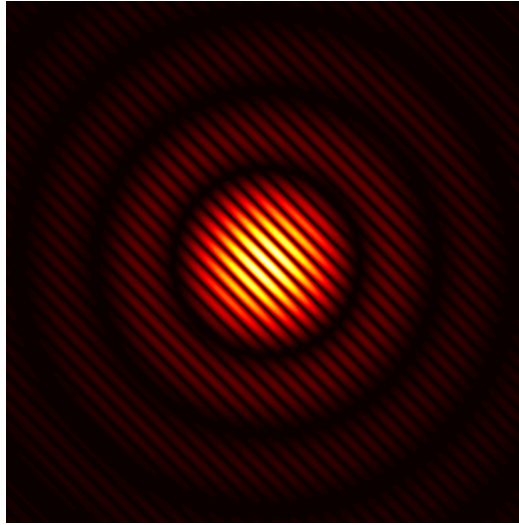


# FC1.4 Fourier Optics

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## Contact

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## Bibliography / links

Goodman, J.W., "Introduction To Fourier Optics"  
[Cours d'optique ondulatoire, L3 \(in French\)](#)  
[Modern optics \(university of Edinburgh\)](#)  
Roddier, F., "Distributions et transformation de Fourier" (in french)  
Bracewell, R.N., "The Fourier Transform and Its Applications"

## Contents

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### Theory (22h)

1. Reminder on diffraction and coherent filtering.
2. Image formation in incoherent light.
3. Airy pattern, transfer function of a telescope, cutting frequency.
4. Shannon theorem and sampling
5. Diluted pupils, application to interferometry.
6. Imagery at low light level, photon counting

### Lab experiments (8h)

1. Fraunhofer diffraction
2. Fourier filtering