



Mio operations report

BepiColombo online SWT (26 May 2021)

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Mio operations plan

Sys	tem, PI level maintenance/investigation			
		Upload/dump: 1-2 pass	30 March	Final testing on ground was finished in early Jan.
	MDP middleware update, MDP function check, running test (BC_SC-89)	Function check : 1 pass (8 hrs)	1 April	New version of middleware is now ready for upload.
		Running test : 4-5 weeks	Completed! 15 April – 10 May	We are planning to futher reduce the MMO tlm volume, In order to perform the running test before June.
	MIA, MSA, HEP program update and function check	After MDP update	22-24 June	MSA program testing is ongoing at ISAS
	MSA mission data generation investigation (BC_SC-76)	After MSA program update	22-24 June	
	MSA HV ramp with OCL command investigation (BC_SC-104)	After MSA program update	22-24 June	
	Cruise checkout#5 & Battery maintenance		17-18 June 2021	Battery recharging
	VSB2 dry-run with new MDP middleware	Before VSB2	28 June	
Cru	ise Observations			
Α			22 Feb – 8 Mar	Instruments are limited due to
В	MEA1& HEP-e		21 – 24 Mar	the downlink constraints System-HK rate will be
С			12 June – 1 July	reduced to 1/64 Hz.
	MGF running test		19 June – 1 July	To be arranged in the frame of BC-SO science campaign ²

MDP WDT error investigation - FINISHED!!

Following two issues were completely fixed by the MDP middleware update.

- Non-factor interruption triggered by a burst-SRAM ECC interruption.
 - Temporal work-around was tested and verified onboard in March 2020
 - Final measure is included in the latest MDP middleware.
- ECC error on the area dedicated for the operation system.
 - Temporal work-around was tested and verified during June-August 2020.
 - Final measure is included in the latest MDP middleware.

Long-running test of the latest MDP middleware (15 Apr. 2021 to 10 May 2021)

- While **627** ECC interruptions were detected, no critical error was detected during **595** hrs test !!
- The results support that the WDT error issue has been fixed.

Schedule

Aug. 2020 : Long-running test of the test-version of MDP software (Finished)

Aug. - Nov. 2020 : Prepare the final version of MDP software (by industry) (Finished)

After 1st Venus flyby : Upload the final-version software & Long-running test. (Finished)

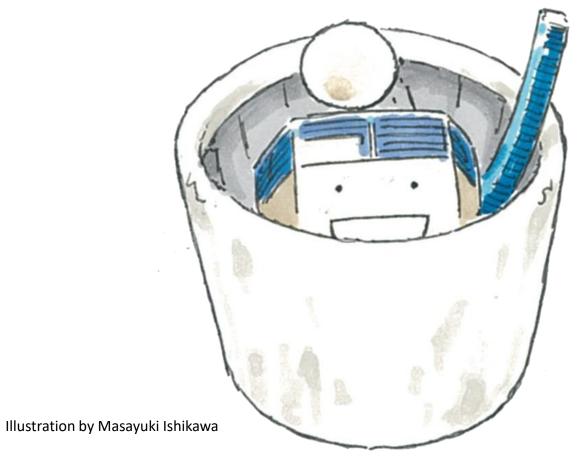
MIO Operation schedule for 2021/June - Oct

	Checkout/mainte	enance			
	17-18 June	Cruise C/O#5, BAT charging	Distributed to PIs on 18 May		
	22-24 June	MIA, MSA, HEP program update and function check	Input from PIs deadline : 31 May		
	28 June	VSB2 dry-run with new MDP middleware			
	December?	Cruise C/O#6			
		MSA HV ramp with OCL command investigation (BC_SC-104)	Pending		
		MSA mission data generation investigation (BC_SC-76)	Pending		
	Science observat	tion			
	(12-16 June)	Cruise observation solar-wind mode (MEA1, HEP-e)	Go/cancel decision of this slot will be made on 9 June		
	19-21 June 25-27 June 29 June – 1 Jul	Cruise observation solar-wind mode (MEA1, HEP-e) + MGF			
a-1	1 – 15 Jul				
a-2	19 – 30 Jul	Cruise observation solar-wind mode (MEA1, HEP-e) + MGF	In case of TCM on 15 Jul this slot will be cancelled		
	10 Aug	Venus flyby#2	Datas are based on information before		
b	14 – 19 Aug	Cruise observation solar-wind mode (MEA1, HEP-e) + MGF	Dates are based on information before SEP6.		
С	7 – 16 Sep	Cruise observation solar-wind mode (MEA1, HEP-e) + MGF	JLI U.		
	2 Oct	Mercury Flyby#1	Please note that the schedule from 1 July		
d	7 – 8 Oct	Cruise observation solar-wind mode (MEA1, HEP-e) + MGF	onwards may change.		
е	16 -28 Oct	Cruise observation solar-wind mode (MEA1, HEP-e) + MGF			

Pass information

DO Y	Wee k	Date	Ground Station	Start of Track	End of Track	Activity
168	24	Thu 17-06-21	CEB	8:16	18:16	MIO Cruise C/O, BAT charging
169	24	Fri 18-06-21	CEB	8:17	18:17	MIO BAT check
170	24	Sat 19-06-21				
171	24	Sun 20-06-21				
172	25	Mon 21-06-21				
173	25	Tue 22-06-21	CEB	8:22	18:22	MSA update(out of pass) MIA HEP update+dump MSA function check HV ON start MSA running test HV ON
174	25	Wed 23-06-21				continue MSA running test HV ON (out of pass)
175	25	Thu 24-06-21	CEB	8:25	21:00	MIA HEP function check HV ON
176	25	Fri 25-06-21				
177	25	Sat 26-06-21				
178	25	Sun 27-06-21				
179	26	Mon 28-06-21	CEB	9:00	19:00	VSB#2 dryrun HV ON

Thank you!



Stay safe!