

Welcome to the workshop: Dark Matter (WIMPs) Direct Detection

Junhui LIAO

Oct 14, 2019

- 1 Workshop introduction
 - The motivation of the workshop
 - The program of the workshop
 - Logistics

- 2 Acknowledgement

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The motivation of the workshop

Where we are

- No smoking gun evidence for the existence of DM from satellites, accelerators, and underground detectors.
- No observed WIMPs up to ton-scale detectors (“G 1.5” detectors).
- Current limits on high mass WIMPs exceeding the lowest weakly interaction between WIMPs and nucleons through the Higgs Boson under the hypothesis of coherent scattering.

Where we want to go?

- Listening to the thoughts of leading physicists: from both experimental and theoretical sides.
- We have some kind of novel ideas on DM direct detection, and we would like to listen to the comments from all interested participants, in particular, the review panel members.

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Six topics, 1/2

- DM theory.
Prof. Dan HOOPER
Prof. Xiaojun Bi,
Dr. Jia LIU.
- High mass WIMPs experiments.
LUX/LZ, Prof. Richard GAITSKELL.
XENON-1T, Prof. Kaixuan Ni.
PandaX, Prof. Yue MENG.
DarkSide, Dr. Xiang XIAO.
DarkSide, Mr. Xinran LI.
- Low mass WIMPs experiments.
Low mass WIMPs experiments review, and HeRALD, Prof. Dan MCKINSEY.
CDEX, Dr. Litao YANG.
ALHET, Dr. Junhui LIAO (Jun).
- Liquid helium research.
Prof. George SEIDEL.
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Six topics, 2/2

- SiPMs company.
FBK, Dr. Alberto GOLA.
Hamamatsu, Miss. Yue TAO.
 - Discussion,
All interested participants.
Review,
Review panel.
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- Workshop closes on the afternoon of Oct 16, Wednesday.

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Social events

- Workshop picture.
Time: 11:30 - 11:40 AM, Oct 14, Mon (After the coffee break on this morning).
Place: 1st floor, outside of this building (one floor above)
- Banquet.
Time: 17:00 - 19:00 PM, Oct 15, Tue.
Place: Western Restaurant (?)

During the WS

- WS place: (always) B105.
- WIFI: (1) chep, PW: chep2016; (2) edurom.
- Restrooms: Going out of the door of CHEP, 10 meters ahead.
- Coffee, drinking, lunch box: free, CHEP (right here).

Commutation and tourism

- Subway: Hotel (Remin University, D) \longleftrightarrow CHEP (Peking University, east gate, B).
- Tourism: Beijing is a historical city. **Tourism** is strongly recommended.

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- Thanks to the dean of the school of physics, Prof. Yuanning GAO, and the deputy dean, Prof. Qing-Hong CAO.
Without their support of many kinds, this WS could not happen.
- Special thanks Miss. Lv LV for very efficient and professional work.
Please clap your hands for her incredible work.

In case you need it

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