Checking S-RefCell Piezo Dither Amplitude

Symptomatics

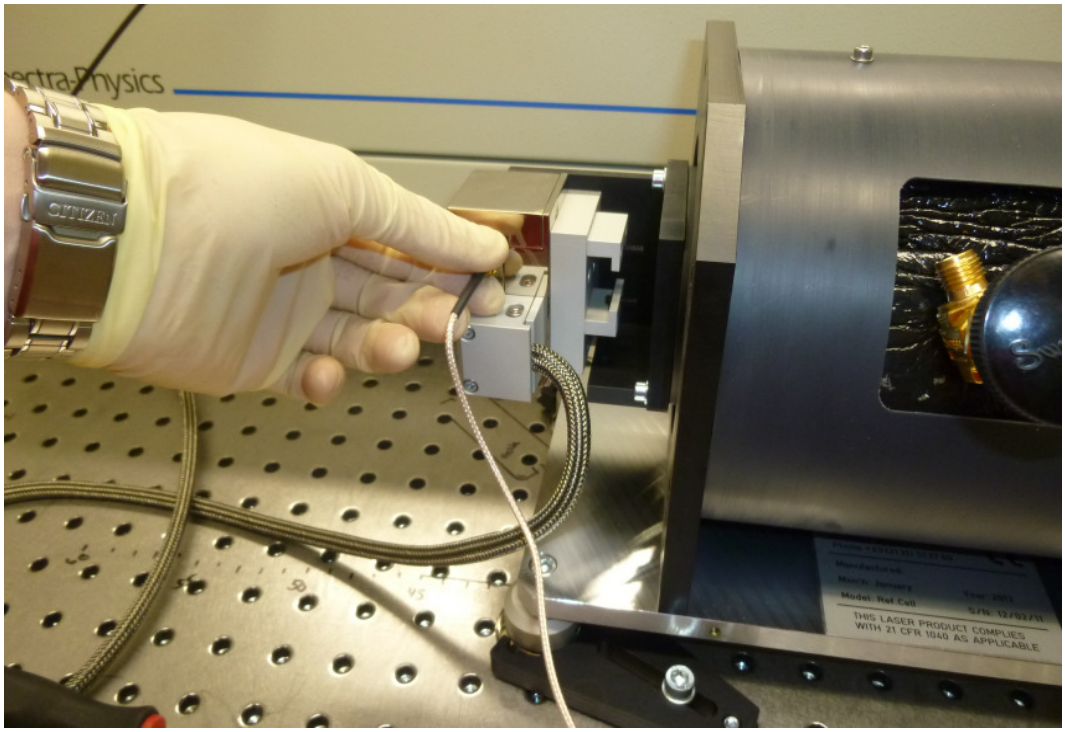
In case that you are not able to align the Matisse RefCell due to missing flicker of the transmission through the S-RefCell, it is necessary to check if the piezo starts to dither when open the “RefCell Waveforms” window in the software.

Requirements

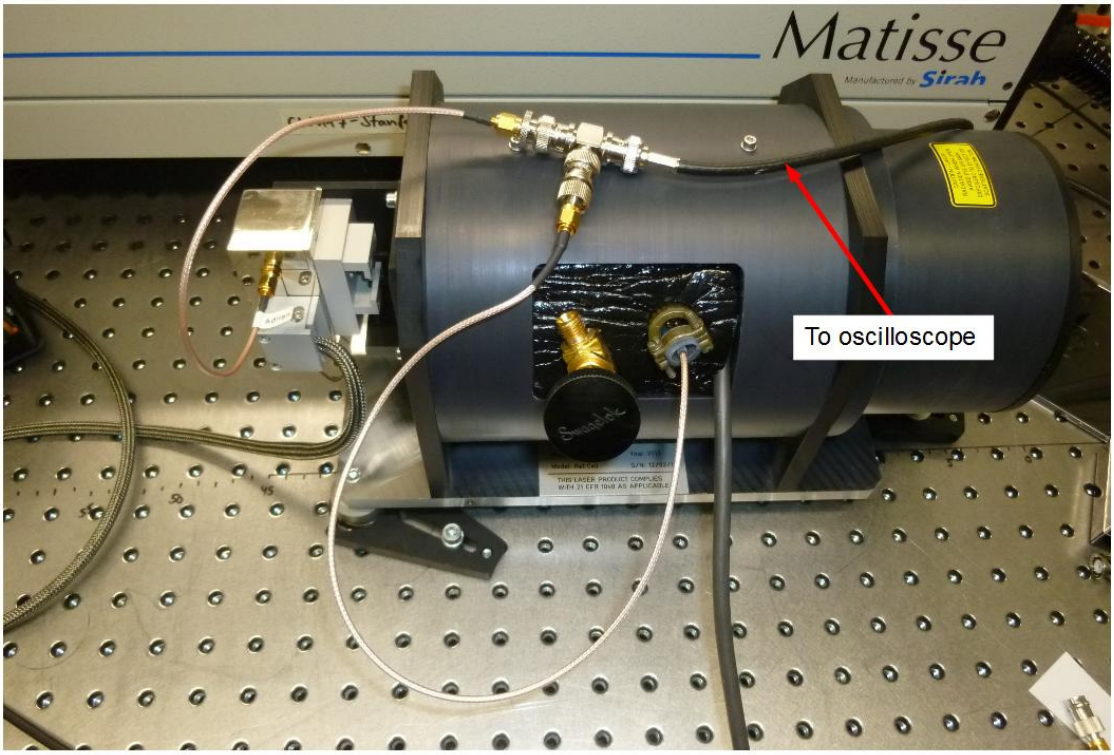
- One oIscilloscope
- T-Connector
- SMA<->BNC adaptors and BNC cable

Procedure

1. Switch off Matisse electronic box.
2. Remove the black cover of the S-Refcell on the transmission side
3. Disconnect the SMA cable from the diode

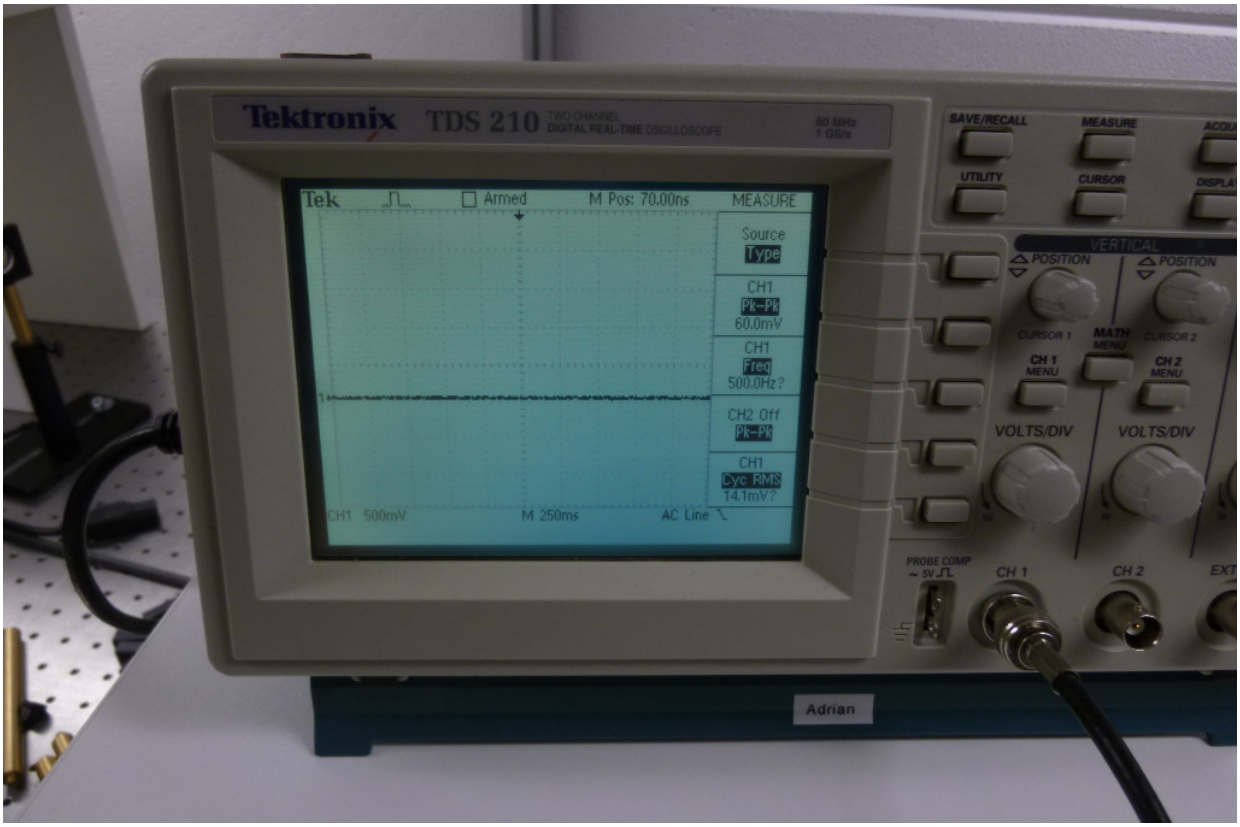


4. Integrate a T-Connector with a BNC connection to a oscilloscope inbetween the diode and Refcell piezo cable you disconnected from the diode in the previous step.

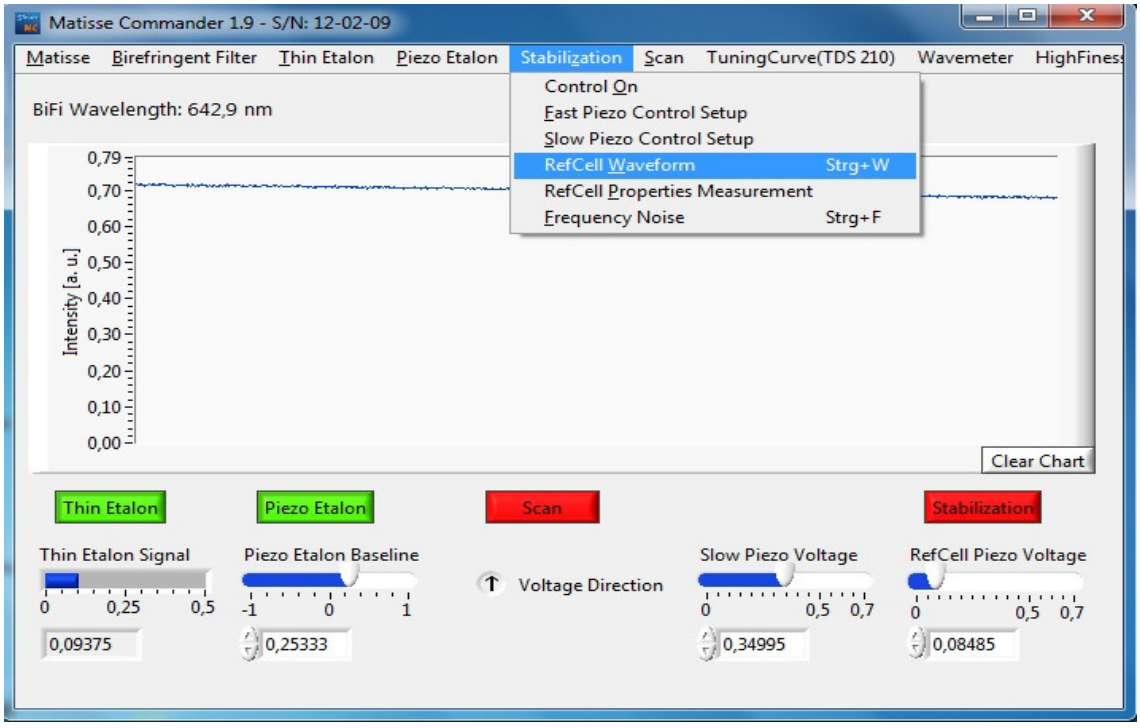


5. Switch on Matisse Electronic box, connect the remaining BNC cable to the oscilloscope and set trigger to AC line, time increment to approx. 250ms and AC coupling.

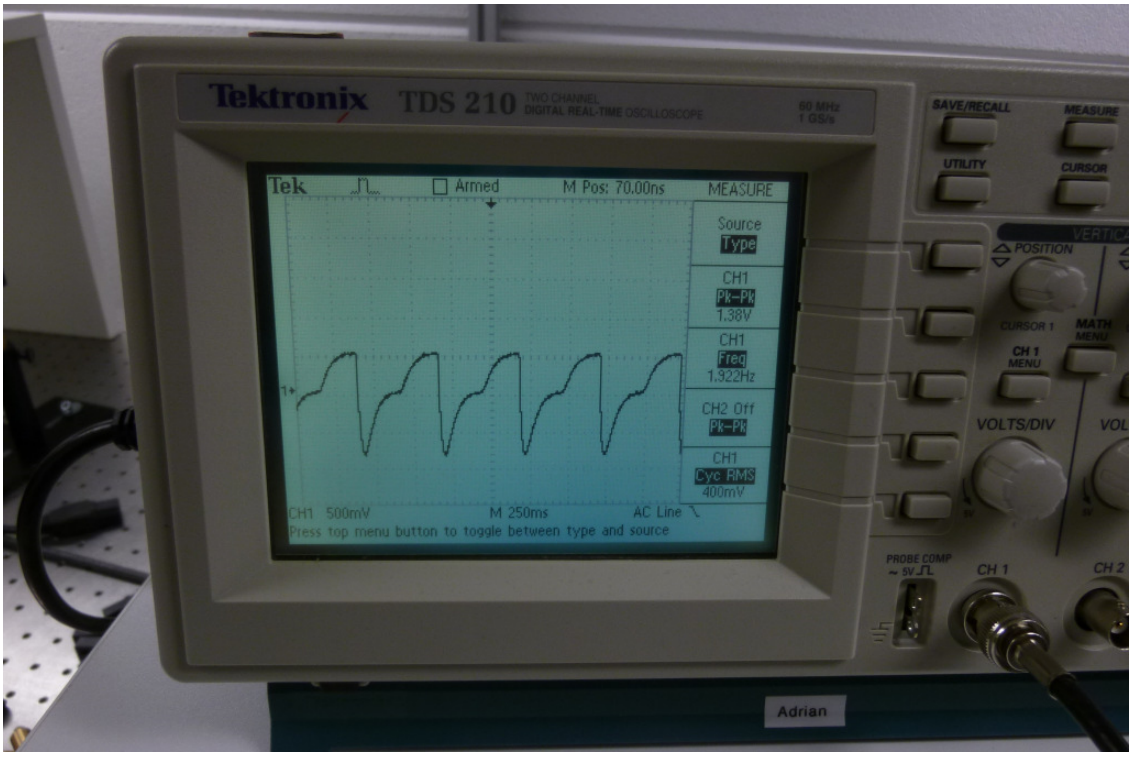
6. Switch on Matisse Commander. At this moment you should see flat line on the oscilloscope



7. Open “RefCell Waveform” window in the “Stabilization” pop up menue



8. When you open this window internaly there will be send a dither command to the Refcell piezo and you should see in the oscilloscope the dither signal, see picture below.



Results:

- You see the signal as in the picture above, that indicates that electronic is OK
- You see flat line even when the “RefCell Waveform” window is open, that indicates that something is wrong with electronic.

Please report your results to Sirah or Spectra-Physics service egineer.