

NLUF News

Proposals for FY95

Eight proposals were submitted for consideration for FY95, as summarized in Table 64.IV. Two of them (186 and 188) are from principal investigators who submitted proposals for the first time. The proposals listed in Table 64.IV include three for x-ray spectroscopy measurements and one each for calibration of nuclear detectors, x-ray microscopy of ICF targets, high-resolution imaging, polymer shell characterization, and characterization of the critical surface.

These proposals were considered on 7 March 1995 by the voting members of the NLUF Steering Committee, listed in Table 64.V. The committee members include three from national laboratories, two from universities, and one from industry.

The approved FY95 proposals are listed in Table 64.VI, in order of technical merit as determined by the voting members of the Steering Committee. It is expected that the approved experiments will have OMEGA system time scheduled during calendar year 1996.

Table 64.IV: Proposals submitted for FY95.

Proposal Number	Principal Investigator	Institution	Title
186	Stephen Padalino	State University of New York at Geneseo	Neutron Calibration Studies for MEDUSA
187	Hans R. Griem	University of Maryland	Spectroscopic Diagnostics on High-Density, Strongly Coupled ICF Plasmas
188	Qichang Su	Illinois State University	Krypton Spectroscopy Diagnostics of High-Temperature Implosions
189	Ping-chin Cheng	State University of New York at Buffalo	Development of High-Resolution X-Ray Microtomographic System for Characterizing ICF Targets for the OMEGA Upgrade Experiments
190	John F. Seely	Naval Research Laboratory	Monochromatic Two-Dimensional Imaging of Laser Targets
191	Arnold Honig	Syracuse University	New Techniques Applied to Cryogenic Polymer Shells: Emissivity and Accommodation Coefficients, Electron Spin Resonance for Temperature Determination and Levitation, and Nuclear Magnetic Resonance for Composition and Other Diagnostics of Deuterated Plasma Coatings
192	Katsuhiro Mizuno	University of California, Davis	The Ion Acoustic Decay Instability in the OMEGA Upgrade Laser Plasma—Applications to a Critical Surface Diagnostic, and Instability at Quarter Critical Density
193	Charles F. Hooper, Jr.	University of Florida	Time-Resolved Plasma Spectroscopy of Imploded Gas-Filled Microballoons: The Next Generation

The first user experiment on the upgraded OMEGA laser system is the University of Maryland proposal (Number 187), which is expected to begin in January 1996. H. Griem and R. Elton from the University of Maryland have visited LLE to discuss this experiment. They will be mounting an XUV spectrometer on the OMEGA target chamber and are at present designing the mechanical mounts. LLE personnel are assisting them with preparations for this experiment.

Proposals for FY96

Nine proposals, summarized in Table 64.VII, have been submitted for consideration for FY96. The proposals include four for x-ray spectroscopy experiments and one each for cryogenic target characterization, nuclear calibration, hohlraum diagnostic development, high-resolution low-energy x-ray imaging of laser irradiation imprinting, and optical imaging of the critical surface. These proposals are presently being reviewed by the Steering Committee.

Table 64.V: Voting members of the NLUF Steering Committee.

Dr. John Apruzese	Naval Research Laboratory
Dr. Michael J. Boyle	Bondtronix, Inc.
Prof. Chandrashekhar J. Joshi	University of California at Los Angeles
Dr. Joseph D. Kilkenny	Lawrence Livermore National Laboratory
Dr. Richard D. Petrasso	Massachusetts Institute of Technology
Dr. Jeffrey P. Quintenz	Sandia National Laboratory

Table 64.VI: Approved FY95 NLUF proposals.

Proposal Number	Principal Investigator	Institution
192	Katsuhiro Mizuno	University of California, Davis
193	Charles F. Hooper, Jr.	University of Florida
188	Qichang Su	Illinois State University
191	Arnold Honig	Syracuse University
187	Hans R. Griem	University of Maryland

Table 64.VII: Proposals submitted for FY96.

Proposal Number	Principal Investigator	Institution	Title
194	Hans R. Griem	University of Maryland	Electric Field Measurements from Satellites to Forbidden Line Ratios in an OMEGA Upgrade Laser-Produced Plasma
195	Arnold Honig	Syracuse University	Optical Imaging, Electron Spin Resonance, and Nuclear Magnetic Resonance Applied to Cryogenic Polymer ICF Targets for Low-Temperature Emissivity and Accommodation Coefficient, Levitation, and Quantitative Analysis of Fuel and Target Shell Material
196	Stephen Padalino	State University of New York at Geneseo	Calibration of Neutron Diagnostics for OMEGA
197	Joseph J. MacFarlane	University of Wisconsin, Madison	Development of Soft X-Ray Tracer Diagnostics for Hohlräum Experiments
198	Eugene Clothiaux	Auburn University	Implementation of Novel X-Ray Polarization Diagnostics for OMEGA Upgrade at the National Laser Users Facility (NLUF)
199	John F. Seely	Naval Research Laboratory	High-Resolution Imaging of Early-Time Imprinting Using Normal-Incidence Multilayer Mirrors
200	Qichang Su	Illinois State University	Diagnosis of Core-Shell Mixing with Absorption and Emission Spectra of a Doped Layer
201	Katsuhiro Mizuno	University of California, Davis	The Ion Acoustic Decay Instability in the OMEGA Upgrade Laser Plasma—Applications to Optical Micrograph Image Diagnostic, and Instability at the Quarter Critical Density
202	Charles F. Hooper, Jr.	University of Florida	Time-Resolved Plasma Spectroscopy of Imploded Gas-Filled Microballoons: Continuum Lowering and Pusher Dynamics

