

Nuclear Astrophysics in Germany

Darmstadt Meeting 15/16 Nov 2016

Scope, Contents, Schedule

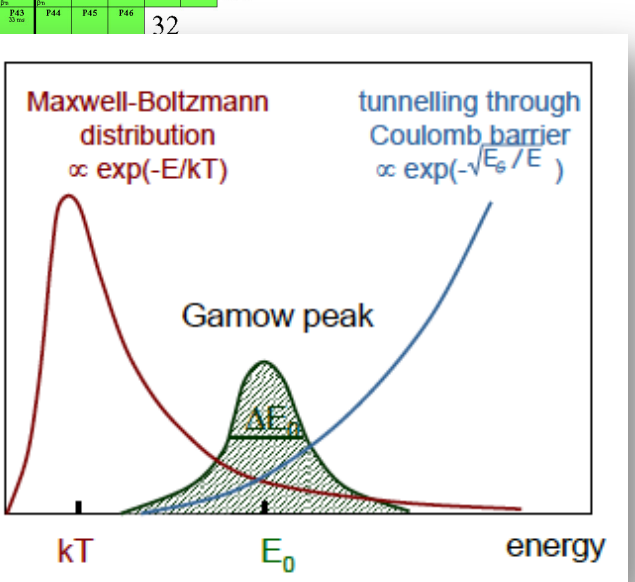
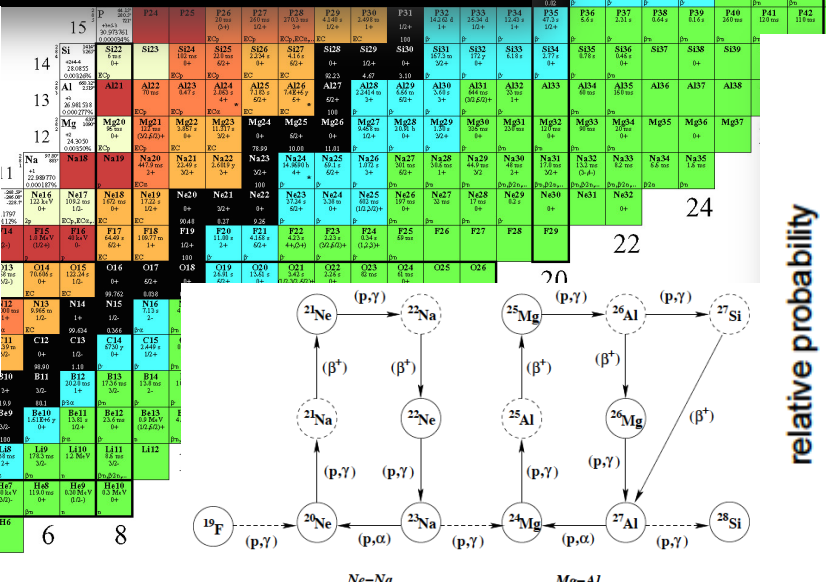
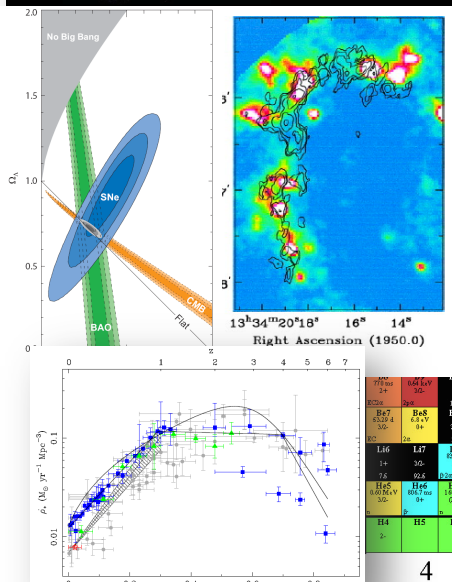
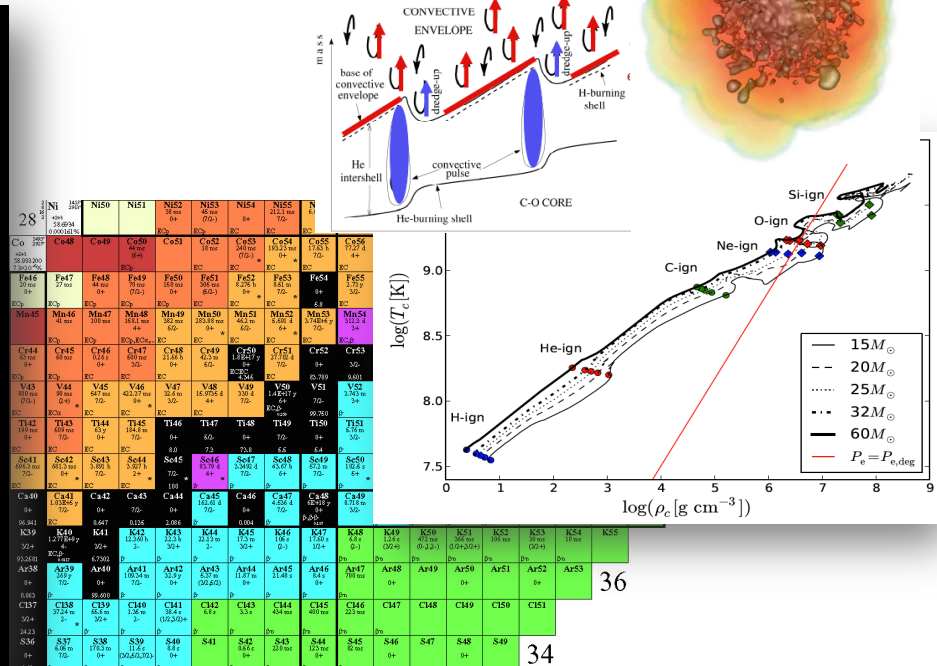
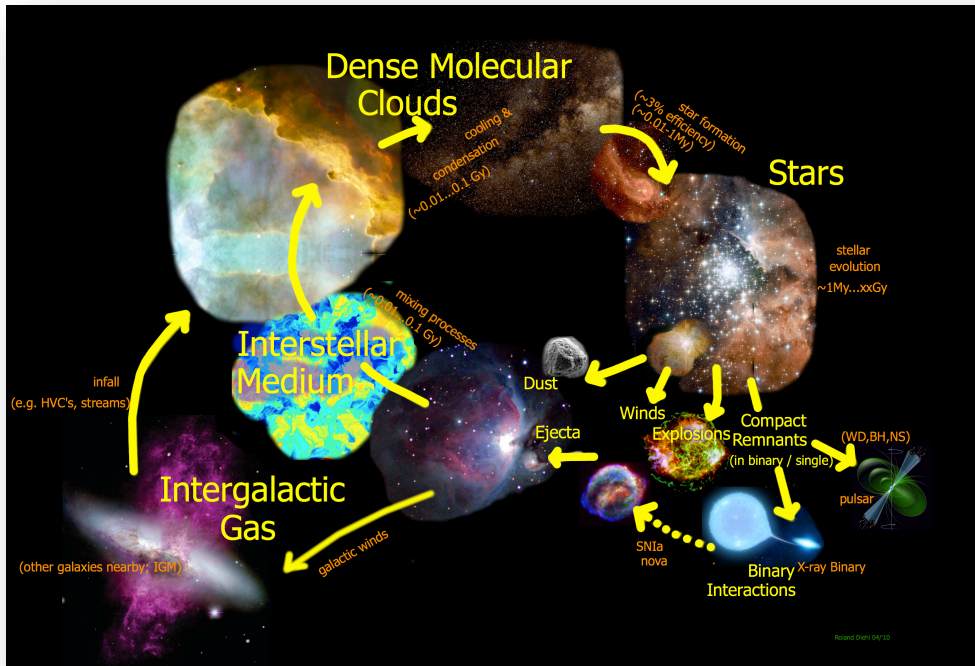
The scope

- "Nuclear Astrophysics" is a multi-faceted label
 - Different communities mean different things
 - » astrophysics community: "B2FH 50 years ago, all understood, need to implement into our models..."
 - » nuclear physics community: "Stars and supernovae are nice illustrations how relevant our science is..."
 - Many of us are experts in a subfield, and rely on others
 - » Stellar abundances: nuclear reactions, ISM morphology "given"
 - » Galactic evolution: Star formation, supernovae "given"/"random"
 - » Nuclear reactions: Stellar/supernova models "given"
 - » ...
- German groups are active in this field
 - Many international collaborations, many often small groups
 - Rich history, e.g. Rofls, Weizsäcker, Bethe, Hillebrandt,

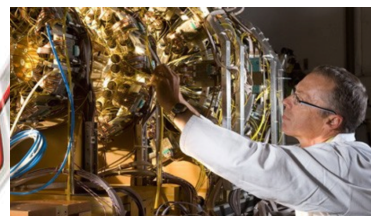
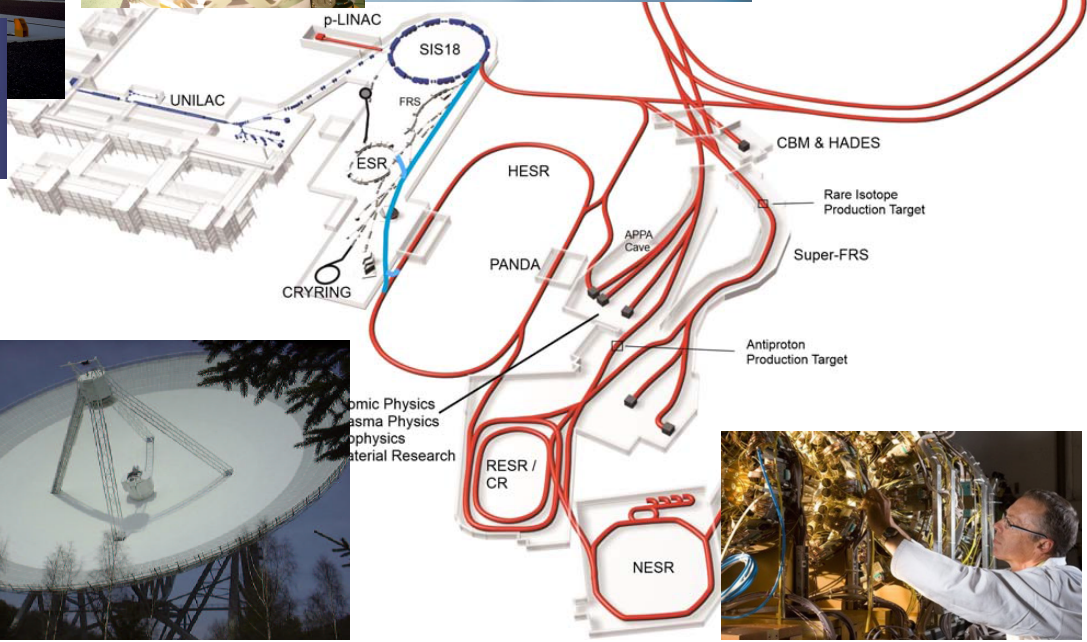
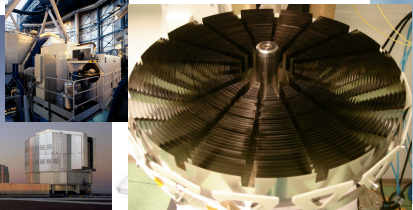
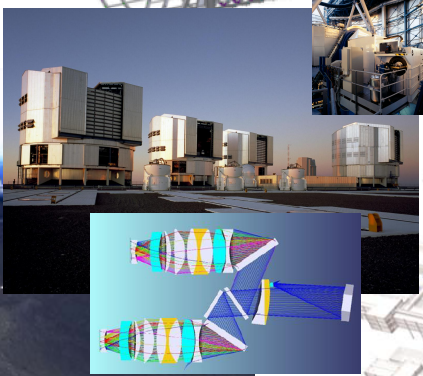
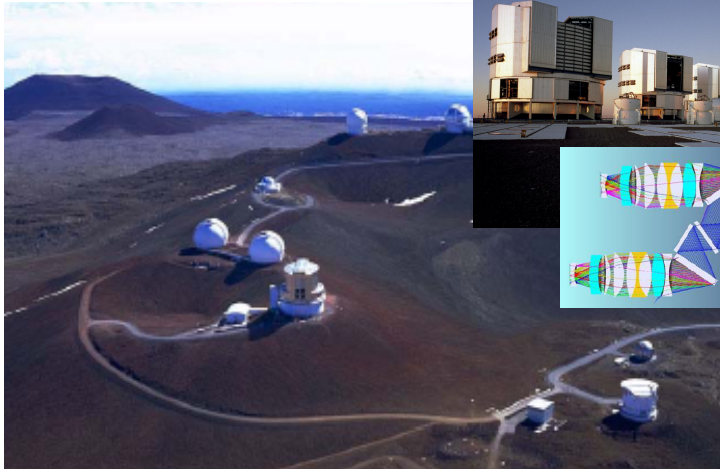
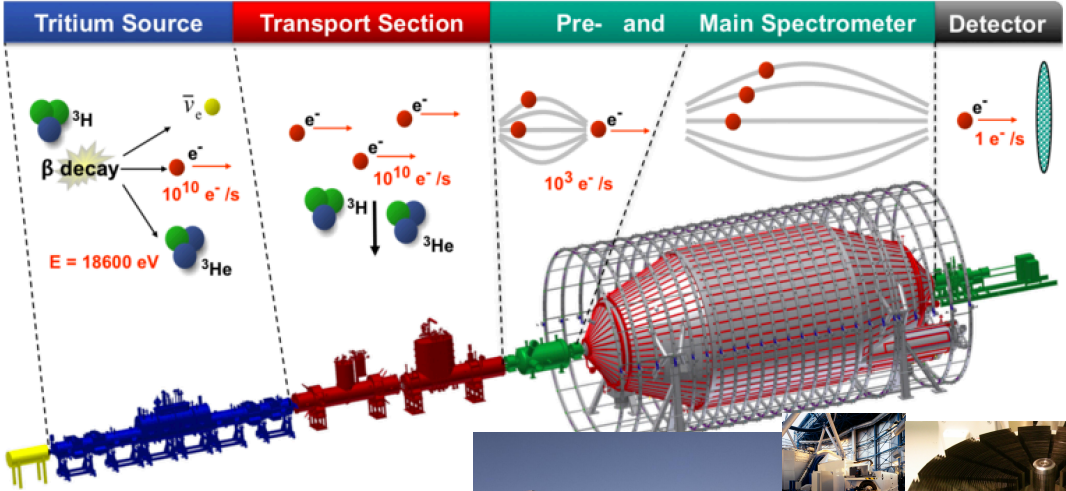
The diversity of research infrastructures

- German research organisations
 - DFG
 - DPG
 - HGF, MPG, Leibniz
- German research discussion committees
 - Rat deutscher Sternwarten, AG
 - Komitee für Hadronen und Kernphysik KHuK
 - Komitee für Astroteilchenphysik KAT
- Nuclear-Astrophysics Projects/Programs
 - NAVI, EMMI, Universe Cluster, SFBs/TRs,...
 - EuroGenesis, COST
 - FAIR, KATRIN, INTEGRAL, ...

The diversity of science



The diversity of tools



This Meeting

- Reminders of NuclAstro Activities in Germany
 - Define "fields" as
 - Astronomy/Observations
 - Nuclear Physics and Reactions
 - Nuclear Reaction Experiments
 - Astrophysical Models of NuclAstr in Cosmos
 - Have presentations per field, and extensive discussion
- Try to identify community activities
 - Watch out for gaps, deficits, missed opportunities
 - Contemplate community funding request(s)

Today

		Science Workshop "Nuclear Astrophysics in Germany"	15/16 Nov 2016
		<i>Darmstadtium, Darmstadt (D)</i>	<i>(Program version 9, 11 Nov 2016)</i>
		Day 1 = 15 Nov 2016	
Time	End	Title	Speaker
11:00	11:15	Welcome and Introduction	Diehl, Roland
11:15	11:40	Observations: Stars across the ages	Christlieb, Norbert
11:40	12:05	Observations: Stellar abundance issues	Bergemann, Maria
12:05	12:20	Observations: Stellar abundance specifics	Hansen, Camilla
12:20	13:20	<i>Lunch Break</i>	
13:20	13:45	Observations: Interstellar gas	Diehl, Roland
13:45	14:00	Observations: presolar grains and meteorites	Hoppe, Peter
14:00	14:15	Observations: Cosmic rays	Pohl, Martin
14:15	14:30	Cosmic Compositional Evolution	Diehl, Roland
14:30	15:10	<i>Discussion: Observations Perspectives</i>	<i>all</i>
15:10	15:40	<i>Coffee Break</i>	
15:40	16:05	NuclearPhysics & Theory	Hebeler, Kai
16:05	16:30	NuclearPhysics & Theory	Martinez-Pinedo, Gabriel
16:30	17:10	<i>Discussion: Nuclear Physics Theory Perspectives</i>	<i>all</i>
17:10	18:00	<i>Strategies</i>	Reifarth; Diehl; all
18:00		<i>end</i>	
		<i>social evening</i>	

Tomorrow

Time	End	Title	Speaker
09:30	09:50	Nuclear Laboratories and Experiments: HZDR	Bemmerer, Daniel
09:50	10:10	Nuclear Laboratories and Experiments: FRANZ, GSI	Reifarh, Rene
10:10	10:20	Nuclear Laboratories and Experiments: GSI and connections	Litvinov, Juri
10:20	10:30	Nuclear Laboratories and Experiments: Darmstadt's facilities	Pietralla, Norbert
10:30	11:00	<i>Coffee Break</i>	
11:00	11:10	Nuclear Laboratories and Experiments: Munich Tandem	Faestermann, Thomas
11:10	11:20	Nuclear Laboratories and Experiments: Cologne Tandem	Scholz, Philipp
11:20	12:00	<i>Discussion: Nuclear Laboratories and Experiments Perspectives</i>	<i>all</i>
12:00	13:00	<i>Lunch Break</i>	<i>all</i>
13:00	13:25	Source Models: Stellar and binary evolution	Abate, Carlo
13:25	13:50	Source Models: Supernovae	Röpke, Fritz
13:50	14:15	Source Models: Compact object aspects	Rezzolla, Luciano
14:15	14:45	<i>Discussion: Source Models Perspectives</i>	<i>all</i>
14:45	15:25	<i>Discussion: Strategies to support Nuclear Astrophysics</i>	<i>all</i>
15:25	15:30	Farewell	<i>all</i>
15:30		<i>end</i>	