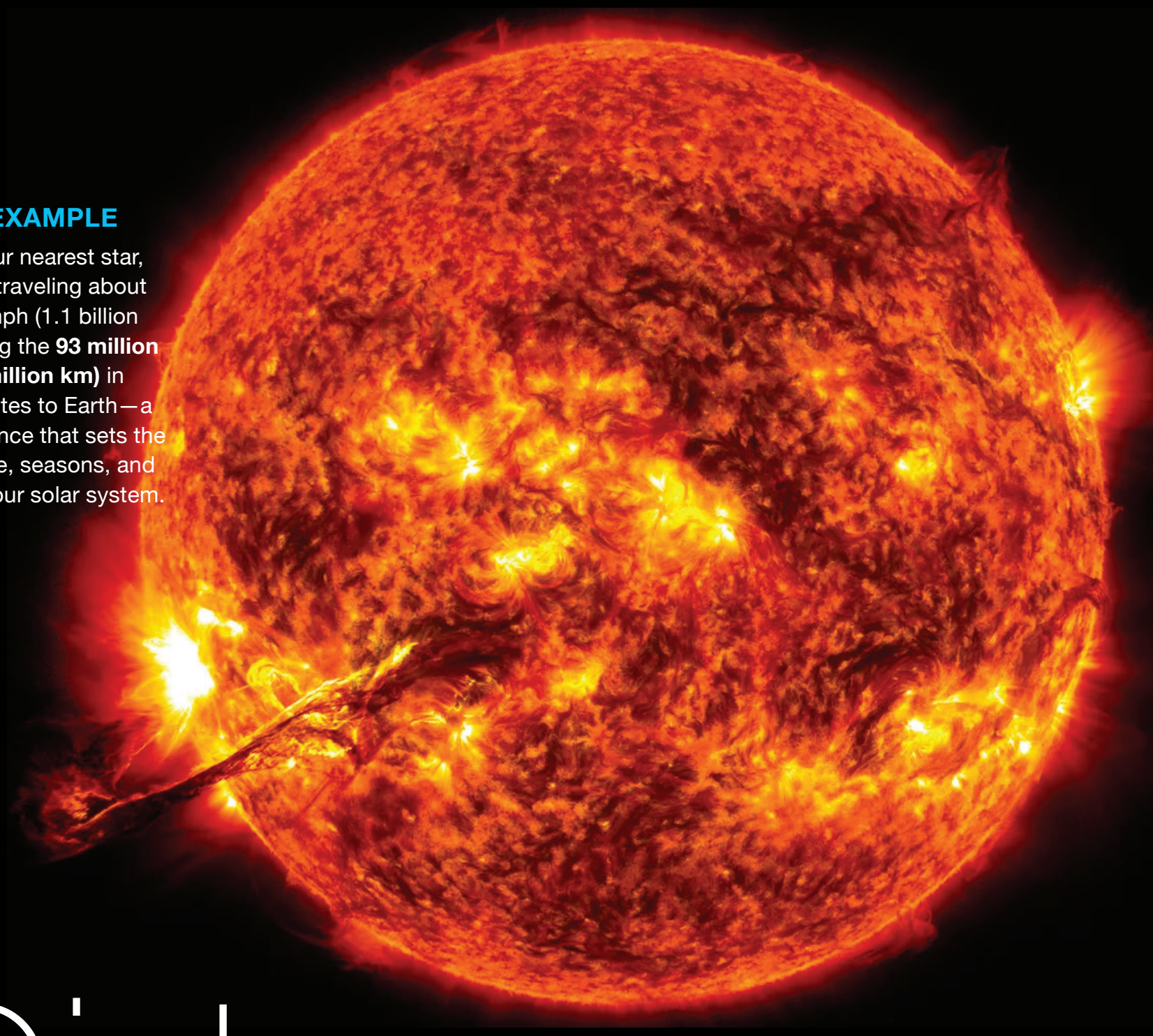
COSMIC PITCH

National Aeronautics and Space Administration

NASA

COSMIC EXAMPLE

The Sun is our nearest star, with its light traveling about 650 million mph (1.1 billion kph), covering the **93 million miles (150 million km)** in about 8 minutes to Earth—a cosmic distance that sets the rhythm for life, seasons, and the scale of our solar system.



NASA/SDO

Distance

DEFINITION: how far away an object is or the amount of ground an object has covered in its motion

Units: meter (m), kilometers (km), feet, miles, light years (A light year is the distance light travels in a year, about 6 trillion miles/9.5 trillion km).

Distance can be described as the ground covered between two points. Light itself travels nearly 300,000 kilometers every second, covering 150 million kilometers between the Sun and Earth in about 8 minutes. From pitch to planet, distance defines the scale of every journey.

SOCCER EXAMPLE

A FIFA soccer field (also called pitch) is about **110–120 yards (100–110 meters) long** and **70–85 yards (64–75 meters) wide**.

To run a mile, you'd have to complete approximately five-and-a-half laps around a professional soccer field.



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