

Asteroid Trails in Wide-Field
Abstract submitted to the IAU meeting

Close examination of 3750 observations for the GTO Parallel Survey, the Deep selected long exposures from the GTO, have become public has revealed many additional asteroid trails were found by the Space Telescope Science Institute appropriate Principal Investigator and three others were early detections and the IAU's Minor Planet Center in 1991. Most of these asteroids are discovered because they are too dim to show up on photographic exposures.

Asteroid trails are easily distinguished from cosmic ray tracks by their point spread function, curvature, and the continuity of their trails between observations. The asteroid trails exhibit a remarkable parallax due to the orbital motion of the BST observations, it is clearly resolved in these images. This parallax, when combined with that due to the Earth's and the Hubble Space Telescope's motion, allows the distance to each object to be estimated from each single set of observations. In combination with the observed magnitudes ($16 \leq m \leq 23$) and colors this allows crude size estimates for the objects. The asteroids appear to be small, main belt objects of ~ 25 km in diameter.