

Cavity Magnetic Observations: A Survey using AIA and CoMP data

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The magnetic field of the corona is the predominate source of energy when it comes to coronal mass ejections (CME) and flares. Coronal prominence cavities are highly visible regions of rarified density when viewed off limb and can erupt into CMEs. Observing magnetic fields in the corona has always been difficult, but for the first time daily observations of linear polarization are being made by the Coronal Multichannel Polarimeter (CoMP). These observations of the optically-thin corona are ideal for studying structures such as cavities which extend along the line of sight. A survey was conducted over the last 6 months using the Atmospheric Imaging Assembly (AIA) instrument aboard the Solar Dynamics Observatory (SDO) satellite in order to create a working database of all visible cavities. These cavities were then compared to intensity and linear polarization images obtained by the CoMP telescope. The linear polarization images were examined for specific structures similar to those created using forward calculations of CoMP-like observables from magnetohydrodynamic models.