

# Abbreviations and acronyms

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ACC	Accelerometer	Cat-1	Level-2 Products that are processed by the SCARF Level-2 processing consortium
ACCELE	Operational Level 1b Processor of ACC data	Cat-2	Level-2 Products that are processed by PDGS
AE	Auroral Electrojet index	CCDB	Characterisation and Calibration Database
AEBS	Auroral Electrojet and auroral Boundaries estimated from Swarm observations (a Level-2 data product)	CCN	Contract Change Notice
AEJ	Auroral Electrojet	CDF	Common Data Format (file format, see <a href="https://cdf.gsfc.nasa.gov/">https://cdf.gsfc.nasa.gov/</a> )
AGC	Automatic Gain Control	CDM	Configuration and Data Management
AGU	American Geophysical Union	CDMP	Configuration and Data Management Plan
AISP	Annotated Instrument Source Packet	CDS	CCSDS Day Segmented Time Code
AIUB	Astronomical Institute of the University of Bern (CH)	CEA-Leti	Leti CEA Technology Research Institute, Grenoble, FR (Laboratoire d'électronique des technologies de l'information)
AMPS	The Average Magnetic field and Polar current System model (a Level-2 data product)	CFI	Customer Furnished Item (provided by the customer without cost to the contractor)
AOB	Auroral Oval Boundaries/Any Other Business	CHAMP	CHALLENGING Mini-satellite Payload, led by GFZ, Germany
AOCS	Attitude and Orbit Control Subsystem	CHAOS	High-precision magnetic Field model derived by DTU Space
APDF	Archiving and Payload Data Facility	CHU	Camera Head Unit
API	Application Programming Interface	CI	Configuration Item
APID	Application Process ID	CI	Comprehensive Inversion
ARB	Anomaly Review Board	CIRES	Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder (US)
ASM	Absolute Scalar Magnetometer	CoM	Centre of Mass
ASM-V	ASM Vector mode	CR	Change Request
ASU	Astronomical Institute of the Czech Academy of Sciences (CZ)	CSES	China Seismo-Electromagnetic Satellite
ATP	Acceptance To Proceed	CUC	CCSDS Day Unsegmented Time Code
AuroraX	Extension of the Swarm Aurora project	CUP	Charles University Prague (CZ)
Aux	Auxiliary data	CVQ	Calibration-Validation Quality control
BBO	Blinding/big-bright object (STR issue)	D0	Date of availability of the first Swarm data
BCSS	Birkeland Centre for Space Science, University of Bergen (NO)	DAB	DISC Advisory Board
BGS	British Geological Survey (GB)	dB_sun	Sun induced stray field
BOM	Beginning Of Mission	DIFI	Dedicated Ionospheric Field model
CAC	Cumulative archive content		
Cal/Val	Calibration and Validation (science group, workshop)		

DISC	(Swarm) Data, Innovation, and Science Cluster	ESRIN	European Space Research Institute, Frascati (IT)
DL	Deliverable	ESTEC	European Space Research and Technology Centre, Noordwijk (NL)
DLFI	Dedicated Lithospheric Field Inversion	ETH	Eidgenössische Technische Hochschule Zürich (CH)
DMPS	Defense Meteorological Satellite Program	eu	Engineering unit
DNS	Direct Numerical Simulation	FAC	(Ionospheric) Field-Aligned Currents
DPA	Description of the Processing Algorithm	FFP	Firm Fixed Price
DPM	Detailed Processing Model	FLR	Field Line Resonance
DQC	Data Quality Control	FMI	Finnish Meteorological Institute (FI)
DQW	Data Quality Workshop	FOS	Flight Operation Services
DS/NCI	Declaration of secrecy and non-conflict of interest	FP	Faceplate
Dst	Disturbance storm time index, monitoring the strength of the magnetospheric ringcurrent	FTE	Flux Transfer Event
DTU	Technical University of Denmark (DK)	FTE	Full Time Equivalent
DTU-MI	DTU Space, division of Measurement and Instrumentation	FTP	File Transfer Protocol
DUT	Delft University of Technology (NL)	FUP	Fixed Unit Price
DVT	Data Validation Tool	GAP	GPS receiver-based Attitude, Position, and profiling experiment (ePOP)
DVUC	Description of the Visualization Use-Cases	GEO	Geographic coordinate system
DYN	Dynamic Orbit Determination	GFZ	Helmholtz Centre Potsdam - German Research Centre for Geoscience (DE)
EEF	(Dayside eastward) Equatorial Electric Field, a Level-2 data product	GMV	GMV Innovations Solutions Poland (PL)
EEJ	Equatorial Electrojet	GNSS	Global Navigation Satellite System (using the GPS (US), GLONASS (Russian), Galileo (EU) or BeiDou (Chinese) system)
EFD	Electric Field Detector (CSES)	GPSR	Global Positioning System (GPS) Receiver
EFI	Electrical Field Instrument, including the TII and the LP	GSE	Geocentric Solar Ecliptic coordinate system
ELF	Extreme-Low Frequency	GSFC	NASA Goddard Space Flight Center (US)
EM	Engineering Model	GUI	Graphical User Interface
EO	Earth Observation (ESA)	GUT	GOCE User Toolbox
EO-Sec	ESA security office for the EO domain	GUT	Graz University of Technology
EOX	EOX IT Services GmbH (AT)	HK	House-Keeping
ePOP	Swarm Echo	HR	High Resolution
ERP	Earth Rotation Parameters (present in L1B AlgoDoc) / Earth Radiation Pressure (used by ACC community)	HVPS	High Voltage Power Supply
ESA	European Space Agency	IAR	Ionospheric Alfvén Resonators
ESAC	European Space Astronomy Centre	IBA	Inter Boresight Angle
ESF	Equatorial Spread-F	IBA	Inter Boresight Angle
ESL	(Swarm) Expert Support Laboratories	IBI	Ionospheric Bubble Index, a Level-2 data product
ESR	EISCAT Svalbard Radar	IBP	Ionospheric Bubble Probability
		IBP	Inter Boresight Parameter

ICD	Interface Control Document	L1BOP/L1B OP	Level 1b Operational Processor
ICRF	International Celestial Reference Frame		
IE	Integral Equation	L2	Level 2 (satellite data)
IfG	Institute of Geodesy of the Graz University of Technology (AT)	L2 Cat-1	Level 2 category 1, (data processed by SCARF)
IGRF	International Geomagnetic Reference Field	L2 Cat-2	Level 2 category 2, (data processed by PDGS)
IHFAC	Interhemispheric field-aligned current	L2PS	Level 2 Processing System (replaced by SCARF)
IMDD	Instrument Measurement Data Definition	LA1Q	ASM Level of Signal La1 (Swarm housekeeping Level 0 product)
IMF	Interplanetary Magnetic Field, a magnetic field parameter	LC	Line Current
IOC	In Orbit Commissioning	LEO	Low Earth Orbit
IOCR	In Orbit Commissioning Review	LIT	Lithospheric
IOP	In Orbit Performance meeting	LoL	Limit of Liability
IPF	Instrument Processing Facilities (Serco)	LP	Langmuir Probe, part of the Electrical Field Instrument on Swarm and is also on CSES
IPGP	Institut de Physique du Globe de Paris (FR)		
IPIR	Ionospheric Plasma Irregularities and Fluctuations based on Swarm data (a Level-2 data product)	LPGN	Laboratoire de Planétologie et Géodynamique de Nantes (FR)
IRC	Ionospheric Radial Current	LR	Low Resolution
IRF	Swedish Institute of Space Physics (SE)	LRR	Laser Retro-Reflector
IRI	International Reference Ionosphere	LSB	Least Significant Bit
IRM	Imaging and Rapid-scanning ion Mass spectrometer	LUH	Leibniz Universität Hannover (DE)
IS radar	Incoherent Scatter radar	LVPS	Low Voltage Power Supply
ISP	Instrument Source Packet	M2 tidal	Lunar M-2 tide (a Level-2 data product)
ITRF	International Terrestrial Reference Frame	M2M	Machine to Machine
ITT	Invitation To Tender	MAGNET	Operational Level 1b Magnetic processor
JIRA	Internet based tool (Atlassian) for tracking project issues (server located at DTU - <a href="https://jira.spacecenter.dk/">https://jira.spacecenter.dk/</a> )	MGF	Magnetic Field Instrument (ePOP)
KIN	Kinematic Precise Orbit Determination	MHD	Magneto hydrodynamics
KO	Kick-Off	MIO	Magnetic Ionospheric field model (Swarm product)
Kp	Index monitoring global geomagnetic activity	MLT	Magnetic Local Time
KPI	Key Performance Indicator	MM	Mission Manager
L	Launch time of the Swarm satellites (22 Nov 2013)	MMA	(Swarm data derived) Model of the large-scale Magnetospheric Magnetic Field (a Level 2 data product)
L0	Level 0 (raw data direct from the satellite)	MMEG	Magnetic Measurement Expert Group
LOGF	Level 0 Generating Facility	MoM	Minutes of Meeting
L1	Level 1 (satellite data)	MoU	Memorandum of understanding
L1b	Level 1b (satellite data)	MPPF	Mission Planning and Performance Facility
		MRD	Mission Requirements Document
		MSB	Most Significant Bit

MST	ASM on-board parameter format code	QC	Quality Control
MT	Magnetotelluric	QD	Quasi-Dipole
N/A	Not Applicable	QL	Quick Look
NCI	Non-conflict of interest	QWG	Swarm Quality Working Group
NEC	North, East, Center coordinate system. A spherical coordinate system in relation to Earth's center	R&D	Research and development
NED	North, East, Down coordinate system. A geodetic coordinate system in relation to Earth's ellipsoid model	RFP/RFQ	Request for proposals/quotation
		RMS	Root-mean-square
		ROTI	Rate of TEC Index
NOA	National Observatory of Athens (GR)	S&T	Science [&] Technology Corporation (NL)
NPM	New Procurements Manager	SAA	South Atlantic Anomaly
NRT	Near Real Time	SAC-C	Satélite de Aplicaciones Científicas-C
OP	Operational Processor (for Cat-2 products)	SC & S/C	Spacecraft
		SC DYN	Spacecraft Dynamics (Level 1b product)
OPER	Operational data (nominal)	SCARF	Satellite Constellation Application and Research Facility (replaces L2PS)
ORBATT	Operational Level 1b orbit and attitude processor	SCM	Search Coil Magnetometer (CSES)
OS	Operating System	SCT	Special Conditions to Tender
OSU	Ohio State University (US)	SDBR	Swarm DISC Board of Representatives (replaced by DAB)
PA	Product Assurance	SECS	Spherical Elementary Current System
Pc/Pi	Pulsations continuous/pulsations irregular (rapid geomagnetic variations caused by magnetospheric/ionospheric currents and waves)	Serco	Serco SpA, Frascati (IT), Serco GmbH, Darmstadt (DE) and Serco Ltd., London (GB)
		SFTP	Secure File Transfer Protocol
PDD	Product Definition Document	SH	Spherical Harmonics
PDGS	Payload Data Ground Segment	SH degree	Spherical Harmonics degree
PDGSE	Payload Data Ground Segment Evolution	SHA	Spherical Harmonic Analysis
PDR	Preliminary Design Review	SID	Structure ID
PEJ	Polar Electrojet	SIL	Scientist In the Loop. Scientist evaluating and if appropriate, adjusting the processing parameters for the purpose of improving the scientific quality of the data products
PFC	Parameter Format Code	SLA	Service Level Agreement
PI	Principal Investigator	SLR	Satellite Laser Ranging (method to determine position at a given time instant)
PID	Process ID	SMILE	Solar wind Magnetosphere Ionosphere Link Explorer
PLASMA	Operational Level 1b Plasma processor	SoW	Statement of Work
PLP	Planar Langmuir Probe	SPPA	Swarm Sensor Performance, Products and Algorithms Manager (ESA/ESRIN)
PLSO	Post Launch Support Office	SPR	Software Problem Report
POD	Precise Orbit Determination	Sq	Solar quiet geomagnetic variation
PP	Prototype Processor (for Cat-2 products)		
PPS	Pulse per Second		
PRD	Products routinely distributed		
PRG	Products routinely generated		
PSD	Power Spectral Density		
PTC	Parameter Type Code		

SR	Success Rate	UiO	University of Oslo (NO)
SRP	Solar Radiation Pressure	ULF	Ultra-Low Frequency
SSA	Space Situational Awareness	UoC	University of Calgary (CA)
SSFAC	Small-scale Field-Aligned Currents	UoN	University of Nantes (FR)
SSW	Sudden Stratospheric Warming	USGS	US Geological Survey
STR	Star Tracker	UT	Universal Time
STSE	Support to Science Element	UXO	Unexploded Ordnance
SUM	Software User Manual	VC4	Virtual Channel 4 (science-part of Swarm telemetry)
SVN	SVN Repository with server located at DTU. Presently, the following URLs apply: <a href="https://smart-svn.spacecenter.dk/svn/smart/SwarmESL">https://smart-svn.spacecenter.dk/svn/smart/SwarmESL</a> - All, <a href="https://smart-svn.spacecenter.dk/svn/smart/SwarmL2">https://smart-svn.spacecenter.dk/svn/smart/SwarmL2</a> (heritage from the L2PS Project)	VFM	Vector Field Magnetometer
		VIR	VirES requirement
		VRE	Virtual Research Environment
		WBS	Work Breakdown Structure
SVT	Swarm Validation Team	WDMAM	World Digital Magnetic Anomaly Map
SW or S/W	Software	WO	Work Order
SWA, SWB, SWC	Swarm-A, -B, -C	WP	Work Package
Swarm Aurora	Finished project conducted by UoC.	WPD	Work Package Description
Swarm Echo/ Swarm-E	A suite of eight scientific instruments on-board the CAScade, Smallsat and IOnospheric Polar Explorer (CASSIOPE) satellite. The University of Calgary's Institute for Space Research leads the science project	WPS	Web Processing Service by Open Consortium. Protocol can be used to retrieve data from VirES server
		ZT	Zero Tracking
		ZTH	Zero Tracking Harmonic Mode
SYM-H	Symmetric disturbance index for the Horizontal component of the Earth's magnetic field. 1-min proxy of the (hourly) Dst index		
SAA	South Atlantic Anomaly		
TBC	To Be Confirmed		
TBD	To Be Defined		
TC	Tender Conditions/Telecommand		
TDS	Test Data Set		
TEB	Tender Evaluation Board		
TEC	Ionospheric Total Electron Content		
TFA	Time-Frequency Analysis		
TII	Thermal Ion Imager, part of the Electrical Field Instrument		
TM	Telemetry		
TN	Technical Note		
TOB	Tender Opening Board		
TPM	Third Party Mission		
UiB	University of Bergen (NO)		