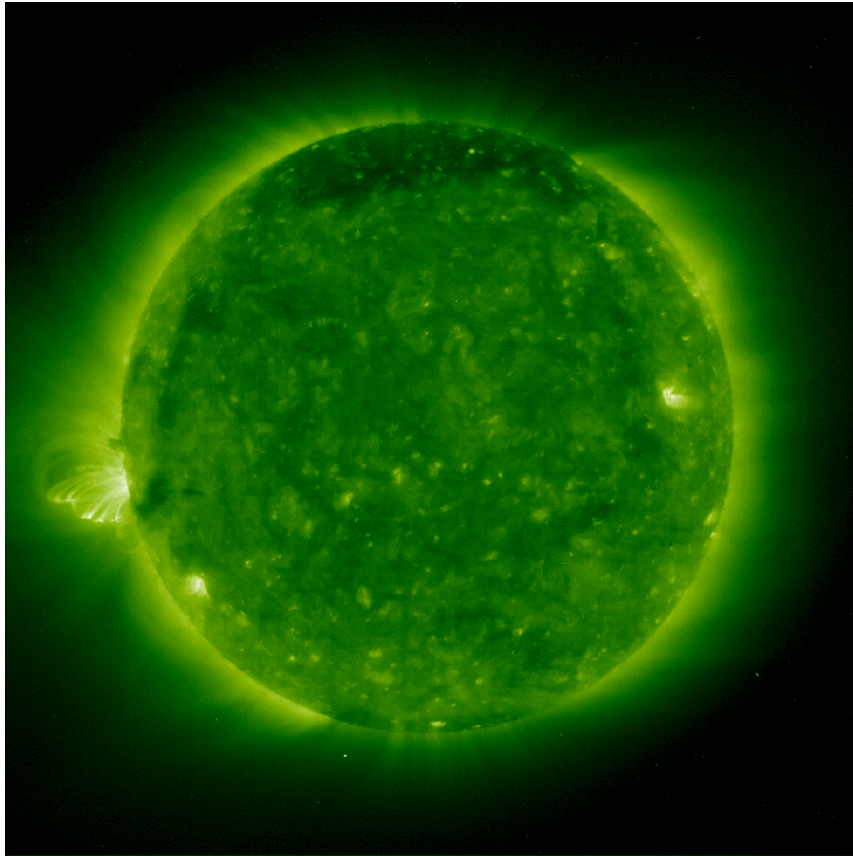


# Trou Coronaux vu dans les yeux de SOHO (EIT):

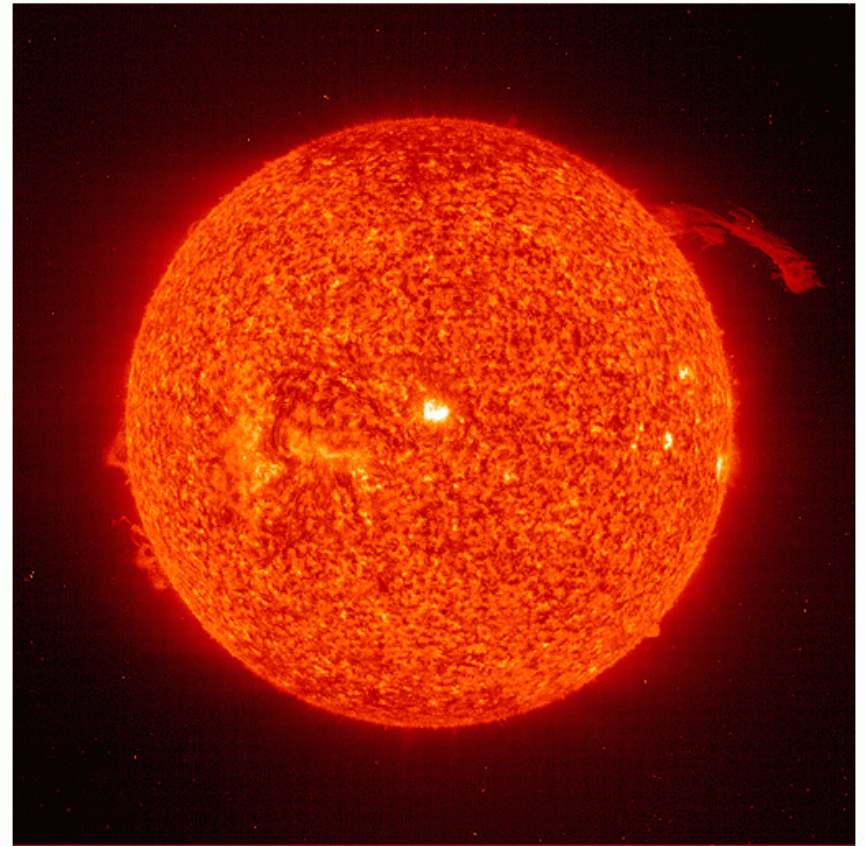
In Honor of Jean-Pierre Delaboudiniere  
("Boudine")

Don Hassler  
Southwest Research Institute  
Boulder, Colorado, Etats-Unis

Au debut des images SOHO/EIT, trou coronaux etaient parmi les structures large le plus impressive, vu partout sur le soleil

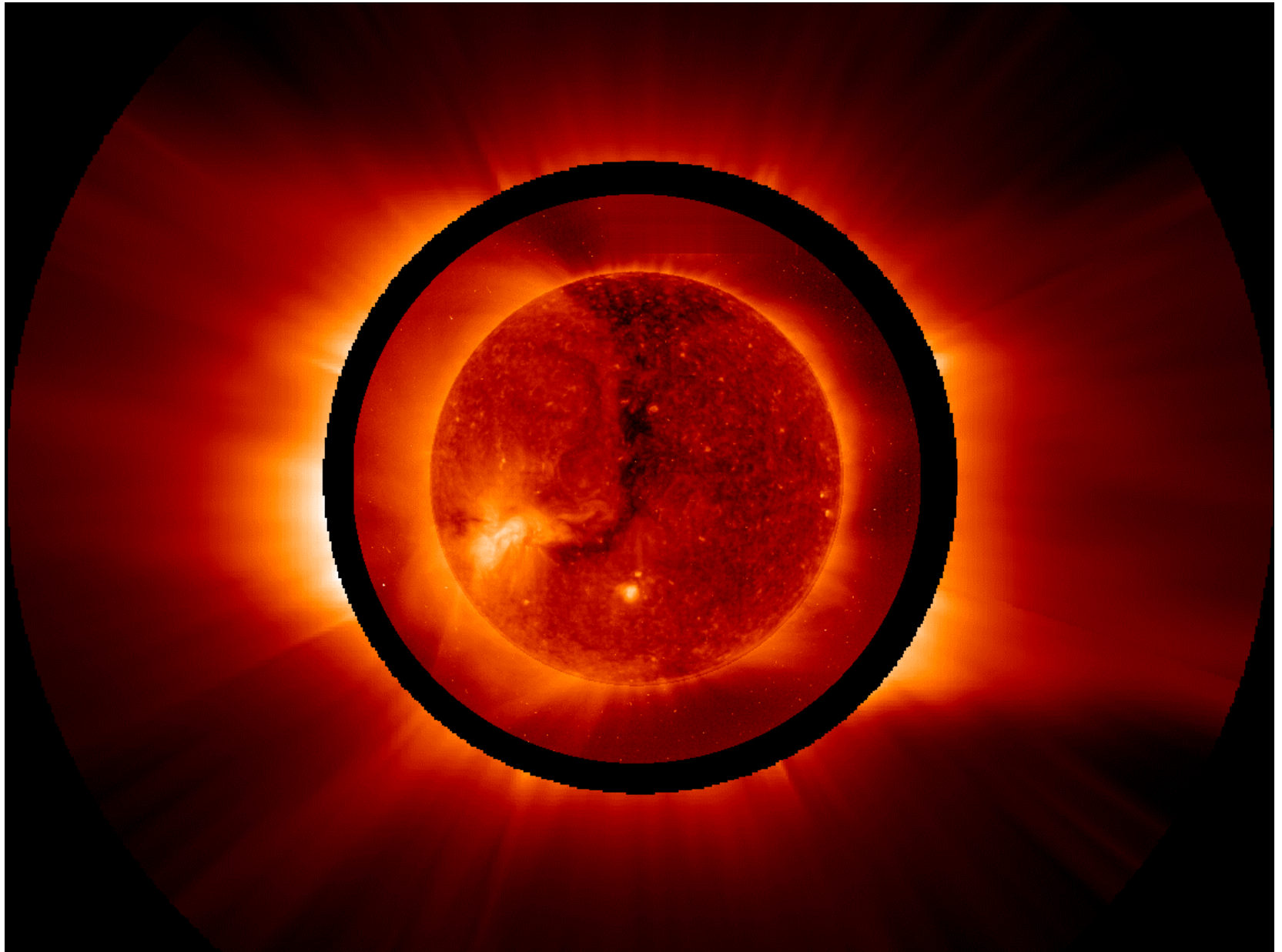


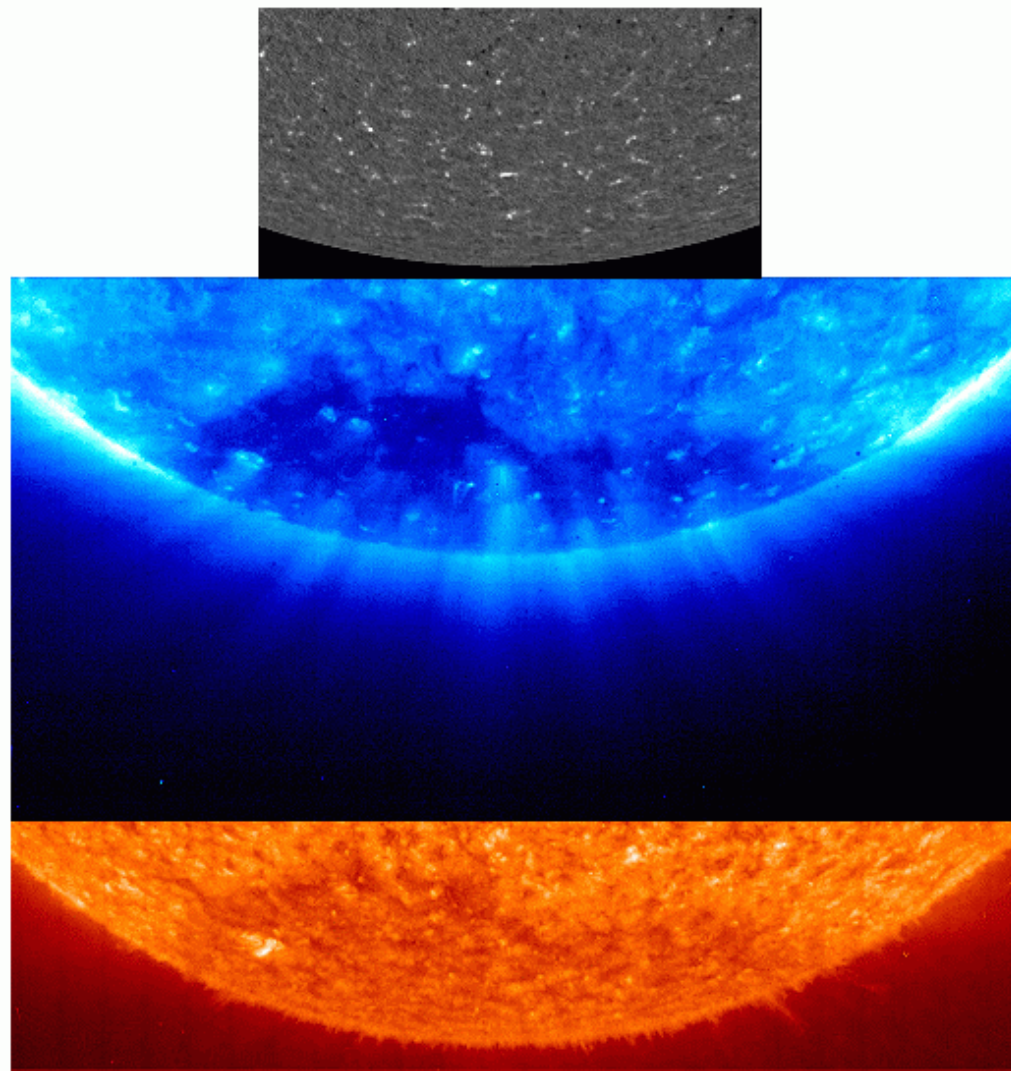
**SOHO-EIT**  
**Fe XII 195 Å (~2,000,000 K)**



**SOHO-EIT**  
**He II 304 Å (~ 60,000 K)**  
**1996 June 6 22:35 UT**

# Image Composite de SOHO (EIT, UVCS, and LASCO)





SOHO views of polar plumes  
1996 March 7

Top to bottom:

MDI hi-res magnetogram

EIT Fe IX/X 171 Å image

EIT He II 304 Å image

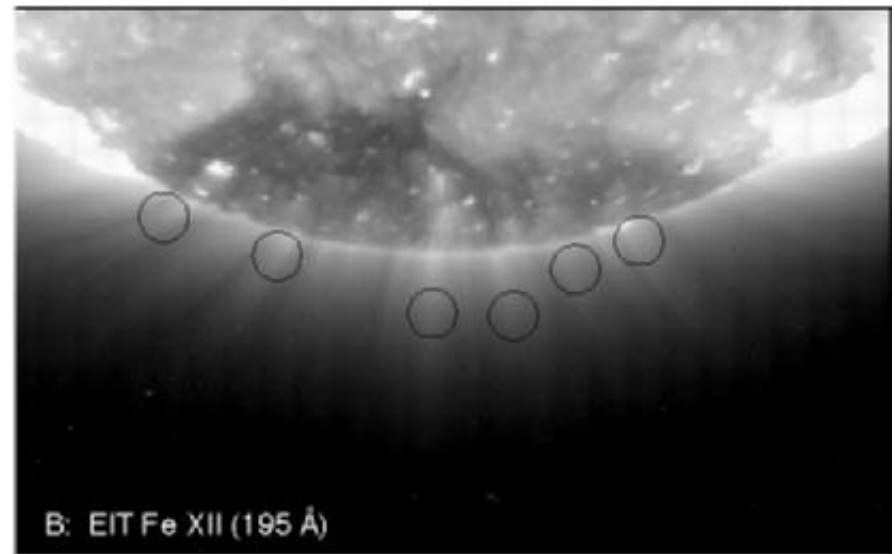
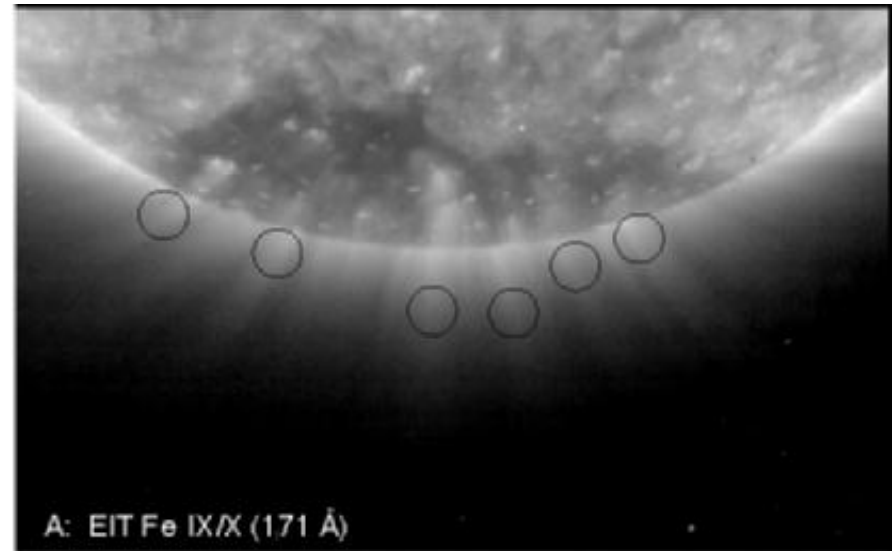
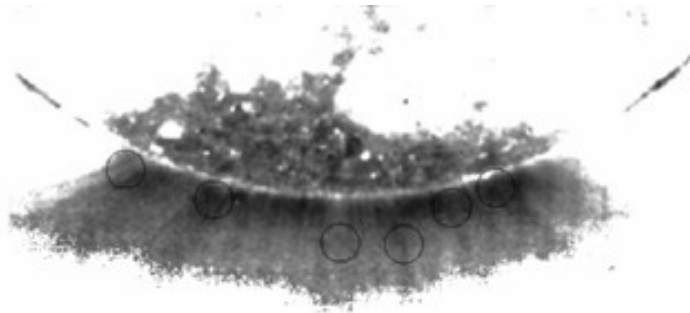


# Les Plumes sont froides!

A droite: 195Å image des plumes  
En sous: rapport de 195Å (Fe XII)  
divise par 171Å (Fe IX&X).

Base chaud; corps froid.

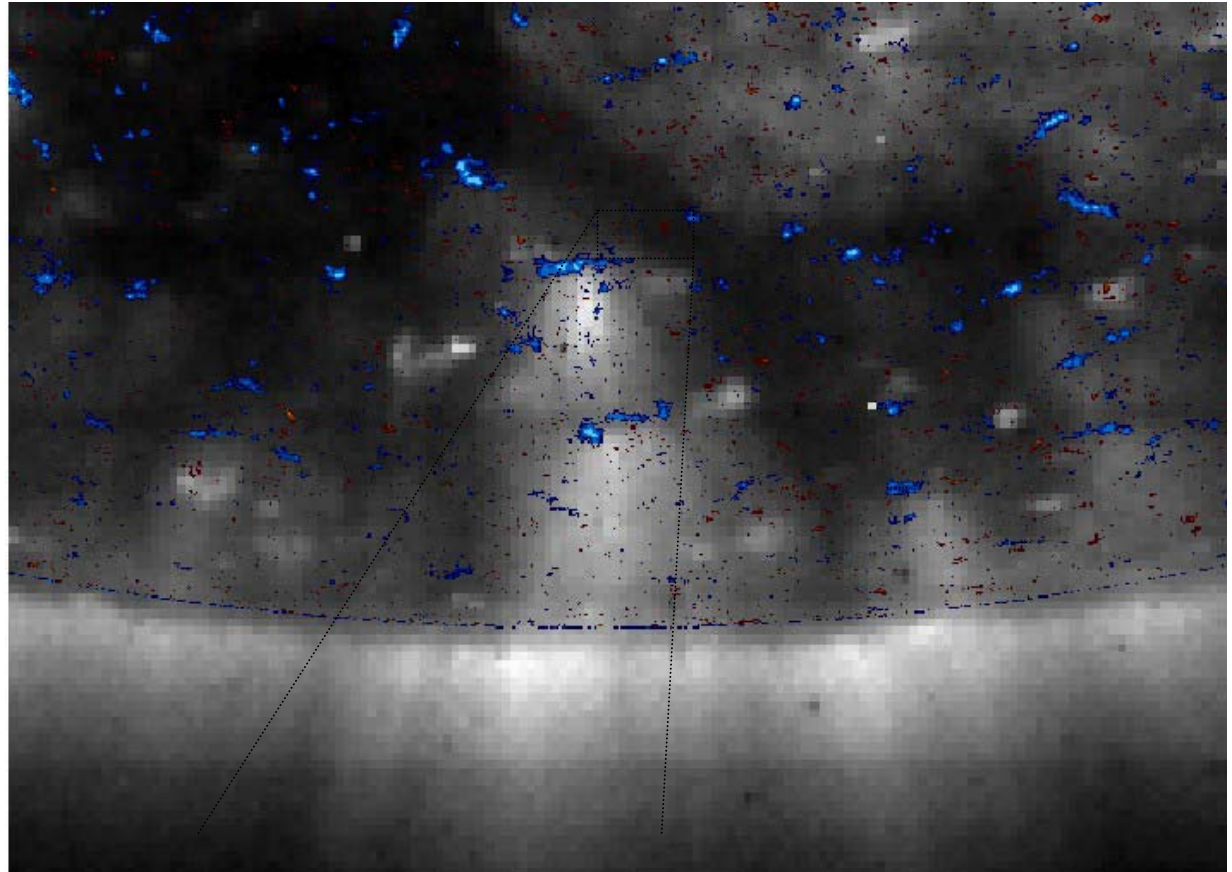
Les resultat de SUMER (largeur  
de raies) sont d'accord.



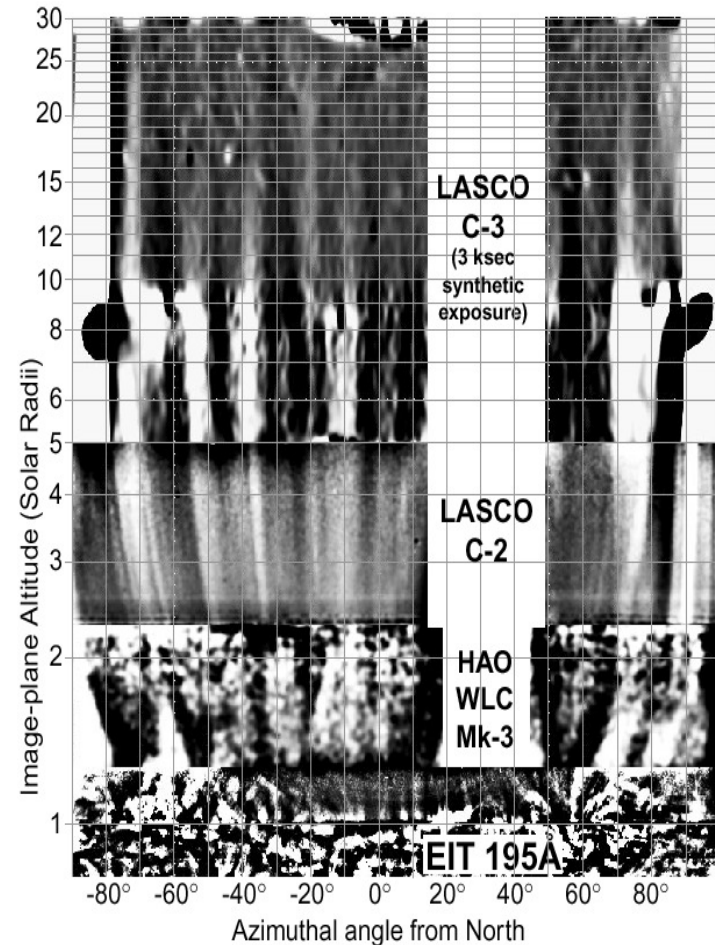
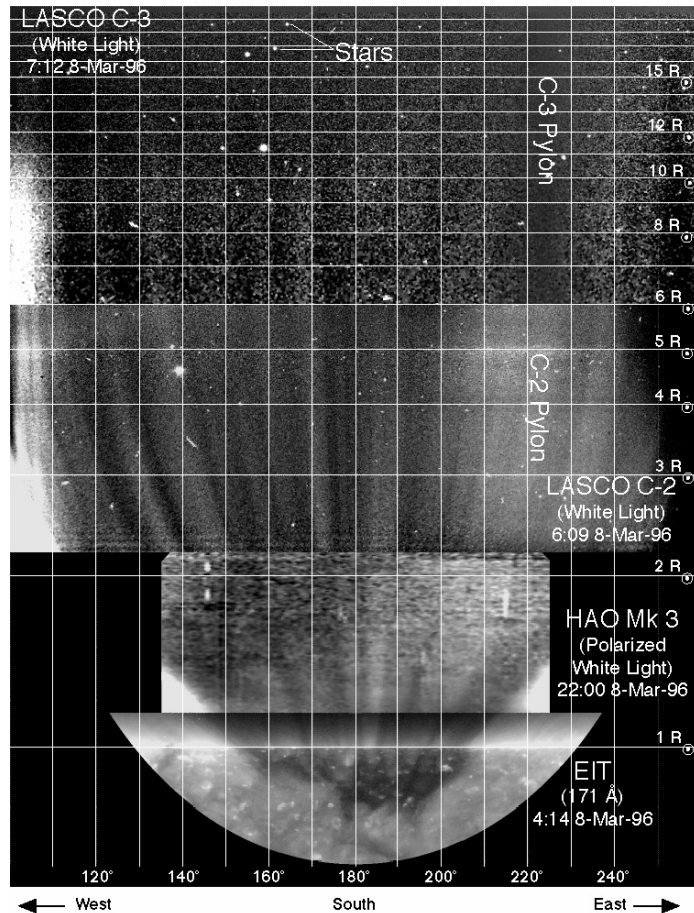
# Magnetic Footpoints of Plumes in Coronal Holes

Plumes arise from complex, nearly unipolar magnetic footpoints.

RIGHT: overlay of MDI magnetogram and EIT 171Å image.



# Plumes in Coronal Holes Extend through the Corona Into the Heliosphere



Polar plumes extending from the surface out to  $>30$  solar radii. The images are in conformal azimuthal coordinates. Vertical lines represent radial lines in normal space, and the radial direction is scaled logarithmically.

# MEASUREMENTS OF OUTFLOW FROM THE BASE OF SOLAR CORONAL HOLES

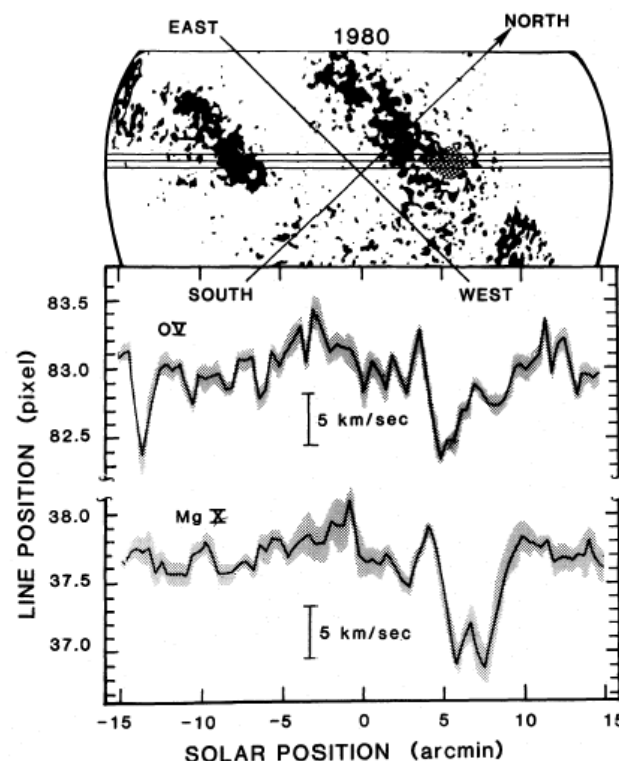
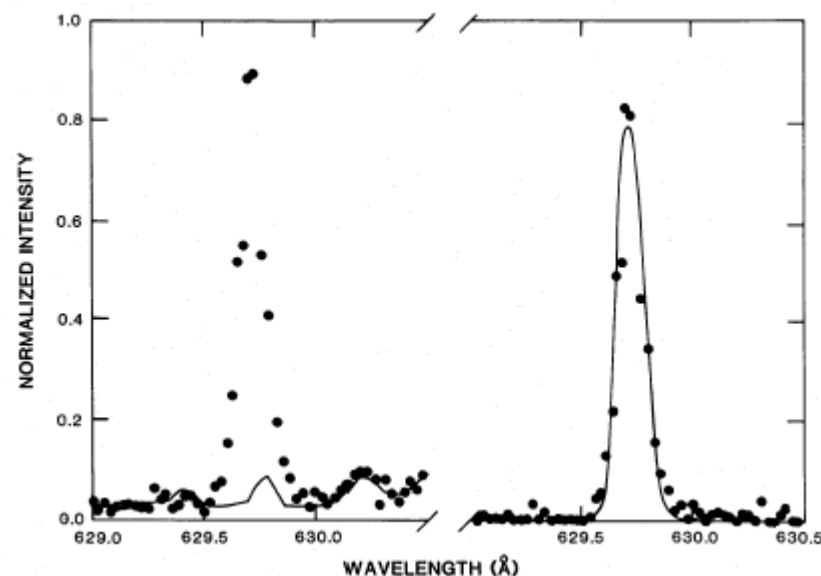
G. J. ROTTMAN<sup>1</sup>, F. Q. ORRALL,<sup>2</sup> AND J. A. KLIMCHUK<sup>3</sup>

Received 1981 December 28; accepted 1982 March 15

## ABSTRACT

New evidence is presented that EUV emission lines formed at the levels of the base of the corona and the transition region are systematically shifted to shorter wavelengths within coronal holes relative to the rest of the solar disk, and that moreover this shift increases with height in the atmosphere. This evidence is contained in measurements made with a rocket-borne EUV spectrometer having high spectroscopic resolution and stability flown on 1980 July 15. Repeated measurements were made along a chord of the solar disk that crossed a compact coronal hole near Sun center identified on  $\lambda 10830$  He I spectroheliograms. The maximum measured shift corresponded to a velocity of  $12 \text{ km s}^{-1}$  in  $\lambda 625 \text{ Mg X}$  ( $T \sim 10^{6.15} \text{ K}$ ) and  $7 \text{ km s}^{-1}$  in  $\lambda 629 \text{ O V}$  ( $T \sim 10^{5.40} \text{ K}$ ). If these velocities correspond to a true mass flux, they provide important data on the acceleration of coronal plasma in open magnetic field regions. But displacements measure a true systematic flow, they are of coronal holes, now measured on three rocket flights. and the implications considered.

*Subject headings:* Sun: corona — Sun: solar wind — ul





# Solar Wind Outflow and the Chromospheric Magnetic Network

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Pål Brekke,<sup>4</sup> Werner Curdt,<sup>2</sup> Helen E. Mason,<sup>5</sup> Jean-Claude Vial,  
Klaus Wilhelm<sup>2</sup>

Observations of outflow velocities in coronal holes (regions of open coronal magnetic field) have recently been obtained with the Solar and Heliospheric Observatory (SOHO) spacecraft. Velocity maps of  $\text{Ne}^{7+}$  from its bright resonance line at 770 angstroms, formed at the base of the corona, show a relationship between outflow velocity and chromospheric magnetic network structure, suggesting that the solar wind is rooted at its base to this structure emanating from localized regions along boundaries and boundary intersection of magnetic network cells. This apparent relation to the chromospheric magnetic network and the relatively large outflow velocity signatures will improve understanding of the complex structure and dynamics at the base of the cc and the source region of the solar wind.

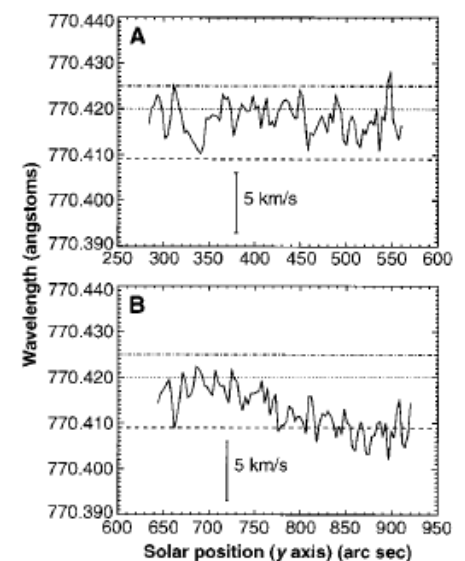
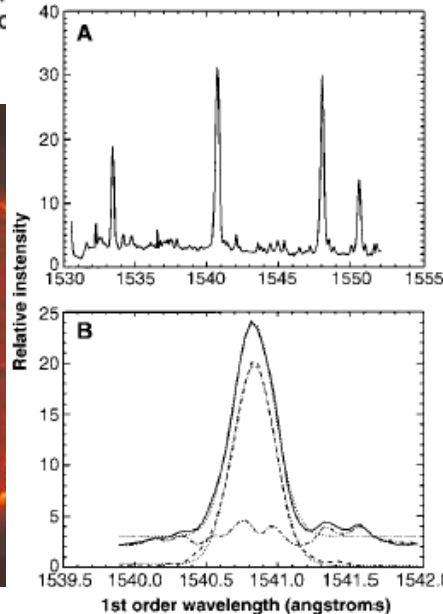
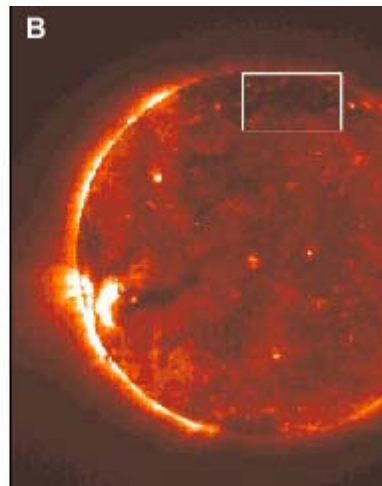
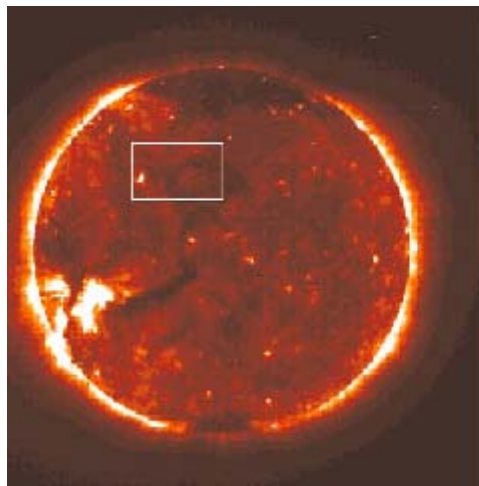
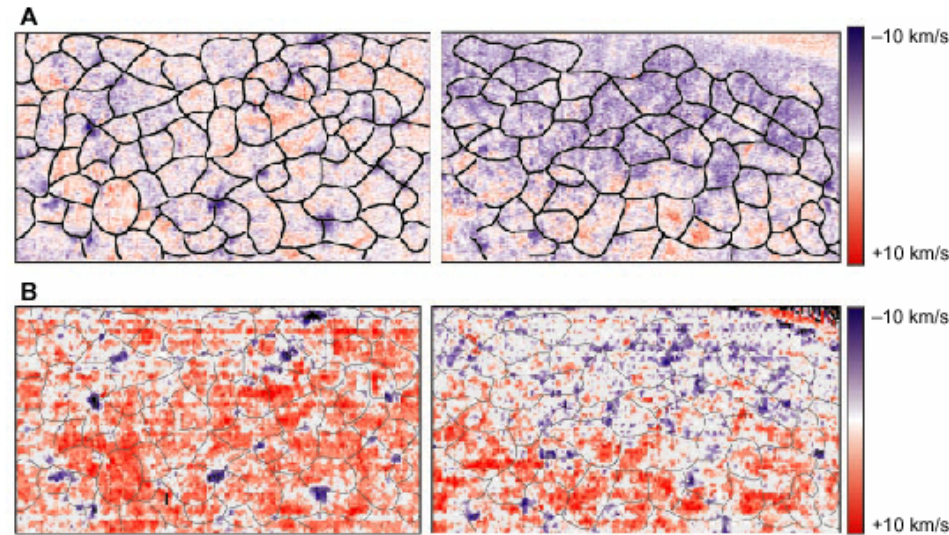


Fig. 3. Observed Ne VIII 770 Å wavelengths of a strip 2 arc min in width near the central



EIT Images have  
been the “face” of  
SOHO, and a focal  
point of scientific  
research...

...thanks to Boudine!

Merci, Boudine ☺

