# ACCELERATOR SEMINAR

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GSI

## Thursday, 9. Dezember 2021 at 4 pm

**Online-Seminar via Zoom**
**(ID: 964 2687 1307/ PW: 840837)**

## Isochronous Mode of the ESR, Status and Perspectives

The isochronous optics of the ESR is a unique ion-optical setting in which the particles within a finite momentum acceptance circulate at constant frequency.

It is used for direct mass measurements of short-lived exotic nuclei by a Time-of-Flight method. Besides the mass spectrometry, the isochronous ESR has been used as an instrument for the search of short lived isomers stored in the ring, which was performed in 2021 for the first time.

Introduction to the isochronous mode of the ESR, comparison with a standard operational mode, recent machine experiments with a new LSA control system will be presented in the seminar. Possible improvements of the isochronous optics at the ESR and perspectives of the isochronous mode at CR, FAIR will be discussed.

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