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# A Forward Multiparticle Spectrometer for CMS

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I describe a Forward Multiparticle Spectrometer (FMS) that could be installed as a new subsystem for CMS in Run 4, with p+p collisions at √s = 14 TeV and with p + O and O + O collisions. It uses a new superconducting dipole as a spectrometer magnet to measure multi-TeV charged hadron spectra behind a large radius beam pipe. The tracking detectors and calorimeters, between z = 116 m and 126 m, are clones of the planned CMS Endcap upgrade, supplemented by transition radiation detectors for hadron identification. In addition to measuring the spectra of ππ , Kπ , p, pbar and light antinuclei, charmed hadrons,
J/ψ and other decaying particles can be measured at high Feynman-x. At high luminosity the FMS in a different mode can search for penetrating long-lived neutral particles. An Expression of Interest is in preparation.

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