

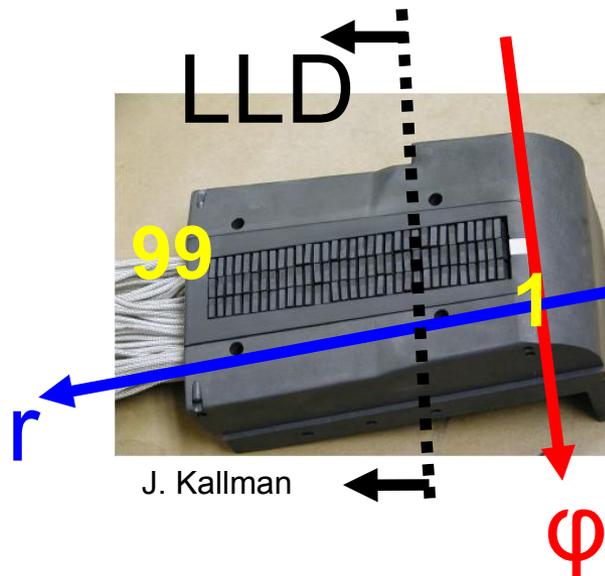
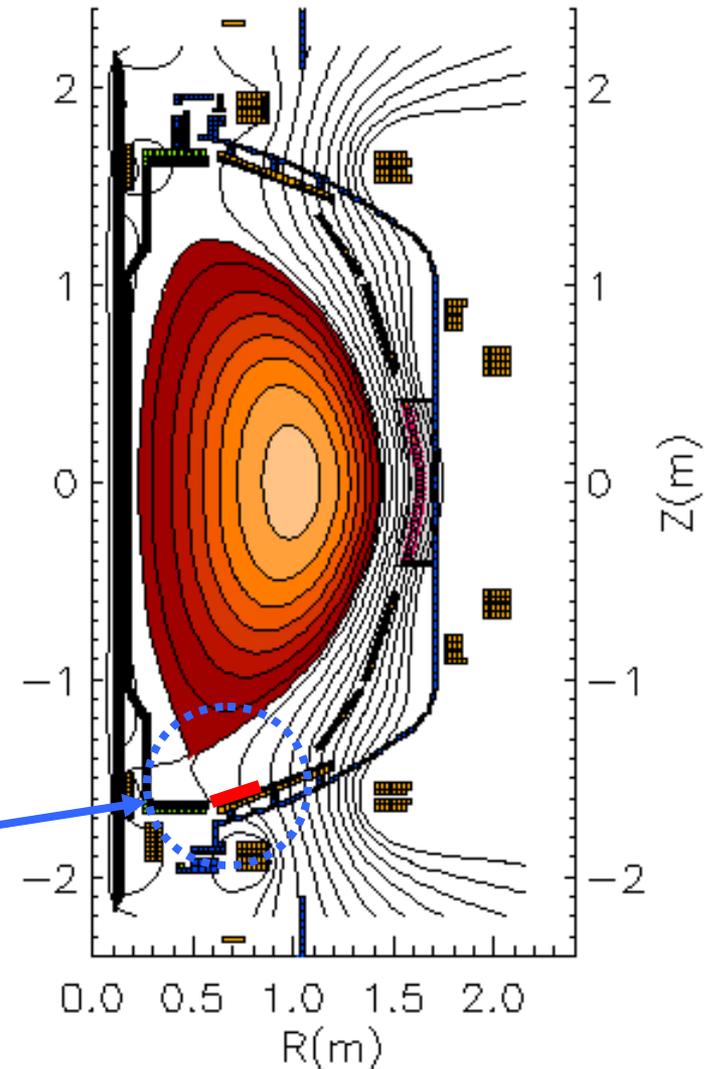
New diagnostic capabilities and modeling plans in the NSTX SOL

M.A. Jaworski, D. Stotler

Increased probe coverage

- Dense array will provide n_e , T_e and V_f
 - Radial extent is limited $0.62 < R < 0.72\text{m}$
 - Which probes “active” depends on requests and operation
- Existing probes remain on in-board side
- Best coverage for intermediate triangularity shots

from \EFIT02, Shot 134971, time=403ms



Modeling plans

- Perform “Onion-skin method” modeling of NSTX SOL
 - Make use of improved probe coverage
 - Provides data constrained model of SOL
- OEDGE (OSM + EIRENE + DIVIMP) previously used on DIII-D for carbon transport studies
 - Used ^{13}C methane puffs and nuclear reaction analysis
 - Reasonable agreement obtained with the addition of SOL flows and pinch effects (Elder 2007 JNM)
 - NSTX effort beginning this year...