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New Neutron Capabilities in the 88-Inch Cyclotron at Lawrence Berkeley National Lab (LBNL)¹ SIMARJIT KAUR, University of California, Berkeley, M.A. MCMAHAN, Lawrence Berkeley National Lab, L.A. BERNSTEIN, D. SCHNEIDER, Lawrence Livermore National Lab — Two neutron generators - one 14 MeV and one thermal - will be installed at the 88-Inch Cyclotron at LBNL. The 14 MeV (d, t) source has an integrated neutron output of 10^{11} neutron/sec at maximum power. The thermal source generates 10^7 neutrons/sec in a 116 cm^2 field. These neutron generators will be used in diagnostic studies and cross section measurements for the National Ignition Facility at LLNL, and will also be utilized for radiation effects testing. The project scope will be presented including facility layout, neutron flux, shielding calculations and timeline. This new capability will add to the versatility of the 88-inch cyclotron facility and provide exciting new opportunities for both basic and applied nuclear science and national space security missions.

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Prefer Oral Session
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