

Proposal for *Compton* GRO Guest Investigation

CGRO-98-047

Cover Form

NRA 98-OSS-01

PI Name DR. MARK L. MCCONNELL <small>Title First name Middle initial Last name</small>				Date 1998-05-05
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E-mail address MARK.MCCONNELL@UNH.EDU				
Proposal Title BROAD-BAND GAMMA-RAY SPECTRA OF CYGNUS X-1				
Proposal Type <input checked="" type="checkbox"/> Y Type 1 Analysis of Archival Data <input type="checkbox"/> N Type 3 Correlative Research <input type="checkbox"/> N Type 2 Request for Observing Time <input type="checkbox"/> N Type 4 Service Proposal				
Subject Category X RAY BINARIES				
Estimate of Total Project Cost \$ 15000				

Abstract: 1000 characters maximum(about 150 words).

We have recently generated the first consistent broad-band spectrum of Cyg X-1 using contemporaneous data from COMPTEL, BATSE and OSSE, thus providing a valuable cross-calibration of these three experiments. This gives us the confidence to proceed with generating additional broad-band CGRO spectra. Of particular interest is the nature of the spectrum near 1 MeV, for which COMPTEL data is most useful. In producing broad-band spectra, the COMPTEL statistics can be increased considerably by relaxing the requirement for contemporaneous OSSE data and using only COMPTEL and BATSE data. For this purpose, we can use BATSE spectra generated with both standard occultation analysis and with the JPL-EBOP analysis. We propose to generate such broad-band spectra for various spectral states of Cyg X-1. These data would provide useful input to theoretical models for the broad-band emission and perhaps offer some insight as to the nature of the emission near 1 MeV.

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General Form

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PI Name DR. MARK L. MCCONNELL <small>Title First name Middle initial Last name</small>	Date 1998-05-05
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Proposal Title BROAD-BAND GAMMA-RAY SPECTRA OF CYGNUS X-1
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Co-Investigators			
Last name	First name	Institution	Country
LING	JAMES	NASA/JPL	USA
PACIESAS	WILLIAM	NASA/MSFC	USA
PHLIPS	BERNARD	NRL	USA
RYAN	JAMES	UNH	USA
SCHOENFELDER	VOLKER	MPE	GERMANY
HERMSEN	WIM	SRON/UTRECHT	NETHERLANDS
BENNETT	KEVIN	SSD/ESA	NETHERLANDS

PI Institution UNIVERSITY OF NEW HAMPSHIRE
Administrative Authority (optional) ASSOCIATE DIRECTOR, UNH OFFICE OF SPONSORED RESEARCH
Administrator (optional) STEVEN BERNSTEIN
Signature: _____ Date: _____

Statement as to the desired affiliation with Instrument Team or special access to proprietary data. PI IS A MEMBER OF THE COMPTTEL TEAM.

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Special Requirements Form

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Special Requirements: Please indicate additional required scheduling constraints, special operational modes, or other special requests for any of the relevant targets from the above list. When including scheduling constraints for correlative or targeted observations, please include the widest possible window to facilitate scheduling. Stricter constraints will decrease the likelihood of a candidate target being scheduled.

NONE