Analysis of an Anemone-Type Magnetic Field in an On-Disk Coronal Hole

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Overview

- Introduction -- What is a coronal hole?
  -- What is an Anemone Event?

- Data

- Analysis

- Summary

- Future Work
What is a Coronal Hole?

SDO AIA 193 Å

Darker, Less dense, Cooler

Seen anytime in solar cycle, more common in declining phase

Sun's field open to interplanetary medium, high speed solar wind > 400km/s
Coronal Hole “Now”
Coronal Hole and Anemone Event

SDO AIA 193.0 Angstrom 2016-03-03 20:25:05

[Image of the Sun with annotations for X-position and Y-position in arcsec, and a smaller image labeled 'Earth Scale']
DATA
ANALYSIS
HMI line-of-sight component and Continuum

Before Appearance of Pores 20:06:27

Emerging Flux

Appearance of Pores 20:06:27
Further Development of Region
Interchange-Reconnection Schematic
SUMMARY
We observed the birth of a bipolar solar active region in a small coronal hole with obvious field-emergence driven interchange magnetic reconnection without obvious jets...
FUTURE WORK

- Finish analysis with 211 Å data

- Identify more events like this one for multi-wavelength study