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Derek Habermas* (habermds@potSDam.edu). *Decompositions of compact symmetric spaces.*

Let U/K be a connected, compact symmetric space, θ an involution of U that fixes K , G the complexification of U , and $\phi : U/K \rightarrow U \subset G$ the Cartan embedding. Intersecting $\phi(U/K)$ with the Bruhat decomposition of G , corresponding to a θ -stable triangular factorization of the Lie algebra of G , gives us a decomposition of the symmetric space indexed by the Weyl group W of G . We will show explicit computations of representatives, in the normalizer of a maximal torus in U , of the connected components of the generic part of this decomposition. We will also discuss necessary and sufficient conditions to determine if a given $w \in W$ corresponds to a cell that has a non-empty intersection with $\phi(U/K)$. (Received September 25, 2012)