

**The SPS Target Station for CHORUS and NOMAD Neutrino Experiments, S. PERAIRE, M. ROSS, J.M. ZAZULA, CERN-SL/BT/TA** - The SPS primary and secondary beam lines for the Chorus and Nomad experiments had to be dismantled and rebuilt. Consequently, a new target station, T9, was designed and installed in the neutrino tunnel. The heart of the station is the target box: eleven beryllium rods (3 mm in diameter, 10 cm long, each separated by a 9 cm gap) are accurately aligned in the cast aluminium box; they are cooled by a closed circuit helium gas with adjusted flow to each rod. The box is motorised horizontally and vertically at both ends, to remotely optimise the production of pions (which further decay to neutrinos) by aligning the beryllium rods with the incident proton beam. Radiation protection around the station is guaranteed by more than 100 tons of shielding material (iron, copper, marble). Two vacuum tanks containing beam monitors, one upstream and the other downstream, complete the installation. This presentation describes briefly the various components of the target station; it emphasises particularly the thermal and mechanical calculations which define a safe maximum beam intensity allowed on the beryllium targets. Over the first two years of successful operation, the station has received more than  $2 \cdot 10^{19}$  protons at 450 GeV/c, with intensity peaks of  $2.8 \cdot 10^{13}$  protons per 14.4 s machine cycle.