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**Marcin Bownik\***, Department of Mathematics, University of Oregon, Eugene, OR 97403, and  
**Karol Dziędziul.** *Smooth orthogonal projections on sphere.*

We construct a decomposition of the identity operator on the sphere  $\mathbb{S}^d$  as a sum of smooth orthogonal projections subordinate to an open cover of  $\mathbb{S}^d$ . We give applications of our main result in the study of function spaces and Parseval frames on the sphere. (Received September 17, 2014)