

Hurricane Field Program Plan

Part II Appendices

Table of Contents

APPENDIX A	1
Decision and Notification Process.....	1
APPENDIX B: CALIBRATION; DATA BUOYS	5
B.1 En-route Calibration of Aircraft Systems.....	5
B.2 Tables Buoy/C-MAN/NOS Platform Over Flight Locations.....	6
<i>Table B-2.3 Automated Surface Observing System (ASOS)/METAR Sites</i>	13
APPENDIX C: DOD/NWS RAWIN/RAOB AND NWS COASTAL LAND-BASED RADARS ...	22
APPENDIX D: PRINCIPAL DUTIES OF THE NOAA SCIENTIFIC PERSONNEL	24
APPENDIX E: NOAA RESEARCH OPERATIONAL PROCEDURES AND CHECK LISTS ...	28
E.1 “Conditions-of-Flight” Commands.....	29
E.2 Lead Project Scientist.....	30
E.3 Cloud Physics Scientist.....	37
E.4 Boundary Layer Scientist.....	39
E.5 Radar Scientist.....	42
E.6 Dropsonde Scientist.....	45
APPENDIX F: SYSTEMS OF MEASURE AND UNIT CONVERSION FACTORS	48
APPENDIX G: AIRCRAFT SCIENTIFIC INSTRUMENTATION	49
APPENDIX H: NOAA EXPENDABLES AND RECORDING MEDIA	53
ACRONYMS AND ABBREVIATIONS	55

Hurricane Field Program Plan

Part II

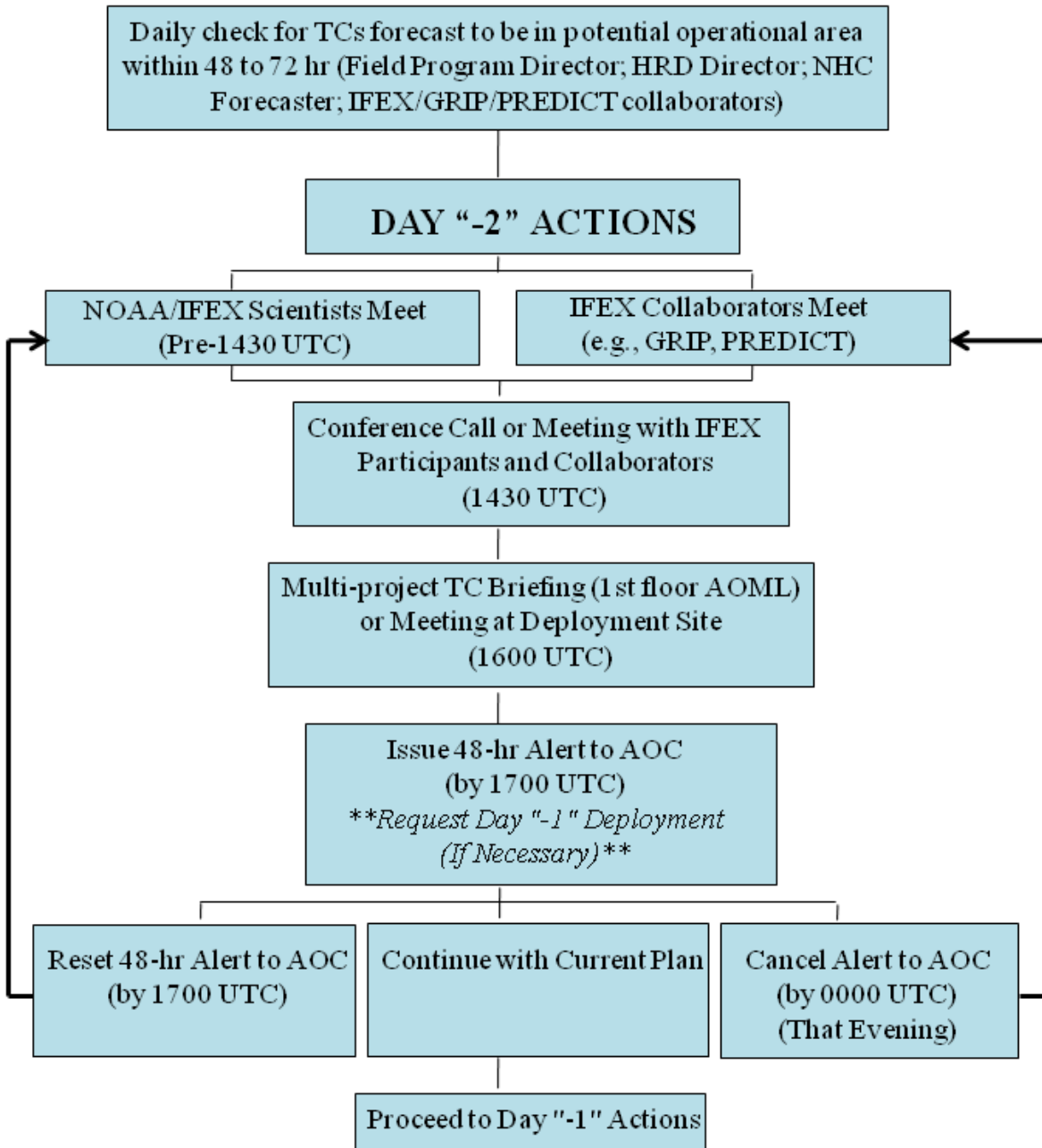
Appendix A

DECISION AND NOTIFICATION PROCESS

The decision and notification process is illustrated in Figs. A-1, A-2, and A-3. This process occurs in four steps:

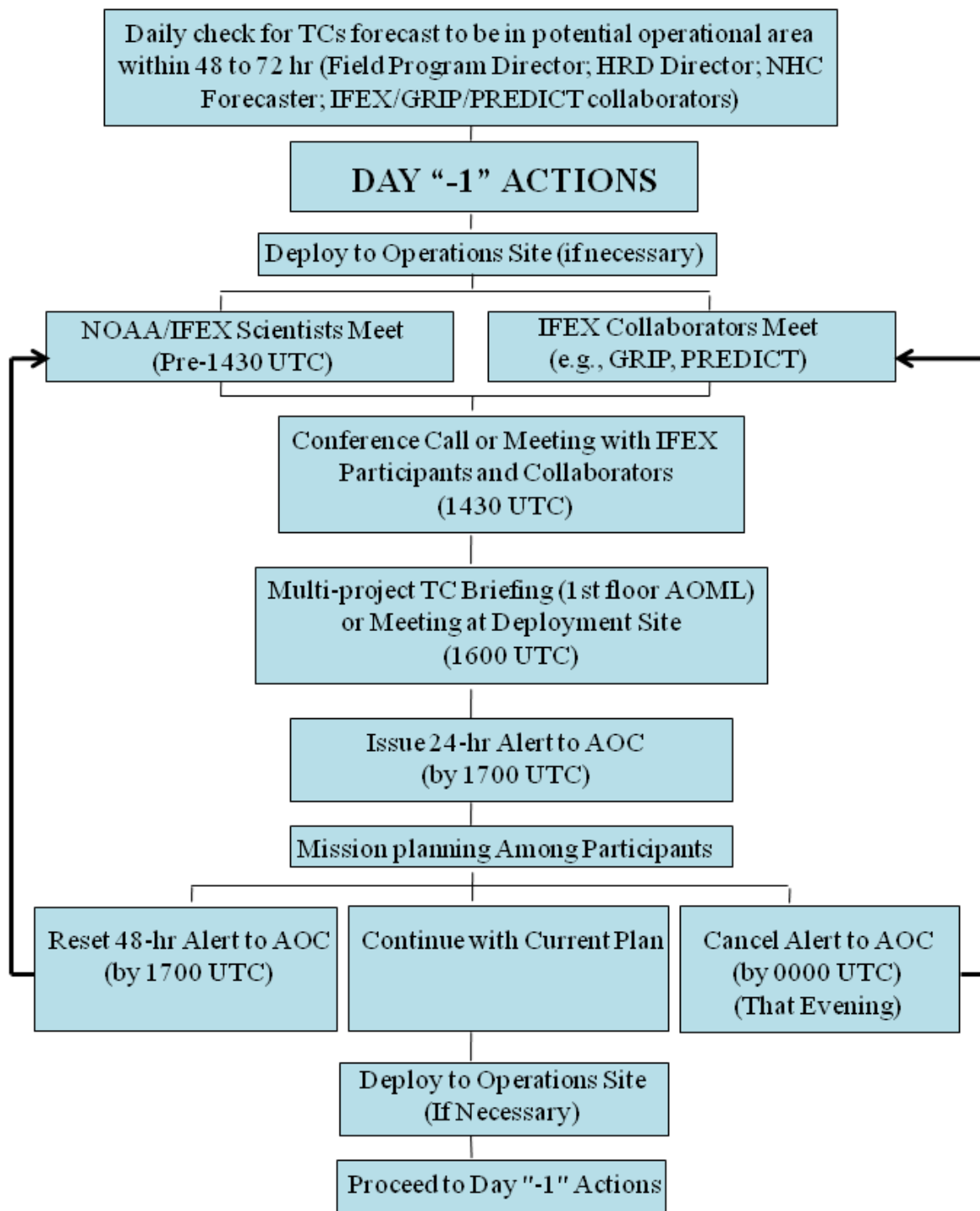
- 1) A research mission is determined to be probable within 72 h [field program director]. Consultation with the director of HRD, and the AOC Project Manager determines: flight platform availability, crew and equipment status, and the type of mission(s) likely to be requested.
- 2) The Field Program Advisory Panel [F. Marks (Director, HRD), R. Rogers (Director, Hurricane Field Program), J. Dunion, E. Uhlhorn, S. Aberson, M. Black, J. Cione, P. Dodge, J. Gamache, J. Kaplan, S. Murillo and J. McFadden (or AOC designee) meets to discuss possible missions and operational modes. Probable mission determination and approval to proceed is given by the HRD director (or designee).
- 3) Primary personnel are notified by the Hurricane Field Program Director [R. Rogers].
- 4) Secondary personnel are notified by their primary affiliate (Table A-2).

General information, including updates of program status, are provided continuously by tape. Call (305) 221-3679 to listen to the recorded message. During normal business hours, callers should use (305) 361-4400 for other official inquiries and contacts. During operational periods, an MGOC team member is available by phone at (305) 229-4407 or (305) 221-4381. The MGOC team leader and the HRD field program director will be available by cell phone. (Appropriate telepager phone numbers will be provided to program participants before the start of the field program.)



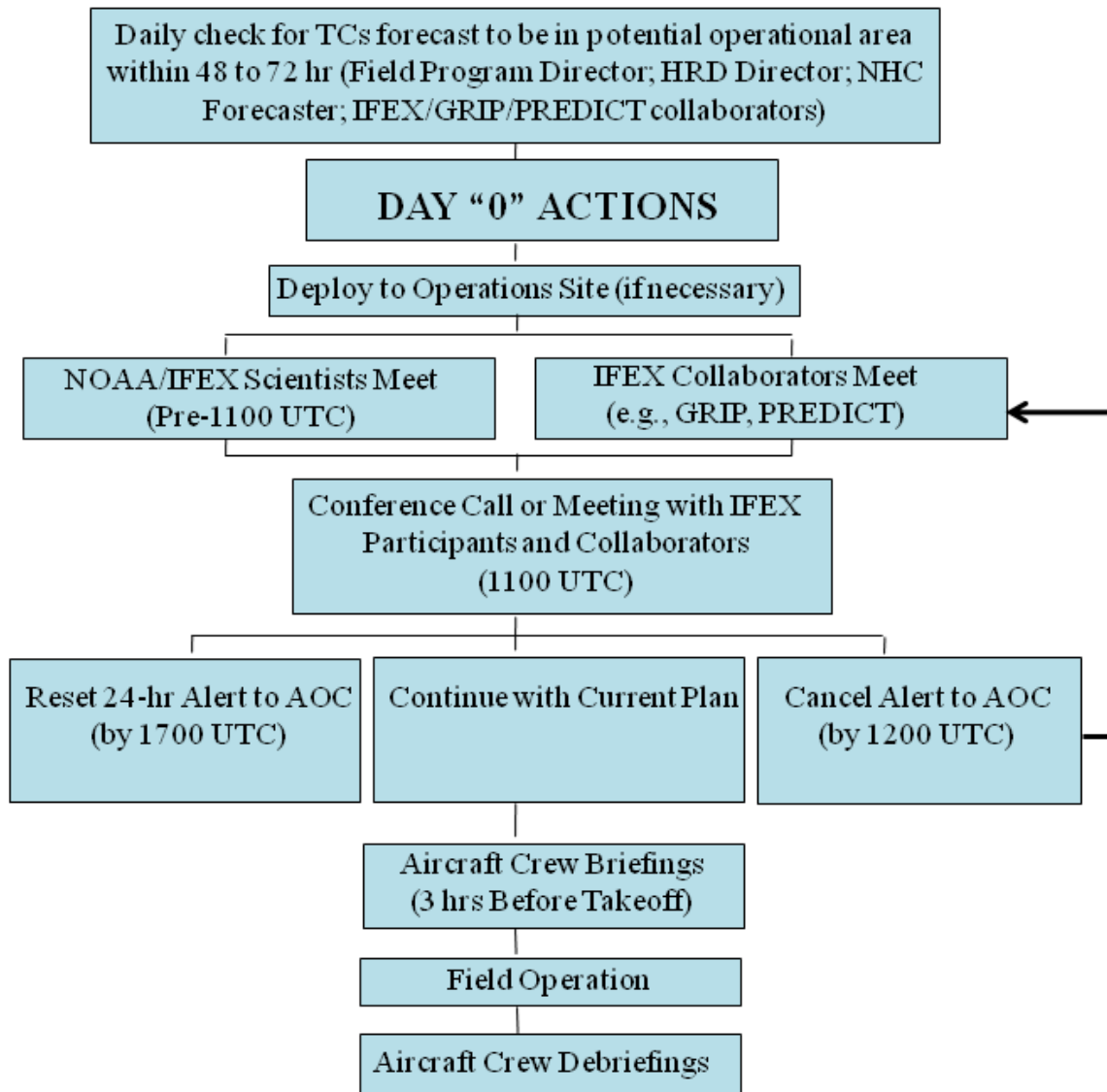
**Note: Time of briefings, conference calls, decisions, and deployments are dictated by timing limitations imposed by the AOC crew.

Fig. A-1: Decision and notification process for Day “-2”.



**Note: Time of briefings, conference calls, decisions, and deployments are dictated by timing limitations imposed by the AOC crew.

Fig. A-2: Decision and notification process for Day “-1”



**Note: Time of briefings, conference calls, decisions, and deployments are dictated by timing limitations imposed by the AOC crew.

Fig. A-3: Decision and notification process for Day "0"

Appendix B: Calibration; Data Buoys

B.1 En-Route Calibration of Aircraft Systems

Instrument calibrations are checked by flying aircraft intercomparison patterns whenever possible during the hurricane field program or when the need for calibration checks is suggested by a review of the data. In addition, an over flight of a surface pressure reference is advisable en route or while on station when practicable. Finally, all flights enroute to and from the storm are required to execute a true airspeed (TAS) calibration pattern. This pattern is illustrated in Fig. B-1.

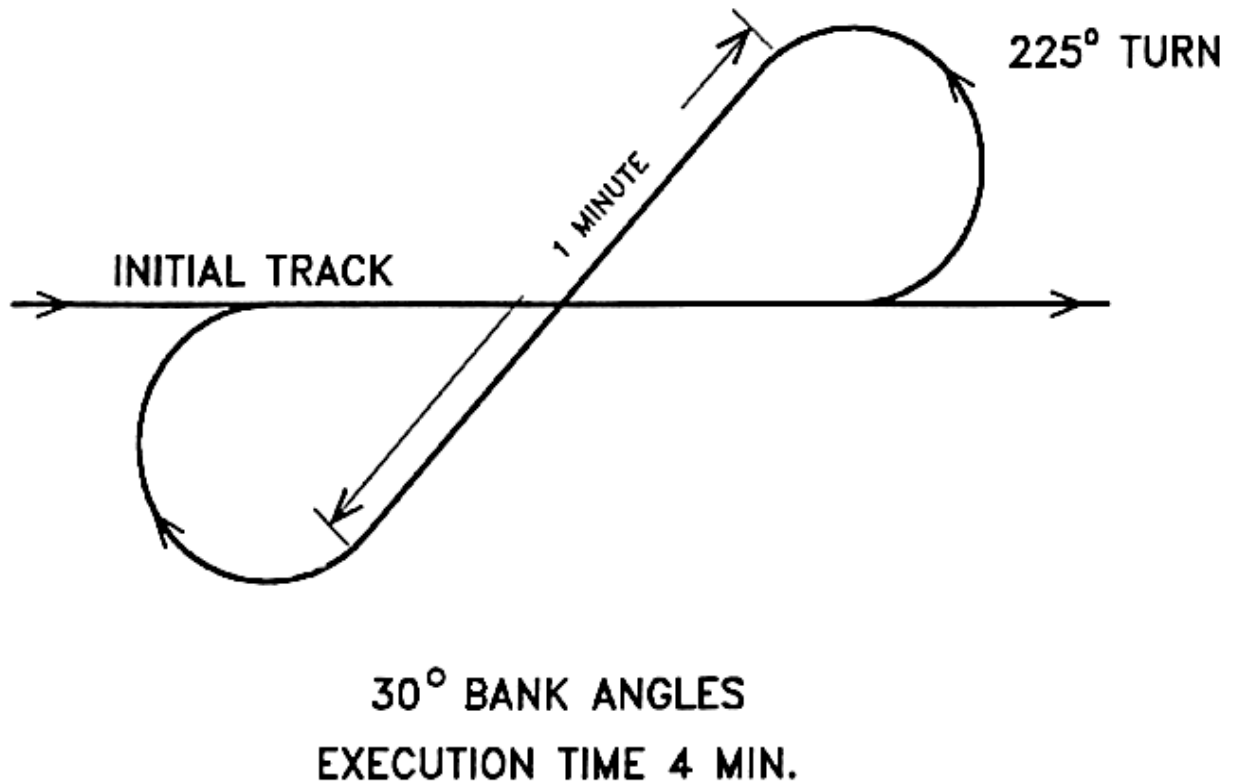
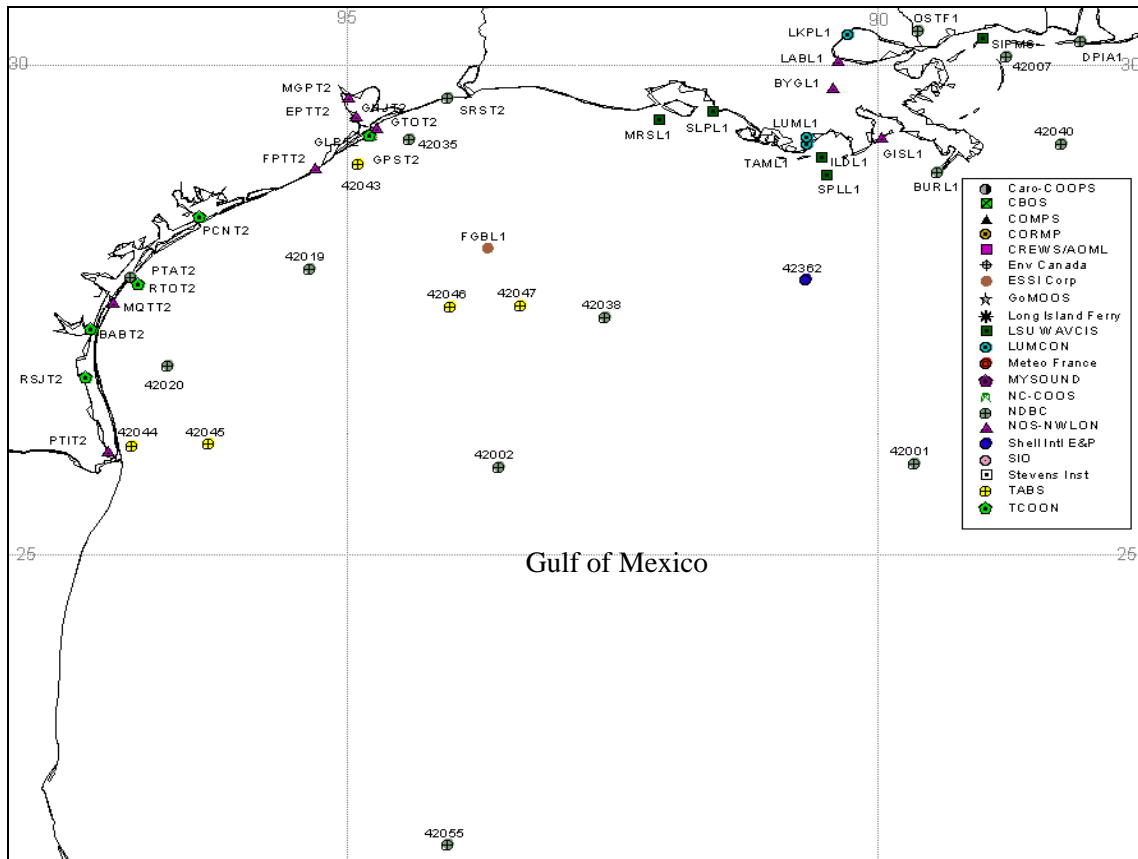


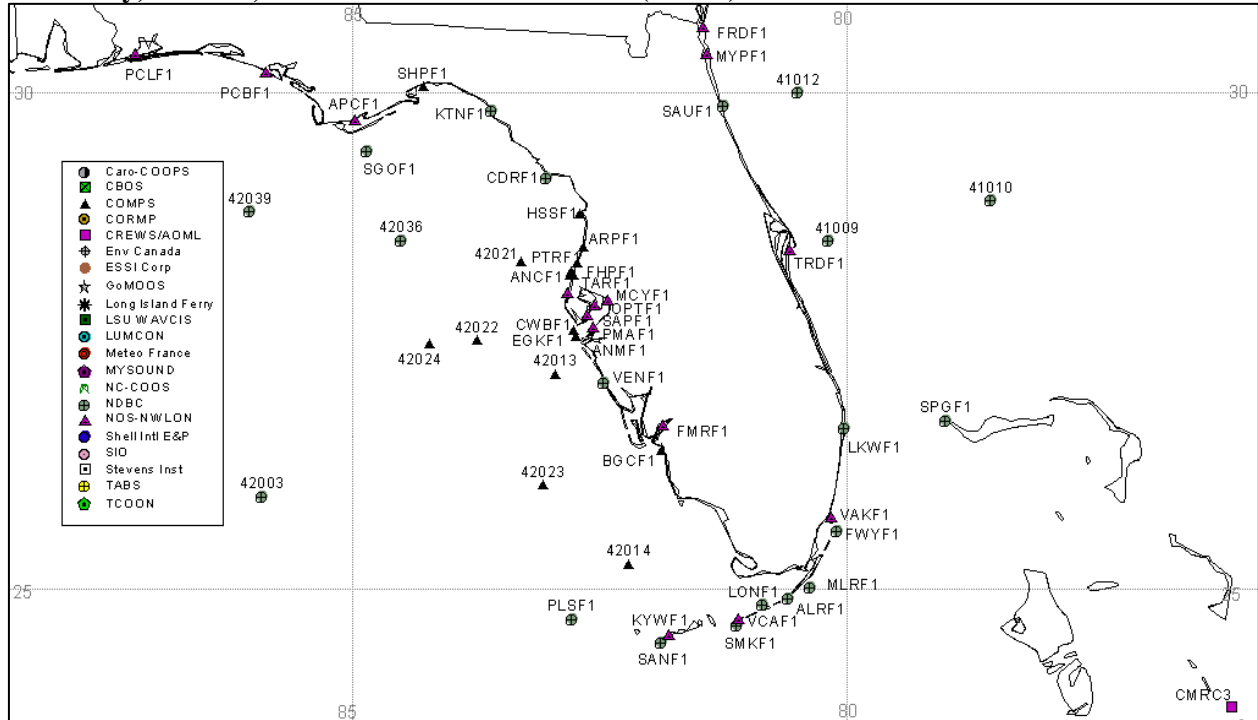
Fig. B-1 En-Route TAS calibration pattern.

B-2 Buoy, C-MAN, and NOS Platform Locations

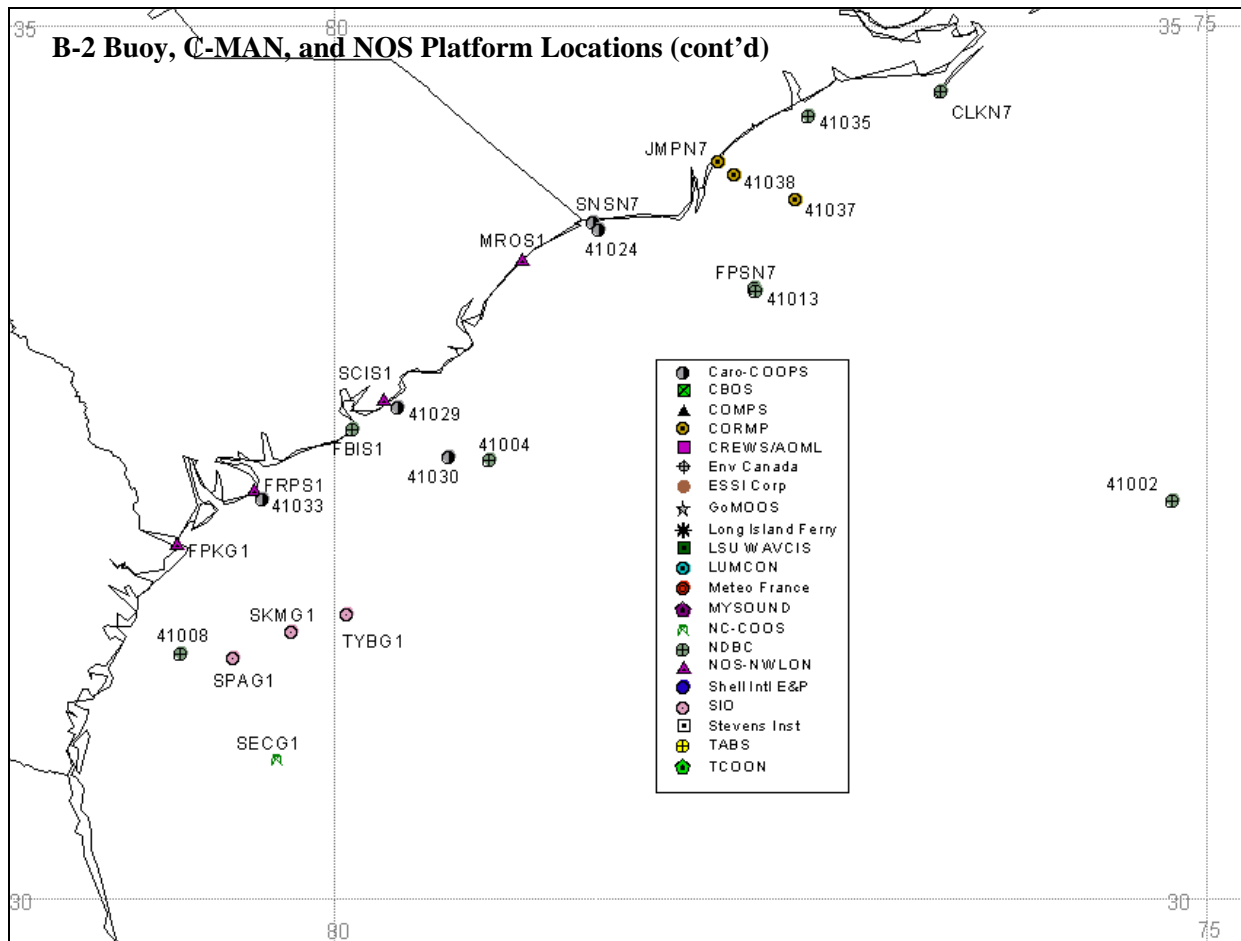


Station	Lat	Lon	Height	Provider	Station Location	Payload Comments
RSJT2	26.801	-97.47	10 (m)	TCOON	RINCON DEL SAN JOSE POTRERO LOPENO SW	
BAPT2	27.3	-97.42	10	TCOON	BAFFIN BAY POINT OF ROCKS	
PTIT2	26.06	-97.26	10	NOS-NWLN	PORT ISABEL, TX, 8779770	
MQTT2	27.58	-97.22	10	NOS-NWLN	8775870 - MALAQUITE BEACH, CORPUS CHRISTI, TX	
PTAT2	27.83	-97.05	14.9	NDBC	PORT ARANSAS, TX	
42044	26.11	-97.03	4	TABS	PS-1126 TABS J	TABS II
RTOT2	27.76	-96.98	20	TCOON	RTNS OFFSHORE	
42020	26.916	-96.7	5	NDBC	50 NM SOUTHEAST OF CORPUS CHRISTI, TX	3-meter discus buoy, DACT payload
PCNT2	28.45	-96.4	9	TCOON	MATAGORDA BAY PORT O'CONNOR	
42045	26.13	-96.31	4	TABS	PI-745 TABS K	TABS II
42019	27.916	-95.36	5	NDBC	FREEPORT, TX 60 NM SOUTH OF FREEPORT, TX	3-meter discus buoy, DACT payload
FPTT2	28.95	-95.31	10	NOS-NWLN	8772440 - FREEPORT, TX	
MGPT2	29.68	-94.99	10	NOS-NWLN	8770613 - MORGAN'S POINT, TX	
EPTT2	29.48	-94.92	10	NOS-NWLN	8771013 - EAGLE POINT, TX	
42043	28.99	-94.9	4	TABS	GA-252 TABS B	TABS II
GTOT2	29.31	-94.79	10	NOS-NWLN	8771450 - GALVESTON PIER 21, TX	
GPST2	29.29	-94.79	7	NOS-NWLN	8771510 - GALVESTON PLEASURE PIER, TX	
GLPT2	29.285	-94.788	15	TCOON	GALVESTON PLEASURE PIER	
GNJT2	29.3583	-94.725	10	NOS-NWLN	8771341 - GALVESTON BAY (NORTH JETTY), TX	
42035	29.246	-94.41	5	NDBC	GALVESTON 22 NM EAST OF GALVESTON, TX	3-meter discus buoy, DACT payload
SRST2	29.67	-94.05	12.5	NDBC	SABINE, TX	
42055	22.02	-94.05	10	NDBC	BAY OF CAMPECHE	12-meter discus buoy, ARES payload
42046	27.53	-94.02	4	TABS	HI-A595 TABS N	TABS II
FGBL1	28.118	-93.67	22.9	ESSI Corp	FOREST OIL - HIGH ISLAND - HI-334B	
42002	25.892	-93.568	10	NDBC	W GULF 240 NM SOUTH-SOUTHEAST OF SABINE, TX	10-meter discus buoy, MARS payload
42047	27.54	-93.36	4	TABS	HI-A389 TABS V	TABS II
42038	27.42	-92.57	5	NDBC	NORTH MID GULF OF MEXICO	3-meter discus buoy, ARES payload
MRSL1	29.441	-92.061	23.42	LSU WAVCIS	MARSH ISLAND, CS103	
SLPL1	29.516	-91.557	5.5	LSU WAVCIS	SALT POINT, CS114	
42362	27.8	-90.67	122	Shell Intl E&P	BRUTUS - GREEN CANYON 158	Fixed Drilling Platform
TAML1	29.187	-90.665	10	LUMCON	TAMBOUR BAY	
LUML1	29.253	-90.663	13.2	LUMCON	LUMCON MARINE CENTER	
ILD1	29.053	-90.533	19.2	LSU WAVCIS	ISLE CERNIERES, CS105	
SPLL1	28.867	-90.483	40.34	LSU WAVCIS	SOUTH TIMBALIER BLOCK 52, CS106	
BYGL1	29.78	-90.42	9.1	NOS-NWLN	8762483 - BAYOU GAUCHE, LA	
LABL1	30.05	-90.37	9.1	NOS-NWLN	8762482 - BAYOU LABRANCH, LA	
LKPL1	30.31	-90.28	13	LUMCON	WESTERN LAKE PONCHARTRAIN	
GISL1	29.263	-89.957	9.5	NOS-NWLN	8761724 - GRAND ISLE, LA	
42001	25.928	-89.653	10	NDBC	MID GULF 180 NM SOUTH OF SOUTHWEST PASS, LA	12-meter discus buoy, ARES payload
OSTF1	30.3567	-89.6125	10	NDBC	STENNIS TEST FACILITY	
BURL1	28.906	-89.429	30.5	NDBC	SOUTHWEST PASS, LA	
SIPM6	30.266	-89.007	10.98	LSU WAVCIS	SHIP ISLAND PASS, CS113	
42007	30.091	-88.772	5	NDBC	BILOXI 22 NM SOUTH-SOUTHEAST OF BILOXI, MS	3-meter discus buoy, DACT payload
42040	29.195	-88.253	5	NDBC	64 NM SOUTH OF DAUPHIN ISLAND, AL	3-meter discus buoy, DACT payload
DPIA1	30.25	-88.07	17.4	NDBC	8735180 - DAUPHIN ISLAND, AL	

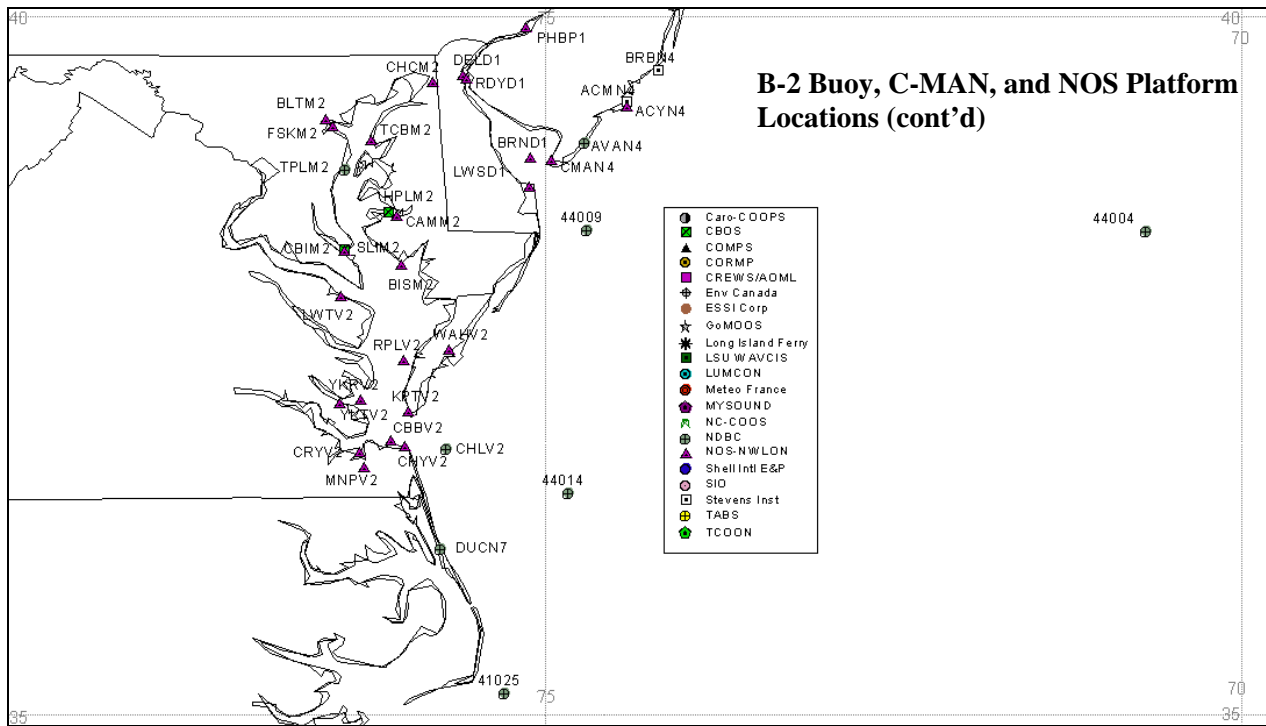
B-2 Buoy, C-MAN, and NOS Platform Locations (cont'd)



Station	Lat	Lon	Height	Provider	Station Location	Payload Comments
PCLF1	30.40	-87.21	10 (m)	NOS-NWLON	8729840 - PENSACOLA, FL	
42039	28.80	-86.04	5	NDBC	PENSACOLA - 115NM EAST SOUTHEAST OF PENSACOLA, FL	3-meter discus buoy, DACT payload
42003	25.94	-85.92	10	NDBC	E GULF 260 NM SOUTH OF PANAMA CITY, FL	10-meter discus buoy, ARES payload
PCBF1	30.21	-85.88	6.1	NOS-NWLON	8729210 - PANAMA CITY BEACH, FL	
APCF1	29.73	-84.98	10	NOS-NWLON	8728690 - APALACHICOLA, FL	
SGOF1	29.41	-84.86	35.1	NDBC	TYNDALL AFB TOWER C (N4), FL	
42036	28.51	-84.51	5	NDBC	W. TAMPA 106 NM WEST NORTHWEST OF TAMPA, FL	3-meter discus buoy, ARES payload
SHPF1	30.06	-84.29	10	COMPS	SHELL POINT, FL	
42024	27.46	-84.22	3.2	COMPS	W. FL MERHAB	
42022	27.50	-83.74	3.2	COMPS	CMP24 - WEST FLORIDA CENTRAL BUOY	
KTNF1	29.82	-83.59	10	NDBC	KEATON BCH, FL	
42021	28.30	-83.30	2.8	COMPS	CMP4 - PASCO COUNTY BUOY, FL	
42023	26.05	-83.07	3.2	COMPS	CM3 - WEST FLORIDA SOUTH BUOY	
CDRF1	29.14	-83.03	10	NDBC	CEDAR KEY, FL	
42013	27.16	-82.95	2.8	COMPS	NA2 - NAVY-2	
CWBF1	27.98	-82.83	6.4	NOS-NWLON	8726724 - CLEARWATER BEACH, FL	
FHPF1	28.15	-82.80	10	COMPS	FRED HOWARD PARK, FL	
ANCF1	28.19	-82.79	10	COMPS	ANCLOTE GULF PARK, FL	
PLSF1	24.69	-82.77	10	NDBC	PULASKI SHOAL LIGHT, FL	
EGKF1	27.60	-82.76	10	COMPS	EGMONT KEY, FL	
TARF1	28.16	-82.76	7	COMPS	TARPON SPRINGS, FL	
ANMF1	27.54	-82.74	10.8	COMPS	ANNA MARIA, FL	
PTRF1	28.29	-82.73	10.1	COMPS	PORT RICHEY, FL	
HSSF1	28.77	-82.71	6.6	COMPS	HOMOSASSA, FL	
ARPF1	28.44	-82.67	10.3	COMPS	ARIPEKA, FL	
SAPF1	27.76	-82.63	6.1	NOS-NWLON	8726520 - ST. PETERSBURG, FL	
PMAF1	27.64	-82.56	10	NOS-NWLON	8726384 - PORT MANATEE, FL	
OPTF1	27.86	-82.55	10	NOS-NWLON	8726607 - OLD PORT TAMPA, FL	
VENF1	27.07	-82.45	11.6	NDBC	VENICE, FL	
MCYF1	27.91	-82.42	10	NOS-NWLON	8726667 - MCKAY BAY ENTRANCE, FL	
42014	25.25	-82.21	2.8	COMPS	W. FL SEA-COOS	
BGCF1	26.40	-81.88	12	COMPS	BIG CARLOS PASS, FL	
SANF1	24.46	-81.88	13.1	NDBC	SAND KEY, FL	
FMRF1	26.65	-81.87	6.1	NOS-NWLON	8725520 - FORT MYERS, FL	
KYWF1	24.55	-81.81	6.4	NOS-NWLON	8724580 - KEY WEST, FL	
FRDF1	30.67	-81.47	6.4	NOS-NWLON	8720030 - FERNANDINA BEACH, FL	
MYPF1	30.40	-81.43	10	NOS-NWLON	8720218 - MAYPORT (BAR PILOTS DOCK), FL	
SAUF1	29.86	-81.26	16.5	NDBC	ST. AUGUSTINE	
SMKF1	24.63	-81.11	48.5	NDBC	SOMBRERO KEY, FL	
VCAF1	24.71	-81.11	6.4	NOS-NWLON	8723970 - VACA KEY, FL	
LONF1	24.84	-80.86	7	NDBC	LONG KEY, FL	
ALRF1	24.90	-80.60	47.5	NDBC	ALLIGATOR REEF	
TRDF1	28.42	-80.59	6.4	NOS-NWLON	8721604 - TRIDENT PIER, FL	
41012	30.00	-80.50	5	NDBC	ST. AUGUSTINE, FL 40NM ENE OF ST AUGUSTINE, FL	3-meter discus buoy, ARES payload
MLRF1	25.01	-80.38	15.8	NDBC	MOLASSES REEF, FL	
41009	28.50	-80.18	5	NDBC	CANAVERAL 20 NM EAST OF CAPE CANAVERAL, FL	6-meter NOMAD buoy, ARES payload
VAKF1	25.73	-80.16	9.1	NOS-NWLON	8723214 - VIRGINIA KEY, FL	
FWYF1	25.59	-80.10	43.9	NDBC	FOWEY ROCKS, FL	
LKWF1	26.61	-80.03	13.7	NDBC	LAKE WORTH, FL	
SPGF1	26.69	-79.00	9.8	NDBC	SETTLEMENT POINT, GBI	
41010	28.91	-78.55	5	NDBC	CANAVERAL EAST 120NM EAST OF CAPE CANAVERAL	6-meter NOMAD buoy, ARES payload
CMRC3	23.80	-76.10	10	CREWS/AOML	NORTH NORMAN'S REEF, BAHAMAS	



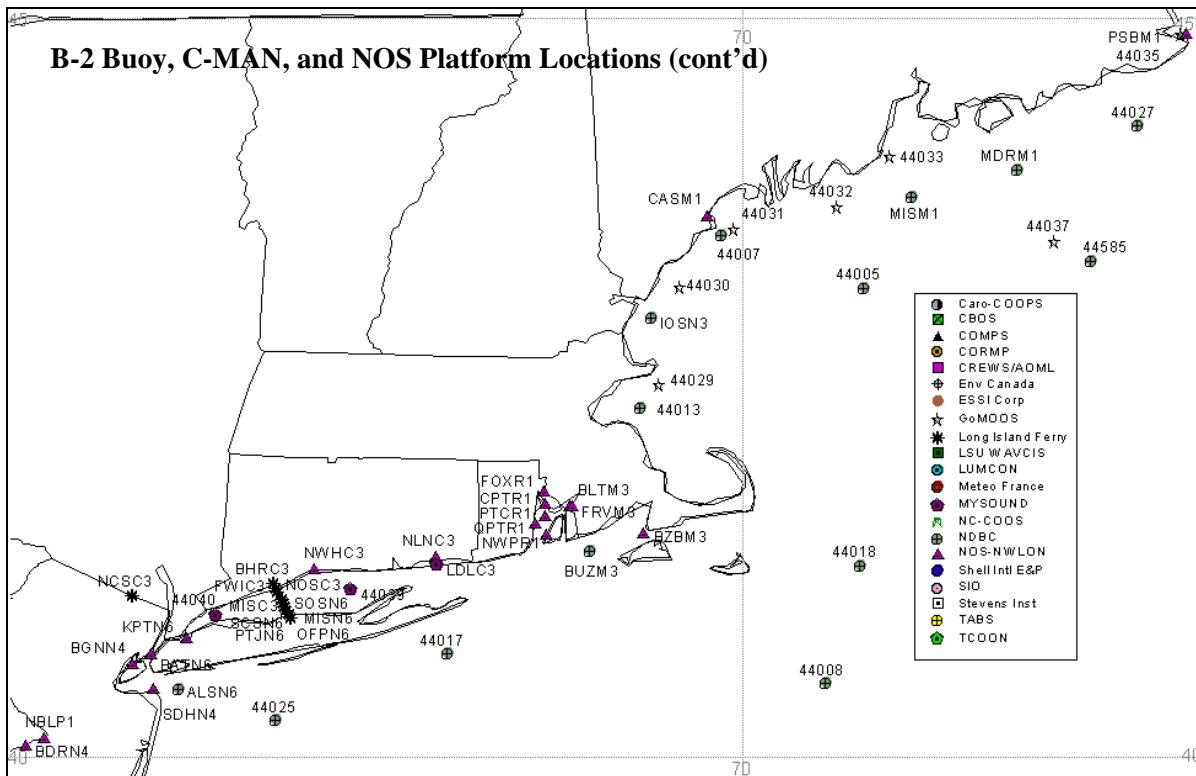
Station	Lat	Lon	Height (m)	Station Provider	Station Location	Payload Comments
FPKG1	32.03	-80.9	6.7	NOS-NWLON	8670870 - FORT PULASKI, FL	
41008	31.40	-80.87	5	NDBC	GRAY'S REEF, SAVANNAH, GA	3-meter discus buoy, ARES payload
SPAG1	31.38	-80.57	50	SIO	U.S. NAVY TOWER R2 GA	
FRPS1	32.34	-80.46	10	NOS-NWLON	8668498 - FRIPPS INLET, SC	
41033	32.28	-80.41	3	Caro-COOPS	FRIPP NEARSHORE (FRP 2)	
SECG1	30.80	-80.32	35	NC-COOS	U.S. NAVY TOWER R4 GA	
SKMG1	31.53	-80.24	50	SIO	U.S. NAVY TOWER M2R6 GA	
TYBG1	31.63	-79.92	34	SIO	U.S. NAVY TOWER R8 GA	
FBIS1	32.68	-79.89	9.8	NDBC	FOLLY ISLAND, SC	
SCIS1	32.86	-79.71	10	NOS-NWLON	8664941 - S CAPERS ISLAND, SC	
41029	32.81	-79.63	3	Caro-COOPS	CAPERS NEARSHORE (CAP 2)	
41030	32.52	-79.34	3	Caro-COOPS	CAPERS MID-SHELF (CAP 3)	
41004	32.51	-79.10	5	NDBC	EDISTO, CHARLESTON, SC	3-meter discus buoy, VEEP payload
MROS1	33.66	-78.92	10	NOS-NWLON	8661070 - SPRINGMAID PIER, SC	
SNSN7	33.87	-78.51	10	Caro-COOPS	8659897 - SUNSET BEACH, NC	
41024	33.83	-78.48	3	Caro-COOPS	SUNSET NEARSHORE (SUN 2)	
JMPN7	34.21	-77.80	10	CORMP	8658163 - JOHNNY MERCER PIER, WRIGHTSVILLE BEACH, NC	
41038	34.14	-77.71	3	CORMP	ILM2, WRIGHTSVILLE BEACH, NC	
FPSN7	33.49	-77.59	44.2	NDBC	FRYING PAN SHOALS, NC	
41013	33.48	-77.58	5	NDBC	FRYING PAN SHOALS, NC BUOY	3-meter discus buoy, DACT payload
41037	33.99	-77.36	3	CORMP	ILM3, WRIGHTSVILLE BEACH, NC	
41035	34.48	-77.28	5	NDBC	ONSLow BAY, NC	3-meter discus buoy, ARES payload
CLKN7	34.62	-76.52	9.8	NDBC	CAPE LOOKOUT, NC	
41002	32.28	-75.19	5	NDBC	S HATTERAS - CHARLESTON, SC	6-meter NOMAD buoy, VEEP payload



B-2 Buoy, C-MAN, and NOS Platform Locations (cont'd)

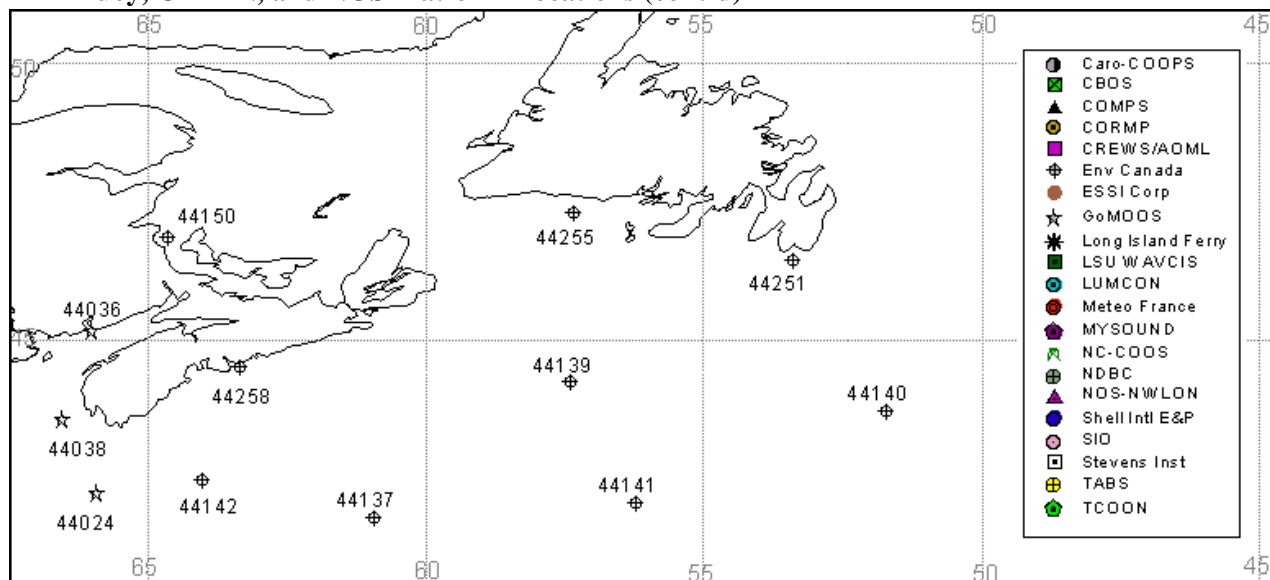
Station	Lat	Lon	Height	Station Provider	Station Location	Payload Comments
BLTM2	39.27	-76.58	10(m)	NOS-NWLON	8574680 - BALTIMORE, MD	
FSKM2	39.22	-76.53	10	NOS-NWLON	8574728 - FRANCIS SCOTT KEY BRIDGE, MD	
YKTV2	37.23	-76.48	10	NOS-NWLON	8637689 - YORKTOWN, VA	
LWTV2	38.00	-76.47	10	NOS-NWLON	8635750 - LEWISSETTA, VA	
CBIM2	38.32	-76.45	10	CBOS	CHESAPEAKE BIO LAB WEATHER STATION, MD	
SLIM2	38.32	-76.45	10	NOS-NWLON	8577330 - SOLOMON'S ISLAND, MD	
TPLM2	38.90	-76.44	18	NDBC	THOMAS POINT, MD	
CRYV2	36.89	-76.34	10	NOS-NWLON	8638595 - SOUTH CRANEY ISLAND, VA	
YKRV2	37.25	-76.33	10	NOS-NWLON	8637611 - YORK RIVER E. REAR RANGE LIGHT, VA	
MNPV2	36.78	-76.30	10	NOS-NWLON	8639348 - MONEY POINT, VA	
TCBM2	39.12	-76.25	10	NOS-NWLON	8573364 - TOLCHESTER BEACH, MD	
HPLM2	38.59	-76.13	10	CBOS	HORN POINT WEATHER STATION MD	
CBBV2	36.97	-76.11	13	NOS-NWLON	8638863 - CHESAPEAKE BAY BRIDGE TUNNEL, VA	
CAMM2	38.57	-76.07	6.1	NOS-NWLON	8571892 - CAMBRIDGE, MD	
BISM2	38.22	-76.04	10	NOS-NWLON	8571421 - BISHOPS HEAD, MD	
RPLV2	37.54	-76.02	10	NOS-NWLON	8632837 - RAPPAHANNOCK LIGHT, VA	
CHYV2	36.93	-76.01	10	NOS-NWLON	8638999 - CAPE HENRY, VA	
KPTV2	37.17	-75.99	6.4	NOS-NWLON	8632200 - KIPTOPEKE, VA	
CHCM2	39.53	-75.81	10	NOS-NWLON	8573927 - CHESAPEAKE CITY, MD	
DUCN7	36.18	-75.75	20.4	NDBC	DUCK PIER, NC	
CHLV2	36.90	-75.71	43.3	NDBC	CHESAPEAKE LIGHT, VA	
WAHV2	37.61	-75.69	10	NOS-NWLON	8631044 - WACHAPREAGUE, VA	
DELD1	39.58	-75.59	10	NOS-NWLON	8551762 - DELAWARE CITY, DE	
RDYD1	39.56	-75.57	10	NOS-NWLON	8551910 - REEDY POINT, DE	
41025	35.15	-75.29	5	NDBC	DIAMOND SHOALS	3-meter discus buoy, ARES payload
PHBP1	39.93	-75.14	6.4	NOS-NWLON	8545240 - PHILADELPHIA, PA	
LWSD1	38.78	-75.12	10	NOS-NWLON	8557380 - LEWES, DE	
BRND1	38.99	-75.11	10	NOS-NWLON	8555889 - BRANDYWINE SHOAL LIGHT, DE	
CMAN4	38.97	-74.96	12.2	NOS-NWLON	8536110 - CAPE MAY, NJ	
44014	36.58	-74.83	5	NDBC	64 NM EAST OF VIRGINIA BEACH, VA	3-meter discus buoy, DACT payload
AVAN4	39.09	-74.72	10	NDBC	STEVENS INST	
44009	38.46	-74.70	5	NDBC	26 NM SOUTHEAST OF CAPE MAY, NJ	3-meter discus buoy, VEEP payload
ACMN4	39.38	-74.42	15	Stevens Inst	ATLANTIC CITY MARINA, NJ	
ACYN4	39.36	-74.42	10	NOS-NWLON	8534720 - ATLANTIC CITY, NJ	
BRBN4	39.61	-74.20	10	Stevens Inst	AVALON, NJ	
44004	38.46	-70.69	5	NDBC	HOTEL 200 NM EAST OF CAPE MAY, NJ	6-meter NOMAD buoy, ARES payload

B-2 Buoy, C-MAN, and NOS Platform Locations (cont'd)



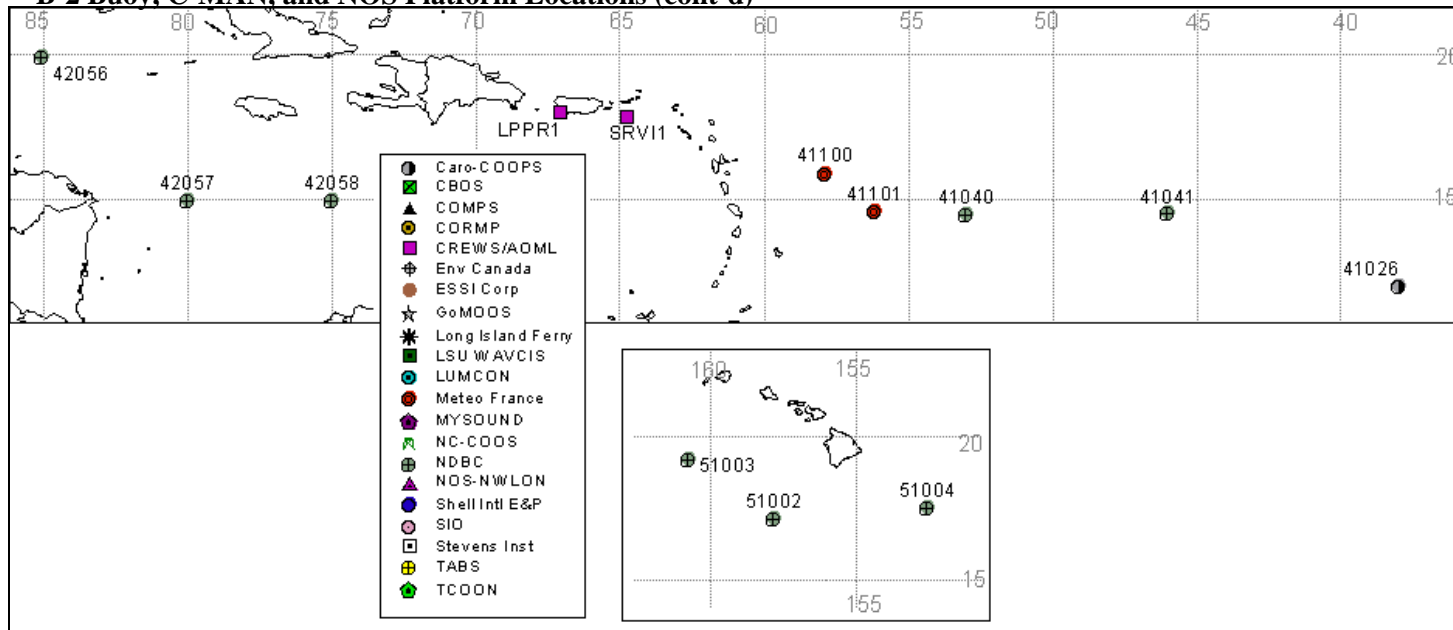
Station	Lat	Lon	Height (m)	Provider	Station Location	Payload Comments
BDRN4	40.08	-74.87	10	NOS-NWLN	8539094 - BURLINGTON, DELAWARE RIVER, NJ	
NBLP1	40.14	-74.75	10	NOS-NWLN	8548989 - NEW BOLD, PA	
BGNN4	40.64	-74.15	9.1	NOS-NWLN	8519483 - BERGEN POINT WEST REACH, NJ	
NCSC3	41.10	-74.15	16	Long Island Ferry	NORTH CENTRAL SOUND, CT	
BATN6	40.70	-74.02	10	NOS-NWLN	8518750 - THE BATTERY, NY	
SDHN4	40.47	-74.01	10	NOS-NWLN	8531680 - SANDY HOOK, NJ	
ALSN6	40.46	-73.83	49.1	NDBC	AMBROSE LIGHT, NY	
KPTN6	40.81	-73.78	10	NOS-NWLN	8516945 - KING'S POINT, NY	
44040	40.96	-73.58	3.5	MYSOUND	WESTERN LONG ISLAND SOUND	buoy
BHRC3	41.18	-73.19	16	Long Island Ferry	BRIDGEPORT TERMINAL, CT	
FWIC3	41.15	-73.17	16	Long Island Ferry	FAYER WEATHER ISLAND, CT	
44025	40.25	-73.17	5	NDBC	LONG ISLAND 33 NM SOUTH OF ISLIP, NY	3-meter discus buoy, DACT payload
NOSC3	41.12	-73.16	16	Long Island Ferry	NORTHERN OPEN SOUND, CT	
MISC3	41.07	-73.13	16	Long Island Ferry	NORTH MIDDLE SOUND, CT	
MISN6	41.05	-73.12	16	Long Island Ferry	SOUTH MIDDLE SOUND, NY	
SCSN6	41.02	-73.11	16	Long Island Ferry	SOUTH CENTRAL SOUND, NY	
SOSN6	41.00	-73.10	16	Long Island Ferry	SOUTHERN OPEN SOUND, NY	
OPFN6	40.97	-73.08	16	Long Island Ferry	OLD FIELD ISLAND, NY	
PTJN6	40.95	-73.07	16	Long Island Ferry	PORT JEFFERSON, NY	
NWHC3	41.28	-72.91	6.4	NOS-NWLN	8465705 - NEW HAVEN, CT	
44039	41.14	-72.66	3.5	MYSOUND	CENTRAL LONG ISLAND SOUND	2.4-meter foam hull buoy
NLNC3	41.36	-72.09	10	NOS-NWLN	8461490 - NEW LONDON, CT	
LDLC3	41.31	-72.08	20	MySound	LEDGE LIGHT WEATHER STATION, CT	
44017	40.70	-72.00	5	NDBC	23 NM SOUTHWEST OF MONTAUK POINT, NY	3-meter discus buoy, ARES payload
QPTR1	41.59	-71.41	6.4	NOS-NWLN	8454049 - QUONSET POINT, RI	
FOXR1	41.81	-71.35	4.2	NOS-NWLN	8454000 - PROVIDENCE, RI	
PTCR1	41.64	-71.34	10	NOS-NWLN	8452951 - POTTER COVE, PRUDENCE ISLAND, RI	
CPTR1	41.72	-71.34	4.3	NOS-NWLN	8452944 - CONIMICUT LIGHT, RI	
NWPR1	41.51	-71.33	6.4	NOS-NWLN	8452660 - NEWPORT, RI	
BLTM3	41.71	-71.17	10	NOS-NWLN	8447387 - FALL RIVER, MA	
FRVM3	41.71	-71.16	3.6	NOS-NWLN	8447386 - FALL RIVER, MA	
BUZM3	41.40	-71.03	24.8	NDBC	BUZZARDS BAY, MA	
44013	42.35	-70.69	5	NDBC	BOSTON 16 NM EAST OF BOSTON, MA	3-meter discus buoy, DACT payload
BZBM3	41.52	-70.67	10	NOS-NWLN	8447930 - WOODS HOLE, MA	
IOSN3	42.97	-70.62	19.2	NDBC	ISLE OF SHOALS, NH	
44029	42.52	-70.57	4	GoMOOS	BUOY A0102 - MASS. BAY/STELLWAGEN	2-meter discus buoy
44030	43.18	-70.43	4	GoMOOS	BUOY B0102 - WESTERN MAINE SHELF	2-meter discus buoy
CASM1	43.66	-70.25	10	NOS-NWLN	PORTLAND, ME, 8418150	
44007	43.53	-70.14	5	NDBC	PORTLAND 12 NM SOUTHEAST OF PORTLAND, ME	3-meter discus buoy, ARES payload
44031	43.57	-70.06	4	GoMOOS	BUOY C0201 - CASCO BAY	2-meter discus buoy
44008	40.50	-69.43	5	NDBC	NANTUCKET 54 NM SOUTHEAST OF NANTUCKET	3-meter discus buoy, ARES payload
44032	43.72	-69.36	4	GoMOOS	BUOY E0104 - CENTRAL MAINE SHELF	2-meter discus buoy
44018	41.30	-69.20	5	NDBC	SE CAPE COD 30 NM EAST OF NANTUCKET, MA	3-meter discus buoy, ARES payload
44005	43.17	-69.18	5	NDBC	GULF OF MAINE, NH	6-meter NOMAD buoy, DACT payload
44033	44.06	-69.00	4	GoMOOS	BUOY F0103 - WEST PENOBSCOT BAY	2-meter discus buoy
MISM1	43.78	-68.85	16.5	NDBC	MATINICUS ROCK, ME	
MDRM1	43.97	-68.13	22.6	NDBC	MT DESERT ROCK, ME	
44037	43.49	-67.88	4	GoMOOS	BUOY M0102 - JORDAN BASIN	2-meter discus buoy
44585	43.35	-67.64	10	NDBC		Drifting Buoy
44027	44.27	-67.31	5	NDBC	JONESPORT, MAINE	3-meter discus buoy, ARES payload
44035	44.89	-67.02	4	GoMOOS	BUOY J0201 - COBSCOOK BAY	2-meter discus buoy
PSBM1	44.90	-66.99	6.4	NOS-NWLN	8410140 - EASTPORT, ME	

B-2 Buoy, C-MAN, and NOS Platform Locations (cont'd)



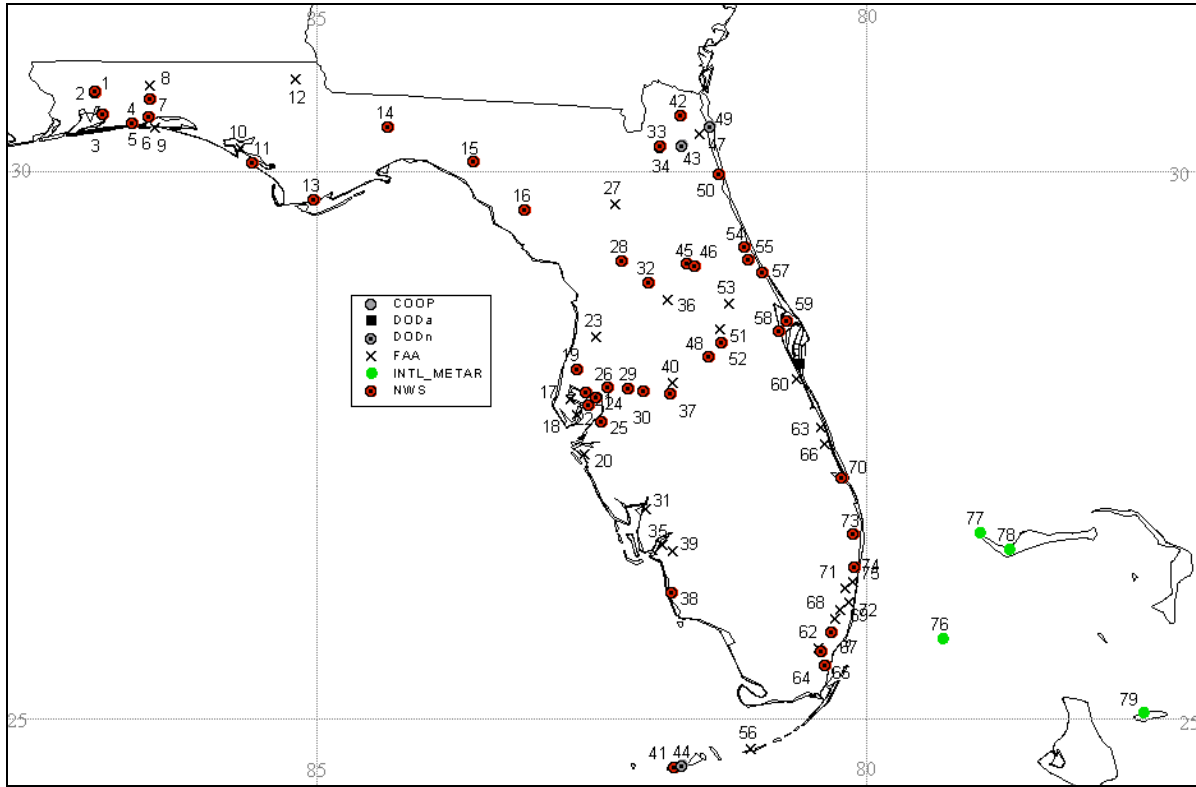
Station	Lat	Lon	Height	Provider	Station Location	Payload Comments
44137	41.83	-60.94	5(m)	Env Canada	EAST SCOTIA SLOPE	
44141	42.10	-56.22	5	Env Canada	LAURENTIAN FAN	
44024	42.31	-65.93	4	GoMOOS	BUOY N - NORTHEAST CHANNEL	2-meter discus buoy
44142	42.50	-64.02	5	Env Canada	LA HAVE BANK	
44038	43.62	-66.55	4	GoMOOS	BUOY L0102 - SCOTIAN SHELF	2-meter discus buoy
44140	43.75	-51.74	5	Env Canada	TAIL OF THE BANK	
44034	44.11	-38.11	4	GoMOOS	BUOY I0103 - EASTERN MAINE SHELF	2-meter discus buoy
44139	44.26	-57.39	5	Env Canada	BANQUIREAU BANKS	
44258	44.54	-63.35	5	Env Canada	HALIFAX HARBOR	
44036	45.20	-66.02	4	GoMOOS	BUOY K0102 - SAINT JOHN	2-meter discus buoy
44251	46.44	-53.39	5	Env Canada	NICKERSON BANK	
44150	46.85	-64.64	5	Env Canada	LA HAVE BANK	3-meter discus buoy
44255	47.28	-57.35	5	Env Canada	NE BURGEO BANK	

B-2 Buoy, C-MAN, and NOS Platform Locations (cont'd)

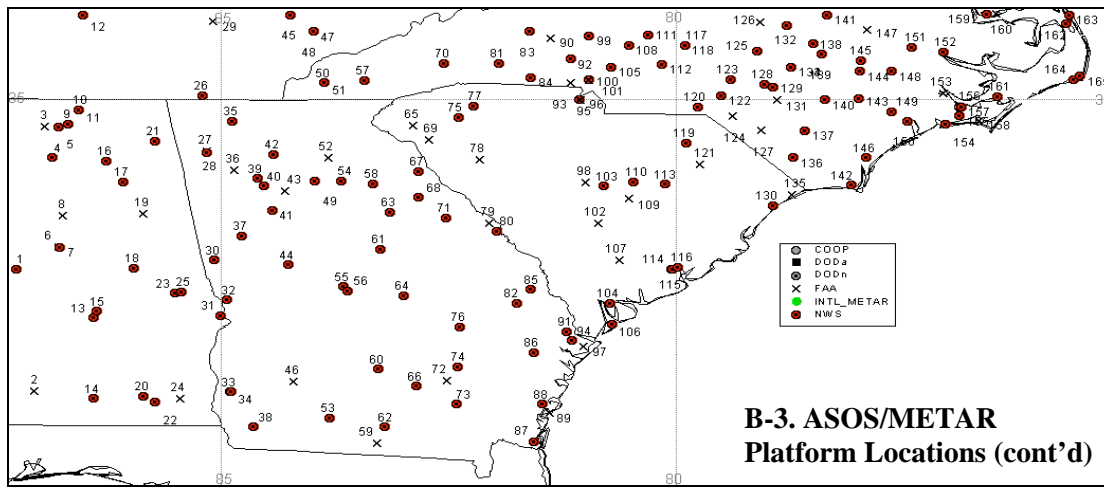


Station	Lat	Lon	Height	Station Provider	Station Location	Payload Comments
51003	19.16	-160.74	5 (m)	NDBC	205 NM SOUTHWEST OF HONOLULU, HI	6-meter NOMAD buoy, VEEP payload
51002	17.15	-157.79	5	NDBC	215 NM SOUTH SOUTHWEST OF HILO, HI	6-meter NOMAD buoy, ARES payload
51004	17.52	-152.51	5	NDBC	SE HAWAII 185 NM SOUTHEAST OF HILO, HI	6-meter NOMAD buoy, ARES payload
42056	19.87	-85.06	10	NDBC	YUCATAN BASIN	12-meter discus buoy, ARES payload
42057	14.99	-79.99	10	NDBC	WESTERN CARIBBEAN	10-meter discus buoy, ARES payload
42058	14.98	-74.99	10	NDBC	CENTRAL CARIBBEAN	10-meter discus buoy, ARES payload
LPPR1	17.94	-67.05	10	CREWS/AOML	LA PARGUERA, PR	
SRV11	17.78	-64.76	10	CREWS/AOML	ST. CROIX, USVI	
41100	15.90	-57.90	3.6	Meteo France	LESSER ANTILLES	
41101	14.60	-56.20	3.6	Meteo France	EAST OF MARTINIQUE	
41040	14.50	-53.02	5	NDBC	WEST ATLANTIC	6-meter NOMAD buoy, ARES payload
41041	14.53	-46.00	5	NDBC	MIDDLE ATLANTIC	6-meter NOMAD buoy, ARES payload
41026	12.00	-38.00	5	Caro-COOPS	SUNSET MID-SHELF (SUN 3)	

B-3. ASOS/METAR Platform Locations (cont'd)

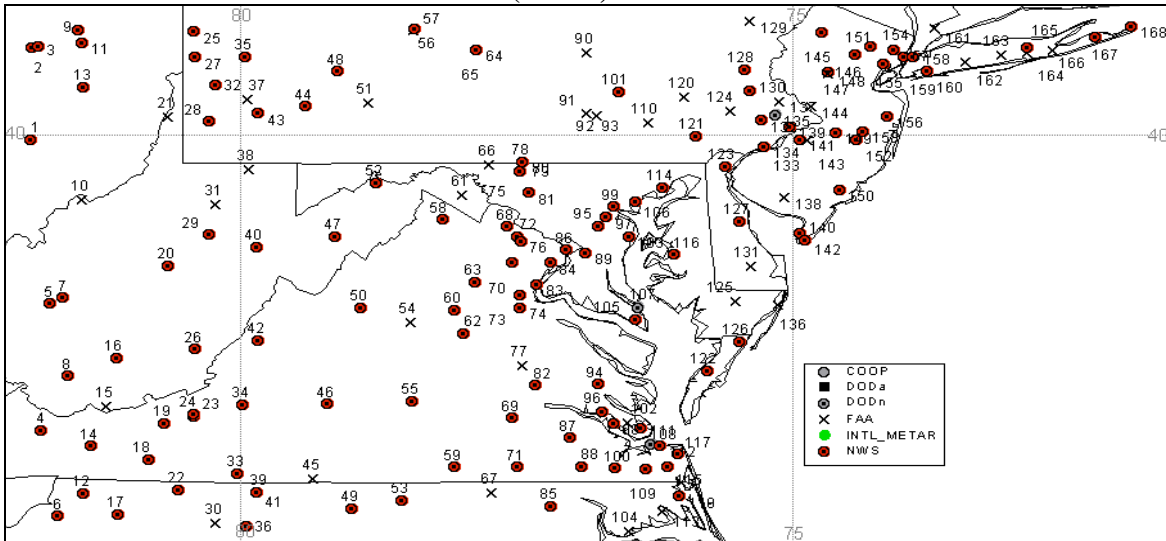


#	Station	Lat	Lon	Height	Provider	Station Location
1	KNDZ	30.70	-87.02	10 (m)	NWS	MILTON/WHITING FIELD S
2	KNSE	30.72	-87.02	10	NWS	MILTON/WHITING FIELD NAS-N.
3	KNFJ	30.51	-86.95	10	NWS	MILTON/PENSACOLA NALF
4	KHRT	30.43	-86.68	10	NWS	HURLBURT FLD (AF)
5	KQBL	30.42	-86.68	10	NWS	AFCWC NTFS
6	KVPS	30.48	-86.53	10	NWS	EGLIN AFB
7	KEGI	30.65	-86.52	10	NWS	DUKE FLD/EGLIN AUX
8	KCEW	30.78	-86.52	10	FAA	BOB SIKES ARPT, CRESTVIEW
9	KDTS	30.39	-86.47	10	FAA	FT. WALTON BCH ARPT, DESTIN
10	KPFN	30.21	-85.69	10	FAA	BAY CO ARPT, PANAMA CITY
11	KPAM	30.07	-85.58	10	NWS	TYNDALL AFB
12	KMAI	30.84	-85.18	10	FAA	MARIANNA MUNI ARPT
13	KAAP	29.73	-85.03	9	NWS	APALACHICOLA ARPT
14	KTLH	30.39	-84.35	10	NWS	TALLAHASSEE RGNL ARPT
15	K40J	30.07	-83.57	10	NWS	PERRY-FOLEY ARPT
16	KCTY	29.63	-83.11	10	NWS	CROSS CITY ARPT, CROSS CITY
17	KPIE	27.91	-82.69	10	FAA	ST. PETERSBURG ARPT
18	KSPG	27.77	-82.63	8	FAA	ALBERT-WHITTED ARPT
19	KRRF	28.18	-82.62	10	NWS	PORT RICHEY (ASOS)
20	KSRQ	27.40	-82.56	10	FAA	SARASOTA-BRADENTON ARPT
21	KTPA	27.96	-82.54	8	NWS	TAMPA INTL ARPT, TAMPA
22	KMCF	27.85	-82.52	10	NWS	MACDILL AFB, TAMPA
23	KBKV	28.47	-82.45	10	FAA	HERNANDO CO. ARPT
24	KTPF	27.92	-82.45	10	NWS	PETER O KNIGHT ARPT/TAMPA
25	KTBW	27.70	-82.40	10	NWS	TAMPA BAY FL
26	KVDF	28.01	-82.35	10	NWS	TAMPA VANDENBURG ARPT
27	KGNV	29.69	-82.28	10	FAA	GAINESVILLE RGNL ARPT
28	KOCF	29.17	-82.22	10	NWS	OCALA_MUNI (AWOS)
29	KPCM	28.00	-82.16	10	NWS	PLANT CITY MUNI ARPT
30	KLAL	27.98	-82.02	10	NWS	LAKELAND RGNL
31	KPGD	26.92	-81.99	10	FAA	PUNTA GORDA ARPT
32	KVVG	28.97	-81.97	10	NWS	THE VILLAGES_FL
33	KNZC	30.22	-81.88	10	DODn	CECIL FLD NAS FL
34	KVQQ	30.22	-81.88	10	NWS	CECIL FLD NAS,FL
35	KFMY	26.59	-81.86	8	FAA	FT MYERS PAGE FIELD
36	KLEE	28.82	-81.81	10	FAA	LEESBURG MUNI ARPT
37	KBOW	27.95	-81.78	10	NWS	BARTOW MUNI ARPT
38	KAPF	26.15	-81.77	10	NWS	NAPLES MUNI ARPT
39	KRSW	26.53	-81.77	10	FAA	FT. MYERS SW RGNL ARPT
40	KGIF	28.06	-81.76	10	FAA	WINTER HAVEN'S GILBERT ARPT
41	KEYW	24.55	-81.75	10	NWS	KEY WEST INTL ARPT
42	KJAX	30.50	-81.69	10	NWS	JACKSONVILLE INTL ARPT
43	KNIP	30.23	-81.68	10	DODn	JACKSONVILLE NAS
44	KNQX	24.57	-81.68	10	DODn	KEY WEST NAS
45	KNAE	29.14	-81.63	10	NWS	ASTOR/BOMBING RANGE DET
46	K90J	29.12	-81.57	10	NWS	ASTOR NAS
47	KCRG	30.34	-81.51	8	FAA	JACKSONVILLE CRAIG MUNI ARPT
48	KISM	28.29	-81.44	10	NWS	KISSIMMEE MUNI ARPT
49	KNRB	30.40	-81.42	10	DODn	MAYPORT NS
50	KSGJ	29.96	-81.34	10	NWS	ST AUGUSTINE ARPT
51	KORL	28.55	-81.34	10	FAA	ORLANDO EXECUTIVE ARPT
52	KMCO	28.42	-81.33	8	NWS	ORLANDO INTL ARPT, ORLANDO
53	KSF6	28.78	-81.24	10	FAA	ORLANDO SANFORD ARPT
54	KOMN	29.30	-81.11	10	NWS	ORMOND BCH MUNI ARPT
55	KDAB	29.17	-81.07	10	NWS	DAYTONA BCH INTL ARPT
56	KMTH	24.73	-81.05	10	FAA	MARATHON ARPT
57	KEVB	29.06	-80.95	10	NWS	NEW SMYRNA BCH MUNI ARPT
58	KTIX	28.52	-80.80	10	NWS	TITUSVILLE
59	KTT5	28.62	-80.72	10	NWS	NASA SHUTTLE FCLTY
60	KMLB	28.10	-80.64	10	FAA	MELBOURNE INTL ARPT
61	KCOF	28.23	-80.61	10	DODa	COCOA BCH PATRICK AFB
62	KTMB	25.64	-80.44	10	FAA	MIA/KENDALL-TAMIAMI ARPT
63	KVRB	27.66	-80.41	10	FAA	VERO BEACH MUNI ARPT
64	KA	25.61	-80.41	10	NWS	MIAMI NEXRAD
65	KHST	25.48	-80.38	10	NWS	HOMESTEAD AFB
66	KFPR	27.50	-80.38	8	FAA	FT. PIERCE/ST. LUCIE CO. INTL
67	KMIA	25.78	-80.32	10	NWS	MIAMI INTL ARPT, MIAMI
68	KOPF	25.91	-80.28	10	FAA	OPA LOCKA ARPT, MIAMI
69	KHOW	26.00	-80.23	10	FAA	HOLLYWOOD N PERRY ARPT (ASOS)
70	KSUA	27.18	-80.22	10	NWS	STUART/WITHAM FLD ARPT
71	KFXE	26.20	-80.13	10	FAA	FT. LAUDERDALE EXECUTIVE ARPT
72	KFLF	26.07	-80.15	10	FAA	FT LAUD/HOLLYWOOD INTL ART
73	KPBI	26.68	-80.12	10	NWS	WEST PALM BCH
74	KPMP	26.25	-80.12	10	FAA	POMPANO BEACH
75	KBCT	26.38	-80.11	10	NWS	BOCA RATON ARPT
76	MYBS	25.73	-79.30	10	INTL	ALICE TOWN/S BIMINI, BA
77	MYGW	26.70	-78.97	10	INTL	WEST END INTL ARPT, BA
78	MYGF	26.55	-78.70	10	INTL	FREESPORT INTL ARPT, BA
79	MYNN	25.05	-77.47	10	INTL	NASSAU INTL ARPT, BA



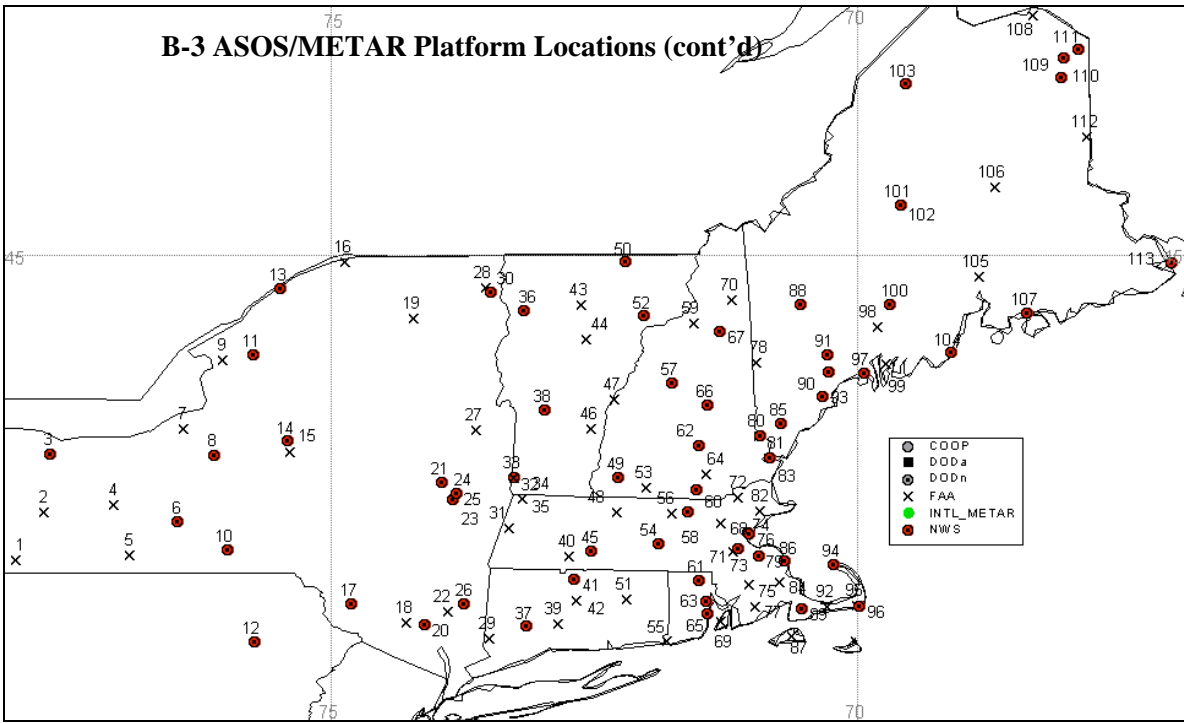
#	Station	Lat	Lon	Provider	Station Location	#	Station	Lat	Lon	Provider	Station Location
1	KCKL	32.90	-87.25	NWS	CENTREVILLE/BIBB CO AL	84	KEHO	35.25	-81.60	NWS	SHELBY MUNI ARPT, NC
2	KGZH	31.42	-87.05	FAA	EVERGREEN MIDDLETON FLD, EVERGREEN, AL	85	KJYL	32.65	-81.60	NWS	SYLVANIA/PLANTATION AIRPARK, GA
3	KDCU	34.66	-86.94	FAA	DECATUR PRYOR FLD, DECATUR, AL	86	KLHW	31.88	-81.57	NWS	FT STEWART/WRIGHT GA
4	K3A1	34.27	-86.86	NWS	FOLSOM FLD ARPT, AL	87	KNBQ	30.79	-81.56	NWS	KINGS BAY NAVAL STN, GA
5	KHSV	34.64	-86.77	NWS	HUNTSVILLE INTL JONES FLD, HUNTSVILLE, AL	88	KBQK	31.25	-81.47	NWS	BRUNSWICK/GLYNCO GA
6	KEET	33.18	-86.78	FAA	ALABASTER SHELBY CO ARPT, ALABASTER, AL	89	KSSI	31.15	-81.39	FAA	BRUNSWICK MALCOLM MCKINNON ARPT, GA
7	KBXM	33.17	-86.77	NWS	BIRMINGHAM NEXRAD, AL	90	KHKY	35.74	-81.38	FAA	HICKORY RGNL ARPT, HICKORY, NC
8	KBHM	33.57	-86.75	FAA	BIRMINGHAM INTL ARPT, BIRMINGHAM, AL	91	KSAV	32.13	-81.20	NWS	SAVANNAH INTL ARPT, SAVANNAH, GA
9	KHUA	34.68	-86.68	NWS	REDSTONE ARMY AIRFLD, AL	92	KIPJ	35.48	-81.16	NWS	LINCOLNTON NC
10	KM82	34.86	-86.56	NWS	MADISON CO EXEC ARPT, AL	93	KAKH	35.20	-81.16	FAA	GASTONIA MUNI ARPT, GASTONIA, NC
11	KMDQ	34.86	-86.56	NWS	MADISON CO EXEC ARPT, AL	94	KSVN	32.02	-81.15	NWS	HUNTER (AAF) GA
12	KMQY	36.02	-86.52	NWS	SMYRNA, TN	95	K29J	34.98	-81.06	NWS	ROCK HILL, SC
13	KMGGM	32.30	-86.41	NWS	MONTGOMERY DANNELLY ARPT, AL	96	KUZA	34.98	-81.06	FAA	ROCK HILL YORK CO ARPT, ROCK HILL, SC
14	K79J	31.32	-86.40	NWS	ANDALUSIA/OPP ARPT AL	97	KTOI	31.96	-81.01	FAA	TROY MUNI ARPT, TROY, AL
15	KMXF	32.38	-86.37	NWS	MAXWELL AFB/MONTGOM AL	98	KCUB	33.97	-80.99	FAA	COLUMBIA OWENS FLD ARPT, COLUMBIA, SC
16	K8A0	34.23	-86.26	NWS	ALBERTVILLE MUNI ARPT, AL	99	KSVH	35.77	-80.96	NWS	STATESVILLE MUNI ARPT, NC
17	KGAD	33.97	-86.08	NWS	GADSDEN MUNI (AWOS) AL	100	KCLT	35.22	-80.96	NWS	CHARLOTTE DOUGLAS INTL ARPT, NC
18	KALX	32.91	-85.96	NWS	THOMAS C RUSSELL FLD ARPT, AL	101	KGMU	35.22	-80.96	FAA	GREENVILLE DOWNTOWN ARPT, GREENVILLE, SC
19	KANB	33.59	-85.86	FAA	ANNISTON METRO ARPT, ANNISTON, AL	102	KOGB	33.46	-80.85	FAA	ORANGEBURG ARPT, ORANGEBURG, SC
20	KXSX	31.35	-85.85	NWS	SHELL AHP AL	103	KMMT	33.92	-80.80	NWS	MCCENTIRE ANS BASE SC
21	K4A9	34.47	-85.72	NWS	ISBELL FLD ARPT, AL	104	KNBC	32.48	-80.72	NWS	BEAUFORT MCAS SC
22	KOZR	31.28	-85.72	NWS	CAIRNS AAF/OZARK AL	105	KJQF	35.38	-80.71	NWS	CONCORD NC
23	KAUB	32.60	-85.50	NWS	AUBURN UNIV. (AMOS) AL	106	KHXD	32.22	-80.70	NWS	HILTON HEAD (AWOS) SC
24	KDHN	31.32	-85.45	FAA	DOTHAN RGNL ARPT, DOTHAN, AL	107	KEQY	33.01	-80.62	FAA	MONROE ARPT, MONROE, NC
25	KAUO	32.62	-85.43	NWS	AUBURN-PELIKA APT AL	108	KRUQ	35.65	-80.52	NWS	SALISBURY/ROWAN CO ARPT, NC
26	KCHA	35.03	-85.20	NWS	CHATTANOOGA/LOVELL, TN	109	KFTY	33.77	-80.52	FAA	ATLANTA FULTON CO ARPT, ATLANTA, GA
27	KFFC	34.35	-85.15	FAA	PEACHTREE CITY FLACON FLD, ATLANTA, GA	110	KSSC	33.97	-80.47	NWS	SHAW AFB/SUMTER SC
28	KRMG	34.34	-85.15	NWS	ROME RB RUSSELL ARPT, ROME, GA	111	KEXX	35.78	-80.30	NWS	LEXINGTON DAVIDSON CO ARPT, NC
29	KCSV	35.95	-85.08	FAA	CROSSVILLE MEMORIAL, TN	112	KVUJ	35.42	-80.15	NWS	ALBEMARLE/STANLY CO ARPT, NC
30	KLGC	33.01	-85.07	NWS	LA GRANGE/CALLAWAY ARPT, GA	113	KCAE	33.94	-80.12	NWS	COLUMBIA METROPOLITAN ARPT, COLUMBIA, SC
31	KLSF	32.33	-85.00	NWS	FORT BENNING GA	114	KIGC	32.90	-80.05	NWS	CHARLESTON AFB SC
32	KCSG	32.52	-84.93	NWS	COLUMBUS METRO ARPT GA	115	KCHS	32.90	-80.04	NWS	CHARLESTON INTL ARPT, CHARLESTON, SC
33	K11J	31.40	-84.90	NWS	EARLY CO ARPT, GA	116	KNEX	32.92	-79.98	NWS	NISE CHARLESTON SC
34	KBJJ	31.40	-84.89	NWS	EARLY CO ARPT GA	117	KHBI	35.65	-79.90	NWS	ASHEBORO MUNI ARPT, NC
35	KDNN	34.72	-84.87	NWS	DALTON MUNI ARPT, GA	118	KW44	35.65	-79.90	NWS	ASHEBORO MUNI ARPT, NC
36	KVPC	34.12	-84.85	FAA	CARTERSVILLE ARPT, GA	119	KUDG	34.45	-79.88	NWS	DARLINGTON, SC
37	KCCO	33.31	-84.77	NWS	NEWNAN COWETA ARPT, GA	120	K45J	34.89	-79.76	NWS	ROCKINGHAM-HAMLET ARPT, NC
38	KBGE	30.97	-84.64	NWS	DECATUR CO INDUS AIR PARK, GA	121	KFL0	34.19	-79.73	FAA	FLORENCE RGNL ARPT, FLORENCE, SC
39	KRYV	34.01	-84.60	NWS	MARIETTA/COBB CO ARPT, GA	122	KHFF	35.03	-79.50	NWS	MACKALL AAF NC
40	KMGE	33.92	-84.52	NWS	DOBBINS AFB/MARIETT GA	123	KSOP	35.23	-79.40	NWS	SOUTHERN PINES AWOS NC
41	KATL	33.62	-84.44	NWS	ATLANTA HARTSFELD INTL ARPT, ATLANTA, GA	124	KMEB	34.78	-79.37	FAA	MAXTON/LAURINBURG MAXTON ARPT, NC
42	K47A	34.31	-84.42	NWS	CHEROKEE CO ARPT, GA	125	KTTA	35.58	-79.10	NWS	SANFORD-LEE CO RGNL ARPT, NC
43	KPDK	33.87	-84.27	FAA	ATLANTA DEKLAB-PEACHTREE ARPT, GA	126	KIGX	35.49	-79.06	FAA	CHAPEL HILL WILLIAMS ARPT, CHAPEL HILL, NC
44	KOPN	32.95	-84.26	NWS	THOMASTON-UPSOM CO ARPT, GA	127	KLBT	34.61	-79.06	FAA	LUMBERTON MUNI ARPT, LUMBERTON, NC
45	KOQT	36.02	-84.23	NWS	OAK RIDGE	128	KPOB	35.17	-79.02	NWS	POPE AFB NC
46	KABY	31.54	-84.20	FAA	ALBANY SW GA RGNL ARPT, ALBANY, GA	129	KFBG	35.13	-78.93	NWS	FORT BRAGG/SIMMONS NC
47	KMRX	35.82	-83.98	NWS	KNOXVILLE	130	KMYR	33.68	-78.93	NWS	MYRTLE BEACH (CIV) SC
48	KTYS	35.82	-83.98	NWS	KNOXVILLE MUNI	131	KFAV	34.98	-78.88	FAA	FAYETTEVILLE RGNL NC
49	KLZU	33.98	-83.96	NWS	LAWRENCEVILLE/GWINNETT CO, GA	132	KRDU	35.89	-78.78	NWS	RALEIGH DURHAM INTL, RALEIGH, NC
50	K6A3	35.19	-83.86	NWS	ANDREWS, NC	133	K37W	35.38	-78.73	NWS	ERWIN/HARNETT CO ARPT, NC
51	KRHP	35.19	-83.86	NWS	ANDREWS-MURPHY ARPT, NC	134	KHRJ	35.38	-78.73	NWS	ERWIN/HARNETT CO ARPT, NC
52	KGVL	34.27	-83.82	FAA	GAINESVILLE LEE GLIMMER MEM ARPT, GA	135	KCRE	33.82	-78.72	FAA	N. MYRTLE BCH GRAND STRAND ARPT, SC
53	KMGR	31.08	-83.80	NWS	MOULTRIE MUNI ARPT, GA	136	KCPK	34.27	-78.71	NWS	COLUMBUS CO MUNI ARPT, NC
54	KWDR	33.98	-83.67	NWS	WINDER-BARROW ARPT, GA	137	KEYF	34.60	-78.58	NWS	CURTIS L BROWN JR FLD ARPT, NC
55	KMDCN	32.68	-83.65	NWS	MACON MIDDLE RGNL ARPT, MACON, GA	138	KRAX	35.67	-78.49	NWS	RALEIGH/DURHAM NEXRAD, NC
56	KWRB	32.63	-83.60	NWS	WARNER ROBINS AFB GA	139	KJNX	35.54	-78.39	NWS	SMITHFLD/JOHNSTON CO ARPT, NC
57	K1A5	35.22	-83.42	NWS	MACON CO ARPT, NC	140	KCTZ	34.98	-78.36	NWS	SAMPSON CO ARPT/CLINTON, NC
58	KAHN	33.95	-83.33	NWS	ATHENS BEN EPPS ARPT, ATHENS, GA	141	KLHZ	36.02	-78.33	NWS	LOUISBURG/FRANKLIN CO ARPT, NC
59	KVLD	30.78	-83.27	FAA	VALDOSTA RGNL ARPT, VALDOSTA, GA	142	KSUT	33.93	-78.07	NWS	OAK ISL/BRUNSWICK CO ARPT, NC
60	KFZG	31.68	-83.27	NWS	FITZGERALD MUNI ARPT, GA	143	KDPL	35.00	-77.98	NWS	KENANSVILLE/DUPLIN CO, NC
61	KMLJ	33.14	-83.24	NWS	MILLEDGEVILLE/BALDWIN CO ARPT, GA	144	KGSB	35.33	-77.97	NWS	SEYMOUR-JOHNSON AFB NC
62	KVAD	30.97	-83.20	NWS	MOODY AFB/VALDOSTA GA	145	KGWV	35.46	-77.96	NWS	GOLDSBORO-WAYNE MUNI ARPT, NC
63	K3J7	33.60	-83.14	NWS	GREENE CO RGNL ARPT, GA	146	KILM	34.27	-77.90	NWS	WILMINGTON INTL ARPT, WILMINGTON, NC
64	KDBN	32.57	-82.99	NWS	DUBLIN/W H BUD BARRON ARPT, GA	147	KRWI	35.85	-77.90	FAA	ROCKY MOUNT WILSON ARPT, ROCKY MOUNT, NC
65	KCEU	34.67	-82.88	FAA	CLEMSON-OCONEE CO ARPT, CLEMSON, SC	148	KISO	35.33	-77.62	NWS	KINSTON/STALLINGS NC
66	KDQH	31.47	-82.85	NWS	DOUGLAS MUNI ARPT, GA	149	KOAJ	34.83	-77.62	NWS	JACKSONVILLE (AWOS) NC
67	K27A	34.10	-82.82	NWS	ELBERT CO ARPT/PATZ FLD, GA	150	KNCA	34.72	-77.45	NWS	NEW RIVER MCAS NC
68	KIHY	33.78	-82.82	NWS	WASHINGTON-WILKES CO ARPT, GA	151	KPGV	35.63	-77.4	NWS	PITT-GREENVILLE ARP NC
69	KAND	34.50	-82.71	FAA	ANDERSON CO ARPT, ANDERSON, SC	152	KOCW	35.57	-77.05	NWS	WASHINGTON/WARREN FLD APRT, NC
70	KAVL	35.43	-82.54	NWS	ASHVILLE RGNL ARPT, ASHVILLE, NC	153	KEWN	35.07	-77.05	FAA	NEW BERN CRAVEN RGNL ARPT, NEW BERN, NC
71	KHQU	33.53	-82.52	NWS	THOMSON, GA	154	KNJM	34.68	-77.03	NWS	BOGUE FLD MCALF NC
72	KAMG	31.54	-82.51	FAA	ALMA BACON CO ARPT, ALMA, GA	155	KMHX	34.78	-76.88	NWS	NEWPORT NC
73	KAYS	31.25	-82.40	NWS	WAYCROSS/WARE CO, GA	156	KNKT	34.89	-76.88	NWS	CERRY POINT MCAS NC
74	KBHC	31.71	-82.39	NWS	BAXLEY MUNI ARPT, GA	157	KNIS	34.90	-76.86	NWS	CERRY POINT MCAS, NC
75	KGYH	34.76	-82.38	NWS	DONALDSON CENTER ARPT, SC	158	KMRH	34.73	-76.66	FAA	BEAUFORT M SMITH FLD ARPT, BEAUFORT, NC
76	KVDI	32.19	-82.37	NWS	VIDALIA MUNI ARPT, GA	159	KEDE	36.03	-76.57	NWS	EDENTON/NORTHEASTERN ARPT, NC
77	KGSP	34.91	-82.21	NWS	GREER GREENVILLE-SPARTANBRG ARPT, SC	160	KBUY	36.05	-76.47	FAA	BURLINGTON ALAMANCE RGNL ARPT, NC
78	KGRD	34.25	-82.15	FAA	GREENWOOD CO ARPT, GREENWOOD, SC	161	KNBT	35.02	-76.46	NWS	PINEY ISLAND BT-11 BOMBING RG, NC
79	KDNL	33.47	-82.04	FAA	AUGUSTA DANIEL FLD ARPT, AGUSTA, GA	162	KMQI	35.92	-75.70	NWS	MANTEO/DARE CO RGNL NC
80	KAGS	33.37	-81.96	NWS	AUGUSTA BUSH FLD, AUGUSTA, GA	163	KFFA	36.02	-75.67	NWS	KILL DEVIL HILLS/FIRST FLT ARPT, NC
81	KFOD	35.43	-81.94	NWS	RUTHERFORDTON/MARCHMAN FLD, NC	164	KHSE	35.23	-75.62	NWS	HATTERAS BILLY MITCHELL FLD, NC
82	KTBR	32.48	-81.74	NWS	STATESBORO-BULLOCH CO ARPT, GA	165	KHAT	35.27	-75.55	NWS	CAPE HATTERAS NC
83	KMRN	35.82	-81.61	NWS	MORGANTON-LENOIR ARPT, NC						

B-3 ASOS/METAR Platform Locations (cont'd)

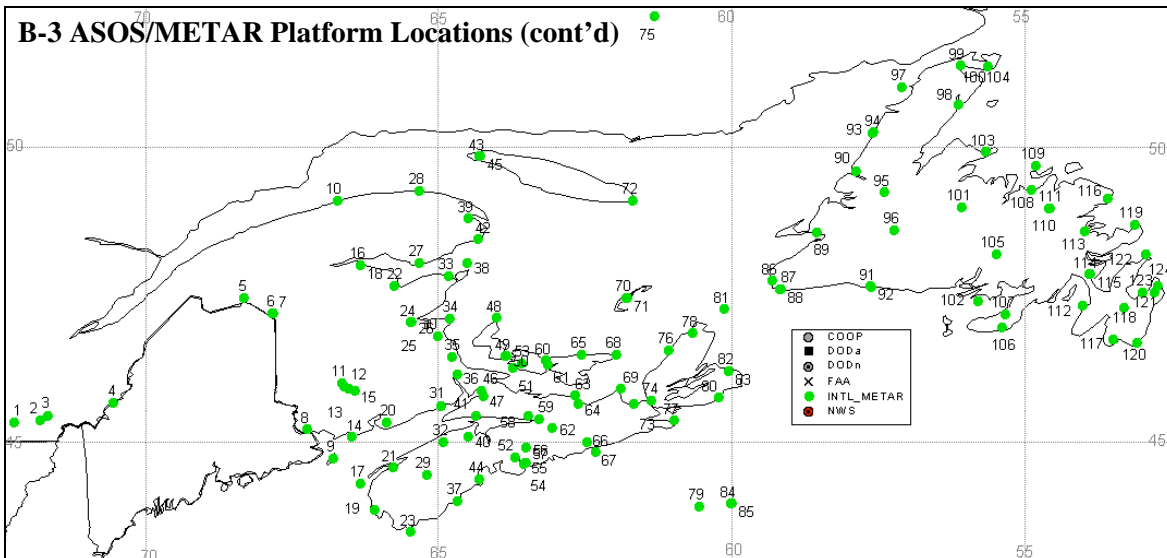


#	Station	Lat	Lon	Height	Provider	Station Location	#	Station	Lat	Lon	Height	Provider	Station Location
1	KZZV	39.95	-81.90	10 (m)	NWS	ZANESVILLE MUNI, OH	85	KASJ	36.30	-77.17	10	NWS	AHOSKIE/TRI-CO ARPT, NC
2	KBJJ	40.87	-81.88	10	NWS	WOOSTER WAYNE CO ARPT, OH	86	KDCA	38.85	-77.03	10	NWS	WASHINGTON REAGAN NATL ARPT
3	KSJW	40.88	-81.83	10	NWS	SMITHVILLE WOOSTER, OH	87	KARQ	36.98	-77.00	8	NWS	WAKEFIELD MUNI ARPT, WAKEFIELD, VA
4	KGV3	37.06	-81.80	10	NWS	TAZEWELL CO ARPT, VA	88	KFTN	36.70	-76.90	10	NWS	FRANKLIN/B ROSE
5	KRLX	38.31	-81.72	10	NWS	CHARLESTON NEXRAD, WV	89	KADW	38.82	-76.87	10	NWS	ANDREWS AFB, MD
6	KTNB	36.20	-81.65	10	NWS	BOONE/WATAUGA CO HOSP HELIPAD, NC	90	KSEG	40.82	-76.86	10	FAA	SELINGROVE PENN VALLEY ARPT
7	KCRW	38.37	-81.60	10	NWS	CHARLESTON/KANAWHA, WV	91	KCKY	40.22	-76.86	10	FAA	HARRISBURG CAPITAL CITY ARPTPA
8	KI16	37.60	-81.56	10	NWS	KEE FLD ARPT, WV	92	KTHV	40.20	-76.77	10	FAA	YORK MUNI ARPT, YORK, PA
9	KAKR	41.04	-81.46	10	NWS	AKRON FULTON INTL ARPT (ASOS), OH	93	KMDT	40.20	-76.77	10	FAA	MIDDLETOWN HARRISBURG INTL ARPT, PA
10	KPKB	39.35	-81.43	10	FAA	PARKERSBURG/WILSON, WV	94	KFYJ	37.52	-76.76	10	NWS	MID PENINSULA RGNL ARPT, VA
11	KCAK	40.92	-81.43	10	NWS	AKRON-CANTON RGNL, OH	95	KFME	39.09	-76.76	10	NWS	FT MEADE/TIPTON ARPT, MD
12	KGEV	36.43	-81.42	10	NWS	JEFFERSON/ASHE CO ARPT, NC	96	KJGG	37.24	-76.72	10	NWS	WILLIAMSBURG/JAMESTOWN ARPT, VA
13	KPHD	40.47	-81.42	10	NWS	NEW PHILA/HARRY CLEVER FLD, OH	97	KBWI	39.17	-76.68	10	NWS	BALTIMORE WASHINGTON INTL, MD
14	KMKJ	36.90	-81.35	10	NWS	MARION/WYTHEVILLE	98	KFAF	37.13	-76.62	10	NWS	FT EUSTIS/FELKER
15	KBLF	37.30	-81.20	8	FAA	BLUEFIELD MERCER CO. ARPT, WV	99	KDMH	39.28	-76.62	10	NWS	BALTIMORE/INNER HARBOR (ASOS), MD
16	KBKW	37.78	-81.12	10	NWS	BECKLEY MEMORIAL, WV	100	KSFQ	36.68	-76.60	10	NWS	SUFFOLK MUNI ARPT, VA
17	KUKF	36.22	-81.10	10	NWS	N WILKESBORO/WILKES CO ARPT, NC	101	KMUI	40.43	-76.57	10	NWS	MURI AAF/INDIANTOWN, PA
18	KHLX	36.77	-80.82	10	NWS	HILLSVILLE	102	KPHF	37.13	-76.49	10	FAA	NEWPORT NEWS INTL ARPT, VA
19	KPSK	37.13	-80.68	10	NWS	DUBLIN/NEW RIVER VALLEY, VA	103	KNAK	38.98	-76.48	10	NWS	US NAVAL ACAD ANNAPOLIS, MD
20	K481	38.69	-80.65	10	NWS	BRAXTON CO ARPT, WV	104	KBUY	36.05	-76.47	10	FAA	BURLINGTON ALAMANCE RGNL ARPT, NC
21	KHLG	40.18	-80.65	10	FAA	WHEELING/OHIO CO, WV	105	KNUI	38.15	-76.42	10	NWS	ST INGOES/WEBSTER FLD, MD
22	KMWK	36.46	-80.55	10	NWS	MT AIRY/SCURRY CO ARPT, NC	106	KMTN	39.33	-76.42	10	NWS	BALTIMORE/MARTIN, MD
23	KRNN	37.20	-80.42	10	NWS	ROANOKE/BLACKBURG, VA	107	KNHK	38.28	-76.40	10	DODn	PATUXENT RIVER NAS, MD
24	KBCB	37.22	-80.42	10	NWS	VIRGINIA TECH ARPT, VA	108	KLFI	37.08	-76.37	10	NWS	LANGLEY AFB
25	KUCP	41.03	-80.41	10	NWS	NEW CASTLE MUNI ARPT, PA	109	KCKP	36.67	-76.32	10	NWS	CHESAPEAKE MUNI ARPT, VA
26	KLWB	37.87	-80.40	10	NWS	LEWISBURG/GREENBRIE, WV	110	KLNS	40.12	-76.30	8	FAA	ELIZABETHTOWN, LITITZ, PA
27	KBVI	40.77	-80.40	10	NWS	BEAVER FALLS ARPT, PA	111	KNGU	36.93	-76.28	10	DODn	NORFOLK NAS/CHAMBER
28	KAFJ	40.13	-80.28	10	NWS	WASHINGTON (AWOS), PA	112	KORF	36.90	-76.19	10	NWS	NORFOLK INTERNATIONAL ARPT, VA
29	KW22	39.00	-80.27	10	NWS	UPSHUR CO RGNL ARPT, WV	113	KCEG	36.26	-76.17	10	FAA	ELIZABETH CITY CG ARPT, NC
30	KINT	36.13	-80.22	10	FAA	WINSTON-SALEM/SMITH, NC	114	KAPG	39.47	-76.17	10	NWS	PHILLIPS AAF/ABERDN, MD
31	KCKB	39.30	-80.22	10	FAA	CLARKSBURG/BENEDUM, WV	115	KNEF	36.70	-76.13	10	NWS	FENTRESS/NAS AUX, VA
32	KPIT	40.50	-80.22	10	NWS	PITTSBURG INTL, PA	116	KESN	38.80	-76.07	10	NWS	EASTON/NEWMAN FLD, MD
33	KMTV	36.63	-80.02	10	NWS	MARTINSVILLE	117	KNTU	36.82	-76.03	10	NWS	OCEANA NAS/SOUCEK
34	KROA	37.32	-79.97	10	NWS	ROANOKE REGIONAL ARPT, VA	118	KONX	36.40	-76.02	10	NWS	CURRITUCK CO ARPT, NC
35	KBTP	40.78	-79.95	10	NWS	BUTLER CO (AWOS), PA	119	K9W7	36.40	-76.02	10	NWS	CURRITUCK CO ARPT, NC
36	KGSO	36.10	-79.94	10	NWS	GREENSBORO PIEDMONT TRIAD INTL, NC	120	KRDG	40.38	-75.97	10	FAA	READING/SPAATZ FLD, PA
37	KAGC	40.35	-79.93	10	FAA	PITTSBURG/ALLEGEN, PA	121	K40N	39.98	-75.87	10	NWS	CHESTER CO ARPT, PA
38	KMGW	39.65	-79.92	10	FAA	MORGANTOWN/HART FLD, WV	122	KMFV	37.65	-75.77	10	NWS	MELFA/ACCOMACK ARPT
39	K78N	36.44	-79.85	10	NWS	ROCKINGHAM CO SHILOH ARPT, NC	123	KILG	39.68	-75.60	10	NWS	WILMINGTON ARPT, DE
40	KEKN	38.88	-79.85	10	NWS	ELKINS/RANDOLPH FLD	124	KPTW	40.23	-75.55	10	FAA	POTTSTOWN LIMERICK ARPT, PA
41	KSIF	36.44	-79.85	10	NWS	ROCKINGHAM CO SHILOH ARPT, NC	125	KSBY	38.34	-75.51	8	FAA	SALISBURY WICOMICO RGNL ARPT, MD
42	KHSP	37.95	-79.83	10	NWS	HOT SPRINGS/INGALLS	126	KWAL	37.94	-75.47	10	NWS	WALLOPS ISLAND FLIGHT, VA
43	KFWQ	40.21	-79.83	10	NWS	MONONGAHELA/ROSTRAVER ARPT, PA	127	KDVO	39.13	-75.47	10	NWS	DOVER AFB, DE
44	KLBE	40.28	-79.40	10	NWS	LATROBE/WESTMORLAND, PA	128	KABE	40.65	-75.43	10	NWS	ALLENTOWN-BETHLEHEM, PA
45	KDAN	36.57	-79.33	10	FAA	DANVILLE REGIONAL ARPT.DANVILLE, VA	129	KMPO	41.13	-75.38	10	FAA	MT POCONO, MT POCONO, PA
46	KLYH	37.32	-79.21	10	NWS	LYNCHBURG ARPT.LYNCHBURG, VA	130	KUKT	40.44	-75.38	10	NWS	QUAKERTOWN ARPT, PA
47	KW99	38.98	-79.13	10	NWS	PETERSBURG/GRANT CO ARPT, WV	131	KGED	38.68	-75.37	10	FAA	GEORGETOWN SUSSEX CO ARPT, DE
48	KIDI	40.63	-79.11	10	NWS	INDIANA/STEWART FLD, PA	132	KLOM	40.14	-75.27	10	NWS	WINGS FLD ARPT, PA
49	KTDF	36.28	-78.98	10	NWS	ROXBORO/PERSON CO ARPT, NC	133	KPHL	39.88	-75.25	10	NWS	PHILADELPHIA INTL PA
50	KSHD	38.27	-78.90	10	NWS	STAUNTON/SHENANDOAH	134	KPHI	39.88	-75.25	10	NWS	PHILADELPHIA, PA
51	KJST	40.32	-78.84	10	FAA	JOHNSTOWN CAMBRIA ARPT, JOHNSTOWN, PA	135	KNXK	40.20	-75.15	10	DODn	WILLOW GROVE NAS
52	KCBE	39.52	-78.76	10	NWS	GREATER CUMBERLAND RGNL ARPT, MD	136	KOXB	38.31	-75.13	10	FAA	OCEANA CITY MUNI ARPT, MD
53	KHNZ	36.36	-78.53	10	NWS	HENDERSON/OXFORD ARPT, NC	137	KDYL	40.33	-75.12	10	FAA	DOYLESTOWN ARPT, PA
54	KCHO	38.13	-78.45	10	FAA	CHARLOTTESVILLE ALBEMARLE ARPT, VA	138	KMIV	39.37	-75.07	10	FAA	MILLVILLE MUNI, NJ
55	KFVX	37.35	-78.43	10	NWS	FARMVILLE	139	KPNE	40.08	-75.02	10	NWS	PHILADELPHIA NW, PA
56	KFIG	41.04	-78.42	10	FAA	CLEARFIELD LAWRENCE ARPT, PA	140	KWWD	39.02	-74.92	10	NWS	WILDWOOD (AWOS), NJ
57	KN97	41.05	-78.41	10	NWS	CLEARFIELD, PA	141	KTYZ	39.95	-74.92	10	NWS	MONMOUTH BCH (ASOS), NJ
58	KOKV	39.15	-78.15	10	NWS	WINCHESTER RGNL	142	KN91	38.95	-74.88	10	NWS	CAPE MAY (CGS), NJ
59	KAVC	36.69	-78.05	10	NWS	S HILL/MECKLENBURG-BRUNSWICK	143	KVAY	39.95	-74.85	10	FAA	MT HOLLY S JERSEY RGNL, NJ
60	KOMH	38.25	-78.05	10	NWS	ORANGE CO ARPT, VA	144	KTIN	40.28	-74.82	10	FAA	TRENTON/MERCER CO, NJ
61	KMRB	39.40	-77.98	10	FAA	MARTINSBURG RGNL	145	K12N	41.02	-74.73	10	NWS	ANDOVER AEROFLEX, NJ
62	KLKU	38.01	-77.97	10	NWS	LOUISA CO/FREEMAN FLD, VA	146	KJSB	40.62	-74.67	10	NWS	SOMERVILLE, NJ
63	KCJR	38.53	-77.86	10	NWS	CULPEPER RGNL ARPT, VA	147	KN52	40.62	-74.67	10	NWS	SOMERVILLE, NJ
64	KUNV	40.85	-77.85	10	NWS	STATE COLLEGE, PA	148	KSMQ	40.62	-74.67	10	FAA	SOMERVILLE SOMERSET ARPT, NJ
65	KCTP	40.85	-77.85	10	NWS	STATE COLLEGE, PA	149	KWRI	40.02	-74.60	10	NWS	MCGUIRE AFB, NJ
66	KHGR	39.70	-77.73	10	FAA	HAGERSTOWN WASHINGTON CO, RGNL, MD	150	KACY	39.45	-74.57	10	NWS	ATLANTIC CITY INTL, NJ
67	KRZZ	36.44	-77.71	10	FAA	ROANOKE RAPIDS/HALIFAX ARPT, NC	151	KMMU	40.80	-74.42	10	NWS	MORRISTOWN MUNI, NJ
68	KJYO	39.08	-77.57	10	NWS	LEESBURG/GODFREY	152	KDIX	39.95	-74.41	10	NWS	PHILADELPHIA NEXRAD, PA
69	KPTB	37.18	-77.52	10	NWS	PETERSBURG (AWOS)	153	KNEL	40.03	-74.35	10	NWS	LAKEHURST NAS, NJ
70	KHEF	38.72	-77.52	10	NWS	MANASSAS MUNI (AWOS)	154	KCDW	40.88	-74.28	10	NWS	CALDWELL/ESSEX CO., NJ
71	KEMV	36.69	-77.48	10	NWS	EMPORIA-GREENSVILLE RGNL ARPT, VA	155	KEWR	40.70	-74.17	10	NWS	NEWARK INTL ARPT, NJ
72	KLWX	38.98	-77.48	10	NWS	STERLING, VA	156	KBML	40.18	-74.13	10	NWS	BELMAR-FARMDALE, NJ
73	KRMN	38.40	-77.46	10	NWS	STAFFORD RGNL ARPT, VA	157	KTEB	40.85	-74.07	10	NWS	TETERBORO ARPT, NJ
74	KEZF	38.27	-77.45	10	NWS	SHANNON ARPT	158	KNYC	40.77	-73.98	10	NWS	NEW YORK CITY, NY
75	KOBV	39.63	-77.45	10	NWS	CAMP DAVID, MD	159	KLGA	40.77	-73.90	10	NWS	NY LA GUARDIA, NY
76	KIAD	38.94	-77.45	10	NWS	DULLES INTL ARPT, WASHINGTON, DC	160	KJFK	40.63	-73.77	10	NWS	NY JFK INTL ARPT, NY
77	KOFP	37.71	-77.44	10	FAA	RICHMOND ASHLAND HANOVER CO, VA	161	KHPN	41.07	-73.70	10	FAA	WHITE PLAINS, NY
78	KQAH	39.73	-77.43	10	NWS	SITE R, PA	162	KFRG	40.73	-73.42	10	FAA	FARMINGDALE/REPUBLIC, NY
79	KJWX	39.73	-77.43	10	NWS	FT RITCHIE, MD	163	KISP	40.80	-73.10	10	FAA	ISLIP LONG ISLAND MCARTHUR ARPT, NY
80	K43M	39.73	-77.43	10	NWS	FT RITCHE/SITE R, MD	164	KHWV	40.82	-72.86	10	FAA	BROOKHAVEN ARPT, NY
81	KFDK	39.42	-77.37	10	NWS	FREDERICK MUNI ARPT, MD	165	KOKX	40.87	-72.86	10	NWS	BROOKHAVEN, NY
82	KRIC	37.51	-77.32	10	NWS	RICHMOND INTL ARPT, RICHMOND, VA	166	KFOK	40.85	-72.63	10	FAA	WEST HAMPTON BCH, NY
83	KNYG	38.50	-77.30	10	NWS	QUANTICO MCAF	167	KHTO	40.97	-72.25	10	NWS	EAST HAMPTON, NY
84	KDAA	38.72	-77.18	10	NWS	FT BELVOIR/DAVISO	168	KMTP	41.08	-71.92	10	NWS	MONTAUK ARPT, NY

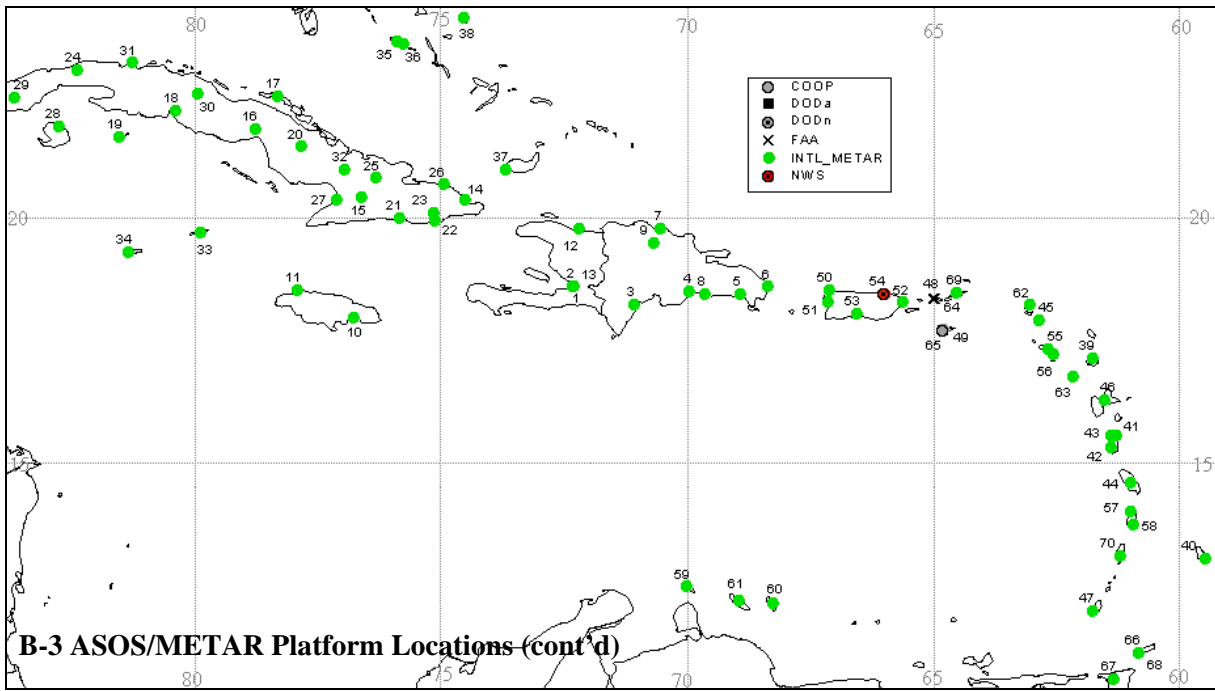
B-3 ASOS/METAR Platform Locations (cont'd)



#	Station	Lat	Lon	Provider	Station Location	#	Station	Lat	Lon	Provider	Station Location
1	KELZ	42.11	-77.99	FAA	WELLSVILLE MUNI ARPT, NY	57	KIP1	43.78	-71.75	NWS	PLYMOUTH MUNI ARPT, NH
2	KDSV	42.57	-77.72	FAA	DANSVILLE, NY	58	KAYE	42.57	-71.60	NWS	FORT DEVENS/AYER MA
3	KROC	43.12	-77.67	NWS	ROCHESTER/MONROE CO, NY	59	KHIE	44.35	-71.55	FAA	WHITEFIELD (ASOS) NH
4	KPEO	42.64	-77.05	FAA	PENN YAN ARPT, PENN YAN, NY	60	KASH	42.78	-71.52	NWS	NASHUA/BOIRE FIELD NH
5	KELM	42.16	-76.90	FAA	ELMIRA CORNING RGNL ARPT, ELMIRA, NY	61	KSFZ	41.92	-71.50	NWS	PAWTUCKET (AWOS) RI
6	KITH	42.48	-76.45	NWS	ITHACA/TOMPKINS CO., NY	62	KCON	43.20	-71.50	NWS	CONCORD MUNI NH
7	KFZY	43.35	-76.39	FAA	FULTON/OSWEGO CTY ARPT, NY	63	KPVD	41.723	-71.43	NWS	PROVIDENCE GREEN STATE ARPT, RI
8	KSYR	43.11	-76.10	NWS	SYRACUSE HANCOCK INTL ARPT	64	KMHT	42.93	-71.43	FAA	MANCHESTER AIRPARK NH
9	KART	44.00	-76.02	FAA	WATERTOWN INTL ARPT, NY	65	KOQU	41.60	-71.42	NWS	N. KINGSTON/QUONSET RI
10	KBGM	42.21	-75.98	NWS	BINGHAMTON RGNL ARPT	66	KLCI	43.57	-71.42	NWS	LACONIA MUNI (AWOS) NH
11	KGTB	44.05	-75.73	NWS	FORT DRUM/WHEELER, NY	67	KMWN	44.27	-71.30	NWS	MOUNT WASHINGTON NH
12	KAVP	41.33	-75.72	NWS	WILKES-BARRE SCRANTON INTL ARPT	68	KBED	42.47	-71.29	FAA	BEDFORD HANSCOM FIELD, BEDFORD, MA
13	KOGS	44.68	-75.47	NWS	OGDENSBURG INTL, NY	69	KUUU	41.53	-71.28	FAA	NEWPORT STATE ARPT, NEWPORT, RI
14	KRME	43.23	-75.40	NWS	GRIFFISS AFB/ROME, NY	70	KBML	44.58	-71.18	FAA	BERLIN MUNI NH
15	KUCA	43.14	-75.38	FAA	UTICA ONEIDA CO ARPT, UTICA, NY	71	KOWD	42.19	-71.17	FAA	NORWOOD MEMORIAL ARPT, NORWOOD, MA
16	KMSS	44.93	-74.85	FAA	MASSENA/RICHARDS, NY	72	KLWM	42.71	-71.13	FAA	LAWRENCE MUNI ARPT, LAWRENCE, MA
17	KMSV	41.70	-74.80	NWS	MONTICELLO (AWOS), NY	73	KMQE	42.22	-71.12	NWS	EAST MILTON (ASOS), MA
18	KMGJ	41.52	-74.27	FAA	MONTGOMERY/ORANGE CTY ARPT, NY	74	KBOX	42.37	-71.03	NWS	BOSTON MA
19	KSLK	44.40	-74.20	FAA	SARANAC LAKE/ADIRONDACK, NY	75	KTAN	41.88	-71.02	FAA	TAUNTON MUNI ARPT, TAUNTON, MA
20	KSWF	41.50	-74.10	NWS	NEWBURGH/STEWART, NY	76	KBOS	42.36	-71.02	NWS	BOSTON LOGAN INTL ARPT, BOSTON, MA
21	KSCH	42.85	-73.93	NWS	SCHENECTADY ARPT, NY	77	KEWB	41.68	-70.96	FAA	NEW BEDFORD MUNI ARPT, MA
22	KPOU	41.63	-73.88	FAA	POUGHKEEPSIE DUTCHESS CO ARPT, NY	78	KIZG	43.98	-70.95	FAA	FRYEBURG (ASOS) ME
23	KALY	42.69	-73.83	NWS	ALBANY WFO & SCD, NY	79	KNZW	42.15	-70.93	NWS	SOUTH WEYMOUTH NAS MA
24	KALB	42.75	-73.80	NWS	ALBANY, NY	80	KDAW	43.28	-70.93	FAA	ROCHESTER/SKYHAVEN ARPT, NH
25	KALB	42.75	-73.80	NWS	ALBANY CO ARPT, ALBANY, NY	81	K6B1	43.28	-70.92	NWS	ROCHESTER, NH
26	K44N	41.70	-73.73	NWS	MILLBROOK/SKY ACRES, NY	82	KBVY	42.58	-70.92	FAA	BEVERLY MUNI ARPT, BEVERLY, MA
27	KGFL	43.34	-73.61	FAA	GLENS FALLS ARPT, GLENS FALLS, NY	83	KPSM	43.08	-70.82	NWS	PEASE AFB/PORTSMOUTH NH
28	KPLB	44.69	-73.52	FAA	PLATTSBURGH/CLINTON CNTY ARPT, NY	84	KPYM	41.91	-70.73	FAA	PLYMOUTH MUNI ARPT, PLYMOUTH, MA
29	KDXR	41.37	-73.48	FAA	DANBURY MUNI, CT	85	KSFM	43.40	-70.72	NWS	SANFORD MUNI (AWOS) ME
30	KPBG	44.65	-73.47	NWS	PLATTSBURGH AFB, NY	86	K3B2	42.10	-70.68	NWS	MARSHFIELD ARPT MA
31	KPSF	42.42	-73.29	FAA	PITTSFIELD MUNI ARPT, PITTSFIELD, NY	87	KMVY	41.39	-70.62	FAA	MARTHA'S VINEYARD ARPT, MA
32	K5B5	42.89	-73.25	NWS	BENNINGTON, VT	88	KRUM	44.53	-70.53	NWS	RUMFORD ME
33	KDDH	42.89	-73.25	FAA	BENNINGTON MORSE STATE ARPT, VT	89	KFMH	41.65	-70.52	NWS	OTIS ANGB MA
34	KAQW	42.70	-73.17	FAA	NORTH ADAMS HARRIMAN, MA	90	KPWM	43.65	-70.32	NWS	PORTLAND INTL JET ME
35	KAQW	42.70	-73.17	FAA	NORTH ADAMS MA	91	KLEW	44.05	-70.28	NWS	AUBURN-LEWISTON ME
36	KBTV	44.47	-73.15	NWS	BURLINGTON INTL, VT	92	KHYA	41.67	-70.27	FAA	HYANNIS BARNSTABLE MUNI ARPT, MA
37	KOXC	41.48	-73.13	NWS	OXFORD (AWOS) CT	93	KGYX	43.89	-70.26	NWS	GRAY ME
38	KRUT	43.53	-72.95	NWS	RUTLAND STATE (AWOS) VT	94	KPCV	42.07	-70.22	NWS	PROVINCETOWN (AWOS) MA
39	KMMK	41.51	-72.83	FAA	MERIDEN MARKHAM MUNI APT, CT	95	KCQX	41.69	-69.99	FAA	CHATHAM MUNI ARPT, CHATHAM, MA
40	KBAF	42.15	-72.72	FAA	WESTFIELD/BARNES MA	96	KCHH	41.67	-69.97	NWS	CHATHAM MA
41	KBDL	41.93	-72.68	NWS	HARTFORD/BRADLEY CT	97	KNHZ	43.88	-69.93	NWS	BRUNSWICK NAS ME
42	KHFD	41.73	-72.65	FAA	HARTFORD/BRAINARD CT	98	KAUG	44.32	-69.80	FAA	AUGUSTA STATE ARPT ME
43	KMVL	44.53	-72.62	FAA	MORRISVILLE (ASOS) VT	99	KIWI	43.97	-69.72	FAA	WISCASSET ME
44	KMPV	44.20	-72.57	FAA	BARRE-MONTEPELIER VT	100	KWVL	44.53	-69.68	NWS	WATERVILLE (AWOS) ME
45	KCEF	42.20	-72.53	NWS	CHICOPEE/WESTOVER MA	101	KGNR	45.47	-69.58	NWS	GREENVILLE (AMOS) ME
46	KVSF	43.35	-72.52	FAA	SPRINGFIELD/HARTNES VT	102	KGNR	45.47	-69.58	NWS	GREENVILLE (AMOS) ME
47	KLEB	43.63	-72.30	FAA	LEBANON MUNI NH	103	K40B	46.62	-69.53	NWS	CLAYTON LAKE, ME
48	KORE	42.57	-72.28	FAA	ORANGE MUNI ARPT, ORANGE, MA	104	KRKD	44.07	-69.10	NWS	ROCKLAND/KNOX (AWOS) ME
49	KEEN	42.90	-72.27	NWS	KEENE/DILLANT (AWOS) NH	105	KBGR	44.80	-68.83	FAA	BANGOR INTL ARPT ME
50	K9B2	44.93	-72.20	NWS	NEWPORT VT	106	KMLT	45.65	-68.68	FAA	MILLINOCKET MUNI ME
51	KIJD	41.74	-72.18	FAA	WILLIMANTIC WINDHAM ARPT, CT	107	KBHB	44.45	-68.37	NWS	BAR HARBOR (AWOS) ME
52	K1V4	44.42	-72.02	NWS	ST. JOHNSBURY (AMOS) VT	108	KFVE	47.28	-68.32	FAA	FRENCHVILLE, ME
53	KAFN	42.80	-72.00	FAA	JAFFREY NH	109	KPOI	46.68	-68.05	NWS	PRESQUE ISLE (AWOS), ME
54	KORH	42.27	-71.88	NWS	WORCESTER (AMOS) MA	110	KCAR	46.87	-68.02	NWS	CARIBOU MUNI, ME
55	KWST	41.35	-71.80	FAA	WESTERLY STATE ARPT, WESTERLY, RI	111	KLIZ	46.95	-67.88	NWS	LORING AFB/LIMESTON, ME
56	KFIT	42.55	-71.76	FAA	FITCHBURG MUNI ARPT, FITCHBERG, MA	112	KHUL	46.12	-67.80	FAA	HOULTON INTL ARPT, ME
						113	KEPO	44.92	-67.00	NWS	EASTPORT ME

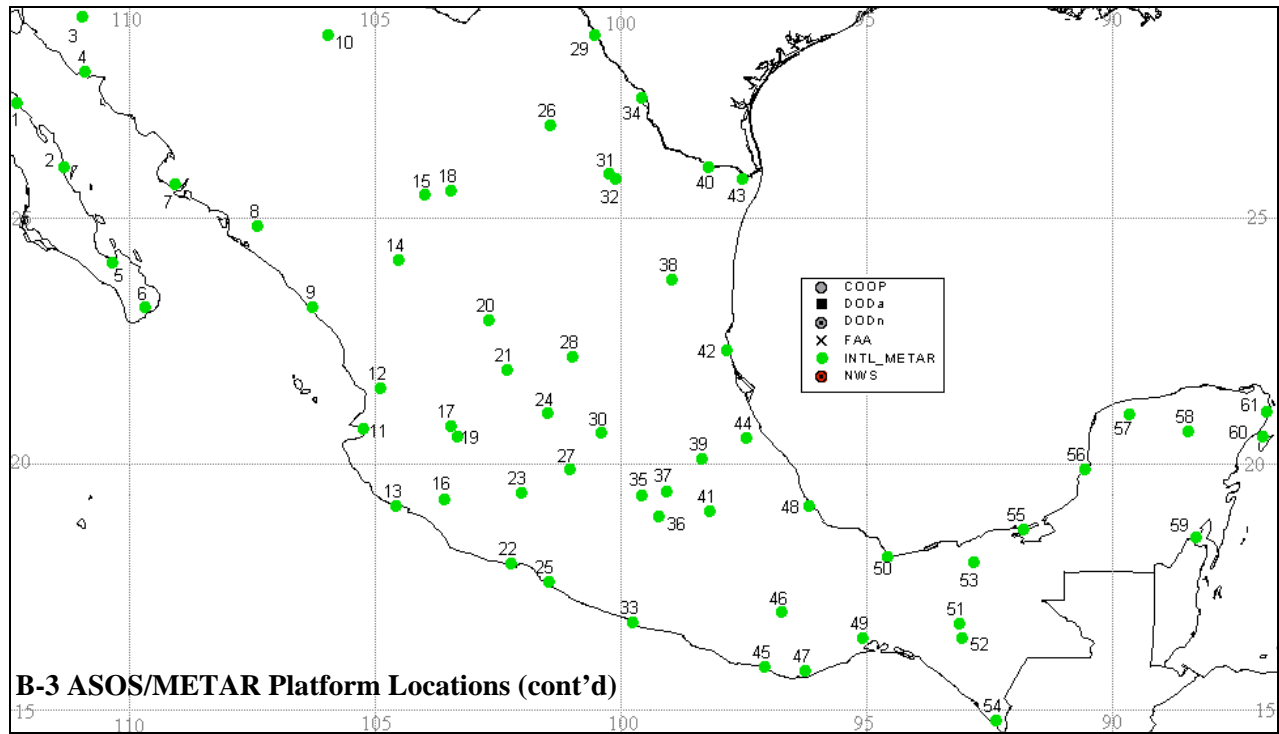


#	Station	Lat	Lon	Station Location	#	Station	Lat	Lon	Station Location
1	CWHY	45.32	-72.25	MONT-ORFORD QB	63	CWBK	45.76	-62.68	CARIBOU NS
2	CWQH	45.36	-71.81	LENNOXVILLE, QB	64	CYTN	45.61	-62.62	TRENTON MUNI ARPT NS
3	CYSC	45.43	-71.68	SHERBROOKE ARPT QB	65	CZSP	46.45	-62.57	ST PETERS PE
4	CWPQ	45.63	-70.55	MONTREAL-EST QB	66	CXMY	44.98	-62.48	MALAY FALLS NS
5	CERM	47.42	-68.32	EDMUNSTON NB	67	CWBV	44.81	-62.33	BEAVER ISLAND (MAPS) NS
6	CYSL	47.16	-67.83	ST LEONARD ARPT NB	68	CWEP	46.45	-61.97	EAST POINT (MARS) PE
7	CWIY	47.15	-67.82	ST LEONARD AUTO8 NB	69	CWGU	45.87	-61.90	CAPE GEORGE (AUTO8) NS
8	CWSS	45.20	-67.25	ST STEPHEN (MARS) NB	70	CWGR	47.42	-61.80	ILES-DE-LA-MADELEIN QB
9	CXGM	44.71	-66.80	GRAND MANAN SAR CS NB	71	CYGR	47.42	-61.78	ILES DE LA MADELEIN QB
10	CWSG	49.08	-66.73	CAP CHAT (MAPS) QB	72	CWHP	49.08	-61.70	HEATH POINT (MAPS) QB
11	CWZF	45.97	-66.65	FREDERICTON AQUATIC NB	73	CXTD	45.61	-61.68	TRACADIE NS
12	C AFC	45.92	-66.60	FREDERICKTON CDA CS NB	74	CYPD	45.67	-61.38	PORT HAWKESBURY NS
13	CYFC	45.87	-66.53	FREDERICTON ARPT NB	75	CWFD	52.23	-61.32	LITTLE MACATINA NF
14	CWPE	45.07	-66.47	POINT LEPREAU NB	76	CWZQ	46.53	-61.08	GRAND ETANG (AUTO8) NS
15	CYCX	45.83	-66.43	GAGETOWN (CAN-MIL) NB	77	CWRN	45.35	-60.98	HART ISLAND (MAPS) NS
16	CZCR	47.98	-66.33	CHARLO AUTO NB	78	CXNM	46.82	-60.67	NORTH MOUNTAIN NS
17	CWVU	44.28	-66.33	BRIER ISLAND (AUT) NS	79	CWXX	43.88	-60.55	ROWAN GORILLA III NS
18	CYCL	47.98	-66.33	CHARLO ARPT NB	80	CWRW	45.72	-60.23	FOURCHU HEAD (MAPS) NS
19	CYQI	43.83	-66.08	YARMOUTH ARPT NS	81	CWFE	47.23	-60.13	ST PAUL ISL (MAPS) NS
20	CYSJ	45.32	-65.88	SAINT JOHN ARPT NB	82	CYQY	46.17	-60.05	SYDNEY ARPT NS
21	CYID	44.55	-65.78	DIGBY ARPT (AWRS) NS	83	CAQY	46.17	-60.05	SYDNEY RCS NS
22	CZBF	47.63	-65.75	BATHURST ARPT (AWRS) NB	84	CWSA	43.93	-60.02	SABLE ISLAND NS
23	CWCP	43.45	-65.47	BACCARO POINT NS	85	CYSA	43.93	-60.00	SABLE ISLAND (APT) NS
24	CWCQ	47.00	-65.47	CHATHAM (AUTO8) NB	86	CXWR	47.71	-59.31	WRECKHOUSE NF
25	CACQ	47.00	-65.45	MIRAMICHI RCS NB	87	CWOF	47.57	-59.18	PORT BASQUES (AUTO) NF
26	CYCH	47.00	-65.45	CHATHAM (CAN-MIL) NB	88	CWZB	47.56	-59.16	PORT-AUX-BASQUES, NF
27	CWOC	48.02	-65.33	NEW CARLISLE1 QB	89	CYJT	48.53	-58.55	STEPHENVILLE ARPT NF
28	CWSF	49.25	-65.33	CAP MADELEINE (MAPS) QB	90	CXRH	49.57	-57.88	ROCKY HARBOUR CS NF
29	CWKG	44.43	-65.20	KEJIMKUJIK 1 NS	91	CWBF	47.62	-57.63	BURGEO (AUTO) NF
30	CAKC	46.77	-65.00	KOUCHIBOUGUAC CS NB	92	CWBD	47.61	-57.61	BURGEO NF
31	CAFY	45.60	-64.95	FUNDY PARK CS NB	93	CWDX	50.23	-57.60	DANIEL'S HARBOUR (AUTO) NF
32	CYZX	44.98	-64.92	GREENWOOD (CAN-MIL) NS	94	CWDH	50.24	-57.58	DANIEL'S HARBOUR NF
33	CWXS	47.80	-64.83	BAS CARAQUET NB	95	CYDF	49.22	-57.40	DEER LAKE ARPT NF
34	CWPJ	47.07	-64.80	PT. ESCUMINAC(MAPS) NB	96	CWHU	48.58	-57.23	STAR BROOK NF
35	CABT	46.42	-64.77	BUCTOUCHE CDA CS NB	97	CWXI	51.02	-57.10	FEROLLE PT. (MAPS) NF
36	CYQM	46.12	-64.68	MONCTON ARPT NB	98	CWDA	50.72	-56.12	ENGLEE (MAPS) NF
37	CWWE	43.98	-64.67	WESTERN HEAD (MARS) NS	99	CWDW	51.38	-56.10	ST ANTHONY NF
38	CWMI	48.02	-64.50	MISCOU ISL (MARS) NB	100	CYAY	51.38	-56.09	ST ANTHONY ARPT NF
39	CYGP	48.77	-64.48	GASPE ARPT QB	101	CWDI	48.97	-56.07	BADGER (MARS) NF
40	CXKT	45.07	-64.48	KENTVILLE NS	102	CWZN	47.37	-55.80	SAGONA ISL (MAPS) NF
41	CAPR	45.42	-64.35	PARRSBORO NS	103	CWAG	49.91	-55.66	LA SCIE NF
42	CWRZ	48.42	-64.32	CAP D'ESPOIR (MAPS) QB	104	CWAX	51.37	-55.63	ST ANTHONY NF
43	CWBY	49.83	-64.30	PORT MENIER (MARS) QB	105	CWFX	48.17	-55.48	CONNE RIVER NF
44	CXLB	44.35	-64.30	LUNENBERG NS	106	CWDS	46.92	-55.38	ST LAWRENCE NF
45	CYPN	49.83	-64.28	PORT MENIER (MAN) QB	107	CXWT	47.14	-55.33	WINTERLAND NF
46	CWAH	45.84	-64.26	AMHERST NS	108	CWHW	49.27	-54.88	COMFORT COVE NF
47	CXNP	45.75	-64.23	NAPPAN AUTO NS	109	CWDO	49.68	-54.80	TWILLINGATE (MAPS) NF
48	CWNE	47.08	-64.00	NORTH POINT (AUTO8) PE	110	CXGD	48.94	-54.58	GANDER ARPT CS NF
49	CWSD	46.43	-63.85	SUMMERSIDE (AUTO8) PE	111	CYQX	48.95	-54.57	GANDER INTL ARPT NF
50	CYSU	46.43	-63.83	SUMMERSIDE (CAN-MIL) PE	112	CWAR	47.29	-54.00	ARGENTIA NF
51	CXBP	46.23	-63.73	CONFEDERATION BRIDGE PE	113	CXTP	48.56	-53.97	TERRA NOVA NATL PARK CS NF
52	CWAZ	44.72	-63.68	BEDFORD NS	114	CWJZ	47.82	-53.90	BULL ARM AUTO8 NF
53	CXMP	46.30	-63.58	MAPLE PLAINS PE	115	CWZY	47.82	-53.87	GBS PLATFORM NF
54	CXMI	44.60	-63.53	MCNABS ISLAND NS	116	CWYI	49.12	-53.58	POOLS ISLAND NF
55	CWAW	44.63	-63.52	SHEARWATER JETTY NS	117	CWFH	46.72	-53.48	ST SHOTTS NF
56	CYAW	44.63	-63.50	SHEARWATER (CAN-MIL) NS	118	CXSA	47.26	-53.29	SALMONIER NATURE PARK NF
57	CYHZ	44.88	-63.50	HALIFAX INTL ARPT NS	119	CWVA	48.67	-53.12	BONAVISTA NF
58	CZDB	45.42	-63.47	DEBERT NS	120	CWRA	46.65	-53.07	CAPE RACE (MARS) NF
59	CWUR	45.37	-63.27	TRURO (MARS) NS	121	CWUU	47.52	-52.98	LONG POND NF
60	CAHR	46.35	-63.17	HARRINGTON CDA CS PE	122	CWVV	48.17	-52.93	GRATES COVE (AUTO) NF
61	CYYG	46.28	-63.13	CHARLOTTETOWN ARPT PE	123	CXSW	47.52	-52.78	ST JOHN'S WEST CDA CS NF
62	CAOH	45.23	-63.05	UPPER STEWACKE RCS NS	124	CYYT	47.62	-52.73	ST JOHN'S ARPT NF



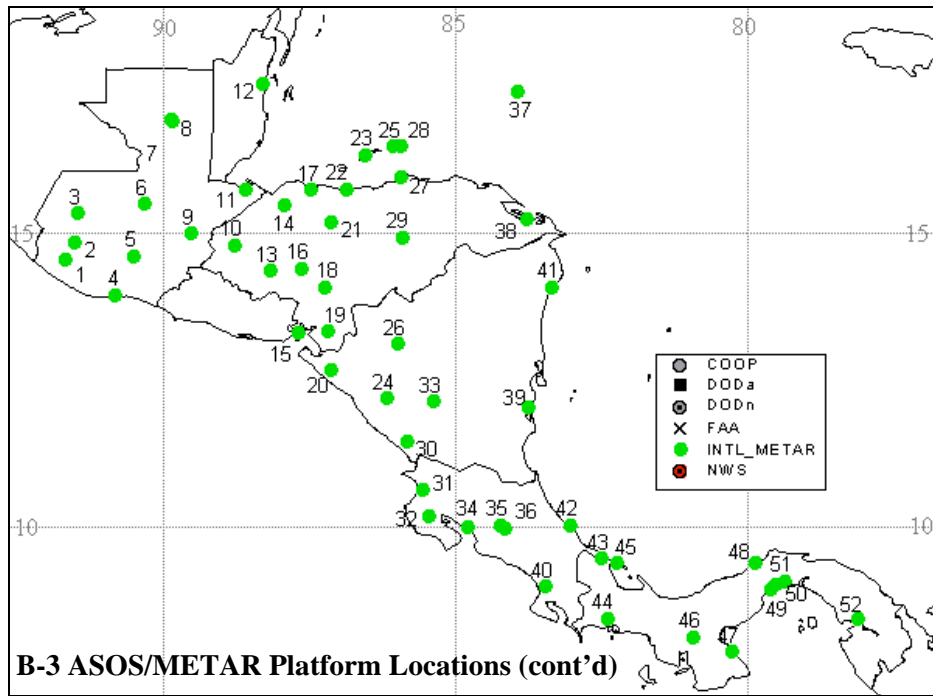
B-3 ASOS/METAR Platform Locations (cont'd)

#	Station	Lat	Lon	Station Location	#	Station	Lat	Lon	Station Location
1	CTPP	18.57	-72.32	CAMP_CANARGUS HA	38	MYSM	24.05	-74.53	COCKBURN/SAN_SALVAD BA
2	KQAR	18.58	-72.30	PORT_AU_PRINCE HA	39	TAPA	17.12	-61.78	COOLIDGE_ARPT AT
3	MDBH	18.22	-71.10	BARAHONA DR	40	TBPB	13.07	-59.48	GRANTLEY_ADAMS_INTL BR
4	MDHE	18.47	-69.97	HERRERA DR	41	TDCF	15.53	-61.40	CANEFIELD_AIRPORT DO
5	MDLR	18.42	-68.95	LA_ROMANA_INTL_ARPT DR	42	TDPD	15.53	-61.30	MELVILLE_HALL_ARPT DO
6	MDPC	18.57	-68.37	PUNTA_CANA DR	43	TDPR	15.30	-61.40	ROSEAU DO
7	MDPP	19.75	-70.55	PUERTO_PLATA_INTL DR	44	TFFF	14.60	-61.00	LE_LAMENTIN MR
8	MDSB	18.43	-69.67	CAUCEDO/DE_LAS_AMER DR	45	TFJJ	17.90	-62.85	GUSTAVIA/ST BARTHEL MF
9	MDST	19.47	-70.70	SANTIAGO_INTL_ARPT DR	46	TFFR	16.27	-61.52	LE_RAIZET/GUADELOUP MF
10	MKJP	17.93	-76.78	NORMAN_MANLEY/KINGS JM	47	TGPY	12.00	-61.78	POINT_SALINES_INTL GD
11	MKJS	18.50	-77.92	SANGSTER/MONTEGO JM	48	TIST	18.33	-64.97	C_AMALIE/CYRIL_E. VI
12	MTCH	19.75	-72.18	CAP-HAITIEN_INTL HA	49	TISX	17.70	-64.80	CHRISTIANSTED/ALEXA VI
13	MTPP	18.57	-72.30	PORT-AU-PRINCE_ARPT HA	50	TJBQ	18.50	-67.13	AQUADILLA/BORINQUEN PU
14	MUBA	20.35	-74.50	BARACOA_(CIV/MIL) CU	51	TJMZ	18.27	-67.15	MAYAGUEZ/EUGENIO PU
15	MUBA	20.40	-76.62	BAYAMO CU	52	TJNR	18.25	-65.63	ROOSEVELT_ROADS_NAS PU
16	MUCA	21.78	-78.78	CIEGO_AVILA/VENEZUE CU	53	TJPS	18.02	-66.57	PONCE/MERCEDITA PU
17	MUCC	22.45	-78.32	CAYO_COCO/JARDINES_DEL_RAY	54	TJSJ	18.43	-66.00	LUIS MUNOZ ARPT, SAN JUAN PR
18	MUCF	22.15	-80.40	CIENFUEGOS(CIV/MIL) CU	55	TKPK	17.30	-62.68	GOLDEN_ROCK AT
19	MUCL	21.62	-81.55	CAYO_LARGO_DEL_SUR CU	56	TKPN	17.20	-62.58	CHARLESTOWN/NEWCAST AT
20	MUCM	21.42	-77.85	CAMAGUEY/IGANCIO CU	57	TLPC	14.02	-61.00	CASTRIES/VIGIE LC
21	MUCU	19.97	-75.85	SANTIAGO_DE_CUBA CU	58	TLPL	13.75	-60.95	HEWANORRA_INTL_ARPT LC
22	MUGM	19.90	-75.13	GUANTANAMO_BAY_NAS CU	59	TNCA	12.50	-70.02	REINA_BEATRIX_INTL NU
23	MUGT	20.08	-75.15	GUANTANAMO CU	60	TNCB	12.15	-68.28	FLAMINGO_AIRPORT NU
24	MUHA	22.98	-82.40	HAVANA/JOSE_MARTI CU	61	TNCC	12.20	-68.97	HATO_ARPT_(CIV/MIL) NU
25	MUHG	20.78	-76.32	HOLGUIN_(CIV/MIL) CU	62	TQPF	18.20	-63.05	WALL_BLAKE VI
26	MUMO	20.65	-74.92	MOA_(MIL) CU	63	TRPM	16.75	-62.17	BLACKBURNE/PLYMOUTH AT
27	MUMZ	20.33	-77.12	MANZANILLO CU	64	TSTT	18.33	-64.98	CYRIL E. KING INTL ARPT, ST. TOMAS, USVI
28	MUNG	21.83	-82.78	NUEVA_GERONA_(MIL) CU	65	TSTX	17.7	-64.80	CHRISTIANSTED ARPT, ST. CRIXO, USVI
29	MUPR	22.42	-83.68	PINAR_DEL_RIO_NORTE CU	66	TTCP	11.15	-60.85	CROWN_PT./SCARBOROU TD
30	MUSC	22.50	-79.95	ABEL_SANTAMARIA CU	67	TPPP	10.62	-61.35	PIARCO_INTL_ARPT TD
31	MUVR	23.13	-81.28	VARADERO CU	68	TTPT	11.15	-60.83	CROWN_POINT_ARPT TD
32	MUVT	20.95	-76.95	LAS_TUNAS/VICTORIA CU	69	TUPJ	18.45	-64.53	BEEF_ISL/ROADTOWN VI
33	MWCB	19.68	-79.89	GERRARD_SMITH_INTL/CAYMAN_	70	TVSV	13.13	-61.20	ARNOS_VALE/KINGSTON LC
34	MWCR	19.28	-81.35	OWEN_ROBERTS_INTL GC					
35	MYEF	23.57	-75.89	EXUMA_INTL BA					
36	MYEG	23.50	-75.77	GEORGE_TOWN/EXUMA BA					
37	MYIG	20.95	-73.68	MATTHEW_TOWN/INAGUA BA					



B-3 ASOS/METAR Platform Locations (cont'd)

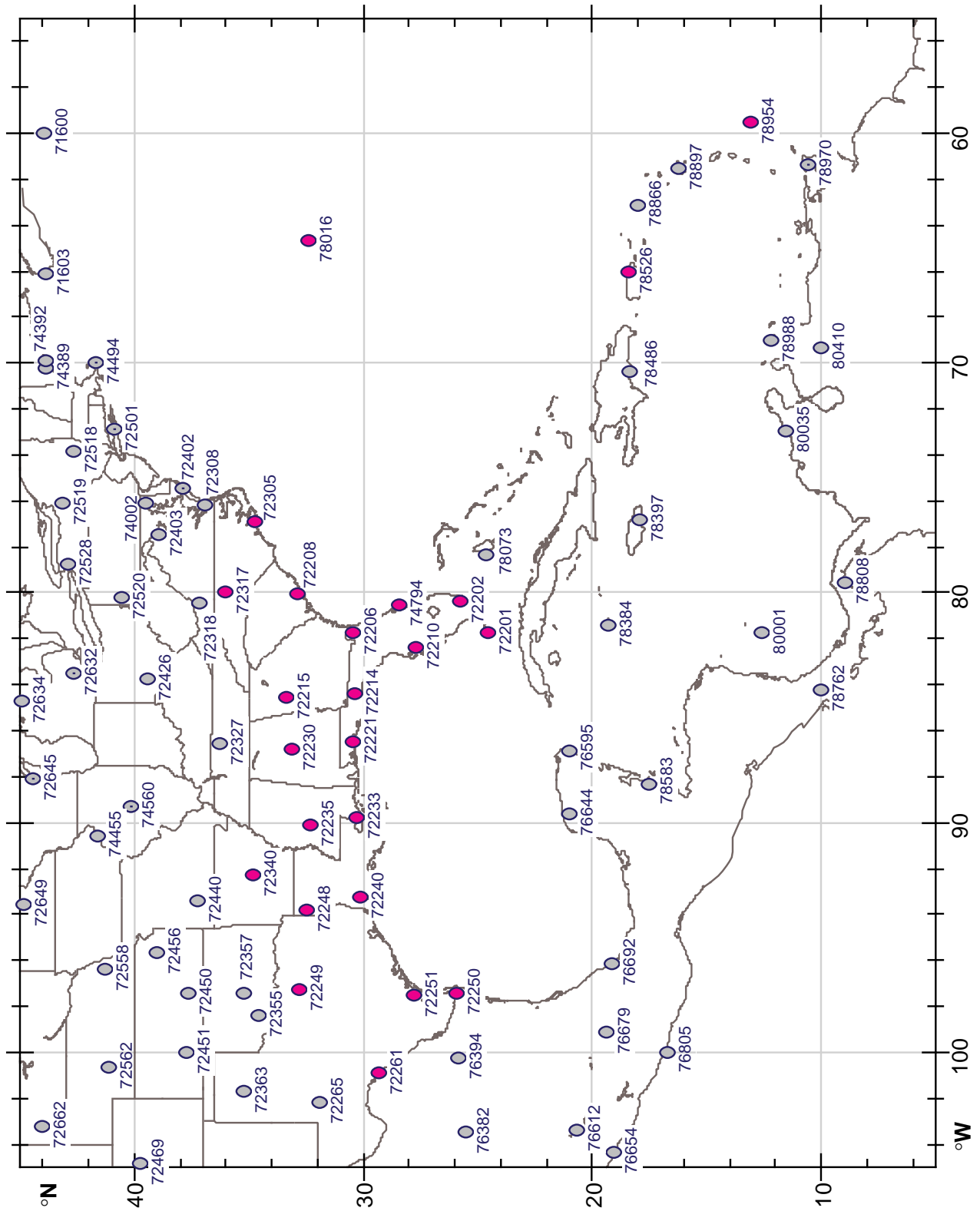
#	Station	Lat	Lon	Height	Station Location	#	Station	Lat	Lon	Height	Station Location
1	MMCN	27.32	-112.30	10 (m)	SANTA ROSALIA	32	MMMY	25.78	-100.1	10 (m)	MONTERREY/GEN MARIA
2	MMLT	26.02	-111.35	10	LORETO	33	MMAA	16.77	-99.75	10	ACAPULCO/G. ALVAREZ
3	MMHO	29.07	-110.97	10	HERMOSILLO INTL	34	MMNL	27.43	-99.57	10	NUEVO LAREDO INTL
4	MMGM	27.97	-110.93	10	GUAYMAS INTL ARPT	35	MMTO	19.35	-99.57	10	TOLUCA/JOSE MARIA
5	MMLP	24.07	-110.37	10	LA PAZ INTL ARPT	36	MMCB	18.92	-99.25	10	CUERNAVACA
6	MMSD	23.15	-109.70	10	SAN JOSE DEL CABO	37	MMMX	19.43	-99.10	10	MEXICO CITY/LICENCI
7	MMLM	25.68	-109.08	10	LOS MOCHIS ARPT	38	MMCV	23.72	-98.97	10	CIUDAD VICTORIA APT
8	MMCL	24.82	-107.40	10	CULIACAN (CITY)	39	MMTL	20.08	-98.37	10	TULANCINGO
9	MMMZ	23.17	-106.27	10	MAZATLAN/G BUELNA	40	MMRX	26.02	-98.23	10	REYNOSA INTL ARPT
10	MMCU	28.70	-105.97	10	CHIHUAHUA INTL ARPT	41	MMPB	19.03	-98.20	10	PUEBLA
11	MMPR	20.68	-105.25	10	PUERTO VALLARTA/LIC	42	MMTM	22.28	-97.87	10	TAMPICO/GEN FJ MINA
12	MMEP	21.52	-104.90	10	TEPIC	43	MMMA	25.77	-97.53	10	MATAMOROS INTL
13	MMZO	19.15	-104.57	10	MANZANILLO INTL	44	MMPA	20.50	-97.47	10	POZA RICA/PALIZADA
14	MMDO	24.13	-104.53	10	DURANGO ARPT	45	MMPs	15.87	-97.08	10	PUERTO ESCONDIDO
15	MMIO	25.45	-103.98	10	SALTILLO	46	MMOX	16.97	-96.73	10	OAXACA/XOXOCOTLAN
16	MMIA	19.27	-103.58	10	COLIMA	47	MMBT	15.78	-96.27	10	BAHIAS DE HUATULCO
17	MMZP	20.75	-103.47	10	ZAPOPAN (MIL)	48	MMVR	19.15	-96.18	10	GEN. HERIBERTO JARA
18	MMTC	25.53	-103.45	10	TORREON ARPT	49	MMIT	16.45	-95.08	10	IXTEPEC OX
19	MMGL	20.52	-103.32	10	DON MIGUEL/GUADALAJ	50	MMMT	18.10	-94.58	10	MINATITLAN
20	MMZC	22.90	-102.68	10	ZACATECAS ARPT	51	MMTG	16.75	-93.12	10	TUXTLA GUTIERREZ A
21	MMAS	21.88	-102.30	10	AGUASCALIENTES	52	MMTB	16.45	-93.07	10	TUXTLA GUTIERREZ
22	MMLC	17.98	-102.22	10	LAZARO CARDENAS	53	MMVA	18.00	-92.82	10	VILLAHERMOSA
23	MMPN	19.40	-102.03	10	URUAPAN/GEN RAYON	54	MMTP	14.78	-92.38	10	TAPACHULA
24	MMLO	21.00	-101.48	10	DEL BAJIO/LEON	55	MMCE	18.65	-91.80	10	CIUDAD DEL CARMEN
25	MMZH	17.60	-101.47	10	IXTAPA-ZIHUATANEJO	56	MMCP	19.85	-90.55	10	CAMPECHE/IGNACIO
26	MMMV	26.88	-101.42	10	MONCLOVA	57	MMMD	20.98	-89.65	10	MERIDA INTL ARPT
27	MMMM	19.85	-101.03	10	MORELIA NEW	58	MMCT	20.64	-88.45	10	CHICHEN-ITZA
28	MMSP	22.15	-100.98	10	SAN LUIS POTOSI	59	MMCM	18.50	-88.30	10	CHETUMAL
29	MMPG	28.70	-100.52	10	PIEDRAS NEGRAS	60	MMCZ	20.53	-86.93	10	COZUMEL (CIV/MIL)
30	MMQT	20.60	-100.38	10	QUERETARO	61	MMUN	21.03	-86.87	10	CANCUN INTL ARPT
31	MMAN	25.87	-100.23	10	MONTERREY INTL ARPT						

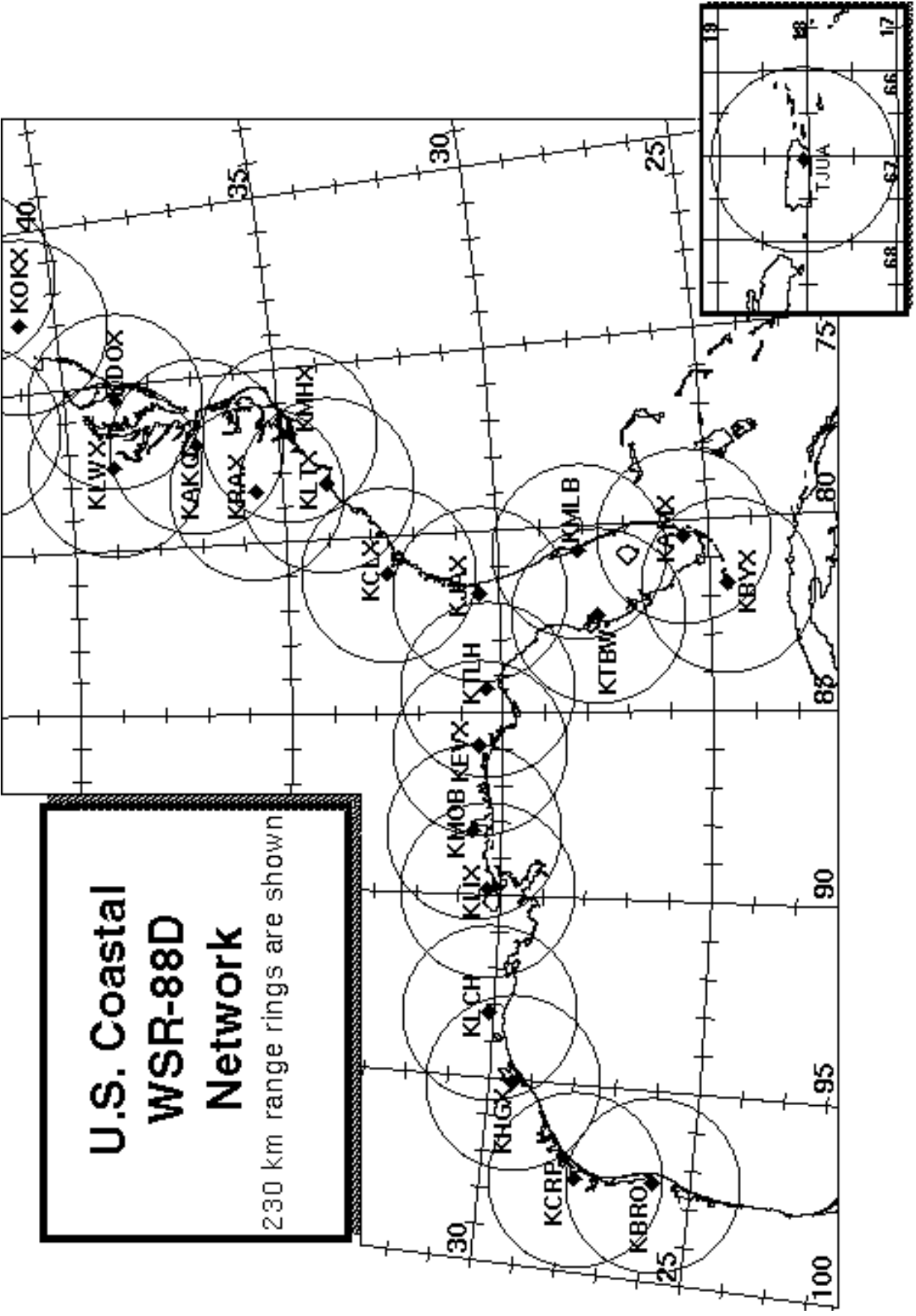


#	Station	Lat	Lon	Station Location	#	Station	Lat	Lon	Station Location
1	MGRT	14.53	-91.67	RETALHULEU (MIL) GU	27	MHTR	15.93	-85.93	TRUJILLO HO
2	MGQZ	14.83	-91.52	QUEZALTENANGO GU	28	MHNJ	16.47	-85.92	GUANAJA HO
3	MGHT	15.32	-91.47	HUEHUETENANGO GU	29	MHCA	14.90	-85.91	CATACAMAS HO
4	MGSI	13.92	-90.82	SAN JOSE (CIV/MIL) GU	30	MNRS	11.42	-85.83	RIVAS NK
5	MGGT	14.58	-90.52	GUATEMALA/LA AURORA GU	31	MRLB	10.60	-85.55	LIBERIA/TOMAS GUARD CS
6	MGCB	15.48	-90.32	COBAN GU	32	MRNC	10.15	-85.45	NICOYA CS
7	MGFL	16.92	-89.88	FLORES/SANTA ELENA GU	33	MNJU	12.10	-85.37	JUIGALPA NK
8	MGTK	16.90	-89.85	TIKAL GU	34	MRCH	9.98	-84.78	CHACARITA CS
9	MGZA	14.97	-89.53	ZACAPA GU	35	MROC	10.00	-84.22	SAN JOSE/SANTAMARIA CS
10	MHSR	14.78	-88.78	SANTA ROSA DE COPAN HO	36	MRPV	9.95	-84.15	TOBIAS BOLANOS INTL CS
11	MGPB	15.72	-88.60	PUERTO BARRIOS(MIL) GU	37	MHIC	17.40	-83.93	ISLAS DEL CISNE HO
12	MZBZ	17.53	-88.30	BELIZE INTL ARPT BH	38	MHPL	15.22	-83.80	PUERTO LEMPIRA HO
13	MHLE	14.33	-88.17	LA ESPERANZA HO	39	MNBL	12.00	-83.77	BLUEFIELDS NK
14	MHLM	15.45	-87.93	LA MESA/PEDRO SULA HO	40	MRPM	8.95	-83.47	PALMAR SUR CS
15	MHAM	13.28	-87.67	AMAPALA/LOS PELONAS HO	41	MNPC	14.05	-83.37	PUERTO CABEZAS(MIL) NK
16	MHSC	14.38	-87.62	SOTO CANO AB HO	42	MRLM	10.00	-83.05	LIMON INTL ARPT CS
17	MHTE	15.72	-87.48	TELA HO	43	MPCH	9.43	-82.52	CAPTAIN MANUEL NINO PM
18	MHTG	14.05	-87.22	TEGUCIGALPA/TONCONT HO	44	MPDA	8.40	-82.42	DAVID/ENRIQUE MALEK PM
19	MHCH	13.30	-87.18	CHOLUTECA HO	45	MPBO	9.35	-82.25	BOCAS DEL TORO INTL PM
20	MNCH	12.63	-87.13	CHINANDEGA NK	46	MPSA	8.08	-80.95	SANTIAGO PM
21	MHYR	15.17	-87.12	YORO HO	47	MPNU	7.83	-80.28	AUGUSTO VERGARA PM
22	MHLC	15.73	-86.87	LA CEIBA/GOLOSON HO	48	MPCF	9.35	-79.87	ENRIQUE ADOLFO JIME PM
23	MHRO	16.32	-86.53	ROATAN HO	49	MPHO	8.92	-79.60	HOWARD AFB PM
24	MNMG	12.15	-86.17	MANAGUA/AUGUSTO CES NK	50	MPMG	8.98	-79.52	MARCOS A. GELABERT PM
25	MHNO	16.47	-86.07	GUANAJA HO	51	MPTO	9.05	-79.37	TOCUMEN/GEN. OMAR PM
26	MNJG	13.08	-85.98	JINOTEGA NK	52	MPLP	8.40	-78.13	LA PALMA PM

Station Lat Lon Station Location

Appendix C: DOD/NWS RAWIN/RAOB and NWS Coastal Land-based Radar Locations





APPENDIX D: PRINCIPAL DUTIES OF THE NOAA SCIENTIFIC PERSONNEL

CAUTION

Flight operations are routinely conducted in turbulent conditions. Shock-mounted electronic and experimental racks surround most seat positions. Therefore, *for safety onboard the aircraft all personnel should wear a flight suit and closed toed shoes*. For comfort, personnel should bring a jacket or sweater, as the cabin gets cold during flight.

Smoking is prohibited within 50 ft of the aircraft while they are on the ground. No smoking is permitted on the aircraft at any time.

Section 4-401, of the NOAA Safety Rules Manual state that: “Don’t let your attention wander, either through constant conversation, use of cell phone or sightseeing while operating vehicles. Drivers must use caution and common sense under all conditions. Operators and passengers are not permitted to smoke or eat in the government vehicles. Cell phone use is permitted while car is parked.”

GENERAL INFORMATION FOR ALL SCIENTIFIC MISSION PARTICIPANTS

Mission participants are advised to carry the proper personal identification [i.e., travel orders, "shot" records (when appropriate), and passports (when required)]. Passports will be checked by AOC personnel prior to deployment to countries requiring it. All participants must provide their own meals for in-flight consumption. AOC provides a refrigerator, microwave, coffee, utensils, condiments, ice, water, and soft drinks for a nominal fee per flight.

D.1 Field Program Director/ IFEX Chief Scientist;

- (1) Responsible to the HRD director for the implementation of the Hurricane Field Program Plan.
- (2) Only official communication link to AOC. Communicates flight requirements and changes in mission to AOC.
- (3) Only formal communication link between AOML and CARCAH during operations. Coordinates scheduling of each day's operations with AOC only after all (POD) reconnaissance requirements are completed between CARCAH and AOC.
- (4) Convenes the Hurricane Field Program Operations Advisory Panel. This panel selects missions to be flown.
- (5) Provides for pre-mission briefing of flight crews, scientists, and others (as required).
- (6) Assigns duties of field project scientific personnel. Ensures safety during the field program.

(7) Coordinates press statements with NOAA/Public Affairs.

D.2 Assistant Field Program Director

(1) Assumes the duties of the field program director in his absence.

D.3 Miami Ground Operations Center: Senior Team Leader

(1) During operations, the MGOC senior team leader is responsible for liaison between HRD base and field personnel and other organizations as requested by the field program director, the director of HRD, or their designated representatives.

D.4 Named Experiment Lead Project Scientist

(1) Has overall responsibility for the experiment.

(2) Coordinates the project and sub-project requirements.

(3) Determines the primary modes of operation for appropriate instrumentation.

(4) Assists in the selection of the mission.

(5) Provides a written summary of the mission to the field program director (or his designee) at the experiment's debriefing.

D.5 Lead Project Scientist

(1) Has overall scientific responsibility for his/her aircraft.

(2) Makes in-flight decisions concerning alterations of: (a) specified flight patterns; (b) instrumentation operation; and (c) assignment of duties to on-board scientific project personnel.

(3) Acts as project supervisor on the aircraft and is the focal point for all interactions of project personnel with operational or visiting personnel.

(4) Conducts preflight and post flight briefings of the entire crew. Completes formal checklists of safety, instrument operations - noting malfunctions, problems, etc.

(5) Provides a written report of each mission day's operations to the field program director at the mission debriefing.

D.6 Cloud Physics Scientist

(1) Has overall responsibility for the cloud physics project on the aircraft.

(2) Briefs the on-board lead project scientist on equipment status before takeoff.

(3) Determines the operational mode of the cloud physics sensors (i.e., where, when, and at what rate to sample).

- (4) Operates and monitors the cloud physics sensors and data systems.
- (5) Provides a written preflight and post flight status report and flight summary of each mission day's operations to the on-board lead project scientist at the post flight debriefing.

D.7 Boundary-Layer Scientist

- (1) Insures that the required number of AXCPs, AXBTs, and AXCTDs are on the aircraft for each mission.
- (2) Operates the AXCP, AXBT, and AXCTD equipment (as required) on the aircraft.
- (3) Briefs the on-board lead project scientist on equipment status before takeoff.
- (4) Determines where and when to release the AXCPs, AXBTs, and AXCTDs (as appropriate) subject to clearance by flight crew.
- (5) Performs preflight, inflight, and post flight checks and calibrations.
- (6) Provides a written preflight and post flight status report and a flight summary of each mission day's operations to the on-board lead project scientist at the post flight debriefing.

D.8 Radar Scientist

- (1) Determines optimum meteorological target displays. Continuously monitors displays for performance and optimum mode of operations. Thoroughly documents modes and characteristics of the operations.
- (2) Provides a summary of the radar display characteristics to the on-board lead project scientist at the post flight debriefing.
- (3) Maintains tape logs.
- (4) During the ferry to the storm, the radar scientist should record a tape of the sea return on either side of the aircraft at elevation angles varying from -20° through $+20^{\circ}$. This tape will allow correction of any antenna mounting biases or elevation angle corrections.

D.9 Dropsonde Scientist

- (1) Processes dropsonde observations on HRD workstation for accuracy.
- (2) Provides TEMP drop message for ASDL, transmission or insures correct code in case of automatic data transmission.

D.10 Workstation Scientist

- (1) Operates HRD's workstation.

- (2) Runs programs that determine wind center and radar center as a function of time, composite flight-level and radar reflectivity relative to storm center and then process and code dropwindsonde observations.
- (3) Checks data for accuracy and sends appropriate data to ASDL computer.
- (4) Maintains records of the performance of the workstation and possible software improvements.

APPENDIX E: NOAA RESEARCH OPERATIONAL PROCEDURES AND CHECK LISTS

Hurricane Field Program Deployment Safety Checklist

The Field Program Director is responsible for making sure safety is enforced and ensuring necessary materials are in place and/or any actions have been completed before the start of the HFP. Field program participants are responsible for reviewing this checklist.

Scientist _____ Date _____

Before leaving AOML

- _____ 1. Contact MGOc personnel to notify departure time.
- _____ 2. Things to take
 - a. Flight bag (s)
 - b. Cell phone
 - c. List of HFP important numbers
 - d. HRD Field program plan
 - e. Flight suit

Ground transportation

- _____ 1. Arrange for ground transportation
- _____ 2. Visual inspection of government vehicle
 - a. Make sure tires do not appear to be flat
 - b. Check for any cracked/broken lights, windshield and mirrors
 - c. Check for any major dents around the vehicle
- _____ 3. Inspection inside the government vehicle
 - a. Check all lights work properly (head and tail lights, dome lights, dashboard and turn signal lights)
 - b. Make sure the engine, oil, or temperature indicator lights does not flash. *If so, contact facilities management.*
 - c. **Note** the gas and mileage
- _____ 4. Contents inside the government vehicle
 - a. Make sure there is first aid kit and fire extinguisher
 - b. Proper jack and lug wrench
 - c. Spare tire
 - d. Basic auto repair kit (i.e. road hazard reflector or flares)
 - e. *Consider carrying a flashlight*
- _____ 5. If possible, return vehicle with full tank (regular unleaded gasoline)
- _____ 6. Contact MGOc personnel upon returning

E.1 "Conditions-of-Flight" Commands

Mission participants should be aware of the designated "conditions-of-flight." There are five designated basic conditions of readiness encountered during flight. The pilot will set a specific condition and announce it to all personnel over the aircraft's PA (public address) and ICS (interphone communications systems). All personnel are expected to act in accordance with the instructions for the specific condition announced by the pilot. These conditions and appropriate actions are shown below.

CONDITION 1: TURBULENCE/PENETRATION. All personnel will stow loose equipment and fasten safety belts.

CONDITION 2: HIGH ALTITUDE TRANSIT/FERRY. There are no cabin stations manning requirements.

CONDITION 3: NORMAL MISSION OPERATIONS. All scientific and flight crew stations are to be manned with equipment checked and operating as dictated by mission requirements. Personnel are free to leave their ditching stations.

CONDITION 4: AIRCRAFT INSPECTION. After take-off, crew members will perform wings, engines, electronic bays, lower compartments, and aircraft systems check. All other personnel will remain seated with safety belts fastened and headsets on.

CONDITION 5: TAKE-OFF/LANDING. All personnel will stow or secure loose equipment, don headsets, and fasten safety belts/shoulder harnesses.

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 field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.
- _____ 4. Contact HRD members of crew to:
 - a. Assure availability for mission.
 - b. Review field program safety checklist
 - c. Arrange ground transportation schedule when deployed.
 - d. Determine equipment status.
- _____ 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
- _____ 5. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. 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).
- _____ 7. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- _____ 7. Make sure each HRD flight crew members have life vests
- _____ 7. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.
- _____ 8. Collect “mess” fee (\$2.00) from all on-board HRD flight crew members.

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 Lead Project Scientist Form.
- _____ 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

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. Obtain a copy of the radar DAT tapes and if possible a copy of the radar data-packet files should be copied onto a flash drive. Turn in with completed forms.
- _____ 6. Obtain a copy of the all VHS videos form aircraft cameras (3-4 approx.). Turn in with completed forms.
- _____ 7. Obtain a copy of CD with all flight data. Turn in with completed forms.
- _____ 8. Determine next mission status, if any, and brief crews as necessary.
- _____ 9. Notify MGOC as to where you can be contacted and arrange for any further coordination required.
- _____ 10. Prepare written mission summary using **Mission Summary** form (due to Field Program Director 1 week after the flight).

Lead Project Scientist Check List

Date _____ Aircraft _____ Flight ID _____

A. —Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	_____	Flight Director	_____
Radar	_____	Pilots	_____
Workstation	_____	Navigator	_____
Cloud Physics	_____	Systems Engineer	_____
Photographer/Observer	_____	Data Technician	_____
/Guests	_____	Electronics Technician	_____
Dropwindsonde	_____	Other	_____
AXB T/AXCP	_____		

B. Take-off and Landing Locations:

Take-Off: _____ Location: _____

Landing: _____ Location: _____

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind

D. Mission Briefing:

Form E-2

Page 2 of 5

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

Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / Cds /Expendables/ Printouts
Radar/LF				
Doppler Radar/TA				
Cloud Physics				
Data System				
GPS sondes				
AXBT/AXCP				
Ozone instrument				
Workstation				
Videography				

REMARKS:

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 #)

Mission Synopsis: (include plot of actual flight track)

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

Problems:(list all problems)

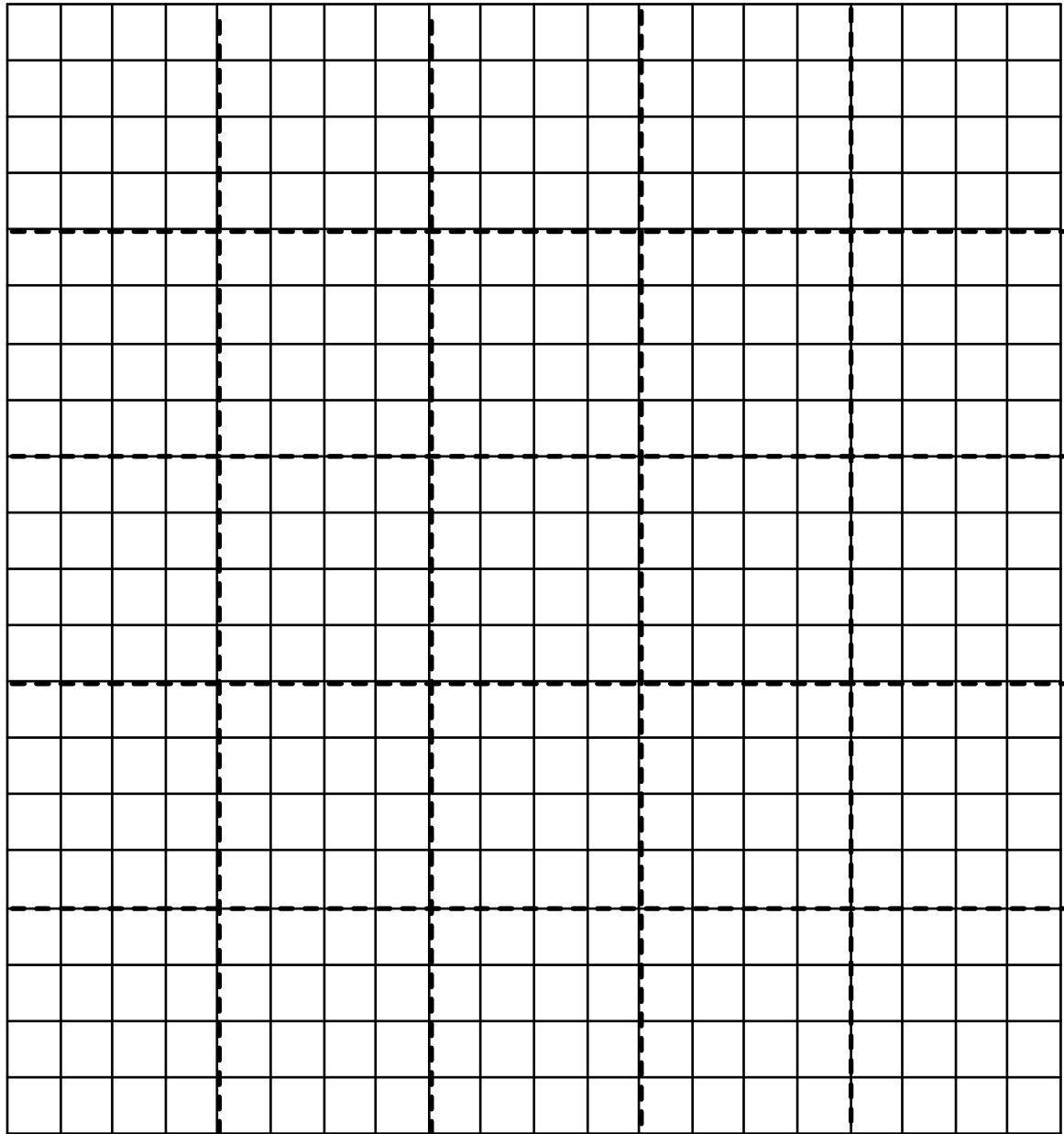
Expendables used in mission:

GPS sondes : _____
AXBTs : _____
Sonobuoys: _____

Observer's Flight Track Worksheet

Date _____ Flight _____ Observer _____

Latitude (°)



Longitude (°)

E.3 Cloud Physics Scientist

The on-board cloud physics scientist (CPS) is responsible for cloud physics data collection on his/her assigned aircraft. Detailed operational procedures are contained in the cloud physics kit supplied for each aircraft. General procedures follow. (Check off and initial.)

E.3.1 Preflight

- _____ 1. Determine status of cloud physics instrumentation systems and report to the on-board lead project scientist (LPS).
- _____ 2. Confirm mission and pattern selection from the on-board LPS.
- _____ 3. Select mode of instrument operation.
- _____ 4. Complete appropriate instrumentation preflight check lists as supplied in the cloud physics operator's manual.

E.3.2 In-Flight

- _____ 1. Operate instruments as specified in the cloud physics operator's manual and as directed by the on-board LPS.

E.3.3 Post flight

- _____ 1. Complete summary checklist forms and all other appropriate forms.
- _____ 2. Brief the LPS on equipment status and turn in completed check sheets to the LPS.
- _____ 3. Take cloud physics data tapes and other data forms and turn these data sets in as follows:
 - a. Outside of Miami-to the LPS.
 - b. In Miami-to AOML/HRD. [**Note:** all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- _____ 4. Debrief as necessary at MGOc or the hotel during a deployment.
- _____ 5. Determine the status of future missions and notify MGOc as to where you can be contacted.

Cloud Physics Scientist Check List

Date _____ **Aircraft** _____ **Flight ID** _____

A. —Instrument Status and Performance:

System	Pre-Flight	In-Flight	Downtime
PMS Probes 2D-P			
PMS Probes 2D-C			
PMS Probes FSSP			
Data System			
DRI Field Mills			
King Probe			
NCAR/NOAA CIP			
NCAR PIP			
NCAR FSSP			

B. —Remarks:

E.4 Boundary-Layer Scientist

The on-board boundary-layer scientist (BLS) is responsible for data collection from AXBTs, AXCPs, AXCTDs, BUOYs, and SST radiometers (if these systems are used on the mission). Detailed calibration and instrument operation procedures are contained in the air-sea interaction (ASI) manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

E.4.1 Preflight

- _____ 1. Determine the status of equipment and report results to the on-board lead project scientist (LPS).
- _____ 2. Confirm mission and pattern selection from the LPS.
- _____ 3. Select the mode of operation for instruments after consultation with the HRD/BLS and the LPS.
- _____ 4. Complete appropriate preflight check lists as specified in the ASI manual and as directed from the LPS.

E.4.2 In-Flight

- _____ 1. Operate the instruments as specified in the ASI manual and as directed by the on-board LPS.

E.4.3 Post flight

- _____ 1. Complete summary checklist forms and all other appropriate forms.
- _____ 2. Brief the on-board LPS on equipment status and turn in completed checklists to the LPS.
- _____ 3. Debrief as necessary at MGOc or the hotel during a deployment.
- _____ 4. Determine the status of future missions and notify MGOc as to where you can be contacted.

AXBT and Sonobuoy Check Sheet Summary

Flight _____ **Aircraft** _____ **Operator** _____

Number

- (1) Probes dropped _____
- (2) Failures _____
- (3) Failures with no signal _____
- (4) Failures with sea surface temperature, but terminated above thermocline _____
- (5) Probes that terminated above 250 m, but below thermocline _____
- (6) Probes used by channel number
 - CH12 _____
 - CH14 _____
 - CH16 _____
 - CH__ _____

NOTES:

E.5 Radar Scientist

The on-board radar scientist is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and checklists are contained in the operator's manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

E.5.1 Preflight

- _____ 1. Determine the status of equipment and report results to the lead project scientist (LPS).
- _____ 2. Confirm mission and pattern selection from the LPS.
- _____ 3. Select the operational mode for radar system(s) after consultation with the LPS.
- _____ 4. Complete the appropriate preflight calibrations and check lists as specified in the radar operator's manual.

E.5.2 In-Flight

- _____ 1. Operate the system(s) as specified in the operator's manual and as directed by the LPS or as required for aircraft safety as determined by the AOC flight director or aircraft commander.
- _____ 2. Maintain a written commentary in the radar logbook of tape and event times, such as the start and end times of F/AST legs. Also document any equipment problems or changes in R/T, INE, or signal status.

E.5.3 Post flight

- _____ 1. Complete the summary checklists and all other appropriate check lists and forms.
- _____ 2. Brief the LPS on equipment status and turn in completed forms to the LPS.
- _____ 3. Hand-carry all radar tapes and arrange delivery as follows:
 - a. Outside of Miami-to the LPS.
 - b. In Miami-to MGOC or to AOML/HRD. [**Note:** all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- _____ 4. Debrief at MGOC or the hotel during a deployment.
- _____ 5. Determine the status of future missions and notify MGOC as to where you can be contacted.

HRD Radar Scientist Check List

Flight ID: _____

Aircraft Number: _____

Radar Operators: _____

Radar Technician: _____

Number of digital magnetic tapes on board: _____

Component Systems Status:

MARS _____ Computer _____

DAT1 _____ DAT2 _____

LF _____ R/T Serial # _____

TA _____ R/T Serial # _____

Time correction between radar time and digital time: _____

Radar Post flight Summary

Number of digital tapes used: DAT1 _____

DAT2 _____

Significant down time:

DAT1 _____ Radar LF _____

DAT2 _____ Radar TA _____

Other Problems:

E.6 Dropsonde Scientist

The lead project scientist (LPS) on each aircraft is responsible for determining the distribution patterns for dropwindsonde releases. Predetermined desired data collection patterns are illustrated on the flight patterns. However, these patterns often are required to be altered because of clearance problems, etc. Operational procedures are contained in the operator's manual. The following list contains more general supplementary procedures to be followed. (Check off and initial.)

E.6.1 Preflight

- _____ 1. Determine the status of the AVAPS and HAPS. Report results to the LPS.
- _____ 2. Confirm the mission and pattern selection from the LPS and assure that enough dropsondes are on board the aircraft.
- _____ 3. Modify the flight pattern or drop locations if requested by AOC to accommodate changes in storm location or closeness to land.
- _____ 4. Complete the appropriate preflight set-up and checklists.

E.6.2 In-Flight

- _____ 1. Operate the system as specified in the operator's manual.
- _____ 2. Ensure the AOC flight director is aware of upcoming drops.
- _____ 3. Ensure the AVAPS operator has determined that the dropsonde is (or is not) transmitting a good signal. Recommend if a backup dropsonde should be launched in case of failure.
- _____ 4. Report the transmission of each drop and fill in the Dropwindsonde Scientist Log.

E.6.3 Post flight

- _____ 1. Complete Dropwindsonde Scientist Log.
- _____ 2. Brief the LPS on equipment status and turn in reports and completed forms.
- _____ 3. Hand-carry all dropwindsonde data tapes or CDs as follows:
 - a. Outside of Miami-to the LPS or PI.
 - b. In Miami-to AOML/HRD. [**Note:** all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- _____ 4. Debrief at the MGOC or the hotel during a deployment.
- _____ 5. Determine the status of future missions and notify MGOC as to where you can be contacted.

APPENDIX F: SYSTEMS OF MEASURE AND UNIT CONVERSION FACTORS

Table F-1 Systems of measure: Units, symbols, and definitions

Quantity	SI Unit	Early Metric	Maritime	English
<i>length</i>	meter (m)	centimeter (cm)	foot (ft)	foot (ft)
<i>distance</i>	meter (m)	kilometer (km)	nautical mile (nm)	mile (mi)
<i>depth</i>	meter (m)	meter (m)	fathom (fa)	foot (ft)
<i>mass</i>	kilogram (kg)	gram (g)		
<i>time</i>	second (s)	second (s)	second (s)	second (s)
<i>speed</i>	meter per second (mps)	centimeter per second (cm s^{-1})	knot (kt) (nm h^{-1})	miles per hour (mph)
		kilometers per hour (km h^{-1})		
<i>temperature-sensible</i>	degree Celsius ($^{\circ}\text{C}$)	degree Celsius ($^{\circ}\text{C}$)	---	degree Fahrenheit ($^{\circ}\text{F}$)
<i>-potential</i>	Kelvin (K)	Kelvin (K)	---	Kelvin (K)
<i>force</i>	Newton (N) (kg m s^{-2})	dyne (dy) (g cm s^{-2})	poundal (pl)	poundal (pl)
<i>pressure</i>	Pascal (Pa) (N m^{-2})	millibar (mb) (10^3 dy cm^{-2})	inches (in) mercury (Hg)	inches (in) mercury (Hg)

Table F-2. Unit conversion factors

Parameter	Unit	Conversions
<i>length</i>	1 in	2.540 cm
	1 ft	30.480 cm
	1 m	3.281 ft
<i>distance</i>	1 nm (nautical mile)	1.151 mi 1.852 km 6080 ft
	1 mi (statute mile)	1.609 km 5280 ft
	1 $^{\circ}$ latitude	59.996 nm 69.055 mi 111.136 km
<i>depth</i>	1 fa	6 ft 1.829 m
<i>mass</i>	1 kg	2.2 lb
<i>force</i>	1 N	10^5 dy
<i>pressure</i>	1 mb	102 Pa 0.0295 in Hg
	1 lb ft $^{-2}$	4.88 kg m $^{-2}$
<i>speed</i>	1 m s $^{-1}$	1.9
	at. 6 h $^{-1}$	10 kt

APPENDIX G: AIRCRAFT SCIENTIFIC INSTRUMENTATION

Instrument	Parameter	PI	Group	Electronics Location	Instrument Location
Navigational					
INE1/2	lat, lon		AOC		
GPS1/2	lat, lon		AOC		
Honeywell HG9550 altimeter	Radar altitude		AOC		
Standard Met.					
Buck1101c, Edgetech Vigilant, Maycom TDL	T_d		AOC		
Rosemount temp	T, T'		AOC		
Static pressure	p		AOC		
Dynamic pressure	p'		AOC		
Horizontal wind	V_h		AOC		
Vertical wind	w		AOC		
Infrared Radiation					
Side CO ₂ radiometer	T		AOC		
AOC down radiometer	SST		AOC	Under floor	Down radiometer port
Weather Radar					
LF radar	R	Gamache	AOC	Station 3	Lower fuselage
TA Doppler radar, French antenna	V, R	Gamache	AOC	Station 3	Fuselage tail
Passive Microwave					
AOC SFMR/pod	V_{10}, Z	Goldstein	AOC	pod	Inner left pylon
Active Microwave					
ProSensing WSRA	HS, WPS, WDS	Popstefanija	HRD, NHC	Fore Press Dome	Fore Press Dome
Passive GPS					
GPS bistatic altimeter	ocean height	Walsh	GSFC, ESRL	Station 5	up/down field mill ports
Airborne Ocean Profiler					
HRD/UM AXBT receivers (2), DAT recorders (4)	TS vs z	Shay	UM	Station 2	Free-fall chute
AOC AXBT receivers	TS vs z	Smith	AOC	Station 5	
Dropsonde System					
GPS AVAPS Dropsonde-8CH	V, T, RH, p vs z	Smith	AOC	Station 5	Aft station 5
Video Systems					
Down video	$F(\%), WD$		AOC		Vert. Camera port
Side, nose video	LCL		AOC		Side, nose camera port
Turbulence System					
Friehe radome gust probe system	U', V', W', T'	Zhang, Drennan	HRD, UM	Nose radome bulkhead	Nose radome
On board processing					
Mac Notebook	LPS/X-chat	Griffin	HRD		
Mac Notebook (if RVP-8 non-operational)	Radar superobs	Griffin	HRD	Station 3	
HRD workstation (if RVP-8 non-operational)	Radar processing/Edit sonde	Griffin	HRD	Station 3	
Real-time data communications systems	FL, radar data	Chang, Carswell	NESDIS	Station 3	
ASDL (100 baud)	$V, T, T_d, p, PA, D, V_{10}, Z$	Goldstein	AOC		
Wind Lidar		Atlas			

Table G.1: NOAA/AOC WP-3D (N42RF) instrumentation

AIRCRAFT SCIENTIFIC INSTRUMENTATION (CONT'D)

Instrument	Parameter	PI	Group	Electronics Location	Instrument Location
Navigational					
INE1/2	lat, lon		AOC		
GPS1/2	lat, lon		AOC		
Honeywell HG9550 altimeter	Radar altitude		AOC		
Standard Met.					
Buck1101c, Edgetech Vigilant, Maycom TDL	T_d		AOC		
Rosemount temp	T, T'		AOC		
Static pressure	p		AOC		
Dynamic pressure	p'		AOC		
Horizontal wind	V_h		AOC		
Vertical wind	w		AOC		
Infrared Radiation					
Side CO ₂ radiometer	T		AOC		
AOC down radiometer	SST		AOC	Under floor	Down radiometer port
Weather Radar					
LF radar	R	Gamache	AOC	Station 3	Lower fuselage
TA Doppler radar, NOAA/AOC antenna	V, R	Gamache	AOC	Station 3	Fuselage tail
Passive Microwave					
AOC SFMR/pod	V_{10} , Z	Goldstein	AOC	pod	Inner left pylon
USFMR (UMASS)	V_{10} , Z	Esteban, Carswell, Chang	UMass, NESDIS	Station 7	Laser hole
Active Microwave					
AWRAP (CSCAT, KSCAT)	V_{10} , Z, V vs z	Zhang, Chang	Umass, NESDIS	Station 7	Fore/aft pressure domes
Airborne Ocean Profiler					
AOC AXBT receivers	TS vs z	Smith	AOC	Station 5	
Dropsonde System					
GPS AVAPS Dropsonde-4CH	V, T, RH, p vs z	Smith	AOC	Station 5	Aft station 5
Video System					
Down video	F(%), WD		AOC		Vert. Camera port
Side, nose video	LCL		AOC		Side, nose camera port
Cloud Microphysics/Sea Spray					
DMT CCP probe	Cloud particle spectra	Black	AOC		Outer left pylon
DMT PIP probe	Precipitation particle spectra	Black	AOC		Outer left pylon
DMT CAS probe	Aerosol/cloud droplet spectra	Black	AOC		Outer left pylon
DMT DAS	processor	Black	AOC	Station 4	
TECO Ozone sampler	O ₃	Carsey	AOML		
CCN Counter (DMT or other)	Aerosol/cloud droplet spectra	Black	AOML		
SEA probe	Total water	R. Black	AOC, HRD		
Turbulence Systems					
Friehe radome gust probe system	U', V', W', T'	Drennan	RSMAS	Nose radome bulkhead	Nose radome
LICOR-750 water vapor analyzer	q'	Drennan	RSMAS, AOC	Nose radome bulkhead	Nose Radome bulkhead
On board processing					
Mac Notebook	Radar superobs	Griffin	HRD	Station 3	
HRD workstation	Radar	Griffin	HRD	Station 3	

	processing/Edits onde				
Mac Notebook	LPS/x-chat	Griffin	HRD		
Real-time data communications systems	FL, radar data	Chang, Carswell	NESDIS		
ASDL (100 baud)	V, T, Td, p, PA, D, V ₁₀ , Z	Goldstein	AOC		

Table G.2: NOAA/AOC WP-3D (N43RF) instrumentation

APPENDIX G: AIRCRAFT SCIENTIFIC INSTRUMENTATION (CONT'D)

Instrument	Parameter	PI	Group
Navigational			
INE1/2	lat, lon		AOC
GPS1/2	lat, lon		AOC
Honeywell HG9550 altimeter	Radar altitude		AOC
Standard Met.			
Buck1101c, Edgetech Vigilant, Maycom TDL	T_d		AOC
Rosemount temp	T, T'		AOC
Static pressure	p		AOC
Dynamic pressure	p'		AOC
Horizontal wind	V_h		AOC
Vertical wind	w		AOC
Weather Radar			
TA Doppler radar	V, R	Gamache	AOC
Passive Microwave			
SFMR	V_{10}, Z	Goldstein	AOC
Dropsonde Systems			
GPS AVAPS Dropsonde-8CH	V, T, RH, p vs z	Smith	AOC
On board processing			
Real-time data communications systems	FL, radar data	Chang, Carswell	AOC
HP-UX Workstations			
	radar data, sondes	Gamache	HRD
MacBook Laptops	radar data, x-chat	Gamache	HRD

Table G.3 (Cont'd): NOAA/AOC G-IV (N49RF) instrumentation

APPENDIX H: NOAA EXPENDABLE AND RECORDING MEDIA

Experiment	GPS Dropwindsondes		AXBTs	CADs
	<i>G-IV</i>	<i>42/43RF</i>	<i>42/43RF</i>	<i>42/43RF</i>
Three-Dim Doppler Winds	-	20	9	9
TC Synoptic Flow	30	30	-	-
Coyote UAS	-	14	9	9
Doppler Wind Lidar	-	10	-	-
Tropical Cyclogenesis	25	25	9	9
Rapid Intensification	25	20	9	9
TC-Ocean Interaction	-	20	15	15
Saharan Air Layer	15	20	-	-
TC Landfall and Decay	-	15	-	-
Arc Cloud	-	10	-	-
Boundary Layer entrainment	-	12	6	6
Aerosol/Cloud droplet	-	-	-	-

Table H-1.1: Required expendables for 2010 experiments per flight day for 42/43RF and the G-IV.

	DATs ¹	CDs ²	D-Audio	DVD +R DL
Experiment			AXBTs	Nose/Side/Down
Three-Dim Doppler Winds	42/3: 2 / 2 / 1 = 5	3 / 2 / 1 = 6	6	1 / 2 / 1 = 4
TC Synoptic Flow	2 / 2 / 1 = 5	42/3: 3 / 2 / 1 = 6 49: 0 / 0 / 1 = 1	-	1 / 2 / 1 = 4
Coyote UAS	-	-	6	-
Doppler Wind Lidar	-	-	-	-
Tropical Cyclogenesis	2 / 2 / 1 = 5	42/3: 3 / 2 / 1 = 6 49: 0 / 0 / 1 = 1	6	1 / 2 / 1 = 4
Rapid Intensification	2 / 2 / 1 = 5	42/3: 3 / 2 / 1 = 6 49: 0 / 0 / 1 = 1	6	1 / 2 / 1 = 4
TC-Ocean Interaction	2 / 2 / 1 = 5	3 / 2 / 1 = 6	6	1 / 2 / 1 = 4
Saharan Air Layer	2 / 2 / 1 = 5	42/3: 3 / 2 / 1 = 6 49: 0 / 0 / 1 = 1	-	1 / 2 / 1 = 4
TC Landfall and Decay	2 / 2 / 1 = 5	3 / 2 / 1 = 6	-	1 / 2 / 1 = 4
Arc Cloud	-	-	-	-
Boundary Layer entrainment	-	-	6	-
Aerosol/Cloud droplet	-	-	-	-

1 DATs required for Slow and Fast flight-level / Radar data / HRD Workstation Data

2 CDs required for Slow and Fast flight-level / Cloud Physics / AVAPS

NOTE: 1 DAT and 1 CD are required for G-IV missions

Table H-1.2. Required recording media for 2006 experiments per flight day for 42RF and the G-IV

ACRONYMS AND ABBREVIATIONS

θ_e	equivalent potential temperature
ABL	atmospheric boundary-layer
A/C	aircraft
ACLAIM	Airborne Coherent Lidar for Advanced In-flight Measurements
AES	Atmospheric Environment Service (Canada)
AFRES	U. S. Air Force Reserve
AOC	Aircraft Operations Center
AOML	Atlantic Oceanographic and Meteorological Laboratory
ASDL	aircraft-satellite data link
AXBT	airborne expendable bathythermograph
AXCP	airborne expendable current probe
AXCTD	airborne expendable conductivity, temperature, and depth probe
CARCAH	Chief, Aerial Reconnaissance Coordinator, All Hurricanes
CDO	central dense overcast
CIRA	Cooperative Institute for Research in the Atmosphere
C-MAN	Coastal-Marine Automated Network
CP	coordination point
CW	cross wind
DLM	deep-layer mean
DOD	Department of Defense
DOW	Doppler on Wheels
DRI	Desert Research Institute (at Reno)
E	vector electric field
EPAC	Eastern Pacific
ETL	Environmental Technology Laboratory
EVTD	extended velocity track display
FAA	Federal Aviation Administration
F/AST	fore and aft scanning technique
FEMA	Federal Emergency Management Agency
FL	flight level
FP	final point
FSSP	forward scattering spectrometer probe
GFDL	Geophysical Fluid Dynamics Laboratory
G-IV	Gulfstream IV-SP aircraft
GOMWE	Gulf of Mexico Warm Eddy
GPS	global positioning system
HL	Hurricanes at Landfall
HRD	Hurricane Research Division
INE	inertial navigation equipment
IP	initial point (or initial position) IWRSS Improved Weather Reconnaissance System
JW	Johnson-Williams
Ku-SCAT	Ku-band scatterometer
LF	lower fuselage (radar)
LIP	Lightning Instrument Package
LPS	Lead Project Scientist
MCS	mesoscale convective systems
MGOC	Miami Ground Operations Center
MLD	Mixed Layer Depth

MPO	Meteorology and Physical Oceanography
NASA	National Aeronautics and Space Administration
NCAR	National Center for Atmospheric Research
NCEP	National Centers for Environmental Prediction
NDBC	NOAA Data Buoy Center
NESDIS	National Environmental Satellite, Data and Information Service
NHC	National Hurricane Center
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OML	oceanic mixed-layer
PDD	pseudo-dual Doppler
PMS	Particle Measuring Systems
POD	Plan of the Day
PPI	plan position indicator
PV	potential vorticity
RA	radar altitude
RAOB	radiosonde (upper-air observation)
RAWIN	rawinsonde (upper-air observation)
RECCO	reconnaissance observation
RHI	range height indicator
RSMAS	Rosenstiel School of Marine and Atmospheric Science
SFMR	Stepped-Frequency Microwave Radiometer
SLOSH	sea, lake, and overland surge from hurricanes (operational storm surge model)
SRA	Scanning Radar Altimeter
SST	sea-surface temperature
TA	tail (radar)
TAS	true airspeed
TC	tropical cyclone
TOPEX	The Ocean Topography Experiment
TPC	Tropical Prediction Center (at NHC)
UMASS	University of Massachusetts (at Amherst)
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USWRP	U. S. Weather Research Program
UTC	universal coordinated time (U.S. usage; same as "GMT" and "Zulu" time)
VTD	velocity-track display

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