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Exhibition in Berlin

The ESO exhibition opened at the Zeiss Großplanetarium in (East-) Berlin on November 1, 1991. The City of Berlin was represented by Mr. Arndt, Staatssekretär für Schule, Berufsbildung und Sport and the Mayor of Berlin-Prenzlauer Berg, Dr. Dennert.

This planetarium is one of the world's largest and was inaugurated in 1987 on the occasion of the 750th anniversary of Berlin.

It has the latest Zeiss projector with all possible technical finesses.

Already on the opening day there were lots of visitors and many more are expected during the 3 months' duration of the exhibition.

ESO is particularly pleased to make its exhibition available at an institution which only recently was incorporated into the Federal Republic, at the time of the German re-unification. There is little doubt that it will be of particular interest to the inhabitants of the parts of Berlin surrounding the Planetarium.



Mr. Arndt, Undersecretary of State for Education, Vocational Training and Sports, opens the ESO Exhibition in Berlin.

Looking for Optical Emission from Gamma-Ray Bursters

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1. Gamma-Ray Bursts: a 20-Year-Old Mystery

Discovered some 20 years ago [1] gamma-ray bursts (hereafter GRB) remain mysterious: these transient sources emit only during times ranging from a few milliseconds to several minutes, and they are observed only in the X-ray/Gamma-ray range, from 1 keV to more than 100 MeV. They have no obvious counterparts, either transient or quiescent, in other spectral regions, e.g. optical [2] or in soft X-rays [3] [4]. Further-

more, their light curves, and their energy spectra are extremely diverse: there is no "typical" gamma-ray burst and among the 600 bursts observed until now, not even a general classification has been established. With 3 notable exceptions, none has been observed to repeat. The exceptions are the soft repeaters SGR 1806-20 [5] [6], SGR 1900+14 [7] and the GBS 0526-66 [8] March 5b, 1979 GRB, which is located in the direction of the LMC.

Until recently, there was a general

agreement on the galactic neutron star origin of these sources, based on the characteristic time scales of the events (sometimes less than a millisecond) and on the presence of strong magnetic field signatures in their energy spectra. In that case, with more than 600 detections to date (and an actual detection rate of 1 per day), GRBs would have been the most common manifestation of neutron stars in our galaxy. However, recently the situation became quite confused with the announcement by the