

Application to join ePIC

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JUSTUS-LIEBIG-



UNIVERSITÄT
GIESSEN

Physics at JLU Gießen



- Gießen: Town central in Germany
- Justus Liebig University: Large public research university
- Founded in 1607, one of the oldest universities in the German-speaking world

- II. Physikalisches Institut:
Focused on subatomic physics
- Topics and experiments:
Nuclear physics at GSI, heavy ion collisions at GSI and FAIR, Hadron physics at FAIR, Jefferson Lab and CERN



Annika Thiel - Professor for Hadron physics @ JLU Gießen

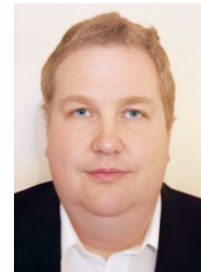
Research interests:

- Interested in Hadron spectroscopy (Mesons, Baryons and Exotics)
- (Double) polarization measurements
- Partial wave analysis
 - Involvement in GlueX@JLab, AMBER@CERN and CBELSA/TAPS



Research interests at EIC/ePIC:

- Spectroscopy (baryons, mesons and exotics)
- Research with polarized beams
- Hardware contributions (LowQ2 tagger, slowcontrol, ...)



Stefan Diehl - Research associate at JLU Gießen
and Research Professor at UConn (CT, USA)

- Currently Member of the ePIC collaboration via UConn

Research interest: 3D nucleon and resonance structure (GPDs, transition GPDs, TMDs)

⇒ Active in CLAS, AMBER, PANDA

Research interest at the EIC / ePIC:

- Transition GPDs via the $N \rightarrow N^*$ DVCS and DVMP processes
- GPDs via deeply virtual vector meson production (gluonic structure) and (double) DVCS
- TMDs via semi-inclusive processes
- Interest in software developments (AI for PID, event reconstruction and physics extraction)

Previous involvements in the EIC / ePIC:

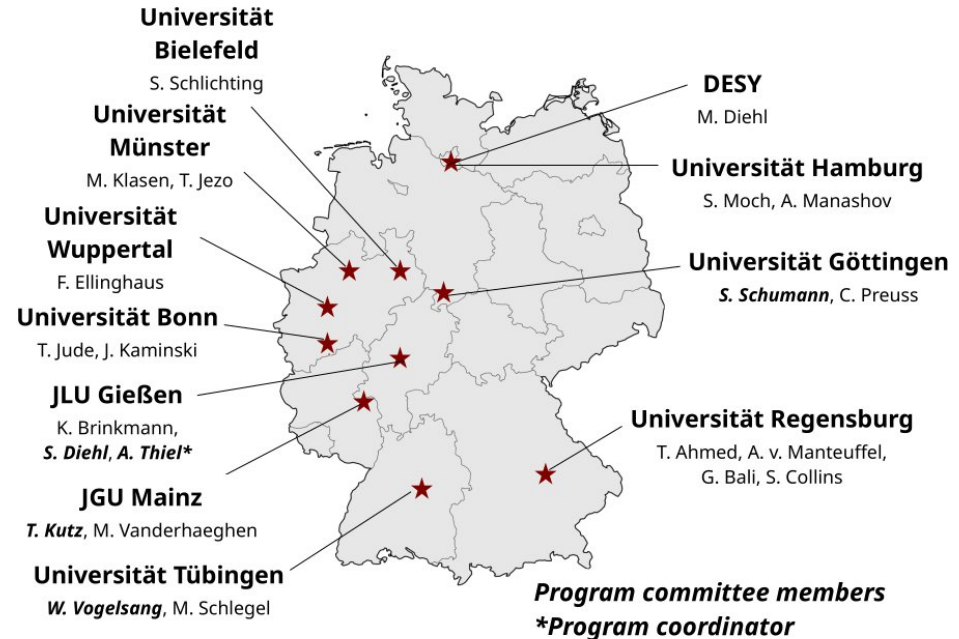
- Contributions to one of the 3 EIC detector proposals (CORE) in 2021 - 2022
- Member of ePIC (via UConn) since 2022
- ePIC physics convener for semi-inclusive processes 2023 - 2025

Our idea

- Initiate a German-wide network of researchers interested in EIC/ePIC physics
 - Take part in the Europe-wide effort to contribute to EIC
 - Combine forces to be able to have a significant impact in the field
 - Establish Germany as an important contributor to EIC/ePIC
 - Create new research opportunities for early career researchers in Germany
- Apply for funding within a priority program by the DFG (German Research Foundation)

EIC Germany

- An application for a coordinated German funding program is ongoing
- Initiative started at JLU Gießen
- > 20 contributors from > 10 institutions within Germany
- Joint effort between experiment and theory
- Four pillars: Hadron Structure, Spectroscopy, MC, Hardware and Software development



Planned contributions of JLU Gießen

Initial stage (2026 - 2027):

- First feasibility studies on certain physics reactions (deep exclusive processes, spectroscopy)

After a potential approval of German EIC / ePIC funding (2028 - ...):

- Dedicated involvement in ePIC in cooperation with the other German groups (experiment and theory)
- Detailed feasibility and benchmark studies
- Focus on: Exclusive processes, SIDIS, spectroscopy
- Software contributions on AI methods, ...
- Potential smaller contributions to detector projects (cooperation with existing efforts)

Thank you for your attention!
