

# Program LMJ-PETAL User Meeting

Thursday 4 October 2018

Schedule	Duration	Title	Speaker	Institution
8:00 AM	0:30	Welcome ILP		
8:30 AM	0:30	Opening addresses	L. Bonnet F. Hardouin E. Mevel JL Miquel	CEA-DAM/DS CESTA/Dir CELIA ALP
		<b>Plenary session-1 : LMJ-PETAL performance</b>	<b>Chairman : JL. Miquel</b>	<b>CEA/DAM</b>
9:00 AM	0:25	1.1- LMJ Facility: Status and Performance	P. Delmas	CEA/DAM, France
9:25 AM	0:25	1.2- PETAL laser performance	N. Blanchot	CEA/DAM, France
9:50 AM	0:25	1.3- Status on LMJ-PETAL plasma diagnostics	R. Wrobel	CEA/DAM, France
10:15 AM	0:25	1.4- Preliminary results from the qualification experiments of the PETAL+ diagnostics	D. Batani	CELIA, France
10:40 AM	0:20	<i>Break</i>		
		<b>Plenary session-2: Next user experiments</b>	<b>Chairman : D. Batani</b>	<b>CELIA</b>
11:00 AM	0:25	2.1- Effect of hot electrons on strong shock generation in the context of shock ignition	S. Baton	LULI, France
11:25 AM	0:25	2.2- Investigating magnetic reconnection in ICF conditions	S. Bolanos	LULI, France
11:50 AM	0:25	2.3- Efficient Creation of High-Energy-Density-State with Laser-Produced Strong Magnetic Field	S. Fujioka or K. Matsuo	ILE, Osaka U., Japan
12:15 PM	2:00	<i>Lunch / Posters session</i>		
2:15 PM	1:30	<b>Round table -1</b>		
		<b>Targets</b>	<b>Chairman: M. Manuel</b>	<b>General Atomic</b>
	0:20	1.1- Target laboratory on LMJ Facility	O. Henry	CEA/DAM, France
	0:20	1.2- Review of General Atomics Target Fabrication : Facilities, Capabilities and Notable Recent Developments	M. Manuel	General Atomic, USA
		<b>Diagnostics</b>	<b>Chairman: W.Theobald</b>	<b>LLE Omega</b>
	0:20	1.3- Visualization of fast heated plasma by X-ray fresnel phase zone plate	K. Matsuo	Technology U. Darmstadt, Ge.
2:15 PM	1:30	<b>Round table - 2</b>		
		<b>Codes</b>	<b>Chairman: E. d'Humières</b>	<b>CELIA</b>
	0:20	2.1- Numerical investigation on non-thermal electron effects measured in a Gekko experiment at intensities relevant to shock ignition	Ph. Nicolai	CELIA, France
	0:20	2.2- Laser-driven experiments shedding light on turbulent dynamo: Platform design and numerical modeling with FLASH	P.Tzeferacos	U. of Chicago, USA
3:45 PM	0:20	<i>Break</i>		
		<b>Plenary session-3: Advices and Perspectives</b>	<b>Chairman : P. Renaudin</b>	<b>CEA DAM</b>
4:05 PM	0:25	3.1- Experimental Process on LMJ	B. Loupiau	CEA/DAM, France
4:30 PM	0:30	3.2- <b>Tutorial:</b> Practical advices on how to perform ns X-ray radiography on LMJ	C. Courtois	CEA/DAM, France
5:00 PM	0:25	3.3- A Perspective on the Future of ICF and HEDP Research	M. Campbell	LLE, USA
5:25 PM	0:25	3.4- Exploring the universe through Discovery Science on NIF	H. Chen	LLNL, USA
6:00 PM	1:00	<i>Welcome addresses DGRI + DAM Cocktail (ILP)</i>		
7:00 PM	1:00	Transportation to Gala dinner and to Bordeaux		
8:00 PM	3:00	<i>Gala Dinner / Mercure Cité Mondiale (Bordeaux)</i>		
11:00 PM		Transportation to Bordeaux		

# Program LMJ-PETAL User Meeting

Friday 5 October 2018

Schedule	Duration	Title	Speaker	Institution
8:00 AM	0:15	Accueil ILP		
		Parallel session - 1: ICF and WDM	Chairman: A. Casner	CELIA
8:15 AM	0:20	1.1- Hydrodynamics studies of shock ignition targets	S. Atzeni	U. di Roma "La Sapienza", Italy
8:35 AM	0:20	1.2- Kinetic effects in laser-driven spherical implosions	G. Kagan	LANL, USA
8:55 AM	0:20	1.3- Auxiliary Heating for Inertial Fusion	P. Norreys	U. of Oxford, UK
9:15 AM	0:20	1.4- Demonstration of Imprint Mitigation in Planar Geometry by a Combination of X-Ray-Driven Picket-Pulse Shocks and Directly Driven Targets	W. Theobald	LLE, USA
9:35 AM	0:20	1.5- A preparatory experiment to 2017 LMJ-SI (S. Baton) experiment: Radiography of shocks and hot electron preheat on OmegaEP	J. Trela	CELIA, France
9:55 AM	0:20	Break		
10:15 AM	0:20	1.6- Ion stopping measurements in plasma targets	L. Volpe	CELIA, U. of Salamanca, Spain
10:35 AM	0:20	1.7- Experimental observation of non local electron transport in warm dense matter	K. Falk	HZDR, Germany
		Parallel session - 2: Astrophysics and UHI	Chairman: M. Koenig	LULI, France
8:15 AM	0:20	2.1- Optical generation of strongly magnetized plasma	Ph. Korneev	NRNU-MEPHI, Russia
8:35 AM	0:20	2.2- Exploration of astrophysical phenomena with scaled laboratory experiments	C. Li	MIT, USA
8:55 AM	0:20	2.3- Weibel-mediated collisionless shocks driven by supersonic plasma flows	V. Tikhonchuk	CELIA, France
9:15 AM	0:20	2.4- Observation of Collisions of Magnetized-Plasma Bubbles Mediated by Anisotropic Pressure	N. Woolsey	U. of York, UK
9:35 AM	0:20	2.5- Using thermal fields to investigate QED processes with high-power lasers	S. Rose	Imperial College, UK
9:55 AM	0:20	Break		
10:15 AM	0:20	2.6- Overview of Laser Driven Relativistic Pair Jets Experiments at LLNL	H. Chen	LLNL, USA
10:35 AM	0:20	2.7- Laser-Driven Neutrons as a new Probe for HED Plasmas	M. Roth	Technology U. Darmstadt, Ge.
10:55 AM	0:20	2.8- X-ray sources from laser-wakefield acceleration on picosecond, kilojoule-class lasers	F. Albert	LLNL, USA
		Plenary session - 4: Conclusions		
11:15 AM	0:30	4.1- Magnetic field amplification experiments on large-scale laser facilities	G. Gregori	U. of Oxford, UK
11:45 AM	0:45	4.2- Round tables wrap-up	3 chairmans	
12:30 PM	0:20	4.3- Conclusions : Organization, next User-meeting	Organizing committee	
12:50 PM	1:30	Lunch / Posters session		
2:20 PM	0:10	Transportation to LMJ-PETAL		
2:30 PM	2:30	LMJ-PETAL tour		
2:30 AM		Transportation to Bordeaux (for no LMJ-PETAL visit)		
5:00 PM		Ajournment, transportation to Bordeaux		

# POSTERS

Family Name	First Name	Institution	Country	Poster title
<b>Bott</b>	Archie	University of Oxford	UK	Experimental investigation of pre-magnetization effects on laser-plasma dynamo processes
<b>Chen</b>	Duration	LLNL	USA	Overview of Laser Driven Relativistic Pair Jets Experiments at LLNL
<b>D'Humieres</b>	Emmanuel	CELIA	France	Collisionless magnetized shock formation and particle energization in scaled astrophysical conditions
<b>Harmand</b>	Marion	CNRS - IMPMC	France	Iron And Iron alloys under extreme conditions for geoscience application
<b>Khlar</b>	Benjamin	Univ. of Chicago, FLASH center for comput. science	USA	FLASH MHD simulations of LMJ experiments that study compressible magnetized turbulence and turbulent dynamo
<b>Matteucci</b>	Jackson	Princeton University	USA	Biermann-Battery reconnection in 3-D colliding laser-driven plasmas
<b>Adrian</b>	Patrick	MIT	USA	Utilizing multiple fusion reaction-histories, x-ray emission histories, and charged-particle stopping to evaluate high-energy-density-plasma (HEDP) transport properties at OMEGA
<b>Ceuvoorst</b>	Luke	CELIA	France	3D Broadband Bubble Dynamics for the Imprinted Ablative Rayleigh-Taylor Instability
<b>Goudal</b>	Thibault	CELIA	France	Analytical modeling of 3D imprinted Rayleigh-Taylor Instabilities
<b>Holec</b>	Milan	CELIA	France	Kinetic modeling of nonlocal electrons and self-consistent electric field in ICF relevant plasmas
<b>Kabadi</b>	Neel	MIT	USA	Observations of multi-ion and kinetic effects in OMEGA shock driven implosions relevant to ignition experiments
<b>Lebo</b>	Yvan	Russian Technological University MIREA	Russia	Two-sided conical laser target design for fusion-fission reactor
<b>Malko</b>	Sophia	University of Salamanca	Spain	Numerical simulations of Ion stopping in degenerate and coupled plasma
<b>Ruocco</b>	Alessandro	CELIA	France	Self focusing of a laser beam into a plasma
<b>Shigemori</b>	Keisuke	ILE - Osaka	Japan	Ultrahigh pressure generation with laser-produced hot electrons for shock ignition scheme
<b>Simpson</b>	Raspberry	MIT	USA	Diagnosing fuel areal-density asymmetries in cryogenic deuterium-tritium implosions at OMEGA using knock-on deuteron spectra
<b>Sio</b>	Hong	MIT	USA	Time evolution of ion and electron temperatures in shock-driven implosions at OMEGA
<b>Sutcliffe</b>	Graham	MIT	USA	Development and utilization of the DT3He multi-particle backlighter for stopping-power experiments and for radiography of strong fields at MJ-scale laser facilities
<b>Trela</b>	Jocelain	CELIA	France	Extrapolation of 2D planar CHIC simulation into 3D geometry for the calculation of realistic synthetic radiography.
<b>Bardon</b>	Matthieu	CEA DAM	France	EMP studies on the LMJ-PETAL facility
<b>Caillaud</b>	Tony	CEA DAM	France	X-ray imagers for the Laser MégaJoule (LMJ)
<b>Caillaud</b>	Tony	CEA DAM	France	GXI-1 & GXI-2 gated x-ray imaging diagnostics for the Laser Megajoule facility
<b>Duval</b>	Alain	CEA DAM	France	SESAME, « Spectromètre ElectronS Angulaire Moyenne Energie » for LMJ-PETAL
<b>Kulkarni</b>	Sudhir	Prism Computational Sciences Inc	USA	SPECT3D, Imaging and Spectral Analysis Package
<b>Lantuejoul</b>	Isabelle	CEA DAM	France	SEPAGE: a proton-ion-electron spectrometer for LMJ-PETAL
<b>Raffestin</b>	Didier	CELIA	France	Development of PETAL diagnostics: PETAPhys project
<b>Reverdin</b>	Charles	CEA DAM	France	SPECTIX, a PETAL+ X-ray spectrometer
<b>Rousseau</b>	Adrien	CEA DAM	France	SSXI, Streaked Soft X-ray Imager on LMJ
<b>Sebald</b>	James	Prism Computational Sciences Inc	USA	VISRAD, 3-D Target Design and Radiation Simulation Code
<b>Soullié</b>	Gérard	CEA DAM	France	The DMX X-ray broad-band spectrometer
<b>Soullié</b>	Gérard	CEA DAM	France	The mini-DMX spectrometer
<b>Davoine</b>	Xavier	CEA DAM	France	Electron acceleration and generation of betatron x-ray radiation with the kilojoule and subpicosecond PETAL laser
<b>Fournier</b>	Kevin	LLNL	USA	Proposing and Planning Experiments at the NIF
<b>Hussein</b>	Amina	University of Michigan	USA	The role of quasi-static channel fields in Direct Laser Acceleration of electron beams to 0.6 GeV
<b>Spiers</b>	Benjamin	University of Oxford	UK	Tomographic Reconstruction of Magnetic Field structures from Proton Radiography Data
<b>Wei</b>	Mingsheng	LLE University of Rochester	USA	Overview of the Fundamental Science Program on the Omega Laser Facility