Sustainability

08.09.2025

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Sustainability

- How can we (and the next generations of scientists) still do particle physics (at Belle II) in 10 or 20 years from now?

- Requires continued support by society / funding agency under changing boundary condition
- → Transition to CO_2 neutrality
- → Japan and KEK as well as EU want to be CO_2 neutral by 2050
- → Bundes-Klimaschutzgesetz §3:

(1) Die Treibhausgasemissionen werden im Vergleich zum Jahr 1990 schrittweise wie folgt gemindert:

1. bis zum Jahr 2030 um mindestens 65 Prozent,
2. bis zum Jahr 2040 um mindestens 88 Prozent.

(2) Bis zum Jahr 2045 werden die Treibhausgasemissionen so weit gemindert, dass Netto-Treibhausgasneutralität erreicht wird. Nach dem Jahr 2050 sollen negative Treibhausgasemissionen erreicht werden.

What can we do?

Scientific, quantitative approach

- Perform measurements and act based on numbers

Efficiency

- We are already used to and successful in optimizing scientific output per money unit
- New dimension: scientific output per CO_2e
- Both dimensions may become more and more correlated

→ Maximize benefit (science output) per invested resource (money, CO_2e)

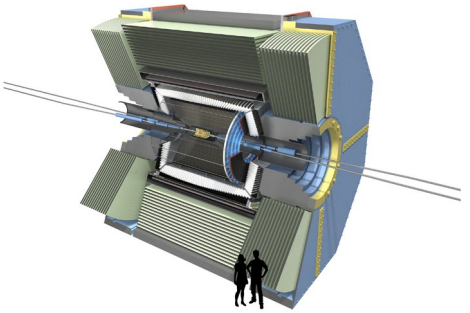
Sustainability Task Force @ Belle II

Mandate:

- Gather data to quantify the overall carbon footprint of our Belle II related activities;
- Propose measures to reduce emissions and improve sustainability to the management and the collaboration.

Areas:

- Detector, Computing, Software, Travel



Members:

- David Jaffe (computing), Shohei Nishida (KEK contact), Lorenz Gärtner (travel), Tom Browder (detector), Karin Schönning, Andreas Gellrich, Raymundo Bueno Rivera, Paul Gebeline, Thomas Kuhr (chair, software)

Next Steps

Task force meeting on Monday, September 15th

- Schedule for areas

Session at B2GM on Thursday, October 2nd

- Open discussion of task force plans
- Talk by KEK management?