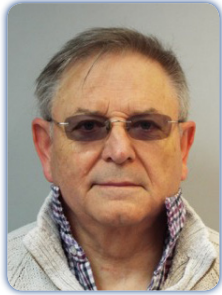


International conference on

# ATOMIC, NUCLEAR AND PLASMA PHYSICS

November 19-20, 2018 Sydney, Australia



## *John Owen Roberts*

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### **A quantum framework for the periodic table**

The mathematics of quantum physics from the standard model using groups  $U(1) \times SU(2) \times SU(3)$  and the Pauli Principle produces two sets of time independent quantum states  $n(n+1)$  and  $n(n-1)$  where  $n$  is the principal quantum number. Oscillations between these states results in a one to one mapping with the Roberts-Janet nuclear periodic table by interpretation of  $n > 0$  for condensed matter and  $n < 0$  for plasma prior to fusion. The mechanism provides a framework for periodic tables for every supernova by excluding mass number. In the lower half of the table occupation by bosons leads to increased energy density following recycling. A suggestion of suitable heavy nuclei to stimulate fusion is proposed.

### **Biography**

John Owen Roberts has completed his Graduation in 1969 with a BSc (Hons) in Physics from The University of Liverpool. He has been an Open University Tutor for 30 years and a private tutor of Math and Science. He is the author of *Those Infinities* and the *Periodic Table* (ISBN 978-0-9934667-3-1).

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