eROPub & eROSE

Web services for the eROSITA-DE consortium

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eROSITA Publication Archive (eROPub)

erosita.mpe.mpg.de/eROPub

- Web-app to support the implementation of *eROSITA*-DE consortium publication policies
- A (web-)browseable archive of *eROSITA*-related publications, technical reports, presentations
- Used to make paper announcements, request co-authorships, upload pdfs etc
- Built on Django/Python framework, backed by Apache WebServer+PostgreSQL, hosted at MPE.
- Access limited to consortium members

ID	Details	Lead Author	Title	Type	Status	Associated WG(s)	Latest PDF	Last modified
Pub#30	Details	AndreaMerloni	eROSITA Science Book: Mapping the Structure of the Energetic Universe	Uncategorised publication	Published	EroAgn EroBkg EroCalib EroCat EroClusters EroCompact EroFollowup EroGal EroSnr EroSolar EroStars EroTda		2018-02-21 17:53:31
Pub#35	Details	AaaaMemberScientist1	A demonstration paper	Article in Journal	In preparation	AaaaWorkingGroup1 EroCat	here	2018-04-23 16:15:53
Pub#36	Details	TomDwelly	An analytically expressed vignetting model for eROSITA	Technical Note	In preparation	EroCalib EroCat	here	2018-04-23 17:40:54
Pub#37	Details	AaaaSeniorScientist1	An exciting X-ray survey paper	Article in Journal	In preparation	AaaaWorkingGroup1		2018-04-23 17:38:24

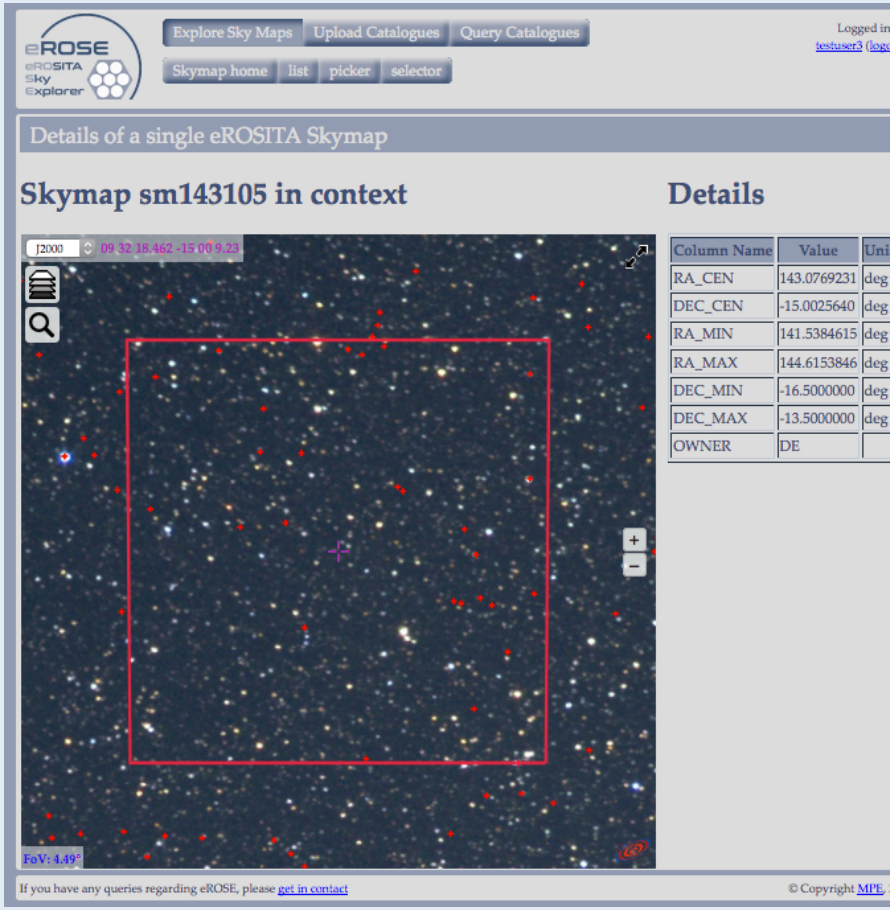
eROPub status

- Almost completely coded, and currently running on MPE (production) server
- User list populated with consortium members
  - empty working group membership and publication lists
- Access currently limited to MPE network
  - but can be viewed from outside via an ssh tunnel
- E-mail notifications are currently redirected to me
- Testing & refinement is needed before release to the consortium
  - a few ~~victims~~ volunteers are required

eROSITA Sky Explorer (eROSE)

erosita.mpe.mpg.de/eROSE

- User-friendly interface to high-level *eROSITA* science products, with value-added functions not possible with existing tools
  - e.g. searchable catalogues, all-sky maps, high-level source products, meta-data, etc
  - collects comments/annotations from users
  - provides *eROSITA*-specific interactive visualisations
- A web-based system for registered users only
  - Restricted to *approved eROSITA*-DE members
  - Will contain proprietary X-ray data
- Will allow complex catalogue queries:
  - e.g. cross-match with user-uploaded catalogues and internal catalogues
  - make complex SQL selections + joins
  - quickly browse/inspect results



eROSE: What to expect

- A central catalogue database hosted on a PostgreSQL server
  - With some standard extensions e.g. fast spatial indexing via the **q3c** plugin
  - Containing internally “released” versions of the eRASS catalogue (i.e. “CATMERGE” format)
  - Each eRASS catalogue statically cross-matched against previous eRASS catalogues (unique source IDs)
  - Load + index a new eRASS catalogue into the DB via web interface.
  - The DB will also contain a small set of public X-ray catalogues (e.g. 3XMM, 2RXS, CSC, 1SXPS…)
  - Tables of the "official" cross-matches of eRASS sources from multi-wavelength catalogues, produced outside eROSE (i.e. by the eRoFollowUp WG; see next talk)
- A web front end based on the Python/Django framework
  - Access via http://erosita.mpe.mpg.de/eROSE
  - A user account system (extending the built-in Django user management system), where user access is granted by WG chairs.
  - Limited private storage per user to store past queries, uploaded catalogues etc (as tables inside database)
  - A user interface to query the catalogue database:
    - basic version: structured page with limited options, including a multi-source query option (requires user to upload a list of positions to query). Reports the derived SQL query to the user.
    - advanced form: free-form SQL/ADQL entry
  - An interface to inspect the returned catalogue selections (tables) and to download results in several formats
  - An interface to inspect source-specific products (catalogue parameters, X-ray images, plots of spectra/light curves)
    - users may attach comments/annotations to a source − logged to the DB
    - interactivity minimal at first (e.g. static plots of spectra, LCs), but could become more interactive if effort is available
  - for the download of SASS data products, we will direct users to a pre-filled DATool web page
- A proprietary library of browseable all-sky HiPS maps built from eSASS image products
  - images in several bands, false colour, expmap, bgmap, sensitivity map etc
  - HiPS Catalogue versions of eSASS catalogues will also be displayed
  - Additional HiPS images+catalogues could be (built+) hosted locally
- Online documentation of how to use eROSE features − (where it’s not obvious)

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Key:
Finished
Started
Not started
Post-Launch

Coordination of user accounts, access rights, WG membership etc

- The number of web services is increasing:
  - eROSITA wiki (https://wiki.mpe.mpg.de/eRosita)
  - DATool (http://erosita.mpe.mpg.de/DATool/)
  - eROSE (http://erosita.mpe.mpg.de/eROSE/)
  - eROPub (http://erosita.mpe.mpg.de/eROPub/)
  - Plus separately managed lists of consortium members, WG membership lists, mailing lists etc
  - Yuck!
- Consolidate (where possible) into one central user management service − i.e. a single username per consortium member
  - Extend the Django user access system to describe eROSITA user management structures
  - Provide a web interface to view/edit user lists:
    - Users can request access rights from a WG chair
    - WG chairs can grant/revoke rights to access the various tools
    - Easy to visualise who has access to what and for how long
    - E-mail notifications of events
  - Integrate with existing tools (DATool, maybe even the wiki)

A guided tour

- eROPub
  - erosita.mpe.mpg.de/eROPub
- eROSE
  - erosita.mpe.mpg.de/eROSE