

I. EXPERIMENT

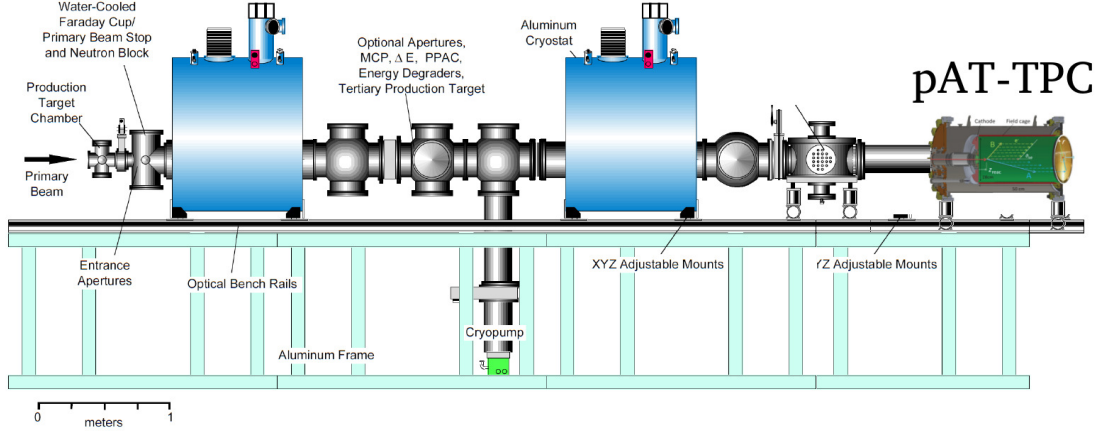


FIG. 1. Experimental setup. TWINSOL coupled with the pAT-TPC. A 54% pure ^{17}F beam at 34.7 MeV was injected into the pAT-TPC. The pAT-TPC was filled with pure ^4He gas at 350 Torr.

II. PRELIMINARY RESULTS

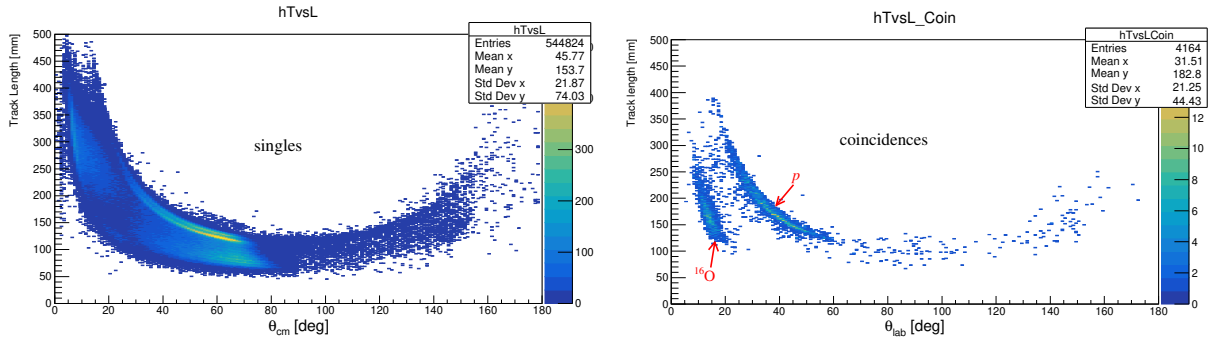


FIG. 2. PID for the scattered particles. The singles spectra is dominated by ^4He scattering. Protons and heavy-ion particles can also be selected in coincidence events with only one reaction vertex.

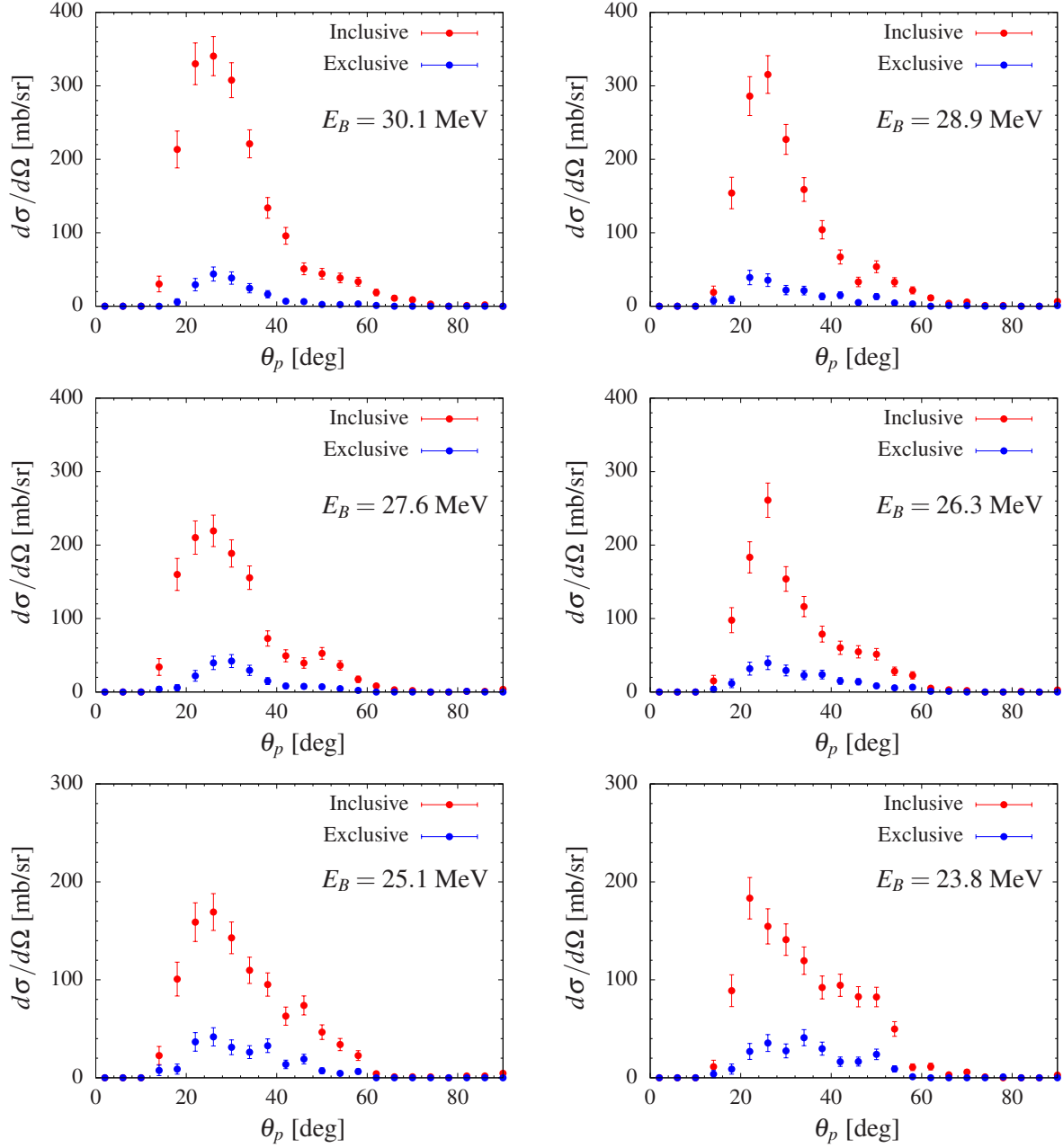


FIG. 3. Proton production (inclusive) and Breakup events in coincidence with ^{16}O particles (exclusive) for different energies.

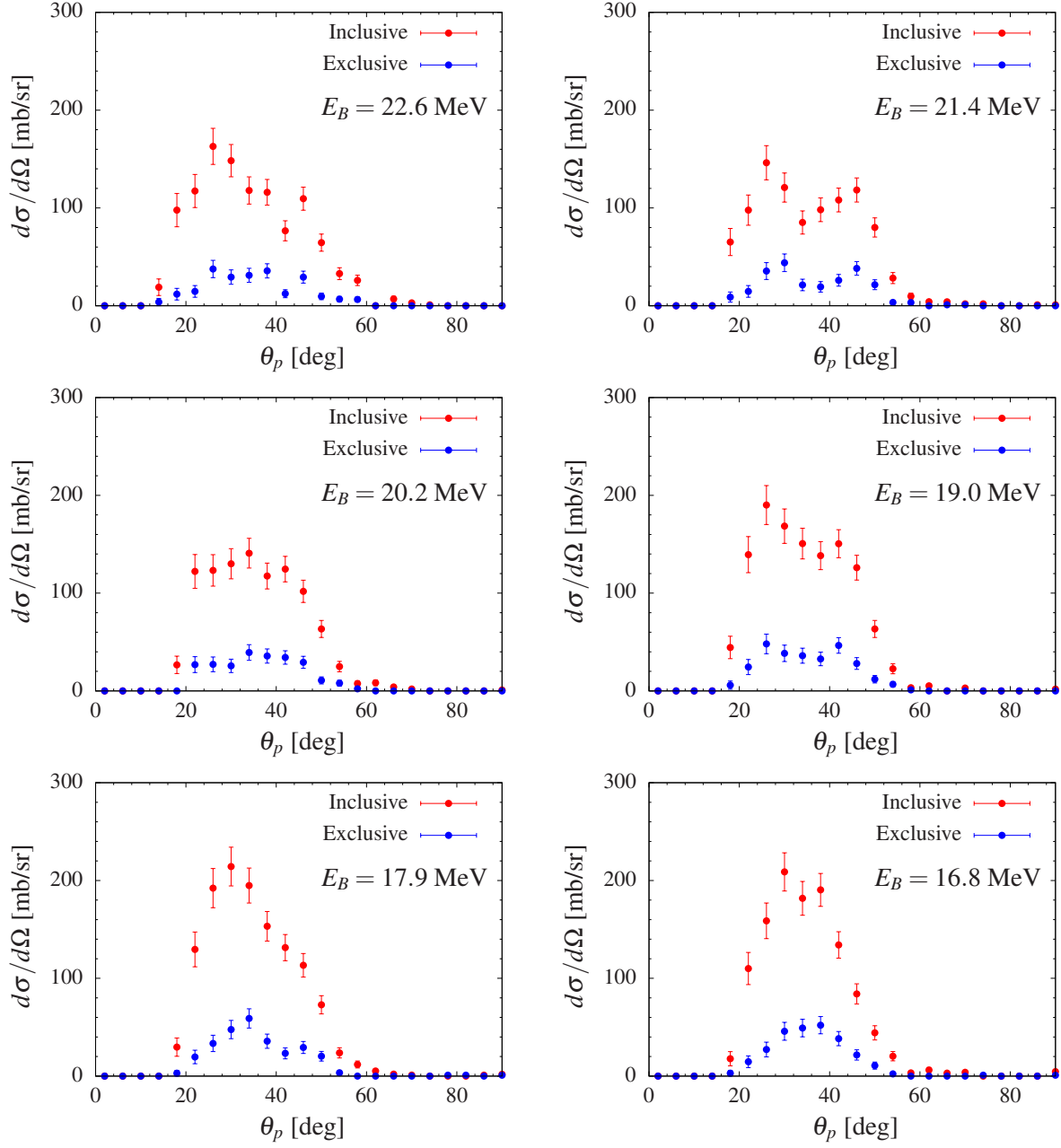


FIG. 4. Same as Fig. 3 but for a different energy range.

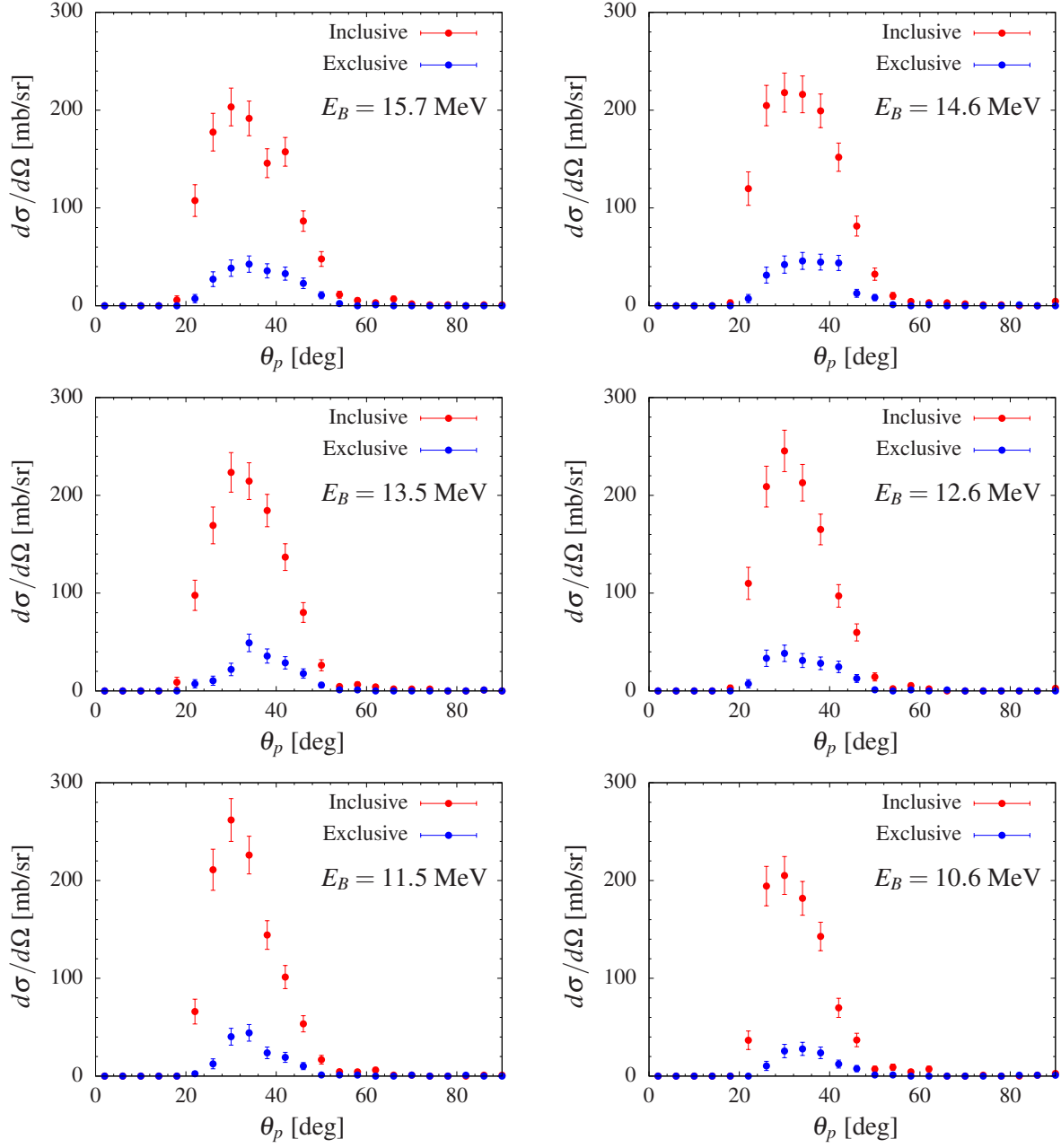


FIG. 5. Same as Fig. 3 but for a different energy range.

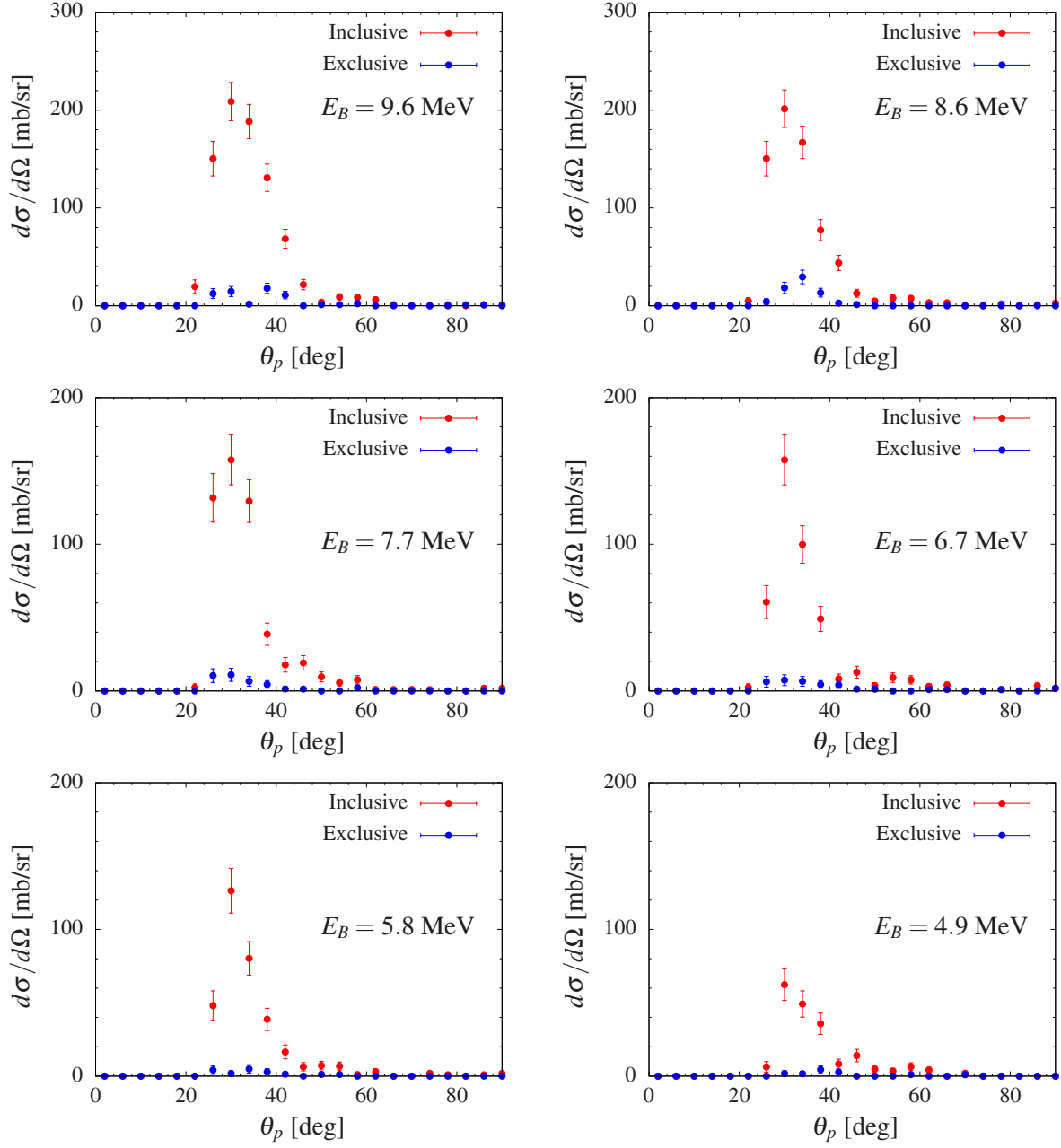


FIG. 6. Same as Fig. 3 but for a different energy range.

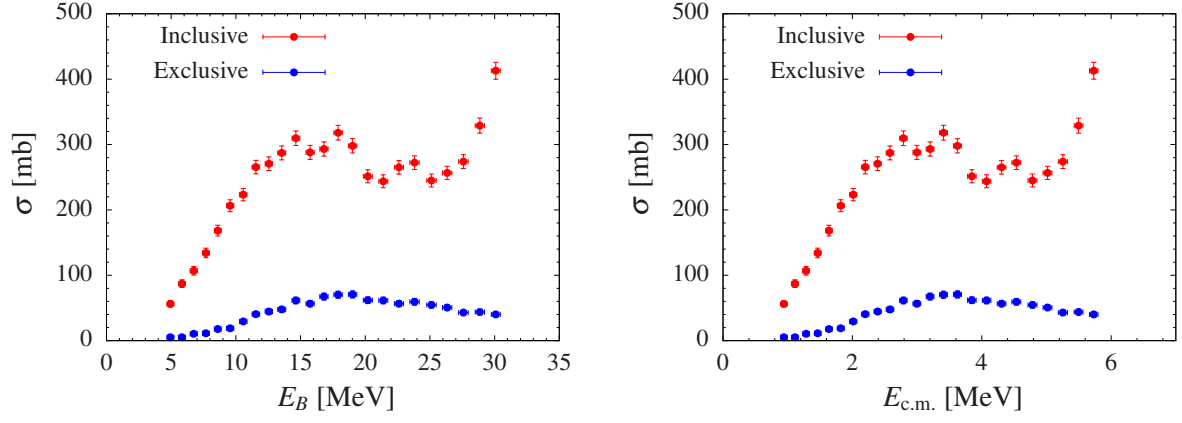


FIG. 7. Energy spectra of proton production at laboratory and center of mass energies.