

Cross-cutting MHD/Boundary Physics Issues for Next Steps

R. Maingi Oak Ridge National Laboratory

MHD Long Term Goals Session NSTX 5 Year Planning Ideas Forum Princeton, NJ June 24-26, 2002



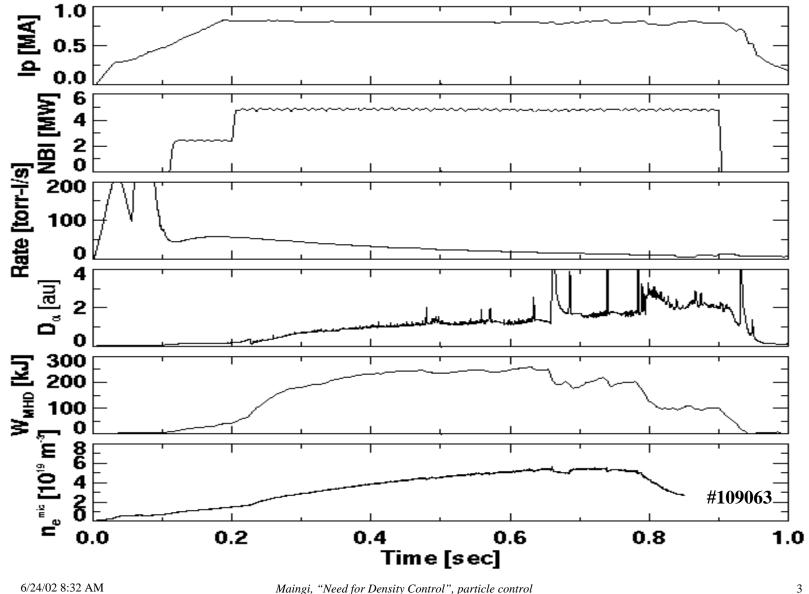
MHD/Boundary Issues

- density control needed
 - in-vessel pump can only be optimized for a single shape
 - need one pump per divertor? -> SN vs DN decision
- density profile control desired (needed?)
 - pellets more effective from HFS -> center stack design
 - compact toroid fueling requirements?
- impurity control needed for long pulse, high power shots
 - edge tearing modes impurity related?
 - wall may need higher thermal conductivity material

-> wall tile thickness important, sets minimum aspect

6/24/02 8:32 AM

Continuous Density Rise in Long Pulse, High Performance Discharges



session, NSTX 5 year ideas Forum