

Geometric Manifolds and the Shape of Space

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Outline

1. Geometric 2-Manifolds

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Introduction

- A **Geometric 2-Manifold** is a connected surface that is locally isometric to either the Euclidean plane, hyperbolic plane, or sphere.
- Cones (excluding cone point), Cylinders, and Tori are examples of flat 2-manifolds

Conclusion

- The orientation of the temperature patterns of these sets hint at the gluings of the 3-Manifold Universe, and ultimately the geometric structure.
- NASA's Wilkinson Microwave Anisotropy Probe (WMAP) mapped out the CMB and its temperature patterns from 2001 to 2010.
- Results showed that Universe should hold properties similar to Euclidean Geometry

Questions?