

NASA'S CHANDRA X-RAY OBSERVATORY

SCIENCE BY THE NUMBERS SO FAR

0.002 seconds

for a neutron star (47 Tuc W) observed with Chandra to spin around once

2.3 days

before Chandra started observing a neutron star merger and gravitational wave source after it was discovered

3 number of remnants observed with Chandra of thermonuclear supernova explosions seen with the unaided eye

300 million

Sun masses are swallowed by a black hole to create enormous cavities in hot gas in a galaxy cluster

100

factor of energy that particles obtain over the Large Hadron Collider after being accelerated in a supernova remnant

32 million miles

expansion speed per hour of blast wave in supernova remnant G1.9+0.3

20,000 light years

distance between the black hole in the "Death Star" galaxy and the target galaxy it is striking

10 years

for a supermassive black hole took to dine on the remains of a star it tore apart

3 quintillion

quantity of Sun masses in the El Gordo galaxy cluster

1 quadrillion

how many times stronger the magnetic field of a magnetar is than the magnetic field of Earth

4 inches

height of atmosphere of the neutron star in Cassiopeia A

0.01 number of electrons per cubic centimeter in hot gas in a galaxy cluster

100 million quadrillion

hydrogen bombs are needed to produce the energy a quasar releases every second

99.9 fraction of the speed of light that particles reach in a jet formed by a neutron star

110 years

age of the youngest supernova remnant, timed from Earth, in the Milky Way galaxy

1 billion tons

weight of a sugar cube-sized piece of neutron star

1 million

number of Earth masses worth of oxygen ejected into space in the Cassiopeia A supernova remnant

57 number of octaves below middle C of a note produced by a supermassive black hole observed by Chandra.

