

IMPERIAL MAG Data Release Report 2404



6 August 2024 (report covers data release for 1 April– 30 April 2024)

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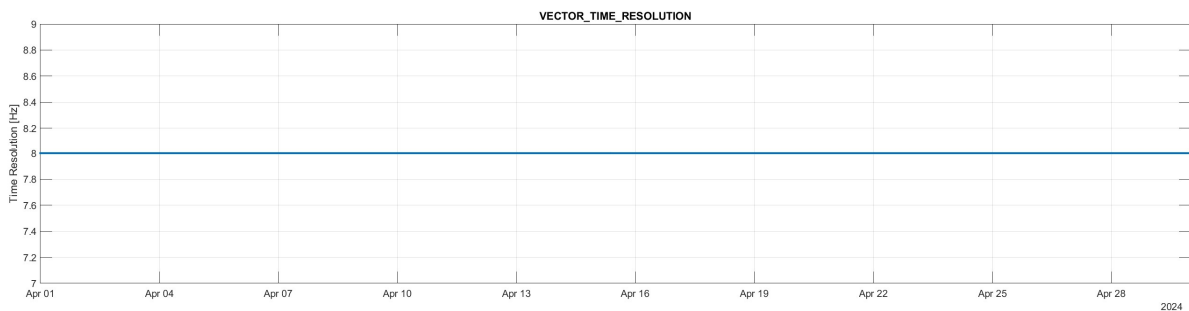
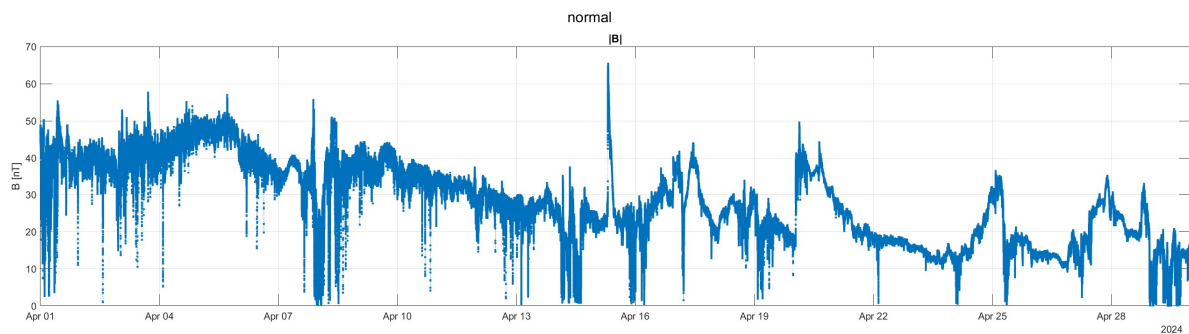
Data Summary

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

Perihelion was on the 4th of April.

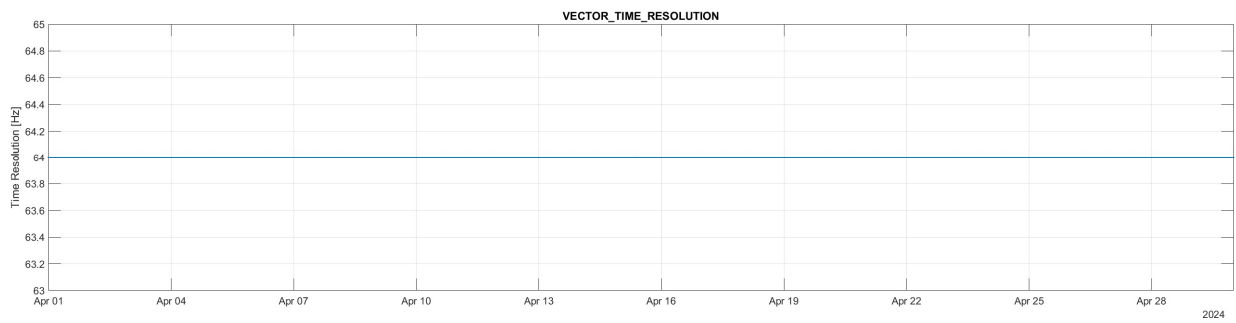
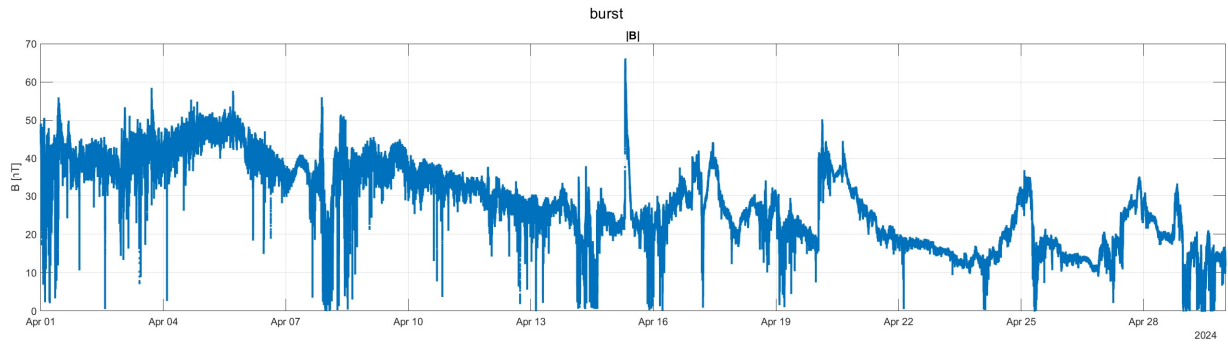
The spacecraft started the month at 0.30AU on the 1st of April and at the end of the month it was at 0.58AU.

Normal Mode



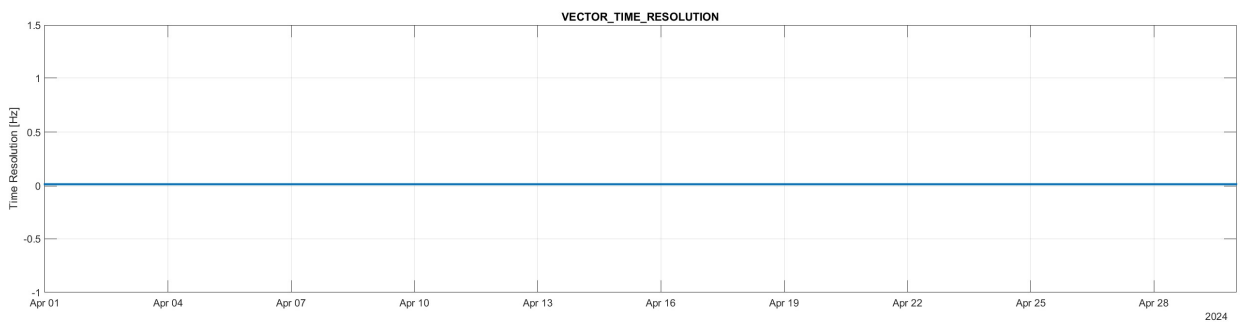
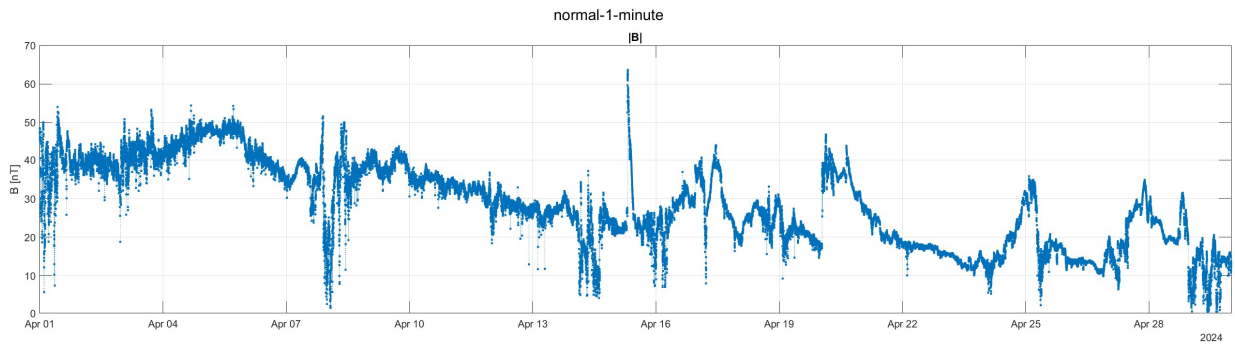
Operations	1 April – 30 April	Science phase throughout period, normal data produced.
Operational Events of Note		

Burst Mode

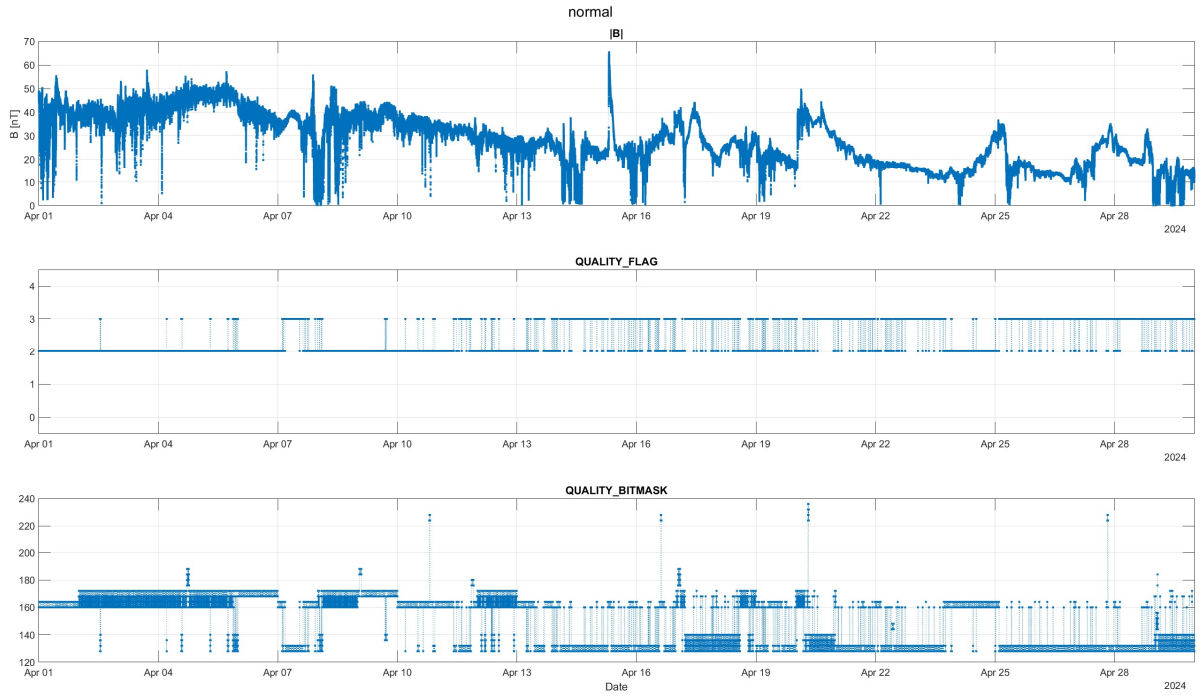


Coverage	From	To	Coverage
	01/04	30/04	24h per day of 64 vectors/s

Normal – 1min



Quality bitmask



Quality bit mask events

<p>SC events which disturb the field</p>	<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
<p>SC related issues</p>	<p>N/A</p>

Offsets

1 Apr – 30 Apr

The OBS offsets remained stable throughout the month, changing by a maximum of +/- 0.3nT in the X and Z axes. The OBS Y offset displayed the expected recovery behaviour, increasing by 0.4nT as has previously been observed. The IBS offsets were primarily disturbed by the increase in the IBS sensor temperature due to perihelion and the solar array events on the 10th, 16th and 20th.

OffsetNumber	Date	OBSX	OBSY	OBSZ	IBSX	IBSY	IBSZ	Comment
221060	01/04/2024 00:00	-44.05	-108.5	-5.47	-50.4	84.5	15.2	
221061	04/04/2024 12:00						14.8	
221062	08/04/2024 12:00					84.6	15.54	Increase in IBS offsets due to temperature range with perihelion
221063	10/04/2024 12:00	-44.05	-108.5	-5.69	-49.33			
221064	16/04/2024 12:00						13.98	
221065	19/04/2024 12:00					85.2		
221066	26/04/2024 12:00		-108.13					
221067	01/05/2024 00:00	-44.2	-108.2	-5.7	-49.8	85.2	14.0	
221068	07/05/2024 12:00	-44.2	-108.13	-5.73	-50	85.24	14	

Appendix

Appendix A: Files within this release

Filename
solo_L2_mag-rtn-burst_20240401_V01.cdf
solo_L2_mag-rtn-burst_20240402_V01.cdf
solo_L2_mag-rtn-burst_20240403_V01.cdf
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solo_L2_mag-rtn-burst_20240405_V01.cdf
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solo_L2_mag-rtn-burst_20240410_V01.cdf
solo_L2_mag-rtn-burst_20240411_V01.cdf
solo_L2_mag-rtn-burst_20240412_V01.cdf
solo_L2_mag-rtn-burst_20240413_V01.cdf
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solo_L2_mag-rtn-burst_20240415_V01.cdf
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