MONTANA STATE UNIVERSITY | College of LETTERS & SCIENCE — Physics Colloquium

Friday, January 27, 2017
4:10 – 5:00 PM
Barnard/EPS 103

Why is the Solar Corona So Hot?

James A. Klimchuk
NASA Goddard Space Flight Center
http://science.gsfc.nasa.gov/sed/bio/james.a.klimchuk

Abstract:

This fundamental question has challenged space scientists for decades. At temperatures of several million degrees, the corona is hundreds of times hotter than the solar surface, so heat cannot simply flow upward against the temperature gradient. (The same is true on other stars.) It is widely believed that the energy responsible for the extreme temperatures is extracted from the stressed magnetic fields that permeate the corona. The details of how this occurs are still, however, a matter of vigorous debate. It is likely that the mechanisms involved play a fundamental role in a wide range of phenomena, both on the Sun and beyond. During this talk, I will review our current understanding of the coronal heating problem and offer my own thoughts on its solution.

Host: Dana Longcope

****** Refreshments served in the EPS second floor atrium at 3:45 ******