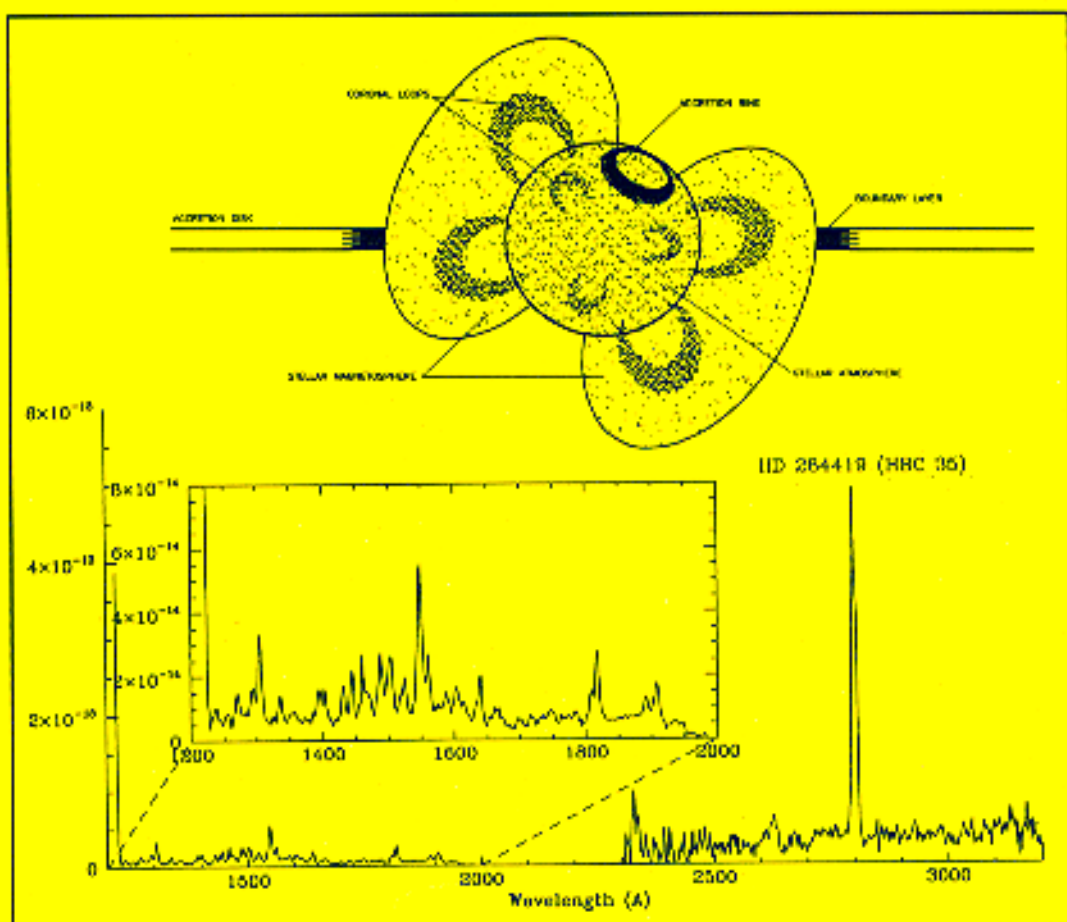


IUE - ULDA Access Guide No.8



International Ultraviolet Explorer - Uniform Low Dispersion Archive
T Tauri Stars

IUE-ULDA Access Guide No. 8

International Ultraviolet Explorer - Uniform Low Dispersion Archive

T Tauri Stars

prepared by

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About the cover:

A "working-model" for a T Tauri star is sketched. The magnetically active T Tauri star, with some coronal loops and a large magnetosphere, interacts with the surrounding accretion disk. The material from the inner disk falls on to the star, channelled by the magnetic field. If the field were strong (compared with the gravitational well) a fair fraction of the material might be channelled into the magnetic poles and accretion shocks (accretion rings) would be produced at these points. No attempt has been made to represent the wind or the jet.

The lower part of the front cover shows the Ultraviolet spectrum of the star T Tauri itself.

ESA SP-1205: IUE-ULDA Access Guide No. 8: T Tauri Stars

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ULDA Access Guides: W. Wamsteker

Published by: ESA Publications Division, ESTEC
Noordwijk, The Netherlands

International Standard Book
Number: ISBN 92-9092-419-5

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Price: 80 Dutch Guilders

Printed in: The Netherlands

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FOREWORD

The IUE ULDA/USSP Access Guides.

The International Ultraviolet Explorer (IUE) Satellite project was a joint effort between NASA, ESA and the PPARC. The IUE Spacecraft and instruments were operated in a Guest Observer mode to allow Ultraviolet Spectrophotometry at two resolutions in the wavelength range from 115nm to 320nm: low resolution $\Delta\lambda/\lambda=300$ ($\cong 1,000$ Km/sec.) and a high resolution mode $\Delta\lambda/\lambda=10,000$ ($\cong 19$ Km/sec.). The IUE S/C, its scientific instruments as well as the data acquisition and reduction procedures, have been described in "*Exploring the Universe with the IUE Satellite*", Part I, Part VI and Part VII (Astrophysics and Space Sciences Library volume 129, Y. Kondo, Editor-in-Chief, Kluwer Acad. Publ. Co.) and references therein. A more recent overview of the IUE Project is given in "*15 Years of IUE*" in *Frontiers of Ground-based and Space Astronomy* (Astrophysics and Space Sciences Library volume 187, pg. 77-86, Eds. W.Wamsteker, M.Longair and Y. Kondo, Kluwer Acad. Publ. Co.). Extensive information on the IUE Project can also be found on the World-Wide-Web under: <http://www.vilspa.esa.es/iue/iue.html>. From the very beginning of the project (launched on 26 January 1978), it was expected that the archival value of the data obtained with IUE would be very high. This expectation has been borne out fully after 18.6 years of orbital operations in which 104,741 spectroscopic images have been collected. The Operations with the IUE spacecraft have been stopped on 30 September 1996 (ESA IUE Newsletter No.47). The annual IUE Archive data retrieval rate during the last ten years of operations has been more than 10 times the new data collection rate of 5,500 spectra per year. Considering that the demand for observing time has, until the end of operations exceeded the available time by a factor of 3, it is clear that, especially now, the IUE Archive is an important source of data. The IUE ULDA/USSP (**Uniform Low Dispersion Archive/ULDA Support Software Package**) was developed by ESA in 1986, to make IUE low resolution spectra available in a way which would not involve project staff and simplify consulting IUE data, and supports 47% of all data retrieval from the IUE Project. At the ESA IUE Observatory the ULDA/USSP has been an integral part of the archival data distribution system in which **National Hosts** play an important role. Pioneering remote de-archiving, the ULDA/USSP has fulfilled an existing need in the access to IUE Data. The low resolution data set was chosen since it represented a data set excellently suitable for remote de-archiving, and at the same time not overloading the facilities available in 1987 at the National Host Institutes. Currently 24 National Hosts (page ????) participate in the ULDA/USSP system, serving scientists in 27 countries. It is foreseen that the **IUE Final Archive (IUEFA)** will be completed in 1997 and the first delivery of **INES (IUE Newsips Extracted Spectra)**, the **IUEFA** distribution system, including High Resolution data will be implemented during 1997.

The subset of the IUE Archive contained in the ULDA and accessible through the USSP, consists of the low resolution IUE spectra in a form directly applicable to all modern Scientific Analysis techniques. Version 4.0 of the ULDA/USSP has been released in February 1993 and contains 54,200 spectra low resolution spectra obtained with IUE before January 1st, 1992. The details of the construction of the ULDA and the design of the USSP can be found in Wamsteker et al. (*Astronomy and Astrophysics Supplement Series*, Vol. 79, pg. 1-10, 1989) and in ESA IUE Newsletter #30, which

also contains a Users Guide. The design and software coding of the USSP has been a coordinated effort between the ST-ECF, R.A.L., O.A.T. and the ESA IUE Observatory. The production of the ULDA and the overall coordination of the ULDA/USSP has been done at the ESA IUE Observatory at VILSPA. New developments include a UNIX version of the USSP (USSP Version 4.0), developed in collaboration with the National Hosts from Canada (CADC), Italy (OAT) and Spain (LAEFF).

The quantity of data in the IUE Archive is sufficiently large that it is not necessarily simple to address the data efficiently in the context of an astrophysical problem, even though access to the data is extremely easy. The purpose of the series of ULDA Access Guides is: To facilitate the use of the IUE Archive for scientists with a specific astrophysical problem in mind. The series of ULDA/USSP Access Guides consists of a number of subject-oriented books, for which a specialist in the field has been invited to take the scientific responsibility. *ULDA Access Guide No.8* treats the data of *T Tauri stars* and has been compiled by Dr. Ana I. Gomez de Castro and Ms. Merche Franqueira of the Departamento de Astronomia and Geodesia of the Universidad de Complutense in Madrid, Spain.

Further volumes of the ULDA Access Guides (page ???) will be published whenever the necessary data compilation has been completed by the authors. For details of the access to the ULDA through the National Hosts we refer to the details supplied regularly in the ESA IUE Newsletters (especially Driessen, Pasian and Talavera, 1988, IUE Newsletter #30, containing the ULDA/USSP Users Guide). After this (page ???) we identify the National Host for each country, necessary to access to the IUE-ULDA. Any inquiries on the access to the ULDA and the use of the USSP should be directed to the National Host Managers (page ???). Inquiries about the specific data content of the ULDA should be directed to ULDA Manager at the ESA IUE Observatory at VILSPA, Madrid, Spain (INTERNET: IUEOBS@VILSPA.ESA.ES).

Willem Wamsteker

Previously issued IUE-ULDA Access Guides:

No.1	ESA SP 1114	<i>Dwarf Novae and Nova-like Stars</i>	C. la Dous
No.2	ESA SP 1134	<i>Comets</i>	M. Festou
No.3	ESA SP 1152	<i>Normal Galaxies</i>	G. Longo, M.Capaccioli
No.4	ESA SP 1153 (A ,B)	<i>Active Galactic Nuclei</i>	T.J.-L. Courvoisier, S. Paltini
No.5	ESA SP 1181 (I, II)	<i>Chromospherically Active Binary Stars</i>	C. la Dous, A.Gimenez
No.6	ESA SP 1189	<i>Supernovae</i>	E.Cappellaro, M.Turatto, J.Fernley
No.7	ESA SP 1203	<i>K Stars</i>	M.Franchini, C, Morossi, M.L.Malgnini
No.8	ESA SP 1205	<i>T Tauri stars</i>	A.I. Gomez de Castro, M. Franqueira

ULDA National Host Information

April, 1997

This section supplies the contact and address information for the ULDA National Hosts, ordered alphabetically by the country they serve with the following exceptions: P. R. of China is served by two hosts; Sweden, Norway, Denmark and Finland are grouped together under 'Nordic Countries' since they share a single host; ST-ECF/ESO and VBO serve themselves and local visitors only, though they have national host status.

Belgium

Host: Royal Belgian Observatory,
Ringlaan 3, B-1180 Brussels.
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CEP 01051, Sao Paulo - SP.
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5071 W. Saanich Rd., Victoria B.C.,
CANADA V8X 4M6
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Casilla 603, La Serena, Chile 1353.
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Costa Rica

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San Jose, Costa Rica.

Host manager: **Jorge Paez**
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Egypt¹⁾

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France

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11, rue de l'Université,
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D-85748 Garching, Germany.

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India

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Israel

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Italy

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Netherlands

Host: Sterrenkundig Instituut ,Universiteit Utrecht,
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Nordic countries

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Portugal¹⁾

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¹⁾ The National Hosts marked may not be operational at the time of printing of this issue.