

Need Stable Fusion Reactions? Bombard the Plasma with Radio Waves

Source: [Giza Death Star](#)

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Mr. T.M. spotted this one, and it contains one of those “things that make you go, ‘Hmmm...’.” Scientists at Princeton claim they’ve found a new way to get rid of troublesome “magnetic islands” in plasmas that can destabilize fusion reactions. But wait until you see what it is:

[Scientists Discovered a New Way to Stabilize Fusion Reactions](#)

What’s the new technique? Just this:

The work, described in a [new paper](#) published in the journal Physical Review Letters, deals with a type of structure in plasma that researchers call a “magnetic island.” Magnetic islands can cause complex plasma disruptions capable of shutting down fusion experiments and even damaging reactors.

The researchers found that by bombarding plasma with radio-frequency waves while creating small fluctuations in its temperature, they could stabilize the material and prevent the dangerous magnetic islands from forming.

A second article goes into greater depth ([Scientists discover a process that stabilizes fusion plasmas](#)):

Researchers found in the 1980s that using radio-frequency

(RF) waves to drive current in the plasma could stabilize tearing modes and reduce the risk of disruptions. However, the researchers failed to notice that small changes – or perturbations – in the temperature of the plasma could improve the stabilization process, once a key threshold in power is exceeded. The physical mechanism that PPPL has identified works like this:

- *The temperature perturbations affect the strength of the current drive and the amount of RF power deposited in the islands.*
- *The perturbations and their impact on the deposition of power feedback against each other in a complex – or nonlinear – manner.*
- *When the feedback combines with the sensitivity of the current drive to temperature perturbations, the efficiency of the stabilization process increases.*
- *Furthermore, the improved stabilization is less likely to be affected by misaligned current drives that fail to hit the center of the island.*

If you've been a regular reader of my books over the years, this might sound vaguely familiar, as it did to me, for the idea of using radio frequency "bombardment" of a nuclear plasma is not new, nor, indeed, from the 1980s. As I detailed in my book *The Nazi International*, the claim sounds all too similar to that of former Nazi plasma physicist Dr. Ronald Richter, whom, it will be recalled, Argentine dictator Juan Peron introduced to a press conference in 1951 with the bold claim that Dr. Richter had figured out the process of controlling fusion. Needless to say, when Peron made his announcement, most of the world's press denounced the whole claim, with a few papers even going out of their way to consult other former Nazi scientists to render their negative verdict.

Suspicious, Peron started his own investigative committee,

headed by one of Argentina's own nuclear physicists, Dr. Jose Balseiro. Balseiro's report to Peron, which I detail in *The Nazi International*, makes for some very interesting reading indeed, for not only does he detail Richter's claims to be able to achieve fusion reactions at temperatures far below that thought to be necessary at the time (and, indeed, now), making Richter the first to make a "cold" fusion claim decades in advance of Pons and Fleischmann, but Richter also made the claim that he did this in a rotating plasma, and bombarding it with, you guessed it, radio waves. And all this months before the USA had exploded the world's first hydrogen bomb. Balseiro's report also details behavior by Richter that is, well, nothing less than bizarre, so bizarre in fact that it contributed mightily to his denunciations in the press, and by privately by Balseiro in his report to Peron, as a fraud.

Even more interesting was what was happening behind the scenes, for while the western press was busily piling on denunciations of Peron and Richter, and Balseiro was privately making his report, the U.S. Air Force quietly sent people to interview Richter, and that report too is a masterpiece of double-speak, roundly denouncing Richter as a fraud and mountebank on the one hand, and yet on the other, lauding him as some sort of "mad genius working in the 1970s", and stating that the man should be watched carefully, i.e., be constantly surveilled and spied upon. In short, the US agents did not, in the final analysis, know *what* to make of Richter, and covered both possibilities; "he's a fraud, but we'd better watch him closely, just in case he isn't."

Then came Philo Farnsworth's press conference in the mid-1960s, in which he reported he had sustained fusion reactions in a device no larger than a softball, using virtual anodes and cathodes as a means of containing, and stabilizing, his reactions. After his announcement, Farnsworth was shuffled quietly off the stage, and ITT said no more about his devices (which Farnsworth called a Fusor and a Plamator). Then, a few

years ago, Lockheed-Martin claimed to have built a fusion reactor which could fit on the back of a truck, and released a picture of a device that looked suspiciously like Farnsworth's Fusor and Plasmator patents. Go figure.

Bottom line? Whatever is going on in the world of fusion, my bet is we're not being told the full story, and it's articles like these that make me wonder if, in fact, it's been around for some time.

See you on the flip side...