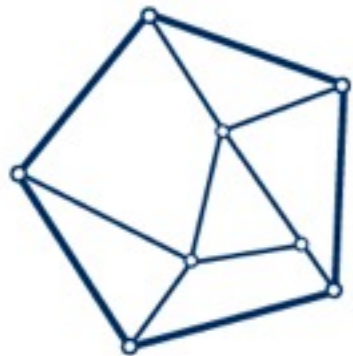




BIGHORNS

Project Overview

Steven Tremblay - CAASTRO
2012 EoR Global Signal Workshop



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Antenna





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Antenna





Conical Logarithmic Spiral Antenna:

- Relaxed freq. dependance of beam
- Persistent forward gain
- RFI rejection via polarisation selection



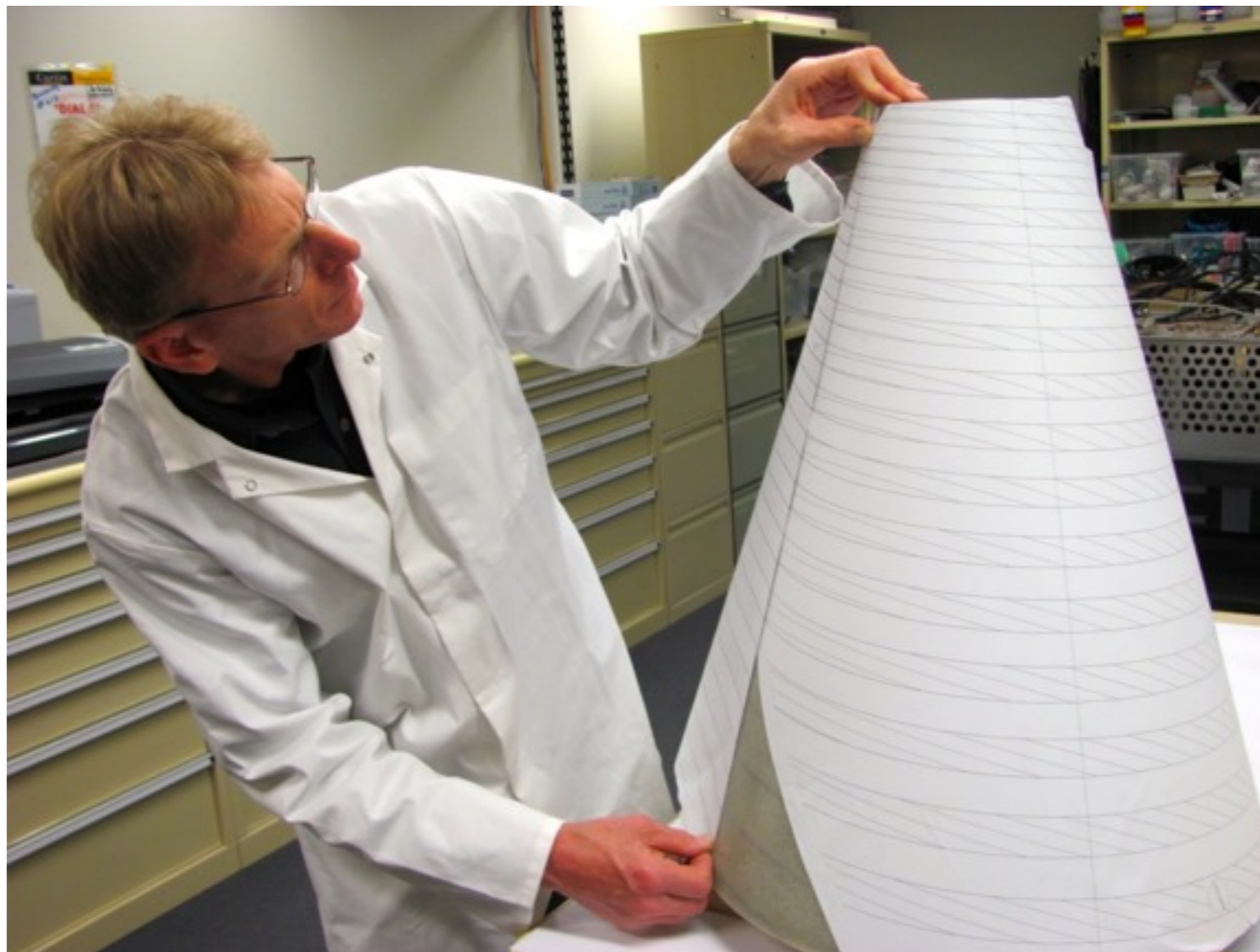


Work proceeds on constructing conical log spiral antennas at Curtin





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In the meantime, Biconical Antenna



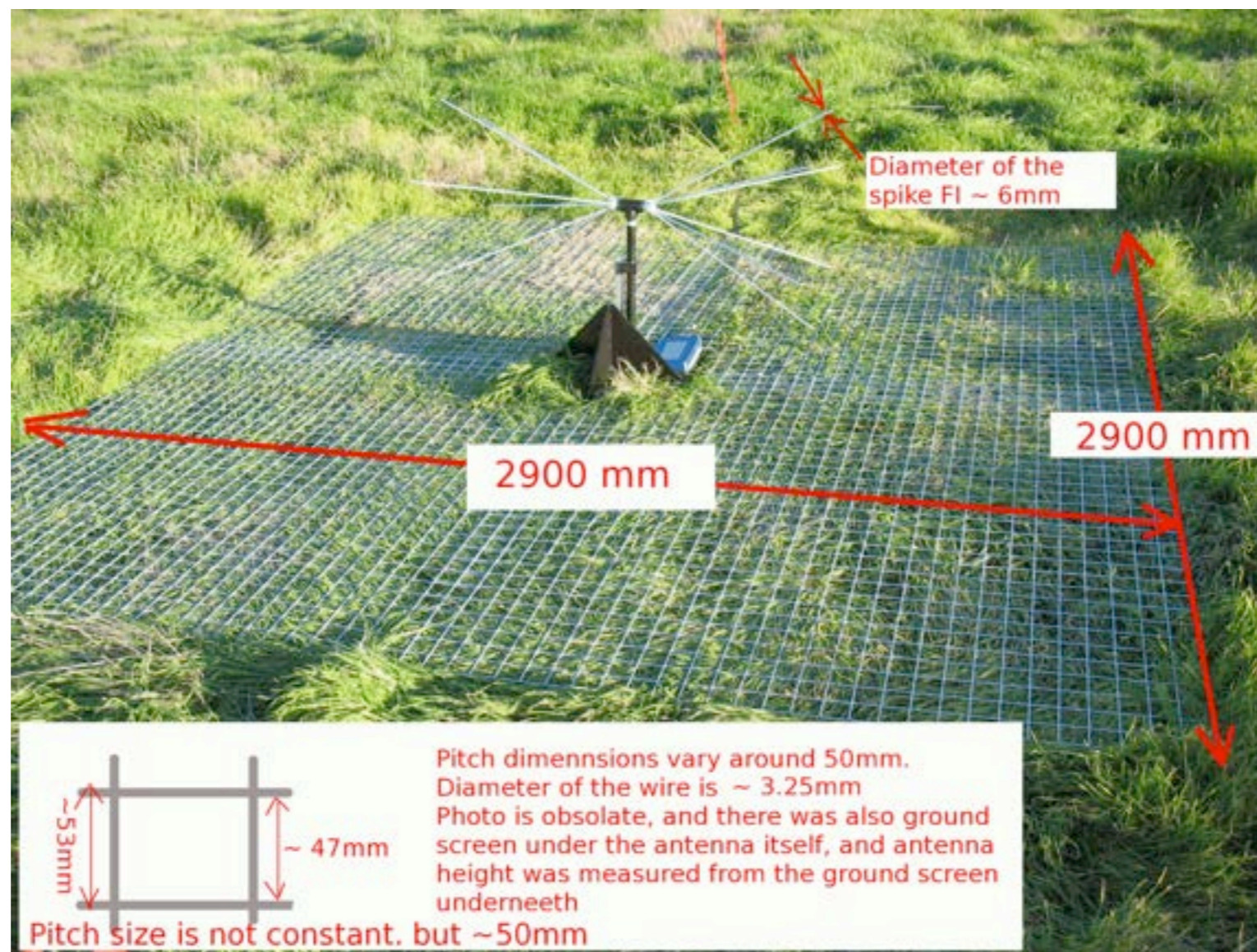


In the meantime, Biconical Antenna





In the meantime, Biconical Antenna





Analogue Chain



Front-end:

- 2-Channels
- ~38 dB of Gain
- Temperature (etc.) info
- 4-State switching for calibration

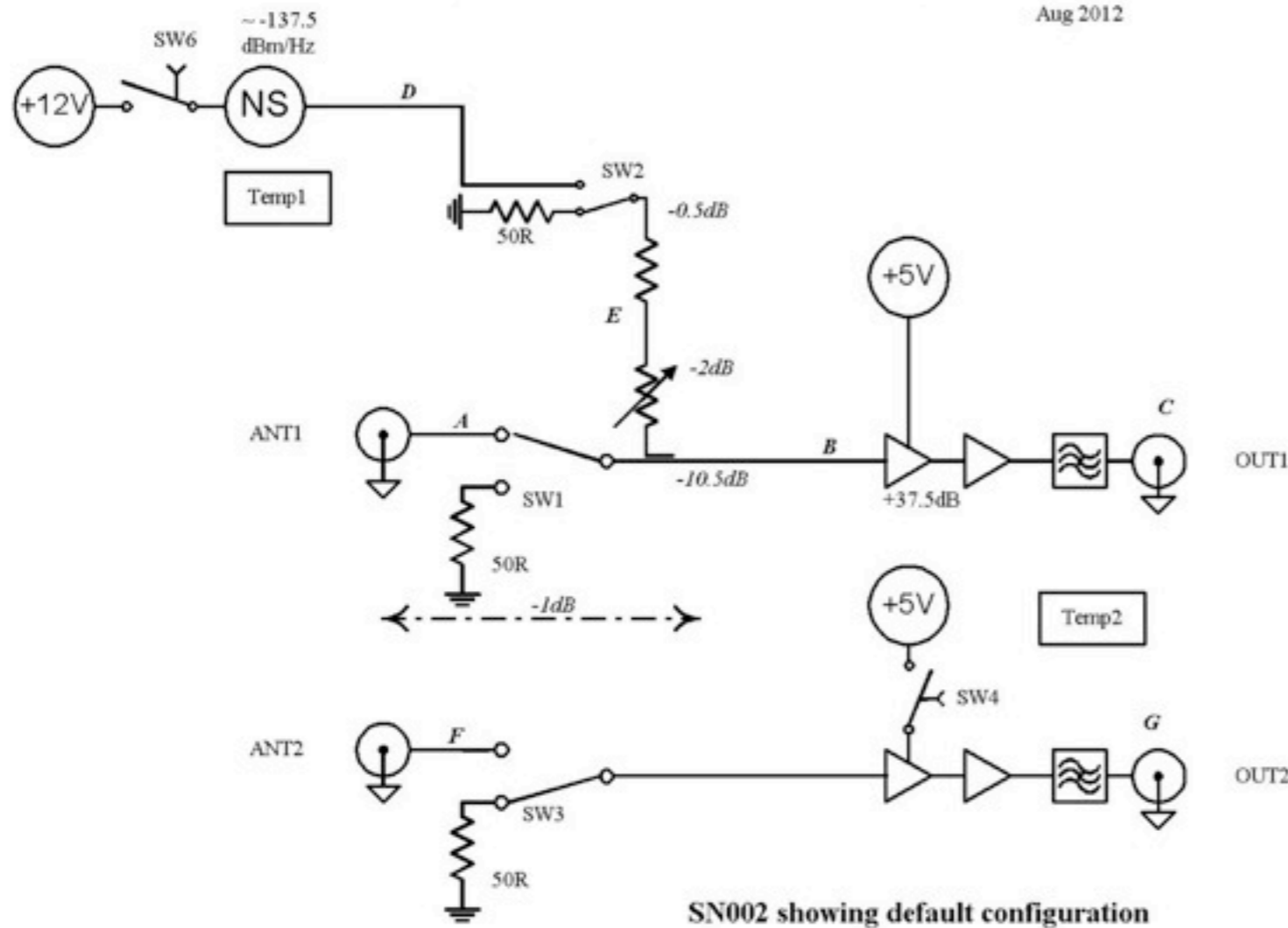


Analogue Chain



Simplified Front-end Switching Diagram

Aug 2012

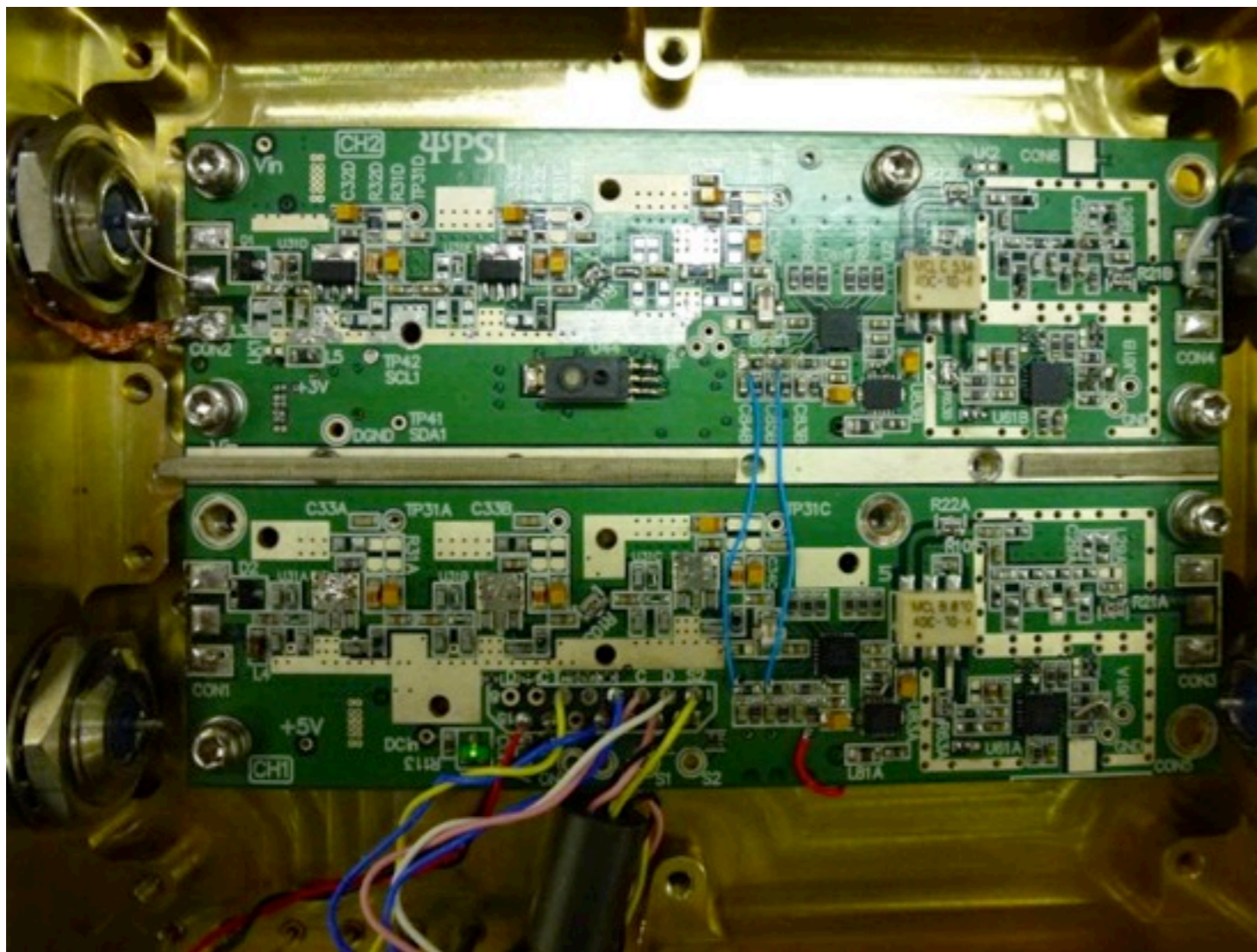


Front-end:

- 2-Channels
- ~ 38 dB of Gain
- Temperature (etc.) info
- 4-State switching for calibration



Analogue Chain

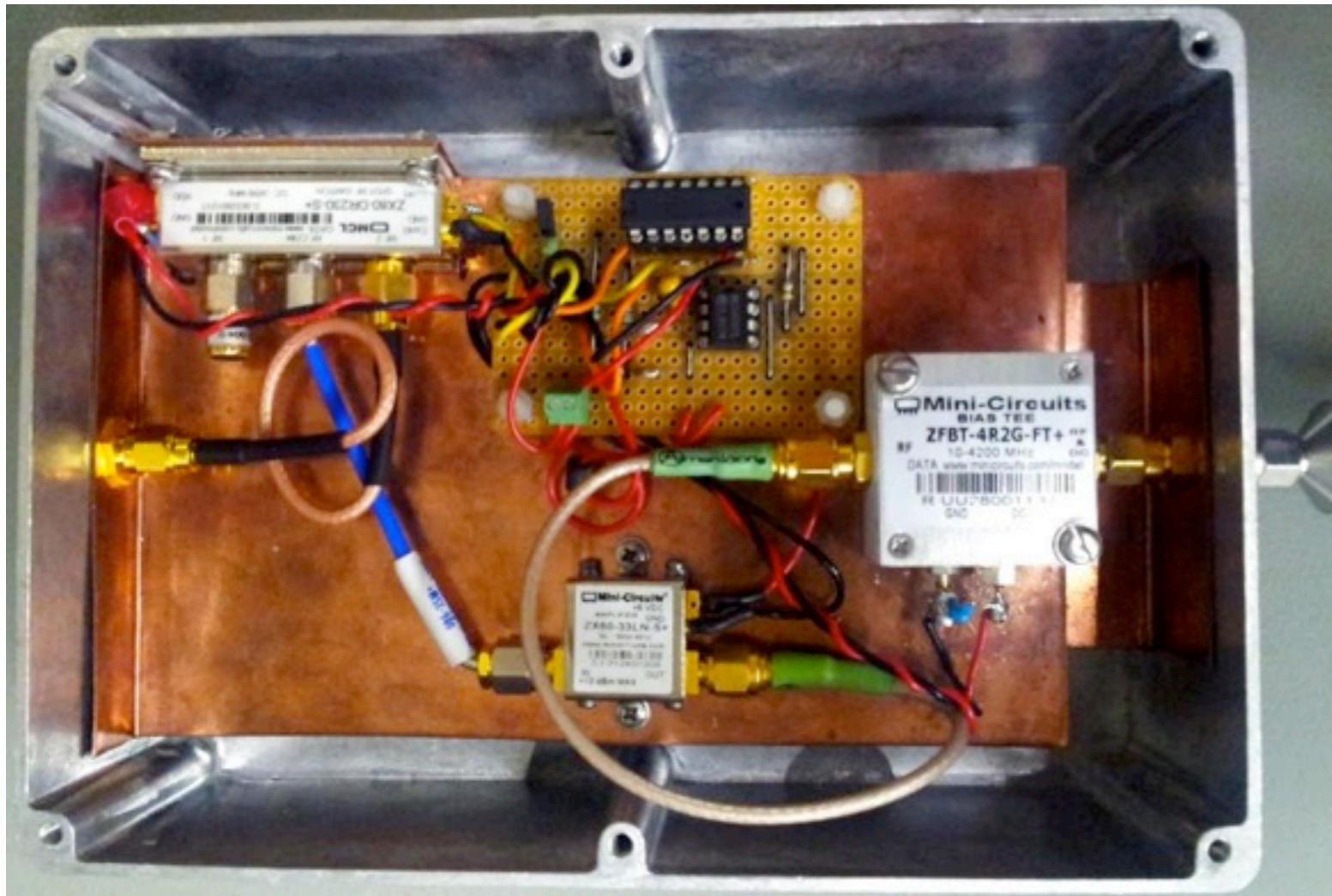


Back-end Analogue:

- 2-Channels
- Up to 40 dB of Gain
- Variable attenuation
- Temperature (etc.) info



Analogue Chain

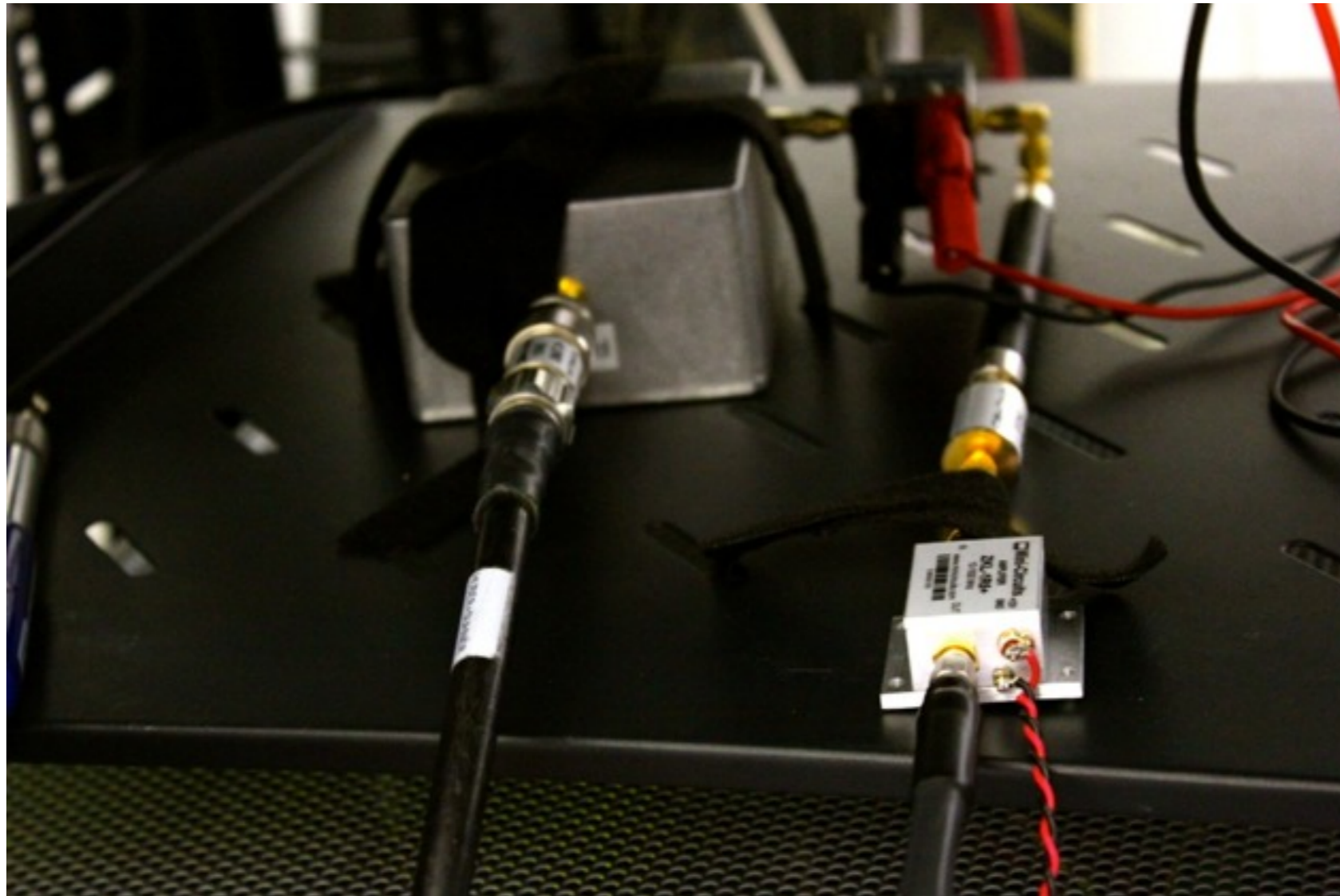


Front-end:

- Single Channel
- ~22 dB of Gain
- 2-State switching for calibration

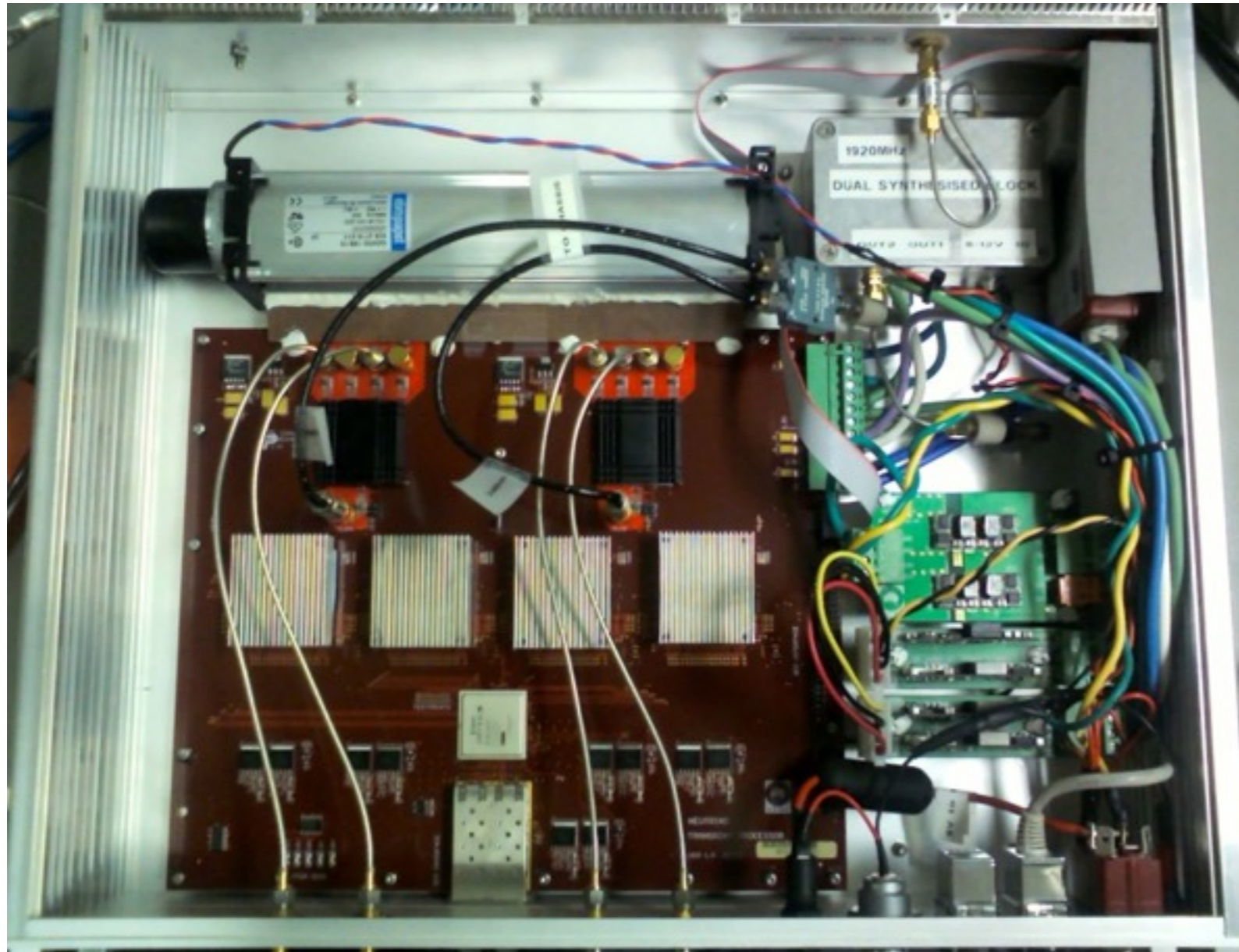


Analogue Chain



Back-end Analogue:

- 2 more amplifiers
- Bandpass of ~
- Attenuate as needed



Bedlam Board:

- 4096 Channels
- PFB-Spectrometer
- Sends UDP Packets via
fiber



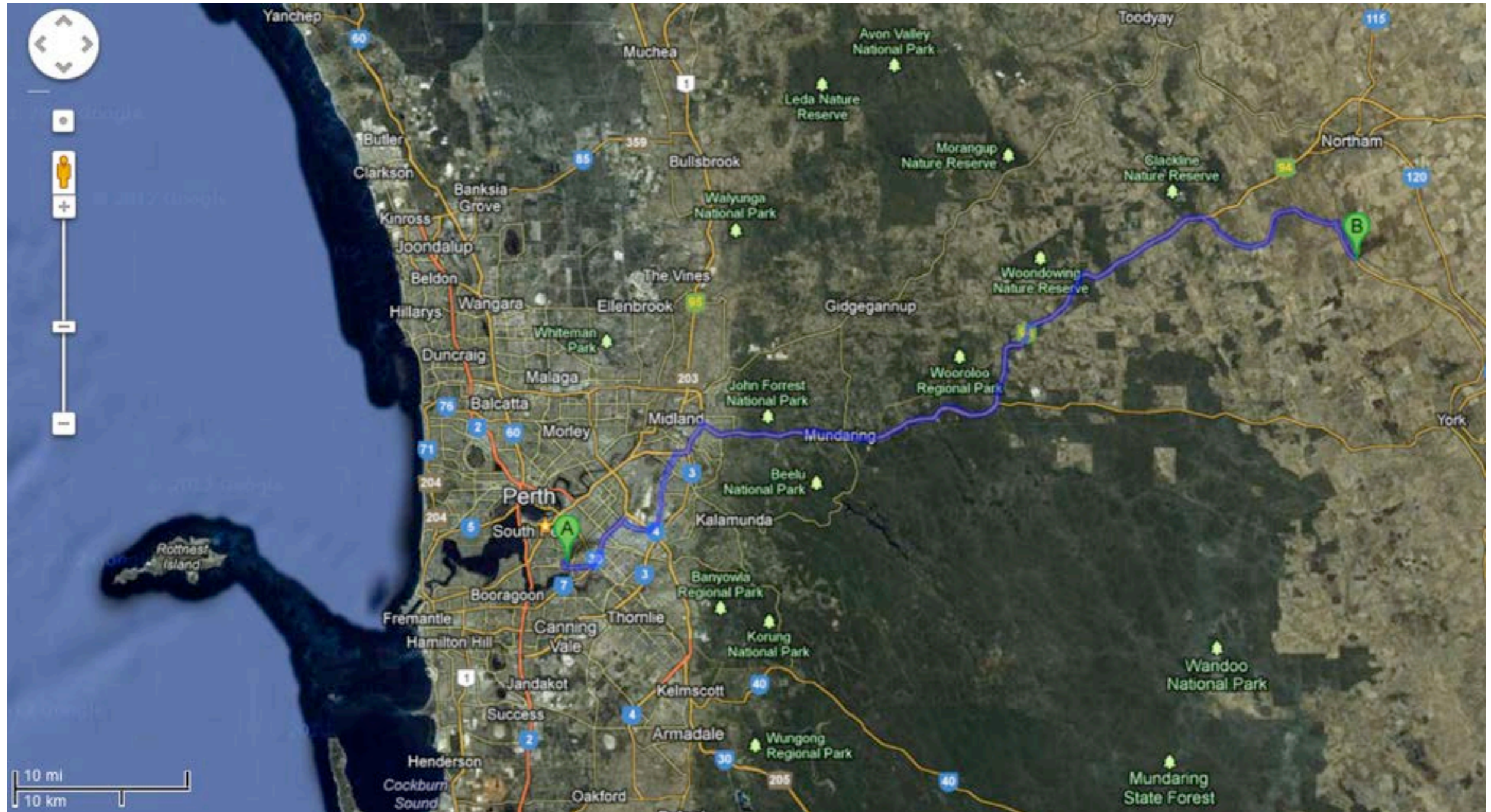
Bedlam Board:

- 4096 Channels
- PFB-Spectrometer
- Sends UDP Packets via
fiber



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Field Tests





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Field Tests





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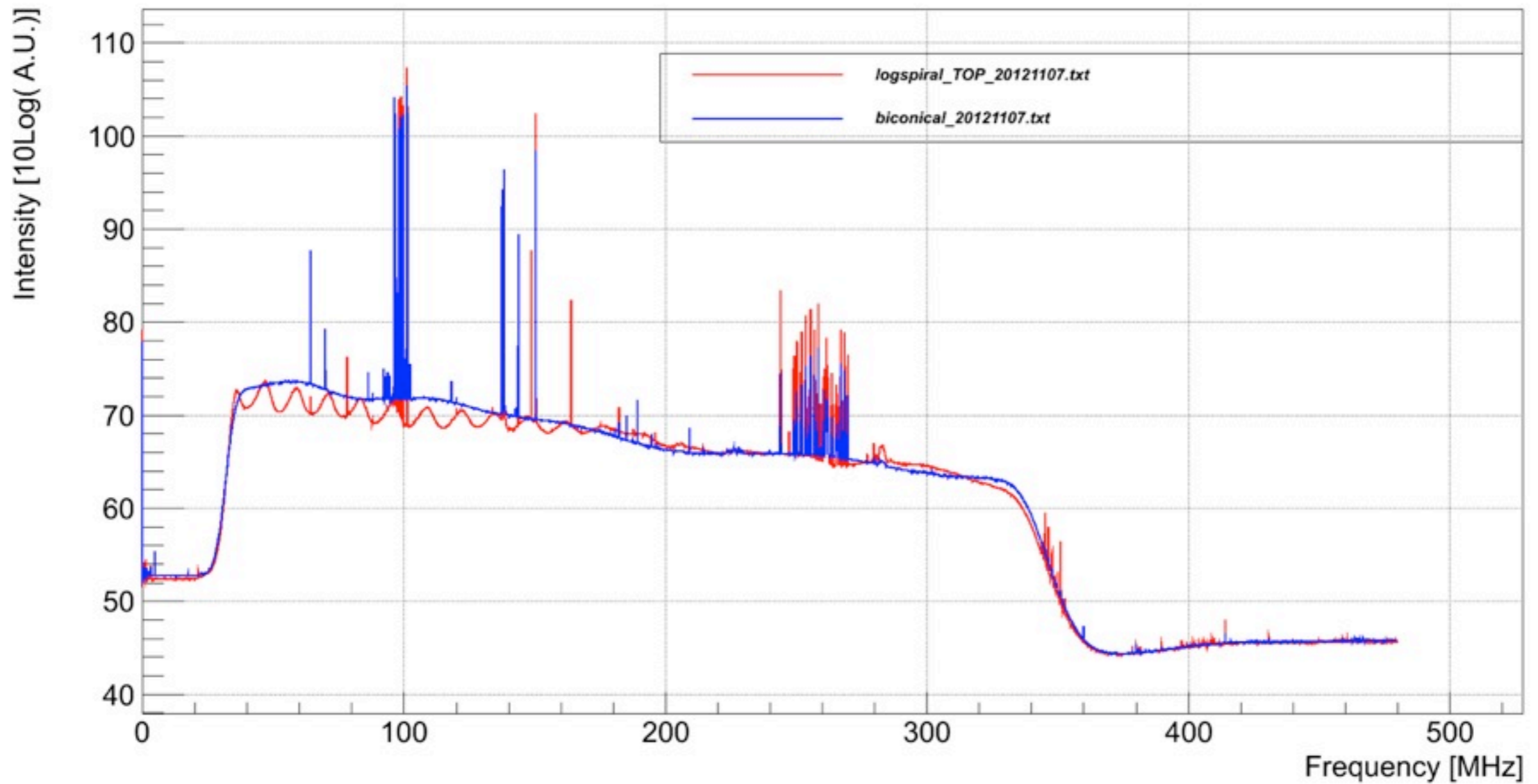
Field Tests





Early Results

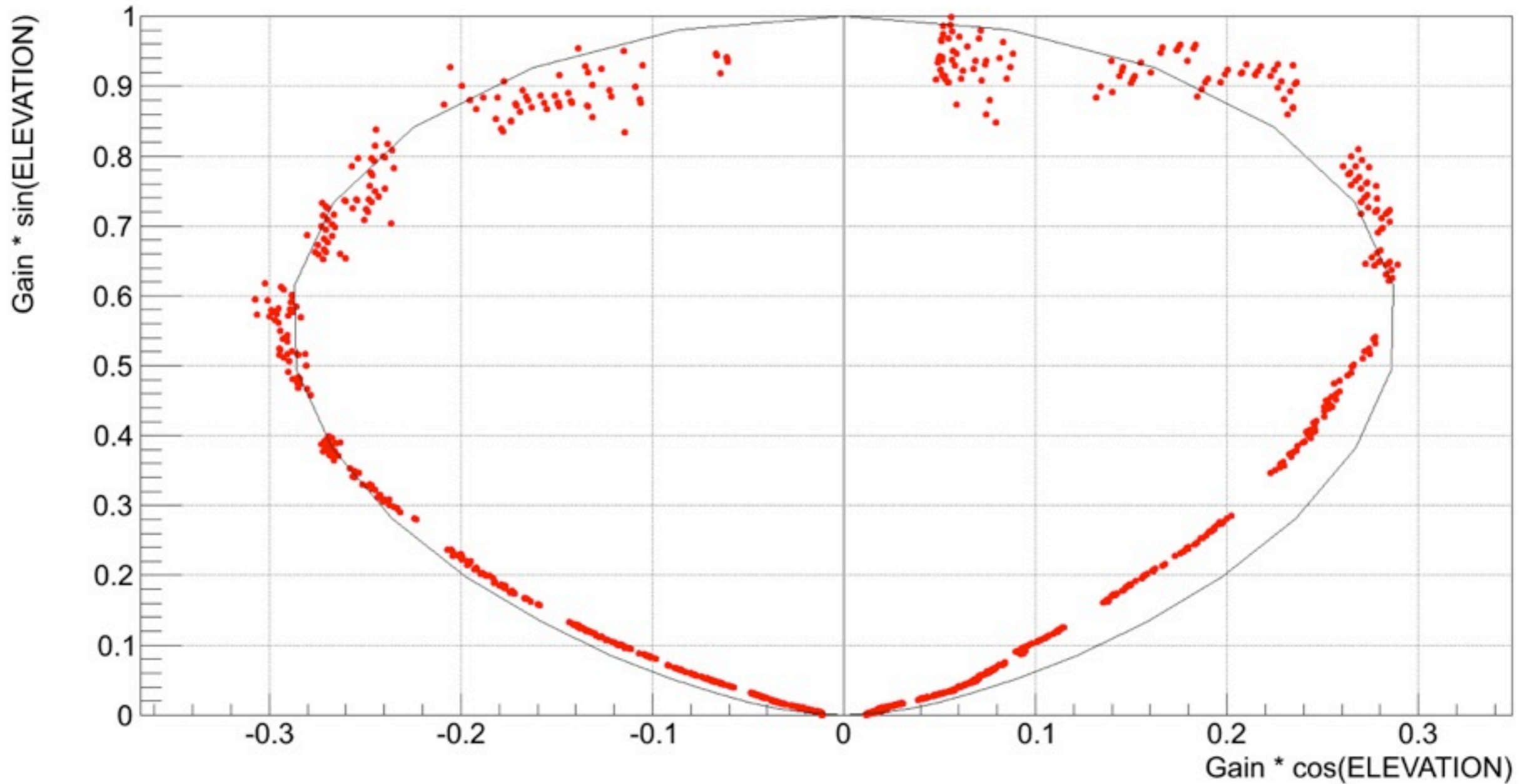
Spectrum





Early Results

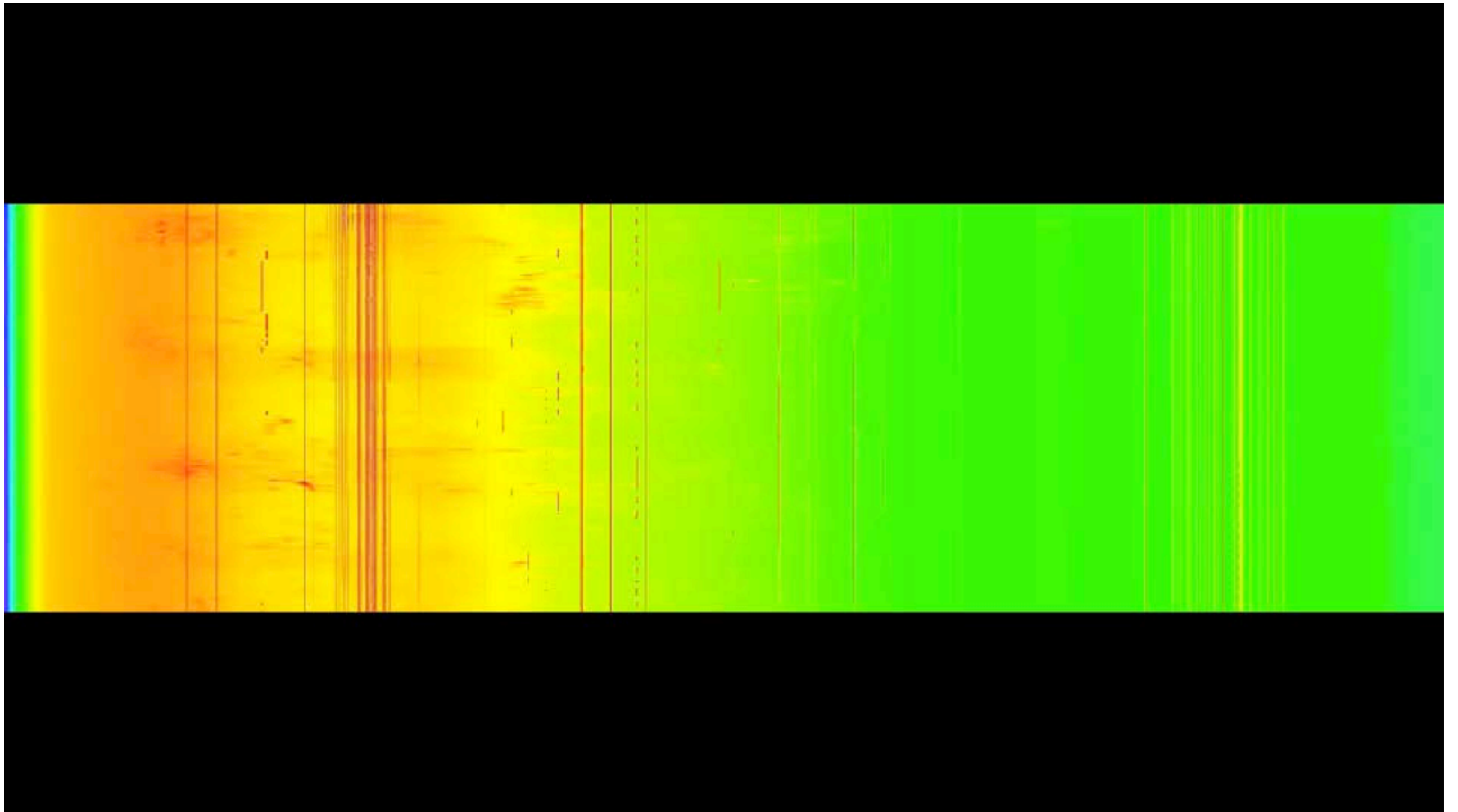
1352119183_ORBCOMM_FM_31_power_vs_zendist.txt





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Early Results





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What's Next?





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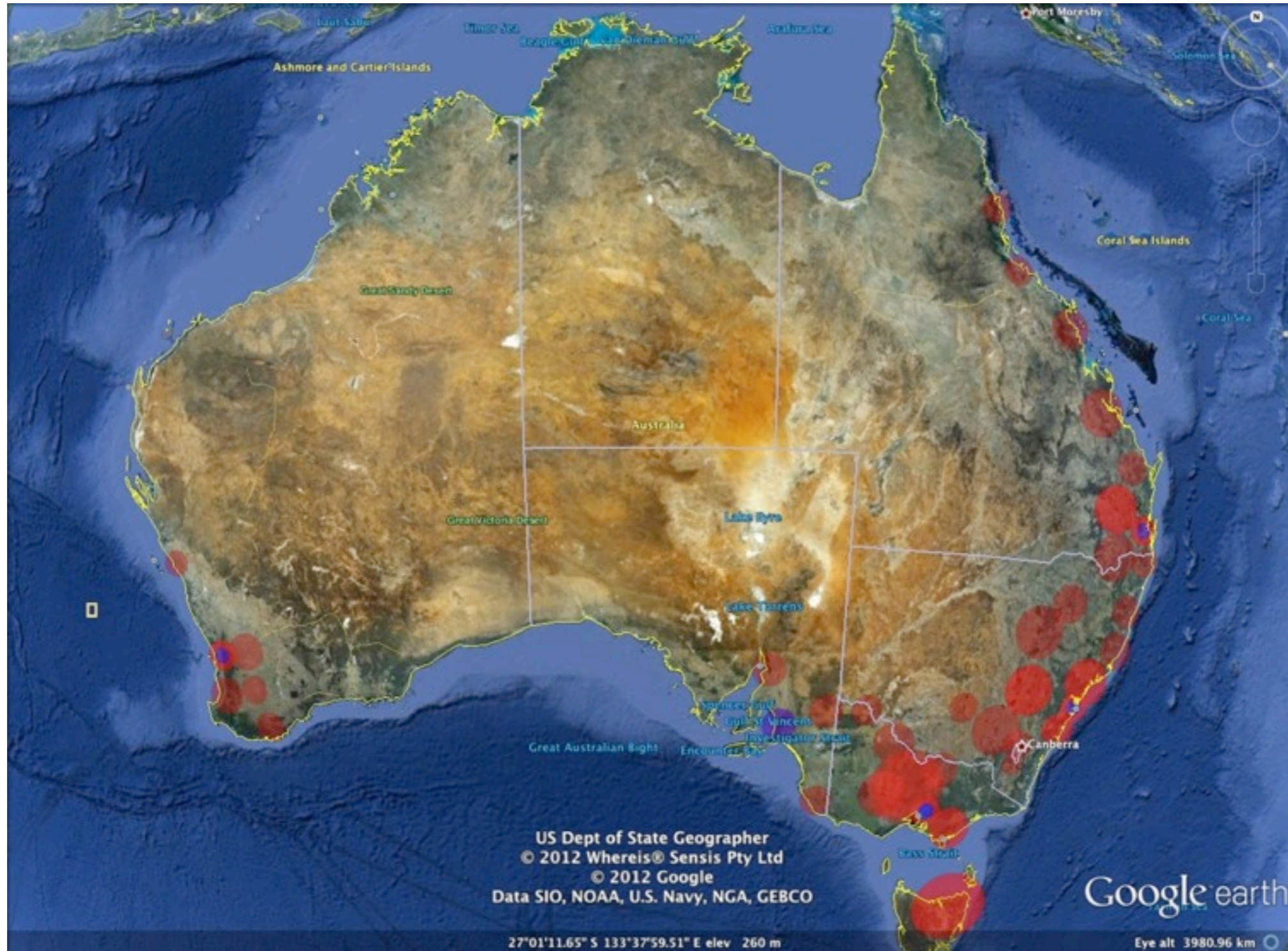
What's Next?





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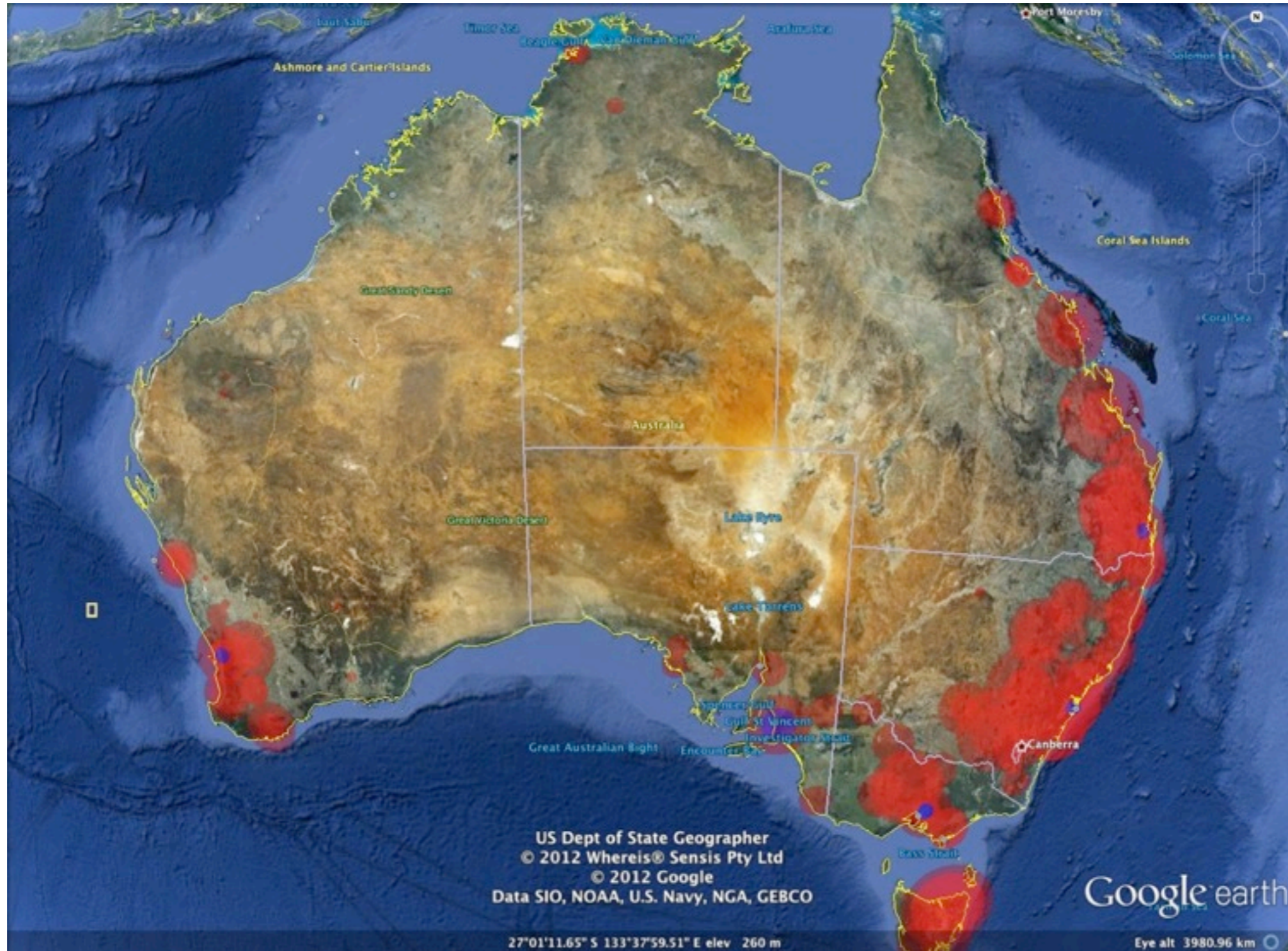
What's Next?





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What's Next?





What's Next?





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What's Next?





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Thank You...

