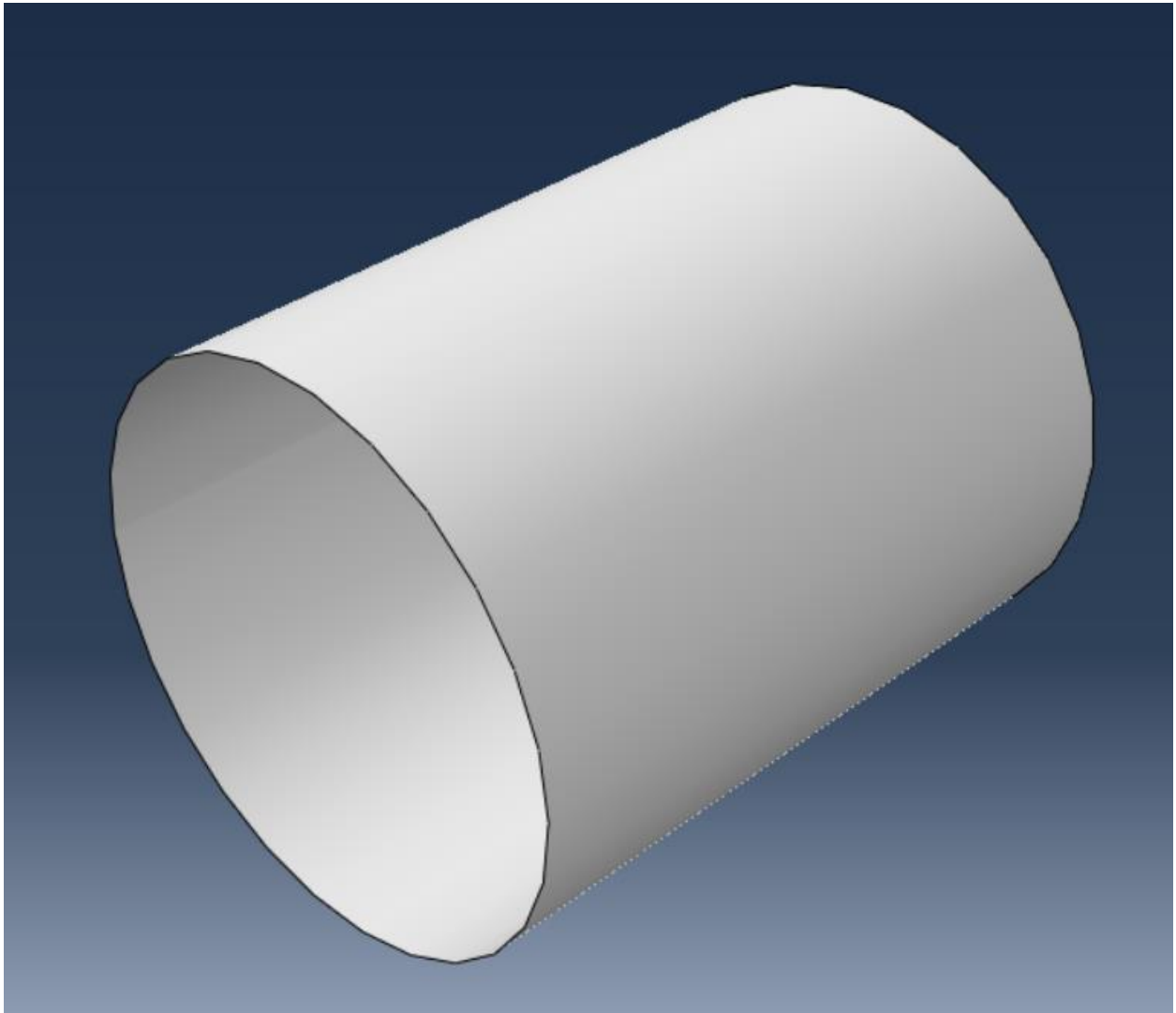Project 24_ABAQUS: Buckling of a Cylinder

Problem Statement: Model deformation of a cylinder subjected to buckling.

Geometry:

Material Properties:

Material Behaviors

Elastic

General   Mechanical   Thermal   Electrical/Magnetic   Other

Elastic

Type: Isotropic

☐ Use temperature-dependent data

Number of field variables: 0

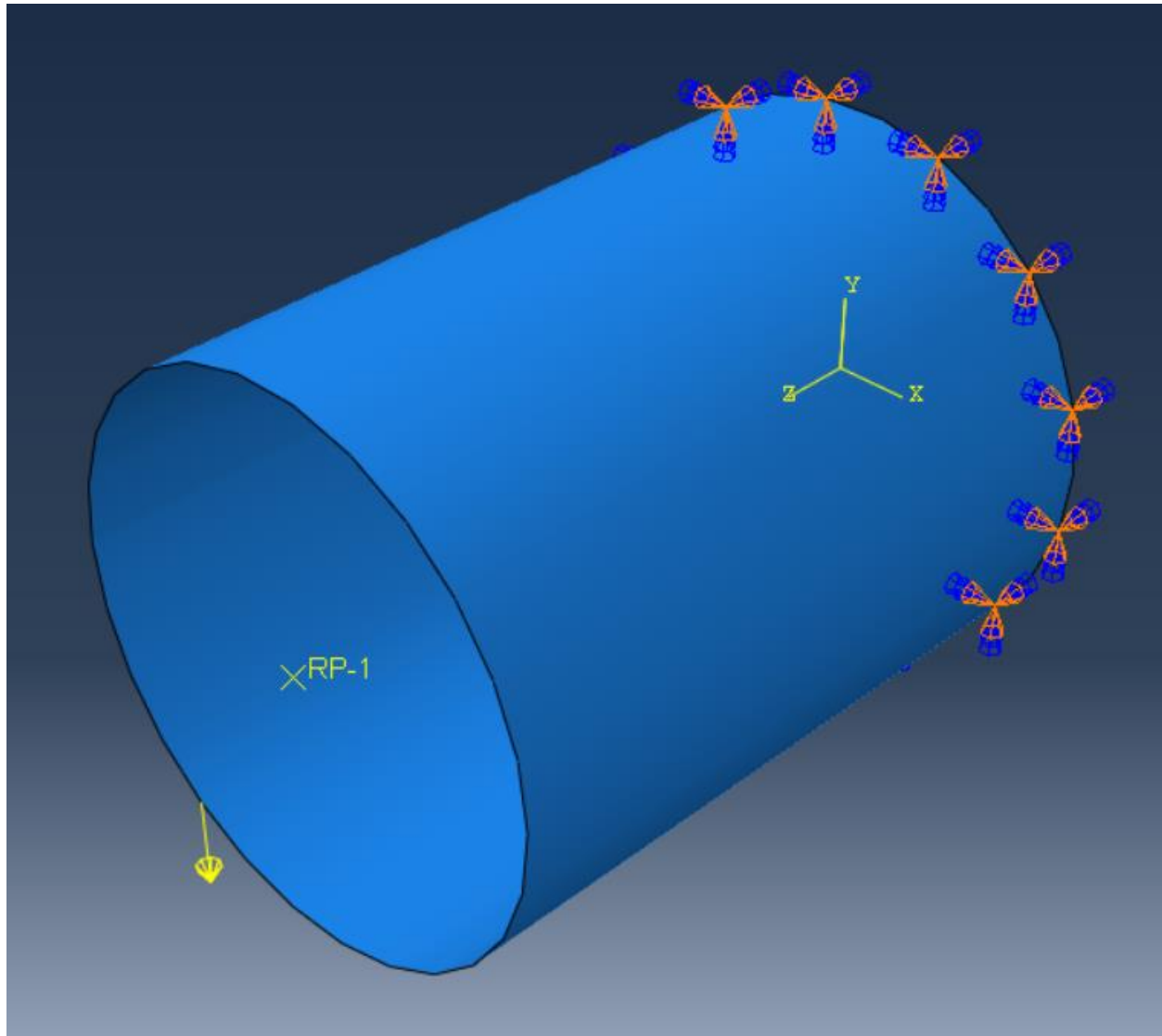Moduli time scale (for viscoelasticity): Long-term

☐ No compression
☐ No tension
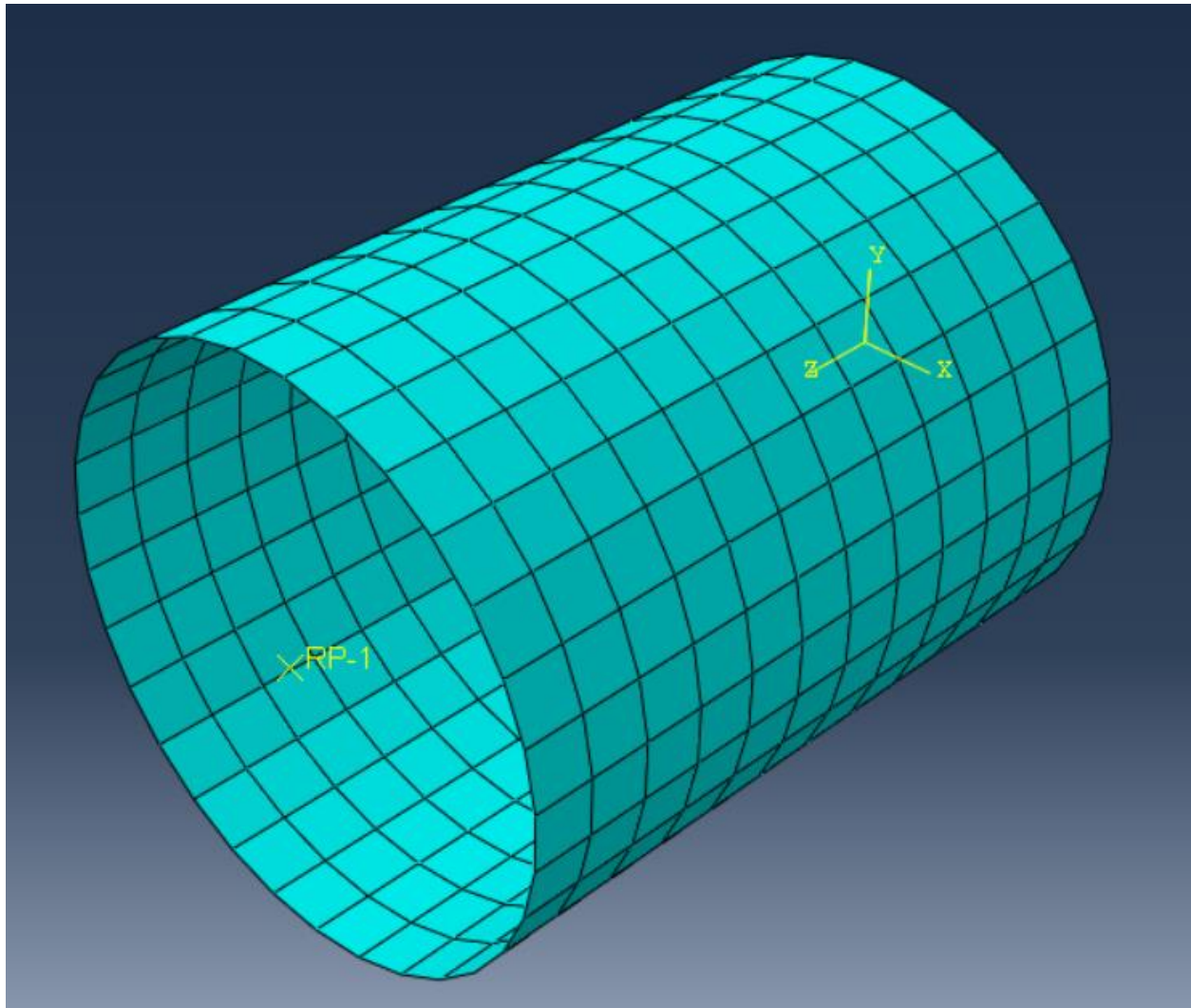
Data

	Young's Modulus	Poisson's Ratio
1	210000	0.3

Loading and boundary conditions:

1) Right edge is fixed.
2) Left edge has a concentrated force applied.

Mesh: (coarse due to limitation of 1000 nodes in ABAQUS educational version).

Results:

Deformation: