

ELI NP Executive Committee  
National Institute of Physics and Nuclear Energy  
Bucharest, Romania  
4/12/10

# Comments from Scientific Advisory Committee

Toshi Tajima  
ILE, Palaiseau  
and  
LMU, MPQ, Garching

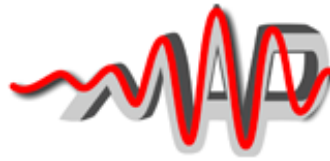
Acknowledgments for Discussions: D. Habs, C. Barty, G. Wormser, R. Hajima, T. Hayakawa, G. Mourou, P. Thirolf, G. Korn, M. Gross, J. Chambaret, M. Fujiwara, N. Zamfir,

# Challenges (as of Dec.9, 2009)

- How to reach the ultimate goal of ‘extreme light’
- How to integrate the ELI science as a whole through three/four pillars
- Three centers to compliment and excel in its own strength and compete for the best, rather than to line up at the slowest of the three
- Time limited at 2015
- High intensity site selection at 2012
- Technology transfer
- Personnel development

# Needed Goals

- Strive for science-driven world leadership and excellence
- Retention of the original goals of ELI: Extreme Light and its science
- Integration of science among the three/four Centers, integration of more developed countries and centers in EU; ample communications among these
- Ability to execute projects not waiting other two Centers; front-loaded execution
- Exchange info and personnel



# SAC's Requests Today



LMU  
www.attoworld.de

- Today's workshop proceedings into a report
- After the scientific talks, outline the project
- Invite/make more enthusiasts of this pillar, particularly from Rumania, Hungary, and Czech, but also from other countries
- Perhaps, **formation of team, Counsel, and sub-groups?**

(As of Dec. 9, 2009)

# Range of photonuclear physics

(as of Dec. 9, 2009)

- < keV regime: specific nuclear transitions, e.g.  $\text{Th}^{229}$  @7.6eV(Habs)
- keV regime: class of transitions, and some ‘photonuclear physics’
- MeV regime: general category of ‘photonuclear physics’
- > 10MeV regime: ‘photohadronic physics’
- > GeV: ‘photoparticle physics’

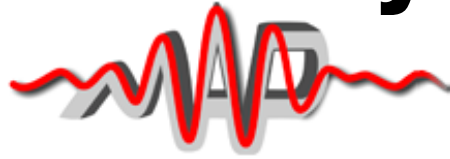
**(has been expanded and better categorized as of Feb. 2, 2010)**



# Today's Science Tasks

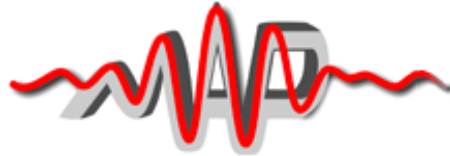
- Determine the rough outline of the missions of ELI NP
- The missions and goals: world-leading exciting cutting-edge, which will gravitate many world's talents
- Integrate and cross-fertilize the findings of the 4 Working Groups of ELI NP
- Look at short-term reality as well as the long-range vision over next 20-30years
- Plan ahead a staged and flexible vision and installation
- Need to serve for societal calls as well

# Today's Spirit (my suggestion)



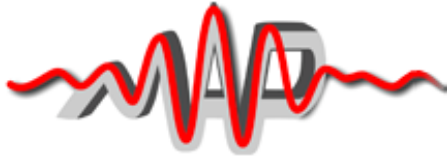
- Strive for the very best
- Make this truly pan-European and world-wide;  
Foster the camaraderie among Romanians as well as world's NP community, as embodied by the 4 Working Groups
- Dedicate your service and goodwill toward the greater good than the individual ambition
- Decide on science merit first, not as business

# Mountain of Radioactive Junk at JAEA



Remember: The society needs a solution to this!





# Nuclear Waste Unidentified

Handled Currently by Hand Individually



(JAEA)