Chinese training programme on High plateau. On logistics front Korea and China are cooperating in the Antarctic Peninsula, where they have research base in King George island.

The outcome of the AFoPS meeting, from India point of view, is (i) potential areas for scientific collaborations on paleoclimatic and glaciological studies, remote sensing techniques. The technical expertise of the AFoPS country is of very high order and India can learn a lot by joining hands with some of the groups, specially those working on marine biology, ice cores and paleo climates, glaciology and weather/ space weather; (ii) sharing of bases / facilities for Arctic and Antarctic Research; (iii) Sharing of technical expertise for proposed ice class vessel for Indian polar programme (iv) discussions were also held to start a newsletter of AFoPS for sharing information, research programmes and future seminars and symposia in polar sciences.

It is hoped that many collaborative research programmes in the contemporary areas of Polar Science and Technology will evolve among AFoPS countries.

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EXPLORING EARTH'S DEPTHS [GPS IN MASSIVE GEOLOGICAL STUDY]

Recent advances in the study of the Earth by Geoscientists and Geodetic Surveyors is a Quantum jump with new 3D imaging, broadband seismic sensors and state-of-the-art GPS technology to map the Earth and the energies that controls it. This endeavor is a most exciting, innovative and multi-purpose EarthScope Project [ESP] is conceived to explore the structure and evolution of Northern America. This novel research can look into the inner workings of the Earth and then 3-dimensionally map and monitoring the movements that trigger earthquakes, volcanic eruptions etc. For the first time ever, we can see what's going on before, during and after an earthquake or other seismic events. Monitoring accomplishes how a continent is formed and the processes that shape it. ESP envisages for the first time ever, scientists are no longer limited to speculate geologic processes, now can observe these processes **in real time**. ESP has three components:

1. The San Andreas Fault Observatory At Depth [SAFOD], the first underground observatory with a 4.83 km long SAFOD borehole that enables researchers to view all phases of an earthquake process.
2. The Plate Boundary Observatory [PBO] network, a geodetic observatory designed to study the three-dimensional strain field resulting from deformation across the active boundary zone between the Pacific and North American plates in the western U.S and Alaska
3. The USArray, a continental scale seismic observatory designed to provide a foundation for integrated studies of continental lithosphere and deep Earth structure over a wide range of scales.

Perhaps the most significant of the ESP components is PBO, which uses 875 "Trimble NetRS" GPS reference stations, 100 portable GPS receivers and 100 borehole strainmeters. The equipment is installed in tectonically active areas to provide data on the strain fields that can be recorded in time scales ranging from **seconds to decades**. The reference stations will receive data from GPS satellites to measure the **slightest** movement on the Earth's crust. The borehole strainmeters, which are about 3-meter long and 10 cm in diameter, are embedded into rock about 200 meters below the earth surface. The strainmeters are also clustered along active faults and volcanic territories to pick up changes in the volume of the rock when it contracts or expands as a part of the Earth's movement. National Science Foundation funded ESP could be operational by fall 2008 and expected to run at least for 15 years. Data will be available **free** to Research and Educational Institutions and General Public via Internet. Great opportunity for Geoscientists to avail.

[*Source:* Technology & More, Issue 2007-1,Visit: http://www.earthscope.org/pbo/instrumentation/gps.php]

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