

Policy Document for

Proposing & Scheduling GMRT Target Of Opportunity Observations

(last updated 5 December 2018)

Given below are the general policy, and the specific terms and conditions for Target of Opportunity (ToO) proposals, as well as details of their implementation at the observatory, including the scheduling aspects.

I. Policy and terms & conditions :

1. ToO proposals may be submitted under both GTAC and DDT proposal streams.
2. ToO category in regular GTAC proposals: These proposals will be triggered ToOs asking for ToO time for certain number of objects with a well defined trigger criteria, even if the specific target/s are not known at the time the proposal is submitted, e.g. a gravitational wave event or a new supernova. These proposals will be reviewed by the GTAC, along with the regular proposals and time allocations will be made as per GTAC recommendations. As with regular GTAC proposals, a ToO proposal will be restricted to one GTAC cycle.
3. ToO category in DDT proposals: These proposals will be object based ToOs owing to the appearance of some interesting transient outside of the regular GTAC submission and approval cycle, for which no GTAC ToO proposal exists under the ongoing GTAC cycle, or the specific target is not part of other GTAC proposals submitted in the ongoing GTAC cycle.
4. Up to 5% of the total GTAC time can be allocated under the GTAC ToO category, which currently is ~ 90 hours. The total time allocation for DDT ToO proposals is flexible, based on the needs and availability of free slots, and under the discretion of Centre Director.
5. Proposals submitted in the GTAC ToO category are required to mention the trigger response time as well as a justification for this request. The response time should be one of the following:

- (a) High priority: observing within 24 hours.
Please note that urgent trigger observations are not guaranteed within 24 hours even after GTAC approval. It depends upon the availability of slots, and willingness of other observers to move their already scheduled observations. Centre Director will have the final authority to take a decision in such cases.
 - (b) Medium priority: observing required in a few days up to a week.
 - (c) Low priority: observing within a few weeks.
6. The proprietary data period for all ToO observations shall be 3 months. In exceptional cases, the observatory may make data public immediately.
 7. Time allocated against a GTAC ToO proposal will not be scheduled until the PI sends a request for a specific source or target, which must match the trigger condition mentioned in the proposal. To make such a request, the proposer must fill the white-slot usage request form available at <http://www.ncra.tifr.res.in/ncra/gmrt/gtac/white-slot-form> mentioning the LST range of the target, the frequency of observation, and any additional information (e.g. how critical the observations are).
 8. It is **mandatory** to mention the defined trigger criteria as well as a few lines justification in the comments section of the white-slot form when requesting to trigger a ToO proposal, establishing the match with the specified trigger criteria. For example, in a SN proposal it could be the type of supernova, optical magnitude, distance etc.

II. Implementation at the Observatory :

1. The observatory shall make best efforts to approve a trigger request for GTAC proposal within 24 hours of its receipt.
2. Faster trigger requirements will be handled on a case by case basis. For such case, please send an email alert to gmrtschedule@ncra.tifr.res.in.
3. ToO proposals submitted under the DDT stream, would be processed rapidly to avoid missing out on transient science.
4. For GTAC ToO scheduling requests, the staff at the observatory will verify whether

the requested target meets the trigger criteria mentioned in the related ToO proposal.

5. When scheduling GTAC ToO proposal observations, the Centre Director will be kept informed about triggering of the observations and the number of hours allotted.
6. If there are two overlapping approved GTAC ToO proposals and a certain trigger satisfies the trigger criteria for both the proposals, then the data will be made available to both the proposal teams.
7. If ToO observations are requested for an object, which is also an object for an approved GTAC proposal, it will be made clear that the ToO proposal can use the data only for the ToO science. For example, suppose a supernova happens in a galaxy or field which is already a target for an approved GTAC proposal, the ToO proposer can use the data only for his / her supernova related science objectives, until the proprietary period for the regular GTAC proposal is over.
8. In case of a clash between a DDT and a GTAC approved ToO, the GTAC approved ToO will get higher priority. The observatory will wait for 48 hours for a scheduling request from the approved GTAC ToO proposers. In case no such request is received from the GTAC ToO PI, the time could be allocated to the DDT ToO.
