3.9 GHz 3rd Harmonic Cavities

- **OBJECTIVE**

  FNAL to fabricate four cavities

  Jlab to fabricate four cavities

- **STATUS**

  FNAL -- two cavities completed -- parts for 3rd and 4th cavities 100% complete as of May 1 -- welding 25% complete.

  JLAB -- parts for four cavities 100% complete -- welding 70% complete.

3.9 GHz 3rd Harmonic Cavities

- **SCHEDULE**

  FNAL -- 3rd cavity complete in July -- 4th cavity complete in August.

  JLAB -- four cavities complete by the end of June.

- **COSTS**

  FNAL -- approximately $36K of $55K budget spent by May 1 -- approximately $15K to $20K to complete cavities plus ~ $23K for welding at Sciaky.

  JLAB -- approximately $35K of $58K budget spent to date -- remaining budget should not be a problem.

1.3 GHz Cavity Fabrication: FY06

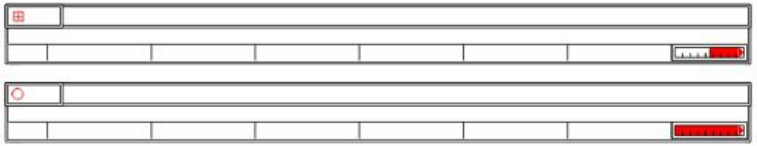
- **OBJECTIVES**

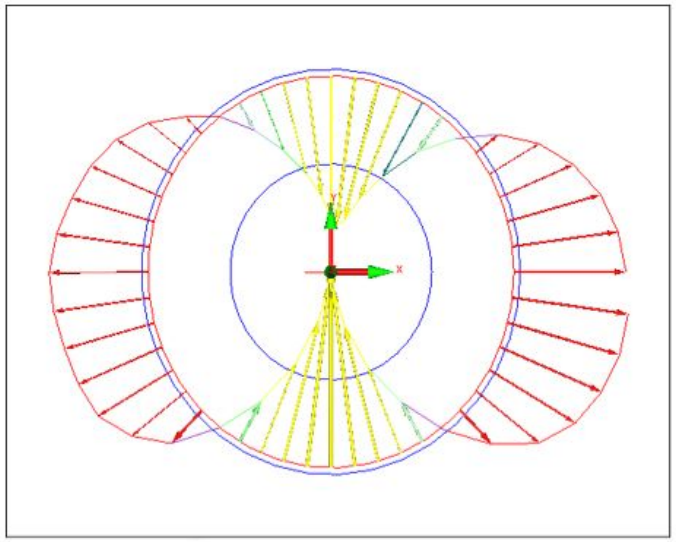
  JLAB will fabricate two Tesla cavities (asymmetric end tubes) from polycrystal niobium and two ILC cavities (symmetric end tubes) from large grain niobium.

  AES will fabricate four Tesla cavities from polycrystal niobium.

- **STATUS**

  AES -- end groups on schedule -- niobium blanks for half cells exhibited significant anisotropic behavior during forming of test half cells.





1.3 GHz Cavity Fabrication: FY06

- **STATUS**

  P. Bauer et al with assistance from MSU conducted thorough investigation -- concluded material not properly re-crystalized -- two blanks were heat treated and sent to AES for forming with excellent results -- Wah Chang agreed to heat treat material free of charge.

  JLAB has welded dumbbells and are in the process of prepping them for welding on the stiffening rings -- forming and machining of end group components is in progress.

1.3 GHz Cavity Fabrication: FY06

- **SCHEDULE**

  AES -- Delivery of cavities originally scheduled to commence in the Fall -- delay expected due to material problems.

  JLAB -- late FY06.

- **COSTS**

  AES -- $250K

  JLAB -- $400K

1.3 GHz Cavity Fabrication: FY06

- Bid(s) for eight ILC cavities (symmetric end tubes) in preparation -- four polycrystal and four large grain.