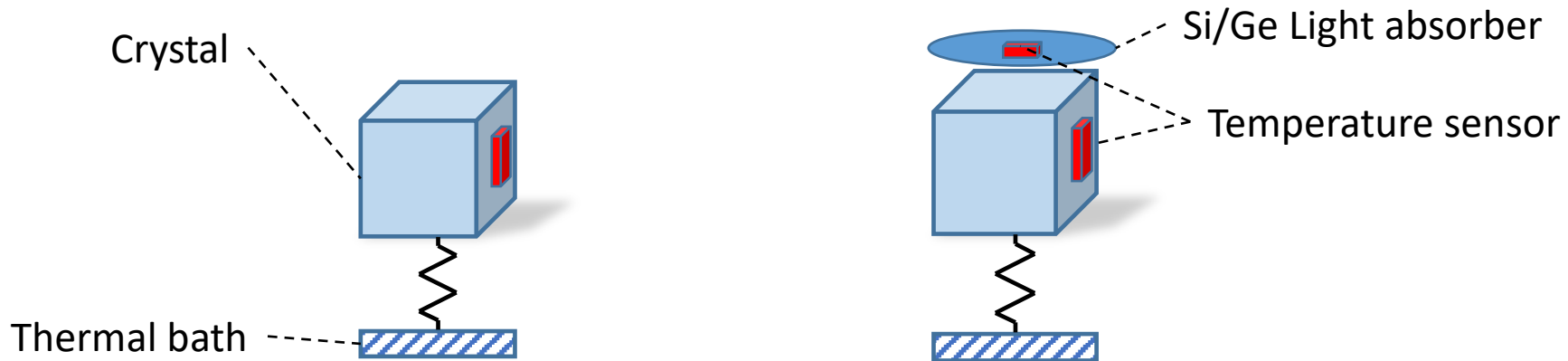


Characterization of a High Precision TES Light Detector for Neutrino-Less Double Beta Decay Search

Jianjie Zhang, Argonne National Laboratory
for CUPID interest group

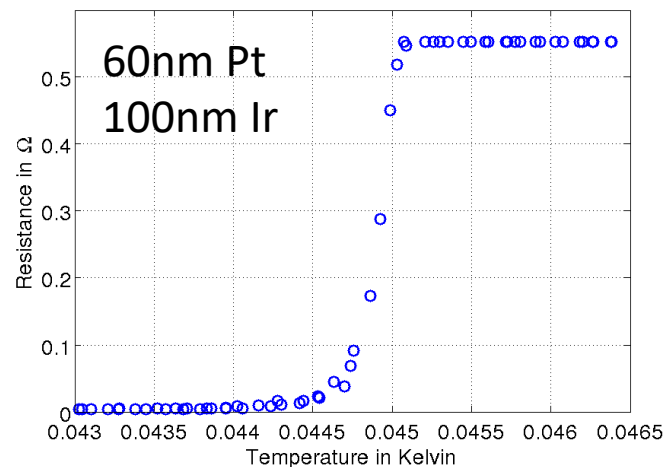
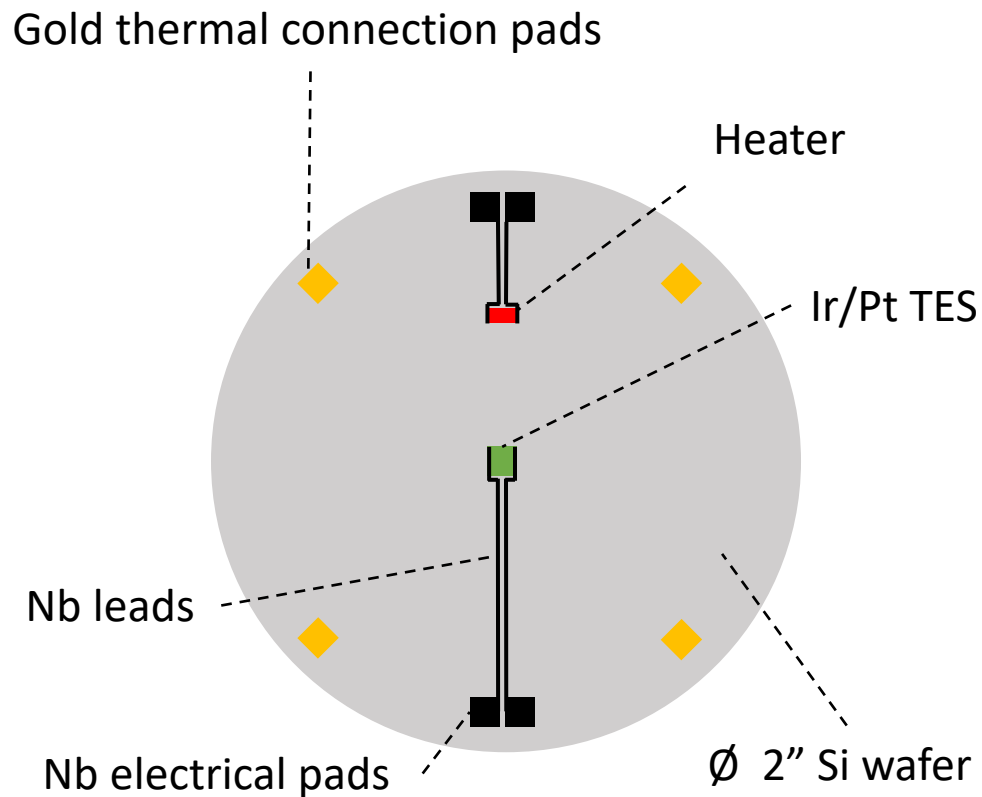


	CUORE		CUPID	
Crystal	5x5x5 cm³ TeO₂		TeO ₂	Li ₂ ¹⁰⁰ MoO ₄
Signal	Heat (phonon) only		Heat + ~100 eV Cherenkov light	Heat + ~2 keV scintillation light
(Expected) main background	Surface alphas		Surface alphas	2νββ coincident events

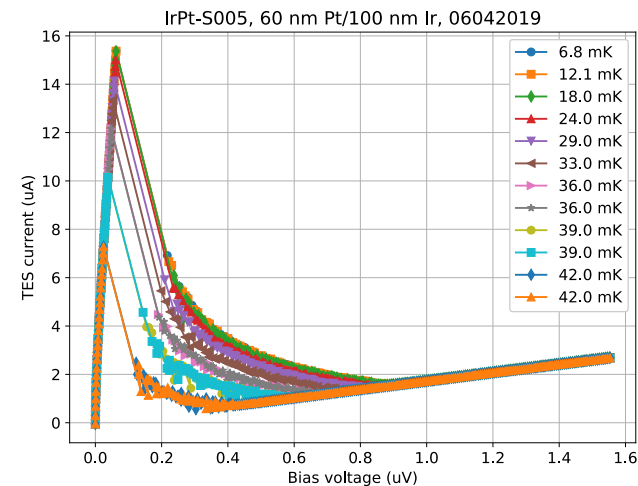
Light detector:

- **large area,**
- **O(10) eV baseline resolution,**
- **10-100 μs time resolution.**

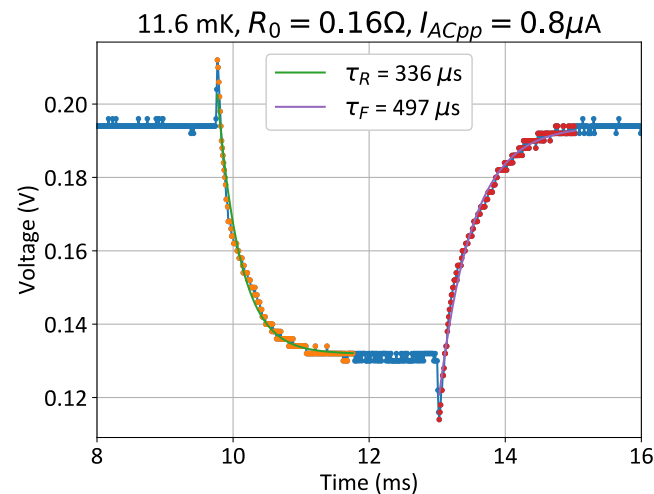
TES Light Detector



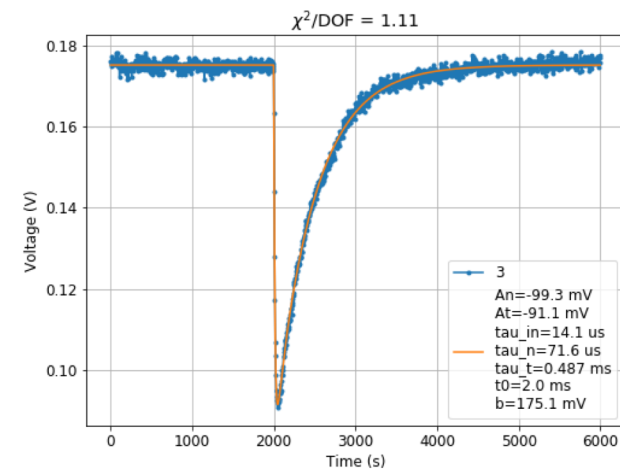
RT Curve



IV Curves



Step Pulse Excitations



Observed Cosmic Event

Posters #329 and #105-248