SCIENCE OBSERVING POLICY

3.6m Devasthal Optical Telescope

Aryabhatta Research Institute of Observational Sciences
Manora Peak, Nainital - 263 001
Uttarakhand, India

Change Record

Document details
Document number: **ARI-DOT-TEL-POL-001** Issue number: **4**

Changes in this document			
Issue	**Date**	**Modified Pages**	**Remarks**
1	28 July 2017	All	Initial Issue
2	22 June 2020	All	Change made in observing mode due to COVID situation.
3	25 January 2021	All	Typos corrected.
4	26 June 2025	All	Inclusion of new sections with revised policies. Change of document layout. Corrected typos.

Scope of this document

The purpose of this document is to define the policies and procedures which will be followed while making time allocation for carrying out scientific observations with the 3.6m Devasthal Optical Telescope (DOT) which is run and maintained by the Aryabhatta Research Institute of Observational Sciences (ARIES). This policy document has been prepared based on the inputs received from the 3.6m DOT - Time Allotment Committee (DTAC) and the Governing Council of ARIES. The updated version of this document can be found at the 3.6m DOT page on the ARIES website.

Contents

1 Mode of Observations

The observing time on the 3.6m DOT will be offered in two modes:

(a) **Visitor Mode:** Visiting astronomers present at the telescope, over-viewing and guiding the activities of the observing staff.

(b) **Service Mode (currently open for NON-ARIES proposals with proper justification)**: Observations are done by observatory staff on the basis of predetermined sequences of operations mutually agreed upon by the DOT operation team and the proposer. The PIs should opt for service mode while submitting the proposal in the DOT Online Proposal Submission System (DOPSES). In addition, PIs should send a detailed observation plan in the prescribed format (Observation Plan Template) at least two days prior to their scheduled observation night. The observatory staff will contact the PIs if any additional information is needed. Online participation of the observer(s) will be facilitated through a convenient channel during the observation.

2 Proposal Category

As decided by the Governing Council of ARIES in its 25th and 30th meeting, the observing time on 3.6m DOT will be apportioned as follows: 60% Open time on competitive basis to any astronomer working in an Indian Institution subject to the scientific merit of the proposals; 33% guaranteed time for astronomers from ARIES subject to the merit of the proposals; and 7% guaranteed time for Belgian astronomers, also subject to the merit of their proposals. The observing time shares are allocated based on the affiliation of the Principal Investigator (PI). The PI should be affiliated with one of the institutions from India or Belgium. The time share in which the proposal is submitted, i.e. **60% (Indian-time)**, **33% (ARIES-time)**, **7% (Belgian-time)**, should be specified in the observing proposal.

3 Proposal submission and evaluation procedure

(a) Observing proposals have to be submitted using the DOT Online Proposal Submission System (DOPSES) at the URL: `http://dopses.aries.res.in` or at any other URL announced on the ARIES and the 3.6m DOT webpage.

(b) For each observing cycle, a Call for Proposals will be issued on the webpage of 3.6m DOT and an email will be sent to all Indian and Belgian proposers who have registered with the DOPSES. An email to all the Indian Institutions pursuing research on the topics related to astronomy and astrophysics, will be circulated one month before the deadline for submission: 1st December and 1st August for the periods February to May and October to January respectively.
The Call for proposals will be notified to the Belgian astronomers for their 7% observing time share through the Belgian-Time Allocation Committee (B-TAC). The table below specifies some of the important dates.

Table 1: Details on the observation cycles of DOT

Item	Cycle-1 (Feb–May)	Cycle-2 (Oct–Jan)
Call for Proposal	1st November	1st July
Deadline for Submissions	1st December	1st August
Time Allocation	10th January	10th September

(c) Each proposal should identify a single individual who will act as PI and will be responsible for the proposed scientific programme. The PI will be the contact person for all communications with the DOT Team, including the data delivery.

(d) All the proposals belonging to the proposal category of ARIES-Time and Indian Time will be reviewed by the DTAC, including an external refereeing process. The proposals will be graded into one of the following categories.
A (Excellent): The allocated observing time will definitely be scheduled
B (Good): The allocated observing time will be scheduled if time is available after scheduling proposals of category [A]
C (Fair): The allocated observing time will be scheduled on a best-effort basis.
D (Poor): The proposal contains clear technical and/or scientific flaws and will not be allocated time.

(e) The B-TAC will review the proposals belonging to the category of Belgian Time. Two members, the DTAC-chairman and the DTAC-convener, will also be members of the B-TAC to interface between the two TACs and also to coordinate with the DOT team.

4 Observing assistance and Local hospitality

ARIES will provide observing assistance, local hospitality and travel assistance to one observer per program as described below. If a second observer is required, this has to be clearly mentioned in the proposal so that arrangements can be made accordingly.

(a) **Observing assistance:** A night observing team of four persons, viz. two scientific assistants, a helper and an electrician, will assist the proposer in both Visitor and Service modes of observations. In service mode, the project scientist assigned to the proposal will perform the observation based on the observation plan submitted by the PIs. The operation of the telescope, instruments and the dome will be carried out by the scientific staff available during the night. The proposer has to fill out the science observation log after observations for the night are completed. The proposer has to specify the instrument set-up, exposure time and desired signal-to-noise ratio while submitting the proposal to the DOPSES.

(b) **Travel assistance:** National observer(s) (including Ph.D. students) from universities that do not have travel support from their respective institutions may be considered for travel reimbursement (train fare) up to Kathgodam/Haldwani, in accordance with government guidelines and subject to the merit of the proposal. ARIES will also provide local travel support (pick-up and drop-off between Haldwani/Kathgodam/Manora Peak and the Devasthal campus) to all observers visiting Devasthal for observations.

(c) **Accommodation at Haldwani and Devasthal:** Lodging and boarding for the observer will be arranged at the Haldwani Transit House, the Devasthal Guest House, or both, depending on the requirement. Single-room accommodation will be provided to the observer, and if a second observer is accompanying them, accommodation will be provided for the accompanying person as well, subject to availability. ARIES will also ensure essential facilities during night observations, including access to restrooms and provision of midnight snacks, etc.

5 Data Rights

Successful proposers will have exclusive access to their scientific data for the duration of a proprietary period. Normally, this period will expire one year after the date of observation. An extension of this proprietary period may be granted in special cases, and the corresponding requests will have to be submitted to the Director, ARIES, at least one month before the expiry.

6 Data Archive

The data from the 3.6m DOT is archived at the data archive website, which hosts data from all the ARIES telescopes (link to Archive). The proposer needs to create a user profile in the archive system to access the data.

7 Data Acknowledgement

To use data observed using DOT:
Observers/Proposers/Authors are encouraged to mention 3.6m DOT in the title or abstract of the research publications and also quote inline in the body of text when first appropriate:

> "Based on observations obtained at the 3.6m Devasthal Optical Telescope (DOT), which is a National Facility run and managed by Aryabhatta Research Institute of Observational Sciences (ARIES), an autonomous Institute under the Department of Science and Technology, Government of India.".

In addition, it is mandatory to cite the papers of the telescope and the instrument used. The papers of the telescope and several instruments are listed below:

1. **Telescope:** 3.6-m Devasthal Optical Telescope Project: Completion and first results, Kumar et al., 2018, Bulletin de la Société Royale des Sciences de Liège, 87, pp. 29-41,ADS link of paper.
2. **IMAGER:** Photometric calibrations and characterization of the 4K ×4K CCD Imager, the first-light axial port instrument for the 3.6m DOT,
   Kumar et al., 2022, JApA, 43, 27K, ADS link of paper
3. **ADFOSC:** First-light images from low dispersion spectrograph-cum-imager on 3.6- meter Devasthal Optical Telescope,
   Omar et al., 2019, Current Science, 116, 1472-1478 ADS link of paper

4. **TANSPEC:** TANSPEC: TIFR-ARIES Near-infrared Spectrometer,
   Sharma et al., 2022, PASP, 134, 1038, id 085002, 23pp, ADS link of paper

5. **TARCAM II:** TIFR Near Infrared Imaging Camera-II on the 3.6 m Devasthal Optical Telescope
   Baug et al., 2018, Journal of Astronomical Instrumentation, 7(1):1850003–1881, ADS link of paper

When using data observed in service mode:
Observers/Proposers/Authors are additionally requested to acknowledge the DOT observation staff for carrying out the observation in an Acknowledgement section as follows:

> "We acknowledge the scientific and technical staff of the 3.6m Devasthal Optical Telescope (DOT), a national facility operated and managed by the Aryabhatta Research Institute of Observational Sciences (ARIES), an autonomous institute under the Department of Science and Technology, Government of India, for their support in facilitating service mode observations and providing the observational data."

8 Scheduling of observation

The observation night is split into four quarters. These four quarters will be split among a maximum of two proposals (PIs) per night. The duration of each quarter will be decided based on the length of the night, starting from evening to morning astronomical twilight. Thesis proposals will be given preference in time allocation, with ARIES thesis proposals getting higher priority.

9 Director's Discretionary Time (DDT) Proposals

As per the Resolution No. 33.4 of the Governing Council of ARIES, about 10% of the available science time will be reserved as Observatory Time / Director's Discretionary Time for allocation by the Director, ARIES. A DDT proposal must necessarily belong to one of the following four categories:

(a) Proposal for test and maintenance due to unforeseen requirements of the 3.6m DOT facility.

(b) Category-A proposals that have lost time due to technical problems, and asking for compensation.

(c) Proposals of Target of Opportunity (ToO) nature requiring immediate observations of a sudden and unexpected astronomical event.

(d) Proposals requesting observations on a scientific topic which is highly competitive and could produce unique or breakthrough results.
DDT proposals can be submitted at any time. Request for the DDTs should be made to the Director, ARIES as a fresh proposal or in case of an ongoing proposal that needs the

time, referring by proposal number and providing justification for the DDT time request. The allocation will be made by the Director, ARIES, in consultation with the Astronomer-in-Charge of the 3.6m DOT. The data policy for the compensation time shall follow the policy for the regular proposal. However, the lock-in time for the DDT proposals, such as ToO, shall be 90 days from the date of observation.

10 Target of Opportunity

The policy on Target of Opportunity (ToO) observations was revised during the DTAC committee meeting held on 3 April 2025. The revised policies are given below:

(a) The ToO time allotment will not exceed 50%, while scheduling the ToO Compensatory time slots.

(b) Instead of scheduling time slots for individual ToO in the DOT observation schedule, these will be named as time slots for 'ToO Compensatory nights'.

(c) For any given night, a maximum of one-quarter can be spent on ToO observations.

(d) ToO observations may be undertaken in consultation with, and with the concurrence of, the observer(s) scheduled for the night. While all observers are informed about ToO triggers, it is not mandatory for the scheduled observer(s) to provide their time if it adversely affects their science program.

(e) Proposals submitted in the DTAC ToO category are required to mention the trigger response time (as given below) as well as a justification for this request. Fast triggers will be considered on a case-by-case basis.
High priority: Within 24 hrs
Medium priority: Beyond one day and up to a week
Low priority: Within a few weeks

(f) ToO proposals should also include the number of triggers for the same science case in the previous two cycles.

(g) A 'Trigger Request' is to be sent by the proposer to request the ToO trigger. It should be sent via email to the DOT in-charge (dot@aries.res.in), with a copy to the DOT Project Scientists.