

What's happening on Mt. Everest and K2 in 2004?



In a flank overhanging the mighty Khumbu Glacier and with a good view of several 8000-meter mountains - including Everest, Lhotse, Nuptse - the Italian research pyramid (left) was set up in 1992 with numerous laboratory facilities for medical and environmental research. In 2003, the lab received a GPS 530 station located on undisturbed rock (red circle). Photo: Ev-K2-CNR Poretti/Leica Geosystems

The GPS system from Leica Geosystems receives signals around the clock from the 24 Navstar GPS satellites, allowing it to determine its exact position and to also transmit a precise position signal every 30 seconds. This reference signal allows researchers and climbers in the region with their own GPS receivers to orientate themselves with centimeter accuracy.

GPS technology and equipment from Leica Geosystems was used to survey the highest mountain in the world for the first time in 1992, by an international team led by Italian geophysicist Giorgio Poretti. The Leica GPS system is now permanently installed at base-camp altitude. It delivers the extremely precise referential data to researchers and climbers

The newly erected Leica GPS hemispheric antenna at the foot of Mt. Everest receives GPS signals year all year round, 24 hours a day. The Leica GPS System 530 calculates the signals and transmits exact positioning data for researchers, climbers and emergency teams in the region every 30 seconds. Solar technology supplies the equipment with energy throughout the entire year. The data are also transmitted directly to the Italian research center in order to track tectonic changes. Photo: Ev-K2-CNR Poretti/Leica Geosystems



For the first time ever, a Leica GPS system records movements around Mt. Everest every 30 seconds...

Mountain climbers and scientists aren't the only things that move around on the world's highest mountain; in fact, Mt. Everest and the entire Himalayan region is constantly transforming itself. In order to capture the positions of people and nature as well record their movements, a permanent, solar-powered Leica GPS 530 surveying station was installed in 2003. It is located on the Nepalese side of the mountain, near the glass research pyramid that was set up more than a decade ago by the Italian research team "Ev-K2-CNR".

and at the same time records valuable information on changes in the earth's crust. "After a series of tough tests and based on our many years of positive experience in extreme situations, we decided once again in favour of GPS equipment from Leica Geosystems. In this climatic zone, with no way to maintain the equipment over the course of many months, precision and reliability are the top priority," says Giorgio Poretti.

Mt. Everest ice cover and the 50th anniversary of the first K2 conquest

To this day it is not known exactly how thick the ice cover is on the top of Mt. Everest, and thus the course and height of the profile of the summit are not known. In a GPS

surveying campaign to be led by the Italian research team "Ev-K2-CNR" under the direction of the Trieste-based geophysicist Giorgio Poretti in 2004, the two highest mountain peaks in the world will be climbed and surveyed with state-of-the-art GPS systems from Switzerland, in such a way that even the precise profile of the summit can be recognized.

The combined expedition on Mt. Everest and K2 marks the 50-year anniversary of the first successful climb of 8611-meter K2 in 1954, accomplished by an Italian mountaineering team led by Professor Poretti's "Ev-K2-CNR" predecessor, Ardito Desio. Leica GPS surveying instruments will accompany the teams to the world's two highest summits in 2004. It will be the first GPS topographical survey of K2's summit ever!

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