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### Site diversity gain for earth-to-satellite links using rain intensity measurement (Article)

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#### Abstract

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Site diversity technique is effective method to overcome rain attenuation, mostly in the tropics where high precipitation is predominant. The method is analyzed based on measurements in two locations separated by 37.36 Km in Malaysia. From concurrent measured rain intensities of two locations at IIUM and UKM for one year, it was found that only ten concurrent events had occurred containing highest rain intensities of 18 mm/h with outage probability of 0.00154% on two locations out of about 381 events experienced over one year period. These findings will be very useful for Earth-to-satellite link designers to improve reliability by applying site diversity as a rain fade mitigation technique at any frequency. © 2017, Institute of Advanced Engineering and Science. All rights reserved.

#### Author keywords

[Prediction models](#) [Rain intensity](#) [Site diversity gain](#) [Site diversity technique](#)

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