[Problem#11048] *Proposed by Matthias Beck, Marcin Mazur, and Shelemyahu Zacks, Binghamton University (SUNY), Vestal, NY.* Let S be a sphere of radius 1. The *spherical segment* AB with end points $A, B \in S$ is the shorter of the arcs of the great circle passing through A and B (so this is well defined for $A \neq B$ which are not antipodal; if A and B are antipodal, we have two spherical segments with ends A, B). The spherical distance $d(A, B)$ between A and B is the length of the spherical segment AB. Given three points A, B, C no two of which are antipodal, the *spherical triangle* ABC is the union of the spherical segments AB, AC, BC, which are called sides of ABC. We say that a spherical triangle is *ordinary* if its diameter (in the spherical distance) is equal to the largest of the lengths of its sides. Prove that a spherical triangle with sides of length s_1, s_2, s_3 is ordinary iff at most one of the inequalities $\cos s_i \cos s_j > \cos s_k$, i, j, k an even permutation of $1, 2, 3$, holds.