

Scenario_231.01

Simulation of a Light Source with the Spectrum of the Sun

This application scenario shows the simulation of a light source whose spectral composition is equal to that of the sun.

Keywords: light source, spectrum, sun

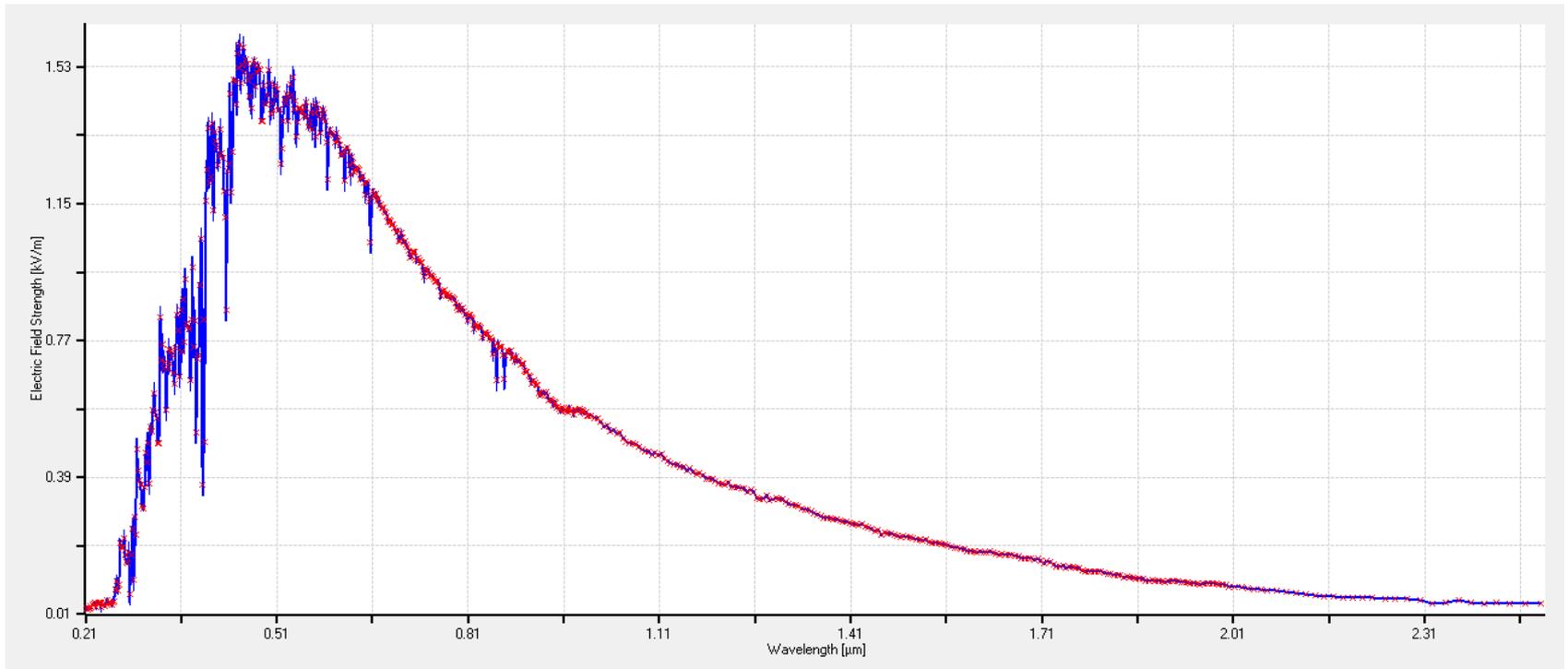
Required Toolboxes: Starter Toolbox

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Modeling Task

A Super Gaussian Wave light source has to be modeled and simulated, using a measured spectrum of the sun as shown below:



Data of the extraterrestrial sun spectrum

Solution with VirtualLab™

Any spectrum can be read from text files directly into the edit dialog of the light source, if given in the correct format (columns can be separated by an arbitrary number of spaces):

# Wavelength in m	Squared Amplitude in V^2/m^2
5.1E-07	1.1
5.5E-07	4.0
5.8E-7	2.3

Example for the text format required for input of spectral data in the light source dialog

Results

If the data of the given sample file are loaded into the edit dialog of a Super Gaussian light source (panel *Spectral Parameters*), specified as referring to *Intensity* when asked, the result's light view should look like below:

