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Effects of flow control over a 3D turret – Part III RYAN SCHMIT, Air Force Research Laboratory, MARLYN ANDINO, Syracuse Univeristy, RYAN WALLACE, Syracuse University, RUSSEL CAMPHOUSE, JAMES MYATT, Air Force Research Laboratory, MARK GLAUSER, Syracuse University — Additional 3D turret work from Wright-Patterson Air Force Base's Subsonic Aerodynamic Research Laboratory (SARL) will be presented in the paper. The research involved simultaneously sampling aero-optic measurement with the dynamic surface pressure measurements. Two aero-optics devices the Malley Probe and the PhaseCam, a digital electronic holography system, where used to measure the aero-optic distortion created by the turbulent separated region of the turret. Open and closed loops flow control was used to reduce the aero-optical distortion and improve the flow quality. POD and LSM analysis techniques will be used to correlate the aero-optic distortion movement over the turret to the dynamic surface pressure measurements.

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