

Contracts and Grants

1992-2018

TITLE	SOURCE	AMOUNT	From ... to
Creating movies of moving plasma	AFRL	100,000	2015-2017
Sensitivity laser Gyro	NASA I	37,000	2017
Laser Induced Breakdown spectroscopy of nuclear materials	STTR IIB DOE	635,000	2017-2019 (Co-PI)
Sensitivity enhancement and dead band elimination in laser gyros	SBIR I NASA	70,000	2015
Laser Induced Breakdown spectroscopy (LIBS) of nuclear materials	STTR II DOE	500,000	2015-2016 (Co-PI)
Laser Induced Breakdown spectroscopy (LIBS) of nuclear materials	STTR I DOE	90,000	2014 (Co-PI)
Microscopic analysis of filaments (Development of a VMI)	DURIP (ARO)	141,176	2012-2013 (Co-PI)
Filament Science	ARO MURI	1,565,556	08/01/11 — 07/31/16
UV/IR filaments for high resolution novel spectroscopy	DTRA	1,750,000	07/01/11 — 06/30/16
Scanning Intracavity Phase Nanoscope	Keck Foundation	1,200,000	07/01/08 — 06/30/11
Interfering Pulse train Magnetometer	NSF	350,000	9/15/09 — 8/31/12
Remote detection of explosives	Southwest Institute	60,000	08/01/06 — 03/01/07
Bit-error rate for light comm.	AFOSR DURIP	120,000	04/01/08 — 11/15/09
Bit-error rate for light comm.	AFOSR	230,000	03/01/07 — 11/30/09
Intracavity sensors	NSF	240,000	06/01/06 — 05/31/09
Laser Induced Discharges	ARO DURIP	150,000	04/01/08 — 12/14/09
Laser Induced discharges	ARO	500,000	11/15/05 — 11/14/08
UV Filaments	Ionatron	250,000	08/01/03 — 08/31/05
Stabilized lasers as sensors and frequency standards	NSF	270,000	08/01/02 — 07/31/05
light strings	AFOSR	150,000	02/01/02 — 01/31/03
Study of filamentation in air	U. of AZ	120,000	01/31/03 — 12/31/05
Absolute Measurement of Low Level Optical Scattering	NRO	250,000	10/01/02—9/30/03
Fundamental studies of filaments in the atm.	Lite Cycle	250,000	08/01/02 — 07/31/04
Stabilization of femtosecond lasers	U. of Co	450,000	07/01/02 — 06/30/07
Absolute Calibration of On-Orbit Photon Sensors with QM Techn.	NRO	175,000	03/01/01 — 11/30/01
Intracavity Phase Spy, atomic clock, λ standard	NSF	240,000	07/01/99—06/30/02

TITLE	SOURCE	AMOUNT	From . . . to
Detection of Groundwater	WRI	25,000	01/01/00 — 12/31/00
Filamentation in air	AFOSR	120,000	01/01/00 — 12/31/02
R. & D. on diode pumped S. S. lasers for gyro and sensors	NSF-INT	43,700	07/01/99—06/30/02
Novel beacons for adaptive optics	NUCOR	40,000	01/01/98 — 12/31/00
New diagnostics techniques	NSF-INT	27,000	10/01/98—12/31/01
Petawatt source	NSF	300,000	1996 — 1999 (Co-PI
Instrumentation to measure dispersion	Continuum	33,525.	09/01/96 — 12/31/96
Lightning diversion	Opt. Science Trust	300,000	
Development of ultrafast mirrors	CVI	20,000	01/01/96 — 12/31/96
Solid state laser	Continuum	35,184.	02/01/95 — . . .
Negative feedback	Continuum	9,000	06/01/94 — 01/31/95
Laser gyro	Allied Signal	40,000	05/01/94 — 04/30/97
Semiconductor laser gyro	Allied Signal	5,000	01/01/95 — 12/31/95
Imaging	Keck	300,000	
MQW semiconductor lasers	Philips Labs	25,000	01/01/95 — 12//31/95
Unidirect. ring laser	Philips Labs	25,000	01/01/96 — 12//31/96
Linear diagnostic method	Coherent Rad.	50,000	01/01/91 — 12/31/92
Exploration of revolutionary ring laser concepts	Honeywell	151,242	12/15/90—12/31/93
Non-reciprocal effects	NSF	300,387	01/01/94 — 07/31/97
Sagnac Interferometry	ONR	145,000	03/01/92 — 31/12/94
Lightning diversion	EPRI	200,000	07/01/96 — 12/31/96
Laser induced plasma	EPRI	38,000	04/01/96 — 12/31/96
Fs pulse induced discharge	EPRI	210,480	06/08/93—12/31/96
Laser induced discharge	EPRI	400,000	1/4/97—12/31/98
Discharge of charged clouds	USAF (Hanscom)	217,983	08/01/90—12/31/91
Feasibility study on visualization of stresses in thin films	Sandia labs	15,845	08/08/91 — 09/30/91
Visualization of ultrafast switching with PLZT	DARPA	50,000	01/01/90 — 12/31/91
Laser triggering of photo-conductive semiconductors	Tetra Co	65,064	10/01/90 — 09/30/92
Fs pulse compression in air	Research Co	13,000	06/01/92 — 05/31/94