

## Lower temperature response of an EUV wave observed by Hinode/EIS and SDO/AIA

LEE, Kyoung sun<sup>1\*</sup> ; KWON, Ryun young<sup>2</sup> ; BROOKS, David<sup>2</sup> ; SHIMIZU, Toshifumi<sup>1</sup>

<sup>1</sup>ISAS/JAXA, <sup>2</sup>George Mason University

We investigate an EUV wave observed by Hinode/EIS and SDO/AIA on 2011 August 04. The EUV wave propagates across the solar disk and the wave front passing through a remote active region (AR 11263) is observed by EIS. This EUV wave has already been analyzed using coronal lines, but the lower temperature response to the EUV wave has not been investigated. Using multi-wavelength observations from EIS and AIA, we determined the intensity and Doppler velocity variation of different temperature lines and compared them. From the comparison, we found an enhancement of the intensity at lower temperatures before the intensity increase seen in the coronal filters of AIA. And a significant enhancement of the red shift (10 km/s) in the lower temperature line (Si VII,  $\log T \sim 5.8$ ) compared to the increase of the red shift ( $\sim 3$  km/s) in coronal lines (Fe XII, FeXIII, and Si X,  $\log T \sim 6.1-6.2$ ) when the EUV wave interacts with the active region. We will discuss the impact of the EUV wave on the lower temperature emission.

Keywords: Spectroscopy, Corona, EUV wave