

UDRC Space Challenge Data

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This data is from the University Defence Research Collaboration (UDRC) Phase 2 Themed Meeting on Space Surveillance and Tracking on 23rd November 2016.

There are four sub datasets in this dataset. Each set is collected using a mounted cooled Charged-Coupled Device (CCD) camera.

The datasets consist of detections from these captured images using the method in `processing_pipeline.py` and are stored as Flexible Image Transport System (FITS) Binary Tables. The binary tables have the following columns:

- `x` : The position of a detected object in the x dimension of the image space, measured in pixels from the bottom left.
- `y` : The position of a detected object in the y dimension of the image space, measured in pixels from the bottom left.
- `ra` : The Right Ascension (RA) of a detected object in spherical coordinates, measured in degrees in the J2000 Epoch.
- `dec` : The Declination (DEC) of a detected object in spherical coordinates, measured in degrees in the J2000 Epoch
- `eccentricity` : The eccentricity of a detected object's shape, unitless.

The RA and DEC of an object is calculated using the World Coordinate System (WCS) information in the FITS header.

Any questions or suggestions for improvements should be directed to Mark Campbell, mcampbell@dstl.gov.uk or mc318@hw.ac.uk.