

Re-testing the JET-X Flight Module No. 2 at the PANTER facility

Daniele Spiga · Gianpiero Tagliaferri · Paolo Soffitta · Oberto Citterio ·
Stefano Basso · Ronaldo Bellazzini · Alessandro Brez · Wolfgang Burkert ·
Vadim Burwitz · Enrico Costa · Luca de Ruvo · Ettore Del Monte ·
Sergio Fabiani · Gisela Hartner · Benedikt Menz · Massimo Minuti ·
Fabio Muleri · Giovanni Pareschi · Michele Pinchera · Alda Rubini ·
Carmelo Sgrò · Gloria Spandre

Received: 1 September 2013 / Accepted: 7 November 2013
© Springer Science+Business Media Dordrecht 2013

Abstract The Joint European X-ray Telescope (JET-X) was the core instrument of the Russian Spectrum-X- γ space observatory. It consisted of two identical soft X-ray (0.3–10 keV) telescopes with focusing optical modules having a measured angular resolution of nearly 15 arcsec. Soon after the payload completion, the mission was cancelled and the two optical flight modules (FM) were brought to the Brera Astronomical Observatory where they had been manufactured. After 16 years of storage, we have utilized the JET-X FM2 to test at the PANTER X-ray facility a prototype of a novel X-ray polarimetric telescope, using a Gas Pixel Detector (GPD) with polarimetric capabilities in the focal plane of the FM2. The GPD was developed by a collaboration between INFN-Pisa and INAF-IAPS. In the first phase of the test campaign, we have re-tested the FM2 at PANTER to have an up-to-date characterization in terms of angular resolution and effective area, while in the second part of the test the GPD has been placed in the focal plane of the FM2. In this paper we report the results of the tests of the sole FM2, using an unpolarized X-ray source, comparing the results with the calibration done in 1996.

Keywords JET-X · PANTER · Flight module · X-ray tests

D. Spiga (✉) · G. Tagliaferri · S. Basso · O. Citterio · G. Pareschi
INAF / Brera Astronomical Observatory, Via Bianchi 46, 23807 Merate, Italy
e-mail: daniele.spiga@brera.inaf.it

E. Costa · E. Del Monte · S. Fabiani · F. Muleri · P. Soffitta · A. Rubini
INAF/Institute for Space Astrophysics and Planetology, via Fosso del Cavaliere 100,
00133 Roma, Italy

R. Bellazzini · A. Brez · L. de Ruvo · M. Minuti · M. Pinchera · C. Sgrò · G. Spandre
INFN Sezione di Pisa, Largo B. Pontecorvo, 3-56127 Pisa, Italy

V. Burwitz · W. Burkert · G. Hartner · B. Menz
Max-Planck-Institut für extraterrestrische Physik, Gießenbachstraße 1, 85748 Garching, Germany