



Warm Electronics Overview

November 16, 2020
ADMX Collaboration Meeting

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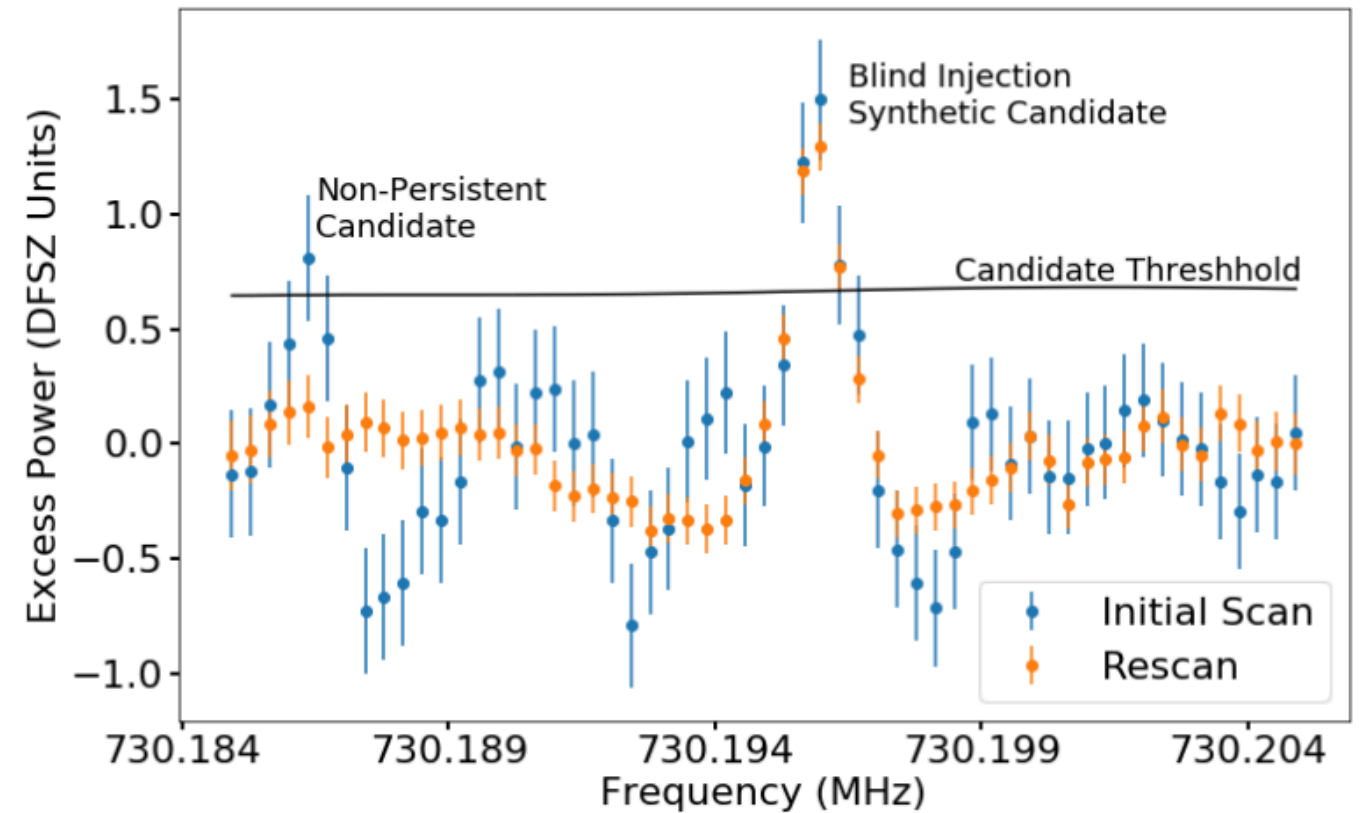
Scope of Warm Electronics (Gen 2)

- RF System Planning
- Electronics Interfaces
- RF Receiver
- SAG (Synthetic Axion Generation)
- Cavity Locking
- DAQ (Data Acquisition)

- RF System Planning
 - Christian Boutan
- Electronics Interfaces
 - Chelsea Bartram, Christian Boutan, Matt Hollister, Tatsumi Nitta, Matt Taubman
- RF Receiver
 - Christian Boutan, Jonathan Tedeschi
- SAG (Synthetic Axion Generation)
 - Chelsea Bartram, Christian Boutan, Nick Du, NSO
- Cavity Locking
 - Christian Boutan, Daniel Cain, Matt Taubman
- DAQ (Data Acquisition)
 - Nick Du, Ben LaRoque, NSO

Upgrades for Run 1B

- SAG system implemented
 - First iteration
 - Used for first time in Run 1B
 - One persistent candidate in 1B
 - See SAG talk today



Upgrades for Run 1C/D

- SAG system upgraded
 - Second implementation
 - Much easier operations
 - See NSO's talk today
- DAQ system upgraded
 - New digitizer
 - ✓ Increased reliability
 - New software
 - ✓ Increased reliability
 - ✓ Dripline integration
 - See N. Du's talk today



ATS 9462

Upgrades for Run 2A

- System-wide RF plans
- Site electronics upgrades
 - See C. Boutan's talk tomorrow
- SAG adapted
- Locking implemented
 - See M. Taubman's talk tomorrow

Current Activities

- Synthetic axion injections for the current run
- Cavity locking development for Run 2A