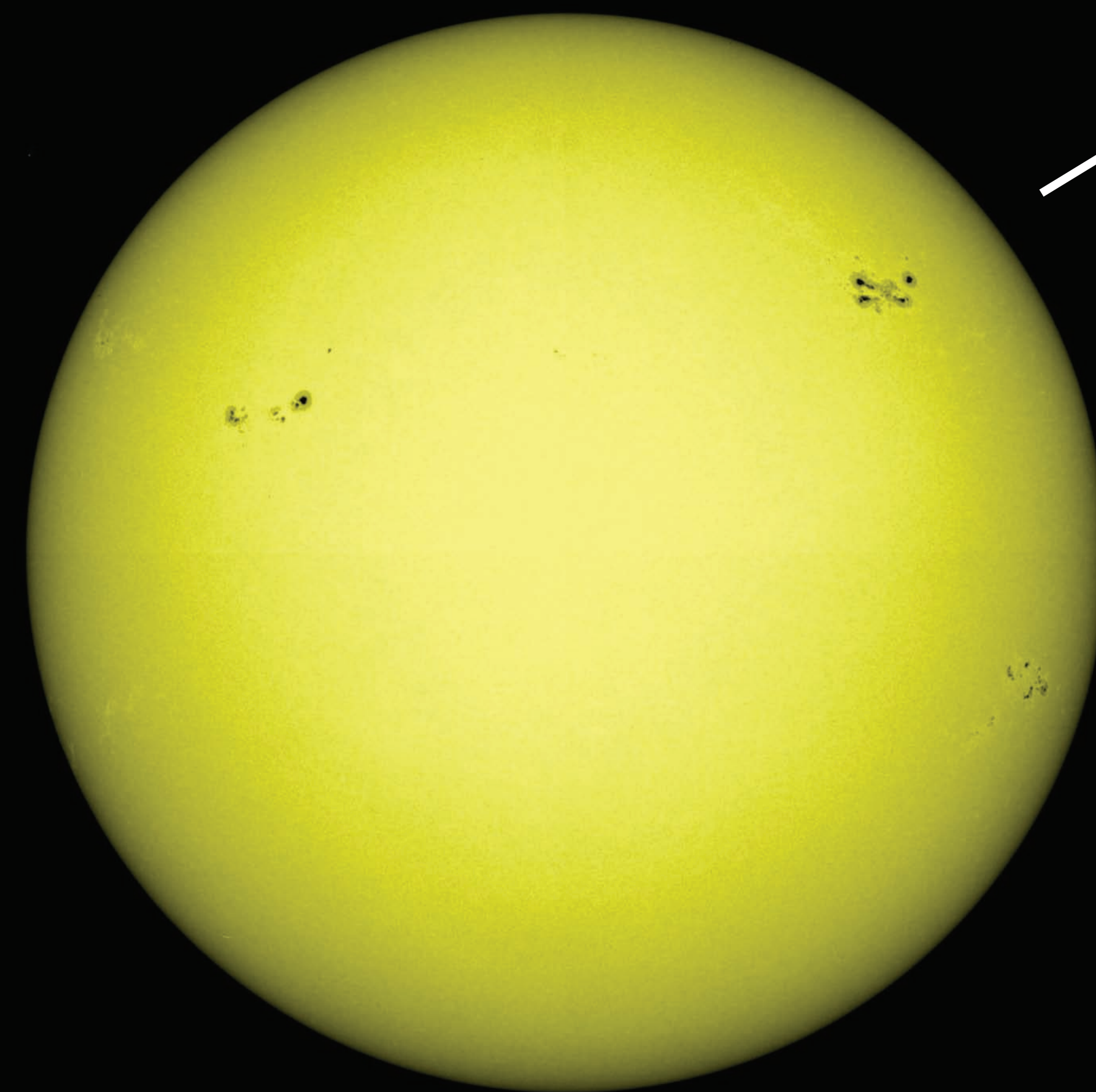


Our Magnetic Sun

Explore a moment in the dynamic life of our Sun. Sun images were taken on the same day using different instruments.



PHOTOSPHERE

Sun's Visible "Surface"

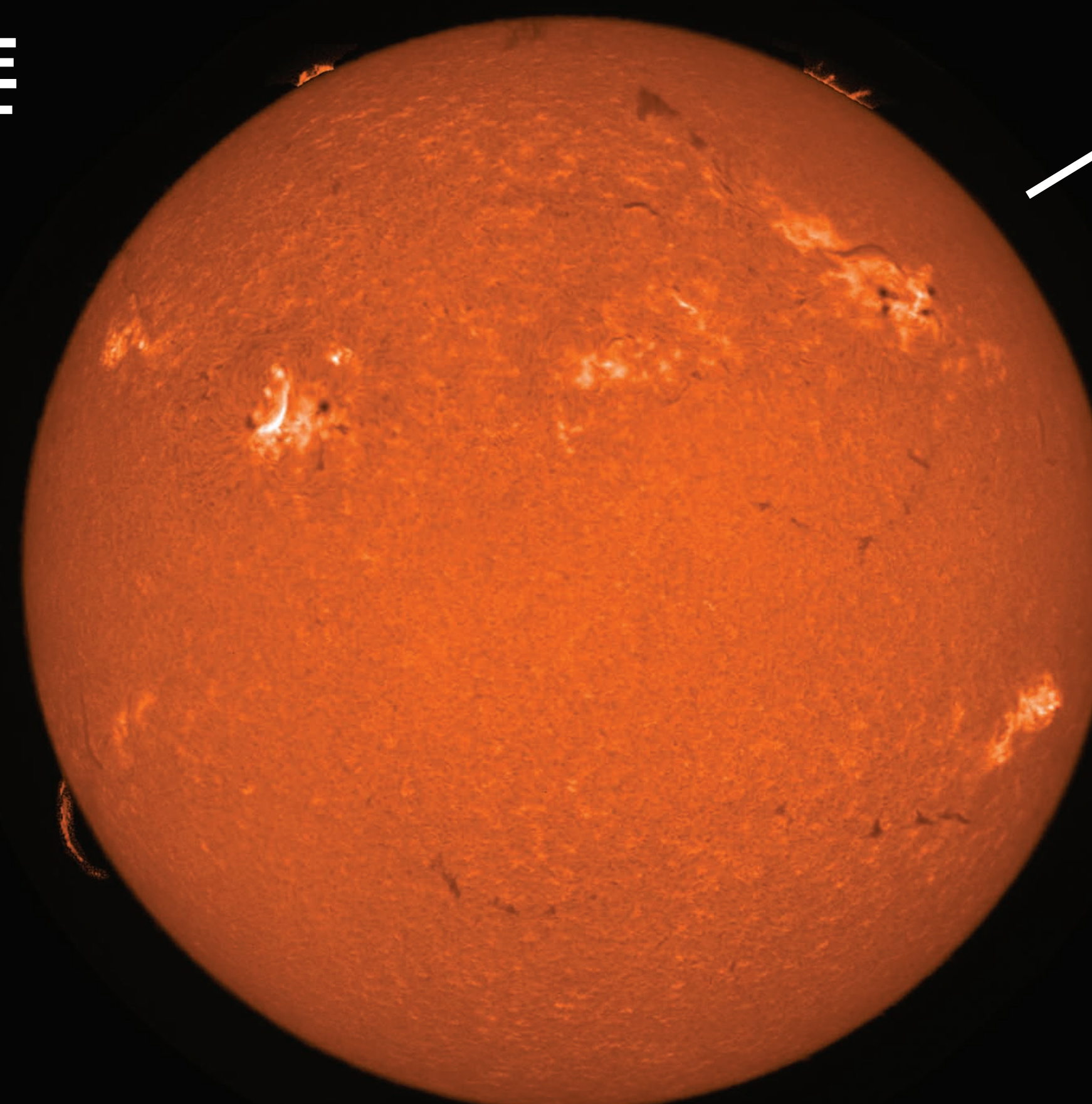
6,000°C

Through a filtered telescope, you might see dark spots on the Sun. These are *sunspots* which mark where twisted **magnetic field** lines pop through the surface of the Sun.

What do you see around the sunspots in the other Sun images?

How big is Earth on this scale? ➡ ⬅

NASA SDO/AIA 4500 2011-03-06 14:00:08 UT



CHROMOSPHERE

Thin Layer of Sun's Atmosphere just above the Photosphere

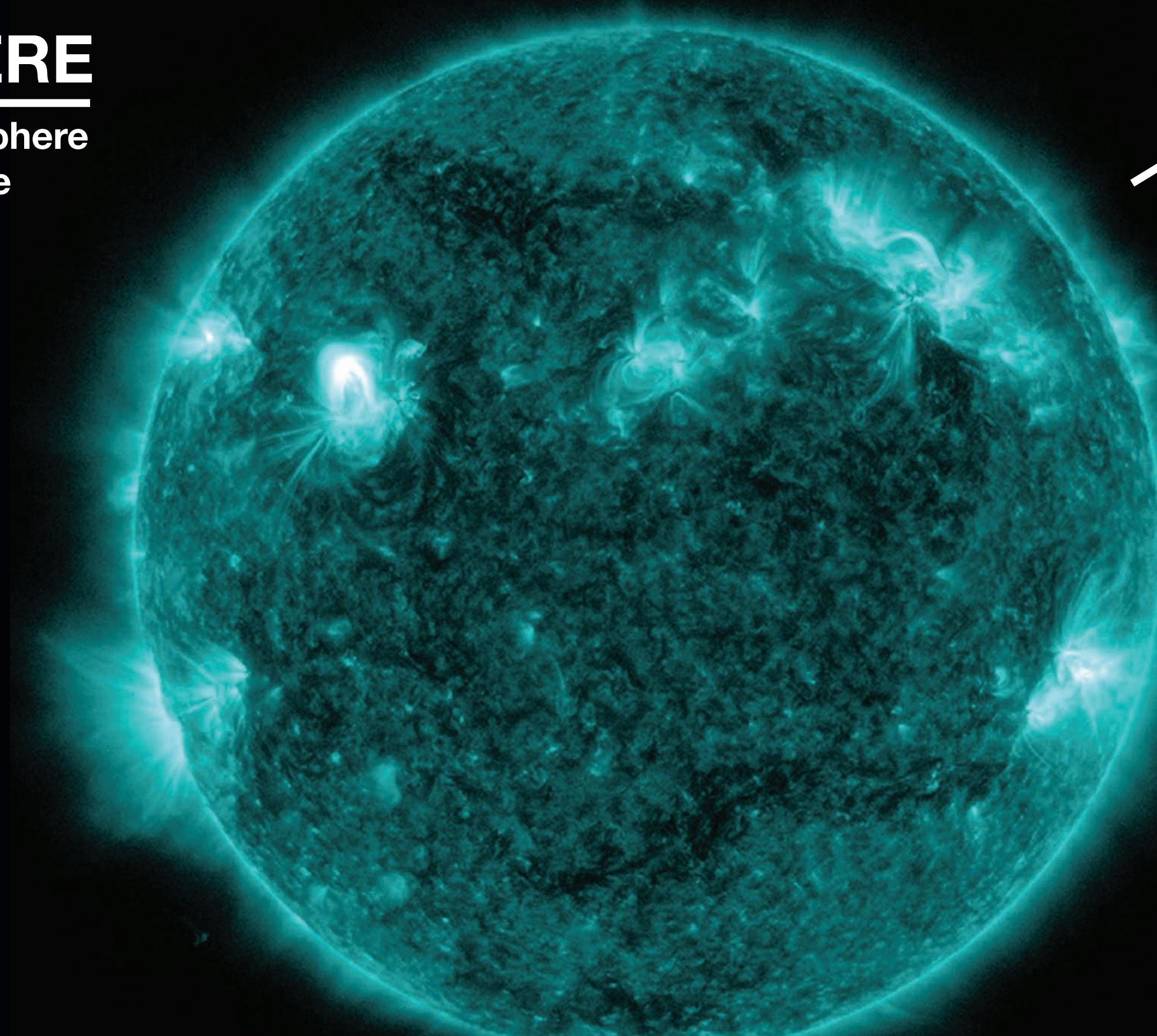
10,000°C

This image shows features you might see in a telescope using a *hydrogen-alpha* filter.

Clouds of bright glowing gases appear above the sunspots, heated by the **magnetic fields**.

Around the edge, do you see material rising out of the Sun? Those are *prominences*, lifted out of the Sun's surface by **magnetic activity**.

Photo courtesy of AFRL/RVBXS ISOON telescope



INNER CORONA

Sun's Atmosphere above the Chromosphere

Over 1,000,000°C

This image is from a UV-detecting telescope out in space!

What happened to the sunspots you saw on the other images?

They are completely covered by extremely hot loops of coronal material trapped and swirling within **magnetic fields** surrounding the sunspots. Radiating ultraviolet (UV) energy, the corona has a temperature of over one million degrees.

NASA SDO/AIA 131 2011-03-06 13:59:59 UT

Magnetic activity gives our Sun its dynamic personality.

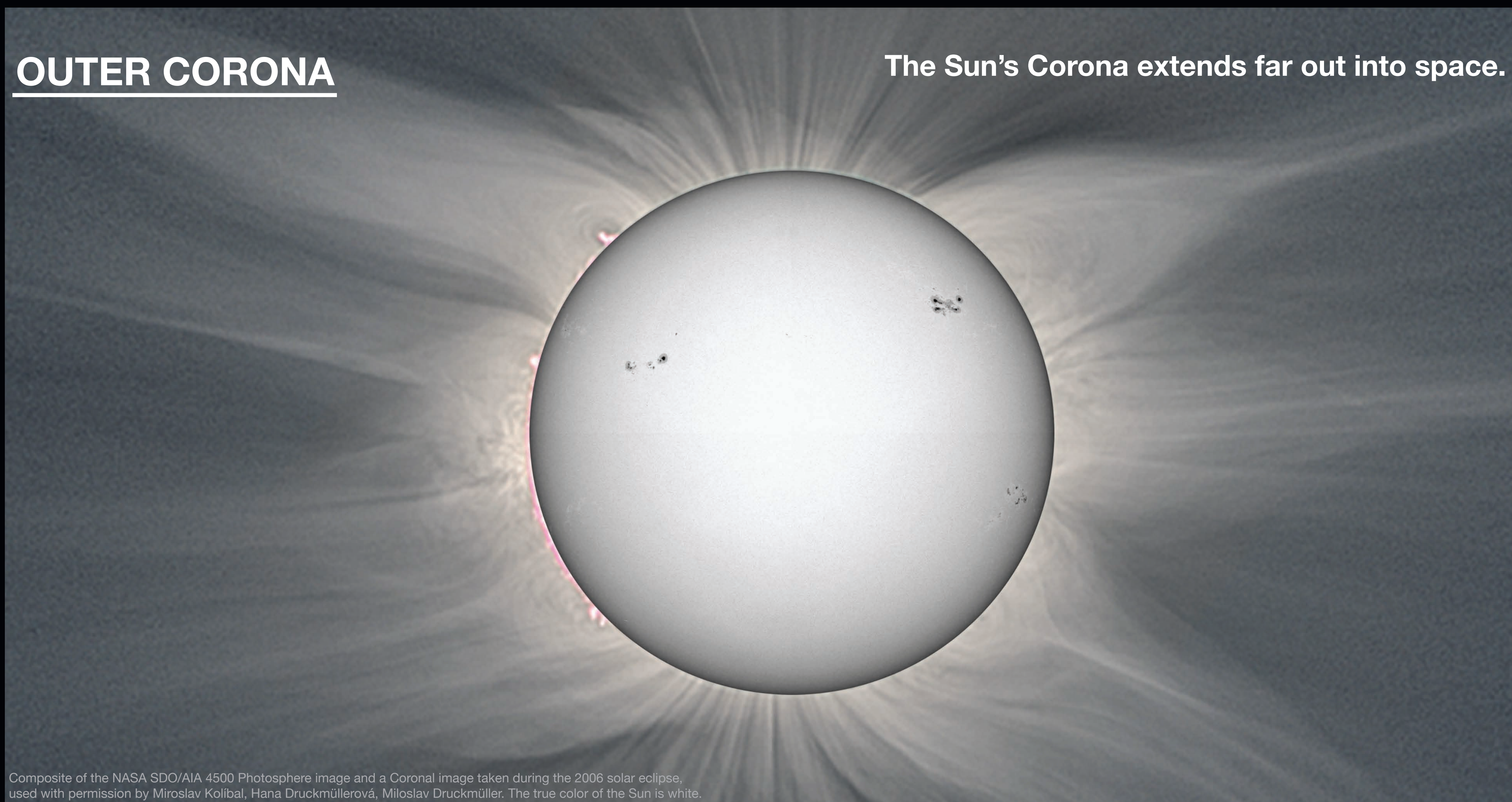


www.astrosociety.org/samplers/DynamicSun4Views.mov

Use your smartphone to see a video of three days in the life of our dynamic Sun.

OUTER CORONA

The Sun's Corona extends far out into space.



Composite of the NASA SDO/AIA 4500 Photosphere image and a Coronal image taken during the 2006 solar eclipse, used with permission by Miroslav Kolibal, Hana Druckmüllerová, Miloslav Druckmüller. The true color of the Sun is white.

Practice safe solar viewing: Don't ever look directly at the Sun without using a proper filter!