

Table of Contents

Mie scattering 1

Mie scattering

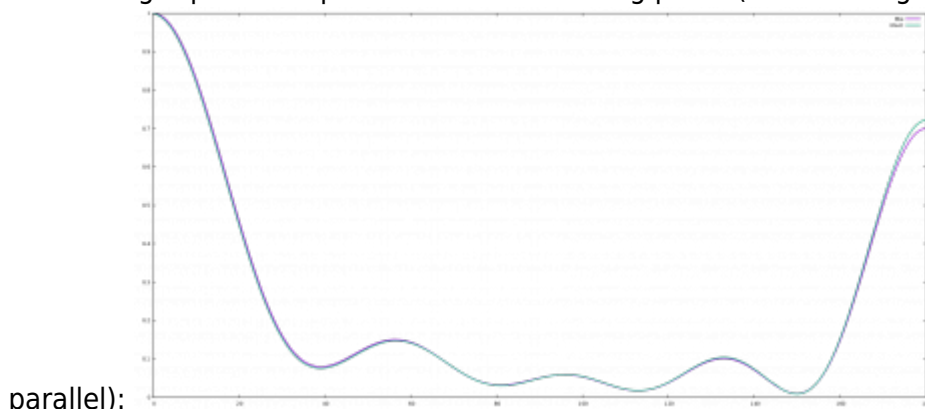
Scattering of monochromatic light by a homogeneous dielectric sphere is a traditional problem in the area of light-matter interaction. It has numerous applications, e.g. in aerosols measurements in environmental studies.

Calculation on a regular, smooth and homogeneous, sphere can be done using Mie's solution of Maxwell equations and there are numerous codes available for this, even [online](#). However, we can use it to benchmark the performance of the near-field to far-field transform.

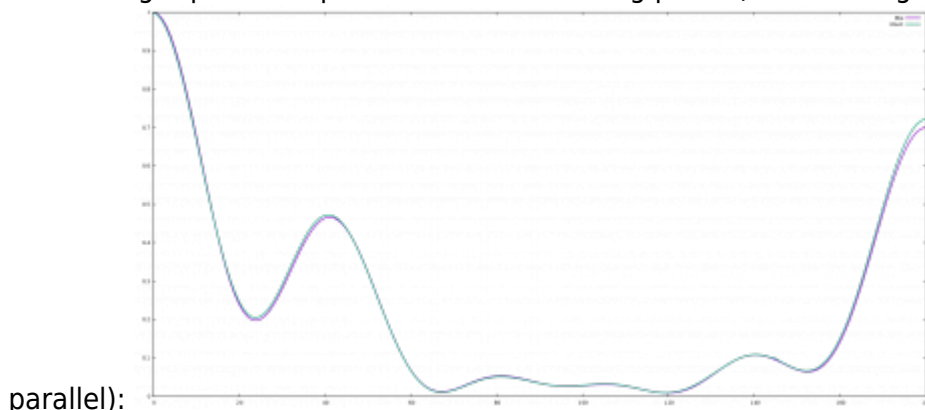
The figures below illustrate a good match between GSvit and Mie's solution calculated using the [MieScatter](#) package for Julia.

Nominal particle radius: 400.2 nm, wavelength: 633 nm, refraction index of the sphere material: 2.0.

Incident light polarized parallel to the scattering plane (scattered light therefore also polarized



Incident light polarized parallel to the scattering plane (scattered light therefore also polarized



Under construction.

From:
<http://gsvit.net/wiki/> - **GSvit documentation**

Permanent link:
<http://gsvit.net/wiki/doku.php/app:mie?rev=1537963753>

Last update: **2018/09/26 14:09**



