

The Virgo Vacuum System and Next-Phase Upgrades

Tuesday 25 November 2025 14:00 (30 minutes)

Virgo is currently operating in the O4b data-taking phase, ongoing for over one year and regularly detecting gravitational-wave signals. In parallel, several hardware upgrades are being prepared to enhance the detector sensitivity for the next data-taking phase O5. Among these, significant upgrades are planned for the vacuum system. Here we give a quick overview of the overall vacuum system and we detail the new components under design, including vacuum chambers, pumping systems, and contamination-control equipment. These developments are now at their final design stage, with the corresponding industrial tenders expected to be launched in the near to mid term.

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Session Classification: Session 6: Gravitational Waves (Chair: Achim Stahl)