

Extremely Large Telescope (EELT) and the Square Kilometre Array radio telescope top the priority list for ground-based facilities that exceed €400 million. The top picks in the medium scale (€50 million–€400 million) are the European Solar Telescope, the Cherenkov Telescope Array, and then KM3NeT, an underwater neutrino detector—the last two were priorities in the recent astroparticle roadmap (see PHYSICS TODAY, November 2008, page 25). The two highest-ranked space missions are the Laser Interferometer Space Antenna, a gravitational wave observatory, and the International X-ray Observatory. The full report is available at <http://www.astronet-eu.org>.

As a follow-up, Astronet has commissioned a review of Europe's 2- to 4-meter optical telescopes. The "heterogeneous mix of national and common instruments, equipped and operated without overall coordination," creates a situation that "impedes effective ground-based support of space missions," says Johannes Andersen, Astronet board chair and director of the Nordic Optical Telescope on La Palma. A review of Europe's millimeter–submillimeter and radio telescopes is also planned, as is one focusing on optimizing exploitation of 8- to 10-meter-class optical telescopes in the era of the EELT.

One goal of the roadmap, says Andersen, "is to define a common European strategy on future global-scale projects. We hope this will be helpful input to the new decadal survey in the US." Implementing the roadmap will require an increase of roughly 20% in current astronomy spending, which totals about €2 billion a year.

Toni Feder

US, China settle on nuclear terms

How does one define "assassin's mace"? The expression proved to be one of the most difficult of the 1000 or so terms that a US–China team of nuclear experts had to wrestle with as they assembled a common glossary that can be used in bilateral and international discussions involving nuclear security issues. The two-year project, sponsored by the US National Academy of Sciences' Committee on International Security and Arms Control (CISAC) and the Chinese Scientists Group on Arms Control of the Chinese People's Association for Peace and Disarmament, released its product in November; publication had been delayed for two months by the disastrous May earth-

quake in Sichuan Province.

Most of the glossary entries are simply matched to their equivalents in the other language. But some terms required more nuanced translations. "New thinking," for example, continues in the Chinese policy lexicon to denote the geopolitical philosophy advanced by Soviet president Mikhail Gorbachev two decades ago. "Self-defensive nuclear strategy" is China's official description of its no-first-use policy for nuclear weapons. Even "nuclear weapon" required four definitions, including one used by the North Atlantic Treaty Organization and another by the Russian government. On the other hand, both sides judged the terms "second-generation nuclear weapon" and "theory of low-intensity conflict" to be clear enough to stand alone. "The process was enormously useful," declared CISAC chair Raymond Jeanloz of the University of California, Berkeley. "The Chinese discussions provided a richer understanding of the ambiguities and implications" of translations.

The Chinese side initially resisted inclusion of assassin's mace, or *shashou jian*, dismissing it as US jargon, said Ming-Shih Lu, chair of the CISAC panel that produced the glossary. In US geopolitical parlance, the term describes a Chinese strategy to overcome a superior adversary with a quick technological knockout blow, particularly

in connection with a possible US intervention in a conflict between Taiwan and the mainland. When informed that former Chinese president Jiang Zemin had once used the term in a speech, the Chinese agreed to include it. Still, something may have been lost in the translation: Assassin's mace is defined as "a type of metal weapon" that is thrown unexpectedly at an adversary and as "a metaphor for an adept ability or unique skill used at a critical moment."

The glossary is available online at http://www7.nationalacademies.org/cisac/Glossary_CISAC.html.

David Kramer

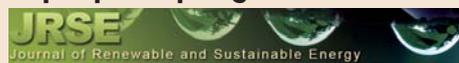
news notes

Oppenheimer TV drama. On Monday, 26 January, the Public Broadcasting System will premiere *The Trials of J. Robert Oppenheimer*, a two-hour program centered around a dramatic re-creation of the 1954 US government hearings that confirmed the 1953 revocation of Oppenheimer's security clearance. During World War II, the theoretical physicist had been the head scientist of the Manhattan Project, which developed the atomic bomb. And after the war, he had served the government as a key adviser on nuclear-weapons issues. The dramatization of the hearings, with actor David Strathairn portraying the beleaguered Oppenheimer, is interspersed with commentaries by historians and scientists,

web watch

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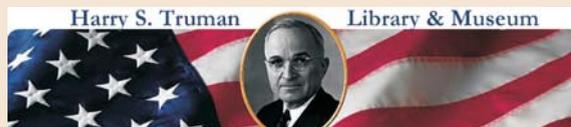
http://www.foreignpolicy.com/story/cms.php?story_id=4555

Writing in the journal *Foreign Policy*, Richard Muller has drawn up **The List: Five Physics Lessons for Obama**. The succinct lessons cover terrorism, energy, nuclear energy, space, and global warming. Muller is a physicist at the University of California, Berkeley.



http://www.trumanlibrary.org/whistlestop/study_collections/bomb/large

The **Harry S. Truman Library and Museum** has been steadily scanning its trove of presidential records and making them available online. The collection about Truman's decision to drop atomic bombs on Hiroshima and Nagasaki now includes more than 70 items.





photos from Oppenheimer's life, and historic film and TV footage. The program, part of the PBS *American Experience* series, was written, produced, and directed by David Grubin. **BMS**

Dubai forum. "The Biology of Business—Learning from Nature to Understand Business" was the title of Geoffrey West's talk last November at the fifth annual Leaders in Dubai Business Forum. West, a physicist and the president of the Santa Fe Institute, was the first scientist to be invited to participate in the forum.

West was asked to attend, according

to a Leaders in Dubai spokesperson, because his "scientific theories are directly related to the business world" and because the forum last year wanted to "provoke new ways of thinking and see a new viewpoint on why businesses and organizations behave the way they do." What caught the organizers' attention, says West, "was work I've done showing why the pace of life increases, and why we have to be innovating at an accelerated rate."

In Dubai, West shared the stage with the likes of Mohamed ElBaradei, director general of the International Atomic Energy Agency; Rudolph Giuliani, former mayor of New York City; and James Wolfensohn, former World Bank president. The forum was attended by some 1500 business leaders from across the Middle East. **TF**

Preventing an attack. A terrorist attack using a weapon of mass destruction is likely to occur somewhere in the world before the end of 2013, unless concerted and urgent international actions are taken, a congressionally chartered commission has warned. Although a bioterror attack is more likely than one involving a nuclear explosive, the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism said in its 2 De-

cember report that the nuclear threat continues to increase as North Korea and Iran gain nuclear weapons capabilities. In addition to recommending reinvigoration of the nonproliferation agenda, the bipartisan commission, chaired by former senators Bob Graham (D-FL) and Jim Talent (R-MO), called for a "radical revamp" of US policy toward Pakistan, which it described as "the crossroads of proliferation and terrorism." The US must use diplomatic, military, and economic means to work with Pakistan and other governments in the region to eliminate terrorist safe havens, it said.

Among the commission's recommendations are the establishment of an international nuclear fuel bank to supply reactor fuel to, and take back spent fuel from, nations that pledge to not acquire their own fuel production capacity, and the provision of additional authorities and more funding for the International Atomic Energy Agency. And, in what panel member Henry Sokolski of the Nonproliferation Policy Education Center described as "a radical recommendation," the commission said that US subsidies for the promotion of nuclear power in other nations should be discouraged.

The commission's report is available at <http://www.preventwmd.gov>. **DK ■**

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