Cygnus Complex met JRT (Job's Radio Telescope)

Intent:

Following the positive results of the Cassiopeia A drift scan, an attempt to capture the Cygnus complex (a strong radio source in the sky) with JRT is a logical step.

The Cygnus complex consists of Cygnus X (4500 light years away) and Cygnus A (730 million light years away). Since the beam of the dish is 8 degrees, the total flux will be a summation of both complexes.

Another detail to take into account is that the results may be disturbed by the synchrotron radiation from the Milky Way. As described by an Astropeiler article: "Synchrotron radiation from the galactic plane: In addition to specific, strong targets such as radio galaxies, star-forming regions and supernova remnants, there is a fairly strong continuum radiation from the galactic plane. This is particularly intense in the area around the galactic center..... Measurements showed that this synchrotron radiation essentially disappeared at 55° longitude."

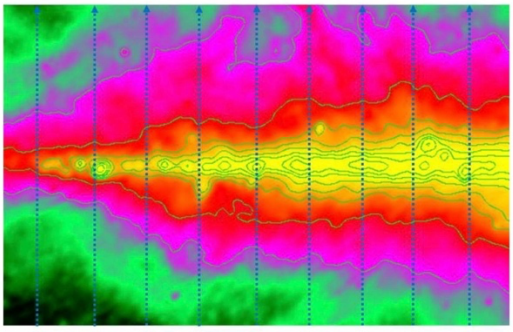
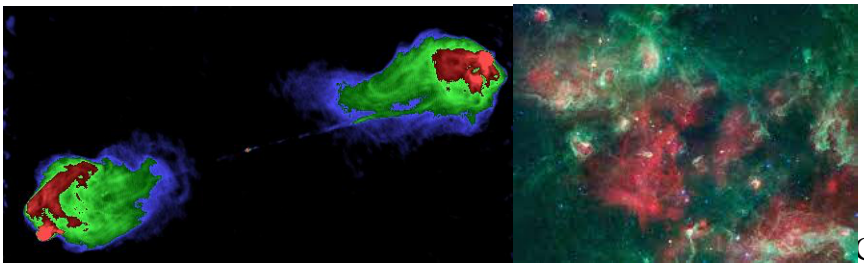


Figure 21: *Scan paths through the galactic plane*

Source: Astropeiler



Cygnus A & X

The Cygnus complex is at longitude 79°. That would mean that little to no synchrotron radiation will be measured.
To be sure of this, the plan is to first measure the Cygnus Complex and then take a measurement a good 15 degrees (the dish beam is 8 degrees) next to the complex as well.

Results.
Drift scans of 3 hours of the Cygnus Complex were made on September 19 and September 20. Frequency 1424 MHz.
Both times with positive results!
Both with the python application VirgoSoft connected to an RTLSDR and with SDR# connected to an airspy mini.

As described in the setup, on September 21 a driftscan was made 15 degrees next to the Cygnus Complex. Again positive results with the understanding that at that position NO increase of Power in a Gauss curve was measured whereby the presence of galactic synchrotron radiation can be excluded.

In short, a fine result with JRT.

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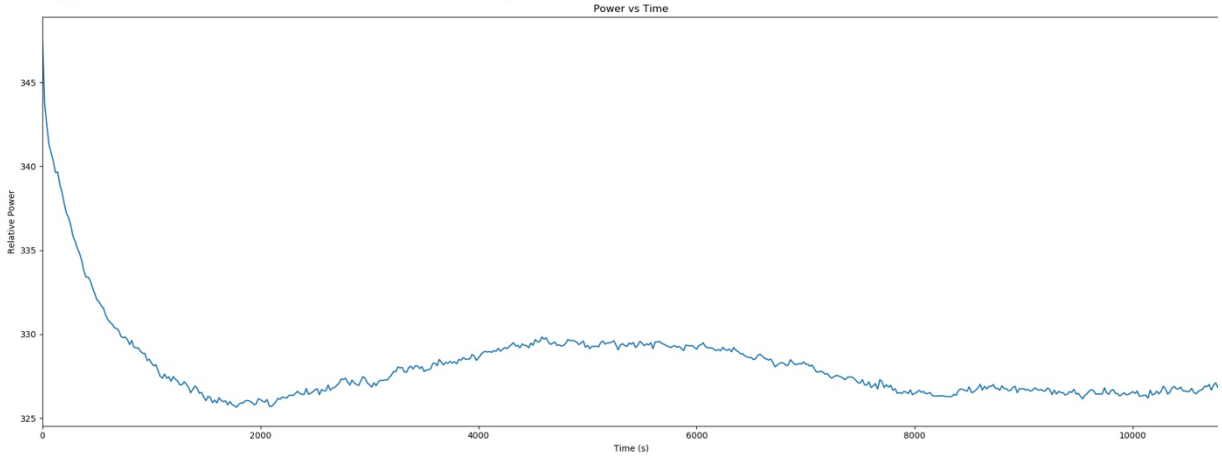
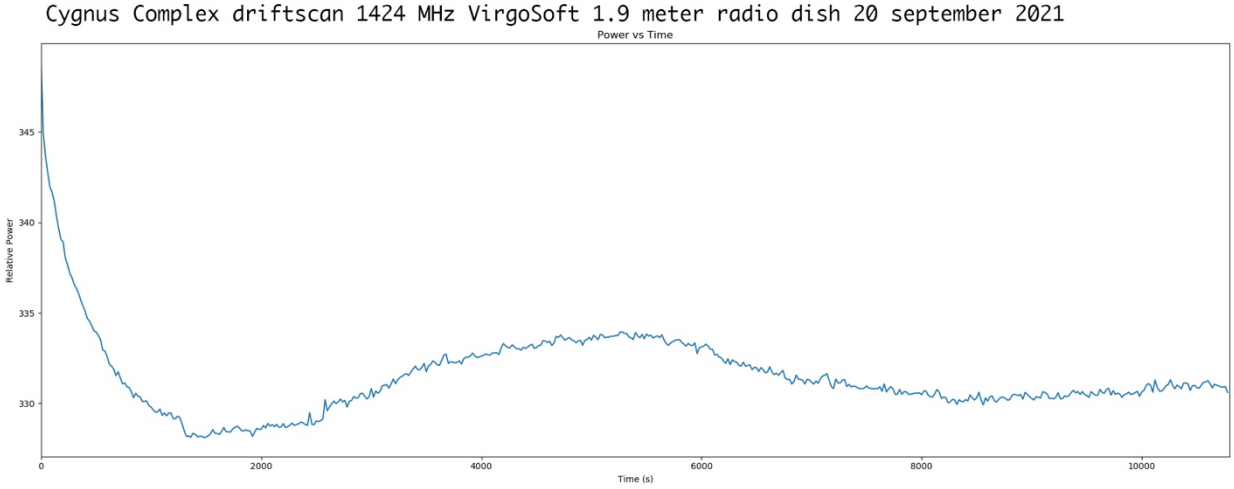
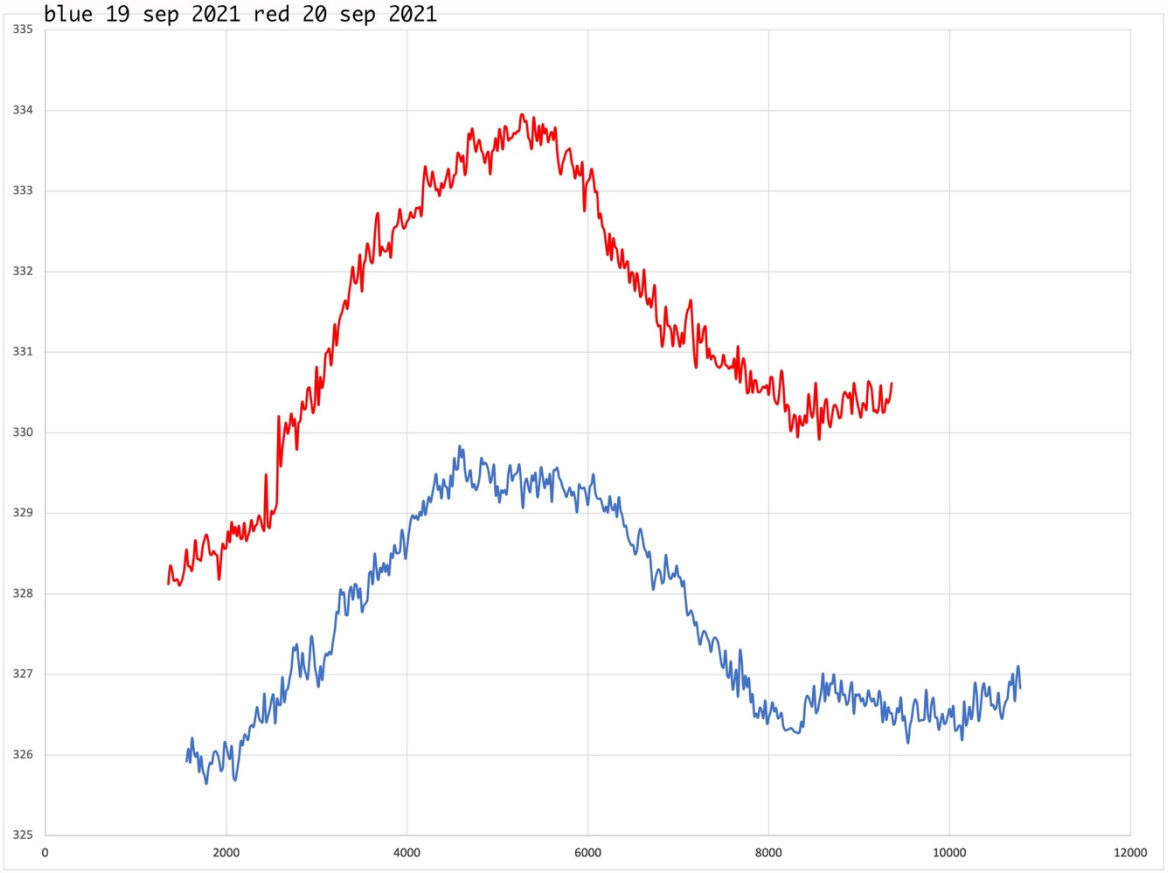
Cygnus Complex driftscan 1424 MHz VirgoSoft 1.9 meter radio dish 19 september 2021



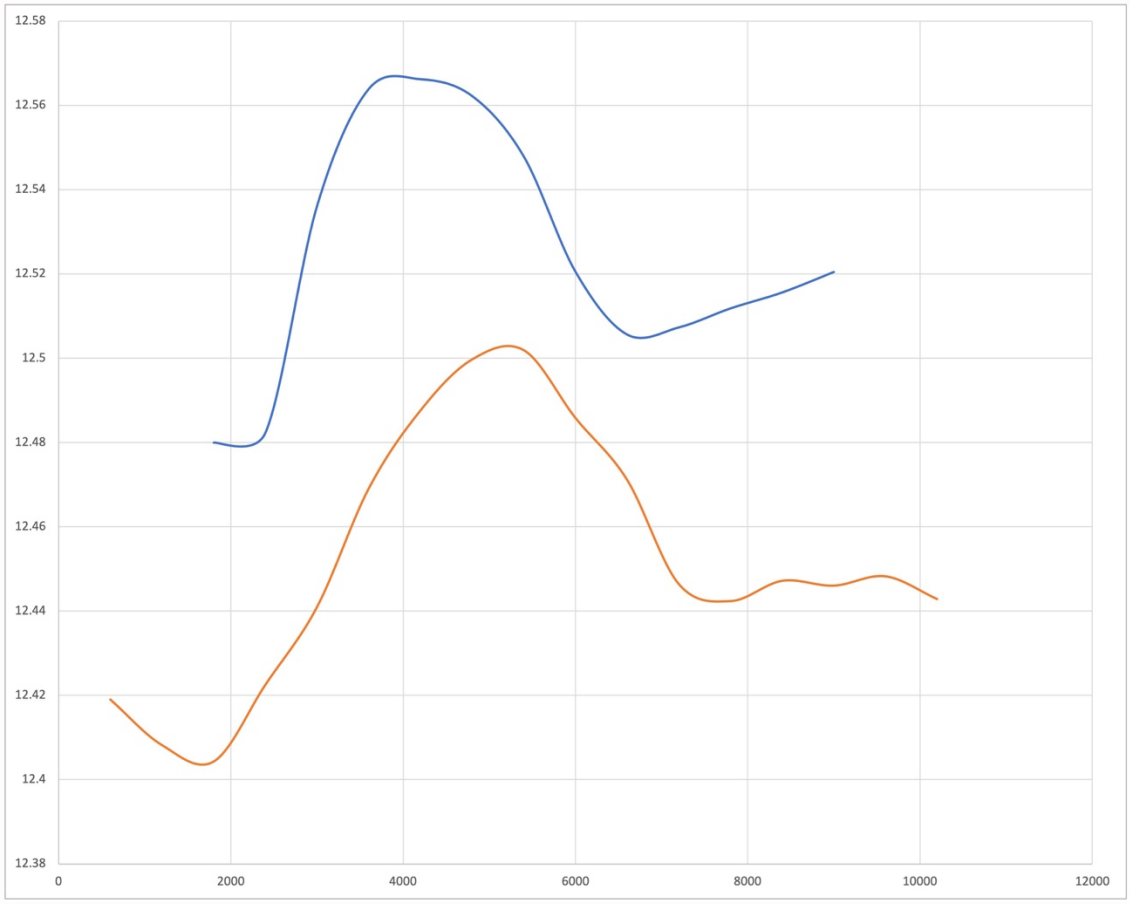
Cygnus Complex driftscan 1424 MHz VirgoSoft 1.9 meter radio dish 20 september 2021



DETAIL: Cygnus Complex driftscan 1424 MHz VirgoSoft 1.9 meter radio dish
blue 19 sep 2021 red 20 sep 2021



DETAIL: Cygnus Complex driftscan 1424 MHz SDR#-IFAverage 1.9 meter radio dish
blue 19 sep 2021 red 20 sep 2021



15 degrees offset Cygnus driftscan 1424 MHz VirgoSoft 1.9 meter radio dish 21 september 2021