1154-74-1977 **Peter D Dragnev*** (dragnevp@pfw.edu), Department of Mathematical Sciences, Purdue University Fort Wayne, 2101 E. Coliseum Blvd., Fort Wayne, IN 46805, and **Oleg R Musin** (oleg.musin@utrgv.edu), School Mathematical and Statistical Sciences, University of Texas Rio Grande Valley, One West University Boulevard, Brownsville, TX 78520. *Log–optimal $(d+2)$-configurations in d–dimensions.*

We enumerate and classify all stationary logarithmic configurations of $d+2$ points on the unit sphere in d–dimensions. In particular, we show that the logarithmic energy attains its relative minima at configurations that consist of two orthogonal to each other regular simplexes of cardinality m and n. The global minimum occurs when $m=n$ if d is even and $m=n+1$ otherwise. This characterizes a new class of configurations that minimize the logarithmic energy on $\mathbb{S}^{d-1}$ for all d. The other two classes known in the literature, the regular simplex ($d+1$ points on $\mathbb{S}^d$) and the cross polytope ($2d$ points on $\mathbb{S}^d$), are both universally optimal configurations. (Received September 16, 2019)