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#### A QUANTUM CONNECTION IN THE PERIODIC AND ROBERTS-JANET TABLES

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The time independent quantum states in the Periodic Table are inverted to accommodate spatial variation relative to the nucleus. From groups U (1) x SU (2) x SU (3) including the Pauli principle the mathematics of quantum physics from the standard model produces two sets of time independent quantum states in the gauge potential n(n+1) and n(n-1) where n is the principal quantum number. Oscillations between these states result in a one-to-one mapping between this quantum mechanical table and the Roberts-Janet nuclear periodic table by interpretation of positive n values for condensed matter and negative n values for plasma prior to fusion. A model of string theory at the nuclear end of the table is discussed merging into quantum loop gravity at the condensed matter end of the table. Having discussed a possible route back to the big bang, the structure of both the Periodic and Roberts-Janet Tables is analysed including repeating patterns of 8,18,32 and the energy orbitals of the transition and lanthanide/actinide elements.

## BIOGRAPHY

John Owen Roberts is graduated in 1969 with a BSc (Hons) Physics from the University of Liverpool. He has been an Open University Tutor for 30 years and a private tutor of Maths and Science.

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