

PIP-II IT HWR - Bug #24593

HWR Resonance control cables

07/02/2020 03:52 PM - Brian Chase

Status:	Resolved	Start date:	07/02/2020
Priority:	Normal	Due date:	
Assignee:	Philip Varghese	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	10.00 hours
Description			
There is still confusion about cables.			
From Joe's notes.			
Powered up cavity #5 at low power, and began calibration process, locked onto cavity, field < 1 MV/m. However the tuner did not function (see Phil's entry # 174633), though the cavity frequency was close enough so that adjusting the LO frequency allowed the system to lock on. Investigation of the tuner issue was not fruitful, so we decided to change to cavity #4. Saw the same behavior with cavity 4 - able to power up (low power, 20W), and lock to the cavity, establish field. But tuner did not function (no change in frequency observed). Also we didn't see the pressure transducer output voltage change. So more investigation is needed to understand what is going on. We were able to successfully operate the tuner for cavity #3 last week, Also all tuners were checked out and run over their entire ranges (> 100kHz) at 2K.			
A few of us will meet tomorrow AM to discuss the path forward. It may be likely that we move ahead with cavity characterization in SEL mode (with minor adjustment to LO frequency if required) so that we can establish cavity performance.			

History

#1 - 07/03/2020 03:36 PM - Brian Chase

At least cables 5 and 6 are labeled wrong. Resonance control is also on the wrong labview page.

#2 - 07/10/2020 11:52 AM - Shrividhyaa Sankar Raman

- % Done changed from 0 to 80

- Tuner pod cables labeling have been checked for cavities 3 through 8.
- Cable database needs to be updated with these changes.

#3 - 07/10/2020 11:56 AM - Shrividhyaa Sankar Raman

- Status changed from New to Work in progress

#4 - 08/09/2020 10:27 AM - Brian Chase

There are four pairs of cables that can be in one of two states. When can we say that we have the cables correctly labeled and connected correctly?

#5 - 08/09/2020 07:47 PM - Philip Varghese

- % Done changed from 80 to 100

- Status changed from Work in progress to Resolved

The confusion about tuner cable is definitively resolved when both the tuner is operated an RF applied to the cavity. At this point all cavities have been subjected to this combined test and the final confusion was corrected last week when it was observed that cavity 7 and 8 were swapped. The cables were relabeled after the test.