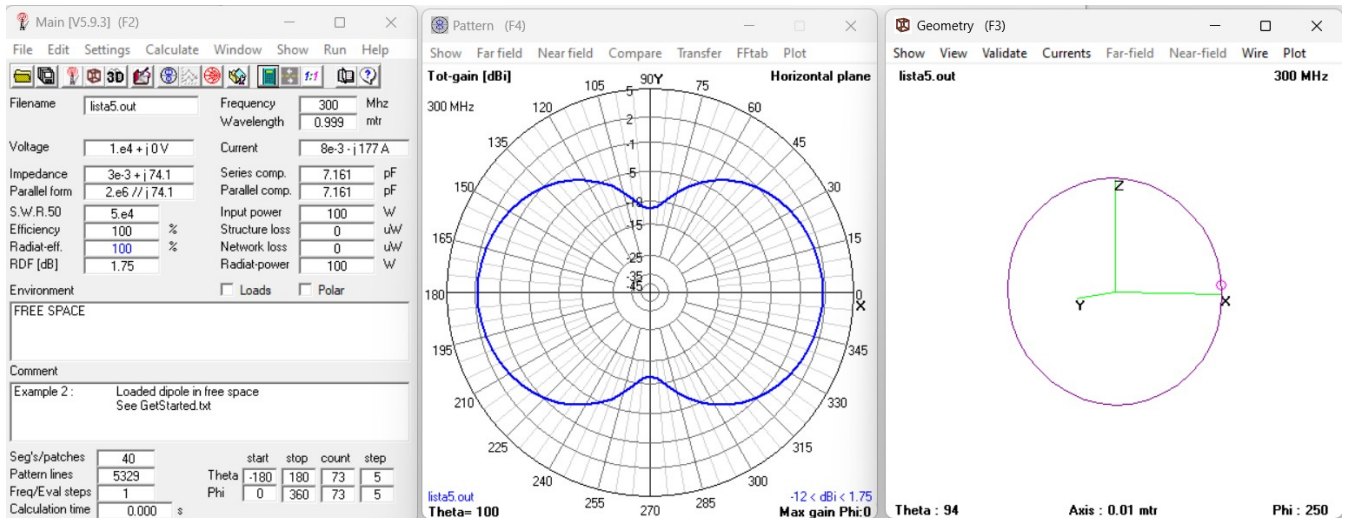


# Tópicos avançados em comunicação

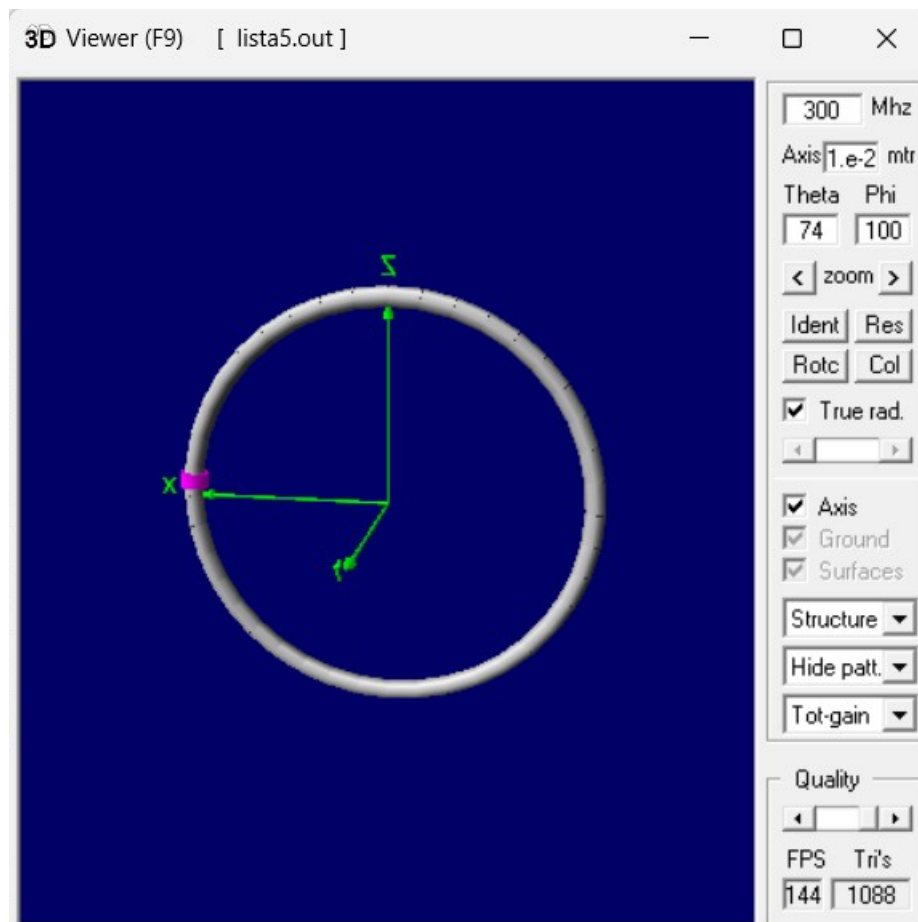
## LISTA 5

Gabriel Ferreira da Silva

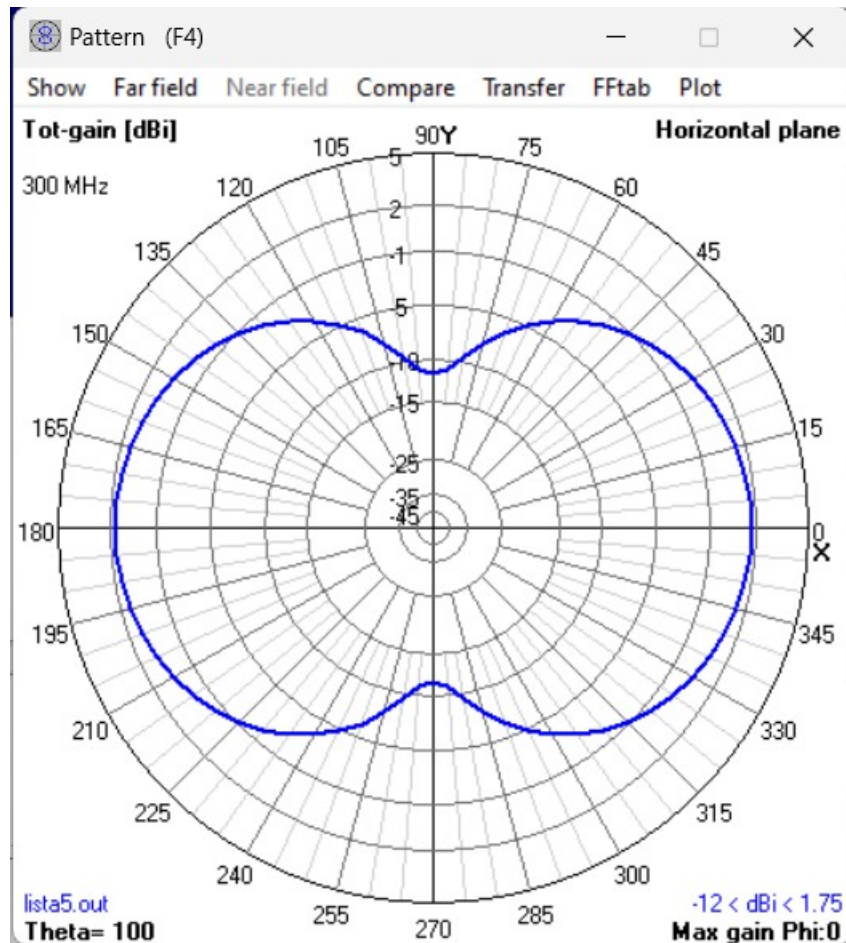
### 1. Far field



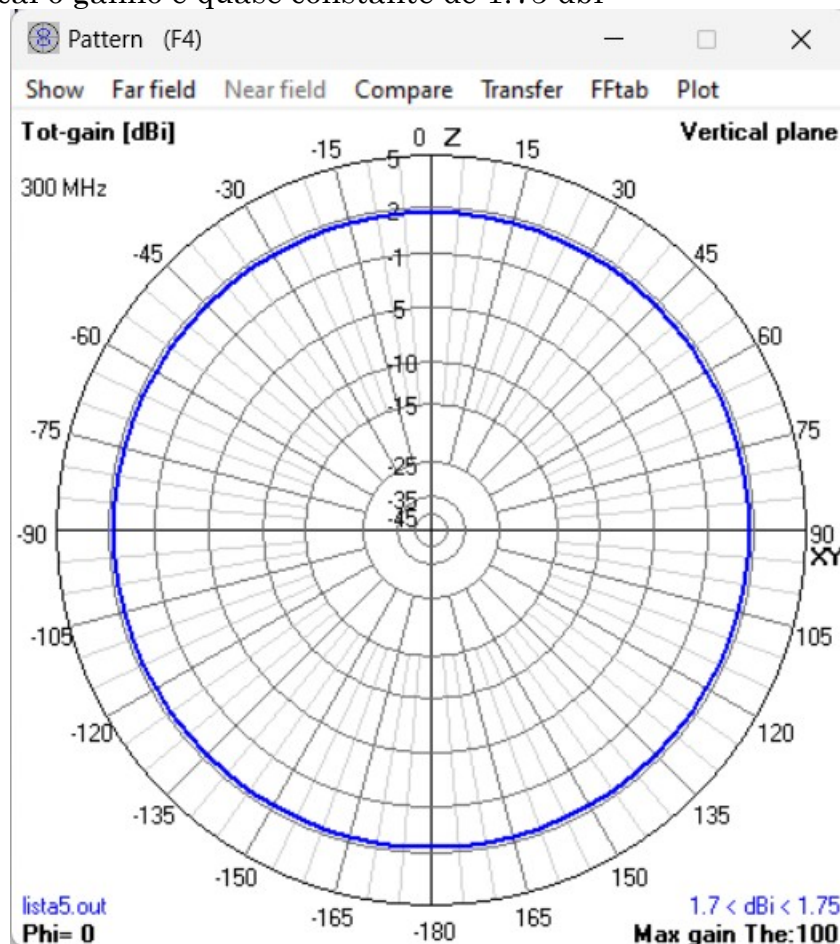
plot 3d



2. No plano paralelo ao loop temos ganho de 1.75 dbi



No plano vertical o ganho é quase constante de 1.75 dbi

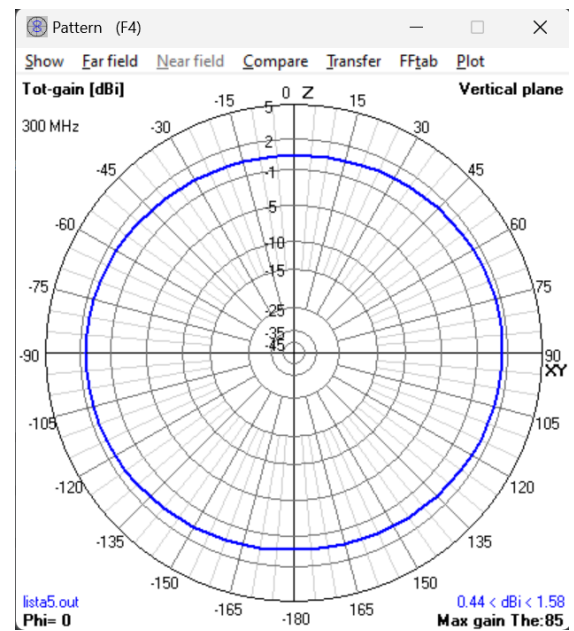
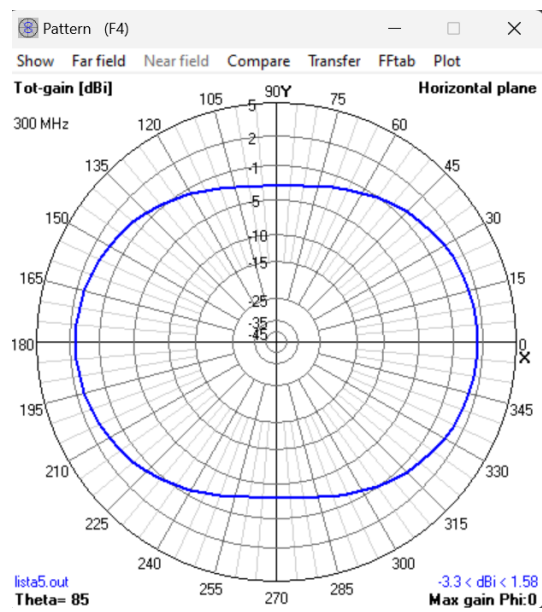


**3.**

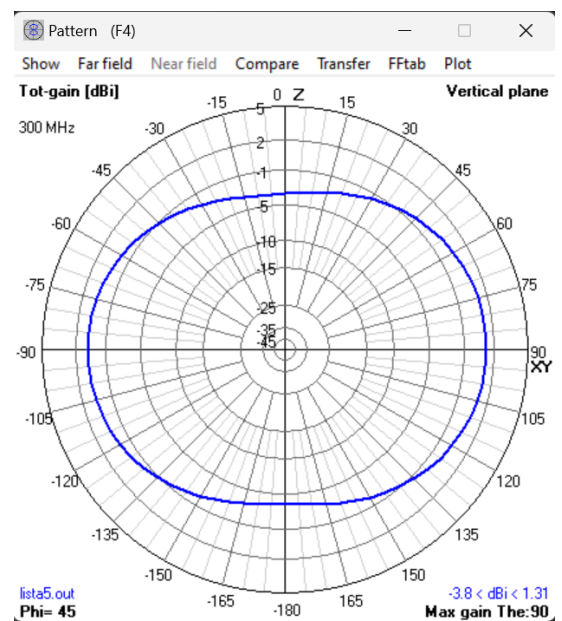
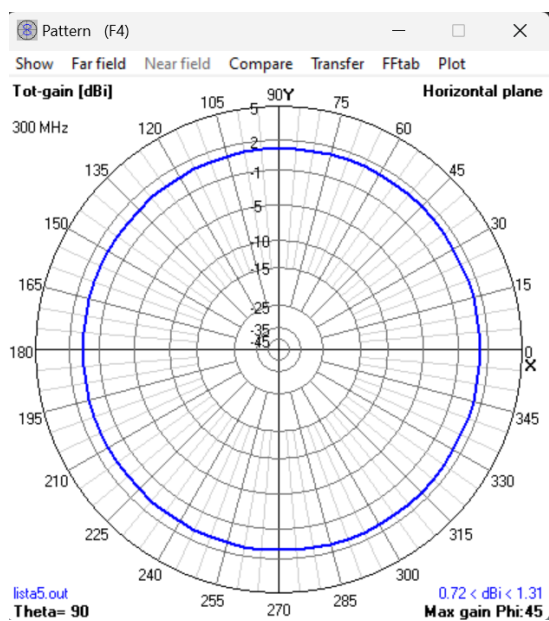
<b>Nº de segmentos</b>	9	21	31	41	101
<b>Impedância</b>	0.003 + j71.6	0.003 + j73.7	0.003+j74	0.003+j74.1	0.003+j74.5

4.

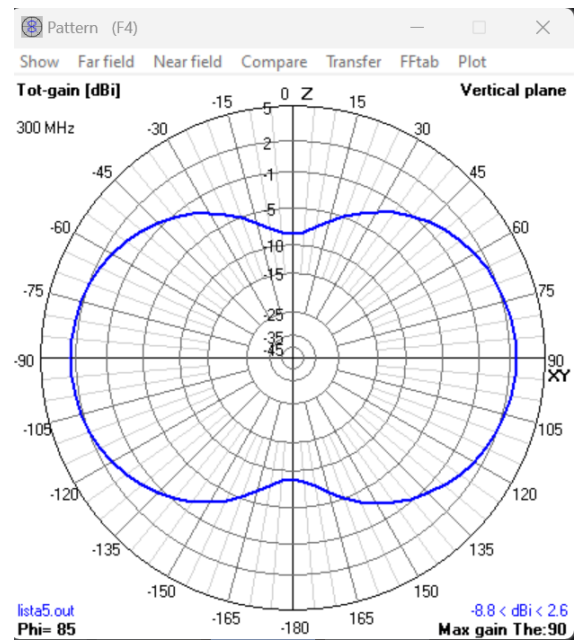
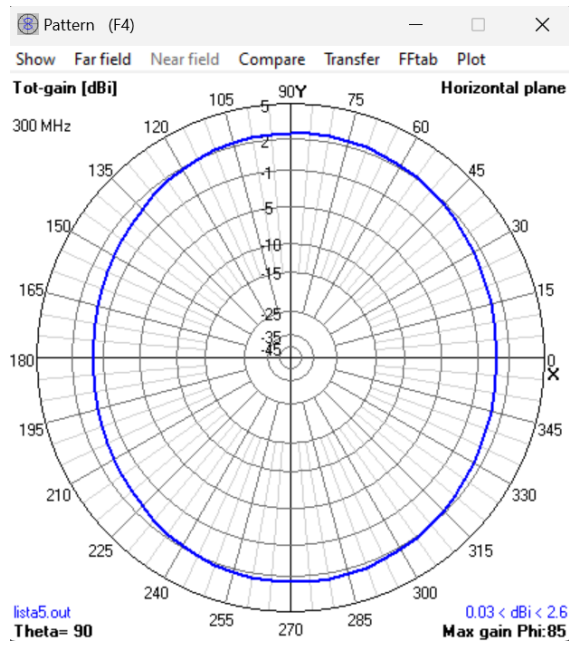
Circunferência de 0.3 lambda



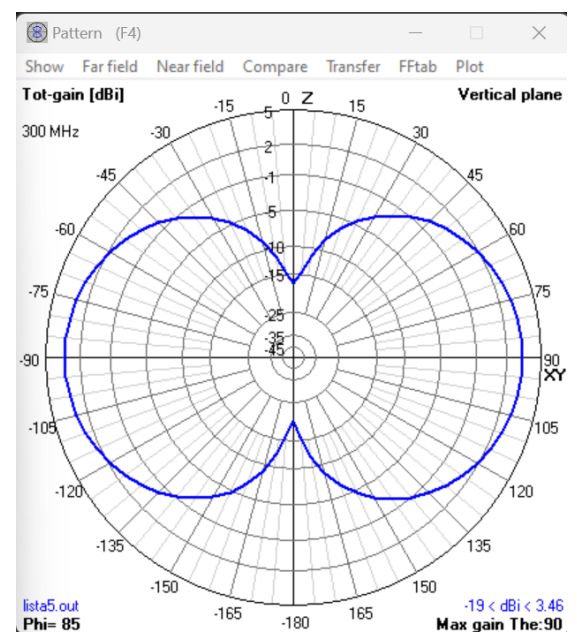
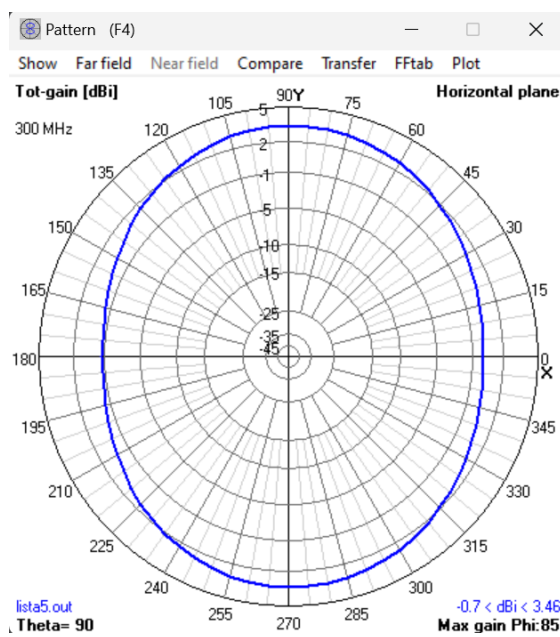
Circunferência de 0.6  $\lambda$



Circunferência de 0.8 lambda



Circunferência de 1 lambda



5.

Nº de segmentos	19	31	41	51	101
Impedância	125 - j108	124 - j99.5	123 - j97.3	123 - j96.3	122 - j95