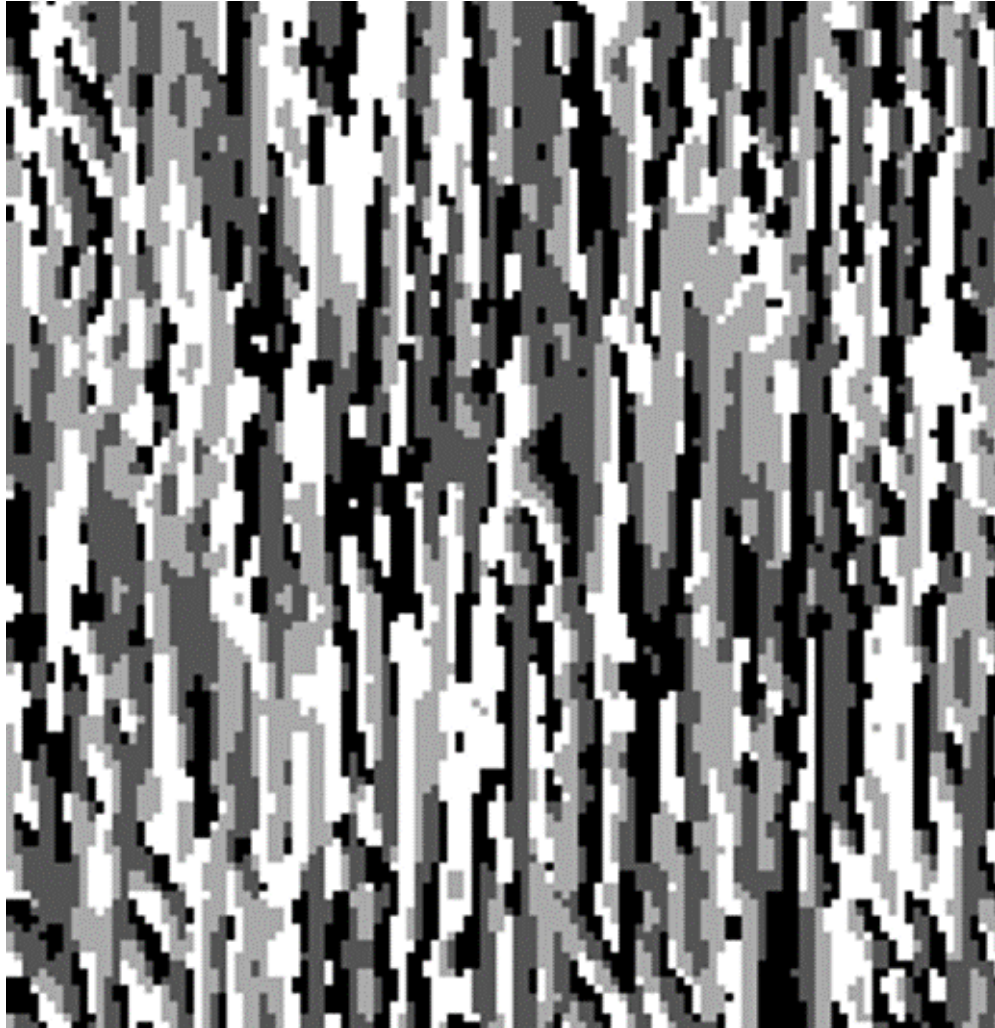


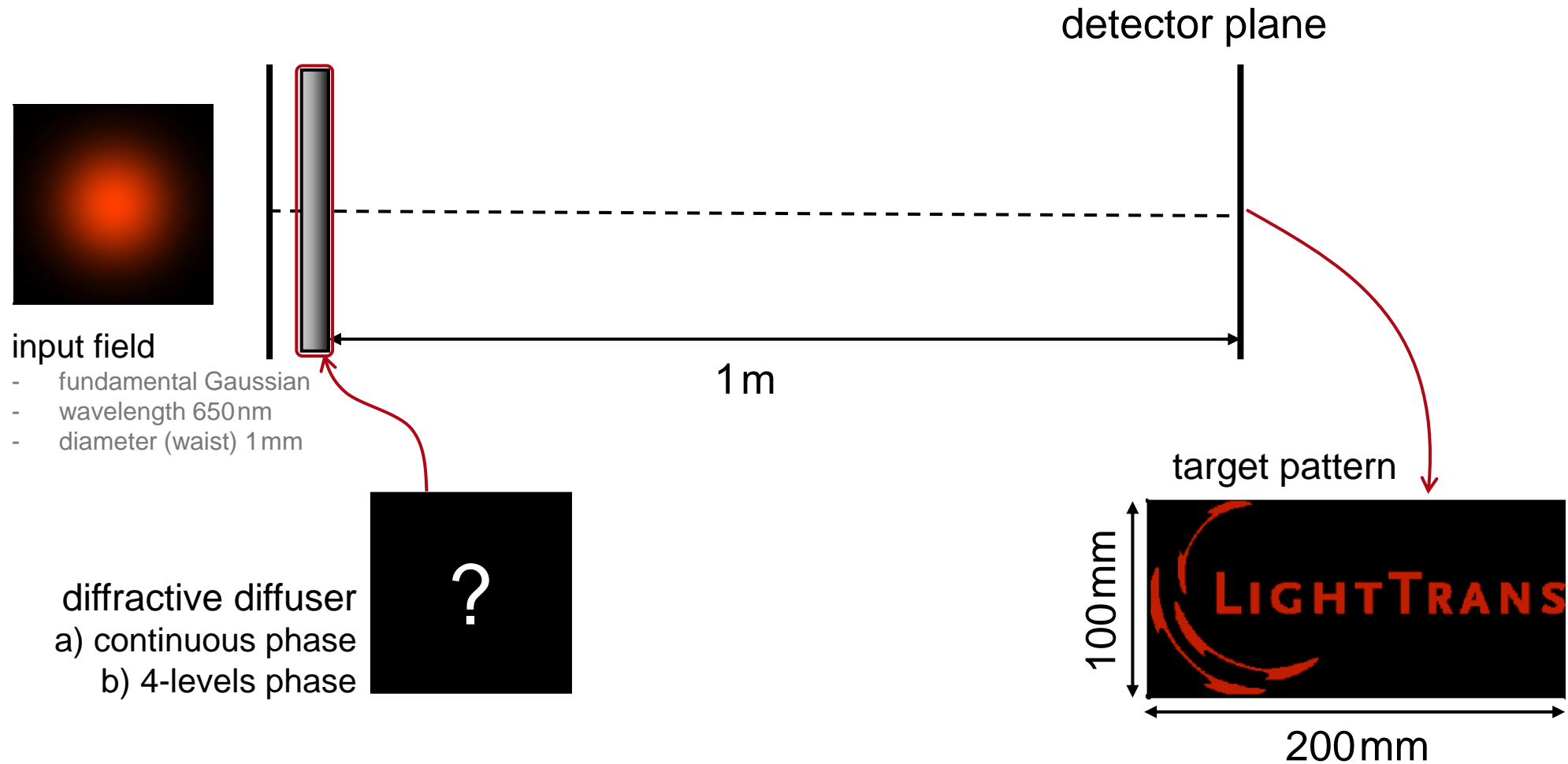
Design of a Diffractive Diffuser to Generate a LightTrans Mark

Abstract

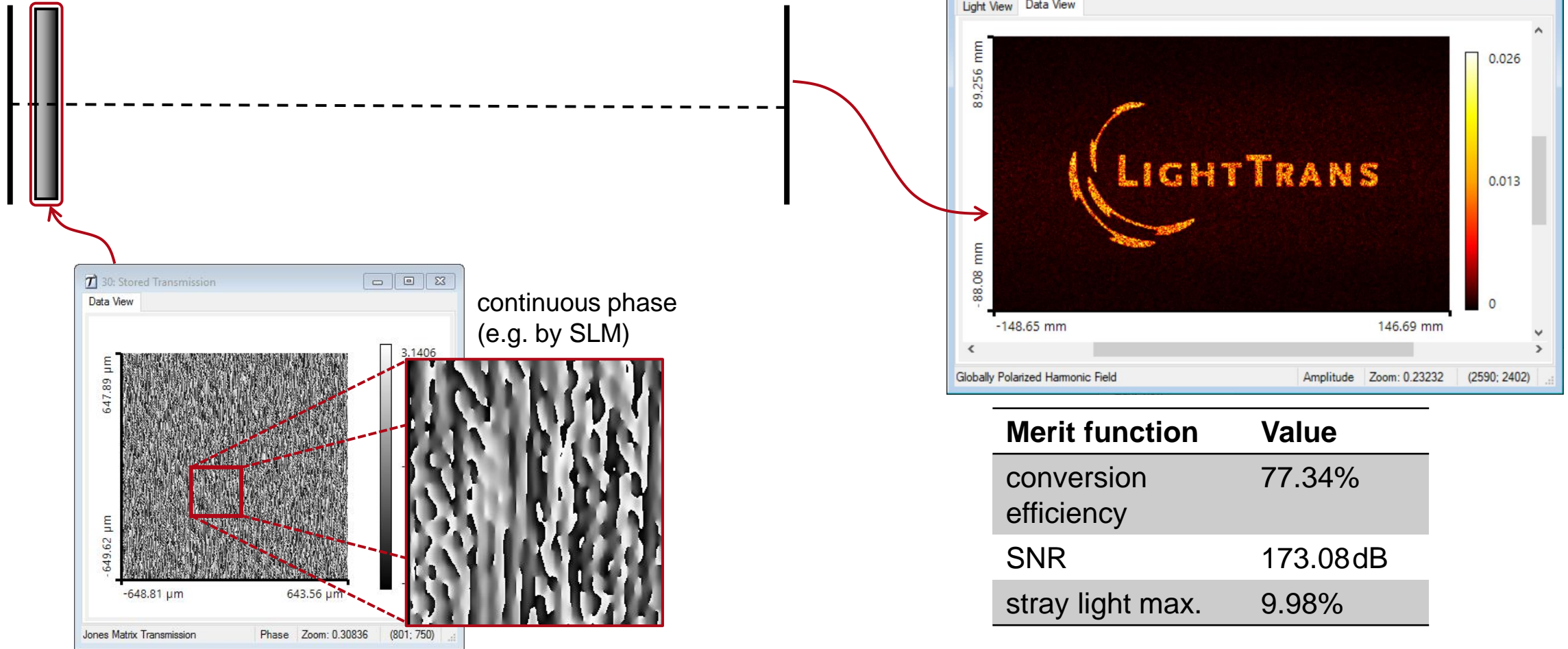


Diffraction optics elements can be used as light diffusers to generate customized illumination patterns. In this example, diffusers for generating a LightTrans trademark are designed with the iterative Fourier transform algorithm (IFTA) in VirtualLab Fusion. By introducing different constraints, two designs with continuous and 4-level discrete phase function are obtained, and the performance of them is investigated.

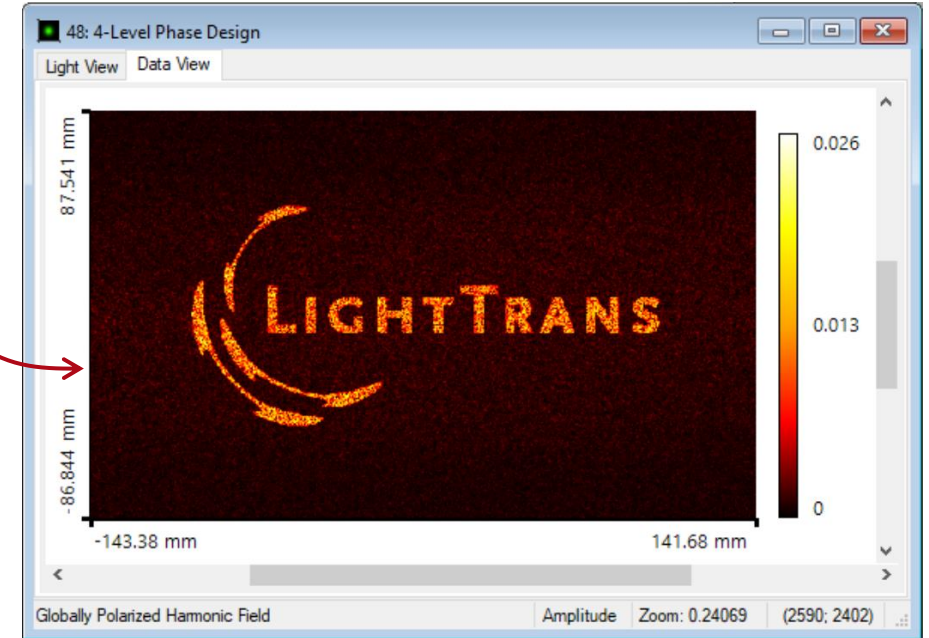
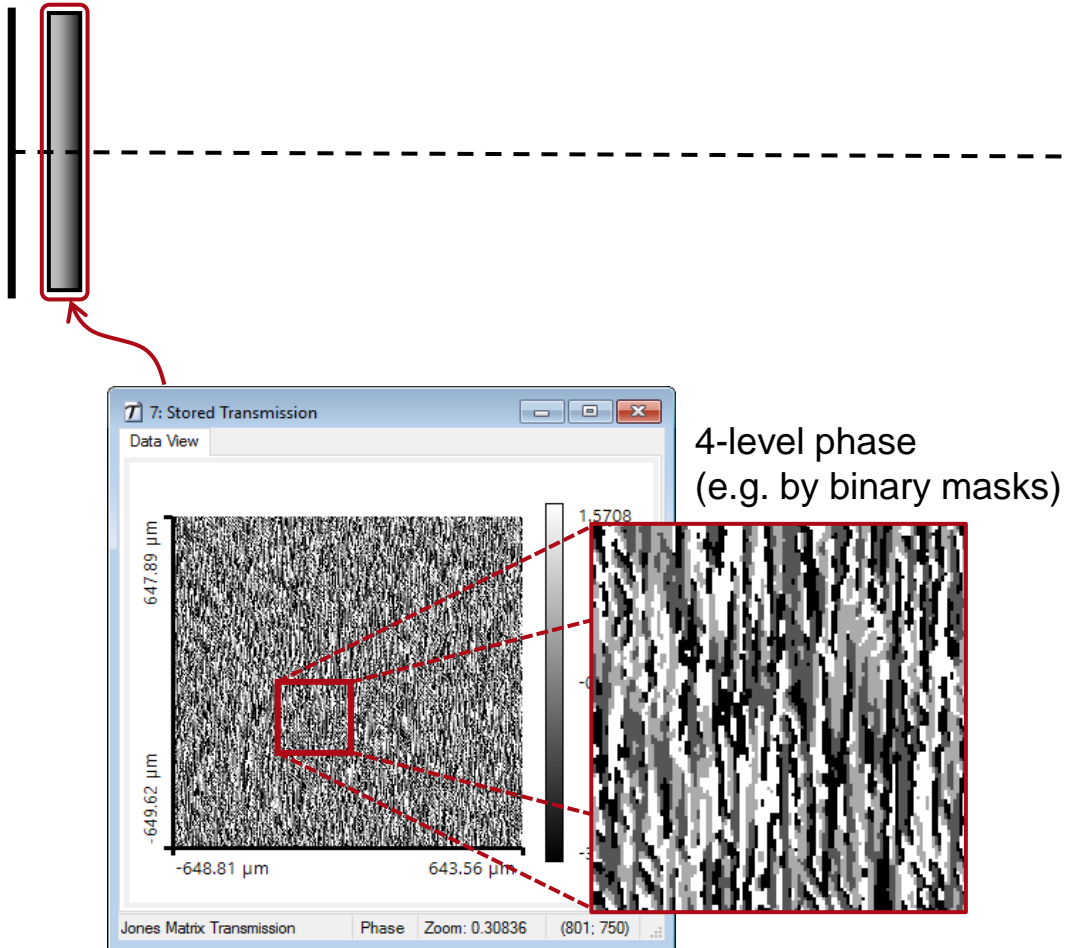
Design Task



Continuous Phase Design



4-Level Phase Design



Merit function	Value
conversion efficiency	63.98%
SNR	33.51 dB
stray light max.	15.13%

Document Information

title	Design of a Diffractive Diffuser to Generate a LightTrans Mark
document code	DOE.0003
version	2.0
edition	VirtualLab Fusion Basic
toolbox(es)	Diffractive Optics Toolbox Silver
software version	2020.1 (Build 1.200)
category	Application Use Case
further reading	<ul style="list-style-type: none">- <u>Design of Diffractive Beam Splitters for Generating a 2D Light Mark</u>- <u>Diffraction Pattern Calculation from a Reflection-Type Diffractive Beam Splitter</u>
