

SPACE EXPLORATION SYMPOSIUM (A3)  
Space Based Astronomy (4)

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# ULTRA FAST FLASH OBSERVATORY TO OBSERVE THE PROMPT PHOTONS FROM GAMMA RAY BURSTS

## Abstract

UFFO (Ultra Fast Flash Observatory) is an ultra-fast optical/UV telescope which can slew to targets within 1 msec using MEMS (Micro-Electro-Mechanical Systems) micromirrors. It is utilized for observations of prompt optical/UV photons from GRBs (Gamma Ray Bursts), permitting the first ever systematic study of optical/UV emission far earlier than 1 sec after trigger. Topics of interest include short vs. long GRB prompt emission, which may have different emission time scales and mechanisms, and potential prompt emission from otherwise "dark" GRBs. We describe a concept and optical designs of the UFFO, and report lap-test results using a prototype telescope.