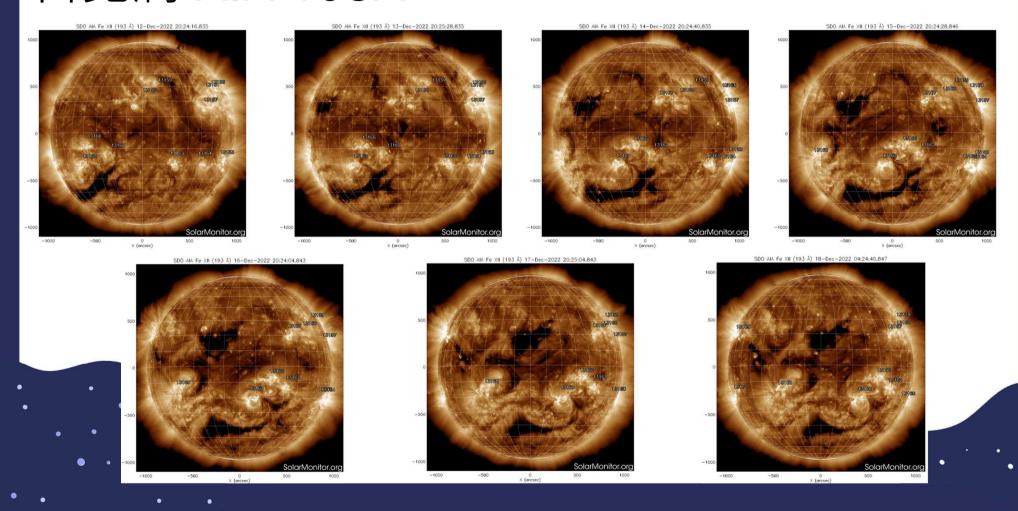
電漿值周 12/12~12/18

尤紹宇、吳育修

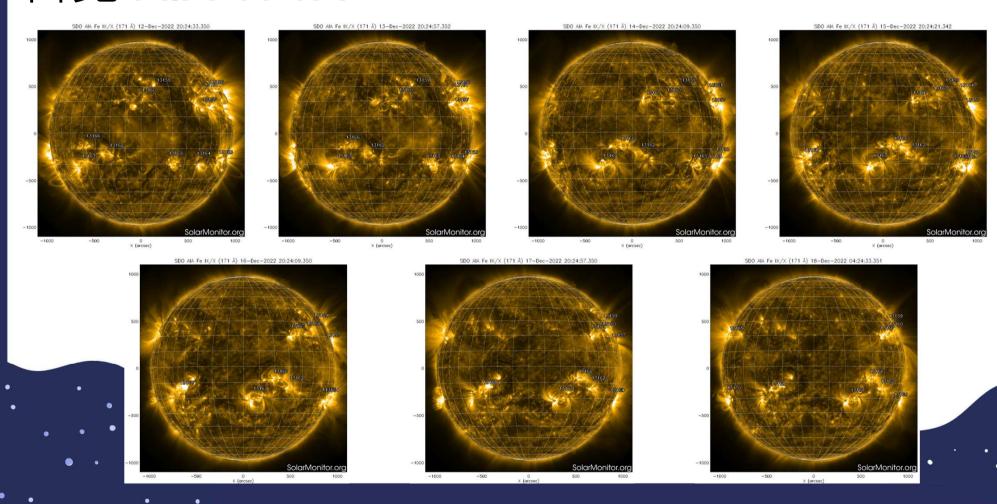
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www.SolarMonitor.org



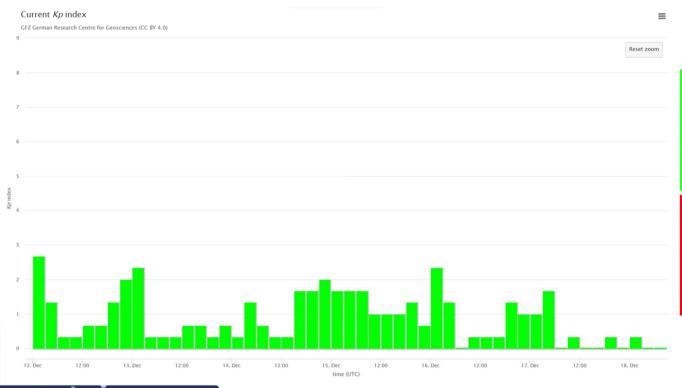
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www.SolarMonitor.org



Kp index

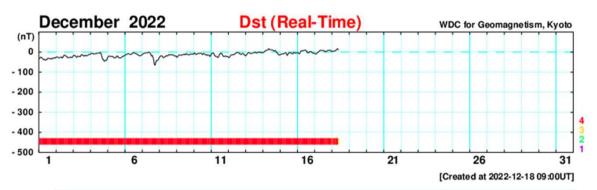
10 days plot - Kp index (gfz-potsdam.de)



	O Quiet	C	1 Quiet	Uns	2 settled		3 settled	4 Active			
HIGH Geomagnetic Latitudes	WEAK & SLOW AURORA POSSIBLE	HIGH Geomagnetic Latitudes	WEAK & SLOW AURORA LIKELY	HIGH Geomagnetic Latitudes	MODERATE AURORAL DISPLAY	HIGH Geomagnetic Latitudes	ACTIVE AURORAL DISPLAY Sporadic substorm possible	HIGH Geomagnetic Latitudes	ACTIVE AURORAL DISPLAY multiple sporadic substorms possible		
LOW Geomagnetic Lattudes	AURORA EXTREMELY UNLIKELY	LOW Geomagnetic Latitudes	AURORA VERY UNLIKELY	LOW Geomagnetic Latitudes	AURORA UNLIKELY	LOW Geomagnetic Latitudes	WEAK AURORA DISPLAY POSSIBLE	LOW Geomagnetic Latitudes	WEAK AURORA DISPLAY POSSIBLE		
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	(G5)	{	G(G4) Severe	7	(G3)	((G2)	5 (G1)			
	netic storm		gnetic Storm		gnetic Storm		gnetic Storm		netic Storm		
HIGH Geomagnetic Eactubes	EXTREMELY STRONG AURORA Long periods of substituting	HOOK Geomagnetic Carbboes	EXTREMELY STRONG AURORA Long periods of substorming	HIGH Geomagnetis LMOVORS	VERY STRONG AURORAL DISPLAY Long periods of substorming	HIGH Geomagnatic Latitudes	STRONG AURORAL DISPLAY fonger substorms	HIGH Geomagnetic Lathudes	VERY ACTIVE AURORAL DISPLAY Multiple substorms likely		
LOW Geomagnatic Lintidas	VERY STRONG AURORAL DISPLAY overhead aurora possible	LOW Decreasymbol Labitades	STRONG AURORAL DISPLAY EXTREMELY LIKELY	LOW Geomegratic Latinoses	STRONG AURORAL DISPLAY VERY LIKELY	LOW Geomagnetic Latitudes	ACTIVE AURORAL DISPLAY VERY LIKELY	LOW Geomagnetic Lathrdes	AURORAL DISPLAY LIKELY		
Super CME:	ectre source s. Cerningsponistesis events top sour wind eath- ne shock ware	Cargo GM Sec Avery ands	inibe source Es caused by seller- rine or flares incled color wind with by shoce wave	Large CM 550 3 yeary entra	nativ source Cs caused by sour- ross of Bares occed solar world with ig shock wave	Corenal hol	esche source le sending fast winds Or CME need solar wind	Possible source: Coronal hole sending fast winds Or CME > enhanced soler wind			

DST index

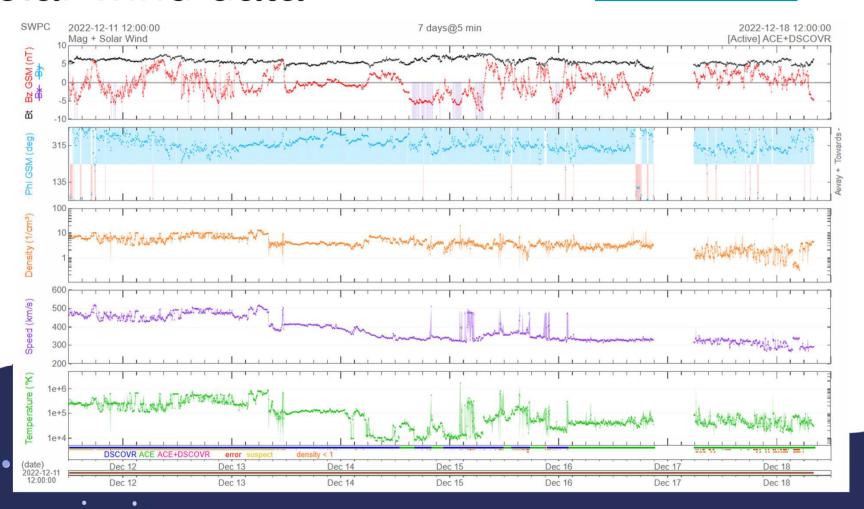
Real-time (Quicklook) Dst Index Monthly Plot and Table (kyoto-u.ac.ip)



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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	
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Solar wind data

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



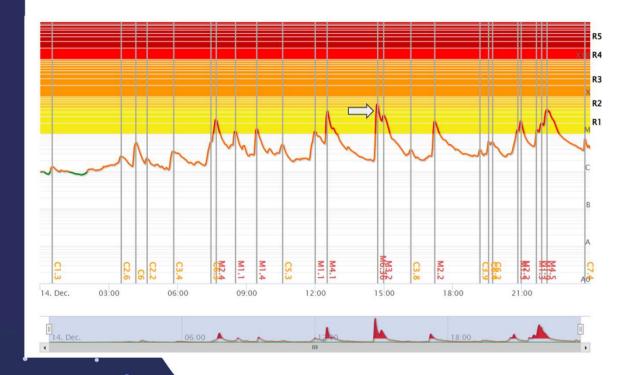
CACTus Diagostics (sidc.be)

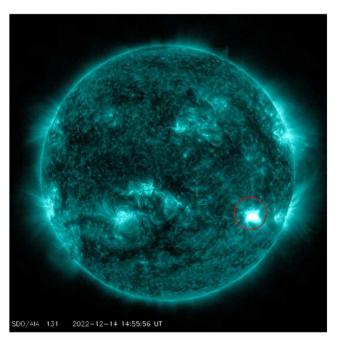
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12/14 Solar flare

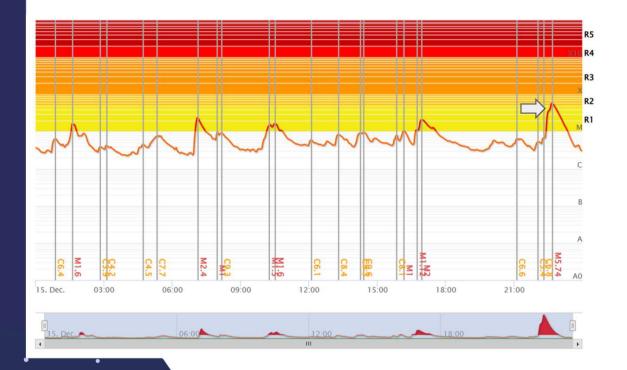
Solar flares - Wednesday, 14 December 2022 SpaceWeatherLive.com

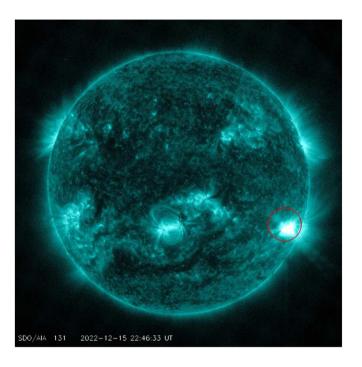




12/15 Solar flare

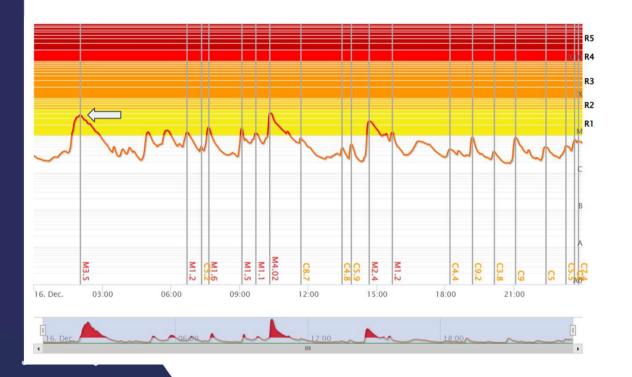
Solar flares - Thursday, 15 December 2022 | SpaceWeatherLive.com

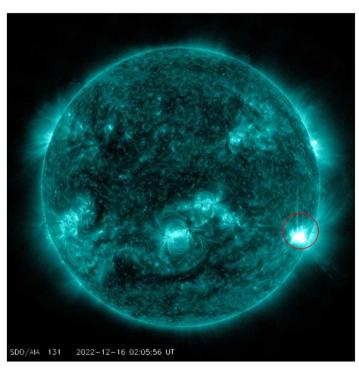




12/16 Solar flare

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





太空新聞



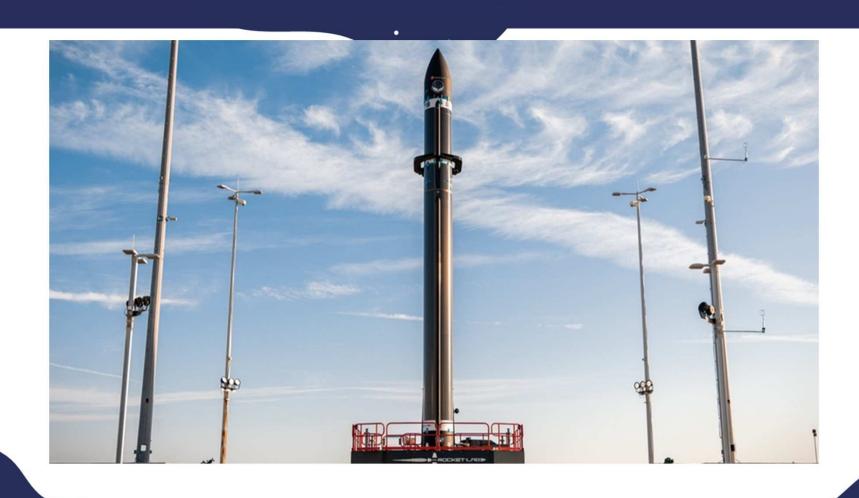
Historic first launch of Chinese private methane-fueled rocket ends in failure

· 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

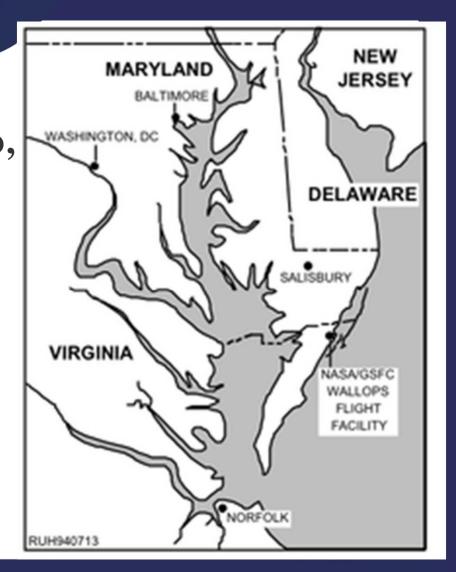
planned.





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.





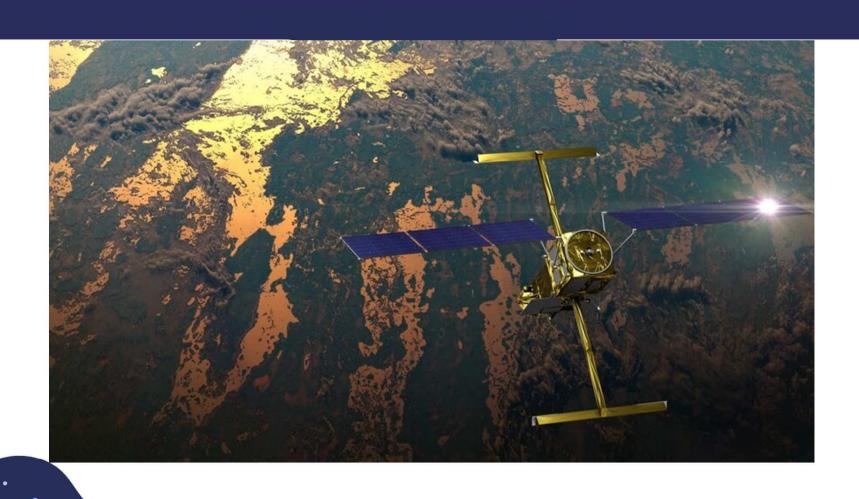
SpaceX launches first pair of O3b mPower satellites

· O3b mPOWER is a communications satellite system

· roughly 10 times more than the first-generation O3b

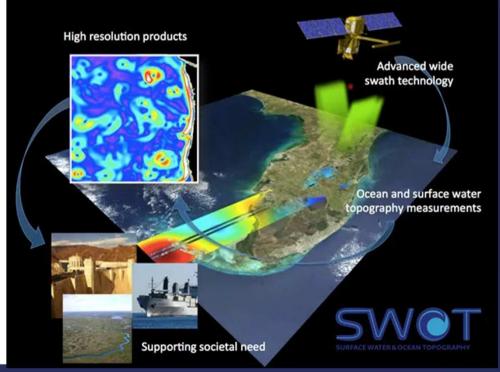
satellites





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