Strategic objectives

• Coordination of European Astroparticle Physics
• Develop and update long term strategies (roadmap)
• Express collective views on APP in international fora

Implementation objectives

• Coordination between existing/developing national activities
• Convergence of future large scale projects/facilities
• Organisational advice for implementation of large facilities
• Launch common calls funded by a (virtual) common pot
2008

2011

2017

Preparations
Considerations
Consultation community
Recommendations and roadmap approved in 2017
Roadmap 2017 – 2026

21 recommendations
1. High-energy Universe: multi-messengers
GW170817: start of multi-messenger astronomy:

Gravitational Waves, Gamma- and X-rays, UV, Optical, IR, and Radio Waves, Neutrinos

Wednesday 17.30 talk
Gravitational Waves
Chris v.d. Broeck
Einstein Telescope
In 2016, NSF unveiled a set of “Big Ideas” -- 10 bold, long-term research and process ideas that identify areas for future investment at the frontiers of science and engineering. With its broad portfolio of investments, NSF is uniquely suited to advance this set of cutting-edge research agendas and processes that will require collaborations with industry, private foundations, other agencies, science academies and societies, and universities and the education sector. The Big Ideas represent unique opportunities to position our Nation at the cutting edge -- indeed to define that cutting edge -- of global science and engineering leadership and to invest in basic research and processes that advance the United States’ prosperity, security, health and well-being.

Windows on the Universe: The Era of Multi-Messenger Astrophysics

Using powerful new syntheses of observational approaches to provide unique insights into the nature and behavior of matter and energy and help to answer some of the most profound questions before humankind. Read more.
1. High-energy Universe: multi-messengers

2. Neutrinos

3. Cosmology
Organisational issues
- European Commission
- European Coordination
- Global collaboration/coordination
- Particle physics & Astronomy
- Inter-disciplinary opportunities

Societal issues
- Gender balance
- Education & Outreach
- Industry
Platform for discussion and collaboration involving industry and academia
Astroparticle Physics and Particle Physics Ties

• Consistent description of the evolution of the Universe from quantum phase to large scale structures
• Communities intimately related
• Computing and data strategies
• Share expertise in experimental techniques, project management and governance
• APP dominates CERN’s ‘recognized experiments’
• ECFA/APPEC detector R&D panel
• European Astroparticle Theory Center
Money
APPEC’s “own” annual cash budget: only 80 k€
APPEC’s “own” annual cash budget: only 80 k€

**Bright side:**
- APP investments
- ~75 M€/year
- National funding
- Partner countries

**Opportunities:**
- Regional €’s
- EU ERDF
- Growing field
- Collaboration
- Interdisciplinary
- Political interest
- GW

Need for coordination and collaboration
European research infrastructures roadmap: ESFRI
National roadmaps: APP well represented

Next steps: funding decisions, competitions, ...
<table>
<thead>
<tr>
<th>Country</th>
<th>Funding</th>
</tr>
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<tbody>
<tr>
<td>Czech Republic</td>
<td>5,52 M EUR</td>
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<tr>
<td>The Kingdom of Denmark</td>
<td>230 M EUR</td>
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<td>The Federal Republic of Germany</td>
<td>202,5 M EUR</td>
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<td>The Republic of Estonia</td>
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<td>33,2 M EUR</td>
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<td>645 M EUR</td>
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<td>The Swiss Confederation</td>
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**European Spallation Source**

~ 1500 M EUR
Summary:

- Extraordinarily exciting time for our comprehension of the Universe with Multi-messenger approach
- Attraction power to students, young researchers and technicians
- Potential high impact on growth and innovation
- Industry, politics and science have to act in consort
Thank you!

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