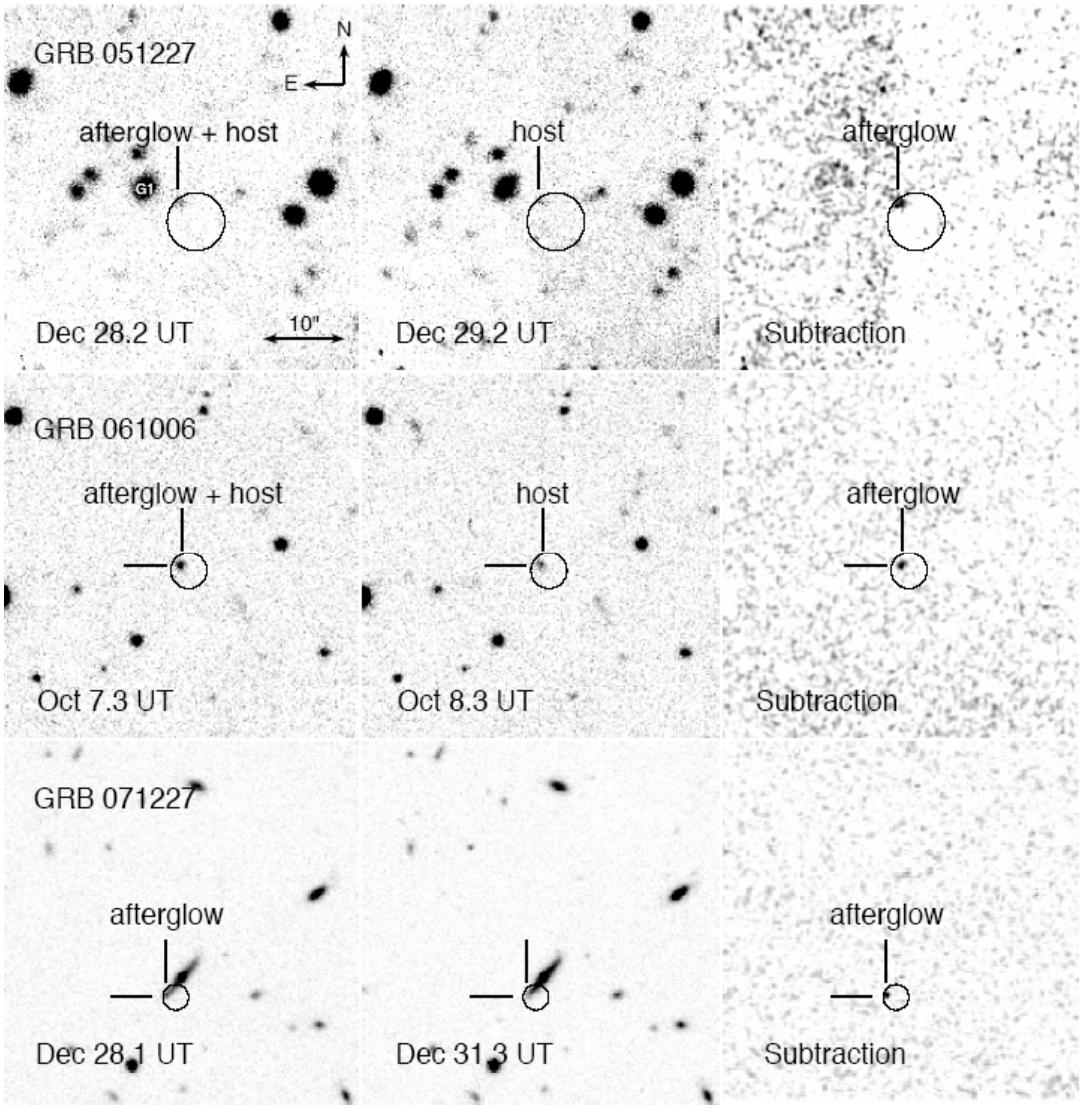
Astronomy & Astrophysics

HIGHLIGHTS: this week in A&A

Volume 498-3 (May II 2009)



In section 4. Extragalactic astronomy

"The optical afterglows and host galaxies of three short/hard gamma-ray bursts", by P. D'Avanzo, D. Malesani, S. Covino, S. Piranomonte, A. Grazian, D. Fugazza, V. D'Elia, L. A. Antonelli, S. Campana, G. Chincarini, M. Della Valle, F. Fiore, et al., A&A 498, p. 711

Short GRBs are thought to come from the merging of double compact object binaries, but direct evidence for this scenario is still missing. The authors have carried out optical observations of the afterglow of three GRB, and identified their host galaxies.
They find in all GRB that the optical emission in the afterglow decay significantly steeper than in the X-rays. The three hosts are blue, star-forming galaxies at moderate redshifts and with metallicities comparable to the solar ones. The projected offsets of the optical afterglows from their host galaxies centers span a wide range, but all afterglows lie within the light of their hosts. This helps to distinguish between the scenarios for GRB.