

Methodology for the emission of the calls for scientific consultants



INAF – OAR for the Astrodeep project



ASTRODEEP

"Unveiling the power of the deepest images of the Universe"

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[Exploitation of space science and exploration data]

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ABSTRACT

Description of the methodology adopted to select consultants from external teams.

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Goal

One of the main aspects of the ASTRODEEP project is to enhance collaboration between members of the participating institutes and other international scientists. To accomplish this exchange of expertise, data and tools, external consultants (not affiliated to the beneficiaries) will be invited for short and medium term periods in one of the beneficiary institutes. This document describes the procedures for their selection.

Who can apply

In principle, any scientist, not affiliated to the beneficiary institutes, active in the field of astronomical data processing and galaxy evolution can apply, provided that he/she is able to contribute to the ASTRODEEP project bringing either a specific expertise or a specific data set. One option is that external consultants own proprietary data that are critical to the project: by adhering to this initiative they will offer access to these data sets well before they are publicly released. Another possible contribution is the scientific analysis of the data: external consultants could either share with the team a specific expertise in the treatment of data or directly share proprietary software that could be tailored for the needs of the project and integrated in the suite of customized tools developed by the ASTRODEEP consortium.

Special focus is given to scientists involved with the CANDELS and HERSCHEL deep surveys that can be considered complementary to our project. These two projects own proprietary data and software as well as experts in the fields of the scientific analysis ASTRODEEP intends to pursue. A close collaboration with components of these teams will be particularly beneficial to the progress of the project, since they can contribute unique expertise, that would take years to develop otherwise.

Selection Procedures

To select these external consultants, the following procedure will be applied.

Every six (6) months, starting from month 4 (April 2013), an open call will be issued inviting scientists who are willing to spend a period of time working on ASTRODEEP-related topics in one of the four partner institutes. Visiting periods can last from one week up to three months and should take place within the 12 months following the issue of the Call.

In the call, "external consultants" will be referred to as "visiting scientists" for simplicity.

A template of the call is given in Annex 1.

Applicants wishing to participate must declare what specific expertise, data, software or any other kind of input they will be able to contribute to ASTRODEEP. Applications from scientists being part of scientific consortia/collaborations that own data or software that are relevant to ASTRODEEP will be strongly encouraged. Application can be submitted by compiling an on-line form, which is presented in Annex 2

Applications submitted within 30 days from the issue of each Call, will receive full consideration. Applications arriving after such deadline will be considered according to funds availability in the relevant reporting period.

Within 15 days from the Call deadline, the ASTRODEEP Executive Committee will evaluate all applications. Evaluation and final decision on the successful applicants can take place also using electronic means (i.e: teleconference or e-mail).

Successful visiting scientists will receive a reimbursement of the full visit cost (including travel, accommodation and per-diem) that will be provided by the hosting institute.

As soon as a visit is approved by the AEC, the project coordinator (INAF) will distribute the necessary funds for each visitor to the hosting institutes.

Annex 1

CALL FOR EXTERNAL CONSULTANTS

Positions are open to participate as a visiting scientist for short to medium term periods in the framework of the project ASTRODEEP: “Unveiling the power of the deepest images in the Universe”. ASTRODEEP is financed by the European Commission (FP7-Space) and is a collaboration between the Rome Astronomical Observatory (A. Fontana), the University of Edinburgh (J. Dunlop), CEA-Saclay (D. Elbaz) and CDS Strasbourg (S. Derriere). The successful candidate can choose to work on any ASTRODEEP topic, in one of the participant Institutes mentioned above.

ASTRODEEP is a comprehensive program of i) algorithm/software development and testing; ii) data reduction/release, and iii) scientific data validation/analysis, using the data obtained within the CANDELS and HERSCHEL surveys and other similar recent multi-wavelength surveys based on HST, VLT and Spitzer data.

One of the challenges this project is set to address is the effective combination of imaging data with different angular resolution, and the disentangling of overlapping datasets (including grism spectroscopy). Thus, an important task will be to cross-check and compare various methods for multi-band photometry, aiming to understand, quantify the differences and fully characterize their systematic properties before defining the final recipes to adopt. Particular attention will be given to the further development of available software for PSF-matched photometry, like TFIT and CONVPHOT.

Another main goal of ASTRODEEP is using this unique data set to study the birth and evolution of galaxies in the early Universe. Among the main scientific areas there are: the evolution of massive galaxies and of the stellar mass function at high redshift, the statistical properties of Lyman-Break galaxies at $3 < z < 8$ and the properties of star-forming and quiescent galaxies at $z > 2$.

More details about the ASTRODEEP project can be found at www.oa-roma.inaf.it/astrodeep.

This call is aimed at enhancing collaboration between the ASTRODEEP consortium with scientists who are involved in deep surveys or software development. A key feature in the selection of the visiting scientist will be the specific expertise they can contribute to the project. More specifically this call is addressed to scientist who i) own proprietary data critical to the project; ii) develop specific scientific software for data analysis; iii) have specific expertise in the key scientific goals of the project; and iv) can help develop and customize tools for the needs of ASTRODEEP. Applicants cannot be affiliated to the beneficiary institutes.

Successful applicants will receive a reimbursement of the full visit cost (including travel, accommodation and per diem) that will be provided by the hosting institute. Visits can last from one week up to two months and could take place any time before April 2014.

Applicants, wishing to participate, should declare what specific expertise, data, software or any other kind of input they will be able to contribute to ASTRODEEP, by compiling the on-line template, available at www.oa-roma.inaf.it/astrodeep/astrodeep/Jobs.html. The deadline for on-line applications is April 30th 2013. Applications from scientists being part of scientific consortia/collaborations that own data or software that are relevant to ASTRODEEP are strongly encouraged. Candidates will be evaluated directly by the Executive Committee of ASTRODEEP and will be notified about the outcome of the selection after May 15th 2013.

Annex 2

APPLICATION FOR VISITING SCIENTISTS

Last Name:

First Name:

Title:.....

Affiliation Institute:.....

Goal of the visit (10 lines)

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Specific contribution to the Astrodeep project (15 lines)

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Proposed hosting institute:.....

Proposed period and duration of visit:.....

Estimate of requested contribution: