

Passive Satellite RF Tracking using the SatNOGS Network

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The SatNOGS Network performs hundreds observations per day, each producing a waterfall diagram which shows the Doppler curve caused by the transmitting satellite flying over the station. By analyzing multiple of these curves the satellite orbit can be determined. The new SatNOGS Artifacts allows the extraction of precise frequencies and timestamps. For this “Spectranalysis” was developed, an interactive web service for extracting Doppler curves from SatNOGS Artifacts, which can then be used by the existing open source tools like STRF for orbit determination.

In this talk the concept of passive RF tracking is introduced, the new SatNOGS Artifacts format and the tool “Spectranalysis” for analyzing Doppler curves is presented.

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