DIAMETER BOUNDS FOR EQUAL AREA PARTITIONS OF THE UNIT SPHERE[*]

PAUL LEOPARDI[†]

Abstract. The recursive zonal equal area (EQ) sphere partitioning algorithm is a practical algorithm for partitioning higher dimensional spheres into regions of equal area and small diameter. Another such construction is due to Feige and Schechtman. This paper gives a proof for the bounds on the diameter of regions for each of these partitions.

Key words. sphere, partition, area, diameter, zone

AMS subject classifications. 11K38, 31-04, 51M15, 52C99, 74G65