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Let f be a meromorphic function and let $f^\# = |f'|/(1 + |f|^2)$ be its spherical derivative in the unit disk \mathcal{D} . The function f is normal if $\sup_{z \in \mathcal{D}} (1 - |z|^2) f^\#(z) < \infty$. For $0 < p < \infty$, f belongs to the spherical Besov class $B_p^\#$ if $\sup_{z \in \mathcal{D}} \int \int_{\mathcal{D}} (1 - |z|^2)^{p-2} (f^\#(z))^p dx dy < \infty$. It is shown that for $0 < p < 1$, $B_p^\#$ is clearly different from the analytic Besov space, $B_1^\#$ contains only either constant or non-normal functions and for $1 < p < 2$, $B_p^\#$ contains both some non-constant normal functions and non-normal functions. Further, for $1 < p < \infty$, functions in $B_p^\#$ are described in terms of spherical oscillations. (Received January 28, 2008)