

IAUC 6576: GRB 970228

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GRB 970228

E. Costa, M. Feroci, L. Piro, and M. N. Cinti, Istituto di Astrofisica Spaziale (IAS), CNR, Frascati; F. Frontera and G. Zavattini, Universita di Ferrara; L. Nicastro, E. Palazzi, D. Dal Fiume, and M. Orlandini, Istituto Tecnologie e Studio Radiazioni Extraterrestri (ITESRE), CNR, Bologna; J. in 't Zand, J. Heise, and R. Jager, Space Research Organization of the Netherlands (SRON), Utrecht; A. Parmar and A. Owens, Space Science Department, ESTEC; S. Molendi, Istituto di Fisica Cosmica e Tecnologie Relative, CNR, Milano; G. Cusumano, M. C. MacCarone, and S. Giarrusso, Istituto di Fisica Cosmica e Applicazioni Informatica, CNR, Palermo; L. A. Antonelli, F. Fiore, P. Giommi, J. M. Muller, L. Salotti, G. Gennaro, M. Stornelli, G. Crisigiovanni, R. Ricci, and A. Coletta, BeppoSAX, Rome; and R. C. Butler, Agenzia Spaziale Italiana, Rome, report: "The BeppoSAX GRBM/WFC error box of GRB 970228 ([IAUC 6572](#)) was observed with the BeppoSAX Narrow Field Instruments on Feb. 28.458 UT for 15~000 s (8 hr after the gamma-ray burst). A previously unknown intense x-ray source, SAX J0501.7+1146, has been detected by the MECS and LECS at the same position (R.A. = 5h01m44s Decl. = +11o46'.7, equinox 2000.0; estimated error radius 50"). This position lies at the edge of the reported BeppoSAX WFC error box ([IAUC 6572](#)). The source flux is $(2.8 \pm 0.4) \times 10^{-12}$ erg cm⁻² s⁻¹ in the MECS (2-10 keV) and $(4.0 \pm 0.6) \times 10^{-12}$ erg cm⁻² s⁻¹ in the LECS (0.5-10 keV). The field was observed again on Mar. 3.734, and a source was detected at a position consistent with the previous one, but at a flux level lower by a factor of 20. Given this very peculiar time variability, we conclude that the new BeppoSAX x-ray source is related to GRB 970228."

D. A. Frail, National Radio Astronomy Observatory; S. R. Kulkarni, California Institute of Technology; E. Costa, M. Feroci, and L. Piro, IAS, Frascati; L. Nicastro, D. Dal Fiume, and E. Palazzi, ITESRE, Bologna; F. Frontera, Universita di Ferrara; and R. Jager and J. Heise, SRON, report: "Observations at 20 cm with the Very Large Array on Mar. 1.03 and 2.16 UT, and at 6 cm on Mar. 4.04

centered on the gamma-ray burst position given on [IAUC 6572](#), have detected a single, unresolved radio source in the error circle of the x-ray transient seen by Costa et al. (above). The radio source is at R.A. = 5h01m41s.68 +/- 0s.01, Decl. = +11o47'05".1 +/- 0".2 (equinox J2000.0). Flux densities measured on these three days are 0.80, 0.76, and 0.62 mJy, respectively, with errors of order 0.15 mJy."

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