

B. Majorovits (MPI für Physik, München) on behalf of the GDT cooperation



Max-Planck-Institut für Physik  
(Werner-Heisenberg-Institut)



EBERHARD KARLS  
UNIVERSITÄT  
TÜBINGEN



## Deutsch-Chinesische-Kooperationsgruppe

### Development of High Purity Germanium Detector Techniques for Applications in Fundamental Research

Finanziell unterstützt durch: Chinesisch-Deutsches Zentrum für Wissenschaftsförderung Peking, China

## 中德合作研究小组

### 应用于基础研究的高纯锗探测器技术研发

资助者: 中德科学中心 / 中国 北京

→ Support of 3 symposia & additional travel budget  
by the Sino-German center for the support of sciences 2013-2015

# GOALS AND SUBJECTS:

Evaluation of common interests and goals

Study feasibility of next generation dark matter and  $0\nu\beta\beta$  experiments using HPGe detectors

- HPGe detector technology
- Electronics and readout
- Experiments to be planned (Dark Matter,  $0\nu\beta\beta$ -decay, etc.)
- Experimental conditions (Experimental surroundings, Underground labs, etc.)
- Backgrounds, with a focus on neutrons



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# Activities so far:

## Symposia

### **Symposium on Future Applications of Germanium Detectors in Fundamental Research**

Tsinghua university in Beijing from March 23 to March 29, 2011

[https://www.gerda.mpp.mpg.de/symp\\_index.php](https://www.gerda.mpp.mpg.de/symp_index.php)



### **Symposium of the Sino-German GDT Cooperation**

University of Tübingen, 8 April 2013 12 April 2013

<https://indico.mpp.mpg.de/conferenceDisplay.py?confId=2117>



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# Activities so far: Scientific exchange

**Student exchange: common work on HPGe-BEGe detector  
pulse shape simulations**

**Simulation of muon induced neutrons in shallow and deep  
underground lab**

**Start collecting needs for large scale next generation dark  
matter and/or  $0\nu\beta\beta$  experiment at Jinping**



# Future plans: Scientific exchange

## Planned common activities:

**Measure muon induced neutrons at shallow (and deep ?)  
underground site (Jingping)**

**Low background ASIC development for HPGe at  
cryogenic liquids**

**Evaluation of needs for next generation experiment**

## Next symposium :

**Tsinghua university in Beijing from May 12 to May 16, 2014**

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