

ASTRONET and the EAS: Opportunities and Options

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ASTRONET:

IS:

- A consortium of European funding agencies
- Aim: To jointly optimise the scientific returns of their investments in astronomy (EU ~ 2%)

IS NOT:

- A supranational decision-making body
- A lobbying agency for big projects
- An easy way to invent big new money
- A branch of the EU, ERC or IAU

The Science Vision Report

A Science Vision for European Astronomy

What is the origin and evolution of stars and planets?

How do galaxies form and evolve?

Do we understand the extremes of the Universe?

How do we fit in?

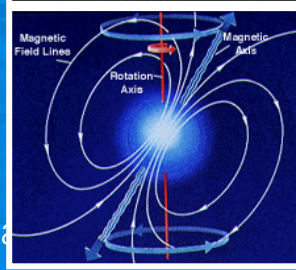
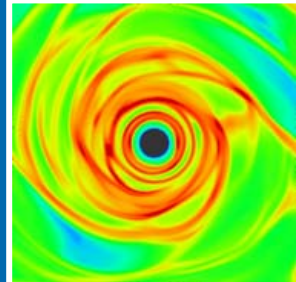
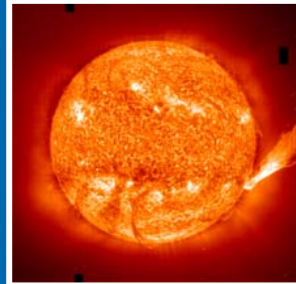
Pub.: September 2007
(Eds.: T. de Zeeuw et al.)

In PDF format at:

<http://www.astronet-eu.org/>

- Large Symposium in Poitiers, January 2007
- Input via WWW & e-mail before and after

Mid-Term review: similar



The Roadmap Report

Pub.: November 2008; Eds.: M. Bode et al. → ESFRI



The ASTRONET Roadmap
A Strategic Plan for Europe
Executive Summary

A STRATEGIC PLAN FOR EUROPE

Financial and Human Resources

A useful roadmap must include realistic estimates of costs, technological readiness and available advice as well as information provided by the projects themselves has been used to assess their reliability of these data varies from project to project. For future space missions in particular, pre and merging internally or with global projects while this report was being prepared.

The resource estimates and scientific capabilities described here should therefore be regarded as a tentative situation, based on the best information available to date. Known or estimated costs to be throughout.

More surprisingly, despite a dedicated effort to obtain an overview of the present financial situation in European astronomy, this information remains quite incomplete. Budget numbers for ESO, ESA and other agencies are easy to collect, but including universities and projects in individual nations as well as other sources of uncertainty. The demarcation between astronomy and other natural sciences is not always clear. The Roadmap can therefore only give approximate total figures, based on pan-European estimates available today.

While ground-based and space-based projects are considered separately, as the funding procedures are often different, the Roadmap recommendations are all based on the global science vision.

Artist's impression of the European Extremely Large Telescope (E-ELT) during observations. In the background, the Milky Way is just rising above the horizon.



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The Role of Existing Facilities

The scientific role and operating cost of existing and approved facilities are also considered in the Roadmap. In space, several current missions are so successful that an extension of their operational lifetimes beyond those already approved is richly justified on scientific grounds. In a constrained environment, the selection of the missions that can be extended within available funds should be based on the scientific productivity of the mission and, for ESA-supported missions, the overall balance in the ESA programme.

On the ground, the existing set of small to medium-size optical telescopes is a heterogeneous mix of national and common instruments, equipped and operated without overall coordination. This is inefficient and, for example, impedes effective ground-based support for space missions. ASTRONET has therefore appointed a committee to review the future role, organisation and funding of the European 2-4 m optical telescopes within the context of the Roadmap, to report by September 2009.

Reviews of Europe's existing millimetre-submillimetre and radio telescopes will be undertaken shortly after, followed later by a review focusing on the optimum exploitation of our access to 8-10 m-class optical telescopes as we enter the era of the E-ELT. Together, these reviews will enable Europe to establish a coherent, cost-effective complement of medium-size facilities.

The four 8-m telescopes of the ESO Very Large Telescope (VLT), on Cerro Paranal in Chile.



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ASTRONET membership:

- Contractors: BMBF/DESY (DE), CNRS (FR, Coordinator), INAF (IT), NWO (NL), ESO, NOTSA (Nordic), NCBiR (PL), MICINN (ES), STFC (UK)
- Associates: ESA, FWF (AT), FWO+FRS (BE), BAS (BG), MSES (HR), IA-CAS (CZ), MPG, DFG (DE), ESF (EE), GNCA (GR), HAS (H), LAS (LT), FCT (PT), RSA (RO), SAS (SK), ARRS (SI), SRC (SE), SER (CH), UAS (UA)
- Forum members: DK, FIN, IS, ISR, NO, LV
- Total population: 550+ million in 29 countries

NB: EAS contacts helped to enlist all these!



ASTRONET status 2013 (I):

ASTRONET has initiated action to implement the Roadmap, so far as regards:

- Rationalisation of the instrumentation and common access procedures across (all) European 2-4 m telescopes (2010)
- Implementation of wide-field spectroscopic surveys
- Coordination of the future use of existing radio telescopes
- Common initiatives in laboratory astrophysics
- Planning for the astrophysical software laboratory

NB: ASTRONET has no role in the decision making of intergovernmental organisations, esp. ESO, ESA etc.!.

ASTRONET status 2013 (II)

Other steps still to be taken include:

- Develop **specific procedures** to rationalise the system of European 2-4m telescopes
- Develop/invent procedures to launch and fund Europe-wide projects (submm support, WFS for Gaia,...)
- Assist new MS to develop and implement coordinated national roadmaps and follow-up (ESO and/or other...)
- Build training, outreach and recruitment into programme

SV & IR Mid-Term Review 2013

Aim: To take stock of scientific, technical, political and financial developments since 2008; specifically:

- Update Science Vision recommendations where needed
- Note what large projects are moving forward (E-ELT, SKA, etc.), what gaps remain, and what may have changed
- See what initiatives are lagging behind Roadmap plans
- Update recommendations for 2020 horizon
- Devise permanent mode of coordination/cooperation >2014
- **all with community input, based on drafts released ~May**



ASTRONET @ EWASS 2013

**Mid-Term Review Discussion
Whole-Day Community Meeting
Saturday July 13, 2013**

**Substantial Travel Support Offered
Free Lunches**

Future Options for Cooperation:

- Develop European network of external PhD supervisors
- Develop European network of external (female) mentors
- Facilitate astronomer/engineer exchanges (w. OPTICON)
- Develop concepts for “Regional Partner Facilities”
- Network of “non-OPTICON” ~2m telescopes