



The Belgian National Seismic Monitoring Network

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The Royal Observatory of Belgium (ROB) is responsible for the seismic activity monitoring in Belgium. For this purpose the ROB operates a network of 24 seismic stations. In addition 18 accelerographs have been installed since 2001 in the most seismic active zones. Seismometers allow detecting and localizing any earthquake of magnitude larger than 1.0 in Belgium and surrounding regions. The location of the accelerometric stations is chosen in function of the type of sub-soil and in some places in function of the nearness of important infrastructures as well. Seven seismic stations are now sending their data in real time to the Observatory (in Uccle) using ADSL lines. This will be increased in a near future. Among them 3 broad-band stations are also sending data to the ORFEUS and IRIS data centres. IRIS also receives data from the Belgian superconducting gravimeter. In addition, in 2010, a broadband borehole seismometer is to be installed at the Princess Elizabeth Antarctic station (71°57' S – 23°20' E), on the bedrock, 180 km away from the coastline.

Recently a low-cost seismic alert system was developed for the Belgian territory, based on the connection flow on the ROB website (<http://www.seismology.be>), in parallel to an automatic control of the “Did you feel it ?” macroseismic inquiries, implemented in 2002. The alert is then confirmed at the latest by the seismic signals from five seismic stations that appear on the website with a delay of more or less ten minutes.

It was successfully tested during the earthquake sequence that has been observed in the region at the southwest of Brussels since July 2008.