Huckleberry, Alan T.; **Fels, G.**

A characterization of K-invariant Stein domains in symmetric embeddings. (English)

Zbl 0790.32030

Ancona, Vincenzo (ed.) et al., Complex analysis and geometry. New York: Plenum Press. The University Series in Mathematics. 223-234 (1993).

Let K be a connected compact Lie group and let G be its complexification. Let X be an irreducible normal Stein space equipped with a G-action. If G has an open orbit in X that is a complex symmetric space, then X is called an affine symmetric embedding. Each such X possesses an essentially canonical closed complex subvariety D that is an affine torus embedding with respect to a certain subgroup of G such that $K \cdot D = X$.

The main result of the paper is the following theorem: Let Ω be a connected K-invariant domain in an affine symmetric embedding X. Then Ω is Stein if and only if $\Omega \cap D$ is Stein and connected.

For the entire collection see [Zbl 0772.00007].

Reviewer: A.Russakovskii (Khar'kov)

MSC:

32M05 Complex Lie groups, group actions on complex spaces
32M15 Hermitian symmetric spaces, bounded symmetric domains, Jordan algebras (complex-analytic aspects)
32E10 Stein spaces, Stein manifolds

Keywords:

K-invariant Stein domains; affine symmetric embedding