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## Numerical calculation on spectral phase of undulator radiation

*Monday 8 May 2023 16:30 (2 hours)*

We have developed numerical method to calculate temporal structure of synchrotron radiation in arbitrary magnetic field. Using this method, spectral phase of synchrotron radiation can be calculated, which is important in the reconstruction of temporal structure of radiation. It is also interesting that it reflects the symmetric property of magnetic field from which radiation is generated. Recently an experiment to deduce the spectral-phase structure of undulator radiation using 'spectral phase interferometry for direct electric field reconstruction (SPIDER)' was carried out at UVSOR-III. The experimental result was compared with the numerical calculation in the regard. We will also discuss the effect of the magnetic field error to the spectral phase.

### Funding Agency

### Footnotes

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

Yes

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