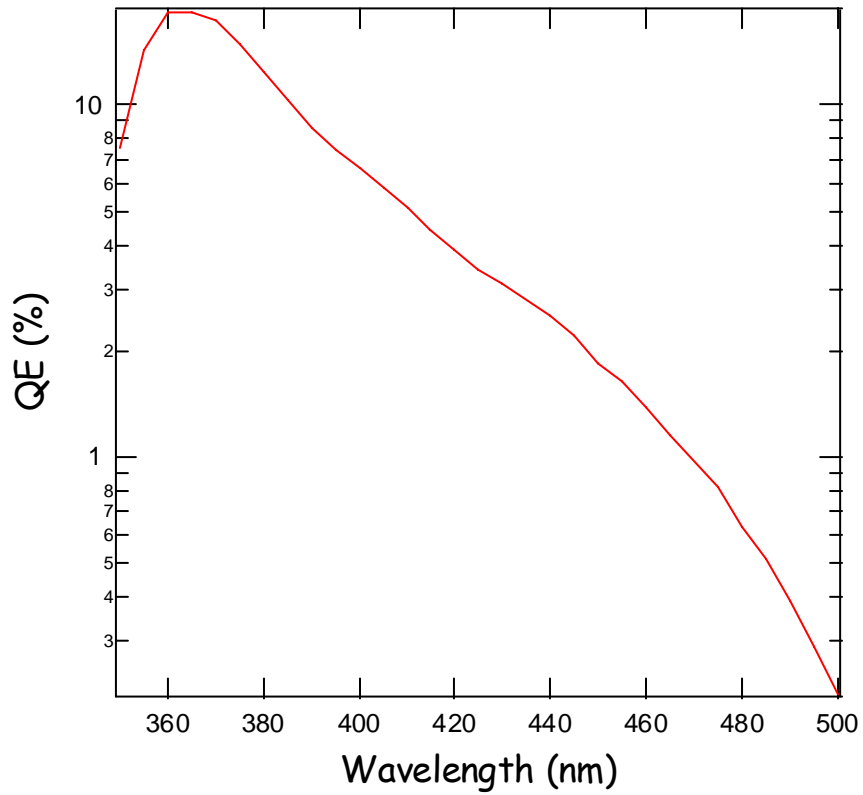


Update on SVT GaN SBIR Phase I

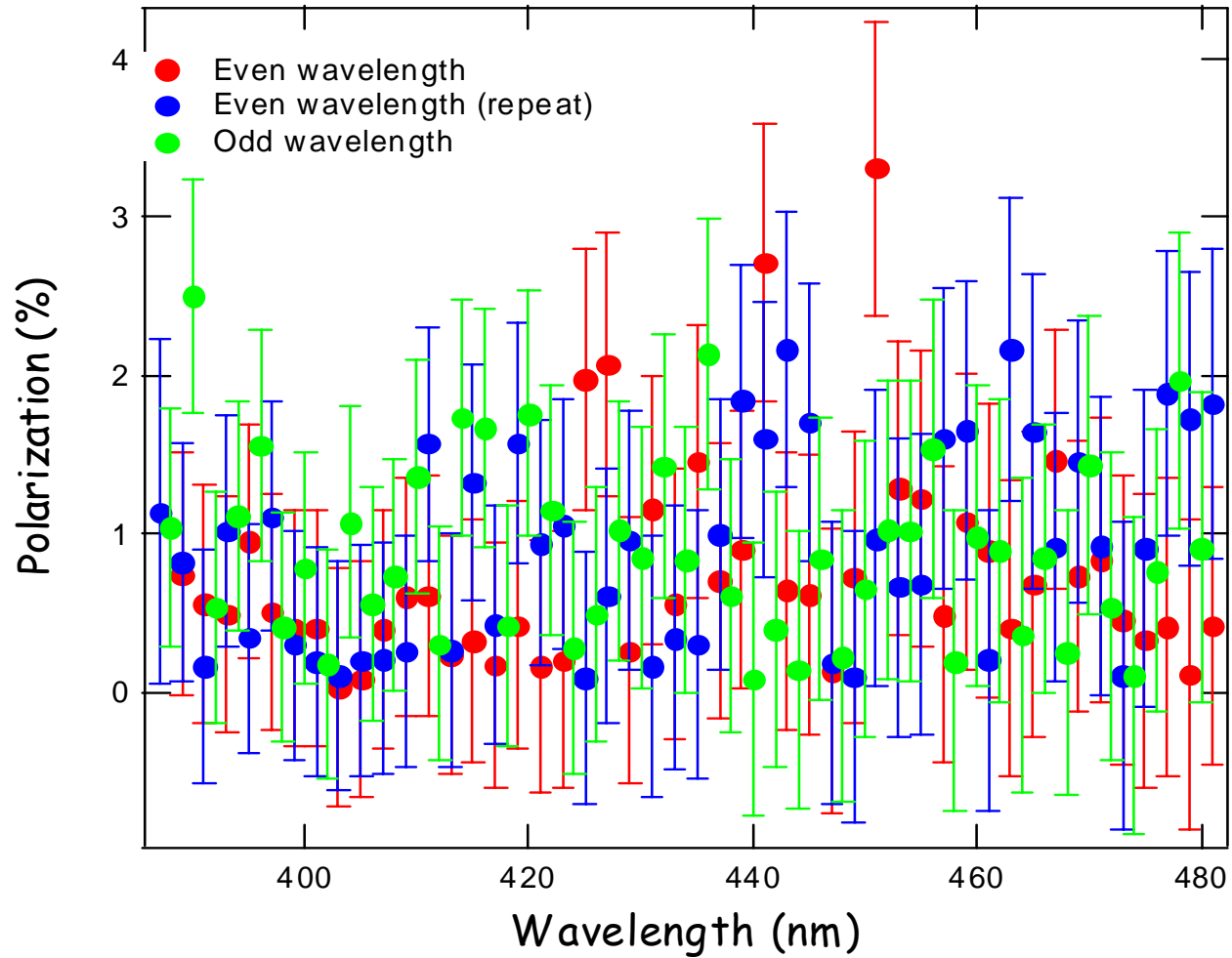
- New InGaN wafers received (Jan 19, 2007)
 - 100 nm InGaN grown on AlN buffer/sapphire substrate
 - 12 – 18% Indium
 - Mg-doped (p-type)
- Chem cleaning
 - Boiling TCE
 - 10 min. etch in 90°C 4 H₂SO₄ : 1 H₂O₂
- Activation
- QE/Polarization measurements

QE



- Good Cesium response
- High QE
- Long lifetime
 - No significant decay in one week

Polarization



Any chance of polarization?

- Hexagonal structure has a HH-LH splitting of 9 meV.
 - $kT \sim 23$ meV @room temp.
 - Need to cool the cathode to ~ 100 K.
- Excitation light $\Delta\lambda \sim 5$ nm ($\Delta E \sim 40$ meV).
 - Need $\Delta\lambda \sim 1$ nm

Difficult to do in the CTS system.