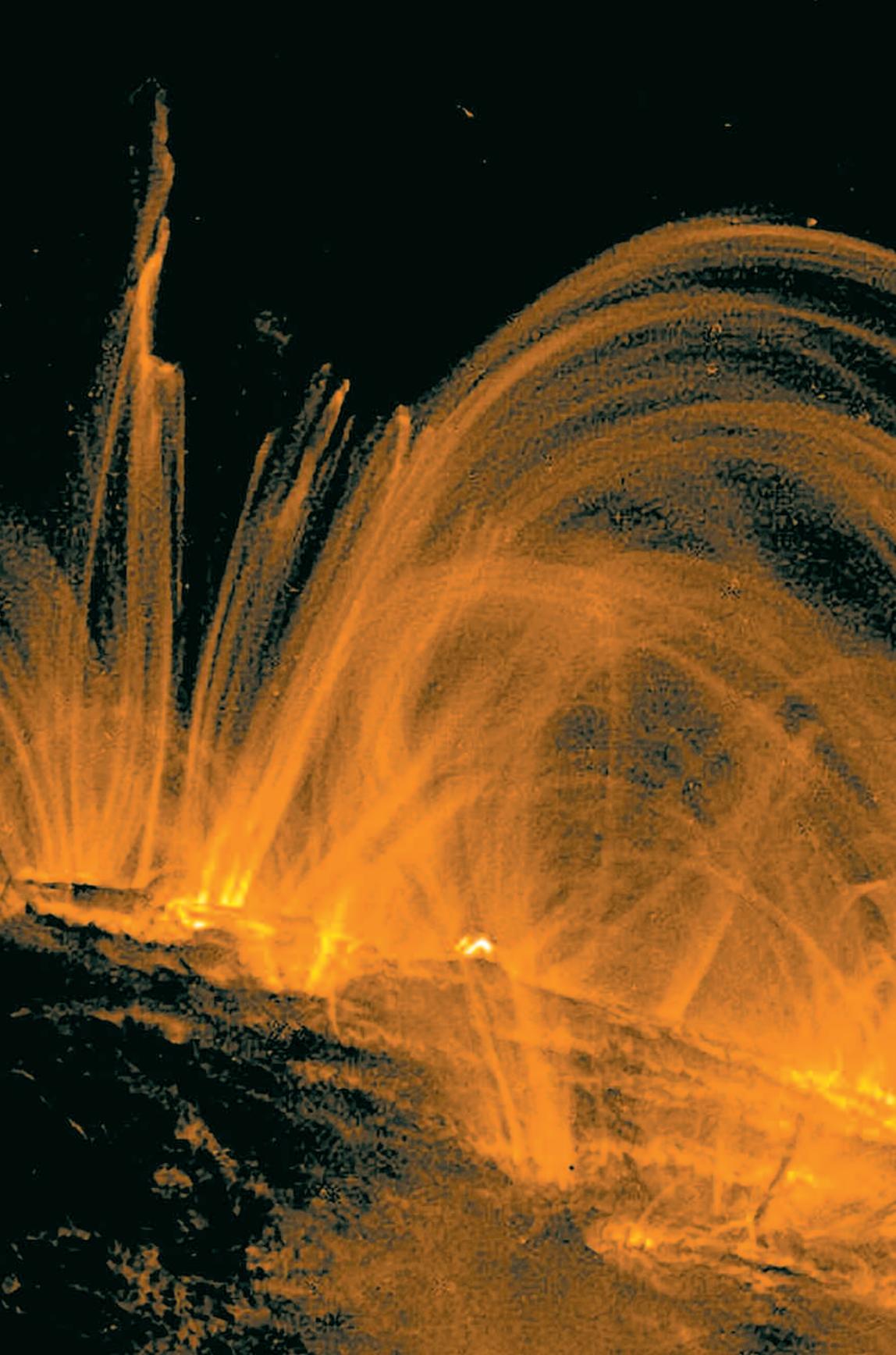


Our Sun



Equatorial Diameter: 865,278 miles; 1,392,530 km

Mass: 332,946.0 Earth masses or 4.3860×10^{30} pounds;
 1.9891×10^{30} kg

Average Density: 1.41 gm/cm³ (water is 1.00 gm/cm³)

Rotation: 25.38 days at the equator and 35 days near the poles.

Below a depth of 124,000 miles (200,000 km) the Sun appears to rotate at a stable 27 days, from equator to poles.

Inclination of Axis to Earth's Orbit: 7.25°

Visual Magnitude: -26.75

Absolute Magnitude: +4.82 (This would be the magnitude of the Sun if it were placed at a distance of 10 parsecs from Earth. This distance is used to compare the actual magnitude of *all* stars.)

Temperatures: Surface temperature averages 10,000° F (5,500° C; 5,800K). Sunspots are cooler areas on the surface and average 6,300° F (3,500° C). The Sun's core is estimated to reach 27,000,000° F (15,000,000° C)

Star Classification: G2 V (The **G** refers to the spectral classification scale O•B•A•F•G•K•M•R•N•S where O are the hottest and S the coolest stars. The **2** refers to a finer 0–9 subtype of the spectral scale and the Roman numeral **V** indicates that the Sun is a typical star in its class.)

Energy Output: 3.85×10^{26} watts. Energy just outside Earth's atmosphere is 1.37 kilowatts per square meter.

Solar Wind Speed near Earth: about 280 miles/sec; 450 km/sec.

Travel time from the Sun to the Earth is about 4 days.

Composition: 92.1% Hydrogen, 7.8% Helium, with traces of Oxygen (0.061%), Carbon (0.030%), Nitrogen (0.0084%), Neon (0.0076%), Iron (0.0037%), Silicon (0.0031%), Magnesium (0.0024%), Sulfur (0.0015%), and other elements (0.0015%)

Gravity: 27.9 times the gravity of Earth at its photosphere "surface"

Escape Velocity: 384 miles/sec (1.4 million miles/hour); 617.5 km/sec

Sunspot Cycle: about 11.1 years, but varying from 8 to 16 years

Location in Galaxy: See Our Milky Way Galaxy on page 15.

Nearest Neighbor: Proxima Centauri, a star in the constellation Centaurus, is 4.2 light years away. Proxima is an 11th magnitude star and is not visible to the naked eye.

Age: about 4.6 billion years

Facing page. This image of the Sun's surface shows coronal loops which are composed of plasma (particles of electrons and positive ions) and shaped by intense magnetic fields. The large loop spans 30 Earth diameters.