GRB 030227: The first multiwavelength afterglow of an INTEGRAL GRB - DTU Orbit

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We present multiwavelength observations of a gamma-ray burst detected by INTEGRAL (GRB 030227) between 5.3 hours and similar to 1.7 days after the event. Here we report the discovery of a dim optical afterglow (OA) that would not have been detected by many previous searches due to its faintness (R similar to 23). This OA was seen to decline following a power law decay with index alpha(R) = - 0.95 +/- 0.16. The spectral index beta(opt/NIR) yielded - 1.25 +/- 0.14. These values may be explained by a relativistic expansion of a fireball (with p = 2.0) in the cooling regime. We also find evidence for inverse Compton scattering in X-rays.

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