Orbital Debris Observations with WFCAM

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Abstract:
The United Kingdom Infrared Telescope has been operating for 35 years on the summit of Mauna Kea as a premier Infrared astronomical facility. In its 35th year the telescope has been turned over to a new operating group consisting of University of Arizona, University of Hawaii and the LM Advanced Technology Center. UKIRT will continue its astronomical mission with a portion of observing time dedicated to orbital debris and Near Earth Object detection and characterization.

During the past 10 years the UKIRT Wide Field CAMera (WFCAM) has been performing large area astronomical surveys in the J, H and K bands. The data for these surveys have been reduced by the Cambridge Astronomical Survey Unit in Cambridge, England and archived by the Wide Field Astronomy Unit in Edinburgh, Scotland. During January and February of 2014 the Wide Field CAMera (WFCAM) was used to scan through the geostationary satellite belt detecting operational satellites as well as nearby debris. Accurate photometric and astrometric parameters have been developed by CASU for each of the detections and all data has been archived by WFAU.

This paper will present the January and February results of the orbital debris surveys with WFCAM.