

# ALMA Users' Policies



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ALMA is a partnership of ESO (representing its member states), NSF (USA) and NINS (Japan), together with NRC (Canada), NSTC and ASIAA (Taiwan), and KASI (Republic of Korea), in cooperation with the Republic of Chile. The Joint ALMA Observatory is operated by ESO, AUI/NRAO and NAOJ.

## User Support:

For further information or to comment on this document, please contact your regional Helpdesk through the ALMA User Portal at [www.almascience.org](http://www.almascience.org). Helpdesk tickets will be directed to the appropriate ALMA Regional Center at ESO, NAOJ or NRAO.

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## 1 What's New

- Clarification on the responsibility of Principal Investigators (PIs) of Joint Proposals requiring coordinated observations among observatories, and added the period during which Joint Proposals remain active in the ALMA queue (Section 5.4)
- Added new policy regarding ESO Guaranteed Time Observations (Section 5.5)
- Added new policy regarding the PI's responsibility for coordinated observations among observatories (Section 7.6)
- Updated and re-organized section on Changes to ALMA Proposals for clarity (Section 8)
- Updated change request policy to include the requests to observe within the minimum Sun-target separation (Section 8.2.2)
- Added a section on the minimum justification required for major change requests to be self-contained (Section 8.5)
- Added new Appendix D on Other Operational Policies including the Sun-target separation describing the limitations of ALMA when observing close to the Sun

Note that the policy changes regarding change requests and Sun-target separation will be in effect from the date the Call for Proposals (CfP) documentation is released.

## 2 Purpose and Scope

This document defines the long-term core policies for use of the Atacama Large Millimeter/submillimeter Array (ALMA) and ALMA data by the science community. Cycle-dependent implementation parameters and procedures are detailed in the CfP documents for each cycle: the cycle announcement, the Proposer's Guide and the Technical Handbook. In case of conflict between the CfP documents and the Users' Policies, the latter takes precedence, unless explicitly indicated otherwise. All ALMA users are subject to the Users' Policies described here and in the CfP documents. Violation of these policies by a user may result in sanctions against scientific project(s) under evaluation or execution in which they are involved.

### **3 ALMA User Privileges and Registering with ALMA**

Unauthenticated users on the ALMA Science Portal (unregistered users, or users who are registered but have not logged in) have access to ALMA non-proprietary data, documentation, tools, and the ALMA Helpdesk Knowledgebase articles listing solutions to common questions and problems.

Registering with ALMA confers all authenticated users additional privileges such as participating in ALMA proposals, accessing their proprietary data, following up the progress of their projects and accessing the ALMA Helpdesk.

Anyone can register for an ALMA user account. Each user may only have a single ALMA account, which is identified by a unique, user-selected username. This username is permanent: a user may not change their username after completing the registration process. To prevent the accidental creation of two accounts with a different username by a single user, the Science Portal issues a warning if it detects such an attempt.

To register, a user must provide their full name, a valid email address, and the country of their affiliation or their country of residence (for users not affiliated with a scientific institution). The ALMA Observatory has experienced that ALMA official notifications often end up in the spam folder of users' emails that belong to commercial servers, such as Gmail or Yahoo!. The Joint ALMA Observatory (JAO) reserves the right to refuse any complaint about not receiving email notifications from users entering such email addresses in their user profile.

Users are responsible for ensuring that their profile is correct and up to date (e.g., email address, affiliation), both at the time of final proposal submission and throughout the cycle. This is important for proper observing time accounting across the Executives (Section 7.4). If users have more than one affiliation across different Executives, they should use the affiliation where they spend the majority of their time. Users may not submit proposals to the same proposal call using more than one affiliation.

Users are requested to contact ALMA staff through the ALMA Helpdesk if they encounter problems or to deactivate duplicate profiles. It is strongly encouraged to deactivate duplicate profiles.

### **4 User Support**

The ALMA Regional Centers (ARCs) and ARC nodes provide user support. For further information, see the associated [Guides to the ALMA Regional Centers](https://almascience.org/documents-and-tools#arcguides) available at the ALMA Science Portal: <https://almascience.org/documents-and-tools#arcguides>.

The country specified in the user's profile defines which ARC will provide support as follows. Users from a country within the three Executives (East Asia, Europe or North America) are automatically and compulsorily assigned to the ARC of their Executive for support. Users from Taiwan may elect either the EA ARC or the NA ARC as their ARC for support. Users outside the three ALMA Executives, including Chilean users, may choose any Executive ARC as their ARC for support. In the case of Large Programs, the supporting ARC may change from the Principal Investigator (PI) to one of the Co-Principal Investigators (Co-PIs) under mutual agreement between the PI, Co-PIs and the ARC Managers. If a PI changes affiliation between Executives, the supporting ARC for observing programs that have yet to be started will be transferred to the supporting ARC in the new Executive. For programs that have already started, the supporting ARC will remain unchanged.

Questions should be submitted through the [ALMA Helpdesk](#). Information communicated to ALMA staff through the ALMA Helpdesk can only be accessed through a secured database accessible by the user themselves, ARC-affiliated staff or JAO staff.

The ARCs are the interface between ALMA users and the JAO for all communications. Users should always contact the supporting ARC via the ALMA Helpdesk for issues related to any project, including project execution, proposal submissions or change requests.

Only in case of urgent questions regarding the execution of Target of Opportunity (ToO; see the [Principles of the ALMA Proposal Review Process](#) for a definition of proposal types) projects or special observing campaigns (e.g., VLBI) may the PI be in contact with designated JAO staff. In this case, the communication proceeds via the ALMA Helpdesk at a dedicated department.

## 5 ALMA Proposal Preparation and Submission

This section details policies that govern proposal preparation and submission and time assignment.

### 5.1 Eligibility and responsibility

Any registered user may submit ALMA proposals. All registered users agree to act according to the ALMA policies and procedures, as defined in this document and in the [Proposal Call documentation](#). In particular, all users accept the limitations of the observing capabilities and operational restrictions applicable for the cycle for which they submit a proposal.

Each proposal must identify a single individual who will serve as PI. A single individual is understood as a single person. Proposals submitted by a consortium are not permitted. Instead, a person within the consortium should submit the proposal and act as PI and any other consortium members will act as Co-Investigators (Co-Is) or Co-PIs (if the proposal type allows them). The PI (or their designee in some cases - see below) is the official contact between ALMA and the proposing team for all proposal correspondence. The PI of a proposal cannot be changed after proposal submission. Proposals may include any number of Co-Is and, for Large Programs, Co-PIs. Additional rules, described at [http://www.das.uchile.cl/~alma\\_crc/](http://www.das.uchile.cl/~alma_crc/), apply for qualification to use the Chilean share of ALMA time.

The PI(s), Co-PI(s) and all Co-Is are responsible for ensuring that their respective user profiles are correct and up to date (e.g., email address, affiliation), both at the time of final proposal submission and throughout the cycle. The deliberate use of an incorrect affiliation or Executive (Section 3) may result in sanctions against the scientific projects of that user (Section 2). This includes an individual PI using more than one affiliation to submit proposals to the same call, or different PIs from the same team submitting the same proposal using different regional affiliations.

By submitting a proposal, the PI takes full responsibility for its contents. The PI is responsible for ensuring that all Co-Is and Co-PIs have agreed to be included on a proposal. Including an ALMA user as Co-I or Co-PI in a proposal without their consent may lead to the proposal being canceled. Co-I and/or Co-PI names cannot be added to or be withdrawn from the proposal after the proposal deadline.

The PI responsibilities as described above may only be transferred to Co-PIs or Co-Is in the case of emergency (e.g., sickness), status change (e.g., retirement) and approved leave (e.g., parental, military, see Section 9.4.4).

These responsibilities may not be transferred for non-urgent circumstances (e.g., sabbatical or science leave, vacations). Requests to transfer PI responsibility should be sent to the ALMA Helpdesk.

The PI may grant the following privileges on a project basis to one or more ALMA registered users:

- Access to proprietary data (see Section 9.4);
- Triggering of ToO proposals;
- Email notification of state changes to an approved project.

These privileges are granted through the user profile “Project Delegation” interface accessible through the ALMA Science Portal.

PIs, Co-PIs, and Co-Is may all track the progress of their proposals via the Snooping Project Interface (SnooPI) and are entitled to receive help from, or discuss project details with, ARC staff.

## 5.2 Proposal Time Assignment

Proposal types and the policies related to time allocation are described in the [Principles of the ALMA Proposal Review Process](#), available through the ALMA Science Portal. There may be cycle-dependent limits on the time allocated for proposals of different types (e.g., Large Programs). These are described in the [Proposer’s Guide](#) for each cycle.

## 5.3 Proposal submission: Phase 1

Proposals are generated and submitted using the ALMA Observing Tool (ALMA OT). This is known as the “Phase 1” process. The capabilities and most of the observing mode restrictions in the proposal call documentation are built into the ALMA OT. If inconsistencies exist, the Proposer’s Guide takes precedence. If a user finds such an inconsistency, it should be reported through the ALMA Helpdesk. ARC and JAO staff will take the appropriate actions to resolve the inconsistency.

Only proposals that conform to the prescribed format, i.e., that are submitted through the ALMA OT released for the specific cycle, that comply with the advertised technical constraints and restrictions (including proposal anonymity), and that are successfully submitted into the ALMA Archive before the proposal submission deadline will be considered. The deliberate use of incorrect source coordinates in the ALMA OT at Phase 1, for example with the purpose of obscuring the true positions of target sources, may result in sanctions against the affected scientific project (Section 2). The JAO reserves the right to reject proposals that do not comply with the guidelines to anonymize the proposals for the dual-anonymous review process (see the [Proposer’s Guide](#)).

The final proposal submission deadline is firm. It is the responsibility of the PI to ensure that their proposal has been successfully submitted into the ALMA Archive, via the ALMA OT, by the deadline. Proposals submitted after this deadline will not be accepted except for Director’s Discretionary Time (DDT) proposals as described below. A proposal can be submitted any number of times to the ALMA Archive until the submission deadline. When a proposal is submitted multiple times, previous versions are overwritten. Multiple submissions of the same proposal using different regional affiliations (see Sections 5.1 and 7.4) are not allowed (Section 5.1). If such proposals are detected, only the first submitted version will be considered, and the remaining proposals will be ignored.

Proposals accepted in previous cycles for which observations have not been completed by the proposal deadline can be resubmitted for consideration in the current cycle CfP. Grade A (Section 6.1) proposals accepted in a given cycle are automatically carried over to the following cycle and should not be resubmitted in this case (Section 7.3). If the resubmitted proposal is accepted and one or more Science Goals (SGs) were successfully completed (i.e., successful QA2) or started at the time of the Cycle start, the relevant SGs of the resubmitted proposal will be timed out and the observations will continue in the SG from the previous Cycle.

DDT proposals do not have a specific submission deadline and can be submitted at any time. Accepted DDT proposals shall remain in the observing queue for 12 months from the date of proposal acceptance, irrespective of ALMA Cycle. DDT proposals enter the review process as soon as they are submitted. If a change is needed to the proposal, the DDT proposal must be withdrawn and a new proposal submitted.

## **5.4 Joint Proposal submission and responsibility**

Details of the capabilities offered for Joint Proposals between ALMA and partner observatories, restrictions, limitations, and other information are described in the [Proposer's Guide](#).

PIs must submit their Joint Proposals to the observatory that requires the most observing time, which is defined as the Main Observatory. The other requested observatories are then referred to as Partner observatories. In the case of ALMA, which has three different arrays, the relevant observing time is the total amount of time requested for the 12-m Array, or the 7-m Array in case of ACA stand-alone proposals. The same Joint Proposal cannot be submitted to multiple observatories, i.e., a submitted proposal cannot be under review by another observatory. Both ALMA and the partner observatories reserve the right to identify and reject such duplicate submissions.

Joint Proposals must follow the users' policies and CfP guidelines of each of the requested observatories, as well as extra limitations and rules imposed on Joint Proposals by each observatory. Note that the limitations and rules may differ depending on whether an observatory is the Main observatory or the Partner observatory. Joint Proposals will not be accepted as ALMA DDTs.

PIs are responsible for providing the technical justification for each observatory according to the CfP guidelines. All Joint Proposals are assessed technically by each of the requested observatories based on the information provided by the PI and, after acceptance, during the preparation of the observations. Each observatory follows their technical criteria for acceptance. ALMA projects are evaluated based on the technical feasibility of the requested observations, the scheduling feasibility considering the requested array configuration, and any time constraints specified in the proposal.

Major change requests after a Joint Proposal has been accepted have to be submitted to the Main observatory. This includes changes in the time constraints of simultaneous/coordinated observations. ALMA will perform duplication and technical checks which could result in the rejection of the requested change. Minor changes can be submitted to the observatory where the change is required. The definition of a major and minor change request is provided by each observatory and PIs may be asked to submit a major change request if deemed needed. The ALMA policy on change requests is described in Section 8.

Accepted Joint Proposals will remain in the queue for 2 years. This is two cycles for projects submitted to ALMA as Main observatory or two years for projects incoming from partner observatories from the time they enter the ALMA queue.

PIs are responsible for triggering ToO observations at each observatory as well as the coordination of observations among them, following the procedures specified by the individual observatories.

## **5.5 ESO Guaranteed Time Observations**

In accordance with the ALMA Trilateral Agreement and the Principles of the ALMA Development Program, a portion of ESO's share of ALMA observing time can be awarded as Guaranteed Time Observations (GTO) in exchange for contributions to the ALMA Development Program. The award of ESO GTO requires prior approval from the ESO Council and written consent from the other ALMA parties (NINS and NSF).

GTO Teams will submit proposals to the main CfP. GTO proposals are subject to the same restrictions and requirements as non-GTO team proposals, with only two exceptions:

- GTO teams cannot apply for joint proposals and large programmes.
- GTO teams are allowed to take a maximum of 25% of their awarded GTO using ALMA capabilities that do not make use of their own development.

For the Cycle 13 CfP, GTO PIs must submit a Helpdesk ticket to the Project Planning department within 24 hours after the proposal submission deadline, listing the project code and informing ALMA that they wish their proposal to be designated for GTO. Submitted proposals must not identify as GTO in the proposal text, nor include any information that could identify the proposal as GTO, in order to adhere to the dual anonymous policy. The PI of a GTO proposal must be from a European institution at the time of proposals submission.

GTO proposals are evaluated alongside proposals submitted to the main CfP following the procedures in the ALMA Proposal Review Process. A GTO proposal must meet the same minimum ranking threshold as all other proposals to be considered in the queue-building process. The observing queue is initially constructed by selecting the highest-ranked proposals, regardless of proposal type, to fill the available grade A time. If a GTO proposal that met the minimum ranking threshold is not scheduled in this stage, it will be given highest priority in the subsequent queue-building steps. Duplications will be resolved by the Joint ALMA Observatory in accordance with the ALMA Proposal Review Process. Accepted GTO proposals will be assigned priority grade A and the total number of GTO hours accepted by ALMA per cycle shall not exceed 10% of the number of observable hours of the European regional share.

Accepted GTO proposals will be executed at the telescope following the ALMA procedures and policies for accepted proposals in the main CfP, with the exception that they remain in the observing queue for a period of 5 years following the delivery of the capability by the consortium. Delivered GTO data will be subject to the standard proprietary time policies.

## **5.6 Use of Generative Artificial Intelligence (GAI) in Proposal Preparation**

ALMA policy on the acceptable use of GAI in preparing ALMA proposals is described in Appendix C.

# **6 ALMA Proposal Selection**

ALMA proposals other than DDTs are subject to international peer review. Reviewers are automatically selected in the case of distributed peer review or otherwise are appointed by the JAO.

## 6.1 Proposal Assessment

Each proposal is assigned a letter grade as a result of the proposal review process as described in the [Principles of the ALMA Proposal Review Process](#). Grades A, B and C will be assigned based on scientific rank, Executive balance, and scheduling feasibility. Proposal grades indicate the scheduling priority, with proposals with A grades having the highest priority and proposals with C grades having the lowest. All other proposals will not have Phase 2 Scheduling Blocks (SBs) generated (see Section 7.1) and will not be considered for scheduling at the telescope. Accepted Large Programs, DDTs, and Joint Proposals are assigned Grade A priority for observations. For Joint Proposals, this applies whether they are submitted to ALMA as the Main observatory or submitted with ALMA as the Partner observatory.

The ALMA Observatory may declare any type of observation that does not conform to the advertised capabilities technically infeasible at any stage of the Proposal Review Process or during “Phase 2” (see Section 7.1). The final decision on project feasibility will be taken by the Head of the ALMA Department of Science Operations (DSO) based on the advice from a small standing committee consisting of staff at the JAO. PIs of proposals found to be infeasible will be notified by email with a description of the technical issue.

Joint Proposals where ALMA is the Main observatory are rejected in their entirety if deemed technically infeasible by any of the partner observatories. When ALMA is the Partner observatory, the ALMA observations are canceled if any of the involved observatories declares the proposal technically infeasible.

PIs or designated reviewers of proposals that are assessed through the distributed peer review process have to submit their ranks and reviews by the time of the Stage 1 review deadline. If this deadline is not met, the proposal on which the reviewer is acting as the designated reviewer will be rejected (see the [ALMA Proposal Review Process Guidelines](#)).

### 6.1.1 Use of Generative Artificial Intelligence (GAI) in Proposal Review

ALMA policy on the acceptable use of GAI in reviewing ALMA proposals is described in Appendix C.

## 6.2 Outcome

An email notification will be sent to the PIs that will include the complete reviews from the ALMA distributed peer review process or the consensus report from the ALMA panel review, and the assigned letter grade. The outcome of the proposal selection process is final.

In case of questions about details in the ALMA review report(s), the PI may submit a request for clarification through the ALMA Helpdesk. However, in no case will such a request lead to a revision of the grade assigned to the proposal based on the scientific assessment.

## 6.3 Duplications

Duplicate observations of the same location on the sky with similar observing parameters (frequency, angular resolution, sky coverage, and sensitivity) are not permitted unless scientifically justified. Detailed criteria of what constitutes a duplicated observation are specified in Appendix A.

It is the responsibility of the proposers to check the proposed observations against the previously executed programs in the Archive and accepted grade A programs to avoid duplicate observations. It is allowed to propose observations that duplicate previous cycle observations if there is no way to know about them by the

proposal deadline. Any proposed duplicate observation must be justified in the proposal. Duplicate observations not justified in the proposal may be descoped by the JAO (Section 6.4).

Duplicate observations may result among proposals submitted within the same cycle. In general, the higher ranked proposal will be given priority, but regional shares may be considered for closely ranked proposals. The final decision of which proposal is awarded time will be determined when the observing queue is formed, which factors in the share of time available to each region (Section 7.4).

The JAO may consider the amount of time duplicated between the two proposals when determining whether or not a proposal is descoped (Section 6.4). The proposal that stands to lose the proposed duplicate observation will not have access to the data from the other proposal until the proprietary period has expired.

There may be cases where more than one DDT, Time Critical or ToO program is triggered on the same object nearly simultaneously. Should such a situation arise, the Head of ALMA DSO will take the final decision on which program will be observed. Typically, the program with the better grade will have higher priority in the queue. Other factors will also be considered, including the requested observing frequency and the prevalent weather conditions, and which project triggered the observation first. In these cases, all relevant PIs will be notified of their priority in the queue. If multiple proposals trigger on a time-variable object, duplication rules will not apply.

## **6.4 Descoping**

Projects may be partially or fully descoped only for compelling scientific or technical reasons. This includes duplications with existing data or metadata available at the time of proposal deadline or with a higher-ranked project from the same cycle. A project descoping based on duplication will only be made if this is clearly stated in the notification of proposal review results to PIs. Descoping cannot add Science Goals (SGs) to a proposal. The ALMA Observatory will not change parameters for a subset of targets within a SG (e.g., removal of one spectral window or changing the correlator setup or requested resolution and sensitivity for a subset of targets within a SG). If a change request (Section 8) is submitted and in the subsequent duplication checking the observation is then found to duplicate any portion of another project in the observing queue of the current or upcoming cycle or archival observations, then the change request will be denied and the target may be descoped from the project making the change request. The descoping will take place irrespective of the relative rankings of the projects.

# **7 Preparation and Execution of ALMA Observations**

This section details policies that govern the preparation, execution, and quality assessment of approved projects.

## **7.1 Observation preparation: Phase 2**

All Phase 2 material (including Phase 2 SGs and SBs) is generated automatically by the ALMA Observatory, i.e. PIs do not need to submit Phase 2 SGs. PIs should therefore be particularly careful when submitting their Phase 1 proposals to ensure requested observing properties and setups are correct.

In case a PI needs to request a change to a scheduled project (Section 8), they should consult with their supporting ARC via the Helpdesk. There is no deadline by which changes can be requested for scheduled

projects, however it remains the responsibility of the PI to ensure that all user-supplied information is correct by the time a SG is executed (also see Section 8).

ALMA staff may modify scheduled projects for technical reasons (e.g., to improve the efficiency of the observational setup). If such technical modifications (e.g., moving slightly the spectral windows from the band edge) affect the scientific output of the project in any way, the PI will be contacted to approve the changes.

## 7.2 Observation scheduling

Science observations will be scheduled taking into account many factors including, for example, weather, proposal grade and Executive balance (see Section 7.4) and will be executed by ALMA operations staff. The individual SBs of approved projects will remain in the observing queue until one of the following three criteria are met:

1. The data are determined to meet the user specified criteria (see Section 7.3).
2. The potential scheduling period has ended. This is one observing season for grade B and C projects, two observing seasons for grade A projects. For DDT and Joint Proposals where ALMA is partner the period is 12 months (see Section 5.3) and two years (see Section 5.4), respectively.
3. There are no more 12-m Array configurations planned for the rest of the scheduling period that match the SB angular resolution requirements or time constraints have expired.

If a project has been observed for more than twice the originally estimated time, further executions may be deprioritized (see Section 7.3).

## 7.3 Quality Assurance, project completion and carry-over

The quality assurance criteria and outcomes (Pass, Fail, Semi-pass) are described in the Quality Assurance chapter of the [Technical Handbook](#). Data that have no scientific value (e.g., no valid data or cannot be calibrated or exported) are marked QA0 Fail. Data that do not pass the QA0 criteria do not count against project completion or regional time shares, are not available to PIs, and do not show up in archival searches. Data marked as QA0 Semi-pass will not be used in the generation of PI science products and do not count against the PI or regional time shares, but the raw data follow the same access rules and proprietary periods as QA0 Pass data (see Section 9.4.2) and do show up in archival searches.

QA2 is performed on the data that result from all executions of an SB (called an ObsUnitSet or OUS). A special case is constituted by an OUS that has been already observed for more than twice the originally estimated time and still does not pass QA2. In this case, the region where the QA2 assessment was performed will report on how much time was already spent, how much additional time is anticipated to be needed to complete the OUS, and whether the additional time is thought to be useful for that OUS. Based on this, the ARC manager at each region will take the decision to mark the corresponding OUS as QA2 Fail and have it placed back into the observing queue or as QA2 Semi-pass and have the data products delivered to the PI. QA2 Semi-pass data count against regional shares (see Section 7.4). See Section 9.4 for Proprietary periods of delivered data products.

SBs from Grade B and C projects that have not been started or completed by the end of the cycle and have not been accepted as a resubmission in the new cycle will be removed from the observing queue. Grade A projects that have not been completed at the end of the cycle in which they were submitted will be carried

over to the next cycle. At the end of the second cycle in the observing queue, Grade A projects will also be removed from the observing queue unless a resubmission has been accepted for the upcoming cycle.

If not all of the project's OUSs have been delivered as QA2 Pass or QA2 Semi-pass and there is no further opportunity to observe the project in the current cycle (e.g., because the requested configuration is no longer available) or to roll it forward into the next cycle (e.g., resubmission, Grade A), the project is timed out. If there are executions of an SB that are insufficient to pass QA2 at the termination, the QA2 state is changed from QA2 Fail to QA2 Semi-pass and the OUS is delivered to the PI.

## **7.4 Time accounting**

The policies of time accounting are described in the [Principles of the ALMA Proposal Review Process](#) document.

The ALMA Observatory strives to balance the observing time among the regions over two-year periods. Balance across regions is based on the actual execution time of valid 12-m Array observations; i.e., data that are QA0 Pass and have been delivered to PIs (see Section 7.3).

All proposals will have their observing time assigned proportionally to the regions of the PI and Co-PIs (in case of Large Programs). As long as it does not exceed 5% of the total observation time of the cycle, observation time for PIs and Co-PIs unaffiliated with an ALMA partner (Open Skies projects) will be accounted to the regions, proportionally to their regional share; i.e., 10% for Chile, 22.5% for East Asia, and 33.75% for each of Europe and North America. Any additional time required by Open Skies observations will be assigned to North America.

The affiliation in the ALMA user profile at the time of the proposal's final submission is used. For "EA/NA" affiliation selected by PIs and Co-PIs in Taiwan, 50% of the time is accounted to East Asia and 50% to North America.

## **7.5 PI errors**

The ALMA Observatory is not responsible for errors in tuning or pointing (e.g., wrong or outdated ephemerides) due to incorrect information provided by the PI. All ALMA time allocations charged to observations that are flawed due to user error will be charged to the relevant region as if the observation had been completed without errors.

Should a PI realize after observations of their project have been made that, due to an error on their part, the data do not produce the expected scientific outcome, then the observations will not be repeated. If unexecuted parts of the project are found to contain similar (or any other) errors before the project execution has been completed, the PI should immediately submit a change request to correct those errors. This change request will be handled through the standard procedure (see Section 8).

## **7.6 Coordinated observations responsibility**

The PI will be responsible for the coordination of observations that require simultaneous or coordinated observations with other observatories. This includes, but is not limited to, Joint, ToO, and Solar proposals. The need for coordinated observations must be explicitly indicated in the proposal as part of the scientific justification.

The PI should also declare the need for coordinated observations in the project ticket in the ALMA Helpdesk as soon as possible after the ticket is generated. The planning for scheduling of coordinated ALMA observations should be initiated by the PI as soon as the time constraints are known, or well in advance of the triggered observation in the case of ToOs.

The JAO will provide information regarding scheduling feasibility (including technical constraints and weather forecast) before the observations to enable the coordination by the PI with other observatories. ALMA observations that are required to be simultaneous and/or contemporaneous with other observatories cannot be guaranteed, due to variable weather and technical constraints.

## **8 Changes to ALMA Proposals**

### **8.1 Purpose and Scope**

After the proposal deadline, submitted proposals may not be modified prior to the completion of the proposal review process. After the PIs have been notified of the results of the proposal review process, PIs of scheduled proposals may request necessary changes to their project via the ALMA Helpdesk.

The purpose of change requests is to ensure that approved ALMA projects can be executed correctly and effectively, while preserving the scientific objectives and competitive evaluation of the original proposal. Change requests are not a mechanism to revise, enhance, or expand the scientific objectives of an approved proposal.

### **8.2 Classification of Changes**

Changes to approved projects are classified as minor or major, as defined in Appendix B. The classification of a change as minor or major is based on technical criteria (e.g., pointing, frequency setup, angular resolution, observing time, configuration) and determines the required approval process.

#### **8.2.1 Minor Change Requests**

Minor changes are changes that do not alter the approved scientific scope of the project, do not increase the total observing time, and do not require a duplication check, as defined in Appendix B. Minor changes may be requested via the project Helpdesk ticket and do not require submission of a formal change request. They can be implemented during Phase 2 by ARC staff in consultation with the PI.

#### **8.2.2 Major Change Requests**

Major changes require formal evaluation and approval and are allowed only if the change is essential for the science goals of the project. Any major change request by a PI must be made by submitting a Helpdesk ticket to the Proposal Change Requests department and will only be implemented after the approval by the ALMA Observatory.

Major change requests may be motivated by one or more of the following considerations:

- Correction of mistakes or misunderstandings in the original proposal or technical considerations for implementation during Phase 2 (that are initiated by the PI, e.g. to optimize the scientific yield of the observations).

- New information that became available since the original proposal submission and could not reasonably have been anticipated (e.g. new observations including interim observational results of a project, other new information on planned observing targets, or externally-imposed changes to the scheduling of time-coordinated observations at other observatories).
- Scientific need to observe a target within 15 degrees of the Sun.

During the time the change request is under consideration, the affected scheduling blocks will be immediately removed from the observing queue until the change request status is resolved.

The ALMA Observatory's decision on the requested change will be communicated to the PI via the Helpdesk. Approved changes will be implemented by ARC staff in consultation with the PI. Decisions on change requests are final and may not be resubmitted.

### **8.3 Changes not requiring a PI-initiated request**

A PI-initiated change request is not necessary in the following circumstances:

- To correct errors introduced by the ALMA Observatory (either by ALMA staff or ALMA tools) in the generation of a Scheduling Block (SB). Any time spent executing such erroneous SBs will not be charged against the PI observing time.
- To implement technical changes that are initiated and required by the ALMA Observatory during Phase 2 (e.g. changes to observing strategies for a particular observing mode, to increase observing efficiency, or to calibrations needed to reach stated science goals).
- To implement minor changes as listed in Appendix B.

In all cases, consultation with the PI, when required, will be handled via the appropriate ARC.

### **8.4 Changes that are not allowed**

The following changes are not allowed:

- Changes that modify the scientific objectives of the proposal, except as a result of the Proposal Review Process (e.g. a reduction in scope).
- Changes leading to duplications against ALMA proposals in the observing queue of the current or upcoming cycle, or archival observations. This may include changes that would plausibly alter the proposal's competitive evaluation, ranking, or allocation of observing time.
- Changes that ask for capabilities that are not offered; changes must conform to the advertised capabilities and be technically feasible.
- Changes whose main motivation is to increase the observing window of an SB, for example by changing the angular resolution or configuration.

Requests for changes to a Science Goal containing SBs whose observations have already started are strongly discouraged.

### **8.5 Required justification for a Major Change request**

All major change requests must be self-contained. All relevant information for evaluation must be included in the submitted Helpdesk ticket.

At minimum, the justification must contain the following information:

- Clear description of the proposed change and its classification as a major change under Appendix B.
- Explanation of why the change is required, including whether it represents a correction, a response to new information, or a technical optimization necessary to achieve the approved science goals.
- Explicit description of any extra information that has become available since the time of the original proposal, if applicable.
- Full technical justification of the new request, including any specific detailed new calculations supporting the change.

Any figures, tables, or supplementary information provided will be treated with strict confidentiality. Change requests that do not provide sufficient information for evaluation may be rejected on the basis of insufficient justification.

## **8.6 Project withdrawal**

A PI may withdraw an approved project at any time via the Helpdesk, after which no further observations will be acquired for the project.

## 9 ALMA Data Delivery and Data Rights

This section details policies that govern ALMA data, including proprietary times.

### 9.1 Data property

All data taken by ALMA are jointly owned by the Parties<sup>1</sup>. Ownership shall not impact the free access to the data for use by observers and the astronomical community, according to the policies described in this document.

### 9.2 ALMA proposal data

Proposal data include the Phase 1 materials submitted by the PI (proposal title, abstract, scientific and technical justification, and the names, institutions, and regions of PIs Co-PIs and Co-Is); the proposal grades and reviews; and the Phase 2 content prior to execution, including target positions, frequency settings, and spectral window parameters.

For proposals assigned grade A or B, the ALMA project code, proposal title, abstract, names of the PI, Co-PIs and Co-Is, Executive, and proposal science category will be made public on the [“Highest Priority Projects” page](#) on the ALMA Science Portal soon after PIs are informed of the outcome of the proposal review process. For proposals assigned grade C, the corresponding information will be made public when the first data pass QA0.

After the proposal review process is completed, ALMA will also publish on the [“Duplicate Observations” page](#) of the Science Portal additional metadata (for example the source positions, observation frequencies, and integration times) of all SBs of Grade A proposals from both active projects in the current cycle queue as well as those that will enter the observing queue in the following cycle.

Metadata for all SBs (assigned Grade A, B or C) will be made public in the ALMA Science Archive as soon as the first data of such SBs are archived.

The metadata for any unaccepted proposals or unobserved Grade B and C proposals (or parts thereof) will remain confidential.

The scientific and technical justification, figures, references, and review rankings and reviews are never made public for any proposal.

### 9.3 Observational metadata

Observational metadata include the positional and sky coverage information, frequency settings, frequency coverage and resolution, angular resolution, *uv*-coverage, antenna lists, source and calibrator names, polarization, observation date(s) and start/end times, time on source and sampling rate, weather information and PI name. Observational metadata will be made available without restrictions when an observation that passes QA0 is archived, regardless of its grade.

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<sup>1</sup> The ‘Parties’ are defined in the ALMA Trilateral Agreement as the NSF (National Science Foundation of the United States), ESO (European Organisation for Astronomical Research in the Southern Hemisphere) and NINS (National Institutes of Natural Sciences of Japan).

## 9.4 Observational data access and proprietary periods

Observational data include visibility data and all resulting data products.

ALMA staff will have access to observational data at all times, as necessary e.g. for technical analysis, performance tuning and supporting the PI and any ALMA users delegated by the PI. In addition, ALMA staff members formally assigned to perform project QA2 can download and reduce project data for this purpose.

### 9.4.1 Proprietary period and QA2 access

All ObsUnitSets (OUSs) that do not fail QA2 (see Section 7.3) will be made available to the PI and any ALMA users delegated by the PI (see Section 5.1). These data (i.e. QA2 Pass and QA2 Semi-pass) are subject to a 12-month proprietary period that begins when the ARC sends an email notification to the PI that the QA2 data are available. For DDT projects, there is no proprietary period. In exceptional circumstances, and if requested by the PI at the time of proposal submission, the ALMA Director may grant a proprietary period of up to 6 months.

PIs cannot voluntarily waive the proprietary period in their proposal. ALMA will not reduce or remove the proprietary period of any approved proposal that requests it.

Successful proposers will have exclusive access to their project's observational data for the proprietary period, after which the data will become publicly accessible.

Until the proprietary period expires, ALMA staff may not disclose or scientifically use ALMA observational data from projects for which they are not PI, including projects they support, without explicit recorded permission from the PI. Similarly, ALMA staff performing QA2 may not disclose any intermediate or final data reduction products of PI observations to anyone outside the ALMA/ARC network, including the project PI, Co-PIs and Co-Is, prior to data delivery. Any exceptions to this policy must be approved by the ARC Managers and informed to the Head of DSO.

Once a proprietary period expires and ALMA observational data becomes public, a new proprietary period on that data will only be granted in the specific case of an approved re-submitted MOUS (Section 5.3) that has previously been delivered (Section 7.3). A new proprietary period will not be granted in any other circumstances, including in the case of a QA3 (see Sections 9.4.3 and 9.4.4).

### 9.4.2 QA0 raw data access

PIs of active projects can request the release of any QA0 Pass or QA0 Semi-pass raw data before the full QA2-assured products are delivered. Such requests should be made via the Science Portal. The proprietary period for all data of the MOUS, including data not yet taken as well as the QA2 products that will subsequently be created, begins after the raw data from the first Execution Block (EB) in the MOUS have been made available to the PI. This applies even if the observations continue in the next cycle as a result of a carry-over (in the case of A-rank projects) or a resubmission. Helpdesk tickets requesting assistance with raw data will be given a lower priority than other submitted tickets although will still adhere to the standard operating procedures and service level agreements of the ALMA Helpdesk (i.e. PIs will still get a reply within 48 hours but may not have the issue Resolved in that time). The delivery of Calibrated Measurement Sets by the ARCs will not be possible until the data have undergone the formal QA2 process. The release of raw data to the PIs will have no implications for the QA2 process. QA2 data will continue to be delivered to all PIs, irrespective of whether

they chose to download the raw data. The proprietary time on data that have been requested at QA0 will not be changed if the associated MOUS goes on to fail QA2, i.e. the proprietary time will still be 12 months (or 0-6 months for DDT projects) from the time the QA0 data were made available. Note that the QA0-access policy supersedes the previous stale data and early release of ToO and time critical data policies.

### **9.4.3 Problems with delivered data: QA3**

If a user finds a significant problem with the calibration or imaging data products, a Helpdesk ticket should be submitted to their supporting ARC. The ALMA Observatory will then determine if the observations or data processing need to be repeated to correct the problem (QA3). If necessary, active SBs that might be affected by the reported issue and have not yet been observed will be put on hold while the investigation takes place. Archival access may be suspended until the corrected data have been re-delivered. For issues that have little to no impact to the affected projects' Science Goals, the solution or work-around will be communicated to the user.

If all or part of the project needs to be re-observed, the relevant SBs will be placed back in the observing queue with the original priority. If necessary, corrected Phase 2 SBs will be produced and resubmitted. Re-observation will only be possible within the same Cycle, except for grade-A proposals that are carried over to one subsequent Cycle. Any exceptions to this policy will be considered on a case-by-case basis at the discretion of the Head of DSO.

When re-observed, the data will be processed through QA2 and re-delivered to the PI with a new proprietary period according to Section 9.4.4. If the data need to be reprocessed rather than re-observed, these corrected data will replace the original data in the Archive.

QA3 of manually processed Early Science data (Cycles 0, 1 and 2) will be conducted on a best efforts basis, subject to availability of resources.

If a problem reported by a user is determined to impact other projects, the ALMA Observatory will proactively contact the relevant PIs to describe the issues. In some cases, this may result in the QA3 of the data of other users and in such cases the policies in this section will then also be applicable to the affected projects.

### **9.4.4 Extension of Proprietary periods**

#### **Proprietary period extension for data that undergoes QA3**

MOUSs that are still under proprietary time and need to have their data corrected due to a QA3 (see Section 9.4.3), but which do not need to be re-observed, will have their proprietary period extended as follows if the proposal Science Goals are affected:

- Problems reported within two months of original delivery: the full proprietary period (defined in Section 9.4.1) will be reset starting from the delivery date of the corrected data.
- Problems reported more than two months from the original delivery: the proprietary period will be extended by an amount equal to the greater of i) the elapsed time between the posting of the reporting Helpdesk ticket and the delivery date of the corrected data or ii) two months.
- Problems that the ALMA Observatory determines require a QA3 for a large number of PIs: the full proprietary period (defined in Section 9.4.1) will be reset starting from the delivery date of the

corrected data. This applies to problems reported at any time during the original proprietary period but it does not apply once data has become public (Section 9.4.1).

For MOUSs that have problems reported after the proprietary period has expired: the affected PIs will receive the corrected data when available and such data will also replace the faulty products in the Archive. In this case, a new proprietary period will not be granted (Section 9.4.1).

### **Proprietary period extension requests from PIs for extenuating circumstances**

Requests from PIs for extensions of the proprietary period will be considered for extenuating circumstances outside the control of the PI, e.g. parental/personal leave, long-term sick leave, or military service. Vacation, home, science, and sabbatical leaves will not be considered for an extension. The proprietary period of Large Programs will not be extended in the cases of leave described above.

PIs may submit the request through the Helpdesk and justify that the approved leave takes significant time away from the office. Decisions on such requests for an extension of the proprietary period are made by the Head of DSO. The length of the extension will be considered on a case-by-case basis based on the conditions of the approved leave. For these cases, the extension must be requested at least one month before the end of the proprietary period. An extension will not be granted if requested within 30 days before the data are scheduled to become public.

## **9.5 Calibration data**

Standard calibration data are observations of calibrators needed to perform the correct calibration of the scientific data. They include the bandpass, amplitude, phase, check source, and polarization observations taken during PI observations, as well as grid survey observations run by the JAO.

All standard calibration data that have passed QA2, whether generated from JAO or PI observations, have no proprietary period. PIs may request the delivery of such data to the corresponding ARC via the Helpdesk. Such requests will be handled by each ARC on a best-effort basis.

## **9.6 ALMA Test and Science Verification Data**

Data obtained during commissioning, engineering tests or Science Verification (SV) activities will be used to characterize and develop the ALMA system, including hardware and software. The data will be released through the Science Portal, Science Archive, ALMA technical memos, or publications. Any ALMA registered user may then obtain such data through the Science Portal or by opening a Helpdesk ticket at the corresponding ARC. Users are advised to carefully check the characteristics of a given offered dataset at the Science Portal before requesting the raw data since often test data do not fulfil the requirements of scientific data regarding calibration.

Science Verification projects may not duplicate an approved PI or DDT proposal that is in the observing queue or during their proprietary period. If a PI proposal is approved that duplicates an SV observation planned after the proposal submission deadline, the corresponding SV project must be changed to avoid duplication. DDT proposals that duplicate an SV observation already planned and announced on the Science Portal before the submission of the former will be rejected.

## 10 Confidentiality of Information

Through the ALMA OT, any authenticated ALMA user has access to the following information: first and last name, affiliation, Executive, and ALMA username of registered users. All other ALMA user information is available to only the user themselves and ARC-affiliated or JAO staff.

ALMA records the IP address and browser information of registered users logging in to the Science Portal. This information is used exclusively to track download parameters such as download speed and file size.

ALMA also records the IP address and browser information of authenticated and non-authenticated Helpdesk users. Access to this information, as well as to the contents of Helpdesk tickets, is restricted to authorized ALMA staff.

Helpdesk Knowledgebase articles will not contain any information which would identify users or reveal confidential proposal information.

## 11 Publication of ALMA Results

The following statement must be included in the acknowledgment of papers that use ALMA data:

*"This paper makes use of the following ALMA data: ADS/JAO.ALMA#YYYY.C.NNNNN.Z. ALMA is a partnership of ESO (representing its member states), NSF (USA) and NINS (Japan), together with NRC (Canada), NSTC and ASIAA (Taiwan), and KASI (Republic of Korea), in cooperation with the Republic of Chile. The Joint ALMA Observatory is operated by ESO, AUI/NRAO and NAOJ."*

In this statement, YYYY.C.NNNNN.Z must be replaced by the actual project code. Here, "YYYY" denotes the year when the CfP for a given cycle is issued, "C" identifies the cycle ID during that year<sup>2</sup>, "NNNNN" is a five-digit running number and "Z" denotes the proposal type (**S**: Regular, **V**: VLBI, **L**: Large, **T**: ToO, **P**: Phased Array). A similar nomenclature is used for test observations, where "Z" denotes the type of dataset (**E**: Engineering, **CSV**: Commissioning and Science Verification, **CAL**: Calibration, **SV**: Science Verification).

In addition, publications from NA authors must include the standard NRAO acknowledgement:

*"The National Radio Astronomy Observatory is a facility of the National Science Foundation operated under cooperative agreement by Associated Universities, Inc."*

### 11.1 Naming convention of sources discovered by ALMA

If referring to sources detected for the first time in ALMA fields one should follow the naming convention **ALMA JHHMMSS.s+/-DDMMSS** (approved by IAU "Clearing House" of Commission 5 Working Group on Designations), where J indicates J2000 coordinates.

The coordinates should be truncated according to the precision in the position of the source. Typically, this should be approximately 1/10th of the size of the synthesized beam used in the discovery observation (see

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<sup>2</sup> The "C" is used to identify both regular cycles (using a single digit), and DDT cycles (using a single letter). C=1 for the first regular cycle of the considered year, C=2 for the second (if any), etc. C=A for the DDT cycle coinciding with the regular C=1 observation period, C=B for the DDT cycle corresponding to the C=2 observing period, and so on.

the ALMA Technical Handbook for details on ALMA astrometric precision). For example, for a 1" beam, declination should be given to a precision of 0.1" of arc and RA to 0.01s of time (ALMA JHHMMSS.ss+/-DDMMSS.s), for a 0.1" beam declination to 0.01" of arc and RA to 0.001s of time (ALMA JHHMMSS.sss+/-DDMMSS.ss).

## **12 Final Provisions**

Any situation that is unforeseen or for which ambiguity exists in this Users' Policies document or in the associated CfP material will be referred to the ALMA Director, whose decision is final.

Policy changes will be published in the Users' Policy document at the CfP for each cycle and proposers should review the policies with each proposing cycle. Such changes may also apply to programs currently in the observing queue if needed for operational reasons, in which case this will be stated in the documentation.

ALMA reserves the right to change the policies defined in this document at any time. In exceptional cases where changes in policy are applied during an observing cycle, the changes will be communicated via the ALMA Science Portal.

## Appendix A Definition of a Duplicate Observation

A proposed observation is considered a duplicate of another observation if *all* of the following conditions are met:

### Target field location

- For single-field interferometry, the proposed position coincides within the half-power beam width of the other observation. Moving objects (e.g., Solar System objects) will be identified by name.
- For mosaic observations, more than 50% of the proposed pointings are within the half power beam width area covered by the other observation.

### Angular Resolution

- The proposed angular resolution differs by a factor of  $\leq 2$  from the other observation.

### Spectral windows

- Continuum: The requested sensitivity (rms) for the aggregate bandwidth is better by a factor of  $\leq 2$  from the other observation and the requested frequency is within a factor of 1.3.  
– or –
- Spectral line: If the central frequency in any requested correlator window observed in Frequency Division Mode (FDM) mode is encompassed by the other observation observed in FDM mode and the sensitivity per spectral channel, after smoothing to the same spectral resolution, is better by a factor of  $\leq 2$ .

To be considered a “continuum” observation, the proposed correlator setup must contain 2 or more windows with a bandwidth  $> 1.8$  GHz.

Solar observations will not be checked for duplications.

## Appendix B Definition of a Major Change Request

A change to an approved project that is initiated by the PI at Phase 2 is considered a major change if one or more of the following conditions are met for the requested change compared to what was submitted at Phase 1:

### Target field location

- A shift in position of any pointing of more than 0.5 times the primary beam size.

### Spectral windows

- A change to the central sky frequency of any spectral window that is more than 20% of the bandwidth of that spectral window.
- An increase in the bandwidth or spectral resolution (i.e. finer spectral resolution) of any spectral window.

### Angular Resolution

- A change in angular resolution that is more than 10% of the requested angular resolution.
- Any change in angular resolution that would change the configuration from C-6 or smaller to long baseline (C-7 to C-10).

### Observing time

- A change that results in an increase in observing time.

### Time constraints

- A change to any time window that has already started.
- A change to a time window that is larger than the duration of the time window itself (e.g., moving or extending a one-day window by more than one day).

### Other

- Any change of target for a triggered, but not observed, SB from a ToO project.
- Any change that is not explicitly listed as a minor change below must be submitted as a major change request (e.g. changes to the default OT-generated observing parameters or observing strategies, including requests for exceptions to the operational policies described in Appendix D).

Any changes made are considered cumulative, e.g. a +2" change to the field center coordinate RA and a +1" change in the pointing offset RA will result in a +3" overall change in pointing position. Similarly, a -10 km/s change to the source radial velocity and a -5 km/s shift to a spectral window central frequency will result in an overall change of -15 km/s.

Changes that request capabilities that are not offered or that duplicate another observation (Appendix A) are not allowed.

Minor changes do not change the project scientific scope, increase the observing time, or require a duplication check. Minor changes initiated by the PI that can be made at Phase 2 by ARC staff without submission of a change request are as follows:

- Shifts in position of any pointing that are less than 0.5 times the primary beam size.
- Changes to the central sky frequency of any spectral window that are up to 20% of the bandwidth of that spectral window.
- Changes in angular resolution that are less than 10% of the requested angular resolution and that do not change the configuration to a long baseline configuration or increase the observing time.
- Changes to the source radial velocity, redshift or Doppler type that do not change the central sky frequency of any spectral window by more than 20% of the bandwidth of that spectral window.
- Changes to time windows that are smaller than the duration of the time window itself, before the time window has started (e.g., moving or extending a one-week time window by one day).
- Trivial changes that do not imply a scientific impact, such as changing the velocity reference frame from LSR to Heliocentric.

## **Appendix C Use of Generative Artificial Intelligence in Proposal Preparation and Review**

The Atacama Large Millimeter/submillimeter Array (ALMA) is committed to maintaining the integrity, fairness, and confidentiality of its proposal submission and review processes. As Generative Artificial Intelligence (GAI) tools, such as large language models (e.g., ChatGPT), become increasingly accessible, it is essential to provide clear guidelines on their responsible use. This policy outlines the acceptable use of GAI in preparing and reviewing ALMA proposals while balancing their potential benefits with the need to preserve human judgment, scientific expertise, and confidentiality.

### **Proposal preparation**

Investigators may use GAI to assist with proposal preparation tasks, such as refining and organizing text. Investigators are fully responsible for:

- Ensuring that any content produced with GAI is scientifically accurate, original, and free from plagiarism.
- Properly citing all original source material referenced in content created using GAI, in accordance with academic standards.

### **Proposal review**

To maintain fairness, confidentiality, and reliability in the review process, reviewers must adhere to the following guidelines:

- Reviewers have sole responsibility for assessing proposals. GAI tools must not be used to recommend rankings, assess scientific strengths or weaknesses, or perform any evaluative tasks.
- Proposals assigned to reviewers are strictly confidential. Reviewers and mentors must not input any part of their assigned proposals into GAI or machine learning tools.
- GAI may only be used to correct grammar or improve readability of their reviews. If GAI tools are used, reviewers must ensure that no proposal-specific or sensitive information entered into a GAI tool. Reviewers are fully responsible for ensuring their reviews are accurate and comply with ALMA's guidelines.

### **Compliance**

All investigators, reviewers, and mentors must adhere to this policy. Non-compliance, including inappropriate use of GAI, failure to ensure the originality of proposal submissions, or unauthorized sharing of content, may result in disqualification of the individual's proposal. This policy will be reviewed and updated regularly to reflect advancements in GAI technology and evolving best practices.

## Appendix D Other Operational Policies

### D.1 Sun-target separation

ALMA observations of non-Solar targets are not allowed when the target is within 15 degrees of the Sun, to prevent degradation of the calibration on some or all antennas. Any exceptions to this policy must be requested via the Major Change Request procedure (Section 8 and Appendix B) and will only be considered when all the following four criteria are met:

1. There is a strong justification for why the observation must take place when the science target is closer than 15 degrees from the Sun. It should not be possible to carry out an equivalent observation when the science target is farther than 15 degrees from the Sun.
2. There is strong justification that the science goals can be met even under degraded amplitude calibration conditions.
3. All other normal observing feasibility criteria are met, such as suitable calibrators are available.

For any approved exception to this policy, any observations attempted when the science target is closer than 15 degrees from the Sun and processing of any data obtained from such observations will be carried out on a best efforts basis; if data quality is affected by proximity to the Sun, observations will not be repeated. Data that requires manual processing will be delivered as QA2 Semi-pass. Data will otherwise be subject to normal Quality Assurance procedures and policies (Section 7.3). PIs may request QA0 raw access per normal policy (Section 9.4.2) but should be aware that this data may have significantly poorer than nominal amplitude calibration accuracy and should be used for interpretation of scientific results with caution.



The Atacama Large Millimeter/submillimeter Array (ALMA), an international astronomy facility, is a partnership of the European Organisation for Astronomical Research in the Southern Hemisphere (ESO), the U.S. National Science Foundation (NSF) and the National Institutes of Natural Sciences (NINS) of Japan in cooperation with the Republic of Chile.

ALMA is funded by ESO on behalf of its Member States, by NSF in cooperation with the National Research Council of Canada (NRC) and the National Science and Technology Council (NSTC) in Taiwan and by NINS in cooperation with the Academia Sinica (AS) in Taiwan and the Korea Astronomy and Space Science Institute (KASI).

ALMA construction and operations are led by ESO on behalf of its Member States; by the National Radio Astronomy Observatory (NRAO), managed by Associated Universities, Inc. (AUI), on behalf of North America; and by the National Astronomical Observatory of Japan (NAOJ) on behalf of East Asia. The Joint ALMA Observatory (JAO) provides the unified leadership and management of the construction, commissioning and operation of ALMA.

