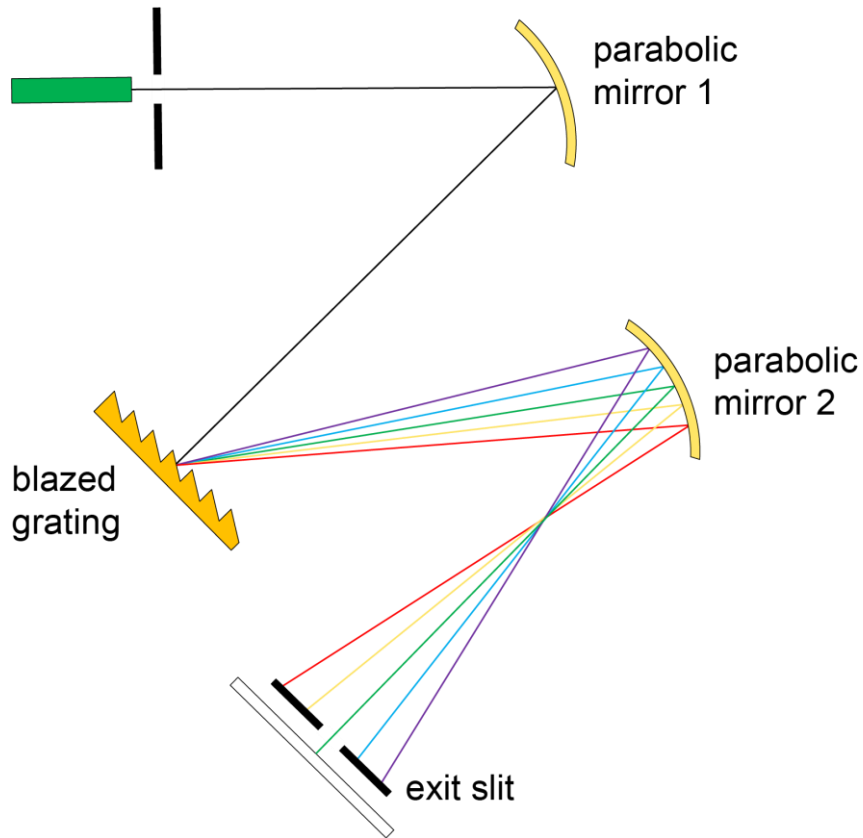


Resolving Sodium Doublet by Using a Czerny-Turner Setup

Abstract



Czerny-Turner setup is widely used to analysis the spectral information of light sources. Typically, a parabolic mirror is used to collimated the source first, and then a diffraction grating will spatially separate the colors spatially. In this example, a Czerny-Turner setup, consisting of reflective mirrors and diffractive gratings, for examining the Sodium doublet is presented. Particularly, the diffraction efficiency of the grating calculated with Fourier modal method (FMM).

Modeling Task

input spectrum



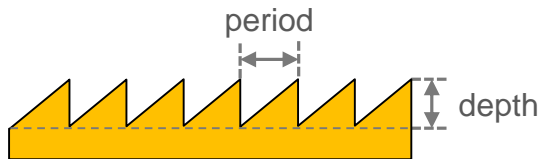
- Sodium doublet
588.995, 589.592nm
with equal weights
- linearly polarized

parabolic mirror 1
focal length 100mm

parabolic mirror 2
focal length 100mm

sawtooth grating

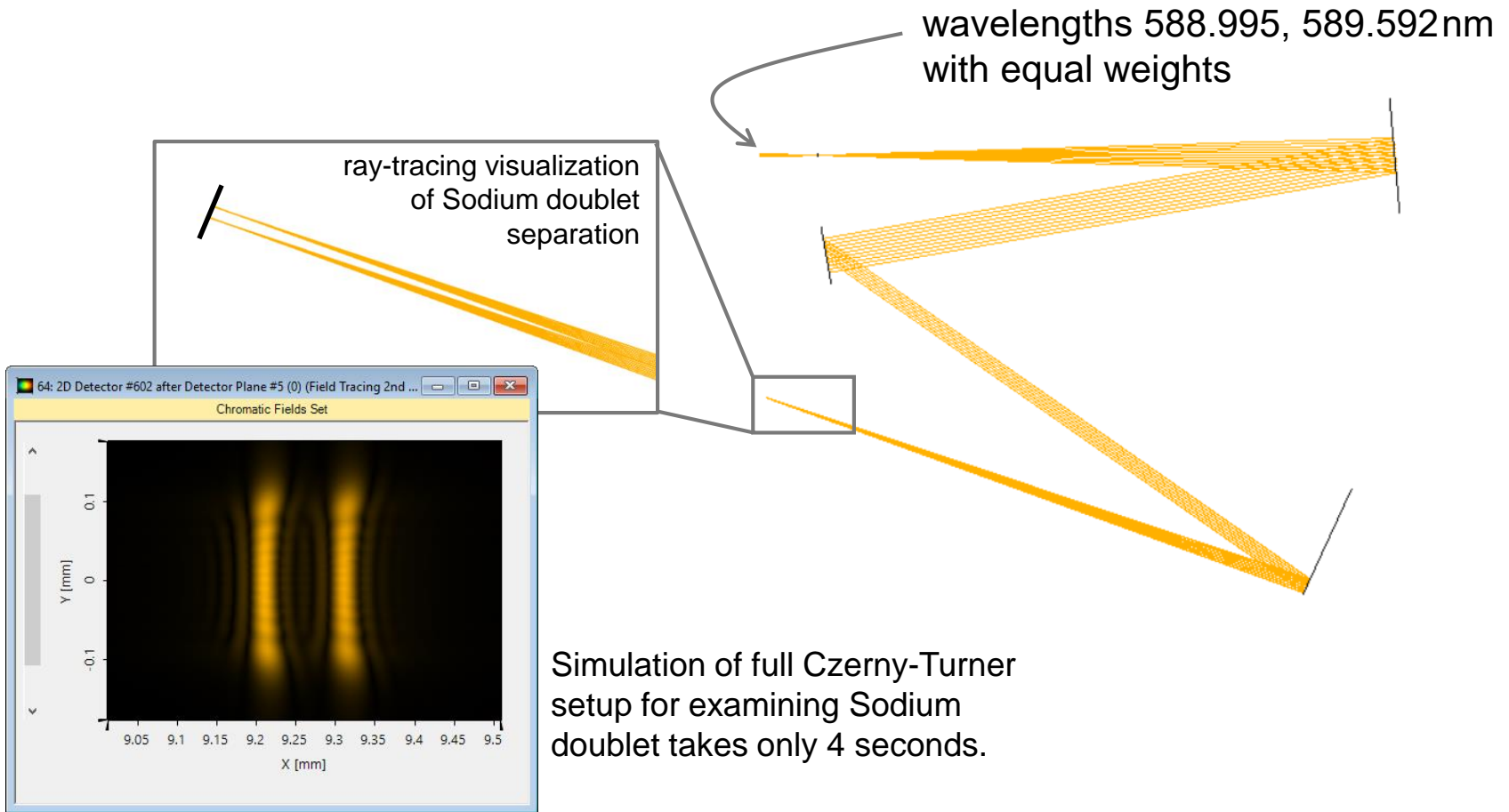
- period 833nm
- modulation depth 282nm



Output spectrum?
with rigorous consideration of
diffraction efficiency of the grating

?

Results



Document Information

title	Resolving Sodium Doublet by Using a Czerny-Turner Setup
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category	Application Use Case
