



LAPD Photocathode Milestones

- Systematic characterization of Photo-electron Emission (PE) properties of materials for photocathode development.
- Demonstration of an operational 8"-square photo-cathode with a viable path to $QE \geq 15\%$ for wavelengths between 300 and 450 nm.

Associated Milestones - Dependencies:-

- Demonstration of the window-to-body seal solution.
- Design and costing of the vacuum-transfer/assembly facility for the 8"-square MCP module.



UCB Cathode Development Summary

- Alkali cathodes are still the standard for the wavelength regime
- Establish Semitransparent Alkali processes and window treatments on small 1.2” substrates
- Confirm that alkalis can be deposited on large windows and sealed into leak tight enclosures
- Make trial full up LAPD detector(s)



UCB 8" Tube and Cathode Process Tank System

Large window cathode development, 8.66" square

- Implement alkali source design for large cathode areas
- Develop wet cleaning and plasma cleaning processes
- Establish metalization scheme
- Test metal/ITO conductor underlayer for 8" cathodes
- Develop techniques to make 8" area uniform QE
- Optimize cathode QE levels
- Trial seals on 8.66" "frames"

- **Then**

- **Make LAPD 8" tubes**