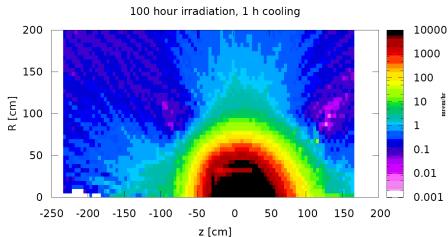
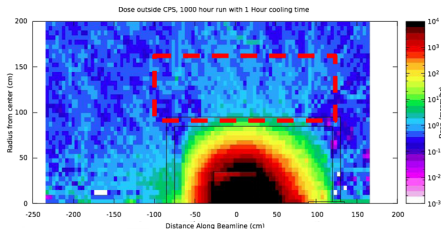


Over the past two weeks...

New since last time:

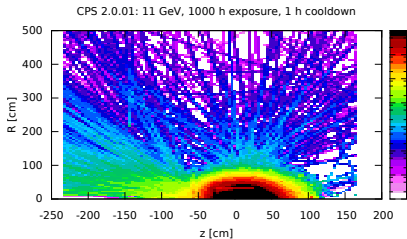
- Looked into 100 vs 1000 h exposure time.
- Prompt coil Dose rate
- Got a polarized tgt model (from Jixie, thanks!)



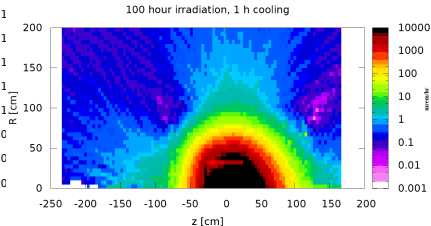
- On 11/01/2019 we saw that even though they look similar, the left (P.Reid) and right (GN) plots said 1000 and, resp., 100 h of irradiation
- typo in the label, input file, or saturation?...

\$0.02 on the latter!

GN 1000 h exposure (new!)



GN 100 h exposure (from last time)

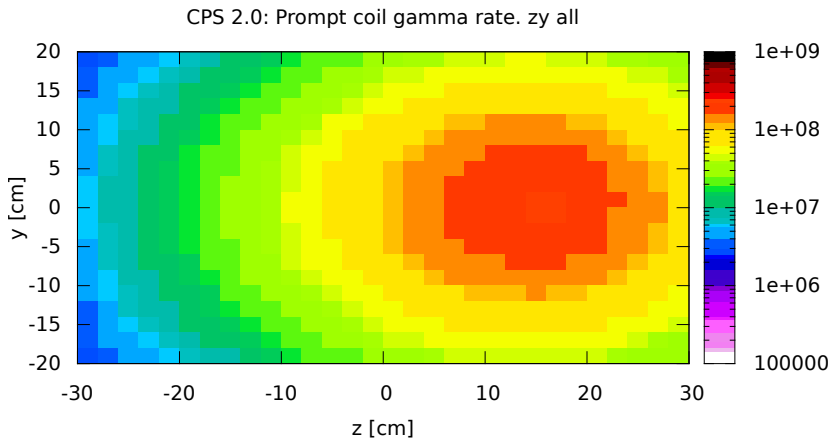


- Apologies I could not get figure sizes more uniform.
- Scale is not quite the same but IMHO the two look similar enough to believe that all material that can activate will do so before the first 100 h.
- Can use more statistic for the left plot.

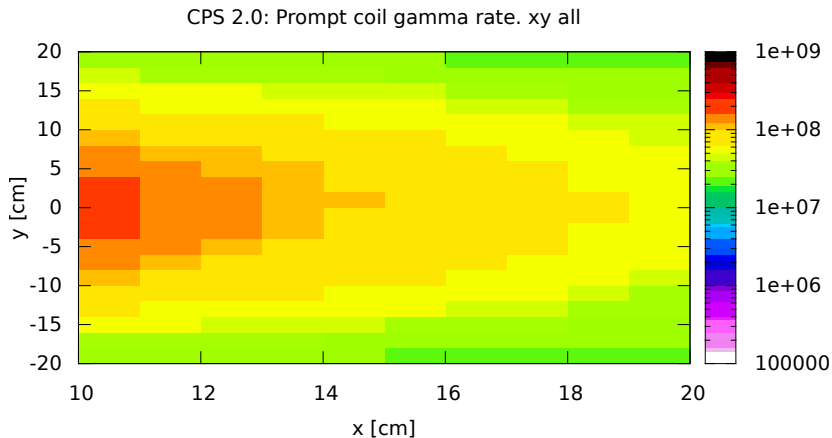
Prompt Coil Rate

- Define **xyz grid** scoring volume for one of the coils
- Monitor separately **neutrons** and **photons**. Gamma distr. shown. neutrons are comparable in magnitude & profile.
- 30 kW beam
- 1x1x2 cm (in x-y-z)
- 2D Dose Rate distr. shown here (integrated over the 3rd dim.)
- Some thin slices as well (i.e. a bin in the 3rd dim.) as well...
- Apologies for not overlaying the actual coil outline on these! :(

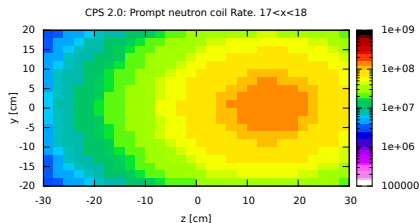
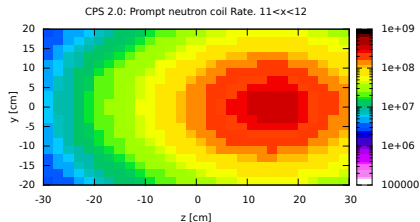
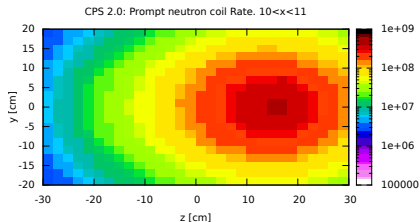
Prompt Coil Rate (II). γ , z-y, [rem/h]



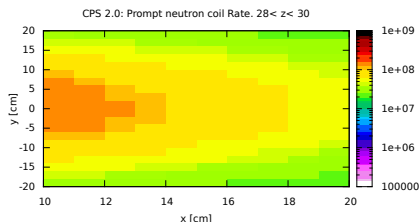
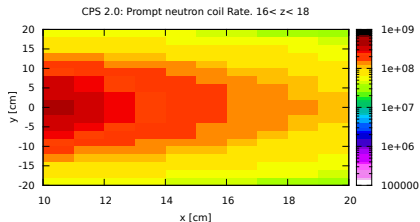
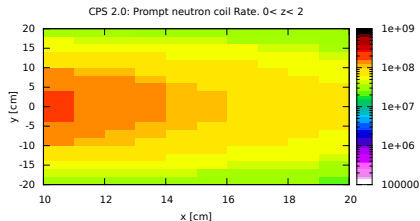
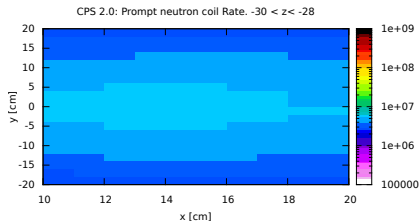
Prompt Coil Rate (III). γ , x-y, [rem/h]



Prompt Coil Rate (IV). n, z-y slices. [rem/h]



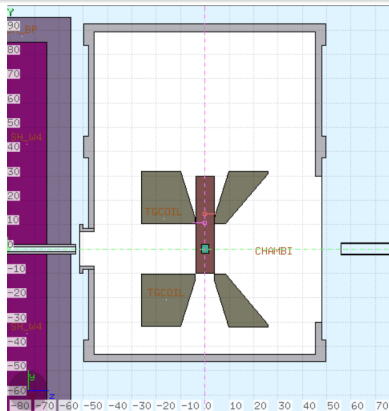
Prompt Coil Rate (V). n, x-y slices. [rem/h]



Hopefully useful!

Extending/expanding the model

- Jixie provided (about a week ago) his model (w/ instr., hints... thanks, Jixie!) of the pol. tgt (and earlier CPS version)
- this is how it looks:

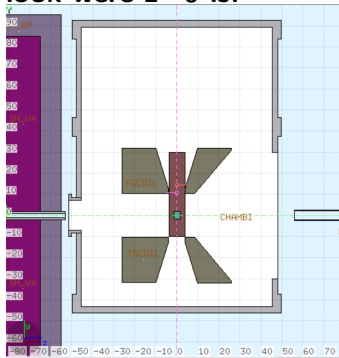


Extending/expanding the model (II)

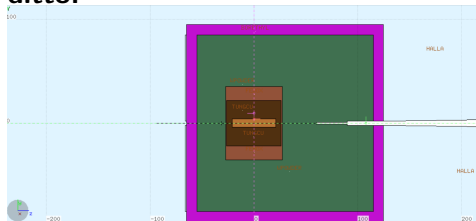
Couple of (small - 4U) problems:

- No pol. tgt. field yet!
- tgt. and CPS located at same point in FLUKA-world (in diff. .inp files)

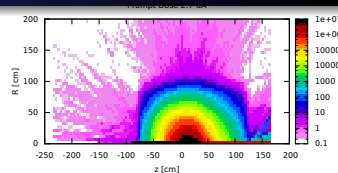
look where $z=0$ is!



ditto.



GN Action items...



While chewing on turkey and sitting shifts...

- Merge Jixie's tgt into the CPS model
- Obtain (help please!) target field
 - even a **rough one** is better than **none**
- Any other item from the list we think needs to be prioritized.