

Abstract

Amr S El-Wakeel

Pointing Error in FSO Link under Different Weather Conditions

Pointing errors is one of the main challenges that face free space optical communication and affects its performance specially at high range links, in this paper, an evaluation for the pointing error for practical Bit Error Rate is carried. This is done for an FSO link under different weather conditions at 1.55 μ m. Under practical simulation conditions it was found that maximum pointing error allowed to achieve 10^{-9} bit error rate for clear weather can reach 13.53 μ rad, Heavy fog is found to be the worst weather condition, where small pointing error can lead to link failure.