APPENDIX IV

40. AMIS Weather Parameters

40.1 AMIS Weather Parameters. In the usage of this user's guide, particularly when producing horizontal and vertical analyses, you are asked to select a “parameter". This appendix provides an alphabetic listing of the AMIS weather parameters (Table 40-1) by mnemonic together with their range and units. Each mnemonic is described briefly and some indication is given about its origin:

(R) Implies that the parameter has been received from the external networks. Typically GRIB, UGDF, FBD, and vector graphics (VG) fall into this category.

(D) Implies that the parameter has been derived through the AMIS system. Some parameters are derived for use in a display but not stored on the system.

(G) Refers to LGG products.

Note in the following tables, two symbols are used to indicate exponential relationships:

e Means exponent, e.g., 1.0e-5 = 1.0×10^{-5}

** Means exponent, e.g., meter**2 = meter x 10^{2}

Therefore, sec**-1 1.0e-5 = (1/sec) x 10^{-5}.

TABLE 40-1. Weather Parameter Units

MNEM	Units	Range	Point of Ref	FBD	UGDF	LGG	VG	Description
A-	N/A			D		G		Addition, Advection or Subtraction Field
ALT	Inches Mercury	15-33		R		G		Altimeter Setting
ALT1-5	N/A			D				Svr Alternative Indices
BC	Enum Code	160-168		R				Barometric Characteristic
BDP	Deg C	0-99			R		R	Boundary Layer Dewpoint Depression
BLK	AN		Geog Regions	R				WMO Block Number
+BE	Joules/Kg			D				Positive Bouyant Energy
CAL	AN			R				ICAO Station Call Letters
CCL	mb	150-1050		D				Convective Condensation Level
CDB	Feet	0-5.0e4	Sea Level		R			Contrail Base
CDB	Enum Code				R			Cloud Base
CDT	Feet	0-7.0e4	Sea Level		R			Contrail Top
CDT	Enum Code				R			Cloud Top
CHA	Percent	0-100			R		R	High Cloud Amount
CIG	Feet	0-5.0e4	Station Level	R		G		Cloud Ceiling Altitude
CLA	Percent	0-100			R		R	Low Cloud Amount
CMA	Percent	0-100			R		R	Middle Cloud Amount
CT	Deg C				D			Convective Temperature
CTA (UGDF)	Percent	0-100			R			Cloud Amount Total UGDF
CTA (FBD)	Enum Code	149-159	Octaves	R				Cloud Amount Total FBD
CTI	Deg C	±50		D				Cross Totals Index (stability)
DA	Feet	-3000 - 35332	Sea Level	D				Density Altitude
DA	Deg C			D				Dry Adiabat (SWAT)
DIR	Degrees	0-360	True North	R		G	R	Wind Direction
DIV	Sec**1 1.0e-5	±2.0e2			R		R	Divergence
DPD	Deg C	0-99		R	R	G	R	Dew Point Depression
DPT	Deg C	-110-50		R		G		Dewpoint Temperature
DVL	Feet	±3000	Standard Atmosp	D	R	G	R	D-Value
EL	Meters			D				Equilibrium Level
EPT	Deg K	150-500	Abs 0	D	R		R	Equivalent Potential Temperature
GPH	Geopot Meters	-1.0e3 -3.5e4	Sea Level	R	R	G	R	Geopotential Height
GST/ GUST	Knots	0-99		R/D				Wind Gust
HAIL	Inches			D				Maximum Hail Size
HGT	Meters	0-3.5e4	Standard Level	R		G		Height (altitude)
KI	Deg C	0-100		D			R	K-Index (stability)
KO	Deg C			D				KO-Index (stability)
L1A	Enum Code	149-159	Octaves	R				Cloud Amount Layer 1
L1H	Feet	0-5.0e4	Standard Level	R		G		Cloud Height Layer 1
L1T	Enum Code	111-139		R				Cloud Type Layer 1
L2A	Enum Code	149-159	Octaves	R				Cloud Amount Layer 2
L2H	Feet	0-5.0e4	Standard Level	R		G		Cloud Height Layer 2
L2T	Enum Code	111-139		R				Cloud Type Layer 2
L3A	Enum Code	149-159	Octaves	R				Cloud Amount Layer 3

MNEM	Units	Range	Point of Ref	FBD	UGDF	LGG	VG	Description
L3H	Feet	0-5.0e4	Standard Level	R		G		Cloud Height Layer 3
L3T	Enum Code	111-139		R				Cloud Type Layer 3
L4A	Enum Code	149-159	Octaves	R				Cloud Amount Layer 4
L4H	Feet	0-5.0e4	Standard Level	R		G		Cloud Height Layer 4
L4T	Enum Code	111-139		R				Cloud Type Layer 4
LAT	Degrees	±90	Equator	R				Latitude
LCL	Millibar	150-1050		D				Lifting Condensation Level
	Feet	0-5.0e4	Sea Level					
LFC	Millibar	150-1050		D				Level of Free Convection
LH	cal/gm			D				Latent Heat
LI	Deg C	±20		D			R	Lifted Index (stability)
LON	Degrees	±180	Greenwich	R				Longitude
MLI	Deg C			D				Modified Lifted Index (stability)
MR	g/Kg			D				Mixing Ratio (SWAT)
MXR	g/kg	0-40		D	D	G		Mixing Ratio
MW1	Geopot Meters	0-3.5e4		R				Maximum Wind Level
OVV	Microbar sec**-1	±10			R		R	Omega (vertical velocity)
PA	Feet	-3000 - 35332	Standard Atmosp	D				Pressure Altitude
PEPT	Deg K			D				Pseudo-Equivalent Potential Temperature
PP	mb/3hr	±100	Sea Level	R		G	R	Barometric Tendency
PPP	Millibar	900-1100	Sea Level	R	R	G	R	(Mean) Sea Level Pressure
PPT	Deg K			D				Partial Potential Temperature
PPW	Inches	0-10		R	R	G	R	Precipitable Water
PRS	mb	0-1100		R	R		R	Pressure (UAIR)
PT	Deg K	150-500	Abs 0	D	D			Potential Temperature
PWD	Degrees	0-360	PI Ref Grid and LONX	D	D			PI Set Wind Direction
PWX	Enum Code	103-109		R			R	Past Weather
QPF	Inches	0-25			R		R	Quantitative Precipitation Forecast
R06	Inches	0-10		R		G	R	Precipitation Accumulation 6-hour Rain Amount
R24	Inches	0-40		R		G	R	Precipitation Accumulation 24-hour Rain Amount
RH	Percent	0-100		D	D	G		Relative Humidity
RI	Deg C			D				Bulk Richardson Number (stability)
S06	Inches	0-99		R		G	R	Precipitation Accumulation 6-hour Snow Amount
SA	Deg C			D				Saturated Adiabat
SD	Enum Type	170-178	True North	R				Ship Direction
SMR	g/Kg			D				Saturated Mixing Ratio
SPD	Knots	0-250		R	D	G	R	Wind Speed
SSI	Deg C	±20		D				Showalter Stability Index
SST	Deg C	-4 - 40		R				Sea Surface Temperature
STF	meter**2 sec**-2	±1.0e8			R			Stream Function
STM	N/A			D	D	D	R	Streamlines
STN	AN			R				WMO Station Number

MNEM	Units	Range	Point of Ref	FBD	UGDF	LGG	VG	Description
SV	Knots	0-100		R				Ship Speed
SVP	Millibar			D				Saturated Vapor Pressure
SWT	N/A	0-1000			R		R	SWEAT (stability) Index
THK	Geopot Meters	±3.5e4		D		G		Thickness of Atmospheric Layer
TI	Deg C			D				Thompson Index (stability)
TMP	Deg C	-110 - 60		R	R	G	R	Temperature
TP1	Millibar	100-500		R				Tropopause Height
TTI	Deg C	±99		D				Total Totals (stability) Index
UWC	Meters sec**-1	±120	PI Grid Related	D	R	G	R	U-Wind Component
VIS	Nautical Miles	0-99	Standard Level	R			R	Visibility (horizontal)
VP	Millibar			D				Vapor Pressure
VRT	sec**-1 1.0e5	±2.0e2			R		R	Vorticity
VTI	Deg C	±50		D				Vertical Totals (stability) Index
VWC	Meters sec**-1	±120	PI Grid Related	D	R	G	R	V-Wind Component
VWS	Meters sec**-1	±120		D	D			Vertical Wind Shear
WBZ	Meters			D				Wet-Bulb Zero Height
WND	N/A							Specifies Wind Component Derivation
WW1	Enum Code	000-096		R			R	Present Weather Primary
WW2	Enum Code	000-096		R			R	Present Weather Secondary
WW3	Enum Code	000-096		R			R	Present Weather Tertiary