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### **Maximal Antipodal Sets of $F_4$ and $FI$**

We explicitly classify congruent classes of maximal antipodal sets of  $F_4$  by using the Jordan algebra  $H_3(\mathbb{O})$ . Moreover, we give a realization of the compact symmetric space of type  $FI$  as a totally geodesic submanifold in a Grassmannian  $G_{15}(H_3(\mathbb{O}))$ , where  $G_{15}(H_3(\mathbb{O}))$  is the set of all subspaces of dimension 15 in  $H_3(\mathbb{O})$ . In this realization, we explicitly classify congruent classes of maximal antipodal sets of  $FI$ .

**Keywords:** Antipodal set, symmetric space, compact Lie group.

**MSC:** 53C35, 22E40.