

## AeroBase

### FILE DESCRIPTION

**AeroBase** provides references, abstracts, and controlled-vocabulary indexing of key scientific and technical documents, as well as books, reports, and conferences, covering aerospace research and development. This database supports basic and applied research in aeronautics, astronautics, and space sciences, as well as technology development and applications in complementary and supporting fields such as chemistry, geosciences, physics, communications, and electronics. All reports included in the database are unclassified.

### SUBJECT COVERAGE

- Aircraft Design and Instrumentation
- Aerodynamics
- Chemistry and Chemical Engineering
- Communications and Navigation
- Electronics and Electrical Engineering
- Energy Production and Conversion
- Environmental Pollution
- Fluid Mechanics and Heat Transfer
- Geophysics and Earth Resources
- Lasers and Masers
- Life Sciences
- Materials
- Mathematical and Computer Sciences
- Mechanical Engineering
- Meteorology, Climatology, and Oceanography
- Physics: Solid State, Thermodynamics, Atomic and Molecular, Nuclear and High-Energy, Optics, Acoustics, Plasmas
- Propellants and Fuels
- Quality Assurance and Reliability
- Social Sciences
- Space Sciences
- Spacecraft Design and Systems Engineering
- Structural Mechanics

### SOURCES

Coverage includes preprints, conference papers, books, theses, and unpublished report literature. A limited number of journal articles are also included.

### TIPS

#### USE FILE 104

to search for technical reports, journal articles, and conference papers focusing on aerospace and related topics.

#### USE CS= and OS=

to search for documents issuing from agencies of interest.

S CS,OS=NASA GODDARD?

#### USE RN=

to search for specific report numbers.

S RN=E-10649

#### USE SC= and SH=

to search for broad subject categories:

S SC=90

S SH=ASTROPHYSICS

### DIALOG FILE DATA

Inclusive Dates: 1999 to the present

Update Frequency: Monthly

File Size: Over 21,000 records as of March 2004

### CONTACT

AeroBase is provided by Dialog. Questions concerning file content should be directed to:

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## SAMPLE RECORD

DIALOG(R)File 104:AeroBase  
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0000119909

**/TI** TITLE: Synoptic Study of an X-Ray Nova in Outburst (ADP 2000)

**AU=,CS=** AUTHORS:  
McClintock, Jeffrey, Smithsonian Astrophysical Observatory, United States,  
Other US Government, Cambridge, MA, United States  
Oliversen, Ronald J., Technical Monitor, NASA Goddard Space Flight Center,  
United States, NASA, Greenbelt, MD, United States

**OS=** CORPORATE SOURCE:  
Smithsonian Astrophysical Observatory, United States, Other US Government,  
Cambridge, MA, United States

**DT=** DOCUMENT TYPE: Technical Report  
**PD=,PY=** PUBLICATION DATE: January 2004

**SP=** FINANCIAL SPONSOR:  
NASA Goddard Space Flight Center, United States, NASA, Greenbelt, MD,  
United States

**LA=** LANGUAGE: English  
ABSTRACT LANGUAGE: English

**RN=** ORIG REPORT NO: Rept-3  
**AA=** IP DOCUMENT ID: 20040016155  
**PT=** PROGRESS REPT TYPE: Annual Report  
PROGRESS REPT PERIOD: 15 May 2003 - 15 Mar. 2004  
**NO=** GRANT NO: NAG5-10813  
PAGE COUNT: 3

AVAILABILITY INFORMATION:  
DISTRIB LIMITS: Publicly available, Unlimited  
SECURITY CLASS: Unclassified

**AV=** AVAIL SOURCE: CASI  
FORMAT/PRICE CODE: Hardcopy, A01

**/AB** ABSTRACT:  
In the completed work listed above, we present an X--ray spectral and timing analysis of 4131543-47 during its 2002 outburst based on 49 pointed observations obtained using the Rossi X-ray Timing Explorer (RXTE). The outburst reached a peak intensity of 4.2 Crab in the 2-12 keV band and declined by a factor of 32 throughout the month-long observation. A 21.9+/-0.6 mJy radio flare was detected at 1026.75 MHz two days before the X-ray maximum; the radio source was also detected late in the outburst, after the X-ray source entered the hard state. The X-ray light curve exhibits the classic shape of a rapid rise and an exponential decay. The spectrum is soft and dominated by emission from the accretion disk. The continuum is fit with a multicolor disk blackbody (kT-max = 1.04 keV) and a power-law (Gamma -2.7). Midway through the decay phase, a strong low-frequency quasi-periodic oscillation (QPO; nu = 7.3-8.1 Hz) was present for several days. The spectra feature a broad Fe K line that is asymmetric, suggesting that the line is due to relativistic broadening rather than Comptonization. Relativistic Laor models provide much better fits to the line than non-relativistic Gaussian models, particularly near the beginning and end of our observations. The line fits yield estimates for the inner  
(. . .)  
observed. Specifically, we observe a 240 Hz QPO at a significance of 4.7sigma and a 162 Hz QPO at 3.7sigma. The higher frequency QPO was discovered by Homan et al. in an independent data set; they also found marginal evidence (2.5sigma) (Author)

**/DE** DESCRIPTORS:  
MAJOR DESCR: X RAYS; X RAY SOURCES; NOVAE; BLACK HOLES (ASTRONOMY); RADIANT FLUX DENSITY; SPECTRUM ANALYSIS

**/DE** MINOR DESCR: ACCRETION DISKS; ANGULAR MOMENTUM; ASYMMETRY; DISPLAY DEVICES; X RAY TIMING EXPLORER

**SC=,SH,SH=** SUBJ CATG: 90, Astrophysics (NASA Subject Category Scheme)  
COPYRIGHT: No Copyright

## SEARCH OPTIONS

## BASIC INDEX

SEARCH SUFFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
—	—	All Basic Index Fields	Word	S RADIO(W)FLARE
/AB	AB	Abstract	Word	S PEAK(W)INTENSITY/AB
/DE	DE	Descriptor	Word & Phrase	S BLACK(W)HOLE?/DE S X RAY SOURCES/DE
/ID	ID	Identifier	Word & Phrase	S PARALLEL(W)COMPUTERS/ID S WALL BOUNDARY/ID
/SH	SH	Section Heading	Word	S ASTROPHYSICS/SH
/TI	TI	Title	Word	S X(W)RAY(W)NOVA/TI

## ADDITIONAL INDEXES

SEARCH PREFIX	DISPLAY CODE	FIELD NAME	INDEXING	SELECT EXAMPLES
AA=	AA	IP Accession Number	Phrase	S AA=20040016155
AU=	AU	Author	Phrase	S AU=MCCLINTOCK, J?
AV=	AV	Availability	Word	S AV=CASI
—	AZ	DIALOG Accession Number		
BN=	BN	International Standard Book Number (ISBN)	Phrase	S BN=0-16-038211-4 S BN=0160382114
CD=	CD	Conference Date	Phrase	S CD=20030106
CL=	CL	Conference Location	Phrase	S CL=NEW ZEALAND
CN=	CN	Country	Phrase	S CN=UNITED STATES
CP=	CP	Country of Publication	Phrase	S CP=UNITED STATES
CS=	CS	Corporate Source/Author Affiliation	Word & Phrase	S CS=(SMITHSONIAN(S)ASTROPHYS?) S CS=SMITHSONIAN ASTROPHYSICAL?
CT=	CT	Conference Title	Word	S CT=(AIAA(S)AEROSPACE)
CY=	CY	Conference Year	Phrase	S CY=2002
DT=	DT	Document Type	Phrase	S DT=TECHNICAL REPORT
JN=	JN	Journal Name	Phrase	S JN=AIAA JOURNAL?
LA=	LA	Language	Word	S LA=ENGLISH
NO=	NO	Contract/Grant/Project Number	Word & Phrase	S NO=(BSF(W)97(W)00127) S NO=BSF-97-00127
NT=	NT	Notes	Word	S NT=SPONSORED
OS=	OS	Organization Source	Word & Phrase	S OS=(SMITHSONIAN(1W)ASTROPHYSICAL) S OS=ACADEMY OF SCIENCES?
PD=	PD	Publication Date	Phrase	S PD=20040101
PN=	PN	Patent Number	Phrase	S PN=US-PATENT-APPL-SN-022745?
PT=	PT	Progress Report Type	Phrase	S PT=ANNUAL REPORT
PU=	PU	Publisher	Word	S PU=(AMERICAN(W)ASTRONOMICAL(W) SOC?)
PY=	PY	Publication Year	Phrase	S PY=2004
RN=	RN	Report Number	Phrase	S RN=REPT-3
RT=	RT	Record Type	Phrase	S RT=ABSTRACT
SC=	SC	Subject Classification Code	Phrase	S SC=90
SE=	SE	Series Information	Word	S SE=(BOREAL(W)ECOSYSTEM?)
SH=	SH	Subject Heading Text	Word & Phrase	S SH=ASTROPHYSICS S SH=NUMERICAL ANALYSIS?
SM=	SM	Sponsor of Meeting	Word & Phrase	S SM=(ACADEMY(1W)SCIENCE) S SM=ACADEMY OF SCIENCE?
SN=	SN	International Standard Serial Number (ISSN)	Phrase	S SN=0018-9251 S SN=00189251
SO=	SO	Source Information	Word	S SO=(ADVANCES(1W)SPACE)
SP=	SP	Sponsoring Organization	Phrase	S SP=NASA GODDARD?
UD=	—	Update	Phrase	S UD=9999

**SPECIAL FEATURES**

For command descriptions, enter HELP LIMIT, HELP SORT, HELP RANK, HELP DUP online.

<b>LIMIT</b>	/ENG -- English Language /MAJ -- Major descriptors /NONENG -- Non-English Language /YYYY -- Publication Year	S S1/ENG S X RAYS/MAJ S S8/NONENG S S3/2004
<b>SORT</b>	AA, AU, CS, JN, PD, PY, TI	SORT S3/ALL/PD,D PRINT S8/5/ALL/PY
<b>RANK</b>	All phrase- and numeric-indexed fields in the Additional Indexes can be ranked. Other RANK codes include: DE	RANK DE RANK AU S4
<b>RD, ID</b>	Remove duplicates (RD) or identify duplicates (ID,IDO).	RD S5

**PREDEFINED FORMAT OPTIONS**

NO.	DIALOGWEB FORMAT	RECORD CONTENT
1	--	DIALOG Accession Number
2	--	Full Record except Abstract
3	Medium	Bibliographic Citation
4	--	Full Record with Tagged Fields
5	--	Full Record
6	Short	Title and Publication Date
7	Long	Bibliographic Citation and Abstract
8	Free	Title, Indexing, and Publication Date
9	Full	Full Record
K	--	KWIC (Key Word In Context) displays a window of text; may be used alone or with other formats

**OTHER OUTPUT OPTIONS**

For an explanation, enter HELP TYPE, HELP UDF, HELP TAG online.

<b>USER DEFINED FORMATS</b>	Display codes listed in the Search Options tables can be used to customize output.	TYPE S3/AU,TI,SO/1-5
<b>TAG</b>	Output can be displayed with tags identifying each display field.	TYPE S3/3/1-5 TAG
<b>DIRECT RECORD ACCESS</b>	If the accession number of a specific record is known, it can be used to display the record directly.	TYPE 1344408/5 DISPLAY 1331202/AU,TI,SO PRINT 1329895/5

**FOR ONLINE HELP:**

See HELP FIELDS 104 for searchable fields; HELP FORMAT 104 for output formats; HELP LIMIT 104 for limits; HELP RATES 104 for cost information; HELP SORT 104 for sorts.