

Ancient orbs

This sparkling picture taken by the NASA/ESA Hubble Space Telescope shows the centre of globular cluster M 4. The power of Hubble has resolved the cluster into a multitude of glowing orbs, each a colossal nuclear furnace.

M 4 is relatively close to us, lying 7200 light-years distant, making it a prime object for study. It contains several tens of thousand stars and is noteworthy in being home to many white dwarfs — the cores of ancient, dying stars whose outer layers have drifted away into space.

In July 2003, Hubble helped make the astounding discovery of a planet called PSR B1620-26 b, 2.5 times the mass of Jupiter, which is located in this cluster. Its age is estimated to be around 13 billion years — almost three times as old as the Solar System! It is also unusual in that it orbits a binary system of a white dwarf and a pulsar (a type of neutron star).

Amateur stargazers may like to track M 4 down in the night sky. Use binoculars or a small telescope to scan the skies near the orange-red star Antares in Scorpius. M 4 is bright for a globular cluster, but it won't look anything like Hubble's detailed image: it will appear as a fuzzy ball of light in your eyepiece.

On Wednesday 5 September, the European Southern Observatory (ESO) will publish a wide-field image of M 4, showing the full spheroidal shape of the globular cluster. See it at www.eso.org/public/news/eso1235/ on Wednesday.

Credit: ESA/Hubble & NASA

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About the Image

Id:	potw1236a
Type:	Observation
Release date:	3 September 2012, 10:00
Size:	4165 x 4132 px

About the Object

Name:	M 4(http://simbad.u-strasbg.fr/simbad/sim-id?Ident=M+4), Messier 4(http://simbad.u-strasbg.fr/simbad/sim-id?Ident=Messier+4), NGC 6121(http://simbad.u-strasbg.fr/simbad/sim-id?Ident=NGC+6121)
Type:	Milky Way : Star : Grouping : Cluster : Globular
Distance:	7000 light years(http://en.wikipedia.org/wiki/Light-year)
Constellation:	Scorpius
Category:	Star Clusters(/images/archive/category/starclusters/)

Image Formats

-  Fullsize Original(/media/archives/images/original/potw1236a.tif)
47.4 MB 
-  Large JPEG(<https://cdn.spacetelescope.org/archives/images/large/potw1236a.jpg>)
13.1 MB
-  Publication TIFF 4K(/media/archives/images/publicationtiff/potw1236a.tif)
42.2 MB
-  Publication JPEG(<https://cdn.spacetelescope.org/archives/images/publicationjpg/potw1236a.jpg>)
16.4 MB
-  Screensize JPEG(<https://cdn.spacetelescope.org/archives/images/screen/potw1236a.jpg>)
633.2 KB

Zoomable

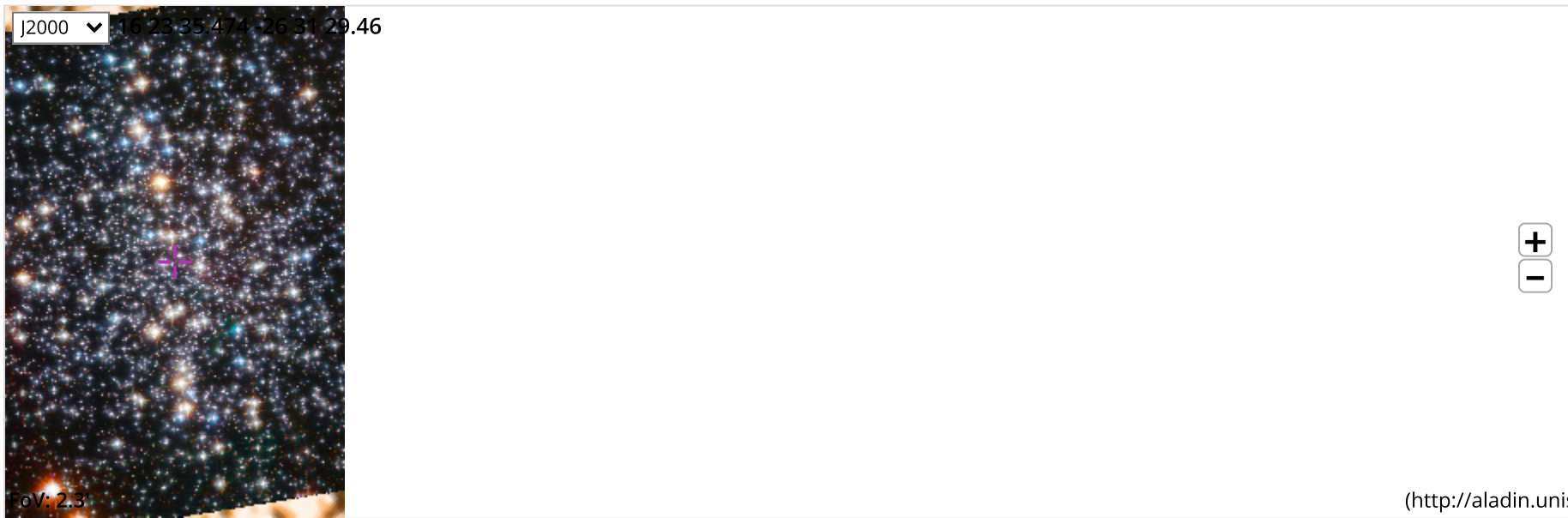
-  Zoomable(zoomable/)

Wallpapers

-  1024x768(<https://cdn.spacetelescope.org/archives/images/wallpaper1/potw1236a.jpg>)
618.1 KB
-  1280x1024(<https://cdn.spacetelescope.org/archives/images/wallpaper2/potw1236a.jpg>)
992.2 KB
-  1600x1200(<https://cdn.spacetelescope.org/archives/images/wallpaper3/potw1236a.jpg>)
1.4 MB
-  1920x1200(<https://cdn.spacetelescope.org/archives/images/wallpaper4/potw1236a.jpg>)
1.7 MB
-  2048x1536(<https://cdn.spacetelescope.org/archives/images/wallpaper5/potw1236a.jpg>)
2.4 MB

Coordinates

Position (RA):	16 23 35.48
Position (Dec):	-26° 31' 29.48"
Field of view:	3.48 x 3.45 arcminutes
Orientation:	North is 9.5° right of vertical



- ☒ Optical (DSS2)
- ☐ Infrared (2MASS)

Crossfade image:


Colours & filters

Band	Wavelength	Telescope
Optical B	435 nm	Hubble Space Telescope ACS
Optical V	606 nm	Hubble Space Telescope ACS
Infrared I	814 nm	Hubble Space Telescope ACS

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- images on [esawebb.org](https://esawebb.org/images/)(<https://esawebb.org/images/>)