

## E.2 Lead Project Scientist

### E.2.1 Preflight

- \_\_\_\_\_ 1. Participate in general mission briefing.
- \_\_\_\_\_ 2. Determine specific mission and flight requirements for assigned aircraft.
- \_\_\_\_\_ 3. Determine from CARCAH or field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist and CARCAH unless briefed otherwise by field program director.
- \_\_\_\_\_ 4. Contact HRD members of crew to:
  - a. Assure availability for mission.
  - b. Arrange ground transportation schedule when deployed.
  - c. Determine equipment status.
- \_\_\_\_\_ 5. Meet with AOC flight crew at least 90 minutes before takeoff, provide copies of flight requirements, and provide a formal briefing for the flight director, navigator, and pilots.
- \_\_\_\_\_ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOC in Miami).

### E.2.2 In-Flight

- \_\_\_\_\_ 1. Confirm from AOC flight director that satellite data link is operative (information).
- \_\_\_\_\_ 2. Confirm camera mode of operation.
- \_\_\_\_\_ 3. Confirm data recording rate.
- \_\_\_\_\_ 4. Complete Form E-2.

### E.2.3 Post flight

- \_\_\_\_\_ 1. Debrief scientific crew.
- \_\_\_\_\_ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to MGOC.
- \_\_\_\_\_ 3. Gather completed forms for mission and turn in at the appropriate operations center.  
[Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- \_\_\_\_\_ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- \_\_\_\_\_ 5. Determine next mission status, if any, and brief crews as necessary.
- \_\_\_\_\_ 6. Notify MGOC as to where you can be contacted and arrange for any further coordination required.
- \_\_\_\_\_ 7. Prepare written mission summary using form E-2 p.3 (due to Field Program Director 1 week after the flight).

### Lead Project Scientist Check List

Date 9/30/02 Aircraft 43 Flight ID 020930I

#### A. —Participants:

| HRD                    |                | AOC                    |                     |
|------------------------|----------------|------------------------|---------------------|
| Function               | Participant    | Function               | Participant         |
| Lead Project Scientist | <u>Cione</u>   | Flight Director        |                     |
| Cloud Physics          | <u>-</u>       | Pilots                 | <u>Tennison</u>     |
| Radar                  | <u>Gomade</u>  | Navigator              |                     |
| Workstation            | <u>"</u>       | Systems Engineer       |                     |
| Photographer/Observer  | <u>-</u>       | Data Technician        |                     |
| Dropwindsonde          | <u>Gomache</u> | Electronics Technician |                     |
| AXBT/AXCP/Guest        | <u>Whhorn</u>  | Other <u>AXCP</u>      | <u>Guillem/Cook</u> |

Take-Off: 1716Z Location: MacDill Landing: MacDill Location: MacDILL  
Number of Eye Penetrations: 4

#### B. —Past and Forecast Storm Locations:

| Date/Time | Latitude | Longitude | MSLP | Maximum Wind |
|-----------|----------|-----------|------|--------------|
|           |          |           |      |              |
|           |          |           |      |              |
|           |          |           |      |              |
|           |          |           |      |              |
|           |          |           |      |              |

#### C. —Mission Briefing:

Fly in storm (dy 2)  
pattern... sample over the storm  
and hot points/logs from Dy 1



D. —Equipment Status (Up ↑, Down ↓, Not Available —, Not Used O)

| Equipment          | Pre-Flight | In-Flight | Post-Flight | # of DATs or Expendables |
|--------------------|------------|-----------|-------------|--------------------------|
| Aircraft           |            |           |             |                          |
| Radar/LF           | ✓          |           |             |                          |
| Radar/TA (Doppler) | ✓          |           |             |                          |
| Cloud Physics      | ✓          |           |             |                          |
| Data System        | ✓          |           |             |                          |
| Dropwindsondes     | ✓          |           |             |                          |
| AXBT/AXCP          | ✓          |           |             |                          |
| Workstation        | ✓          |           |             |                          |
| Videography        | ✓          |           |             |                          |

REMARKS:

all systems up + running

**Mission Summary**  
**Storm name**  
**YYMMDDA# Aircraft 4\_RF**

**Scientific Crew (4 RF)**

|                          |       |
|--------------------------|-------|
| Lead Project Scientist   | _____ |
| Radar Scientist          | _____ |
| Cloud Physics Scientist  | _____ |
| Dropwindsonde Scientist  | _____ |
| Boundary-Layer Scientist | _____ |
| Workstation Scientist    | _____ |
| Observers                | _____ |

**Mission Briefing: (include sketch of proposed flight track or page #)**

T Desc Day 2 mission pretty day 1 points  
+ sample Storm... Track



**Mission Synopsis: (include plot of actual flight track)**

**Evaluation: (did the experiment meet the proposed objectives?)**

yes... very well

**Problems: (list all problems)**

Data system went down  
a few times... 6:00 AM @ a time... 4 Times.  
Some FL/level data lost... however the data  
lost was for the most part, wasn't mission critical  
(one sig' exception was lost exp. wind direction (East) lost max elev. winds all lost. Average speed 85 kts)



Date 130/02 Flight 0209307 LPS Cine

| Time     | Event                  | Position                                | Comments                    |
|----------|------------------------|-----------------------------------------|-----------------------------|
| 17:16Z   | Takeoff                | MacDill                                 | Ax BT, Fine. BT = noise     |
| 19:15.5Z | IP                     | 21.00 84.03W                            | Triple Dip CP/AX BT         |
| 19:17:33 | Backup GPS             | 20.97 83.9Z                             | GPS, no good SST =          |
| 19:37    | 1st outer barrel       | 20.58 82.6                              | moderate conv ~20-35 dB     |
| 19:44    | another barrel         | 20.40 82.2                              | ~35-40 DBZ                  |
| 19:46:40 | BT, AXCP, GPS          | 20.39 82.16                             | SST = 28.8 (BT?) Dao        |
| 19:58    | Date system Backup     | 20.17 81.49                             | Lost ~ 10-12 mi. N of       |
| also     | AXCP2                  | we got No                               | Current/Temp data above     |
| Data     | Down                   | 1946-1955                               | lost ~ 40 miles =           |
| 20:02:00 | BT, AXCP, GPS          | 20.08 81.20                             | all OK SST = 28.7 CP =      |
| 20:11:20 | W Eppwall              | 20.07 80.58                             | no convection open to west  |
| N        | GPS BT4                |                                         | still double                |
| 20:14:32 | E Eppwall 81.5 BT, GPS | 20.12 80.32                             | 75 KT max V SST             |
| 20:20:47 | BT only, 81.6          | 20.37 79.87                             | SST = 28.8C                 |
| NOTE!    | NO Triple eye          | dropped - will get on next Pass thru    |                             |
| 20:28:26 | BT, GPS                | 20.76 79.88                             | SST = 29.0 No good fail was |
| 20:42    | S FMR 5.06 GHz channel |                                         | is crap. --- Big            |
| 20:35:52 | BT only                | 20.89 80.47                             | SST = <del>BAD</del> R+     |
| 20:43:47 | BT 5 GPS/BT            | 20.94 81.04                             | SST = 29.2                  |
| 20:49:05 | BT only                | 20.65 80.89                             | SST = 29.0                  |
| 20:50:30 | GPS + BT               | 20.37 80.71                             | "N" Eppwall 40 KTF          |
| no GPS   | Note                   | GPS stuck in the for 3 min. - will auto |                             |
| 20:57:47 | Triple Launch          | 20.22 80.60                             | Center fix 70 KTF           |
| 96       | AXCP 12                |                                         | 90. (9 FIM) 9.1 m/s         |
| 21:04:35 | Sand/BT, 13            | 20.33 80.89                             | SST = 28.7 Sale = good      |
| 21:14:30 | " 12                   | 20.61 81.47                             | SST = 28.8                  |
| 21:19:13 | " 13                   | 20.21 81.65                             | SST = 29.0                  |
| 21:24:30 | " 15 BT, 15            | 20.00 81.83                             | SST = 28.9                  |

NOTE! ~187 Affix 984 our express = 980 @ 21:20Z  
~4mb/3.5h or 1mb/hr... (moderate interest)



19.68 19.74  
80.8 80.03

Cal 27th  
Tues  
Mines

Form E-2  
Page 5 of 5

# Lead Project Scientist Event Log

Date 9/30/02 Flight 080935I LPS Clore

| Time     | Event                        | Position                          | Comments                     |
|----------|------------------------------|-----------------------------------|------------------------------|
| 21:29    | BT <sub>7</sub>              | 19.68 82.0                        | SST=29.2                     |
| 21:33:12 | BT <sub>18</sub>             | 19.47 82.11                       | SST=29.1                     |
| 21:39:31 | BT <sub>19</sub>             | 19.11 82.31                       | SST=29.1                     |
| 21:47:40 | BT <sub>20</sub> end 7-8 hrs | 18.77 82.54                       | SST=29.0                     |
| 22:05:34 | BT <sub>21</sub>             | 19.58 81.59                       | SST=28.9                     |
| 22:17    | Data down                    | down                              | (again)                      |
| 22:25    | "                            | UP                                |                              |
| 22:33    | GPS in                       | 20.41 80.80                       | Center fix                   |
|          | <del>GPS in</del>            | <del>3m below 1.5</del>           | <del>receptor in water</del> |
|          | another Data down            | situation                         |                              |
|          | ~15 min                      | up                                | 22:50 Z                      |
| 23:01:47 | Ver. 6 pt range              | 19.69 80.74                       | Dust to S of storm SST=28.9  |
| 23:14    | S. of storm                  | 19.01 80.72                       | 60m S. of center SST=29.0    |
|          | NOTE                         | legs 9-10, 10-11                  | have been cut                |
|          | Short                        | due to 10 station (data down net) |                              |
|          | Still                        | OK... Core                        | still covered                |
| 23:22:51 | leg 10-11                    | 19.06 80.1                        | SST=28.6 L. Rear             |
| 23:27:22 | BT <sub>23</sub>             | 19.36 79.94                       | SST=28.8 L. Rear             |
| 23:31:45 | BT <sub>24</sub>             | 19.64 79.80                       | SST=28.3 L. R                |
| 23:36:20 | L. REAR                      | 19.95 79.63                       | SST=28.6                     |
| 23:42:00 | BT <sub>25</sub> GPS         | 20.30 79.55                       | Rear of storm SST=28.8       |
| 23:47:40 | Rear of storm                | 20.38 79.94                       | BT <sub>27</sub> SST=        |
| 23:57:38 | BT <sub>28</sub>             | 20.47 80.51                       | 1st station beyond reef      |
|          |                              |                                   | Base - 40 DBZ                |
| 20:56:05 | GPS 16                       | 20.49 80.59                       | Rear Bay                     |
| 20:59:18 | 17 large                     | 20.55 80.83                       | Eye wall past large ship     |
| 23:59:10 | 18 small                     | "                                 | " east 1st ship              |
| 24:00:50 | BT <sub>29</sub> ch 2        | "                                 | " east SST=28.9              |

47 244  
60 3015  
ch 12 4/5

MILP=960  
rate

SST=28.9  
SST=29.0

SST=28.6  
SST=28.8  
SST=28.3  
SST=28.6  
SST=28.8  
60m Rear  
30m Rear  
SST=29.0

~79.5 19.75  
Note: Eye wall drop showed  
85 Kts/60m... storm was intensifying  
as we were leaving



LILI 020930Z

GAMACUA WTS

RADAR + WEEN

LF COMPS SENT WEEN

1) 2015-2017

2) 2150

3) 2254

4) 2400

12 Smaller sent

020002I LILI

TateoRE 0201 (10:00 pm)

S expected at 24, 87

④ 0600 UTC

1 PS - Joe Cione / NORT SIM

Radar - M. Black

Drops - M. Black

Workstation M. Black

AXCP / 250 / 10

Tom Scott

Coat Gail

12 - Storm AIRS (1)  
pattern + dropping over

previous ocean area

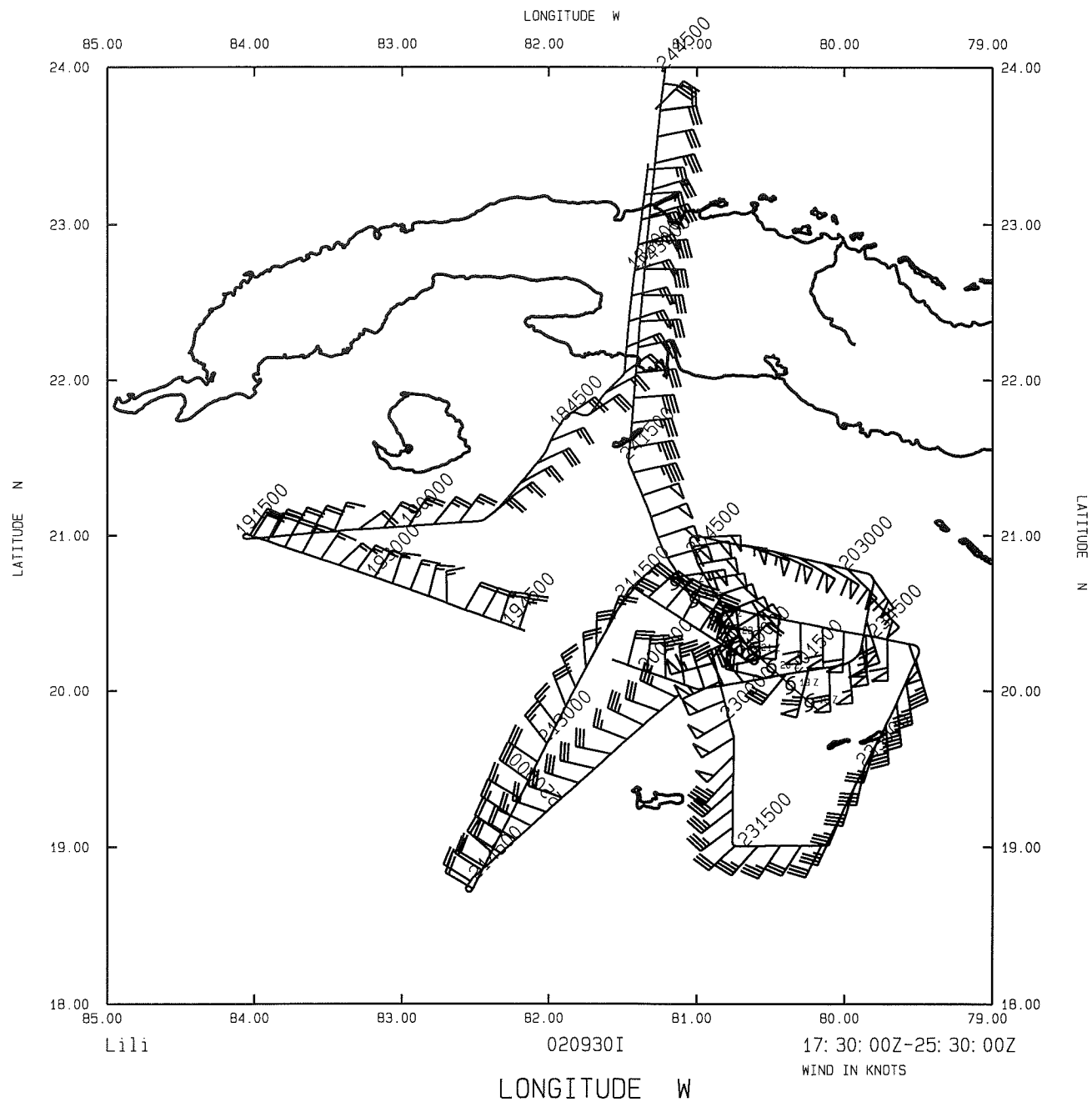
SE of storm and 100

run in a line center

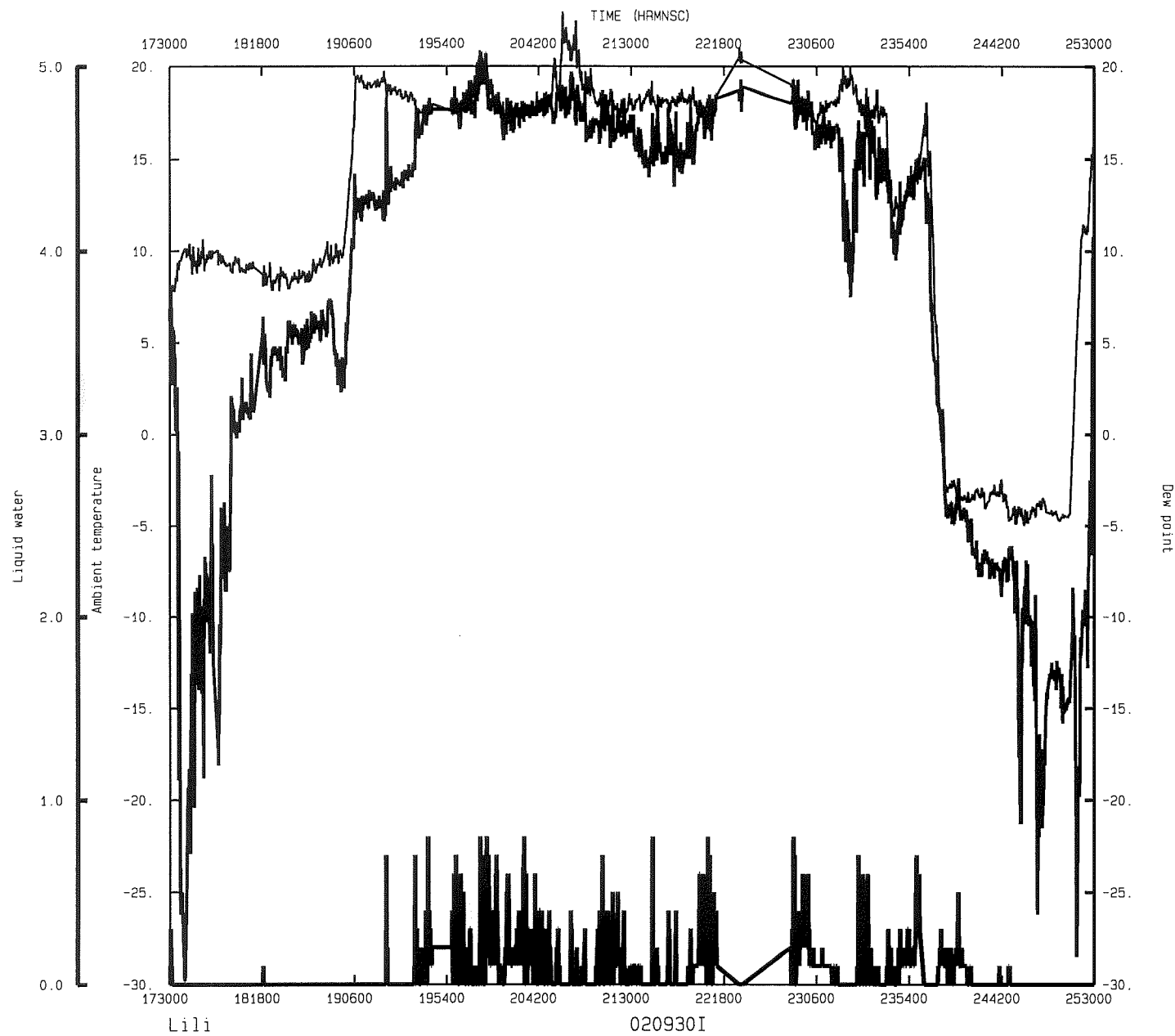
last AF - 268 mb

90 Kts

Impression on IR







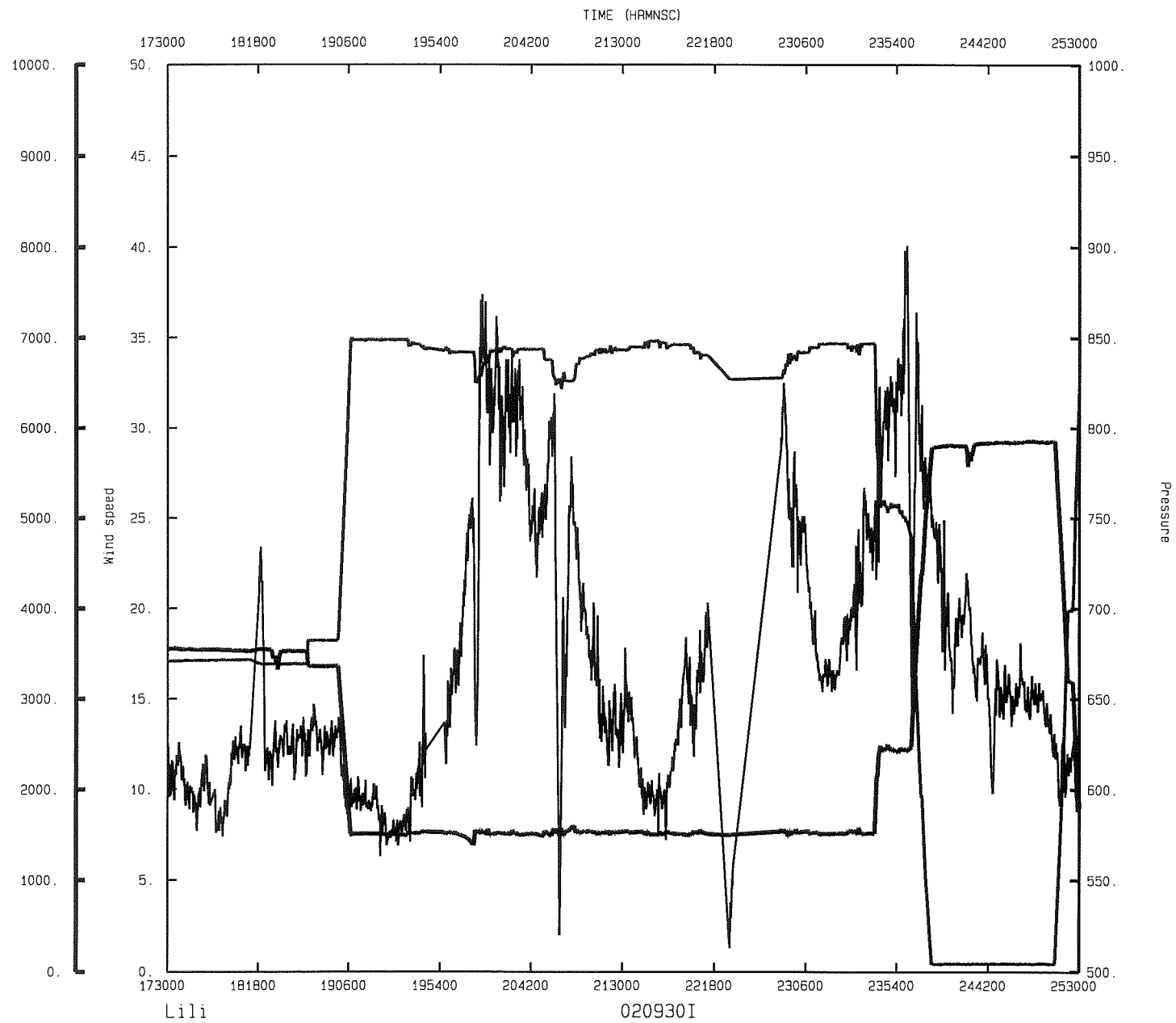
Lili

020930I

TIME (HRMNSC)



NOAA/HRD



NOAA/HRD