

## **Non-Orientation of Space-Time Proves M-Theories Compacted or Embedded Regions**

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**Abstract:** It is shown by a different application of the non-orientation to time theory, commonly referenced as Non-Locality, that embedded regions similar to those proposed under M-Theory must exist and experimental evidence of such.

**Keywords:** Non-Locality, faster-than-light, time theory.

If space-time is both 4 dimensional and contains embedded regions composed of a 4D frame in which the local value of C is not the same as in the combined solution, then it would follow that:

- 1) Locally 4D space-time is always orientable.
- 2) For a comparison on the two sub-space regions there will exist a path along which a consistent orientation cannot be defined.
- 3) This makes the combined system non-orientable because through every point there will exist a path for which no orientation can be defined.

Any experiment then, that probed or utilized such a path, would display non-locality. To validate the non-orientation of space in regards to time, all we need is one example that focuses on some point R outside of the local orientation. Such an experiment does exist in the form of quantum entanglement. A photon, once entangled, can be moved to some point R outside of the lightcone of an event that transpires at a local point that we shall call A, and though after that event its normal light signal will have only reached point B, the event will affect our photon at the remote point R. For this to take place some signal, non-orientable to time in the usual 4D format, must have taken place. This implies a faster-than-light condition must exist for the signal to arrive at R. It also implies that on some fundamental level, all points in space-time must intersect with each other. If they intersect, then time orientation does not exist, thus any system of time orientation can only apply at the combined 4D space-time level or at some manifold shy of the ultimate level of motion. Since that 4D level is known to be the Lorentz invariant, it must obey the confines of that system, yet, those embedded sub-space manifolds will not follow that same Lorentz constraints.

For the ultimate level of motion within this system, since all points are connected, there can be no absolute point of reference. However, in levels short of that point there can be an orientation which is itself a point of reference. If we go from that infinity to the absolute point of rest with zero motion then the two extremes of reference are zero time (since no motion equates to no time) to zero time again since all points being connected implies zero time.

The universe as we know then becomes the sum of two zeros combined together. This also establishes an experimentally supported proof that embedded sub-space regions do exist. At the same time this does not violate relativity since such embedded regions would form a special frame of reference outside of the confines of relativity itself.

**Reference:**

- 1.) [http://xxx.lanl.gov/PS\\_cache/gr-qc/pdf/0202/0202031.pdf](http://xxx.lanl.gov/PS_cache/gr-qc/pdf/0202/0202031.pdf)

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