



Geofizički odsjek

Prirodoslovno-matematički fakultet, Sveučilište u Zagrebu

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O B A V I J E S T

Dana **28.1.2015. u 13¹⁵** sati će se održati u okviru seminara i kolokvija na Geofizičkom odsjeku PMF-a sljedeće izlaganje:

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Lightning, thunderstorm and climate change

ABSTRACT: Lightning is believed to have been occurring on earth long before the existence of life on it and every human civilization has incorporated it as divine weapons. However, the scientific studies, that begun with Franklin's famous experiments, have unveiled it as an electrical discharge between two regions of the atmosphere. It can be vaguely divided into two types, cloud flashes and cloud to ground flashes. Thunderstorms, and lightning in particular, are a major natural hazard to the public, aviation, power companies, and wildfire managers. Since lightning can be monitored from great distances from the storms themselves, lightning may allow us to provide early warnings for severe weather phenomena such as hail storms, flash floods, tornadoes, and even hurricanes. Thunderstorms, themselves, influence the climate system by the redistribution of heat, moisture, and momentum in the atmosphere. The distribution of lightning and thunderstorms around the globe is closely linked to the Earth's climate. The climate is strongly influenced by the general circulation of the atmosphere, driven by the Hadley circulation between the equator and the mid-latitudes. Lightning activity, thunderstorm days, or indices linked to global lightning activity are sensitive indicators of surface temperature changes. Small changes in surface temperature have been found to result in large changes in thunderstorm and lightning activity. Lightning itself may impact the climate of the Earth by producing nitrogen oxides (NO_x), a precursor of tropospheric ozone, which is a powerful greenhouse gas. Lightning has also been found to be a sensitive indicator of upper tropospheric water vapor, clouds, ice crystal size, and ice water path in thunderstorms. Hence, lightning itself may provide a useful tool for the future climate change.

Pozivaju se studenti, apsolventi i svi zainteresirani da prisustvuju predavanju, koje će se održati u predavaoni br. 2 Geofizičkog odsjeka PMF-a, Horvatovac 95, Zagreb. Studentima 2. godine diplomskog sveučilišnog studija fizika - geofizika je prisustvovanje predavanjima u sklopu Geofizičkog seminara obavezno.