

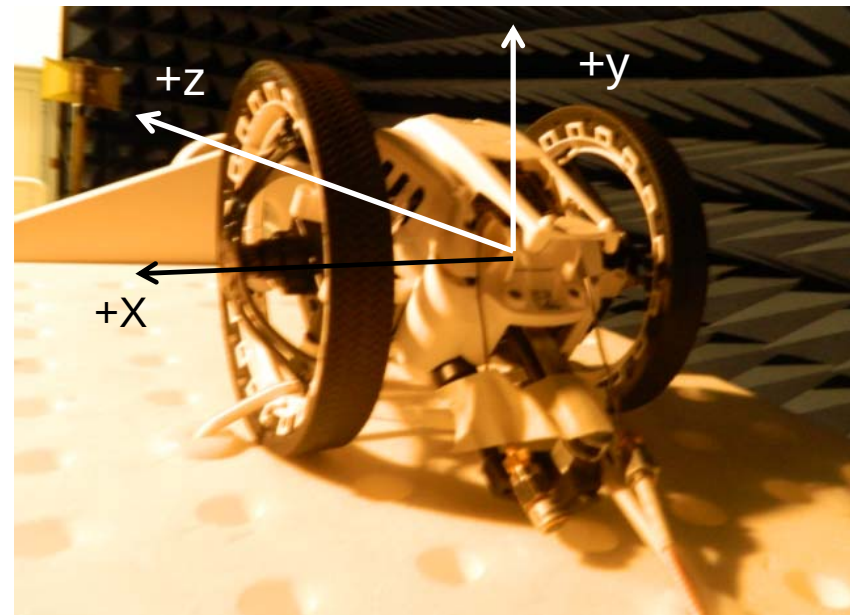
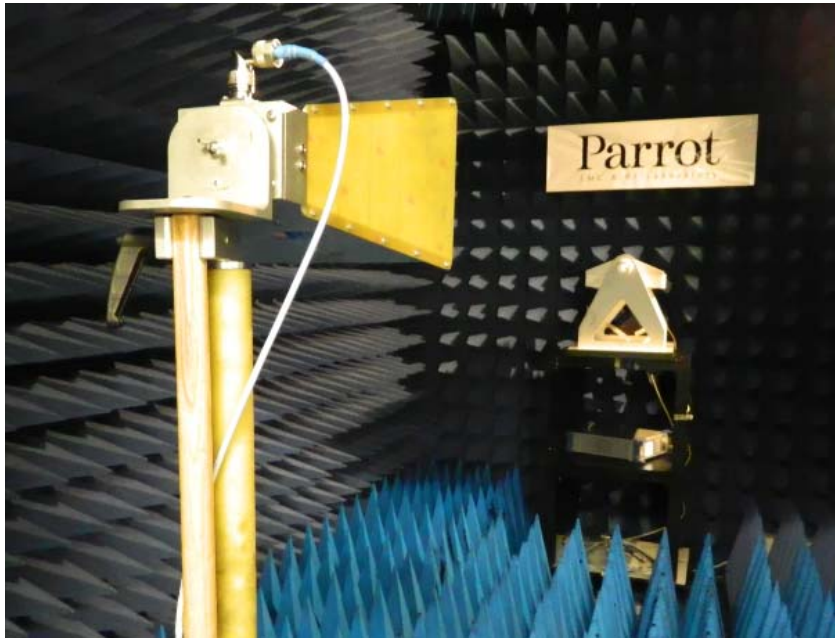


Jumping Sumo: 3D radiation pattern

3D radiation pattern: measurement Setup



- The measurement was made at Parrot radio test laboratory, with Diarray3D system
- The antennas were connected to a CW signal generator: signal level @2.4GHz=5dBm; @5GHz=10dBm
- Angular resolution is : 10°
- Measurement uncertainty : $\pm 1\text{dB}$

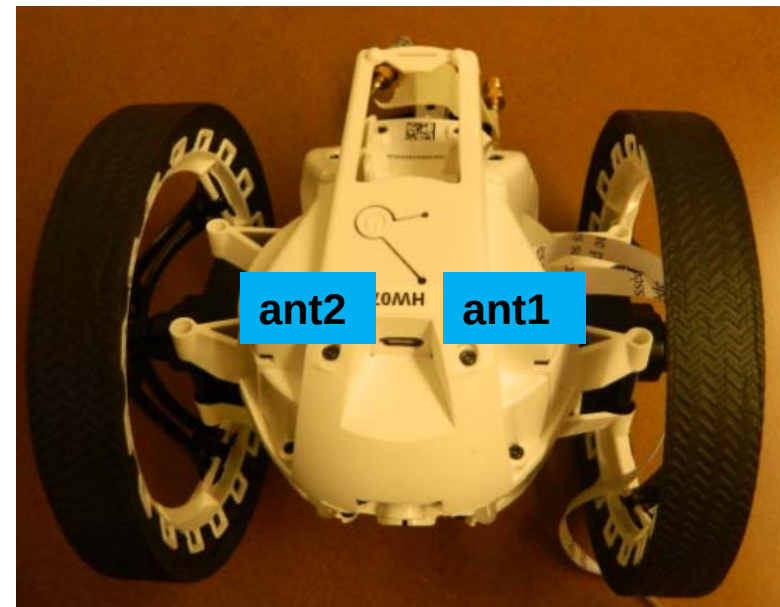
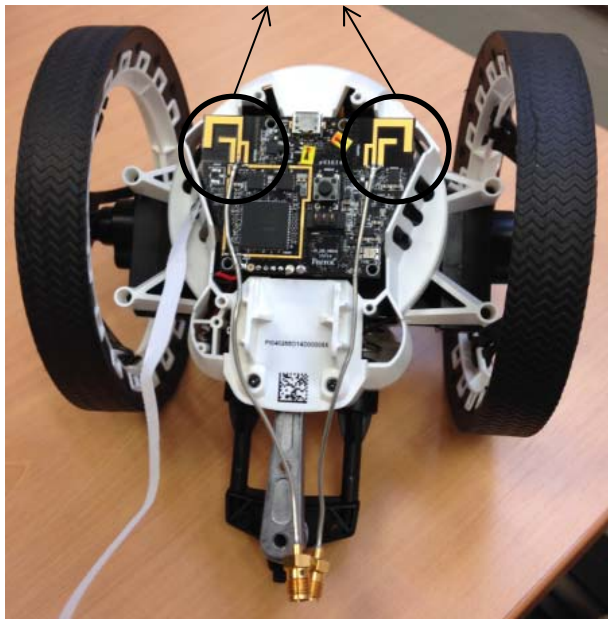


3D radiation pattern: measured antennas



- ❑ Jumping Sumo is integrating 2 Wifi Dual-band antennas

Dual band antennas



- Antennas dimensions: 12mmx10mm
- Distance between antennas: 33mm
- Space and radiation pattern diversity

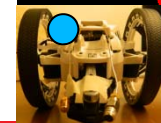
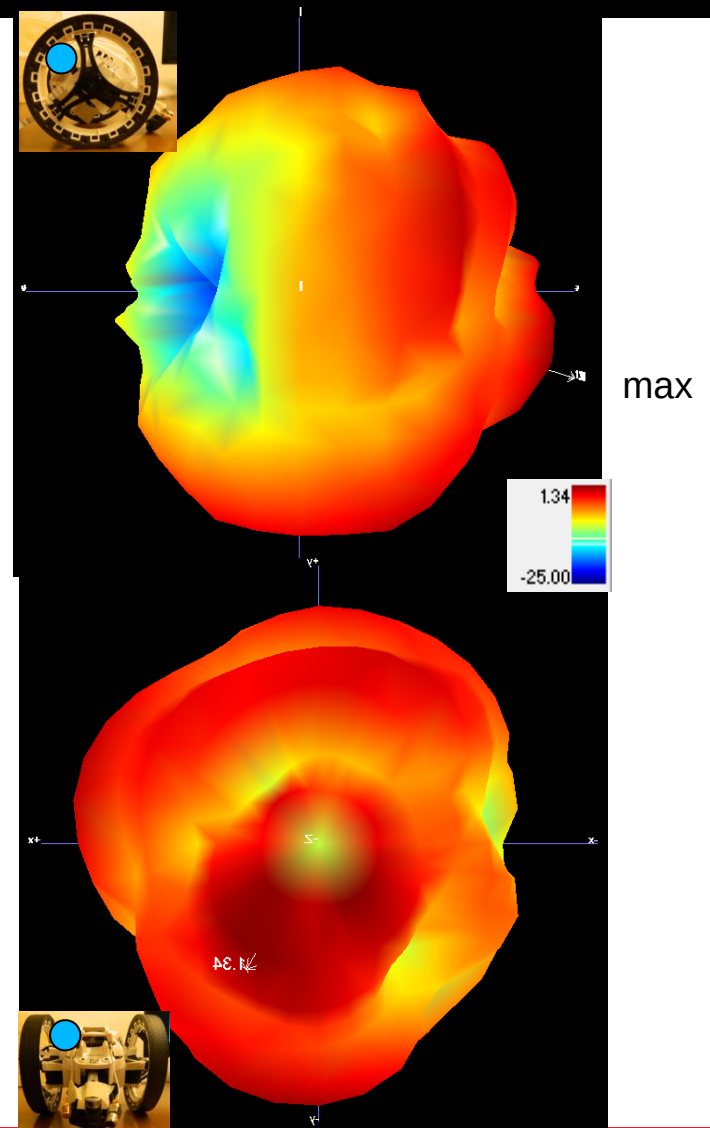
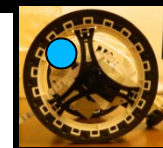
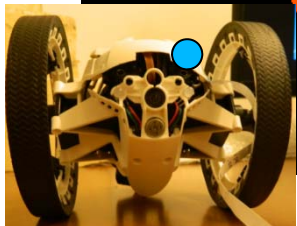
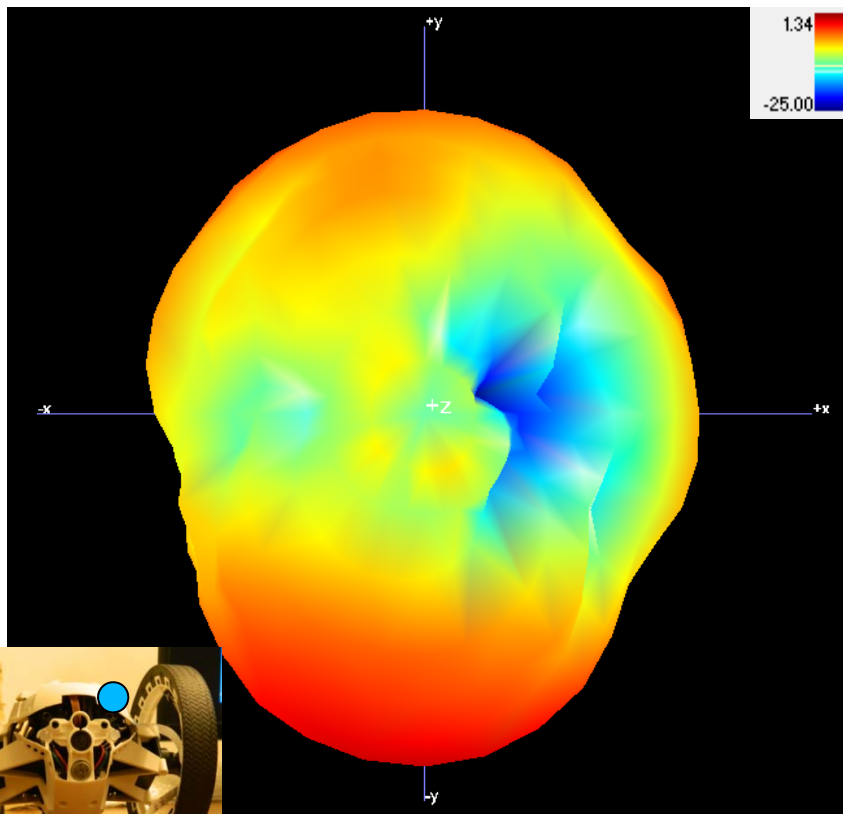
Antenna 1: 3D radiation pattern @2440MHz



Max gain @2440MHz= **1.34dBi**

Min gain @2440MHz= -24.8dBi

Mean gain @2440MHz = -4.9dBi



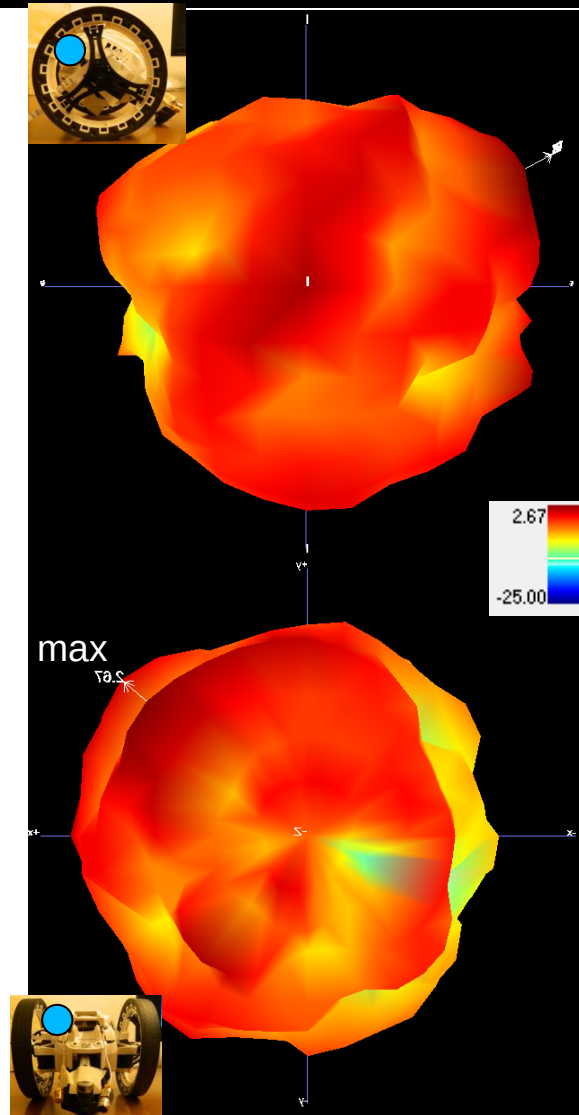
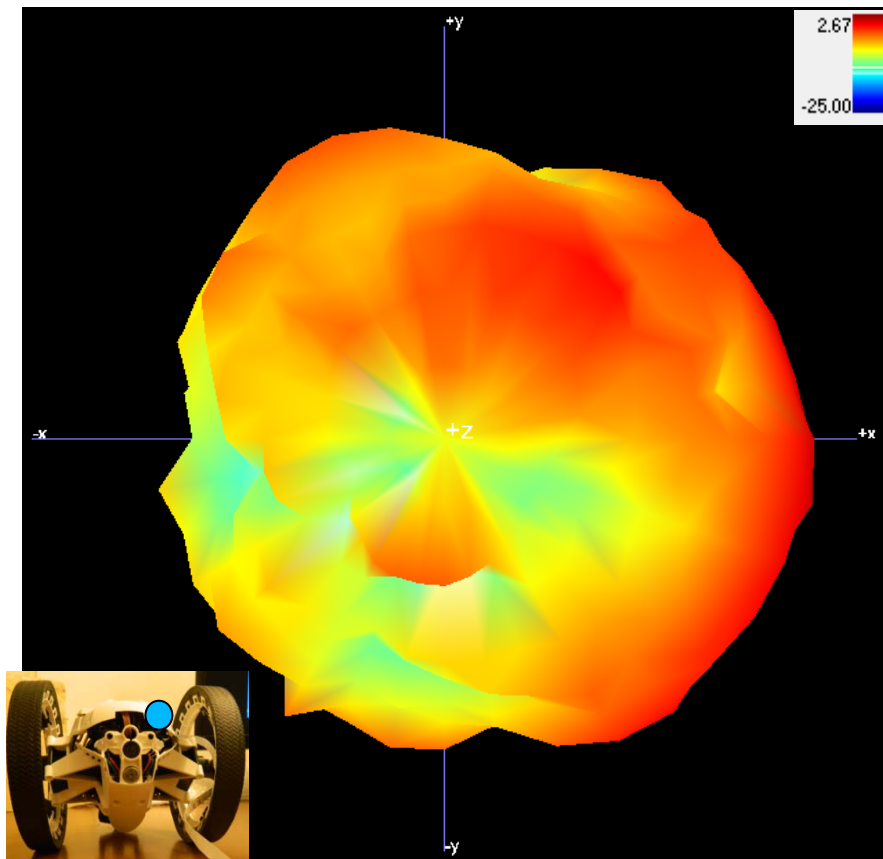
Antenna 1: 3D radiation pattern @5500MHz



Max gain @5500MHz = **2.67dBi**

Min gain @5500MHz = -12.7dBi

Mean gain @5500MHz = -3.92dBi

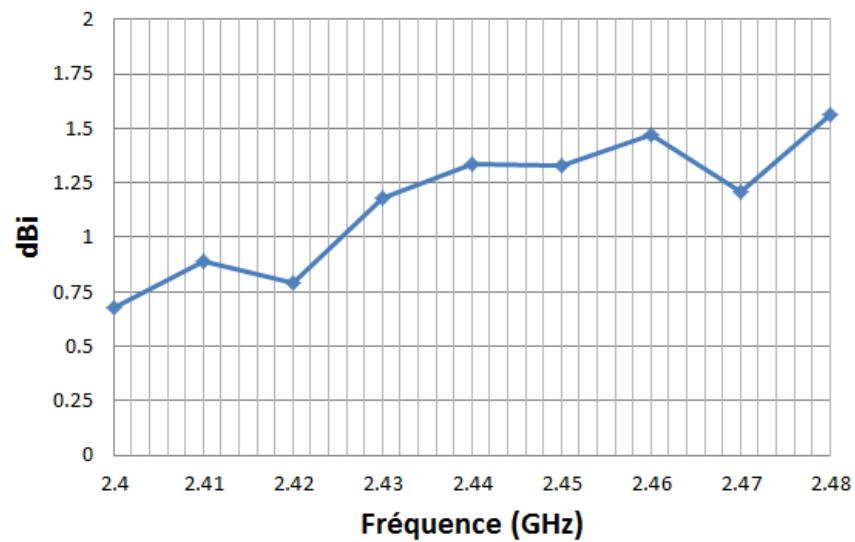


Antenna 1: max gain VS frequency



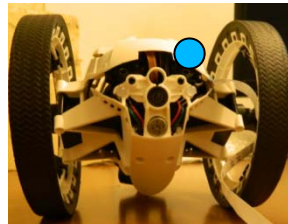
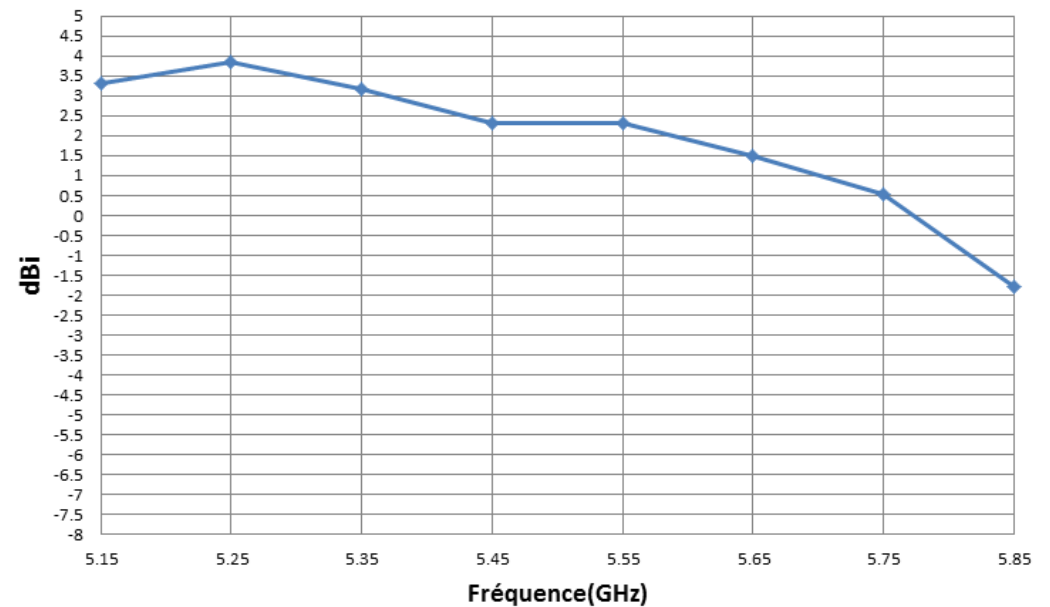
2.4GHz band

Max gain



5GHz band

Max gain



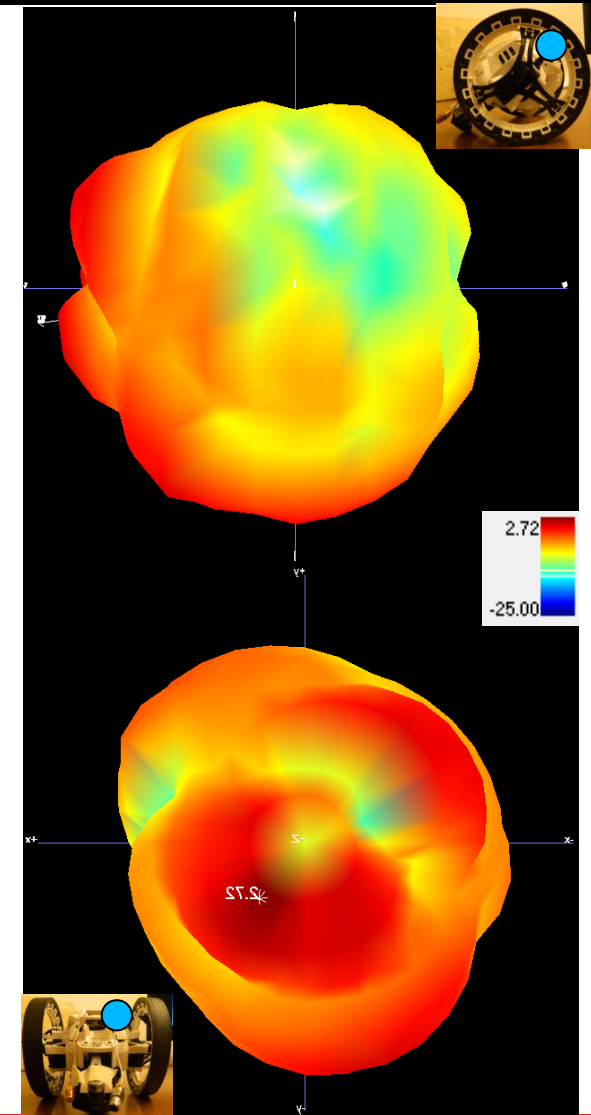
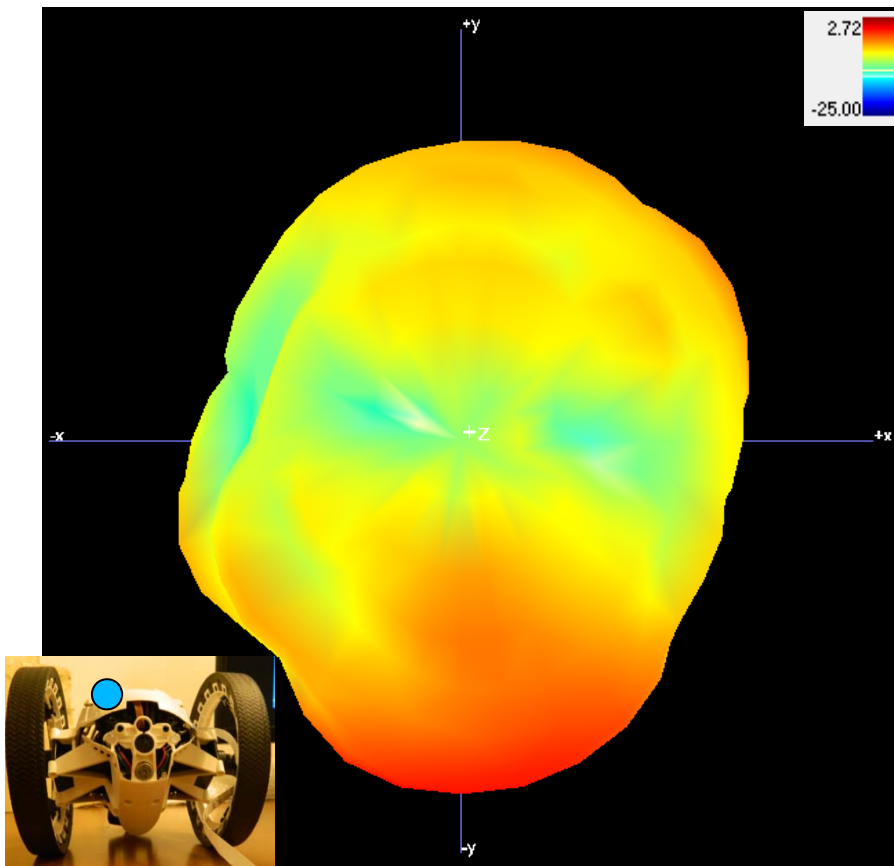
Antenna 2: 3D radiation pattern @2440MHz



Max gain @2440MHz = **2.72dBi**

Min gain @2440MHz = -17.7dBi

Mean gain @2440MHz = -4.94dBi



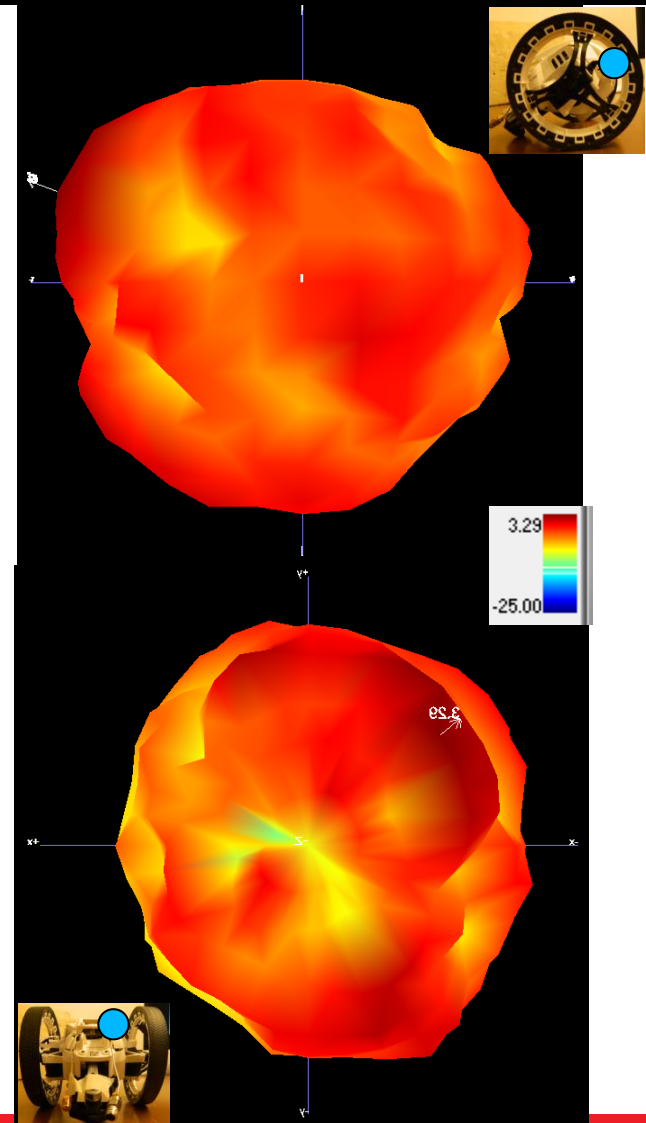
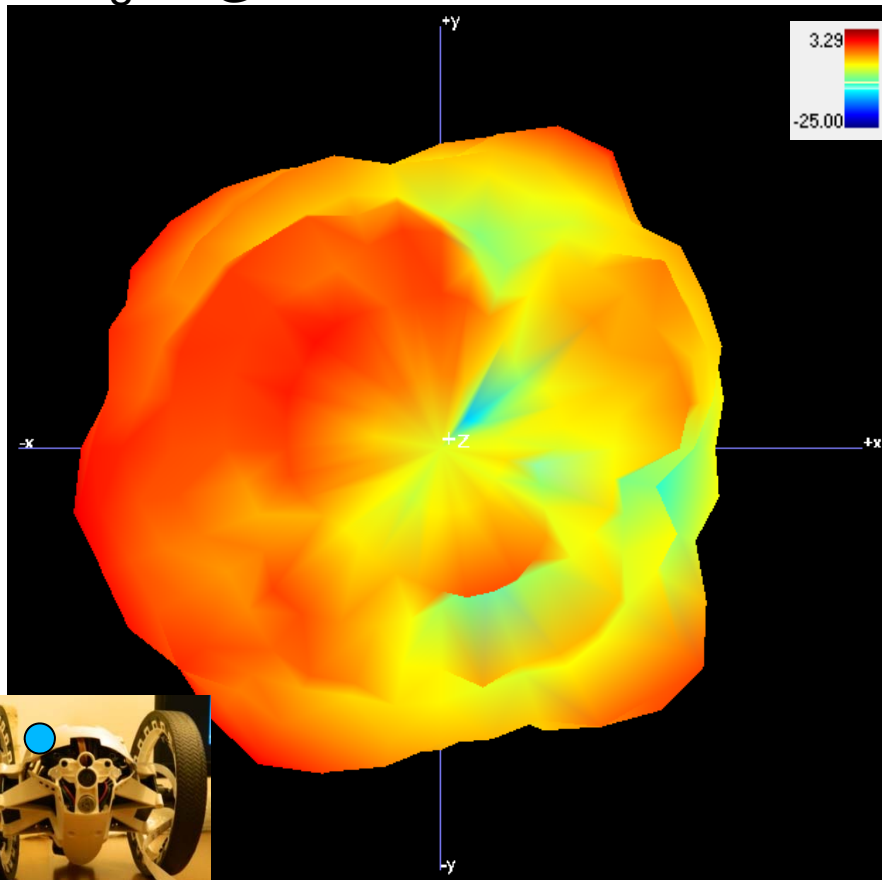
Antenna 2: 3D radiation pattern @5500MHz



Max gain @5500MHz = **3.29dBi**

Min gain @5500MHz = -15.9dBi

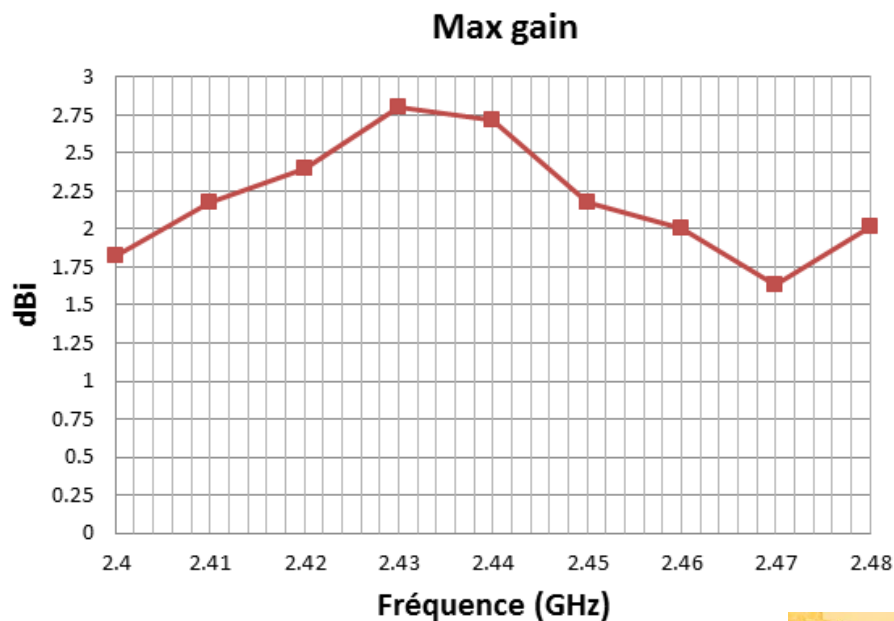
Mean gain @5500MHz = -3.43dBi



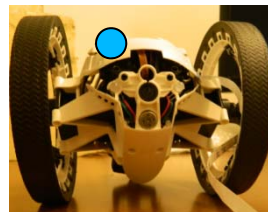
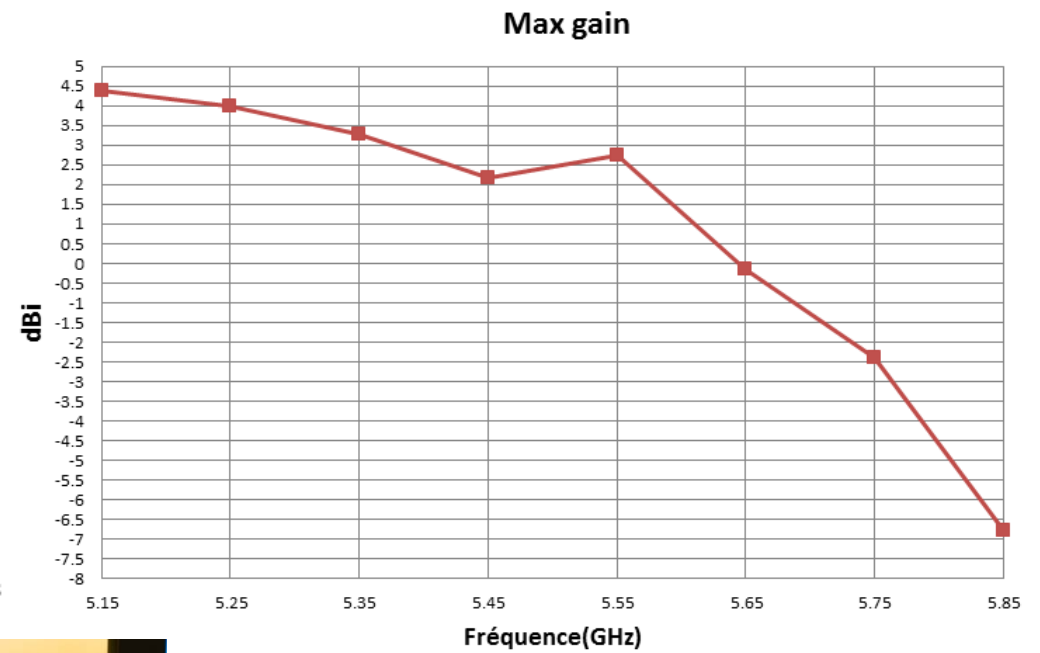
Antenna 2: max gain VS frequency



2.4GHz band



5GHz band





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