

Astronomy Archives User Group

Project Scientist inputs

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Role of the Project Scientists

- “ensuring that the maximum scientific return from a mission is maintained as a target throughout all phases (study, development, operations, *archiving*), within technical, financial, programmatic, and safety constraints”
- Within ESA science projects, the PS is the only cradle-to-grave participant
- The PS sets the requirements on “their” specific Archive
 - Science Management Plan
 - Operations Scenario
 - Archive Requirements Specification
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- Most PSs are at ESTEC
- The development of the Archives is done at ESAC by the ESDC, under supervision of the Science Operations Team (in particular the Archive Scientist)

Some points to keep in mind

- Requirements are set very early and determine the available resources
 - Experience shows that the actual needs evolve strongly over the long lifetime of the mission
 - The “best” delivery technology also evolves strongly
 - Commonality with other missions is also a constraint
- Data storage and distribution needs come at all phases of the mission: development, ground testing, operations, science product distribution (internal and external)
 - It makes sense not to separate the external archive from other needs
 - “external” archives are constrained by and an evolution of previous phases
- Need to consider as part of the Archive
 - Explanatory documentation
 - Scientific papers
 - Analysis software
 - mission documentation

More points to keep in mind

- Mission Archives are unique i.e. they have specificities
- It is important to create flexible interfaces between individual Archives and
 - Other Archives
 - Data reduction tools such as Aladin
 - Visualization tools such as ESASky, ESOSky, JUDO, IRSA, ...
 - *keeping in mind that they do not fulfill the same function !*
- There are often parallel Archives e.g. CDS, IRSA, Heasarc, Lambda, etc etc
 - Plenty of coordination issues

More points to keep in mind



- Archives are not just data distribution means
 - They have to actively support the needs of the users functionally and scientifically
 - Interfaces and contents have to evolve continuously
- Beyond the operational phases there are (currently) no dedicated resources to do much more than “maintaining”
 - Experience shows that some of the most useful and interesting data products are generated long after the (post)operational phases end
 - To remain relevant, “old” data products must be kept in tune with “new” ones (formats, calibration, ...)

