

Joint Institute for Nuclear Research (Dubna)

# Beam monitoring with new geometry - status update

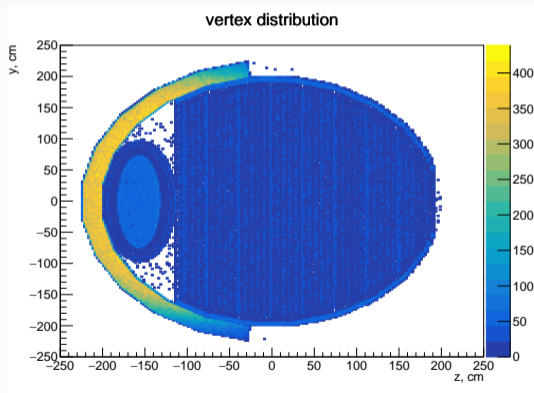
**SAND meeting**

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14<sup>th</sup> of January, 2022



GRAIN length - 87 cm





Proton beam parameter	1 $\sigma$ deviation as given by beam group	ECAL+STT new		ECAL+STT	
		$\sqrt{\Delta\chi^2(E_\nu)}$ true	rec	$\sqrt{\Delta\chi^2(E_\nu)}$ true	rec
Horn current	+3 kA	12.57	9.44	12.61	10.30
Water layer thickness	+0.5 mm	4.69	3.58	5.53	4.73
Decay pipe radius	+0.1 m	7.23	5.95	7.89	6.96
Proton target density	+2%	5.28	4.07	7.00	6.14
Beam sigma	+0.1 mm	4.41	3.53	5.06	4.44
Beam off set X	+0.45 mm	5.11	3.54	5.67	4.56
Beam theta phi	0.07 mrad $\theta$ , 1.57 $\phi$	0.62	0.28	0.75	0.39
Beam theta	0.070 mrad	0.91	0.58	1.10	0.78
horn 1 X shift	+0.5 mm	4.70	3.42	4.79	3.78
horn 1 Y shift	+0.5 mm	5.27	3.87	5.22	4.13
horn 2 X shift	+0.5 mm	1.18	0.69	1.38	0.93
horn 2 Y shift	+0.5 mm	1.31	0.77	1.38	0.90