Mechanical Design Status of RF Components

- Square Bend
  - Transformer
- Cold Test Wrap Around Mode Converter
- Four Load Tree
- NLCTA Upgrade
Square Bend

- RF and Mechanical Design Complete
- Fabrication in Process
- Cold Test in March/April
Cross Section of Square Bend
Transformer: $\varnothing 1.5 \text{ inch}$ to $\varnothing 2.93 \text{ inch}$

- $\varnothing 1.5 \text{ inch}$
- $\varnothing 2.115 \text{ inch}$
- $\varnothing 2.435 \text{ inch}$
- $\varnothing 2.930 \text{ inch}$
Square Bend: Prototype of Body in Aluminum
Square Bend: Prototype of Lid in Aluminum
Square Bend: Circular to Round Transition
Cold Test WAMC

• RF and Mechanical design complete
• Fabrication in process
• Ready for cold test in March
Cross Section of Cold test WAMC
Wrap Around Mode Converter Body
Cold Test Wrap Around Mode Converter at 1.5 inch diameter
Four Load Tree

• RF Design Complete
• Mechanical Design Started
• Use Existing Loads
  – Choke design
  – 11 cells
  – Design: 200MW peak power
  – Design: 6kW average power
Assembly Model of Four Load Tree
Model of Four Way Bypass
Cut Away of the Four Way Bypass
Cross Section of the Four Way Bypass

Matching Iris
NLCTA Upgrade to 300 MW

- Combine Two 50MW Klystrons at stations
- Replace Flower Petals with Wrap Arounds
- Replace Existing bends with Square Bends
- Replace Magic tee with H-Plane Hybrid