

## COMPLEXITY OF SUPERGRANULAR STRUCTURE

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We employ fractal analysis to study the complexity of supergranulation structure using the Solar and Heliospheric Observatory (SOHO) dopplergrams. Our data consists of 200 visually selected supergranular cells, for which we find a broad, slightly asymmetric dispersion in the size distribution, with the most probable size around 31.9 Mm. From the area-perimeter relation, we deduce a fractal dimension  $D$  of about 1.25. This is consistent with that for isobars, and suggests a possible turbulent origin of supergranulation. By relating this to the variances of kinetic energy, temperature and pressure, it is concluded that the supergranular network is close to being isobaric and that it has a possible turbulent origin.

Also we are examining the fractal dimension of the supergranular structures using the solar maximum data.