

Abstract Submitted
for the DPP15 Meeting of
The American Physical Society

Unmatter Plasma FLORENTIN SMARANDACHE, Univ of New Mexico — “Unmatter Plasma” is a novel form of plasma, exclusively made of matter and its antimatter counterpart. An experiment (2015) on matter-antimatter plasma [or unmatter plasma] was recently successful at the Astra Gemini laser facility at the Rutherford Appleton Laboratory, Oxford, United Kingdom. The experiment that was made has produced electron-positron plasma. The positron is the antimatter of the electron, having an opposite charge of the electron, but the other properties are the same. Unmatter is considered as a combination of matter and antimatter. For example electron-positron is a type of unmatter. We coined the word “unmatter” (2004) that means neither matter nor antimatter, but something in between. Besides matter and antimatter there may exist unmatter (as a new form of matter) in accordance with the neutrosophy theory that between an entity and its opposite there exist intermediate entities.

[1] G. Sarri, K. Poder, J. Cole, W. Schumaker, A. Di Piazza, B. Reville, T. Dzelzainis, D. Doria, L.A. Gizzi, G. Grittani, S. Kar, C.H. Keitel, K. Krushelnick, S. Kuschel, S.P.D. Mangles, Z. Najmudin, N. Shukla, L.O. Silva, D. Symes, A.G.R. Thomas, M. Vargas, J. Vieira and M. Zepf, Generation of neutral and high-density electron-positron pair plasmas in the laboratory, *Nature Communications* 6:6747 (2015); DOI: 10.1038/ncomms7747.

[2] Florentin Smarandache, “A New Form of Matter - Unmatter, Formed by Particles and Anti-Particles,” EXT-2004-182 in CERN’s web site, 2004.

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Date submitted: 24 May 2015

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