

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.
- ✓ N 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 8-15-08 Aircraft N43RF Flight ID 080815I1

A. Participants

HRD

OA0

Function	Participant	Function	Participant
Lead Proj. Sci. ✓	<u>Duman</u>	Flight Director	<u>Parrish</u>
Cloud Physics		Pilots	<u>Choy/Newman/Ebhardt</u>
Radar	<u>Gamache</u>	Navigator	<u>Kidder</u>
Doppler		Sys. Engr.	<u>Floyd</u>
Photographer		Data Tech.	<u>Lynch</u>
Omegasonde	<u>Cibone</u>	El. Tech.	
AXB T/AXCP		Other	

Take-Off	Location	Landing	Location
<u>0253Z</u>	<u>BGI</u>	<u>0952Z</u>	<u>BGI</u>

B. Past and Forecast Storm Locations

Date/Time	Latitude	Longitude	MSLP	Max. Wind
<u>15 Aug 06Z</u>	<u>18.2N</u>	<u>65.0W</u>		

C. Mission Briefing

D. Equipment Status

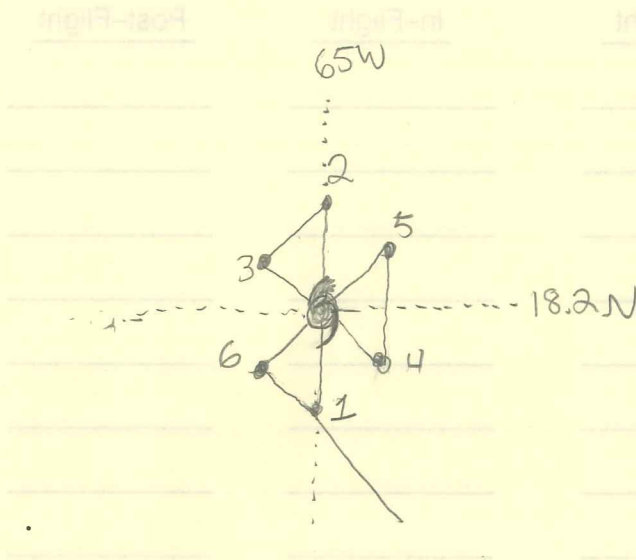
<u>Equipment</u>	<u>Pre-Flight</u>	<u>In-Flight</u>	<u>Post-Flight</u>
Aircraft	_____	_____	_____
Radar	_____	_____	_____
Cloud physics	_____	_____	_____
Data system	_____	_____	_____
Omegasondes	_____	_____	_____
AXBT/AXCP	_____	_____	_____
Doppler	_____	_____	_____
Photography	_____	_____	_____

REMARKS: Dropsonde accounting

HRD: 3

NWS: 8

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



E. II. Actual Flight Pattern

conv burst module

PR



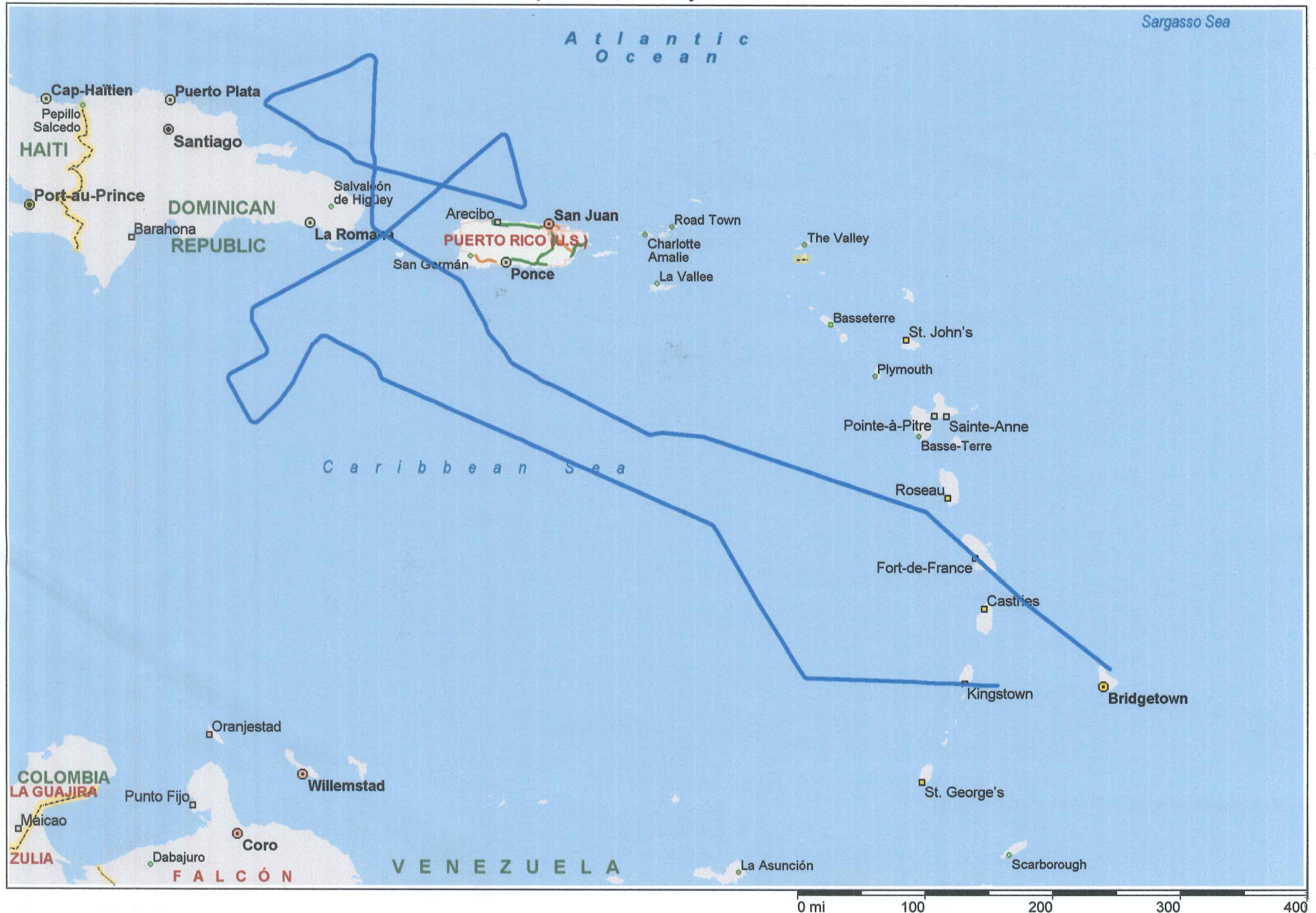
drop point
⑤

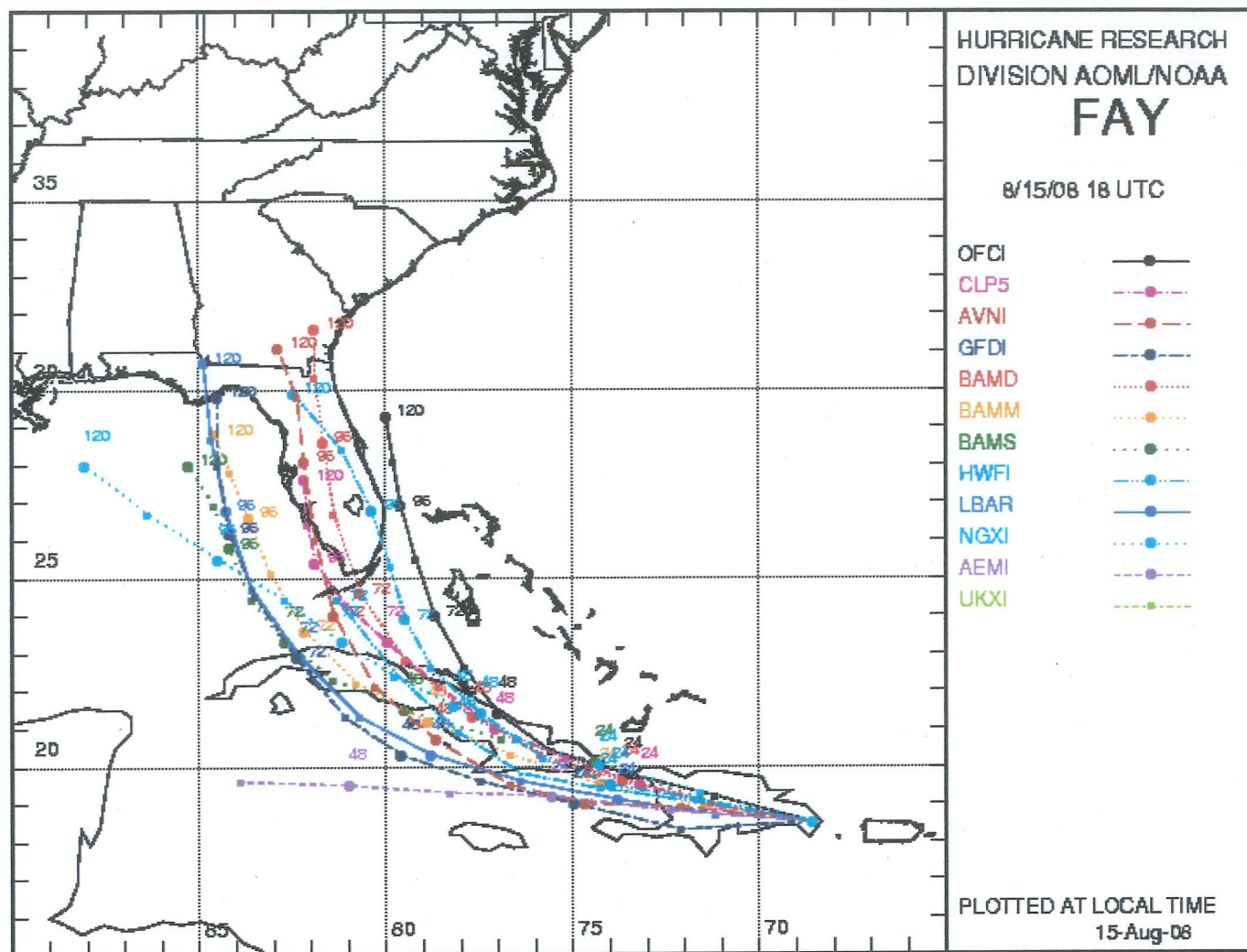
Lead Project Scientist Event Log

LPS J. DUNION

see p. 3
sketch

tropical storm fay 080815h





* ATLANTIC SHIPS INTENSITY FORECAST *

* GOES AND/OR OHC INPUT MISSING *

* FAY AL062008 08/15/08 18 UTC *

TIME (HR)	0	6	12	18	24	36	48	60	72	84	96	108	120
V (KT) NO LAND	35	38	42	46	50	56	64	69	73	79	84	82	82
V (KT) LAND	35	33	31	30	36	33	30	33	36	42	48	46	46
V (KT) LGE mod	35	33	31	29	38	34	30	35	41	48	56	63	68
SHEAR (KTS)	9	6	7	8	8	12	6	14	9	7	3	14	12
SHEAR DIR	291	252	294	295	299	279	219	252	301	258	318	257	272
SST (C)	28.8	28.8	28.8	28.9	29.0	29.1	29.4	29.6	29.8	29.8	29.4	28.9	28.9
POT. INT. (KT)	150	150	149	151	152	153	158	161	165	165	157	148	142
ADJ. POT. INT.	144	144	143	144	143	141	144	145	147	145	136	126	119
200 MB T (C)	-53.0	-53.1	-53.1	-53.0	-52.3	-52.7	-52.0	-52.2	-52.2	-52.0	-51.6	-51.9	-51.9
TH E DEV (C)	14	14	13	13	13	12	12	11	11	11	10	9	9
700-500 MB RH	47	50	46	49	53	51	53	51	60	56	58	58	59
GFS VTEX (KT)	13	12	13	12	12	12	13	12	11	13	16	13	15
850 MB ENV VOR	1	2	-4	1	7	-10	-11	-39	-11	-9	-6	-21	-33
200 MB DIV	26	20	-11	2	32	-26	14	0	-2	14	32	-17	52
LAND (KM)	-20	-46	-66	-33	33	-33	-32	32	176	105	30	55	106
LAT (DEG N)	18.5	18.9	19.2	19.5	19.8	20.3	21.3	22.5	24.0	25.5	26.9	28.2	29.3
LONG (DEG W)	68.6	70.0	71.3	72.6	73.8	75.7	77.3	78.3	78.7	79.2	79.8	80.0	79.9
STM SPEED (KT)	13	13	13	12	11	9	8	8	8	7	7	6	5
HEAT CONTENT	9999	9999	9999	9999	83	9999	9999	1	40	83	27	3	16

FORECAST TRACK FROM OFCI INITIAL HEADING/SPEED (DEG/KT): 275/ 12 CX,CY: -11/ 1

T-12 MAX WIND: 30 PRESSURE OF STEERING LEVEL (MB): 545 (MEAN=625)

GOES IR BRIGHTNESS TEMP. STD DEV. 100-300 KM RAD: -99.0 (MEAN=20.0)

% GOES IR PIXELS WITH T < -20 C 50-200 KM RAD: -99.0 (MEAN=68.6)

INDIVIDUAL CONTRIBUTIONS TO INTENSITY CHANGE

	6	12	18	24	36	48	60	72	84	96	108	120
SAMPLE MEAN CHANGE	1.	2.	3.	4.	6.	8.	9.	10.	11.	12.	12.	13.
SST POTENTIAL	1.	1.	2.	3.	7.	12.	16.	20.	24.	26.	28.	28.
VERTICAL SHEAR	1.	2.	4.	5.	7.	9.	10.	11.	12.	12.	12.	12.
PERSISTENCE	1.	1.	2.	2.	3.	2.	2.	2.	2.	1.	1.	0.
200/250 MB TEMP.	0.	0.	0.	-1.	-1.	-2.	-2.	-3.	-3.	-4.	-4.	-4.
THETA E EXCESS	0.	1.	1.	1.	1.	2.	2.	2.	2.	2.	2.	1.
700-500 MB RH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	-1.	-1.
GFS VORTEX TENDENCY	0.	0.	-1.	-1.	-2.	-1.	-2.	-3.	-2.	1.	-1.	-1.
850 MB ENV VORTICITY	0.	0.	-1.	-1.	-1.	-2.	-2.	-3.	-3.	-3.	-4.	-4.
200 MB DIVERGENCE	0.	0.	0.	0.	-1.	-2.	-2.	-3.	-3.	-3.	-3.	-2.
ZONAL STORM MOTION	0.	0.	1.	1.	1.	2.	2.	3.	3.	3.	4.	4.
STEERING LEVEL PRES	0.	0.	0.	1.	1.	1.	1.	2.	2.	2.	1.	1.
DAYS FROM CLIM. PEAK	0.	0.	0.	0.	0.	0.	0.	0.	-1.	-1.	-1.	-1.
SUB-TOTAL CHANGE	3.	7.	11.	15.	21.	29.	34.	38.	44.	49.	47.	47.
SATELLITE ADJUSTMENTS												
MEAN ADJUSTMENT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GOES IR STD DEV	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
GOES IR PIXEL COUNT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
OCEAN HEAT CONTENT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL ADJUSTMENT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
TOTAL CHANGE (KT)	3.	7.	11.	15.	21.	29.	34.	38.	44.	49.	47.	47.

** 2008 ATLANTIC RI INDEX AL062008 FAY 08/15/08 18 UTC **

(25 KT OR MORE MAX WIND INCREASE IN NEXT 24 HR)

12 HR PERSISTENCE (KT): 5.0 Range: -45.0 to 30.0 Scaled/Wgtd Val: 0.7/ 1.2

850-200 MB SHEAR (KT): 7.7 Range: 35.1 to 3.2 Scaled/Wgtd Val: 0.9/ 1.4

D200 (10**7s-1) : 13.8 Range: -20.0 to 149.0 Scaled/Wgtd Val: 0.2/ 0.3

POT = MPI-VMAX (KT) : 108.7 Range: 25.1 to 130.7 Scaled/Wgtd Val: 0.8/ 0.9

850-700 MB REL HUM (%): 64.4 Range: 56.0 to 88.0 Scaled/Wgted Val: 0.3/ 0.1
% area w/pixels <-30 C: 82.0 Range: 17.0 to 100.0 Scaled/Wgted Val: 0.8/ 0.2
STD DEV OF IR BR TEMP : 12.9 Range: 35.1 to 3.2 Scaled/Wgted Val: 0.7/ 0.9
Heat content (KJ/cm2) :5041.0 Range: 0.0 to 132.0 Scaled/Wgted Val:999.0/999.0

Prob of RI for 25 kt RI threshold= 999% is 999.0 times the sample mean(12.3%)
Prob of RI for 30 kt RI threshold= 999% is 999.0 times the sample mean(7.8%)
Prob of RI for 35 kt RI threshold= 999% is 999.0 times the sample mean(4.5%)

ANNULAR HURRICANE INDEX (AHI) AL062008 FAY 08/15/08 18 UTC ##
STORM NOT ANNULAR, SCREENING STEP FAILED, NPASS=4 NFAIL=3 ##
AHI= 0 (AHI OF 100 IS BEST FIT TO ANN. STRUC., 1 IS MARGINAL, 0 IS NOT ANNULAR) ##
ANNULAR INDEX RAN NORMALLY