LAMPS START COUNTER R&D STATUS

MinJung Kweon
Inha University

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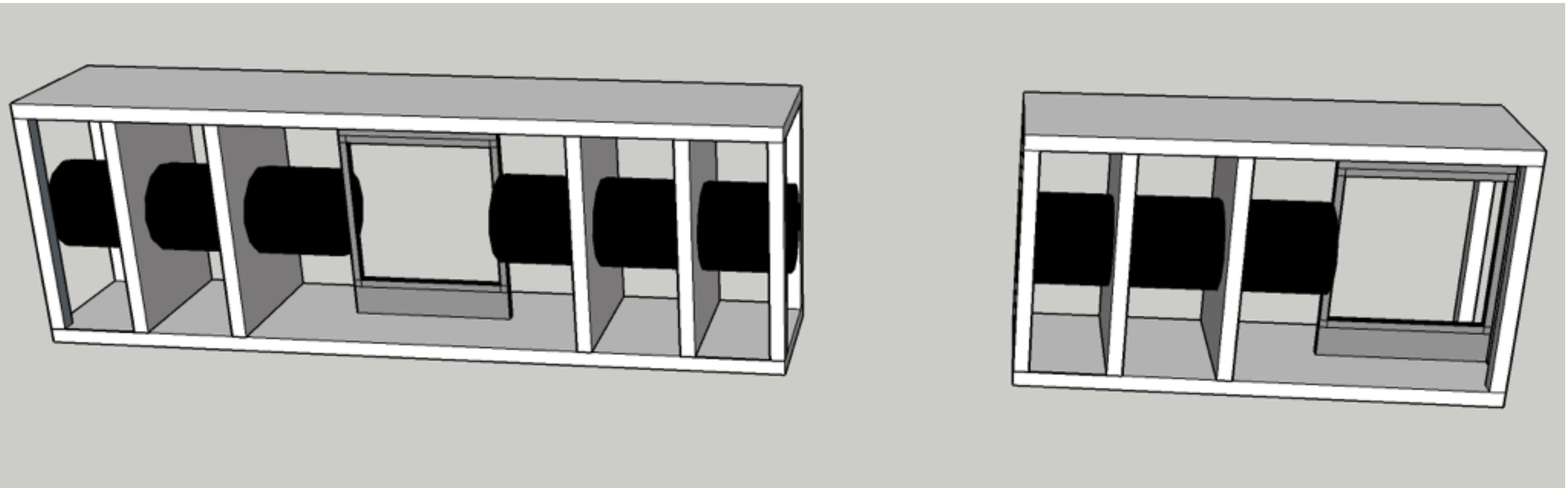
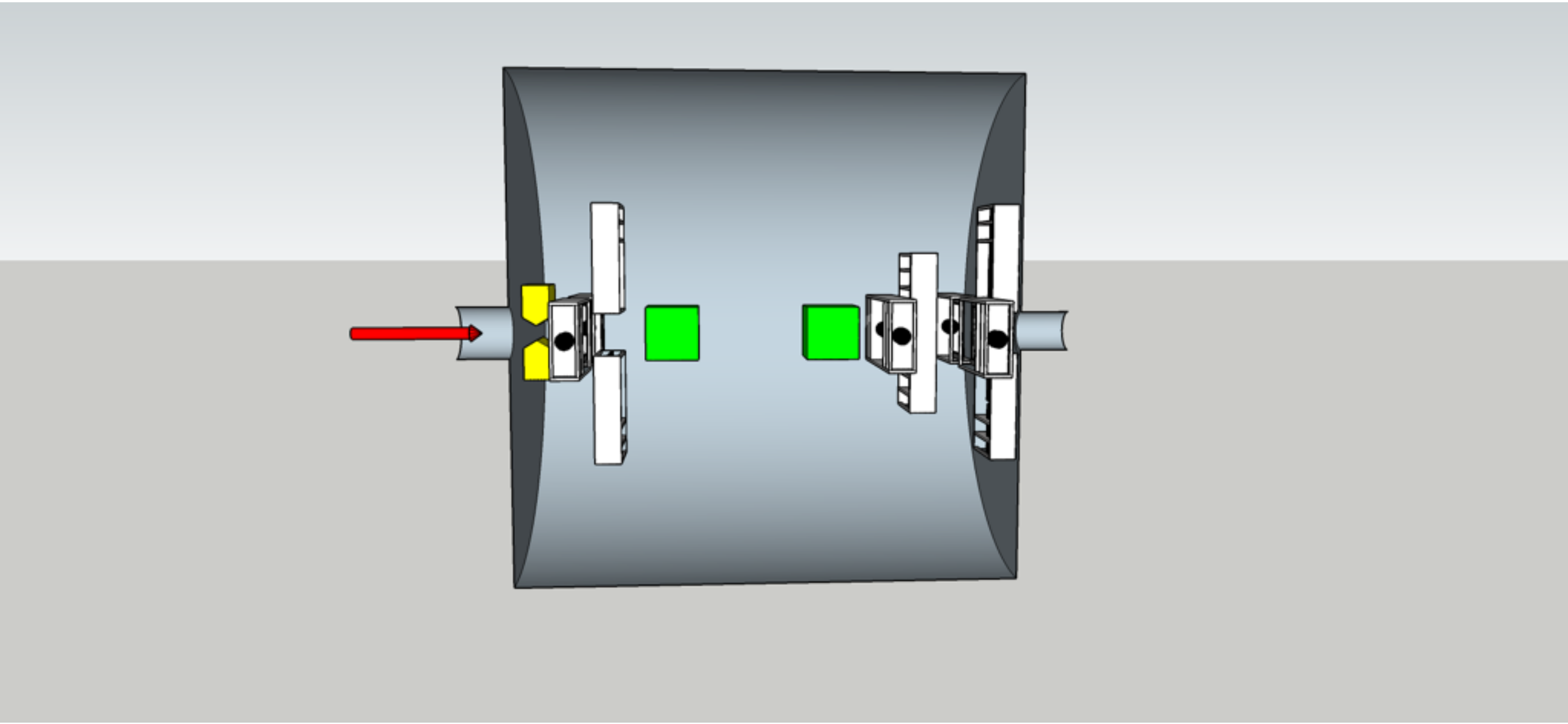
START counter design



START counter & other beam detectors



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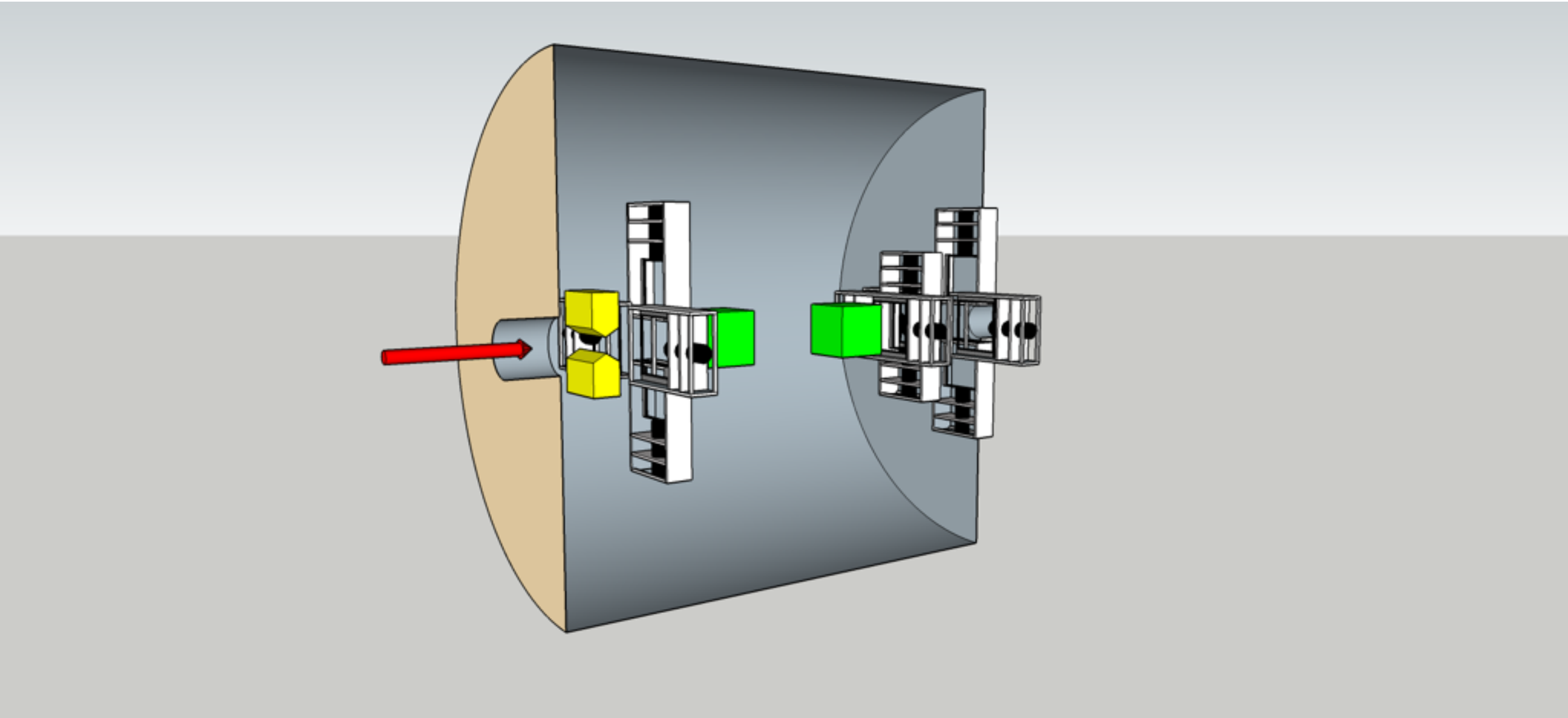
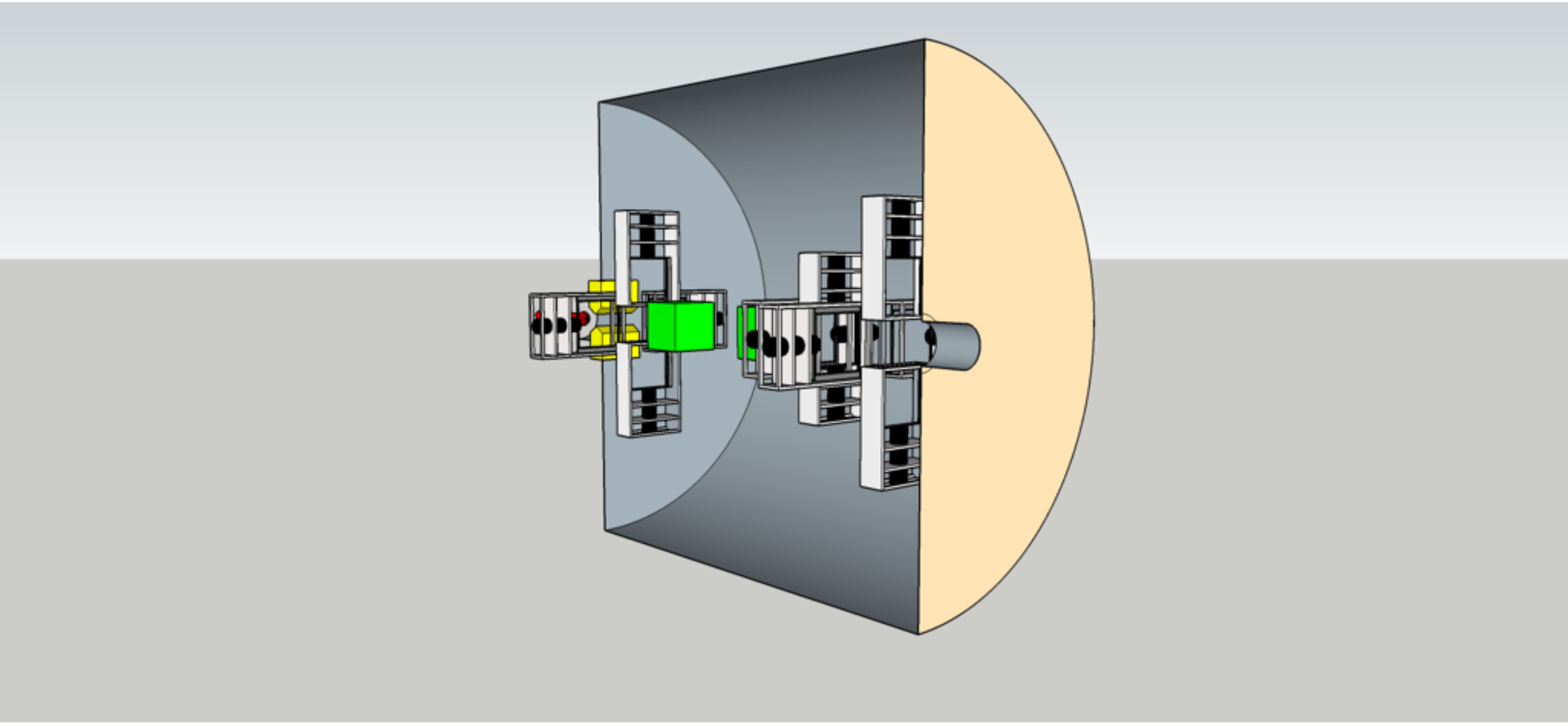


START counter & other beam detectors



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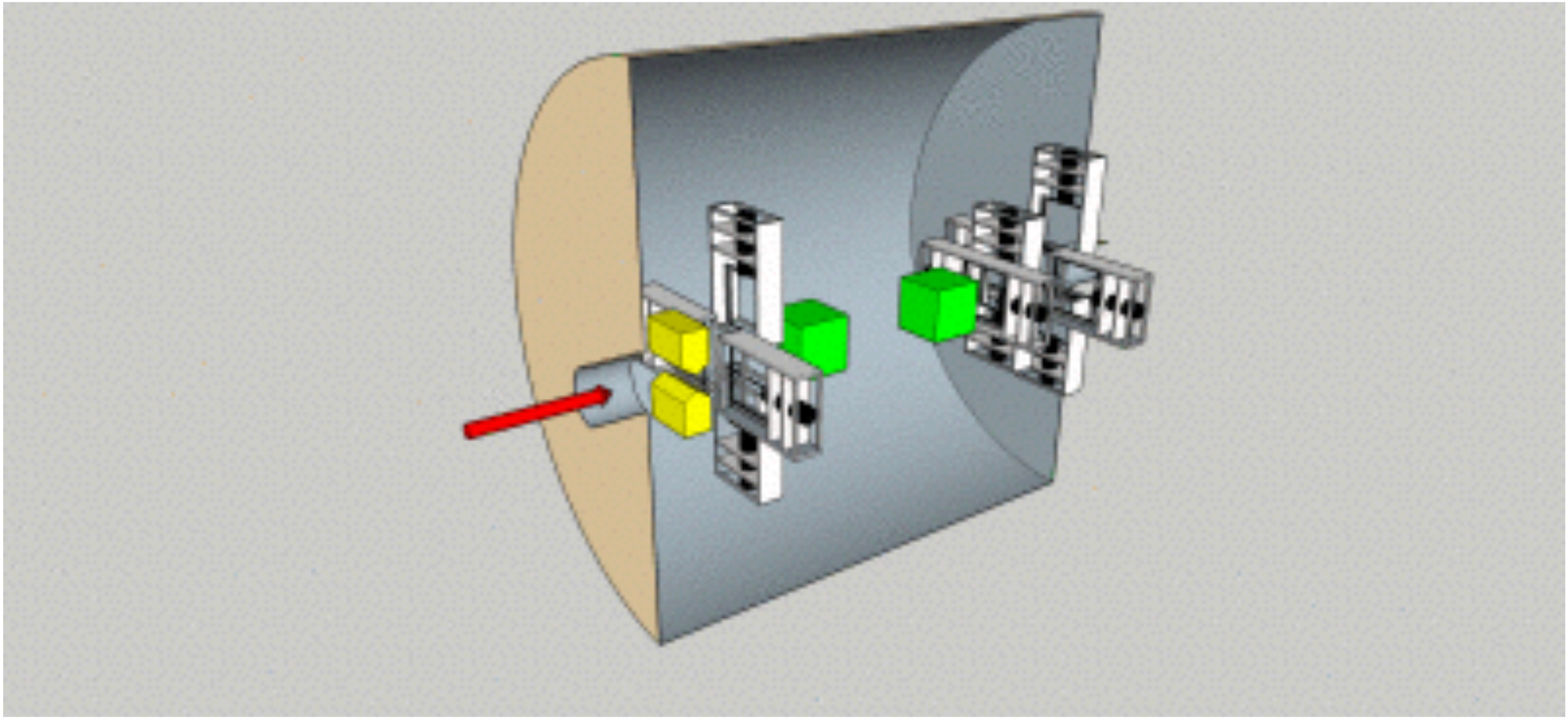

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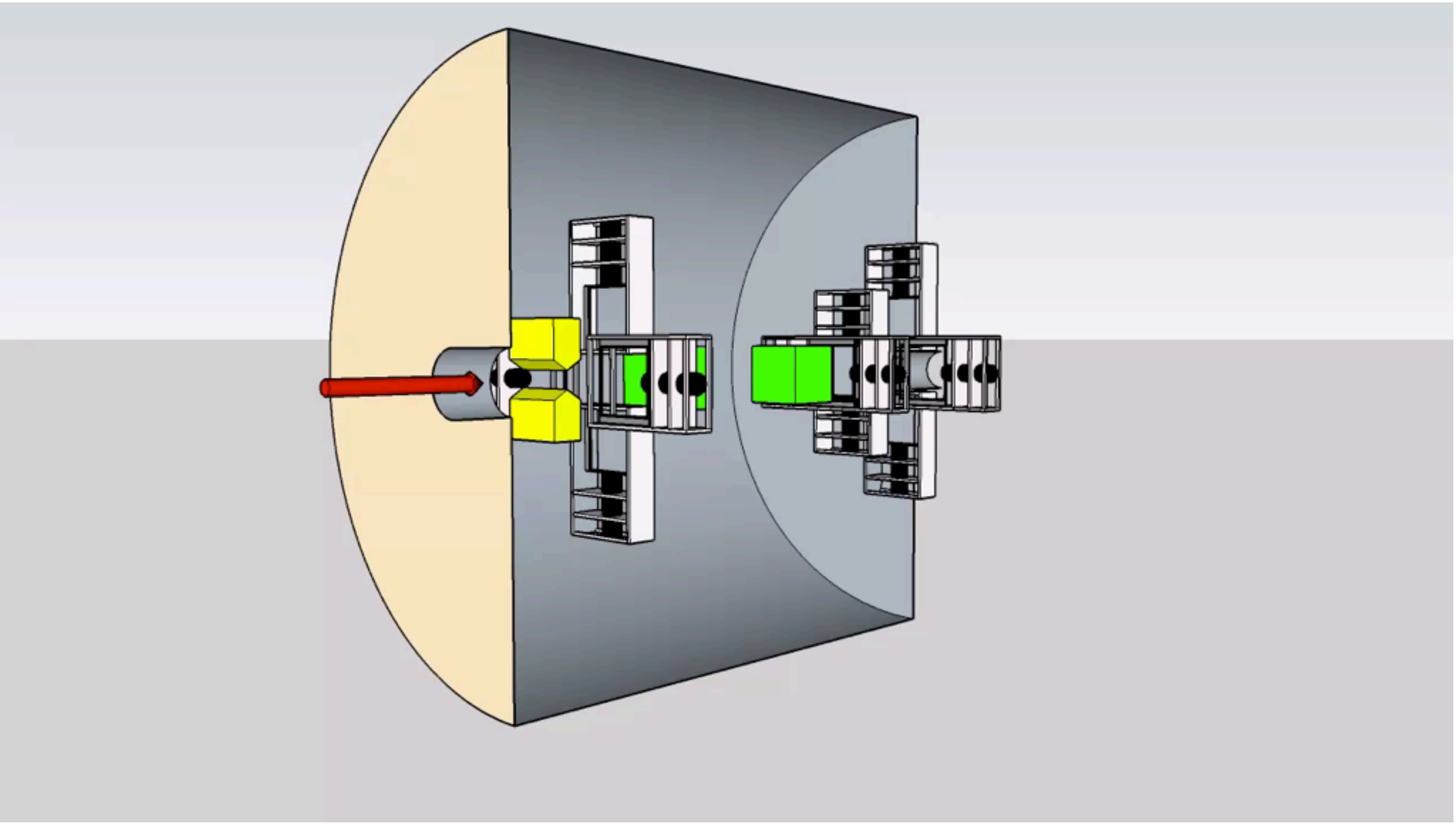
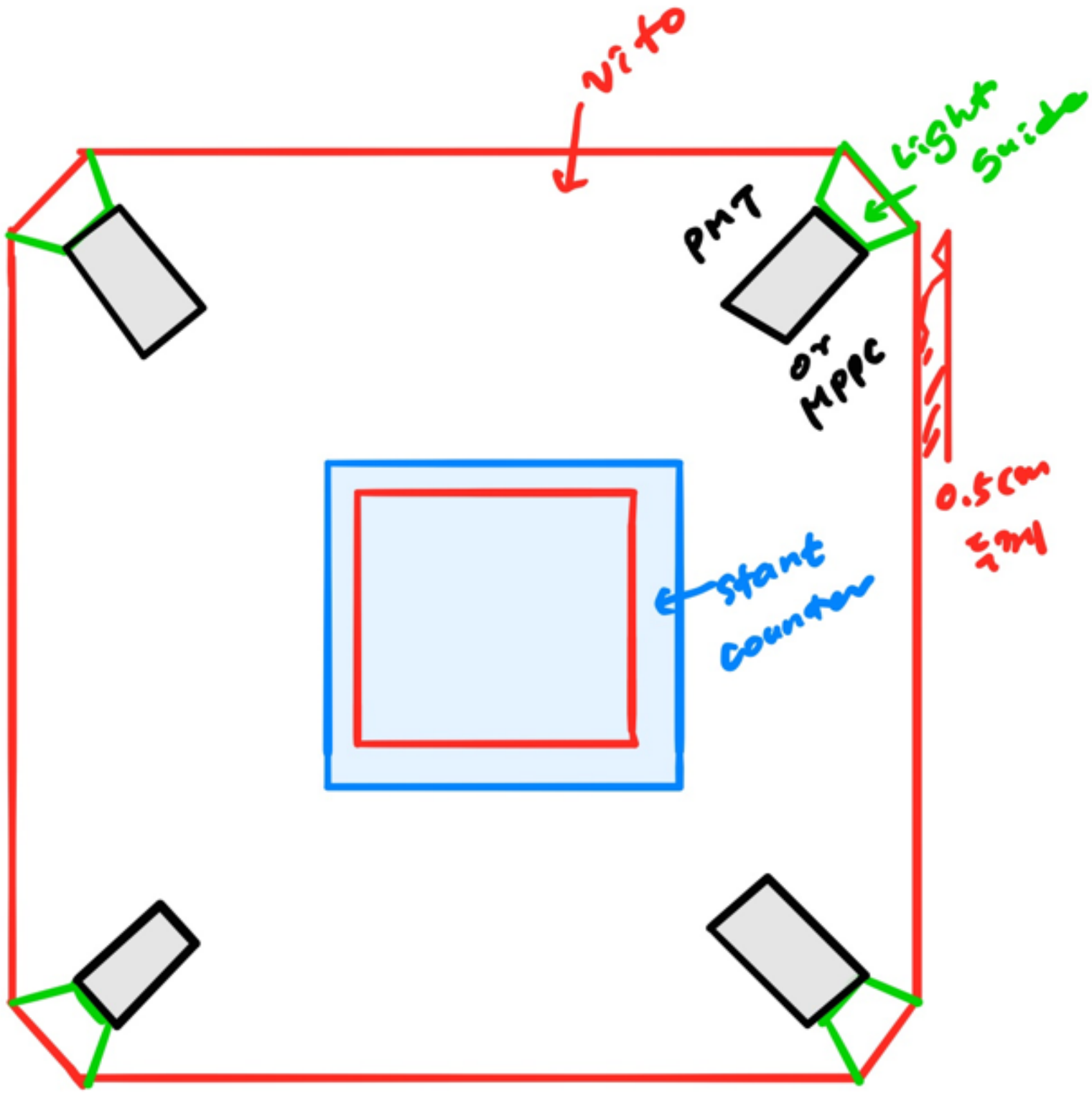
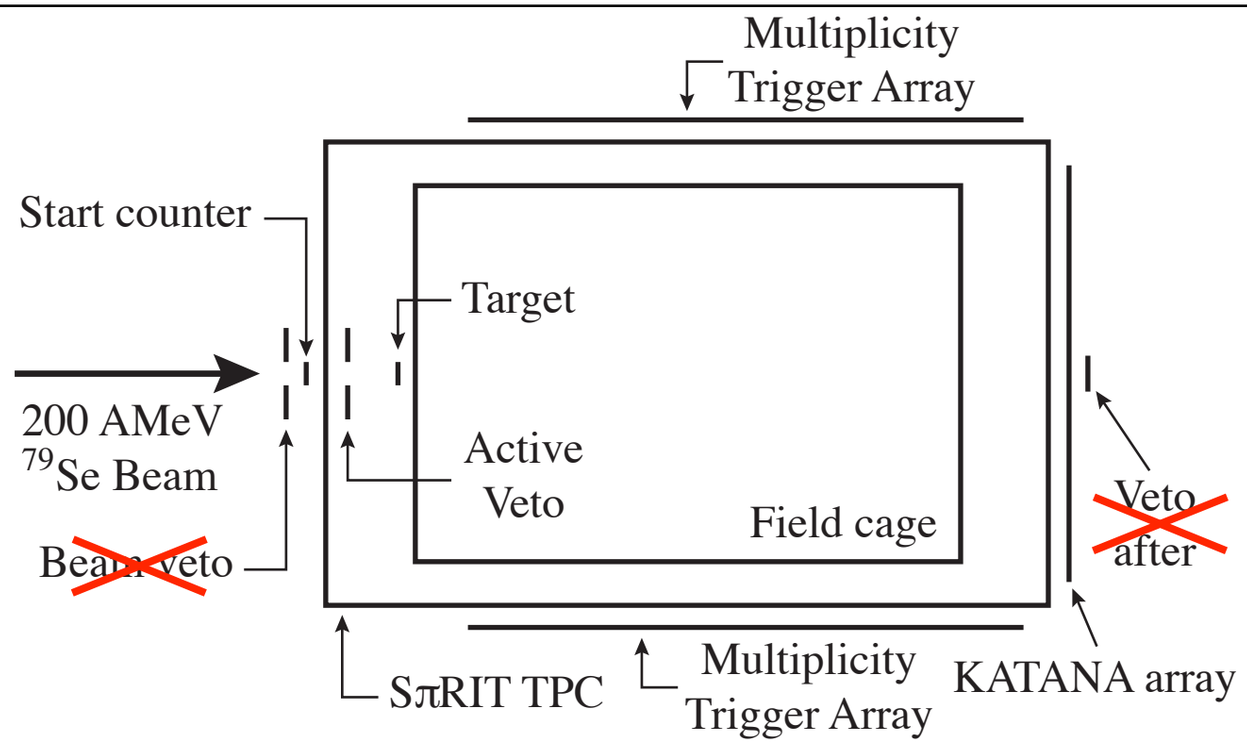


Vito counter design



SπRIT Detectors

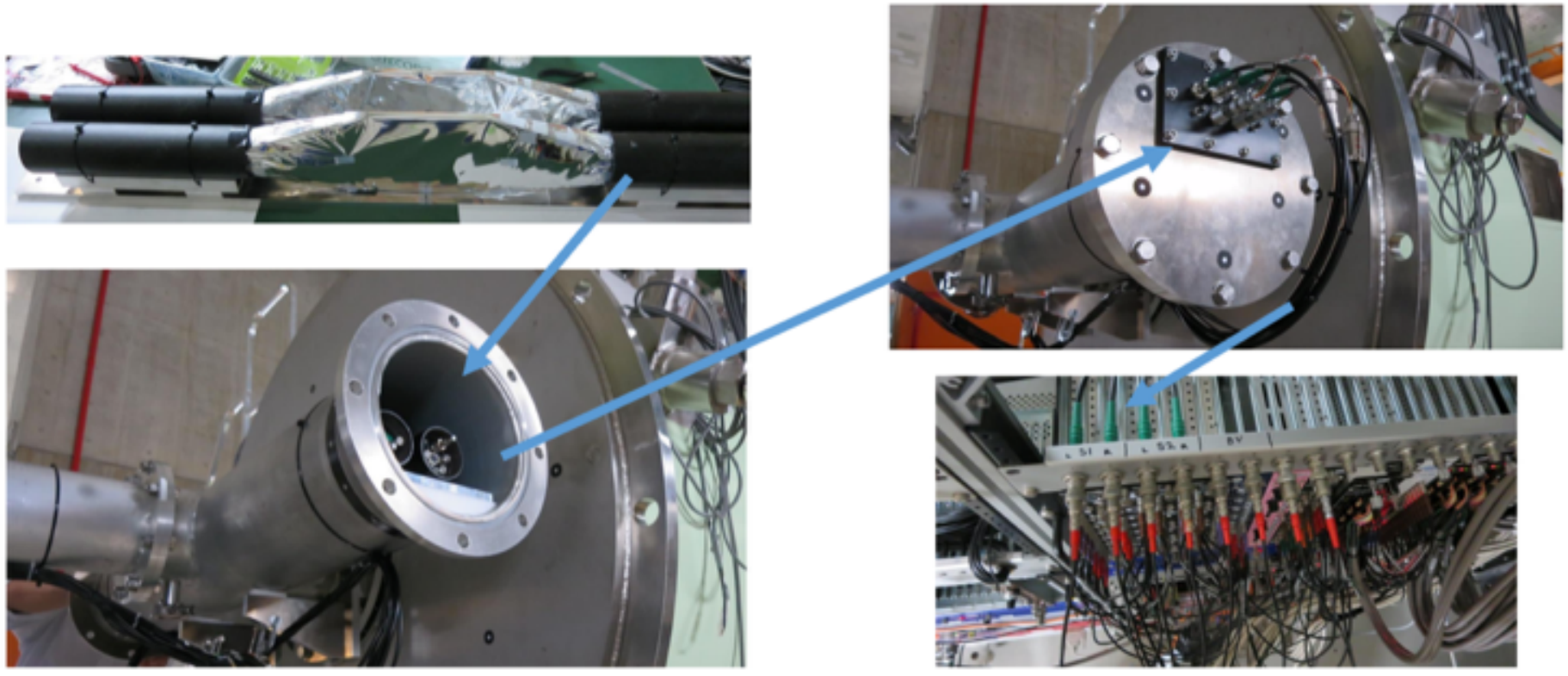


At the moment. A part of KATANA arrays play a role of beam veto

In the beam line, start counters added: two scintillators (200μm width), four photodetectors

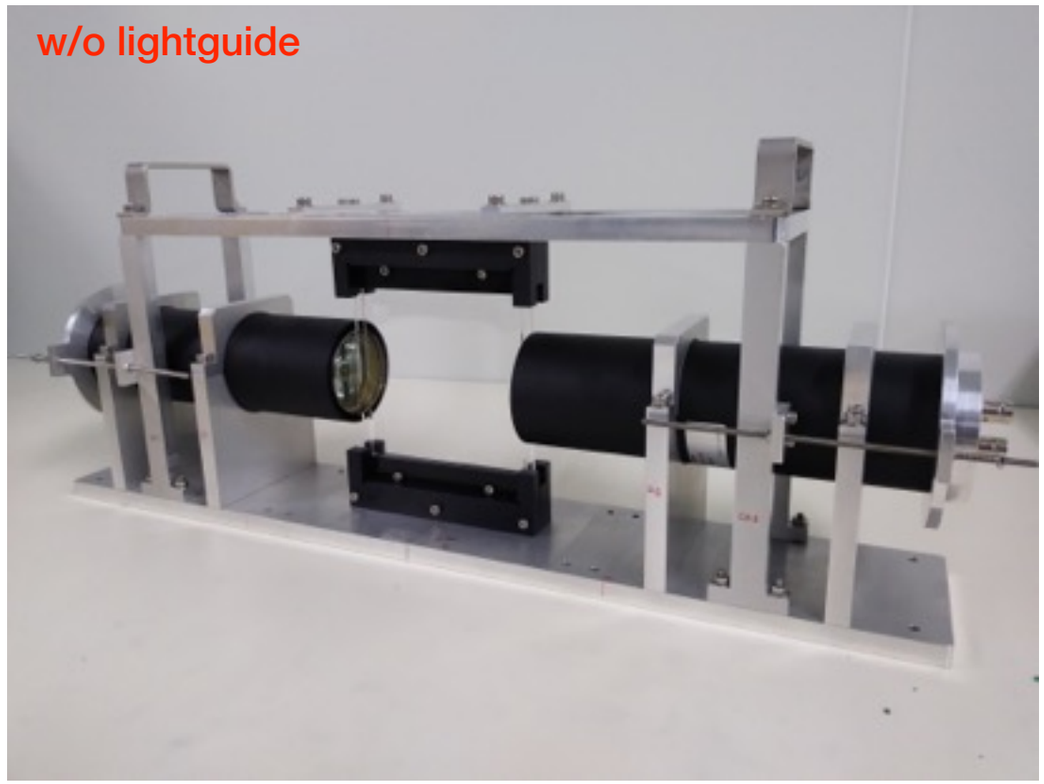
270 AMeV beams.
Ex. Sn-132 with 50% purity, the trigger rate at the final stage of beam line ~ 1k pps.

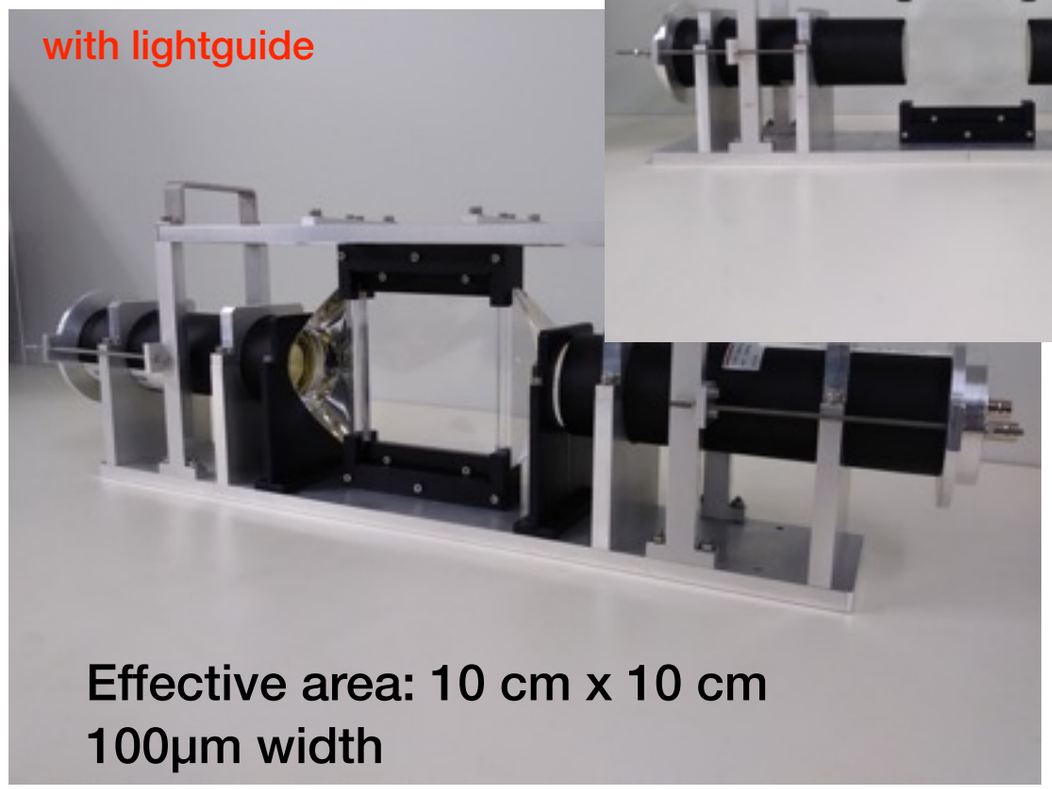
Beam profile at SBT: x~4.6 mm, y~4.4 mm gaussian

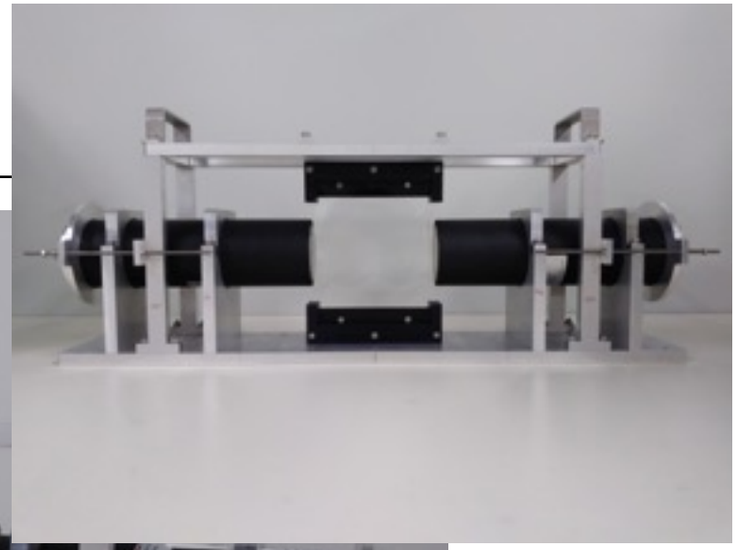


Example of some physics run trigger rates ~ 50 Hz

KOBRA Start Counter







Effective area: 10 cm x 10 cm
100μm width

KOBRA Requirement for plastic detector
-Time resolution : ~ 50 ps (RMS) or ~100 ps (FWHM)
-Active area : 10 cm x 10 cm (required minimum area = 5 cm x 5 cm)

Performance test with Am-241
-Time resolution ~61ps with light guide, ~44 ps w/o light guide.

Plastic scintillator : EJ-230
PMT : H2431-50