

Mark Tregellen

# The Dimensional Boundary Chord Model of the Nucleus

A New Look At Atomic Structure

Volume 1  
Cosmological Origins



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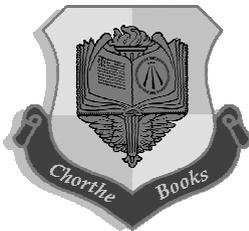
*THE CHORTHE PROJECT*

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*This work  
is a summary  
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independent research  
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and  
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# Preface to this edition

This work is based on the initial findings of an independent and ongoing research program that was begun in the summer of 2002. During the compilation of what was originally intended to be a series of introductory papers on what has now been dubbed *the dimensional boundary chord model of the nucleus*; I received quite a lot of rather poignant criticism regarding my motivation. Is this all really necessary and does a model such as this serve any purpose at all? If something isn't broken in the first place, then why would you still try to fix it anyway? There were also the obvious question of course, like why have you called them *boundary chords* and what have *dimensions* got to do with it all?

These were all quite justifiable questions and to be perfectly frank, apart from the last two, *all* a little difficult to answer. I could of course, have simply said "why not", but that kind of response didn't address any of the points I was particularly trying to make and would also fail to give any real explanation as to *why* I was spending my time on this project in the first place. There was (and still is) quite a lot I wanted to say.

'Why' and 'how' are probably the real motivating factors behind most trains of enquiry and they can both be very complex questions. The proper way of science however, is not to get *too* involved with either of them and to tackle only those questions that can be proved or disproved through a process of observation and experimentation (the bigger picture can slowly be built up from there). Everything else lies a little too uncomfortably close to the borders of speculation and to be quite honest; this work probably falls a little *TOO* close to that border. In its defence though, it does try to tackle a distinct 'why' and 'how':

- a. *Why do the elementary particles have the properties they do?*
- b. *How would a universe need to evolve in order to result in one that comprises at least three spatial dimensions?*

These two seemingly separate questions are in my mind, closely linked - and each is but a different side to the same coin. It could easily be argued that such an undertaking cannot be tackled effectively in the true manner of science as many of the concepts that will be introduced into this book are for the moment at least, difficult to prove and are thus speculative and must be treated with caution. This is true in a sense, but again in my own defence, there can be no harm in it. My purpose is to simply air an idea and I fully accept the fact that it may or may not be received favourably.

The questions of 'why' and 'how' will manifest themselves as two distinct threads that run throughout this book. The first will be a new definition of the 'waves', which will be placed in a dimensional context - and the second will be a re-mapping of both the proton and the neutron that will take account of an origin that involved a process called *dimensional differentiation*. As a result, perhaps the most unconventional claim of this work will be its lack of dependence on the quarks, which effectively become redundant within this model.

This book's purpose then is simply one of communication and although still in its early or embryonic stages, the *dimensional boundary chord model of the nucleus* is offered out for examination in the hope that it may spark an interest in groups or individuals who are a lot cleverer than I am. As for the last two questions cited at the end of the first paragraph - all will hopefully become clear in the coming chapters.

Mark Tregellen  
London  
2011

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