JoeTourist

JoeTourist

1b.JPG

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tg_fossil ridge.JPG

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th birdJPG

JoeTourist

Grandview Campground

is enjoyed and appreciated by many types of campers but especially by those that enjoy the peace and quiet and the beautiful night sky.

You can help keep this a special place by turning off generators after 9:00 PM and limiting your campsite lighting to only what you need in your immediate campsite area.

Thank You!!

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3d.JPG

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4d.jpg

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Orion's phantom loop, part 1

You better sit down for this one. On the next clear and transparent night, go to the darkest site you know, lie down on a blanket or lounge chair, and make yourself comfortable. ☾ Use your unaided eyes to look for the emission nebula Sharpless 2-276 in Orion. Commonly known as Barnard's Loop, this bank of ghostly light forms a 10°-wide semicircle predominantly around the eastern side of Orion's belt and sword.

In wide-field photographs, especially in long exposures taken in red light, the Loop looks like the wing of a celestial snow angel made with Orion's right arm and leg. To the unaided eye, however, the Loop has about as much visual punch as a snowflake clinging to a frosty window. Seeing it (sans filter) is truly one of the greatest naked-eye challenges and the subject of many heated debates on cold winter nights.

Seeing ghosts

One such debate between Ohio amateurs Philip Hoyle and Phillip Creed inspired this column. In March 2005, while observing from an altitude of 3,000 feet (915 meters) in the Persimmon Gap section of Big Bend National Park in southwestern Texas, Hoyle saw what appeared to be Barnard's Loop. Creed then saw it, too. "I thought it might have been a chance alignment of stars," Creed said, but he confirmed its position on a star atlas and agreed with Hoyle that it could be nothing else.

"Barnard's Loop looked like a skinny, faint arc just east of Mintaka and straight south of Betelgeuse," Creed recalled. He noticed it was "brightest on the northern half," and said it looked almost like a "departed ghost" of the Milky Way.

"The strangest part was how easy it was to see," Hoyle said. "It looked like a finger of the Milky Way, but, as I recall, it didn't look really that skinny. It was just west of the Milky Way and just east of the classic figure of Orion, spanning from nearly shoulder to foot."

But is such an observation possible, they wondered?

No fooling

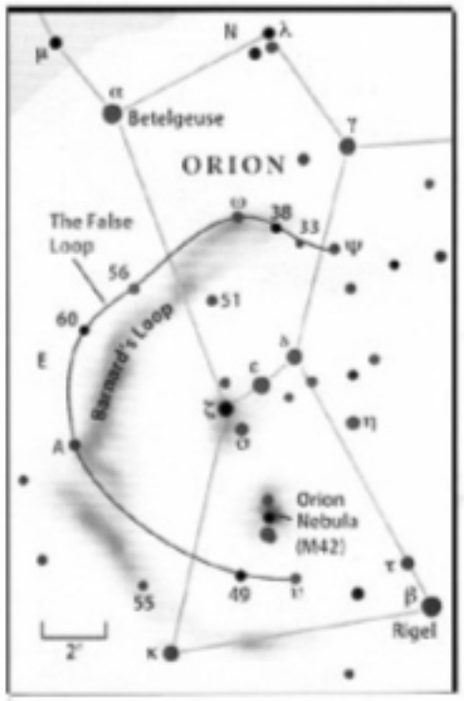
Yes, sections of Barnard's Loop are visible to the unaided eye. But, as Creed suspected, the eye can also be fooled by Orion's False Loop, which is why it's important to have a star atlas or photograph nearby. The False Loop is a 10°-wide semicircle of light that follows a coincidental curve of nine 4.5- to 5th-magnitude suns.

The northwestern portion lies about 4° north of Delta (δ) Orionis (Mintaka), the westernmost star in Orion's belt. It consists of Psi (Ψ), 33, 38, and Omega (ω) Orionis.

The eastern segment, nearly 5° northeast of Zeta (ζ) Orionis — the easternmost star in Orion's Belt — includes 56 and 60 Orionis and the star I've marked "A," located almost 3½° south of 60 Orionis.

The bottom segment of the false loop contains 49 and Upsilon (υ) Orionis, just south of the sword.

These dim stars appear as a fuzzy beaded necklace when observed with averted vision. That's because our eye-brain system, especially when working at low light levels, fills in the gaps to create a meaningful image.



THE EMISSION NEBULA Sharpless 2-276, often called Barnard's Loop, forms a ghostly glowing arc at the eastern side of Orion's belt and sword. The Loop is difficult for most people to see with unaided eyes. The brain may combine several dimly visible portions of Barnard's Loop into a continuous arc

Commonly known as the "etcetera principle," this connect-the-dots phenomenon occurs when the eye-brain system assumes a connection between individual data sets — in this case several arcs of stars. It is what led late American astronomer Percival Lowell to see strings of individual albedo features on Mars as linear "canals." It's also

why you can make a portrait of Elvis with 35 pieces of toast (no fooling!).

Working the eye

To see Barnard's Loop, you have to be patient and judicious. You'll also need to know how to position your eyes to maximize your averted vision. Peripheral vision serves as a motion detector. Because much of what we see is stationary, our eyes constantly jiggle to set things in motion. As a stationary object sweeps across the retina, receptors fire away, and we become aware of the object's presence.

To see an astronomical object as vast as Barnard's Loop, you need to sweep your eyes gently back and forth across a 10° field. But you should also align your eyes so the Loop's sections move over each eye's "hot spot" — the region at the retina's periphery most sensitive to faint light.

For instance, when I want to inspect a dim object at night, I direct my gaze toward the 4 o'clock position in the field of view. This places the object of interest in my hot spot, which lies in the upper left of the field. (The position of your hot spot might differ from mine.)

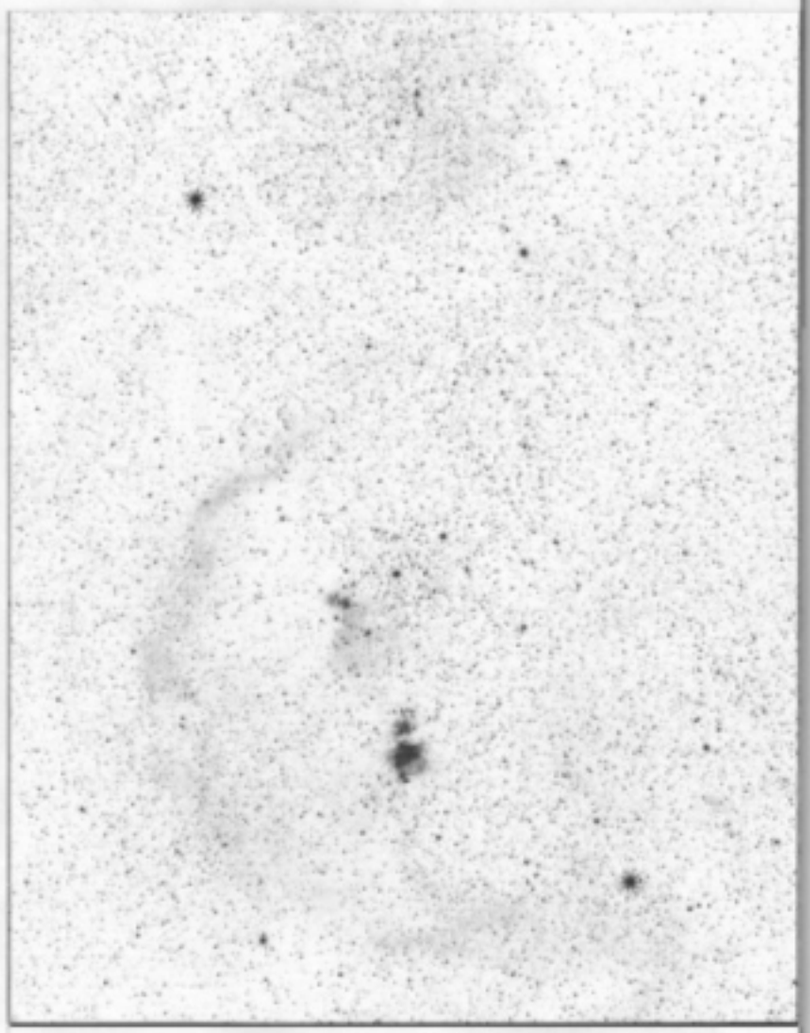
That's why I suggest you lie down. Orion stands high above the southern horizon during February evenings after sunset, which means the long axis of Barnard's Loop slices vertically across your retina. To maximize your chance of seeing the Loop, orient your body so the Loop's major axis is horizontal to your line of sight. This means positioning Orion on its side.

With Orion oriented this way, you can tackle seeing the Loop in pieces. Start with its brightest segment — a 5°-long arc of diffuse light that starts about 1° south of 56 Orionis and ends about ½° west of star A. Then direct your gaze toward Omega and 33 Orionis, but concentrate on the region of sky between 56 and 51 Orionis.

Slowly sweep your eyes toward Zeta (ζ) Orionis, but look for the Loop extending toward star A. Sweep southward, but redirect your gaze to a point above Orion's sword but concentrate on the region between A and 55 Orionis, and so on.

A hyperfine Loop segment lies midway between Kappa (κ) Orionis and Beta (β) Orionis (Rigel). Seeing it requires patience and rhythmic breathing (and, perhaps, the advantage of clearer skies at higher altitude). It also helps to extend your fingers to block the bright stars Kappa and Beta Orionis. The greatest challenge will be to see any glow between Omega and Psi Orionis; the nebula follows the string of dim stars between them, and it's hard to tell if the etcetera principle is at work.

If you succeed, then you have glimpsed what could arguably be the remains of an ancient supernova explosion or more than one supernova — the only such feature visible to the unaided eye. Let me know what you see: somearа@interpoc.net. ■



IN THIS TIME-EXPOSURE IMAGE, the emission nebula Sharpless 2–276 is barely detectable as a diffuse red glow east (left) of the line of bright stars forming Orion's belt. The wispy patch of light below the belt is the Orion nebula (M42). TONY AND DAPHNE HALLAS

SWANS JEWELS	TRIPLE STAR	ENE OF M17
CAS A	SNR	CASSIOPEIA
JONES 1	PN	PEGASUS
ABELL 66 (ESO 595-4)	PN	WEST OF M75
ABELL 71 (PK 85+4.1)	PN	NNW OF DENEB
SHAKHBAZIAN 16	GLXY CLUSTER	DRACO
CAT'S PAW	BN	SCORPIUS
TERZAN 5	GC	SGR
PALOMAR 6	GC	SGR
PARSAMYAN 21	COMETARY NEB	AQL
GYULBUDAGHIAN'S NEB	REFLECTION NEB	CEP
TON 2	GC	SCO

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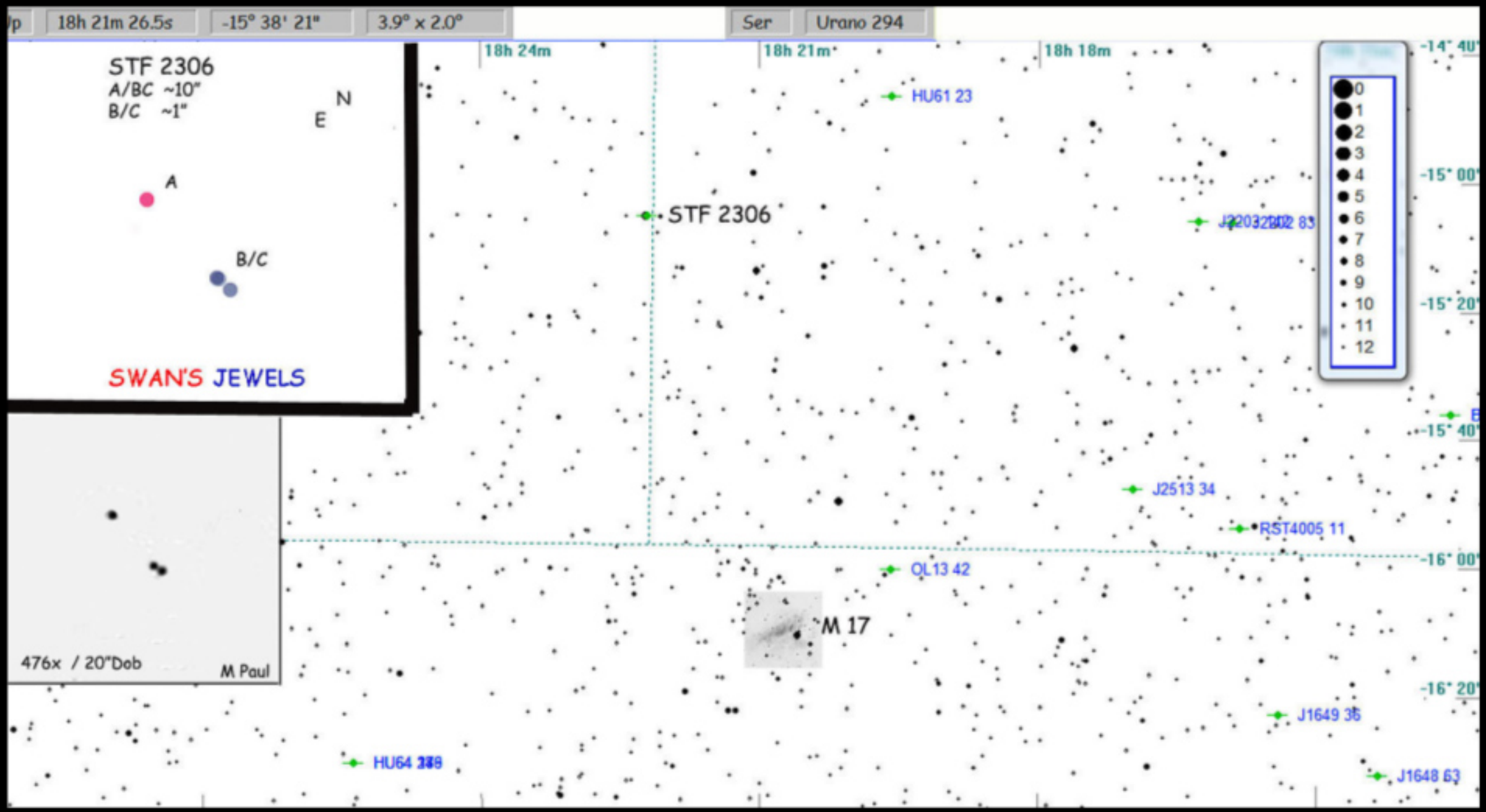
18h 21m 26.5s
-15° 38' 21"
3.9° x 2.0°
Ser
Urano 294
STF 2306
A/BC ~10"
B/C ~1"
N
E
A
B/C
SWAN'S JEWELS
476x / 20"Dob
M Paul
18h 24m
18h 21m
18h 18m
HU61 23
STF 2306
J2513 34
RST4005 11
OL13 42
M 17
J1649 35
J1648 63
-14° 40'
-15° 00'
-15° 20'
-15° 40'
-16° 00'
-16° 20'
0
1
2
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12

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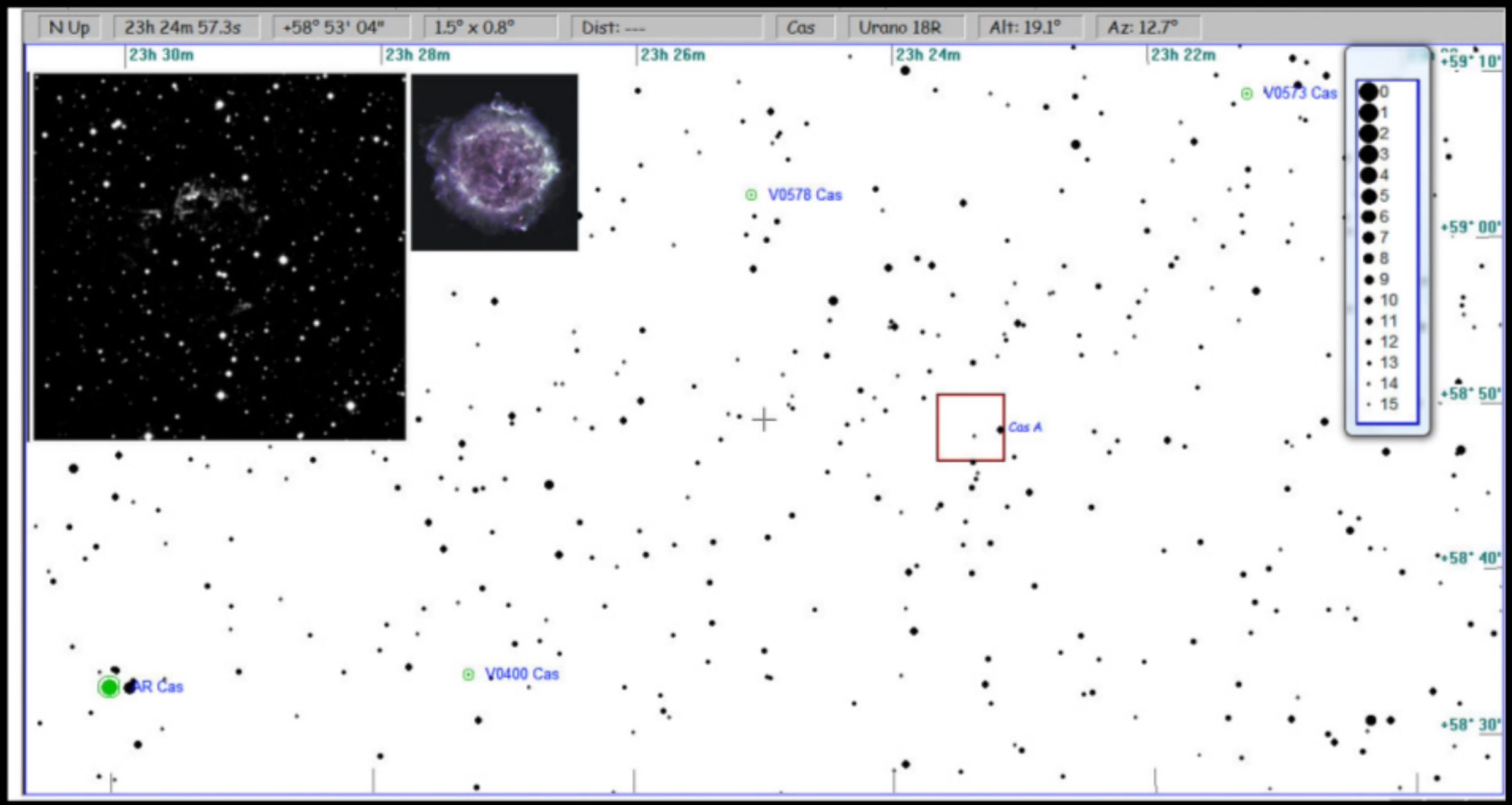
N Up
23h 24m 57.3s
+58° 53' 04"
1.5° x 0.8°
Dist: ---
Cas
Urano 18R
Alt: 19.1°
Az: 12.7°
23h 30m
23h 28m
23h 26m
23h 24m
23h 22m
+59° 10'
+59° 00'
+58° 50'
+58° 40'
+58° 30'
V0573 Cas
V0578 Cas
V0400 Cas
AR Cas
Cas A
0
1
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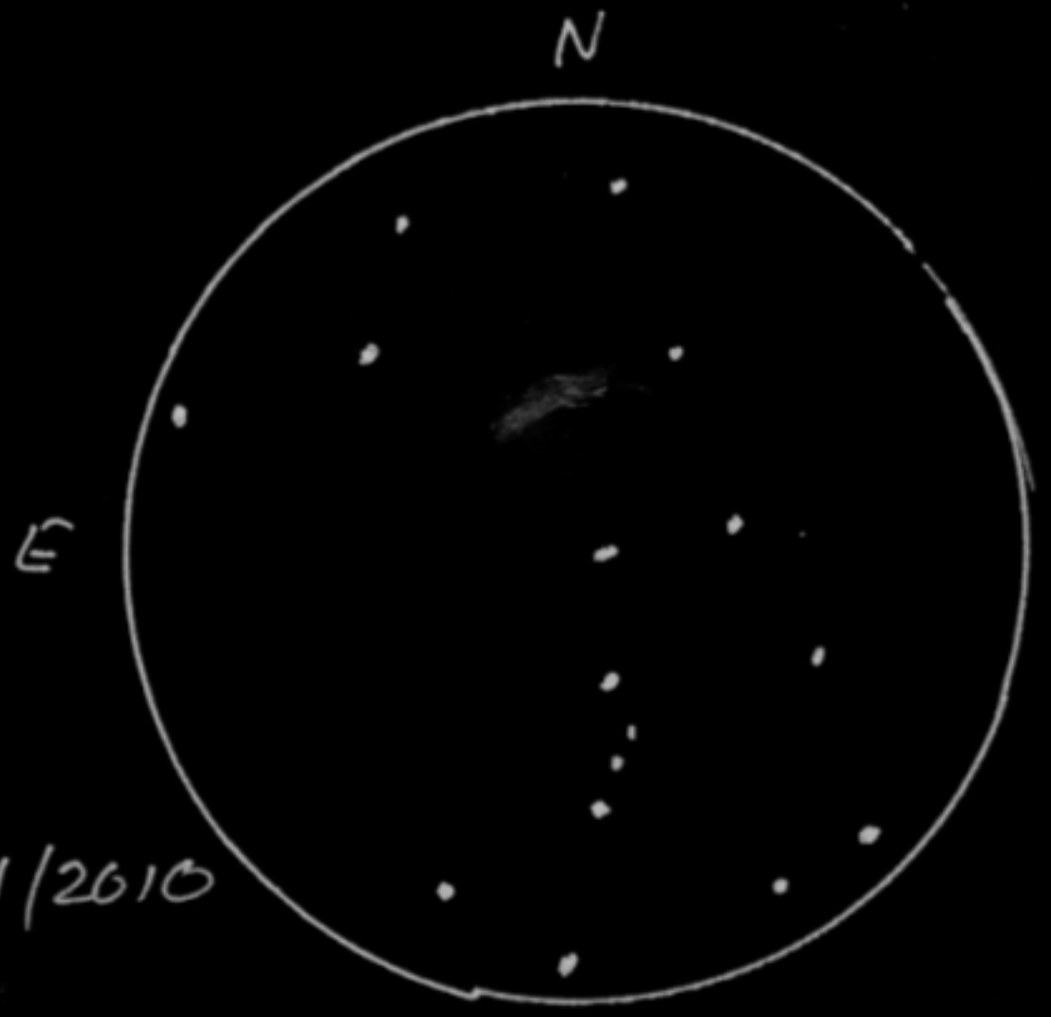
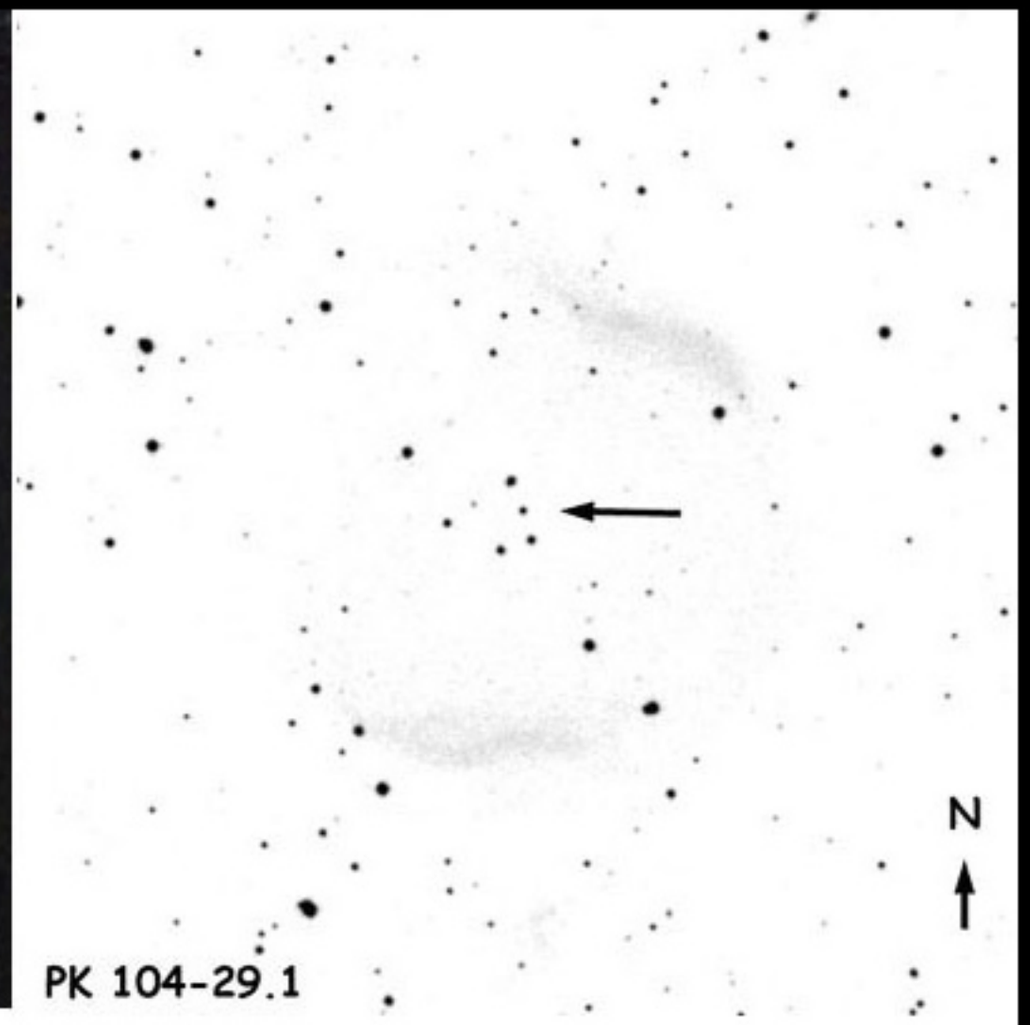


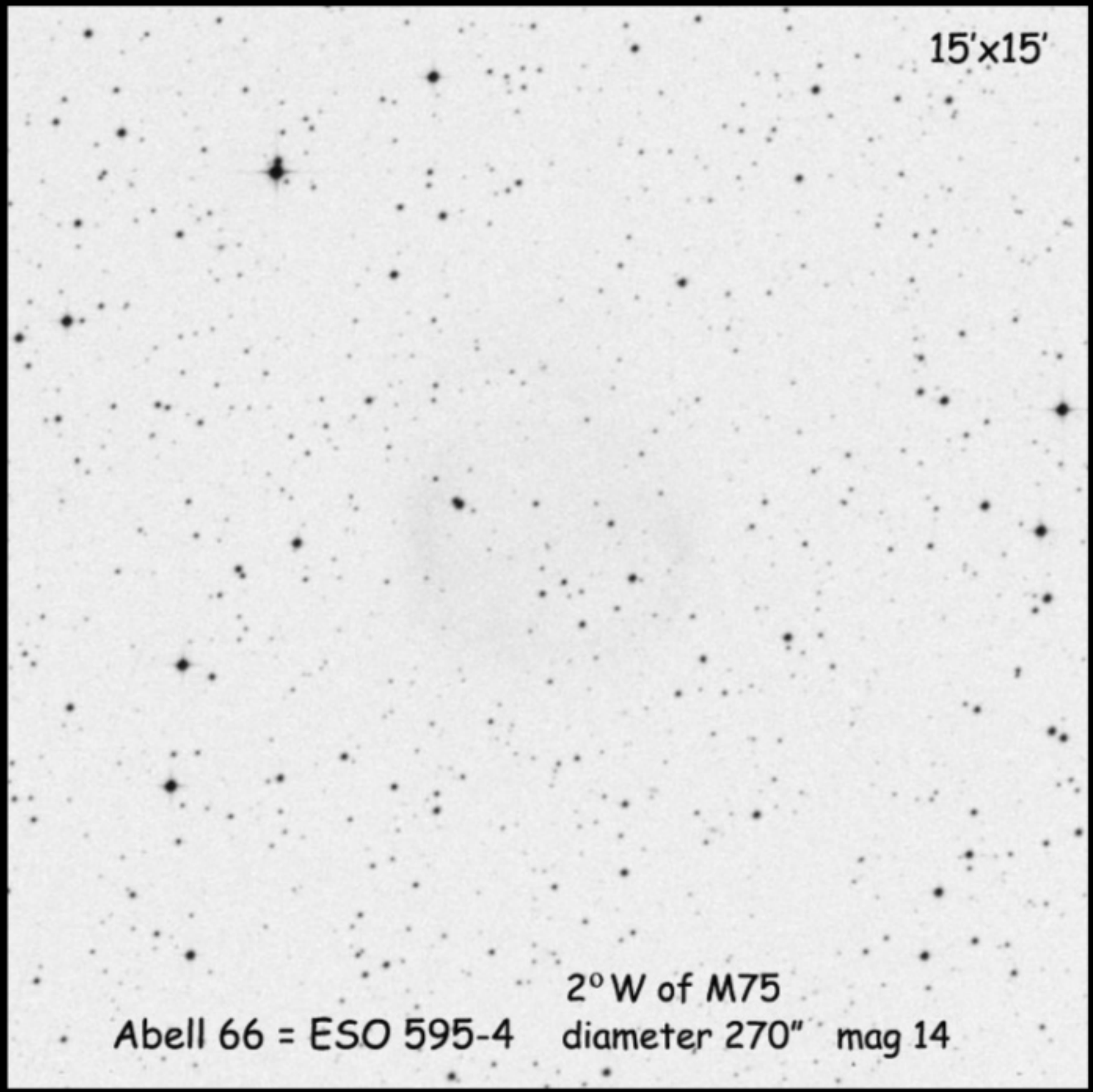
01/11/2010

Cas A 476X + O III
field dia = 10'

JONES 1 (diam 320" / mag 15.1P,12.1V)



central star mag 15?



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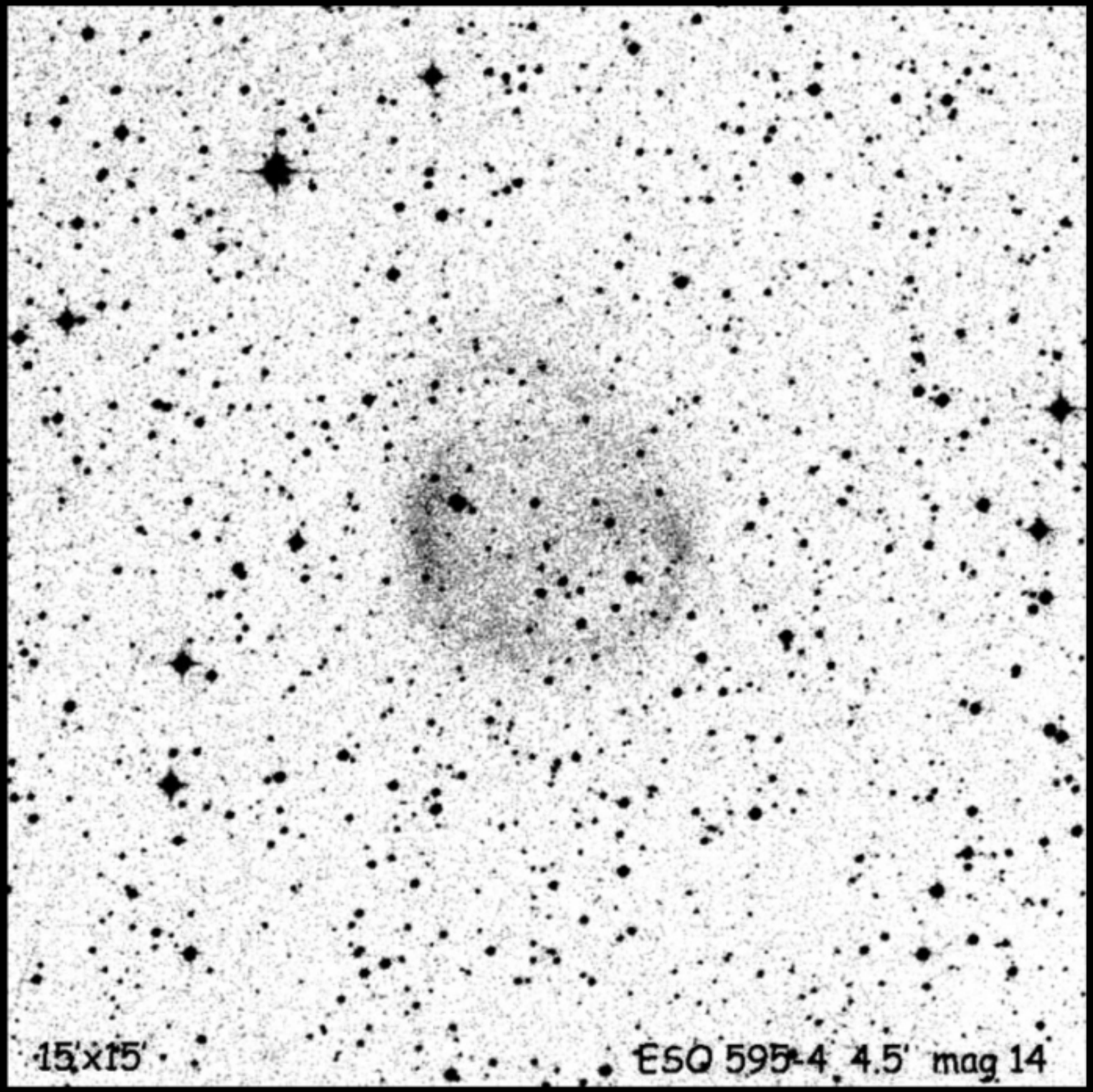

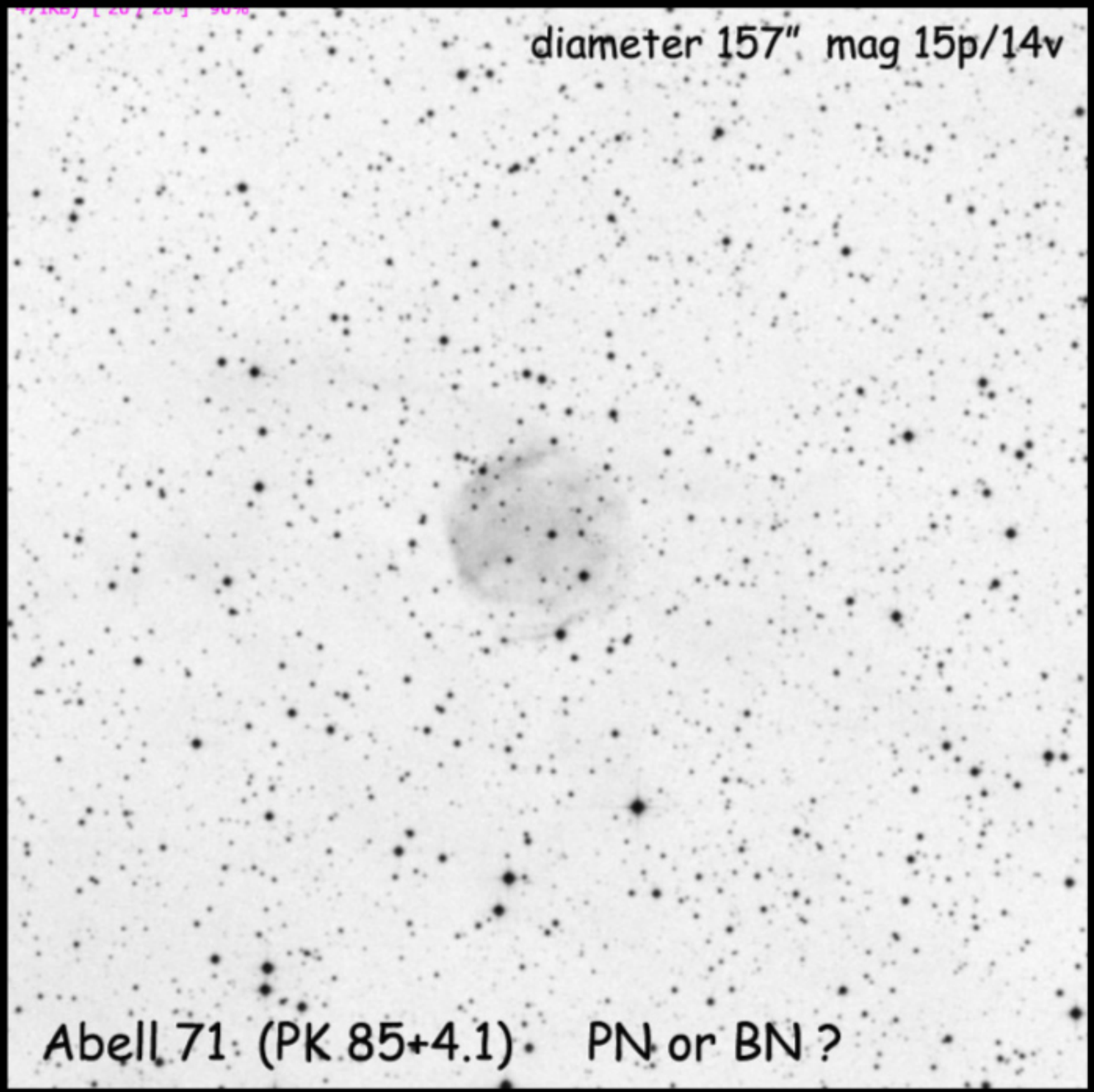

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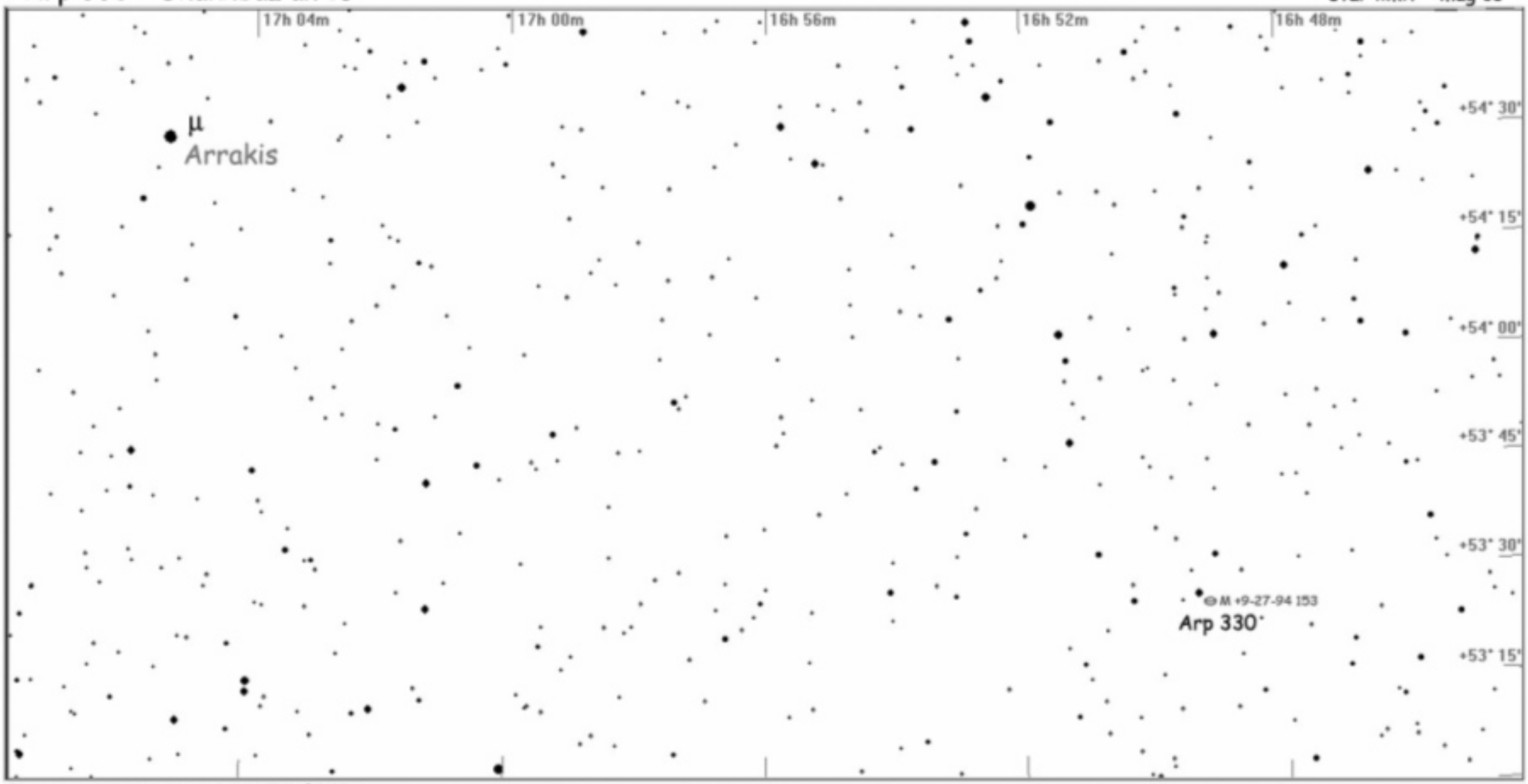
Arp 330 = Shakhbazian 16

star limit = mag 13



Draco Uranometria 52/21R

MegaStar Chart

MCG+9-27-94 is the brightest galaxy in Arp 330

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x9 cat's paw-wolf's head.jpg

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x105DL.jpg