

# CPS Simulation Update 07/31/2020

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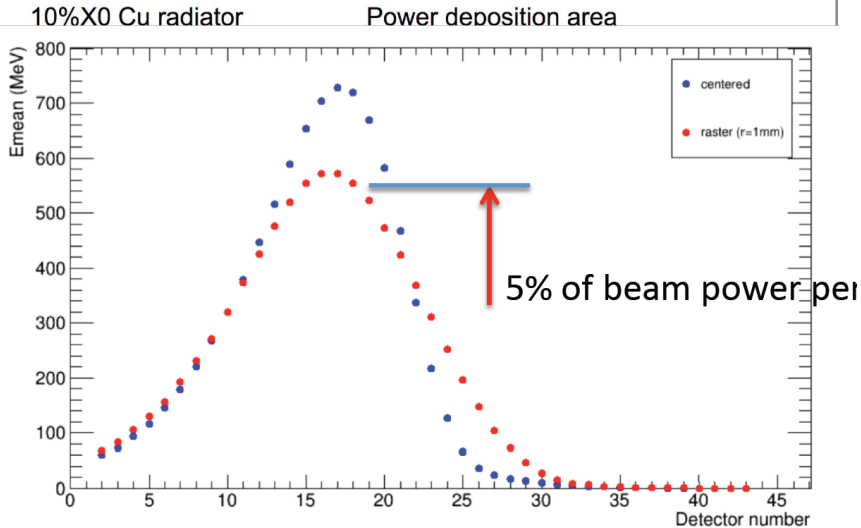
**Online...**

July 31, 2020

# Simulation update

- A little bit of energy/heat deposition work
- A first stab at the Hall D source

# Energy Deposition: Turn this...



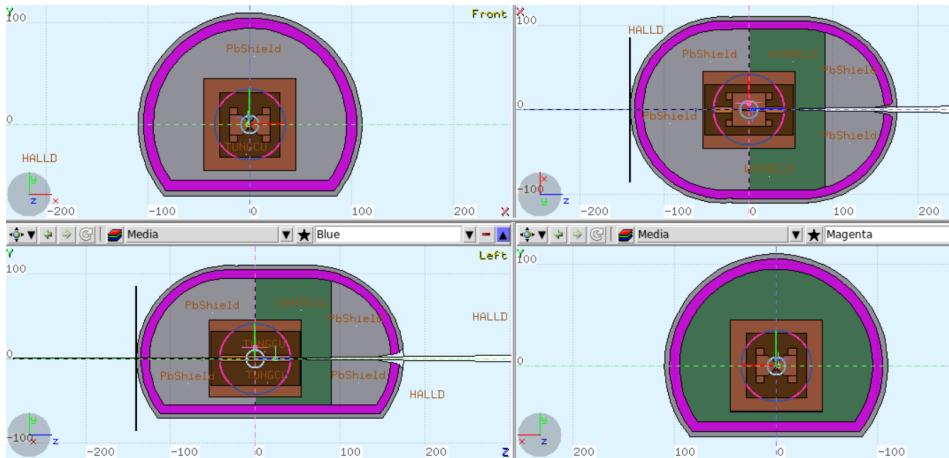
# Energy Deposition: Into this.

	A	B	C	D	E	F	G	H
1	Power deposition in the Central CPS region according to Fig 2...							
2								
3	Z	Raster No Raster						
4	[cm?]	[MeV]	[MeV]					
5	2	69	61					
6	3	85	74					
7	4	107	96					
8	5	132	118					
9	6	158	148					
10	7	194	180					
11	8	232	223					
12	9	273	268					
13	10	321	321					
14	11	375	380					
15	12	427	448					
16	13	478	517					
17	14	521	590					
18	15	555	655					
19	16	572	704					
20	17	573	729					
21	18	555	720					
22	19	525	670					
23	20	474	583					
24	21	425	469					
25	22	371	339					
26	23	312	219					
27	24	253	129					
28	25	199	67					

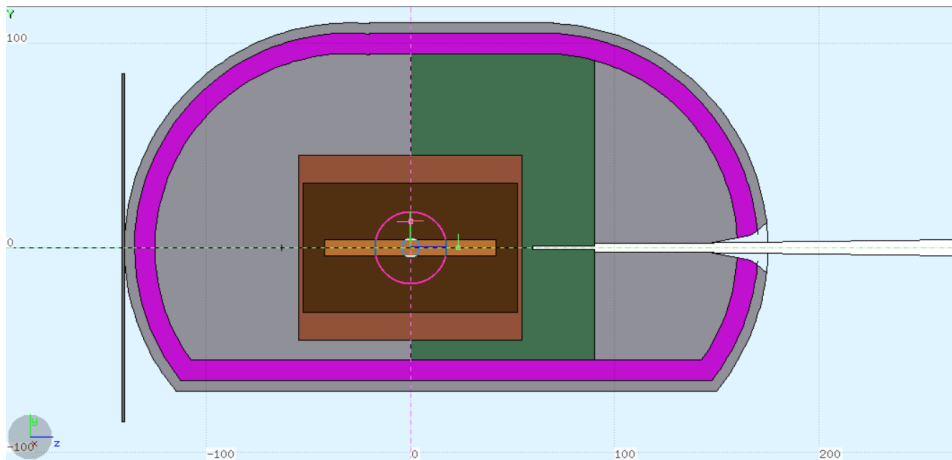
cps\_power\_deposition\_from\_plot

- origin of the figure to the left not clear (Parker, Jixie, GN?)
- (re)digitized it anyway.  
Numbers/figure  $\sim 5\%$  (or less).
- also ran the latest FLUKA CPS model to get the equivalent result.

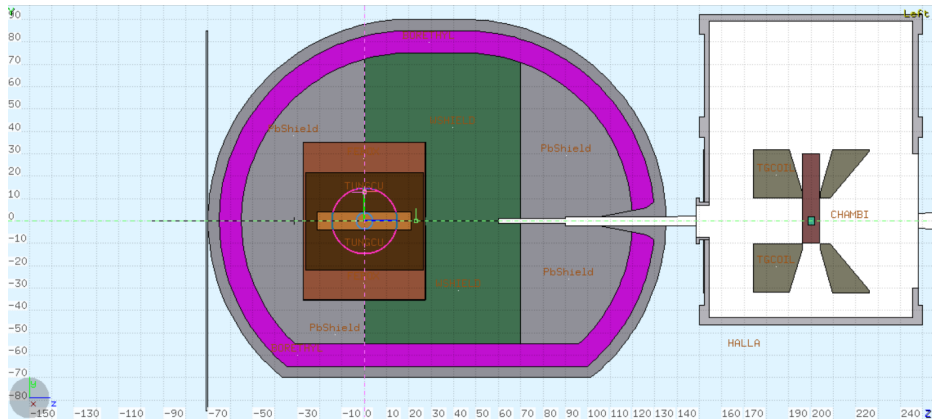
# After much postponement (?)...



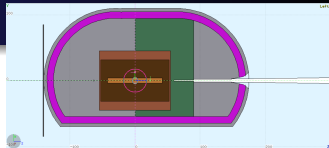
# Side view



# Hall C version for comparison



# Quo Vadis? (GN's \$0.02...)



- central CPS region power deposition numbers available
- ... in convenient .csv format
- first stab at a Hall D CPS
- many-many more steps needed:
  - field (scale existing or new?)
  - post CPS beam line
  - target
  - shielding optimization.
- As always your suggestions are welcome!

