

Photocathode R&D

- SVT SBIR Phase I
 - Re-measure second sample
 - X-ray analysis

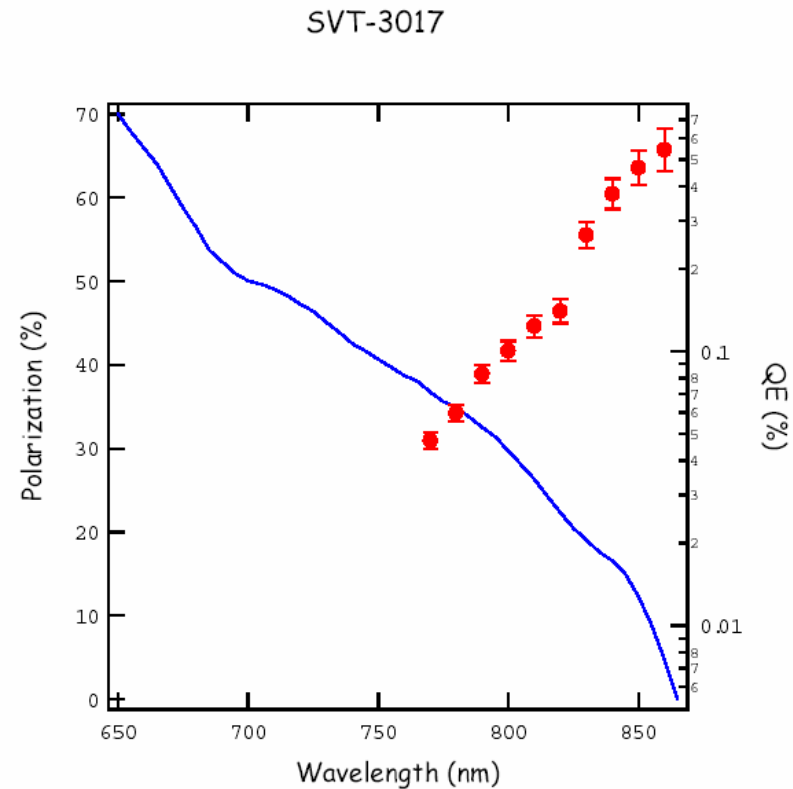
QE and Polarization

QE at 670 nm

	Sample #1	Sample #2
3017	0.39%	0.41%
3031	0.11	0.13
3039	1.34	1.54

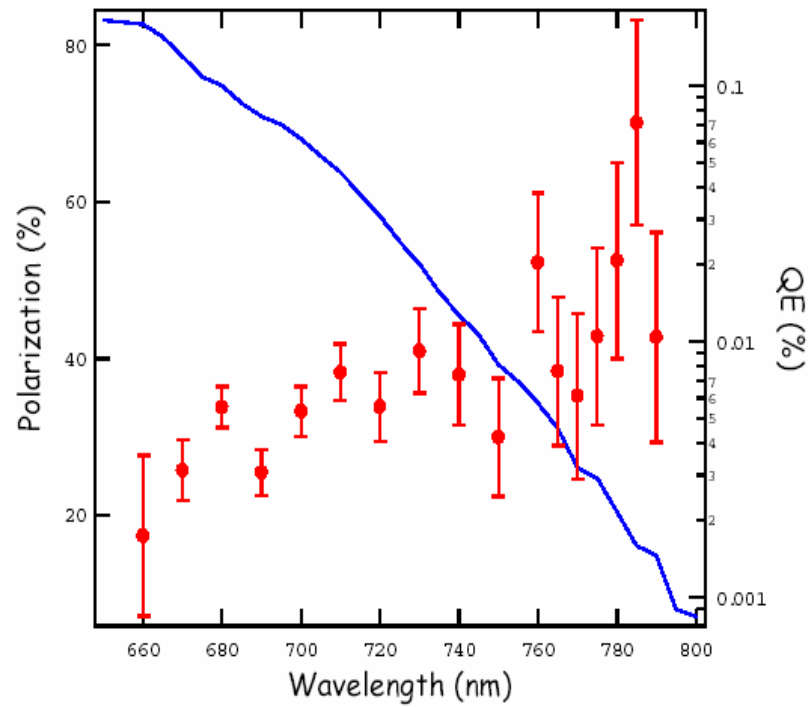
3031 QE is anomalously low.

3039 QE is still $\sim 1/3$ of GaAsP/GaAs.

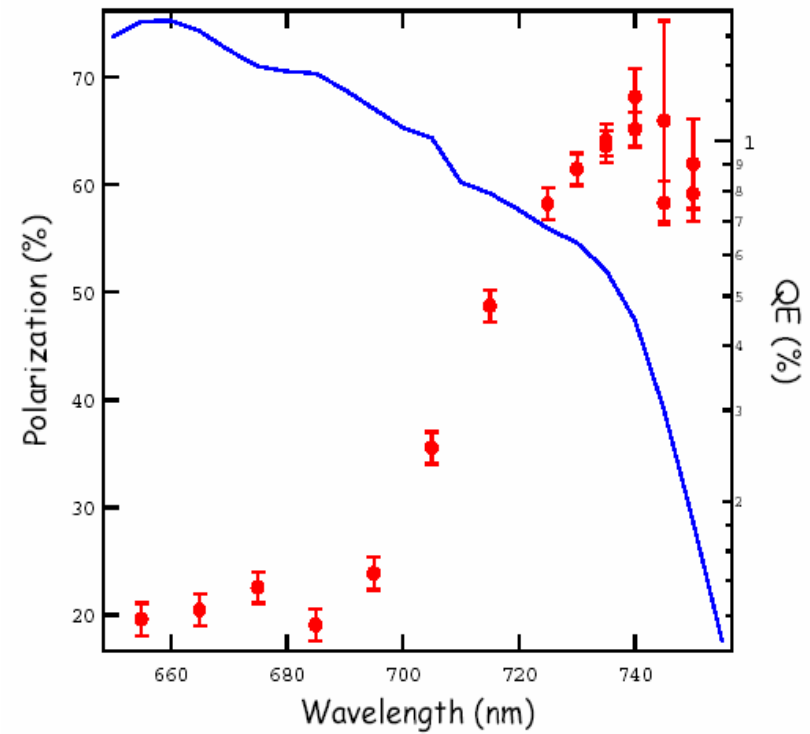


QE and Polarization

SVT-3031



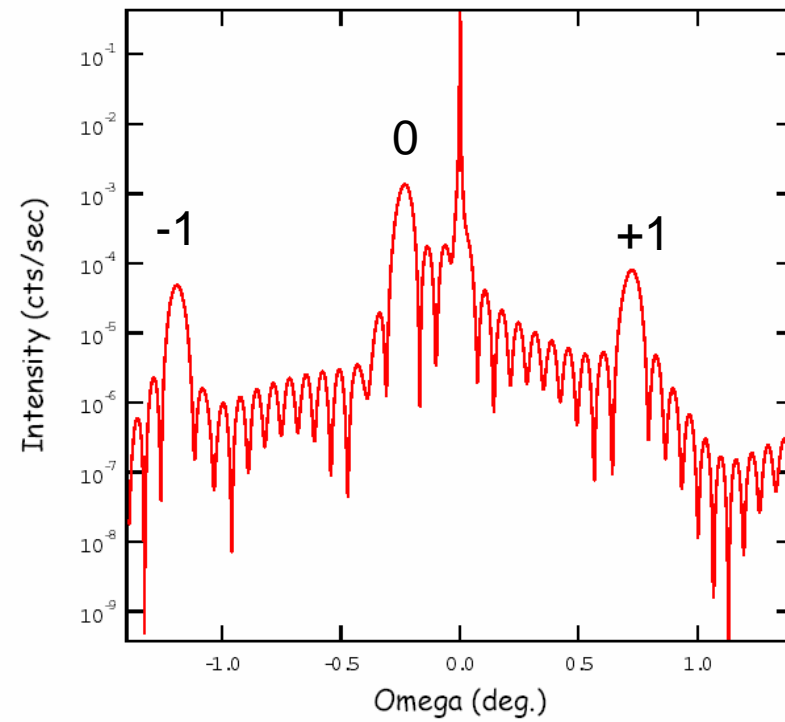
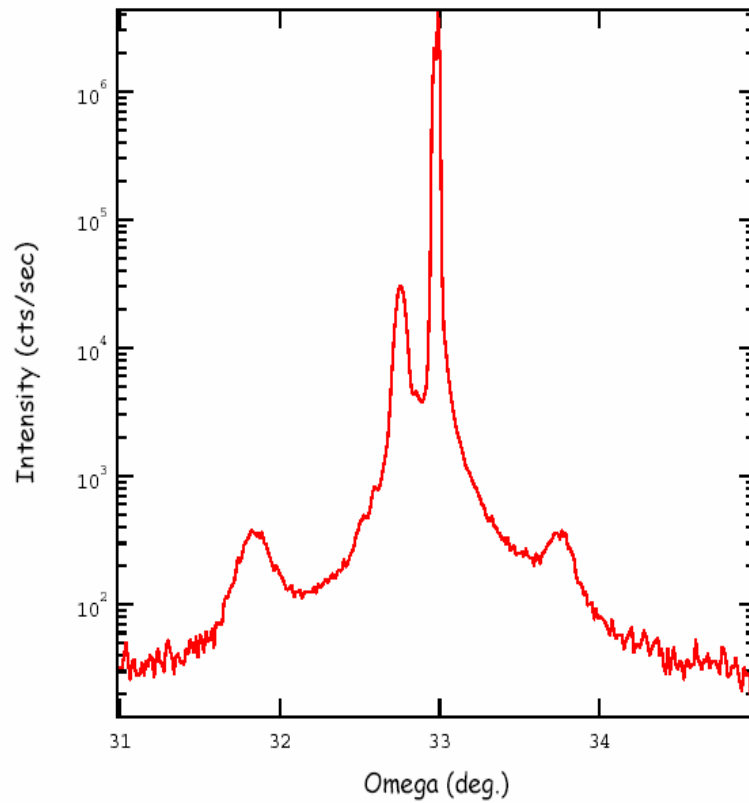
SVT-3039



SVT-3017 Xray

1.5 nm In(0.65)Ga(0.35)P – 4 nm GaAs

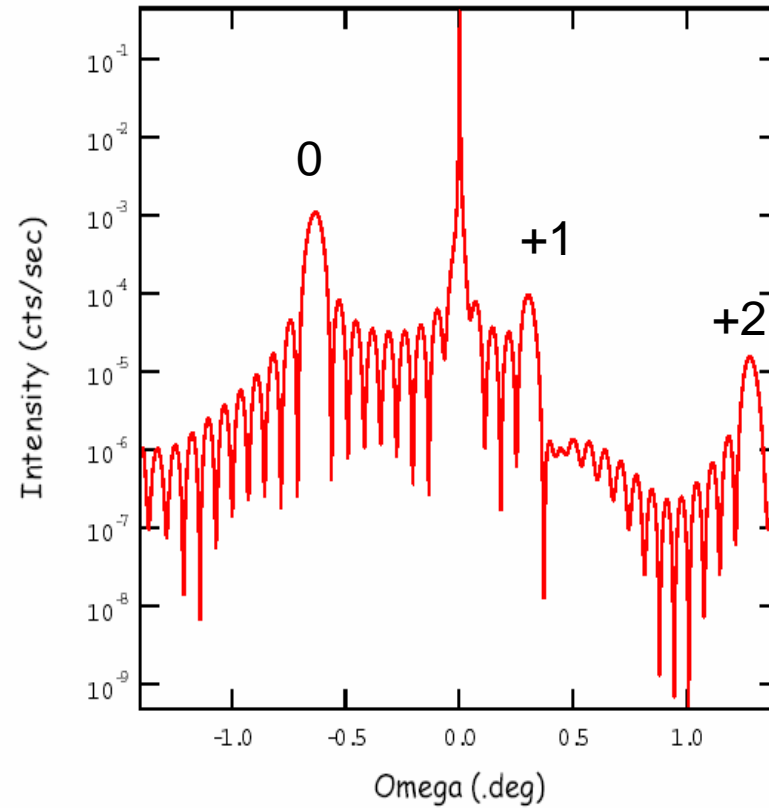
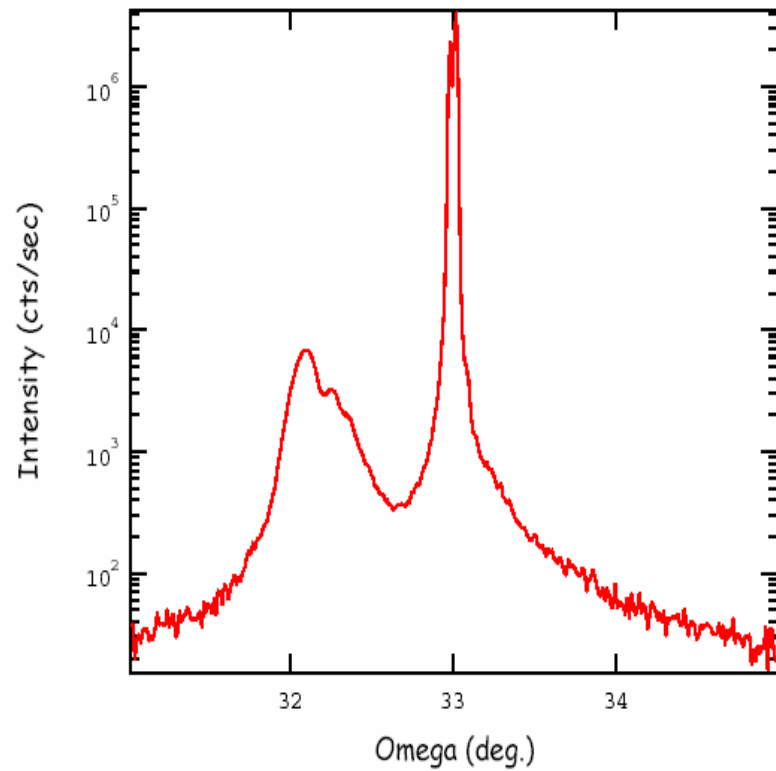
RADS



SVT-3031 Xray

4 nm In(0.65)Ga(0.35)P – 1.5 nm GaAs

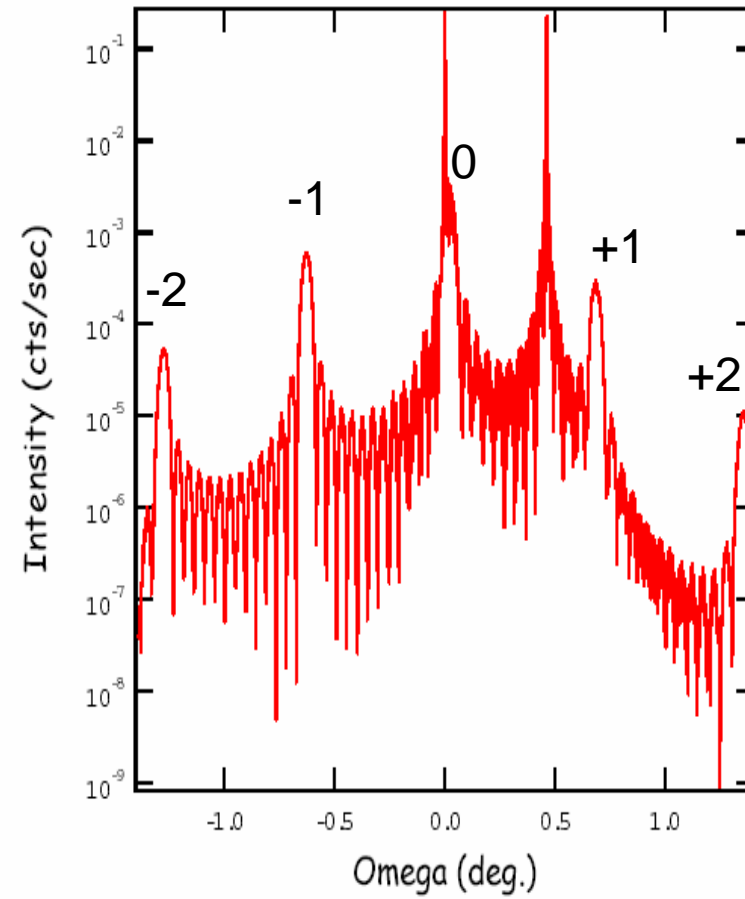
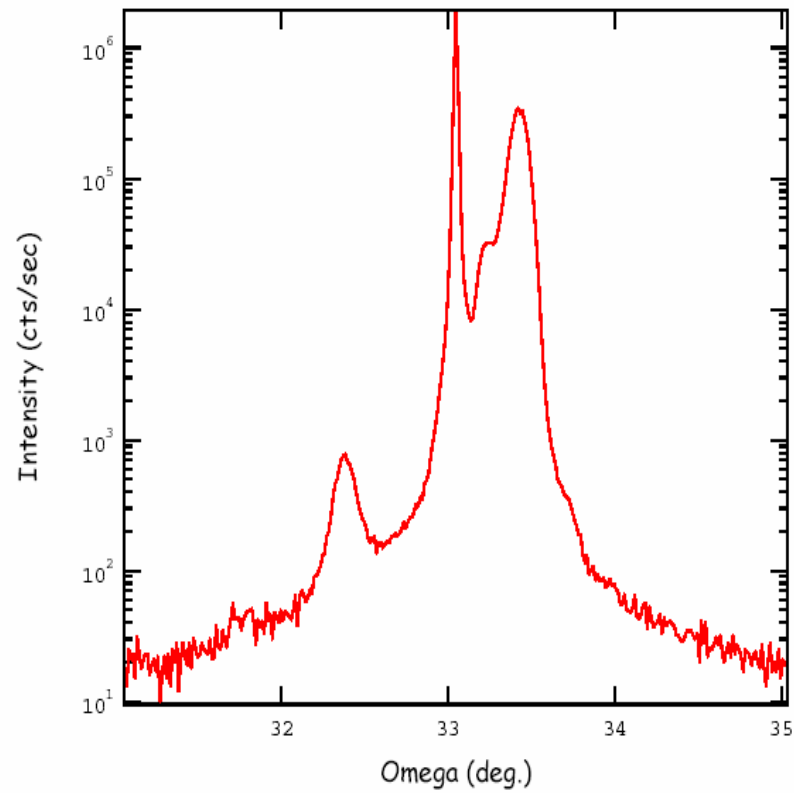
RADS



SVT-3039

4 nm In(0.31)Ga(0.69)P – 4 nm GaAs

RADS



SVT sample summary

- The sample structures are not quite right.
 - SVT-3017 is OK.
 - SVT-3031 does not have SL structure.
 - SVT-3039 has a weak SL structure.
- SVT says the SBIR funds have been exhausted, but since two wafers are not satisfactory, re-growth of 3031 and 3039 will be attempted.