

Abstract Submitted
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Low Pressure Seeder Development for PIV in Large Scale Open Loop Wind Tunnels RYAN SCHMIT, Air Force Research Laboratory — A low pressure seeding techniques have been developed for Particle Image Velocimetry (PIV) in large scale wind tunnel facilities was performed at the Subsonic Aerodynamic Research Laboratory (SARL) facility at Wright-Patterson Air Force Base. The SARL facility is an open loop tunnel with a 7 by 10 foot octagonal test section that has 56% optical access and the Mach number varies from 0.2 to 0.5. A low pressure seeder sprayer was designed and tested in the inlet of the wind tunnel. The seeder sprayer was designed to produce an even and uniform distribution of seed while reducing the seeders influence in the test section. ViCount Compact 5000 using Smoke Oil 180 was using as the seeding material. The results show that this low pressure seeder does produce streaky seeding but excellent PIV images are produced.

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