1117-52-363   **Ferenc Fodor*** (`fodorf@math.u-szeged.hu`), Department of Geometry, Bolyai Institute, University of Szeged, Aradi vertanuk tere 1, Szeged, 6720, Hungary. *On some covering and extremal problems on the sphere.*

We will consider some covering and extremal problems on the unit sphere in 3-space. In particular, we will prove a lower bound for the minimum width of n equal zones (spherical segments symmetric with respect to the centre of the sphere) that can cover the sphere. We will also find an upper bound for the maximum of the sum of the pairwise angles of n unoriented lines in 3-dimensional space. These two results are joint with V. Vígh (University of Szeged, Hungary) and T. Zarnócz (University of Szeged, Hungary). Moreover, we will investigate the approximation properties of a spherical convex disc by convex n-gons with respect to various measures of distance. (Received January 18, 2016)