

atlas. Effects of such calamities on various categories of houses (RCC, bamboo- or brick-constructed or mud huts) are expressed in a lucid, but tabulated manner. Establishment of a centralized body like Earthquake Evaluation Research Centre (EERC) by DST is a historical necessity. The Geological Survey of India (GSI), a premier 150-year-old earth science organization had created an Earthquake Division on 15 April 1999 in the National Capital Region, Faridabad, Haryana. Better coordination and understanding with other central organizations was the sole

criterion for establishment of such a division. But GSI is bent upon its closure and as a first step, recently shifted it to Lucknow, with only two scientists. The rest of the scientists were posted to other places. Its closure is imminent. It is an unfortunate development and EERC shall oppose such a move. Among 212 seismological observatories in India, 75 are manned by India Meteorological Department (IMD) and only 57 stations are chosen for determination of the epicentres of earthquakes. It appears strange that earthquake data of India are monitored and maintained by

the Weather Office, IMD. Further, meteorologists dominate the IMD and seismologists occupy insignificant positions in the department. EERC may be entrusted such a specialized assignment. Majority of 212 observatories may be networked for compilation of earthquake data.

BRIJESH BARTH WAL

C-203, Rohtas Apartment,
Sector-9, Vikas Nagar,
Lucknow 226 022, India

Bandwagon science in India

P. Balaram's comment in the editorial, 'Lost innocence' (*Curr. Sci.*, 2001, **81**, 229–230), 'There is, presumably, little new physics to be gleaned from nuclear blasts' is not supported by facts. The inadequacy of the current state of knowledge of physics available, which goes into the design of nuclear weapons, may be judged by browsing through the recent issues of *Physics Today* (December 2000) and *Los Alamos Science* (2000, **27**). Nuclear-weapon states would not be spending billions, if Balaram's view was tenable.

I am of the view that Balaram's advice to the academies in India 'to limit their domain to conventional academic science and avoid straying into the difficult waters of strategic science and technology', is already being followed. This is reflected in the elections to the

fellowship. A. P. J. Abdul Kalam was not elected by one of the academies. However, (with due respects to her), late Indira Gandhi was. This attitude has also led to the proliferation of 'bandwagon' science in India. The research on high-temperature superconductivity is a prime example. In India, nothing much has emerged from this, both in the academic and the technological areas. On the other hand, it has encouraged the import of scientific instruments and killed whatever little efforts on building indigenous instrumentation existed in the country.

It may also be difficult to compartmentalize science into two neat categories of academic and strategic science. A few examples will suffice to illustrate this. The tetraflop computers, like Blue Pacific developed for 3D simulation of

nuclear weapons, are also being employed to understand protein folding. In the middle of the 20th Century, a storehouse of data on nuclear and radiation transport cross-sections was developed essentially for design of weapons and nuclear reactors. Who would have imagined then that in the future this database combined with Monte Carlo statistical methods will be used for creating a new tool for analysing and planning radiation treatment of cancers?

S. K. SIKKA

Atomic and Condensed Matter Physics Group,
Bhabha Atomic Research Centre,
Trombay,
Mumbai 400 085, India
e-mail: sksikka@magnum.barc.ernet.in