19 July 2006

Dr Philip Campbell
Editor-in-Chief, *Nature*
4 Crinan Street
London N1 9XW

Dear Dr Campbell,
Energy from fusion – the unreachable star
There is now hard evidence to show that nuclear stability can drastically change in harsh environments, thus casting serious doubts, to say the least, on the very fundamentals of conventional high-energy fusion theory. It has, however, come as no surprise to my own research which also shows that fusion efficiency is not attainable in Earth space *even in principle*.

I am submitting herewith a paper on this crucial issue for publication in your esteemed journal. Do kindly include it in the Peer Review Trial server as well. The subject being of international concern also to the taxpaying public at large, the open web review could not have come at a better time for the paper's global reach and critique, which, I'm confident, will lead to its early acceptance.

Letters highlighting these fundamental problems were sent to many in the fusion community, including the seven EFDA Participant Team Leaders. The most unexpected, yet reassuring, response came from Princeton. In confidence here, Dr Ned Sauthoff, who is one of those seven leaders and also the US ITER Project Manager with many years experience at the DOE Princeton Plasma Physics Laboratory, was quite accommodative of my views in the many e-mails we exchanged on the subject. His last, dated 4 June 2006, in response to a query, was: "Thank you for your note. We in the US ITER Project Office have not ignored your concerns and the references you cited. I have sent the information to our chief scientist for his views and am awaiting his findings. Ned" Perhaps, Dr Sauthoff will not mind letting you in on those views and also being a referee to this paper.

A second referee I could suggest is Dr Duarte Borba, EFDA Head of Office and Associate Leader for JET, Culham Science Centre, Abingdon, UK. His response was also on behalf of Dr Jerome Pamela, EFDA Leader; and Dr Maurizio.Gasparotto, EFDA Associate Leader for Technology. The many e-mails that followed here, too, were most helpful to this paper even though Dr Borba maintained a defensive posture for the ITER project, unlike Dr Sauthoff who was neutral. (Although Drs Sauthoff and Borba may not be totally unbiased or free of all vested interests, they would still be second to none in commenting on the paper with authority for *your* impartial judgment.)

As the International Atomic Energy Agency put it on the disturbing empirical findings [Bosch, F. *et al*. *Phys. Rev. Lett.* **77**, 5190-5193 (1996); Jung, M. *et al*. *Phys. Rev. Lett.* **69**, 2164-2167 (1992)], "these factors have implications in nuclear structure as well as in astrophysics" (http://www-nds.iaea.org/reports-new/indc-reports/indc-nds/indc-nds-0399.pdf}. Not surprisingly, the detailed look into the workings of the atomic nucleus here shows also this obvious extension into the universe at large. The ramifications of the paper are thus truly and

literally – cosmic; and the simplicity of it all, with illustrative figures, should be enthralling even the lay. Hope you will make an exception if you must to consider this submission favourably for the full peer review process. **Though the paper may now seem controversial, I can only say that in all sincerity the model I have presented here has the power to win over even the harshest of critics – but with the greatness of heart to *read it fully* and ask for any required clarifications.**

"But [Fred] Hoyle could, in essence, have been right: his only error was not to think on a grand enough scale. Our entire observable universe could be an 'oasis' in a grand ensemble of other universes. Although we cannot observe them (and they may be for ever inaccessible) other universes are a natural expectation from current cosmology. Moreover, many features of our universe that otherwise seem baffling fall into place once we recognise this."
"To appear so bright at such great distances, quasars would have to outshine entire galaxies even though they are energized by something smaller than our Solar System. They undergo outbursts, which are equivalent to turning on 10,000 galaxies like our own within a single day. How this happens is still poorly understood."

These are words of none other than Sir Martin Rees, Astronomer Royal, on pages 27 and 45 of his book, *Before the Beginning Our universe and others* (Simon & Schuster, UK, 1997). Through such writings of his, I found him not dogmatic at all about present day concepts. Perhaps, he, too, would be a good referee here to comment especially on the larger picture I have presented in Part 1 of the paper. (He may not know about me even though *Discover* had a feature on me and my work in their April 2002 issue – as a counterpoint, perhaps, to Prof Alan Guth's work on the cover story of that same issue!).

I am an engineering consultant by profession, having also worked for some leading UK- and US-based international project management consultancies in the past; I hold a Canadian passport.
Thank you and best regards.
Yours sincerely,
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