

# **Adler–Bell–Jackiw anomaly in electroweak interactions, the $3p^+ \rightarrow 3L^+$ process and links to spontaneous UHD decay and transmutation process**

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In the Oslo Norway lab, the (University of Iceland) PhD student Sindre-Zeiner Gundersen has succeeded in replicating Leif Holmlid's work to some degree with laser type of experiments [1]. After two years of hard work and rebuilding and testing, observations with the same behaviour as Leif has published started to emerge. This is indicating how rely hard it is to get the Ultra-Dense Hydrogen phases started up in an experimental lab and replication are therefore indeed very difficult.

These results from Sindre and Leif are not typical excess heat cold fusion results found in electrochemical Palladium cells. Here high energy particles are possibly seen in the experiments.

One very recent interpretation is disintegration of the proton into lighter particles in a process of 3N-proton  $\rightarrow$  3N-anti-lepton process. This process is allowed according to the Standard Model of High energy physics but has never been observed since it would need post big bang high temperature conditions to occur to high energy for LHC accelerator at CERN. This process could maybe solve one of the biggest remaining mystery in cosmology i.e. Baryogenesis. The hypothetical physical process that took place during the early universe that produced baryonic asymmetry, i.e. the imbalance of matter (baryons) and antimatter (antibaryons) in the observed universe.

This 3N-proton  $\rightarrow$  3N-anti-lepton process is driven by the Adler–Bell–Jackiw anomaly in electroweak interactions in the Standard model. Why it can occur in our experiments at room temperature condition is an obvious mystery, but first idea for solution could be quantum Bose Einstein condensation of the protons or neutrons inside the Ultra-dense phase of Hydrogen. Both the spontaneous and laser induced entanglement breaking when laser pulse impinges on the condensate.

In the poster, the question how random unreliable cold fusion results in Palladium experiments and this 3N-proton  $\rightarrow$  3N-anti-lepton process be related, will be addressed. Possible transmutation processes will also be hinted.

[1] To be published.

[2] Experimental Studies and Observations of Clusters of Rydberg Matter and Its Extreme Forms  
Leif Holmlid. J. Clust Sci (2012) 23:5–34 Holmlid, L. & Fuelling, S. J Clust Sci (2015)