

IMPERIAL MAG Data Release Report 2403



11 July 2024 (report covers data release for 1 March – 31 March 2024)

Report Version	1	L2 ground processing software version:	V2.26.1
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Data Summary

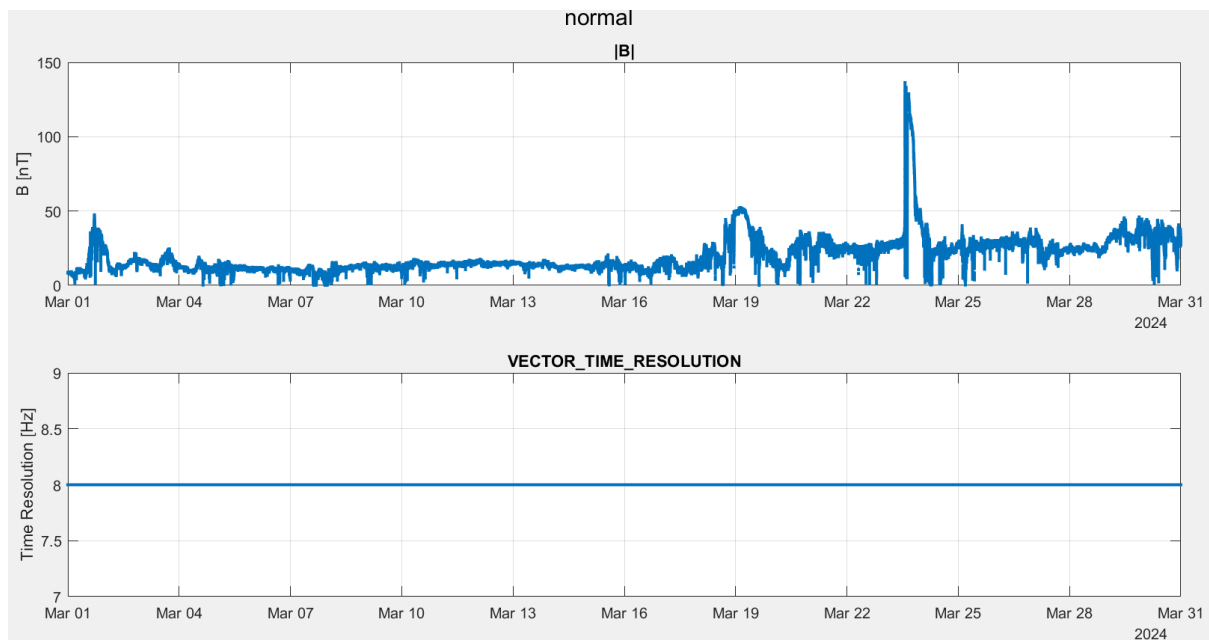
MAG was powered on for March. Burst Mode (BM) was available at 64 vectors/s for 24 hours per day for the whole month.

There was a large CME (>150nT) on the 23rd of March, and Solar Orbiter was approaching perihelion towards the end of the month (perihelion on the 4th of April).

There were several data gaps due to ground station issues on 2024-03-27 and 2024-03-29, of no more than 30 minutes each.

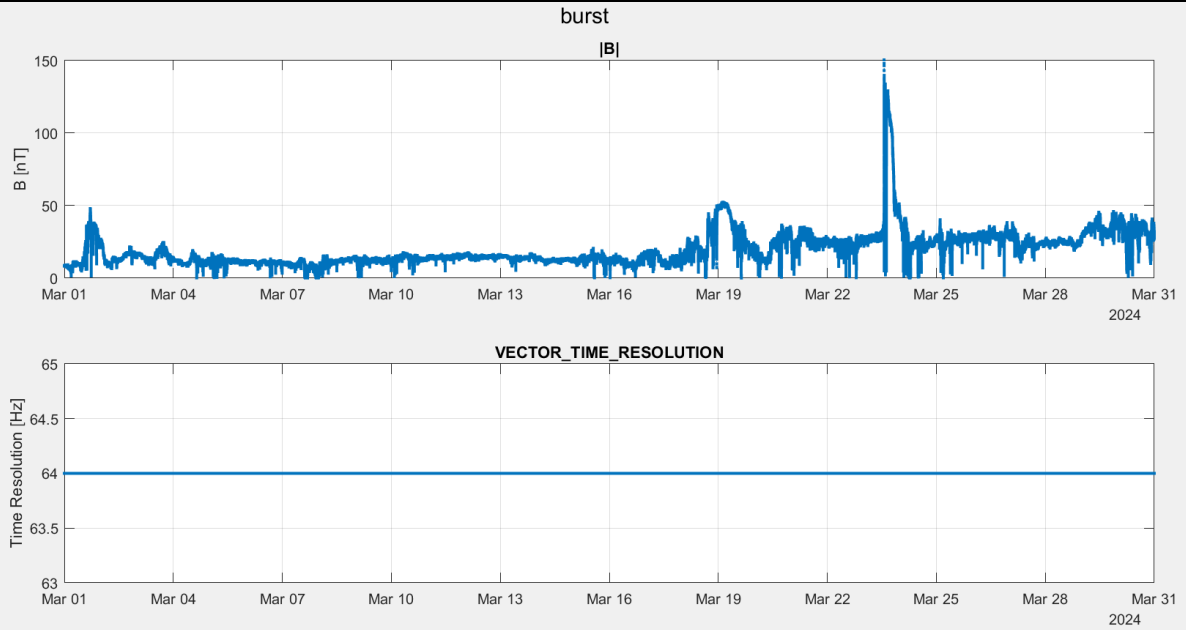
The spacecraft started the month at 0.67AU on the 1st of February and at the end of the month it was at 0.31AU.

Normal Mode



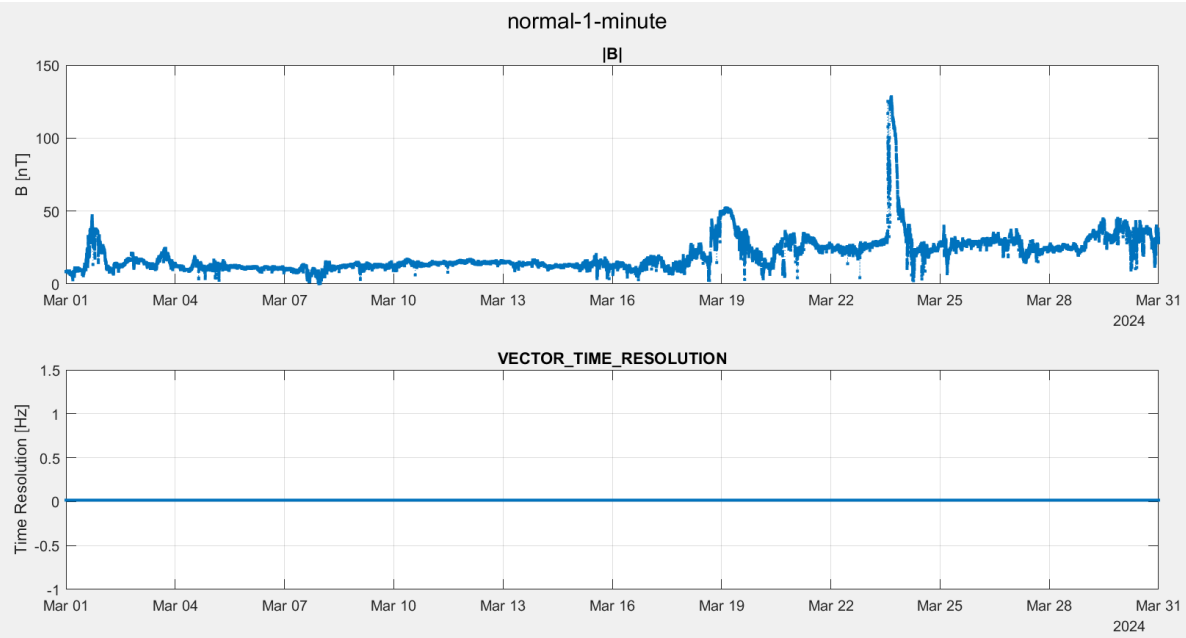
Operations	1 March – 31 March	Science phase throughout period, normal data produced.
Operational Events of Note		

Burst Mode

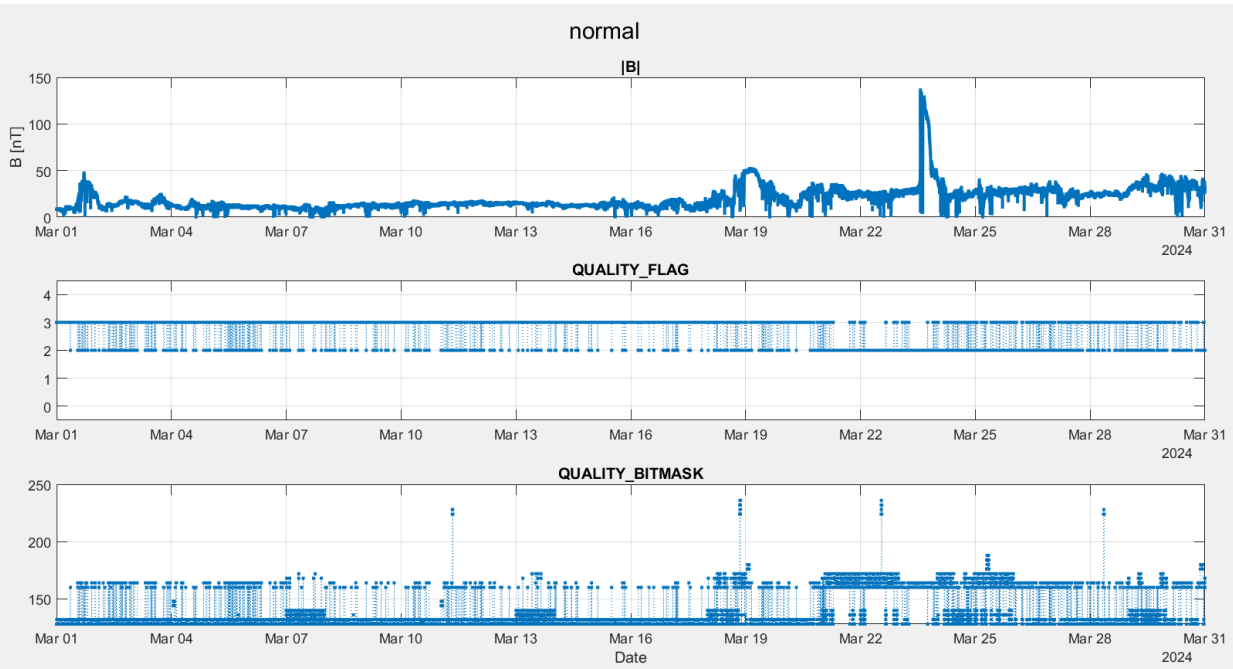


Coverage	From	To	Coverage
	01/03	31/03	24h per day of 64 vectors/s

Normal – 1min



Quality bitmask



Quality bit mask events

SC events which disturb the field	<ol style="list-style-type: none"> 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	N/A

Offsets

1 Mar – 31 Mar

The OBS offsets remained stable throughout the month, changing by a maximum of only +/- 0.3nT in X & Y and stable in Z. The OBS Y offset displayed the expected recovery behaviour, as has previously been observed. The IBS offset were primarily disturbed by the SA events on the 18th and 22nd of March.

OffsetNumber	Date	OBSX	OBSY	OBSZ	IBSX	IBSY	IBSZ
221040	21/02/2024 22:02				-50.07	85.66	15.49
221041	25/02/2024 12:00	-43.78					
221042	27/02/2024 05:03				-49.9		
221043	27/02/2024 05:04				-50.22		
221044	28/02/2024 12:00	-43.76	-108.67	-5.47			15.3
221045	04/03/2024 12:00				-50		
221046	07/03/2024 12:00				-50.23		
221047	09/03/2024 12:00				-50.83		
221050	12/03/2024 12:00		-108.87			85.38	
221051	15/03/2024 12:00	-44		-5.47			15
221052	18/03/2024 20:18				-50.4		

221053	18/03/2024 20:19						15.59
221054	20/03/2024 12:59		-108.53				
221055	22/03/2024 12:00					85.21	
221056	22/03/2024 12:59						15.59
221057	26/03/2024 12:00					85.21	
221058	28/03/2024 12:00	-43.9					
221059	30/03/2024 00:00					84.5	
221060	31/03/2024 12:00	-43.9	-108.53	-5.47			

Appendix

Appendix A: Files within this release

Filename
solo_L2_mag-rtn-burst_20240301_V01.cdf
solo_L2_mag-rtn-burst_20240302_V01.cdf
solo_L2_mag-rtn-burst_20240303_V01.cdf
solo_L2_mag-rtn-burst_20240304_V01.cdf
solo_L2_mag-rtn-burst_20240305_V01.cdf
solo_L2_mag-rtn-burst_20240306_V01.cdf
solo_L2_mag-rtn-burst_20240307_V01.cdf
solo_L2_mag-rtn-burst_20240308_V01.cdf
solo_L2_mag-rtn-burst_20240309_V01.cdf
solo_L2_mag-rtn-burst_20240310_V01.cdf
solo_L2_mag-rtn-burst_20240311_V01.cdf
solo_L2_mag-rtn-burst_20240312_V01.cdf
solo_L2_mag-rtn-burst_20240313_V01.cdf
solo_L2_mag-rtn-burst_20240314_V01.cdf
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solo_L2_mag-rtn-burst_20240320_V01.cdf
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solo_L2_mag-rtn-burst_20240324_V01.cdf
solo_L2_mag-rtn-burst_20240325_V01.cdf
solo_L2_mag-rtn-burst_20240326_V01.cdf
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solo_L2_mag-rtn-burst_20240330_V01.cdf

solo_L2_mag-rtn-burst_20240331_V01.cdf
solo_L2_mag-rtn-normal-1-minute_20240301_V01.cdf
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