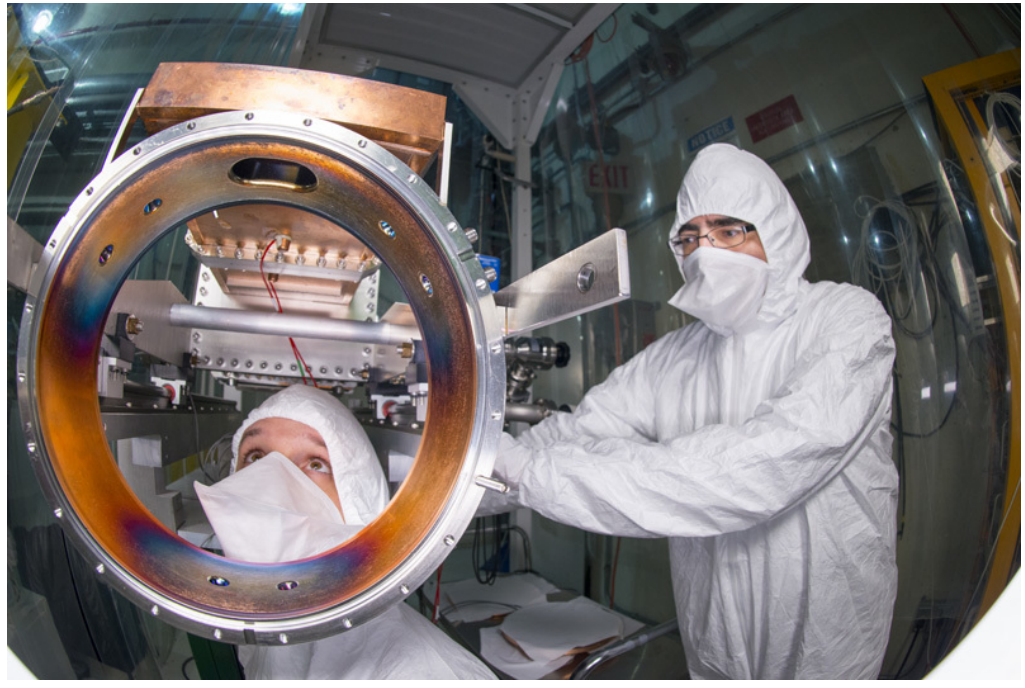
Modular cavity update

D. Bowring *et al.*

MAP Weekly Meeting

29 January 2016



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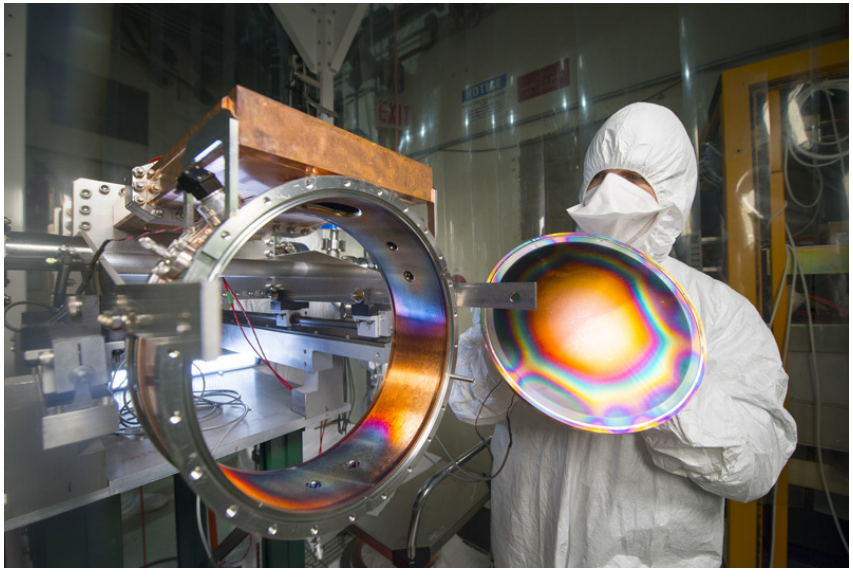
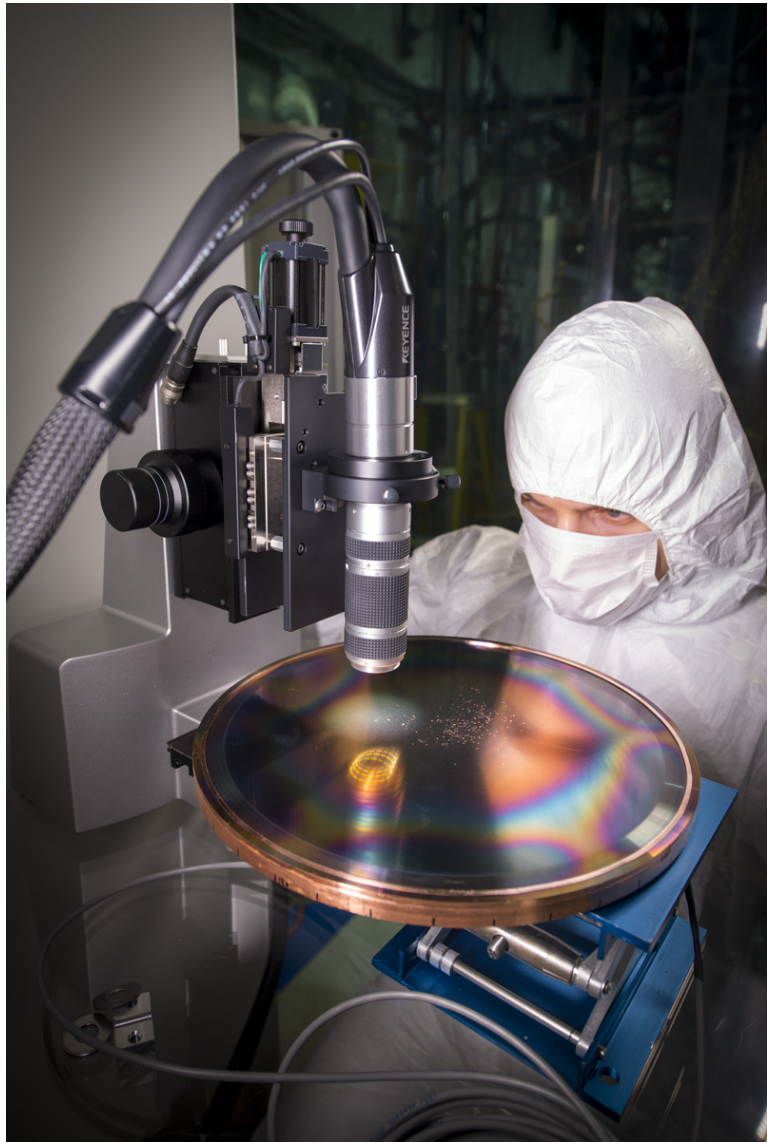
- I'll show preliminary results from an exhaustive inspection campaign.

The modular cavity is very well-behaved.

- Frequency consistent to w/in $\sim$ 10 kHz.
- Q_0 consistent to w/in $\sim$ 500.
- Cavity prep takes $\sim$ half day.
- Inspections take 2-4 days depending on availability of personnel.

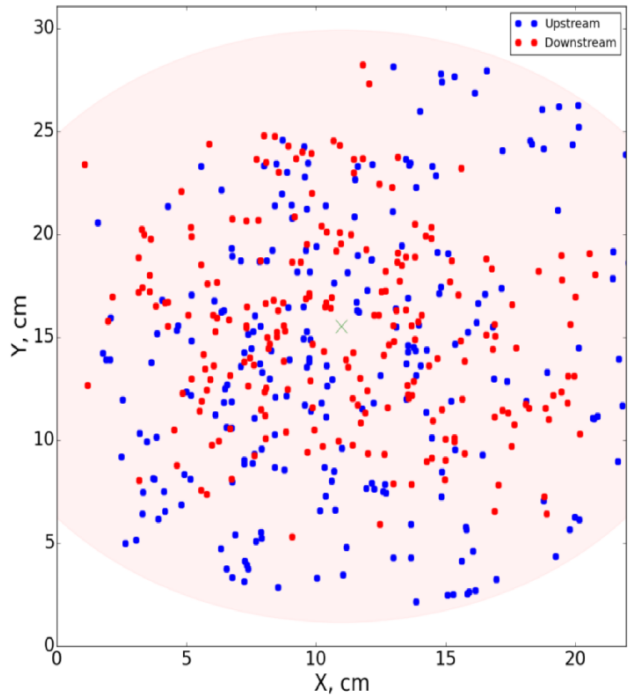


Recent inspection results

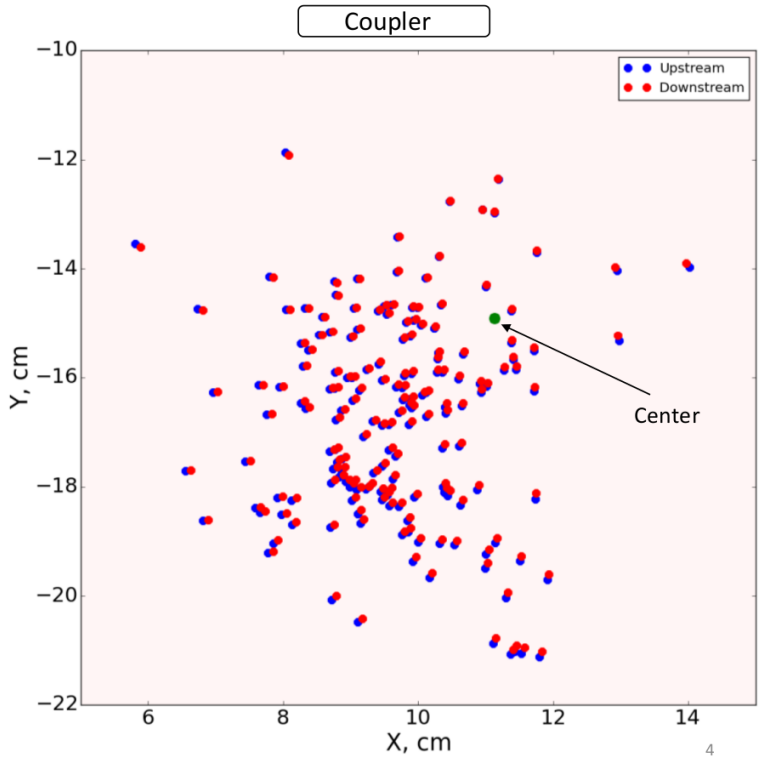


Thanks to R. Hahn for photos.

A reminder: $B = 0$ damage is random, $B = 3$ T damage is "ordered".



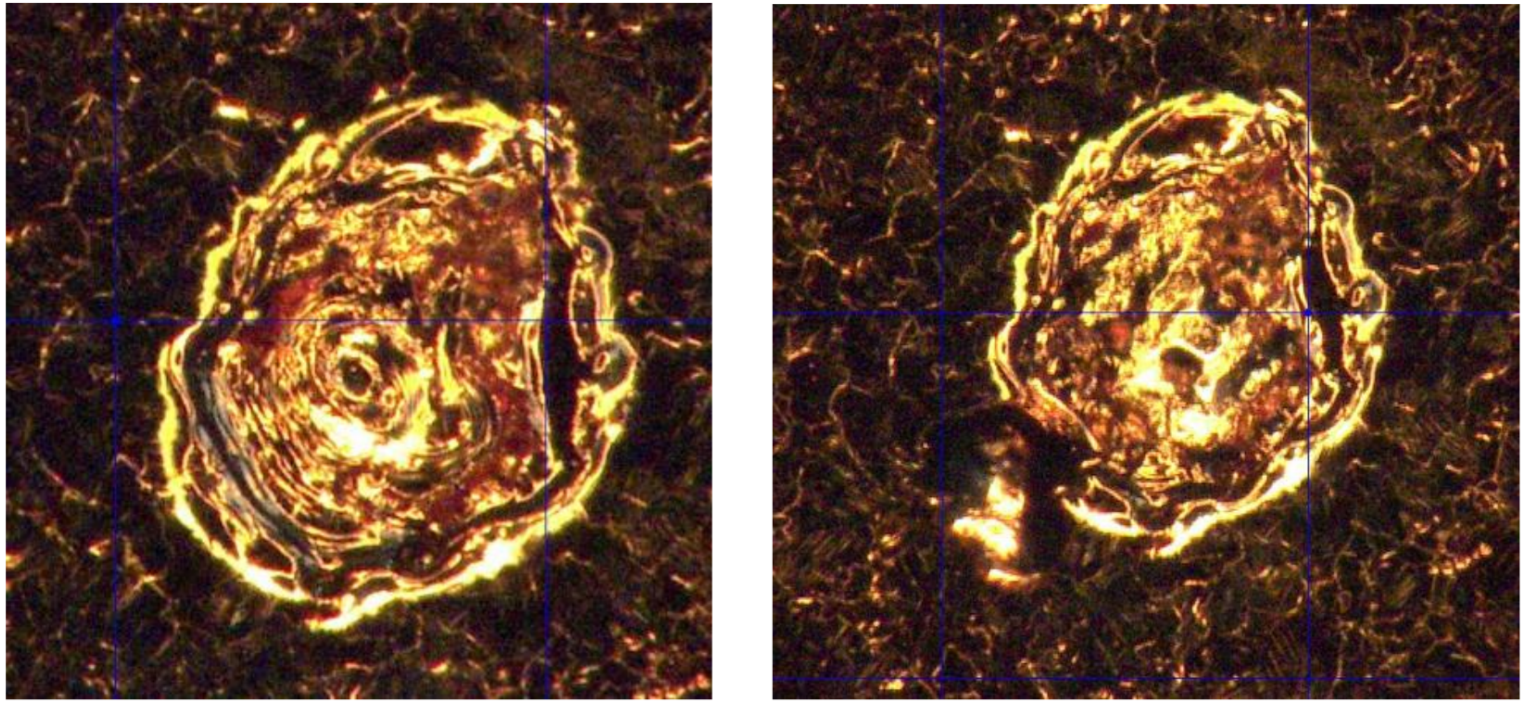
All "interesting" features, $B = 0$.



Breakdown damage, $B = 3$ T.

Also, $B = 0$ features are polymorphous, while $B = 3$ T damage all looks the same.

January's $B = 0$ run caused little damage, but some conditioning is evident.



This is the most dramatic example of a $B = 3$ T "crater" being affected by RF conditioning. Other examples available on request.

Ongoing work

- Finish $B = 0$ conditioning, attempt another $B = 3$ T run.
- *Lots* of data collected recently. The 201 MHz work in the MTA might give us a chance to catch our breath and push on data analysis.