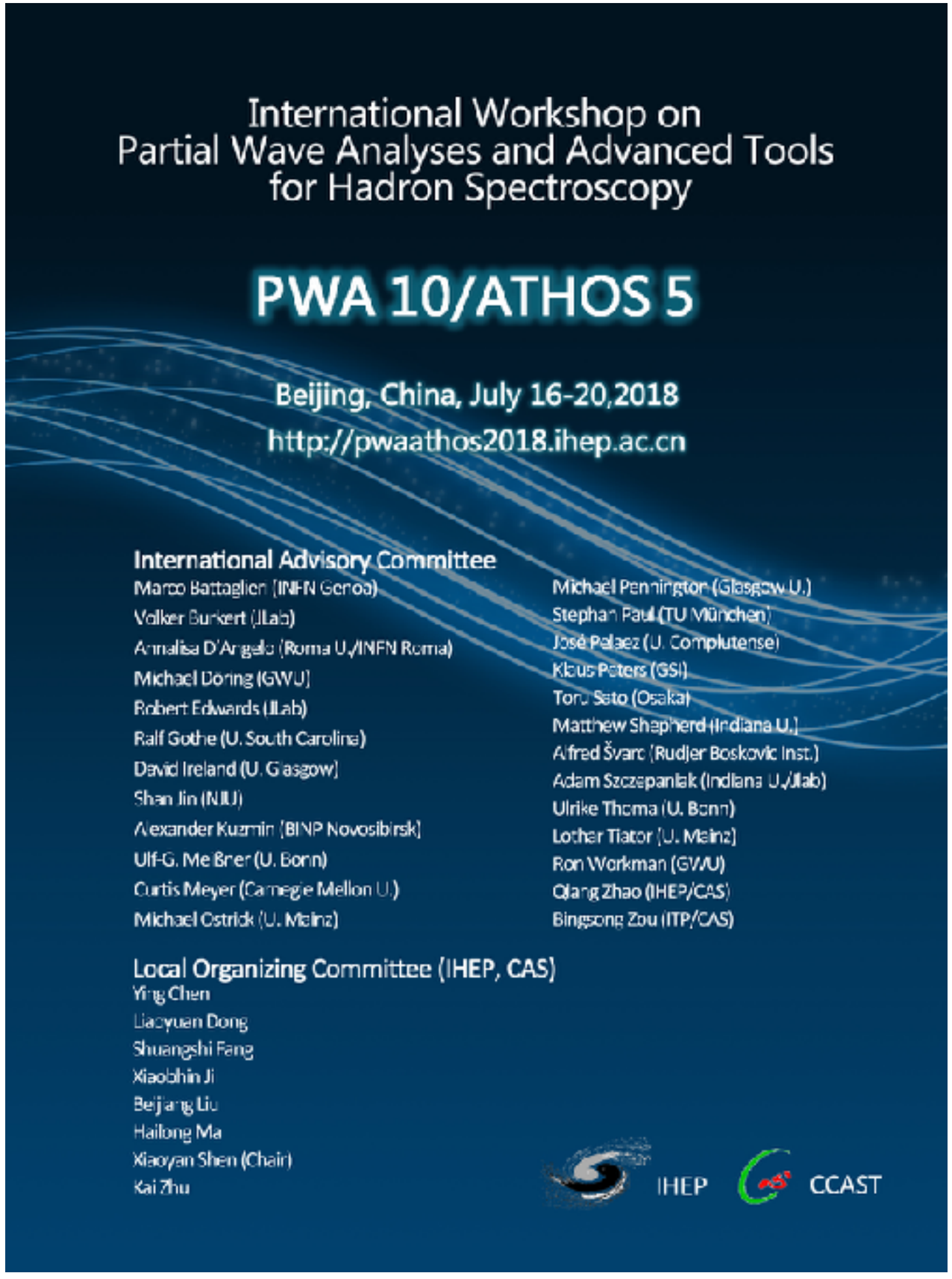
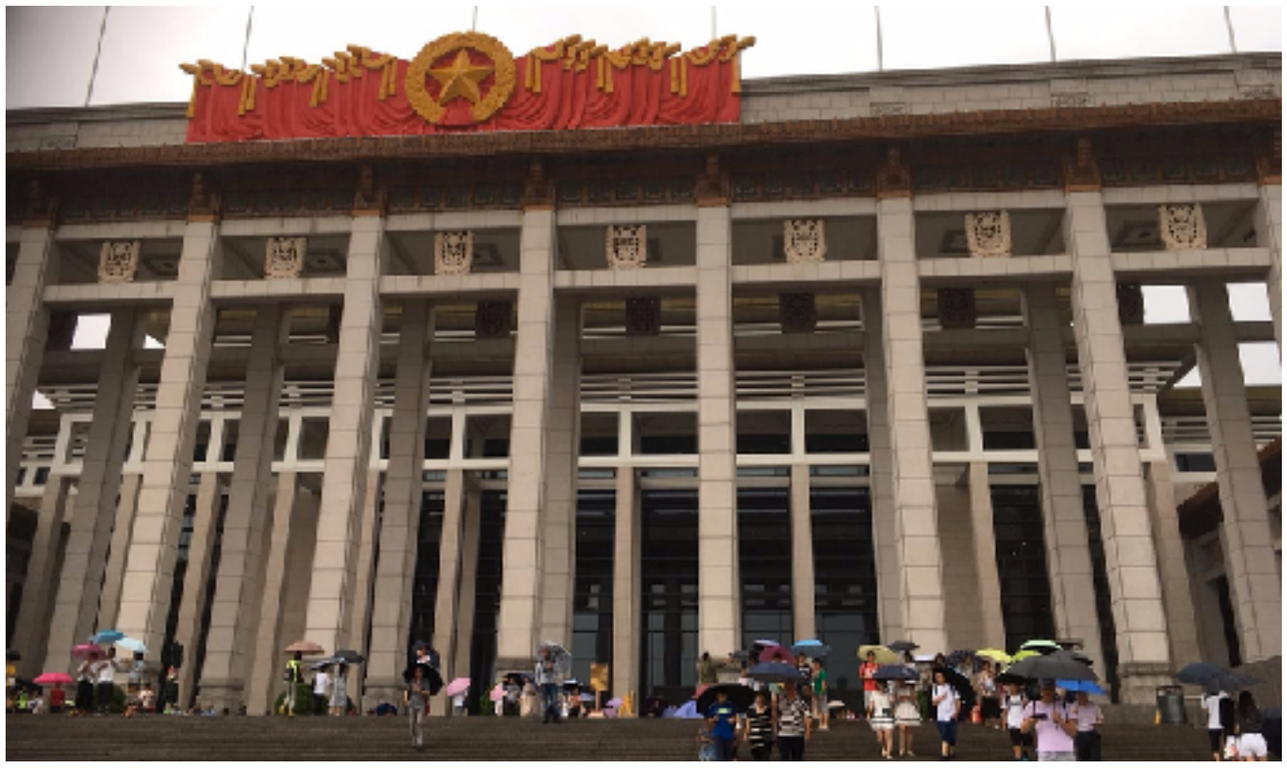
Closing remarks



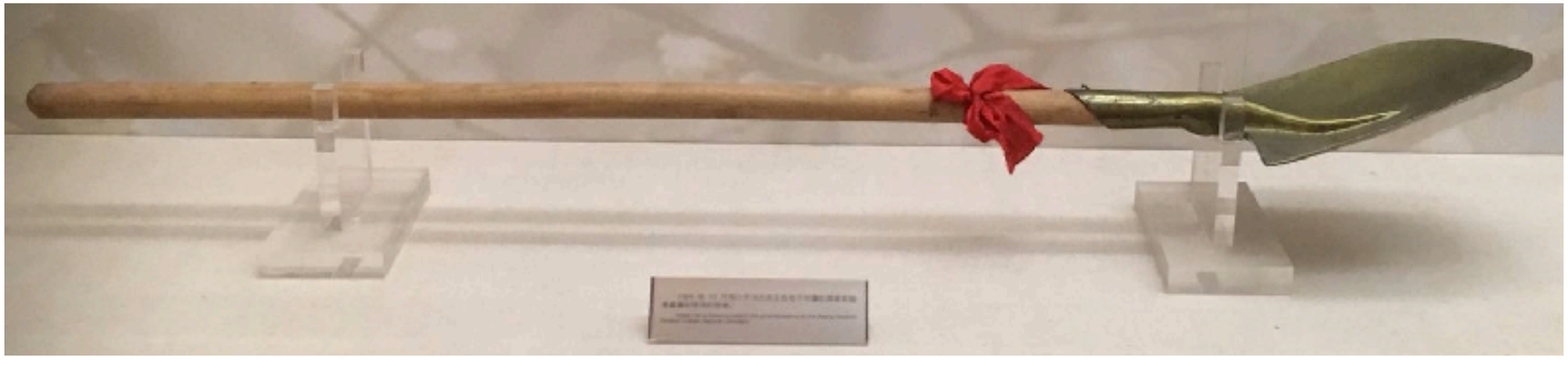
The Conference Site and the National Museum

Museum with the third largest number of yearly visitors



The Conference Site and the National Museum

Founding of BEPC



The Participants

Personal Comments:

Joint ATHOS-PWA workshop

Status after several such workshops:

still different language in baryon and meson PWA

- Baryons:
  - PWA Models (Pietarinnen fits, SAID/MAID/Bn-Gatchina etc…) fit all observables at all beam energies from „all“ experiments
  - Many talks given by theorists showing their fits with data
  - Very good cooperation theory/experiment (common data base)
  - Talk characteristics: each presenter shows about > 500 distributions (felt)

    Record held by Sarantsev: 1010 graphs (I counted !!)

  Recommendation: Point out the issues, not the wealth of data

  Difficult to see the physics behind different models and

  the essence of the model differences

- Heavy baryons:
  - PWA for heavy baryons started. Methods derived from meson physics - which other tools are necessary ?
  - So far: little theory input

Personal Comments:

- Mesons:
  - Experiments: PWA analysis much improved (coupled channel fits (sufficient ?), K-matrix pole extraction, isobar freed analysis)
  - Heavy mesons: still isobar model used too often, further development of tools necessary
  - Theory: effort to formulate 2- and 3-body amplitudes
  - Gap between theory and experiment closes from both sides
    - still: which information can be transferred from reaction ⟶ reaction ?
  - Need data base for independent theory fits (partly requires cooperation agreements with collaborations) - PHASE initiative (stalled)
  - Strategy: need coherent strategy for mutual understanding

Recommendation: updated whitebook

include theorists in model fitting

Personal Comments:

Joint ATHOS-PWA workshops

- issues learned
  - model selection algorithms (LASSO or else) for baryon and light mesons (initiator)
  - analysis methods for heavy and light mesons now experience mutual fertilisation
  - develop cooperation models for theory - experiment (learn from baryon sector)
- Goals for analysis are multifold
  - spectroscopy - mesons, baryons
    presentations of results and „lessons learned“ still very different
  - electroweak studies, CKM (mesons)
  - CP violation - mesons, baryons (just starting)

Conclusion:

Lets continue joint workshops but also adapt communication

PWA10/ATHOS5

IHEP, Beijing, China
July 16-20, 2018

37 academic talks, more than 66 participants

Session Chairs:

Xiaoyan Shen, Beijiang Liu, Liming Zhang, Stephan Paul, Bingsong Zou, Shan Jin, Andrey Sarantsev, Boris Grube, Hanqing Zheng, Qiang Zhao, Liaoyuan Dong, Zhenwei Yang, Andrzej Kupsc, Deborah Rönchen, Changzheng Yuan, Shuangshi Fang

LOC members:

Ying Chen, Liaoyuan Dong, Shuangshi Fang, Xiaobin Ji, Beijiang Liu, Hailong Ma, Xiaoyan Shen, Kai Zhu

Conference secretaries:

Yeliu Mo, Zeqi Wei, Shuopin Wen

Volunteers:

Ning Cao, Wangling Chang, Yuming Ma, Xinxin Ma, Yuqiang Wang, Xian Xiong, Shuangli Yang, Qiao Zhou

Next workshop in 2019

Rio de Janeiro, Brazil