



# Active Cal Sources

For Technological Demonstrator (T.D.)

And

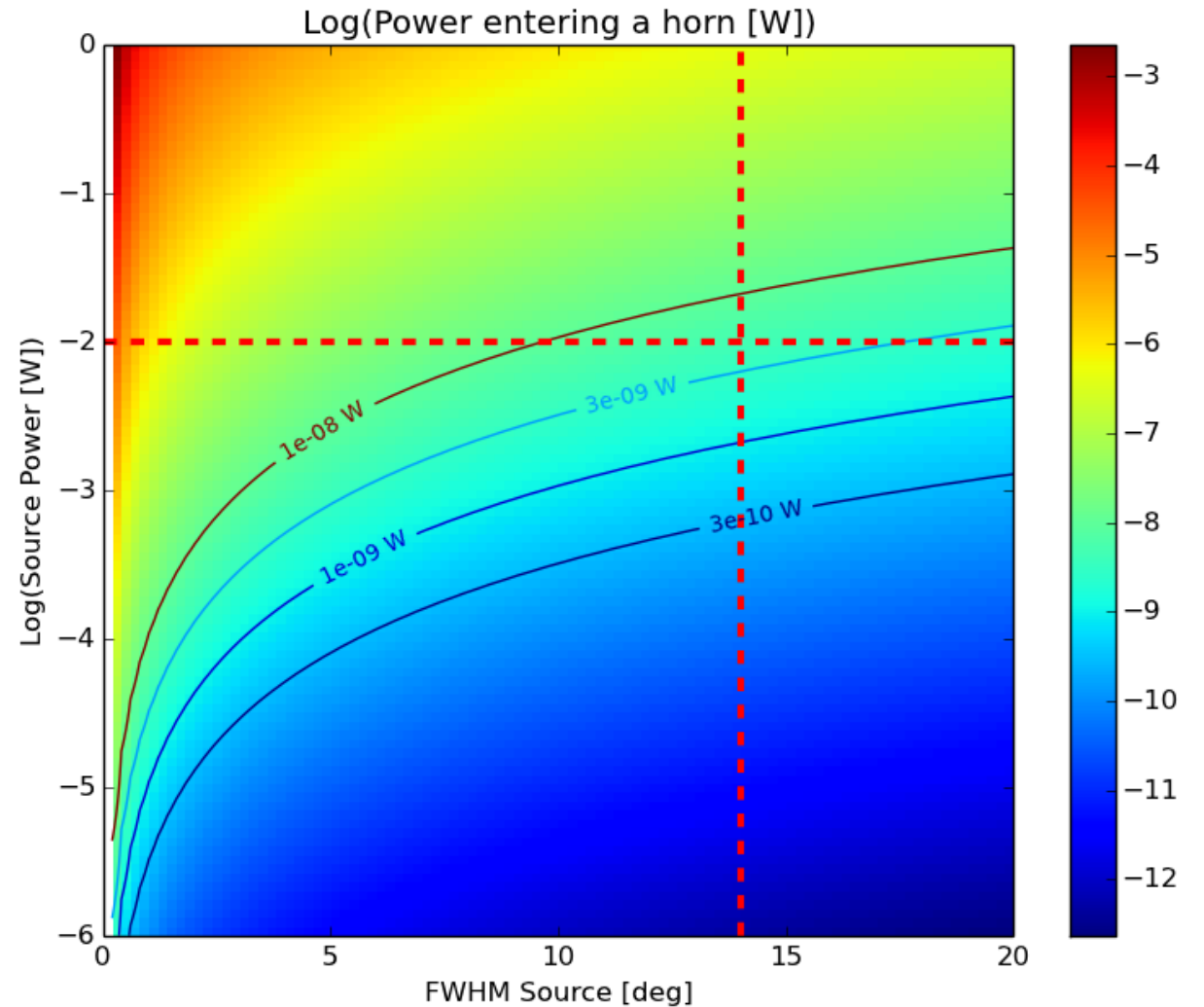
For Final Instrument (F.I.)

# Status

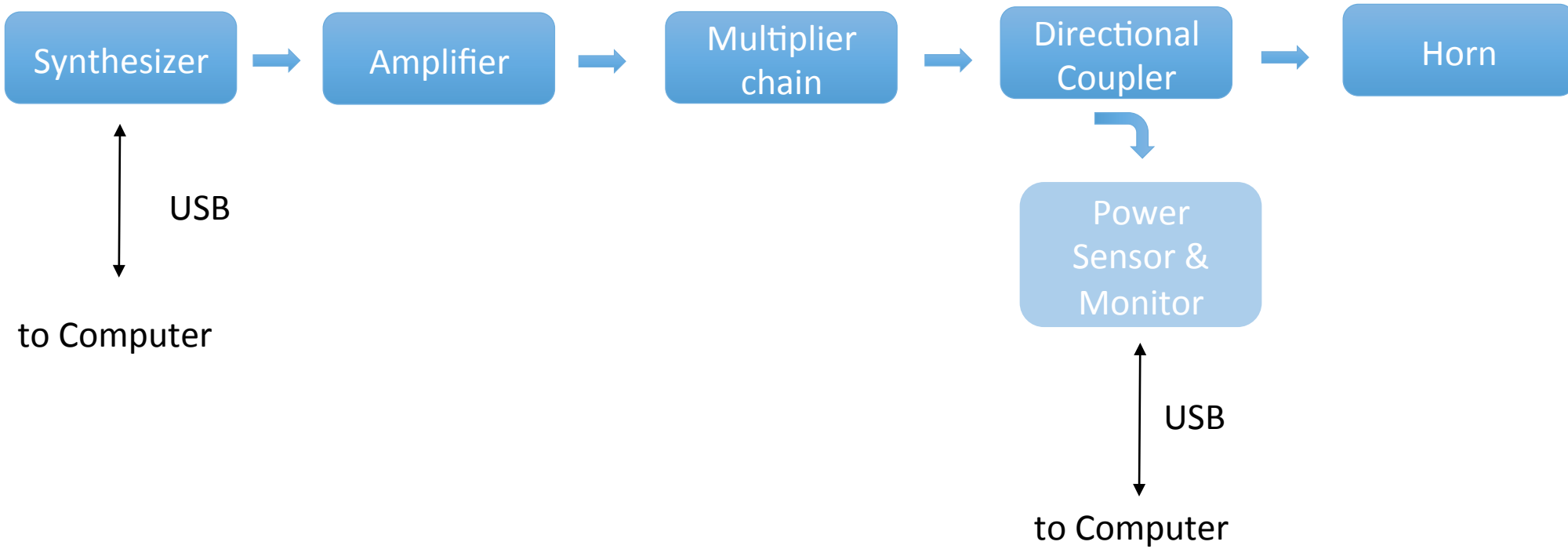
- Call for tender being closed (matter of few days)
- A company already selected
- DIM-ACAV founded (Ile-de-France): 130 k€
- Funds available to cover the needs for installation on the tower
- 7 weeks delivery time for both frequencies

# Needs: a lot of power and a polarized monochromatic source

Michel early suggestion: increase S/N detection of fringes by putting more power (at the price of saturating many detectors)



# Scheme



Stability vs  
Temperature  
0.05 dB/°C  
=> 1% /°C

Power

5 mW to 10 mW

Frequency

110-170 GHz  
190-245 GHz

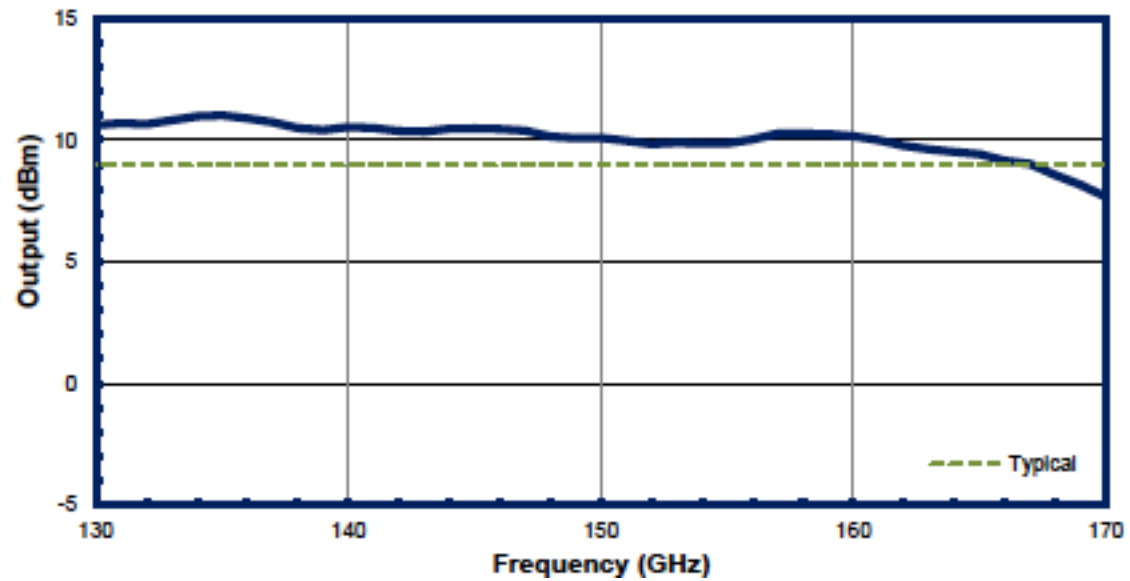
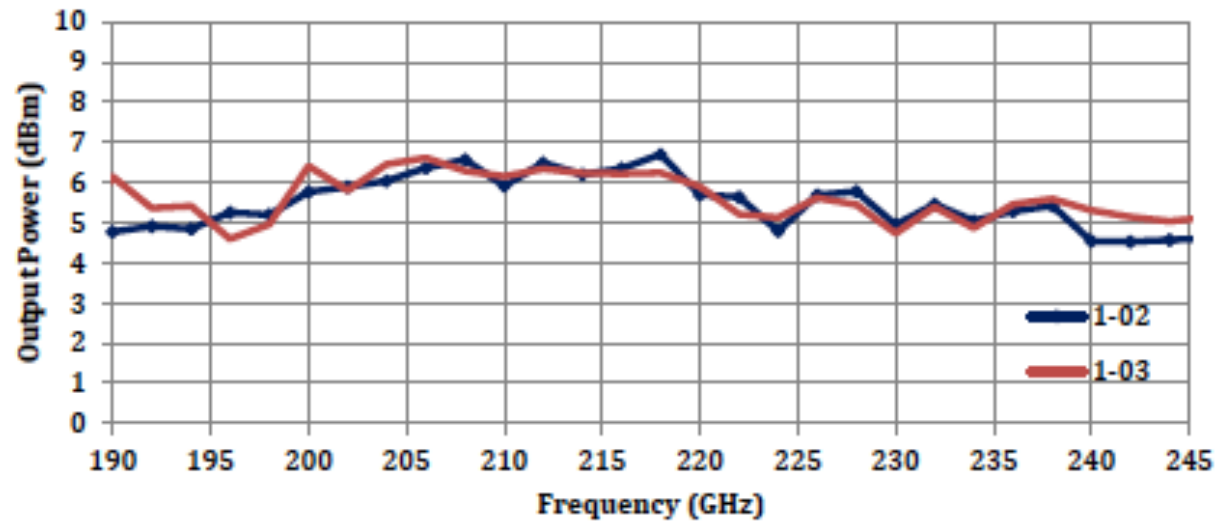
Operation modes

Continuous Wave

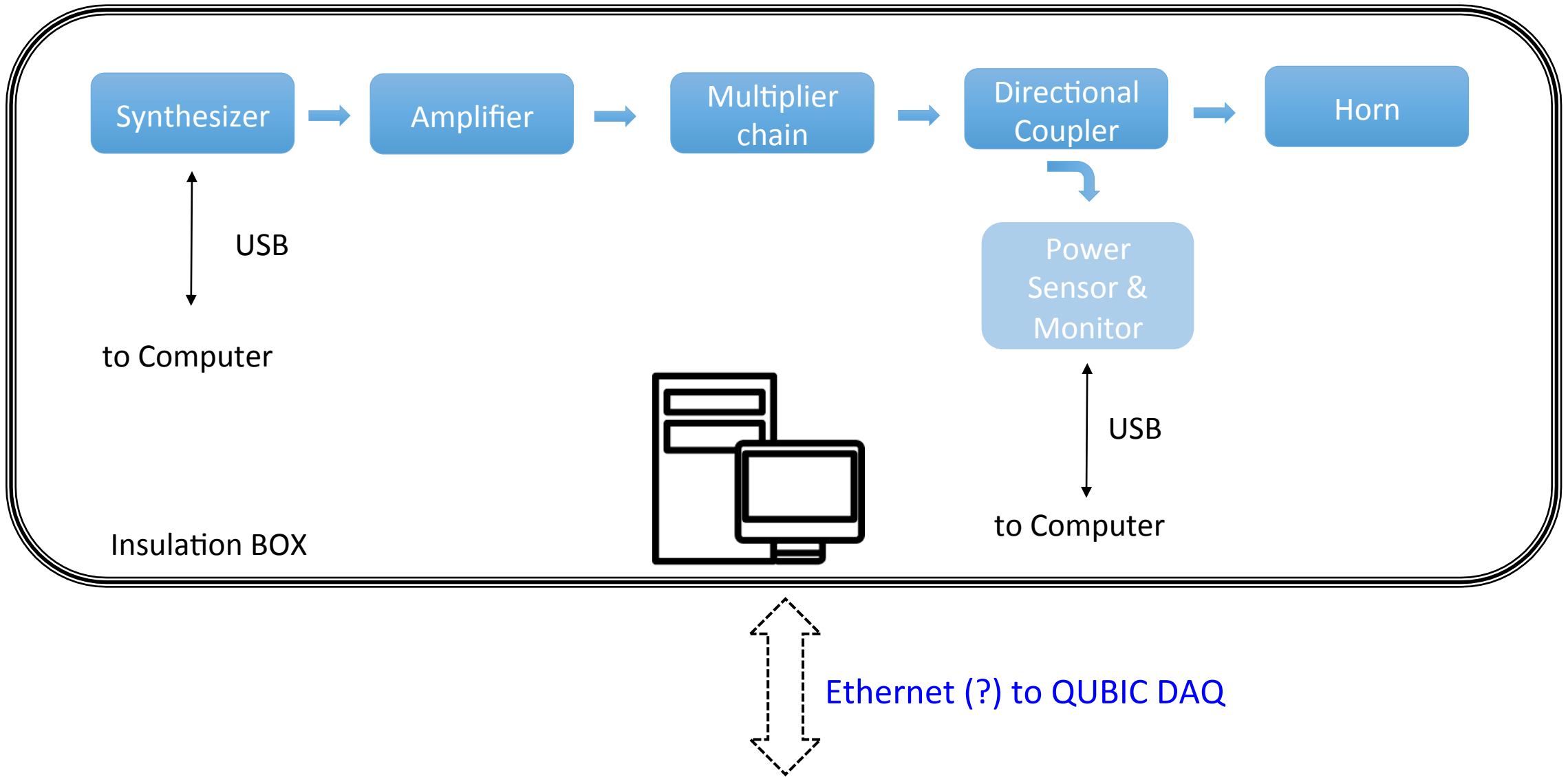
+ modulation (AM, FM)

+ power control (via attenuator)

# Power and Frequency Coverage



# On the tower



# Actions

- Laboratory test
- Design of the thermal insulation box
- Define the interface with QUBIC Studio