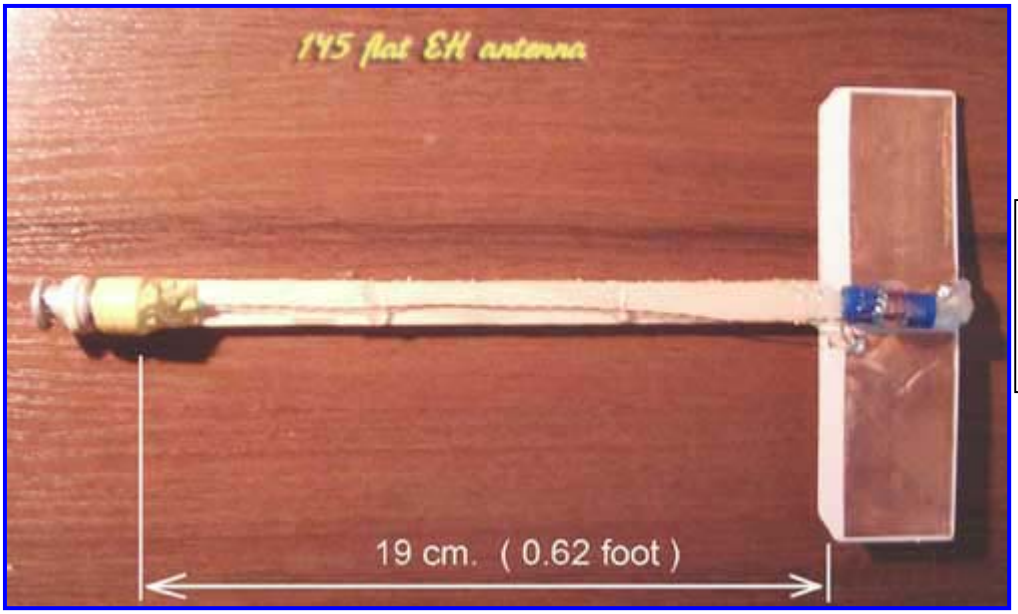
SOME EXPERIMENTS OF FLAT EH ANTENNA 145 MHz
(use fluorescent light)

Vladimir (UA1ACO)

Flat antenna (145 MHz) was made In first. The next photography, show this experiments.
Conditions of made experiments:

1. Transceiver - "Kenwood TH-F6A".
2. Power – 5 watts.
3. Power of fluorescent light – 10 watts.
4. Transceiver stand on paper pipe.
5. Fluorescent light on Capron thread.



Coil – 6 turns
Tap – 1 turn
Wire - #28
VSWR – 1:1.2

Fig. 0

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

Fig. 9

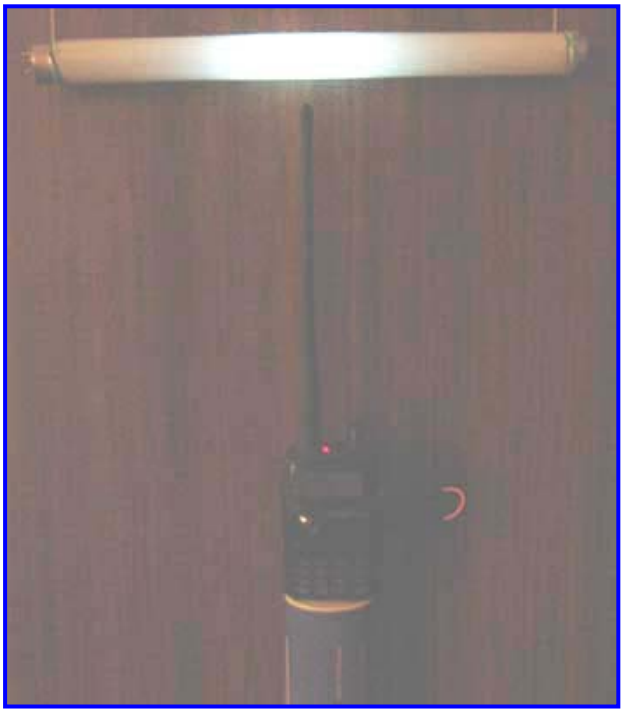
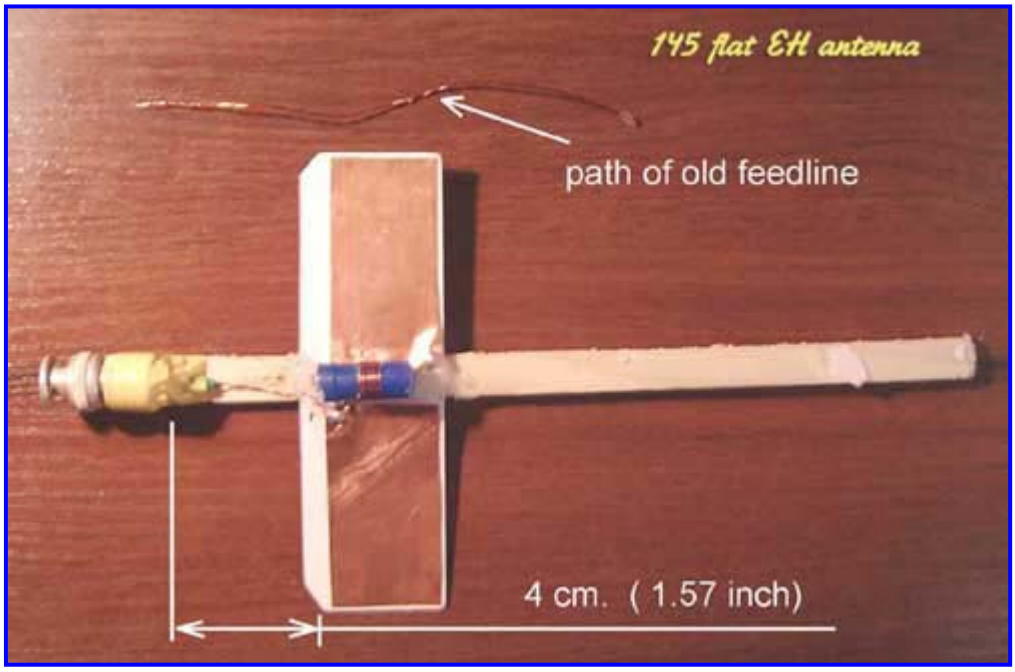


Fig. 10



Coil – 6 turns
Tap – 2/3 turn
Wire - #28
VSWR – 1:1.3

Fig. 11 EH flat antenna a shot feedline

It is flat EH antenna (Fig. 11) was down level 1.0 to 1.5 dB relative to the larger EH that has a longer feedline.

FOLLOWING EXPERIMENT
(dipole replace to capacitor)

Remove the dipole elements from the antenna and connect a capacitor in its place.
The variable capacitor is 2 to 7 pF. VSWR – 1:1.2

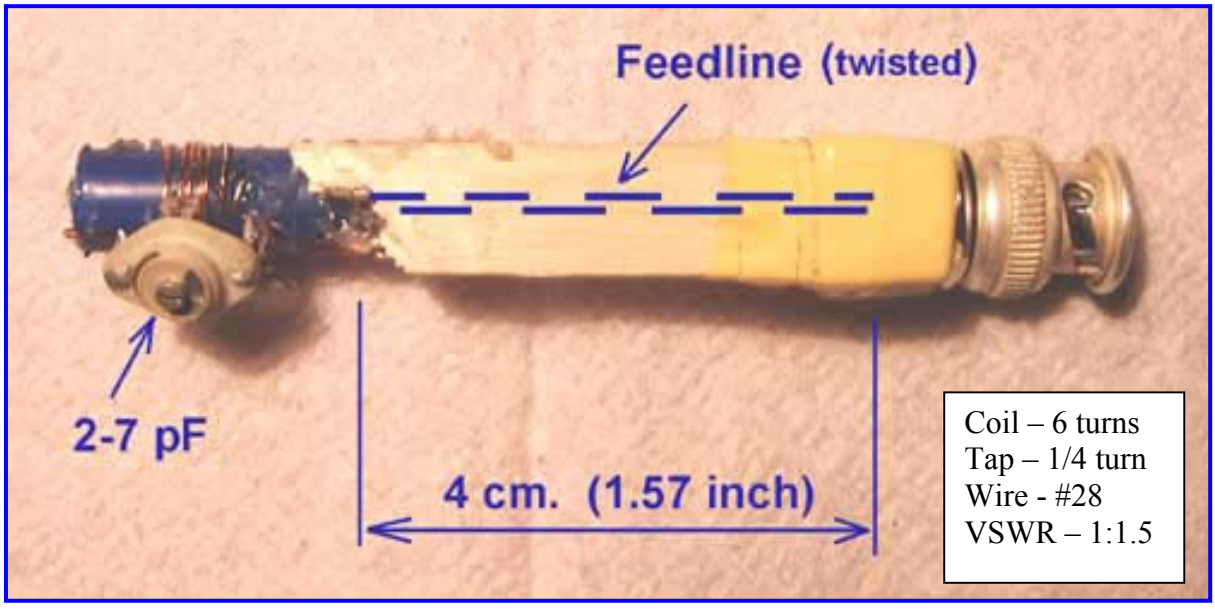


Fig. 12

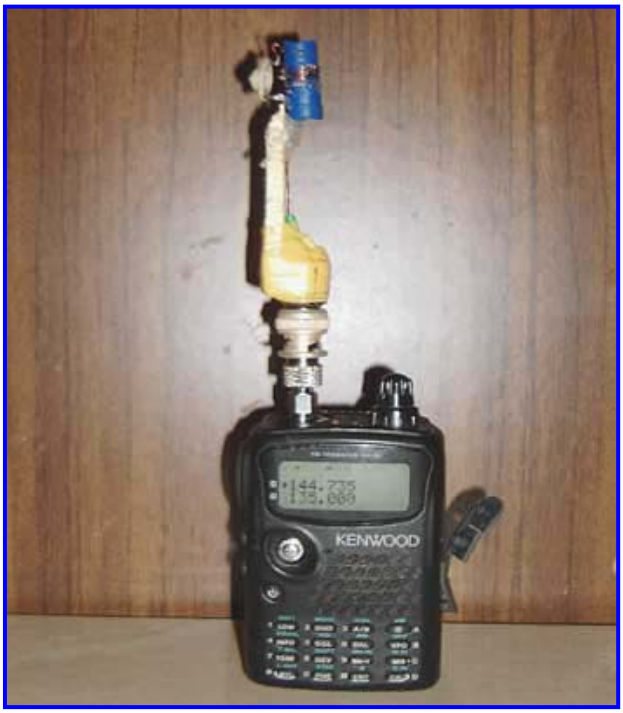


Fig. 13

Fig. 14

Fig. 15

Fig. 16

NOT feedline, only C and L

Fig. 17

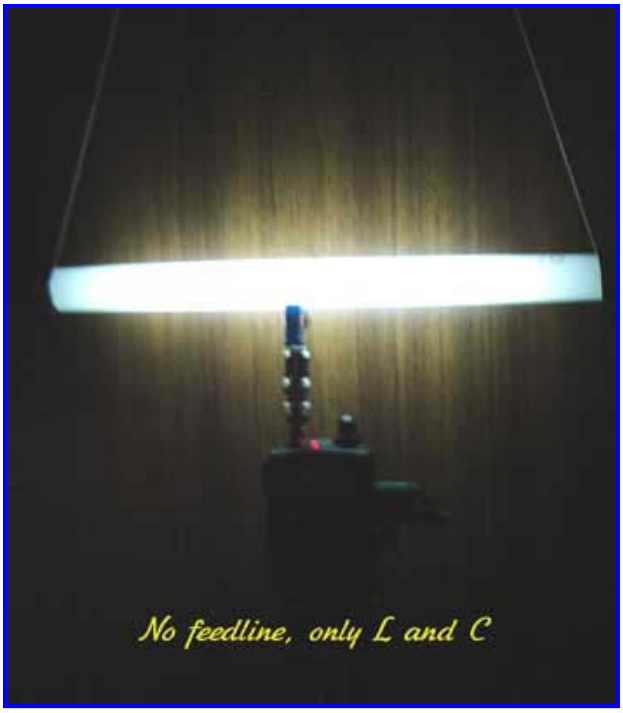


Fig. 18

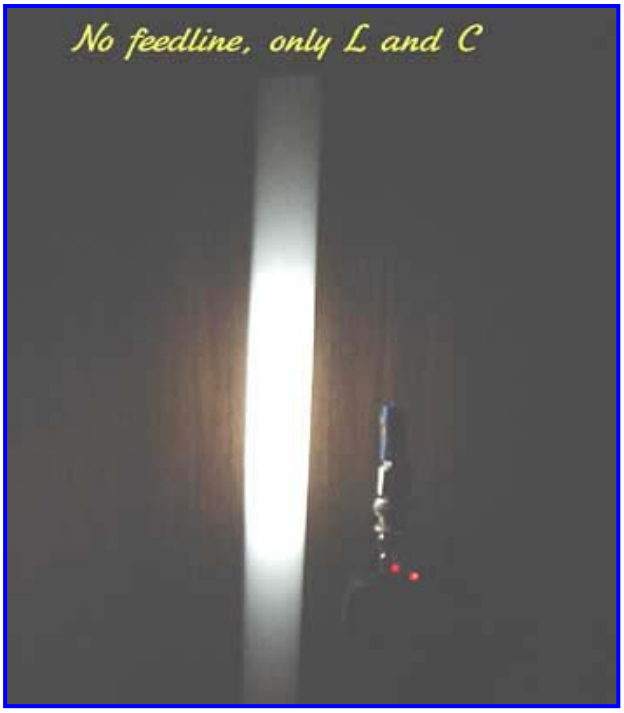


Fig. 19

Now, next experimens…
I made new long feedline (19 cm) and connected C and L only.
Results see on the next page.

NOW, long feedline and L ana C only.

Fig. 20

Fig. 21

Fig. 22

Fig. 23

I think that all these experiments very aproximate (as like boy scout)
It is difficult to value a light of the lamp to estimation of the level of field.
Necessary to make the instrumental measurements a level field (apart H and E), as I this has done on antenna of the 40 metres band (7 MHz), then becomes understandable as they are distributed field and as their level in miscellaneous variant.
(regrettably I can not measure true level by field, my sensors are not calibrated), but measure the level beside EH and compare it with level Dipol - wholly possible, see, for instance Fig. 24 , Fig. 25 and Fig.26

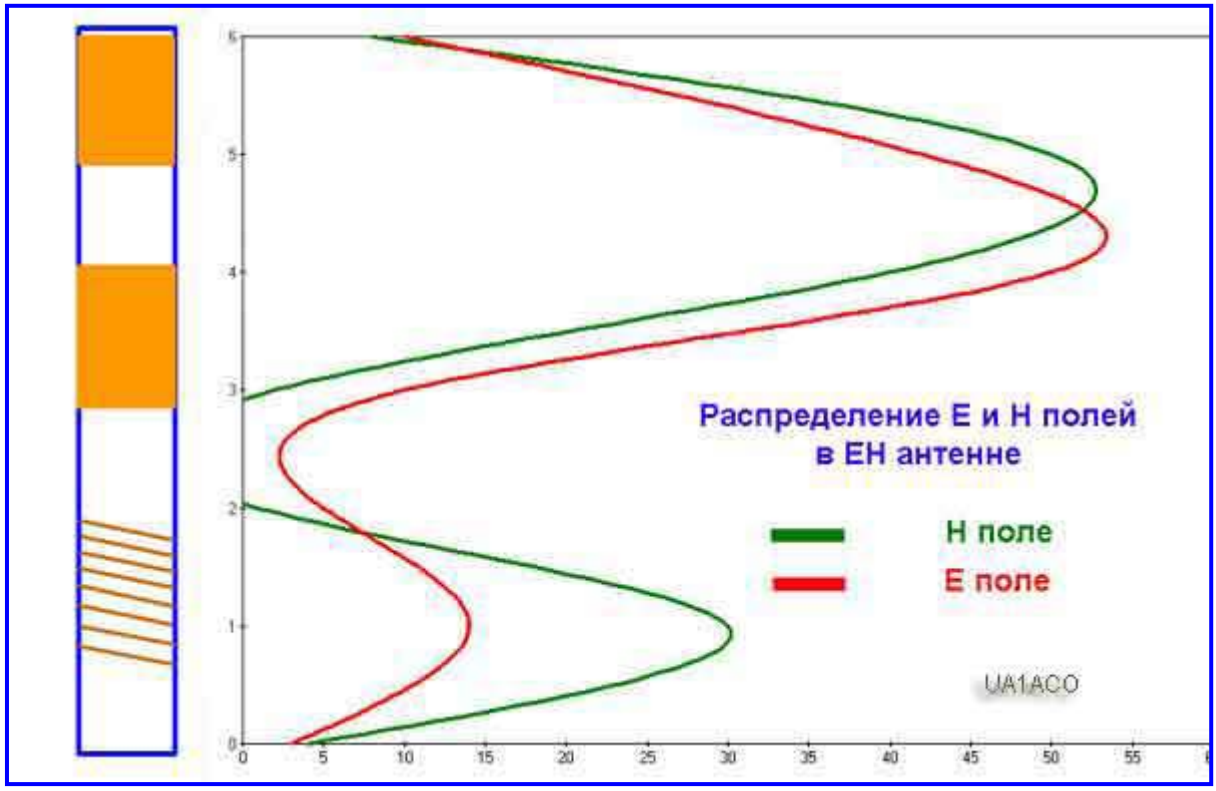


Fig. 24 E and H field from EH antenna (7 MHz)

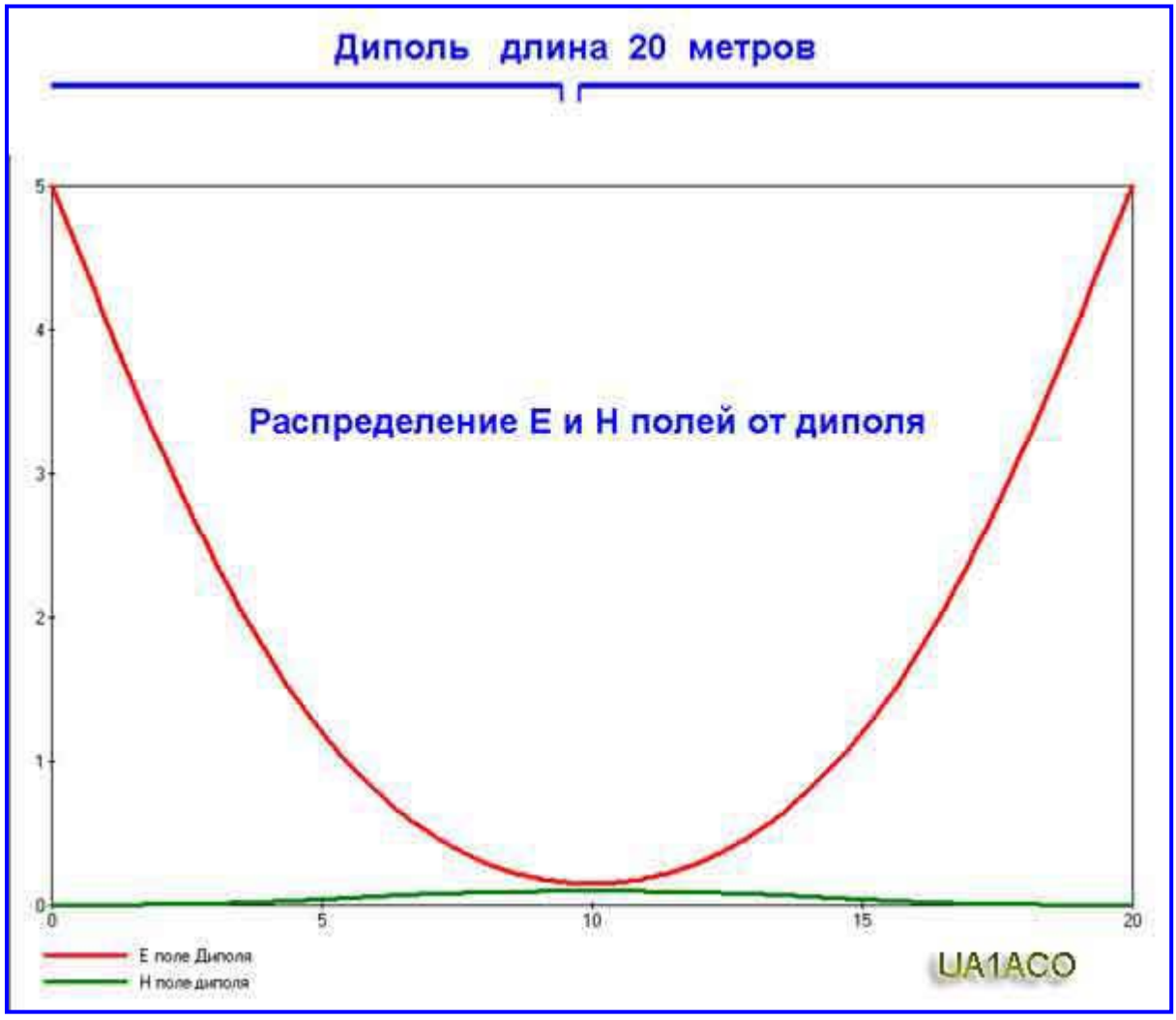


Fig. 25 E and H field from Dipol (20 meters length) 7 MHz.

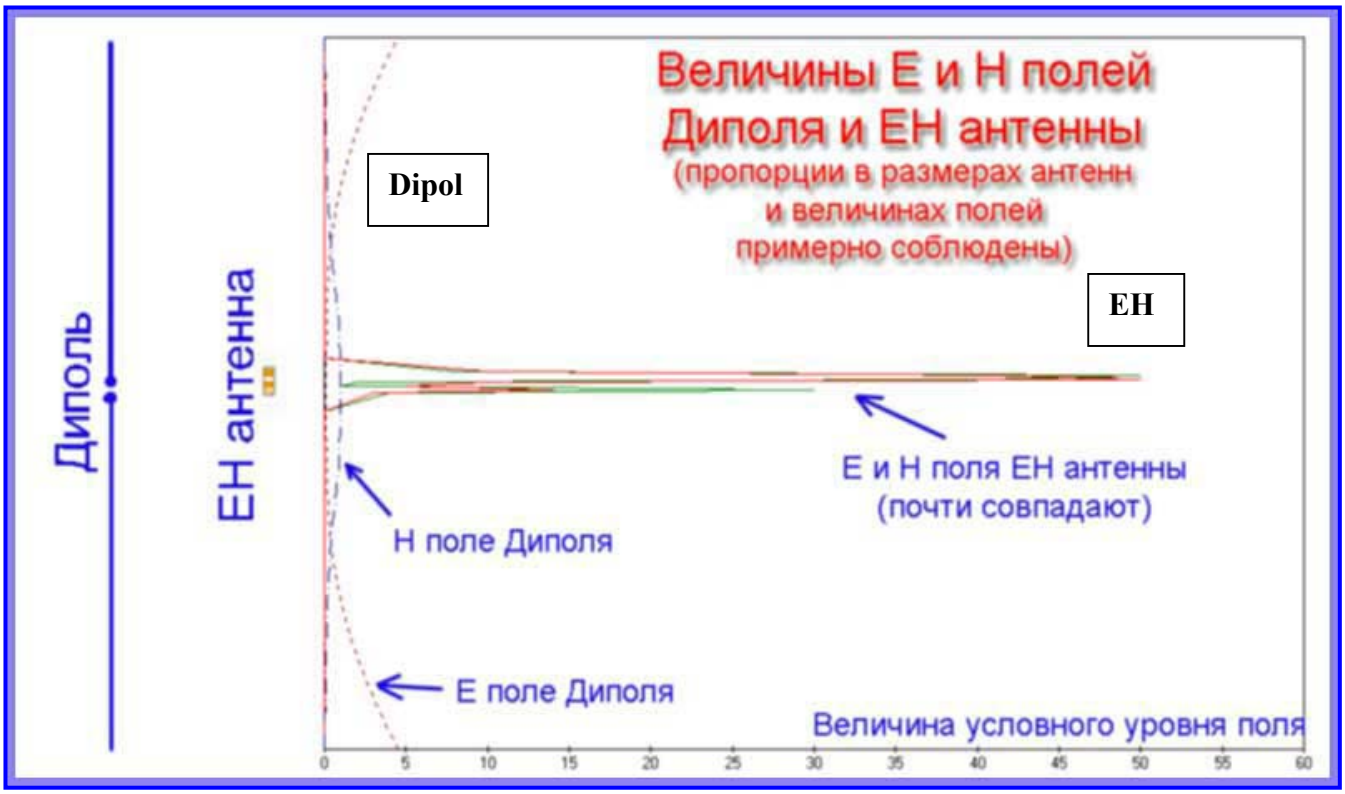


Fig. 26 Joning Fig. 24 and Fig. 25 The field between EH and Dipol respective

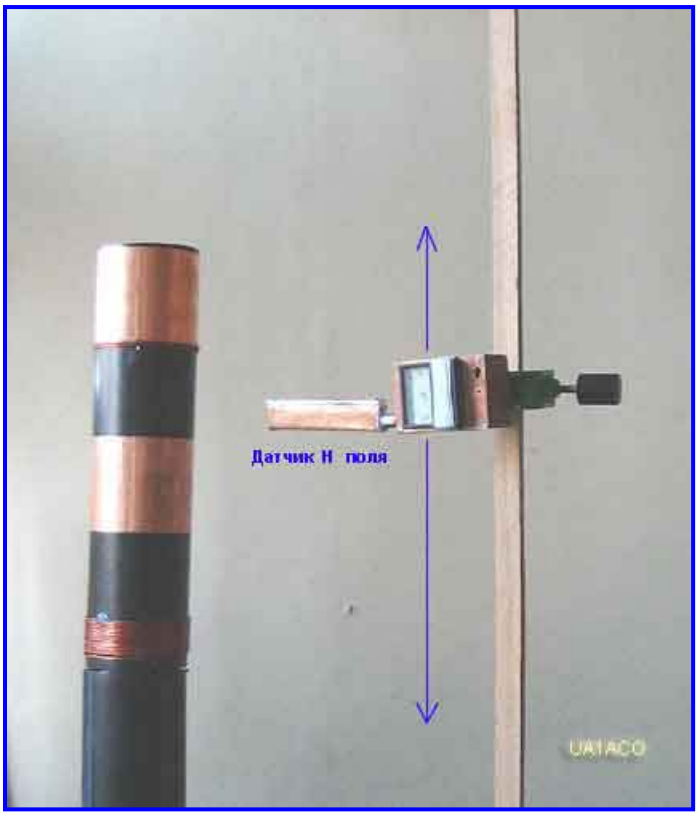


Fig. 27 Work moment measurement of H field

73! Vlad UA1ACO
19.05.2007