

# Physics 535 – Lecture 23

## Physics of Lightning

Time Domain RS model

3/11/16

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(Photo courtesy of Harald Edens)

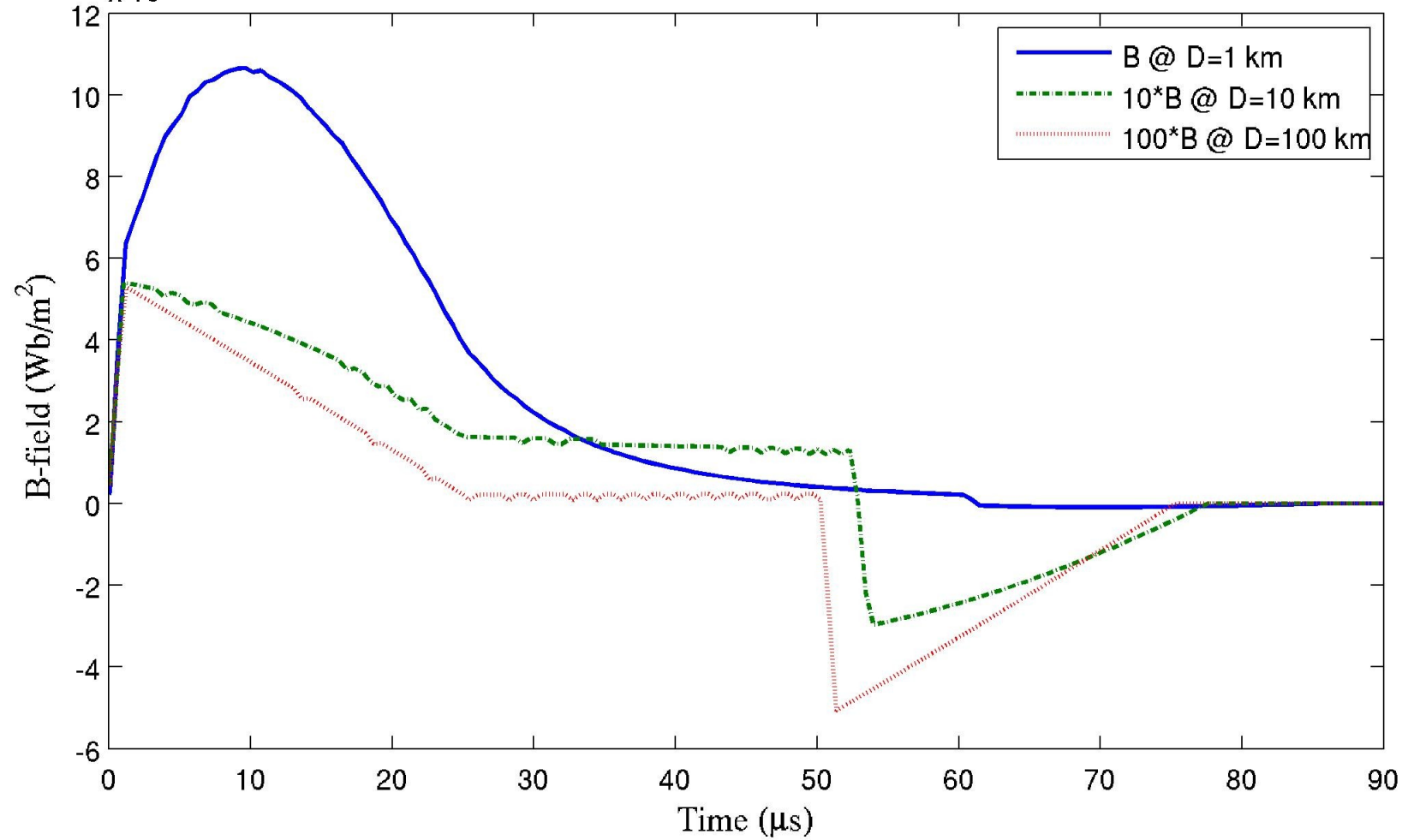
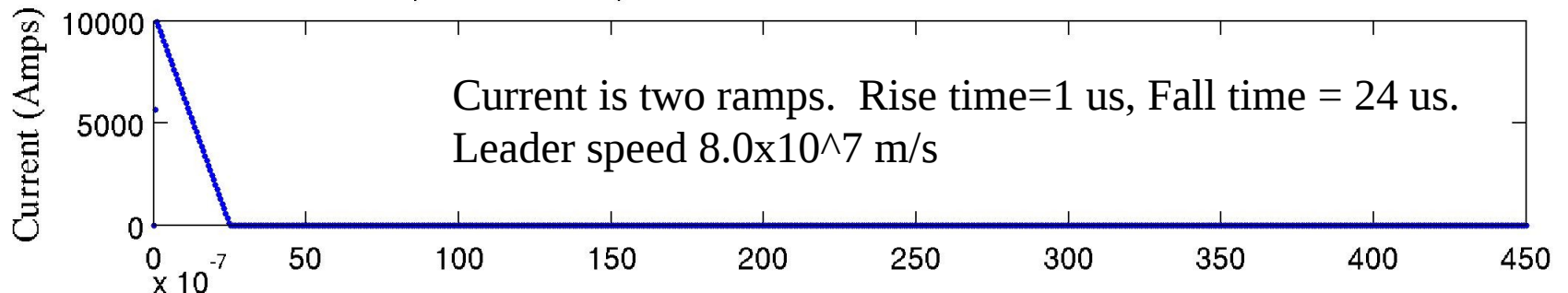
## Problem 6-1

Measure conductivity of air with capacitor  
and ES voltmeter

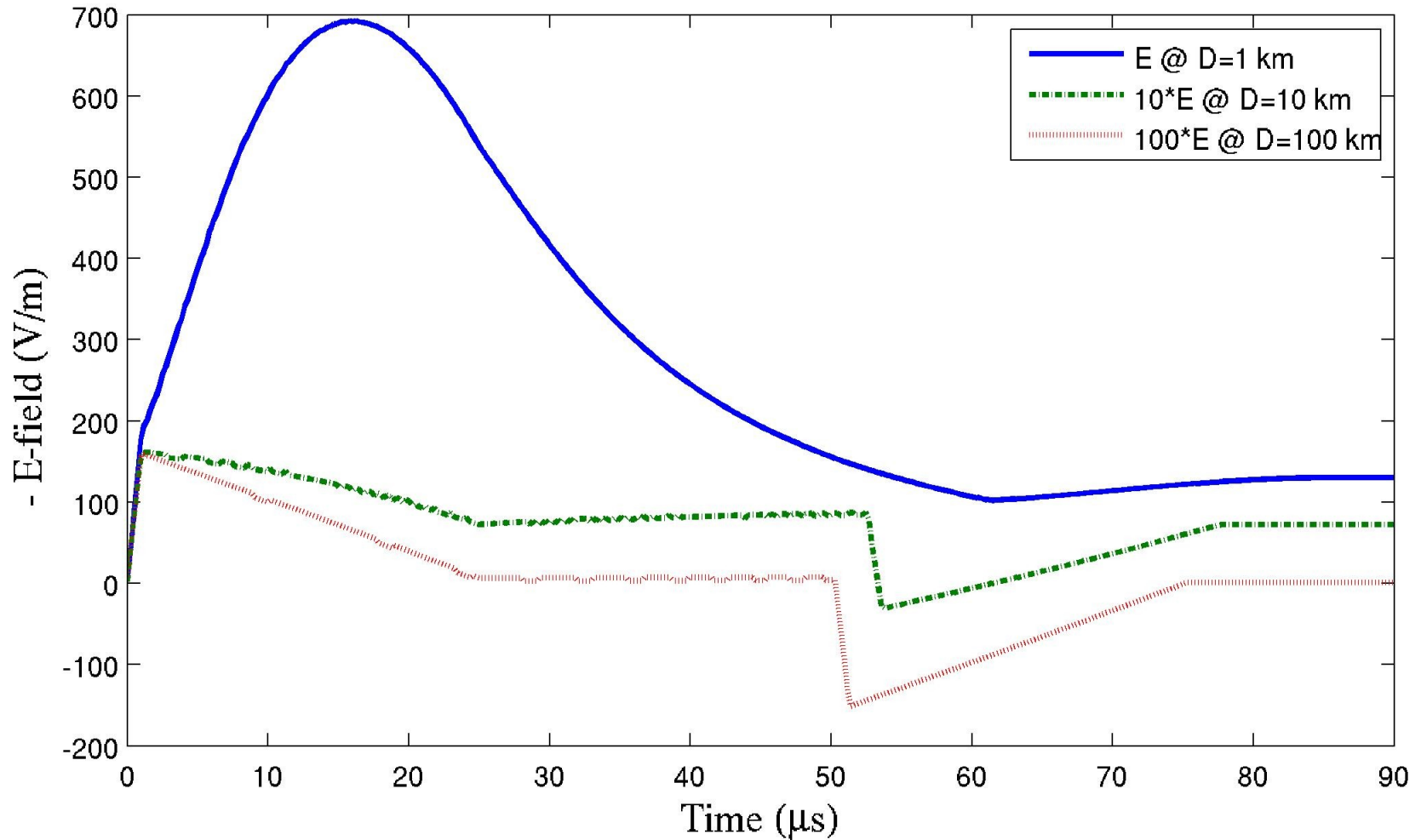
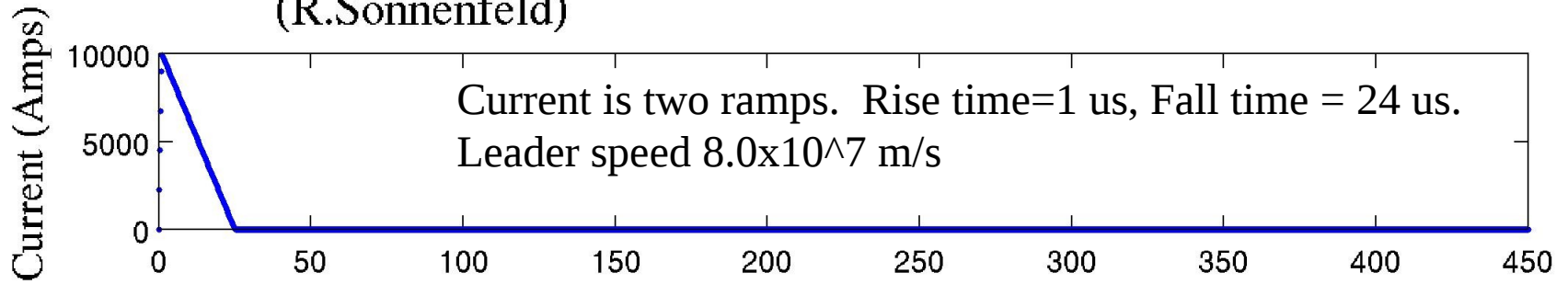
Note effect of UV light

# Visualize corona with a Van de Graaf

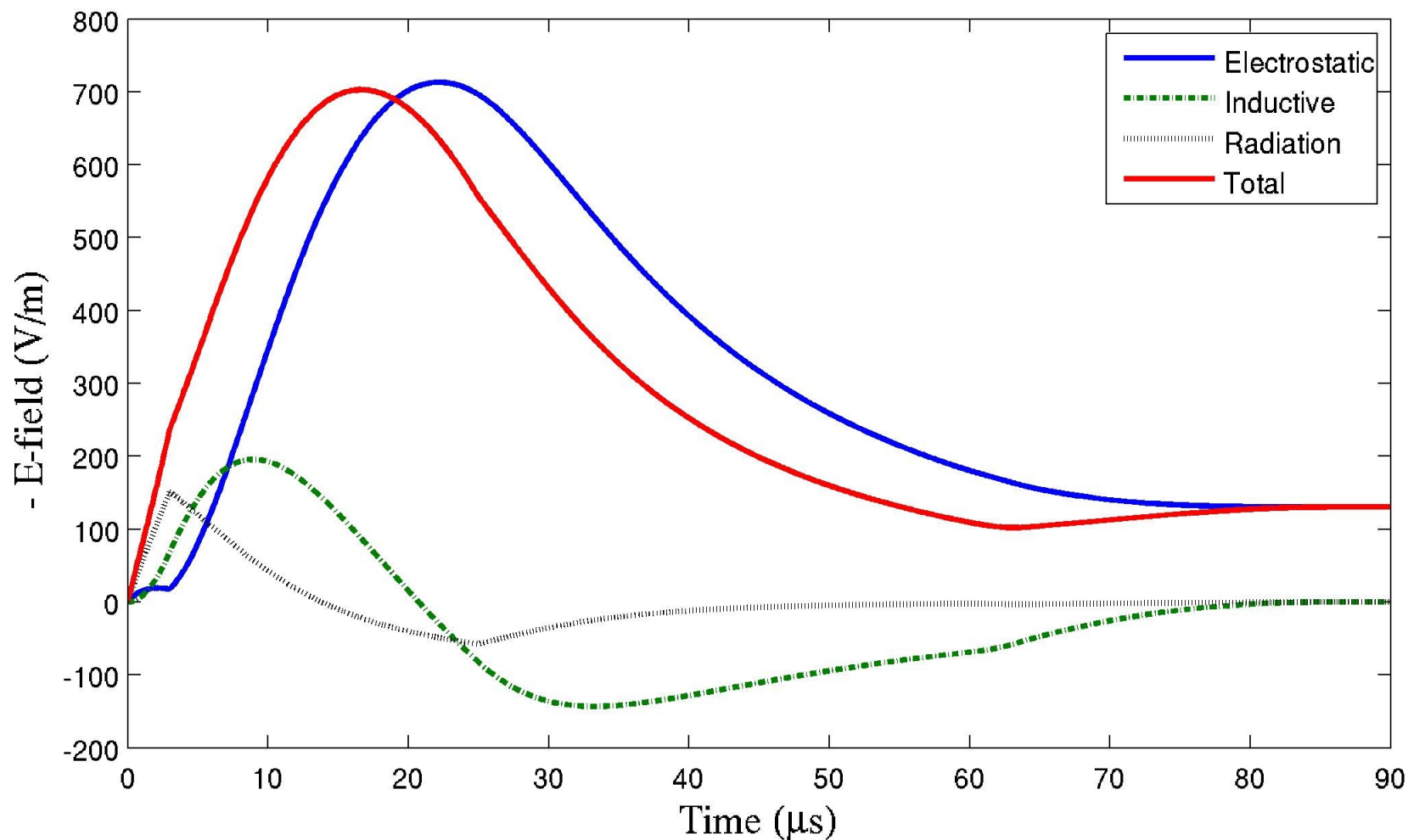
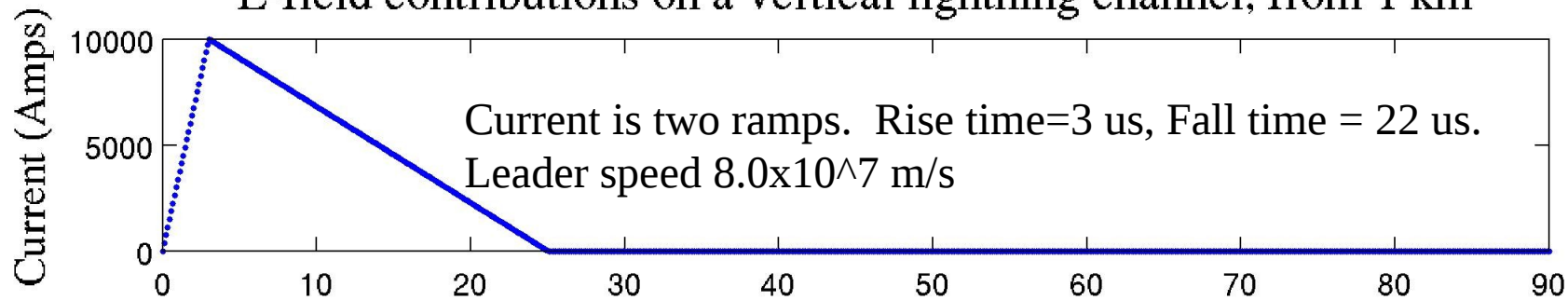
B-field from a vertical lightning channel, based on Uman75  
(R.Sonnenfeld)



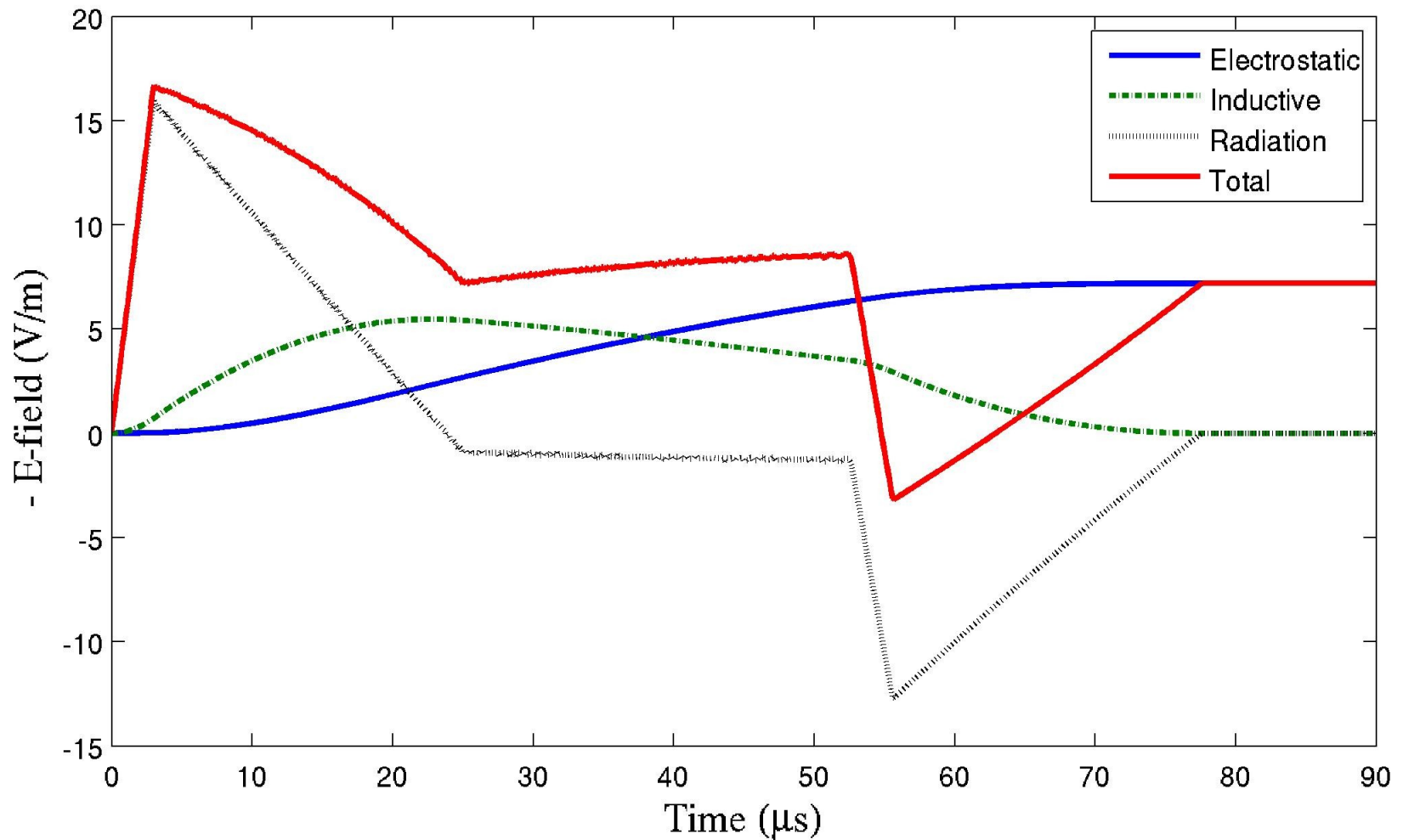
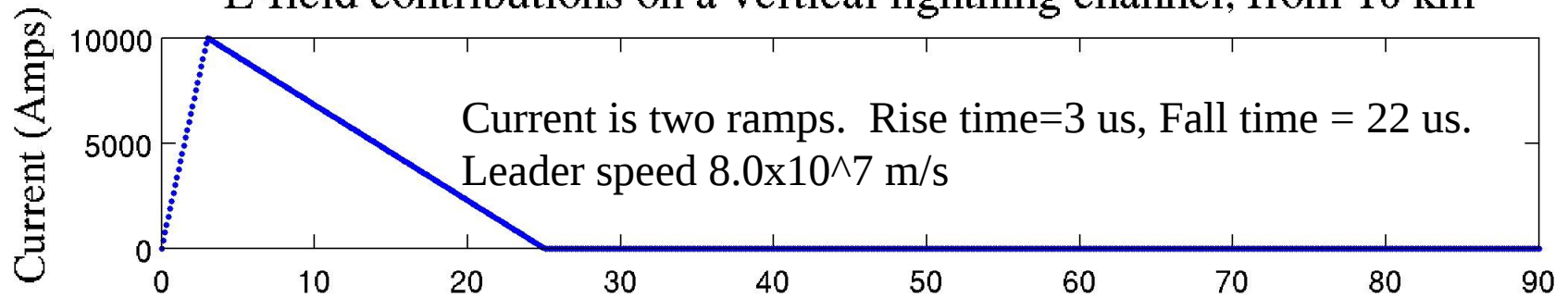
# E-field from a vertical lightning channel, based on Uman75 (R.Sonnenfeld)



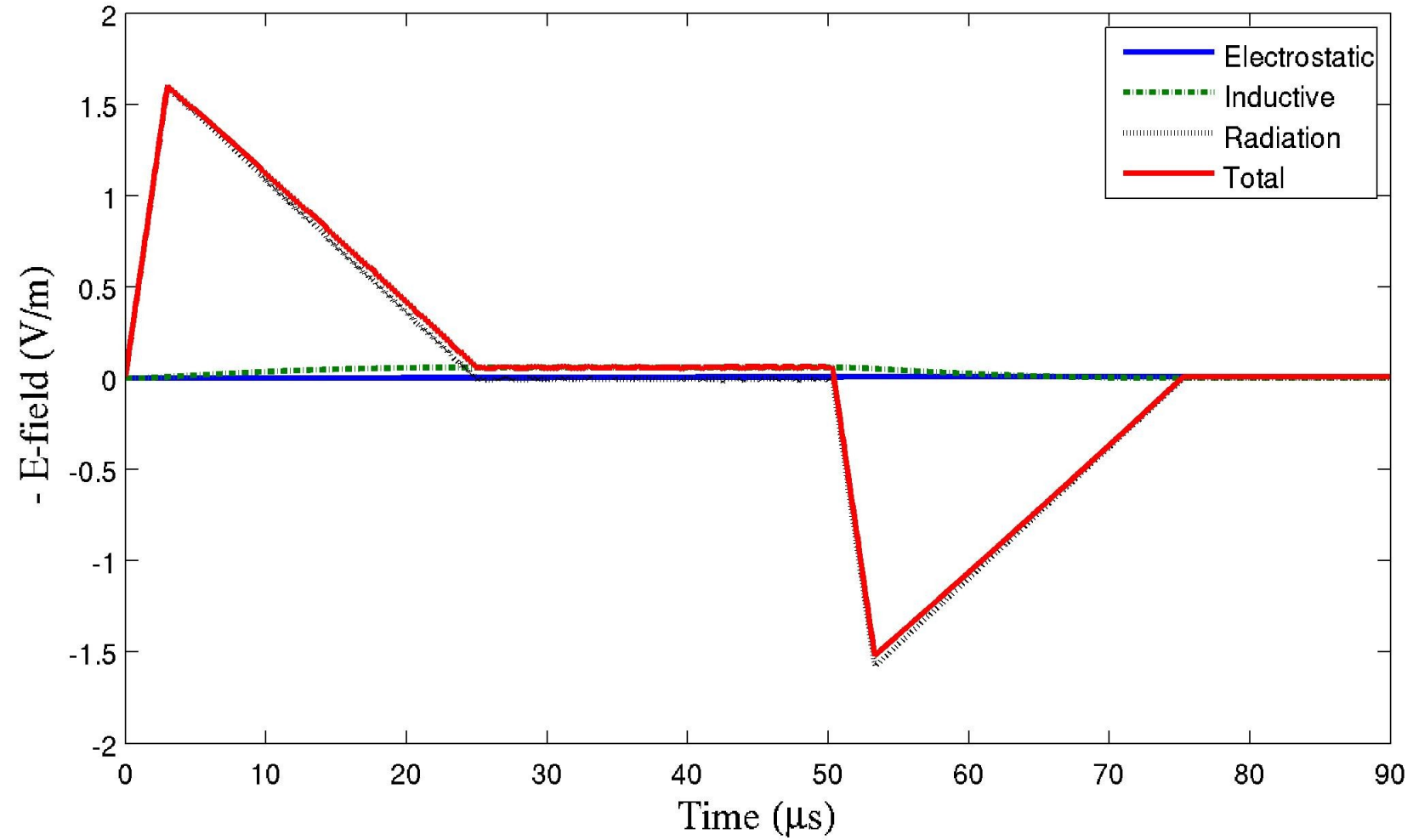
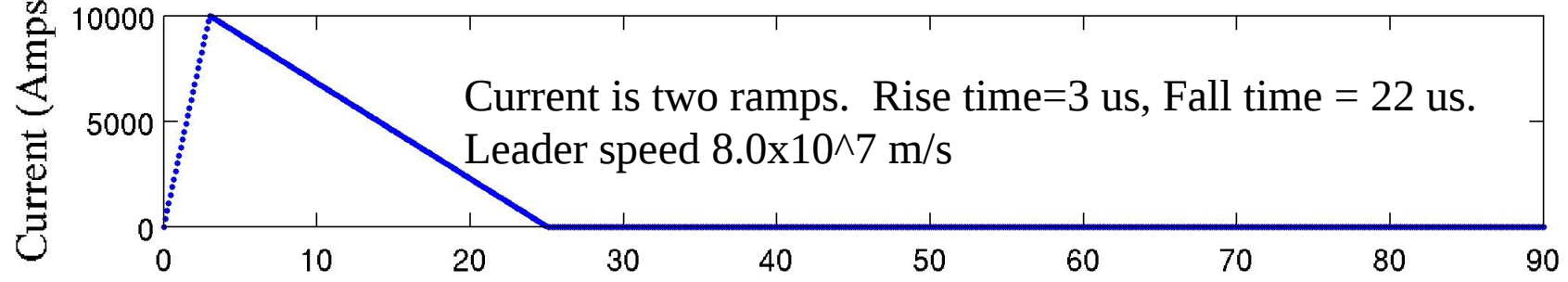
# E-field contributions on a vertical lightning channel, from 1 km



# E-field contributions on a vertical lightning channel, from 10 km

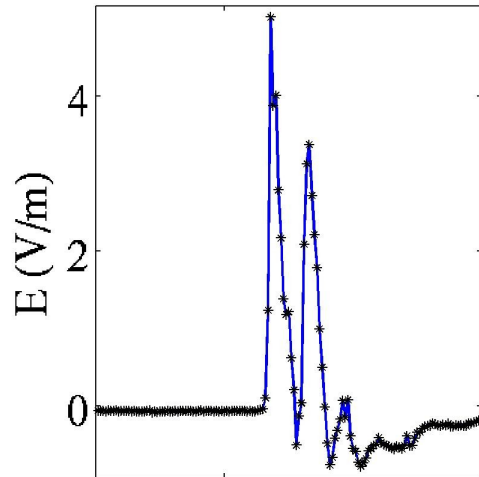


# E-field contributions on a vertical lightning channel, from 100 km

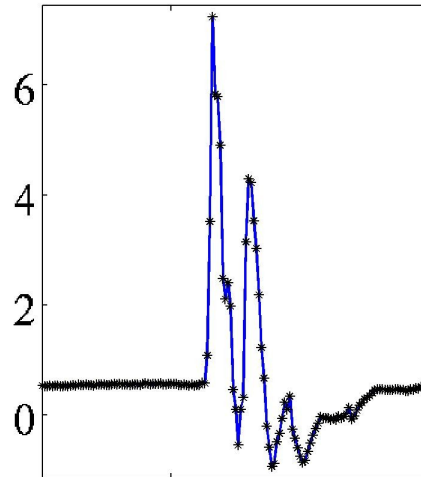




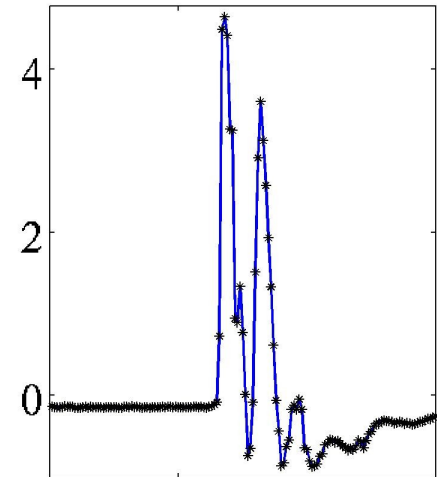
Station 2



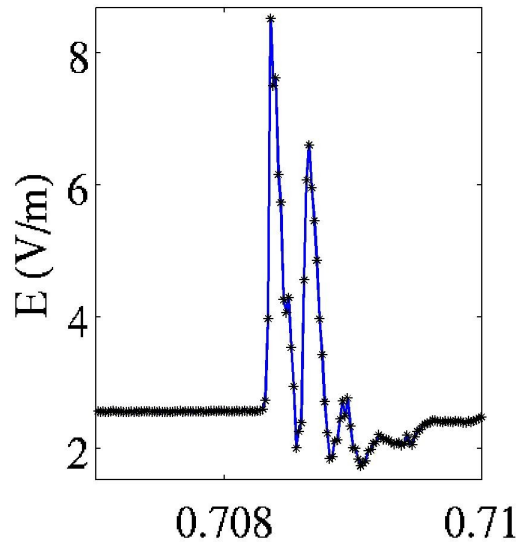
Station 4



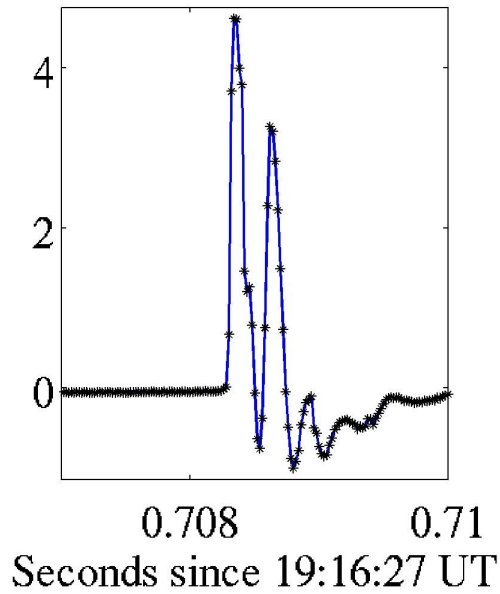
Station 5



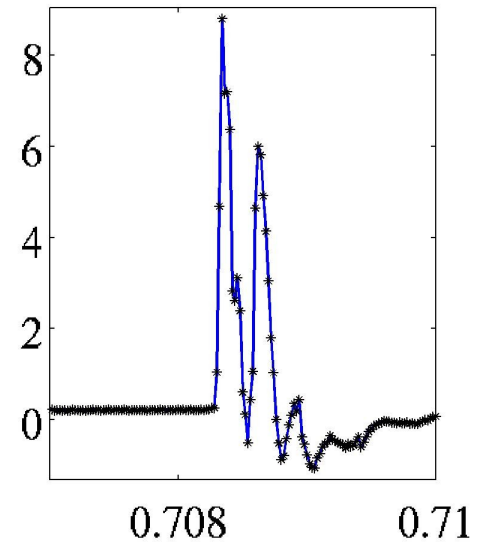
Station 6



Station 7



Station 8



Seconds since 19:16:27 UT