such pairings between neutron stars and ordinary stars. Still, he won't disregard the fascinating possibility that PSR J1740-5340 is a cosmic newborn. "It may or may not be knowable," he says. "But they've done very good detective work so far just to find it."

–ROBERT IRION

RADIO ASTRONOMY

Japan and Korea To Link Networks

TOKYO—Japan and Korea are teaming up to create an Asian network of radio telescopes that will match the capabilities of existing arrays in the United States and Europe. Last month scientists from both countries announced their first joint observations using two antennas, the forerunner of what they hope will be a string of 10 dishes operating in unison by 2005. The observations mark a scientific coming of age for Korea in very long baseline interferometry (VLBI), which combines signals from two or more radio antennas into an image equivalent to what would be captured by a single antenna spread over the entire area.

"This is really a big step forward for Korean astronomy," says Se-Hyung Cho, director of the Taeduk Radio Astronomy Observatory, one of two telescopes making the initial observations. "We hope this leads to more opportunities for our community to make important contributions."

In VLBI, the wider the spacing of the antennas, the better the resolution. The United States currently operates the 10-station U.S. Very Long Baseline Array that stretches nearly 13,000 kilometers from Hawaii to the Virgin Islands, and the 18-station European VLBI Network covers an even larger region.

The Asian array, although smaller, is expected to be ideal for investigating silicon monoxide masers, sources of coherent radiation produced when energy from an expanding star excites silicon monoxide molecules within a surrounding dust cloud. These excited molecules release powerful radio waves, just as excited molecules within a laser release coherent light waves. Silicon monoxide masers are believed to eject mass from very old stars.

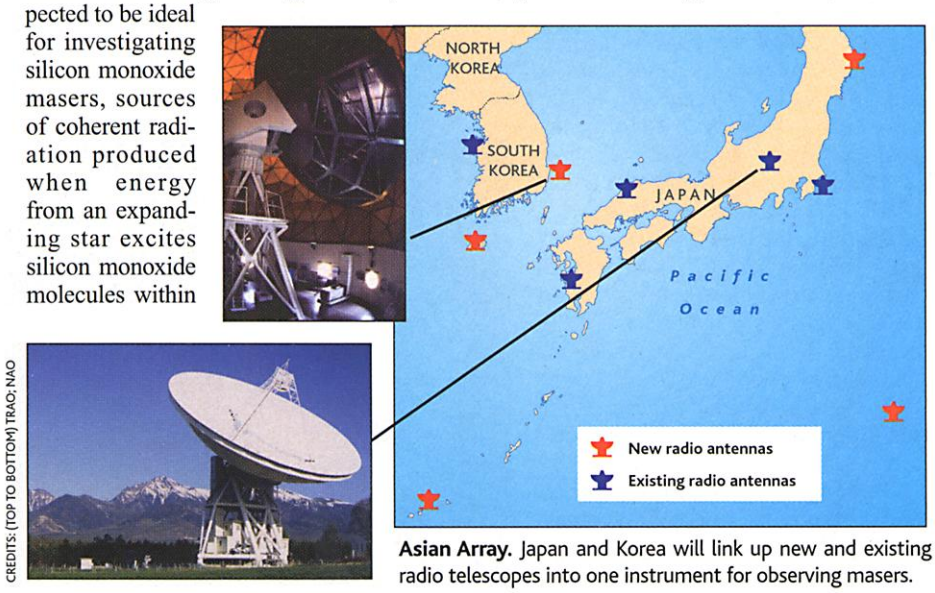
But widely spaced arrays are too powerful to image the entire maser, which are in our galaxy and, thus, relatively close. Katsunori Shibata, a radio astronomer at Japan's National Astronomical Observatory, Mitaka, compares it to training a very powerful telescope on a distant house and seeing only a section of wall instead of an outline of the entire building. "The 1000 kilometers separating Taeduk and Nobeyama is ideal for observing these masers," explains his colleague, Hideyuki Kobayashi. Scientists hope that the observations will shed light on how the masers form and what drives them.

The larger network will incorporate a new array of four, 20-meter antennas scattered throughout Japan, as well as three, 20-meter diameter radio antennas being built in Korea (see map). On its own, the $58 million Japanese array, called VERA (VLBI Exploration of Radio Astrometry) and expected to come online next year, will try to pinpoint the location of masers throughout the Milky Way. In doing so, it will also plot the movement of the galaxy's spiraling arms. The $16 million Korean VLBI Network, to be completed in 2005, hopes to study active galactic nuclei and star-forming regions as well as being part of the larger array.

The Korean and Japanese observatories will also give a boost to the Asia-Pacific Telescope, an informal framework for cooperation among radio observatories throughout the Pacific Rim. "It makes a lot of sense to build in collaborations among regional neighbors as early as possible," says David Jauncey, a radio astronomer at the Australia Telescope National Facility, Canberra, one of 21 observatories in 10 countries that belong to the consortia.

–DENNIS NORMILE

With reporting by Mark Russell in Seoul.



CREDITS: (TOP TO BOTTOM) TRAO; NAO

Asian Array. Japan and Korea will link up new and existing radio telescopes into one instrument for observing masers.

BIOMEDICAL RESEARCH

Tritium Lab to Close After Loss of NIH Funds

BERKELEY, CALIFORNIA—Long a target of local activists, a government-funded tritium labeling facility here is shutting down next month. Federal officials say the 19-year-old facility has outlived its usefulness, but supporters see it as a victim of political pressure founded on scientific ignorance.

The National Tritium Labeling Facility (NTLF) at Lawrence Berkeley National Laboratory develops reagents for biomedical researchers to label molecules with tritium, a radioactive hydrogen isotope used to trace the movements, activities, and binding sites of existing and potential drugs. Local officials have twice passed a resolution urging the government to shut it down for fear that its emissions of tritium gas and tritiated water pose a health hazard, and local Representative Barbara Lee (D–CA) has raised the issue with officials at the National Institutes of Health (NIH). But NIH officials say the facility is safe and that fiscal and scientific shortcomings, not politics, led to its decision to end funding.

"I did not consider the NTLF among our highest priorities in view of … resources needed for genomics," says Judith Vaitukaitis, director of NIH's National Center for Research Resources (NCRR), which has supported the facility since its inception. "It was never mentioned during our workshops to set priorities for biomedical technology." The NTLF also had become "too much of a service facility for industry," she adds. Figures show that it has provided a total subsidy to users of $97,000 over the last 2 years. Michael Marron, NCRR's director of biomedical technology, says that the primary reasons for closure were low publication rates, inadequate service to NIH grantees, and failure to fill a safety position.

Supporters of the center question that explanation and accuse NIH of caving in to outside pressure. They cite a 1999 NIH review laced with effusive praise that gave the center an exceptional score and say that the subsidy is a small part of a $1-million-a-year budget. "It's an extraordinary example of a bunch of extremely ill-informed and antiscience people destroying a precious scientific lab," says Elmer Grossman, a professor emeritus at the University of California, San Francisco, and chair of Berkeley's Community Environmental Advisory Commission.