

Proposal for *Compton* GRO Guest Investigation

CGRO-98-020

Cover Form

NRA 98-OSS-01

PI Name DR. MARK L. MCCONNELL <small>Title First name Middle initial Last name</small>				Date 1998-05-03
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Department SPACE SCIENCE CENTER				
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E-mail address MARK.MCCONNELL@UNH.EDU				
Proposal Title COMPTEL OBSERVATIONS OF X-RAY TRANSIENTS				
Proposal Type <input checked="" type="checkbox"/> Y Type 1 Analysis of Archival Data <input type="checkbox"/> N Type 3 Correlative Research <input checked="" type="checkbox"/> Y 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).

Although observations of soft X-ray transients with CGRO have provided a wealth of information about the hard X-ray emission of these sources, observations of spectra near 1 MeV are limited. Based on experience with Cyg X-1, such observations would be valuable in our efforts to understand the high energy spectrum. Even a single significant datapoint near 1 MeV, when combined with lower energy data, could prove useful (c.f., GRO J0422+32). COMPTEL is capable of providing such data. Unfortunately, past COMPTEL observations of XRTs are limited in number, and often so limited in exposure that no detection was possible. We propose long exposure observations with COMPTEL of any new XRT which becomes visible during cycle 8 and which is likely to be detected by COMPTEL. We also propose to continue the analysis of archival COMPTEL data from previous XRT events, some of which show evidence for detectable emission.

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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 1998-05-03
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Proposal Title COMPTTEL OBSERVATIONS OF X-RAY TRANSIENTS

Co-Investigators				
Last name	First name	Institution	Country	
RYAN	JAMES	UNH	USA	
SCHOENFELDER	VOLKER	MPE	GERMANY	
HERMSEN	WIM	SRON - UTRECHT	NETHERLANDS	
BENNETT	KEVIN	SSD/ESA	NETHERLANDS	
RICHARD	KROEGER	NRL	USA	

PI Institution UNIVERSITY OF NEW HAMPSHIRE
Administrative Authority (optional) UNIVERSITY OF NEW HAMPSHIRE
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.

WE ARE REQUESTING OBSERVATIONS OF ANY X-RAY TRANSIENT (PRESENTLY KNOWN OR UNKNOWN) WHICH REACHES A FLUX LEVEL OF 1.0 CRAB AT 100 KEV FOR A HIGH GAMMA-RAY STATE TRANSIENT (WITH AN EXPONENTIAL GAMMA-RAY SPECTRUM) OR 0.5 CRAB AT 100 KEV FOR A LOW GAMMA-RAY STATE TRANSIENT (WITH A POWER-LAW GAMMA-RAY SPECTRUM). THE TARGET LIST INCLUDES A LIST OF KNOWN PREVIOUS TRANSIENT SOURCES, BUT OUR PROPOSAL IS NOT RESTRICTED TO THESE SOURCES ALONE; IT IS INTENDED TO COVER ANY PREVIOUSLY-UNKNOWN SOURCE AS WELL.