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Brookhaven Super Neutrino Beam Project[1] JIE WEI, WU-TSUNG WENG, YONG YUNG LEE, NICHOLAOS TSOUPAS, DEEPAK RAPARIA, S.Y. ZHANG, BNL — Super neutrino beam facilities are used to accurately determine the neutrino mixing amplitudes and phase, as well as the CP violation parameters with the long distance and wideband nature of the neutrino beam for the observation of several oscillations from one species of the neutrino to the other. The Super Neutrino Beam Project was proposed at the Brookhaven National Laboratory based on an upgrade of the AGS proton facility from the current 0.14 MW to over 1 MW beam power. The project consists of three major parts: a 1.5 GeV superconducting RF linac that replaces the booster as injector for the AGS, performance upgrade of the AGS itself for a higher intensity and repetition rate, and finally the target and horn system for the neutrino production. This talk gives an overview of the project with emphasis on the design consideration to achieve high intensity and low beam loss for the accelerator systems.

[1]Work performed under the auspices of the US DOE.

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