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Spectra of π^+ and π^- from π^+ -Carbon Interactions at 31 GeV/c with the NA61/SHINE Spectrometer SCOTT JOHNSON, Univ of Colorado - Boulder, NA61/SHINE COLLABORATION — Tuning of secondary pion interactions will be important for the success of the next generation long baseline neutrino experiments. The interaction energy of 31 GeV/c is particularly useful for understanding secondary pion interactions in the LBNF and NuMI neutrino beamlines. π^+ and π^- spectra have been obtained from interactions of 31 GeV/c π^+ s with carbon from data taken in 2009 with the NA61/SHINE hadron spectrometer. dEdx and mass squared information from the TPC and Time of Flight systems were used to identify charged pions. The production and inelastic cross sections for this interaction will be measured from magnet off data taken in 2015 by NA61/SHINE. NA61/SHINE is poised to run with a more extensive data program to cover the important interactions for DUNE and the NuMI experiments over the next two years.

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