

LINK MODELS FOR SPACE/AIR TO SUB-SURFACE, OPTICAL COMMUNICATION ANALYSIS



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ABSTRACT

This paper describes a set of engineering models which collectively can be used to characterize any coherent space/air to sub-surface optical communication link. These models include the effects of clouds, sea water and the air/sea interface. Example calculations are given. Special emphasis is given to those angular and temporal degradation aspects created by particulate multiple scattering, and their impact on anticipated system performance. The effects of non-classical noise sources, e.g., bioluminescence, are also discussed.