

## **Cosmic strings:**

are hypothetical 1-dimensional topological defects which may have formed during a symmetry-breaking phase transition in the early universe when the topology of the vacuum manifold associated to this symmetry breaking was not simply connected.

## **Cosmic string Wake**

long strings moving perpendicular to the tangent vector along the string give rise to “wakes” behind the string, i.e. in the plane spanned by the tangent vector to the string and the velocity vector