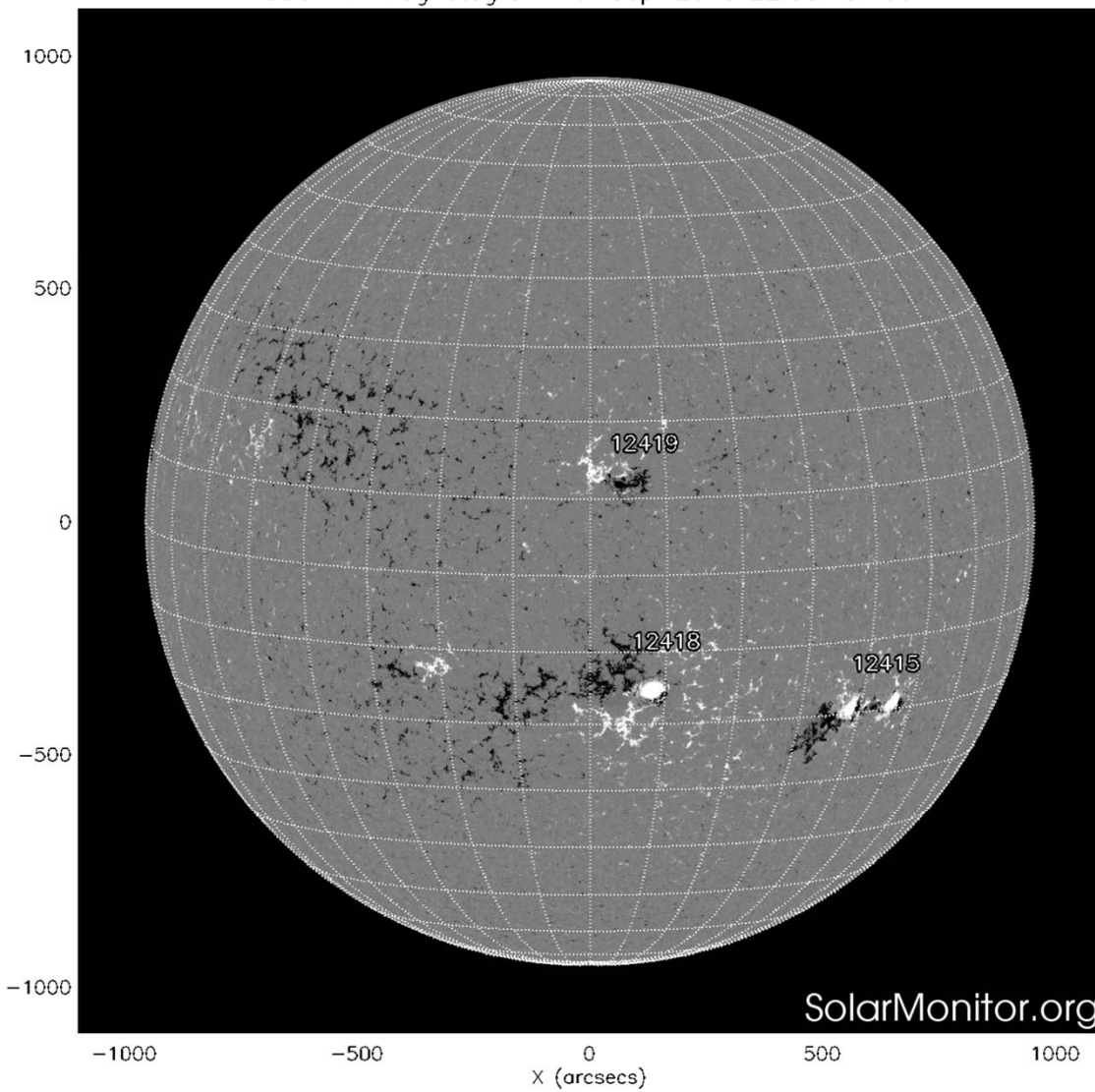


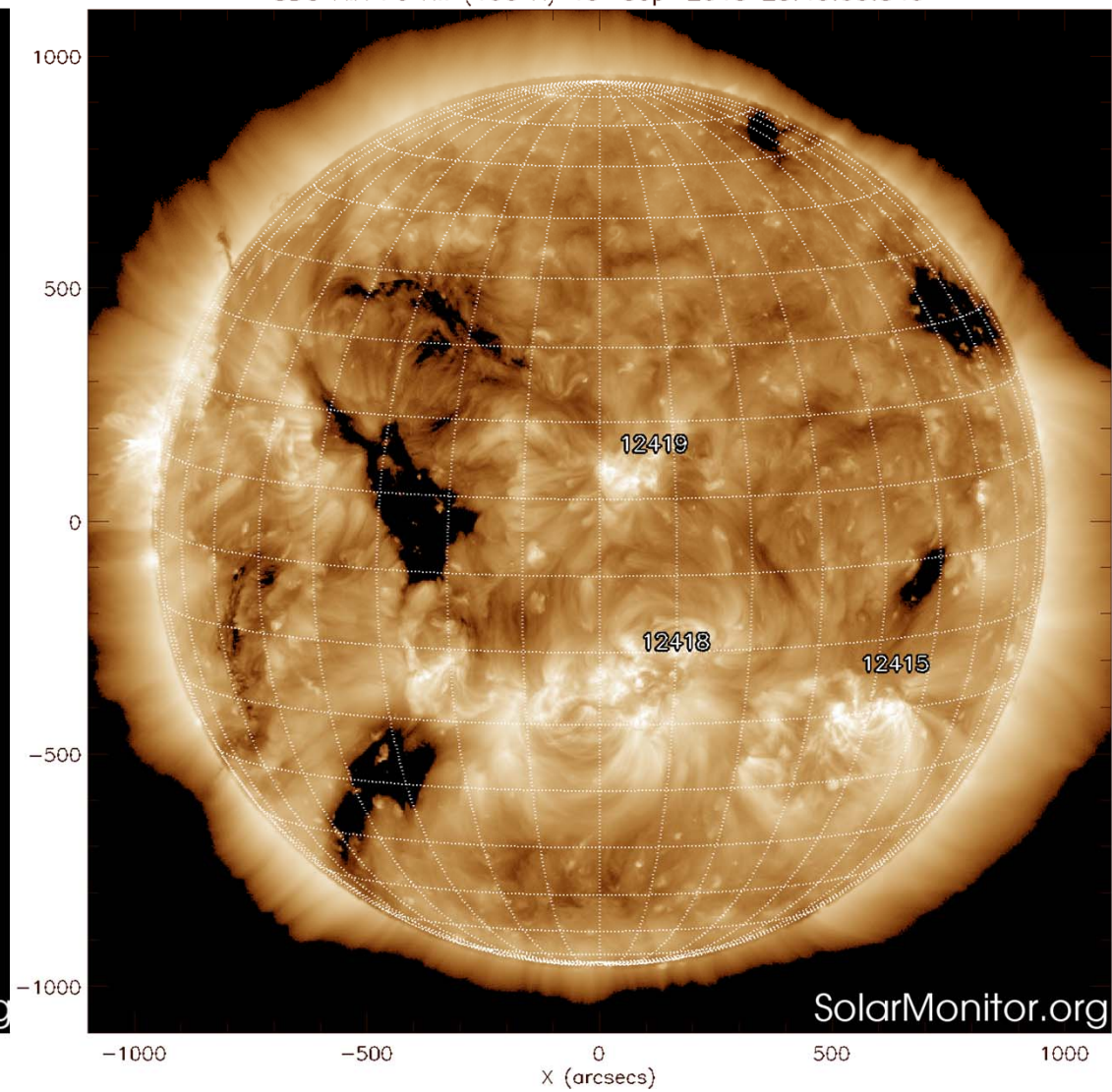
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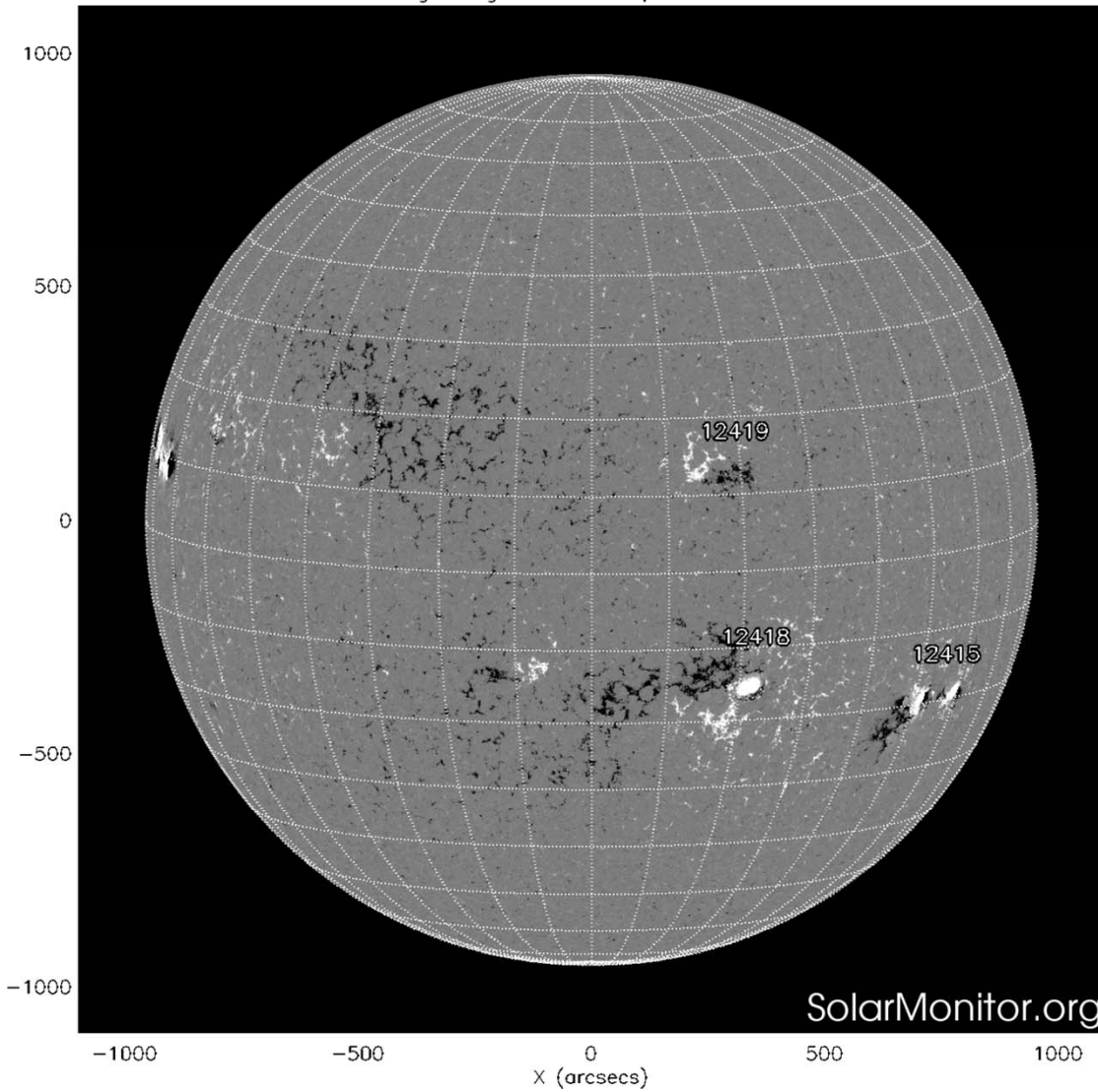
SDO HMI Magnetogram 19-Sep-2015 22:58:18.700



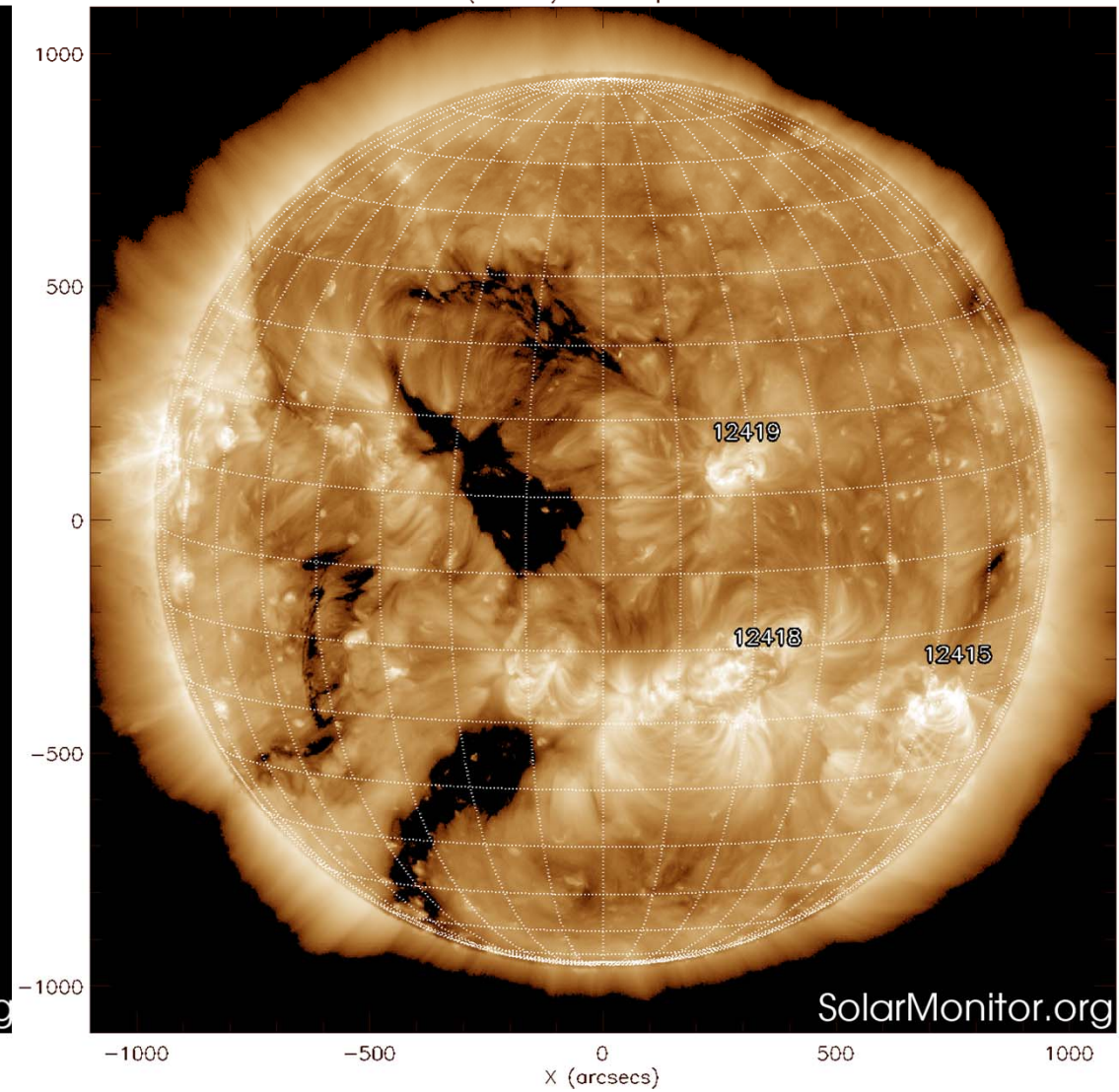
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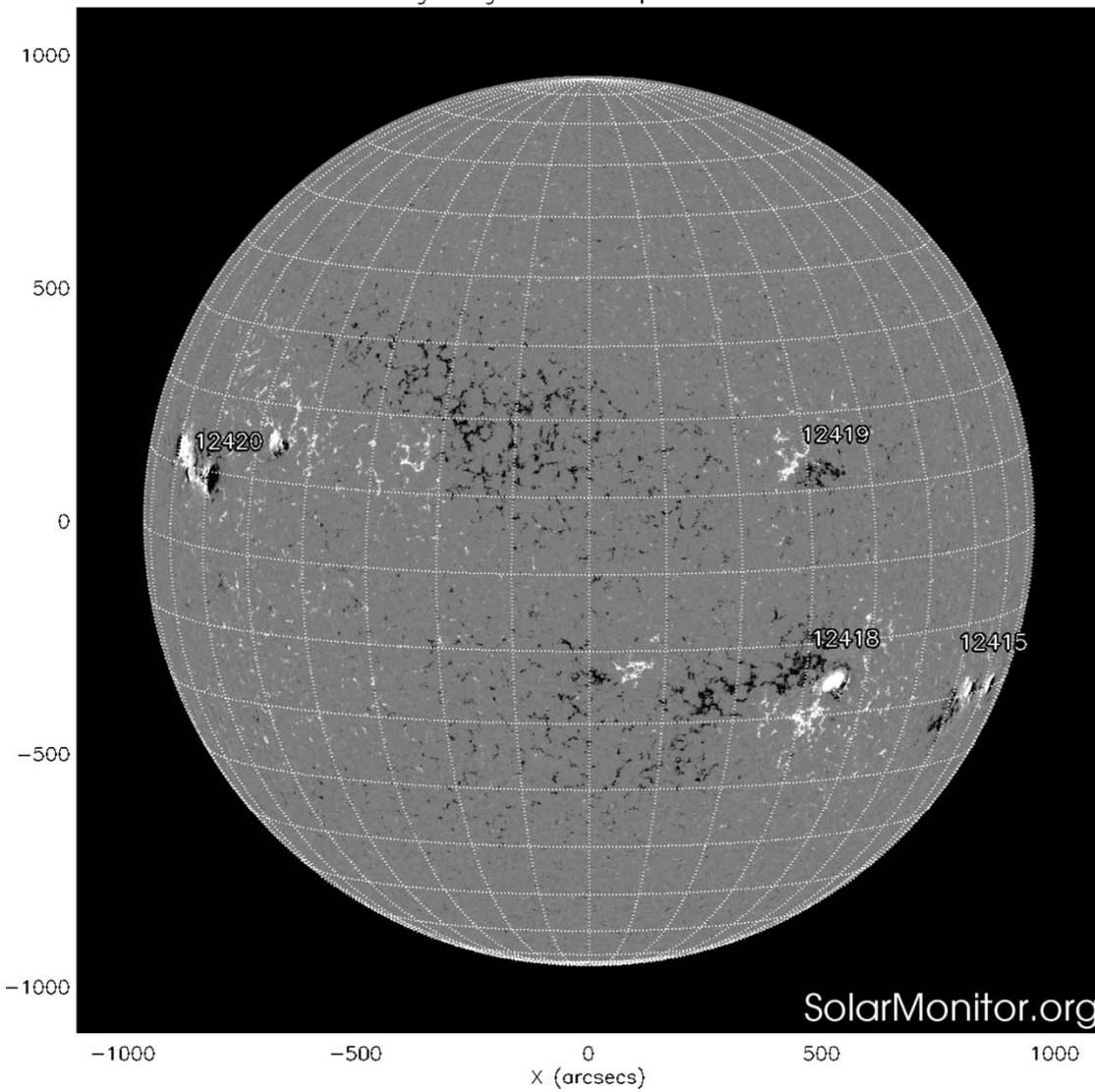
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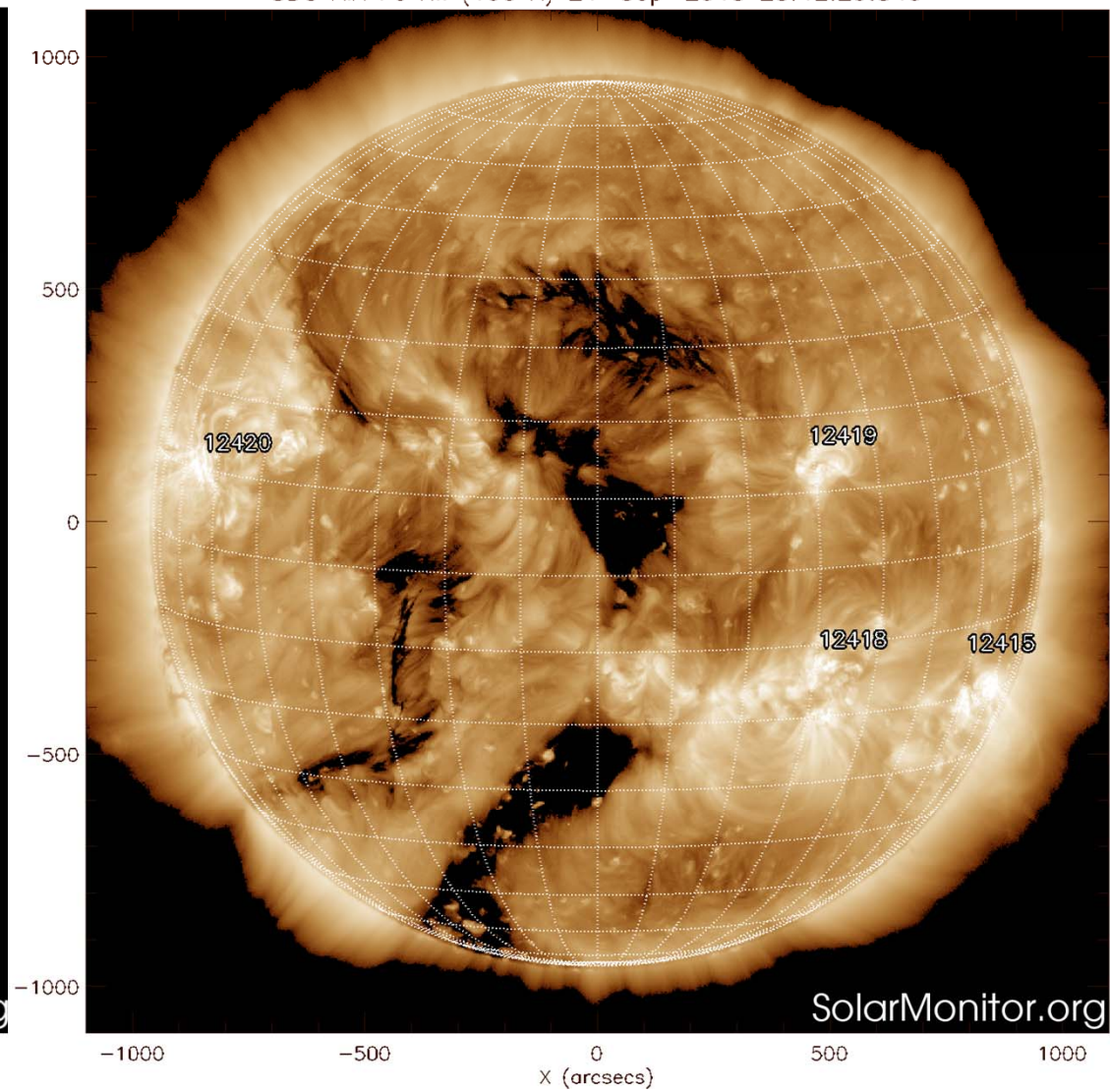
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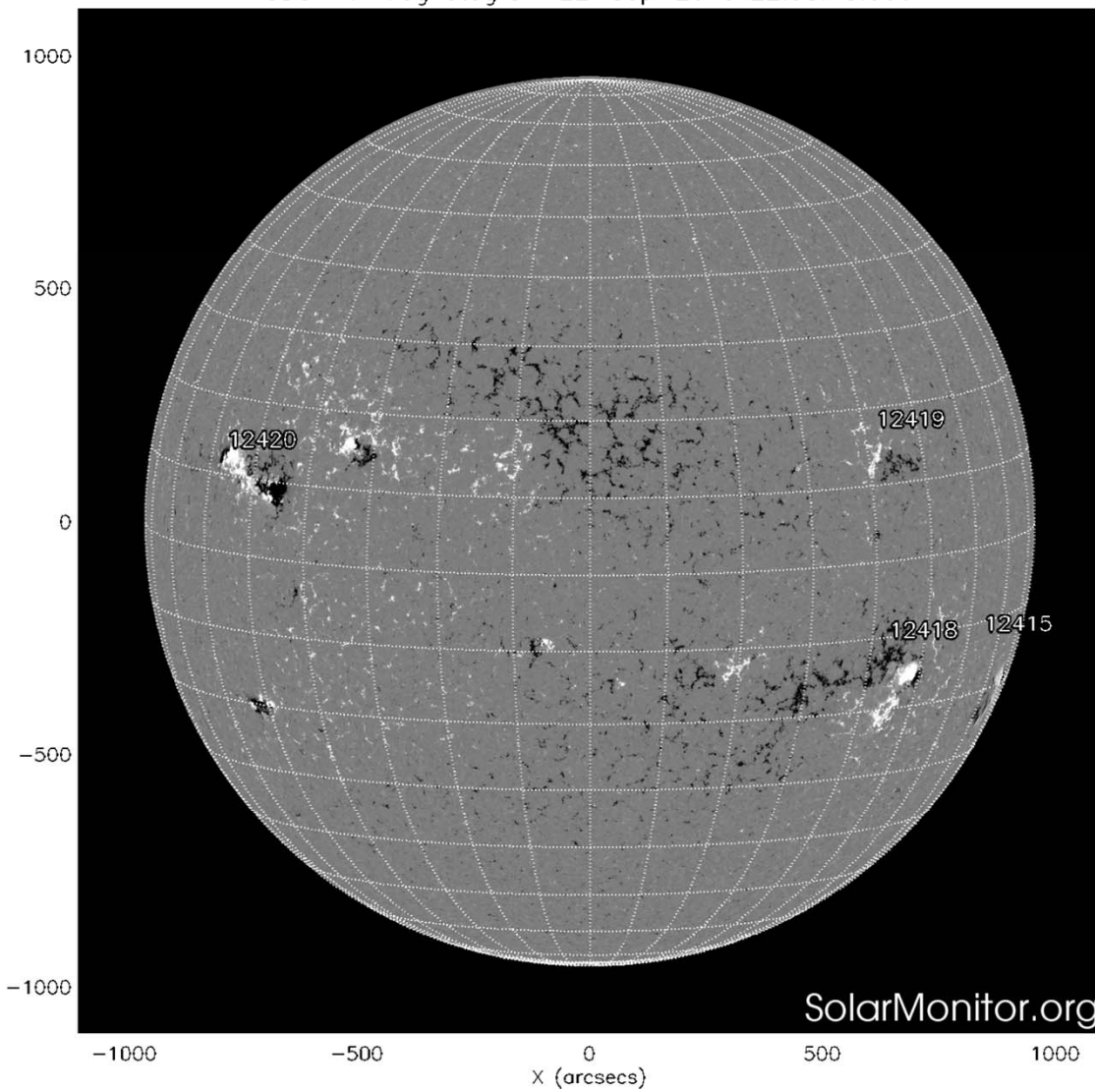
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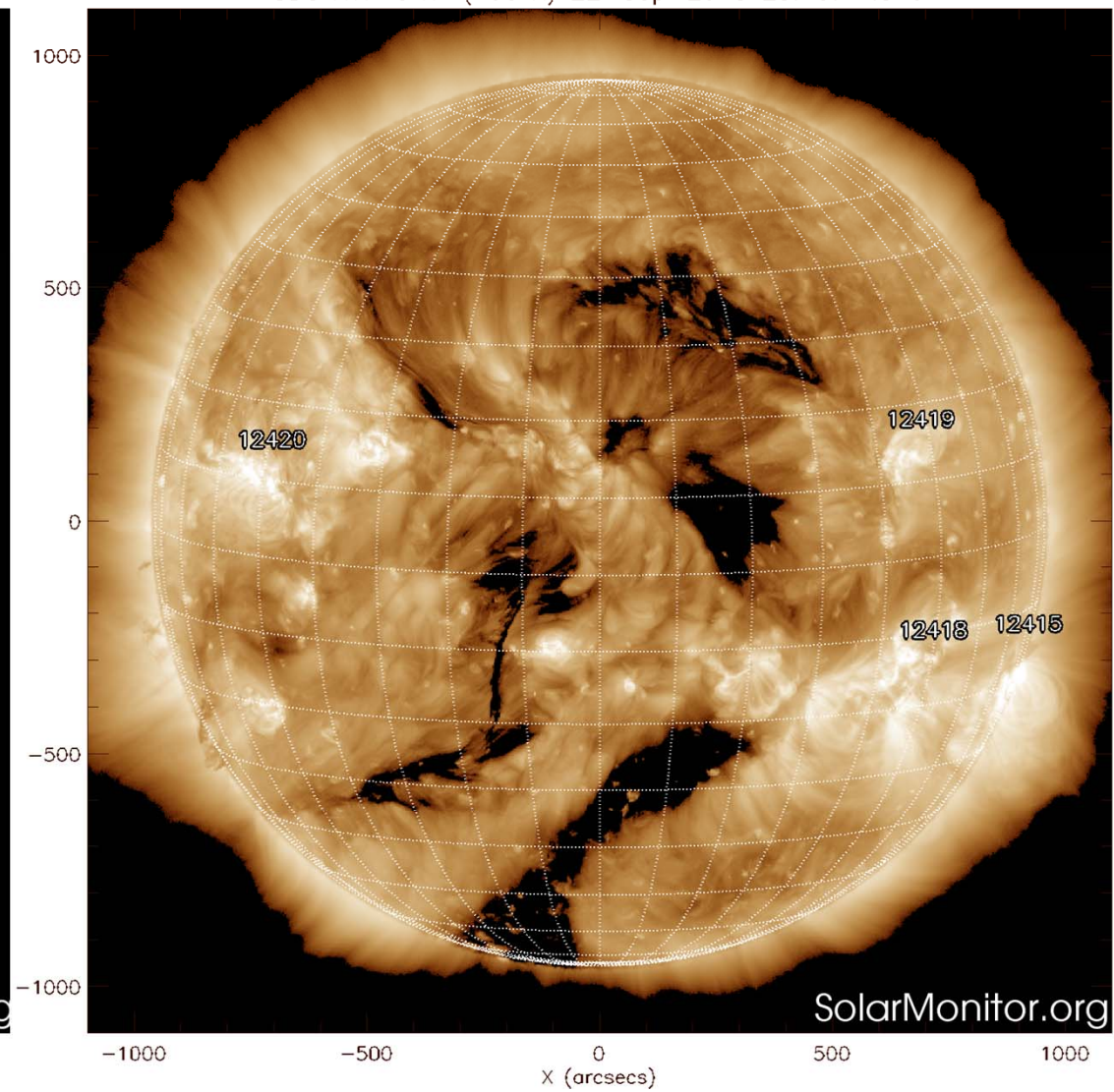
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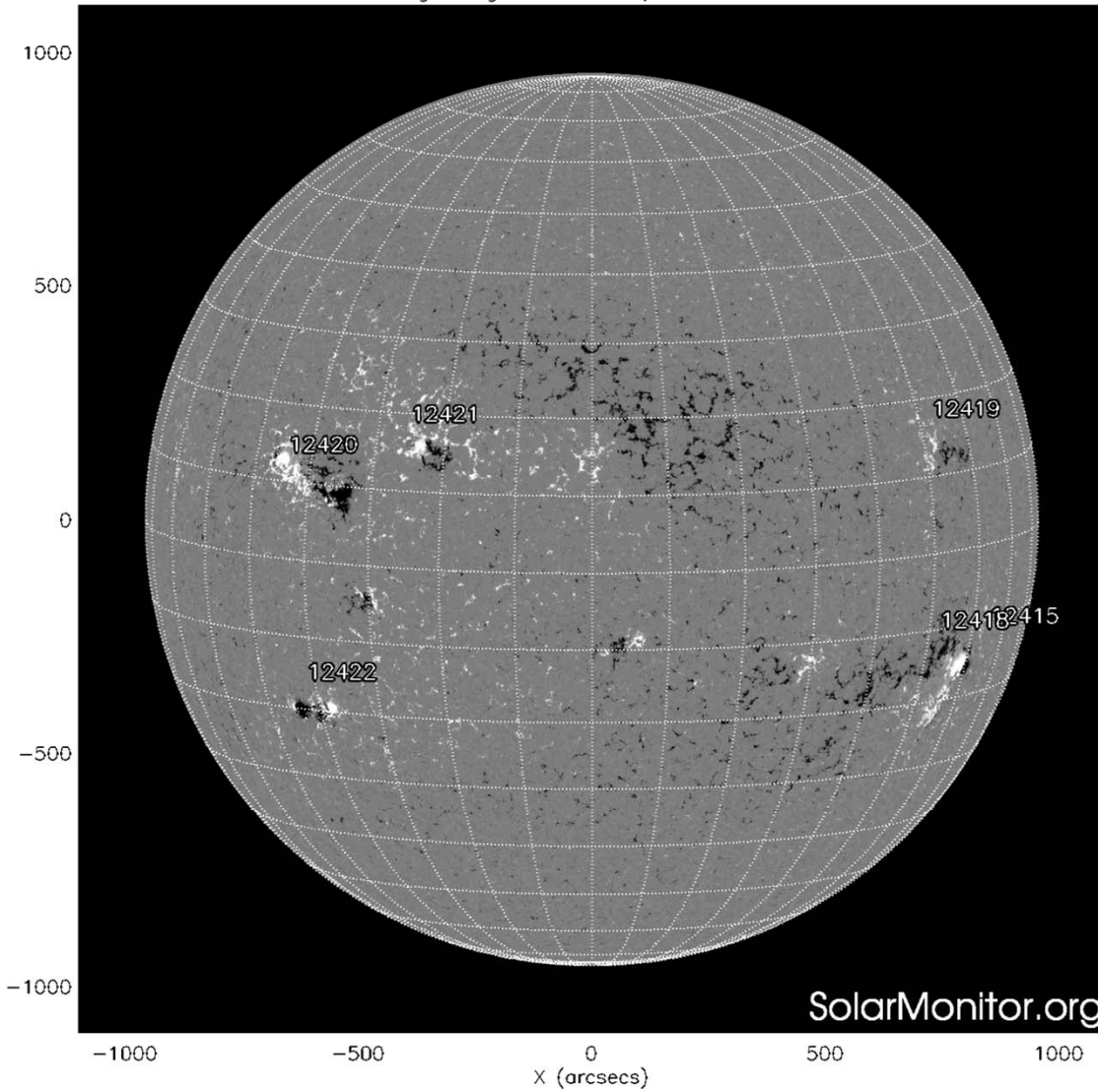
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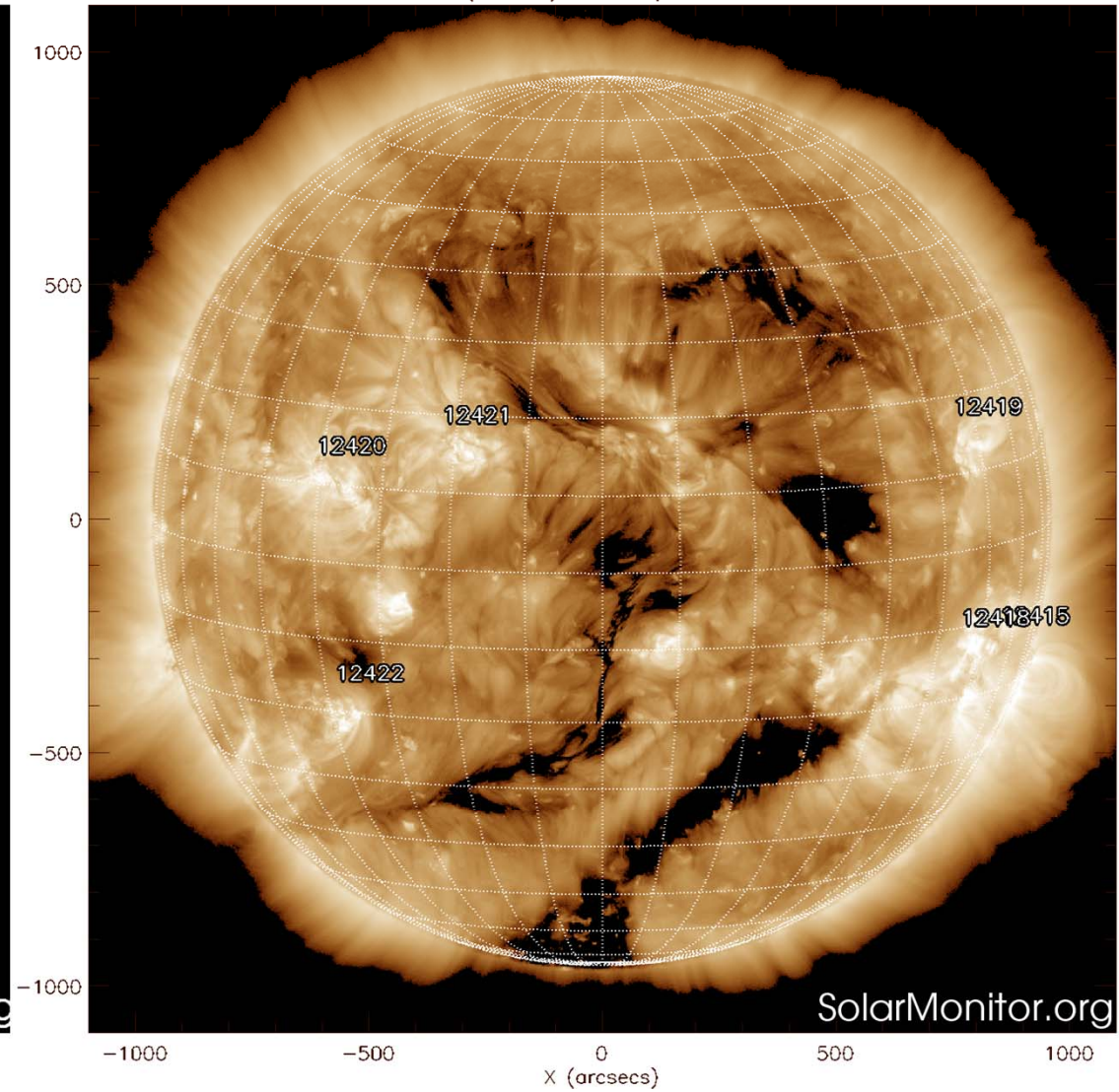
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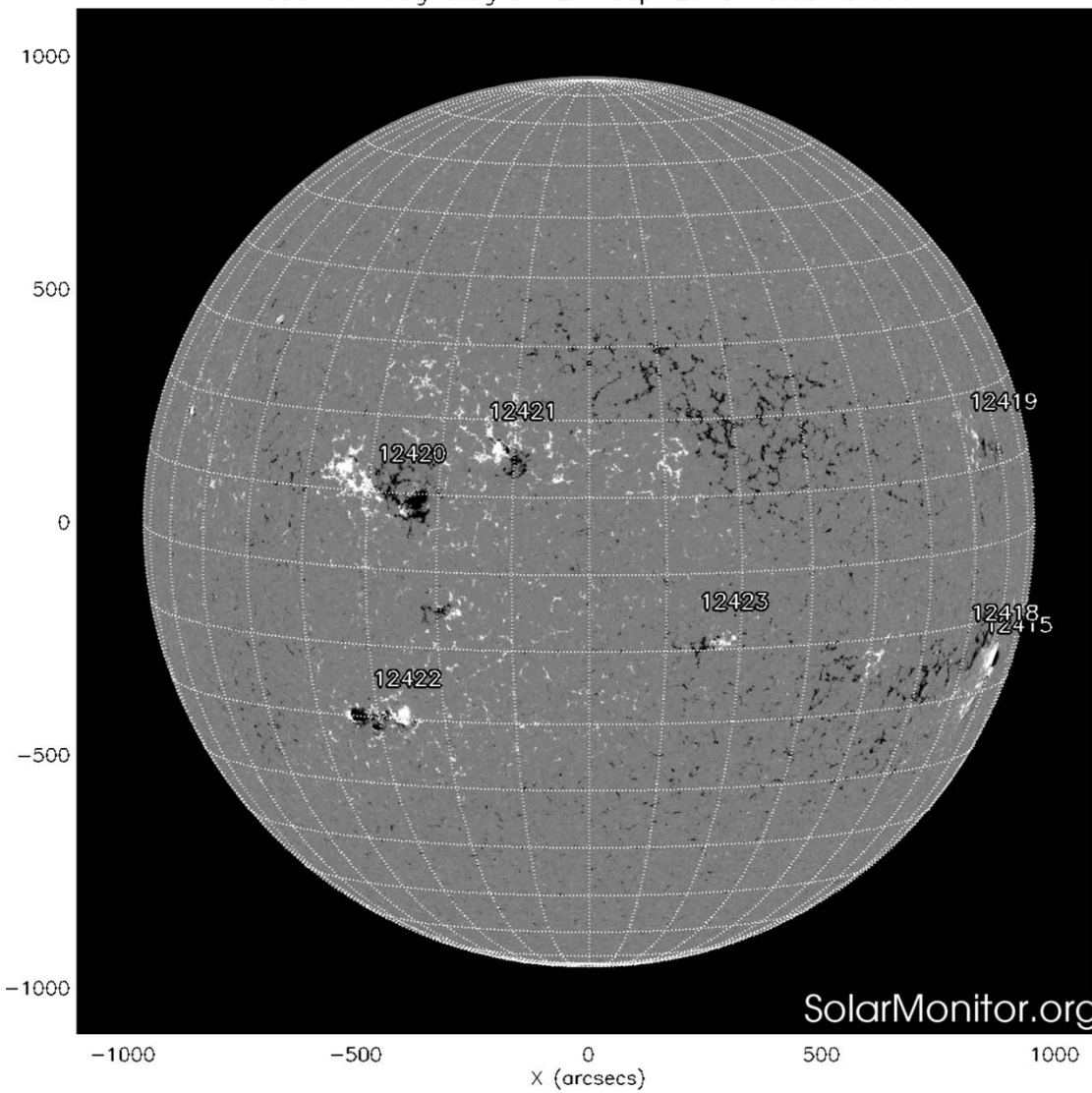
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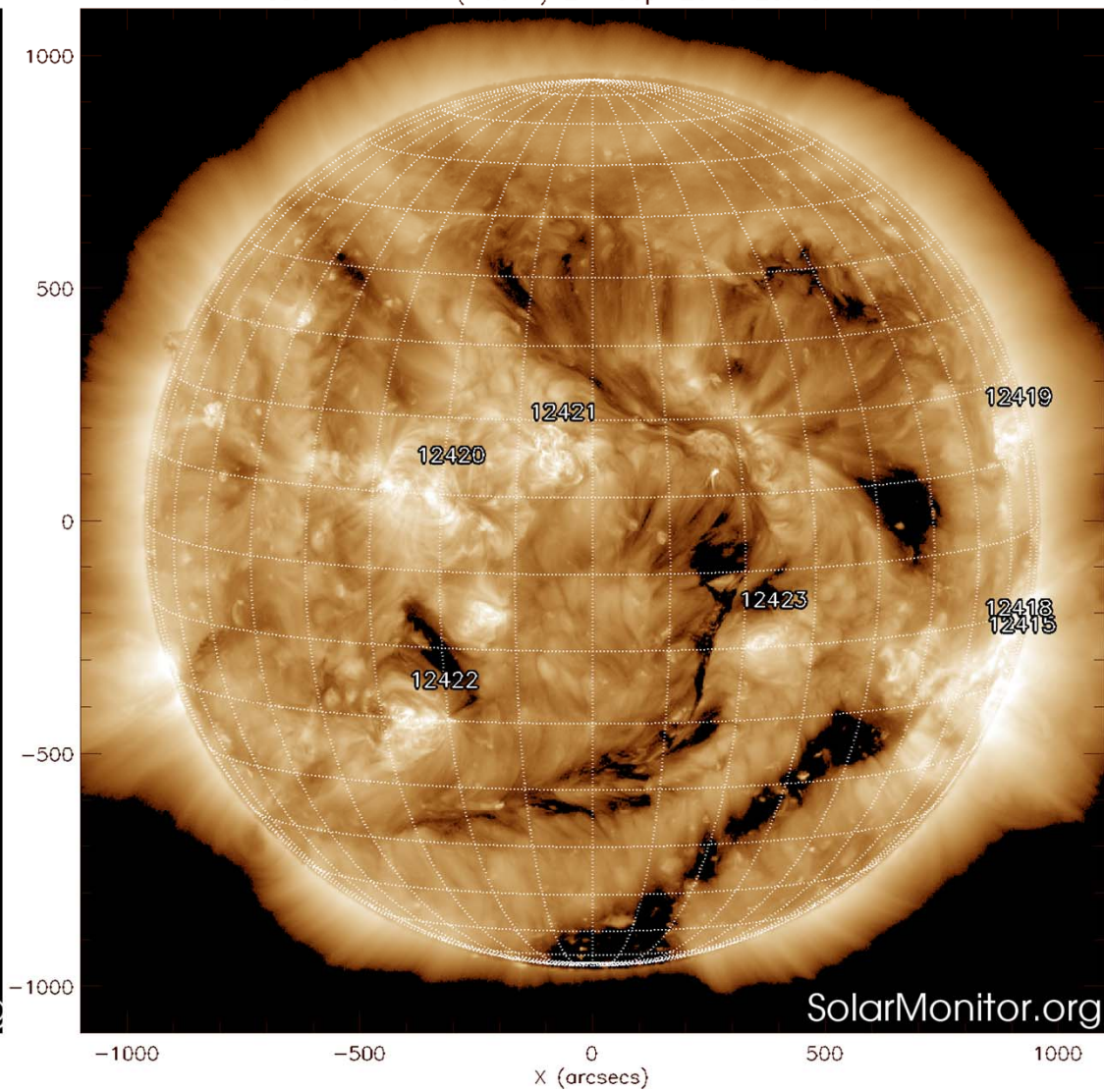
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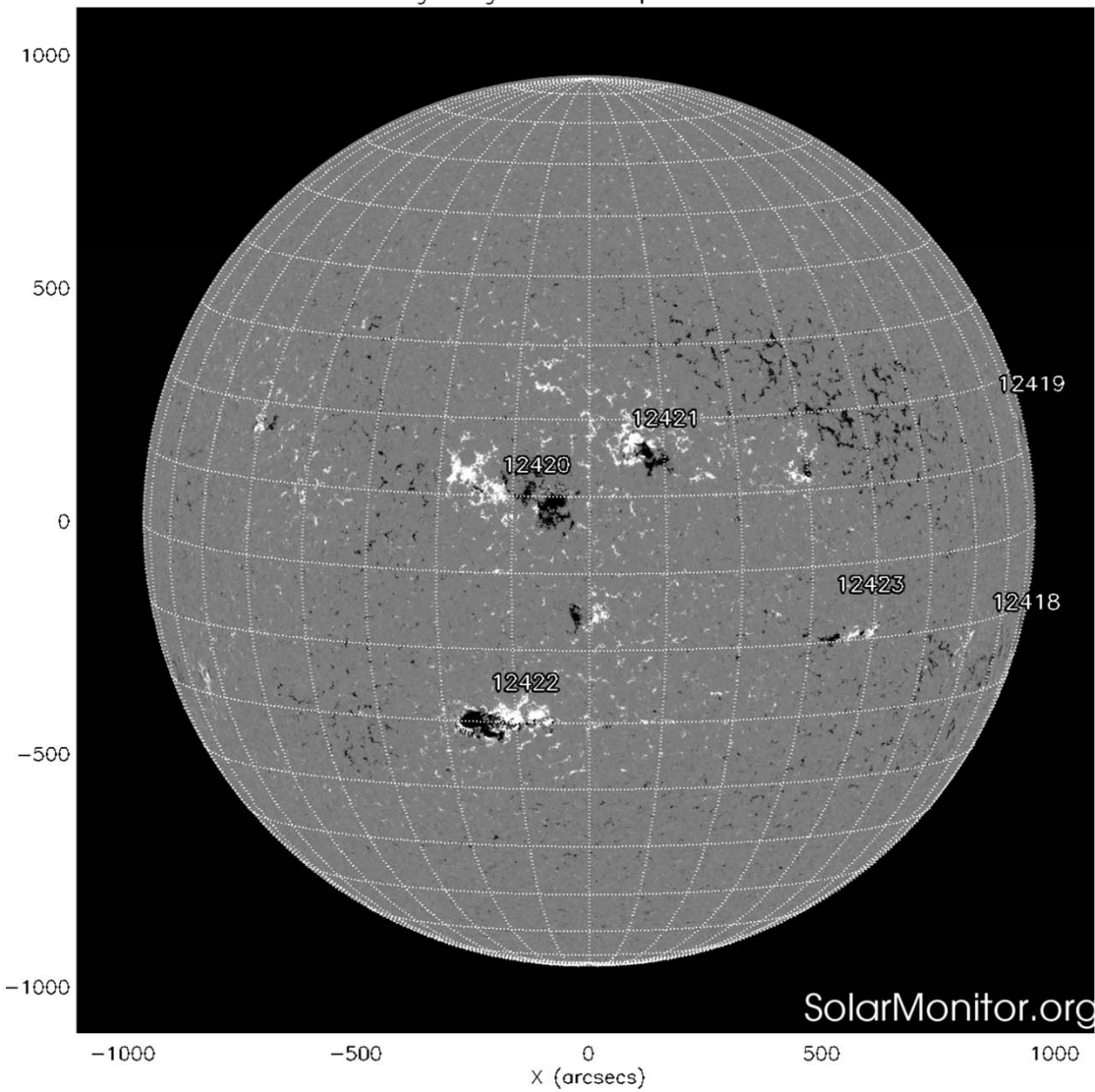
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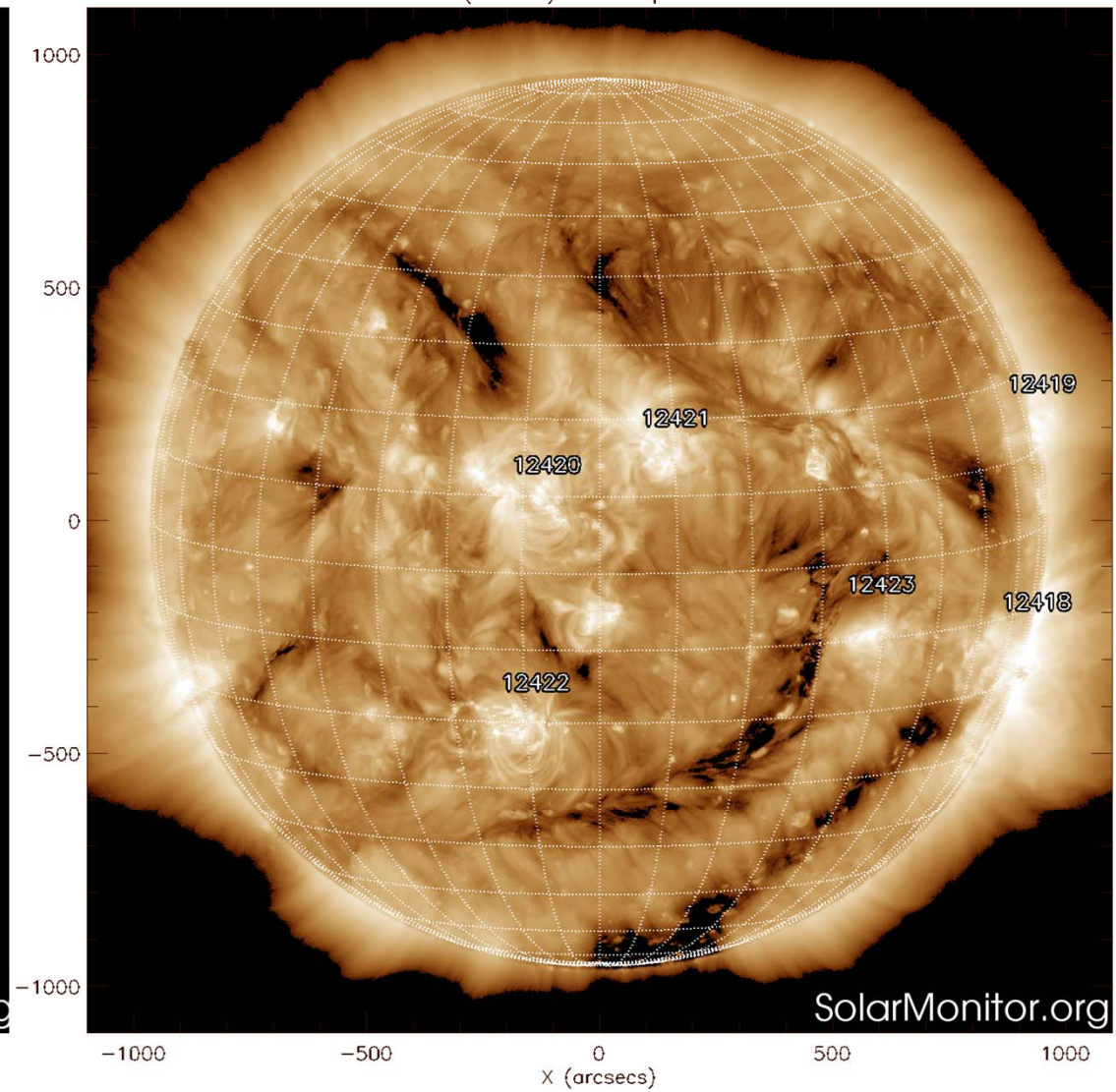
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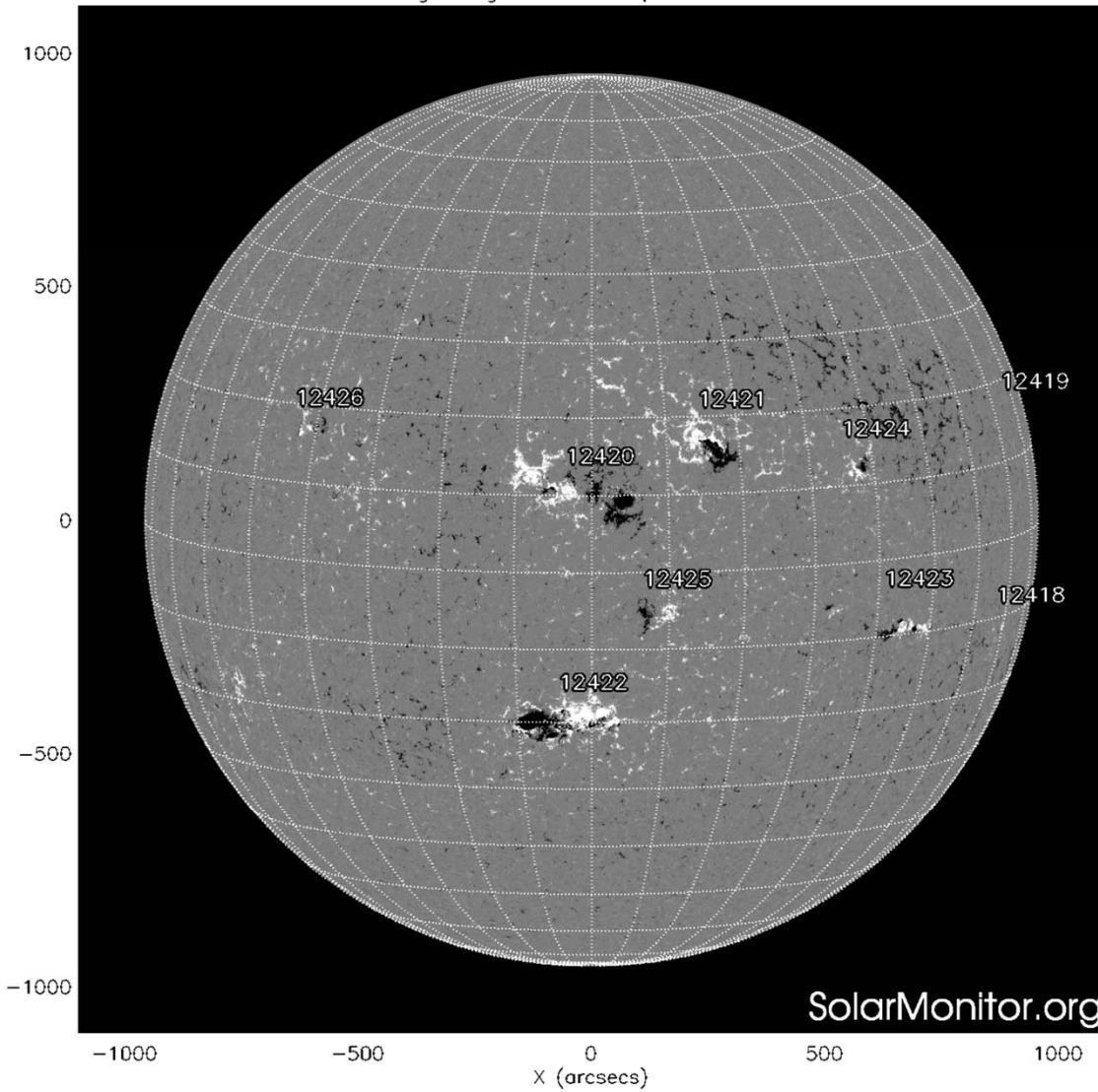
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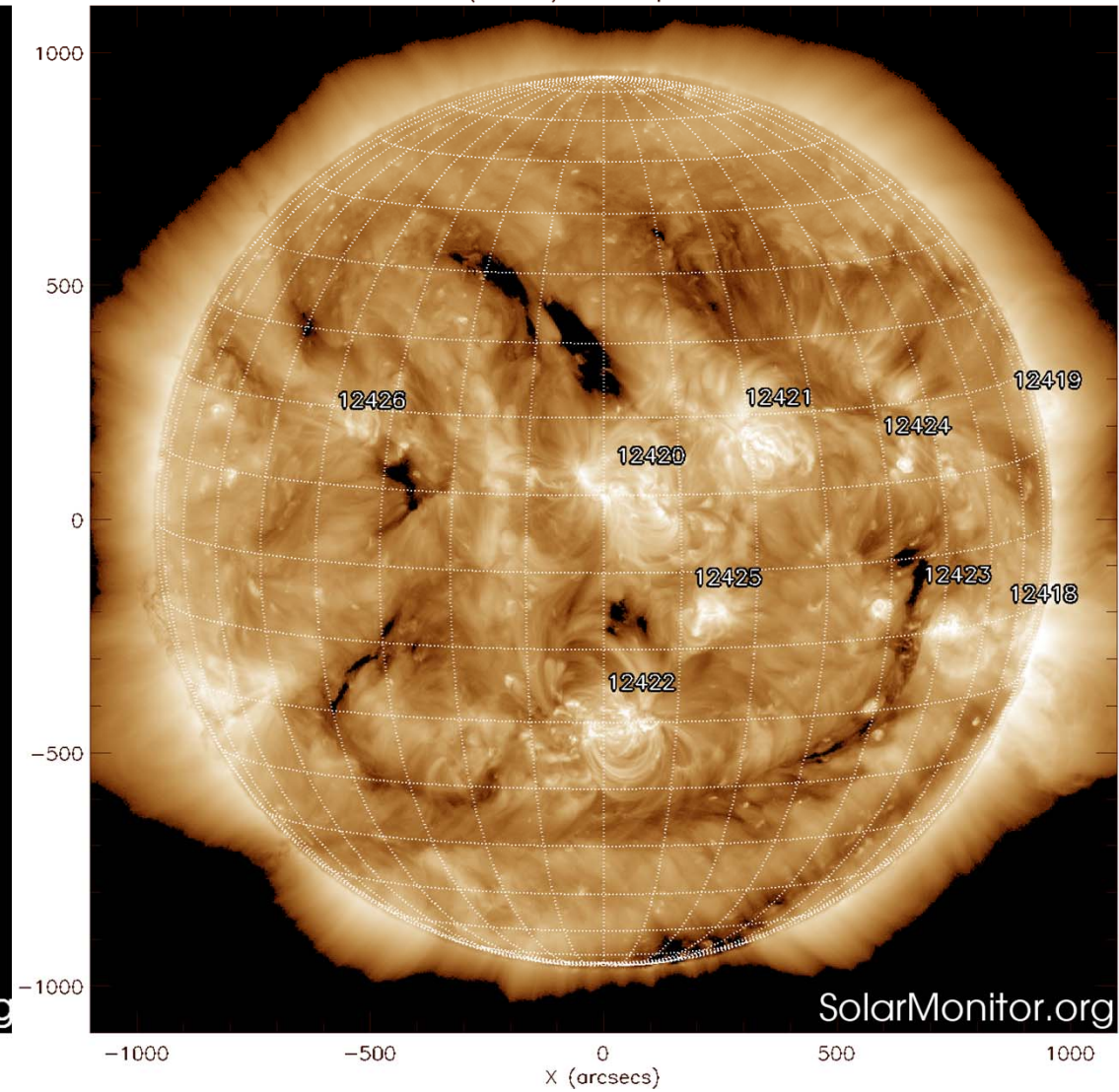
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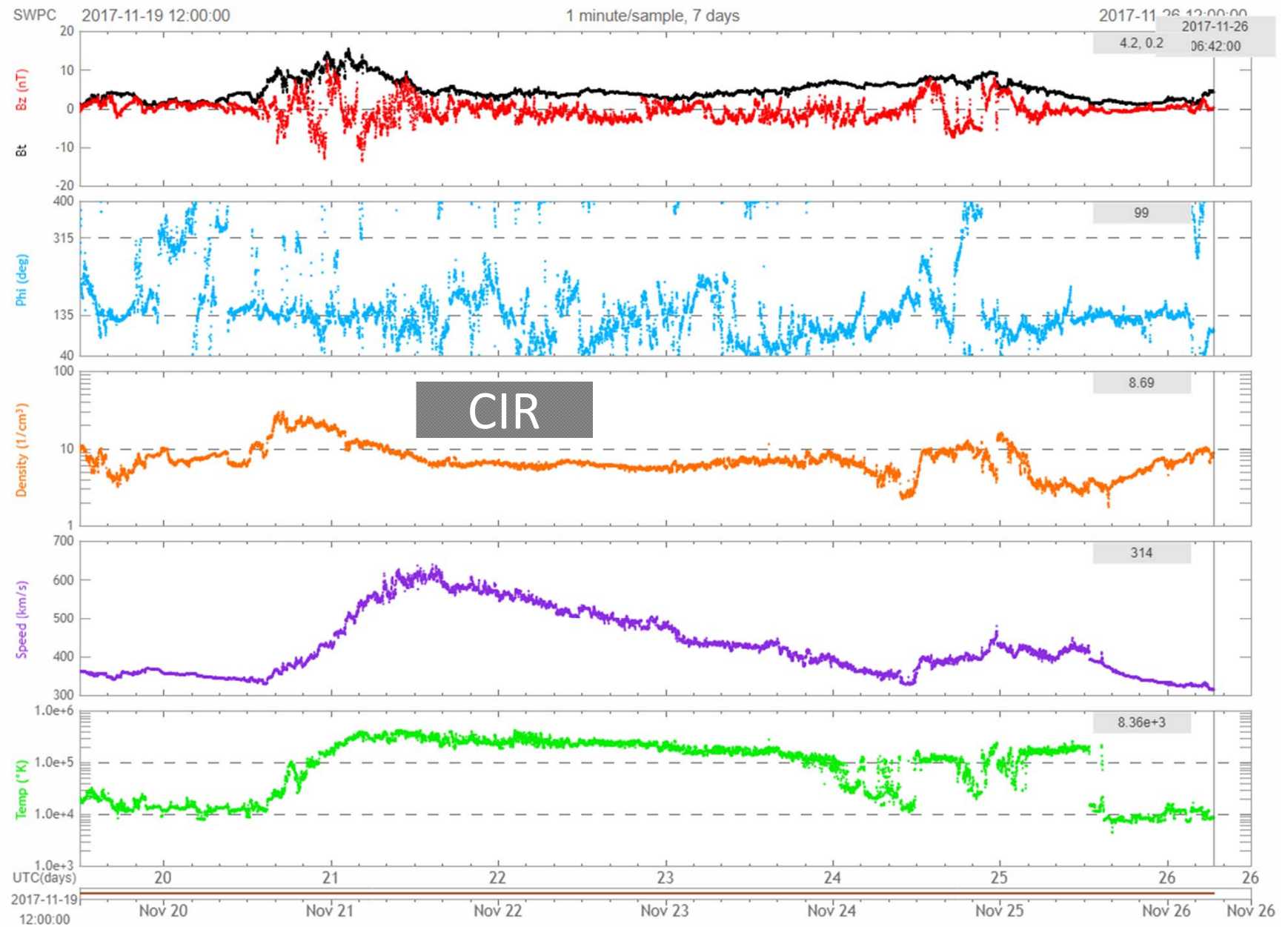


SDO HMI Magnetogram 26-Sep-2015 14:22:17.700

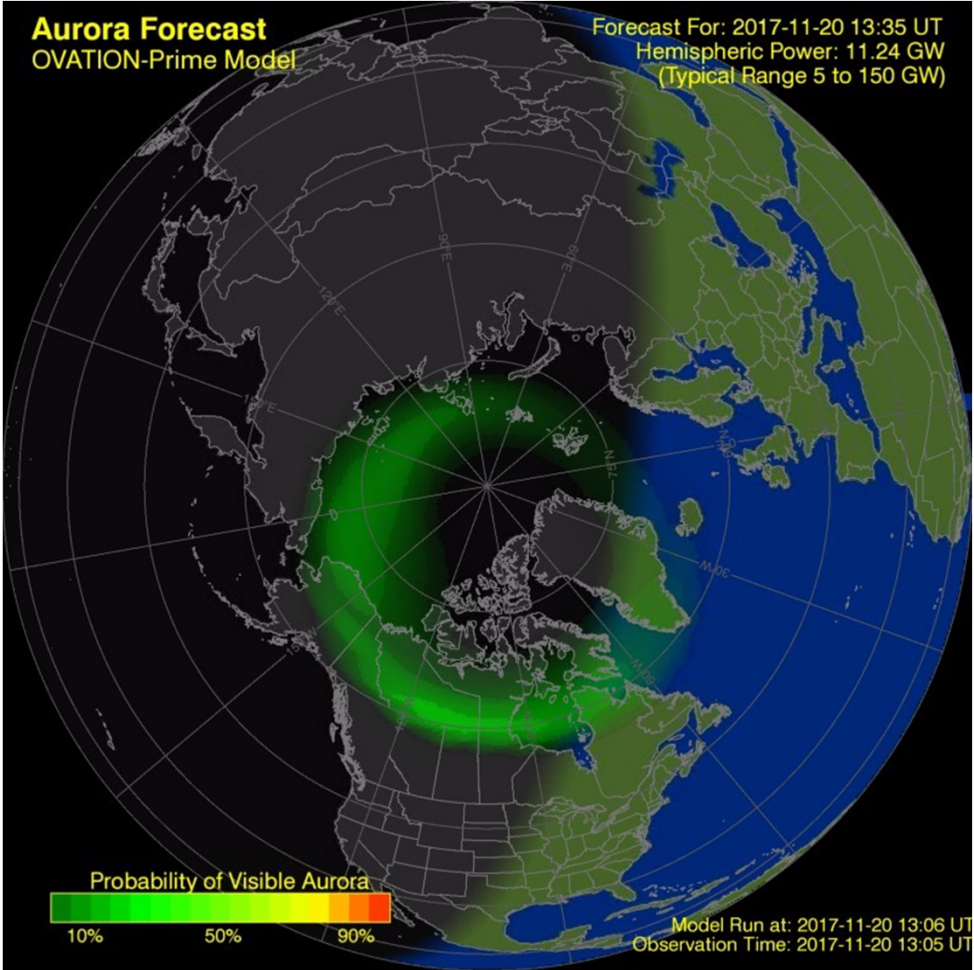


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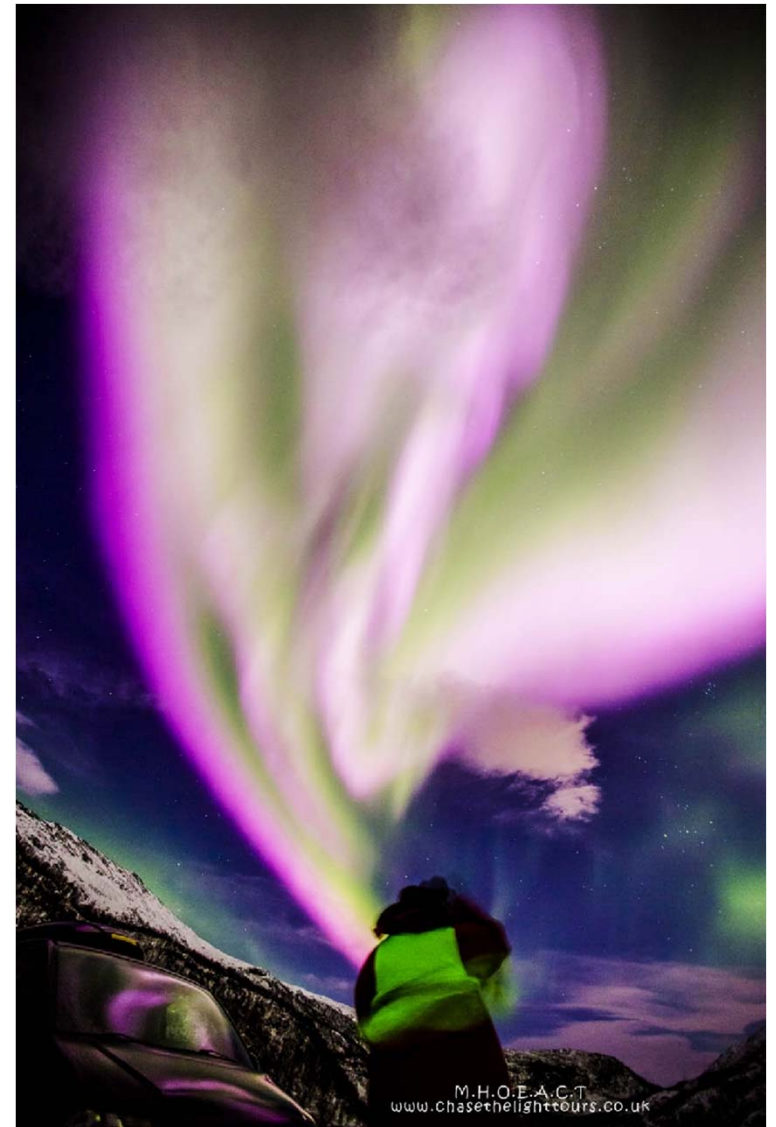


Aurora_1121



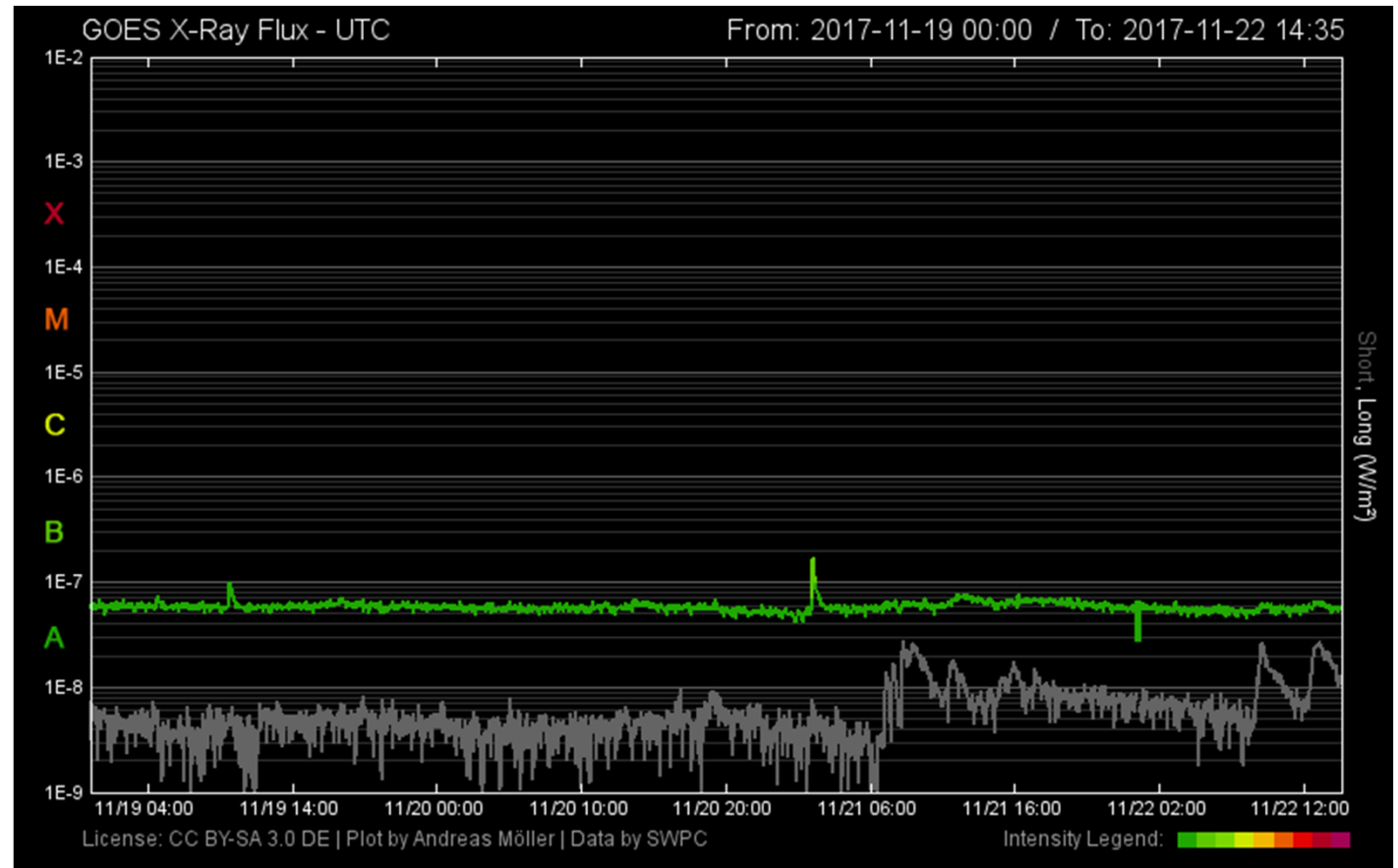
Pink Auroras

- About the **solar wind on Nov. 22nd**: it seems to have been unusually penetrating.
- Pink appears when the energetic particles descend lower than usual.



Solar Flare

- 21-Nov-2017 **B1.7**
start time: 01:58
peak time: 02:03
end time: 02:10

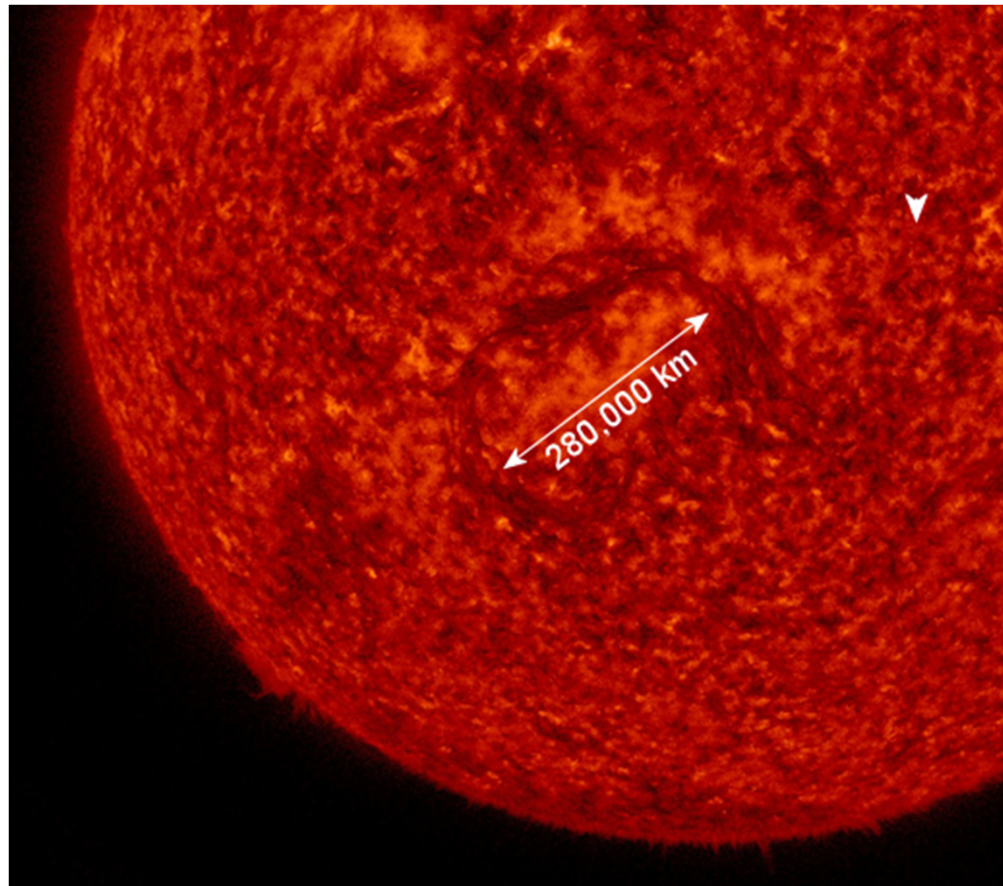


A Crystal Ball in the Stratosphere



Unusual Magnetic Filament

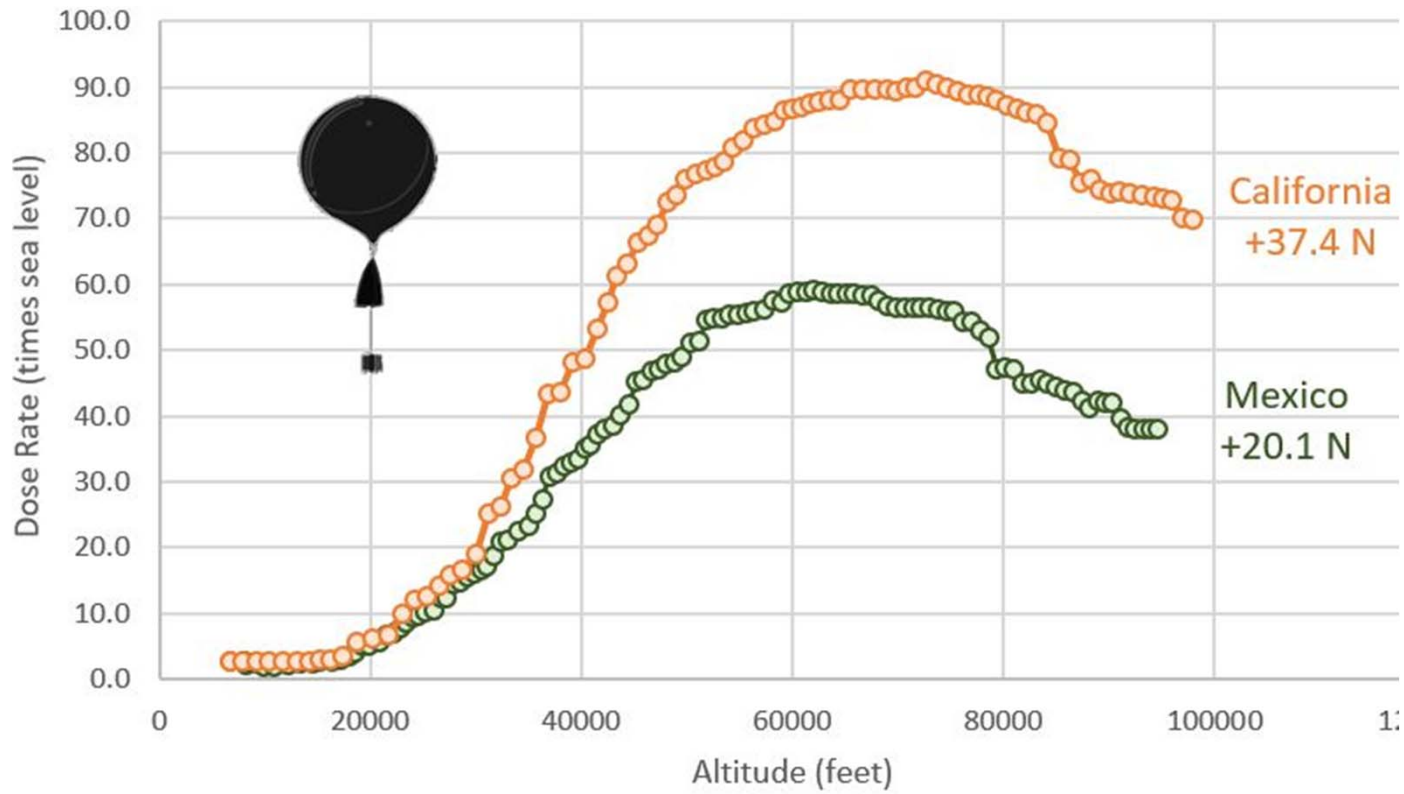
- Nov. 22nd



References

- spaceweather.com
- SPACE WEATHER PREDICTION CENTER
- Solar Monitor

Atmospheric Cosmic Rays -- Nov. 10-11, 2017



- Last week's double launch of space weather balloons over Mexico and California was a success. The goal of our experiment was to measure cosmic rays in the atmosphere above both countries and compare the results. A first look at the data reveal big differences.
- These curves show dose rate vs. altitude. They diverge rapidly above 15,000 feet, with radiation levels over central California typically 1.5 times higher than over Mexico. This means air travelers over California can expect to receive significantly greater doses of cosmic radiation compared to their counterparts flying south of the border. In both places, radiation levels reached a peak in the stratosphere. At those altitudes, dose rates were 60 times greater than sea level for Mexico, 90 times greater than sea level for California.
- The reason for these differences is Earth's magnetic field which, generally speaking, provides greater shielding against cosmic rays near the equator (Mexico) than at mid-latitudes (California)
- The radiation sensors onboard our helium balloons detect X-rays and gamma-rays in the energy range 10 keV to 20 MeV. These energies span the range of medical X-ray machines and airport security scanners. They trace secondary cosmic rays, the spray of debris created when primary cosmic rays from deep space hit the top of Earth's atmosphere.
- Our payloads also carried neutron sensors. Stay tuned for updates next week as we continue our analysis of data from those detectors