SuperTIGER

Catching heavy cosmic rays

Electrons
1 percent

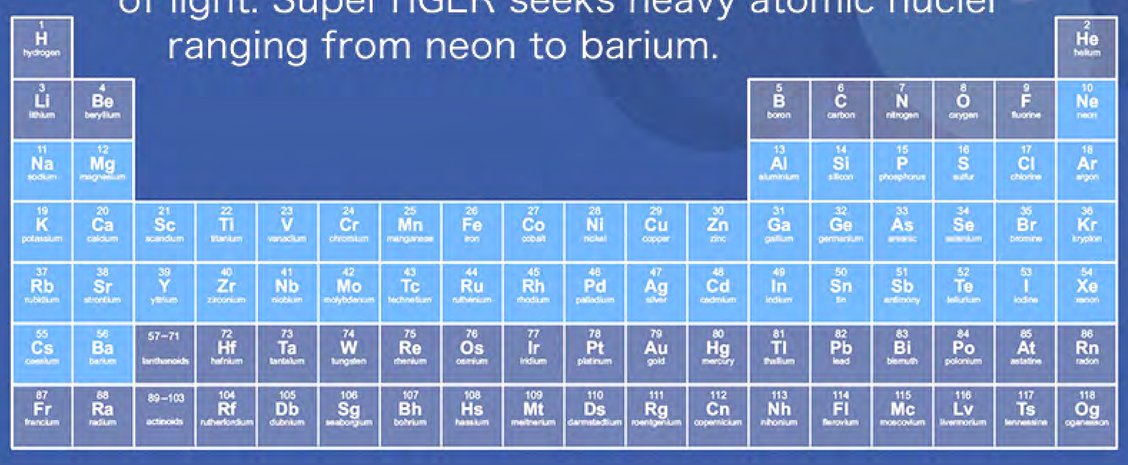
Hydrogen nuclei (protons)
90 percent

Helium nuclei
8 percent

Heavier nuclei
1 percent

Cosmic ray particles

Cosmic rays are particles from far outside the solar system traveling at up to nearly the speed of light. SuperTIGER seeks heavy atomic nuclei ranging from neon to barium.



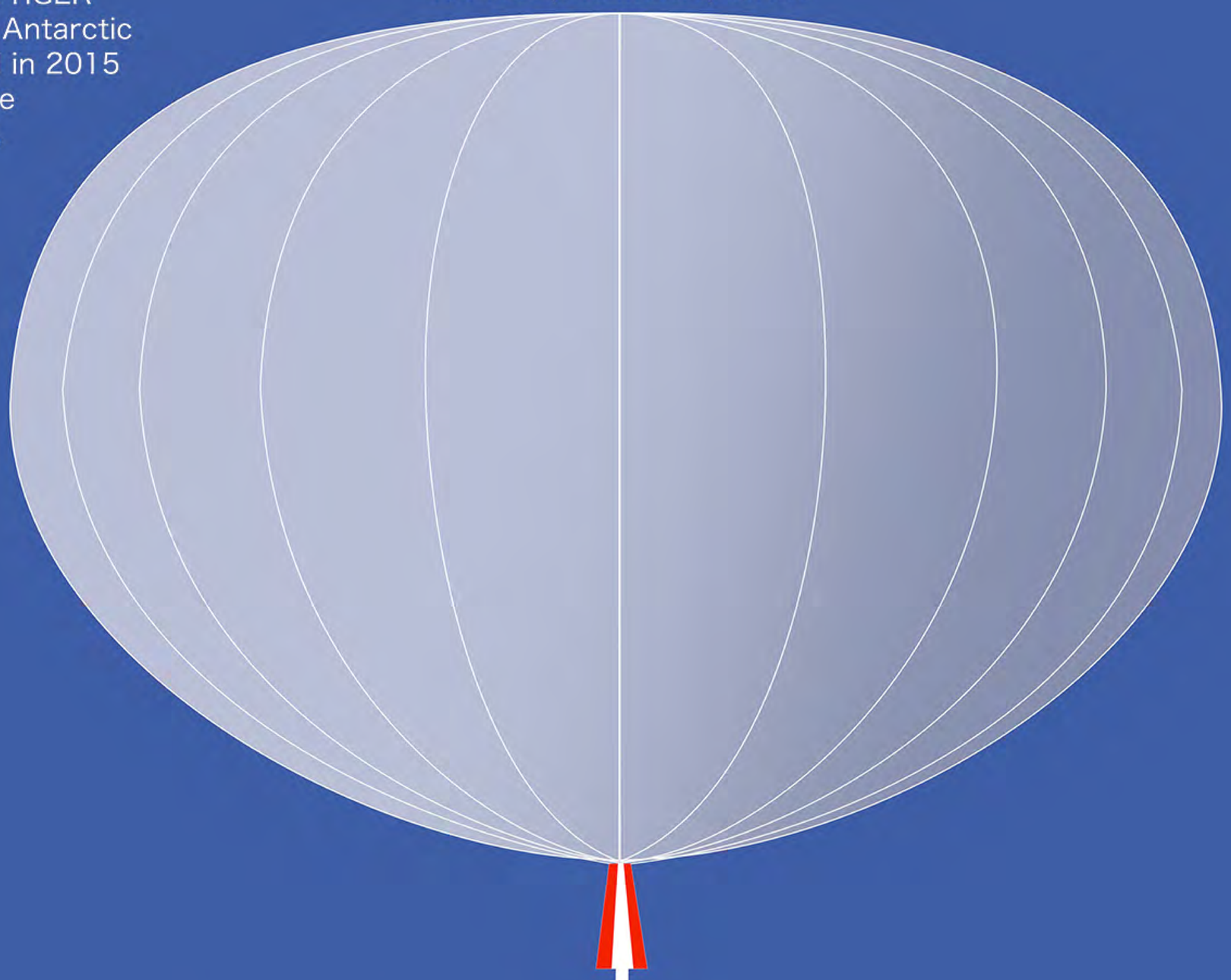
SuperTIGER is a souped-up version of the Trans-Iron Galactic Element Recorder (TIGER) detector that flew in 1998, 2001 and 2003.

Balloon at launch
856 feet (261 meters) tall

SuperTIGER and its supporting hardware weighs 6,000 pounds (2,700 kilograms), comparable to a full-size van.

After its previous flight ended in 2013, SuperTIGER spent 2 years on the Antarctic ice. It was recovered in 2015 and prepped for more scientific adventures.

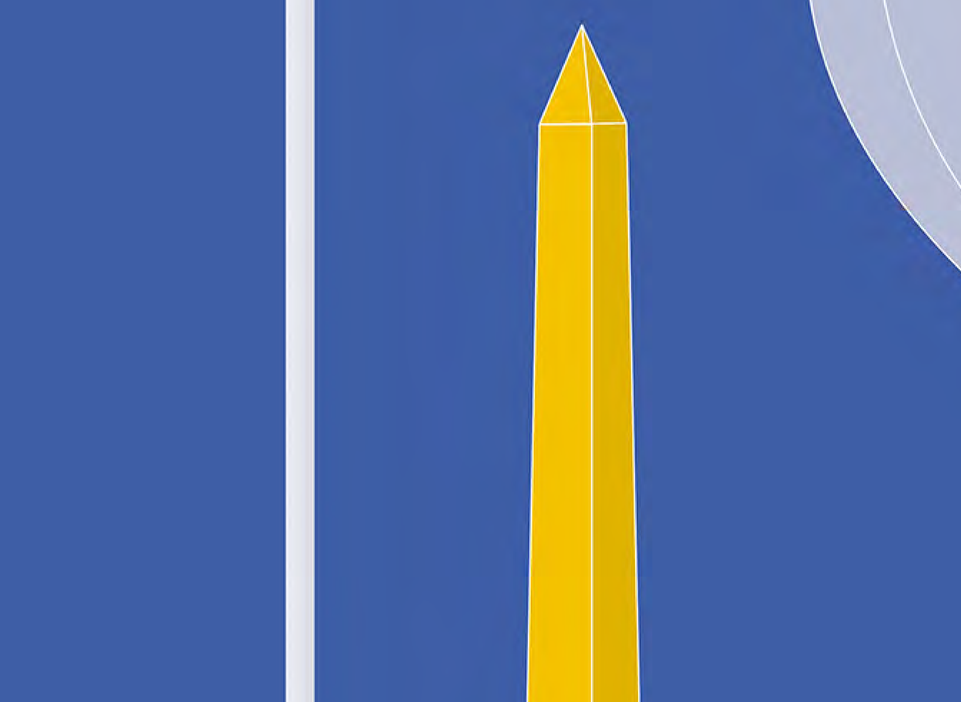
Balloon at altitude
460 feet (140 meters) across



SuperTIGER reaches a maximum height of about 127,000 feet (39,000 meters).

That's nearly four times the typical cruising altitude of commercial airliners...

...and above 99.5 percent of the atmosphere.



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