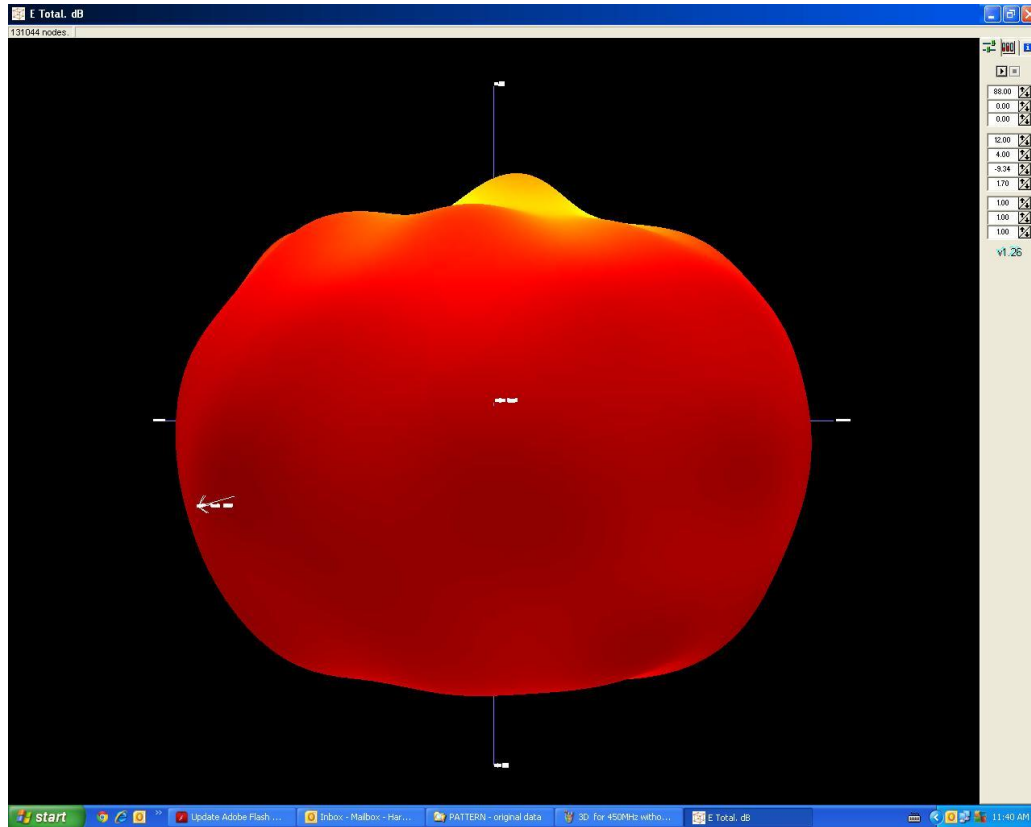


3D Radiation pattern test for A-372-130-400520

UHF MINING ANTENNA

12/10/2011

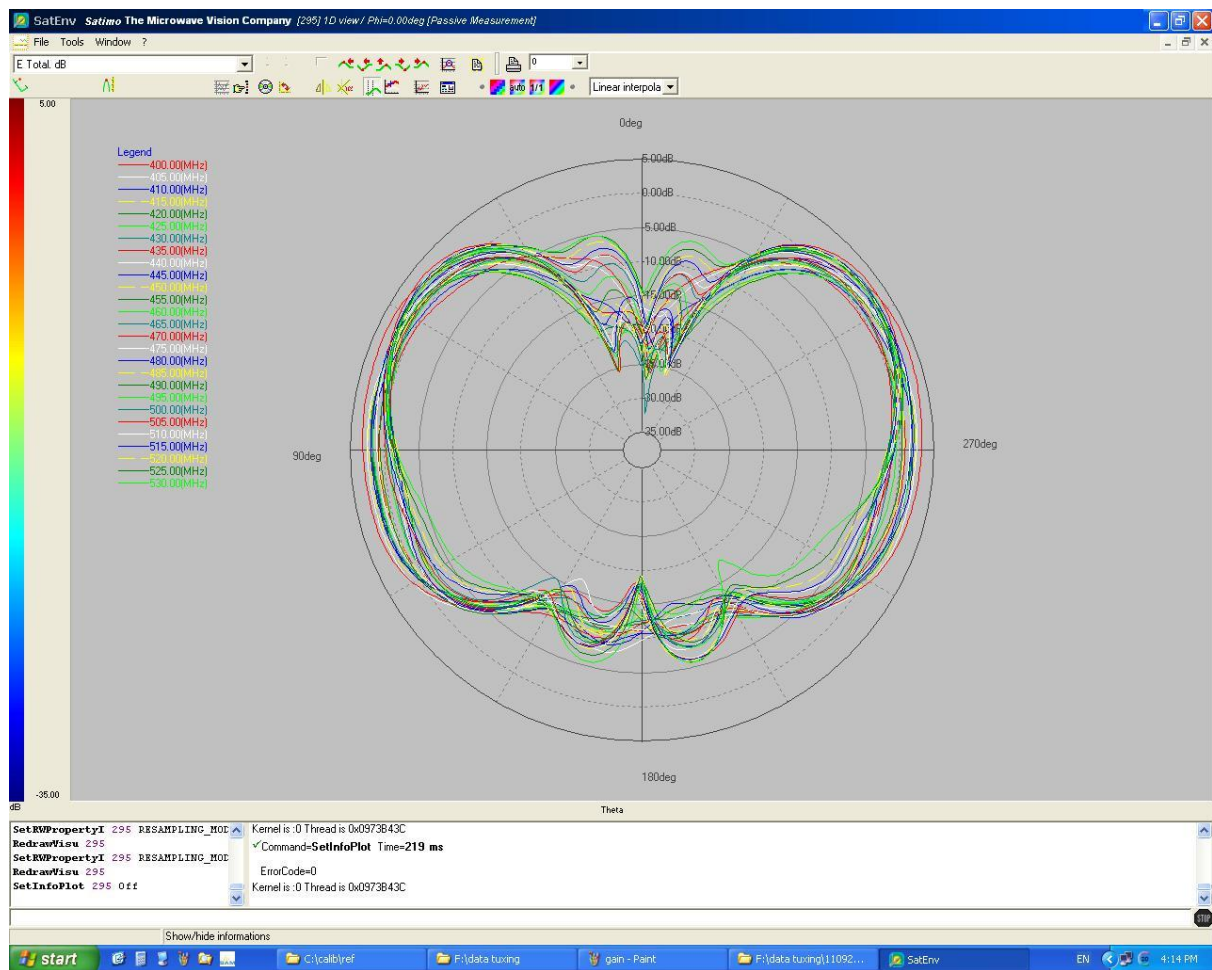


A-372-130-400520 is a high power, high performance, Low IM, wide band UHF (400-520MHz) base antenna dedicated designed for open cut mining applications. To ensure the reliable radio link between the bottom of the mining site, the mobile units on the surface in the medium range (5-20km) to the base stations on the surface, the maximum radiation power has been designed 30 deg down from the base of the antenna. If more power is needed for lower depth sites, the additional antenna fingers can be used to change the pattern to 45 deg down from the base.

A-372-130-400520 is the best choice for high power multi-channel digital radio base stations, thanks to the low passive IM (intermodulation) design. This antenna has been used by the big mining companies for 4- 6 RF channel digital radio systems combined through ROJ-047, a high isolation multi-channel combiner with 65w input per-channel, made by Rojone.

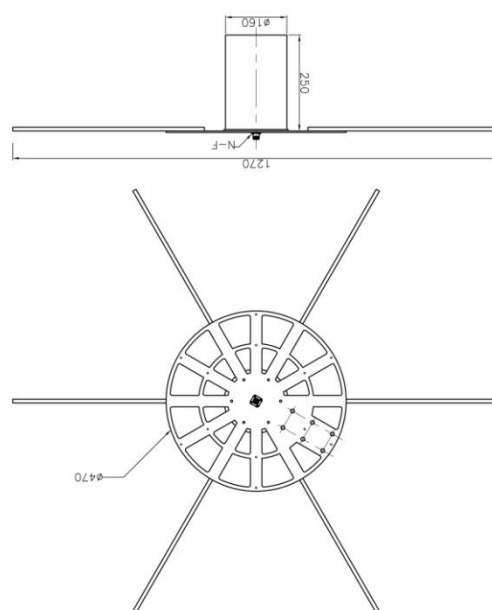
(Rojone has standard 2-4 way combiners for VHF/UHF system but also provides custom design/manufacture for high performance multi-channel combining systems Please contact Rojone for high power combiners up to 200w per channel)

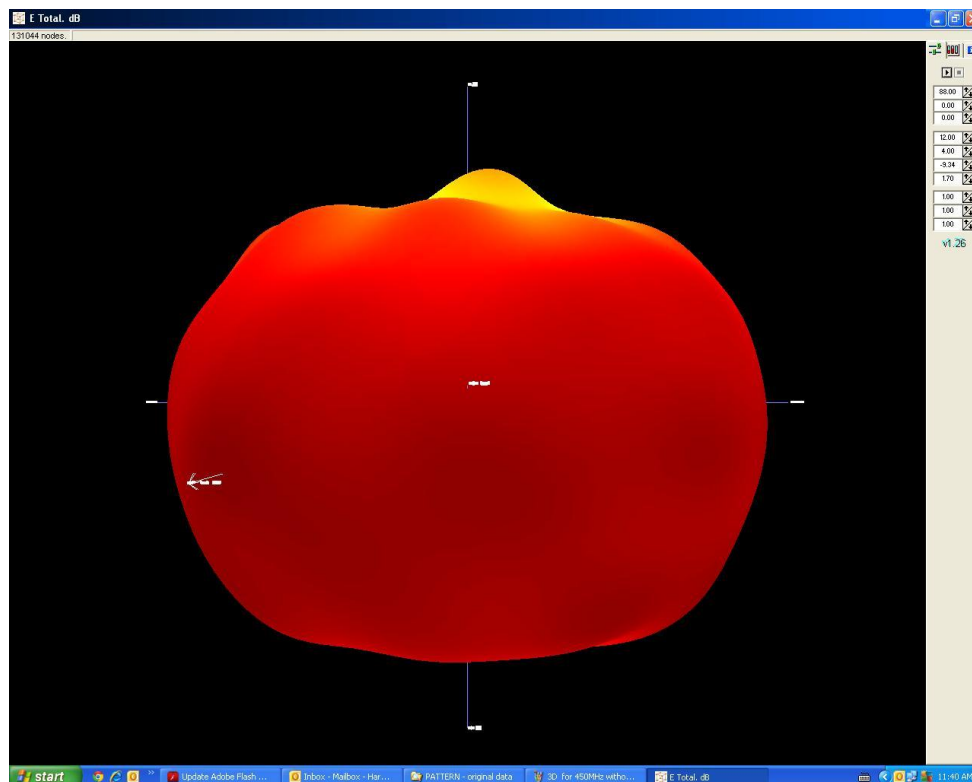
3D pattern test for A-372-130-400520



Typical radiation patter from 400-520MHz

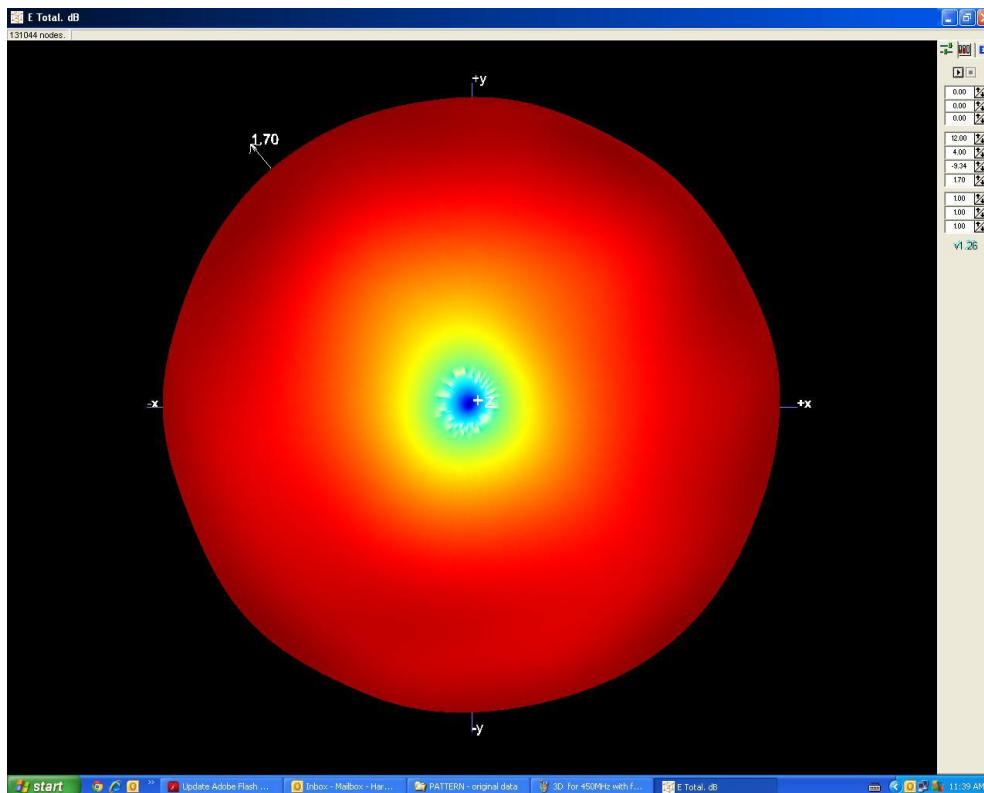
The test antenna was mounted upside down in the RF chamber for best accuracy. The 3D test result is turned back to normal mounting position by software.



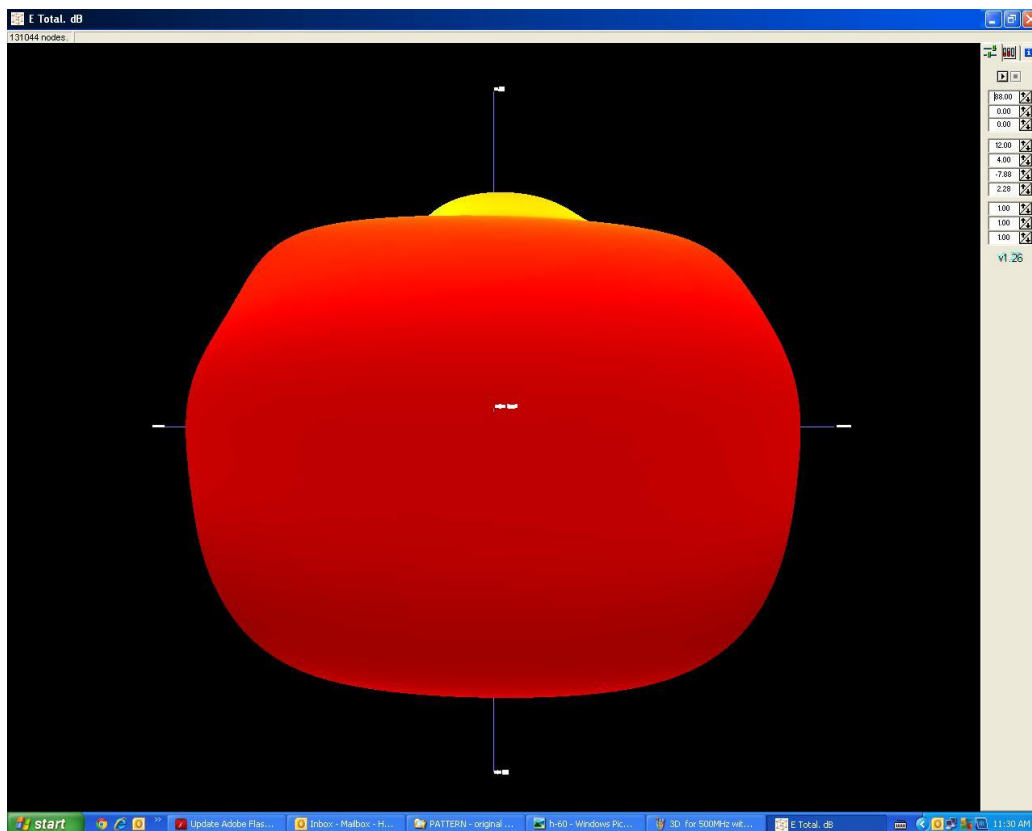


Radiation pattern @450MHz without fingers at normal mounting position.

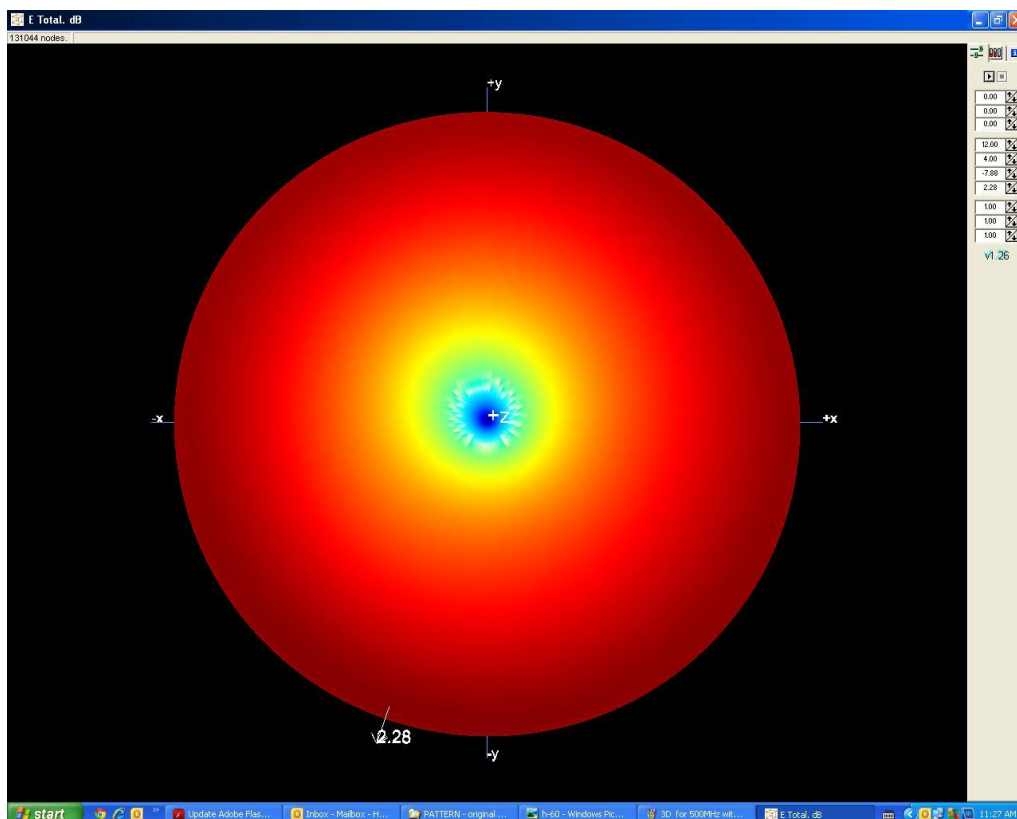
Darker Red color means more RF energy



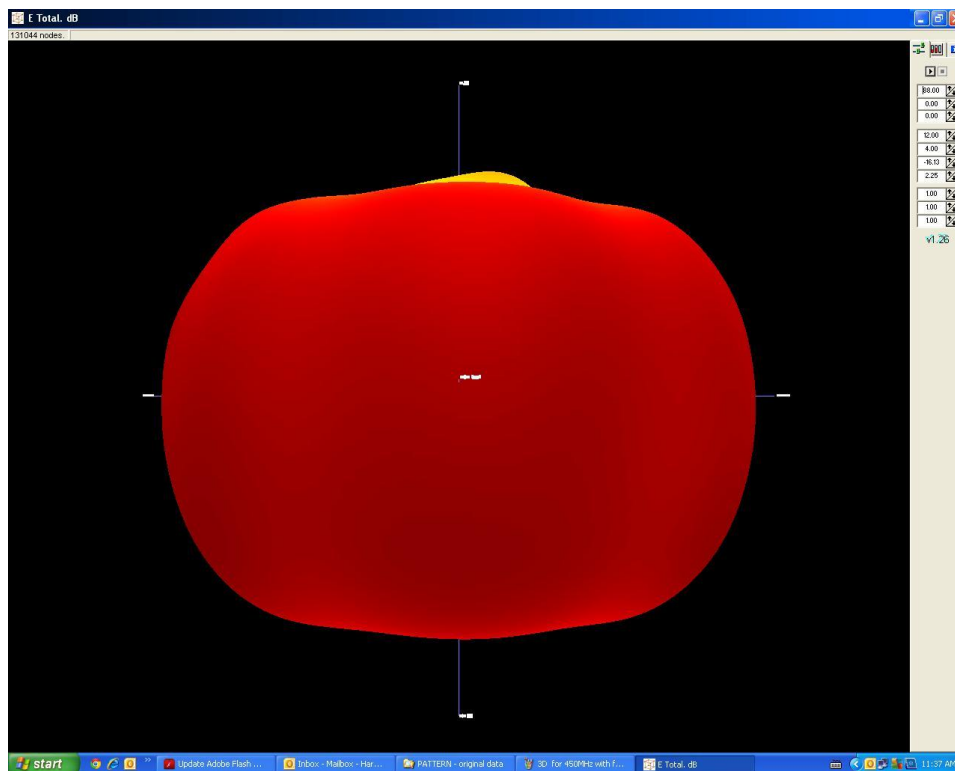
0 deg view from the ground when antenna mounted at normal position @ 450Mhz without fingers



Radiation pattern @500MHz without fingers at normal mounting position

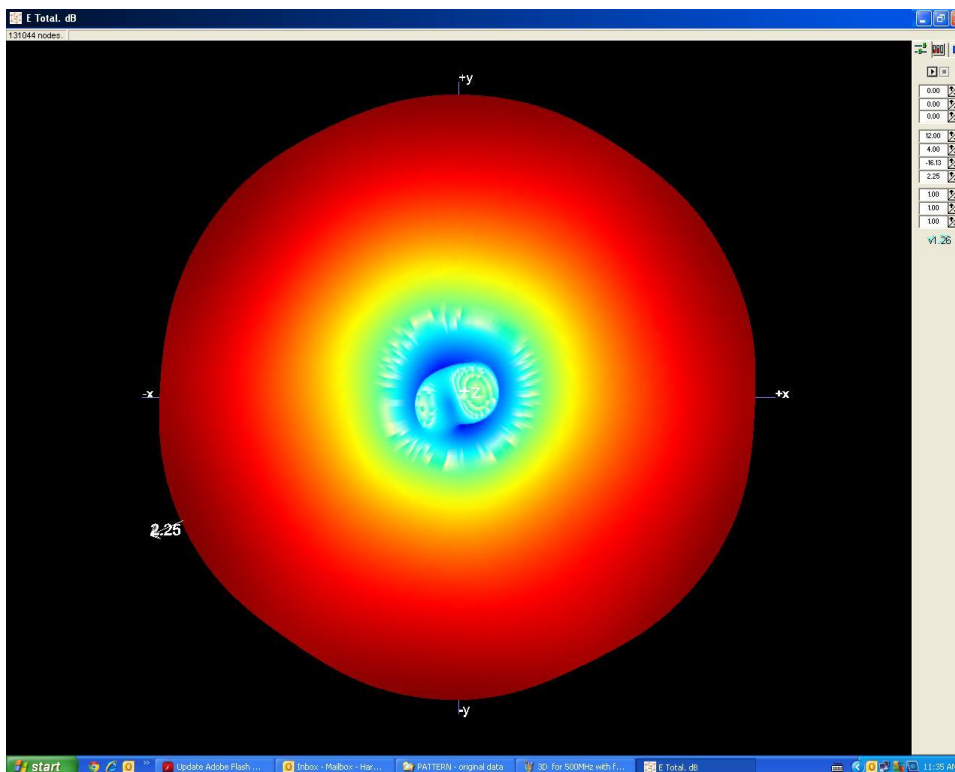


0 deg view from the ground when antenna mounted at normal position @ 500Mhz without fingers

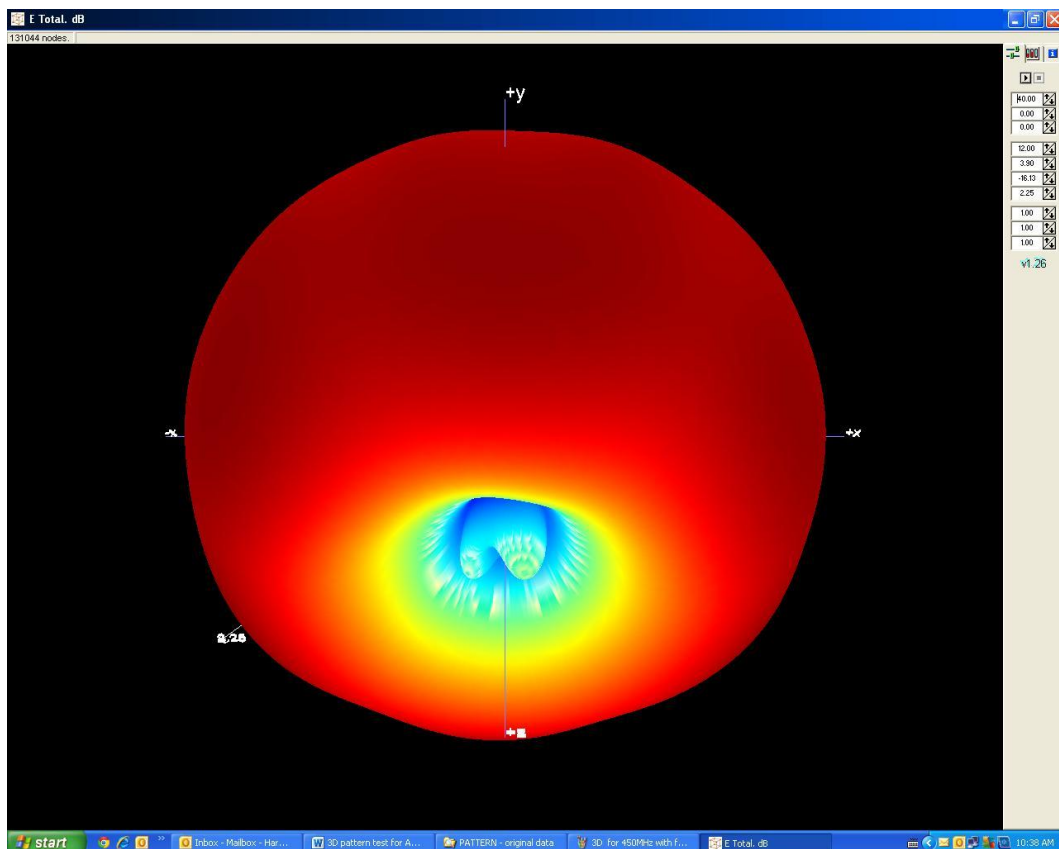


Radiation pattern @ 450MHz with 6 fingers at normal mounting position

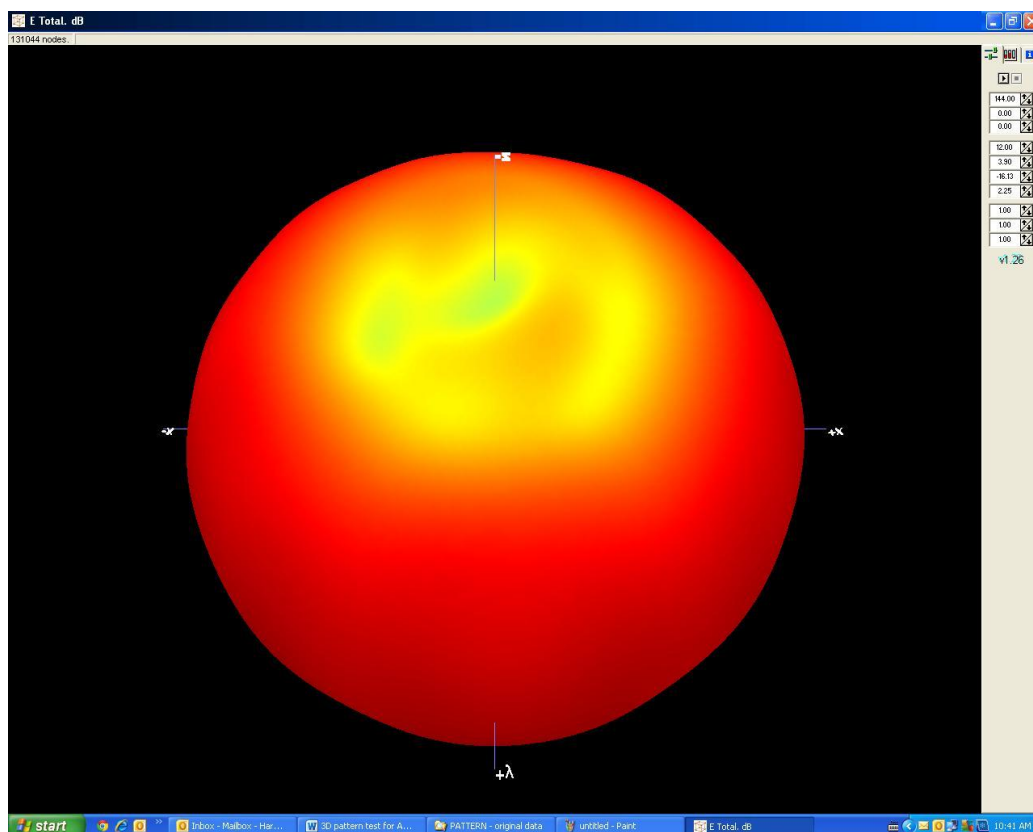
The maximum number of fingers can be 11, which should make the radiation pattern close to an ideal circle



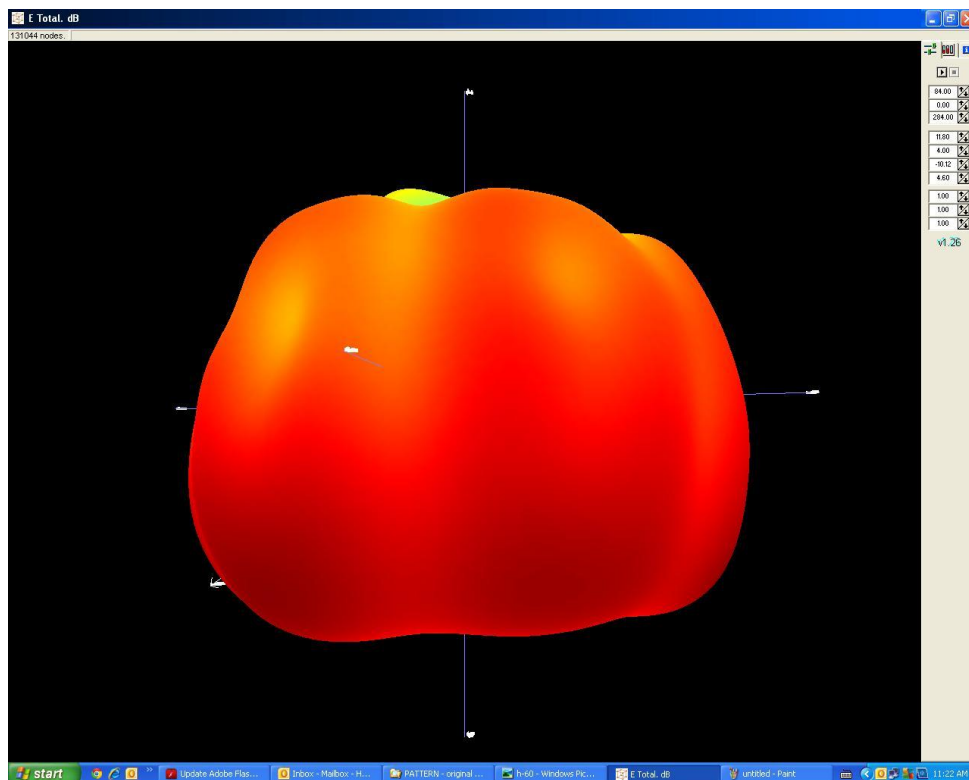
0 deg View from the ground when antenna mounted at normal position @ 450Mhz with 6 fingers



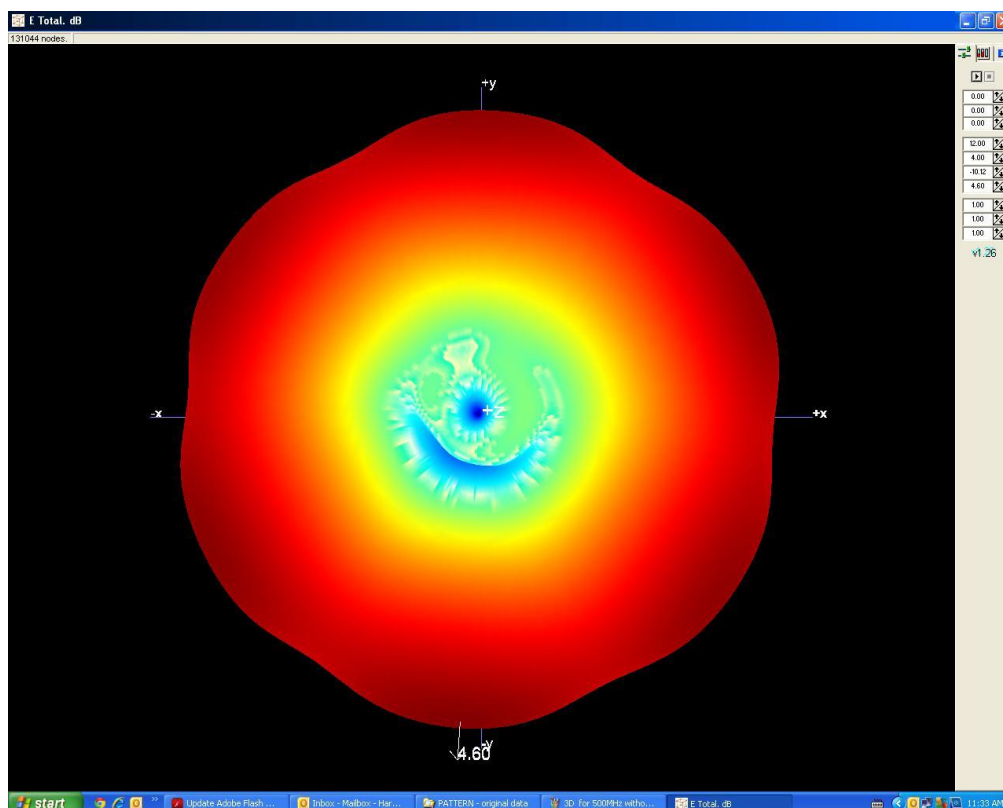
42deg view from the ground @450MHz with 6 fingers



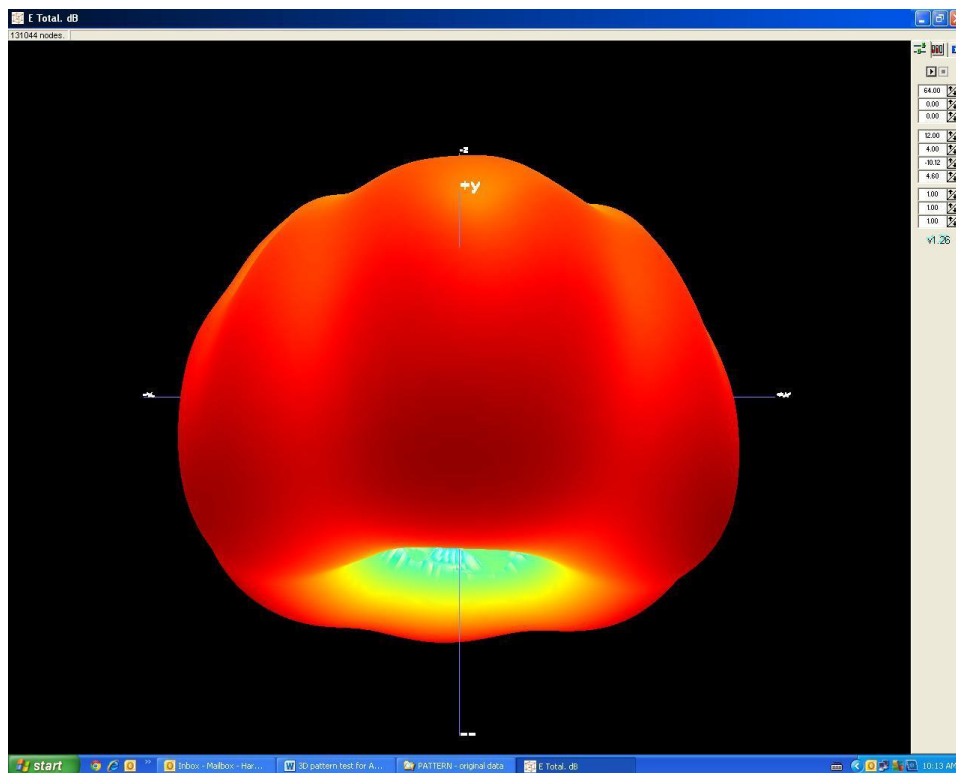
44deg view from the top of antenna @450MHz with 6 fingers



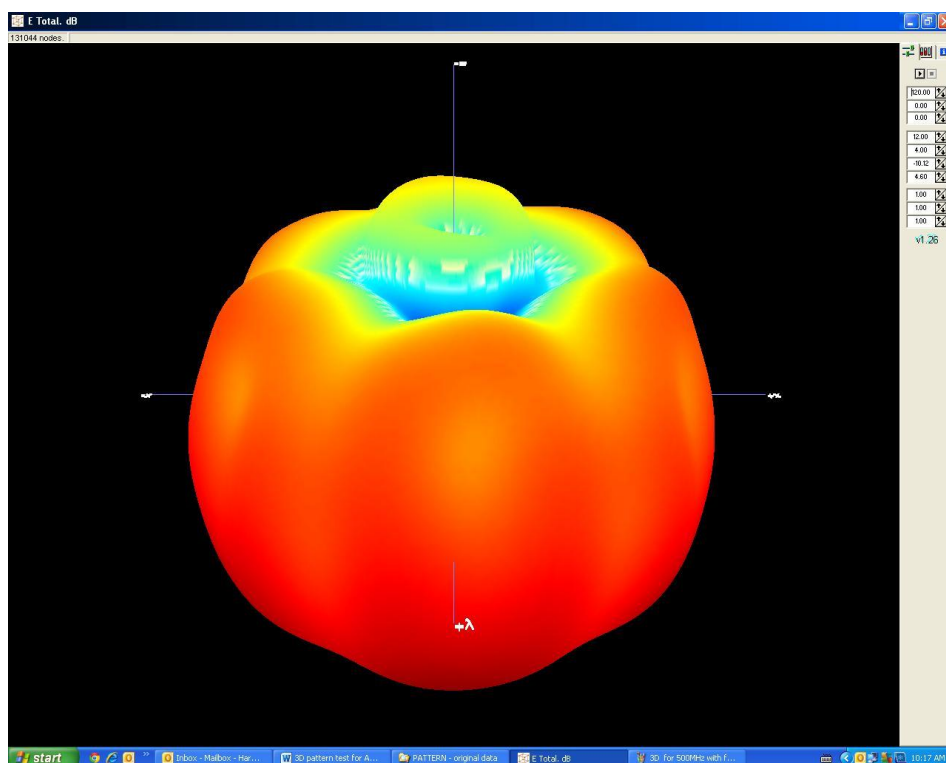
Radiation pattern @ 500MHz with 6 fingers at normal mounting position



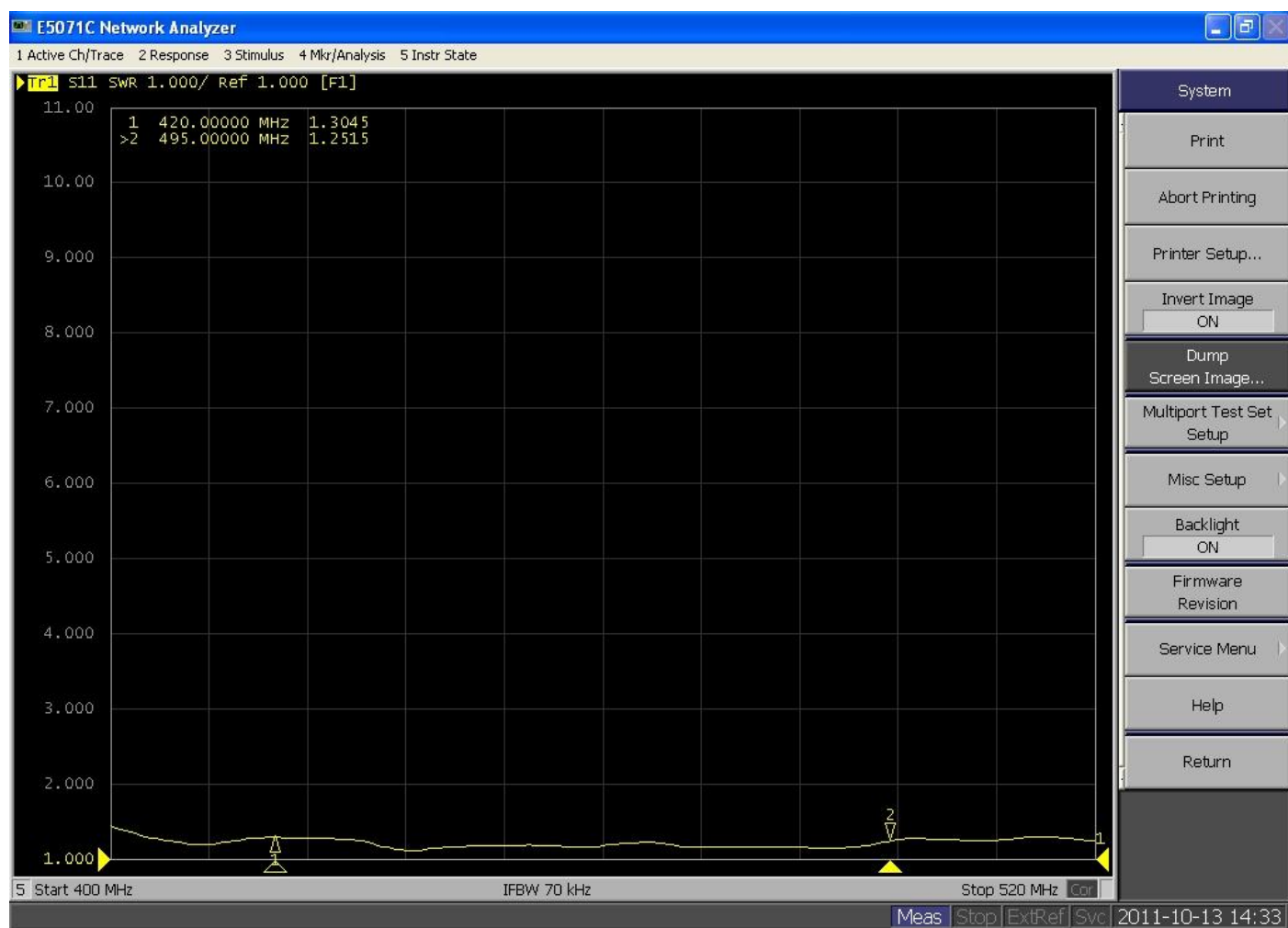
**0 deg view from the ground when antenna mounted at
normal position @ 500Mhz with 6 fingers**



64deg view from the ground @500MHz with 6 fingers



60deg view from the top of antenna @500MHz with 6 fingers



TYPICAL VSWR WITHOUT THE FINGERS

The end