



INSU
ESQUIF 99
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**List of output variables in *Times Series Plots* set
and in *VnnV_ESQ.Txt* (1p/sec) & *VnnM_ESQ.Txt* (1p/30sec) files
Produced by ARAT Fokker 27 Volothèque**

Version dépouillement (Quick-Look processing) 1.01.00 990724

WITH *Chemistry Measurements*

Col. #	Name	Description	Unit	Manufacturer & Model	Comment / Position
0	TEMPS	UTC	s	Datum GPS	0-86400 sec
"Page #1"					
1	RALT_15	Ground Altimeter	m	TRT AHV12	0-4500 m
2	ROULIS	Aircraft Roll Angle	degrees	Sagem ULISS 45 i	Inertial Nav. Syst. CoG
3	TANGAGE	Aircraft Pitch Angle	degrees	Sagem ULISS 45 i	Inertial Nav. Syst. CoG
4	CAP_GEO	Aircraft True Heading	degrees	Sagem ULISS 45 i	Inertial Nav. Syst. CoG
5	LAT_GPS	Aircraft Latitude	degrees	Sercel GPS	Global Posit. Syst.
6	LON_GPS	Aircraft Longitude	degrees	Sercel GPS	Global Posit. Syst.
7	RALT_GPS	Aircraft Altitude / MSL	m	Sercel GPS	Mean Sea Level ref.
8	ZELL_GPS	Aircraft Altitude / WGS84	m	Sercel GPS	WGS84 ellipsoïde
"Page #2"					
9	LAT_INS	Aircraft Latitude	degrees	Sagem ULISS 45 i	Inertial Nav. Syst. CoG
10	LON_INS	Aircraft Longitude	degrees	Sagem ULISS 45 i	Inertial Nav. Syst. CoG.
11	RALT_05	Gound Altimeter	m	TRT AHV12	0-1500 m
12	PS_DR *	Static Pressure raDome	hPa	ROSEMOUNT	Radome
13	TS_DR *	Static Temperature raDome	°C	Rosemount 102 E2AL	corrected value
14	VP_DR *	True Air Speed	m.s ⁻¹	calculation	Radome
15	MOD_VENT	Wind Velocity	m.s ⁻¹	Volothèque's calculation	Radome
16	DIR_VENT	Wind Direction	degrees	Volothèque's calculation	Radome

* in icing conditions, spare processing named "*copilote Aile Secours*" is used: *_DR* is changed in *_AS*

** in icing conditions, W is not available, all values are set = 0



Col. #	Name	Description	Unit	Manufacturer & Model	Comment / Position
"Page #3"					
17	W **	vertical velocity	m.s ⁻¹	Volotheque's calculation	Radome
18	Z_OACI	Standard Altitude (baro)	m	SEXTANT AVIONIQUE	INS input
19	H_RELIEF	height of ground above ICAO ref. level	m	calculation	Z_OACI - RALTI_15
20	TD_GE1	Dew Point Temperature	°C	General Eastern 1011B	body
21	R_TDGE1	Specific Humidity	g.kg ⁻¹	calculation	TD_GE1, PS_DR
22	HUR_VL7	Relative Humidity	%	Coreci	body
23	HUC	Relative Humidity	%	Carbon Plate	body
24	TVIR	Virtual Temperature	°C	calculation	TS_DR, R_TDGE1
"Page #4"					
25	TPOT	Potential Temperature	°C	calculation	TS_DR, PS_DR
26	TPOT_VIR	Virtual Pot. Temp.	°C	calculation	TVIR, PS_DR
27	OZONE	INSU's Ozone concentration	ppb	Thermo-Electron 49PS	in situ measurements
28	NOYAU	Optical Particules counter	part.cm ⁻³	TSI 3220	raw count lin or log plot
29	NEPHELO	Aerosol Conc.: back scattering coef.	10 ⁻⁴ m ⁻¹	MRI 1550B	top intake
30	ACT_PCAS	PCASP Activity	coinc. %	PMS PCASP-100X	PCASP housing
31	JNO2H_10	NO dissociation velocity above A/C	V	Eppley #905	Top Shell, raw values
32	JNO2B_11	NO dissociation velocity under A/C	V	Eppley #906	Bottom Shell raw values
"Page #5"					
33	NO	Nitrogene Oxyde concentration	V	LISA MONA	raw values
34	NOX	Nitrogene Oxyde concentration	V	LISA MONA	NO + NOy
35	NOY_9	Nitrogene Oxyde concentration	V	LISA MONA	raw values
36	AETHL_12	Aethalometre	µg.m ⁻³	?	
37	CO_5	Carbon Oxyde	ppm	?	
38	DEBIT_1	flowmeter.	m ⁻³ .h	?	
39	VISB_WM2	Upward Pyranometer	W.m ⁻²	Eppley PSP 0.285 to 2.800 µm	Bottom Shell
40	RGB_WM2	Upward RED Pyranometer	W.m ⁻²	Eppley PSP dark red	Bottom Shell



Col. #	Name	Description	Unit	Manufacturer & Model	Comment / Position
"Page #6"					
41	UVB_WM2	Upward UV Photometer	W.m ⁻²	Eppley TUVB 0.295 to 0.385 μm	Bottom Shell
42	WIRR	Upward Pyrgeometer	W.m ⁻²	Eppley PIR 4 to 45 μm	temporary coefficients during FORMON99, HIETA99, VDOPF99, ESQUIF99
43	VISH_WM2	Downward Pyranometer	W.m ⁻²	Eppley PSP 0.285 to 2.800 μm	Top Shell
44	RGH_WM2	Downward RED Pyranometer	W.m ⁻²	Eppley PSP dark red	Top Shell
45	UVH_WM2	Downward UV Photometer	W.m ⁻²	Eppley TUVB 0.295 to 0.385 μm	Top Shell
46	WIRD	Downward Pyrgeometer	W.m ⁻²	Eppley PIR 4 to 45 μm	Top Shell
47	TBARN_B	Radiometric Surface Temperature	°C	Barnes PRT5	Bottom Shell
48	LBARN_H	Downward Radiance	W.m ⁻² .sr ⁻¹	Barnes PRT5	Top Shell
"Page #7"					
49	TBARN_H	Radiometric Temperature	°C	Barnes PRT5	Top Shell
50	PR_CAB	Cabin Pressure	hPa		housing
51	WTCH_DPS	Dynamic Pressure error	hPa	checking param	DPS_DR–DPS_AS
52	WTCH_TS	Temperature error	°C	checking param	TS_DR–TS_AS
53	WTCH_VP	TAS error	m.s ⁻¹	checking param	VP_DR–VP_AS
54	WTCH_PS	Static Pressure error	hPa	checking param	PS_DR–PS_AS

**The amount of *physical* pages depends on the flight duration :
1 paper page per flight hour.**

Christian Allet