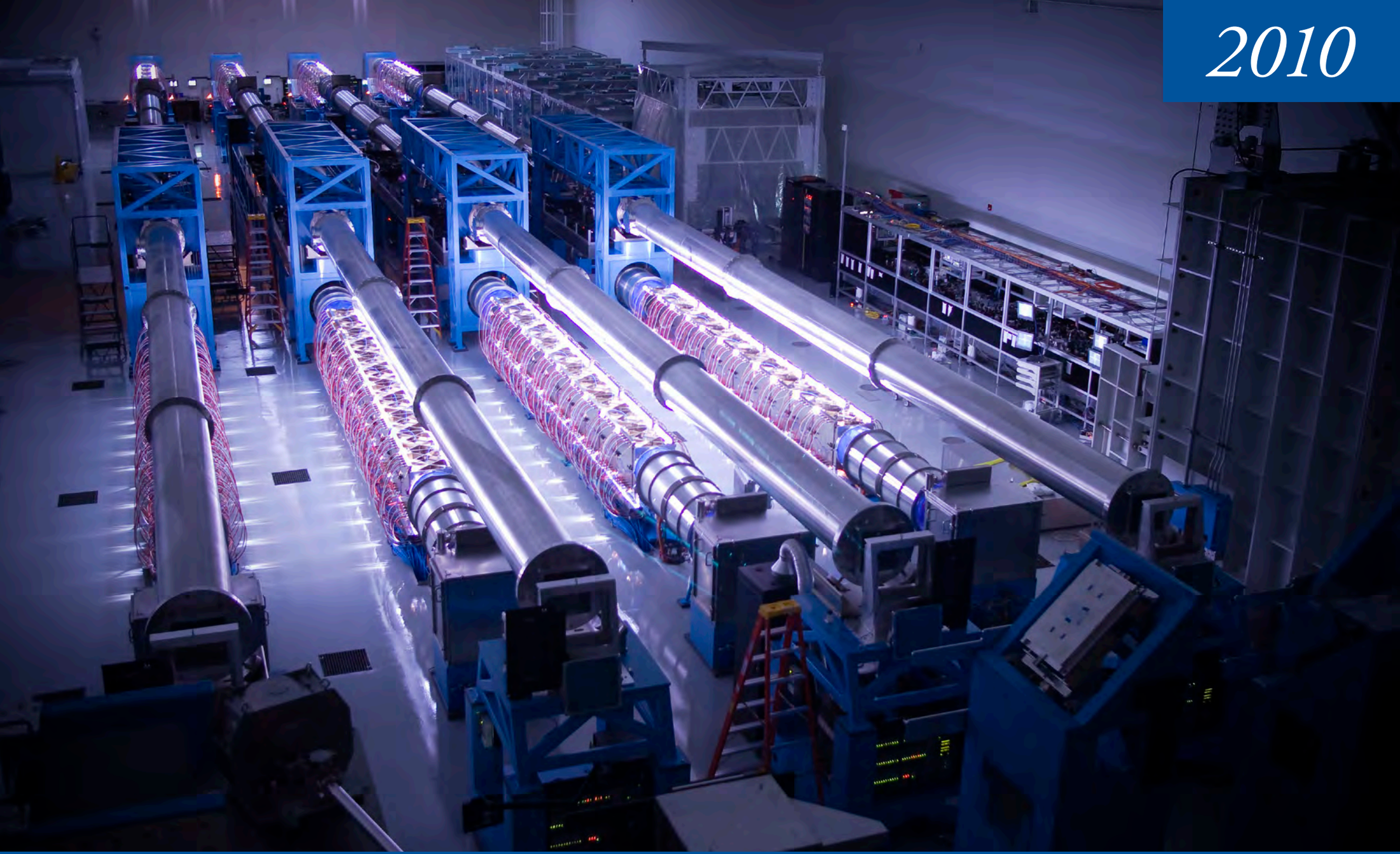

2010

LABORATORY *for* LASER ENERGETICS

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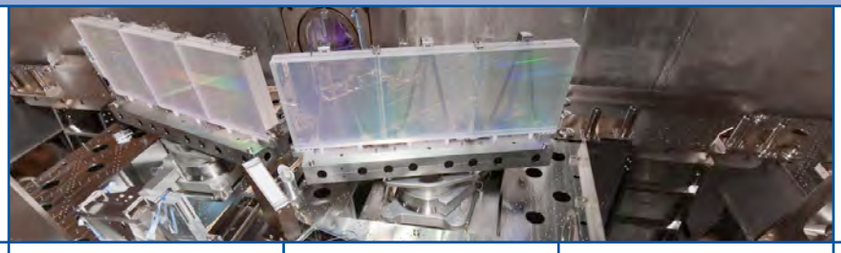
OMEGA EP Grating Inspection System

The final phase of the Grating Inspection System installation is shown inside OMEGA EP's Grating Compression Chamber.



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
DECEMBER S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31				**FEBRUARY** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	1 New Year's Day University Holiday	2
3	4	5	6	7 ◑	8	9
10	11	12	13	14	15 ●	16
17	18 Martin Luther King Jr. Day	19	20	21	22	23 ◐
24 31	25	26	27	28	29	30 ○

JANUARY 2010

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VISAR

The velocity interferometry system for any reflector (VISAR) for OMEGA EP was commissioned in 2009. It comprises a probe laser, velocity interferometers, and two ROSS streak cameras (below). This diagnostic measures the velocity of shock waves in studies of ICF, astrophysics, and planetary physics.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
JANUARY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3	4	5 ◑	6
7	8	9	10	11	12	13
14 ●	15 Presidents' Day	16	17	18	19	20
21	22 ◐	23	24	25	26	27
28 ○	**MARCH** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31					

FEBRUARY 2010

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Nuclear Diagnostic Inserter

The nuclear diagnostic inserter (NDI) is used in conjunction with the MRS to insert CD or CH foils that are used to measure fusion-neutron spectra. These new NDI's will be used to insert WRFM's (wedged-range-filter modules) for various experiments.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
FEBRUARY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	1	2	3	4	5	6
7 ◑	8	9	10	11	12	13
14 Daylight Savings Time Begins	15 ●	16	17	18	19	20 Vernal Equinox
21	22	23 ◐	24	25	26	27
28	29	30 ○	31	**APRIL** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30		

MARCH 2010

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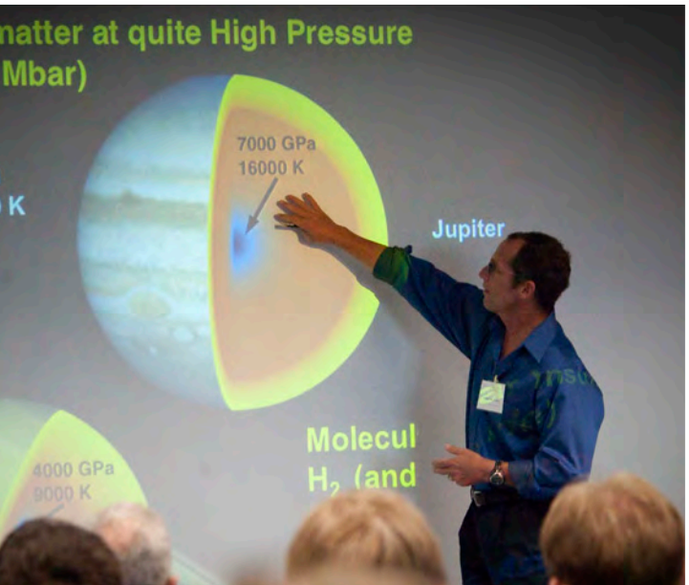
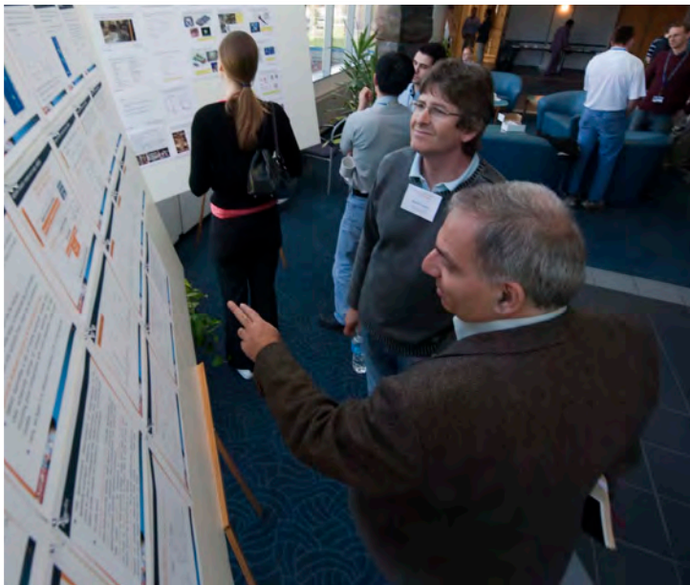
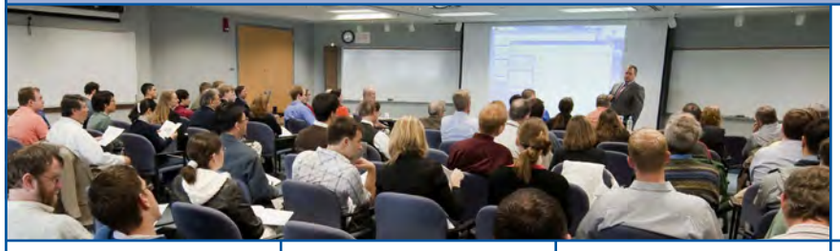
UR LLE


natter at quite High Pressure
Mbar)
7000 GPa
16000 K
Jupiter
Molecul
H2 (and
4000 GPa



OLUG Workshop

The first Omega Laser Facility Users Group (OLUG) Workshop. The purpose of the workshop was to facilitate communication and exchanges among the individual users and between users and LLE and to present ongoing and proposed research that could be undertaken at the Omega Laser Facility.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			MARCH S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3
4	5	6 ◑	7	8	9	10
11	12	13	14 ●	15	16	17
18	19	20	21 ◐	22	23	24
25	26	27	28 ○	29	30	MAY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

APRIL 2010

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NLUF Jet Target

A target used for an OMEGA NLUF experiment carried out by a team from MIT's Plasma Science and Fusion Center to study jet formation using proton radiography. The large conical structure is used to shield the diagnostic systems from x-ray radiation generated by the laser beams.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
APRIL S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30					**JUNE** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1
2	3	4	5	6 ◑	7	8
9	10	11	12	13	14 ●	15
16	17	18	19	20 ◐	21	22
23	24	25	26	27	28	29
30	31 Memorial Day University Holiday			○		

MAY 2010

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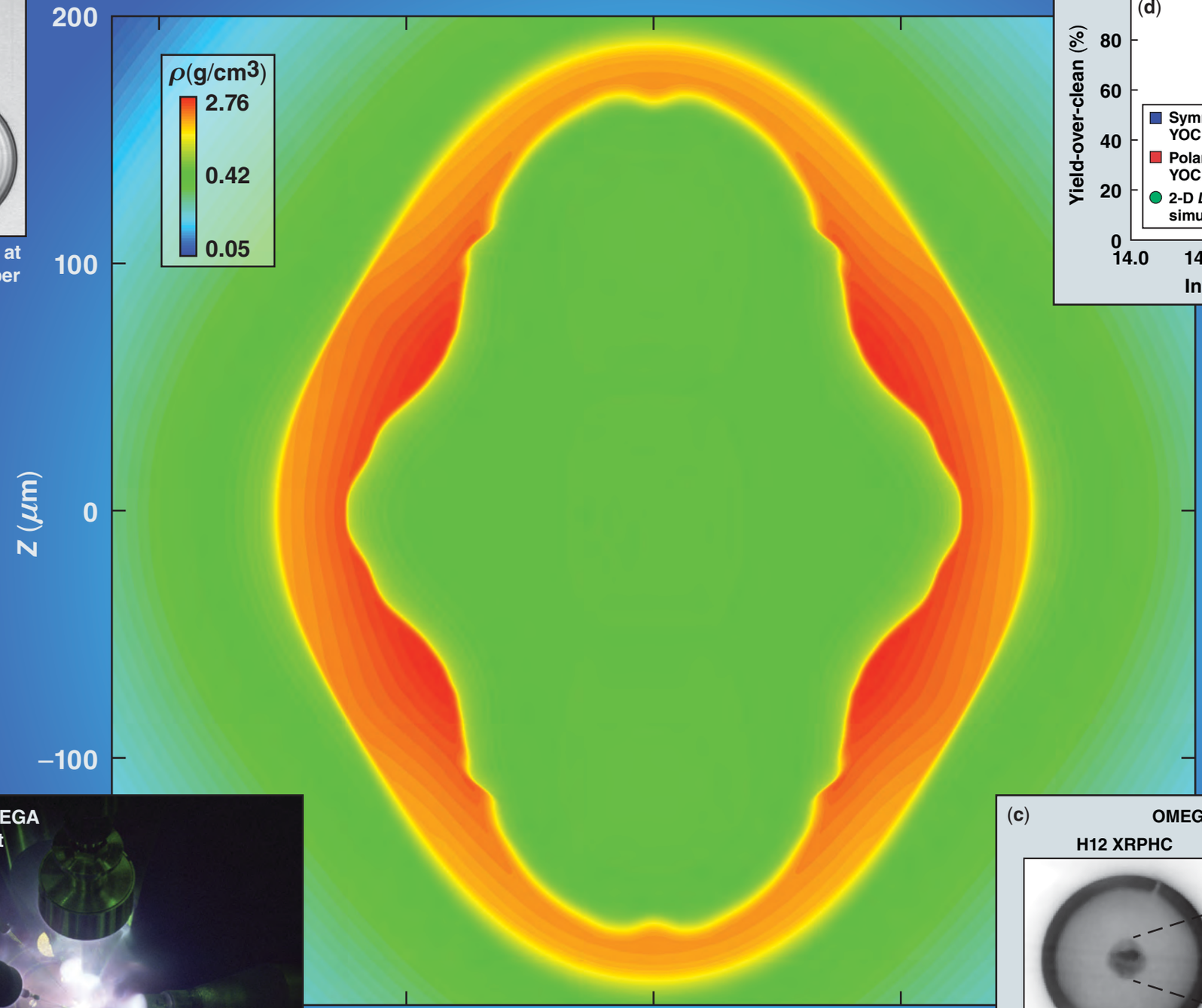
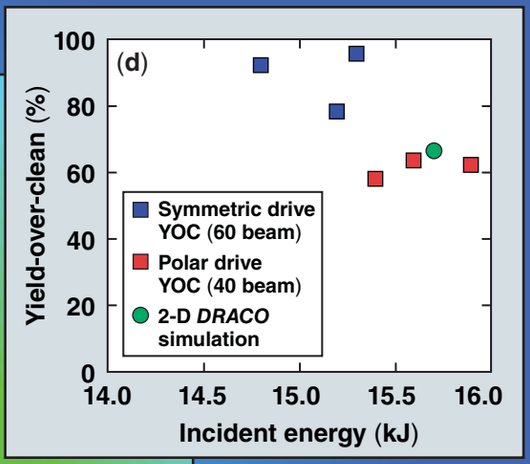
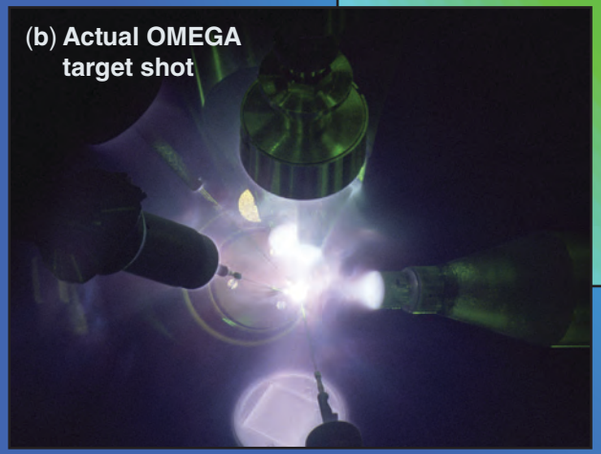
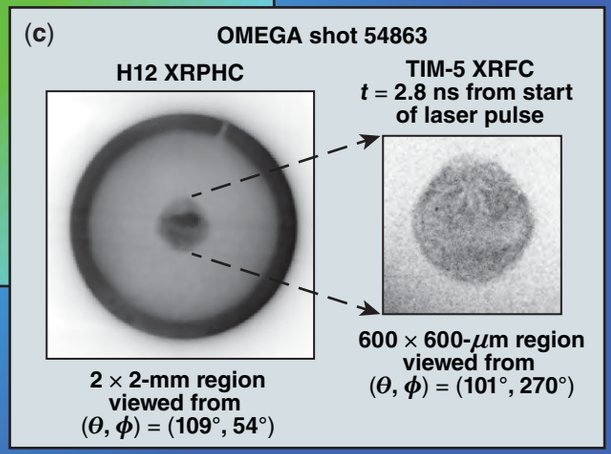
Target image at target chamber center









Polar Drive NIF

Design and testing of initial NIF neutron diagnostic commissioning shots were carried out at LLE and the Omega Laser Facility. Two-dimensional target designs (center) were fielded on OMEGA [Figs. (a) and (b)], resulting in very similar compressed-core x-ray images (c) and very good target-performance results (d).

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	MAY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3	4 ◑	5
6	7	8	9	10	11	12 ●
13	14	15	16	17	18	19 ◐
20	21 LLE Golf Tournament at Blue Heron Hills Summer Solstice	22	23	24	25	26 ○
27	28	29	30	JULY S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		

JUNE 2010

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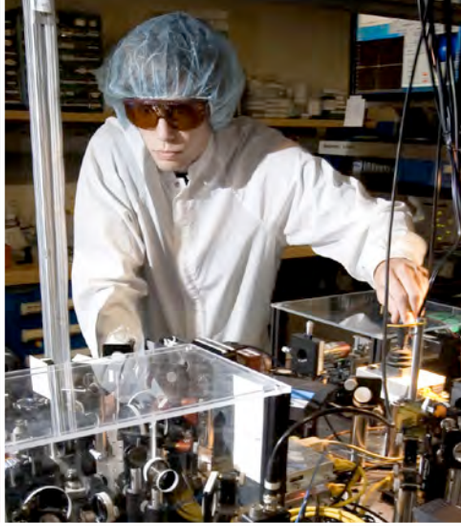




High School Program

Participants in LLE's 21st Summer High School Research Program with program director Dr. Stephen Craxton. The program challenges high school students to explore research topics and careers under the tutelage of LLE scientists, engineers, and staff in a state-of-the-art environment.

JUNE

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20	21	22	23	24	25	26
27	28	29	30			

AUGUST

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22	23	24	25	26	27	28
29	30	31				

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2	3
4 Independence Day ◑	5 Independence Day Observed University Holiday	6	7	8	9	10
11 ●	12	13	14	15	16 LLE Golf Tournament at Mill Creek	17
18 ◐	19	20	21	22	23	24
25	26 ○	27	28	29	30	31

JULY 2010

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OMEGA EP Firing

The OMEGA EP Laser Bay during a four-beam shot. With no bay lights on, the beamline structures are illuminated by a small amount of flash-lamp light that leaks out of the laser amplifiers.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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15	16 ◐	17	18	19	20	21
22	23	24 ○	25	26	27	28
29	30	31				

JULY

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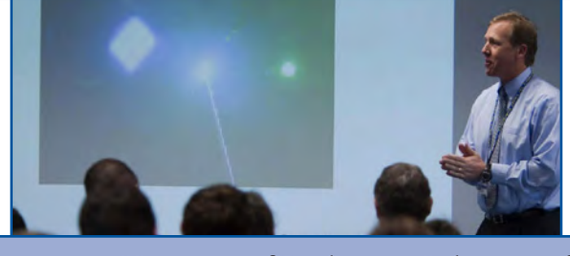
18	19	20	21	22	23	24
25	26	27	28	29	30	31



SEPTEMBER

S	M	T	W	T	F	S
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

AUGUST 2010

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Left to right: Dr. R. L. McCrory/Director LLE, Brigadier General Garrett Harencak/ Principal Assistant Deputy Administrator for Military Application—NNSA, RADM Gerald Talbot (USN–Ret.), and Dr. Gregory Simonson

OMEGA EP Target Chamber

A view inside the OMEGA EP Target Chamber showing a collection of fixed diagnostics that have increased in quantity and experimental capabilities. Above inset: Brig. Gen. Harencak along with Mr. Talbot and Dr. Simonson visited LLE in November 2009.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		AUGUST S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 ◑	2	3 LLE Golf Tournament at Bristol Harbour	4
5	6 Labor Day University Holiday	7	8 ●	9	10	11
12	13	14	15 ◐	16	17	18
19	20	21	22	23 Autumnal Equinox ○	24	25
26	27	28	29	30	OCTOBER S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	

SEPTEMBER 2010

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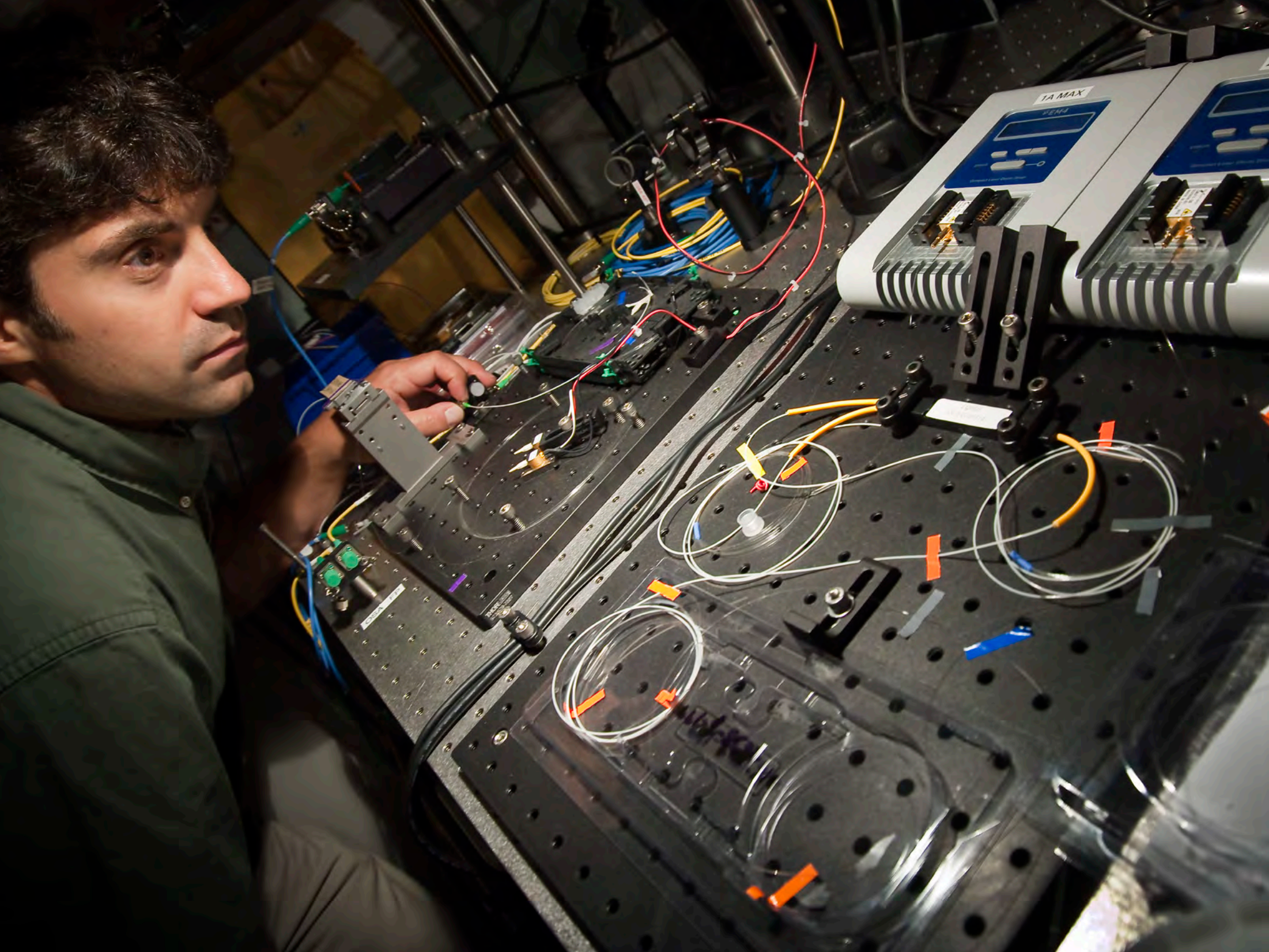
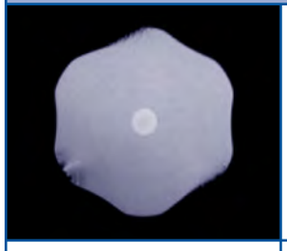

1A MAX

Fiber-Optic Systems Research

Research in optical fibers and fiber components enables precision, compact, alignment- and maintenance-free optical systems, both passive and with optical gain, for use in OMEGA and OMEGA EP laser systems.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	SEPTEMBER S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30			NOVEMBER S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1 ◑	2
3	4	5	6	7 ●	8	9
10	11 Columbus Day	12	13	14 ◐	15	16
17	18	19	20	21	22	23 ○
24	25	26	27	28	29	30 ◑
31						

OCTOBER 2010

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TIM-11 Installation of TIM-11 on OMEGA EP. The TIM (ten-inch manipulator) is the standard interface for diagnostics fielded by all Omega Facility users.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
OCTOBER S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1	2	3	4	5	6 ●
7 Daylight Savings Time Ends	8	9	10	11 Veterans Day	12	13 ◐
14	15	16	17	18	19	20
21 Winter Solstice ○	22	23	24	25 Thanksgiving Day University Holiday	26 University Holiday	27
28 ◑	29	30	**DECEMBER** S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31			

52nd Annual Meeting of the APS Division of Plasma Physics in Chicago, IL

NOVEMBER 2010

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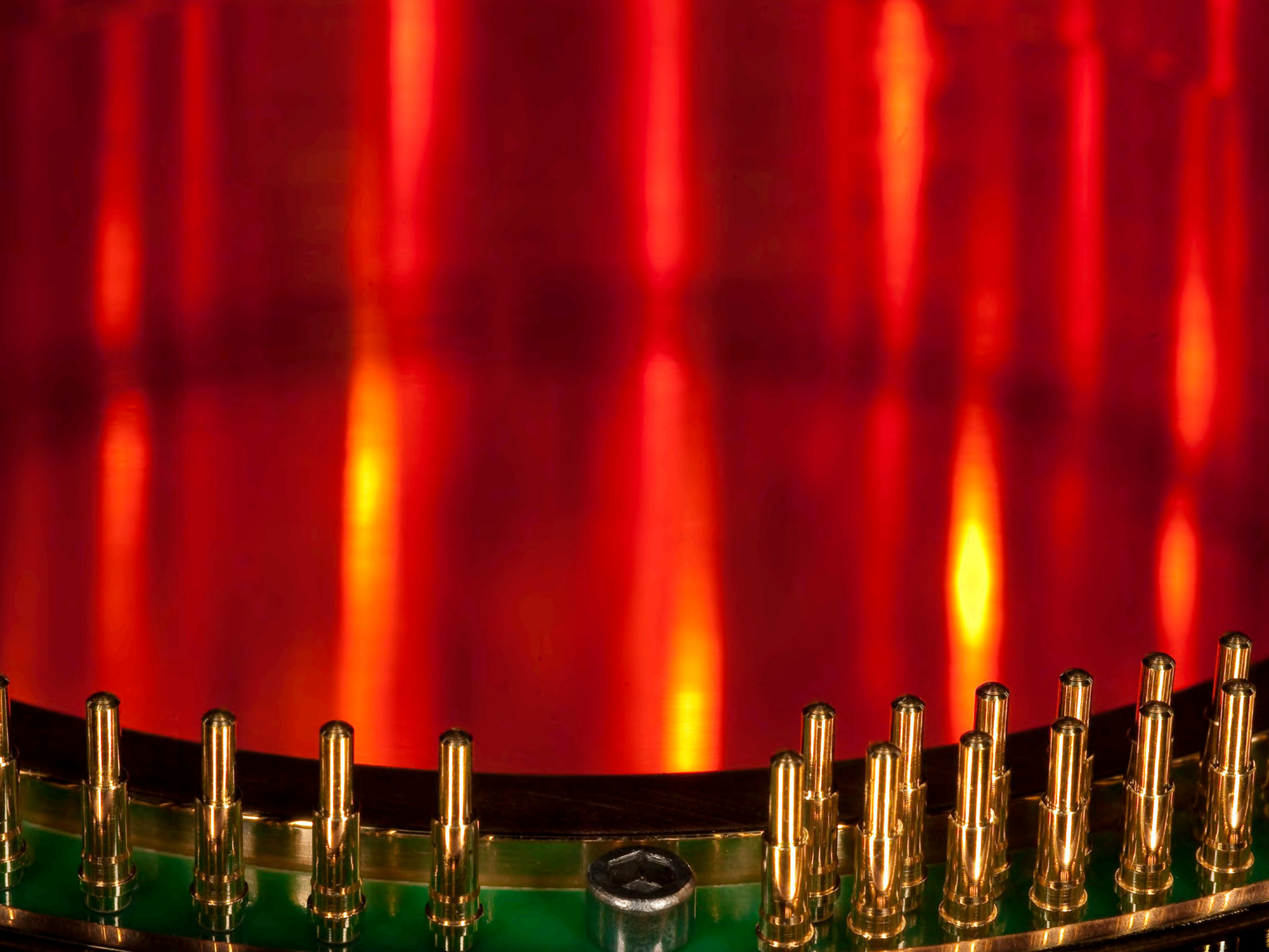

Cryostat

The shroud interconnect circuit board mounted on the lower, intermediate shroud of the new moving cryostat. Used to provide an electrical connection to the heaters and temperature sensors mounted in the upper shrouds, these spring-loaded contacts disconnect when the upper and lower shrouds separate.

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		NOVEMBER S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3	4
5 ●	6	7	8	9	10	11
12	13 ◐	14	15	16	17	18
19	20	21 Winter Solstice ○	22	23	24 University Holiday	25 Christmas Day
26	27	28 ◑	29	30	31	JANUARY 2011 S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

DECEMBER 2010

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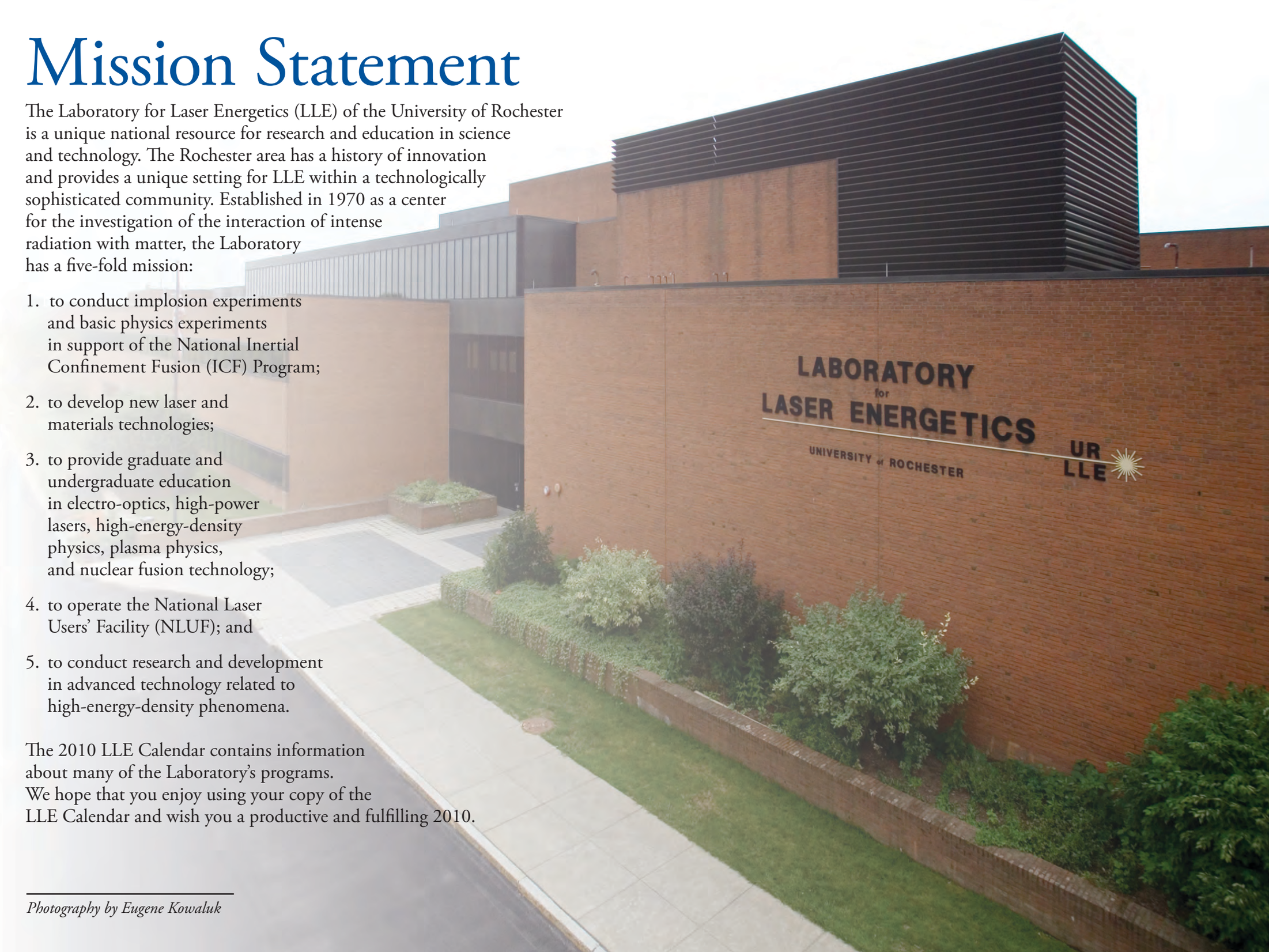
Mission Statement

The Laboratory for Laser Energetics (LLE) of the University of Rochester is a unique national resource for research and education in science and technology. The Rochester area has a history of innovation and provides a unique setting for LLE within a technologically sophisticated community. Established in 1970 as a center for the investigation of the interaction of intense radiation with matter, the Laboratory has a five-fold mission:

1. to conduct implosion experiments and basic physics experiments in support of the National Inertial Confinement Fusion (ICF) Program;
2. to develop new laser and materials technologies;
3. to provide graduate and undergraduate education in electro-optics, high-power lasers, high-energy-density physics, plasma physics, and nuclear fusion technology;
4. to operate the National Laser Users' Facility (NLUF); and
5. to conduct research and development in advanced technology related to high-energy-density phenomena.

The 2010 LLE Calendar contains information about many of the Laboratory's programs. We hope that you enjoy using your copy of the LLE Calendar and wish you a productive and fulfilling 2010.



Photography by Eugene Kowaluk

2010

JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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2011

JANUARY

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FEBRUARY

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MARCH

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APRIL

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MAY

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JUNE

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JULY

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31						

AUGUST

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21	22	23	24	25	26	27
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SEPTEMBER

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25	26	27	28	29	30	

OCTOBER

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NOVEMBER

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27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

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