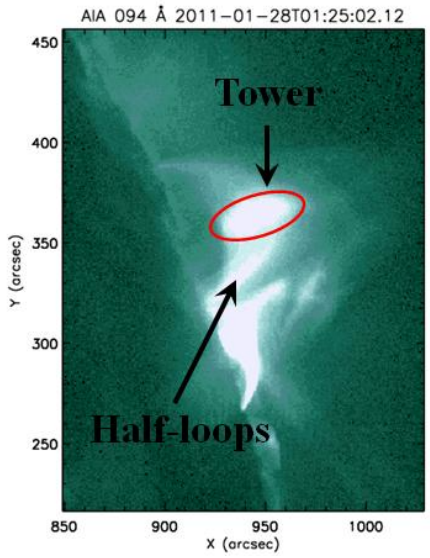
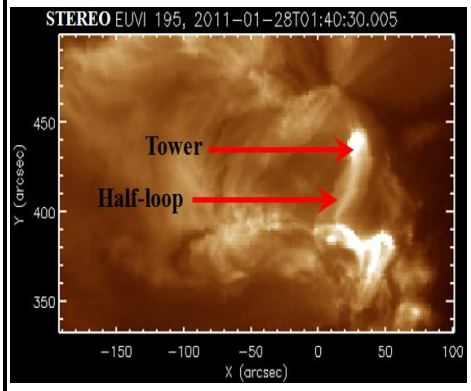
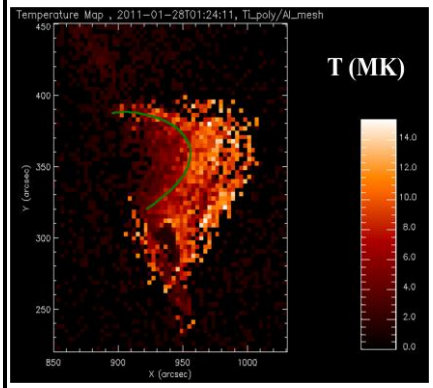
SDO-4/IRIS/Hinode Workshop summary for the Dr. Thomas R. Metcalf Travel Award
Silvina E. Guidoni
March 12-16, 2012. Monterey, Ca

For this workshop, I presented a poster during the following days: March 12, 14:30 - 16:30 pm; March 13, 14:45 - 16:15 pm; March 14, 10:00 - 10:50 am (paper poster); March 15, 9:30 - 10:10 am (electronic poster).

Poster Title: Post-Flare Half-Loops: What are They?
Authors: Silvina Guidoni[1], David McKenzie[1], Dana Longcope[1]. (1) Montana State University-Bozeman.
Abstract: My poster described our work on a powerful flare that occurred on Jan 28, 2011 and had a remarkable resemblance to a famous and well studied flare, called "Tsuneta candle-flame" flare. Our flare was observed with three different spacecrafts, Solar Dynamics Observatory, STEREO (A), and Hinode, resulting in high spatial resolution, great temperature coverage, and stereoscopic views of this iconic structure. The high temperature images reveal a brightening associated with a localized density increase, that grows in size to form a tower-like structure at the top of the flare arcade and may correspond to a shock at the top of the loops. They also show that loops which are successively connected to this tower develop a density increase in one of their legs that can be more than double the density of the other leg, giving the appearance of "half-loops". These jumps in density last for an extended period of time. Aided by STEREO images, we showed that the standard explanation (line-of-sight projection effect) for the observation of these half-loops does not apply to our current flare. We do not have an explanation for what causes the phenomenon yet, but we are studying several theories and models to identify the main physical mechanism.

Solar Dynamics Observatory (flare image)	STEREO (A) (flare perpendicular view)	Hinode/XRT (flare temperature map)
		

Silvina E. Guidoni's bio: I received my PhD in Physics in May of 2011 at Montana State University. My dissertation work involved theoretical modeling of "patchy" reconnection in the Solar Corona, under Prof. Dana Longcope's advice. Since then, I have been working as a Research Associate for Prof. David McKenzie at the same university. My future plans include a postdoctoral position at Goddard Space Flight Center in Greenbelt, MD, starting in July 2012. I will investigate coronal mass ejections and flares through 3D magnetohydrodynamics simulations.

I would like to express my sincere gratitude to Dr. Metcalf's family and the Solar Physics Division (SPD) for establishing the Thomas Metcalf SPD Travel Fund and the workshop organizers for selecting me as one of the award recipients.