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**Spectral Solar Radiation  
Data Base Documentation**

**Volume II**

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## **PREFACE**

This report documents the Solar Energy Research Institute's spectral solar radiation data base. Volume I describes the history, approach, content, and format of the data, and Volume II contains graphs of each of the spectral solar radiation curves and associated field notes.

This is the first public release of these data. Our intent is to make the data available as soon as possible so that others can use it. However, we also intend to create additional products and data subsets in the future to illustrate applications of the data for special purposes or analyses.

Comments or questions about these data should be directed to the Solar Energy Research Institute, Solar Electric Research Division, Resource Assessment and Instrumentation Branch, in Golden, Colorado, 80401.

## **ACKNOWLEDGMENTS**

SERI would like to acknowledge the work of the Florida Solar Energy Center and the Pacific Gas and Electric Company in building this spectral solar radiation data base. Without their help, this data base would not have been possible.

## SUMMARY

The objective of this report is to provide documentation for the spectral solar radiation data base at the Solar Energy Research Institute. The data reside on magnetic tape.

### Discussion

Volume I of this report documents the history, approach, content, and format of the data base. Volume II contains graphs and field notes for each of the spectral data sets. Together, these two volumes should allow users to find and access any particular field of data or desired data subset contained on the magnetic tape.

### Conclusions

These data are being released at this point to make the information available to those who have immediate uses or applications. We also intend to create other products and data subsets in the future to illustrate particular applications and analyses.



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## 1.0 INTRODUCTION

This second volume of the Spectral Solar Radiation Data Base Documentation and User's Manual contains copies of the daily field notes and graphs of broadband and spectral solar radiation data that were created during the quality-control processing. All of these data are contained on the data-base magnetic tape. Volume I of this series should be consulted for detailed information about the data.



## 2.0 CONTENTS.

This volume can be used as a catalog for the information contained in the data base. Each page of graphs represents the data measured on one day of the year, from October 1986 through April 1988, at one of three locations: the Florida Solar Energy Center (FSEC), Cape Canaveral, Fla.; the Pacific Gas and Electric Company (PG&E), San Ramon, Calif.; and the Solar Energy Research Institute (SERI), Golden, Colo.

The following information is contained on each page:

1. **Field notes.** The first line of the field notes begins with an "N" followed by the site, year, and day number. The second line contains a log sheet number (FSEC only), day number, date, serial number of the LI-COR spectroradiometer(s), and measurement mode(s). The measurement modes are direct normal DN (irradiance from the solar disk in about a 5-deg field of view), global normal GN (flat plate tracking the sun), global horizontal GH (flat plate on a horizontal surface), global tilt GT (flat plate tilted at or near the latitude angle), and diffuse horizontal DF. Next are operator observations, such as weather or instrument operations, observations about the data, and notes on the existence of all-sky pictures. (The pictures are labeled as good G, marginal M, or poor P.)
2. **Broadband solar radiation graph.** The broadband solar radiation values (in watts per square meter) recorded by Eppley Precision Spectral Pyranometers and a Normal Incidence Pyrheliometer, before the spectral data were acquired, are plotted versus standard time. The site and day number are printed at the top of the graph. The four measurement modes (if available) include global normal GN, direct normal DN, global tilt GT, and global horizontal GH.
3. **Spectral solar radiation graph(s).** The spectral solar radiation data acquired on this day are graphed for each measurement mode. The titles of the graphs include site, day number, and measurement mode (including a symbol for the spectroradiometer foreoptics). The measurement modes are:
  - DNT Direct normal measured with a view-limiting tube receiver
  - GNS Global normal measured with an integrating sphere receiver
  - GND Global normal measured with a Teflon dome receiver
  - GHS Global horizontal measured with an integrating sphere
  - GHD Global horizontal measured with a Teflon dome (for comparison with GHS only; GHS data should be used)
  - GTS Global tilt measured with an integrating sphere
  - DFS Diffuse horizontal measured with an integrating sphere
  - DFD Diffuse horizontal measured with a Teflon dome (for comparison with DFS data only; DFS data should be used).

Spectral irradiance (in watts per square meter per nanometer) is graphed versus wavelength in nanometers. The legends to the right of the spectral graphs give the standard time and air mass when the spectra were acquired. PG&E and SERI operated one spectroradiometer, rotating through measurement modes. FSEC generally operated two spectroradiometers simultaneously, with one in the direct-normal mode and the other in one of the global modes.

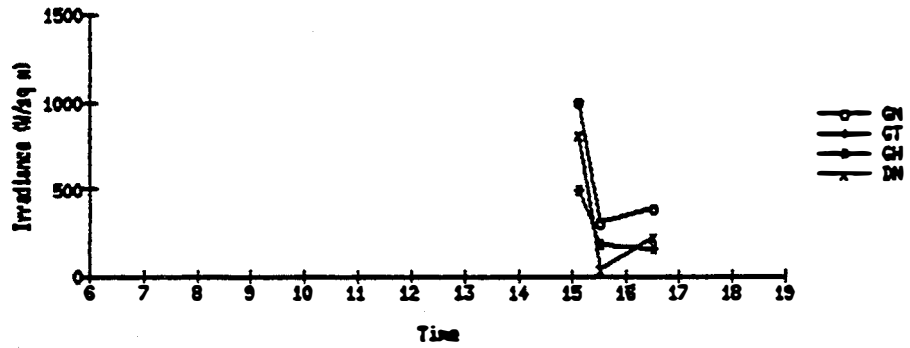


**3.0 DAILY NOTES AND GRAPHS**

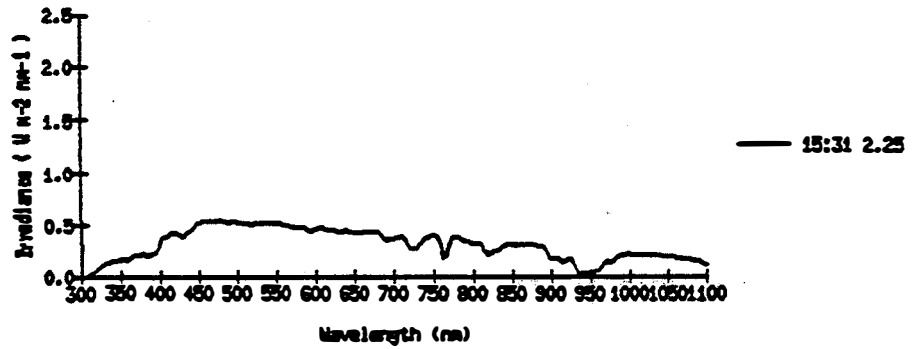
**3.1 Florida Solar Energy Center, Cape Canaveral, Fla.**

N FSEC86296  
 001 10 23 86 296 218  
 No GT - being calibrated  
 No albedo measurement  
 Temp controller 40 C at 1510  
 Partly cloudy  
 No photos

FSEC 296



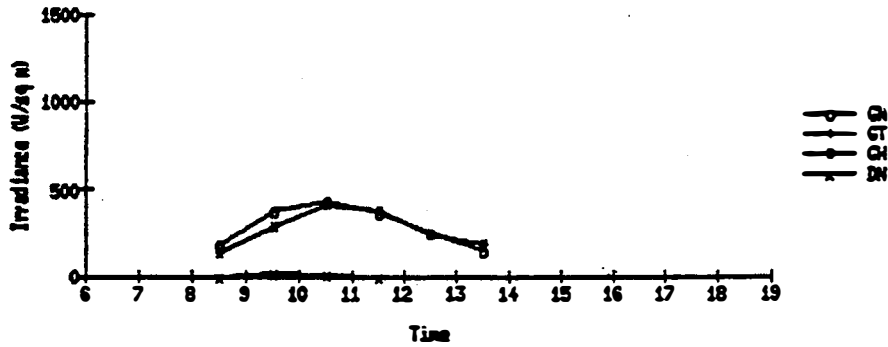
FSEC 296 GND



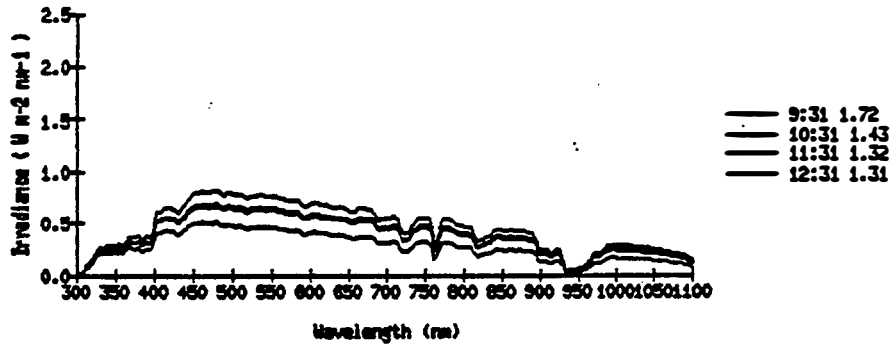


N FSEC86297  
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 No GT - being calibrated  
 No albedo measurement  
 Temp controller 41 C at 1030; 41 C at 1430  
 Partly cloudy  
 No photos

FSEC 297

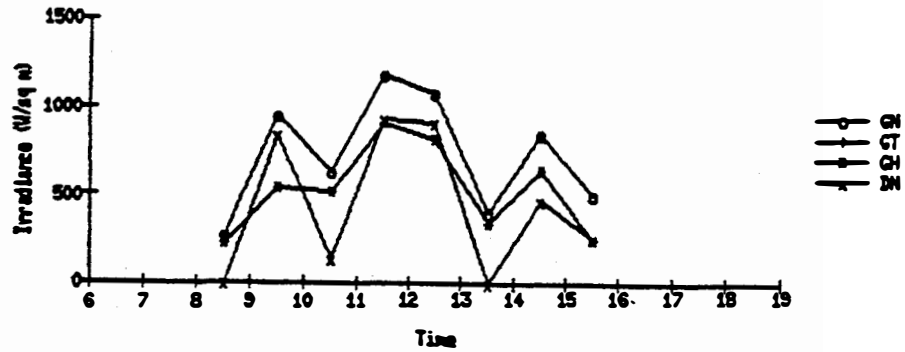


FSEC 297 CND

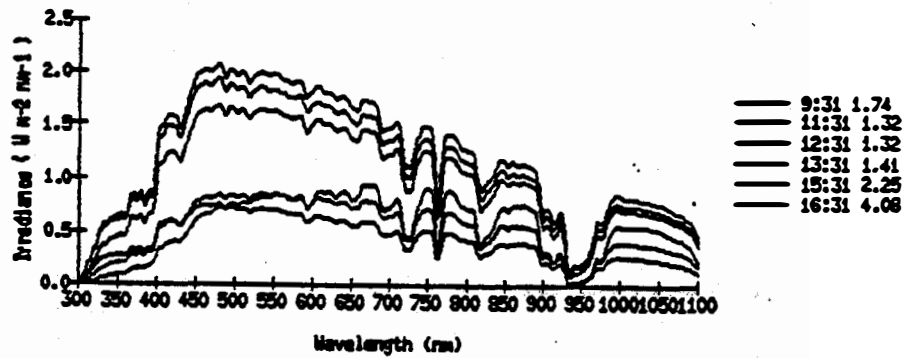


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 No albedo measurement  
 Partly cloudy  
 No photos

FSEC 298

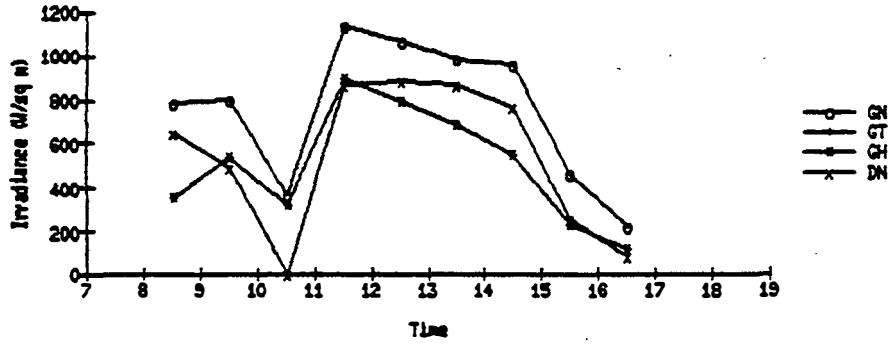


FSEC 298 GND

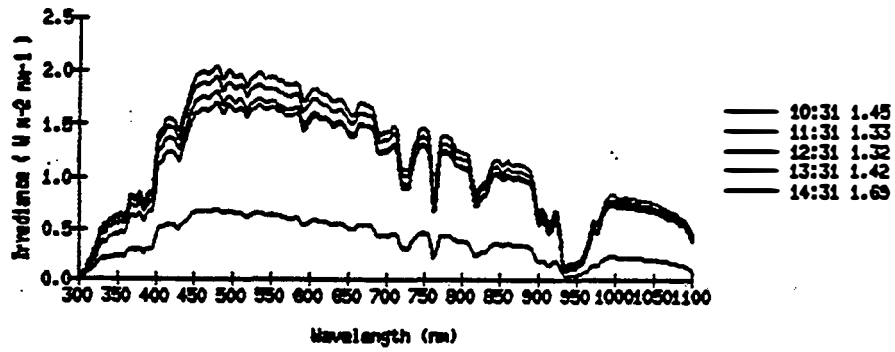


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 No albedo measurement  
 Partly cloudy  
 No photos

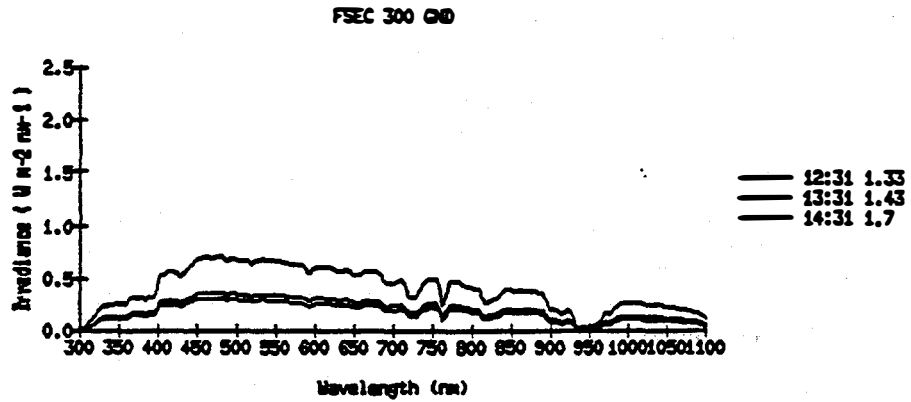
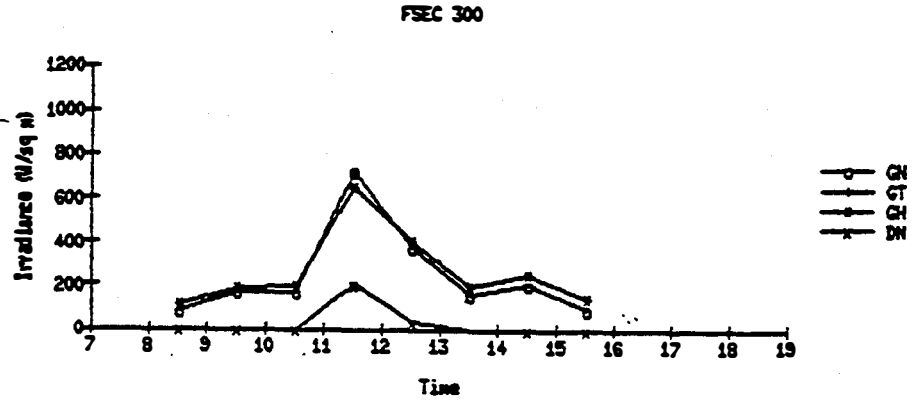
FSEC 299



FSEC 299 GND

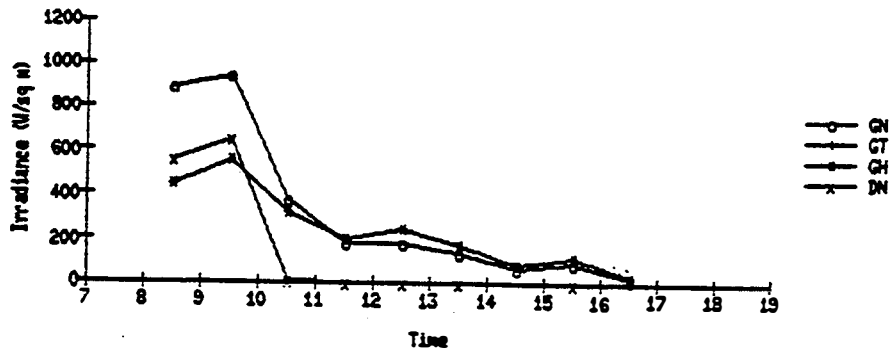


N FSEC86300  
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 No GT - being calibrated  
 No albedo measurement  
 Temp controller 39 C at 0830; 40 C at 1330  
 Overcast, light rain/mist for part of afternoon  
 No photos

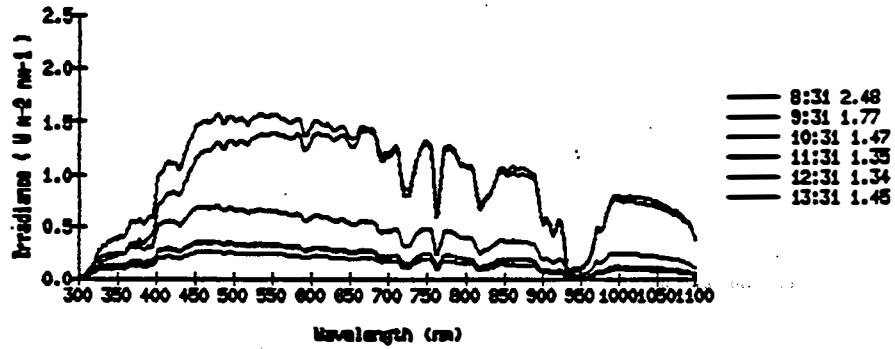


N FSEC86301  
 006 10 28 86 301 218  
 No GT - being calibrated  
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 Temp controller 40 C at 1030  
 Partly cloudy to overcast  
 No photos

FSEC 301

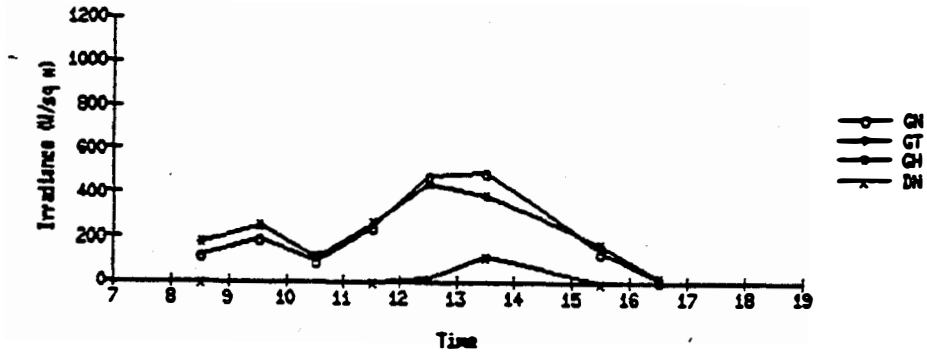


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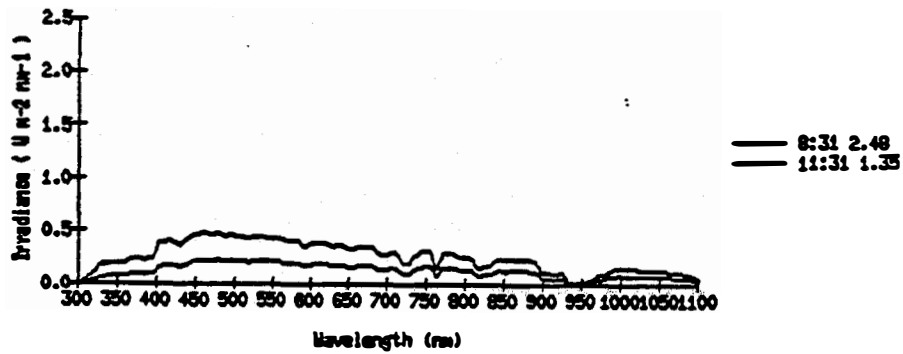


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 No GT - being calibrated  
 No albedo measurement  
 Temp controller 39 C at 0830; 40 C at 1500  
 Overcast, light rain 1000-1100  
 No data at 1430 - tracker malfunction  
 No photos

FSEC 302

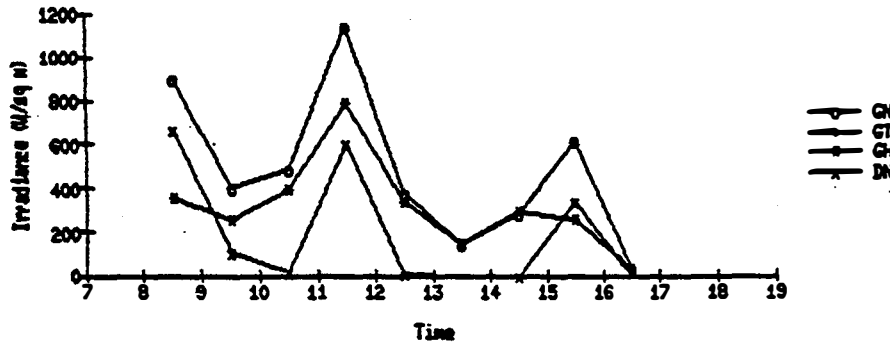


FSEC 302 GND

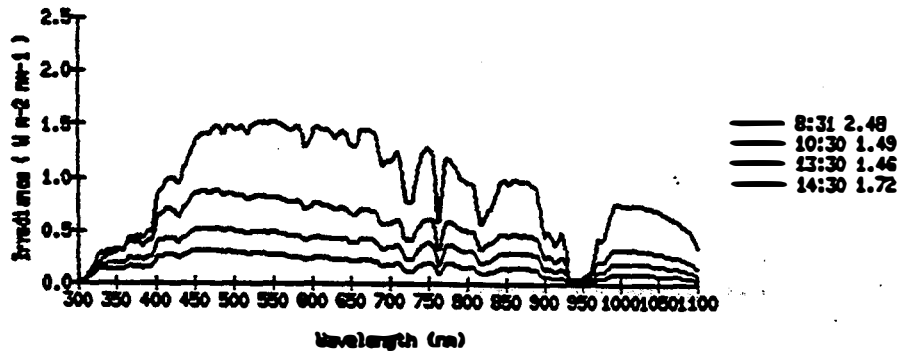


N FSEC86303  
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 No GT - being calibrated  
 No albedo measurement  
 Temp controller 40 C at 1030; 40 C at 1530  
 Partly cloudy  
 No photos

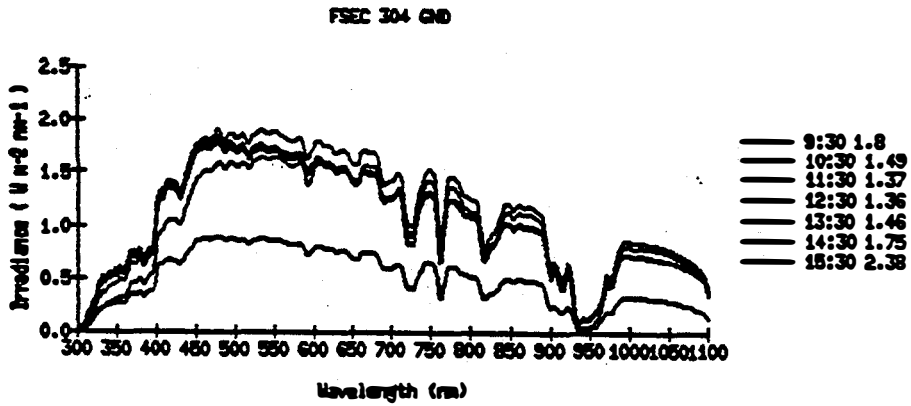
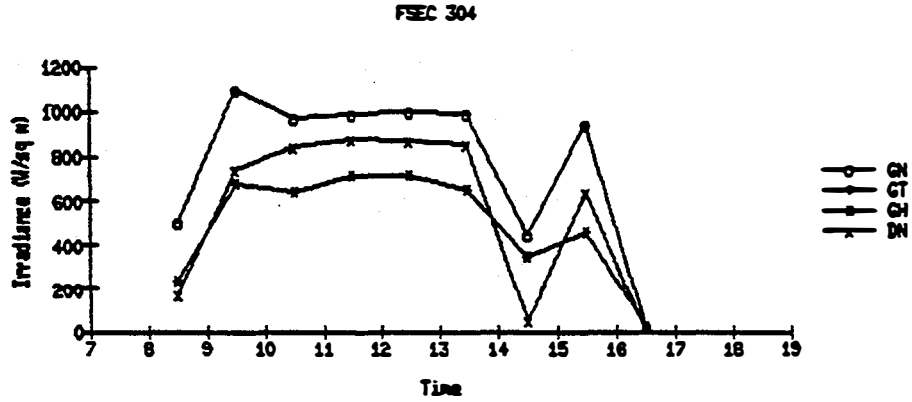
FSEC 303



FSEC 303 CWB

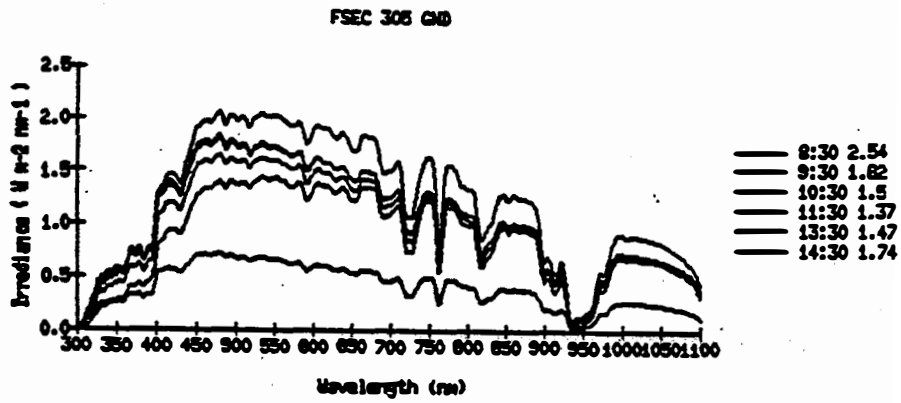
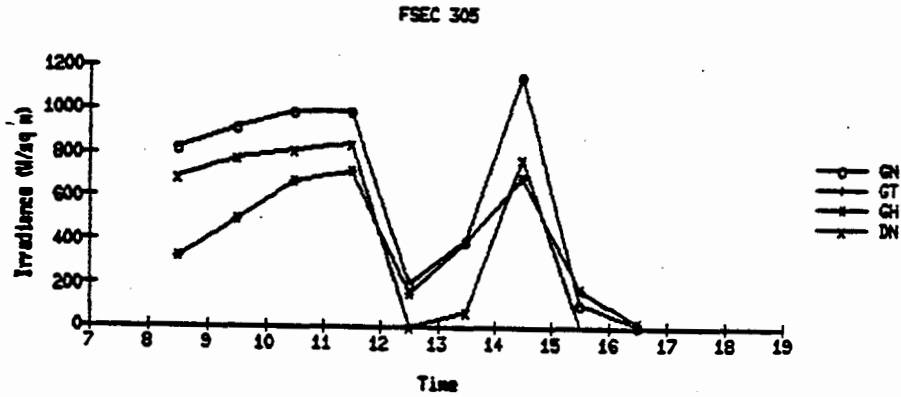


N FSEC86304  
 009 10 31 86-304 218  
 No GT  
 No albedo measurement  
 Temp controller 41 C at 1130; 41 C at 1430  
 Partly cloudy  
 No photos  
 -----  
 Spectrum at 1530 may be cloud enhancement



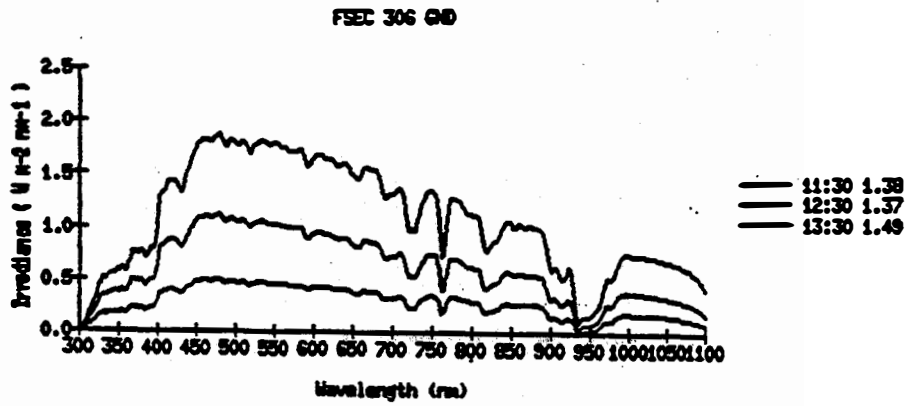
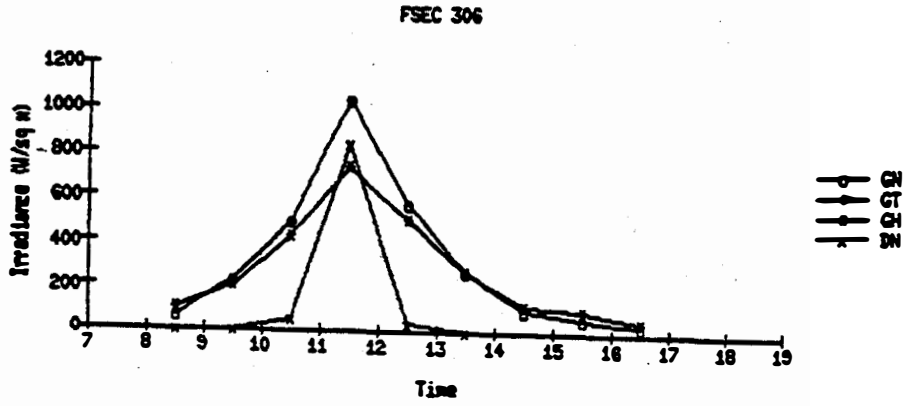


N FSEC86305  
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 No GT  
 No albedo measurement  
 Mostly clear AM; partly cloudy PM  
 No photos  
 -----  
 Spectrum at 1430 may be cloud enhancement





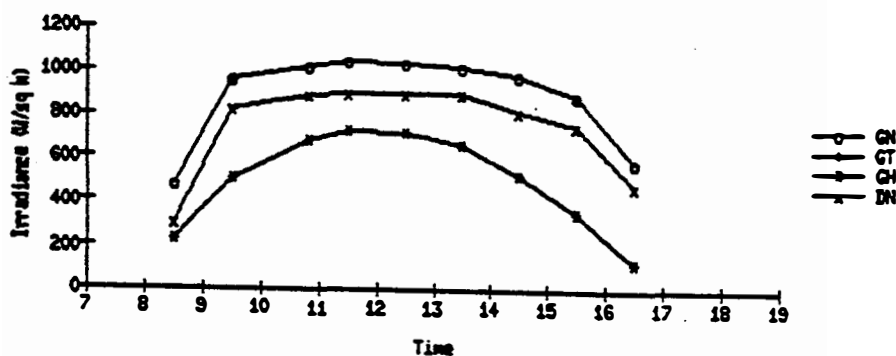
N FSEC86306  
 011 11 02 86 306 218  
 No GT  
 No albedo measurement  
 Overcast to partly cloudy  
 No photos



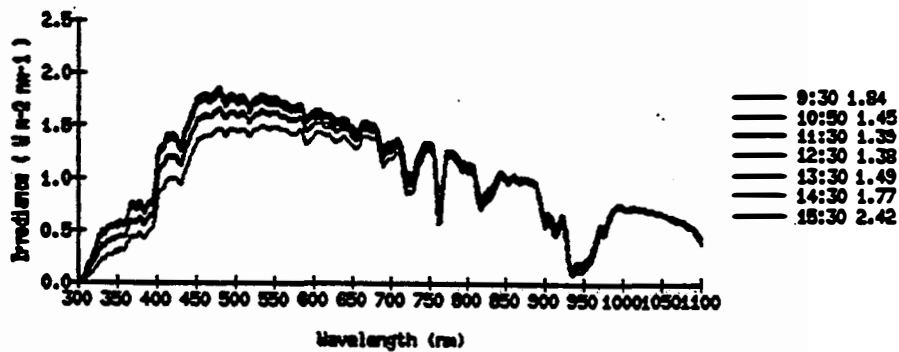


N FSEC86307  
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 No GT  
 No albedo measurement  
 Temp controller 40 C at 0830; 40 C at 1430  
 Partly cloudy  
 No photos

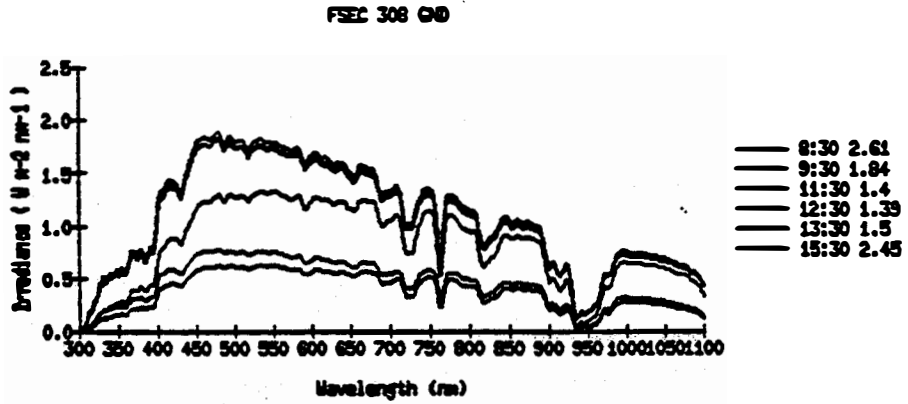
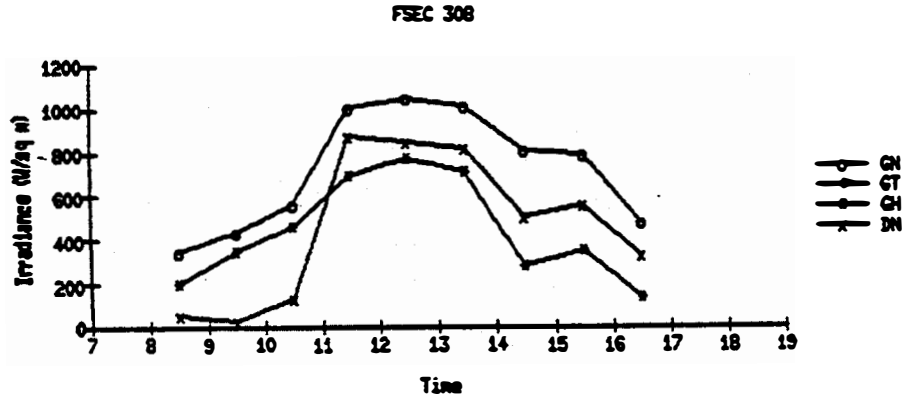
FSEC 307



FSEC 307 GND

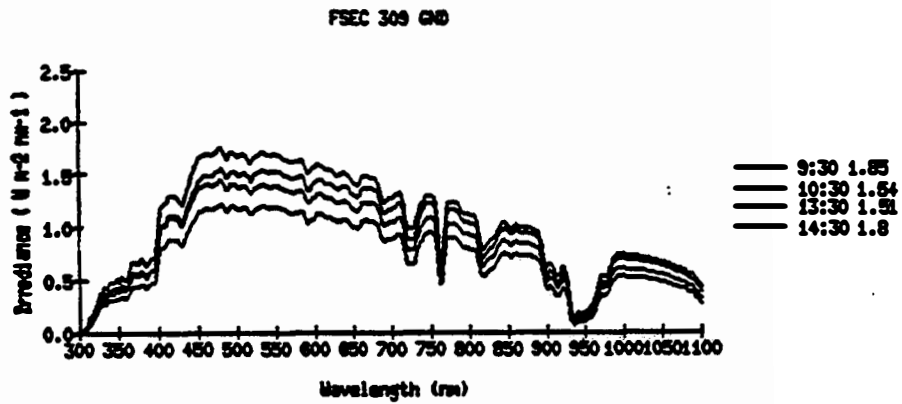
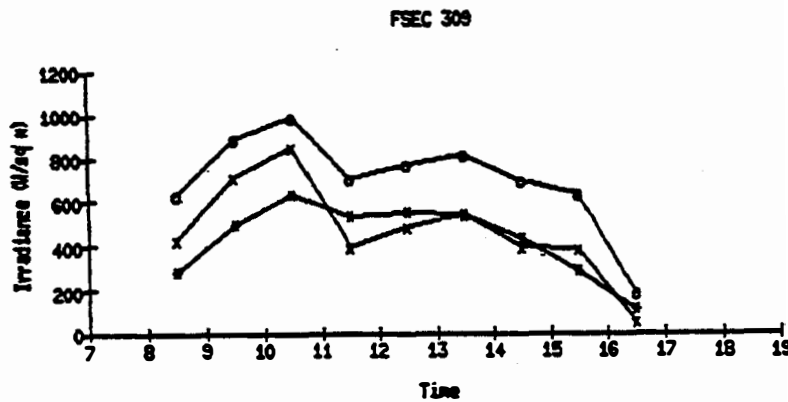


N FSEC86308  
 013 11 04 86 308 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0810; 41 C at 1410  
 Partly cloudy  
 No photos





N FSEC86309  
 014 11 05 86 309 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0830; 40 C at 1415  
 Partly cloudy; light cirrus clouds  
 No photos



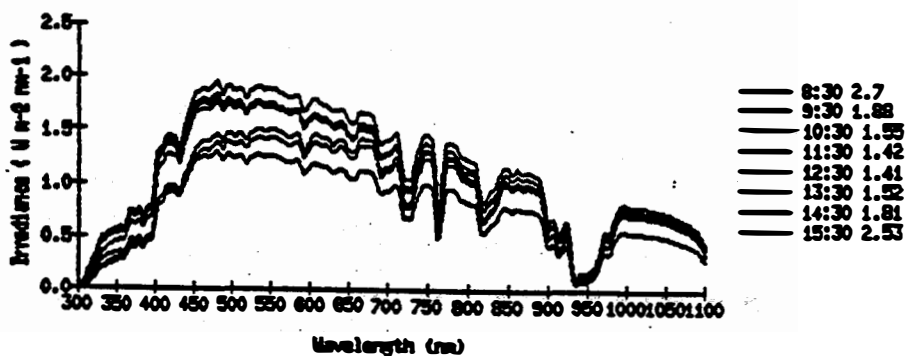


N FSEC86311  
 015 11 07 86 311 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0830  
 Partly cloudy  
 No photos

FSEC 311

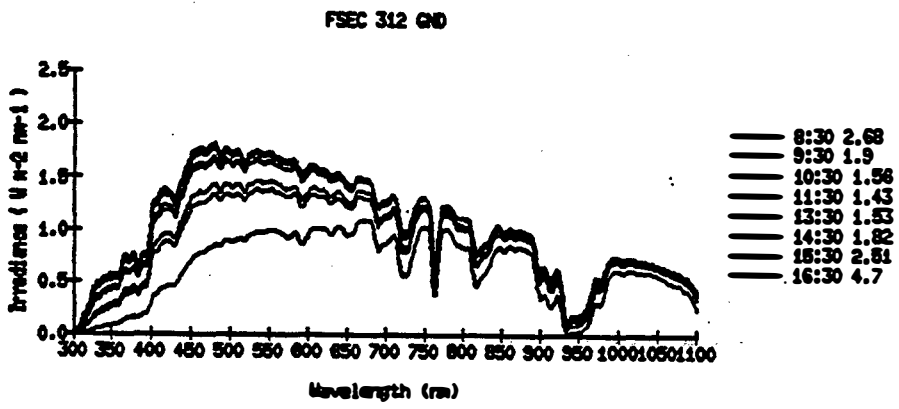
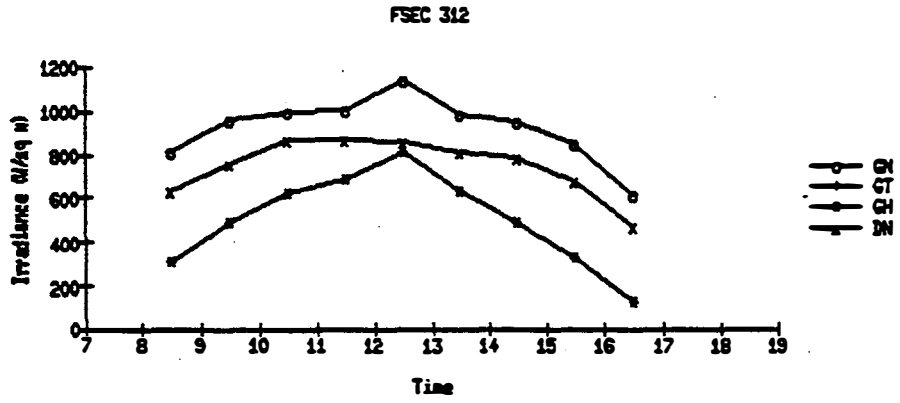


FSEC 311 GND



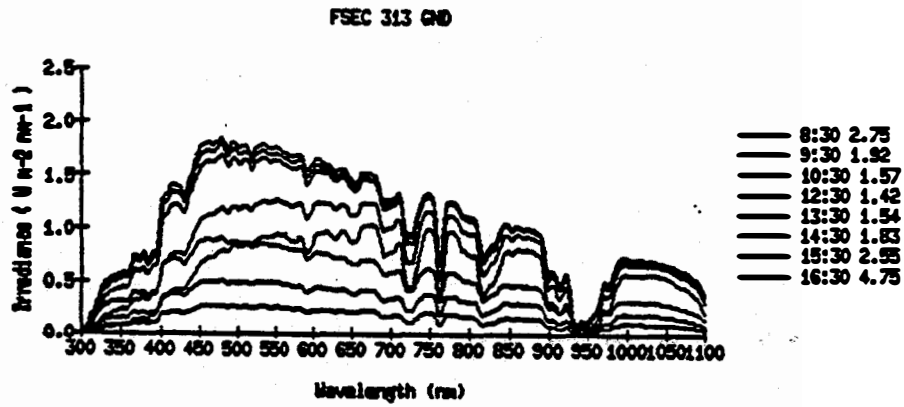
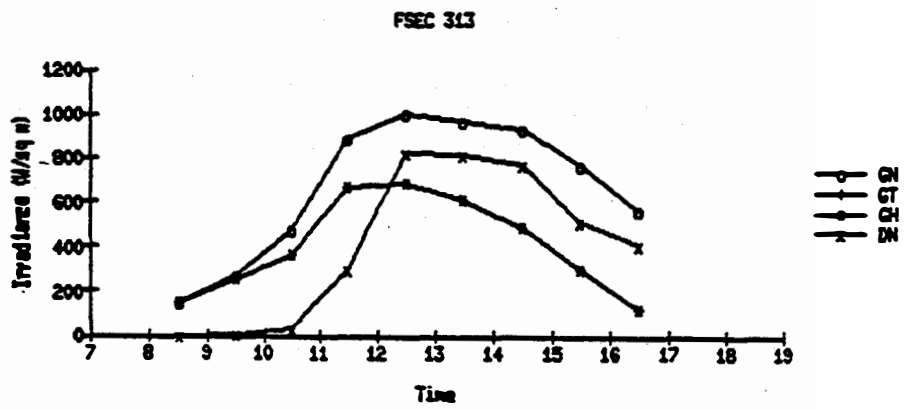


N FSEC86312  
 016 11 08 86 312 218  
 No GT  
 No albedo measurement  
 Partly cloudy  
 No photos





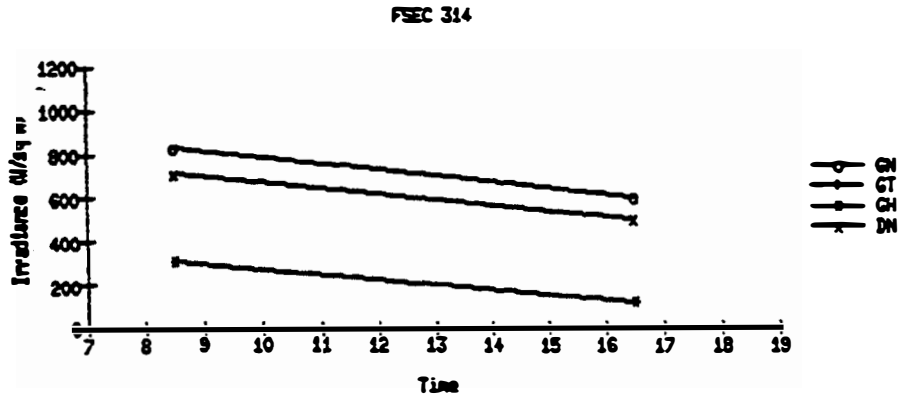
N FSEC86313  
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 No GT  
 No albedo measurement  
 Partly cloudy  
 No photos





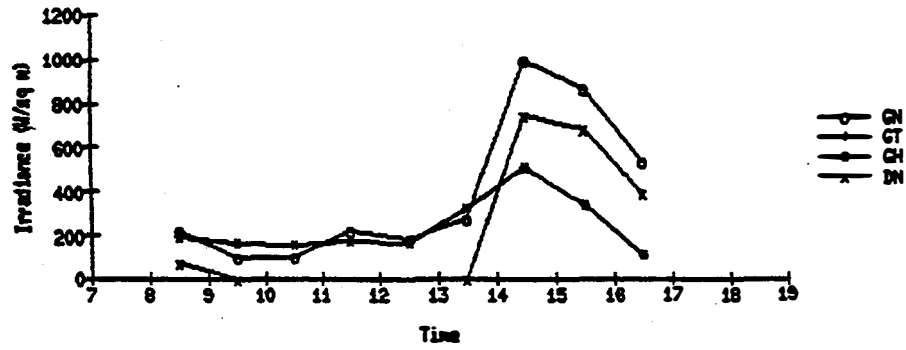


N FSEC86314  
 018 11 10 86 314 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0810; 40 C at 1630  
 Partly cloudy at 0830; mostly clear at 1630  
 No photos  
 Readings only at 0830 and 1630  
 (no spectra)

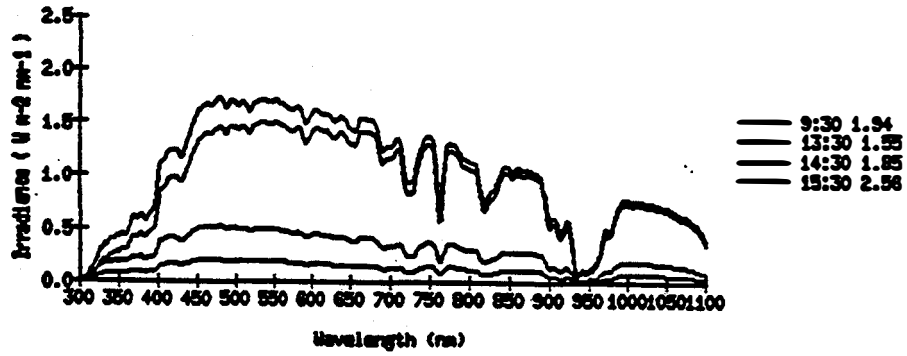


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 019 11 11.86 315 218  
 No GT  
 No albedo measurement  
 Partly cloudy  
 No photos

FSEC 315

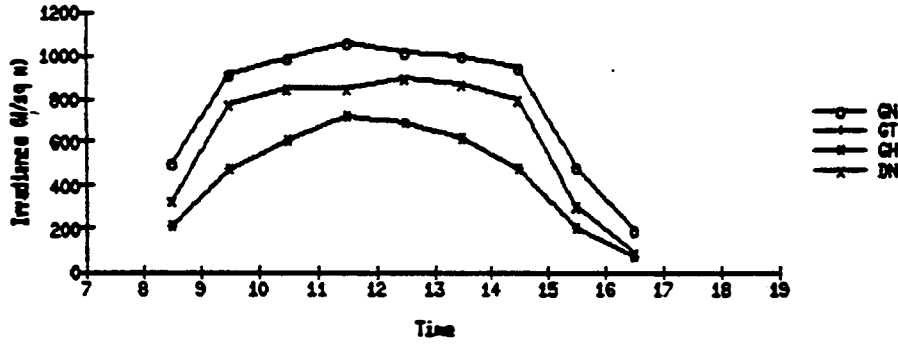


FSEC 315 GD

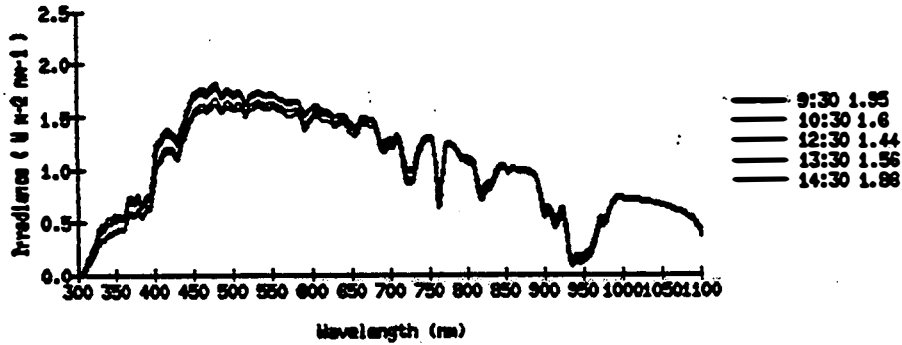


N FSEC86316  
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 No GT  
 No albedo measurement  
 Temp controller 40 C at 0830  
 Partly cloudy  
 No photos

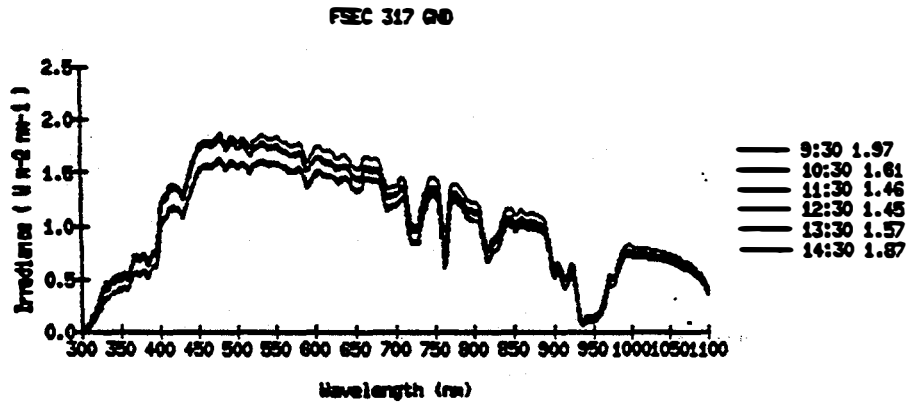
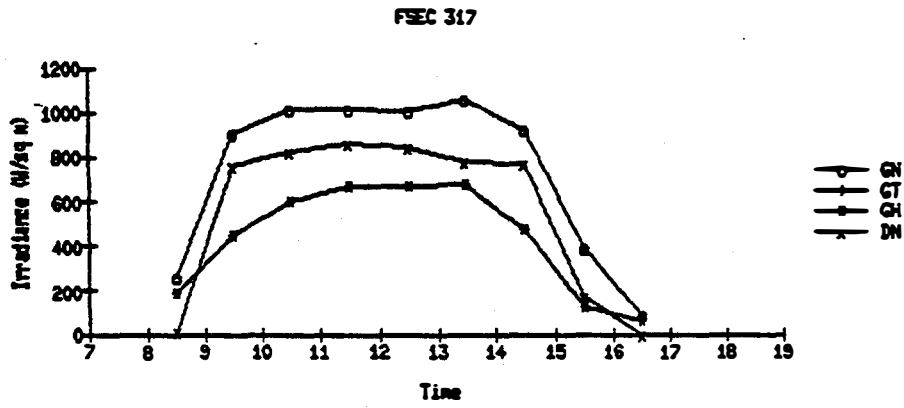
FSEC 316



FSEC 316 GND

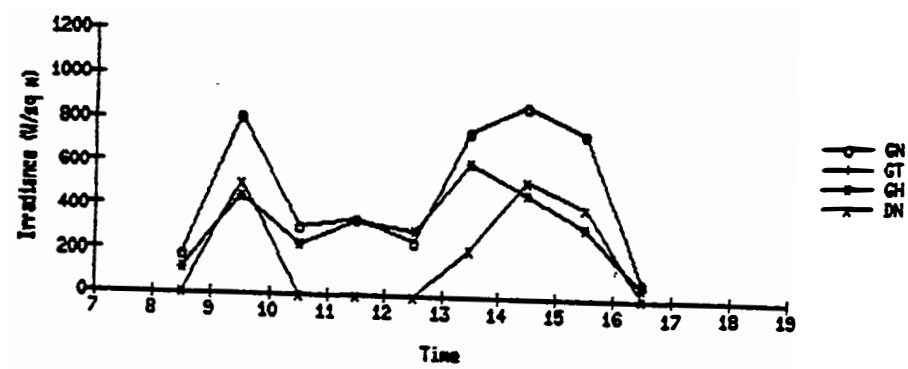


N FSEC86317  
 021 11 13 86 317 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0830; 40 C at 1430  
 Early morning fog; mostly clear  
 Photos: 1530 G  
 1630 G

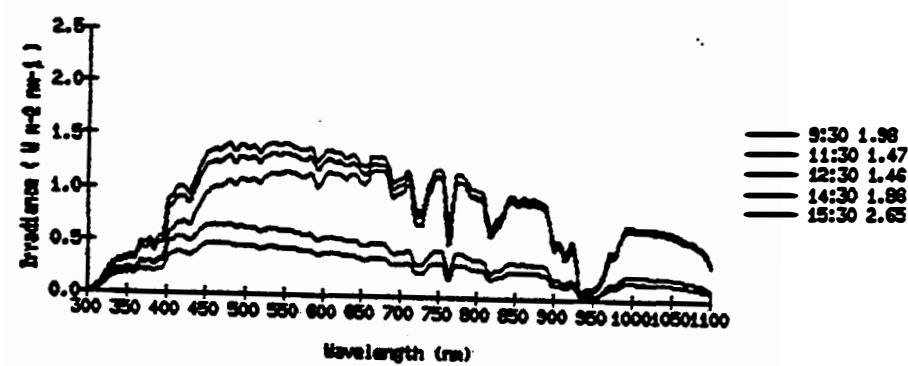


N FSEC86318  
 022 11 14 86 318 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0830  
 Partly cloudy; windy  
 Photos: 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 318

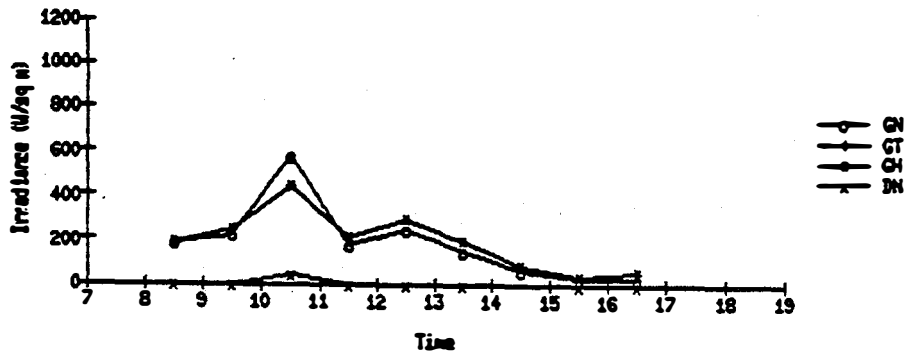


FSEC 318 GND

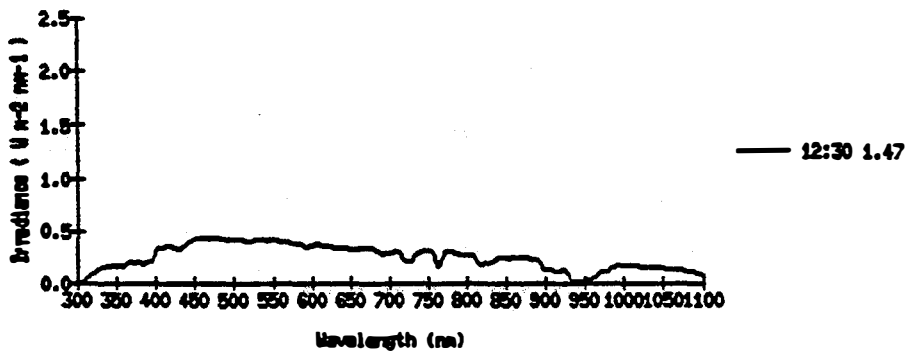


N FSEC36319  
 023 11 15 86 319 218  
 No GT  
 No albedo measurement  
 Partly cloudy AM; overcast PM  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

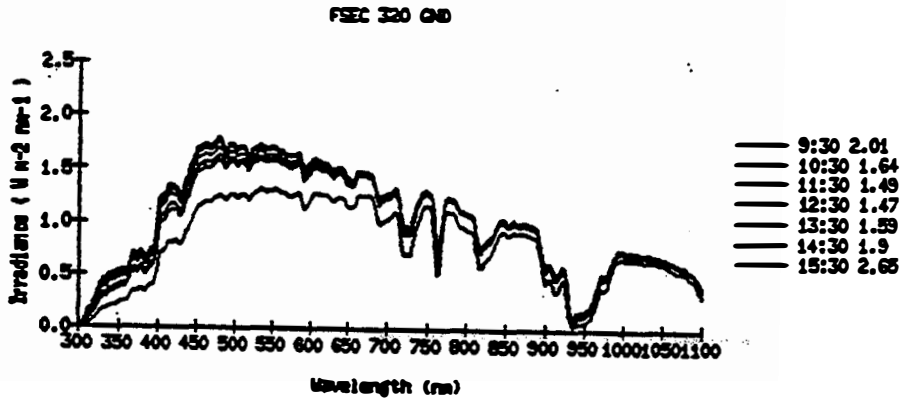
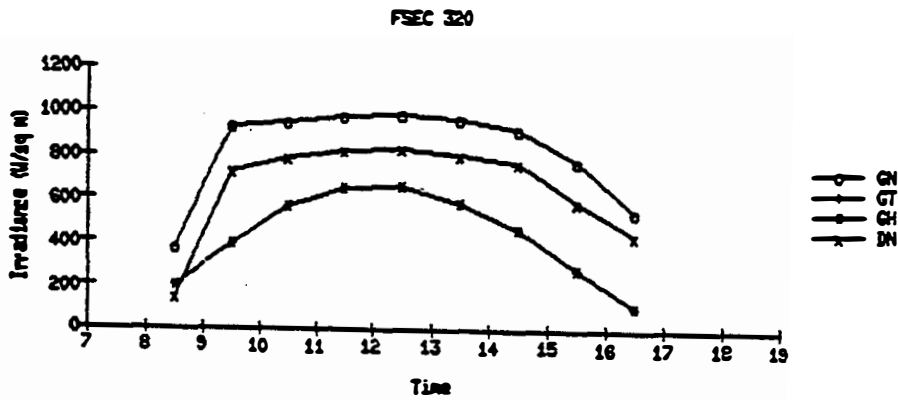
FSEC 319



FSEC 319 GD

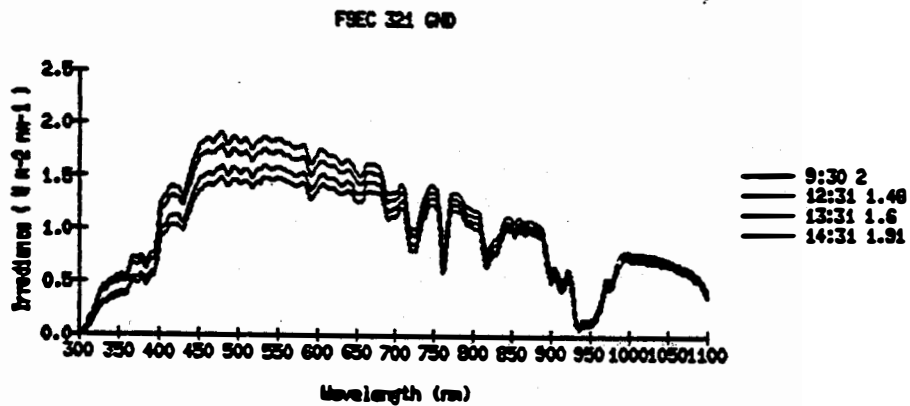
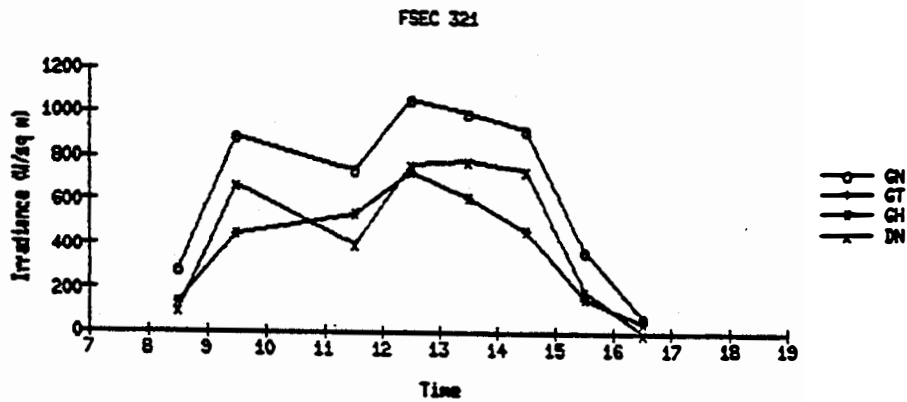


N FSEC86320.  
 024 11 16 86 320 218  
 No GT  
 No albedo measurement  
 Mostly clear  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G





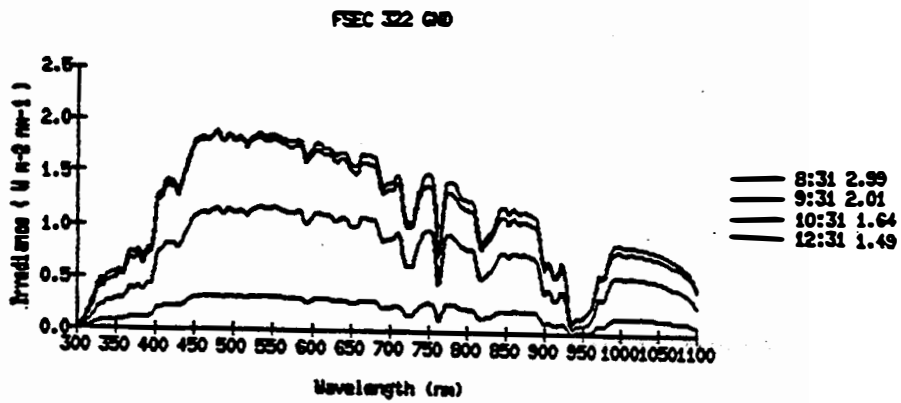
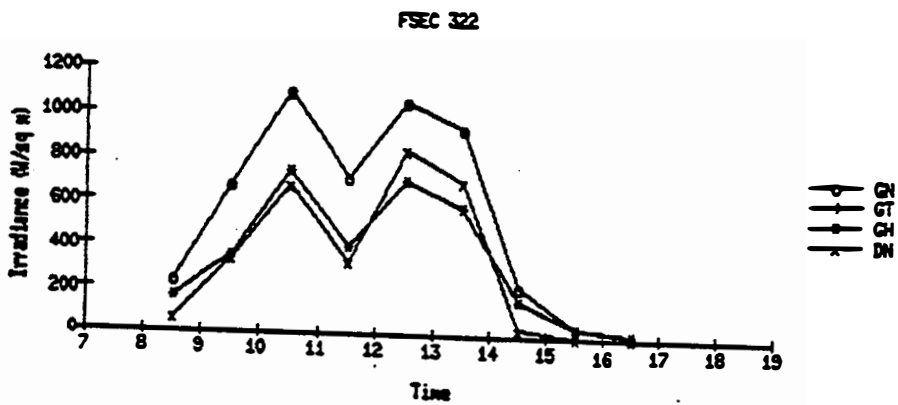
N FSEC86321  
025 11 17 86 321 218  
No GT  
No albedo measurement  
No broadband readings at 1030 (Fluke down)  
Temp controller 40 C at 0830  
Partly cloudy  
Photos: 0830 G  
0930 G  
1030 G  
1130 G  
1230 G  
1330 G  
1430 G  
1530 G  
1630 G





FSEC86322  
 026 11 18 86 322 218  
 No GT  
 No albedo measurement  
 Temp controller 39 C at 0800  
 Overcast to partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

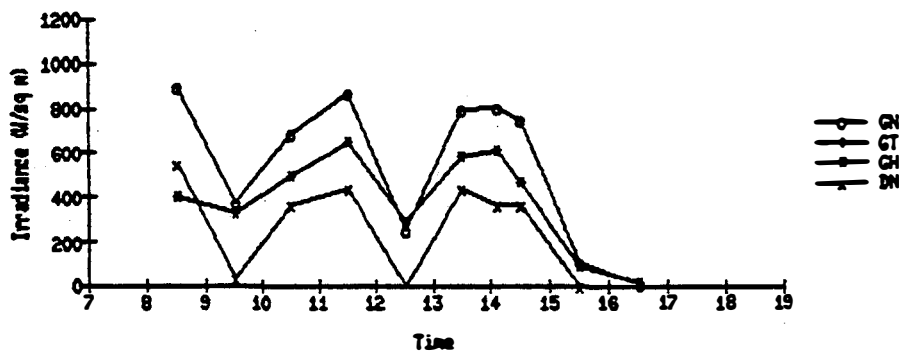
0831 bef/aft readings different



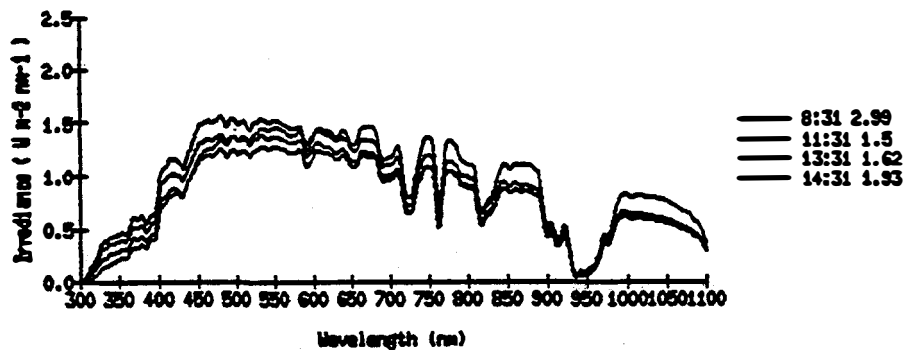


N FSEC86323  
 027 11 19 86-323 218  
 No GT  
 No albedo measurement  
 Temp controller 40 C at 0815  
 Partly cloudy to overcast  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

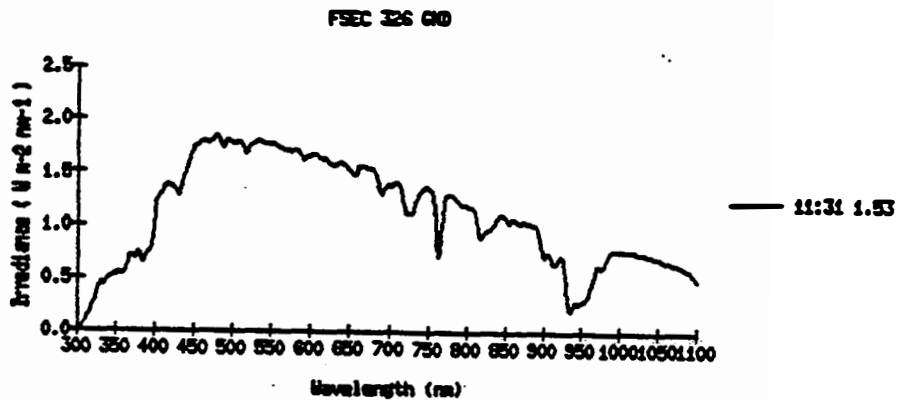
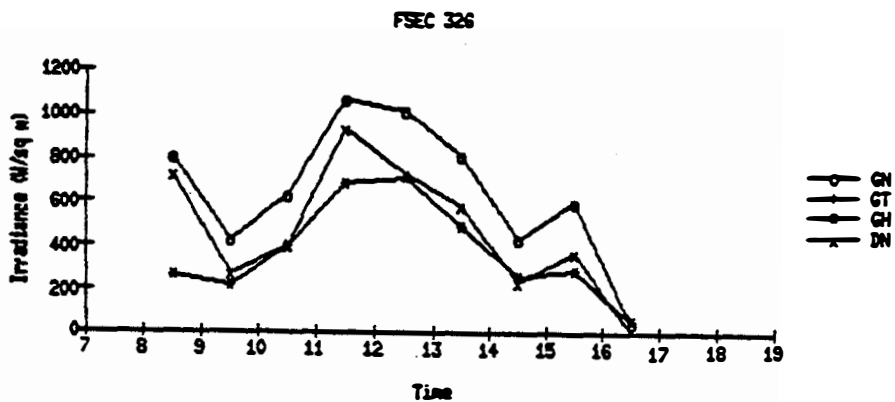
FSEC 323



FSEC 323 GND

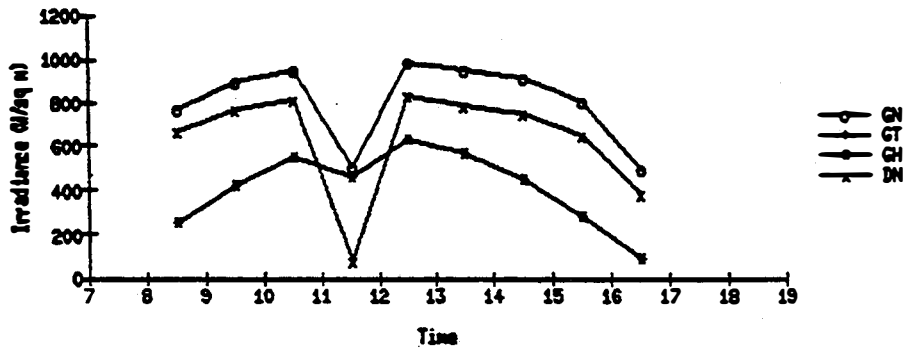


N FSEC86326  
 028 11 22 86 326 218  
 No GT  
 No albedo measurement  
 Partly cloudy  
 Photos: 0830 M (rain)  
 0930 G (water drops)  
 1030 G (water drops)  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

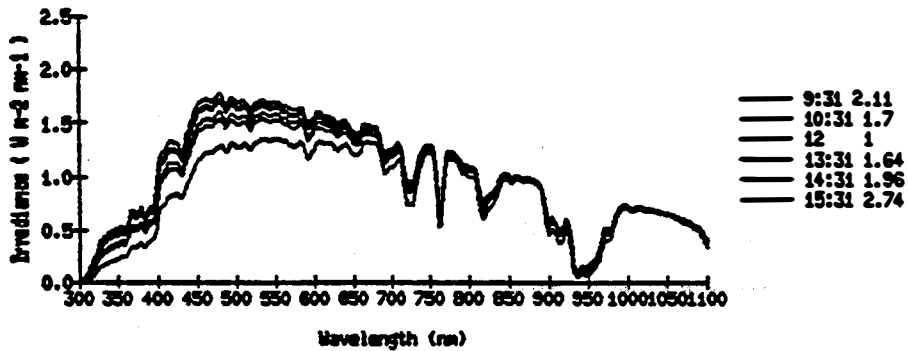


N FSEC86327  
 029 11 23 86 327 218  
 No GT  
 No albedo measurement  
 Clear to partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 327

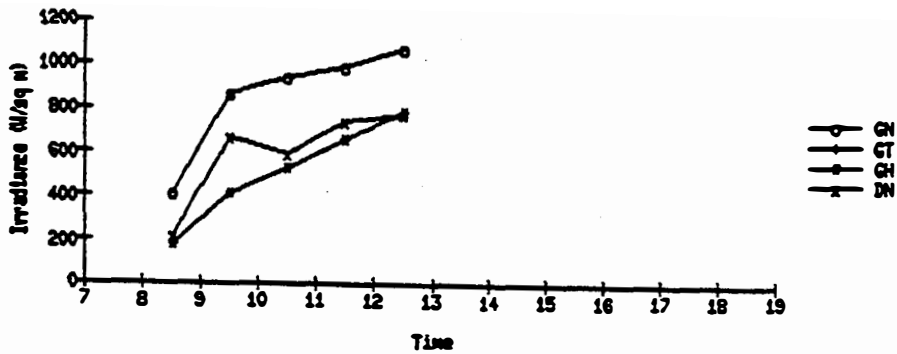


FSEC 327 GND

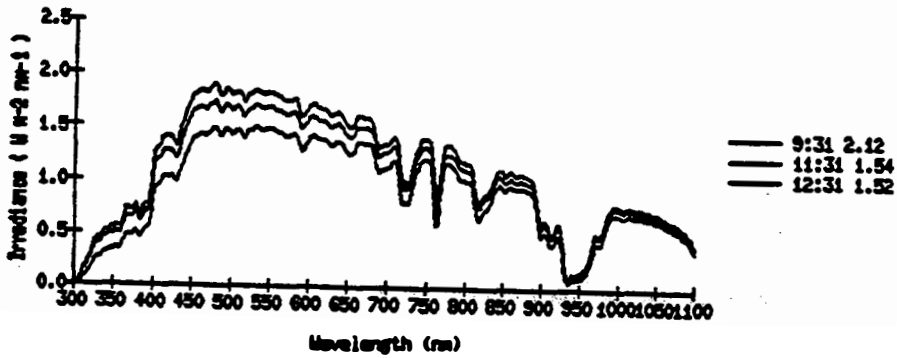


**N FSEC86328**  
**030 11 24 86 328 218**  
**No GT**  
**No albedo measurement**  
**Temp controller 39 C at 0830**  
**Overcast to partly cloudy**  
**Photos: 0830 M (water drops)**  
**0930 M (water drops)**  
**1030 G**  
**1130 G**  
**1230 G (water drops)**  
**1330 G (water drops)**  
**1430 G**  
**1530 G**  
**1630 G**

FSEC 328



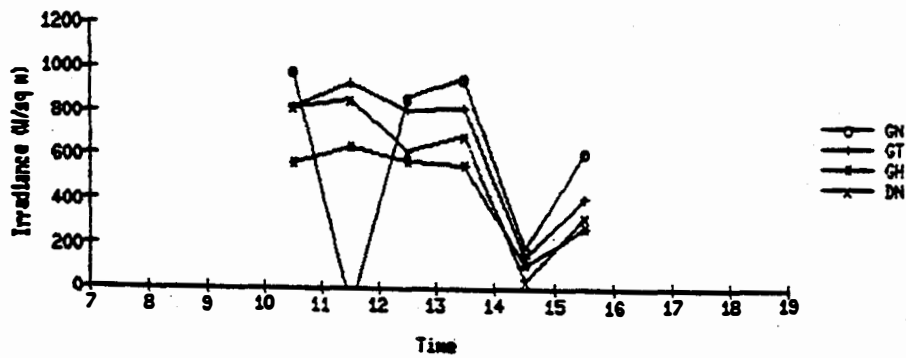
FSEC 328 GND



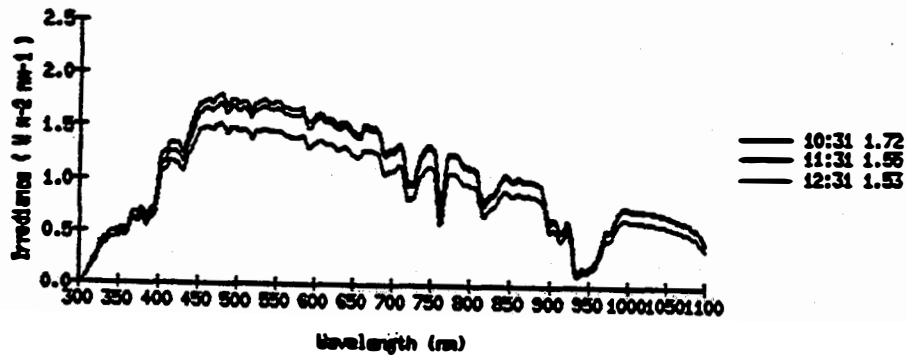
N FSEC86329  
 031 11 25 86 329 218  
 GT and Albedo PSP installed  
 New cal constant for GN PSP (was 9.0; now 8.85)  
 Temp controller 40 C at 1030  
 Clear to partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

1131 SN, SH, GN are -99 (before)

FSEC 329

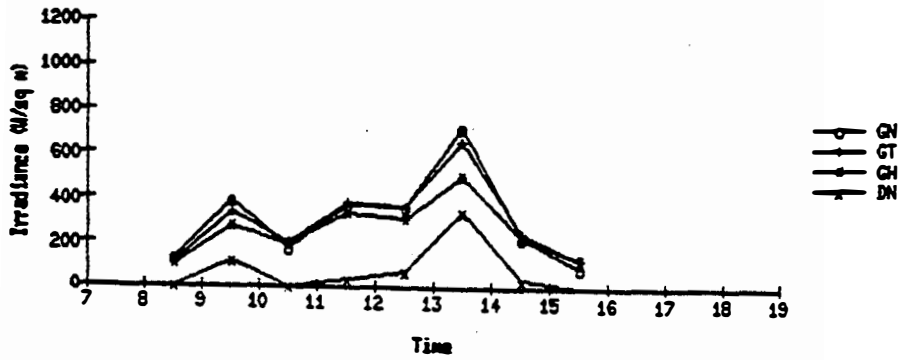


FSEC 329 GND

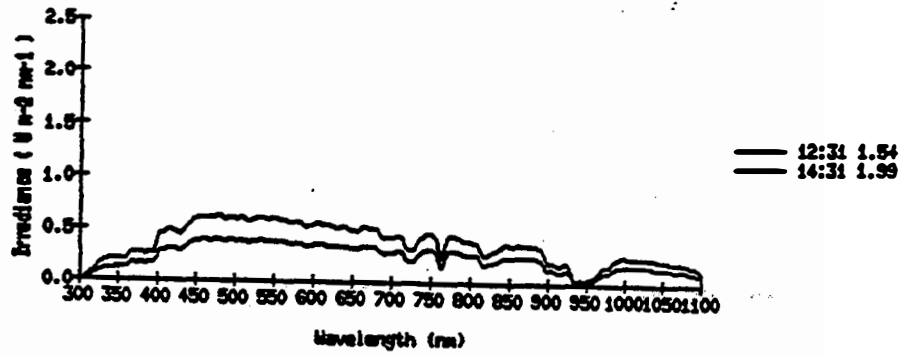


N FSEC86330  
 032 11 26 86 330 218  
 Mostly overcast  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

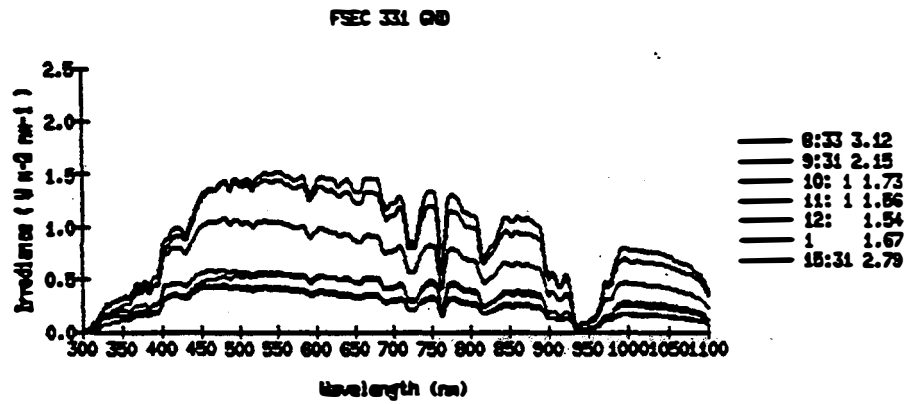
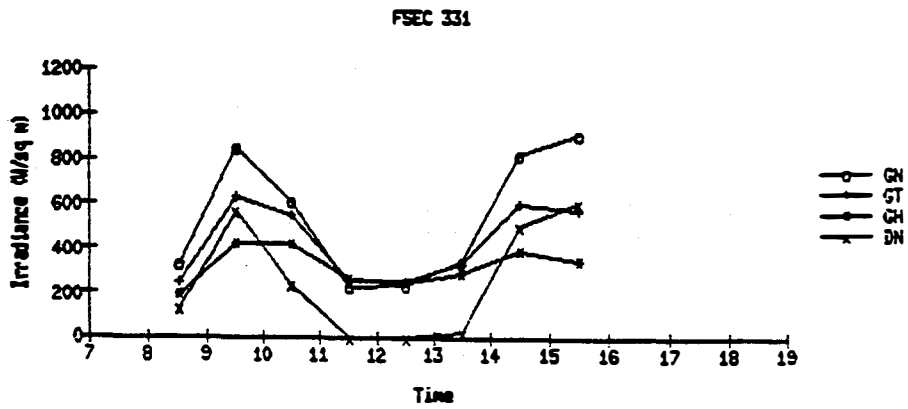
FSEC 330



FSEC 330 GND

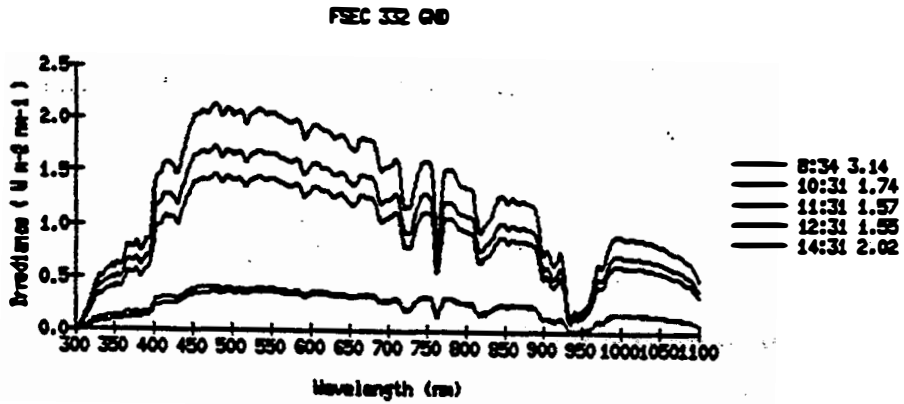
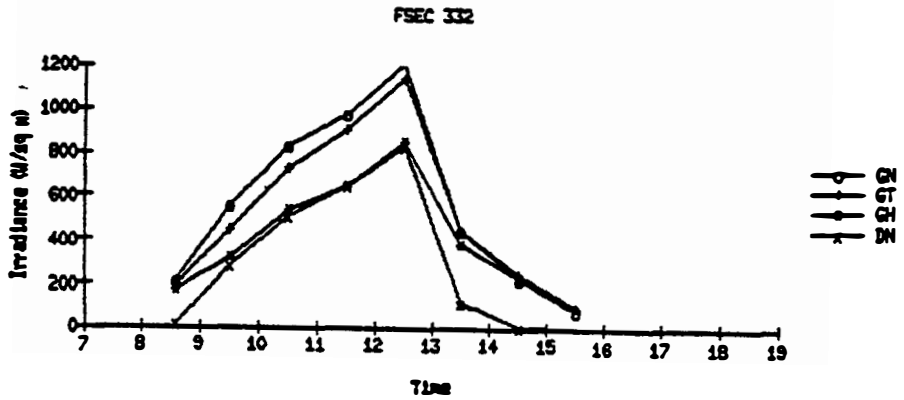


N FSEC86331  
 033 11 27 86 331 218  
 Partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

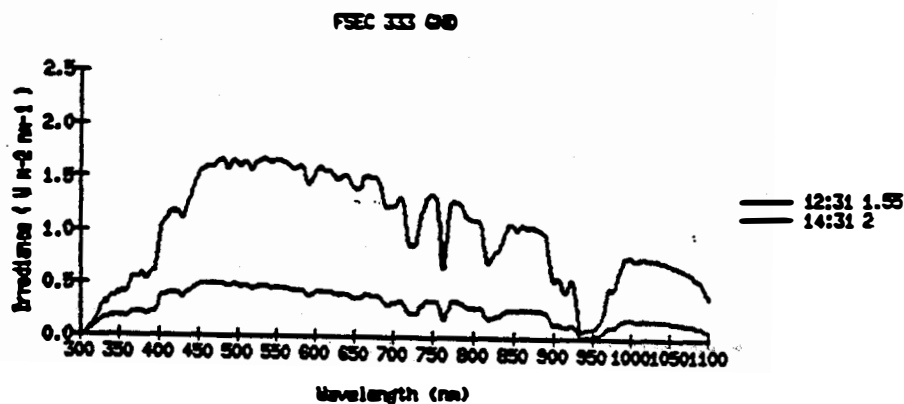
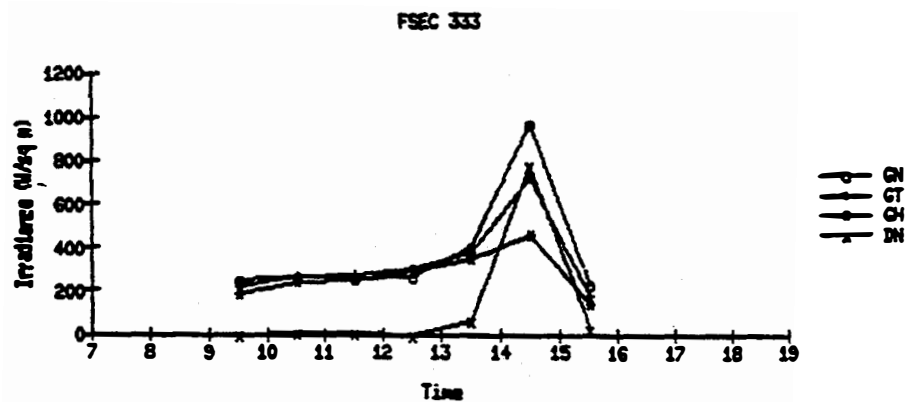




N FSEC86332  
 034 11 28 86 332 218  
 Partly cloudy  
 Photos: 0830 G (Missing 11-28 1530 through  
 0930 G 11-30 1230)  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G

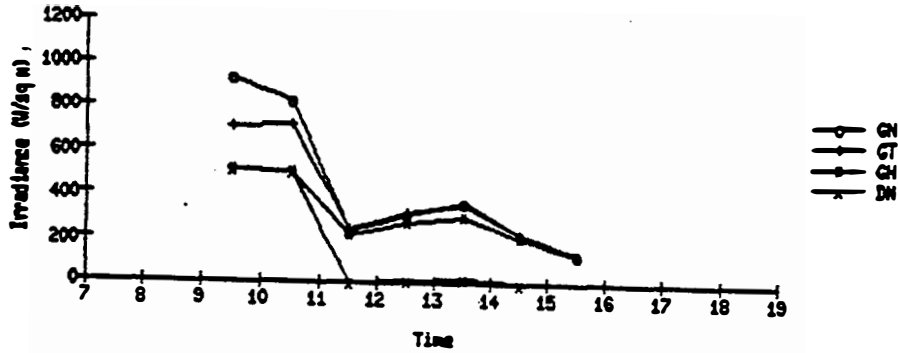


H FSEC86333  
 035 11 29 86 333 218  
 Partly cloudy  
 No photos

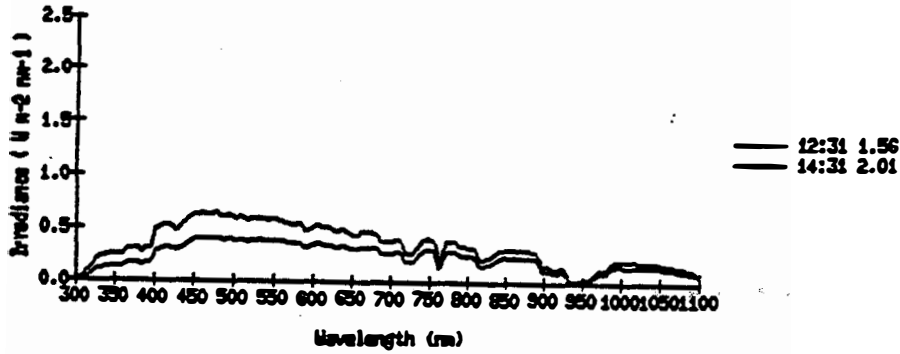


N FSEC86334  
 036 11 30 86 334 218  
 Partly cloudy to clear  
 Photos: None in morning  
 1330 G (water drops)  
 1430 G (water drops)  
 1530 G (water drops)  
 1630 G (water drops)

FSEC 334

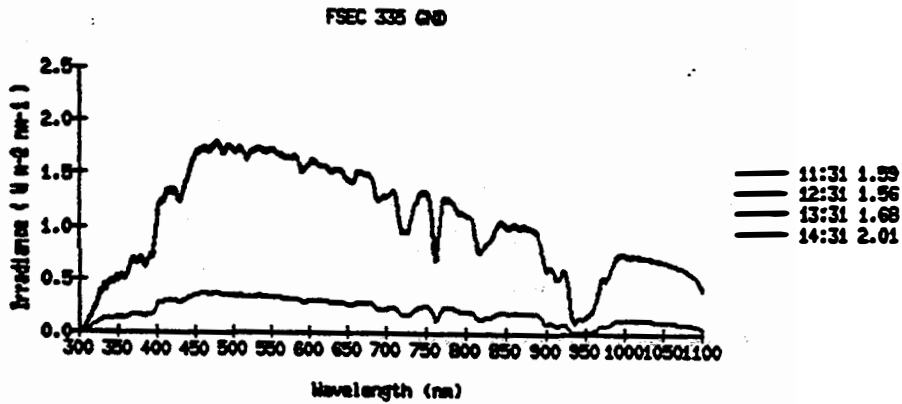
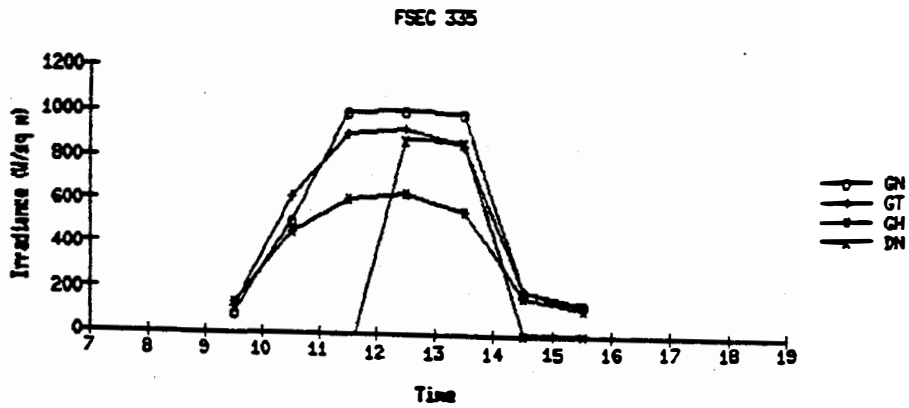


FSEC 334 GND

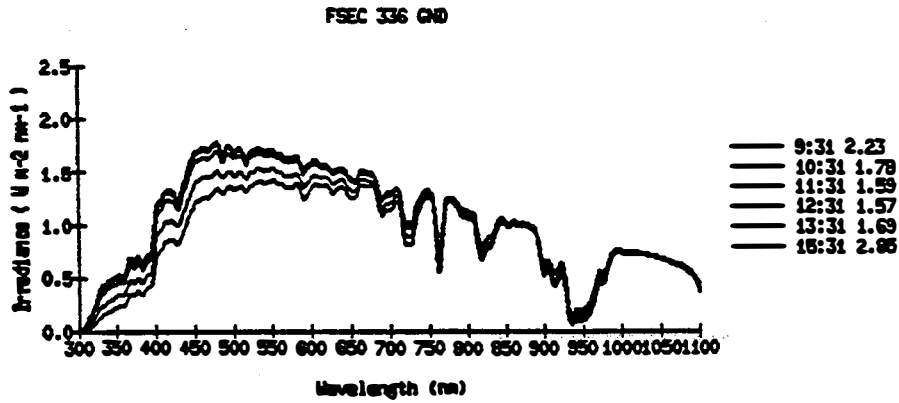
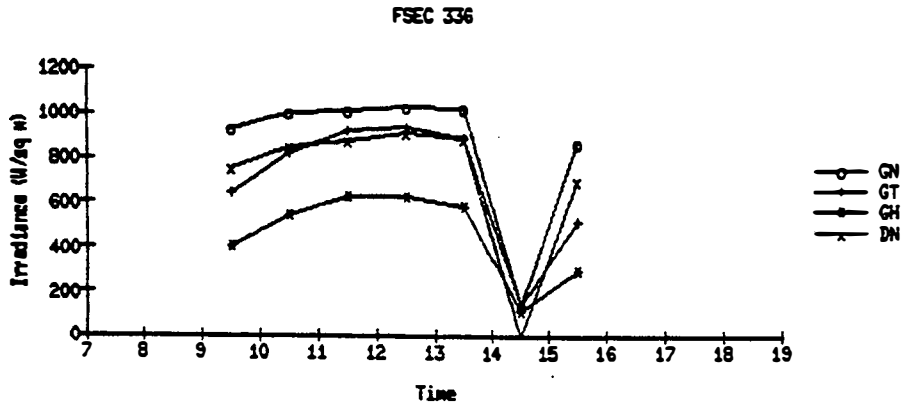


N FSEC86335  
 037 12 01 86 335 218  
 NIP data may be unreliable  
 Partly cloudy  
 Photos: 0830 G (water drops)  
 0930 G  
 1030 G (water drops)  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

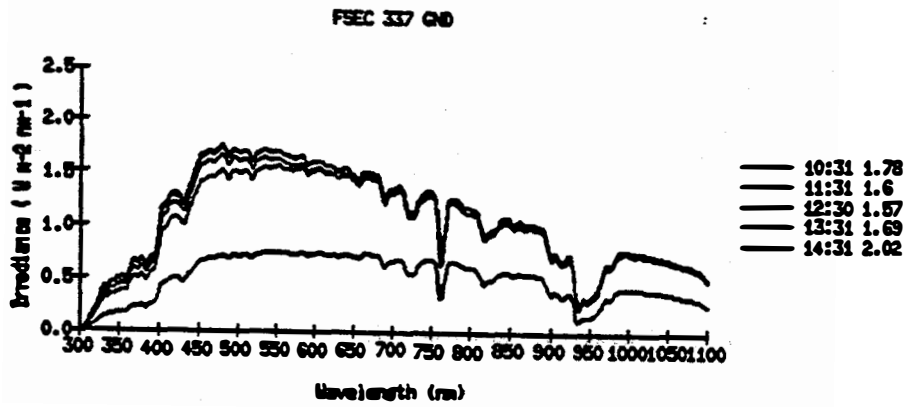
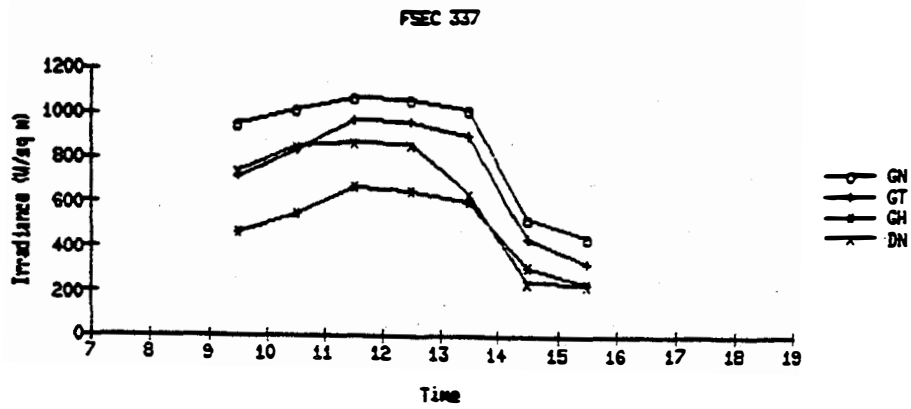
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 NIP data at 1131 is bad



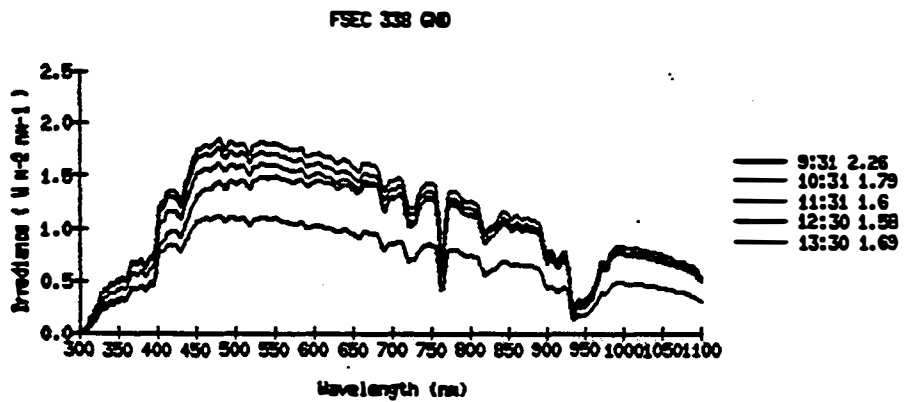
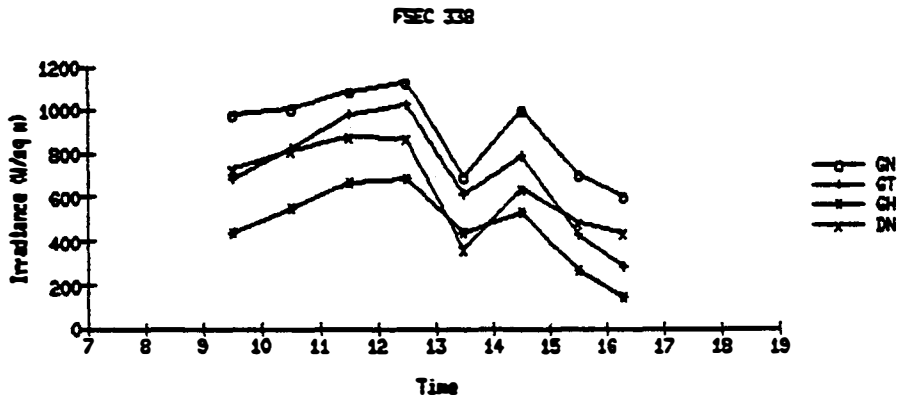
N FSEC86336  
 038 12 02 86 336 218  
 Temp controller 40 C at 0830; 40 C at 1230  
 Partly cloudy to clear  
 Photos: 0830 G  
 0930 G G  
 1030 G  
 1130 G  
 1230 G G  
 1330 G  
 1430 G  
 1530 G G  
 1630 G



N FSEC86337  
 039 12 03 86 337 218  
 Temp controller 40 C at 1130  
 Mostly clear AM; becoming hazy PM  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

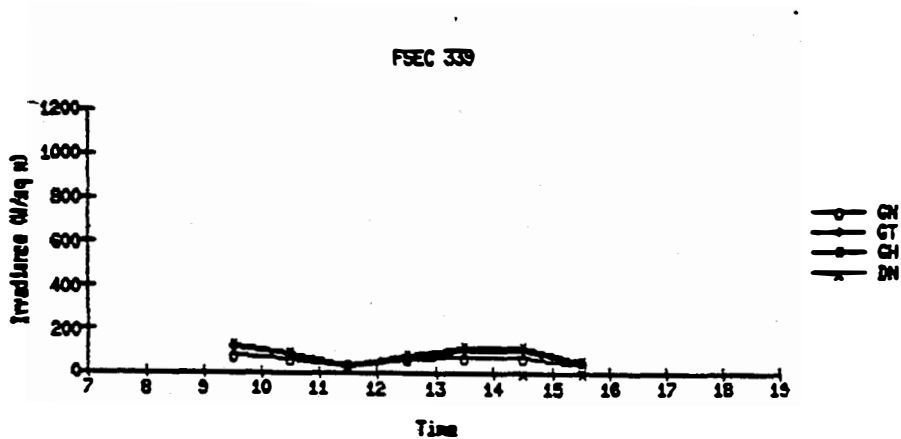


N FSEC86338  
 040 12 04 86 338 218  
 Temp controller 39 C at 0810; 39 C at 1430  
 High cirrus; hazy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



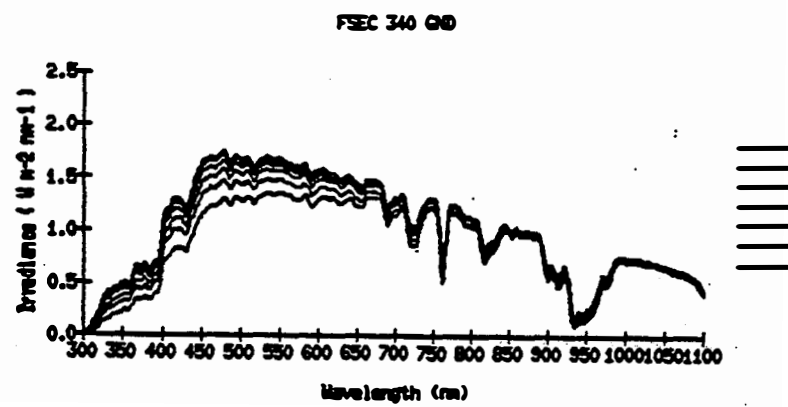
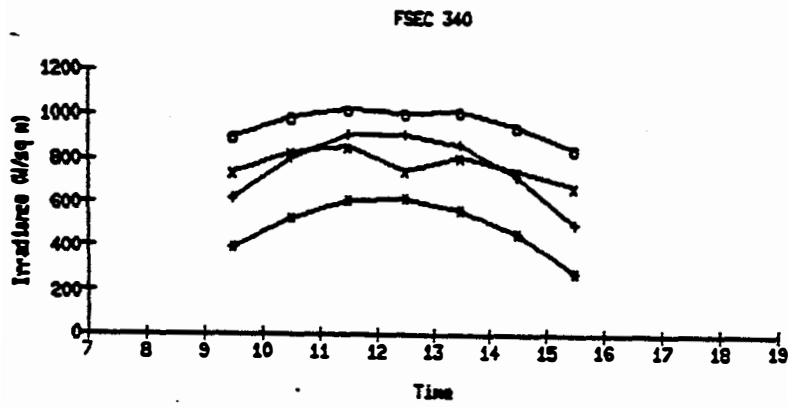
N FSEC86339  
 041 12 05 86 339 218  
 NIP malfunction; readings are negative  
 Temp controller 39 C at 0900; 39 C at 1500  
 Overcast  
 Photos: 0830 M (processing problems)  
 1630 G (Missing 12-5 0930 through  
 12-5 1530)

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 No spectra



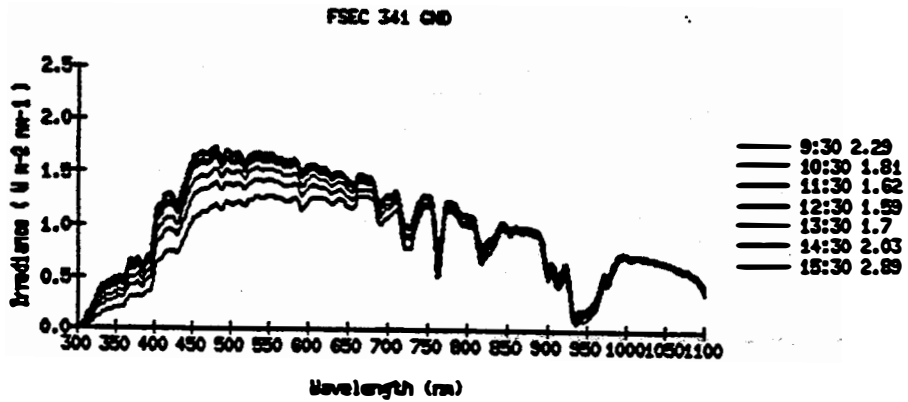
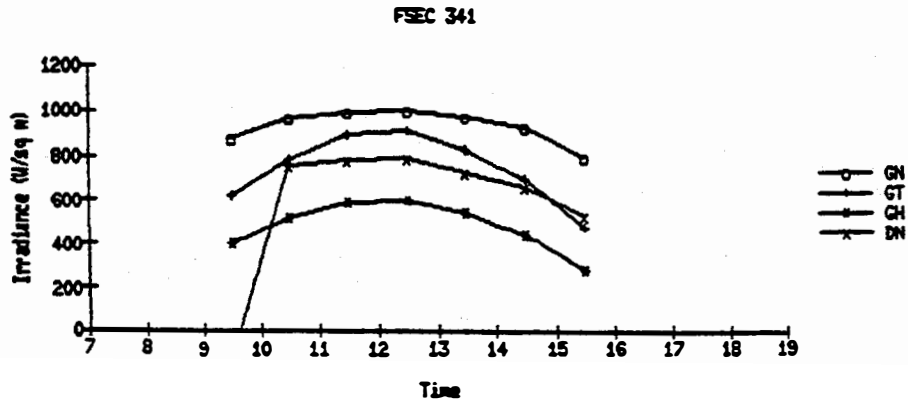


N FSEC86340  
 042 12 06 86 340 218  
 Clear to partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

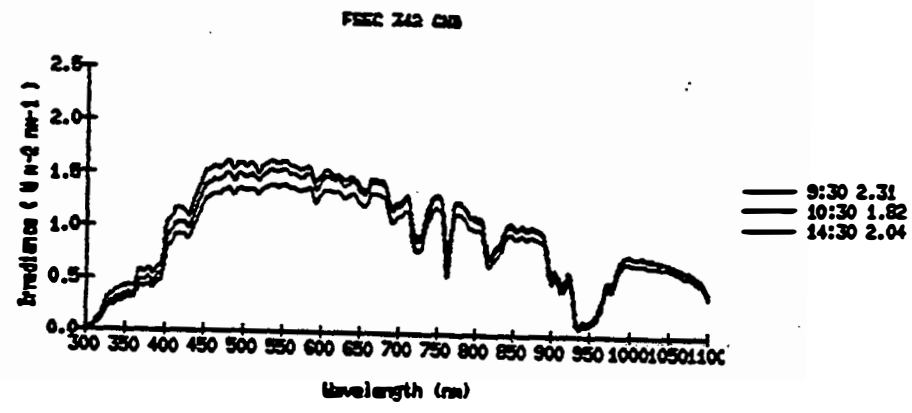
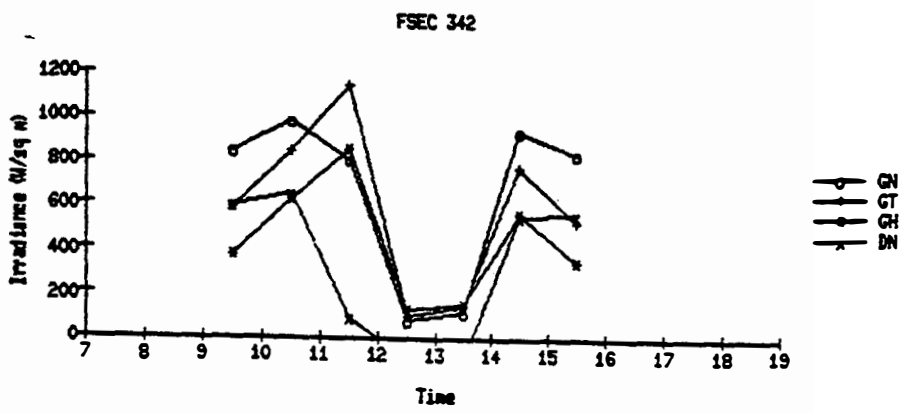


N FSEC86341  
 043 12 07 86 341 218  
 NIP malfunction; readings negative (intermittent) during morn  
 Partly cloudy  
 Photos: 0830 G (water drops)  
 0930 G (water drops)  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G (scratch)  
 1530 G  
 1630 G

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 NIP reading -99 at 0930



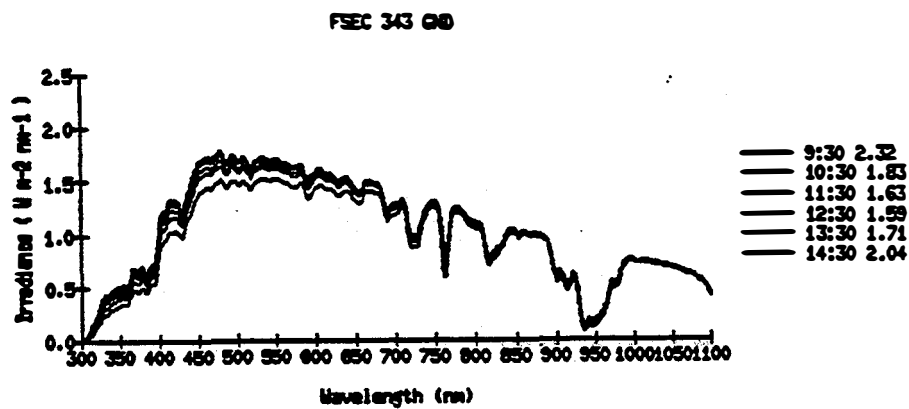
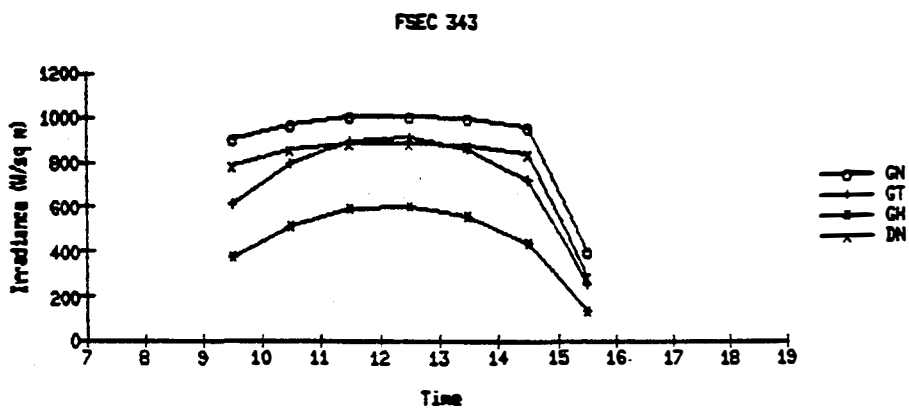
N FSEC86342  
 044 12 08 86 342 218  
 NIP malfunction; negative readings  
 Temp controller 40 C at 1400  
 Partly cloudy to overcast  
 Slides: 1030 G  
           1130 G  
           1230 G  
           1330 G  
           1430 G  
           1530 G  
           1630 G



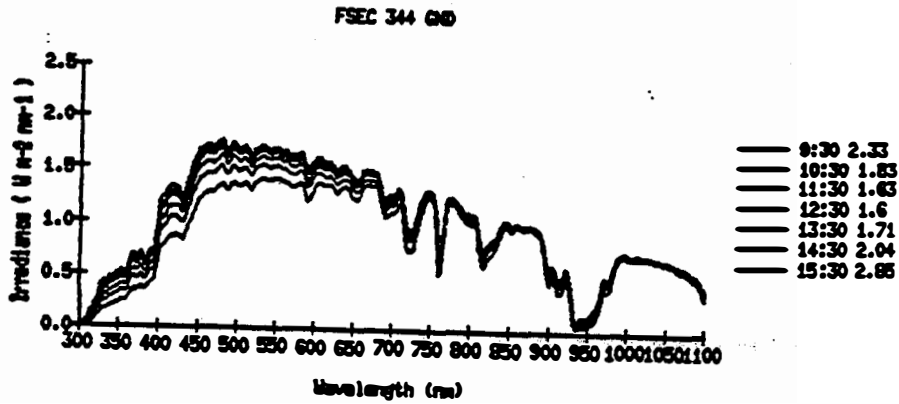
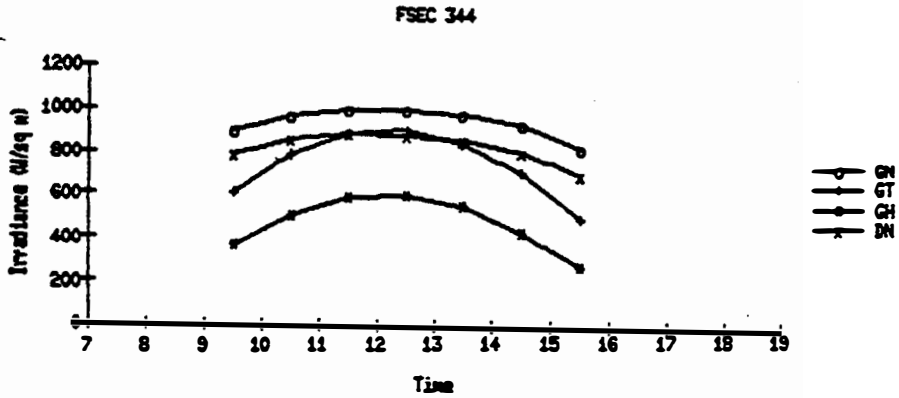


N FSEC86343  
 045 12 09 86 343 218  
 Temp controller 40 C at 1000

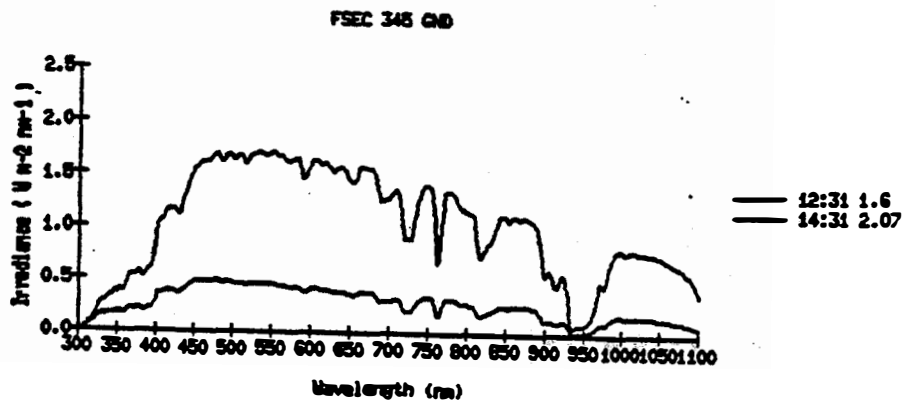
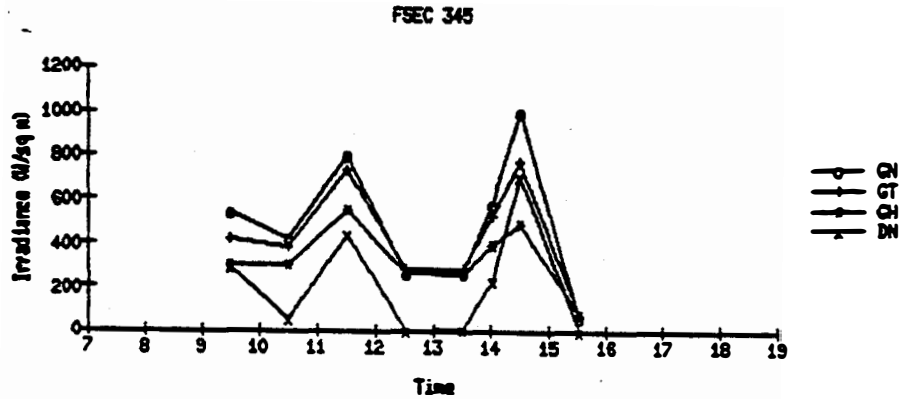
Clear  
 Slides: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



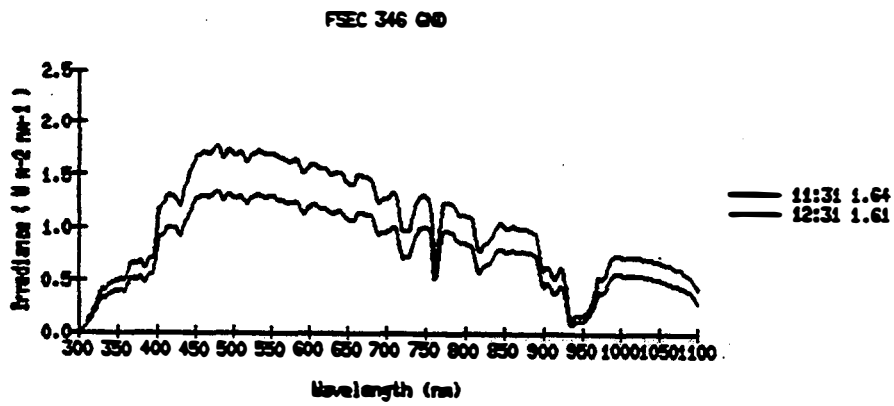
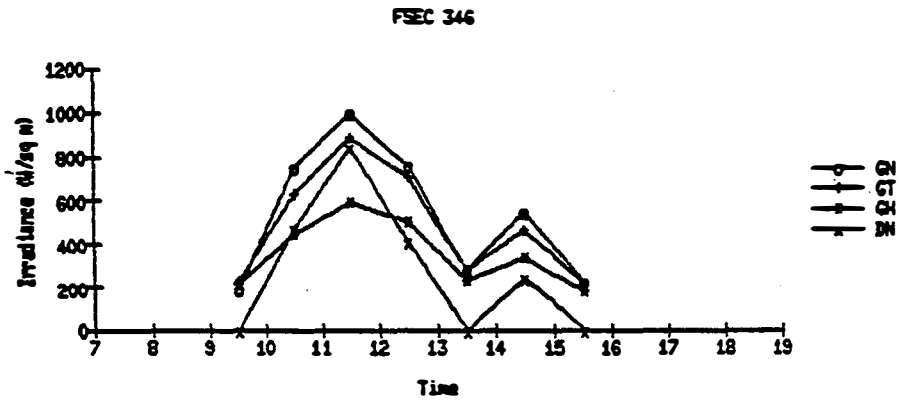
N FSEC86344  
 046 12 10 86 344 218  
 Clear  
 Slides: 0830 M (dew?)  
 0930 M (dew?)  
 1030 M (dew?)  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



N FSEC86345  
 047 12 11 86 345 218  
 Temp controller 40 C at 0900  
 Partly cloudy  
 Slides: 0830 G  
           0930 G  
           1030 G  
           1130 G  
           1230 G  
           1330 G (water drops)  
           1430 G (water drops)

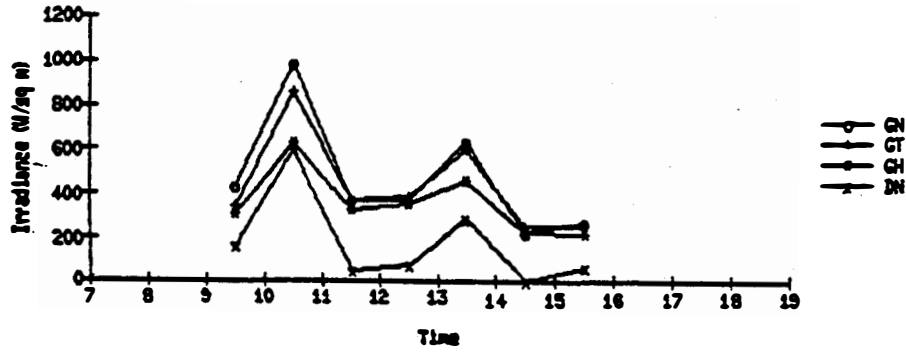


N FSEC86346  
 048 12 12 86 346 218  
 Temp controller 39 C at 0810; 40 C at 1230  
 No photos

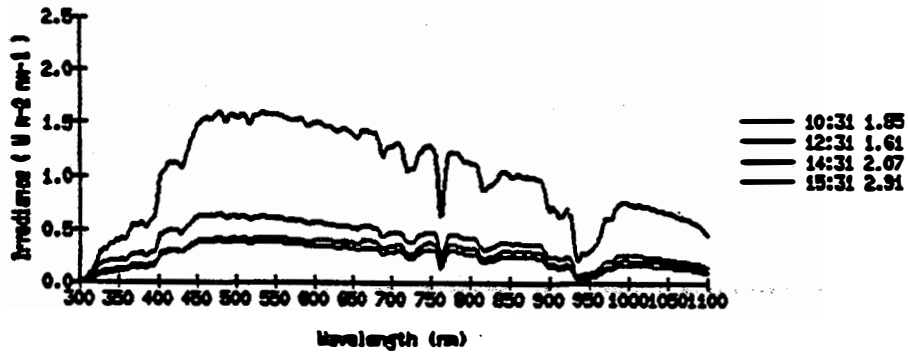


N FSEC86347  
 049 12 13 86 347 218  
 Partly cloudy  
 No photos

FSEC 347



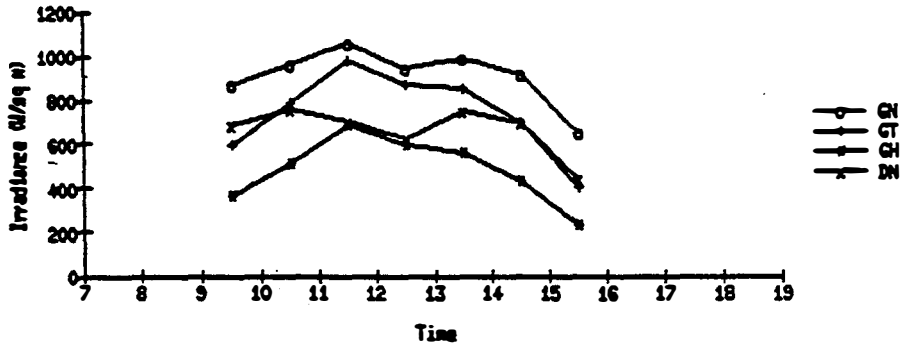
FSEC 347 GND



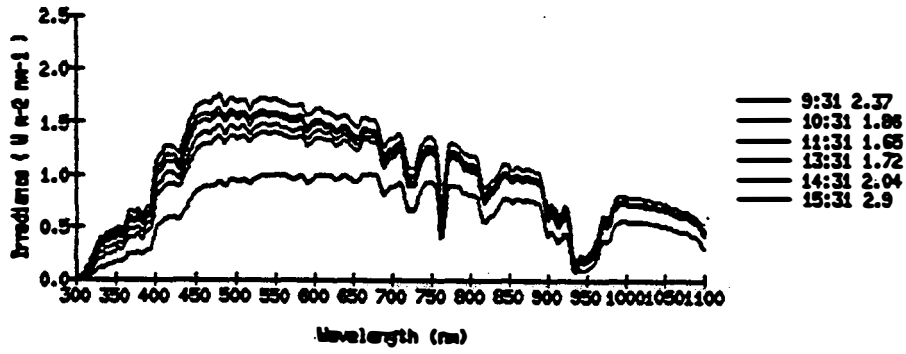


N FSEC86348  
 050 12 14 86 348 218  
 Partly cloudy  
 No photos

FSEC 348

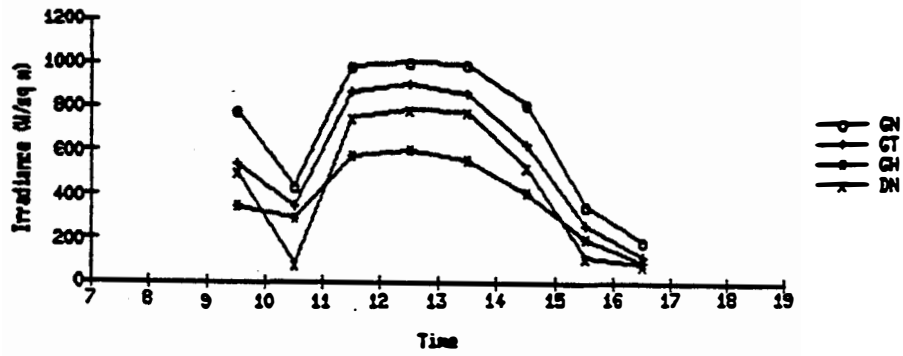


FSEC 348 GND

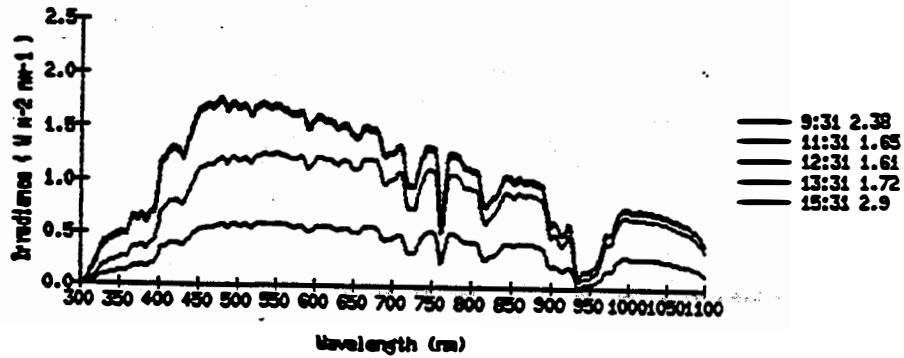


N FSEC86349  
 051 12 15 86 349 218  
 Temp controller 40 C at 1100  
 Partly cloudy  
 Slides: 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

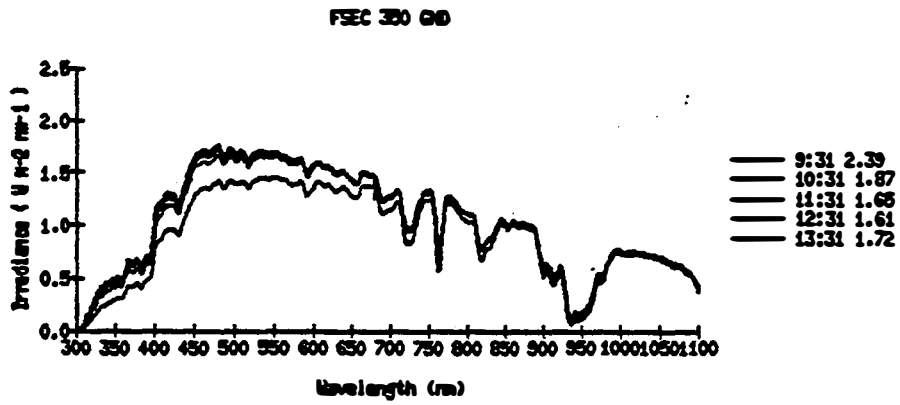
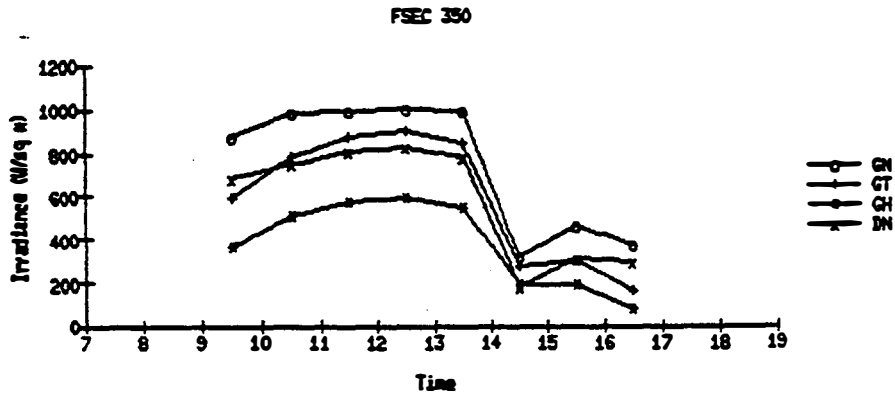
FSEC 349



FSEC 349 GND



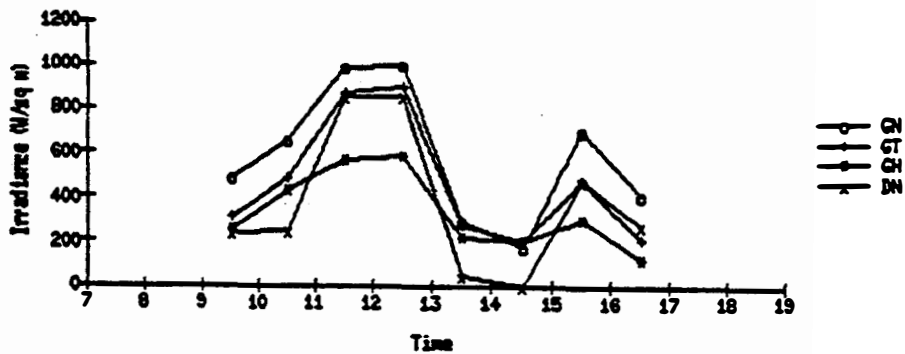
N FSEC86350  
 052 12 16 86 350 218  
 Temp controller 39 C at 0815; 39 C at 1610  
 Partly cloudy to overcast, then becoming clear  
 Slides: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



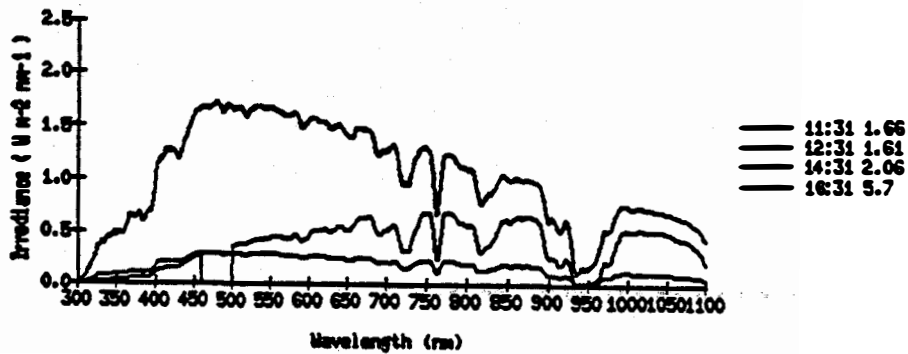
N FSEC86352  
 053 12 18 86 352 218  
 Replaced NIP; old = 14306E6, cal 8.43 x 10<sup>-6</sup> V/Wm<sup>-2</sup>  
 new = 23943E6, cal 6.08 x 10<sup>-6</sup> V/Wm<sup>-2</sup>  
 No net data 1230-1430  
 Temp controller 40 C at 0830; 40 C at 1315  
 Partly cloudy  
 Photos: 0830 P (processing problem)  
 0930 P  
 1030 P  
 1130 M  
 1230 M  
 1330 G  
 1430 G  
 1530 M  
 1630 M

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 LSR integral bad at 1631; missing data in spectrum in near-IR

FSEC 352

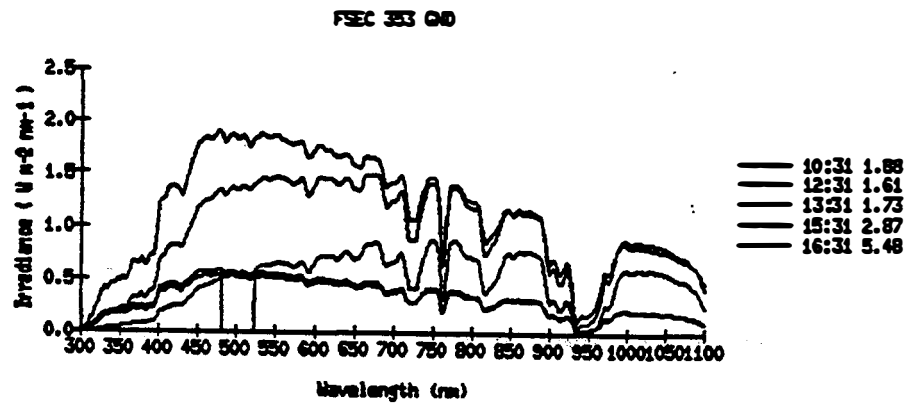
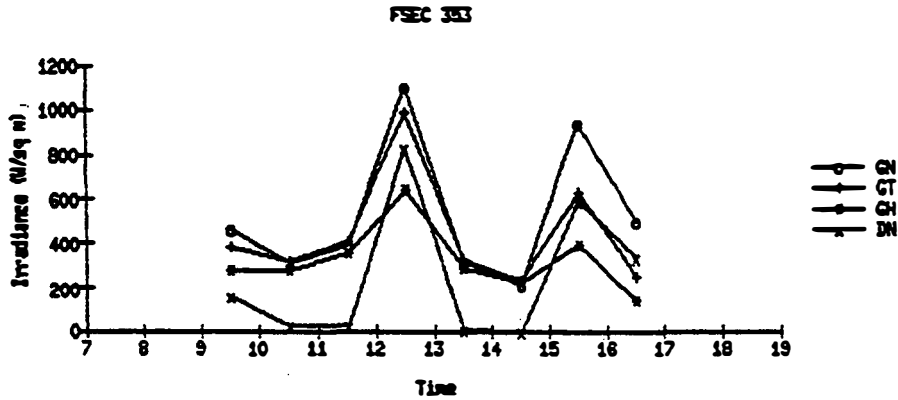


FSEC 352 GND



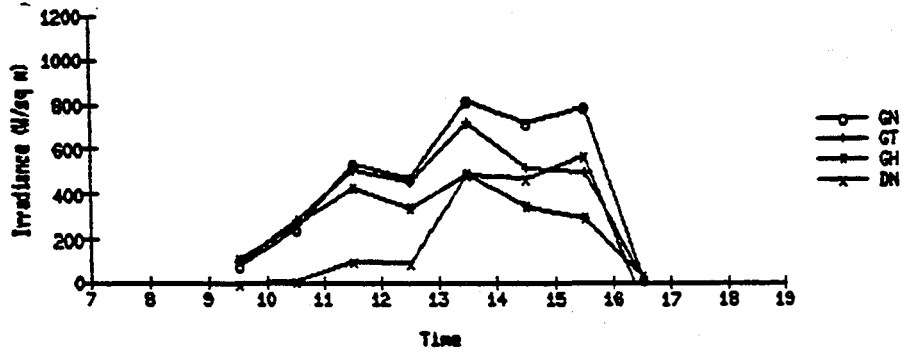
N FSEC86353  
 054 12 19 86 353 218  
 Temp controller 39 C at 0830; 40 C at 1320  
 Partly cloudy to overcast  
 No photos

LSR integral at 1631 bad; missing data in spectrum in visible

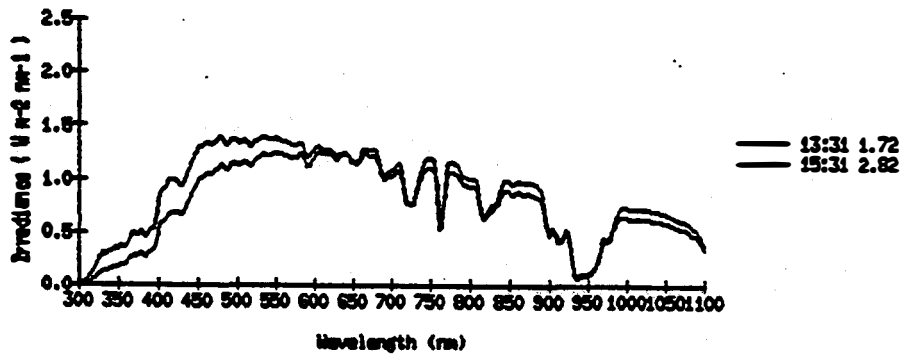


N FSEC86354  
 055 12 20 86 354 218  
 Cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

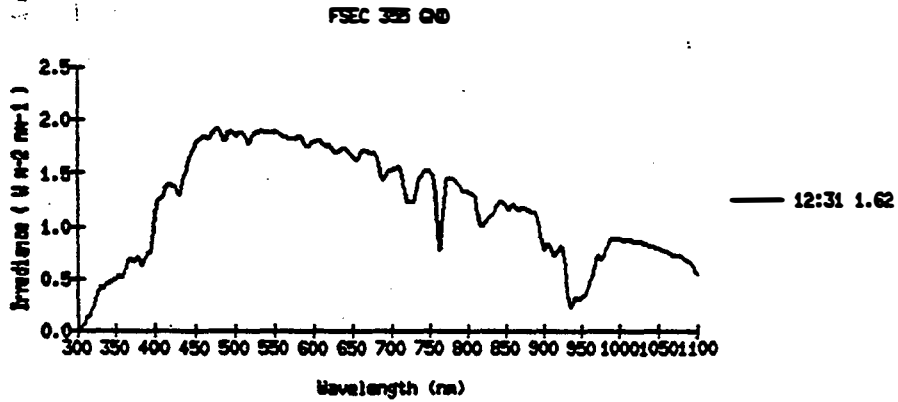
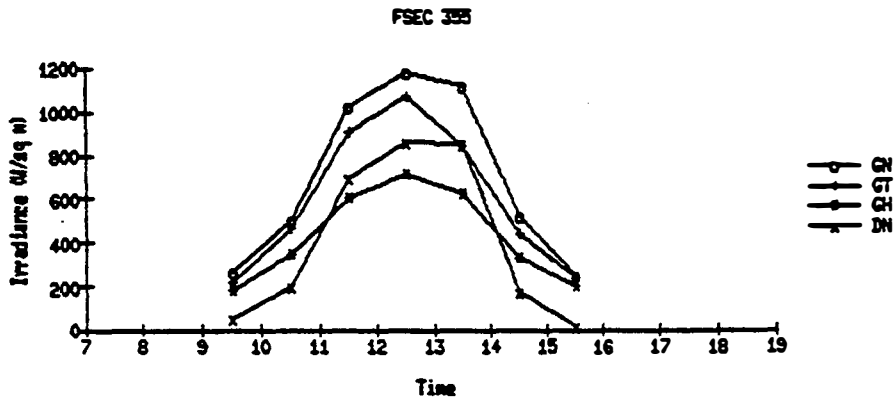
FSEC 354



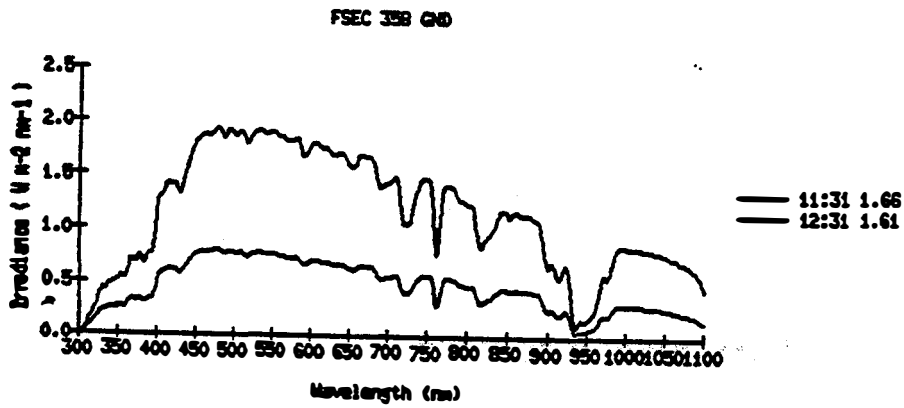
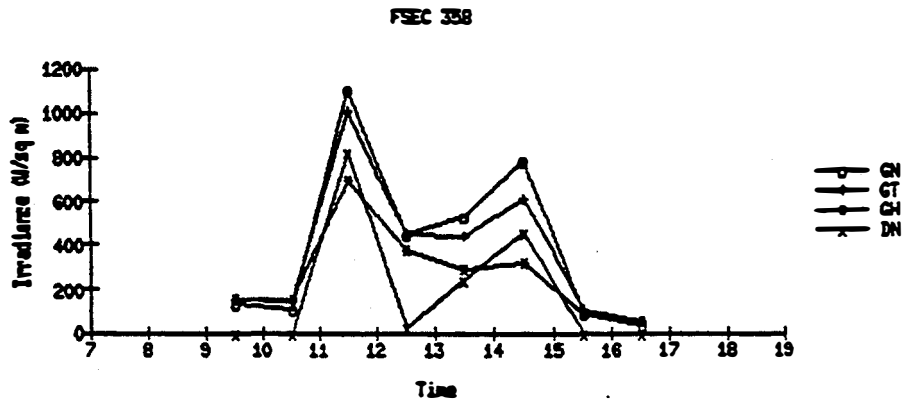
FSEC 354 GND



N FSEC86355  
 056 12 21 86-355 218  
 Cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

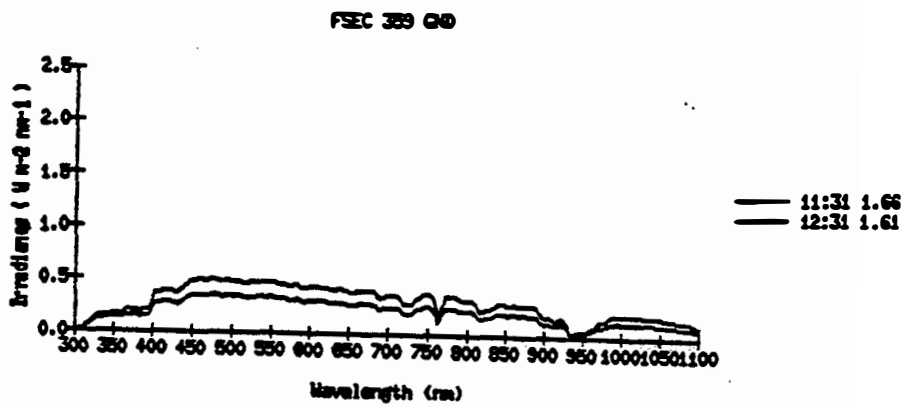
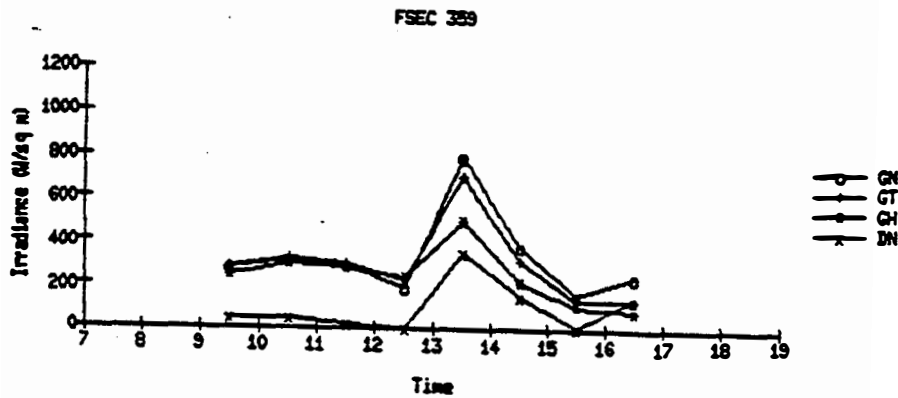


N FSEC86358  
 057 12 24 86 358 218  
 Temp controller 39 C at 0820  
 Cloudy  
 Photos: 0830 G  
           0930 G  
           1030 G  
           1130 G  
           1230 G  
           1330 G  
           1430 G  
           1530 G  
           1630 G



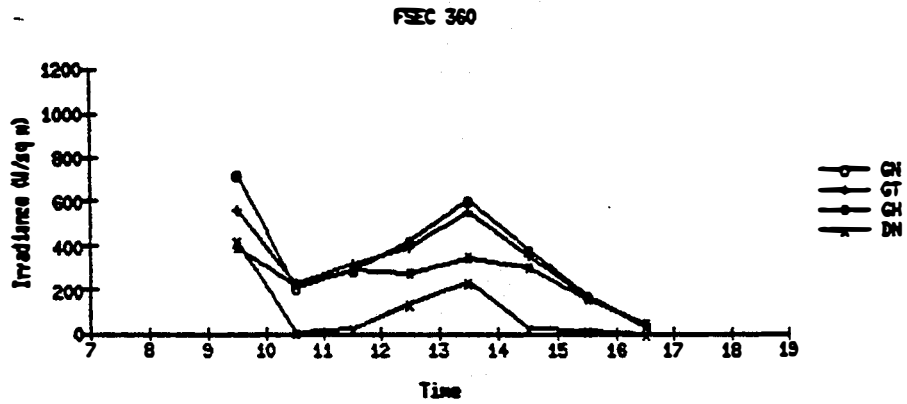


N FSEC6359  
 058 12 25 86 359 218  
 Partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



N FSEC86360  
 059 12 26 .86 360 218  
 Partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

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 No spectral data

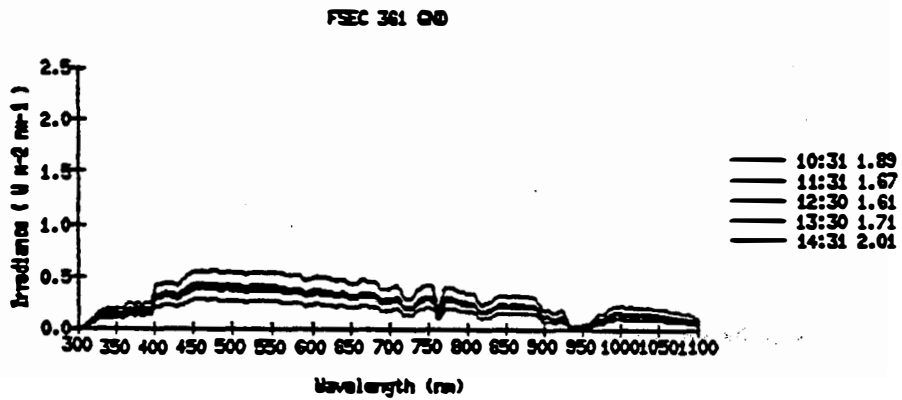
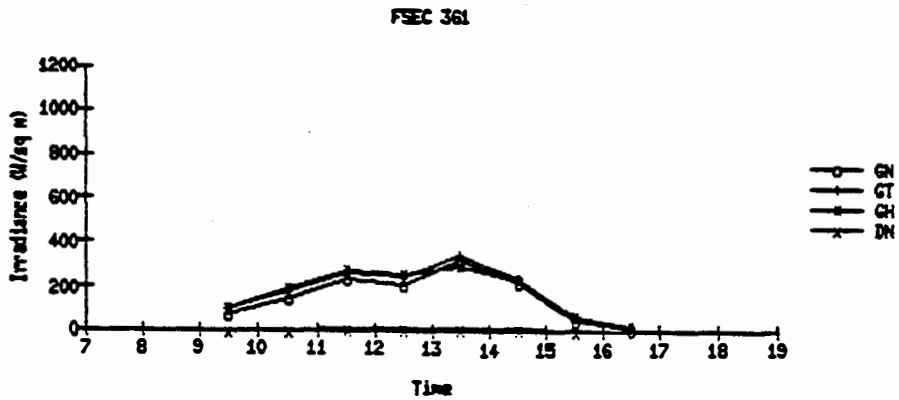


N FSEC86361  
060 12 27 86 361 218

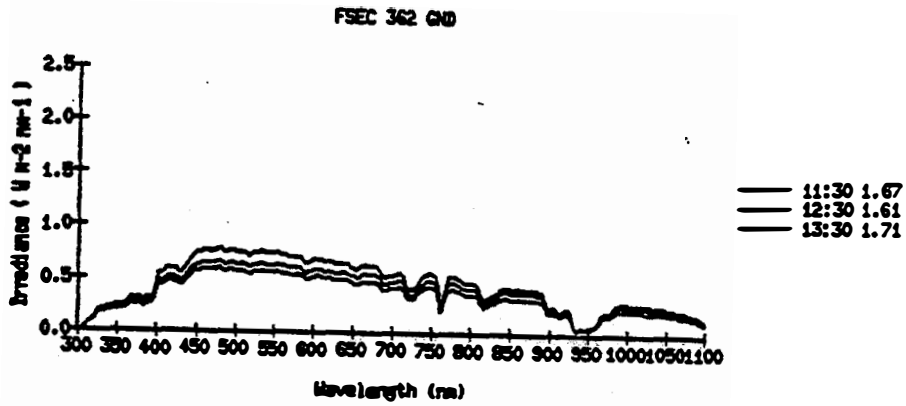
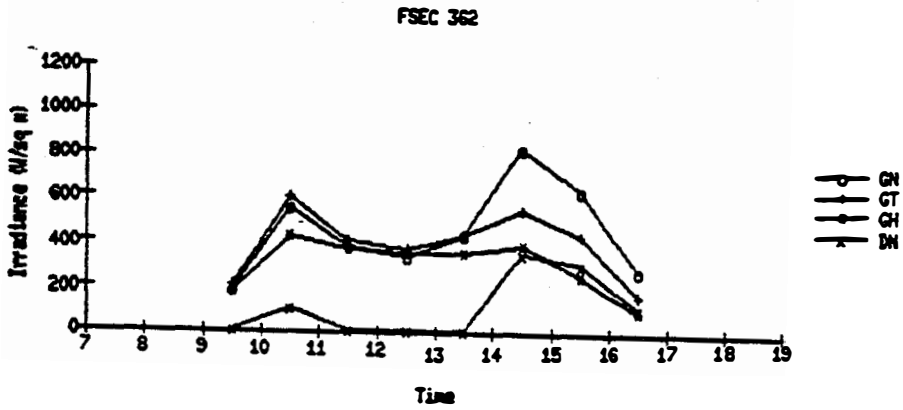
Cloudy

Photos: 0830 G  
0930 G (water drops)  
1030 G  
1130 G  
1230 G (water drops)  
1330 G (water drops)  
1430 G  
1530 G  
1630 G

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Appears to be flat spot in spectrum in near-IR at 1131 and 1230

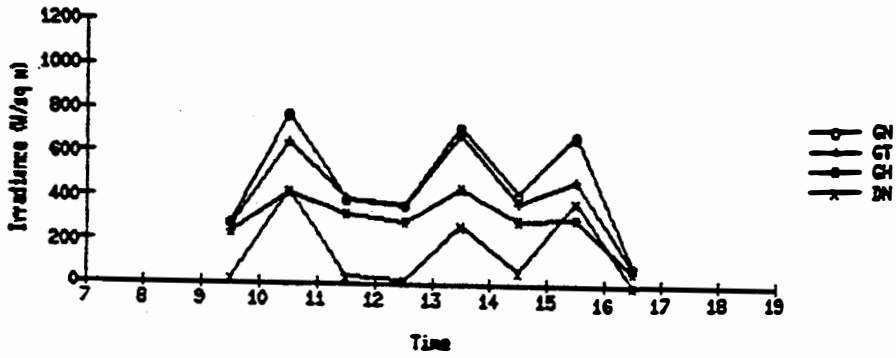


N FSEC86362  
 061 12 28 86 362 218  
 Partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

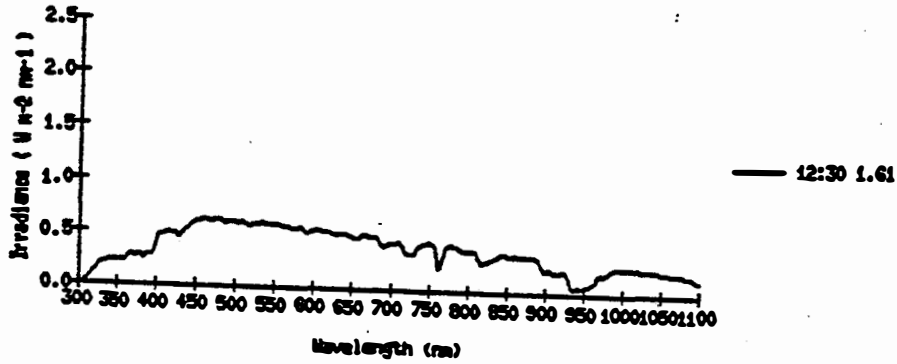


N FSEC86363  
 062 12 29 '86 363 218  
 Temp controller 39 C at 0820; 40 C at 1430  
 Scattered clouds  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 363

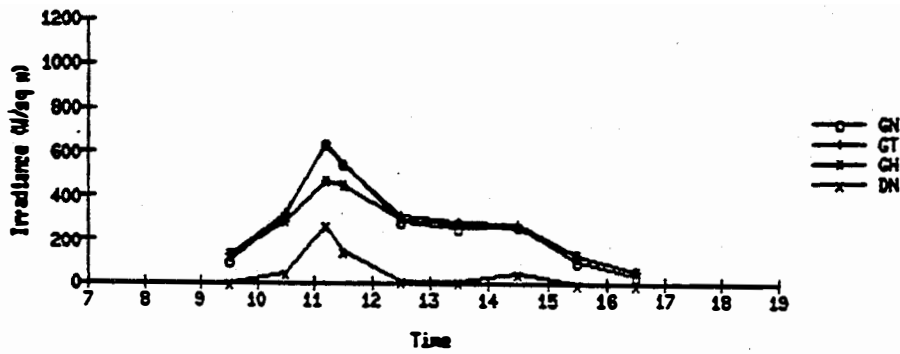


FSEC 363 CND

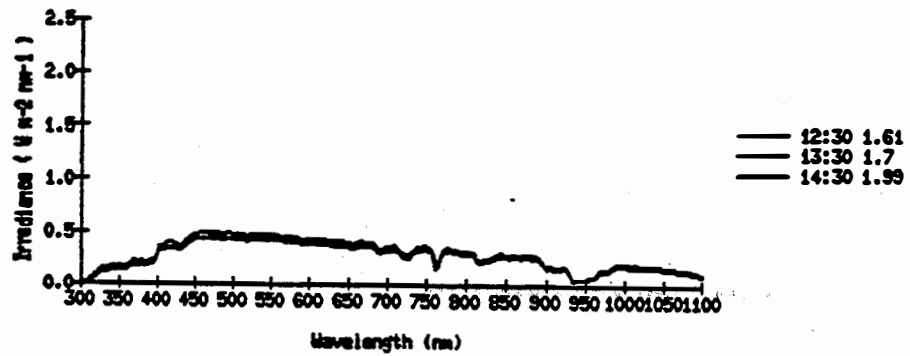


N FSEC86364  
 063 12 30 86 364 218  
 Temp controller 39 C at 0820; 40 C at 1445  
 Overcast  
 Photos: 0830 G (east and west are reversed)  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 364

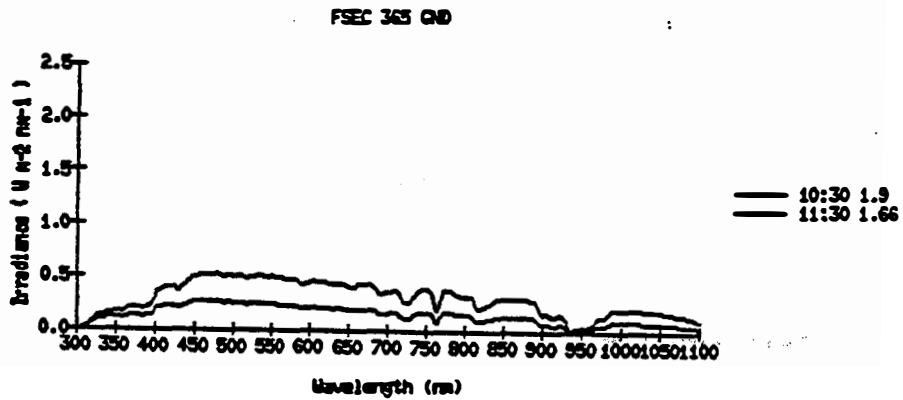
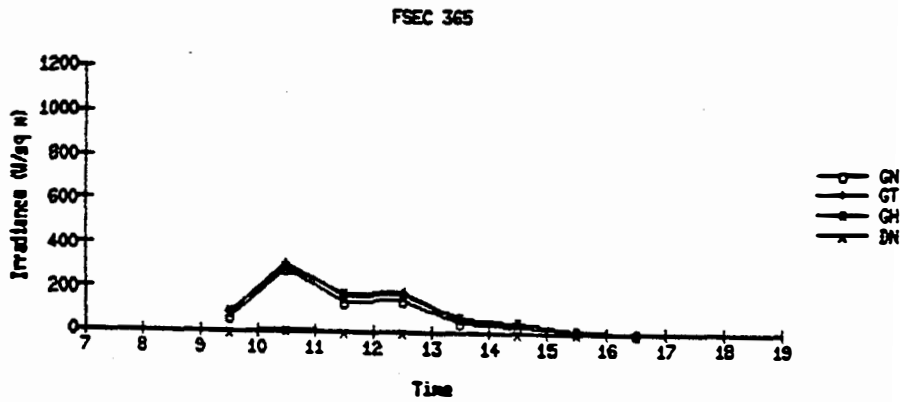


FSEC 364 GD



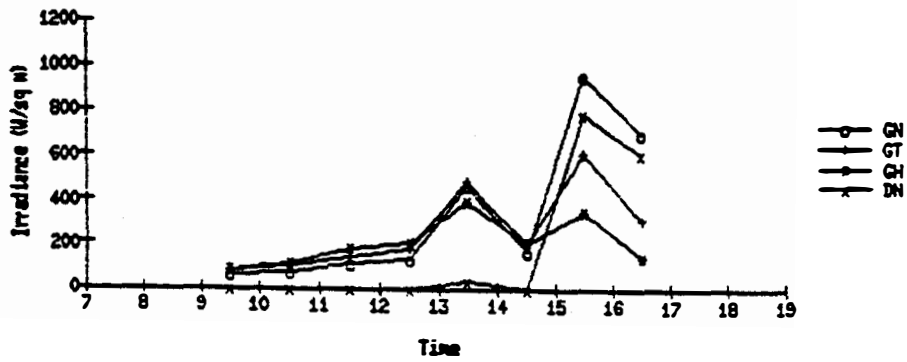
N FSEC86365  
 064 12 31 86 365 218  
 Temp controller 39 C at 0820  
 Cloudy  
 Photos: 0830 G (east and west are reversed)  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

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 Spectral integral = broadband value at 1130

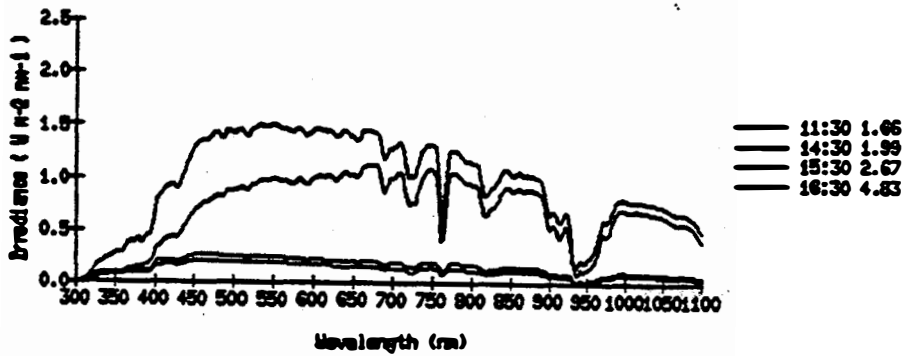


N FSEC87001  
 065 01 01 87 001 218  
 Cloudy  
 Photos: 0830 G (east and west are reversed)  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 1

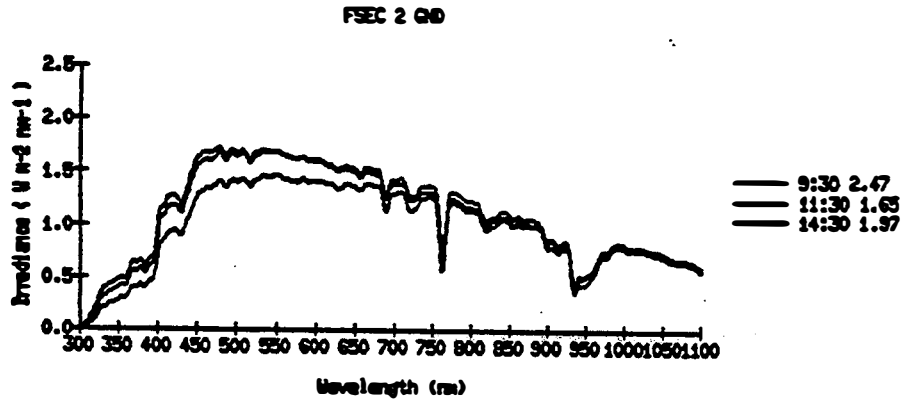
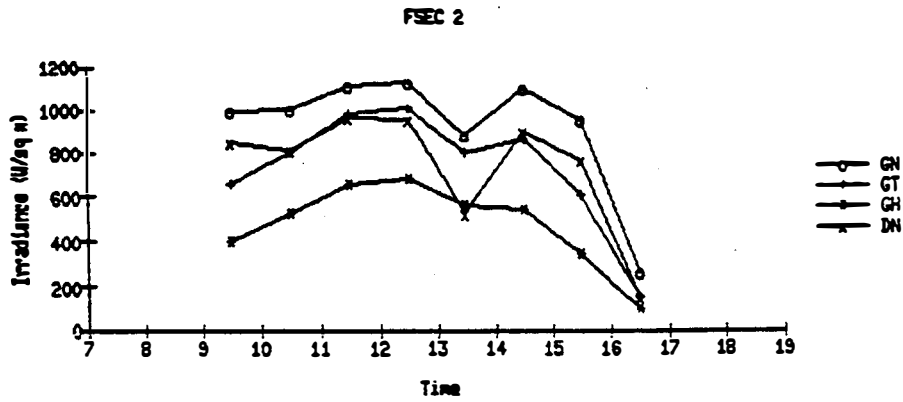


FSEC 1 GD

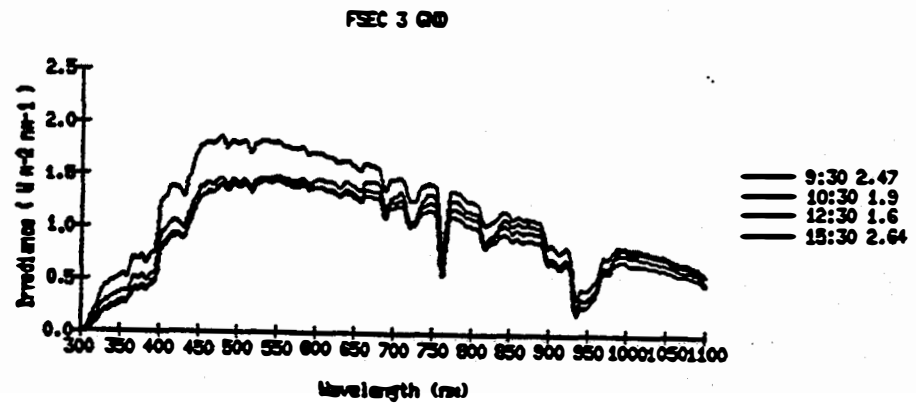
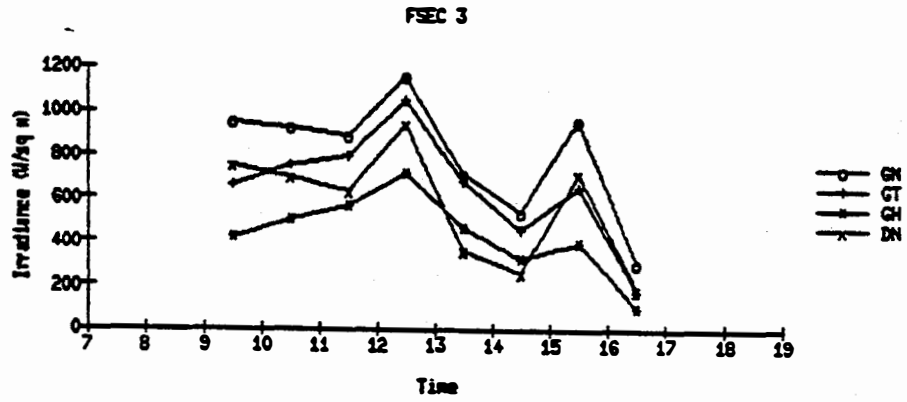




N FSEC87002  
 066 01 02 87 002 218  
 Temp controller 38 C at 0825  
 Clear  
 Photos: 0830 M (condensation) (east and west are reversed)  
 0930 M .  
 1030 M .  
 1130 M .  
 1230 M .  
 1330 M .  
 1430 M .  
 1530 M .  
 1630 M .

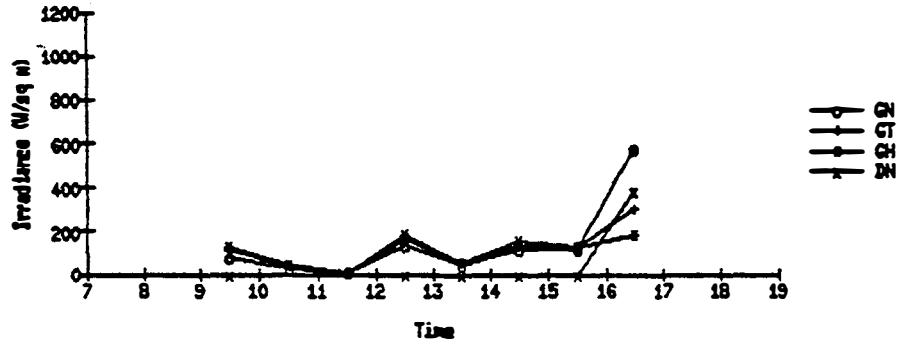


N FSEC87003  
 067 01 03 87-003 218  
 Partly cloudy  
 Photos: 0830 M (condensation) (east and west are reversed)  
 0930 M  
 1030 M  
 1130 M  
 1230 M  
 1330 M (water drops)  
 1430 M (water drops)  
 1530 M (water drops)  
 1630 G (water drops)

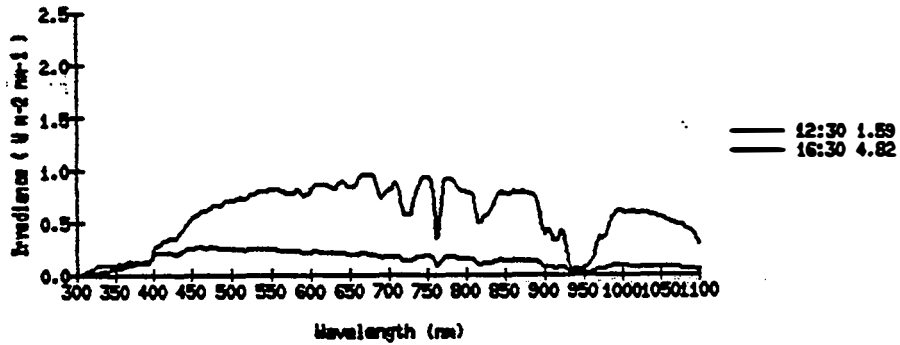


N FSEC87004  
 068 01 04 87 004 #18  
 Overcast; rain  
 Photos: 0830 G (east and west are reversed)  
 0930 P (processing problems)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P

FSEC 4

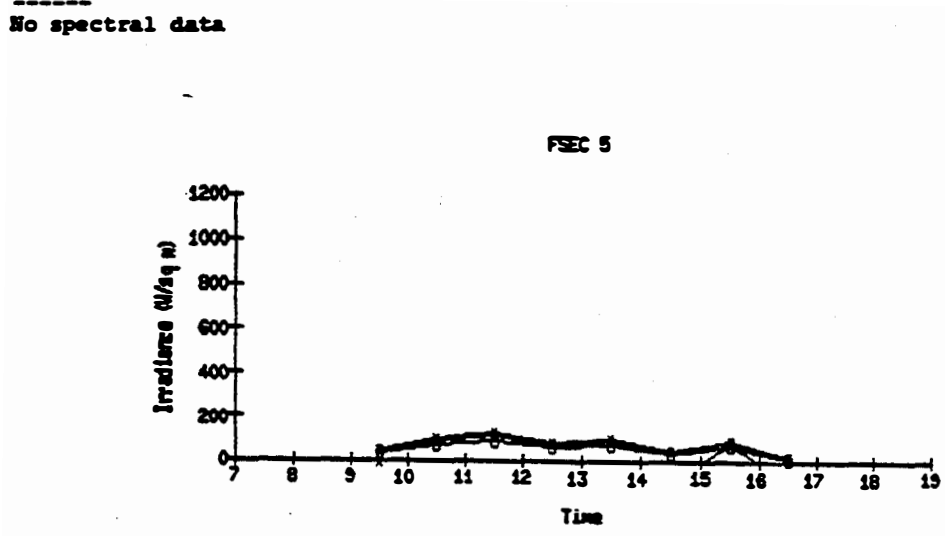


FSEC 4 GND

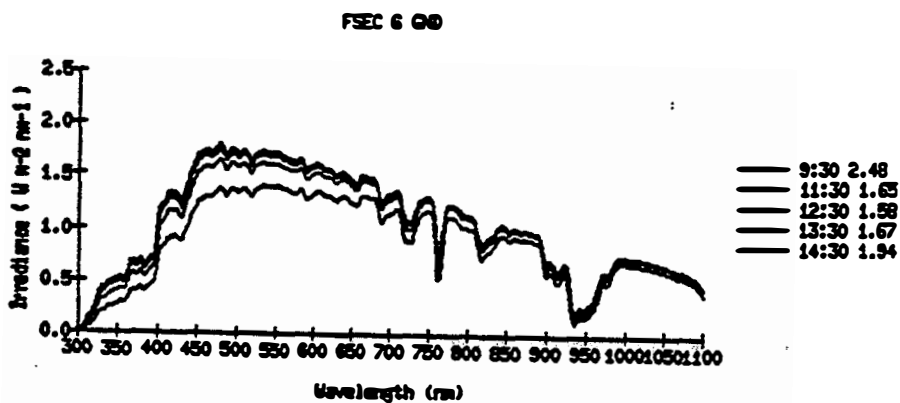
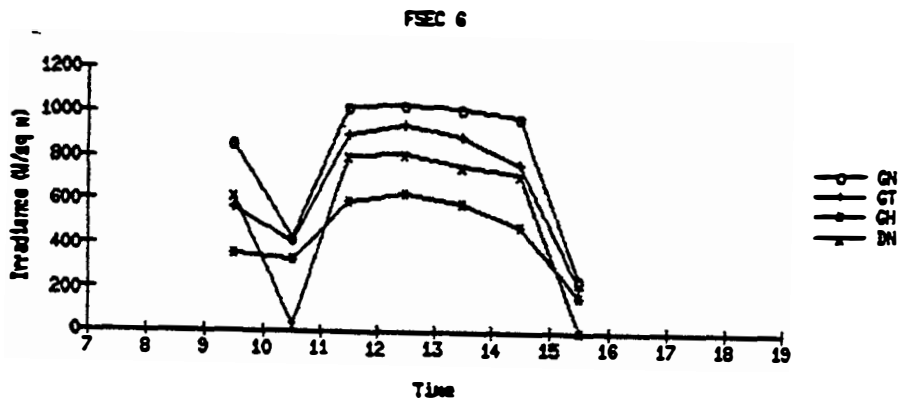


N FSEC87005  
 069 01 06 87 005 218  
 Temp controller 38 C at 1100  
 180 deg lens installed on all-sky camera  
 Overcast, windy  
 Photos: 1030 G  
           1130 G  
           1230 G  
           1330 G  
           1430 G  
           1530 G  
           1630 G

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 No spectral data

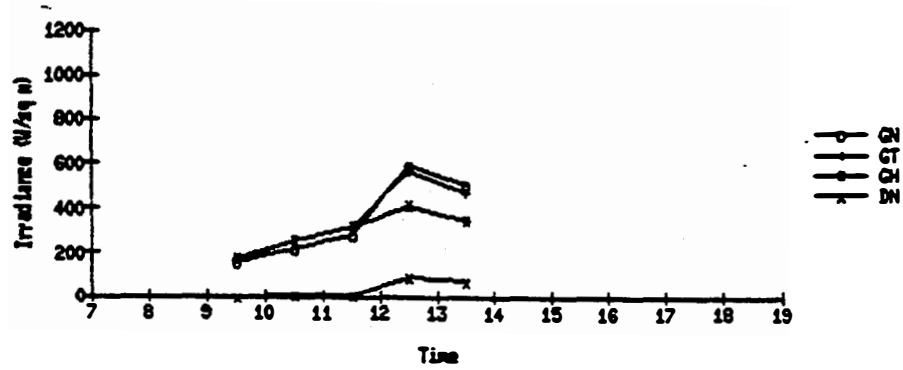


N FSEC87006  
 070 01 06 87 006 218  
 Temp controller 39 C at 0815; 39 C at 1130; 40 C at 1400  
 Slight adjustment of temp controller at 1345  
 Mostly clear  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

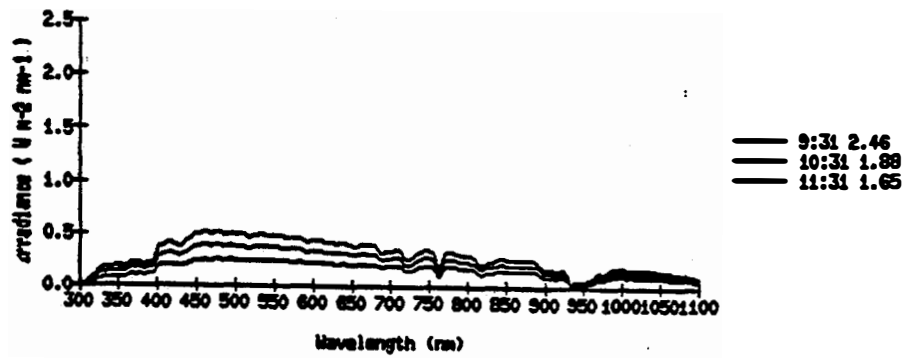


N FSEC87007  
 071 01 07 87 007 218  
 Temp controller 39 C at 0930  
 Overcast, becoming partly cloudy.  
 Photos: Power outage 0830-0930  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 7

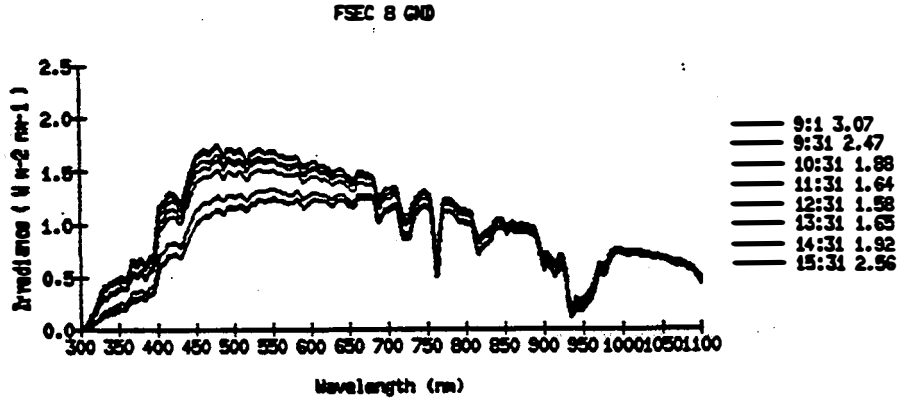
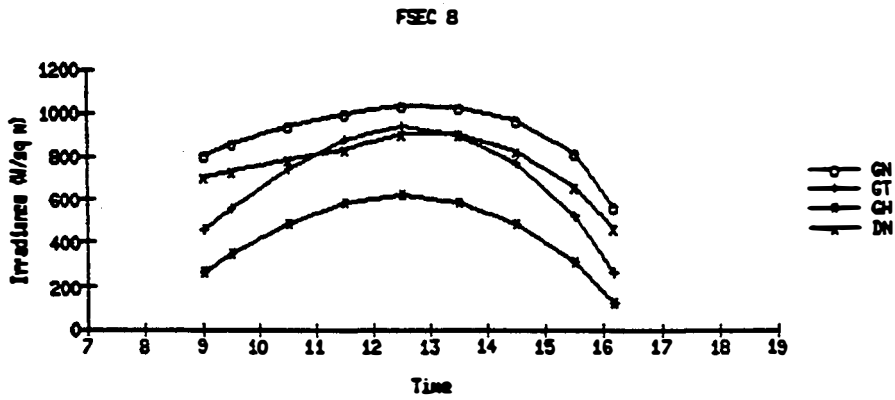


FSEC 7 GND



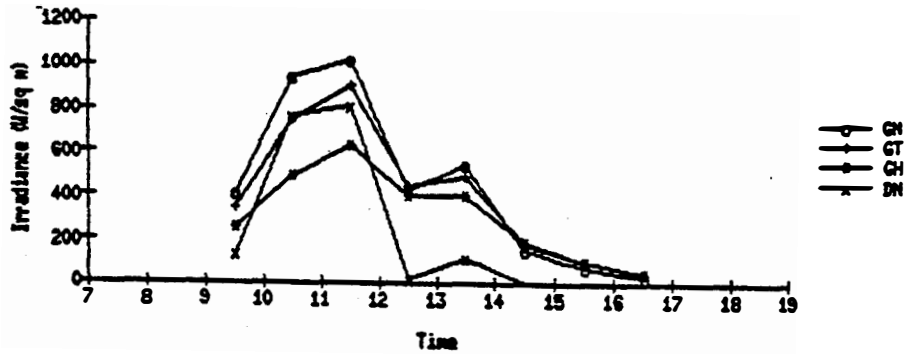


N FSEC87008  
 072 01 08 87-008 218  
 Temp controller 39 C at 0900; 40 C at 1330  
 Mostly clear  
 Photos: 0830 M (condensation)  
 0930 M .  
 1030 M .  
 1130 M .  
 1230 M .  
 1330 M .  
 1430 M .  
 1530 M .  
 1630 M .

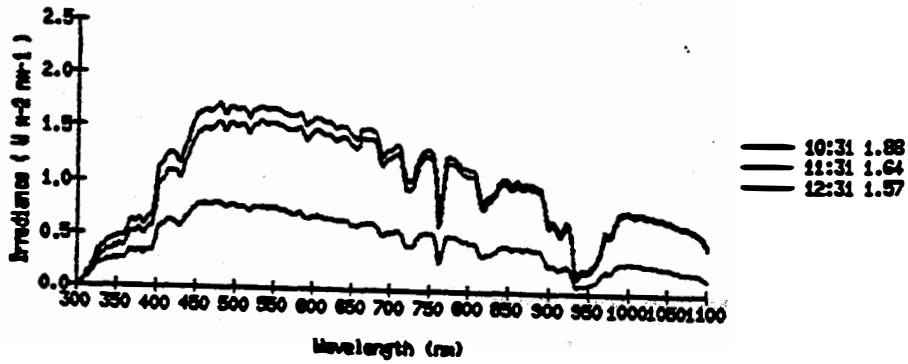


N FSEC87009  
 073 01 09 87 009 218  
 Temp controller 39 C at 1000; 38 C at 1500  
 Partly cloudy, becoming overcast  
 Photos: 0830 M (condensation)  
 0930 M  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 9



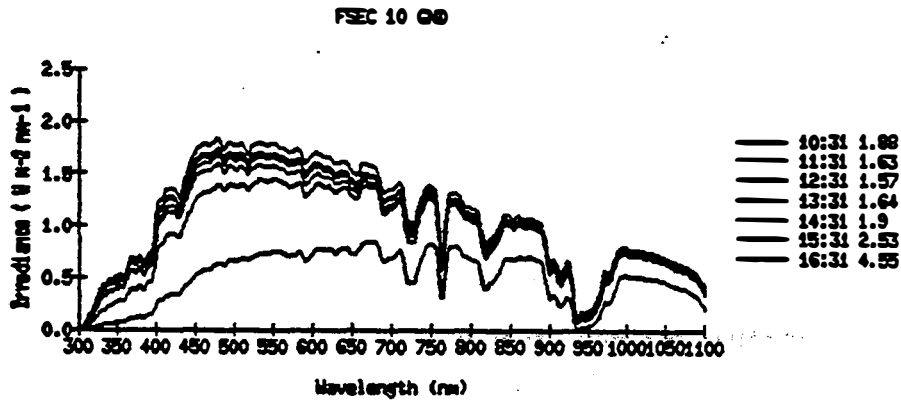
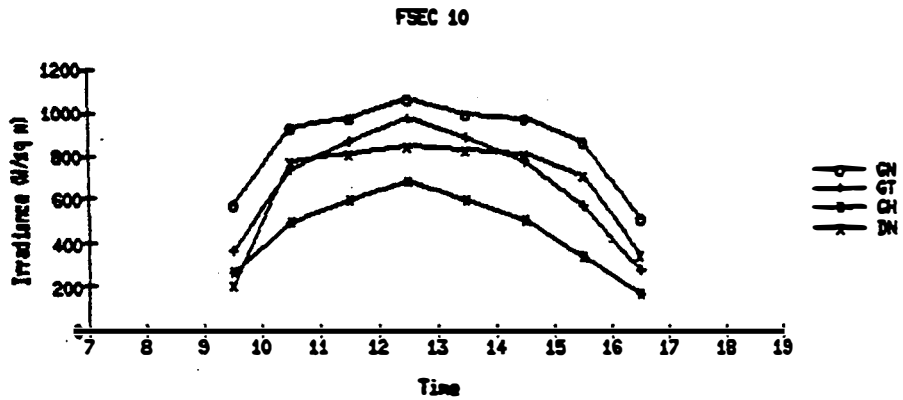
FSEC 9 GIB



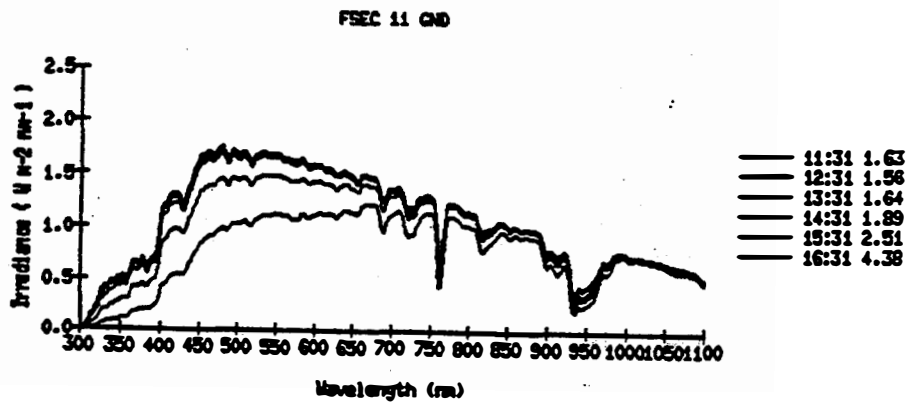
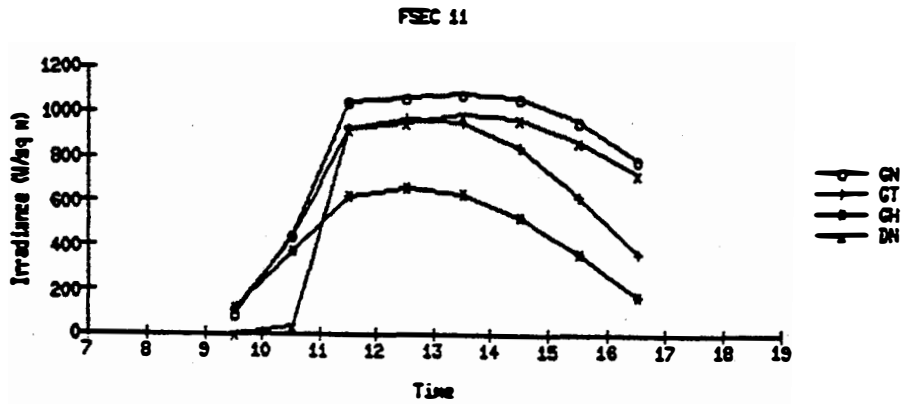


N FSEC87010  
 074 01 10 87 010 218  
 Partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

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 Small flat spot in spectrum about 600 nm (?) at 1631

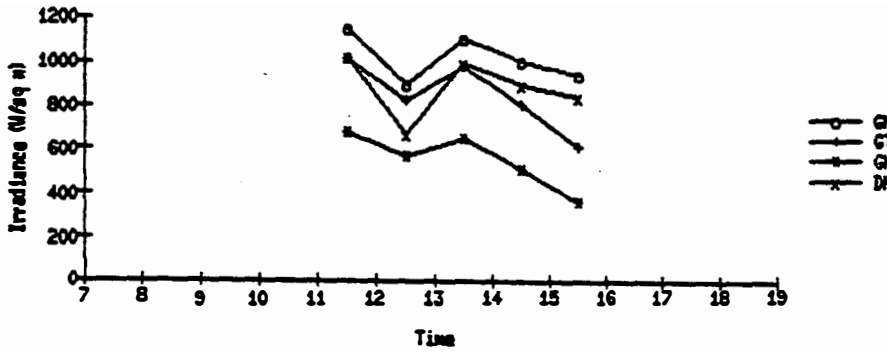


N FSEC87011  
 075 01 11 87 011 218  
 Overcast, becoming mostly clear at 1100  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

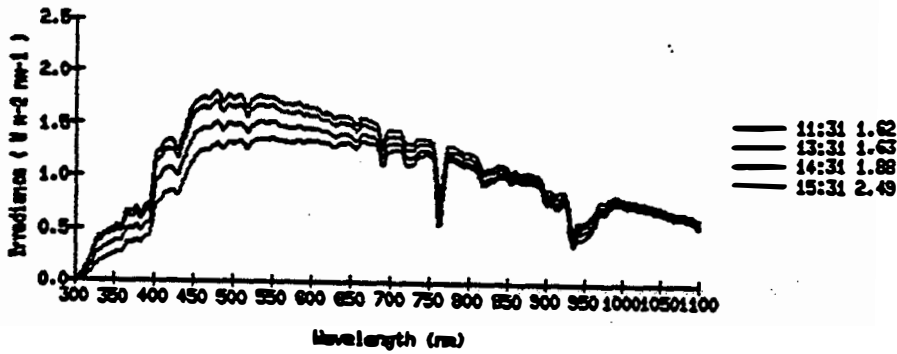


N FSEC87012  
 076 01 12 87 012 218  
 Temp controller 38 C at 0830; 39 C at 1230; 40 C at 1530  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

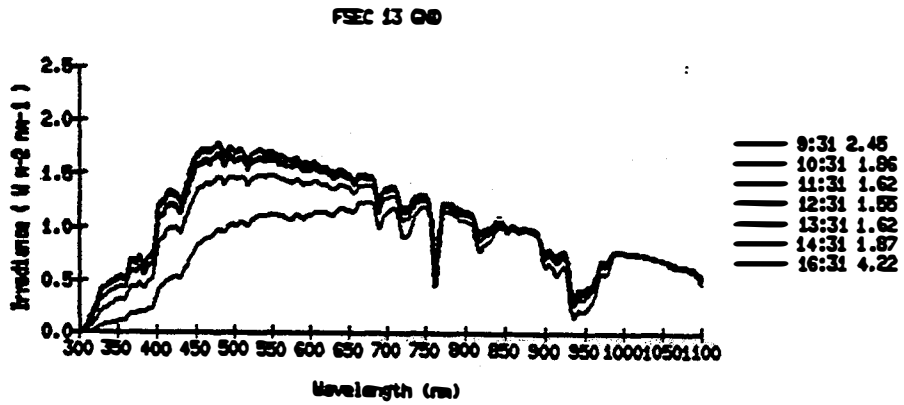
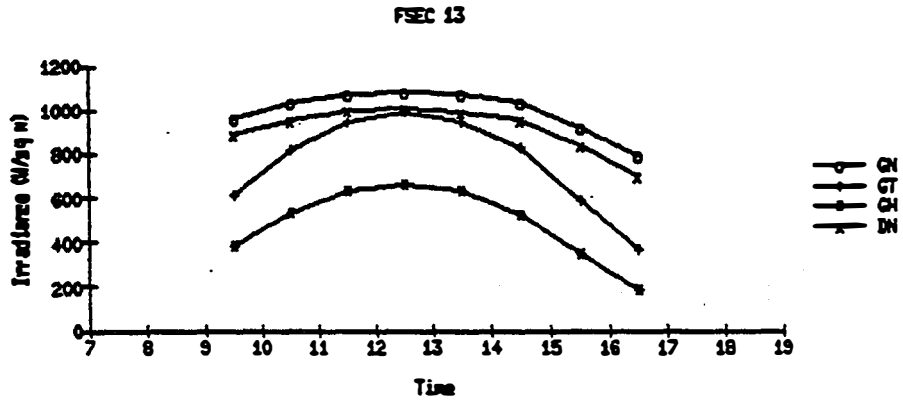
FSEC 12



FSEC 12 G40

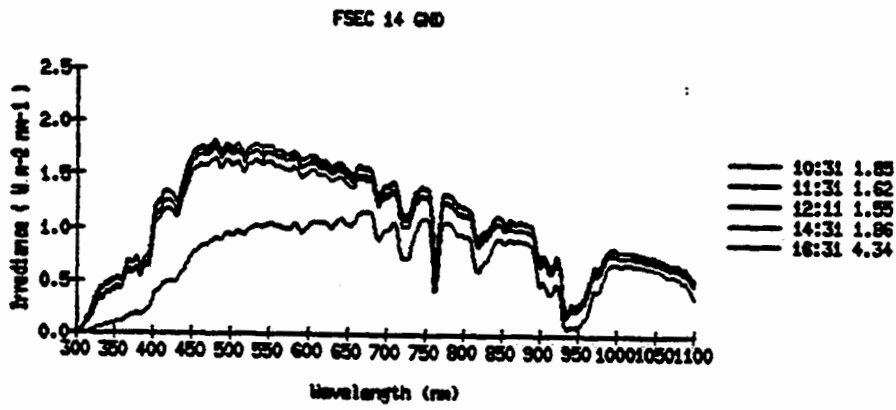
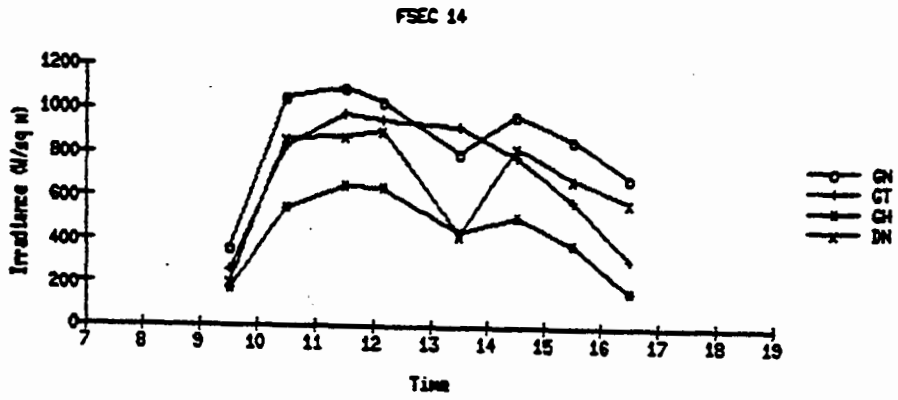


N FSEC87013  
 077 01 13 87 013 218  
 Temp controller 39 C at 0815; 40 C at 1430.  
 Clear at 0900 and 1430  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



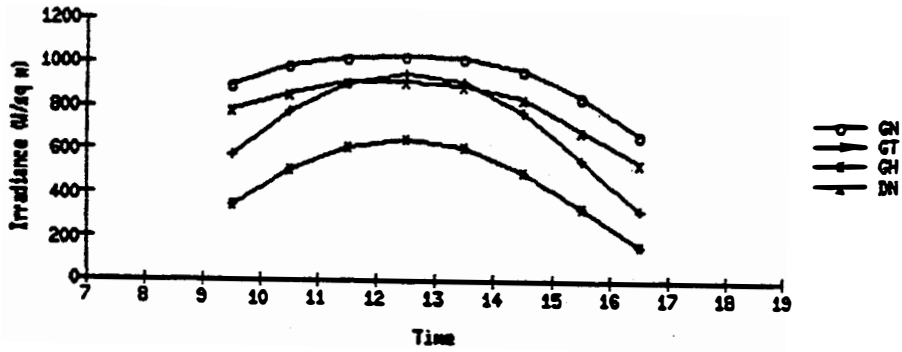
N FSEC87014  
 078 01 14 87 014 218  
 Temp controller 39 C at 0815; 41 C at 1230; 41 C at 1530  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

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 Note time stamp differences 1211 vs. 1231

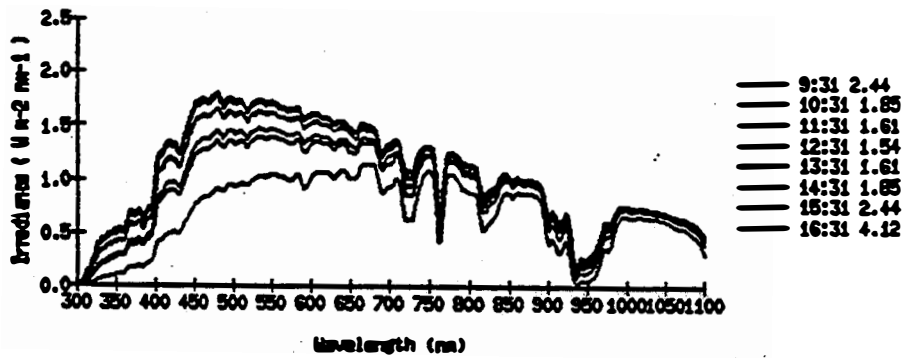


N FSEC87015  
 079 01 15 87 015 218  
 Temp controller 40 C at 1030  
 Clear at 1030; 0.1 cloud cover at 1530  
 Photos: 0830 M (condensation)  
 0930 M (condensation)  
 1030 P (processing problems)

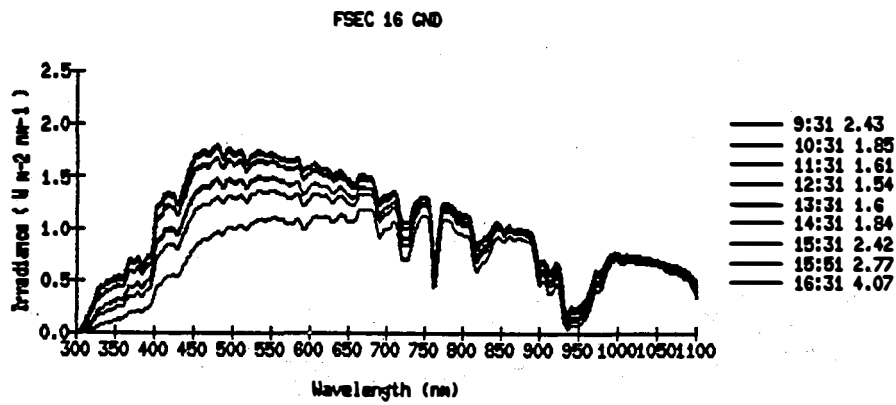
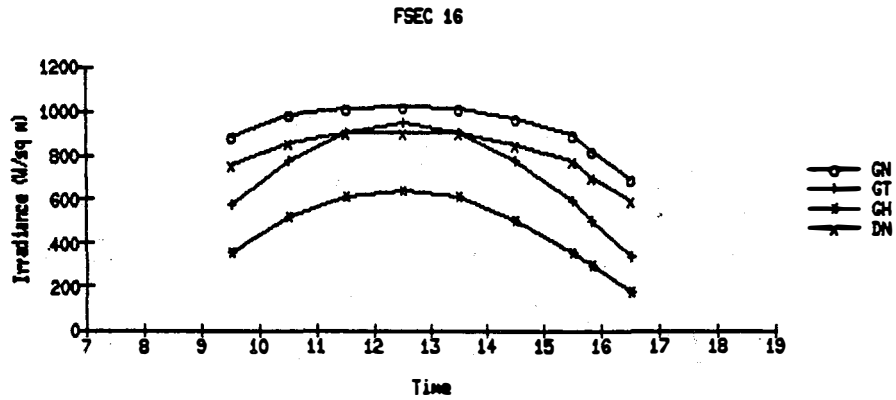
FSEC 15



FSEC 15 CND

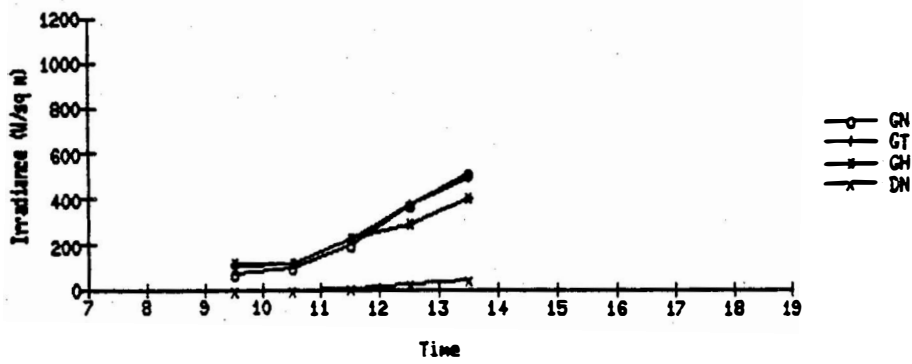


N FSEC87016  
 080 01 16 87 016 218  
 Temp controller 40 C at 0815; 41 C at 1430  
 0.1 cloud cover at 0830; clear at 1430  
 No photos

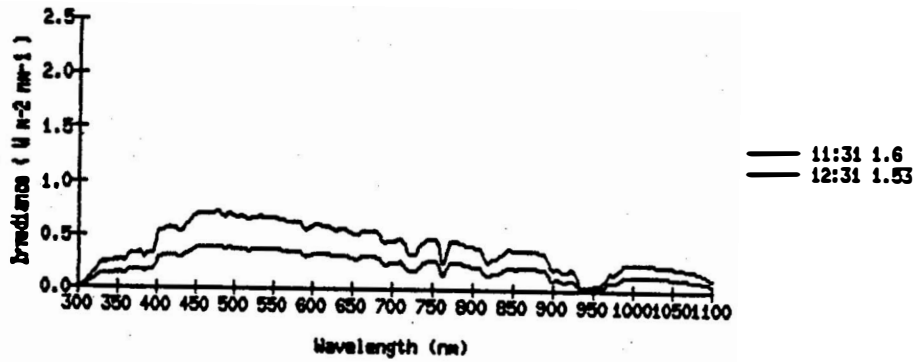


N FSEC87017  
 081 01 17 87 017 218  
 Power interrupt; trackers quit at 1400  
 Partly cloudy  
 No photos

FSEC 17



FSEC 17 QND

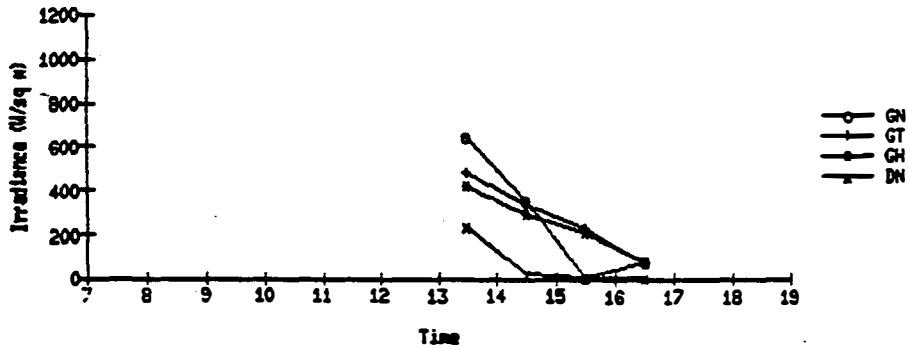




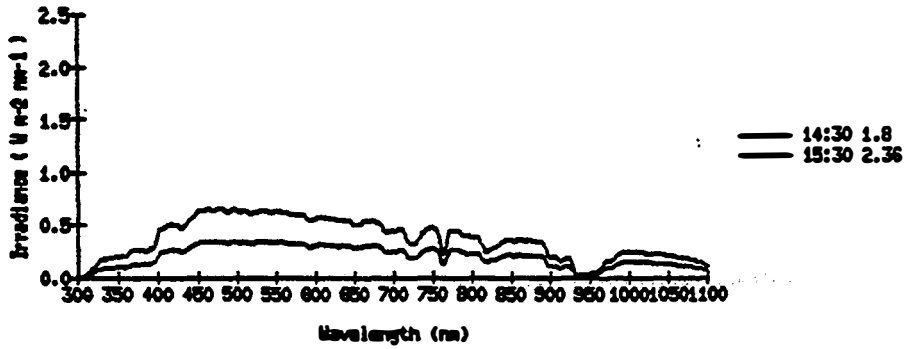
N FSEC87020  
 082 01 20 87 020 218  
 Temp controller 40 C at 1300  
 Partly cloudy; 0.8 cloud cover at 1300  
 No photos

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 GN bef/after is bad at 1530

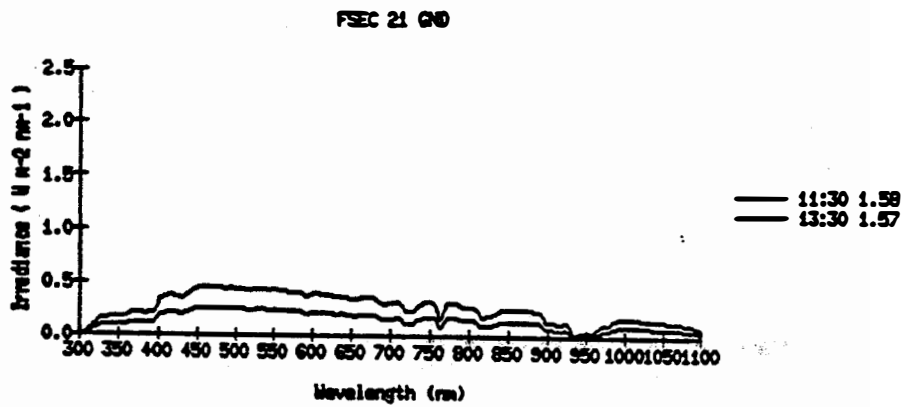
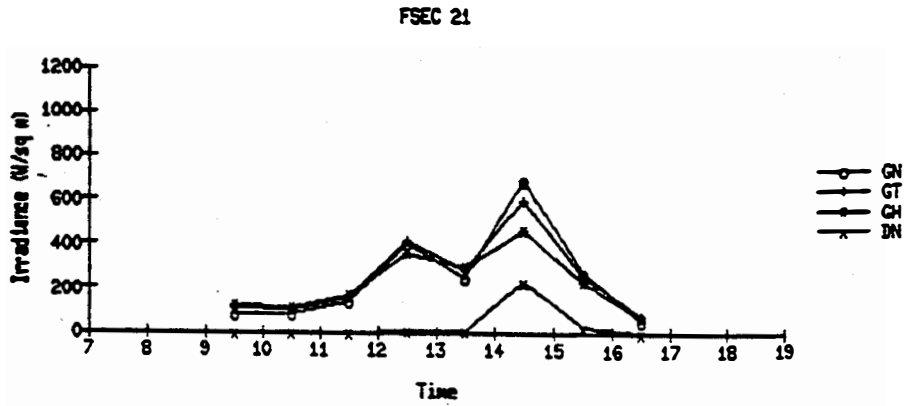
FSEC 20



FSEC 20 GND

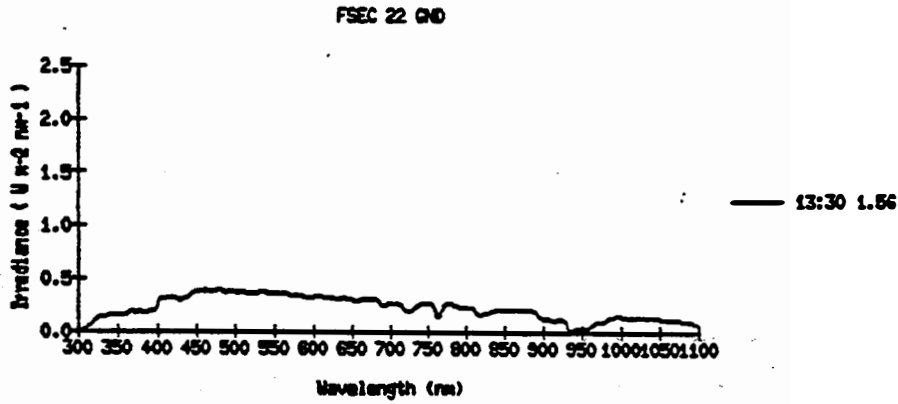
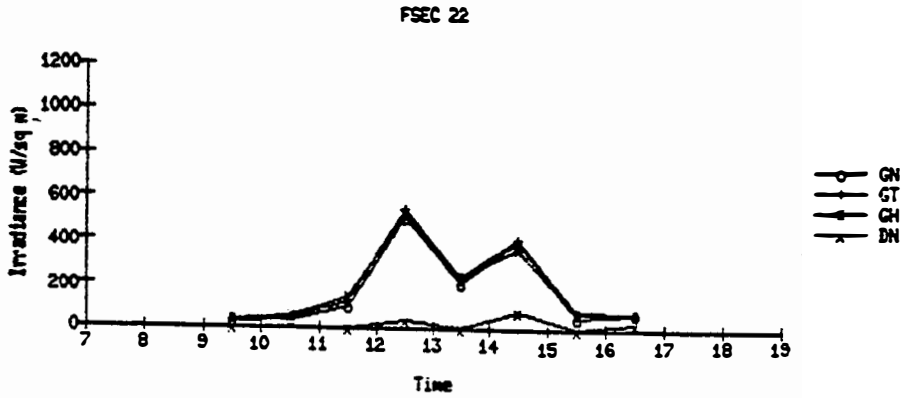


N FSEC87021  
 083 01 21 87 021 218  
 Temp controller 39 C at 0830  
 Overcast at 0830; 0.9 cloud cover at 1530  
 No photos



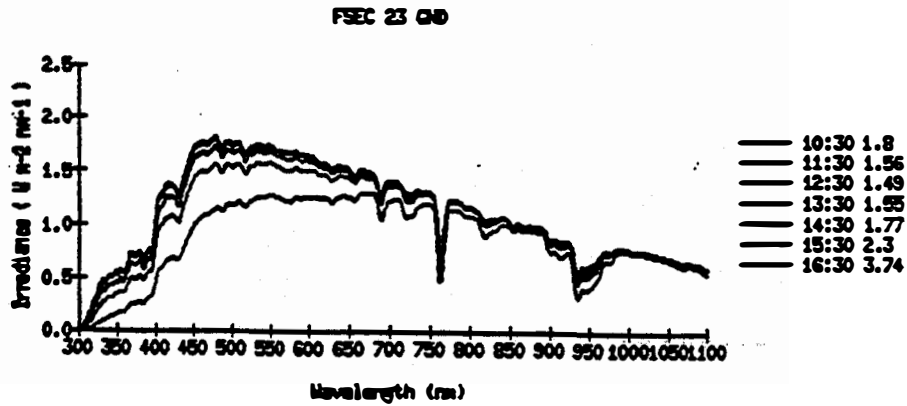
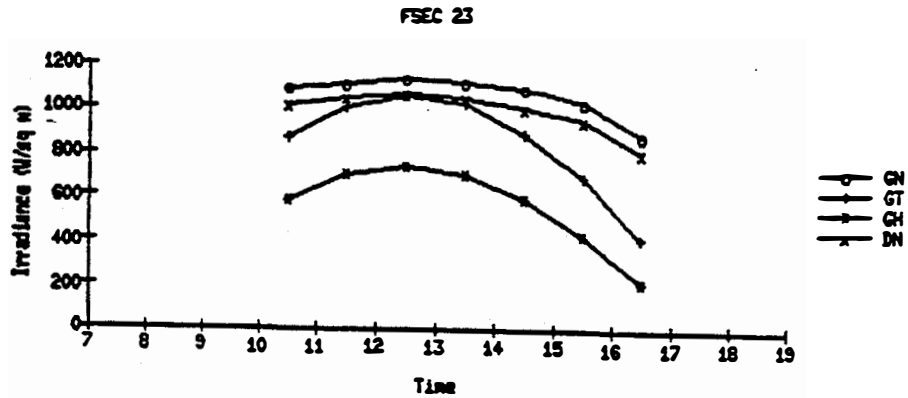
N FSEC87022  
 084 01 22 87 022 218  
 Temp controller 39 C at 0830  
 Overcast at 0830; rain 1000-1100; 1.0 cloud cover at 1530  
 No photos

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 No spectral data

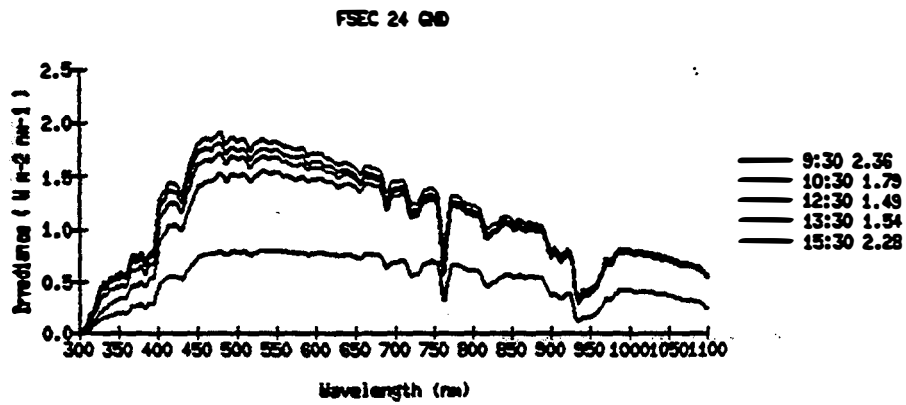
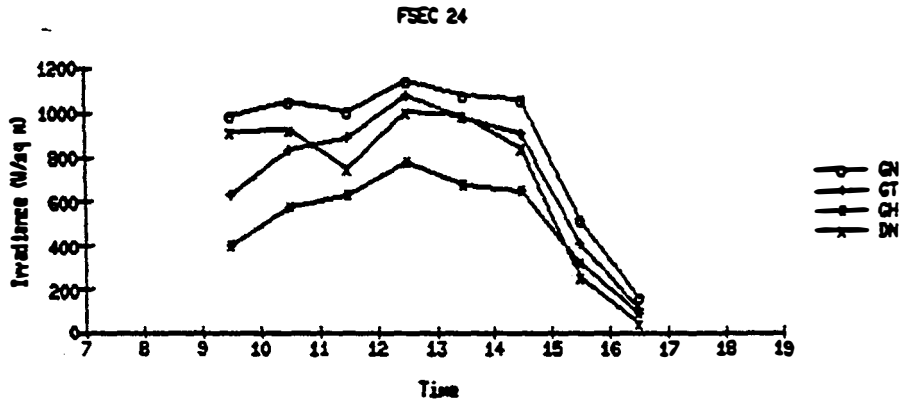


N FSEC87023  
 085 01 23 87.023 218  
 Temp controller 38 C at 1030; 38 C at 1330  
 High DH  
 Clear at 0815 and 1630; windy  
 No photos

GH/SH different at 1030, 1130, 1230



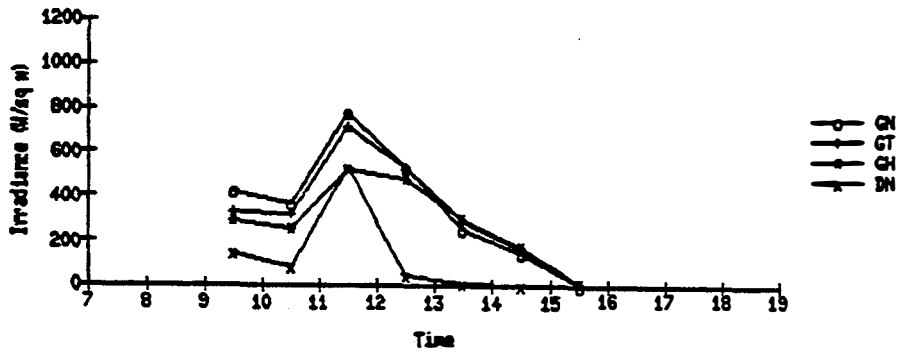
N FSEC87024  
 086 01 24 87 024 218  
 Partly cloudy  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G



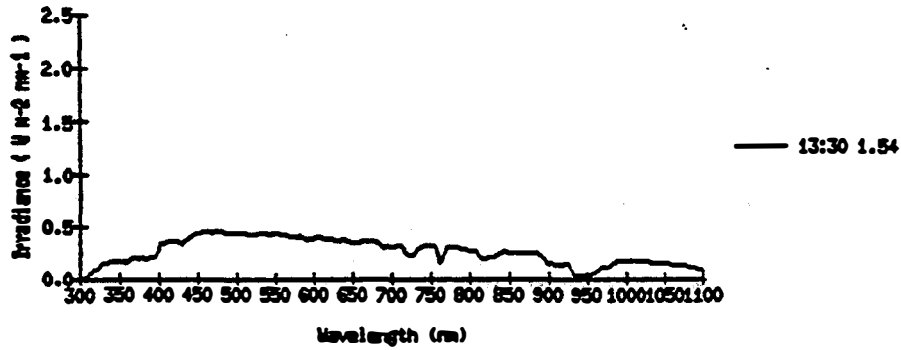


N FSEC87025  
 087 01 25 87. 025 218  
 Partly cloudy, becoming overcast; 1.0 cloud cover at 1500  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 25

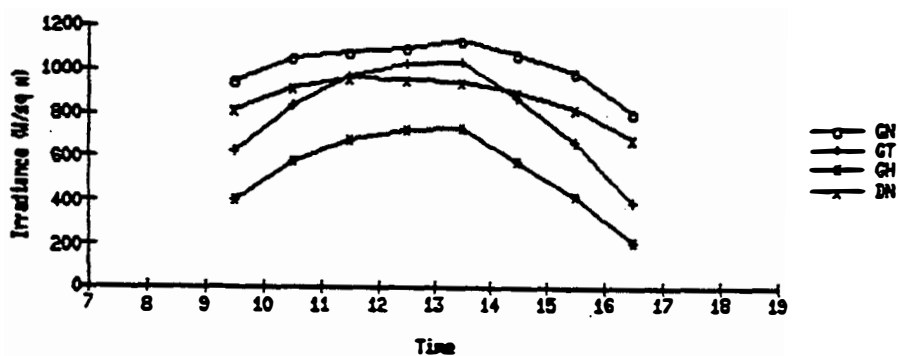


FSEC 25 GND

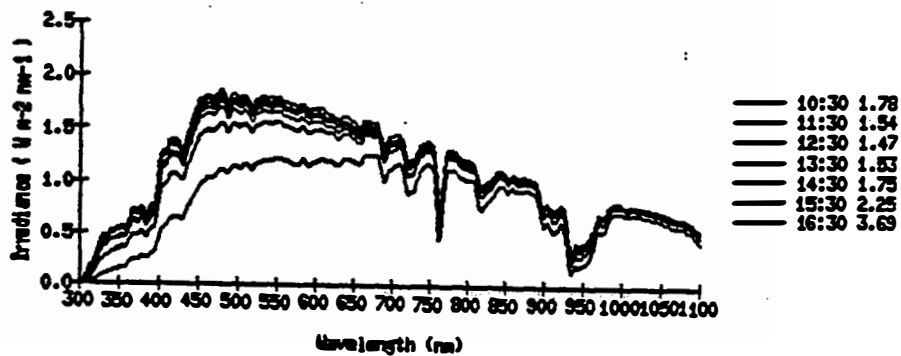


N FSEC87026  
 088 01 26 87 026 218  
 Temp controller 39 C at 0830; 39 C at 1430  
 0.1 cloud cover at 0930 and 1430  
 Photos: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G

FSEC 26



FSEC 26 G10

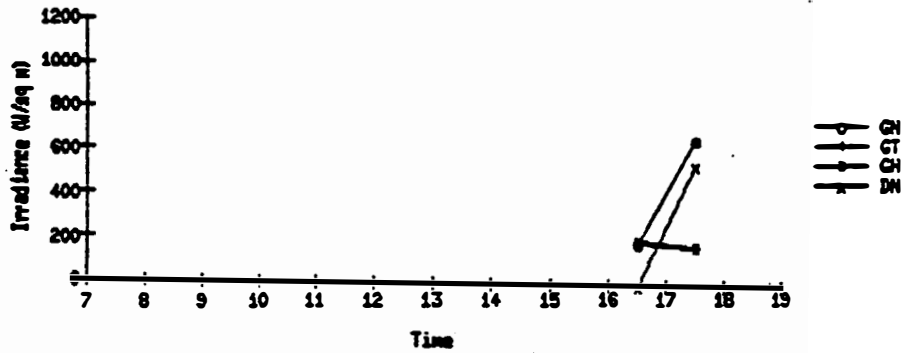


N FSEC87093  
 089 04 03 87 093 172 DN  
 Changed GH 2-17-87; new = 14322F3, cal 6.38  
 old = 14321F3, cal 9.32

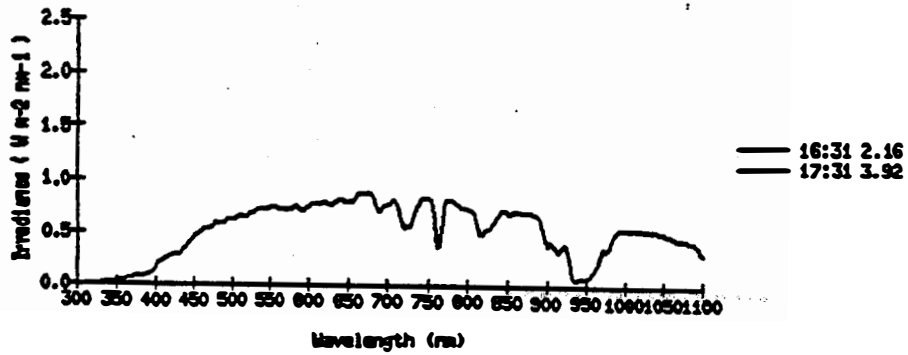
0.5 cloud cover  
 Slides: 0826 G  
           0926 G  
           1026 G  
           1126 G  
           1226 G  
           1326 G  
           1426 G  
           1526 G  
           1625 G  
           1725 G

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 Spectral scan 0 (no direct normal) at 1631

FSEC 93



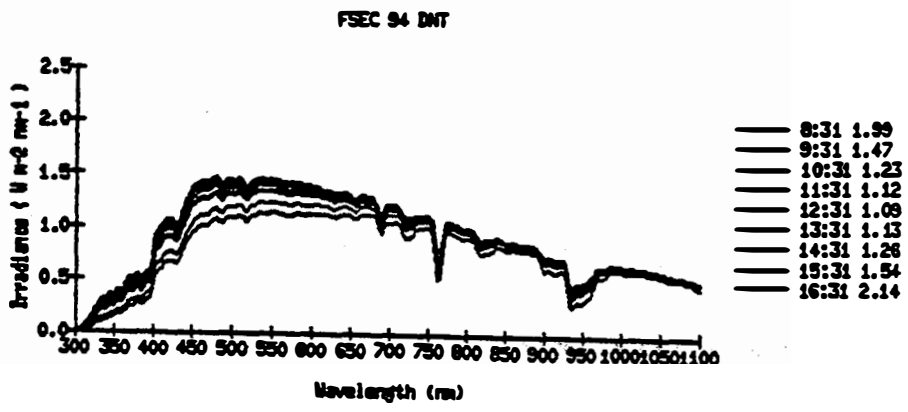
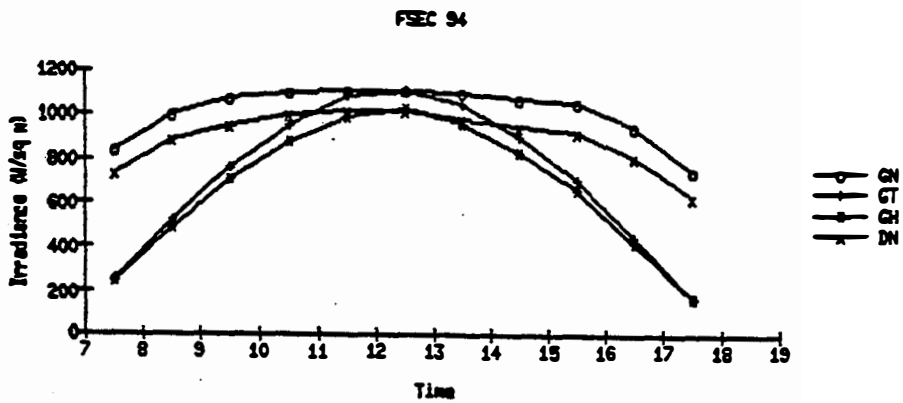
FSEC 93 DNT





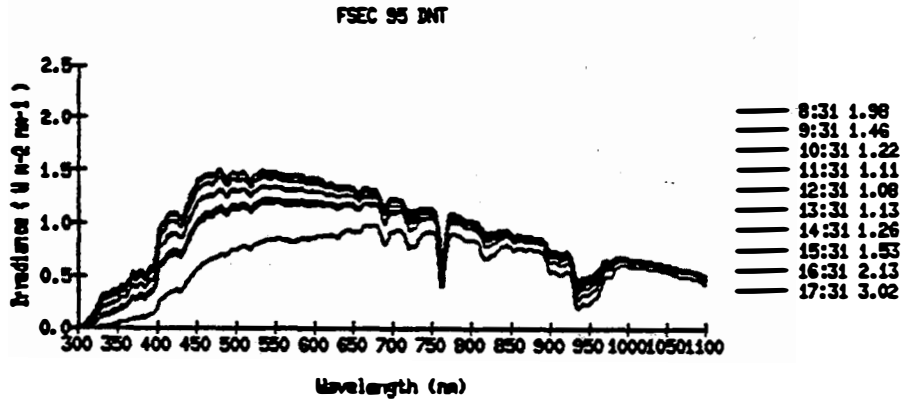
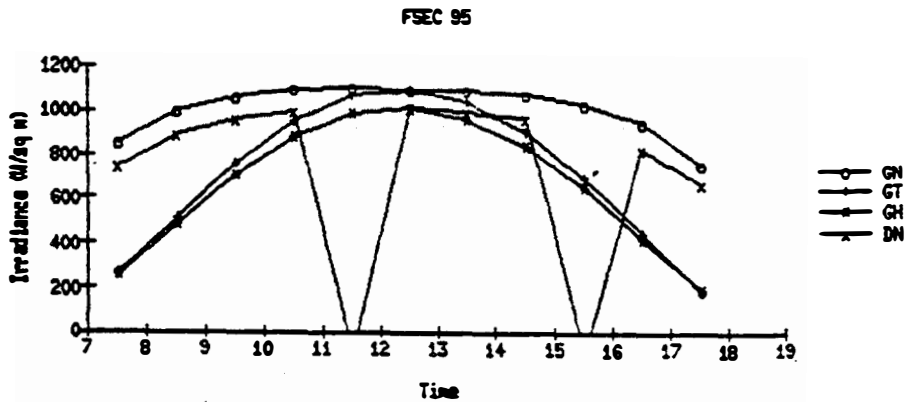
N FSEC87094  
 090 04 04 87 094 172 DW  
 Clear  
 Slides: 0824 G  
 0924 G  
 1024 G  
 1124 G  
 1224 G  
 1324 G  
 1424 G  
 1524 G  
 1624 G  
 1724 G

-----  
 GH/SH different  
 Spectrum at 1631 appears cut off in plot



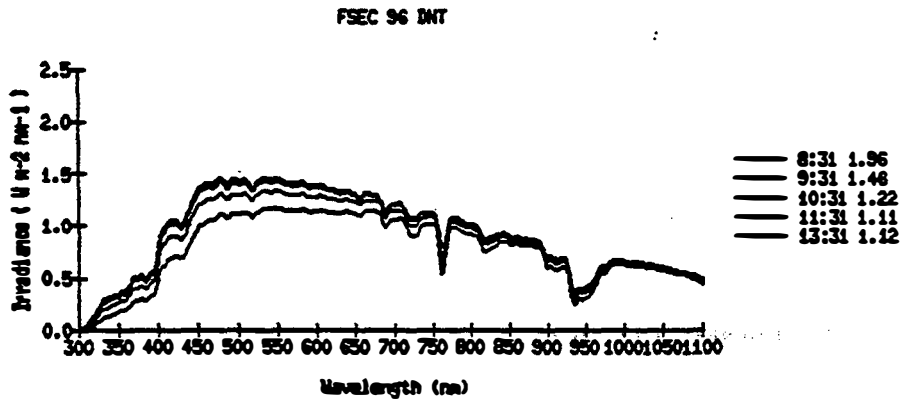
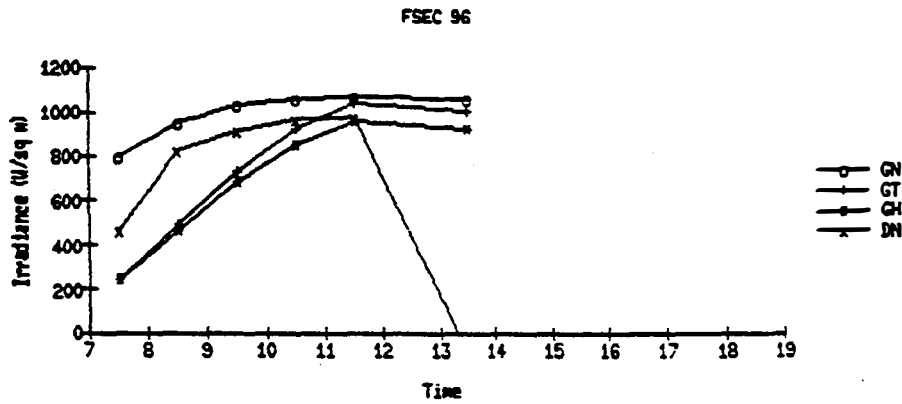
N FSEC87095  
 091 04 05 87 095 172 DN  
 Clear  
 Slides: 0825 G  
 0925 G  
 1026 G  
 1126 G  
 1226 G  
 1326 G  
 1426 G  
 1526 G  
 1627 G  
 1727 G

-----  
 DN before is bad at 1131  
 DN after is bad at 1231  
 DN before is bad ad 1531  
 Note time stamp differences 1731 vs. 1711



N FSEC87096  
 092 04 06 87 096 172 DM  
 Clear  
 Slides: 0828 G  
 0928 G  
 1028 G  
 1128 G  
 1228 G  
 1328 G  
 1432 G  
 1532 G  
 1632 G  
 1732 G

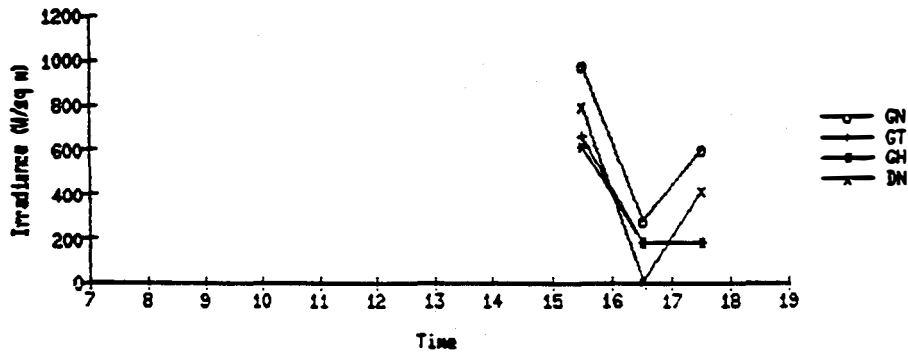
-----  
 SN before is bad at 0831  
 DM before is bad at 1331



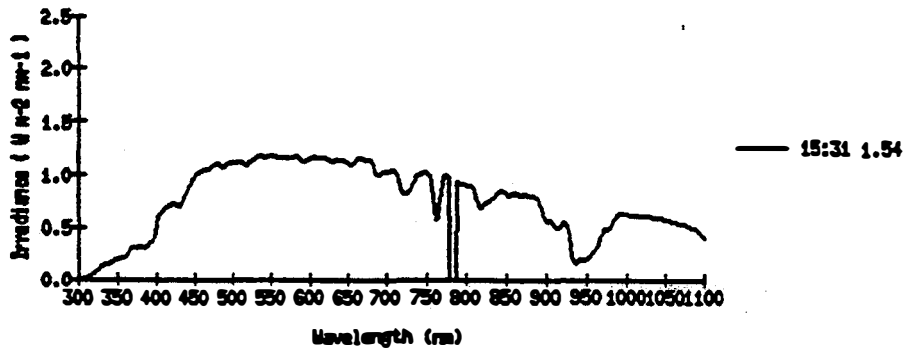
N FSEC87097  
 093 04 07 87 097 172 DN 102 GH  
 Mostly clear  
 Slides: 0832 G  
           0931 G G  
           1031 G G G  
           1131 (missing 1230)  
           1329 G G G  
           1429 G  
           1529 G G  
           1629 G G  
           1728 G

-----  
 Missing data in DN spectrum at 1531

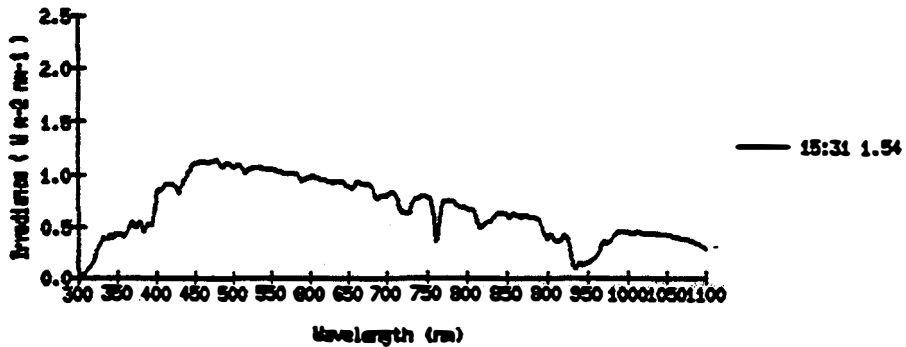
FSEC 97



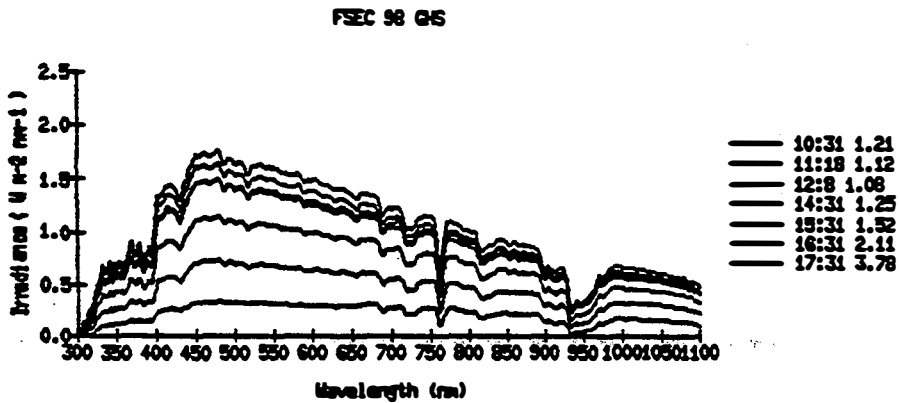
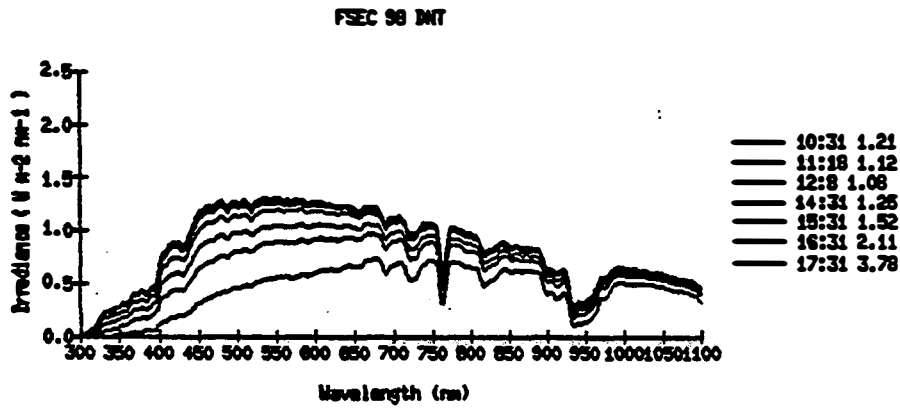
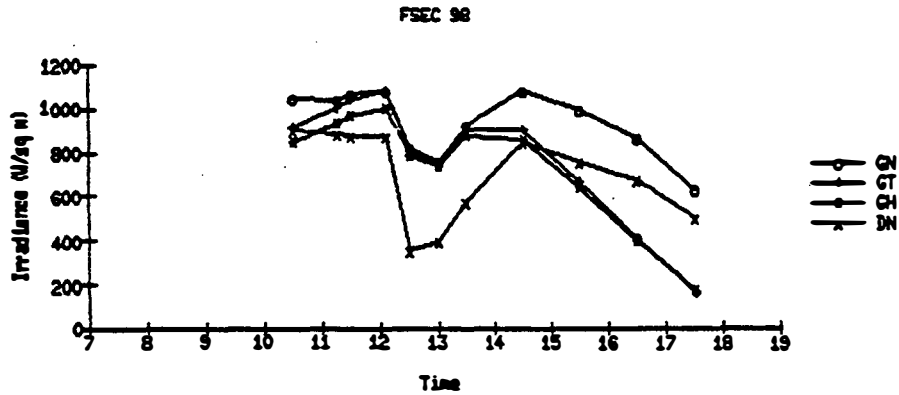
FSEC 97 DNT



FSEC 97 GS

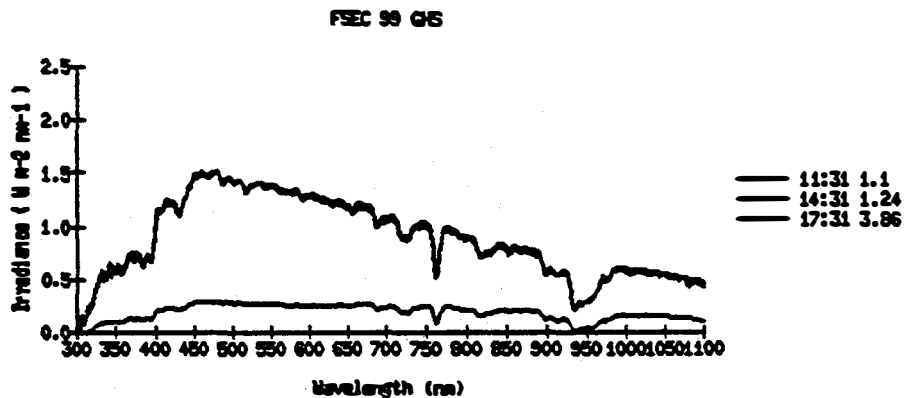
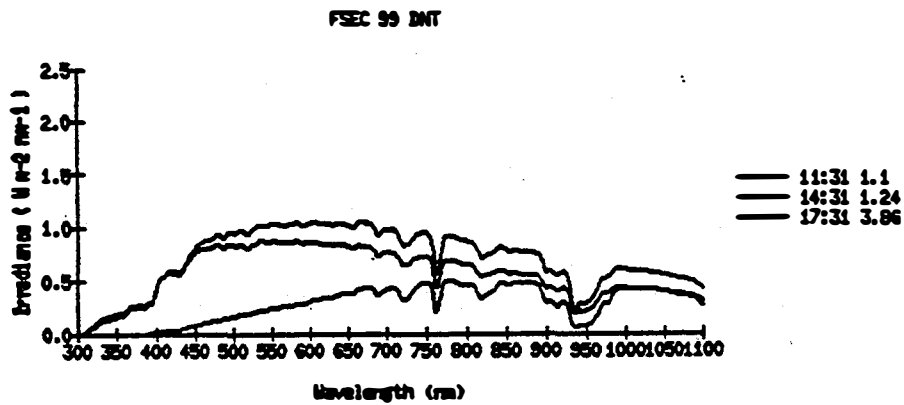
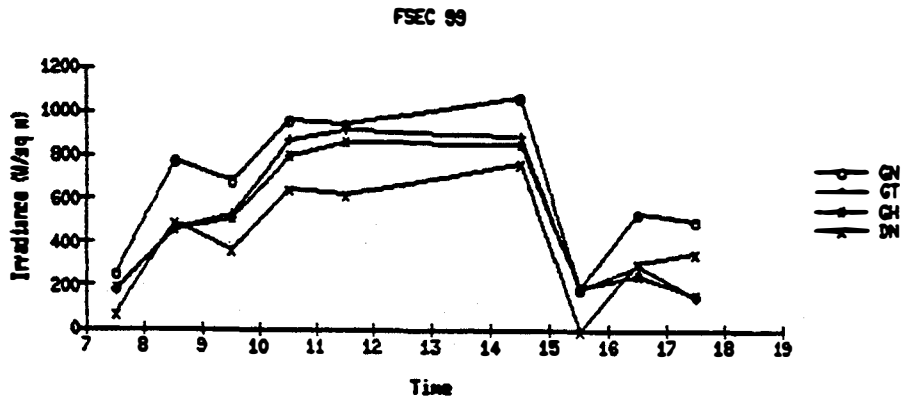


N FSEC87098  
 094 04 08 87 098 172 DN 102 GH  
 Mostly clear; 0.1 cloud cover at 0800; 0.6 at 1230  
 Slides: 0826 G  
 0926 G  
 1026 G  
 1126 G  
 1226 G  
 1326 G  
 1426 G  
 1526 G  
 1626 G  
 1726 G



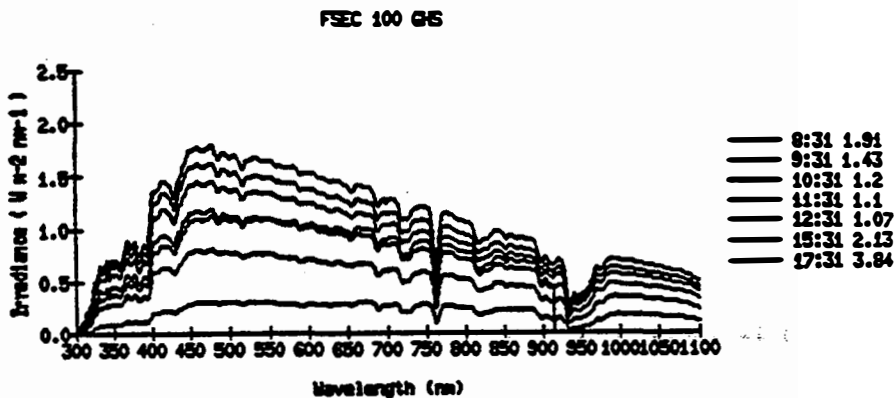
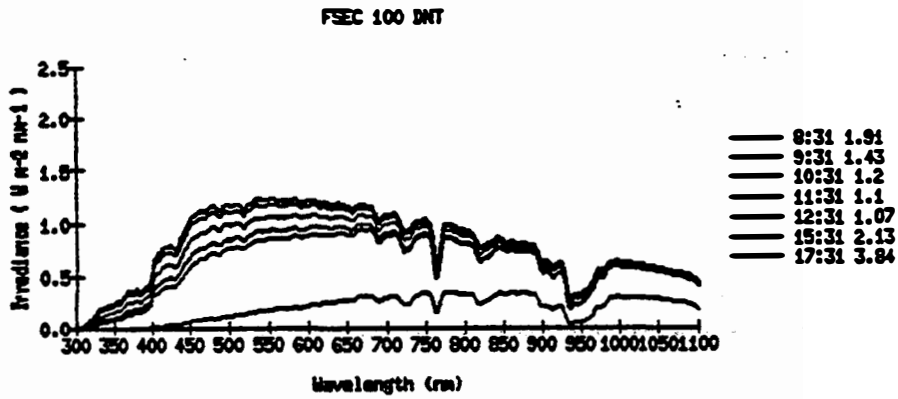
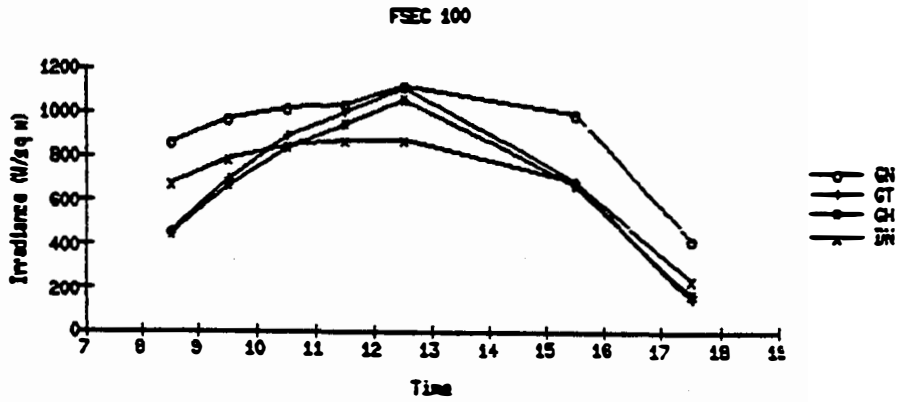
N FSEC87099  
 095 04 09 87 099 172 DW 102 GH  
 Hazy; 0.5 cloud cover at 0730  
 Slides: 0825 G  
 0925 G  
 1025 G  
 1125 G  
 1225 G  
 1325 G  
 1425 G  
 1525 G  
 1625 G  
 1724 G

-----  
 GH spectrum appears noisy in UV and near-IR at 1131



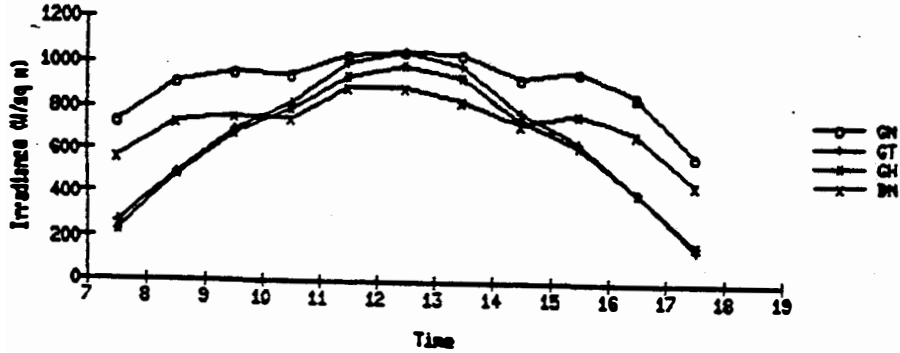
N FSEC87100  
 096 04 10 87 100 172 DN 102 GH  
 Slides: 0823 G  
 0923 G  
 1023 G  
 1123 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G  
 1730 G

GH spectrum had in near-IR at 1531 (pegged)  
 Note time stamp differences 1531 vs. 1634

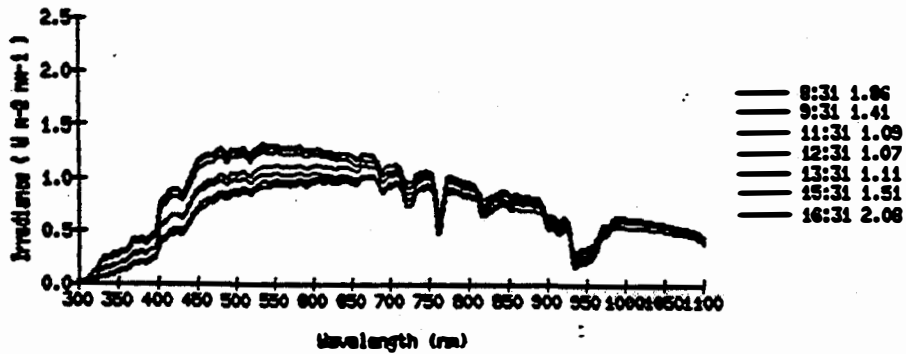


N FSEC87101  
 097 04 11 87 101 172 DW 102 GH  
 Slides: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G  
 1730 G

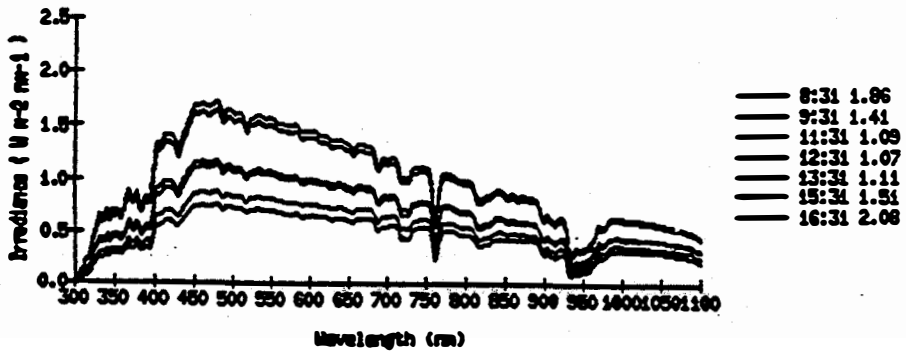
FSEC 101



FSEC 101 DNT

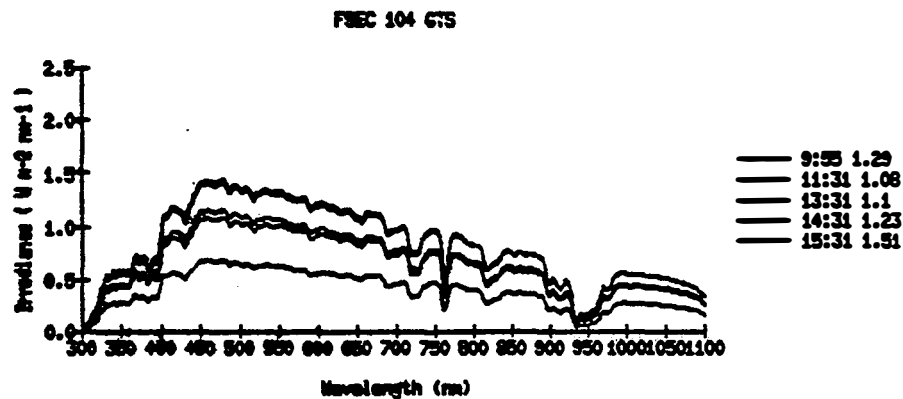
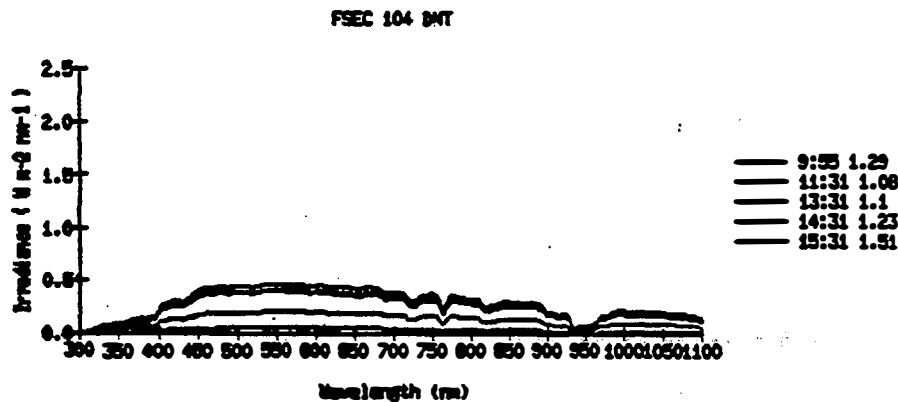
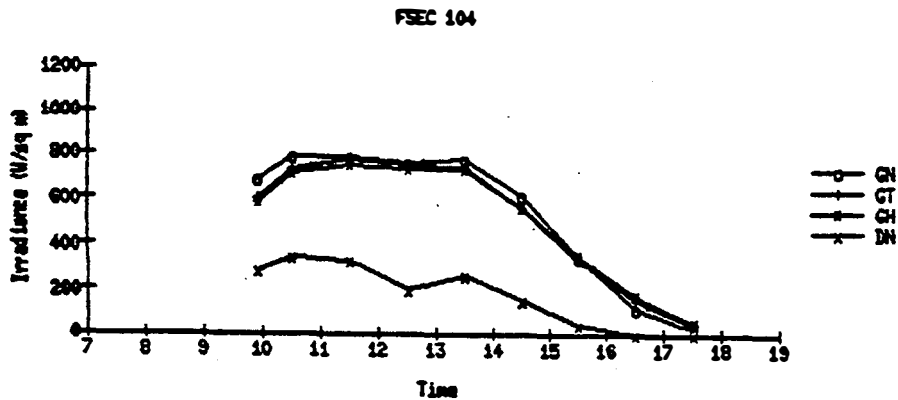


FSEC 101 GHS





N FSEC87104  
 098 04 14 87 104 172 DN 102 GT  
 Thin haze, .0.8 cloud cover at 1000; very light overcast, 1.0 at 1530  
 Slides: 0630 G  
 0730 G  
 0831 G  
 0931 G  
 1031 G  
 1131 M (dark)  
 1231 G  
 1331 M (dark)  
 1431 G  
 1531 G  
 1631 G  
 1731 G



N FSEC87105

099 04 15 87 105 172 DN 102 GT

Mostly overcast; 0.9 cloud cover at 0730 and 1130

Rain at 1430

Observed moisture inside dome on sphere; will reseal after dryout

- Slides: 0631 G
- 0731 G
- 0831 G
- 0932 G
- 1032 M (dark)
- 1132 G
- 1232 G
- 1332 G
- 1432 G
- 1532 G
- 1632 G
- 1732 G

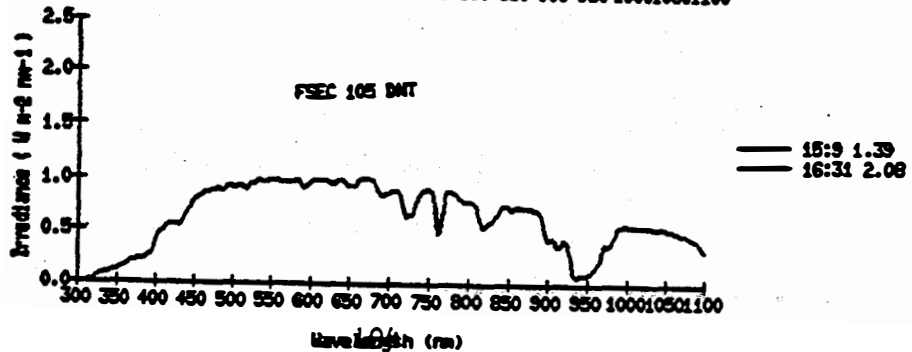
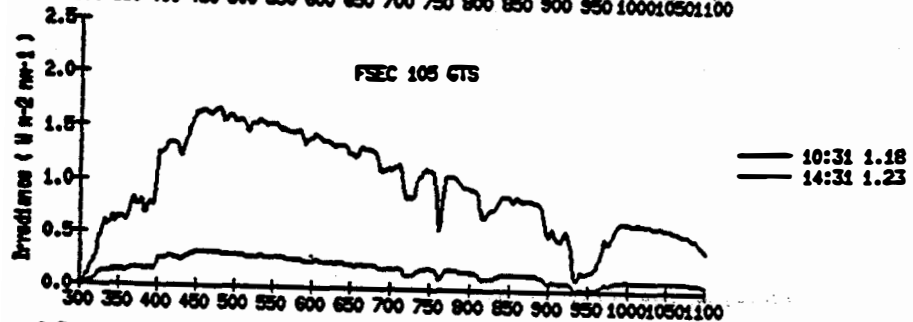
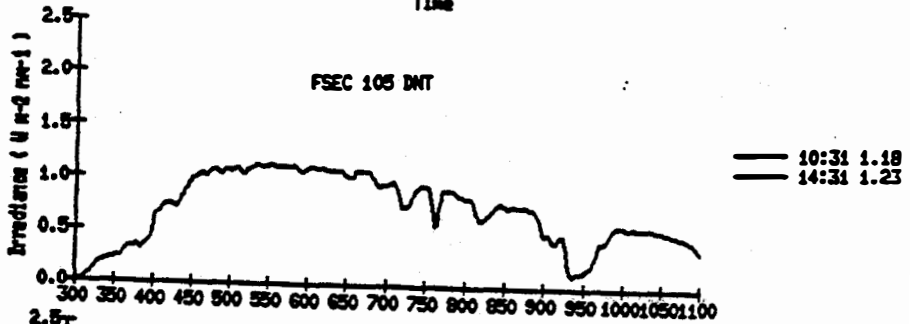
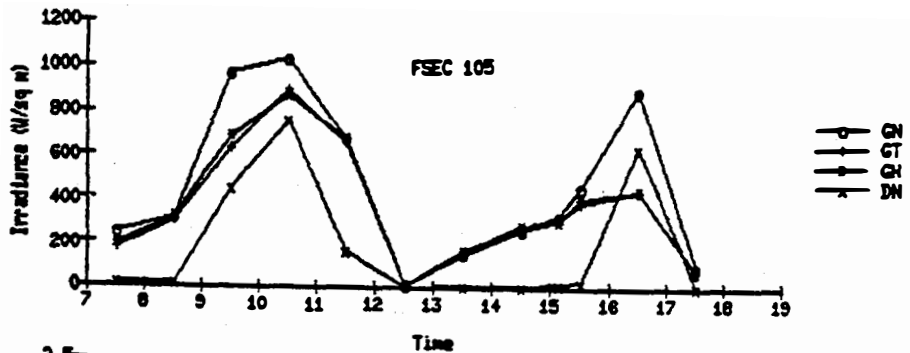
-----  
One LSR starting 1509; no spectrum (no direct beam) at 1509

100 04 15 87 105 172 DN

One LSR

Cloudy; 1.0 cloud cover at 1530, then clearing

Slides: see above



N FSEC87106

101 04 16 87 106 172 DN

Mostly clear; 0.1 cloud cover at 0930; 0.3 at 1530; partly cloudy

Slides: 0632 G

0732 G

0832 G

0932 M (dark)

1032 M

1132 M

1232 G

1332 M (dark)

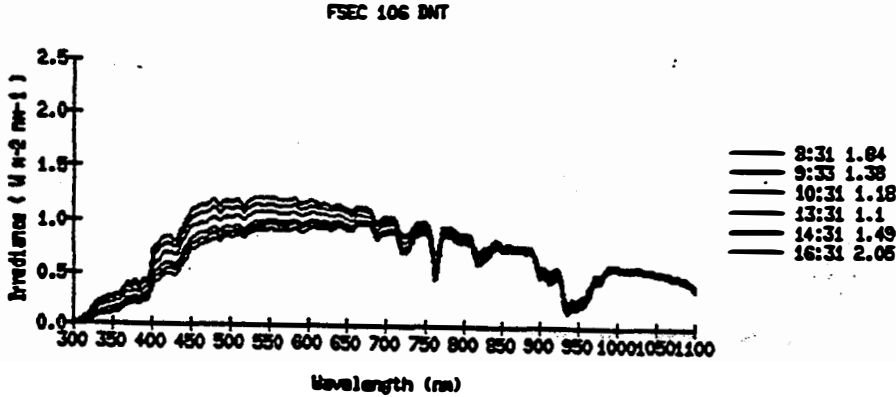
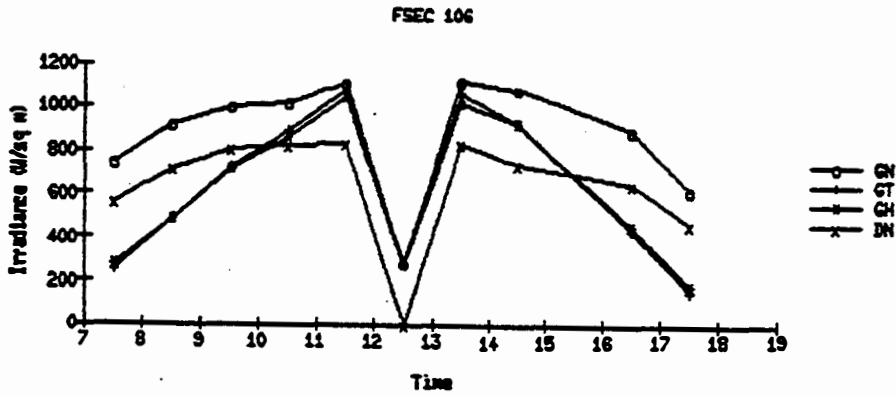
1432 G

1532 G

1632 G

1732 G

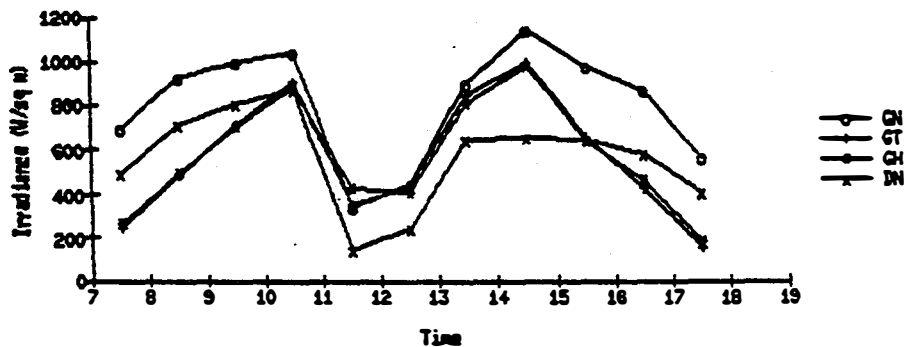
Note time stamp differences 1431 vs. 1531



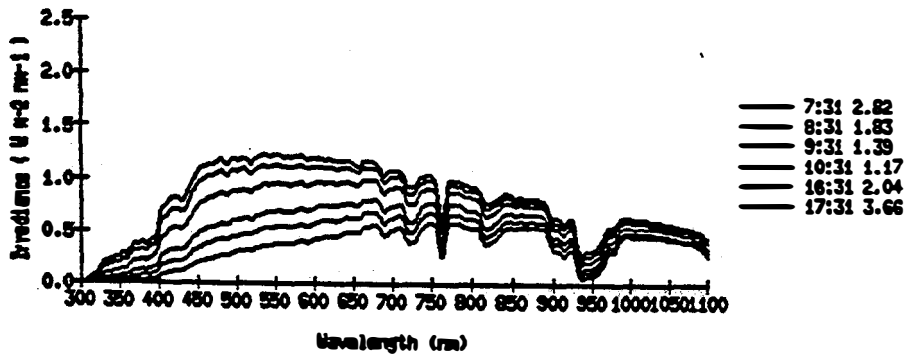


N FSEC87107  
 102 04 17 87 107 172 DW  
 Slides: 0632 G  
 0732 G  
 0832 G  
 0932 M (dark)  
 1032 P  
 1132 G  
 1232 M (stained)  
 1332 P (dark)  
 1432 G  
 1532 G  
 1632 G  
 1732 G

FSEC 107



FSEC 107 DNT

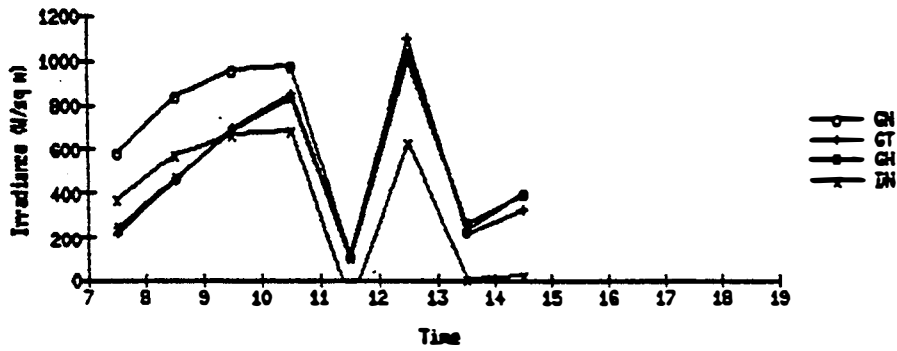


N FSEC87108  
 103 04 18 87 108 172 DN

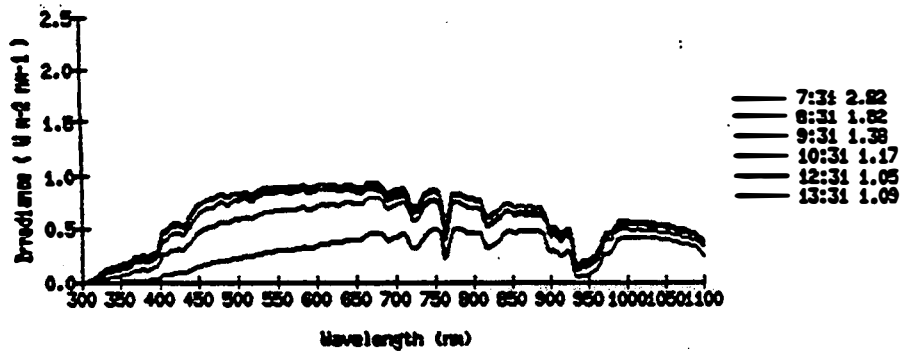
Afternoon rain

- Slides: 0632 G
- 0732 G
- 0832 G
- 0932 M (dark)
- 1032 P
- 1133 G
- 1233 P (dark)
- 1333 G
- 1433 G (water drops)
- 1533 G (water drops)
- 1633 G (water drops)
- 1733 G (water drops)

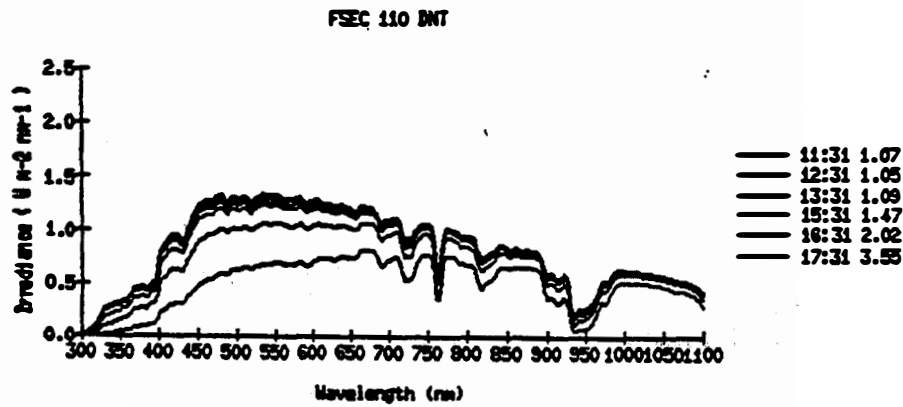
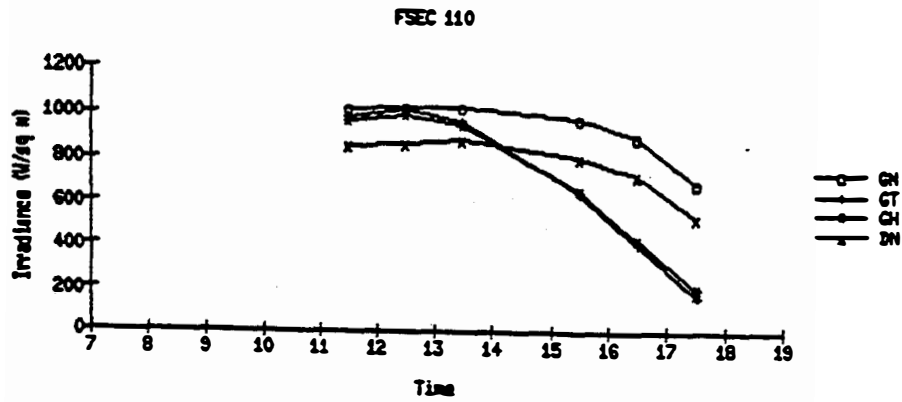
FSEC 108



FSEC 108 DNT

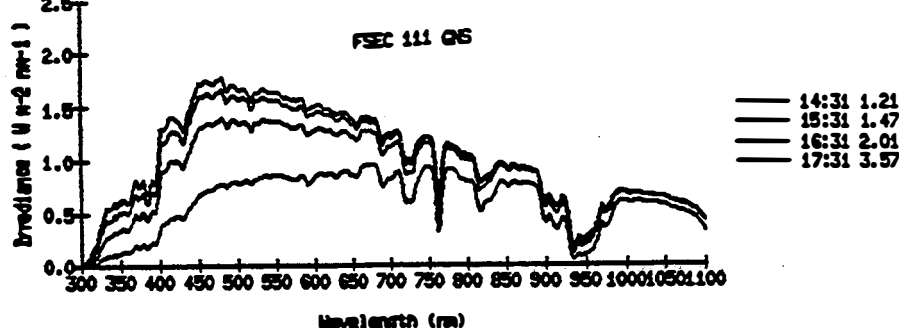
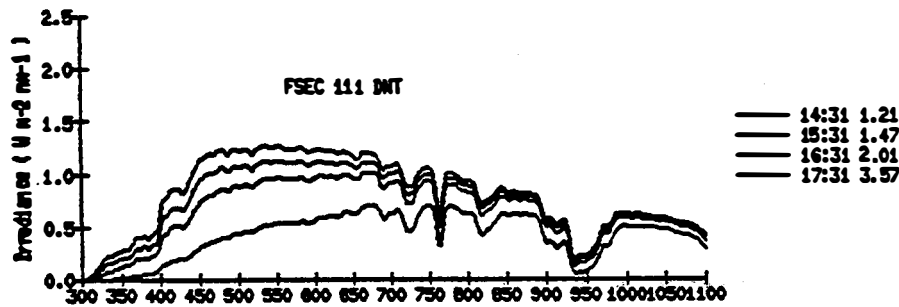
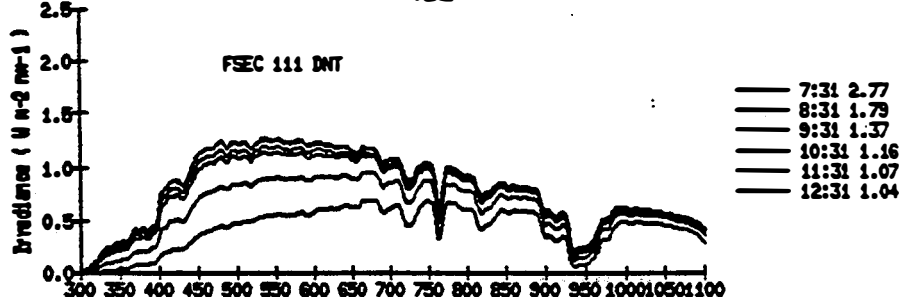
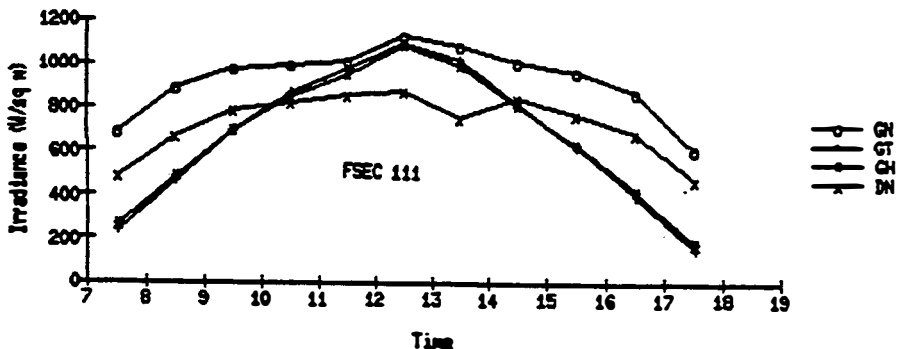


N FSEC87110  
 104 04 20 87 110 172 DM  
 Clear at 0900  
 Slides: 0634 G  
           0734 G  
           0834 G  
           0935 M (dark)  
           1035 P  
           1135 P  
           1235  
           1335 P  
           1435 M  
           1535 G  
           1630 G  
           1730 G



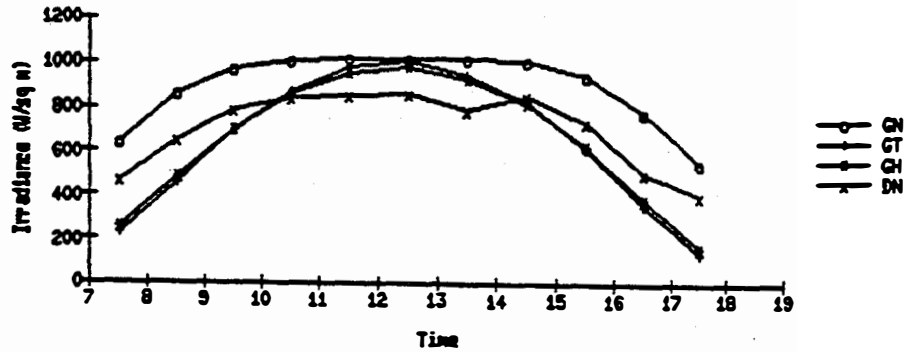
N FSEC87111  
 105 04 21 87 111 172 DN  
 Clear at 0900  
 Slides: 0630 G  
 0730 G  
 0830 G  
 0930 M (dark)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 G  
 1630 G  
 1730 G

106 04 21 87 111 172 DN 102 GN  
 Two LSRs  
 FRS 102 installed after sphere dryout and reference file check  
 0.3 cloud cover at 1330; 0.1 at 1500  
 Slides: See above

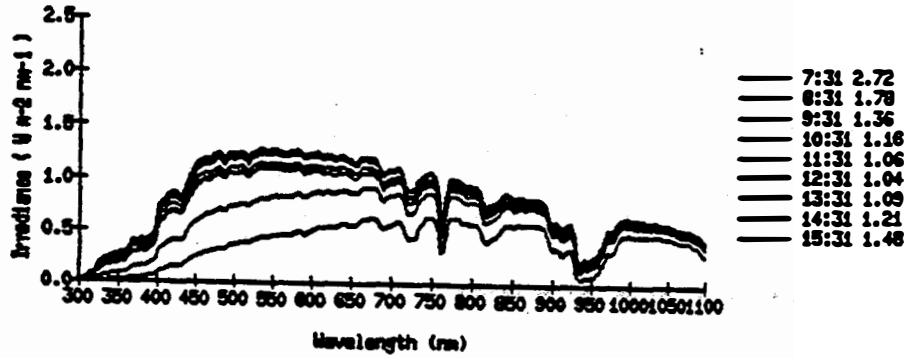


N FSEC87112  
 107 04 22 87 112 172 DN 102 GN  
 0.1 cloud cover at 0730; 0 at 1200; 0.1 at 1500  
 Slides: 0629 G  
 0729 G  
 0829 G  
 0930 M (dark)  
 1030 P  
 1130 P  
 1230 P  
 1329 P  
 1429 P  
 1529 G  
 1629 G  
 1729 G

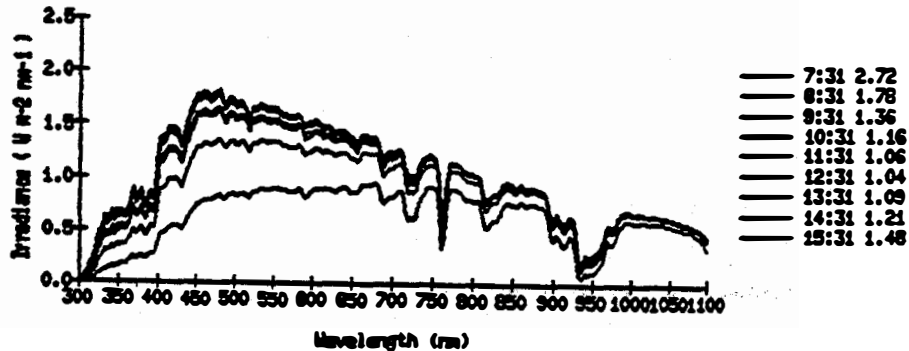
FSEC 112



FSEC 112 DNT



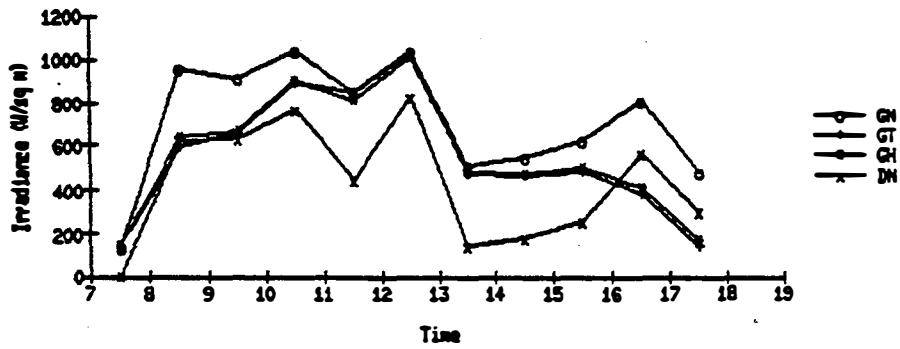
FSEC 112 GNS



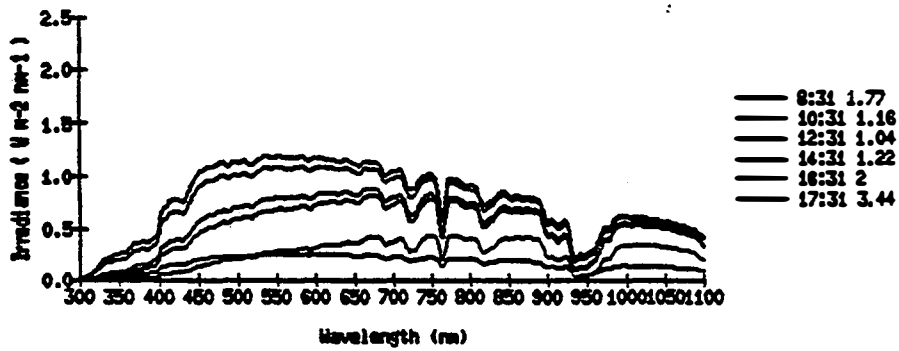


N FSEC87113  
 108 04 23 87 113 172 DN 102 GN  
 0.8 cloud cover at 0800; 0.9 at 1400  
 Slides: 0628 G  
 0728 G  
 0828 G  
 0928 M (dark)  
 1029 P  
 1129 P  
 1229 P  
 1329 P  
 1429 G  
 1529 G  
 1628 G  
 1728 G

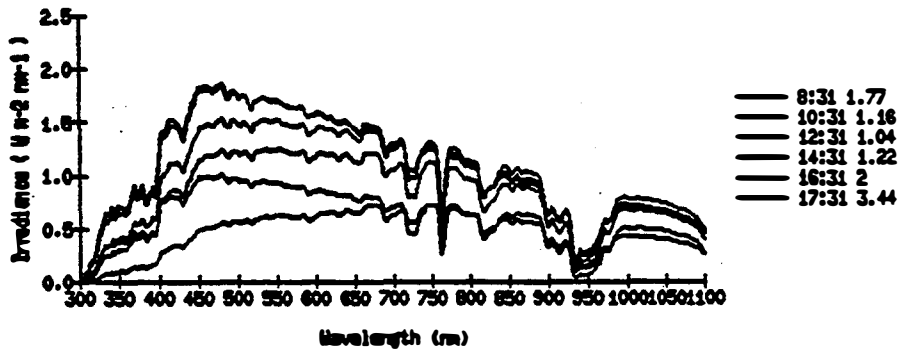
FSEC 113



FSEC 113 DNT

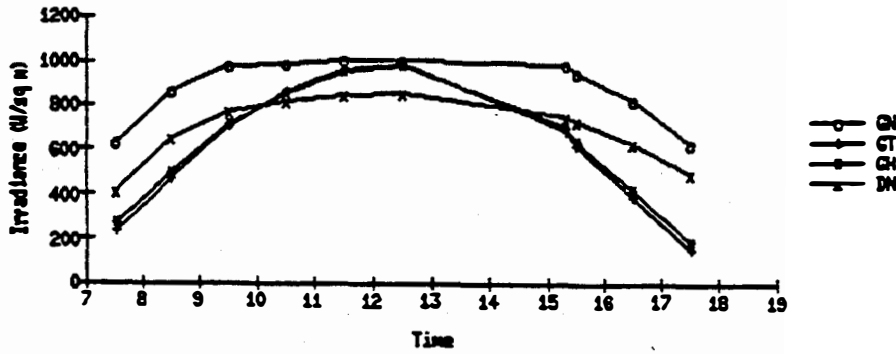


FSEC 113 GNS

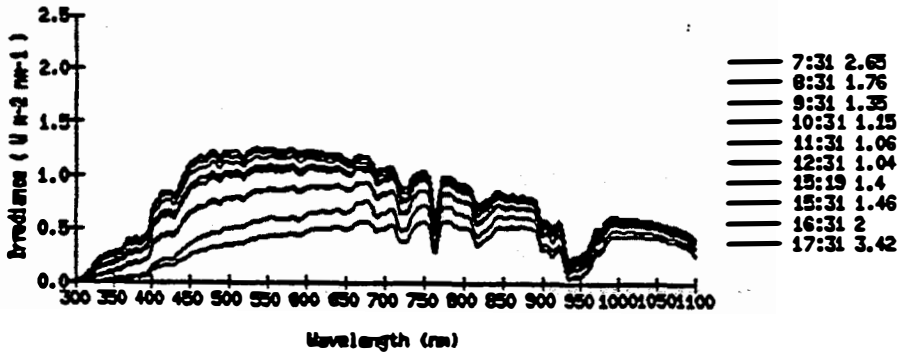


N FSEC87114  
 109 04 24 87 114 172 DN 102 GN  
 Hazy at 0730, 0.1 cloud cover; 0.1 at 1200  
 Slides: 0628 G  
 0728 G  
 0829 G  
 0929 M (dark)  
 1029 P  
 1129 P  
 1229 P  
 1329 P  
 1429 P  
 1529 G  
 1630 G  
 1730 G

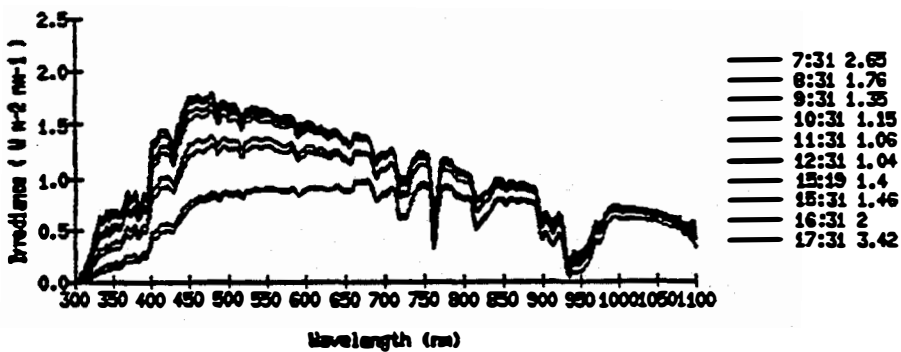
FSEC 114



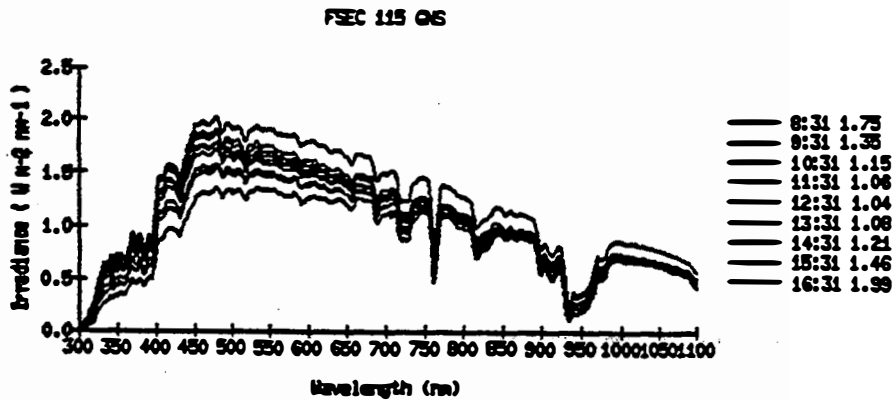
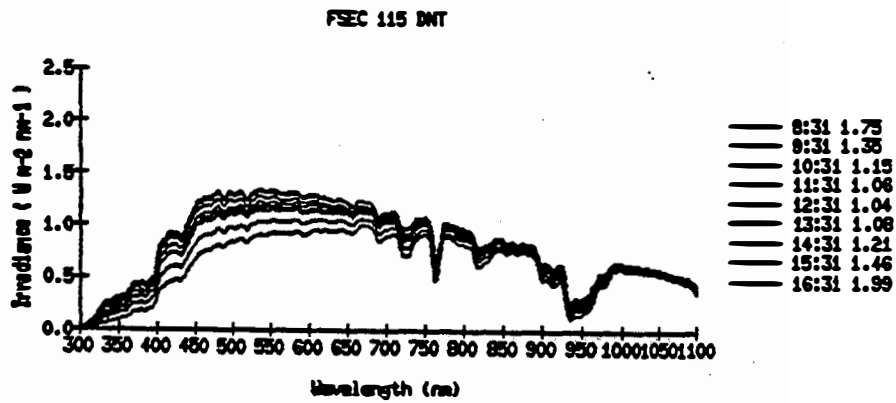
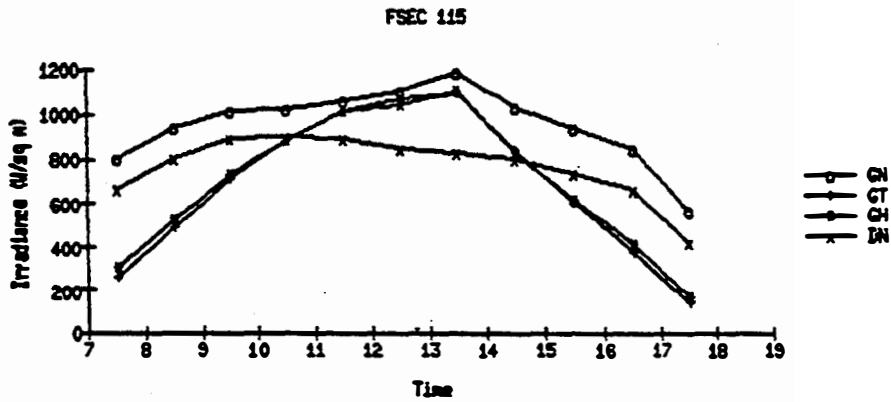
FSEC 114 DNT



FSEC 114 GNS

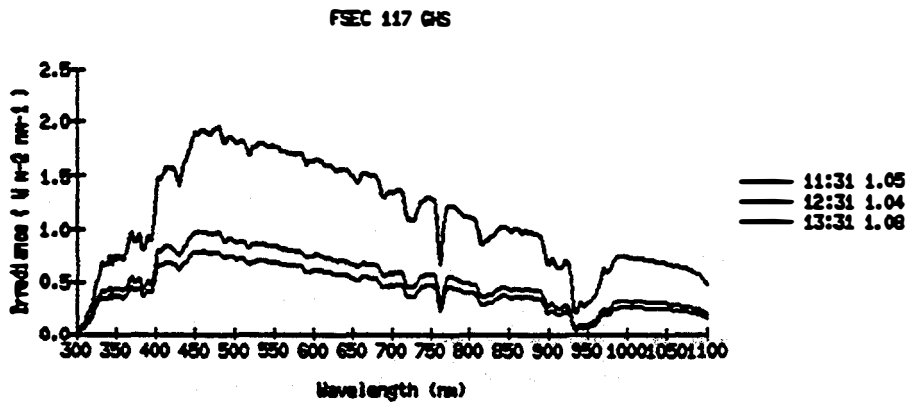
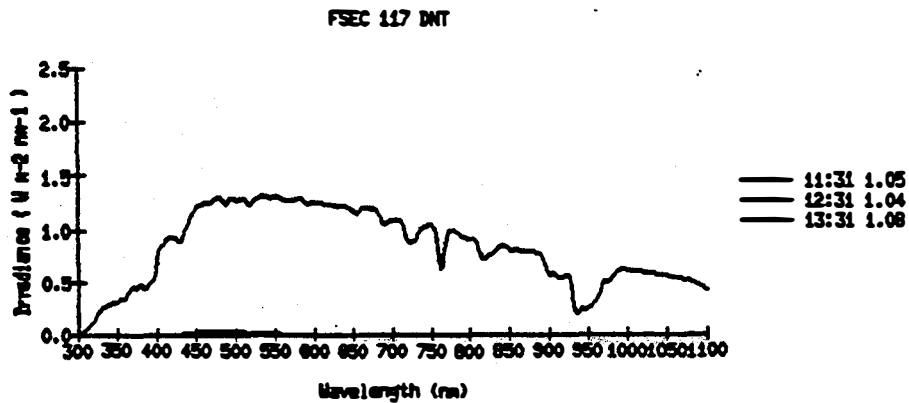
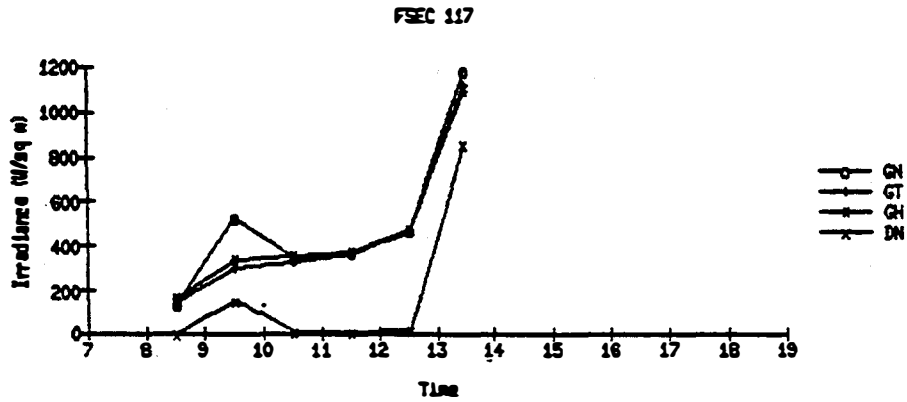


N FSEC87115  
 110 04 25 87 115 172 DN 102 GN  
 Slides: 0631 G  
 0731 G  
 0831 G  
 0931 M (dark)  
 1031 P  
 1131 P  
 1231 P  
 1331 P  
 1431 M  
 1531 G  
 1631 G  
 1732 G





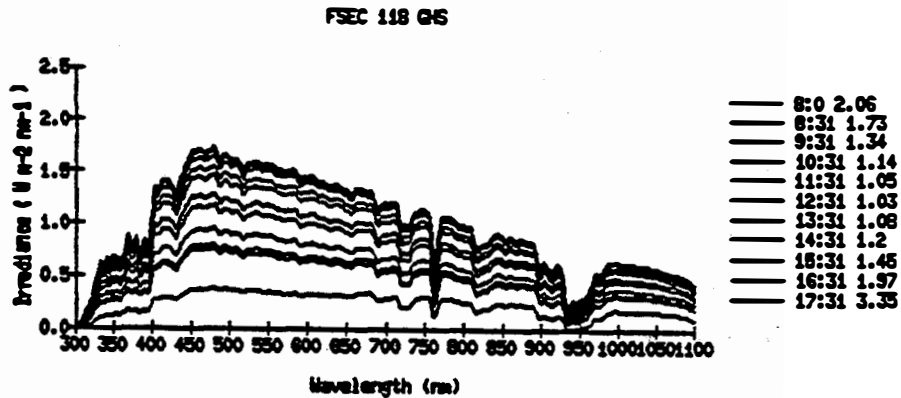
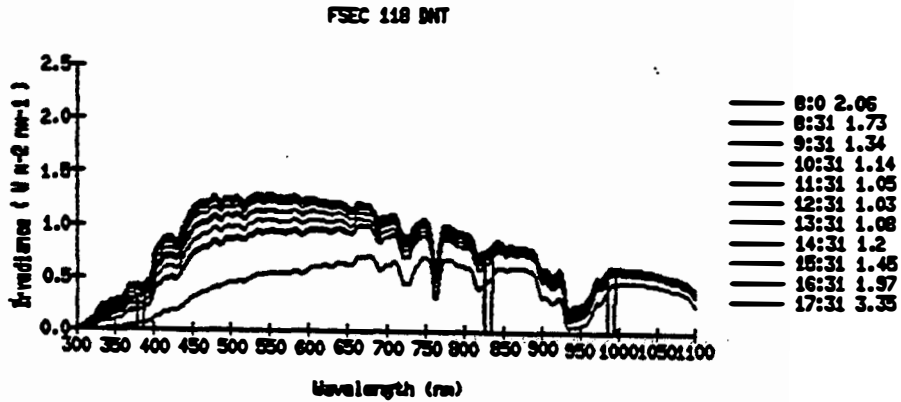
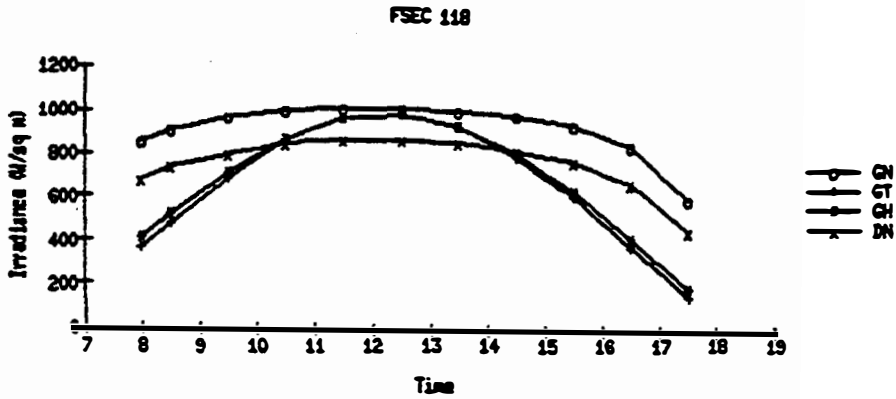
N FSEC87117  
 111 04 27 87 117 172 DN 102 GH  
 0.9 cloud cover at 0830 and 1130; 0 at 1530  
 Slides: 0633 G  
 0733 G  
 0833 G  
 0933 M (dark)  
 1033 G  
 1133 G  
 1233 G  
 1334 P (dark)  
 1434 P  
 1531 G  
 1631 G  
 1731 G



N FSEC87118  
 112 04 28.87 118 172 DN 102 GH  
 Clear at 0900 and 1530

: 0631 G  
 0731 G  
 0831 G  
 0931 M (dark)  
 1031 P  
 1131 P  
 1231 P  
 1331 P  
 1431 M  
 1531 G  
 1631 G  
 1731 G

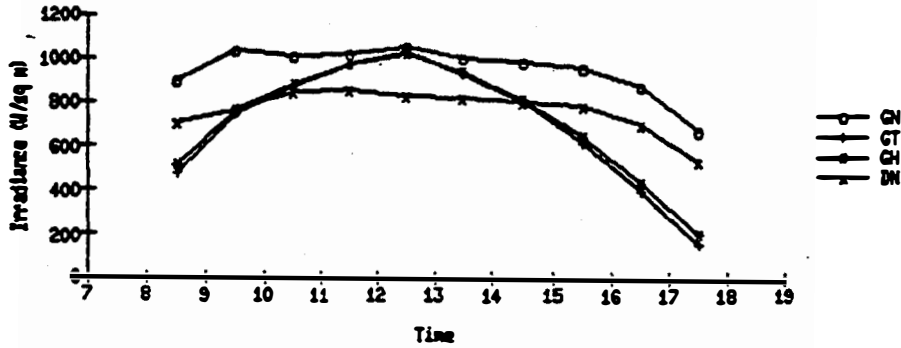
Missing data in DN spectrum at 0931 and 1531



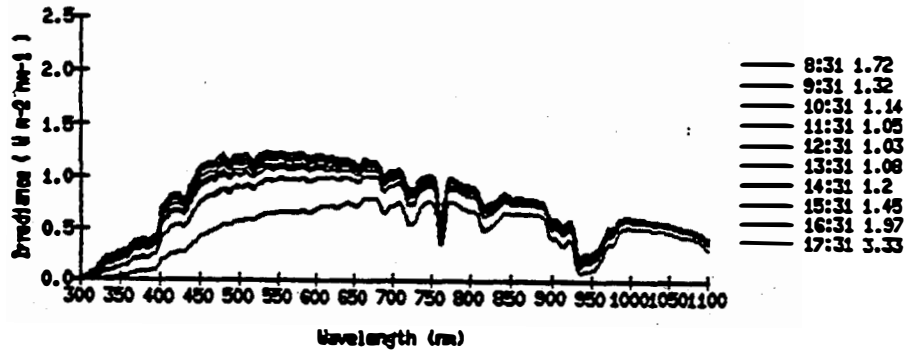


N FSEC87119  
 113 04 29 87 119 172 DN 102 GH  
 Clear at 0800; 0.1 cloud cover at 1230  
 Slides: 0629 G  
 0729 G  
 0829 G  
 0929 M (dark)  
 1029 P  
 1129 P  
 1229 P  
 1329 P

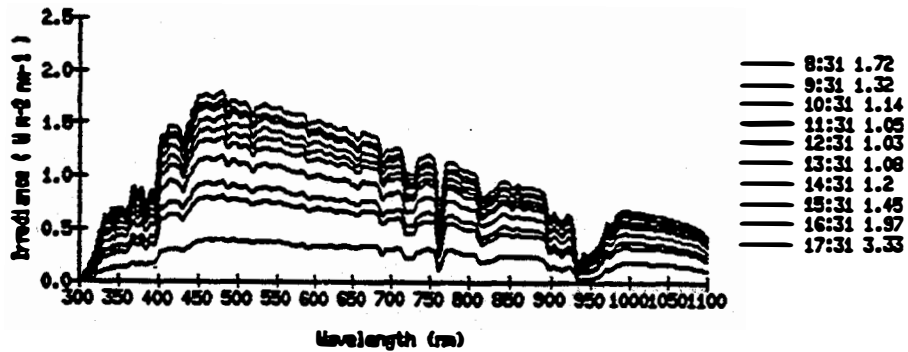
FSEC 119



FSEC 119 DNT



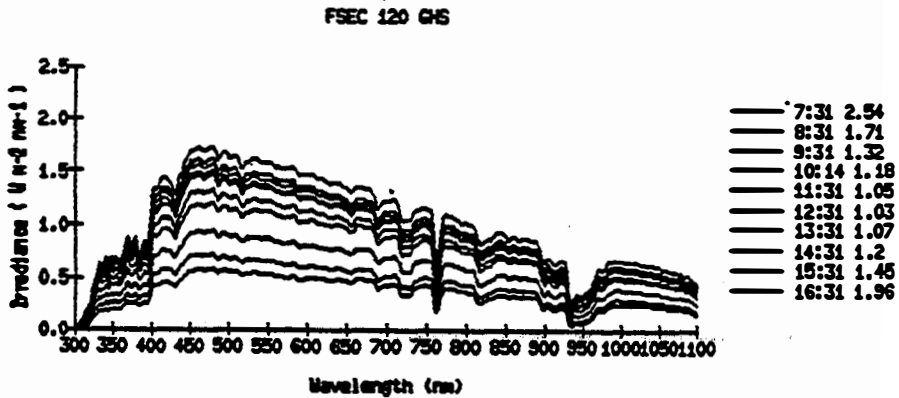
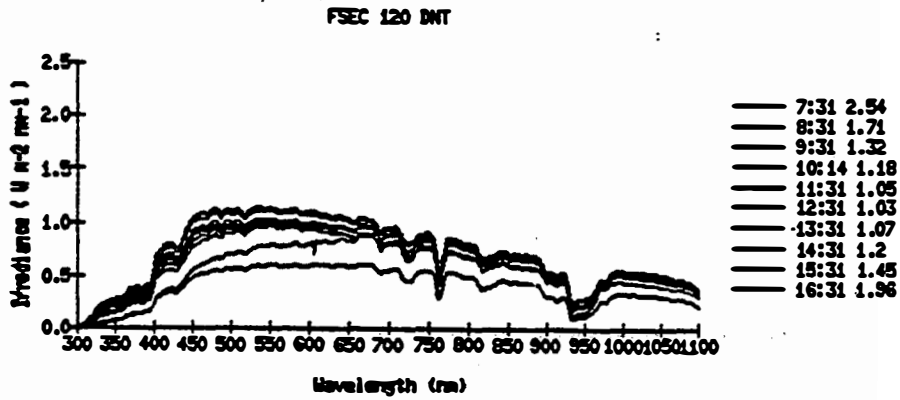
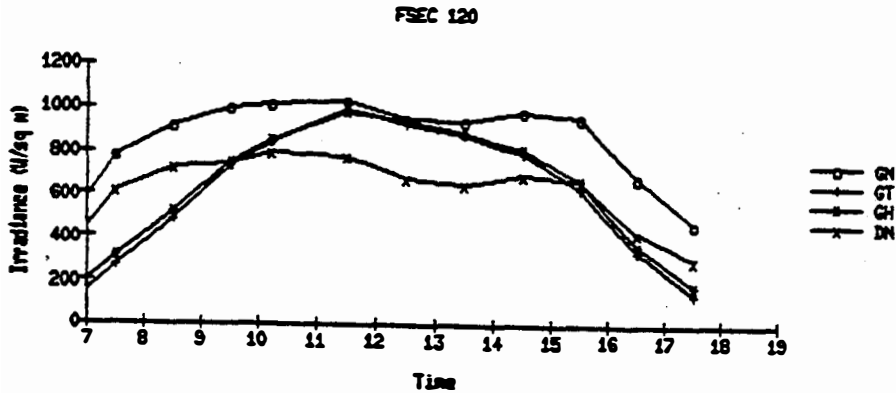
FSEC 119 GS





N FSEC87120  
 114 04 30 87 120 172 DN 102 GH  
 Clear at 0700; 0.9 cloud cover at 1130 (hazy); 0.8 at 1600 (hazy)  
 Slides: 0626 G  
 0726 G  
 0832 G  
 0932 M (dark)  
 1032 P  
 1132 P  
 1232 P  
 1332 P  
 1432 M  
 1532 G  
 1632 G  
 1732 G

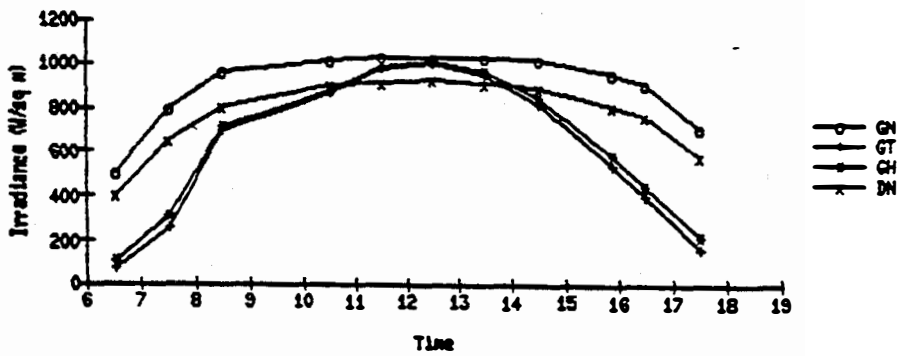
Small spike in DN spectrum in visible at 0731  
 Appears to be spike in GH spectrum in UV at 0931



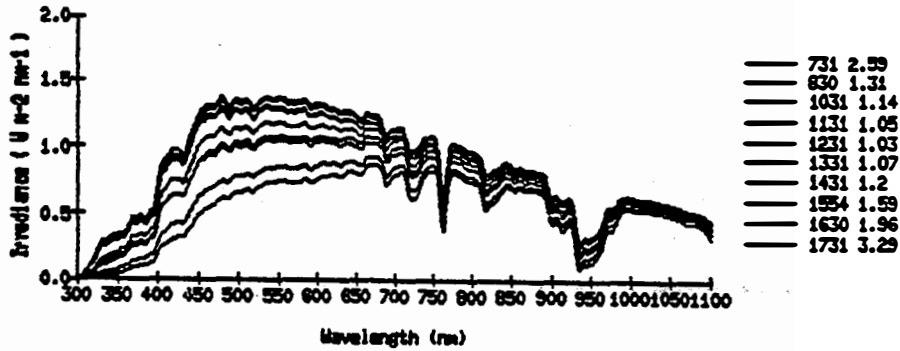
N FSEC87121  
 115 05 01 87 121 172 DN 102 GH  
 Clear at 0730; 0.1 cloud cover at 1130; 0 at 1600  
 Slides: 0632 G  
           0732 G  
           0832 G  
           0932 M (dark)  
           1032 P  
           1133 P  
           1233 P  
           1333 P  
           1433 M  
           1533 G  
           1633 G  
           1733 G

-----  
 Spikes in GH spectra in UV at 0731 and 0830  
 Note time stamp differences 0830 vs. 0935

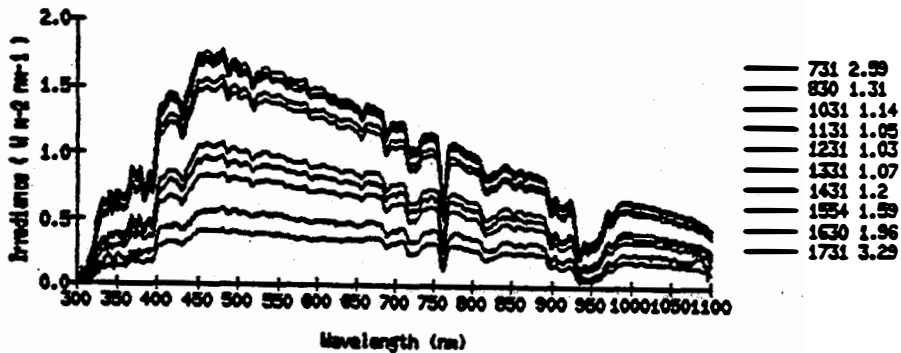
FSEC 121



FSEC 121 DMT



FSEC 121 GS

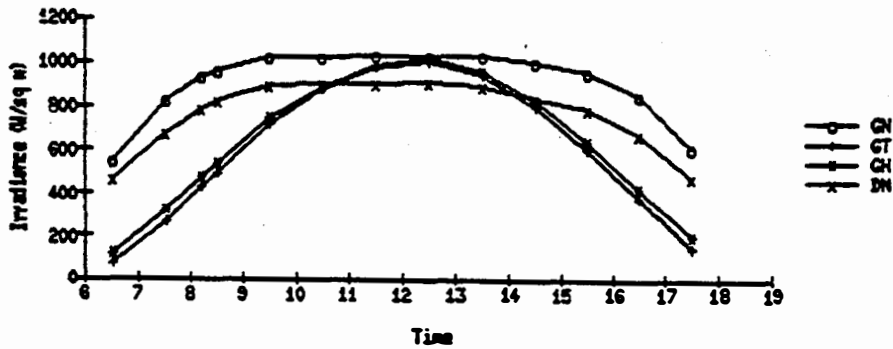




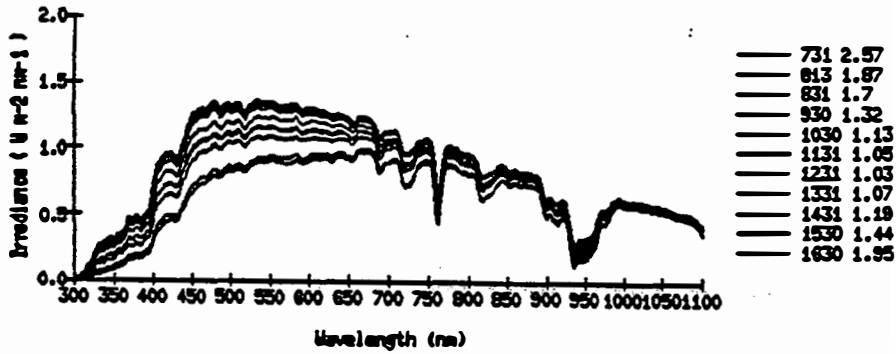
N FSEC87122  
 116 05 02 87 122 172 DN 102 GH  
 Clear at 0730  
 GH for first two scans, then GT  
 Slides: 0632 G  
           0733 G  
           0833 G  
           0933 M (dark)  
           1033 P  
           1133 P  
           1233 P  
           1333 P  
           1433 M  
           1533 G  
           1633 G  
           1733 G

117 05 02 87 122 172 DN 102 GT  
 GT starting at 0800  
 Clear at 0800  
 Slides: See above

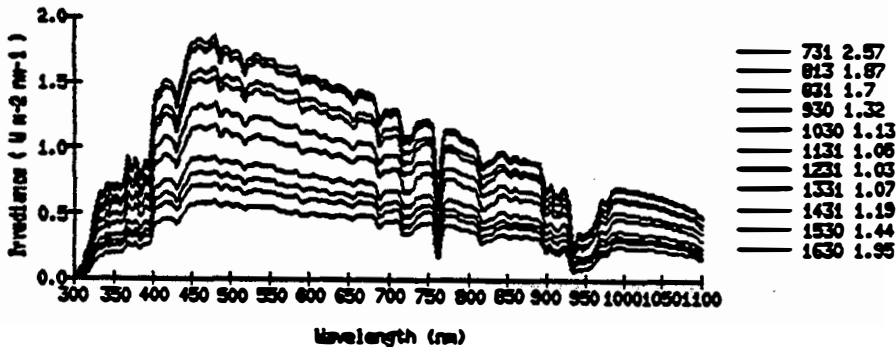
FSEC 122



FSEC 122 DNT

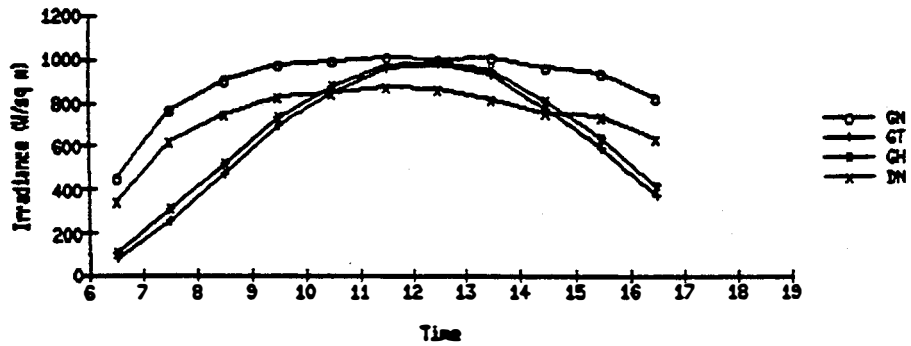


FSEC 122 GTS

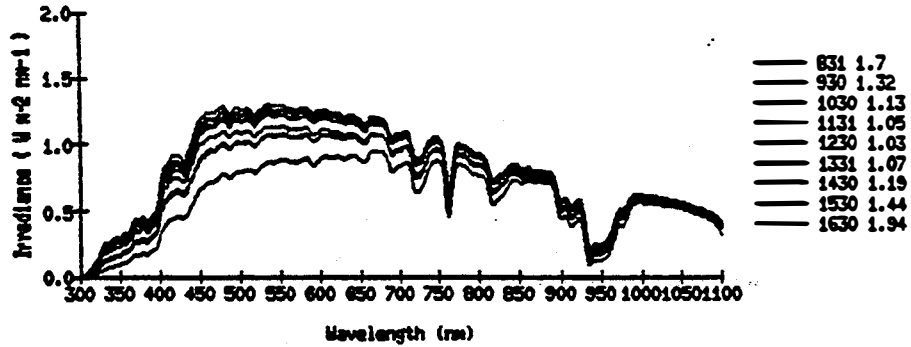


N FSEC87123  
 118 05 03 87 123 172 DN 102 GT  
 Clear at 0830  
 Slides: 0633 G  
 0733 G  
 0833 G  
 0933 M (dark)  
 1033 P  
 1133 P  
 1233 P  
 1333 P  
 1433 M  
 1533 G  
 1633 G  
 1733 G

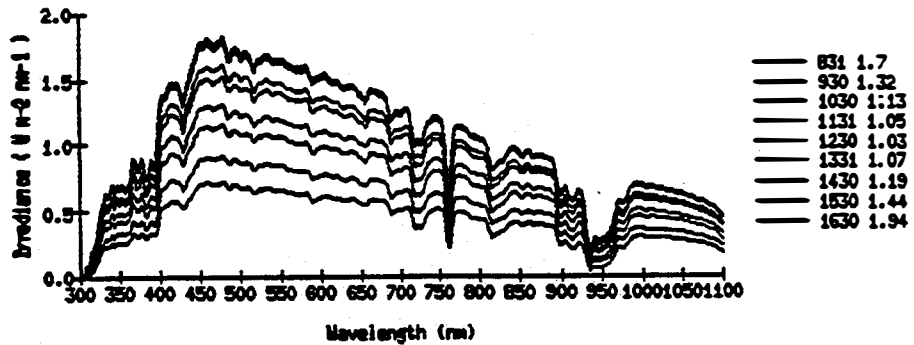
FSEC 123



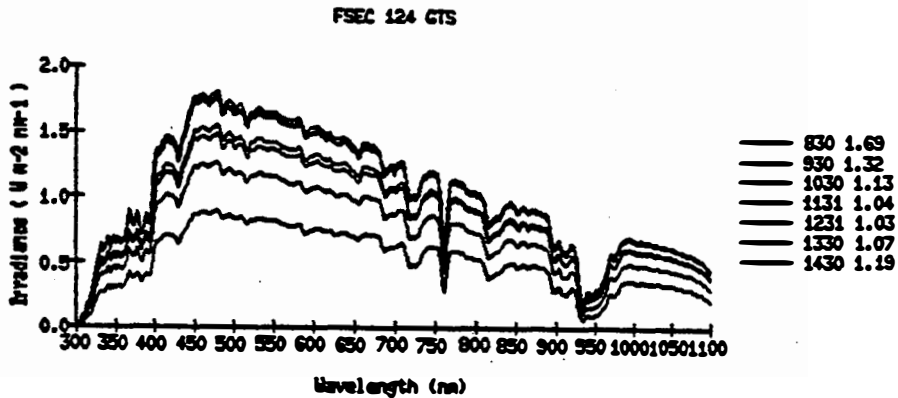
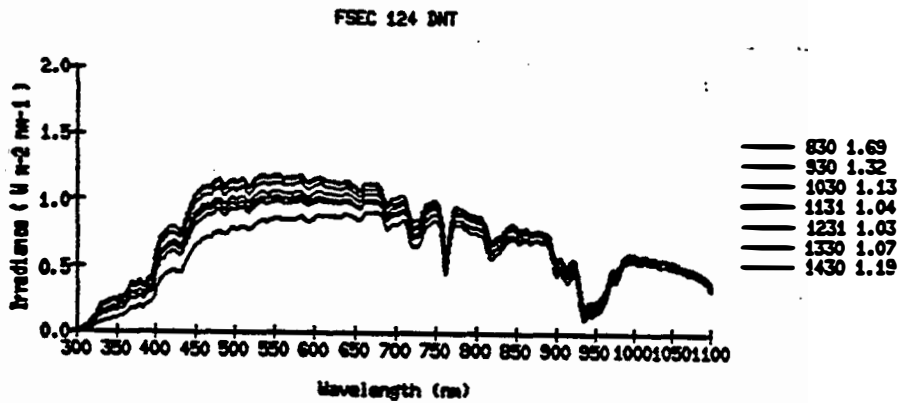
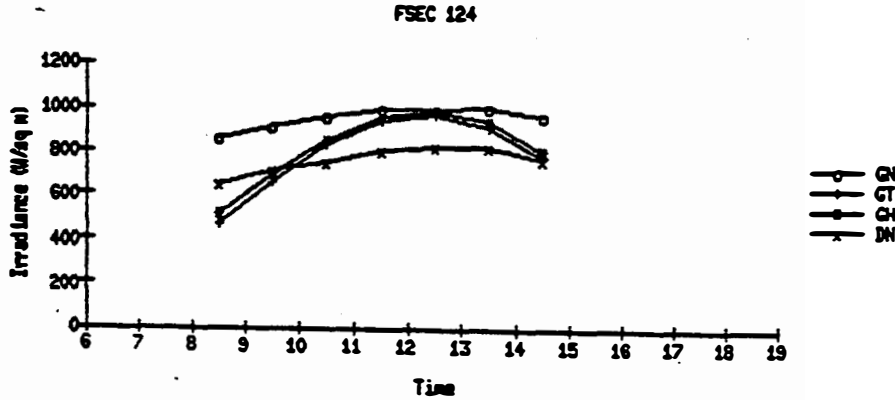
FSEC 123 DNT



FSEC 123 GTS

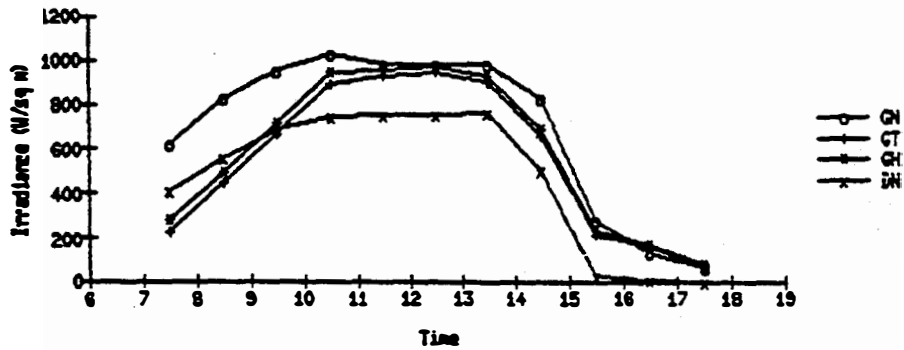


N FSEC87124  
 119 05 04 87 124 172 DN 102 GT  
 Clear at 0850 and 1600  
 Slides: 0633 G  
 0733 G  
 0833 G  
 0933 G  
 1033 P (dark)  
 1134 P  
 1234 P  
 1334 P  
 1434 M  
 1534 G  
 1634 G  
 1735 G

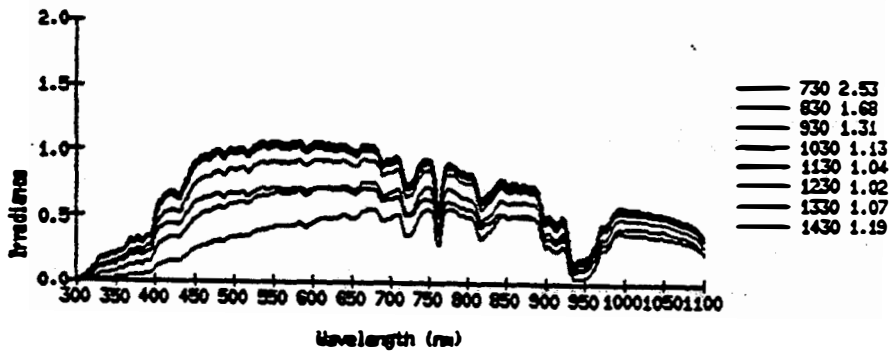


N FSEC87125  
 120 05 05 87 125 172 DN 102 GT  
 0.05 cloud cover with light haze at 0830; then 0.4  
 Trackers quit; reset at 0800  
 Slides: 0635 G  
 0735 G  
 0835 G  
 0935 G  
 1035 M (dark)  
 1135 P  
 1235 P  
 1335 P  
 1432 M  
 1535 G  
 1635 G  
 1735 G

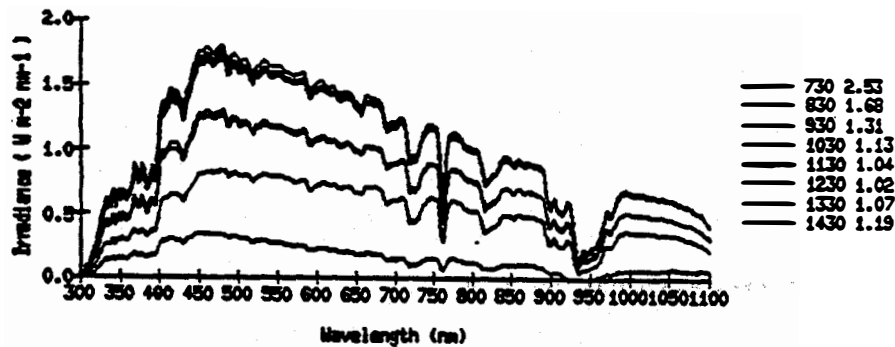
FSEC 125



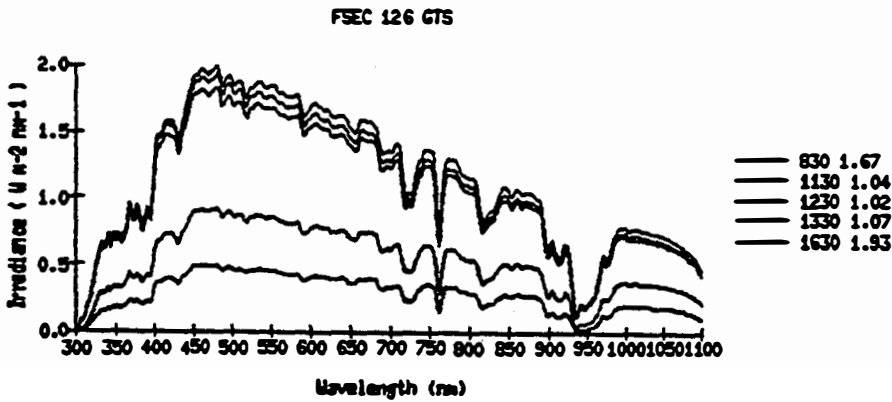
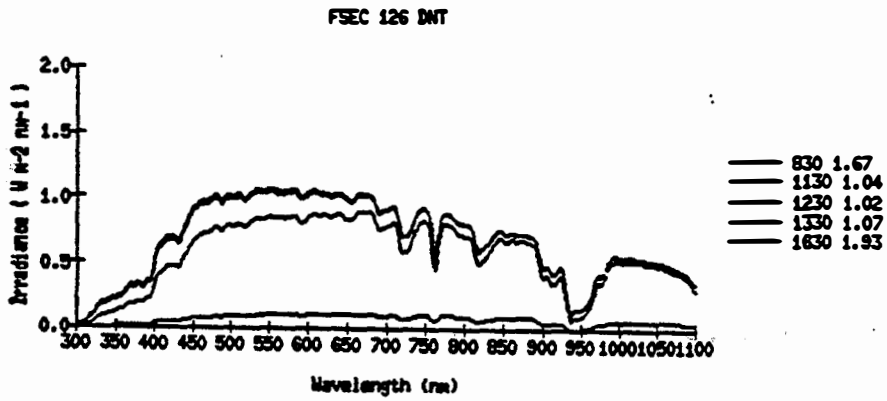
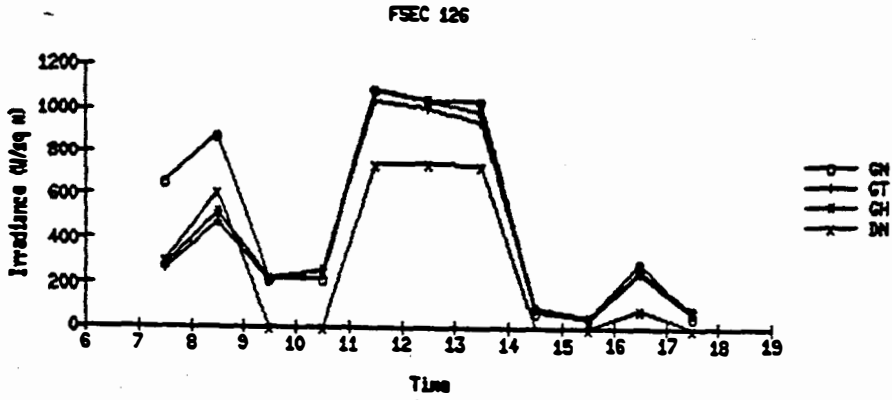
FSEC 125 DNT



FSEC 125 GTS



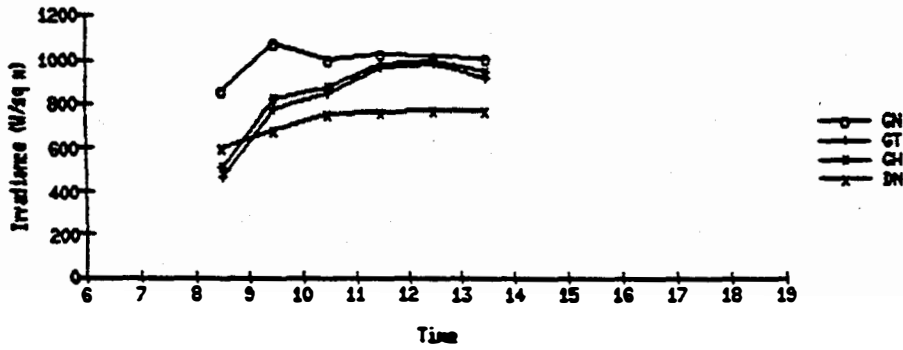
N FSEC87126  
 121 05 06 87 126 172 DN 102 GT  
 0.5 cloud cover at 0810; 0.85 at 1530  
 Reset trackers  
 Slides: 0636 G  
 0736 G  
 0836 G  
 0936 G  
 1036 G  
 1136 P (dark)  
 1236 P  
 1336 P  
 1436 G  
 1536 G  
 1636 G  
 1736 G



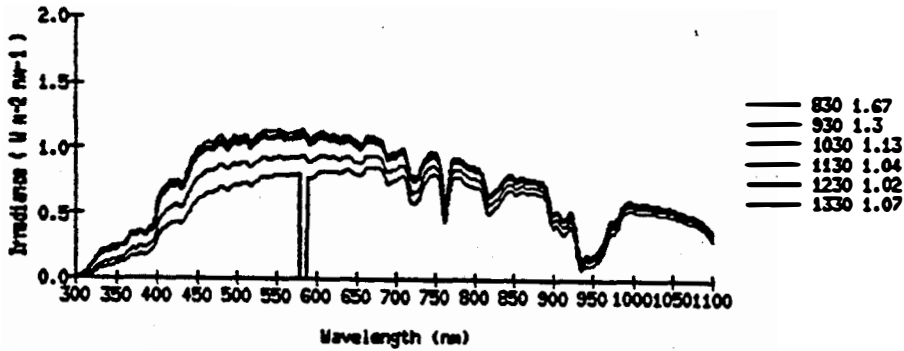
N FSEC87127  
 122 05 07 87 127 172 DN 102 GT  
 Trackers quit; reset at 0815  
 0 cloud cover with light haze at 0815; 0.1 after noon  
 Slides: 0635 G  
           0735 G  
           0835 G  
           0935 M (dark)  
           1035 P  
           1135 P  
           1235 P  
           1335 P  
           1435 M  
           1535 G  
           1635 G  
           1735 G

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 Spike in DN spectrum at 0830  
 Unstable conditions at 0930

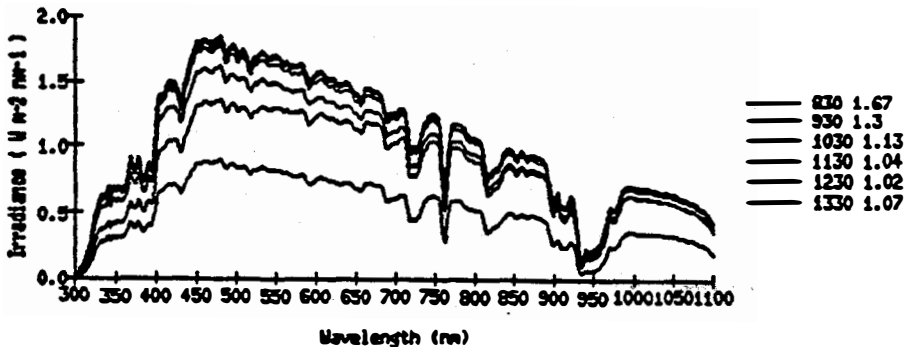
FSEC 127



FSEC 127 DNT



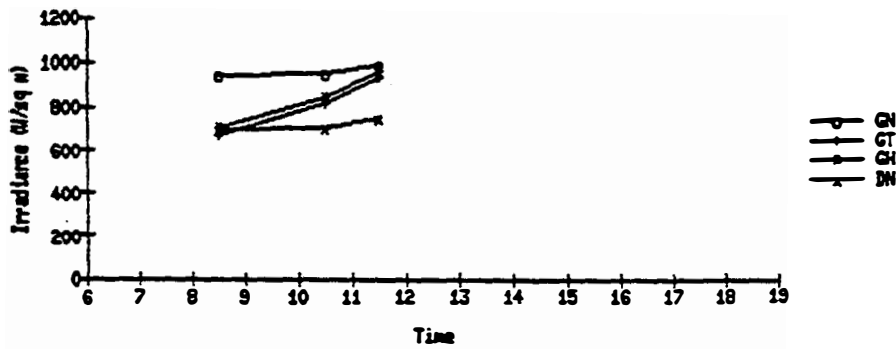
FSEC 127 GTS



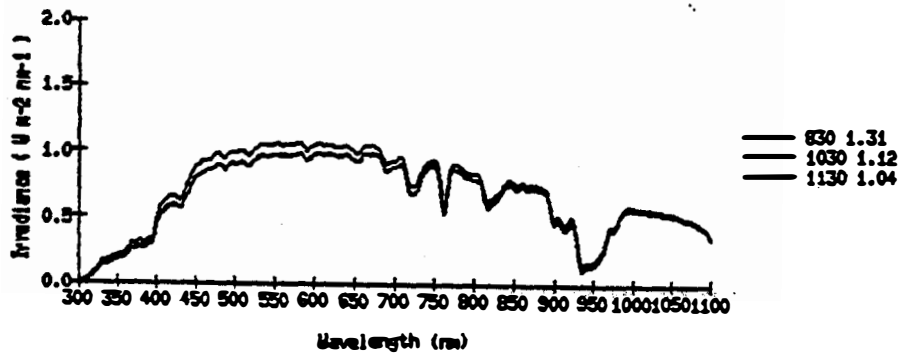
N FSEC87128  
 123 05 08 87 128 172 DN 102 GT  
 0.05 cloud cover with some haze  
 Reset trackers at 0820  
 Slides: 0634 G  
           0734 G  
           0834 G  
           0934 M (dark)  
           1034 P  
           1134 P  
           1234 G  
           1334 G  
           1434 G  
           1534 G

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 Note time stamp differences 0830 vs. 0931

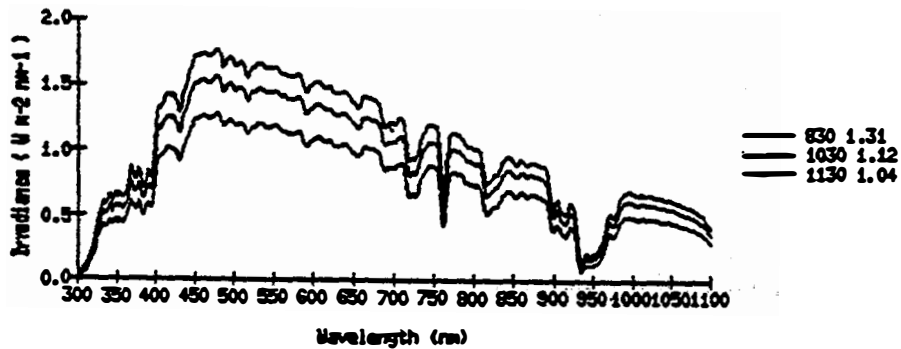
FSEC 128



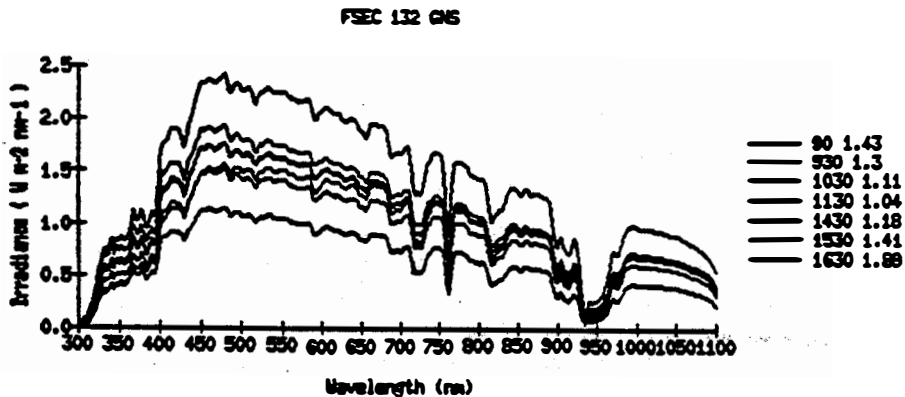
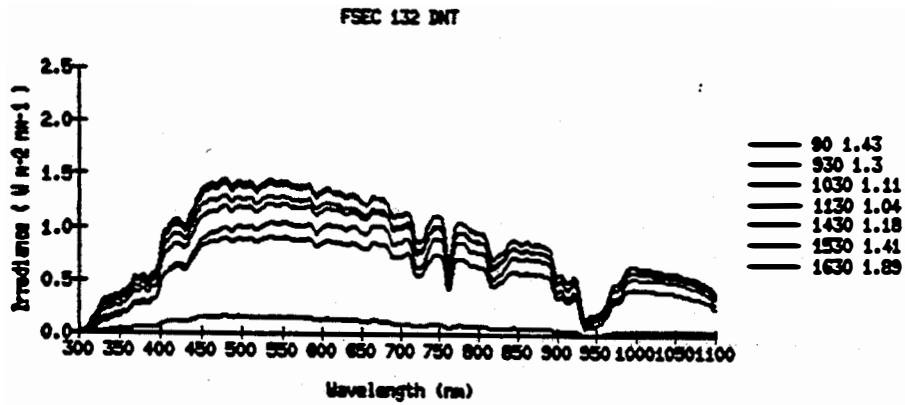
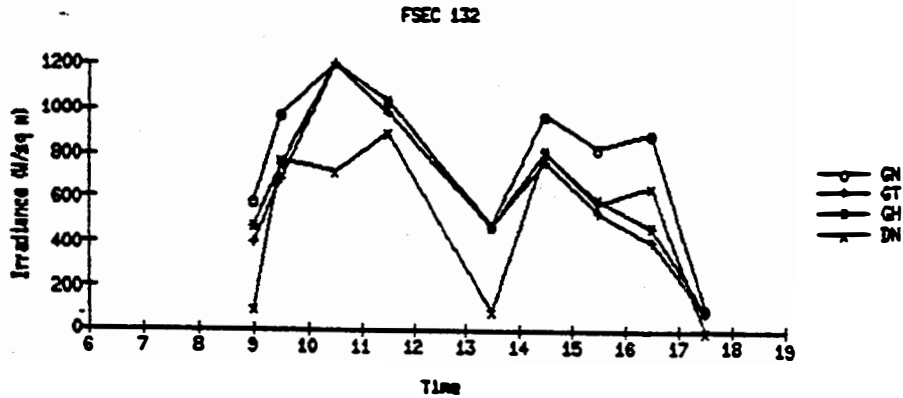
FSEC 128 DNT



FSEC 128 GTS

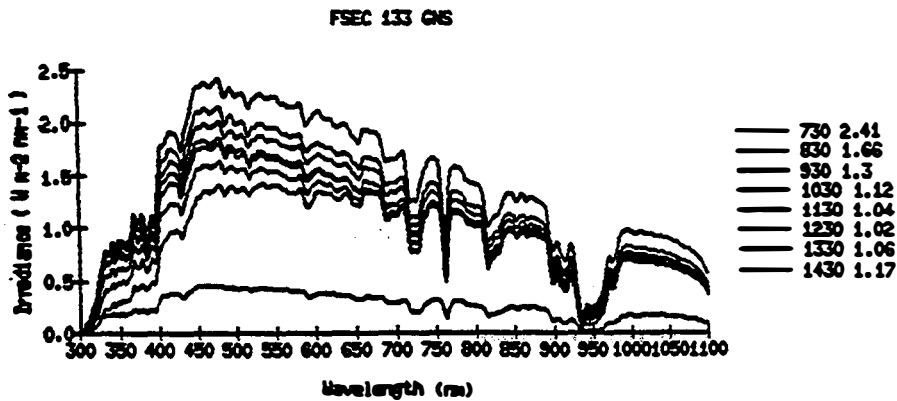
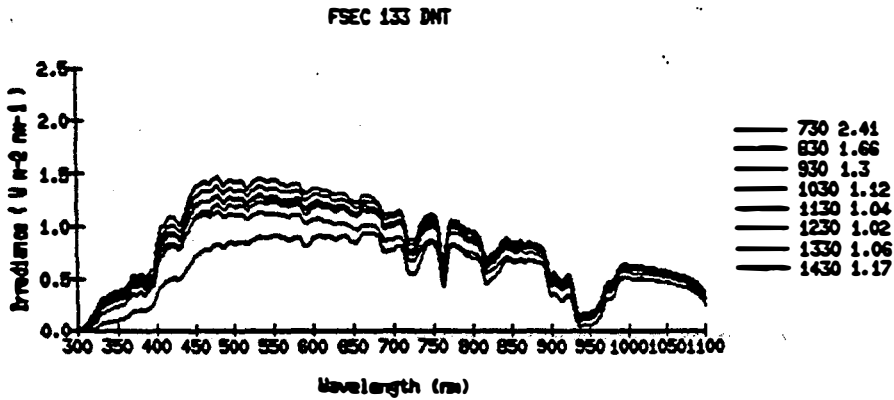
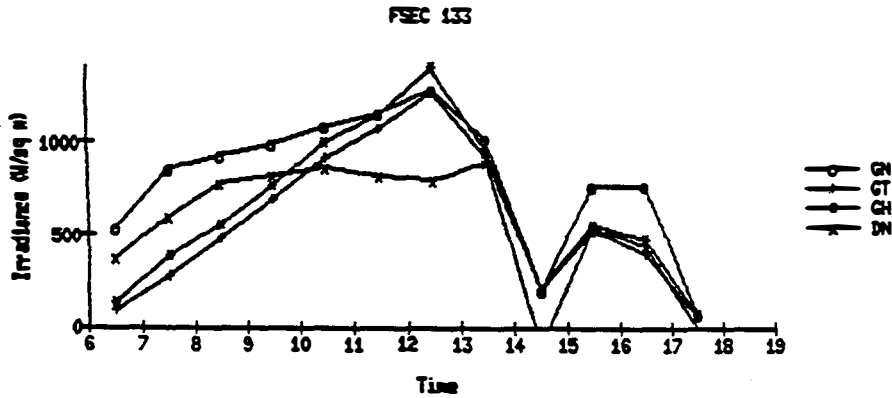


N FSEC87132  
 124 05 12 87 132 172 DN 102 GN  
 0.5 cloud cover at 0900; 0.6 at 1600  
 Slides: 0631 G  
 0731 G  
 0831 G  
 0931 M (dark)  
 1031 M  
 1131 P  
 1231 G  
 1331 M (dark)  
 1431 M  
 1531 G  
 1631 G



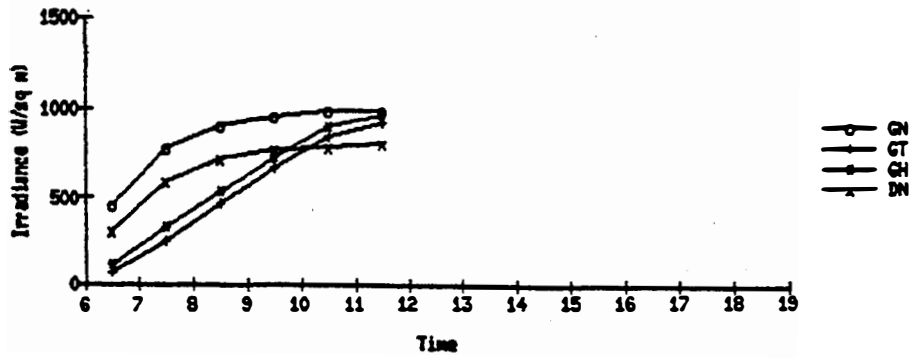


N FSEC87133  
 125 05 13 87 133 172 DN 102 GH  
 0.3 cloud cover at 0730; 0.7 at 1200; 0.8 at 1530  
 Note GH about 1290 Wm-2 and GH about 1400 Wm-2 at 1230  
 Slides: 0631 G  
 0731 G  
 0831 M (dark)  
 0931 M  
 1031 P  
 1131 P  
 1231 P  
 1331 P  
 1431 G  
 1532 G  
 1632 G  
 1732 G

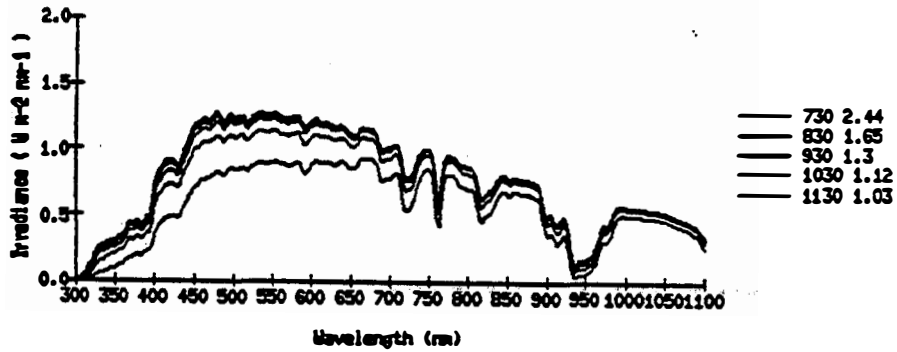


N FSEC87134  
 126 05 14 87 134 172 DN 102 GN  
 0.2 cloud cover at 0730  
 Slides: 0632 G  
 0732 G  
 0832 M (dark)  
 0932 M  
 1032 P  
 1132 P  
 1232 P  
 1332 P  
 1432 G  
 1532 G  
 1632 G  
 1732 G

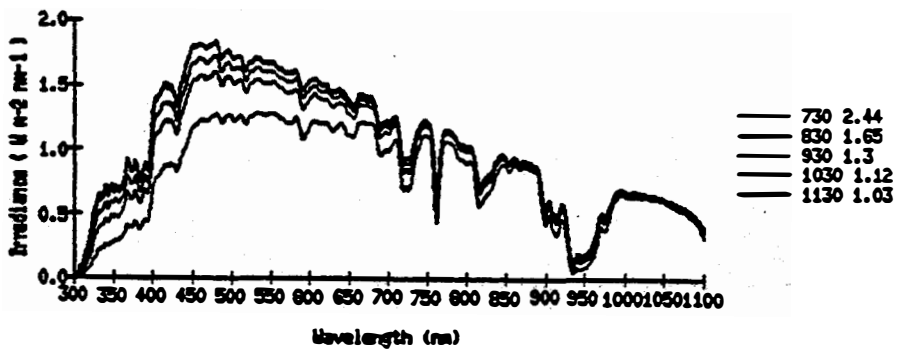
FSEC 134



FSEC 134 DNT

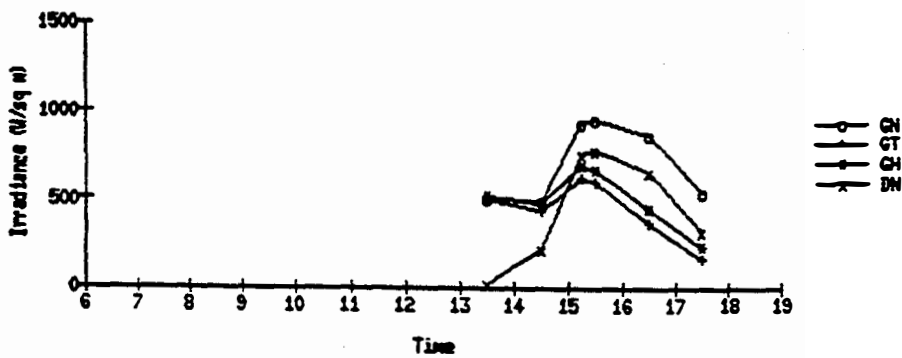


FSEC 134 GS

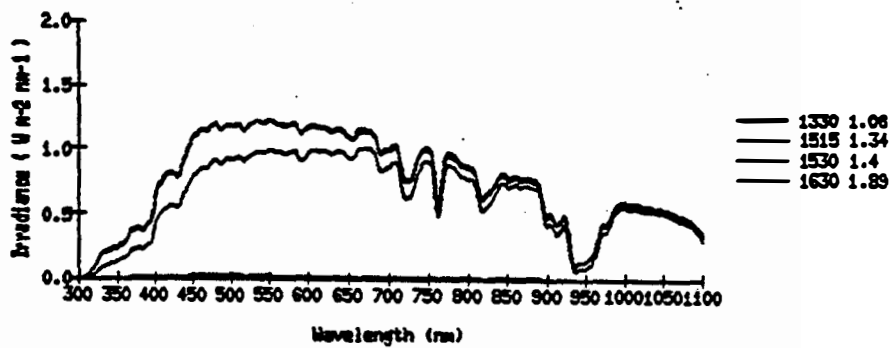


N FSEC87135  
 127 05 15 87 135 172 DW 102 GN  
 0.7 cloud cover at 1230; 0.2 at 1515  
 Heavy rain in morn; area under albedo flooded  
 Slides: 0631 G (water drops)  
 0732 G  
 0832 G  
 0931 G  
 1031 G  
 1131 G  
 1231 G  
 1331 G  
 1431 M (dark)  
 1532 G  
 1632 G  
 1732 G

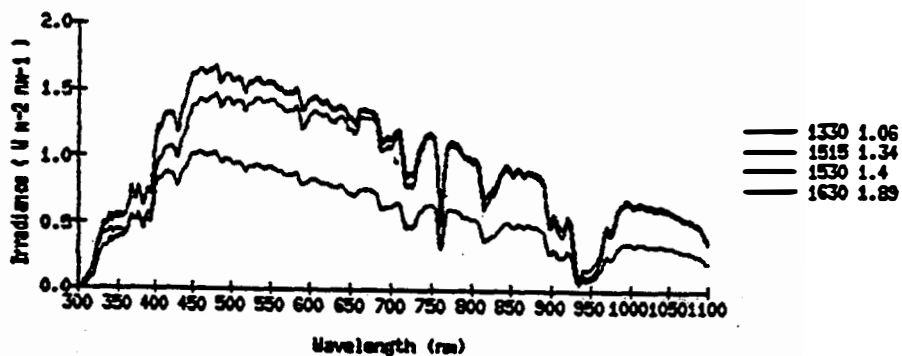
FSEC 135



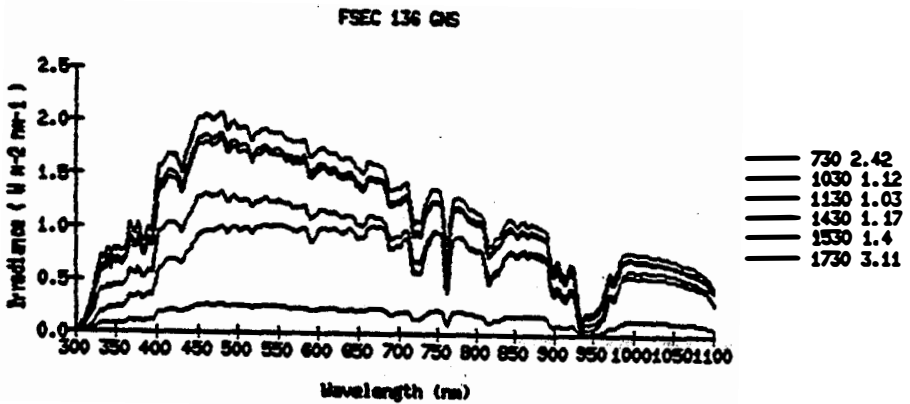
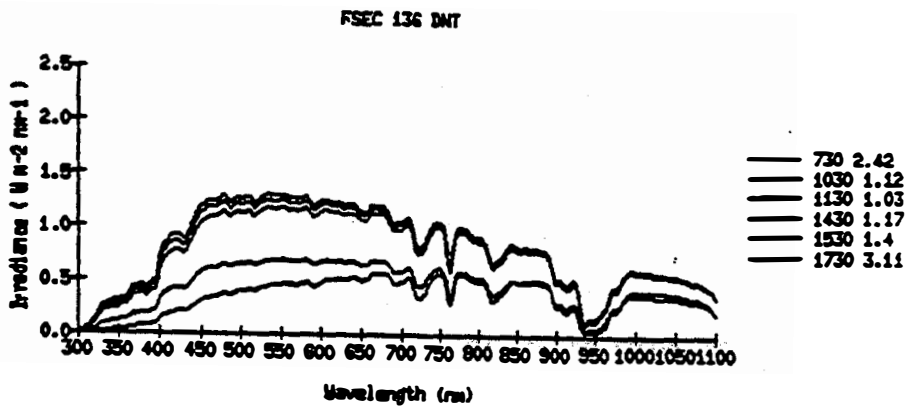
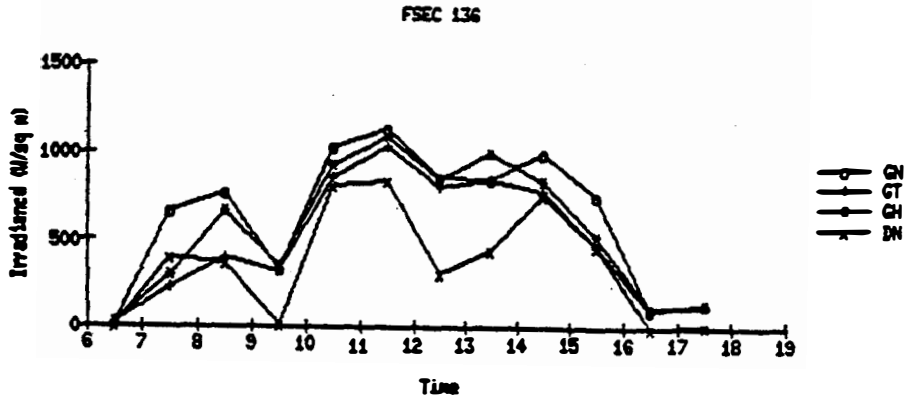
FSEC 135 DW



FSEC 135 GN



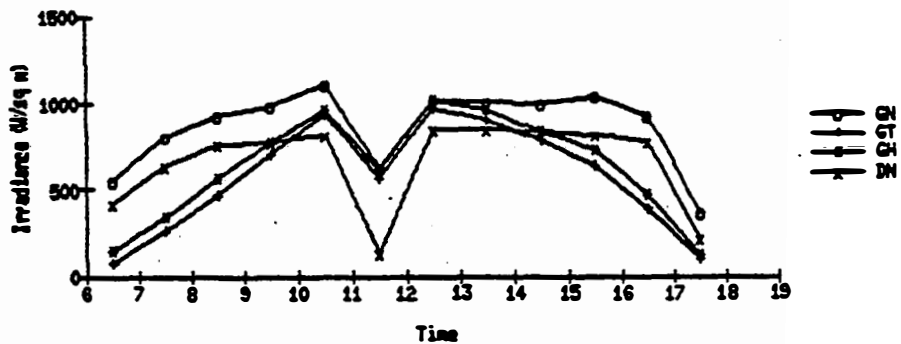
N FSEC87136  
 128 05 16 87 136 172 DN 102 GN  
 Partly cloudy  
 Slides: 0631 G  
 0731 G  
 0831 G



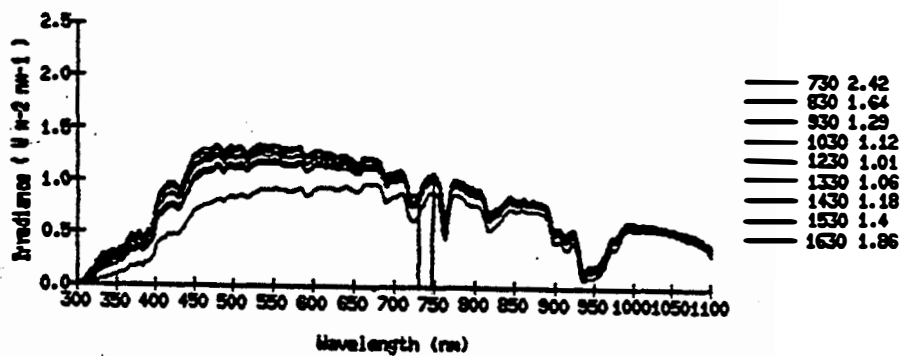
N FSEC87137  
 129 05 17 87 137 172 DW 102 GN  
 Partly cloudy  
 No slides

-----  
 Missing data in DW spectrum at 1430

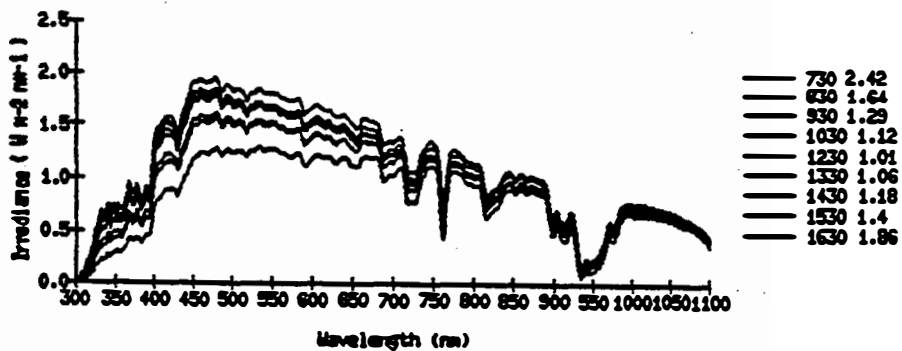
FSEC 137



FSEC 137 DNT

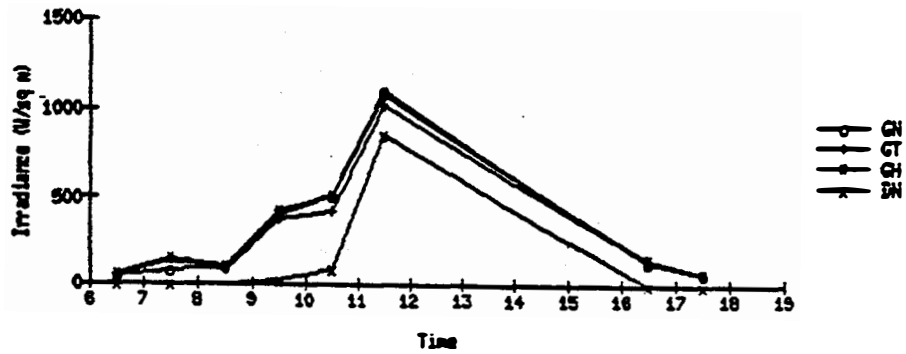


FSEC 137 GNS

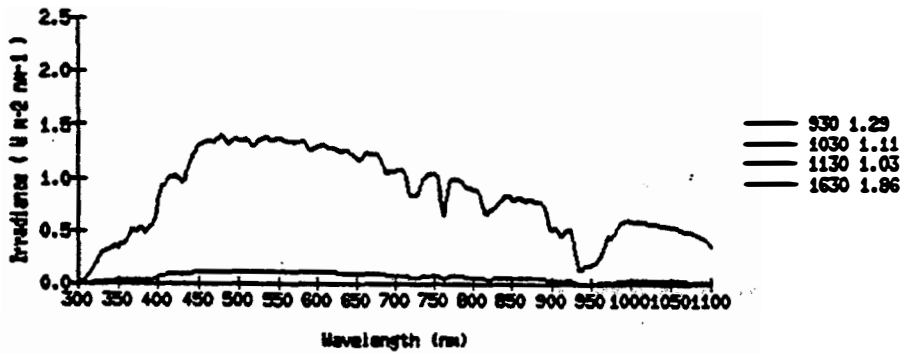


N FSEC87138  
 130 05 18 87.138 172 DW 102 GN  
 1.0 cloud cover at 0730; 0.5 at 1200, 0.8 at 1500  
 No photos

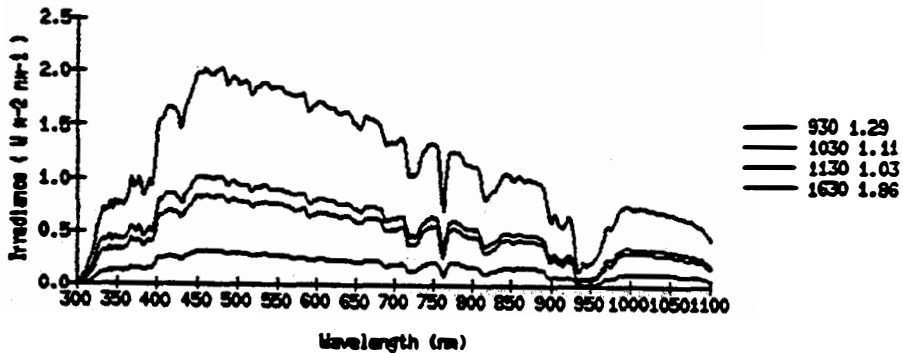
FSEC 138



FSEC 138 DNT



FSEC 138 GNS



N FSEC87148  
 131 05 28 87 148 102 GH  
 LSR 172 removed for repair - lost memory  
 Replaced SI pyranometer; old = PY2276, cal  $8.45 \times 10^{-6}$  V/Wm<sup>-2</sup>  
 new = 2279, cal  $7.87 \times 10^{-6}$  V/Wm<sup>-2</sup>

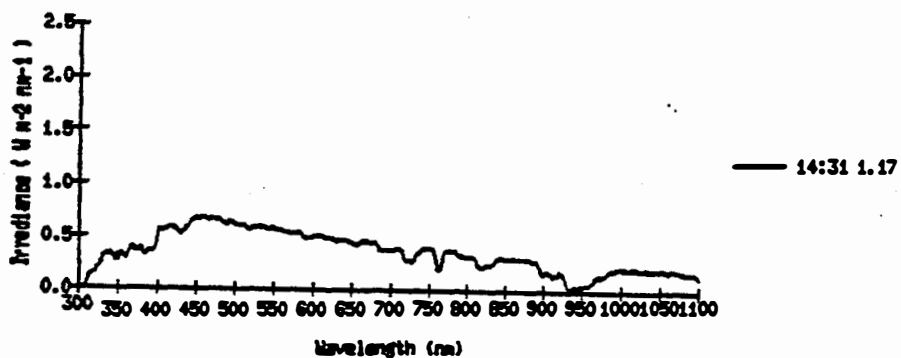
0.9 cloud cover  
 No slides

-----  
 Appears to be spike in spectrum in UV at 1431

FSEC 148

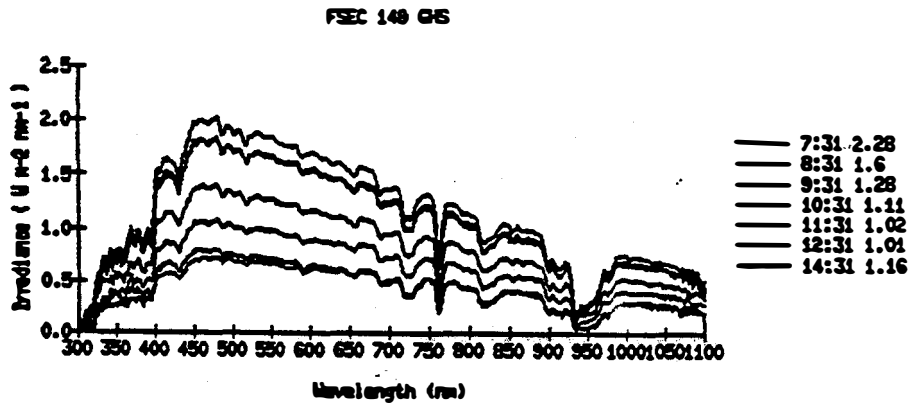
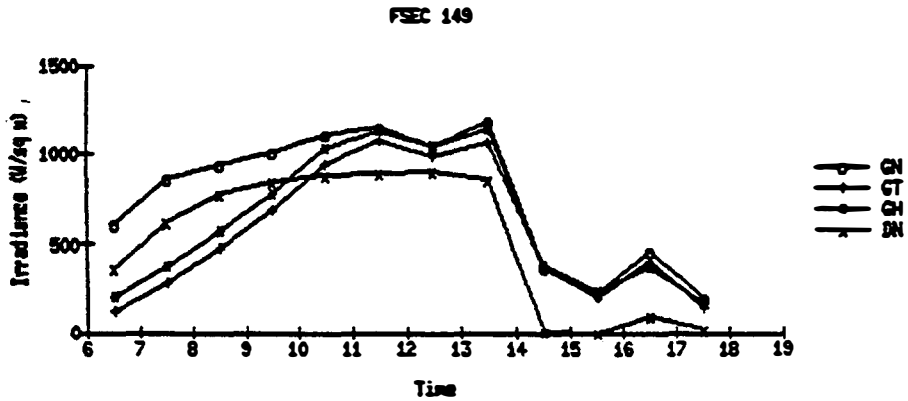


FSEC 148 GHS



N FSEC87149  
 132 05 29 87 149 102 GH  
 0.1 cloud cover at 0730 and 1230; 1.0 at 1430  
 Slides: All black

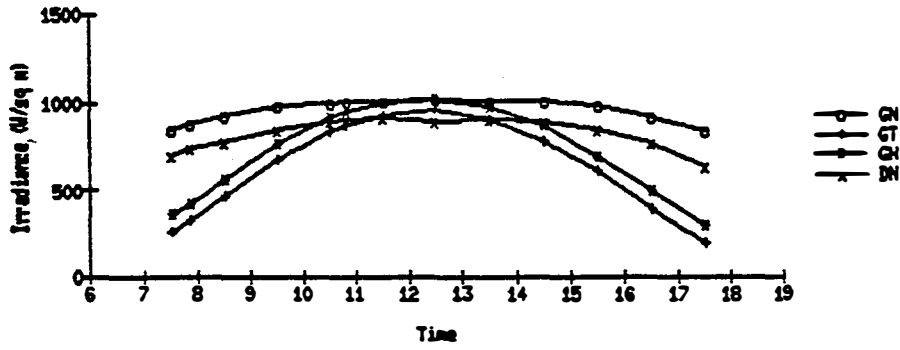
Spikes in spectra in UV at 0731, 0831, 0931, 1131, 1231, 1431



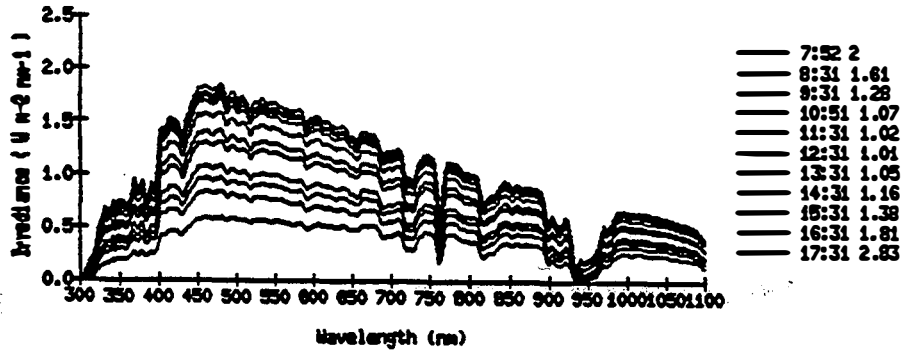


N FSEC87152  
 133 06 01 87 152 102 GH  
 0.1 cloud cover at 0730; 0.2 at 1130  
 Slides: All black

FSEC 152

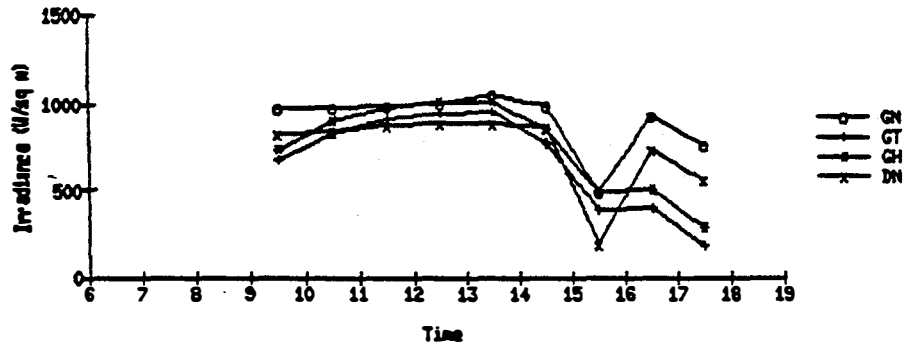


FSEC 152 GHS

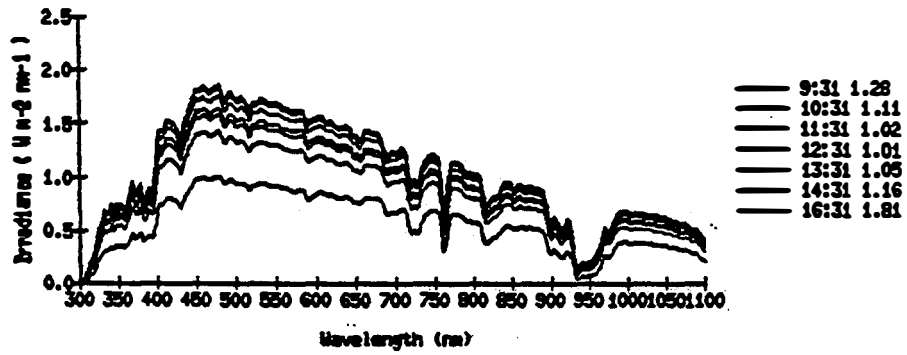


N FSEC87153  
 134 06 02 87 153 102 GH  
 0.3 cloud cover at 0830; 0.2 at 1200  
 Slides: All black

FSEC 153

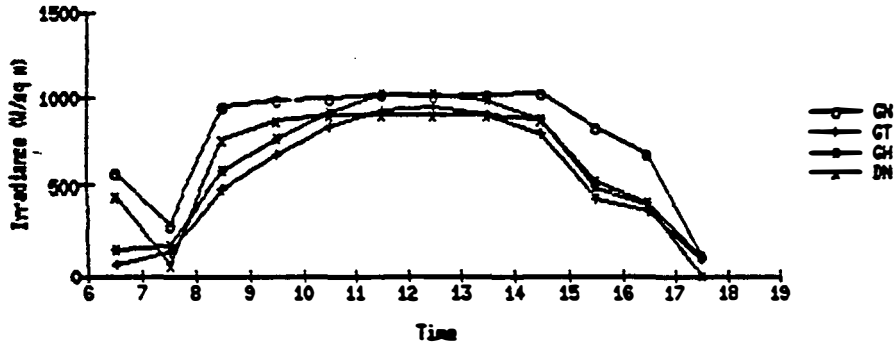


FSEC 153 GHS

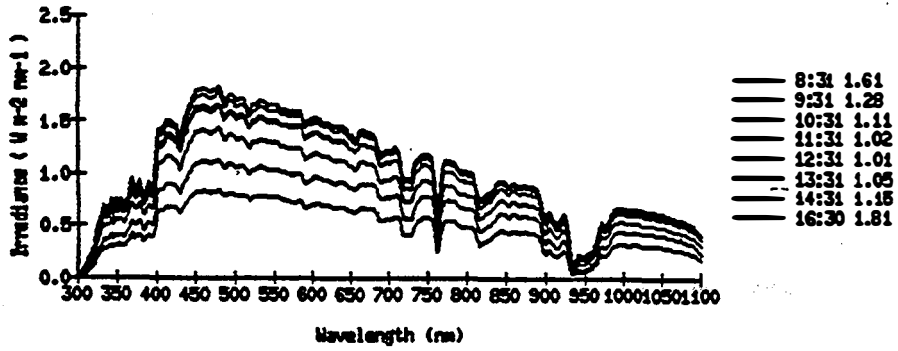


N FSEC87154  
 135 06 03 87 154 102 GH  
 0.4 cloud cover at 0700  
 Slides: All black

FSEC 154



FSEC 154 GHS

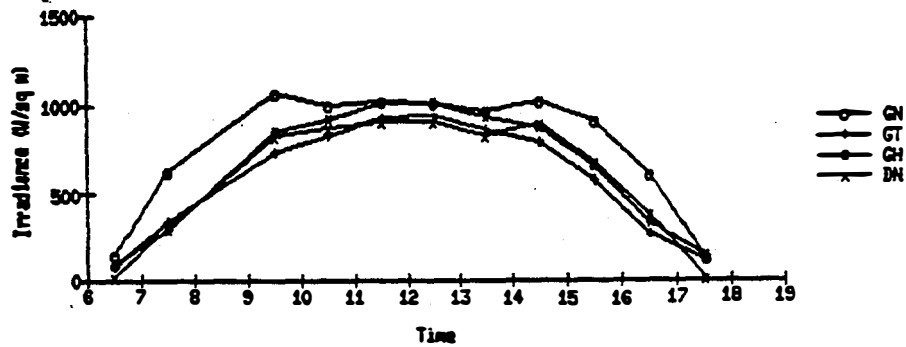


N FSEC87155  
 136 06 04 87 155 102 GH  
 GH in morning  
 0.5 cloud cover at 0730  
 Slides: All black

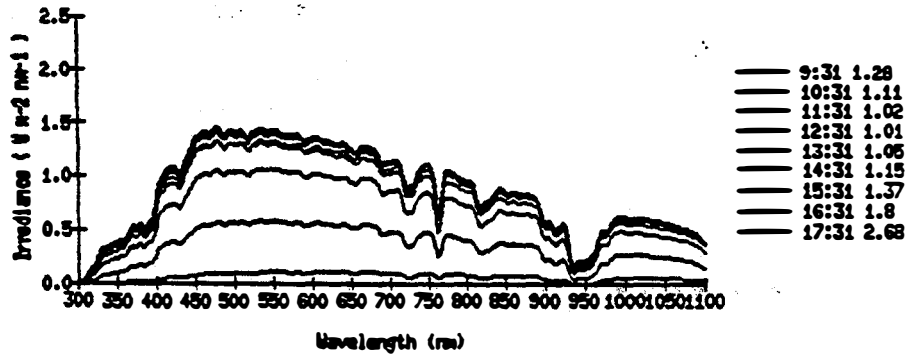
No spectra

137 06 04 87 155 172 DW 102 GT  
 0.6 cloud cover at 0930; 0.2 at 1130; 0.5 and hazy at 1600  
 Slides: All black

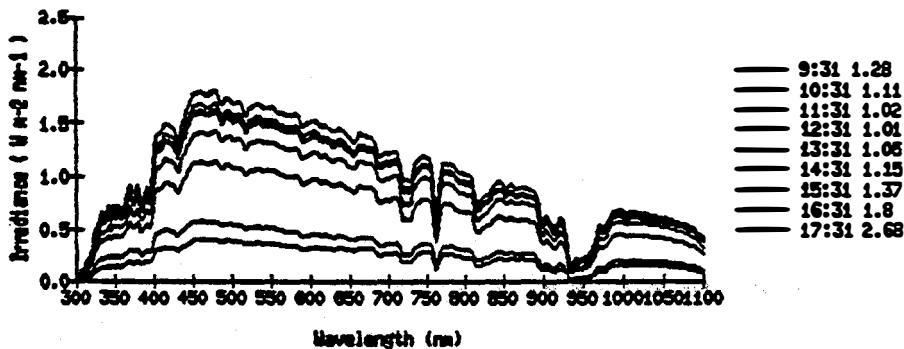
FSEC 155



FSEC 155 DNT



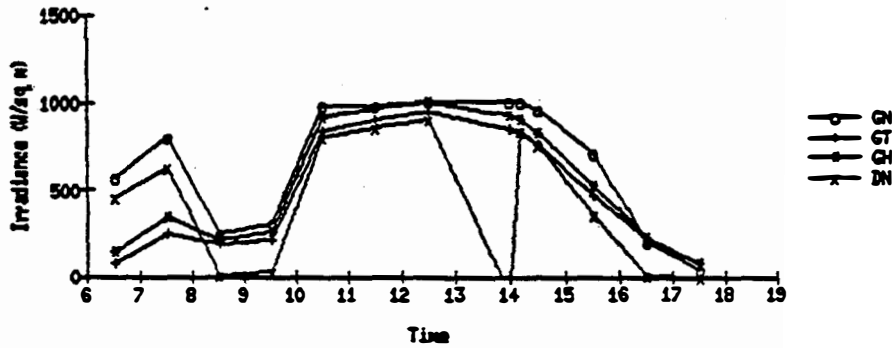
FSEC 155 GTS



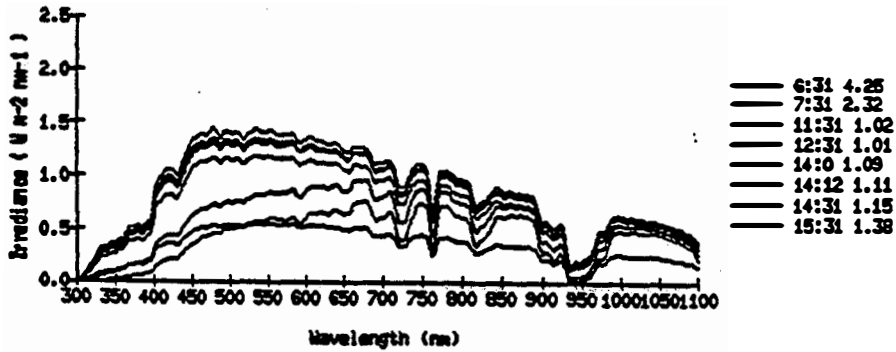
N FSEC87156  
 138 06 05 87 156 172 DN 102 GT  
 0.1 cloud cover at 0730 and 1400 (hazy)  
 Slides: All black

-----  
 DN before bad at 1401  
 Spike in GT spectrum in UV at 1401 and 1412  
 Spectral integral > GT broadband at 0634

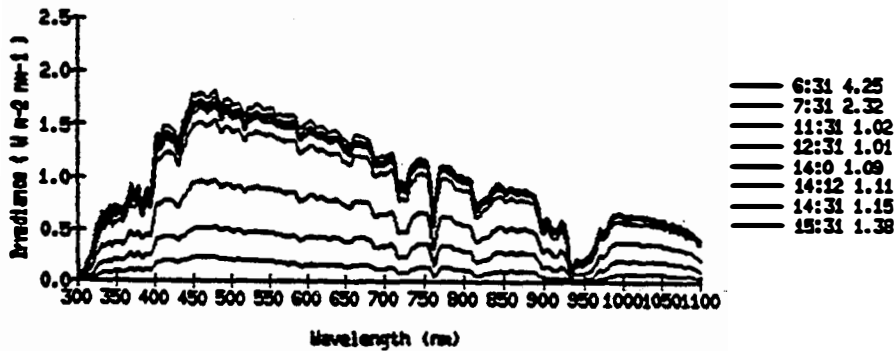
FSEC 156



FSEC 156 DNT

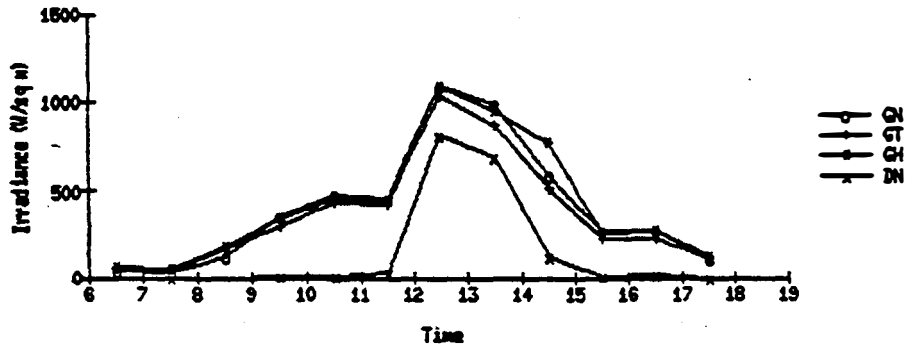


FSEC 156 GTS

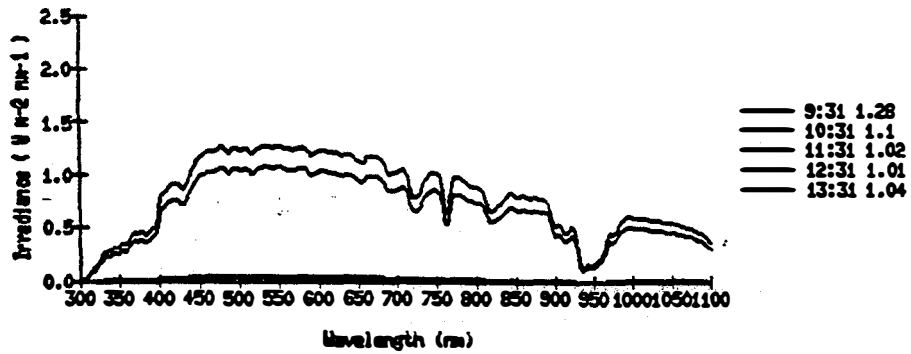


N FSEC87157  
 139 06 06 87 157 172 DN 102 GT  
 Partly cloudy  
 Slides: All black

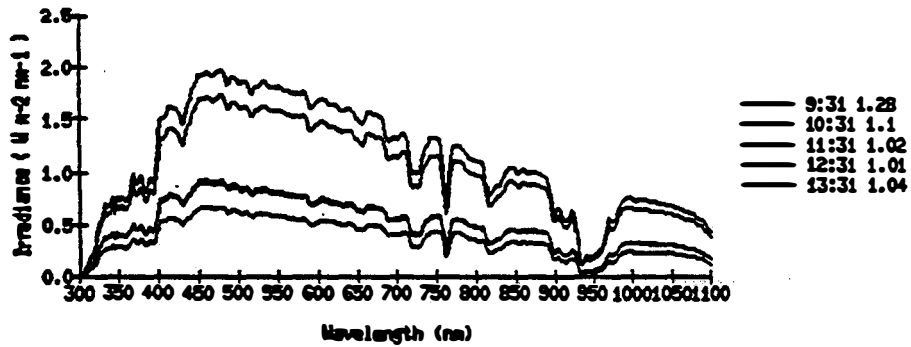
FSEC 157



FSEC 157 DNT

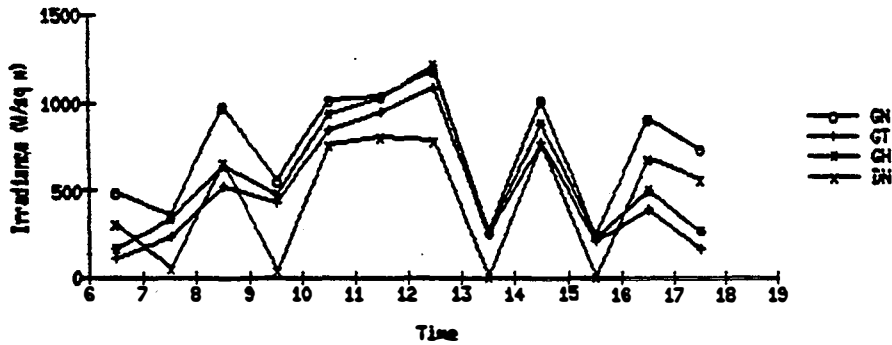


FSEC 157 GTS

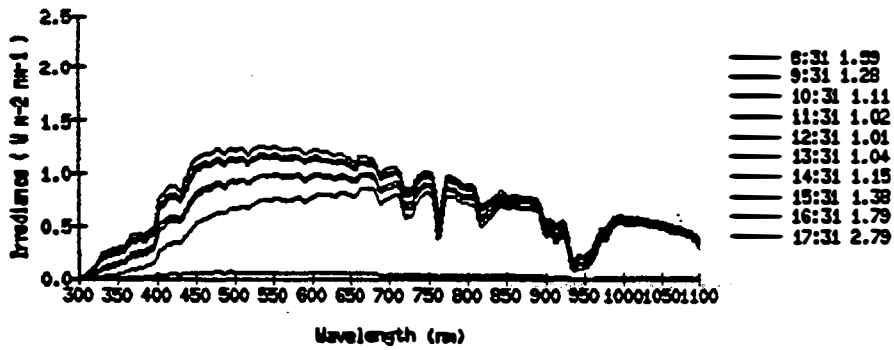


N FSEC87158  
 140 06 07 87 158 172 DN 102 GT  
 Partly cloudy  
 Slides: All black

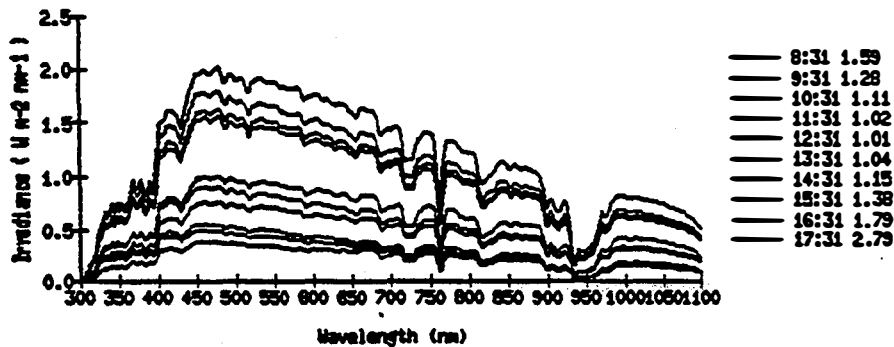
FSEC 158



FSEC 158 DNT



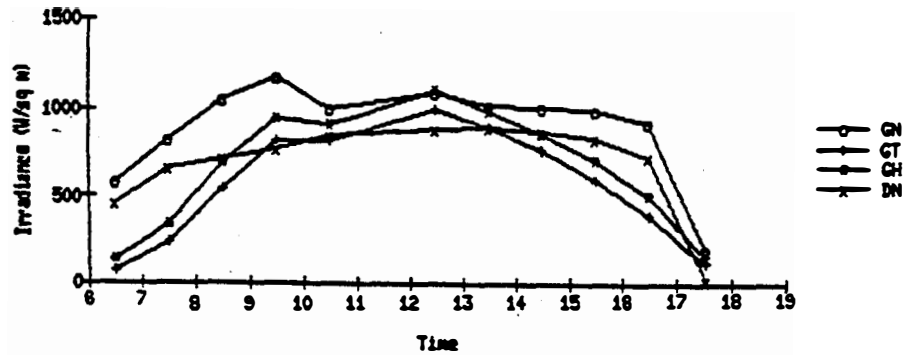
FSEC 158 GTS



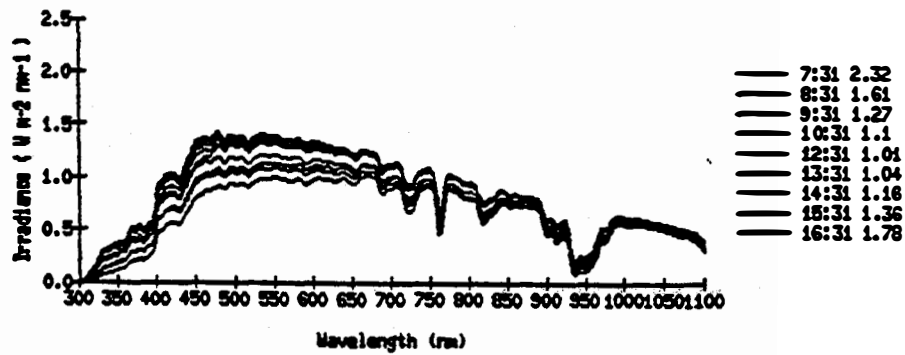
N FSEC87159  
 141 06 08 87 159 172 DN 102 GT  
 Clear at 0730; 0.2 cloud cover at 1030  
 Slides: All black

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 DN spectrum at 1231 has an odd shape

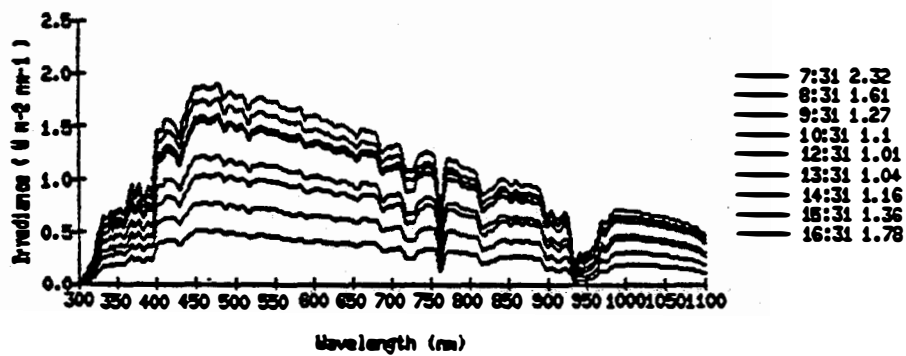
FSEC 159



FSEC 159 DNT



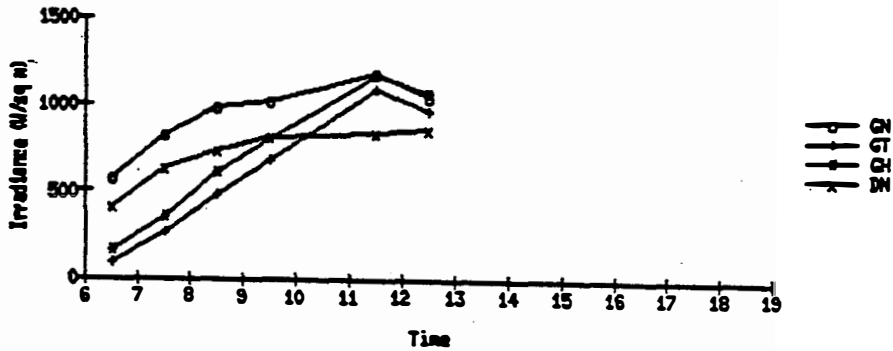
FSEC 159 GTS



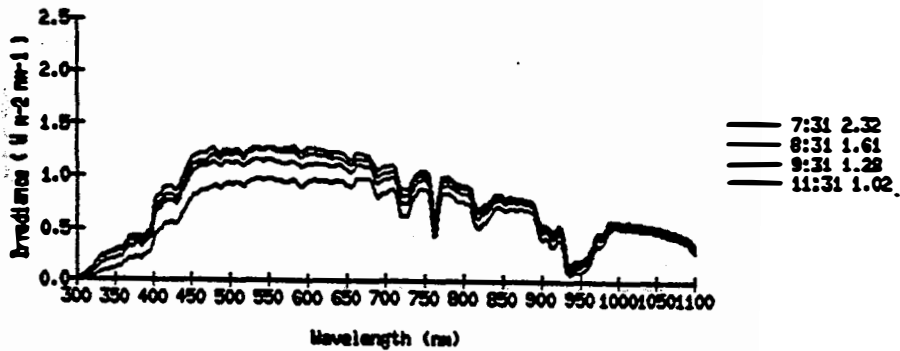


N FSEC87160  
 142 06 09 87 160 172 DN 102 GT  
 0.3 cloud cover at 0730; 0.2 at 1600  
 LSR 172 lost memory about 1300  
 Slides: All black

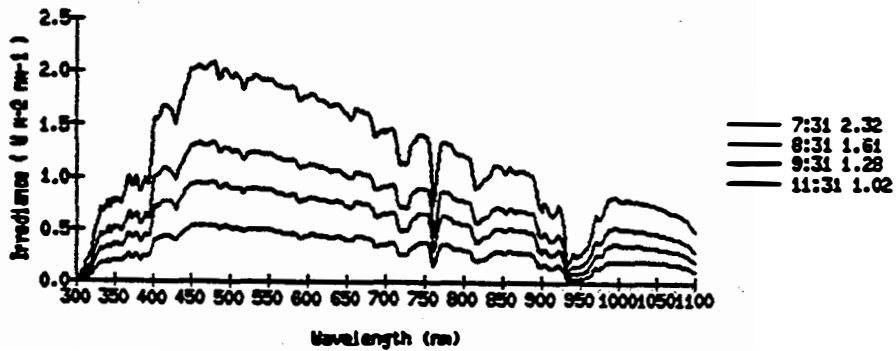
FSEC 160



FSEC 160 DNT

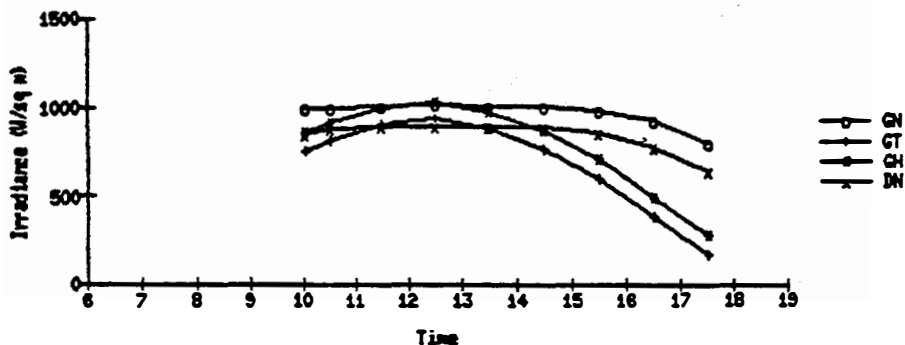


FSEC 160 GTS

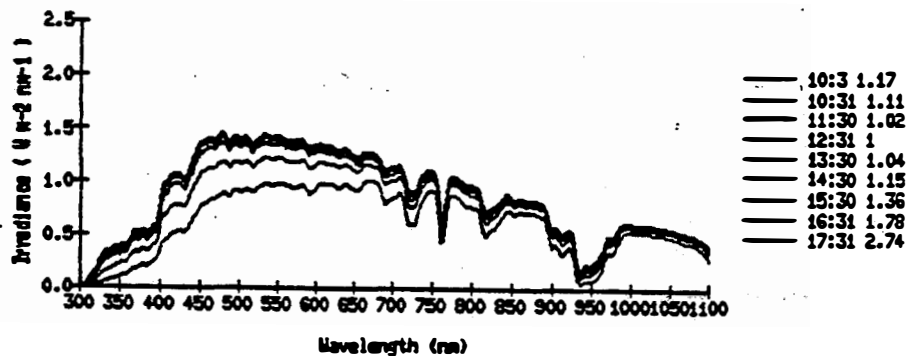


N FSEC87161  
 143 06 10 87 161 172 DN 102 GN  
 0.2 cloud cover at 1000 and 1500  
 LSR 172 lost memory for second time; reloaded cal files  
 Slides: All black

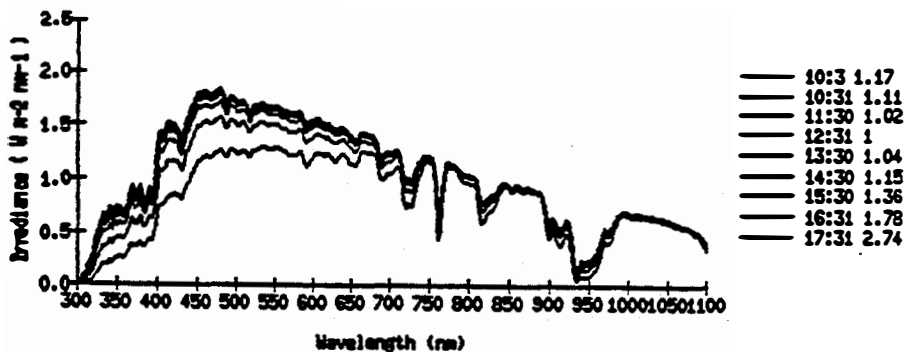
FSEC 161



FSEC 161 DNT

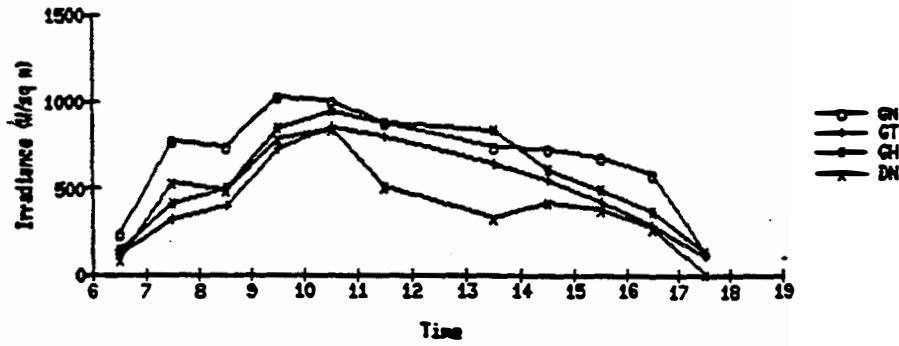


FSEC 161 GNS

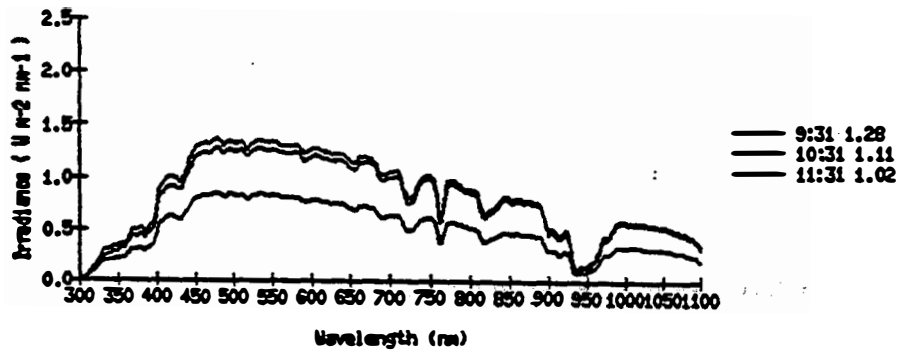


N FSEC87162  
 144 06 11 87 162 172 DN 102 GN  
 0.4 cloud cover at 0730; 0.9 at 1130  
 Slides: All black

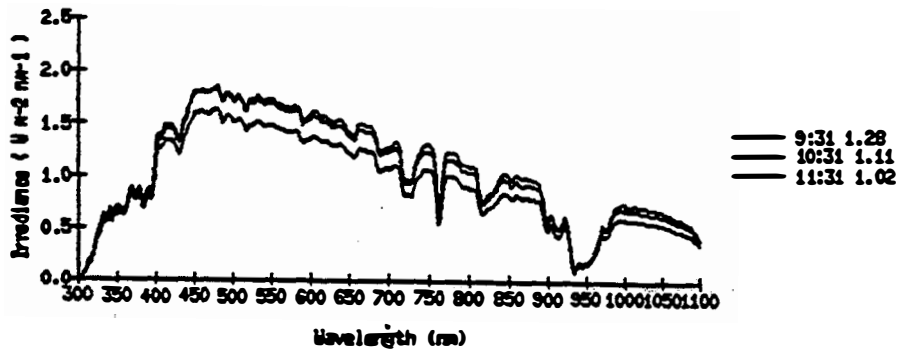
FSEC 162



FSEC 162 DNT

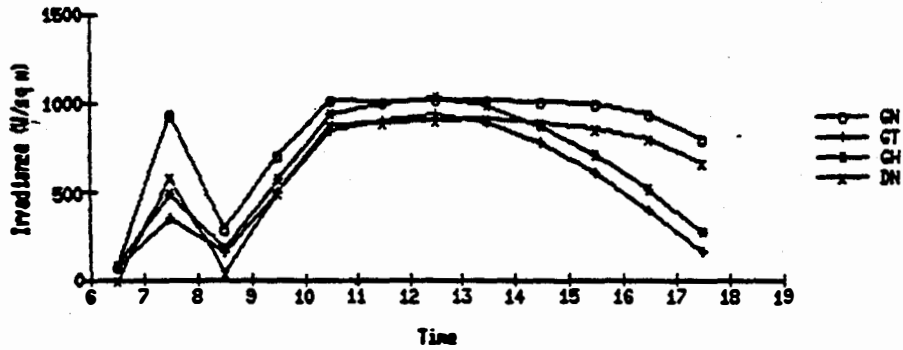


FSEC 162 GNS

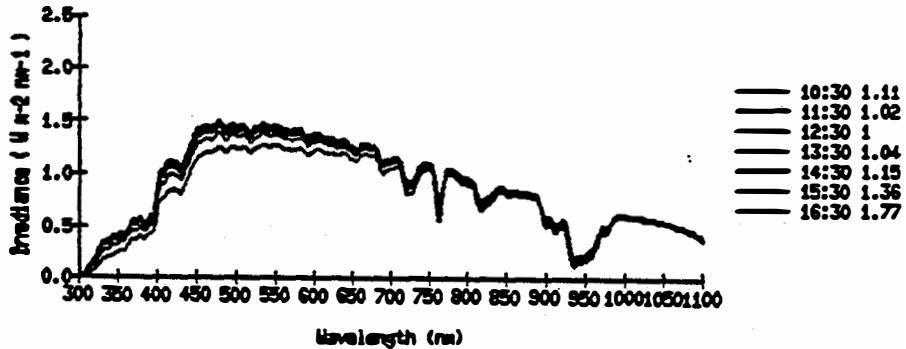


N FSEC87163  
 145 06 12 87 163 172 DN 102 GN  
 0.9 cloud cover at 0730; 0.3 at 1030; 0.2 at 1430  
 Slides: All black

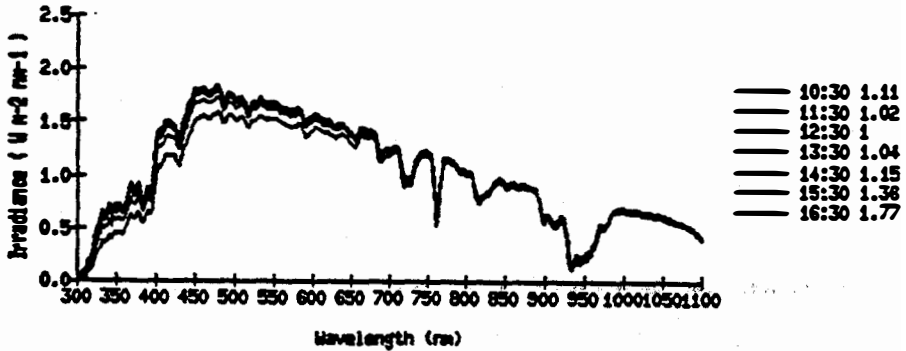
FSEC 163



FSEC 163 DNT

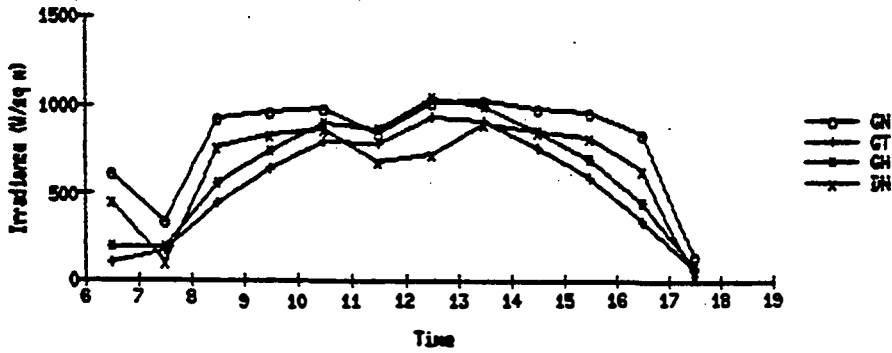


FSEC 163 GS

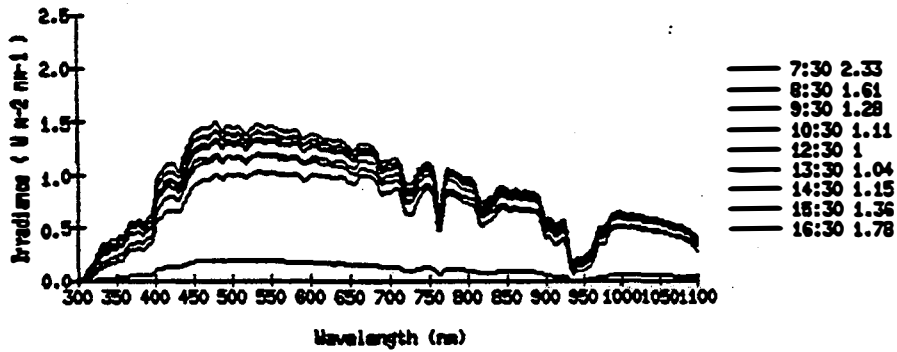


N FSEC87164  
 146 06 13 87 164 172 DN 102 GN  
 Partly cloudy  
 Slides: 0631 G  
 0731 G  
 0831 M (dark)  
 0931 M  
 1031 P  
 1131 P  
 1231 P  
 1331 P  
 1432 P  
 1532 M  
 1632 G  
 1731 G  
 1832 G

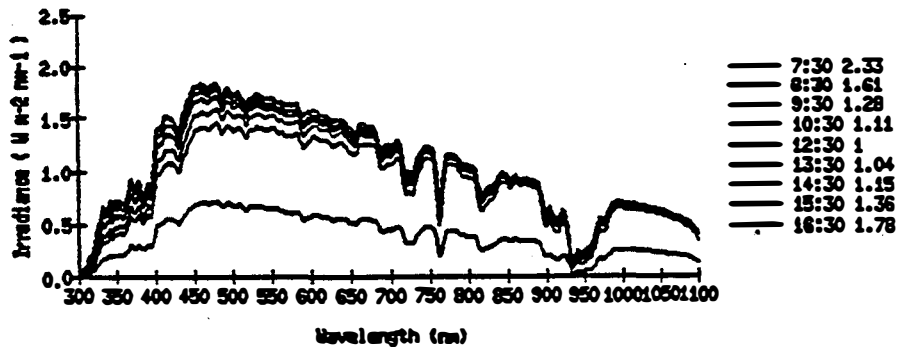
FSEC 164



FSEC 164 DNT

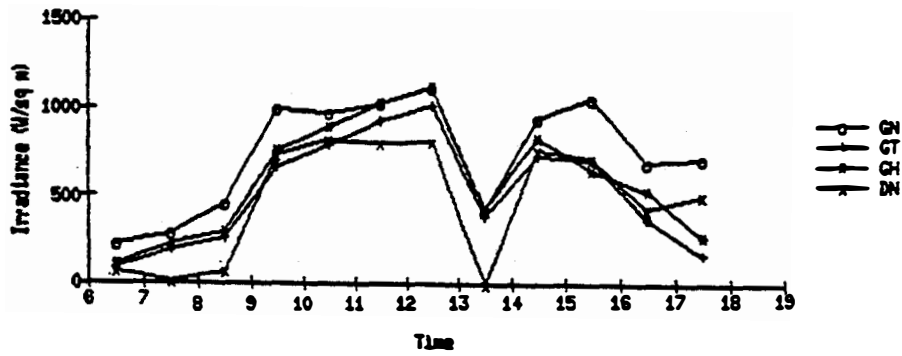


FSEC 164 GMS

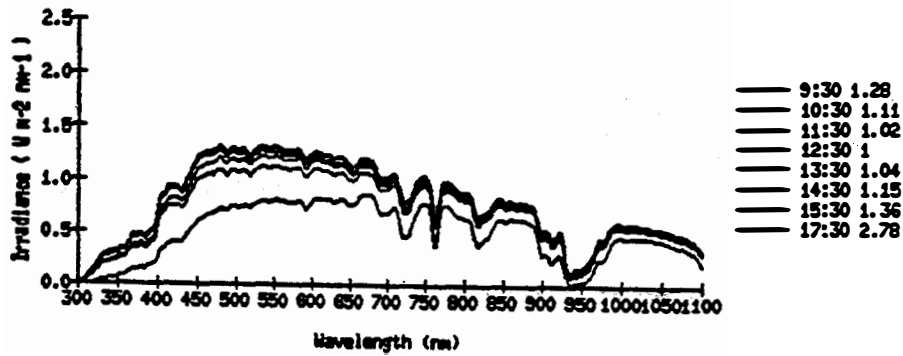


N FSEC87165  
 147 06 14 87 165 172 DN 102 GN  
 Partly cloudy  
 Slides: 0631 G  
 0731 G  
 0831 M (dark)  
 0931 M  
 1031 P  
 1131 P  
 1231 M  
 1331 G  
 1431 M (dark)  
 1531 M  
 1631 G  
 1731 G  
 1831 G

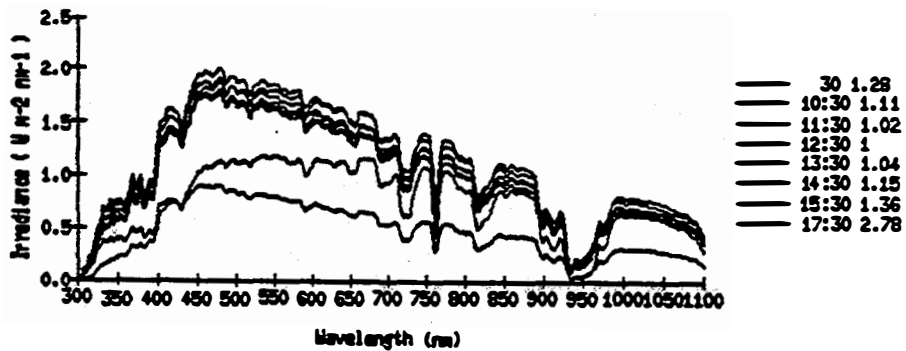
FSEC 165



FSEC 165 DNT

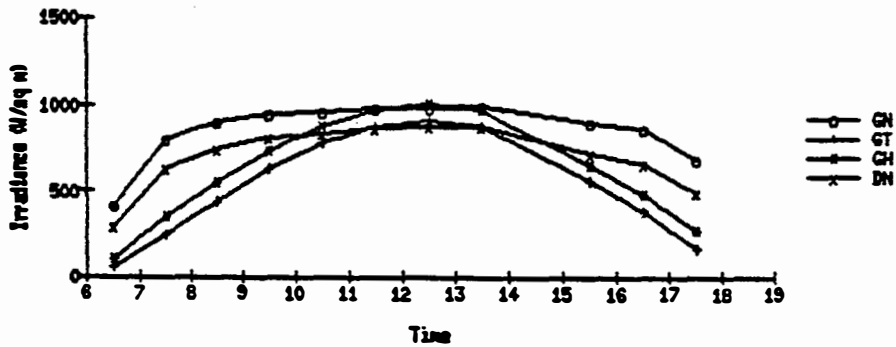


FSEC 165 GNS

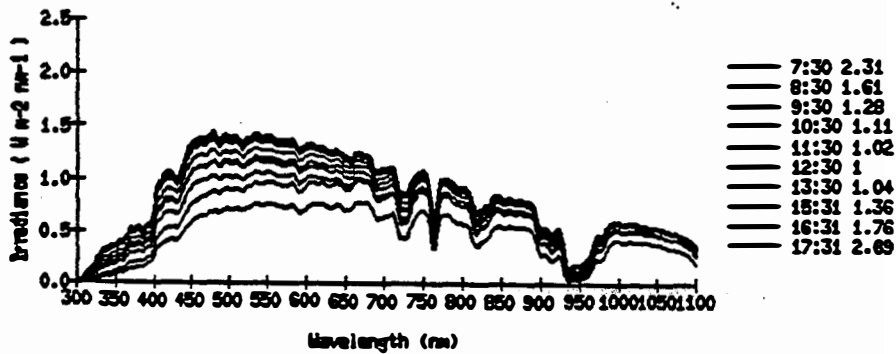


N FSEC87166  
 148 06 15 87 166 172 DN 102 GN  
 0.3 cloud cover at 0730; 0.1 at 1130; 0.1 at 1530  
 Slides: 0631 G  
 0731 G  
 0831 M (dark)  
 0930 M  
 1030 M  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 M  
 1630 G  
 1730 G  
 1830 G

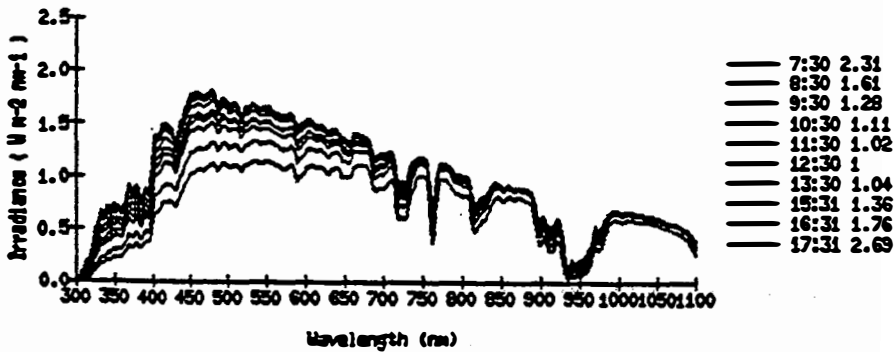
FSEC 166



FSEC 166 DNT



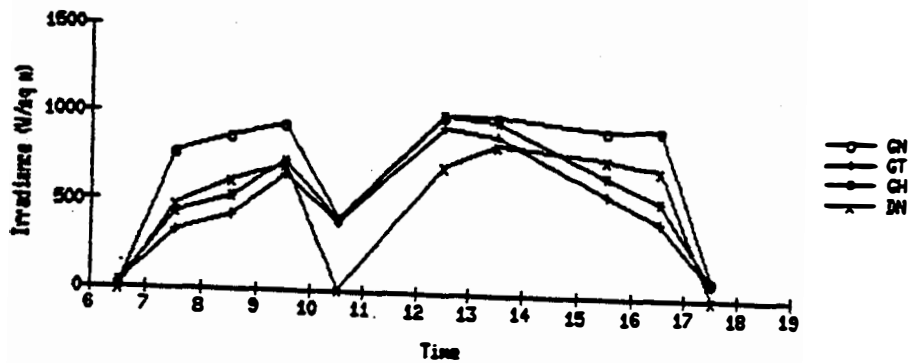
FSEC 166 GMS



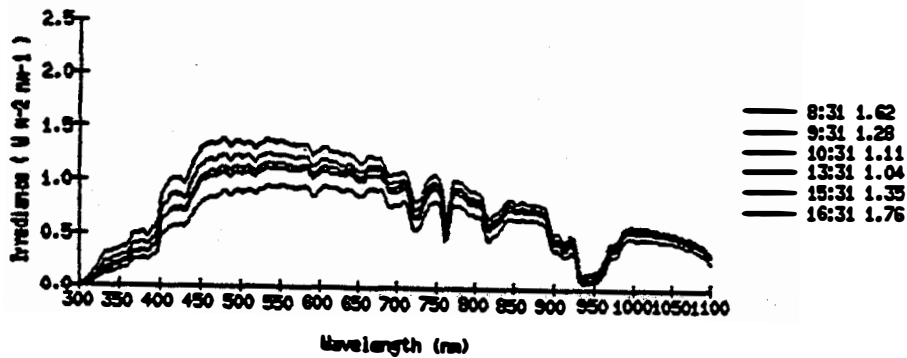
N FSEC87167  
 149 06 16 87 167 172 DN 102 GN  
 0.9 cloud cover at 0730; 0.8 at 1130; 0.5 at 1530  
 Some data from LSR 102 lost during data transfer at 1230 scans;  
 trackers being worked on

Slides: 0630 G  
 0730 G  
 0830 H (dark)  
 0930 H  
 1030 G  
 1130 G  
 1231 H (dark)  
 1331 P  
 1431 P  
 1531 H  
 1631 G  
 1731 G  
 1831 G

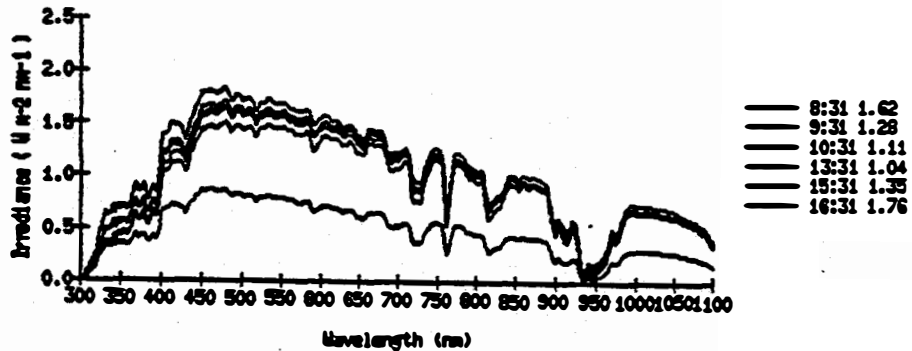
FSEC 167



FSEC 167 DNT



FSEC 167 GIS

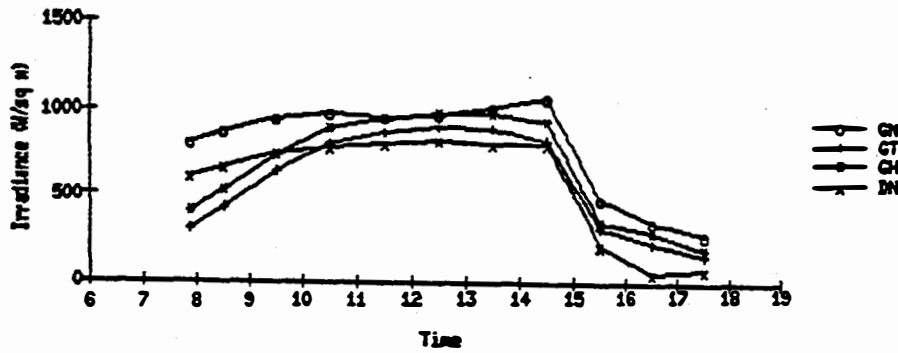




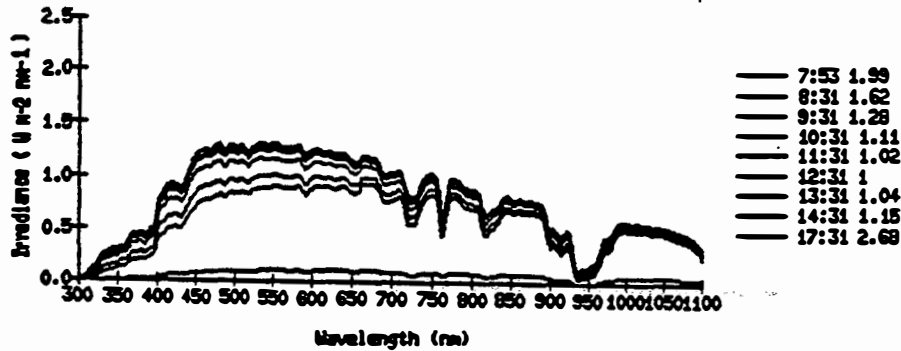
N FSEC87168  
 150 06 17 87 168 172 DN 102 GH  
 0 cloud cover at 0750; 0.2 at 1200; 0.7 at 1600  
 Slides: 0631 G  
 0731 G  
 0831 M (dark)  
 0931 M  
 1031 P  
 1131 P  
 1231 P  
 1331 P  
 1431 M  
 1529 G  
 1629 G  
 1729 G  
 1829 G

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 Appears to be a small spike in UV in GH spectrum at 1231

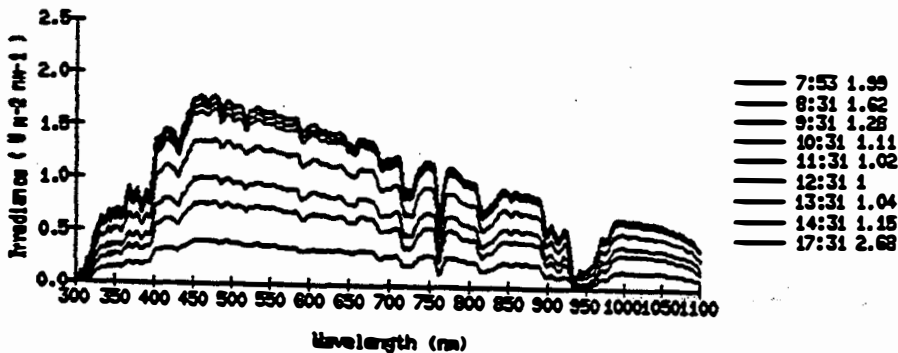
FSEC 168



FSEC 168 DNT

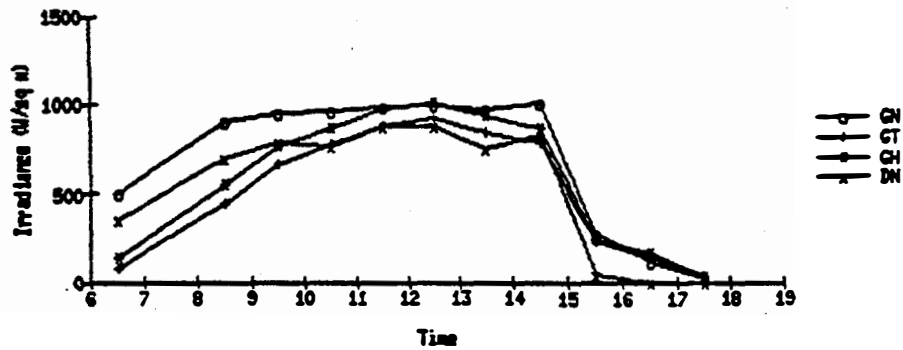


FSEC 168 GHS

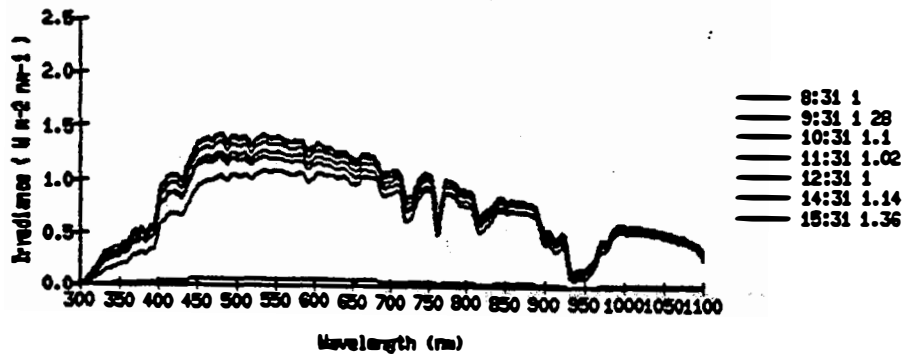


N FSEC87169  
 151 06 18 87-169 172 DN 102 GH  
 0.4 cloud cover at 0730; 0.1 at 1100; 1.0 at 1600  
 Slides: 0628 G  
 0728 G  
 0828 M (dark)  
 0928 M  
 1028 P  
 1128 P  
 1228 P  
 1327 P  
 1427 M  
 1527 G  
 1627 G  
 1727 G  
 1827 G

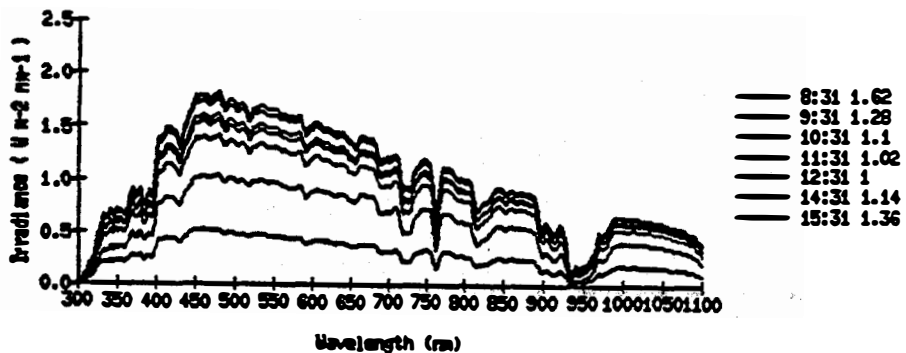
FSEC 169



FSEC 169 DNT

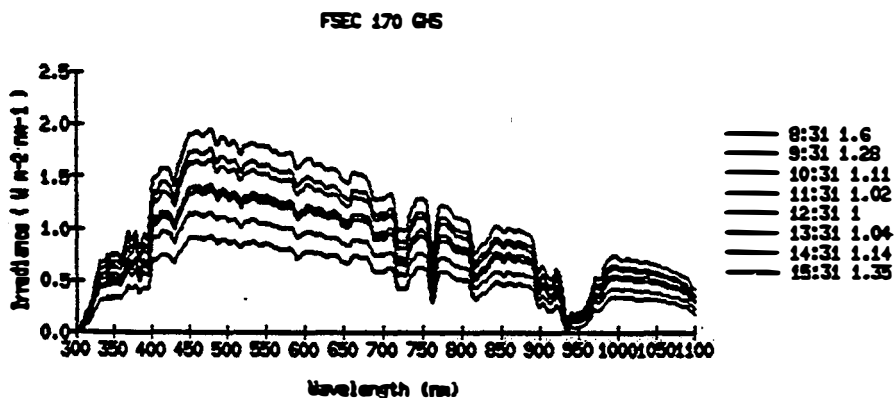
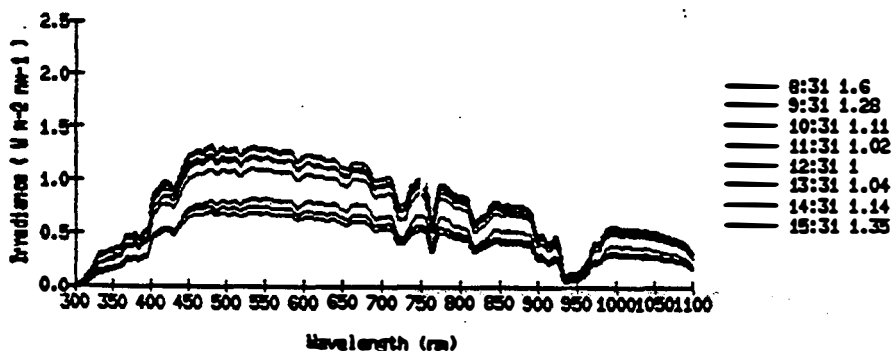
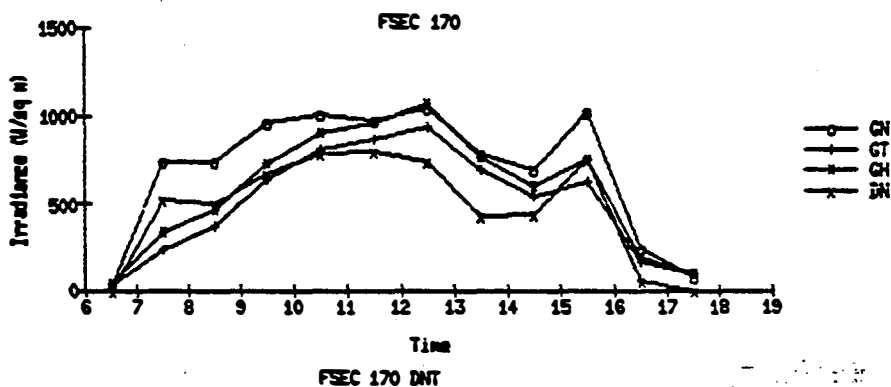


FSEC 169 GHS



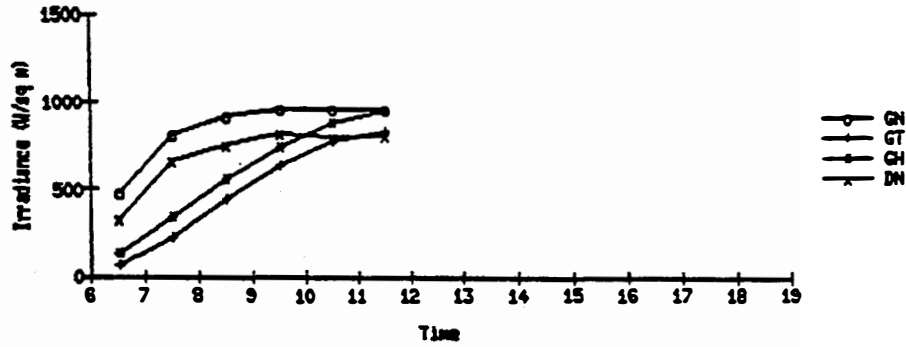
N FSEC17170  
 152 06 19 87 170 172 DN 102 GH  
 0.3 cloud cover at 0730; 0.3 at 1130; 0.6 at 1520  
 Tightened 4 set screws securing direct beam tube to base; tube  
 was slightly loose (LSR 172); bird sitting on tube just prior to  
 check; believe no effect on data  
 Slides: 0630 M (condensation)  
 0730 M -  
 0830 M (dark)  
 0930 M -  
 1030 P -  
 1130 P -  
 1230 P -  
 1330 P -  
 1430 M -  
 1530 M -  
 1630 G -  
 1730 G -  
 1830 G -

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 Appears to be small spike in UV in GH spectrum at 1531

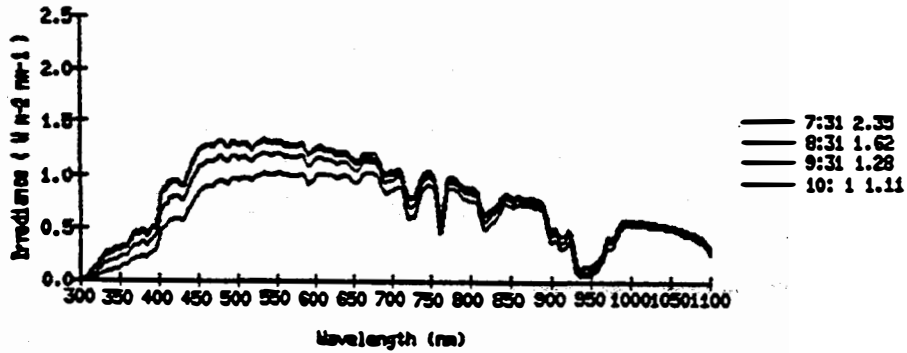


N FSEC87171  
 153 06 20 87 171 172 DE 102 GH  
 Partly cloudy  
 Slides: 0630 G  
 0730 G  
 0830 M (dark)  
 0930 M  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 M  
 1630 G  
 1730 G  
 1830 G

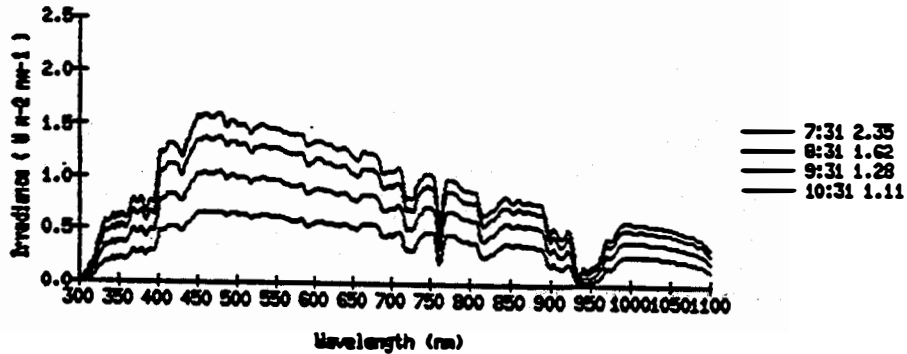
FSEC 171



FSEC 171 DNT

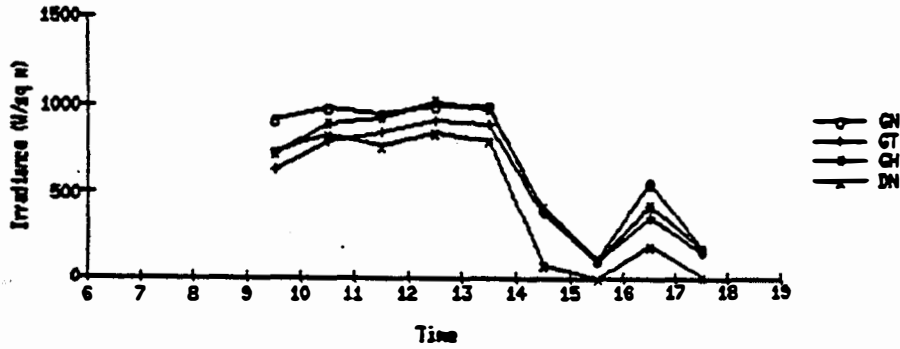


FSEC 171 QMS

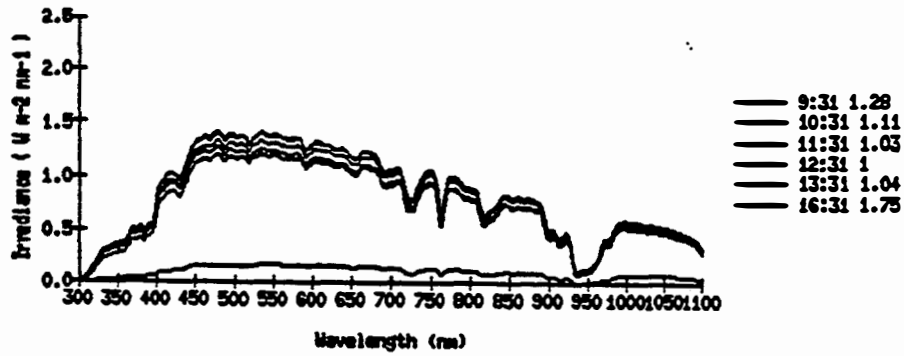


N FSEC87173  
 154 06 22 87 173 172 DN 102 GH  
 0.4 cloud cover at 0830; 0.3 at 1130; 1.0 at 1530  
 Slides: 0620 G  
 0720 G  
 0815 G  
 0915 M (dark)  
 1015 P  
 1115 P  
 1215 M  
 1315 P  
 1415 G  
 1530 G  
 1630 G  
 1730 G  
 1830 G

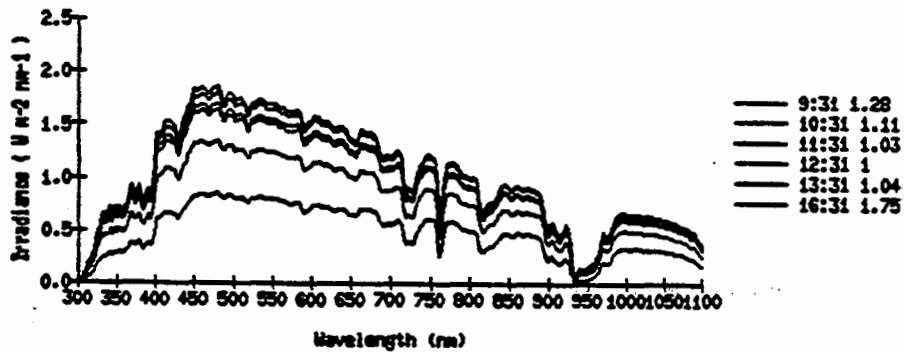
FSEC 173



FSEC 173 DNT

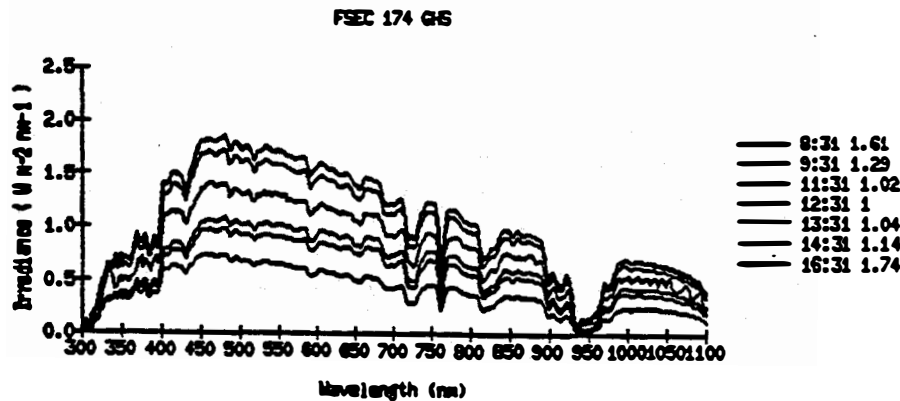
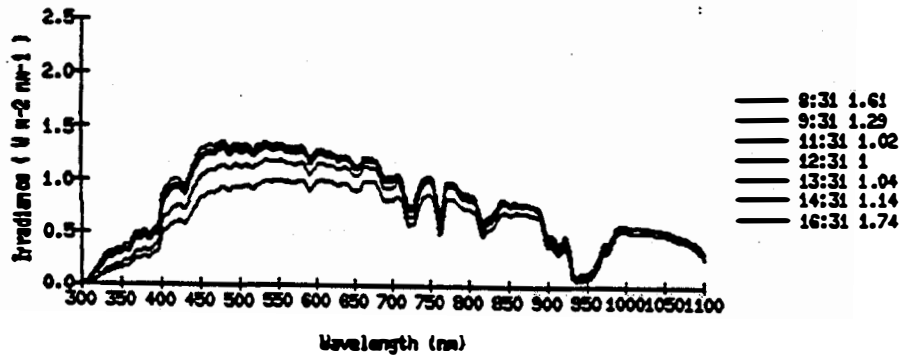
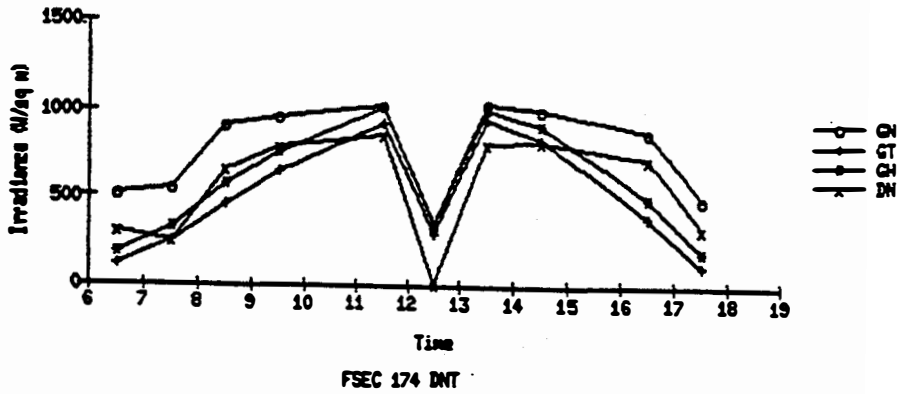


FSEC 173 GHS



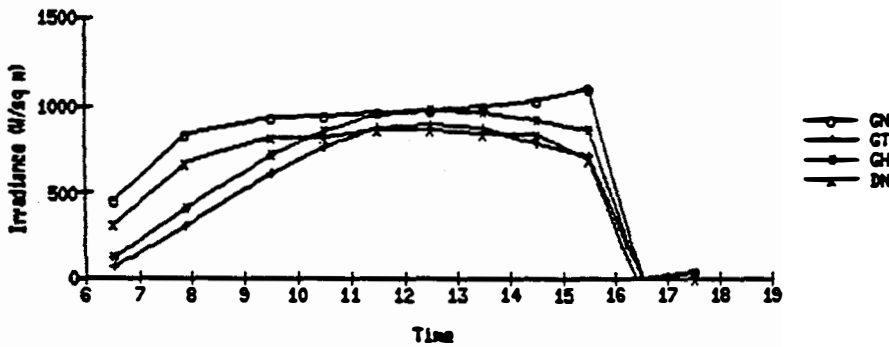
N FSEC87174  
 155 06 23 87 174 172 DN 102 GH  
 0.8 cloud cover at 0730; 0.3 at 1130 and 1500  
 LSR 102 temp controller reading high  
 Temp controller 44 C at 1130; 40 C at 1300  
 Believe caused by east side of case not shielded by mylar  
 East side will be covered with mylar foil  
 Slides: 0630 G (water drops)  
 0730 G (water drops)  
 0830 M (dark)  
 0930 M  
 1030 P  
 1130 P  
 1230 G  
 1330 M (dark)  
 1430 M  
 1530 G  
 1630 G  
 1730 G  
 1830 G

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 Spikes in UV in GH spectrum at 0931 FSEC 174

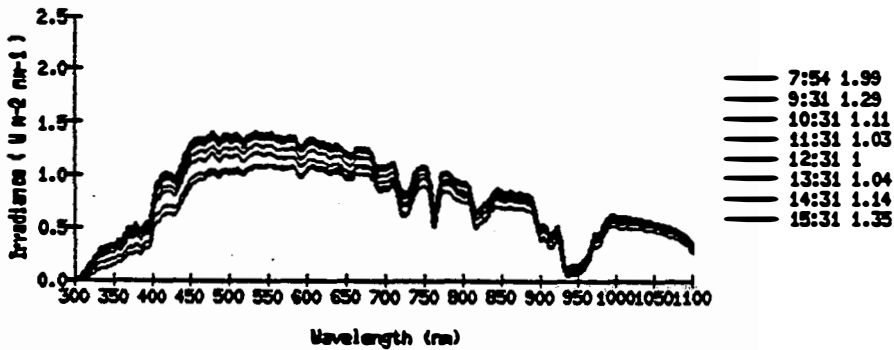


N FSEC87175  
 156 06 24 87 175 172 DN 102 GH  
 0 cloud cover at 0750; 0.2 at 1200  
 Covered east side of LSR 102 with foil to minimize solar heat gain  
 Tracker out of alignment 1.5-2 deg at 1145; reset  
 Slides: 0630 G  
 0730 G  
 0830 M (dark)  
 0930 M  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 G  
 1630 G  
 1730 G (water drops)  
 1830 G (water drops)

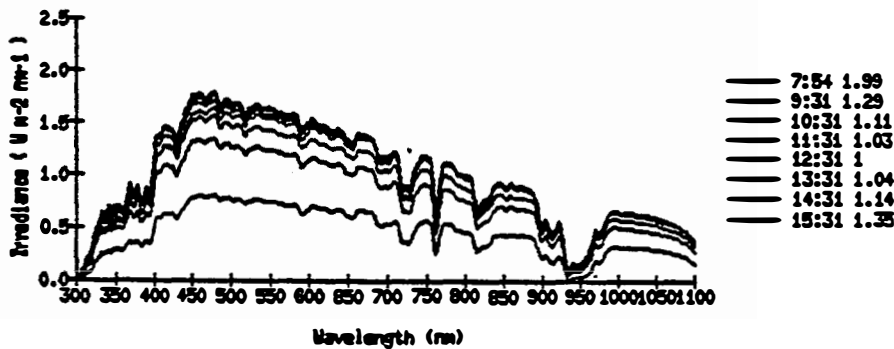
FSEC 175



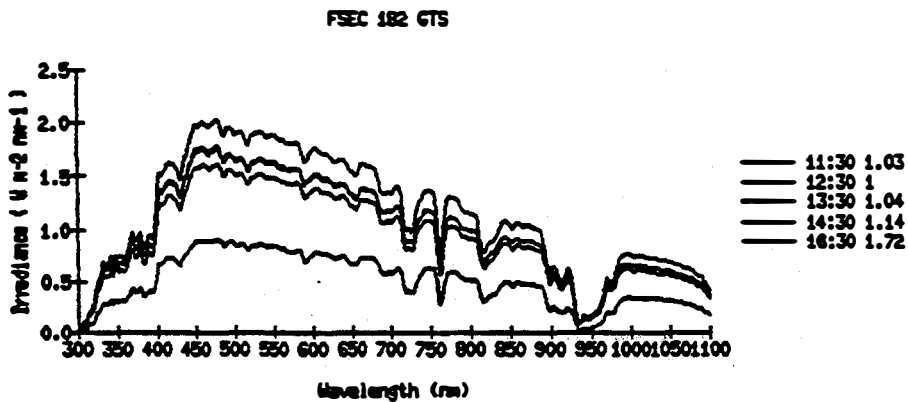
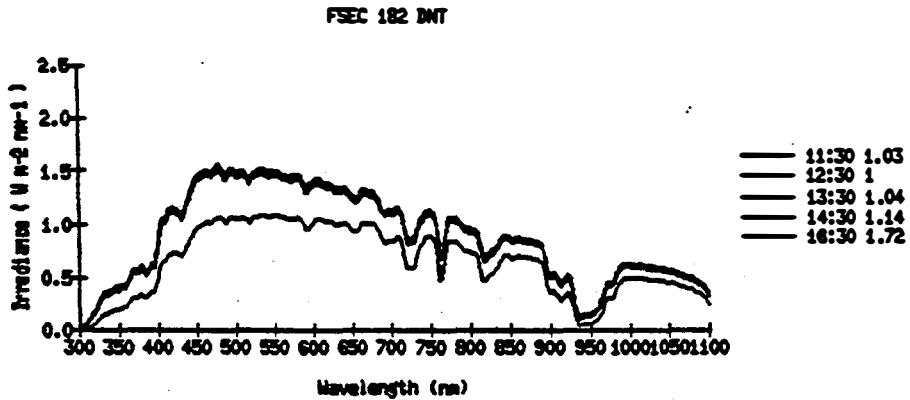
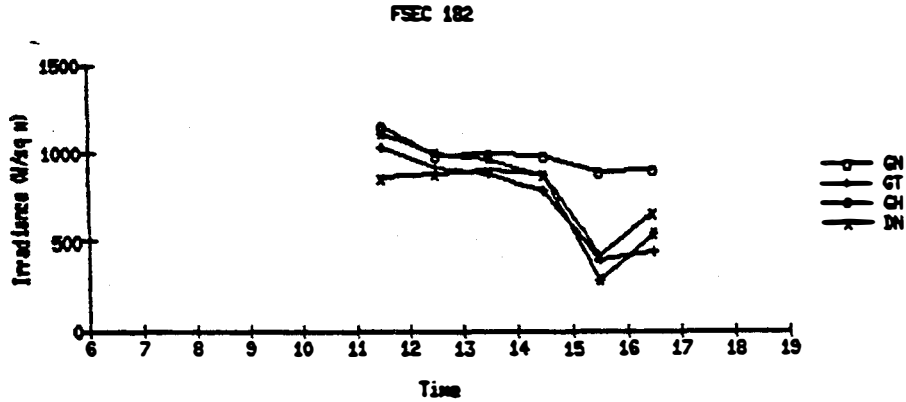
FSEC 175 DN1



FSEC 175 GHS



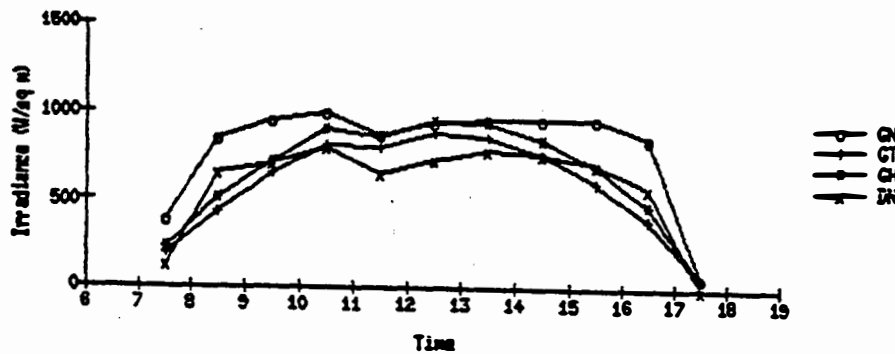
N FSEC87182  
 157 07 01 87 182 172 DW 102 GT  
 0.1 cloud cover at 0830; 0.5 at 1130; 0.4 at 1530  
 First day data collection since 6-26-87 lightning strike (VAX out)  
 Photos: 0627 G  
           0727 G  
           0827 G  
           0926 M (dark)  
           1026 M  
 Slides 1630 G  
           1730 G  
           1830 G



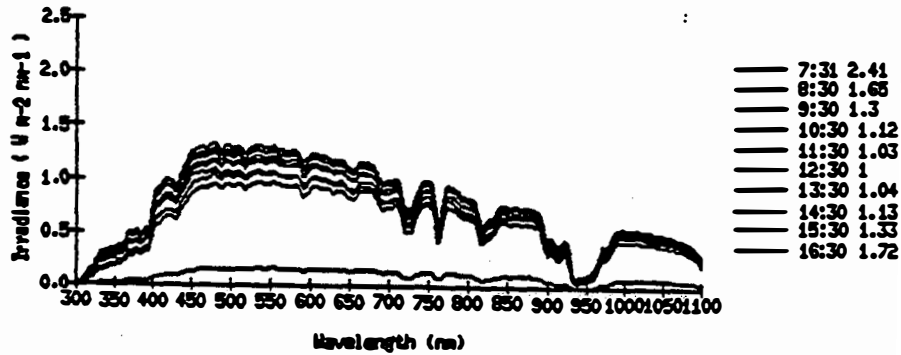


N FSEC87183  
 158 07 02 87 183 172 DN 102 GT  
 0.8 cloud cover at 0730; 0.7 at 1030; 0.2 at 1500  
 Slides: 0630 G (water drops)  
 0730 G (water drops)  
 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G  
 1730 G  
 1830 G

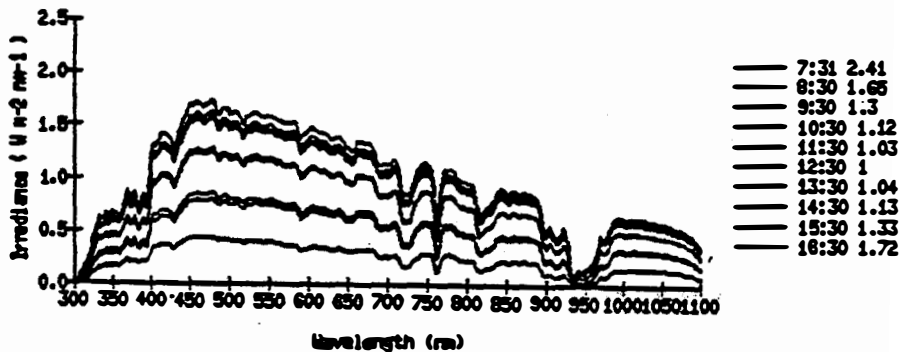
FSEC 183



FSEC 183 DNT



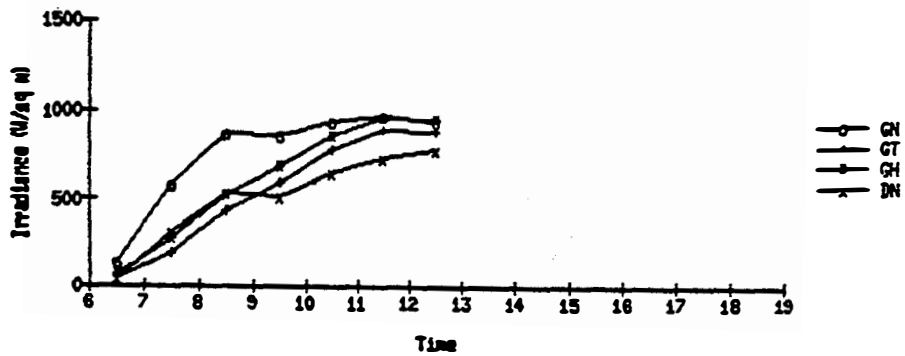
FSEC 183 GTS



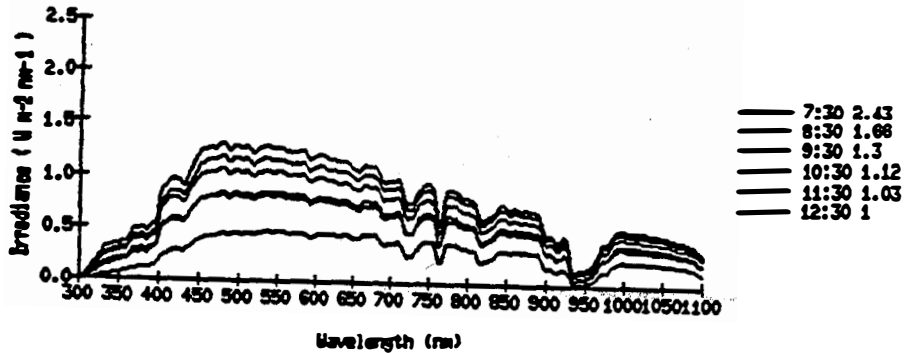
N FSEC87184  
 159 07 03 87 184 172 DN 102 GT  
 Partly cloudy  
 Slides: 0630 G  
 0730 G  
 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G  
 1730 G  
 1830 G

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 Spike in UV in GT spectrum at 1230

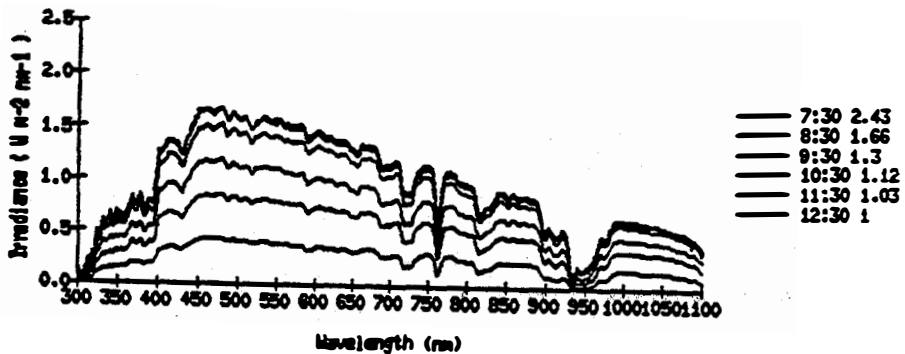
FSEC 184



FSEC 184 DNT



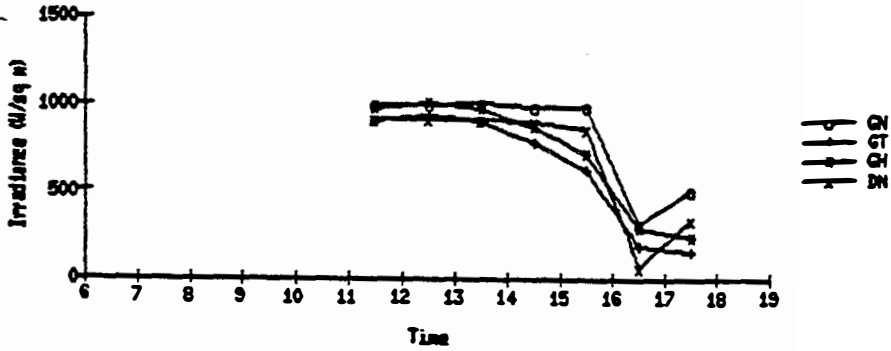
FSEC 184 GTS



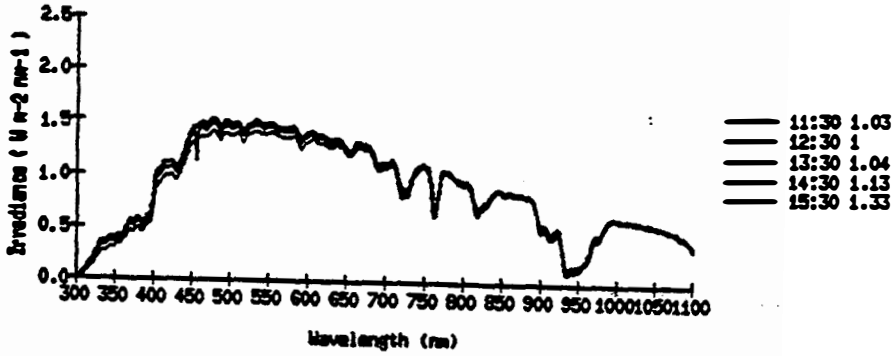
N FSEC87186  
 160 07 05 87 186 172 DN 012 GT  
 Partly cloudy  
 Slides: 0630 G (water drops)  
 0730 G (water drops)  
 0830 G  
 0930 G  
 1030 G

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 Spike in visible in DN spectrum at 1430

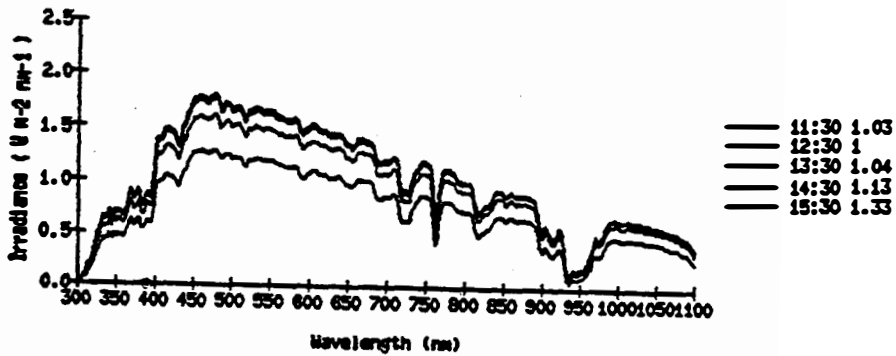
FSEC 186



FSEC 186 DNT



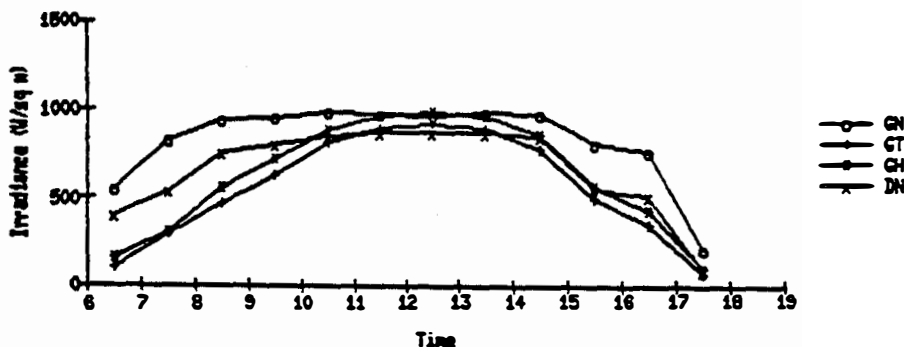
FSEC 186 GTS



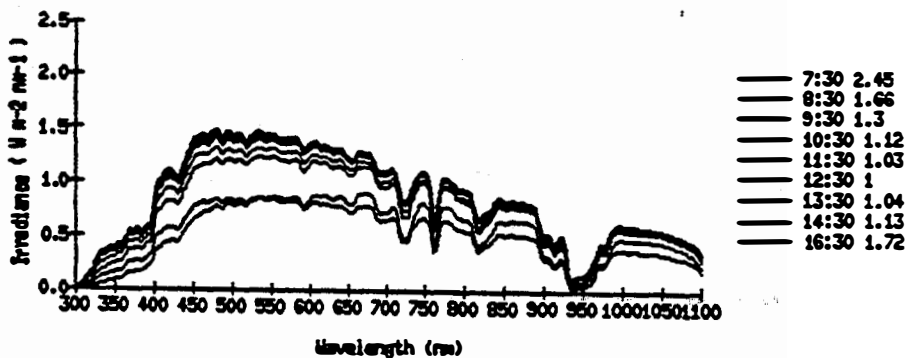
N FSEC87187  
 161 07 06 87 187 172 DN 102 GT  
 0.4 cloud cover at 0800; 0.2 at 0930 and 1130; 0.3 at 1530  
 LSR 172 temp controller 42 C at 1330; 41 C at 1530  
 Slides: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1630 G  
 1730 G  
 1830 G

-----  
 Spikes in UV in GT spectrum at 0730

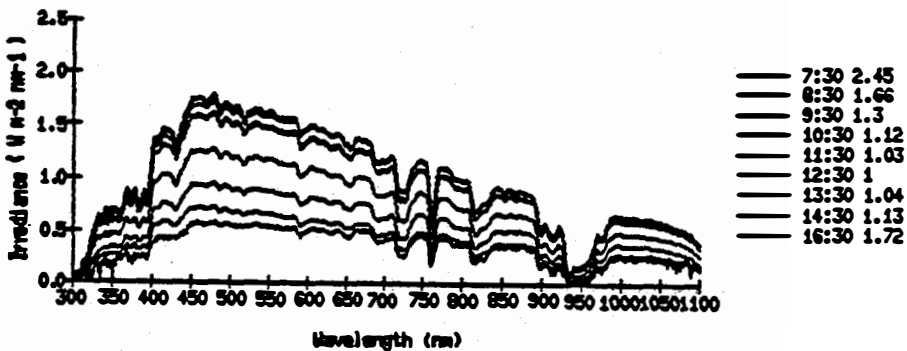
FSEC 187



FSEC 187 DNT



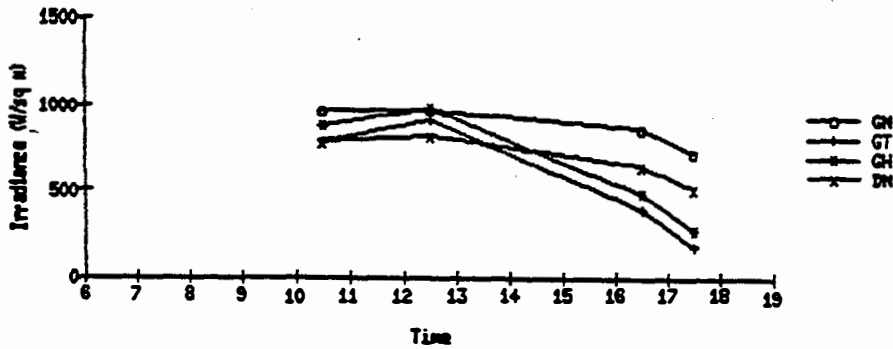
FSEC 187 GTS



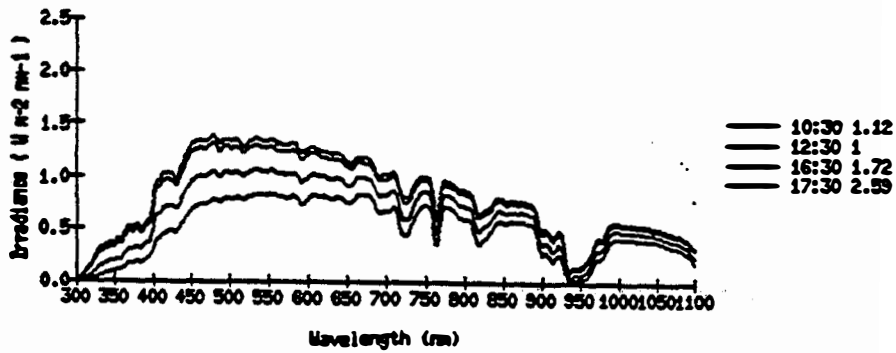
N FSEC87188  
 162 07 07 87 188 172 DM 102 GT  
 0 cloud cover at 0730; 0.2 at 1200 and 1530  
 No slides

Brief spikes in UV in GT spectra at 1030 and 1230

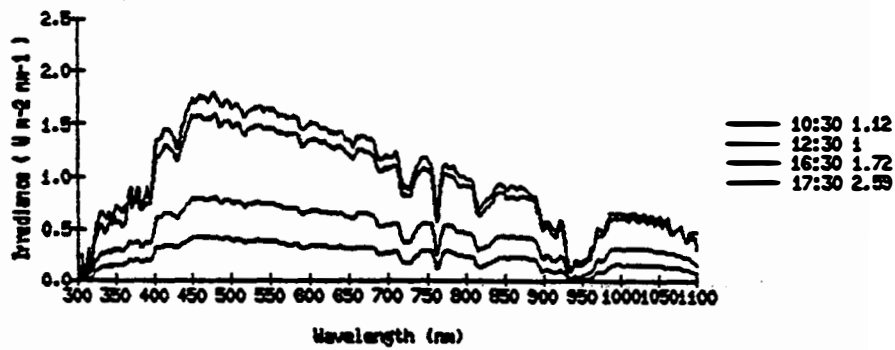
FSEC 188



FSEC 188 DNT

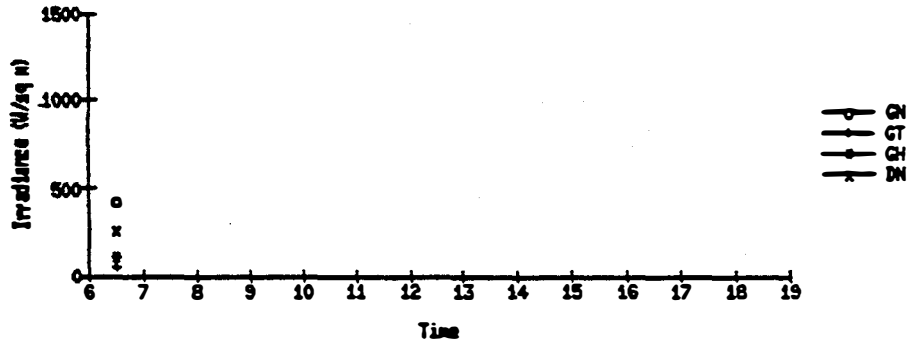


FSEC 188 GTS

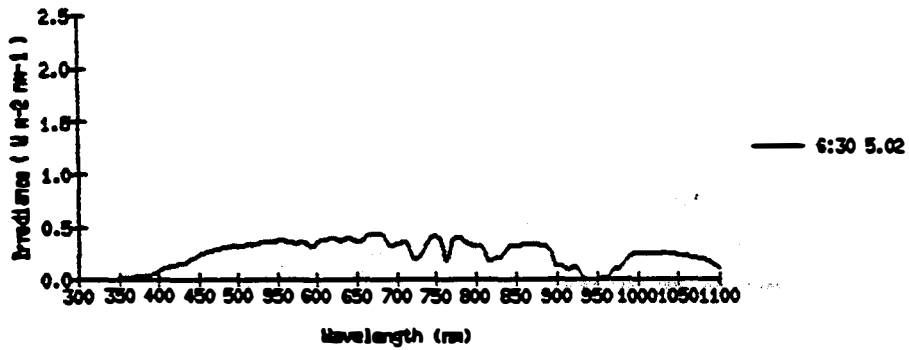


N FSEC87189  
 163 07 08 87 189 172 DM 102 GT  
 Clear at 0630  
 No slides  
 -----  
 Spike in UV in GT spectrum at 0630

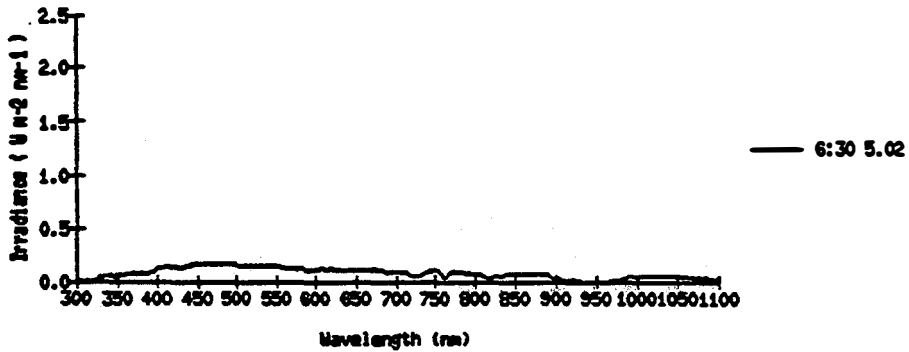
FSEC 189



FSEC 189 DM

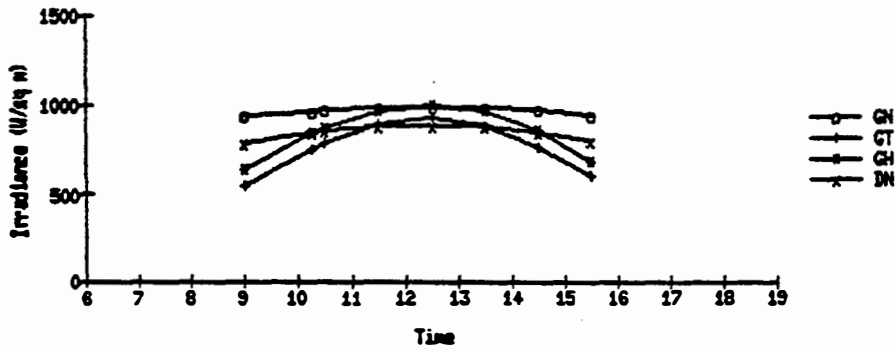


FSEC 189 GT

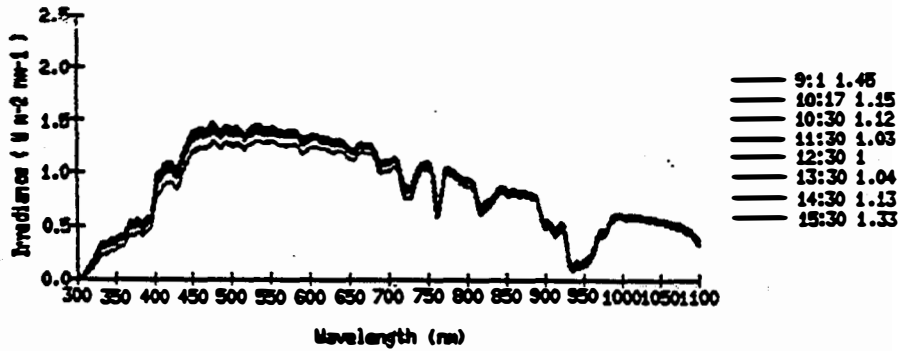


N FSEC87190  
 164 07 09 87 190 172 DN 102 GN  
 0.1 cloud cover at 0900 and 1130  
 LSR 172 temp controller 43 C at 1230; 45 C at 1330; 44 C at 1430,  
 43 C at 1530  
 No slides

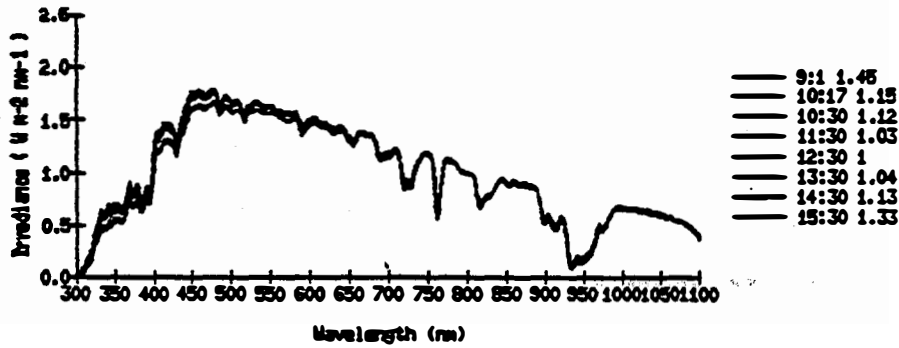
FSEC 190



FSEC 190 DNT

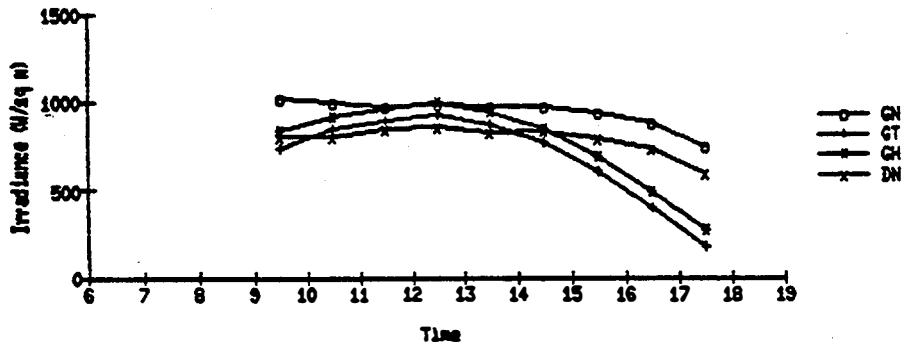


FSEC 190 GS

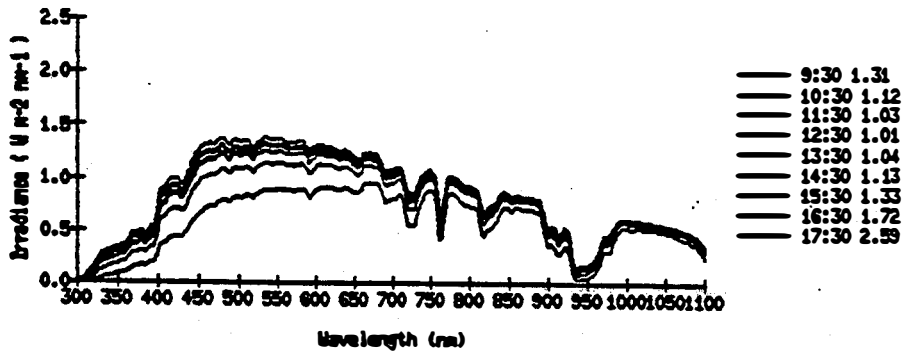


N FSEC87191  
 165 07 10 87 191 172 DN 102 GN  
 0.2 cloud cover at 0850, 1130, and 1520  
 LSR 172 temp controller 42 C at 1130 and 1330; 40 C at 1520  
 No slides

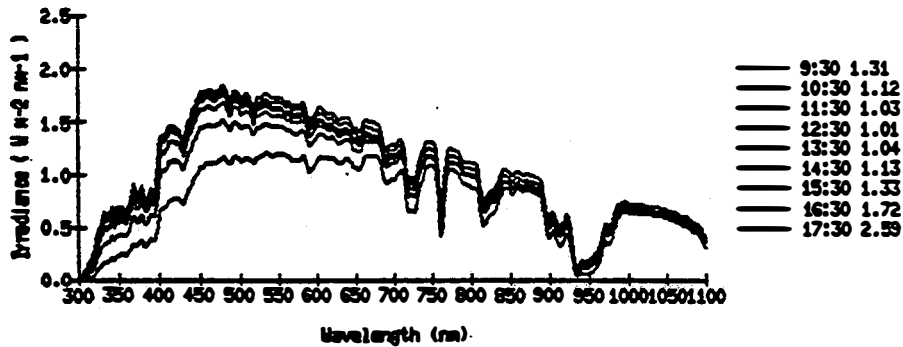
FSEC 191



FSEC 191 DNT



FSEC 191 GNS

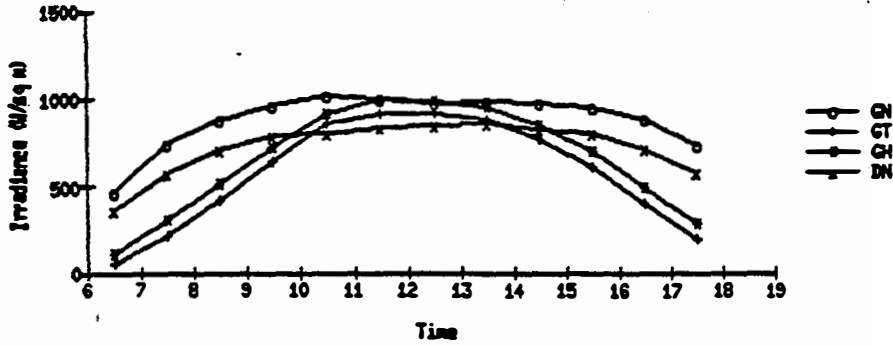




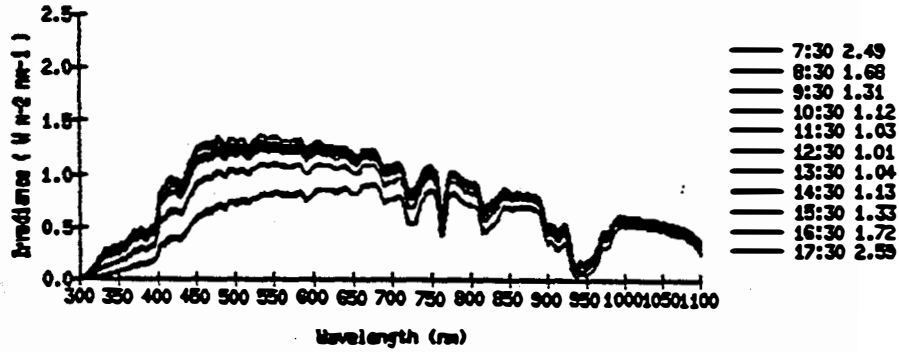
N FSEC87192  
 166 07 11 87 192 172 DN 102 GN  
 Partly cloudy AM; mostly clear PM  
 No slides

Brief spike in UV in GN spectrum at 1230, 1330, 1430, 1530

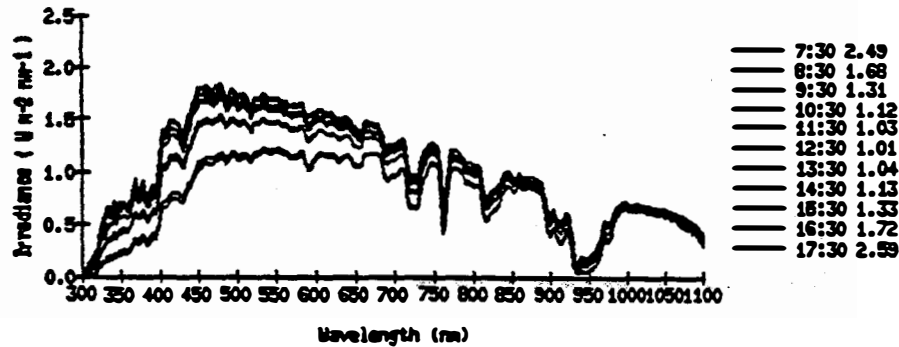
FSEC 192



FSEC 192 DN1

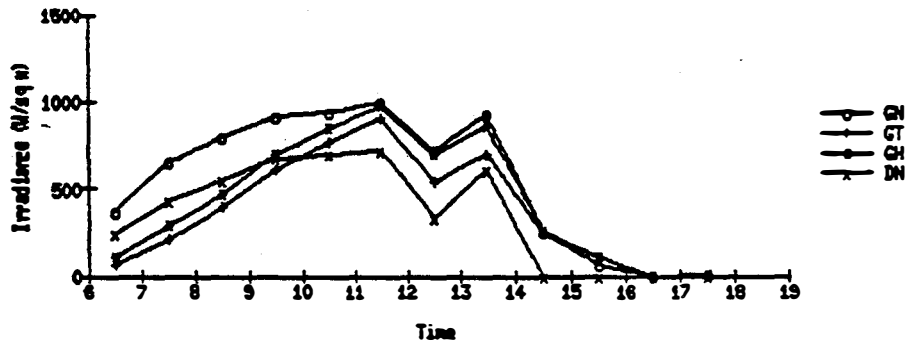


FSEC 192 GN5

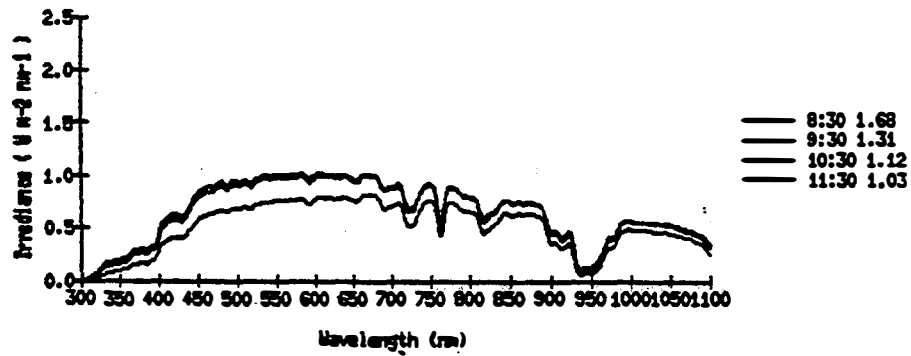


N FSEC87193  
 167 07 12 87 193 172 DN 102 GN  
 Mostly clear AM; partly cloudy with rain in PM  
 No slides

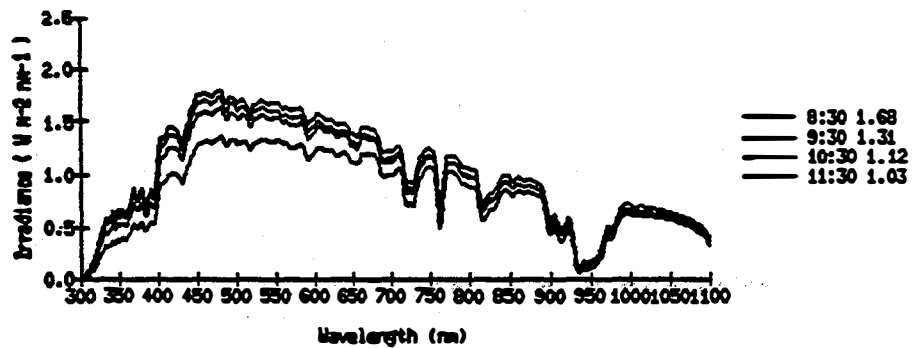
FSEC 193



FSEC 193 DNT

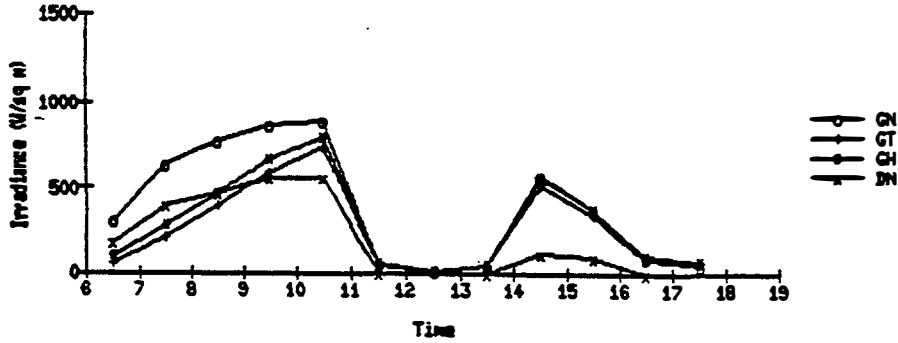


FSEC 193 GNS

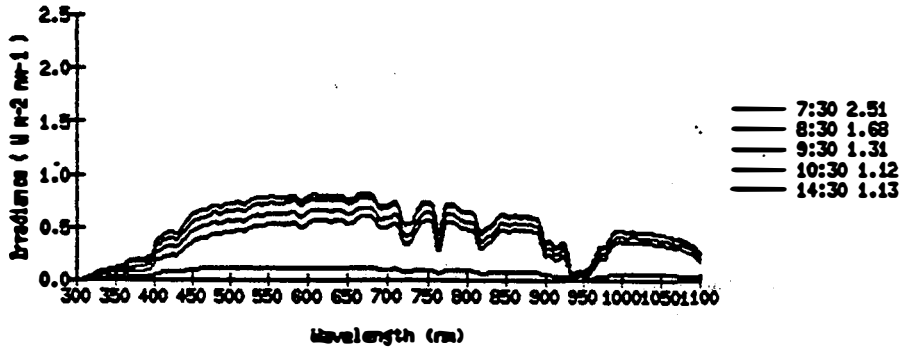


N FSEC87194  
 168 07 13 87 194 172 DN 102 GN  
 0 cloud cover with haze at 0730; 1.0 at 1130, rain at 1300, 1.0 at 1530  
 Added 5/16" foam "standoffs" to LSR 172 case to separate mylar from case surface; permits airflow between mylar and case to promote better temp control  
 No slides

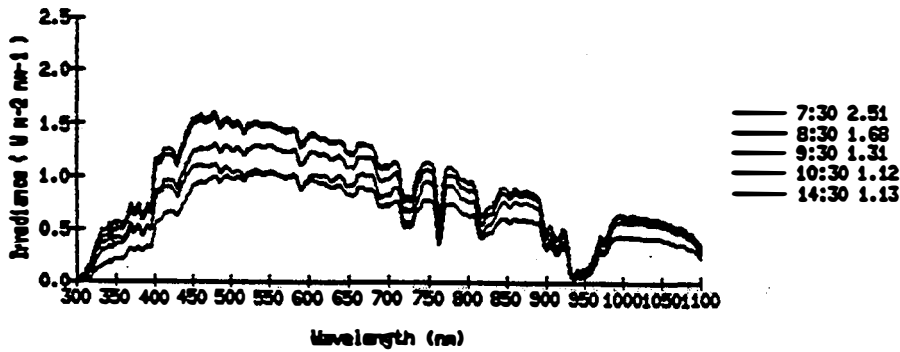
FSEC 194



FSEC 194 DNT

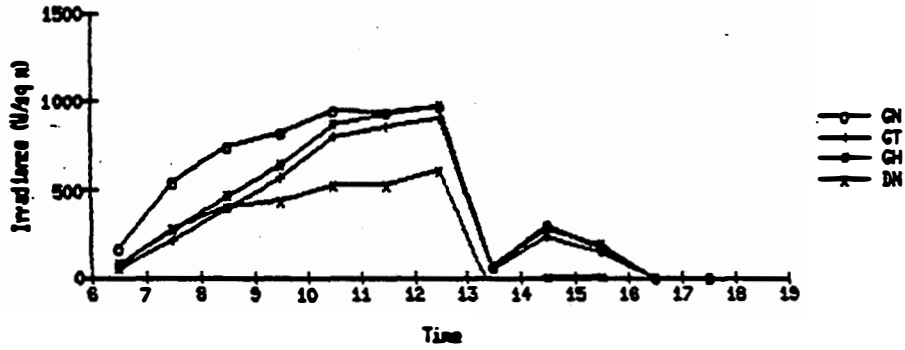


FSEC 194 GNS

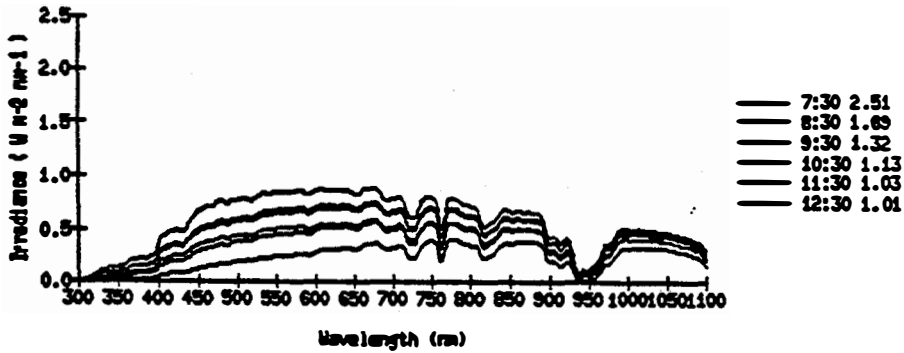


N FSEC87195  
 169 07 14 87 195 172 DN 102 GN  
 0.3 cloud cover with haze at 0730; 0.9 at 1130; 1.0 at 1530, rain  
 No slides

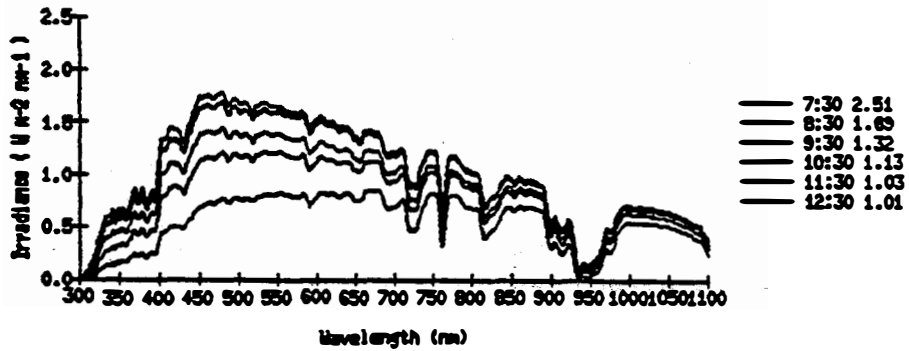
FSEC 195



FSEC 195 INT

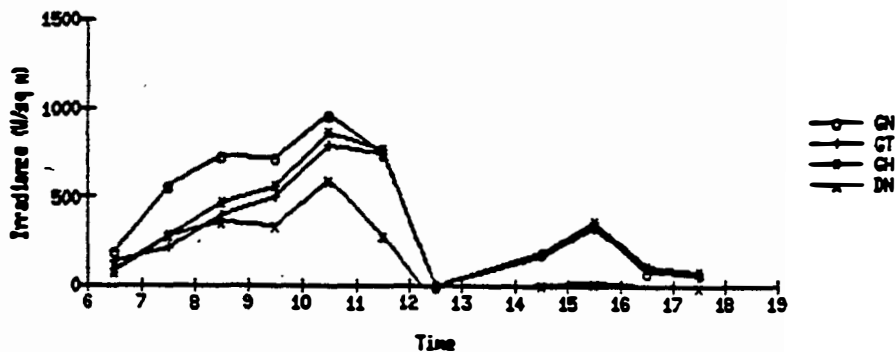


FSEC 195 GNS

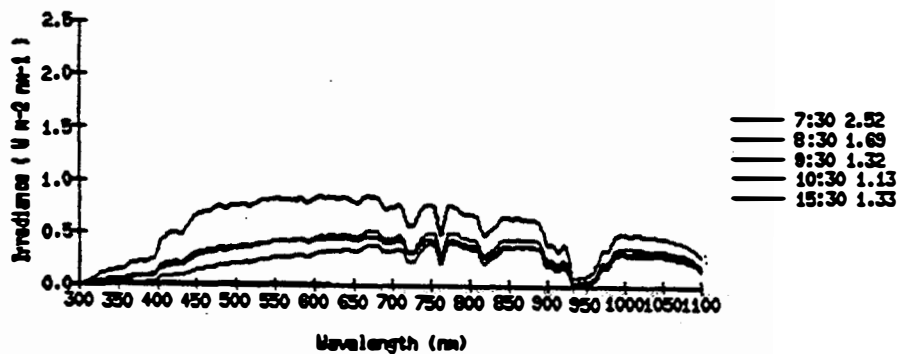


N FSEC87196  
 170 07 15 87 196 172 DN 102 GN  
 0.8 cloud cover with haze at 0830; 1.0 at 1130; rain at 1230; 1.0 at 1530  
 No slides

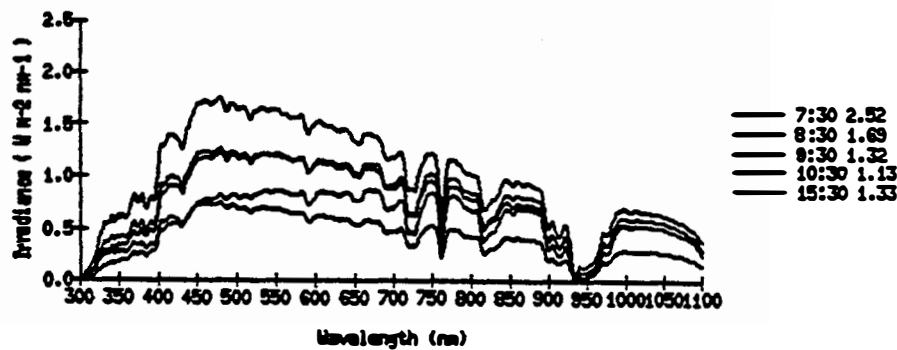
FSEC 196



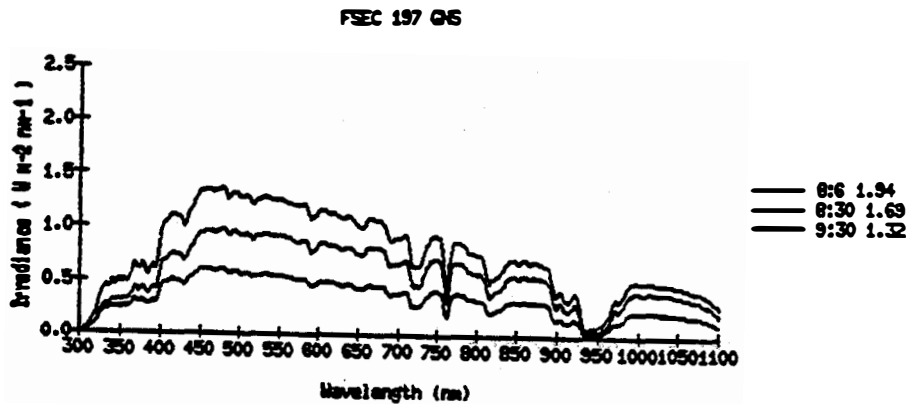
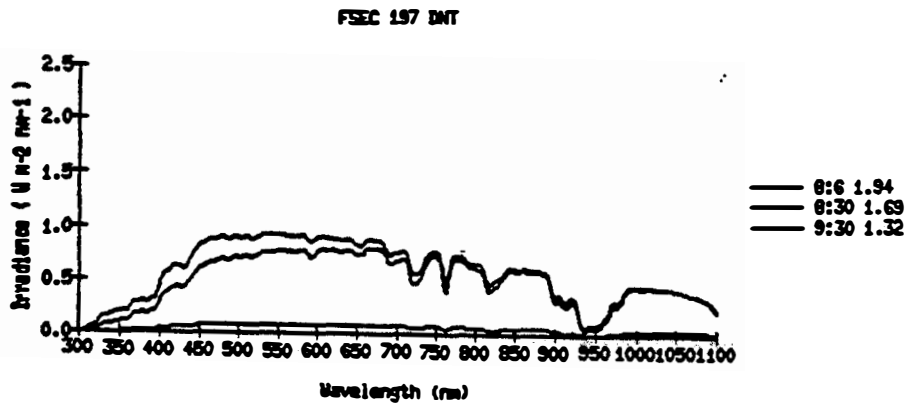
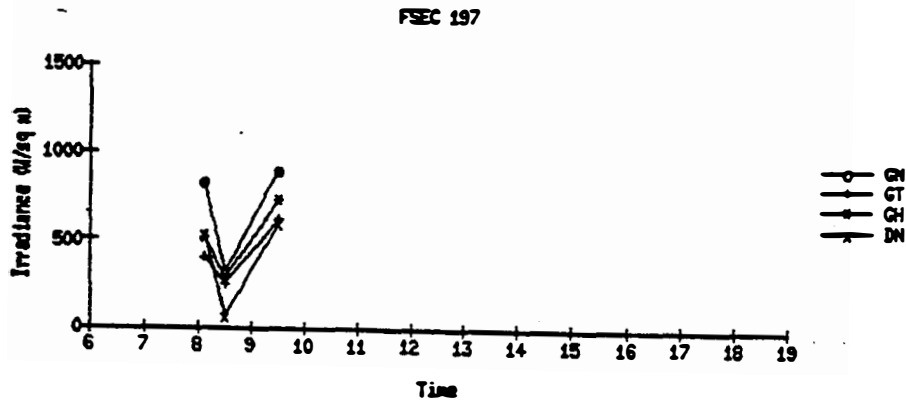
FSEC 196 DNT



FSEC 196 GNS

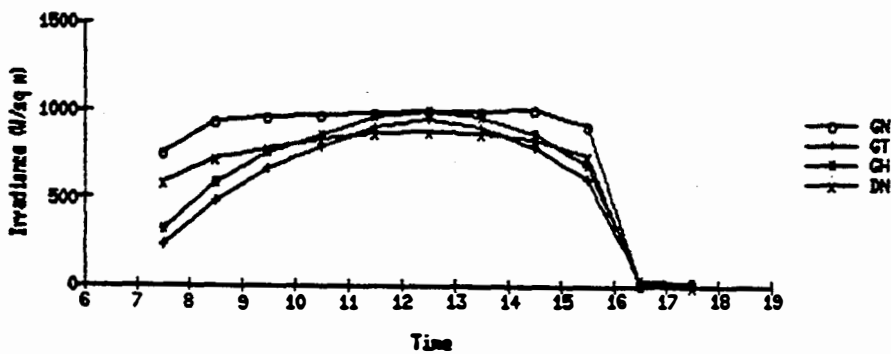


N FSEC87197  
 171 07 16 87 197 172 DB 102 GH  
 0.9 cloud cover at 0800; 1.0 at 1200; rain at 1300  
 Slides: 0830 G  
 0930 G  
 1030 G  
 1130 G  
 1229 M (dark)  
 1329 G (water drops)  
 1429 G  
 1529 G  
 1628 G  
 1728 G  
 1828 G

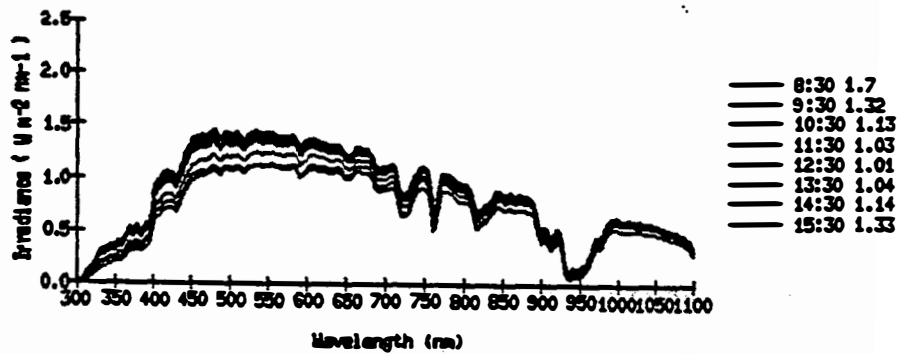


N FSEC87198  
 172 07 17 87 198 172 DN 102 GH  
 0.2 cloud cover at 0730 and 1130; 0.5 at 1530  
 Slides: 0626 G (water drops)  
 0726 G  
 0826 M (dark) (water drops)  
 0926 M  
 1026 M  
 1125 P  
 1225 P  
 1325 P  
 1425 P  
 1524 G  
 1624 G  
 1724 G  
 1824 G

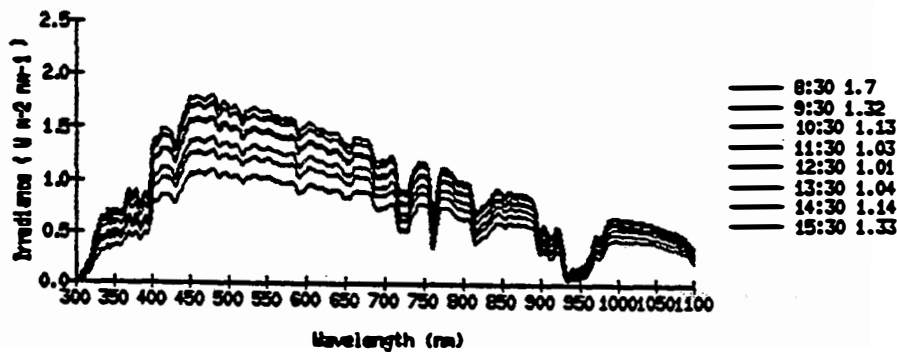
FSEC 198



FSEC 198 DNT

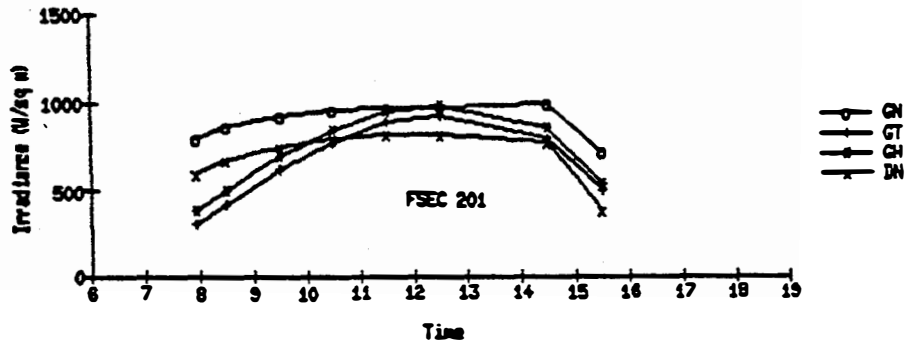


FSEC 198 G/S

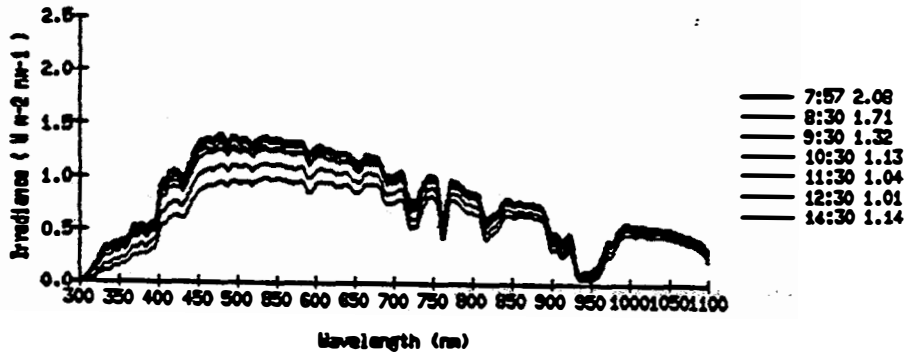


N FSEC87201  
 173 07 20 87 201 172 DN 102 GH  
 0.1 cloud cover at 0800; 0.2 at 1130; 0.6 at 1530  
 18 mV drift error on LSR 102 at 0800  
 Slides: 0610 G (water drops)  
 0709 G  
 0809 G  
 0909 M (dark)  
 1009 P  
 1108 P  
 1208 P  
 1308 P  
 1408 P  
 1507 G  
 1607 G  
 1707 G  
 1807 G

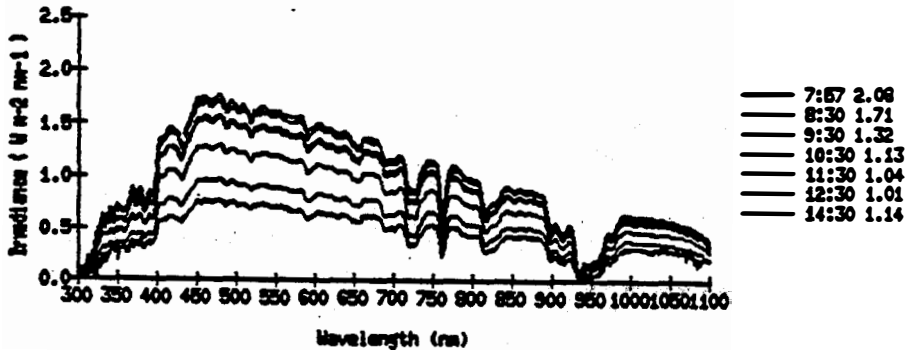
Noise in UV and near-IR in GH spectrum at 0757 and 1130



FSEC 201 DNT



FSEC 201 GHS

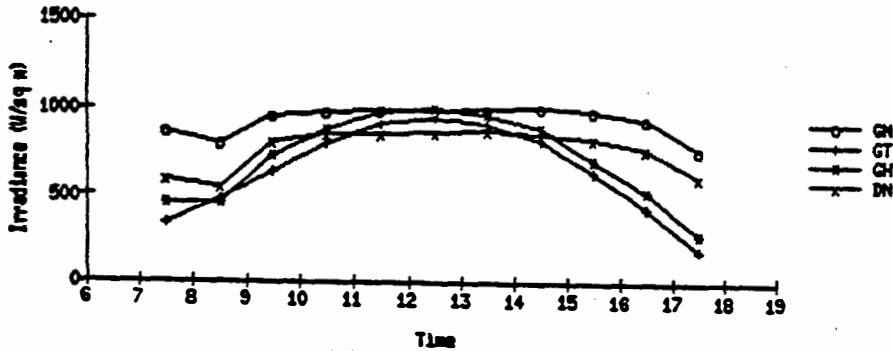




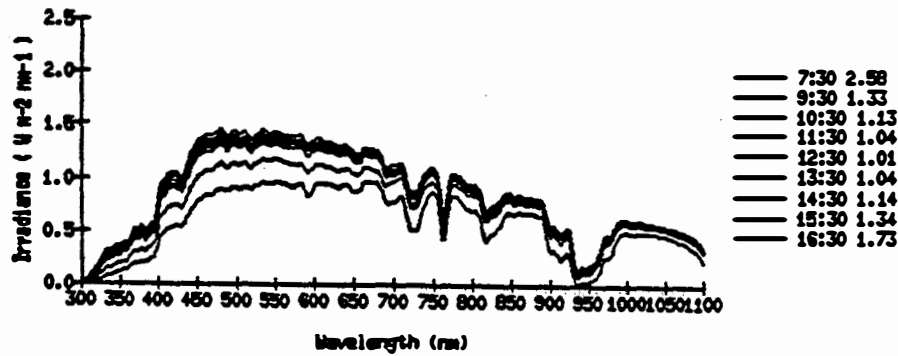
N FSEC87202  
 174 07 21 87 202 172 DW 102 GH  
 0.4 cloud cover at 0730 and 1130; 0.3 at 1530  
 14 mV drift error on LSR 102 at 1130  
 11 mV drift error on LSR 102 at 1530  
 Slides: 0606 G (water drops)

- 0705 G
- 0805 G
- 0905 M (dark)
- 1005 M
- 1105 P
- 1205 M
- 1304 P
- 1404 G
- 1504 G
- 1604 G
- 1704 G
- 1804 G

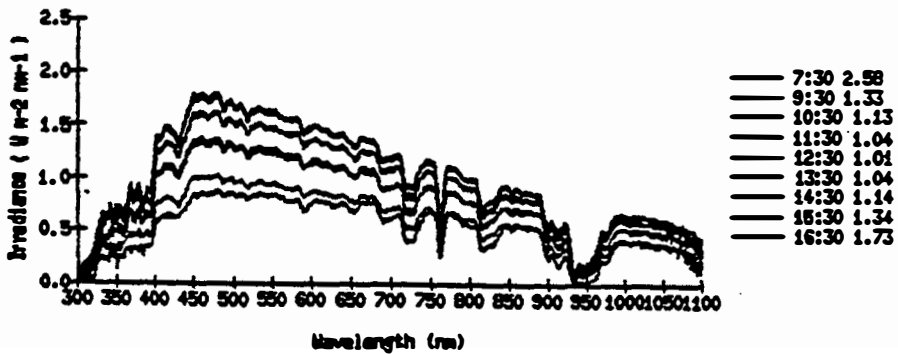
-----  
 Noise in UV and near-IR in GH spectra throughout day  
 FSEC 202



FSEC 202 DNT



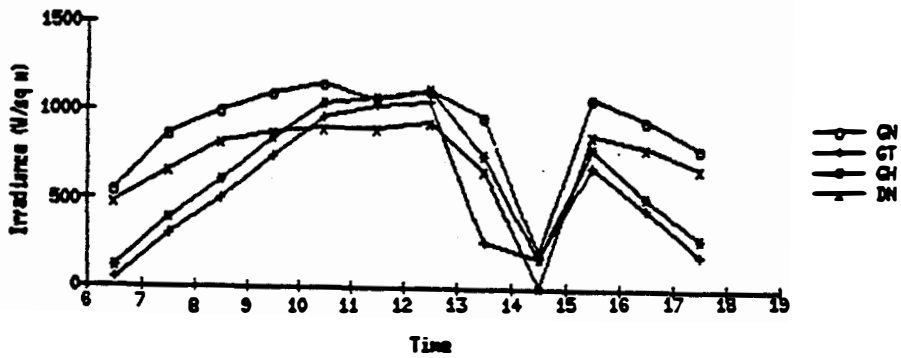
FSEC 202 GHS



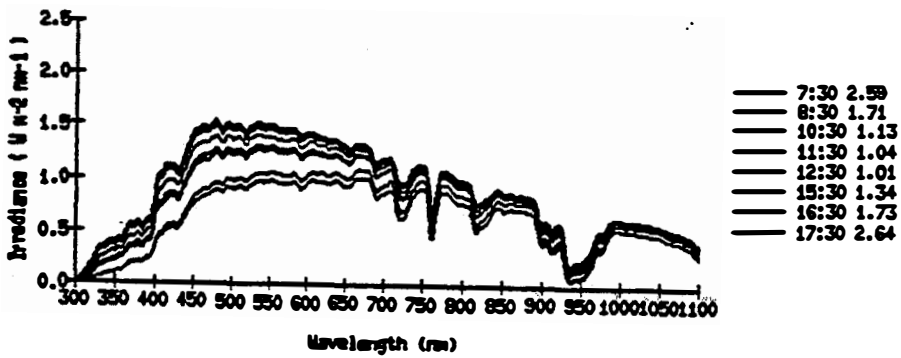
N FSEC87203  
 175 07 22 87 203 172 DH 102 GH  
 0.2 cloud cover at 0730; 0.4 at 1130; 0.2 at 1530  
 17 mV drift error on LSR 102 at 1130  
 Slides: 0602 G  
 0701 G  
 0801 G  
 0901 G  
 1001 G  
 1101 P (dark)  
 1201 P  
 1301 P  
 1400 P  
 1500 M  
 1600 G  
 1700 G  
 1800 G

Noise in UV and near-IR in GH spectra throughout day

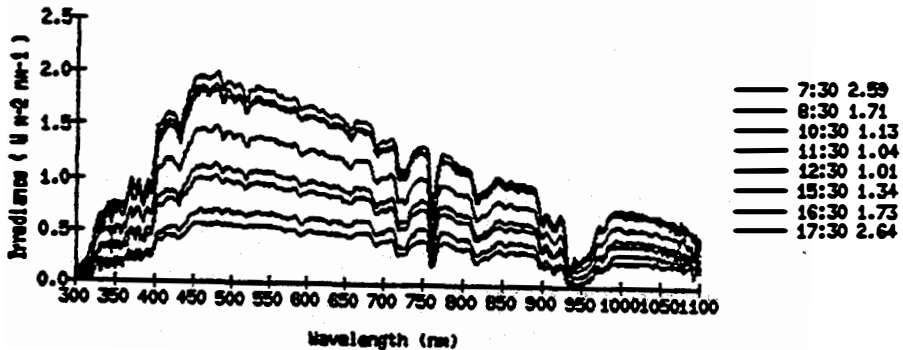
FSEC 203



FSEC 203 DNT



FSEC 203 GH6



N FSEC87204

176 07 23 87 204 172 DN 102 GT

0.4 cloud cover (light haze); 0.7 at 1130

Temp controllers: 172 102

1130 44 C 43 C, T(amb) 30.8 C, wind speed 2.4 m/s

1330 44 C 45 C, 31.6 C, 1.0

1530 43 C 45 C, 31.4 C, 3.0

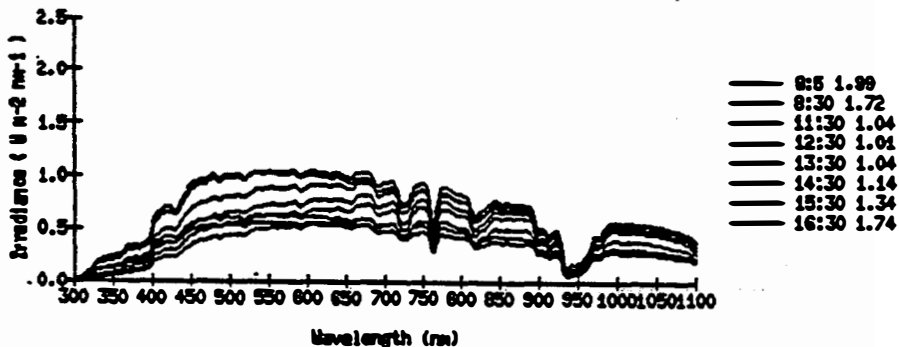
(temp controller turned off for 45 minutes at 1530)

- Slides: 0558 G  
 0658 G  
 0758 G  
 0858 M (dark)  
 1024 G  
 1124 M (dark)  
 1229 G  
 1328 G  
 1428 G  
 1528 G  
 1628 G  
 1728 G  
 1827 G

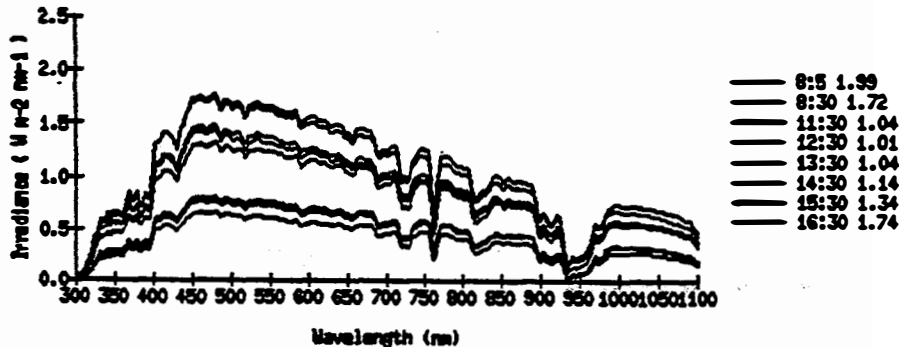
FSEC 204



FSEC 204 DNT



FSEC 204 GTS





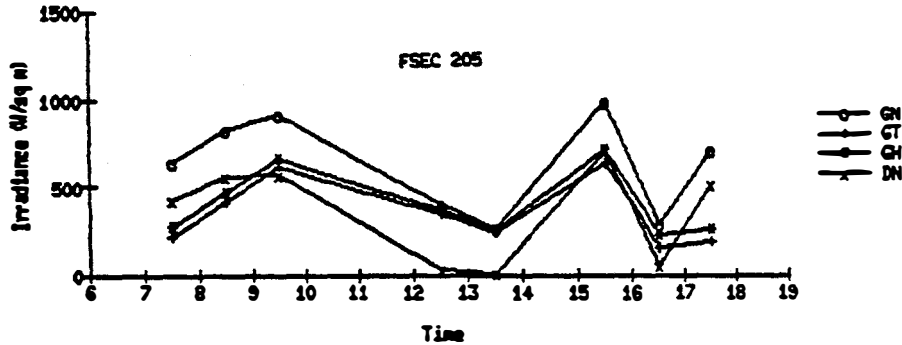
N FSEC87205

177 07 24 87 205 172 DN 102 GT  
 0.1 cloud cover with haze at 0730; 0.4 at 1130 and 1530

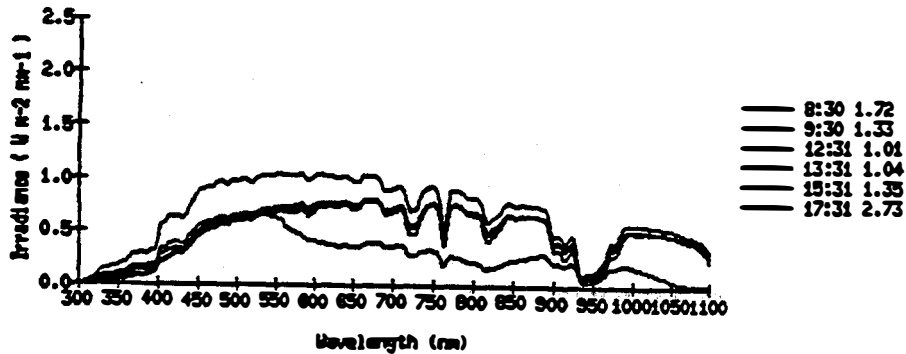
Temp controller: 172 102  
 0830 40 C 40 C, T(amb) 28.2 C, wind speed 1.7 m/s  
 0940 41 C 40 C 29.7 2.4  
 1130 40 C 40 C 30.7 2.7  
 1500 40 C 40 C 30.7 4.3

Slides: 0624 G  
 0724 G  
 0824 G  
 0924 M (dark)  
 1023 M "  
 1123 M "  
 1223 M "  
 1323 G  
 1422 M (dark)  
 1522 G  
 1622 G  
 1722 G  
 1821 G

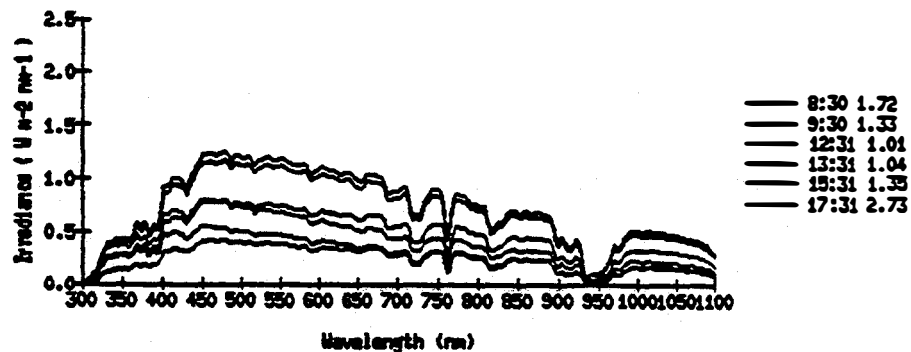
-----  
 DN spectrum at 1233 is bad  
 Broadband unstable



FSEC 205 INT



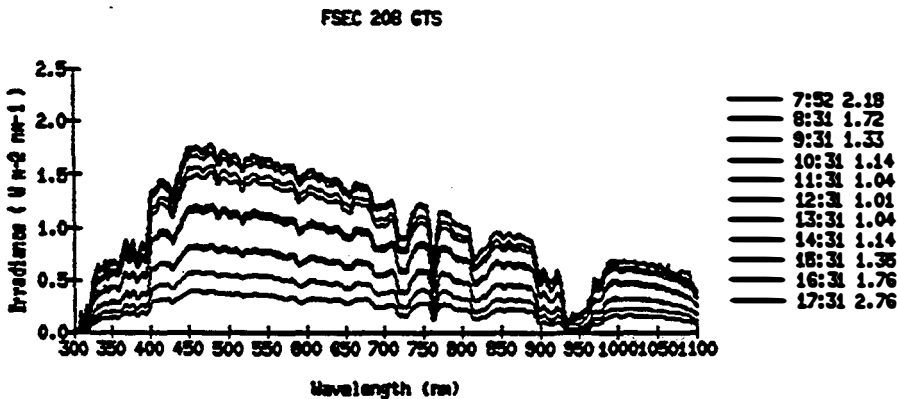
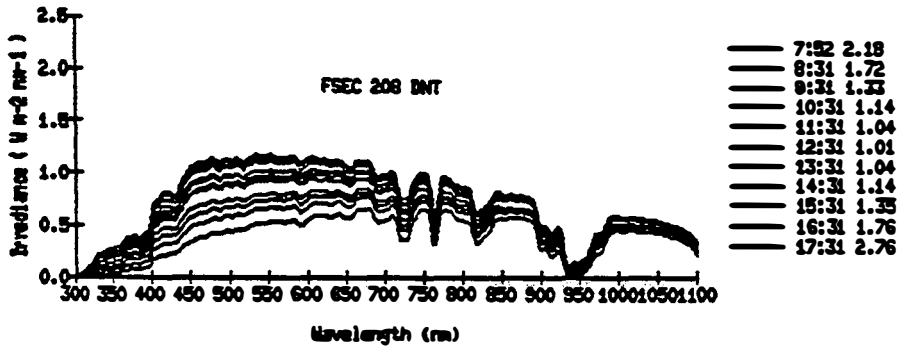
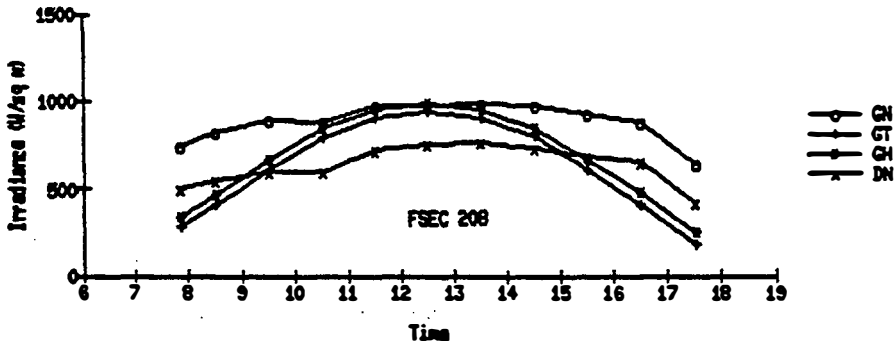
FSEC 205 GTS



N FSEC87208  
 178 07 27 87 208 172 DN 102 GT  
 0 cloud cover at 0800, 0.3 at 1130 and 1530  
 Temp controller: 172 102  
 1130 42 C 40 C  
 1300 42 C 40 C  
 1430 40 C 40 C  
 1530 40 C 40 C

mV drift errors on LSR 102 at 1130  
 Slides: 0612 G.  
 0712 G  
 0812 G  
 0912 M (dark)  
 1011 M  
 1110 P  
 1211 P  
 1310 P  
 1410 M  
 1510 G  
 1609 G  
 1709 G  
 1809 G

-----  
 Spike in UV in GT spectrum at 1131

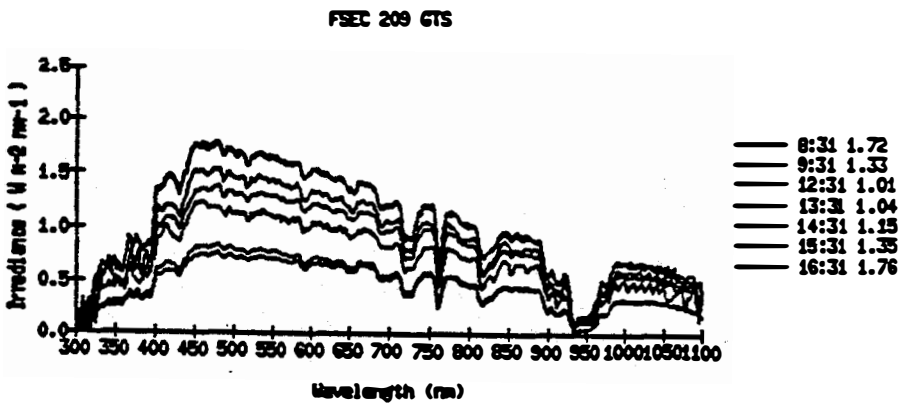
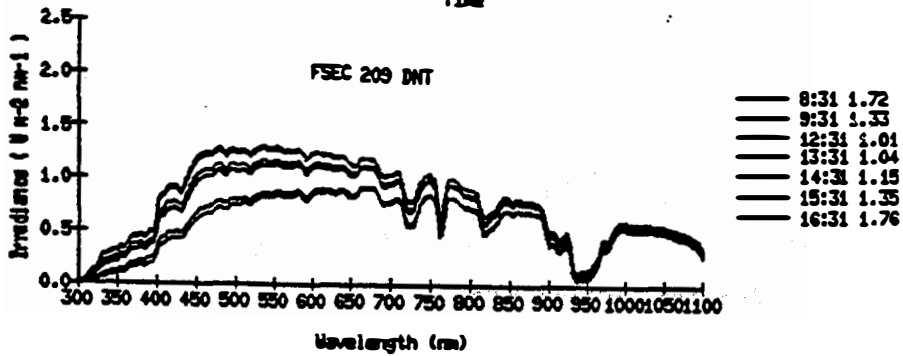
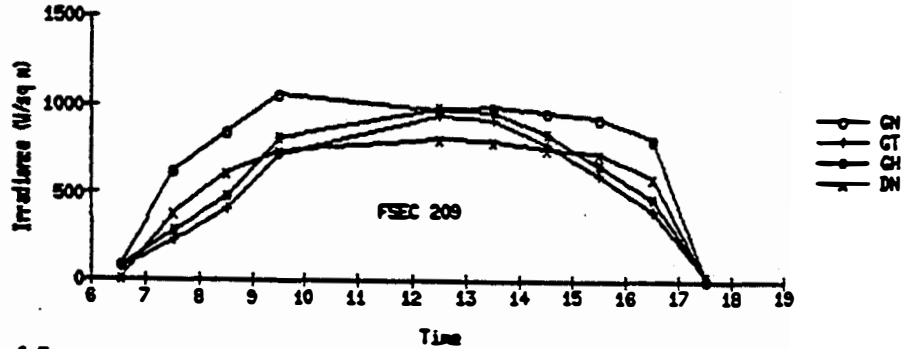


N FSEC97209  
 179 07 28 87 209 172 DN 102 GT  
 0.4 cloud cover at 0730, 0.1 at 1130; 0.2 at 1530  
 Temp controller: 172 102  
 1130 45 C 42 C  
 1230 43 C 41 C  
 1430 42 C 40 C  
 1530 41 C 40 C

mV drift error on LSR 102 at 1230, 1330, 1430, and 1530

Slides: 0606 G  
 0706 G  
 0805 G  
 0905 M (dark)  
 1005 M .  
 1105 P .  
 1204 P .  
 1304 P .  
 1404 P .  
 1503 M .  
 1603 G .  
 1703 G .  
 1803 G .

Spikes in UV and near-IR in GT spectra at 0831, 1231, 1331  
 Very noisy GT spectra at 1431 and 1531

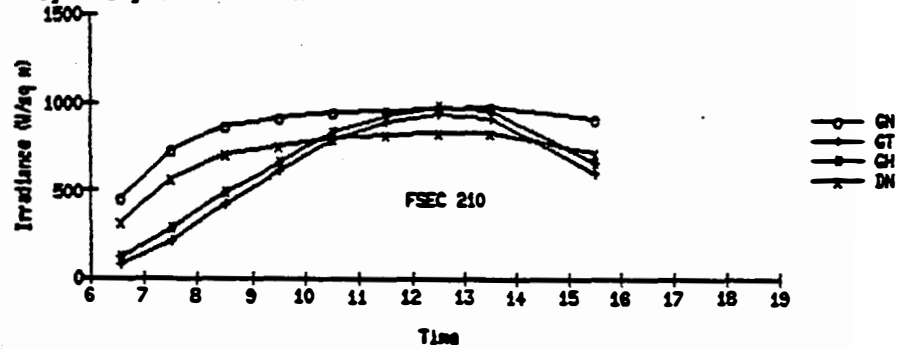


N FSEC87210  
 180 07 29 87 210 172 DN 102 GT  
 0.1 cloud cover at 0700, 0.3 at 1230 and 1530  
 Temp controller: 172 102  
 1230 42 C 41 C  
 1530 40 C 40 C

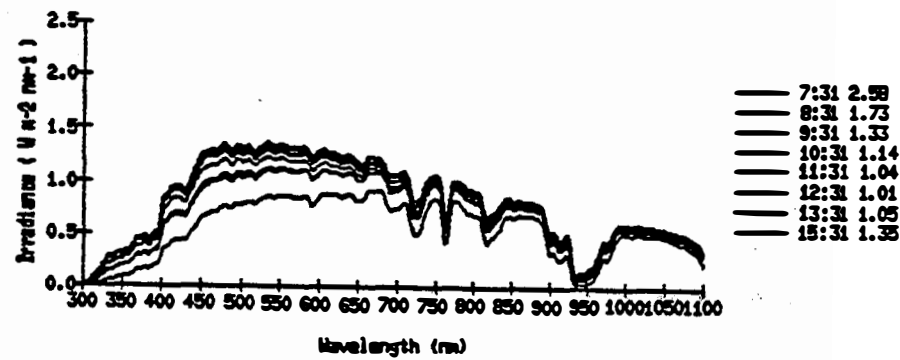
mV drift errors on LSR 102 at 1230 and 1330

- Slides: 0600 G  
 0700 G  
 0800 G  
 0900 M (dark)  
 0959 P  
 1049 P  
 1159 P  
 1259 P  
 1358 P  
 1458 M  
 1558 G  
 1658 G  
 1758 G

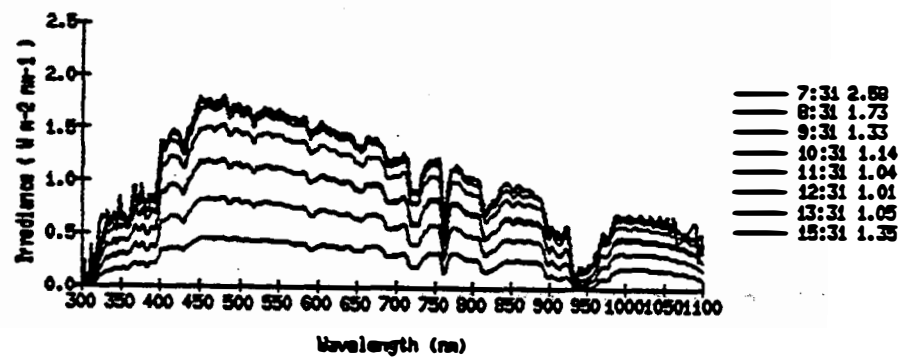
Spike in UV in GT spectrum at 1231  
 GT spectrum very noisy in UV and near-IR at 1331



FSEC 210 DNT

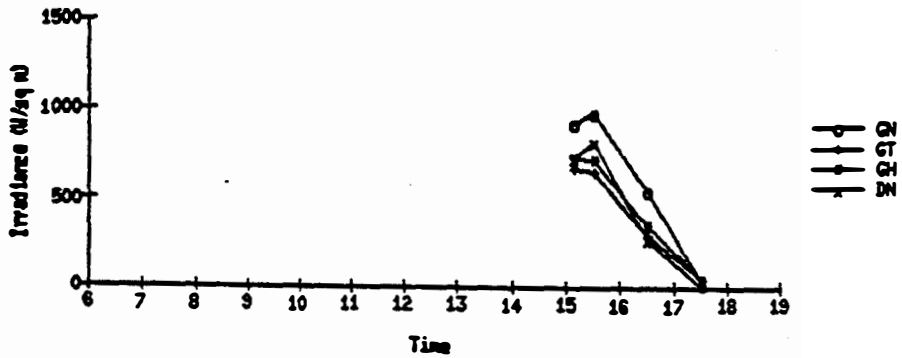


FSEC 210 GTS

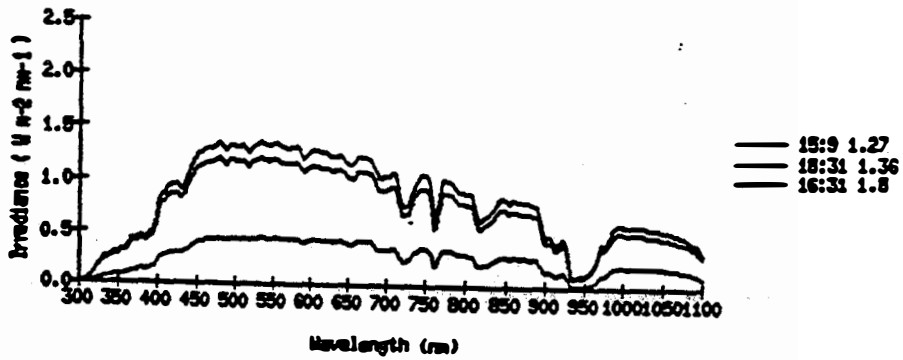


N FSEC87211  
 181 07 30 87 211 172 DN 102 GN  
 0.6 cloud cover at 1510  
 Slides: 0555 G  
 0655 G  
 0755 G  
 0854 G  
 0954 G  
 1045 M (dark)  
 1153 P  
 1253 P  
 1353 P  
 1443 M  
 1552 G  
 1652 G  
 1752 G

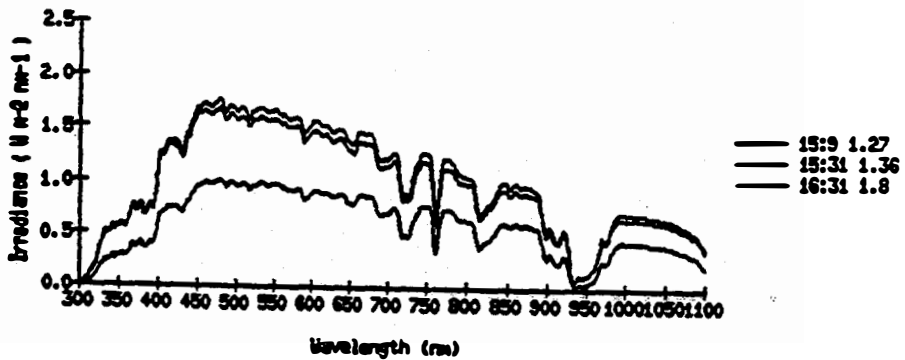
FSEC 211



FSEC 211 DNT



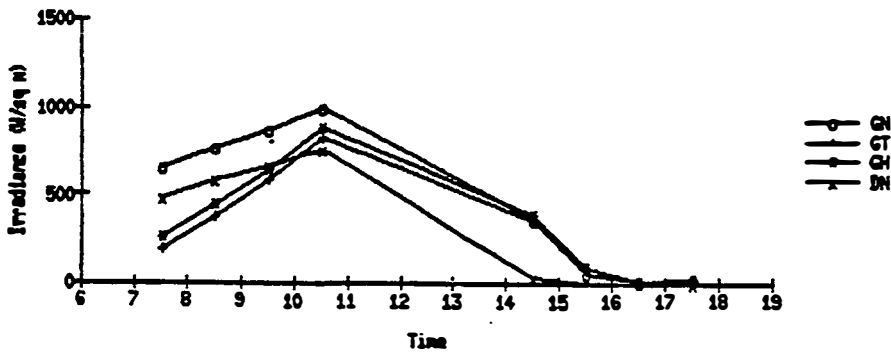
FSEC 211 OS



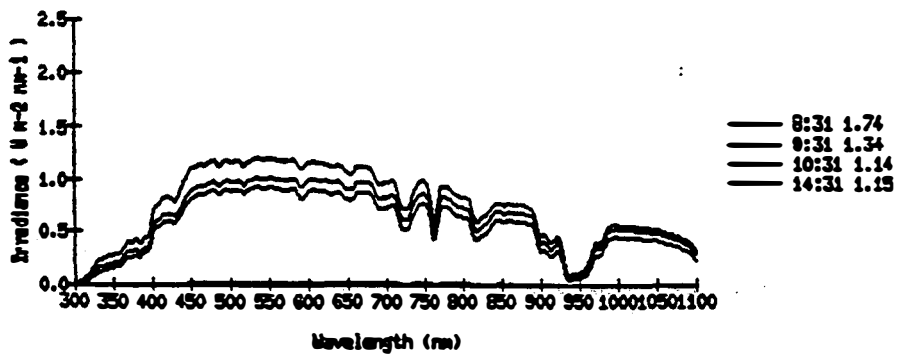


N FSEC87212  
 182 07 31 87 212 172 DW 102 GN  
 0.5 cloud cover at 0730; rain at 1330  
 Slides: 0552 G  
 0649 G  
 0749 G  
 0849 G  
 0948 G  
 1048 M (dark)  
 1148 M (color change)  
 1248 G (water drops)  
 1347 G  
 1547 G (missing 1447)  
 1628 G  
 1728 G  
 1827 G

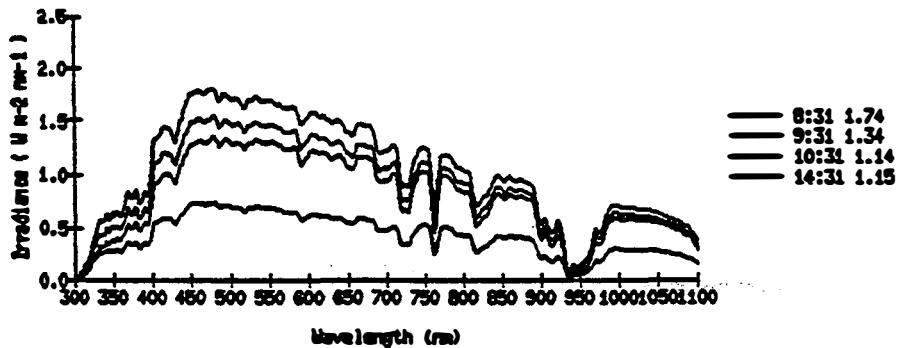
FSEC 212



FSEC 212 DNT



FSEC 212 GNS

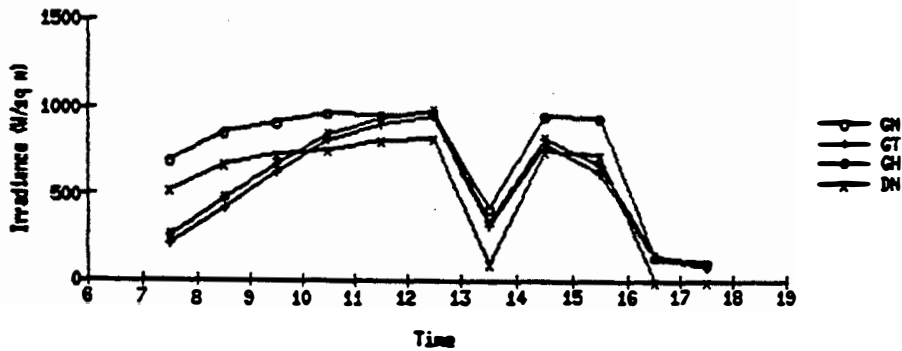




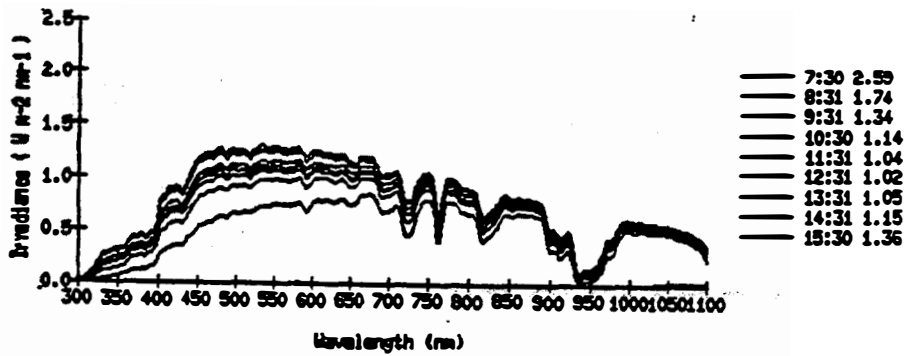
N FSEC87213  
 183 08 01 87.213 172 DN 102 GN  
 Mostly clear AM; partly cloudy PM  
 Slides: 0625 G  
 0724 G  
 0824 M (dark)  
 0924 P  
 1024 P  
 1124 P  
 1224 P  
 1324 P  
 1423 M  
 1523 G  
 1623 G  
 1723 G  
 1829 G

-----  
 Bef/aft measurements show instability at 1333

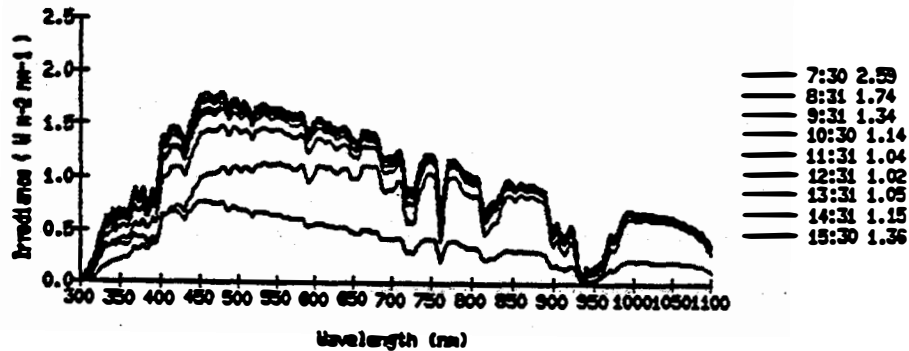
FSEC 213



FSEC 213 DNT

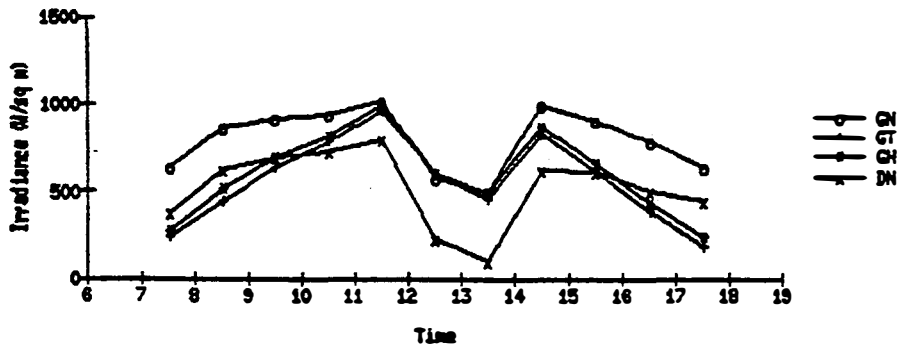


FSEC 213 GNS

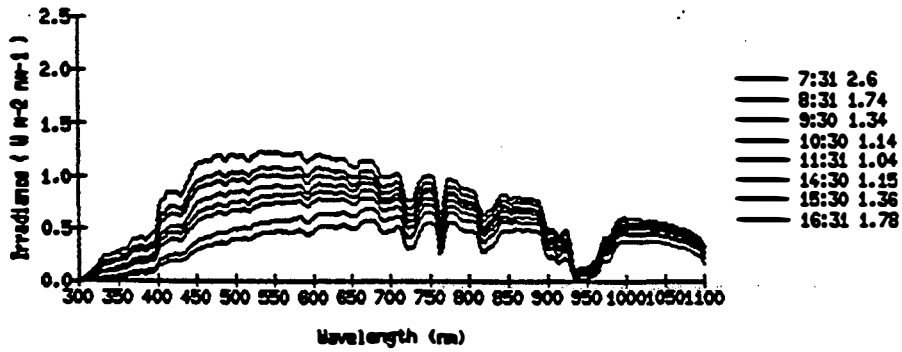


N FSEC87214  
 184 08 02 87 214 172 DN 102 GN  
 Partly cloudy  
 Slides: 0620 G  
 0720 G  
 0820 G  
 0920 H (dark)  
 1019 H  
 1119 G  
 1219 G  
 1319 G  
 1419 G  
 1519 G  
 1619 H (dark)  
 1818 G (missing 1719)

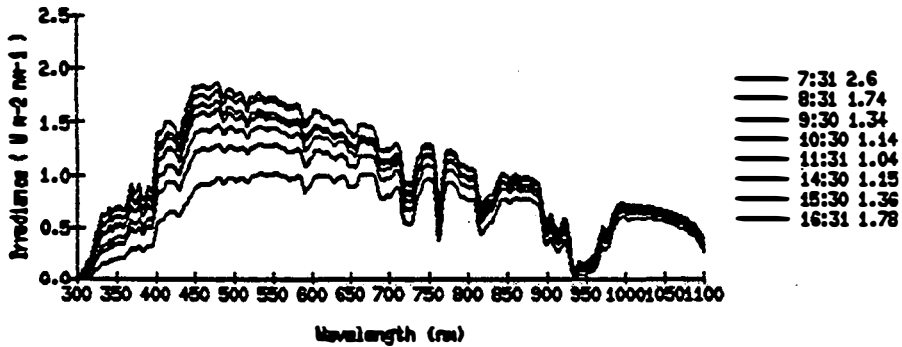
FSEC 214



FSEC 214 DNT



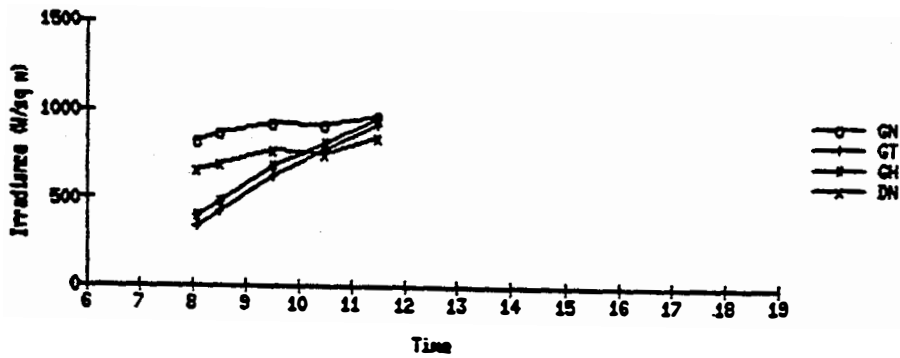
FSEC 214 GNS



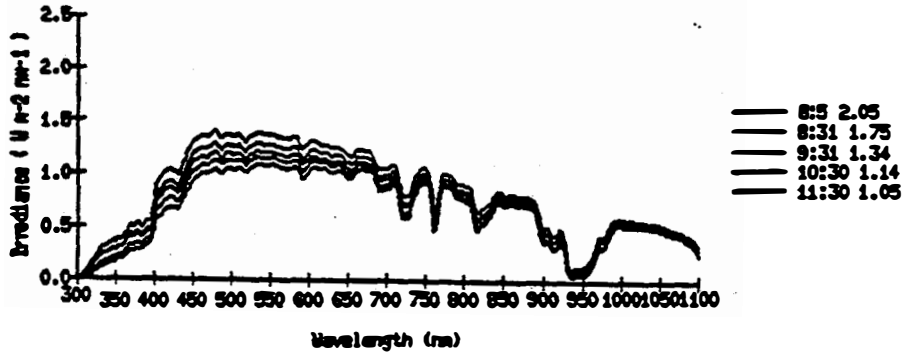
N FSEC87215  
 185 08 03 87 215 172 DW 102 GN  
 0.1 cloud cover at 0730; 0.2 at 1130  
 Temp controller: 172 102  
 1130 40 C 40 C

Slides: 0616 G  
 0716 G  
 0816 G  
 0915 M (dark)  
 1015 P  
 1115 P  
 1229 P  
 1328 P  
 1428 P  
 1528 G  
 1627 G  
 1727 G  
 1827 G

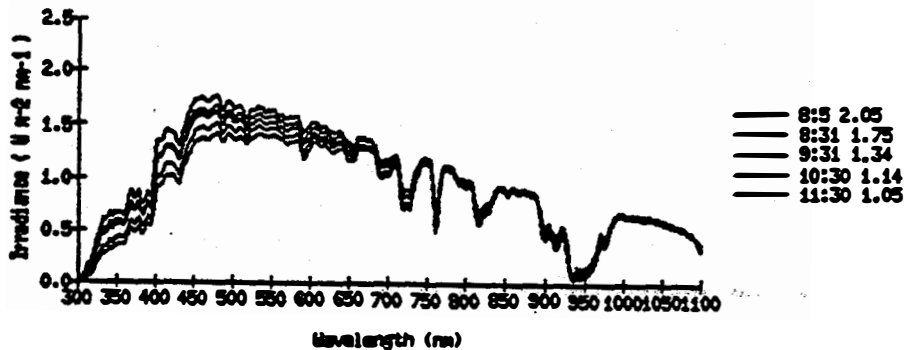
FSEC 215



FSEC 215 DNT



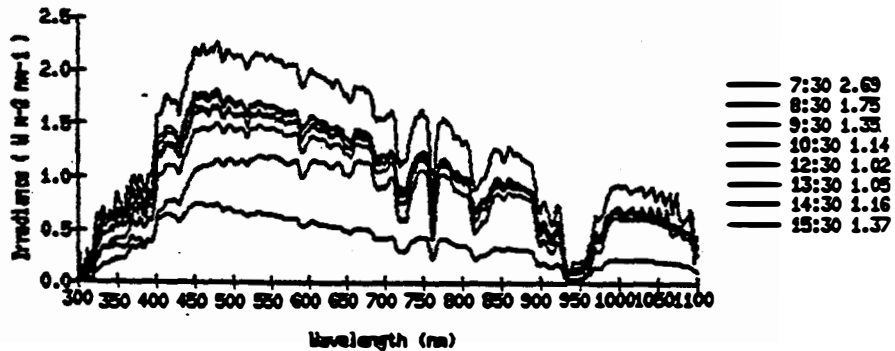
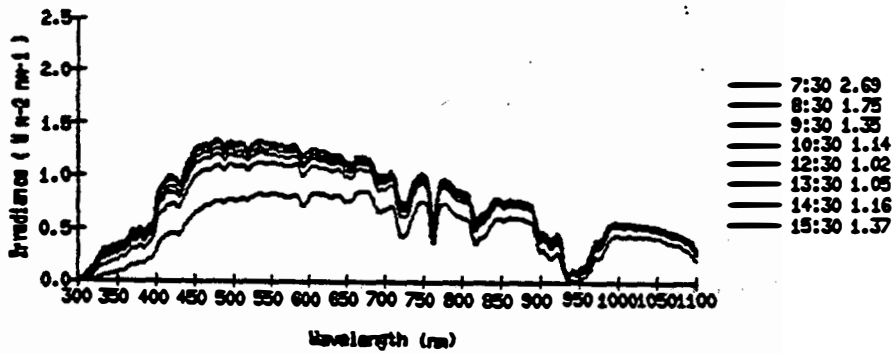
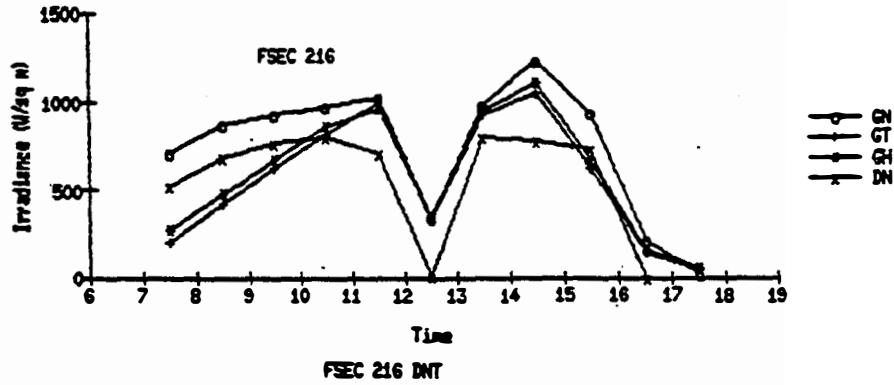
FSEC 215 GN6



N FSEC87216  
 186 08 04 87 216 172 DN 102 GN  
 0.1 cloud cover at 0730; 0.4 at 1130; 0.3 at 1530  
 Temp controller: 172 102  
 1130 41 C 40 C  
 1330 42 C 40 C  
 1530 40 C 40 C

Slides: 0624 G  
 0724 G  
 0824 G  
 0924 M (dark)  
 1024 P  
 1124 P  
 1224 P  
 1324 P  
 1424 G  
 1524 G  
 1624 G  
 1724 G  
 1824 G

GN spectrum noisy in UV and near-IR at 1434 and 1531

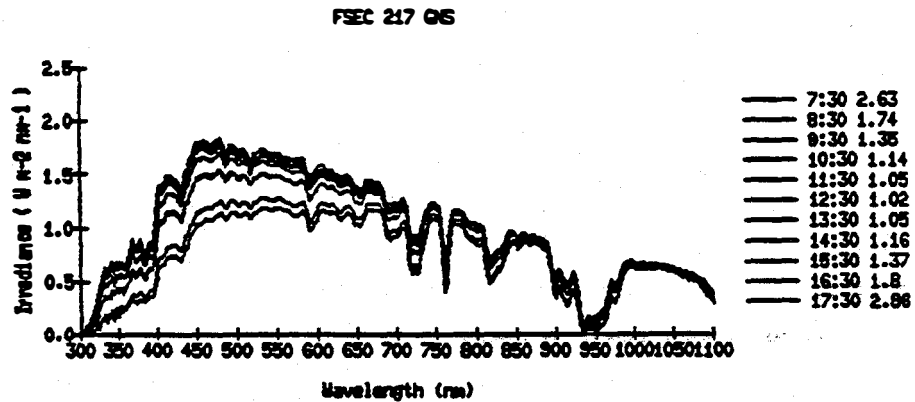
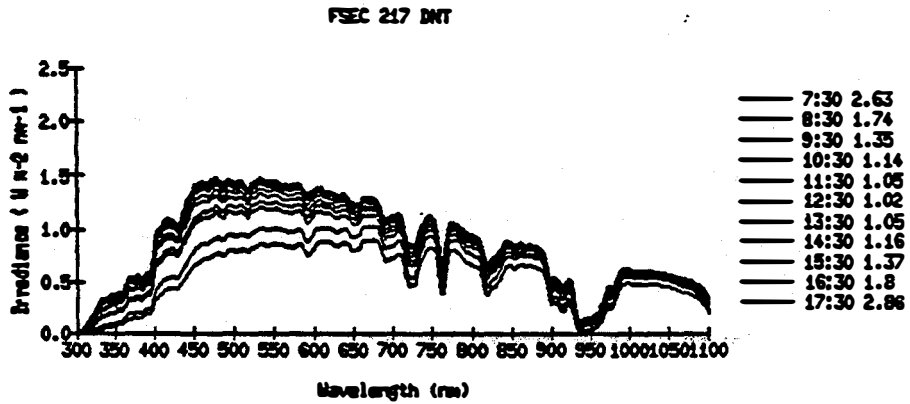
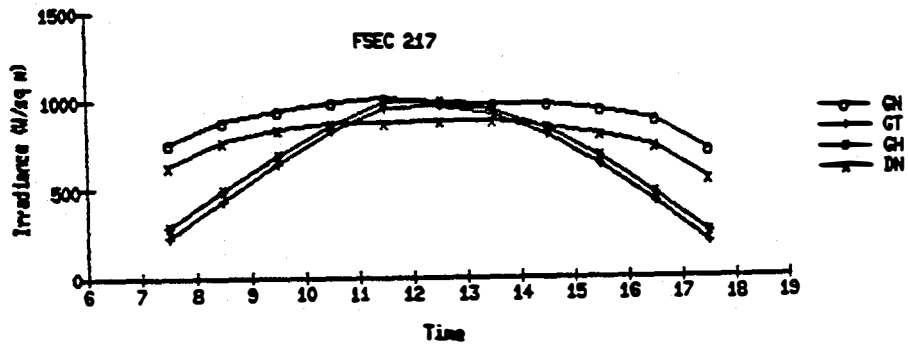




N FSEC87217  
 187 08 05 87 217 172 DM 102 GH  
 0 cloud cover at 0730; 0.3 at 1130, 0.1 at 1530  
 Temp controller: 172 102  
 1130 41 C 40 C  
 1530 40 C 40 C

Slides: 0630 G  
 0730 G  
 0830 G  
 0930 M (dark)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 M  
 1630 G  
 1730 C  
 1830 G

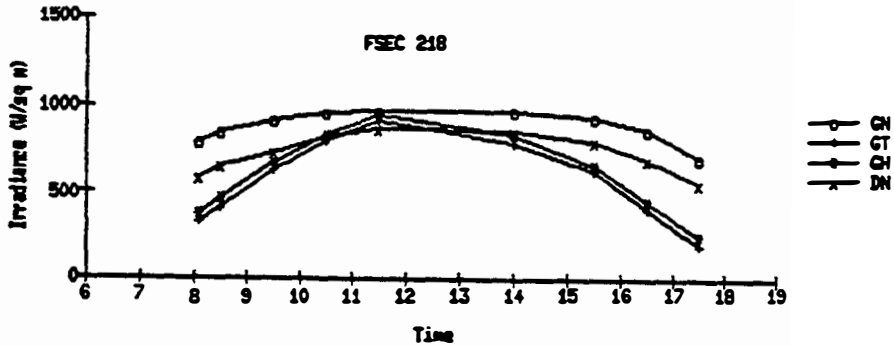
-----  
 Brief spikes in UV in GH spectra at 1331, 1431, 1631, and 1732



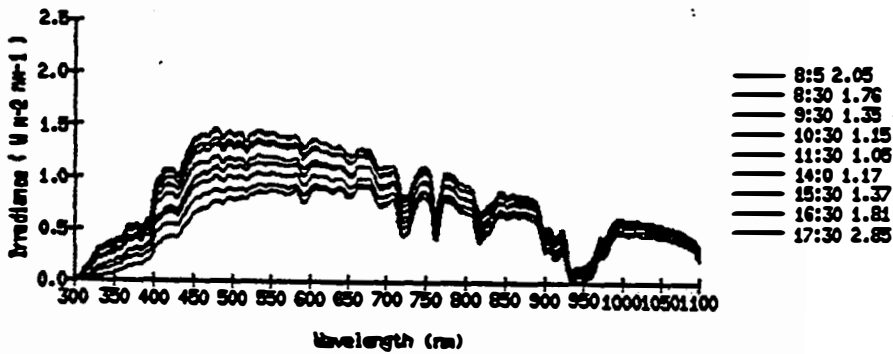
N FSEC87218  
 188 08 06 87 218 172 DN 102 GH  
 0 cloud cover at 0800; 0.1 at 1130 and 1530  
 Temp controller: 172 102  
 1130 40 C 42 C  
 1530 40 C 41 C

Slides: 0630 G  
 0730 G  
 0830 G  
 0930 M (dark)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 M  
 1630 G  
 1730 G  
 1830 G

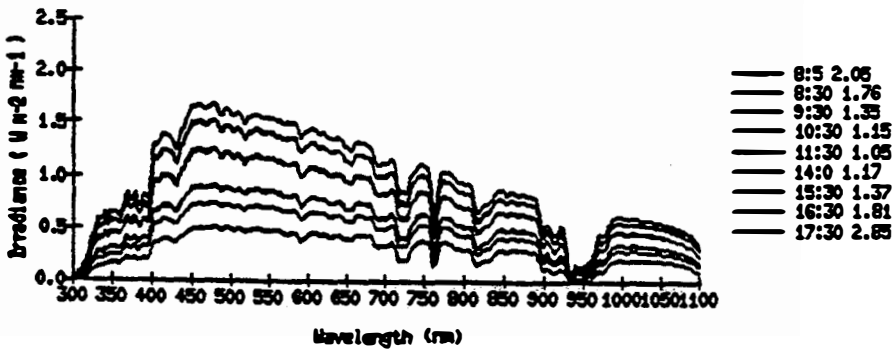
-----  
 Appears to be very small spike in UV in GN spectrum a 0831  
 Note time stamp differences 1400 vs. 1434



FSEC 218 DNT



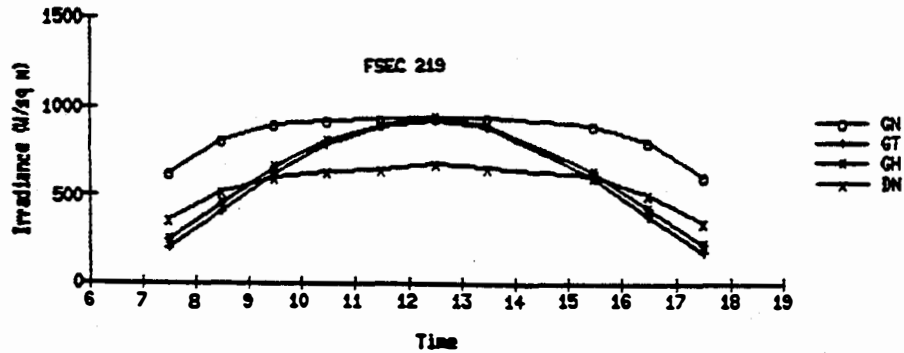
FSEC 218 GHS



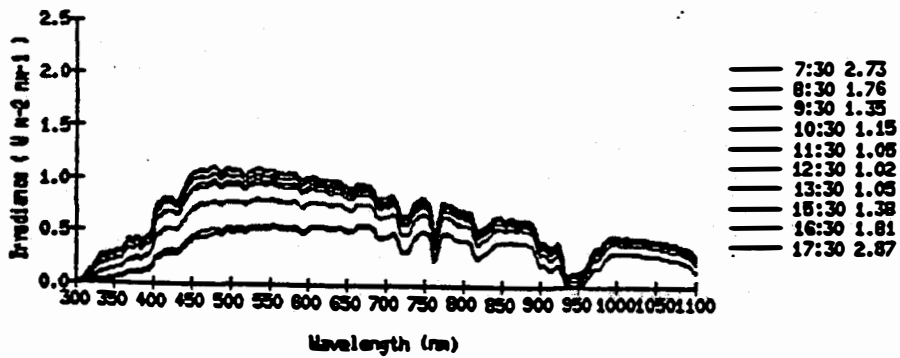
N FSEC87219  
 189 08 07 87 219 172 DN 102 GH  
 0 cloud cover at 0730; 0.1 at 1130 and 1530  
 Tracker error of about 1.5 deg at 1400; reset  
 (Tracking O.K. at 1130 check)

Slides: 0630 G  
 0730 G  
 0830 G  
 0930 M (dark)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 M  
 1630 G  
 1730 G  
 1830 G

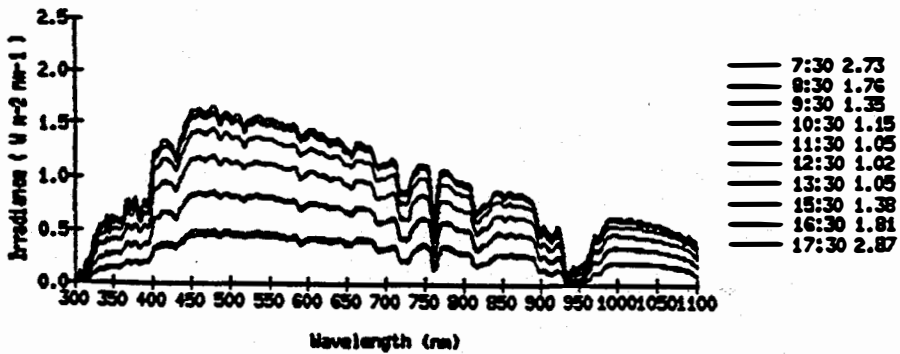
-----  
 Brief spike in UV in GH spectrum at 1231 and 1331



FSEC 219 DNT



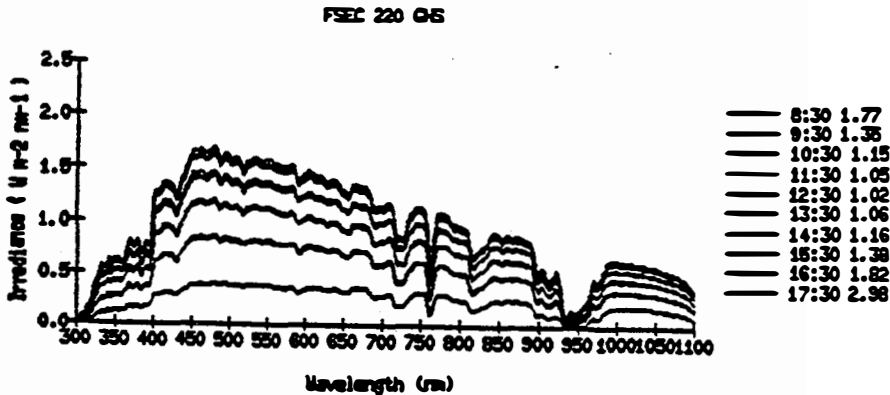
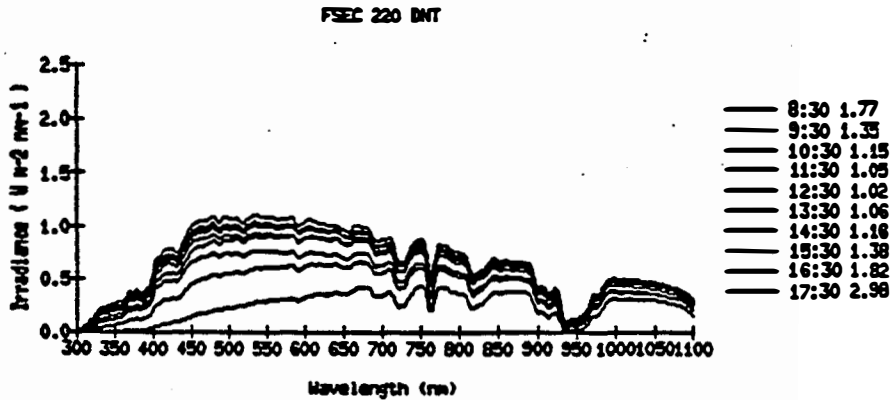
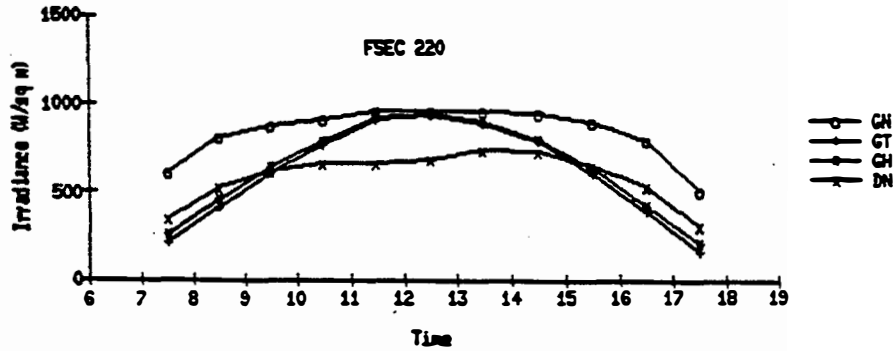
FSEC 219 GHS





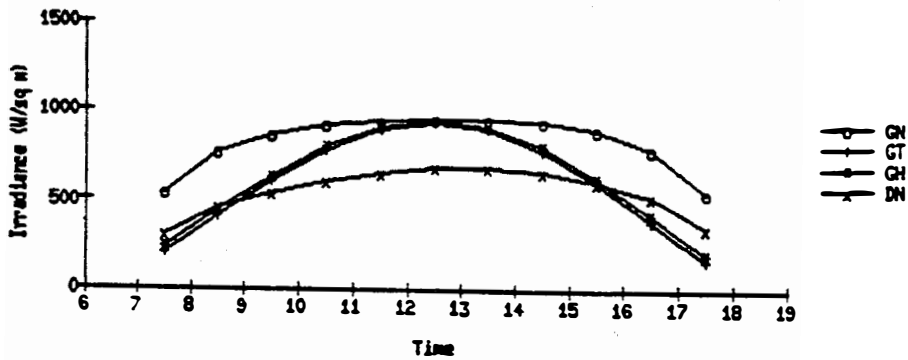
N FSEC87220  
 190 08 08 87 220 172 DN 102 GH  
 Mostly clear  
 Tracking not monitored today; may be suspect  
 Slides: 0630 G  
           0730 G  
           0830 M (dark)  
           0930 M  
           1030 P  
           1130 P  
           1230 P  
           1330 P  
           1430 P  
           1530 M  
           1630 G  
           1730 G  
           1830 G

-----  
 Very brief spike in UV in GH spectrum at 1431  
 Spike in UV in GH spectrum at 1734  
 DN spectral integral appears to be low compared to broadband this day

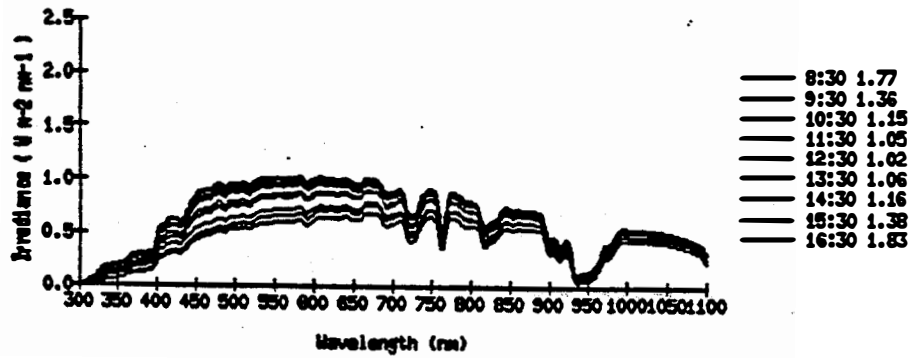


N FSEC87221  
 191 08 09 87 221 172 DN 102 GH  
 Clear  
 Tracking not monitored this day; may be suspect  
 Slides: 0630 G  
 0730 G  
 0830 M (dark)  
 0930 P  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 P  
 1530 M  
 1630 G  
 1730 G  
 1830 G

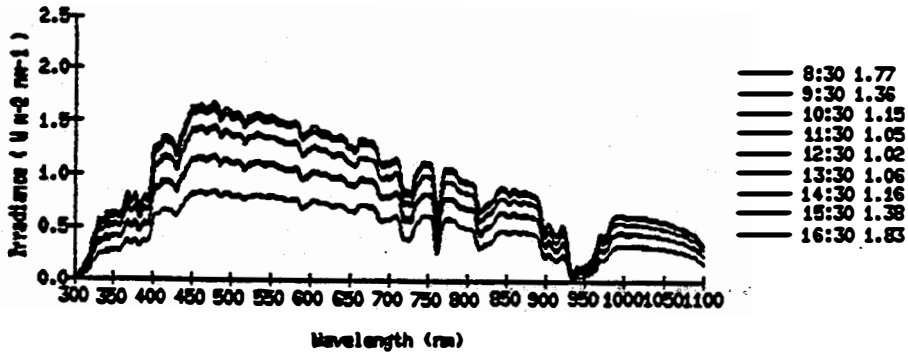
FSEC 221



FSEC 221 DNT



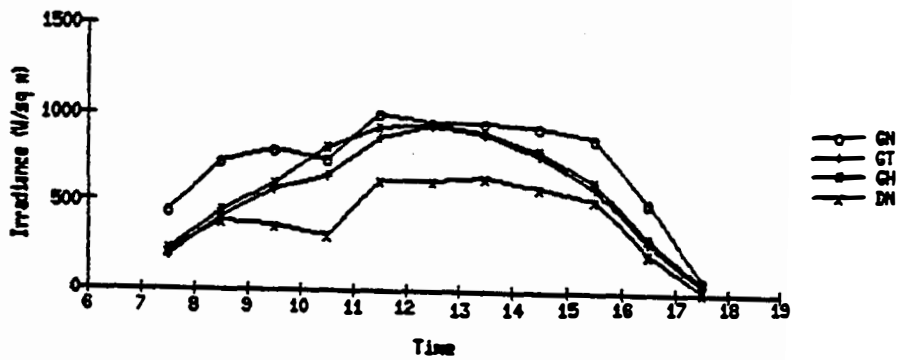
FSEC 221 GHS



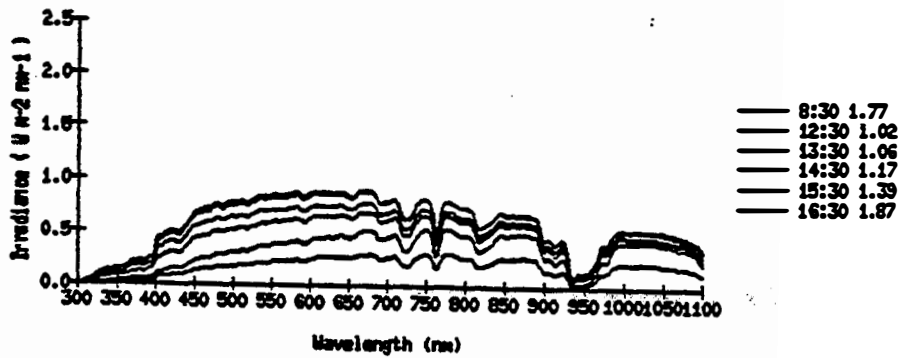
N FSEC87222  
 192 08 10 87 222 172 DN 102 GH  
 Partly cloudy  
 Tracking not monitored today; may be suspect  
 Slides: 0630 G  
 0730 G  
 0830 M (dark)  
 0930 G  
 1030 G  
 1130 P (dark)  
 1230 P  
 1330 P  
 1430 P  
 1530 P  
 1630 M  
 1730 G  
 1830 G

GH spectra noisy in UV and near-IR at 1231, 1331, 1431, and 1531

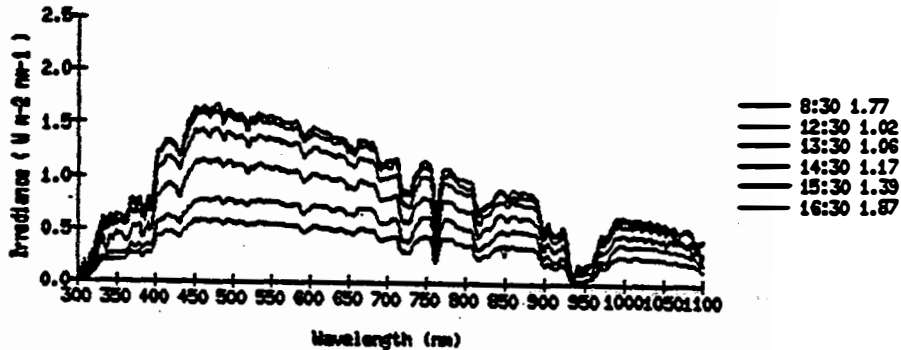
FSEC 222



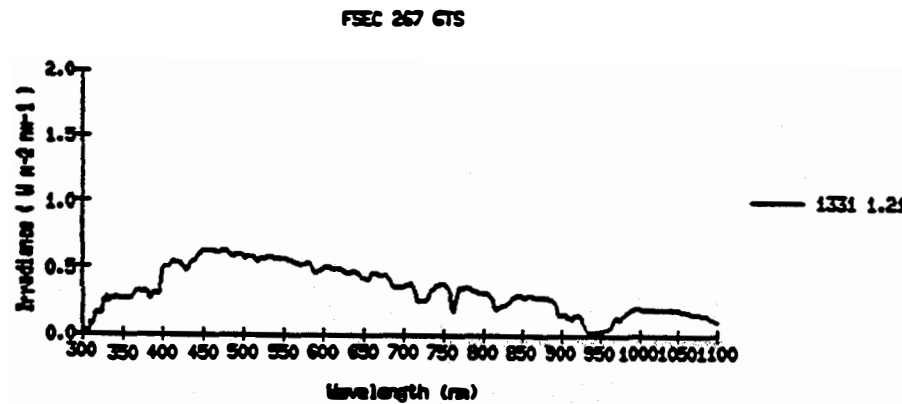
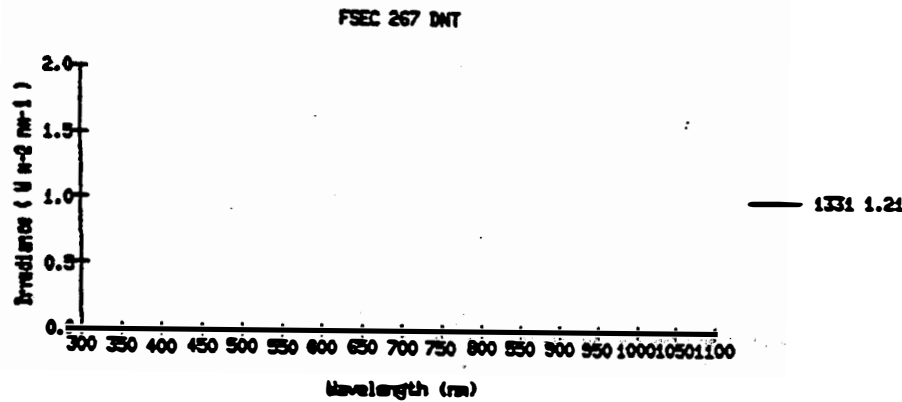
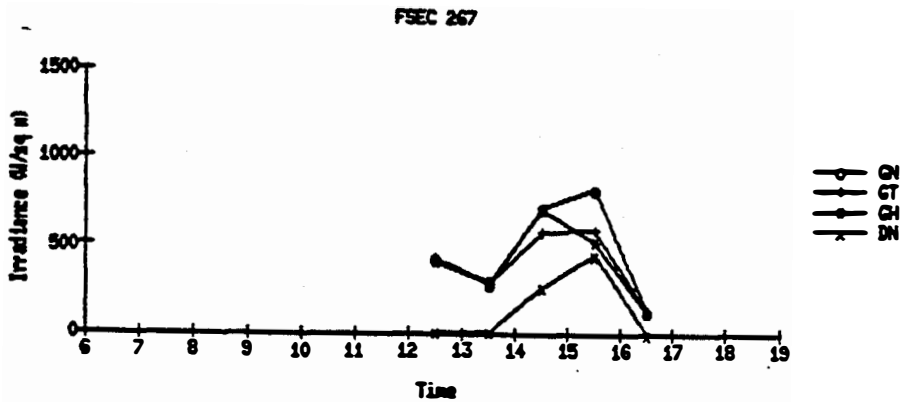
FSEC 222 DNT



FSEC 222 GS

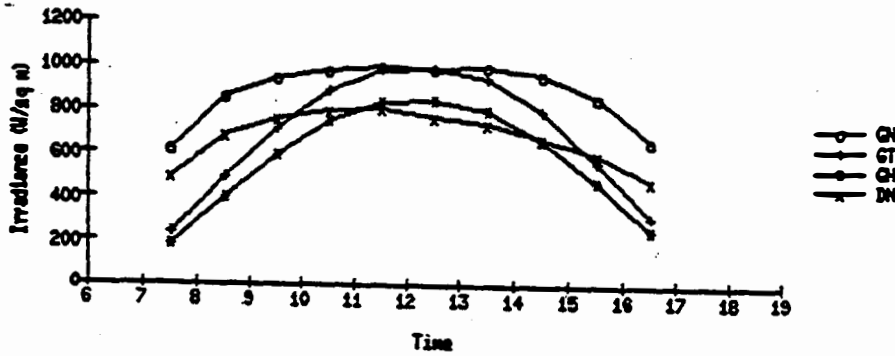


N FSEC87267  
 193 09 24 87 267 172 DW 102 GT  
 0.9 cloud cover at 1230  
 Temp controllers 40 C at 1330  
 Slides: 0723 G  
           0823 G  
           0923 G  
           1023 P (dark)  
           1123 G  
           1222 M (dark)  
           1322 G  
           1422 G  
           1522 G  
           1628 G

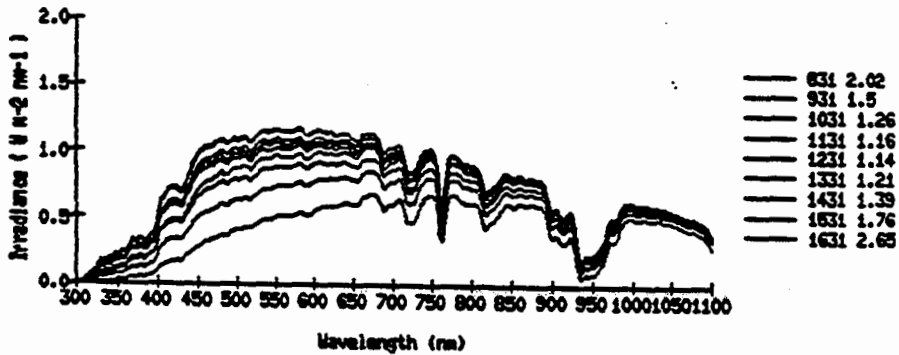


N FSEC87268  
 194 09 25 87 268 172 DN 102 GT  
 0 cloud cover at 0730  
 Temp controllers: 172 40 C and 102 41 C at 1130  
 Slides: 0725 G  
 0825 G  
 0925 M (dark)  
 1025 P  
 1125 P  
 1224 P  
 1324 P  
 1424 G  
 1524 G  
 1624 G

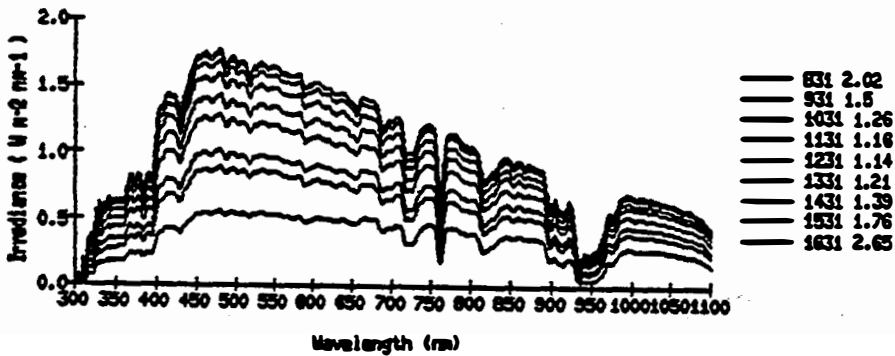
FSEC 268



FSEC 268 DNT



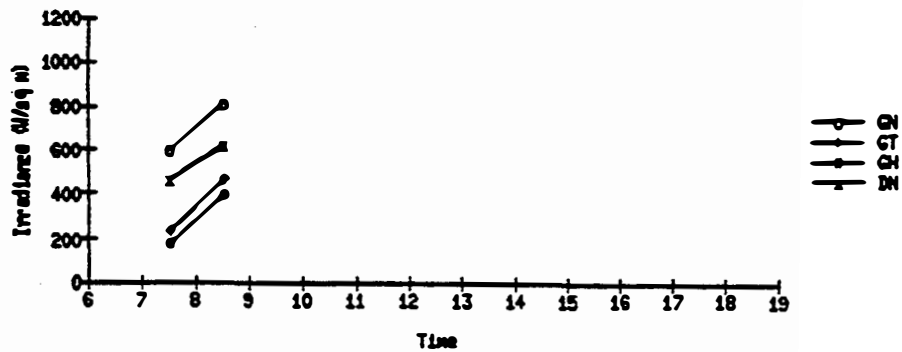
FSEC 268 GTS



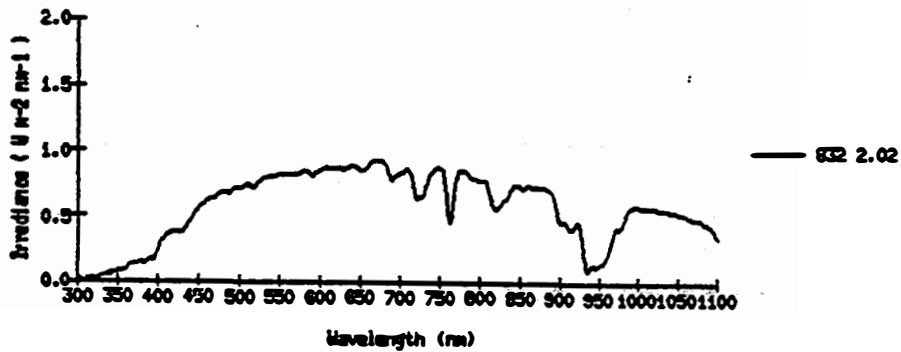
N FSEC87269  
 195 09 26 87 269 172 DN 102 GT  
 Slides: 0721 G  
           0821 G  
           0921 M (dark)  
           1020 P -  
           1120 P -  
           1220 P -  
           1320 P -  
           1420 M -  
           1520 G  
           1619 G

-----  
 Brief spike in UV in DN spectrum at 0832

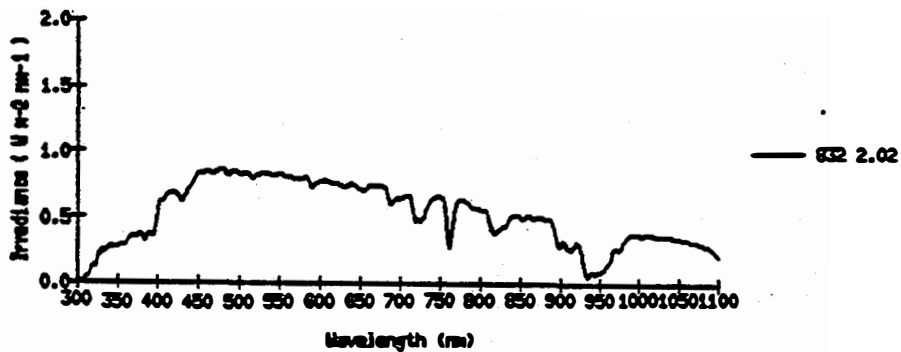
FSEC 269



FSEC 269 DNT



FSEC 269 GTS

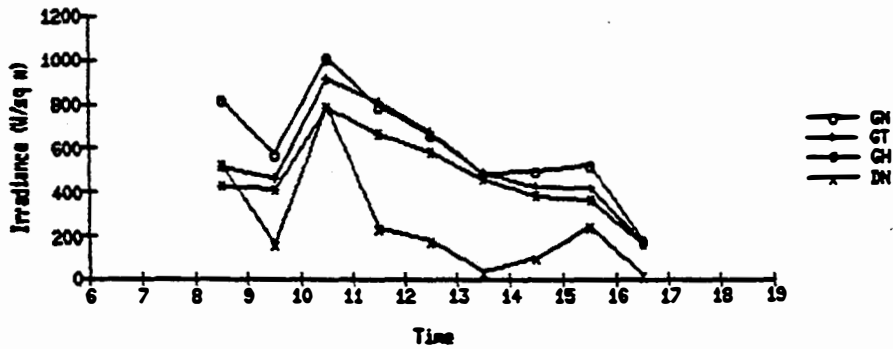




N FSEC87271  
 196 09 28 87 271 172 DW 102 GT  
 0.9 cloud cover at 0710 and 1130  
 Temp controllers: 172 102  
 0710 40 C 40 C  
 1130 41 C 41 C

Slides: 0712 G  
 0812 G  
 0911 G  
 1011 M (dark)  
 1111 P P "  
 1211 M "  
 1311 G G  
 1411 G G  
 1510 G  
 1610 G

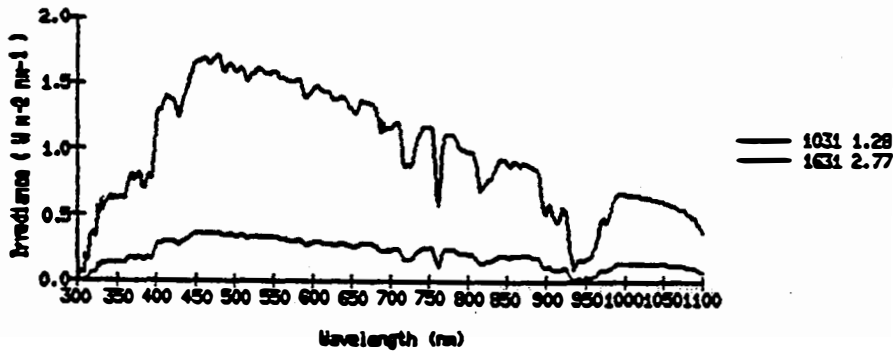
FSEC 271



FSEC 271 DNT



FSEC 271 GTS

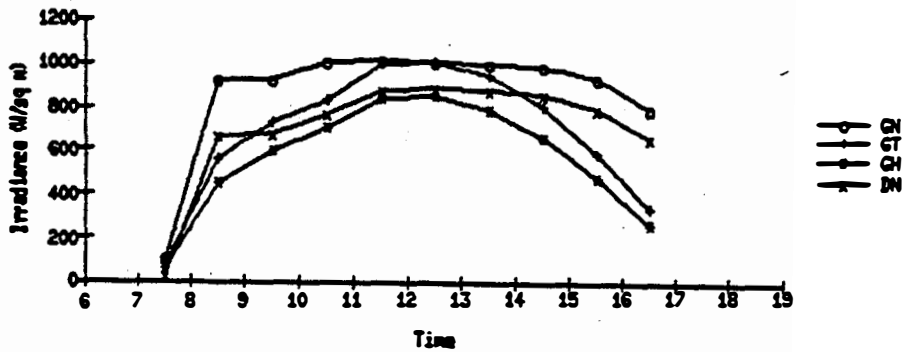


N FSEC87272  
 197 09 29 87 272 172 DH 102 GT  
 0.9 cloud cover at 0715; 0.4 at 1130; 0.2 at 1530  
 Temp controller: 172 102  
                   0715 39 C 39 C  
                   1130 44 C 40 C  
                   1330 42 C 41 C

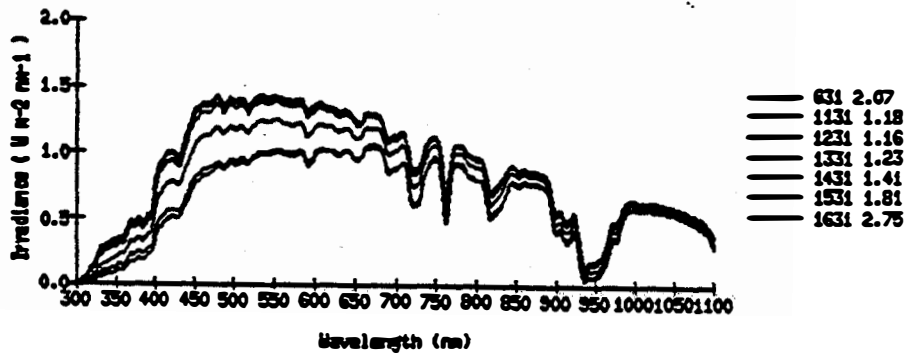
Slides: 0706 G  
           0806 G  
           0906 G  
           1006 H (dark)  
           1106 P  
           1223 P  
           1333 P  
           1433 G  
           1532 G  
           1632 G

-----  
 Spike in UV in DH spectrum at 0831

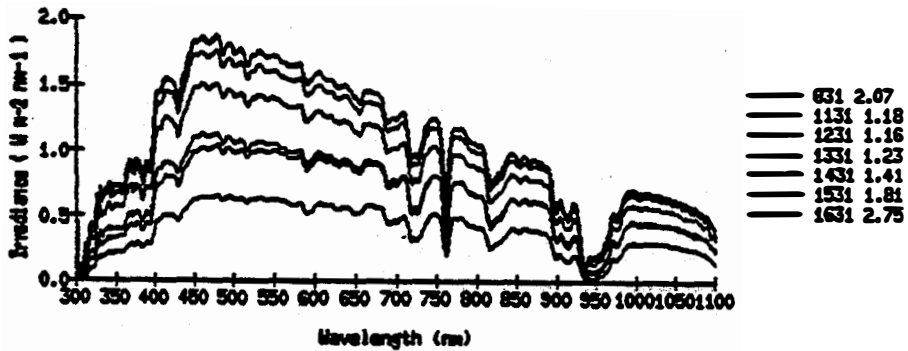
FSEC 272



FSEC 272 DNT



FSEC 272 GTS



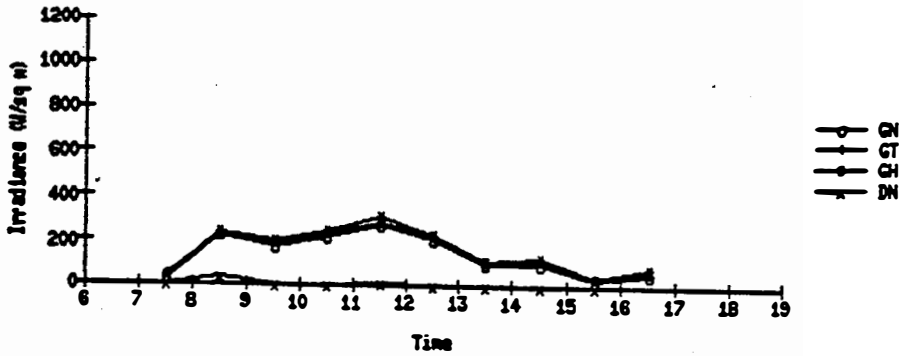


N FSEC87273  
 198 09 30 87 273 172 DN 102 GT  
 1.0 cloud cover at 0715, 1230 (light rain), and 1530  
 Temp controllers 39 C at 0715

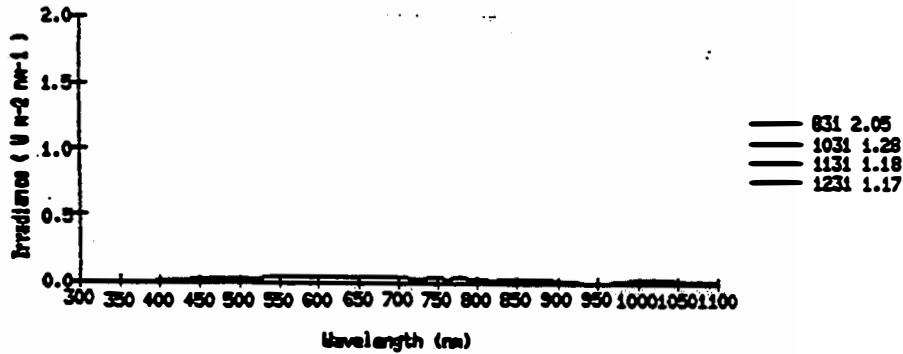
Slides: 0729 G  
 0829 G (water drops)  
 0929 G (water drops)  
 1028 G  
 1128 G  
 1228 G (water drops)  
 1328 G  
 1428 G  
 1528 G  
 1528 G

-----  
 Spectral integral = broadband at 1231

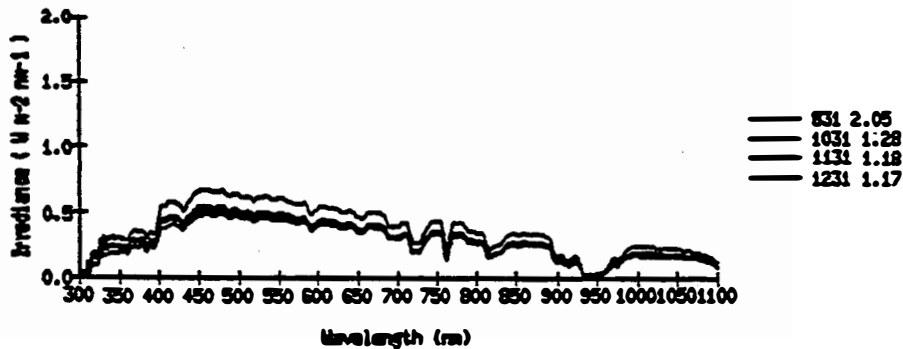
FSEC 273



FSEC 273 DNT



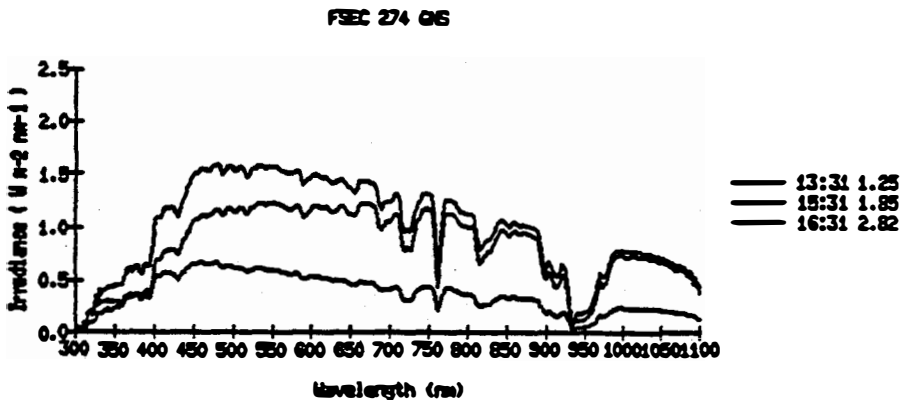
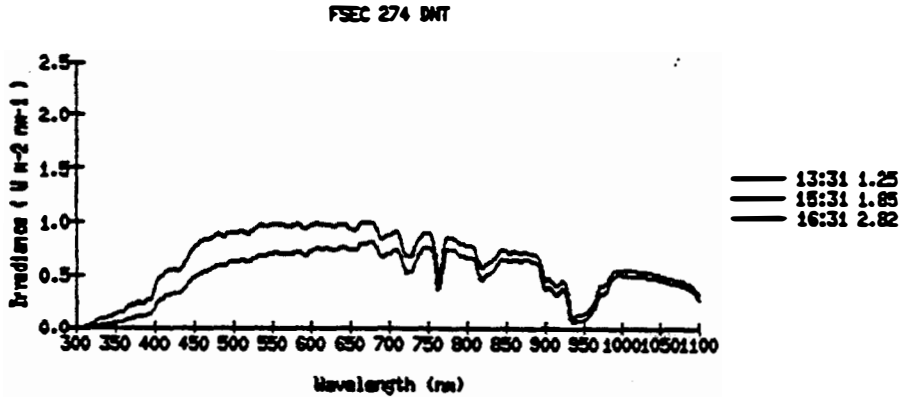
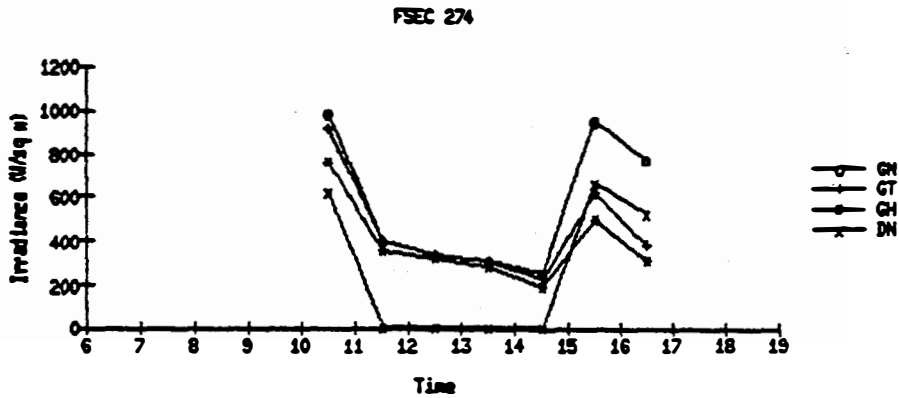
FSEC 273 GTS





N FSEC87274  
 199 10 01 87 274 172 DN 102 GN  
 0.4 cloud cover at 1030 and windy; 0.4 at 1600  
 Temp controllers: 172 40 C and 102 41 C at 1600  
 Slides: 0725 G (water drops)  
 0825 G  
 0925 G  
 1025 G  
 1125 G  
 1225 G (dark)  
 1325 G  
 1425 G  
 1524 G  
 1637 G

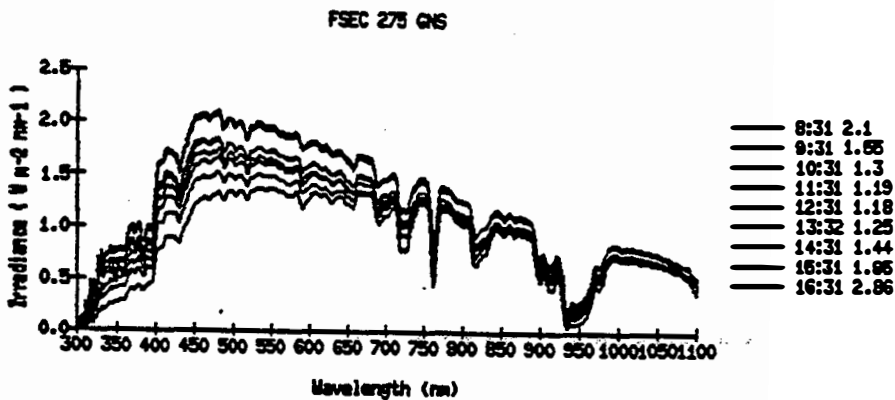
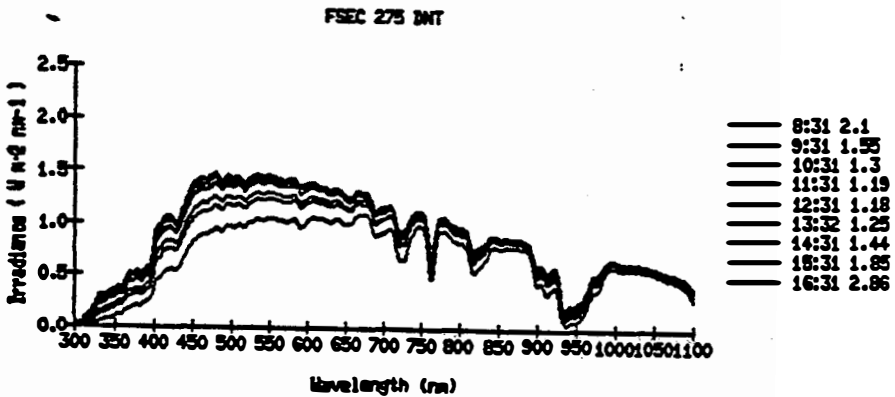
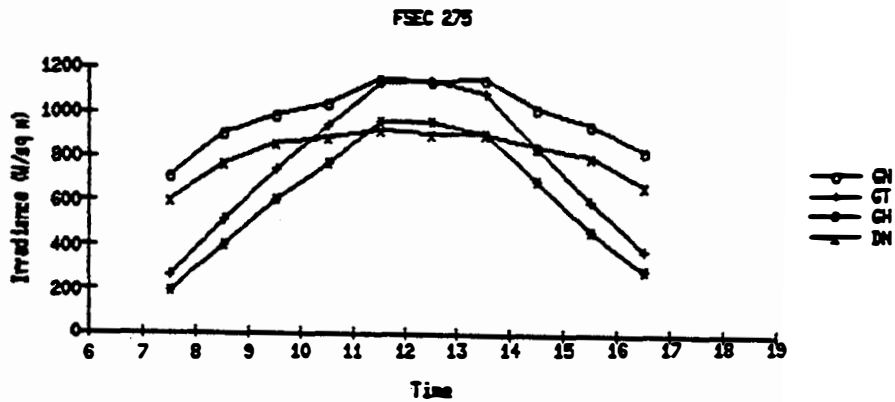
-----  
 Spikes in UV in GN spectra at 1533 and 1631



N FSEC87275  
 200 10 02 87 275 172 DW 102 GN  
 0 cloud cover at 0715; 0.4 at 1230; 0.3 at 1530  
 Temp controller: 172 102  
 0715 39 C 41 C  
 1230 40 C 41 C

Slides: 0733 G  
 0833 G  
 0933 M (dark) (slide times approximate to 30 min)  
 1033 P  
 1133 P  
 1240 P  
 1330 P  
 1430 G  
 1530 G  
 1630 G

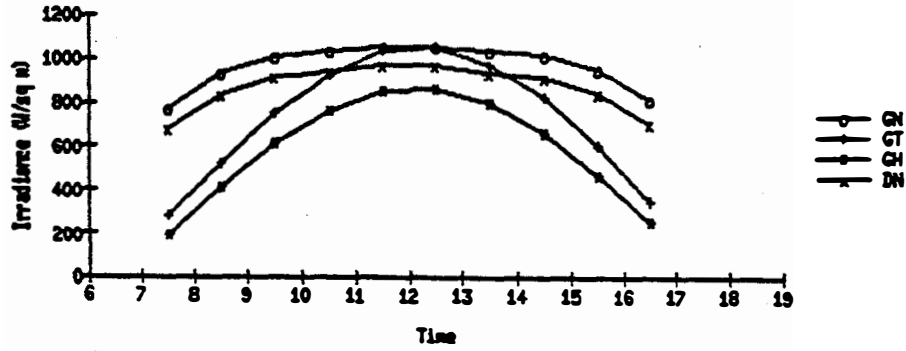
UV noisy in GN spectrum at 0931



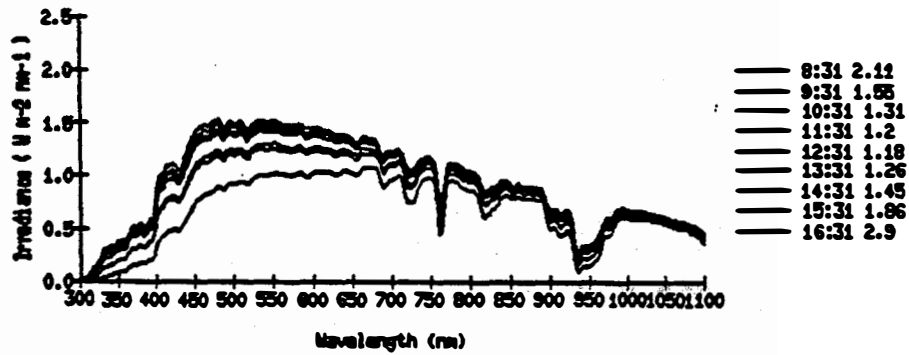


N FSEC87276  
 201 10 03 87 276 172 DN 102 GN  
 Weekend data; possible tracking errors  
 Slides: 0730 G  
 0830 G  
 0930 M (dark) (slide times approximate to 30 min.)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 G  
 1530 G  
 1630 G

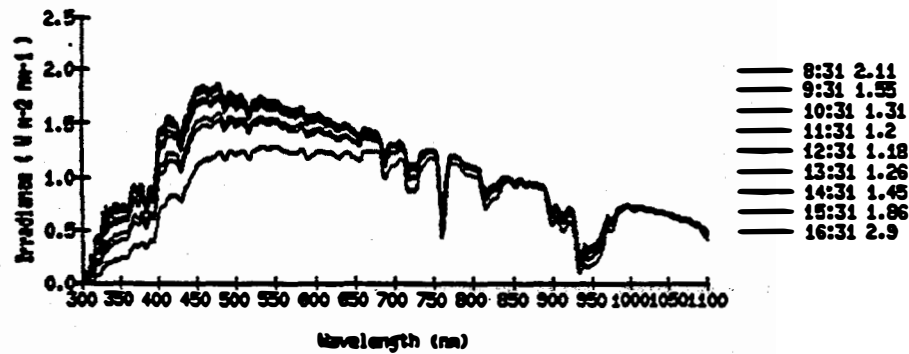
FSEC 276



FSEC 276 DNT

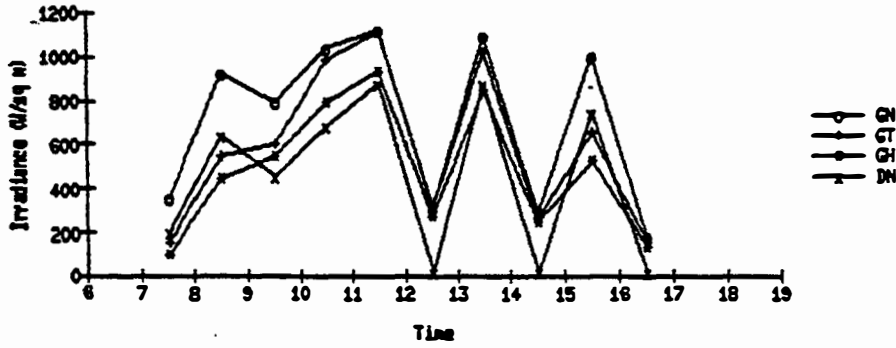


FSEC 276 GMS

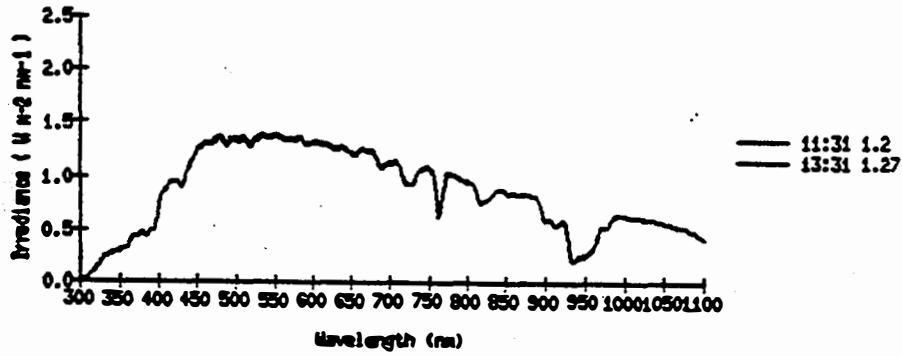


N FSEC87277  
 202 10 04 87 277 172 DW 102 GN  
 Weekend data; possible tracking errors  
 Slides: 0730 G  
 0830 G (slide times approximate to 30 min.)  
 0930 G  
 1030 P (dark)  
 1130 P  
 1230 G  
 1330 P (dark)  
 1430 G  
 1530 G  
 1630 G

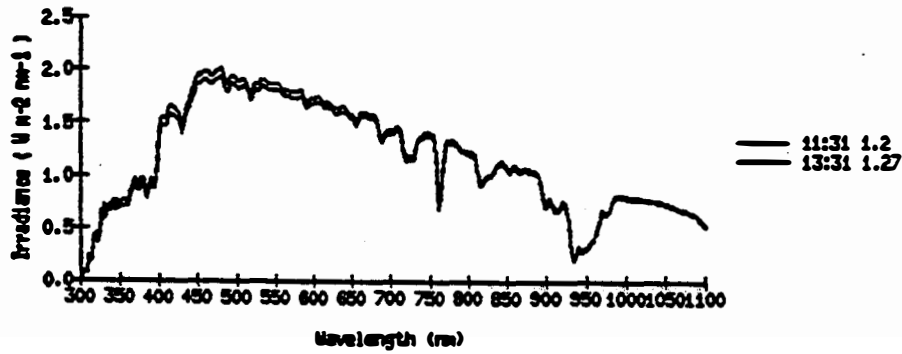
FSEC 277



FSEC 277 DNT



FSEC 277 GNS

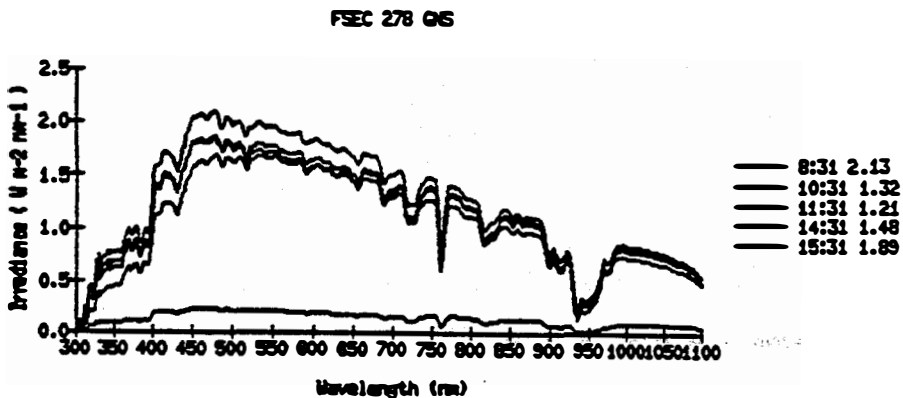
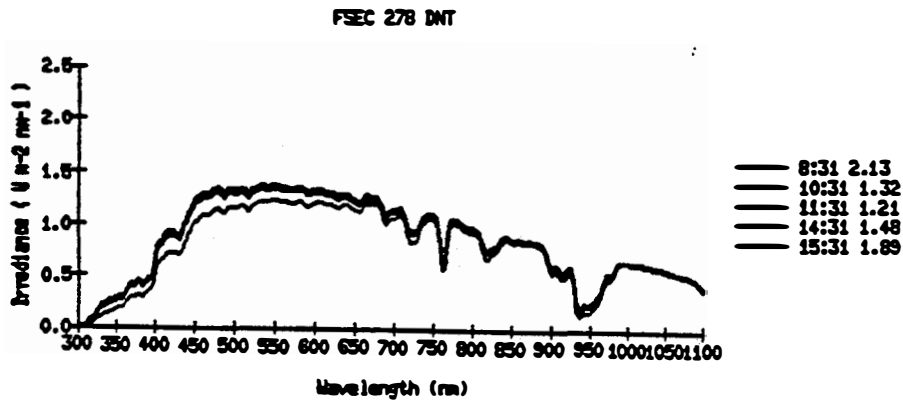
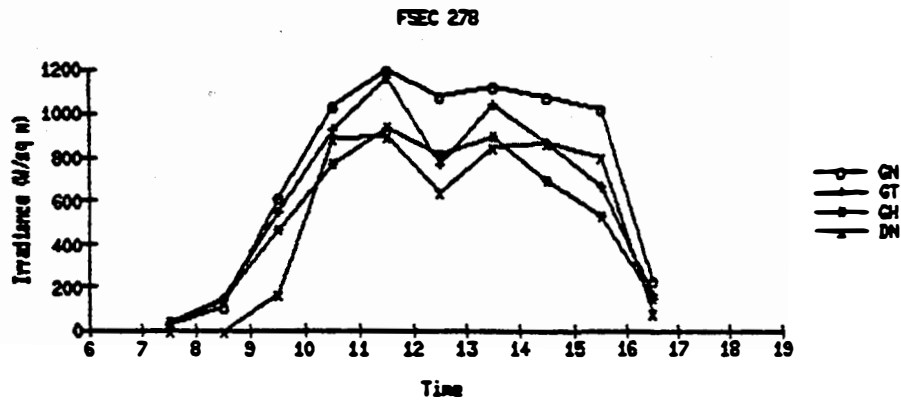


N FSEC87278  
 203 10 05 87 278 172 DN 102 GN  
 1.0 cloud cover at 0730; 0.4 at 1030; 0.5 at 1530  
 Temp controller: 172 102  
 0730 39 C -40 C  
 1030 40 C 40 C  
 1530 39 C 40 C

Tracking error of about 3 deg prior to 1030 scan; reset

Slides: 0730 G  
 0830 G  
 0930 G (slide times approximate to 30 min)  
 1030 M (dark)  
 1130 P -  
 1230 P -  
 1330 P -  
 1430 M -  
 1530 G  
 1630 G

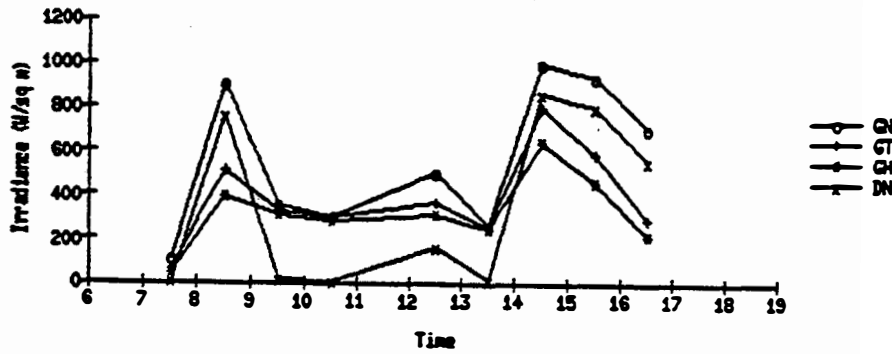
Spectral integral = broadband at 0831



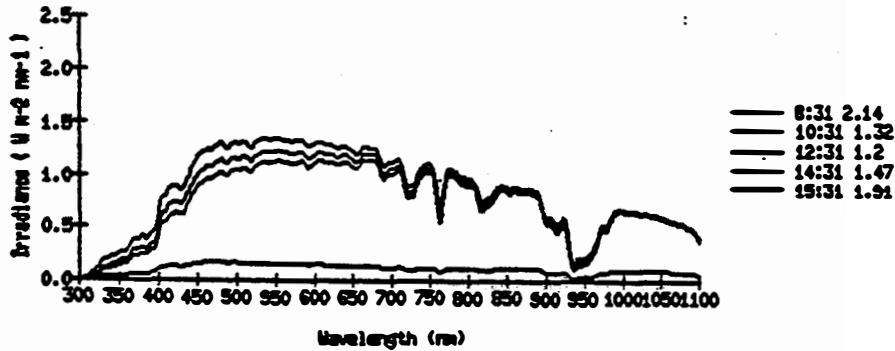
N FSEC87279  
 204 10 06 87 279 172 DN 102 GN  
 0.1 cloud cover at 0730; 0.6 at 1230; 0.2 at 1530  
 Temp controller: 172 102  
 0730 39 C 39 C  
 1230 40 C 40 C  
 1530 41 C 40 C

Slides: 0730 G  
 0830 G  
 0930 G (slide times approximate to 30 min)  
 1030 M (dark)  
 1130 P  
 1230 G  
 1330 P (dark)  
 1430 M  
 1530 G  
 1630 G

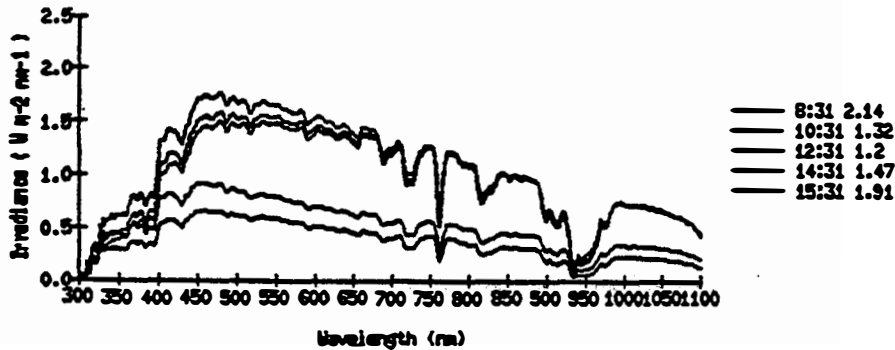
FSEC 279



FSEC 279 DNT



FSEC 279 GNS

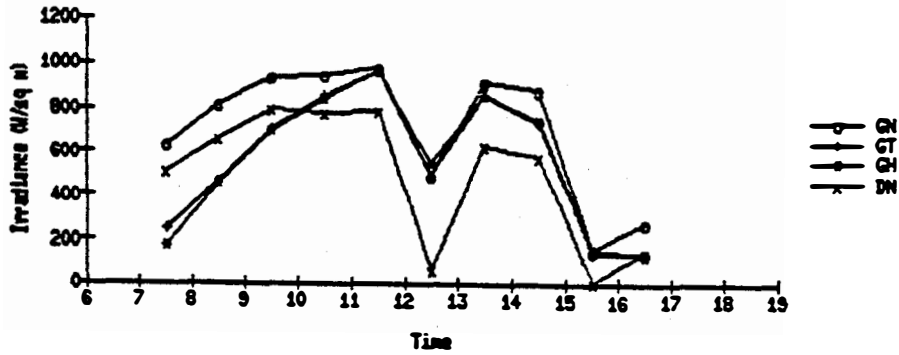




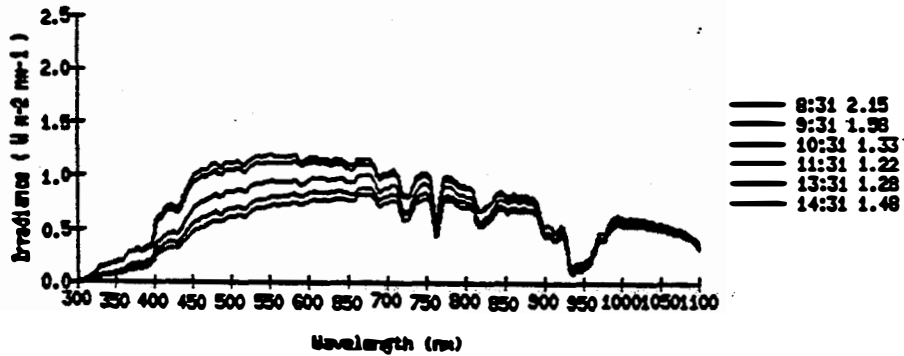
N FSEC87280  
 205 10 07 87 280 172 DN 102 GN  
 0 cloud cover at 0730; 0.4 at 1130; 0.6 at 1530  
 Temp controller: 172 102  
 0730 39 C 39 C  
 1130 40 C 40 C  
 1530 40 C 40 C

Slides: 0730 G  
 0830 G (slide times approximate to 30 min.)  
 0930 M (dark)  
 1030 P  
 1130 P  
 1230 P  
 1330 P  
 1430 G  
 1530 G  
 1630 G

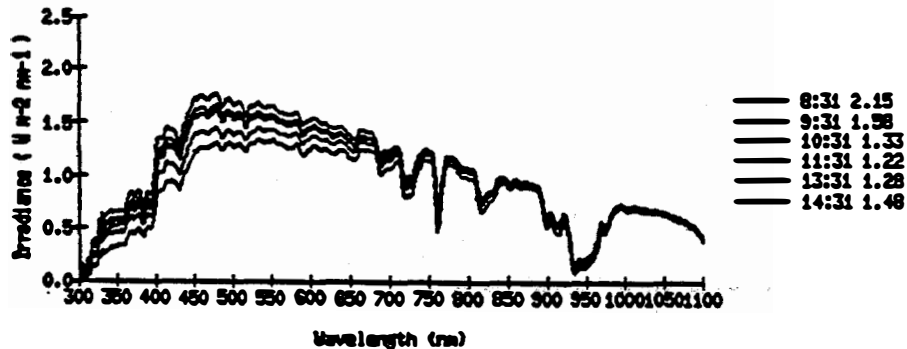
FSEC 280



FSEC 280 DNT



FSEC 280 GNS







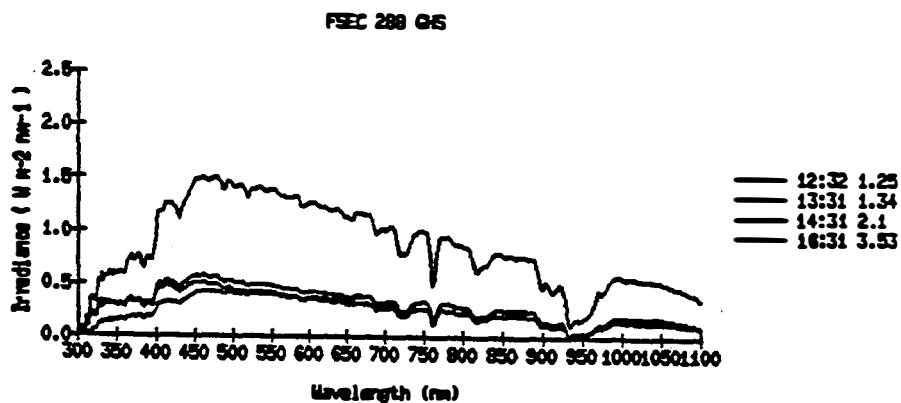
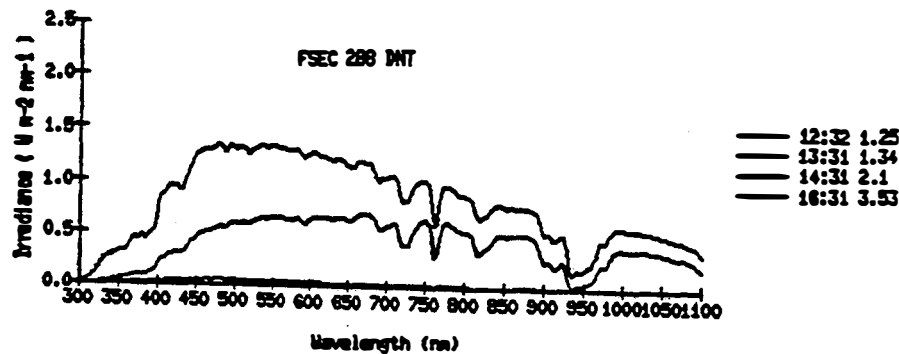
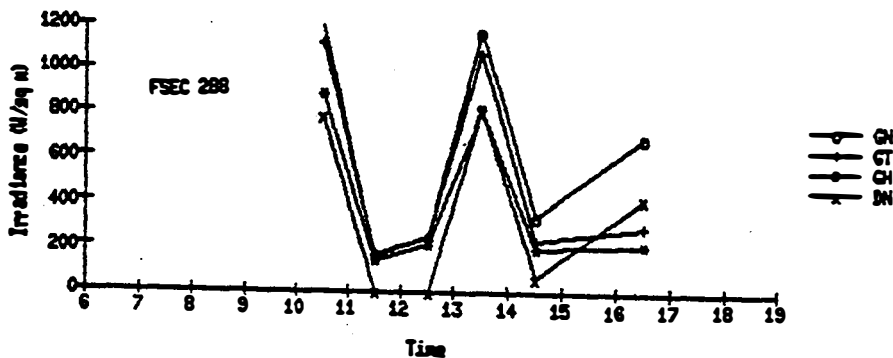
N FSEC87288  
 206 10 15.87 288 172 DW 102 GH  
 0.8 cloud cover at 1030; 0.5 at 1600  
 Temp controller: 172 102  
 1030 40 C 41 C  
 1600 40 40

PSPs changed for channels 2,3,4, and 10 (for calibration):

	Old	New	
2 (GH)	24185F3 8.85 x 10 <sup>-6</sup>	18273F3 9.29 x 10 <sup>-6</sup>	(Apr. 87)
3 (GH)	14322F3 6.38 x 10 <sup>-6</sup>	14318F3 7.70 x 10 <sup>-6</sup>	(Apr. 87)
4 (GT)	24183F3 8.99 x 10 <sup>-6</sup>	14320F3 7.98 x 10 <sup>-6</sup>	(Apr. 87)
10 (Alb)	16297F3 10.09 x 10 <sup>-6</sup>	21065F3 9.95 x 10 <sup>-6</sup>	(Apr. 87)

Slides: 0730 G  
 0830 G (slide times approximate to 30 min.)  
 0930 G  
 1030 P (dark)  
 1130 M -  
 1230 G  
 1330 P -  
 1430 G  
 1530 G  
 1630 G

mV drift errors at 1232, 1432, and 1634 (LSR 172)  
 Unstable conditions at 1634  
 Very small spike in GH spectrum at 1232 and 1634  
 Note time stamp differences 1431 vs. 1534



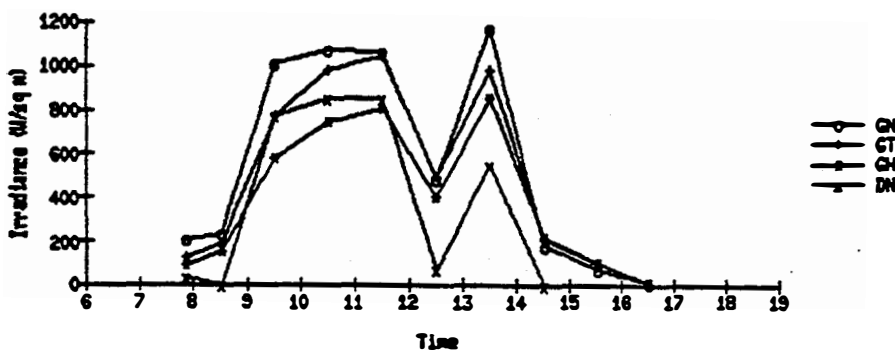


N FSEC87289  
 207 10 16 87 289 172 DW 102 GH  
 0.4 cloud cover at 0720; 0.5 at 1130, 1.0 (light rain) at 1530  
 Temp controller: 172 102  
 0720 40 C 40 C  
 1130 40 C 40 C

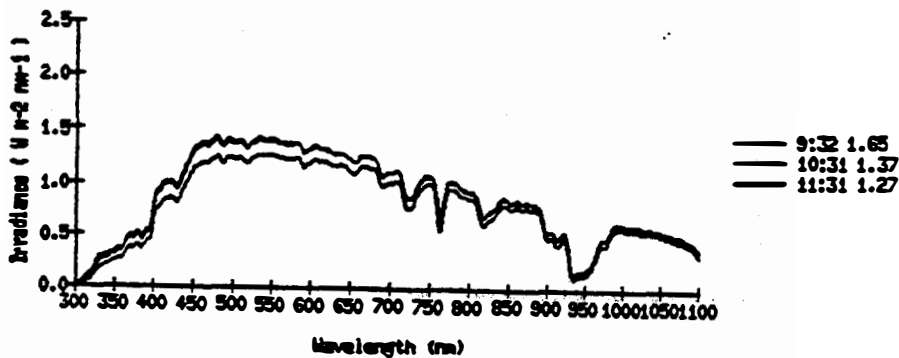
mV drift errors at 0756 (58 mV, 47 mV, 80 mV)  
 mV drift errors at 1035, 1132 (LSR 172)

Slides: 0730 G  
 0830 G  
 0930 G (slide times approximate to 30 min. to 1130)  
 1030 M (dark)  
 1130 P  
 1319 P  
 1430 G  
 1529 G (water drops)  
 1629 G

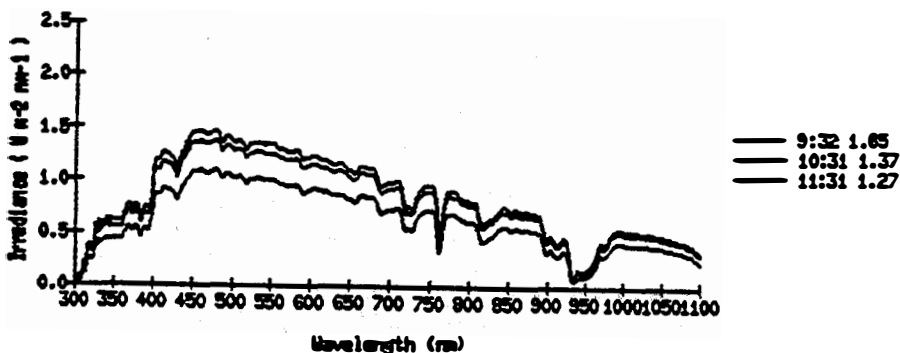
FSEC 289



FSEC 289 DNT

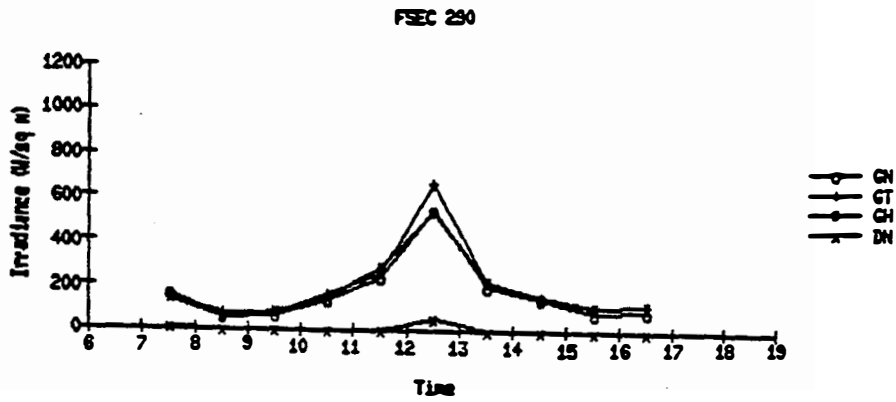


FSEC 289 GHS

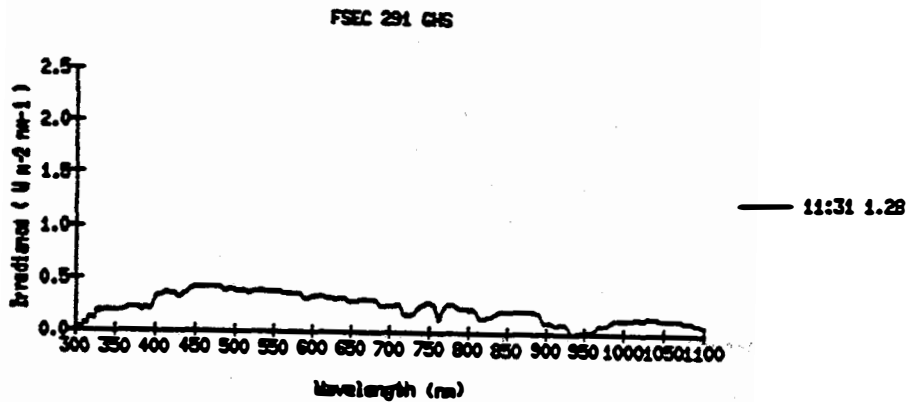
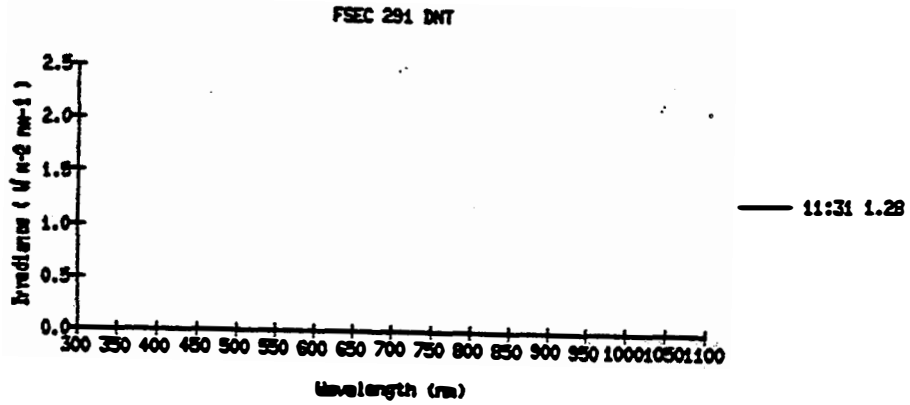
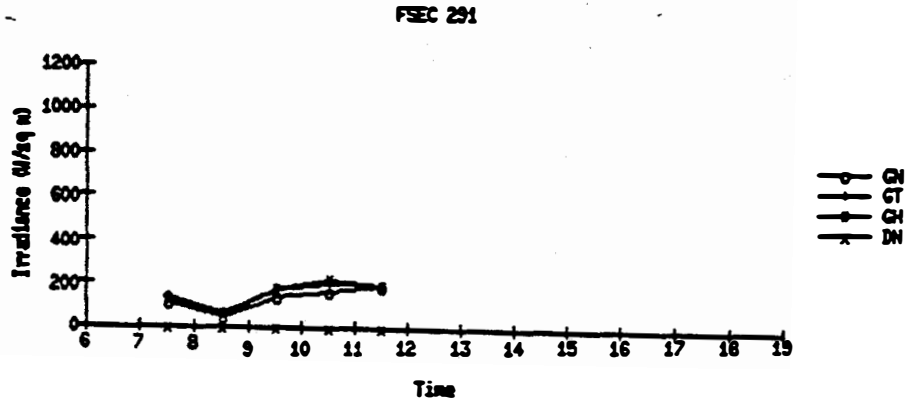


N FSEC87290  
 208 10 17 87 290 172 DN 102 GH  
 Cloudy; weekend data  
 Slides: 0722 G  
           0822 G (water drops)  
           0922 G  
           1021 G  
           1121 G  
           1220 G  
           1320 G  
           1420 G  
           1519 G  
           1619 G

-----  
 No spectra



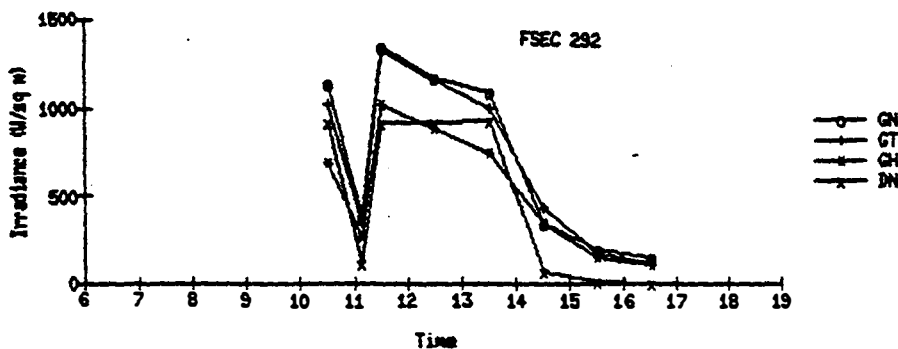
N FSEC87291  
 209 10 18 87 291 172 DW 102 GH  
 Cloudy; weekend data  
 mV drift error at 1133  
 Slides: 0713 G (water drops)  
 0813 G  
 0913 G  
 1012 G  
 1112 G  
 1212 M (dark)  
 1311 M  
 1411 G  
 1511 G  
 1610 G



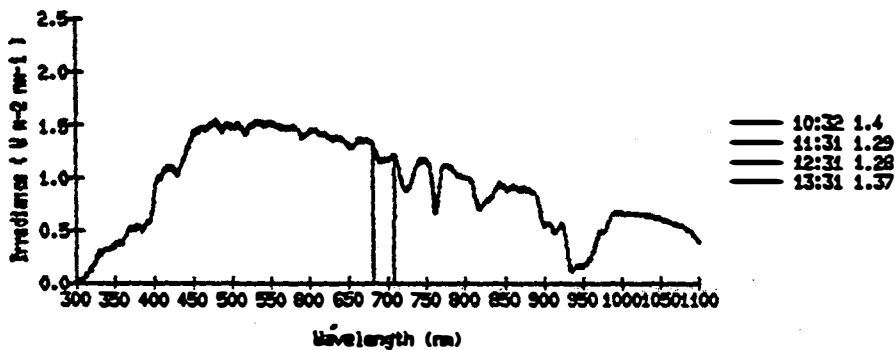


N FSEC87292  
 210 10 19 87 292 172 DW 102 GH  
 0.4 cloud cover at 1030; 0.9 at 1530  
 Temp controller: 172 102  
 1030 40 C 40 C  
 1130 40 C 41 C  
 LSR 172 5 mV drift error at 1130  
 LSR 172 mV drift errors at 1033 and 1131  
 Slides: 0704 G (water drops)  
 0803 G  
 0903 G  
 1003 G  
 1102 P (dark)  
 1202 G  
 1301 M (dark)  
 1401 G  
 1501 G  
 1600 G  
 1700 G

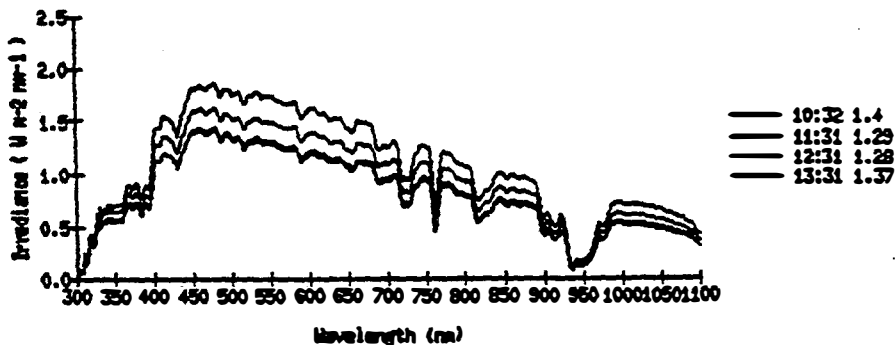
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 Error in DW spectrum at 1033; unstable conditions



FSEC 292 DNT



FSEC 292 DW





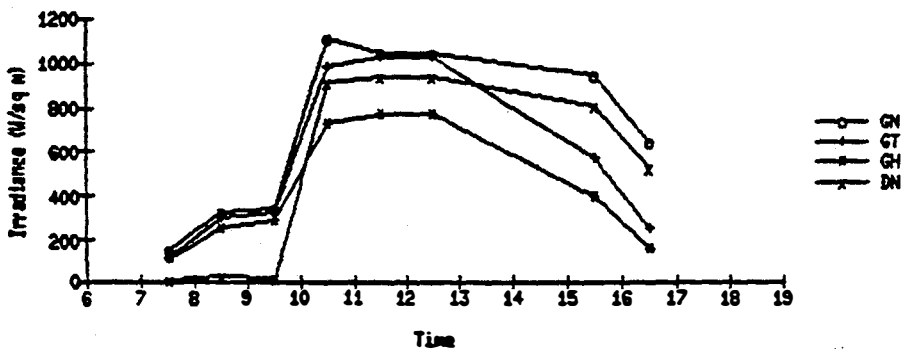
N FSEC87293  
 211 10 20 87 293 172 DN 102 GH  
 1.0 cloud cover (fog) at 0730; 0.4 at 1030; 0.2 at 1530  
 Temp controller: 172 102  
 0730 39 C 41 C  
 1030 40 C 41 C

LSR 172 26 mV drift error at 1030; 7 mV at 1530  
 LSR 172 mV drift errors at 0835, 1035, 1131, 1231, and 1531

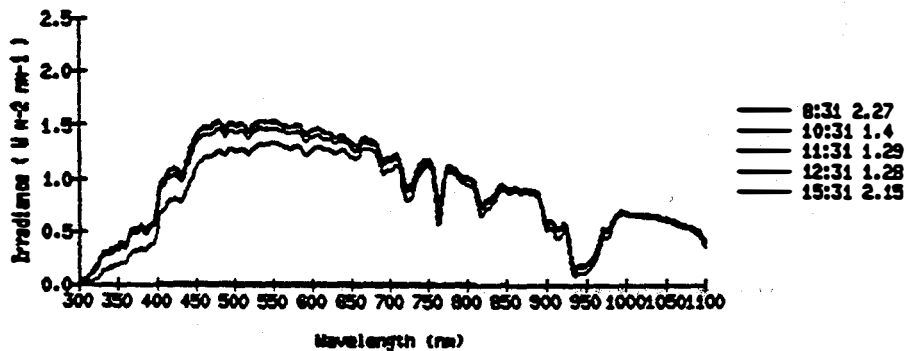
Slides: 0654 G (water drops)  
 0754 G  
 0854 G  
 0943 G  
 1053 P (dark)  
 1129 P (dark)  
 1228 P  
 1328 P  
 1428 G  
 1527 G  
 1627 G

-----  
 Spikes in UV in DN spectrum at 0831

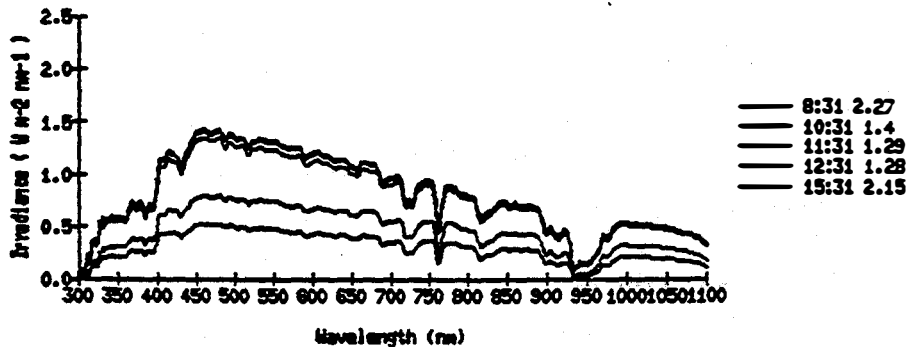
FSEC 293



FSEC 293 DNT



FSEC 293 GHS





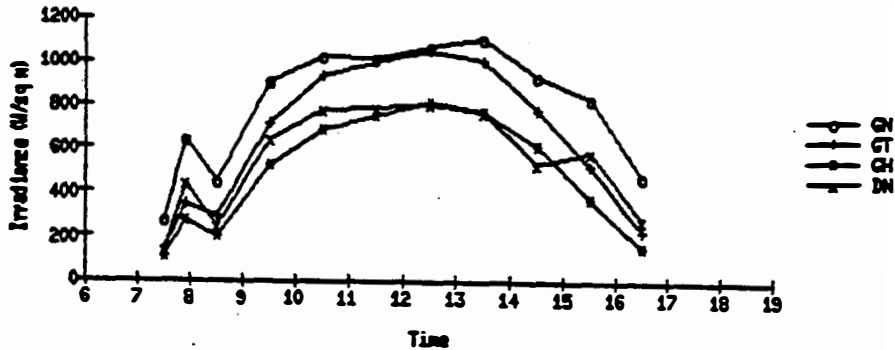
N FSEC87294  
 212 10 21-87 294 172 DN 102 GH  
 0.9 cloud cover at 0730; 0.4 at 1130  
 Temp controller: 172 102  
 0730 39 C 40 C  
 1130 40 C 41 C

LSR 172 mV drift errors at 0931, 1133, 1231, 1333, and 1631

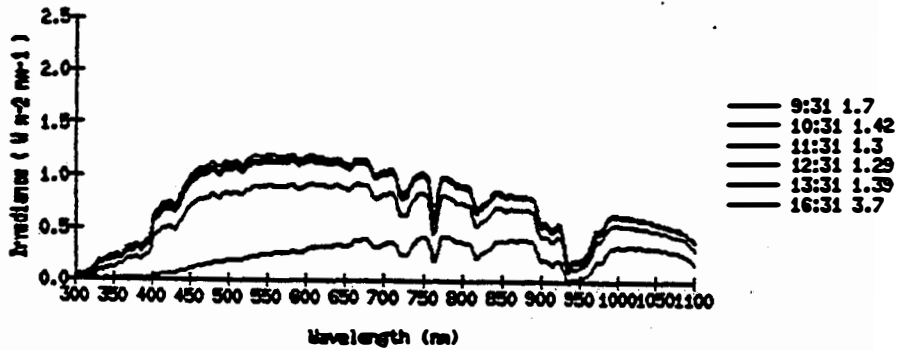
Slides: 0720 G (water drops)  
 0820 G  
 0920 G  
 1020 M (dark)  
 1119 P  
 1219 P  
 1319 P  
 1418 G  
 1518 G  
 1617 G

-----  
 DN spectrum very noisy in UV at 1631

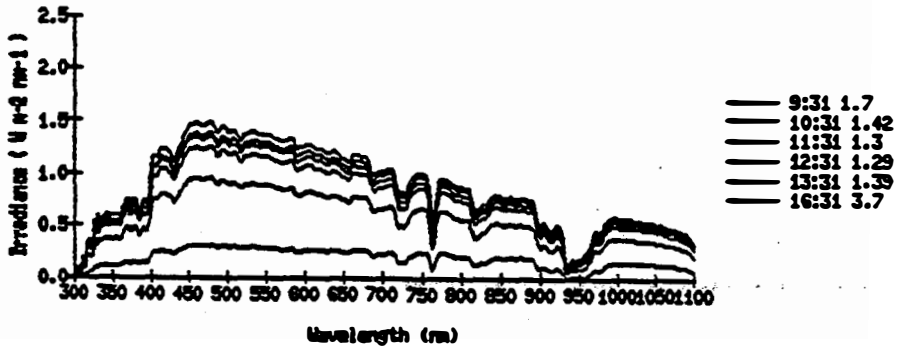
FSEC 294



FSEC 294 DNT

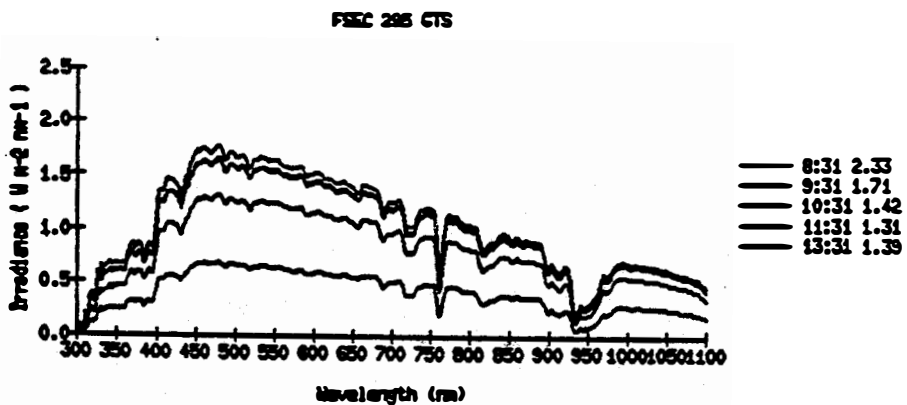
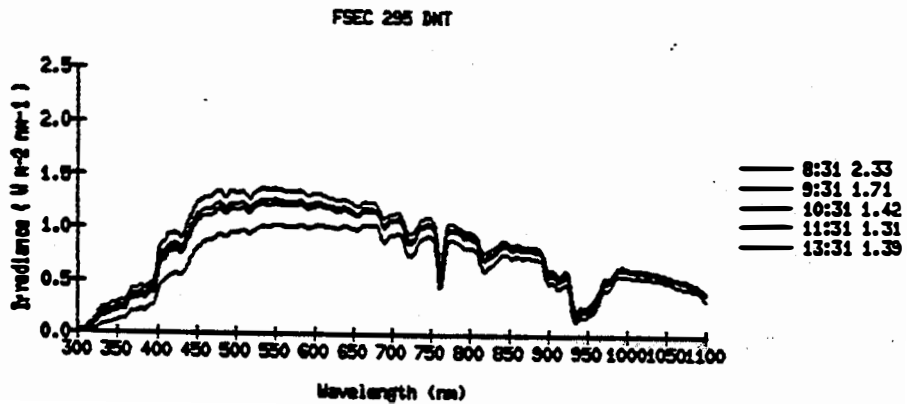
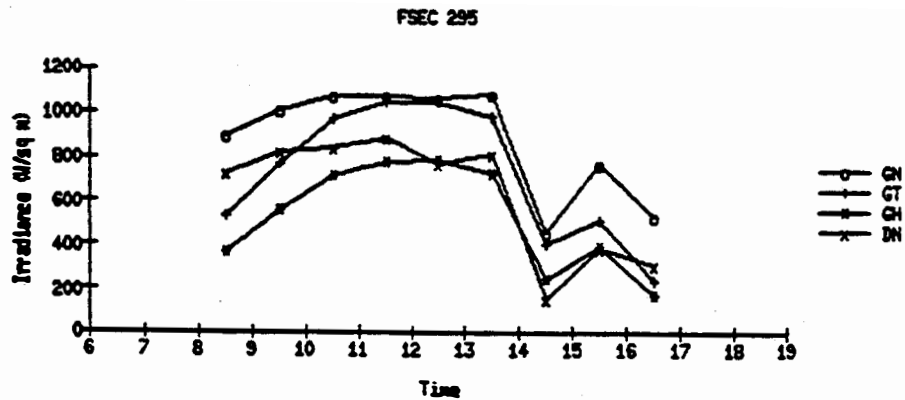


FSEC 294 GS



N FSEC87295  
 213 10 22 87 295 172 DW 102 GH  
 GH then GT on this day  
 Slides: 0711 G  
 0811 G  
 0911 G  
 1010 G  
 1110 P (dark)  
 1210 G  
 1309 P (dark)  
 1409 G  
 1509 G  
 1608 G

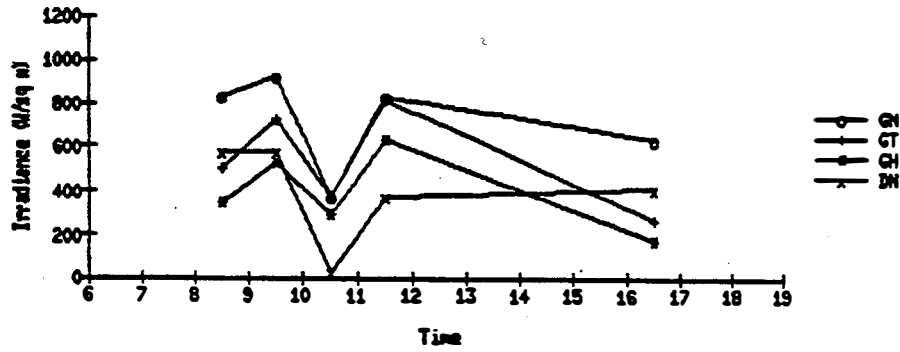
214 10 22 87 295 172 DW 102 GT  
 0.3 cloud cover at 0930 and 1130; 0.9 at 1530  
 Temp controller: 172 102  
 0930 39 C 40 C  
 Slides: See above



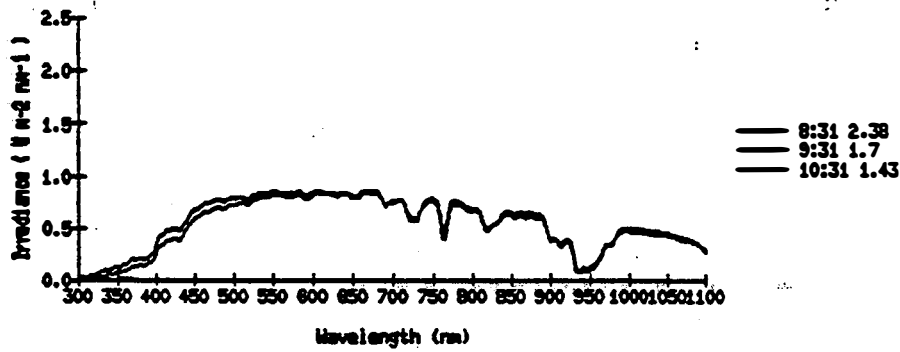


N FSEC87296  
 215 10 23 87 296 172 DW 102 GT  
 0.4 cloud cover at 0730  
 Temp controller: 172 102  
 0730 39 C 40 C  
 LSR 172 50 mV drift error at 1030  
 Slides: 0703 G  
 0802 G  
 0930 G  
 1030 M (dark)  
 1129 G G  
 1229 P (dark)  
 1328 G  
 1428 G  
 1528 G  
 1628 G

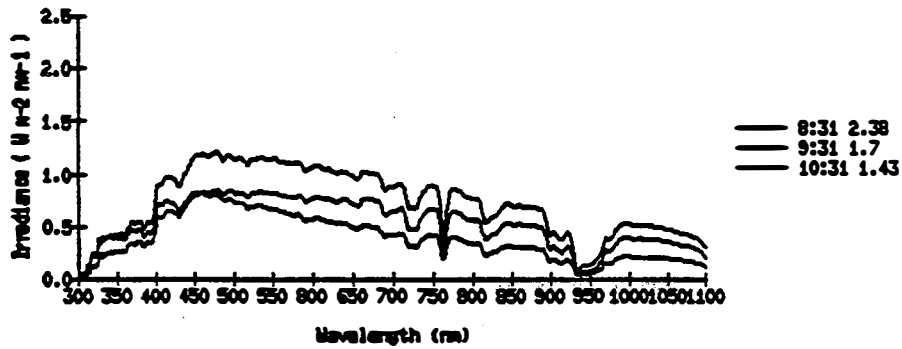
FSEC 296



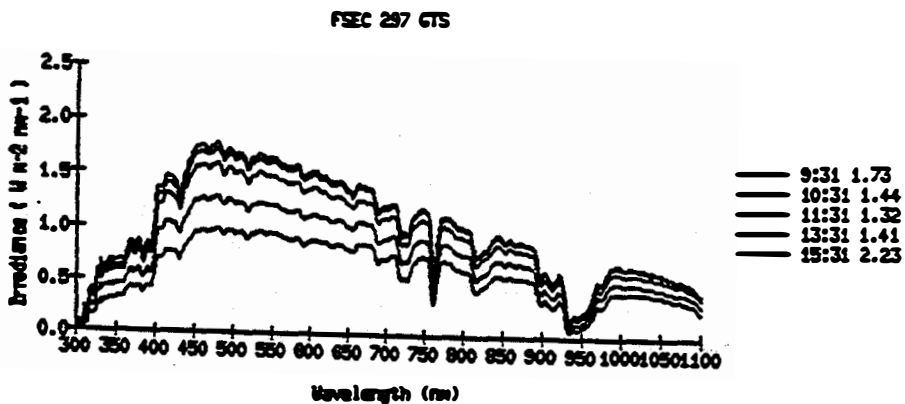
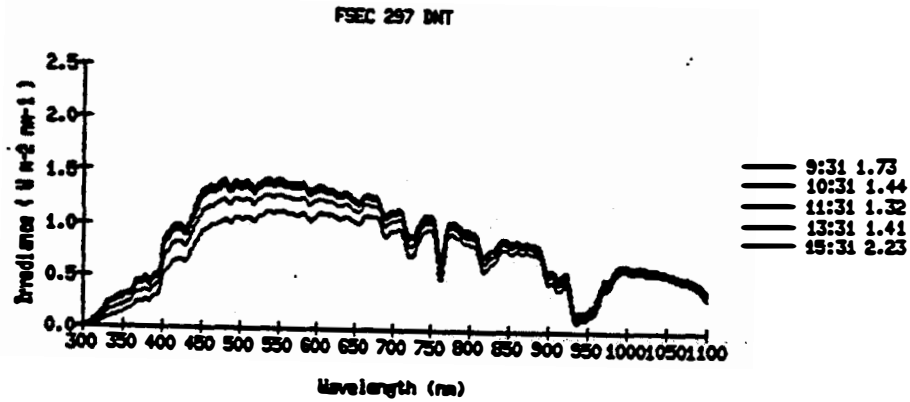
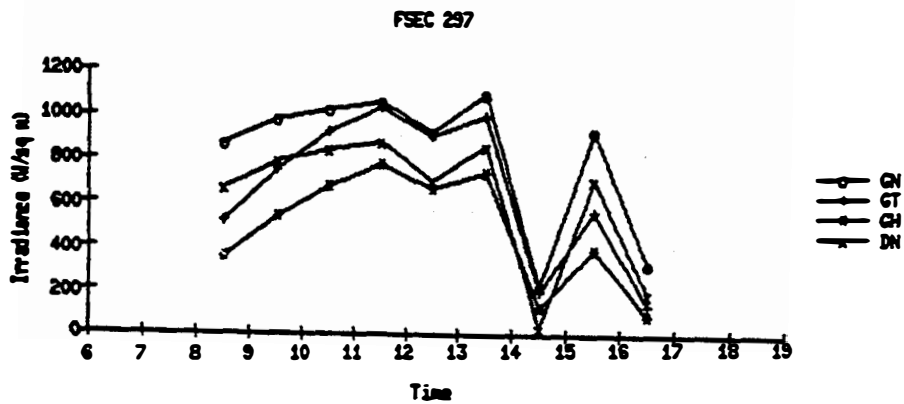
FSEC 296 DNT



FSEC 296 GTS



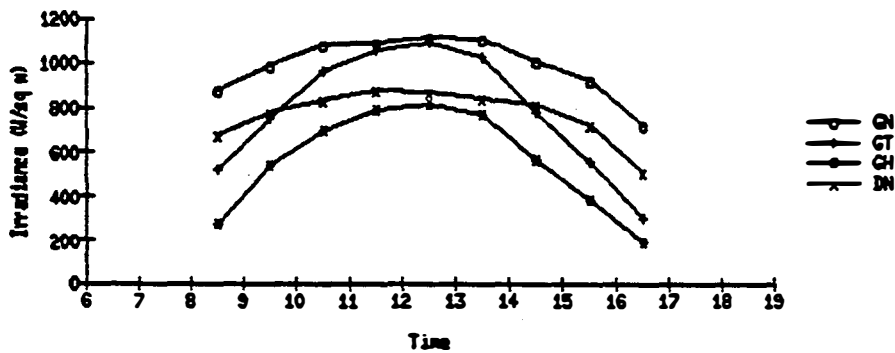
N FSEC87297  
 216 10 24 87 297 172 DW 102 GT  
 Partly cloudy, mostly clear AM  
 Weekend data; possible tracking error  
 Slides: 0722 G  
 0821 G  
 0921 G  
 1027 P (dark)  
 1120 P -  
 1220 P -  
 1320 P -  
 1419 G  
 1519 G  
 1618 G



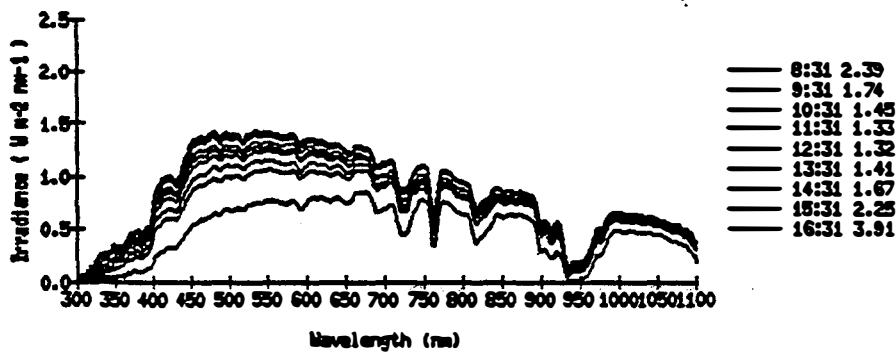
N FSEC87298  
 217 10 25 87 298 172 DN 102 GT  
 Partly cloudy  
 Weekend data; possible tracking error  
 LSR 172 mV drift error at 1031, 1131, 1233, 1331, 1431, and 1531  
 Slides: 0712 G (water drops)  
           0812 G  
           0911 G  
           1011 M (dark)  
           1111 P  
           1210 P  
           1310 G  
           1410 G  
           1509 G  
           1609 G  
           1708 G

-----  
 Minor noise in UV in DN spectra at 1031 and 1131  
 Spikes in UV in DN spectra at 1431, 1531, and 1631

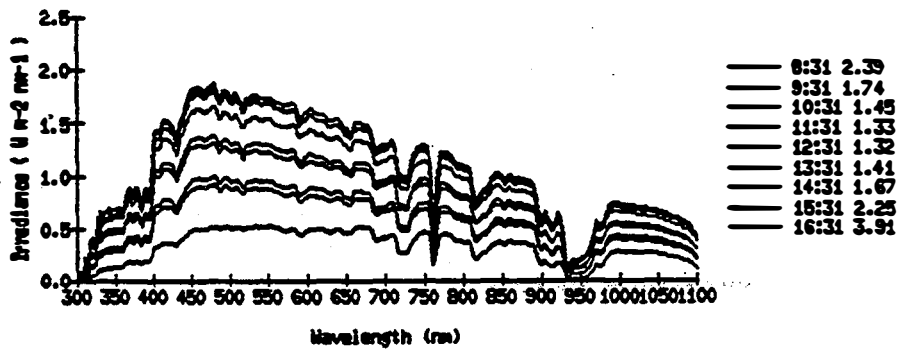
FSEC 298



FSEC 298 DNT



FSEC 298 GTS





N FSEC87299

218 10 26 87 299 172 DM 102 GT

1.0 cloud cover at 0830; 0.8 at 1030; 0.4 at 1230; 0.1 at 1530

Temp controller: 172 102

1030 40 C 40 C

1230 41 C 41 C

1530 41 C 41 C

Slides: 0702 G (condensation)

0802 M

0901 M

1001 M (dark)

1100 P

1130 P

1229 P

1329 P

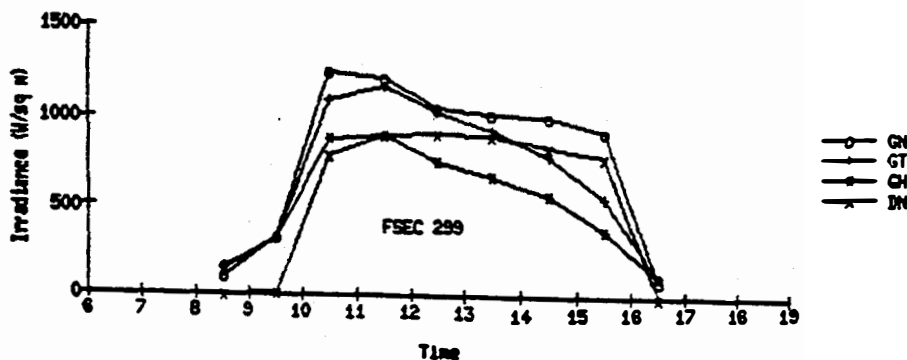
1429 G

1528 G

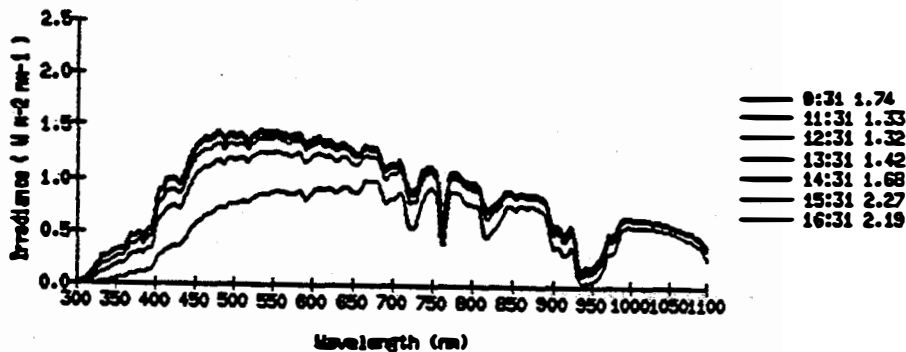
1628 G

Spectral integrals and broadband values different at 0847; bad time stamp

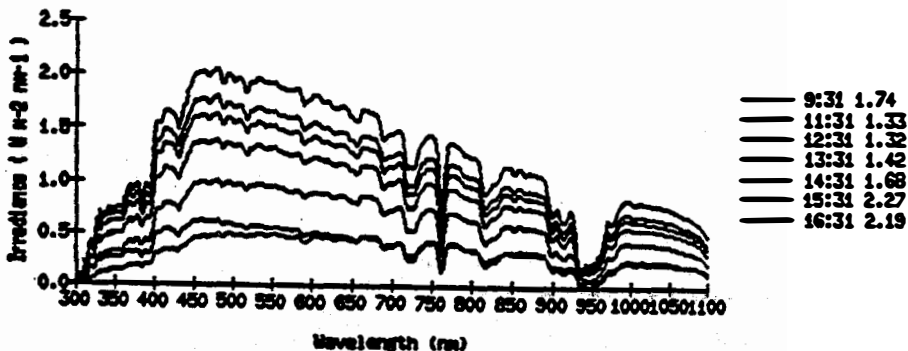
Note, spectrum is out of sequence - after 1531- could be for 10-27



FSEC 299 DNT

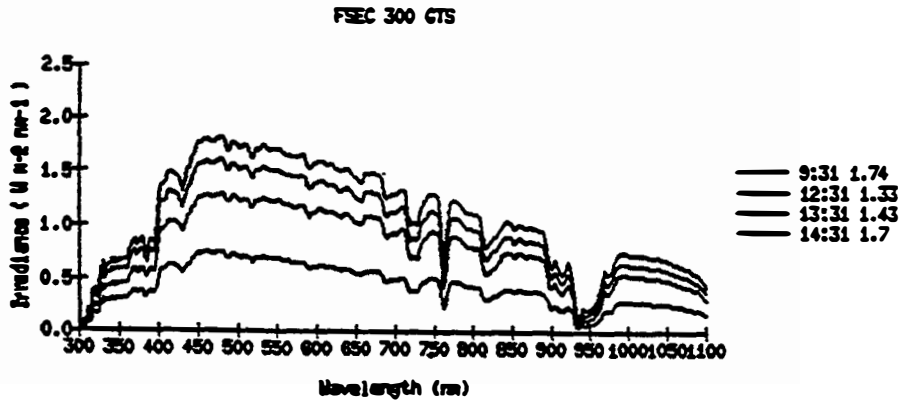
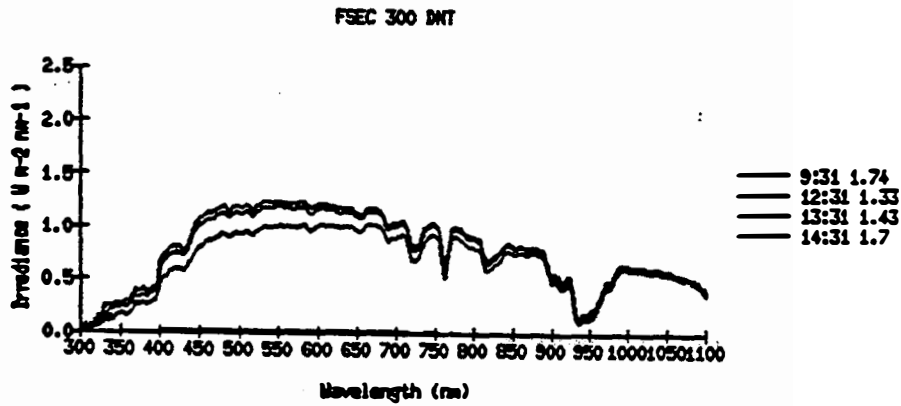
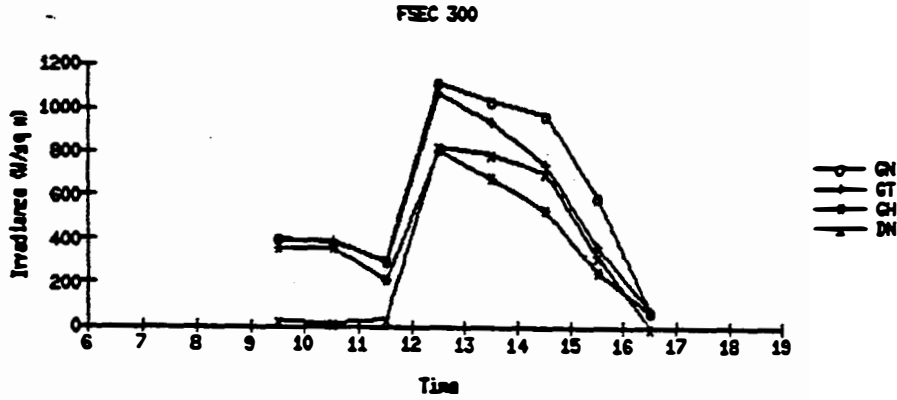


FSEC 299 GTS



N FSEC87300  
 219 10 27 87 300 172 DN 102 GT  
 LSR 172 mV drift errors at 1231, 1331, and 1433  
 Slides: 0721 G  
 0820 G  
 0920 M (dark)  
 1020 M  
 1119 P  
 1219 P  
 1318 P  
 1418 G  
 1518 G  
 1617 G

-----  
 Spikes in UV in DN spectrum at 1433



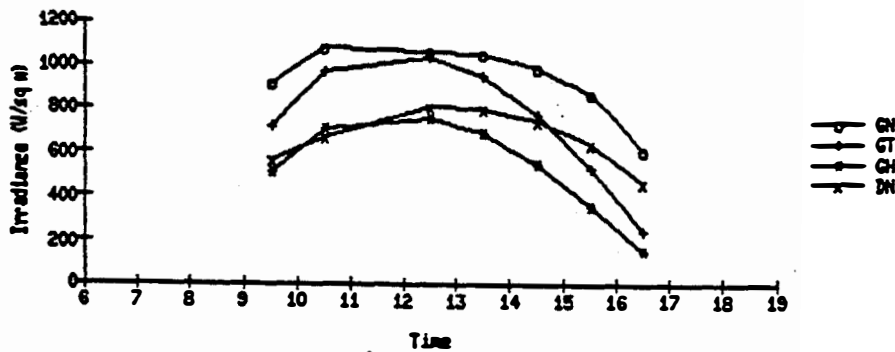
N FSEC87301  
 220 10 28 87 301 172 DN 102 GT  
 1.0 cloud cover at 0830; 0 at 1230; 0.1 at 1530  
 Temp controller: 172 102  
 0830 39 C 40 C  
 1230 39 C 40 C  
 1530 39 C 39 C

LSR 172 mV drift errors at 0931 and 1231

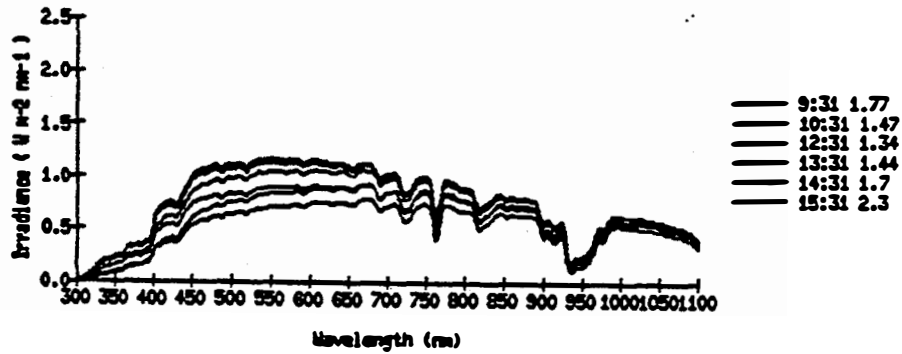
Slides: 0710 G (condensation)

- 0809 G
- 0909 G
- 1009 G
- 1108 P (dark)
- 1208 P
- 1307 P
- 1407 G
- 1507 G
- 1607 G
- 1706 G

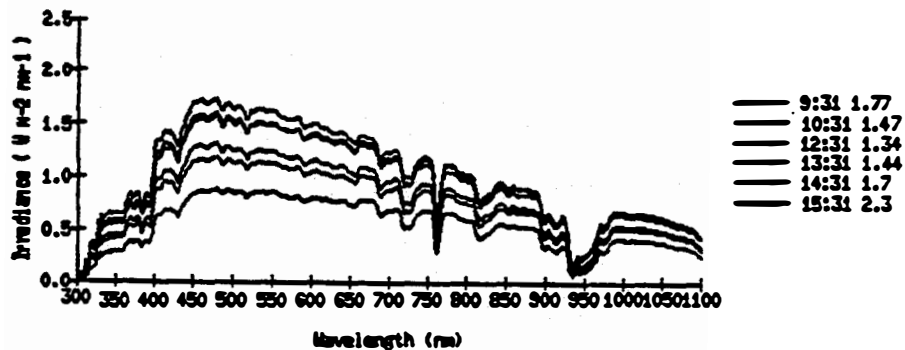
-----  
 Spikes in UV in DN spectrum at 0931 FSEC 301



FSEC 301 BMT



FSEC 301 GTS

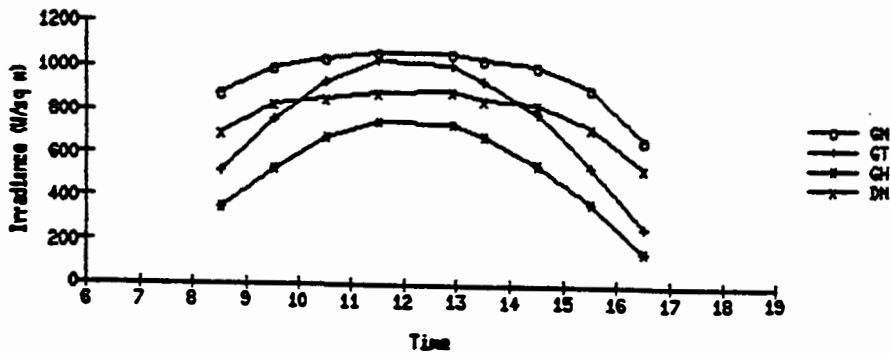


N FSEC87302  
 221 10 29 87 302 172 DS 102 GT  
 0.1 cloud cover at 0815; 0 at 1225 and 1630  
 Temp controller: 172 102  
 0815 39 C 40 C  
 1255 39 C 40 C  
 1630 40 C 40 C

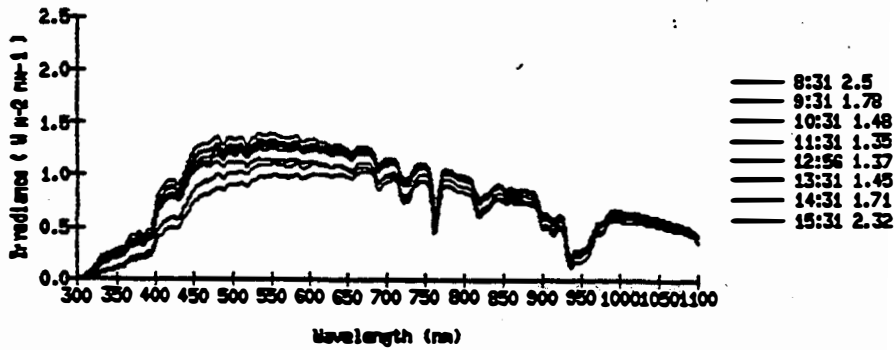
Tracking error of 3-4 deg observed at 1215; reset  
 0930, 1030, and 1130 scans may be affected

Slides: 0758 G  
 0858 G  
 0958 G  
 1034 M (dark)  
 1133 P  
 1233 P  
 1333 P  
 1432 G  
 1532 G  
 1632 G

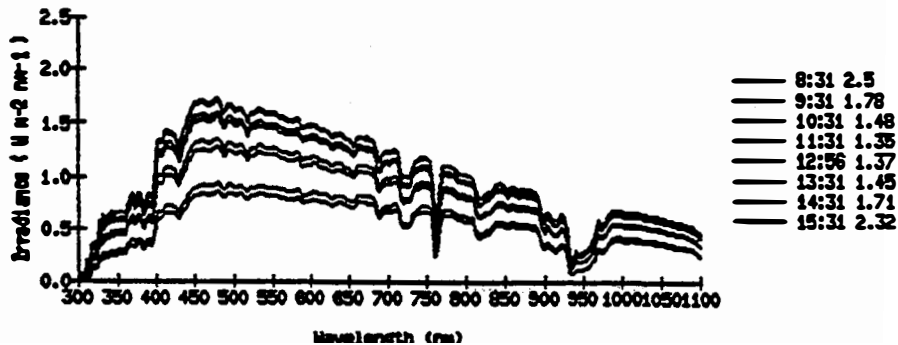
FSEC 302



FSEC 302 DNT



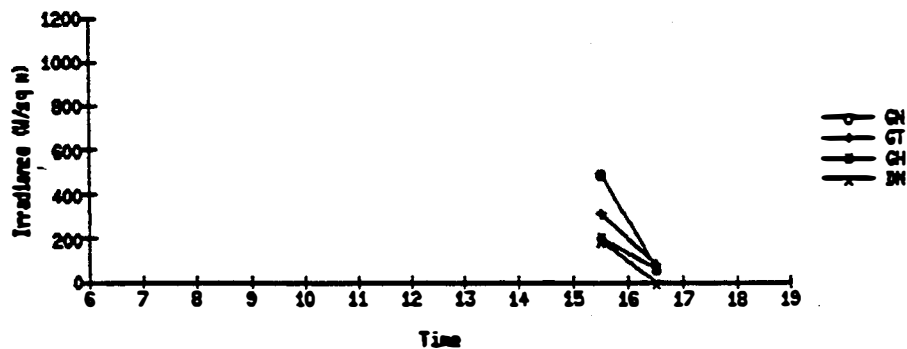
FSEC 302 GTS





N FSEC87309  
222 11 05 87 309 172 DN 102 GN  
0.8 cloud cover at 1530  
Temp controller: 172 102  
1530 40 C 40 C  
No slides

FSEC 309

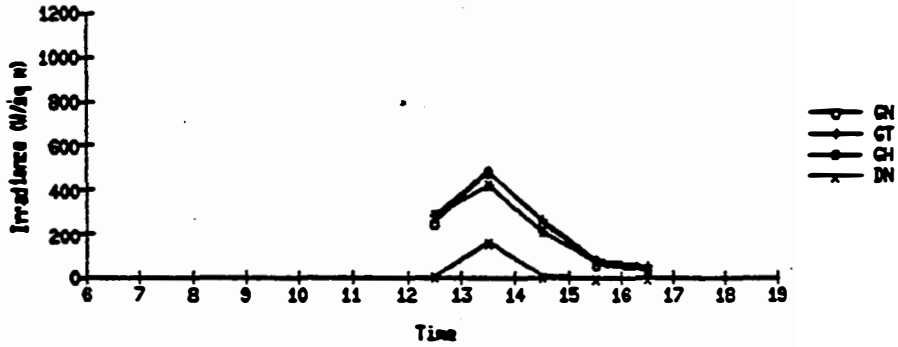




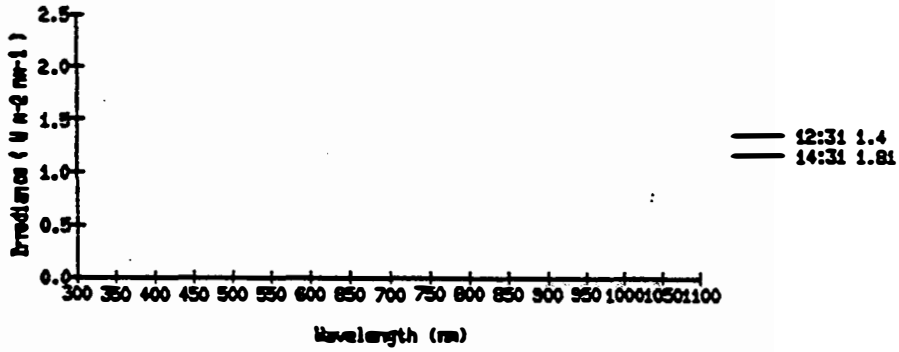


N FSEC87310  
 223 11 06 87 310 172 DN 102 GN  
 0.9 cloud cover at 0805; then 1.0  
 Temp controller: 172 102  
 0805 39 C 40 C  
 1530 39 C 40 C  
 No slides

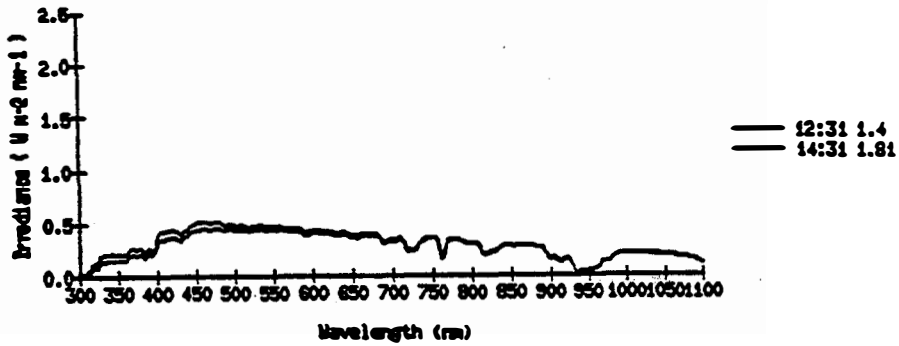
FSEC 310



FSEC 310 DNT



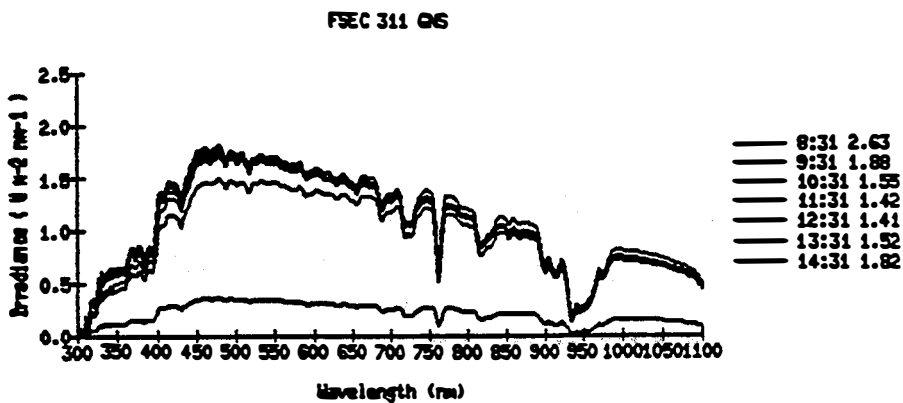
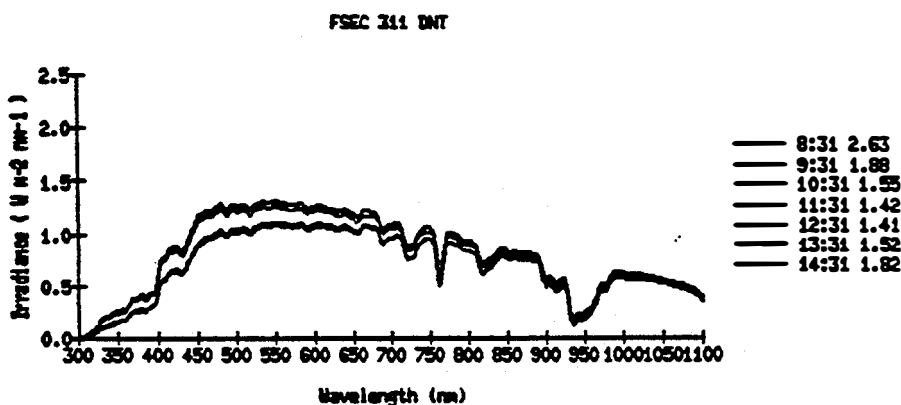
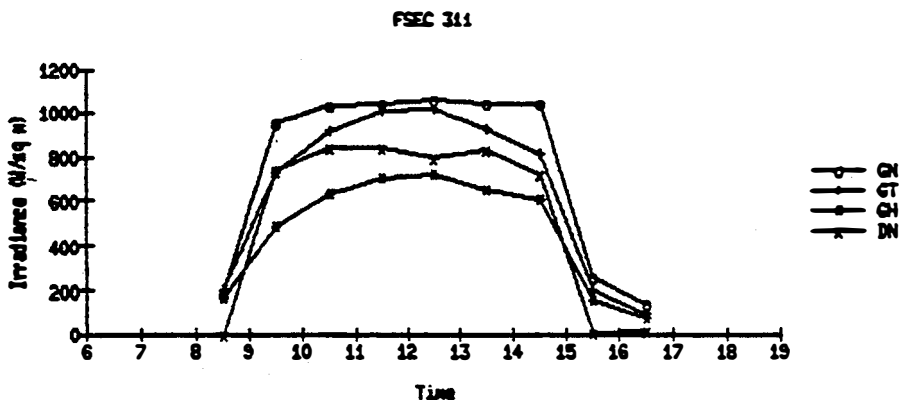
FSEC 310 GNS





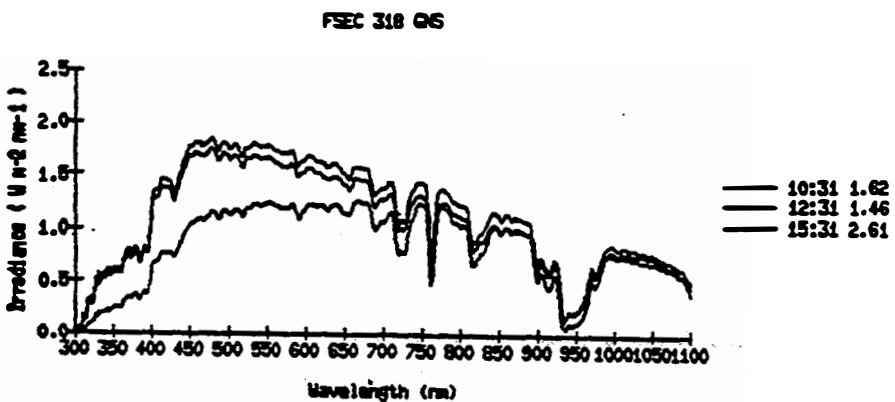
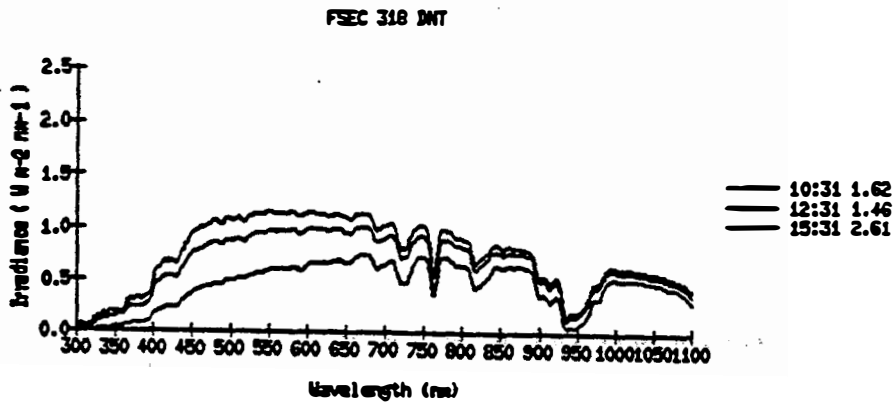
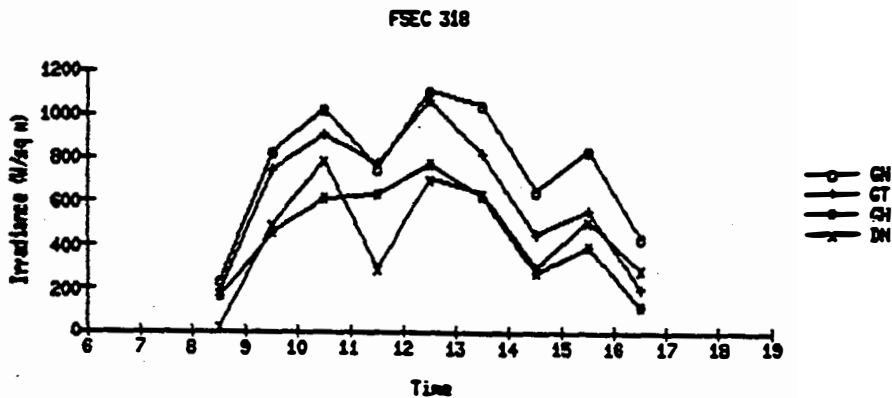
N FSEC87311  
 224 11 07 87 311 172 DW 102 GN  
 Partly cloudy  
 No slides

Lost data from 11-8-87 through 11-13-87 due to VAX problems



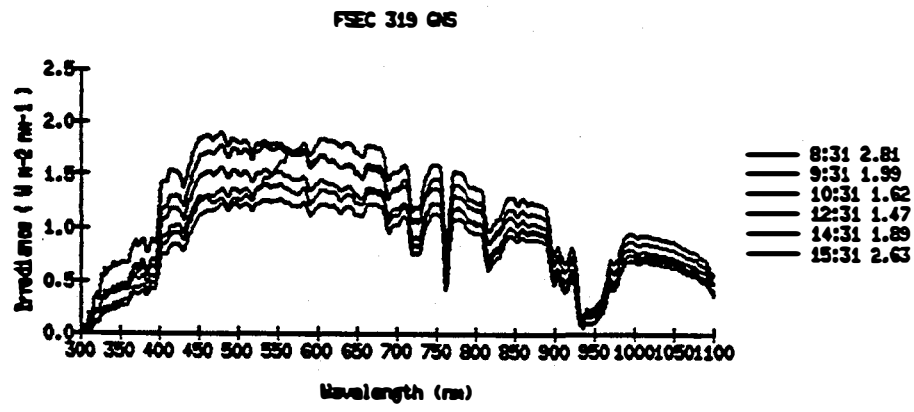
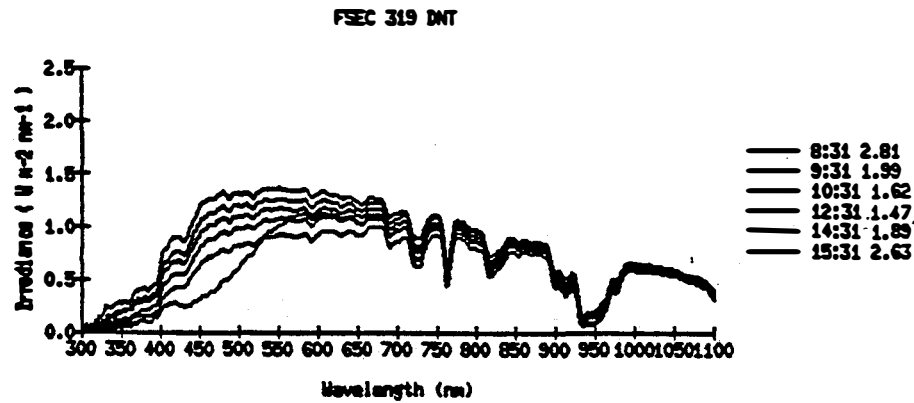
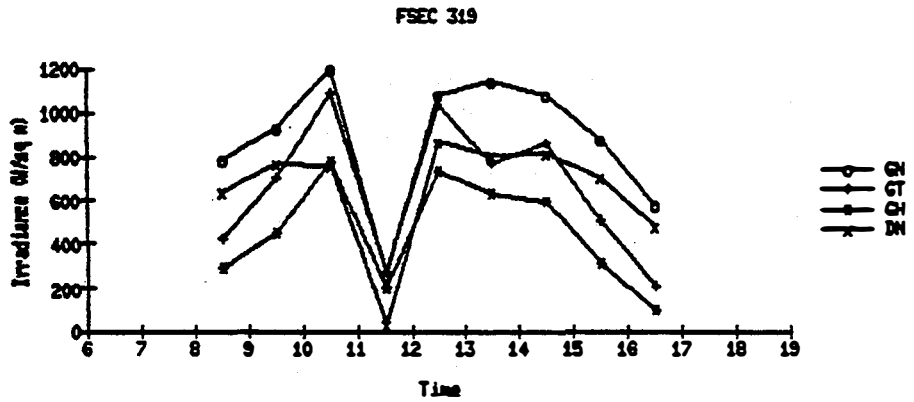
N FSEC87318  
 225 11 14 87 318 172 DH 102 GN  
 Partly cloudy; weekend  
 No slides

-----  
 Spikes in UV in DH spectrum at 1031



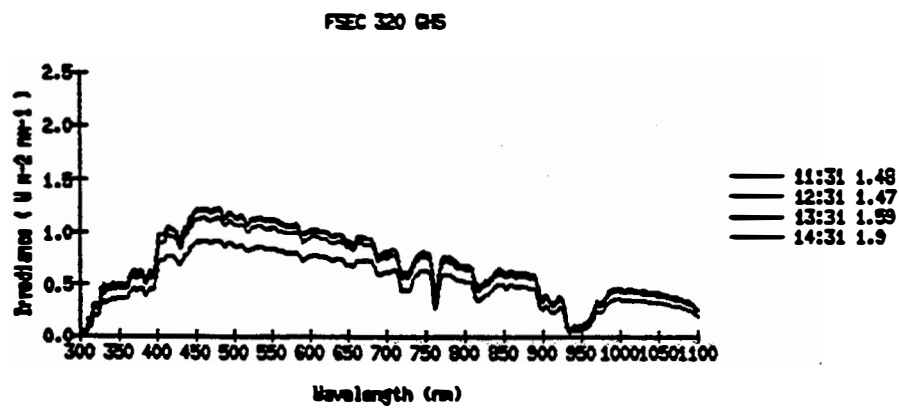
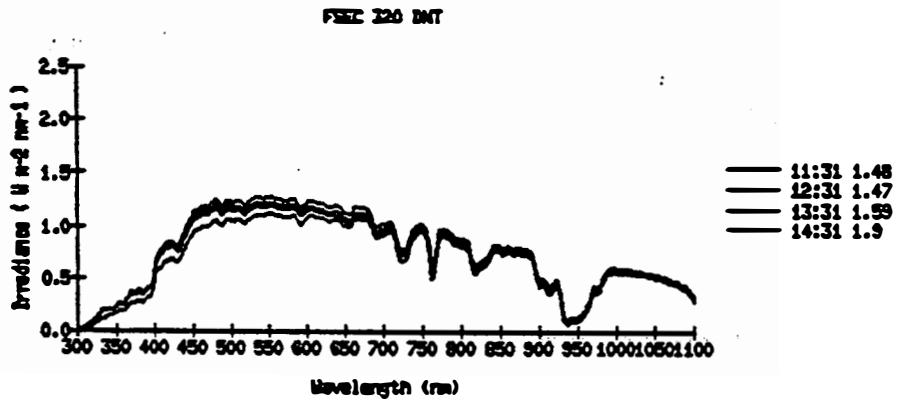
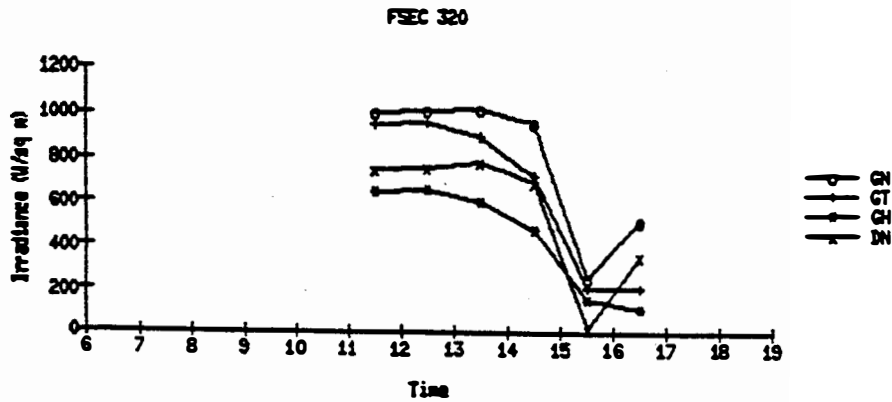
N FSEC87319  
 226 11 15 87 319 172 DN 102 GN  
 Partly cloudy; weekend  
 No slides

-----  
 Spikes in UV in DN spectra at 0835, 0931, 1431, and 1531  
 DN and GN spectra at 1033 are bad



N FSEC87320  
 227 11 16 87 320 172 DN 102 GH  
 0 cloud cover at 1130 and 1630  
 Temp controller: 172 102  
                   1130 40 C 40 C  
                   1630 40 C 40 C  
 LSR 172 97 mV drift error at 1130  
 LSR 172 mV drift error at 1231  
 Slides: 1230 P (dark)  
           1330 M  
           1430 G  
           1529 G  
           1629 G

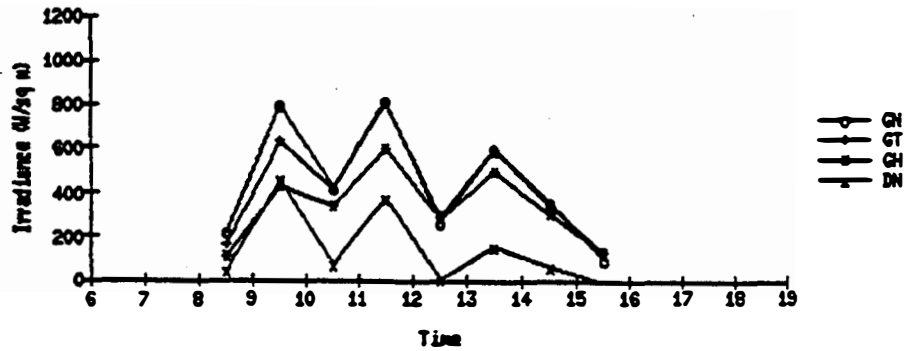
-----  
 Appears to be small spike in UV in DN spectra at 1131 and 1331



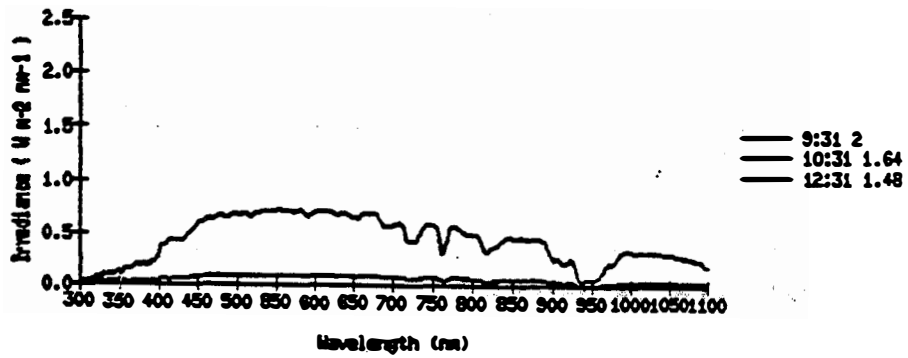
N FSEC87321  
 228 11 17.87 321 172 DN 102 GH  
 0.8 cloud cover at 0830; 1.0 at 1230 and 1630  
 LSR 172 30 mV drift error at 1230  
 LSR 172 mV drift errors at 0933, 1031, and 1233  
 No slides

Noisy UV in DN spectrum at 0933  
 UV in DN spectra is bad at 1031 and 1233

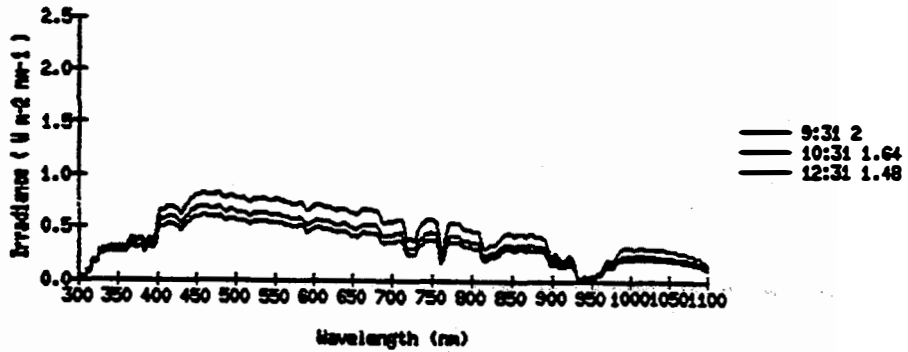
FSEC 321



FSEC 321 DNT



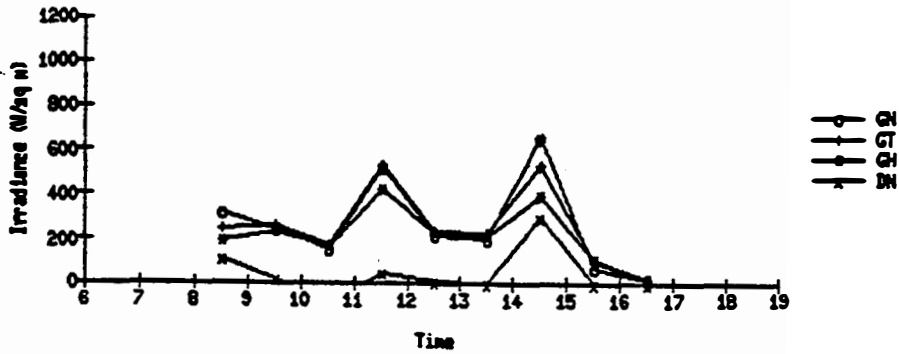
FSEC 321 GH



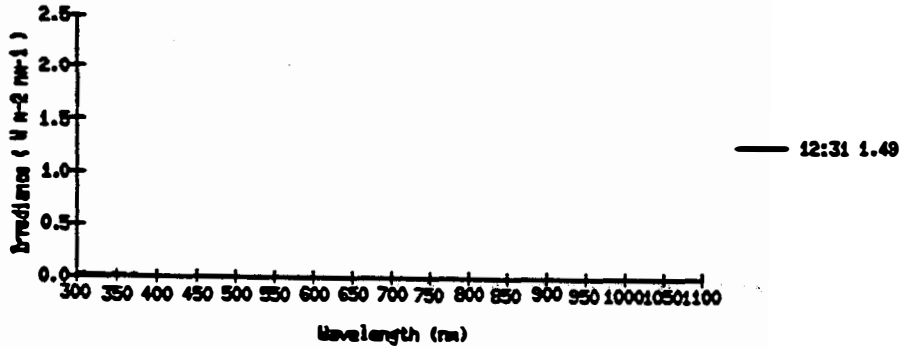
N FSEC87322  
 229 11 18 87 322 172 DN 102 GH  
 0.9 cloud cover at 0810; 1.0 at 1630  
 Temp controller: 172 102  
 0810 39 C 40 C  
 LSR 172 mV drift error at 1233  
 No slides

-----  
 DN spectrum at 1233 is bad (no direct beam)

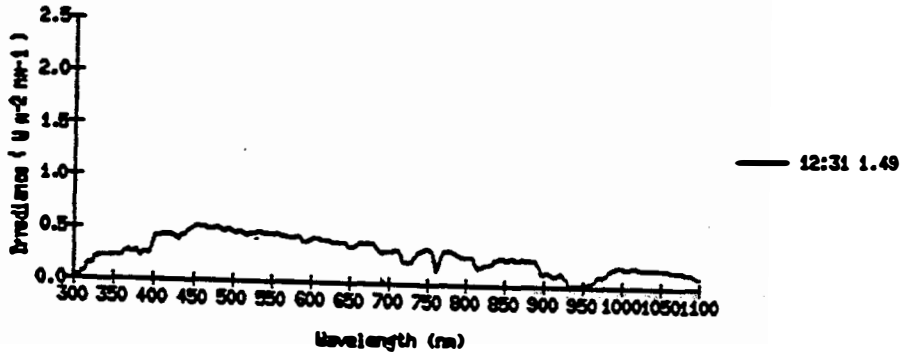
FSEC 322



FSEC 322 DNT



FSEC 322 GHS

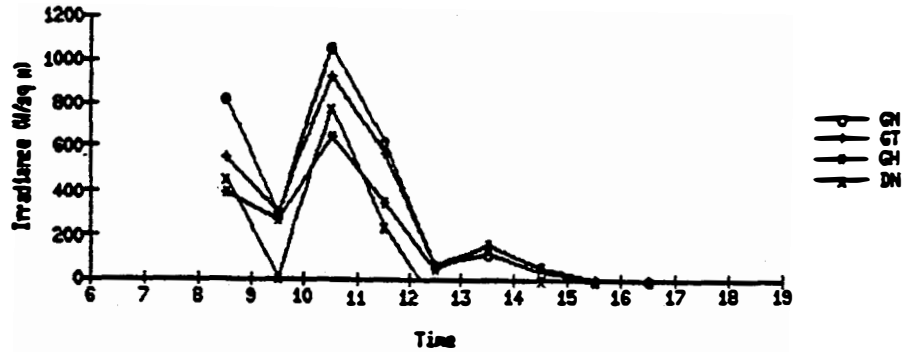




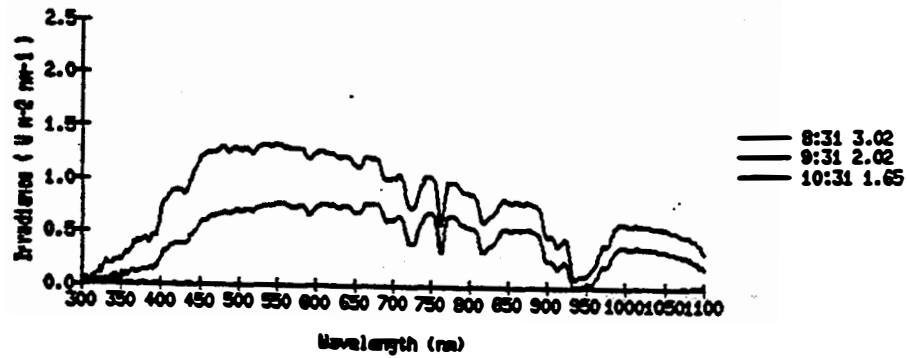
N FSEC87323  
 230 11 19 87 323 172 DN 102 GH  
 0.9 cloud cover at 0815; 1.0 with rain at 1230  
 LSR 172 mV drift errors at 0934 and 1033  
 No slides

-----  
 UV in DN spectra at 0831 and 0934 is bad (no direct beam at 0934)

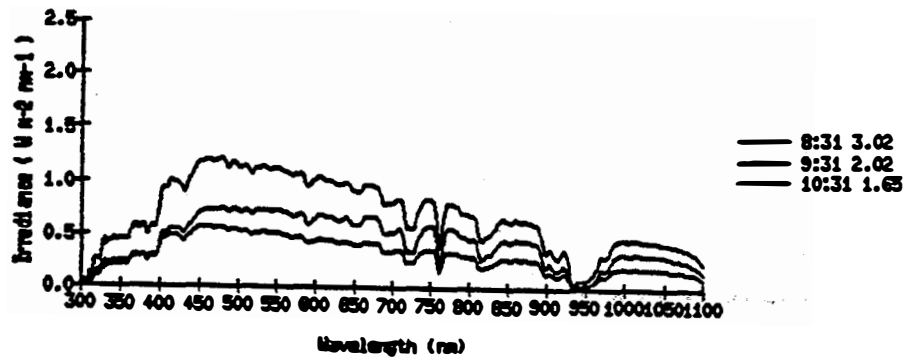
FSEC 323



FSEC 323 DNT



FSEC 323 GHS

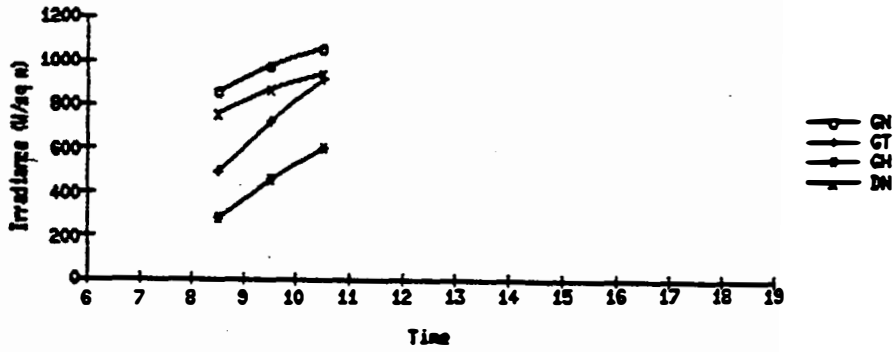




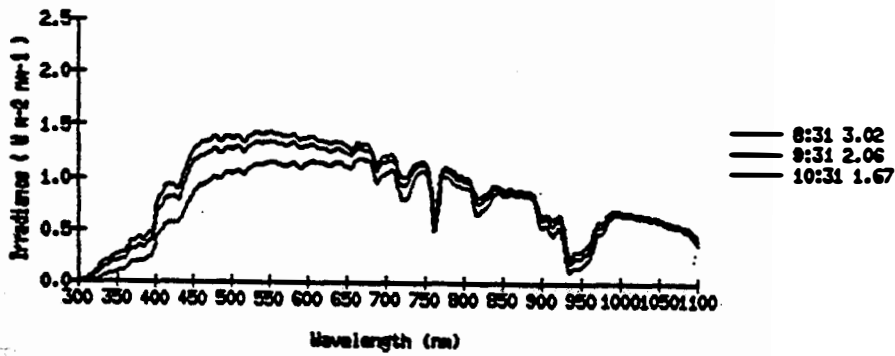


N FSEC87324  
 231 11 20 87 324 172 DM 102 GH  
 0.1 cloud cover at 0815; 0.3 at 1230; 0.1 at 1530  
 Temp controllers: 172 39 C and 102 40 C at 0815  
 No slides

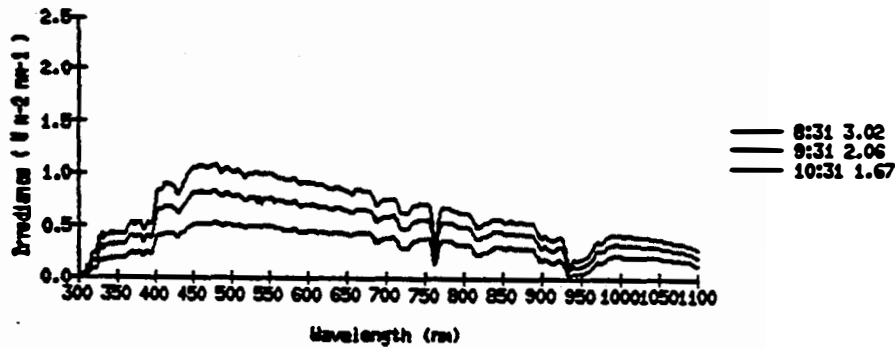
FSEC 324



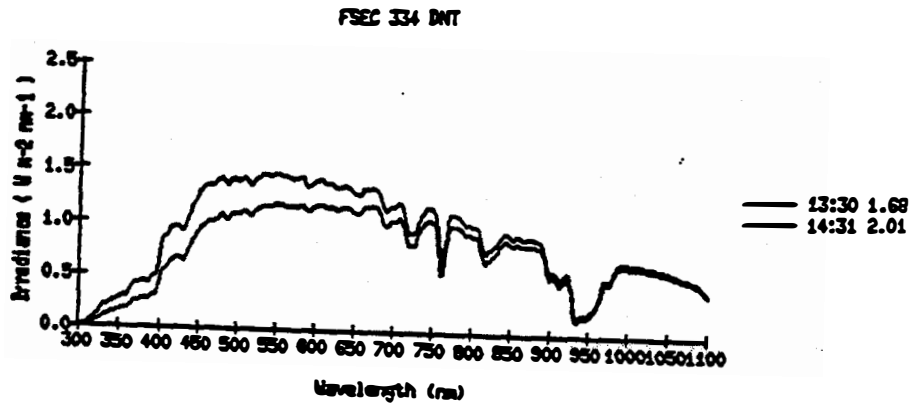
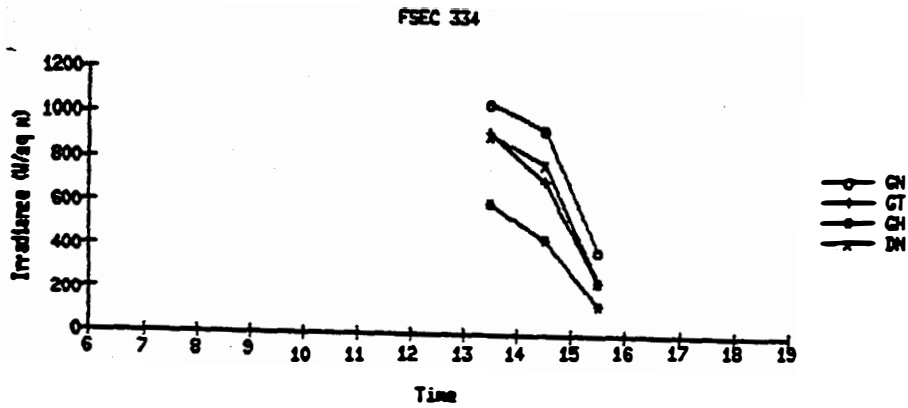
FSEC 324 DNT



FSEC 324 GHS



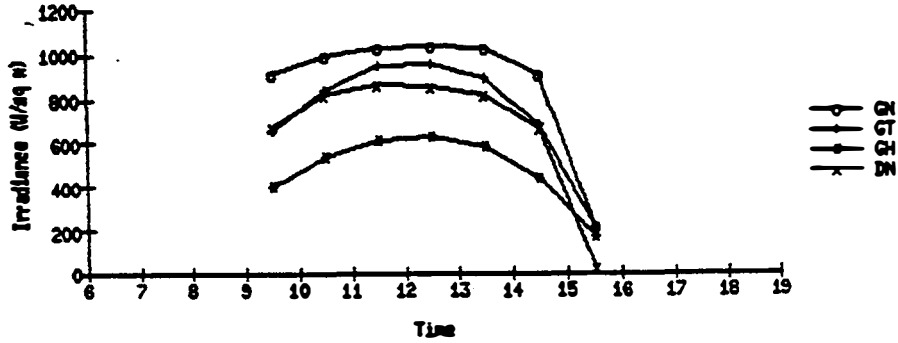
N FSEC87334  
 232 11 30 87 334 172 DW  
 LSR 102 returned to SERI for cal check  
 Temp controller 40 C at 1330  
 LSR 172 mV drift error at 1232  
 Slides: 0925 G (condensation)  
 1024 M " (dark)  
 1125 M " "  
 1225 M " "  
 1324 G "  
 1424 G "  
 1524 G "



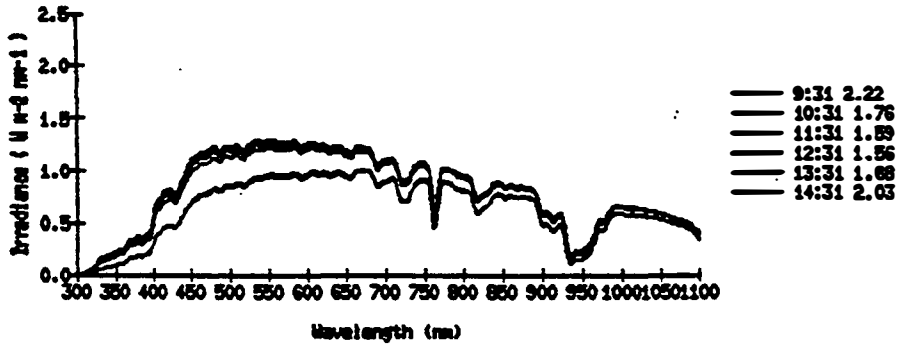


N FSEC87335  
 233 12 01 87 335 172 DM  
 0.9 cloud cover at 0810; 0.1 at 1200; 0.9 at 1630  
 Temp controller 39 C at 0810; 40 C at 1200  
 Slides: 0920 G (condensation)  
 1020 G  
 1128 M (light leak)  
 1227 G  
 1327 G  
 1426 G  
 1526 G

FSEC 335

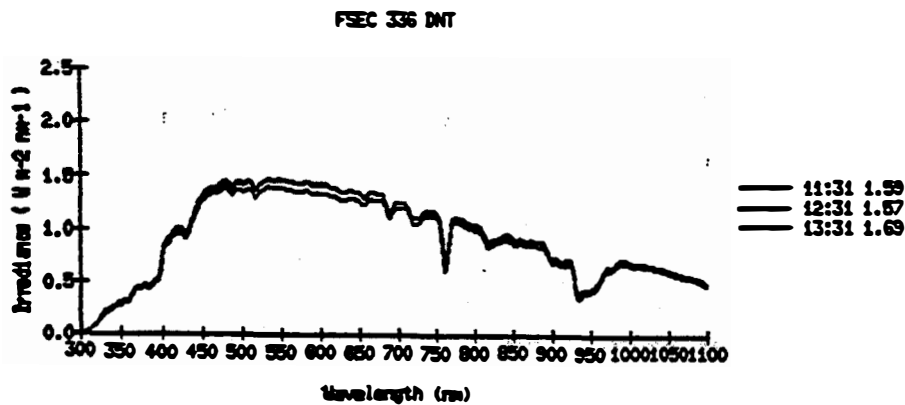
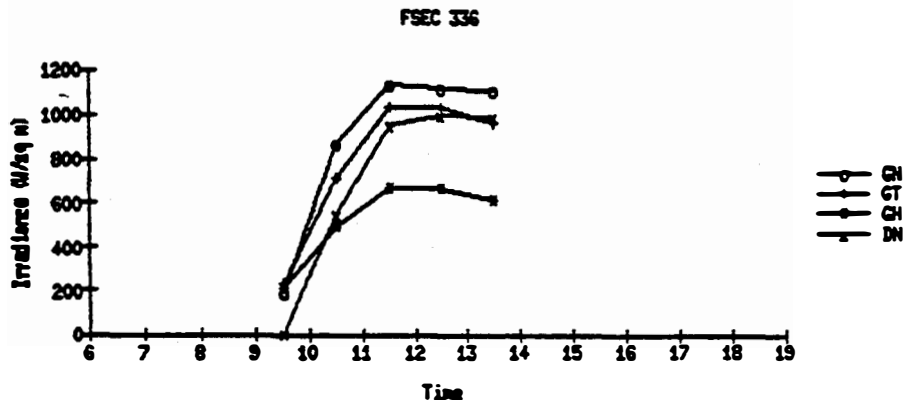


FSEC 335 DNT





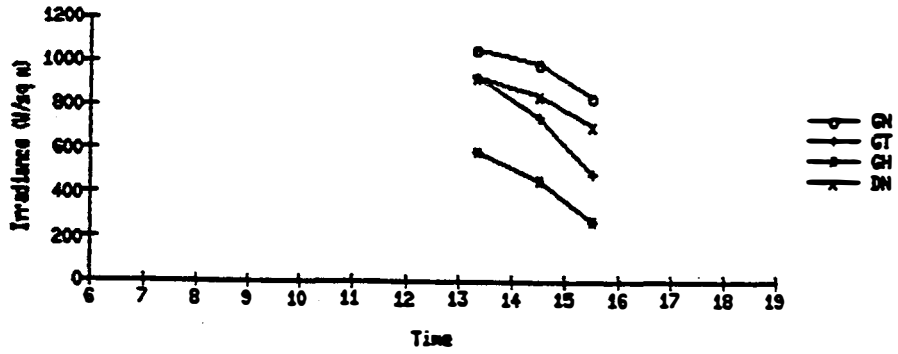
N FSEC87336  
 234 12 02 87 336 172 DM  
 1.0 cloud cover at 0830; 0.1 at 1230 (cold front passed)  
 Temp controller 39 C at 1230  
 Slides: 0919 M (light leak)  
           1019 M        " (condensation)  
           1118 M        "  
           1218 P        "  
           1318 P        "  
           1417 M        "  
           1517 G        "



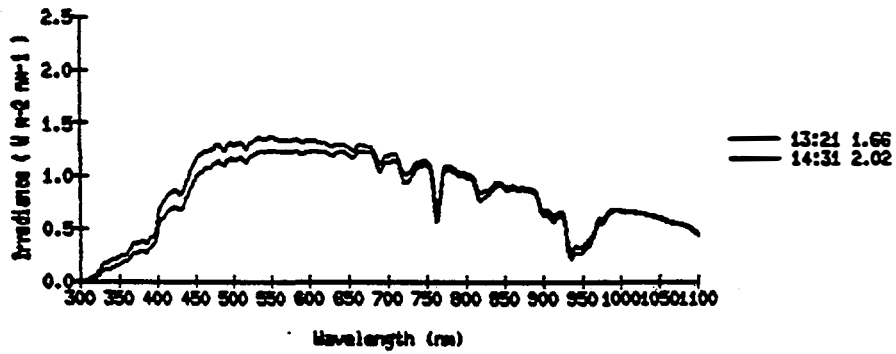


N FSEC87337  
235 12 03 87 337 172 DN  
No slides

FSEC 337



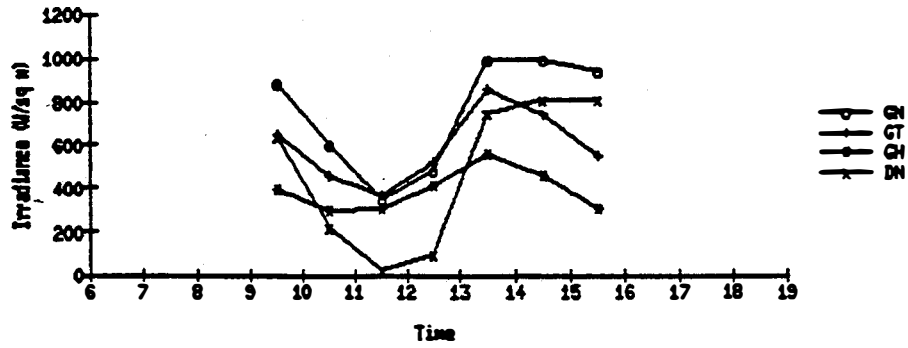
FSEC 337 DNT



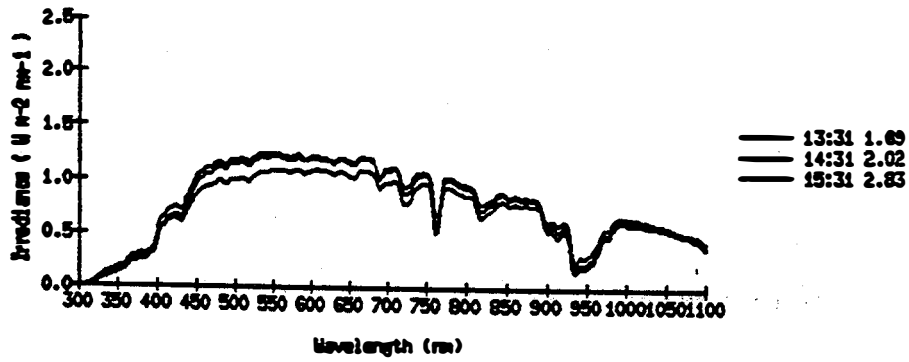


N FSEC87338  
 236 12 04 87 338 172 DW  
 No slides

FSEC 338



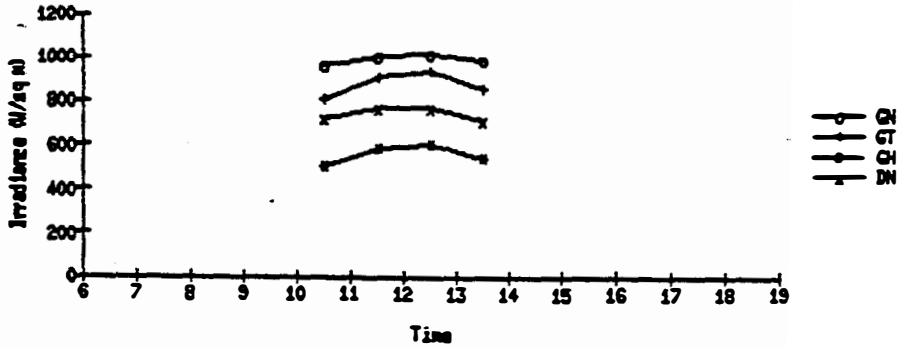
FSEC 338 DNT



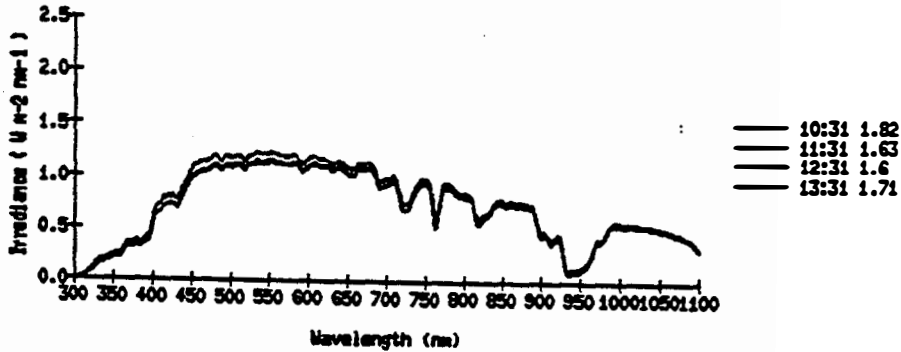


N FSEC87343  
 237 12 09 87 343 172 DW 102 GT  
 LSR 102 re-installed after check at SERI  
 Clear at 1030 and 1630  
 Temp controller: 172 102  
 1030 41 C 41 C  
 1630 41 C 41 C  
 Slides: 1137 M (light leak)  
 1236 M  
 1336 G  
 1436 G  
 1536 G

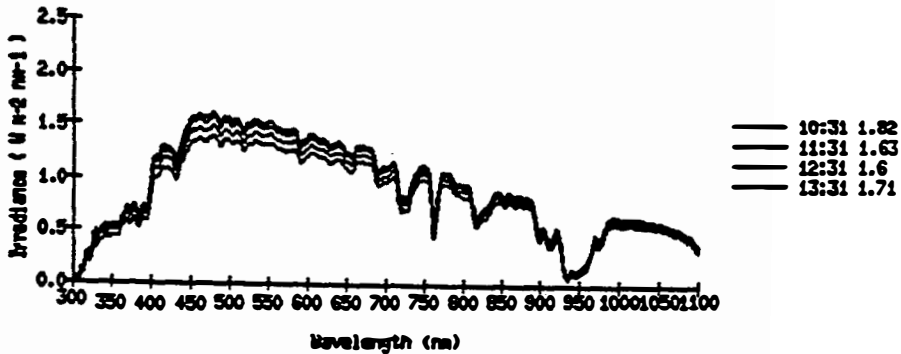
FSEC 343



FSEC 343 DNT



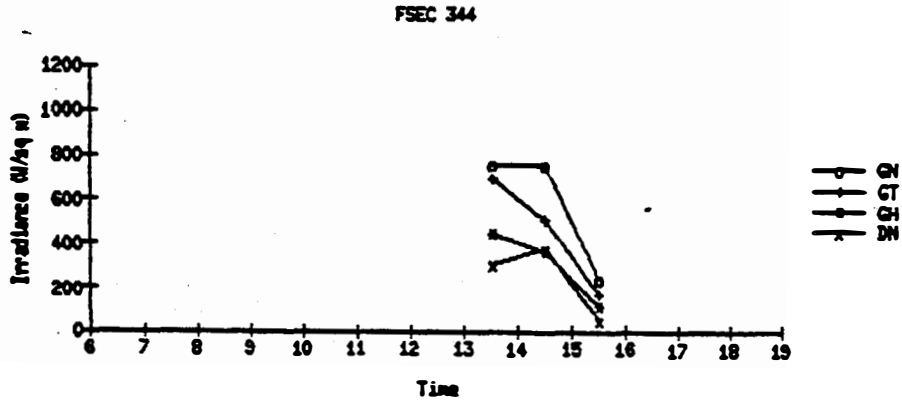
FSEC 343 GTS





**N FSEC87344**  
 238 12 10 87 344 172 DN 102 GT  
 1.0 cloud cover at 0930; 0.6 at 1300; 0.9 at 1630  
 Temp controller: 172 102  
                   0930 41 C 41 C  
                   1300 41 C 40 C  
 Slides: 0930 M (light leak; condensation)  
           1030 M  
           1130 G  
           1230 G  
           1329 M (light leak)  
           1429 M  
           1529 M

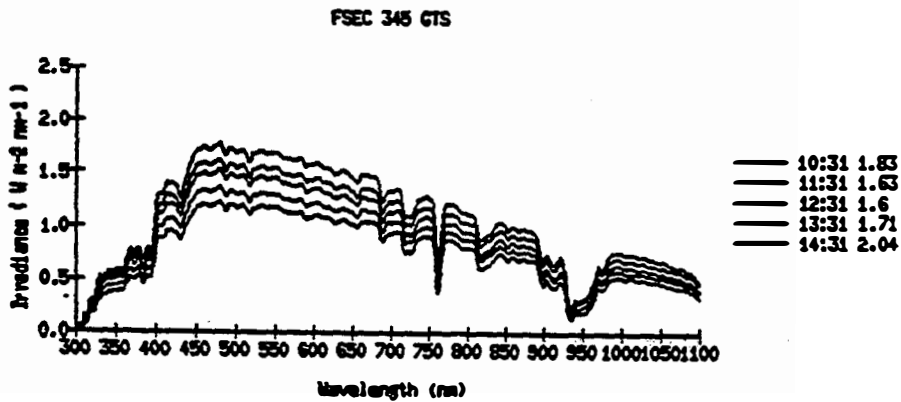
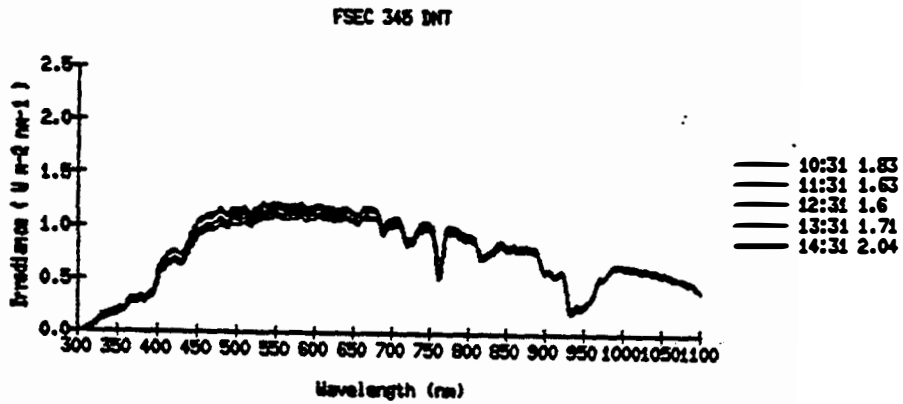
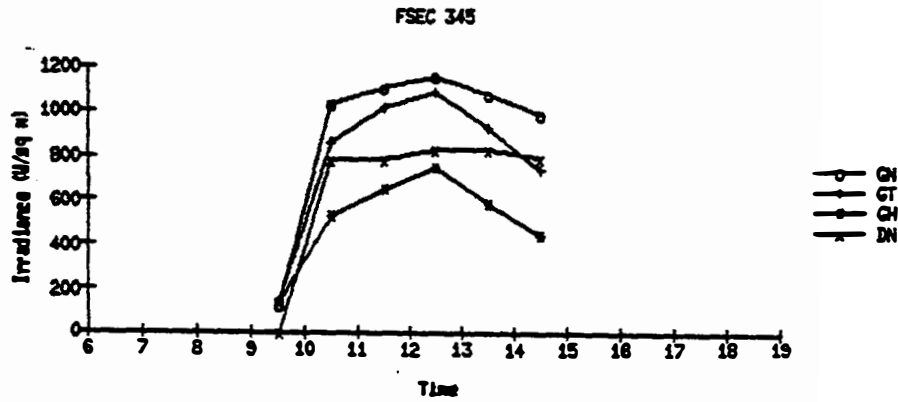
-----  
 No spectra







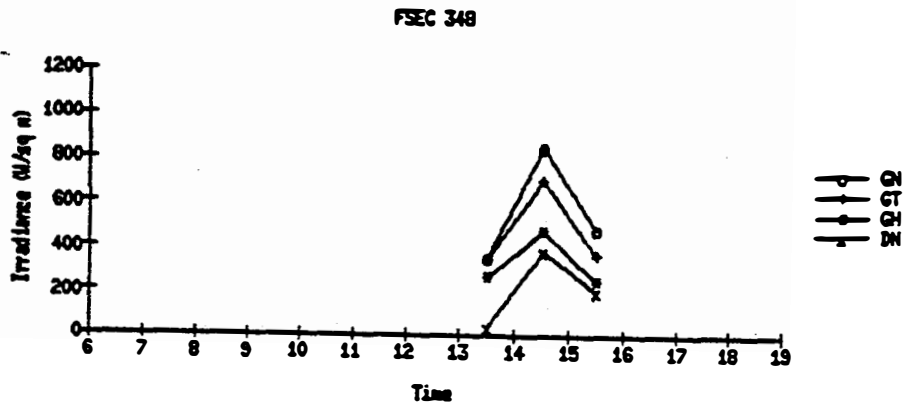
N FSEC87345  
 239 12 11 87 345 172 DN 102 GT  
 Partly cloudy  
 Bird droppings discovered on lens of direct beam tube on next day;  
 may have affected DN spectra this day  
 Slides: 0939 G  
 1038 G  
 1138 G  
 1238 G  
 1337 G  
 1437 M (light leak)  
 1532 M



N FSEC87348  
 240 12 14 87 348 172 DW 102 GT  
 0.5 cloud cover at 1230; 0.9 at 1630  
 Temp controller: 172 102  
 1230 -40 C 40 C  
 1630 40 C 40 C

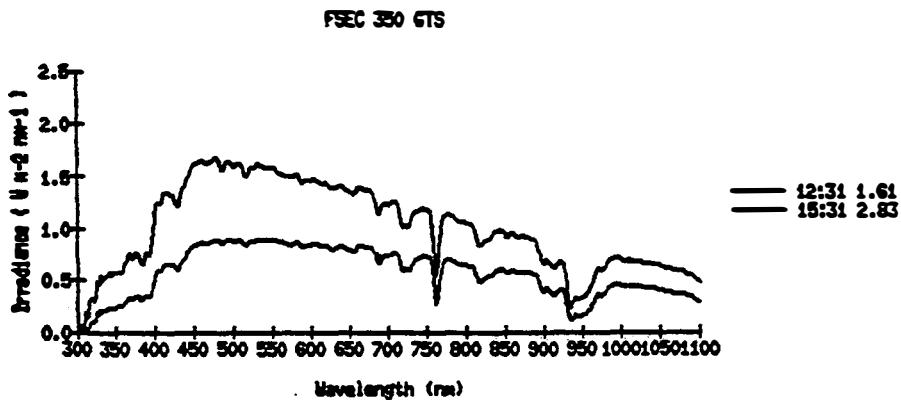
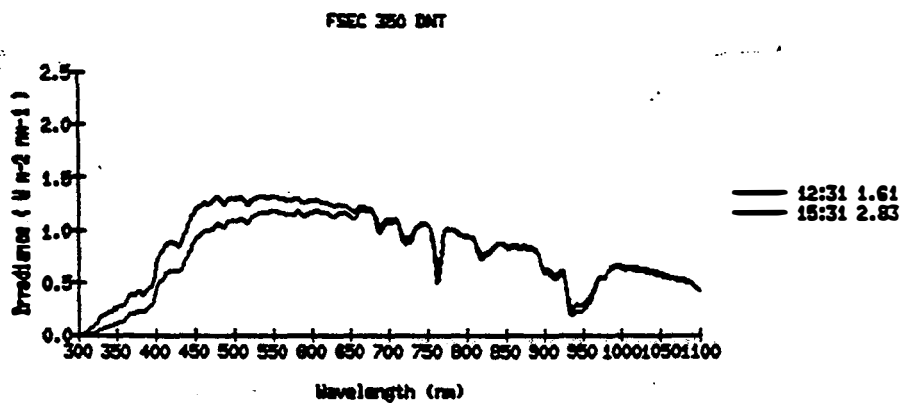
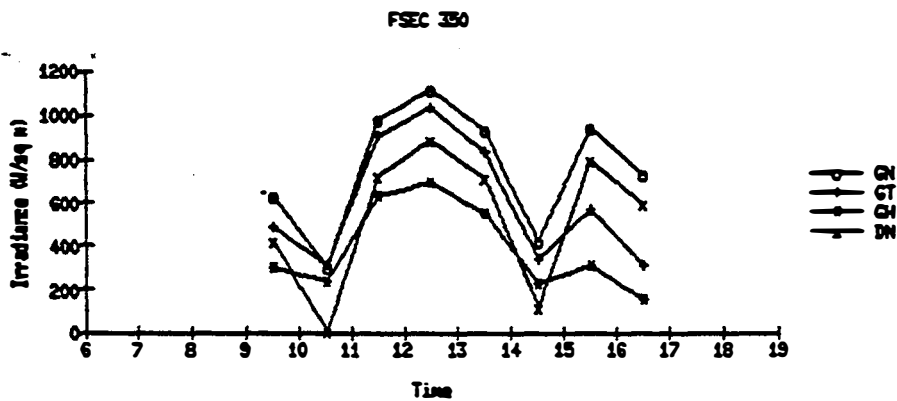
Bird droppings removed from direct beam tube  
 No slides

-----  
 No spectra



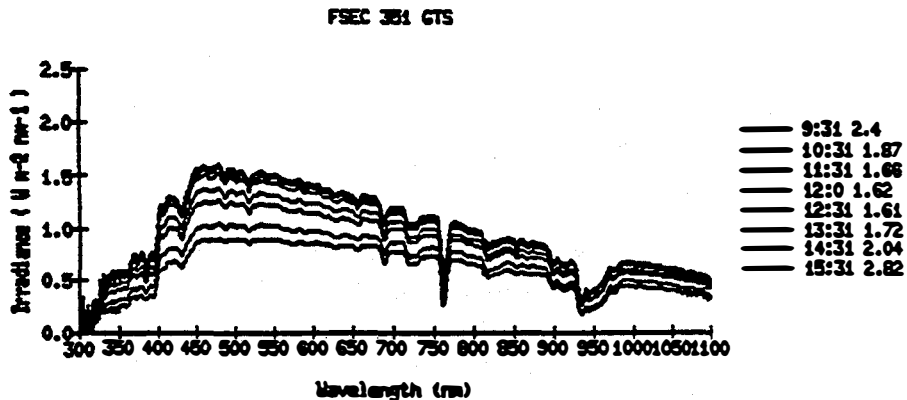
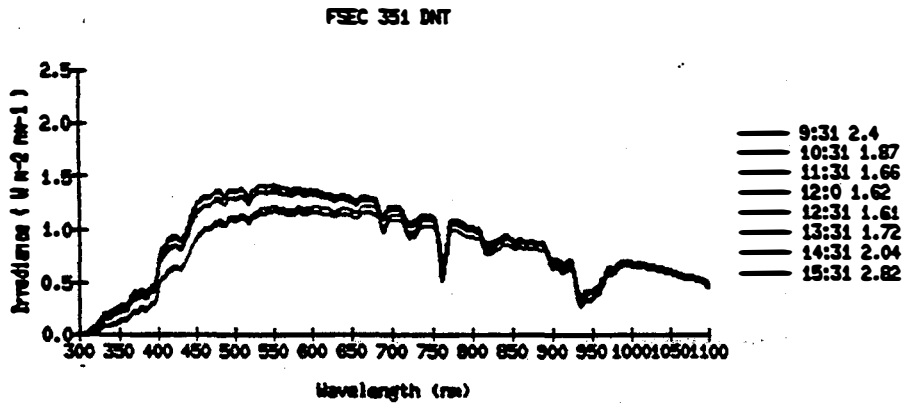
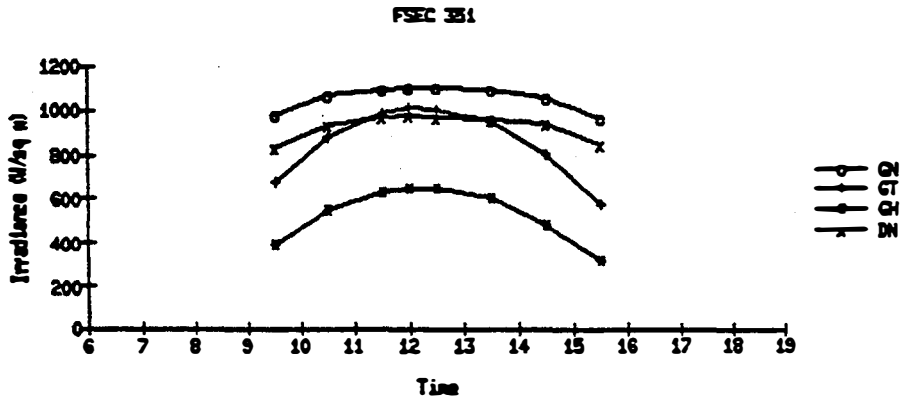


N FSEC87350  
 241 12 16 87 350 172 DM 102 GT  
 0.5 cloud cover at 1130; 0.9 at 1630  
 Temp controllers: 172 and 102 39 C at 1130  
 Slides: 0933 M (condensation)  
 1035 M :  
 1135 M : (dark)  
 1234 M :  
 1334 G :  
 1434 G :  
 1534 G :  
 1633 G :



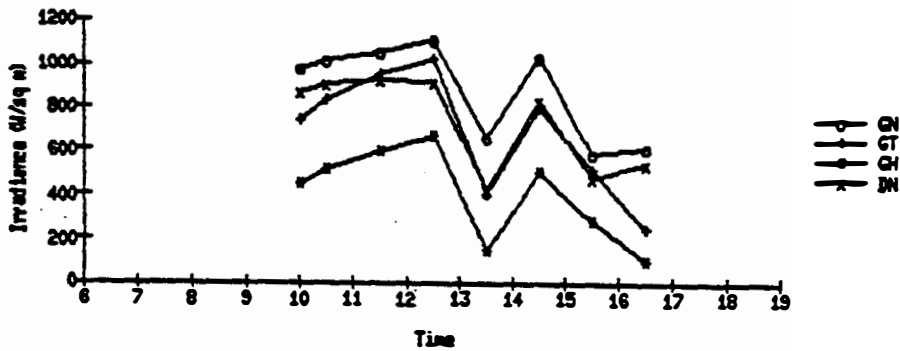
N FSEC87351  
 242 12 17 87 351 172 DN 102 GT  
 Clear at 0830, 1200, and 1530  
 Temp controller: 172 102  
                   0830 38 C 39 C  
                   1200 38 C 40 C  
 Slides: 0929 M (condensation)  
           1029 M (dark)  
           1129 P  
           1229 P  
           1329 P  
           1429 M  
           1529 M  
           1528 M

-----  
 GT spectrum noisy in UV and near-IR at 1131, 1231, and 1331  
 Spikes in UV in GT spectrum at 1531

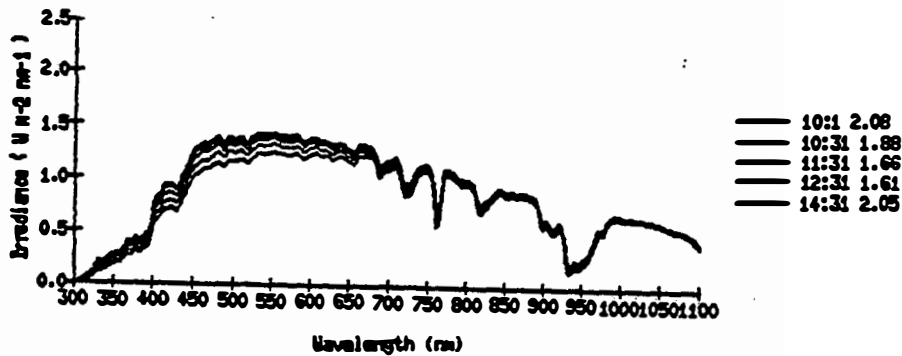


N FSEC87352  
 243 12 18 87 352 172 DN 102 GN  
 0 cloud cover at 1000; 0.2 at 1400; 0.1 at 1630  
 Temp controller: 172 102  
 1000 39 C 40 C  
 1400 40 C 40 C  
 Slides: 0923 M (condensation)  
 1023 M  
 1123 M (dark)  
 1223 M  
 1323 M  
 1423 M  
 1533 G  
 1633 G

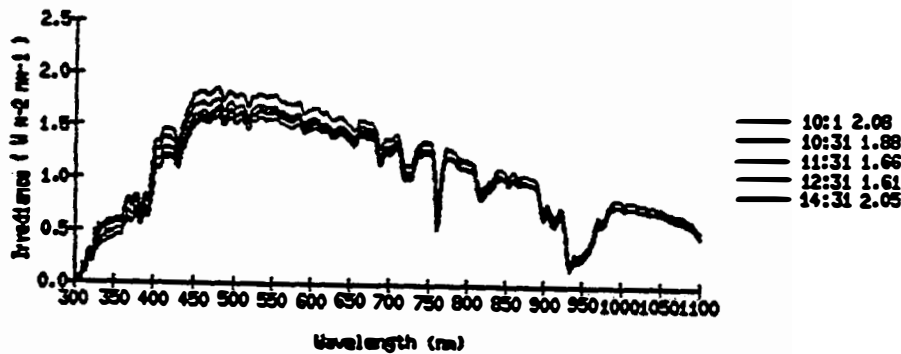
FSEC 352



FSEC 352 DNT



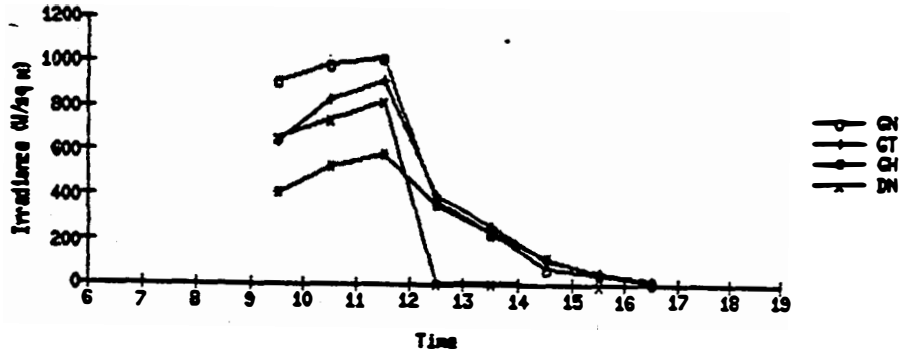
FSEC 352 GN



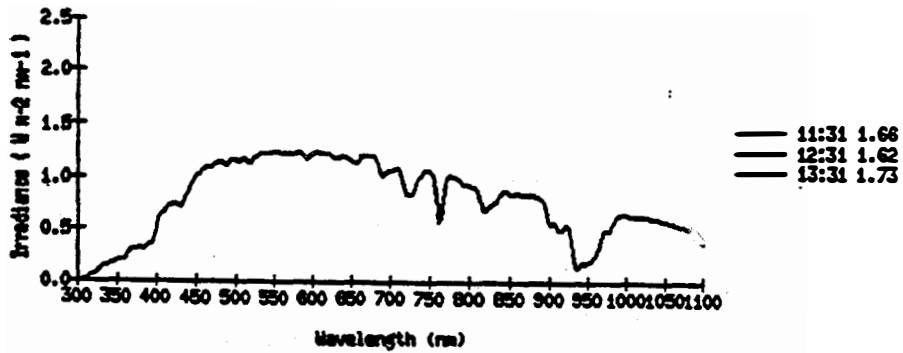


N FSEC87353  
 244 12 19 87 353 172 DM 102 GN  
 Partly cloudy  
 Slides: 0929 G  
 1028 G  
 1128 G  
 1228 G  
 1328 G  
 1427 G  
 1527 G  
 1627 G

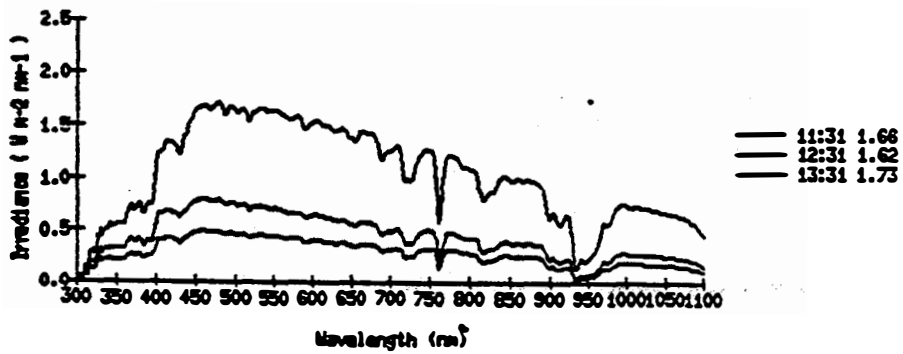
FSEC 353



FSEC 353 DM1

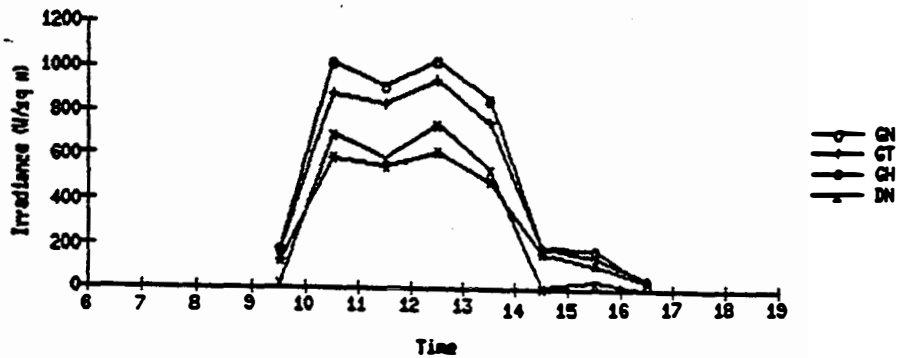


FSEC 353 G16

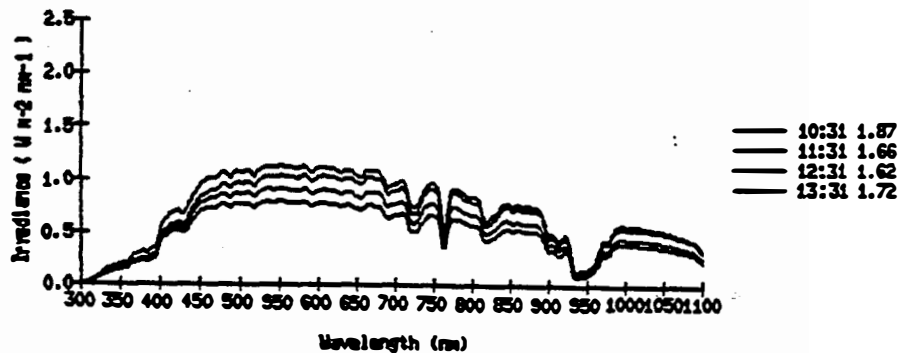


N FSEC87354  
 245 12 10 87 354 172 DN 102 GN  
 Partly cloudy  
 Slides: 0923 G  
 1023 G G  
 1122 G G  
 1222 G G  
 1322 G G  
 1422 G G  
 1521 G  
 1621 G

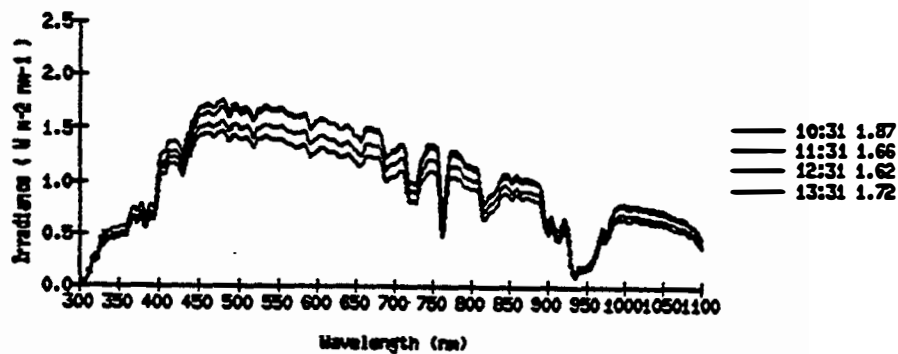
FSEC 354



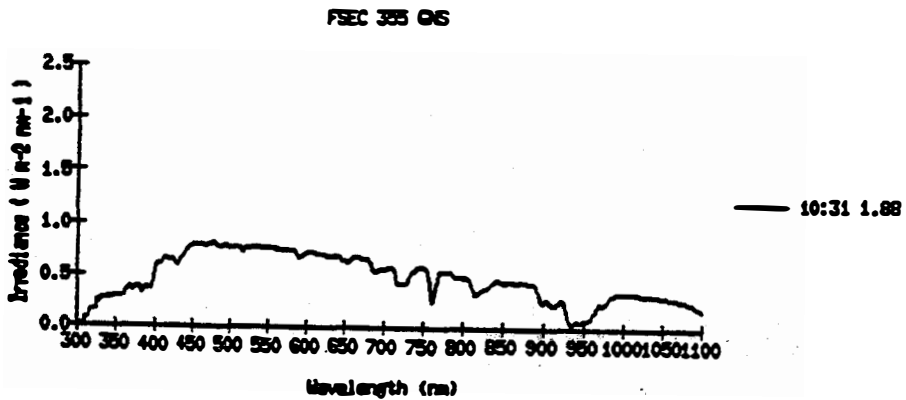
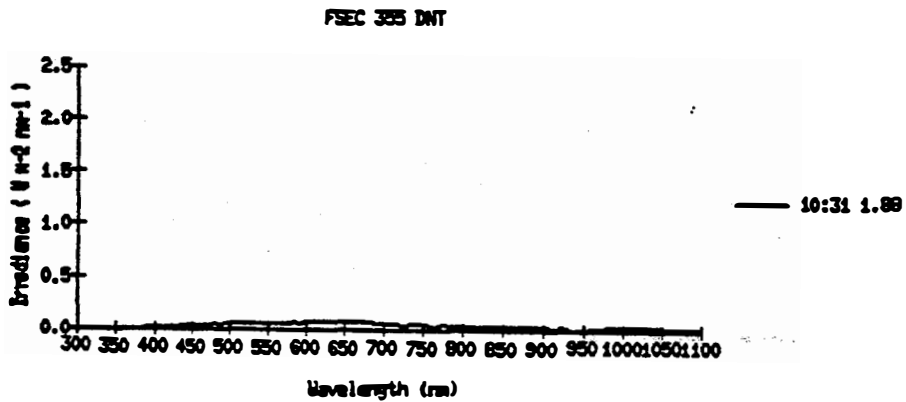
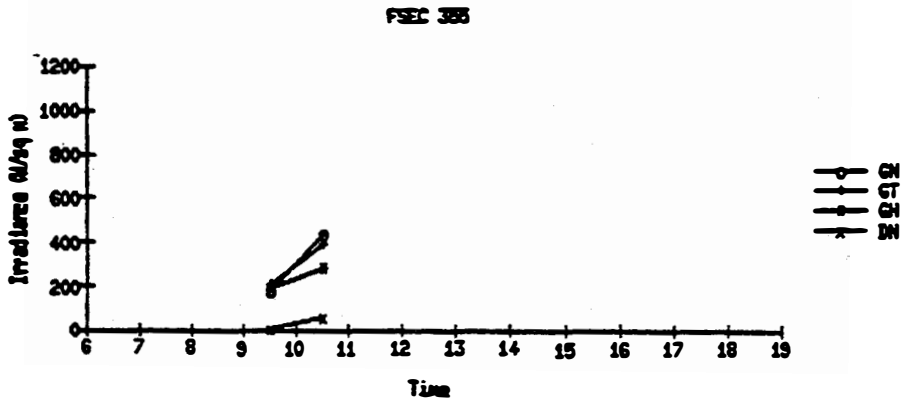
FSEC 354 DNT



FSEC 354 GNS



N FSEC87355  
 246 12 21 87 355 172 DW 102 GH  
 0.9 cloud cover at 0930; 1.0 at 1130  
 Temp controllers: 172 41 C and 102 40 C at 1130  
 Slides: 0917 G  
           1016 G  
           1116 G  
           1216 M (dark)  
           1316 M  
           1429 G  
           1529 G  
           1629 G

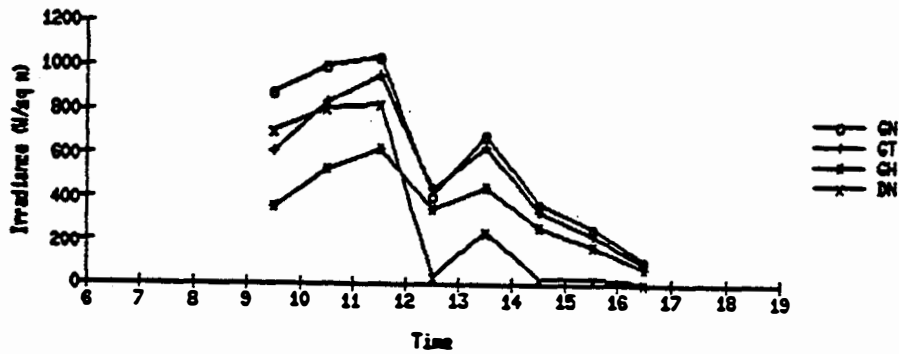




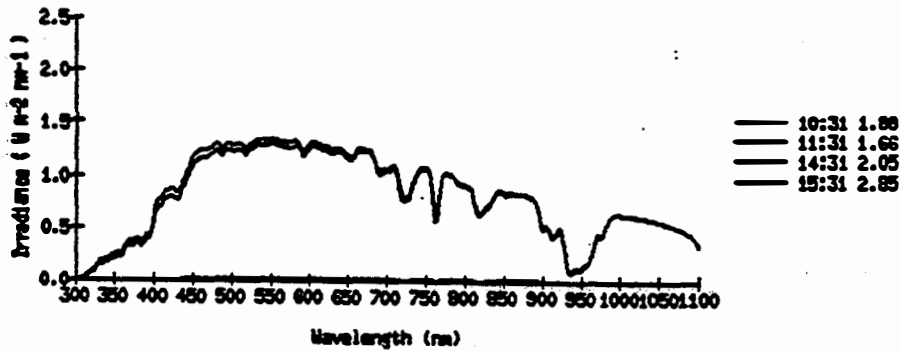
N FSEC87356  
 247 12 22 87 356 172 DN 102 GN  
 0.1 cloud cover at 0830; 0.6 at 1130; 0.9 at 1630  
 Temp controllers: 172 102  
                   0830 39 C 39 C  
                   1130 40 C 40 C  
                   1630 40 C 40 C

Slides: 0924 G  
 1024 G  
 1123 G  
 1223 G  
 1323 G  
 1422 G  
 1522 G  
 1622 G

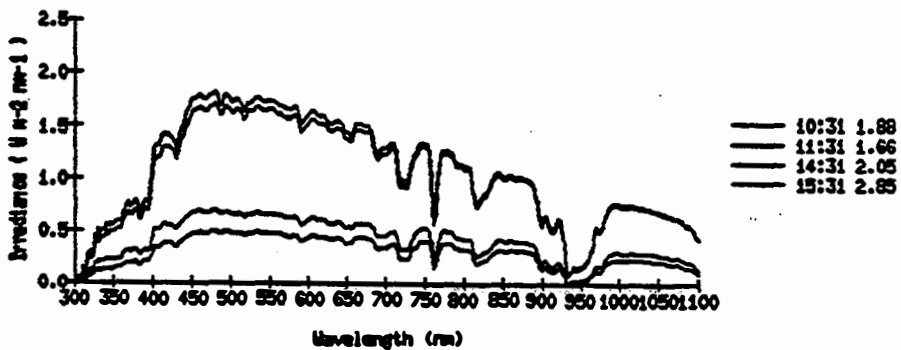
FSEC 356



FSEC 356 DNT



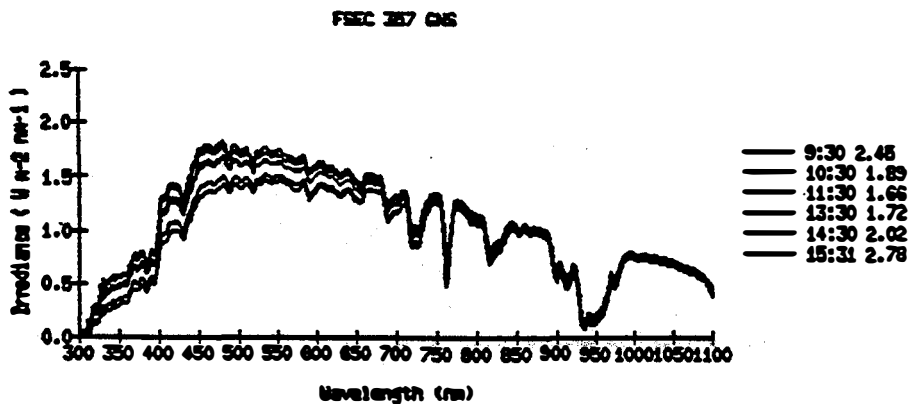
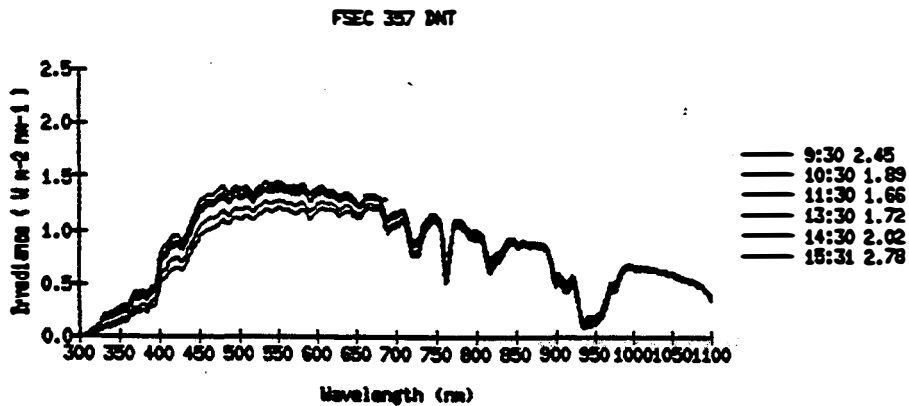
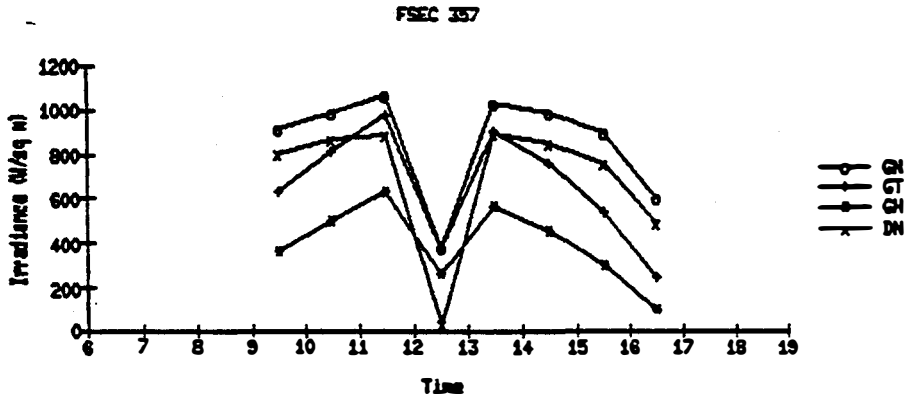
FSEC 356 GNS





N FSEC87357  
 248 12 23 87 357 172 DN 102 GN  
 0 cloud cover at 0930; 0.3 at 1300; 0.1 at 1630  
 Temp controllers: 172 102  
                   0930 39 C 40 C  
                   1300 40 C 40 C  
                   1630 40 C 40 C

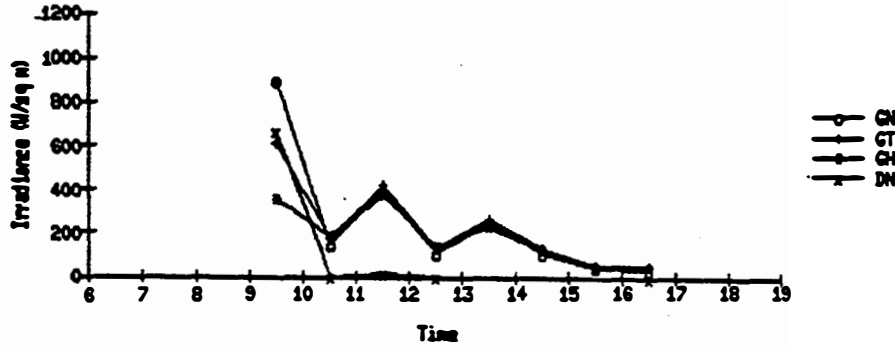
Slides: 0932 G  
 1031 G  
 1131 G  
 1231 G  
 1331 G  
 1430 G  
 1530 G  
 1630 G



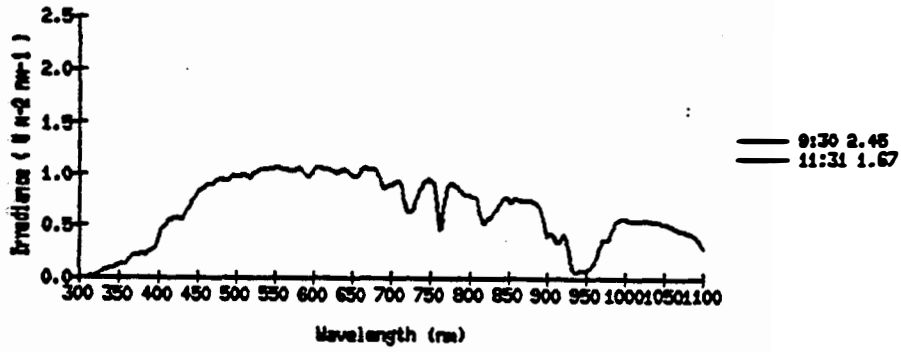


N FSEC87358  
 249 12 24 87 358 172 DN 102 GH  
 0.3 cloud cover at 0930; 1.0 at 1030  
 Temp controllers: 172 and 102 40 C at 0930  
 Slides: 0924 G  
 1024 G  
 1124 G  
 1223 G G  
 1323 G  
 1423 G  
 1522 G (water drops)  
 1622 G (water drops)

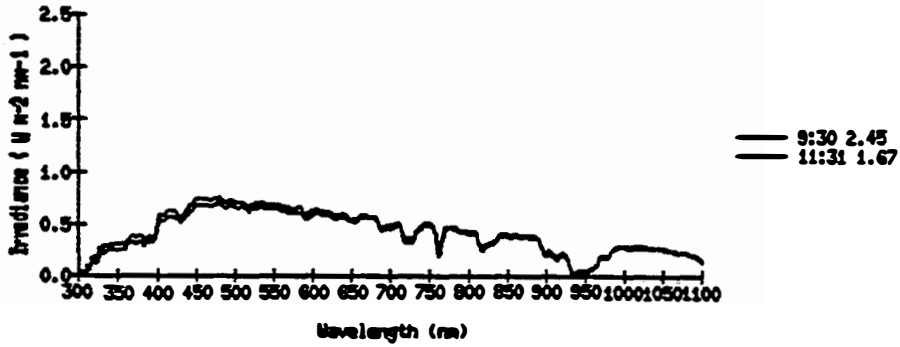
FSEC 358



FSEC 358 DNT



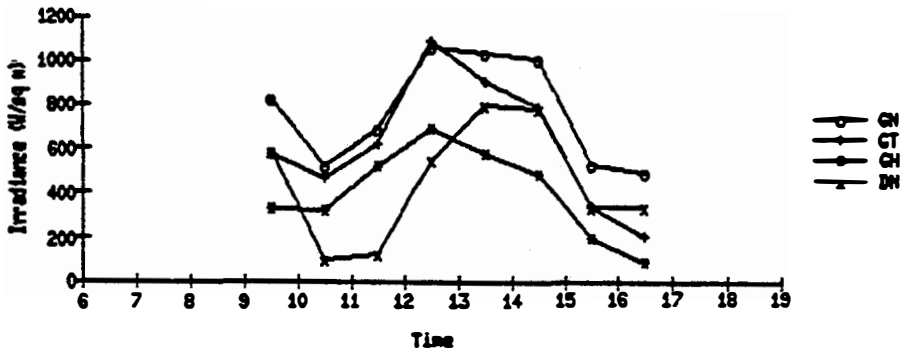
FSEC 358 GHS



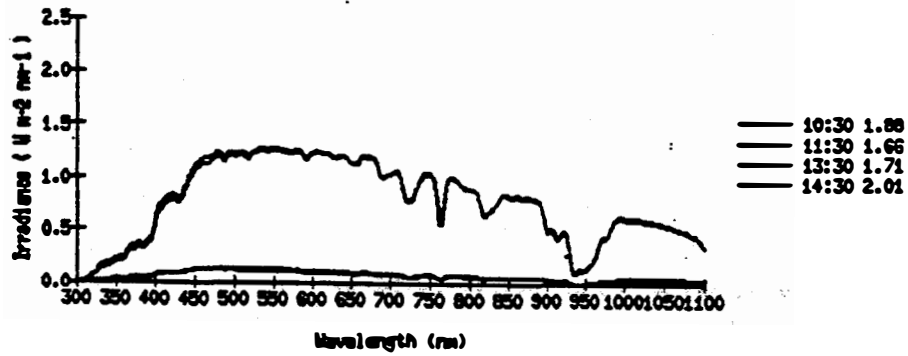


N FSEC87359  
 250 12 25 87 359 172 DN 102 GH  
 Partly cloudy  
 Slides: 0931 G  
 1031 G  
 1131 G  
 1230 G  
 1330 G  
 1430 G  
 1530 G  
 1629 G

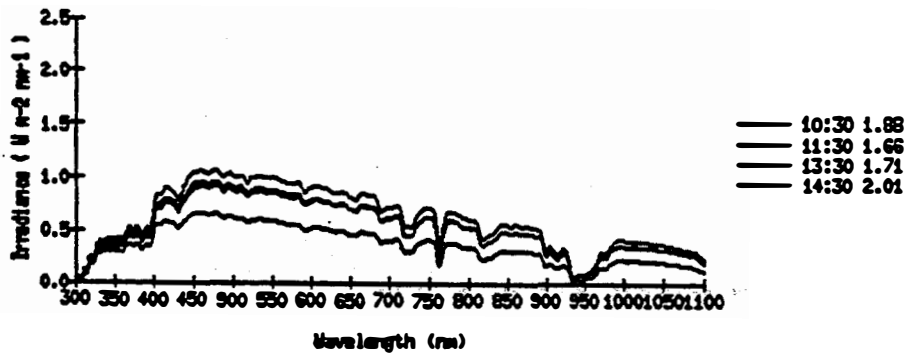
FSEC 389



FSEC 389 DNT

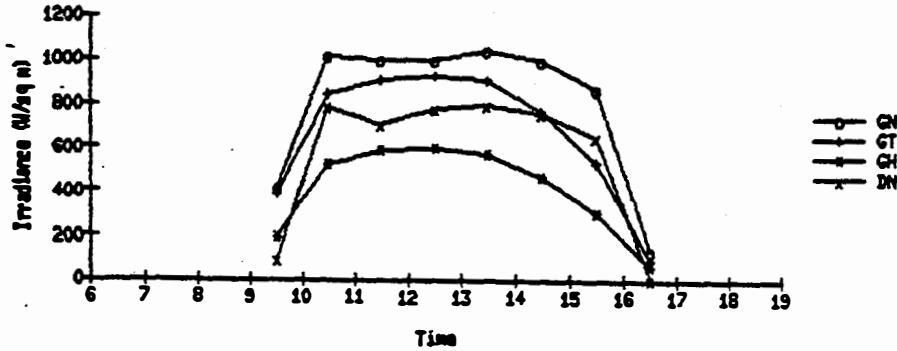


FSEC 389 GHS

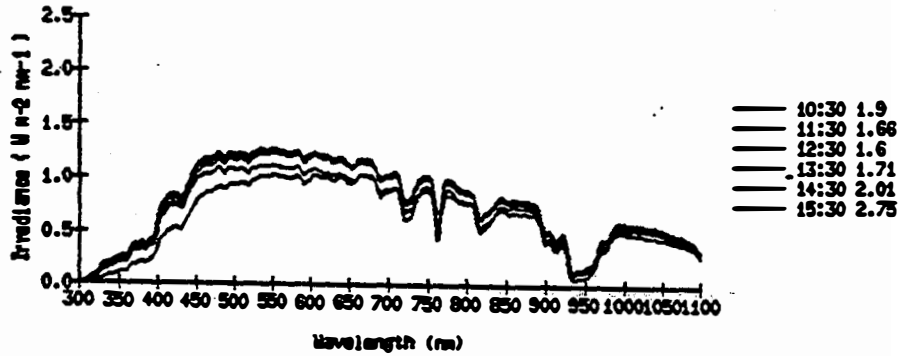


N FSEC87360  
 251 12 26 87 360 172 DM 102 GH  
 Partly cloudy  
 Slides: 0924 M (water drops)  
 1024 G  
 1124 G  
 1224 G  
 1323 G  
 1423 G  
 1523 G  
 1622 G

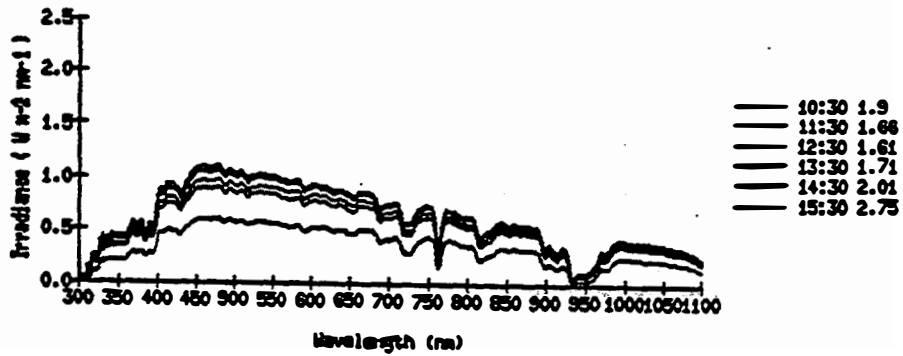
FSEC 360



FSEC 360 DM



FSEC 360 GH

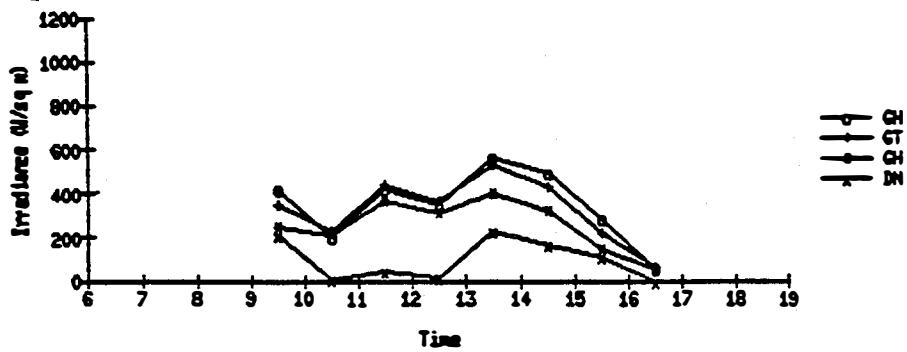




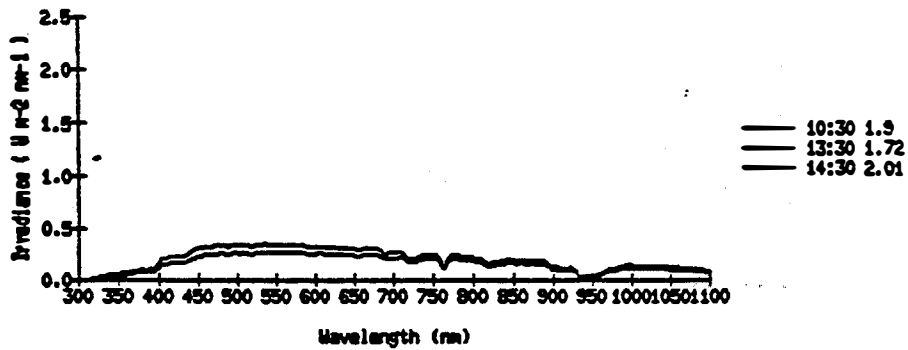
N FSEC87361  
 252 12 27 87 361 172 DN 102 GH  
 Partly cloudy  
 Slides: 0917 M (water drops)  
 1027 G  
 1117 G  
 1217 G  
 1316 G  
 1416 G  
 1516 G  
 1625 G

VAX was down 12 28/29

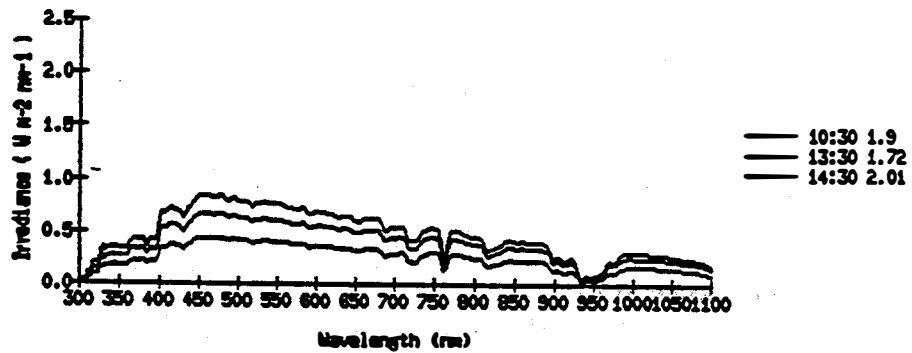
FSEC 361



FSEC 361 DNT

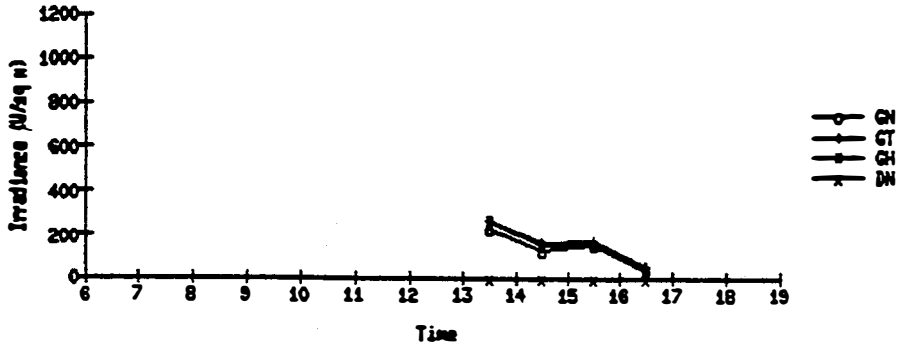


FSEC 361 GMS

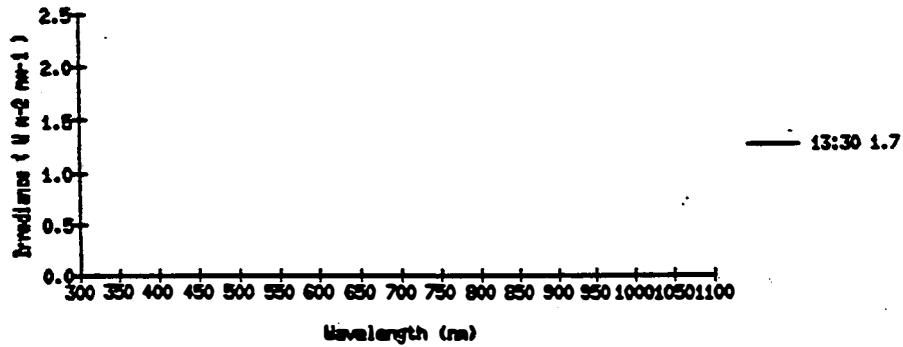


N FSEC87364  
 253 12 30 87 364 172 DW 102 GT  
 1.0 cloud cover at 1330  
 Temp controllers: 172 38 C and 102 39 C at 1330  
 No slides

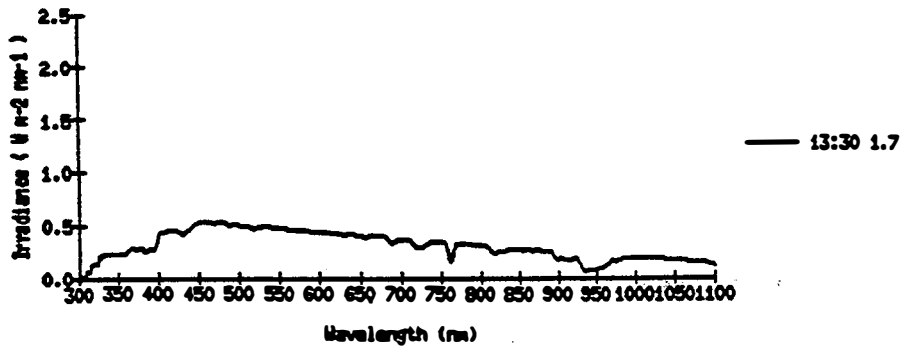
FSEC 364



FSEC 364 INT



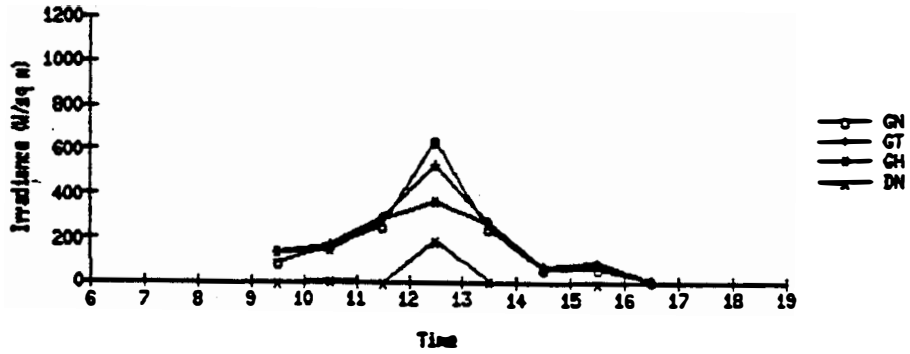
FSEC 364 GTS



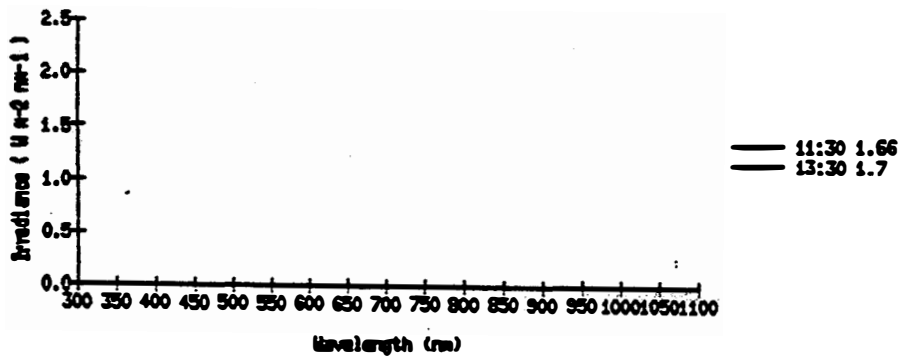


H FSEC87365  
 254 12 31 87 365 172 DH 102 GT  
 Cloudy; overcast  
 No slides

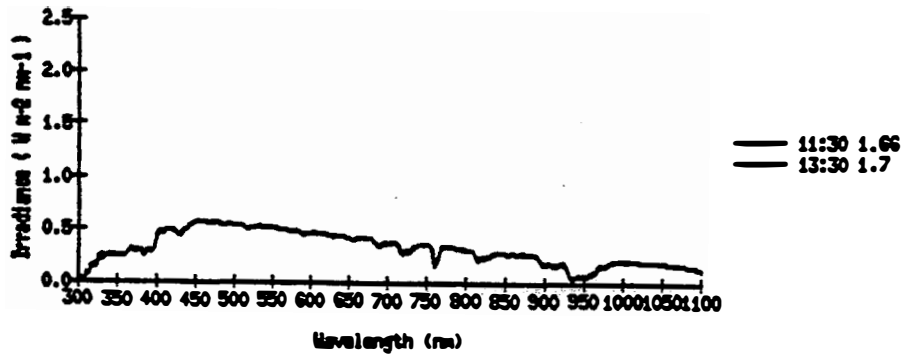
FSEC 365



FSEC 365 DNT



FSEC 365 GTS

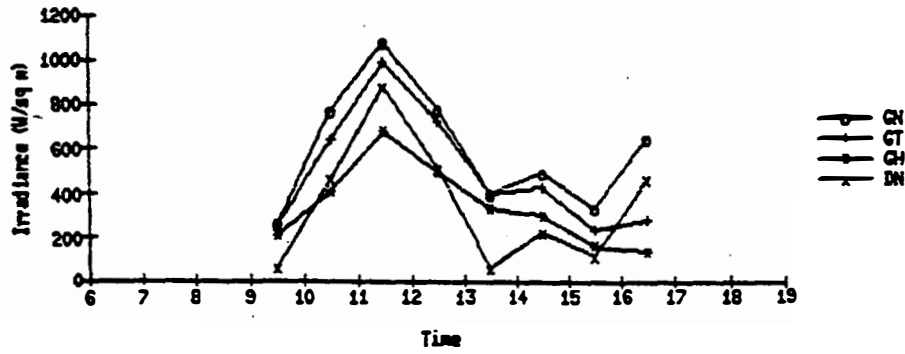




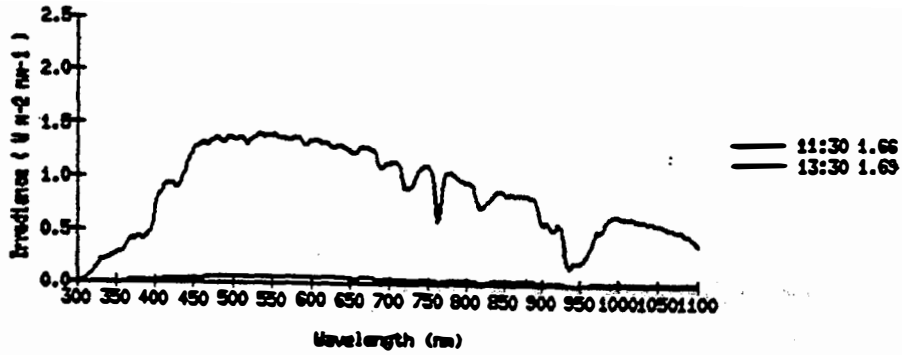


N FSEC88001  
 255 01 01 88 001 172 DN 102 GT  
 Partly cloudy

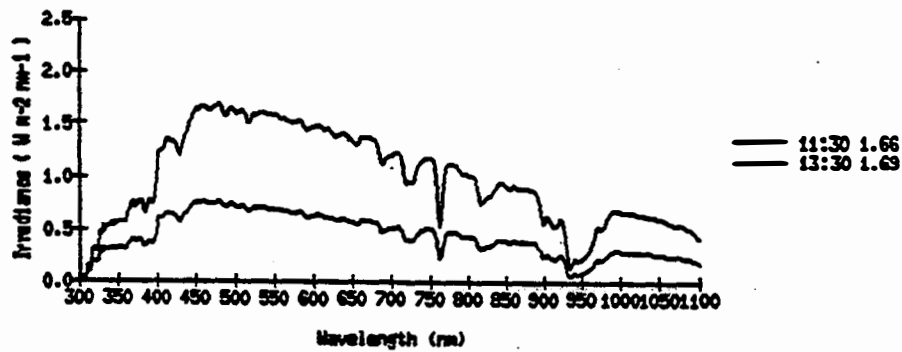
FSEC 1



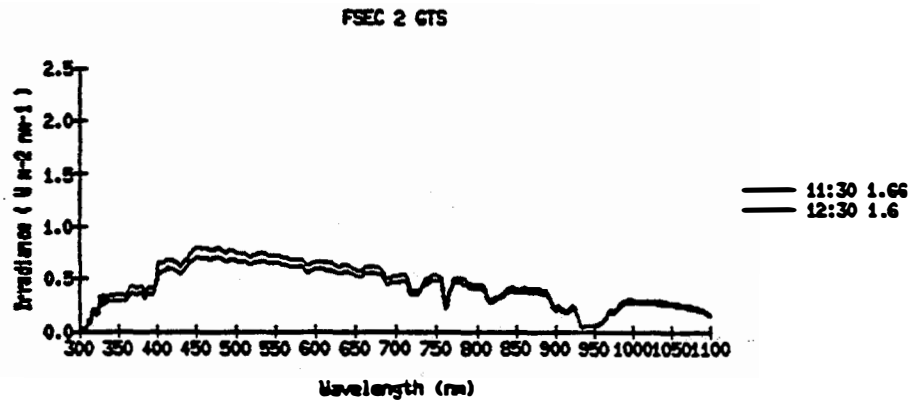
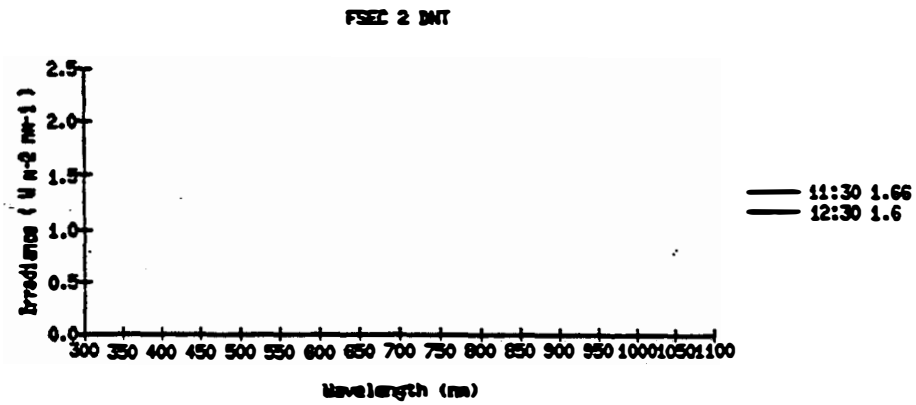
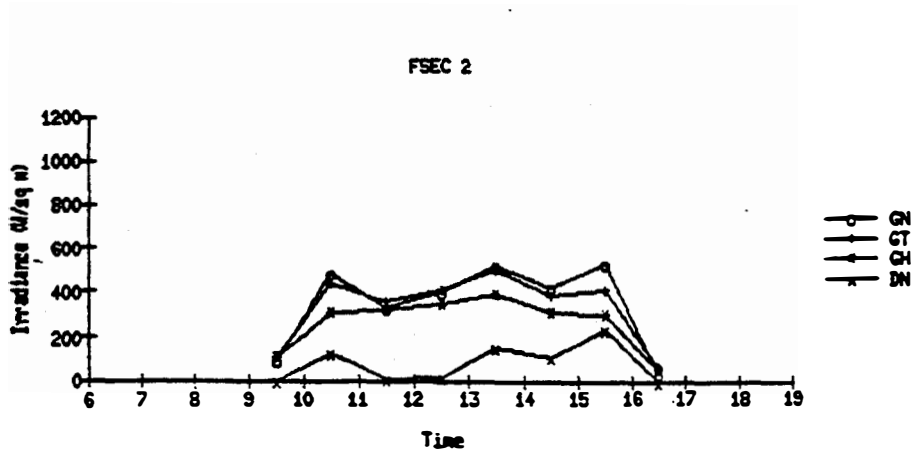
FSEC 1 DNT



FSEC 1 GTS

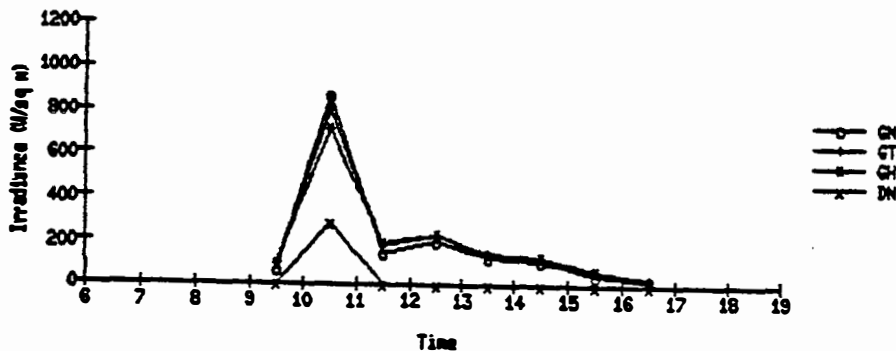


N FSEC88002  
 256 01 02 88 002 172 DN 102 GT  
 Mostly cloudy  
 No slides

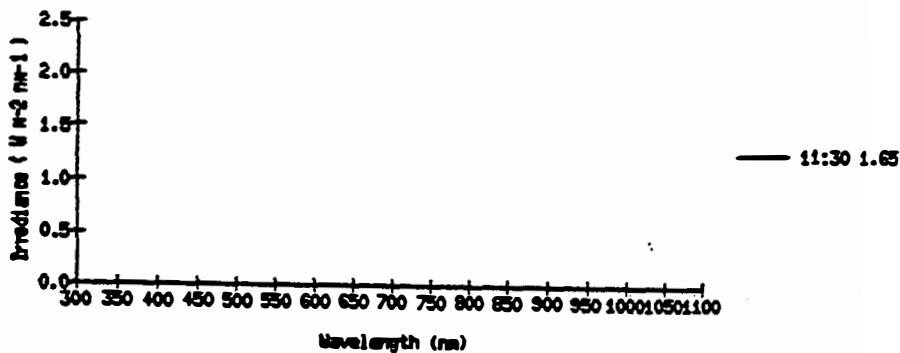


N FSEC88003  
 257 01 03 88 003 172 DN 102 GT  
 Cloudy; overcast  
 No slides

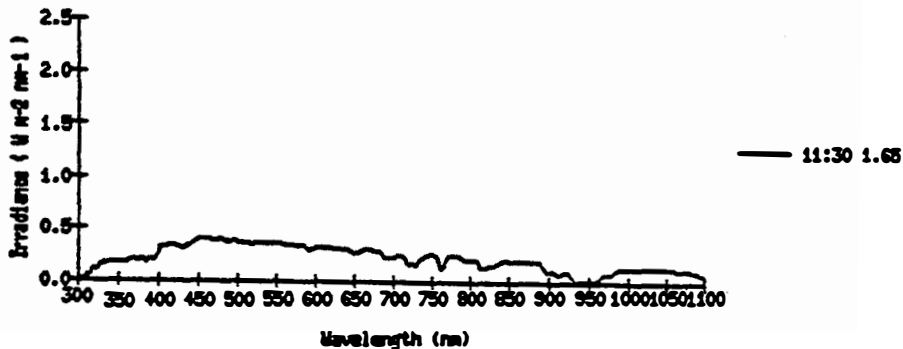
FSEC 3



FSEC 3 DNT



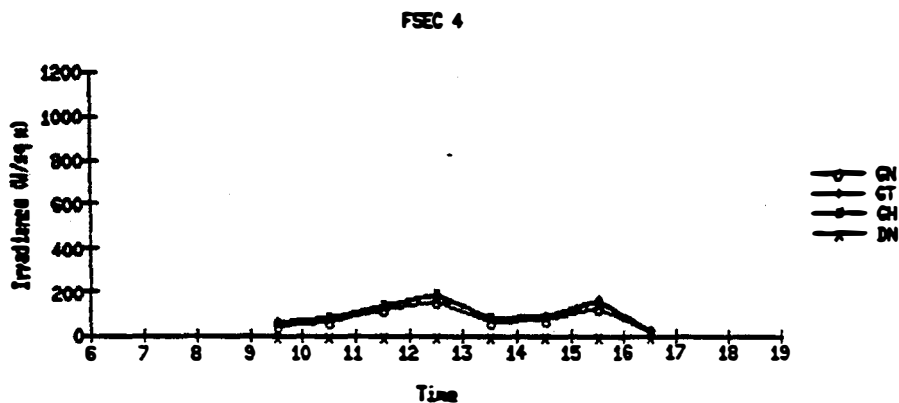
FSEC 3 GTS





N FSEC88004  
258 01 04 88 004 172 DH 102 GT  
1.0 cloud cover at 0830, 1230 and 1630  
Temp controllers: 172 38 C and 102 39 C at 0830  
Slides: 1511 G  
1611 G

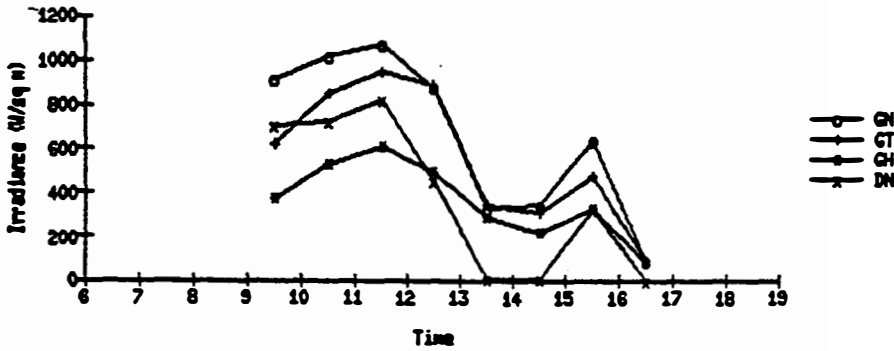
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No spectra



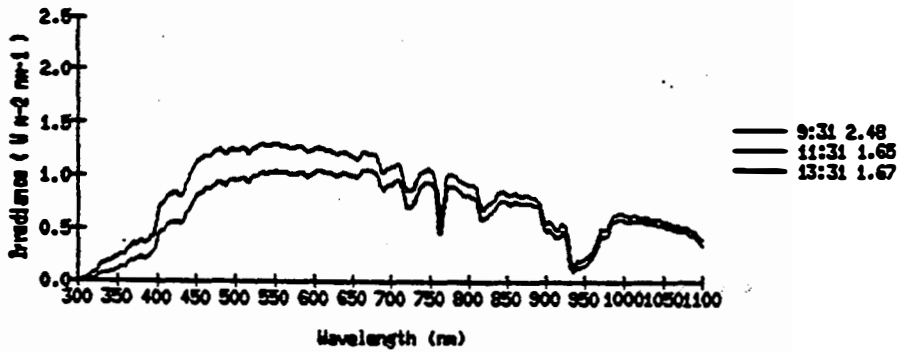


N FSEC88005  
 259 01 05 88 005 172 DN 102 GT  
 0.9 cloud cover at 0830; 0.7 at 1300  
 Temp controllers: 172 39 C and 102 40 C at 1300  
 Slides: 0927 G  
 1026 G  
 1126 M (dark)  
 1226 M  
 1326 G  
 1425 G  
 1525 G  
 1625 G

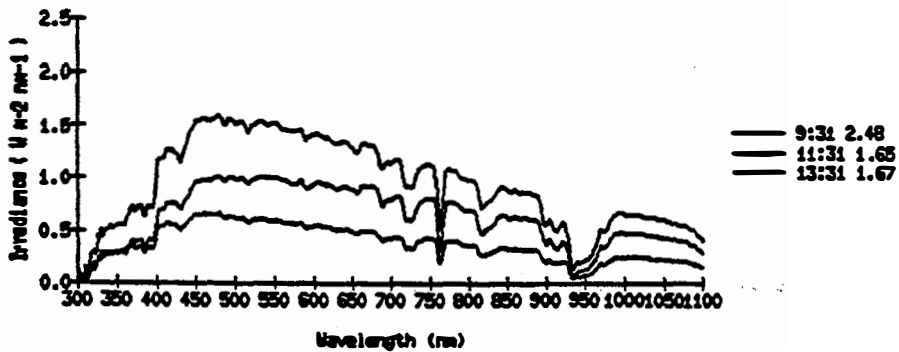
FSEC 5



FSEC 5 DNT



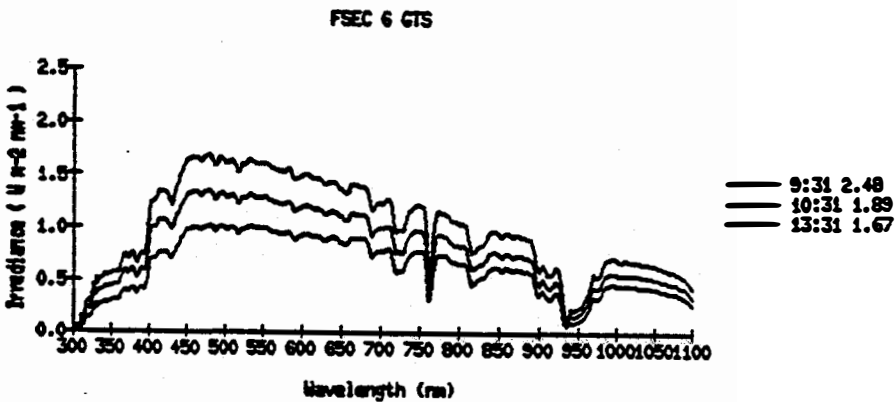
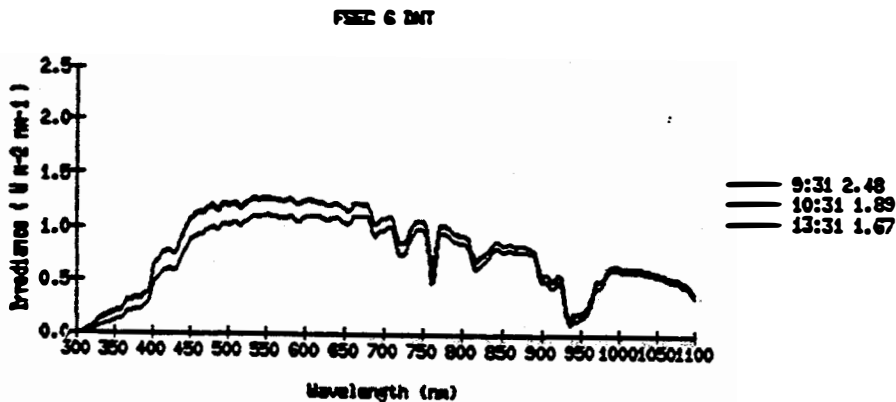
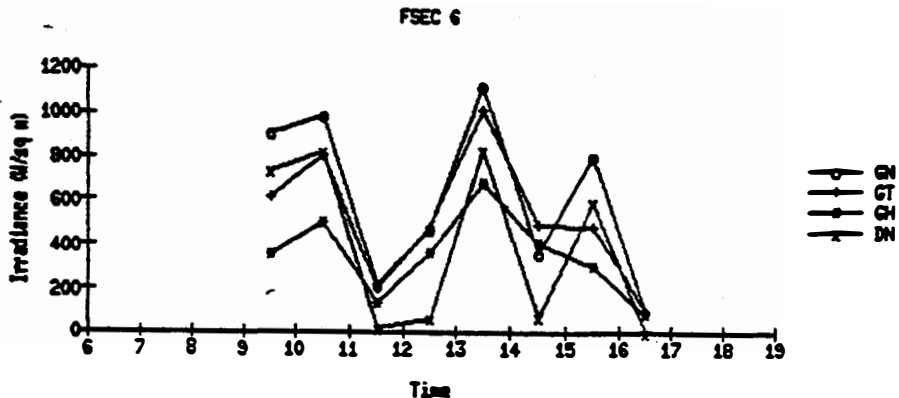
FSEC 5 GTS





N FSEC88006  
 260 01 06 88.006 172 DN 102 GT  
 0.1 cloud cover at 0830; 0.7 at 1430  
 Temp controller: 172 102  
 0830 39 C 40 C  
 1430 40 C 41 C

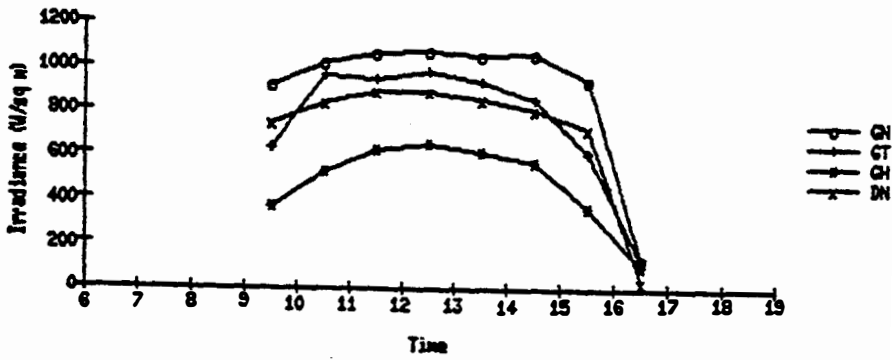
Slides: 0921 G  
 1020 G  
 1120 M (dark)  
 1220 G  
 1320 G  
 1419 G  
 1519 G  
 1619 G



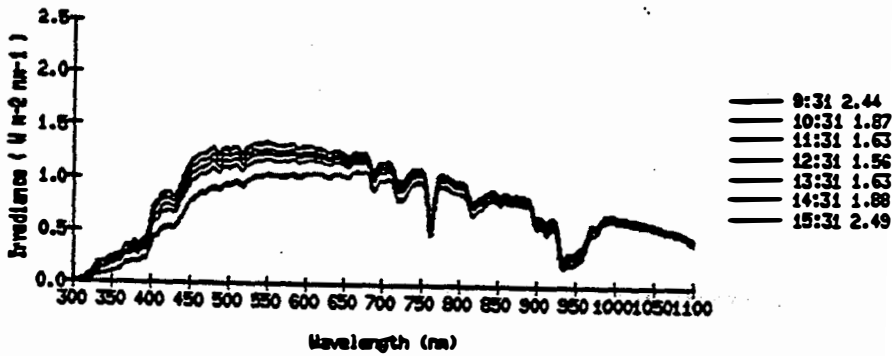
N FSEC88012  
 261 01 12 88 012 172 DN 102 GN  
 Clear until later afternoon  
 PSPs changed for channels 2 and 4; new cal for 1 and 5:  
 Old New  
 2 (GN) 18273F3 9.29 (Apr. 87) 24185F3 8.65 (Dec. 87)  
 4 (GT) 14320F3 7.98 (Apr. 87) 24183F3 8.79 (Dec. 87)  
 1 (DN) 23943E6 6.08 (Dec. 86) same 6.16 (Dec. 87)  
 5 (S1) 3826 31.8 (Sep. 86) same 31.38 (Dec. 87)  
 NIP)  
 LSR 172 mV drift errors at 0932, 1031, and 1331  
 Slides: 0927 M (condensation)  
 1027 G  
 1127 G  
 1227 G  
 1326 G  
 1426 G  
 1526 G  
 1625 G

Brief spikes in UV in DN spectrum at 1031

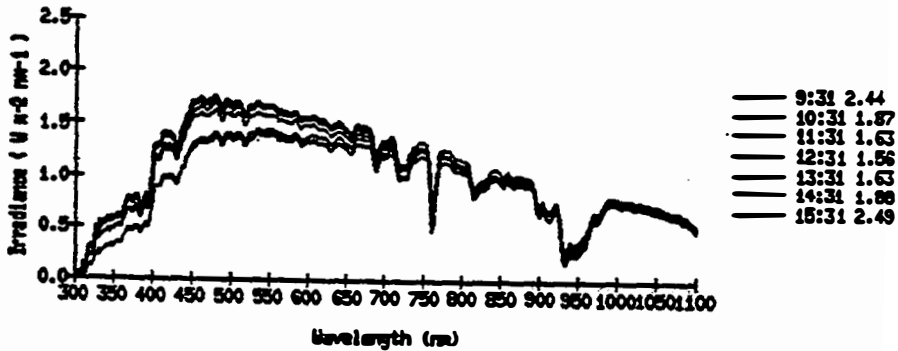
FSEC 12



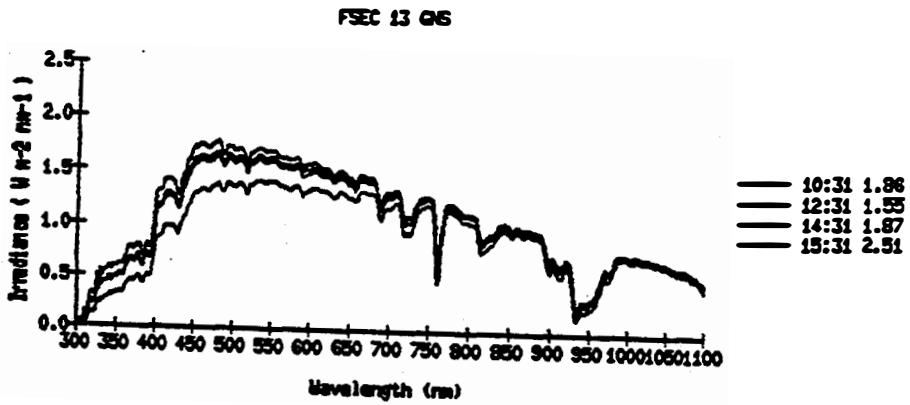
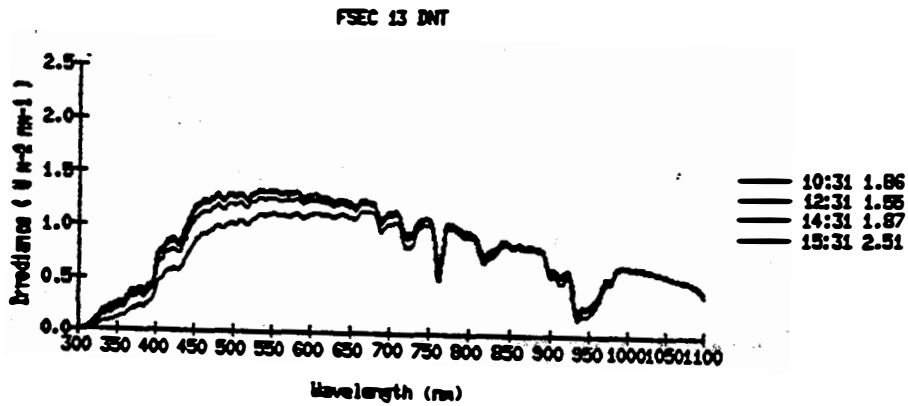
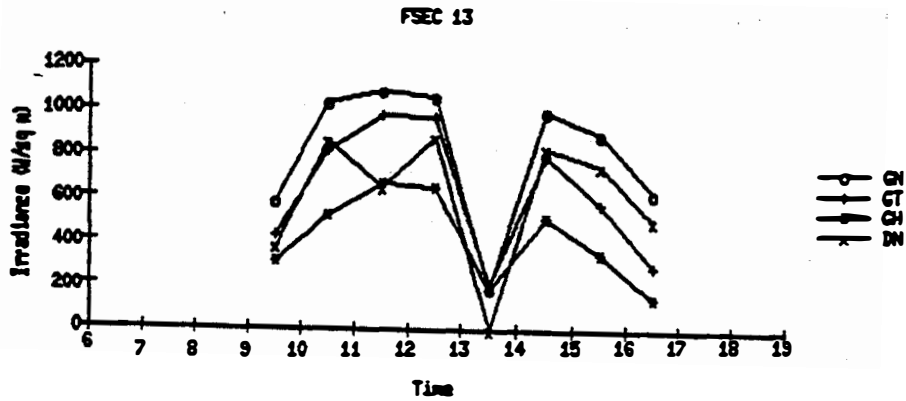
FSEC 12 DNT



FSEC 12 GNS



N FSEC89013  
 262 01 13 88 013 172 DW 102 GW  
 Partly cloudy  
 Slides: 0920 M (condensation)  
 1020 M  
 1119 G  
 1219 G  
 1319 G  
 1418 G  
 1518 G  
 1617 G

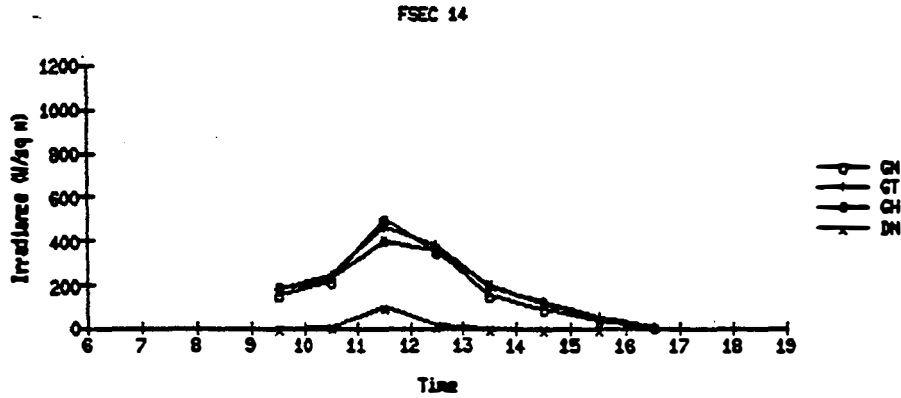






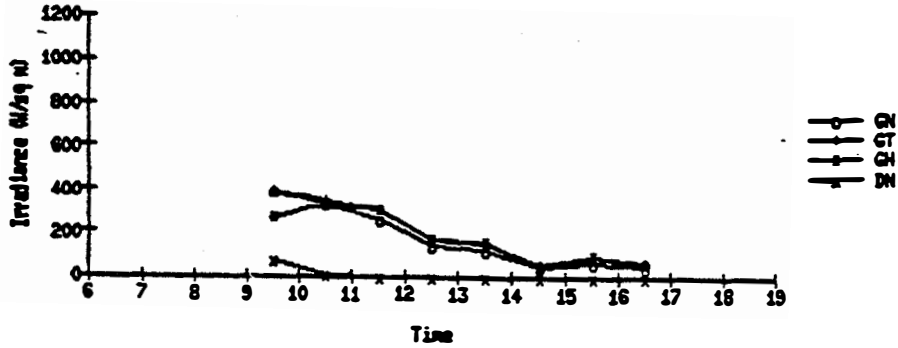
N FSEC8014  
 263 01 14 88 014 172 DN 102 GN  
 1.0 cloud cover at 0930 and 1230  
 Temp controllers: 172 38 C and 102 40 C at 1230  
 Slides: 0913 G  
           1013 G  
           1133 G  
           1233 G  
           1333 G  
           1432 G  
           1532 G  
           1632 G

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 No spectra

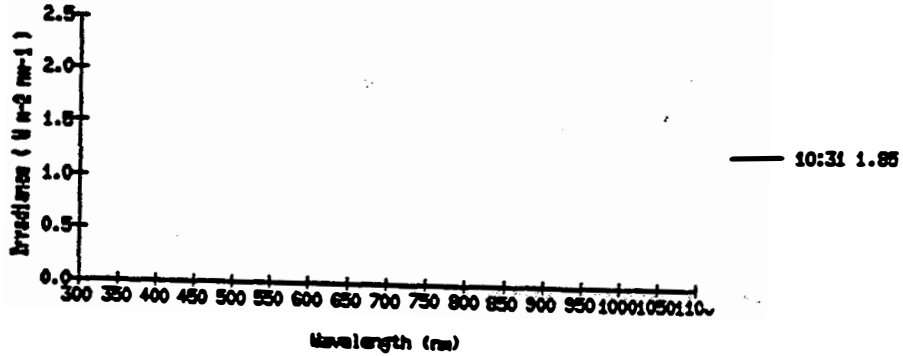


N FSEC88015  
 264 01 15 88 015 172 DN 102 GN  
 0.9 cloud cover at 0930; 1.0 at 1530  
 Temp controllers: 172 38 C and 102 39 C at 0930  
 Slides: 0929 G (water drops)  
 1029 G  
 1128 M (dark)  
 1228 G  
 1328 G  
 1428 G  
 1528 G  
 1627 G

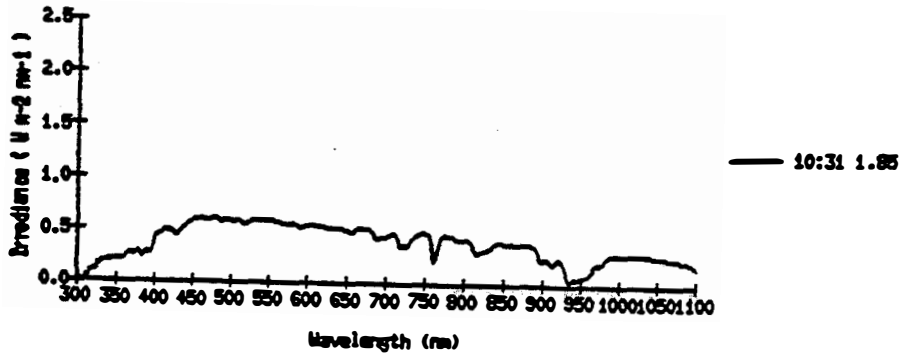
FSEC 15



FSEC 15 DNT

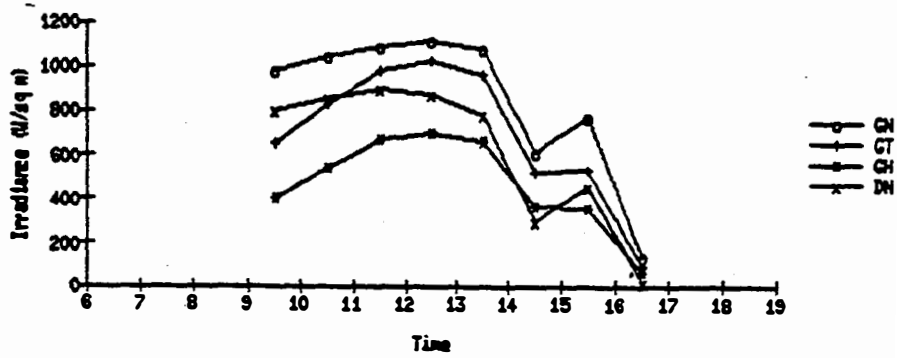


FSEC 15 GNS

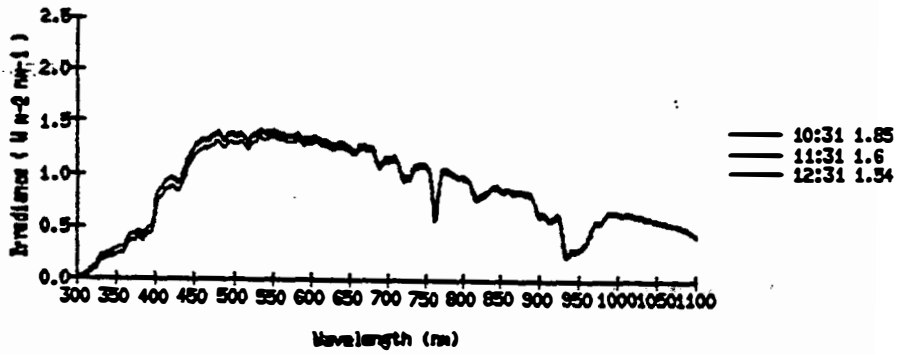


N FSEC88016  
 265 01 16 88 016 172 DN 102 GN  
 Partly cloudy  
 LSR 172 mV drift error at 1132  
 Slides: 0925 G  
 1025 G  
 1125 H (dark)  
 1225 H  
 1325 G  
 1424 G  
 1524 G  
 1624 G

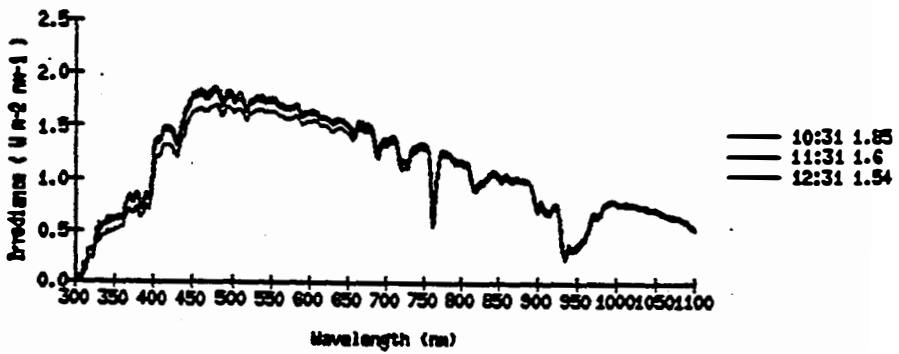
FSEC 16



FSEC 16 DNT

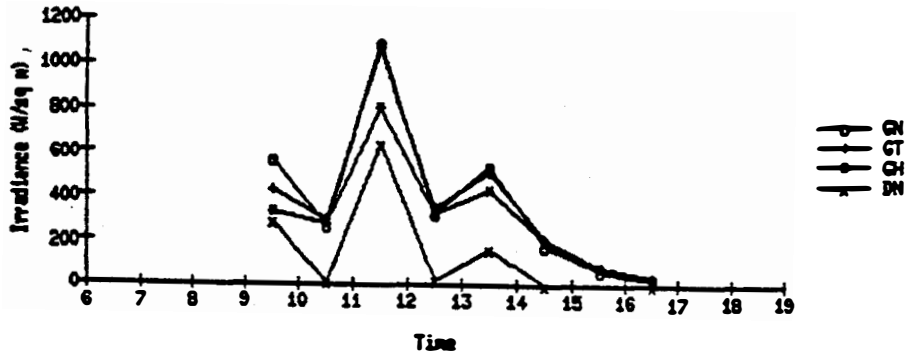


FSEC 16 GMS

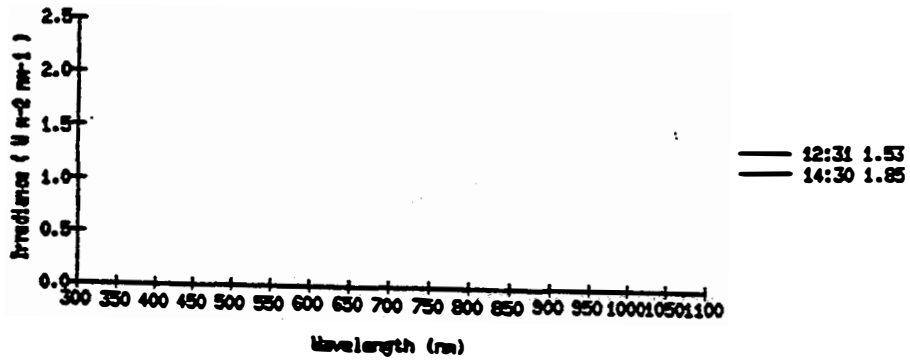


N FSEC88017  
 266 01 17 88 017 172 DW 102 GN  
 Partly cloudy  
 Slides: 0921 G  
 1021 G  
 1121 M (dark)  
 1221 G  
 1321 G  
 1420 G  
 1520 M (dark)  
 1620 G

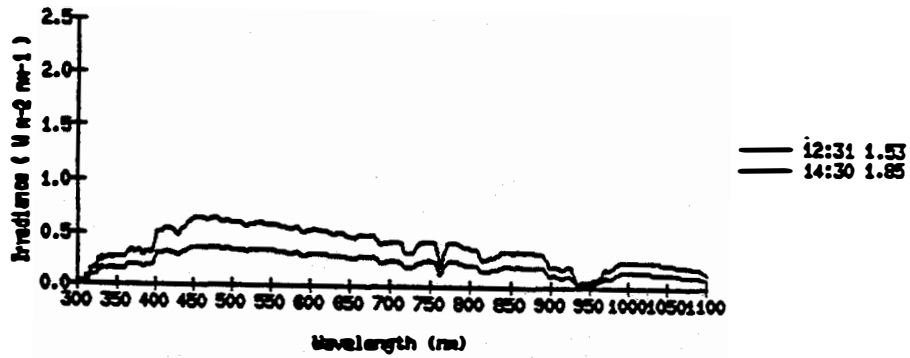
FSEC 17



FSEC 17 DNT



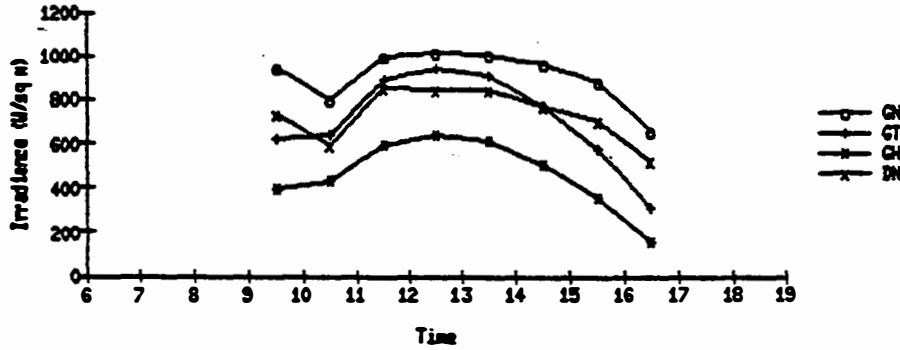
FSEC 17 GMS



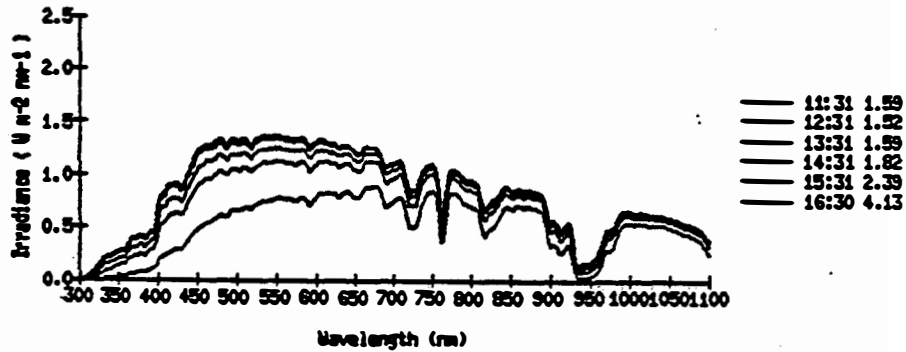


N FSEC88018  
 267 01 18 88 018 172 DNT 102 GN  
 Partly cloudy AM; mostly clear PM  
 Slides: 0917 G (water drops)  
 1017 G  
 1117 M (dark)  
 1217 M  
 1316 M  
 1416 G missing 1516  
 1616 G

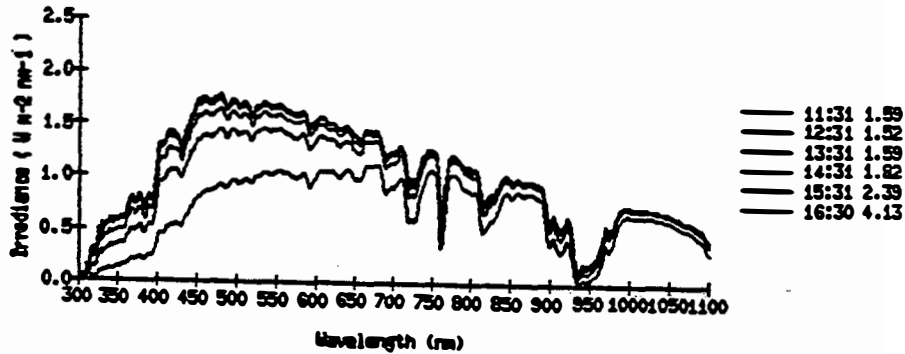
FSEC 18



FSEC 18 DNT

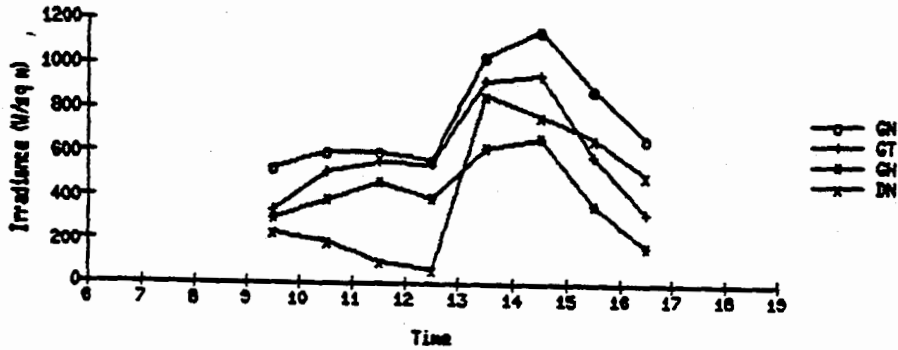


FSEC 18 GNS

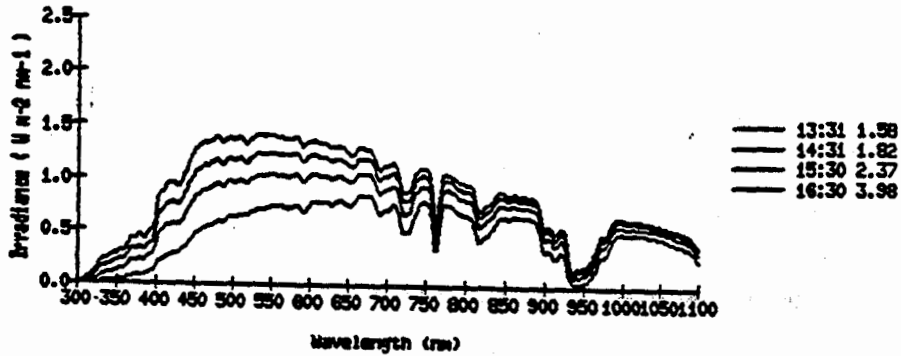


N FSEC88019  
 268 01 19 88 019 172 DN 102 GN  
 0.3 cloud cover at 0830; 0.4 at 1230; 0.3 at 1630  
 Temp controllers: 172 41 C and 102 40 C at 1230  
 Slides: 0916 G (condensation)  
 1016 G  
 1116 G  
 1216 M (dark)  
 1316 M  
 1416 G  
 1516 G  
 1616 G

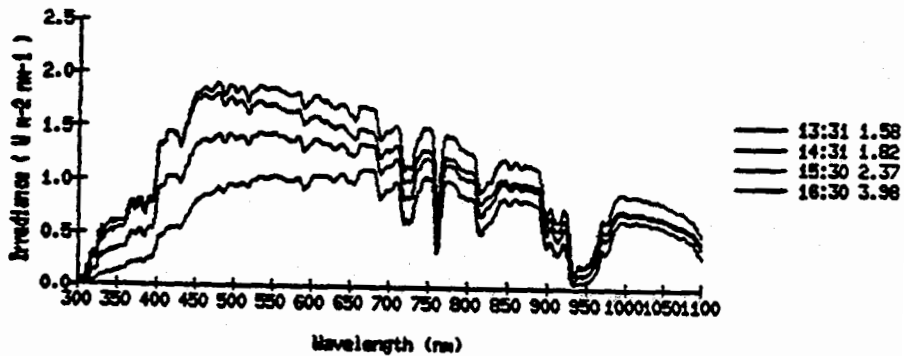
FSEC 19



FSEC 19 BNT



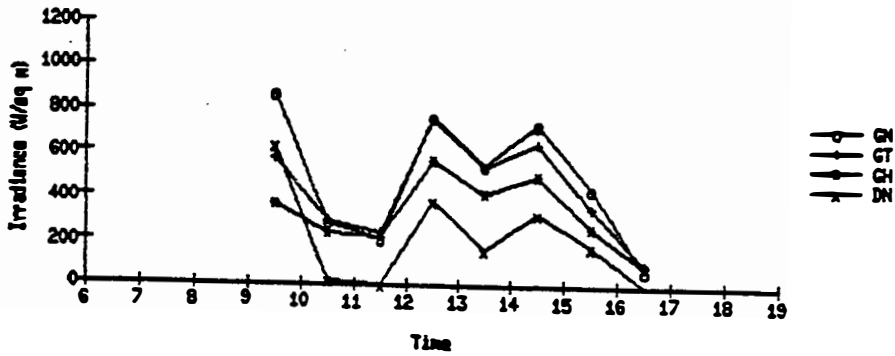
FSEC 19 GNS



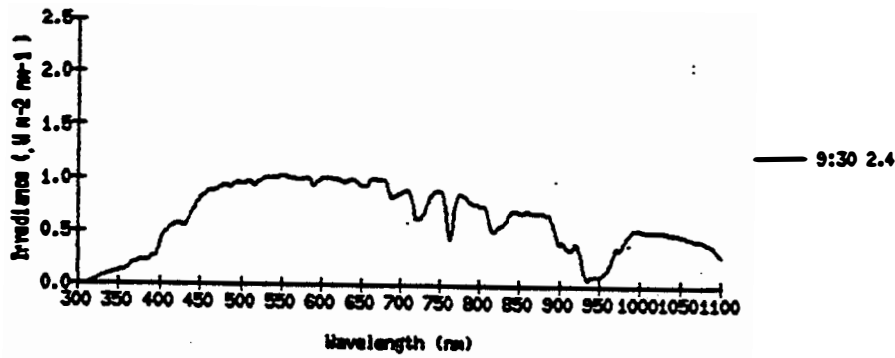
N FSEC88020  
 269 01 20 88 020 172 DN 102 GN  
 0.9 cloud cover at 0830; 0.8 at 1230 and 1530  
 Temp controllers: 172 102  
                   0830 40 C 39 C  
                   1530 41 C 40 C

Slides: 0915 G  
 1034 G  
 1133 G  
 1233 G  
 1332 G  
 1432 G  
 1532 G  
 1631 G

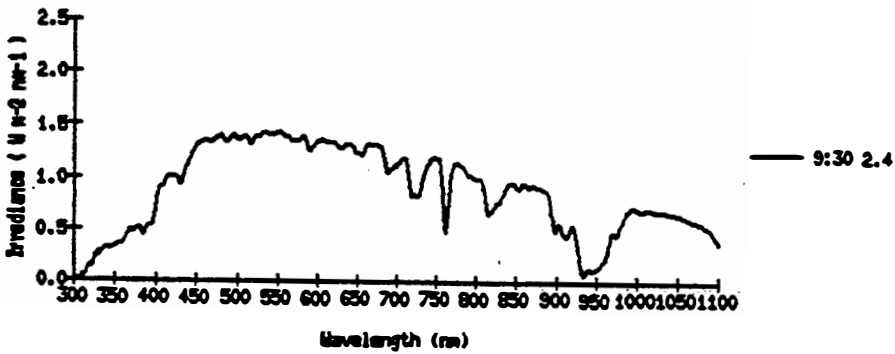
FSEC 20



FSEC 20 BNT



FSEC 20 GNS



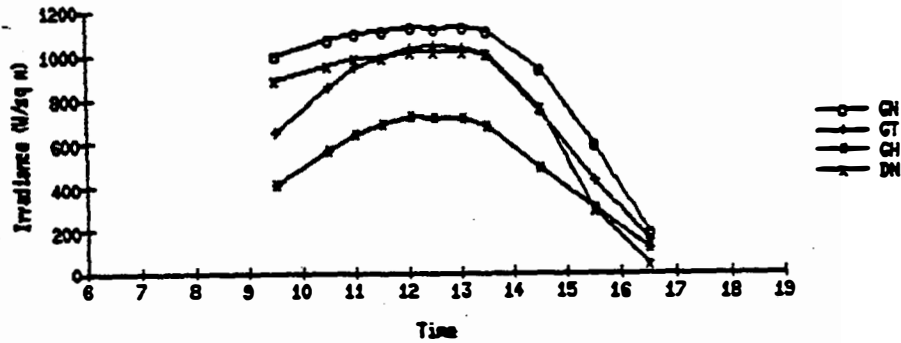
N FSEC88021  
270 01 21 88 021 172 DM 102 GN  
1.0 cloud cover at 0815; 0.9 at 1230; afternoon rain  
Temp controllers: 172 and 102 40 C at 0815  
VAX crash - data lost this day  
Slides: 0924 G  
          1024 G  
          1124 G  
          1223 M (dark)  
          1322 M - (water drops)  
          1422 M -  
-----  
No spectra



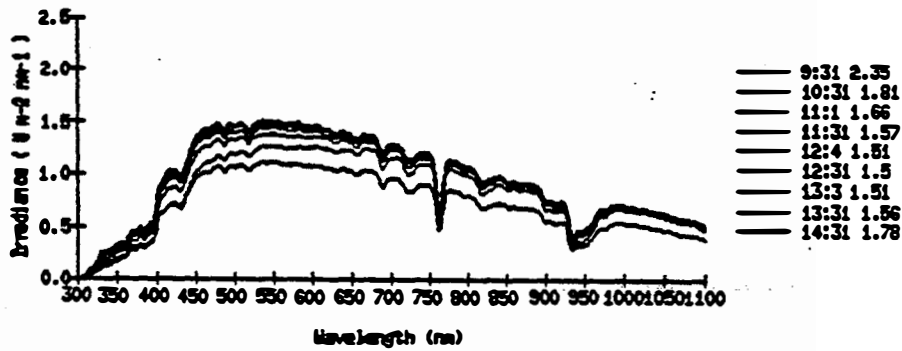


**N FSEC88022**  
 271 01 22-88 022 172 DN 102 GN  
 0 cloud cover at 0930 and 1230; 0.8 at 1630  
 Slides: 0908 G  
           1033 G  
           1132 M (dark)  
           1232 M -  
           1331 M -  
           1431 G  
           1530 G  
           1630 G

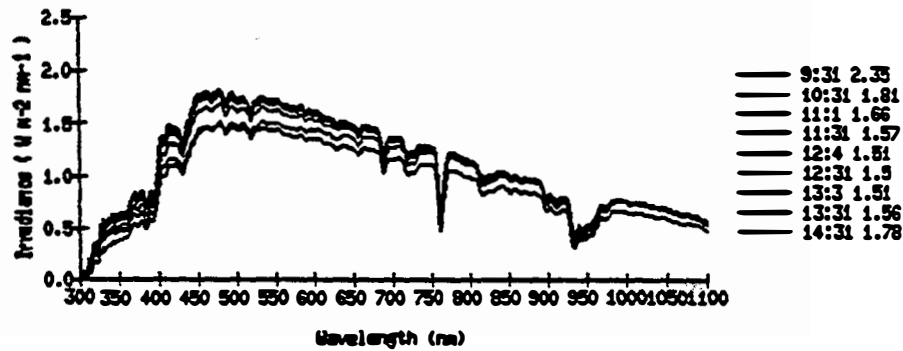
FSEC 22



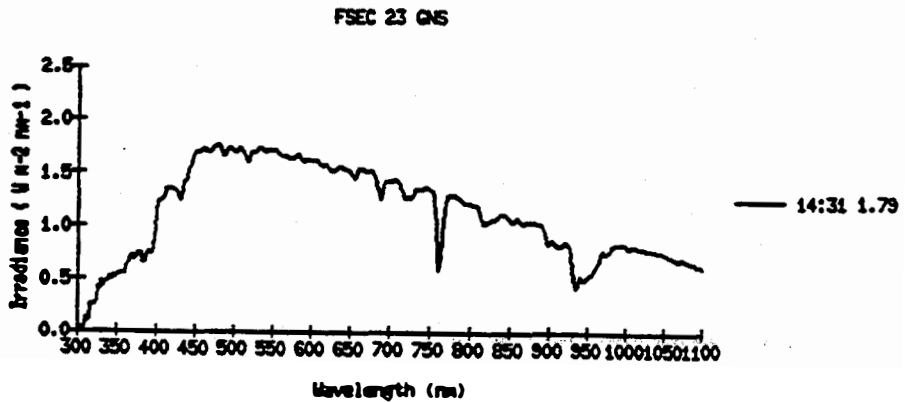
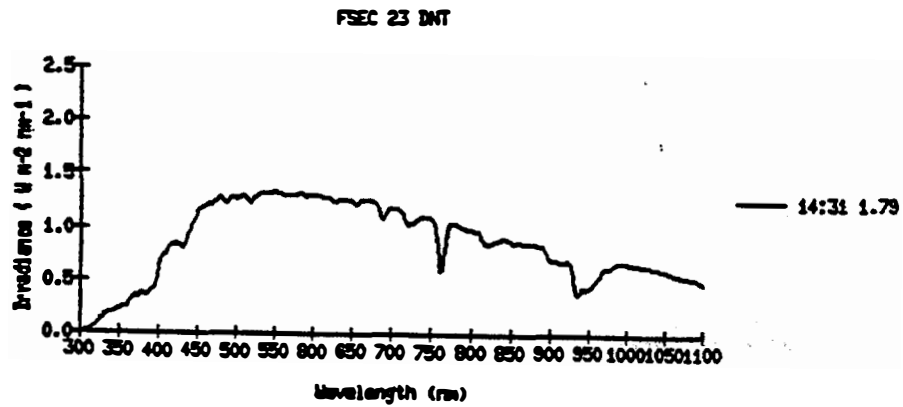
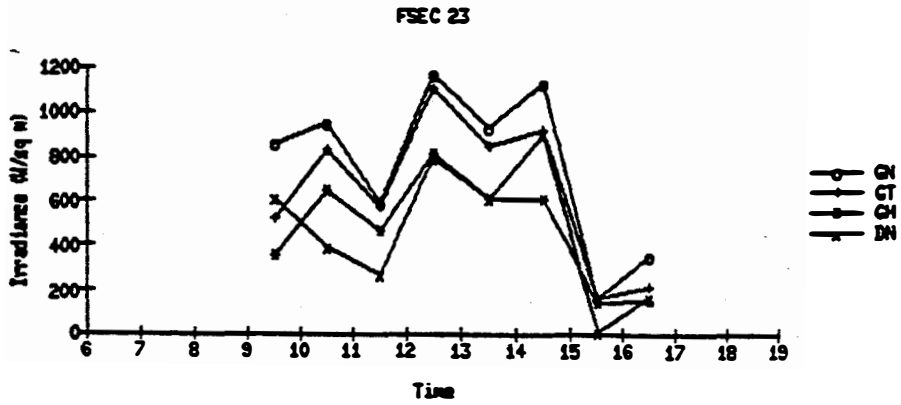
FSEC 22 DNT



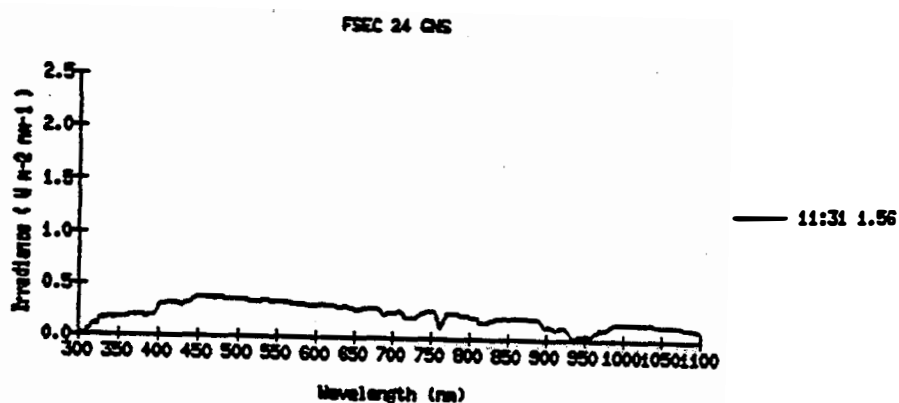
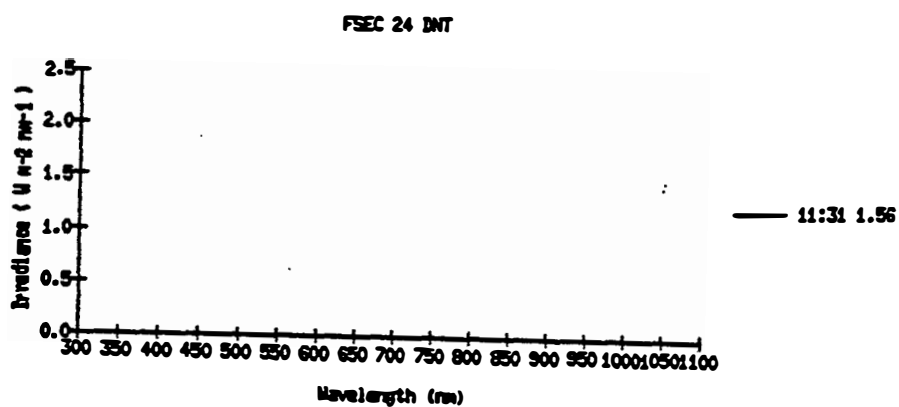
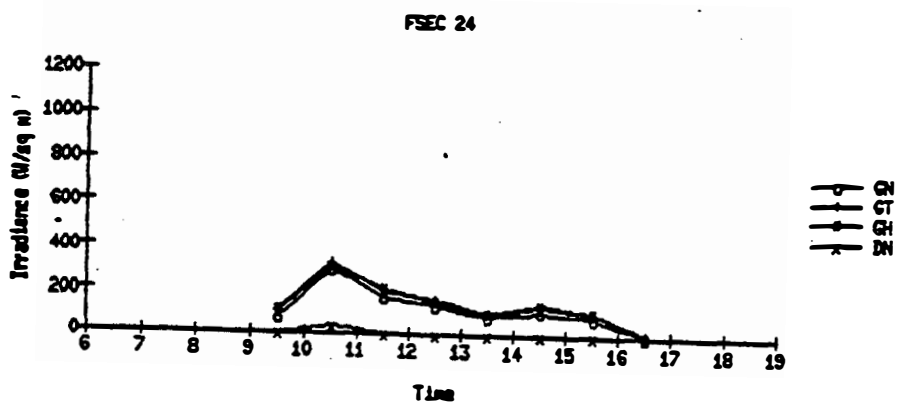
FSEC 22 GNS



N FSEC88023  
 272 01 23 88 023 172 DN 102 GN  
 Partly cloudy  
 LSR 172 mV drift at 1434  
 Slides: 0933 G  
 1024 M (dark)  
 1123 M -  
 1235 M -  
 1332 M -  
 1425 G  
 1536 G  
 1633 G



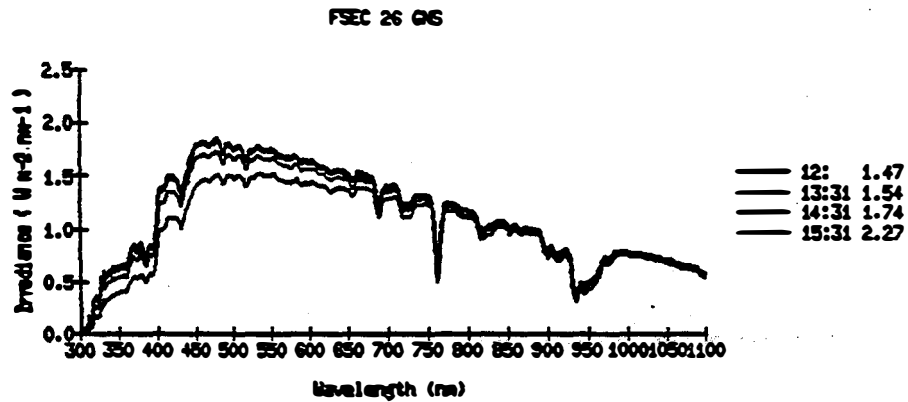
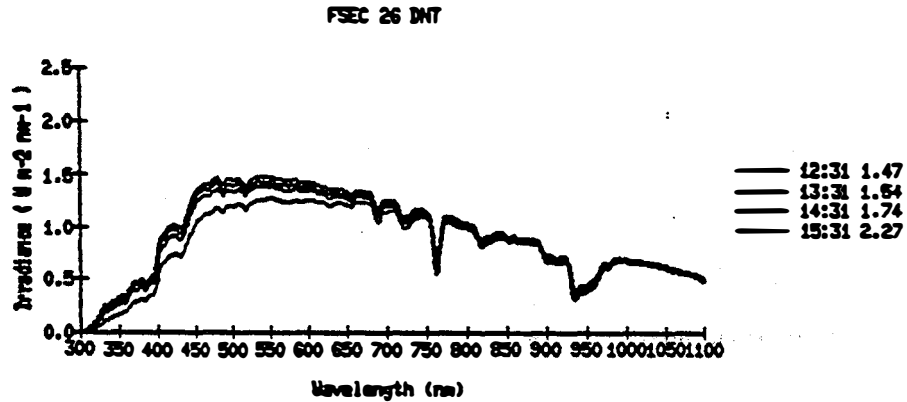
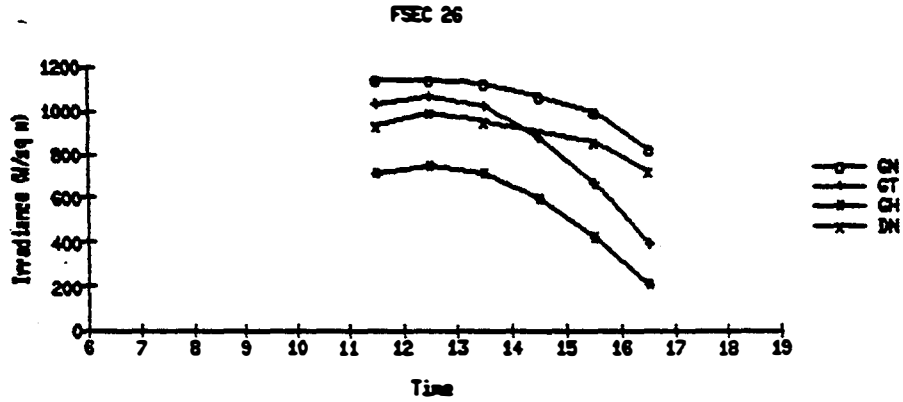
N FSEC88024  
 273 01 24 88 024 172 DN 102 GN  
 Overcast; rain  
 Slides: 0932 G  
 1042 G  
 1134 G  
 1235 G  
 1335 G  
 1427 M (dark)  
 1537 G  
 1634 G



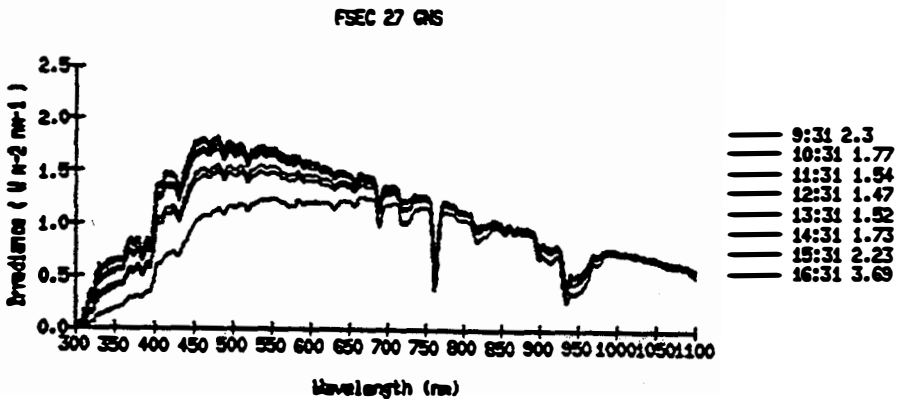
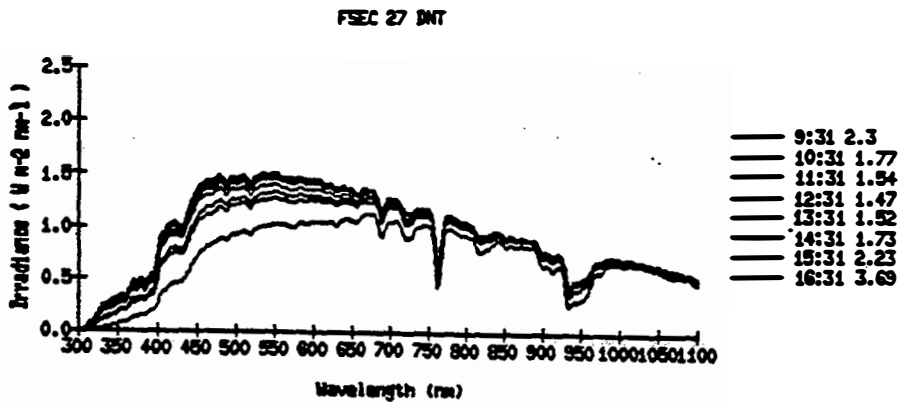
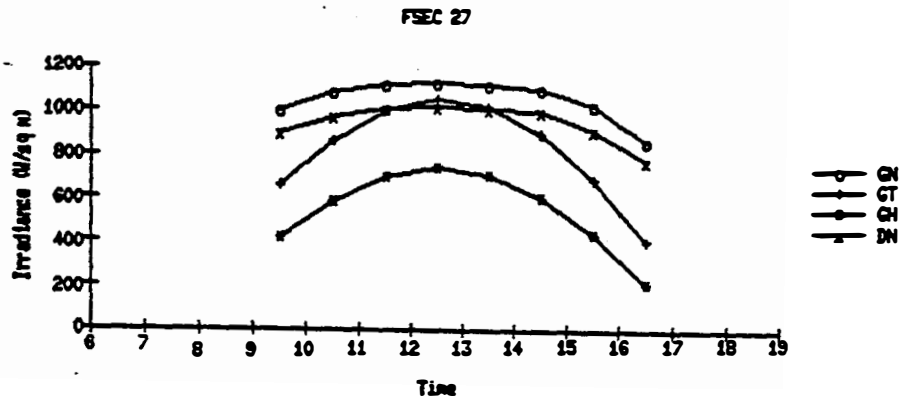


N FSEC88026  
 274 01 26 88 026 172 DW 102 GW  
 0.3 cloud cover at 0816; 0.1 at 1630  
 Temp controllers: 172 102  
                   0815 38 C 39 C  
                   1630 39 C 40 C  
 LSR 172 mV drift error at 1533

Slides: 0938 G  
           1038 H (dark)  
           1138 P "  
           1237 P "  
           1337 P "  
           1437 G  
           1537 G  
           1639 G



N FSEC88027  
 275 01 27 88 027 172 DW 102 GN  
 0.1 cloud cover at 0830; 0 at 1200  
 Temp controllers: 172 38 C and 102 40 C at 1200  
 Slides: 0935 G  
           1034 G  
           1134 M (dark)  
           1234 P -  
           1334 P -  
           1433 G  
           1533 G  
           1633 G

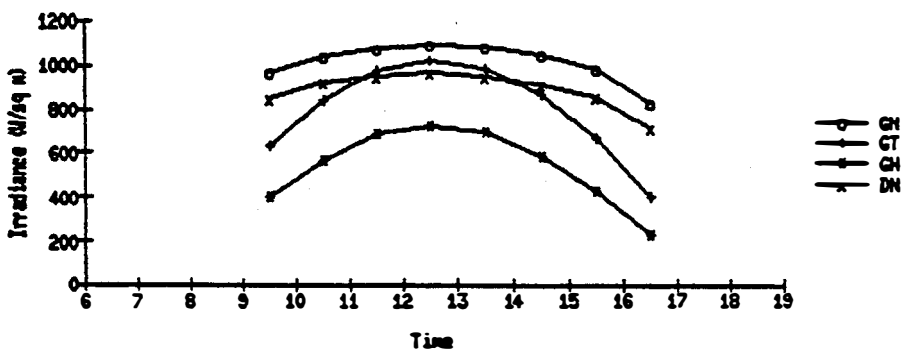




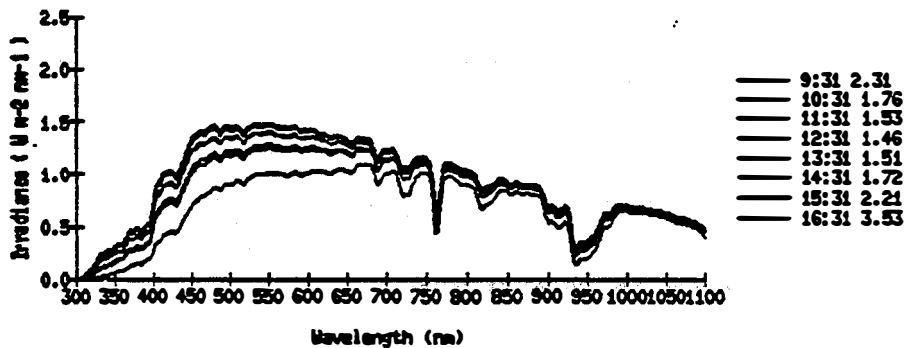
N FSEC88028  
 276 01 28 88 028 172 DN 102 GH  
 0 cloud cover at 0830, 1230, and 1630  
 Temp controllers: 172 102  
 1200 39 C 40 C  
 1600 39 C 40 C

Slides: 0928 G  
 1028 G  
 1128 M (dark)  
 1228 P -  
 1327 P -  
 1427 M -  
 1527 G  
 1627 G

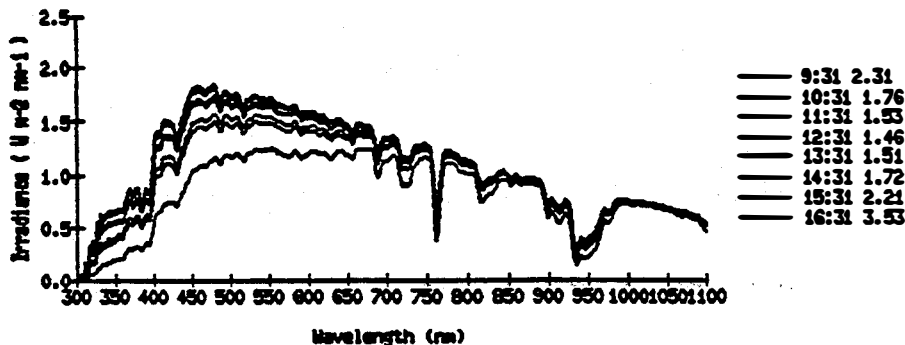
FSEC 28



FSEC 28 DNT



FSEC 28 GNS

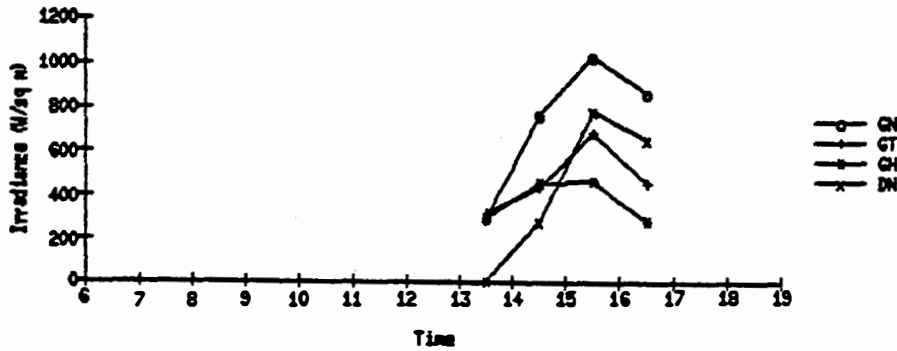


M FSEC88029  
 277 01 29 88 029 172 DN 102 GH  
 0.9 cloud cover at 1330; 0.7 at 1530  
 Temp controllers: 172 102  
 1330 39 C 40 C  
 1530 40 C 41 C

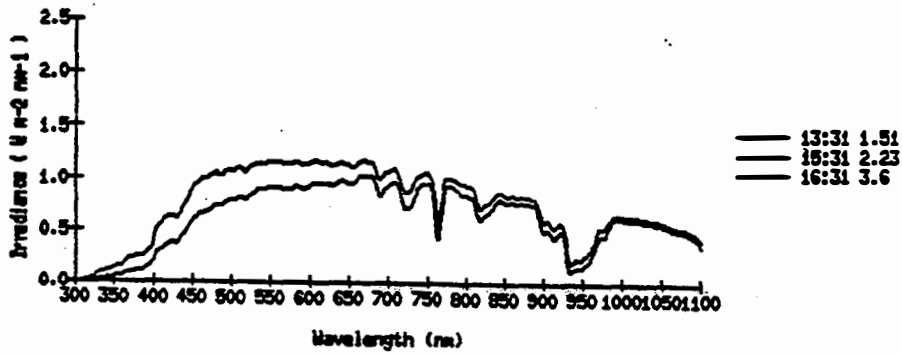
Slides: 0921 G  
 1021 G  
 1120 G  
 1220 G  
 1320 M (dark)  
 1420 G  
 1519 G  
 1619 G

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 Spectral integrals on GH are very close to broadband all day

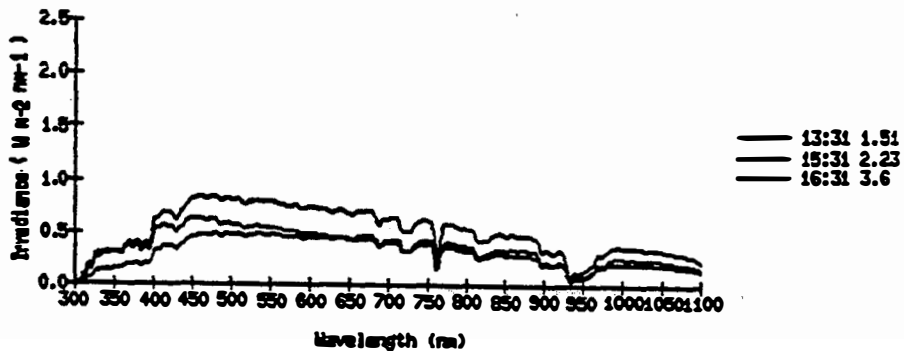
FSEC 29



FSEC 29 DNT

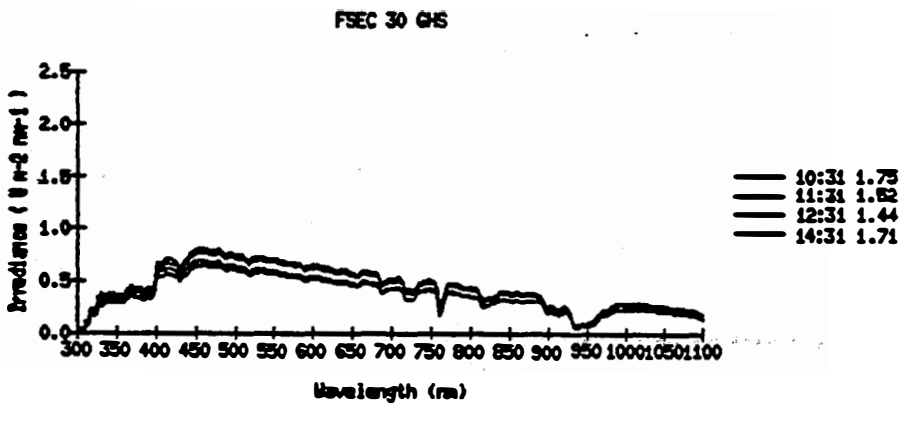
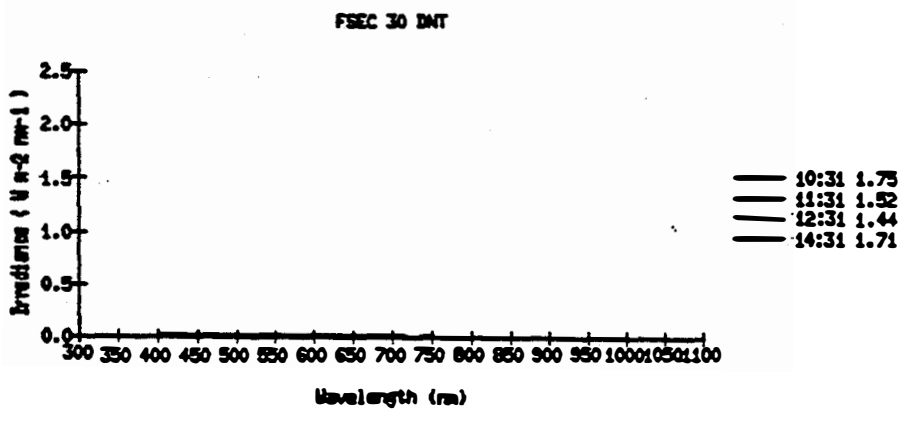
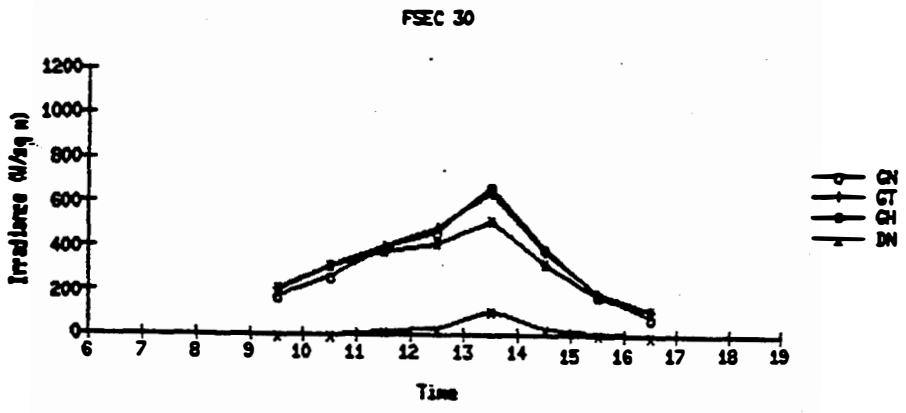


FSEC 29 GS



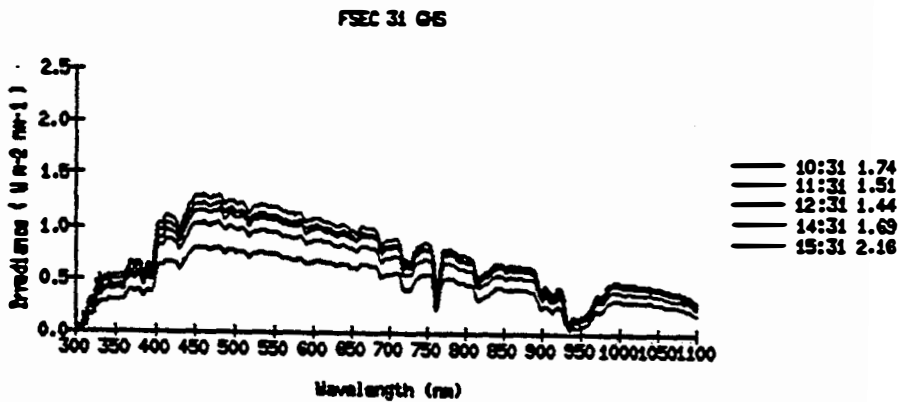
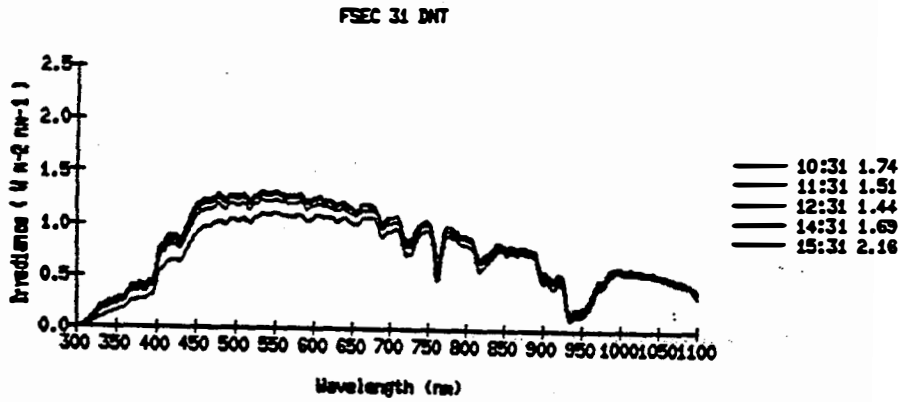
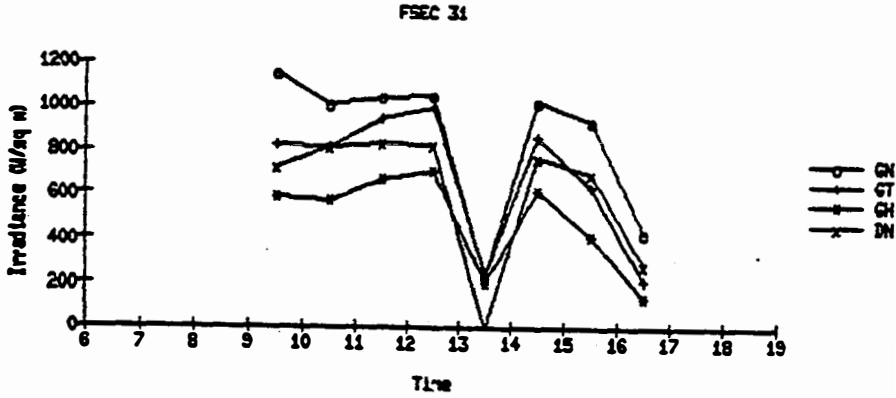


N FSEC88030  
 278 01 30 88 030 172 DN 102 GH  
 Partly cloudy  
 Slides: 0919 M (dark)  
 1019 G  
 1119 G  
 1219 G





N FSEC88031  
 279 01 31 88 031 · 172 DN 102 GH  
 Partly cloudy and clearing  
 No slides

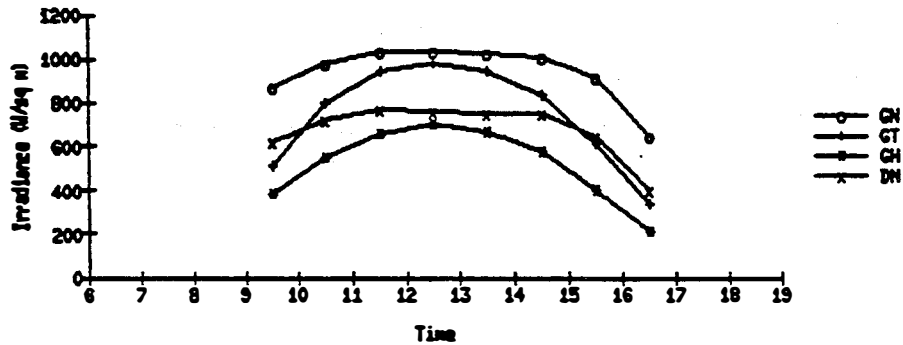




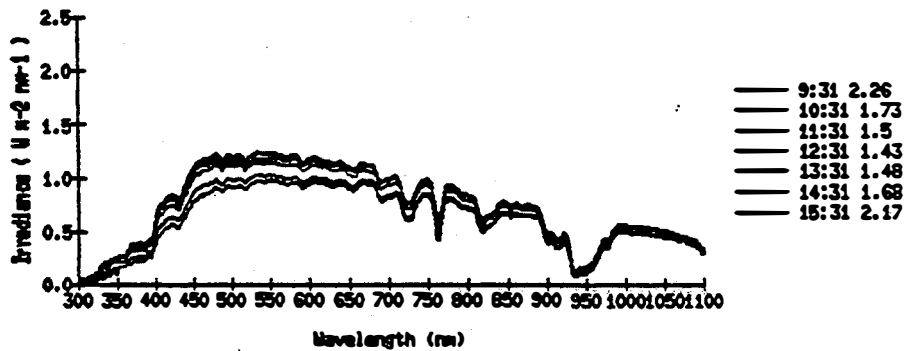
N FSEC88032  
 280 02 01 88 032 172 DN 102 GH  
 0.4 cloud cover at 1130; 0.3 at 2430, with haze  
 Temp controllers: 172 102  
                   1130 41 C 41 C  
                   1430 40 C 40 C  
 LSR 172 mV drift errors at 0931 and 1030  
 Slides: 1456 G  
           1556 G  
           1656 G

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 Brief spikes in UV in DN spectra at 0931 and 1031

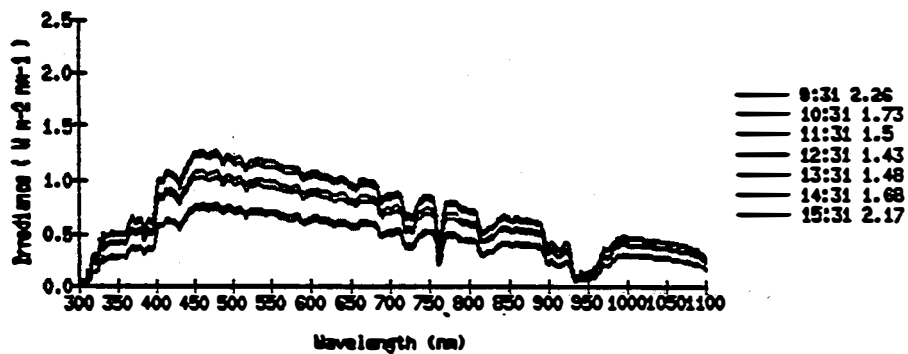
FSEC 32



FSEC 32 DNT



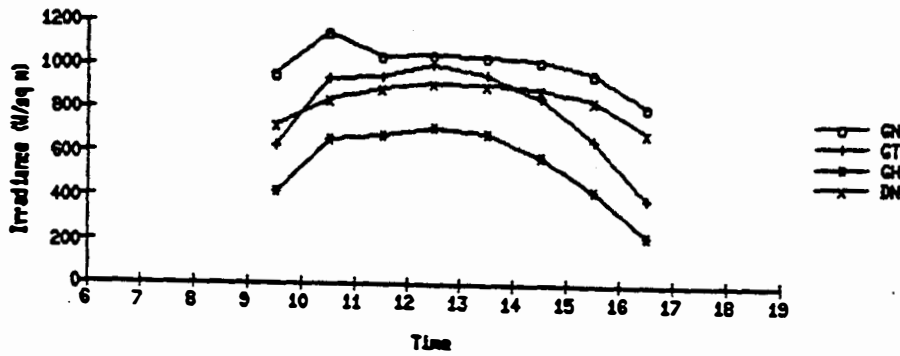
FSEC 32 GS



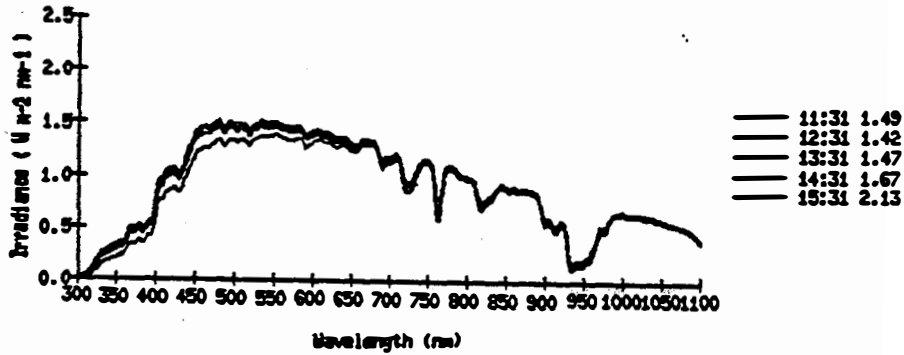
N FSEC88033  
 281 02 02 88 033 172 DN 102 GH  
 0 cloud cover at 0820; 0.8 at 0945; 0 at 1230  
 Temp controllers: 172 102  
                   0820 39 C 40 C  
                   1230 40 C 40 C  
                   1630 40 C 40 C  
 LSR 172 mV drift errors at 1131  
 Slides: 0949 M (dark)  
           1041 M -  
           1140 P -  
           1240 P -  
           1340 P -  
           1439 G  
           1539 G  
           1638 G

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 Very small spike in UV in DN spectrum at 1131

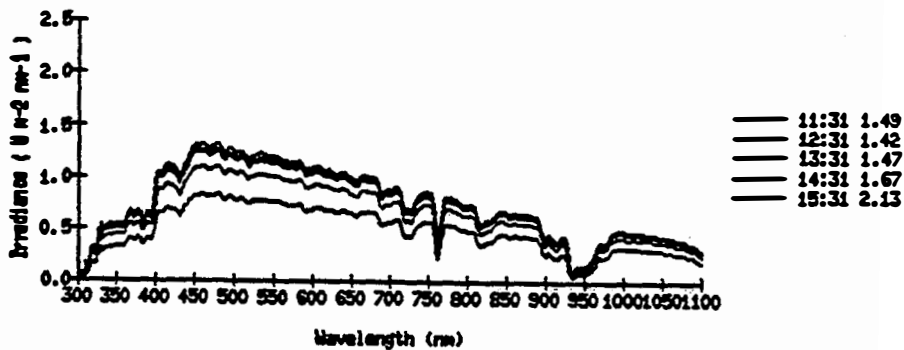
FSEC 33



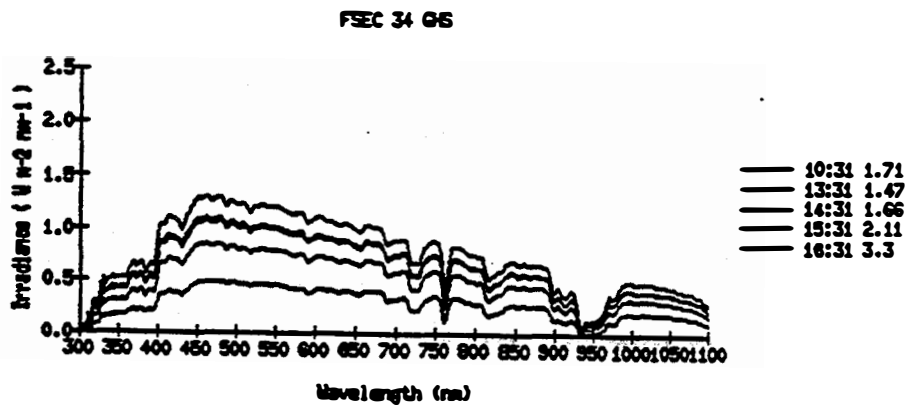
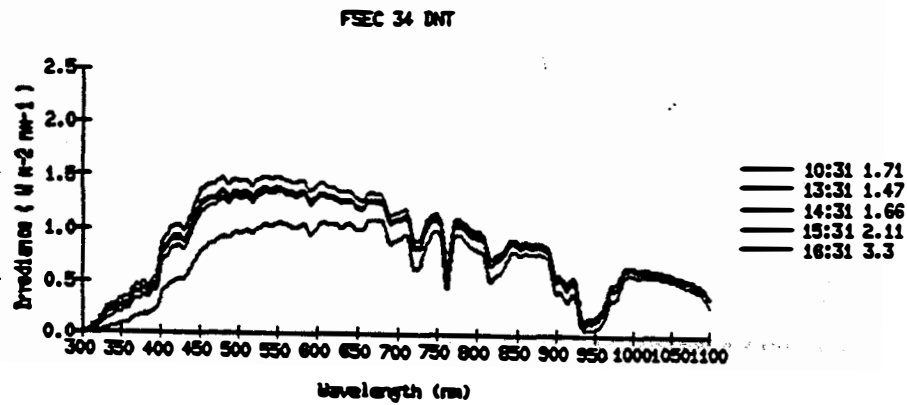
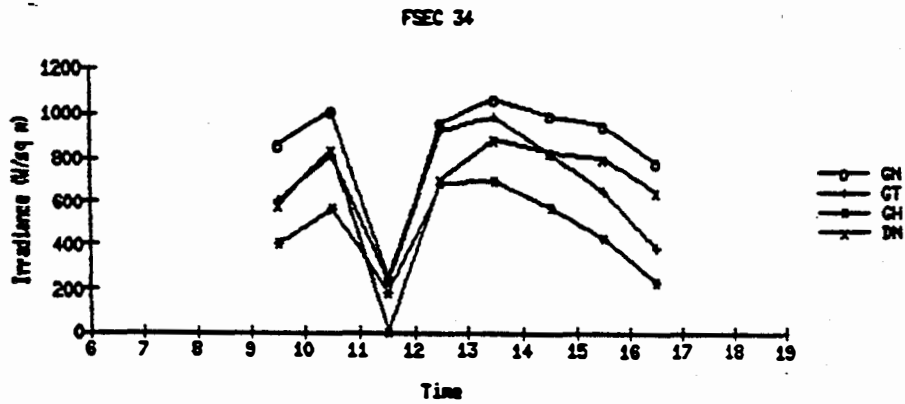
FSEC 33 DNT



FSEC 33 GHS



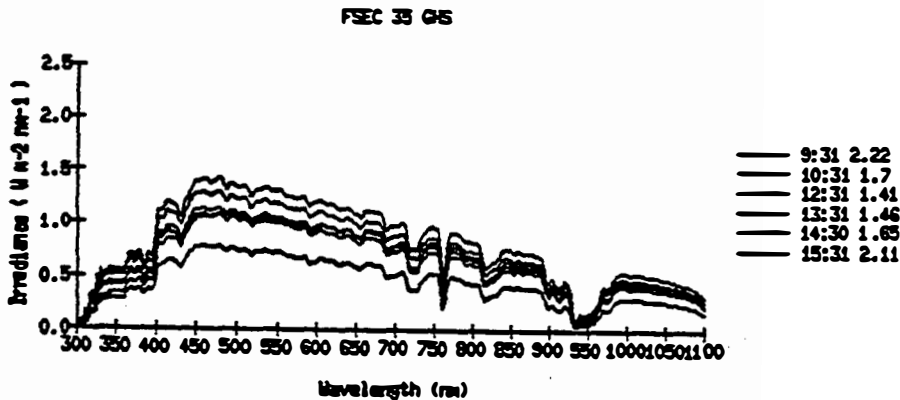
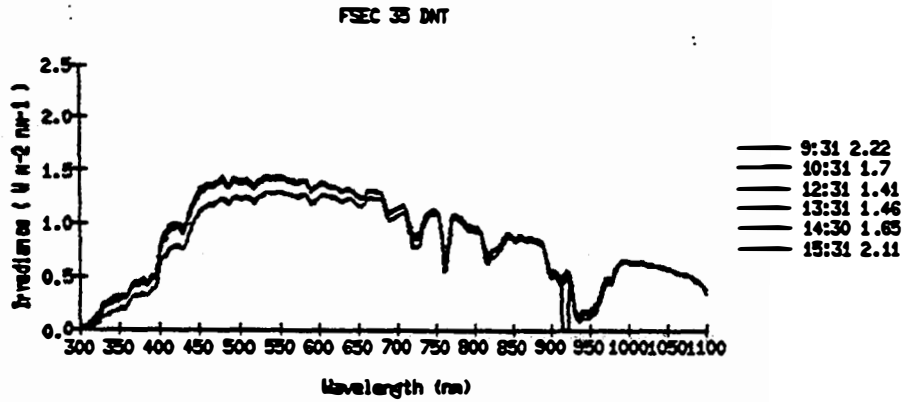
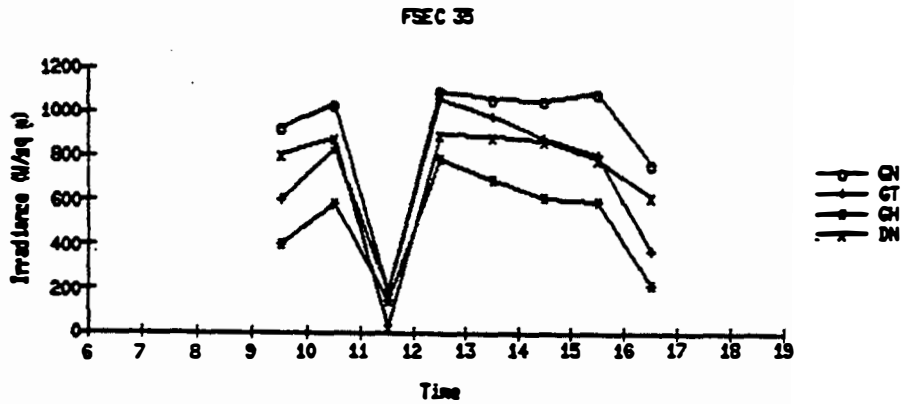
N FSEC88034  
 282 02 03 88 034 172 DN 102 GH  
 0.5 cloud cover at 0830; 0.6 at 1230; 0.5 at 1600  
 Temp controllers: 172 102  
 0830 39 C 39 C  
 1600 40 C 40 C  
 LSR 172 mV drift errors at 1331  
 Slides: 0931 M (water drops)  
 1031 M (dark)  
 1130 G  
 1229 P (dark)  
 1329 P  
 1429 M  
 1528 G  
 1626 G





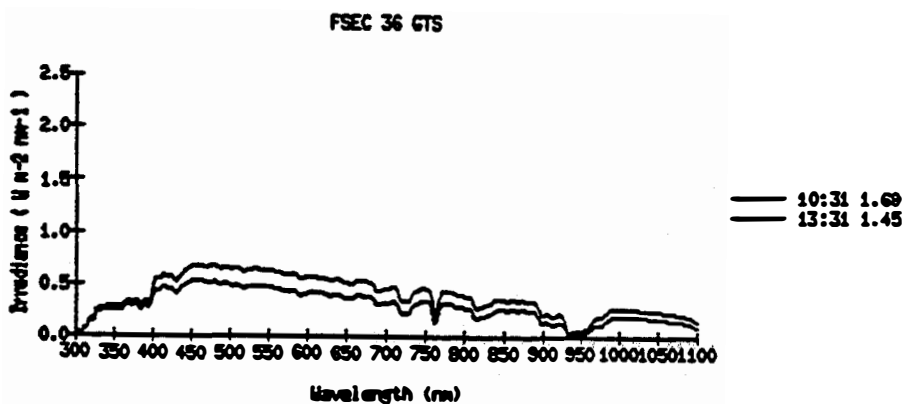
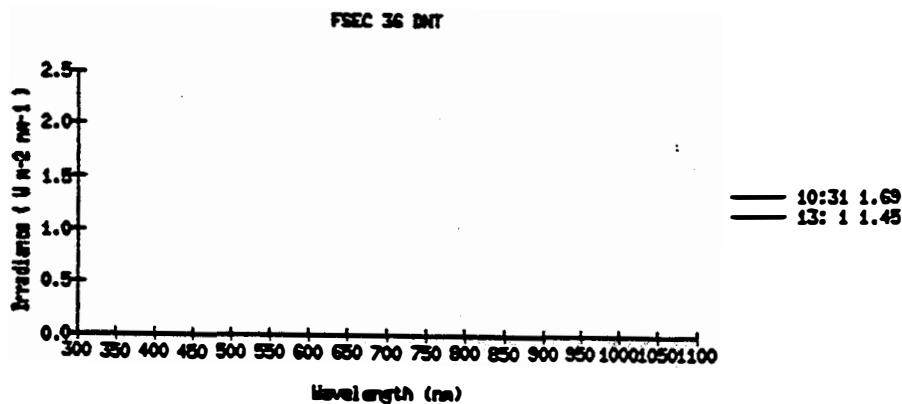
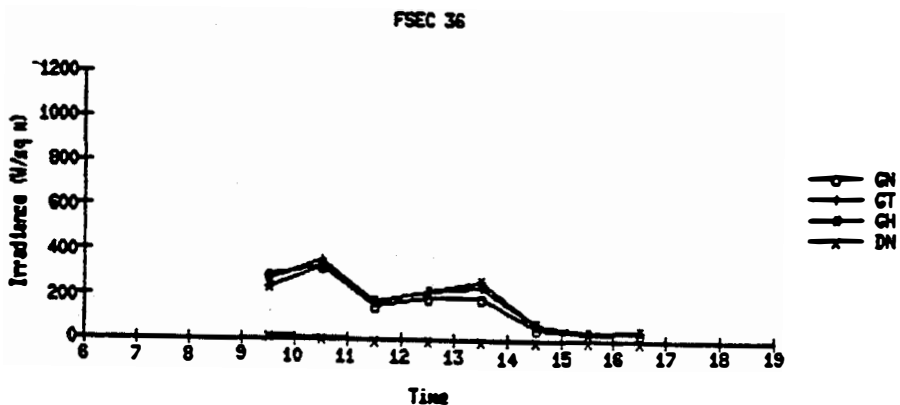
N FSEC88035  
 283 02 04 88 035 172 DN 102 GH  
 0 cloud cover at 0815; 0.4 at 1230; 0.1 at 1700  
 Temp controllers: 172 102  
                   0815 39 C 39 C  
                   1700 40 C 40 C  
 LSR 172 mV drift errors at 0931, 1031, and 1233  
 Slides: 0929 M (water drops)  
           1029 G  
           1128 M (dark)  
           1228 P  
           1328 P  
           1427 G  
           1527 G  
           1626 G

-----  
 Very brief spike in UV in DN spectra at 0931  
 Missing data in DN spectrum at 1031; noise in UV





N FSEC88036  
 284 02 05 88 036 172 DN 102 GT  
 1.0 cloud cover at 0930, 1230, and 1530  
 Temp controllers: 172 38 C and 102 39 C at 0930  
 Slides: 0919 G  
           1019 M (dark)  
           1118 G  
           1218 G  
           1318 G  
           1418 G  
           1517 G  
           1617 G

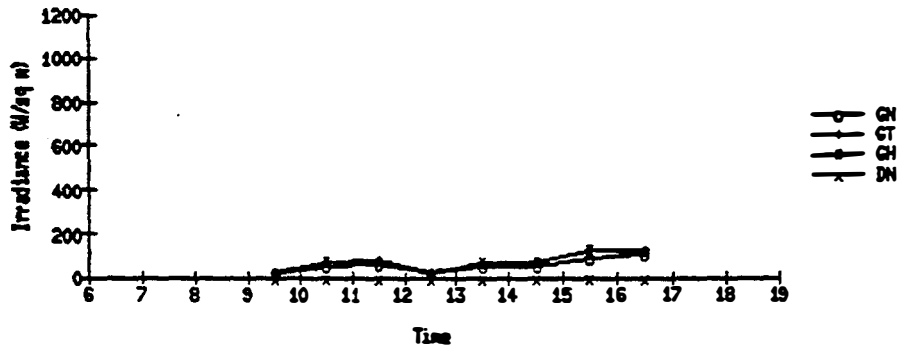




N FSEC88037  
 285 02 06 88 037 172 DN 102 GT  
 Overcast; rain  
 Slides: 0912 G (water drops)  
           1012 G  
           1112 G  
           1212 G  
           1311 P (black)  
           1411 P  
           1511 G  
           1611 G

-----  
 No spectra

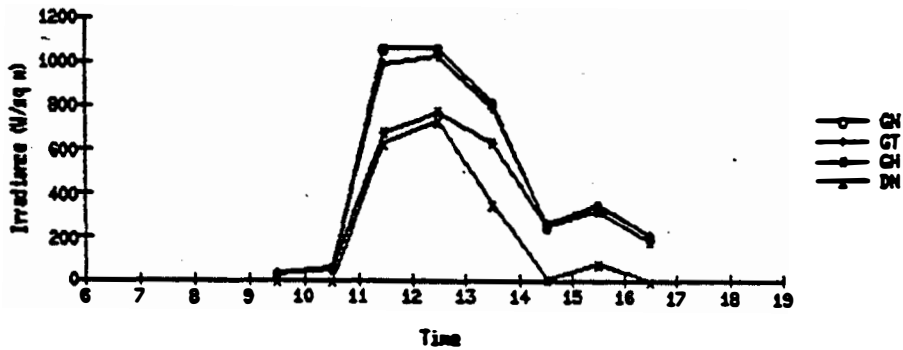
FSEC 37



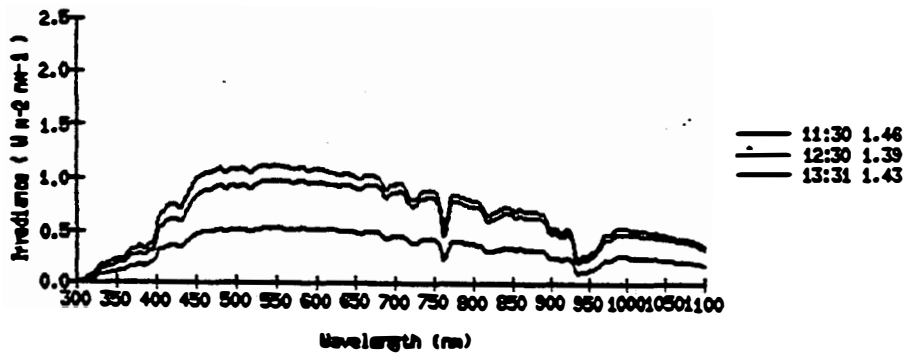


N FSEC88038  
 286 02 07 88 038 172 DW 102 GT  
 Partly cloudy  
 LSR 172 mV drift errors at 1131 and 1231  
 Slides: 0908 G  
 1008 G  
 1108 M (dark)  
 1208 P -  
 1308 P -  
 1408 M -  
 1508 G  
 1608 G

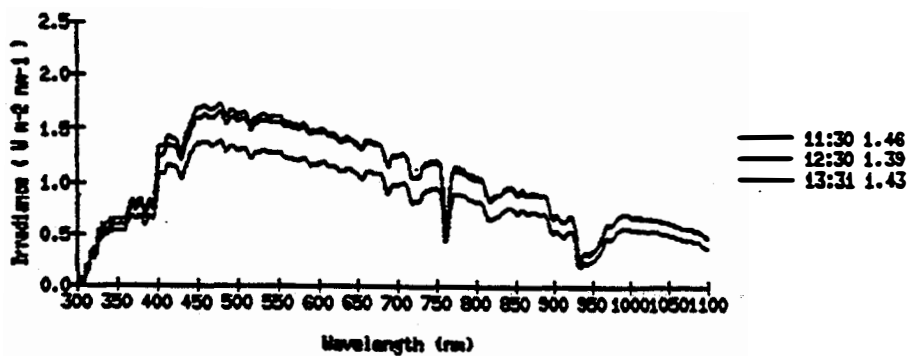
FSEC 38



FSEC 38 DNT



FSEC 38 GTS

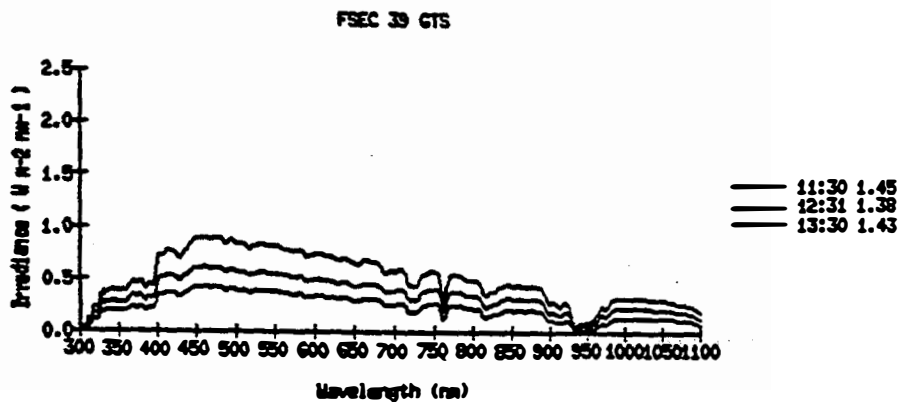
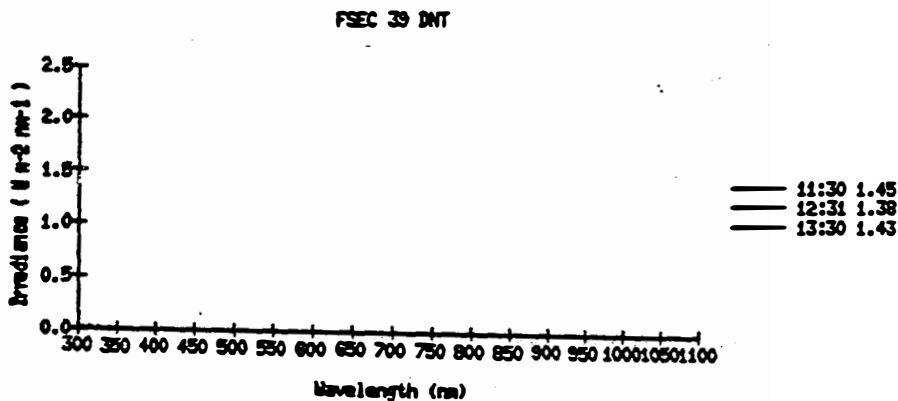
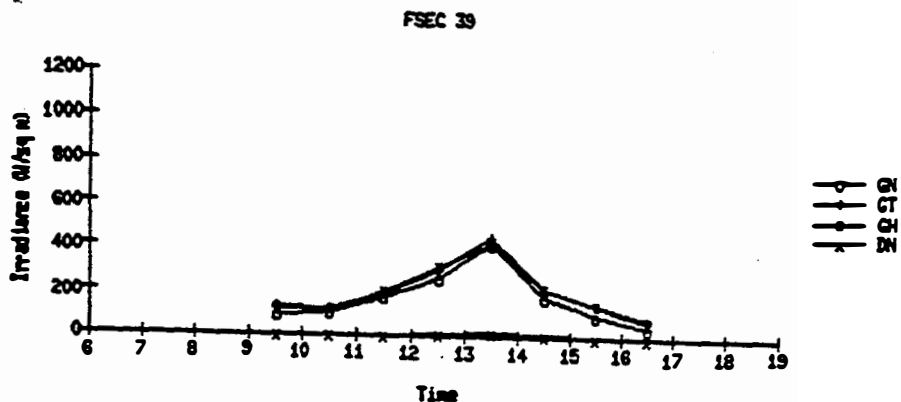






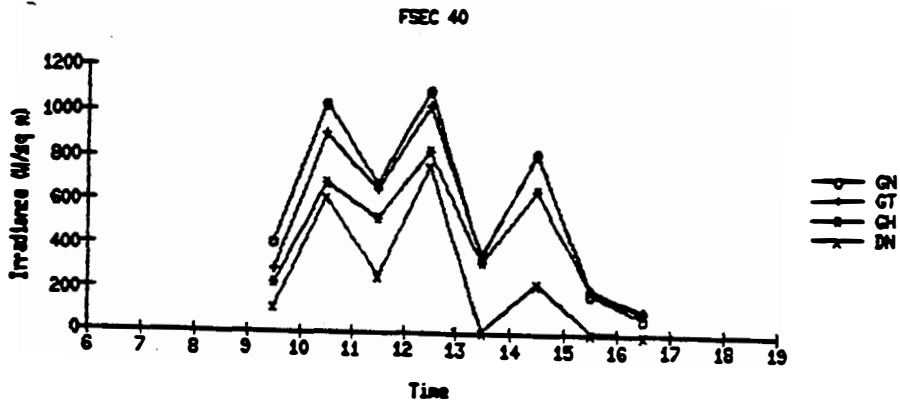
N FSEC88039  
 287 02 08 88 039 172 DW 102 GT  
 Overcast; rain  
 LSR 172 mV drift error at 1331  
 Slides: 0940 M (water drops; dark)  
           1040 P (black)  
           1140 G (water drops)  
           1240 G -  
           1339 G -  
           1439 G -  
           1539 G  
           1639 G

-----  
 DN spectrum bad at 1331 (no direct beam)

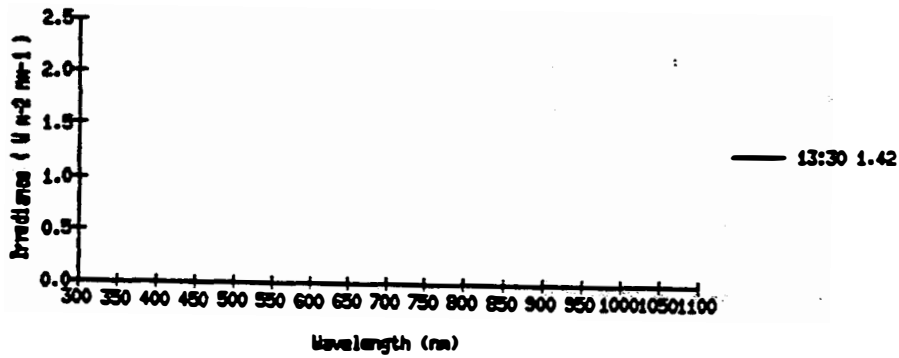


N FSEC88040  
 288 02 09 88 040 172 DN 102 GT  
 1.0 cloud cover at 0830, 1230, and 1630  
 Temp controllers: 172 102  
                   0830 38 C 39 C  
                   1230 38 C 39 C

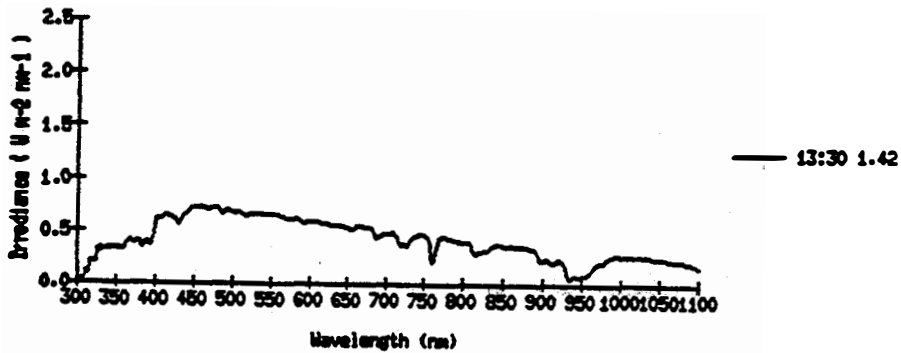
Slides: 0933 G  
           1033 G  
           1133 M (dark)  
           1233 P  
           1332 G  
           1432 M (dark)  
           1532 G  
           1632 G



FSEC 40 BNT

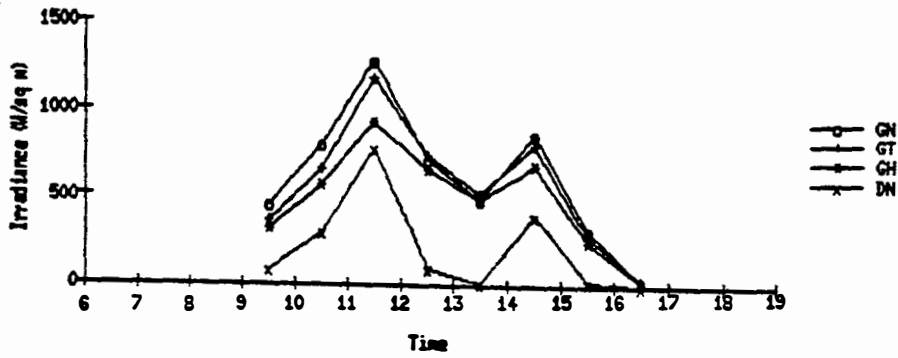


FSEC 40 GTS

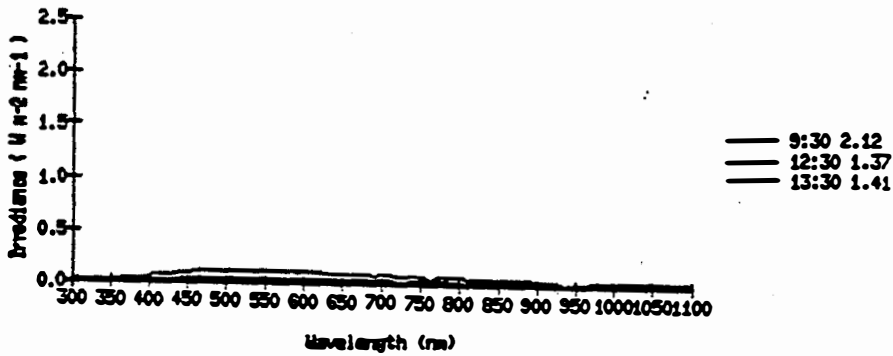


N FSEC88041  
 289 02 10 88 041 172 DN 102 GT  
 0.7 cloud cover at 0830; 0.8 at 1200; 1.0 at 1700  
 LSR 172 mV drift error at 0932  
 Slides: 0926 M (dark)  
 1026 M .  
 1126 M .  
 1226 M .  
 1325 M .  
 1425 G .  
 1525 G .  
 1625 G .

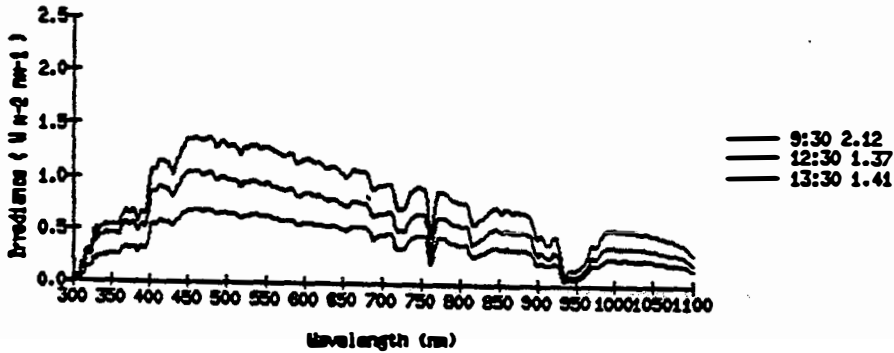
FSEC 41



FSEC 41 DNT



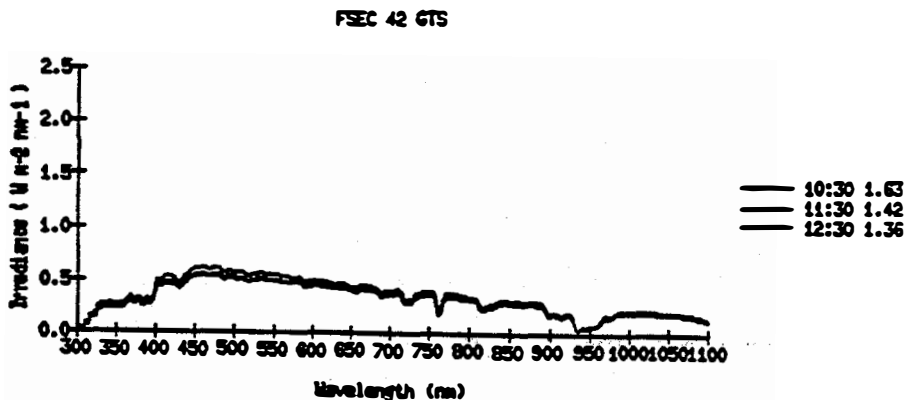
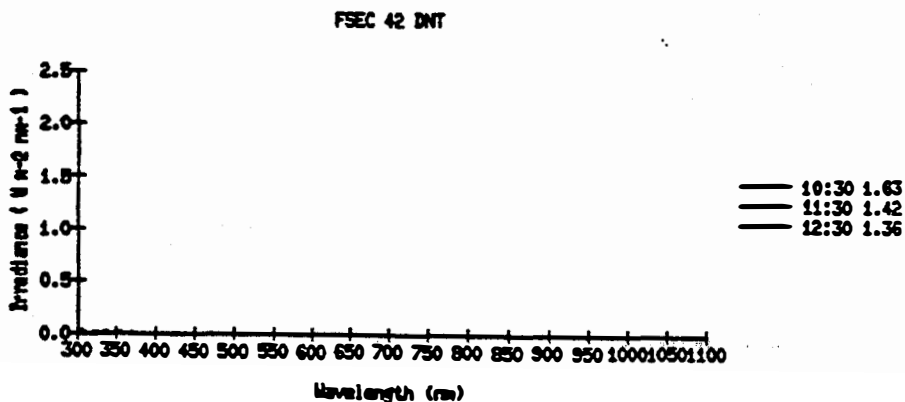
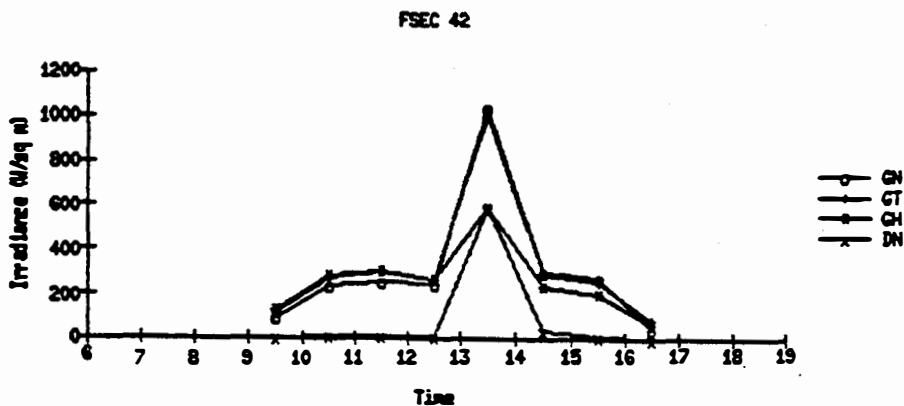
FSEC 41 GTS





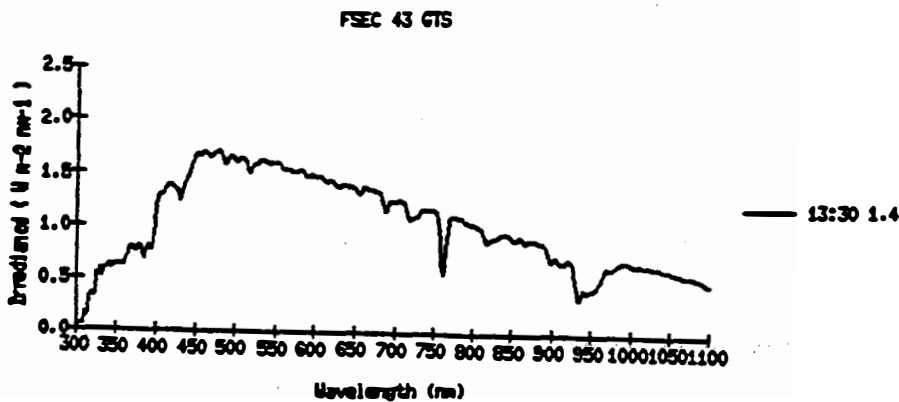
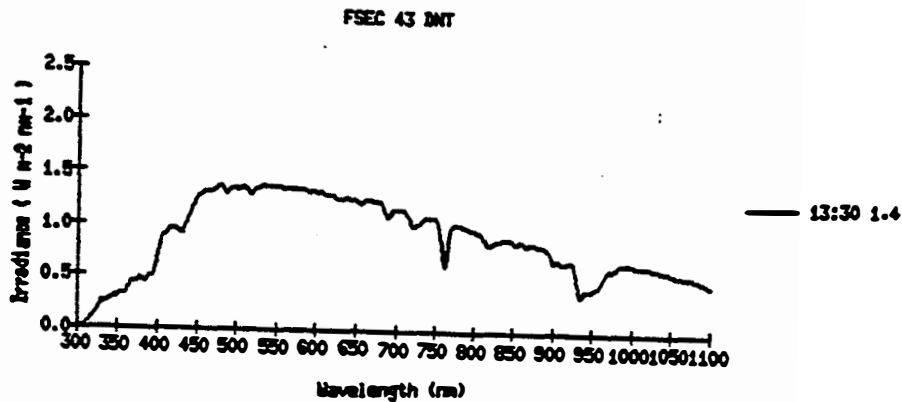
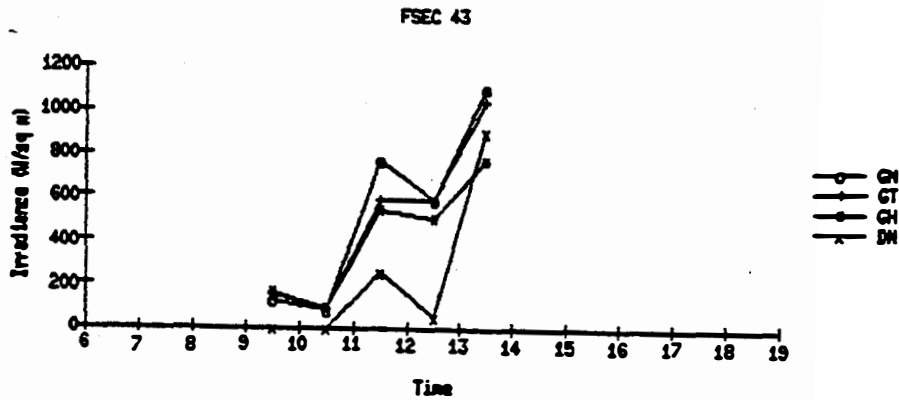
N FSEC88042  
 290 02 11 88 042 172 DN 102 GT  
 1.0 cloud cover at 0830 and 1230; 0.9 at 1600  
 Temp controllers: 172 102  
                   0830 38 C 39 C  
                   1600 39 C 40 C  
 LSR 172 mV drift error at 1132  
 Slides: 0920 G (water drops)  
           1019 M        . (dark)  
           1119 G       .  
           1219 G       .  
           1319 G       .  
           1419 G       .  
           1518 G       .  
           1618 G       .

-----  
 DN spectrum at 1132 is bad (no direct beam)



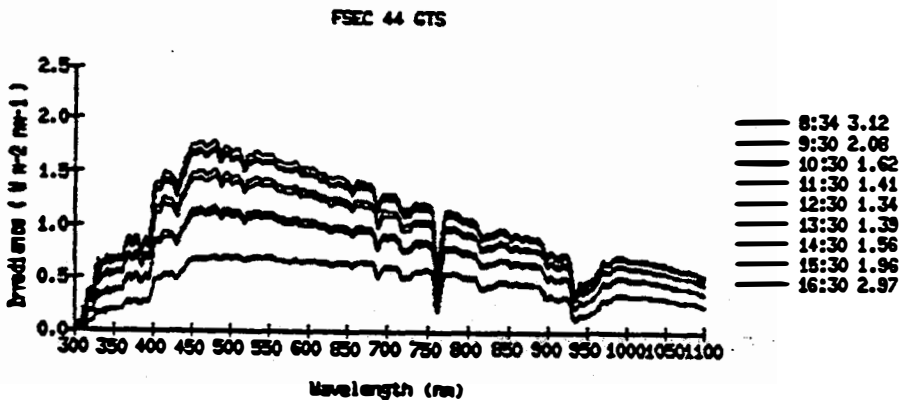
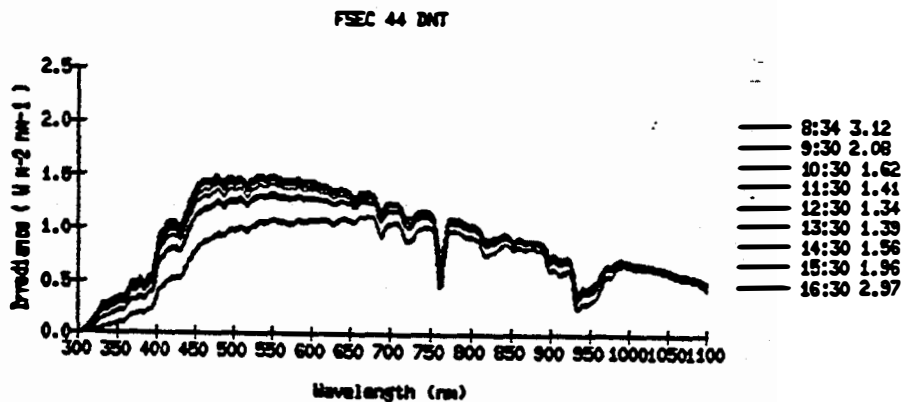
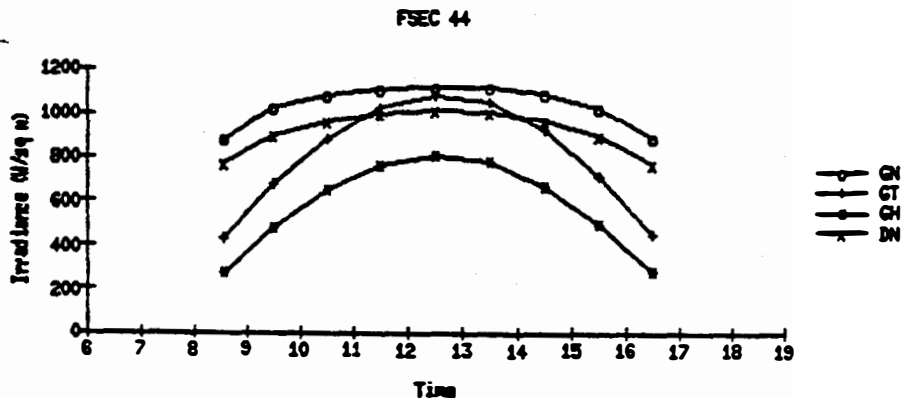
N FSEC88043  
 291 02 12 88 043 172 DH 102 GT  
 1.0 cloud cover at 0830; 0.2 at 1400  
 Temp controllers: 172 102  
 0830 38 C 39 C  
 1400 39 C 40 C

Slides: 0932 M (condensation)  
 1032 M (dark)  
 1132 P -  
 1232 M -  
 1332 P -  
 1431 M -  
 1531 G  
 1631 G



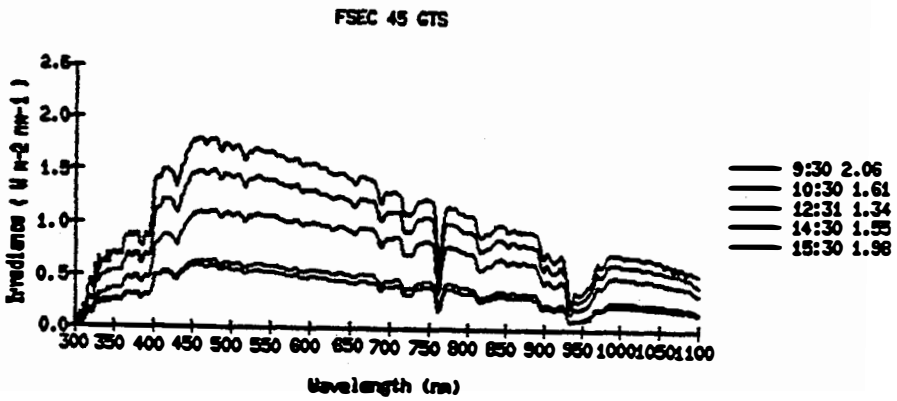
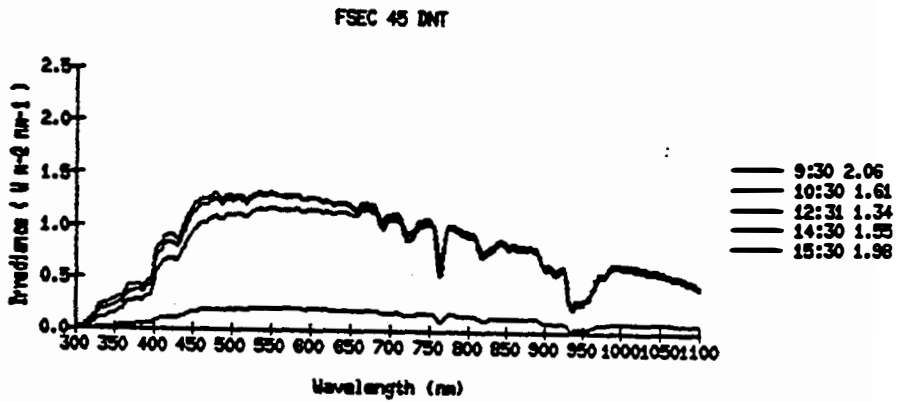
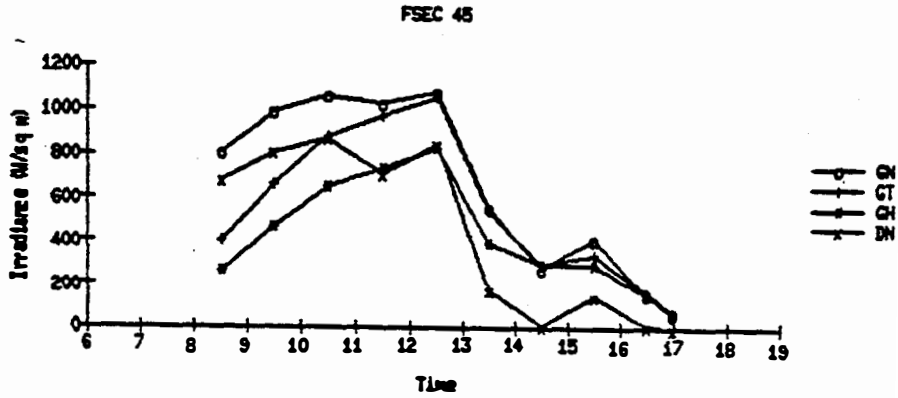


N FSEC88044  
 292 12 13.88 044 172 DN 102 GT  
 Clear  
 LSR 172 and 102 mV drift errors at 0837  
 Slides: 0826 G  
 0926 G  
 1026 G  
 1126 P (dark)  
 1226 P -  
 1326 P -  
 1436 M -  
 1525 G  
 1625 G





N FSEC88045  
 293 02 14 88 045 172 DW 102 GT  
 Partly cloudy  
 Slides: 0821 G  
           0921 G  
           1021 G  
           1121 P (dark)  
           1221 P  
           1320 P  
           1420 G  
           1520 G  
           1620 G

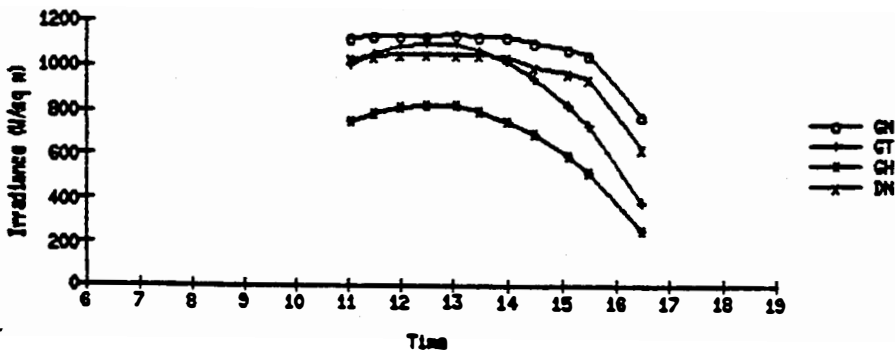




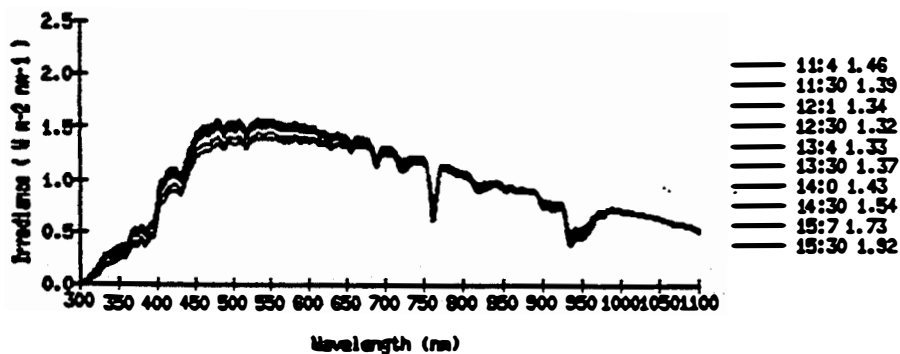
N FSEC88047  
 294 02 16 88 047 172 DN 102 GN  
 0 cloud cover at 1100 and 1630  
 Temp controllers: 172 102  
 1200 40 C 41 C  
 1630 40 C 41 C

No slides

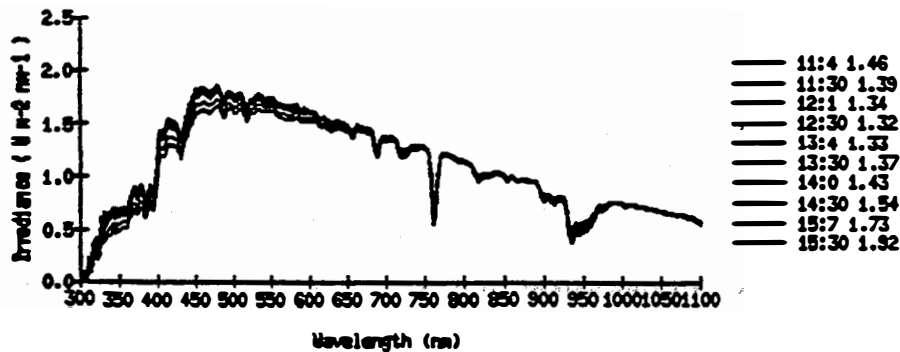
FSEC 47



FSEC 47 DNT



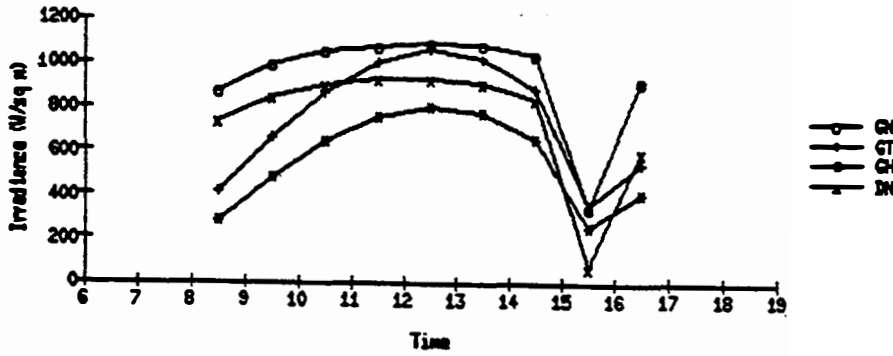
FSEC 47 GS



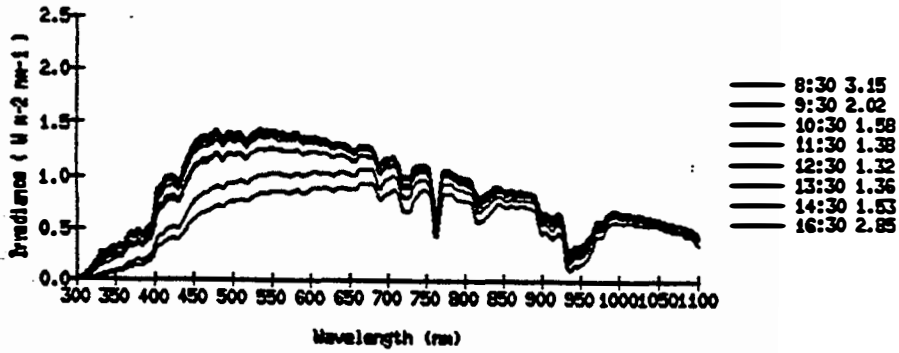


N FSEC88048  
 295 02 17 88 048 172 DH 102 GT  
 0.1 cloud cover at 0830 and 1230; 0.6 at 1630  
 Temp controllers: 172 102  
 0830 39 C 40 C  
 1230 39 C 40 C  
 Slides: 1333 P (dark)  
 1433 M  
 1532 G  
 1632 G

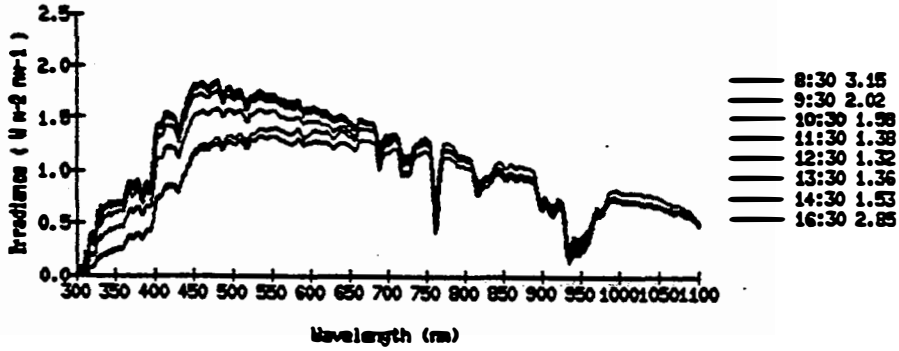
FSEC 48



FSEC 48 DNT

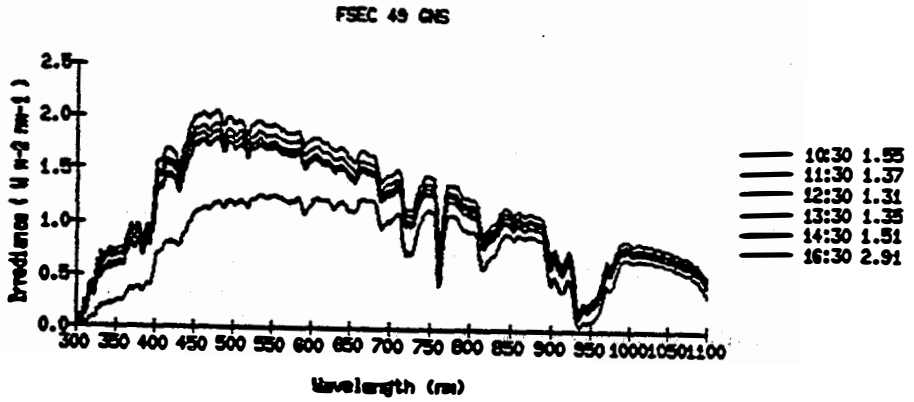
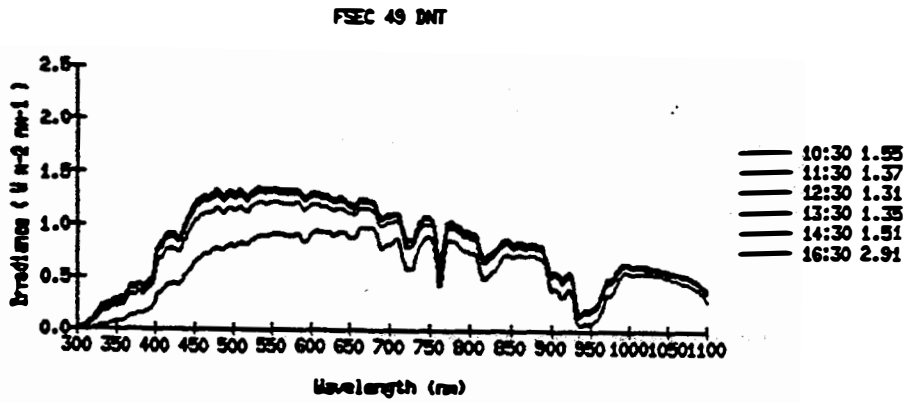
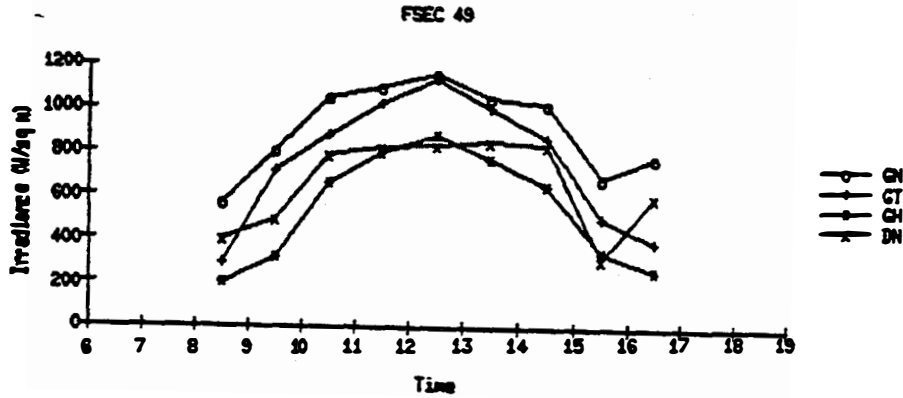


FSEC 48 GIS





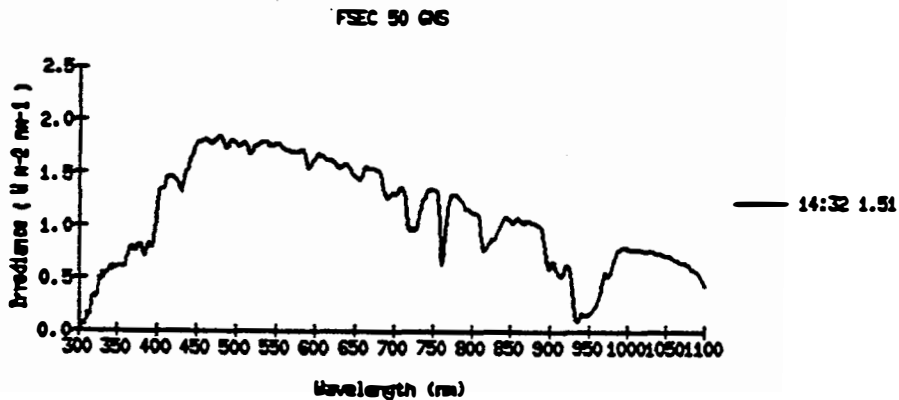
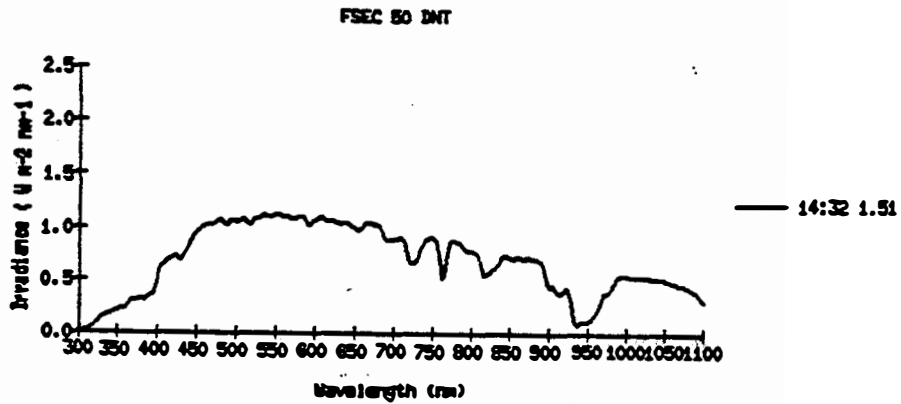
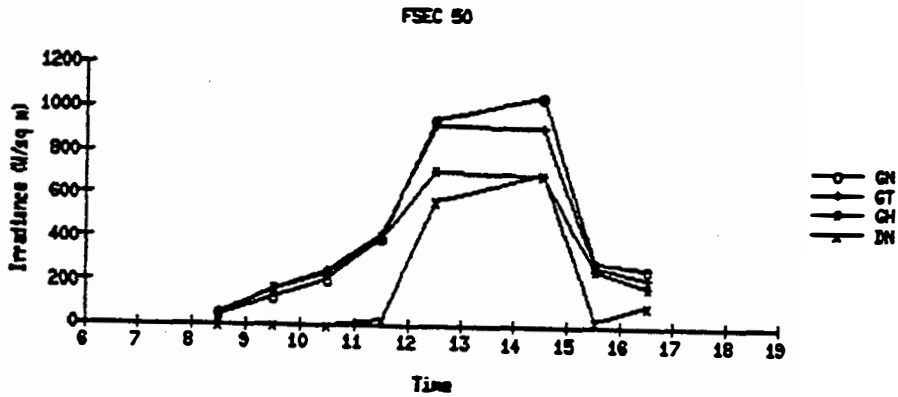
N FSEC88049  
 296 02 18 88 049 172 DH 102 GH  
 0.2 cloud cover at 0830; 0.5 at 1230; 0.3 at 1630  
 Temp controllers: 172 102  
                   0830 39 C 40 C  
                   1230 41 C 41 C  
                   1630 40 C 41 C  
 Slides: 0925 G (water drops)  
           1024 M "  
           1124 M (dark)  
           1224 P "  
           1324 P "  
           1423 M "  
           1523 G "  
           1633 G "



N FSEC88050  
 297 02 19 88 050 172 DN 102 GN  
 1.0 cloud cover at 0830; 0.8 at 1300; 0.9 at 1630  
 Temp controllers: 172 102  
                   0830 40 C 40 C  
                   1300 41 C 41 C  
                   1630 41 C 40 C

Slides: 0820 G  
           0933 M (dark)  
           1020 G  
           1119 G  
           1219 P (dark)  
           1319 P  
           1418 G  
           1518 G  
           1634 G

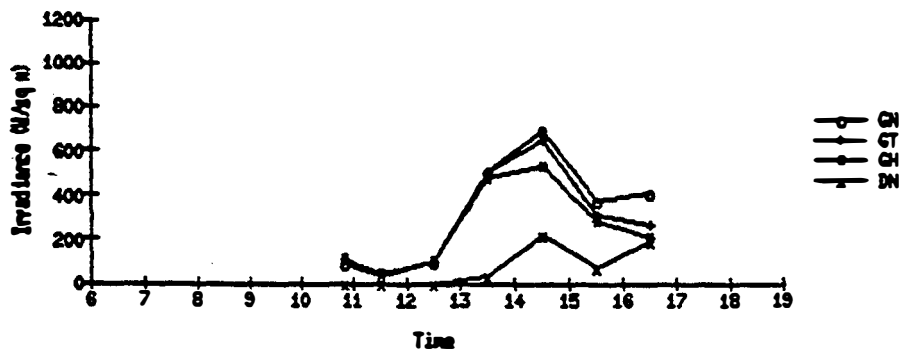
VAX down on 2 20 88



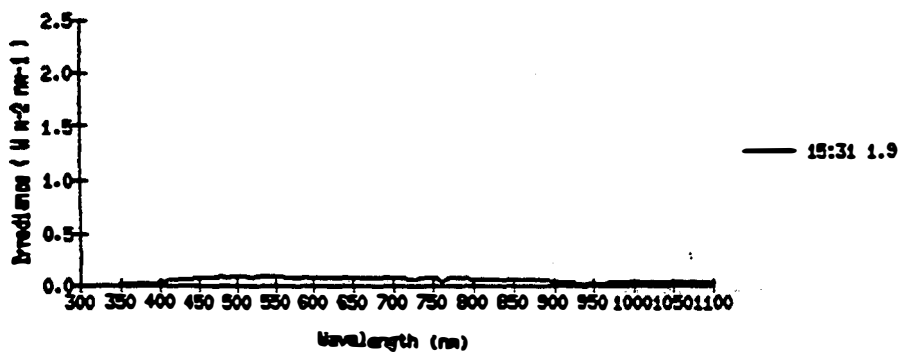


N FSEC88052  
 298 02 21 88 052 172 DH 102 GN  
 Overcast to partly cloudy  
 No slides

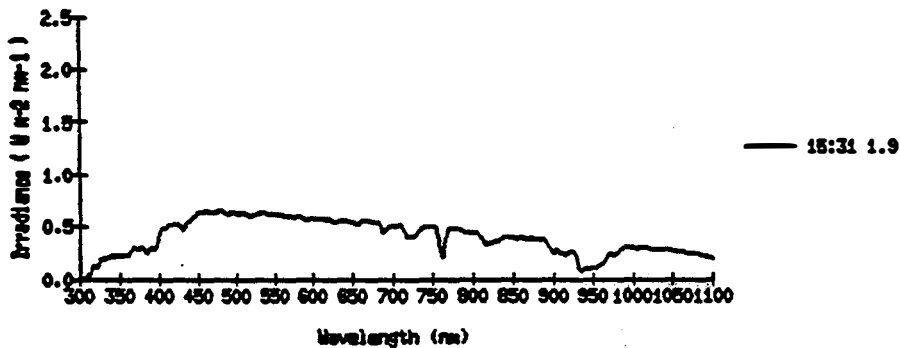
FSEC 52



FSEC 52 DNT

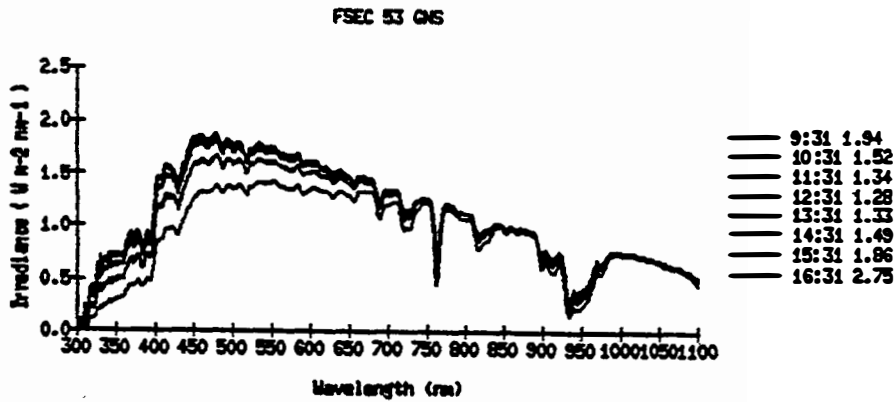
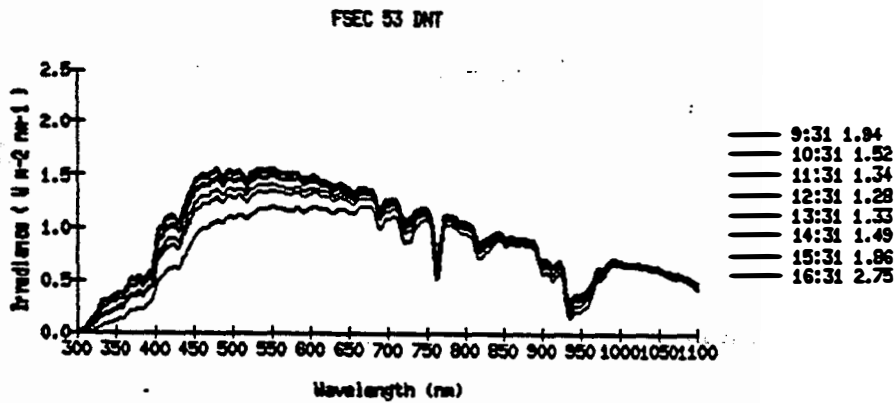
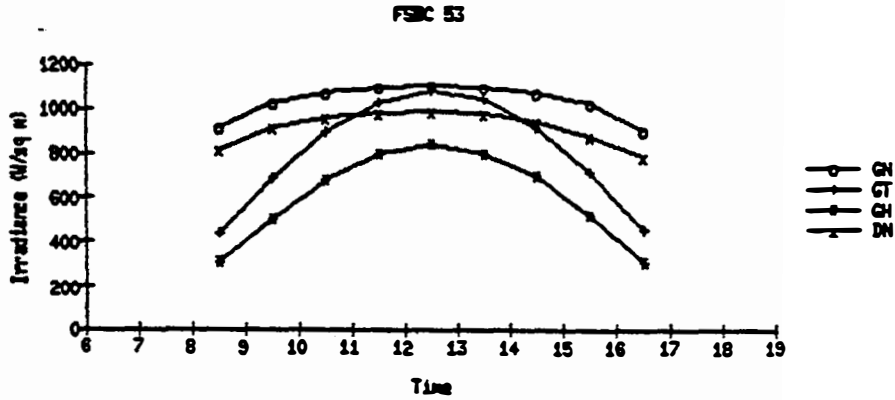


FSEC 52 GNS



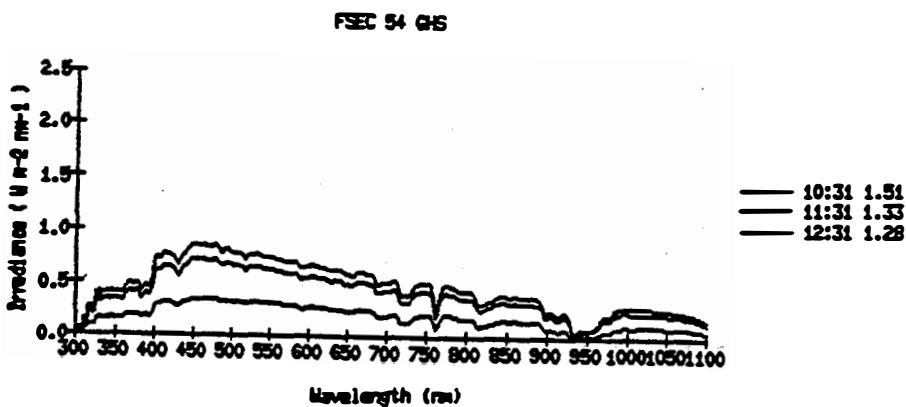
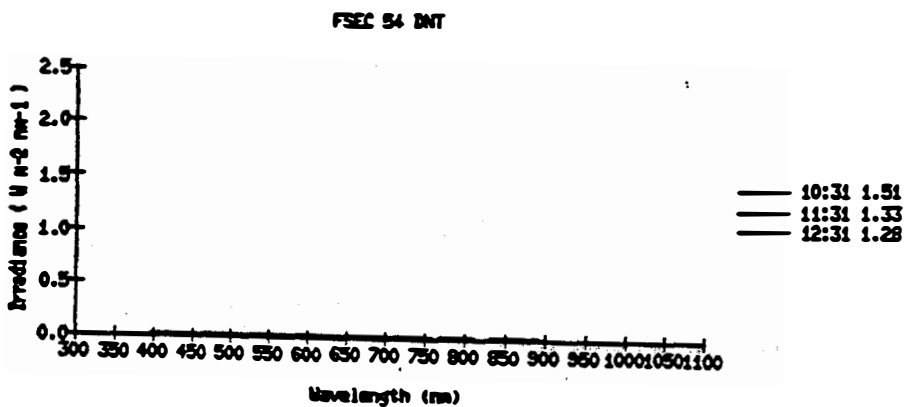
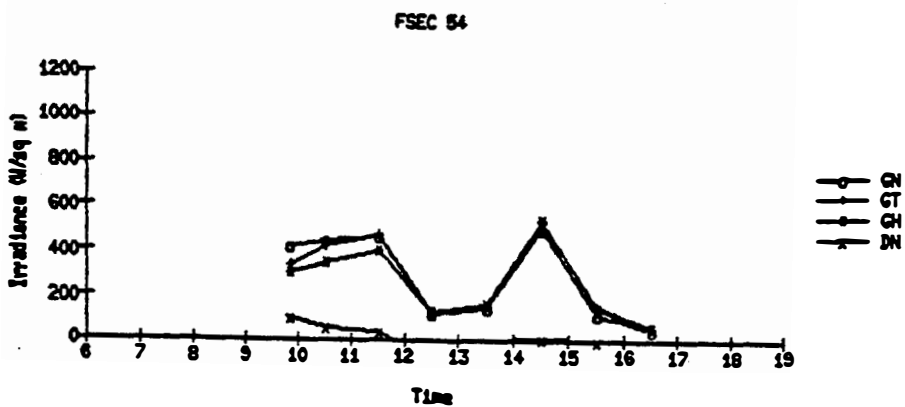


N FSEC88053  
 299 02 22 88 053 172 DN 102 GN  
 0 cloud cover at 0830 and 1200; 0.1 at 1600  
 Temp controllers: 172 102  
                   0830 38 C 39 C  
                   1200 39 C 39 C  
                   1600 40 C 40 C  
 Slides: 1049 P (dark)  
           1149 P -  
           1237 P -  
           1349 P -  
           1448 G  
           1545 G  
           1648 G

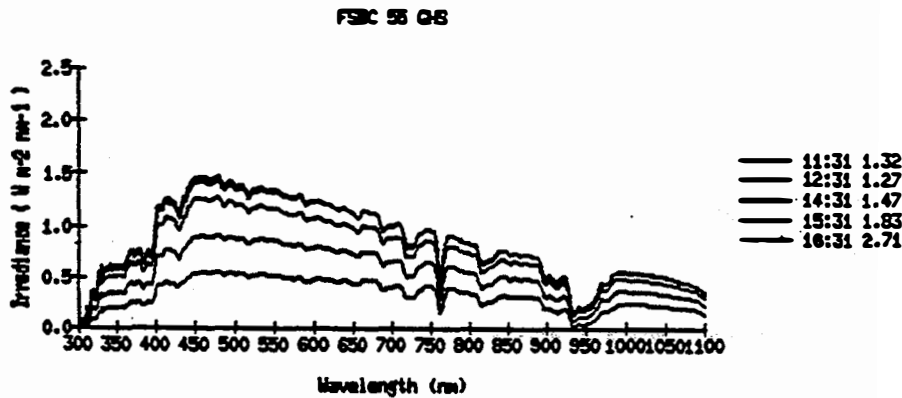
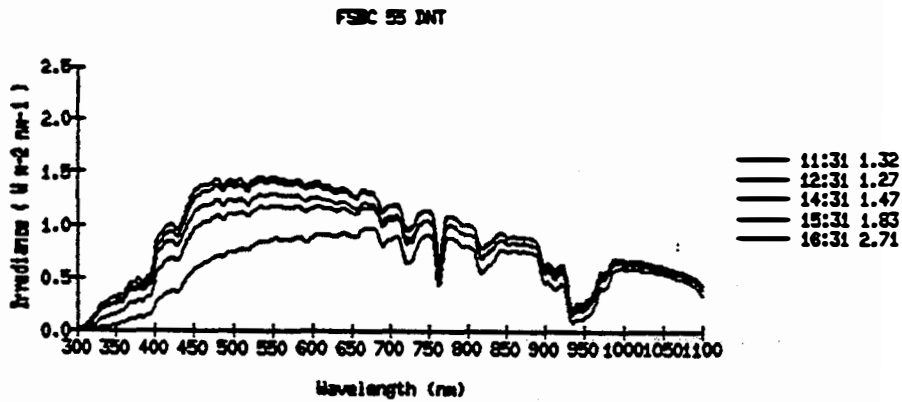
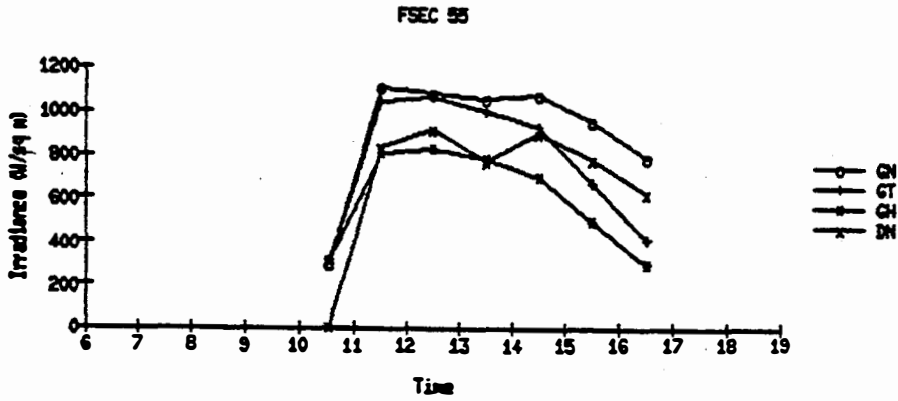




N FSEC88054  
 300 02 23 88 054 172 DN 102 GH  
 0.7 cloud cover at 1000; 1.0 at 1300; rain in afternoon  
 Temp controllers: 172 102  
 1000 40 C 40 C  
 1300 40 C 41 C  
 Slides: 0843 G (water drops)  
 0943 G  
 1042 G  
 1142 P (dark)  
 1236 G  
 1341 G (water drops)  
 1441 G -  
 1541 G -  
 1638 G -



N FSEC88055  
 301 02 24 88 055 172 DN 102 GH  
 1.0 cloud cover at 1000; 0.1 at 1530  
 Temp controllers: 172 102  
 1000 40 C 40 C  
 1530 40 C 40 C  
 No slides

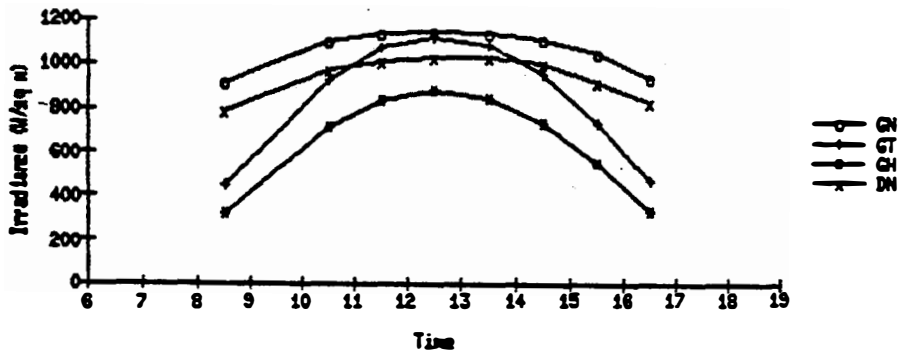




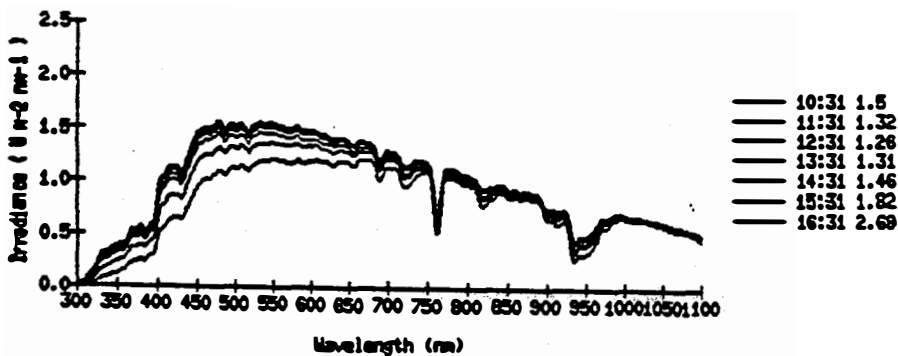
N FSEC88056  
 302 02 25 88 056 172 DW 102 GH  
 Clear at 0815 and 1230  
 Temp controllers: 172 102  
                   0815 38 C 39 C  
                   1230 39 C 40 C  
                   1600 39 C 40 C

No slides

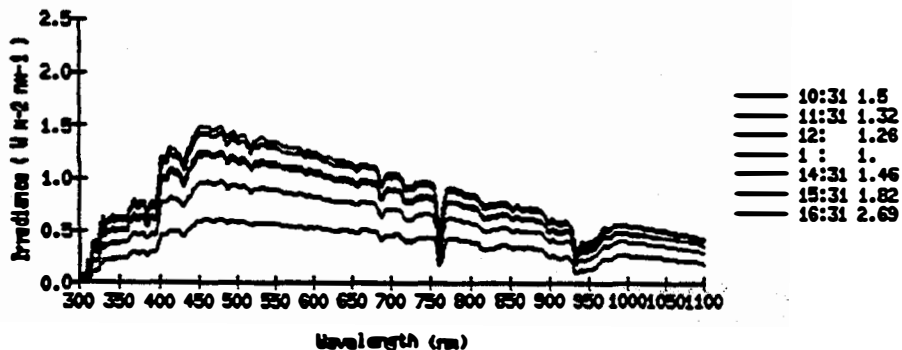
FSEC 56



FSEC 56 DNT



FSEC 56 GMS

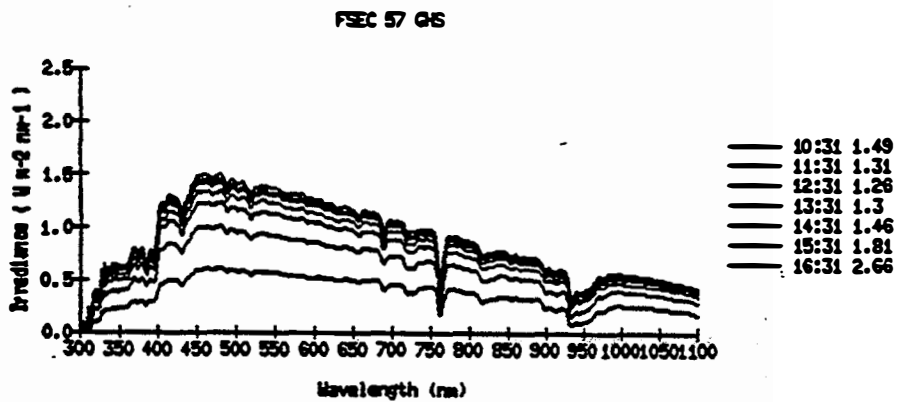
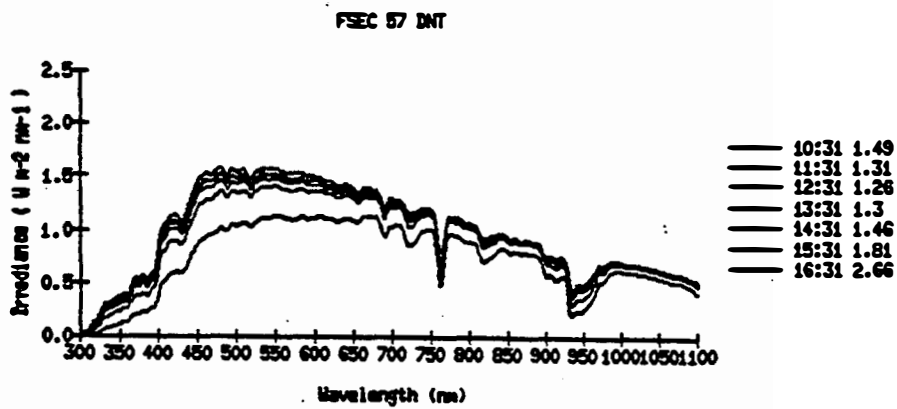
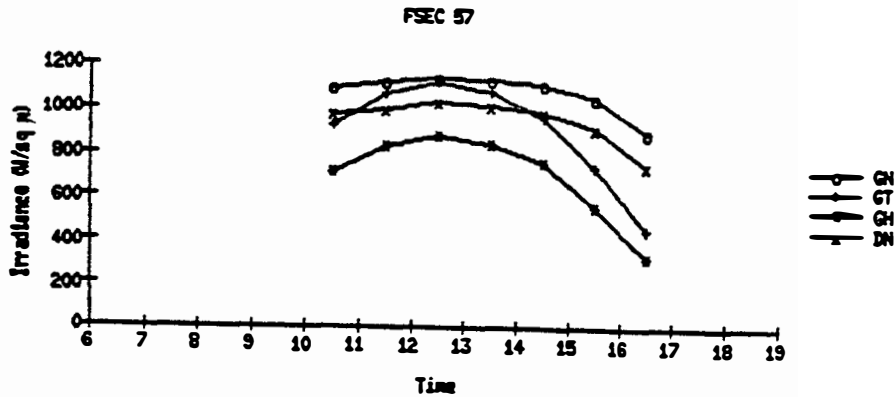






N FSEC88057  
 303 02 26 88 057 172 DH 102 GH  
 0 cloud cover at 0815; 0.1 at 1300 and 1630  
 Temp controllers: 172 102  
 0815 38 C 39 C  
 1300 39 C 40 C  
 1630 39 C 40 C

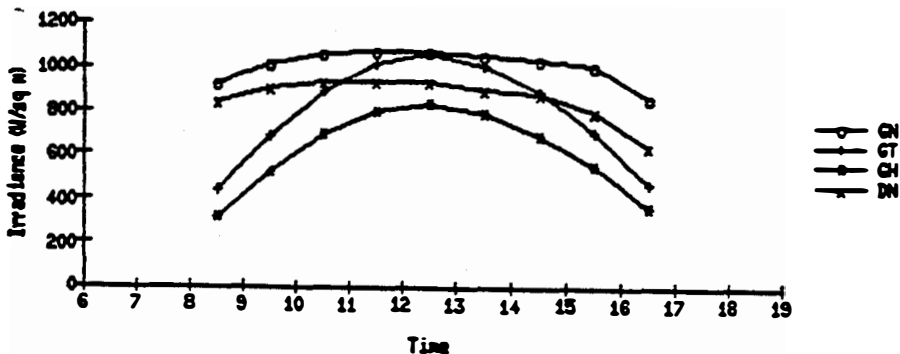
No slides



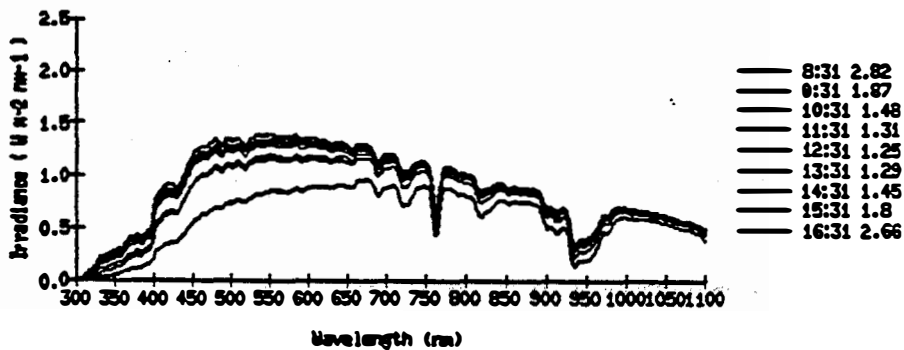


N FSEC88058  
 304 02 27 88 058 172 DN 102 GH  
 Clear until about 1500, then partly cloudy  
 LSR 172 mV drift errors at 0832  
 Slides: 0834 G (water drops)  
 0937 G -  
 1037 G -  
 1137 P (dark)  
 1237 P -  
 1336 P -  
 1426 G -  
 1536 G -  
 1636 G -

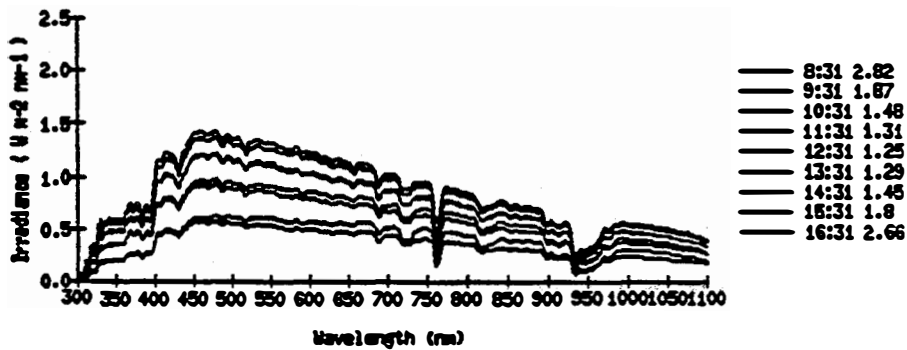
FSEC 58



FSEC 58 DNT



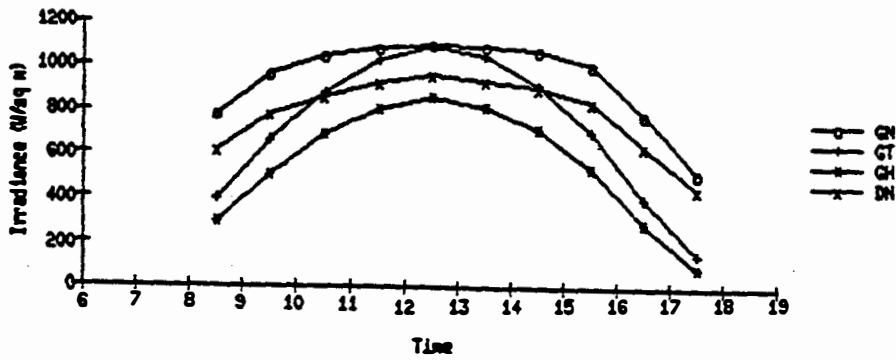
FSEC 58 GS



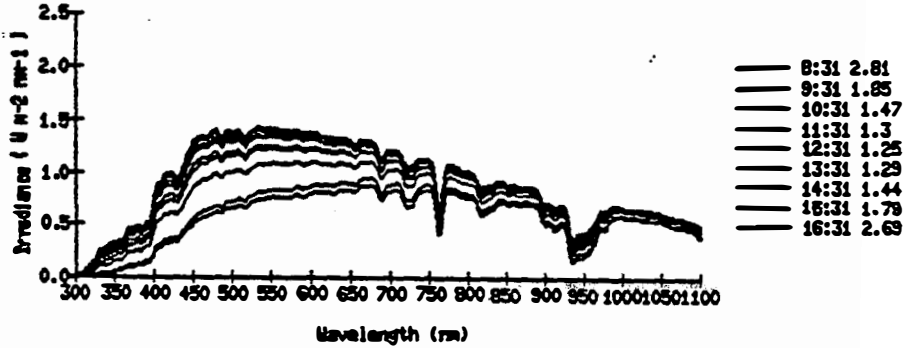


N FSEC88059  
 305 02 28.88 059 172 DN 102 GH  
 Clear  
 LSR 172 mV drift errors at 0932  
 Slides: 0833 G  
 0933 G  
 1033 M (dark)  
 1133 P  
 1233 P  
 1333 P  
 1433 M  
 1533 G  
 1632 G  
 1732 G

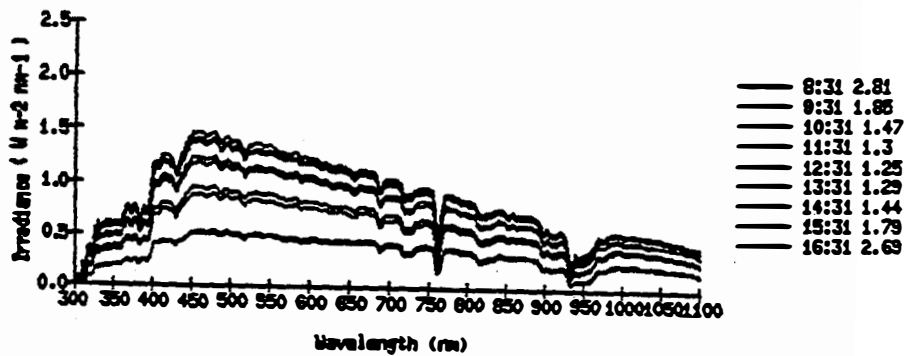
FSEC 89



FSEC 89 DNT

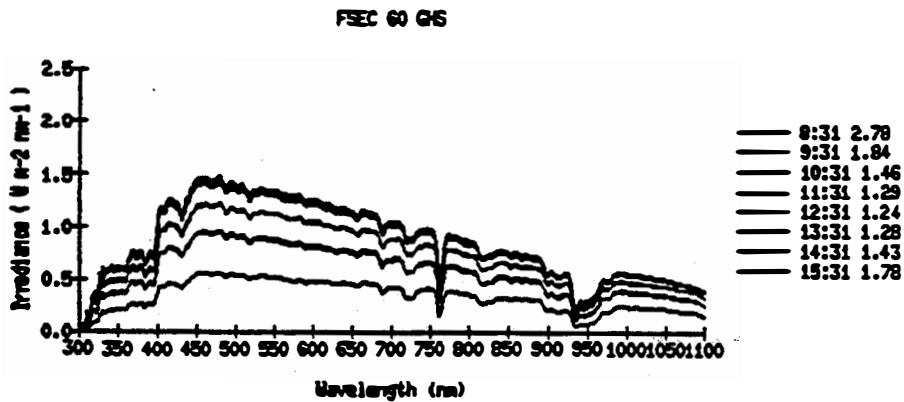
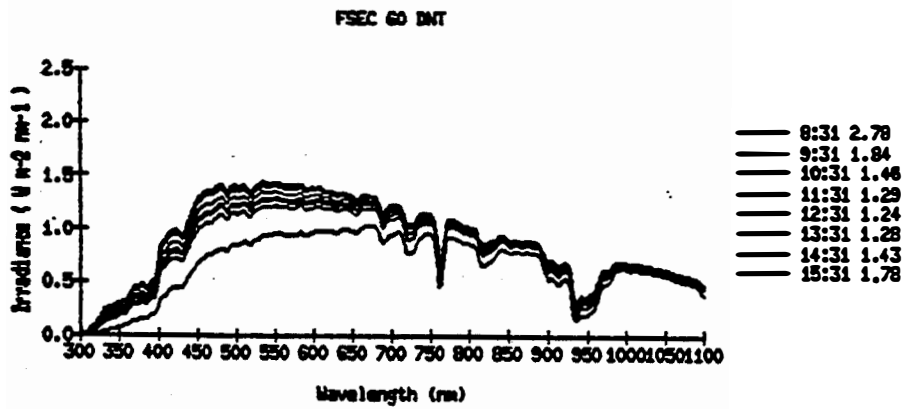
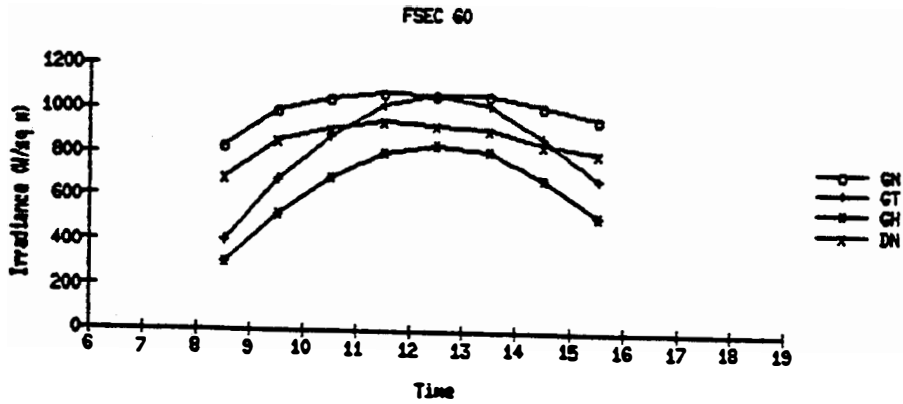


FSEC 89 GS





N FSEC89060  
 306 02 29 88 060 172 DN 102 GH  
 0.1 cloud cover at 0815 and 1400  
 Temp controllers: 172 102  
                   0815 40 C  
                   1400 41 C 41 C  
                   1600 40 C 40 C  
 LSR 172 mV drift errors at 0932 and 1032  
 Slides: 0830 G



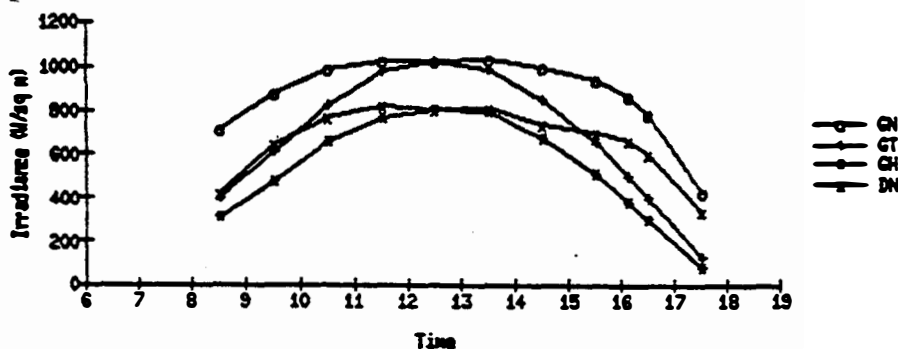


N FSEC88061  
 307 03 01.88 061 172 DH 102 GT  
 0.8 cloud cover at 0815; 0 at 1000, 1230, and 1615  
 Temp controllers: 172 102  
 0815 39 C 40 C  
 1230 40 C 40 C  
 1615 40 C 40 C

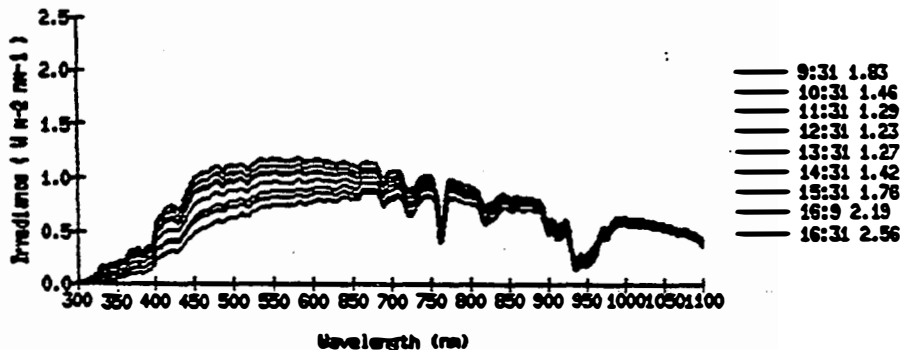
LSR 172 mV drift error at 1031  
 LSR 102 mV drift error at 1531  
 No slides

-----  
 Appears to be very brief spike in UV in DH spectrum at 1031  
 UV in GT spectrum at 1531 is bad

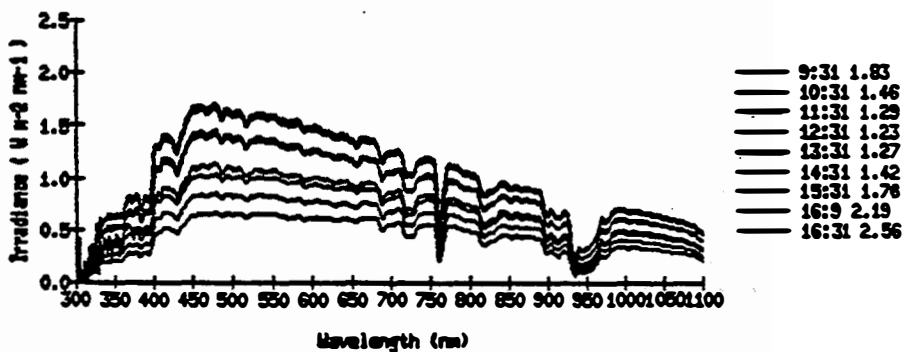
FSEC 61



FSEC 61 DNT

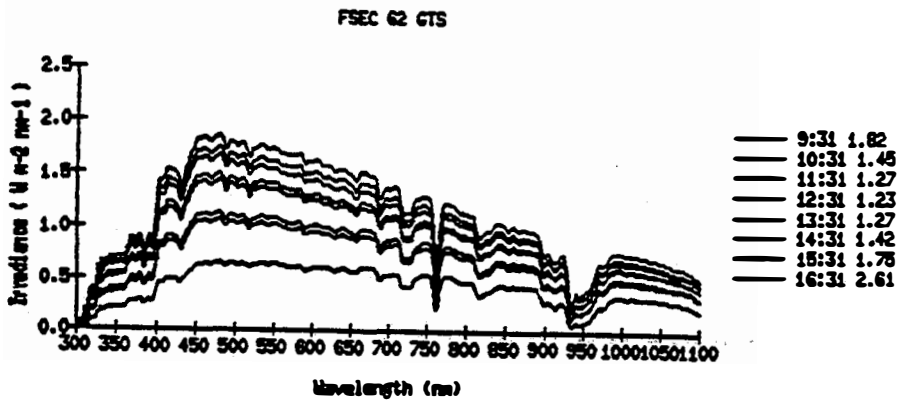
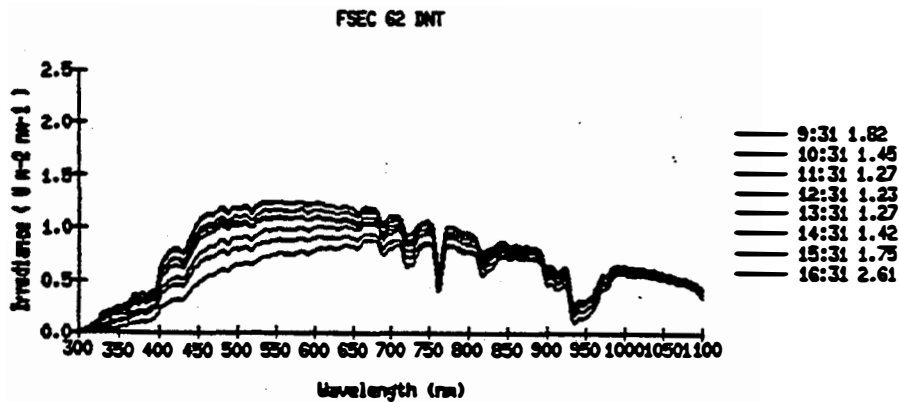
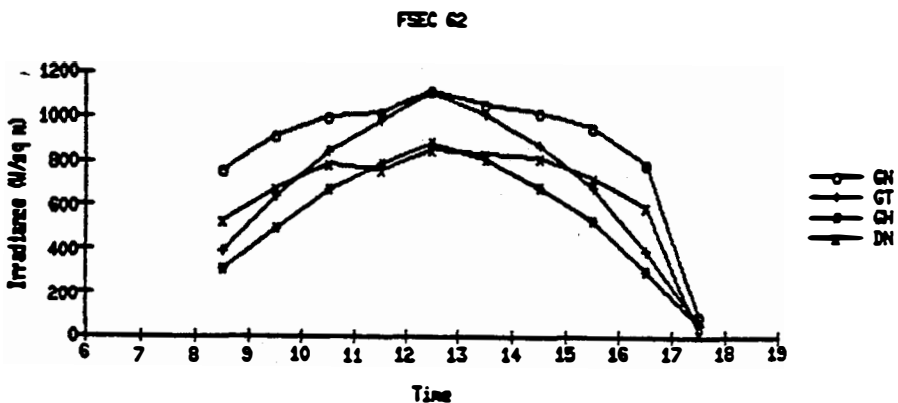


FSEC 61 GTS



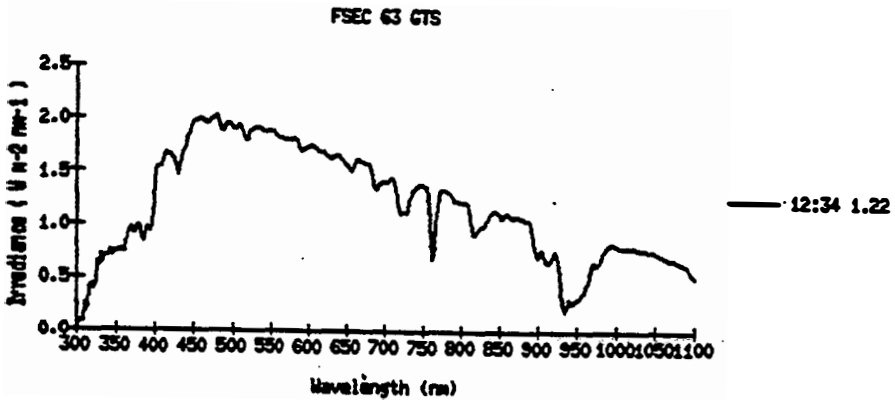
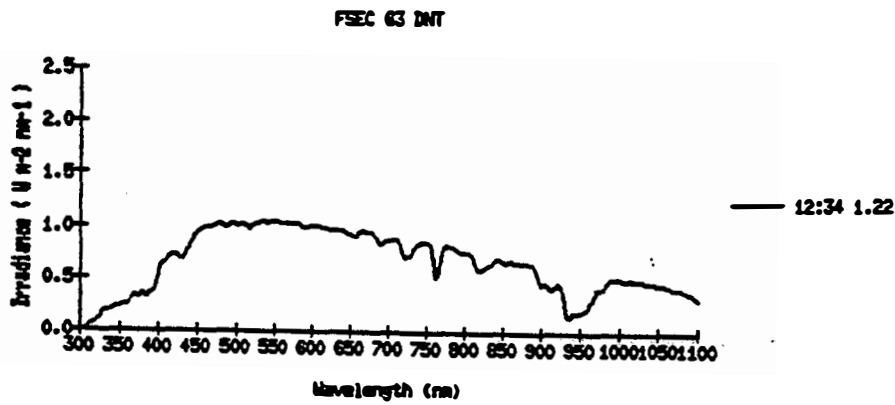
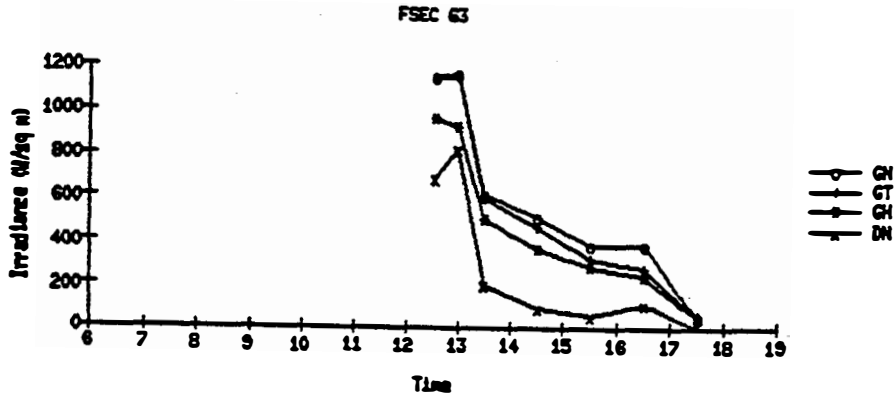


N FSEC88062  
 308 03 02 88 062 172 DN 102 GT  
 0.5 cloud cover (haze) at 0830; 0.8 (haze) at 1250; 0.6 (haze) 1600  
 Temp controller: 172 102  
 0830 40 C 40 C  
 1250 41 C 41 C  
 1600 41 C 41 C  
 LSR 172 mV drift errors at 0931 and 1031  
 No slides  
 -----  
 Spikes in UV in DN spectrum at 0931 and 1031



N FSEC88063  
 309 03 03 88 063 172 DW 102 GT  
 0.8 cloud cover at 0815 and 1300; 0.9 at 1630  
 Temp controllers: 172 102  
 0815 40 C 40 C  
 1300 40 C 41 C  
 1630 41 C 41 C

No slides





N FSEC 88064  
 310 03 04 88 064 172 DW 102 GT  
 1.0 cloud cover at 0815, 1300, and 1530  
 Temp controllers 40 C at 0815  
 No slides  
 -----  
 No spectra

FSEC 64

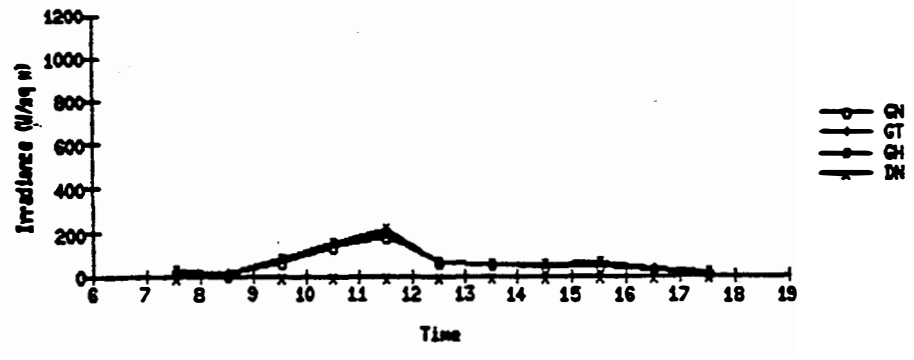






N FSEC8065  
311 03 05 88 065 172 DN 102 GT  
Overcast; rain  
No slides  
-----  
No spectra

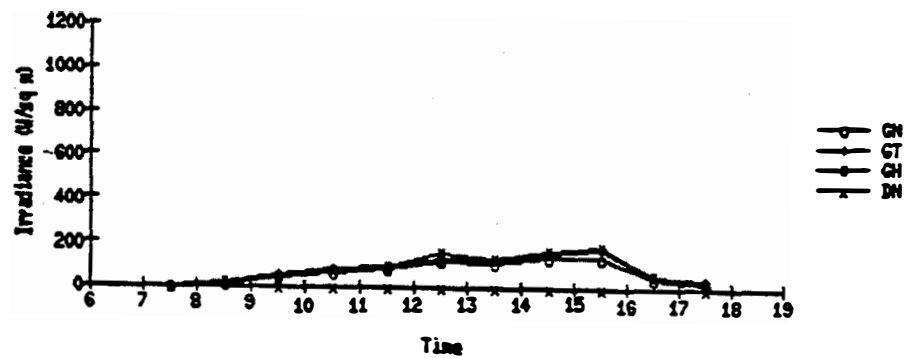
FSEC 65





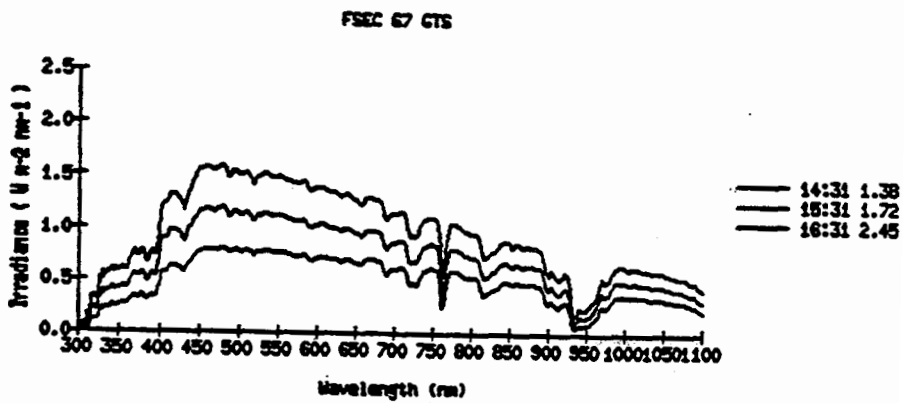
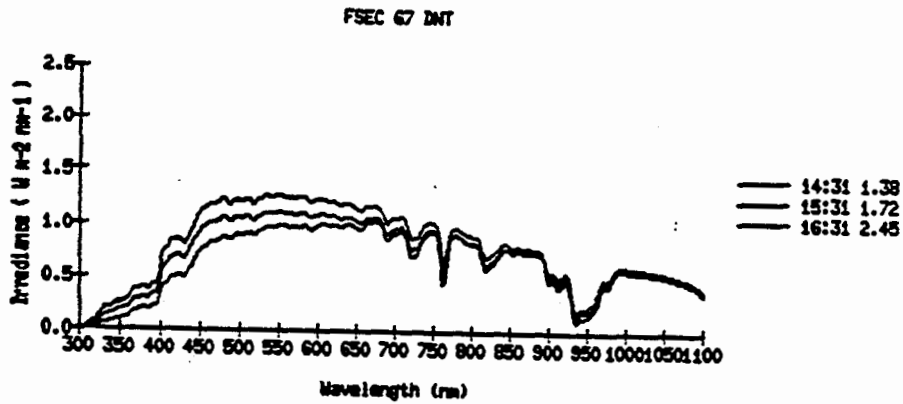
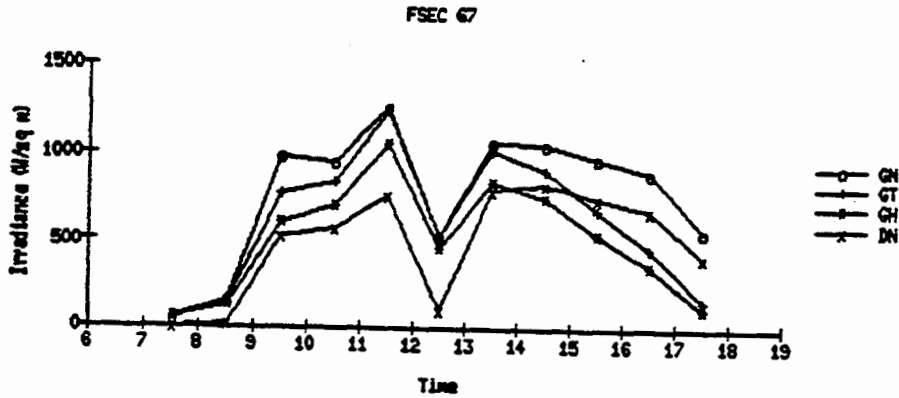
N FSEC88066  
312 03 06 88 066 172 DN 102 GT  
Overcast; rain  
No slides  
-----  
No spectra

FSEC 66

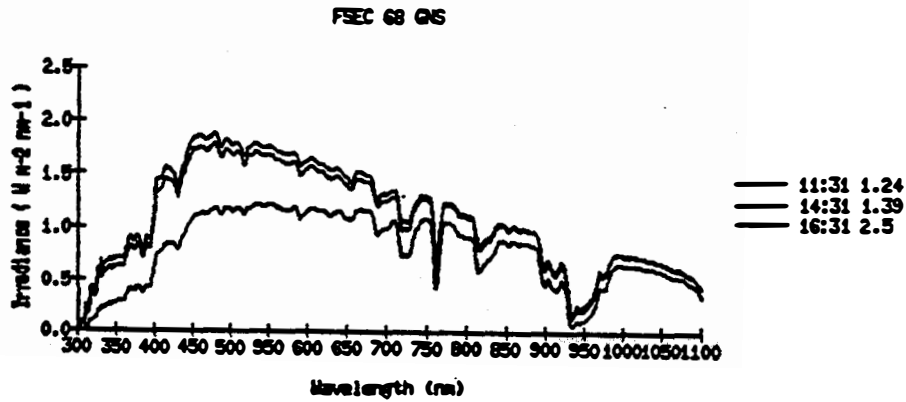
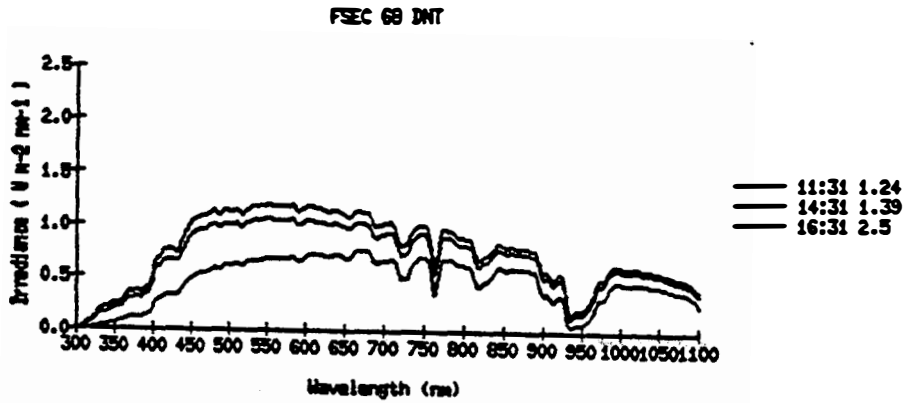
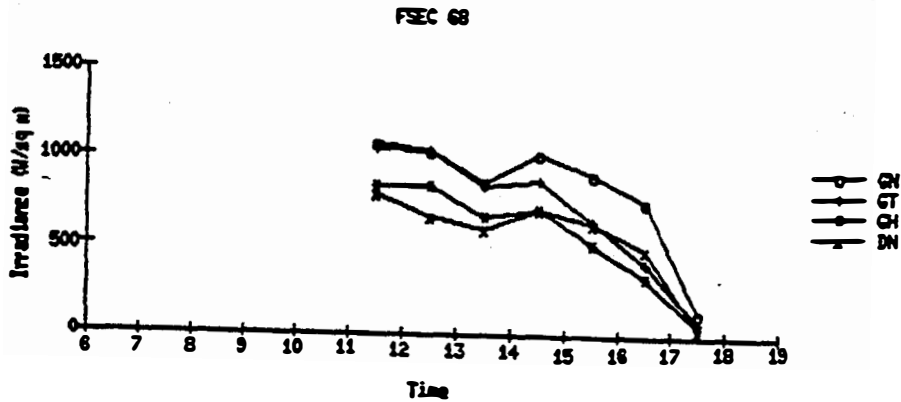


N FSEC88067  
 313 03 07 88 067 172 DN 102 GT  
 1.0 cloud cover at 0815; 0.9 at 1200; 0.5 at 1630  
 Temp controllers: 172 102  
 0815 39 C 40 C  
 1200 40 C 40 C  
 1630 40 C 40 C

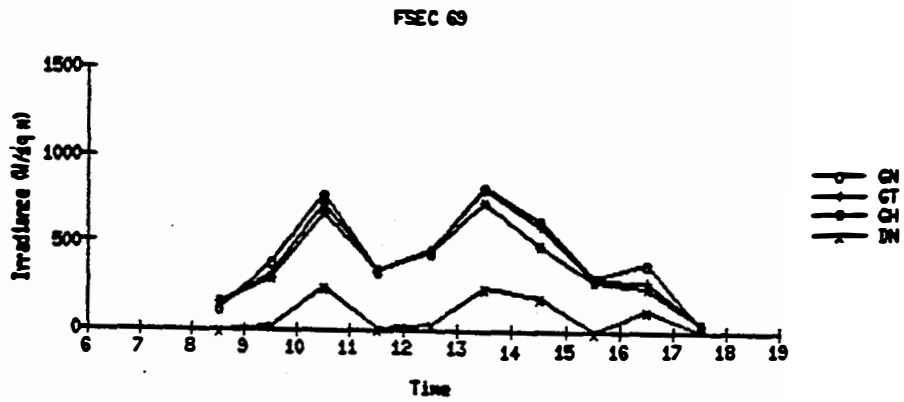
No slides



N FSEC 88068  
 314 03 08 88 068 172 DN 102 GN  
 0.3 cloud cover at 1130; 0.6 at 1630  
 Temp controllers: 172 102  
                   1130 41 C 40 C  
                   1630 40 C 40 C  
 No slides



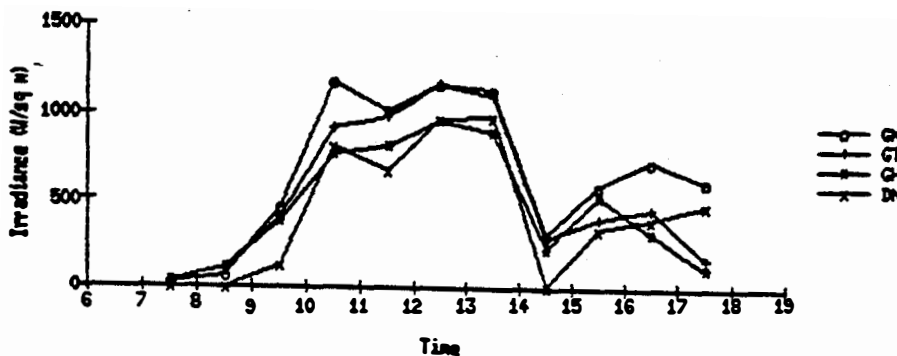
N FSEC88069  
 315 03 09 88 069 172 DN 102 GN  
 1.0 cloud cover at 0815, 1230, and 1630  
 Temp controllers 40 C at 0815  
 No slides  
 -----  
 No spectra



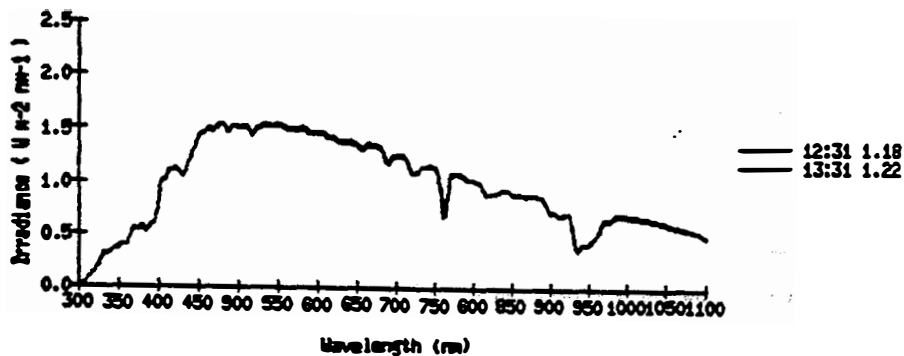


N FSEC88070  
 316 03 10 88 070 172 DN 102 GN  
 1.0 cloud cover at 0815; 0.8 at 1130; 0.7 at 1630  
 Temp controllers: 172 102  
                   0815 39 C 39 C  
                   1130 39 C 39 C  
                   1630 39 C 40 C  
 LSR 172 mV drift error at 1331  
 No slides

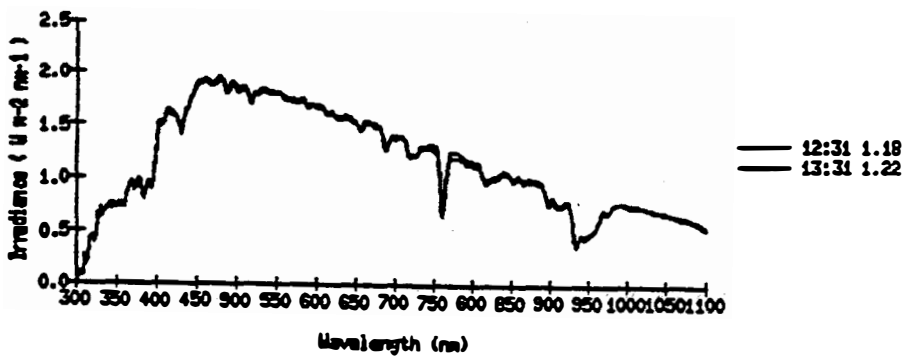
FSEC 70



FSEC 70 INT



FSEC 70 GIS

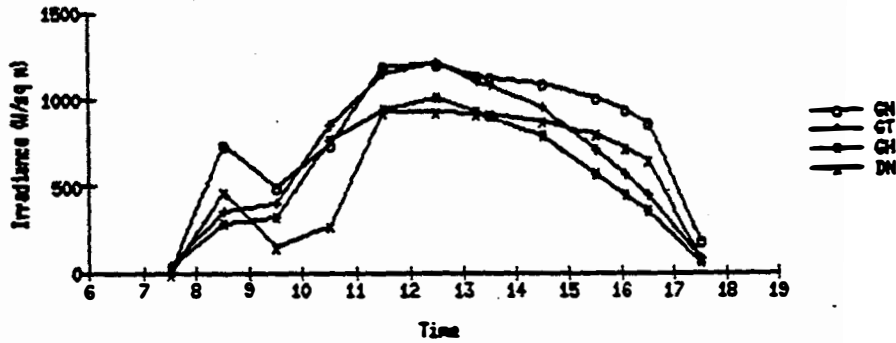




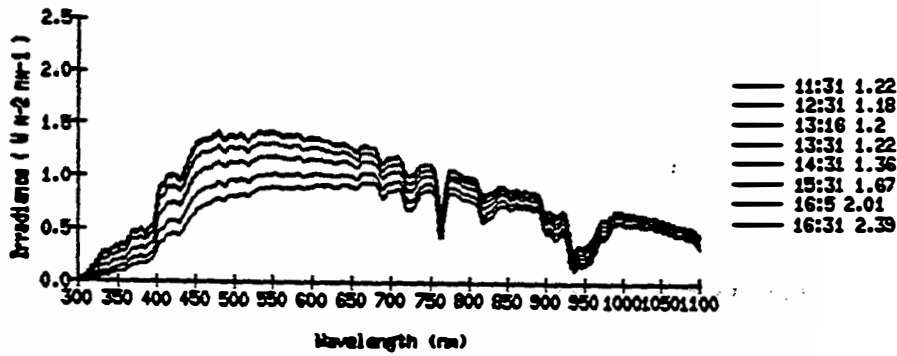
N FSEC88071  
 317 03 11 88 071 172 DM 102 GH  
 0.8 cloud cover at 0815; 0.5 at 1230; 0.3 at 1630  
 Temp controllers: 172 102  
 0815 38 C 39 C  
 1230 39 C 39 C  
 1630 40 C 39 C

No slides

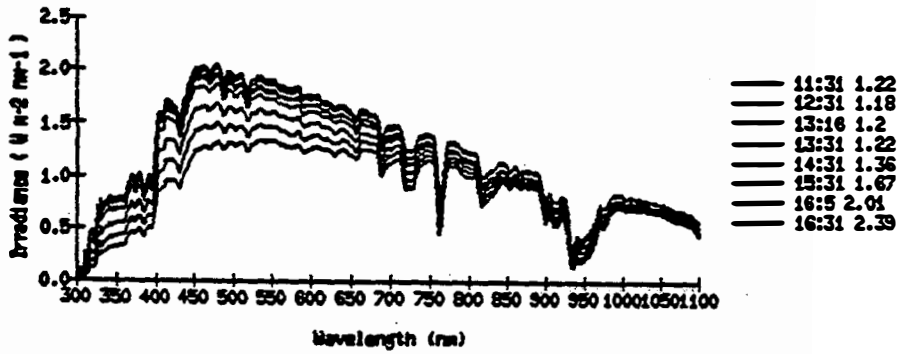
FSEC 71



FSEC 71 DM



FSEC 71 GH

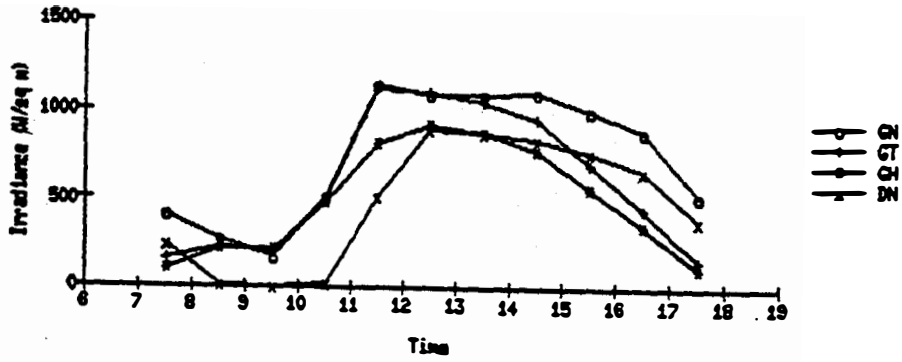




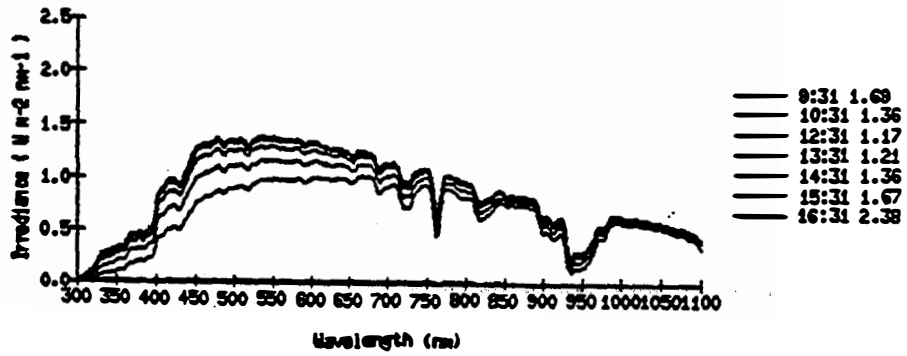
N FSEC88072  
 318 03 12 88 072 172 DN 102 GN  
 Partly cloudy AM; mostly clear PM  
 LSR 172 mV drift errors at 0931 and 1033  
 No slides

-----  
 DN spectra at 0931 and 1033 are bad (no direct beam)

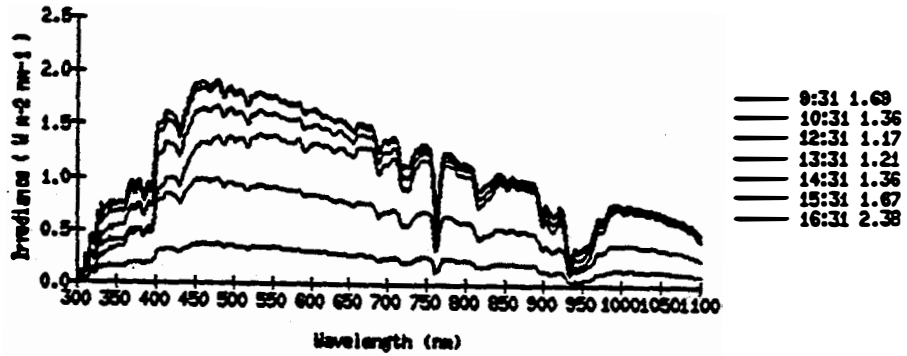
FSEC 72



FSEC 72 DNT



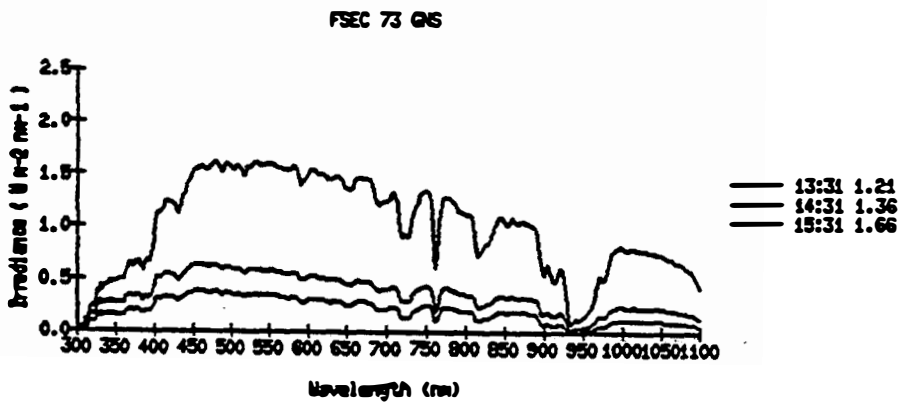
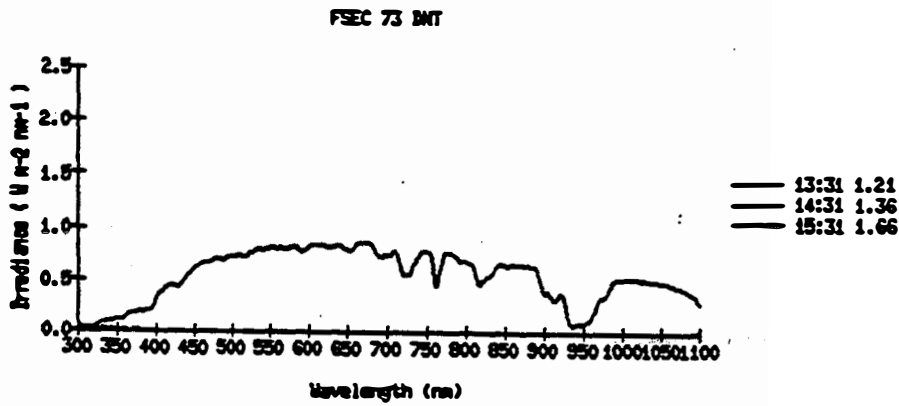
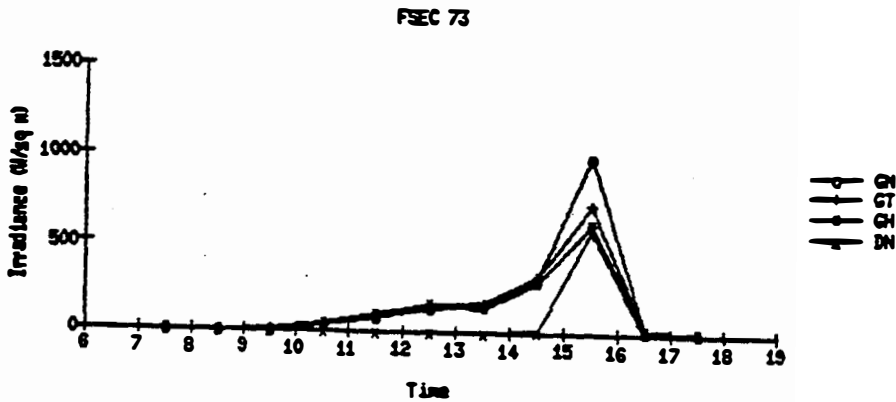
FSEC 72 GS







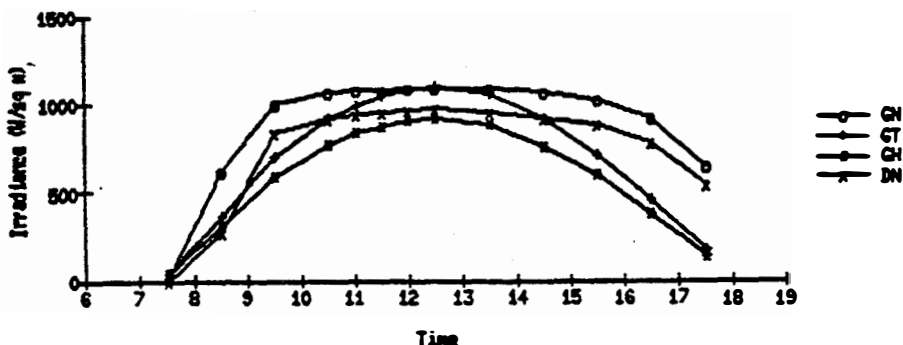
N FSEC88073  
 319 03 13 88 073 172 DN 102 GN  
 Partly cloudy to overcast with rain  
 LSR 172 mV drift error at 1433  
 No slides  
 -----  
 DN spectrum at 1433 is bad (no direct beam)



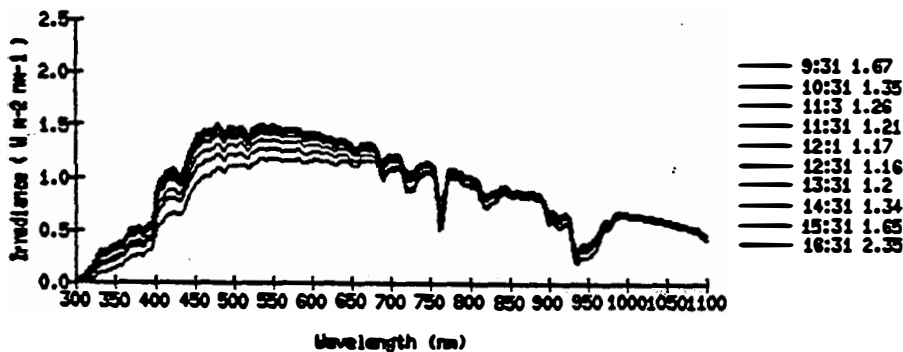


N FSEC88074  
 320 03 14 88 074 172 DN 102 GN  
 0.7 cloud cover at 0815; 0 at 1000, 1230, and 1630  
 Temp controllers: 172 102  
                   0815 39 C 39 C  
                   1230 40 C 39 C  
                   1630 40 C 40 C  
 LSR 172 mV drift error at 1231  
 No slides

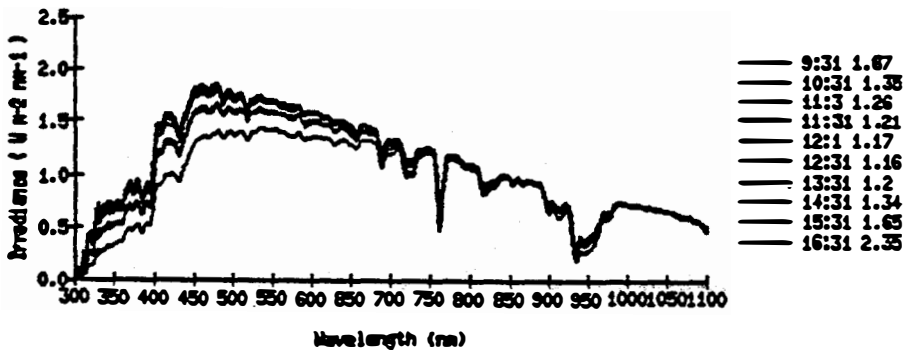
FSEC 74



FSEC 74 DNT



FSEC 74 QNS

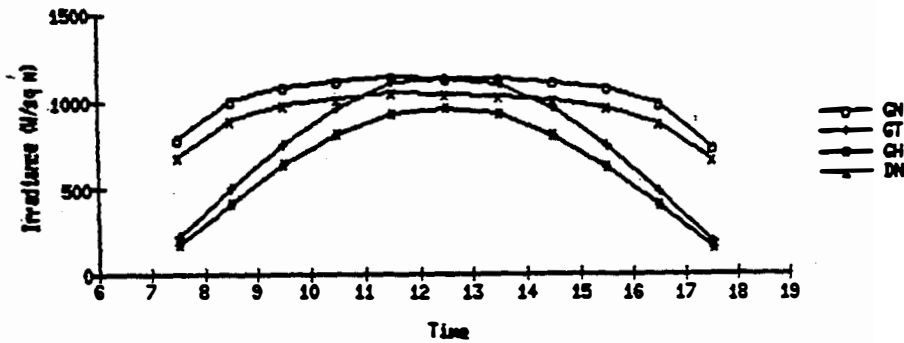




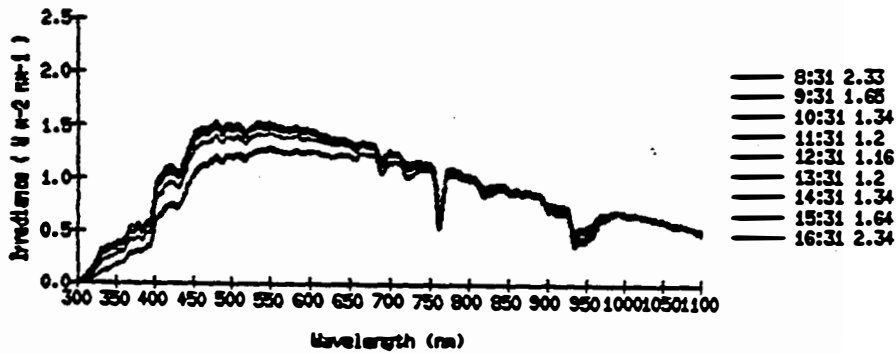
N FSEC88075  
 321 03 15 88 075 172 DH 102 GH  
 0 cloud cover at 0800, 1300, and 1630  
 Temp controllers: 172 102  
 0800 38 C 38 C  
 1300 39 C 40 C  
 1630 39 C 40 C

No slides

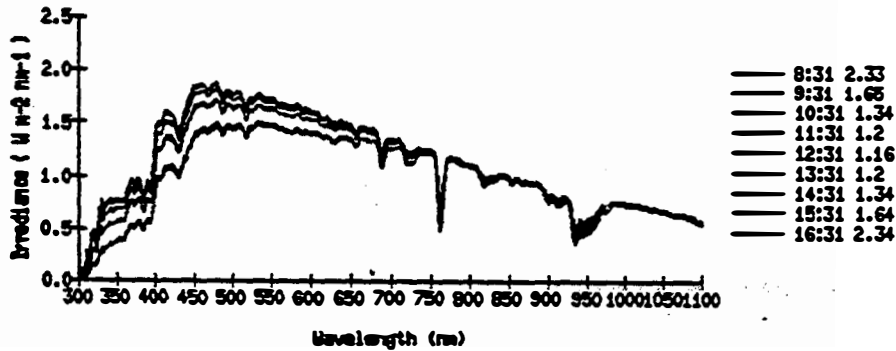
FSEC 75



FSEC 75 DNT

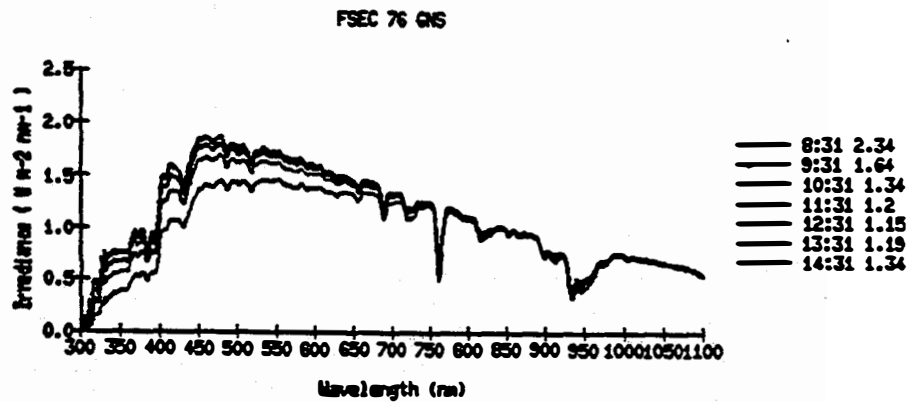
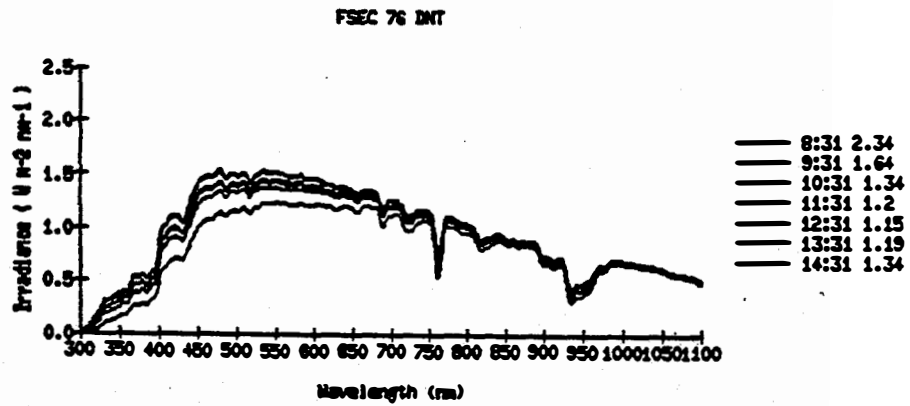
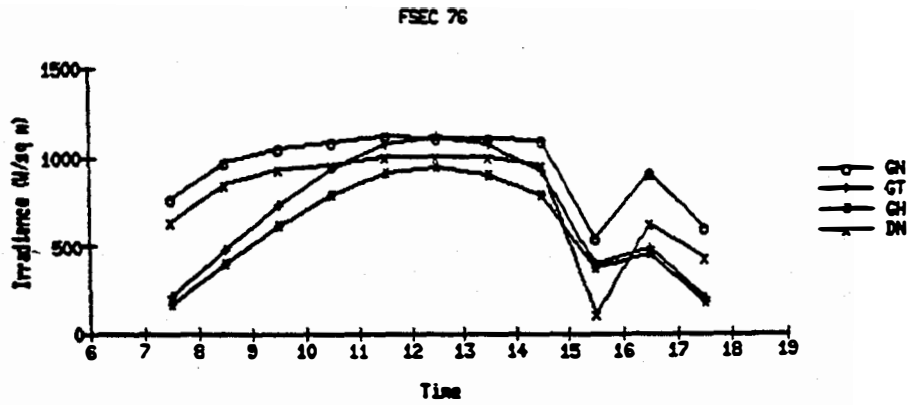


FSEC 75 GHS





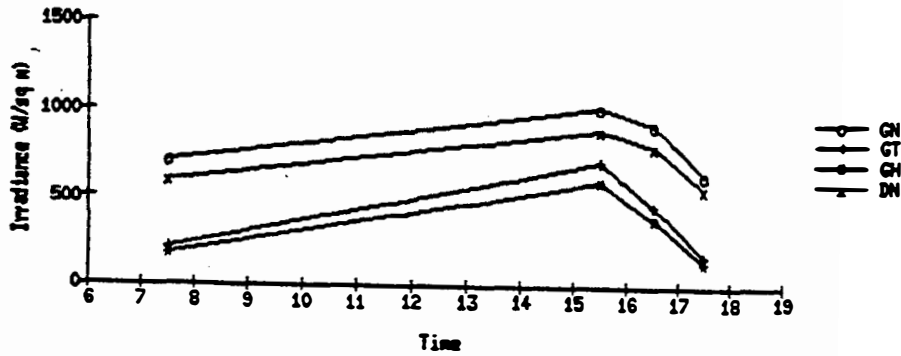
N FSEC88076  
 322 03 16 88 076 172 DN 102 GN  
 0 cloud cover until 1400, then partly cloudy  
 LSR 172 mV drift error at 1331



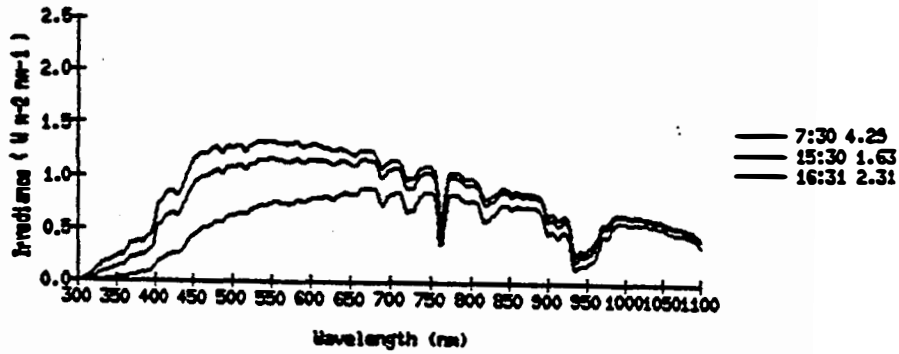
N FSEC88077  
 323 03 17 88 077 172 DN 102 GH  
 One GH spectrum, then GH  
 0 cloud cover at 0730  
 No slides

324 03 17 88 077 172 DN 102 GH  
 0 cloud cover at 1530  
 Temp controllers 40 C at 1530  
 No slides

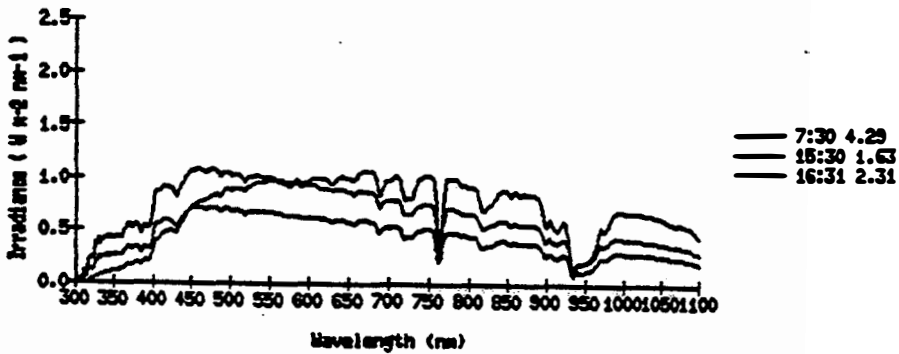
FSEC 77



FSEC 77 DNT



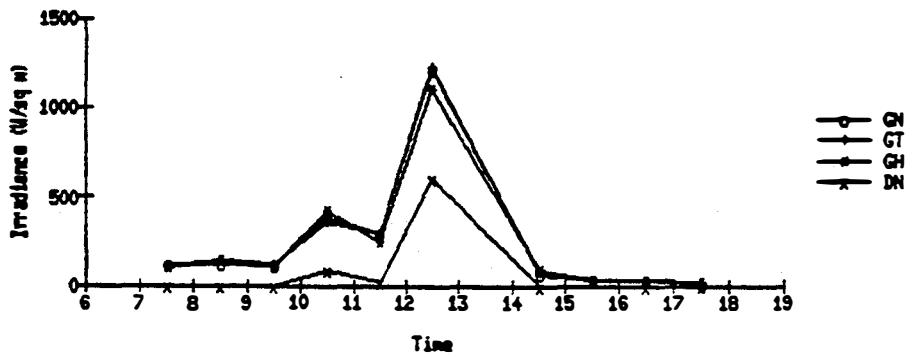
FSEC 77 GH



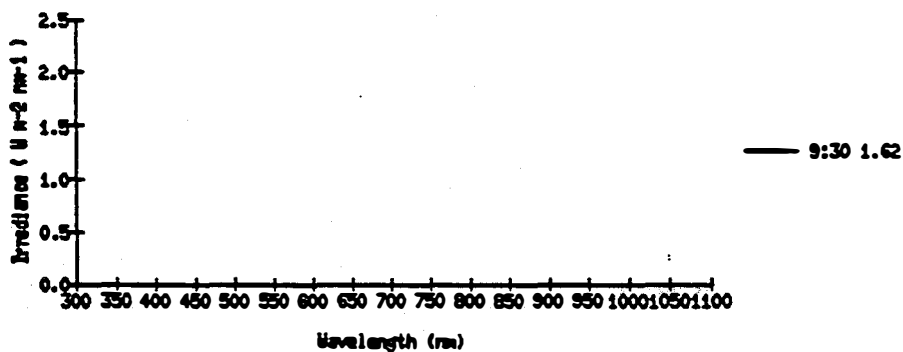


N FSEC88078  
 325 03 18 88 078 172 DW 102 GH  
 1.0 cloud cover at 0815, 1300, and 1630  
 Temp controllers: 172 39 C and 102 40 C at 0815  
 No slides

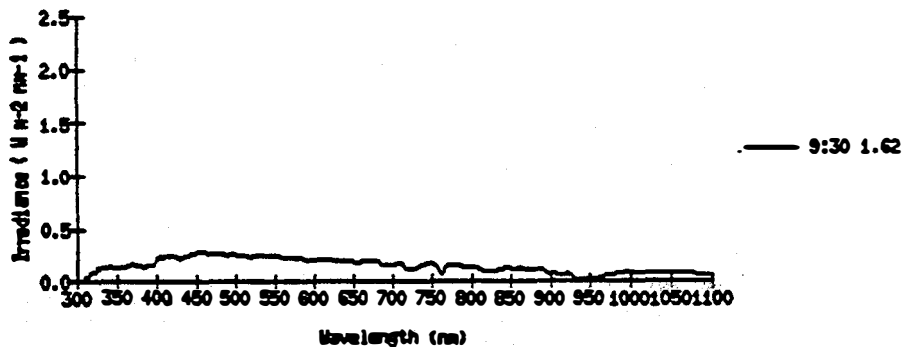
FSEC 78



FSEC 78 DNT



FSEC 78 GHS

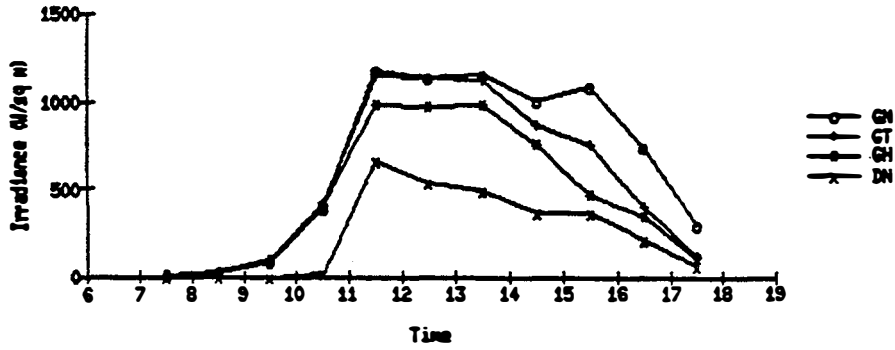




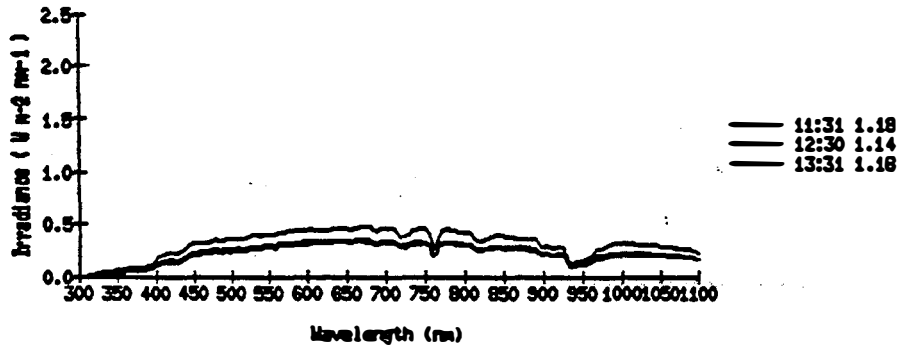
N FSEC88079  
 326 03 19 88 079 172 DN 102 GH  
 Partly cloudy  
 No slides

-----  
 Spectral integral is much lower than broadband for all DN spectra

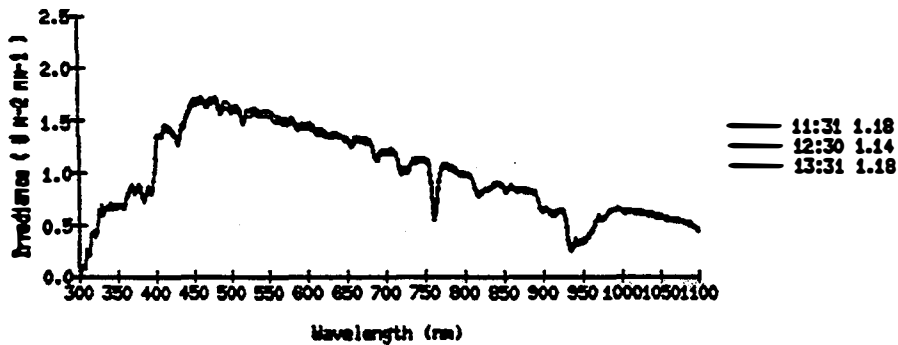
FSEC 79



FSEC 79 DNT



FSEC 79 GHS

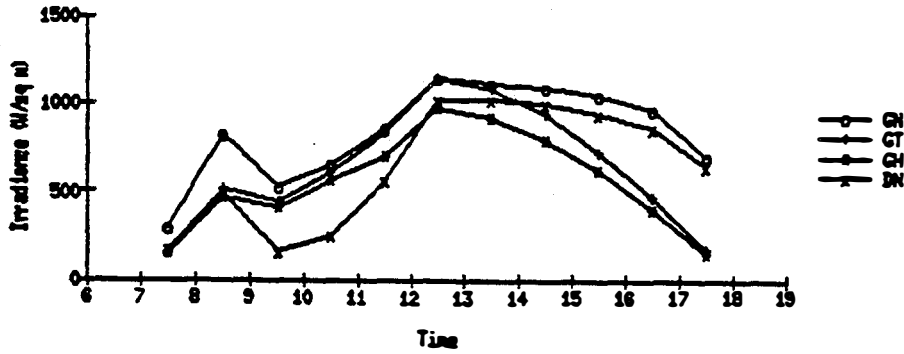




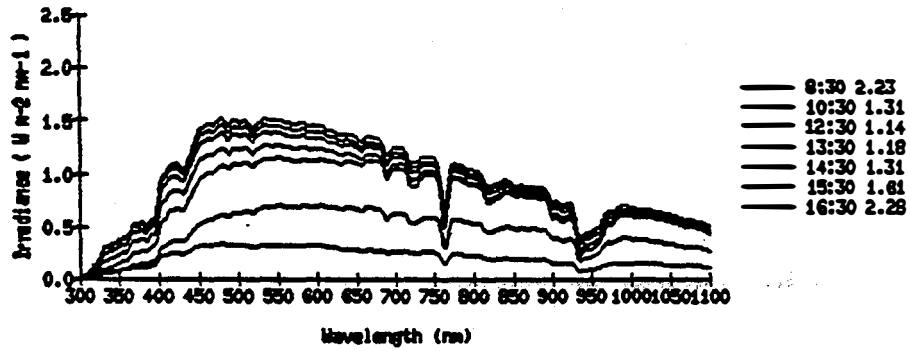
N FSEC88080  
 327 03 20 88 080 172 DN 102 GH  
 Partly cloudy AM; clear PM  
 No slides

-----  
 Spectral integral for DN is too low for 1231, 1331, 1431, 1531, and 1631

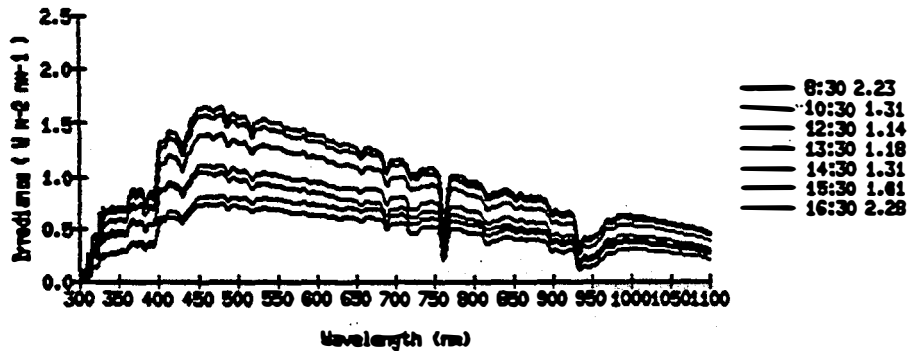
FSEC 80



FSEC 80 DNT



FSEC 80 GHS

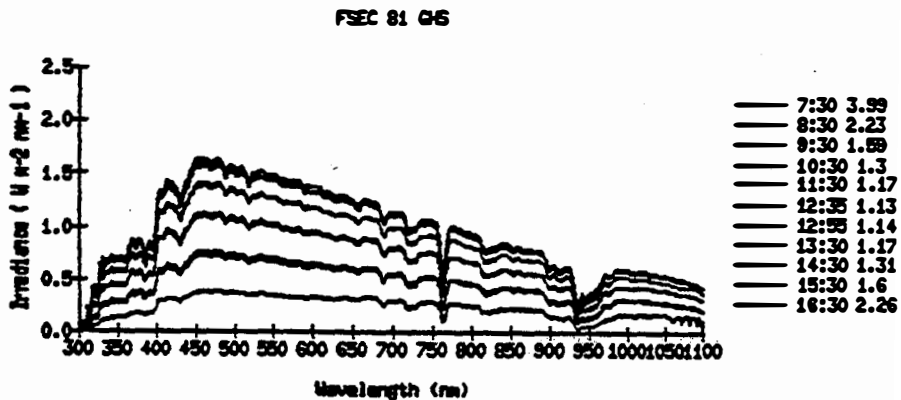
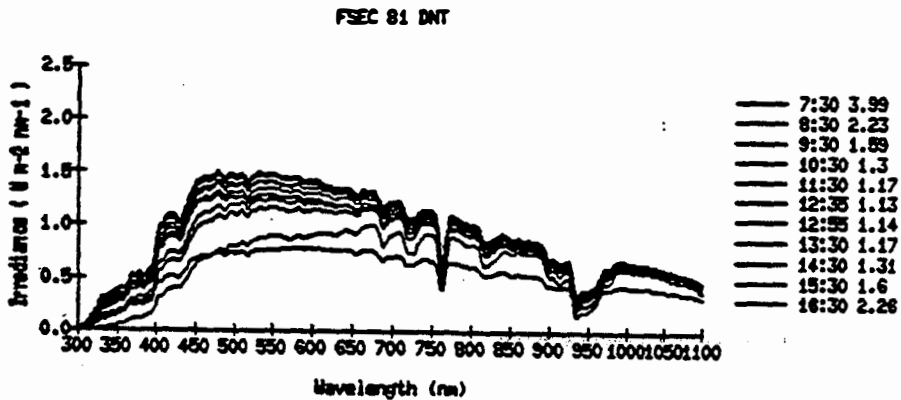
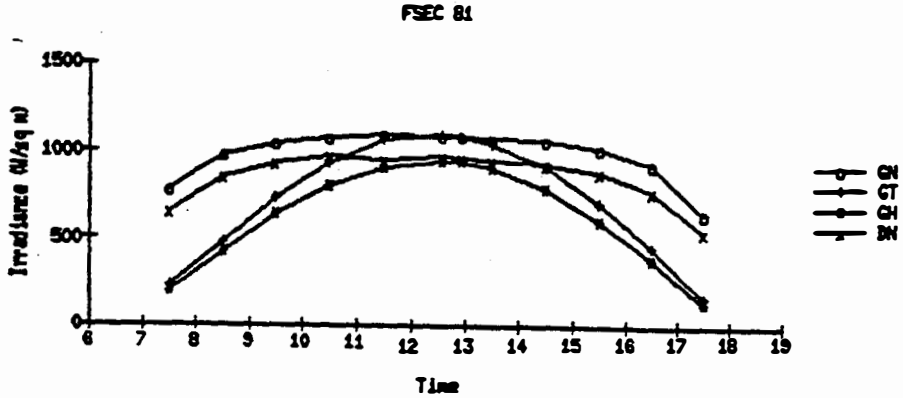






N FSEC88081  
 328 03 21 88 081 172 DN 102 GH  
 0 cloud cover at 0800, 1200, and 1600  
 Temp controllers: 172 102  
 0800 39 C 39 C  
 1200 40 C 40 C  
 1600 40 C 40 C  
 LSR 102 mV drift error at 0734  
 LSR 172 mV drift error at 1131  
 No slides

-----  
 Near-IR in GH spectrum at 0734 is noisy  
 Spectral integral for DN is too low for 1031 and 1131

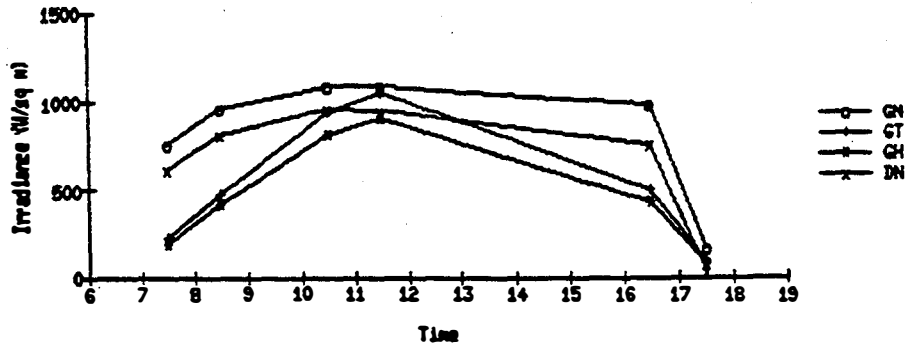




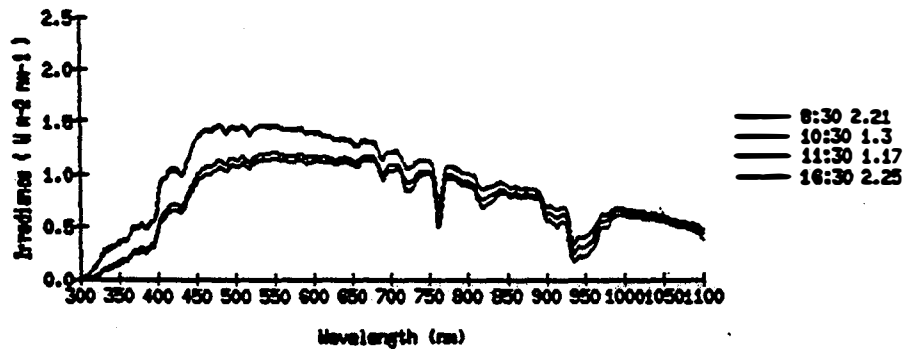
N FSEC88082  
 329 03 22 88 082 172 DN 102 GH  
 0 cloud cover at 0815; 0.8 at 1600  
 Temp controllers: 172 102  
 0815 39 C 40 C  
 1600 40 C 40 C

No slides

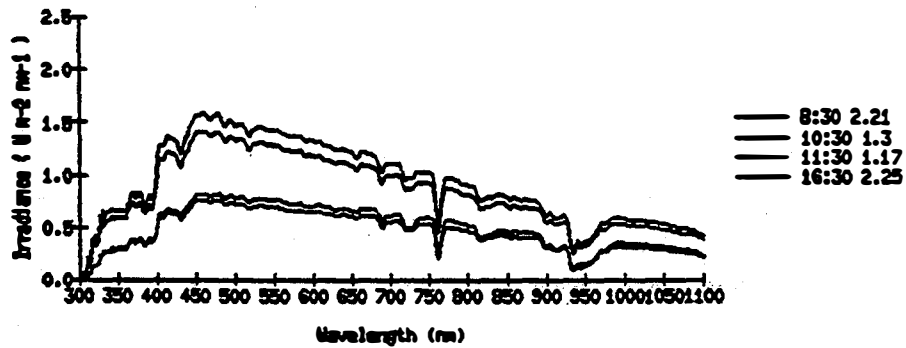
FSEC 82



FSEC 82 BMT



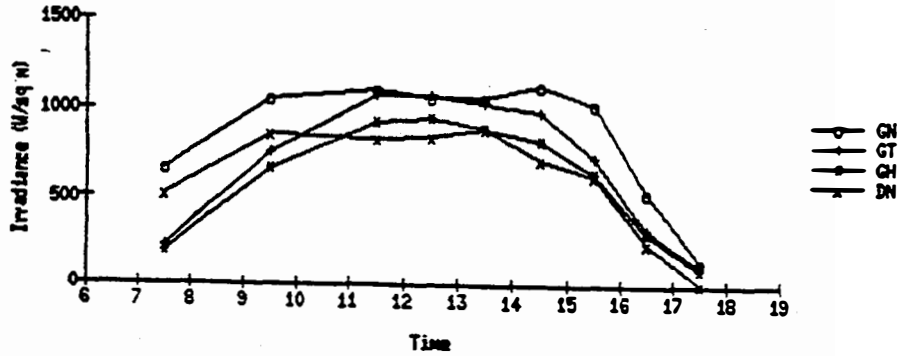
FSEC 82 GH



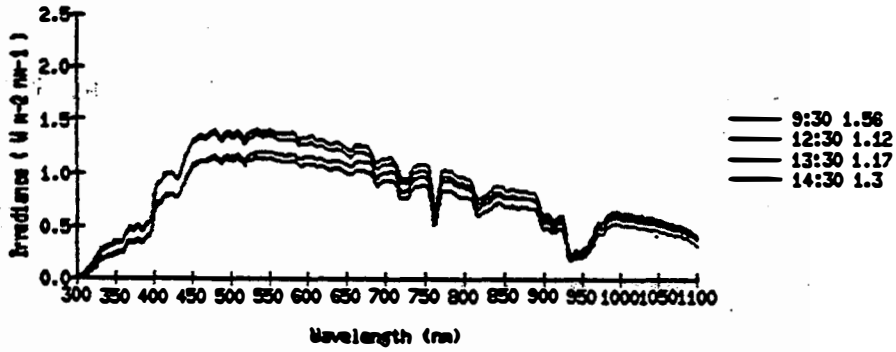


N FSEC88083  
 330 03 23 88 083 172 DN 102 GH  
 0.3 cloud cover at 0800; 0.5 at 1130  
 Temp controllers: 172 102  
 0800 40 C 40 C  
 1130 40 C 40 C  
 Tracking error Of 2-3 deg at 0800; reset  
 May be tracking errors in 0730 data and 0930 data  
 Trackers reset at 1030  
 No slides

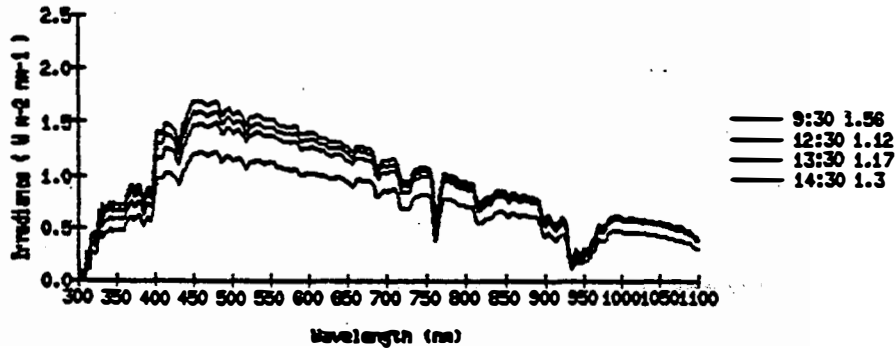
FSEC 83



FSEC 83 DNT



FSEC 83 CH5

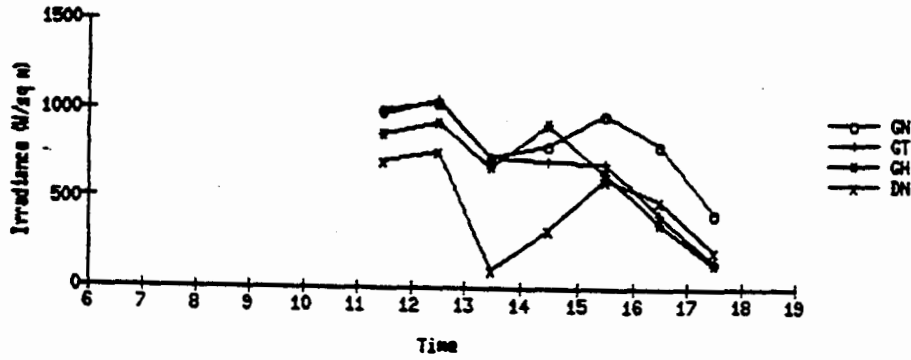




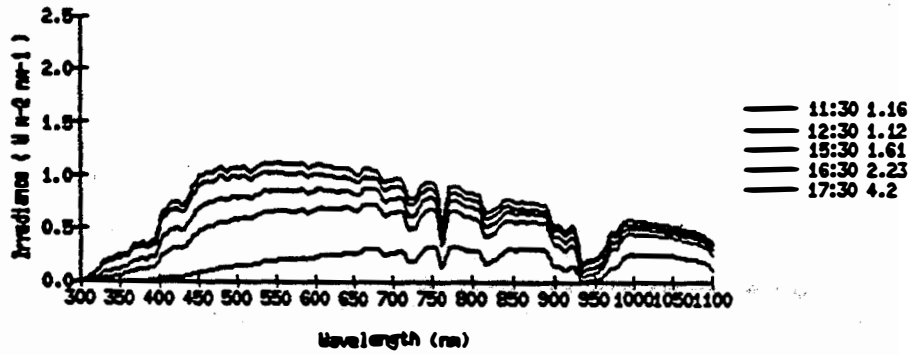
N FSEC88084  
 331 03 24 88 084 172 DN 102 GT  
 0.1 cloud cover with haze at 1130; 0.7 (haze) at 1600  
 Temp controllers: 172 102  
 1130 41 C 40 C  
 1600 40 C 40 C

No slides

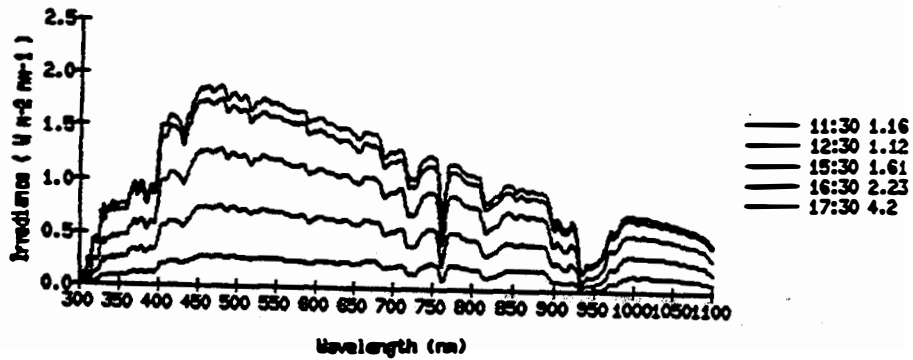
FSEC 84



FSEC 84 DNT



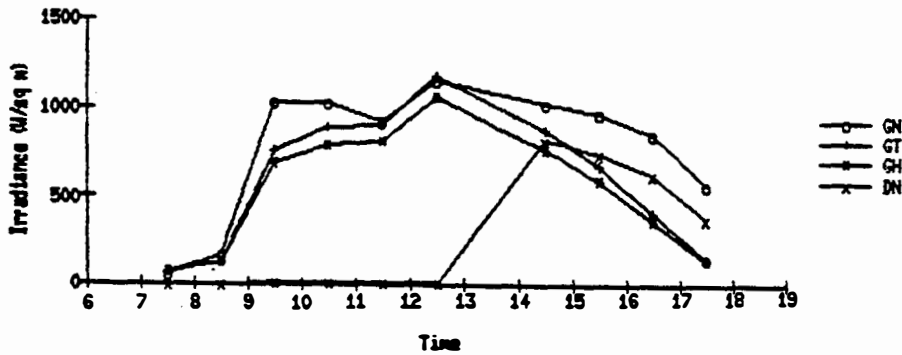
FSEC 84 GTS



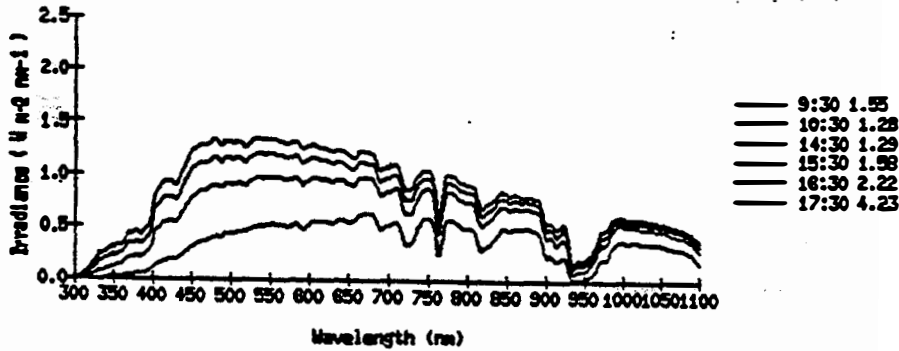
N FSEC88085  
 332 03 25 88 085 172 DN 102 GT  
 0.6 cloud cover at 0845; 0.2 at 1340  
 Temp controllers: 172 102  
 0845 40 C 40 C  
 1345 40 C 41 C  
 Tracking data bad prior to 1430  
 Reset trackers at 1340  
 Slides: 1233 M (dark)  
 1332 P  
 1432 P  
 1532 M  
 1632 G  
 1732 G

-----  
 DN spectra and broadband may be missing/low due to tracking  
 on this day  
 Bad DN (spectral and broadband) at 0931 and 1031

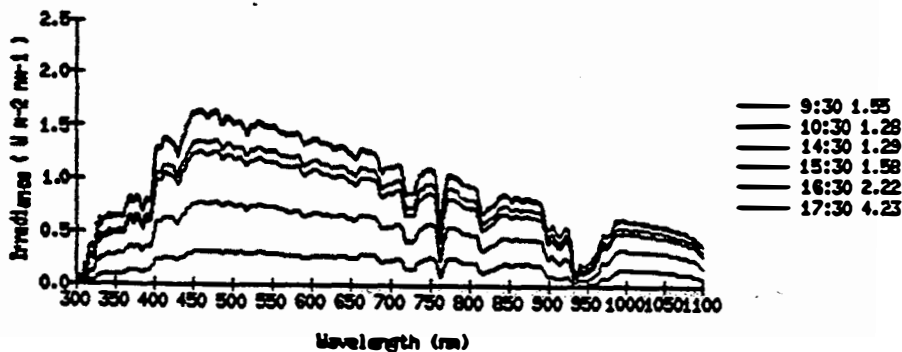
FSEC 85



FSEC 85 DNT



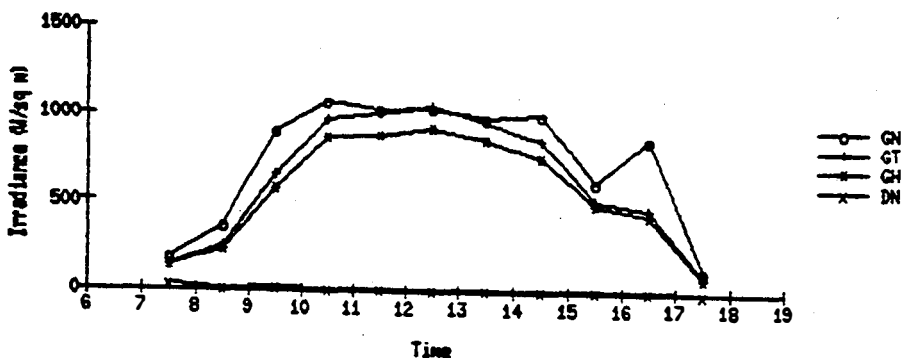
FSEC 85 GTS



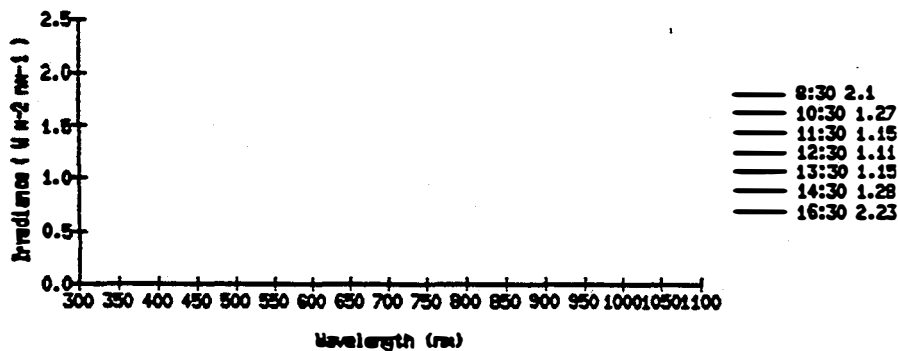
N FSEC88086  
 333 03 26 88 086 172 DN 102 GT  
 Tracking errors; tracking data are bad  
 Slides: 0732 M (condensation)  
 0828 M  
 0930 M  
 1028 P (dark)  
 1128 P  
 1228 P  
 1327 P  
 1427 M  
 1527 G  
 1627 G  
 1727 G

-----  
 DN spectra and broadband are missing/low due to tracking errors  
 on this day  
 Bad DN data (spectral and broadband) all day

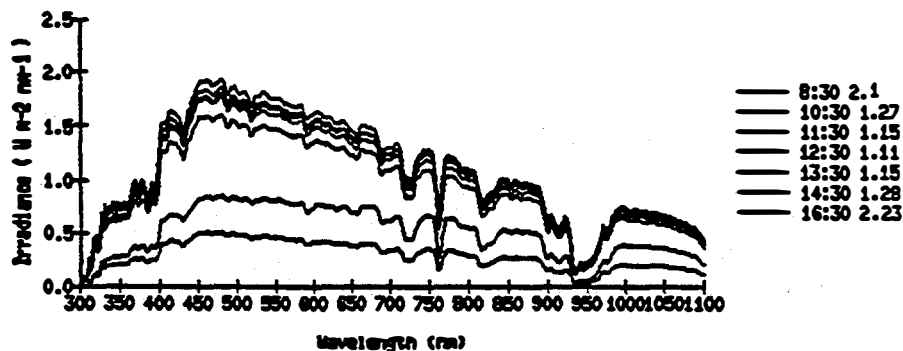
FSEC 86



FSEC 86 DNT



FSEC 86 GTS



N FSEC88087  
334 03 27 88 087 172 DN 102 GT  
No data for this day  
Slides: 0724 M (water drops)  
0824 M " (dark)  
0929 P " "  
1024 G " "  
1124 M " "  
1228 P " "  
1331 P " "  
1423 M " "  
1523 G "  
1623 G "  
1723 G "

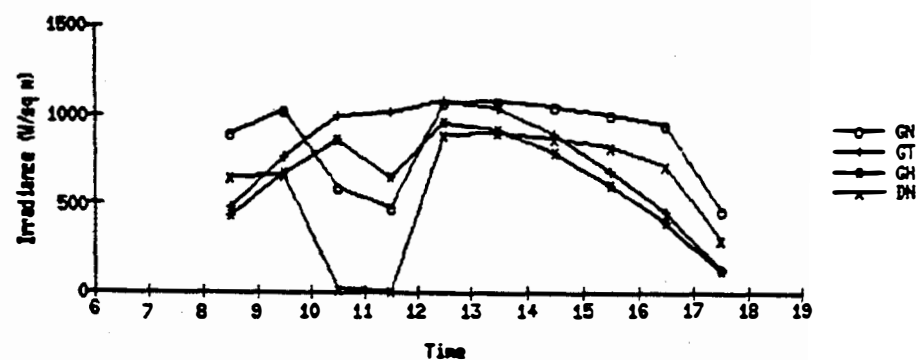
-----  
No data



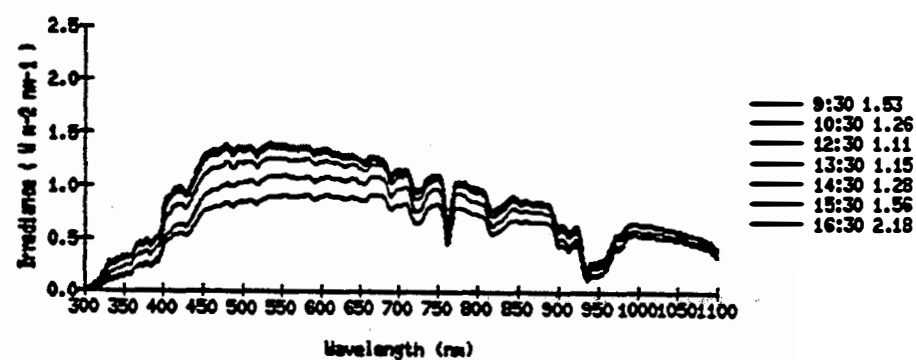
N FSEC88088  
 335 03 28 88 088 172 DN 102 GT  
 0.1 cloud cover at 0815; 0.2 at 1315  
 Temp controllers: 172 102  
                   0815 40 C 40 C  
                   1315 41 C 40 C  
 Trackers reset at 0810  
 Tracking data is suspect  
 LSR 172 mV drift errors at 0930  
 Slides: 0730 M (water drops)  
           0820 M  
           0920 M (dark)  
           1020 M  
           1134 P  
           1233 P  
           1333 P  
           1433 M  
           1532 G  
           1632 G  
           1732 G

-----  
 DN spectrum and broadband missing 1032 due to tracker

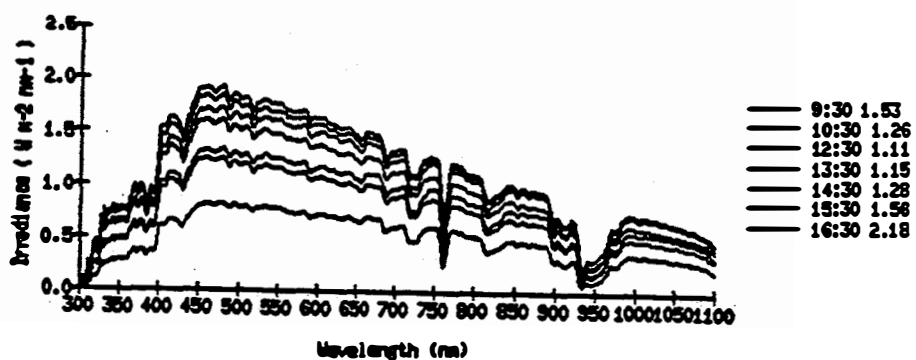
FSEC 88



FSEC 88 DNT



FSEC 88 GTS



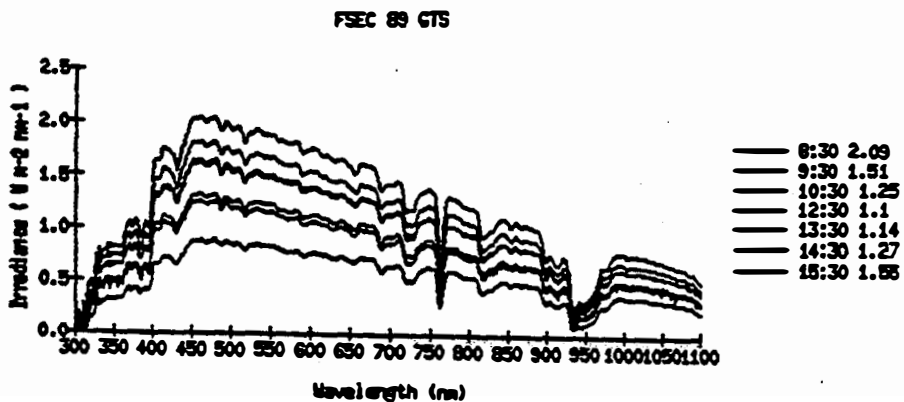
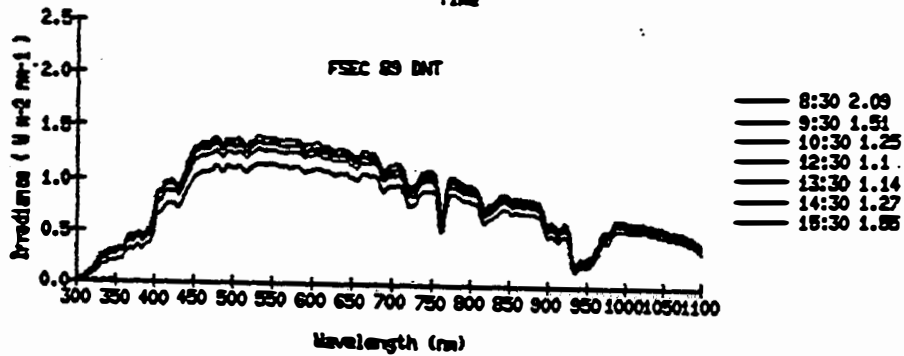
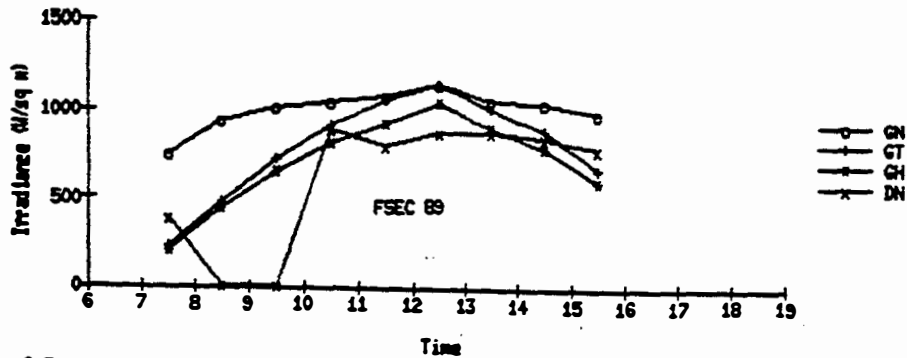


N FSEC88089  
 336 03 29 88 089 172 DN 102 GT  
 0.1 cloud cover at 0950; 0.3 at 1315  
 Temp controllers: 172 102  
 0950 40 C 40 C  
 1315 41 C 40 C

Tracker reset at 0950  
 Tracking data is suspect  
 LSR 172 mV drift errors at 0931 and 1031  
 LSR 102 mV drift errors at 1530

Slides: 0729 G  
 0829 G  
 0928 M (dark)  
 1028 P  
 1128 M  
 1228 P  
 1328 P  
 1428 P  
 1527 M  
 1627 G  
 1727 G

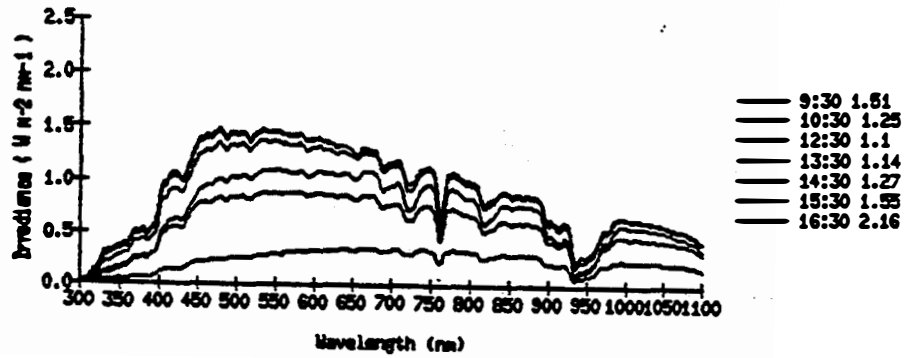
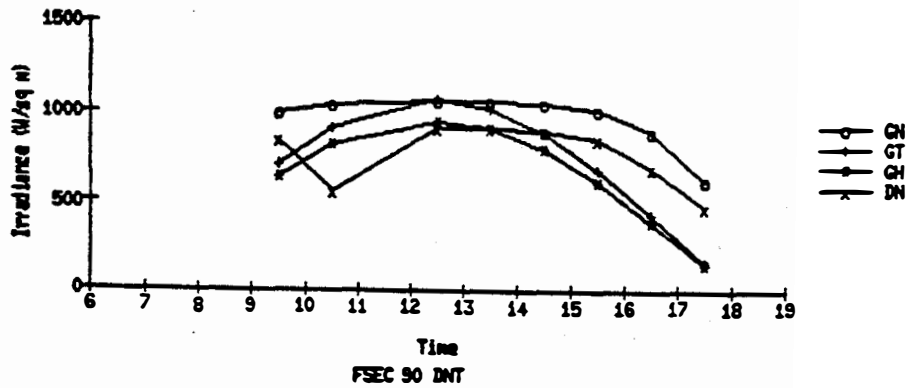
-----  
 Tracker errors - spectra bad at 0830 and 0931  
 GT spectrum noisy in UV and near-IR at 1530



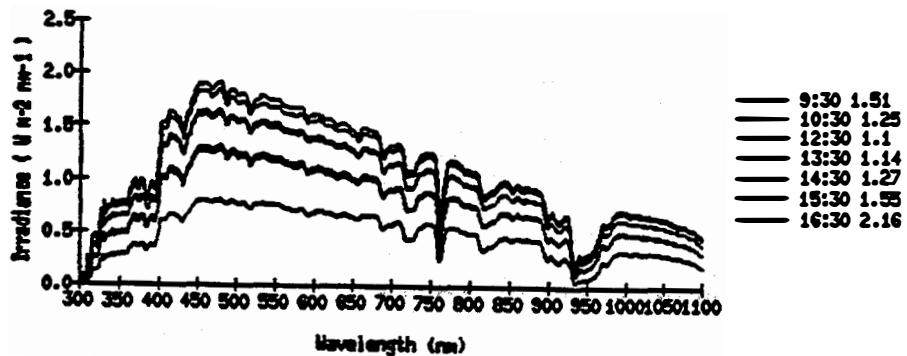
N FSEC88090  
 337 03 30 88 090 172 DN 102 GT  
 0.1 cloud cover at 0800  
 Temp controllers: 172 and 102 40 C at 0800  
 Tracking data is suspect in AM; PM data probably O.K.  
 Slides: 0729 G  
           0824 G  
           0924 M (dark)  
           1024 P -  
           1130 P -  
           1230 P -  
           1330 P -  
           1429 P -  
           1529 G  
           1629 G  
           1729 G

-----  
 DN data bad at 0930 and 1030

FSEC 90



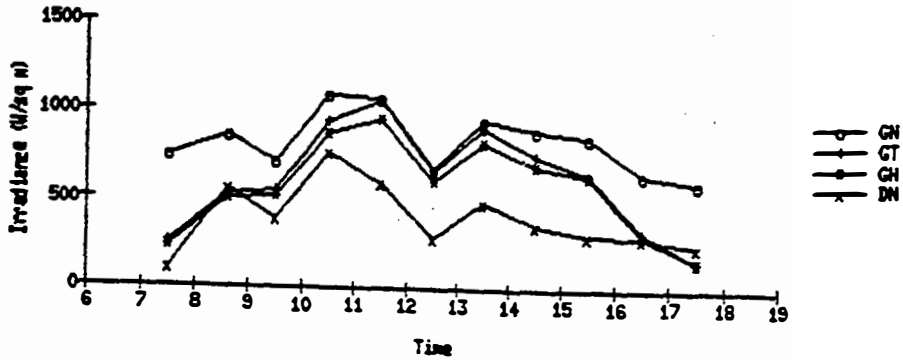
FSEC 90 GTS



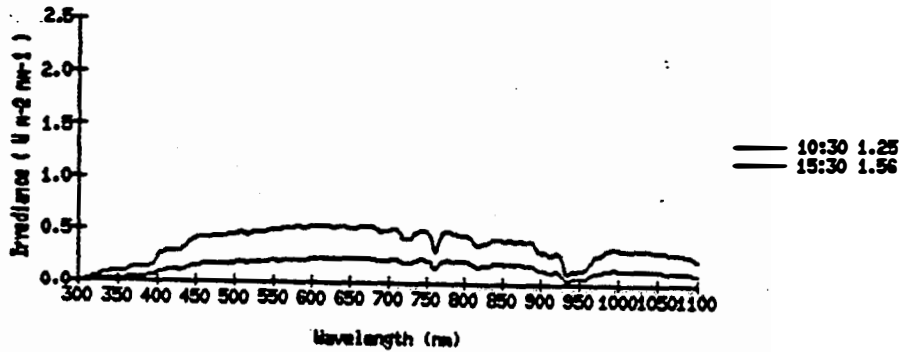
N FSEC88091  
 338 03 31 88 091 172 DN 102 GT  
 0.25 cloud cover at 0815  
 Temp controllers: 172 and 102 40 C at 0815  
 Trackers reset at 0820  
 Tracking data is suspect  
 Slides: 0726 G  
           0826 G  
           0926 M (dark)  
           1026 P  
           1126 P  
           1227 P

-----  
 DN data bad at 1030 and 1532

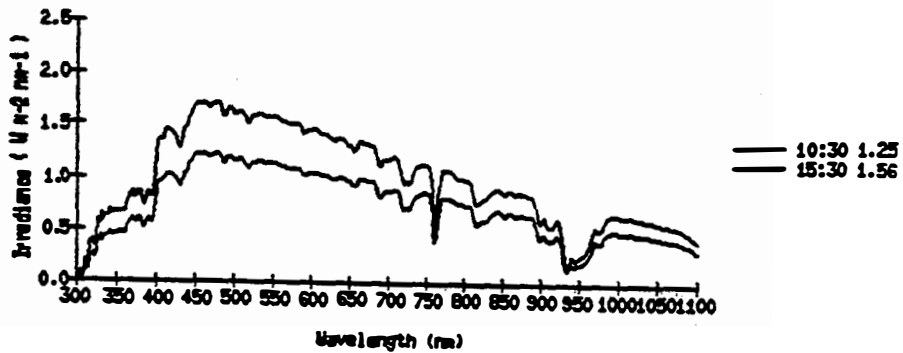
FSEC 91



FSEC 91 DNT



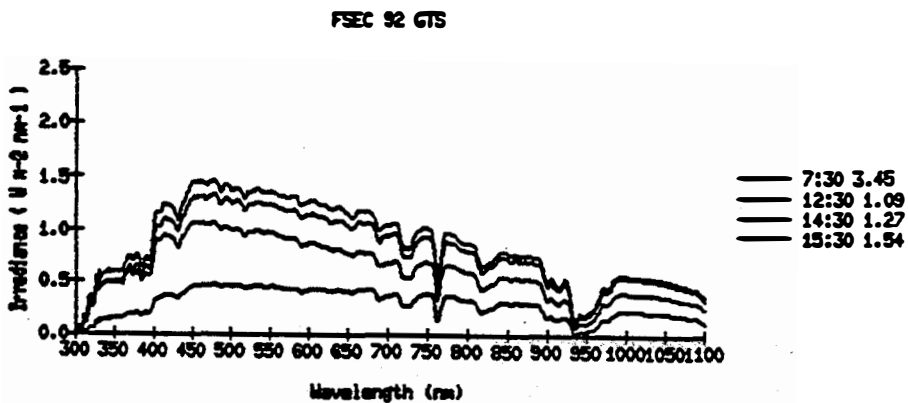
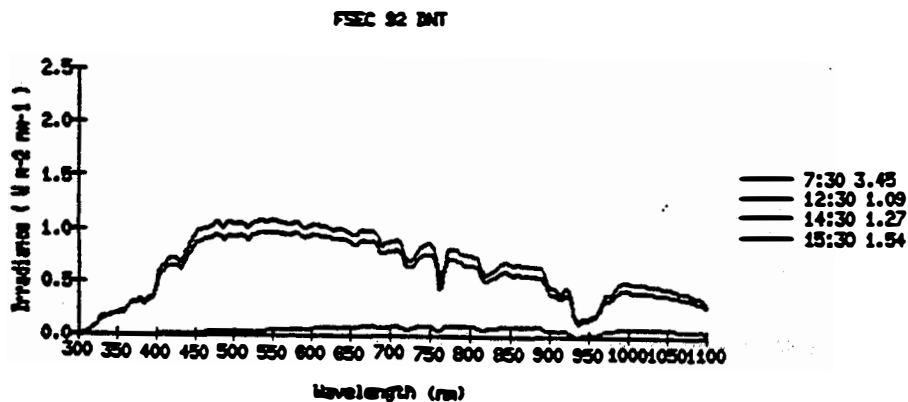
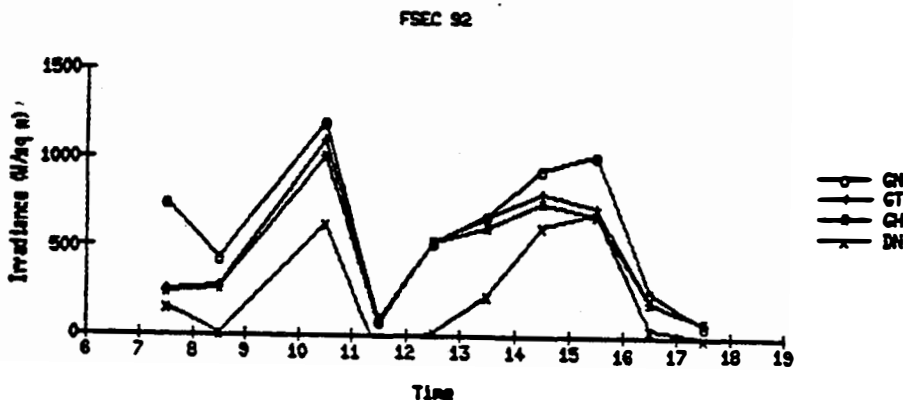
FSEC 91 GTS





N FSEC88092  
 339 04 01 88 092 172 DN 102 GT  
 0.4 cloud cover at 0810  
 Temp controllers: 172 and 102 40 C at 0810  
 Reset trackers at 0940  
 Tracking data suspect in AM  
 LSR 172 mV drift errors at 1230  
 No slides

-----  
 DN data are bad at 0730 and 1230

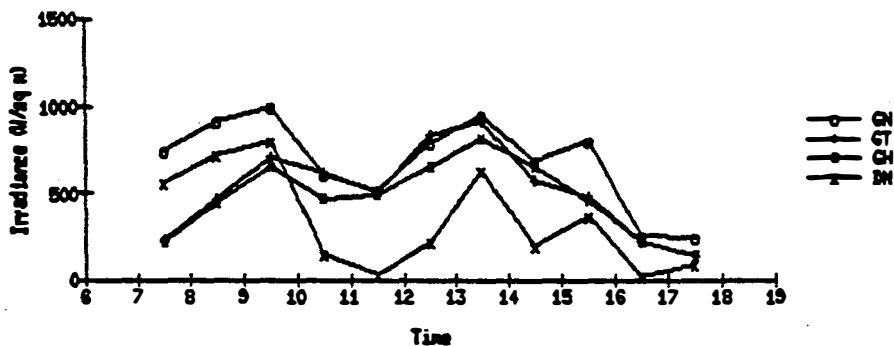




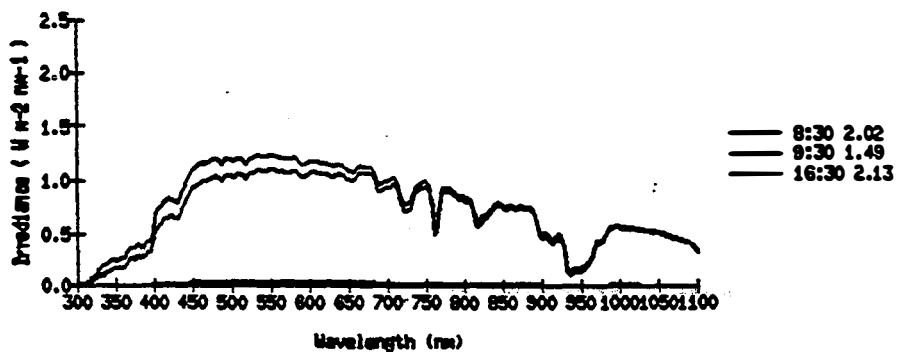
N FSEC88093  
 340 04 02 88 093 172 DN 102 GT  
 Partly cloudy  
 LSR 172 mV drift errors at 0830 and 0930  
 No slides

-----  
 Very brief spike in UV in DN spectra at 0830 and 0930

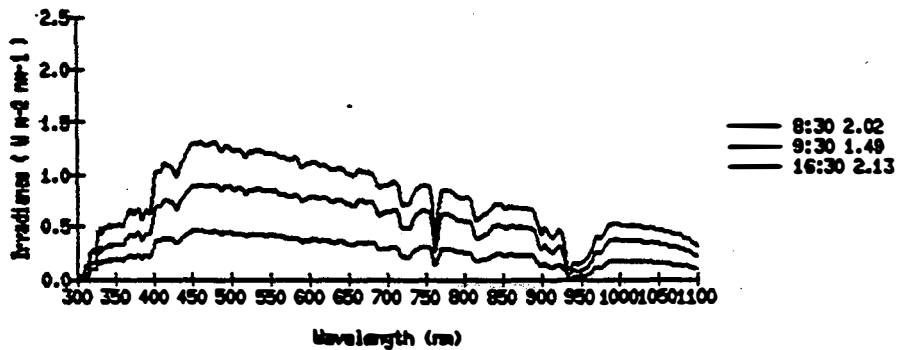
FSEC 93



FSEC 93 DNT



FSEC 93 GTS

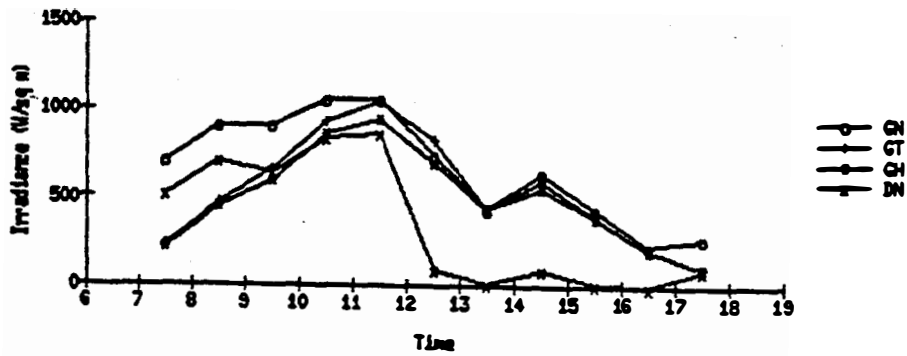




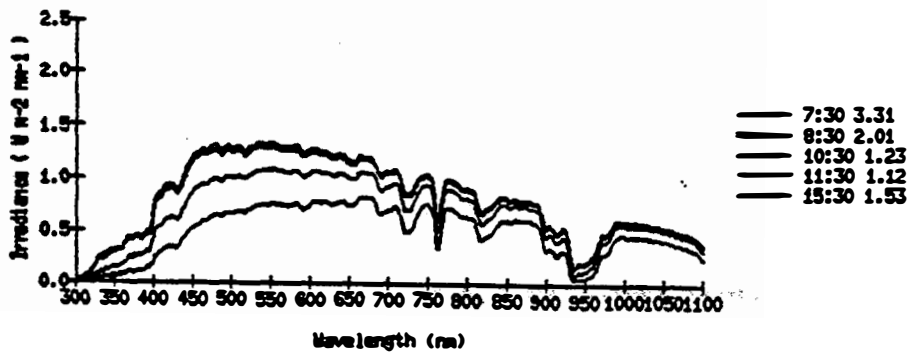
N FSEC88094  
 341 04 03 88.094 172 DN 102 GT  
 Partly cloudy  
 LSR 172 mV drift errors at 0830, 1030, and 1130  
 No slides

-----  
 Spikes in UV in DN spectra at 0733 and 0830

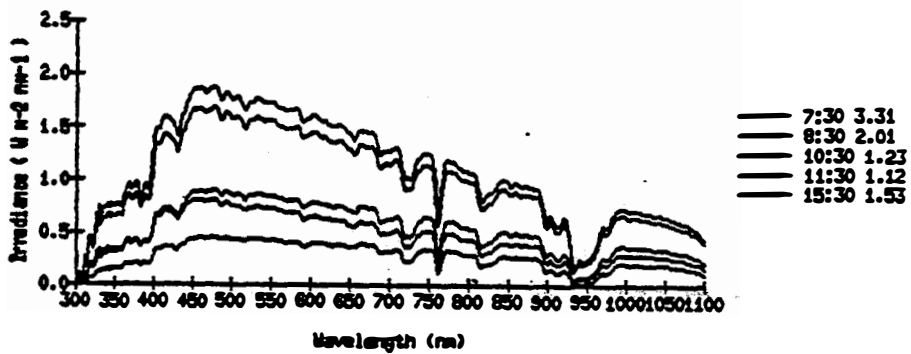
FSEC 94



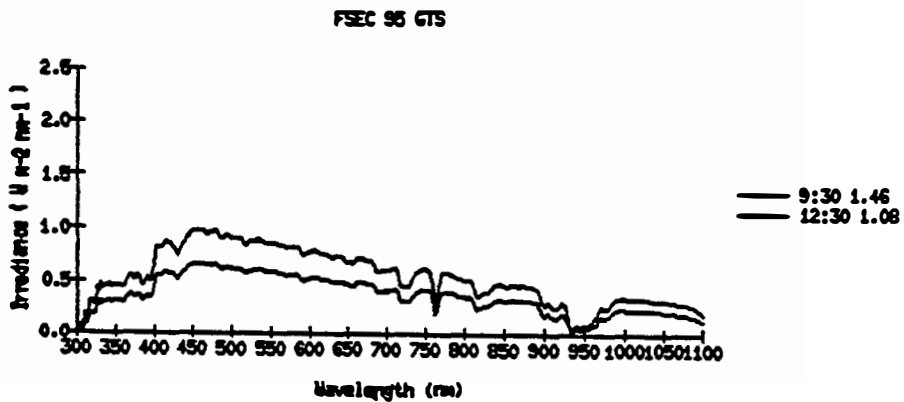
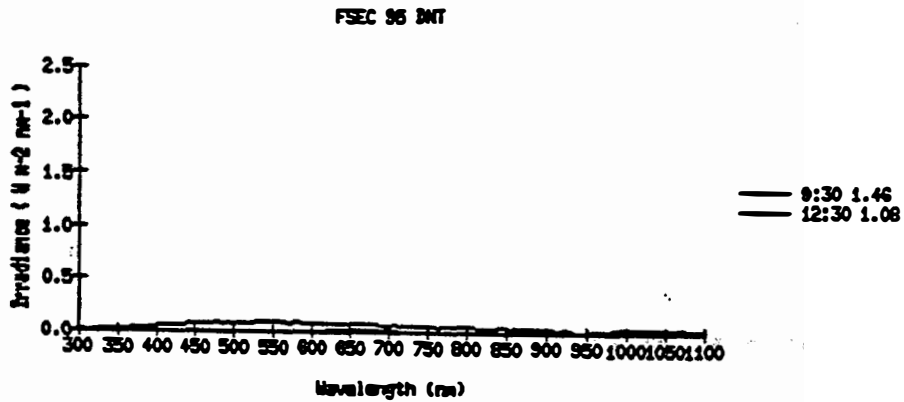
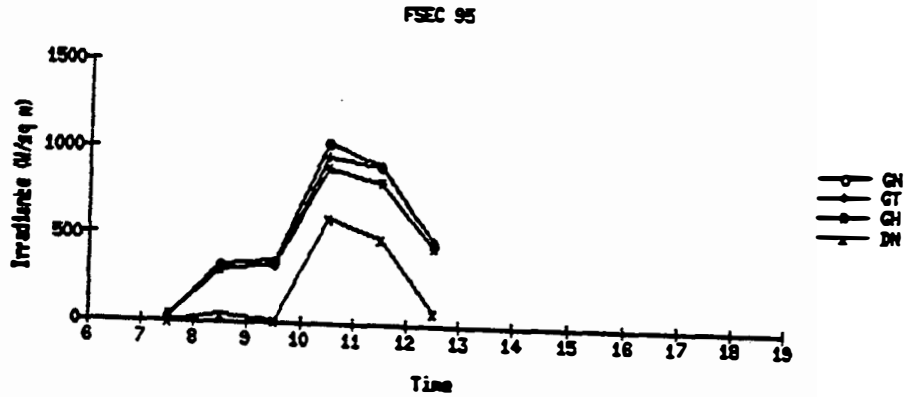
FSEC 94 DNT



FSEC 94 GTS



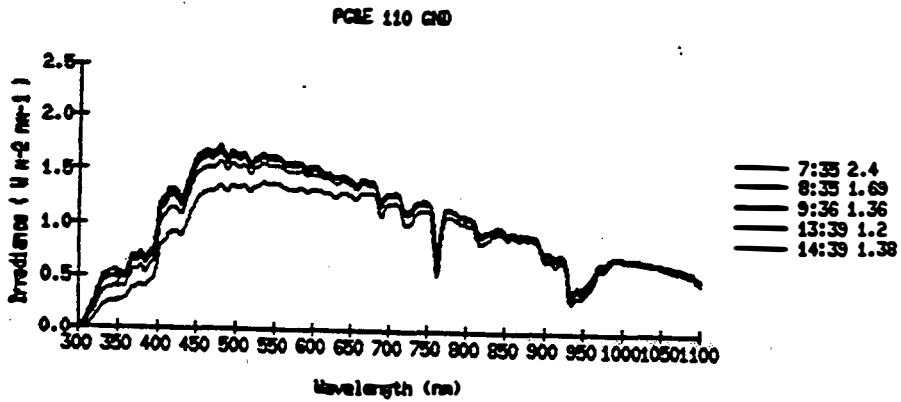
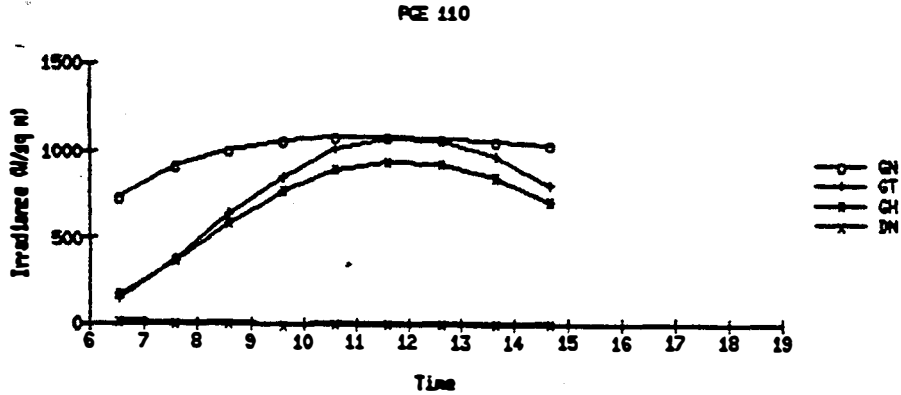
N FSEC88095  
 342 04 04 88 095 172 DN 102 GT  
 0.9 cloud cover at 0900  
 Temp controllers: 172 and 102 40 C at 0900  
 LSR 172 mV drift errors at 1230  
 No slides



**3.2 Pacific Gas and Electric Company, San Ramon, Calif.**

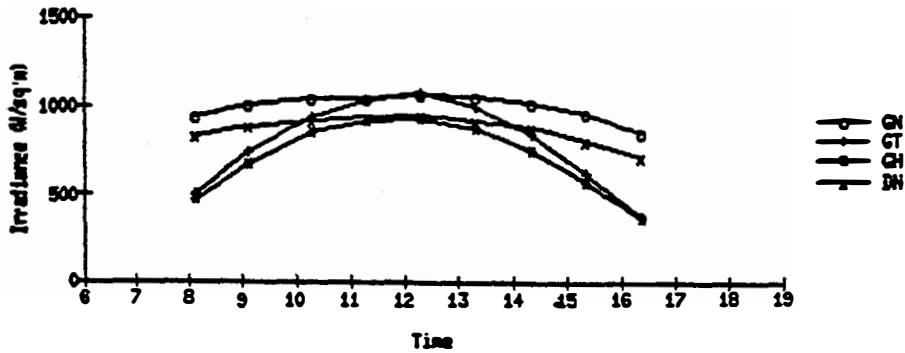


N PG&E87110  
 04 20 87 110 174 GN  
 Clear  
 Problem with Matrix NIP and LI-COR pyranometer:  
 NIP alignment off; fixed 4-21  
 Pyranometer out of range at 850 Wm-2; changed voltage range 4-21  
 Eppley and Matrix NIP tracker out of alignment; corrected 4-21  
 No photos  
 -----  
 NIP data are bad

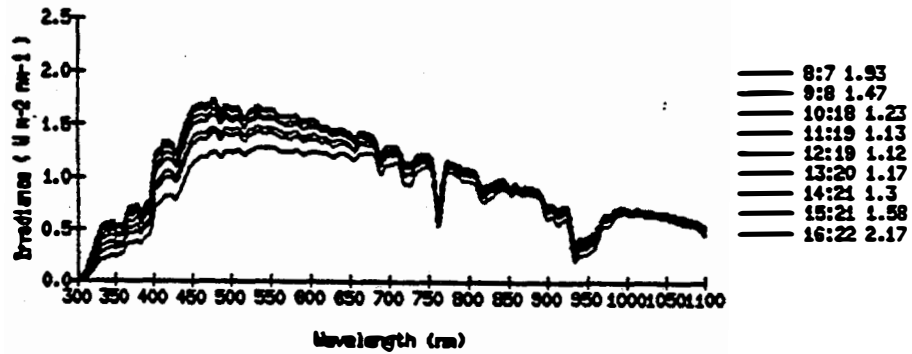


N PG6B7111  
 04 21 87 111 174 GN  
 Clear; some haze  
 NIP alignment and pyranometer voltage fixed  
 Power failed about 0950; restarted at about 1020  
 No photos

PGE 111



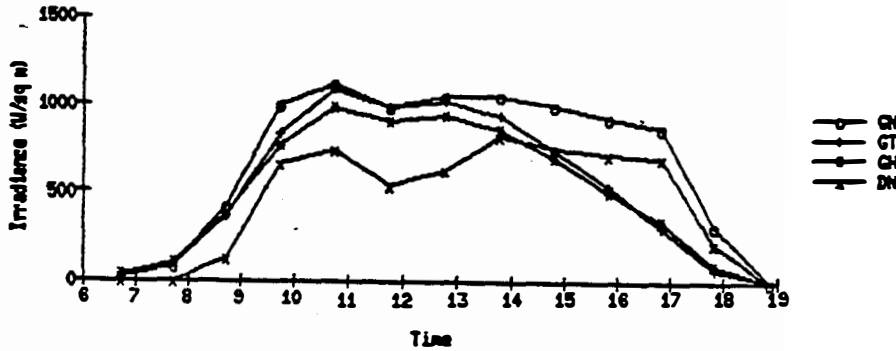
PGE 111 GND



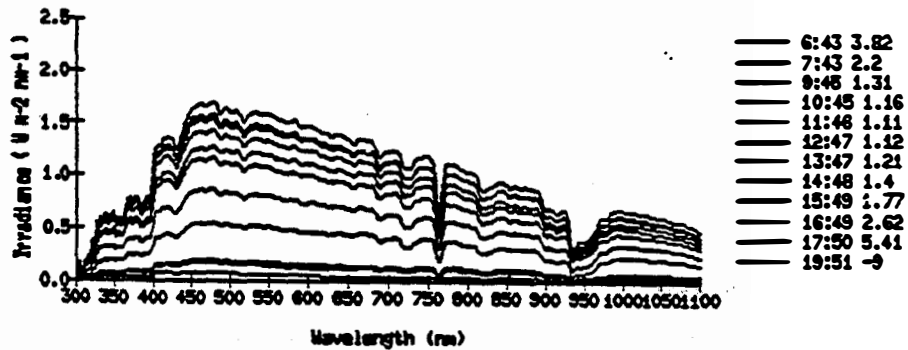


N PG&EB7113  
 04 23/24 87.113 174 GN  
 Ran overnight  
 Overcast in AM with partial clearing  
 No photos  
 -----  
 Scan at 1951 is after sunset  
 Note time stamp differences 1045 vs. 1050

PGE 113



PGE 113 GS



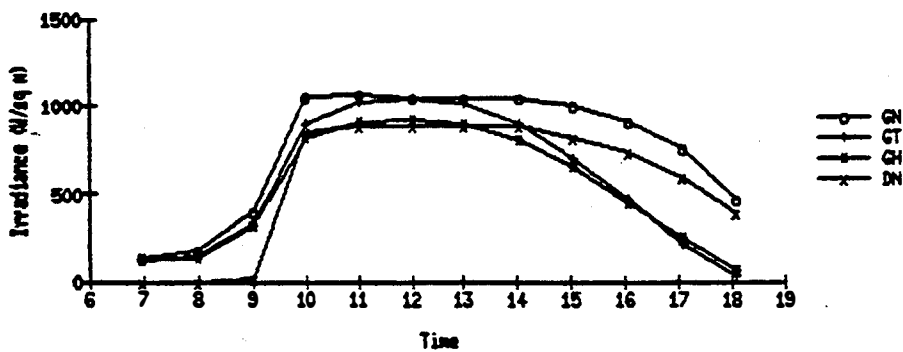


N PG6EB7114

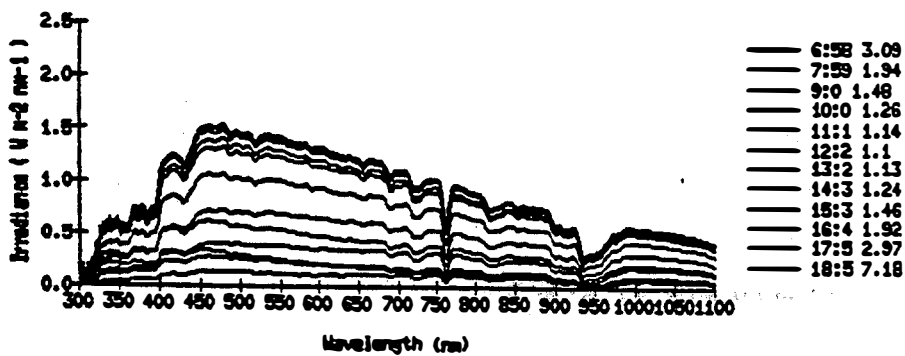
see 87113

Note time stamp differences 0759 vs. 0804

PGE 114



PGE 114 Q/S

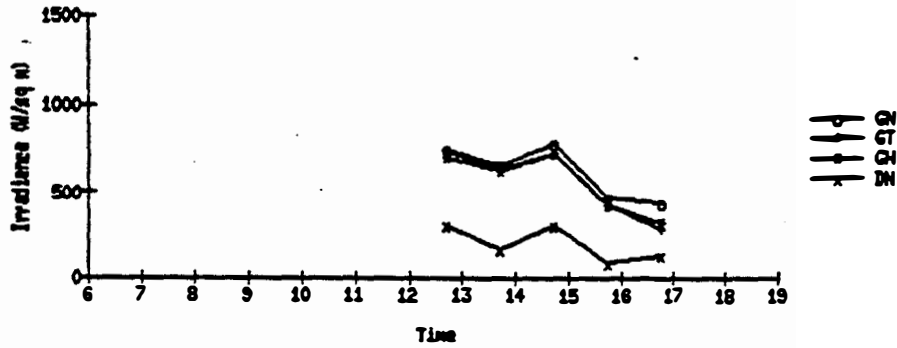




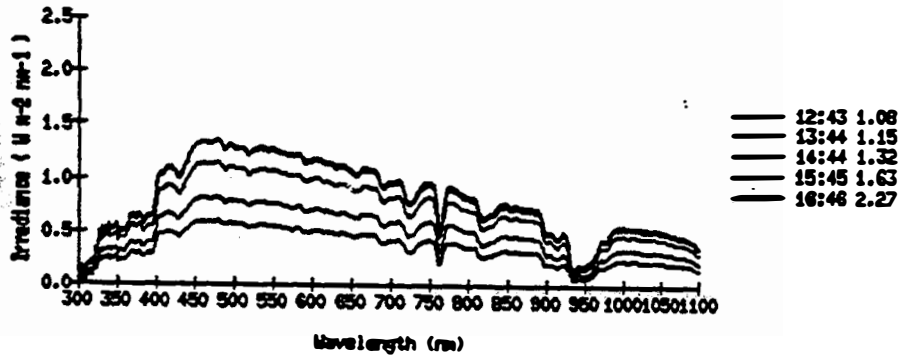
N PG&E87133  
 05 13 87 133 174 GT  
 Intermittent high clouds  
 No photos

-----  
 Spectral integrals nearly match broadband values

PG&E 133

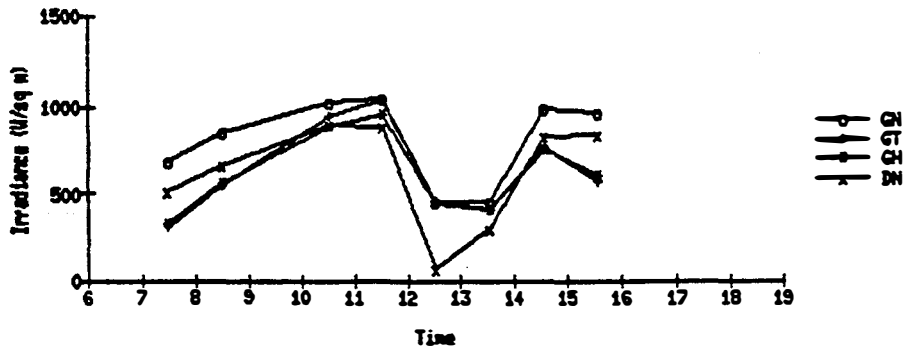


PG&E 133 GTS

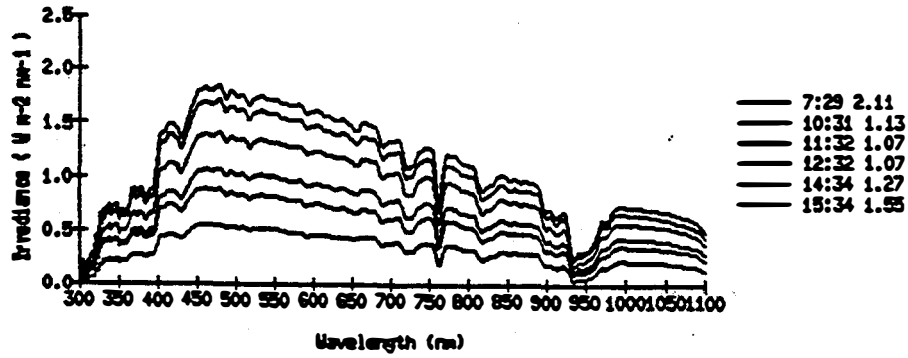


N PG6E87134  
 05 14 87 134 174 GT  
 High clouds  
 No photos

PGE 134



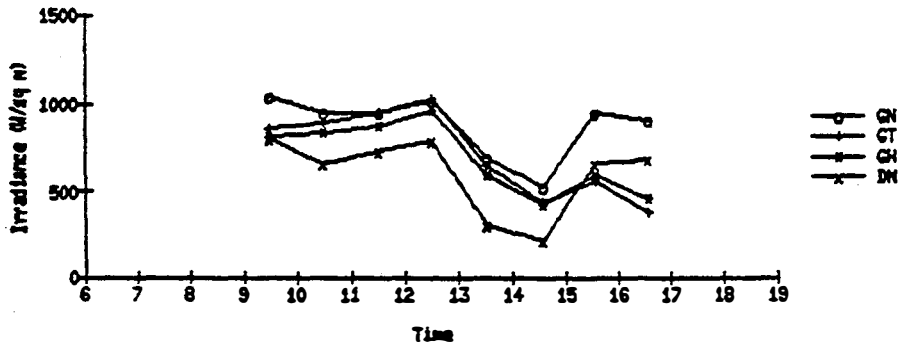
PG6E 134 CTS



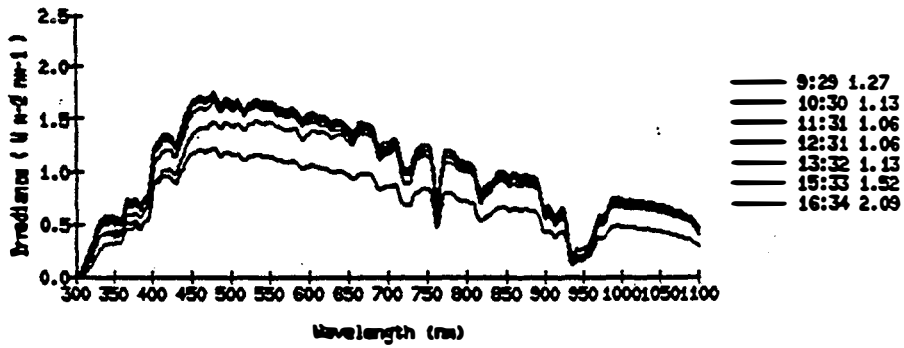


N PG6E87135  
 05 15 87 135 174 GN  
 Partial high clouds  
 No photos

PGE 135



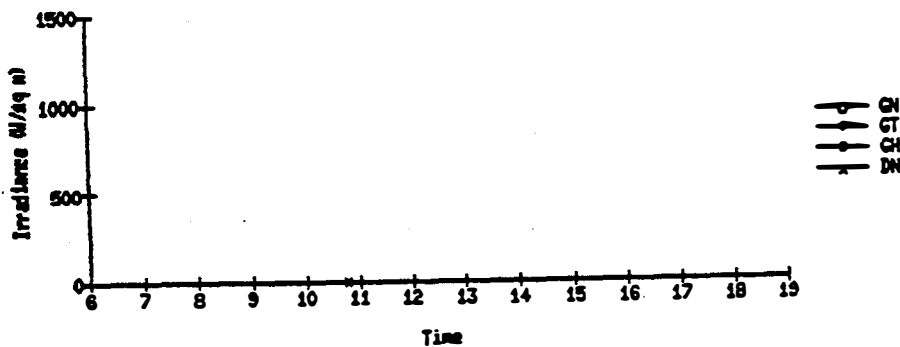
PGE 135 GND



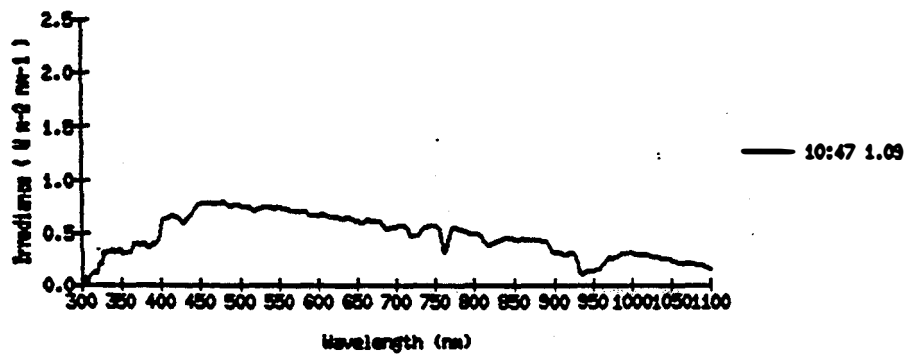


N PG&EB7141  
05 21 87 141 174 GT  
No log sheet  
-----  
One spectrum - GT

PGE 141



PGE 141 GTS



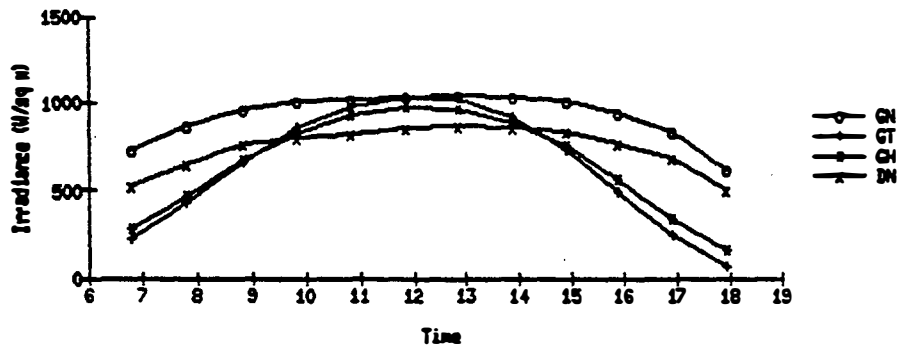




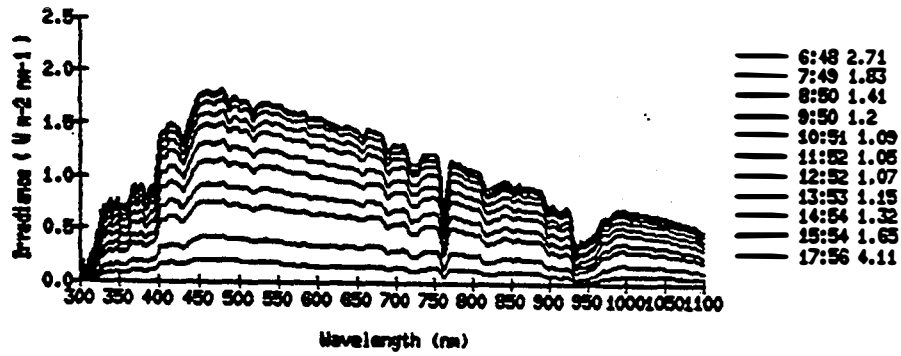
N PG&E87142  
 05 22 87. 142 174 GT  
 Partly cloudy AM; clear PM  
 No photos

-----  
 DN/SN are different at 1151 and 1252  
 Spectral integral is larger than broadband at 1756

PGE 142



PGE 142 GTS

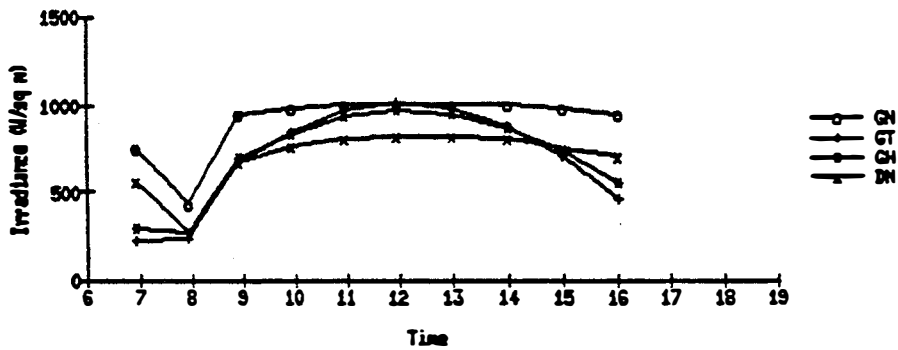




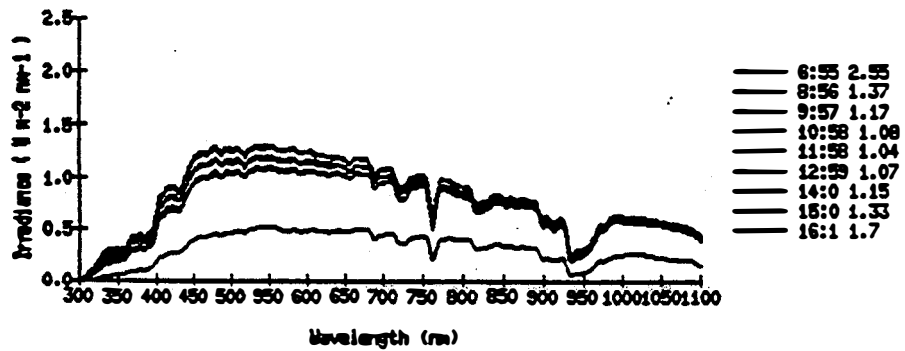
N PG6E87148  
 05 28 87 148 174 DN  
 Partly cloudy, clearing about 1000; hazy in late afternoon  
 No photos

-----  
 Note time stamp differences 1601 vs. 1606

PG6 148



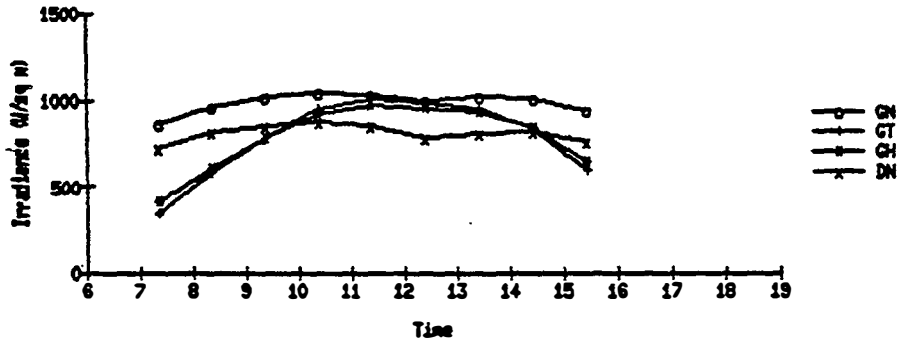
PG6E 148 INT



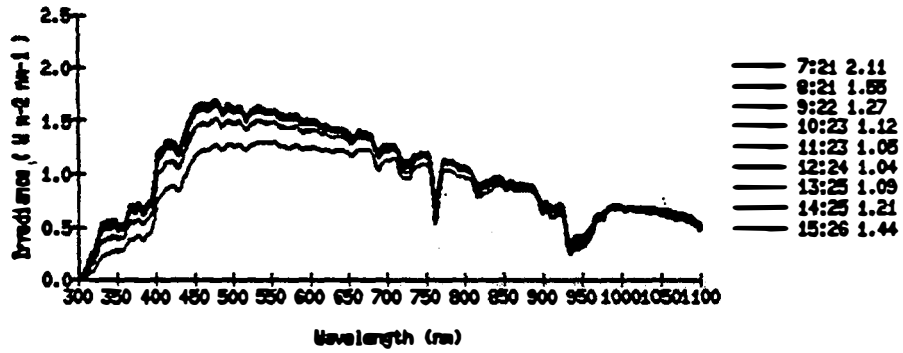


N PG&E87153  
 06 02 87 153 174 GN  
 Clear; hot  
 LSR reach 50 C with temp controller off; ambient > 38 C

PGE 153



PGE 153 GND

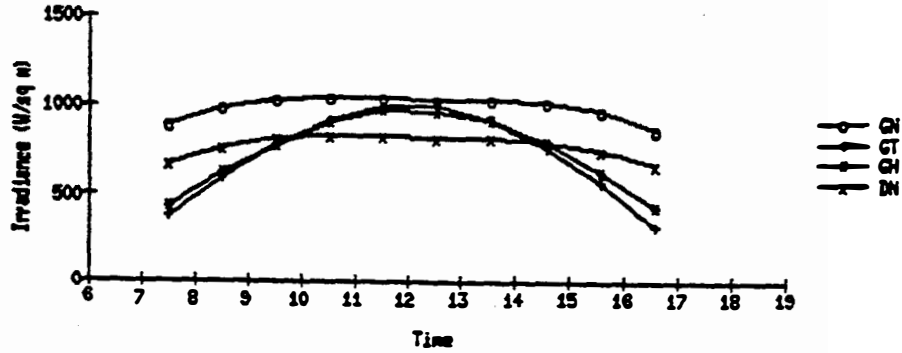


N PG&EB7162  
06 11 87 162 174 GH  
Cloudy AM; clear, windy PM  
Red dust cap not removed from integrating sphere  
No photos  
No spectral data

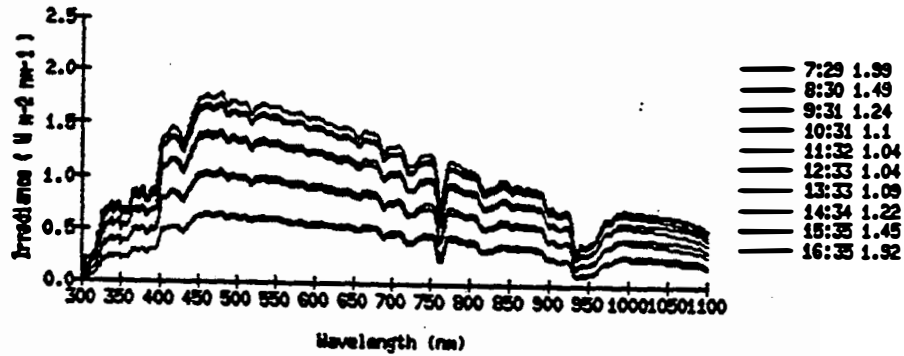
N PGSEB7163  
 06 12 87 163 174 GT  
 Clear; hot  
 Temp controller: 46 C at 1330; T(ambient) 39 C; no foil cover  
 48 C at 1655; 38 C

-----  
 DN/SN different at 0729

PGE 163



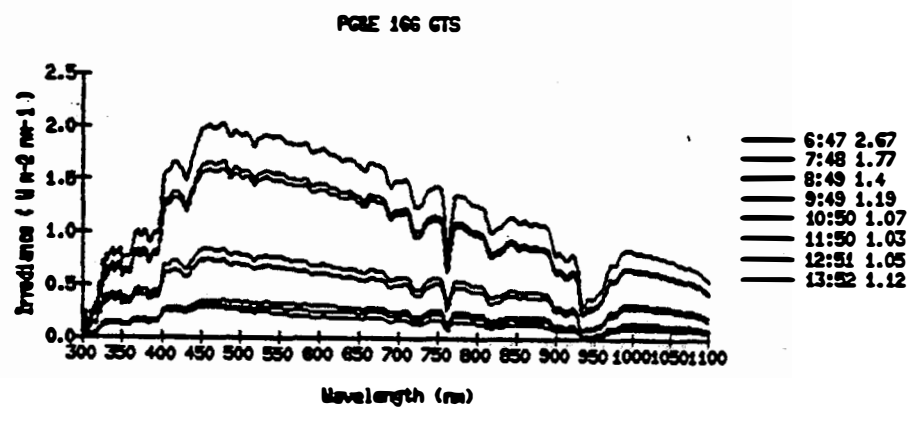
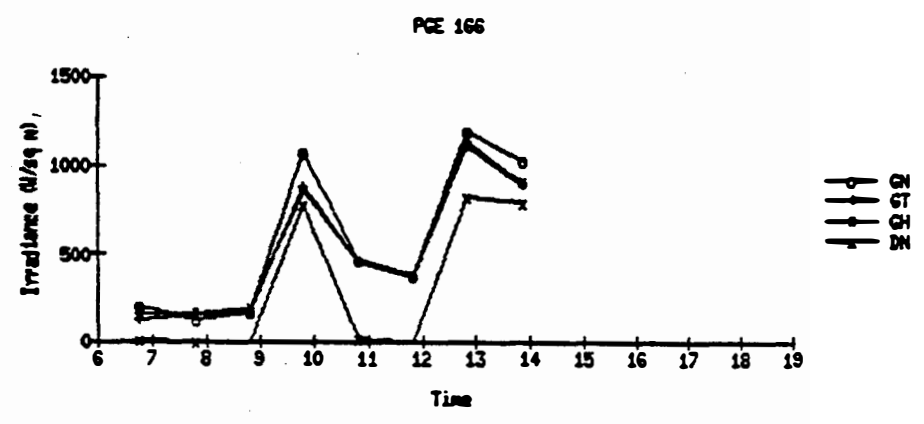
PGE 163 GTS





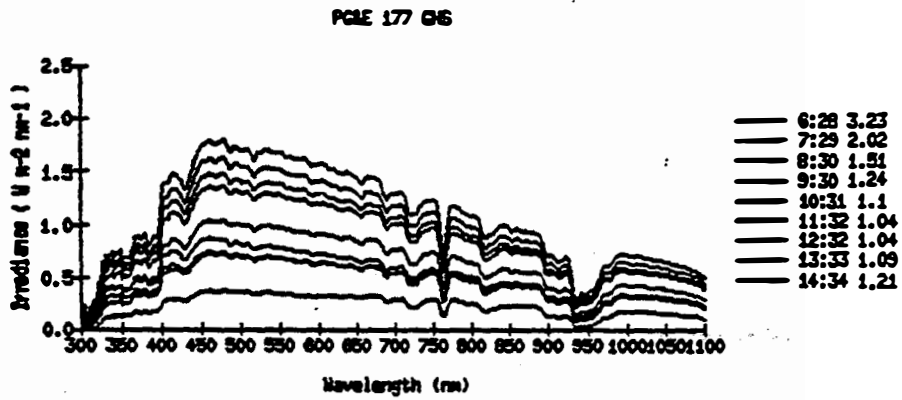
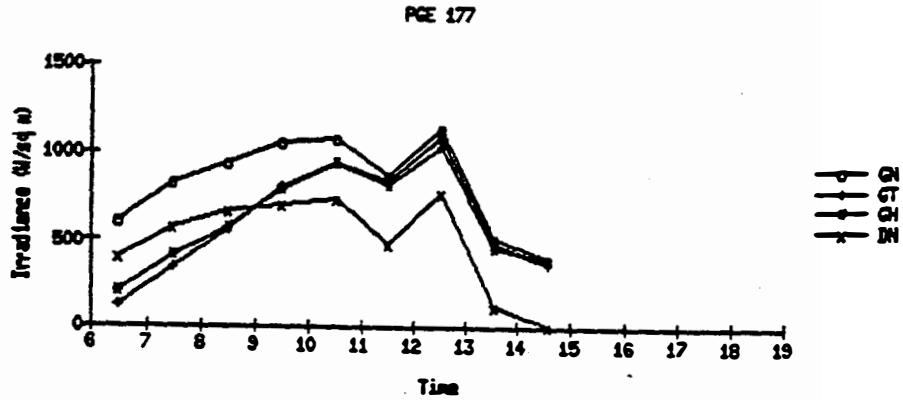
N PGSEB7166  
06 15 87 166 174 GT  
Partly cloudy AM  
No foil shade on LSR  
No photos

-----  
Note time stamp differences 0748 vs. 0753



N PG&E7177  
 06 26 87 177 174 GH  
 Clear AM; partly cloudy PM  
 No photos

-----  
 DN/SN are different at 0628, 0729, and 0830  
 Note time stamp differences 1333 vs. 1338

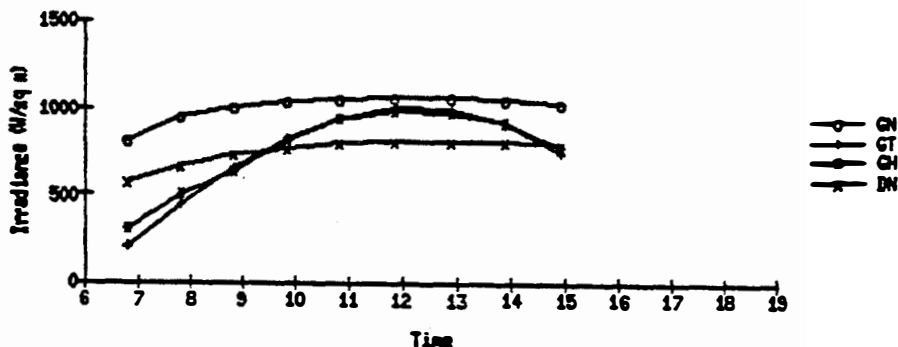




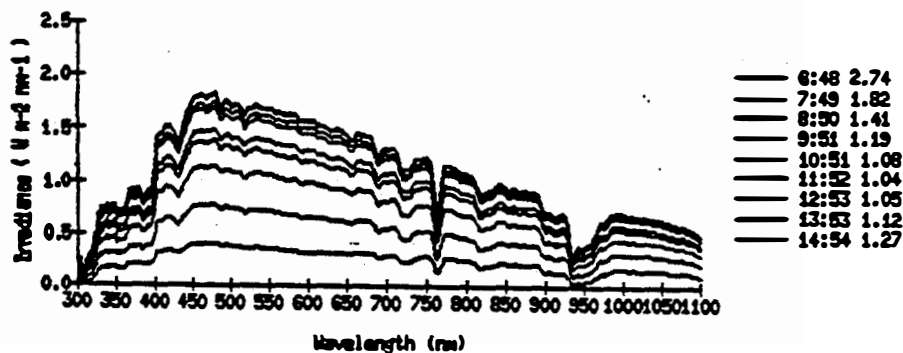
N PGE87183  
 07 02 87-183 174 GT  
 Cloudy AM; clear by 1000  
 No photos

-----  
 SN/DN are different at 0648, 0749, 0850, 1253, and 1353

PGE 183



PGE 183 GTS

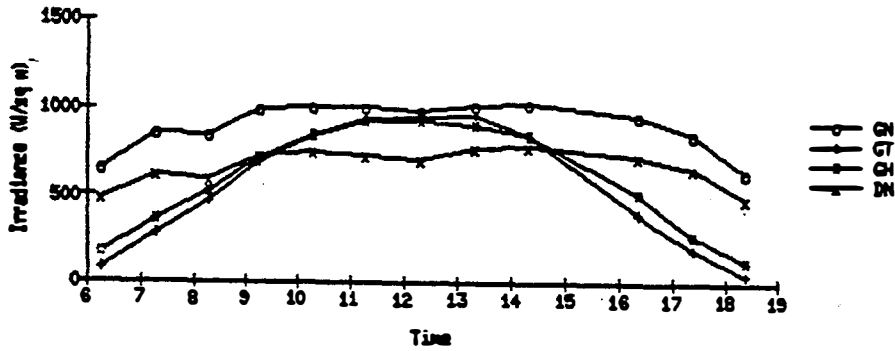




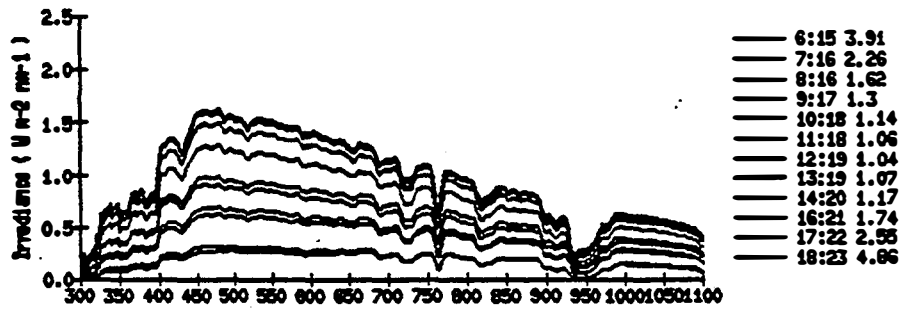
N PG&EB7188  
 07 07 87 188 174 GH  
 Clear; warm  
 No photos

-----  
 SN/DN different at 0615 and 0716  
 SH/GH errors at 1722 and 1823; also spectral integral > broadband

PGE 188

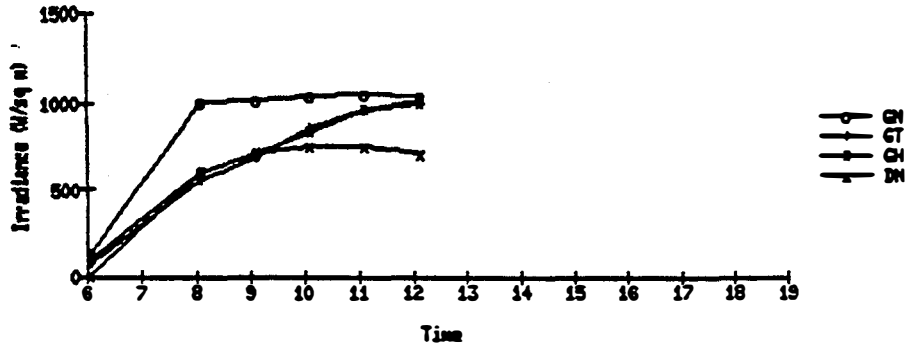


PGE 188 GHS

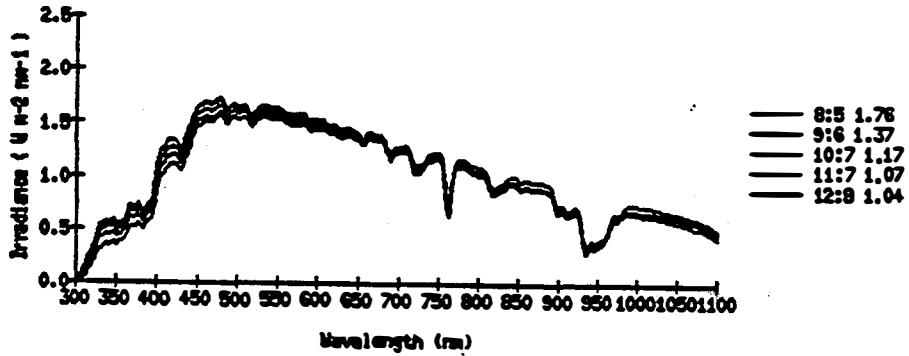


N PG&E87198  
 07 17 87 198 174 GN  
 (Note log sheet shows 07 16)  
 Cloudy AM  
 Tracker may be off by a few degrees at times  
 Tracker wind stowed at 1300  
 No photos

PGE 198

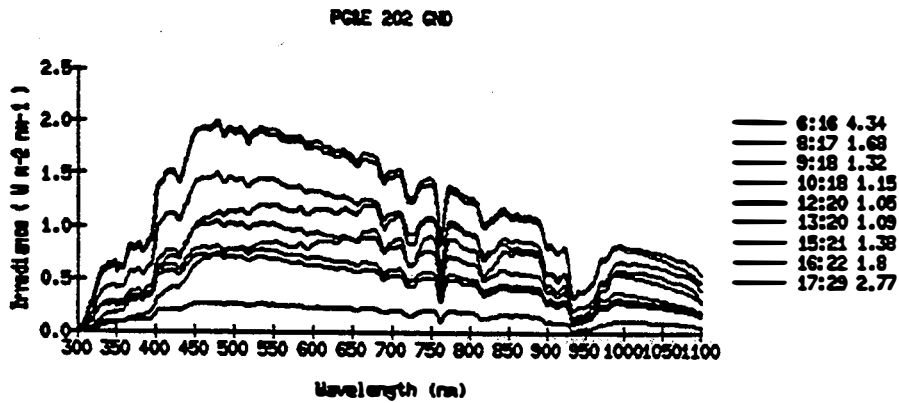
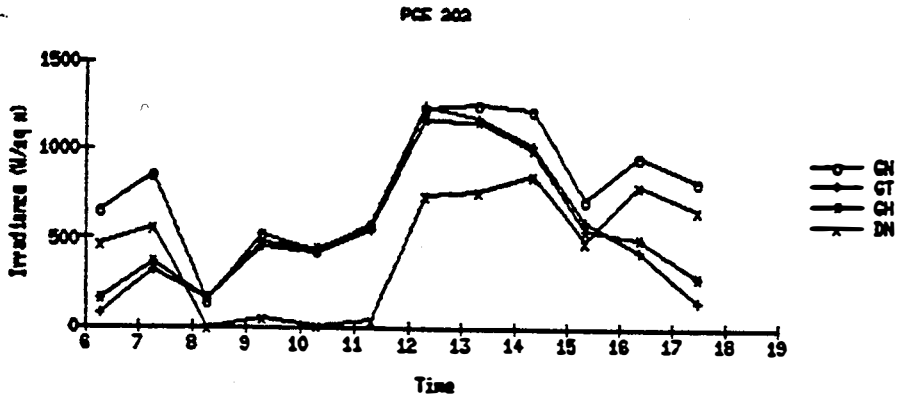


PGE 198 GND



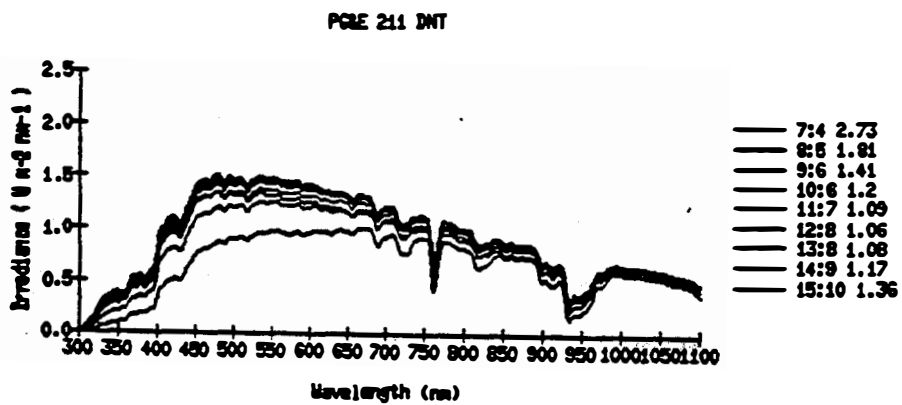
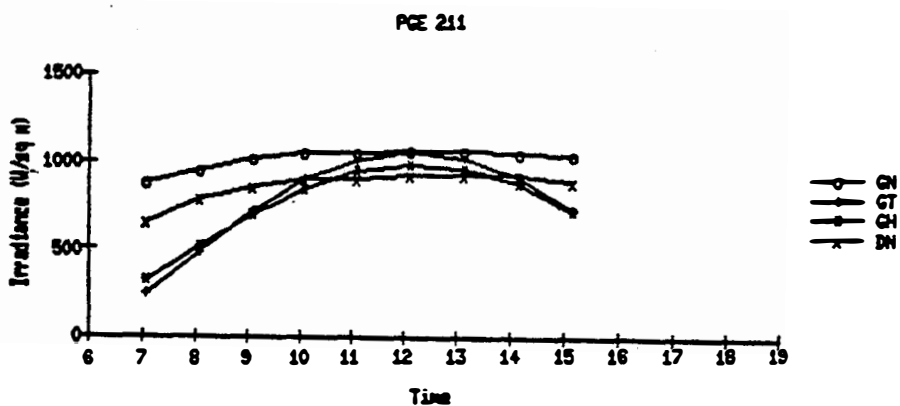
N PG&EB7202  
 07 21 87 202 174 GN  
 Partly cloudy AM  
 Tracker accuracy poor (+/- 5 deg); very poor in afternoon; bad  
 between 1300 and 1700; last scan at 1727 should be good  
 No photos

-----  
 Tracker errors; data bad at 1320 and 1622  
 Spectral integral = broadband at 1521; appears unstable  
 GH/SH errors at 1729  
 Note time stamp differences 1320 vs. 1325



N PG687211  
 07 30 87 211 174 DN  
 Partly cloudy in AM  
 Tracker functioning properly  
 No photos

-----  
 Note Si NIP consistently 200 Wm<sup>-2</sup> below Eppley NIP

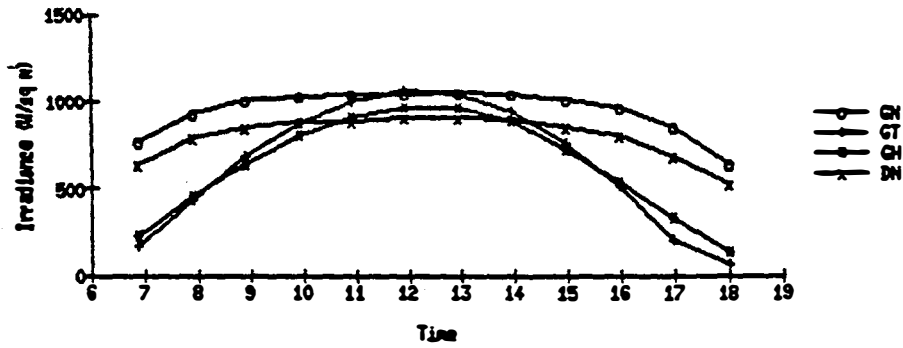




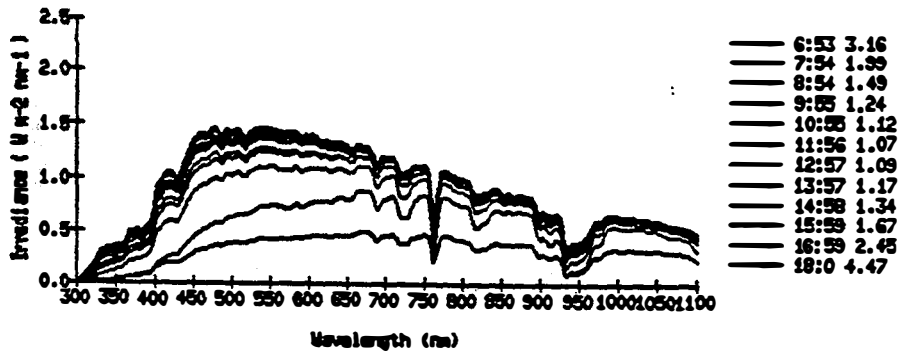
N PG6B7218  
 08 06 87 218 174 DN  
 No log sheet  
 No photos

-----  
 Si NIP appears to be too low throughout day  
 LSR DN and NIP much different at 0655  
 Note time stamp differences 1659 vs. 1704

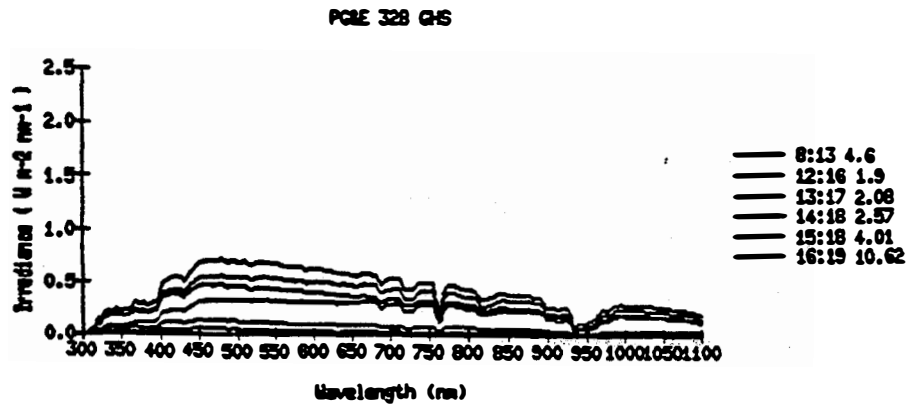
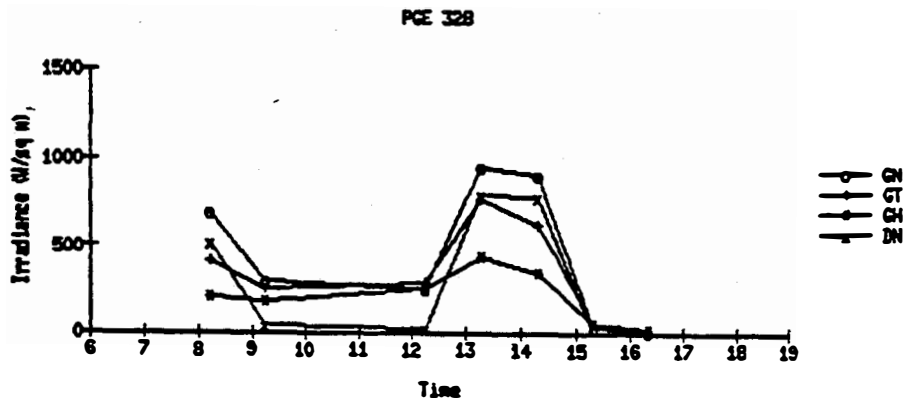
PGE 218



PG6E 218 DNT

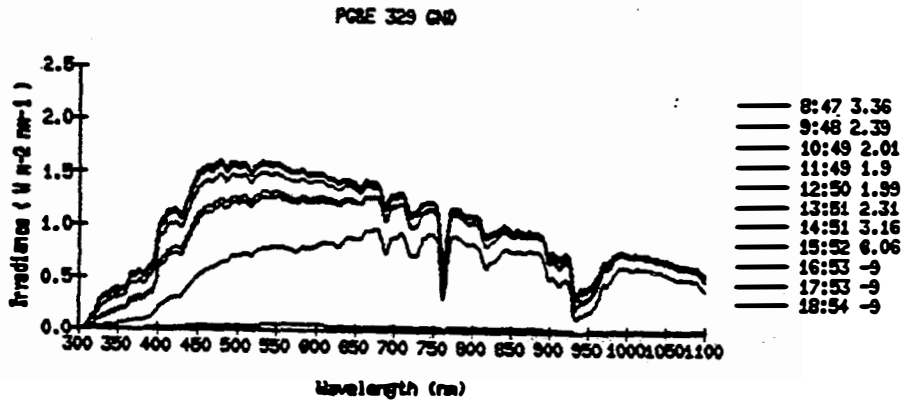
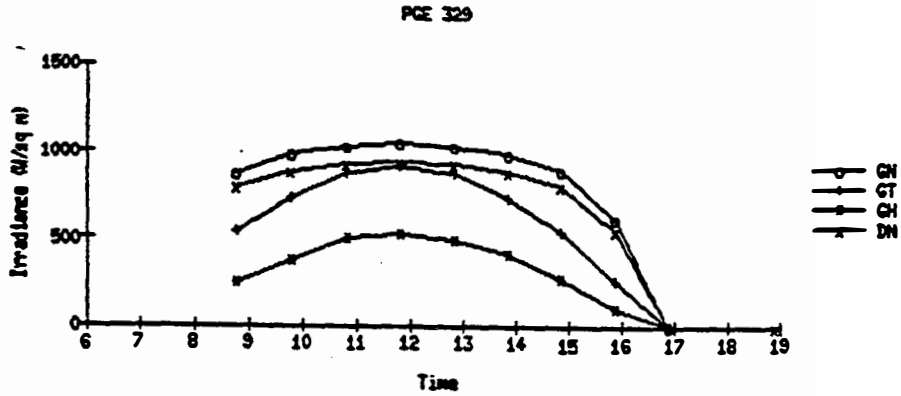


N PG&EB7328  
 11 24 87 328 174 GH  
 Cold; high clouds; overcast by noon  
 Wind speed changed to m/s  
 Photos (but 4 different sets indicate 11-24; cannot distinguish)  
 -----  
 Si NIP appears to be too low throughout the day



N PG&EB7329  
 11 25 87 329 174 GN  
 Cold; windy; some high clouds  
 Photos indicated, but none with this date stamp  
 Wind speed in m/s  
 First run aborted; photo invalid  
 -----

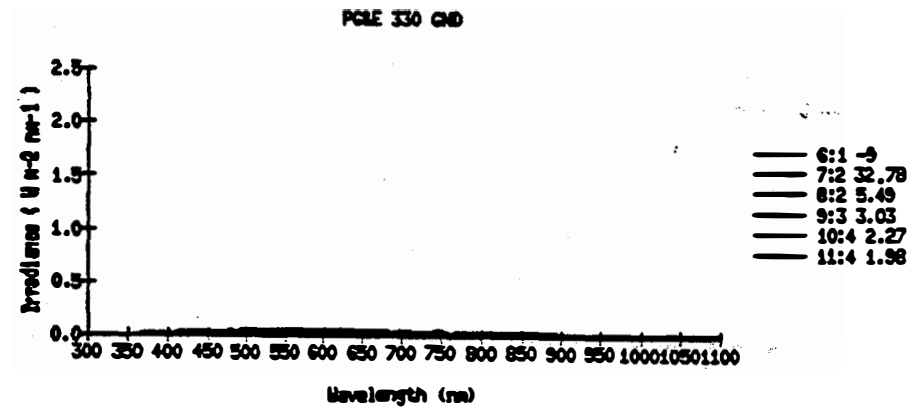
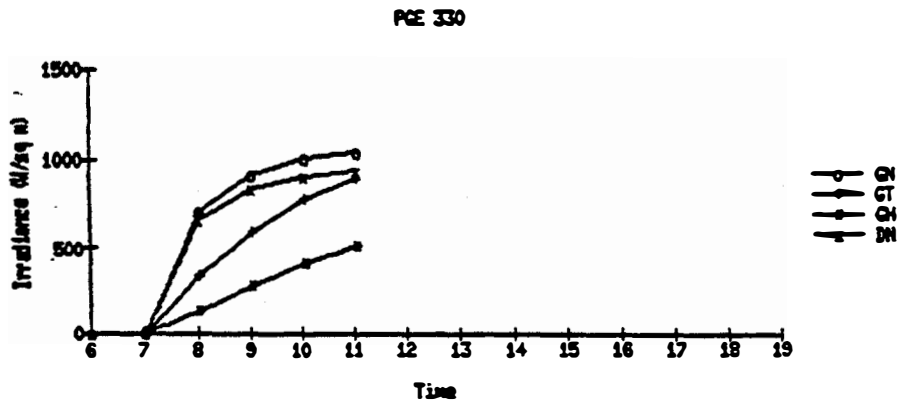
Si NIP appears to be too low through 1153  
 Spectrum at 0948 is bad  
 Data at 1656, 1755, and 1856 are after sunset





N PG&EB7330  
 11 26 87 330 174 GN  
 No log sheet  
 -----

Data at 0603, 0703, and 0804 before sunrise  
 Appears that LSR data is bad all day; doesn't follow broadband  
 Si NIP data are too low





N PG&E88019

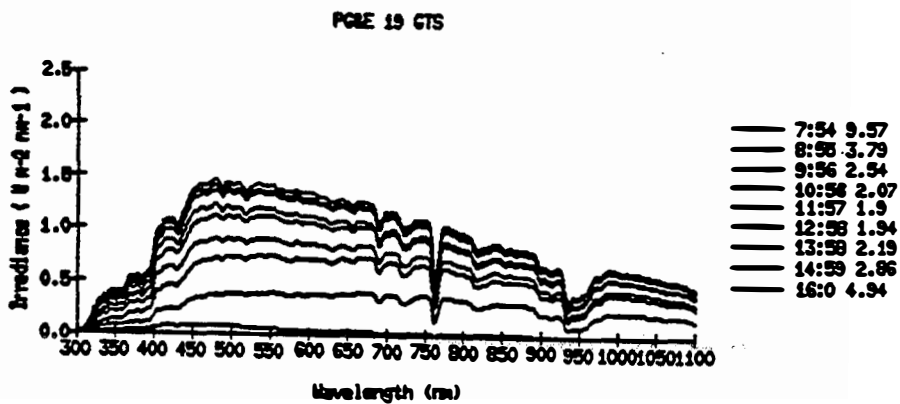
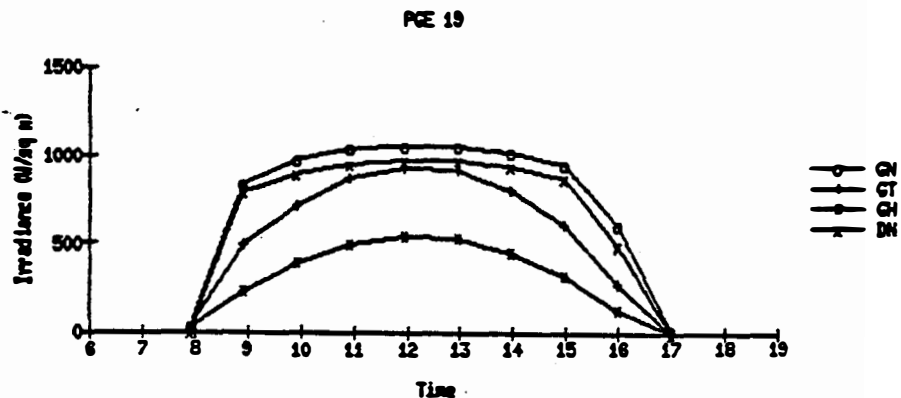
01 19 88 019 174 GT

First scan at 28 C

Clear; cold

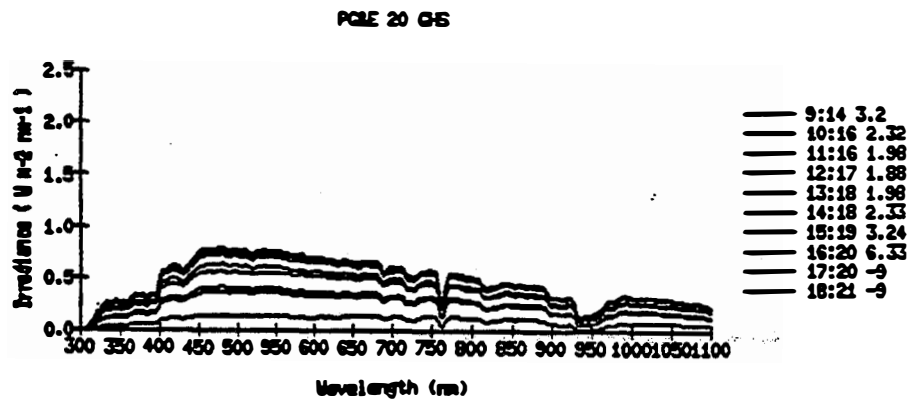
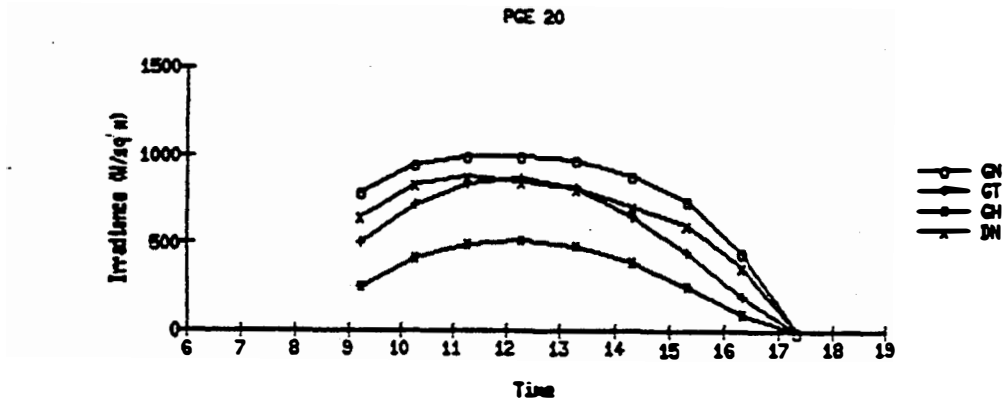
GT and GH PSP and NIP changed between 1600 and 1630; constants changed

Photos indicated, but none with this date stamp





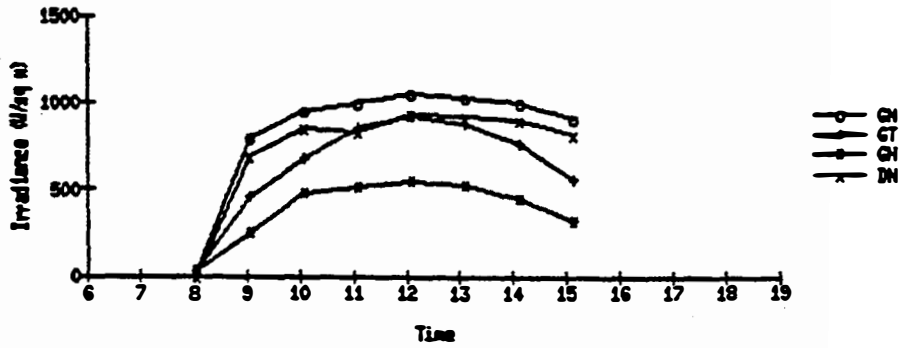
N PG6E8020  
 01 20 88 020 174 GH  
 Clear (some haze); cool  
 Photos indicated, but none with this date stamp  
 -----  
 Si NIP data look bad throughout the day  
 Data at 1722 and 1823 are after sunset



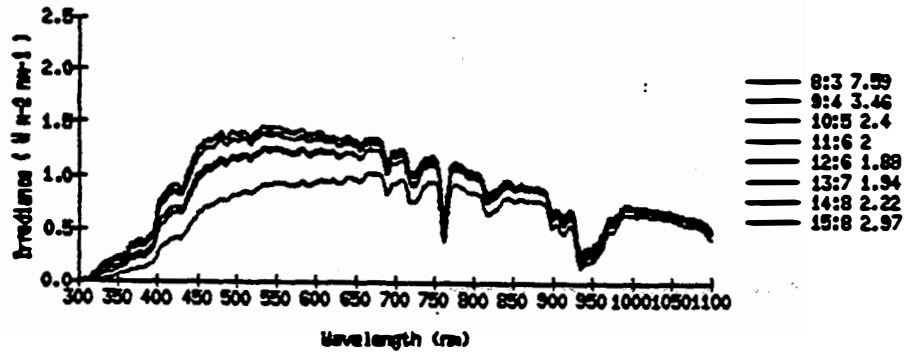
N PG&E88021  
 01 20 88 021 174 DN  
 Clear and cold; some haze; late afternoon high winds  
 Photos indicated, but none with this date stamp

-----  
 Si NIP data look bad  
 No spectrum at 0803; too early

PG&E 21



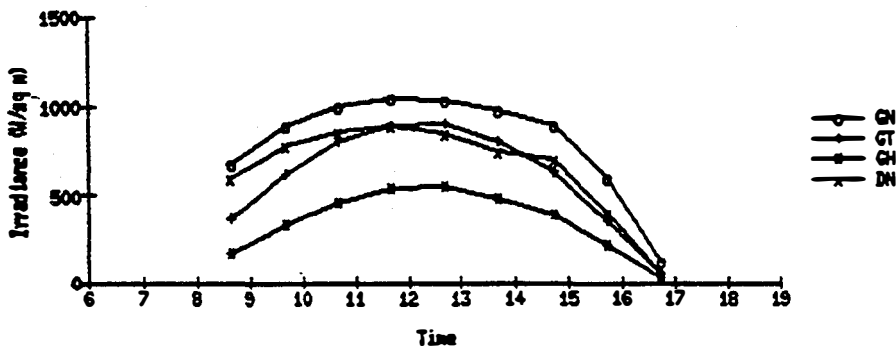
PG&E 21 DNT



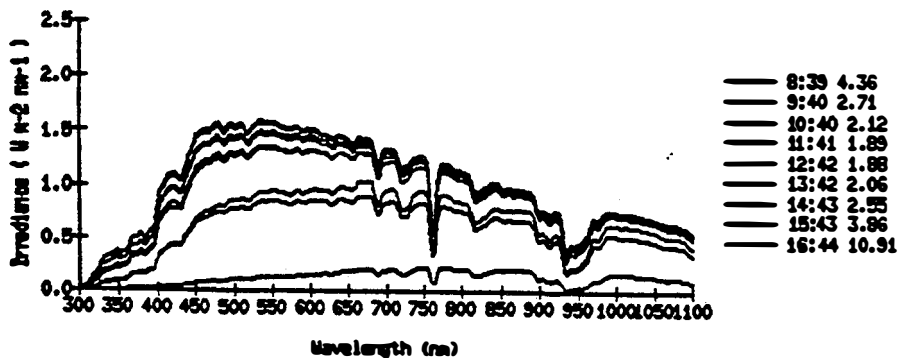


N PG5EB8022  
 01 22 88 022 174 GN  
 Hazy and calm  
 Photos indicated, but none with this date stamp  
 -----  
 Si NIP data look bad

PGE 22

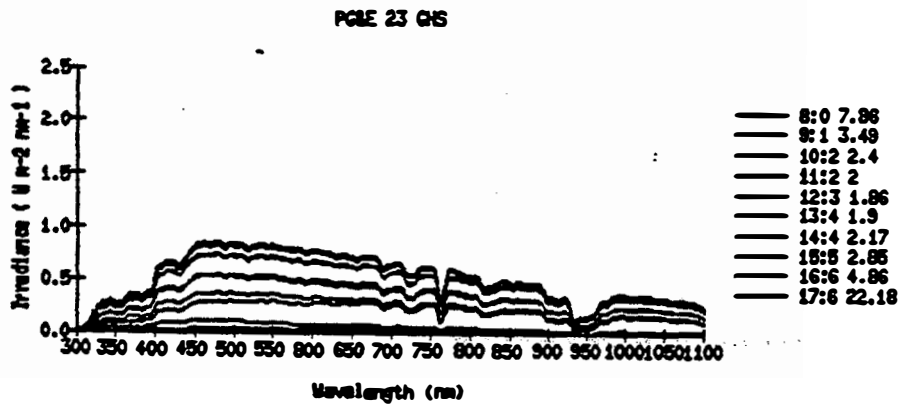
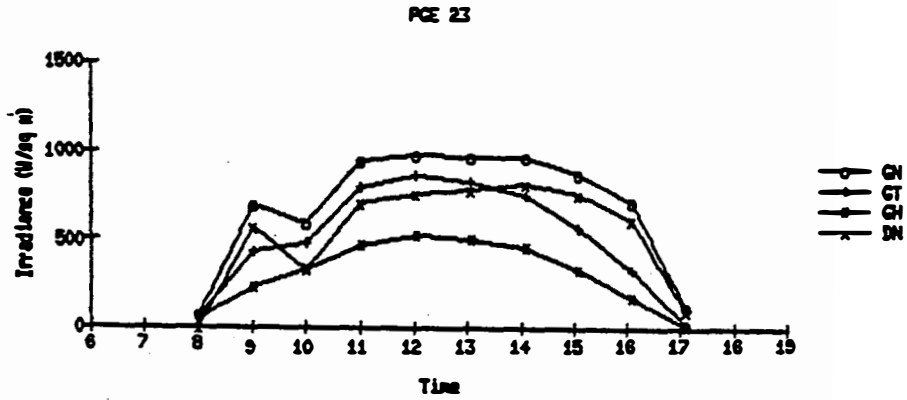


PGE 22 QAD

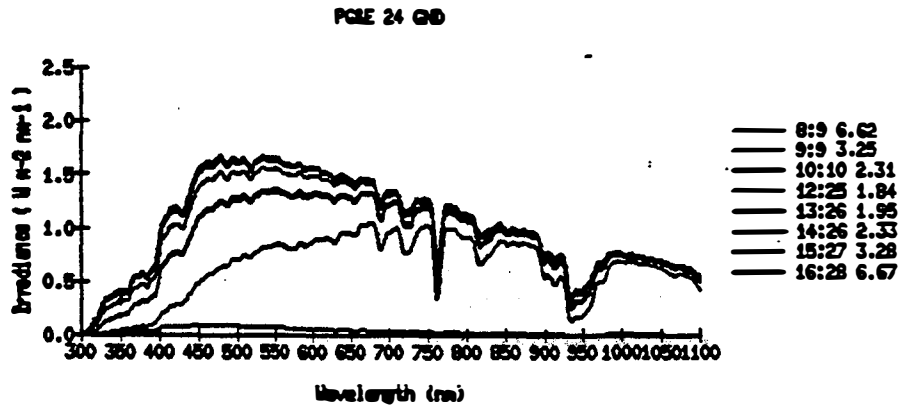
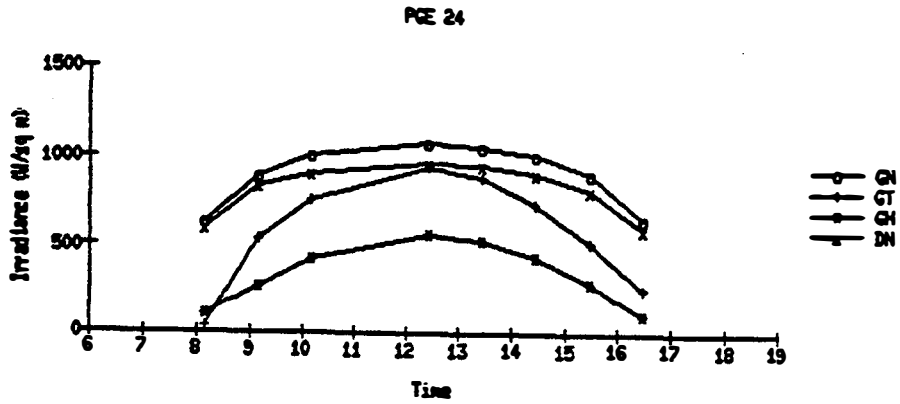


N PG&E88023  
 01 23 88 023 174 GH  
 Hazy; cool  
 Photos indicated, but date stamp uncertain

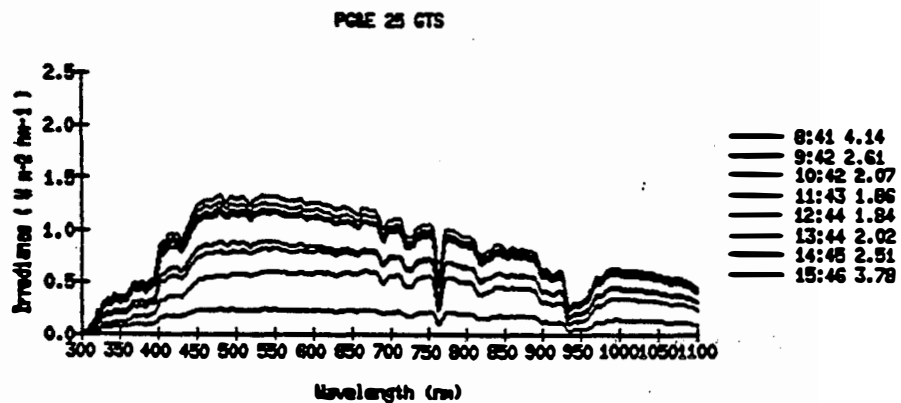
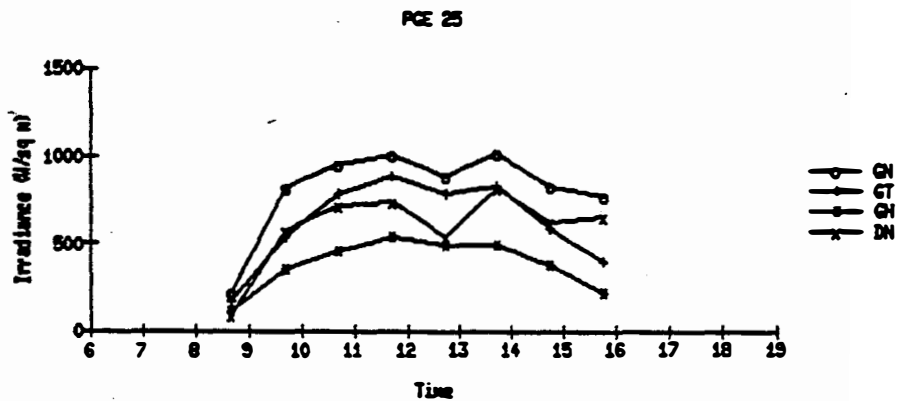
-----  
 Data at 1708 are at sunset  
 S1 NIP data look bad  
 Spectrum at 1708 very late in day; questionable



N PGSEB8024  
 01 24 88 024 174 GN  
 Clear  
 Error stopped data collection; restarted at 1220  
 Photos indicated, but none with this date stamp  
 -----  
 Si NIP data look bad most of the day

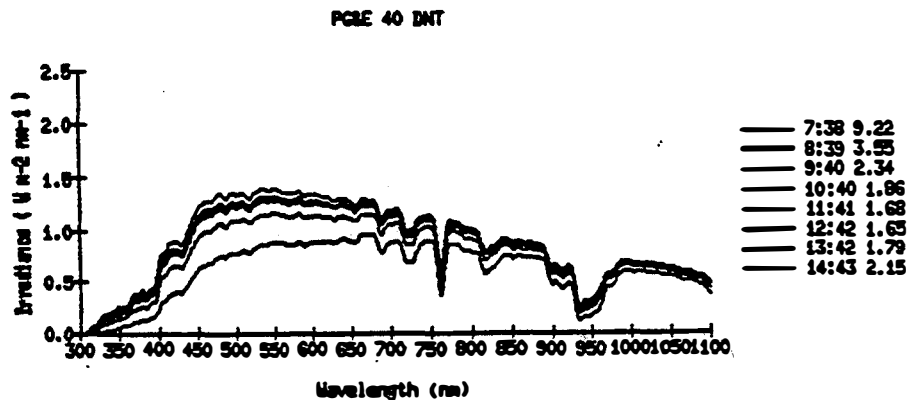
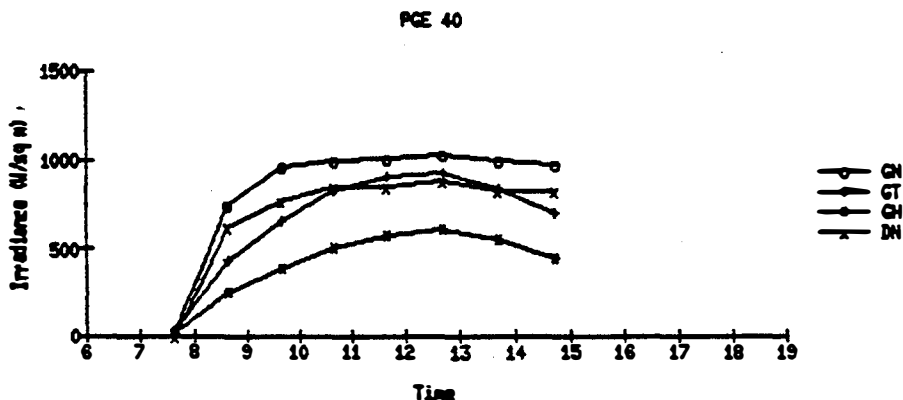


N PG6E88025  
 01 25 88 025 174 GT  
 Light fog  
 PSP and NIP constants changed in the HP85 files before starting  
 Photos indicated, but none with this date stamp  
 -----  
 Si NIP data look bad most of the day



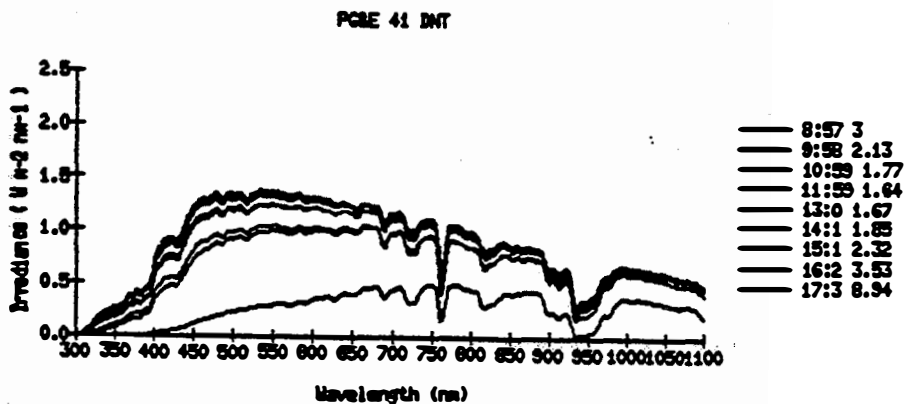
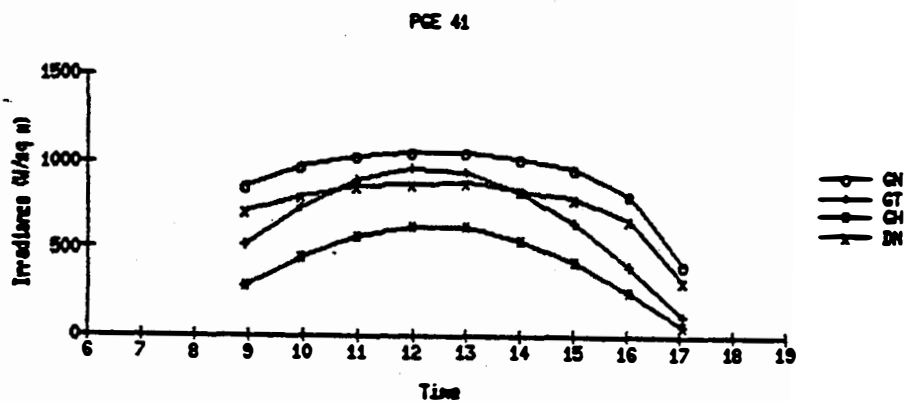


N PG&E88040  
 02 09 88 040 174 DN  
 No wind speed or albedo PSP  
 Clear and cool  
 Photos indicated, but none with this date stamp  
 -----  
 S1 NIP data look bad on most scans  
 Data at 0740 too early; questionable; no spectrum





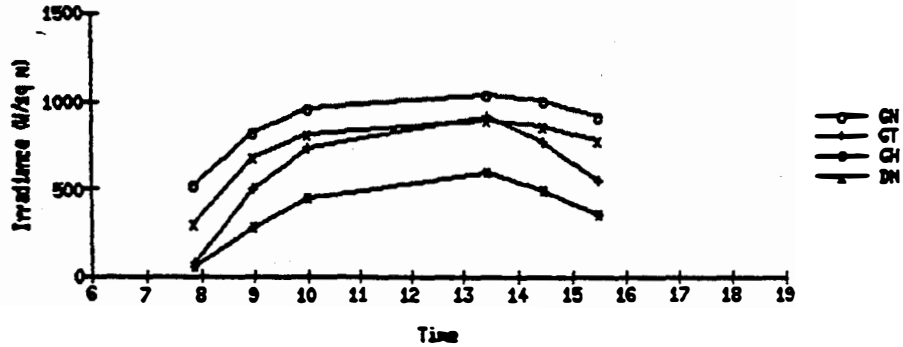
N PG&EB8041  
 02 10 88 041 174 DN  
 No wind speed or albedo PSP; wind speed added at 1345  
 GN PSP tracker control replaced at 1345  
 Clear; warm; windy  
 Photos indicated, but none with this date stamp  
 -----  
 S1 NIP data look bad most of the day



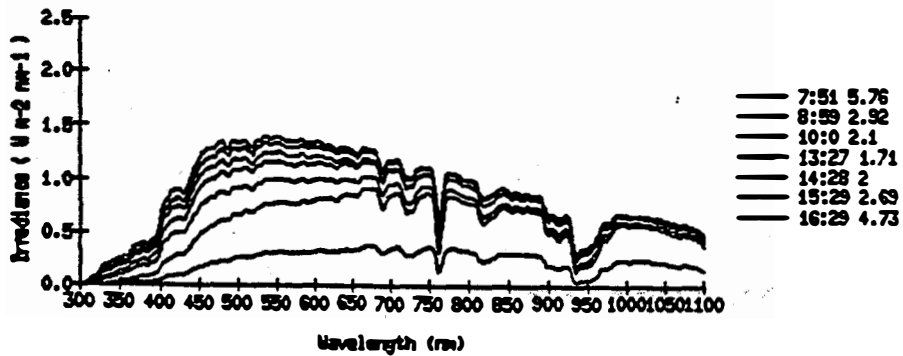


N PG&E88042  
 02 11 88 042 174 DN  
 No albedo PSP  
 Clear; cool  
 Photos indicated, but none with this date stamp  
 -----  
 Si NIP data look bad at 0800, 0901, and 1001  
 Note time stamp differences 0751 vs. 0800

PG&E 42



PG&E 42 DNT



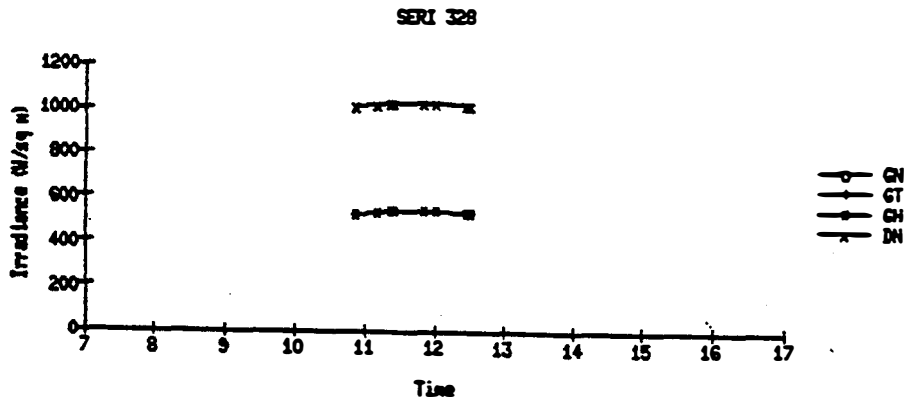
**3.3 Solar Energy Research Institute, Golden, Colo. .**

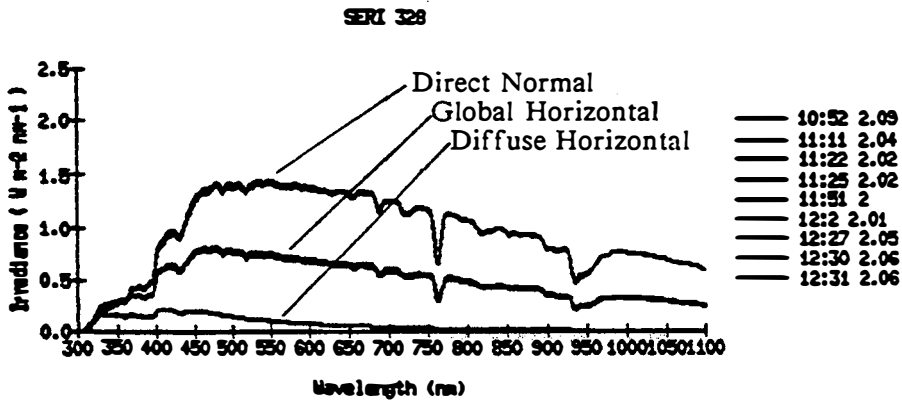
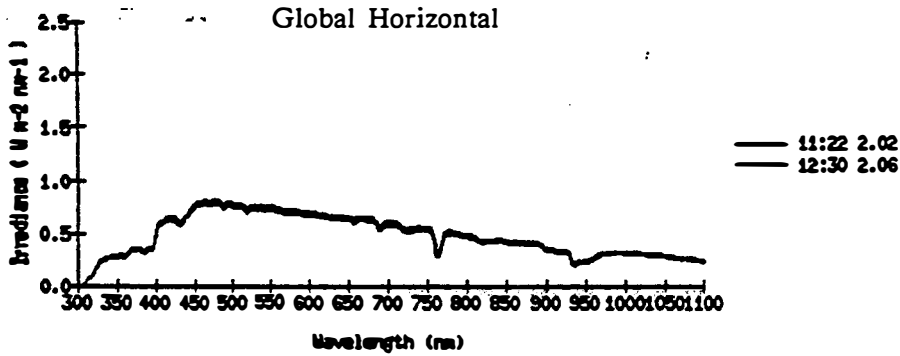
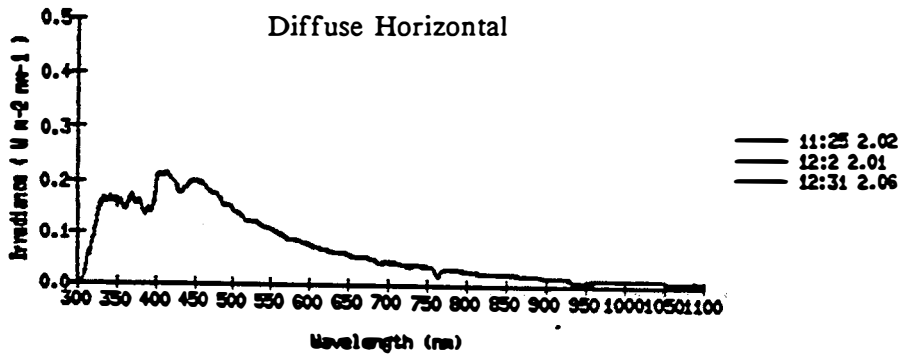
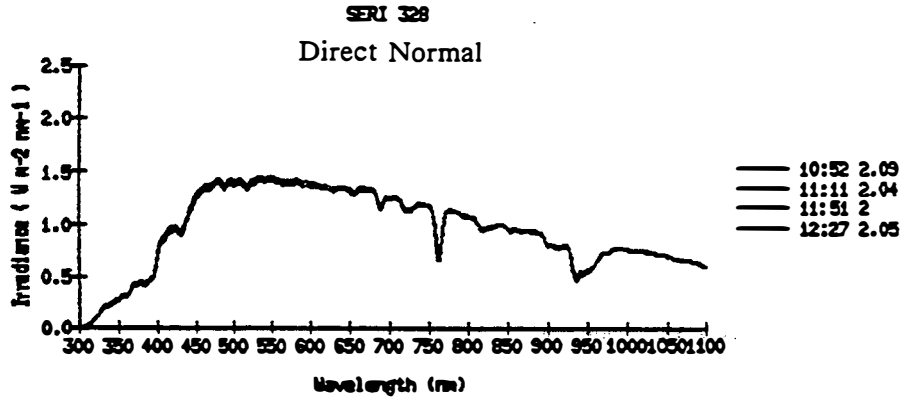
N SERI87328  
 11 24 87 328 158  
 1050: Breezy; no brown cloud visible; hazy "white" to south and west;  
 Mountains just visible  
 Excellent atmospheric stability  
 Temp controller at 40 C

1108:  
 1120: Temp controller at 40 C  
 1123:  
 1149:  
 1201:  
 1222:  
 1224:  
 1226:

Slides for all spectra except diffuse

- 87 328 A: 1052 DN by itself  
 87 328 B: 1111 DN  
 C: 1122 GH  
 D: 1125 DF  
 87 328 E: 1151 DN  
 F: GH missing  
 G: 1202 DF missing one data point; added -99 to end of scan  
 87 328 H: 1227 DN  
 I: 1230 GH  
 J: 1231 DF

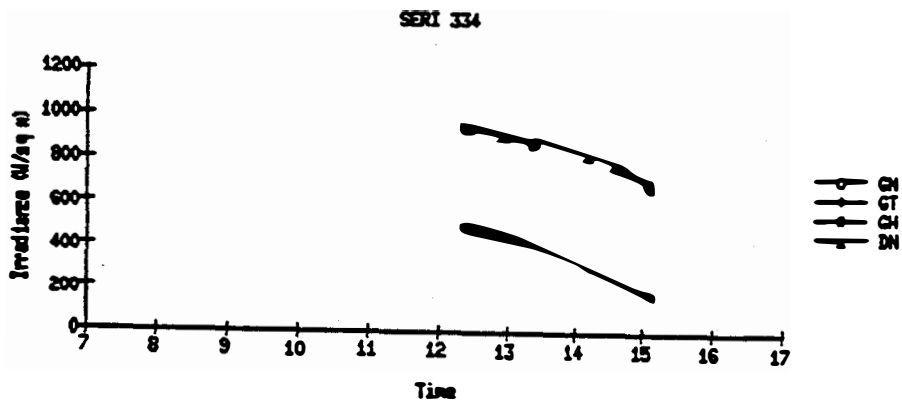


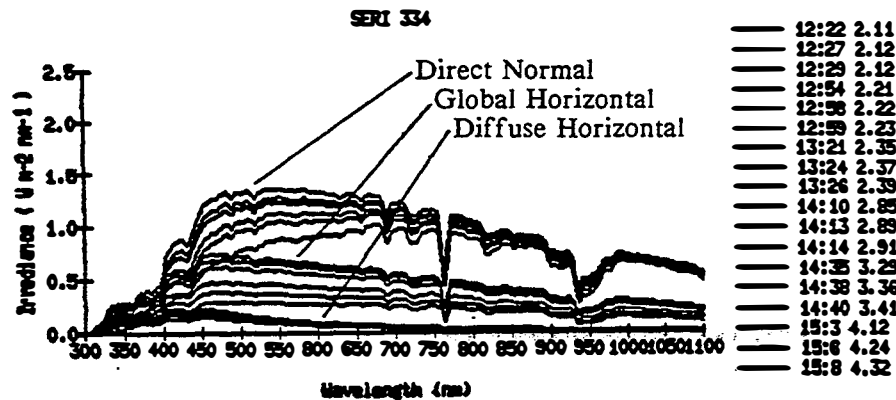
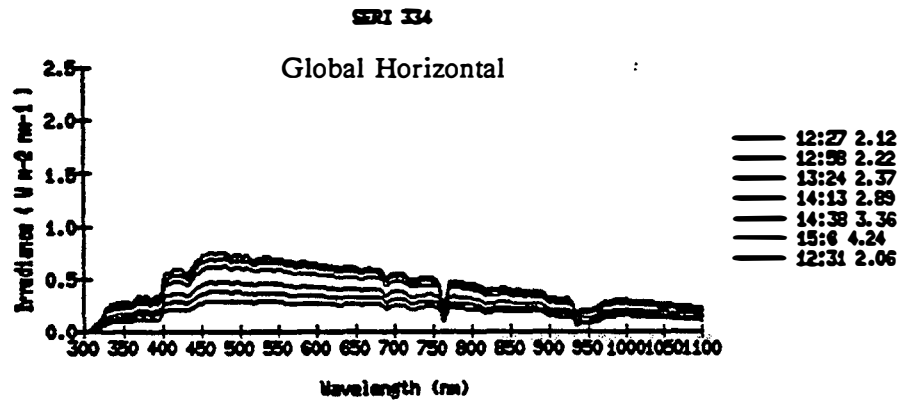
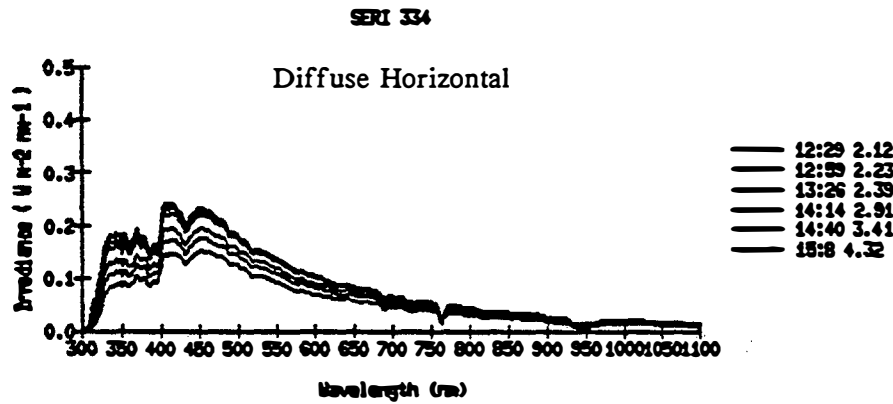
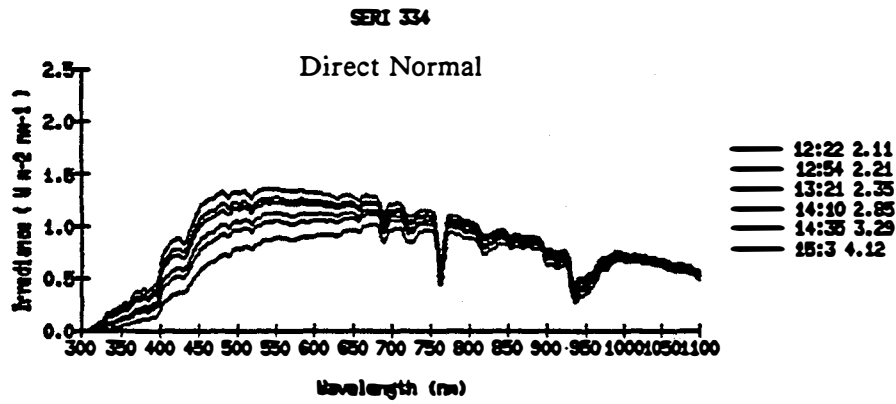




N SERI87334  
 11 30 87 334 158  
 1219: Snow on ground and hill to west (increased global)  
 1224:  
 1229: 1/10 Cs cloud cover on south horizon; power plant cooling tower  
 plume at about 5 deg elevation  
 1252: Contrails do not persist  
 1258: Temp controller 40 C  
 1258+:  
 1321: Power plant plume (light) building below sun above water vapor  
 plume/cloud  
 1/10 Cs cloud cover on south horizon  
 1325:  
 1326:  
 1410: Temp controller 40 C  
 1414:  
 1416:  
 1436:  
 1438:  
 1441:  
 1504:  
 1506:  
 1509: Sun below power line for series of three scans  
 Slides for all spectra, including diffuse

-----  
 87 334 A: 1222 DN  
 B: 1227 GH  
 C: 1229 DF shade disk slides (2 ea) 18 & 19 (have only 3)  
 87 334 D: 1254 DN  
 E: 1258 GH  
 F: 1259 DF  
 87 334 G: 1321 DN  
 H: 1324 GH  
 I: 1326 DF slides 23 & 24 with wand; camera switched to auto on #23  
 87 334 J: 1410 DN  
 K: 1413 GH  
 L: 1414 DF  
 87 334 M: 1435 DN  
 N: 1438 GH  
 O: 1440 DF  
 87 334 P: 1503 DN  
 Q: 1506 GH  
 R: 1508 DF missing one data point; added -99 to end of scan  
 picture #33 missing

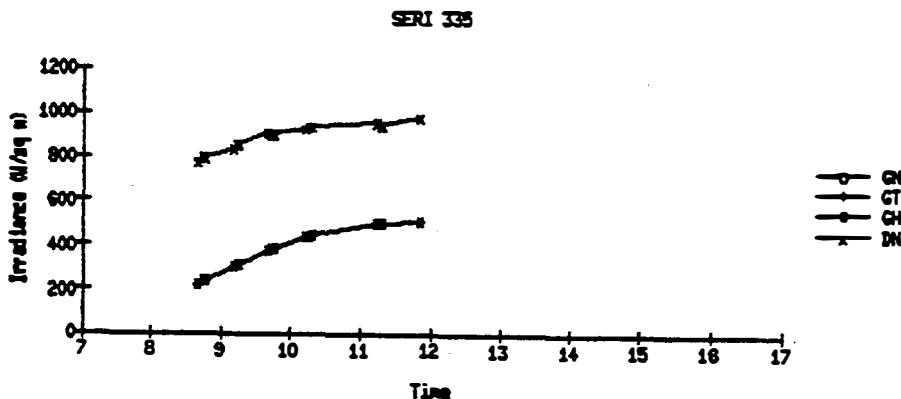




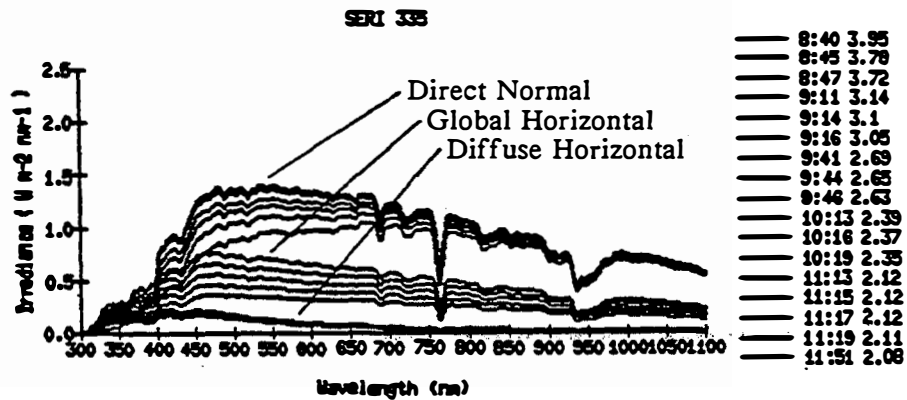
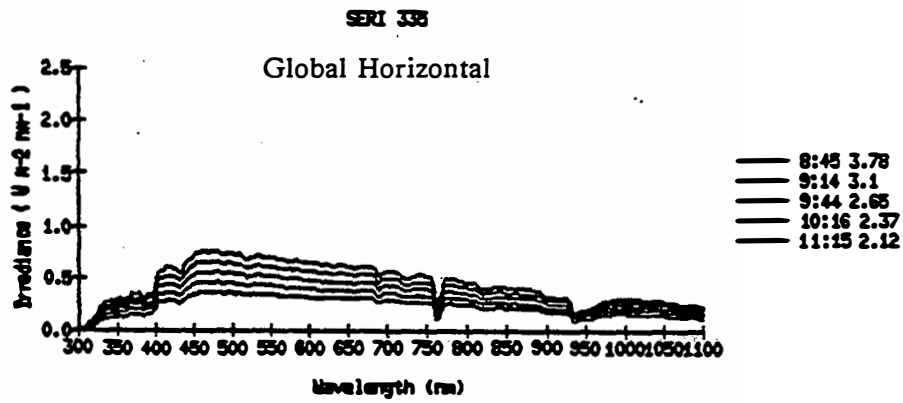
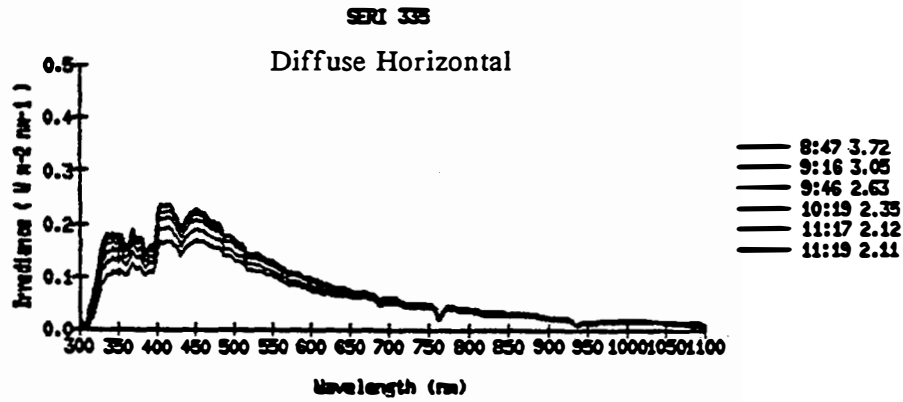
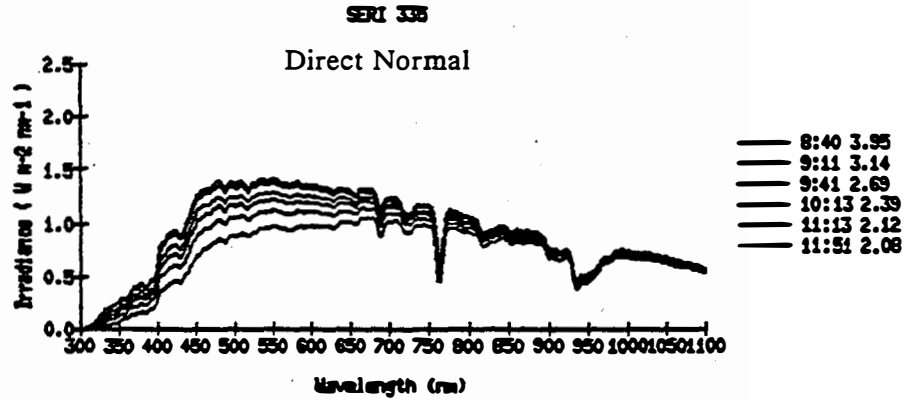


N SERI87335  
 12 01 87 335 158  
 0840: Power plant cooling tower clouds obscure bank building downtown  
 Temp controller at 40 C  
 0840: Power plant cooling tower clouds obscure bank building downtown  
 Temp controller at 40 C  
 0911: Power plant plume visible below sun and to west  
 Winds increasing to 4-6 m/s  
 Temp controller 39 C; set point 40 C (after diffuse spectrum)  
 0942: Contrails do not persist  
 Sun in power plant cloud (band) but drops to west  
 Temp controller at 40 C  
 1014: 1-2/10 As cloud cover building to west  
 Temp controller at 40 C  
 1113: Smelled sulfur, possibly from refineries  
 Temp controller at 40 C  
 (small amount of noise in near-IR on diffuse spectrum at 1117  
 1150: Clouds dissipating; <<1/10 to west; contrails lasting longer  
 Winds aloft chopping out sections (wave form)  
 Temp controller 40-41 C on direct spectrum  
 Slides for all spectra, including diffuse

- 87 335 A: 0840 DN
- B: 0845 GH
- C: 0847 DF
- 87 335 D: 0911 DN
- E: 0913 GH 15 mV drift
- F: 0916 DF
- 87 335 G: 0941 DN
- H: 0944 GH
- I: 0946 DF
- 87 335 J: 1013 DN
- K: 1016 GH mV drift
- L: 1019 DF 3 mV drift
- 87 335 M: 1113 DN
- N: 1115 GH
- O: 1117 DF 27 mV drift on O or P
- P: 1119 DF 2 diffuse
- 87 335 Q: 1151 DN 18 mV drift; one spectrum - memory full







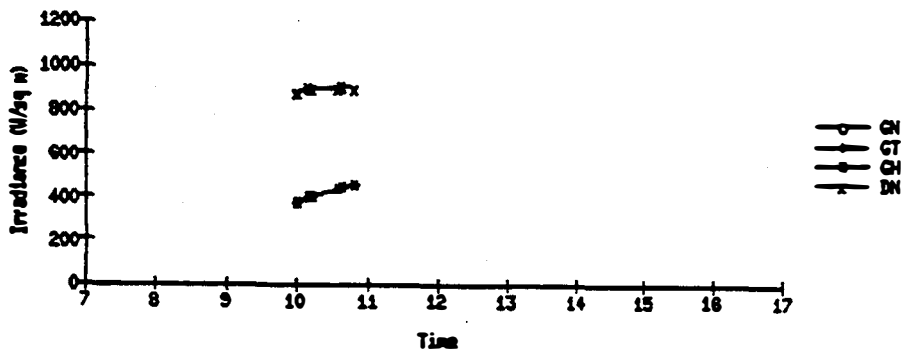


N SERI88013  
 01 13 88 013 158  
 1000: Contrails above and below sun (+/- 10 deg); now thin cirrus  
 Temp controller 39 C for global spectrum  
 1050: 1/10 total cloud cover  
 Cs and lenticular cloud cover west of sun  
 Contrails persisting (lenticular west to northwest)  
 Temp controller at 40 C

Slides for all spectra, including diffuse

- 88 013 A: 1000 DN 29 mV drift  
 B: 1001 DN 38 mV drift (so continued)  
 C: 1010 GH  
 D: 1012 DF 100 cm distance  
 E: 1014 DF 200 cm distance  
 88 013 F: 1035 GH left level bubble near sphere dome; so repeat with G  
 G: 1037 GH see F  
 H: 1038 DF  
 I: 1048 DN

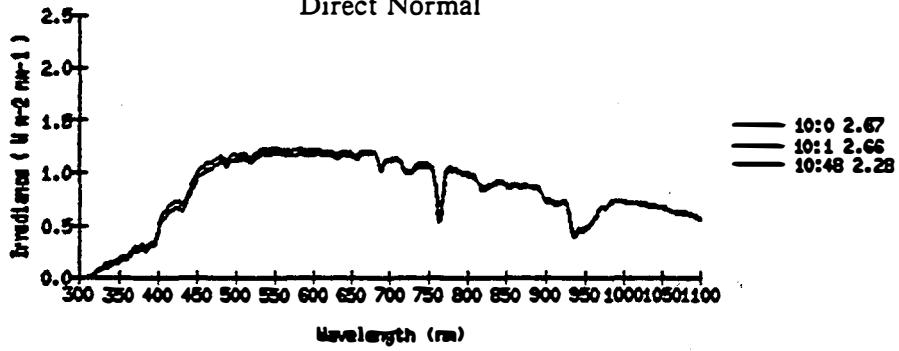
SERI 13





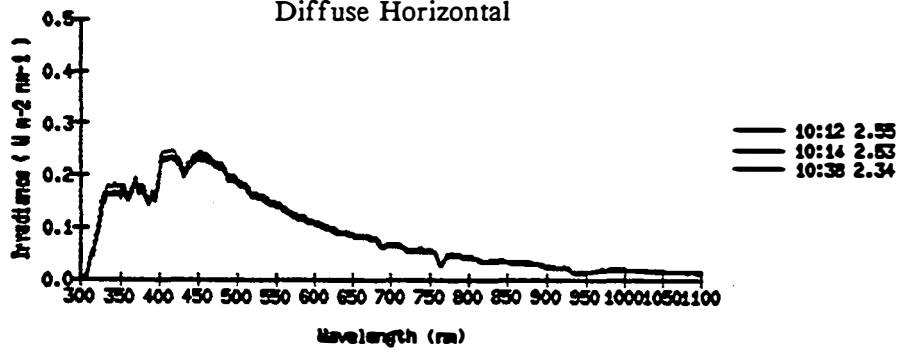
SERI 13

Direct Normal



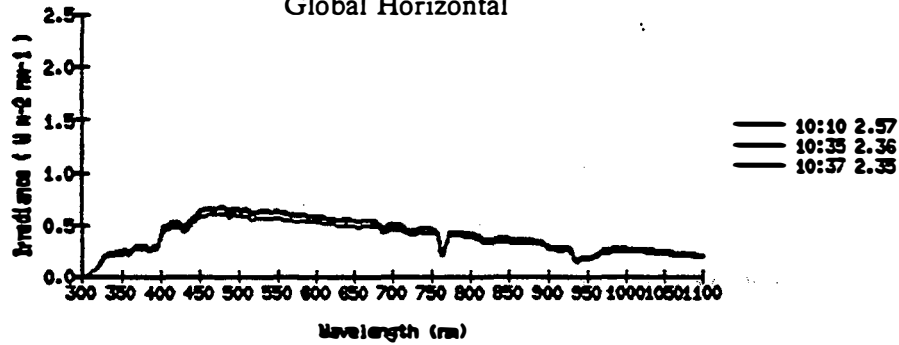
SERI 13

Diffuse Horizontal

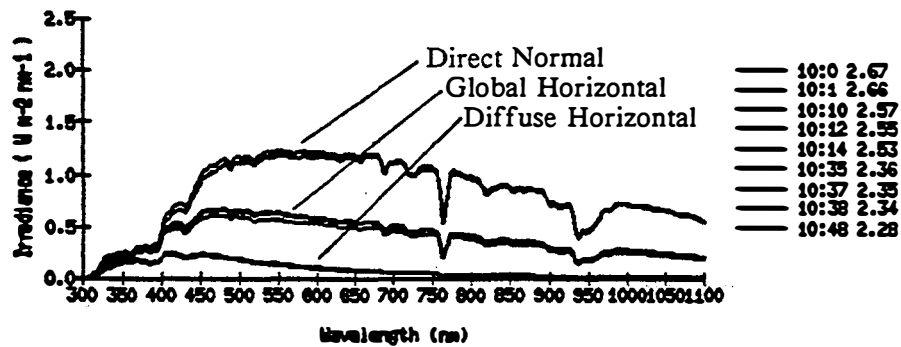


SERI 13

Global Horizontal



SERI 13

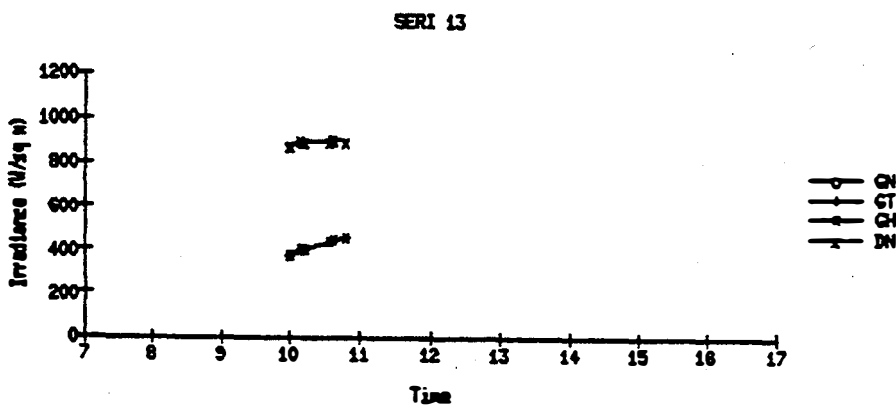


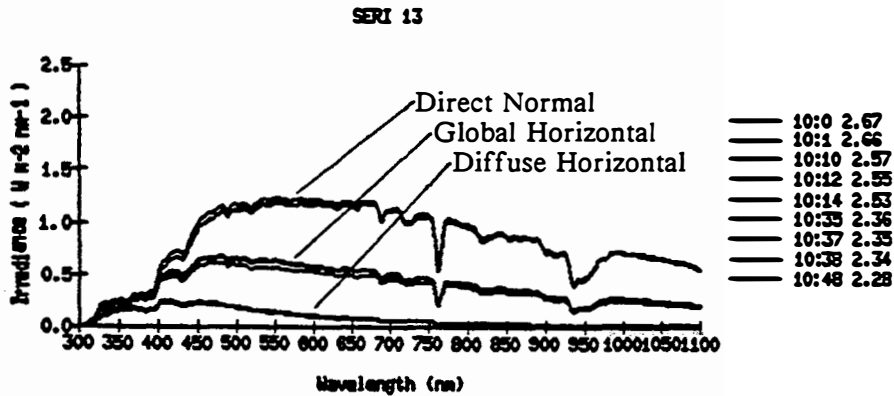
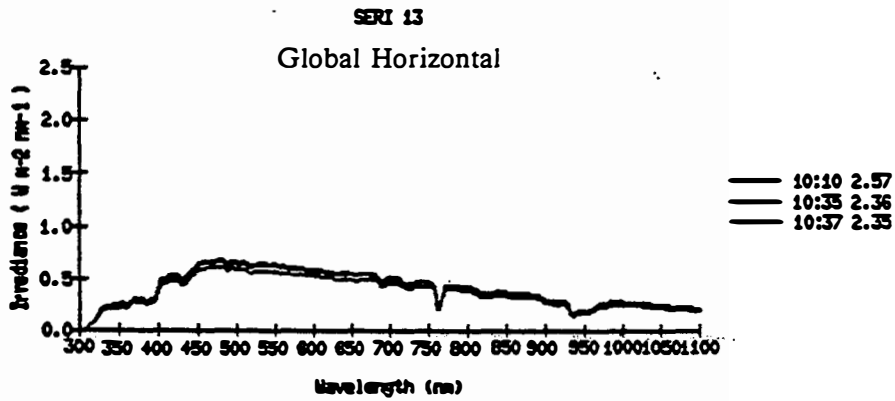
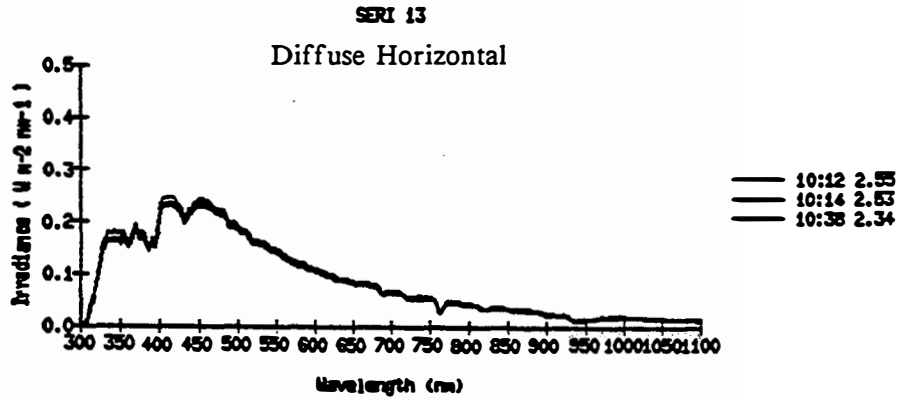
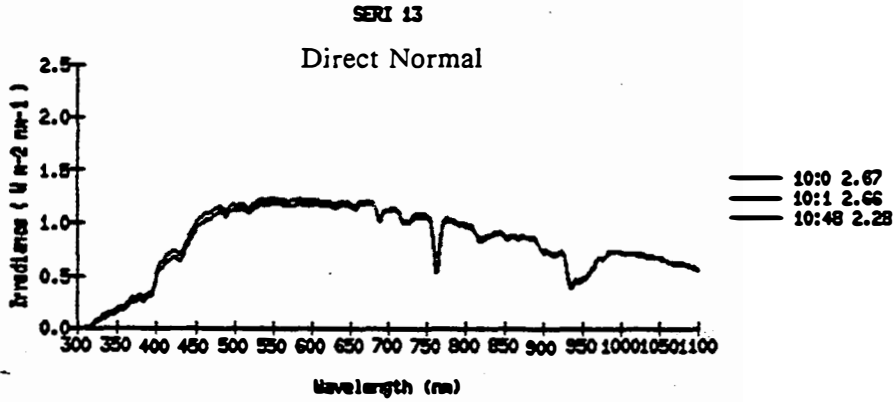


N SERI88013  
 01 13 88 013 158  
 1000: Contrails above and below sun (+/- 10 deg); now thin cirrus  
 Temp controller 39 C for global spectrum  
 1050: 1/10 total cloud cover  
 Cs and lenticular cloud cover west of sun  
 Contrails persisting (lenticular west to northwest)  
 Temp controller at 40 C

Slides for all spectra, including diffuse

- 88 013 A: 1000 DN 29 mV drift  
 B: 1001 DN 38 mV drift (so continued)  
 C: 1010 GH  
 D: 1012 DF 100 cm distance  
 E: 1014 DF 200 cm distance  
 88 013 F: 1035 GH left level bubble near sphere dome; so repeat with G  
 G: 1037 GH see F  
 H: 1038 DF  
 I: 1048 DN

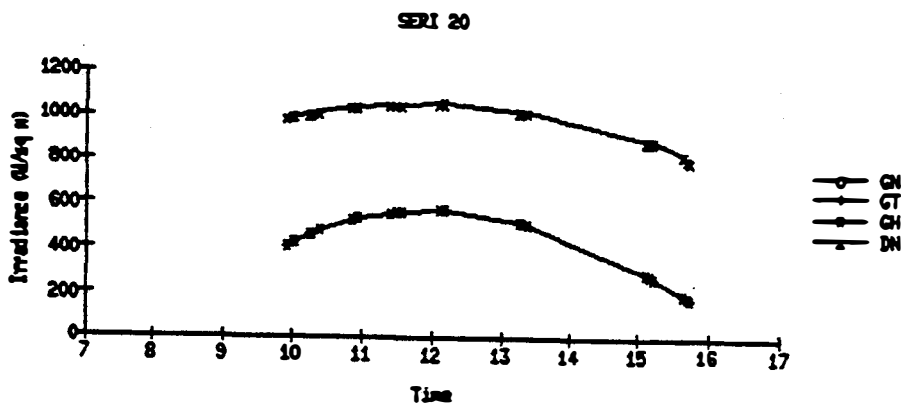


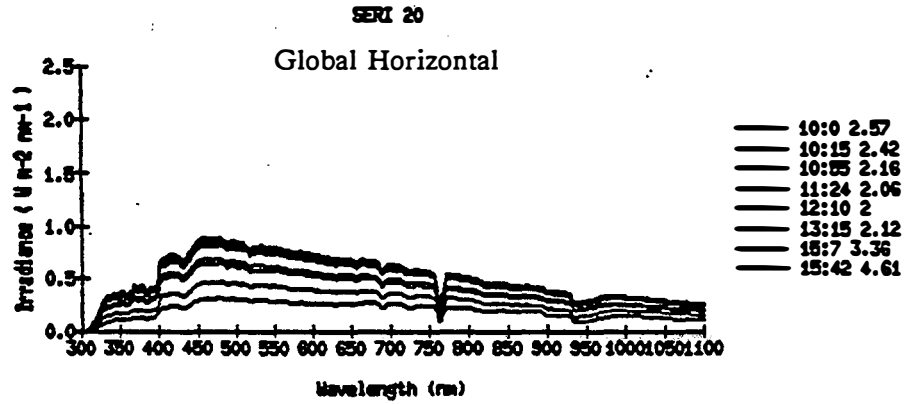
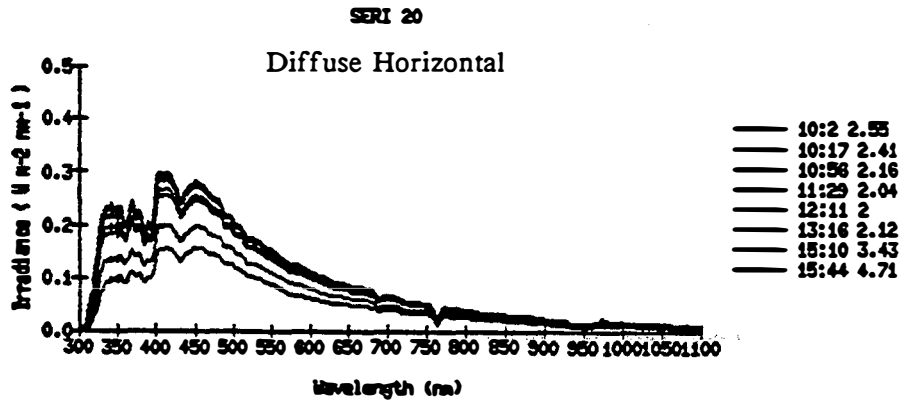
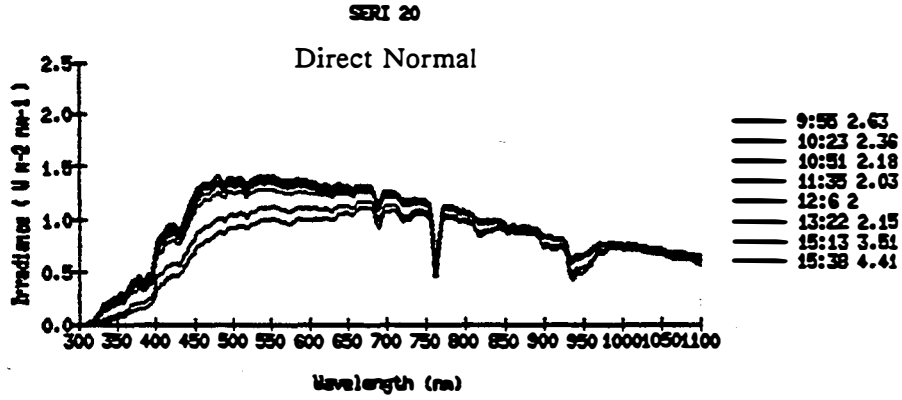




N SERI88020  
 01 20 88 020 158  
 0953: Temp controller at 40 C  
 Fresh snow yesterday (4" new on 6" base)  
 1017: No clouds or contrails  
 Power plant plume OK  
 1051: Very light pollution and clearing out  
 1129:  
 1206: Clear sky pollution slightly darker north  
 Temp controller at 40 C  
 1315: Winds dimishing to light and variable  
 Sky is clear; no contrails  
 Snow cover 4" new + 6" old; drifts to 24"  
 Temp controller 40 C  
 1507: Winds increasing brown cloud to south-southeast (pushing)  
 Temp controller 39 C for GH and Diffuse; 40 C for Direct  
 1538: Contrails a little longer (10 deg angle)  
 Clear sky brown cloud "packing" to south-southeast  
 Slides for all spectra, including diffuse

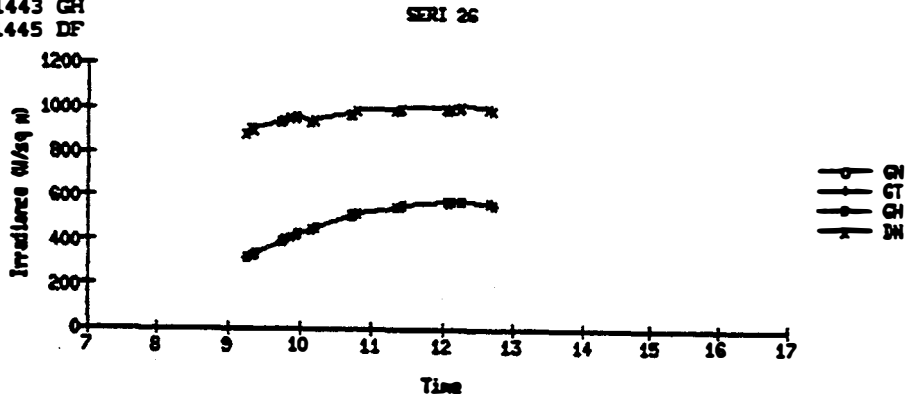
-----  
 88 020 A: 0955 DN  
 B: 1000 GH  
 C: 1002 DF  
 88 020 D: 1015 GH  
 E: 1017 DF  
 F: 1023 DN  
 88 020 G: 1051 DN  
 H: 1055 GH  
 I: 1056 DF  
 88 020 J: 1124 GH  
 K: 1129 DF  
 L: 1135 DN  
 88 020 M: 1206 DN solar noon sequence  
 N: 1210 GH  
 O: 1211 DF  
 88 020 P: 1315 GH  
 Q: 1316 DF  
 R: 1322 DN  
 88 020 S: 1507 GH  
 T: 1510 DF  
 U: 1513 DN  
 88 020 V: 1538 DN  
 W: 1542 GH  
 X: 1544 DF



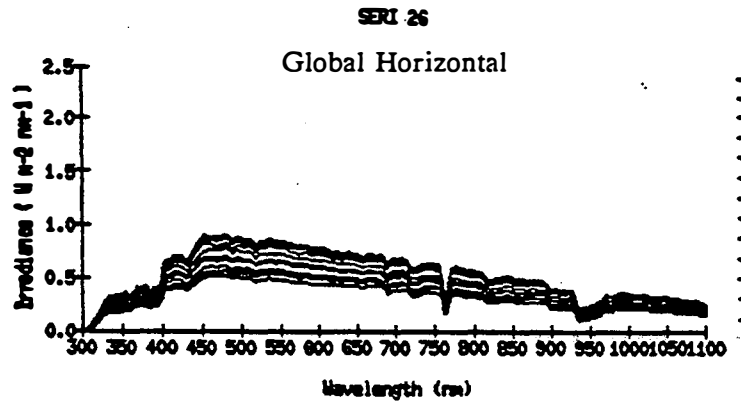
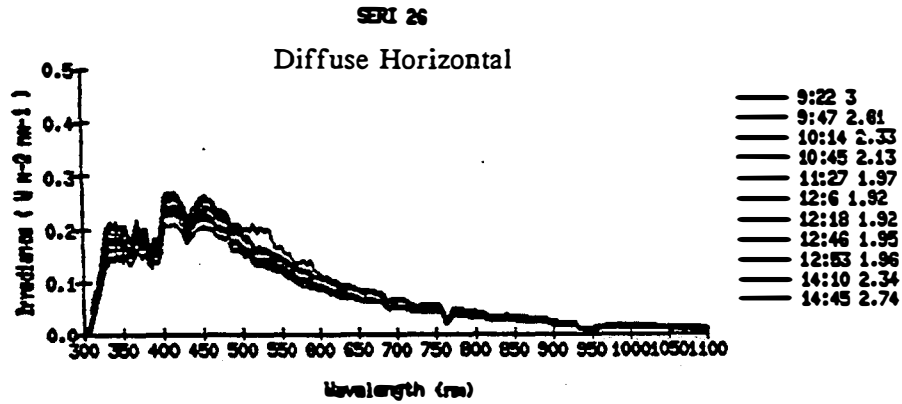
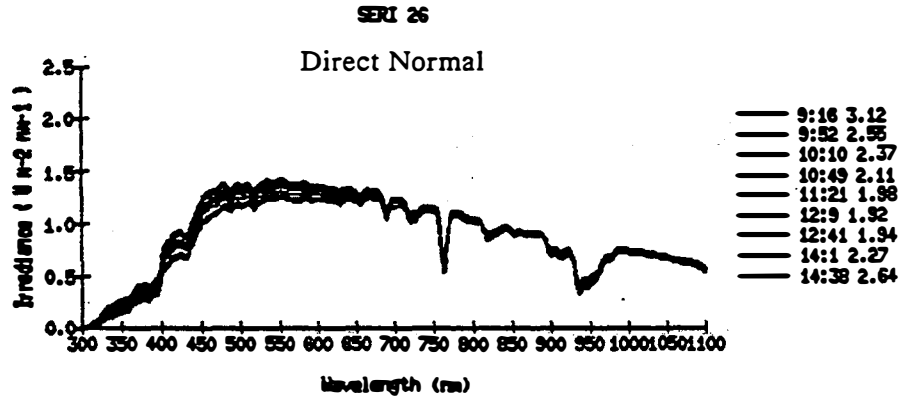


N SERI88026  
 01 26 88 026 158  
 0916: Moderate brown cloud; no clouds  
 Contrails not persisting  
 Temp controller 40 C for DN; 39 C for GH; 41 C for DIF  
 0945: Temp controller 40 C  
 Contrails across sun for diffuse with dome at 0957; none  
 for diffuse spectrum at 0958  
 1010: Winds shifted 180 (now out of west); power plant plume now  
 across bank buliding downtown  
 Contrails persisting; but linger near east  
 Temp controller 40 C  
 1043: Snow cover 85-90 percent; 1 to 10" drifts  
 Power plant plume heading east 1/3 distance between horizon and  
 sun (white color)  
 Contrails now dissipating  
 1121: Temp controller at 40 C  
 1204: Clouds developing to west and southwest; < 1/10 As in linear  
 bands parallel to mountains  
 Contrails persist depending on altitude of aircraft  
 Temp controller at 40 C  
 1241: Winds decreasing and now out of south-southeast  
 Temp controller at 40 C  
 1401: Temp controller at 40 C  
 1438: Wind has blown cloud to mountains  
 Power plant plume rises to below sun  
 Still < 1/10 As to west and southwest (lenticular)  
 Temp controller 40 C  
 Slides for all spectra, including diffuse

- 88 026 A: 0916 DN
- B: 0921 GH
- C: 0922 DF
- 88 026 D: 0945 GH
- E: 0947 DF
- F: 0952 DN
- G: 0957 GH GH with Teflon dome; contrail across sun
- H: 0958 GH GH with Teflon dome; no contrail
- 88 026 I: 1010 DN
- J: 1013 GH
- K: 1014 DF
- 88 026 L: 1043 GH
- M: 1045 DF
- N: 1049 DN
- 88 026 O: 1121 DN
- P: 1125 GH
- Q: 1127 DF
- 88 026 R: 1204 GH
- S: 1206 DF odd plot - probably bad spectrum
- T: 1209 DN
- U: 1217 GH GH with Teflon dome
- V: 1218 DF DF with Teflon dome
- 88 026 W: 1241 DN
- X: 1245 GH
- Y: 1246 DF
- Z: 1252 GH GH with Teflon dome
- AA: 1253 DF DF with Teflon dome
- 88 026 BB: 1401 DN
- CC: 1409 GH
- DD: 1410 DF
- 88 026 EE: 1438 DN 23 mV drift
- FF: 1443 GH
- GG: 1445 DF



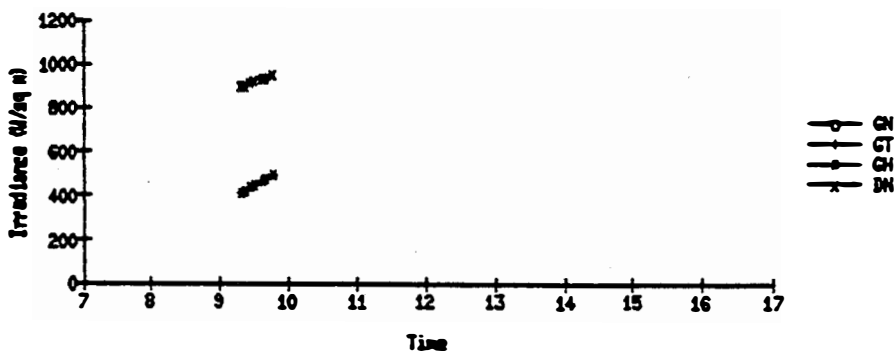






N SERI88047  
 02 16 88 047 158  
 0920: Ac to west; some thin overhead clouds  
 No snow cover  
 Temp controller 40 C  
 0938: Clouds increasing from west (snowing); cloud developing rapidly  
 from northwest; snow began about 1230  
 No pollution to east; building up to west  
 Temp controller 39 C on GH spectrum; set point 41 C  
 Slides for all spectra, including diffuse  
 -----  
 88 047 A: 0920 DN 38 mV drift  
 B: 0922 DN no drift  
 C: 0927 GH  
 D: 0930 DF  
 88 047 E: 0938 GH  
 F: 0940 DF  
 G: 0946 DN

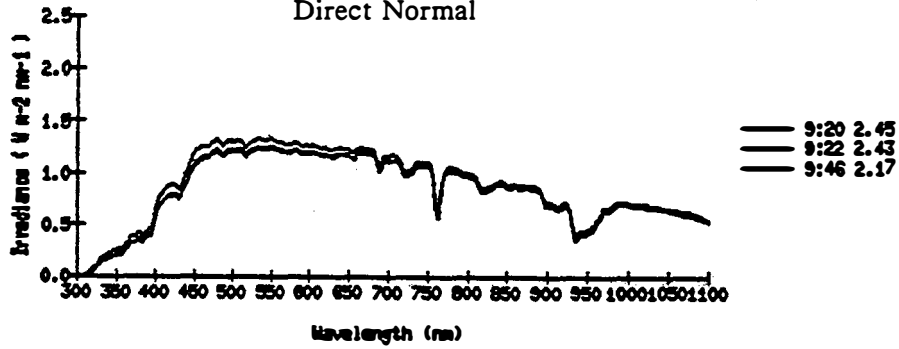
SERI 47





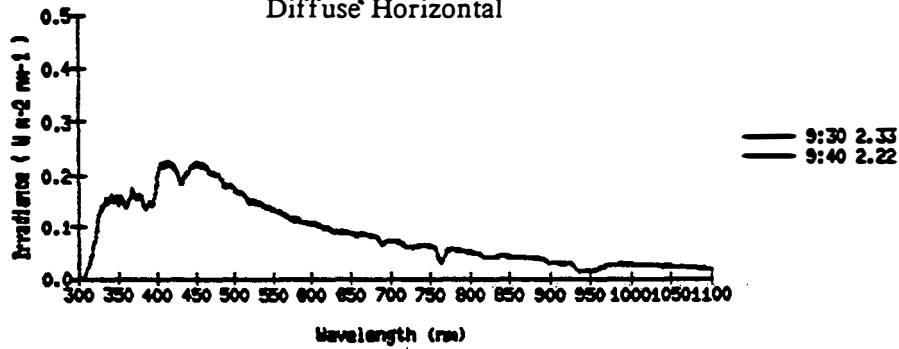
SERI 47

Direct Normal



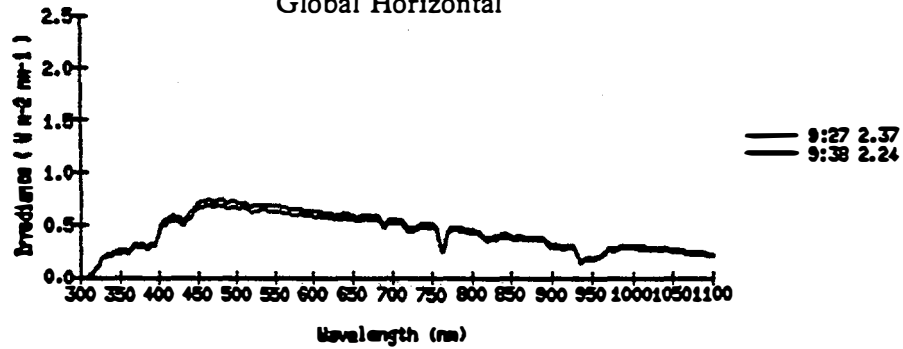
SERI 47

Diffuse Horizontal



SERI 47

Global Horizontal





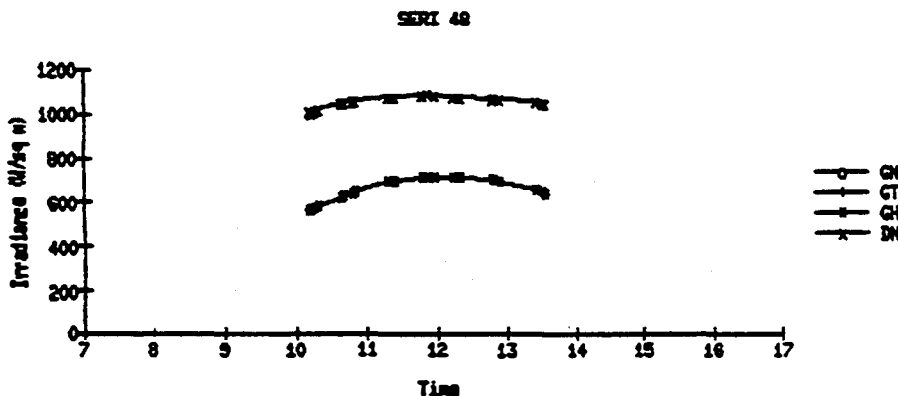
N SERI88048

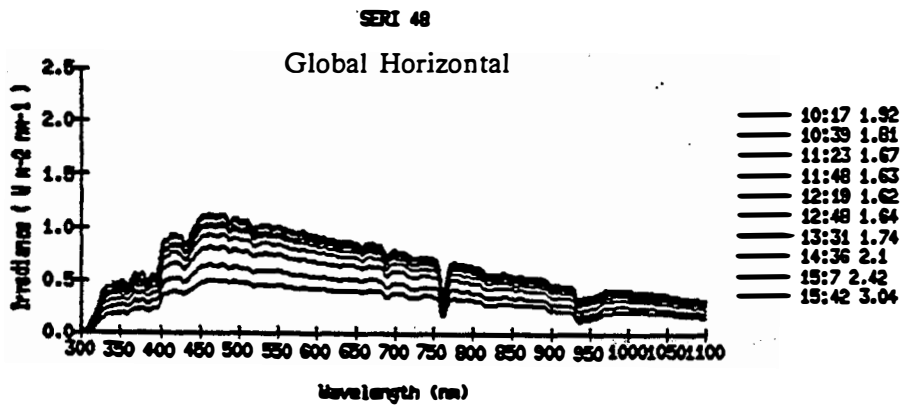
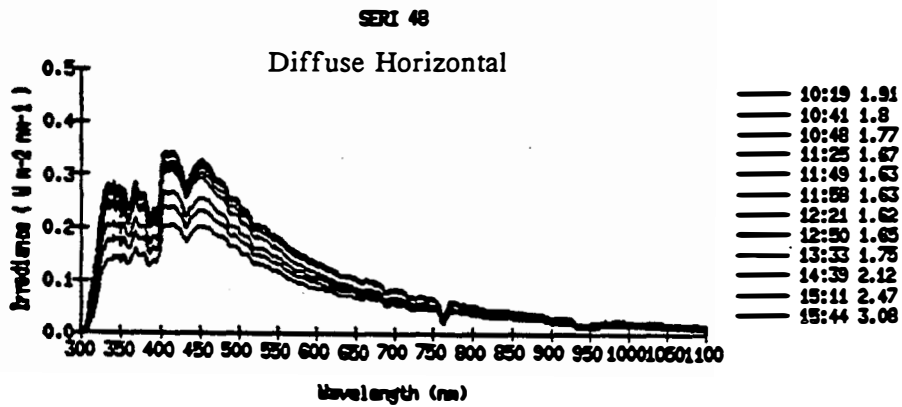
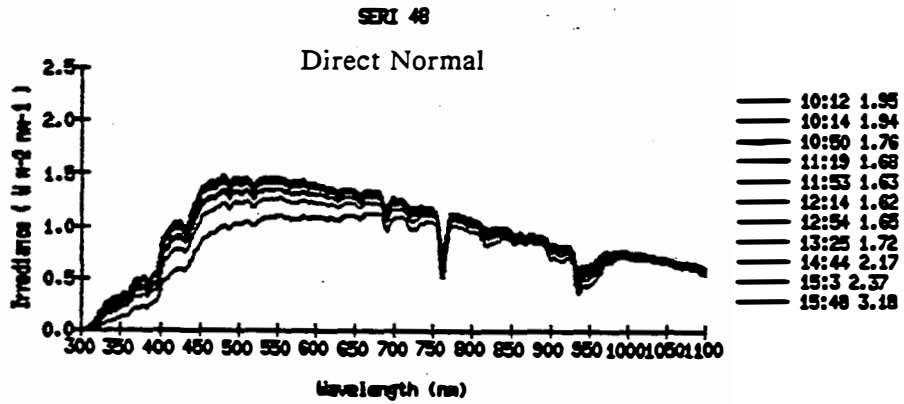
02 17 88 048 158

- 1012: Light-moderate brown cloud all quads; contrails do not persist  
Very clear sky after last night 3-4" snow  
Power plant plume blowing a little out of south; haze/smoke overhead and in sun path  
second DN spectrum
- 1039: Few Cu clouds on south horizon  
Temp controller 39-40
- 1120: Winds picking up  
Temp controller 40 C
- 1149: Ac increasing on southern horizon (very low); front of bank building  
Temp controller 40 C
- 1215: Temp controller 40 C
- 1255:
- 1326: Power plant plume visible below sun and drifting west-northwest and up toward solar disk  
Temp controller 40 C (adjusted from 40 C)
- 1437: Temp controller 40 C  
Clouds are gone
- 1504: Power plant plume drifting west and passing by sun  
Temp controller 40 C
- 1543: Temp controller 40 C

Slides for all spectra, including diffuse

- 
- 88 048 A: 1012 DN 28 mV drift
  - B: 1014 DN 21 mV drift, so continued
  - C: 1017 GH
  - D: 1019 DF
  - 88 048 E: 1039 GH
  - F: 1041 DF
  - G: 1048 DF DF with Teflon dome
  - H: 1050 DN 31 mV drift
  - 88 048 I: 1119 DN
  - J: 1123 GH
  - K: 1125 DF
  - 88 048 L: 1148 GH
  - M: 1149 DF
  - N: 1153 DN
  - O: was circumsolar - deleted
  - P: 1158 DF DF with Teflon dome
  - 88 048 Q: 1214 DN
  - R: 1219 GH
  - S: 1221 DF
  - 88 048 T: 1248 GH
  - U: 1250 DF
  - V: 1254 DN
  - 88 048 W: 1325 DN 7 mV drift
  - X: 1331 GH
  - Y: 1333 DF
  - 88 048 Z: 1436 GH
  - AA: 1439 DF
  - BB: 1444 DN
  - 88 048 CC: 1503 DN plume drifting past sun
  - DD: 1507 GH 40 mV drift
  - EE: 1511 DF
  - 88 048 FF: 1542 GH
  - GG: 1544 DF
  - HH: 1548 DN

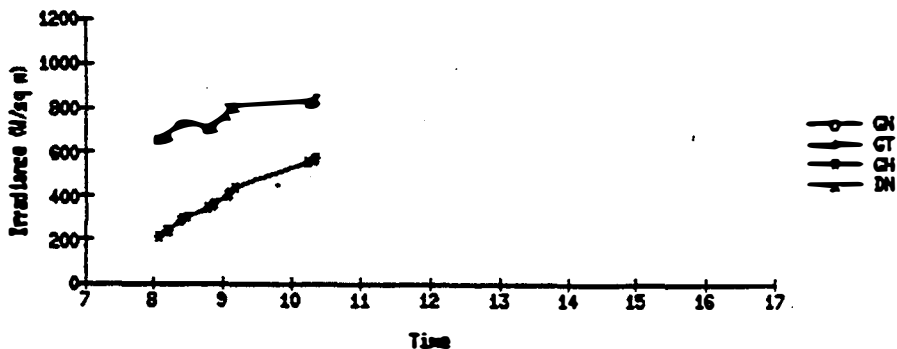






N SERI88055  
 02 24 88 055 158  
 0803: Contrails persist; 5-6/10 thin Ci clouds  
     Power plant plume drifting east  
     Temp controller 39 C  
     Temp controller 40 C on next spectrum  
     GH spectrum at 0811 looks odd  
 0821: Temp controller 39 C on GH spectrum; 41 C on DN spectrum  
 0845: Temp controller 40 C  
 0914: Temp controller 39-40 C  
 1012: Power plant plume now vertical; winds shifted to 90 deg  
     east at 1 m/s  
     Contrails persisting across sky  
 Slides for spectra beginning at about 1000, including diffuse  
 -----  
 88 055 A: 0805 DN Cirrus  
     B: 0811 GH 27 mV drift; noisy spectrum; cirrus  
     C: 0813- DF Cirrus  
 88 055 D: 0823 GH Cirrus  
     E: 0825 DF Cirrus  
     F: 0829 DN Cirrus  
 88 055 G: 0847 DN 23 mV drift; Cirrus  
     H: 0851 GH Cirrus  
     I: 0853 DF Cirrus  
 88 055 J: 0904 GH Cirrus  
     K: 0906 DF Cirrus  
     L: 0911 DN Cirrus  
 88 055 M: 1015 DN 17 mV drift; Cirrus  
     N: 1019 GH Cirrus  
     O: 1021 DF Cirrus  
     P: was circumsolar

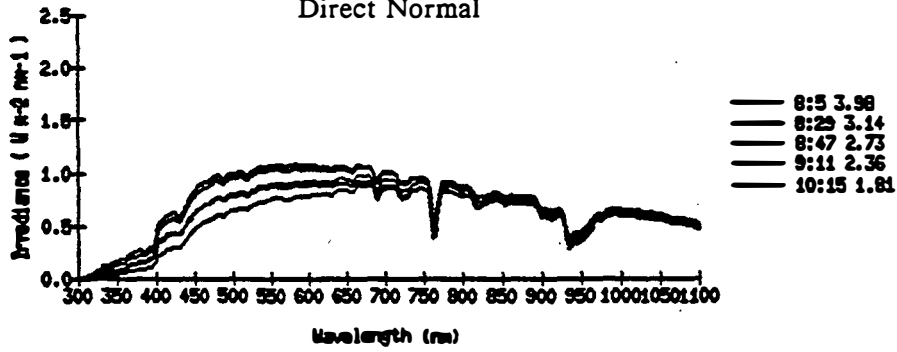
SERI 95





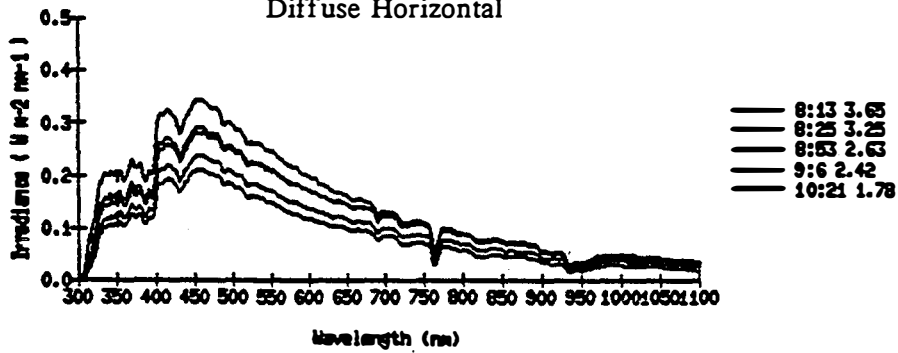
SERI 95

Direct Normal



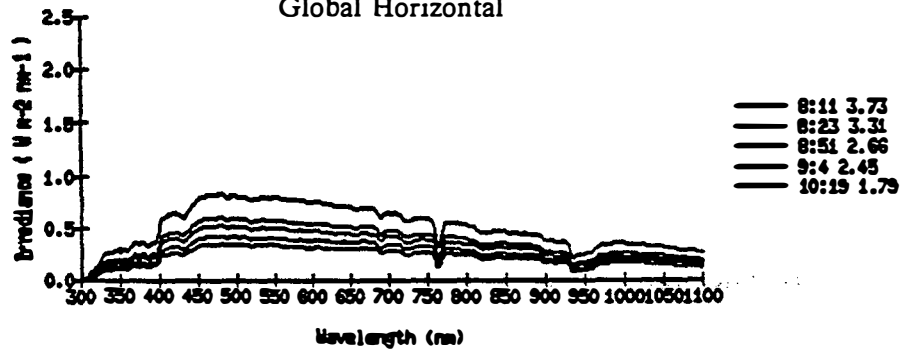
SERI 95

Diffuse Horizontal



SERI 95

Global Horizontal

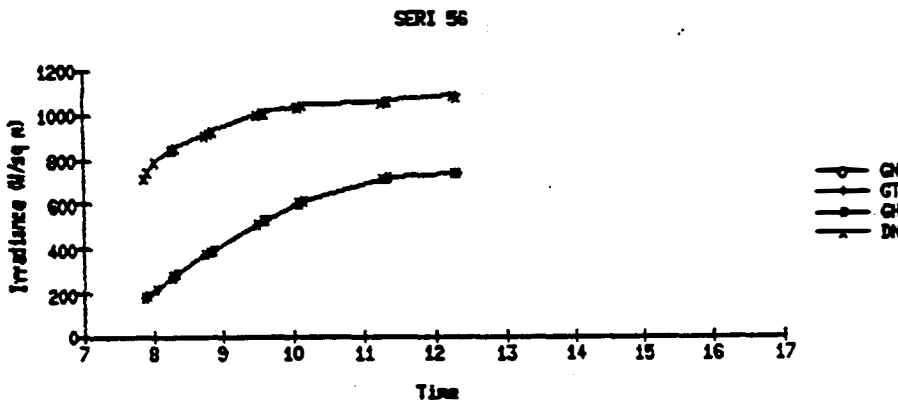




N SERI88056  
 02 25 88 056 158  
 0750: Cirrus (contrails to south-southwest)  
     Light brown cloud blowing east since sunrise  
     Temp controller 40 C  
 0811: Power plant plume visible from north-northeast through stack;  
     layer at height of top of power line  
 0843: No snow cover  
 0927: Wave clouds to west, increasing north/south  
 1000: Wave clouds building to west  
 1110: Very light brown cloud; winds have blown most of it to north  
     Cs wave clouds dissipating to west; very thin Cs to south and  
     north (low on horizon)  
 1214: Wave clouds gone; thin band of Cs (contrail) above bank skyline  
 Slides for all spectra, including diffuse

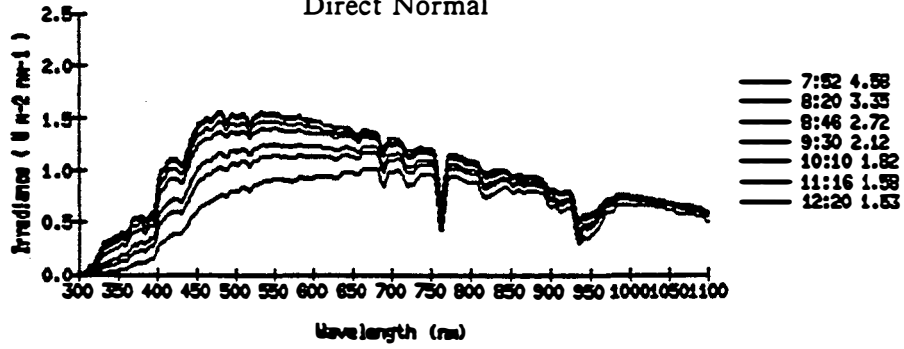
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88 056 A: 0752 DN
      B: 0755 GH  4 mV drift
      C: 0802 DF 52 mV drift
88 056 D: 0816 GH
      E: 0817 DF
      F: 0820 DN
88 056 G: 0846 DN 33 mV drift
      H: 0850 GH
      I: 0852 DF
88 056 J: 0930 DN 32 mV drift
      K: 0935 GH
      L: 0937 DF
88 056 M: 1005 GH
      N: 1006 DF
      O: 1010 DN
88 056 P: 1116 DN
      Q: 1120 GH
      R: 1122 DF
88 056 S:          GH missing; could generate from DN and DF
      T: 1217 DF
      U: 1220 DN
    
```

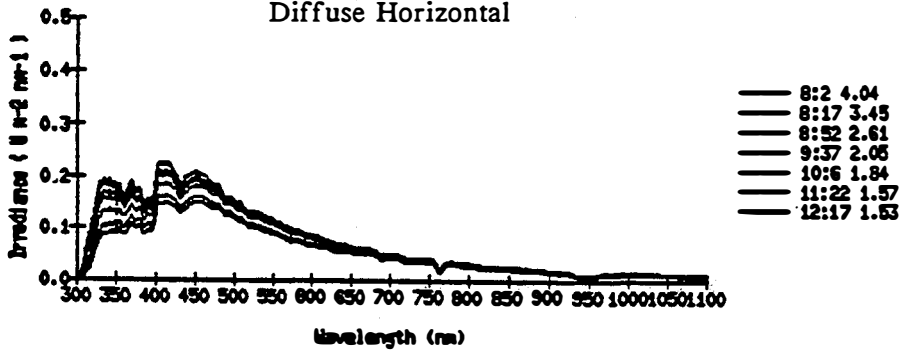




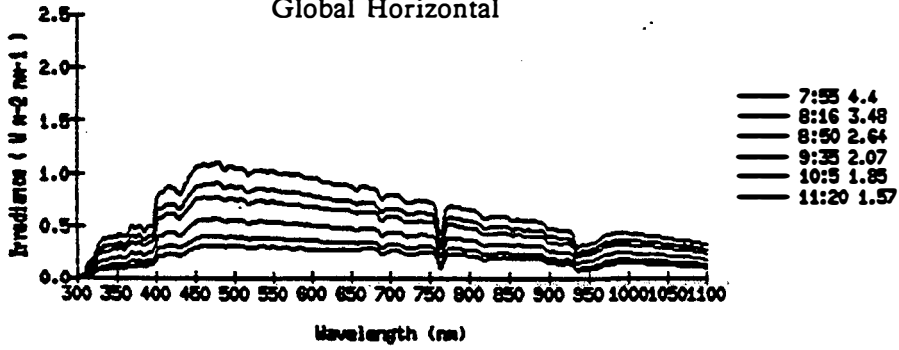
SERI 56  
Direct Normal



SERI 56  
Diffuse Horizontal



SERI 56  
Global Horizontal



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16. Abstract (Limit: 200 words) The Solar Energy Research Institute (SERI), Electric Power Research Institute, Florida Solar Energy Center, and Pacific Gas and Electric Company cooperated to produce a spectral solar radiation data base representing a range of atmospheric conditions. These data will help to characterize the natural variability in the spectral (color) content of outdoor solar radiation so that the sensitivity of spectrally selective solar devices (such as photovoltaics) to these variations can be studied quantitatively. Volume I of this report documents the history, approach content, and format of the data base; Volume II contains graphs and field notes for each of the spectral data sets. The data reside on magnetic tape at SERI.			
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