805 MHz cavity refurbishment

NFMCC collaboration meeting

LBNL

1-09

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JLab
805 MHz cavity refurbishment

• Cavity was heavily arc damaged after many runs at high magnetic field
• Heavy pitting on button holder, irises (with slight “dipole” asymmetry
• Further inspection revealed significant damage in the coupler region
• May explain why all button tests followed similar processing curve with magnetic field
805 Cavity “before”
Coupler region damage
Coupler region damage
Coupler extension damage
Refurbishment

• Polish out all visible iris damage
• Polish out arc marks in coupler region
• Polish out arc marks in coupler extension
• Cut inner and outer blend radii on coupler
• Ultrasonic clean and DI water rinse (HPR)
• Clean room assembly (to be done)
  – Cu and Be windows available
  – Button holder needs to be re-worked or re-made
• No electropolishing
Irises restored by hand-working
Key cutter used for inside blend
Copper windows