Abstract Submitted
for the DFD12 Meeting of
The American Physical Society

Effect of Seeding Particles on the Shock Structure of a Supersonic Jet[1] DAVID PORTA, Facultad de Ciencias UNAM, CARLOS ECHEVERRÍA, CATALINA STERN, Facultad de Ciencias, UNAM — The original goal of our work was to measure. With PIV, the velocity field of a supersonic flow produced by the discharge of air through a 4mm cylindrical nozzle. The results were superposed to a shadowgraph and combined with previous density measurements made with a Rayleigh scattering technique. The idea was to see if there were any changes in the flow field, close to the high density areas near the shocks. Shadowgraphs were made with and without seeding particles, (spheres of titanium dioxide). Surprisingly, it was observed that the flow structure with particles was shifted in the direction opposite to the flow with respect to the flow structure obtained without seeds. This result might contradict the belief that the seeding particles do not affect the flow and that the speed of the seeds correspond to the local speed of the flow.

[1]We acknowledge support from DGAPA UNAM through project IN117712 and from Facultad de Ciencias UNAM

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Date submitted: 29 Aug 2012 Electronic form version 1.4