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# AIR FORCE OFFICE OF SCIENTIFIC RESEARCH

AD-A247 386  


## DTIC ELECTE MAR 10 1992 S D

### RESEARCH PROPOSAL QUARTERLY STATUS REPORT

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH (AFOSR)  
NOTICE OF CONTRACTING OPPORTUNITY (NCO)  
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District  
Georgia  
STINFU Program



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JULY - AUGUST 1991

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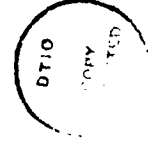
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# RESEARCH PROPOSAL

## QUARTERLY STATUS REPORT

OCTOBER 1991

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Availability Codes		
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## INTRODUCTION

The Research Proposal Quarterly Status Report is published in March, June, September, and December by the Air Force Office of Scientific Research (AFOSR). It lists all the research proposals received by AFOSR in the previous six months along with the action taken (Initiated, Declined or Withdrawn) on each report.

The report is divided into two parts. The Institution Index lists proposals alphabetically by institution. This is followed by a more detailed listing by Directorate, and by Program Manager within the Directorate.

## PURPOSE

This report is designed to inform other Government sponsoring agencies of the proposals received by the AFOSR and the action taken on these proposals. Readers must keep in mind that declined proposals should not necessarily be considered as scientifically unacceptable; many declinations result from a lack of funds or as a result of special programmatic emphasis.

## AFOSR MISSION

The Air Force Office of Scientific Research (AFOSR) is the single manager of the Air Force Defense Research Sciences Program (Program Element 61102F) and the primary Air Force agency for the extramural support of fundamental scientific research. The AFOSR is organized under the Air Force Systems Command, DCS/Technology.

AFOSR awards grants and contracts for research in areas of science relevant to the needs of the Air Force. Research is selected for support from proposals received in response to the Broad Agency Announcement from scientists investigating problems involving the search for new knowledge and the expansion of scientific principles. Selection is on the basis of scientific potential for improving Air Force operational capabilities, originality, significance to science, the qualification of the principal investigators, and the reasonableness of the proposed budget.

KEY TO READING THE DATA

**TITLE** - The title of the research proposal

**INSTITUTION** - The organization, (e.d., college/university, company) at which the research will be conducted.

**INVESTIGATOR** - The Principal Investigators proposing the research.

**TYPE** - N indicates a new research effort.

- R indicates a continuation of an ongoing research effort.

**MONTHS** - The duration of the research proposal.

**RECEIVED** - The month and year in which the AFOSR received the proposal.

**AMOUNT** - The funds requested of the AFOSR for support of the research proposal.

**STATUS** - A = ACCEPTED indicates that the review has been completed and the proposal recommended for funding.

- D = DECLINED indicates the proposal has been reviewed but will not be funded by the AFOSR.

- BLANK SPACE = indicates the proposal is being reviewed.

- W = WITHDRAWN indicates that the proposal submitted was removed from further consideration at the proposers request.

**PROGRAM MANAGER** - The AFOSR scientific staff member assigned the responsibility for the technical evaluation of the proposal.

**PROPOSAL #** - An AFOSR Directorate assigned control number to uniquely identify the research proposal.

**INITIATE** - The proposal has been recommended to the AFOSR Directorate of Contracts for the amount and duration.

**START DATE** - The recommended date for commencement of the research.

**TOTAL AMOUNT** - The estimated number of dollars recommended for support of the research effort; the actual amount is subject to negotiation.

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH SCIENTIFIC STAFF DIRECTORY  
BOLLING AIR FORCE BASE, DC 20332

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Col Arthur L. Pavel, Deputy Director 5017

NA - DIRECTORATE OF AEROSPACE SCIENCES

Dr C I Jim Chang (Director)	EXT
Dr Mitat Birkan	4987
Dr Leonidas Sakell	4938
Dr Amrutur Srinivasan	4935
Dr John Botsis	0463
Dr Dan Fant	4937
Lt Col Steven Boyce	0471
Dr James McMichael	6963
Dr Spencer Wu	4936
Dr Julian Tishkoff	6962
	0465

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	4969

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Lt Col Jan Cerveny	5021

NC - DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

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Dr Michael Berman	4963
Lt Col James Stobie	4960
Lt Col Larry W Burggraf	4960
Dr Fred Hedberg	4963
Dr Joh Wilkes	4963

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Dr Marc Jacobs	5027
Dr Arje Nachman	4939
Dr Jon Sjogren	4940
Dr Abraham Waksman	5028

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Dr Alan Rosenstein (Dep Director)	4984
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Dr Harold Weinstock	4933
Dr Alan Craig	4931
Maj Gernot Pomrenke	4931
Dr Gerald Witt	4931

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Dr Howard Schlossberg	4906
Dr Henry R. Radoski	4906
Lt Col James A. Lupo	4908

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**PART 1**

STATUS - \*A\* = ACCEPTED, \*D\* = DECLINED, \*W\* = WITHDRAWN

INSTITUTION	LAST NAME	INVESTIGATOR	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PM NAME
50th Military Airlift Wing	Baumann		Daniel	D	91-NI-029	A	BOLAND
	Carlson, Jr.		Herbert	C	91-NI-036	A	BOLAND
	Darvis		John	G	91-NI-028	A	BOLAND
	Schepler		Kenneth	L	91-NI-032	A	BOLAND
Aerodyne Research Inc	Troan		R.	C	91-NC-262	A	BURGGRAF
	Beller		Denis	E	91-XO-029	A	EWING
	Suter		Bruce	C	91-NM-372	A	SJOGREN
	Scientist		Idiot	C	91-XO-033	A	EWING
Air Force Office of Scientific Research	LKEJ:LAKJ		S:LNQJ	I	91-XO-034	A	EWING
	Mages		Mary Ann		91-NA-264	A	SAKELL
			Mary Ann		91-XO-030	A	YORK
			Robert		91-NC-252	A	LEE
Analytic Services Inc	Thakur		Mrinal		91-NM-320	A	SJOGREN
	Amara Inc.		Karl		91-NE-254	A	CRAIG
	IBM Corporation		Michael	W	91-NM-337	A	NACHMAN
	Boston University		P. Robert		91-NL-145	A	STOBIE
Iroquois University	Lee		Min-Chang		91-NM-378	A	JACOBS
	Fleming		Angell	H	91-NE-252	A	SCHLOSSBER
	Lawandy		Nabil	M	91-NL-127	A	TANGNEY
	Paradiso		Michael	A	91-NC-223	A	ERSTFELD
California Institute of Technology	Sheldon		Brian	W	91-NA-244	A	BIRKAN
	Culick		Fev	E	91-NA-262	A	BIRKAN
	Harder		Seth		91-NC-222	A	LEE
	McEliace		Robert	J	91-NM-303	A	GLASSMAN
Carnegie-Mellon University	Psaltis		Demetri		91-NE-256	A	CRAIG
	Kumta		Prashant		91-NC-219	A	HEDBERG
	O'Hallaron		David	R	91-NM-361	A	LUPO
	Patterson		G.	D	91-NC-208	A	LEE
Case Western Reserve University	Hauer		A	H	91-NA-260	A	JONES
	Radack		Gerald	M	91-NI-027	A	BOLAND
	Sukenik		Chaim	N	91-NC-225	A	HEDBERG
	Metljevich		Egon	S	91-NC-263	A	ERSTFELD
Clarkson University	Martin		Charles	K	91-NC-248	A	WILKES
	Chu		M	J	91-NL-152	A	STOBIE
	Potasek		M.	F	91-NM-345	A	NACHMAN
	Calicote		Paul	L	91-NA-243	A	BIRKAN
Colorado State University	Houston		Paul	L	91-NC-272	A	BERMAN
	Hui		Chung-Yuen	L	91-NA-250	A	JONES
	Lumley		J	L	91-NA-261	A	MCMICHAEL
	Nation		John	A	91-NE-230	A	BARKER
Cornell University	Parpiu		Jeevak	M	91-NE-243	A	WEINSTOCK
			Adrian		91-NE-244	A	WEINSTOCK
			Lawrence	N	91-NA-270	A	FANT
			Richard	L	91-NA-233	A	WU
Yale University	Virgin		William	D	91-NC-205	A	ERSTFELD
	Wells		Richard		91-NC-205	A	BOLAND
	Schulz		William		91-NI-031	A	BOLAND
	Elishakoff		I		91-NA-223	A	WU
Eastern Kentucky Univ.							
Florida Atlantic University							



REPORT DATE 11/30/91 INSTITUTION INDEX ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
STATUS - 'A' = ACCEPTED, 'D' = DECLINED, 'W' = WITHDRAWN

INSTITUTION	LAST NAME	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PM NAME
General Electric Co	Hoffman	Frederick		91-NM-317	A	WAKSMAN
George Washington University	McKee	Joyles		91-NC-247		BURGGRAF
	Lahner	Rainald		91-NA-229	A	SAKELL
	Singpurwalla	V		91-NM-349	A	SJOGREN
Georgetown University	Kertesz	Miklos		91-NC-244		BURGGRAF
Georgia Institute of Tech	Serfuzo	Richard		91-NM-306	A	SJOGREN
Georgia Tech Research Corporation	Talreja	Ramesh		91-NA-237		JONES
Georgia Univ Research Foundation Inc	Gritton	Bruce	K	91-NL-146		FREGLY
Jordon Research Confernces Inc	Macdonald	Digby	D	91-NC-240		WILKES
Larry E. Moses Applimath	Moses	Harry	E	91-NM-366		NACHMAN
Harvard University	Gross	Barbara	J	91-NM-323		WAKSMAN
	Mitchell	Ralph		91-NC-226	A	HEDBERG
Howard University	Bainum	Peter	M	91-NA-220	A	WU
Duques Aircraft Co	Rutler	Jennifer	M	91-NE-231	A	BARKER
Illinois Institute of Technology	San-Arie	Jezekiel		91-NM-310		WAKSMAN
Illinois State University	Malczyk	Jeffrey	J	91-NL-151		FREGLY
Inst. of Electrical & Electronics Engrg	Lorenzo	Joe		91-NE-246		POMRENKE
	Angeman	Robert	T	91-NE-214		POMRENKE
Johns Hopkins University	Andreou	Andreas	G	91-NM-342		SUDDARTH
	Mang	Ching	I	91-NL-139		RADOSKI
	Yarkony	David	R	91-NC-274		BURGGRAF
	Jiang	Hongxing	S	91-NE-223		POMRENKE
Kansas State University	Gould	Edwin	L	91-NC-213		HEDBERG
Kent State University	Jordanoff	John		91-NA-257		WU
Kozim Jordanoff & Associates Inc	Laung	Ka-Ngo		91-NP-184	A	LUPO
Lawrence Berkeley Laboratory	Erdojan	Fazil		91-NA-224		BOYCE
Lehigh University	Rockwell	Donald	O	91-NA-269	A	FANT
	Calaza	Arthur	R	91-NE-218	A	WITT
	Davis	Paul	A	91-NP-188	A	BARKER
	Miller	Warner	R	91-NP-185		LUPO
	Callawa	Arthur	R	91-NE-224	A	WITT
	Rekefi	George		91-NE-262		BARKER
	Chang-Diaz	F	R	91-NA-249	A	BIRKAN
	Cleary	Michael	P	91-NA-272		JONES
	Lee	Min-Chang		91-NE-221	A	BARKER
	Lighton	Frank	T	91-NM-370	A	GLASSMAN
	Oppenheia	Alan	V	91-NM-371		SJOGREN
	Papaefthymiou	Georgia	C	91-NC-220		ERSTFELD
	Poggio	Tomaso		91-NM-314		WAKSMAN
	Simuels	Richard	J	91-NI-012	A	CAVENDER
	Ullman	Shimon		91-NM-313		WAKSMAN
	Ballance	John	P	91-NC-214		ERSTFELD
	Qenschler	C.	L	91-NC-260		BURGGRAF
Materials Research Society	Pike	John	M	91-NE-217	A	CRAIG
	Oliker	Vladimir	I	91-NM-309	A	NACHMAN
Materials Technologies Corporation	Blanchard	Gary	J	91-NC-250		LEE
Michigan State University	Ponzallo	Bob		91-NA-239	A	SAKELL
YASA - Ames Research Center	Ajello	Joseph	M	91-NP-187	A	KELLEY
YASA - Natl Aeronautical and Space Admin						

REPORT DATE 11/26/91 INSTITUTION INDEX ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
STATUS - 'A' = ACCEPTED, 'D' = DECLINED, 'W' = WITHDRAWN

INSTITUTION	LAST NAME	INVESTIGATOR	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PM NAME
National Inst. of Standards & Technology	Wineland		David	J	91-NP-183		KELLEY
National Oceanic and Atmospheric Admin	Westwater		Ed	R	91-NC-211		STOBIE
National Research Council	Raber		Douglas		91-NC-259		LEE
National Science Foundation	Teill		Daniel		91-NP-190	A	LEMKOWICZ
Naval Post Graduate School	Bradley		Gordon	H	91-XO-031	A	YORK
Naval Research Laboratory	Stackpole		Laurie		91-NM-367	A	GLASSMAN
	White		Joseph		91-XO-032	A	OWENS
	Barnden		John		91-NE-248	A	KELLEY
New Mexico State University	Garabedian		Paul		91-NM-308		WAKSMAN
New York University	Rodman		Laura	R	91-NM-362		NACHMAN
Nielsen Engineering and Research Co	Iyer		Shanthi	C	91-NL-149		STOBIE
North Carolina A&T State University	Cedair		Salan	M	91-NE-204		POMRENKE
North Carolina State University	Campbell		Stephen	L	91-NE-250		POMRENKE
	Kalloy		C. T.		91-NM-359		JACOBS
Northwestern University	Skavanski		Alexander	A	91-NM-377		GLASSMAN
Northwestern University	Keer		Leon	M	91-NL-128		TANGNEY
	Liu		Wing	K	91-NA-252	A	JONES
	Mura		Toshio		91-NA-276		WU
Office of Naval Research	Reynolds		Peter		91-NA-213		BOYCE
Ohio State Univ Research Foundation	Bodonyi		Richard		91-NP-189	A	KELLEY
	Herbert		Thorwald		91-NM-352		NACHMAN
	Rapp		Robert	A	91-NA-239	A	SAKELL
	Ford		Marran	T	91-NC-206		BURGGRAF
	Raff		Lionel	M	91-NC-230		LEE
Oklahoma State University	Rao		Nageswara S	V	91-NC-266		BURGGRAF
Old Dominion University	Schoenbach		Karl	H	91-NM-324		WAKSMAN
Oregon Graduate Center for Study & Resch	Sigmon		Thomas		91-NE-186	A	LUPO
Oregon State University	D'Ambrosio		Bruce	M	91-NE-264	A	WITT
	Herrfried		Alan	G	91-NM-316		WAKSMAN
	Sleight		Arthur	W	91-NA-253		WU
Parkview Durks, Inc.	Hohenearter		Gert	W	91-NE-207	A	WEINSTOCK
Pennsylvania State University	Belegundu		Ashok	K	91-NE-242	A	WEINSTOCK
	Chung		T.	D	91-NA-232		WU
	Grutzeck		Michael	C	91-NC-253		BURGGRAF
	Macdonald		Digby	W	91-NC-257		ERSTFELD
	Santoro		Robert	D	91-NC-234		WILKES
	Settles		Gary	J	91-NA-246	A	TISHKOFF
	Jewell		Jack	S	91-NA-256		SAKELL
Photonics Research Inc.	Davis		Steven	J	91-NE-259		CRAIG
Physical Sciences Inc	Kalkhoran		Iraj	M	91-NC-259		BERNAN
Polytechnic Institute of New York	Salzinger		Kurt		91-NM-225		SAKELL
Polytechnic University	Johnson-Laird		Phillip	N	91-NL-144		HADDAD
Princeton University	Ju		Jiann-Wen		91-NL-132		FREGLY
	Liu		Chung-King		91-NA-255		WU
	Nosenchuck		Daniel	M	91-NA-268	A	TISHKOFF
	Smits		Alexander	J	91-NA-247	A	SAKELL
	Suckewer		Szymon		91-NA-279		SAKELL
					91-NE-253		SCHLOSSBER

INSTITUTION	LAST NAME	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PI NAME
Queens College	Cadieu	Fred	J	91-NE-257	A	WEINSTOCK
Rensselaer Polytechnic Institute	Cole	Julian	D	91-NM-322	A	NACHMAN
	Interrante	Leonard	V	91-NC-217		ERSTFELD
	Levi	Mark		91-NM-330	A	NACHMAN
Home Air Development Center	Stayskal	Mans	P	91-NI-034	A	BOLAND
Rutgers The State Univ. Coll of Injnr	Knight	Doyle	D	91-NA-271		SAKELL
	Wang	George	J	91-NA-231		WU
Butlers The State University	Sheu	Phillip Chen-Yu		91-NM-311		HOLLAND
ERI International	Shockey	Donald	A	91-NE-211	A	ROSENSTEIN
San Diego State University Foundation	Reed	Stephen	K	91-NL-137		FREGLY
Society for Optical/Quantum Electronics	Concoran	V. J.		91-NE-263	A	SCHLOSSBER
Society for Research on Bio Rhythms	Turek	Fred	W	91-NL-131		HADDAD
Southern Methodist University	Kennington	Jeffery	L	91-NM-331	A	GLASSMAN
Southwest Research Institute	Davidson	David	L	91-NE-210	A	ROSENSTEIN
Stanford University	Farzajer	Joel	H	91-NA-267		FANT
	Moin	Parviz		91-NA-214	A	SAKELL
	Tsai	Stephen	4	91-NA-218		BOYCE
State University of New York	Gurwitch	Michael	A	91-NE-206	A	WEINSTOCK
	Osteryoung	Robert		91-NC-261	A	WILKES
	Lagraff	John	E	91-NA-225	A	FANT
Syracuse University	Gal-Cr	Benjamin		91-NA-258		FANT
Technion-Israel Inst of Technology	Bloom	Justin	L	91-NI-030	A	CAVENDER
Technology International, Inc.	Sullivan	Thomas		91-NE-212		WEINSTOCK
Temple University	Cassone	Vincent	M	91-NL-143		HADDAD
Texas A and M Research Foundation	Junkins	John	L	91-NA-254		WU
	Ziener	Xiaus	M	91-NE-234		BARKER
Texas Tech University	Leonard	B P		91-NA-236		MCMICHAEL
Univ of Akron	Dror	Moshe		91-NM-334		GLASSMAN
Univ of Arizona	Sarid	Dror		91-NE-232	A	SCHLOSSBER
	Wynanski	Israel	J	91-NA-235	A	MCMICHAEL
Univ of California	Rowers	Michael	T	91-NC-210	A	BERMAN
	Chanj	Tsu-Shuan		91-NM-304		GLASSMAN
	Guinn	Elizabeth	S	91-NE-245		BARKER
	Jabbari	F.		91-NM-329		JACOBS
	Lamore	Lawrence	L	91-NM-321		GLASSMAN
	Lee	Yuan	T	91-NC-271		BERMAN
	Luhmann, Jr.	Neville	C	91-NE-240	A	BARKER
	Lynch	Gary		91-NL-135		HADDAD
	Mukherjee	A.	K	91-NC-251	A	ROSENSTEIN
	Narens	Louis		91-NL-141		FREGLY
	pearl	Judea		91-NM-376		WAKSMAN
	Wears	John	H	91-NC-255		BURGGRAF
	Williams	Foreman	A	91-NA-274		TISHKOFF
	Zhong	Xiaolin		91-NA-221	A	SAKELL
Univ of California, San Diego	Carneville	George		91-NA-259		MCMICHAEL
Univ of Central Florida	Dynes	Robert	C	91-NE-213	A	WEINSTOCK
Univ of Chicago	Rinalducci	Seward	J	91-NL-126		HADDAD
	Outler	Laurie	J	91-NC-269		BERMAN

REPORT DATE 11/06/31

INSTITUTION INDEX ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH

PAGE 5

STATUS - 'A' = ACCEPTED, 'D' = DECLINED, 'W' = WITHDRAWN

INSTITUTION	LAST NAME	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PM NAME
Univ of Cincinnati	Sibener	Steven	J	91-NC-270		BERMAN
	Elder	Richard	C	91-NC-267	A	BURGGRAF
	Jayaraman	N		91-NC-232		WILKES
Univ of Colorado	Pubin	Stanley	G	91-NA-219		BOYCE
	Feuerstein	Robert		91-NA-251		SAKELL
	Mahalingam	Shankar		91-NE-247		POMRENKE
	Pobovic	Zoya	B	91-NA-263		BIRKAN
Univ of Colorado at Denver	Schnabel	Robert	B	91-NE-225	A	WITT
	Demarauer	Robert	B	91-NM-395		GLASSMAN
	Hall	I.	W	91-NC-246		ERSTFELD
	Bartlett	Rodney	J	91-NC-276	D	BURGGRAF
Univ of Houston	Ramaswamy	R.	V	91-NC-231	A	BURGGRAF
	Simmons	Joseph	H	91-NE-235		KELLEY
	Hussain	F	M	91-NC-273		LEE
	Amirouche	Farid		91-NC-216		ERSTFELD
Univ of Illinois	Potsis	John		91-NM-380		NACHMAN
	Cruzinovsky	A	J	91-NA-273	A	WU
	Gordon	Robert		91-NA-241		JONES
	Granick	Steve		91-NA-277		JONES
Univ of Kentucky	Kramer	Arthur	F	91-NC-264		BERMAN
	Morkoc	Hadis	E	91-NC-215		BURGGRAF
	Riccio	Gary		91-NC-224		ERSTFELD
	Rudel	Lee	W	91-ML-140		FREGLY
Univ of Maryland	Lobb	Christopher	J	91-NE-203	A	WITT
	Marcus	Steven	I	91-NI-035	A	BOLAND
	Yorke	James	A	91-NM-368	D	NACHMAN
	Karasz	Richard	S	91-NM-366		JACOBS
Univ of Massachusetts	Stein	Dennis	S	91-NE-205	A	JACOBS
	bernstein	John	C	91-NM-327	A	NACHMAN
	Campbell	Ronald	M	91-NC-350		LEE
	Gilgenbach	Roman	D	91-NC-275		LEE
Univ of Michigan	Hrycia	Pramod	P	91-NC-268	A	JACOBS
	Kharasonekar	Sylvan	M	91-NM-369	A	CAVENDER
	Kornblum	Richard		91-NI-013	A	BARKER
	Lainz	Bram Van		91-NA-227	A	BOYCE
Univ of Minnesota	Li	Victor C		91-NM-339		JACOBS
	Teneketzis	Demosthenis		91-ML-134	A	FREGLY
	Friedman	Avner		91-NC-237		ERSTFELD
	Said	Youcef		91-NM-305		NACHMAN
Univ of Minnesota, Citta	Dahlberg	E	D	91-NA-266		WU
	Chin	Lee	J	91-NM-359	A	JACOBS
	Switzer	Joy	A	91-NM-364		NACHMAN
				91-NM-313		NACHMAN
Univ of Missouri				91-NE-241	A	WEINSTOCK
				91-NM-360		SJOGREN
				91-NC-236	A	ERSTFELD

INSTITUTION	INVESTIGATOR	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PM NAME
Univ of New Mexico	White	Dan		91-NL-142		STOBIE
	Schmalloglu	Edi		91-NE-251	A	BARKER
	Sinha			91-NM-326		NACHMAN
Univ of North Carolina	Fishman	George	S	91-NM-375		SJOGREN
Univ of Notre Dame	Nelson	Robert	C	91-NA-215	A	FANT
Univ of Oklahoma	Watson	Deborah	K	91-NE-255		KELLEY
Univ of Oregon	Beck	Jacob		91-NL-129		TANGNEY
Univ of Pennsylvania	Cooperman	Barry	S	91-NM-336	A	HOLLAND
	Hjshin	Zvi		91-NA-211		BOYCE
Univ of Pittsburgh	Asher	Sanford	A	91-NC-243		ERSTFELD
	Hall	Charles	A	91-NM-341		NACHMAN
Univ of Rhode Island	Yates	John	T	91-NC-221		BURGRAF
Univ of Rochester	Ghonam	H		91-NA-212		BOYCE
	Hall	Dennis	G	91-NE-209		POMRENKE
Univ of South Florida	Kyberg, Jr	Henry	E	91-NM-382		WAKSMAN
	Gilbert	Richard	A	91-NI-033	A	BOLAND
	Snocki	Thomas		91-NL-147		FREGLY
	Stark	Louise		91-NM-307	A	WAKSMAN
Univ of Tennessee	Alexeff	Igor		91-NE-233		BARKER
	Mamantov	Gleb		91-NE-249		BARKER
	Savler	Gary	S	91-NC-265	A	WILKES
Univ of Texas	Apostathis	Aristotle		91-NL-125	A	CERVEY
	Barnes	J. Wesley		91-NM-325	A	JACOBS
	Cook	Daniel	E	91-NM-312		GLASSMAN
	Piquott	M R		91-NM-333		HOLLAND
Univ of Toronto	Harris	Frank	E	91-NA-234		BOYCE
Univ of Utah	Johnston	William	A	91-NE-229		BARKER
	Quahston	Kurt	E	91-NL-133		FREGLY
Univ of Vermont	Horan	Cornelius	O	91-NM-355		NACHMAN
Univ of Virginia	Meyir	D	G	91-NM-353	A	NACHMAN
	Shur	Michael		91-NM-315		JACOBS
	Towe	Elias		91-NE-227		POMRENKE
Univ of Washington	Hernandez	Gonzalo		91-NE-226		POMRENKE
	Ly	Uy-Loi		91-NL-150		STOBIE
Univ of Wisconsin	Cnapman	Thomas	W	91-NM-365		JACOBS
	Dyer	Charles	R	91-NI-009	A	CAVENDER
	Lin	Cnun	C	91-NM-319		WAKSMAN
	Plesha	Michael	E	91-NE-260		KELLEY
	Rosendero	Richard		91-NA-216		BOYCE
University of Idaho	Taylor	Patrick	P	91-NC-227		ERSTFELD
University of Kansas	Prescott	Glenn	E	91-NC-249		BURGRAF
Utah State University	Adams	Gene	M	91-NM-381		SJOGREN
Vanderbilt University	Kawamura	Kazuhiko		91-NL-138		STOBIE
Virginia Commonwealth University	DeLorenzo	Robert	J	91-NI-005	A	CAVENDER
Virginia Polytechnic Inst & State Univ	Burns	John	A	91-NL-123	A	CERVEY
	Wayfeh	All	H	91-NM-356	A	JACOBS
	Milson	Livne	T	91-NA-249		MU
				91-NM-332	A	JACOBS

REPORT DATE: 11/06/91

INSTITUTION INDEX ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
STATUS - 'A' = ACCEPTED, 'D' = DECLINED, 'W' = WITHDRAWN

PAGE 7

INSTITUTION	INVESTIGATOR	FIRST NAME	MIDDLE	PROPOSAL	STATUS	PI NAME
Warner Robins Air Logistics Center	Reahter	Daniel	C	91-NM-338	A	JACOBS
Washington State University	Dickinson	J Thomas		91-NA-230		WU
	Whitney	Paul		91-NA-278		WU
Washington University	Wickerhauser	M. Victor	A	91-NL-148	A	FREGLY
Wayne State University	Ibrahim	Robert	J	91-NM-329		SJOGREN
	Levis	Raouf		91-NA-245		WU
Wells Research Corp	Reiter	Robert	R	91-NC-219		BURGGRAF
West Virginia University	Napolitano	Elmer	R	91-NL-136		STOBLE
	Teaksoory	Marcello	R	91-NA-217		WU
Western Michigan University	Alavi	Yousef	K	91-NE-237		WITT
Worcester Polytechnic Institute	Klein	Michael	W	91-NM-357		GLASSMAN
Wright State University	Keo	Nicholas	V	91-NI-037	A	BOLAND
	Voss	Daniel	T	91-NL-124	A	CERVENY
Y. Y. Yu Associates	Yu	Y	Y	91-NM-374		SJOGREN
Yale University	Sennott	William		91-NA-275		WU
	Polishness	Eric		91-NE-229		SCHLOSSBER
	Moody	John		91-NM-363		SUDDARTH
	Smooke	Mitchell	D	91-NM-343		SUDDARTH
				91-NM-379		JACOBS

**PART 11**

REPORT DATE: 11/09/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF AEROSPACE SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
SURFACE DAMAGE PHENOMENA AND THEIR EFFECT ON THE MECHANICAL BEHAVIOR OF ROCK JOINTS Univ of Wisconsin	Flesha Michael	N 36 11/07/91 \$363,200	90YCE 91-NA-216	
DYNAMICS CONTROL AND MANEUVERING OF LARGE FLEXIBLE SPACE TETHERED REFLECTORS, TELEROBOTS AND EXPERIMENTAL MODELS (M3CU) Howard University	Spinum Peter	R 36 15/07/91 \$395,705	A WU 91-NA-220	\$125,916 01/01/92 \$395,705
FRACTURE MECHANICS OF FUNCTIONALLY GRADIENT MATERIALS Lehigh University	Endogian Fazil	N 36 15/07/91 \$335,129	BOYCE 91-NA-224	
INTERFACE MECHANICS OF PARTICULATE MEDIA WITH FIBERED INCLUSIONS Univ of Michigan	Myceik Roman	N 12 23/07/91 \$97,795	BOYCE 91-NA-227	
AEROELASTIC TURBULENCE AND HIGH-DIMENSIONAL CHAOS Duke University	Virgin Lawrence	N 36 30/07/91 \$233,962	WU 91-NA-233	
MESOSTRUCTURES AND MESOMECHANICS IN AEROSPACE ADVANCED Univ of Toronto	Piscott M R	N 35 31/07/91 \$325,000	BOYCE 91-NA-234	
ON THE WALL JET IN SPLASHING FLOW Univ of Arizona	Wojanowski Israel	R 12 05/08/91 \$106,784	A MCMICHAEL 91-NA-235	\$106,784 01/01/92 \$106,784
A SIMPLE AND RELIABLE ALGEBRAIC TURBULENCE MODEL BASED ON A MODIFIED MIXING-LENGTH CONCEPT Univ of Akron	Leonard P	N 24 06/08/91 \$117,503	MCMICHAEL 91-NA-236	
INTERGOVERNMENTAL PERSONNEL ACT (IPA) Univ of Illinois	Botzic John	N 12 15/08/91 \$22,083	A JONES 91-NA-241	\$7,637 08/09/91 \$30,549



REPORT DATE 11/06/92

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF AEROSPACE SCIENCES

PAGE 2

TITLE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
DIRECT NUMERICAL SIMULATION OF ACOUSTIC-FLOW INTERACTION IN SOLID ROCKET MOTORS Univ of Colorado	Mansingam Shankar	N 24 11/09/91 \$60,000	BIRKAN 91-NA-263	
CAASERT) INTERFACE MICROSTRUCTURE MODIFICATION BY GAP GRADING AND MICROWAVE CURING Univ of Michigan	Li Victor C	N 36 13/09/91 \$308,250	WU 91-NA-266	
AFOSR WORKSHOP ON SUPERMANEUVERABILITY Lehigh University	Rockwell Donald	N 09 19/09/91 \$5,200	A FANT 91-NA-269	\$5,200 01/11/91 \$5,200
THE EFFECT OF A FLEXIBLE FIBER COVER ON CONTROLLING BOUNDARY LAYER FLOW AND HEAT TRANSFER Duke University	Sejan Adrian	N 36 20/09/91 \$61,000	A FANT 91-NA-270	\$11,000 01/02/92 \$61,000
DYNAMIC ANALYSIS OF TOPOLOGICAL CHANGES IN MECHANICAL SYSTEMS WITH INTERMITTENT MODES OF OPERATION Univ of Illinois	Abrouche Farid	N 36 23/09/91 \$256,589	WU 91-NA-273	
EVOLUTION AND INSTABILITIES OF A CRACK WITH A PROCESS ZONE. EXPERIMENTAL AND THEORETICAL STUDIES Univ of Illinois	Chudnovsky A	N 24 25/09/91 \$351,755	JONES 91-NA-277	
COMPUTER SUPPORT FOR PAY COSNER, MCAIR Air Force Weapons Lab	Mages Mary Ann	N 12 11/09/91 \$10,000	A SAKELL 91-NA-264	\$16,444 01/10/91 \$16,444
COMPUTER SUPPORT FOR PAY COSNER MCAIR Air Force Weapons Lab	Mages Mary Ann	N 10 11/09/91 \$10,000	A SAKELL 91-NA-265	\$10,000 01/10/91 \$10,000
WORKSHOP ON MULTIPLE SITE DAMAGE IN AGING AIRCRAFT Warner Robins Air Logistics Center	Reister Daniel	N 04 26/07/91 \$20,000	A WU 91-NA-230	\$20,000 10/08/91 \$20,000

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
DEVELOPMENT & APPLICATION OF NEW ALGORITHMS FOR THE SIMULATION OF VISCOS COMPRESSIBLE FLOWS WITH MOVING BODIES IN THREE DIMENSIONS George Washington University	Lerner Reinold	R 36 26/07/91 \$372,269	A SAKELL 91-NA-229	\$118,748 01/11/91 \$372,269
REACTION RATE ENGINEERING MODELS FOR FATIGUE CRACK GROWTH Kozin, Bordenoff & Associates Inc	Bordenoff John	N 24 29/08/91 \$142,245	WU 91-NA-257	
STOCHASTIC LINEARIZATION AND NONLINEARIZATIONS: REVISITED AND IMPROVED Florida Atlantic University	Ellenokoff I	N 36 15/07/91 \$192,893	WU 91-NA-223	
(CASEPT) FRACTO-EMISSION FROM METAL-CERAMIC INTERFACES Washington State University	Jickinson J Thomas	N 12 25/09/91 \$170,031	WU 91-NA-278	
SURFACE BOUNDARY CONDITIONS AND RELATED TECHNICAL ISSUES CONCERNING SUPPLY EQUATIONS FOR TWO-DIMENSIONAL HYPERSONIC FLOW Univ of California	Linong Xiaolin	N 24 15/07/91 \$62,759	A SAKELL 91-NA-221	\$23,132 01/11/91 \$62,759
THEORIES OF TURBULENT COMBUSTION IN HIGH SPEED FLOWS Univ of California	Williams Forman	N 36 23/09/91 \$405,808	TISHKOFF 91-NA-274	
STABILITY OF CIRCULAR VORTICES Univ of California, San Diego	Carnevali George	N 24 03/09/91 \$250,494	MCMICHAEL 91-NA-259	
THERMO-MECHANICAL ENVIRONMENTAL DAMAGE IN THE FIBER REINFORCED K23/SIGMA 1240 FIBERED METAL MATRIX COMPOSITE Univ of Rhode Island	Chaner H	N 36 03/07/91 \$362,502	BOYCE 91-NA-212	
DAMAGE EVOLUTION AND FAILURE OF CERAMIC MATRIX COMPOSITES UNDER THERMO-MECHANICAL LOADS Georgia Tech Research Corporation	Talreja Ramesh	N 36 07/03/91 \$312,954	JONES 91-NA-237	

REPORT DATE: 11/20/91  
 PROPOSAL STATUS REPORT ( JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF AEROSPACE SCIENCES

TITLE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
THEORETICAL AND NUMERICAL STUDY OF ASYMMETRIC UNSTEADY LEX AND SLENDER WING VORTICES INCLUDING BREAKDOWN. Univ of Notre Dame	Nelson Robert	N 36 11/07/91 \$190,450	A FANT 91-NA-215	\$44,684 01/11/91 \$180,450
MICROMECHANICAL STUDY OF THE MACROSCOPIC VISCOPLASTICITY UNDER CYCLIC LOADING AND NON-ISOTHERMAL CONDITIONS Rutgers, The State Univ, Coll of Engrg	George	N 24 30/07/91 \$137,542	WU 91-NA-221	
CAASERT) NUMERICAL SIMULATION OF THREE DIMENSIONAL SHOCK WAVE - TURBULENT BOUNDARY LAYER Rutgers, The State Univ, Coll of Engrg	Doyle	N 12 23/09/91 \$15,619	SAKELL 91-NA-271	
ANALYSIS OF CONTACT PROBLEMS WITH CONSIDERATION OF SHAPE, FRICTION, SURFACE CONDITIONS AND TOLERANCES Pennsylvania State University	Ashok	N 36 30/07/91 \$448,353	WU 91-NA-232	\$115,000 15/01/92 \$355,500
DETAILED STUDIES OF SOOT FORMATION IN LAMINAR DISFUSION FLAMES FOR APPLICATION TO MODELING STUDIES Pennsylvania State University	Robert	N 36 26/08/91 \$355,500	A TISHKOFF 91-NA-246	
CAASEFT) EXPERIMENTAL RESEARCH ON CROSSING SHOCK-WAVE/BOUNDARY- LAYER INTERACTIONS Pennsylvania State University	Gary	N 24 29/08/91 \$271,177	SAKELL 91-NA-256	
NOVEL DYNAMICS AND CONTROL ANALYSIS METHODS FOR NONLINEAR STRUCTURAL SYSTEMS Texas A and M Research Foundation	John	N 24 29/08/91 \$203,022	WU 91-NA-254	
REVISIT INHOMOGENEITY PROBLEM VIA MODULUS PERTURBATION AND USE OF THE INVERSE METHOD OF MICROMECHANICS Northwestern University	Mur Toshio	N 36 03/07/91 \$258,917	BOYCE 91-NA-213	\$75,307 01/01/92 \$75,307
SIMULATION IN THE ULTRASONIC SUBMISSION TEST FOR LAYERED ANISOTROPIC PLATES Northwestern University	Leon	? 12 29/08/91 \$75,307	A JONES 91-NA-252	

R-PORT DATE 11/06/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91 )  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF AEROSPACE SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
STABILITY AND DYNAMIC RESPONSE OF STRUCTURES SUBJECTED TO ROTATION INDUCED COMPRESSION Oregon State University	Alan Merrifield	N 24 28/08/91 \$173,429	WU 91-NA-253	
MULTIPLE SCALE METHODS FOR STABILITY ANALYSIS OF FLUID-STRUCTURE SYSTEMS Northwestern University	Wing Liu	N 36 24/09/91 \$293,274	WU 91-NA-276	
NONLINEAR AND CHAOTIC VIBRATIONS OF SANDWICH AND LAMINATED COMPOSITE BEAMS, PLATES AND SHELLS Y. Y. YU Associates	Y Yu	N 36 23/09/91 \$122,660	WU 91-NA-275	
STABILITY AND TRANSITION OF HIGH-SPEED FLOWS OVER REALISTIC GEOMETRIES Ohio State Univ Research Foundation	Thorwald Harbert	N 36 07/08/91 \$293,325	WU 91-NA-238	\$98,350 01/12/91 \$293,325
EXPERIMENTAL MICROMECHANICS OF COMPOSITES Univ of Cincinnati	N Jiyaraman	N 36 15/07/91 \$86,878	BOYCE 91-NA-219	
SHOCK-BOUNDARY LAYER AND UNSTEADY VISCOUS FLOW INTERACTIONS Univ of Cincinnati	Stanley Rubin	N 36 26/08/91 \$191,025	SAKELL 91-NA-251	
STUDY OF A NAVIER-STOKES COMPUTER Princeton University	Daniel Sosenchuck	R 36 25/08/91 \$466,630	SAKELL 91-NA-247	\$70,000 01/12/91 \$539,076
(AAERT) MICROMECHANICS OF HETEROGENEOUS BRITTLE COMPOSITES Princeton University	Jiann-Men Ju	N 24 23/08/91 \$110,519	WU 91-NA-255	
STUDIES ON HIGH-PRESSURE AND UNSTEADY FLAME PHENOMENA Princeton University	Chung-Kin Liu	N 36 15/09/91 \$375,000	TISHKOFF 91-NA-268	\$120,000 01/03/92 \$375,000

REPORT DATE: 11/05/91

PROPOSAL STATUS REPORT C 1 JUL 91 - 30 SEP 91  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF AEROSPACE SCIENCES

PAGE 6

TITLE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
(CAASERT) SUPERSONIC AND HYPERSONIC TURBULENT SHEAR LAYER STUDIES Princeton University	Smits Alexander	N 36 30/09/91 \$273,645	SAKELL 91-NA-279	
THE EFFECT OF MICROCRACKS AND IMPERFECT INTERFACES ON THE THERMOELASTIC RESPONSE AND FAILURE OF COMPOSITES Univ of Pennsylvania	hashin Zvi	N 36 03/07/91 \$499,063	BOYCE 91-NA-211	
THE EFFECT OF NONLINEARITIES ON FLEXIBLE COMPOSITE STRUCTURES Virginia Polytechnic Inst & State Univ	Mayfeh Ali	N 36 26/08/91 \$267,856	A WU 91-NA-248	\$78,000 15/02/92 \$244,519
(CAASERT) MAXIMIZING VTOL & POST-STAFF FOR US VECTORED AIRCRAFT Technion-Israel Inst of Technology	Gol-ur Benjamin	N 36 30/08/91 \$150,000	FANT 91-NA-258	
NASA AMES COMPUTER GRAPHICS SUPPORT FOR PARVIZ MOIN NASA - Ames Research Center	Tagallo Bob	N 09 09/08/91 \$15,000	A SAKELL 91-NA-239	\$15,000 01/01/92 \$15,000
STOCHASTIC MODAL MULTIFURCATION IN NONLINEAR STRUCTURES WITH INTERNAL RESONANCE Wayne State University	Iranian Raouf	N 36 26/08/91 \$274,683	WU 91-NA-245	
EXPERIMENTAL AND ANALYTICAL MECHANICAL BEHAVIOR OF MOLLUSK SHELLS Case Western Reserve University	Heuer A	N 35 04/09/91 \$255,494	JONES 91-NA-260	
PROPULSION RESEARCH ON THE HYBRID PLUMET PLASMA ROCKET Massachusetts Institute of Technology	Chan-Y-Ling F	R 12 26/03/91 \$120,000	A SIRKAN 91-NA-249	\$120,000 01/02/92 \$120,000
3D ANALYSIS AND VERIFICATION OF FRACTURE GROWTH MECHANISMS IN FIBER-REINFORCED CERAMIC COMPOSITES Massachusetts Institute of Technology	Cleary Michael	R 09 23/09/91 \$43,911	JONES 91-NA-272	

REPORT DATE 11/06/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF AEROSPACE SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
EXPERIMENTAL STUDY OF SHOCK-VISCOUS INTERACTION IN A SUPERSONIC STREAM Polytechnic Institute of New York	Kelkhoran Iraq	N 36 17/07/91 \$396,565	SAKELL 91-NA-226	996,941 01/01/92 \$294,533
INTERACTION OF TURBULENCE WITH COMPLEX SHOCK WAVES Stanford University	Moin Parviz	P 36 11/07/91 \$413,095	A SAKELL 91-NA-214	
MICROMECHANICS EVALUATION OF FAILURE CRITERIA IN COMPOSITES DESIGN Stanford University	Tsai Stephen	N 60 15/07/91 \$679,365	BOYCE 91-NA-218	
TURBULENCE SPOT GENERATION AND GROWTH RATES IN A COMPRESSIBLE BOUNDARY LAYER Syracuse University	Ligruff John	N 26 17/07/91 \$235,663	A FANT 91-NA-225	964,975 15/10/91 \$235,663
LARGE BODY SIMULATION OF HEAT TRANSFER ON TURBINE BLADES Stanford University	Fenzler Joel	N 24 15/09/91 \$327,365	FANT 91-NA-267	
SUPPORT FOR THE COMBUSTION INSTITUTE Combustion Institute	Calcote H.	R 12 19/08/91 \$10,000	BIRKAN 91-NA-243	
NONLINEAR DYNAMICS OF PRESSURE OSCILLATIONS WITH STOCHASTIC SOURCES IN COMBUSTION CHAMBERS California Institute of Technology	Culick F	N 12 19/08/91 \$133,597	BIRKAN 91-NA-244	
RESEARCH ON ELECTROSTATIC PROPULSION USING C60 MOLECULES California Institute of Technology	Culick Fev	N 36 09/09/91 \$324,300	BIRKAN 91-NA-262	
DEVELOPMENT OF GUIDELINES FOR THE APPLICATION OF A NEURAL DISERVER FOR STATE ESTIMATION IN THE ACTIVE CONTROL OF STRUCTURAL VIBRATIONS West Virginia University	Apollitano Marcello	N 36 15/07/91 \$240,597	WU 91-NA-217	

REPORT DATE 11/06/91  
PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF AEROSPACE SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
THE MICROMECHANICS OF FRACTURE ALONG/MONOLYMER INTERFACES Cornell University	fu1 Chung-Yuen	N 24 26/08/91 \$199,934	JONES 91-NA-250	
STRUCTURE AND CONTACT OF THE WALL REGION IN A TURBULENT BOUNDARY LAYER Cornell University	Lumley	R 36 05/09/91 \$1,105,588	MCMICHAEL 91-NA-261	

J

REPORT DATE 11/06/91

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

PAGE 1

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
CHEMISTRY INVOLVING THE PREPARATION, ISOLATION, AND IMMOBILIZATION OF III-V COMPOUND SEMICONDUCTOR NANOCRYSTALS AND QUANTUM DOTS Duke University	Wells Richard	N 12 08/07/91 \$210,440	ERSTFELD 91-NC-205	
TRIBOLOGY OF MOLECULARLY-THIN PERFLUORETHER FILMS Univ of Illinois	Granick Steve	N 12 15/07/91 \$150,048	BURGGRAF 91-NC-215	
INVESTIGATION OF SEMICONDUCTOR-GLASS COMPOSITES FOR NON-LINEAR, GUIDED-WAVE OPTICAL APPLICATIONS Univ of Florida	Simmons Joseph	N 12 15/07/91 \$132,360	ERSTFELD 91-NC-216	
THE NUCLEATION OF CRYSTALLINE FILMS FROM VAPOR PHASE REACTANTS Brown University	Sheldon Brian	N 12 19/07/91 \$50,000	ERSTFELD 91-NC-223	
FLUIDS INCLUDING LUBRICANTS UNDER EXTREME CONDITIONS OF HIGH PRESSURE, HIGH TEMPERATURE AND CONFINEMENT Univ of Illinois	Jones Jiri	N 12 22/07/91 \$161,408	ERSTFELD 91-NC-224	
SELECTIVE AREA SYNCHROTRON RADIATION INDUCED DEPOSITION OF CARBON ON SILICON Univ of Wisconsin	Rosenberg Richard	N 12 22/07/91 \$140,100	ERSTFELD 91-NC-227	
1992 SAMUEL SYMPOSIUM Univ of Florida	Bartlett Rodney	N 12 25/07/91 \$10,000	BURGGRAF 91-NC-231	
ELECTRODEPOSITED NANOSCALE OPTICAL MATERIALS Univ of Missouri	Switzer Jay	N 12 29/07/91 \$166,100	A ERSTFELD 91-NC-236	
TAILORED INORGANIC AND ORGANOMETALLIC POLYMERS Univ of Michigan	Laine Richard	N 12 29/07/91 \$170,771	ERSTFELD 91-NC-237	



REPORT DATE 11/06/91  
 PROPOSAL STATUS REPORT C I JUL 91 - 30 SEP 91  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
SINGLE CRYSTAL FILMS AND NANOPARTICLES OF ORGANIC MATERIALS: PREPARATION AND NON-LINEAR OPTICAL PROPERTIES Auburn University	Thakur Mrunal	N 12 19/08/91 \$69,092	LEE 91-NC-252	
KINETICS OF ELEMENTARY REACTIONS: THE EFFECTS OF ROTATIONAL ENERGY ON MOLECULAR REACTIONS Univ of Illinois	Gordon Robert	N 12 04/09/91 \$143,866	BERMAN 91-NC-264	
ELECTROCHEMICAL AND SPECTROSCOPIC STUDIES OF MOLTEN HALIDES Univ of Tennessee	Mamantov Gleb	P 12 05/09/91 \$135,329	A WILKES 91-NC-265	\$135,329 15/11/91 \$135,329
DYNAMICS OF GAS-SURFACE INTERACTIONS Univ of Chicago	Sibener Steven	R 11 12/09/91 \$130,024	A BURGGRAF 91-NC-267	\$130,024 01/12/91 \$130,024
BOND SELECTIVE CHEMISTRY BEYOND THE ADIABATIC APPROXIMATION Univ of Chicago	Butler Laurie	N 12 16/09/91 \$251,998	BERMAN 91-NC-269	
RESEARCH TRAINING IN ENERGETIC MATERIALS' BOND SELECTIVE CHEMISTRY Univ of Chicago	Butler Laurie	N 12 16/09/91 \$80,416	BERMAN 91-NC-270	
ADVANCED NONLINEAR POLYMERIC OPTICAL WAVEGUIDES AND DEVICES Univ of Florida	Ramaswamy R.	N 12 20/09/91 \$151,845	LEE 91-NC-273	
HIGH STRAIN-RATE PROPERTIES OF CERAMIC MATRIX COMPOSITES Univ of Delaware	Hall I.	N 12 27/09/91 \$127,090	D BURGGRAF 91-NC-276	
POLYMER SCIENCE AND ENGINEERING: THE SHIFTING RESEARCH FRONTIER National Research Council	Raber Douglas	N 12 23/08/91 \$25,000	LEE 91-NC-258	

REPORT DATE: 11/05/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
GAS PHASE IMPROVED LASER STUDIES Physical Sciences, Inc	Javis Steven	N 12 26/08/91 \$56,000	BERMAN 91-NC-259	
HIGH TEMPERATURE CHEMISTRY OF CARBON OXIDE ANTIOXIDANTS FOR C/C COMPOSITES: CHEMICAL REACTIVE MODELING WITH GRADIENT SENSIT. ANALY Aerovyna Research Inc	Trohn R.	N 12 23/08/91 \$150,088	BURGGRAF 91-NC-262	
AN INVESTIGATION OF THE KETTING, BONDING AND OXIDATION PROTECTION PROPERTIES OF POLYMER GLASSES ON CARBON SURFACES General Electric Co	McKee Douglas	N 12 03/08/91 \$105,447	BURGGRAF 91-NC-247	
PHOTODISSOCIATION DYNAMICS OF CLUSTER IONS Univ of California	Boyers Michael	R 12 10/07/91 \$153,496	A BERMAN 91-NC-210	\$153,496 15/11/91 \$153,496
FUNDAMENTAL INVESTIGATIONS OF CREEP AND FATIGUE IN DISPERSION STRENGTHENED POLYIMIDE ALLOY Univ of California	Mukherjee A.	N 12 16/08/91 \$176,000	A ROSENSTEIN 91-NC-251	\$176,000 01/02/92 \$543,000
3D INITIO MOLECULAR DYNAMICS SIMULATIONS OF STRATEGIES LEADING TO ENHANCED OXIDATION RESISTANCE OF CARBON-CARBON COMPOSITES Univ of California	Wears John	N 12 22/08/91 \$231,599	BURGGRAF 91-NC-256	
ATM INTERNATIONAL SYMPOSIUM ON MOLECULAR BEAMS Univ of California	Lee Yuan	N 12 18/09/91 \$11,245	BERMAN 91-NC-271	
SPECIALIST MEETING ON MICROWAVE RADIOMETRY AND REMOTE SENSING APPLICATIONS National Oceanic and Atmospheric Admin	Weststar Ed	N 12 11/07/91 \$5,000	STOBIE 91-NC-211	
GAS PHASE STUDIES OF BORN, SILICON, AND ALUMINUM- RELATIONSHIPS TO OXIDATION IN CARBON-CARBON COMPOSITES Univ of Colorado at Denver	Jamrauer Robert	N 12 26/08/91 \$205,675	ERSTFELD 91-NC-246	

REPORT DATE 11/09/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
POLYMER PRECURSOR ROUTES TO NANOSCALE CERAMIC COMPOSITES Konselner Polytechnic Institute	Interrante Leonard	N 12 15/07/91 \$116,344	ERSTFELD 91-NC-217	
SECOND INTERNATIONAL SYMPOSIUM ON ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY Pennsylvania State University	Maddonald Ditby	N 12 23/07/91 \$5,000	WILKES 91-NC-234	
SOLUBLE BORON-CERAMIC POLYMERS: DESIGNED MOLECULAR ROUTE TO OXIDATIVELY RESISTANT BORON-CARBONS Pennsylvania State University	Chung T.	N 12 21/08/91 \$143,188	BURGGRAF 91-NC-253	
ISOTHERMAL OXIDE-WATER PHASE DIAGRAMS: A NOVEL DETERMINATION METHOD Pennsylvania State University	Grutzack Michael	N 12 22/08/91 \$129,235	ERSTFELD 91-NC-257	
EXTENDED LIFE OXIDATION PROTECTION FOR CARBON/CARBON COMPOSITES THROUGH INHIBITION OF INTERNAL OXIDATION Ohio State Univ Research Foundation	Rapp Robert	N 12 08/07/91 \$216,784	BURGGRAF 91-NC-206	
A NEW APPROACH TO MOLECULAR COMPOSITES Univ of Massachusetts	Stein Richard	N 12 16/09/91 \$60,000	LEE 91-NC-268	
SYNTHESIS AND PROPERTIES OF COMPLEX POLYARYLENE VINYLENES Univ of Massachusetts	Karasz Frank	N 12 25/09/91 \$108,642	LEE 91-NC-275	
SURFACE CHEMISTRY OF DIAMOND SINGLE CRYSTALS Univ of Pittsburgh	Vates John	N 12 17/07/91 \$181,562	BURGGRAF 91-NC-221	
NOVEL MATERIALS AND DEVICES FROM SELF-ASSEMBLED PERIODIC STRUCTURES Univ of Pittsburgh	Asher Sanford	N 12 01/08/91 \$180,537	ERSTFELD 91-NC-243	

REPORT DATE 11/19/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
SYMPOSIUM ON BETTER CERAMICS THROUGH CHEMISTRY V Materials Research Society	Jallance John	N 12 13/07/91 \$25,234	ERSTFELD 91-NC-214	
1992 HRS SPRING MEETING "NOVEL FORMS OF CARBON" Materials Research Society	Renschler C.	N 12 26/09/91 \$2,000	BURGGRAF 91-NC-260	
NON-TRANSPARENT ARC PLASMA SYNTHESIS OF NANOMETER CERAMIC PARTICLES: MECHANISMS AND KINETICS OF NUCLEATION AND GROWTH University of Idaho	Patrick Patrick	N 12 15/08/91 \$159,695	BURGGRAF 91-NC-249	
X-RAY ABSORPTION SPECTROSCOPY OF ELECTROCHEMICALLY GENERATED SPECIES Univ of Cincinnati	Richard Richard	N 12 25/07/91 \$160,993	WILKES 91-NC-232	
POLYMER FILMS FOR SECOND ORDER NONLINEAR OPTICS Oklahoma State University	Ford Darren	N 12 24/07/91 \$81,321	LEE 91-NC-230	
ANIONICALLY-CONDUCTIVE ULTRATHIN FILM COMPOSITE MEMBRANES Colorado State University	Martin Charles	N 12 09/08/91 \$105,100	WILKES 91-NC-248	
STUDIES OF COMPUTED MATERIALS FOR PHOTONIC DEVICE APPLICATIONS Michigan State University	Blanchard Gary	N 12 16/08/91 \$82,774	LEE 91-NC-250	
THEORETICAL INVESTIGATIONS OF THE DYNAMICS OF HIGH-ENERGY DENSITY MATERIALS UNDER MATRIX-ISOLATION CONDITIONS Oklahoma State University	Ruff Lionel	N 12 09/09/91 \$70,448	BURGGRAF 91-NC-266	
THE EFFECT OF PHYSICAL AGING ON THE STRUCTURE OF POLYMER ELECTROLYTES AND THE TEMPORAL STABILITY OF SECOND HARMONIC GENERATION Carnegie-Mellon University	Patterson G.	N 12 28/07/91 \$96,500	LEE 91-NC-208	

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

REPORT DAY: 11/05/91

TITLE	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
CHEMICAL PROCESSING OF NOVEL CERAMICS GLASSES AND COMPOSITES FOR MICROELECTRONIC PACKAGING Carnegie-Mellon University	Kunta Prashant	N 12 17/07/91 \$112,137	HEDBERG 91-MC-219	\$36,491 01/12/91 \$36,491
STUDIES IN LEWIS ACID AND SUPERACID IONIC LIQUIDS State University of New York	Osteryoung Robert	N 07 26/08/91 \$36,491	A WILKES 91-MC-251	\$36,491 01/12/91 \$36,491
1992 BODEN RESEARCH CONFERENCE ON CORROSION Corion Research Conference Inc	Macedonald Dobby	N 12 30/07/91 \$3,000	WILKES 91-MC-240	
OPTICAL ASPECTS OF STRONGLY BOUND COVALENT SOLIDS Cyrus State University	Lewis Robert	N 12 15/07/91 \$155,363	BURGGRAF 91-MC-218	
SYNTHESIS AND REACTION OF FUNCTIONAL CERAMIC COMPOSITES Case Western Reserve University	Jukanik Chaim	N 12 22/07/91 \$99,953	HEDBERG 91-MC-225	
PEROXO COMPLEXES OF CHROMIUM(IV). BIFUNCTIONAL HIGH ENERGY MATERIALS Kent State University	Gould Edwin	N 12 13/07/91 \$61,909	HEDBERG 91-MC-213	
DEVELOPMENT OF QUANTUM CHEMICAL METHODS AND THEIR APPLICATIONS TO SIGMA-CONJUGATED POLYMERS Georgetown University	Kertesz Miklos	N 12 02/08/91 \$43,990	BURGGRAF 91-MC-244	
NOVEL HANDBASE CHEMICAL STRUCTURE OBTAINED THROUGH INORGANIC SYNTHESIS Massachusetts Institute of Technology	Papadethymiou Georgia	N 12 17/07/91 \$117,913	ERSTFELD 91-MC-220	
SYNTHESIS, CHARACTERIZATION, AND INTERACTIONS OF WELL DEFINED CERAMIC POLYMERS Clarkson University	Metijevic Egon	N 12 04/09/91 \$44,350	ERSTFELD 91-MC-263	

PROPOSAL STATUS REPORT (1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF CHEMICAL AND ATMOSPHERIC SCIENCES

REPORT DATE: 11/30/91

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYP=/ RECEIVED MONTHS AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
STRUCTURE/PROPERTY RELATIONSHIPS FOR THIRD-ORDER ORGANIC NONLINEAR OPTICAL MATERIALS California Institute of Technology	Harder Seth	N 12 17/07/91 \$156,505	LEE 91-NC-222	
STABILITY AND RADIATIONLESS JUMP AND ENERGY TRANSFER, THE ROLE OF ACTUAL AND AVOIDED SURFACE CROSSINGS Johns Hopkins University	Yarkony David	N 12 24/09/91 \$29,248	SURGGRAF 91-NC-274	
INTERACTION BETWEEN MICROORGANISMS AND POLYMERS USED FOR LAYERING IN THE ELECTRONICS INDUSTRY Harvard University	Witnell Ralph	N 12 22/07/91 \$125,000	A MEDBERG 91-NC-226	\$125,000 01/02/92 \$392,012
VACUUM ULTRAVIOLET STUDIES OF MOLECULAR DYNAMICS Cornell University	Houston Paul	N 12 19/09/91 \$124,234	A SERMAN 91-NC-272	\$124,234 01/01/92 \$257,672

REPORT DATE: 11/05/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF ELECTRONIC AND MATERIAL SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
HIGH-FREQUENCY PROPERTIES OF TWO-DIMENSIONAL JOSEPHSON JUNCTION ARRAYS Univ of Maryland	Loop Christopher	N 36 02/07/91 \$230,000	A WEINSTOCK 91-NE-205	\$50,000 01/11/91 \$230,000
PURITY-RELATED OPTICAL TRANSMISSION FROM SILICON-CERAMICUM ALLOYS AND SUPERLATTICES Univ of Rochester	Hall Dennis	N 36 12/07/91 \$434,709	POMRENKE 91-NE-208	
HIGH SPEED HETEROSTRUCTURE OPTICAL MATERIALS & DEVICES Univ of Illinois	Yorkoc Harris	P 24 16/07/91 \$920,055	A WITT 91-NE-209	\$298,659 01/01/92 \$920,055
MICROSTRUCTURAL ASPECTS OF DEFORMATION AND FAILURE OF METAL-MATRIX COMPOSITES UNDER DYNAMIC LOADS 2PI International	Shockey Donald	N 35 16/07/91 \$453,882	A ROSENSTEIN 91-NE-211	\$95,996 01/02/92 \$453,882
EXTRACTION OF RADIATION WITH JTH AND STA-LIKE FUNNEL JUNCTIONS: APPLICATION TO INFRARED AND OPTICAL DETECTION Temple University	Sullivan Thomas	N 36 16/07/91 \$255,000	WEINSTOCK 91-NE-212	
MESFET GRID OSCILLATORS-INJECTION-LOCKING: POWER DESIGN AND MODULATION Univ of Colorado	Popovic Zoya	N 36 20/08/91 \$463,294	WITT 91-NE-225	
A STUDY OF INTRACRYSTAL-XYL-YAG LPI-LAYERS ON GAAS AND ZNP (HIL) VICINAL SURFACES FOR USE IN DEVICE STRUCTURES Univ of Virginia	Tome Elias	N 24 20/08/91 \$219,834	POMRENKE 91-NE-226	
MONTE CARLO SIMULATIONS OF ELECTRON AND HOLE TRANSPORT IN COMPOUND SEMICONDUCTOR CDS AND INAS Univ of Virginia	Shur Michael	N 24 20/08/91 \$10,184	POMRENKE 91-NE-227	
A PROPOSAL FOR A STUDY OF LASER PHYSICS Yale University	Sennett William	N 24 20/08/91 \$335,828	SCHLOSSBER 91-NE-228	

REPORT DATE: 11/30/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91 )  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF ELECTRONIC AND MATERIAL SCIENCES

TITLE (TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
APPLICATION OF MASSIVELY PARALLEL COMPUTERS TO QUANTUM SCATTERING PROCESSES UNIV of Utah	Morris Frank	N 36 20/08/91 \$450,407	BARKER 91-NE-229	\$110,000 01/01/92 \$410,000
RESEARCH IN SCANNING TUNNEL MICROSCOPY UNIV of Arizona	Savid	R 36 23/08/91 \$405,000	A SCHLOSSER 91-NE-232	
(AAERT) A STUDY OF MICROWAVE FREQUENCY MODIFICATION UNIV of Tennessee	Alexeff Igor	N 12 26/08/91 \$171,621	BARKER 91-NE-233	
FINANCIAL SUPPORT OF 1992 JANUARY SYMPOSIA UNIV of Florida	Bartlett Rodney	N 08 26/08/91 \$5,000	KELLEY 91-NE-235	
MOLECULAR INTERACTIONS AND PROPERTIES WITH MANY-BODY METHODS UNIV of Florida	Bartlett Rodney	R 12 26/08/91 \$143,593	A KELLEY 91-NE-236	\$143,593 01/12/91 \$143,593
DEVELOP ELECTRICALLY PUMPED BODIUM DOPED SILICON LASERS UNIV of Colorado	Feuerstein Robert	N 36 11/09/91 \$225,000	POMRENKE 91-NE-247	
FREQUENCY MODIFICATION OF D.F. SIGNALS UNIV of Tennessee	Alexeff Igor	R 06 12/09/91 \$39,097	BARKER 91-NE-249	
(AAERT) SUPERCONDUCTORS AND NONLINEAR OPTICAL MATERIALS BASED ON MOLECULAR GUEST-HOST SYSTEMS Brown University	Lawandy Nabil	N 36 10/09/91 \$268,899	SCHLOSSER 91-NE-252	
OPTOELECTRONIC NEURAL NETWORK IMPLEMENTATION IBM Corporation	Haney Michael	R 24 10/09/91 \$300,263	CRAIG 91-NE-254	



REPORT DATE 11/06/91

PAGE 3

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91 )  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF ELECTRONIC AND MATERIAL SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
STUDY OF HIGHLY-CORRELATED SYSTEMS Univ of Oklahoma	Watson Deborah	N 36 17/09/91 \$528,655	KELLEY 91-NE-255	\$132,765 01/01/92 \$408,678
THE SYNTHESIS OF MICROWAVE MAGNETIC MATERIALS AS ORIENTED SPUTTERED FILMS Queens College	Cadieu Fred	N 36 18/09/91 \$409,677	A WEINSTOCK 91-NE-257	\$65,505 01/01/92 \$221,897
HIGH POWER, ULTRA-LONG-PULSED GYROFFON BACKWARD WAVE OSCILLATORS Univ of Michigan	Gilgenbach Ronald	N 24 23/09/91 \$221,397	A BARKER 91-NE-258	\$84,974 15/01/92 \$239,976
COLLISIONAL PROCESSES INVOLVING ATMOSPHERIC GASES Univ of Wisconsin	Lin Chun	N 36 24/09/91 \$752,302	KELLEY 91-NE-260	
THIN MAGNETIC FILMS Univ of Minnesota, DRTA	Dahlberg E	P 36 30/08/91 \$239,976	A WEINSTOCK 91-NE-241	
PARAM STUDY AND DEVICE APPLICATION OF LPEE GROWTH OF GAINSSB/GASO North Carolina A&T State University	Iyer Shanthi	N 36 02/07/91 \$419,174	POMRENKE 91-NE-204	
COMPACT MILLIMETER WAVE DEVICES: DIELECTRIC LOADED WIDEBAND GYRO-TWT, HIGH VOLTAGE CARM, NEGATIVE ENERGY CRM PERIOMAGNETRON Univ of California	Luhmann, Jr. Navillo	P 12 30/08/91 \$100,000	A BARKER 91-NE-240	\$100,000 01/12/91 \$100,000
LINEAR PLASMON RESONANCES IN TUMBLE, QUASI-3D ELECTRON GASES Univ of California	Gwinn Elizabeth	N 36 10/09/91 \$301,149	BARKER 91-NE-245	\$10,000 01/10/91 \$10,000
BURNISH LIQUID HELIUM TO UNIVERSITY OF CALIFORNIA SAN DIEGO Univ of California, San Diego	Jynes Robert	N 36 14/07/91 \$30,000	A WEINSTOCK 91-NE-213	

REPORT DATE 11/06/91

PROPOSAL STATUS REPORT C 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF ELECTRONIC AND MATERIAL SCIENCES

PAGE 4

TITLE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
FREE LASERS AND ELECTRO-OPTICS SOCIETY Inst. of Electrical & Electronics Engrs	Wentman Robert	N 12 19/07/91 \$5,435	POMRENKE 91-NE-214	
FOURTH INTERNATIONAL CONFERENCE ON INDIUM PHOSPHIDE AND RELATED MATERIALS Inst. of Electrical & Electronics Engrs	Lorenzo Joe	N 05 10/09/91 \$5,000	POMRENKE 91-NE-246	
EIGHTH INTERNATIONAL CONFERENCE ON LASERS AND APPLICATIONS Society for Optical/Quantum Electronics	Corcoran V. J.	N 06 27/09/91 \$10,000	A SCHLOSSER 91-NE-263	\$10,000 01/12/91 \$10,000
SECOND INTERNATIONAL SYMPOSIUM ON ATOMIC LAYER EPITAXY North Carolina State University	Bedair Salah	N 12 12/09/91 \$2,000	POMRENKE 91-NE-250	
INVESTIGATION OF GAIN EPITAXIAL LAYERS GROWN BY MOLECULAR BEAM EPITAXY AT LOW TEMPERATURE MIT -- Lincoln Lab	Galama Arthur	N 36 19/08/91 \$574,677	WITT 91-NE-224	
PRECISE TIME AND TIME INTERVAL RSD STUDY Ivax Research Laboratory	White Joseph	N 12 11/09/91 \$20,000	A KELLEY 91-NE-248	\$20,000 01/09/91 \$20,000
DEVELOPMENT OF PROCESS TECHNOLOGY FOR FABRICATION OF MESOSCOPIC DEVICES Jregon Graduate Center for Study & Resch	Sigmon Thomas	N 36 30/09/91 \$759,177	A WITT 91-NE-264	
THIN FILM ROUTES TO NEW MATERIALS Jregon State University	Sleight Arthur	N 36 11/07/91 \$265,000	A WEINSTOCK 91-NE-207	\$90,000 01/11/91 \$265,000
NOVEL OPTO-ELECTRONIC DEVICES BASED ON CHARGE STORAGE MECHANISM IN II-VI SEMICONDUCTOR ALLOYS Kansas State University	Jiang Hongming	N 36 19/08/91 \$224,714	POMRENKE 91-NE-223	

REPORT DATE 11/26/91

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91 )  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF ELECTRONIC AND MATERIAL SCIENCES

PAGE 5

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
LOW-RESISTANCE, HIGH-POWER-EFFICIENCY VERTICAL CAVITY MICROLASERS Photonics Research Inc.	Jewell Jack	N 36 23/09/91 \$842,000	CRAIG 91-NE-259	\$142,000 01/01/92 \$573,500
INVESTIGATION OF FRACTURE RESISTANCE IN MICROSTRUCTURES OF INTERMETALLIC MATERIALS FOR HIGH TEMPERATURE SERVICE Southwest Research Institute	Davidson David	N 36 16/07/91 \$573,500	A ROSENSTEIN 91-NE-210	\$142,000 01/01/92 \$573,500
COHERENT SOFT X-RAY GENERATION BY HARMONIC FREQUENCY CONVERSION IN A PERFORMED PLASMA Princeton University	Suckewer Szymon	N 36 16/09/91 \$860,328	SCHLOSSBER 91-NE-253	\$142,000 01/01/92 \$573,500
SUPERCONDUCTING HIGH TC THIN-FILM VORTEX-FLOW TRANSISTOR Parkview Works, Inc.	Hohenwarter Jeff	N 24 03/09/91 \$499,757	A WEINSTOCK 91-NE-242	\$187,409 02/01/92 \$499,757
PASOTRON TECHNOLOGY Hughes Aircraft Co	Sutler Jennifer	N 24 21/08/91 \$302,388	A BARKER 91-NE-231	\$120,000 01/01/92 \$302,888
JACKHARD-WAVE OSCILLATOR INVESTIGATIONS IN THE RAMAN REGIME Univ of New Mexico	Schamiloglu Edi	R 16/09/91 \$200,018	A BARKER 91-NE-251	\$200,018 01/01/92 \$200,018
INVESTIGATION OF NOVEL HYBRID SUPERCONDUCTORS-SEMICONDUCTOR HETEROSTRUCTURE JUNCTION AND TRANSISTORS State University of New York	Gurvitch Michael	N 36 03/07/91 \$230,000	A WEINSTOCK 91-NE-206	\$50,000 15/10/91 \$230,000
ENHANCED QUANTUM DOT NONLINEAR OPTICAL MATERIALS Materials Technologies Corporation	Pike John	N 06 05/08/91 \$64,428	A CRAIG 91-NE-217	\$63,900 15/11/91 \$64,428
(ASERT) INVESTIGATION OF CHARGED PARTICLE DYNAMICS IN ELECTROMAGNETIC FIELDS Texas Tech University	Zieher Klaus	N 13 26/08/91 \$169,350	BARKER 91-NE-234	\$63,900 15/11/91 \$64,428

REPORT DATE 11/06/91

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF ELECTRONIC AND MATERIAL SCIENCES

PAGE 6

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE STARTY DATE TOT AMT
ACROMOVE PROPAGATION AND ATTENUATION IN MAGNETOPLASMAS Massachusetts Institute of Technology	Lee Min-Chang	N 12 19/08/91 \$75,000	A BARKER 91-NE-221	\$75,000 01/12/91 \$75,000
(MRSERT) THEORETICAL AND COMPUTATIONAL INVESTIGATION OF THE DOUBLE STREAM CYCLOTRON LASER Massachusetts Institute of Technology	Dekefi George	N 36 25/09/91 \$150,000	BARKER 91-NE-262	
2-D OPTICAL MEMORY DISK California Institute of Technology	Psaltis Demetri	N 36 17/09/91 \$399,900	CRAIG 91-NE-256	
MULTI-CHIP MODULES: DESIGN FOR MANUFACTURABILITY West Virginia University	Teeksbury Stuart	N 36 26/09/91 \$525,109	WITT 91-NE-237	
NOVEL METHODS OF ACCELERATION Cornell University	Nation John	N 12 21/08/91 \$210,000	A BARKER 91-NE-230	\$210,000 01/02/92 \$210,000
(MRSERT) LONG RANGE PROXIMITY EFFECT IN THIN FILM SUPERCONDUCTORS Cornell University	Parpia Jeevak	N 36 04/09/91 \$150,000	WEINSTOCK 91-NE-243	
INVESTIGATION OF THE PROPERTIES OF THIN FILM SUPERCONDUCTING STRUCTURES WITH MODIFIED TC'S Cornell University	Parpia Jeevak	N 36 04/09/91 \$60,000	WEINSTOCK 91-NE-244	
INVESTIGATION OF GaAs EPITAXIAL LAYERS GROWN BY MOLECULAR BEAM EPI TAXY AT LOW TEMPERATURES Lincoln Laboratory/MIT	Calawa Arthur	N 36 05/08/91 \$574,677	A WITT 91-NE-218	\$194,900 01/10/91 \$574,676

REPORT DATE 11/05/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

FILE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
LOCAL PREDICTOR-CORRECTOR OF THE EULER EQUATIONS AND ITS NUMERICAL APPLICATIONS UNIV of Michigan	Leer	N 36 01/07/91 \$320,016	NACHMAN 91-NM-305	\$59,184 01/12/91 \$231,480
DEVELOPMENT OF THE THEORY AND ALGORITHMS FOR SYNTHESIS OF REFLECTOR ANTENNA SYSTEMS Satis Inc	Oliker	R 36 01/07/91 \$235,316	A NACHMAN 91-NM-309	
THE FORMULATION & APPLICATION OF A TABU SEARCH FRAMEWORK TO PRODUCTION SCHEDULING PROBLEMS UNIV of Texas	Barnes	N 24 12/07/91 \$161,784	GLASSMAN 91-NM-312	
NUMERICAL METHODS FOR LARGE EIGENVALUE PROBLEMS AND BIFURCATION ANALYSIS UNIV of Minnesota	Saad	N 24 12/07/91 \$335,722	NACHMAN 91-NM-313	
THEORY FOR MULTI-RATE CONTROL SYSTEMS DESIGN BY CONVEX OPTIMIZATION UNIV of VIRGINIA	Meyer	N 36 12/07/91 \$197,898	JACOBS 91-NM-315	
SCALE-SPACE AND FEATURE-BASED ASPECT GRAPHS UNIV of Wisconsin	Dyer	N 36 12/07/91 \$384,754	MARKSMAN 91-NM-319	
SIGNAL PROCESSING FOR TRANSIENT FEATURE EXTRACTION Acare, Inc.	Jagler	N 04 12/07/91 \$47,991	A SJOGREN 91-NM-320	\$47,991 15/09/91 \$47,991
ADAPTIVE CONTROL OF NONLINEAR AND STOCHASTIC SYSTEMS UNIV of Texas	Arzopostathis	N 24 01/08/91 \$97,134	A JACOBS 91-NM-325	\$47,360 15/11/91 \$97,134
STOCHASTIC ADAPTIVE ESTIMATION AND CONTROL UNIV of Maryland	Marcus	N 24 01/09/91 \$97,120	A JACOBS 91-NM-327	\$47,338 15/11/91 \$97,120

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

REPORT DATE 11/09/91

TITLE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
THE FORMAL DEFINITION OF AN INHERENTLY UNAMBIGUOUS DESIGN METHODOLOGY Univ of Texas	Cooke Daniel	R 60 02/08/91 \$434,290	HOLLAND 91-NM-333	
VEHICLE ROUTING WITH STOCHASTIC DEMANDS Univ of Arizona	Dror Moshe	N 36 07/08/91 \$242,301	GLASSMAN 91-NM-334	
NEW METHODS FOR LARGE SCALE LOCAL AND GLOBAL OPTIMIZATION Univ of Colorado	Schnabel Robert	R 24 07/08/91 \$313,539	A GLASSMAN 91-NM-335	\$151,460 01/12/91 \$313,539
GEOMETRICAL AND TOPOLOGICAL ASPECTS OF TIME DOMAIN ANTENNA SYNTHESIS Boston University	Kotluga P. Robert	N 24 09/08/91 \$77,514	A NACHMAN 91-NM-337	\$37,759 01/12/91 \$77,514
ROBUST CONTROL AND IDENTIFICATION Univ of Michigan	Khargonekar Premod	N 36 13/08/91 \$195,485	JACOBS 91-NM-339	
NEW NEURAL ALGORITHMS FOR SELF-ORGANIZED LEARNING Yale University	Moody John	R 12 19/08/91 \$165,624	SUDDARTH 91-NM-343	
NONLINEAR FILTERING FOR OPTIMAL AIR-TO-AIR MISSILE GUIDANCE AND CONTROL Univ of Kentucky	Rishel R	N 36 20/08/91 \$393,752	JACOBS 91-NM-346	
THE MEASURE OF NONHYPERBOLICITY IN CHAOTIC DYNAMICAL SYSTEMS Univ of Maryland	Yorke James	N 36 22/08/91 \$92,850	NACHMAN 91-NM-350	\$35,232 01/01/92 \$110,882
LARGE DEFORMATION FAILURE MECHANISMS IN NONLINEAR SOLIDS Univ of Virginia	Horgan Cornelius	N 36 26/08/91 \$110,482	A NACHMAN 91-NM-353	

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91 )  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

REPORT DATE 11/06/91

REPORT DATE	TITLE (CONT.)	INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
	THE ASYMPTOTIC THEORY OF THE REFLECTION & TRANSMISSION OF A PULSED ELECTROMAGNETIC BEAM FIELD AT A PLANAR INTERFACE SEPARAT. TWO DISP	Univ of Vermont	Quigston	R 12 03/09/91 \$104,546	NACHMAN 91-NM-355	
	OPTIMAL SCHEDULING, ROUTING, AND FLOW CONTROL FOR DATA NETWORKS	Univ of Michigan	Taneketzis	N 36 06/09/91 \$322,711	JACOBS 91-NM-358	
	POPULATION SIZE ESTIMATION, WITH APPLICATION TO MIXTURES	Univ of Missouri	Boin	N 24 10/09/91 \$132,047	SJOGREN 91-NM-360	
	MATHEMATICAL METHODS FOR THE IMPLEMENTATION OF NEURAL NETWORKS	Yale University	Wojciesz	N 36 17/09/91 \$505,252	SUDDARTH 91-NM-363	
	ENVIRONMENTAL STUDIES: MATHEMATICAL, COMPUTATIONAL AND STATISTICAL ANALYSIS	Univ of Minnesota	Friedman	N 07 17/09/91 \$10,000	NACHMAN 91-NM-364	
	CLOSED-FORM SOLUTIONS OF SOME NON-LINEAR PARTIAL DIFFERENTIAL EQUATIONS	Univ of Illinois	Rubel	N 36 17/09/91 \$201,459	D NACHMAN 91-NM-368	\$86,386 01/02/92 \$273,528
	ROBUST FIXED-STRUCTURE CONTROL	Univ of Michigan	Bernstein	N 32 17/09/91 \$273,528	JACOBS 91-NM-369	
	CLASSICAL NUMERICAL METHODS AND APPROXIMATION AND MODELLING PROBLEMS ON STOCHASTIC CONTROL THEORY	Yale University	Fleming	N 36 24/09/91 \$86,972	JACOBS 91-NM-378	
	ADAPTIVE CONTINUATION ALGORITHMS WITH APPLICATION TO COMBUSTION PROBLEMS	Yale University	Smooke	N 36 24/09/91 \$245,514	JACOBS 91-NM-379	

REPORT DATE 11/20/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

TITLE TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
VORTEX CORE DYNAMICS, COMPLEX HELICAL WAVE DECOMPOSITION, ORGANIZATION OF FINE-SCALE TURBULENCE & OTHER RELATED THEORETICAL STUDIES Univ of Houston	Fussain	N 36 27/09/91 \$575,447	NACHMAN 91-NM-380	
REPRESENTING, VERIFYING, AND UPDATING UNCERTAINTY Univ of Rochester	Kyberts Jr Henry	N 36 20/09/91 \$408,476	WAKSMAN 91-NM-382	
RESEARCH IN IMPROVED ASSESSMENT OF SOFTWARE RELIABILITY Georgia Administration University	Singpurwalla N	N 24 21/09/91 \$53,127	A SJOGREN 91-NM-369	\$25,758 01/11/91 \$53,127
STOCHASTIC NETWORK PROBLEMS Georgia Institute of Tech	Serfozo Richard	N 12 01/07/91 \$50,367	A SJOGREN 91-NM-306	\$50,367 01/11/91 \$50,367
CONNECTIVIST REASONING BY ANALOGY: CONNECTIONS AND SYMBOLS RECONCILED New Mexico State University	Varnden John	N 36 01/07/91 \$343,075	WAKSMAN 91-NM-308	
PARTIAL SUPPORT FOR THE SECOND INTERNATIONAL SYMPOSIUM ON ARTIFICIAL INTELLIGENCE AND MATHEMATICS Florida Atlantic University	Hoffman Frederick	N 06 12/07/91 \$14,963	A WAKSMAN 91-NM-317	\$14,963 05/01/92 \$14,963
SEVENTH INTERNATIONAL CONFERENCE ON GRAPH THEORY, COMBINATORICS, ALGORITHMS AND APPLICATIONS Western Michigan University	Alawi Yousef	N 12 06/09/91 \$76,320	GLASSMAN 91-NM-357	
EXTERIOR METHODS FOR LINEAR PROGRAMMING VIA INCENTIVE Univ of California	Chan's Tsu-Shuan	N 24 01/07/91 \$92,106	GLASSMAN 91-NM-304	
ON THE SURVEY PROBLEM Univ of California	Lafmore Lawrence	N 24 13/07/91 \$151,511	GLASSMAN 91-NM-321	



REPORT DATE: 11/06/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
ORDER-RECURSIVE METHODS FOR ADAPTIVE IDENTIFICATION OF FLEXIBLE STRUCTURES WITH APPLICATIONS FOR CONTROL Univ of California	Jabbari	N 24 02/08/91 \$108,040	JACOBS 91-NM-329	
CAASERT DYNAMIC CONSTRAINT NETWORKS Univ of California	Pearl	N 12 23/09/91 \$267,304	WAKSMAN 91-NM-376	
DIRECT COMPUTATION OF CONTROL INFORMATION FROM NONLINEAR IMPLICIT MODELS North Carolina State University	Campbell	N 36 09/09/91 \$133,891	JACOBS 91-NM-359	
CAASERT OPTIMIZATION PROBLEMS IN FUNCTION SPACES North Carolina State University	Kelley	N 36 23/09/91 \$93,618	GLASSMAN 91-NM-377	
THEORETICAL AERODYNAMICS Rensselaer Polytechnic Institute	Cole	A 12 26/07/91 \$92,442	NACHMAN 91-NM-322	\$92,442 01/11/91 \$92,442
MATHEMATICAL MODELS OF NON-LINEAR MECHANICAL AND ELECTRICAL SYSTEMS AND THEIR QUALITATIVE BEHAVIOR Rensselaer Polytechnic Institute	Levi	N 36 02/08/91 \$256,170	A NACHMAN 91-NM-330	\$68,296 01/12/91 \$256,170
DECLARATIVE OBJECT-ORIENTED PROGRAMMING Rutgers, The State University	Shu	N 24 12/07/91 \$124,935	HOLLAND 91-NM-311	
TARGET RECOGNITION BY IMAGE DECOMPOSITION USING GAUSSIAN WAVELET GROUPS WITH PARALLEL IMPLEMENTATION BY A LATTICE BASED NEURCOMPUTER Illinois Institute of Technology	Ben-Aria	N 36 01/07/91 \$231,956	WAKSMAN 91-NM-310	
DECIDING IN TIME Oregon State University	Amoroso	N 36 12/07/91 \$277,193	WAKSMAN 91-NM-316	

REPORT DATE 11/05/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

TITLE	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
MULTI-SENSOR SYSTEMS BASED ON ACTIVE SENSING AND LEARNING	Hageswara S	N 24 01/08/91 \$71,399	WAKSHAN 91-NM-324	
Old Dominion University				
CONFOUNDING IN REGULAR, SINGLE REPLICATE FACTORIAL EXPERIMENTS	Daniel	N 36 13/09/91 \$61,340	SJOGREN 91-NM-374	
Wright State University				
COMPRESSIBLE VORTEX FLOWS AND COMPRESSIBLE STABILITY	Richard	N 36 23/08/91 \$293,832	NACHMAN 91-NM-352	
Ohio State Univ Research Foundation				
POLISHING AND GRINDING OF AIRCRAFT CANOPIES AND OTHER OPTICAL SURFACES	Charles	N 36 14/08/91 \$185,125	NACHMAN 91-NM-341	
Univ of Pittsburgh				
SENSOR SELECTION IN MULTIVARIABLE CONTROL	Uy-Loi	N 24 17/09/91 \$223,084	JACOBS 91-NM-365	
Univ of Washington				
THE INSTITUTE FOR ADVANCED SCIENCE AND TECHNOLOGY AT THE UNIVERSITY OF PENNSYLVANIA	Cooperman	N 24 07/08/91 \$0	HOLLAND 91-NM-336	\$0 30/09/91 \$0
Univ of Pennsylvania				
THEORY AND APPLICATION OF HOMOTOPY TECHNIQUES IN NONLINEAR PROGRAMMING AND CONTROL SYSTEMS	Layne	N 36 02/08/91 \$139,874	JACOBS 91-NM-332	
Virginia Polytechnic Inst & State Univ				
HOMOTOPY CONVERGENCE THEORY FOR NONLINEAR PROGRAMMING AND CONTROL SYSTEMS	Layne	N 36 13/08/91 \$154,831	JACOBS 91-NM-338	
Virginia Polytechnic Inst & State Univ				
COMPUTATIONAL METHODS FOR CONTROL AND OPTIMAL DESIGN OF AEROSPACE SYSTEMS	John	N 24 06/09/91 \$516,501	JACOBS 91-NM-356	\$263,711 01/01/92. \$516,501
Virginia Polytechnic Inst & State Univ				

REPORT DATE: 11/04/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
AUTOMATIC TOOLS FOR DEVELOPING FINE-GRAINED SIGNAL PROCESSING PROGRAMS ON MULTICOMPUTERS Carnegie-Mellon University	J Hillston David	N 36 12/09/91 \$395,466	A LUPO 91-NM-361	\$125,000 01/01/92 \$395,466
ENHANCING THE ELECTROMAGNETIC RESPONSE OF A COMPLEX SYSTEM Univ of New Mexico	Sinha	N 12 01/09/91 \$59,558	NACHMAN 91-NM-326	
DESIGN AND ANALYSIS OF MARKOV RANDOM FIELDS AND CHAINS AS APPLIED TO COMPUTATIONAL PROBLEMS Univ of North Carolina	Fishman George	N 36 20/09/91 \$301,423	SJOGREN 91-NM-375	
RESEARCH ON ACOUSTIC COUPLING TO ELECTROMAGNETIC PULSES IN TISSUE Harry E. Moses Applimath	Moses Harry	? 12 17/09/91 \$197,275	NACHMAN 91-NM-366	
DEVELOPMENT OF FUNCTION-BASED MODELS FOR GENETIC OBJECT RECOGNITION Univ of South Florida	Stark Louise	N 36 01/07/91 \$374,142	A WAKSMAN 91-NM-307	\$100,000 01/02/92 \$330,000
CAASERT) LPI SIGNAL DETECTION USING THE WAVELET TRANSFORM University of Kansas	Prescott Glenn	N 36 30/09/91 \$105,338	SJOGREN 91-NM-381	
FEATURE EXTRACTION BY BEST-BASIS WAVELET METHODS Washington University	Wickerhauser M. Victor	N 12 02/08/91 \$45,572	A SJOGREN 91-NM-328	\$45,572 03/12/91 \$45,572
OPTIMIZATION ALGORITHMS FOR INTEGER NETWORKS WITH SIDE CONSTRAINTS FOR APPLICATION IN ROUTING AND SCHEDULING Southern Methodist University	Kennington Jeffery	N 12 02/08/91 \$53,954	A GLASSMAN 91-NM-331	\$58,954 01/01/92 \$58,954
EXPLOITING SPECIAL STRUCTURE IN LARGE-SCALE USAF OPTIMIZATION MODELS Naval Post Graduate School	Bradley Gordon	N 24 17/09/91 \$198,880	A GLASSMAN 91-NM-367	\$99,440 01/12/92 \$99,440

REPORT DATE 11/26/91

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

PAGE 8

TITLE (CONT.) INSTITUTION	TITLE	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
SIGNAL PROCESSING APPLICATIONS OF WAVELET THEORY Air Force Institute of Technology	Suter	Bruce	N 12 19/09/91 \$80,000	A SJOGREN 91-MM-372	\$70,000 15/10/91 \$70,000
LEARNING PARALLEL VISION ALGORITHMS Massachusetts Institute of Technology	Poggio	Tomaso	N 36 12/07/91 \$351,520	WAKSMAN 91-MM-314	
CUEING AND RECOGNITION Massachusetts Institute of Technology	Ullman	Shimon	N 36 12/07/91 \$329,982	WAKSMAN 91-MM-318	
PARALLEL AND DISTRIBUTED COMPUTING AND COMBINATORIAL ALGORITHMS Massachusetts Institute of Technology	Leighton	Frank	N 21 17/09/91 \$317,541	A GLASSMAN 91-MM-370	\$125,605 01/01/92 \$317,541
(AASRT) ANALYSIS, SYNTHESIS AND PROCESSING OF FRACTAL SIGNALS USING WAVELETS Massachusetts Institute of Technology	Oppenheim	Alan	N 36 19/09/91 \$281,656	SJOGREN 91-MM-371	
THEORETICAL STUDIES OF ULTRAFAST PHENOMENA Columbia University	Potasek	M	N 36 20/08/91 \$393,498	NACHMAN 91-MM-345	
(AASRT) COMPUTATIONAL FLUID DYNAMICS New York University	Garabedian	Paul	N 36 17/09/91 \$131,960	NACHMAN 91-MM-362	
RELIABLE COMMUNICATION IN THE PRESENCE OF SEVERE NOISE OR INTERFERENCE California Institute of Technology	McEliece	Robert	R 12 01/07/91 \$99,105	A GLASSMAN 91-MM-303	\$99,105 01/10/91 \$99,105
ADAPTIVE NEURAL NETWORKS Johns Hopkins University	Andrews	Andrews	N 36 19/08/91 \$284,431	SUDDARTH 91-MM-342	

REPORT DATE: 11/06/91

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF MATHEMATICAL & INFORMATION SCIENCES

PAGE 9

TITLE (CONT.)  
INSTITUTION

RESEARCH ON COLLABORATIVE PLANNING  
Harvard University

INVESTIGATOR

JFOIZ  
Barbara

TYPE/MONTHS  
RECEIVED  
AMOUNT

N 12  
01/08/91  
\$61,781

STATUS  
PROGRAM MANAGER  
PROPOSAL #

MARKSMAN  
91-NM-323

INITIATE  
START DATE  
TOT AMT

REPORT DATE 11/05/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 DIRECTORATE OF PHYSICAL AND GEOPHYSICAL SCIENCES

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
SURFACE PROPERTIES OF REFRACTORY TRANSITION METAL OXIDES Linfield Research Institute	PAUL	N 36 16/07/91 \$472,610	A BARKER 91-NP-188	\$174,078 30/09/91 \$472,610
FORMATION AND ENHANCEMENT OF H(-) IONS IN A MAGNETICALLY FILTERED MULTICUSP ION SOURCE/MEASUREMENT OF NEUTRAL ATOM/MOLECULAR Lawrence Berkeley Laboratory	Ka-Ngo	N 12 16/07/91 \$157,925	A LUPO 91-NP-194	\$157,925 01/10/91 \$157,925
ADVANCED TECHNOLOGIES FOR HIGH-RESOLUTION SPECTROSCOPY National Inst. of Standards & Technology	David	N 12 15/07/91 \$165,000	KELLEY 91-NP-183	
IMAGING THE EARTH'S INTERIOR-DETAILED STUDIES OF THE EARTH'S SEISMO C STRUCTURE WITH NEW GLOBAL AND PORTABLE ARRAYS National Science Foundation	Janiel	N 94 03/08/91 \$3,045,000	A LEMKOWICZ 91-NP-190	
SPACE-TIME PHYSICS (LANL RA-90-0300) (NETD-DK1-L042) Los Alamos Natl Lab--Dept Theor Phys JV	Miller	N 12 16/07/91 \$200,000	A LUPO 91-NP-185	\$200,000 01/10/91 \$200,000
UV EMISSION CROSS SECTIONS BY ELECTRON IMPACT: APPLICATION TO UV DAYGLOW AND AURORAL SATELLITE OBSERVATIONS NASA - Natl Aeronautical and Space Admin	Joseph	N 12 18/07/91 \$131,600	A KELLEY 91-NP-187	\$131,600 01/10/91 \$131,600
ELECTRON-BEAM CONTROLLED SEMICONDUCTOR SWITCHES Old Dominion University	Schoenbach	N 12 16/07/91 \$50,000	A LUPO 91-NP-186	\$50,000 01/10/91 \$50,000
EXPERIMENTS WITH TRAPPED NEUTRAL ATOMS Office of Naval Research	Reynolds	N 12 19/07/91 \$66,000	A KELLEY 91-NP-189	\$66,000 01/10/91 \$66,000

REPORT DATE 11/06/91  
 PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91 )  
 AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
 EXTERNAL LAB PROPOSALS

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
PROPERTIES OF NEW MATERIALS RELEVANT TO ENERGY AND FUEL RESEARCH National Hellenic Research Foundation	Nicolaidis Cleanthes	N 24 12/07/91 \$70,000	A OMENS 91-EX-019	\$30,000 30/09/91 \$70,000
IMPLEMENTATION OF THREAT DISCRIMINATION BY MOTION ANALYSIS FOR PASSIVE AIRBORNE WARNING SYSTEM (PAWS) ELISRA Electronic Sys Ltd--Alpoorne Sys	Livi Meir	N 24 16/08/91 \$600,000	A OMENS 91-EX-020	\$100,000 30/09/91 \$600,000
ACOUSTO-OPTIC FREQUENCY SHIFTERS IN DUAL-CORE OPTICAL FIBERS Univ of Southampton	Russell Phillip St.	N 36 08/07/91 \$300,000	A OMENS 91-EX-018	\$99,022 30/09/91 \$300,000
FIBRE-COUPLED REMOTE OPTICAL VIBROMETRY Univ of Southampton	Johnson Mark	N 36 16/08/91 \$300,000	A OMENS 91-EX-021	\$92,700 30/09/91 \$300,000

REPORT DATE 11/06/91

PROPOSAL STATUS REPORT ( 1 JUL 91 - 30 SEP 91)  
AIR FORCE OFFICE OF SCIENTIFIC RESEARCH  
DIRECTORATE OF PLANS AND OPERATIONS

PAGE 1

TITLE (CONT.) INSTITUTION	INVESTIGATOR	TYPE/MONTHS RECEIVED AMOUNT	STATUS PROGRAM MANAGER PROPOSAL #	INITIATE START DATE TOT AMT
NATIONAL SPACE COUNCIL VICE PRESIDENT'S SPACE POLICY ADVISORY BOARD (VSPAB) SUPPORT @ Analytic Services Inc	inn Robert	N 03 26/07/91 \$4,500	A YORK 91-XO-030	\$4,500 01/09/91 \$4,500
IMAGING THE EARTH'S INTERIOR--DETAILED STUDIES OF THE EARTH'S SEISMIC STRUCTURE WITH NEW GLOBAL AND PORTABLE ARRAYS National Science Foundation	Deill Daniel	N 02 08/09/91 \$3,945,000	A YORK 91-XO-031	\$3,845,000 01/08/91 \$3,845,000
MPL LIBRARY Laval Research Laboratory	Stackpole Laurie	N 01 14/08/91 \$2,900	A OWENS 91-XO-032	\$2,900 01/08/89 \$2,900
TEST CASE FOR COL STORIE Air Force Office of Scientific Research	scientist Idiot	N 12 21/08/91 \$0	A EWING 91-XO-033	\$0 30/09/91 \$15,185
SAMPLE CASE Air Force Office of Scientific Research	LKFJ:LAKJ S:LKDJ	N 12 23/08/91 \$221,000	A EWING 91-XO-034	\$2,833 01/07/91 \$10,000
TRAVEL FUNDS FOR BELLER MEETING AFIT Air Force Institute of Technology	Beller Denis	N 03 19/07/91 \$10,000	A EWING 91-XO-029	\$2,833 01/07/91 \$10,000