

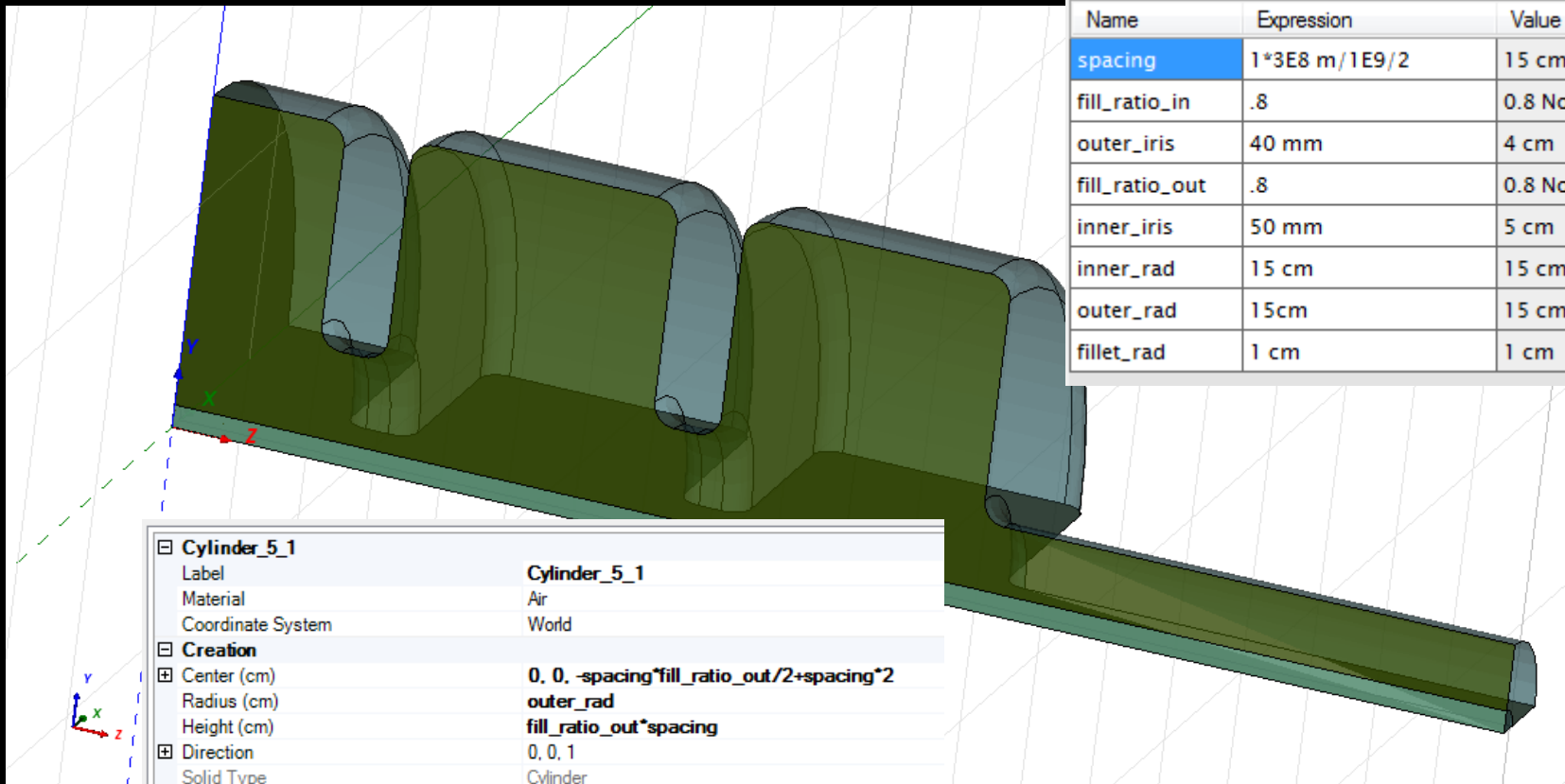
**5-CELL ELLIPTICAL CAVITY
FIELD FLATNESS STUDY**

J. Holzbauer

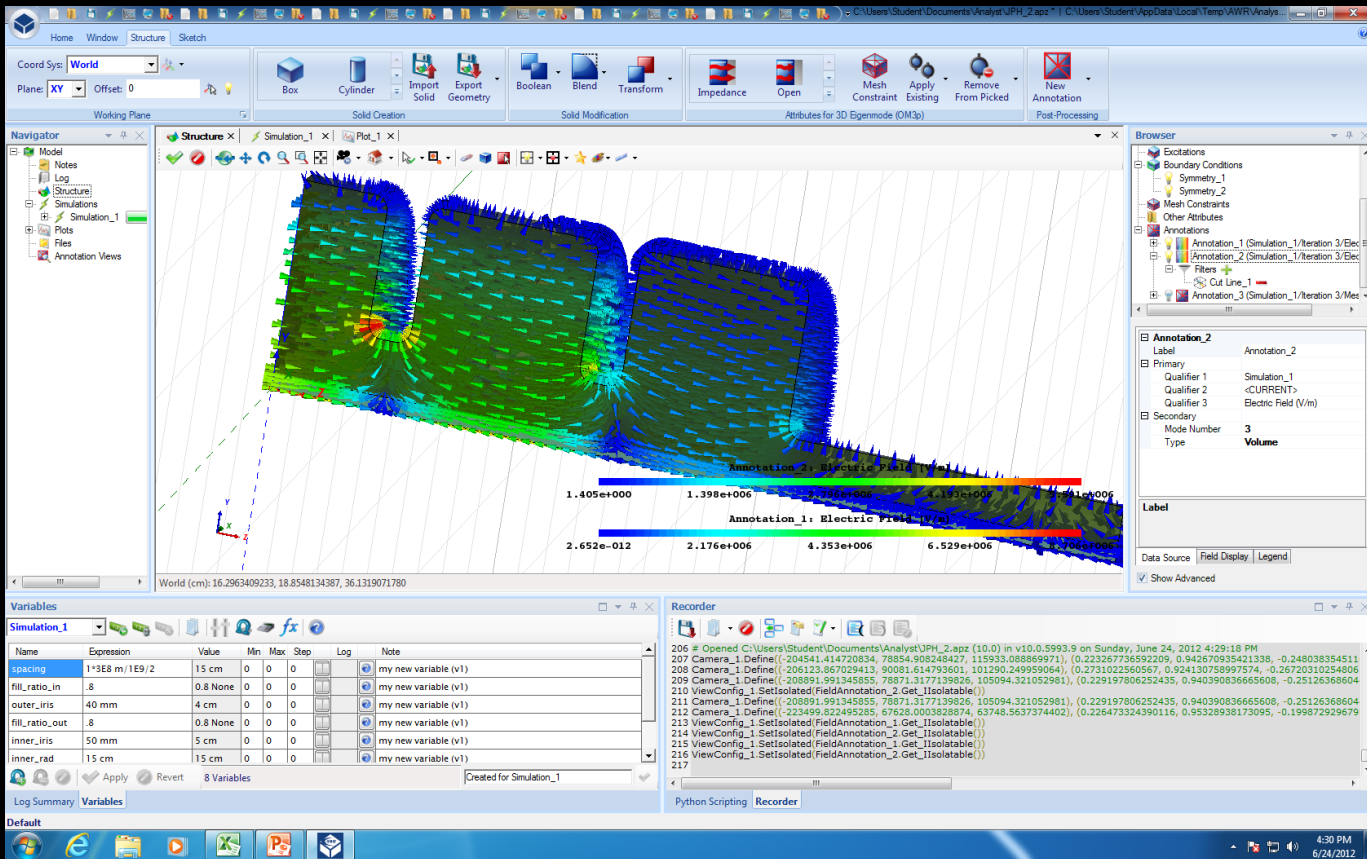
GEOMETRY DEFINITION

Name	Expression	Value
spacing	$1 \times 3E8 \text{ m} / 1E9 / 2$	15 cm
fill_ratio_in	.8	0.8 None
outer_iris	40 mm	4 cm
fill_ratio_out	.8	0.8 None
inner_iris	50 mm	5 cm
inner_rad	15 cm	15 cm
outer_rad	15cm	15 cm
fillet_rad	1 cm	1 cm

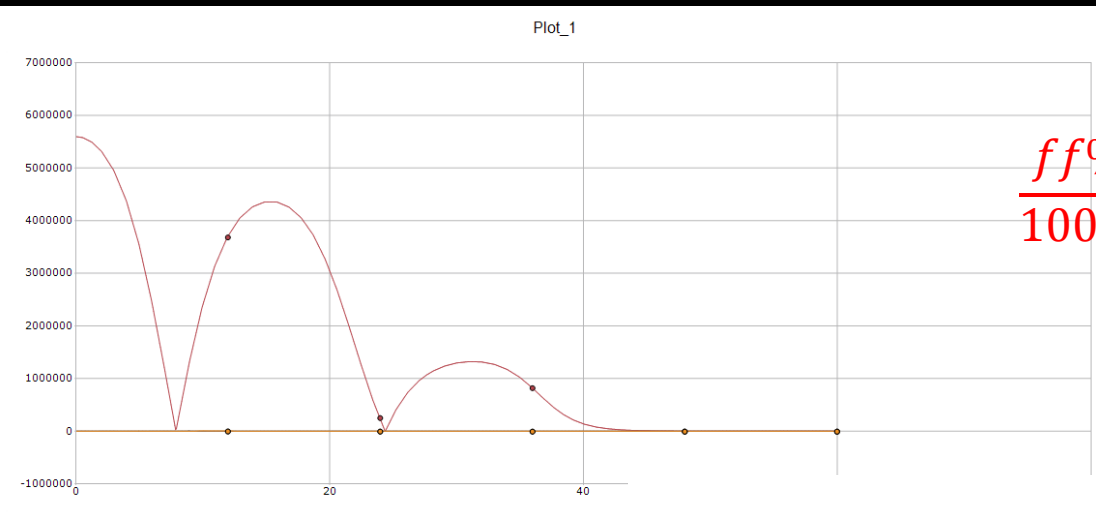
<input type="checkbox"/> Cylinder_5_1	Cylinder_5_1
Label	Cylinder_5_1
Material	Air
Coordinate System	World
<input type="checkbox"/> Creation	
<input type="checkbox"/> Center (cm)	$0, 0, -\text{spacing} \times \text{fill_ratio_out} / 2 + \text{spacing} \times 2$
<input type="checkbox"/> Radius (cm)	outer_rad
<input type="checkbox"/> Height (cm)	fill_ratio_out * spacing
<input type="checkbox"/> Direction	0, 0, 1
<input type="checkbox"/> Solid Type	Cylinder



FIELD FLATNESS

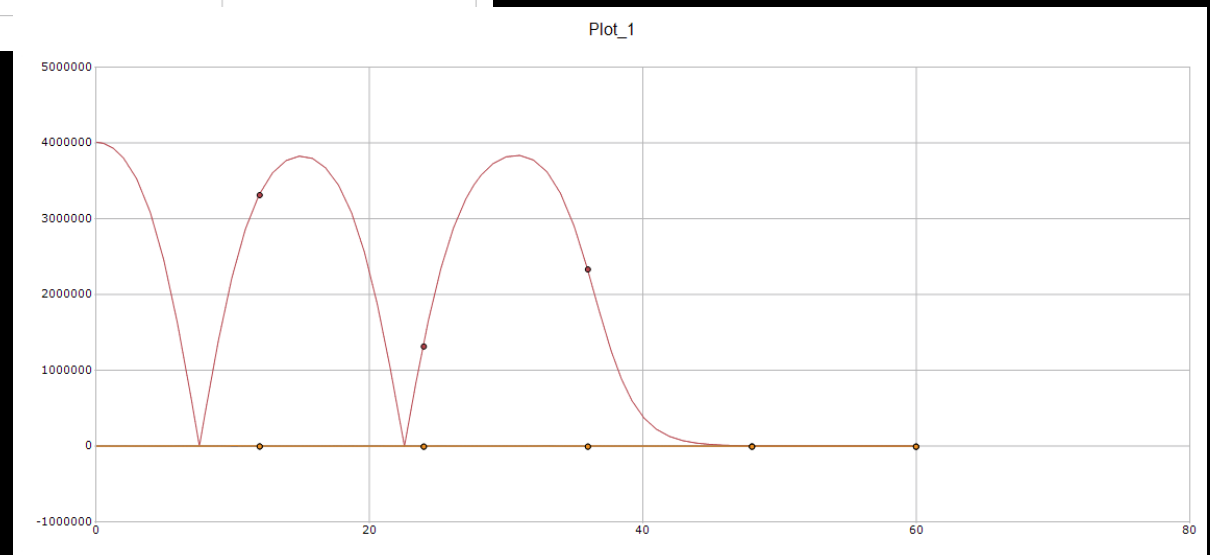


ACCELERATING FIELD



$$ff\% = \frac{MAX(|peaks|) - MIN(|peaks|)}{AVG(peaks)} \times 100\%$$

Radius of
outer cell
reduced by
1.44 mm



FF% V. RADIUS OF END CELLS

