



*What is the  
Astroparticle Physics European Consortium ?  
(ApPEC)*

*S. Katsanevas  
ApPEC chairman*

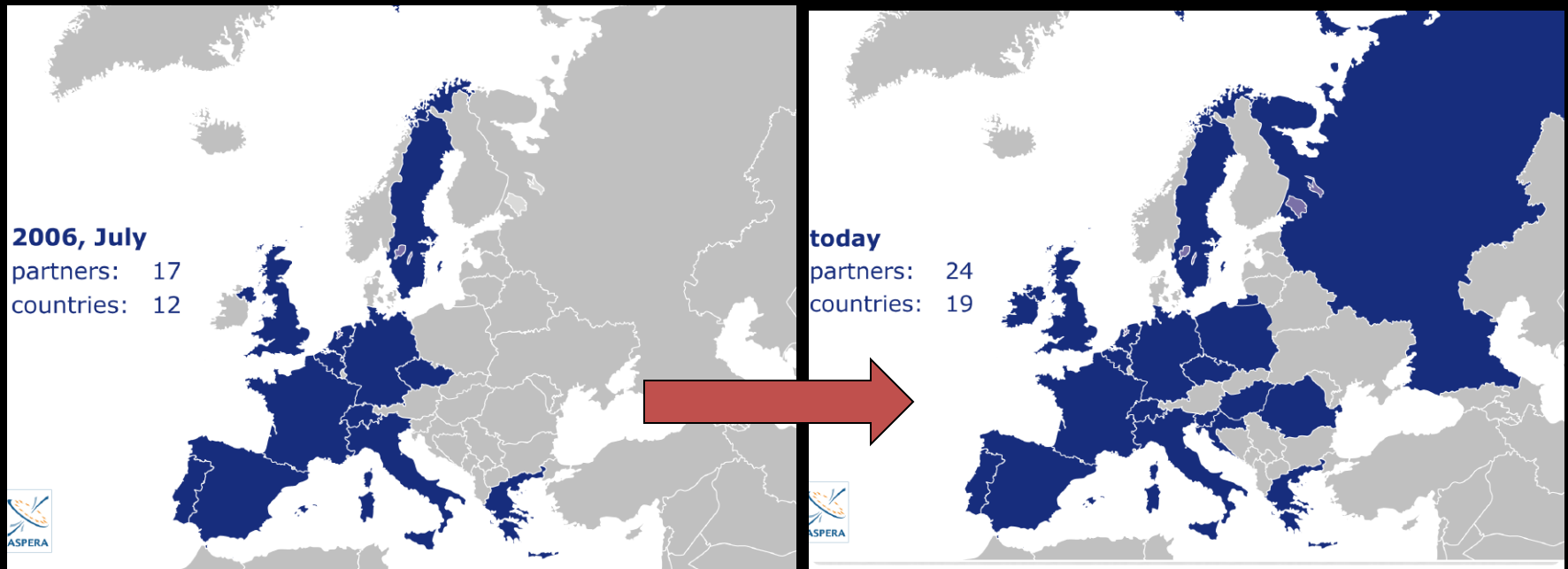
# Clarify first what ApPEC is not



*Ceci n'est pas ApPEC*



ApPE Consortium is a network of agencies  
having its origins in  
ApPE Coordination (2001-2012)  
and it is the product of the work of  
the ASPERA ERANET (2006-2012)



10 countries have signed the MoU on June 29 2012 in Berlin  
9 countries are in the process of accession  
Discussions with CERN, JINR, ESO for the status of observer



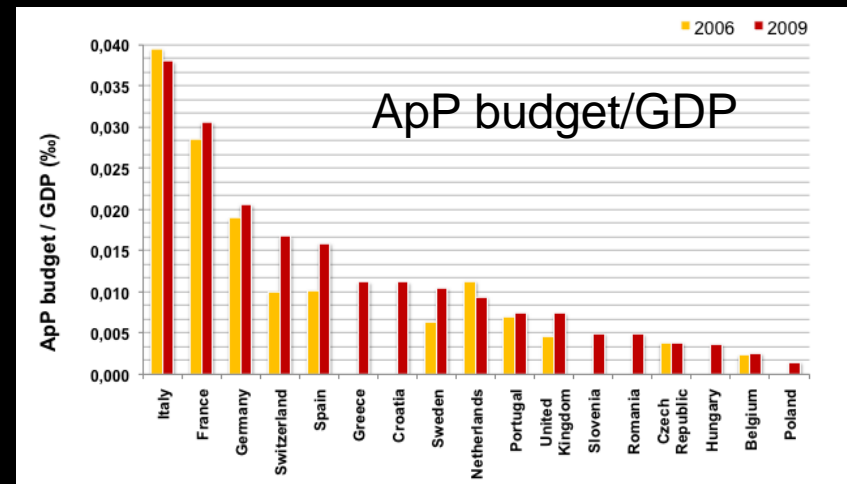
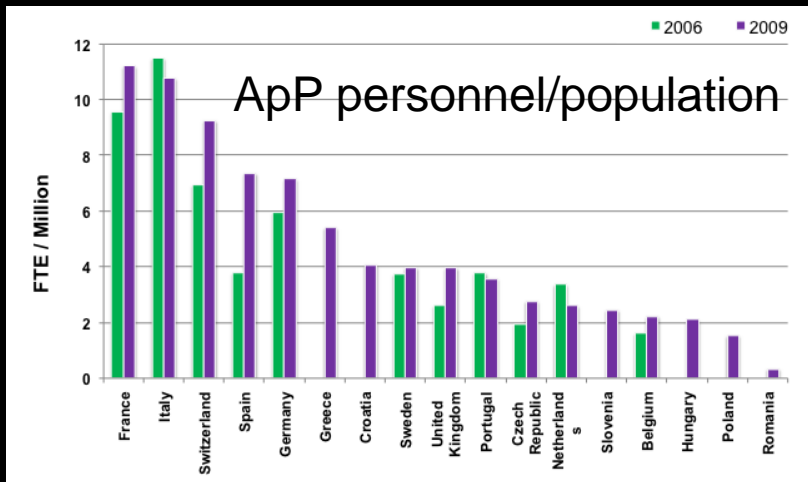
# ApP personnel and budget (2009)

Agents  $\approx$  3 000 FTE:

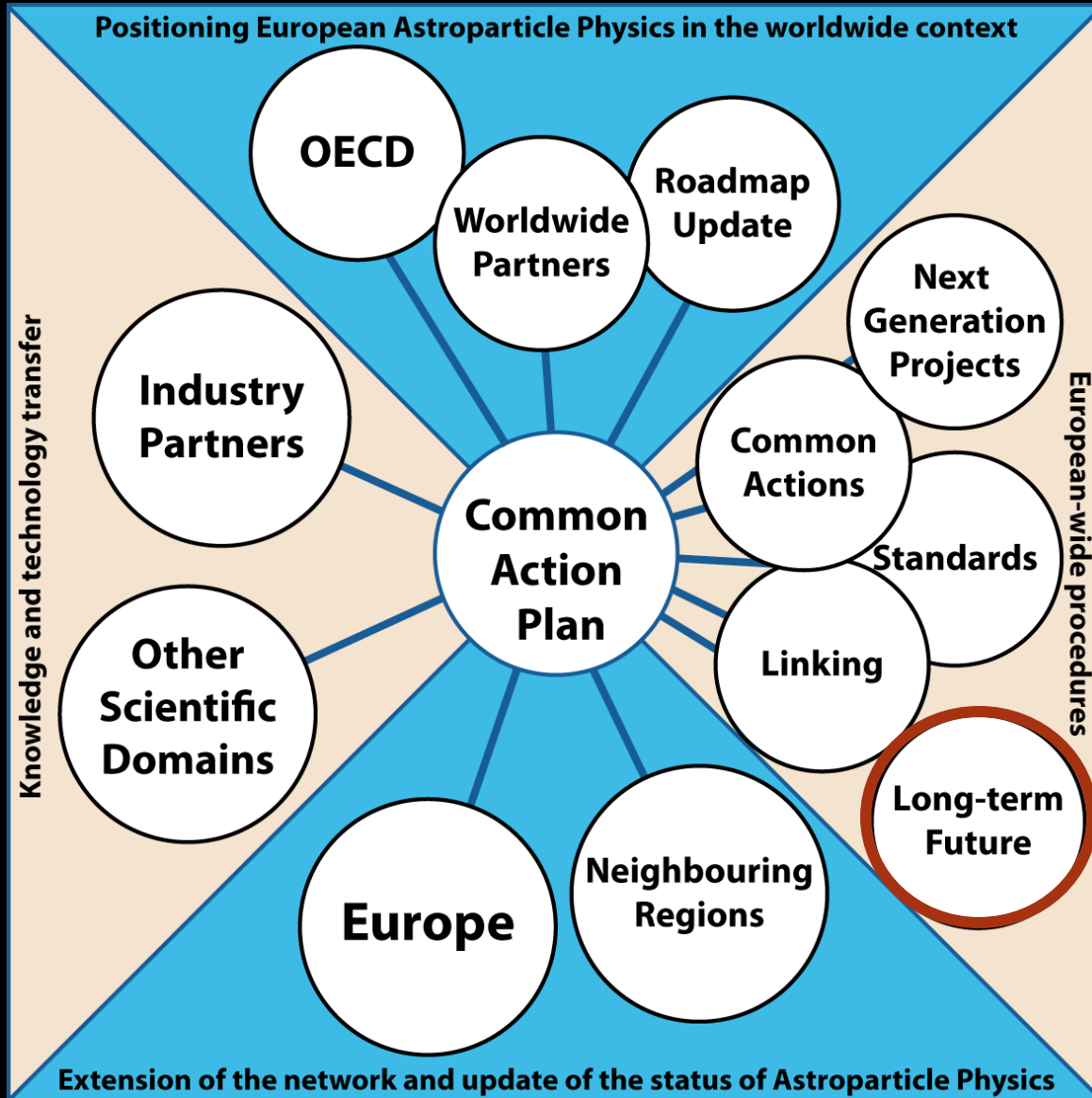
Researchers  $\approx$  1 250, Post-docs  $\approx$  550, Graduate students  $\approx$  750, engineers  $\approx$  450

Total budget  $\approx$  220 M€

*(Personnel, Investment, running costs)*



# From the ASPERA workplan





# Memorandum of Understanding For the Astroparticle Physics European Consortium (ApPEC)

## Strategic objectives

- ✓ Provide a discussion forum for the coordination of European Astroparticle Physics;
- ✓ Develop and update long term strategies
  - ✓ e.g. Roadmap for European Astroparticle Physics;
- ✓ Participate in the European scientific strategy
  - ✓ e.g. the European Strategy of CERN Council and ESFRI;
- ✓ Develop closer relationships with organizations involved in Astroparticle research
  - ✓ such as CERN, JINR, ESA and ESO;
- ✓ Express collective views on Astroparticle Physics in international fora
  - ✓ e.g. the Astroparticle Physics International Forum APIF



# Memorandum of Understanding For the Astroparticle Physics European Consortium (ApPEC)

## Implementation objectives

- ✓ Facilitate and enhance coordination between existing/developing national activities;
- ✓ Develop a common action plan for large Astroparticle Physics infrastructures;
- ✓ Facilitate the convergence of future large scale projects/facilities;
- ✓ Provide organisational advice for the implementation of future large scale projects/facilities,
  - ✓ for instance initiate and/or accompany the creation of resource review boards for international collaborative projects where the national funding agencies are involved;
- ✓ Launch common actions including common calls funded by a virtual common pot.
- ✓ Initiate and guide activities funded by the European Commission (ERA-NET, Prep-Phase, FP);



# Memorandum of Understanding For the Astroparticle Physics European Consortium (ApPEC)

## Organisational Structure

The organisational structure of ApPEC consists of the following 3 bodies:

✓ **the General Assembly (GA)**, strategic, decision-making and supervisory body

✓ Chair since yesterday

*S. Katsanevas*

✓ **the Joint Secretariat (JS)**, executive body

✓ General Secretary since yesterday

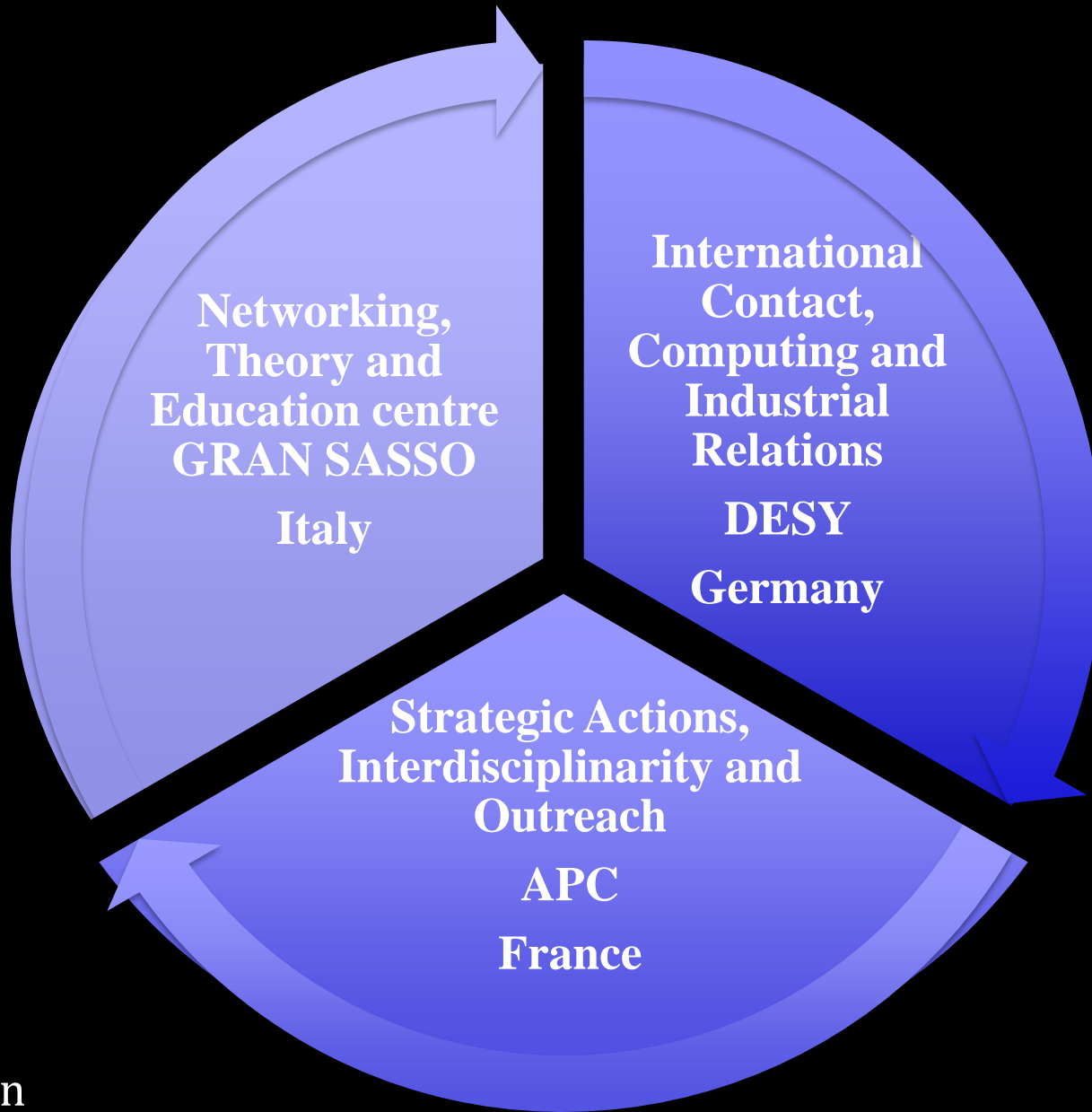
*T. Berghoefer*

✓ **the Scientific Advisory Committee (SAC)**, advisory body

✓ chairman to be nominated in spring 2013

The structure is based on the work of 3 functional centres employing with agency funds a total of 7 officers and support administrative personnel.





7 officers  
+ A common  
operational fund  
≈ 60 KE

**3 Functional centres**

# The roadmap priorities

## preserve MEDIUM scale

1. Gravitational wave advanced detectors,
2. Dark matter searches,
3. Neutrino property measurements,

## initiate LARGE scale

1. Cherenkov Telescope Array (CTA)
2. High-energy neutrino telescope (KM3NeT)
3. Large ground-based UHECR observatory

## interface for VERY LARGE

- LAGUNA (CERN, large scale neutrino detector)
- EUCLID(ESA)/LSST(US)
- eLISA-NGO(ESA)/E.T



## Workplan for 2013

- Oversee the implementation of large scale
- Interface with other strategic exercises : European Strategy for Particle Physics, Global coordination (APIF, e.g. on Dark matter)
- Inaugurate SAC operation with a community workshop:  
“After the Higgs, Planck, neutrino what ?”

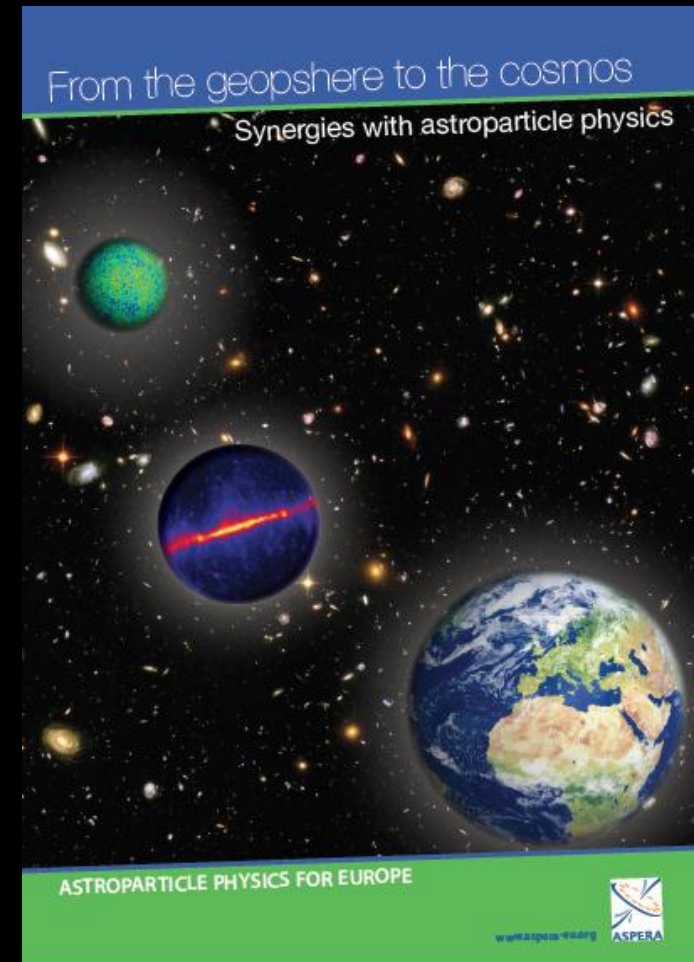


# Synergies with other fields

- From the Geosphere to the Cosmos
  - Paris 1-2 December 2010
- Underwater Science
  - Amsterdam 24-25 May 2012
- Underground science
  - Durham 18-19 December 2012

A new frontier:

- Continuous time series data to other sciences by deploying large networks in hostile environments (sea, desert, underground)
- Radioactivity-free platforms (underground laboratories) for dating and other high sensitivity searches for environment and applications
- Large data manipulation and worldwide networking



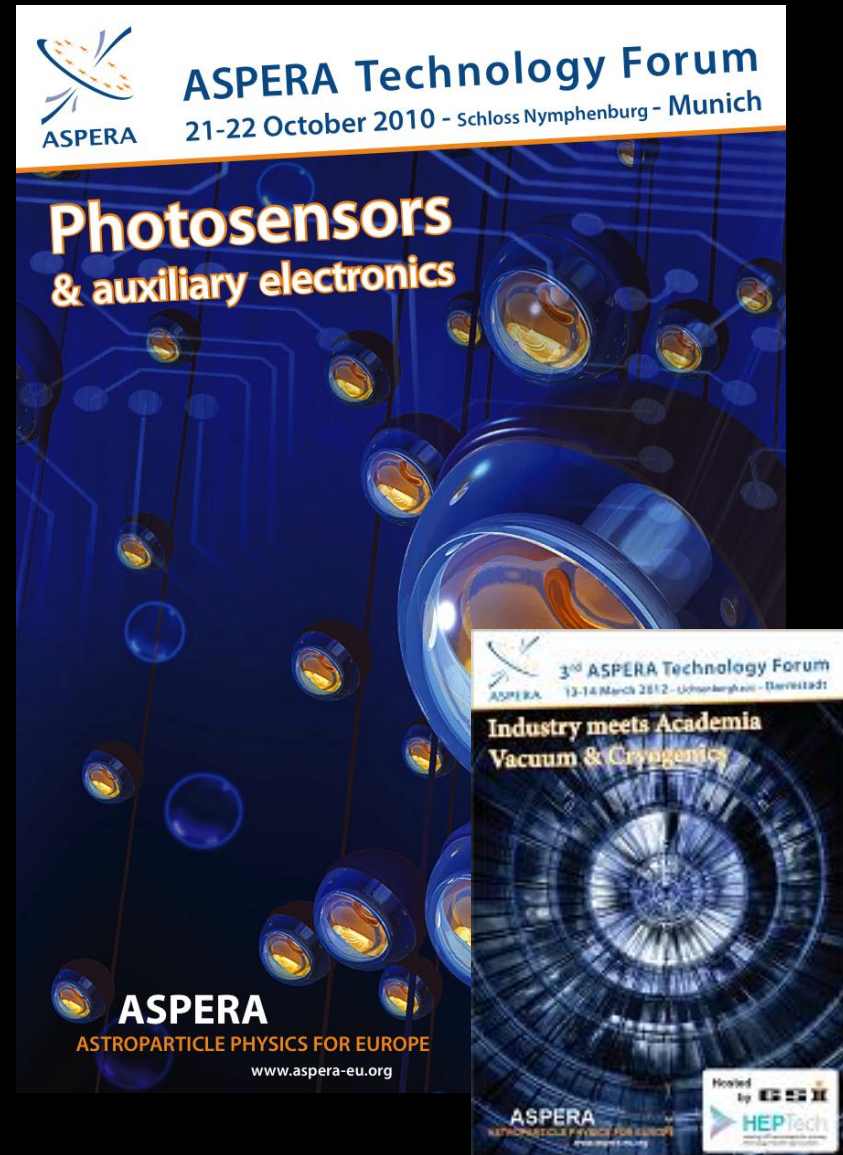
Workplan 2013: coordination with sea-sciences around Deep Ocean Observatories



# Industrial contacts and innovation

- Photosensors and Electronics
  - **Munich 21-22 October 2010**
- Mirros and Lasers
  - **Pisa 20-21 October 2011**
- Cryogenics and Vacuum
  - **Darmstadt March 2012**
- **Cartography of industrial landscape**
- **Organisation of procurement**
- **Encourage industrial developments**
- **Encourage European Innovation**

Workplan 2013: Organize first meeting of industrial officers. to define tasks of Knowledge and Technology Office

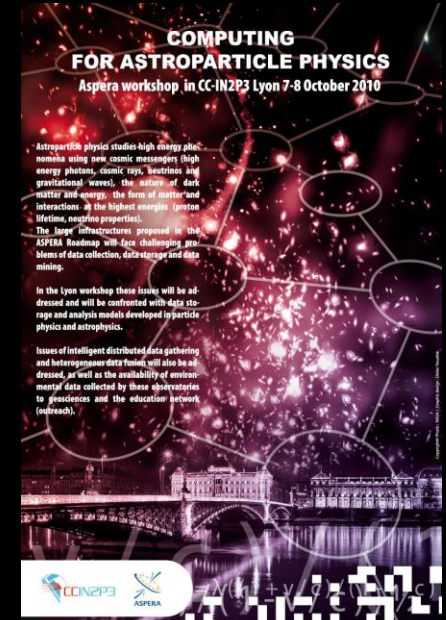
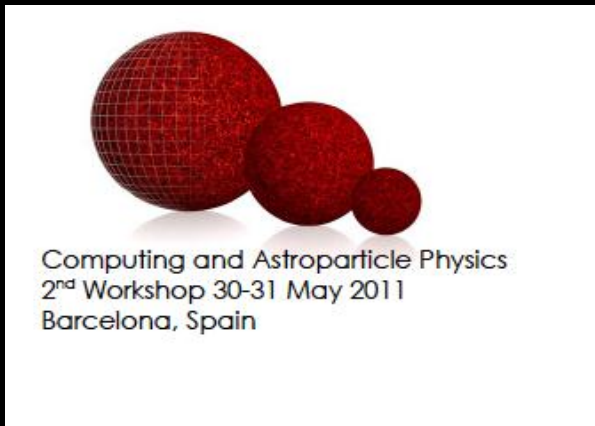




# Define the computing model for Astroparticle Physics

- 3 workshops

1. Lyon October 2010
2. Barcelona May 2011
3. Hannover May 2012



Workplan 2013: Work towards a white paper



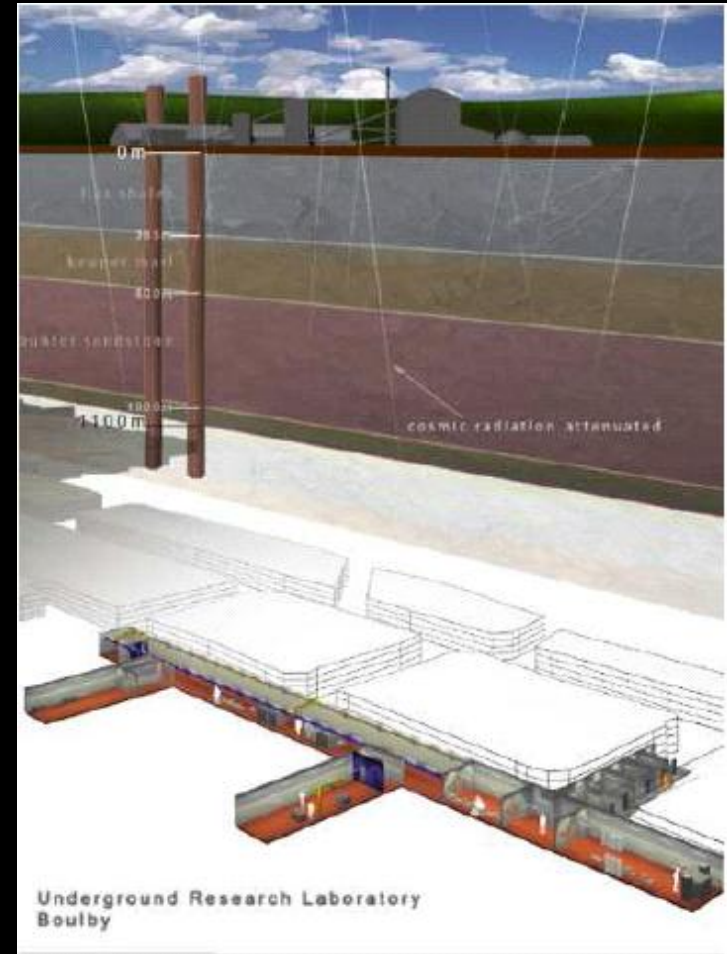
# Linking Infrastructures

## Network of Underground Laboratories

- Workshop on Underground science
  - June 2011 in Zaragoza
- Interdisciplinary uses of Underground science
  - December 2012 in Durham

### Workplan 2013

- Prepare ERIC submission for ApP infrastructures:
  - Underground labs
  - CTA, KM3Net
  - Gravitational waves
- Theory, a coordination scheme



# Web portal and outreach

## www.aspera-eu.org



**ApPEC • Astroparticle Physics European Consortium**

About Science Strategy Infrastructures Industry Interdisciplinarity Theory Communication Calls Documents Events

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**NEWS**

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**New call just announced**  
12 October 2012




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**The technology forum brochure is now available!**  
15 September 2012




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**FEATURES**

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**H.E.S.S.-II inaugurated in Namibia**

World's largest Cherenkov telescope located in the Khomas Highlands of Namibia was officially inaugurated on 28. September 2012.




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- 2012 #NobelPrize in #Physics was awarded jointly to Serge Haroche and David J. Wineland.
- [Via @CERN Courier] Largest Cherenkov telescope sees first light <http://cerncourier.com/cws/article/cern/50800>
- [video] Is dark matter real? - with George Smoot and Martinus Veltman - #darkmatter - RT @NatureNews - <http://www.youtube.com/watch?v=DX9ShHsQUpk>

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**RECENTLY IN THE NEWS**

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- **Europe's elite set sights on universe's mysteries**  
*Projects - June 2012*
- **Celebrating a cosmic centenary**  
*CERN Courier - July 2012*
- **Largest ever Cherenkov telescope sees first light**  
*Innovation report - Oct 2012*

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**EVENTS & MEETINGS**

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- > **Implementing ApP Projects, challenges & solutions...**  
Gran Sasso • Italy • 18/19 October 2012
- > **Underground Synergies with Astroparticle Physics**  
Duisium • UK • 11/12 December 2012
- > **ASPERA ad futurum**  
Bruxelles • Belgium • 30 November 2012

> Full calendar

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Last update: 09 October 2012 - The ApPEC website is hosted and edited by ...





Workplan 2013: Transfer of ASPERA documents and tools (Spain, Canfranc), intensify outreach network of national correspondants



# Common Actions

- Common calls ( $\approx 10$  M€)

- 1<sup>st</sup> common call
  - CTA Design Study
  - Dark Matter Darwin and EURECA
- 2<sup>nd</sup> common call completed
  - UHECR and neutrino mass R&D
- 3<sup>rd</sup> common call in progress (Low energy neutrino, grav waves)

Workplan 2013: Large community meeting (November 2013) to examine EU instruments and how we should respond

## Focus of the ERA-NET instrument under Horizon 2020

- priority to actions, rather than setting up networks or governance structures
- broadening participation
- support for mission-orientation with respect to the big challenges
- need to consider institutional funding

- No future ERA-NET without one substantial call with top-up funding
- No possibility for substantial reimbursement of costs related to coordination and management

→ ApPEC seems well adjusted to current ideas for ERANETS



# Conclusion



100 years after the discovery of cosmic rays

2013 will not only be

an exciting year for Particle and Astroparticle  
Physics and Cosmology (LHC, PLANCK, Neutrino)

but also

a pivotal year for Astroparticle Physics  
coordination