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Current Findings on Solar Flares REBEKAH D. SCHILLER, Stony Brook University, Stony Brook, NY — Solar flares are eruptions of tremendous proportions releasing $10^29 - 10^32$ ergs of energy, released when solar magnetic fields become twisted and complex. Theories on the possible mechanisms of energy conversion in flares, the origins of flares, particle acceleration in flares (as detected by bremsstrahlung), and magnetohydrodynamics (MHD), the study of interactions between plasmas and magnetic fields, will be discussed. An overview to observational tools, including the RHESSI, YOHKOH, and TRACE telescopes will introduce highlights of recent findings and support of current theories.

References:

- 1. An Introduction to Modern Astrophysics. Bradley W. Carroll, Dale A. Ostlie. Addison Wesley. 1996
- 2. Flares and Flashes, Lecture Notes in Physics 454, Proceedings, IAU Colloquium, Sonneberg, Germany 1994. Editor: Greiner et al. Springer. 1994.
- 3. http://hesperia.gsfc.nasa.gov/sftheory/
- 4. http://sunland.gsfc.nasa.gov/smex/trace/
- 5. http://trace.lmsal.com/

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