

Performances of 3rd generation light sources

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Lecture 1 : 3rd generation light sources

- Objectives
- Principle of synchrotron radiation emission
- Main characteristics and features
- What is a beamline ?
- Examples of application
- Main facilities existing or in project

Lecture 2 : Main features of a 3rd GLS Storage Ring

- Brilliance
- Emittance
- Current
- Lifetime

Lecture 3 : Lattice design

- Emittance
- Design criteria
- Optimisation

Lecture 4 :

- Beam position stability
- Insertion devices
- Technological aspects
- Time structure
- Conclusions

Main References :

- ❑ R. Bartolini, Performance and Trends of Storage Ring Light Sources, EPAC08, TUXMO2
- ❑ A. Nadji, Lecture at HERCULES School
- ❑ Thanks to many SOLEIL colleagues