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标题: Propagation beam consideration for 3D THz computed tomography
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摘要: In this paper, a model of the beam propagation is developed according to the physical properties of THz waves used in THz computed tomography (CT) scan imaging. This model is first included in an acquisition simulator to observe and estimate the impact of the Gaussian beam intensity profile on the projection sets. Second, the model is introduced in several inversion methods as a convolution filter to perform efficient tomographic reconstructions of simulated and real acquired objects. Results obtained with three reconstruction methods (BFP, SART and OSEM) are compared to the techniques proposed in this paper. We will demonstrate an increase of the overall quality and accuracy of the 3D reconstructions. (C) 2012 Optical Society of America
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