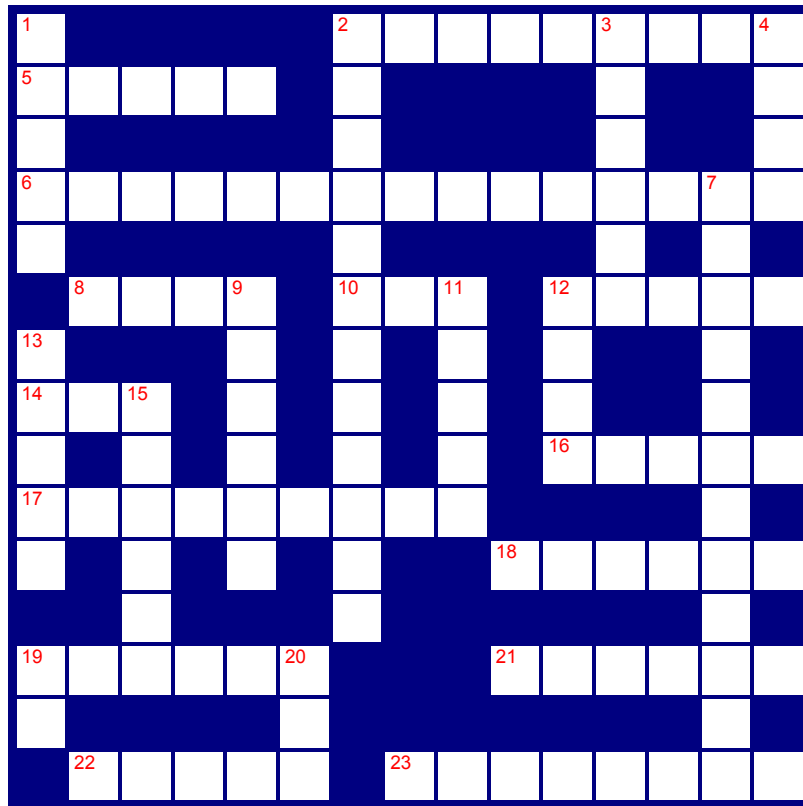


Astrophysics_15x15_2008-10-16

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Across

- 2 The point in an orbit when two objects are closest together. The opposite of apoapsis. (9)
- 5 The length of the path traveled by light in vacuum during a period of 1/299 792 458 second. (5)
- 6 A spherically symmetric collection of stars which shared a common origin. The cluster may contain up to millions of stars spanning up to 50 parsecs. (8,7)
- 8 The Advanced X-ray Astrophysics Facility. _____ was renamed Chandra X-ray Observatory, CXO, and launched in July 1999. (4)
- 10 An atom with one or more electrons stripped off, giving it a net positive charge. (3)
- 12 A device that produces a coherent beam of optical radiation by stimulating electronic, ionic, or molecular transitions to higher levels so that when they return to lower energy levels they emit energy. (5)
- 14 All Sky Monitor.
- An instrument designed to observe large areas of the sky for interesting astronomical phenomena. (3)
- 16 The Broad Band X-Ray Telescope, which was flown on the Astro-1 space shuttle flight (Dec. 1990). (5)
- 17 A body that revolves around a larger body. For example, the

moon is a _____
of the earth. (9)

18 The fundamental
SI unit of time.
(6)

19 The distance to
an object which
has a parallax of
one arc second.
It is equal to
3.26 light years,
or $3.1^{10^{18}}$ cm. (6)

21 The process in
which atomic
nuclei collide so
fast that they
stick together
and emit a large
amount of
energy. (6)

22 Electromagnetic
radiation which
has the lowest
frequency, the
longest
wavelength, and
is produced by
charged particles
moving back and
forth. (5)

23 Cooler (and thus
darker) regions
on the sun where
the magnetic
field loops up
out of the solar
surface. (8)

Down

1 In astronomy, a
picture of the
sky. (5)

2 A special
property of light;
light has three

properties,
brightness,
color and _____.

_____ is a
condition in
which the planes
of vibration of
the various rays
in a light beam
are at least
partially aligned.
(12)

3 A low-density
gas in which the
individual atoms
are ionized (and
therefore
charged). (6)

4 A large ball of
gas that creates
and emits its
own radiation.
(4)

7 The change of
potential energy
experienced by
an electron
moving from a
place where the
potential has a
value of V to a
place where it
has a value of
(V+1 volt). (8,4)

9 A suite of
software tools
developed at
NASA's
Goddard Space
Flight Center for
analyzing high-
energy
astronomy data.
(6)

11 The random
fluctuations that

are always
associated with a
measurement

that is repeated
many times over.
_____ appears in
astronomical
images as
fluctuations in
the image
background. (5)

12 The outer edge
of the apparent
disk of a
celestial body.
(4)

13 (Burst and
Transient Source
Experiment) is
an instrument
aboard the
Compton
Gamma Ray
Observatory that
detects and
locates gamma-
ray bursts in the
sky. (5)

15 A word used for
any kind of stuff
which contains
mass. (6)

19 The constant
equal to the ratio
of the
circumference of
a circle to its
diameter, which
is approximately
3.141593. (2)

20 The Chandra X-
ray Observatory.
CXO was
launched by the
Space Shuttle in
July 1999, and

named after S.
Chandrasekhar.
(3)