

WP 5: Calibration sources and laser

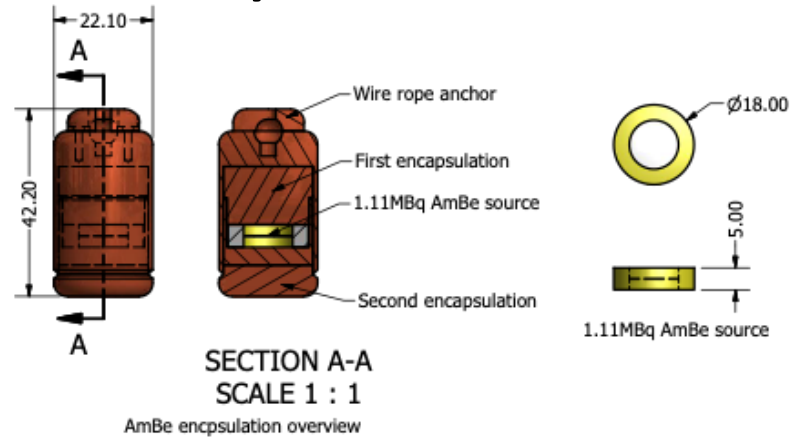
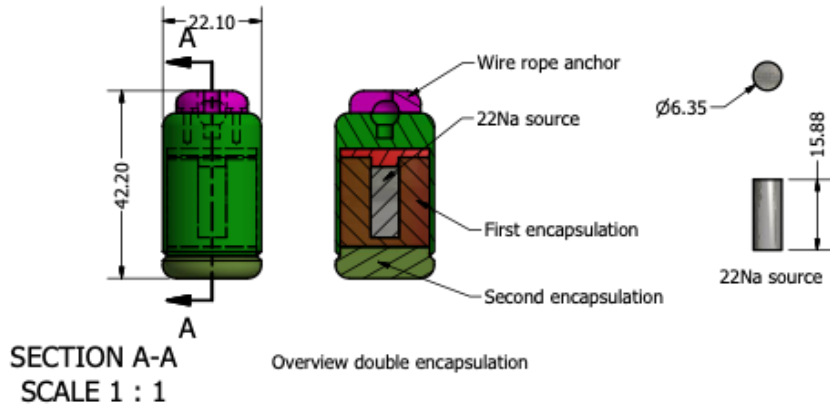
P. Gorel

NEWS Collaboration meeting, Grenoble
11-13 June 2019

Radioactive Sources

- $^{22}\text{Na}/\text{AmBe}$ encapsulation in progress
- ^{37}Ar : Stefanie working on the documentation for SNOLAB.
- ^{55}Fe : idea proposed by Gilles

Revisiting the encapsulation (^{22}Na and AmBe)

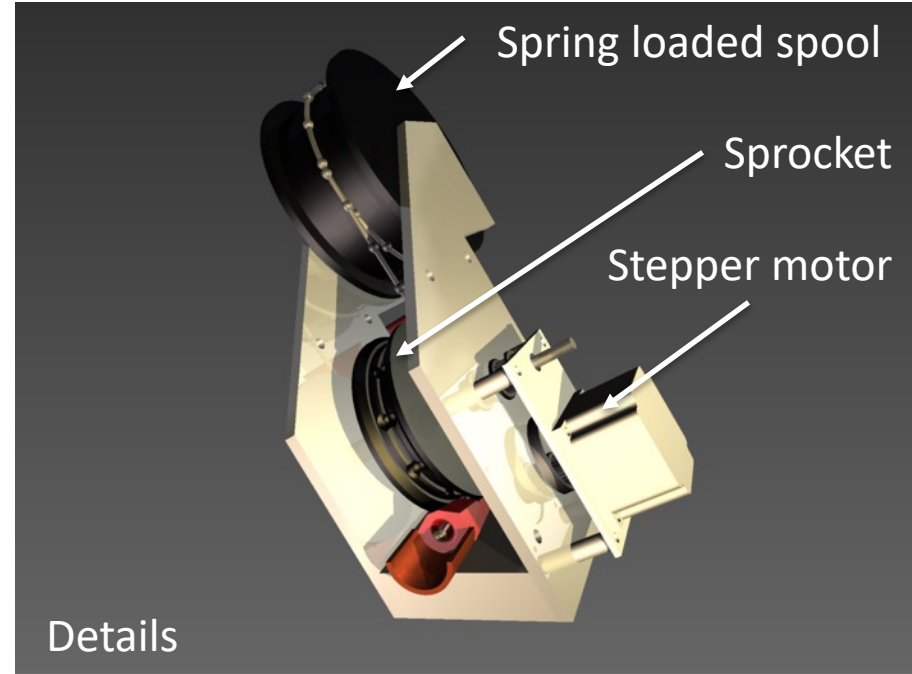
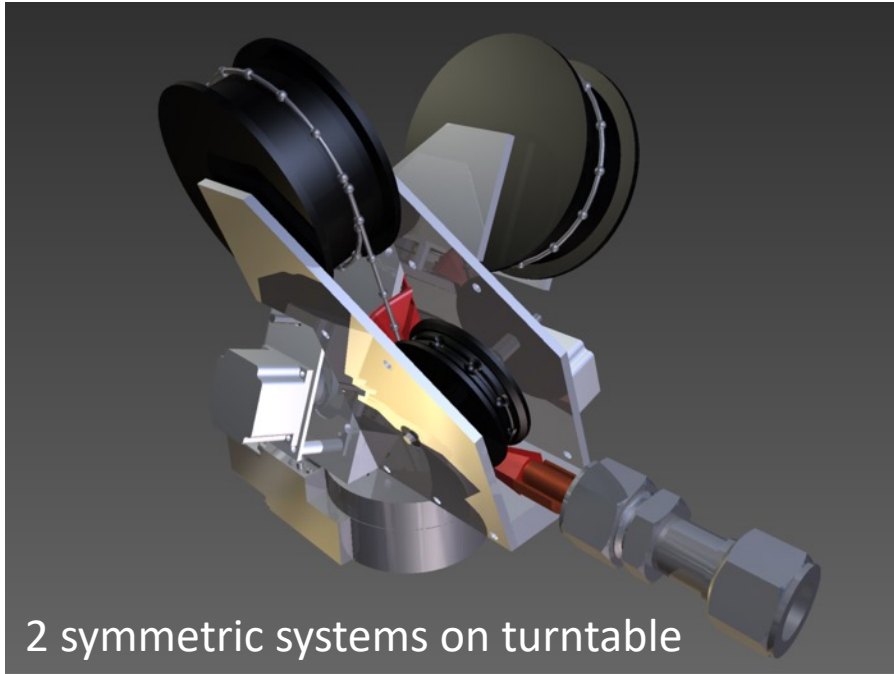


- Soldered copper: no fragile seal/thread
- Heat issue for AmBe source (plastic)
 - Need to control the temperature during soldering

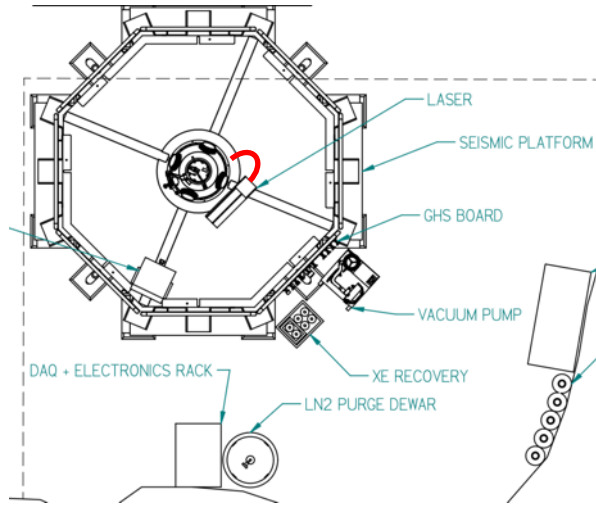
Holding the source

- Stainless Steel cable with crimped SS balls
 - Sample given for gamma counting
- Last ball holding the source canister
 - 2 screws to release if needed

Drive: stepper motor and spocket



Glove box with gas flow



Ordered at soon at I have a final plan for the pipe connection

Sources for LSM runs

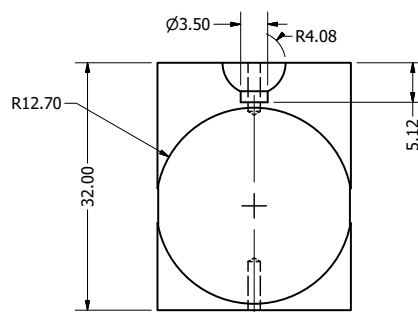
- Without the Pb shield: LSM sources
- With the Pb shield:
 - LSM AmBe source
 - LSPC ^{22}Na source (?)

Deployment in the pipe

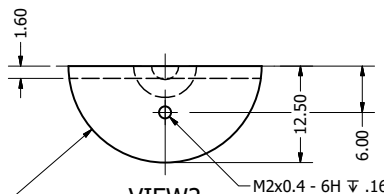
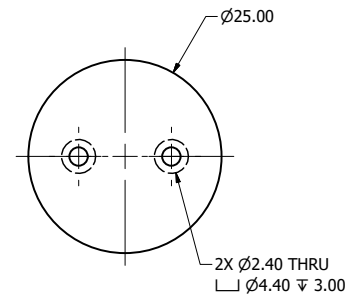
- Polyethylene hose attached to Cu pipe, going between gaps in the PE roof.
- Single ball cable built (delivered?)
- Container for each sources (built)



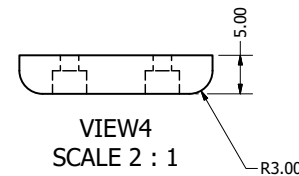
SECTION A-A
SCALE 2 : 1



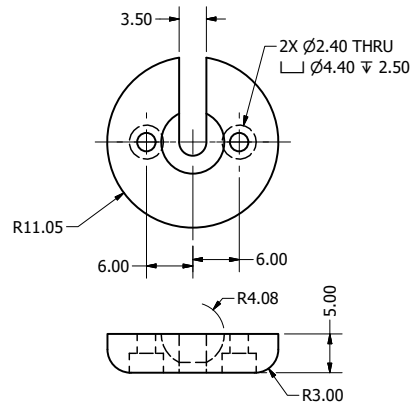
Material: Delrin



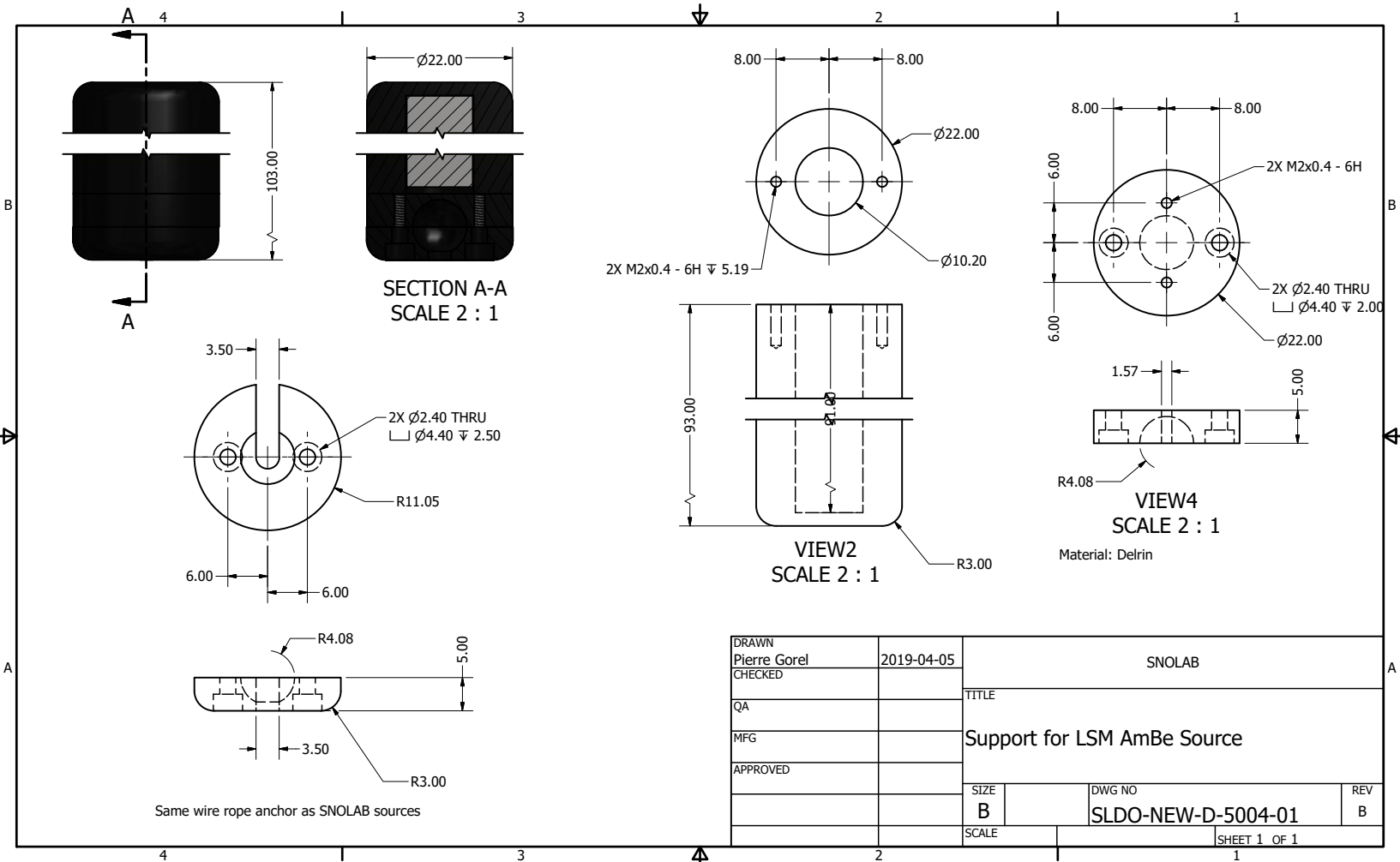
VIEW2
SCALE 2 : 1



VIEW4
SCALE 2 : 1



DRAWN Pierre Gorel	2019-04-05	SNOLAB	
CHECKED		TITLE	
QA		Support for LSPC Na22 source	
MFG			
APPROVED		SIZE B	DWG NO SLDO-NEW-D-5005-01
		SCALE	REV B
		SHEET 1 OF 1	



The next few months

- Build/test the deployment system (June-July).
- Encapsulation sources (June-July).
- Quote/Order glove box (July).
- Assemble everything together (August-September)