



Simultaneous observation of GRB060602B with the H.E.S.S. Air Cherenkov array

PAK-HIN TAM¹, KONRAD BERNLOEHR², PAULA CHADWICK³, JIM HINTON^{1,2}, DALIBOR NEDBAL²,
GERD PÜHLHOFER¹, STEFAN WAGNER¹ FOR THE H.E.S.S. COLLABORATION

¹*Landessternwarte, Universität Heidelberg, Königstuhl, D 69117, Germany*

²*Max-Planck-Institut für Kernphysik, P.O. Box 103980, D 69029 Heidelberg, Germany*

³*University of Durham, Department of Physics, South Road, Durham DH1 3LE, U.K.*

phtam@lsw.uni-heidelberg.de

Abstract: On June 2, 2006, the *Swift* Burst Alert Telescope (BAT) triggered a bursting event in the 15-350 keV energy band which lasted 9 seconds. The burst position was being observed with the H.E.S.S. array of IACTs before the burst, throughout the duration of the burst, and after the burst. In particular, The burst position accidentally fell in the f.o.v. of the H.E.S.S. camera when the burst occurred. A total of 5 hours of observation was obtained during the night of 2-3 June 2006. Another 4 hours of observation was obtained in the next three nights. A search for VHE gamma-rays coincident with the burst event as well as that during the afterglow period was performed. This is the first completely simultaneous observation of a soft gamma-ray bursting event with an IACT instrument. The *Swift* X-ray Telescope detected an X-ray counterpart starting from 83 seconds after the BAT trigger. No optical/infrared counterpart was found. Due to the very soft BAT spectrum (photon index $\Gamma \approx 5$) of the burst compared to other *Swift* GRBs and its proximity to the galactic center, the burst might have been caused by a galactic X-ray burster (e.g. a low-mass X-ray binary). However, the possibility of it being a cosmological GRB cannot be ruled out. Since the nature of the event is still unclear, we will discuss the implications according to the two different bursting scenarios. Results will be given in the post-conference version of the proceedings.