

2.2.07-00 Refraction index of air and CO₂ with Michelson interferometer

What you can learn about ...

- Interference
- Wavelength
- Phase
- Refraction index
- Light velocity
- Virtual light source

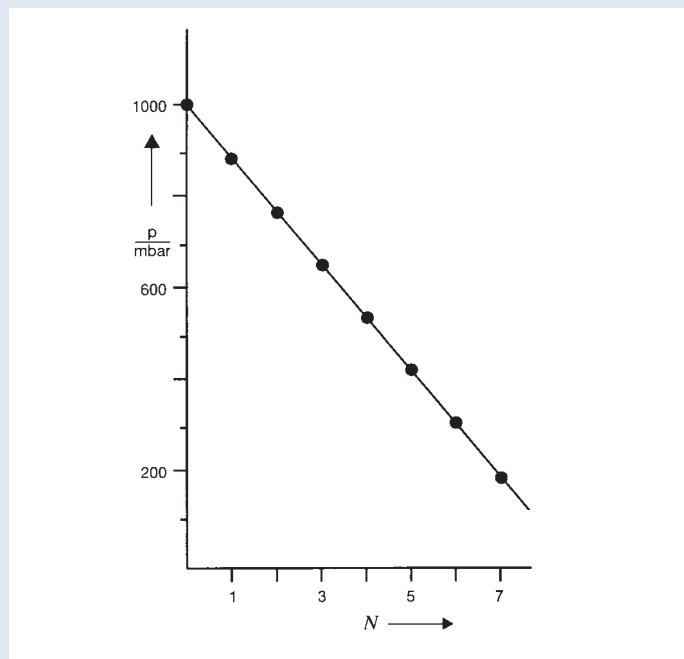
Principle:

A measurement cuvette set in the beam path of a Michelson interferometer can be evacuated or filled with CO₂. The refraction indexes of air or CO₂ are determined through the assessed modification of the interference pattern.

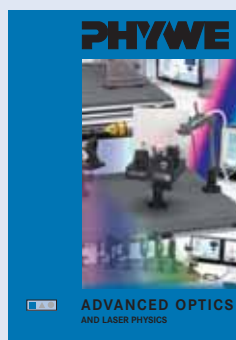
What you need:

Michelson interferometer	08557.00	1
Laser, He-Ne 1.0 mW, 230 VAC	08181.93	1
Glass cell, diam. 21,5 mm	08625.00	1
Manual vacuum pump with manometer	08745.00	1
Optical profile bench, $l = 600$ mm	08283.00	1
Base for optical profile bench, adjustable	08284.00	2
Slide mount for optical profil bench, $h = 30$ mm	08286.01	3
Slide mount for optical profil bench, $h = 80$ mm	08286.02	1
Swinging arm	08256.00	1
Lens holder	08012.00	1
Lens mounted, $f = +5$ mm	08017.01	1
Compressed gas, CO ₂ , 21 g	41772.06	1
Fine control valve for pressure bottles	33499.00	1
Right angle clamp -PASS-	02040.55	1
Barrel base -PASS-	02006.55	1
Screen, metal, 300 mm x 300 mm	08062.00	1
Tubing connect., Y-shape, $d = 8-9$ mm	47518.03	1
PVC tubing, $d = 7$ mm	03985.00	1

Complete Equipment Set, Manual on CD-ROM included
Refraction index of air and CO₂
with Michelson interferometer P2220700



Number N of minima changes as a function of air pressure in the measuring cuvette.



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