

## Development of the Air-Transfer Process for the 'Gen-II' LAPPD

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The Gen-II LAPPD is a  $20 \times 20 \text{ cm}^2$  MCP-based photo-detector that has a monolithic ceramic detector base with an anode capacitively coupled through a thin metal film to an application-specific readout pattern outside of the vacuum package.

We discuss the development of the *air-transfer* process for the Gen-II LAPPD assembly. In this process a hermetic seal between the top window with pre-deposited antimony layer and the detector base is made during the detector bake-out. Photo-cathode synthesis is then performed by introducing alkali metals into the sealed detector package through a small sealable vacuum port. We have demonstrated the feasibility of several critical process steps including demonstration of cesium transport from a source outside of the detector package to the entire surface of the detector window in the presence of two full-size  $20 \times 20 \text{ cm}^2$  MCPs inside the detector.

**Primary authors:** ELAGIN, Andrey (University of Chicago); SPIEGLAN, Eric (University of Chicago); ANGELICO, Evan (University of Chicago); Prof. FRISCH, Henry (Enrico Fermi Institute and Argonne National Lab)

**Presenter:** ELAGIN, Andrey (University of Chicago)

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