

## Volcanism in Iceland, Cold fusion and Rydberg matter

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HOLUHRAUN eruption from Bardarbunga in Vatnajökull glacier in Iceland started August 2014 and ended 27 February 2015. The Holuhraun lava field measures more than 85 square km and the volume is around 1.6 km<sup>3</sup>. It is the largest eruption for over 200 years in Iceland or since the gigantic Lakagígar eruption 1783 in Iceland. An eruption that caused famine in Europe and started in the end the French revolution. The aerosol and gas emissions from the 2014–2015 Holuhraun were extraordinary, 11Tg of SO<sub>2</sub>[12]. The main aerosol concentration from the eruption found in Reykjavik at that time are SO<sub>2</sub> (25µg/m<sup>3</sup>) in addition to H<sub>2</sub>S, HCl aerosols [1]. Here, is presented strange correlation of conductivity measurements of Rydberg matter in the last month of the eruptions and after it, were no conductivity have been measured up to this day.

In Cold fusion and Palladium electrochemical results, there is a strange link of positive results of excess heat in countries and areas with active volcanism or high temperature geothermal area. The largest reported excess heat in cold fusion Palladium experiments was found by [Melvin Miles](#) [2] near China Lake in USA, very close to the largest geothermal power station [Cosco USA](#). Is it a coincidence that most active countries in Cold fusion research are volcanic countries such as USA, Japan and Italy? This link has not been noted strongly by the LENR research community. Are non-active palladium electrodes only found in experiments that have been far from geo-active areas?

In the article, **Thermal energy generation in the earth** by F. J. Mayer and J. R. Reitz [3] the possibility of existence of small H<sup>-</sup> ion (called Tresino by the author) is discussed. This particle or rather the Leif Holmlid's Ultra-Dense Hydrogen phase is then possibly causing some fusion processes to occur within the earth crust with geothermal heat and Helium as product and contributing to the 43TW thermal radiation energy of the earth.

The main contribution to thermal radiation energy of the earth and hence geothermal energy is thought to be coming from decay energy chain from Thorium and Uranium isotopes in the crust. This has been estimated with some rather large uncertainty with underground geo-neutrino detector experiments or the Borexino Collaboration [4]. Allowing still cold fusion to contribute to the thermal energy budget.

[1] Understanding the environmental impacts of large fissure eruptions: Aerosol and gas emissions from the 2014–2015 Holuhraun eruption (Iceland) Evgenia Ilyinskaya et Al. Earth and Planetary Science Letters Volume 472, 15 August 2017, Pages 309-322

[2] Rothwell, J., Introduction to the Cold Fusion Experiments of Dr. Melvin Miles. Infinite Energy, 1997. 3(15/16): p. 27.

[3] Thermal energy generation in the earth. F. J. Mayer<sup>1</sup> and J. R. Reitz Nonlinear Processes in Geophysics, 21, 1–12, 2014

[4] M. Agostini, S. Appel, G. Bellini and et.al. Phys. Rev. D 92, 031101(R) 2015