The Sun has its own magnetic field caused by hot positive ions and negative electrons. Part of the field is dragged away by solar winds, which is called the interplanetary magnetic field, or IMF. Solar wind also contains electrons and protons from the Sun’s aurora in the form of plasma. When the wind interacts with planets that have strong magnetic fields of their own, it gets deflected from the planets by the Lorentz force. This force creates a region called the magnetosphere, where the wind particles are able to affect the magnetic field.

I’m an astronomy major, so I am more interested in the astronomical applications of the physics we learn in class. I’m interested in how solar winds and magnetic fields affect objects in the solar system. Without the magnetosphere, the solar winds would erode away the planets’ atmosphere. The Moon on the other hand has a tiny, almost nonexistent magnetic field, so the solar winds have a much greater effect, causing ‘sunburn’ on the Moon’s surface.

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