Mach-Zehnder Interferometer
Abstract

Interferometry is an important technique for optical metrology. It is widely used for the measurements of e.g. surface profile, defects, mechanical and thermal distortion with high precision. As a typical example, a Mach-Zehnder interferometer with coherent laser source is build up in VirtualLab, and especially it is demonstrated that how the tilt and shift of an optical elements may affect the interference pattern.
Modeling Task

He-Ne laser
- fundamental Gaussian
- wavelength 632.8 nm

3x beam expander

beam splitter

reference path

BK7

2 mm

2 mm

beam splitter

test path
(test object may tilt and/or shift)

interference

?
Results

Calculation of interference pattern including element tilt takes less than 2 seconds!
Results

Calculation of interference pattern including element shift takes less than 2 seconds!
## Document Information

<table>
<thead>
<tr>
<th>title</th>
<th>Mach-Zehnder Interferometer</th>
</tr>
</thead>
<tbody>
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