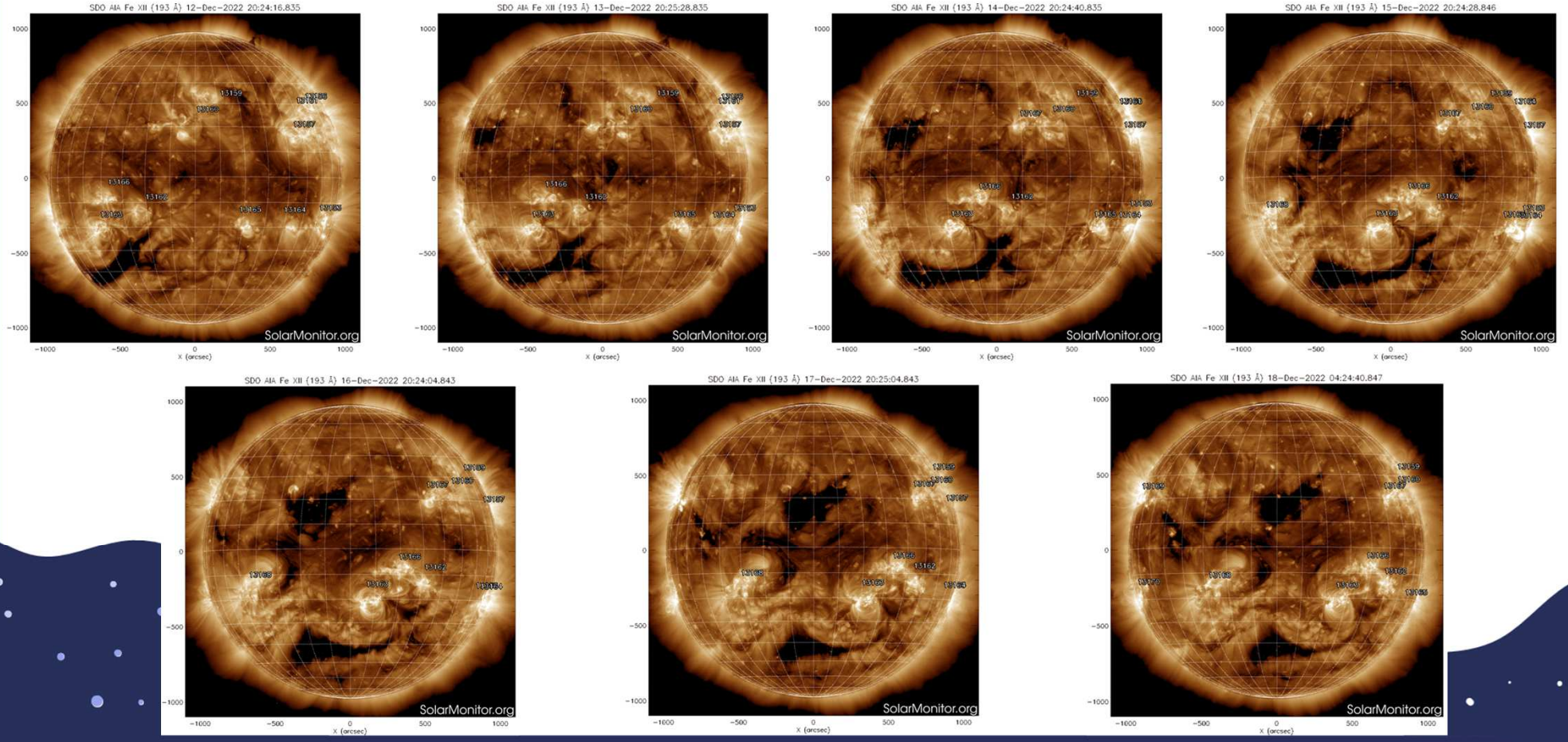
電漿值周

12/12～12/18

尤紹宇、吳育修

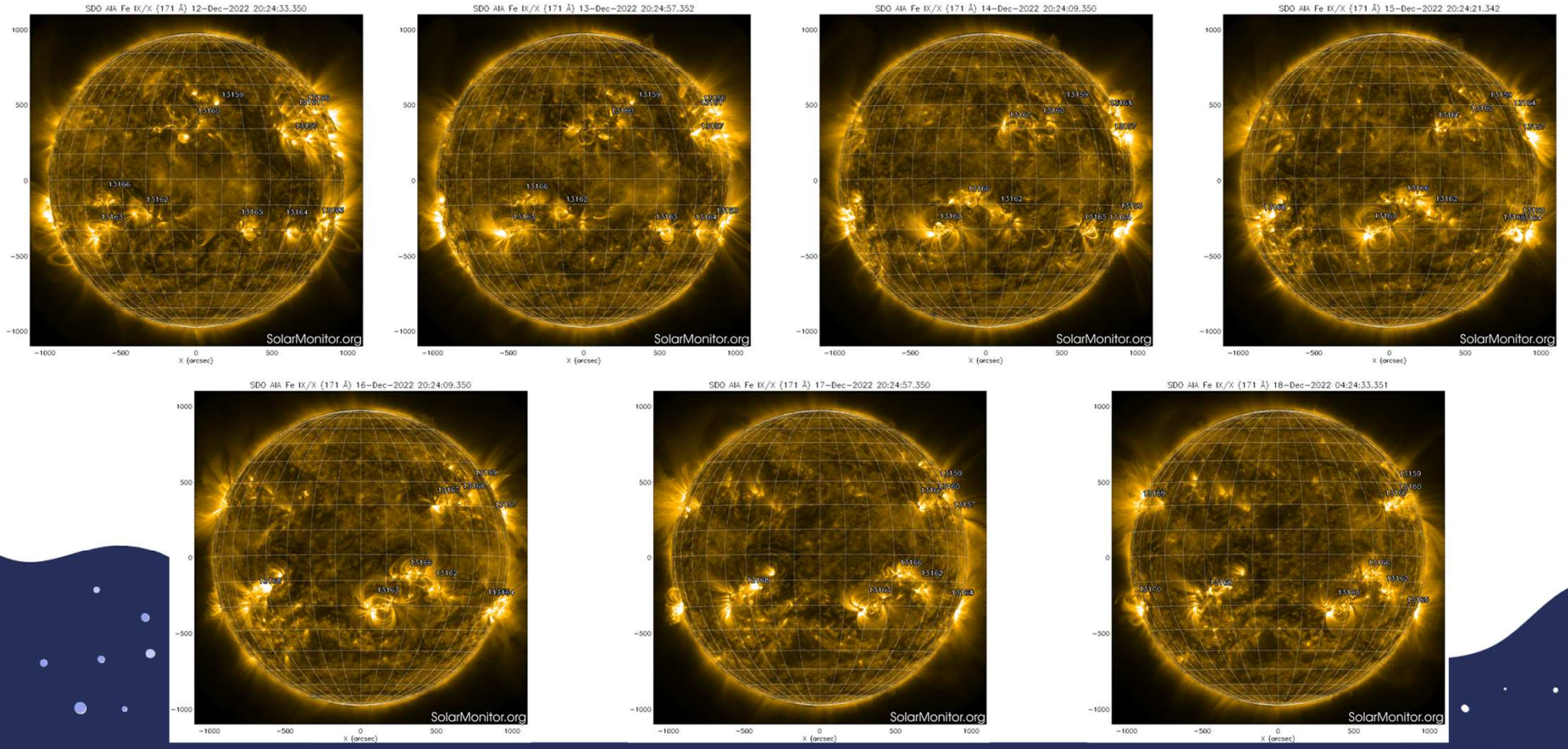
日冕洞 AIA 193Å

www.SolarMonitor.org



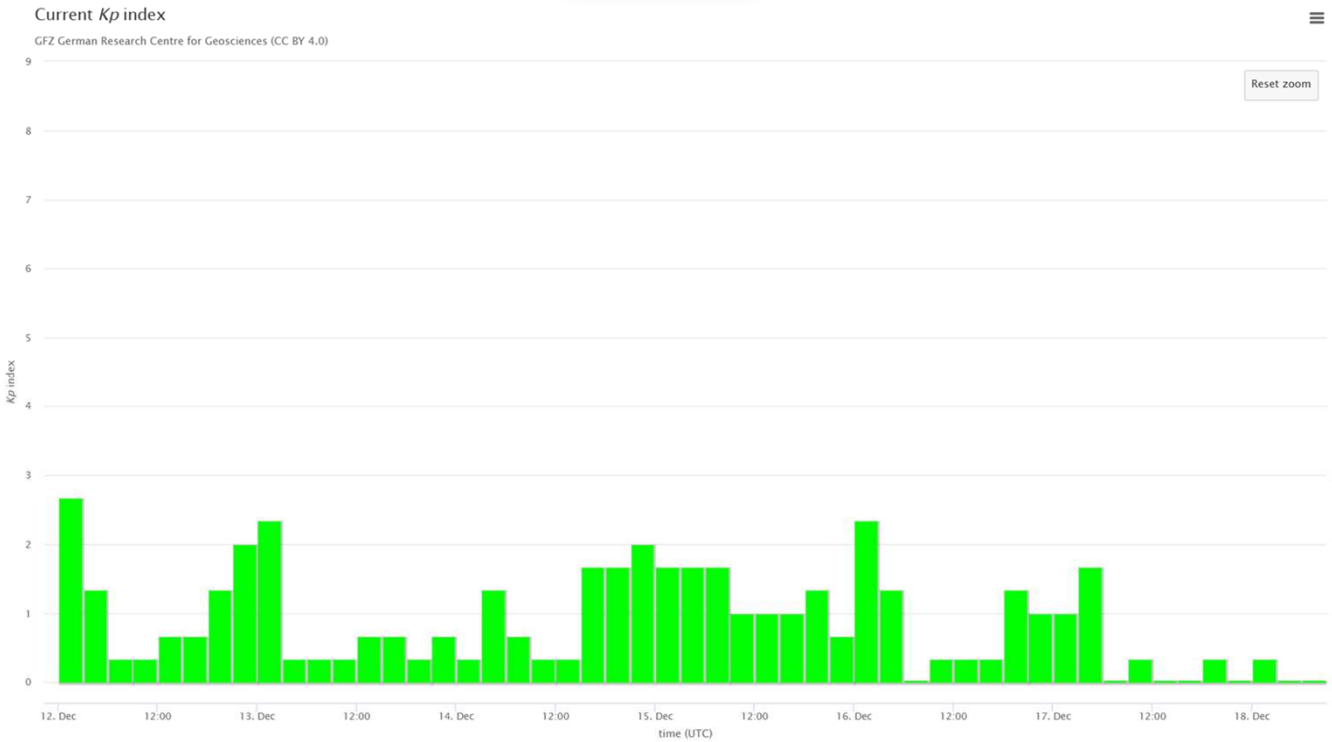
日冕 AIA 171Å

www.SolarMonitor.org



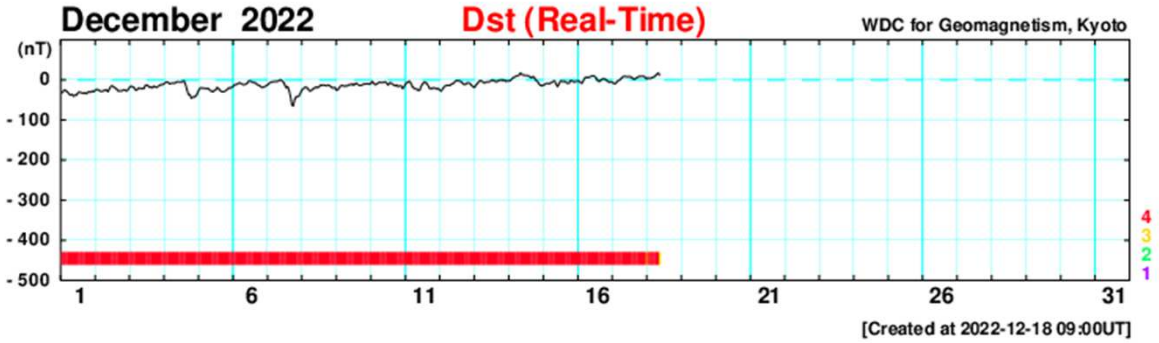
Kp index

[10 days plot - Kp index (gfz-potsdam.de)]



DST index

[Real-time (Quicklook) Dst Index Monthly Plot and Table (kyoto-u.ac.jp)]



WDC for Geomagnetism, Kyoto
Hourly Equatorial Dst Values (REAL-TIME)
DECEMBER 2022

unit=nT

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	UT 24
1	-33	-28	-25	-28	-31	-36	-38	-36	-41	-38	-39	-33	-30	-32	-33	-34	-32	-35	-31	-30	-31	-28	-30	-27
2	-24	-25	-27	-29	-29	-27	-26	-25	-30	-23	-16	-15	-18	-20	-23	-28	-28	-28	-27	-25	-26	-28	-25	-19
3	-16	-17	-19	-25	-26	-21	-21	-22	-22	-22	-14	-13	-15	-19	-18	-20	-16	-18	-19	-16	-14	-12	-12	-10
4	-7	-5	-7	-10	-9	-8	-9	-7	-5	-5	-5	-6	-4	-3	-12	-25	-37	-37	-46	-43	-43	-41	-36	-27
5	-21	-20	-21	-21	-22	-22	-22	-27	-28	-30	-27	-25	-19	-22	-27	-29	-30	-29	-27	-24	-20	-21	-19	-17
6	-13	-12	-11	-8	-8	-10	-12	-12	-11	-8	-3	-3	-5	-7	-7	-9	-12	-14	-16	-19	-19	-17	-15	-13
7	-9	-7	-5	-5	-4	-4	-4	-2	0	-2	-5	-12	-20	-17	-26	-41	-63	-65	-49	-42	-42	-40	-33	-25
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17	-9	-10	-6	-2	-1	2	6	9	9	7	8	8	7	4	1	3	5	7	9	9	9	9	6	2
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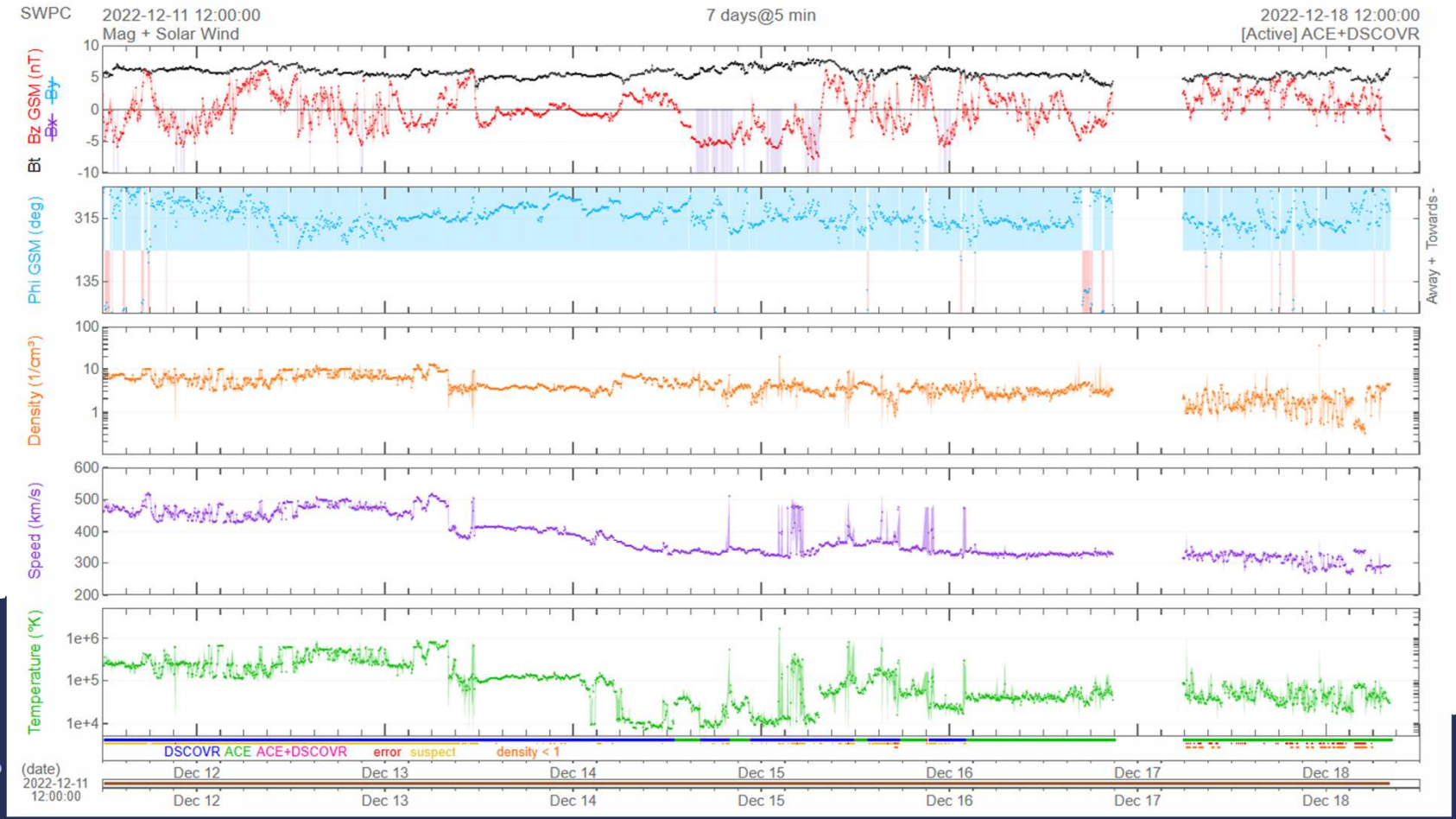
Solar wind data

[Real Time Solar Wind | NOAA / NWS Space Weather Prediction Center]



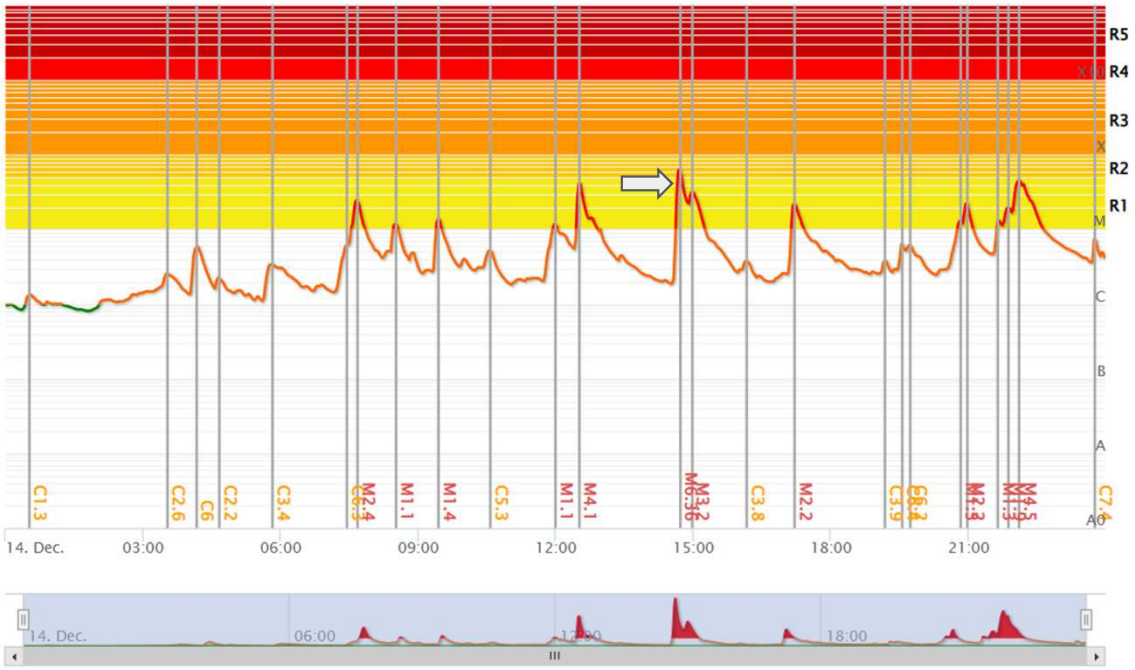
55 times CME last week

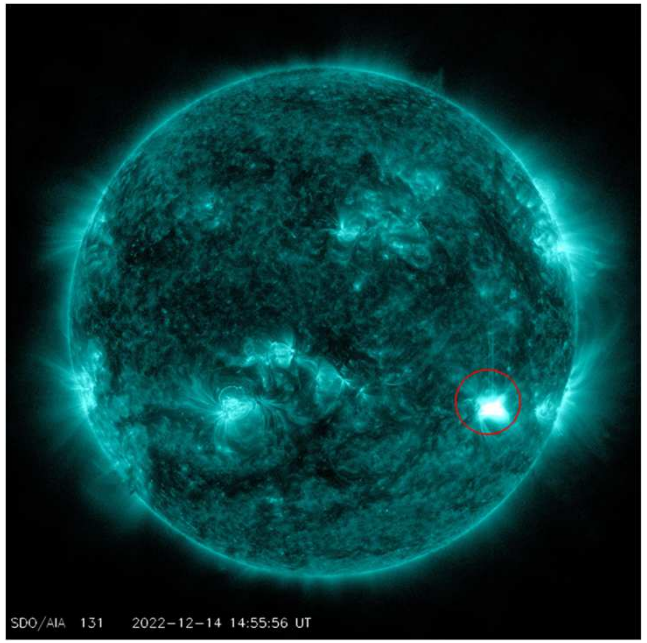
CACTus Diagostics (sidc.be)

# CME	t0	dt0	pa	da	v	dv	minv	maxv	halo?
0055	2022/12/18 05:24	01	061	008	1955	0114	1785	2083	
0054	2022/12/17 22:36	02	291	088	0367	0056	0260	0463	
0053	2022/12/17 20:00	02	114	054	0715	0342	0293	1562	
0052	2022/12/17 19:00	01	257	008	0400	0013	0383	0416	
0051	2022/12/17 05:24	01	125	032	0976	0372	0294	1488	
0050	2022/12/17 04:24	02	255	016	0239	0845	0147	1953	
0049	2022/12/17 03:24	01	052	014	0726	0080	0710	0919	
0048	2022/12/17 01:36	01	217	008	0503	0142	0292	0651	
0047	2022/12/17 01:36	01	105	016	0729	0464	0422	1574	
0046	2022/12/17 00:48	03	292	062	0512	0122	0248	0712	
0045	2022/12/16 23:24	01	052	010	0814	0350	0529	1488	
0044	2022/12/16 21:48	01	124	030	0906	0456	0165	1562	
0043	2022/12/16 19:24	01	231	008	0309	0030	0258	0330	
0042	2022/12/16 17:48	02	059	024	0868	0316	0625	1488	
0041	2022/12/16 15:24	02	012	010	1454	0199	1358	1837	
0040	2022/12/16 13:36	03	018	010	0882	0342	0405	1420	
0039	2022/12/16 13:36	01	065	008	0573	0067	0452	0601	
0038	2022/12/16 11:36	03	027	016	0844	0505	0434	1750	
0037	2022/12/16 04:28	02	104	074	1314	0413	0238	1782	
0036	2022/12/16 00:48	04	208	014	0496	0251	0154	0892	
0035	2022/12/15 21:24	02	247	060	0276	0052	0177	0372	
0034	2022/12/15 16:12	03	119	044	1562	0292	0844	1953	
0033	2022/12/15 14:00	02	269	012	0210	0117	0158	0459	
0032	2022/12/15 13:25	00	093	032	1284	0413	0784	1953	
0031	2022/12/15 11:36	01	130	018	0284	0083	0164	0472	
0030	2022/12/15 06:00	05	236	074	0166	0098	0098	0449	
0029	2022/12/15 04:24	01	040	006	0476	0080	0355	0568	
0028	2022/12/15 00:00	02	344	006	0422	0577	0100	1488	
0027	2022/12/14 21:12	02	092	138	0976	0458	0187	1838	II
0026	2022/12/14 20:36	03	121	040	0459	0066	0328	0568	
0025	2022/12/14 20:00	01	344	006	1060	0688	0332	1735	
0024	2022/12/14 18:12	02	066	022	0390	0114	0233	0651	
0023	2022/12/14 16:36	01	103	012	1096	0280	0976	1644	
0022	2022/12/14 16:36	03	049	040	0781	0027	0744	0843	
0021	2022/12/14 16:36	02	343	008	0434	0108	0246	0529	
0020	2022/12/14 15:27	01	077	024	0924	0079	0747	1051	
0019	2022/12/14 10:24	01	013	008	1467	0353	0919	1656	
0018	2022/12/14 10:12	00	046	010	0553	0096	0339	0624	
0017	2022/12/14 09:48	02	340	006	0265	0844	0208	1953	
0016	2022/12/14 09:24	01	020	006	0434	0241	0339	0892	
0015	2022/12/14 09:24	01	342	014	0625	0044	0558	0694	
0014	2022/12/14 08:36	01	282	014	0844	0292	0459	1300	
0013	2022/12/14 08:24	02	239	068	0395	0024	0351	0449	
0012	2022/12/14 07:24	01	057	012	0516	0144	0440	0791	
0011	2022/12/14 05:00	01	341	012	1121	0271	0709	1358	
0010	2022/12/14 04:36	05	219	108	0220	0063	0102	0341	II
0009	2022/12/14 00:48	01	058	014	0470	0080	0403	0624	
0008	2022/12/13 23:48	01	250	034	0363	0317	0192	1201	
0007	2022/12/13 21:36	01	018	010	1146	0369	0744	1736	
0006	2022/12/13 21:36	01	018	014	0574	0137	0332	0735	
0005	2022/12/13 19:36	00	254	010	0272	0026	0234	0312	
0004	2022/12/13 19:36	01	336	006	0163	0040	0119	0229	
0003	2022/12/13 16:12	02	046	034	0563	0047	0496	0657	
0002	2022/12/13 08:48	01	210	006	0140	0057	0110	0243	
0001	2022/12/13 06:12	01	061	024	0637	0092	0466	0771	

12/14 Solar flare

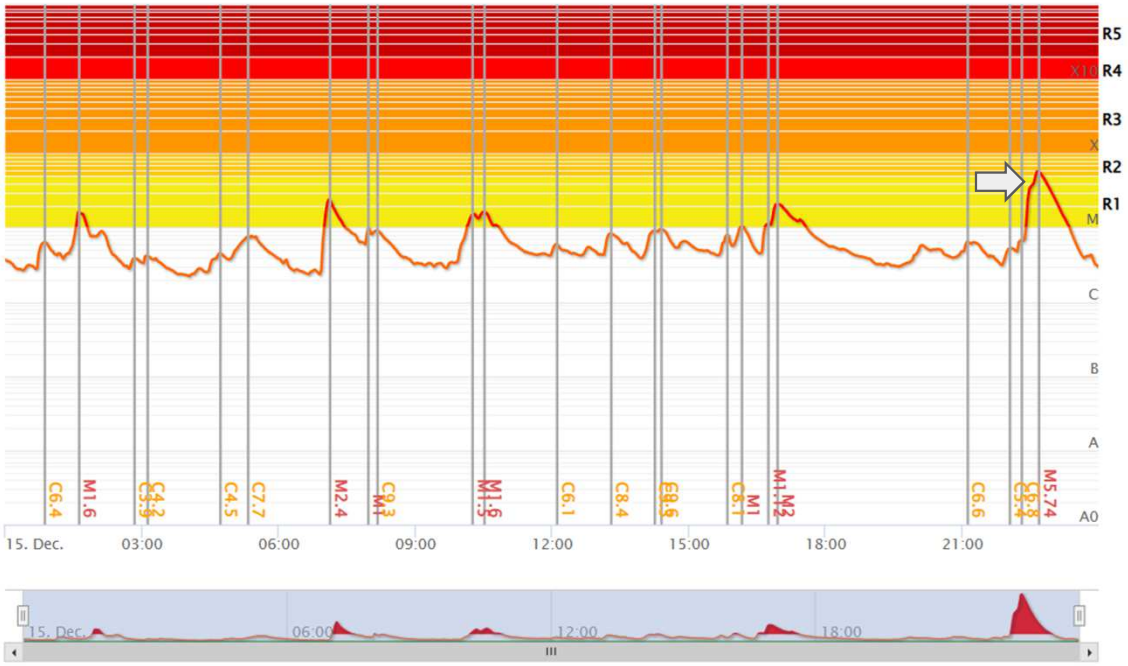
[Solar flares - Wednesday, 14 December 2022 | SpaceWeatherLive.com]

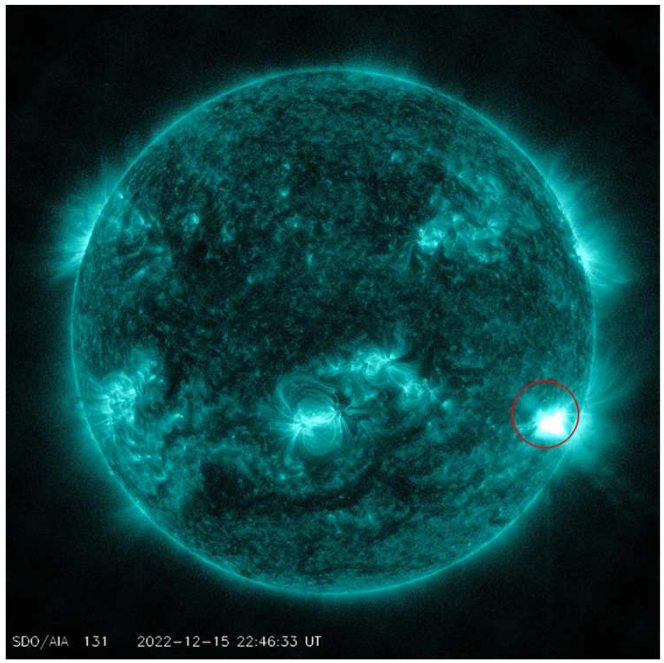




12/15 Solar flare

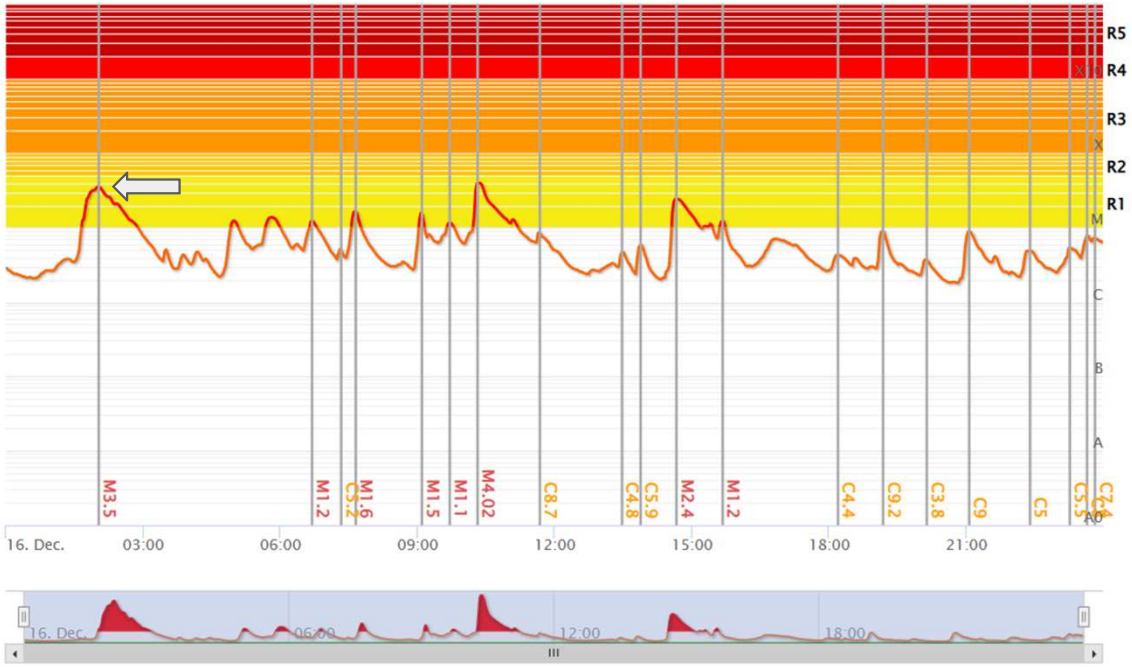
[Solar flares - Thursday, 15 December 2022 | SpaceWeatherLive.com]

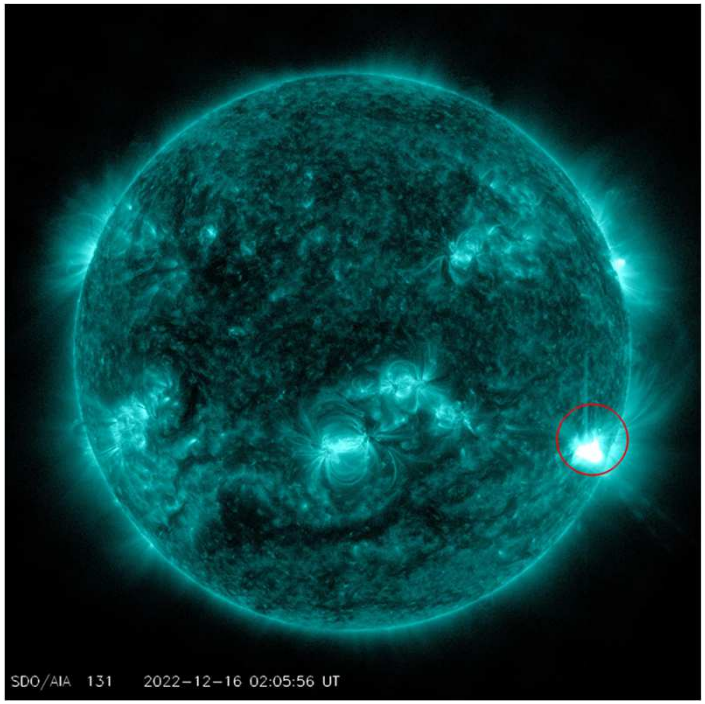




12/16 Solar flare

[Solar flares - Friday, 16 December 2022 | SpaceWeatherLive.com]



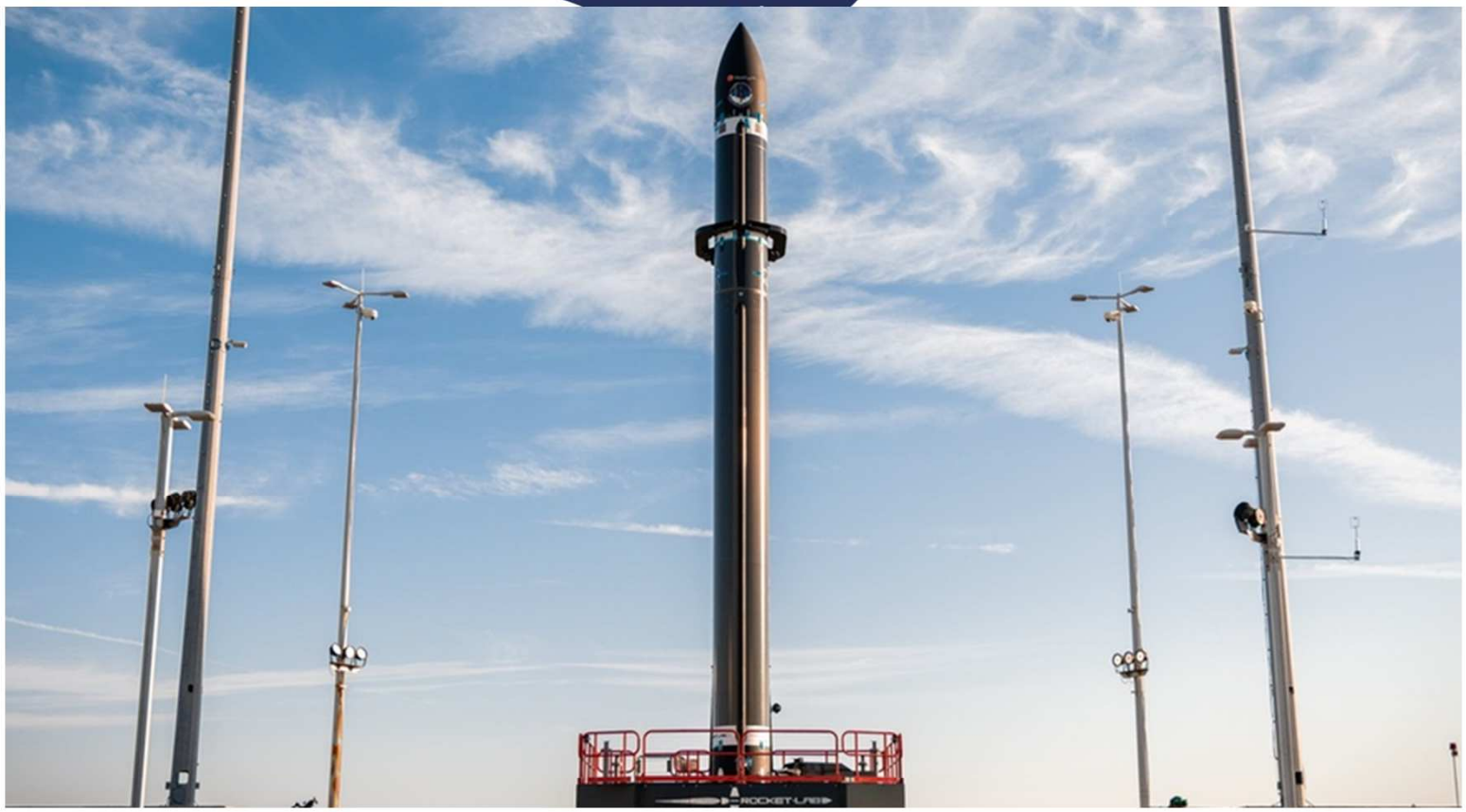


太空新聞

Historic first launch of Chinese private methane-fueled rocket ends in failure

· What was the world’s first attempt to achieve orbit with a methane-fueled rocket.

· Data suggest an expected burn of the stage’s vernier thrusters, intended to carry the stage and payloads into orbit after a burn by the main engine, did not occur as planned.

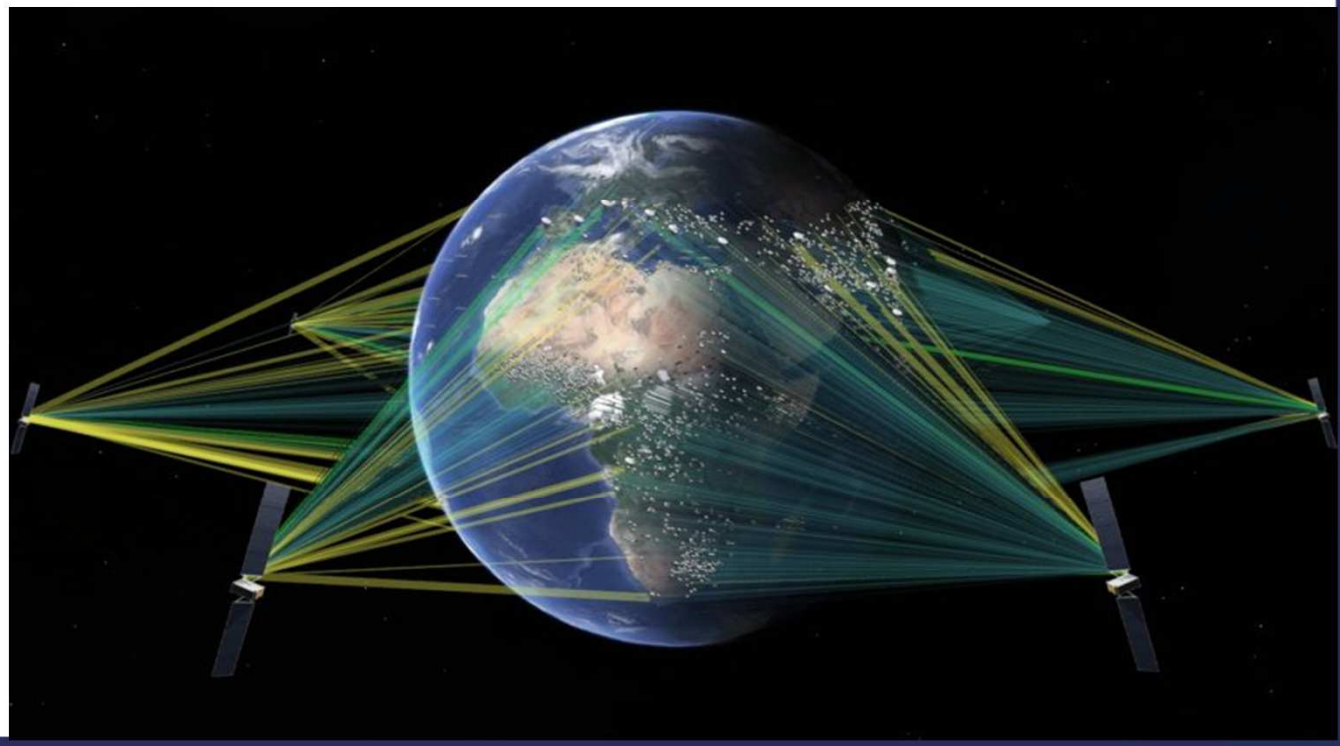


NASA and Rocket Lab ready for first Electron launch from Wallops

The mission will place into orbit three satellites for HawkEye 360, which operates a constellation of spacecraft that perform radio-frequency surveillance. HawkEye 360 signed a contract in April for three Electron launches, including the first Electron launch from Wallops.

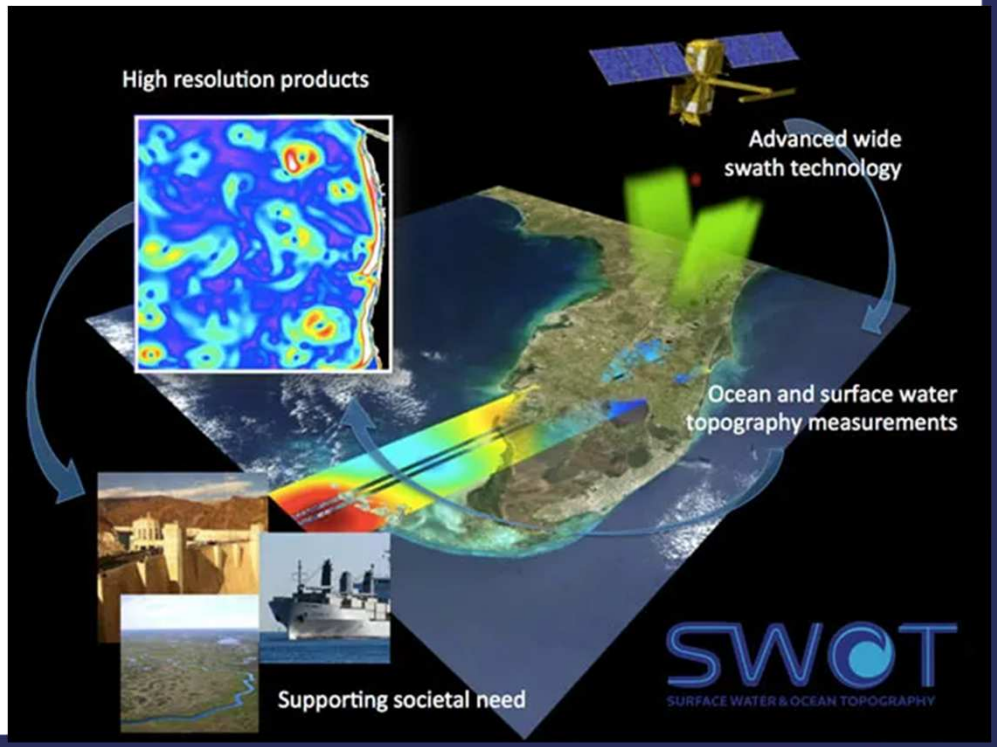
SpaceX launches first pair of O3b mPower satellites

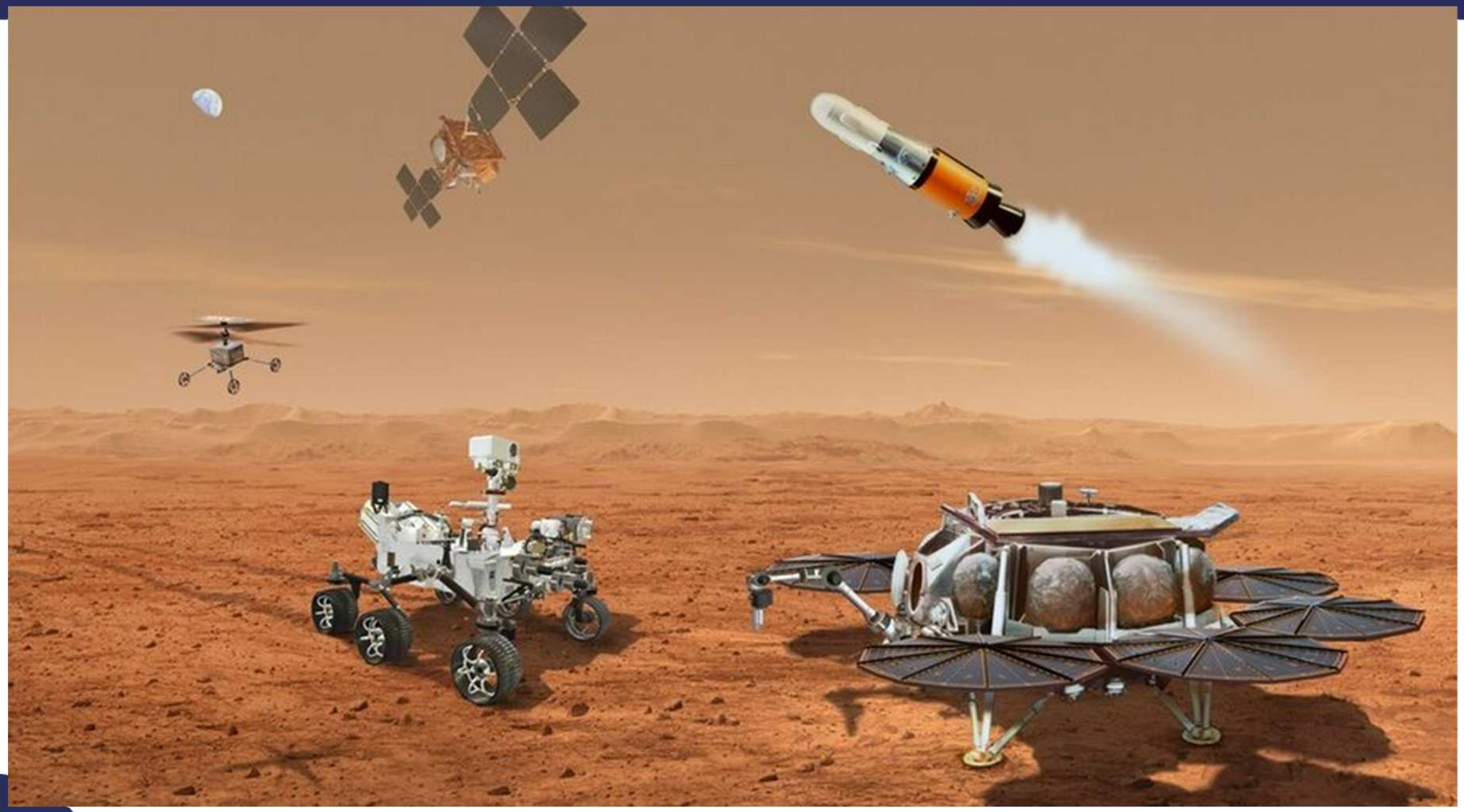
- **O3b mPOWER is a communications satellite system**
- **roughly 10 times more than the first-generation O3b satellites**



Falcon 9 launches ocean science mission for NASA and CNES

The launch was previously scheduled for Dec. 15 but SpaceX postponed it to perform inspections of two first-stage engines where moisture was noticed.

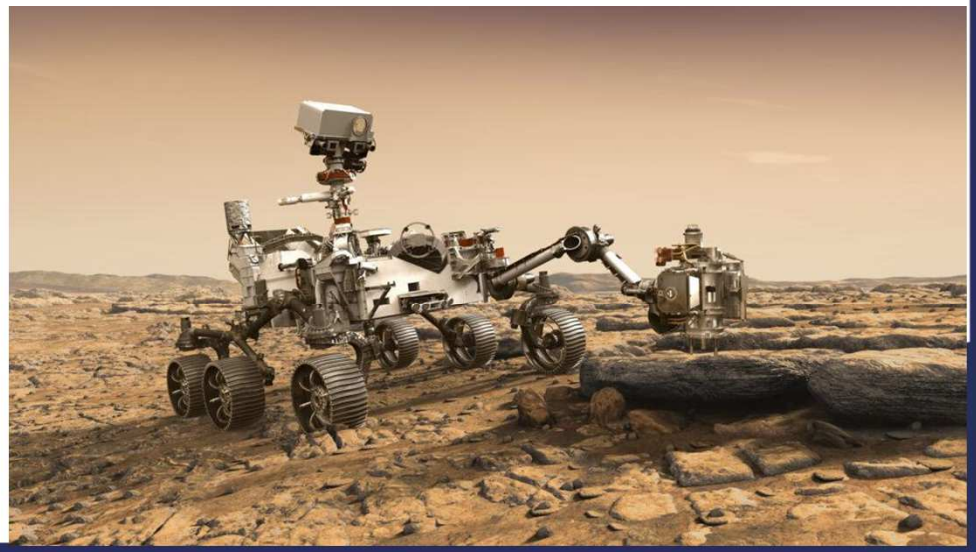




Perseverance prepares to deposit Mars sample cache

Perseverance is depositing the tubes to create a depot that could be retrieved by later missions in the overall Mars Sample Return (MSR) campaign. It will serve as a backup to Perseverance itself, which will keep other tubes and return them to a future Sample Retrieval Lander.

毅力號：是由美國國家航空暨太空總署下屬的噴氣推進實驗室製造，用於火星2020任務中的火星車。



REFERENCE

1. Historic first launch of Chinese private methane-fueled rocket ends in failure - SpaceNews
2. Perseverance prepares to deposit Mars sample cache - SpaceNews
3. NASA postpones spacewalk to support Soyuz investigation - SpaceNews