Instrument	Level	Data Name	Description	Comments
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	*For ESA L0 and SST L1, a separate call to THM_PART_MOMENTS is required for moments.
		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	*For ESA L0 and SST L1, a separate call to THM_PART_MOMENTS is required for moments.
		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 (on-board moments)	L1 and L2	peim_density	ESA ion density	
		peim_flux	ESA ion flux	
		peim_mftens	ESA ion momentum flux tensor	
		peim_eflux	ESA ion energy flux	
		peim_velocity	ESA ion velocity	
		peim_ptot	ESA ion pressure	changed from _press
		peim_ptens	ESA ion pressure tensor	
		peim_velocity_mag	ESA ion field-aligned velocity	Needs FGS data to load
		peim_ptens_mag	ESA ion field-aligned pressure tensor	Needs FGS data to load
		peim_t3_mag	ESA ion field-aligned temperature	Needs FGS data to load
		peim_mag	B field (DSL) interpolated to peim time array	Needs FGS data to load
		peem_#	# = ESA electron quantities (same as for ESA ions)	
		pxxm_pot	Spacecraft potential	
	L1 only	psim_#	# = SST ion quantities (same as for ESA ions)	
		psem_#	# = SST electron quantities (same as for ESA electrons)	
		ptim_#	# = ESA+SST ion quantities (same as for ESA ions)	
		ptem_#	# = ESA+SST electron quantities (same as for ESA ions)	
		pxxm_qf	calibration parameter for SC potential	
		pxxm_shft	calibration parameter for SC potential	
EFI	L1 and L2	eff	E field, fast survey/full orbit, 3D	
		efp	E field, particle burst, 3D	
		efw	E field, wave burst, 3D	
		eff_dot0	E field, fast survey/full orbit, 3D, using E dot B=0	
		efp_dot0	E field, particle burst, 3D, using E dot B=0	
		efw_dot0	E field, particle burst, 3D, using E dot B=0	
		eff_0	E field, fast survey/full orbit, 3D, using Ez=0	
		efp_0	E field, particle burst, 3D, using Ez=0	
		efw_0	E field, particle burst, 3D, using Ez=0	
		efs	On-board spin-fit electric field	
		efs_0	On-board spin-fit electric field using Ez=0	
		efs_dot0	On-board spin-fit electric field using E dot B=0	
		vaf	Voltage, processor A, fast survey/full orbit	
		vap	Voltage, processor A, particle burst	
		vaw	Voltage, processor A, wave burst	
		vbf	Voltage, processor B, fast survey/full orbit	
		vbp	Voltage, processor B, particle burst	
		vbw	Voltage, processor B, wave burst	
		ef?_hed	16-byte packet header for analogous data type; ?=f or p or w	
		ef?_raw	raw data for analogous data type; ?=f or p or w	
		va?_hed	16-byte packet header for analogous data type; ?=f or p or w	
		va?_raw	raw data for analogous data type; ?=f or p or w	
FBK	L1 only	fb1	Filter Bank 1 (E and/or B)	
		fb2	Filter Bank 2 (E and/or B)	
		fbh	Filter Bank high frequency (100-300kHz)	
	L1 and L2	fb_hff	High-frequency filter peak and average values	
		fb_eac12	Spectrogram E field AC component, sensors 1&2 (spin plane)	
		fb_eac34	Spectrogram E field AC component, sensors 3&4 (spin plane)	
		fb_eac56	Spectrogram E field AC component, sensors 5&6 (axial)	
		fb_edc12	Spectrogram E field DC component, sensors 1&2 (spin plane)	
		fb_edc34	Spectrogram E field DC component, sensors 3&4 (spin plane)	
		fb_edc56	Spectrogram E field DC component, sensors 5&6 (axial)	
		fb_scm?	Spectrogram SCM? (search coil) ; ?=1,2,3 (three axes)	
		fb_v?	Spectrogram floating potential of sensor ?=1,2,3,4,5,6	

FFT (on-board)	L1 and L2	ffp_16	FFT power spectrum in particle burst x 16 frequencies	
		ffp_16_dbpara	FFT power spectrum for dB (parallel)	
		ffp_16_dbperp	FFT power spectrum for dB (perpendicular)	
		ffp_16_eac12	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 Ez=0	
		efs_dot0	On-board spin-fit electric field (EFI) using E dot 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 HDZ* coordinates (???? = 4-letter code of ground station)	*Coordinate system for gmags may vary depending on site and installation error/drift. It is best to verify with comparison to expected field.
		mag_???	(??? = 3-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_spindec	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