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The ADMX ultra-low noise receiver[1] CHRISTIAN BOUTAN, University of Washington, ADMX COLLABORATION, ADMX-HF COLLABORATION — The Axion Dark Matter eXperiment (ADMX) searches for dark-matter axions by looking for their resonant conversion to microwave photons in a strong magnetic field. Given the current experimental setup the axion-photon conversion power is expected to be below a yoctowatt ($< 10^{-24}$ W). Detecting such feeble signals above the thermal and electronic noise background requires a very sensitive microwave receiver. To ensure a fully characterized data pipeline, synthetic axion waveforms are simulated and periodically injected through the cavity and receiver chain. Here I discuss the calibration of the ADMX receiver and real-time analysis performed by the DAQ.

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