

May 6<sup>th</sup>, 2009

Joint ICFA Panel meeting at PAC09, Vancouver

# ICFA Panel on Advanced and Novel Accelerators

## Activity and Status

Chair:

Mitsuru Uesaka

Nuclear Professional School

University of Tokyo

# Mission

To promote and encourage international collaboration/workshop/school on advanced and novel accelerators

Especially emphasize on advanced compact accelerator and their application to not only high energy physics, particle physics, nuclear physics but also medical physics, nondestructive evaluation, security and so on, in order to maintain accelerator science and technology.

# Panel Members

Chair: M.Uesaka (Univ.Tokyo, Japan)

I.Ben-zvi (BNL, USA), W.Leemans (LBL, USA),  
R.Ruth (SLAC, USA), Louis Rinolfi(CERN, Europe),  
F.Zimmermann(CERN, Europe), Jongmin Lee(APRI, Korea),  
B.Carlsten (LANL, USA), W.Gai(ANL, USA),  
O.J.Louiten(U.Eindhoven, NL), J.Rosenzweig(UCLA, USA),  
L.Serafini(U.Milan, Italy), S.Schreiber (DESY, Germany),  
Chuangxiang Tang(China), B.Cros(Univ.Paris-Sud, France),  
Patrick Muggli (USC, USA), Dino Jaroszynski(Univ. Strathclyde, UK),  
A.Noda(Kyoto Univ., Japan), R.Hajima(JAEA, Japan)

Total: 19

America: 7

Europe: 7

Asia: 5

Workshop on Compton Sources for X/ $\gamma$  Rays: Physics and Applications,  
chaired by Prof.L.Serafini(INFN/Milano )  
in Sardinia, Italy, on Sep.7-12, 2008



It was successfully held by nice chairpersonship of Prof.L.Serafini etc., having **about 80 leading scientists and students** in this and related fields. At the opening session, I, as the panel chair, explained our panel policies for suggestion on the quality upgrade of the endorsed workshops. Especially, our two panel policies of publication of contributions to prestigious journal after reviewing and awards to young scientists and students were perfectly performed. **Almost all contributions are going to be reviewed and published in NIM. Best oral- and poster-presentation-awards were selected and given.**

## Updated ICFA endorsed Workshop

# The Laser and Plasma Accelerator Workshop 2009 in Kardamyli, Greece

Dr. Patric Muggli(USC) and Dr. Bob Bingham(Rutherford )  
Workshop co-chairs

A part of a very successful series of international workshops that **started in 1987** in **Malibu**. Since then, the workshop has been held in **Asia and in Europe (Kardamyli, Kyoto, Presqu'île de Giens, Portovenere, Taipei, Azores Islands)**.

The purpose of the workshop is to bring together the most recent results in **laser wakefield acceleration, plasma wakefield acceleration, laser-driven ion acceleration, and radiation generation produced by plasma-based accelerator beams**.

The last workshop was organized on the Azores Island of Terceira (<http://cfp.ist.utl.pt/lpaw07/index.php>) by the IST group from Lisbon, Portugal, and brought together over 80 participants.

A distinctive feature of the workshop was the small number of formal talks and the large number of working group sessions.

**The 2009 workshop will be held from June 22 to 26,**  
and the program will be following the same model.

# Updated ICFA endorsed Workshop

## **“The Physics and Applications of High Brightness Electron Beams”**

Chaired by Jamie Rosenzweig,  
for co-chairs Gigi Palumbo and Mitsuru Uesaka

**to be held at the Westin Maui Resort,  
Maui, Hawaii, November 16-19, 2009.**

**which is being proposed for endorsement by the  
ICFA Panels on Beam Dynamics and Advanced  
& Novel Accelerators.**

**the latest in the joint tradition of the “Arcidosso”  
(XFEL) and High Brightness Beam series, and is  
the direct heir to the last workshop in the series,  
held in Erice, Sicily**

# Newsletter is going to re-start up

S-band linac and application: L.Serafini, J.Louiten et al.

L-band linac including superconducting and application: S.Schreiber et al

X-band linac:Louis Rinolfi et al.

Medical physics application: Mitsuru Uesaka et al.

Compact linacs and industrial application:Tang Chuangxiang et al.

Inverse Compton scattering source and industrial application: R.Ruth et al.

High brightness beam and application: J.Rosenzweig et al.

Wakefield accelerator and application: W.Gai et al.

Extremely high RF accelerator and application: B.Carsten et al.

FEL application: R.Hajima et al.

ion cooling and application: I.Ben-zvi et al.

Laser plasma electron accelerator and application (Energy frontier, Pump-and-probe analysis, Intense photon science, FEL etc.): W.Leemans, B.Cros, Jongmin Lee, Dino Jaroszynski et al.

Beam plasma accelerator and application: P.Muggli et al.

Compact ion accelerator and application: A.Noda et al.

Topics on beam physics: F.Zimmermann et al.

**The topics and contents are discussed to be integrated and published in a book**

# Next Newsletter

## -ERL by R.Hajima-

1. ERL principle and overviews (Sakanaka at KEK)
2. Gun for ERL (C.H. Garcia at JLAB)
3. Acc. cavity for ERL (M. Liepe at Cornell)
4. ERL for FEL and Light sources (N. Vinolurov at Budker Inst)
5. Laser Compton gamma-ray generation (Ohgaki at Kyoto U.)
6. Storage ring gamma-ray source (someone from Duke)
7. Linac gamma-ray source (Barty or Siders at LLNL)
8. ERL gamma-ray source (Hajima)
9. Nuclear applications of gamma-ray source (someone from JAEA)
10. Astrophysics with gamma-ray source (Hayakawa at JAEA)

# International Committee for Ultra Intense Lasers (ICUIL)

Letter from the Chairman

'On our collaborative relationship with ICFA' (draft)

Toshi Tajima  
Chairman of ICUIL  
2/8/09

He succeeded Gerard Mourou, the previous chairman of International Committee for Ultra Intense Lasers (ICUIL), since its November 2008 General Assembly.

Based on recent progress and development of large scaled laser facilities in the world, this society has been regarded as a society for open use of the facilities. As to this point, they think the collaborative discussion would be necessary.

The collaboration between ICFA and ICUIL was discussed. The panel on Advanced and Novel accelerators is expected to be the correspondent.

## Discussion on Role and Mission of ICFA and Panels

- ICFA and upper IUPAP are still rather high-energy-oriented.
- However, the accelerator society and national laboratories have been covering a wide-spread fields such as light source, nuclear processing, medical physics, security, nondestructive evaluation etc.
- Panel on Advanced and Novel Accelerators is discussing the role and mission and most effective organization and so on.

Can we discuss jointly?