

IMPERIAL MAG Data Release Report 2409



30 January 2024 (report covers data release for 1 September– 30 September 2024)

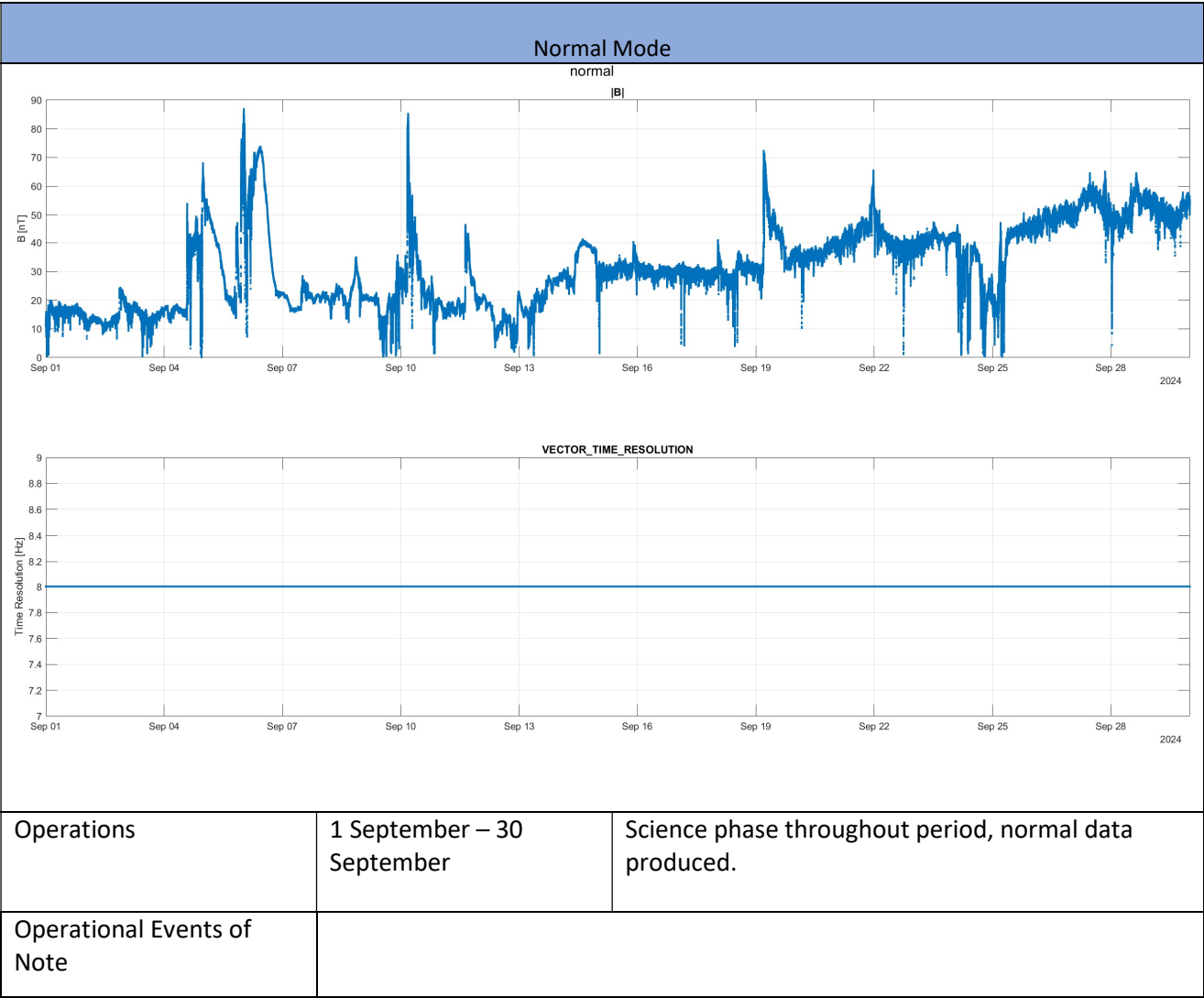
Report Version	1	L2 ground processing software version:	V2.27.1
MAG PI	Tim Horbury t.horbury@imperial.ac.uk		
MAG IM	Helen O'Brien h.obrien@imperial.ac.uk		
Report prepared by	Jean Morris j.morris23@imperial.ac.uk		

Data Summary

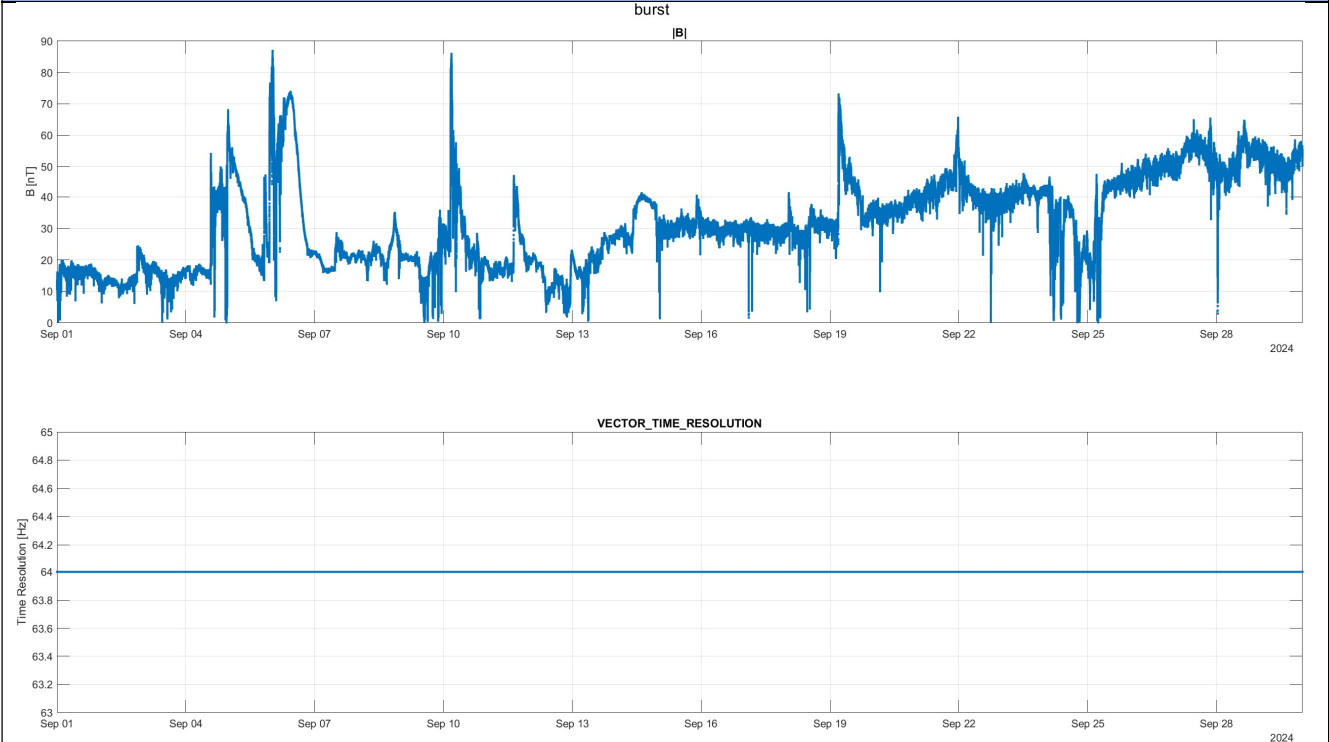
MAG was powered on for September. Burst Mode (BM) was available at 64 vectors/s for 24 hours per day for the entire month.

There is a gap in the magnetic field data between 2024-09-09 18:51-19:08 due to missing data in the spacecraft heater telemetry. Without this housekeeping data we are unable to clean the MAG heater signal for this period and therefore cannot produce L2 files for this time. L1 data for this period is still available.

The spacecraft started the month at 0.62AU on the 1st of September and at the end of the month it was at 0.29AU.

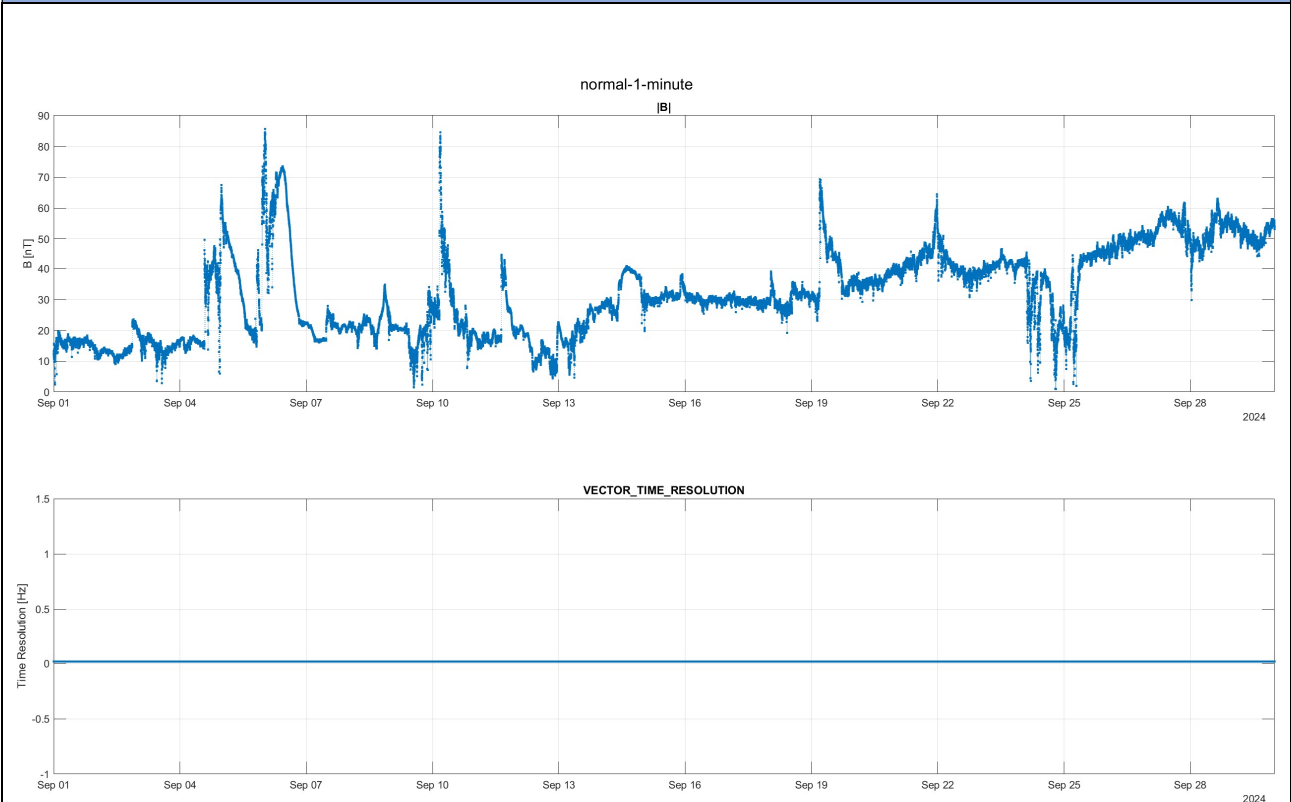


Burst Mode

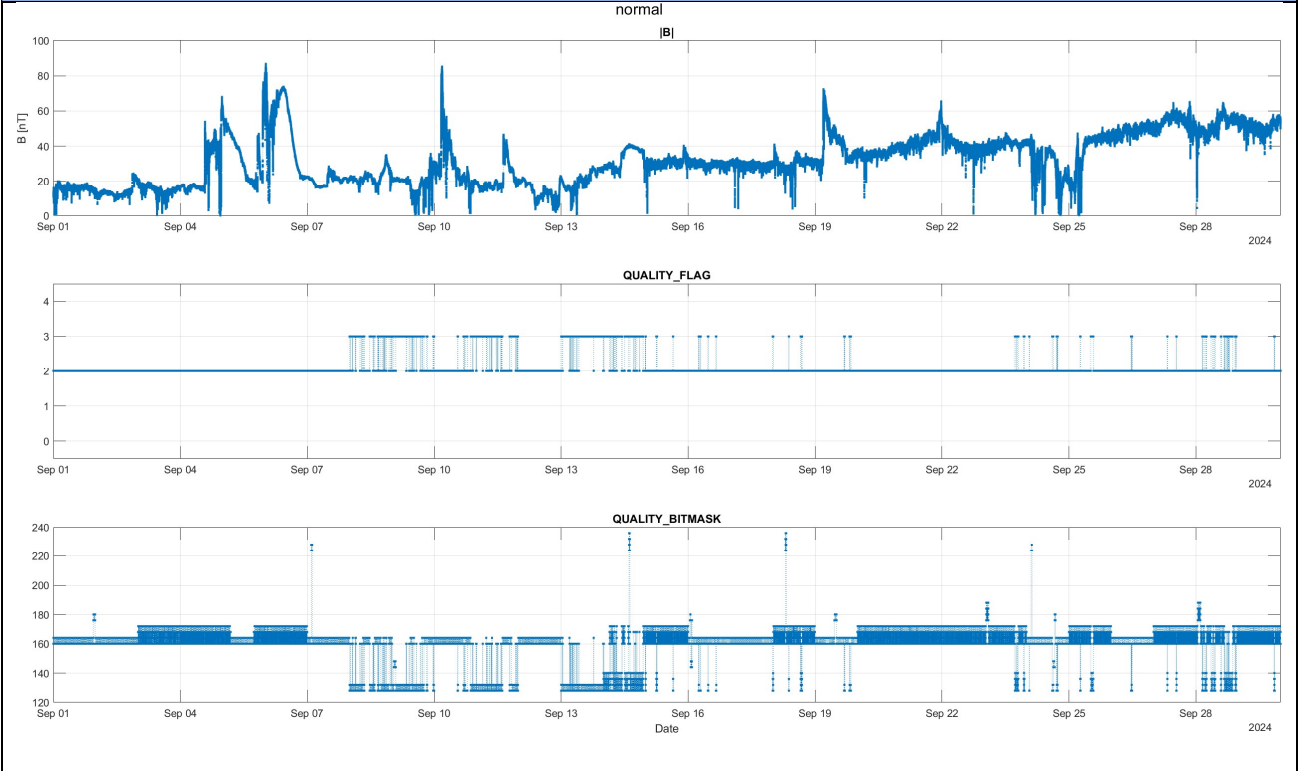


Coverage	From	To	Coverage
	01/09	30/09	24h per day of 64 vectors/s

Normal – 1min



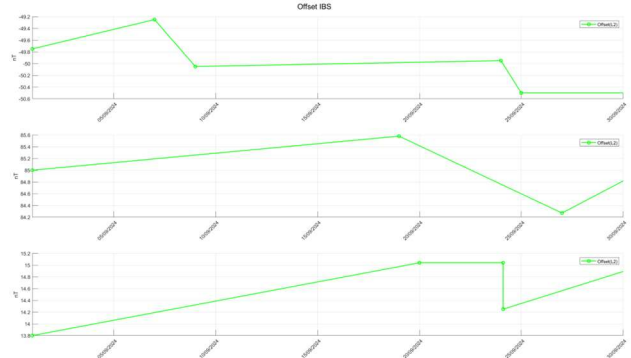
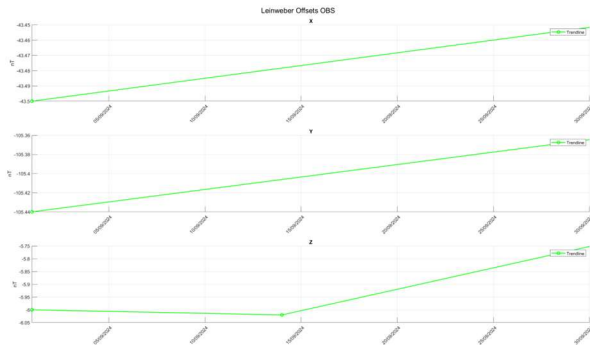
Quality bitmask



Quality bit mask events

SC events which disturb the field	1. Solar array movements (solar array angle is changed, and then remains at new angle due to sun-SC distance thermal constraints) 2. High gain antenna movements 3. Battery Top Up		
SC related issues	StartTime	EndTime	Comment
	23/09/2024 00:05	23/09/2024 03:05	Battery top up event interference affecting IBS

Offsets



1 September – 30 September

The OBS offsets were relatively stable over the course of the month, changing by less than 0.3nT. The IBS offsets were disturbed by the solar array movements on the 7th and 24th.

OffsetNumber	Date	OBSX	OBSY	OBSZ	IBSX	IBSY	IBSZ
221014	01/09/2024 00:00	-43.5	-105.44	-6	-49.75	85	13.8
221015	07/09/2024 00:00				-49.25		
221016	09/09/2024 00:00				-50.05		
221017	14/09/2024 00:00			-6.02			
221018	19/09/2024 00:00					85.58	
221019	20/09/2024 00:00						15.04
221020	24/09/2024 02:36						15.04
221021	24/09/2024 02:38						14.25
221022	24/09/2024 00:00				-49.95		
221023	25/09/2024 00:00				-50.5		
221024	27/09/2024 00:00					84.27	
221025	01/10/2024 00:00	-43.45				85	15

Appendix

Appendix A: Files within this release

Filename
solo_L2_mag-rtn-burst_20240901_V01.cdf
solo_L2_mag-rtn-burst_20240902_V01.cdf
solo_L2_mag-rtn-burst_20240903_V01.cdf
solo_L2_mag-rtn-burst_20240904_V01.cdf
solo_L2_mag-rtn-burst_20240905_V01.cdf
solo_L2_mag-rtn-burst_20240906_V01.cdf
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solo_L2_mag-rtn-burst_20240912_V01.cdf
solo_L2_mag-rtn-burst_20240913_V01.cdf
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