

INTERFEROMETRY

APPLICATIONS OF MICHELSON'S INTERFEROMETER

Determination of the index of air, plate thickness measurement, piezoelectric study



The following set is designed to carry out some of the several applications of a Michelson Interferometer.

You will be able to measure the refraction index of air, of CO₂, of a glass plate.

Knowing the glass plate index, you can also determine very precisely its thickness.

At last, you can determine the exact behavior of a piezoelectric system according to the input voltage submitted.

Components in the Kit

Michelson's interferometer MPL1012P series
Laser He-Ne 632.8nm 1mW with expander
Halogen lamp (12V-75W) with power supply
Sodium and Mercury double spectral lamp with power supply
Squared translucent screen and White screen with graduated metal face
Interferential filter Ø 40 mm (546 nm) with holder
Projection Lenses Ø 80 mm (x3) with holder (x3)
¼ moon stand (x3)
Vacuum Tank for interferometer with adapted stand and Manual vacuum pump
Thin plate kit for interferometer with adapted stand
Piezoelectric kit for interferometer with connection box

"Application of a Michelson" Set

Ref : MPL2514

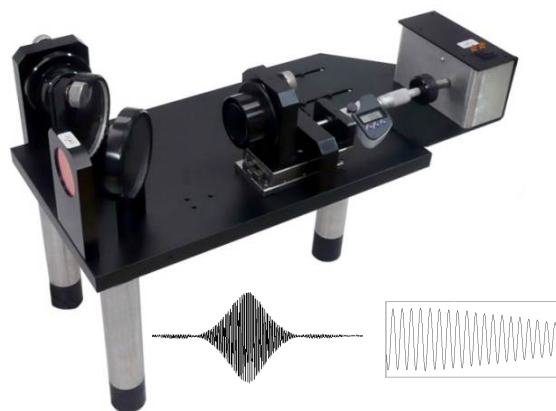
DYNAMIC INTERFEROMETRY SET

Coherence, spectrometry by Fourier transform, anti-coincidence of the Sodium Doublet

This set uses a motorized Michelson interferometer and a photo-detector in order to carry out more advanced experiments such as Fourier transform spectrometry, study of anti-coincidence of the sodium doublet, measurement of the bandwidth of an interferential filter.

The motorization system provides great translation regularity and is equipped with a very simple coupling clutch system to activate or disable the motorization.

With a datalogging system (optional), you can analyze your results precisely on your computer.



"Dynamic interferometry" Set

Ref : MPL2516

Components in the Kit

Michelson's interferometer MPL1022P series with synchronous motorization 0.556 µm/s
Laser He-Ne 632.8nm 1mW with expander and Halogen lamp (12V-75W) with power supply
Sodium and Mercury double spectral lamp with power supply
Squared translucent screen
Interferential filter Ø 40 mm (x3) with 4 space rotative component holder with cylinder
Projection Lenses Ø 80 mm (x3) with holder (x3) and ¼ moon stand (x3)
Digital Ovisio Dynamics device