

The design of electro-optical instruments

Jean-Louis Meyzonnette

PREPA course (25-30 April, 2009)

Introduction

§1. Electro-optical instrumentation

- 1.1. Domains of application
- 1.2. Design phases
- 1.3. Main families of EO sensors

§ 2. Bases in optical radiometry

- 2.1. Basic quantities
- 2.2. Relationships
- 2.3. Some examples of radiations

§ 3. Flux evaluation in an electro-optical instrument

- 3.1. Propagation of light
- 3.2. Geometrical extent of an instrument
- 3.3. Flux incident upon the detector

§4. Evaluation of an electro-optical sensor

- 4.1. Electrical signal
- 4.2. Origins of noise in electro-optical instruments
- 4.3. Signal to noise ratio optimization
- 4.4. Performance