

Instrument	Level	Data Name	Description
ASI	L1	asf_????	All-sky imager full resolution images of 256x256 pixels (???? = 4-letter code of ground station)
		ast_????	All-sky imager thumbnail images of 32x32 pixels (???? = 4-letter code of ground station)
ASK	L1	ask_????	All-sky imager keogram images of 256 pixels (???? = 4-letter code of ground station)
ESA	L2 or L0*	For ESA: ? = f or r or b	f=full, r=reduced, b=burst
		pei?_density	ion density
		pei?_t3	diagonalized ion temperature
		pei?_en	ion energy spectrogram
		pei?_en_eflux	ion energy flux spectrogram
		pei?_velocity	ion velocity (DSL)
		pei?_velocity_???	ion velocity (???=DSL or GSE or GSM)
		pei?_ptens	ion pressure tensor (DSL)
		peif_mftens	ion momentum flux tensor (DSL)
		pei?_magt3	ion temperatures in B frame
		pei?_avgtemp	trace of diagonalized temperature tensor divided by 3
		pei?_vthermal	ion thermal velocity
		pei?_symm	direction of pressure tensor symmetry (DSL)
		pei?_symm_ang	angle between symmetry direction and B
		pei?_ang	ion angle spectrogram
		pei?_tot	total ion count
		pei?_en_counts	ion count vs. energy
		pei?_mode	ion instrument mode
		pee?_density	electron density
		pee?_t3	diagonalized electron temperature
		pee?_en	electron energy spectrogram
		pee?_en_eflux	electron energy flux spectrogram
		pee?_velocity	electron velocity (DSL)
		pee?_velocity_???	electron velocity (???=DSL or GSE or GSM)
		pee?_ptens	electron pressure tensor (DSL)
		pee?_mftens	electron momentum flux tensor (DSL)
		pee?_magt3	electron temperatures in B frame
		pee?_avgtemp	trace of diagonalized temperature tensor divided by 3
		pee?_vthermal	electron thermal velocity
		pee?_symm	direction of pressure tensor symmetry (DSL)
		pee?_symm_ang	angle between symmetry direction and B
		pee?_ang	electron angle spectrogram
		pee?_tot	total electron count
L0 only	pee?_en_counts	electron count vs. energy	
L0 or L2	pee?_mode	electron instrument mode	
SST	L1*	For SST: ? = f or r or b	f=full, r=reduced, b=burst
		psi?_#	# = same quantities as for ESA
	pse?_#	# = same quantities as for ESA	
	L2	SST: full only	
		psif_#	# = same quantities as for ESA
psef_#		# = same quantities as for ESA	
MOM	L1 and L2	peim_density	ESA ion density

(on-board moments)		peim_flux peim_mftens peim_eflux peim_velocity peim_press peem_density peem_flux peem_mftens peem_eflux peem_velocity peem_press	ESA ion flux ESA ion momentum flux tensor ESA ion energy flux ESA ion velocity ESA ion pressure ESA electron density ESA electron flux ESA electron momentum flux tensor ESA electron energy flux ESA electron velocity ESA electron pressure
	L1 only	psim_# psem_#	# = SST quantities (same as for ESA) # = SST quantities (same as for ESA)
EFI	L1 and L2	eff efp efw eff_dot0 efp_dot0 efw_dot0 eff_0 efp_0 efw_0 efs efs_0 efs_dot0 vaf vap vaw vbf vbp vbw ef?_hed ef?_raw va?_hed va?_raw	E field, fast survey/full orbit, 3D E field, particle burst, 3D E field, wave burst, 3D E field, fast survey/full orbit, 3D, using E dot B=0 E field, particle burst, 3D, using E dot B=0 E field, particle burst, 3D, using E dot B=0 E field, fast survey/full orbit, 3D, using Ez=0 E field, particle burst, 3D, using Ez=0 E field, particle burst, 3D, using Ez=0 On-board spin-fit electric field On-board spin-fit electric field using Ez=0 On-board spin-fit electric field using E dot B=0 Voltage, processor A, fast survey/full orbit Voltage, processor A, particle burst Voltage, processor A, wave burst Voltage, processor B, fast survey/full orbit Voltage, processor B, particle burst Voltage, processor B, wave burst 16-byte packet header for analogous data type; ?=f or p or w raw data for analogous data type; ?=f or p or w 16-byte packet header for analogous data type; ?=f or p or w raw data for analogous data type; ?=f or p or w
FBK	L1 only	fb1 fb2 fbh	Filter Bank 1 (E and/or B) Filter Bank 2 (E and/or B) Filter Bank high frequency (100-300kHz)
	L1 and L2	fb_hff fb_eac12 fb_eac34 fb_eac56 fb_edc12 fb_edc34 fb_edc56 fb_scm? fb_v?	High-frequency filter peak and average values Spectrogram E field AC component, sensors 1&2 (spin plane) Spectrogram E field AC component, sensors 3&4 (spin plane) Spectrogram E field AC component, sensors 5&6 (axial) Spectrogram E field DC component, sensors 1&2 (spin plane) Spectrogram E field DC component, sensors 3&4 (spin plane) Spectrogram E field DC component, sensors 5&6 (axial) Spectrogram SCM? (search coil) ; ?=1,2,3 (three axes) Spectrogram floating potential of sensor ?=1,2,3,4,5,6
FFT (on-board)	L1 and L2	ffp_16 ffp_16_dbpara ffp_16_dbperp ffp_16_eac12	FFT power spectrum in particle burst x 16 frequencies FFT power spectrum for dB (parallel) FFT power spectrum for dB (perpendicular) FFT power spectrum for AC component E12

		ffp_16_eac34	FFT power spectrum for AC component E34	
		ffp_16_eac56	FFT power spectrum for AC component E56	
		ffp_16_edc12	FFT power spectrum for DC component E12	
		ffp_16_edc34	FFT power spectrum for DC component E34	
		ffp_16_edc56	FFT power spectrum for DC component E56	
		ffp_16_epara	FFT power spectrum for E (parallel)	
		ffp_16_eperp	FFT power spectrum for E (perpendicular)	
		ffp_16_scm?	FFT power spectrum for SCM? ; ?=1,2,3 (axes)	
		ffp_16_v?	FFT power spectrum for V? ; ?=1,2,3,4,5,6 (sensors)	
		ffp_32_#	# = same quantities in particle burst x 32 frequencies	
		ffp_64_#	# = same quantities in particle burst x 64 frequencies	
		ffw_16_#	# = same quantities in wave burst x 16 frequencies	
		ffw_32_#	# = same quantities in wave burst x 32 frequencies	
		ffw_64_#	# = same quantities in wave burst x 64 frequencies	
FGM	L1 and L2	fgl	B field, low telemetry (low data rate)	
		fgh	B field, high telemetry (high data rate)	
		fge	engineering data (decimated from FGH)	
	L2 only	fgs	B field, spin-resolution magnetic field B in DSL	
FIT (on-board)	L2 only	efs	On-board spin-fit electric field (EFI) data	
		efs_0	On-board spin-fit electric field (EFI) using $E_z=0$	
		efs_dot0	On-board spin-fit electric field (EFI) using $E \cdot B=0$	
		efs_sigma	Variance of onboard spin-plane electric field spin fit	
		fgs	On-board spin-fit FGM data	
		fgs_sigma	Variance of onboard spin-plane magnetic field spin fit	
		fit	SpinFIT file E&B raw data	
fit_bfit	FGM spinfit calibrated data: A,B,C,sig,avg			
fit_efit	EFI spinfit calibrated data: A,B,C,sig,avg			
GMAG	L2	mag_????	Ground magnetometer data in DHZ coordinates (???? = 4-letter code of ground station)	
SCM	L1	For SCM: ? = f or p or w	f=fast survey, p=particle burst, w=wave burst	
		scf	waveform fast survey (DSL)	
		scp	waveform particle burst (DSL)	
		scw	waveform wave burst (DSL)	
		sc?_misalign	misalignment of Z axis from spin axis	
		sc?_dc	X-Y (spin plane) values of the DC field in DSL	
		sc?_iano	time discontinuities of data	
		sc?_cal	calibrated data (unit depends on selected step)	
		L2	scf_???	waveform fast survey (DSL, GSE, GSM)
			scp_???	waveform particle burst (DSL, GSE, GSM)
scw_???	waveform wave burst (DSL, GSE, GSM)			
STATE	L1	state_pos	GEI position, xyz	
		state_vel	GEI velocity, xyz	
		state_man	Maneuver flag	
		state_roi	Regions of interest	
		state_spinras	spin axis right ascension, deg	
		state_spindex	spin axis declination, deg	
		state_spinalpha	Geom to spin axis, Euler alpha, deg	
		state_spinbeta	Geom to spin axis, Euler beta, deg	
state_spinper	spin period, sec			

state_spinphase	spin phase, deg
state_{pos,vel}_gsm	GSM position and velocity
state_{pos,vel}_gse	GSE position and velocity
state_spindec_correction	V03 correction to spin axis declination
state_spinras_correction	V03 correction to spin axis right ascension

*For ESA L0 and SST L1, a separate call to THM_PART_MOMENTS is required for moments.