

Atomic Deuterium in Active LANR Systems Produces 327.37 MHz Superhyperfine RF Maser Emission

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Active lattice assisted nuclear reaction (LANR) systems, both aqueous and dry nanomaterial, emit very narrow bandwidth radiofrequency (RF) emission peaks (circa 327.37 MHz), in the Deuteron-line (“DL”; 327.348 MHz) region. Figure 1 shows RF maser emission from a preloaded ZrO₂PdD Nanor®-type LANR component [1,2] operated below its avalanche voltage in a well-grounded resonant Fabry Perot chamber. The high Q [$> 1.2 \times 10^6$] and Zeeman response indicate maser activity. There are superhyperfine sidebands. Nearest neighbor resonance analysis of those superhyperfine emissions heralds reactions occurring in a Pd lattice palladium face center cubic vacancy. D-loaded active nickel is far more complex.

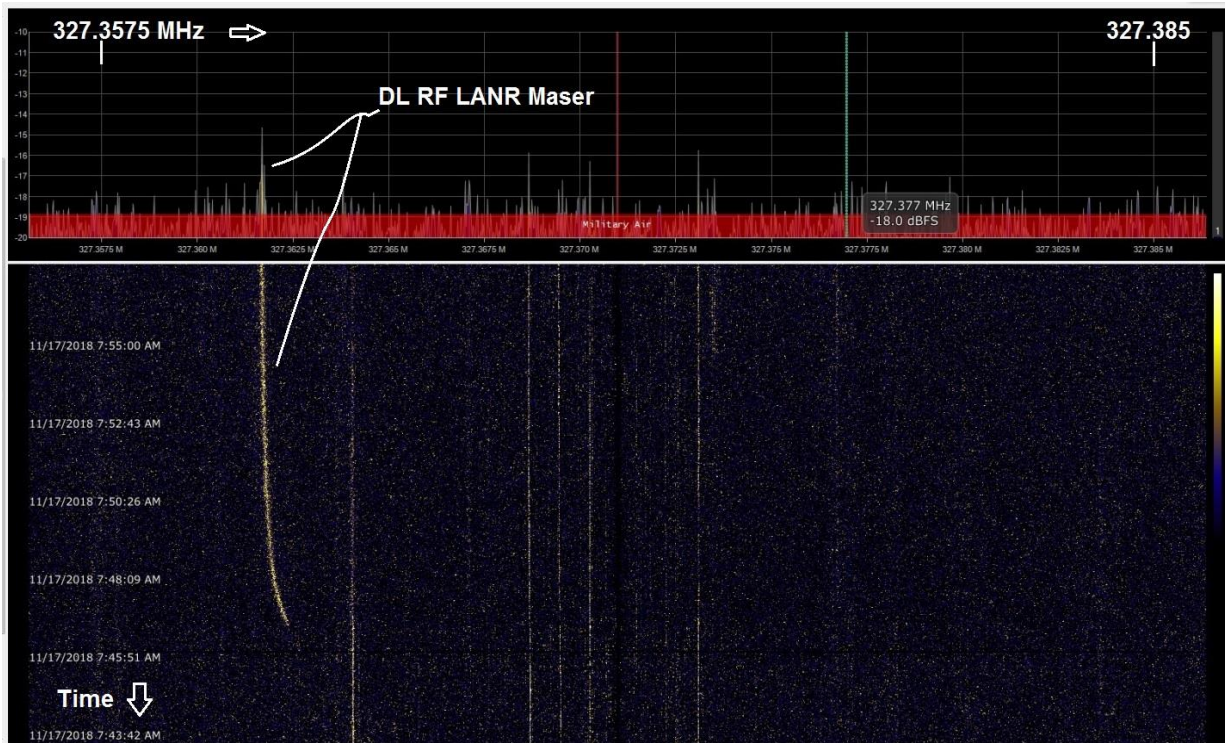


Figure 1 –Software Defined Radio Identification of LANR D-Line Maser Emission In this dual graph, there are two regions; in both, the frequency increases from left to right. The upper portion shows RF intensity peaks as a function of frequency (horizontal) at a single moment in time. On the bottom, each peak appears as a dot on a line for each one moment in time, and time increases from top to bottom, as in a waterfall. The DL RF CF/LANR maser emission line is indicated in both portions of the display.

[1] Swartz M. R., Verner G., Tolleson, J, Energy Gain From Preloaded ZrO₂-PdNi-D Nanostructured CF/LANR Quantum Electronic Components, JCMNSci. 13, 528 (2014).

[2] Swartz, M. R. G. Verner, J. Tolleson, P. Hagelstein, Dry, preloaded NANOR®-type CF/LANR components, *Current Science*, 108, 4, 595 (2015).

[3] The author thanks David Nagel and Bo Gardmark.