

1147-53-677

Shinji Ohno and **Takashi Sakai*** (sakai-t@tmu.ac.jp), 1-1 Minami-Osawa, Hachioji-shi, Tokyo 192-0397, Japan, and **Yasunori Terauchi**. *Antipodal sets of generalized s -manifolds*. Preliminary report.

B.-Y. Chen and T. Nagano investigated polars and antipodal sets of compact symmetric spaces. In this talk, we give the definition of a generalized s -manifold, which has symmetries isomorphic to a group at each point, as a generalization of symmetric spaces. For a generalized s -manifold, we introduce the notions of polar and antipodal set, and define a geometric invariant, which we call the antipodal number, as the supremum of cardinalities of antipodal sets. We show that a flag manifold consisting of sequences of subspaces with inclusion relations in a vector space admits structures of generalized s -manifolds, and determine maximal antipodal sets and the antipodal number. We mention that the antipodal number of the flag manifold is related to its topology. (Received January 28, 2019)