LYSO cristal + PD mechanical test

Preliminary FEM simulation and results



77.071

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FEM model setup a

A: ModalFixed Rotation Z - SideZ

Frequency: N/A

20/06/2022 11:42

Fixed Rotation

- SideZ

C: Copy of Modal

Fixed Display: N/A

Prequency: N/A

C: Copy of Modal

Fixed Displacement XYZ - SideX

Frequency: N/A

30/06/2022 12:00

Fixed Displacement XYZ - SideX Components: 0.;0.;0. mm

Fixed Displacement XYZ - SideX Components: 0.;0.;0. mm

A: Modal Fixed Support LYSO properties uency: N/A 30/06/2022 11:43

Fixed Support

2	Material Field Variables	Table	
3	🔀 Density	7.1	g cm^-3 ▼
4	■ Isotropic Elasticity		
5	Derive from	Young's	
6	Young's Modulus	172*	MPa <u>▼</u>
7	Poisson's Ratio	0.3	
8	Bulk Modulus	1.4333E+08	Pa
9	Shear Modulus	6.6154E+07	Pa

[/]Insys B: Modal **Boundary conditions** Fixed Support Frequency: N/A 9/13/2022 6:37 PM 2022 R1 **STUDENT** Fixed Support 25.00 50.00 (mm)

12.50

77.071

183.64

251.24

435.51

543.17

564.58

669.21

788.49

910.32

37.50

183.64 251.24 435.

^{*} Ref. http://dx.doi.org/10.1016/j.nima.2015.02.061



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FEM modal analys

A: Modal

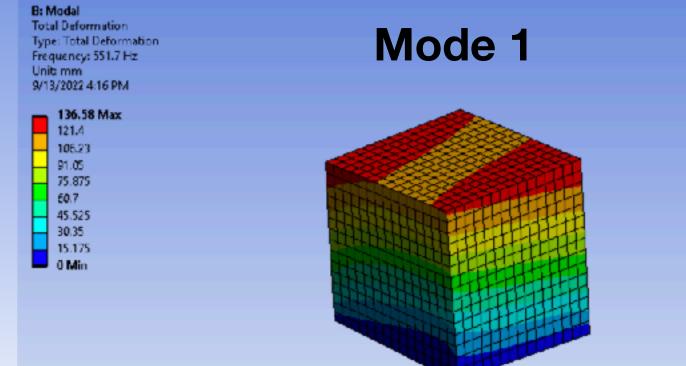
Fixed Rotation Z - SideZ Frequency: N/A

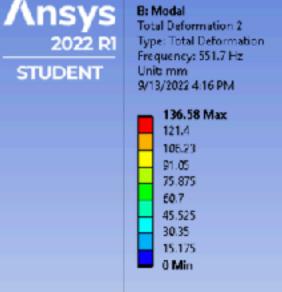
C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A

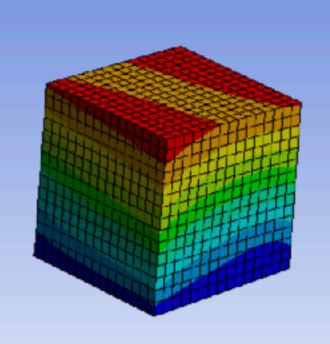
C: Copy of Modal Fixed Displacement XYZ - SideX 30/06/2022 12:00 20/06/2022 11:42

Fixed Displacement XYZ - SideX

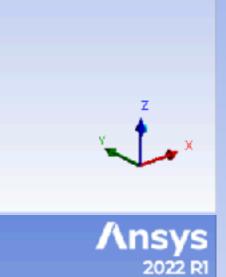








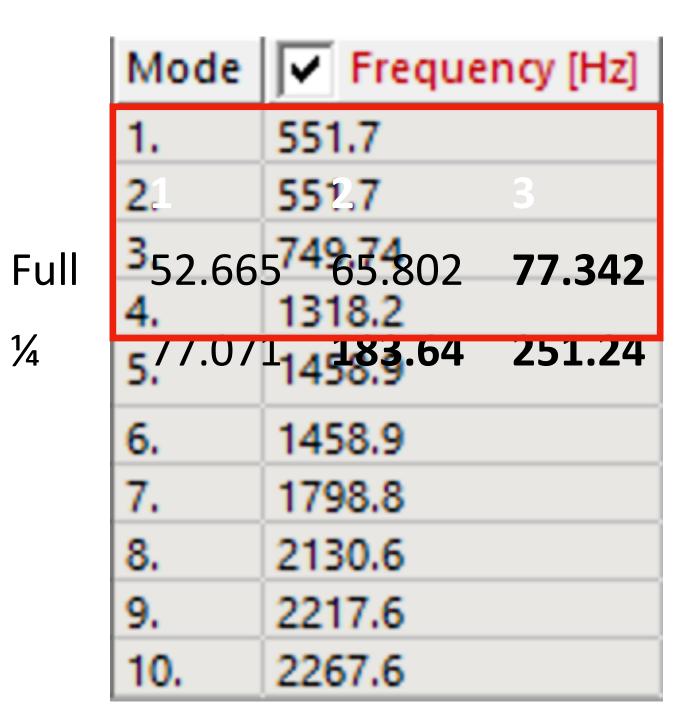
Mode 2

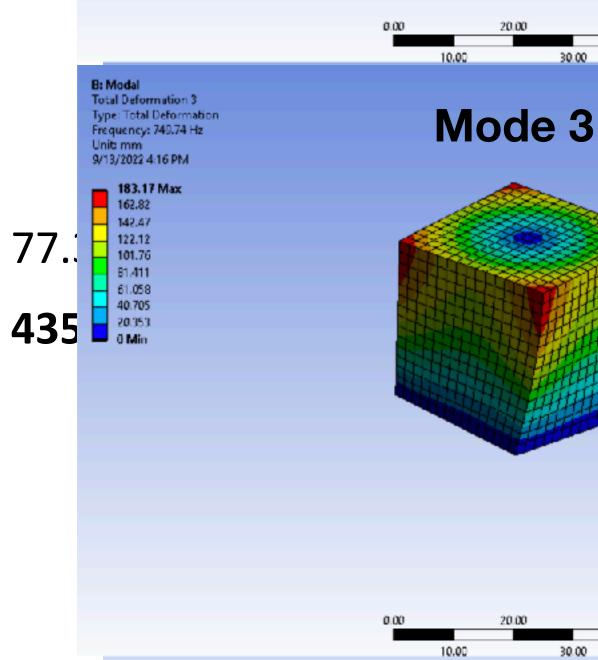


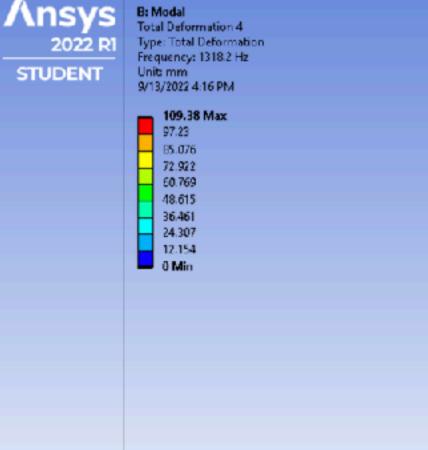
STUDENT

∧nsys 2022 R1

STUDENT

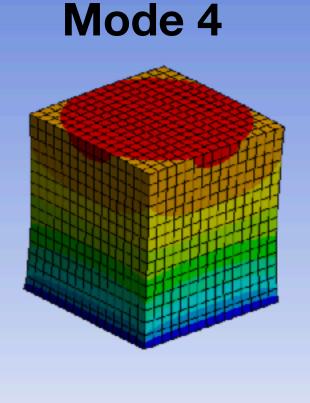


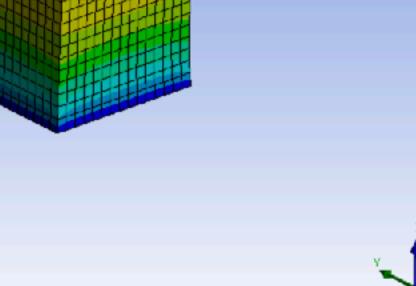




910.32

9 9.





40.00 (mm)



FEM modal analys

A: Modal

Fixed Rotation Z - SideZ Frequency: N/A

20/06/2022 11:42

2022 R1

/Insys

STUDENT

C: Copy of Modal Fixed Displacement XYZ - SideX

Fixed Displacement XYZ - SideX

C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A 30/06/2022 12:00

Ansys

STUDENT

/Insys

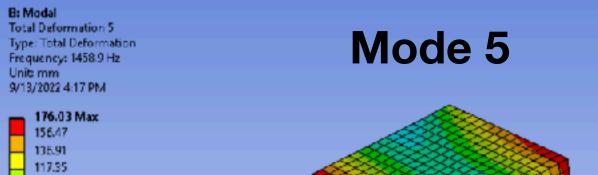
STUDENT

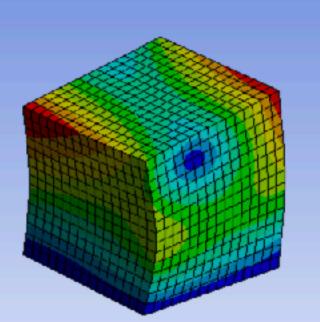
2022 R

2022 RI

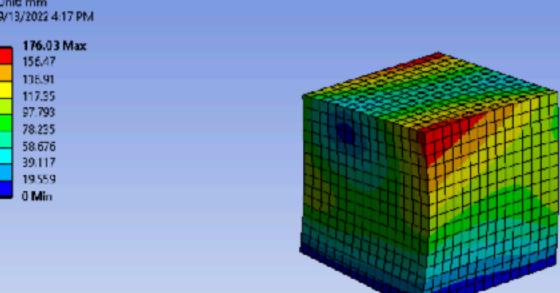
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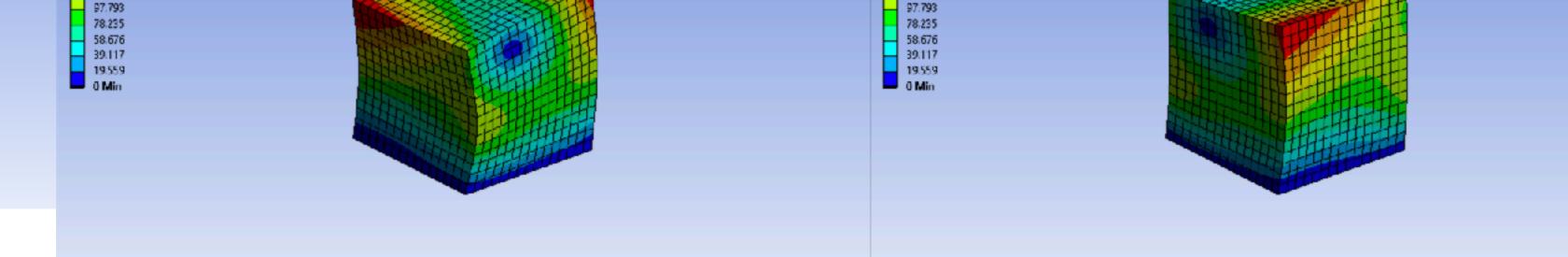


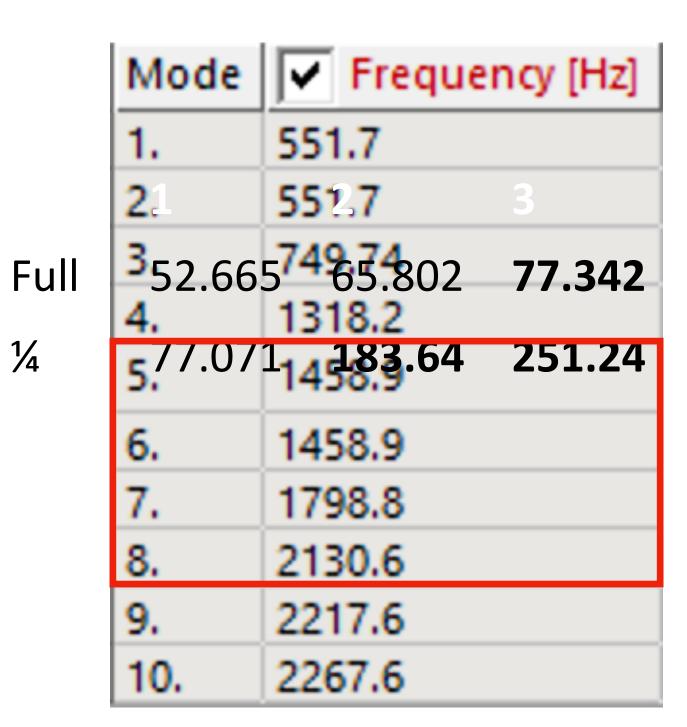


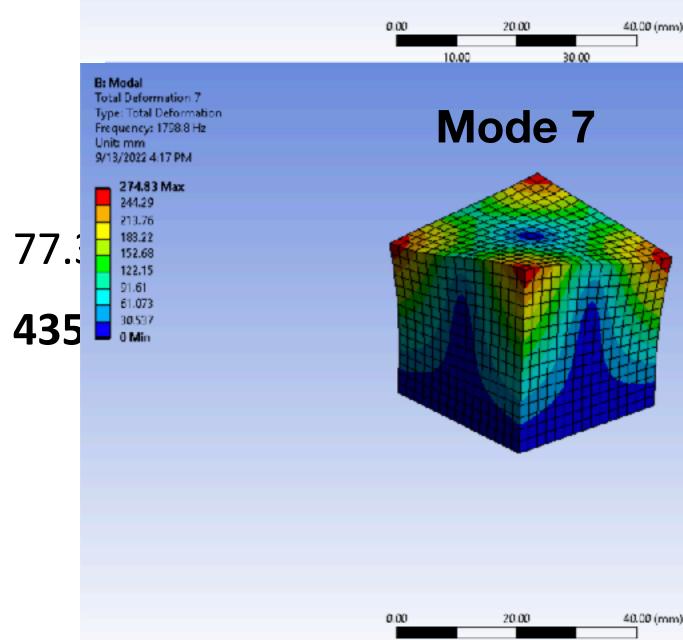


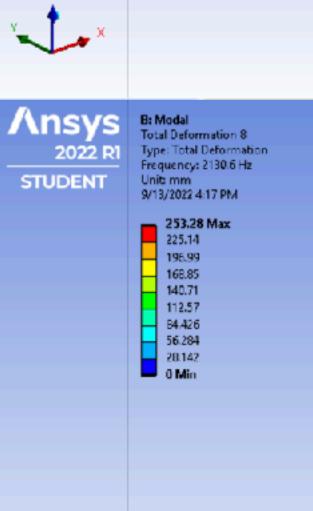






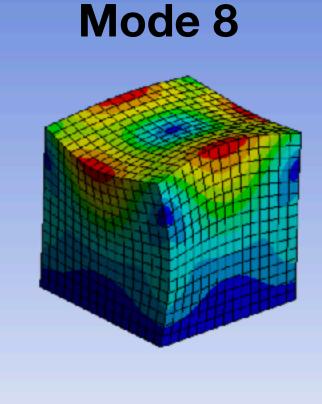


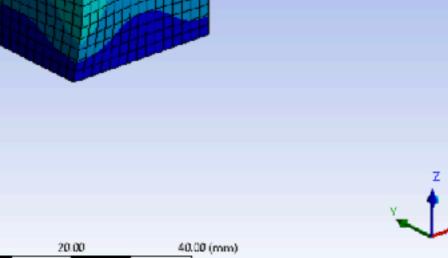




9 9.

910.32





40.00 (mm)



Full

FEM modal analysis

A: Modal

Fixed Rotation Z - SideZ Frequency: N/A 20/06/2022 11/42

STUDENT

C: Copy of Modal Fixed Displacement XYZ - SideX

Fixed Displacement XYZ - SideX

C: Copy of Modal Fixed Displacement XYZ - SideX Frequency: N/A 30/06/2022 12:00

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