

RE: Preliminary analysis of star HD 164595

Breakthrough Listen at UC Berkeley has conducted a preliminary analysis in the direction of star HD 164595.

HD 164595 (also known as HIP 88194) is a Sunlike (G2V) star at a distance of 95 light years from Earth, with one confirmed planet (16 times as massive as Earth) orbiting with a 40 day period. Recently, a search for evidence of advanced life in this system using the RATAN-600 telescope is reported to have detected a strong (750 mJy) signal in the direction of HD 164595. The results are located in slides from a presentation scheduled to be delivered on 2016 September 27 at the International Academy of Astronautics (IAA) SETI Permanent Committee meeting. While we await a formal write-up of the RATAN-600 result, the claim that the detection could be a signal from an extraterrestrial civilization has attracted much interest.

In the early hours of Monday (EDT), August 29, the Breakthrough Listen project obtained observations of HD 164595 using the world's largest fully-steerable radio telescope. The 100-meter Green Bank Telescope (GBT) is one of two telescopes currently undertaking observations for Breakthrough Listen as part of a search for intelligent civilizations beyond Earth. The GBT observations detected no source at the position and frequency of the source seen by RATAN-600, to a sensitivity of 10 mJy. Additionally, the team searched archival data. The preliminary analysis is available in a technical memo - <http://seti.berkeley.edu/HD164595.pdf>. This will be followed up in time with a more formal refereed publication of the initial scientific results from Breakthrough Listen. Additional observations will continue to monitor the target area.

We look forward to the RATAN-600 science paper being released so a more rigorous evaluation can commence. Breakthrough Listen is always open to coordinated efforts and follow-ups of interesting signals. The program seeks to further coordination with telescopes and SETI groups across the world. We welcome opportunities for partnership in order to quickly validate and analyze candidate signals, to continue to develop tools and techniques, and to share our excitement with those who, like us, seek to answer the question, "Are we alone?".

LINK to the preliminary analysis: <http://seti.berkeley.edu/HD164595.pdf>