

CASSIOPEIA'S ToE

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PROJECT INTRODUCTION

Cassiopeia's ToE is a follow-on adjunct of the Cassiopeia Project. That Project created videos that visualized established science knowledge in many fields. But there is a fundamental difference with a Theory of Everything – a “ToE” – because the science is far from established.

So let's be very clear up front – Cassiopeia's ToE is an attempt to visualize an idea that is new, untested, and unconfirmed by anyone other than the author – me. So it should be approached with considerable caution. Question everything.

But that being said, this visualization doesn't appear to contradict or change or modify the mathematics behind any of the currently accepted theories of General Relativity or the Standard Model or the Lambda-Cold-Dark-Matter Model of the universe. And it does contain a remarkable new idea about space-time that seems to make it possible to visualize some of that very difficult math.

The idea came about while I was trying to understand exactly where and why General Relativity conflicts so violently with the theories of the fields and forces in the Standard Model. Why is Gravity so difficult to quantize?

I began some 18 months ago to think seriously about what is meant by a “curved space”. Einstein created a remarkably accurate and successful theory that doesn't need “forces” or exchanged particles of energy and momentum to function. The model for the other forces has, at its heart, fields of virtual particles that are exchanged during interactions of any kind.

Einstein says space-time is a malleable, bendable, thing described by a metric tensor. But what exactly is it that is bent, stretched, concentrated? It must be something physical if it ultimately influences the paths of light and material objects that travel across it.

The thought that followed was this one: If the force of gravity can be interpreted as a distortion of space-time, can the other forces be interpreted as space-time distortions as well? And if so, is it the SAME space-time that is being distorted?

Cassiopeia's ToE results from answering those 2 questions.