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Rain attenuation prediction of optical wireless system in tropical region (Conference Paper)

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Abstract

Optical wireless system is a communication alternative for the last segment to where fiber optic is unable to reach due to deployment and cost constraint. An **optical wireless** capability is similar to **optical** fiber **systems** which provides for a high speed and a higher bandwidth link. Other features of **optical wireless system** are higher speed, low cost and time of deployment and broader broadband technology. However, the availability of **optical wireless** transmission is very much weather dependent. In temperate **region** fog and snow are the two restrictive of the link propagation availability. In **tropical region** however heavy **rain** is expected to be the limiting factor of **optical wireless** link availability. The effect of **rain** on **optical wireless** link is expressed in term of specific **rain attenuation**. Available specific **rain attenuation** parameter of **optical wireless** link is formulated from data measured in temperate **regions**. Therefore, the main objective of this research is to predict and propose specific **rain attenuation** parameter that best fit **tropical region** using measured data in **tropical region** for **optical wireless system**. © 2013 IEEE.

Author keywords

best fit; Free Space Optics; **Optical Wireless System**; specific **rain attenuation**; specific **rain** parameter; **tropical region**

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