Abstract Submitted
for the DPP07 Meeting of
The American Physical Society

VELoCiRaPTORS.[1] J. LUNDGREN, B. ESHAM, S.J. PADALINO, SUNY at Geneseo, T.C. SANGSTER, V. GLEBOV, LLE, University of Rochester — The Venting and Exhausting of Low Level Air Contaminants in the Rapid Pneumatic Transport of Radioactive Samples (VELoCiRaPTORS) system is constructed to transport radioactive materials quickly and safely at the NIF. A radioactive sample will be placed inside a carrier that is transported via an airflow system produced by controlled differential pressure. Midway through the transportation process, the carrier will be stopped and vented by a powered exhaust blower which will remove radioactive gases within the transport carrier. A Geiger counter will monitor the activity of the exhaust gas to ensure that it is below acceptable levels. If the radiation level is sufficient, the carrier will pass through the remainder of the system, pneumatically braking at the counting station. The complete design will run manually or automatically with control software. Tests were performed using an inactive carrier to determine possible transportation problems. The system underwent many consecutive trials without failure. VELoCiRaPTORS is a prototype of a system that could be installed at both the Laboratory for Laser Energetics at the University of Rochester and the National Ignition Facility at LLNL.

[1]Supported in part by the US Department of Energy through the Laboratory for Laser Energetics

Stephen Padalino
Physics and Astronomy, State University of New York at Geneseo

Date submitted: 18 Jul 2007 Electronic form version 1.4