ICATS Serial Output Format
Appendix B

The following format is for the DC-8 navigation and housekeeping data. The data is transfe
intervals. Parameter fields within each block are separated by at least one space, and ther
blanks at the end of a block to pad the length to 56 characters

Identifier	Parameters	Field Format	Units
C	Day	aaa	day of year
	Time	bb:bb:bb.bbb	hours:min:sec (UTC)
	Latitude	+/- cc cc.c	degrees & minutes
	Longitude	+/- ddd dd.d	degrees & minutes
	Pitch	eee.e	degrees
	Roll	ffff.f	degrees
	Wind Speed	ggg	knots
D	Wind Direction	hhh	degrees
	True Air Speed	iii	knots
	Ground Speed	jjjj	knots
	True Heading	kikk.l	degrees
	Drift Angle	lll.l	degrees
	Pressure Altitudes	mmmmm	feet
	Radar Altitude	nnnnn	feet
	Dew/frost Point (GE 1011 hygrometer), with state flagged	ooooo.o	deg C
	Dew/frost Point (EG&G 300 hygrometer), with state flagged	ppppp.p	deg C

Identifier	Parameters	Field Format	Units
E	Static Air Temperature	qqq.q	deg C
	Total Air Temperature	rrr.r	deg C
	IR Surface Temperature	sss.s	deg C
	Static Air Temperature, calculated	ttt.t	deg C
	Indicated Air Speed	uuu	knots
	Vertical Air Speed	vvvvv	ft/min
	Distance To Go	wwwww.w	nm
	Time to Go	xxxx,x	min
	Align Status	yy	
F	Cabin Altitude	zzzzz	feet
	Pressure	JJJJ.J	mb
	Mach Number	K.KKK	
	Cross Track Distance	LLLLL.L	nm
	Desired Track	MMMM.M	deg
	Track Angle Error	NNNN.N	deg
	Track Angle	OOO.O	deg
	Specific Humidity	P.PPP	g H2O/kg air

G	Partial pressure H2O	QQ.Q	mb
	Relative Humidity wrt to Ice	RR.R	%
	Relative Humidity wrt to Water	SS.S	%
	Saturatin Vapor Pressureof Water	TT.TT	mb
	Saturation Vapor Pressure of Water Relative to Ice	UU.UU	mb
	Sun Elevation in Ground Reference Frame, Refracted	VVV.V	deg
	Sun Elevation in Aircraft Reference Frame, Refracted	WWW.W	deg
	Sun Azimuth in Ground Reference Frame	XXX.X	deg
	Sun Azimuth in Aircraft reference Frame Relative to the Nose of the Aircraft	YYYY.Y	deg

	Name	**Format**	**Range**
H	egi_true_hddg	%5.lf	0 to 360 deg
	egi_mag_hdg	%5.lf	0 to 360 deg
	egi_x_velocity	%5d	x/- 9000
	egi_y_velocity	%5d	x/- 9000
	egi_z_velocity	%5d	x/- 9000
	egi_x_acceleration	%5d	x/- 1100
	egi_y_acceleration	%5d	x/- 1100
	egi_z_acceleration	%5d	x/- 1100

	Name	**Format**	**Range**
I	adc_tat	%5.lf	-99.0 to 50.0
	rose_tat	%5.lf	-99.0 to 50.0
	potent_temp	%5.lf	-999.9 to 1000.0
	gps_alt_msl	%5d	-2000 to 70000
	camex_dfpoint	%6.lf	-100.0 to 70.0
	sun_el_ea	%5.lf	-90.0 to 90.0
	sun_el_ac	%5.lf	-90.0 to 90.0
	sun_az_earth	%5.lf	0 to 360

General

All data parameters are in engineering units. For integer formats, the number of digits in a one to the number shown in the field format. For non-integer formats, the placement of the the field and the number of digits to the right of the decimal point are guaranteed as illustrat However, the number of digits to the left of the decimal point may vary from one to the num format.

Individual parameter fields will be filled with special characters for the following reasons:

Condition	**Special Character**
Data too big for parameter field	>
Data too small for parameter field	<
Data formating error occurred	?

erred at one second
re may be one or more

Real Parameter
eo17_pres_tru_hdg
eo17_pres_mag_hdg
eo17_velocity_x
eo17_velocity_y
eo17_velocity_z
eo17_accel_x
eo17_accel_y
eo17_accel_z

Real Parameter
adc_tat
rose_tat
potent_temp
gps_alt_msl
camex_dfpoint
sun_el_ea
sun_el_ac
sun_az_earth

field may vary from
decimal point within
ted in the field format.
ber shown in the field