Variables	Frequency	Aggregation	EUP_MP21	EUP_MP22	EUP_MP23	EUP_MP24	Units, etc.	Available at SYSTRAN internal database	Available on CFM, AF reference	Available on SPECS	Comments
Air temperature	All Tads, Open and Open Detail (sew)	point		RET				Yes. (Rouge 23)	Yes. (Rouge) maybe)	Yes. (Rouge sw)	
Air temperature	Daily	mean			CSS, vc, tsp, HSD, UDC	AQUATOOL, E-HYPE, COSM, LFJ-wl, GUER, GUIS, MORDOR , JCS	VORTEX, ENBA	Yes. (mean32d)	Yes. (maybe)	Yes. (sw)	
Air temperature	Daily	minimum			T< 17°C, C	COSM, GUER, GUIS, AQUATOOL, (E-HYP), MORDOR	GUIDES	Yes. (min32d)	Yes. (tmin)	Yes. (tsemin)	
Air temperature	Daily	maximum			H, FWI	COSM, GUER, GUIS, AQUATOOL, AQUATOOL, (E-HYP), (E-HYP), MORDOR	GUIDES, ENBA	Yes. (max32d)	Yes. (tmax)	Yes. (tsemax)	
Air temperature	Monthly	mean				JCS		Yes. (mean30d)	Yes. (maybe)	Yes. (sw)	
Precipitation	Daily	mean			DDP_Hyl	AQUATOOL, COSM, COSM, LFJ-wl, GUER, GUIS, GUIS, (E-HYP), MORDOR , JCS	GUIDES, ICS	Yes. (tp)	Yes. (pmean)	Yes. (pr)	Is accumulated or flux, which is preferred?
Precipitation	Monthly					JCS		Yes. (tp)	Yes. (pmean)	Yes. (pr)	
Surface downwelling shortwave flux in air	Daily	mean				COSM, LFJ-wl, GUER, GUIS, ZLAM, (MORDOR)	GUIDES, ENBA, ICS	Yes. (rsw)	Yes. (dswdu)	Yes. (rsdu)	
Surface downwelling longwave flux in air	Daily	mean				COSM, LFJ-wl, GUER		Yes. (rslw)	Yes. (dlwdu)	Yes. (rldu)	
Wind speed (at 10m)	Daily	mean			FWI	COSM, GUIS, (AQUATOOL), (E-HYP)	VORTEX, ENBA	Yes. (Derived-10u, 10v)	No. (derived-uvmin, uvmax)	Yes. (Derived-uw, vw)	CORTEX and ENBA really exact sw components
Wind speed (at 10m)	Daily	maximum				(E-HYP)		Yes. (Derived-10u, 10v)	No. (derived-uvmin, uvmax)	Yes. (Derived-uw, vw)	
Wind speed (at 10m)	Monthly	mean			CFU			Yes. (Derived-10u, 10v)	No. (derived-uvmin, uvmax)	Yes. (Derived-uw, vw)	
Component 10Zero	Daily	mean					VORTEX, ENBA	Yes. (u850)	Yes. (Derived-u850)	No. (proxy: monthly, uq850)	
U component 10Zero Wind speed	Daily	mean					VORTEX	Yes. (u850)	Yes. (Derived-u850)	No. (Proxy: monthly, uq850)	
V component 10Zero Wind speed	Daily	mean					VORTEX	Yes. (v850)	Yes. (Derived-v850)	No. (Proxy: monthly, uq850)	
U component 10Zero wind speed	Daily	mean					VORTEX	Yes. (u500)	Yes. (Derived-u500)	No.	
V component 10Zero wind speed	Daily	mean					VORTEX	Yes. (v500)	Yes. (Derived-v500)	No.	
Geopotential height at 10zero	Daily	At 12 UTC				MORDOR		Yes. (Derived-z10)	Yes. (gpm500)	No.	
Geopotential height at 10zero at 12UTC	Daily	At 12 UTC				MORDOR		Yes. (Derived-z500)	Yes. (gpm1000)	No.	
Surface Runoff	Daily	mean				(AQUATOOL)		Yes. (ro)	Yes. (ronsd)	No.	
Sea level pressure	Daily	mean					VORTEX	Yes. (msl)	Yes. (pmsl)	Yes. (psl)	
Dew point temperature	Daily	mean			UDC	(E-HYPE)		Yes. (Td)	Yes. (Proxy:q2m, tsemin, pmsl)	Yes. (tdew)	
Total Runoff	Monthly					(AQUATOOL)		Yes. (ro)	No.	Yes. (mro)	Monthly?
Downward flux	Daily	mean				(GUIDES), (E-HYPE)		Yes. (rd)	No.	Yes. (psw)	
Water Evaporation from Soil	Daily					(COUPES)		Yes. (e)	No.	Yes. (Evbs)	Tread out if they include transpiration
Water Evaporation from Soil	Monthly					GUIDS, (AQUATOOL)		Yes. (e)	No.	Yes. (Evbs)	Tread out if they include transpiration
Water Content of Soil Layer	Daily	mean				(COUPES)		Yes. (Derived: wsw1, wsw2, wsw3, wsw4).	No. (Proxy: wsdw1, wsdw2, wsdw3, wsdw4)	No.	Total?
Water Content of Soil Layer	Monthly					GUIDS, (AQUATOOL)		Yes. (Derived: wsw1, wsw2, wsw3, wsw4).	No. (Proxy: wsdw1, wsdw2, wsdw3, wsdw4)	No.	Monthly?
Sea surface temperature	Daily	mean					VORTEX	Yes. (sst)	No.	No. (Proxy: monthly, sst)	
Sub-surface (ocean) sect	Daily	mean				(AQUATOOL)		Yes. (sst)	No.	No.	According to Dynamic Oceanography, they are only available from Copernicus Marine Service (CMS) in present
Geopotential 10Zero	Daily	mean					VORTEX, ENBA	Yes. (z850)	No.	No.	
WIND GUST	Daily	maximum				(COUPES)		Yes. (10fg)	No.	No.	
Precipitation	At noon	Accumulation in the last 24h		FWI				No.	Yes. (pmean)	Yes. (pr)	
Total Soil Moisture Content	Daily	mean				(AQUATOOL)		No. (Proxy:wsw1, wsw2, wsw3, wsw4)	Yes. (derived:wsw1-wsw4, wsw1-wsw4, wsw1-wsw4)	Yes. (mrsol)	
Surface air pressure	Daily	mean				(GUIDS), (E-HYPE)		No. (Proxy:msl)	Yes. (pmsl)	No. (Proxy:ps)	
Surface air pressure	Monthly					JCS		No. (Proxy:msl)	Yes. (pmsl)	No. (Proxy:ps)	
Specific Humidity	Daily	mean				(AUIS), (AQUATOOL), (E-HYPE), (GUIS)		No.	Yes. (q2m)	No.	
Moisture in Upper Portion of Soil Column	Monthly					(AQUATOOL)		No. (Proxy:wsw1)	Yes. (wsdw1)	No.	What does Upper Portion mean?, Monthly?
Surface downwelling shortwave flux in air	All Tads, Open and Open Detail (sew)	point		RET				No. (Proxy: wsdu, wsw)	No. (Proxy:dsw)	No.	
Surface downwelling shortwave flux in air	All Tads, Open and Open Detail (sew)	point		RET				No. (Proxy: wsdu, wsw)	No. (Proxy:dsw)	No.	
Sound wave Velocity	Daily	mean					ENBA	No. (Proxy:tsw)	No.	Yes. (cl)	
Relative humidity	All Tads, Open and Open Detail (sew)	point		RET				No. (Proxy:2d)	No. (Proxy:q2m, tsemin, pmsl)	No. (Proxy:hlyw)	
Relative humidity	All mean local standard time or daily mean	point		FWI				No. (Proxy:2d)	No. (Proxy:q2m, tsemin, pmsl)	No. (Proxy:hlyw)	
Relative humidity	Daily	mean				COSM, (E-HYPE)		No. (Proxy:2d)	No. (Proxy:q2m, tsemin, pmsl)	No. (Proxy:hlyw)	
Wind speed (at 10m)	All Tads, Open and Open Detail (sew)	point		RET				No. (Proxy:10u, 10v)	No. (derived:uvmin, uvmax)	No. (Proxy:uaw, vaw)	
Wind speed (at 10m)	All mean local standard time	point		FWI				No. (Proxy:10u, 10v)	No. (derived:uvmin, uvmax)	No. (Proxy:uaw, vaw)	
Cloudiness (in octas)	All Tads, Open and Open Detail (sew)	point		RET				No. (Proxy:tcc)	No.	No. (Proxy: n)	
Relative humidity at 850mb	Daily	mean					VORTEX	No. (Proxy:r,q)	No.	No.	
Ozone	Daily	mean				(JULES)		No. (Proxy:O3. Ozone was missing also. Total. Total column ozone)	No.	No.	It needs clarification
Skin temperature	Daily	mean				Minimeteorm		No.	No. (Proxy: tsmin)	No.	
Air temperature	All mean local standard time	point		FWI				No.	No.	No.	
Low cloud cover (octas)	Daily	mean				(COUPES)		No.	No.	No.	
Low cloud cover (octas)	Daily	maximum				(COUPES)		No.	No.	No.	
Low cloud cover (octas)	Daily	minimum				(COUPES)		No.	No.	No.	
Precipitation	Hourly rate	maximum				(GUIDS)		Yes.	No.	No.	
Surface sensible heat exchange (in sew)	Daily	mean				ICS, (MORDOR)		No.	No.	No.	
Surface sensible heat exchange (in sew)	Monthly					ICS		No.	No.	No.	
Surface latent heat exchange (in sew)	Daily	mean				ICS, (MORDOR)		No.	No.	No.	
Surface latent heat exchange (in sew)	Monthly					ICS		No.	No.	No.	
U component 10m wind speed	Daily	mean					VORTEX, ENBA, ICS	No.	No.	No.	
V component 10m wind speed	Daily	mean					VORTEX, ENBA, ICS	No.	No.	No.	
Surface sens. amount	Daily	mean				(GUIDS)		No.	No.	No.	
Surface residual	Daily	mean			UDC			No.	No.	No.	What does it refer to? Humidity? Water in soil?
CLOUD SKY (COVER) SHORTWAVE DIFFUSE	Daily	mean				ICS, (COUPES)		No.	No.	No.	What does (C) refer to?
CLOUD SKY (COVER) SHORTWAVE DIRECT	Monthly					ICS		No.	No.	No.	
Water substraction flux	Daily	mean				(E-HYPE)		No.	No.	No.	
LOW SPECIFIC HUMIDITY OVER TILES	Daily	mean				(COUPES)		No.	No.	No.	
GROUND OUTFLOW	Daily	mean				(Minoflow)		No.	No.	No.	This variable needs clarification
net creeper evapotranspi	Daily	mean				(Minoflow)		No.	No.	No.	What does it mean?
net creeper evapotranspi	Daily	mean				(Minoflow)		No.	No.	No.	What does it mean?
NET DOWN SURFACE LW RAD FLUX [used for ice]	Daily	mean				(JULES)		No.	No.	No.	
GRFLUSE FLUX	Daily	mean				(JULES)		No.	No.	No.	
Interceptation loss	Daily	mean				(AQUATOOL)		No.	No.	No.	
Evaporation from Canopy	Daily	mean				(AQUATOOL)		No.	No.	No.	
Transpiration from Canopy	Daily	mean				(AQUATOOL)		No.	No.	No.	
Transpiration	Monthly					(AQUATOOL)		No.	No.	No.	Monthly?
Soil Frozen Water Content	Monthly					(AQUATOOL)		No.	No.	No.	Monthly?
Total Radiation (Global Horizontal Radiation)	Daily	mean					GUIDES, ENBA, ICS	No.	No.	No.	It needs clarification: horizontal?