

## **Advances in full-face, full-complex SLM characterization**

**Stanley E. Monroe, Jr.**  
*Houston, TX 77058*

**J. Michael Rollins**  
*Houston, TX 77058*

**Richard D. Juday\***  
*Mail Code ER5*  
*NASA Johnson Space Center*  
*Houston, TX 77058*

\*Corresponding author

### **ABSTRACT**

If an optical correlator is to perform at full potential, the filter must know what complex action will result from the control he applies to the filter SLM. If the SLM is spatially variant (and all are, to some degree or other), the behavior may be different at every frequency plane pixel.

We have previously reported characterization of the full-complex behavior at every pixel of an SLM. We have refined the method in two distinct ways: we are doing multi-step interferometry (rather than only phase quadrature), and we have significantly improved the isolation of an individual pixel's complex action. We show the methods and results.

---

Submitted to **Optical Information Processing XII** (Casasent and Chao), SPIE/Orlando April 2001, for *oral delivery*.