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Various HIMB scenarios

Very rough and preliminary characteristics of various versions of HIMB beam. Can serve as a basis to answer questions in physics case more concretely.

HIMB-5

- $10^{10}\,\mu^{+}\mathrm{s}^{-1}$ or $5 \times 10^{7}\,\mu^{-}\mathrm{s}^{-1}$ at 28 MeV/c
- beam spot 50×50 mm^2 (1-sigma)
- $\sim$10% momentum-bite (FWHM)

HIMB-3

- $10^{10}\,\mu^{+}\mathrm{s}^{-1}$ or $5 \times 10^{7}\,\mu^{-}\mathrm{s}^{-1}$ at 28 MeV/c
- beam spot 30×30 mm^2 (1-sigma)
- $\sim$10% momentum-bite (FWHM)

HIMB-cool

- $10^{7}\,\mu^{+}\mathrm{s}^{-1}$
- beam spot $\ll 1 \times 1$ mm^2
- $\sim$10 keV, ΔE $\sim$ 10 eV
- can be reaccelerated to 1-60 MeV/c with good efficiency

HIMB-e

- ?? $10^{11}\,e^{\pm}\mathrm{s}^{-1}$??; rates not yet known
- beam parameters as for HIMB-5 and HIMB-3

HIMB-pi

- $10^{8}\,\pi^{+}\mathrm{s}^{-1}$ at 80 MeV/c
- very large beam spot, mainly useful for calibration, not really for π experiments