XIV ET Symposium - Maastricht May 09, 2024

Introduction to Data Access models in large scientific environments

N&O P@@ - Nando Patat

European Southern Observatory - Observing Programmes Office

The European Southern Observatory

Data Access Policy

The European Southern Observatory

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- It is typically one year (default), but it can be decreased or waived.
- Longer proprietary periods require the approval of the Director General.

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- Before the data become available, the data headers are visible to all users (barring special exceptions).
- The raw data are made available within minutes from the acquisition, and so they may become public at different times.
- Own the case of Public Surveys, the raw data is not covered by any proprietary period, by construction.

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- The abstract of the successful proposal becomes available at the time the proprietary period expires.
- The rest of the proposal remains intellectual property of the proposing team (propositions have been made to change this).

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Target Protection

Sources: ESO Call for Proposals - Data Access Policy

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- This comes with [possibly special] target protections specified in the GTO contracts.

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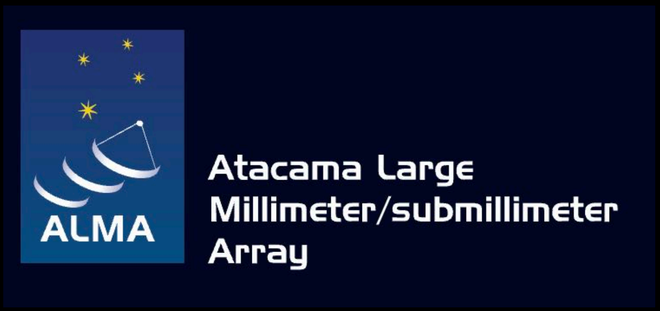
ALMA

Atacama Large Millimeter Array



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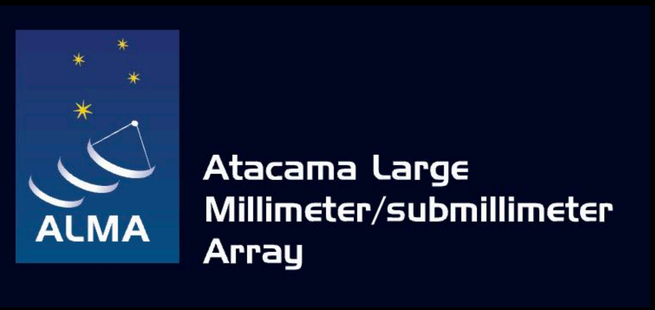

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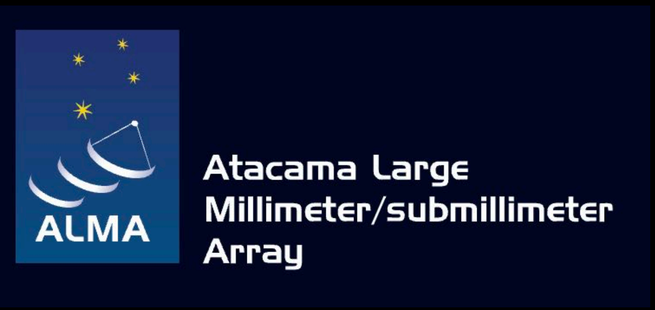

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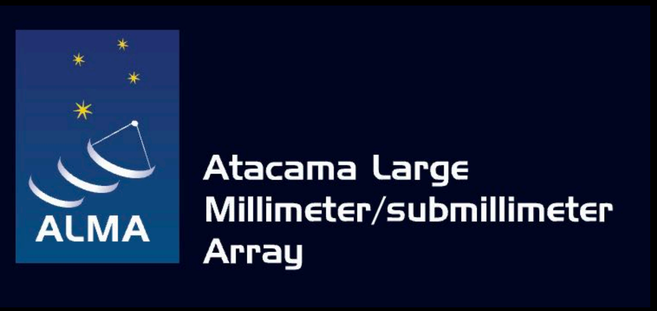

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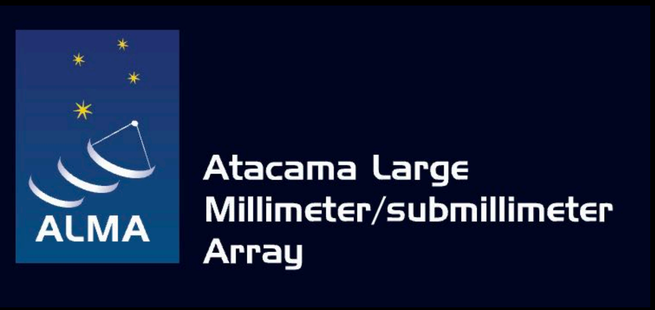
- Observational metadata (frequency, resolution, …) are made available when the observations pass the quality control (QC) check.

ALMA data access/1



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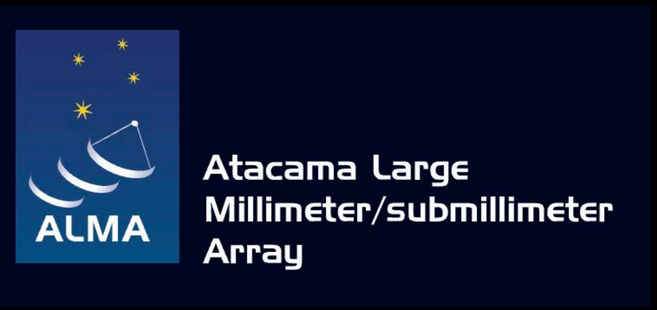

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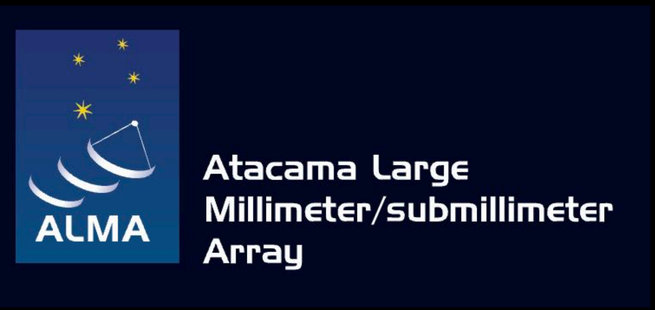

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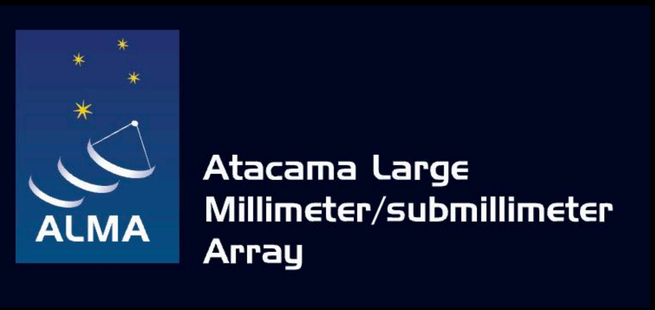

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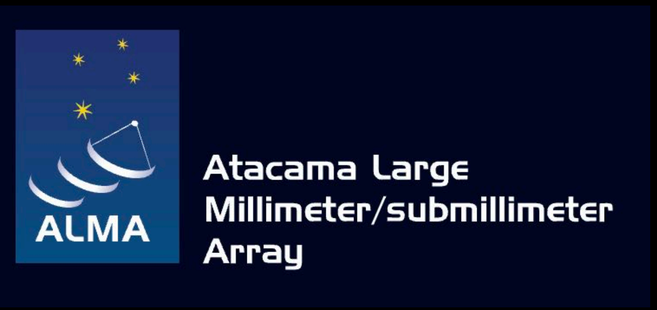

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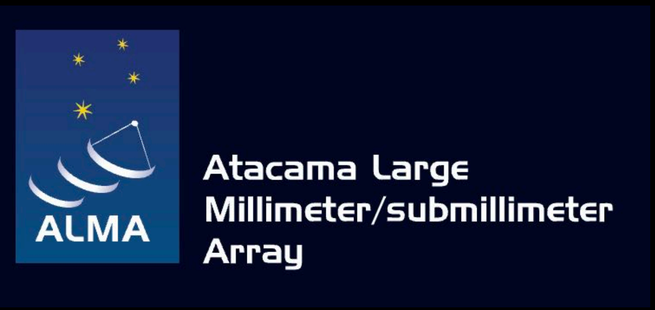

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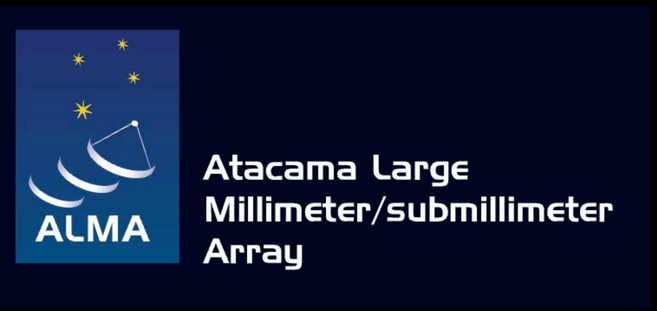

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- For Director Discretionary Time (DDT) proposals the proprietary period is six months.
- The ALMA DG can exceptionally grant a different proprietary period.

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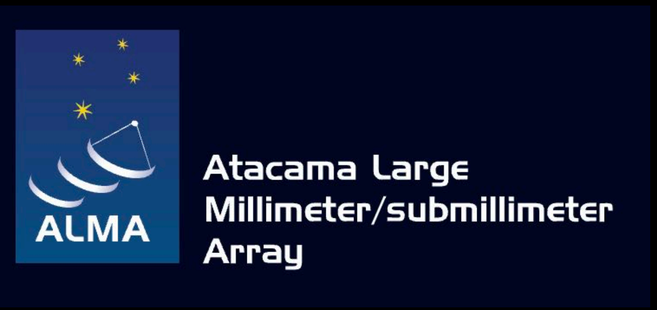

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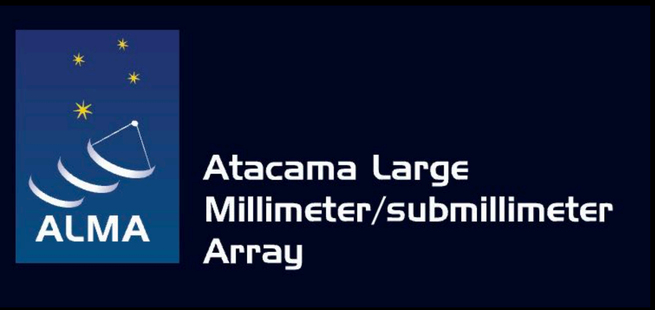

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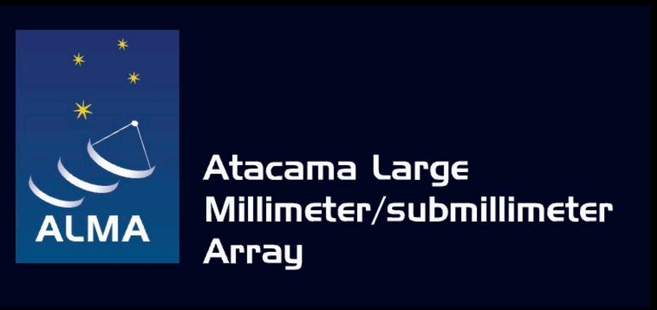

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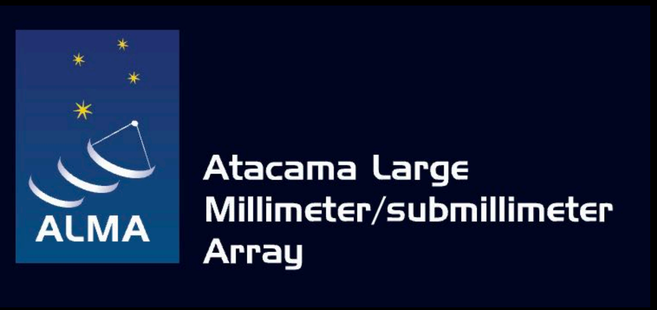

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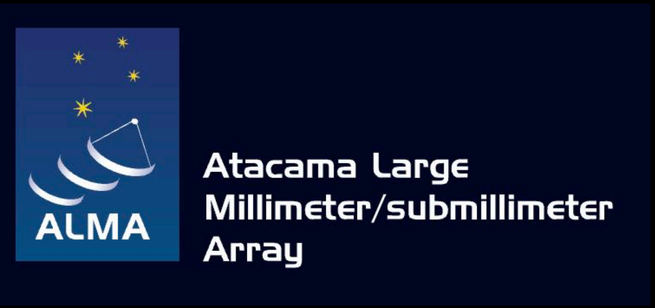

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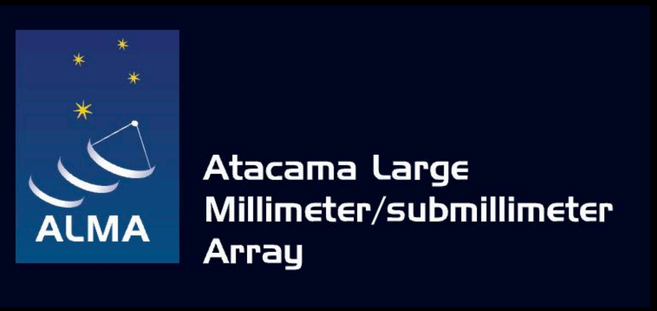

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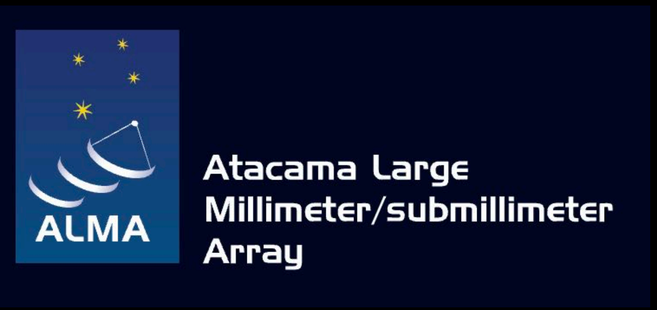
- Programmes reporting data problems are entitled to request extensions of the proprietary period.

ALMA proposals



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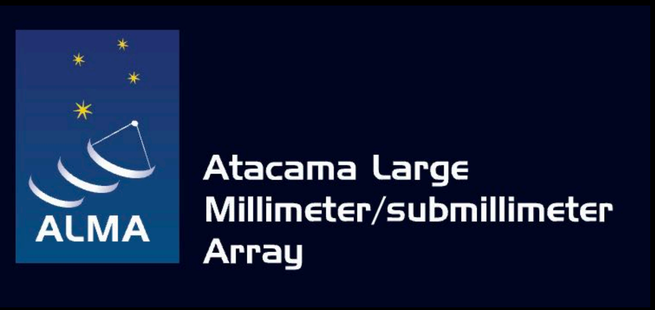

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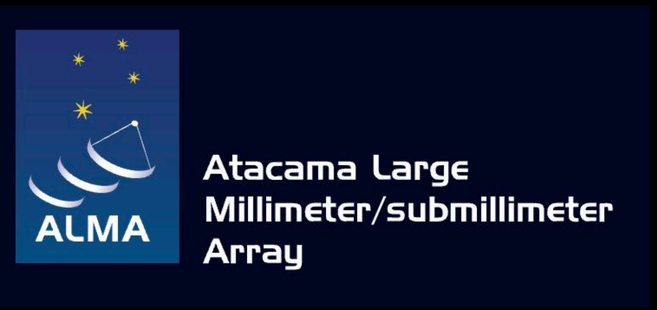

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- There are time quotas for the three parties (US, Europe, East-Asia).

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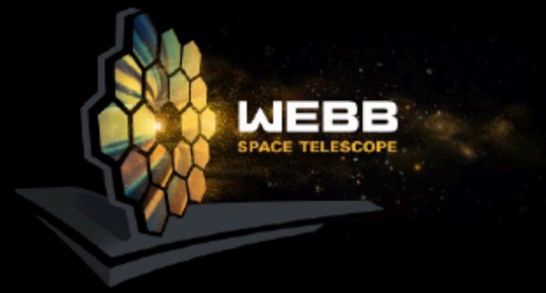
The James Webb Space Telescope



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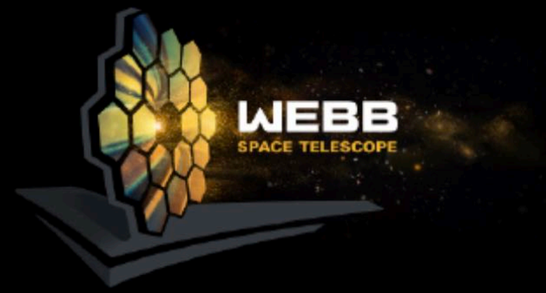

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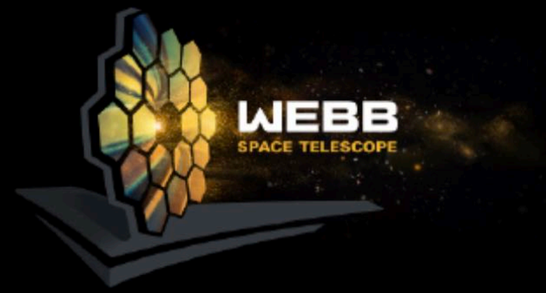

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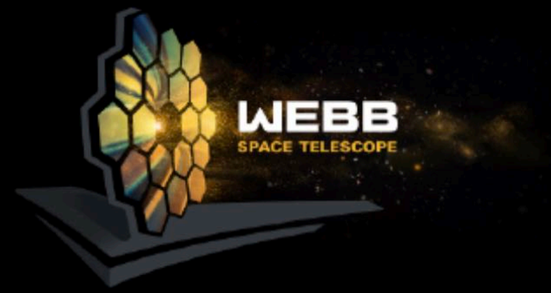

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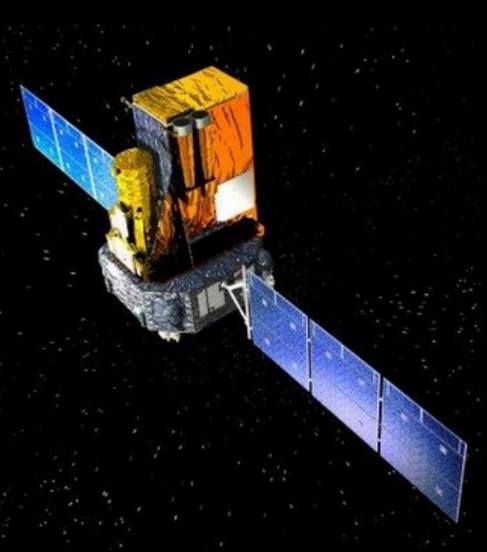

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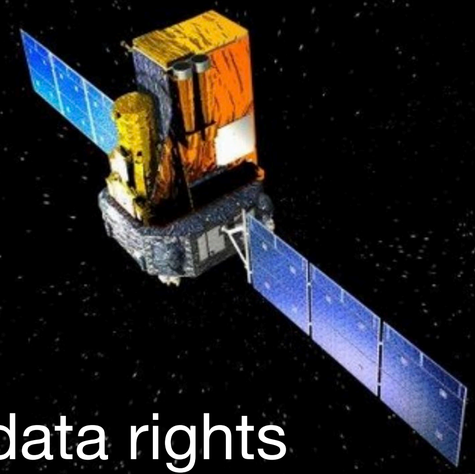

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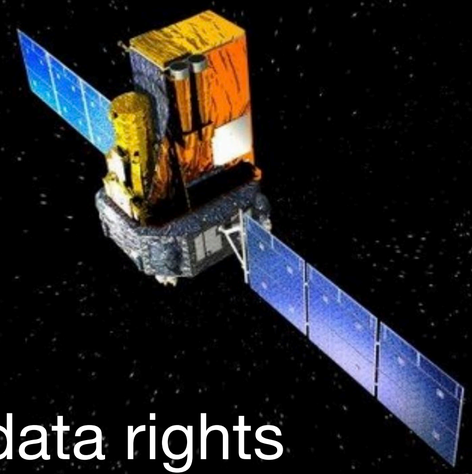

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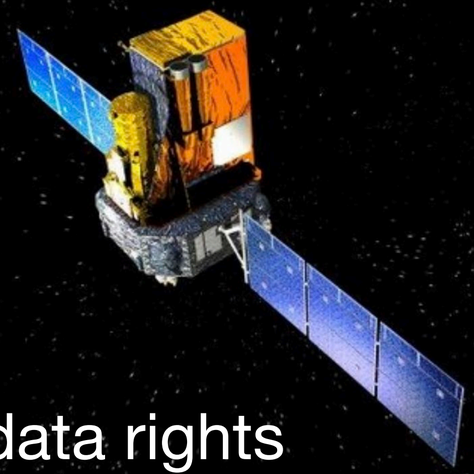

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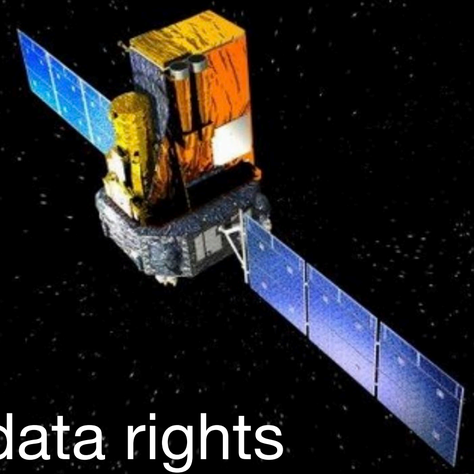

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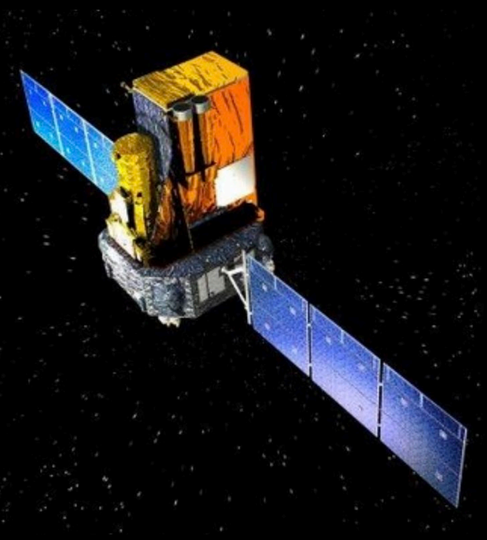

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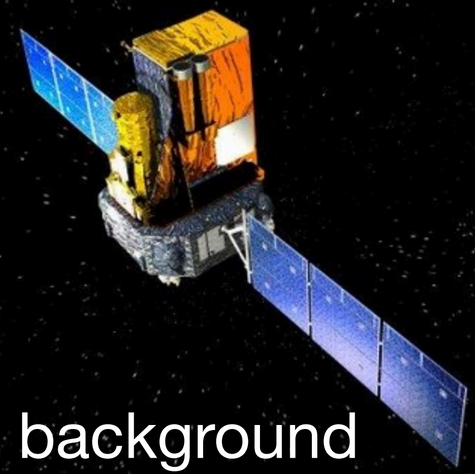

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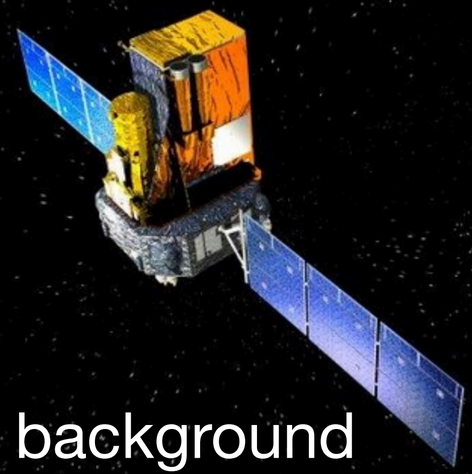

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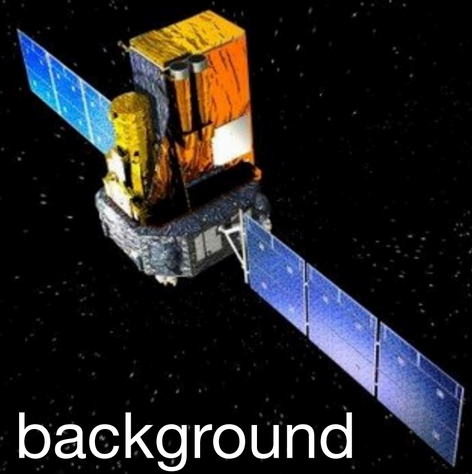
Source: INTEGRAL Policies

ESA Integral/2



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- The rest of the field will be made immediately publicly available.
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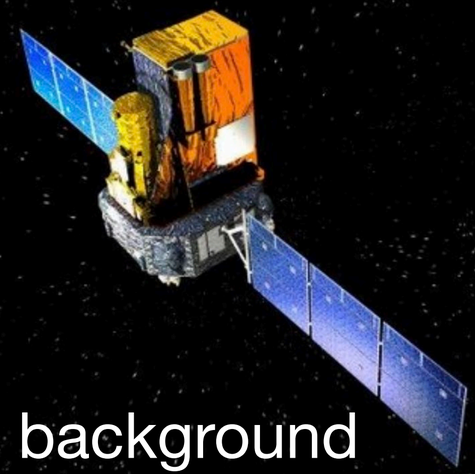
ESA Integral/2



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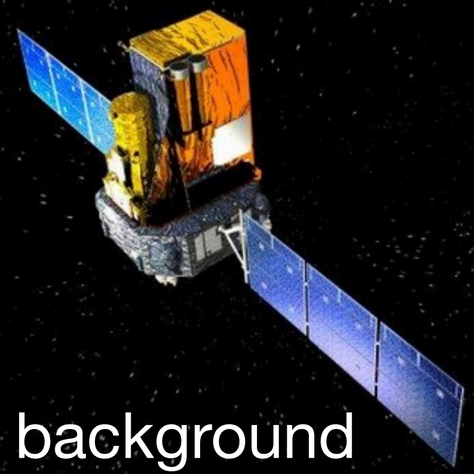

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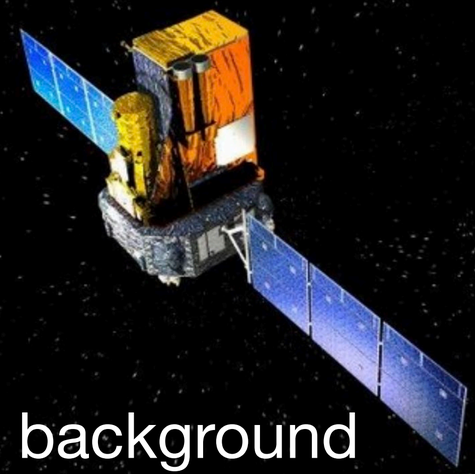

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- Special rights for ToO programmes (too long to be presented here 😊)

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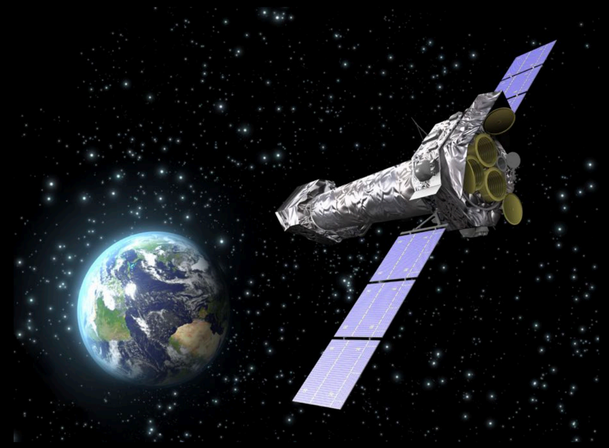
ESA XMM-Newton



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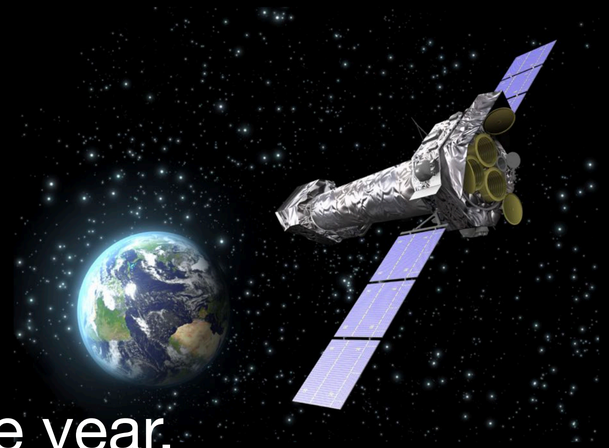

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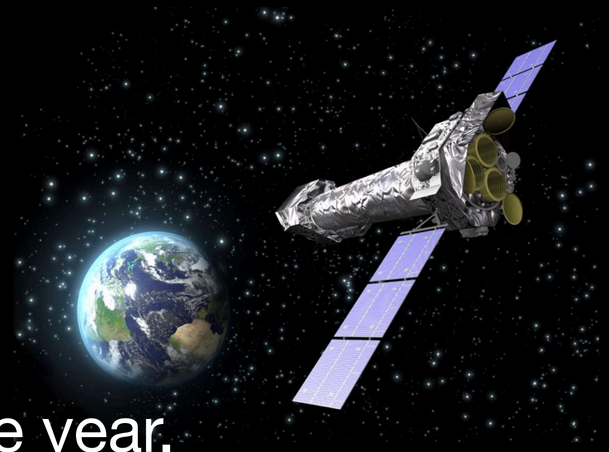

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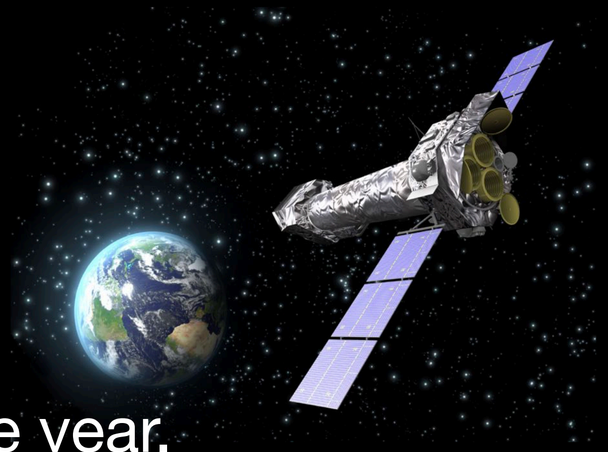

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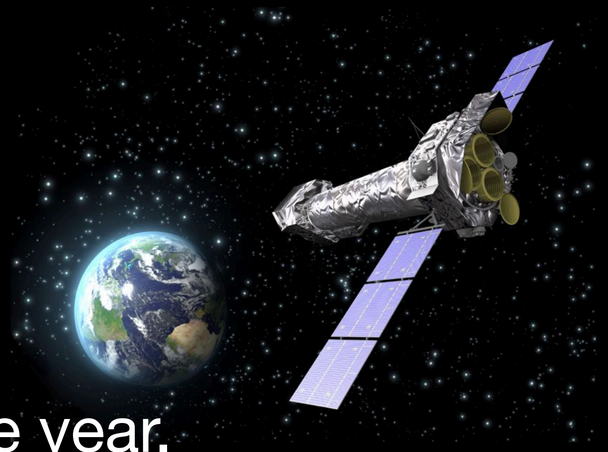

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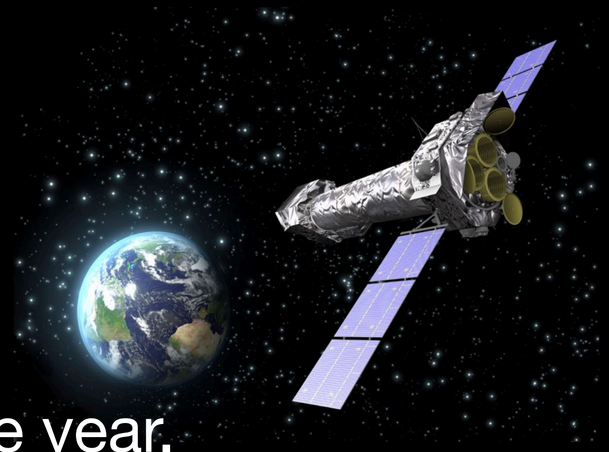

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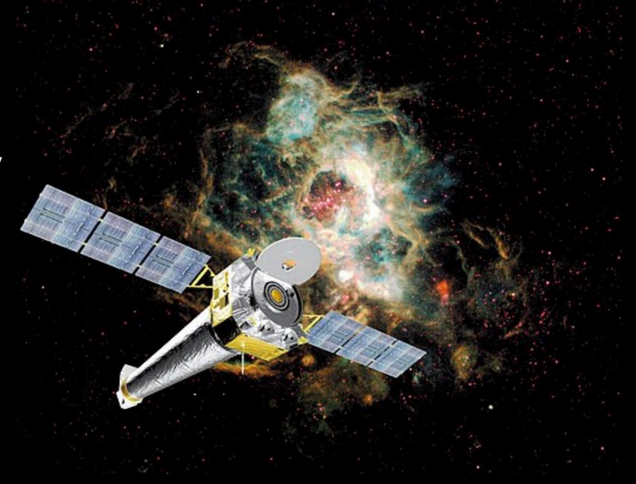
- PIs who wish to obtain data rights for VLP have to request them in the scientific justification of the proposal.

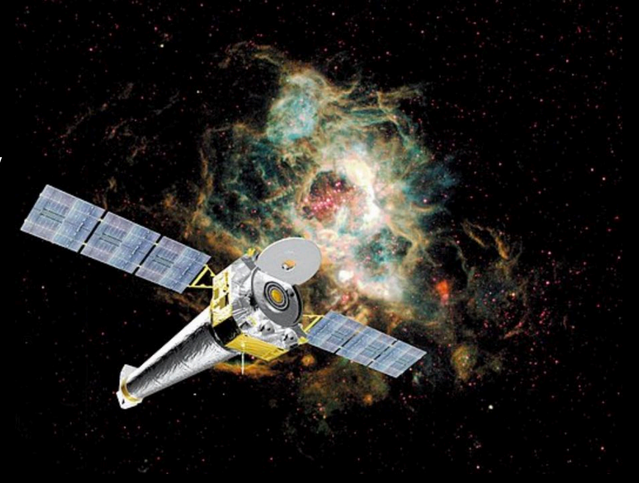
Source: XMM-Newton Data Rights

NASA Chandra X-Ray Observatory



Source: Chandra Exclusive Use Period

NASA Chandra X-Ray Observatory



- The proprietary period used to be 12 months.

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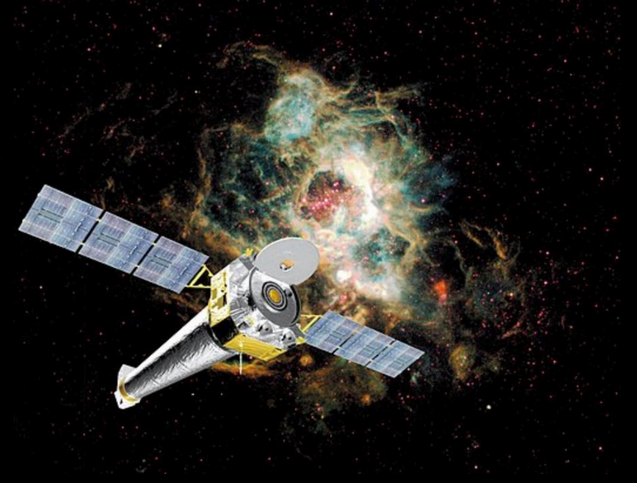

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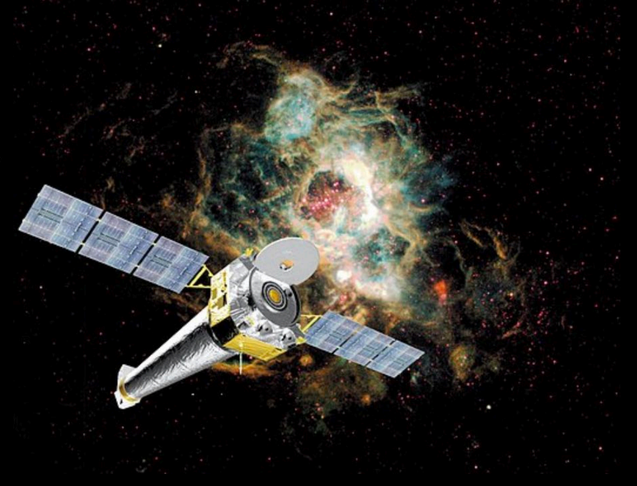

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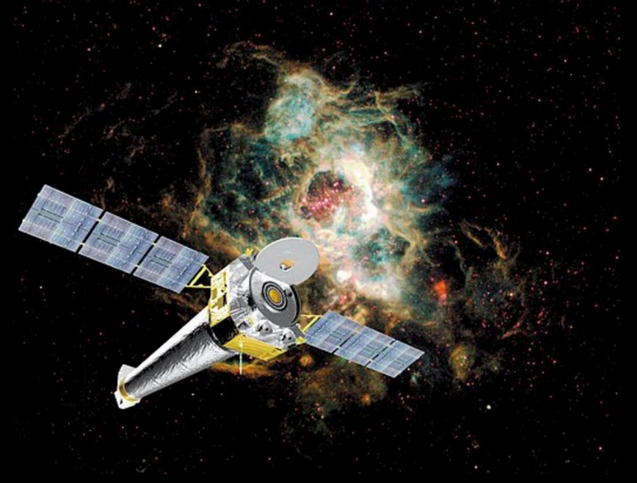

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- Data from ToOs and DDTs may be exclusive for limited periods, no more than 3 moonths.

Source: Chandra Exclusive Use Period

RUBIN-LSST

Source: Rubin Data Rights

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- Generally, the policy looks quite articulated…

Source: Rubin Data Rights

IceCube

Neutrino Observatory

Source: IceCube Governance Document

IceCube
Neutrino Observatory

- There are three ways of accessing data:

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IceCube
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  - It is anticipated that te data will be released within 2 to 3 years after the completed run in which the data are acquired.

Source: IceCube Governance Document

KM3NeT

Cubic Kilometre Neutrino Telescope

KM3NeT *Opens a new window on our universe*

Source: KM3NeT Open Access

KM3NeT

Cubic Kilometre Neutrino Telescope

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- The KM3NeT Collaboration has adopted an open access policy with regulated, free-of-charge access to the infrastructure and its data for scientific purposes.

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KM3NeT

Cubic Kilometre Neutrino Telescope

- The KM3NeT Collaboration has adopted an open access policy with regulated, free-of-charge access to the infrastructure and its data for scientific purposes.
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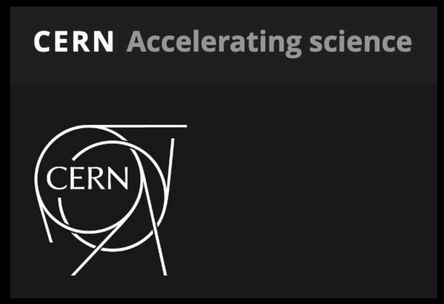
- For this, the Open Science Committee of KM3NeT has been established.

Source: KM3NeT Open Access

CERN/1

Large Hadron Collider



Source: CERN Open Data for LHC

CERN Accelerating science

CERN/1

Large Hadron Collider

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CERN/1

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CERN/1

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- Public releases will occur periodically following an appropriate latency period to allow thorough understanding of the data. Full data sets will be made available at the close of the Collaboration.

Source: CERN Open Data for LHC

CERN Accelerating science

CERN/2

Large Hadron Collider

See also CERN Open Science

CERN/2

Large Hadron Collider

- External authors should be aware that they will not have access to the vast amount pf tacit knowledge built up within the LHC collaborations over decades of design, construction and operation.

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CERN/2

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- To allow external scientists to fully benefit from all the data the collaborations may offer appropriate association programmes.

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CERN/2

Large Hadron Collider

- External authors should be aware that they will not have access to the vast amount pf tacit knowledge built up within the LHC collaborations over decades of design, construction and operation.
- To allow external scientists to fully benefit from all the data the collaborations may offer appropriate association programmes.
- It is not practically possible to make the full raw data-set from the LHC experiments usable in a meaningful way outside the collaborations.

CERN Open Science

See also CERN Open Science

Summary

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Open research data refers to the publishing of the data underpinning scientific research results so that they have no restrictions on their access and usage. Openly sharing data opens it up to inspection and re-use, forms the basis for research verification and reproducibility, and opens up a path to broader collaboration.

UNESCO Open research data definition