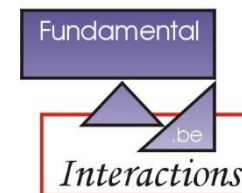


Production of Solid SM1

Nick van Remortel
Universiteit Antwerpen
25/04/2014

Universiteit Antwerpen

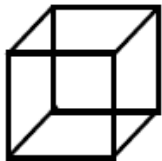


NEMENIX

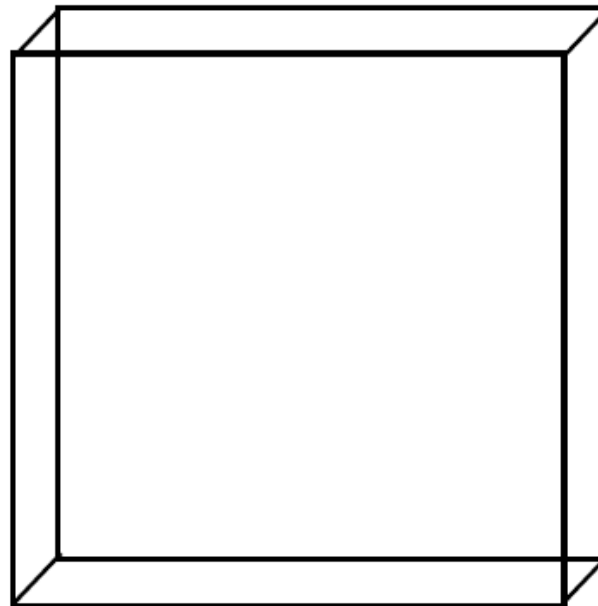
1 Submodule
>2015

Special Submodule1
<sept 2014!!

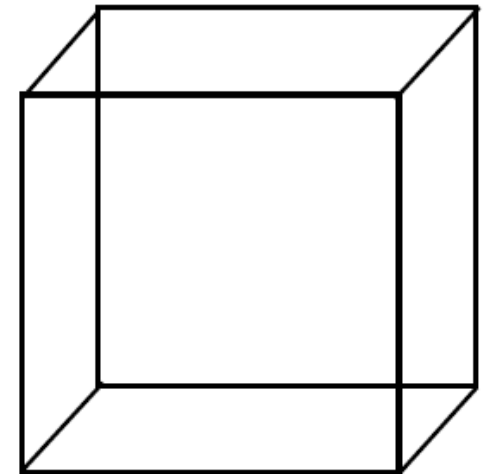
20 x 20 x 20
8 kg FV
4 planes - 32 chan
Fraction of Inner Vol : 0.06



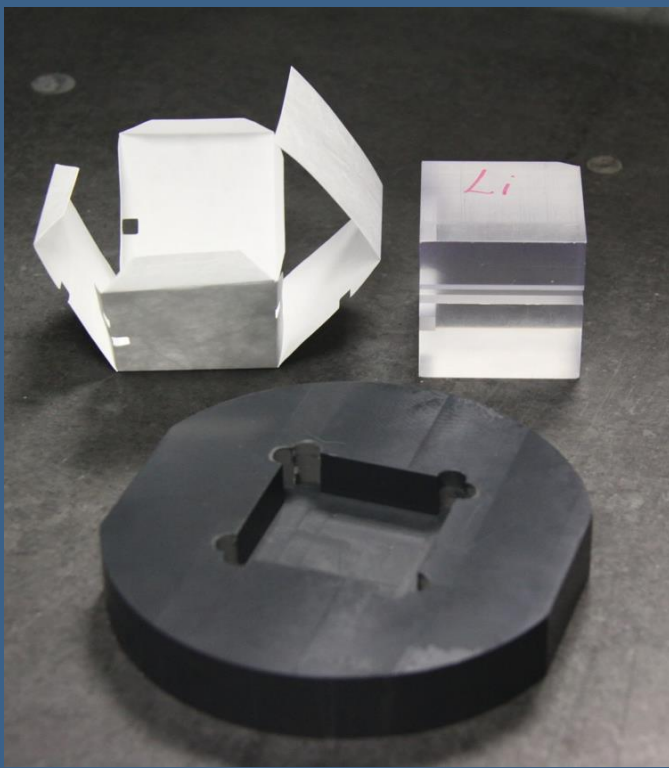
120 x 120 x 20
288 kg FV
4 planes - 192 chan
FIV = 0.42



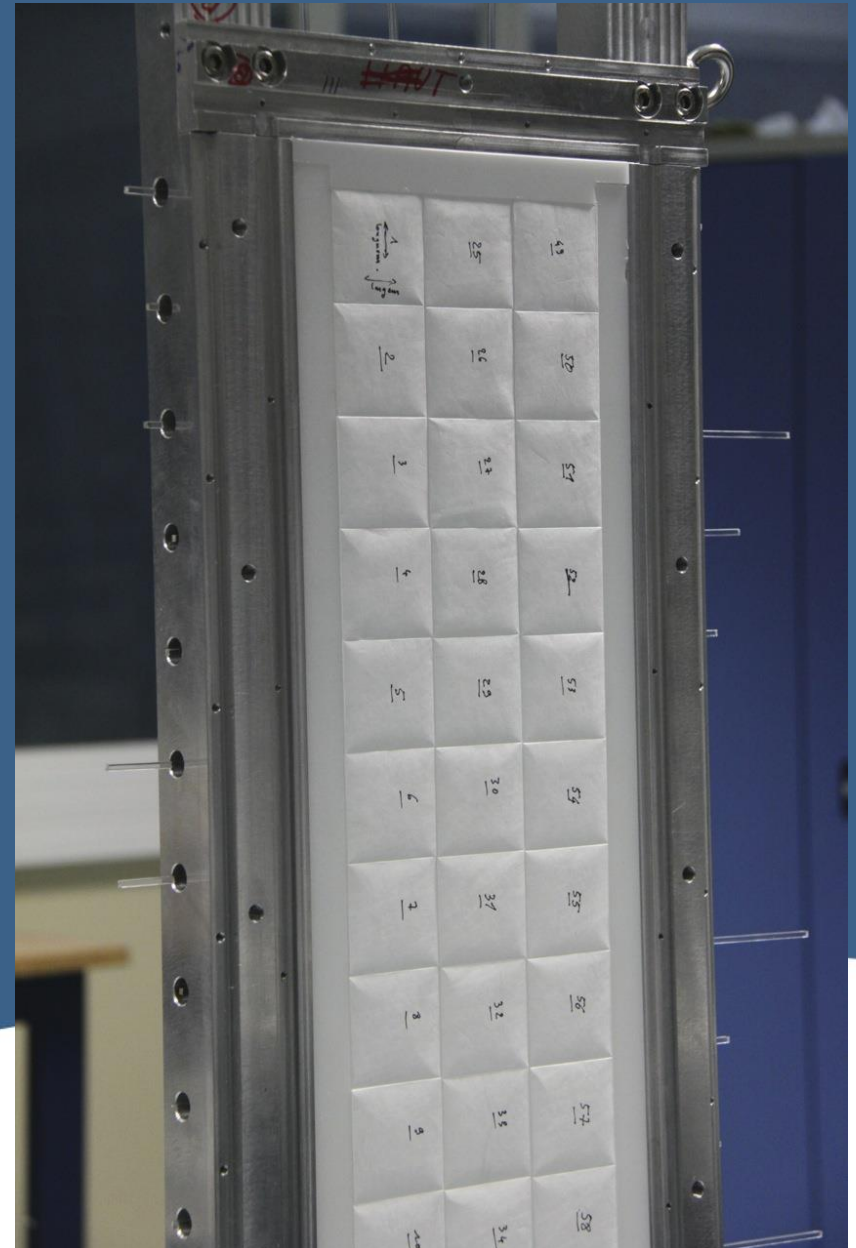
80 x 80 x 45
288 kg FV
9 planes - 288 chan
FIV = 0.6



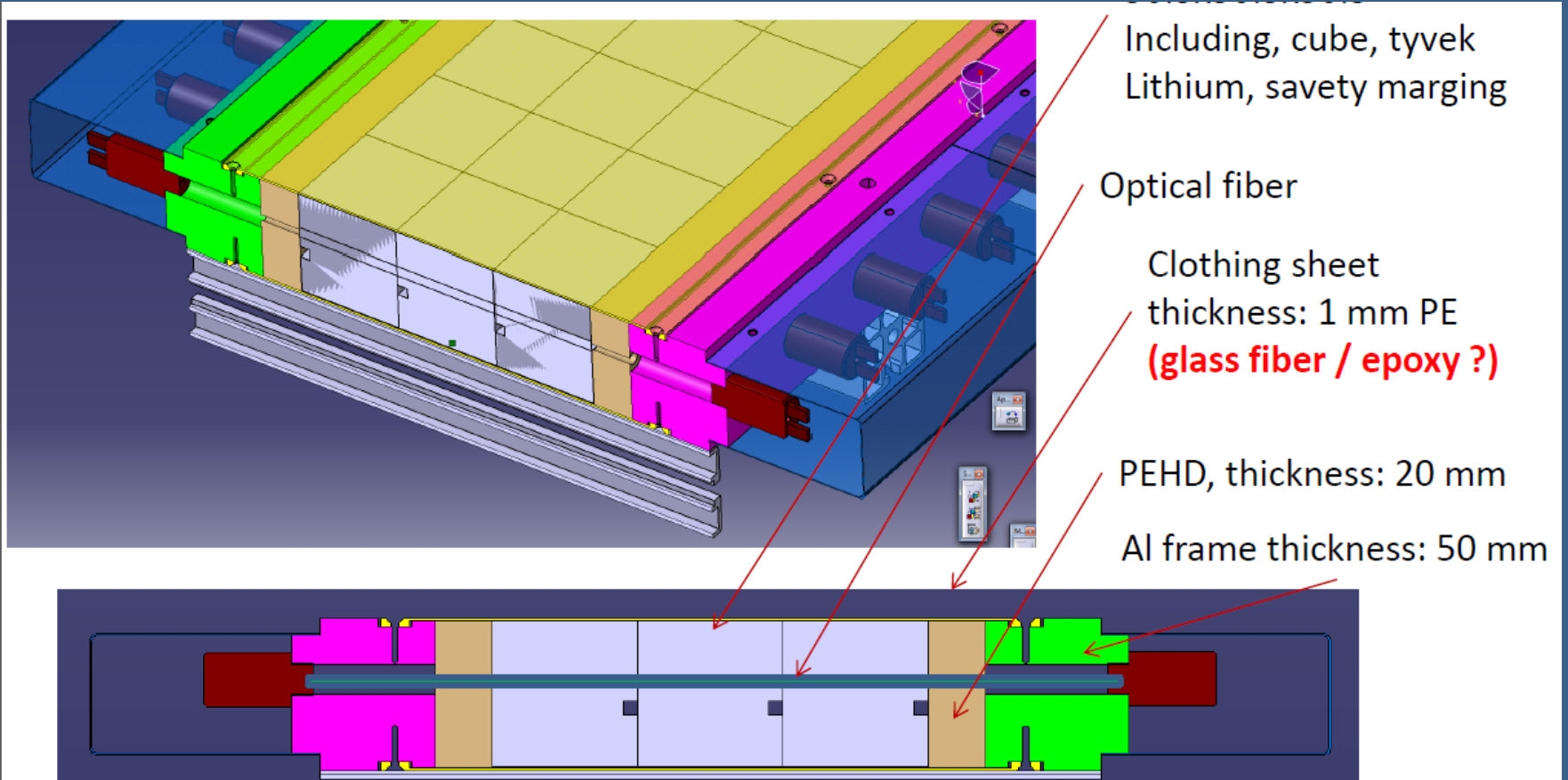
Frame Mockup ³



Frame and jigs designed in
SUBATECH
Gent paid SUBATECH visit in
April 2014



Frame Design ⁴



Status as of 13/5/2014 ⁵

- SUBATECH: Frame design and construction
 - Mockup of 24x3 cubes delivered in time, no snags encountered -> design passed its crucial test!
 - has complete design drawings for old geometry of 120x120 cm²
 - No final design/drawings yet for new geometry (to be expected by next week?)
 - Need commitment and time scale for production of 1 or 2 frames
- Antwerpen: cutting and CNC machining of 2500 cubes
 - Slab cutting and Cuve machining under control: timing indicates 15 mins for cutting+machining 1 cube by 1 person -> daily production of >40 cubes is achievable
 - Now: Issue with delivery of 15 PVT slabs by ELJEN/Scionix
 - Delivery planned by end of April, but nothing received
 - Incontact with Scionix:
 - it appears that ELJEN made production error, only 12 slabs are currently available
 - Will most likely arrive in Antwerpen by end of this week

Status as of 13/5/2014 ⁶

- Gent with help from VUB and Antwerpen:
 - Production of 4 frames
 - Washing cubes
 - Weighing cubes
 - Apply 6Li screen (and weigh again)
 - Wrap in tyvec (and weigh again)
 - Integration in frame
 - Testing with 90Sr source
- Planning and workflow agreed with Antwerpen
 - Combined manpower seems sufficient at this point
 - Possibly tight margin on spare 6Li sheets (should order few more!)
 - Antwerp will deliver few machined cubes before may 21st for testing of 6Li application
 - First target: have 1 complete and tested plane ready by mid July

Status as of 13/5/2014 ⁷

- VUB:
 - Will coordinate light yield testing for fully assembled planes
 - Some help/training needed by Oxford experts:
 - N. Ryder needs to coordinate with Petra for installing old NEMENIX DAQ system in Gent, most preferably in 2nd half of june
- Oxford:
 - Possible to deliver front-end electronics board for testing planes by end june?
 - Can commit to produce 1 frame, if necessary?
- CAEN:
 - Committed to produce 2 frames?

Conclusion ⁸

- All responsibilities are being filled in, timelines get more concrete
- No clear picture on division of workload and timeline for the frames!
- Frames are critical now
- Need to discuss manpower responsibilities, ideas for neutron calibration at SCK, when, how, simulation etc...
- We are still on track, but the schedules/margins are becoming tighter!

