

Call for Proposals on IRAM Telescopes

The deadline for submission of observing proposals on IRAM telescopes, both the NOEMA interferometer and the 30-meter telescope, covering the scheduling period 1 June to 30 November 2016, is

17 March 2016, 17:00 CET (UT + 1 hour)

IRAM proposals should be submitted through the *Proposal Management System* (PMS) at URL:

<http://pms.iram.fr/pms/>

PMS provides on-screen instructions to guide the proposal editor through the submission process. The procedure consists in filling in an on-line form with the details of the requested observations (source coordinates, receiver setups, array configuration, etc.), and to upload a single file in pdf format containing the scientific and technical justification. A L^AT_EX template is provided from the PMS submission page for your convenience. You may customize this file, or generate the pdf file with another software, but in any case **proposers should respect the following requirements**: (1) A normal proposal may contain up to two pages of text describing the scientific aims (4 pages for a Large Program, see below) (2) you may add up to two pages of figures, tables, and references, and (3) the font size must be 11pt or larger.

For a proposal to be complete, PMS requires that all authors validate their identity (e-mail and affiliation) and their participation to the proposal before the deadline. The editor of the proposal will have to send invitations to all authors through PMS by clicking an *invitation* button. We urge proposal editors to invite the authors through PMS well before the deadline to give them enough time to validate their identity before the deadline.

PMS will be opened for submission of new proposals about three weeks before the deadline¹. Proposers may modify their proposals in PMS until the deadline, in which case the *submit* button must be activated again after modification of the proposal. Please avoid last minute submissions when the network could be congested. If you experience any difficulty with the submission process in PMS, please contact us at pms-feedback@iram.fr for help. You may also use this e-mail address for bug reports, general questions and comments.

Detailed information on time estimates, special observing modes, technical information and references for both the NOEMA interferometer and the 30m telescope can be found on the IRAM web site, under the **science users** tab:

<http://www.iram-institute.org/>

Proposers are encouraged to use the CDS (*Centre des Données astronomiques de Strasbourg*) to check whether a source has already been observed at the 30m telescope or the PdB interferometer. We recommend to use the **VizieR Catalogue Service** to query² the header data of IRAM observations obtained since September 2009 for the 30m, and since 1990 for the PdBI.

We encourage the submission of **Large Observing Programs** that require more than 100 hours of observing time and that address strategic scientific issues, using the 30m telescope. You may consult the **Large Program Policy** on the IRAM web site for further details. **Due to the large investment in technical time necessary in the current extension phase of the NOEMA project, Large Programs will not be accepted for the interferometer under the current Call for Proposals.**

Publications resulting from NOEMA or 30m telescope observations should acknowledge this in a footnote “Based on observations carried out under project number XYYZZ [XXX-YY] with the IRAM NOEMA Interferometer [30m telescope]. IRAM is supported by INSU/CNRS (France), MPG (Germany) and IGN (Spain)”. IRAM welcomes an acknowledgment to the IRAM staff for help provided during the observations and for data reduction.

N. Billot & J.M. Winters

¹PMS remains open at all times for submission of Director Discretionary Time proposals.

²search *IRAM* as catalogue name.

The 30-meter Telescope

Proposals for two instruments will be considered for the coming semester (1 June to 30 November 2016):

1. the **E**ight **M**ixer **R**eceiver EMIR, consisting of dual-polarization receivers, and operating in the four bands at 3, 2, 1.3, and 0.9 mm wavelengths,
2. and the 9 pixel dual-polarization heterodyne receiver array, HERA, operating at 1.3 mm wavelength.

Both instruments can be connected to a suite of narrow- and broad-band (up to 32 GHz) spectrometers with resolutions ranging from 3.3 kHz to 2 MHz. A detailed account of the current observatory capabilities and other organisational considerations can be found in a separate document on the **Call for Proposals** and the **30m** web pages.

During the summer semester emphasis will be put on observations at the longer wavelengths. Observations at wavelengths shorter than 1.3 mm will be scheduled toward the end of the semester in pools to optimize observations according to weather conditions. Proposers are requested to use the EMIR and HERA time estimators which are available online via the **IRAM 30m webpage**.

What is new?

End of November 2015, the 3 mm band of EMIR has been equipped with new, NOEMA-type mixers and an ortho-mode transducer to split the two polarisations received via only one horn. The new mixers and optics extend the available frequency range down to 73 GHz (center of the outer IF sub-band of 4 GHz bandwidth), which is accessible by all our backends. Frequencies below 81 GHz are now reached with excellent receiver temperatures and well determined image band rejections. This frequency range opens the way for observations of bright cooling lines of redshifted quasars and to access a number of important chemical tracers in local molecular clouds like the low lying rotational transitions of deuterated species, e.g. DCO⁺, DCN, DC₃N, DNC, N₂D⁺, CH₃OD.

During the same intervention, the 2 mm band of EMIR has been equipped with new, NOEMA-type mixers. Image band rejections are now back to their nominal values at -13 dB.

NIKA2, the second generation New-IRAM-KID-Array, has been successfully installed at the telescope in October 2015. NIKA2 is a dual-band wide field-of-view camera operating simultaneously at 150 and 260 GHz. It is based on large arrays of superconducting Kinetic Inductance Detectors (KID) operated at a temperature of 100mK. The camera has been built by an international consortium, led by the *Institut Néel* (Grenoble, France). Testing and commissioning of NIKA2 is underway and has shown promising performances. It is planned to open NIKA2 to all IRAM users for the winter semester 2016/17.

N. Billot & C. Kramer

The NOEMA Interferometer

Major ground work is foreseen on Plateau de Bure between May and August to build new bypass tracks that will greatly facilitate moving antennas to the hall in the future, when more antennas will become available. This will however reduce our ability to observe in the standard configurations during the first three months of the summer semester.

Commissioning of antenna 8 will start in May and the antenna will possibly join the array during the summer. In this Call for Proposals for the summer semester, proposers are however asked to assume that six antennas will be available during the antenna maintenance period and seven antennas at the end of the semester, when the 7C configuration will be scheduled. Should antenna 8 become available for regular observations during the summer semester, observing times of accepted proposals will be adjusted accordingly. We plan a shortened antenna maintenance period starting around mid of May and to schedule essentially the 7D6 configuration (see below) between June and October.

Each NOEMA antenna is currently equipped with dual polarization receivers operating in the 3 mm, 2 mm, 1.3 mm atmospheric windows. The frequency ranges are 80 GHz to 116 GHz for band 1, 130 GHz to 177 GHz for band 2, 202 to 267 GHz for band 3. Proposals requesting band 4 will not be accepted under this *Call for Proposals*.

At any given time, one frequency band can be observed, with the two orthogonal polarizations available. Each polarization delivers a 3.6 GHz bandwidth which coincide in the sky frequency scale.

The wide-band correlator WideX gives access to the two 3.6 GHz wide IF bands simultaneously providing a fixed spectral resolution of 2 MHz over the full bandwidth for up to eight antennas. The narrow-band correlator accepts two signals of 1 GHz bandwidth, that must be selected within the 3.6 GHz delivered by the receiver. Spectral resolutions range from 40kHz to 2.5MHz in eight independent spectral units. The narrow-band correlator can process the signals of up to six antennas. Therefore, 6-antenna subsets of each of the configurations have been defined for high spectral resolution work (see table below).

We strongly encourage observers to submit proposals that can be executed during summer operating conditions. To keep the procedure as simple as possible, we ask you to put emphasis on:

- observations requesting the use of the 3 mm and 2 mm receivers
- circumpolar sources or sources transiting at night between June and September,
- observations that qualify for the 7D6, 7C, and 7C6 configurations

Name	Stations						
7D6	W08	W05	E04	N11	N07	N02	—
7C	W12	W09	E18	E12	E04	N17	N11
7C6	W12	W09	—	E12	E04	N17	N11

Due to the large investment in technical time necessary in the current extension phase of the NOEMA project, *Large Programs* will not be accepted for the interferometer under this *Call for Proposals*.

A detailed description of the current NOEMA capabilities and organisational considerations are given in a separate document on the [Call for Proposals](#) pages and on the [NOEMA Documentation web pages](#).

Jan Martin WINTERS

Guidelines for Observing Time at the IRAM Facilities

Considering the much increased time requests for the IRAM telescopes over the last few years, taking into account the early science operations of ALMA, and considering the substantial new investments of the IRAM partners into upgrading the Plateau de Bure interferometer into NOEMA, the following guidelines for allocation of telescope time have been put in place:

1. In deciding on proposal rankings the Program Committee is requested to take into account the publication record and impact of the proposers with previous IRAM telescope time allocations. The proposers should also note in their application whether the same or a similar proposal was or is intended to be submitted to ALMA, in which case a special justification is required why IRAM telescope time is needed.
2. Up to 15% of the available observing time may be invested into projects submitted by PIs affiliated with institutes in non-IRAM partner countries.
3. The fraction of time for Large Programs (a detailed description is given on the [IRAM website](#)) can be expanded to a total of about 50% of the scheduled telescope time on either of the IRAM telescopes. In order to ensure proper management of these programs in close interaction with the IRAM observatory, including the provision of suitable archive data products for the general scientific community, only programs led by a PI located in one of the IRAM partner countries will be considered.
4. Once accepted, PIs of Large Programs cannot submit other proposals (as PI) during the active time of the Large Program.

Finally, we inform that the IRAM Partners will reserve time for mutually agreed “Observatory Programs” once the NOEMA upgrade is sufficiently advanced.

Data policy

The IRAM data policy is as follows:

- IRAM organizes storage of raw and online calibrated data for the 30m telescope and storage of raw data for NOEMA/PdB on unlimited time scales.
- Header information of PdB/NOEMA observations later than 1991 can be found in the CDS (*Centre de Données astronomiques de Strasbourg*):
<http://vizier.u-strasbg.fr/viz-bin/VizieR-3?-source=B/iram/pdbi>
- Header information of 30m observations later than 2009 can be found in the CDS:
<http://vizier.u-strasbg.fr/viz-bin/VizieR-3?-source=B/iram/30m>
- Programs are distinguished between normal programs and large programs. Data from large programs are public in reduced format after an 18 month proprietary period (counting from the end of the last semester of observations) and are accessible through the [IRAM Large Program Archive](#) at <http://www.iram-institute.org/EN/content-page-240-7-158-240-0-0.html>
- Data from normal programs so far had indefinite proprietary time. Following a decision of the IRAM partners in June 2015 the following changes are introduced: Raw data from NOEMA/PdB or online calibrated data from the 30m telescope of individual normal programs may be provided by IRAM after a three year proprietary period (again counting from the end of the last semester of observations) and depending on directors decision. Multiple large scale requests are excluded. This policy applies to future programs and to programs terminated during the winter semester 2013/14 or later. Data from programs finished before this date can be requested after December 2016.

IRAM does not provide support for data reduction of such retrieved data. Referencing of these data should follow the standard IRAM reference (see the **Data publication policies** at <http://www.iram-institute.org/EN/content-page-94-7-56-90-94-0.html>) and in addition include at least one reference to publications of the PI team, or the program number in case the data have not yet been published. Further practical details will be made available in the course of the summer semester.

Travel funds for European astronomers

The European RadioNet3 project has come to an end in December 2015. Consequently, no financial support will be available for European astronomers for the coming summer semester at the IRAM observatories. Note however that a proposal is being prepared for submission to the EC, as part of the Horizon2020 research framework program, to pursue this successful community-wide initiative.

N. Billot & R. Neri