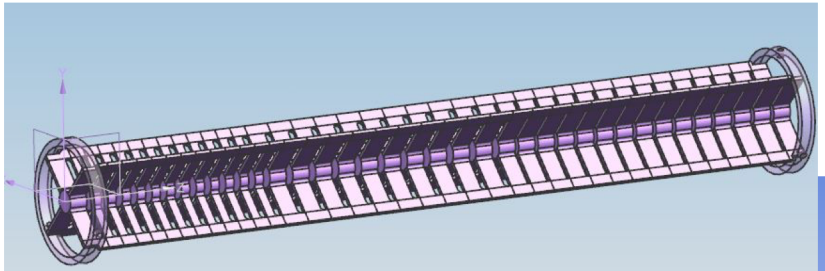
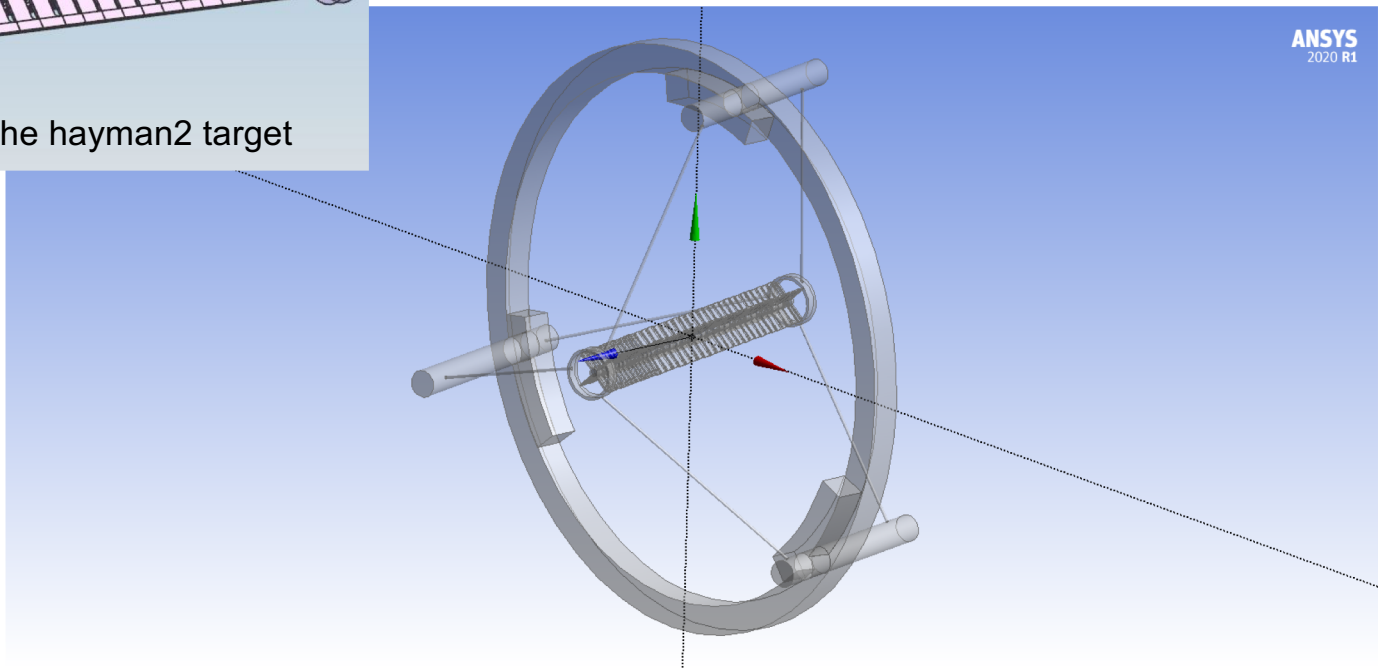
WP6 FNAL μ-campus

- A model of the Hayman2 target has been implemented into MCNP

- Evaluation of the power distribution in the target and secondary particle yields are currently in progress.

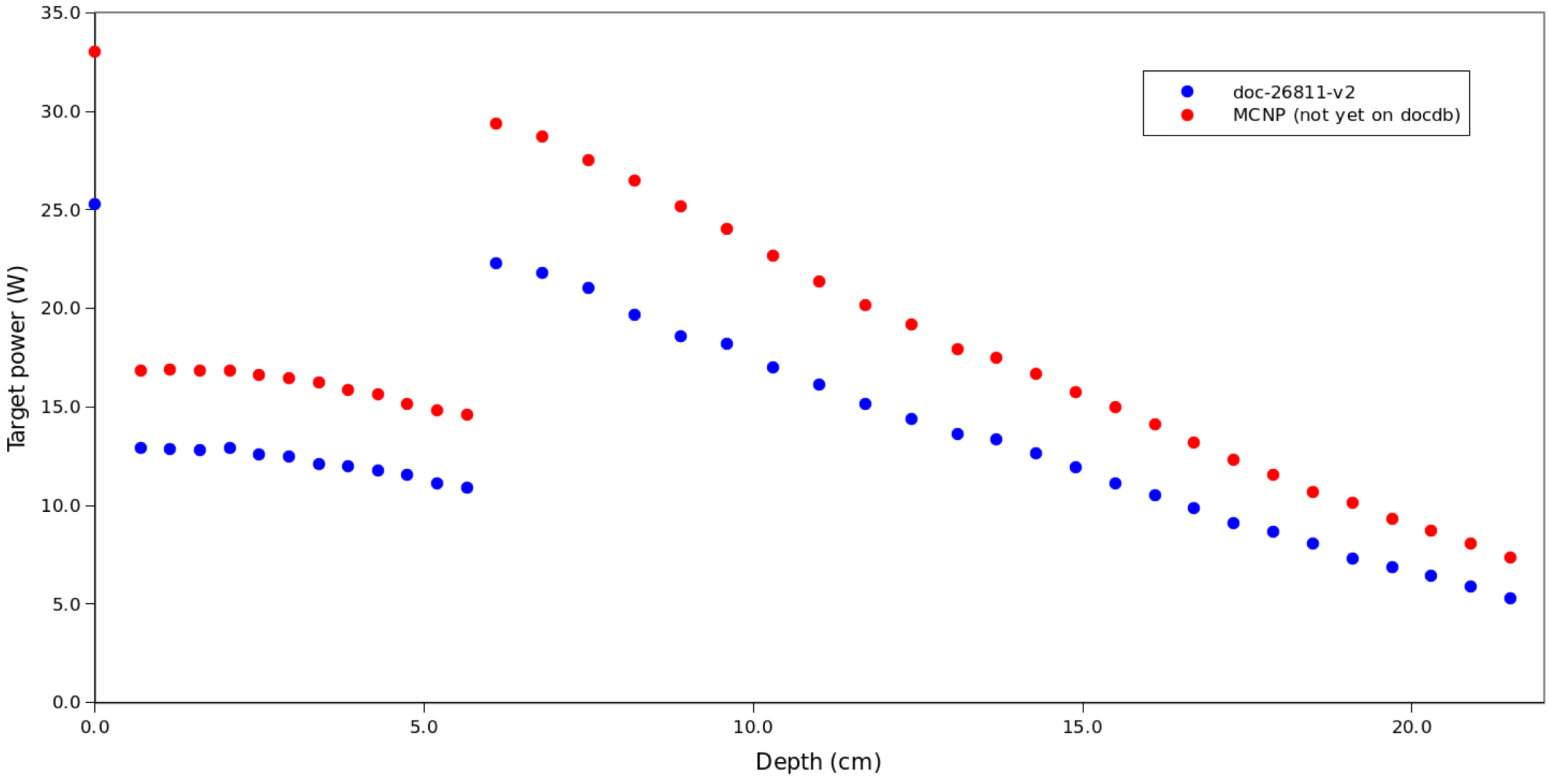


Mechanical drawing of the hayman2 target



MCNP model of hayman2 target and bicycle ring

Target power profiles



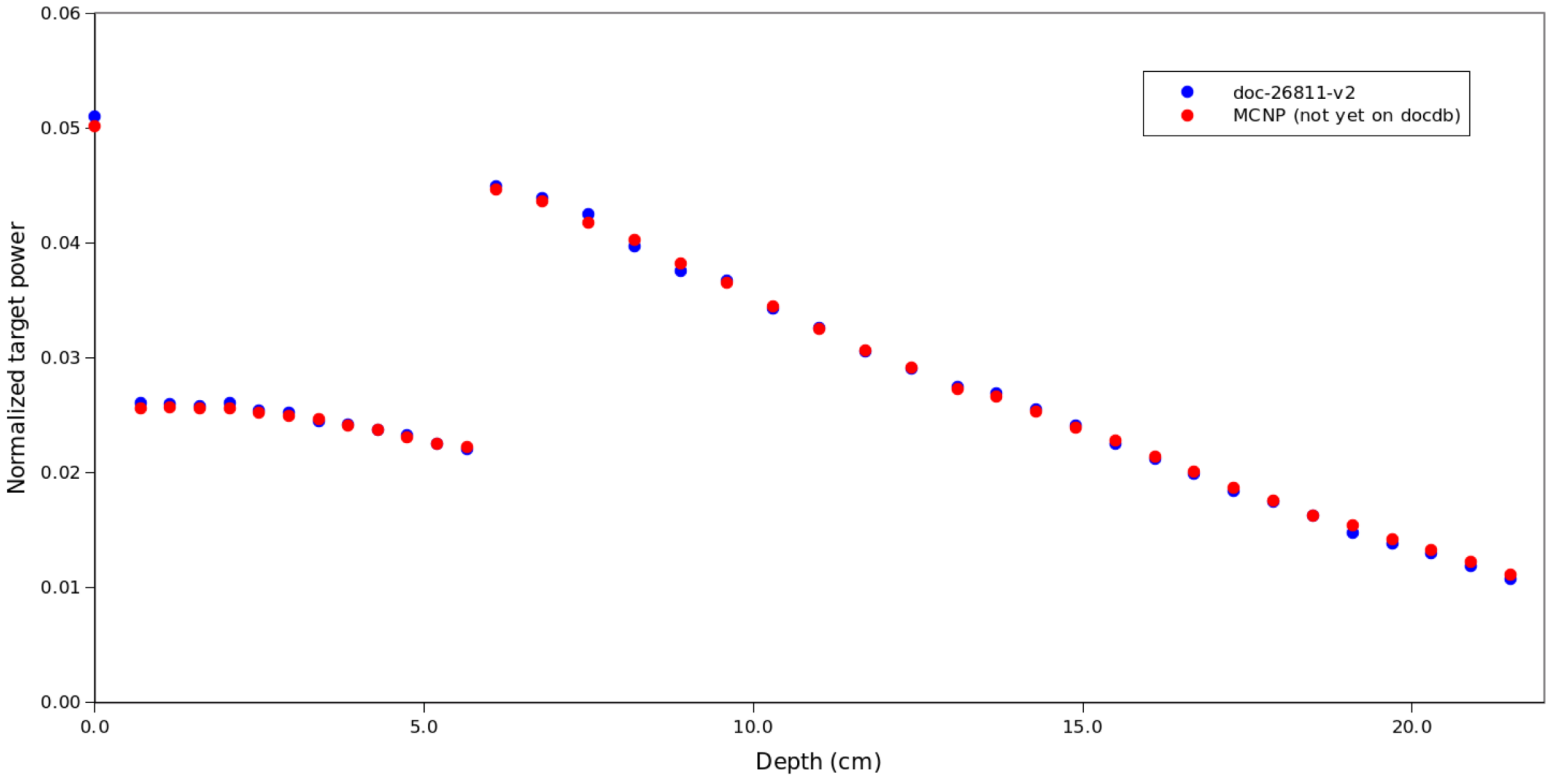
Power distribution in the cylindrical core of the target

Total power

docdb-26811-v2: 495.5 (W)

MCNP: 658.0 (W) (+30%, ...under investigation)

Target power normalized profiles



Despite the difference in the absolute value of the target power, the shape obtained by th

Particle yields

Table below compares the particle yields estimated by MCNP for the Hayman2 and TDR ta

Total yields	Hayman2	E%	TDR	E%	$(Y_{Hayman2}-Y_{TDR})/Y_{TDR}$%
Protons	2.7100	0.02%	2.6194	0.02%	3.46%
Pions	1.4453	0.03%	1.4555	0.03%	-0.70%
Muons	3.46E-3	0.49%	5.75E-4	1.20%	502.36%
Neutrons	26.6554	0.02%	27.5055	0.02%	-3.09%