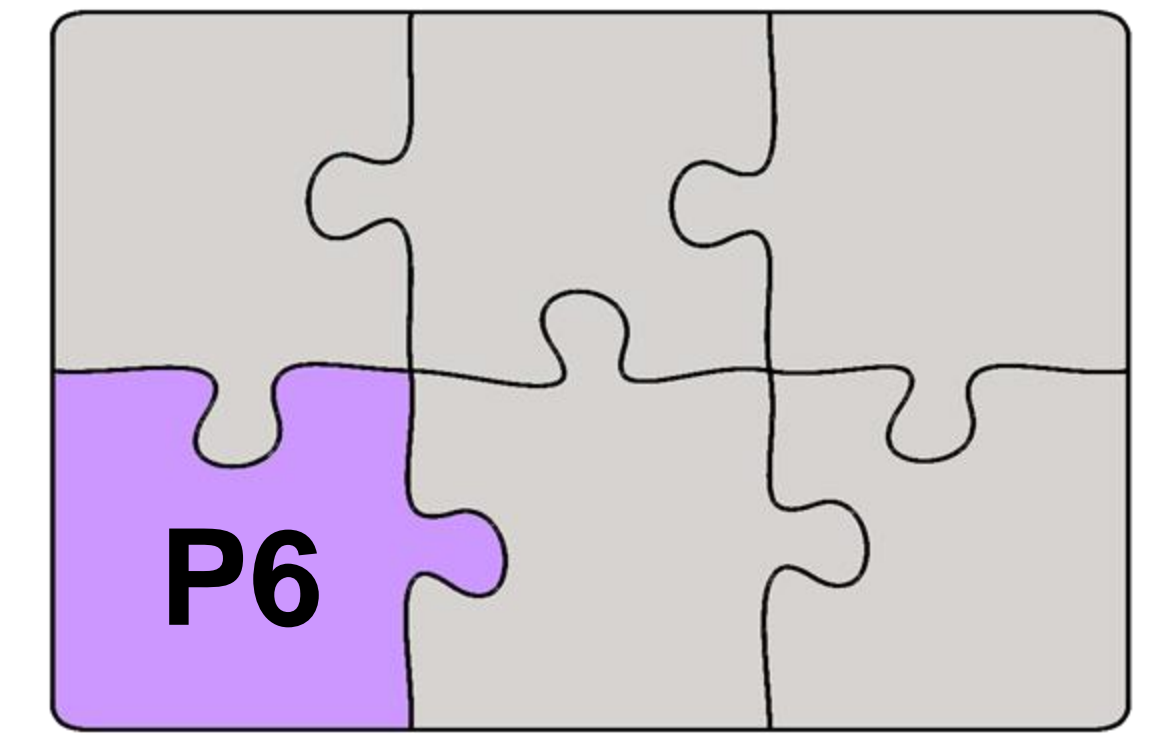


## DELIGHT project P6

# Science analysis



**Applicant:** Kathrin Valerius (KIT)

**Co-applicants:** Klaus Eitel (KIT), Christian Enss (U HD), Torben Ferber (KIT), Loredana Gastaldo (U HD), Felix Kahlhoefer (KIT), Sebastian Kempf (KIT), Markus Klute (KIT), Sebastian Lindemann (U FR), Marc Schumann (U FR), Belina von Krosigk (U HD)

# Messages from the review report

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- **Project summary:** "This project is responsible for the [high-level event building](#) and data analysis for the DELight experiment. The project also encompasses [simulating the detector response](#), which is essential for the initial event building stage (before data exists) and the analysis pipeline. Additionally, it simulates the background events from the [background energy deposits received from P3](#)."
- **Match with group of applicants and resources:**
  - reviewers recognize ...
  - „... outstanding research track record and expertise“ of the project team,
  - „... significant expertise on computing aspects of analysis pipelines and on developing analyses for dark matter searches“,
  - ... possibility to partly re-use „relevant machinery already developed from previous efforts“.

# Points of criticism

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„Overall, the proposed work plan is solid“, **but:**

- „Limited detail (...) regarding the calibration program for the detector (target + MMCs)“
  - Suggest to anchor work items in P1 (cell), P2 (sensors), and P6 (analysis)
  - Define clear responsibilities for calibration system, measurements, analysis and reflect this in corresponding work package descriptions
- Detailed study of energy partition among the channels needs more attention
  - Update new proposal with progress since the review (!) and use this as basis to describe next RU plans.

Help and input needed  
for new draft proposal!

## Open questions I

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- How to address reviewer concern of **risk** associated with necessary development of a calibration system and analysis strategy **within the RU**? Can this be reflected in the project timeline?
- Project team members for new proposal:

### Co-applicants:

Klaus Eitel (KIT), Christian Enss (U HD), Torben Ferber (KIT), Loredana Gastaldo (U HD), Felix Kahlhoefer (KIT), Sebastian Kempf (KIT), Markus Klute (KIT), Sebastian Lindemann (U FR), Marc Schumann (U FR), Kathrin Valerius (KIT), Belina von Krosigk (U HD) [unchanged]

Additional scientists: Francesco Toschi (U HD) + Benedikt Maier ([Imperial](#)) + [Melih Solmaz \(U HD\)](#)

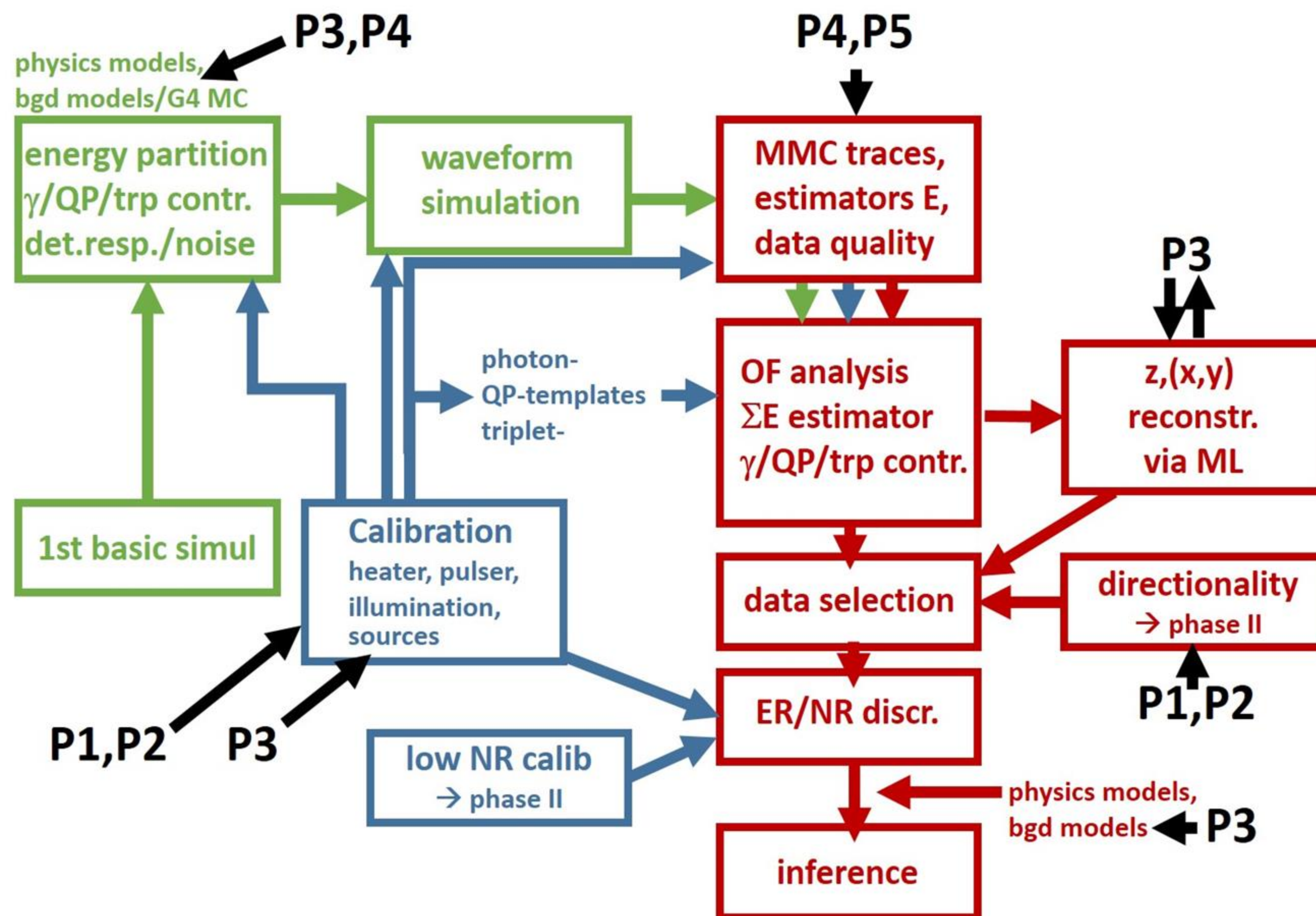






# Open questions III

Finally: Should we change the **structure & name** of project P6?



Currently: P6 = “Science analysis”

Possible alternatives:

1. Response, modeling, and analysis
2. Response, signal reconstruction, and data analysis
3. ...

→ Incorporate two newly formed WGs (reconstruction & simulations) into the structure and add a third WG on calibration