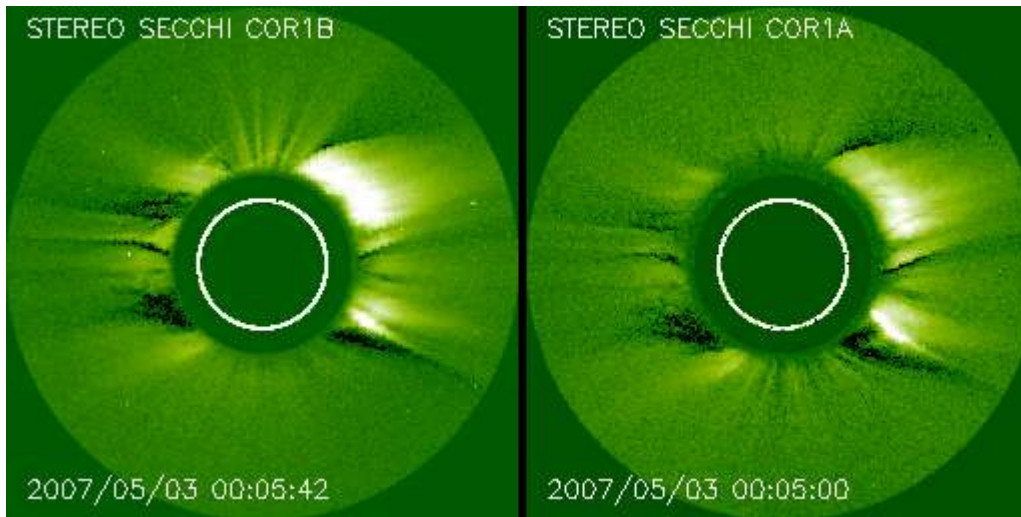


Early Results from STEREO SECCHI COR1



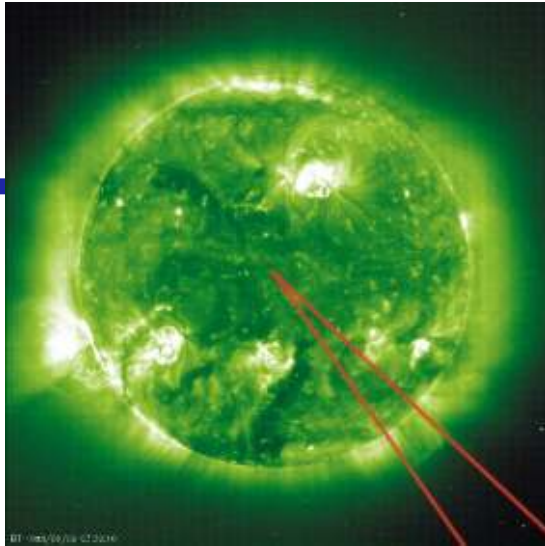
03-May-2007
“pB” daily minimum pixel
Separation=6.3°

O. C. St. Cyr¹, J. M. Davila¹, W. Thompson¹, B. J. Thompson¹, J. B. Gurman¹, S. Jones¹, M. Kramar¹, J. McAteer¹, M. Selwa¹, N. Reginald¹, J. T. Burkepile², G. de Toma²

¹NASA GSFC, ²HAO/NCAR

COR1 Primary Science Goal:

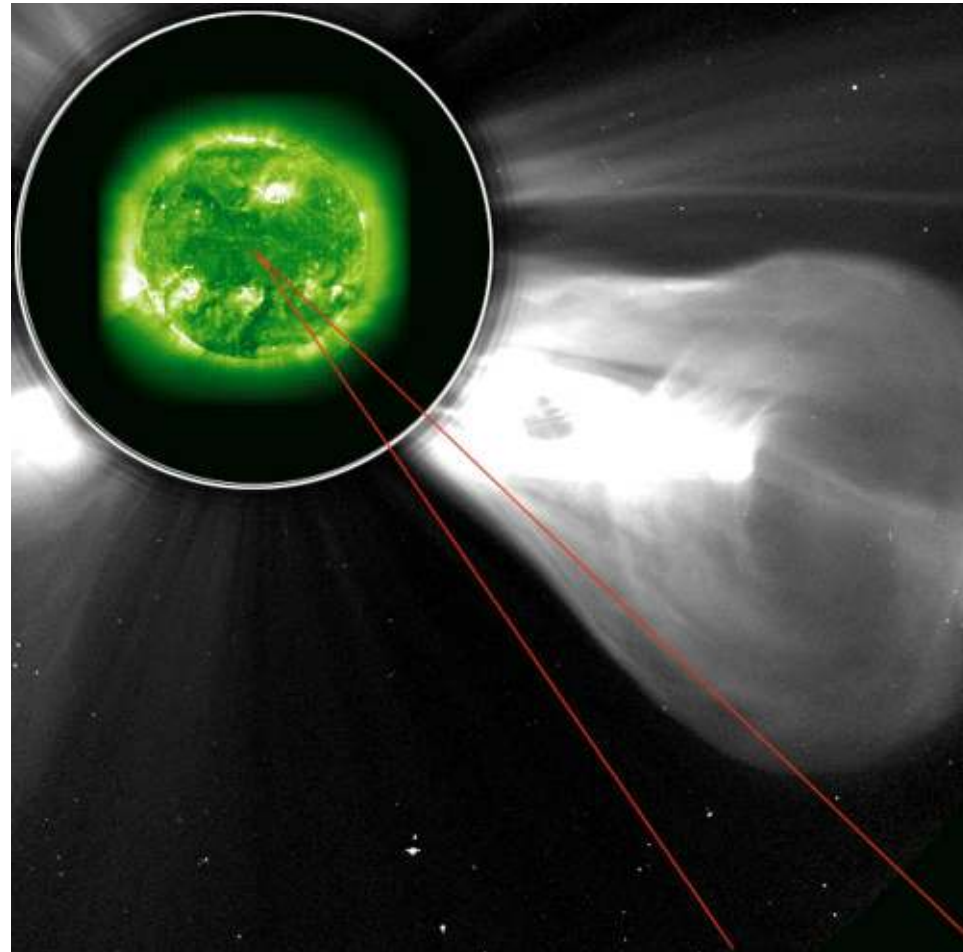
Understanding the Origin of CMEs



There are four parameters that are critical to understanding the origins of CMEs and the forces acting on them. But these are difficult to measure above $2 R_S$ (depicted by white circle).

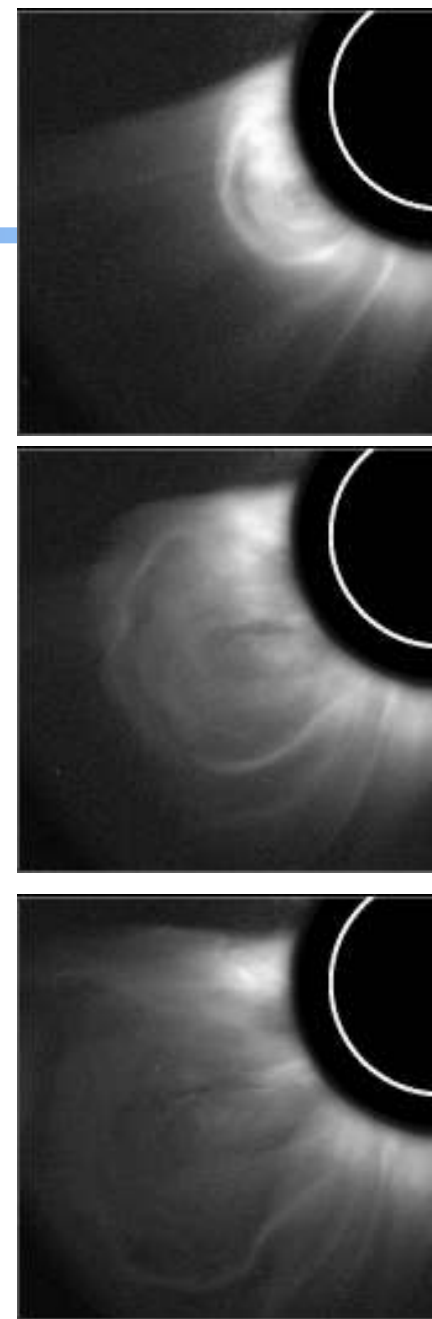
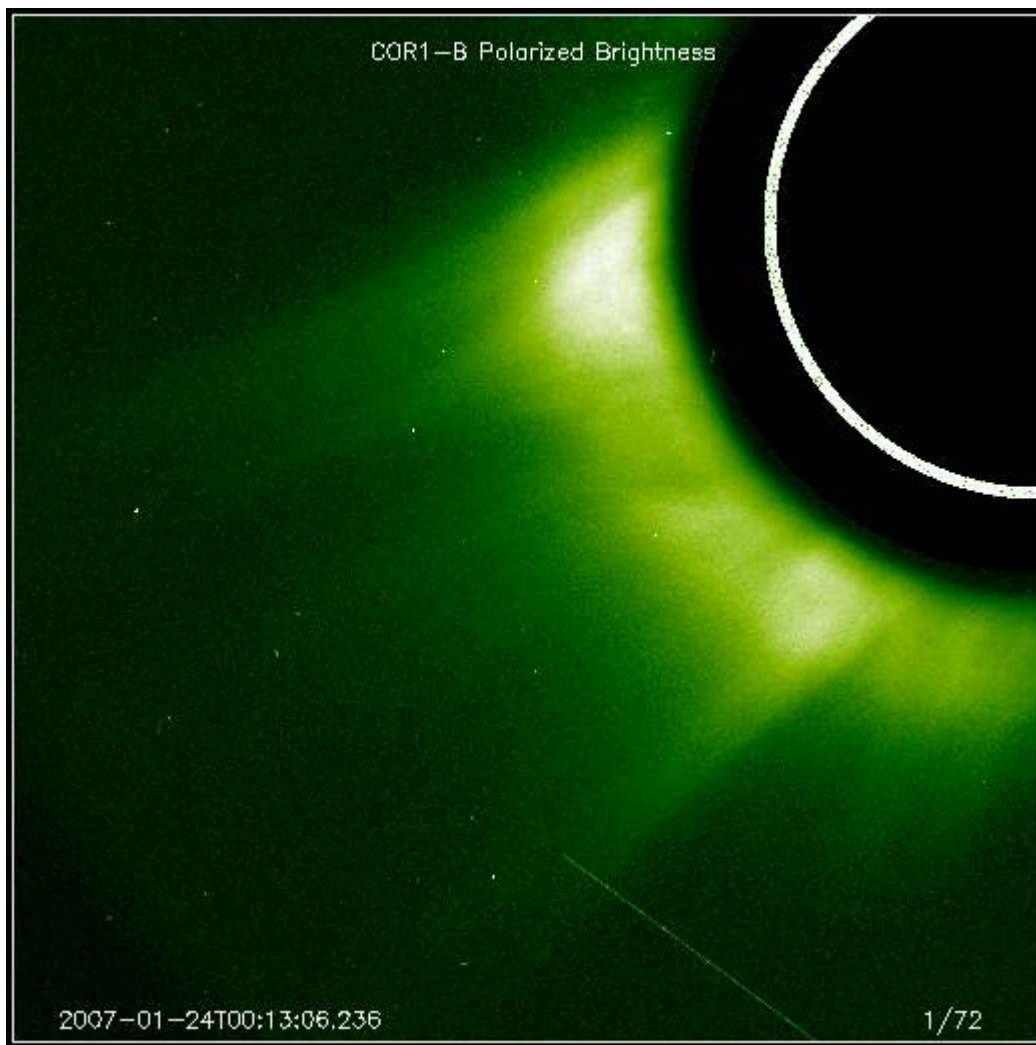
- initial acceleration
- non-radial motions
- transverse (latitudinal) expansion
- initial radial expansion

•Also the site of energetic particle acceleration



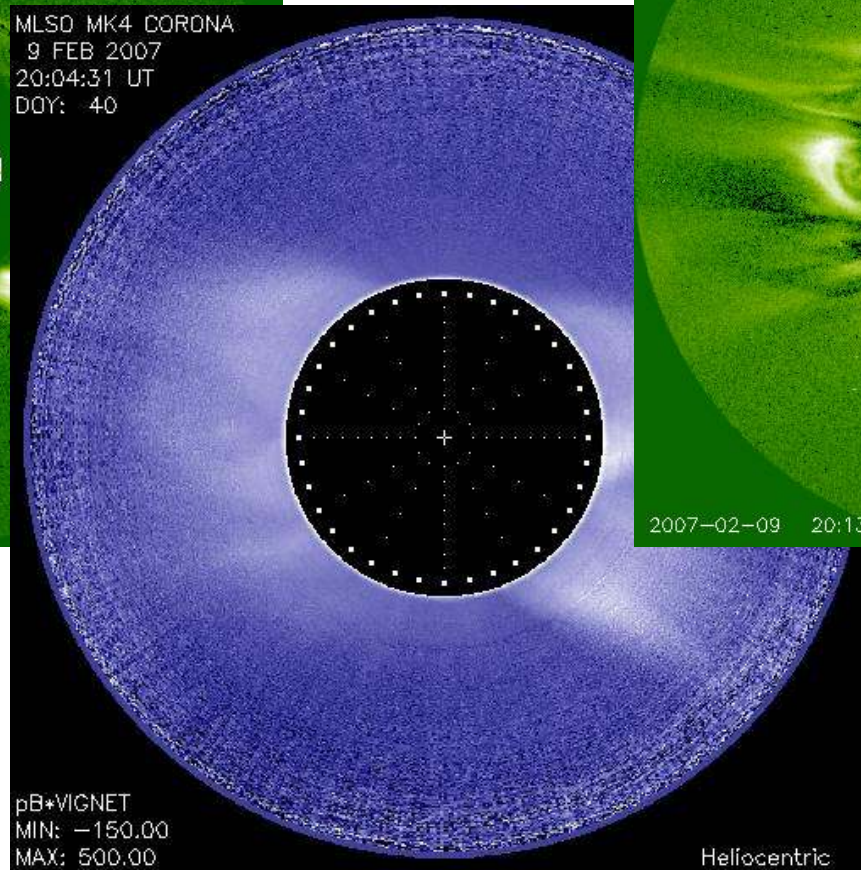
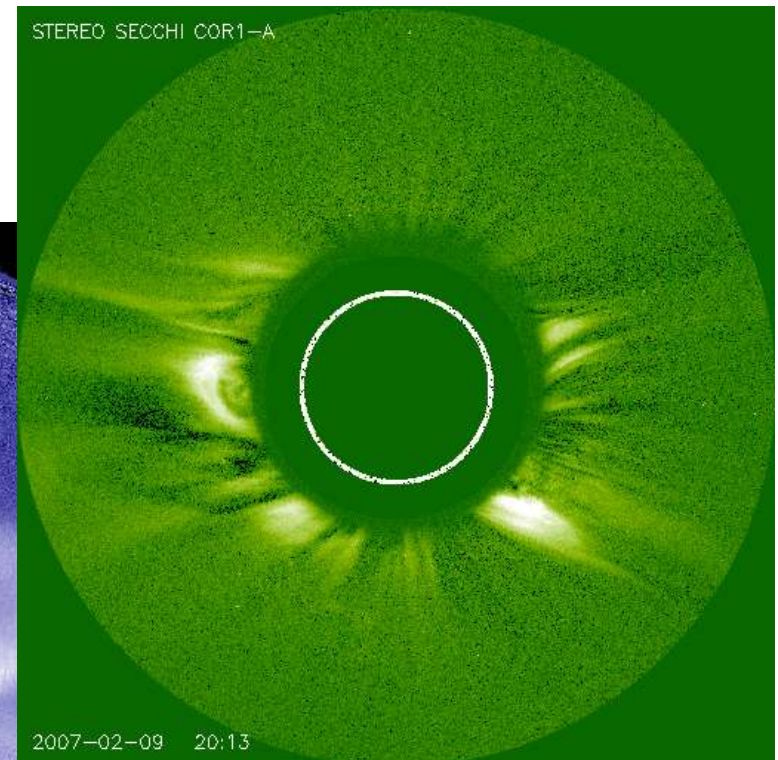
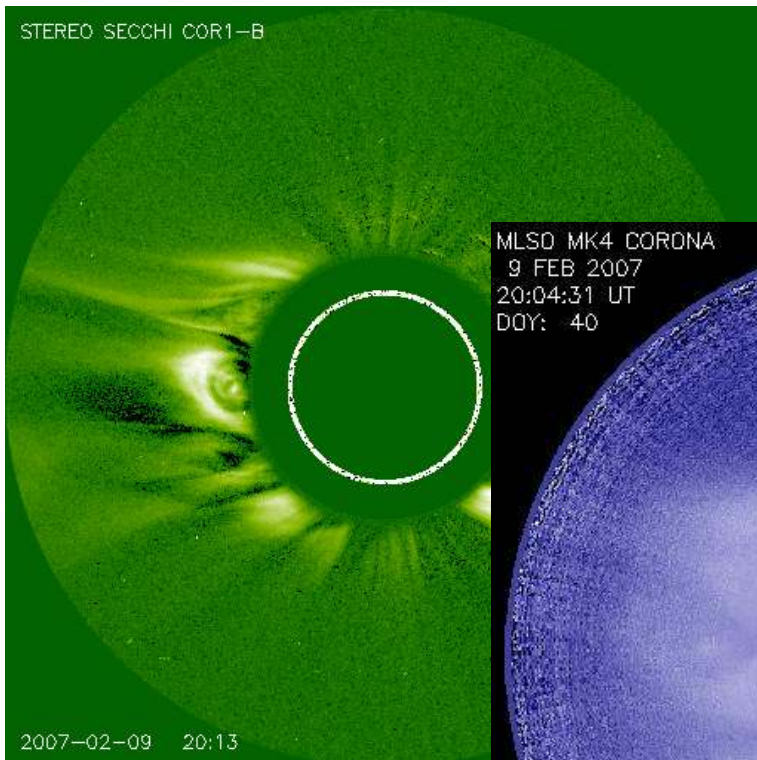
1998-06-02 SOHO EIT (195A) and LASCO C2 (Plunkett et al, 2000)

CME of 24-Jan-2007



2007-Feb-09 CME

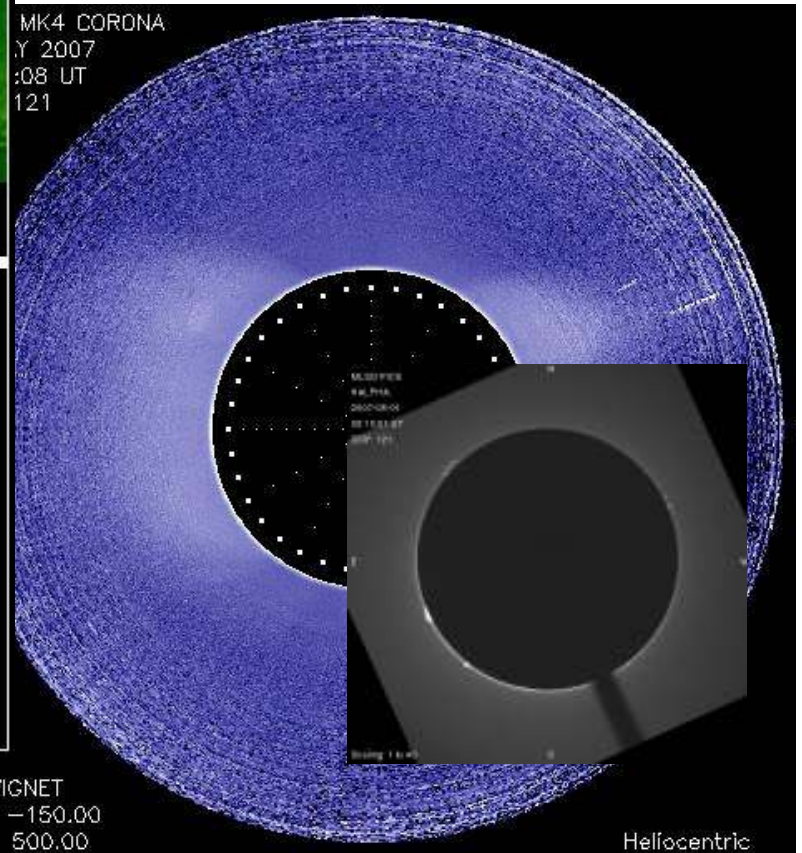
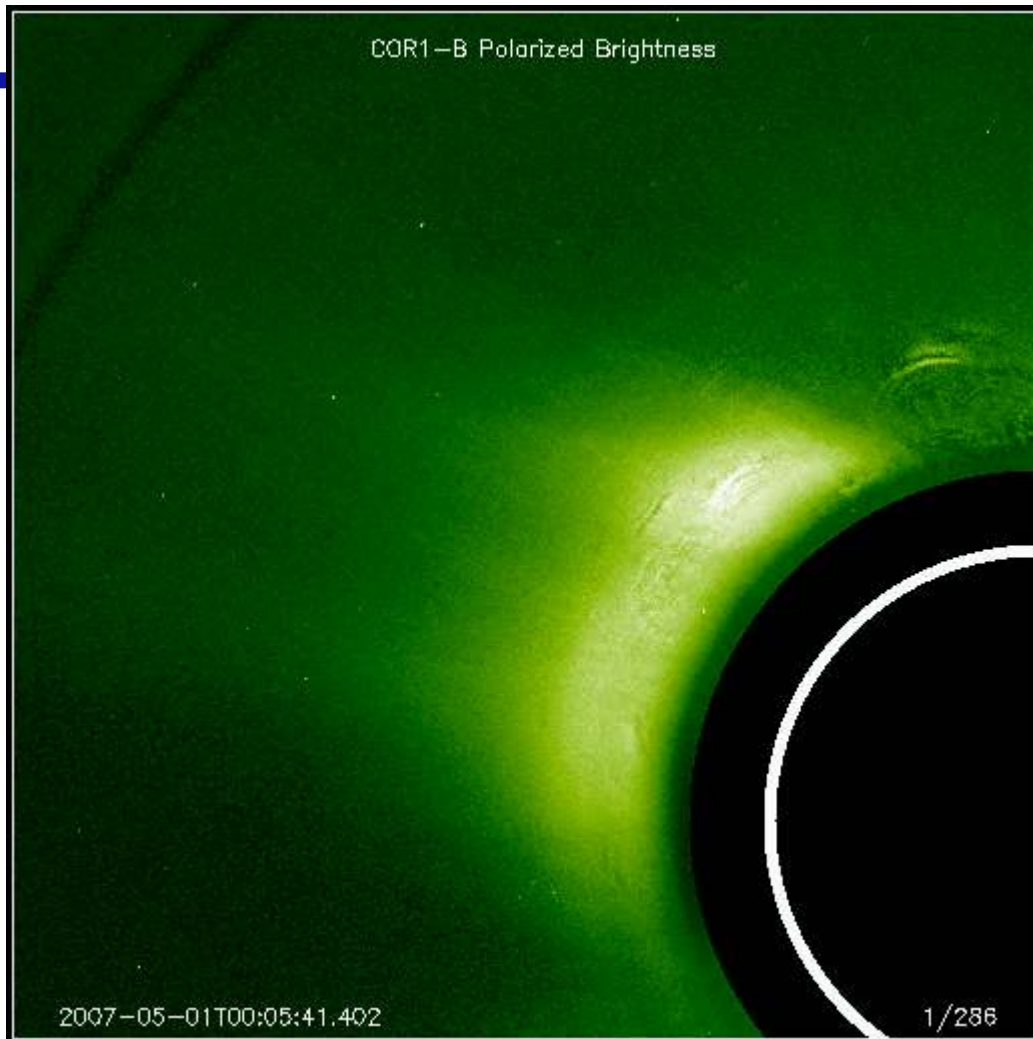
STEREO separation=0.7°



pB images

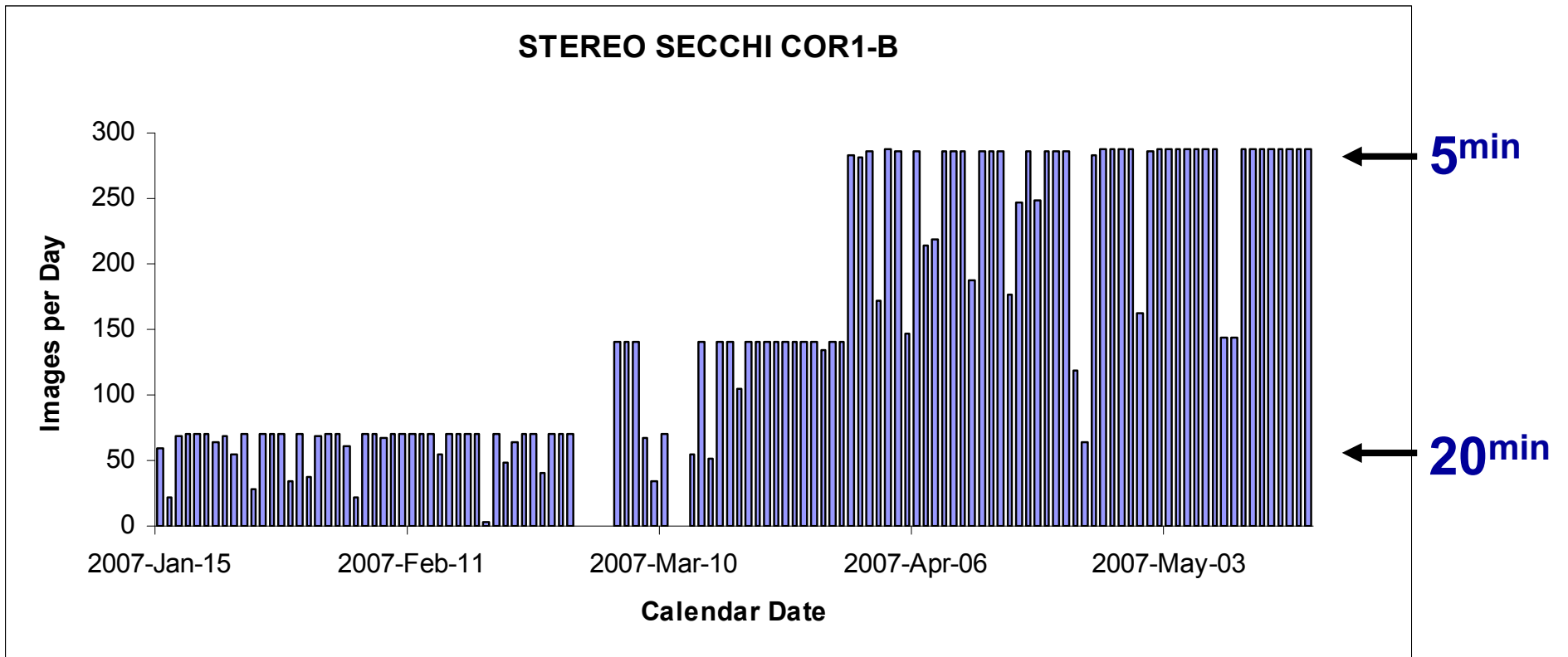
2007-May-01

STEREO separation=6.1°

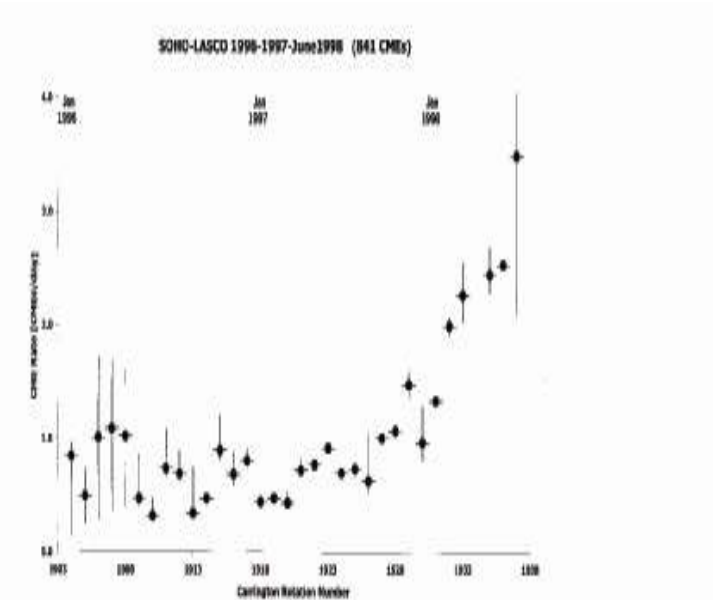
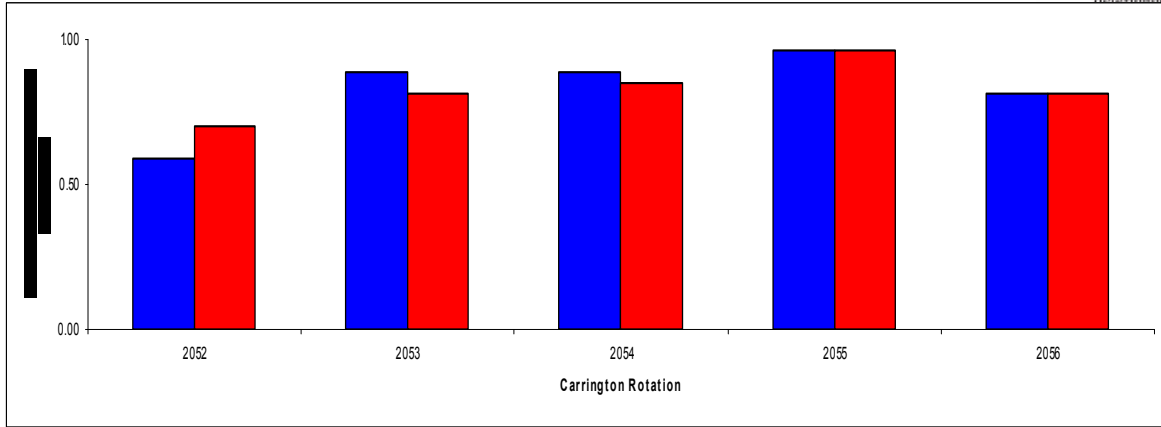
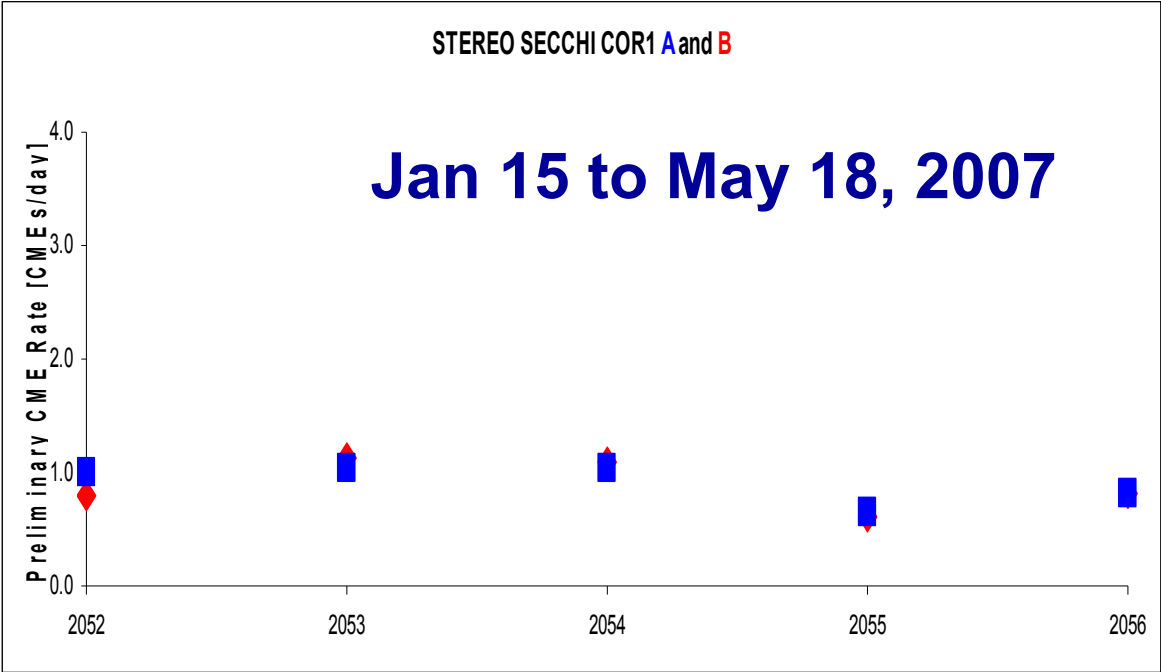


pB images

COR1-B Observing Cadence



COR1 Preliminary CME Rate



CME Rate plot versus Carrington Rotation. Uncertainties in the rate are duty cycle dependent, as explained in the text. Horizontal bars represent the inherent uncertainty of coronagraphic observations in determining the Carrington longitude and rotation of any given CME.

<http://cor1.gsfc.nasa.gov>

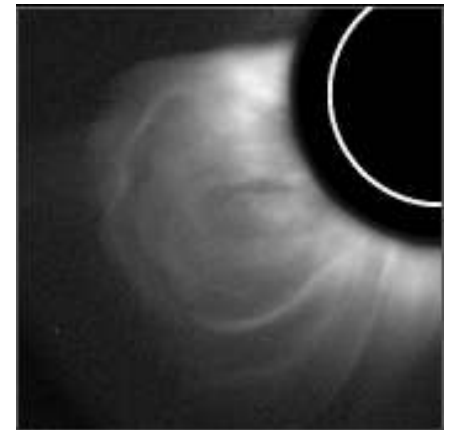


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- **Observers Log & Preliminary CME listing**
- **Design specifications for COR1**
- **Coming soon:**
 - COR1 daily browse movies
 - Gallery of images, movies, and presentations

Conclusions

- Both COR1 instruments performing well and observing routinely
- ~70 CMEs detected between Jan 15-May 15
- At least two events detected by MK4 and COR1-A and -B (Feb 9, May 1, (May 26?))
- <http://cor1.gsfc.nasa.gov>



2 R_☉: 1980 FEBRUAR CORONAL ACTIVITY BELOW 2 R_☉: 1980 FEBRUAR CORONAL ACTIVITY BELOW

AND A. I. POLAND¹

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accepted 1980 December 29; Received 1980 October 17; accepted 1980 December 29; Received 1980 October 17;

ABSTRACT

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Observations of an eruptive prominence were presented for the first time. The coronal transient observation
cal changes of the whole corona and observed the morphological changes of the whole corona and observed the morphologi
clipse on 1980 February 16. On 1980 February 16 total solar eclipse on 1980 February 16. On 1980 February 16 total solar ecl
ity) was observed (an amount of about 10¹⁵ electron density) was observed (an amount of about 10¹⁵ electron dens
rominence directly below R_☉. And the disk-top prominence with a prominence rising below R_☉. And the disk-top prominence with a p
ately 2 hr, the right loop formed a belt of it in about approximately 2 hr, the right loop formed a belt of it in about approxima
r in the central part. This same transient was observed later in the central part of the same transient with observed late
in scattering K_β from a height of about 100 km of electron scattering K_β from a height of about 100 km of electro
10¹⁵ g (equivalent to the mass of the sun) of these was 2 × 10¹⁵ g (equivalent to the mass of the sun) of these was 2 × 1
transients seen above 2 R_☉ by indicating that observed for other transients seen above 2 R_☉ by indicating that observed for other
ch may explain the fall-back. Speculation is presented which may explain the fall-back. Speculation is presented which
figuration. the triggering of the motion of the magnetic configuration. the triggering of the motion of the magnetic con

