

RIIT

High Voltage Laboratory
NATIONAL KOREA MARITIME UNIVERSITY

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Seoul, Korea

Date of Test : 03 Jul. - 14 Jul 2006

Reference No :

TEST REPORT

TEST OBJECT : Lightning Warning System LWS MK-II

MANUFACTURER : KOREA EMI TECHNOLOGIES CO.,LTD



TYPE OF THE TEST : E-filed sensitivity of the LWS MK-II sensing antenna
(comparison to fieldmil)

Test performed by :

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1. Test setup

e-field sensitivity test :

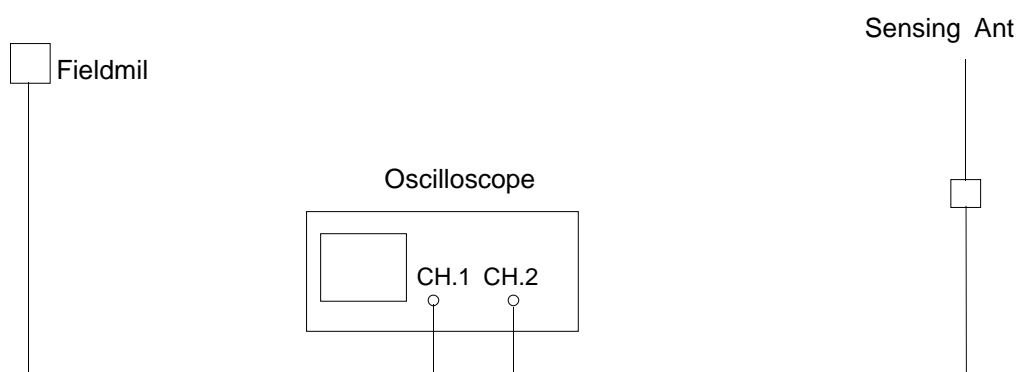
Sensitivity of the sensing antenna have been compared to 1V/kV/m sensitivity of plane shutter type fieldmil under the real lightning storm environment.

The fieldmil was mounted on the top of the 1.5m mast on the rooftop of the 15.5m high Laboratory building. The height over the ground level was 18.5 m.

The sensing antenna was mounted at same location 10m apart from the fieldmil installation.

Test Equipments :

* Digital Oscilloscope : Model DL750 YOKOGAWA



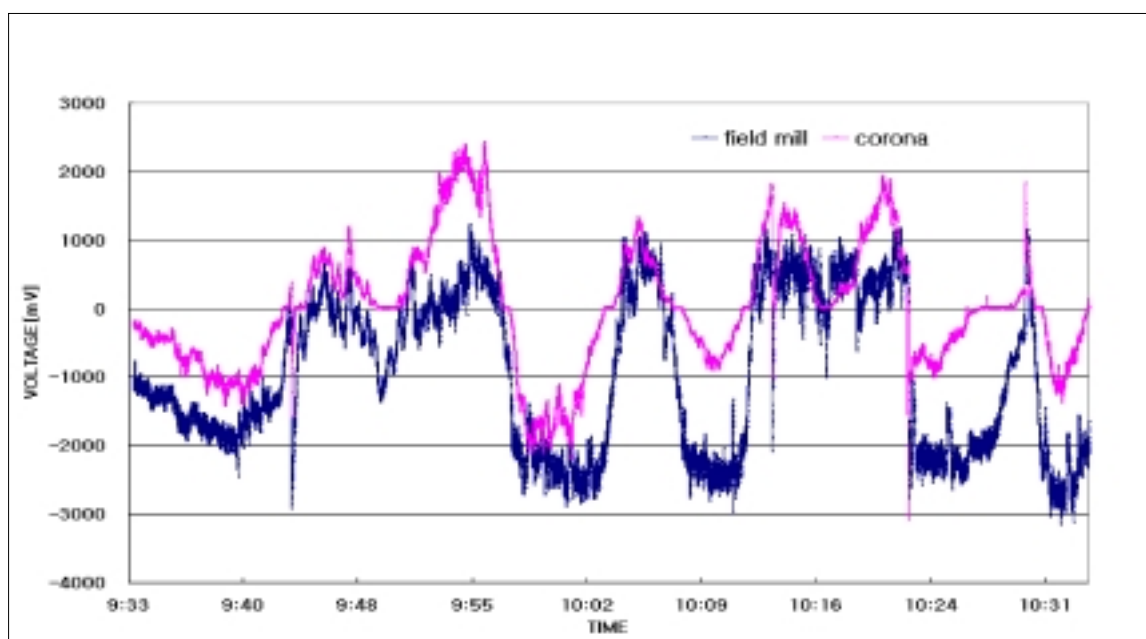
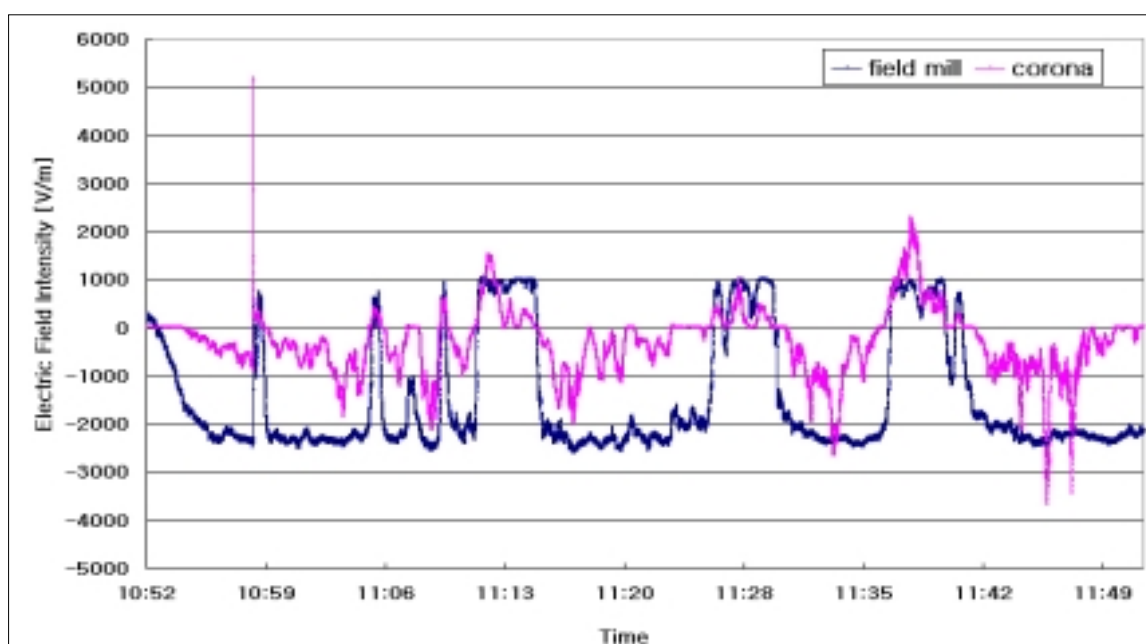
2. Test results :

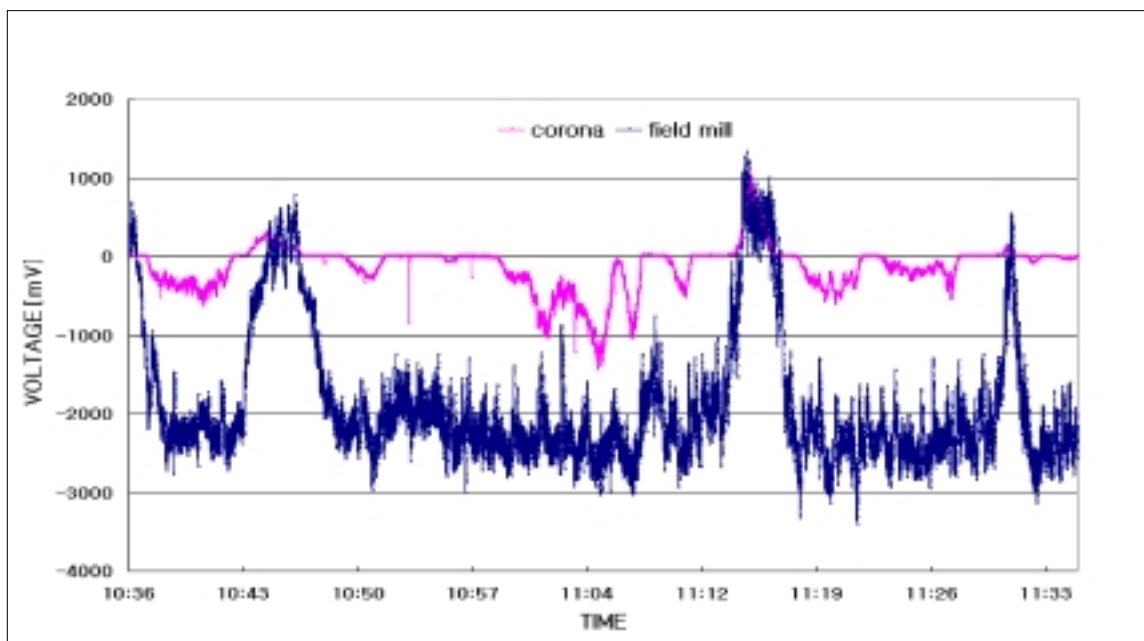
1. Corona inception electric field at positive polarity starting at around 1 kV/m
2. Corona inception electric field at negative polarity starting at 1.9 ~ 2.1 kV/m

The polarity changes and linearity of e-fields measured by the sensing antenna are almost match to the measurement recorded by fieldmil sensor.

The corona inception points by e-fields level were found stable and dependably sound.

In the system, the warning and alert level can be fixed using system software and the present setup value for warning and alert are 4 kV/m and 7 kV/m respectively.





SYSTEM CONFIGURATION

