

SOLAR CORONA SYNOPTIC OBSERVATIONS FROM SOHO WITH AN EXTREME-ULTRAVIOLET IMAGING TELESCOPE

Fe XV 284 Å

Mg IX 368 Å



NRL-SKYLAB

Dec 22, 1973

J.P. DELABOUDINIÈRE - PRINCIPAL INVESTIGATOR

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Naval Research Laboratory (NRL) - USA

R. CATURA, R. STERN and J. LEMEN

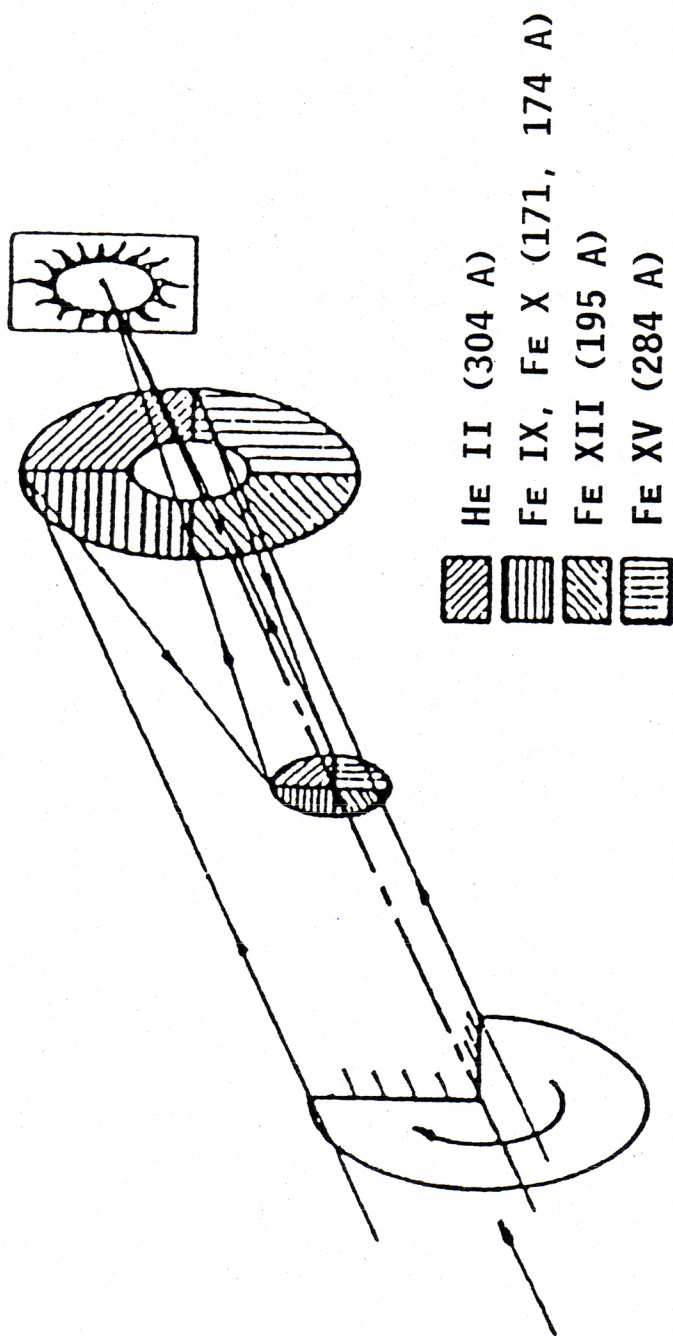
Lockheed Palo Alto Research Laboratory (LPARL) - USA

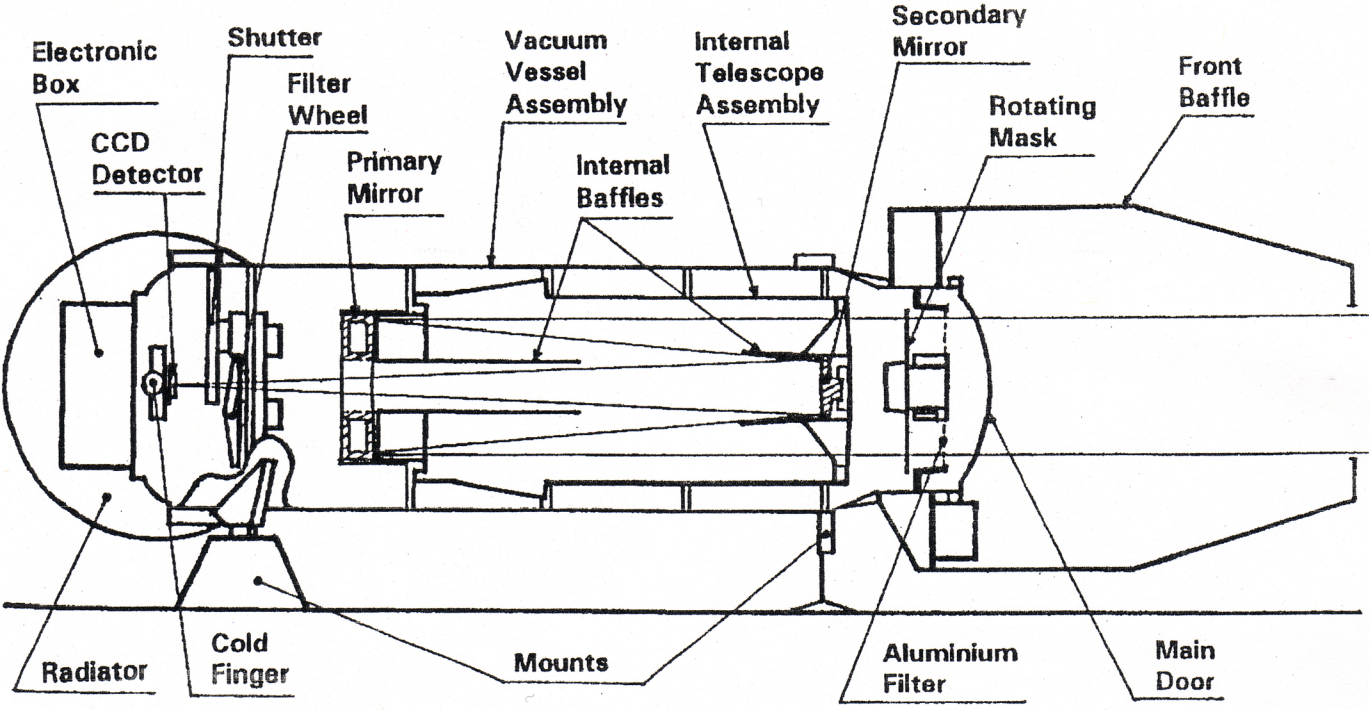
W. NEUPERT

Goddard Spaceflight Center (GSFC) - USA

U.S. funding is required

EIT OPTICAL LAYOUT





EIT bandpasses

Wavelength	Ion	Peak temperature	Observational objective
304 Å	He II	8.0×10^4 K	chromospheric network; coronal holes corona/transition region boundary; structures inside coronal holes quiet corona outside coronal holes active regions
171 Å	Fe IX, X	1.3×10^6 K	
195 Å	Fe XII	1.6×10^6 K	
284 Å	Fe XV	2.0×10^6 K	

Table 2. Multilayer Coatings

Band	Ion	Wavelength	No. of single layers	Mo	Si
1	Fe IX	171 Å	11	36.2 Å	54.3 Å
2	Fe XII	195 Å	11	41.4 Å	62.1 Å
3	Fe XV	284 Å	23	9.1 Å	141.9 Å
4	He II	304 Å	23	26.2 Å	137.8 Å

VALIERQUE



National Aeronautics and
Space Administration

Washington, D.C.
20546

ES (JDB)

AUG 24 1988

Reply to Attn of:

Dr. J. P. Delaboudiniere
Laboratoire de Physique Stellaire et Planetaire
P. O. Box 10-91371
Verrieres-Le-Buisson CEDEX
FRANCE

Dear Dr. Delaboudiniere:

It is with great pleasure that the National Aeronautics and Space Administration (NASA) offers its congratulations to you for the selection of your investigation, entitled "Extreme-Ultraviolet Imaging Telescope," for the Solar Terrestrial Science Programme (STSP), jointly sponsored with the European Space Agency (ESA). Based upon your revised proposal, it is our understanding that the United States (U.S.) scientists listed on Enclosure 1 are Co-Investigators on your science team.

Enclosure 1 defines, by three broad categories of participation, the roles of each of these U.S. Co-Investigators (Co-I's) as based upon our understanding of your revised proposal:

- (i) Co-I's with responsibility for prelaunch development of flight hardware and postlaunch data analysis;
- (ii) Co-I's with responsibility for prelaunch preparation for mission operations and/or data management critical to the execution of the investigation during the operational phase of the mission and postlaunch data analysis; and
- (iii) Co-I's with responsibility for prelaunch science definition and postlaunch data analysis only.

Owing to the restrictions on NASA's budgets, we wish to inform you and your U.S. Co-I's (by way of copy of this letter) of our intent to fund the U.S. Co-I's, as based on these three categories.

- Prelaunch: With regard to the first two categories, NASA is prepared to fund U.S. Co-I costs directly related to the production of flight hardware and/or activities necessary to prepare for the mission operations and/or data management, not to exceed that defined in the revised version of your proposal. With regard to the third category, we are prepared to fund U.S. Co-I's, as agreed to, only for participation in your science team meetings.
- Postlaunch: With regard to all three categories, NASA will negotiate with each U.S. Co-I for his/her participation in mission operations, data management, and/or reduction, and data analysis activities consistent with their defined role in your revised proposal and, most importantly, the extent allowed by NASA's budget for this phase of the mission.



DEPARTMENT OF THE NAVY
NAVAL RESEARCH LABORATORY
WASHINGTON, D.C. 20375-5000

IN REPLY REFER TO:

3910
4105.2-004
08 Nov 1989

Instut d'Astrophysique Spatiale
Dr. Jean-Pierre Delaboudiniere
Boite Postale # 10
91371 Verrieres-le-Buisson CEDEX
France

Dear Dr. Delaboudiniere:

To assist in preparation of your response to the NASA letter of 22 September 1989 requesting a listing of descoping options and their associated scientific impact we offer the following suggestions.

1) Eliminate the EIT Engineering Model

As presently conceived the engineering model (EM) of the LASCO/EIT electronics box will simulate the operation of the CCD camera and motors in the EIT telescope. Therefore an operating CCD camera and shutter will not be required in the EM telescope. Non-operating structural model components can be placed in the EM telescope. The use of SM components in the EIT EM telescope has been recommended in the EIT model philosophy and agrees with current LASCO planning.

The elimination of the LASCO/EIT electronics box EM is an option which can only be exercised for both LASCO and EIT. It is not a stand alone option for either.

There should be no science impact if these options have to be imposed. The cost savings to EIT should be 80-100K.

2) Eliminate the Flight Spare Camera

It is proposed that the brass board camera in the OSTM be refurbished and qualified as the flight spare (FS) camera. It would be delivered with the flight model and be interchangeable with it. Although elimination of the FS camera should have no scientific impact it increases risk to the schedule because repair of a malfunction in the FM would impose a schedule delay thereby increasing cost. The cost savings to EIT could be 150K.

Dear Art,

As you know, a very unfortunate mishap occurred at our calibration facility in Orsay, resulting in the destruction of one of the two available EIT CCD's. We appreciate the assistance from NASA in this dramatic situation (only one CCD left for flight!) through funding the procurement of an extra batch of CCD's.

Another area you could be of great avail is in providing an alternative to our ongoing effort to upgrade the IAS facility for the EIT end-to-end test. We have started a program to improve the safety of the Orsay installation and plan to demonstrate the validity of the resulting setup by November 15. This is the latest date acceptable to embark onto an end-to-end functional test at working wavelengths for the instrument, and there is now a larger-than-ever element of risk in the schedule aspect. The device that R. Catura has proposed to build (at rather modest cost) would provide an alternative means of really checking, and even roughly evaluating, the EIT in the absence of the Orsay facility. This device could be used as early as the November-December time slot if Orsay is definitely to be forgone. It could again be used in January 1994, providing some extra test time before the delivery of the EIT at the end of January 94.

We urge you to do your best in order to again help us out of a potentially desperate situation. To finish the test device before delivery of the EIT flight hardware, R. Catura must be directed by NASA to begin work within the month of September.

#1 7-SEP-1993 21:31:54.52
From: PAL::POLAND
To: IASLAB::BOUDINE,POLAND
CC:
Subj: RE: EIT

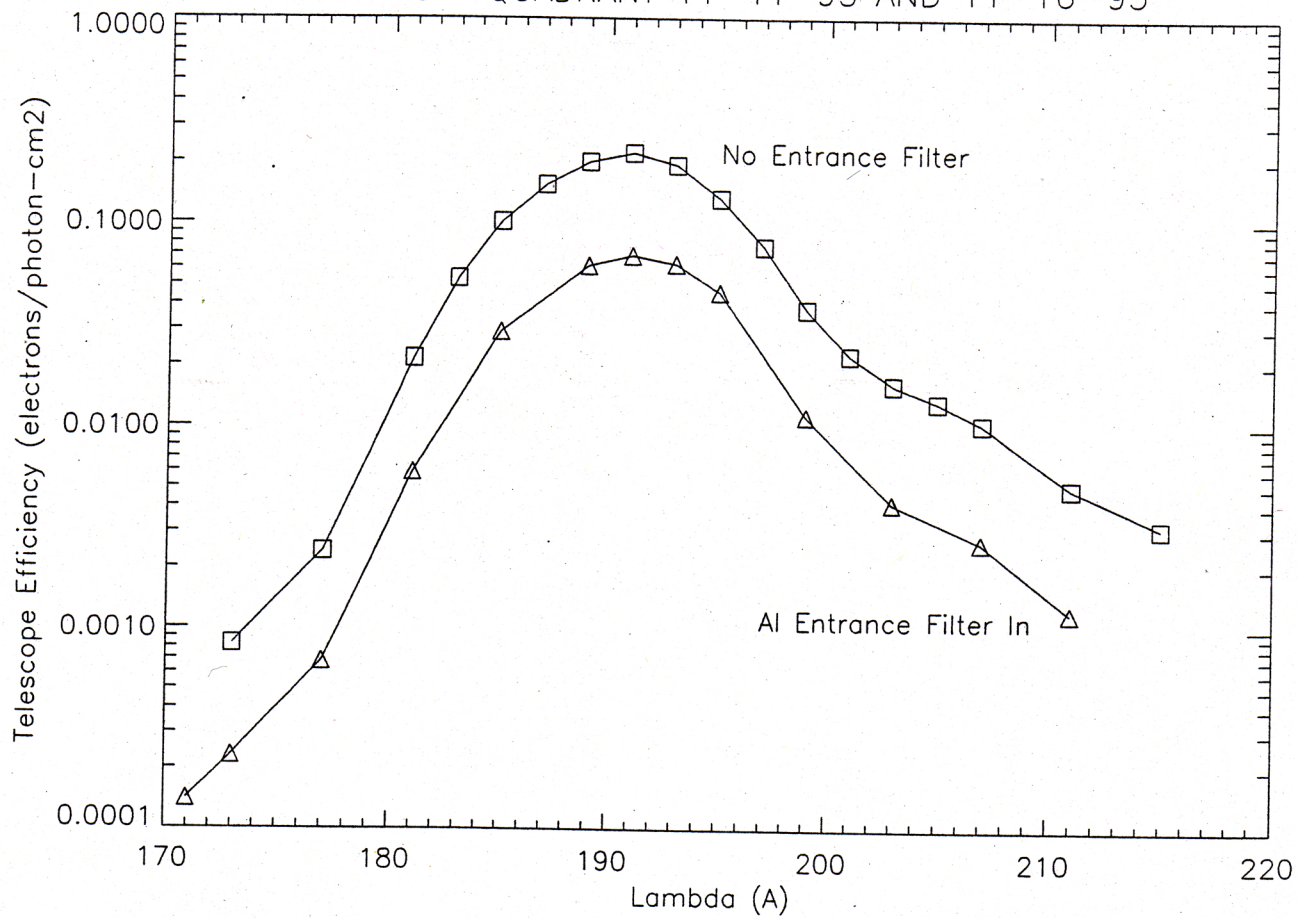
NEWMAIL

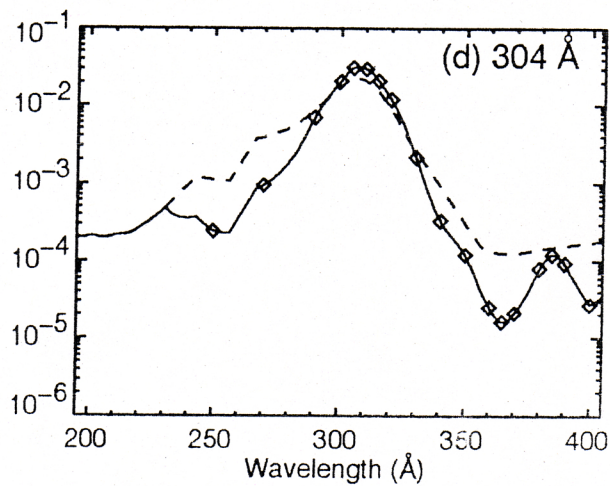
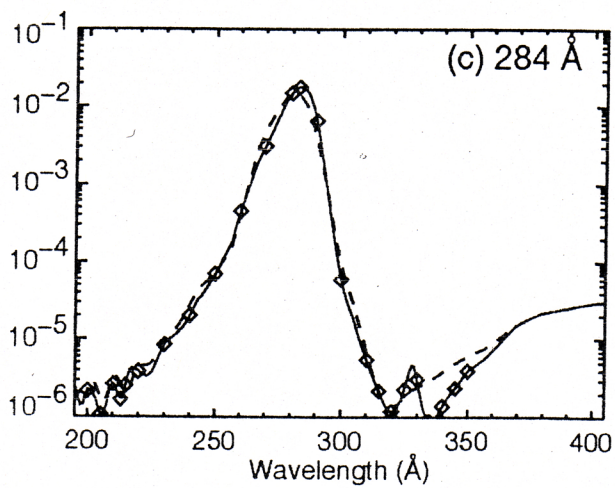
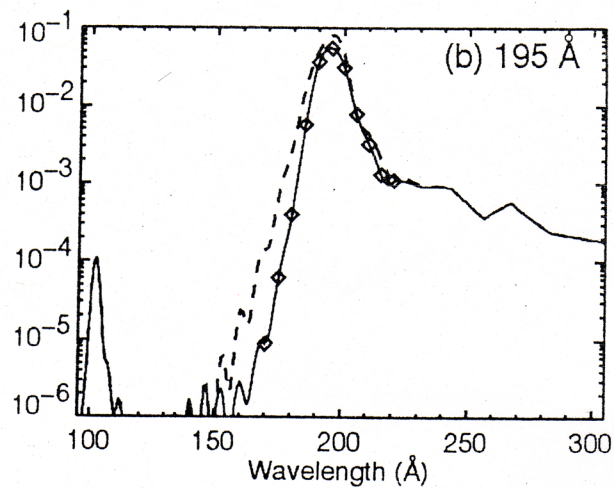
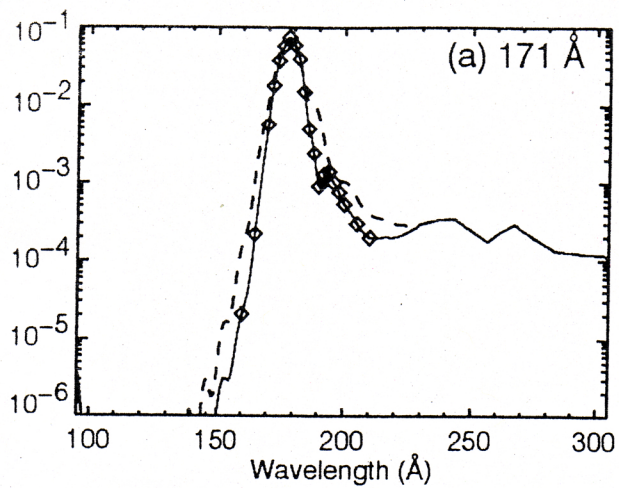
Dear Boudine,

I have tried again to get money for Catura, but with no luck. We are having such severe problems with the MAMAS and UVCS that I cannot really get anyone's attention for this matter. Rather than risk this whole effort, it is better if I give you a no now. Could you possibly get the French funding agency to pay for this?
Sorry I could not be more successful.

Art

EIT 195 A QUADRANT 11-11-93 AND 11-16-93

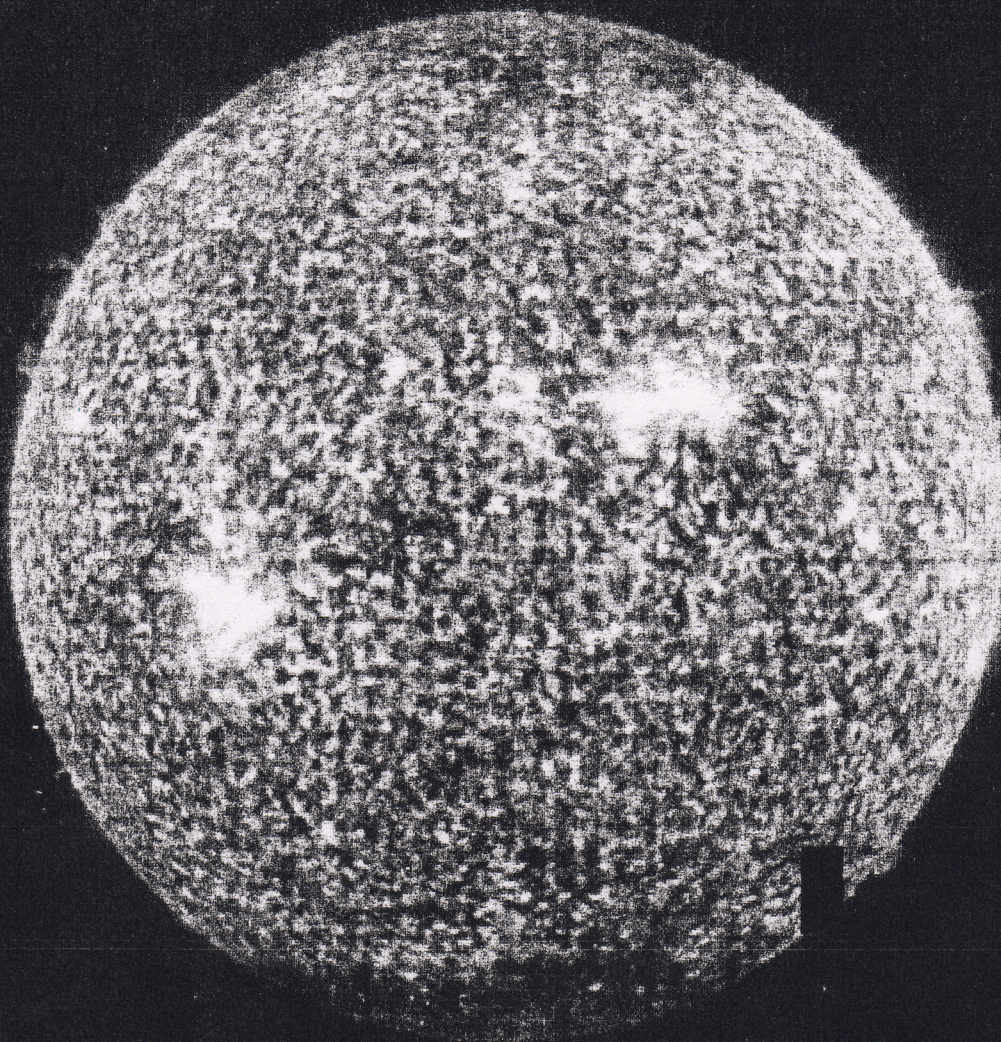




SOHO Mission Interruption Preliminary Status and Background Report - July 15, 1998

Flight controllers at the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) lost contact with the Solar and Heliospheric Observatory (SOHO) in the early morning hours of June 25, 1998 Eastern Daylight Time. The SOHO mission is a joint European Space Agency (ESA)/NASA mission and is a component of the International Solar Terrestrial Program (ISTP). A SOHO Mission Interruption Joint ESA/NASA Investigation has been established to investigate this mishap. The Board co-chairs are Professor Massimo Trella, ESA Inspector General and Dr. Michael A. Greenfield, NASA Deputy Associate Administrator, Office of Safety and Mission Assurance. This Board has concluded its initial evaluation and interim analysis indicates that the loss of the spacecraft was not related to any on-board failures.

The Board is investigating three errors that appear to have led to the major anomaly experienced by the SOHO spacecraft. The first two errors were contained in preprogrammed command sequences executed from the Ground System, while the last error was a decision to send a command to the spacecraft in response to unexpected telemetry readings.



SOHO-EIT first light
1996 January 2
He II 304 Å

EIT GRID REMOVAL

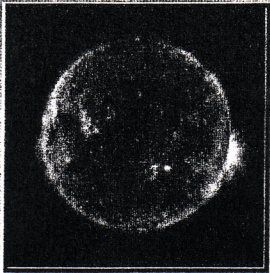
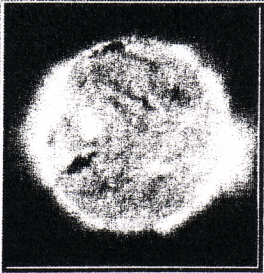

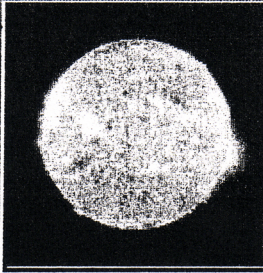


THE EIT DEGRIDDING TEAM:

- F. CLETTE (ORB) COORDINATOR
- A. MAUCHERAT (LAS)
- J.-M. DEFISE (CSL)
- J.-P. DELABOUDINIÈRE, J.-F. HOCHEDÉZ (IAS)
- S. FREELAND (LPARL)

Latest EIT full-field images

Each thumbnail image is a link to a 512 x 512 GIF image of the corresponding, latest EIT **synoptic** file. The "full res" link is to the full-sized image, whether 512 x 512 or 1024 x 1024. Only files with fewer than 15 missing pixel blocks are included.

			
Fe IX/X 171 Å	Fe XII 195 Å	Fe XV 284 Å	He II/Si XI 304 Å
2005/10/18 13:00:14	2005/10/18 16:48:11	2005/10/18 13:06:09	2005/10/18 13:19:40
full-res	full-res	full-res	full-res
512 x 512	512 x 512	512 x 512	512 x 512

Please note that the GIF files to which the "full-res" thumbnails are linked may be representations of full-resolution images, and so are fairly large (700 - 800 Kbyte) when the originals are 1024 x 1024 pixels in size.

Access to full-resolution images has been freely available since 1998 January.

For 512 x 512 representations of the images (more practical if you have a low-bandwidth connection anyway), click on the "512 x 512" links.



[The EIT home page](#)



[The SDAC home page](#)



[The SOHO home page](#)

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Last revised 2005 October 18 - J.B. Gurman