



High resolution false-color image obtained at a frequency of 4.7 GHz by the Very Large Array radio telescope (VLA) of the 'quiet sun' at a resolution of 12 arcseconds, from plasma emitting at 30,000 K. The brightest features (red) in this false-color image have temperatures of about 100,000 degrees K and coincide with sunspots. The green features are cooler and show where the Sun's atmosphere is very dense. At this frequency the radio-emitting surface of the Sun has an average temperature of 30,000 K, and the dark blue features are cooler yet. (Courtesy: Stephen White, University of Maryland, and NRAO/AUI).

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Answer: The sun disk is about 115 millimeters in diameter so the scale is $1,300,000 \text{ km}/115 \text{ mm} = 11,300 \text{ km/mm}$. The smallest features are the dark blue 'freckles' which have about 1-2 millimeters across, corresponding to a physical size of 11,000 to 23,000 kilometers. This is about **1 to 2 times the size of Earth**.