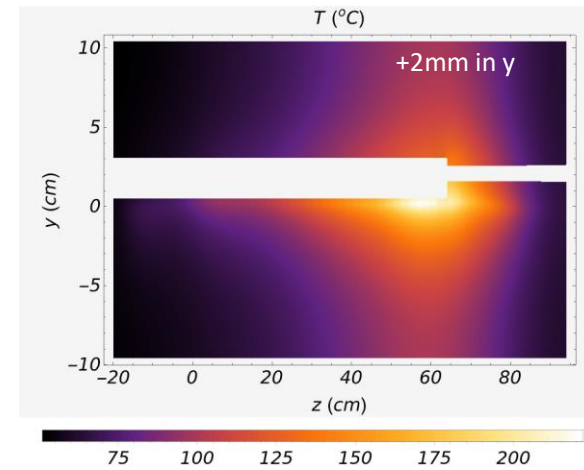
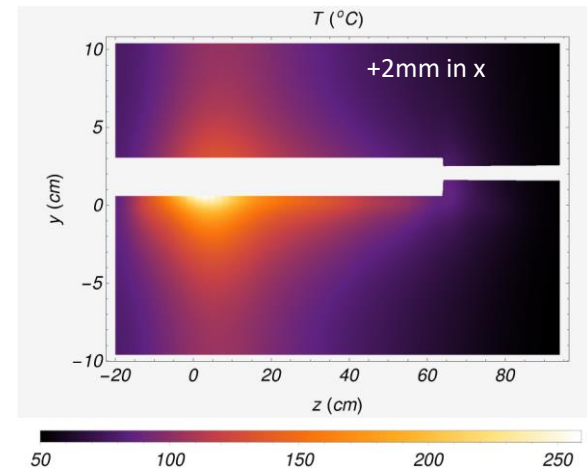
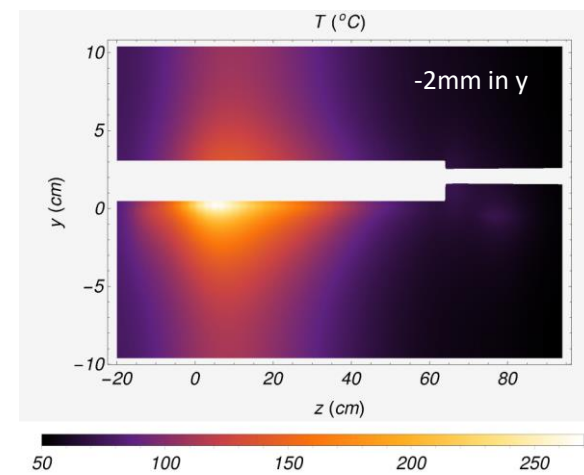
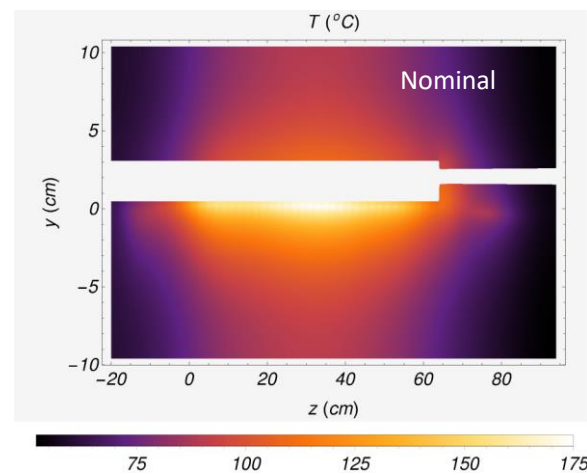


- Analyzed output from klcps76 with different beam conditions using Mathematica.
 - 0.67 T B-field in the magnet.
 - Beam width $\sigma=1.2\text{mm}$ in both directions.
 - Long 200 mm wide slit along z in FLUKA.
 - Many slits in the transverse directions in FLUKA.
 - All slits are ignored in Mathematica.
 - Checked Mathematica results and ANSYS results by Tim for consistency.
 - Considered absorber as isolated.
 - 4x $r=1.2\text{cm}$ cooling holes 5cm offset from the location of the hotspot.
 - $T_w=40^\circ\text{C}$ cooling water temperature.
- Beam positions shifts by 2mm look better than in klcps69 model.
 - We still plan to prevent 1mm beam position excursions.
- Waiting for the full set of beam conditions from klcps77 model without slits in FLUKA.
 - Tim does not think slits make much difference for stresses and deformations.



Configuration Name	Z_{\max} (cm)	T_{\max} ($^\circ\text{C}$)	T_{cold} ($^\circ\text{C}$)	P_{\max} (KW/cm^3)
Nominal KLCSP76	33	175	91	4
98% B-field	37	174	90	4
-2mm shift in Y	5	270	105	5.6
+2mm shift in Y	57	222	100	5.4
+2mm shift in X	3	260	105	6