

The topology of singularities of caustics and wave fronts

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The talk is devoted to the topology of simple singularities of stable Lagrangian and Legendrian mappings. In particular, we will speak on new results about the manifolds of singular points of a fixed type in a stable real caustic germ of type E_6 . It is proved that every connected component of the manifold of singular points which are not points of the transversal intersection of smooth branches of the caustic is contractible. We calculate the number of these components.