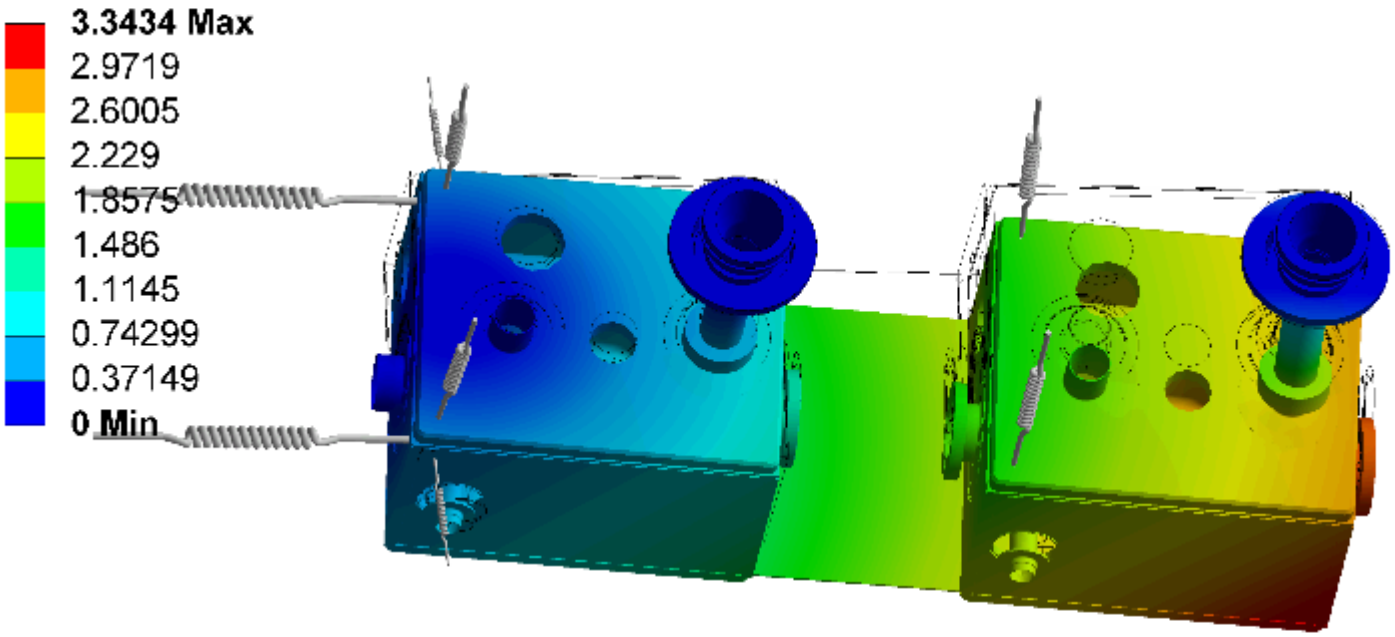
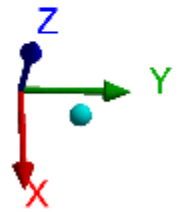
Support System: simulation with both cavities

A: Modal
Figure
Type: Total Deformation
Frequency: 40.571 Hz
Unit: mm
22/02/2015 17:39

40.6 Hz





0.00 450.00 900.00 (mm)
225.00 675.00

B: Modal cartesian 2 - 2
Figure
Type: Total Deformation
Frequency: 45.944 Hz
Unit: mm
22/02/2015 17:42

46 Hz

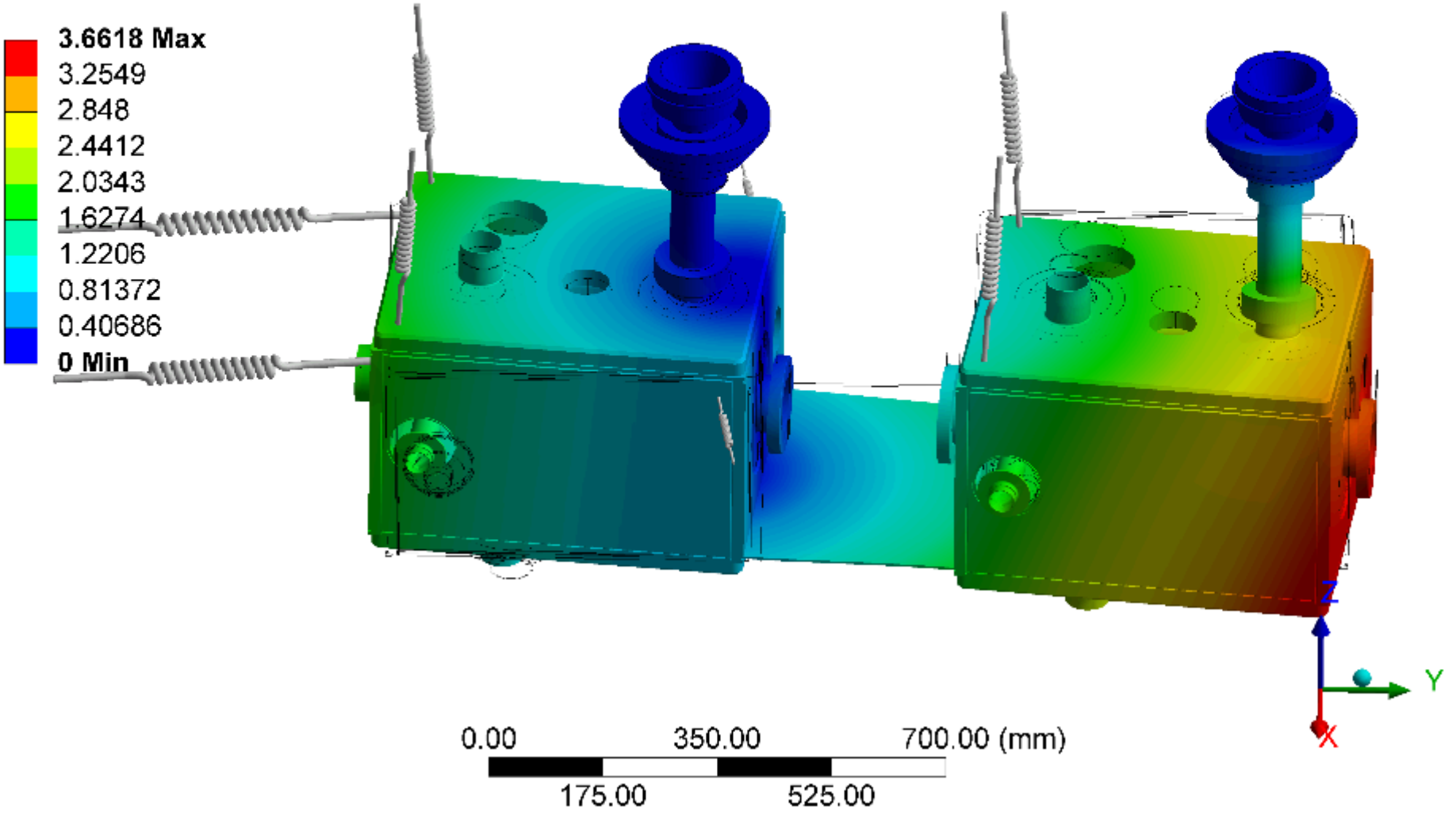


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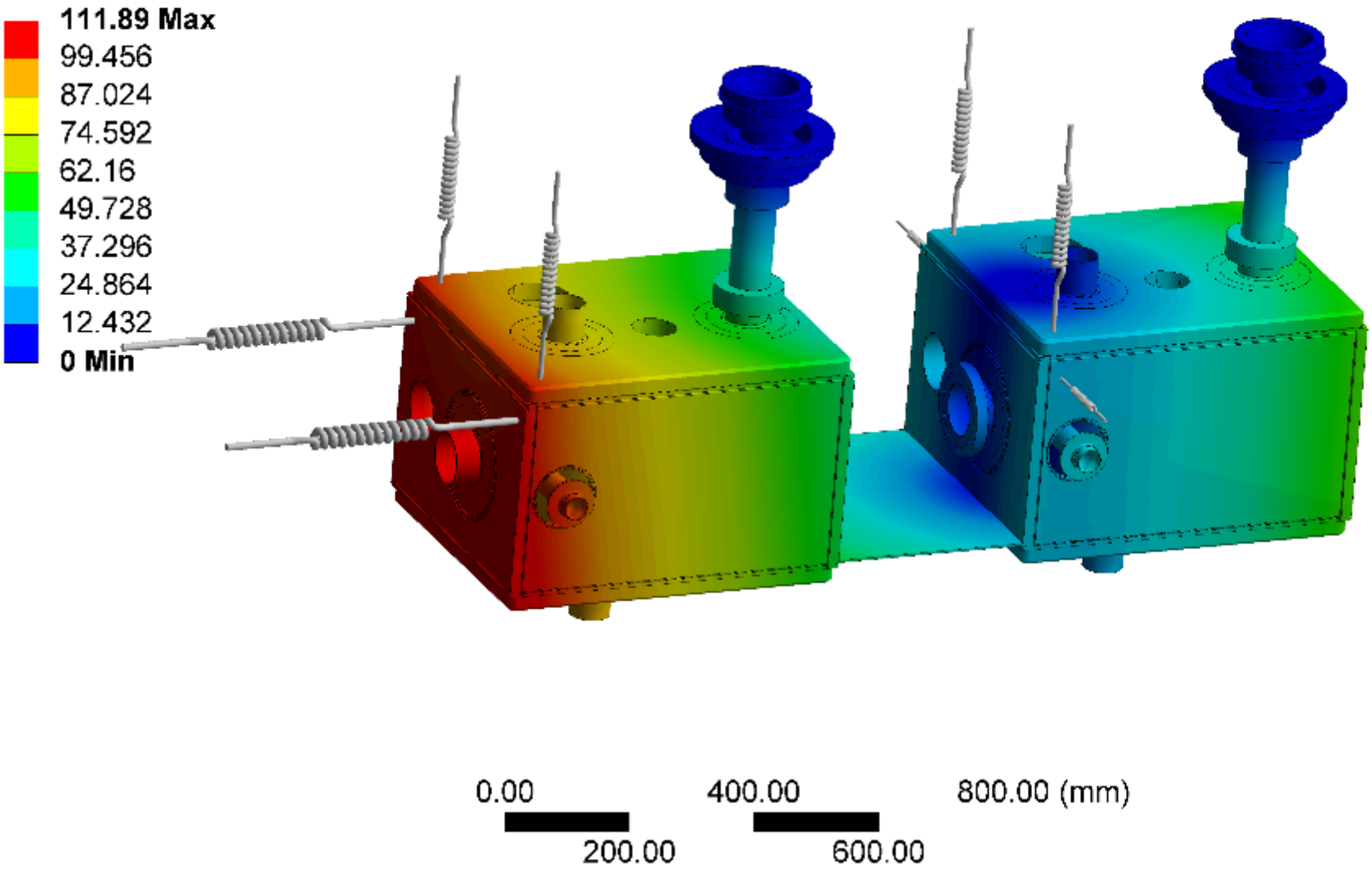
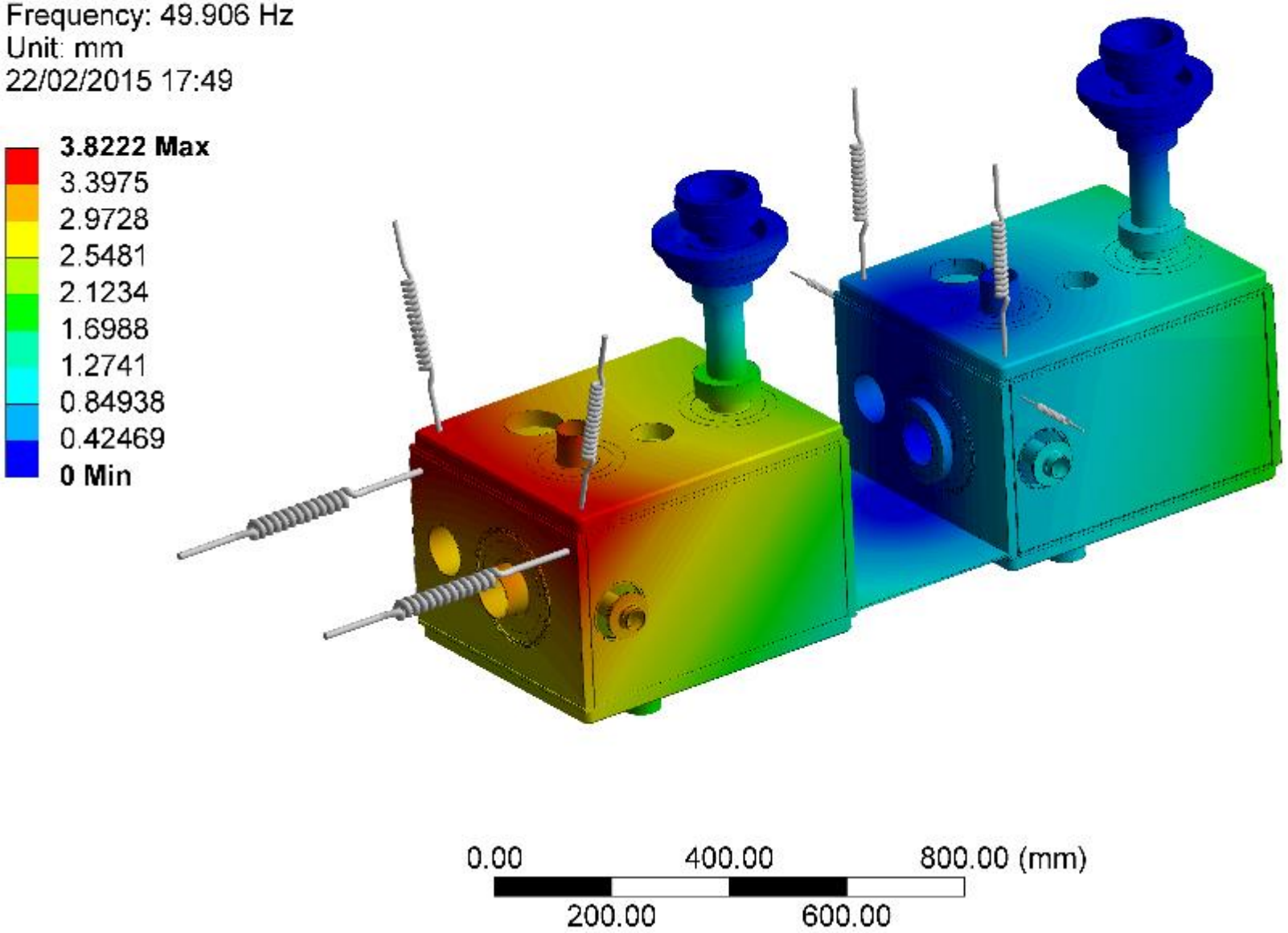
Figure
Type: Total Deformation
Frequency: 40.964 Hz
Unit: mm
22/02/2015 17:51

41 Hz



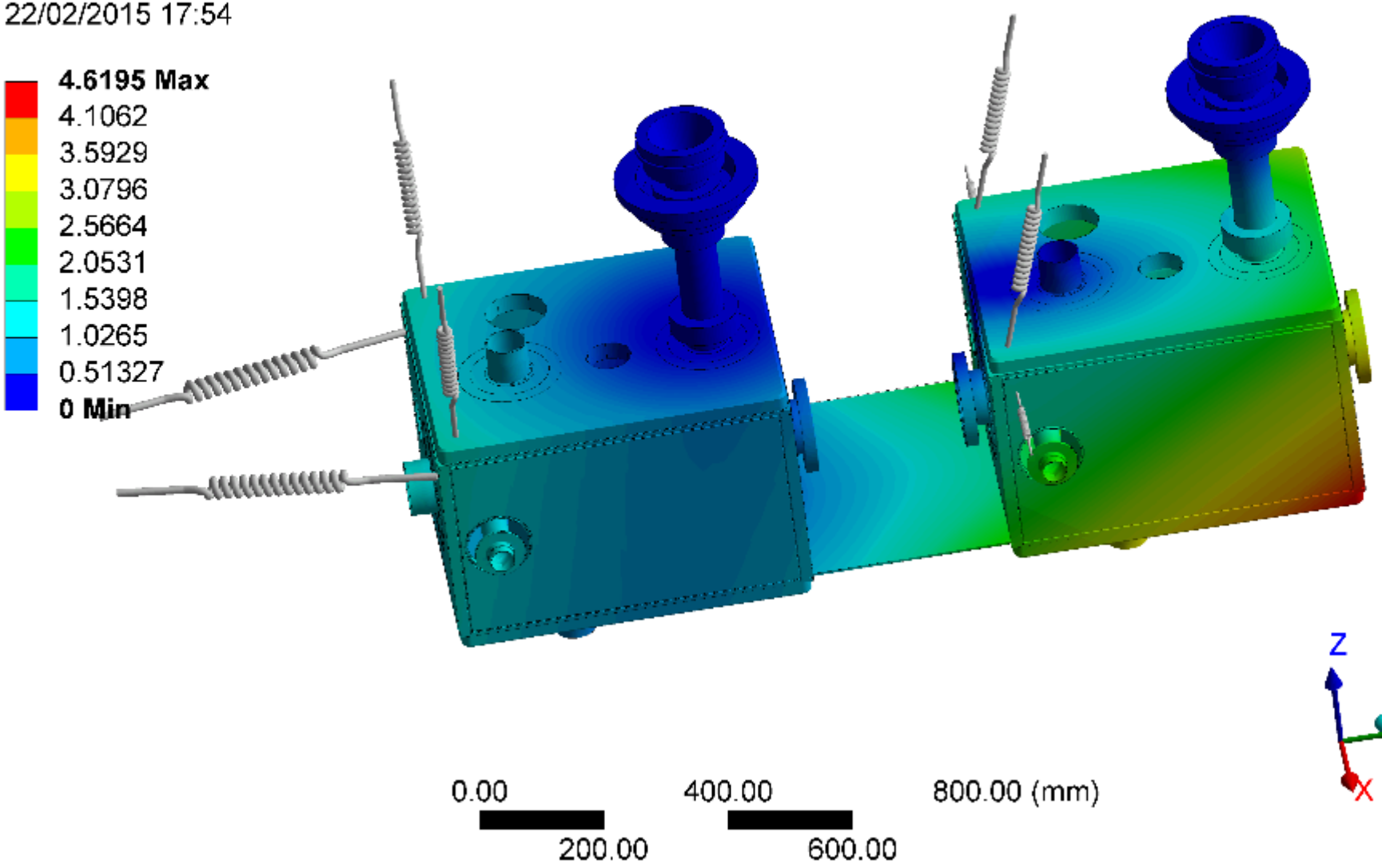
D: Modal cartesian 2 cav - 4
Figure
Type: Total Deformation
Frequency: 49.906 Hz
Unit: mm
22/02/2015 17:49

50 Hz



E: Modal cartesian 2 cav - 5
Figure
Type: Total Deformation
Frequency: 60.928 Hz
Unit: mm
22/02/2015 17:54

61 Hz



Modal vs. Thermal performance

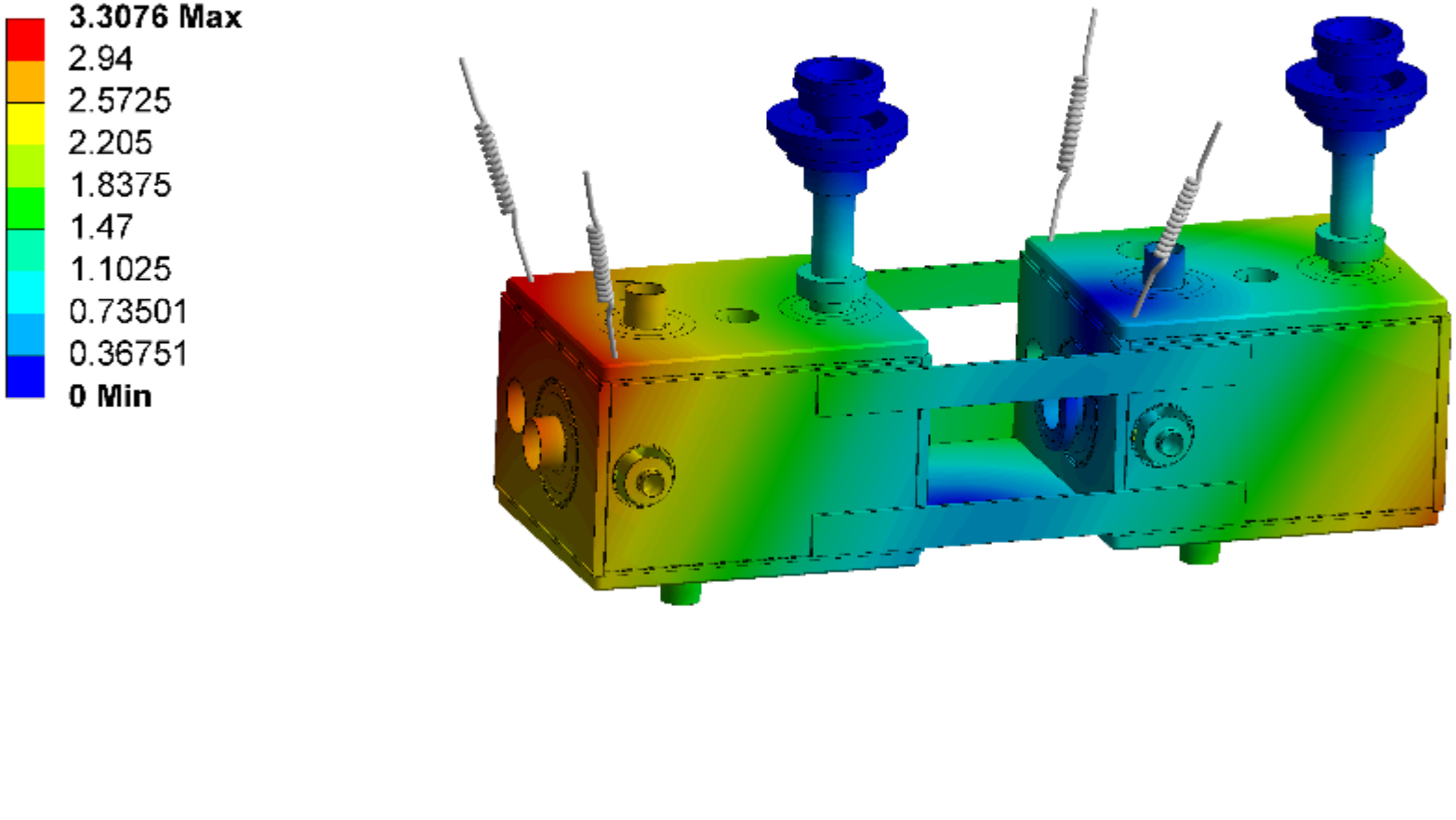
1st Mode [Hz]	Radius [m]	Thermal load (300K), [W]	Thermal load (80K), [W]
22.7	0.0013	0.4	0.0
32.5	0.0022	1.2	0.1
39.4	0.0028	2.0	0.2
42.3	0.0031	2.4	0.3
45.0	0.0034	2.8	0.3
47.4	0.0036	3.2	0.4
49.6	0.0038	3.6	0.4
51.7	0.0040	4.0	0.5
53.6	0.0042	4.4	0.5
55.4	0.0044	4.8	0.6
57.1	0.0046	5.2	0.6
58.7	0.0048	5.6	0.6
60.8	0.0050	6.1	0.7

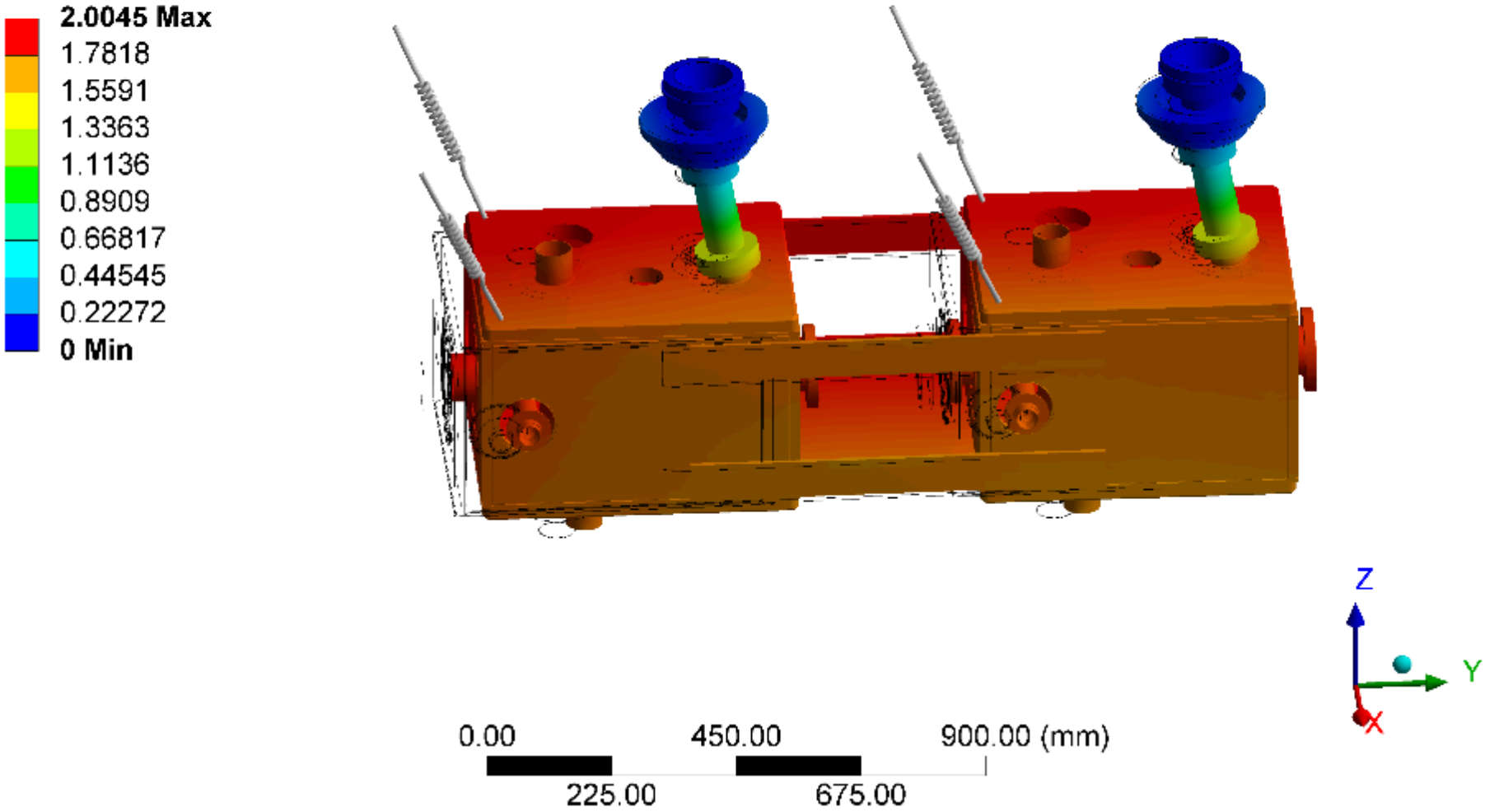
Support System: simulation with both cavities

Cases with rods from above (only) and stiffer intercavity connection

H: Modal cartesian 2 cav - 7 (only top rods)
Figure
Type: Total Deformation
Frequency: 34.834 Hz
Unit: mm
22/02/2015 18:01

35 Hz



36 Hz – along beam axis (2nd at 40 Hz)

J: Modal cartesian 2 cav - 9 (only top rods)
Figure
Type: Total Deformation
Frequency: 36.09 Hz
Unit: mm
22/02/2015 18:04