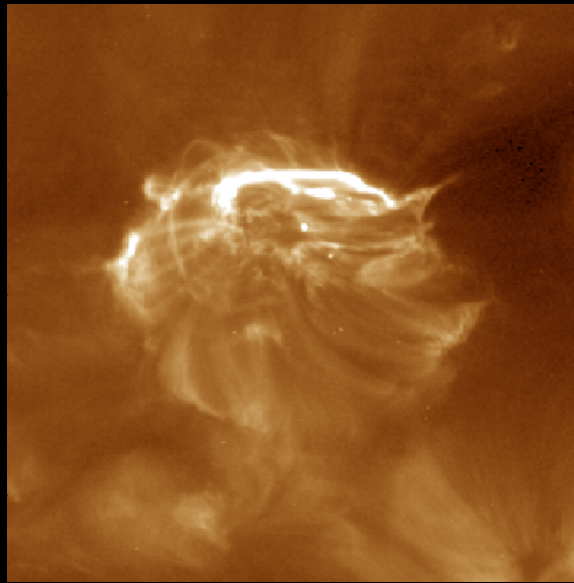


Analysis of an Anemone-Type Magnetic Field in an On-Disk Coronal Hole



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1. NASA/Marshall Space Flight Center

2. NASA/USRA

3. University of Alabama in Huntsville

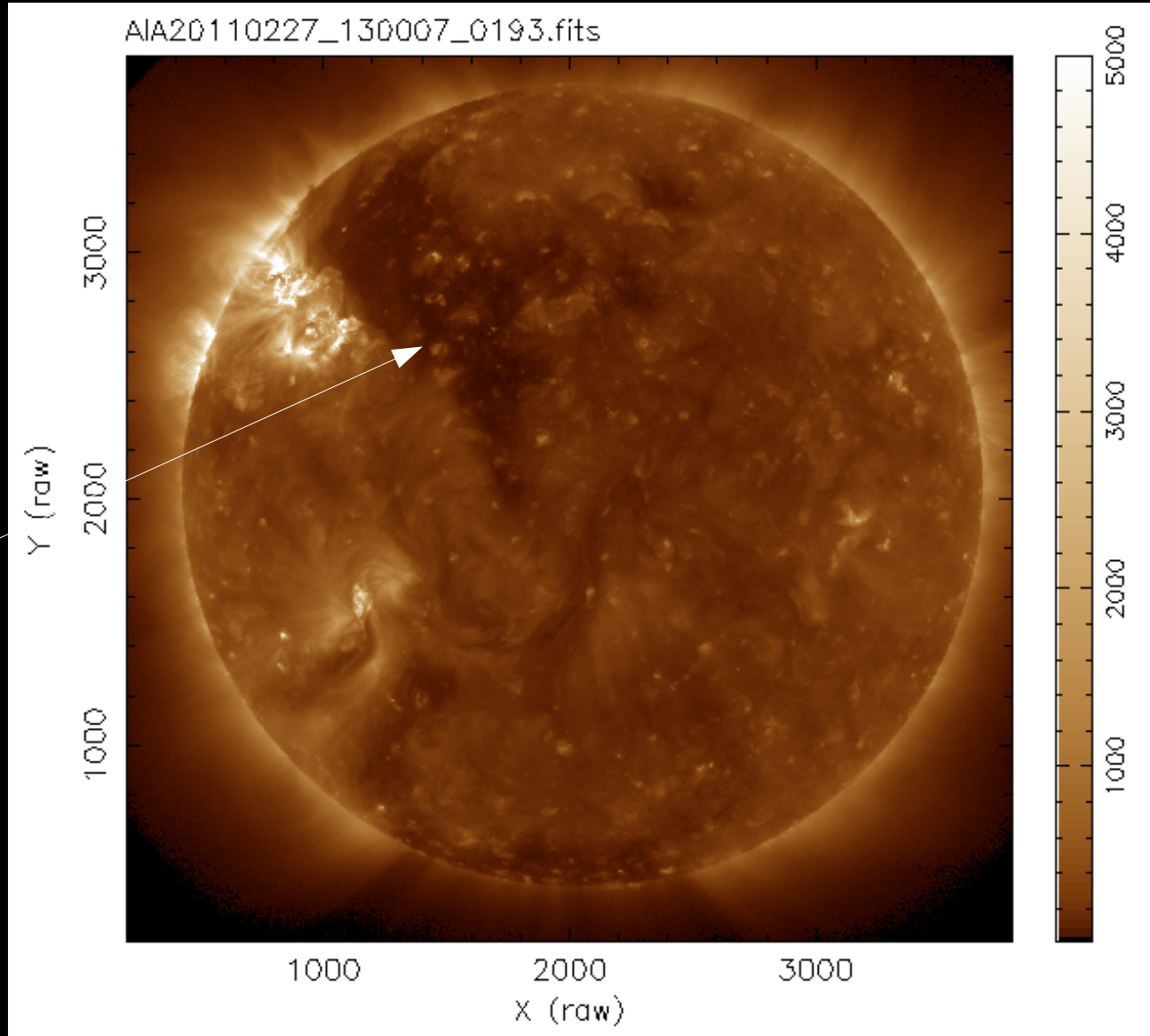
4. Bass Chandler School (Arizona)

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

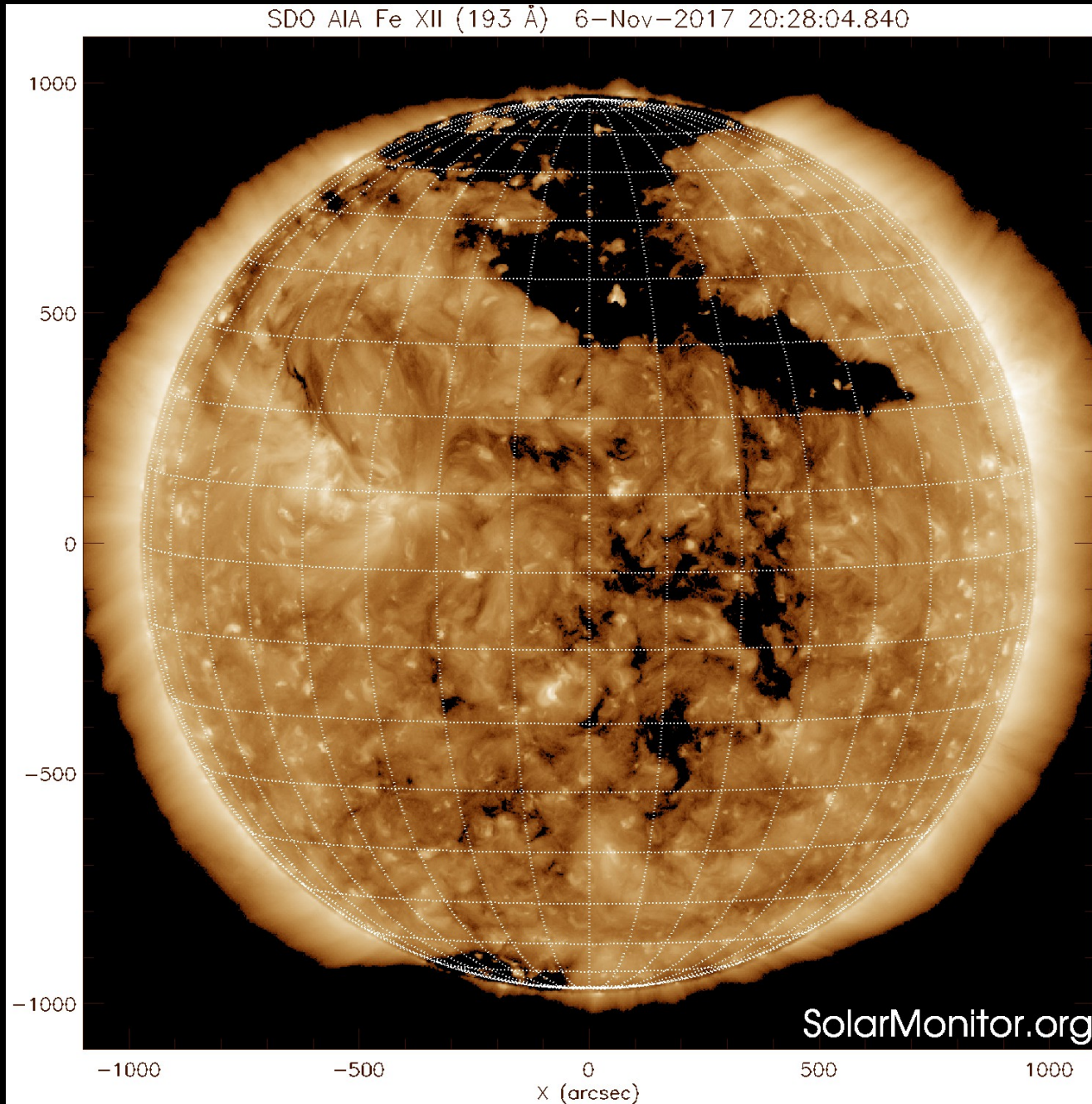


Darker,
Less dense,
Cooler

Seen
anytime
in solar
cycle,
more
common
in
declining
phase

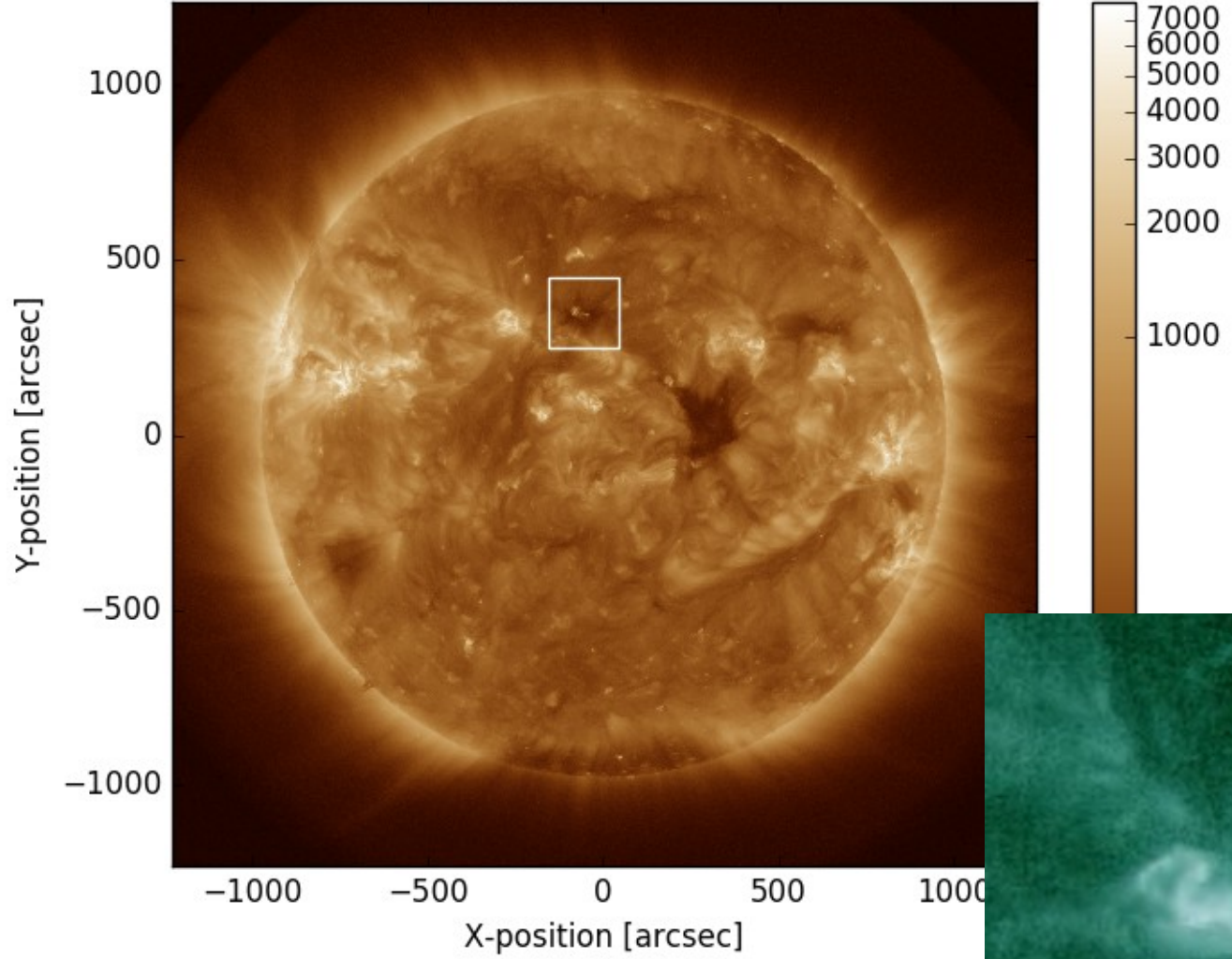
Sun's field open to
interplanetary medium, high speed solar wind > 400km/s

Coronal Hole "Now"



Coronal Hole and Anemone Event

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



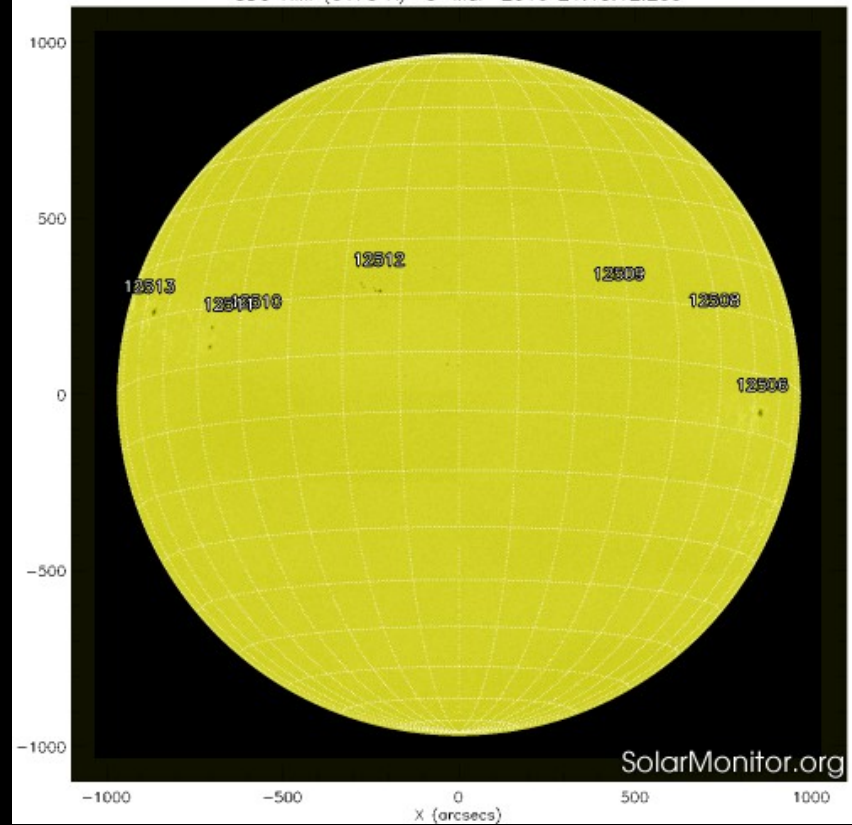
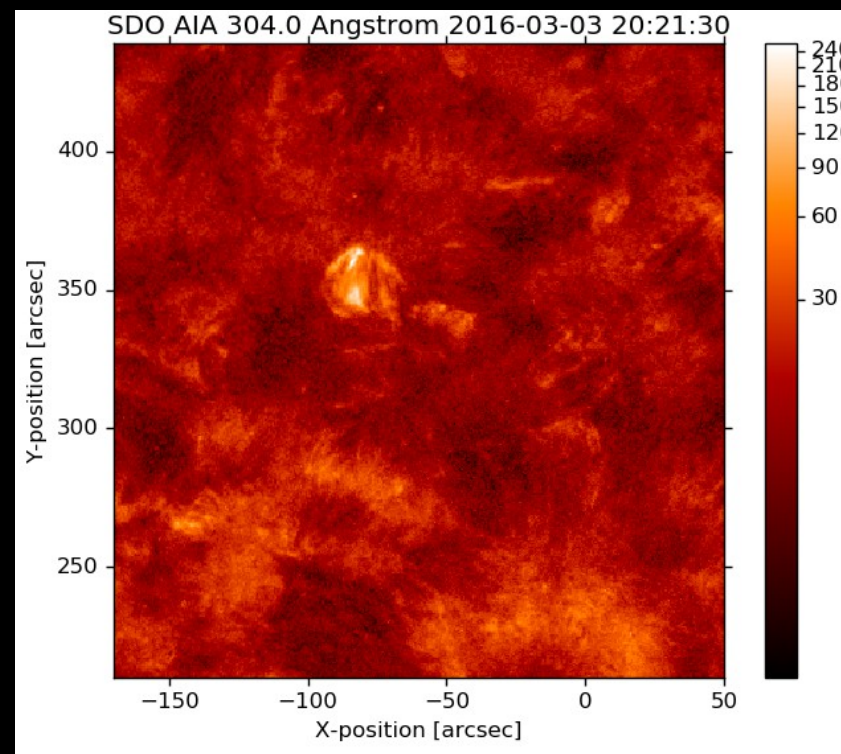
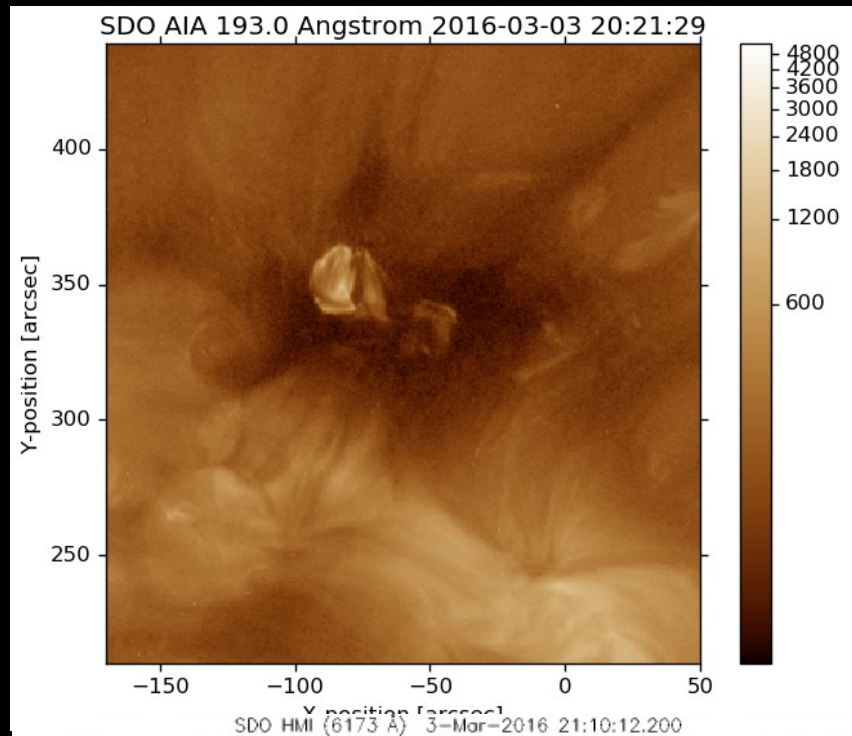
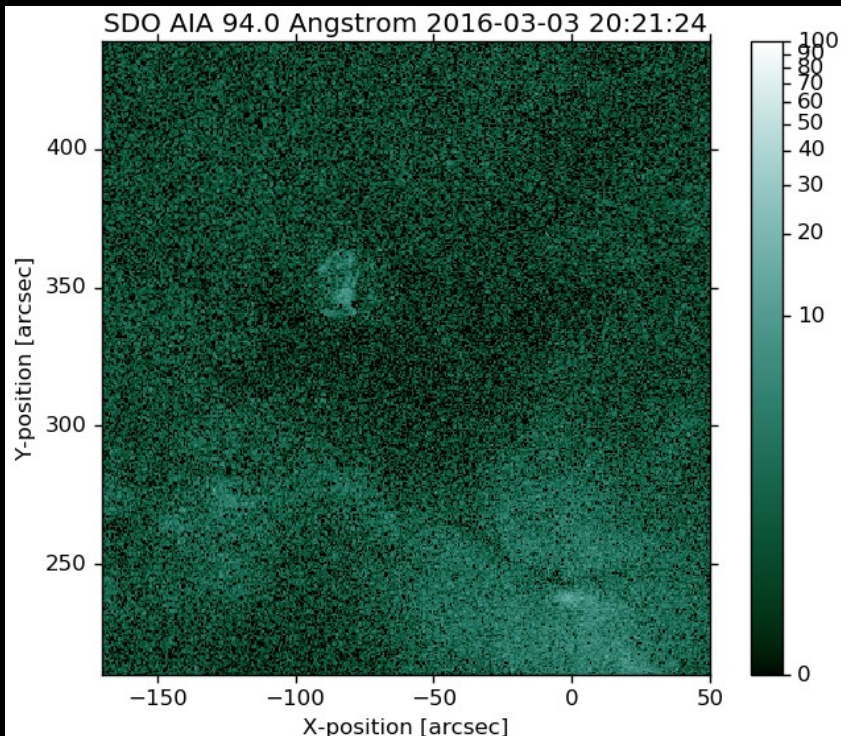
DATA

DATA

Solar Dynamics
Observatory's
Atmospheric
Imaging
Assembly

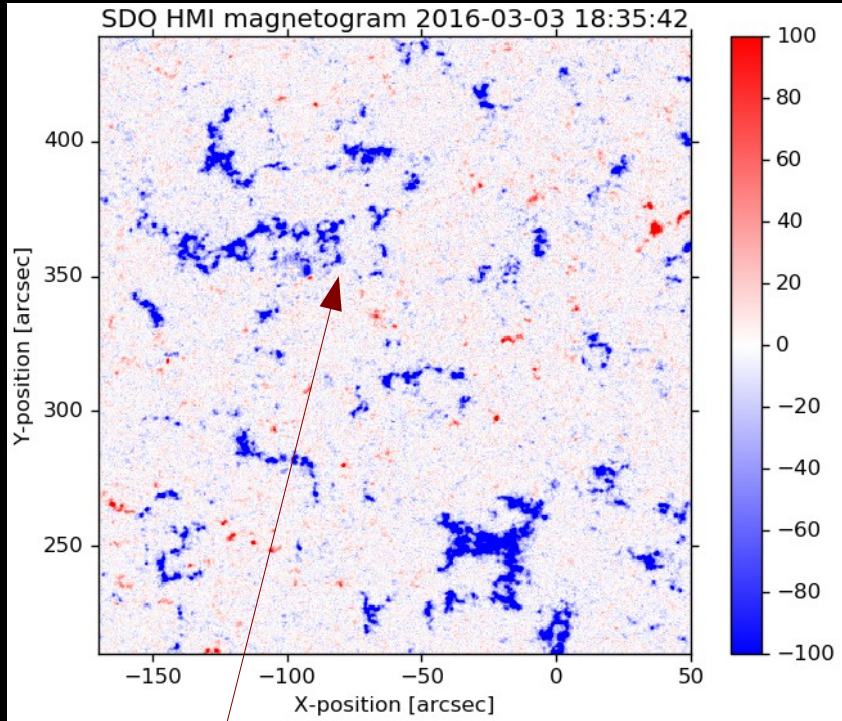
and

Helioseismic
and
Magnetic
Imager



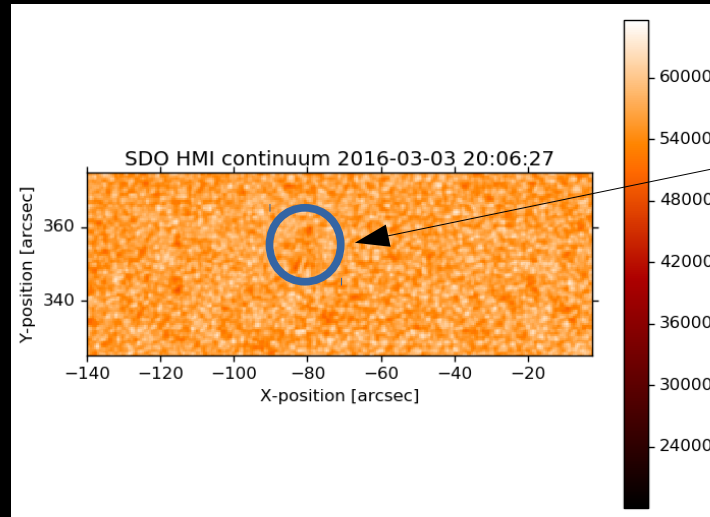
ANALYSIS

HMI line-of-sight component and Continuum

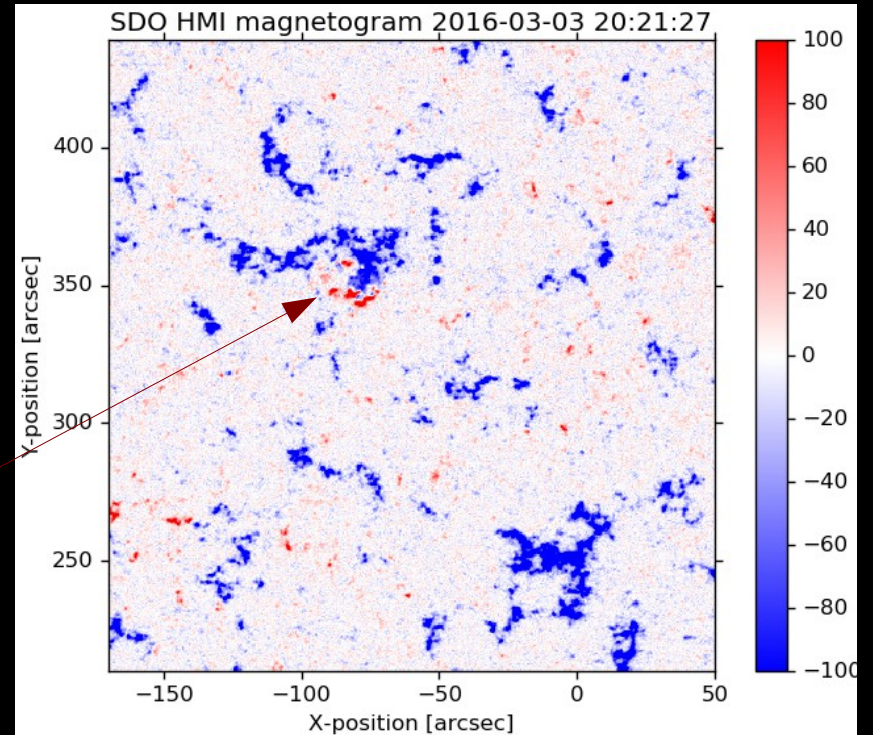


Before

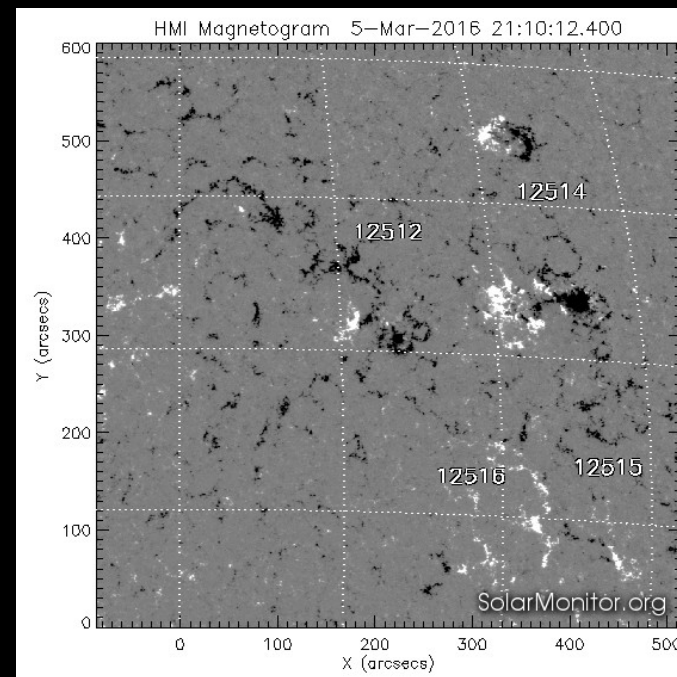
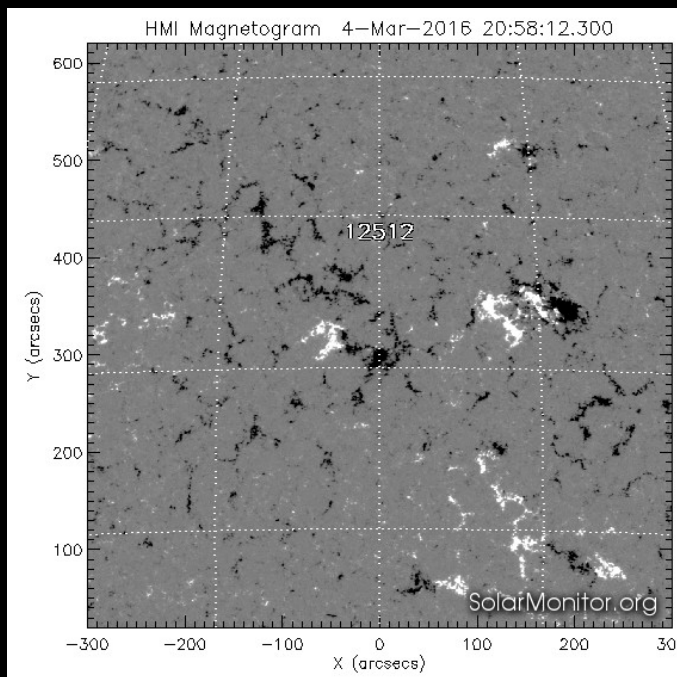
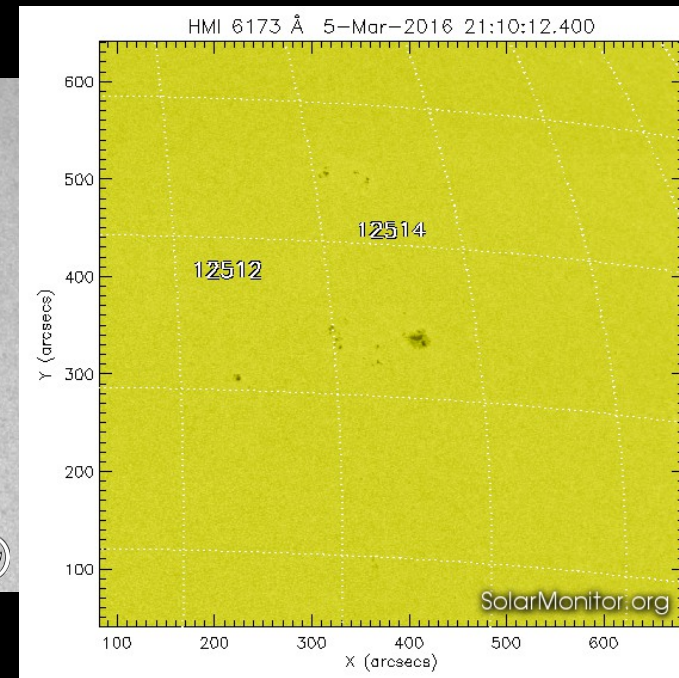
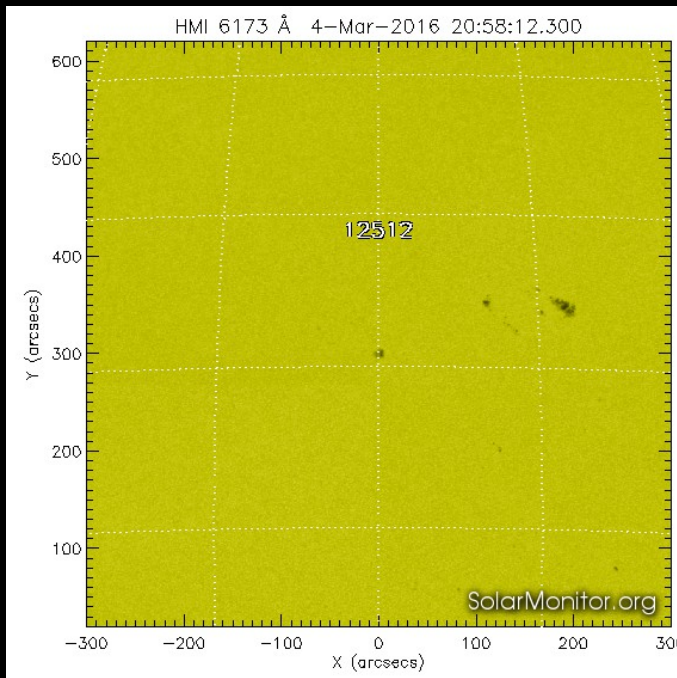
Emerging Flux



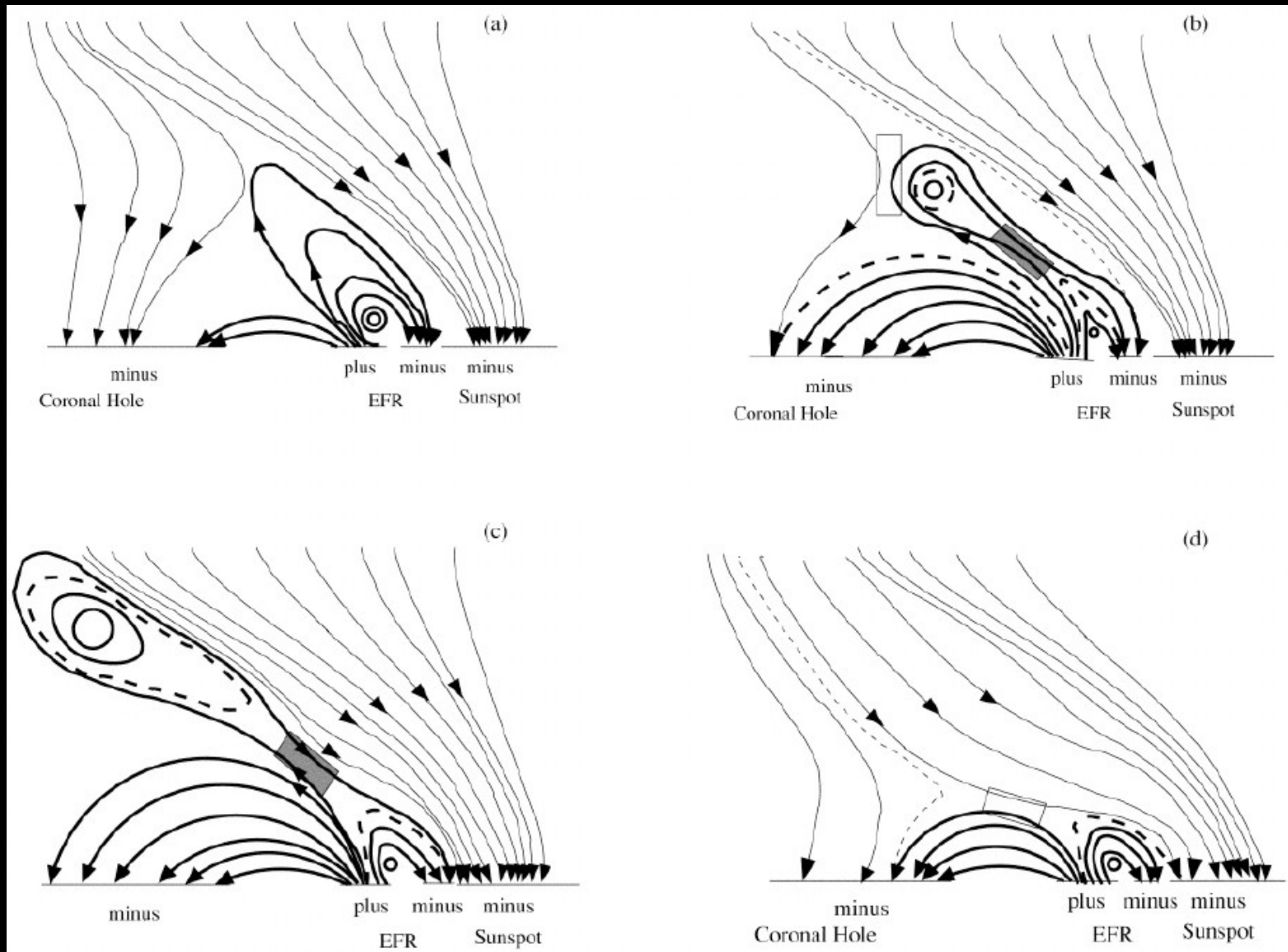
Appearance
of Pores
20:06:27



Further Development of Region

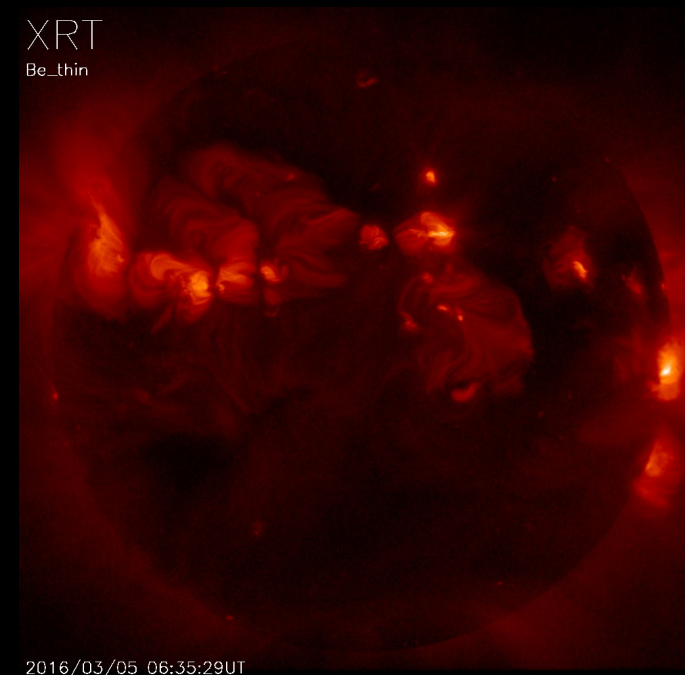
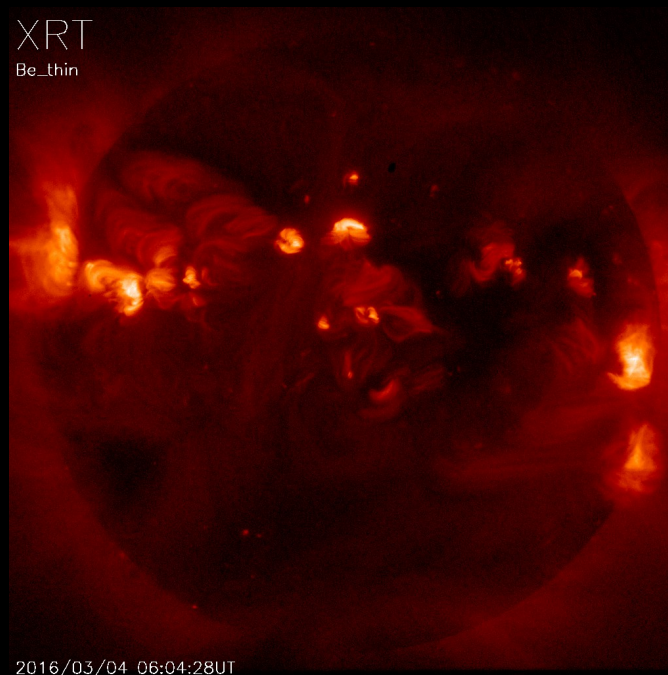
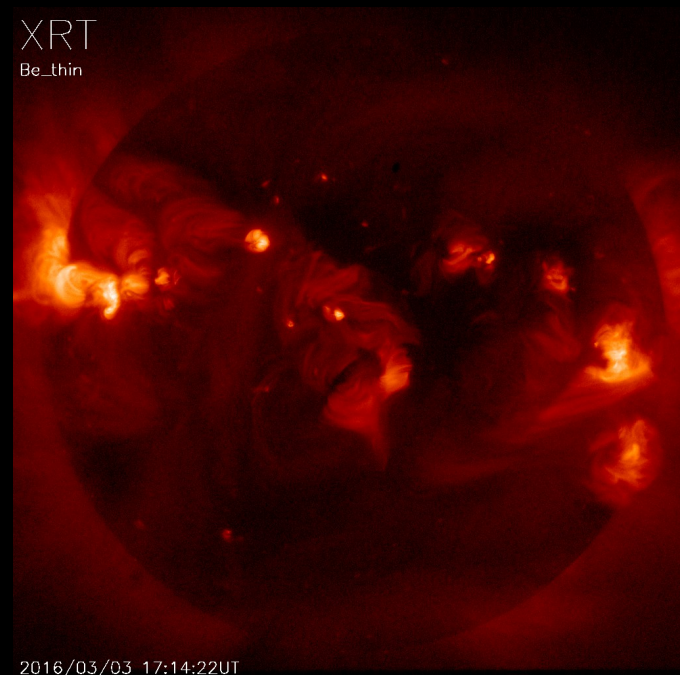


Interchange-Reconnection Schematic



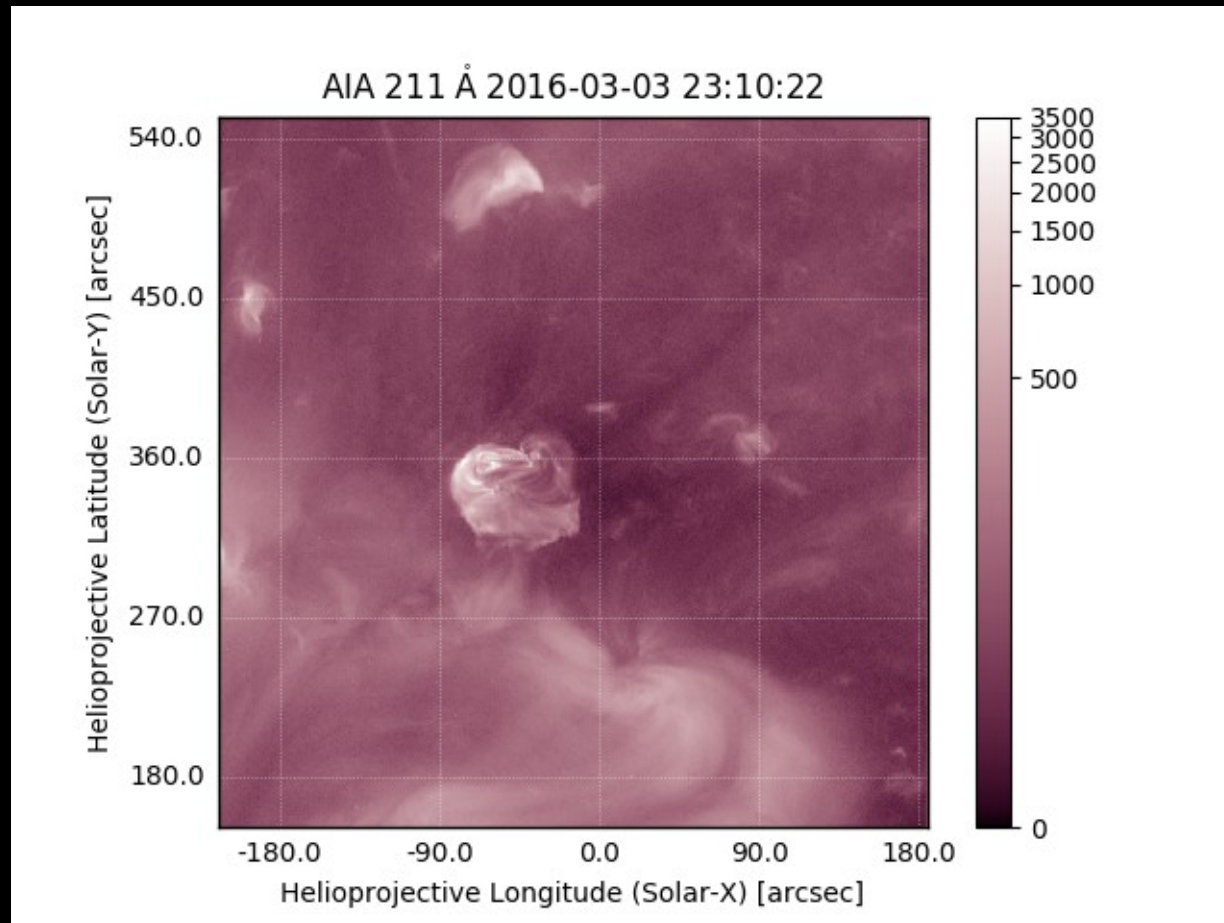
SUMMARY

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