

A loop in the “space of diameters on a sphere” (a.k.a. the projective plane) that cannot be shrunk to a point.

A loop in the projective plane that can be shrunk to a point, in a similar way that the equator on a sphere can be shrunk to a point.

A movie illustrating the shrinking of the above loop on the projective plane. Over time, it shows four iterations of deformed versions of that loop as it shrinks to a point.