

# Eyes focused on remote ice continent

Belarus could soon have its own polar base to conduct research in Antarctic

The Antarctic is a designated region of science. It is rich in natural resources, yet their mining is currently prohibited; however, at some point, the division of the continent between interested countries is sure to begin. When this occurs, Belarus won't stand aside.

So far, only two domestic polar expeditions have travelled to the Antarctic: in 2007-2008 and 2008-2009. Until recently, no active steps were made, although Belarus has taken on certain responsibilities, launching its own research of the continent. To become a consultative part of the Antarctic Treaty, gaining active participation in important decisions regarding the continent, we must continue our scientific-research studies, using our own base at the South Pole. The issue was high on the agenda of a recent working meeting involving Belarus' Natural Resources

and Environmental Protection Minister, Vladimir Tsalko, and the Special Representative of the President of the Russian Federation for International Co-operation in the Arctic and Antarctic, Artur Chilingarov.

Mr. Tsalko noted that it took about a year for our two states' governments to prepare an agreement on co-operation in the Antarctic. It is fully ready and is expected to be signed in March. Little time is left, so discussion of terms for joint Belarusian-Russian work on the continent is essential. It is expected that Russia will pass on the Vechernyaya Mountain station to Belarus (as planned earlier), while assisting in cleaning and equipping the building. Russia's Molodezhnaya polar station is situated nearby, which operates well; its experienced specialists will be ready to offer help if needed. "It would be difficult to start fully-fledged op-



Belarusian scientists to continue their present scientific-research work at South Pole

erations at the South Pole without Russia's help," Mr. Tsalko is convinced. "Of course, we could look for other partners but this would be much more difficult and less profitable." Apart from assisting in preparing the polar base, Russia is offering to help train personnel for Antarctic research. Mr. Chilinga-

rov believes Belarus needs to form a modern centre of polar research.

To date, 150 Belarusians have visited the Antarctic to seriously study the Pole and we are keen to further 'conquer' the continent. This could reward us with natural resources, communications and material for scientific studies.

Moreover, Belarus hopes to offer the global community transport suitable for the harsh Antarctic conditions.

There is no doubt that Belarus plans to become a fully-fledged participant of the Antarctic Treaty, building its own polar base on the continent.

## Co-ordinates determined with accuracy up to 1cm

Fine positioning satellite system to come into operation in Belarus from April



Satellite to distinguish co-ordinates of objects

The project has been discussed by the Chairman of the State Property Committee, Georgy Kuznetsov, and the Surveyor and Cadastral Expert of Lantmateriet, the National Land Survey of Sweden, Carl-Erik Sölscher. As part of the joint *Support for Devel-*

*oping Additional Functions of the Property Management System in the Republic of Belarus* project, Sweden has freely allocated around 180,000 Euros to buy GPS/GLONASS receivers.

At present, 17 permanent stations in Belarus receive signals from the

GLONASS (Russia) and GPS (USA) global navigation satellite systems, with the system becoming operational countrywide from April this year.

Data received is transferred to a computation centre for processing and is then sent to consumers, with time and navigation measurements processed by GPS/GLONASS equipment. Such information is necessary when conducting geodesic and land-cadastral works, as well as investigations into the construction of roads, line structures and other sites. It is also useful for aerial survey work, and the navigation and dispatching of transport vehicles.

The system enables us to determine exact co-ordinates, such as those of underground pipes or land boundaries, with an accuracy of 1-5cm. Its application helps avoid mistakes in design and construction, since measurements are conducted within a single system of co-ordinates for Belarus. In particular, from 2011-2012, the cartographic basis of the Republic's territory is to be unified, to 1:10000 scale.

## Robot able to guard nuclear power station

Brest's Technical University develops prototype of robot-guard for nuclear power station

The robot orients itself and can determine moving objects, while being able to analyse air for the presence of toxic substances. Its intellectual robotised platform can be adjusted to perform various tasks: from warehouse activity to tourist escorting. Brest scientists believe that a robot-guide could be useful at the 2014 IIHF World Championships, to be held in Minsk. Meanwhile, doctors



Technical novelty adapted to fulfil different tasks

and rescuers are interested in the innovation, which has been highly praised at international specialised exhibitions in Russia and Ukraine.

## Contest to attract attention

By Anna Bogacheva

Student brigades from Vitebsk Region to acquire their symbols

The student brigade movement annually unites young people from throughout Belarus. Last summer, 104 brigades were

organised in the Vitebsk Region alone, encompassing over 12,000 youngsters. Young boys and girls worked at construction, providing services, teaching and ecological projects and various other volunteer activities. The formation of new brigades for this sum-

mer has already begun in the region.

To inspire youngsters, while enhancing their interest in such activities, the regional committee of the Belarusian Republican Youth Union has announced a competition to create the best symbols for brigades.

## School bags to 'lose weight'

Textbooks being replaced by electronic display boards in Belarusian schools

According to Belarus' First Deputy Education

Minister, Alexander Zhuk, the scheme is being piloted in one of the regions, with each pupil then given an electronic display board able to contain textbooks from

1st-11th grade, negating the need for heavy books. According to preliminary estimates, the initiative of the Education Ministry could save almost \$10m.