

ID ZGV-0-01  
 Title About the ZGV Project  
 Stage Background Information

## Abstract

ZGV is a naïve concept leading to a GUT and is here presented in stages. The successes of the method are: an arrow of time; gravity from charge; new physics concepts and testable predictions.

## Preamble

1. Physics is seen as: boring to most, over-complex, fragmented and “bogged down” (i.e. stuck)
2. Physics methods and process are far too maths biased, perhaps incestuously so
3. New blood and new approaches are needed - a simplified teaching tool was felt appropriate
4. The author enjoyed the project as a distracting pass-time.

## Description

The problems facing physics are well known - essentially, progress has been slow of late.

The general public remain but passingly interested, seeing the discipline as remote and not meaningful to them - disconnected from everyday life.

Physics seems fragmented, lacking ready dialogue between areas. These rifts mirror the scale of the Universe. Most notorious is the defiance of gravity to be shown as part of the EM family.

The author has an engineering background with no higher maths - yet is aware of the need for rigour, proof and testability. He reads physics books, frequently uses a whiteboard - and on occasion his brain.

ZGV started as a teaching tool to pictorially answer an EM question in terms of curved space - but was allowed to get out of hand, as the technique was making progress. The method offers a broad view of reality, working by predicting classes of phenomenology through analysing the drivers of cause and effect. Maths can be applied; ZGV is a deterministic system.

ZGV applies a single structure with rule sets in a series of “abstraction layers”, some of which are very familiar. From a few assumptions and rules ZGV derives “from below” in steps:

- a seemingly point-originating Universe
- which inflates endlessly, continually accelerating
- as a 3-structure based on a virtual 4th (space and perceived time, intimately connected)
- with an explicit cooling mechanism
- generating plain particles with familiar internal structures
- causing an analogue of charge
- causing an analogue of gravity in +g and -g modes with 2-part operational principle
- correctly curving spacetime as is well-known, complete with time dilation
- analysing +g to decompose acceleration produces long known mechanical motional effects
- apparently duplicating SR / Lorentzian effects

The model has been used to pick apart the Allais Pendulum phenomena noticing attendant time anomalies (which are reported) plus the intermittent nature of the effect (local geography matters). Other well-known phenomena are predicted e.g. the electromotor from +g analysis of “forces”.

Insights and new phenomena abound, the principle one being “Time Distension”, a speeding-up of time or “inverse of time dilation” found in -g space. This connects to several effects e.g. Pioneer.

The advent of a worthwhile and useful arrow of time is, in itself, a boon and has impact on our understanding of the ontology of spacetime.

The method has no major conflict with SM - yet ZGV is not complete. QM is apparent i.e. the model says “something lurks down this route” - but is unapproachable due to the mathless method.

So, what method is taken? The author envisioned likely simple building-blocks for the Universe and projected from that, using known phenomenology as tests to form insights and to establish rule sets. The method as adopted seemingly covers SM well - and has much to say about the gaps in SM. Note: finding an arrow of time and the root of gravity were fortuitous; they “dropped out”.

#### Headlines from ZGV

- \* Space and time and particles and forces can be successfully derived from the same base
- \* space seems volumised, pressurised and plastic
- \* time is a virtual 4th D, so not truly existent. A Universal “now” plus “local rate of ageing” exists
- \* local differences in spacial pressure and dynamics set local tempo and SR frame
- \* gravity seems a cloud-like dynamic effect. The discovery of an ongoing volume loss at mass causes space to “recess-in”, coupled with a pressure hike which slows tempo as mass is approached
- \* magnetism is rotating dragged space (likely circling clockwise for North)
- \* our Universe seem to be nested (stacked) in both macro and micro directions - we are built of micro-Universes and in turn may be but one building-block for macro-Universes.

#### Pros and Cons

No proof of ZGV has been attempted as yet.

Testing though should be straightforward; new phenomena and causal tie-ins are predicted.

This is a simple approach and although jargon and new ideas intrude, it may teach bright teens.

#### Afterword

ZGV is naïve thus likely wrong in detail (or - just wrong!) but has been fun. Physics is great!

Finally, a dedication. To all those who struggle with the great truths, of this day and the past.

*“Please stoop down, dear Giant!  
that we may climb up on your shoulder once more  
again to gaze afar.”*