Long-Lived Coronal Hole Boundary Observations with TRACE

Patricia R. Jibben
Smithsonian Astrophysical Observatory

- Equatorial-extension coronal holes rotate nearly rigidly and the boundaries of these coronal holes evolve slowly.
- Previous studies using SXT data have yielded no direct evidence of magnetic reconnection near the boundaries [Kahler & Hudson, 2002].
- However, Magnetic reconnection must occur at the boundaries for the coronal hole to remain stable over several Carrington rotations.
- TRACE data will yield high spatial and temporal resolution compared to previous studies

Criteria for Observations

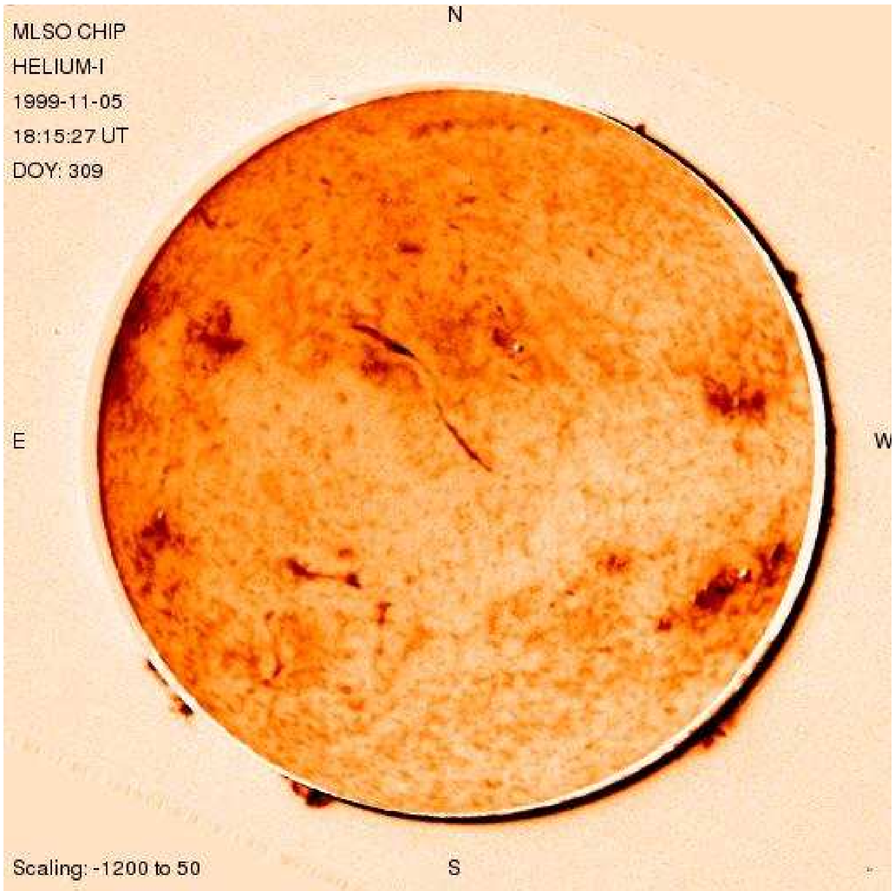
- 2-3 days of observations to make sure coronal hole is not differentially rotating.
- Coronal hole should have a large latitude dissent.
- Soft X-ray or He 10830 Å images to determine if area is a coronal hole
- TRACE 195 Å channel with 171 Å as context data

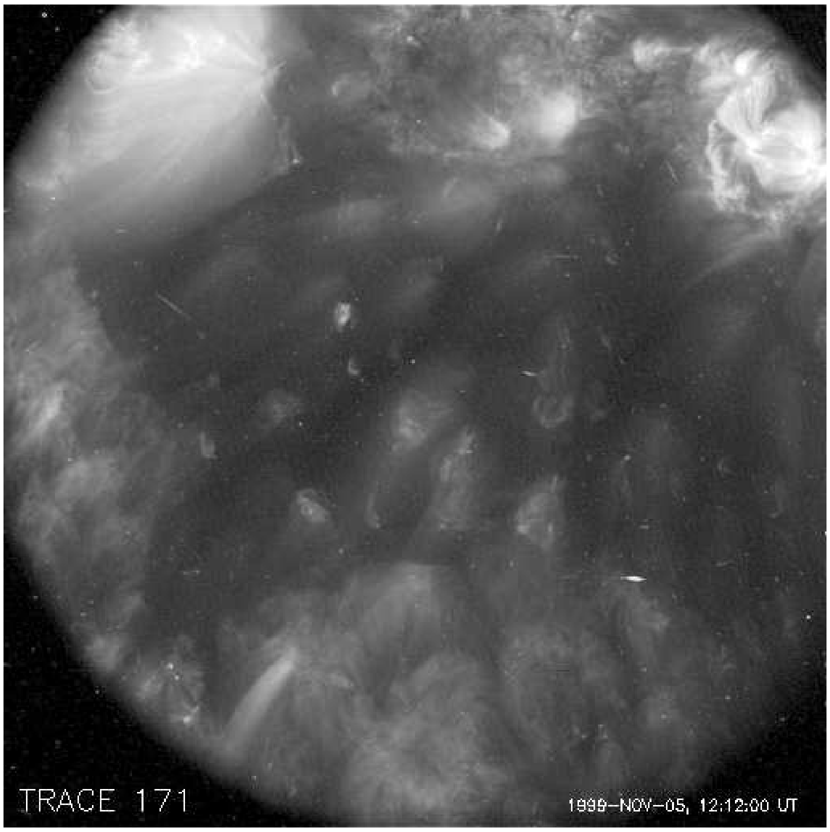
Candidate Coronal Hole Observations

Date	Time (UT)	TRACE λ's	x-y coords	cadence (s)	Notes
1999 Nov 5	12-24	171, 195	(-520, 80)	35	weak candidate
1999 Nov 6	11:15-24	171, 195	(-323,98)	35	
1999 Nov 7	2:30-24	171, 195	(-188, 93)	40	
1999 Nov 8	1-12	171, 195	(24,96)	40	
2005 April 5	3-24	171	(611,263)	45	REJECTED

References

[Kahler & Hudson, 2002] Kahler, S.W., Hudson, H.S., 2002, *Boundary Structures and Changes in Long-Lived Coronal Holes*, ApJ, 574, 467-476


MLSO CHIP
HELIUM-I
1999-11-05
18:15:27 UT
DOY: 309
N
E
W
S
Scaling: -1200 to 50


TRACE 171
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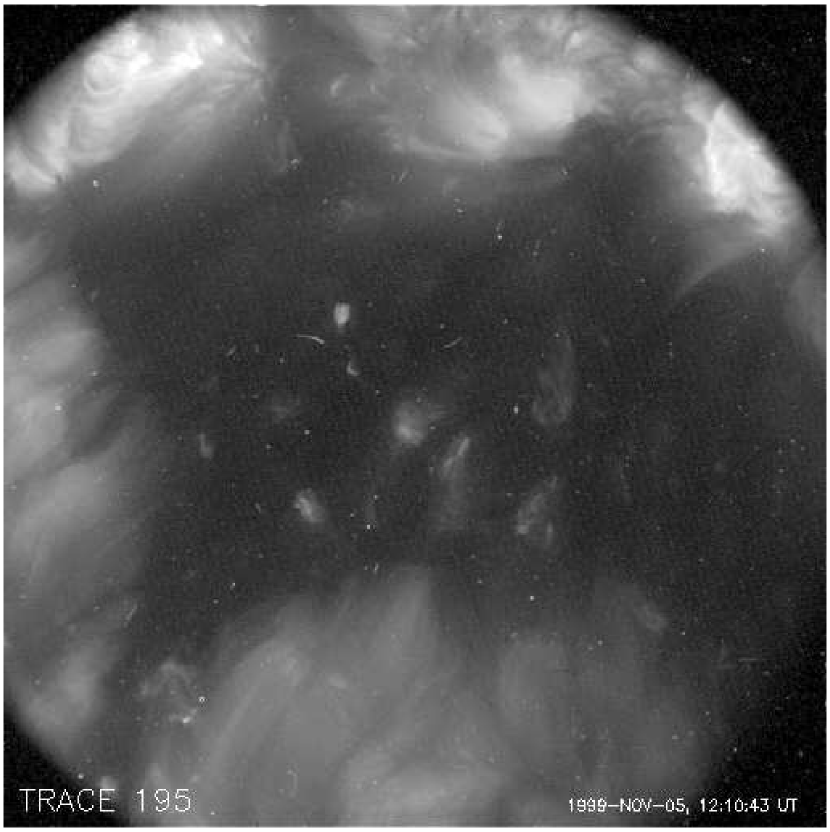
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