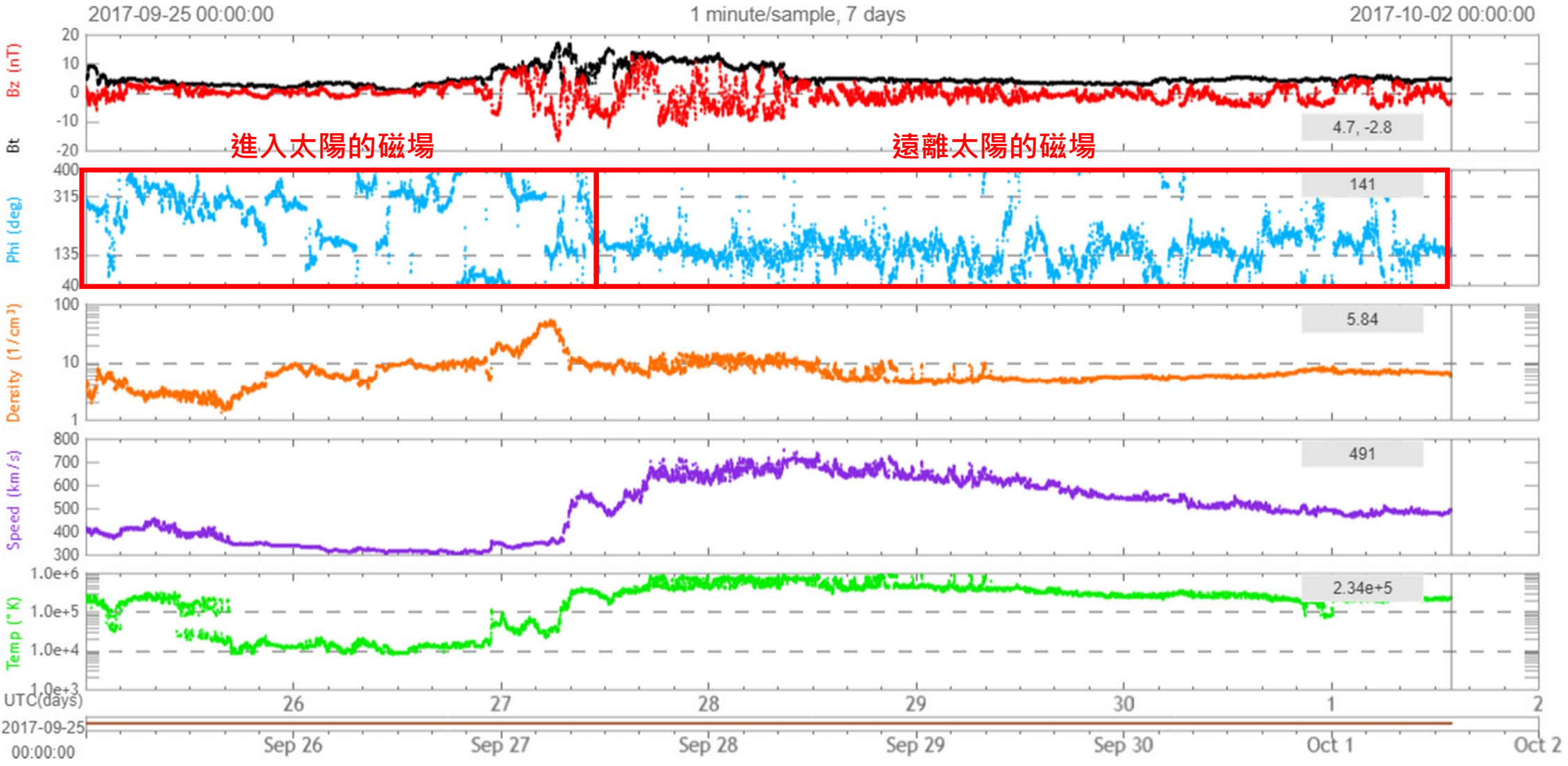
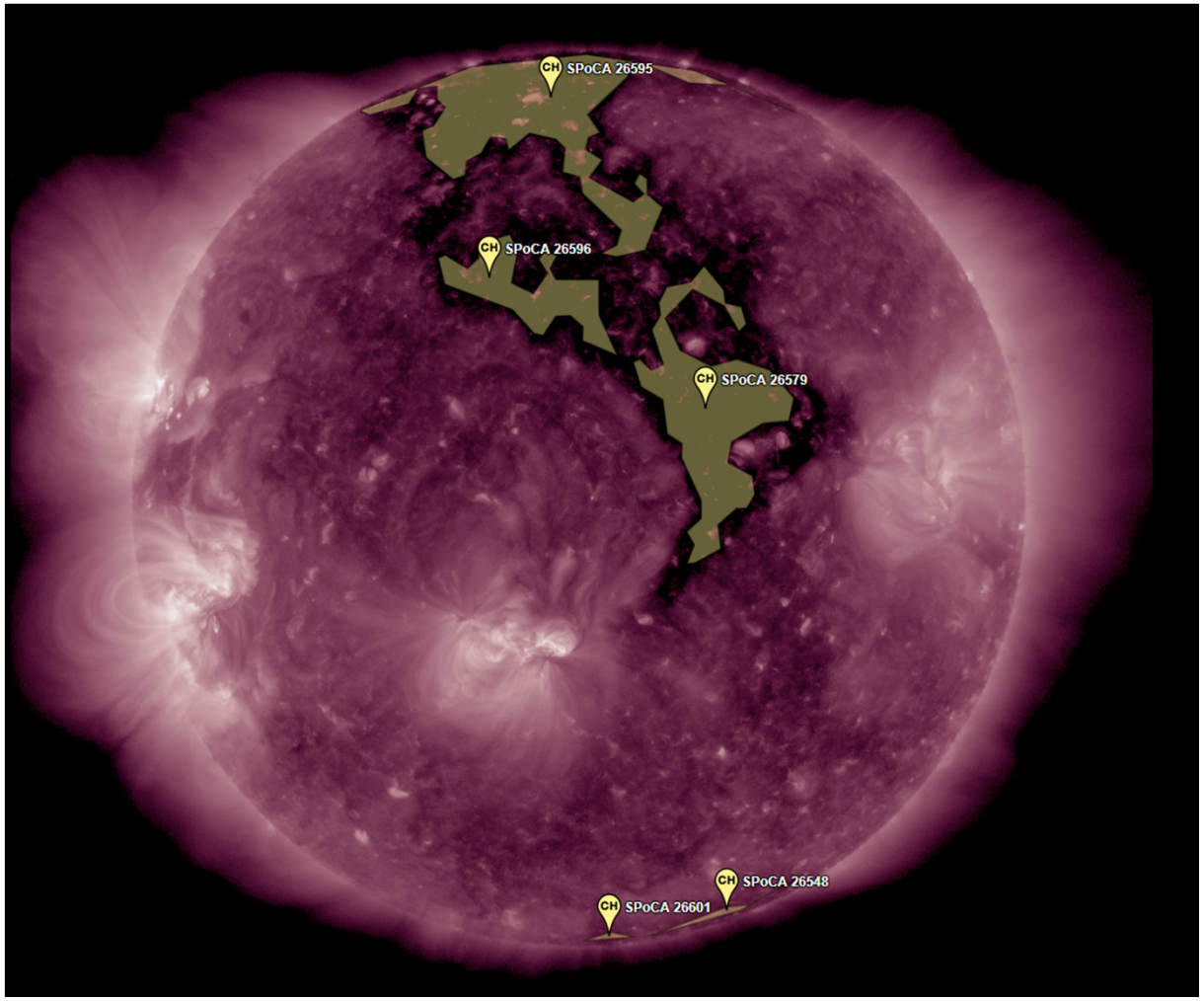
太陽圈物理

值 週 報 告

106/9/25 ~ 106/10/1


2017-09-25 00:00:00
1 minute/sample, 7 days
2017-10-02 00:00:00
Bz (nT)
Bt
20
10
0
-10
-20
4.7, -2.8
進入太陽的磁場
遠離太陽的磁場
Phi (deg)
400
315
135
40
141
Density (1/cm³)
100
10
1
5.84
Speed (km/s)
800
700
600
500
400
300
491
Temp (°K)
1.0e+6
1.0e+5
1.0e+4
1.0e+3
2.34e+5
UTC(days)
26
27
28
29
30
1
2
2017-09-25
00:00:00
Sep 26
Sep 27
Sep 28
Sep 29
Sep 30
Oct 1
Oct 2



9/26 00:00:00 UT

AIA_211Å

“canyon-shaped hole”

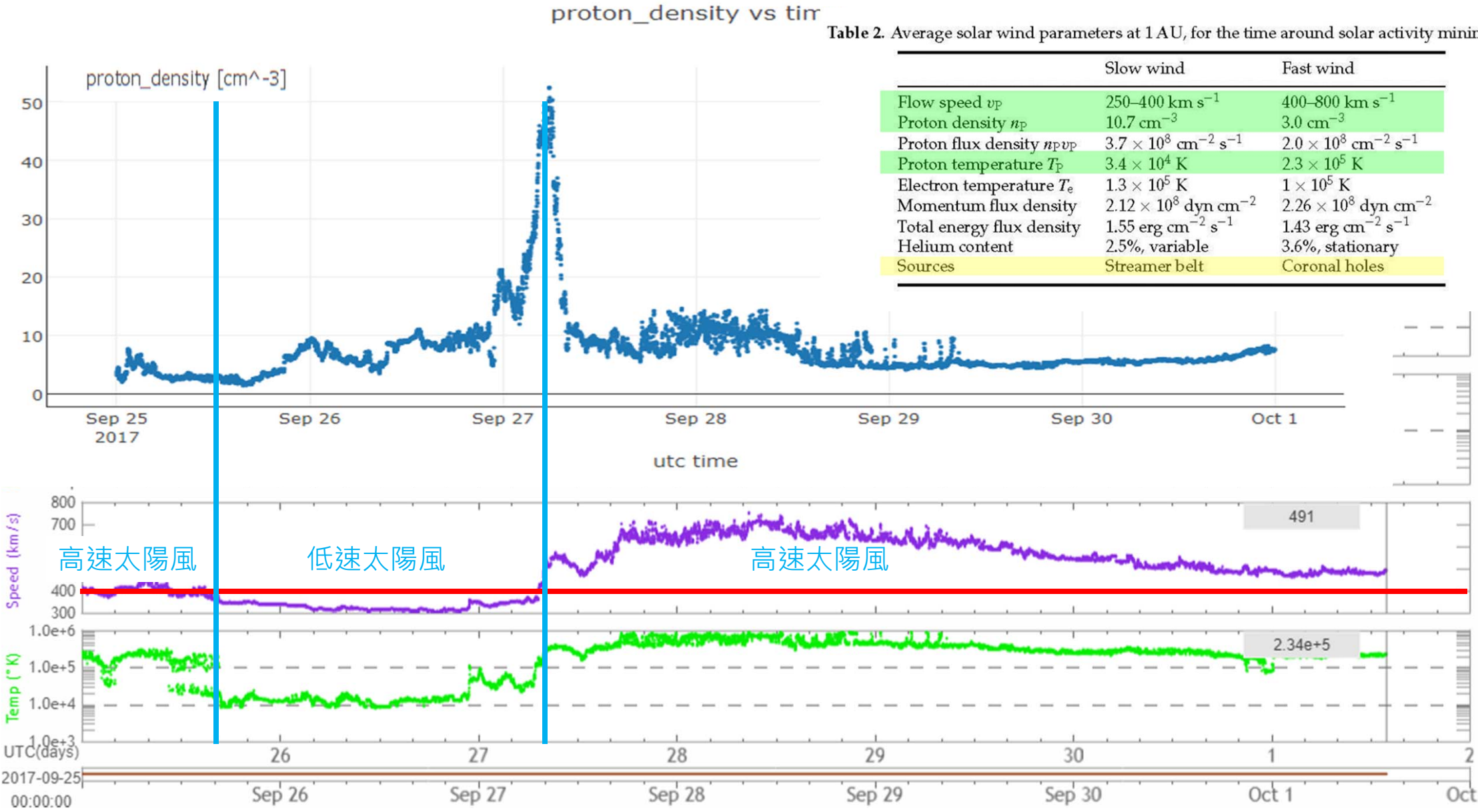
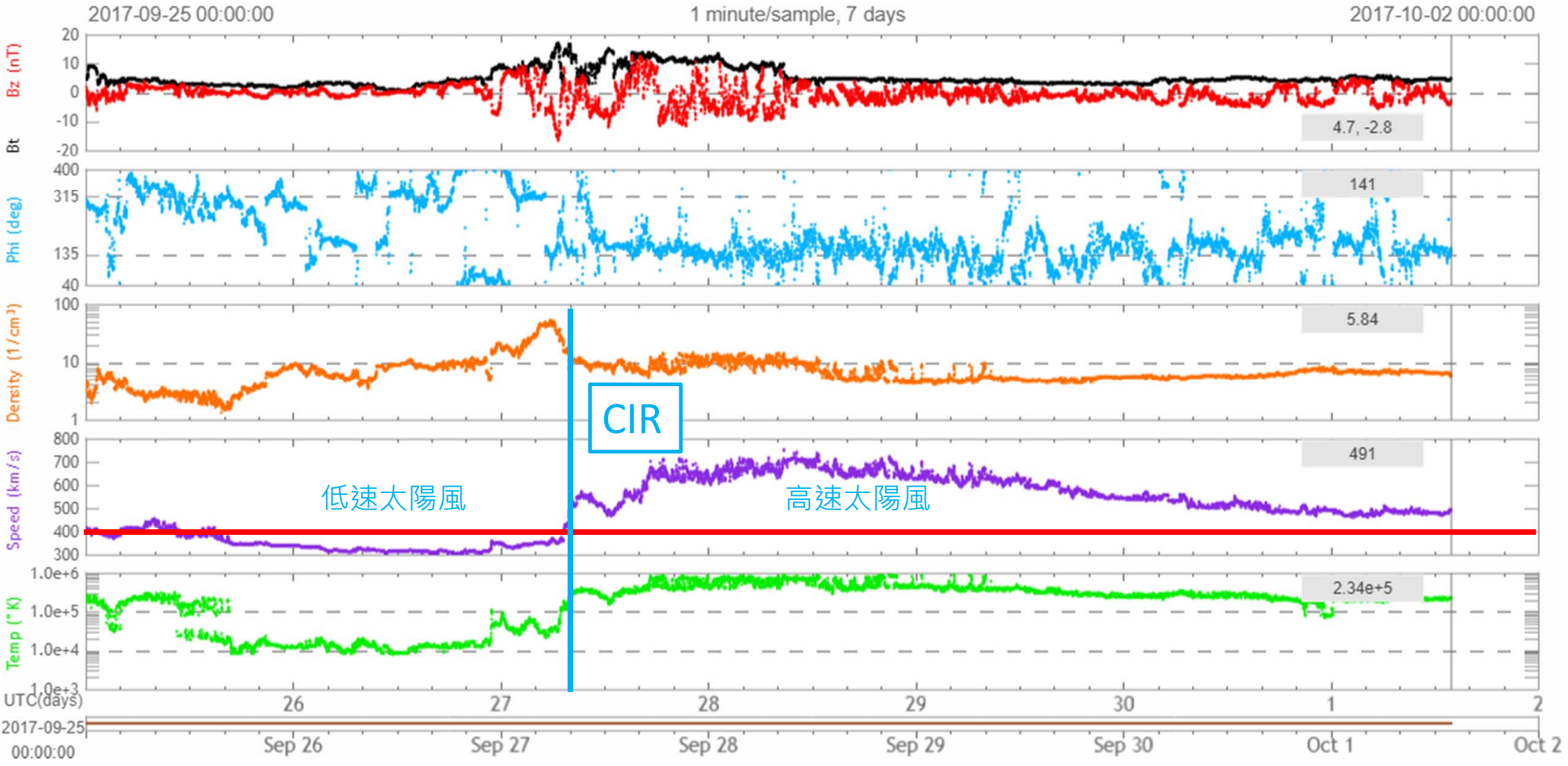
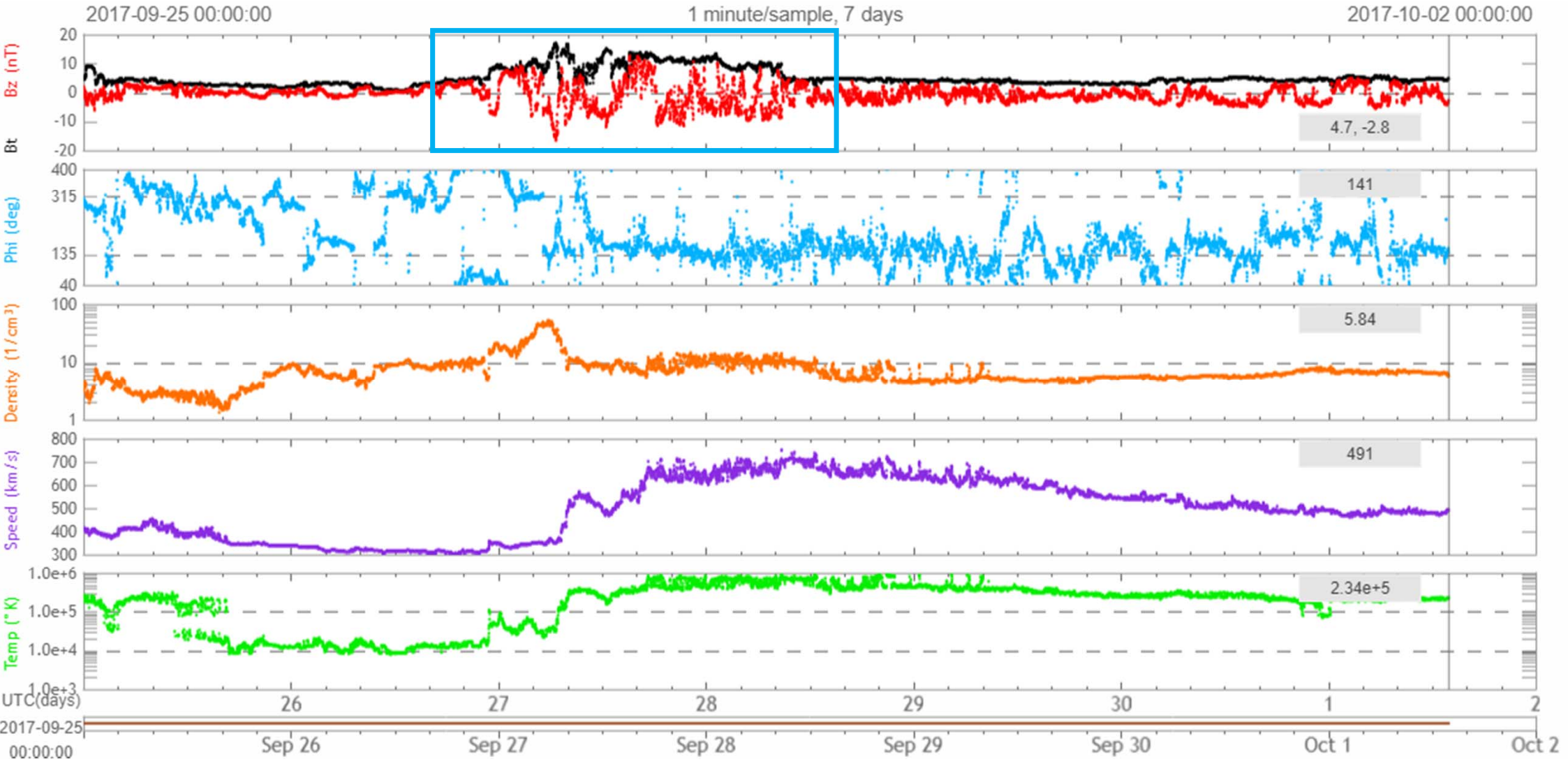


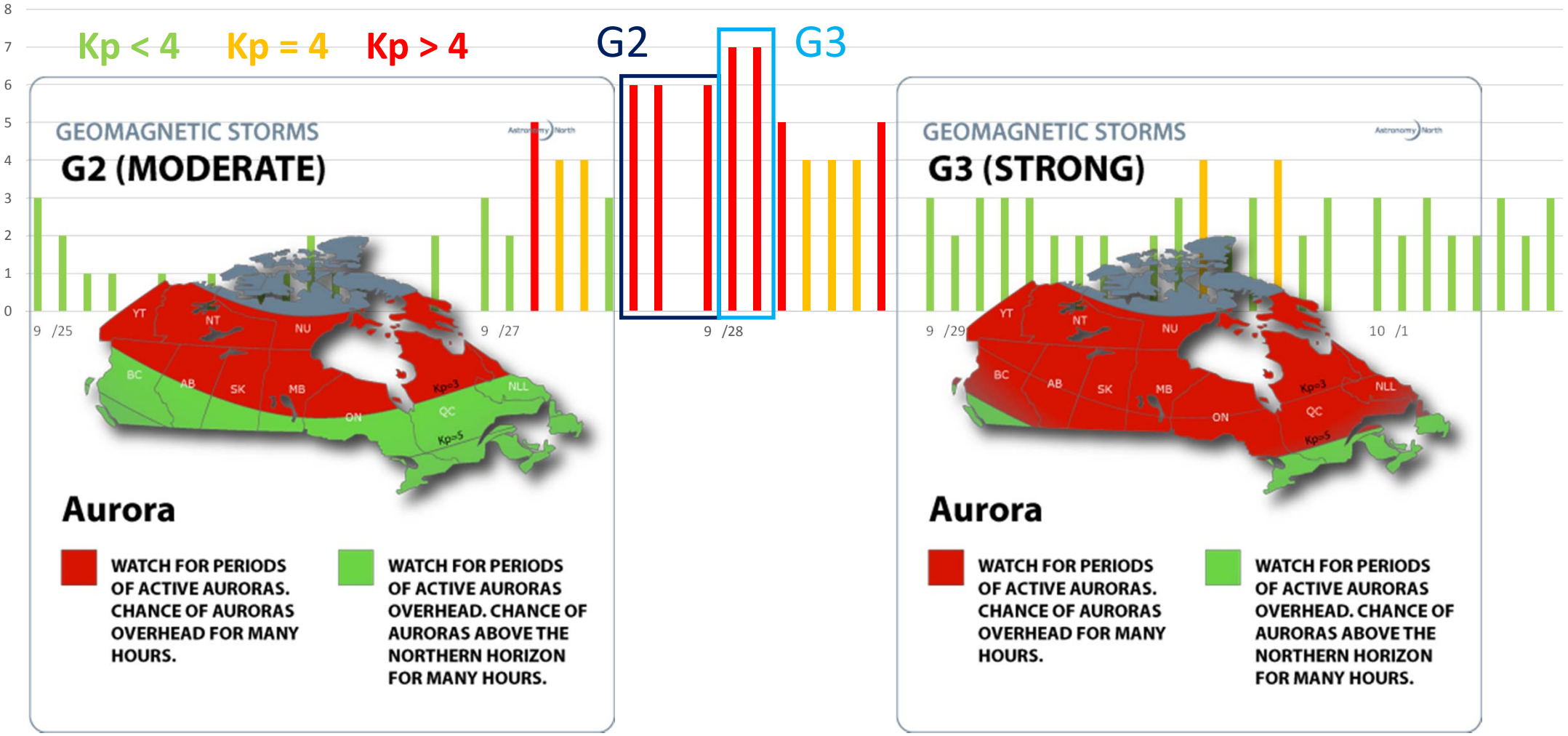
Table 2. Average solar wind parameters at 1 AU, for the time around solar activity minimu

	Slow wind	Fast wind
Flow speed v_P	250–400 km s^{-1}	400–800 km s^{-1}
Proton density n_P	10.7 cm^{-3}	3.0 cm^{-3}
Proton flux density $n_P v_P$	3.7×10^8 cm^{-2} s^{-1}	2.0×10^8 cm^{-2} s^{-1}
Proton temperature T_P	3.4×10^4 K	2.3×10^5 K
Electron temperature T_e	1.3×10^5 K	1×10^5 K
Momentum flux density	2.12×10^8 dyn cm^{-2}	2.26×10^8 dyn cm^{-2}
Total energy flux density	1.55 erg cm^{-2} s^{-1}	1.43 erg cm^{-2} s^{-1}
Helium content	2.5%, variable	3.6%, stationary
Sources	Streamer belt	Coronal holes

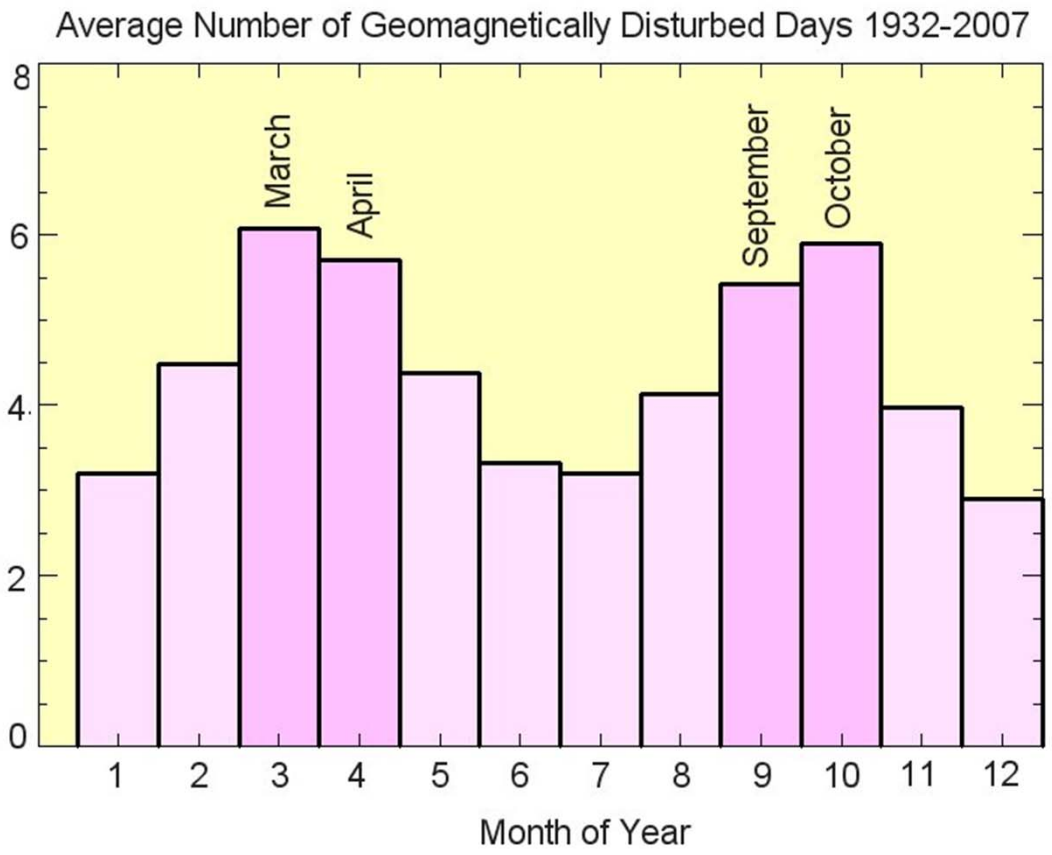

2017-09-25 00:00:00
1 minute/sample, 7 days
2017-10-02 00:00:00
Bz (nT)
Bt
4.7, -2.8
Phi (deg)
141
Density (1/cm³)
5.84
CIR
Speed (km/s)
491
低速太陽風
高速太陽風
Temp (°K)
2.34e+5
UTC(days)
2017-09-25
00:00:00
Sep 26
Sep 27
Sep 28
Sep 29
Sep 30
Oct 1
Oct 2


2017-09-25 00:00:00
1 minute/sample, 7 days
2017-10-02 00:00:00
Bz (nT)
Bt
4.7, -2.8
Phi (deg)
141
Density (1/cm³)
5.84
Speed (km/s)
491
Temp (°K)
2.34e+5
UTC(days)
2017-09-25
00:00:00
Sep 26
Sep 27
Sep 28
Sep 29
Sep 30
Oct 1
Oct 2

Estimated Planetary K index (3 hours data)



Geomagnetic disturbances are almost twice as likely in spring and fall vs. winter and summer, according to 75 years of historical records analyzed by NASA solar physicist David Hathaway.



EARTH
to
SKY
Calculus
8.21.2017

Thermal Protection System Installed for Testing

Posted on 09/30/2017 07:38:10

On Sept. 21, 2017, engineers at the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland, lowered the thermal protection system – the heat shield – onto the spacecraft for a test of alignment as part of integration and testing.

This is the first time that the revolutionary heat shield that will protect the first spacecraft to fly directly into the Sun's atmosphere was installed; also, this is the only time the spacecraft will have its thermal protection system -- which will reach temperatures of 2,500 degrees F while at the Sun -- attached until just before launch.

Parker Solar Probe is scheduled for launch on July 31, 2018, from Cape Canaveral Air Force Station, Florida. The spacecraft will explore the Sun's outer atmosphere and make critical observations that will answer decades-old questions about the physics of how stars work. The resulting data will improve forecasts of major space weather events that impact life on Earth, as well as satellites and astronauts in space.

Watch a time-lapse video of the installation on YouTube

Download HD video of the time-lapse installation

On Sept. 21, 2017, engineers at the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland, lowered the thermal protection system – the heat shield – onto the spacecraft for a test of alignment as part of integration and testing. Credit: NASA/JHUAPL

References

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- http://www.swpc.noaa.gov/observations