To: All Signal-to-Noise Working Group Participants
From: Karen Levay
Re: Final Archive Database Format

The IUE Project is planning the IUE Final Archive. This archive will contain several forms of data including the image data, the image labels, the Final Archive Database, scripts, and other observatory documentation.

This report discusses the plans for the Final Archive Database also known the Final Merged Log of Observations. The Final Archive Database will serve as the search and request facility for the Final Archive. The Final Database at GSFC will be housed in a relational database system environment. Attached is a list of data items that may be included in the Final Archive Database. The data items have been divided into five sections. The first section describes spacecraft specific information; the second describes science data as provided by the Guest Observer; the third describes IUE Project-defined homogenized science data; the fourth holds processing and NSSDC maintenance information; and the fifth includes Data Management tracking information.

The spacecraft information in the first section will be obtained from the image label or from the observing script. If the information is obtained from the observing script, the data must be hand entered. The science data provided from the Guest Observer is obtained from the image label. The initial homogenized science data will be developed in coordination with the SINBAD group. Further "fine-tuning" will be done by the IUE Project. The Raw Image Archive and Condensed Data Archive locations presented as part of the Processing Information represent the locations for the current "on-line" archives and will be adapted to new media as needed. The Data Management section is for current use and may be eliminated after final reprocessing has been completed.

Two additional data items have been suggested for inclusion in the Final Archive Database: galactic coordinates and extended observer's comments concerning each image (e.g. quality of the data, unusual circumstances during acquisition, etc.). Galactic coordinates are easily calculated and may be included as a optional field for observers searching the database or requesting a copy of the database. Other easily calculated or produced fields (e.g. camera name and Julian date) may also be included as optional fields for searches and distribution.

The Project feels that the Final Archive Database should contain sufficient information to allow archival users to search the log for interesting data in the most useful and efficient manner. The Three-Agencies plan to agree upon a final "interchange" database format during the the May IUE Three-Agency Interchange Meeting. The IUE Project requests from you suggestions concerning the data elements to be included in the IUE Final Database. Please send any suggestions and comments concerning the IUE Final Archive Database to Karen Levay by the end of March.

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PROPOSED FIELDS FOR THE IUE ARCHIVE DATA BASE FORMAT

Data Sources: L - Image Label
P - Project Supplied Calculated
S - Observing Script
SP - IUESIPS Output
D - Data Management Center
N - NSSDC
A - IUEAIMS Output
GO - Guest Observer Input

Field Status: N - New Field
M - Modified (location or form)
E - Expanded

	FIELD LENGTH	FIELD STATUS	DATA SOURCE	FIELD NAME
	1	M	L	Camera Number 1; 2; 3; 4; 8; 9
	6		L	Image Sequence Number
	11	E	L	Date/Start Time of Observation
	2			last two digits of year
	3			day of year
	2			hour of day
	2			minute of hour
	2			seconds of minute
	11	N	P	Modified HJD of Start Time of Observation (2400000.00000+)
	1		L	Aperture Large; Small; blank
	1		L	Dispersion Low; High; blank
	1	M	L	Trailed Exposure T
	1	M	L	Multiple Exposure M
	1	N	S	Broken Exposure B
S	1		L	Large Aperture Status Open; Closed
P	7	M		Internal Codes
A	1		L	record number of entry
C	1		L	multiplicity type Double; Wavecal
E	1		D/S	Lost image; Raw image only
C	1	N	L	abnormality code History replay
R	1	N	L	missing minor frames flag Yes; No
A	1	N	L	microphonics flag Yes; No
F	1	N	S	cosmic ray hit flag Yes; No
T	8	E	L	Length of Exposure
	4			minutes
	2			seconds
	2			decimal seconds
	2		L	FES Mode Fast; Slow/ Overlap; Underlap/ Blind
	5		L	FES Counts
	5	N	S	THDA at Start of Exposure (nnn.n)
	5	N	S	THDA at End of Exposure (nnn.n)
	4	N	S	UVC Voltage
	5	N	S	Focus
	3	N	S	FPM at Start of Exposure
	1	N	S	TRK Fes; Gyros; Both
	10	N	L	Guide Star Coordinates
	5			X-Value
	5			Y-Value
	7	N	S	Spacecraft Beta Angle
	7	N	S	Position Angle of Aperture
	1	N	L	Acquiring Station G;V

	FIELD LENGTH	FIELD STATUS	DATA SOURCE	FIELD NAME
	5		L	Program ID
	14	E	L	Object ID
S	7		L	Right Ascension
C	2			hours
I	2			minutes
E	2			seconds
N	1			tenths of seconds
C	7		L	Declination
E	1			sign
	2			degrees
F	2			minutes
R	2			seconds
O	2		L	Object Class
M	6	E	L	Magnitude (+nn.nn)
	4	E	L	Spectral Type
G	3	E	L	Luminosity Class (MK type)
O	5		L	E(B-V)
	16	E	L	Observer's Name
	16	N	L	Primary Investigator's Name
	3	N	S	Exposure Level - emission
	3	N	S	Exposure Level - continuum
	3	N	S	Exposure Level - background
	30	E	L/S	Comments (including TO comments)
	16	N	P	Homogeneous Object ID
	10	N	P	Popular Name
	7	N	P	Right Ascension (1950.0)
	2			hours
	2			minutes
H	2			seconds
O	1			tenths of seconds
M	7	N	P	Declination (1950.0)
O	1			sign
G	2			degrees
E	2			minutes
N	2			seconds
E	7	N	P	Right Ascension (2000.0)
O	2			hours
U	2			minutes
S	2			seconds
	1			tenths of seconds
S	7	N	P	Declination (2000.0)
C	1			sign
I	2			degrees
E	2			minutes
N	2			seconds
C	1	N	P	Proper motion applied to 2000.0? Yes; No
E	2	N	P	Homogeneous Object Class
	6	N	P	Magnitude (calculated from FES) (+nn.nn)
	4	N	P	Homogeneous Spectral Type
	3	N	P	Homogeneous Luminosity Class (MK type)
	5	N	P	Homogeneous E(B-V)

	FIELD LENGTH	FIELD STATUS	DATA SOURCE	FIELD NAME
P	1		SP	Processing Station
R	5		SP	Processing Date (YYDDD)
O	6	N	SP	Processing Scheme ID
C	6	N	SP	Calibration File
E	1	N	SP	Extraction Type (Point, Extended)
S	5		A	Release Date (YYDDD)
S	8		N	NSSDC Reblocked Tape/File
	5		N	NSSDC Reblocking Date (YYDDD)
	6	N	A	Raw Image Archive (RIA) tape
	3	N	A	Raw Image Archive file
	6	N	A	Condensed Data Archive (CDA) tape
	5	N	A	Condensed Data Archive file
	5	N	A	Condensed Data Archive (CDA) Mass Store volume
	5	N	A	Condensed Data Archive (CDA) member
	5		SP	SOC Archive
	2		SP	SOC Archive tape file
	5		D	SOC Photowrite Completed Date
	7		SP	Photowrite Tape Number
	4		SP	Photowrite Tape File
	5		D	Photowrite Produced Date
	7		SP	CalComp Tape Number
	1		SP	CalComp Tape File
	5		D	CalComp Produced Date
D	7		SP	GO Tape Status
M	5		SP	GO Tape File
C	5		D	GO Tape Complete Date
	5		D	Ship to NSSDC Date
	5		D	Ship Photowrite to NSSDC Date
	7		SP	Archive Tape Number
	5		SP	Archive Tape File
	5		D	GO Archive Tape Complete Date
	4		D	Redo Request Number
	1		D	Redo Reason Code