

**Petr Somberg**  
***BGG sequences on spheres***

Comment.Math.Univ.Carolinae 41,3 (2000) 509-527.

**Abstract:** BGG sequences on flat homogeneous spaces are analyzed from the point of view of decomposition of appropriate representation spaces on irreducible parts with respect to a maximal compact subgroup, the so called  $K$ -types. In particular, the kernels and images of all standard invariant differential operators (including the higher spin analogs of the basic twistor operator), i.e. operators appearing in BGG sequences, are described.

**Keywords:** BGG sequences, invariant differential operators, branching rules,  $K$ -types, complexes, homogeneous spaces

**AMS Subject Classification:** 35P15, 43A85, 22E46