

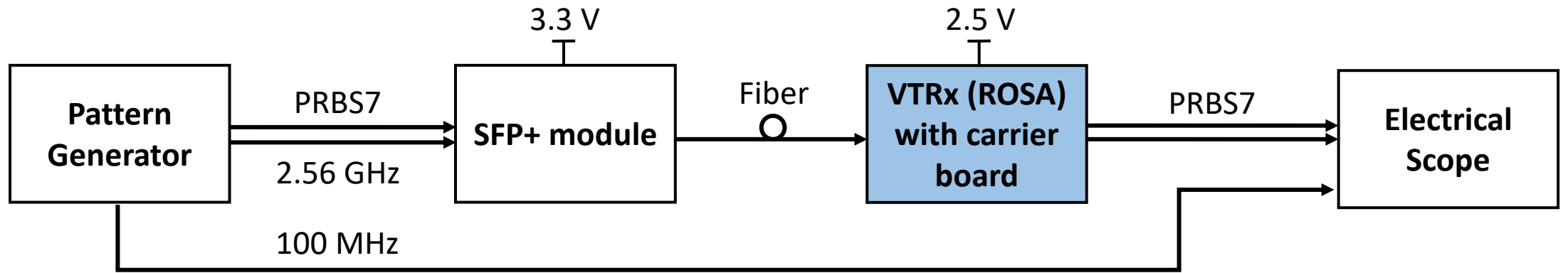
VTRx ROSA test in liquid nitrogen

Wei Zhang

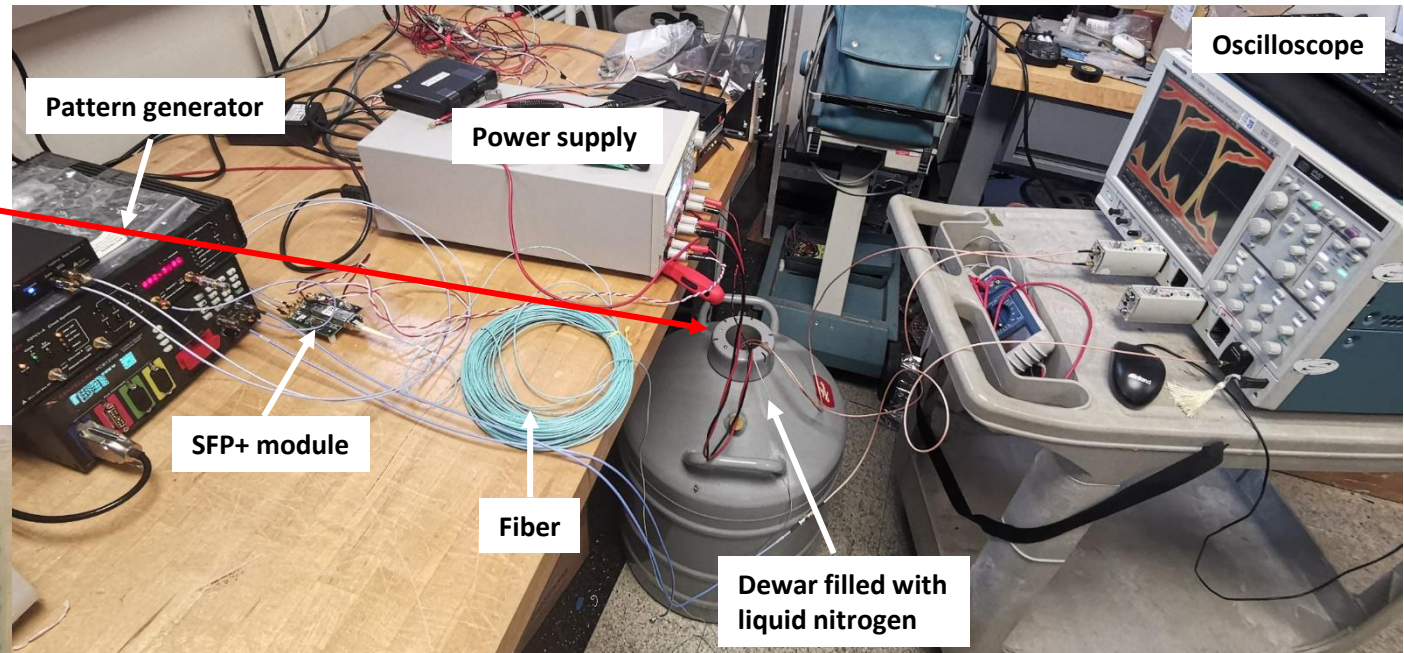
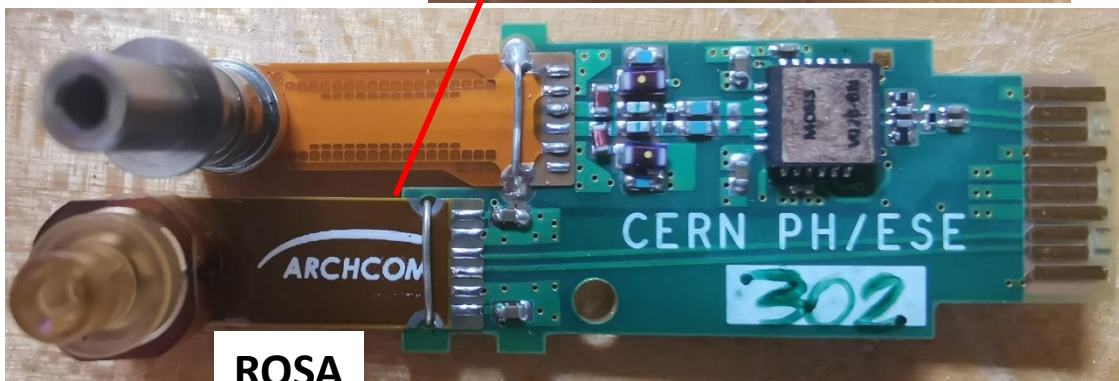
Southern Methodist University

April 7th, 2021

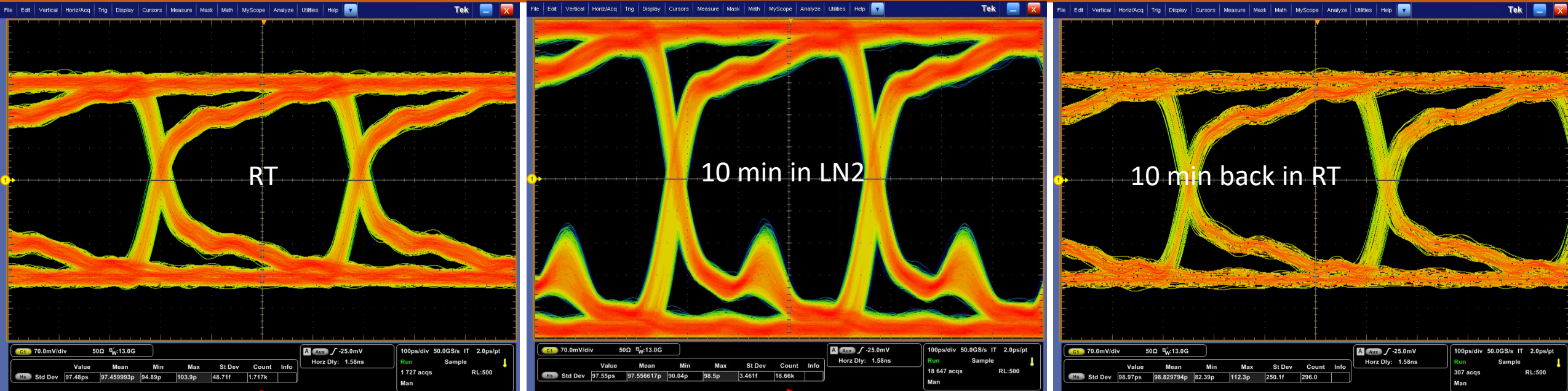
VTRx ROSA test setup



Carrier board and VTRx module



VTRx ROSA cryogenic test results



Time	Room temp (RT)	10 mins in LN2	10 min after back in RT
Amplitude of eye diagram (mV)	290	560	280
2.5 V Supply current (mA)	213	278	210

Summary

- The ROSA of an VTRx module properly works in liquid nitrogen. In liquid nitrogen, the amplitude of eye diagram and power consumption of VTRx ROSA are greater than before placing it into the Dewar.
- After taking the VTRx module out of the Dewar, the module works well, and the amplitude and the supply current returns its values in the room temperature.