

The most important thing we build is trust



ADVANCED ELECTRONIC SOLUTIONS

AVIATION SERVICES

COMMUNICATIONS AND CONNECTIVITY

MISSION SYSTEMS

## Wideband HF Antenna

Olivier Langlois

# Wide Bandwidth (>24kHz) HF Antenna HFIA 2015

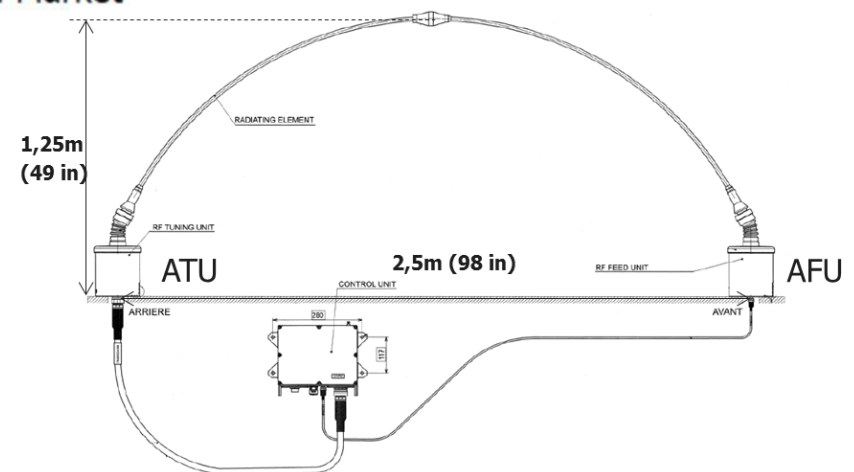
- Remember 2014 objectives :

- 2015

- ☑ OTM antenna solution introduction for the WB-HF Market
- ☑ Gain improvement by working on the hardware
- ☑ Communicate tests with Perseus system
- ☑ Finalise Qualification
- ☑ Specify the frequency range for the Extended WB-HF capability



- Use Ground WB-HF antennas technologies to Naval Market
- Propose a wide range of radios interfaces



# Wide Bandwidth (>24kHz) HF Antenna HFIA 2015

- What happen since last HFIA ?
  - WBHF antenna Hardware and Radio Design complete.
  - Radio/Antenna compatibility test done with Rockwell Collins.
  - DSEI 2015: Product Introduction.



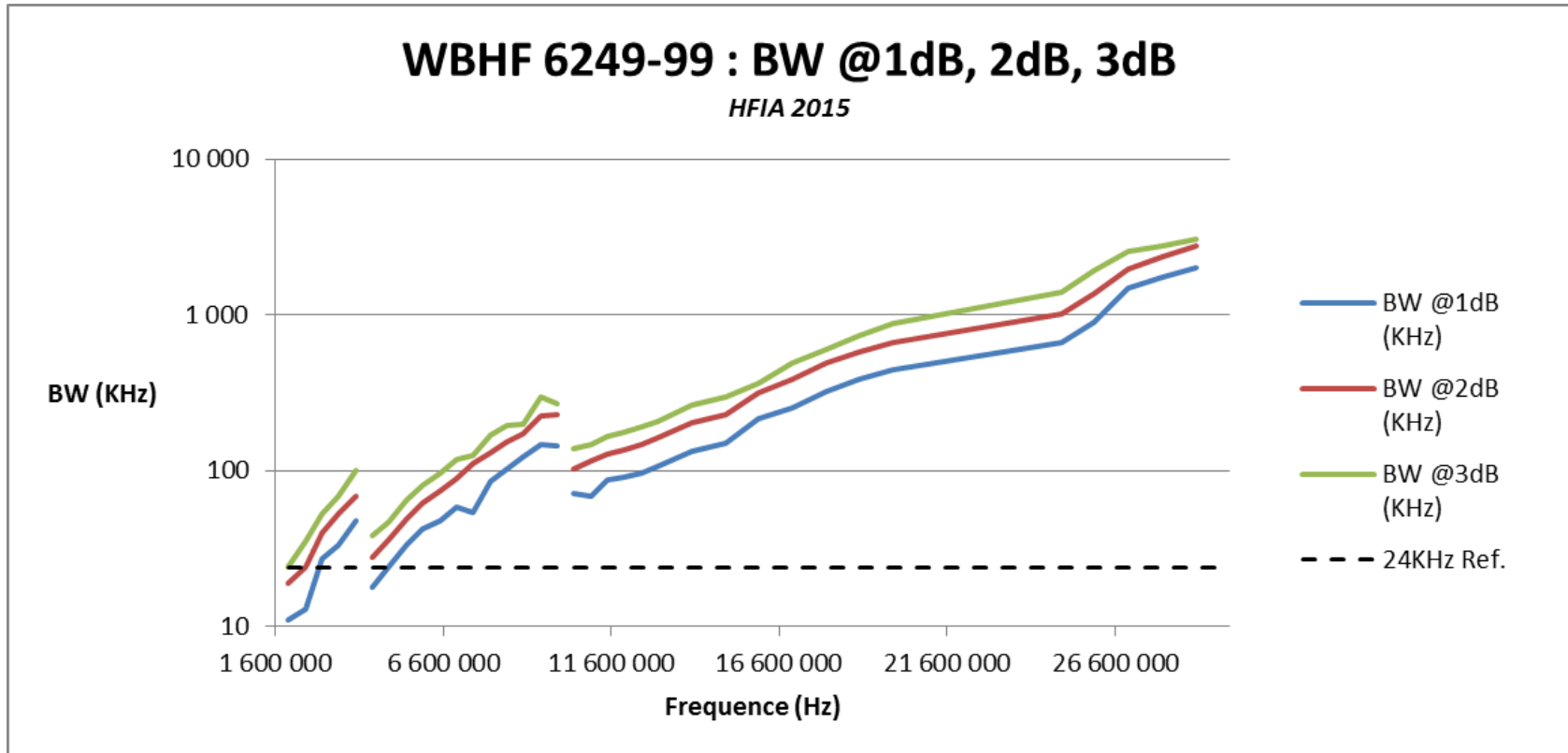
# Wide Bandwidth (>24kHz) HF Antenna HFIA 2015

- Technical Check-List

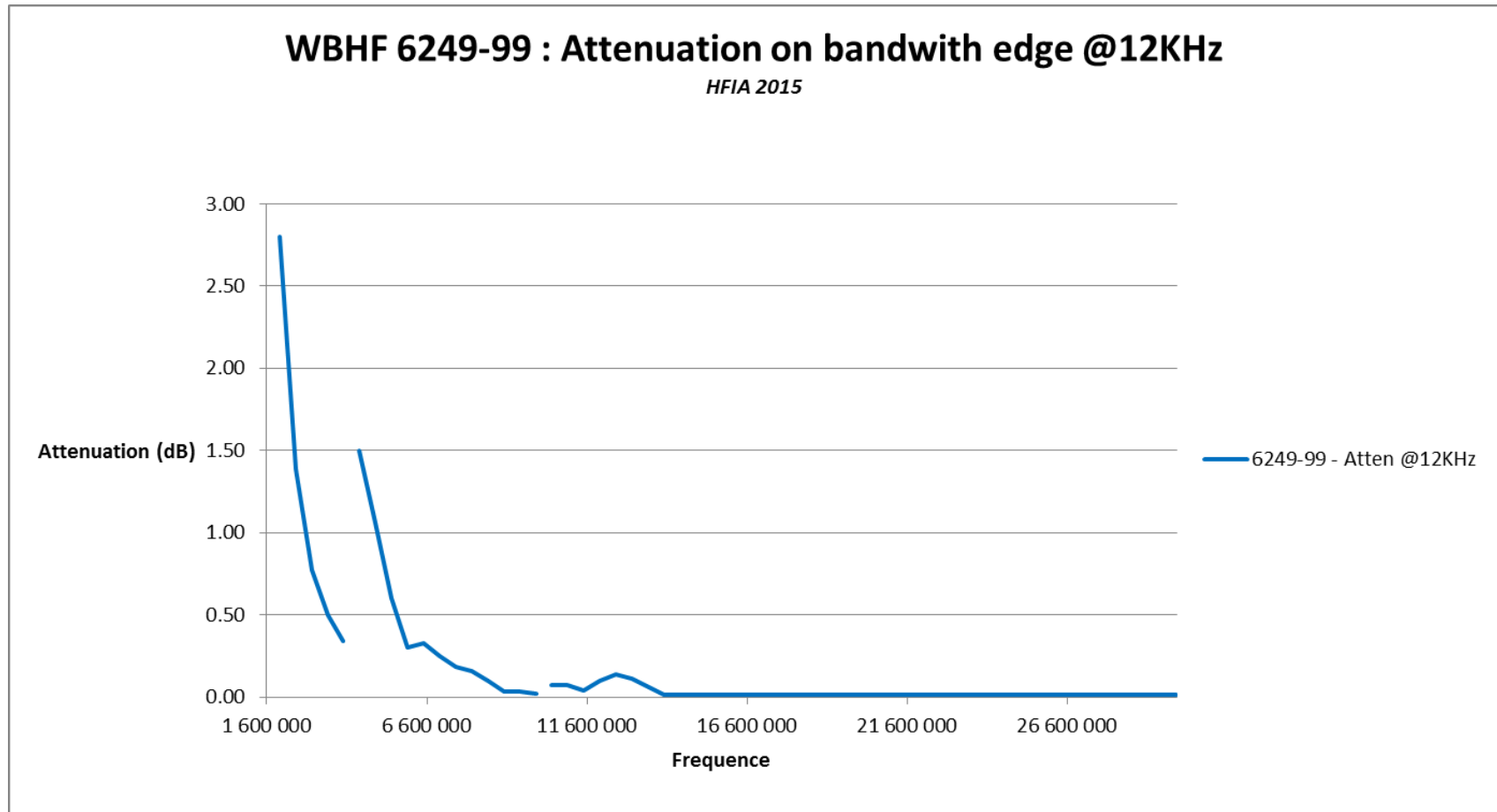
- Final antenna Hardware: **Done**
- Comparative measurement between the standard 3190 Half-Loop antenna and the new 6249 WBHF antenna: **Done**
- 6249 WBHF antenna and WBHF radio compatibility: **Done**
- Antenna software: **In completion**



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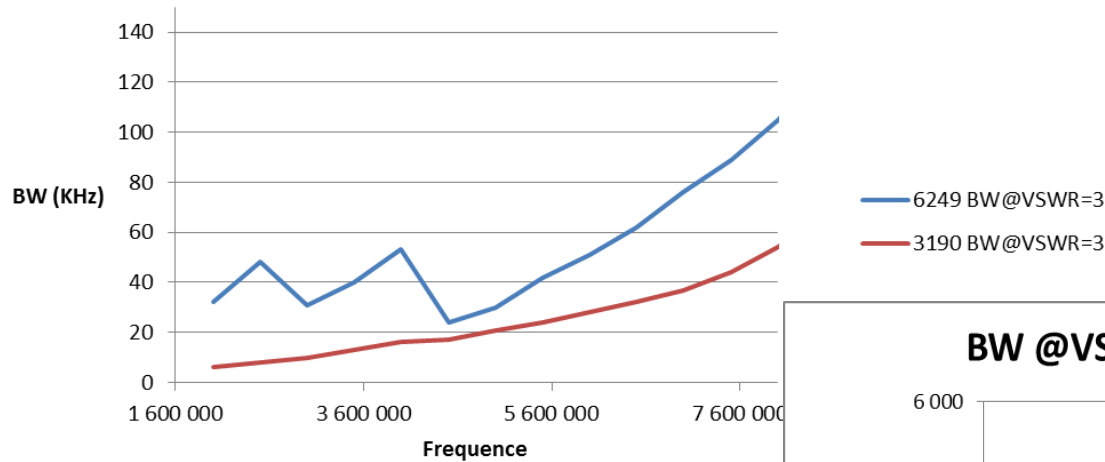
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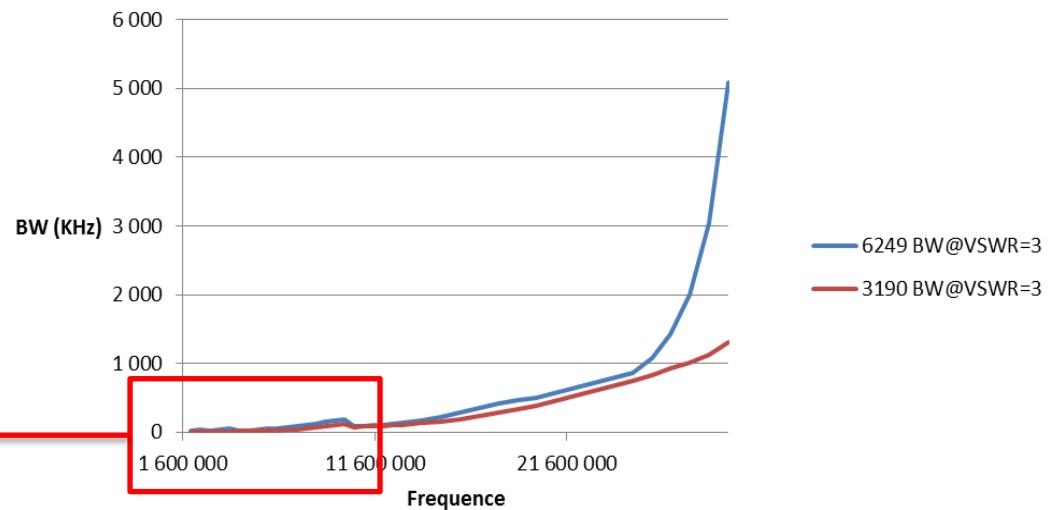


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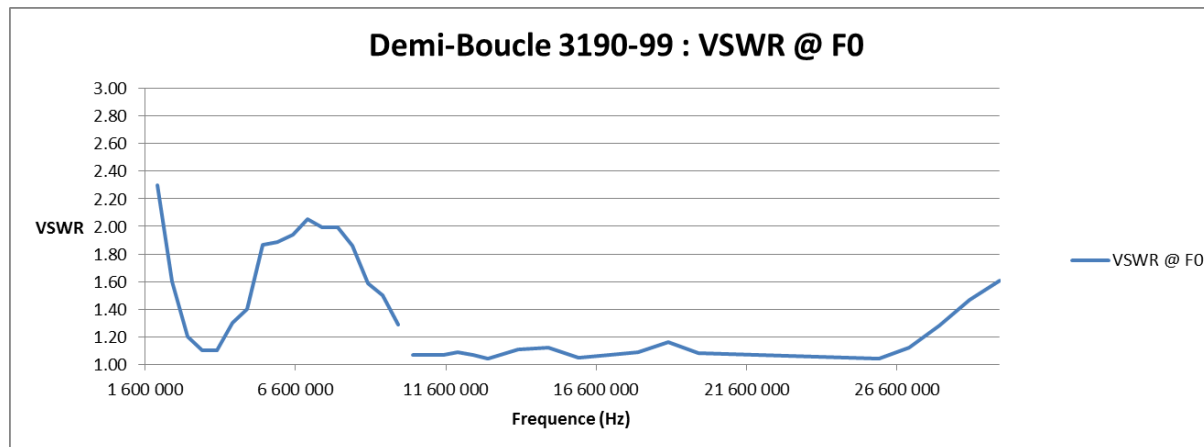
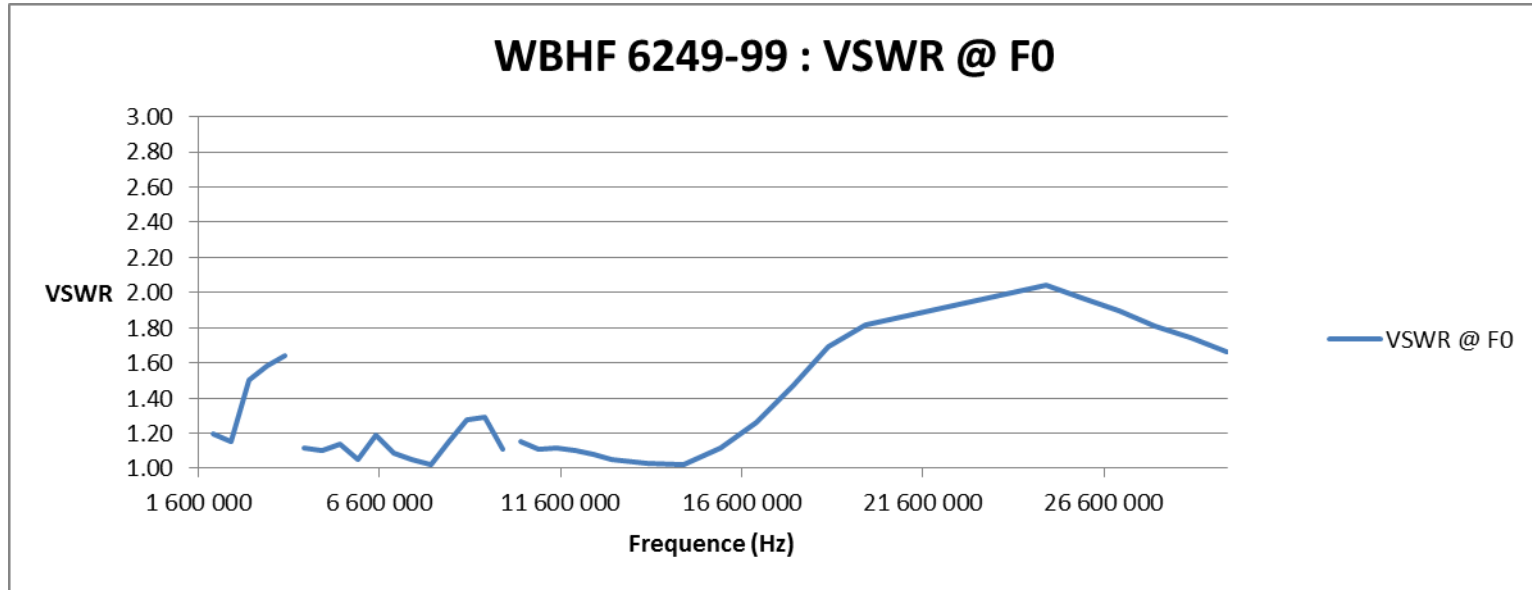
**BW @VSWR=3 - Antenne 6249-99, 3190-99**  
**Zoom 2MHz-8MHz**  
*HFIA 2015*



**BW @VSWR=3 - Antenne 6249-99, 3190-99**



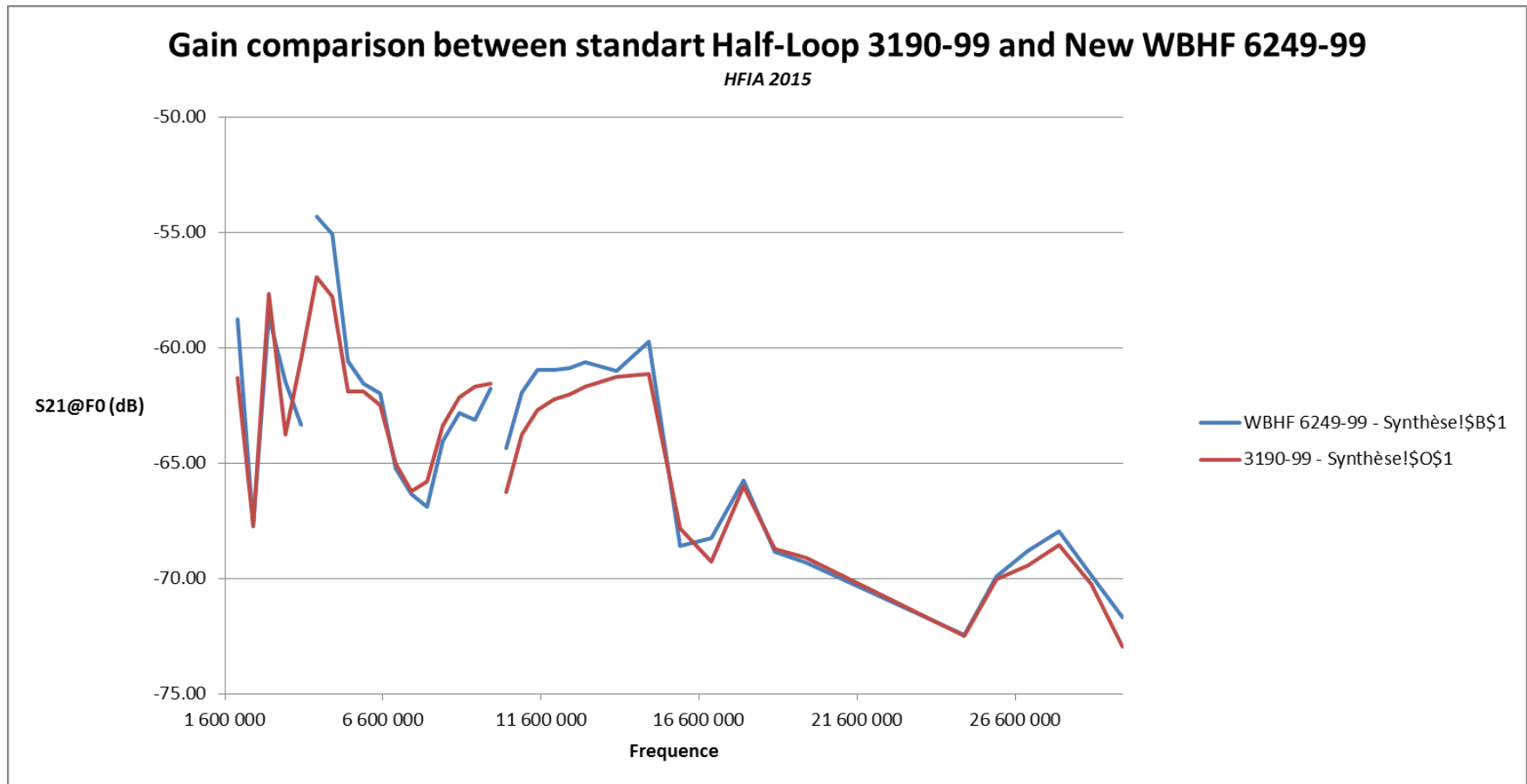
# Wide Bandwidth (>24kHz) HF Antenna HFIA 2015





# Wide Bandwidth (>24kHz) HF Antenna HFIA 2015

- The S21 of 3190-99 & WBHF 6249-99 antennas has been measured in transmission with the same reference antenna.



- Conclusion :
  - The new 6249-99 WBHF Half-Loop antenna is compatible with WBHF radio.
  - We succeed improve Half-Loop antenna BW and keep good know performances of the standard 3190-99 antenna.
  - New tests, in operational condition, will be held with Rockwell Collins.
  - The final design of the antenna is the best trade-off between size, bandwidth and gain.
  - Contacts on progress with major customers who are looking for a complete WBHF solution and interested COBHAM small form factor antenna.