



## Q degradation in operation in ISAC-II SC linac

*Thursday 25 September 2025 14:30 (3 hours)*

Quality factor ( $Q$ ) of SRF cavities is one of the essential parameters in continuous wave accelerator operation.  $Q$  degradation has been observed in the operation of ISAC-II superconducting heavy ion linac. Other than the well-known mechanisms, such as field emission and trapped magnetic flux, the past eight years statistics reveals gas molecules in the beam line caused measurable  $Q$  drops after a few months' operation. This paper will describe the observations on ISAC-II linac, analyze data from operation and accidents, and discuss the results of the proof of principle tests.

### I have read and accept the Privacy Policy Statement

Yes

### Footnotes

### Funding Agency

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