# WFAU use of MOC

- We generated and then published coverage maps in MOC format for all our archives, including datasets we mirror.
  - For all UKIDSS and VISTA surveys we created maps of individual and joint passbands for all public data releases
  - For mirrored datasets (e.g. SDSS DR8), we generated maps of the source tables
  - Maps were created in both High Resolution (HEALPix level 1024) and Low Resolution (HEALPix level 128) to accommodate different use cases
  - The maps are available from our website, and WebSAMP is used to make it possible for the user to seamlessly interact with the webpage and Aladin for viewing the maps
    - http://surveys.roe.ac.uk/wsa/coverage-maps.html
    - http://horus.roe.ac.uk/vsa/coverage-maps.html

# WFAU MOC creation experience

- Map generation was relatively easy, using the DensityMapGenerator.jar and hpx2moc.jar utilities provided by CDS
  - To generate the UKIDSS and VISTA maps we ran SQL queries to extract the relevant source data into TSV files
  - For mirrored datasets we outgested all source ra, dec data from the survey source tables into TSV format
  - The TSV files were then fed through the DenistyMapGenerator.jar to create the maps used by hpx2moc.jar to create the final MOC files. Simple shell scripts were written to automate the process as much as possible
- Main issues:
  - Density maps only approximate representation of coverage area. This is most noticeable on sparse surveys or source tables that contain individual pointings. It also means areas where coverage exists, but no sources were found, could be misrepresented as not having coverage
  - Low Resolution maps show coverage where none exists, which could mislead users

# MOC Usage by Users

- Coverage Maps were published in late February 2013, and an email notice was sent to registered UKIDSS and VISTA users
  - WFCAM Science Archive: 112 unique users, ~3700 downloads
  - VISTA Science Archive: 82 unique users, ~3300 downloads
- User requests:
  - Tools for generating UNION and intersecting sets that identify areas of mutual coverage
  - More finite control over default Aladin layer settings through SAMP(solid frame instead of wireframe, colour)
  - MOC support in Aladin Lite for browser viewing?
  - Command line client for interrogating online maps