

The ALMA Cycle 11 Proposal Process

Cycle 11 was another highly competitive period for ALMA observing time. A total of 1712 proposals were submitted, collectively requesting 31,608 hours on the 12-m Array, which is the highest amount of time ever requested in a single cycle. This resulted in an oversubscription rate of 7.4, meaning many excellent proposals could not be scheduled due to the overwhelming demand.

As in recent cycles, Large Programs were reviewed by the ALMA Proposal Review Committee (APRC) along with external reviewers. The APRC provides recommendations to the ALMA Director on which Large Programs to schedule. Other proposals were reviewed asynchronously through a distributed peer review process, which produced a scientifically ranked list. Detailed information on the review process can be found in the [ALMA Proposer's Guide](#).

The review process relies heavily on the engagement of the ALMA user community. The APRC, comprising 18 voting members and a chair, met for three hours daily over five days to review 42 proposals. In addition, 82 external reviewers contributed their expertise. The distributed peer review process involved 1095 reviewers, who provided nearly 17,000 individual reviews and rankings. ALMA deeply appreciates the dedication of the reviewers, whose efforts are essential in shaping the science program for the upcoming cycle.

Comments on the review process

ALMA is committed to ensuring that the proposal review process remains fair and impartial. Based on feedback from reviewers and proposers, we continue to implement improvements to the process.

During the review process, nearly 600 comments were submitted to ALMA. The Proposal Handling Team (PHT) promptly addressed these during Stage 2, contacting reviewers as needed to resolve any questions that might affect evaluations. Ten reviews were found to be associated with the wrong proposals and were corrected. We appreciate the prompt action of both the reviewers who reported the issues and those who made the necessary corrections.

In addition, ALMA has developed software tools to cross-check reviews with other reviews and proposal content. While most reviewers conducted their evaluations diligently, there were a few cases where reviews were overly generic, identical across multiple proposals, or simply summaries without an assessment of the scientific merit. In 13 such instances, the reviewers' own proposals were disqualified due to non-compliance. Also, 12 proposals were disqualified for significant violations of the dual anonymous guidelines, such as the use of first-person references to their own work, which could compromise anonymity. Several other proposals received warnings for minor infractions.

To prevent these issues in the future, Cycle 12 documentation will include additional examples of common errors and guidance on how to comply with the guidelines. We urge users to carefully follow the proposal guidelines to avoid these mistakes.

Creating the observing queue

Once the scientific rankings are established, ALMA assembles the observing queue. This process balances several factors beyond the scientific rankings, including the prioritized recommendations for Large Programs, time distribution across ALMA's Executives, the array configuration schedule, requested receiver bands, and historical weather patterns. As a result, proposals with lower scientific rankings may be selected over higher-ranked ones if they meet specific requirements—such as undersubscribed array configurations, receiver bands, or right ascensions.

For Cycle 11, a total of 245 high-priority proposals (Grades A and B) were scheduled, accounting for 4107 hours on the 12-m Array, 2204 hours on the 7-m Array, and 2203 hours on the Total Power Array. This included four Large Programs recommended by the APRC.

Grade A and B programs are selected under the assumption of favorable weather conditions. To ensure flexibility, additional proposals were approved with Grade C priority. These are included as backup to fill any gaps, in case the observation efficiency exceeds initial expectations or if weather conditions differ from those assumed for Grade A and B scheduling. While Executive balance is considered among the Grade C programs, priority is given to ensuring a sufficient number of backup projects. Observations in Bands 9 and 10 — including those within Grade C — will have priority over lower-frequency Bands (1–8) when conditions are optimal for high-frequency observations.

Results

The list of accepted Grade A and B proposals is available on the [ALMA Science Portal](#) and is summarized in Tables 1–3 and Figures 1–4. Table 1 provides selection statistics based on regional affiliation of the Principal Investigator (PI), while Table 2 presents the results by scientific category. Table 3 highlights acceptance rates for different types of proposals.

Overall, 14% of proposals (roughly 1 in 7) were awarded a priority Grade A or B. This acceptance rate was consistent across the five science categories. Target of Opportunity (ToO) and Very Long Baseline Interferometry (VLBI) proposals had the highest success rates, with 30% of these proposals receiving Grades A or B. Additionally, there was a notable 60% increase in the number of submitted Joint Proposals compared to Cycle 10. Eleven joint proposals were accepted for an acceptance rate of 16%, slightly above the overall average.

Figures 2–4 show the distribution of time for Grade A and B proposals across the 12-m, 7-m, and Total Power Arrays, grouped by region, scientific category, and receiver band. Bands 6 and 7 remain the most heavily subscribed. Cycle 11 marked the first complete cycle for Band 1 observations, which accounted for nearly 13% of the total Grade A and B time on the 12-m Array. The success rate of proposals was largely independent of the requested observing time, with proposals requesting over 25 hours showing similar acceptance rates to those requesting fewer hours.

Acknowledgements

The ALMA Proposal Handling Teams thanks the 18 members of the ALMA Proposal Review Committee (APRC) and the 82 external Science Assessors for reviewing the Large Programs. The APRC was chaired by Dr. David Wilner and included the following panel members:

Claudia Cicone	Shinya Komugi	Hsi-An Pan	Tomoko Suzuki
Maria Drozdovskaya	Shuo Kong	Celine Peroux	Kei Tanaka
Jorge González López	Hauyu Baobab Liu	Marc Postman	Ka Tat Wong
Thomas Haworth	Satoshi Ohashi	David Rosario	
Meredith Hughes	Keiichi Ohnaka	Giovanni Rosotti	

We also extend our gratitude to the 1095 reviewers who participated in the distributed peer review process, whose contributions were essential to the success of the Cycle 11 proposal call.

Table 1 – Submitted and accepted proposals by region

	Chile (CL)	East Asia (EA)	Europe (EU)	North America (NA)	Open Skies	Total
Submitted Proposals						
Number of proposals	121	394	632	498	67	1712
12-m Array time (hours)	2346	6646	11946	9752	919	31608
7-m Array time (hours)	1161	3261	4912	3502	158	12994
Total Power Array time (hours)	564	3136	2489	2585	154	8928
Subscription rate						
12-m Array (4300 h offered)	5.5	6.9	8.2	6.7	N/A	7.4
7-m Array time (4300 h offered)	2.7	3.4	3.4	2.4	N/A	3.0
Total Power Array (4300 h offered)	1.3	3.2	1.7	1.8	N/A	2.1
Grade A & B projects						
Number of proposals	24	62	73	81	4	245
12-m Array time (hours)	402	915	1375	1366	50	4107
7-m Array time (hours)	44	606	778	776	0	2204
Total Power Array time (hours)	0	906	408	890	0	2203
Grade C projects						
Number of proposals	24	68	97	68	7	264
12-m Array time (hours)	366	811	1274	1228	24	3703
7-m Array time (hours)	285	1275	1796	416	139	3910
Total Power Array time (hours)	59	1099	503	236	135	2032

Table 2 – Submitted and accepted proposals by science category*

	Category 1	Category 2	Category 3	Category 4	Category 5	Total
Submitted Proposals						
Number of proposals	364	385	467	385	111	1712
12-m Array time (hours)	8731	7329	7356	6731	1461	31608
7-m Array time (hours)	1338	5108	5544	610	395	12994
Total Power Array time (hours)	0	3304	5519	45	60	8928
Grade A & B projects						
Number of proposals	49	50	78	52	16	245
12-m Array time (hours)	1274	796	1059	799	180	4107
7-m Array time (hours)	51	776	1234	126	17	2204
Total Power Array time (hours)	0	536	1627	20	20	2203
Grade C projects						
Number of proposals	58	70	76	50	10	264
12-m Array time (hours)	1198	886	762	776	81	3703
7-m Array time (hours)	587	1516	1523	167	118	3910
Total Power Array time (hours)	0	610	1409	12	0	2032

* The five ALMA science categories are (1) Cosmology and the high redshift universe, (2) Galaxies and galactic nuclei, (3) ISM, star formation and astrochemistry, (4) Circumstellar disks, exoplanets and the solar system, and (5) Stellar evolution and the Sun.

Table 3: Acceptance rates for various proposal types

Proposal Type	Number Submitted	Number Grade A & B	Acceptance Rate
<i>Overall</i>			
All	1712	245	14%
Morita Array	354	56	16%
Morita Array (standalone)	87	17	20%
<i>By science category</i>			
Category 1	364	49	13%
Category 2	385	50	13%
Category 3	467	78	17%
Category 4	385	52	14%
Category 5	111	16	14%
<i>Selected proposal types</i>			
Large Programs	42	4	10%
Joint Proposals	67	11	16%
Target of Opportunity	33	10	30%
VLBI	23	7	30%

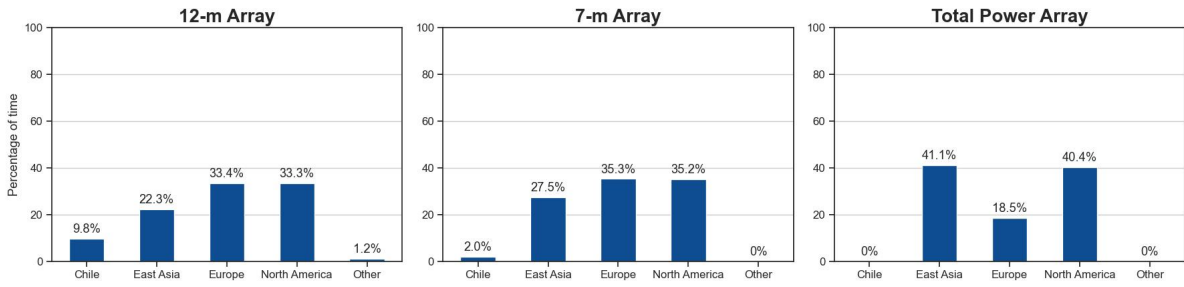


Figure 1 – Distribution of estimated execution time for Grade A and B projects by region.

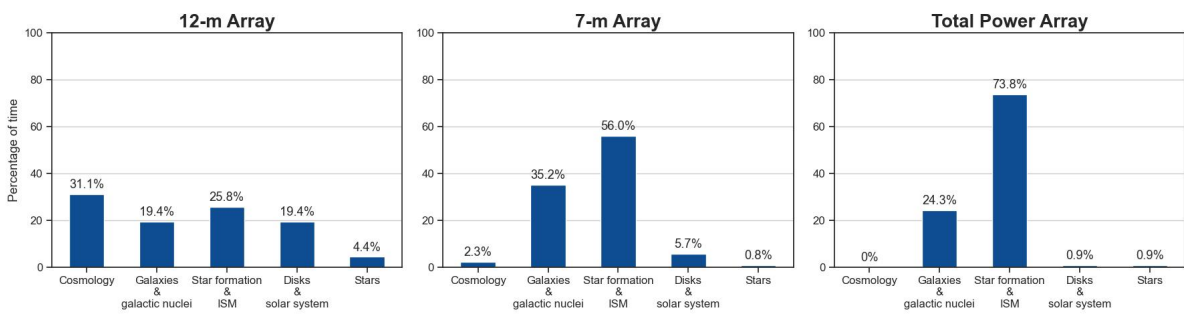


Figure 2 – Distribution of estimated execution time for Grade A and B projects by scientific category.

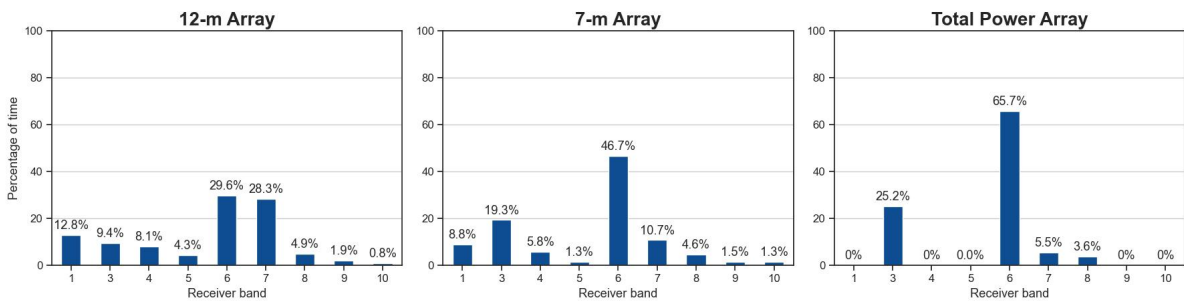


Figure 3 – Distribution of estimated execution time for Grade A and B projects by receiver band.

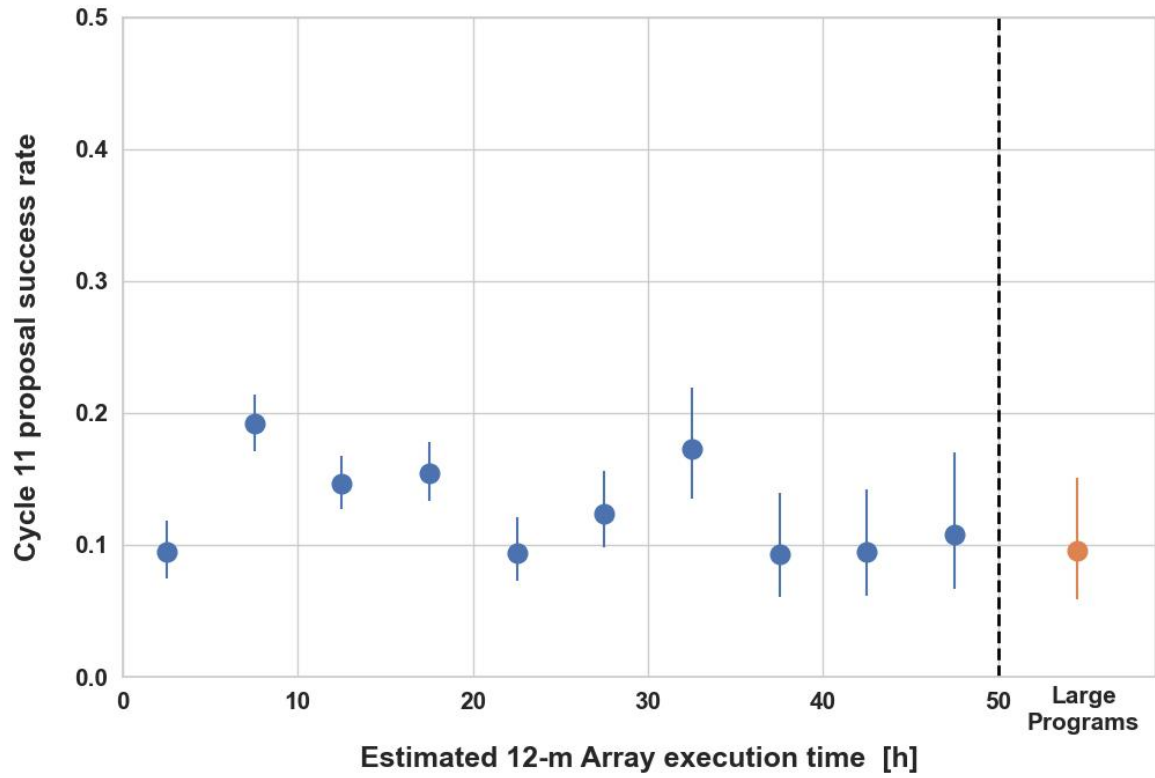


Figure 4 – Fraction of proposals assigned priority Grade A and B as a function of the estimated 12-m Array execution time. The error bars are 1 sigma uncertainties from Poisson statistics.