

## **Making an observational archive VO compliant**

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The ESO archive is one of the largest collections of ground based astronomical observational data in the world. It has been started as a project in 1997 in order to satisfy one of the top level requirements for the Very Large Telescope (VLT) and in order to extend the availability of ESO data beyond principle investigators of observing projects and their collaborators. Today this archive contains mainly non-calibrated (raw) data from about 10 million individual observations collected by 23 instruments of various kinds spanning the near IR to near UV with imaging, low and high resolution spectrographs, integrated field units (3D spectroscopy) and interferometric instruments. Most of the instruments have multiple and complex observing modes and are highly configurable to allow for a huge variety of scientific applications. In addition the archive contains auxiliary and logging data, such as weather and event records of many sensors, proposal and publication databases and additional services for observation preparation and archival research. With the advent of the VO we started the project to upgrade the ESO archive to a world class scientific resource for astronomical research. This paper highlights the required steps, the pitfalls and the current state of the implementation from a VO centric perspective with some emphasize on the VO standards and VO tools.