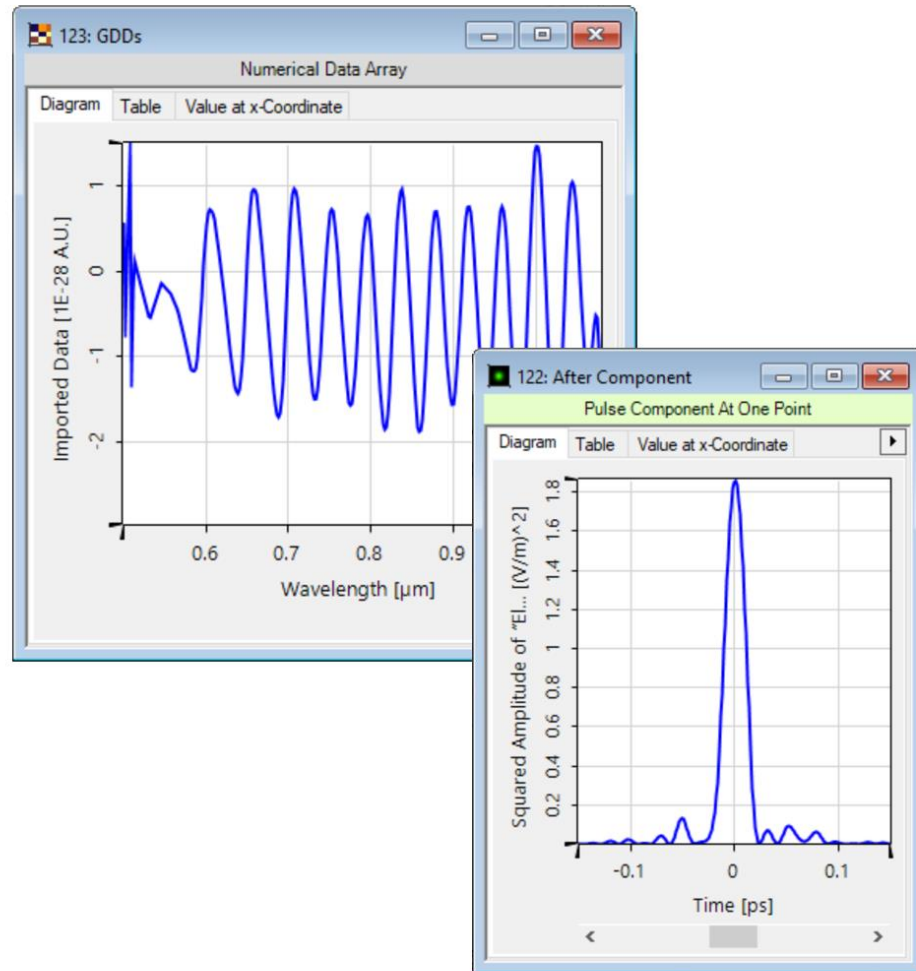


Modeling of Pulse Chirp introduced by an Optical Component

Abstract

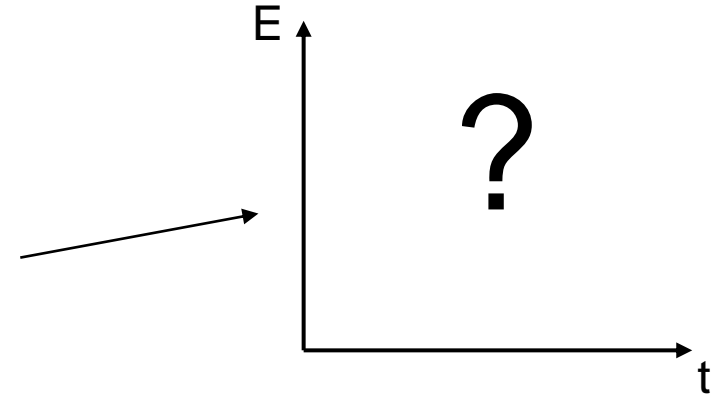
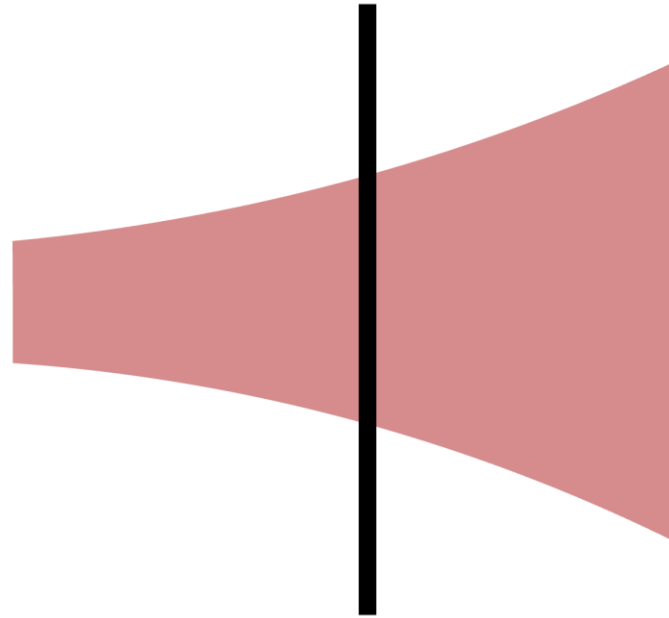
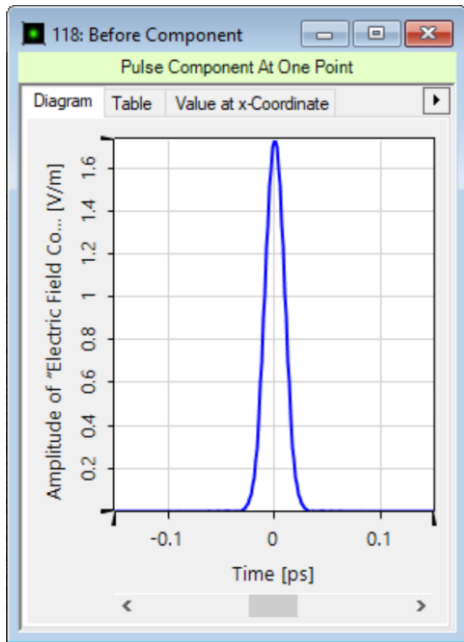


When pulsed light propagates through components or is reflected by mirrors, these interactions change the phase of the light depended on the frequency. This however affects the shape of the pulse after the interaction with the component drastically. The control of the chirp – to shape it either into a specific form or compensate it – is therefore a necessary tool in all applications that require a specific shape of pulses. In this demonstration we show that measured GDD-Data can be imported into VirtualLab – components.

Task Description

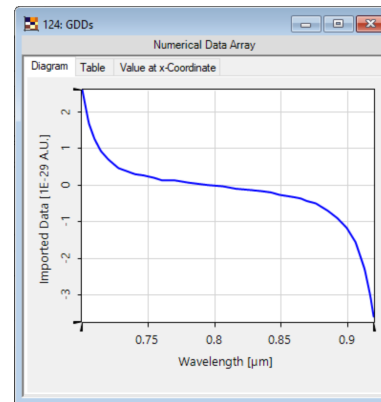
gaussian pulse

- 800 nm carrier frequency
- 15 fs pulse duration

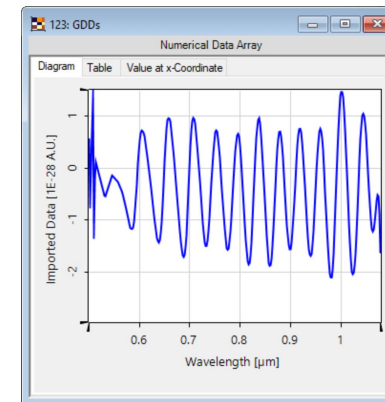


phase transmission function

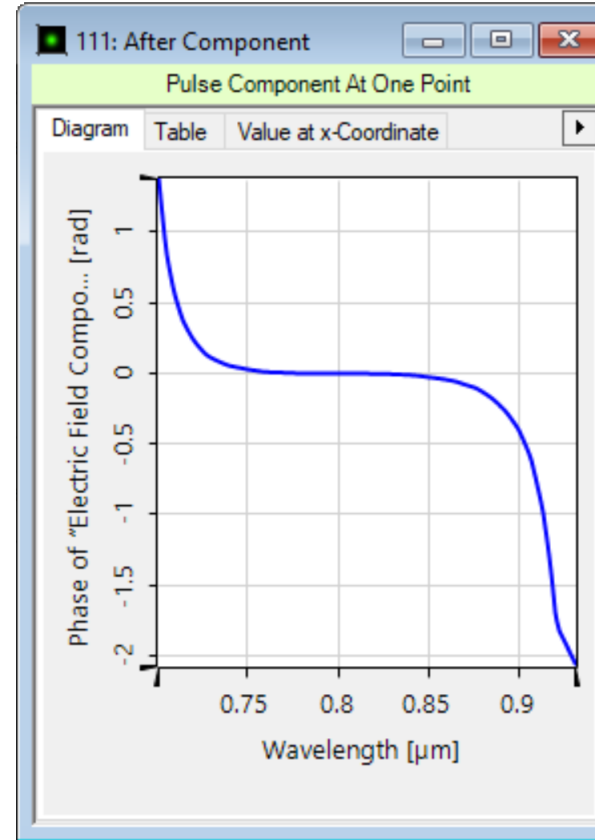
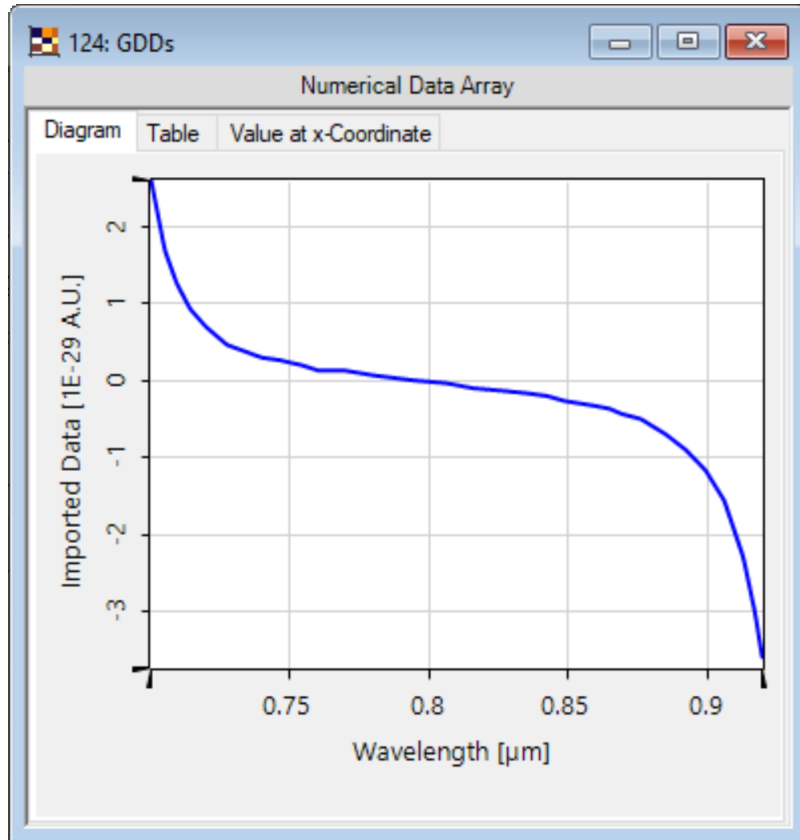
a)



b)

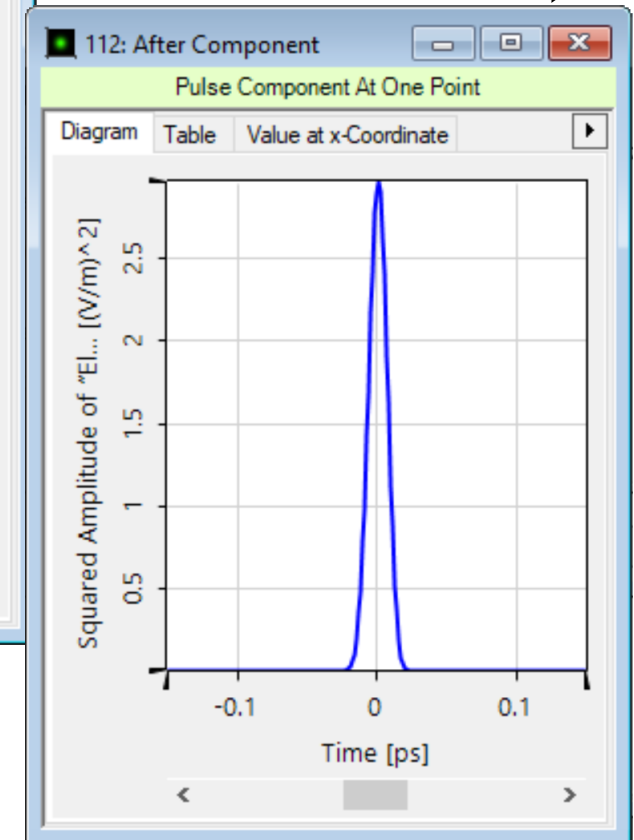


Result 1

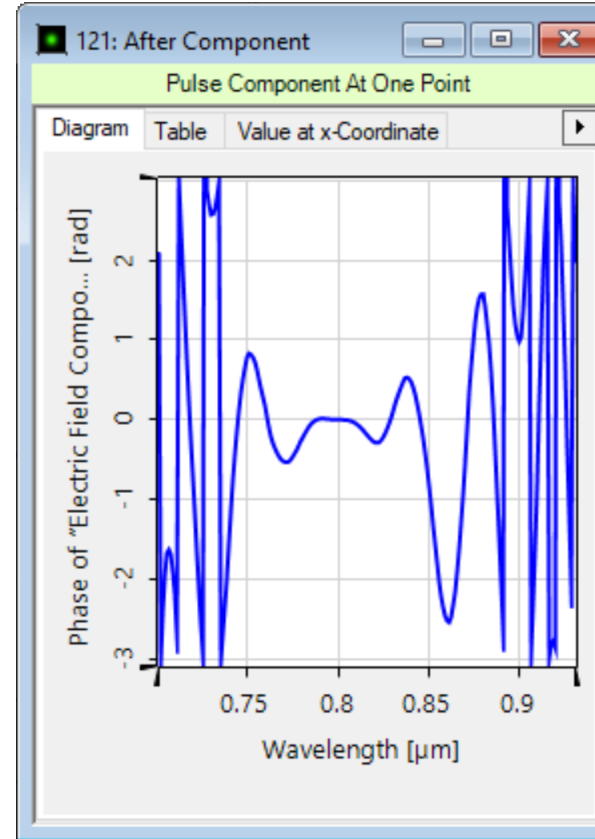
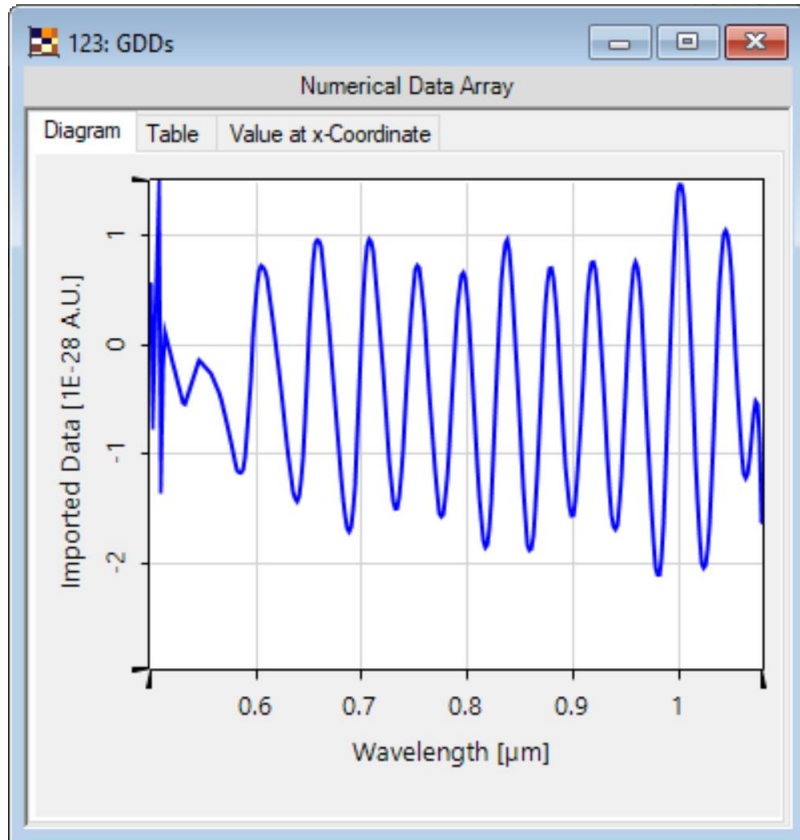


phase of the
transmitted field

Temporal envelope of the
transmitted field

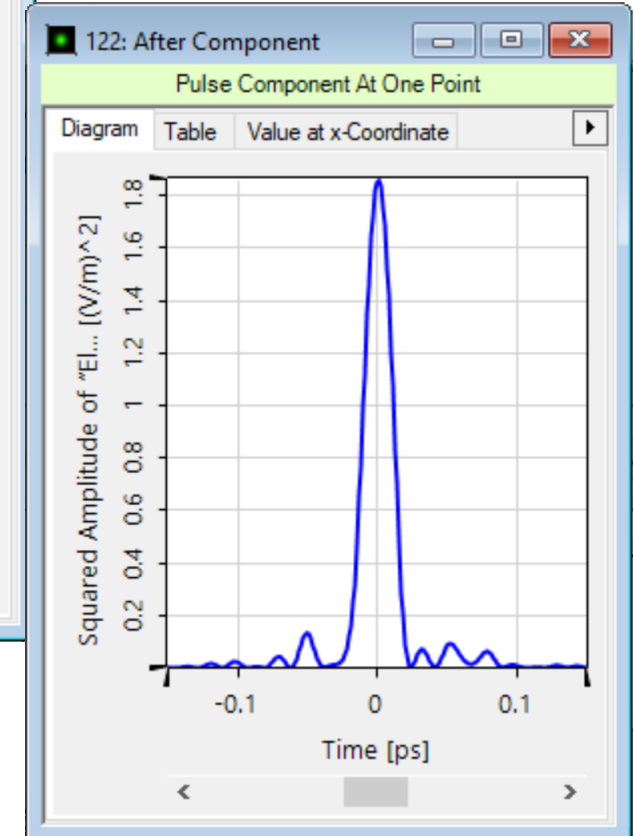


Result 2



phase of the
transmitted field

Temporal envelope of the
transmitted field



Document Information

title	Modeling of Pulse Chirp introduced by an Optical Component
document code	Demo.0019
version	1.0
VL version used for simulations	VirtualLab Fusion Spring Release 2020 (2020.1.0.108)
category	Demo
further reading	
