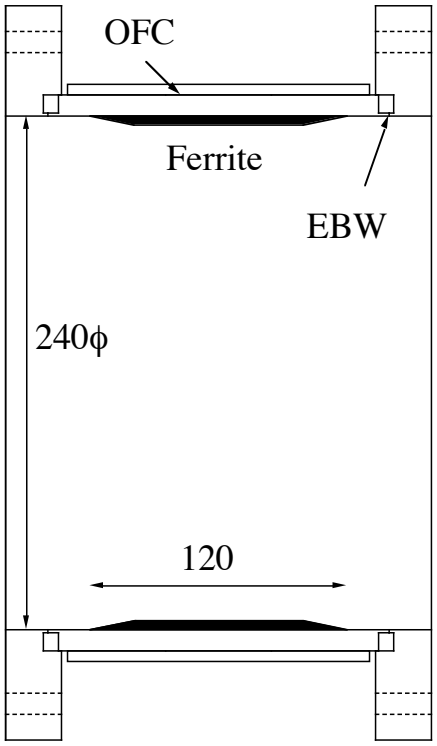
HOM Damper for Crab Cavity

Y. Morita

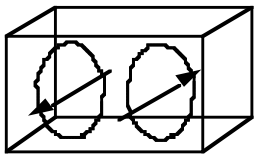
HOM Damper

T. Tajima



- Ferrite damper
- Coaxial HOM Damper
  188ϕ, 4t x 150 mm
- LBP HOM Damper
  240ϕ, 4t x 120 mm
- Hot Isostatic Press (HIP)
  1500 atm, 900 ℃

Higher and the Lowest Order Modes

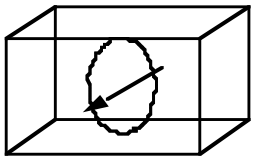


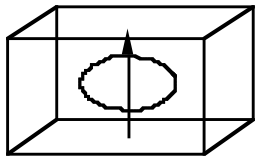
TM210
Crab Mode

Monopole

Dipole

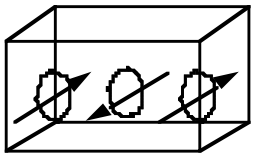
TM110
Lowest order mode

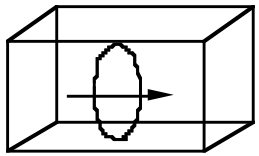




TE101

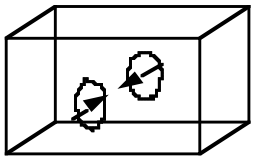
TM310

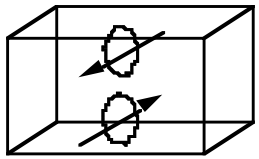




TE011

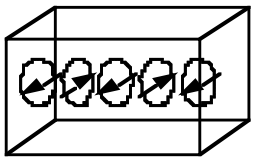
TM111

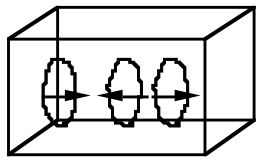




TM120

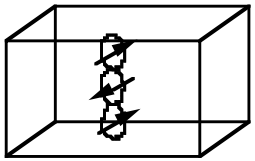
TM510

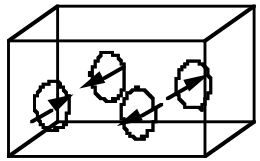




TE211

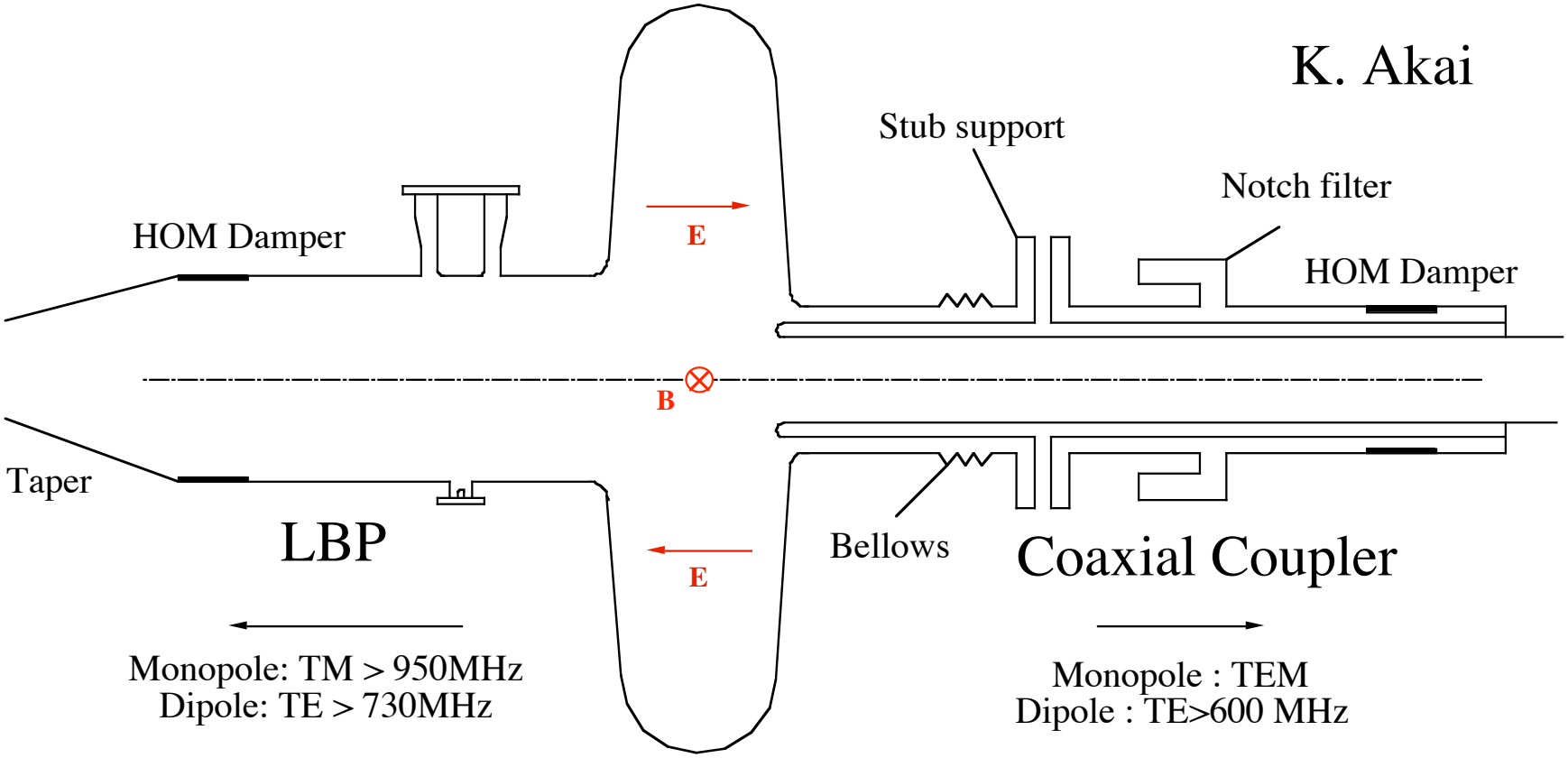
TM130





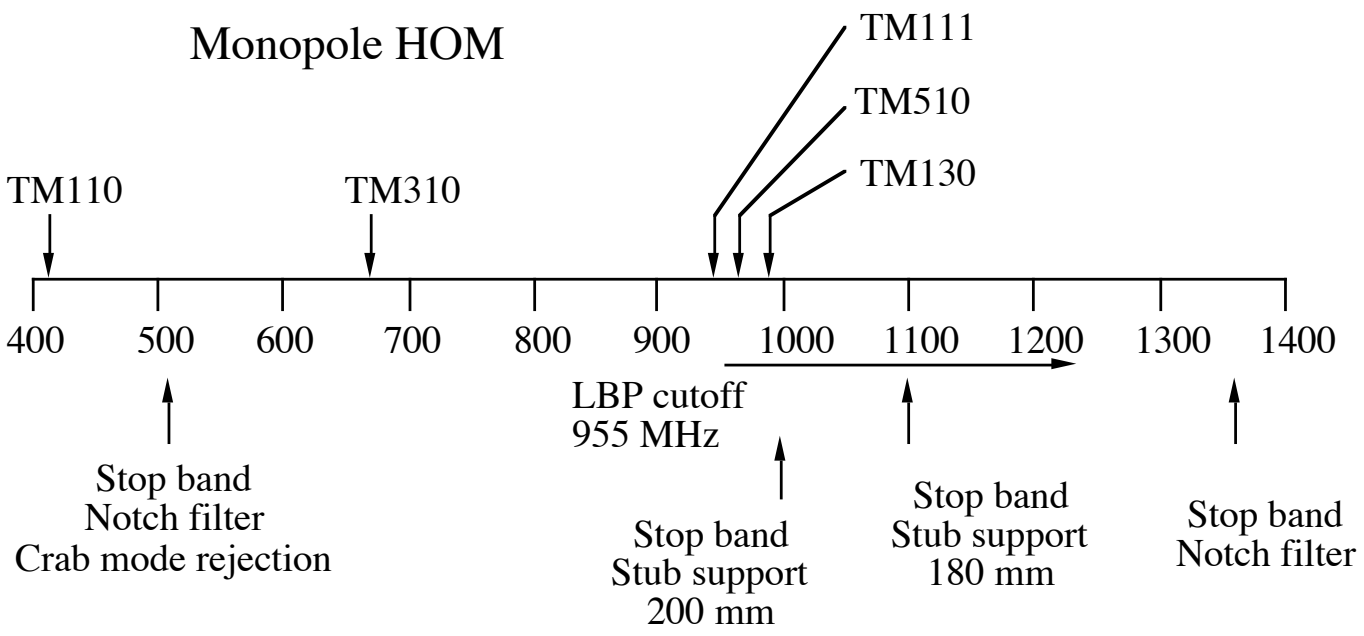
TM211

HOM Damping Scheme

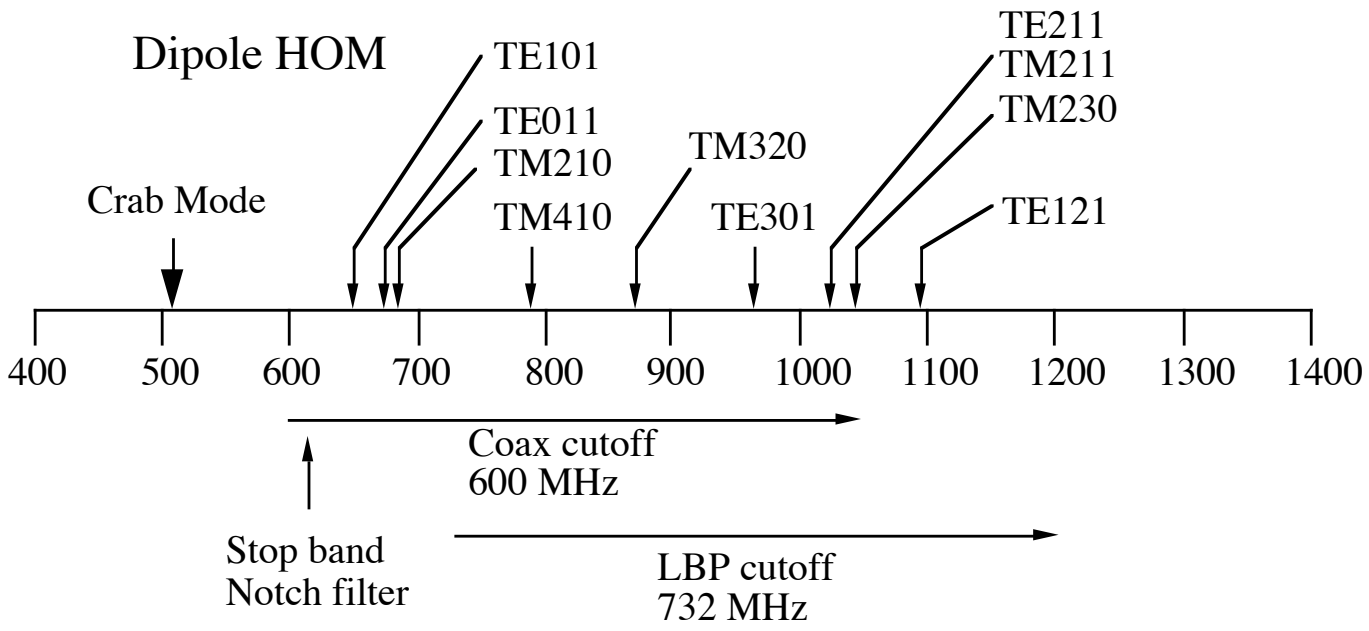


Crab mode: 508 MHz

Adjustment of Stop Band for Monopole Modes

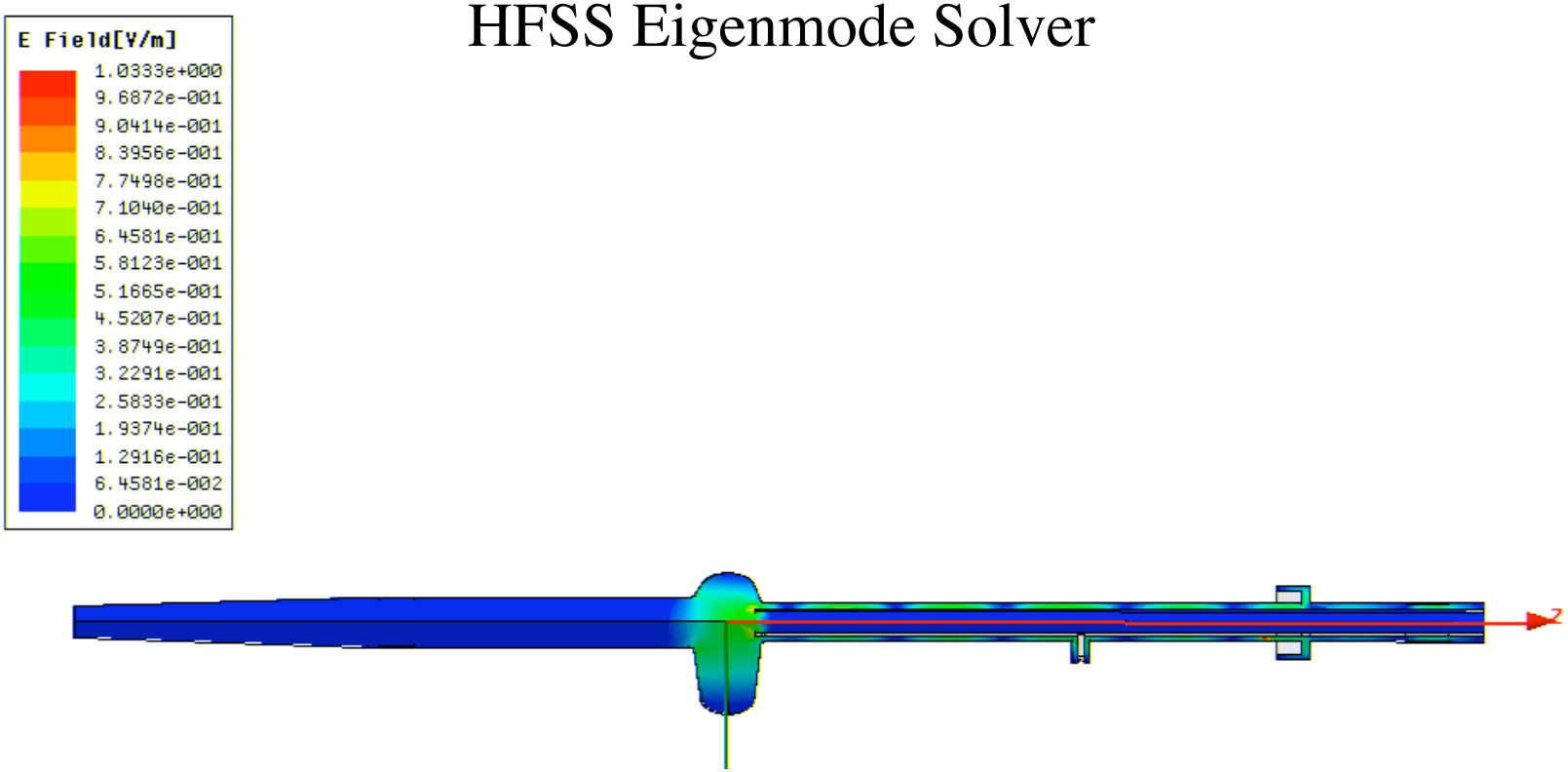


Adjustment of Stop Band for Dipole Modes

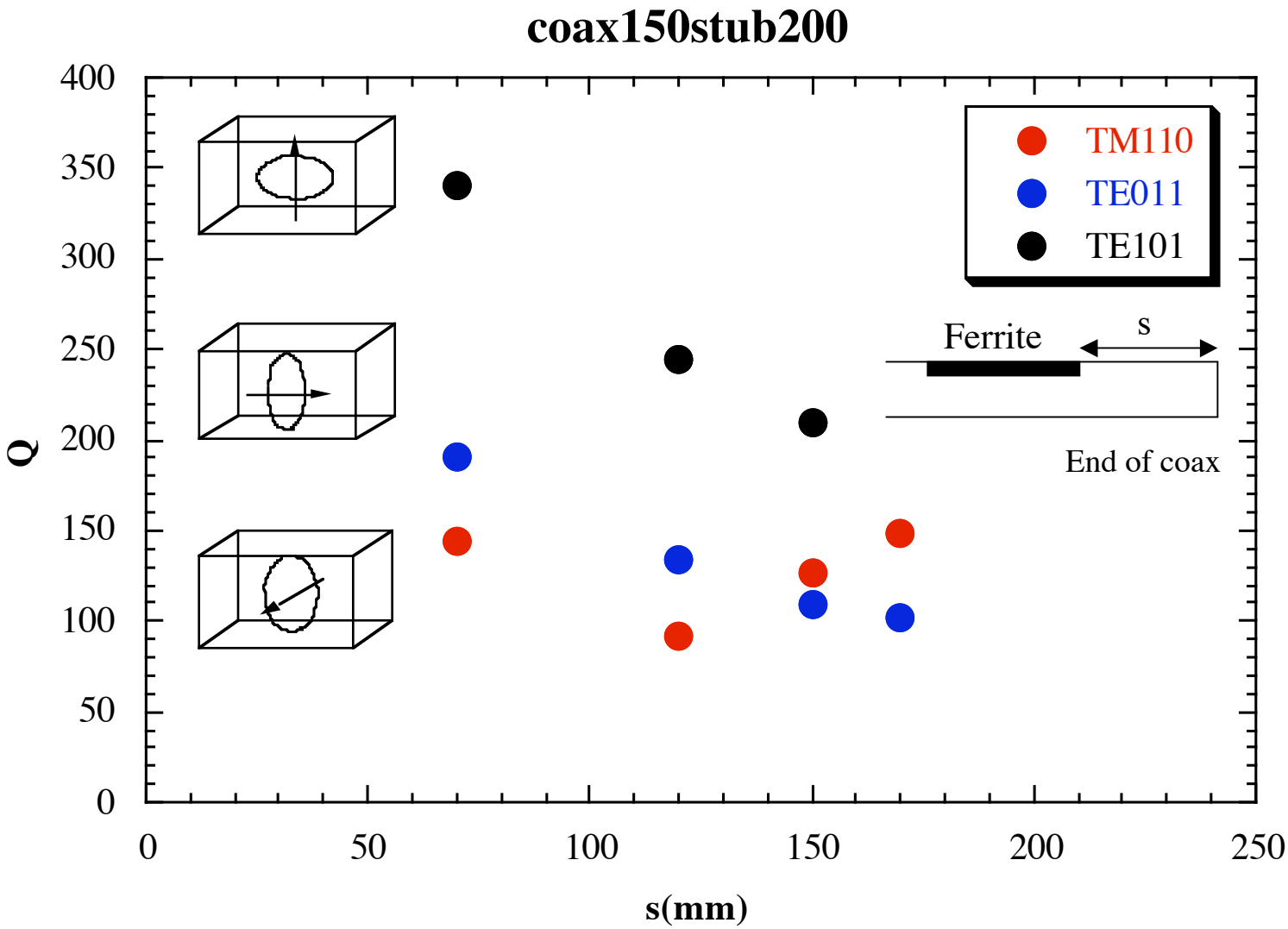


Optimization of HOM Damper Position
Quality Factor of HOM

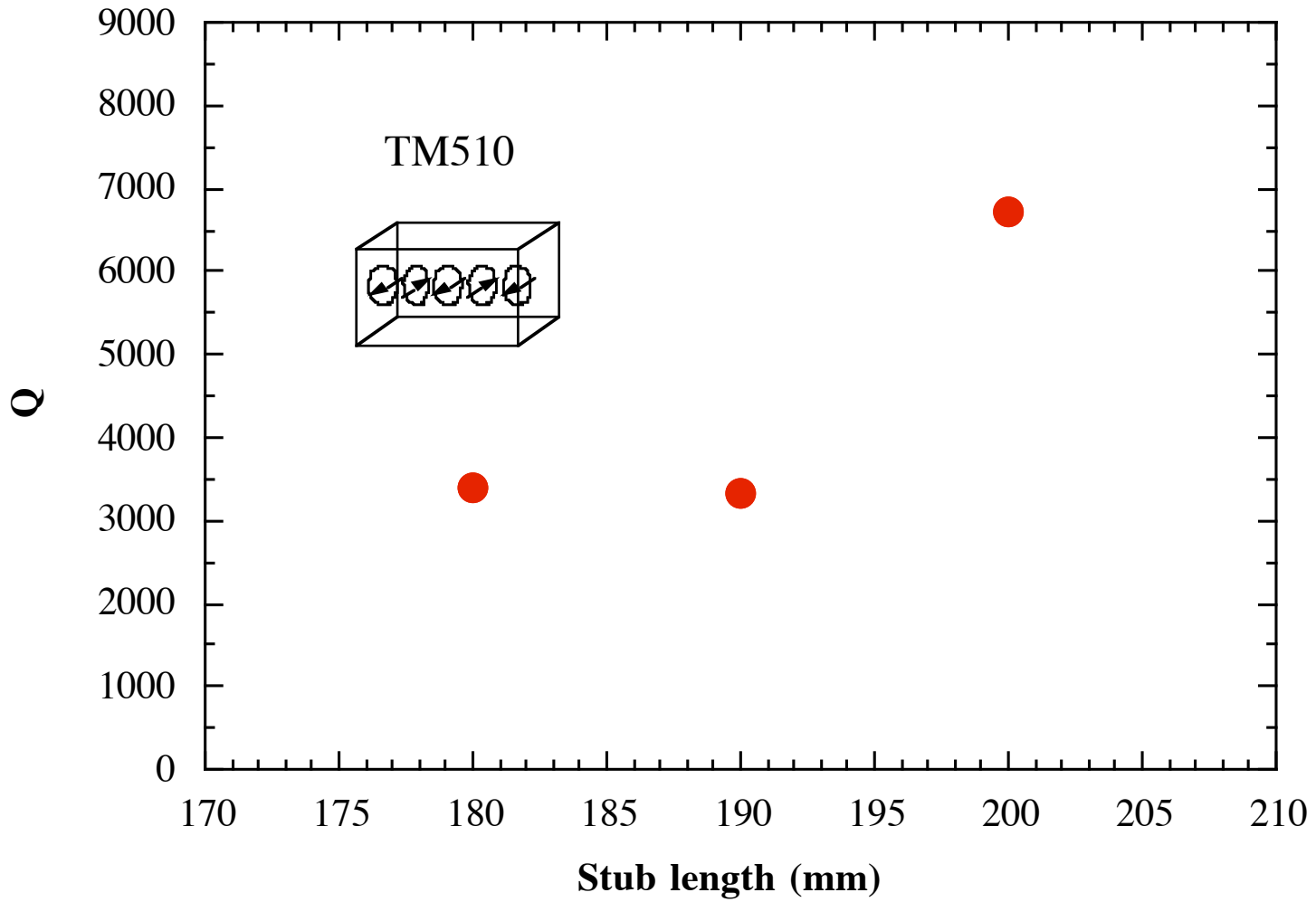
HFSS Eigenmode Solver



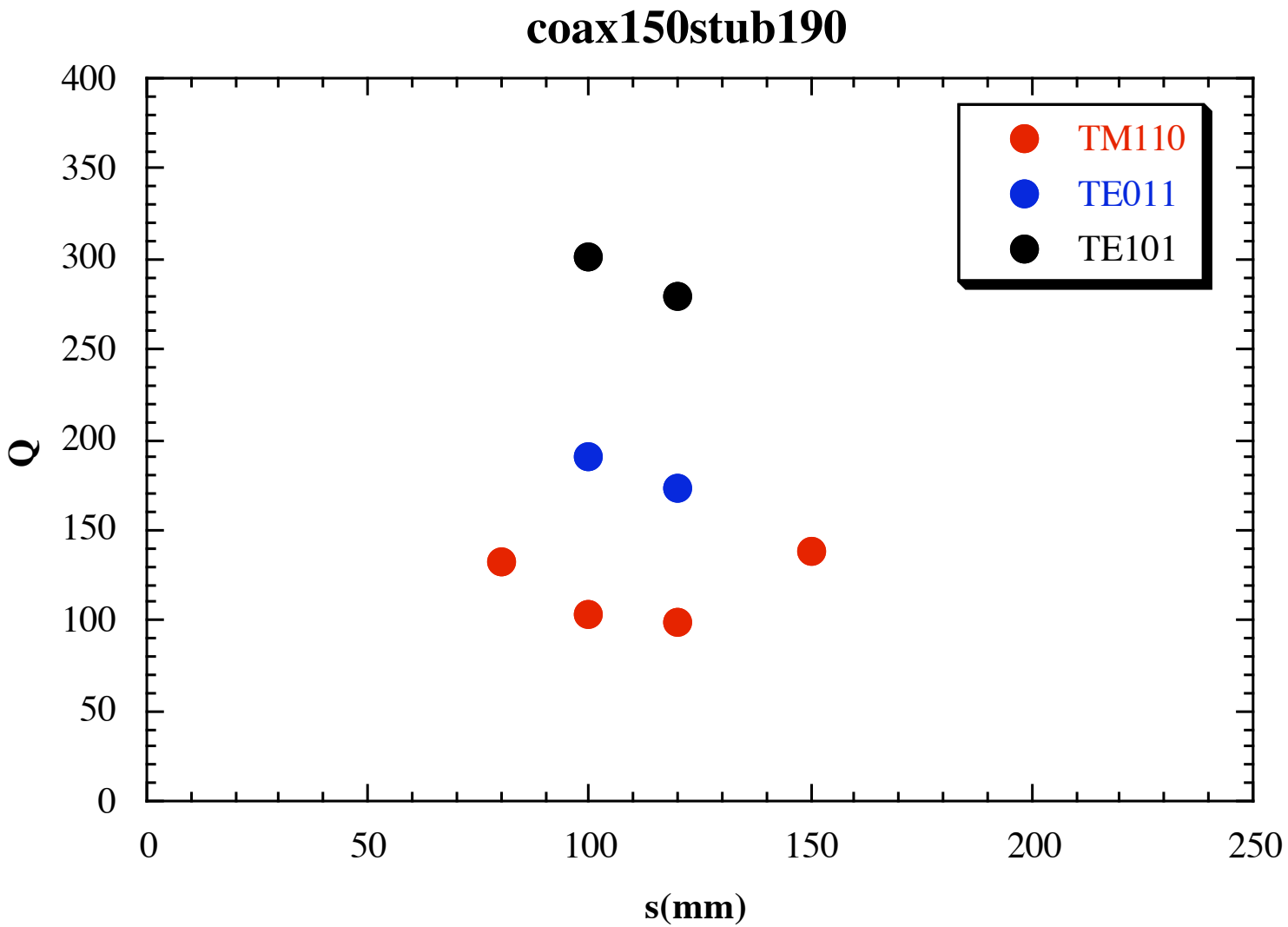
Optimization of Coaxial Damper



Optimization of Stub Support



Optimization of Coaxial Damper



Time Schedule

T. Furuya