INES ACCESS CATALOG

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1 Introduction

The production of the IUE Final Archive had another important goal for the ESA IUE project - the distribution of the archive in a similar way as was done with the Uniform Low Dispersion Archive (ULDA)(Wamsteker et al., 1989), ie. via wide area networks in a tree structure allowing for one Principal Center, several National Hosts and many End User Nodes. This distribution scheme fits appropriately into the World Wide Web and enables user to have easy access to the physical meaningful spectral data of IUE thus ensuring its long term availability.

The IUE Newly Extracted Spectra (INES), which resulted from a post-processing effort at VILSPA is to be driven by an access catalog allowing the query of the archive similar to the IUE Merged Observing log.

The INES Access Catalog was constructed by using verified data from the IUE Final Archive (IUEFA) Master Catalogue running under ORACLE. Should any discrepancy between the INES Access Catalog and the image header exists in fields common to both, the INES Access Catalog information is the most likely to be correct.

It is provided as a comma separated, double-quote enclosed ASCII table allowing for easy import in any kind of data base management systems (DBMS) and is distributed independently from the IUE Final Archive.

2 The INES Access catalog

For each extracted spectra of the IUE archive exists an unique entry in the INES Access catalog identified by CAMERA, IMAGENR., DISPERSION and APERTURE.

Each entry consists of:

KEYWORD	Format	Units	Description
CAMERA	A3		Camera (ie. 'LWP', 'LWR', 'SWP')
IMAGE	I5		Sequential image number
DISPERSN	A4		Dispersion (ie. 'HIGH','LOW','NA')
APERTURE	A5		Aperture (ie. 'LARGE', 'SMALL', 'NA')
DATEOBS	A10	YYYY-MM-DD	Observing date in UT
TIMEOBS	A8	HH:MM:SS	Observing time in UT
EXPMODE	A3		Exposure mode
XTRMODE	A1		Extraction mode (P=Point, E=Extended source)
EXPTIME	F9.3		Effective Exposure time in seconds
HJD_MID	F13.5		Heliocentric corrected Julian date of mid.exposure
OBJECT	A28		Homogeneous Object Id. including complement. id.
OBJECT_NOBLANKS			same but without blanks for query purposes
RA	F8.4	deg	Right Ascension in degrees of homogen. object id. (1950.0)
DE	F8.4	deg	Declination in degrees of hom. object id. (1950.0)
POSANGLE	F6.2	deg	Position angle of the large aperture
FES2MD	A2		FES mode (i.e. FO, SO, FU, BO, etc.)
FES2CN	I5		FES counts (contaminated after Nov. 1991)
TARGET	A16		Target as given by Guest Observer
TARGET_NOBLANKS			same as above but without blanks for query purposes
TARGRA *)	F8.4	deg	Right Ascension in degrees of target
TARGDE *)	F8.4	deg	Declination in degrees of target
IUECLAS	I2		IUE Object class
ECC	A3		Exposure Classification Code (Cont,Emission,Bckgrd)
PGM_ID	A5		Program Id.
STATION	A6		Observing Station ('VILSPA' or 'GSFC')
ABNCODE	A8		Abnormality codes

*) the coordinates given by GO were the ones being used during the observation (slit position). These coordinates may differ from the homogeneous coordinates, e.g. for extended objects, etc.

The EXPMODE holds the following information:

* the first character indicates if there have been **multiple** exposures taken in the large aperture. The possible values are:

Char.	Meaning
'A'	Multiple Exposures along the APERTURE
'N'	NO multiple exposures made (most common case)
'X'	X-OFFSET(S) along FES X-axis for multiple exposures
'Y'	Y-OFFSET(S) along FES Y-axis for multiple exposures
'O'	Other configuration for multiple exposures

* the second character indicates if the exposure was **segmented** ie. the spectrum was obtained by more than one commanded exposure:

Char.	Meaning
'N'	NO (most common case)
'Y'	YES exposure was segmented

* and finally the third character indicates if the exposure was **trailed**:

Char.	Meaning
'N'	NO trail (most common case)
'X'	Exposure was trailed along the FES X-axis
'Y'	Exposure was trailed along the FES Y-axis

In over 88% of the cases the EXPMODE will read 'NNN'.

The ABNCODE holds the relevant abnormality flags. It is advisable that the COMMENTS in the image header are carefully checked if any ABNCODE(s) is(are) present. The meaning of the different characters in the ABNCODE is:

Code	Meaning	Estimated nr.of cases
'T'	TRACK LOST	16
'U'	UVC voltage other than -5Kev	24
'R'	REMNANT of previous spectrum visible	47
'Z'	contamination by solar spectrum or extended source	61
'A'	Abnormal READ (ABNREAD)	90
'B'	BAD Scans LWP (ABNBADSC)	213
'N'	Non-standard image acquisition ABNNOSTD	375
'S'	Serendipity Exposure	396
'P'	Readmode = PARTIAL	561
'H'	History Play back (ABNHISTR)	728
'C'	CORRUPTION including 159 DN	1,291
'W'	ABNHTRWU = LWR Heater Warm Up	4,175
'8'	Cross-correlation less than 80% - CC-PERCN	4,969
'M'	Missing THDA, any of THDAEND, THDAREAD, or THDASTRT	5,815
'O'	OFFSET from nucleus; from center; etc.	12,321

The INES catalog is accompanied by the IUEPUB file. This file holds all spectra indicated in publications analyzing IUE observations. The structure of this files reads:

Camera	A3	'LWP','SWP','LWR'
Image	I5	Image sequence number
Journal	A8	Abbreviation of Journal name
Vol	I4,	Volume number
Pag	A5,	Page number
Year	I4	Year of publication

The abbreviations used for the journals are:

Abbrev.	Name	Nr.
A&A	Astronomy and Astrophysics	11316
A&AS	Astronomy and Astrophysics Supplement	761
AJ	Astronomical Journal	1618
AP&SS	Astrophysics and Space Sciene	299
APJ	Astrophysical Journal	21069
APJS	Astrophysical Journal Supplement	3089
ESASP	ESA Special Publication	13094
GeoRL	Geophysical Research Letters	6
Icar	Icarus	514
JGR	Journal of Geophysical Research	10
MNRAS	Monthly Notices of the Royal Astr. Soc.	4736
NATUR	Nature	82
OBS	Observatory	667
PASP	Publications of the Astron. Soc.of Pacific	596
RMxAA	Revista Mexicana de Astronomia y Astrofisica	22

Fortunately, with this information it was easy, due to our collaboration with CDS in the homogenization of the IUE nomenclature (Barylak et al., 1988; Egret et al., 1992), to generate the associated BIBCODES. These BIBCODES provide the ability to search the abstracts database of the Astrophysics Data System (ADS)(see http://adsabs.harvard.edu/abstract_service.html), which contains data from several sources including SIMBAD, NED, and NASA's Scientific and Technical Information (STI) group. The powerful feature of ADS to "Find Similar Abstracts" once a given abstract is retrieved via eg. the BIBCODE, makes the IUEPUB/BIBCODES database an invaluable starting point for prospective user of IUE data in need of a bibliographic index to journals which describe IUE spectral observations.

References

Barylak M., Schmitz M., Wamsteker W.: 1988, The IUE Data Base - Homogenizing the IUE Object Nomenclature, ESA SP-281, Vol. 2, pg. 373-376.

Egret D., Janiewicz, G., Barylak, M., Wamsteker, W.: 1992, Homogenizing the Object Nomenclature in the IUE Log of Observations, Astronomy from Large Databases II, Haguenau, Sep. 14-16, 1992, pg. 265.

Wamsteker W., Driessen C., Munoz J.R., Hassall B.J., Pasian F., Barylak M., Russo G., Egret D., Murray J., Talavera A., Heck A.: 1989, IUE-ULDA/USSP: The On-line Low Resolution Spectral Data Archive of the International Ultraviolet Explorer, A & A Suppl., 79, pg. 1 (was VILSPA IUE Preprint No. 39, January 1989.)