

### 496. Wilhelm und Else Heraeus-Seminar

February 6<sup>th</sup> to 10<sup>th</sup>, 2012 – Physikzentrum Bad Honnef – Germany

# Astrophysics with modern small-scale accelerators

# Monday, February 6<sup>th</sup>, 2012

8:30 - 10:30, Session 1 E. Dreisigacker-About the Wilhelm and Else Heraeus Foundation (15) R. Reifarth: Research at small-scale accelerators (35+10) M. Wiescher: Challenges and limits of experiments with small accelerators (45+15) 10:45 - 12:30, Session 2 T. Rauscher: Differences between Nuclear Reactions in Stars and in the Laboratory (45+15) A. Sauerwein: Experiments to study optical-model potentials (35+10)  14:00 - 15:45, Session 3 M. Heil: Neutron-induced reactions M. Heil: Neutron-induced reactions (45+15) C. Spitaleri: Experimental setup for Trojan Horse Method in Nuclear Astrophysics (35+10)  16:15 - 18:00, Session 4 Gy. Gyürky: Proton- and Alpha-induced reactions (45+15) K. Schmidt: The ⁴Oca(α,γ)⁴⁴π reaction studied by activation (35+10)  10:45 - 12:30, Session 5 D. Meusel: The Accelerator Based Neutron Source FRANZ (45+15) M. Fonseca High power targets for FRANZ (35+10)  10:45 - 12:30, Session 6 D. Bemmerer: Underground Laboratories (45+15) A. Caciolli: Measurement of ¹ <sup>7</sup> O(ρ,γ)¹ <sup>8</sup> F resonance at E=183.3 keV with the LUNA accelerator (35+10)  14:00 - 15:50, Session 7 K. Sonnabend: Photon-induced reactions (45+15) Short poster presentations (		worlday, i ebit	uary 0 , 2012			
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#### 16:20 - 18:00, Session 8

11.L.M. Fraile:

Posters and discussions

## Wednesday, February 8th, 2012

8:30 - 10:15, S	ession 9	
G. Rugel:	Accelerator Mass Spectrometry	(45+15)
L. Netterdorn:	Experimental facilities for reaction studies in Nuclear Astrophysics in Cologne	(35+10)

A project for a nuclear astrophysics accelerator under the Pyrenees

#### 10:45 - 12:30, Session 10

10.40 - 12.00, 00001011 10			
S. Bishop:	Measuring Reaction Rates for Nova Nucleosynthesis	(45+15)	
A. Parikh:	Experiments to constrain nucleosynthesis in hydrogen-burning environments	(35+10)	



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## Astrophysics with modern small-scale accelerators

# Wednesday, February 8<sup>th</sup>, 2012 (cont.)

14:00 - 16:00, Session 11

F. Käppeler: Astrophysics with spallation sources (45+15)

R. Wolf: A multi-reflection time-of-flight mass separator for high-resolution beam purification at

ISOLTRAP (35+10)

Short poster presentations

(each 3+2)

1. A. Koloczek: Nucleosynthesis simulations in AGB stars

2. C.T. Nsangu: <sup>12</sup>C+<sup>12</sup>C fusion reaction at low energies

3. J. Tomlinson: Indirect measurements of the  $^{18}F(\alpha,p)^{21}Ne$  reaction with TUDA

#### 16:30 - 18:00, Session 12

Posters and discussions

## Thursday, February 9th, 2012

8:30 - 10:15, Session 13

R. Krücken: Astrophysics with rare isotope beams at TRIUMF (45+15)

E. Martin: TACTIC: The TRIUMF Annular Chamber for Tracking and Identification of Charged

particles (35+10)

10:45 - 12:30, Session 14

R. Plag: Data acquisition in nuclear physics – from past to future (45+15)

S. Schmidt: Flash-ADC-based data acquistion at the Frankfurt neutron source FRANZ (35+10)

14:00 - 16:15, Session 15

M. Anders: Direct measurement of the  $d(\alpha, \gamma)^6$ Li cross-section at astrophysical energies (35+10)

M. Carmona:  ${}^{4}\text{He}({}^{3}\text{He},\gamma)^{7}\text{Be cross section at the ECM of 900-2800 keV measured at a 5MV}$ 

tandem accelerator (35+10)

C. Granja: Spatial and Time Correlated Detection of the Decay Chain of Single Radioactive

Nuclei (35+10)

16:30 - 18:00, Session 16

H. Fynbo: A new method for studying broad <sup>12</sup>C resonances using small accelerators and

compact setups (35+10)

R. Depalo: Lifetime measurement of the 6.79 MeV state in <sup>15</sup>O with the AGATA

demonstrator (35+10)

## Friday, February 10<sup>th</sup>, 2012

8:30 - 10:15, Session 17

discussions

10:45 - 12:30, Session 18

summary, future plans