COSMIC PITCH

National Aeronautics and Space Administration

NASA

COSMIC EXAMPLE

MSH 15-52 is powered by a pulsar that is spinning about **seven times every second.** This rotation drives energetic particles outward and creates the hand-shaped nebula seen in X-rays.

NASA/CHANDRA; ATNF; UK STSC

When players curve the ball with spin, air pressure differences make it bend through its flight — a beautiful display of physics. In the cosmos, spin drives entire worlds: planets rotate, stars whirl, and neutron stars can spin hundreds of times per second.

DEFINITION: when an object turns around a central axis. Rotational speed is defined as the number of turns around an axis over a given time.

Units: revolutions per minute (RPM), one cycle per second (Hertz)

Spin

SOCCER EXAMPLE

Professional soccer players can make the ball spin **8-12 revolutions per second (720 RPM).**

nasa.gov

chandra.si.edu/cosmicpitch