

**IBA-Europhysics Prize 2007
for « Applied nuclear Science and Nuclear Methods in Medicine »**

The Executive Committee of the EPS has approved the recommendation of the Nuclear Physics Board according to the proposal of the IBA-EPS prize selection Committee to award the IBA-Europhysics Prize 2007 to:

Dr. Dieter Schardt, Biophysics Division, GSI Darmstadt, Germany
and
Prof. Dr. Wolfgang Enhardt, Technische Universität Dresden, Dresden, Germany

The prize is attributed with the citation:

*** For their outstanding contributions to the development of tumour therapy with heavy ions, providing detailed information on the interaction of ions with biological tissues and novel techniques for treatment quality assurance ***

Dr. Dieter Schardt uses his large experience in experimental nuclear physics to treat questions of uppermost importance in heavy ion therapy : measurement of depth dose curves, measurement of fragmentation cross sections to study biological effects with Carbon or heavy ions irradiation at high energy, investigation of the interaction of ionizing radiation with nerve cells, high accuracy measurement of neutron emission in the treatment of tumours, neutrons being able to induce secondary tumours. Dr. Dieter Schardt is at present the technical leader of the tumour therapy project at GSI. His work is influencing the quality of ion therapy facilities being under construction

and the reliability of ion therapy as a new modality for cancer therapy.



Dr D. Schardt

Prof. Dr. Wolfgang Enhardt has worked out a sophisticated but still very useful method to check the ions' s tracks via their production of radioactive nuclides decaying by positron emission. Pet detection hard and software were developed for their "in beam" use during radiation cancer therapy. The Pet system was put into operation and it is currently used at GSI Facility for hadron therapy.



Prof. Dr. W. Enhardt

Since the 90ties a stable and fruitful collaboration has been established between the Institut für Kern and Hadronen Physik at Rossendorf and GSI - Darmstadt. The physics basis of “in beam” Pet at therapeutic ion beams has been investigated and an “in beam” scanner has been developed, constructed and integrated into the experimental C ions therapy Facility of GSI. The device is in clinical routine since 10 years and the method has been steadily improved on the basis of experiments at the GSI accelerators.

The IBA-Europhysics prize is sponsored by the IBA (Ion Beam Applications) Executive Committee, Chemin du Cyclotron, 1348 Louvain -la- Neuve, Belgium.

It will be delivered during the 9th ECAART (European Conference on Accelerators in Applied Research and Technology) in Firenze, Italy from September 3-7, 2007.

Prof. Ch. Leclercq-Willain
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