

SUMMARY OF INVOLVEMENT FOR THE THOMAS METCALF TRAVEL AWARD

Adam Kobelski

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Adam Kobelski is a postdoctoral fellow for the Robert C. Byrd Green Bank Telescope of the National Radio Astronomy Observatory in Green Bank, WV. He received his PhD in May 2014 from Montana State University under the advisement of Dr. David McKenzie. His graduate work involved being chief observer for the X-Ray Telescope on Hinode, and his postdoctoral work involves similar (but not necessarily solar physics) duties with the 100m radio telescope.

E-Poster Presentation: **Initiation of AR-AR Reconnection After Flux Emergence**

Magnetic reconnection is one of the most important and fundamental processes in astrophysics, but is not yet fully understood. The speed at which reconnection occurs and the MHD instability that instigates the reconnection are still heavily debated. Observational signatures of reconnection can provide necessary information for improving our understanding of how magnetic energy is dissipated in the sun and universe. Here we perform an observational study utilizing images from SWAP onboard PROBA2 and Hinode/XRT as well as HMI magnetograms to provide empirical insights into the factors which control the rate of reconnection by studying the initiation of flux transfer between newly emerged active regions (ARs) and nearby pre-existing active regions. We have measured the delay between flux emergence as seen in HMI data and signatures of reconnection between active regions observed with SWAP for 8 events. When available, soft X-ray data from XRT and radio data from the Solar Radio Burst Spectrometer in Green Bank are also included. In 6 of the cases we find delays that are similar to those reported previously in the literature; we also find one case with a much shorter delay, and one case in which the two ARs do not appear to connect during the time span studied. These results are consistent with the separator reconnection discussed in Longcope et al 2005.

Other Involvement in the Workshop

In addition to presenting recent research, the workshop provided Adam with continued contact with the solar physics community (while working at a non-directly solar physics institution). This allowed collaboration and discussion on his other projects including work with microflares in multistranded loops observed with XRT and Hi-C with other scientists working in these fields, as well as allowing Adam to be involved in discussions about testing the capabilities of the ALMA radio array to perform solar observations. These important discussions and experiences would not have been possible without the opportunity provided by the Thomas Metcalf Travel Fund. The financial support provided is greatly appreciated.