A Study on the Near-Field Diffraction chacteristics of a Spectral Dependent Gaussian-shaped Pulsed Beam From an Infinite

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ABSTRACT

ABSTRACT The purpose of this study is to invetageted the “ Study on the near-field diffraction chacteristics of a spectral dependent gaussian-shaped pulsed beam from an infinite edge ” as shown in the content the effects of dispersion are different for near-field and far-field sisuations . In the near-field case the shift of the center frequenty of the maxium spectral intensity occurs at the edge point(xi = 0) and the amount of shift is propotienal to the bandwidth $\gamma = 1/\omega 0\lambda$, But in the far-field case . obervation point xi = 0 at shows no shift and points at xi > 0 can have both red shift and blue shiht , In the dark region (xi < 0) only the red shift can occur .

Keywords : near-field diffraction ; far-field diffration ; red shift ; blue shiht

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