Variables	Frequency	Aggregation	ISUP_MPS1	ISUP_MPS2	ISUP_MPS3	ISUP_MPS4	where, area	Available in SYSTEM or external database	Available as CDS, or derived	Available as SRDG	Comments
Air temperature	Daily	mean			GSE, RC, Rig, HUG, UEAC	ADAMSON, ALAUSTIN, CLAUS, DUFAL, GLAUS, MORGOR, JICS	LAERDS, ENKIS	mean2DS	Derived (mean) - maybe (Sh)	No	
Air temperature	Daily	minimum			T1-2TC, J1	ADAMSON, ALAUSTIN, CLAUS, DUFAL, GLAUS, MORGOR, JICS	LAERDS	min2DS	Derived (minimum) - sure (Sh)	warm	
Air temperature	Daily	maximum			H, FM	ADAMSON, ALAUSTIN, CLAUS, DUFAL, GLAUS, MORGOR, JICS	LAERDS, ENKIS	max2DS	Derived (maximum) - sure (Sh)	warmer	
Air temperature	Monthly	mean				JICS		Derived (mean) - maybe (Sh)	Derived (mean) - maybe (Sh)	tem	
Precipitation	Daily	mean			GSP, FM	ADAMSON, ALAUSTIN, CGAR, CLAUS, DUFAL, GLAUS, GLAUSAL, MORGOR, JICS	LAERDS, ICS	tp	source (precipitation) - sure (Sh)	pr	Accumulation or flux, which is produced?
Precipitation	Monthly					JICS		source (precipitation) - sure (Sh)	source (precipitation) - sure (Sh)	pr	
Surface downwelling shortwave flux in air	Daily	mean				CGAR, LFGel, CLAUS, GLAUS, MORGOR	LAERDS, ENKIS, ICS	rsd	Derived (mean) - maybe (Sh)	rsds	
Surface downwelling longwave flux in air	Daily	mean				CGAR, LFGel, CLAUS, GLAUS		rld	Derived (mean) - maybe (Sh)	rlds	
2 m temperature (time) (past 24 h min)	Daily	mean					GARTEN, ENKIS	Derived (mean) - 2 m, min2DSn (Sh)	Derived (mean) - 2 m, min2DSn (Sh)	tas	
2 m temperature (time) (past 24 h max)	Daily	mean					GARTEN, ENKIS	Derived (mean) - 2 m, max2DSn (Sh)	Derived (mean) - 2 m, max2DSn (Sh)	tas	
Wind speed (at 10m)	Daily	mean			FM	ADAMSON, CGAR, CLAUS, DUFAL, GLAUS, GLAUSAL, MORGOR, JICS		Derived (mean) - 10m, mean2DS (Sh)	Derived (mean) - 10m, u,v,mean2Dm (Sh)		
Wind speed (at 10m)	Daily	maximum				CLAUS		Derived (mean) - 10m, max2DS (Sh), 10m (Sh)	Derived (mean) - 10m, u,v,max2Dm (Sh), u,v,max2Dm (Sh)	Derived (mean) - 10m, max2DS, u,v,max2Dm (Sh)	
Wind speed (at 10m)	Monthly	mean			CFU			source (mean) - 2m, 4m, 10m	Derived (mean) - u,v,mean2Dm (Sh), u,v,mean2Dm (Sh)	Derived (mean) - u,v,mean2Dm (Sh), u,v,mean2Dm (Sh)	
2 m temperature (daily)	Daily	mean					GARTEN, ENKIS	Derived (mean) - 2d2D (Lib)	Proxy - u,t2D (Sh)	Proxy - u,t2D (Sh)	
2 m temperature (daily) (land)	Daily	mean					GARTEN	Derived (mean) - 2d2D (Lib)	Derived (mean) - u,t2D (Sh)	Proxy - u,t2D (Sh)	
2 m temperature (monthly) (land)	Daily	mean					GARTEN	Derived (mean) - 2d2D (Lib)	Derived (mean) - u,t2D (Sh)	Proxy - u,t2D (Sh)	
2 m temperature (daily) (sea)	Daily	mean					GARTEN	Derived (mean) - 2d2D (Lib)	Derived (mean) - u,t2D (Sh)	No	
2 m temperature (daily) (land)	Daily	mean					GARTEN	Derived (mean) - 2d2D (Lib)	Derived (mean) - u,t2D (Sh)	No	
Temperature height at 2m/10m	Daily	at 12 UTC	X			MORGOR		Proxy - u2m (Lib)	Derived (mean) - u10m (Sh)	No	
Temperature height at 2m/10m	Daily	at 12 UTC	X			MORGOR		Proxy - u10m (Lib)	Derived (mean) - u10m (Sh)	No	
Surface Runoff	Daily	mean				jsojuse-history		sro	Derived (mean) - runoff (Sh)	No	
Snowfall (amount)	Daily	mean					GARTEN	Derived (mean) - sro	Proxy (snowfall) - sro	Derived (mean) - snf (Sh)	
Dew point temperature	Daily	mean			UEAC	JICAVRE		Derived (mean) - td (Sh)	Proxy (q2m) - td (Sh), pressure (Sh)	Derived (mean) - td (Sh), tem (Sh)	
Total Rainfall	Monthly					jsojuse-history		Derived (mean) - sro (Sh)	No	rsrs	Weekly?
Snowfall flux	Daily	mean				JICAVRE		sf	No	prsn	
Water Temperature from Sail	Daily					JICAVRE		tr	No	wtem	*Not sure if this is the appropriate variable
Water Temperature from Sail	Monthly					jsojuse-history		Derived (mean) - tr (day)	No	wtem	*Not sure if this is the appropriate variable
Water Content of Soil Layer	Daily	mean				JICAVRE		Derived (layer), mean2D, mean3D, mean4D, mean5D (day)	Proxy - swfc1, swfc2, swfc3, swfc4, swfc5 (Sh)	No	Total?
Water Content of Soil Layer	Monthly					jsojuse-history		Derived (layer), mean2D, mean3D, mean4D, mean5D (day)	Proxy - swfc1, swfc2, swfc3, swfc4, swfc5 (Sh)	No	Weekly?
Sea surface temperature	Daily	mean					JICAVRE	sst	No	Proxy - sst (mon)	
Sea surface roughness	Daily	mean				jsojuse-history		swrd	No	No	Derived (mean) - Sometimes they are only available as daily, sure are monthly means, sometimes
Longwave radiation	Daily	mean					GARTEN, ENKIS	Derived (mean) - rlds2D (Lib)	No	No	
Wind Speed	Daily	maximum				JICAVRE		u10g	No	No	
Precipitation	30 minute	accumulation - no flux data			FM			tp	*Tpeak	*Tpr	
Total Soil Moisture Content	Daily	mean				jsojuse-history		Proxy - swvl1, swvl2, swvl3, swvl4 (day)	Derived (mean) - swvl1, swvl2, swvl3, swvl4 (Sh)	wtsto	
Surface air pressure	Daily	mean				JICAVRE, JICS, JICAVRE		Proxy - msl (Sh)	Derived (mean) - pressure (Sh)	Proxy - psl (day)	
Surface air pressure	Monthly					JICS		Proxy - msl (Sh)	Derived (mean) - pressure (Sh)	Proxy - psl (day)	
Specific humidity	Daily	mean				jsojuse-history, JICAVRE		No	Derived (mean) - q2m (Sh)	No	
Altitude of Upper Position of Sail	Monthly					jsojuse-history		Proxy - swvl1 (day)	Derived (mean) - swvl1 (Sh)	No	What does Upper Position mean? Weekly?
Surface downwelling shortwave flux in air	30 Sam, 5pm and 8pm (local time)	point			HEC			Proxy - swd (day)	No, *Tmaxs(Lib)	No	
Surface downwelling longwave flux in air	30 Sam, 5pm and 8pm (local time)	point			HEC			Proxy - lwd (day)	No, *Tmaxls (Sh)	No	
Cloud cover fraction	Daily	mean					ENKIS	Proxy - tcc(Sh)	No	Derived (mean) - cl (Sh)	
Air temperature	30 Sam, 5pm and 8pm (local time)	point			HEC			Proxy - 2t (Sh)	Proxy - tas (Sh)	Proxy - tas (Sh)	
Relative humidity	30 Sam, 5pm and 8pm (local time)	point			HEC			Proxy - 2r (Sh)	Proxy - q2m(Sh), rho(Sh), pressure (Sh)	Proxy - hurs (Sh)	
Relative humidity	30 minute local standard time or daily mean	point			FM			Proxy - 2d (Sh)	Proxy - q2m (Sh), rho(Sh), pressure (Sh)	Proxy - rhs (Sh)	
Relative humidity	Daily	mean				CGAR, JICAVRE		Proxy - hd(Sh)	Proxy - q2m (Sh), rho(Sh), pressure (Sh)	Proxy - rhs (Sh)	
Wind speed (at 10m)	30 Sam, 5pm and 8pm (local time)	point			HEC			Proxy - 10u (Sh), 10v (Sh)	Proxy - u,v,mag2Dm (Sh), u,v,mag2Dm (Sh)	Proxy - uas (Sh), vas (Sh)	
Wind speed (at 10m)	30 minute local standard time	point			FM			Proxy - 10u (Sh), 10v (Sh)	Proxy - u,v,mag2Dm (Sh), u,v,mag2Dm (Sh)	Proxy - uas (Sh), vas (Sh)	
Cloudiness (Fraction)	30 Sam, 5pm and 8pm (local time)	point			HEC			Proxy - tcc (Sh)	No	Proxy - cl (day)	
Relative humidity at 300mm	Daily	mean					GARTEN	Proxy - r,t300g (Lib)	No	No	
Ozone	Daily	mean				CLAUS		Proxy - (O3 (mass mixing ratio) (Lib) or Proxy - (O3 (mass mixing ratio (Lib) or Proxy - (O3 (mass mixing ratio (day)	No	No	3 needs clarification
Skin temperature	Daily	mean				Meteomeas		No	Proxy - skinsfc (Sh)	No	
Air temperature	30 minute local standard time	point			FM			No	No	No	
CO2 Concentration (mm day)	Daily	mean				JICAVRE		No	No	No	
CO2 Concentration	Daily	maximum				JICAVRE		No	No	No	
CO2 Concentration (mm day)	Daily	minimum				JICAVRE		No	No	No	
Precipitation	Hourly rate	maximum				GLAUS		No	No	No	
10 metre wind component in u-dir	Daily	mean				JICS, JICAVRE		No	No	No	
10 metre wind component in v-dir	Monthly					JICS		No	No	No	
10 metre wind component in u-dir	Daily	mean				JICS, JICAVRE		No	No	No	
10 metre wind component in v-dir	Monthly					JICS		No	No	No	
2 m temperature (daily) (land)	Daily	mean					GARTEN, ENKIS, ICS	No	No	No	
2 m temperature (mm day) (land)	Daily	mean					GARTEN, ENKIS, ICS	No	No	No	
Surface pressure	Daily	mean				GLAUS		No	No	No	
Surface Irradiance	Daily	mean			UEAC			No	No	No	What does it value is? Weekly? Hourly or sum?
Clear-sky (D) direct surface SW flux	Daily	mean				JICS, JICAVRE		No	No	No	What does D1 refer to?
Clear-sky (D) direct surface SW flux	Monthly					JICS		No	No	No	
Water vapourization flux	Daily	mean				JICAVRE		No	No	No	
Total Precipitation (mm day)	Daily	mean				JICAVRE		No	No	No	
Surface runoff	Daily	mean				jsiteoffline		No	No	No	Site variable needs clarification
Air pressure (at surface)	Daily	mean				jsiteoffline		No	No	No	What does it mean?
Air pressure (at surface)	Daily	mean				jsiteoffline		No	No	No	What does it mean?
Net short-wave flux, 1.4 μm-infinite (over the ice)	Daily	mean				JICAVRE		No	No	No	
Surface flux	Daily	mean				JICAVRE		No	No	No	
Energy Storage/heat sink	Daily	mean				jsojuse-history		No	No	No	
Evaporation (Latent Energy)	Daily	mean				jsojuse-history		No	No	No	
Sensible heat flux	Daily	mean				jsojuse-history		No	No	No	
Net Surface Water Content	Monthly					jsojuse-history		No	No	No	Weekly?
Water Content (Cloud, Horizontal Radiation)	Daily	mean					LAERDS, ENKIS, ICS	No	No	No	3 needs clarification. Horizontal?