

A young star takes centre stage

(<https://cdn.spacetelescope.org/archives/images/screen/potw1509a.jpg>)

With its helical appearance resembling a snail's shell, this reflection nebula(http://en.wikipedia.org/wiki/Reflection_nebula) seems to spiral out from a luminous central star in this new NASA/ESA Hubble Space Telescope image.

The star in the centre, known as V1331 Cyg(<http://simbad.u-strasbg.fr/simbad/sim-id?Ident=V1331%20Cyg>) and located in the dark cloud LDN 981 — or, more commonly, Lynds 981 — had previously been defined as a T Tauri star(http://en.wikipedia.org/wiki/T_Tauri_star). A T Tauri is a young star — or Young Stellar Object(http://en.wikipedia.org/wiki/Young_stellar_object) — that is starting to contract to become a main sequence star similar to the Sun.

What makes V1331Cyg special is the fact that we look almost exactly at one of its poles. Usually, the view of a young star is obscured by the dust from the circumstellar disc and the envelope that surround it. However, with V1331Cyg we are actually looking in the exact direction of a jet driven by the star that is clearing the dust and giving us this magnificent view.

This view provides an almost undisturbed view of the star and its immediate surroundings allowing astronomers to study it in greater detail and look for features that might suggest the formation of a very low-mass object in the outer circumstellar disc.

Credit: ESA/Hubble, NASA, Karl Stapelfeldt (GSFC), B. Stecklum and A. Choudhary (Thüringer Landessternwarte Tautenburg, Germany)

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About the Image

Id:	potw1509a
Type:	Observation
Release date:	2 March 2015, 10:00
Size:	716 x 718 px


About the Object

Name:	V1331 Cyg(http://simbad.u-strasbg.fr/simbad/sim-id?Ident=V1331+Cyg)
Type:	Local Universe : Star : Evolutionary Stage : Young Stellar Object Local Universe : Star : Type : Variable Local Universe : Nebula : Appearance : Reflection
Distance:	1800 light years(http://en.wikipedia.org/wiki/Light-year)
Constellation:	Cygnus
Category:	Stars(/images/archive/category/stars/)






Image Formats

-  Fullsize Original(/media/archives/images/original/potw1509a.tif)
1010.6 KB 
-  Large JPEG(<https://cdn.spacetelescope.org/archives/images/large/potw1509a.jpg>)
188.3 KB
-  Screensize JPEG(<https://cdn.spacetelescope.org/archives/images/screen/potw1509a.jpg>)
256.1 KB

Zoomable

-  Zoomable(zoomable/)

Wallpapers

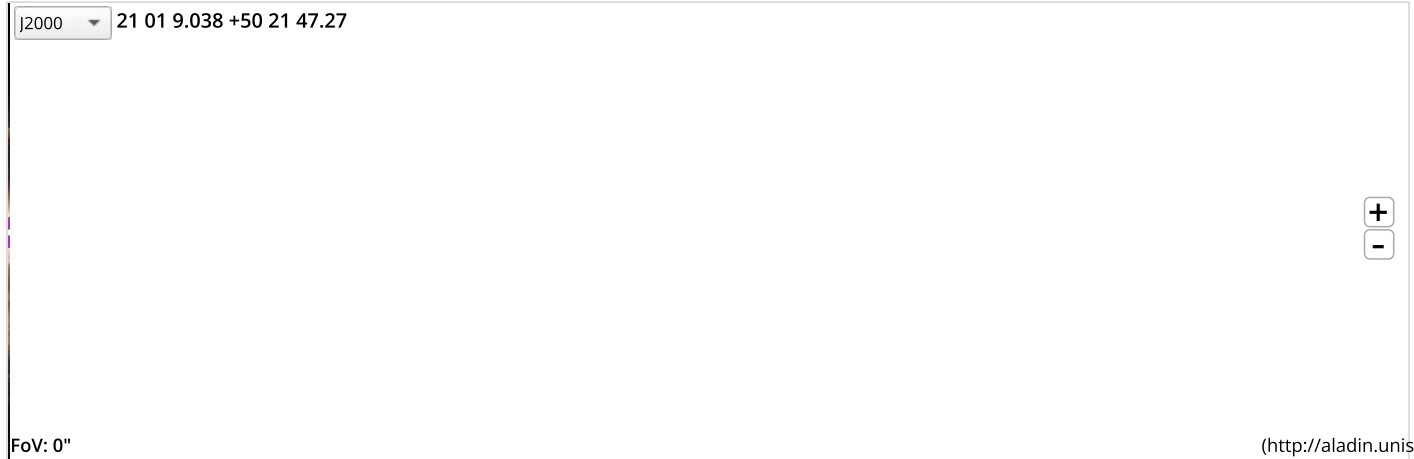
-  1024x768(<https://cdn.spacetelescope.org/archives/images/wallpaper1/potw1509a.jpg>)
267.7 KB
-  1280x1024(<https://cdn.spacetelescope.org/archives/images/wallpaper2/potw1509a.jpg>)
388.4 KB
-  1600x1200(<https://cdn.spacetelescope.org/archives/images/wallpaper3/potw1509a.jpg>)
497.1 KB
-  1920x1200(<https://cdn.spacetelescope.org/archives/images/wallpaper4/potw1509a.jpg>)
534.6 KB
-  2048x1536(<https://cdn.spacetelescope.org/archives/images/wallpaper5/potw1509a.jpg>)
689.4 KB

Coordinates

Position (RA): 21 1 9.04
Position (Dec): 50° 21' 47.24"
Field of view: 1.21 x 1.21 arcminutes
Orientation: North is 5.1° left of vertical



j2000 21 01 9.038 +50 21 47.27



FoV: 0" (http://aladin.unistra.fr/)

Optical (DSS2)

Infrared (2MASS)

Crossfade image:



Colours & filters

Band	Wavelength	Telescope
Optical B	450 nm	Hubble Space Telescope WFPC2
Optical V	606 nm	Hubble Space Telescope WFPC2
Infrared I	814 nm	Hubble Space Telescope WFPC2

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