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## Evaluation of quadrupolar wakefields in Elettra 2.0

*Wednesday 4 June 2025 16:00 (2 hours)*

The non-symmetric design of the vacuum chamber in Elettra 2.0 introduces quadrupolar wakefields, a phenomenon that can influence beam stability and dynamics in advanced light sources. Detailed numerical and analytical studies reveal that these wakefields have minimal impact on the dynamic aperture (DA) and beam lifetime under nominal operational conditions. This work presents a comprehensive analysis of the quadrupolar wakefield effects, highlighting their limited influence on transverse beam dynamics.

### Footnotes

### Paper preparation format

LaTeX

### Region represented

Europe

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