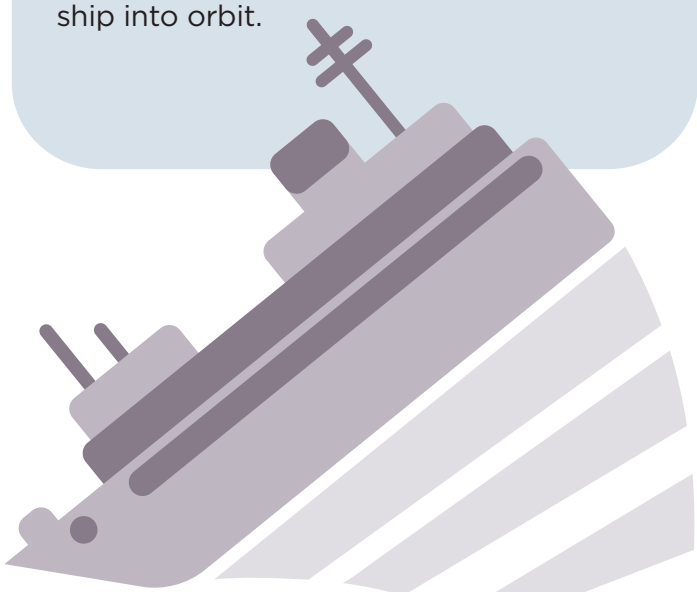
NSTX-U PPPL PRINCETON UNIVERSITY U.S. DEPARTMENT OF ENERGY

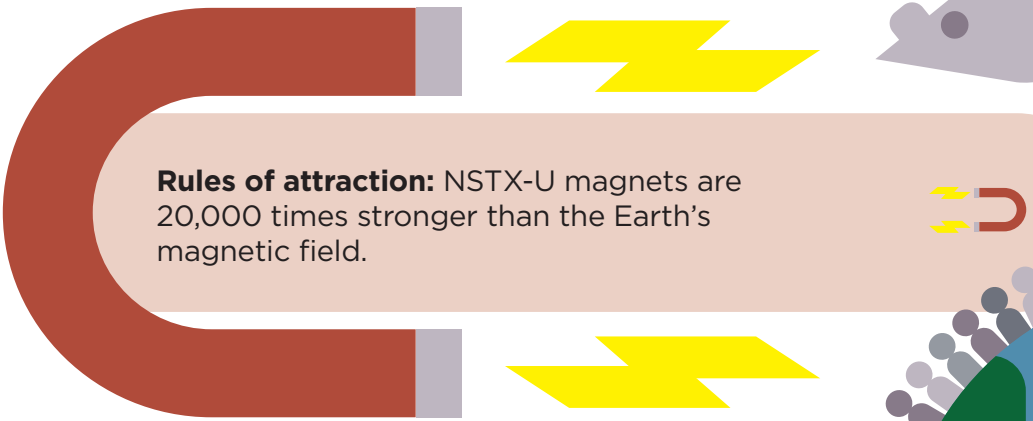
NSTX-U Fun Facts

Up and away: The two 700-ton flywheels that power the NSTX-U could put a naval ship into orbit.

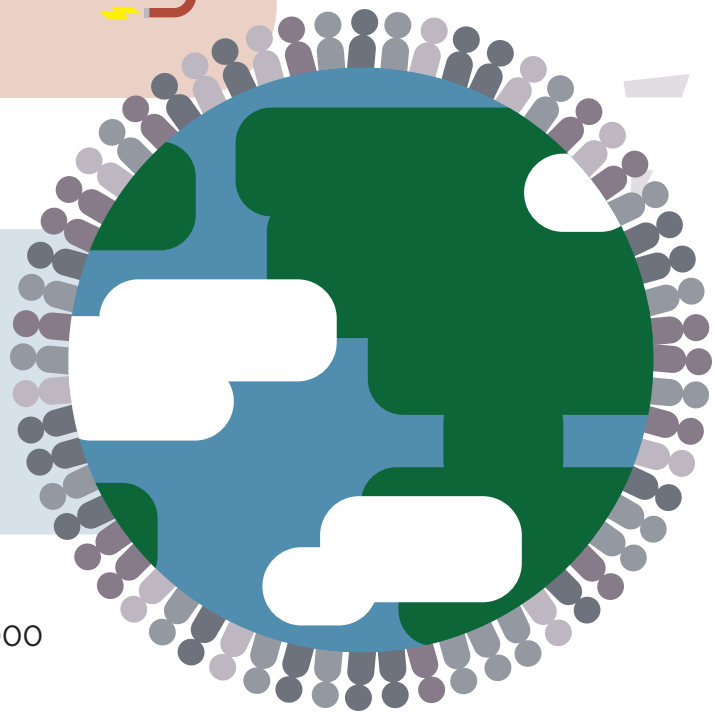


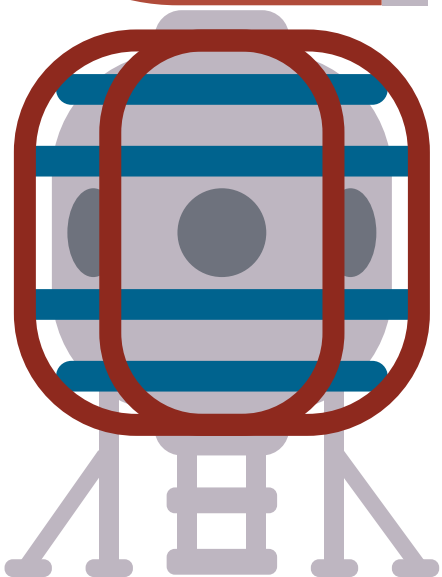
Heart of the upgrade: The NSTX-U center stack consists of 36 22-foot-long, 350-pound copper conductors.

Plenty of juice: The 2 million amp current that will flow through the plasma could light 2 million 100-watt bulbs.



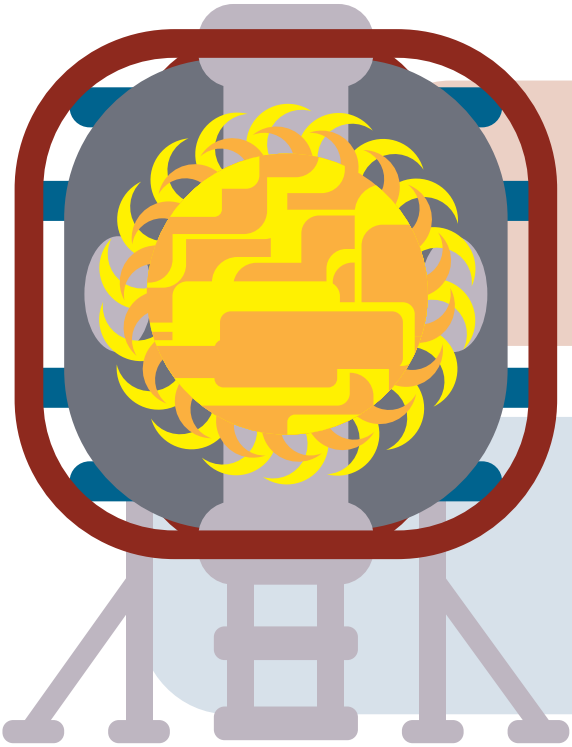
Rules of attraction: NSTX-U magnets are 20,000 times stronger than the Earth's magnetic field.





All together now: 60 research centers around the world will collaborate on NSTX-U.

Time flies: Technicians spent more than 360,000 worker hours building the NSTX-U.



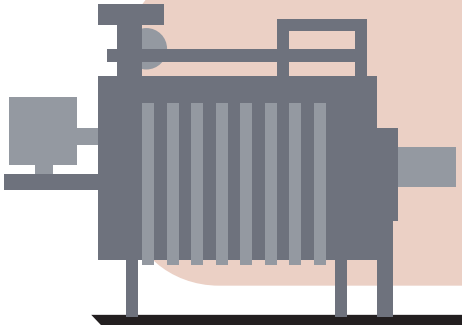
Sunscreen won't help: Temperature inside the NSTX-U will exceed the 15 million degree Celsius core of the sun.

Space age material: Graphite tiles inside the NSTX-U are similar to those used on the outside of space shuttles.

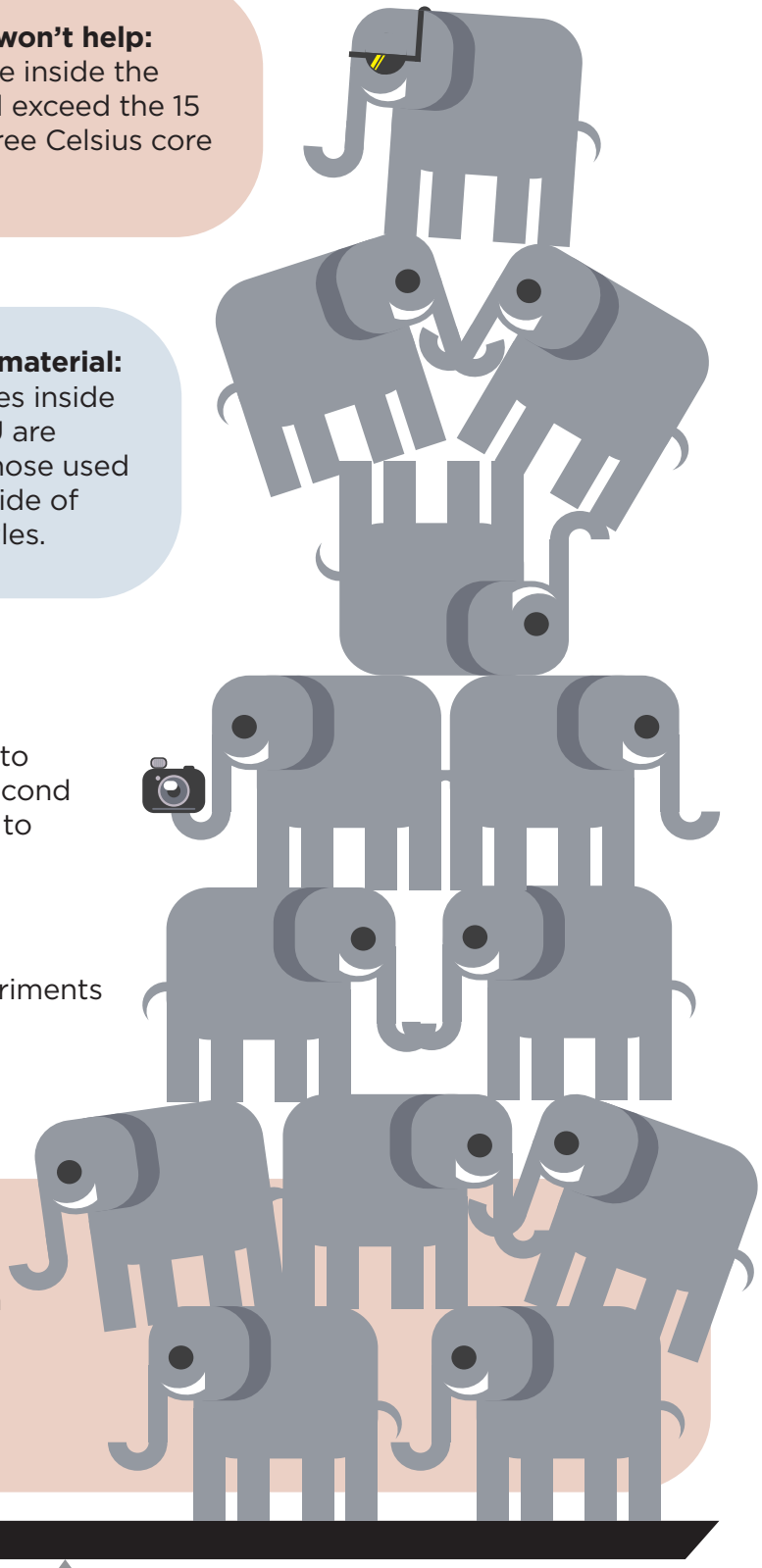
Fast shots: High-speed cameras that photograph NSTX-U plasmas can record 10,000 images per second.

Faster shots: The same cameras can record up to 400,000 images per second when researchers want to see plasma turbulence.

Many experiments: Researchers will run NSTX-U experiments every 10 to 15 minutes, or more than 30 times a day.



Elephantine task: PPPL installed a second neutral beam box that weighs 75 tons, or nearly 13 average-size male African elephants.



PPPL
PRINCETON PLASMA PHYSICS LABORATORY

Princeton Plasma Physics Laboratory
P.O. Box 451
Princeton, NJ 08543-0451
GPS: 100 Stellarator Road
Princeton, NJ 08540

www.pppl.gov

© 2015 Princeton Plasma Physics Laboratory. A Collaborative National Center for Fusion & Plasma Research. All rights reserved.