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Dmitry Ryabogin* (ryabogin@math.kent.edu). *On a continuous Rubik's cube.*

Let f and g be two continuous functions on the unit sphere, S^{n-1} , $n \geq 3$, and let their restrictions to any one-dimensional great circle E coincide after some rotation ϕ of this circle: $f(\phi(\theta)) = g(\theta) \forall \theta \in E$. We prove that in this case $f = g$ or $f(\theta) = g(-\theta) \forall \theta \in S^{n-1}$. This answers the question posed by Richard Gardner and Vladimir Golubyatnikov. (Received August 26, 2013)