# Call for Letters of Intent for 4MOST Community Public Surveys

ESO is issuing a call for letters of intent for public spectroscopic surveys with 4MOST. A public survey is understood to be an observing programme in which the investigators commit to produce and make publicly available a fully reduced and scientifically usable data set that is likely to answer a major scientific question and is of general use and of broad interest to the astronomical community. The raw data are public immediately. A survey is envisaged to be a massive observing programme with observing time allocated over five years. Please also consult the [4MOST Survey Policies](http://www.eso.org/sci/observing/PublicSurveys/4MOST_Policies.html) where the specific policies for 4MOST survey are described in detail.

4MOST is a high-multiplex, wide-field spectroscopic survey facility under development for the 4m-class VISTA telescope at Paranal. For a full description of the technical properties of this new facility we refer to the [4MOST webpage](https://www.4most.eu/cms/).

The 4MOST Operation scheme is unique for an ESO instrument in that it allows to carry out many different science programmes simultaneously during one observation. The 4MOST consortium will perform Public Surveys using 70% of the available fibre-hours in the first 5 years of operations (see [The Messenger special Issue on 4MOST](https://www.eso.org/sci/publications/messenger/toc.html?v=175&m=Mar&y=19)). These Consortium Surveys are the Guaranteed Time Observations (GTO) that the 4MOST consortium receives in return for building the facility and supporting ESO in the 4MOST operations. ESO Public Surveys will fill the other 30% of available fibre-hours in the first 5 years of operations.

Please consider that there are two possible flavours of surveys that can be proposed:

* Participating Community Surveys. These surveys adhere to the 4MOST Science Team Policies available at URL. They will be sharing the 4MOST focal plane with Consortium Surveys and therefore will have access to the data sharing policies and knowledge exchange as defined in the [Science Team Policies](https://www.eso.org/sci/observing/PublicSurveys/docs/4MOST/MST-POL-PSC-20103-9213-0001_3_00_Science_Team_Policies.pdf). Participating Surveys will have access to the [advanced data analysis pipelines](https://www.4most.eu/cms/operations/data-products/) developed by the 4MOST Science Team.
* Non-Participating Community Surveys. These surveys will not share the focal plane with Consortium Surveys. They will be scheduled in dedicated full or half nights. It will be the PIs responsibility to prepare the OBs using a software provided and supported by the Consortium. It will be the Consortium’s responsibility to deliver to these surveys 1-dimensional, calibrated, science-ready spectra extracted from the raw data. Non-Participating Community Surveys will not have access to analysis tools developed by the Consortium.

When submitting the Letter of Intent, the PI shall declare if the survey should be considered Participating or Non-Participating.

The letters of intent should include the following items:

* Title and Abstract
* Survey type: “Participating” or “Non-Participating”
* Principal Investigator (PI) and a list of co-investigators
* Scientific rationale and immediate objectives (up to 3 pages + 2 pages for figures and tables)
* Survey type justification (up to 1 page)
* Survey metrics (up to 3 pages)
  1. Target distribution as a function of RA.
  2. Target distribution as a function of magnitude.
  3. List of the areas covered by the survey with an indication of the range of target density and exposure times needed.
* Observing strategy and required observing conditions (1 page)
* Estimated fibre time per spectral set-up, LR and HR (1 page)
* Description of the responsibilities, resources and experience within the proposing team (1 page).
* Description of the data products and justification of their legacy value (1 page). Please note that the legacy value is an important aspect of public surveys which is carefully considered by the review panel.

The deadline for letters of intent for public spectroscopic surveys with 4MOST is:

**28 February 2020 12:00 CET**

Letters should be submitted only in PDF format to [opo@eso.org](mailto:opo@eso.org). The Public Survey Panel (PSP), composed of experts from the community, will review the letters. Recommended surveys will be invited to submit proposals (mid 2020).

The ESO Director General will select the successful public surveys based on the recommendations of the PSP and OPC, which will evaluate their scientific excellence and their technical feasibility. The selected teams will be invited to prepare a survey management plan, whose approval by ESO is mandatory before final acceptance of a public survey.

Please consider also the following conditions for Public Surveys:

* The ESO Science Archive Facility will be the repository of the survey products and will provide the primary access of these products to the ESO community. Survey data products have to be prepared according to the ESO science data product standard and submitted in agreement with the policies for ESO Phase 3. The teams will be responsible for processing and validating the data products. Survey data product releases are expected yearly.
* Progress of the approved surveys will be reviewed regularly by ESO. Corrective measures will be identified in cases where the survey execution is delayed, or the data product delivery schedule cannot be maintained.