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RTL-SDR (RTL2832U) and software defined radio news and projects. Also featuring Airspy, HackRF, FCD, SDRplay and more.

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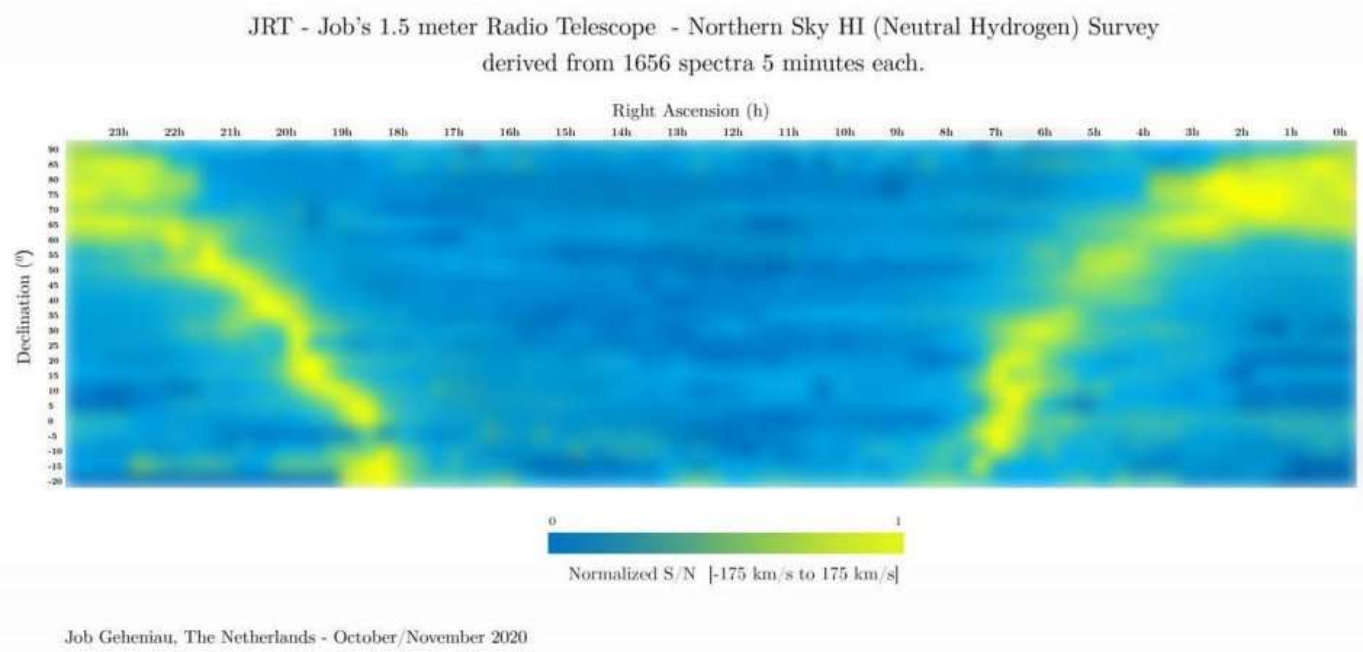
December 2, 2020

Job's Radio Telescope: Hydrogen Line Northern Sky Survey with RTL-SDR

We've posted about Job Geheniau's RTL-SDR radio telescope a few times in the past [1] [2] [3], and every time his results improve. This time is no exception as he's created his highest resolution radio image of the Milky Way to date. We have uploaded his PDF file explaining the project here.

Job used the same hardware as his previous measurements, a 1.5 meter dish, with 2x LNA's, a band pass filter and an RTL-SDR. Over 72 days he used the drift scan technique to collect data in 5 degree increments. The result is a map of our Milky Way galaxy at the neutral Hydrogen frequency of 1420.405 MHz.



JRT - Northern sky Hydrogen Line Survey with RTL-SDR

This image is quite comparable to an image shown in a previous post which was created by Marcus Leech from CCERA who used a 1.8m dish and Airspy.

If you're interested in exploring our Galaxy with an RTL-SDR via Hydrogen Line reception, we have a simple tutorial available here. The ideas presented in the tutorial could be adapted to create an image similar to the above, although with lower resolution.

Related Posts:

1. **A Hydrogen Line Radio Telescope made from a Homemade Helical Antenna and RTL-SDR**
2. **A Hydrogen Line Telescope Made from Cereal Boxes and an RTL-SDR**
3. **Imaging the Milky Way in Neutral Hydrogen with an RTL-SDR Part 2**
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Written by admin Posted in Antennas, Applications, Radio Astronomy, RTL-SDR Tagged with hydrogen line, radio astronomy, rtl-sdr, rtl2832, rtl2832u

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1. 

   December 2, 2020 - 8:50 am *Giamma-based Researchers*

   Another blog that deals with similar topics is http://physicsopenlab.org

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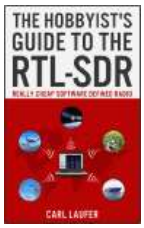

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What is RTL-SDR

The RTL-SDR is an ultra cheap software defined radio based on DVB-T TV tuners with RTL2832U chips. The RTL-SDR can be used as a wide band radio scanner. It may interest ham radio enthusiasts, hardware hackers, tinkerers and anyone interested in RF.

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