1086-53-1486 **J. Arlo Caine*** (jacaine@csupomona.edu) and **Doug Pickrell** (pickrell@math.arizona.edu).
Homogeneous Poisson Structures on Symmetric Spaces.

Applying a general construction in Poisson geometry due to Evens and Lu, we compute in an explicit way Poisson structures on compact and dual non-compact type symmetric spaces which are determined by the choice of a compact real form and a Borel subalgebra of the Lie algebra of the common complexification of the their isometry groups. This decomposes each such symmetric space into a union of symplectic manifolds, each of which turns out to support a natural completely integrable system. A corollary of our calculations is that the hamiltonian system arising in the noncompact case is isomorphic to the generic hamiltonian system arising in the dual compact case. (Received September 22, 2012)