Contribution ID: **166** Type: **Oral**

# Status of the Yemilab operation

*Monday 25 August 2025 14:20 (20 minutes)*

The Yemilab, a new deep underground laboratory, has been constructed to be located under the Yemi mountain at Jeongseon in Korea. The overburden is 1,000 m from the top of the Yemi mountain, and the laboratory space is approximately 25,000 m3. We can access the laboratory using a cage that has a 4 m/s vertical speed through the 600 m shaft and electric vehicles as transportation through the 800 m tunnel. The electricity, mobile networks, and safety facilities have been prepared and operating smoothly since the end of 2022.
Two major experiments, AMoRE-II to search for a neutrinoless double beta decay of 100Mo and COSINE to search for a WIMP as a strong dark matter candidate, are preparing to start the initial operation soon. Even more, various tabletop scale experiments have been prepared to open chances to be a large-scale experiment in the future, such as positronium, astrophysical S-factor, and further detector R&D programs to search for a rare decay.
We introduce seasonal radioactive environmental conditions (especially the Radon level) for rare event search experiments, and support facilities for wide applications at Yemilab.

## Collaboration you are representing

**Author:** SO, Jungho (Institute for Basic Science)

**Co-authors:** Mrs KIM, Eunkyung (Institute for Basic Science); Dr LEE, Jaison (Institute for Basic Science); Mr JANG, Jihoo (Institute for Basic Science); Mr KIM, Jihoon (Institute for Basic Science); Dr PARK, Kangsoon (Institute for Basic Science); Dr BANG, Kimun (Institute for Basic Science); Dr YOON, Sangchul (Institute for Basic Science); Mr YOO, Siwon (Institute for Basic Science); Mr KIM, Sunbum (Institute for Basic Science); Dr KIM, SungHyun (Institute for Basic Science); Dr KANG, Woongu (Institute for Basic Science); Prof. KIM, Yeongduk (Institute for Basic Science)

**Presenter:** SO, Jungho (Institute for Basic Science)

**Session Classification:** Underground Laboratories

**Track Classification:** Underground Laboratories