

news notes

EU astroparticle road map.

Twelve European national research agencies are combining their efforts in astroparticle physics in the Astroparticle Eranet (ASPERA) network, which was started last year. A draft 10-year road map was published this past June, and in September ASPERA members met in Amsterdam to discuss the road map's recommendations on coordinating their efforts.

The road map highlights three major projects: KM3NeT, a kilometer-sized neutrino telescope that will operate beneath the Mediterranean Sea and will be a Northern Hemisphere counterpart of the IceCube Neutrino Observatory in the Antarctic; LAGUNA (Large Apparatus Studying Grand Unification and Neutrino Astrophysics), a detector that will be built with one of three competing technologies (water Cherenkov imaging, liquid scintillator, or liquid-argon time-projection chambers) for proton decay and neutrino astronomy; and the Einstein Telescope, a next-generation gravitational-wave antenna. The road map also proposes funding design studies for the Cherenkov Telescope Array, an observatory for high-

energy gamma rays, and the EURECA (European Underground Rare Event Calorimeter Array) dark-matter detector. Europe will have to double the €70 million (\$98 million) it spends on astroparticle research if it wants to do everything outlined in the road map, says ASPERA chairman and University of Geneva physicist Maurice Bourquin, "and through listening to the community, ASPERA will eventually help to prioritize these projects." The network's members will contribute financially to projects of their choice.

The ASPERA member countries are Belgium, the Czech Republic, France, Germany, Greece, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland, and the UK. Romania is expected to join the network shortly.

PKG

Intraplate earthquakes. China's mega-project to investigate the North China craton, including intraplate earthquakes—those occurring in the continental interior rather than at tectonic plate boundaries—got the green light this year (see PHYSICS TODAY, December 2006, page 31). The project has \$20 million over five years, and Chinese geoscientists are keen on international col-

laborations; US funding agencies are already responding with thumbs up.

Next May the first in a series of workshops for geoscientists from the US and China, sponsored by NSF and the US Geological Survey, will be held in Boulder, Colorado. The topic hasn't been narrowed yet, says Mian Liu, a geoscientist at the University of Missouri–Columbia, but will include active tectonics.

Liu is also the lead on a recently awarded \$2.2 million grant from NSF for studying spatiotemporal patterns of large intraplate earthquakes in North China. Liu and colleagues hope to figure out, for example, why intraplate earthquakes migrate in time and space—in contrast to interplate earthquakes, which tend to recur in specific fault zones. They also aim to determine why the incidence of large earthquakes in the North China Plain is rising, while the neighboring Shanxi-Weihe rifts, an area that was rocked more than 30 times by earthquakes of magnitude 6.5 or greater since 1303, including the deadliest earthquake on record, in 1556, has been largely quiescent over the past two centuries. The researchers will work with partners from China.

TF ■

HIDEN
ANALYTICAL

www.HidenInc.com

Quadrupoles for advanced science

SURFACE ANALYSIS

In the analysis of gases, radicals and ions in surface chemistry applications such as molecular beam and SIMS/ISS/SNMS experiments, Hiden Analytical products offer:

high resolution & sensitivity

fast response

measurement to sub-ppb levels

2. SIMS Workstation

for surface analysis,
depth profiling,
ion energy analysis,
detection of all elements
organic species analysis

for further details of this
and other Hiden Analytical
surface science products contact:

info@hideninc.com

RGA+Ion Gauge+Pirani
Residual Gas Analyzer Plus.....

Extorr



- *Three gauges on a single probe with a 2 3/4" flange.
- *Continuous monitoring protects the filament.
- *All is recorded. All is protected. All is monitored.
- *Autoranging, high stability, and high sensitivity.

Read about the best RGA at:

www.extorr.com

Web Enabled. Mass Ranges to 300 amu.
Optional Electron Multiplier. Sampling Systems Available.
Extorr is an outstanding vacuum measurement value.

Complete RGA \$3450 (U.S. list)

Extorr Inc.
307 Columbia Road
New Kensington, PA 15068 USA

Tel 800-290-7891 or 724-337-3000
Fax 724-337-8322