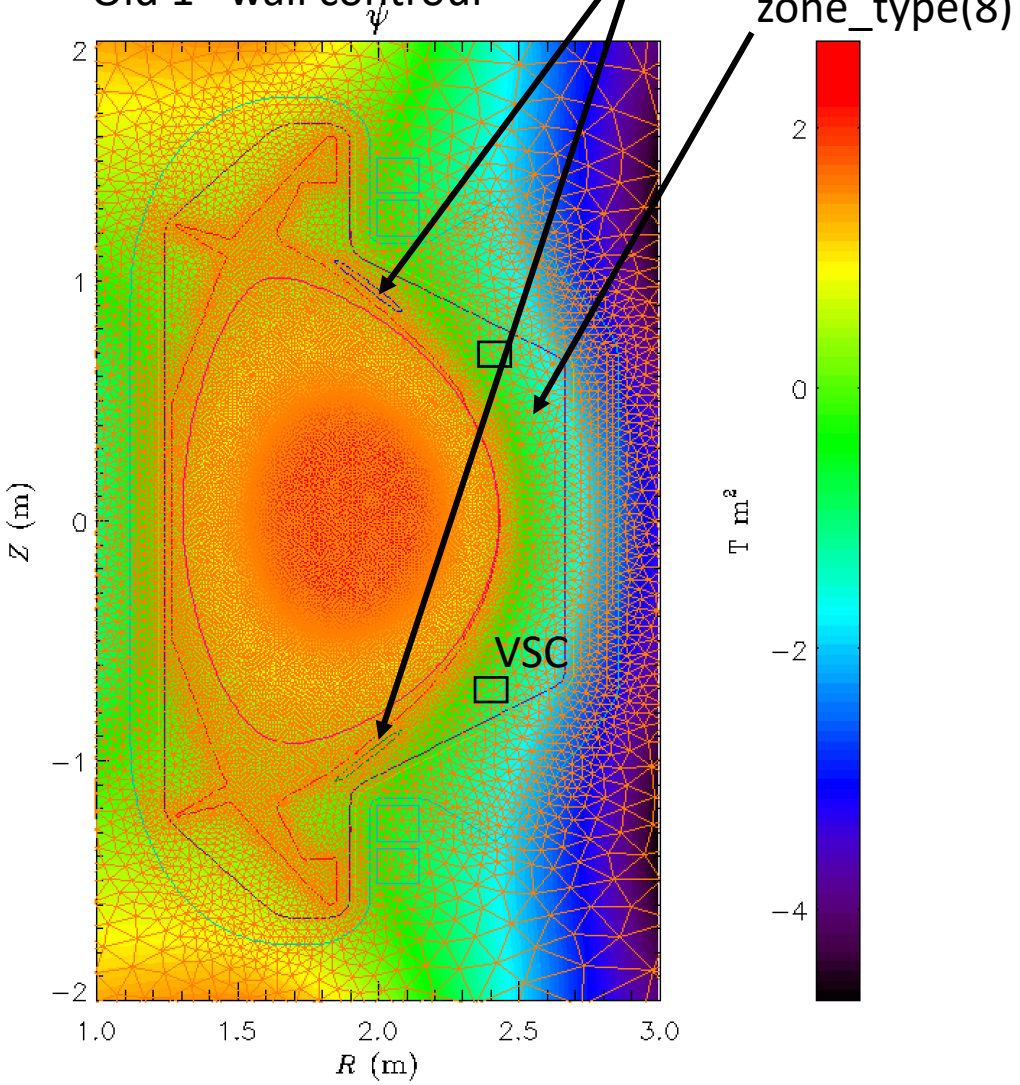
S1

Old mesh model (8 zones)

2 passive plates

Old 1st wall controur

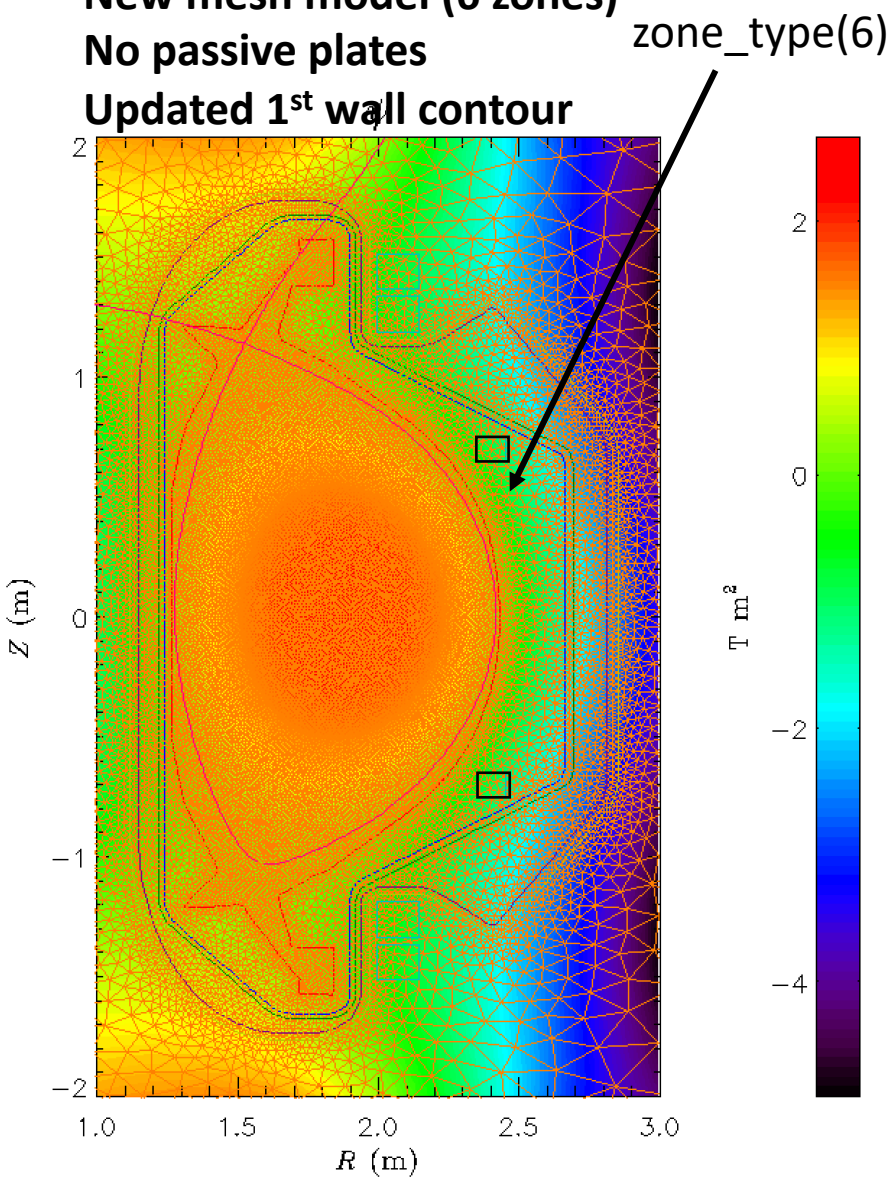


S2

New mesh model (6 zones)

No passive plates

Updated 1st wall contour

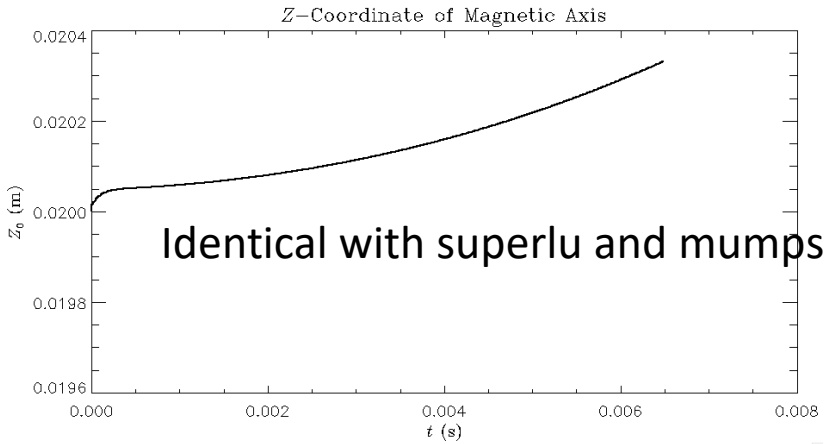


Shifted equilibrium is different in each case because VS coils were not used in S2

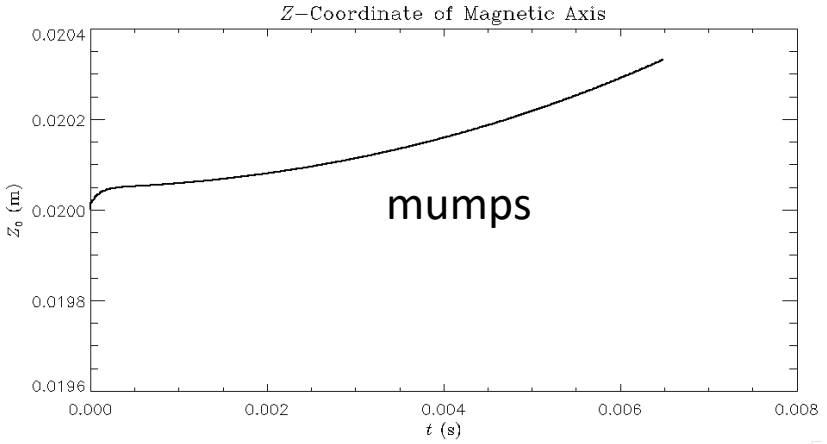
S1 (old model) behaves well in all systems

- Initial equilibrium shifted 2 cm, using VS coils for that
- Zone_type(8) = 3 → set as vacuum region

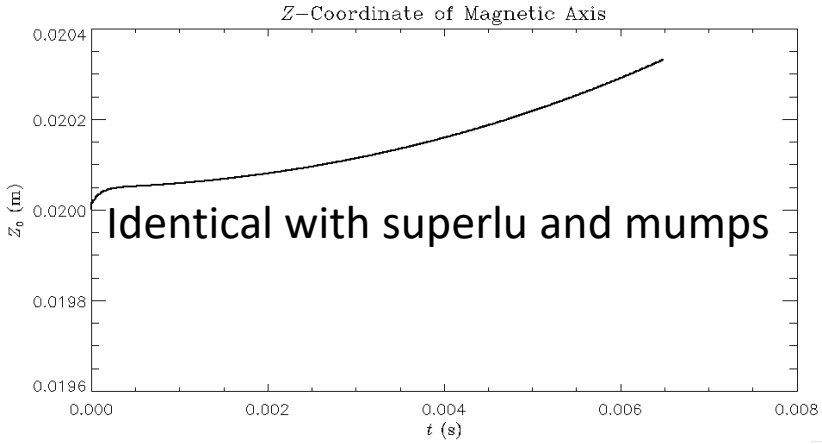
Perlmutter



MIT



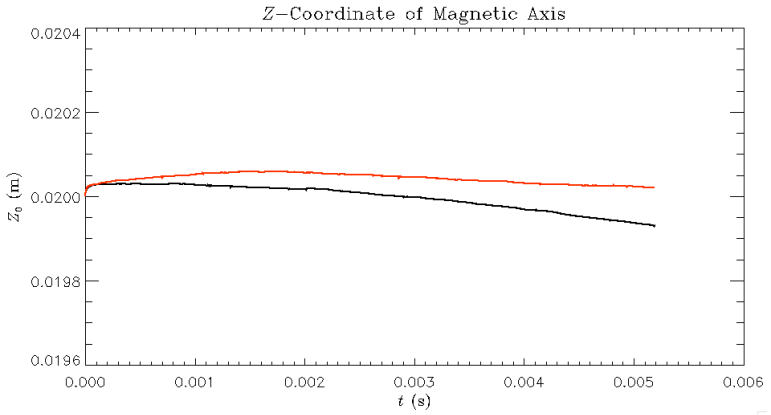
STELLAR



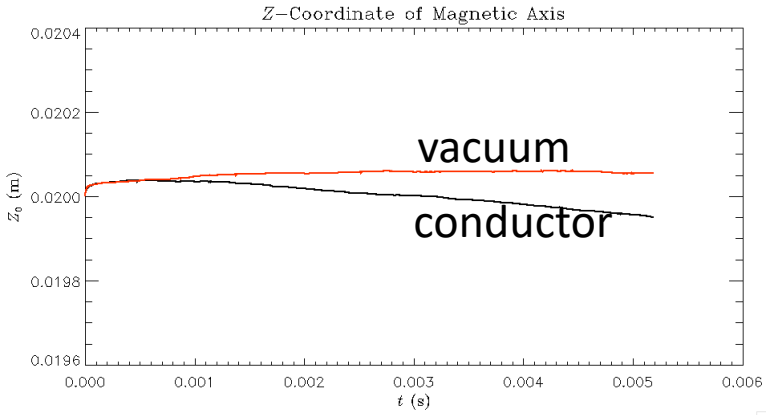
S2 model shows differences and wrong behavior

- Initial equilibrium shifted 2 cm, **NOT** using VS coils
- Zone_type(6**) = 2** → set as a resistive wall region (with high resistivity)

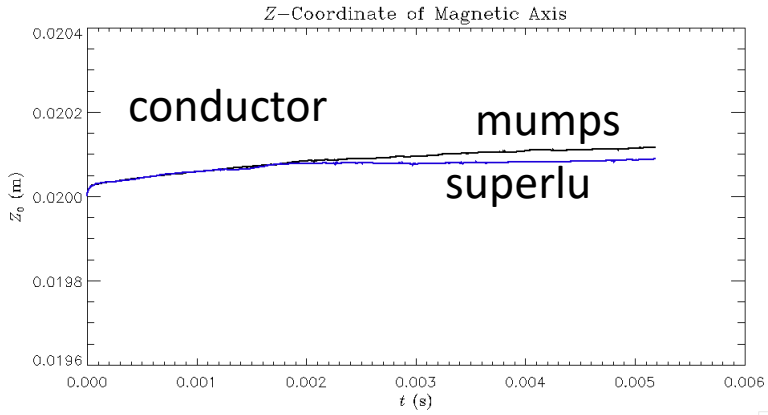
PERLMUTTER



MIT



STELLAR

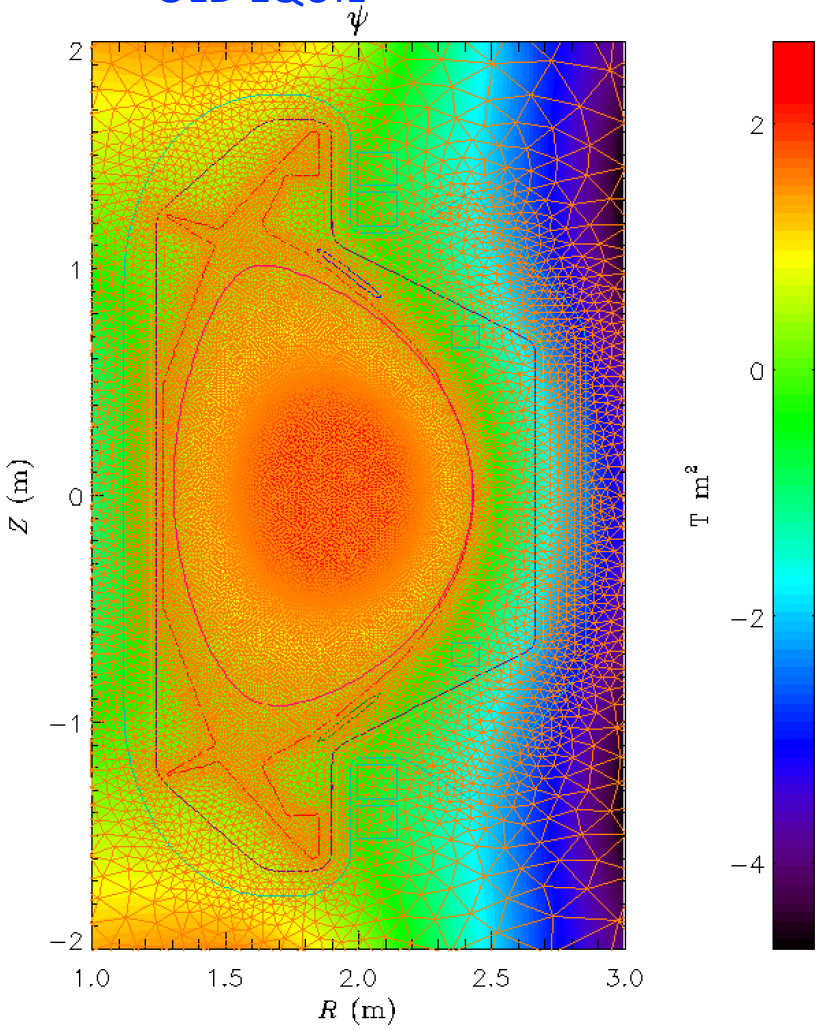


- **RED** curve:
- reverted zone_type(6) = 3 as vacuum

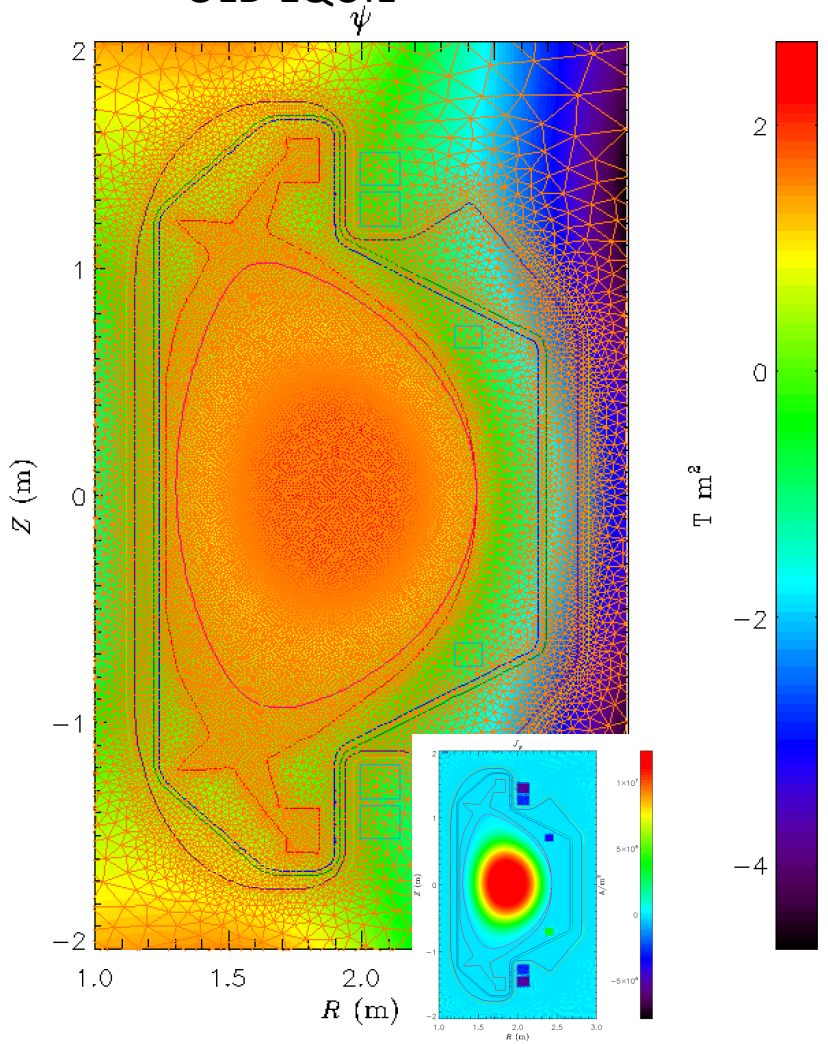
STELLAR shows a much better behavior compared to Perlmutter and MIT.

From the old mesh/equil to the new mesh/equil

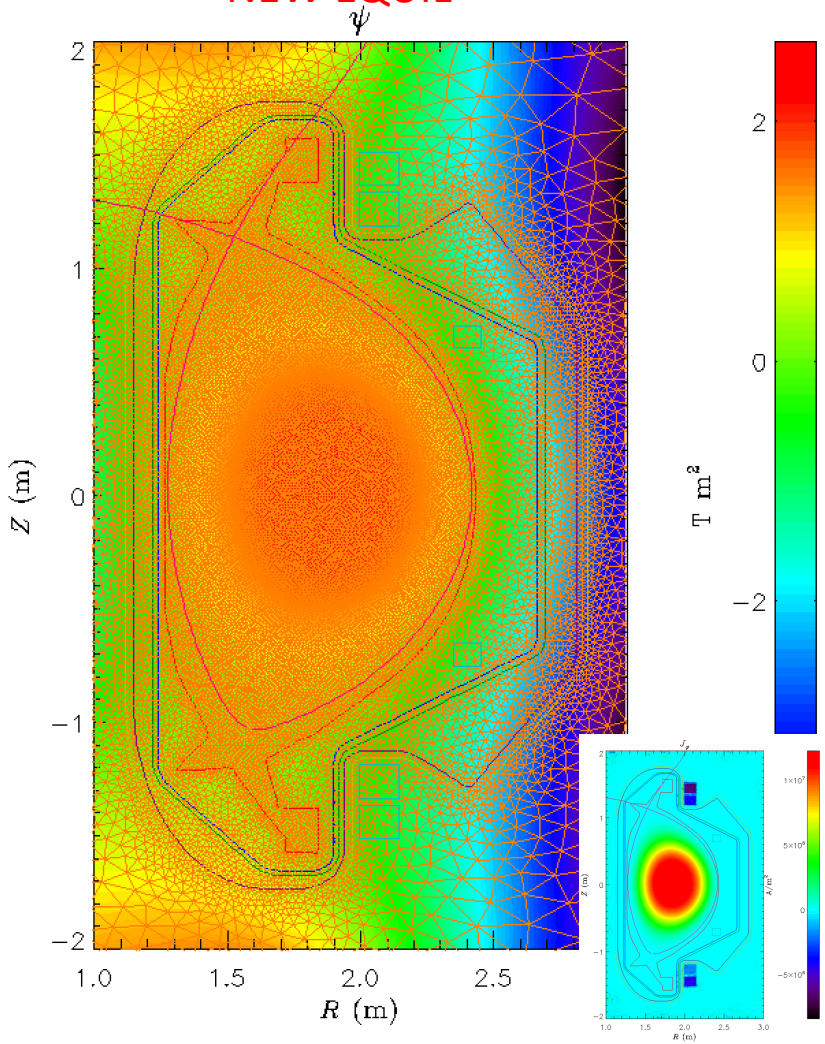
OLD MESH/
OLD EQUIL

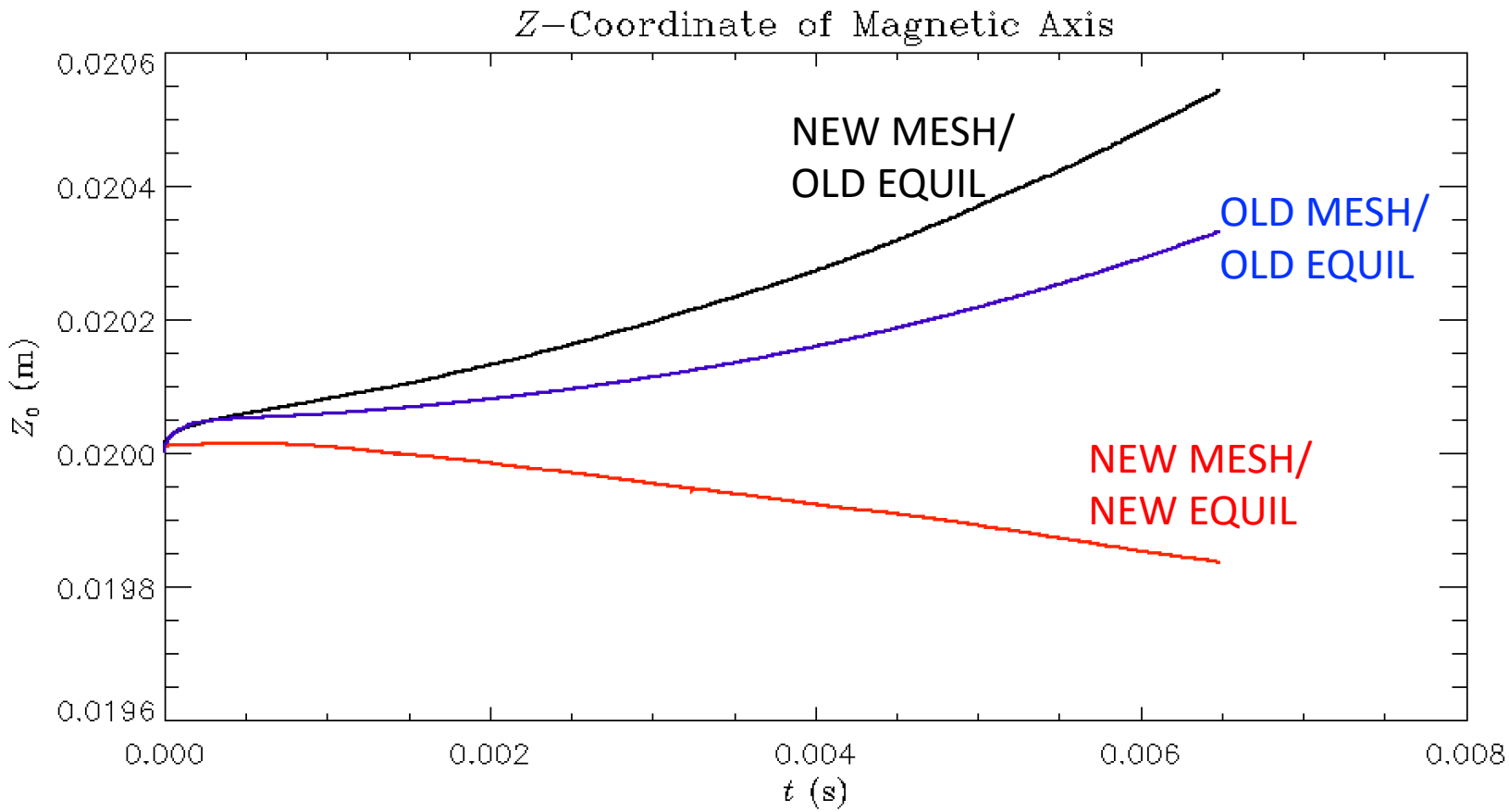


NEW MESH/
OLD EQUIL



NEW MESH/
NEW EQUIL




Z−Coordinate of Magnetic Axis
0.0206
0.0204
0.0202
0.0200
0.0198
0.0196
Z_0 (m)
0.000
0.002
0.004
0.006
0.008
t (s)
NEW MESH/
OLD EQUIL
OLD MESH/
OLD EQUIL
NEW MESH/
NEW EQUIL