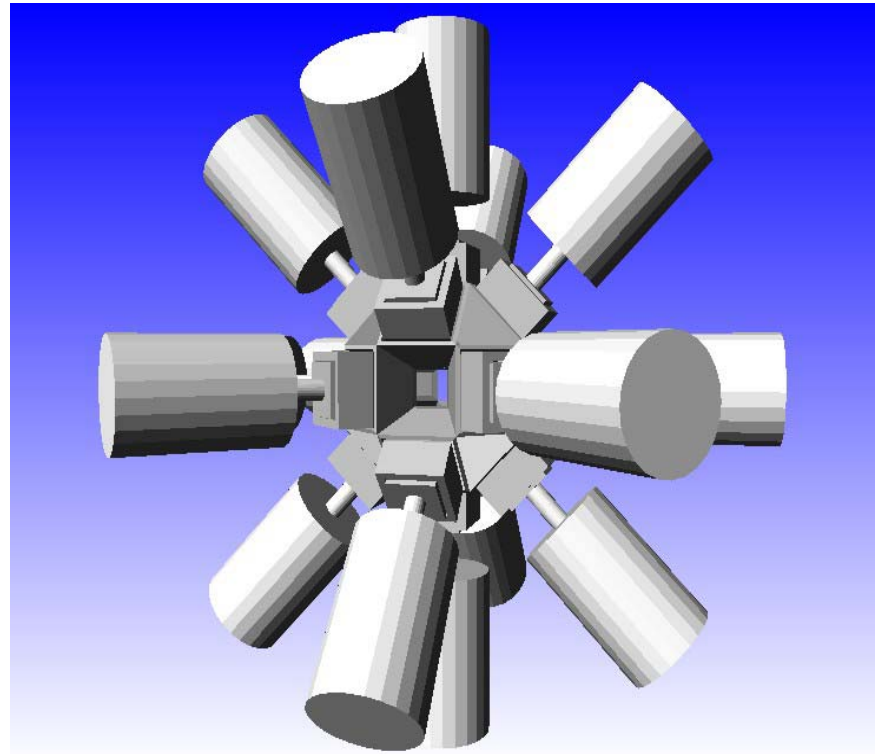
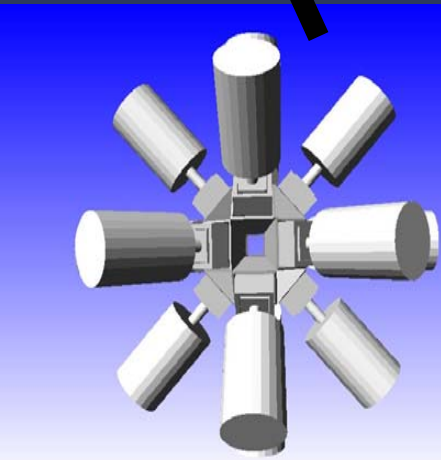
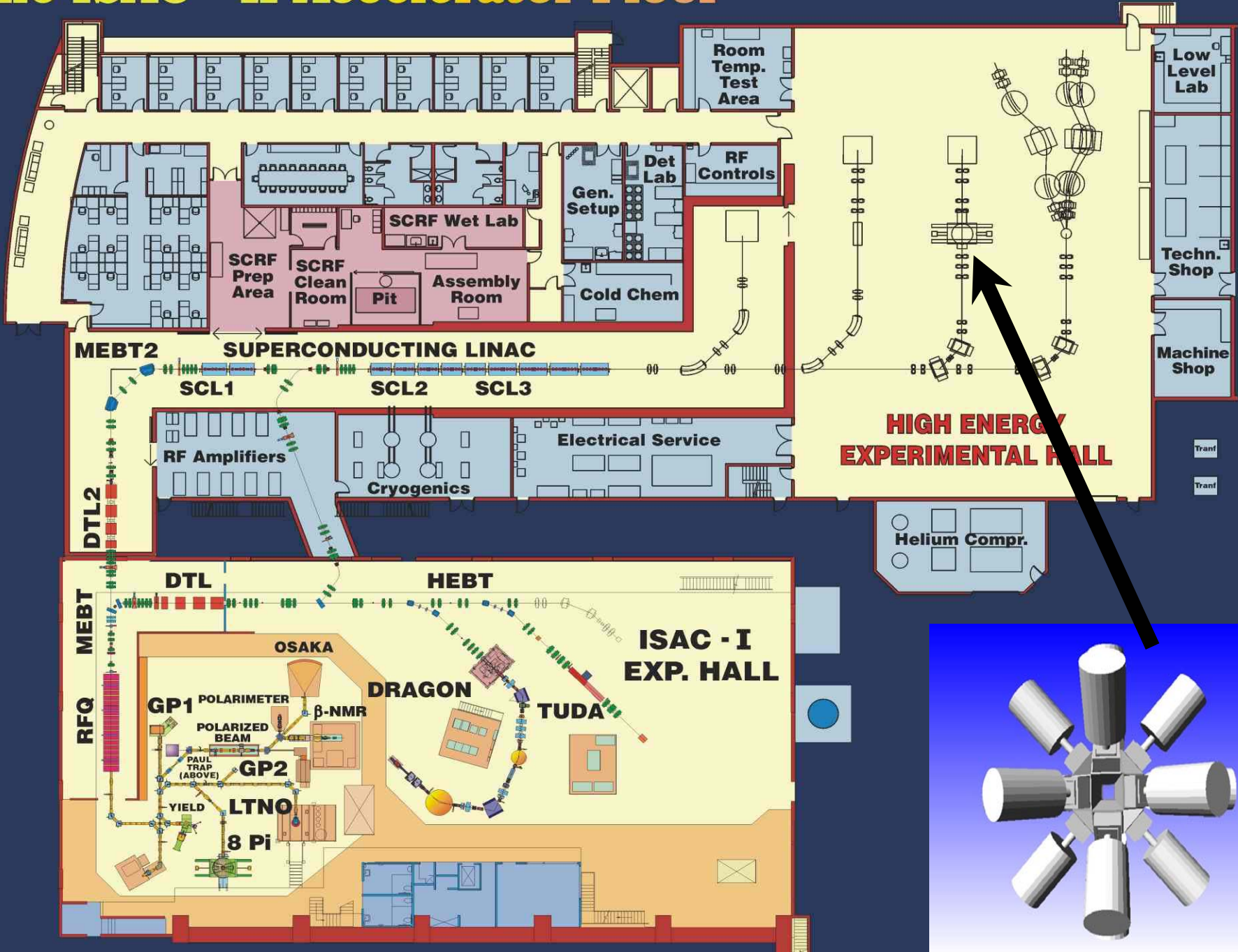


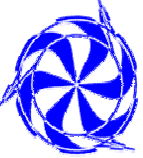
*T*RIUMF
*I*SAC
*G*AMMA-
*R*AY
*E*SCAPE
*S*UPRESSED
*S*PECTROMETER



The story so far....

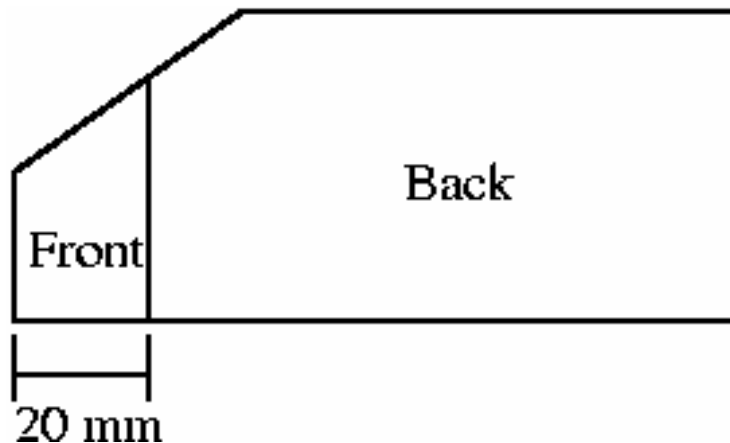
The ISAC - II Accelerator Floor

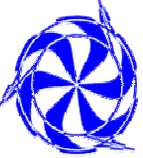




32-Fold Segmented HPGe clover

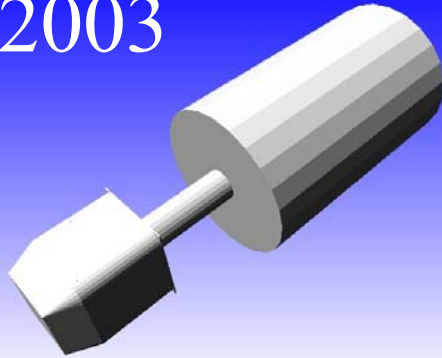
- Mechanically similar to Exogam
- 4 n-type crystals, 1 cryostat
- Lateral segmentation -
20mm from front face
- Crystals oriented so “diagonal”
axis runs “diagonal” of cryostat





Some TIGRESS Milestones

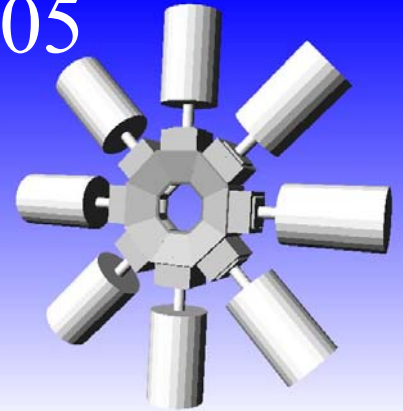
2003



02: Arrival of
prototype

03: NSERC
Grant request

2005

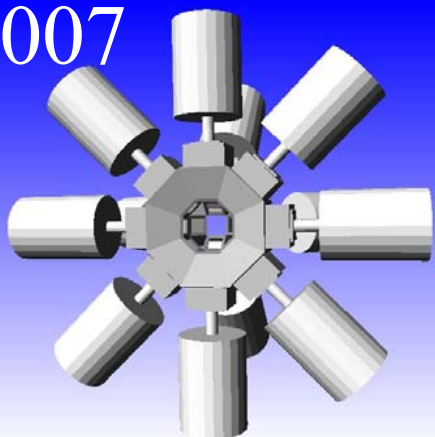


04: 2 HPGe + shields

05: Support frame assembly

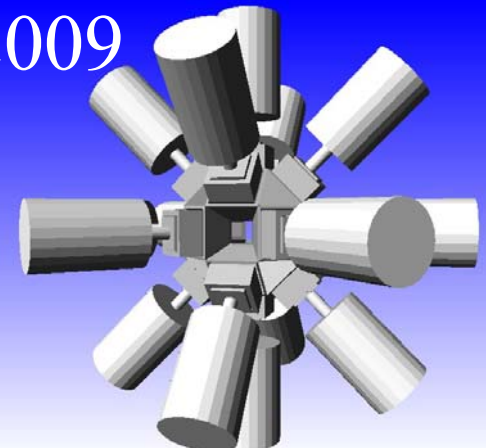
06: 48 TIG-9 modules constructed

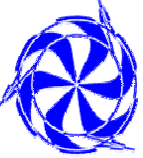
2007



09: Full array
ISAC-II
operational

2009

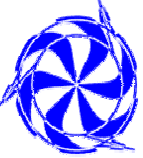




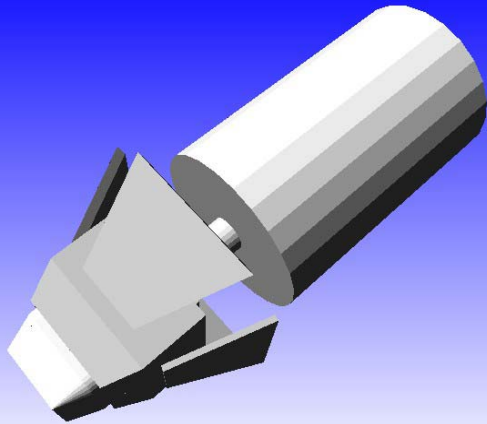
Scanning Setup

- Velmex positioning system complete with motors and controllers
- Lead screw – 2mm
- 1/100 reproducibility
- 300 lb load
- Midas controlled DAQ
- ^{137}Cs collimated source
- XIA cards – 8 channels
- 16 channel SIS - 3301

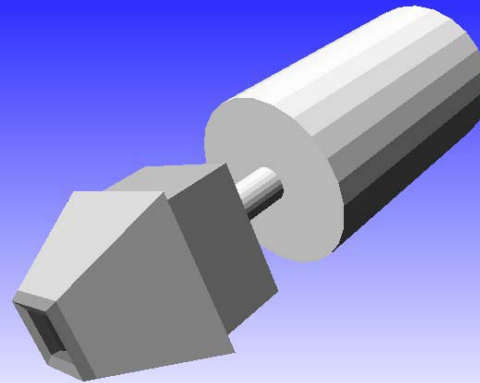




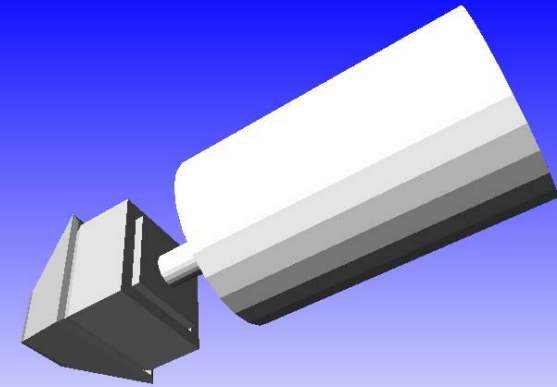
Modular BGO Suppression



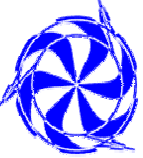
Ge “forward”
maximum
Efficiency
mode



Ge “Back”
optimal
Suppression
mode

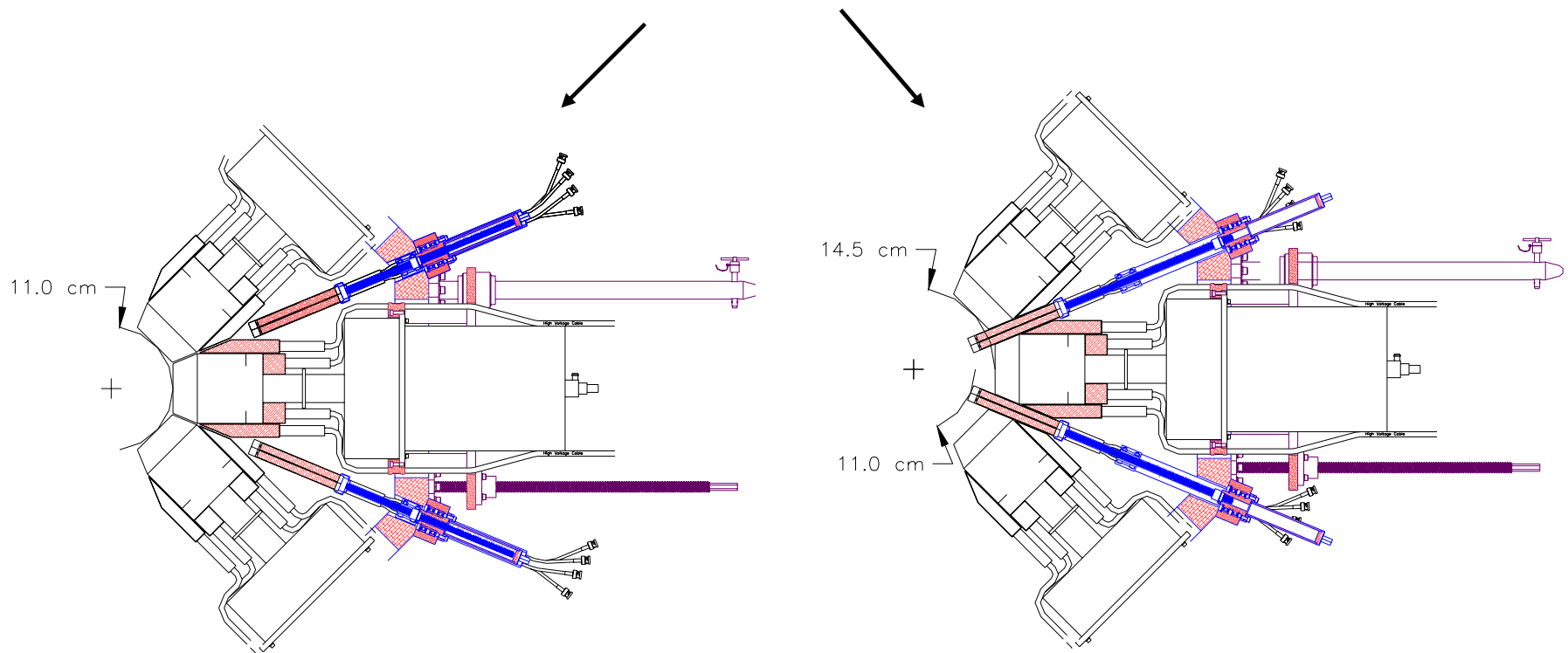


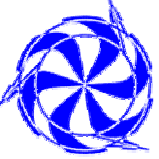
CsI(Tl)
Backplug
for high
energy γ -rays



Modular Suppressor Design

High Efficiency vs. High Peak-To-Total

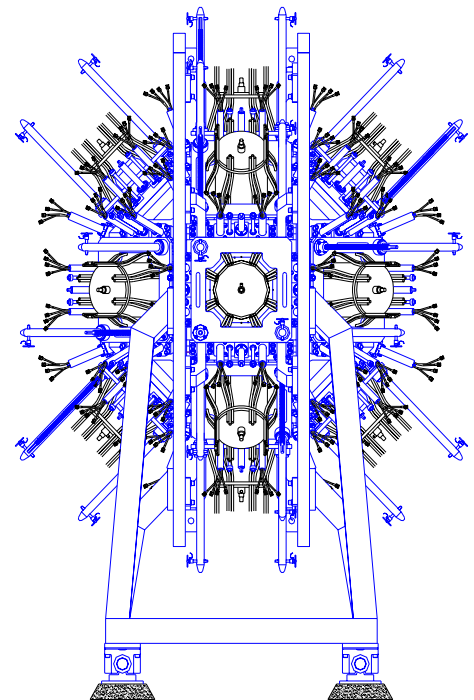
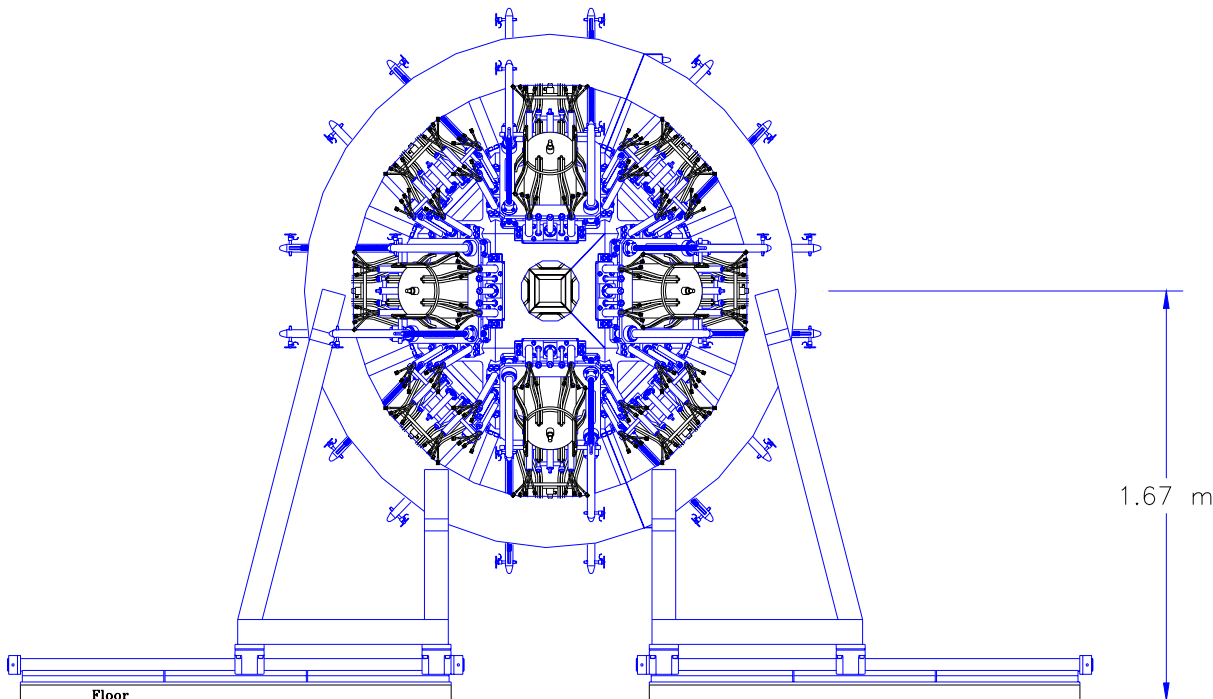




TIGRESS R&D

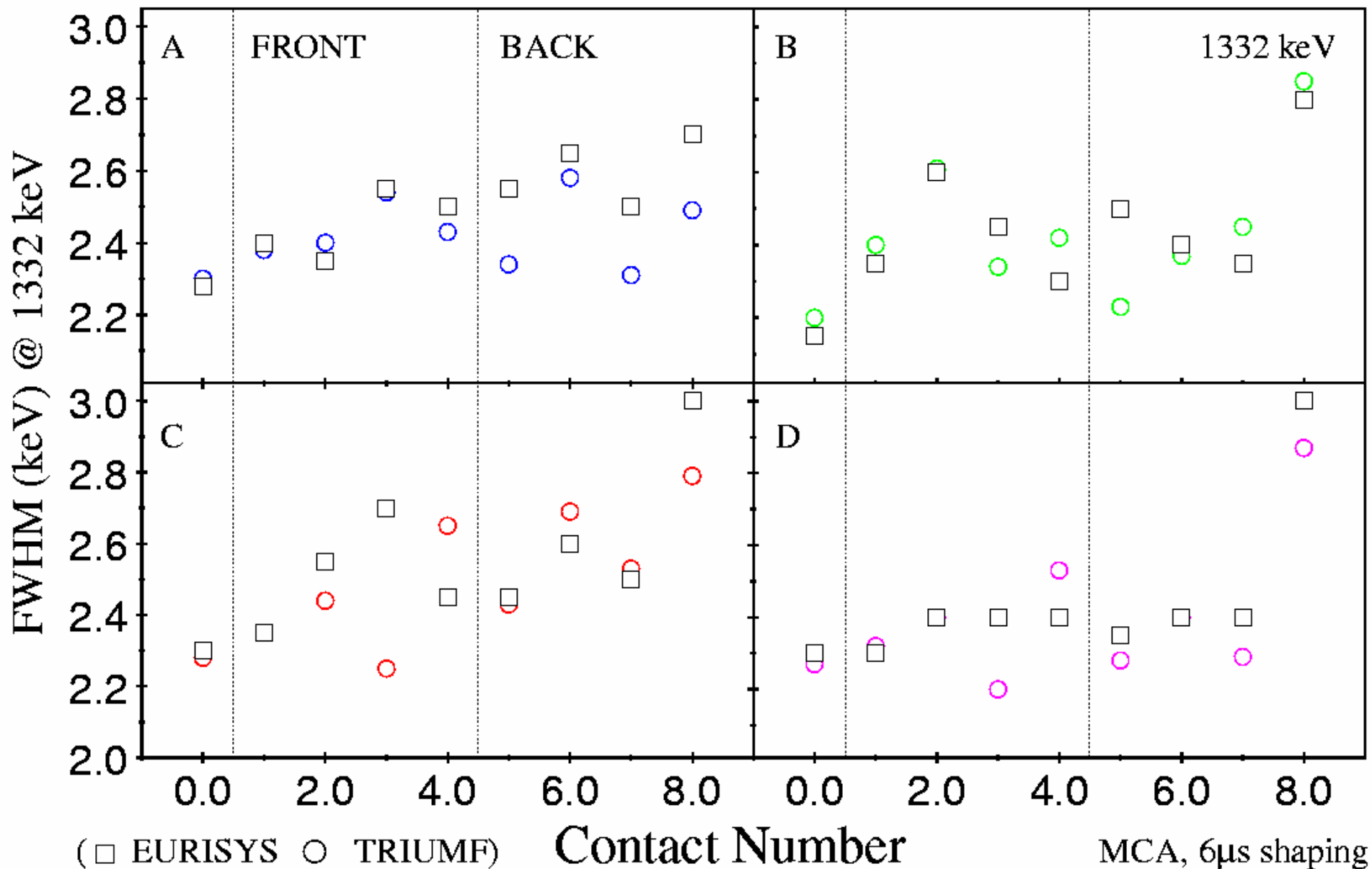
Mechanical Structure

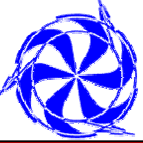
- Detailed conceptual design
- Reconfigurable



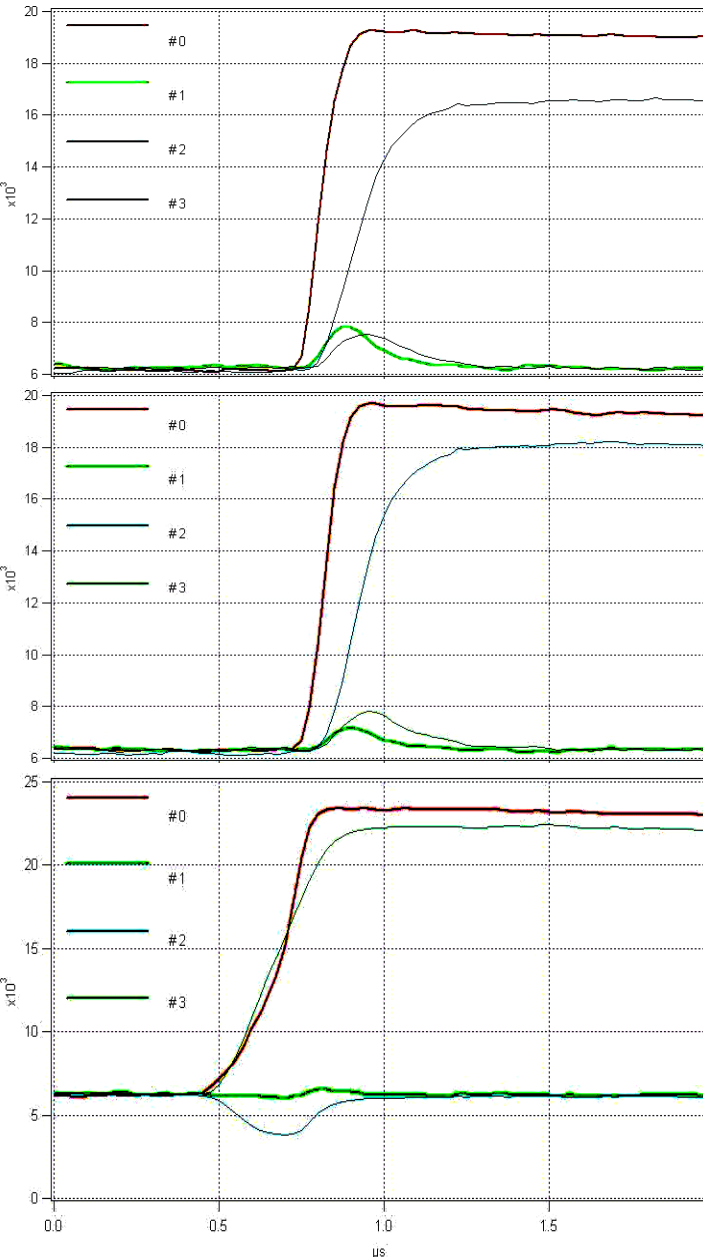


Preliminary Results





Waveforms



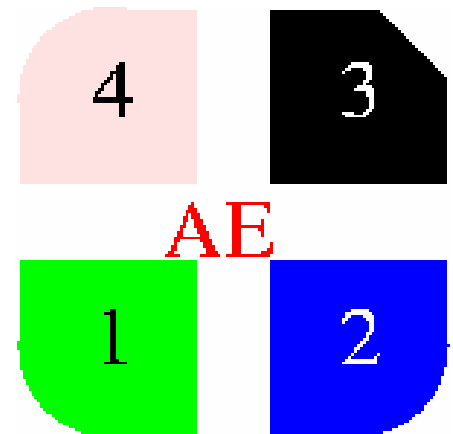
Uncollimated ^{60}Co

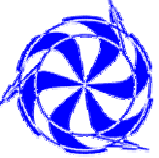
Inspect **AE** (center contact)
and front segments **A1**,
A2, A3

Waveforms captured with
XIA card and associated
software

Top 2 panels – **A2**
interaction

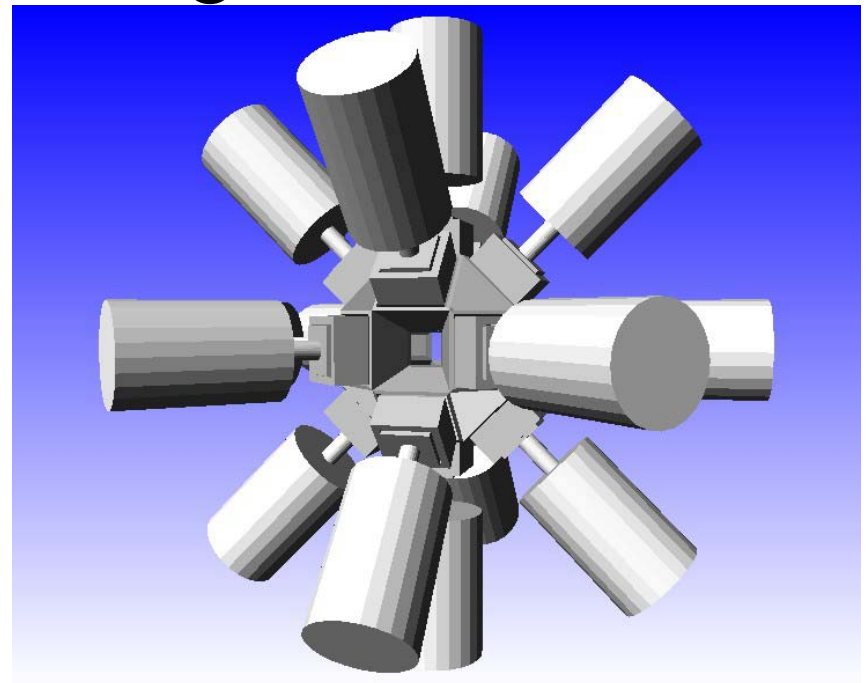
Bottom panel – A3
interaction





Conclusion and FUTURE

- All contacts working
- Scanning phase in progress
- Position-reconstruction algorithm development
- Cost-effective electronics
- Fingers crossed



TIGRESS Collaboration

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