Summary of Results from OFES Proposal Solicitation Notice 00-07

MFE Concept Exploration Experiments

17 applications receive: 7 funded (5 grant and 2 laboratory), one withdrawn.

Funding for FY 2000 for the successful applications was about $1,500,000. They are listed below:

Institution	PI	Topic
Universities/Industries		
Auburn	Knowlton	Compact Toroidal Hybrid
Swarthmore College	Brown	"FRC Stabilization by Internal Toroidal Magnetic Field"
Univ of California, Davis	Hwang	"Investigation of Spheromak Formation Characteristics Using Anode and Cathode Gas Puffing Systems"
Univ of Maryland	Ellis	"An Experiment to test "Centrifugal Confinement of Plasmas"
Univ of Washington	Jarboe	"Helicity Injected Torus Current Drive Program"
Univ of Wisconsin	Forest	"Stabilization of Resistive Wall Modes Using Rotating Liquid Metal Walls"
Laboratories		
Los Alamos National Laboratory	Nebel	"The Periodically Oscillating Plasma Sphere"
Princeton Plasma Physics Lab	Cohen	"FRC Plasma Heating by Rotating Magnetic Fields"

Inertial Fusion Energy Concept Exploration Research

8 University/Private Sector applications and 4 Laboratory proposals. Two collaborations proposed. One collaborative effort involving a national laboratory and private industry was selected for funding.

Funding for FY 2000 for the successful proposals is $738,000. It is anticipated that a total of $760,000/yr will be provided for the duration of this effort.

Institution	PI	Topic
LLNL	Mike Key	Concept Exploration Program in Fast Ignition Inertial Fusion

General Atomics Note: Within the GA grant, researchers from Princeton University and UC-Davis will be involved.	Richard Stephans	Concept Exploration Program in Fast Ignition Ineritla Fusion

IFE Chamber and Target Research

17 applications received: 4 funded (3 grant and 1 laboratory)

Funding for FY 2000 for the successful applications was $303,000. They are listed below:

Institution	PI	Topic
Universities/Industries		
UCLA	Ghoniem	"Modeling Laser Effects on the Final Optics in Simulated IFE Environments"
General Atomics	Gooden	"A New Layering Method for Indirect Drive IFE Targets"
General Atomics	Gooden	"Evaluation of Fluidized Beds for Mass-Production of IFE Targets"
Laboratories		
Oak Ridge National Laboratory	Snead	"Experimental Determination of the Irradiation Performance of Carbon Fiber Composites at IFE Relevant Conditions"

Magnetic Fusion Liquid Wall Experiments (Univ only)

7 applications received; 1 funded (grant)

Funding for FY 2000 for the following successful application was $146,645

Institution	PI	Topic
Univ of California , Los Angeles	Abdou	Evaluation and Resolution of Surface Renewal Techniques for Enhancement of Scalar Transport at the Free Surface of High Prandtl Number Liquid Layer Flows

Basic and applied plasma science (laboratory only)

Sixteen proposals were received. Five proposals were selected for funding.

Start up funds totaling $164,000 were provided for FY 2000. It is anticipated that in future years the total funding for these 5 efforts will be $1,000,000/yr.

Institution	PI	Topic
ORNL	F. Wallace Baity	Studies of Non-Linear Effects in Light Ion Helicon Plasmas
PPPL	Ron Davidson	Paul Trap Experiment to Simulate Intense Non-neutral Beam Propagation Through a Periodic Focusing Field Configuration
PPPL	Nat Fisch	Studies of the Effect of Segmented Electrodes on Physical Processes and Fundamental Limitations of Hall Plasma Thrusters
PPPL	Hanto Ji	Laboratory Study of MHD Effects on Surface Stability and Turbulence in Liquid Metal
PPPL/LLNL.	Manfred Bitter-PPPL/Peter Beiersdorfer-LLNL	Laboratory Simulation of Stellar Flare Plasmas

Fusion Materials Modeling had 18 proposals received. Awards for the planned funding of $1000k are to be made in early FY 2001.