

Technical Talk on Global Warming Increasing Lightning Activity

(Organized by Electrical Engineering Technical Division IEM)

Date : 6th November 2019 (Wednesday)
Time : 5.30pm – 7.30pm (*Refreshments will be served at 4.30pm*)
Venue : Auditorium Tan Sri Prof Chin Fung Kee, Wisma IEM, PJ
Speaker : Emeritus Professor Zen Kawasaki

SYNOPSIS

The issue of global warming had been reported for the first time in 1980's. Since then, quite a few scientists have been engaged in this subject through numerical simulation and field observations of related parameters. It is well known about greenhouse gas but the lightning activity is also one of the key parameters of global warming, because higher temperatures meant more severe storm occurrences. From this aspect, we have been conducting satellite observations to investigate the lightning activity all over the world. Additionally, we are doing ground-based measurement of thunderstorms. Through ground base measurement, we have observed the tendency of increasing lightning activity. On the other hand, based on satellite observation for over ten years, we could not confirm increasing the overall increase in lightning activity globally. These results suggest that in some area lightning activity increased and in other area lightning activity decreased. One more question - is increasing lightning activity due to global warming? On the other hand, we should also ask is lightning activity an influence on the global warming. This means there is the dual possibility of influence of lightning activity on global warming and vice versa.

SPEAKER'S BIODATA



Graduated in B.E. Communication Engineering from Osaka University in 1973, Master in Communication Engineering in 1975, and Ph.D Communication Engineering in 1978. Currently Prof Kawasaki is a Professor Emeritus Professor at Osaka University. He has been studying discharges and their related phenomena with their own observation equipment for many years. Prof Zen, as he is known to his colleagues, is one of the outstanding researchers in the world. During his career he has

developed VHF broadband digital interferometers and observations with those VHF broadband interferometers. He conducted an observation campaign in Darwin, Australia, more than a decade ago and revealed important new information about the lightning leader developments. Furthermore, he proposed a new technique to trigger lightning by means of high energy laser, and his laser succeed in triggering lightning in the field experiment for the first time. He also participated in the development and study of the Lightning Imaging Sensor (LIS) aboard the Tropical Rainfall Measuring Mission (TRMM) as a principal investigator in Japan and clarified the relationship between lightning discharges and thunderstorm characteristics. Furthermore, he designed his own VHF broadband lightning sensors for space. These sensors were already launched in 2009 and 2012, and they succeeded in recording VHF emissions from lightning discharges in space.

BEM Approved CPD/PDP

Hours: 2

Ref Number: IEM19/HQ/542/T

FEE ANNOUNCEMENT

(Effective: 1st October 2017)

Members:

- (i) Registration Fee: No Charge
- (ii) Administrative Fee:
 - (a) Online RM15
 - (b) Walk-In RM20

Non-Members:

- (i) Registration Fee: RM50
- (ii) Administrative Fee: RM20

- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- To secure your seat, kindly register online at www.myiem.org.my

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