



Contribution ID: 95

Type: **Workshop**

## GNU Radio on the Allen Telescope Array

*Wednesday, 22 September 2021 13:30 (2 hours)*

The SETI Institute's Allen Telescope Array, at the Hat Creek Radio Observatory in remote Northern California, consists of 42 six-meter dishes that are primarily used for searches for radio technosignatures - potential indicators of technology developed by extraterrestrial intelligence - in addition to other astronomical applications such as searches for fast radio bursts. The science backend consists of CASPER SNAP boards, but there are also two USRPs available for the use of the GNU Radio community. These are being used to develop digital signal processing and RF analysis pipelines, as well as to observe and decode signals from satellites and interstellar probes.

This workshop will give a detailed introduction to the ATA, and live demos of the `gr-ata` software which enables live processing of data from the ATA in GNU Radio, as well as control of the antennas themselves. For anyone who attended the workshop at GRCon 2020, there has been a lot of development in the meantime! Participants will build GNU Radio flowgraphs to ingest data from live observations of satellites, and make observations that prove that we live in a rotating spiral galaxy!

### Secondary Topic

**Primary authors:** Dr CROFT, Steve (UC Berkeley / SETI Institute); ESTÉVEZ, Daniel; Dr FARAH, Wael (SETI Institute); PISCOPO, Michael; CHAI, Michelle Yiwei

**Co-author:** KOZEL, Derek (GNU Radio)

**Presenters:** Dr CROFT, Steve (UC Berkeley / SETI Institute); ESTÉVEZ, Daniel; Dr FARAH, Wael (SETI Institute)

**Session Classification:** Workshop (Hybrid- Virtual & In-Person)

**Track Classification:** Main Topic: Radio Astronomy