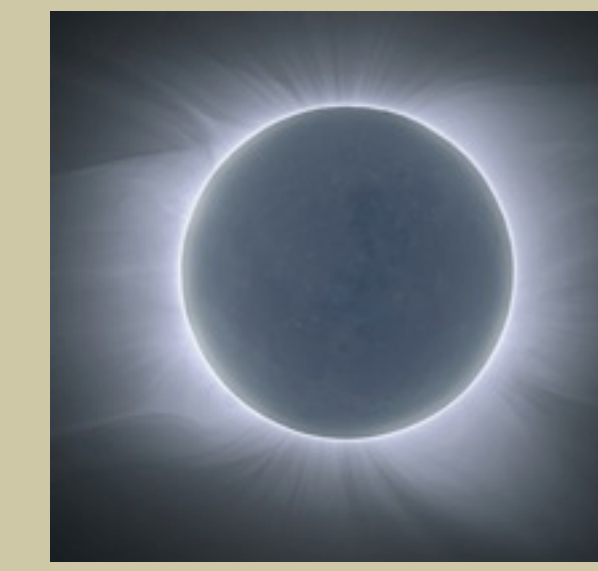


SOLAR OBSERVING

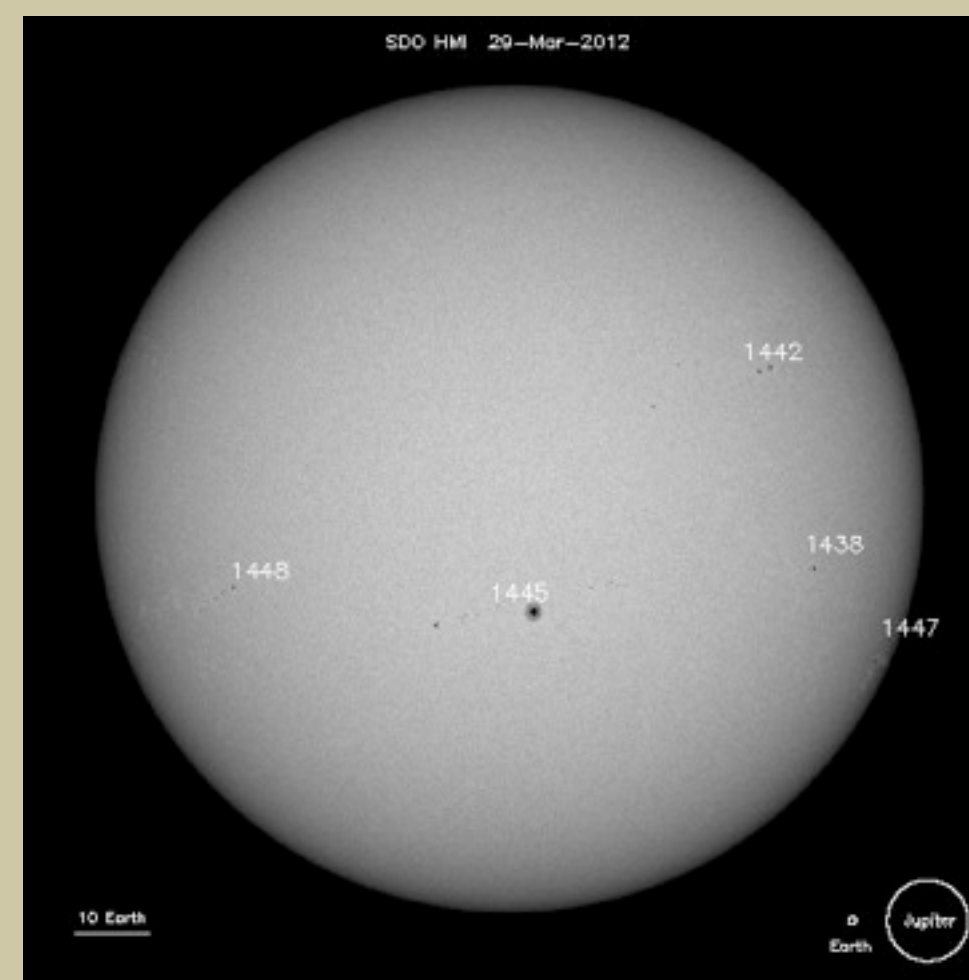
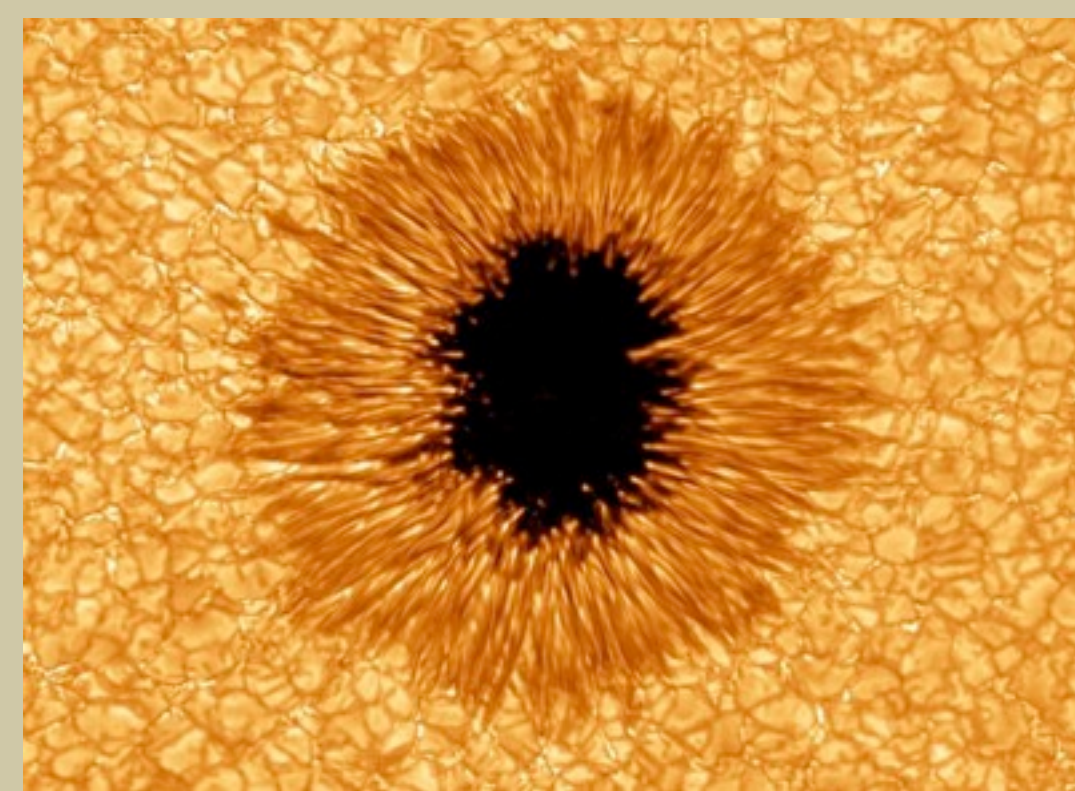


Caution:

The Sun is the closest star to the Earth which means we can study it in great detail. However, observing the Sun incorrectly can result in permanent eye damage. **Never** attempt to observe the Sun through a telescope unless you have been properly trained or are with someone that knows how to properly observe it. Today you are safe! The telescope in use today is fitted with a special solar filter so you can view the Sun safely. Enjoy the show!

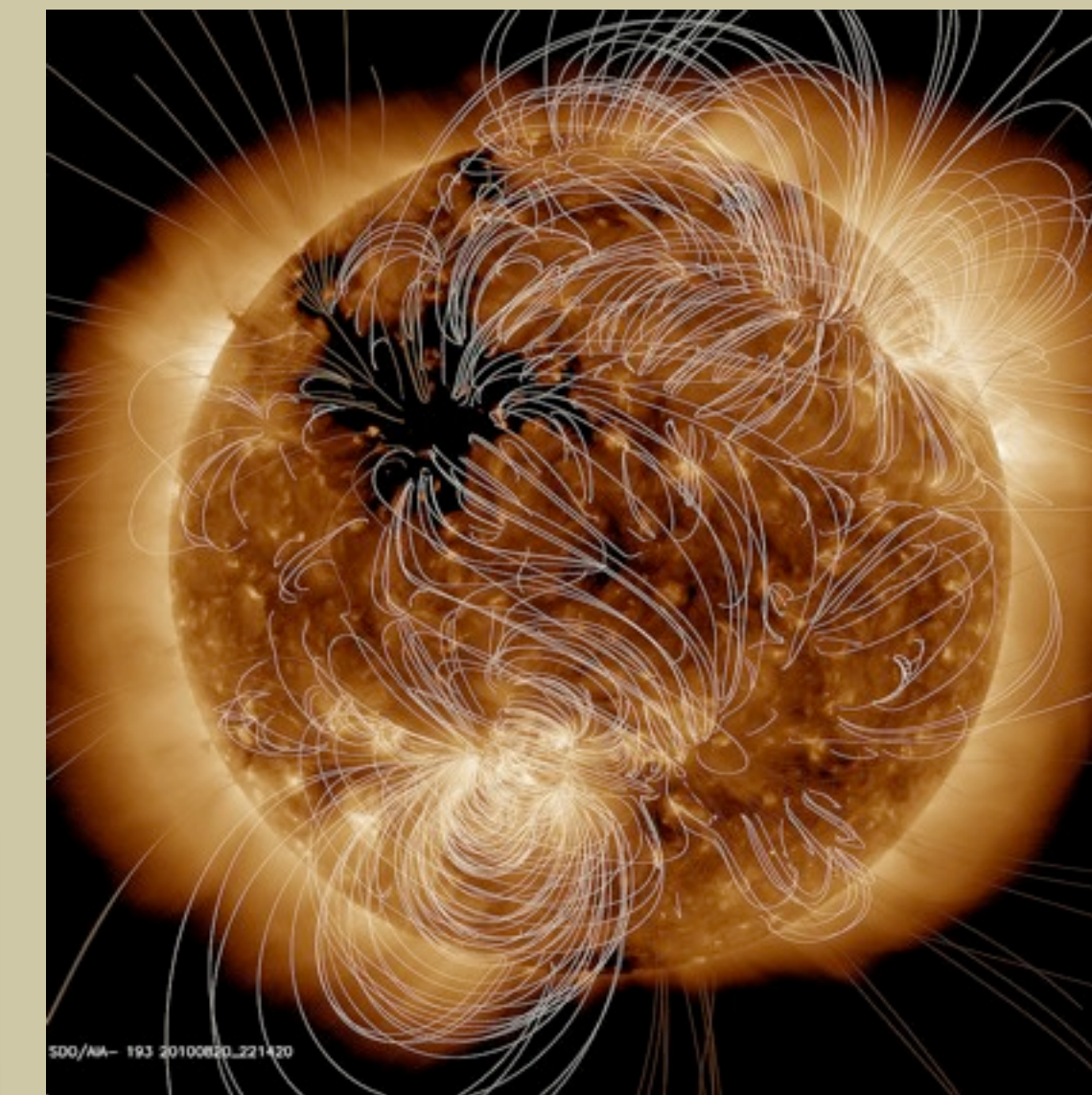
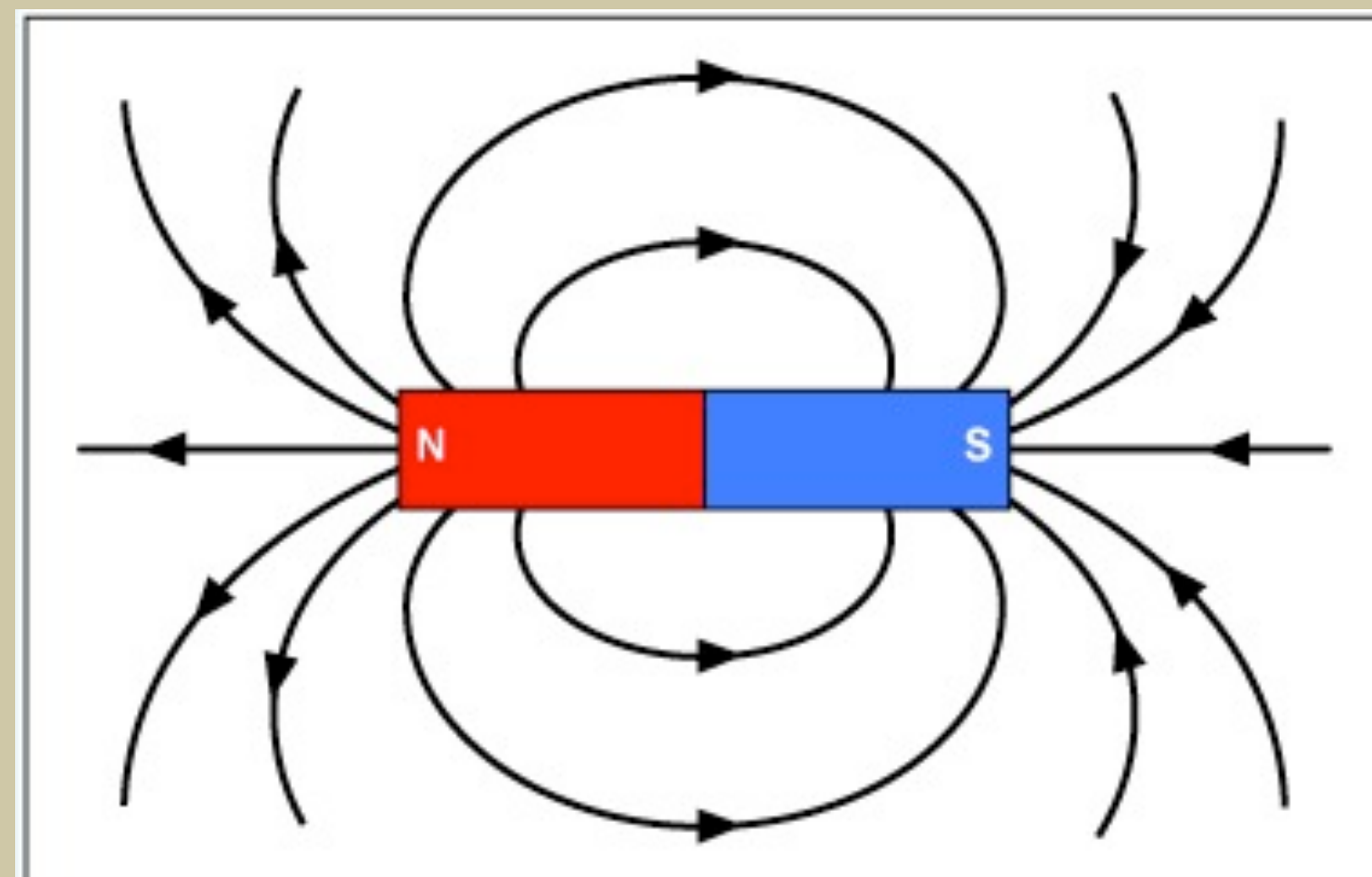
Sunspots:

One of the easiest to see features on the Sun are Sunspots. These spots appear black and are cooler (3000-4500 K; 4,940-7,640° F!) than the rest of the surface of the Sun (5700 K; 9,800° F!) These Sunspots can be very large; even larger than the whole Earth! Do you see any Sunspots today?

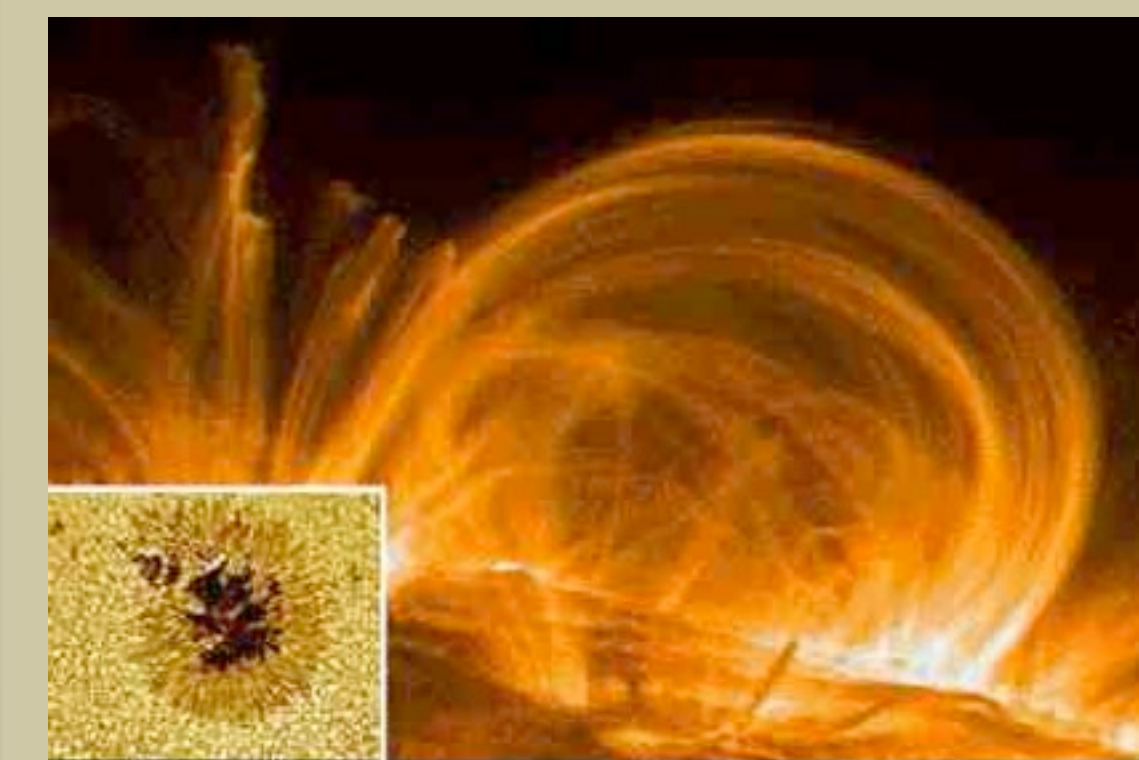


Magnetic Fields:

Let's see why we get Sunspots. Ever play with a magnet and small pieces of metal? Magnets have a North pole and a South pole and magnetic field lines that are invisible to our eyes but that certain types of materials can "see" easily.



The Sun also has a magnetic field but it is much more chaotic. Sometimes parts of the magnetic field get so twisted up that they pop up off the surface of Sun and carry material from the Sun with it. Where these magnetic field lines connect back to the surface of the Sun is where we see Sunspots!



Solar Flares and Aurora:

The magnetic field lines can even become so stretched out that they "break" and send the material they were carrying out into space. If this material is coming at the Earth, our own planet's magnetic field can capture the material from the Sun. This material interacts with our atmosphere to create a spectroscopic light (see our spectra demo inside) show called the aurora! And all of these started with these "small" dark spots on the Sun!



For more information on physics and astronomy please visit our websites. <http://physics.tamu.edu/> <http://instrumentation.tamu.edu/>

