

5TH INT. SOLAR NEUTRINO CONFERENCE



Dresden, 11.6.2018



5th International Solar Neutrino Conference Dresden, June 11-14 2018

Overview:

The 5th International Solar Neutrino Conference will take place in Dresden from June 11-14 2018. The scientific program will focus on solar neutrino physics with particular emphasis on running and future solar neutrino experiments, detection techniques, solar models, helioseismology, phenomenological aspects, neutrino oscillations and nuclear physics related to solar models. The conference lasting four days is going to feature both invited talks and a poster session.

PhD students and young researchers are invited to contribute a poster with their recent research results.

Talks are given by invited renowned experts of their field.

Organizing committee:

Kai Zuber (TU Dresden, chair), Daniel Bemmerer (HZDR), Andreas Jansen (TU Dresden), Mikko Meyer (TU Dresden), Birgit Schneider (TU Dresden), Jan Thurn (TU Dresden), Steffen Turkat (TU Dresden), Thomas Wester (TU Dresden), Stefan Zatschler (TU Dresden)

Advisory board:

M. Asplund (ANU Canberra), P. Prati (Univ. Genova & INFN), A. McDonald (Queen's University), T. Kirsten (MPIK Heidelberg), G. Bellini (Univ. Milano & INFN), W. Haxton (Univ. Berkeley), Y. Suzuki (Univ. of Tokyo), K. Lande (Univ. Pennsylvania), C. P. Garay (IFIC, Valencia), V. Gavrin (INR Moscow), B. Cleveland (SNOLAB), A. Serenelli (CSIC-IEEC Barcelona), J. Christensen-Dalsgaard (Dan. Astro. Centre), A. Smirnov (MPIK Heidelberg)




More information online:
<https://indico.desy.de/event/18666>
 Image credit: NASA

Organisational issues:



- Registration is possible in the breaks
- Session chairs please contact technical people before your session
- On Wednesday we are in a different building, see later
- **Please do not hesitate to contact staff people in case of questions/help**

Time schedule

5th International Solar Neutrino Conference Dresden, June 11-14 2018				
	Monday 11 June Dülfer Saal	Tuesday 12 June Dülfer Saal	Wednesday 13 June Willersbau	Thursday 14 June Dülfer Saal
09:00 – 09:30	Registration	From Radiochemical to Real-time Detection of Solar Neutrinos: GALLEX, Borexino and SNO+	SNO, Super-Kamiokande and Intertwinements in the determinations of PP and CNO neutrinos	SAGE, JUNO and THEIA
10:00 – 10:30	50th anniversary of the first Homestake results			
11:00 – 13:00	Solar Models and Experiments	CNO Cycle	MSW effect and new experiments Introduction to the Felsenkeller laboratory	Novel methods and techniques
14:30 – 16:00	Nuclear Astrophysics	Solar Flare Neutrinos and Neutrino Measurements	Visit of Felsenkeller	
16:00 – 18:00	Poster Session	Solar Neutrinos as background and nuclear astrophysics		Closing and Summary
17:30 – 19:00				
19:00 – 21:00			Guided tour through the city center of Dresden	
			Social Dinner	




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Image credit: NASA



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17:30 – 19:00			Guided tour through the city center of Dresden	
19:00 – 21:00			Social Dinner	

12 presented posters
and snacks



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Image credit: NASA

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5th International Solar Neutrino Conference				
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	14:30 Meeting at the entrance of the Dülfersaal (location of the conference) 14:30 – 14:45 Bus transfer to the Felsenkeller			
			SNO, Super-Kamiokande and Intertwinements in the determinations of PP and CNO neutrinosk	SAGE, JUNO and THEIA
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 Image credit: NASA

Time schedule

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	14:45 – 15:30 Visit of the Felsenkeller 15:30 – 15:45 Bus transfer to Dresden main station			
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Image credit: NASA



Time schedule

5th International Solar Neutrino Conference				
Dresden, June 11-14 2018				
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	17:30 Meeting at the Neumarkt Dresden in front of the Frauenkirche at the Martin- Luther monument (closest station: Dresden Neumarkt or Pirnaischer Platz)			
		ical r EX, O+	SNO, Super- Kamiokande and Intertwinements in the determinations of PP and CNO neutrinosk	SAGE, JUNO and THEIA
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Image credit: NASA

Time schedule

**5th International Solar Neutrino Conference
Dresden, June 11-14 2018**

	Monday 11 June	Tuesday 12 June	Wednesday 13 June Willersbau	Thursday 14 June Dülfer Saal
	<p>The tour will end at the restaurant "Chiaveri" (location where the Social Dinner takes place afterwards).</p>			
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 Image credit: NASA



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Time schedule

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	Please enrol at registration		SNO, Super-Kamiokande and Intertwinements in the determinations of PP and CNO neutrinos	SAGE, JUNO and THEIA
11:00 – 13:00			Solar Models and Experiments	CNO Cycle
14:30 – 16:00	Nuclear Astrophysics	Solar Flare Neutrinos and Neutrino Measurements	Visit of Felsenkeller	Solar Temperature Measurements and Neutrino Detection
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Image credit: NASA

Time schedule (Thursday afternoon/Friday)

5th International Solar Neutrino Conference Dresden, June 11-14 2018				
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09:00 – 09:30	Registration	From Radiochemical to Real-time Detection of Solar Neutrinos: GALLEX, Borexino and SNO+	SNO, Super-Kamiokande and Intertwinements in the determinations of PP and CNO	SAGE, JUNO and THEIA
10:00 – 10:30	50th anniversary of the first solar neutrino results			
11:00 – 13:00	Solar Experiments	Willersbau C207 9:00 - 15:00 Workshop for international Alumni and Friends of TU Dresden		Novel methods and techniques
14:30 – 16:00	Nuclear and neutrino Measurements			Solar Temperature Measurements and Neutrino Detection
16:00 – 18:00	Poster Session	Solar Neutrinos as background and nuclear astrophysics		Closing and Summary Alumni Project
17:30 – 19:00			Guided tour through the city center of Dresden	
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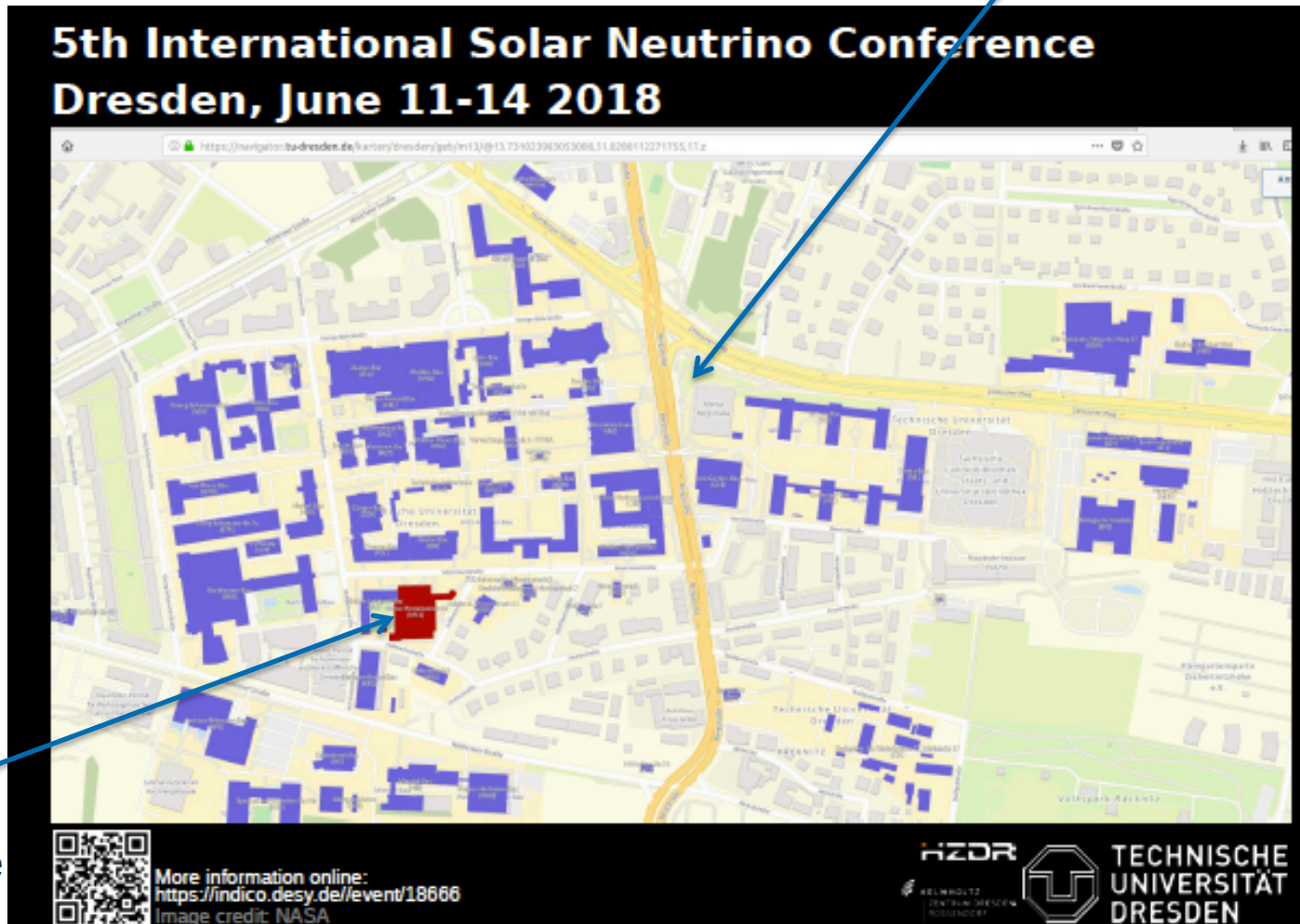
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Image credit: NASA



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Location (Mo,Tue,Thu)

Bus stop area



Conference
Venue

11.06.2018

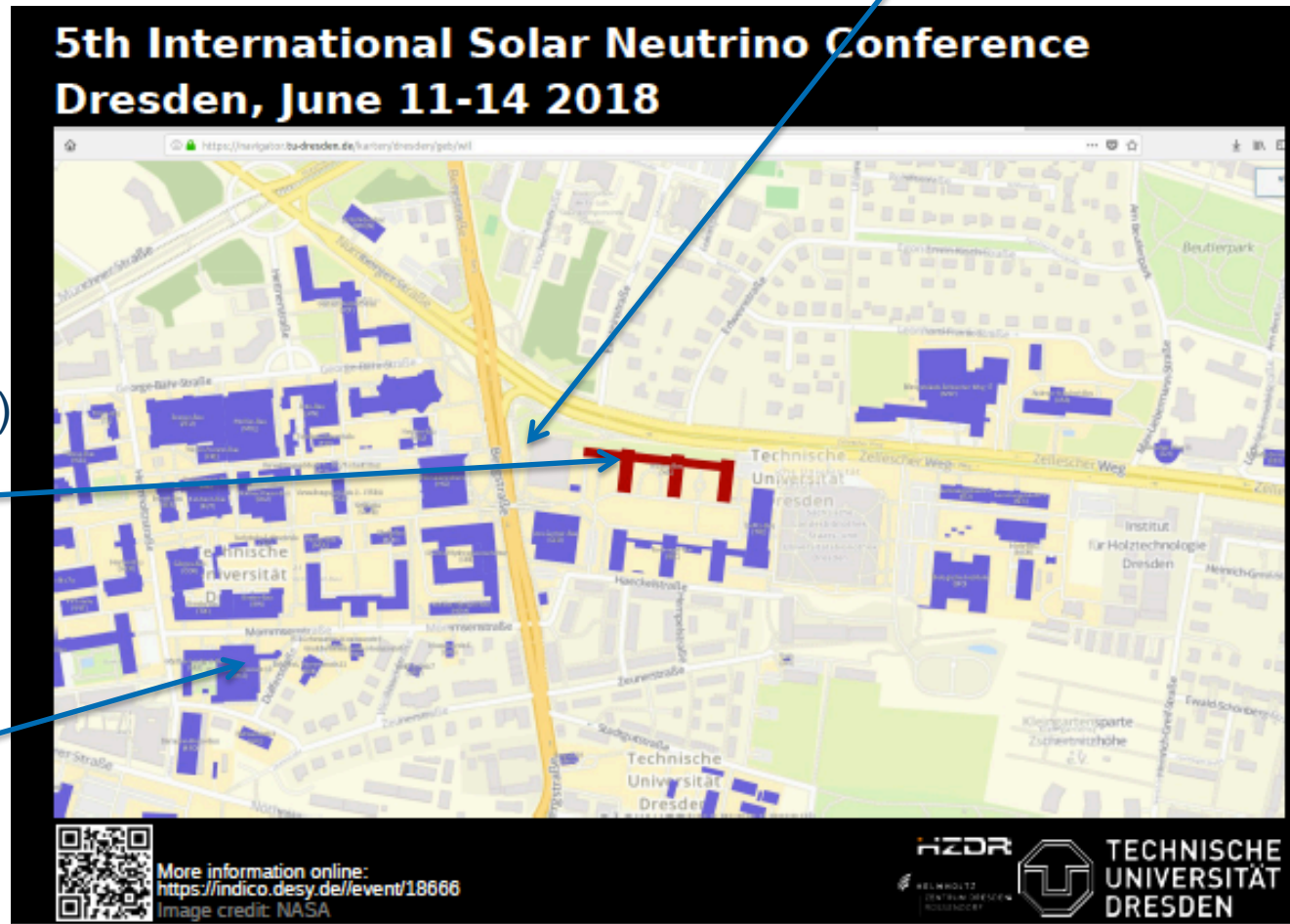
Solar neutrinos

Location (Wed)

Bus stop area

Conference Venue (Wednesday)

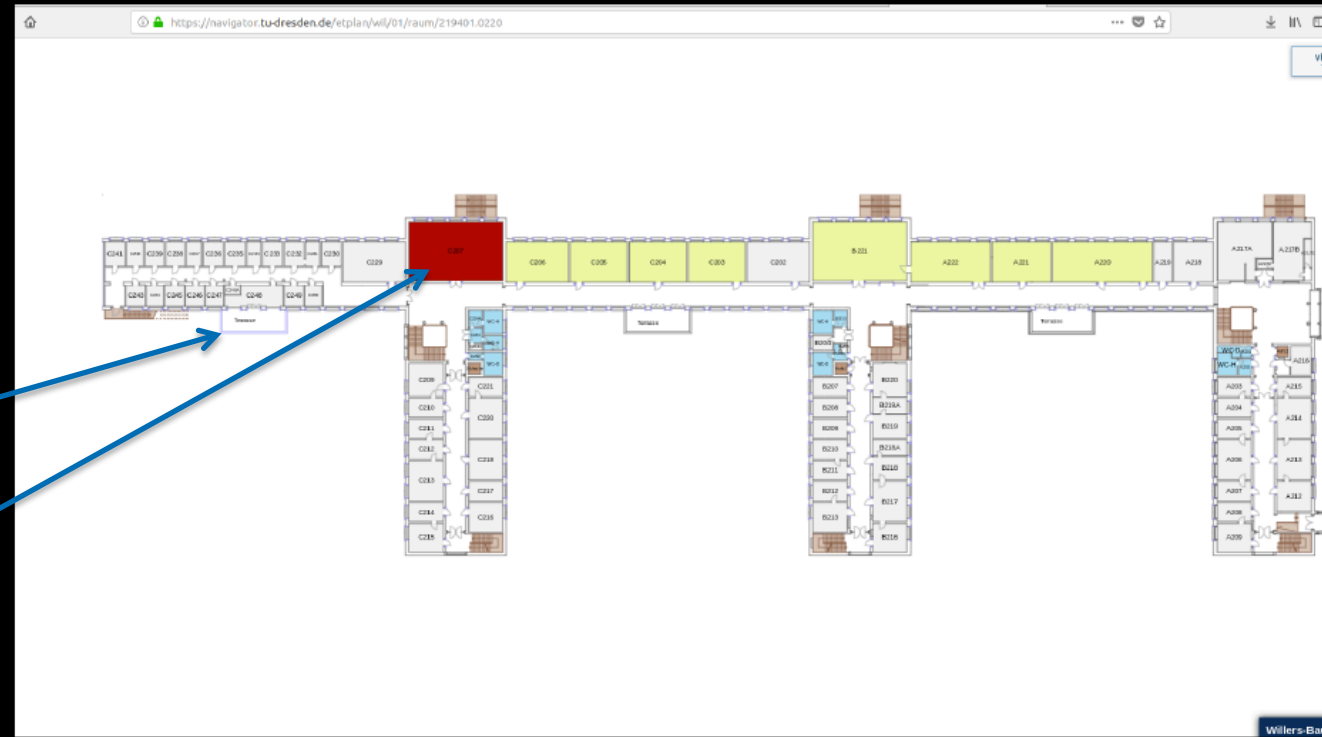
Venue other days



Location (Wed)

Willers Bau C 207 (1st floor)

5th International Solar Neutrino Conference Dresden, June 11-14 2018



Entrance

Venue



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Image credit: NASA

Events

- Poster session today late afternoon/evening (snacks)
- Social event on Wednesday (Visit of Felsenkeller accelerator, city tour, social dinner)
- Alumni program on Thursday/Friday

- and it is our great pleasure that we were able provide some young participants the possibility to give short talks

- and young students were very interested in historical experiments

SEARCH FOR NEUTRINOS FROM THE SUN*

Raymond Davis, Jr., Don S. Harmer,† and Kenneth C. Hoffman

Brookhaven National Laboratory, Upton, New York 11973

(Received 16 April 1968)

A search was made for solar neutrinos with a detector based upon the reaction $\text{Cl}^{37}(\nu, e^-)\text{Ar}^{37}$. The upper limit of the product of the neutrino flux and the cross sections for all sources of neutrinos was $3 \times 10^{-36} \text{ sec}^{-1}$ per Cl^{37} atom. It was concluded specifically that the flux of neutrinos from B^8 decay in the sun was equal to or less than $2 \times 10^6 \text{ cm}^{-2} \text{ sec}^{-1}$ at the earth, and that less than 9% of the sun's energy is produced by the carbon-nitrogen cycle.

SINCE 1998



Super-Kamiokande
20th Anniversary
of first solar ν result
at NEUTRINO

International solar neutrino conferences

-1st: 25.2.1972 at Western White House Conference Facility, San Clemente, CA
26.2.1972 at University of California, Irvine

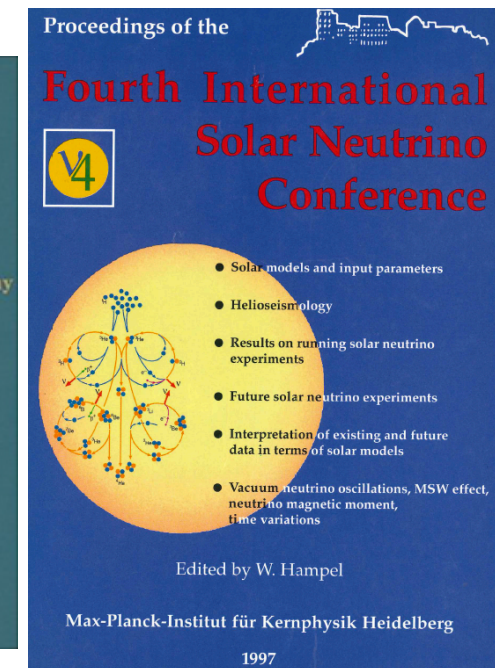
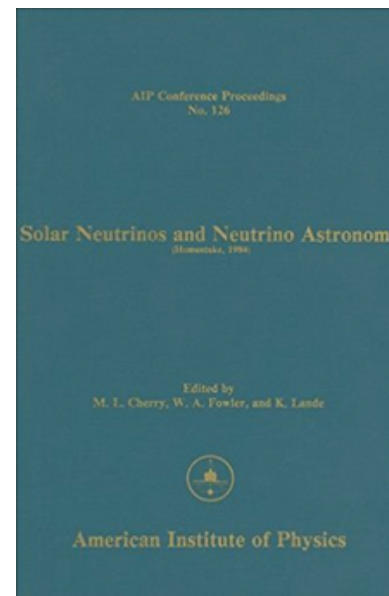
Thanks to B. Cleveland

- 2nd: 5-7.1.1978 Broohaven National Lab. Bldg 555

- 3rd: 23-25. 8.1984 Lead, South Dakota
AIP Conf. Proc. 126 (1985)

- 4th: 8-11.4.1997, Heidelberg, Germany

Prae-Oscillation era



Social tour:

It's your choice
(already asked at
registration)

- Felsenkeller tour (y/n)
- Guided city tour (y/n)
- Social dinner (y/n)

Bus provided (44 seats)

Social dinner at 7 pm
at Chiaveri restaurant

<http://www.chiaveri.de>

Social programme on Wednesday - June 13, 2018

14:30 – 15:45: Visit of Felsenkeller (shallow-underground accelerator laboratory)
On wednesday you will get the opportunity to visit the shallow-underground laboratory Felsenkeller, where a 5 MV Pelletron is currently being installed in a depth of 130 m.w.e. enabling research on astrophysically relevant nuclear reactions. A bus transfer will be provided, so those who are interested in the tour must enrol no later than Tuesday.

14:30 Meeting at the entrance of the Dülfersaal (location of the conference)

14:30 – 14:45 Bus transfer to the Felsenkeller

14:45 – 15:30 Visit of the Felsenkeller

15:30 – 15:45 Bus transfer to Dresden main station

17:30 – 19:00 Guided tour through the city center of Dresden

On wednesday you can also attend a guided tour through the city center of Dresden which will be conducted before the social dinner takes place. For those who are participating in the Felsenkeller tour there will be free time between 15:45 and 17:00. The tour itself will end directly at the restaurant "Chiaveri", where the social dinner takes place afterwards.

17:30 Meeting at the Neumarkt Dresden in front of the Frauenkirche at the Martin-Luther monument (closest station: Dresden Neumarkt or Pirnaischer Platz)

17:30 – 19:00 Guided tour through the city center of Dresden. The tour will end at the restaurant "Chiaveri" (location where the Social Dinner takes place afterwards). The closest stop for public transport nearby the restaurant is „Am Zwingerteich“ (about 10 min walking distance). There you can use tram line 11 to get close to the main station.