

Internal use only

Abstract number: S2-562

The active Sun and its implication for the heliosphere
oral preferred

Sunspot Shocks with SDO

Marsh, Mike¹, Ireland, Jack² and Walsh, Robert¹

¹University of Central Lancashire

²ADNET Systems, Inc., NASA's Goddard Spaceflight Center

There is much evidence for the presence of magnetoacoustic waves within sunspot regions, propagating oscillations having been observed from the photosphere, chromosphere, transition region and into the corona. It is thought that acoustic waves generated in the photosphere may be waveguided along the strong magnetic field in umbral regions. Using SDO/AIA, we present observations which suggest that these waves coherently propagate upwards through the sunspot within all of the observed temperature channels. These waves possess a non-linear signature, implying the presence and propagation of slow magnetoacoustic shock waves into the corona.