

1990RMxAA..21..63

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Title: Hard X-ray arcmin imaging with the EXITE telescope.

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Journal: Revista Mexicana de Astronomia y Astrofisica, Vol. 21, p. 633 - 637

Bibliographic Code: 1990RMxAA..21..633B

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HARD X-RAY ARCMIN IMAGING WITH THE EXITE TELES

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RESUMO: Neste trabalho descreve-se o "Energetic X-ray Imaging Telescope (EXITE) e mostram-se os primeiros resultados obtidos. Discute-se o método codificado, utilizado em EXITE, para obtenção de imagens de fontes cósmicas.

ABSTRACT: In this paper we describe the Energetic X-ray Imaging Telescope (EXITE) and show the first results obtained. We discuss the coded-aperture imaging of cosmic X-ray sources, used by EXITE.

Key words: INSTRUMENTS – X-RAYS – SOURCES

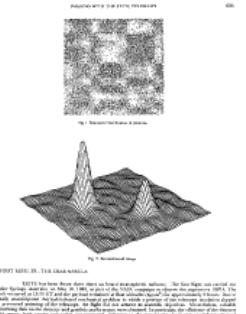
INTRODUCTION

The Energetic X-ray Imaging Telescope Experiment (EXITE) is a balloon-borne instrument designed to detect electromagnetic radiation in the hard X-ray range. (Grindlay *et al.* 1986; Garcia *et al.* 1988). The solution of EXITE can resolve the hard X-ray sources in the most crowded regions of the sky. This is the best achieved by present instruments. The imaging capability is provided by the position-sensitive X-ray detector. Recent improvements on the detector and gondola system (Covault and Grindlay 1988), and both calibration results and flight performance of EXITE (Covault and Grindlay 1989). EXITE observed a variety of both galactic (Covault, Braga, and Grindlay 1988) and extragalactic (Braga, Covault, and Grindlay, 1988) objects. In this paper we present pre-flight tests and early results of hard X-ray imaging of the Crab nebula, and discuss the first hard X-ray imaging of cosmic sources.

INSTRUMENT DESCRIPTION

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