



## Astroparticle Physics European Consortium

April 2016

### From considerations to recommendations: APPEC Town Meeting 2016



This year APPEC will publish a new roadmap for astroparticle physics in Europe, updating the roadmaps prepared by ASPERA in [2008](#) and [2011](#). To capture the current state of astroparticle physics and share ideas on the new roadmap, APPEC invited interested participants to a town meeting in Paris on 6 and 7 April 2016. More than 200 people attended including speakers, invited guests, and astroparticle physicists from around the world.

The meeting heard presentations on all of the key areas in astroparticle physics, as well as hearing perspectives from beyond Europe in an international roundtable. Summaries of each day were circulated to more than 1700 subscribers of the APPEC newsletters, which can be read again [here](#) and [here](#). The [draft considerations for the roadmap](#) are available on the meeting website, as are [the slide presentations from the various speakers](#).

Speaking at the end of the meeting APPEC Chair Frank Linde said he would work with the community to keep in contact as the draft considerations were refined into the recommendations to be stated in the roadmap later in the year. He said that the final roadmap would contain 15-20 recommendations and that the General Assembly would work to write them concisely following the wide range of inputs received at the town meeting, including feedback on the draft considerations. Once the roadmap is published, the most important work would begin to implement it, he said.

*image: Job de Kleuver*

### LIGO India Memorandum of Understanding is signed



*image: NSF/LIGO*

A Memorandum of Understanding has been signed to lead the way for the construction of a gravitational wave detector in India. NSF Director, France Córdoba and Sekhar Basu, India's Secretary of the Department of Atomic Energy (pictured right) signed the MoU, as did the Secretary of India's Department of Atomic Energy and the Secretary of India's Department of Science and Technology after signing the Memorandum of Understanding securing India as the site of the third LIGO detector.

Dr Córdoba said: "We look forward to working closely with our Indian colleagues in this endeavor to further our knowledge of the most energetic phenomena in the cosmos." The [Indian Prime Minister Shri Narendra Modi met LIGO scientists](#) including some Indian students, and encouraged them to interact with universities in India.

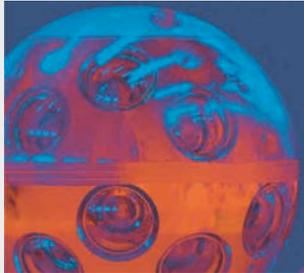
Read the [news story from the LIGO website here](#), and the [National Science Foundation news release here](#).

A further step was taken towards a global gravitational wave detection system, which also includes Virgo, with [test runs of the KAGRA detector](#) in Japan ([news from the KAGRA website](#)).

## ESA's Gravitational Observatory Advisory Team reports back

The European Space Agency expert team charged with reporting on the possibilities of a future space-based gravitational wave detector has issued its report. ESA had already committed to a large mission dedicated to the gravitational universe with a launch date scheduled for 2034.

The report, [which can be read in full here](#) states that a space-based laser interferometer is technically feasible and that the scientific potential was "compelling". [The findings were also reported on by the BBC](#).



## Register for SENSE project kick-off event

by Katharina Henjes-Kunst and Thomas Berghöfer

The SENSE project, which was [introduced in the APPEC newsletter in March](#), will be funded as a Coordination and Support Action with the aim of coordinating the research and development efforts in academia and industry in low light level sensing. SENSE consists of a team of three APPEC related partners (University of Geneva, MPI for Physics in Munich, and DESY as coordinator) will start in September 2016. The Kick-off event of SENSE is organised on 27 September 2016 in Munich, [registration is now open](#).

## Progress for CTA



Preparations for construction at the Armazones site in Chile continue with the addition of more site characterisation instruments.

A 30-metre tower (picture to the left courtesy of CTA Twitter feed) has three dimensional anemometers at various heights to measure the wind speed and profile at the site. These measurements will help to characterise observing conditions, along with other instruments measuring atmospheric absorption and scattering of light, and seismic activity.

Meanwhile, [Spanish media have reported the signing of a collaboration agreement](#) between Spain and Japan for four large size telescopes (LST) to be sited at La Palma in the Canary Islands. The agreement was signed in Tokyo by Rafael Rebolo, director of the Institute of Astrophysics of the Canary Islands (IAC), and Takaaki Kajita, director of the Institute of Cosmic Ray Research of the University of Tokyo (Japan)

image: [@CTA\\_Observatory](#) on Twitter

## The Lake Baikal Three Messenger Conference - call for abstracts



APPEC and its transnational partner JINR (Joint Institute for Nuclear Research) in Dubna, the Institute for Nuclear Research of the Russian Academy of Sciences together with the

Lomonosov State University in Moscow, and the Irkutsk State University are inviting astroparticle physicists and colleagues from neighbouring fields to attend the Lake Baikal Three Messenger Conference.

The conference will provide an opportunity to discuss how to confine nature and underlying physical processes in the non-thermal universe by making use of the three astroparticle messengers along with the multi- discipline and wavelength measurements and the theory. Scientific results achieved with current astroparticle experiments will be shown and discussed together with upcoming experimental opportunities in Russia, Europe and worldwide. We herewith invite colleagues to hand in their abstracts on the three basic cosmic messengers in astroparticle physics for upcoming experimental opportunities in Russia, Europe, and beyond.

- Cosmic and Gamma-rays
- Ultrahigh-energy Neutrinos
- Gravitational Waves

Multi-Messenger:

- Data Analysis Frameworks
- Alert Systems
- Future Requirements

The call for abstracts will remain open until 15 June 2016. Registration is open now.

Information and registration: <https://indico.desy.de/event/baikal16> Location: Крестовая падь <http://www.krestovayapad.ru> APPEC Contact: [appec@desy.de](mailto:appec@desy.de)

### **16th International Baikal Summer School on HEP and Astrophysics**

Registration is open for the 16th International Baikal Summer School on HEP and Astrophysics, to take place on the shores of Lake Baikal in July. The school, jointly organised by the Irkutsk State University and JINR, includes a week of lectures as well as intensive study sessions and the chance to deliver an oral or poster presentation.

Full details of the [scientific programme](#), and [registration are available on the school website](#).

To include a news item, event, or meeting in the APPEC Newsletter, please [email Ruth McAvinia, APPEC Communications and Outreach Coordinator](#).

## EVENTS & MEETINGS:

- [12th Patras Workshop on Axions, WIMPs and WISPs](#)  
Jeju Island, 20-24 June 2016.
- [RICAP16 6th Roma International Conference on Astroparticle Physics](#)  
Roma, 21-24 June 2016.
- [Neutrino 2016](#)  
London, 4-9 July 2016.
- [16th International Baikal Summer School on HEP and Astrophysics](#)  
Bol'shie Koty, 8-15 July 2016.
- [ISAPP Summer Institute on 'Using particle physics to understand and image the Earth'](#)  
L'Aquila, 11-21 July 2016.

- [IDM2016 Identification of Dark Matter 2016](#)  
Sheffield, 18-22 July 2016.
- [Lake Baikal Three Messenger Conference](#)  
Listvyanka, 29 August - 2 September 2016.

## RECENTLY IN THE NEWS:

- [HAWC reveals new look at the very high-energy sky](#)  
*Press release 18 April 2016*
- [Fermi Telescope poised to pin down gravitational wave sources](#)  
*NASA website, 18 April 2016*
- [SNOLAB Town Meeting and strategic planning](#)  
*1 April 2016*
- [Azimuthal asymmetry in the risetime of the surface detector signals of the Pierre Auger Observatory](#)  
*Pierre Auger website, April 2016*
- [NSF renews IceCube maintenance and operations contract](#)  
*IceCube website, 31 March 2016*
- [Special edition of \*h\* dealing with gravitational wave detection](#)  
*EGO, Virgo websites April 2016*
- [IUPAP Newsletter](#)  
*April 2016*

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