

## Underground nuclear reaction-experiments for astrophysics and applications

Workshop in Dresden, Germany --- Final program, as of 28.04.2010 13:30

	<b>Wednesday, 28.04.2010</b>
08:15 – 09:00	Bus Hotel → FZD (address: Bautzner Landstr. 400, 01328 Dresden) Registration
09:00 – 10:20	<b>Introduction, Scientific and Program Context</b> Welcome (Roland Sauerbrey, FZD, and Kai Zuber, TU Dresden) The 2010 NuPECC long range plan (20+5 min.) (Brian Fulton, Univ. York) Astrophysics and nuclear astrophysics (20+5 min.) (Roland Diehl, MPE Garching)
10:20 – 10:50	Coffee break
11:05 – 12:30	<b>Nuclear physics of the Sun and of the Big Bang</b> Recent news on solar fusion reactions (20+5 min.) (Michael Hass, Weizmann Institute) LUNA and the neutrinos from the Sun (20+5 min.) (Zsolt Fülöp, ATOMKI Debrecen) Active targets for nuclear astrophysics (20+5 min.) (Alison Laird, Univ. York)
12:30 – 14:00	Lunch break
14:00 – 15:40	<b>Explosive nucleosynthesis I</b> In-beam studies of the astrophysical p-process (20+5 min.) (Andreas Zilges, Univ. Köln) Activation studies for the astrophysical p-process (20+5 min.) (György Gyürky, ATOMKI Debrecen) Doppler shift attenuation: Nuclear astrophysics at TU München (20+5 min.) (Shawn Bishop, TU München) Nuclear physics of the astrophysical r-process (20+5 min.) (Gabriel Martinez-Pinedo, GSI)
15:40 – 16:00	Coffee break
16:00 – 16:45	Bus FZD → Felsenkeller
16:45 – 18:15	Felsenkeller visit (address: Am Eiswurlager 1, 01189 Dresden) 18:30 Bus Felsenkeller → city center, time to walk around in center
20:00 – 22:00	Social dinner, Restaurant „Sophienkeller“ (address: Taschenberg 3, 01067 Dresden; in the basement of the Taschenbergpalais building)

	<b>Thursday, 29.04.2010</b>
08:15 – 09:00	Bus Hotel → FZD
09:00 – 10:40	<p><b>Facilities for underground nuclear astrophysics</b></p> <p>LUNA – present and future (25+5 min.) (Alessandra Guglielmetti, Univ. Milano)</p> <p>Status of the Canfranc project for an underground nuclear astrophysics laboratory (20+5 min.) (Luis Fraile, Univ. Complutense Madrid)</p> <p>Underground laboratories – is Boulby still an option? (20+5 min.) (Marialuisa Aliotta, Univ. Edinburgh)</p> <p>Possible accelerator laboratory in Felsenkeller Dresden (15+5 min.) (Daniel Bemmerer, FZD)</p>
10:40 – 11:00	Coffee break
11:00 – 13:05	<p><b>Explosive nucleosynthesis II</b></p> <p>Novae and X-ray bursts: astrophysics (20+5 min.) (Jordi José, Univ. Politecnica de Catalunya, Barcelona)</p> <p>Novae and X-ray bursts: experiment (20+5 min.) (Anuj Parikh, TU München)</p> <p>Science case and program of the FRANZ neutron source (20+5 min.) (René Reifarh, Univ. Frankfurt)</p> <p>Astrophysics experiments at GSI and FAIR (20+5 min.) (Michael Heil, GSI)</p> <p>Carbon burning (20+5 min.) (Frank Strieder, Univ. Bochum)</p>
13:05 – 14:15	Lunch break
14:15 – 15:45	<b>Round table discussion on an „Informal network of the European underground accelerator community“</b>
15:45 – 16:15	Coffee break
16:15– 17:55	<p><b>Other potential research topics for underground accelerators</b></p> <p>Ion Beam Applications at Underground Accelerators (20+5 min.) (Adelaide Pedro de Jesus, Univ. Lisbon)</p> <p>Nuclear waste transmutation (20+5 min.) (Andreas Wagner, FZD)</p> <p>Nuclear data needs for rare-event searches (20+5 min.) (Kai Zuber, TU Dresden)</p> <p>Status of the standard solar model (20+5 min.) (Carlos Peña Garay, Univ. Valencia)</p> <p><b>Closing (for non-German participants)</b></p>
18:00 – 18:30	Bus FZD → Hotel
	Dinner (independently by participants)

	<b>Friday, 30.04.2010 (for participants from German institutions)</b>
08:15 – 09:00	Bus Hotel → FZD
09:00 – 10:30	<b>Introduction, possible DFG-Schwerpunktprogramm „Nuclear Astrophysics with stable ions, neutrons, and photons“</b>  Introduction, scope (Andreas Zilges, Daniel Bemmerer)  <b>Presentations by individual groups from Germany:</b> Desired contribution of each interested German group to DFG-Schwerpunktprogramm project (1-2 slides from each group)
10:30 – 11:00	Coffee break
11:00 – 12:30	<b>Round table discussion on DFG-Schwerpunktprogramm project and other aspects</b>
12:30 – 14:00	Lunch break
14:00 – 15:30	Bus FZD → Dresden airport

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**Additional information, updated 20.04.2010:**

Workshop web site: <http://www.fzd.de/felsenkeller>

On the web site, there is a link to a map containing all relevant places for the workshop.

**How to reach the hotel from Dresden airport:**

Take commuter train (S-Bahn) in the basement of the airport building. Get off after ~20 min. at station „Dresden Neustadt“. There, take tram 6 or 11 to go to "Kongresszentrum" (2 stops away). The whole trip (S-Bahn+tram) can be done with a Dresden local ticket (1.90 euros) available in the train station.

Transport between hotel and workshop site will be provided on each of the days of the workshop. The hotel is close to the city center, so you can walk e.g. from the social dinner site to the hotel.

**How to reach FZD from Dresden airport:**

If you need to go from airport directly to the workshop site (FZD), there's a slow+sure way using the above S-Bahn up to "Dresden Hauptbahnhof" and then regional bus 261 from there to "Rossendorf Forschungszentrum". However, bus 261 goes only every hour so you may consider a taxi for ca. 30-35 euros.

When using an automatic navigation system, please consider that recently the street address of FZD has been renumbered (up to date address: Bautzner Landstr. 400, 01328 Dresden-Rossendorf). Your system may only find FZD under the previous address „Bautzner Landstr. 128, Dresden-Rossendorf“, it is close to the intersection between highways B6 and S177.

### **Entering the workshop site at FZD:**

Due to security regulations, please keep a valid photo ID ready in order to enter FZD. If you enter FZD with your own car, you are required to stop the car before entering, then obtain a valid FZD guest card at the guards. Afterwards, you may use the FZD guest card to enter with your car, if you wish. The FZD campus is large, so this may be convenient. The workshop site is the lecture hall in building 120.

### **Meals:**

Lunch at the FZD cafeteria is included in the registration fee, as well as coffee breaks between sessions. You will receive a lunch ticket at registration. The social dinner on Wednesday evening is included in the registration fee, as well. Participants are responsible for their own dinner on Tuesday and Thursday evening.

### **Participants staying in the FZD guesthouse:**

Please take into account that FZD guesthouse residents are responsible for their own breakfast. There is a fully furnished kitchen in the guesthouse. Alternatively, you may buy breakfast at the FZD cafeteria (starting 08:30).

### **Registration fee:**

The registration fee is 70 euros (full workshop), 50 euros (Wednesday only, including social dinner), 40 euros (Thursday+Friday only). For some of you, the fee has been waived altogether. Each participant will therefore receive an individual message stating the amount we ask you to contribute. If you can arrange to pay the fee by bank transfer, please send the relevant amount to

Account holder:	Forschungszentrum Dresden-Rossendorf e.V.		
Name of bank:	Commerzbank AG, Dresden		
From inside Germany use:	Kontonummer:	0402657300	
	BLZ:	850 800 000	
From outside Germany use:	SWIFT:	DRESDEFF850	
	IBAN:	DE42850800000402657300	

If you cannot transfer the fee to the FZD account, please bring it with you in cash and pay at registration.

### **Phone numbers for unexpected problems:**

Anne Liebezeit,	+49 351 260 3293	(inside Germany dial 0351 260 3293)
Daniel Bemmerer,	cell +49 179 475 3139	(inside Germany dial 0179 475 3139)