

19910811I1-LPS

E.2 Lead Project Scientist (On-Board)

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 OAO 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 OAO 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 or FGOC at remote recovery location).

E.2.2 In-Flight

- _____ 1. Confirm from OAO flight director/meteorologist 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 Postflight

- _____ 1. Debrief scientific crew.
- _____ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to the appropriate HRD operations center (MGOC or FGOC).
- _____ 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 OAO flight director.]
- _____ 4. Obtain a copy of the 10-s flight listing from the OAO flight director. Turn in with completed forms.
- _____ 5. Determine next mission status, if any, and brief crews as necessary.
- _____ 6. Notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted and arrange for any further coordination required.

On-Board Lead Project Scientist Check List

Date 8/11/91 Aircraft 43RF Flight ID 910811E

A. Participants

HRD		OAO	
Function	Participant	Function	Participant
Lead Proj. Sci.	<u>Mauls/Willis</u>	Flight Director	<u>Parrish</u>
Cloud Physics	<u>B. Black</u>	Pilots	<u>McKim/Plager</u>
Radar	<u>Kabeche/Tetud</u>	Navigator	<u>Strong</u>
Doppler	<u>Houze</u>	Sys. Engr.	<u>Wade</u>
Photographer	<u>—</u>	Data Tech.	<u>Rames/Hanchele</u>
Omegasonde	<u>—</u>	El. Tech.	<u>Roles</u>
AXBT/AXCP	<u>—</u>	Other	<u>Hallett/Saunders</u>

Take-Off	Location	Landing	Location
	<u>MIA</u>		

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

C. Mission Briefing

CAPE

D. Equipment Status

<u>Equipment</u>	<u>Pre-Flight</u>	<u>In-Flight</u>	<u>Post-Flight</u>
Aircraft	<u>✓</u>	<u> </u>	<u> </u>
Radar	<u>✓</u>	<u> </u>	<u> </u>
Cloud physics	<u>✓</u>	<u> </u>	<u> </u>
Data system	<u>✓</u>	<u> </u>	<u> </u>
Omegasondes	<u>—</u>	<u> </u>	<u> </u>
AXBT/AXCP	<u>—</u>	<u> </u>	<u> </u>
Doppler	<u>✓</u>	<u> </u>	<u> </u>
Photography	<u>OK</u>	<u> </u>	<u> </u>

REMARKS:

E. I. Proposed Flight Pattern (sketch or designate by number)

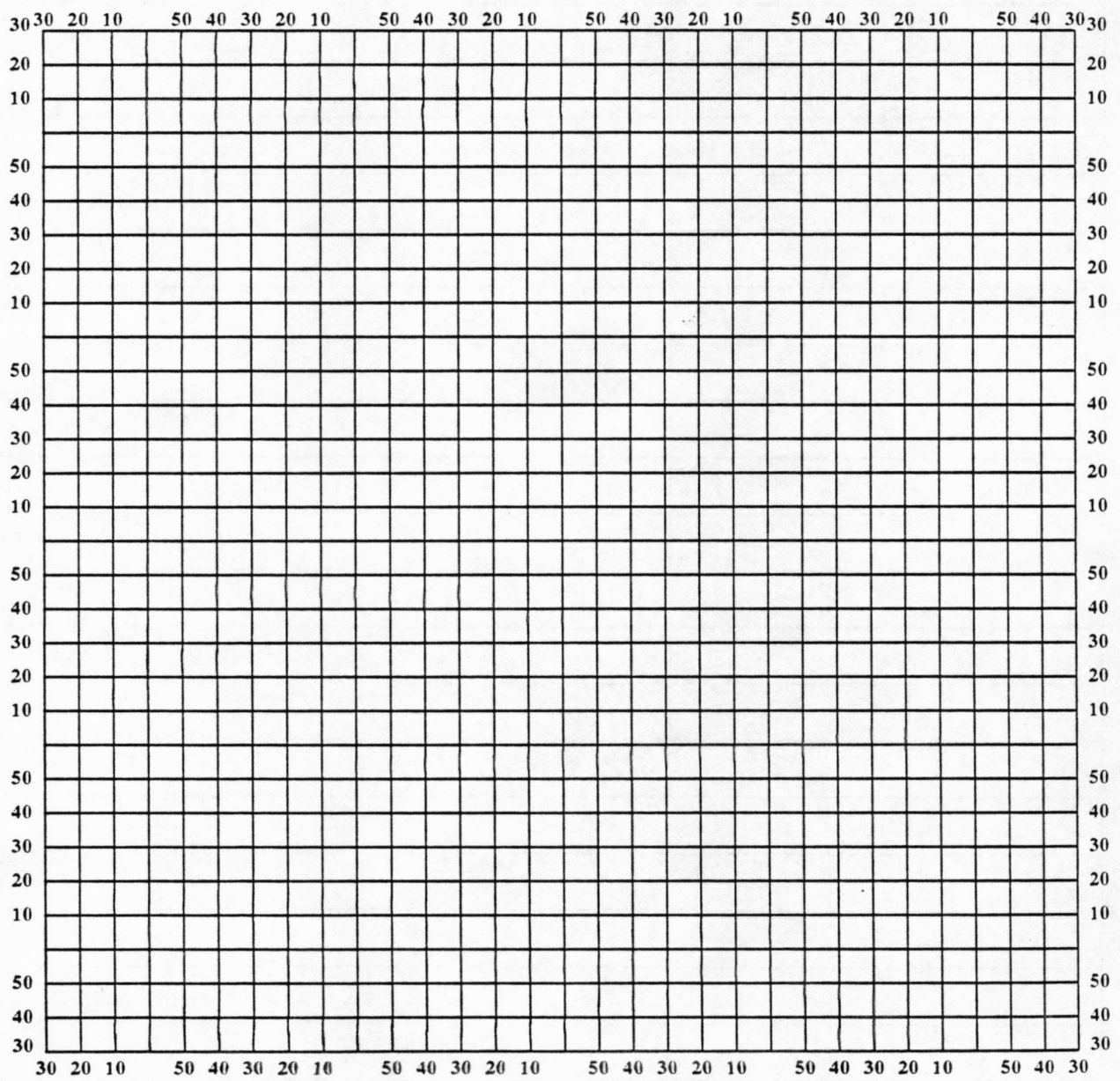
E. II. Actual Flight Pattern

910811I

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date 8/11/91 Longitude 43RF Observer Marles

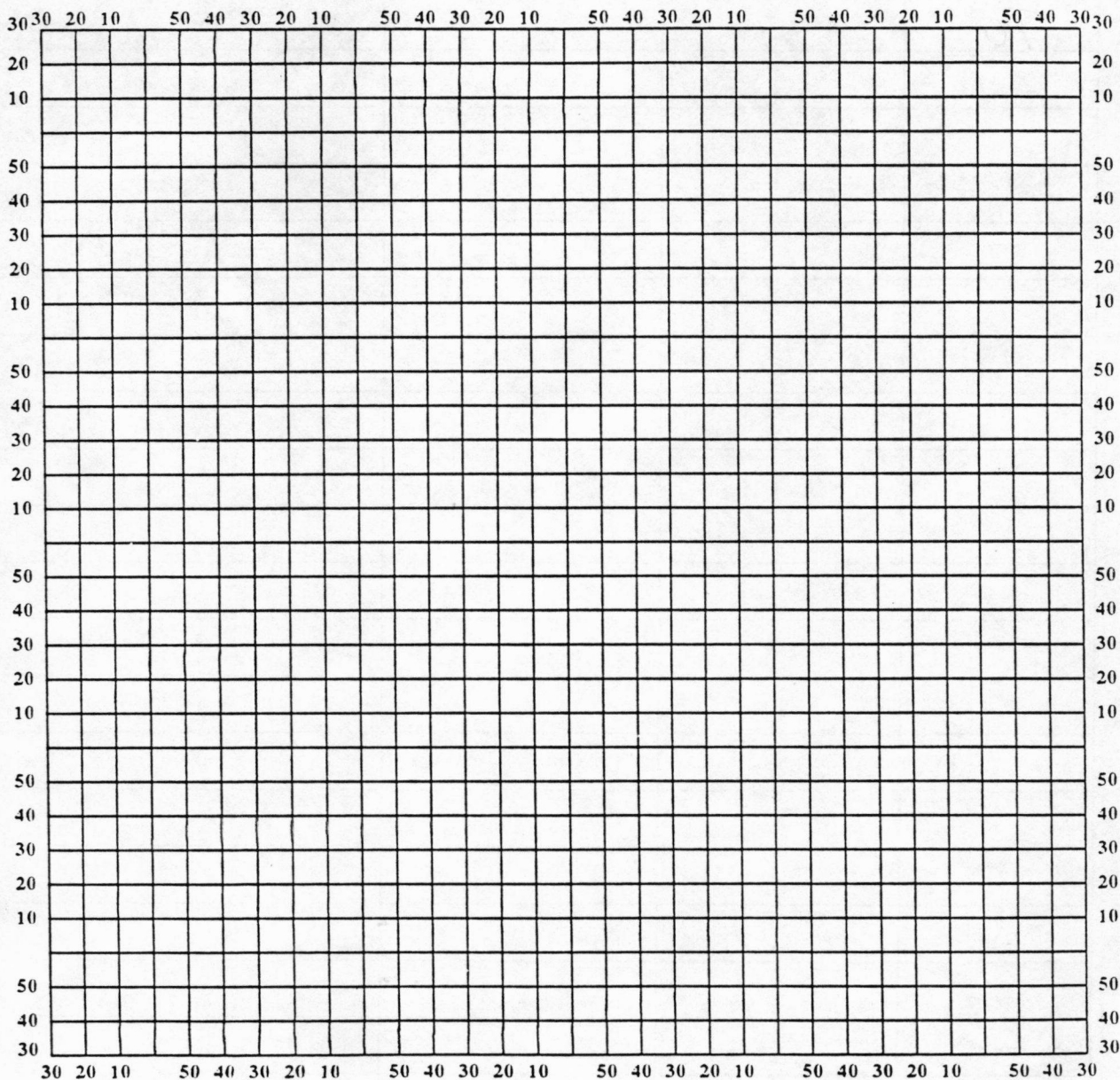


Note: Label full degrees according to location of flight area.

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date _____ Longitude _____ Observer _____



Note: Label full degrees according to location of flight area.

#1

Lead Project Scientist Event Log

Date 8/11/91 Flight 910811I1 LPS Mark

Time	Event	Position	Comments
TO	1833	MIA	
1940	SQ1 threshold off/REF on		too much dropout in intense echoes.
1944	turn on	variance recording	
1945	change to Nav 2	on radar system	
	end of Tape DIT		
195825	stop variance		
2020	EW horizontal rolls		in LF picture behind aircraft - Are these the rolls that the planes fly in the BL?
2105	getting	clearances.	
2110	CAPE requests we search for NASA balloon		
Balloon 2127 Z			094/454m from Ormand Beach VOR
in water.			29.11°N 80.15°W
2132	Set up	CP2/CP-3 baseline	
2157	setup E-W runs	N-S of CP1 complex	
2205	Turn +k	090	sell 5-10m S of TK
2211	Turn TK	233°	radial from CP-2
2216	Turn TK	058°	

310/13

Lead Project Scientist Event Log

Date 8/11/91 Flight CAPE 910811T1 LPS Markus/Willis

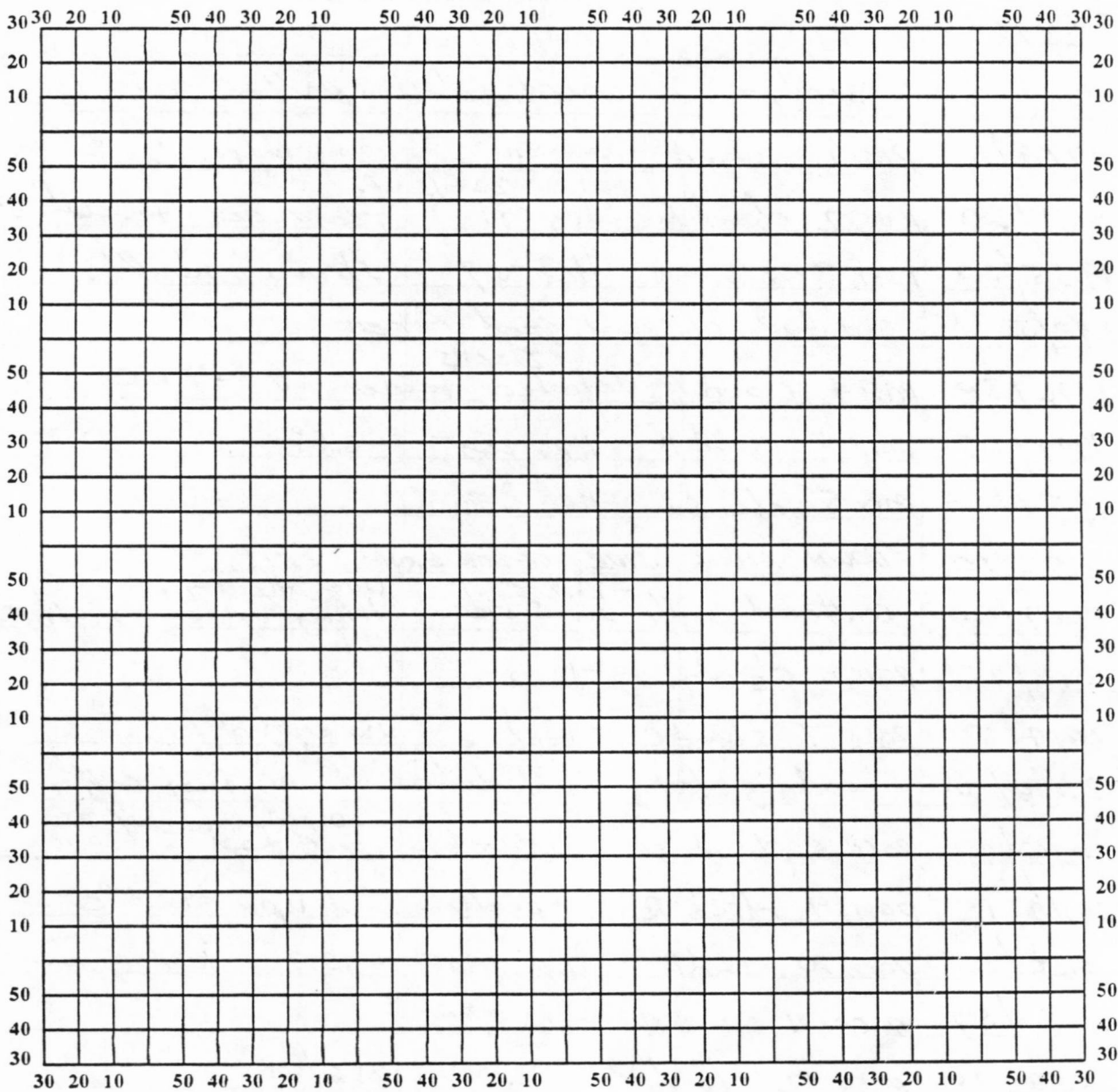
Time	Event	Position	Comments
1432/50 1440	T/O	MIA	
1448	310/13	coordinated pattern at 180	
1909/10	PASS 1 cloud A	-5.0°C	20+ m/s up.
1931/30	PASS 2 cloud A	Hdg 091	23 m/s up. feeder cell to south of main cell
1935/50	PASS 3 cloud A	Hdg 257	strong updrafts
1940/50	over top of new feeder cell		
1946/30	PASS 4 cloud A	detached ^{2 cells} feeder cell	-7.6°C
1949/15	PASS 4 cloud B	Hdg 265	-6.8°C
1954/00	PASS 5 cloud B	Hdg 096	
2002/10	DOWN ANVIL SIDE OF ORIGINAL CELL		
2009/30	scattered cells	on S side.	-12.2°C. over the top. lining up on multiple cell
2012/25	PASS 6 cloud C	-13.0	
2014/50	PASS 7 cloud C	-13.7	no updraft.
2016/30	heading for anvil debris of original cell		
2035/40	PASS 8 cloud D	-13.0°C	probably ^{10 in} cloud over top
2040/15	PASS 9 cloud D	3 cells lined up	-13.8°C
2044/25	PASS 10 cloud D	TRK 295	-13.2 iced spirals and wind shear
2049/57	PASS 11 cloud D	-13.7°C	
2054/10	PASS 12 cloud D	-13.0	326/08
2059/30	PASS 13 cloud D	all iced out hole in base	
2114/53	PMS updating at high TRS		

1839 FLYING RADIALS OFF OF CP-2 for Doppler coverage
1850 heading back to MIA
1922 lot of smoke over land MIA - PT UNDEVELOPED
1935/44 landed MIA

Hurricane Recco Plotting Chart

True at 25° Latitude, in Degrees and Minutes of ϕ and λ .

Date _____ Longitude _____ Observer _____



Note: Label full degrees according to location of flight area.

XMR 08Z 11 AUG 91

B R N = -999
 B+ = -999 (M/SEC)**2 X 10
 B- = -999 (M/SEC)**2 X 10
 SHR = 2 (M/SEC)**2
 WMAX = 0 M/SEC
 EL = -999 MB, -999 HND FT
 MPL = -999 HND FT
 VS5 = 0 (M/SEC)**2
 SS15 = 37 10-4 SEC-1

UNITS : KNOTS, LVLS : THSD FT (MSL)

PARCEL FROM PMAX
 ENTRAINMENT = 60 PERCENT

P0 = 1017 MB
 PMAX = 931 MB
 LCL = 885 MB
 LFC = 688 MB

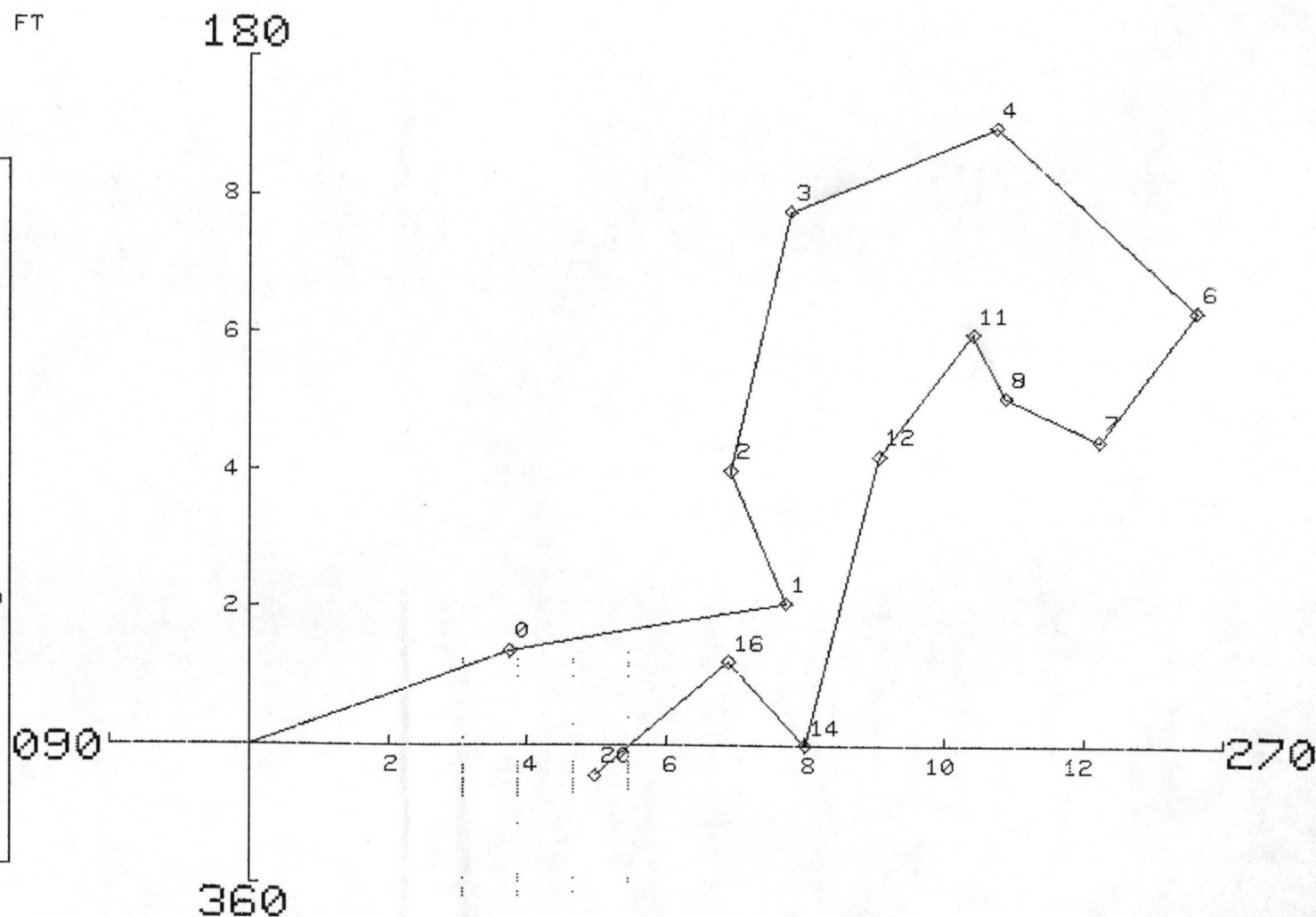
EI = 8 J/KG X 10
 EI+ = 18 (+ PART)
 EI- = -10 (- PART)

ENERGY CHANGE IN LAYERS

P1	P2	
931	688	-10 J/KG X 10
688	327	27
327	275	-2
:	:	:
:	:	:
:	:	:

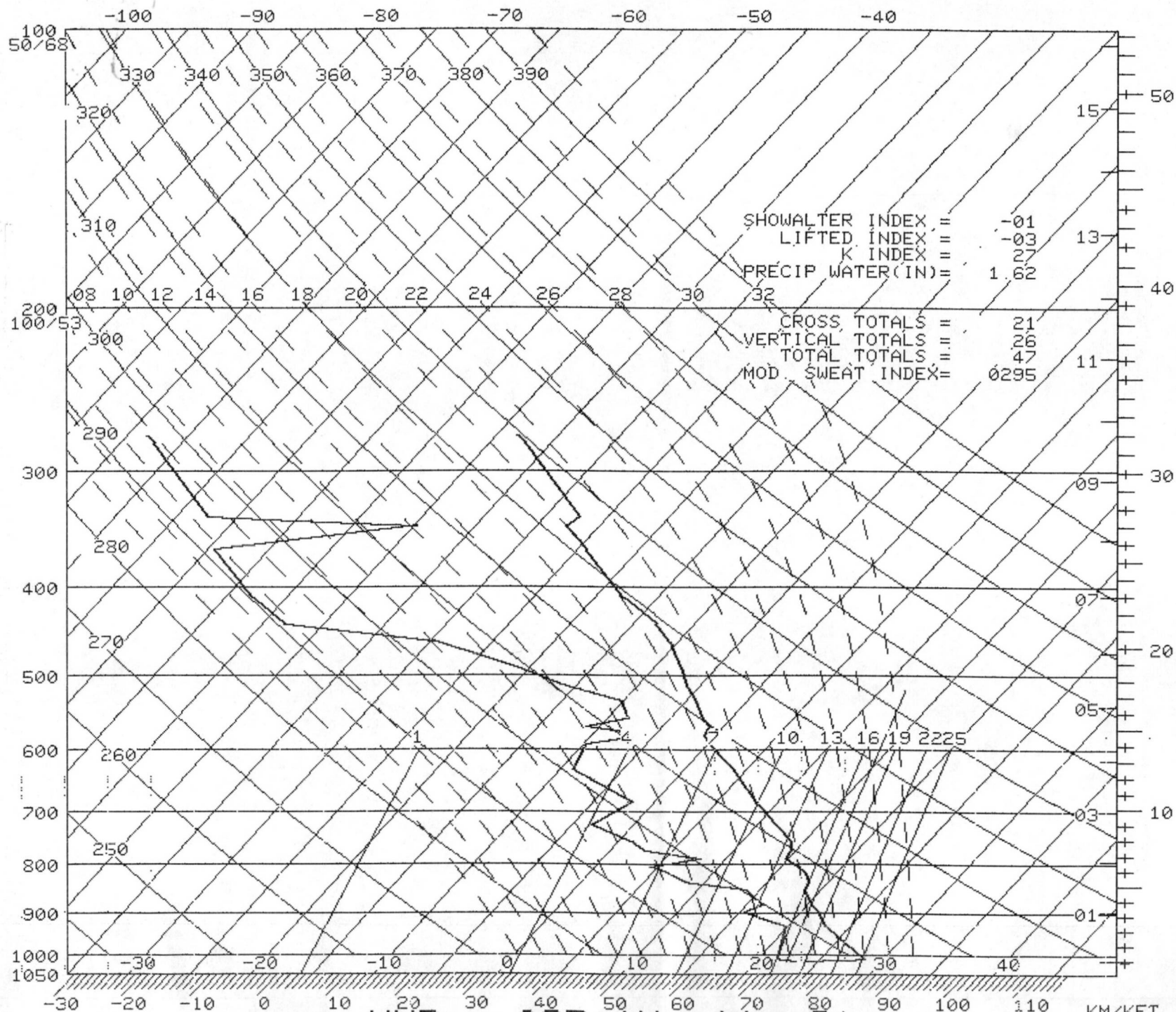
LI = -4
 KI = 27
 SWI = -1

CCL = 829 MB
 C TMR = 35 C, 96 F
 WAVG = 158 G/KG X 10-1



SFC ELV (FT) = 10

L = 14



DIR/KTS DIR/KTS

