



**Atacama  
Large  
Millimeter  
Array**

# ALMA Archive Overview

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ALMA Project

## What it is?

- It provides an ACS compliant interface to persistently store, update, retrieve and query XML data.
- Implements versioning and permissions on a document level.
- Provides interface to unique identifiers for entities.
- Provides registration of schemata.
- It hides the actual DBMS used internally.
- Retrieve and query are based on XPath.



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## What it is *not*?

- It does not provide schema specific access methods.
- It does not provide subsystem specific access or query methods.
- It does not provide binding classes for returned XML documents.
- It does not know any semantics behind XML elements or attributes.
- It is not the ALMA Science Archive (ASA).



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## What will it be?

- It will provide an optimistic document locking mechanism.
- It will provide an interface to persistently store, update, retrieve and query ALMA bulk, monitor and auxiliary data.
- It will provide an interface to register and maintain views using a XML syntax.
- The ASA will be implemented as a special access system.



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# Future Plans

- Integration of the archive with the simulator.
- Setup of two archive servers running DB2, one for Garching, one for Socorro.
- ATF tests of the bulk-store (TBC)
- Development of the data models used in the archive.
- ALMA Archive replication and failover plan.



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# Issues

- Permission, authorization and record locking.
- Exact definition of data format between Correlator and Archive and between Control System and Archive.
- DAO implementation.
- Timeline of MonitorStore and BulkStore implementation.
- Performance tests.
- Deployment of archive components.