

GROUND NOISE MEASUREMENTS AT CONCORDIA BASE, DOME-C, ANTARCTICA

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The site of Dome-C, Antarctica, has been selected for setting a permanent base, in the frame of a French-Italian cooperation. We plan to install a permanent seismological station close to this base, and to deploy an array of seismometers that should benefit from very homogeneous site conditions. We also expect a low level of ground noise since the Concordia site is 1000 km away from the oceans.

During the austral summer 1998-1999, we operated two portable broad-band stations equipped with STS-2 seismometers, in order to evaluate the actual seismic noise in the vicinity of the base. We present the power density spectra obtained from these records. Preliminary results show that, compared to reference noise models, the ground noise at Dome-C is especially low at high frequencies (> 1 Hz) while it remains reasonably good at longer periods. The best results are obtained at few kilometers away from the construction site, which was at the time of measurements a strong source of noise.

New measurements are planned for the summer campaign 1999-2000, and corresponding results will be presented if available.