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NA61/SHINE Data for Long Baseline Neutrino Experiments

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The NA61/SHINE experiment at the CERN SPS has a rich physics programme. Beside the ion and the cosmic ray programmes, hadron production measurements are conducted for precise prediction of conventional accelerator neutrino beams. The neutrino physics program started with a dedicated hadron production campaign for the T2K experiment. The success of this data taking has proven the important role that NA61/SHINE plays as an ancillary experiment for present and future long baseline neutrino programmes. A new campaign for hadron production measurements for Fermilab neutrino beams has already started. In this brief report, we give an overview of the NA61/SHINE experiment capabilities and the dierent analysis methods developed for the neutrino ux prediction. An overview of the current results for the T2K experiment will be shown and future plans will be presented. Examples of the implementation of the hadron production measurements for

the precise T2K neutrino ux prediction will be discussed.

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