

ASTRONET

Status, progress and plans

Prague, 28 Jun 2017 - EWASS



ASTRONET
www.astronet-eu.org



ASTRONET

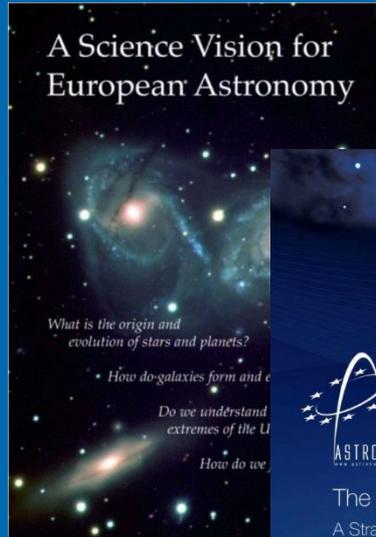
A **consortium of funding agencies** for European astronomy focusing on strategic planning and coordination

Aim

To develop the **overall context** that can **assist** national funding agencies and European organisations in taking **science-based, rational, and coordinated** decisions for the long-term benefit and cost-effectiveness of European astronomy.

Key achievement

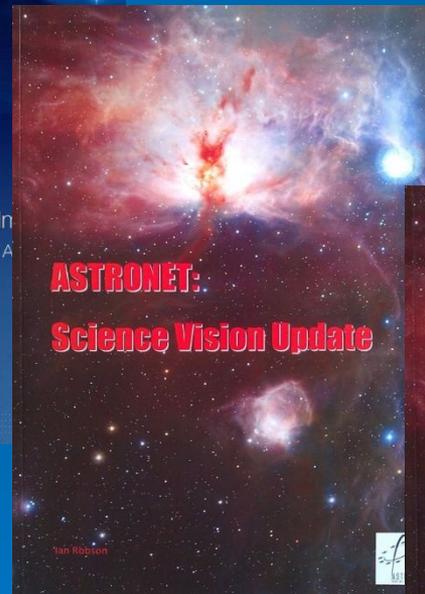
Science Vision and Infrastructure Roadmap



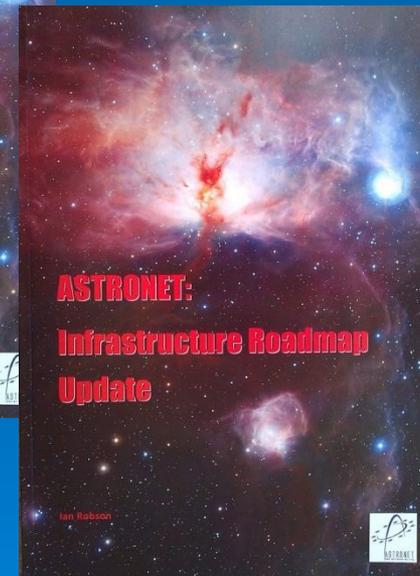
2007



2008



Feb 2013



Jul 2014



Supporting efforts

Preparing for a sustainable Virtual Observatory in Europe



ETFLA: European Task Force Laboratory Astrophysics



Astrophysical Software Laboratory Working Group



ERTRC: European Radio Telescope Review Committee



European Optical/IR Telescopes



ASTERICS H2020, cluster of infrastructures



Education and public outreach report





ASTRONET today

FP7-ASTRONET ended on June 30th, 2015

Signature of LoI in June 2015 in the direction of a MoU preparation

Signature of the MoU in October 2016

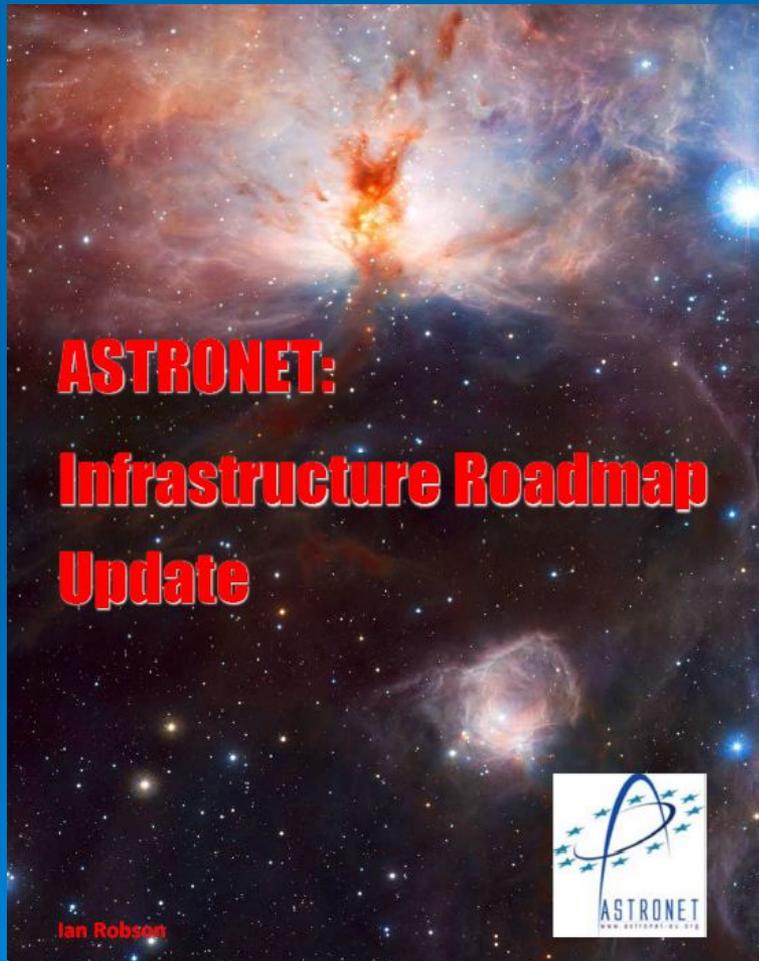
New Board in April 2017 (BE, ESO, FR, HU, IT, NL, SE, UK)

+ *observer/invitee*: APPEC, EAS, ESA

+ *intention to join*: CZ, DE, DK, ES, GR, PT, UA

Astronomy Coordination within Europe via: ASTRONET

Our roadmap...



SEVENTH FRAMEWORK PROGRAMME

FP7 – INFRASTRUCTURES – 2010 - 1



ASTRONET Final report

Project acronym: *ASTRONET*

Project full title: *Coordinating strategic planning for European Astronomy*

Grant agreement no.: 262162

Current plans

- Management activities
 - Complete the accession process
 - New communication channels
- Implementing the recommendations of the roadmap
 - CMB coordination in Europe (joint activity with APPEC)
 - Monitoring the European Medium and Large Size O/IR Ground facilities (J. Gallego and ESO)
 - Support the European Forum of Astronomical Communities (J. Palous)
 -
 - ASTERICS Policy Forum
- Towards a new Science Vision and Infrastructure Roadmap



ASTERICS/ASTRONET policy forum



WP1's Policy Forum will coordinate and agree new models for joint time allocation, observing and data access/sharing.

Within the policy forum, the ESFRI facilities, together with other major astronomy research infrastructures, will study **how to harmonise joint and efficient scheduling, operation and interoperability of the various multi-wavelength and multi-messenger telescopes.**

The forum convenes dialogues aimed at producing actionable outcomes in key policy areas, such as: **interoperability, commensal observations, and data access.**

Four key topics

1. **Joint time allocation**

A common policy, including practical aspects like software tools, database..., for requesting joint time at current and future ESFRI observatories

2. **Observing strategies for multi-messenger campaign**

The policy forum will define new models for coordinating observing campaigns that take advantage of the new multi-messenger approach envisioned by the ASTERICS collaboration

3. **Data access and sharing**

Common policies are needed to harmonize the distribution of data from different facilities and to enable sharing information across the typical disciplinary boundaries.

4. **General policies of common interest**

ASTERICS wants to establish a single collaborative cluster of next generation ESFRI telescopes in the area of astronomy, astrophysics and astroparticle physics.

And four ESFRI RI

1. **CTA – ELT – KM3NET – SKA**
2. Study of some MW/MM science cases by the RI with a specific insight on the Policy Forum needs
3. Share of the idea in the first Policy FORUM (end of 2017, beginning of 2018), together with an extended list of European Data Providers (including space missions)
4. The PF committee will then analyze the findings and propose, together with the 4 RI, some guidelines for future policies regarding MW/MM coordination.
5. Share this largely within the second Policy FORUM (end of 2018)



Towards a new Science Vision and Infrastructure Roadmap for European Astronomy

Colin Vincent, STFC, Leuven, May 2017

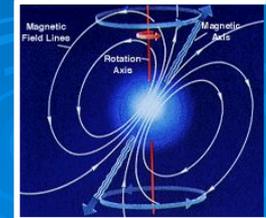
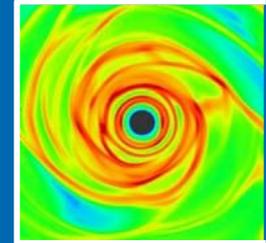
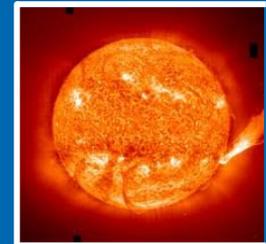
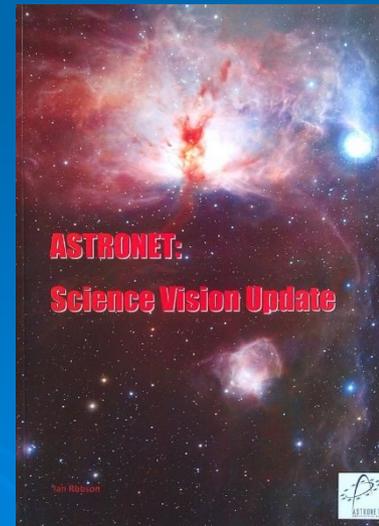
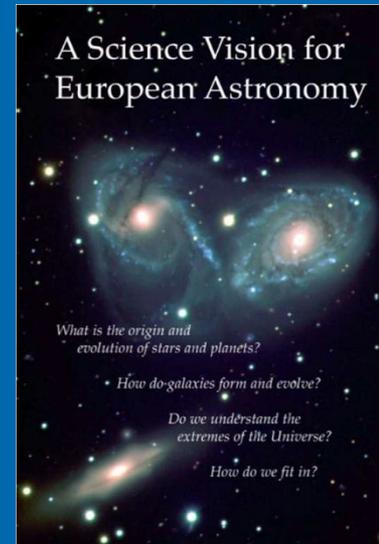
Developing the Science Vision

- Made maximum use of available documents (e.g. national strategic plans, ESA's Cosmic Vision, ESO-ESA reports, scientific cases for new facilities)

- Broad cross-section of science community
About 50 people in Working Group and 4 Panels

9 Working Group and 31 Panel meetings

Wider community input via web-based discussion forum and symposium.



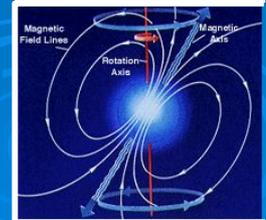
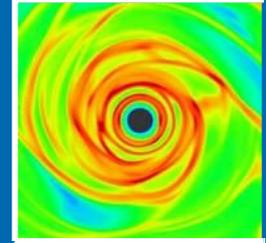
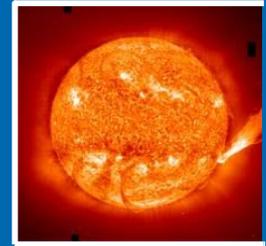
Science Vision Key Questions Panels

A: Do we understand the extremes of the Universe? (John Peacock)

B: How do galaxies form and evolve? (Jacqueline Bergeron)

C: What is the origin and evolution of stars and planetary systems? (Leonardo Testi)

D: How do we (and the solar System) fit in? (Oskar van der Lühe)



Infrastructure Roadmap

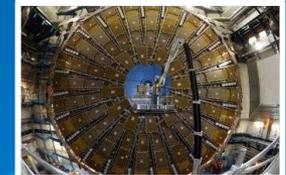
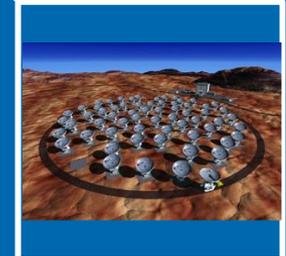
- A plan for the development of the infrastructures to enable European Astronomy to deliver the Science Vision

Took the Science Vision as the point of departure

Covered both ground & space-based facilities, including VO, HPC, theory, HR issues, outreach, education and training, industrial links

Incorporated existing ESO, ESA plans as far as possible, and a global perspective

Tried to fit within reasonable budgetary envelopes



Roadmap Panels (Chairs)

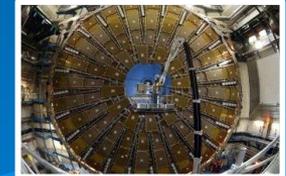
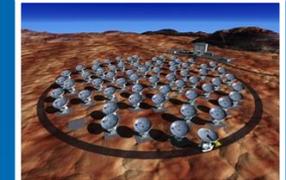
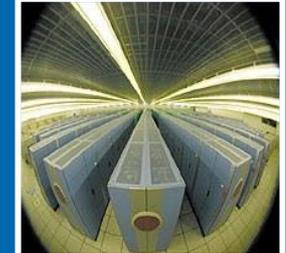
High energy astrophysics, astroparticle astrophysics, gravitational waves
[Guenther Hasinger, Patrizia Caraveo]

UVOIR and radio/mm astronomy [Michael Grewing,
Laurent Vigroux]

Solar telescopes, solar system missions, laboratory studies [Mats
Carlsson, Therese Encrenaz]

Theory, computing facilities and networks, virtual observatory
[Francoise Combes, Paolo Padovani]

Education, recruitment and training, public outreach [Rosa Maria Ros,
Bob Fosbury]



Next Steps

- Possibly to include survey of how relevant/helpful the current versions have been
- Possibly look at ways to involve more of the community / younger researchers
- Possibly look at alternative routes to data collection – more workshops
- Obtain ‘buy in’ from agencies and research organisations – how do we ensure wider ‘ownership’
- Agree with Astronet on resources and coordinator

Commence 2018

Complete 2020?

Concluding remarks

- EAS – ASTRONET links are now very strong
- The European Forum for Astronomical communities is an excellent initiative supported by ASTRONET and in the direct continuation of the previous activities. The link with ESO is also very important.
- ASTRONET new SV+IR require stronger links with the Community □ Important role for EAS
- ASTRONET will be present at EWASS 2018 in Liverpool
 - Specific session on the SV+IR
 - Continuation of the European Forum