

PA measurements were made using java tool *OnScreenProtractor* from SourceForge (<https://osprotractor.sourceforge.net/Protractor.html>). The screenshot below is what it looks like in use. Measurements made with this tool are listed in the data table on each page.

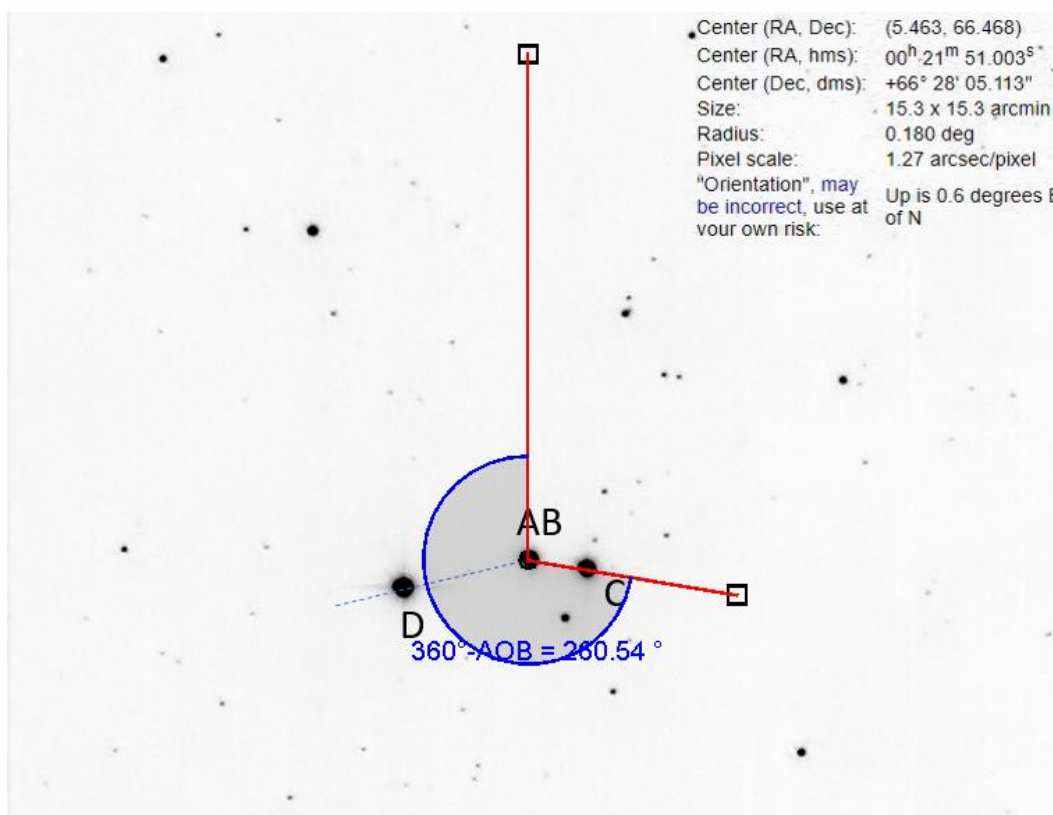
Star System Data  
(from StelleDoppie)

Mag A	9.21
Mag B	9.81
Mag C	8.58
Mag D	7.80
Sep AB	0.9"
Sep AC	48.5"
Sep AD	109.7"
PA AB (measured)	129 (nd)
PA AC (measured)	259 (260.54)
PA AD (measured)	109 (103.32 )

#024 **STT 7** (SAO 11132) in Cassiopeia

2024.08.09 02:32:41 UTC

SLOOH Canary2 1x20s, cropped, inverted



# #057 STFA 25 ABC (SAO 16018) in Draco

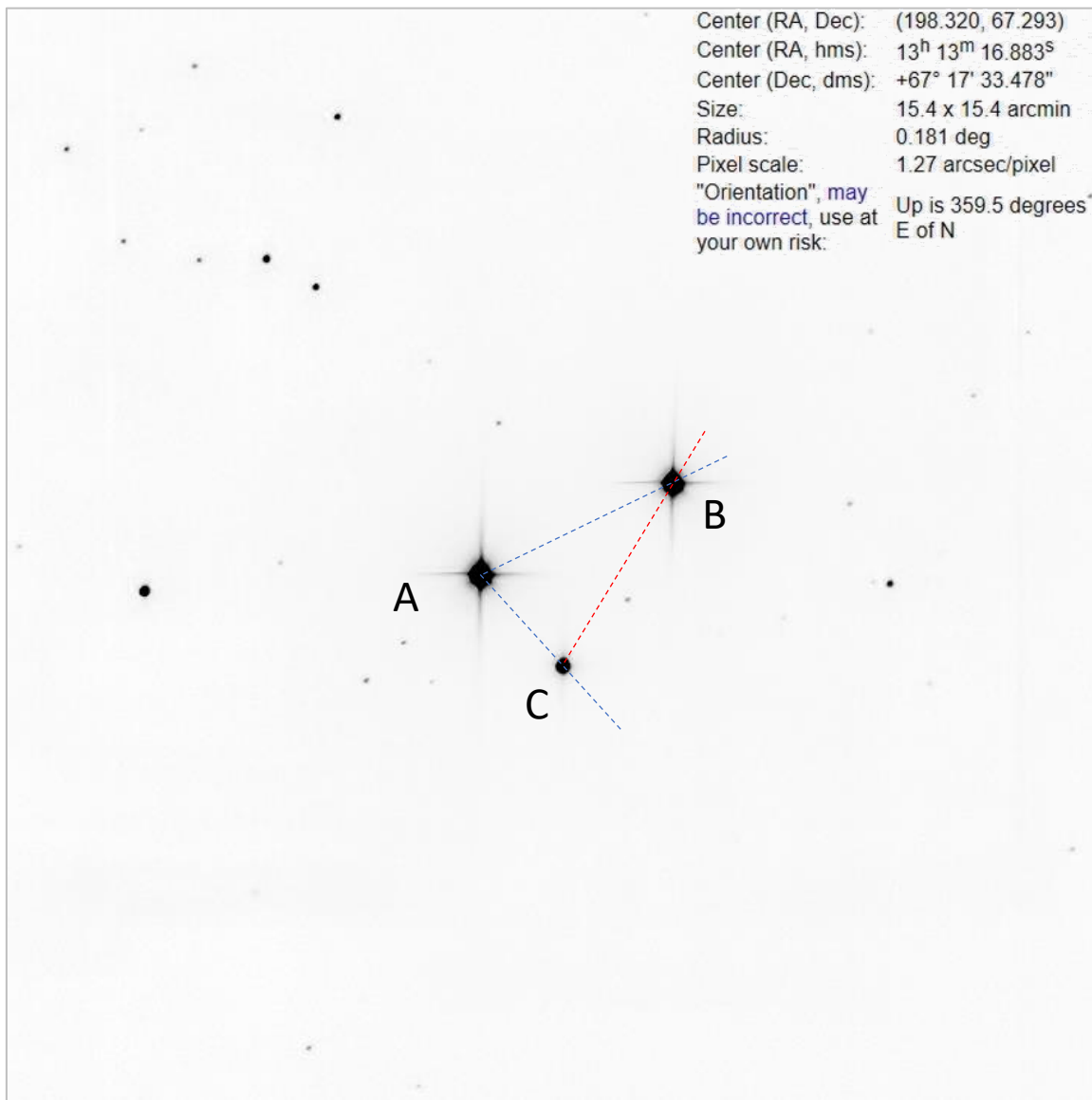
2024.08.28 21:07:29 UTC

SLOOH Canary2 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	6.64
Mag B	7.08
Mag C	8.89
Sep AB	180.8"
Sep AC	104.5"
Sep BC	180.1"
PA AB (measured)	298 (296.31)
PA AC (measured)	225 (222.33)
PA BC (measured)	151 (149.98)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

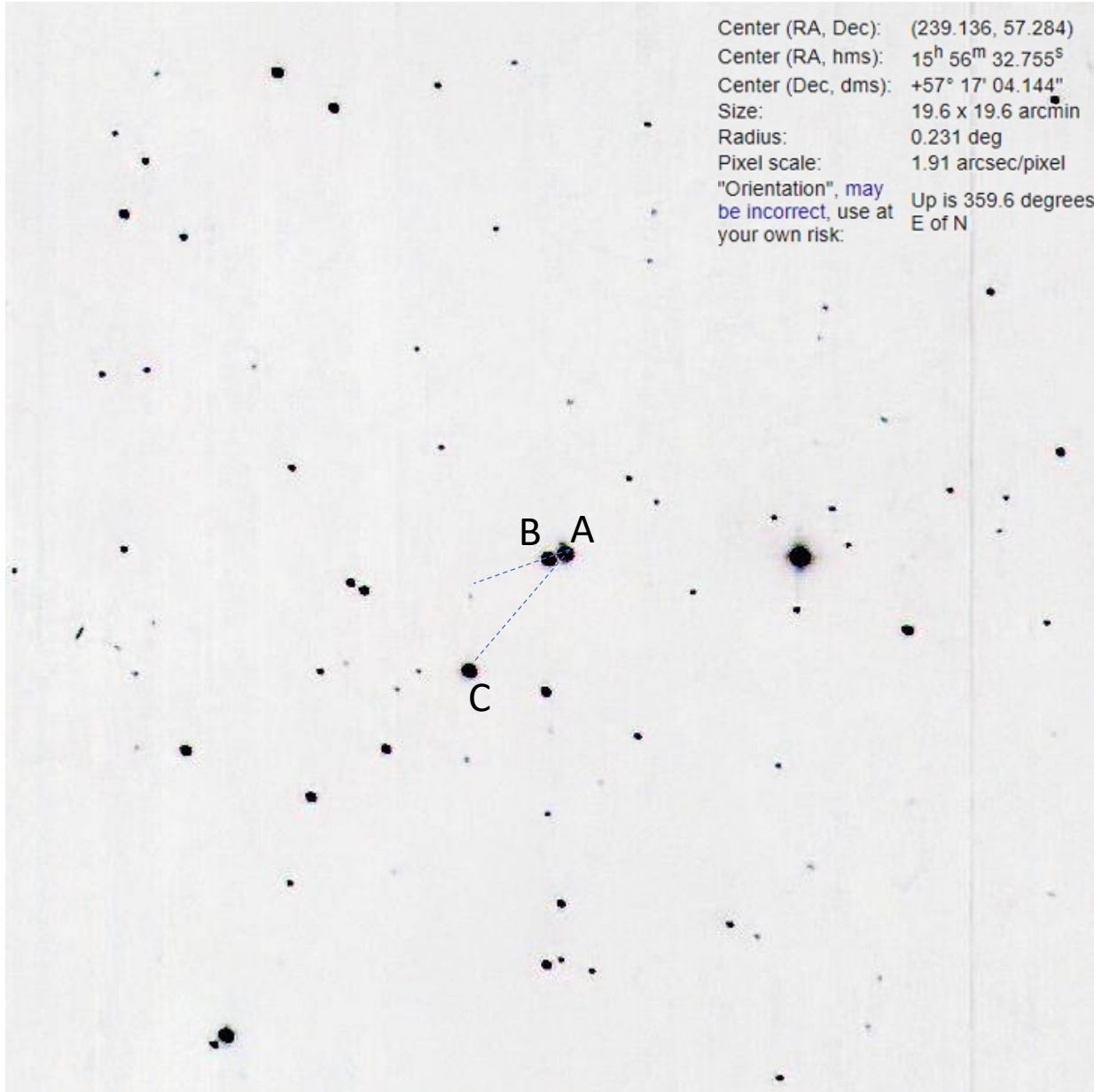


Notes: This is a pretty trio that forms a clean right triangle. The A & B stars are roughly matched in brightness while the C star is ~2 mags dimmer. All are widely spaced from one another & easy to identify.

#058 STF 1996 ABC (SAO 29725) in Draco  
2024.08.07 01:27:35 UTC  
SLOOH Canary2 1x50s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	10.2
Mag B	10.6
Mag C	10.59
Sep AB	19.4"
Sep AC	162"
PA AB (measured)	108 (109)
PA AC (measured)	141 (141)



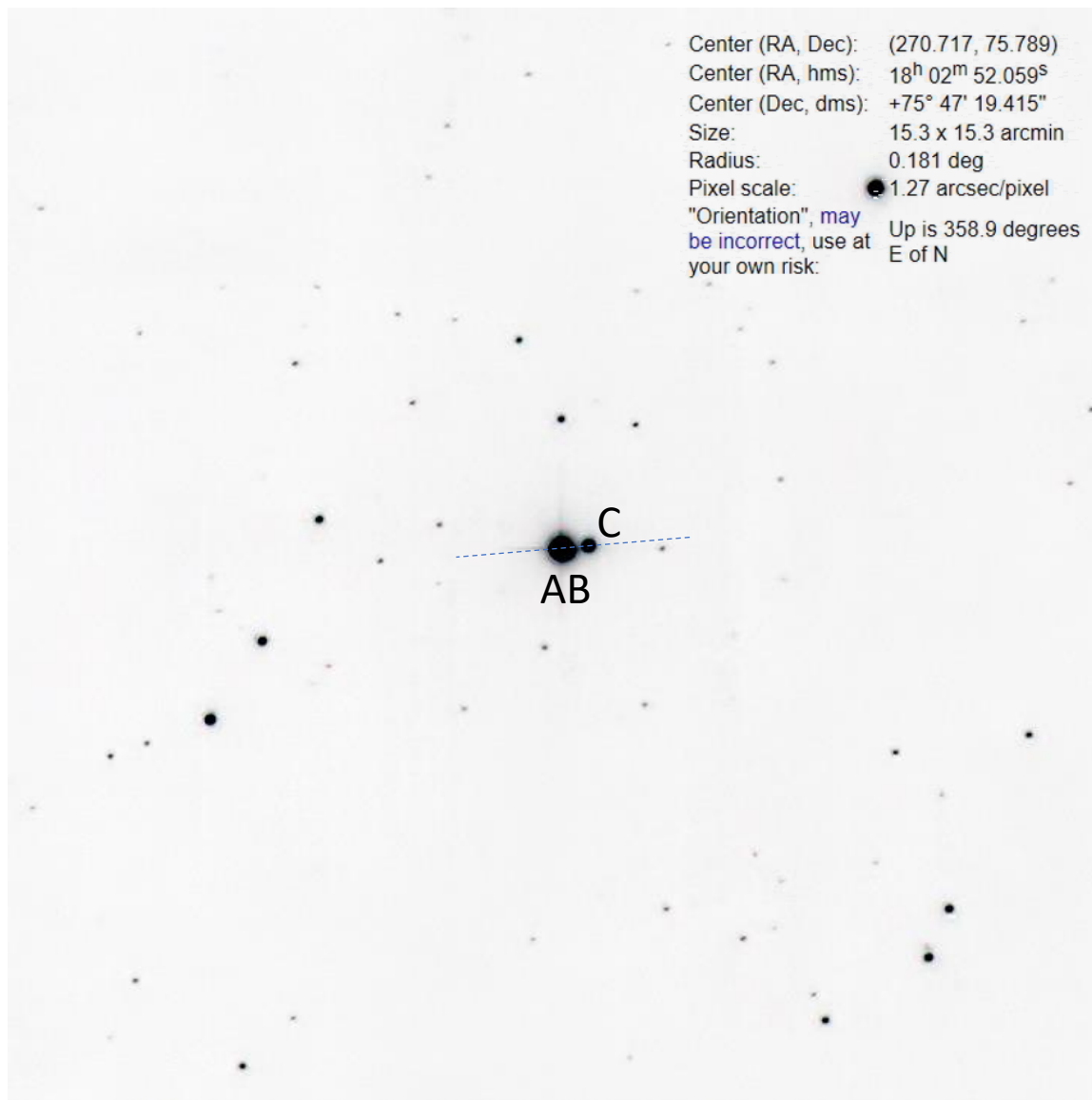
Notes:  
The three stars in this system have virtually the same brightness. The AB pair is tight but easily split. The AC distance is ~8x that of AB.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge.  
FOV analyzed by nova.astrometry.net  
(see box in upper right)

#059 STF 2302 (SAO 8999) in Draco  
 2024.08.13 02:02:13 UTC  
 SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	7.03
Mag B	9.97
Mag C	9.66
Sep AB	5.7"
Sep AC	22.9"
Sep BC	18.3"
PA AB (measured)	248 (nd)
PA AC (measured)	278 (275.37)
PA BC (measured)	287 (nd)



Notes: I cannot split the AB star, although there might be a bulge on the western (right) side which would correspond with the reported PA of 248°. The C star is easily split to the west as it just escapes the glow of AB.

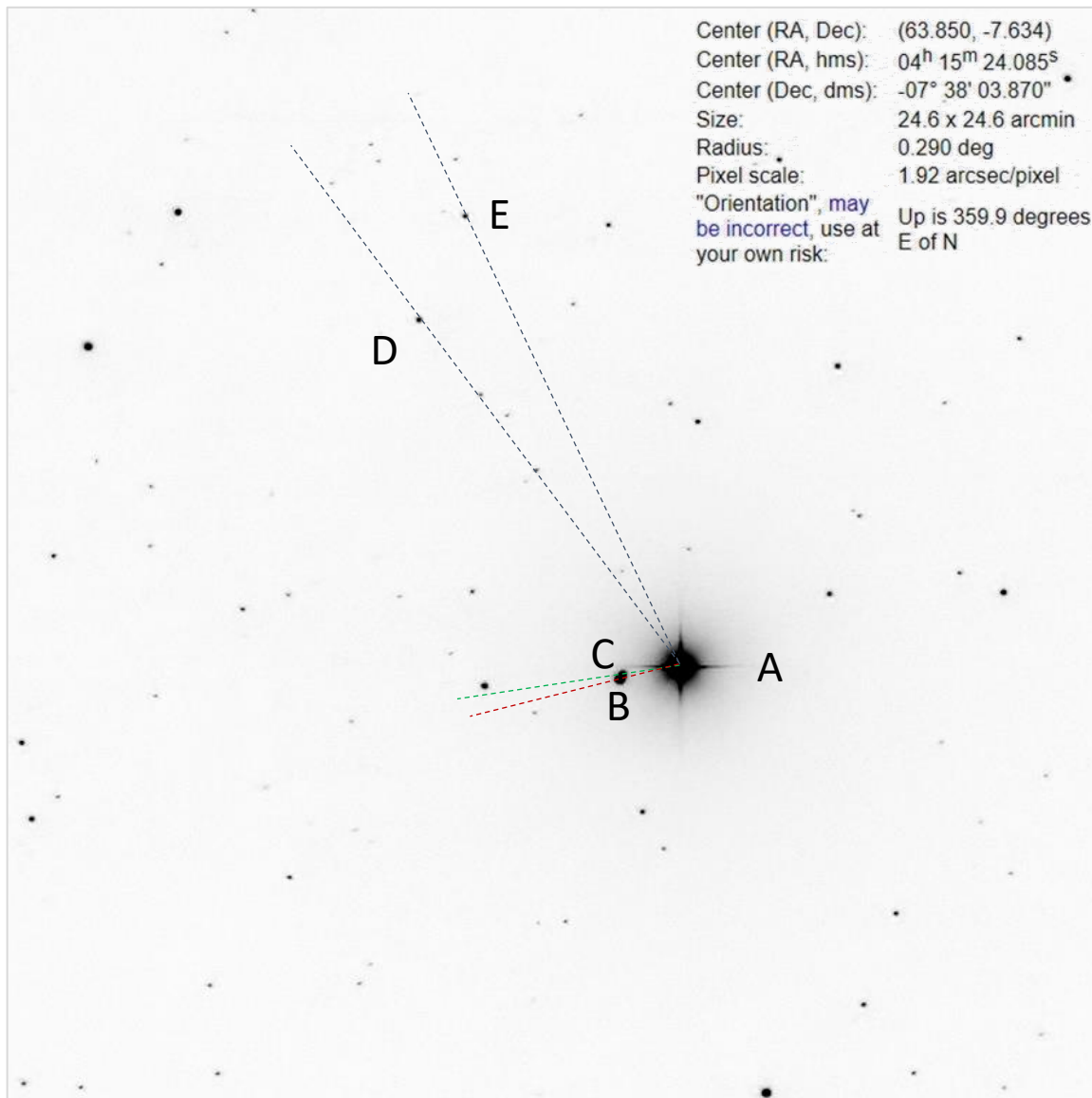
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

# #060 STF 518 / Keid (SAO 131063) in Eridanus

2024.08.13 07:01:55 UTC

SLOOH Chile2 1x20s, cropped, inverted

Mag A	4.43
Mag B	9.53
Mag C	11.17
Mag D	12.62
Mag E	12.99
Sep A,BC	82.7"
Sep BC	8.2"
Sep AC	77.5"
Sep AD	481.4"
Sep AE	569.9"
PA A,BC (measured)	102 (100.4)
PA BC (measured)	330 (nd)
PA AC (measured)	97 (95.57)
PA AD (measured)	38 (36.73)
PA AE (measured)	24 (25.31)



Notes: I had to crop to a wider FOV than usual to get stars D & E. Stars B & C can be distinguished but not fully split.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

# #061 HJ 3644 (SAO 169368) in Eridanus

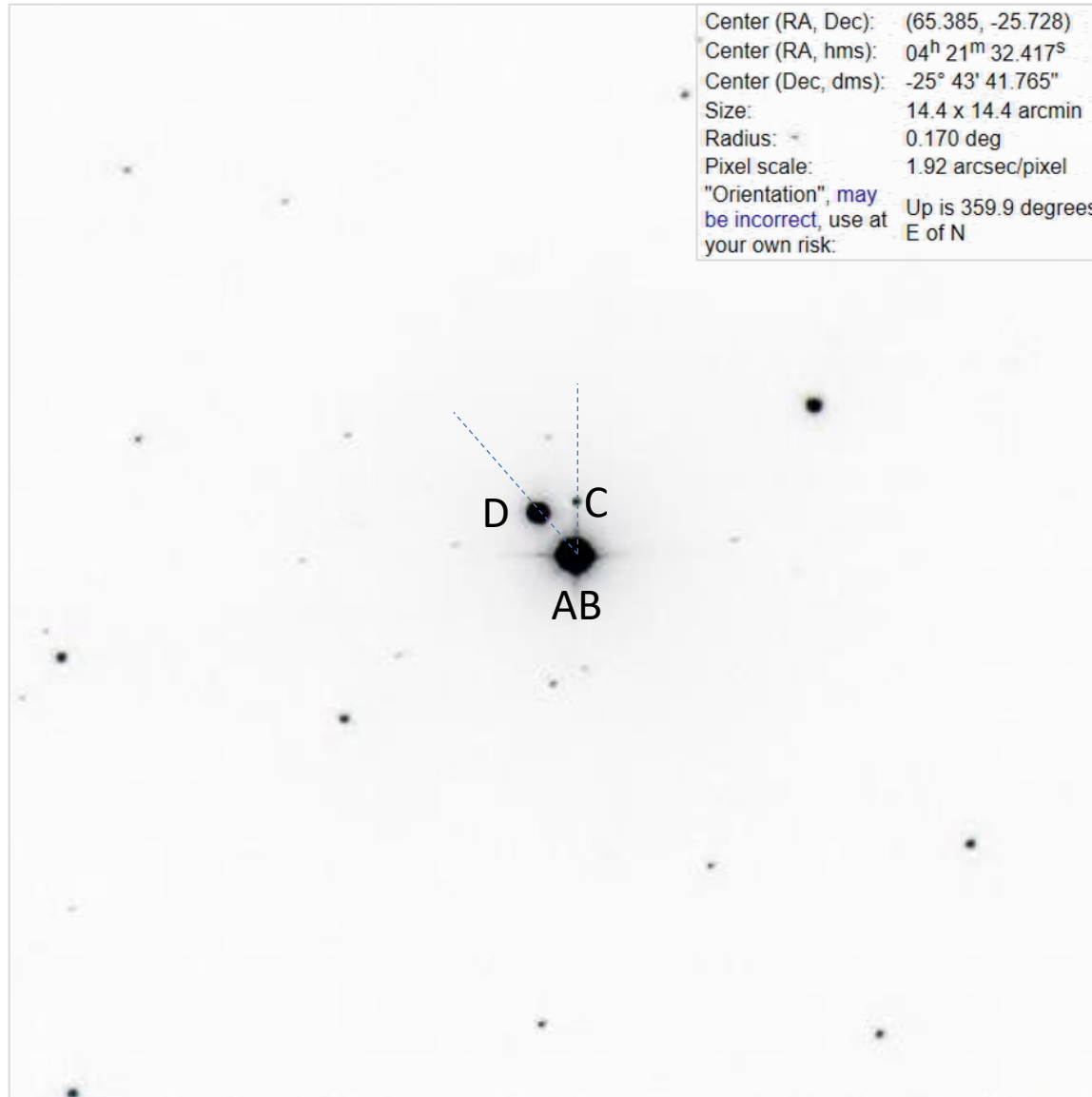
2024.08.13 07:46:22 UTC

SLOOH Chile2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag AB	6.15
Mag C	12.8
Mag D	8.23
Sep AB,C	41.1"
Sep AB,D	43.7"
PA AB,C (measured)	1 (0.72)
PA AB,D (measured)	41 (40.68)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: Stars AB are listed as one in StelleDoppie, with no separation. The group has nice stairstep magnifications at Mag 6, Mag 8, and Mag 12 (Poppa Bear, Momma Bear, & Baby Bear 😊)

# #062 51 Eri, BU 88, WAL 32 (SAO 131358) in Eridanus

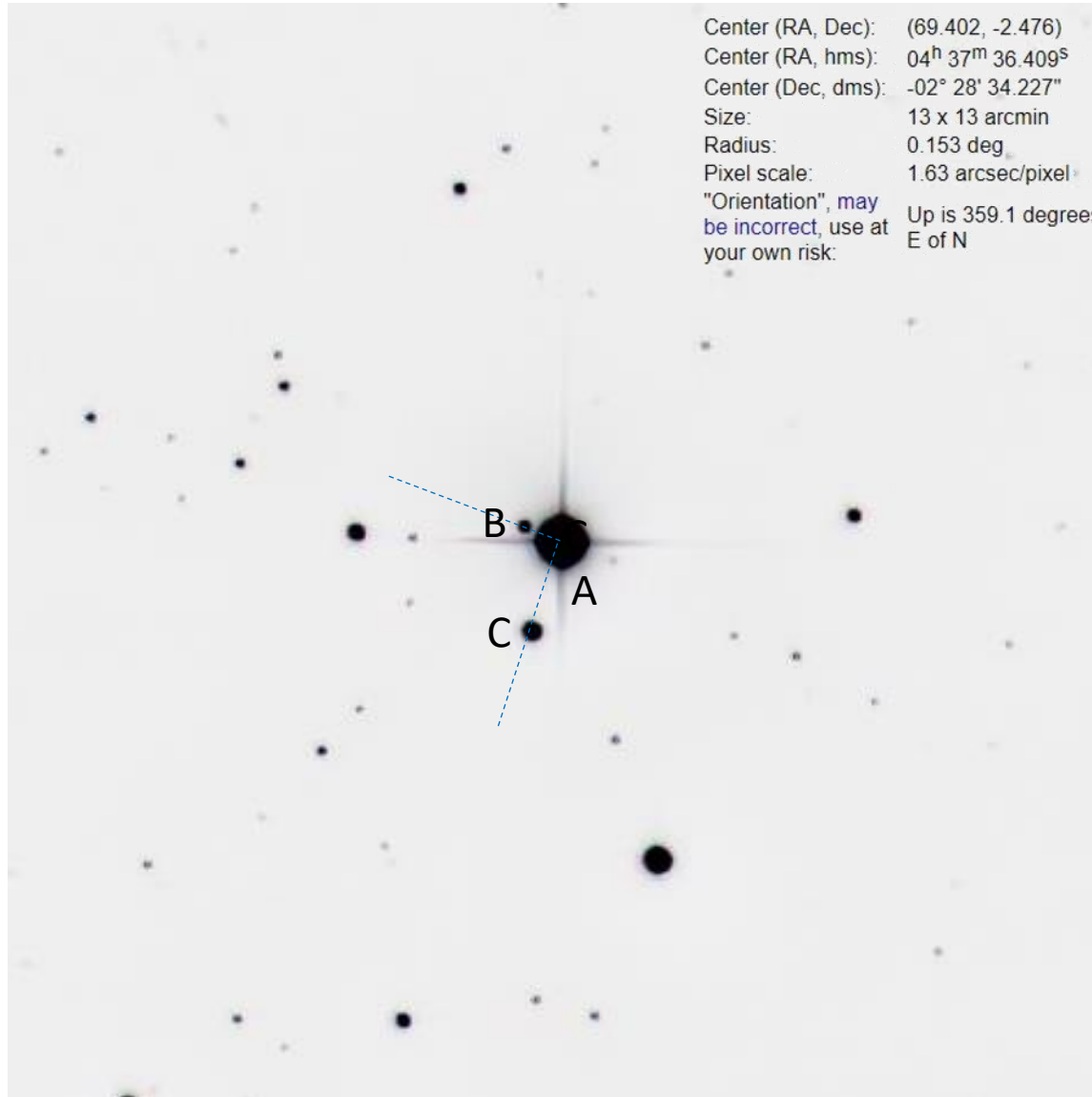
2024.08.29 17:01:36 UTC

SLOOH us1 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	5.22
Mag B	11.8
Mag C	10.59
Sep AB	28.9"
Sep AC	66.7"
PA AB (measured)	75 (73.0)
PA AC (measured)	163 (163.76)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: Extremely bright A star dominates this group, but the B star is just far enough away to be an obvious split, and the C star, at twice the distance, is even easier.



# #063 HJ 3677 AB+DAW BC (SAO 169657) in Eridanus

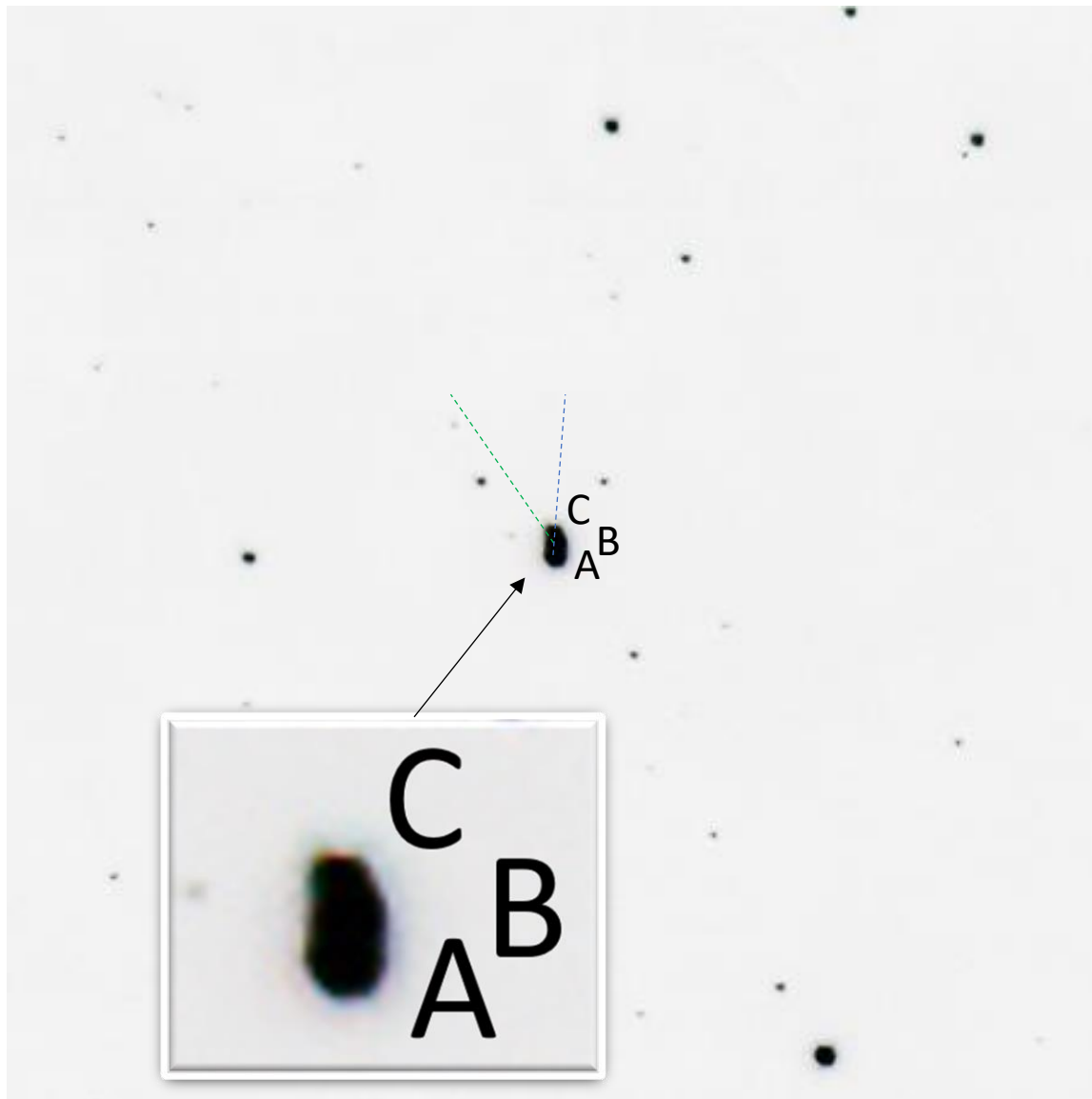
2024.08.12 07:05:55 UTC

SLOOH Chile2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	9.81
Mag B	10.25
Mag C	11.2
Sep AB	10.6"
Sep BC	8.5"
PA AB (measured)	354 (354.51)
PA BC (measured)	17 (17.8)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: This is such a tight trio that I inserted a highly magnified view to display the shapes of the individual overlapping stars. Star B is almost hidden in between stars A & C.



# #064 62 (b) Eri, SHJ 48, GMC 11 (SAO 131614) in Eridanus

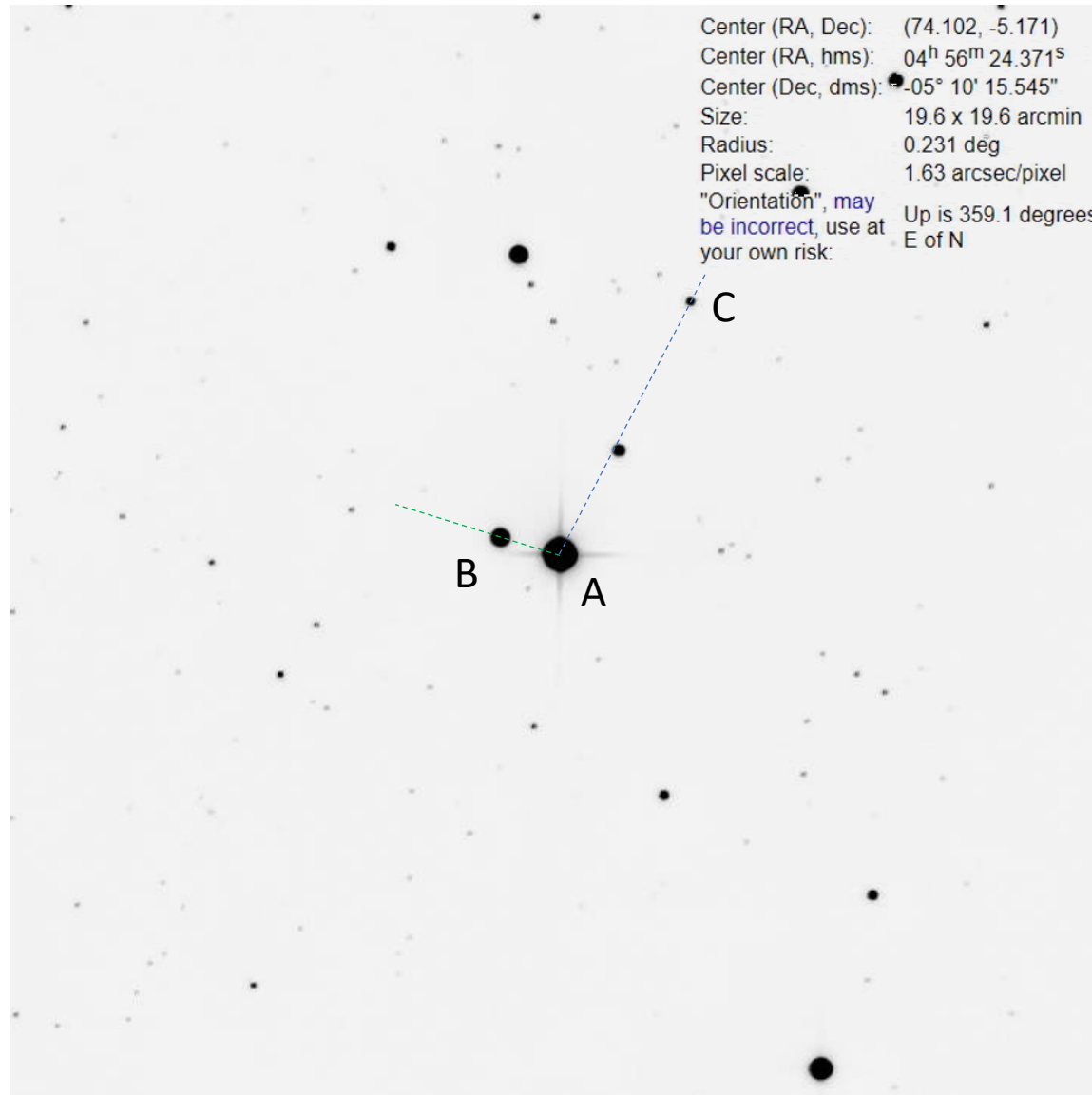
2024.08.29 17:06:25 UTC

SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	5.46
Mag B	8.93
Mag C	11.42
Sep AB	66.1"
Sep AC	127.1"
PA AB (measured)	76 (73.45)
PA AC (measured)	331 (332.75)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: In this system of 3 stars, are all well defined and easily split. There's a nice step down in brightness between the three members, ranging from 5.5 (A) to the dimmest at 11.4 (C) . Star B takes the middle ground at mag 9.

# #065 66 Eri, STF 642, HUB 5 (SAO 131777) in Eridanus

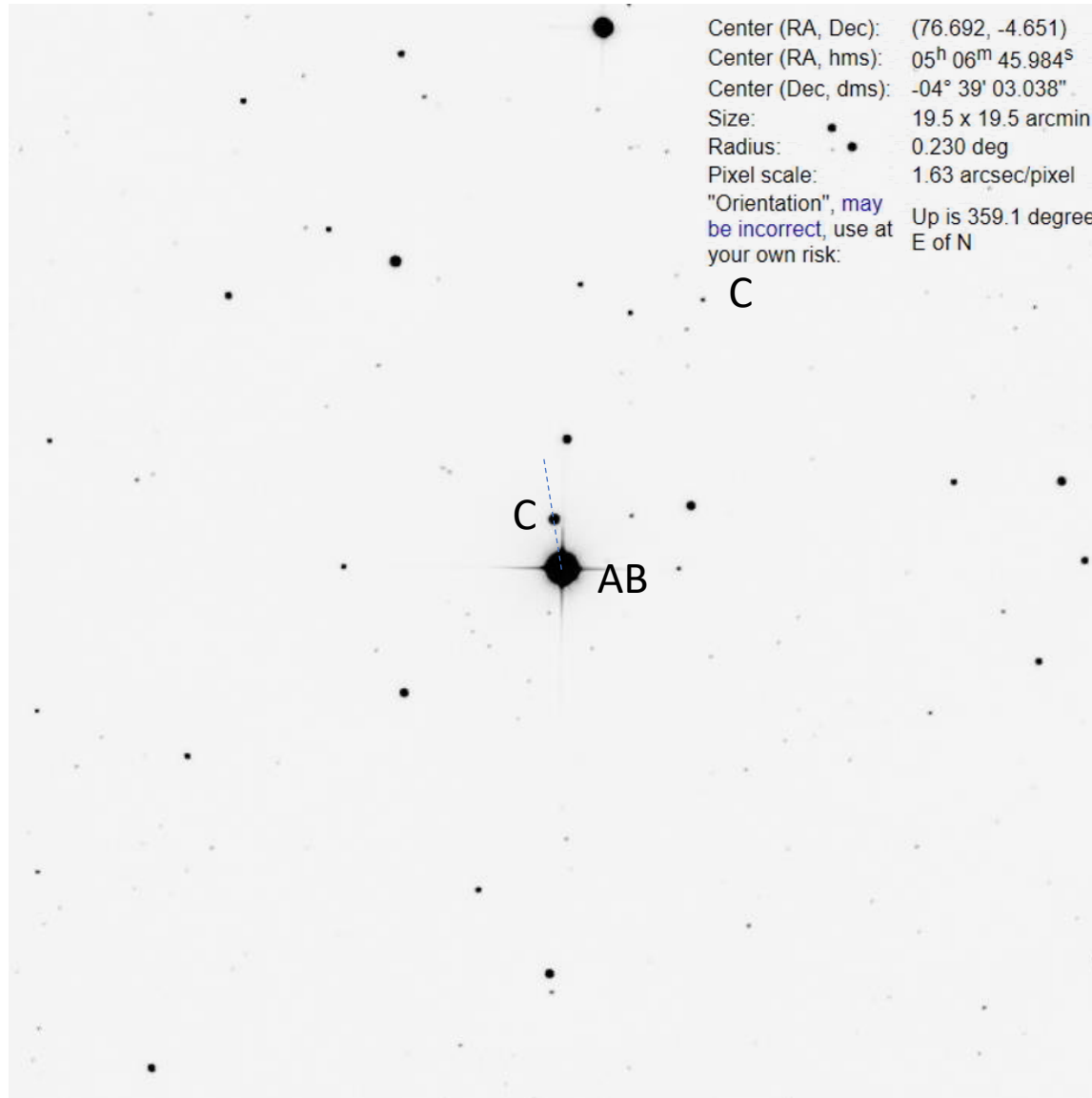
2024.08.29 17:16:35 UTC

SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	5.12
Mag B	9.38
Mag C	10.80
Sep AB	1.6"
Sep AC	52.2"
PA AB (measured)	233 (nd)
PA AC (measured)	10 (9.12)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



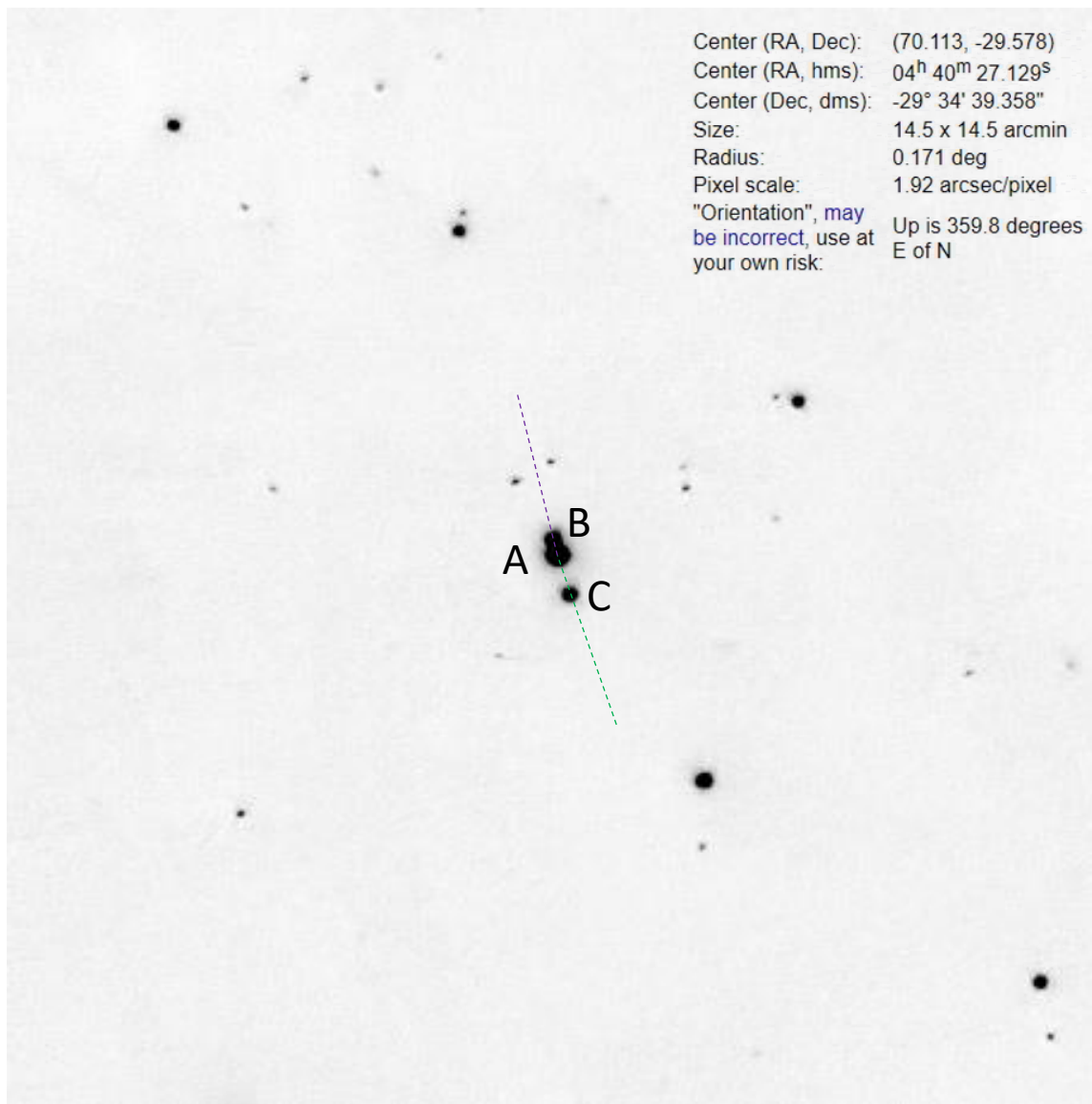
Notes: Although we can only see 2 members here, the B star sits a tiny bit askew on top of the A star, making the lower right quadrant of AB bulge ever so slightly. Small star C is well separated from AB a short ways to the North.

#066 HJ 3518 (SAO 167944) in Fornax  
2024.08.12 05:26:49 UTC  
SLOOH Chile2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	9.38
Mag B	11.20
Mag C	11.37
Sep AB	13.5"
Sep AC	31.1"
PA AB (measured)	15 (14.04)
PA BC (measured)	199 (198.89)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: Stars B and C are similar in magnitude but C is twice as far away from A than is B.

# #067 STF 982 ABC (SAO 96265) in Gemini

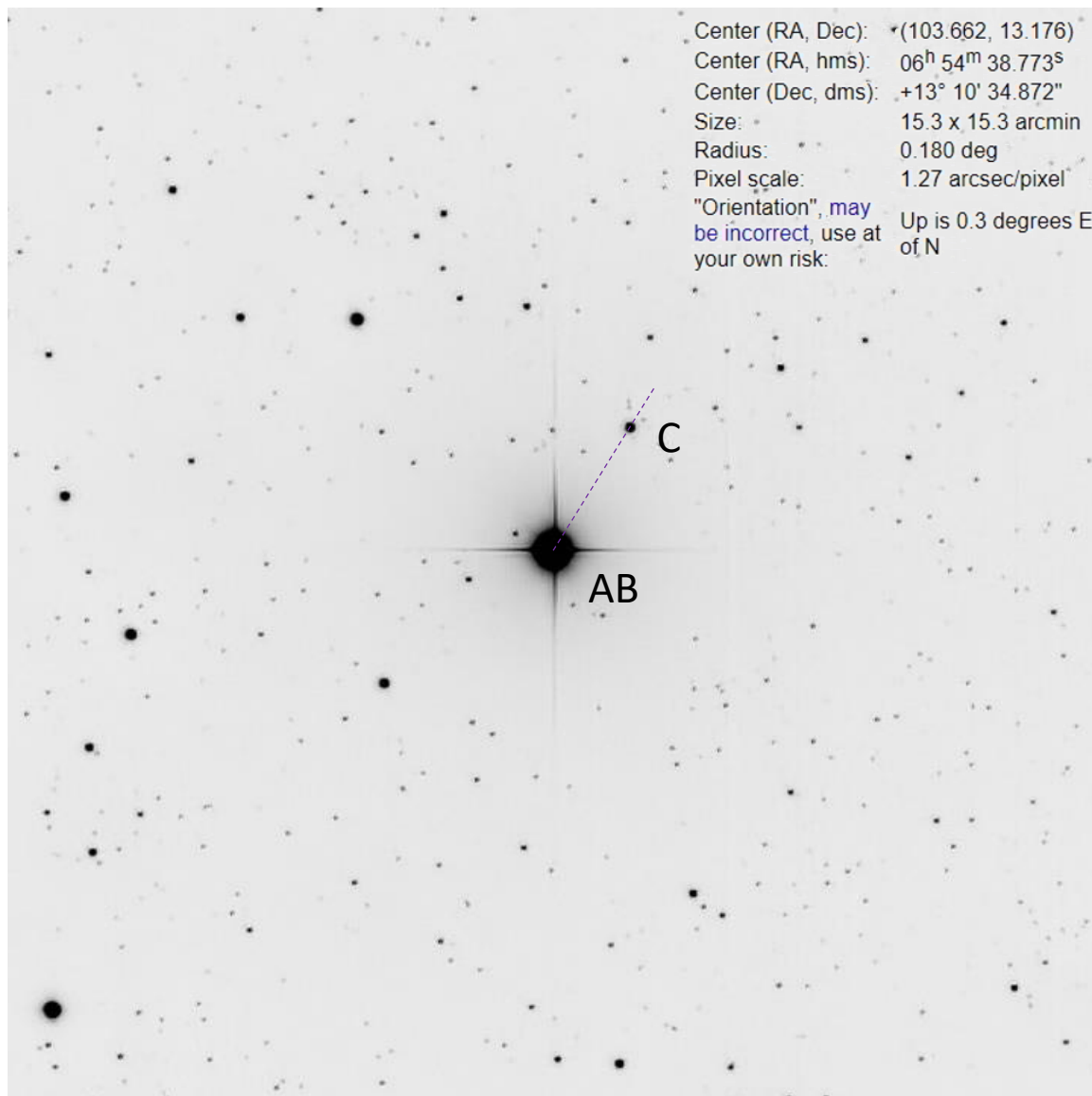
2024.09.05 04:47:24 UTC

SLOOH Ca2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	4.75
Mag B	7.80
Mag C	11.32
Sep AB	7.3"
Sep AC	120.8"
PA AB (measured)	145 (nd)
PA AC (measured)	328 (327.25)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

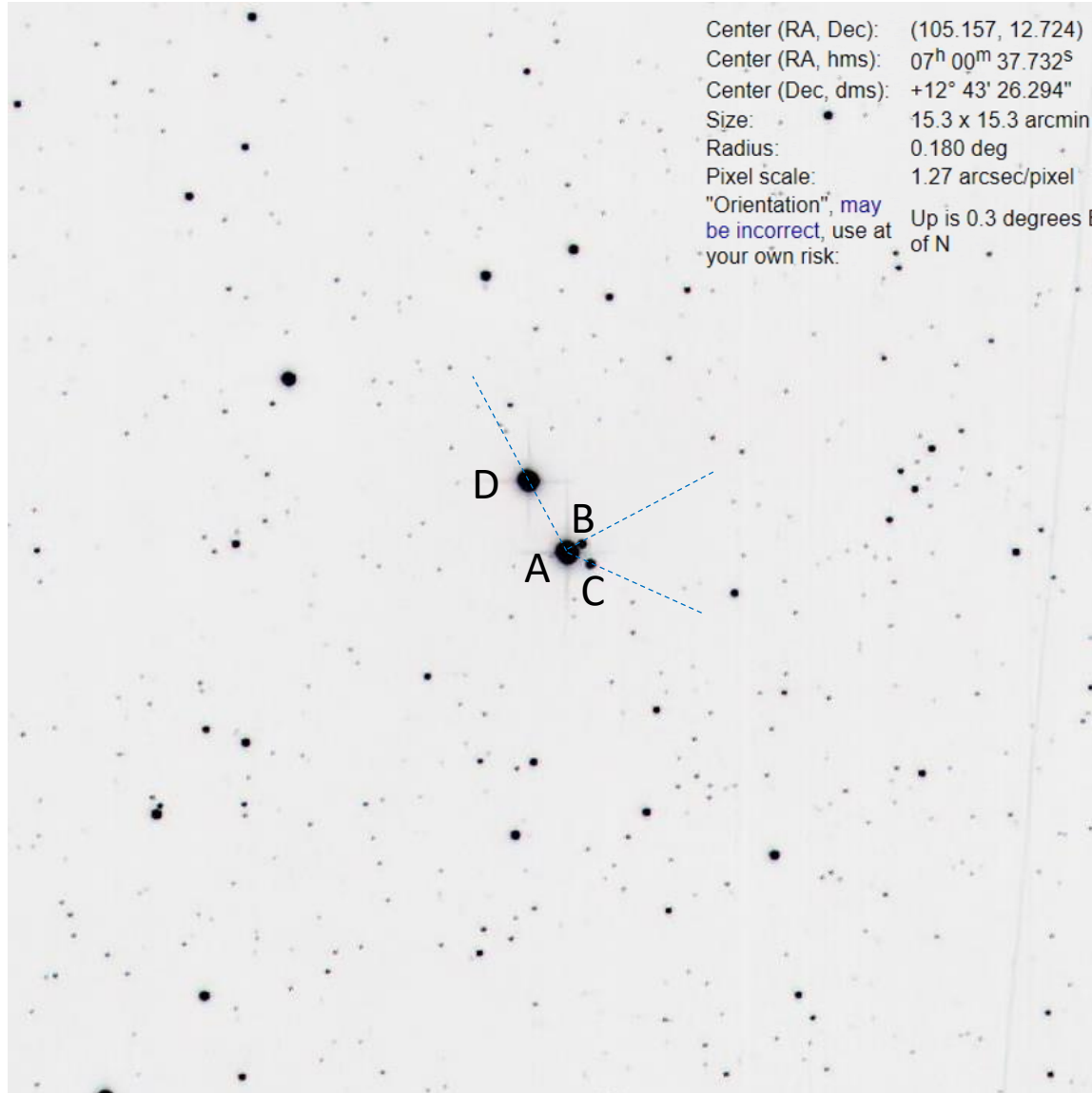


Notes: I thought I'd be able to see a at least a hint of the B star, but the A star is just too bright for the closeness of B. Star C, while much dimmer than B is a safe 2' away from A and easily visible.

Star System Data  
(from StelleDoppie)

#068 STF 1007 AD (SAO 96272) in Gemini  
2024.09.05 04:52:09 UTC  
SLOOH Ca2 1x20s, cropped, inverted

Mag A	7.43
Mag B	11.40
Mag C	10.00
Mag D	7.74
Sep AB	14.6"
Sep AC	21.9"
Sep AD	67.7"
PA AB (measured)	300 (300.07)
PA AC (measured)	244 (244.67)
PA AD (measured)	28 (28.26)



Notes: What a cute system! Two dainty B & C stars sit cleanly off the west side of the primary, while the D star rivals the A star in brightness and sits at a well-balanced distance to the NE.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#069 STF 1054 (SAO 59962) in Gemini  
2024.09.05 04:42:49 UTC  
SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	8.16
Mag B	9.96
Mag C	9.93
Sep AB	18.5"
Sep AC	96.8"
PA AB (measured)	292 (291.13)
PA AC (measured)	274 (274.40)



Notes: Here we see a compact trio with all three components clearly split. The B & C stars are of similar magnitude and are only slightly dimmer than the primary A star.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge.  
FOV analyzed by nova.astrometry.net  
(see box in upper right)

# #070 STF 11102 (SAO 96964) in Gemini

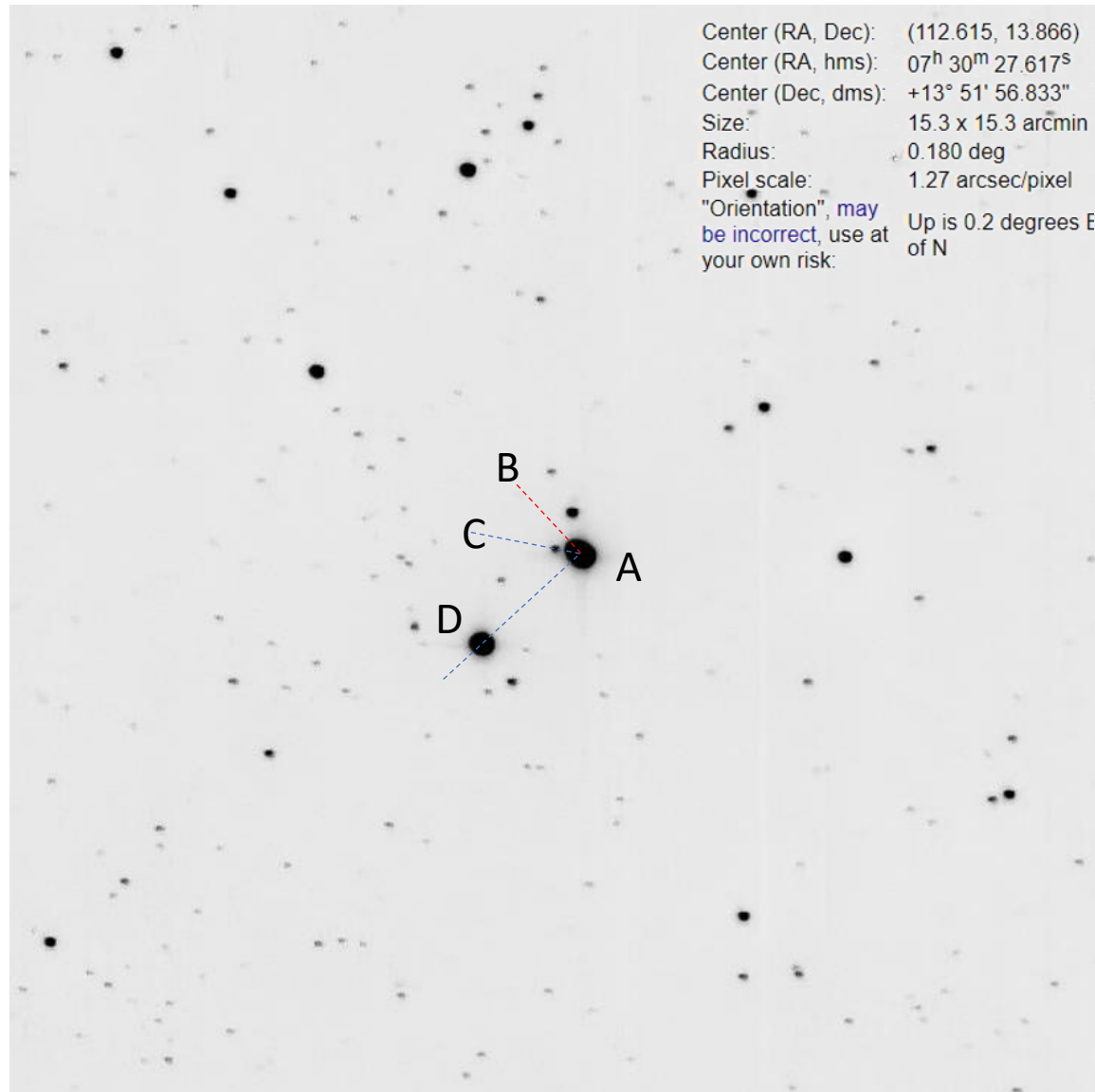
2024.09.06 04:57:24 UTC

SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	7.36
Mag B	9.21
Mag C	13.23
Mag D	8.04
Sep AB	7.7"
Sep AC	21.8"
Sep AD	111.9"
PA AB (measured)	45 (45.37)
PA AC (measured)	77 (78.20)
PA AD (measured)	131 (131.49)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

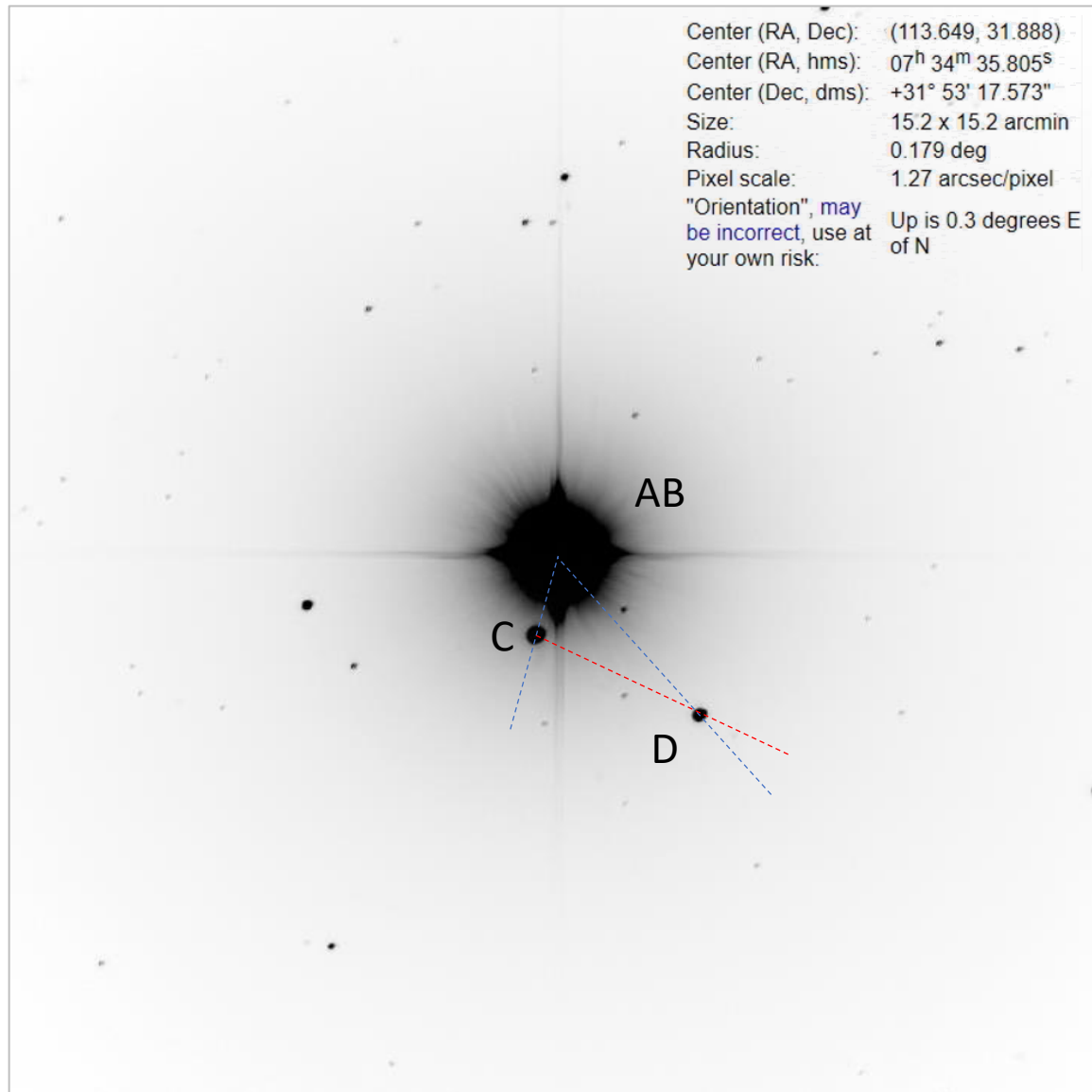


Notes: This multiple star system has a close B star that is seen here as a lump bulging out of the NW quadrant of A (marked in red). The tiny C star is cleanly split, just off the A's eastern (left) edge. The D star is surprisingly bright, only 2 mags dimmer than A and is located ~3' SE of A at about 7 o'clock.



Mag A	1.93
Mag B	2.97
Mag C	9.83
Mag D	10.07
Sep AB	5.4"
Sep AC	71.6"
Sep AD	179.8"
PA AB (measured)	53 (nd)
PA AC (measured)	164 (164.39)
PA AD (measured)	221 (221.67)
PA CD (measured)	244 (244.21)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



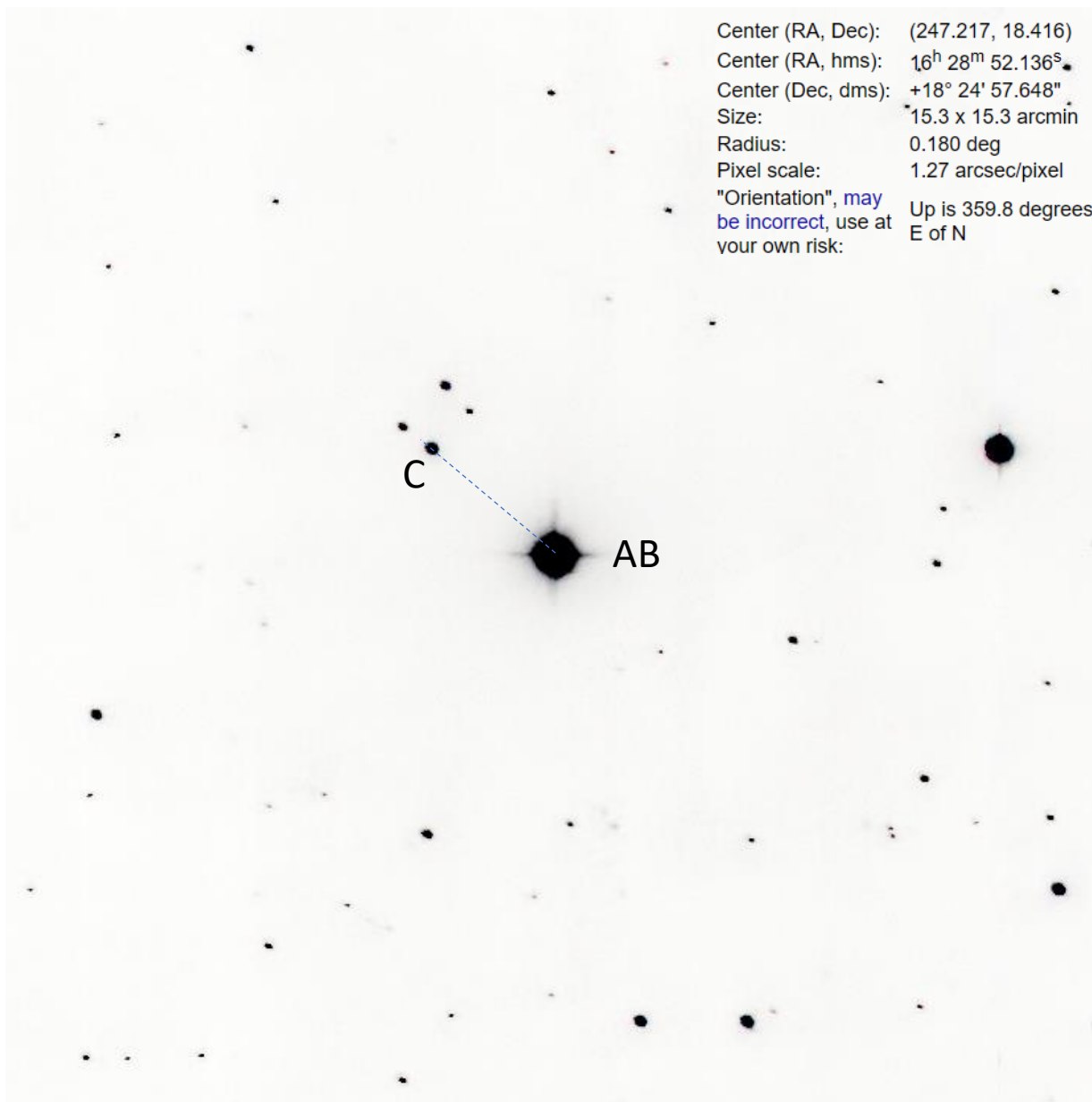
Notes: Castor is one of my favorite winter stars to point out at winter outreach events. I've always enjoyed explaining how it is actually a sextuple star system. This image is the first time I've seen the C & D pair! Although visually I can detect both the A & B stars (doubles themselves), here they are far too bright for the photo and merge into one. The A pair, B pair, and C pair all orbit one center of mass.

#072 STF 2052 (SAO 102200) in Hercules  
2024.08.10 01:17:33 UTC  
SLOOH Canary2 1x50s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	7.69
Mag B	7.91
Mag C	11.80
Sep AB	2.5"
Sep AC	136.4"
PA AB (measured)	118 (nd)
PA AC (measured)	44 (48.54)

Center (RA, Dec): (247.217, 18.416)  
Center (RA, hms): 16<sup>h</sup> 28<sup>m</sup> 52.136<sup>s</sup>  
Center (Dec, dms): +18° 24' 57.648"  
Size: 15.3 x 15.3 arcmin  
Radius: 0.180 deg  
Pixel scale: 1.27 arcsec/pixel  
"Orientation", may be incorrect, use at your own risk: Up is 359.8 degrees E of N



Notes:  
The AB stars are too close to split. The C star is sits ~2' away to the NE, anchoring the bottom corner of a nifty little 4-star box.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

# #073 STFA 31AB / 37 Her (SAO 121776) in Hercules

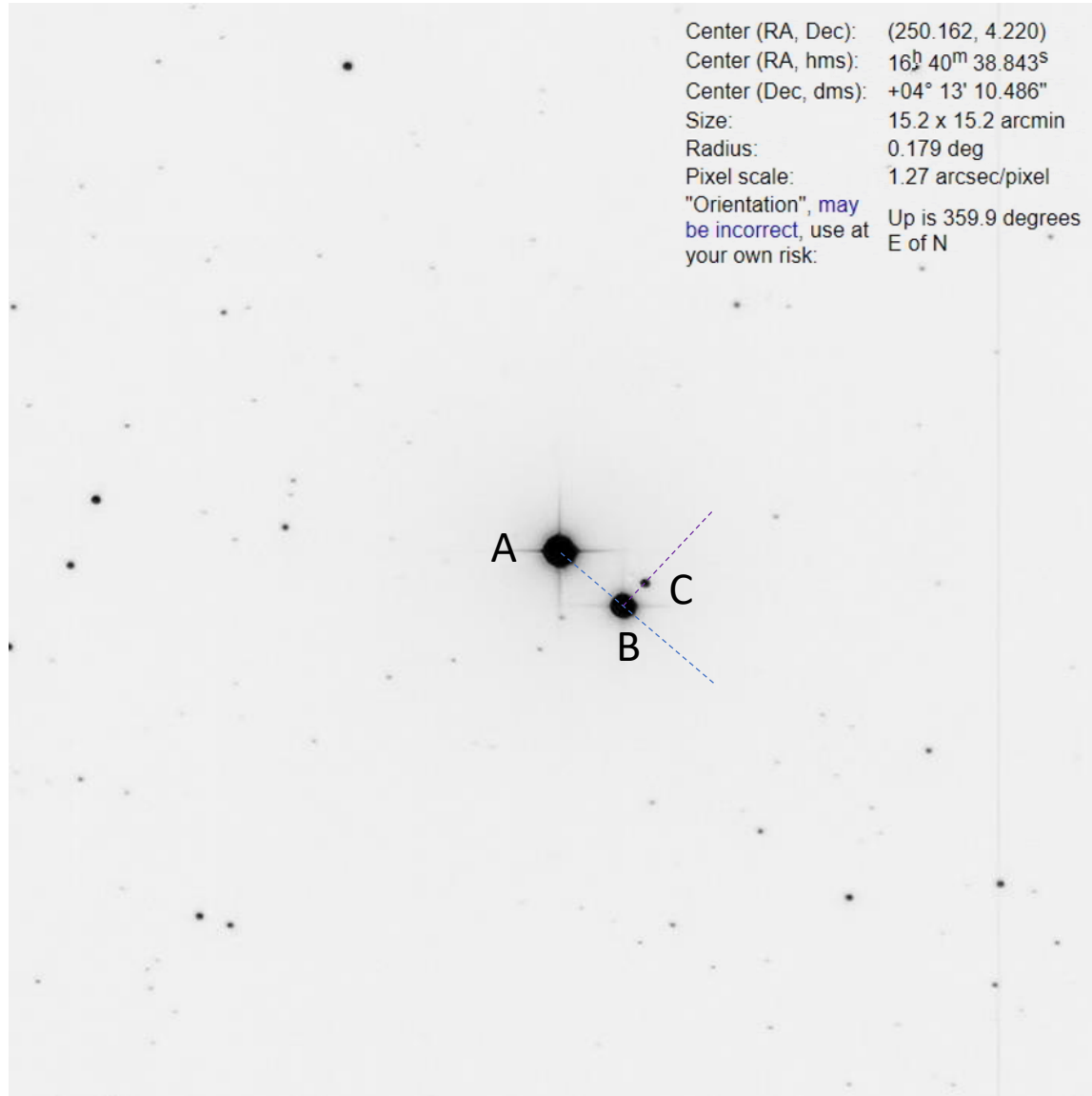
2024.08.12 05:26:49 UTC

SLOOH Chile2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	5.76
Mag B	6.92
Mag C	11.40
Sep AB	69.3"
Sep BC	25.7"
PA AB (measured)	229 (229.14)
PA BC (measured)	316 (316.52)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: This is a pretty trio, well-separated from one another and displaying a pleasing assortment of magnitudes, 5.8 / 6.9 / 11.4.

# #074 STF 2083 (SAO 102337) in Hercules

2024.08.11 00:07:14 UTC

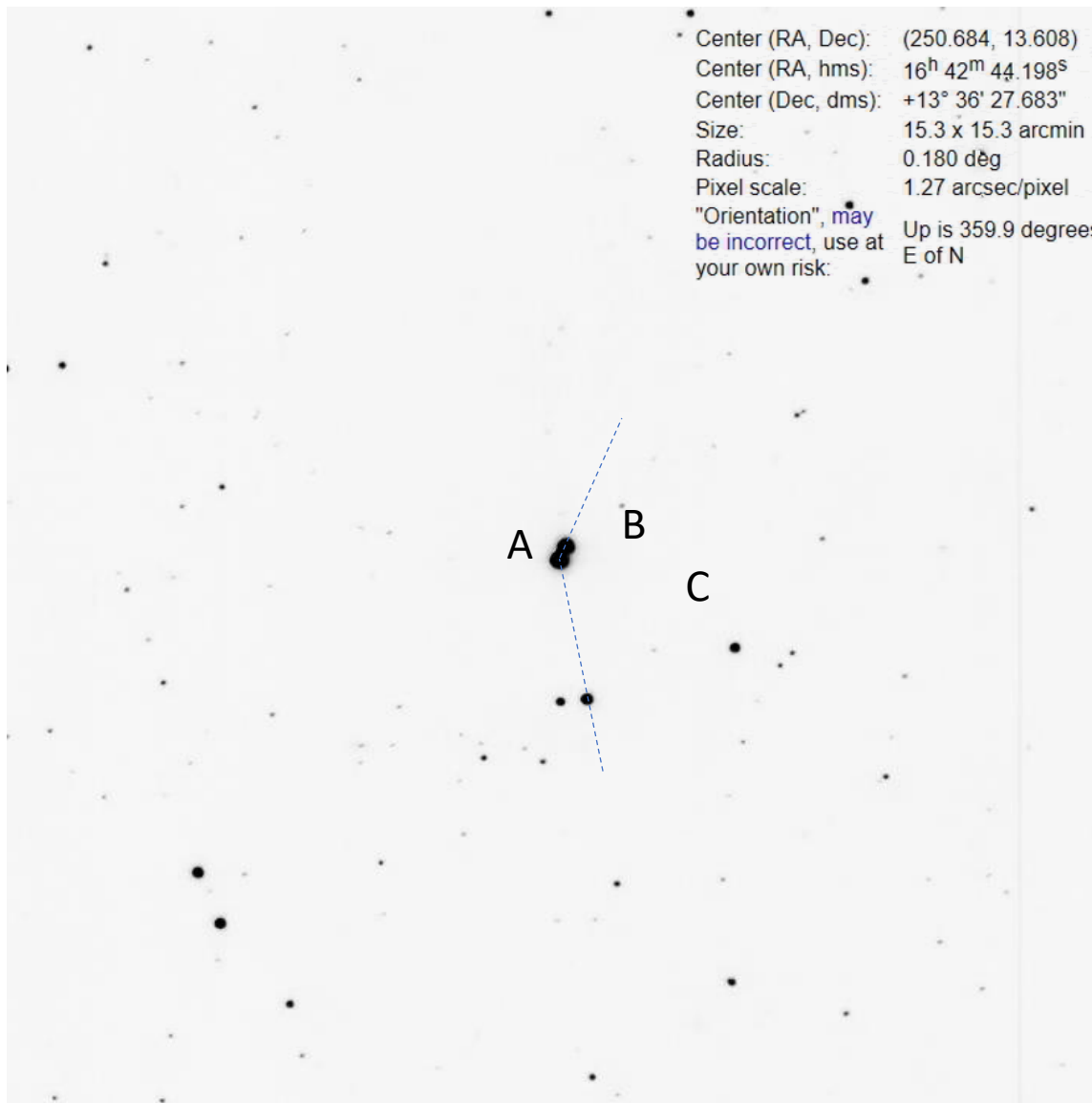
SLOOH Canary2 1x20s, cropped, inverted

## Star System Data

(from StelleDoppie)

Mag A	9.13
Mag B	9.56
Mag C	11.38
Sep AB	12.7"
Sep AC	119.1"
PA AB (measured)	334 (335.58)
PA AC (measured)	191 (191.64)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: The A & B stars form a tight, evenly matched double. Their C companion is 10X further away and quite a bit smaller with 2 magnitudes less brightness.

# #075 100 Her/STF 2280 (SAO 85753) in Hercules

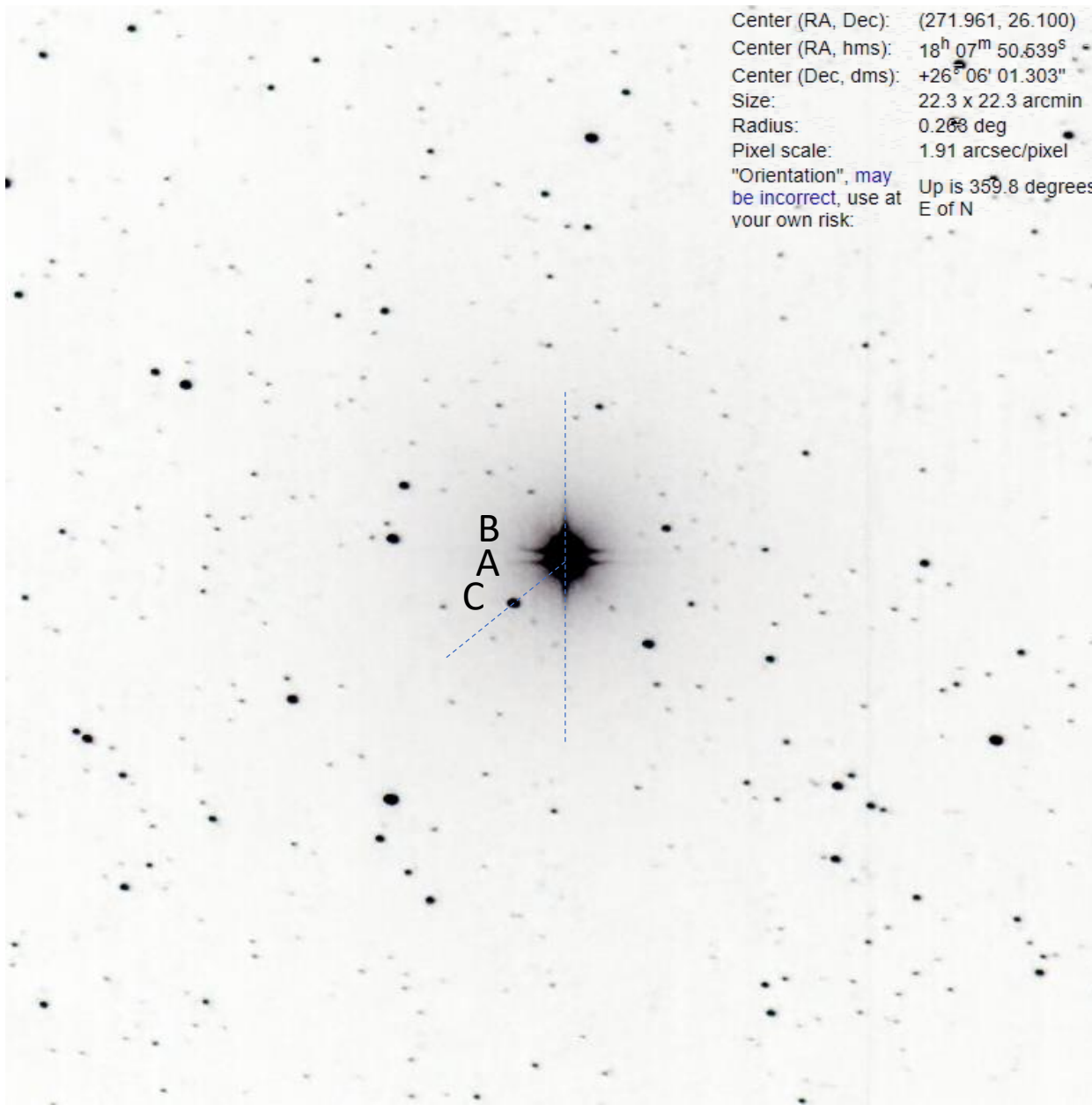
2024.08.07 02:26:35 UTC

SLOOH Canary2 1x50s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	5.81
Mag B	5.84
Mag C	11.80
Sep AB	14.3"
Sep AC	79.9"
PA AB (measured)	182 (180.2)
PA AC (measured)	127 (130.3)

Center (RA, Dec): (271.961, 26.100)  
Center (RA, hms): 18<sup>h</sup> 07<sup>m</sup> 50.639<sup>s</sup>  
Center (Dec, dms): +26° 06' 01.303"  
Size: 22.3 x 22.3 arcmin  
Radius: 0.206 deg  
Pixel scale: 1.91 arcsec/pixel  
"Orientation", may be incorrect, use at your own risk: Up is 359.8 degrees E of N



## Notes:

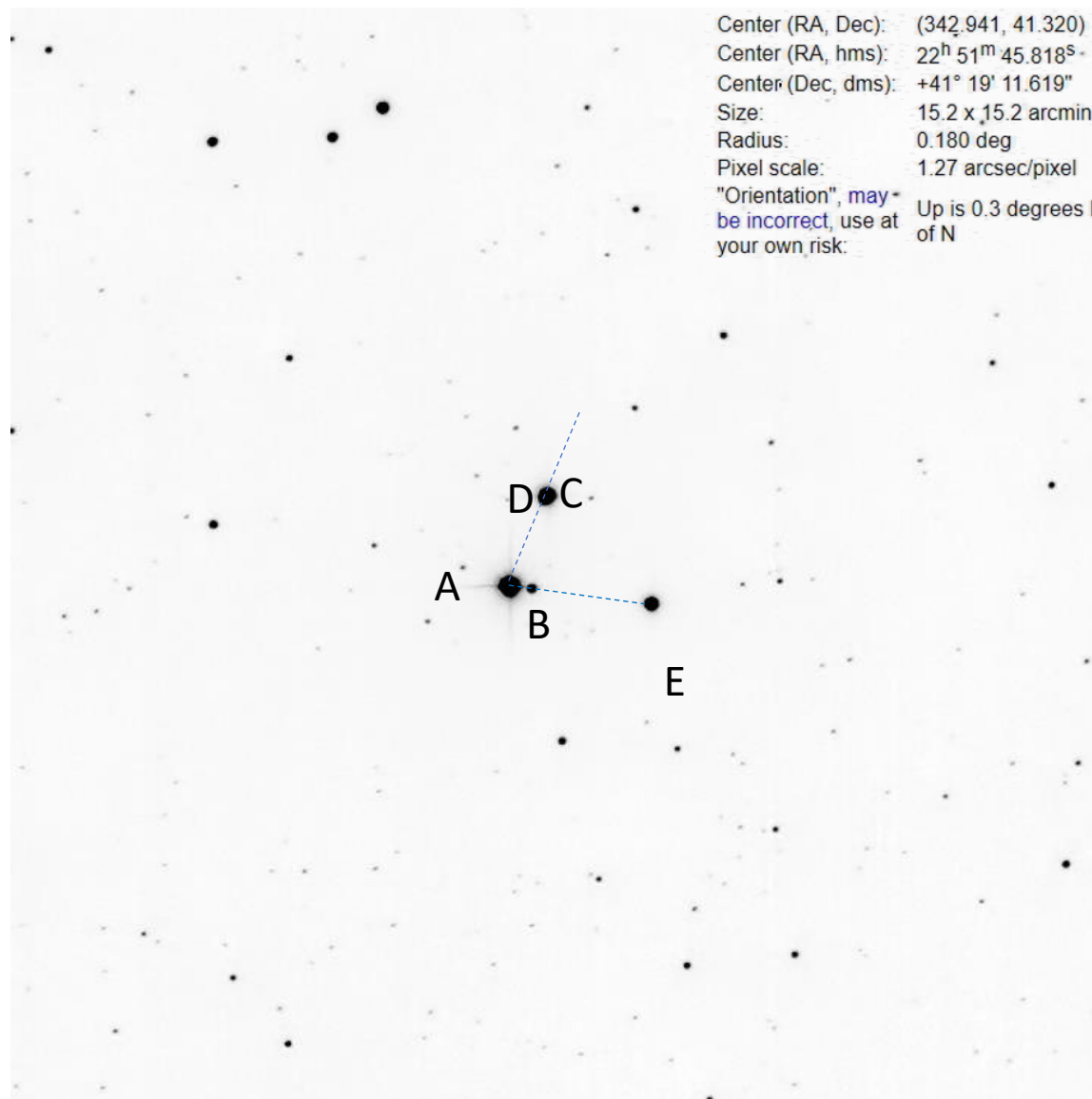
The AB stars in this image sit one on top of the other, but it is easy to see the two star sets of star spikes. In striking contrast, the C star is 6 mags dimmer.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#079 HJ 1823 (SAO 52433) in Lacerta  
 2024.08.07 02:26:35 UTC  
 SLOOH Canary2 1x50s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	7.06
Mag B	11.48
Mag C	8.11
Mag D	11.25
Mag E	8.85
Sep AB	18.7"
Sep AC	81.6"
Sep AE	119.1"
Sep CD	5.1"
PA AB (measured)	264 (263.76)
PA AC (measured)	338 (337.81)
PA AE (measured)	263 (262.67)
PA CD (measured)	139 (139.81)



Notes: Stars A, B & E are all in a line. They are easily separated and give interest with their difference in brightness. The image of the CD pair just gives a slight hint that two stars are present, with D making a subtle bulge on the lower left edge.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

# #082 STT 525, HJ 3780 (SAO 15062) in Lepus

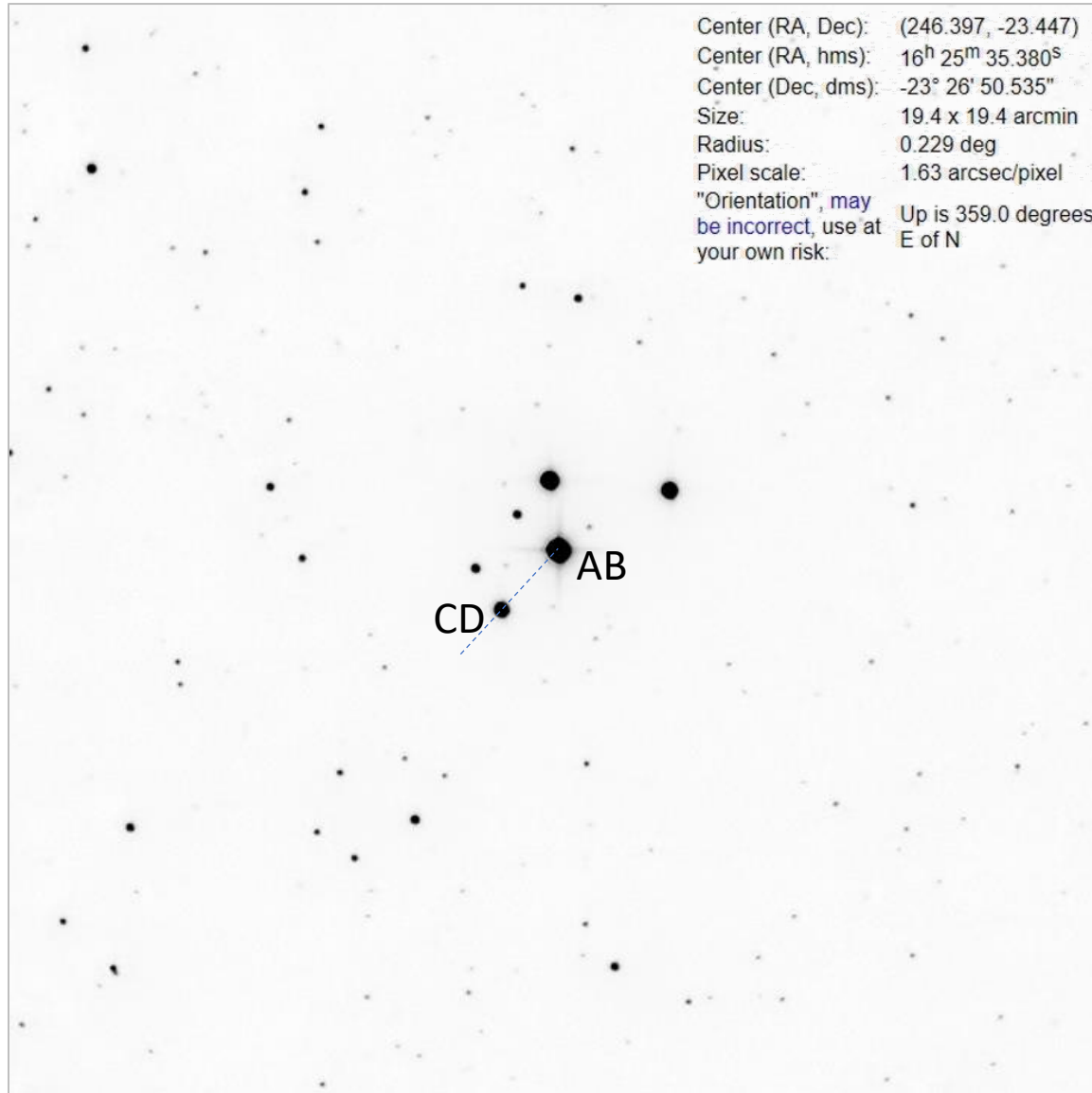
2024.08.30 18:24:14 UTC

SLOOH Aus1 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	6.69
Mag B	7.83
Mag C	8.89
Mag D	9.55
Sep AB	0.5"
Sep AC	88.8"
Sep CD	1.5"
PA AB (measured)	160 (nd)
PA AC (measured)	137 (136.52)
PA CD (measured)	355 (nd)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: Stars AB and stars CD sit on top of one another. AB is a pair of brighter pair & CD is a pair of slightly dimmer stars. They are not physical doubles.



# #083 5 Lyn/S 514/WAL 46 (SAO 25733) in Lynx

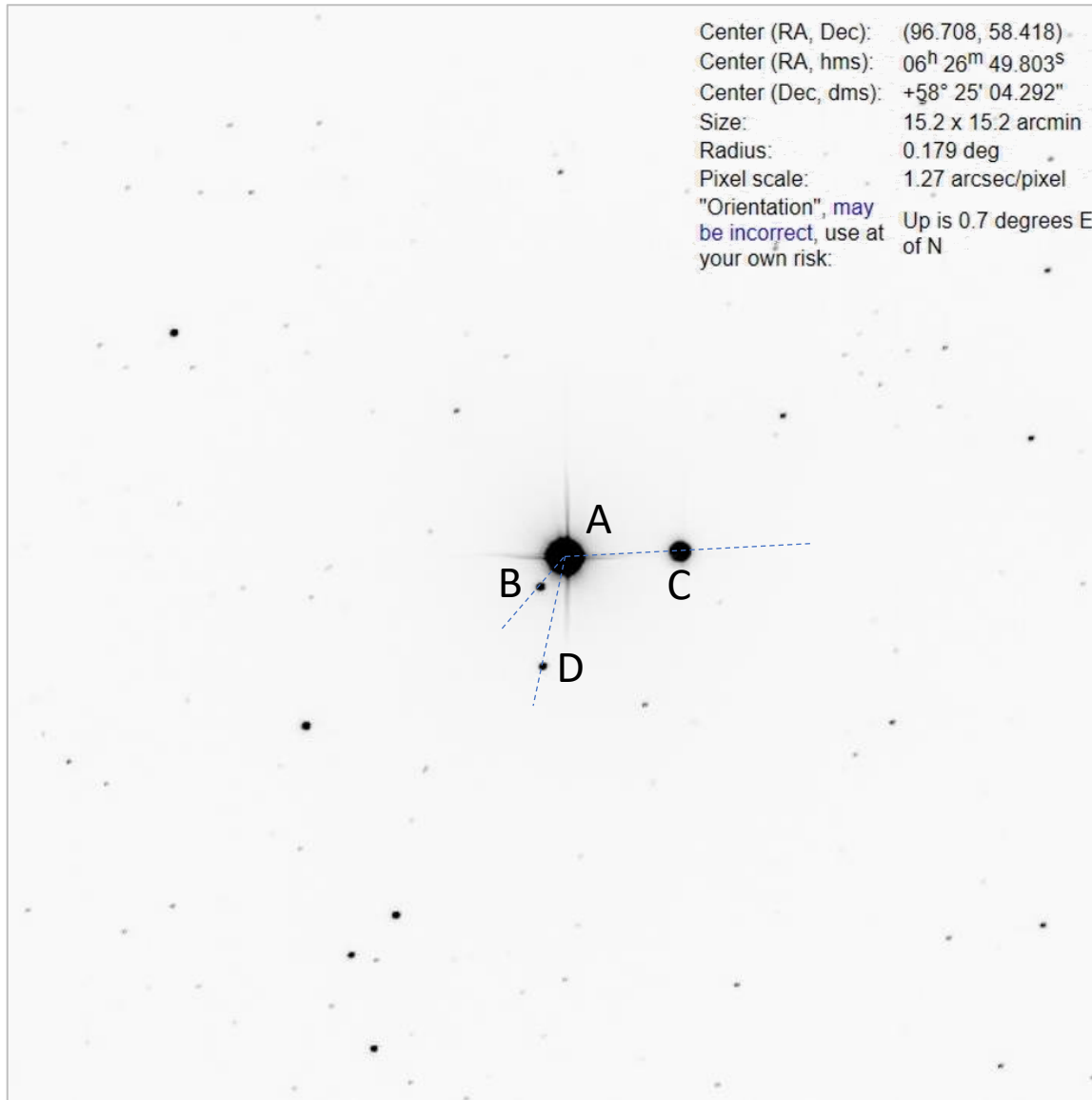
2024.09.01 04:42:26 UTC

SLOOH Canary2 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	5.38
Mag B	11.90
Mag C	7.92
Mag D	12.28
Sep AB	32.6"
Sep AC	95.5"
Sep AD	92.8"
PA AB (measured)	140 (139.96)
PA AC (measured)	272 (272.50)
PA AD (measured)	168 (168.28)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: All members of this quad system are easily identified and split, with a nice assortment of magnitudes and distance.

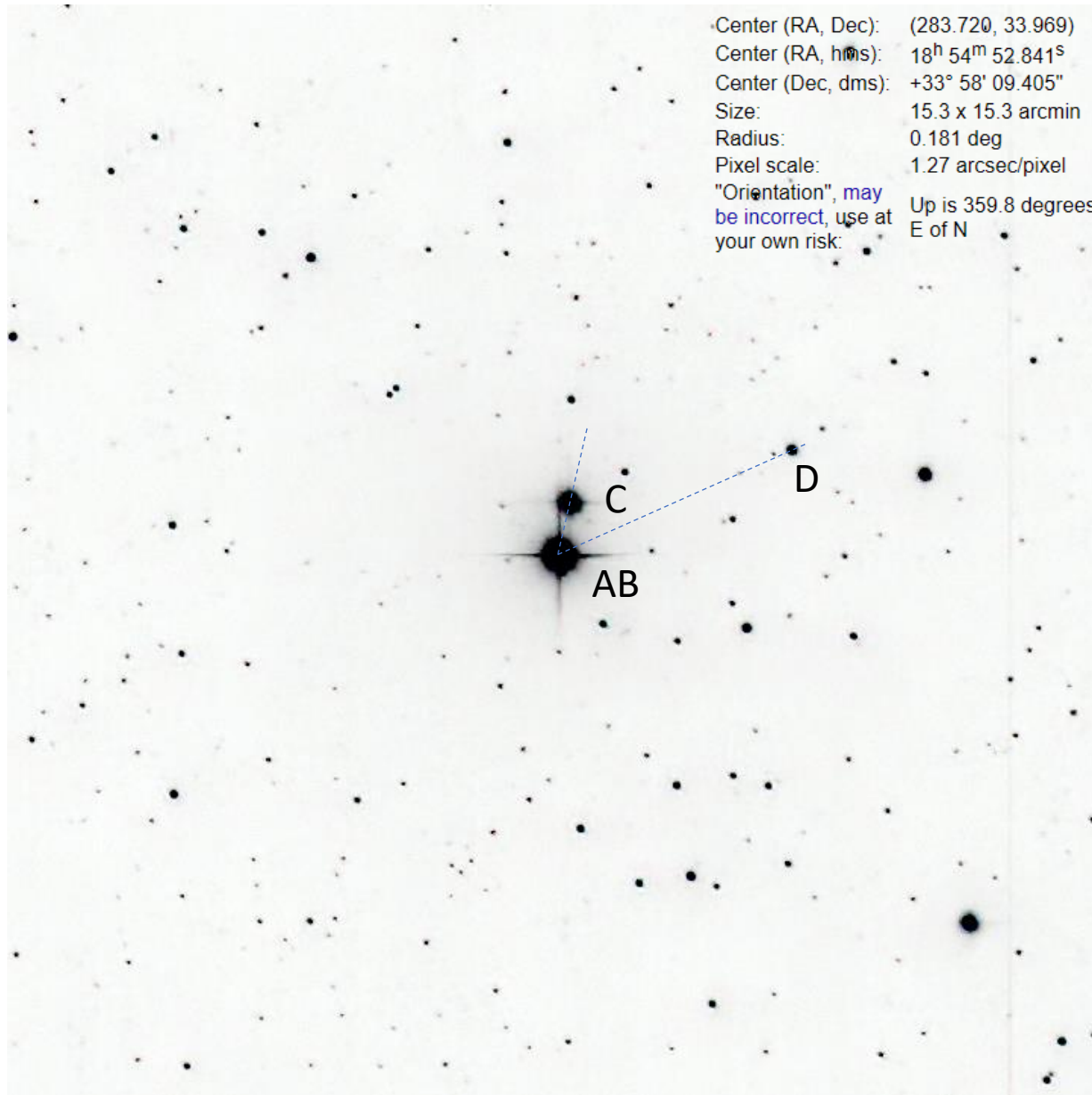
# #084 STT 525, SHJ 282 ABCD (SAO 67566) in Lyra

2024.08.08 22:54:43 UTC

SLOOH Canary2 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	6.14
Mag B	9.12
Mag C	7.60
Mag D	11.03
Sep AB	1.8"
Sep AC	45.4"
Sep AD	214.8"
PA AB (measured)	118 (nd)
PA AC (measured)	349 (348.02)
PA AD (measured)	295 (294.22)



## Notes:

The AB stars are too close to split. The dimmer C companion is close by, just above AB. The little mag 11 D star is 215" away to the NW.

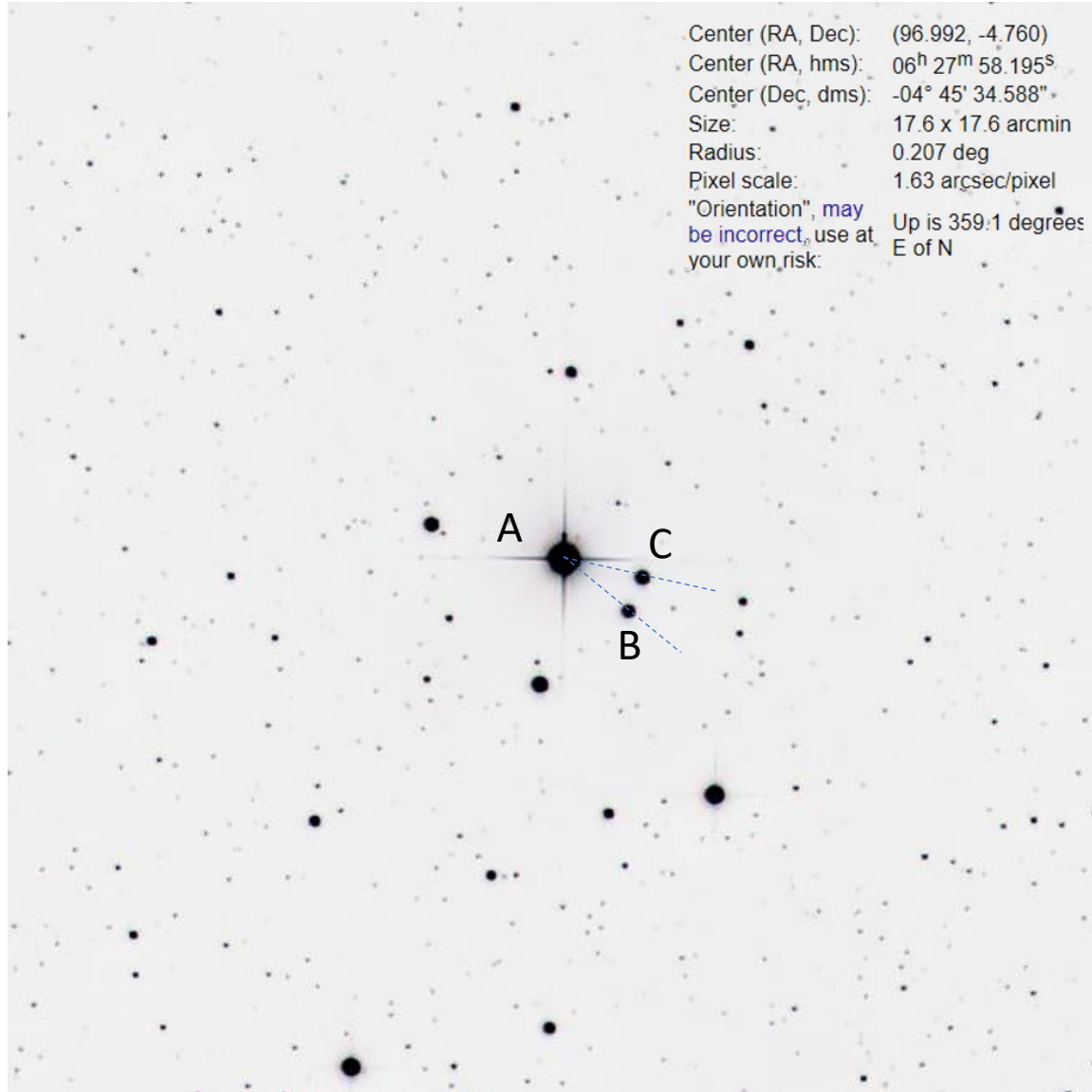
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#085 10 Mon, BUP 89 (SAO 133290) in Monoceros  
2024.08.31 18:20:55 UTC  
SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	5.01
Mag B	9.57
Mag C	9.85
Sep AB	77.0''
Sep AC	78.0''
PA AB (measured)	257 (257.22)
PA AC (measured)	232 (231.42)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: This is a cute triangle of stars, with a bright primary matched up with two dimmer companions, themselves twinning with equal magnitudes and at similar distance and direction.

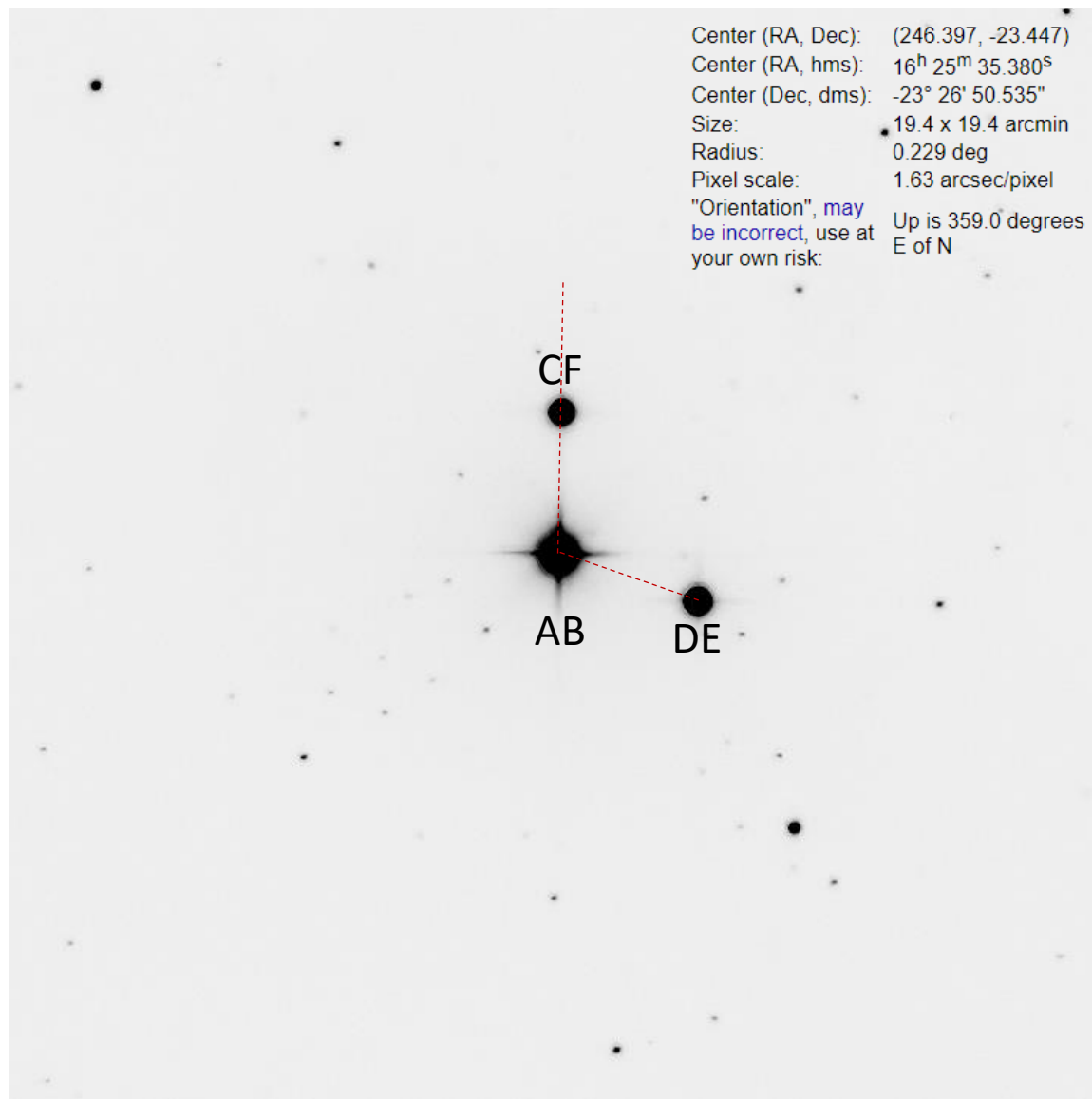
Star System Data  
(from StelleDoppie)

# #086 Rho Ophiuchi / H2 19 (SAO 184382) in Ophiuchus

2024.08.26 10:51:11 UTC

SLOOH Aus1 1x20s, cropped, inverted

Mag A	5.07
Mag B	5.74
Mag C	7.29
Mag D	6.81
Mag E	8.42
Mag F	11.7
Sep AB	3.0"
Sep AC	151.1"
Sep AD	156.1"
Sep CF	4.8"
Sep DE	0.3"
PA AB (measured)	335 (nd)
PA AC (measured)	0 (358.65)
PA AD (measured)	253 (250.68)
PA CF (measured)	206 (nd)
PA DE (measured)	196 ( )



## Notes:

Although a 6-star system, they only display here as 3 sets of 2 stars due to their tight splits, AB, CF, and DE. That said, this system is striking in the eyepiece!

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by [nova.astrometry.net](http://nova.astrometry.net) (see box in upper right)

# #087 STF 2050 ABCD (SAO 159961) in Ophiuchus

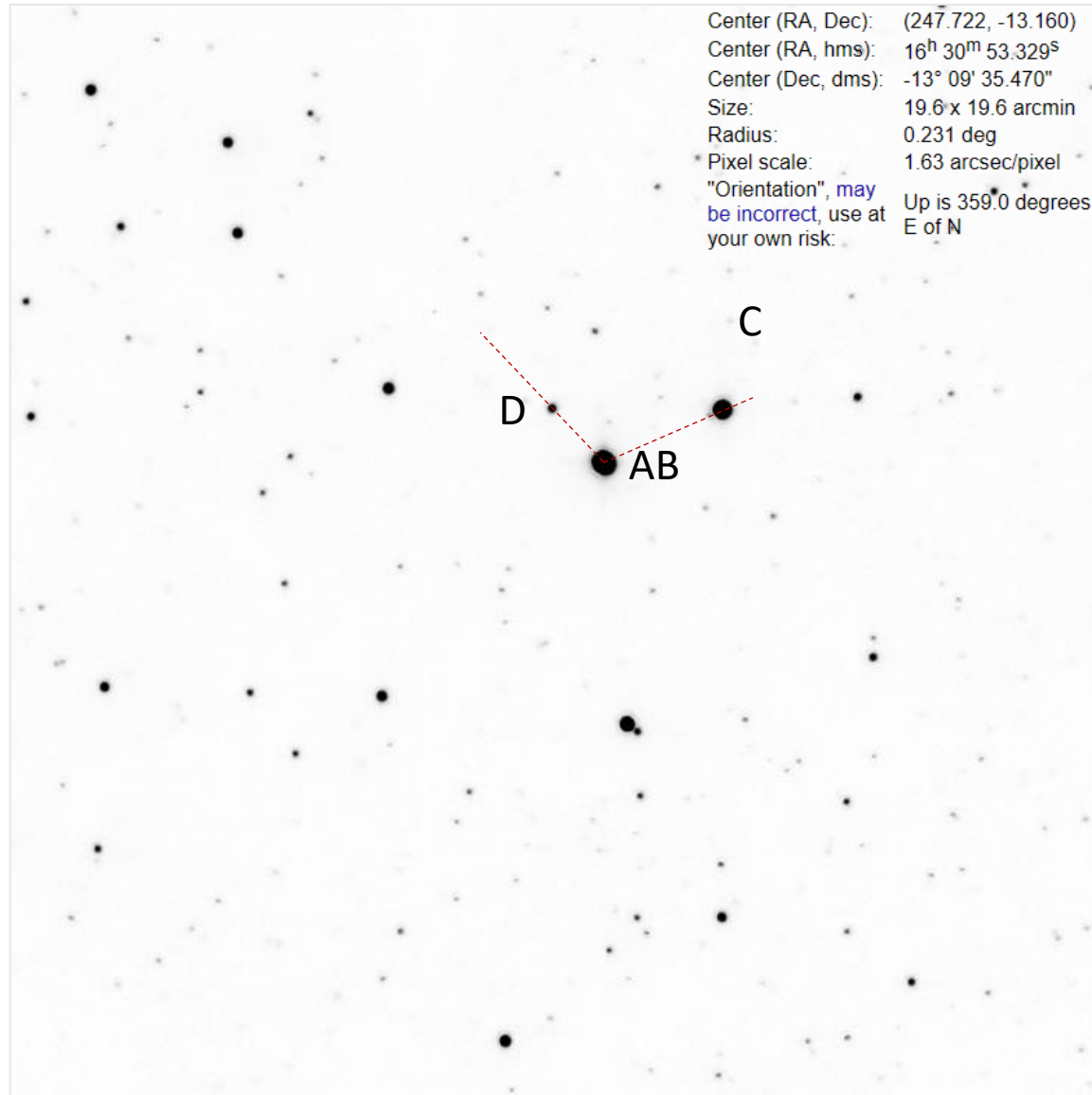
2024.08.26 10:55:56 UTC

SLOOH Aus1 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	8.27
Mag B	9.72
Mag C	9.32
Mag D	12.92
Sep AB	5.7"
Sep AC	140.7"
Sep AD	81.3"
PA AB (measured)	218 (218.46)
PA AC (measured)	295 (292.96)
PA AD (measured)	44 (44.38)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



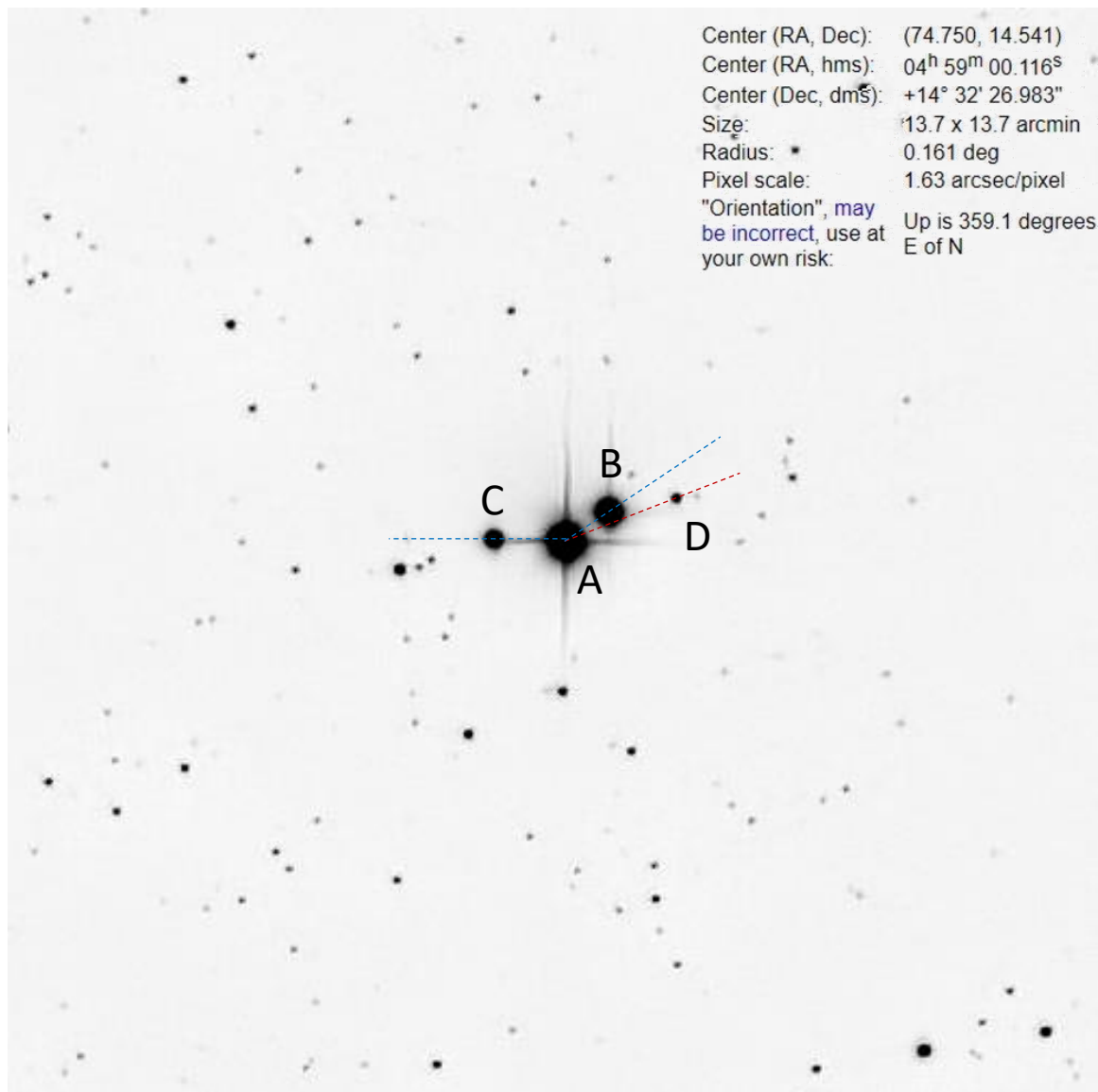
Notes: Three of the four stars in this system are easily observed here. The B star just barely pokes its head out to the southwest from underneath the A star (@ PA 218). An unrelated but cute doublet is located directly south of AB, so I cropped the field to feature it as well as our target.

#088 SHJ 49 (SAO 84240) in Orion  
 2024.09.01 18:01:21 UTC  
 SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	6.06
Mag B	7.43
Mag C	9.6
Mag D	13.20
Sep AB	39.3"
Sep AC	54.0"
Sep AD	88.9"
PA AB (measured)	306 (305.10)
PA AC (measured)	88 (88.93)
PA AD (measured)	292 (291.12)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

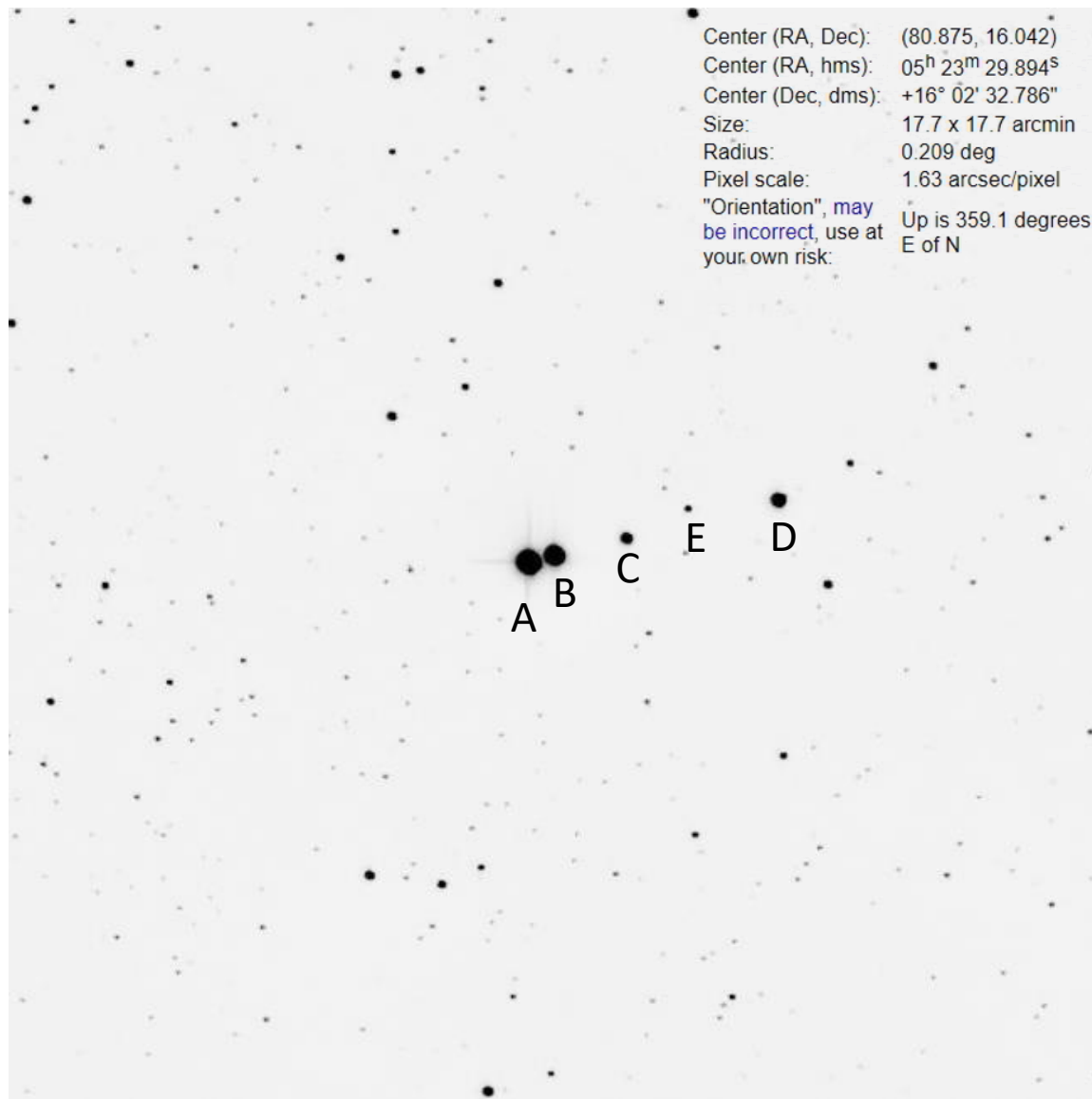


Notes: Another system where I can easily split all 4 components! Their magnitudes staircase neatly from the brightest member A through the dimmest member D (6.1-7.4-9.6-13.2). Their separations widen sequentially as well. A cute squirt of three field stars sits near C .

#089 STF 697 (SAO 94512) in Orion  
 2024.09.01 18:06:20 UTC  
 SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	7.27
Mag B	8.10
Mag C	10.83
Mag D	10.07
Mag E	13.89
Sep AB	25.4"
Sep AC	98.1"
Sep AD	250.0"
Sep AE	163.6"
PA AB (measured)	287 (287.16)
PA AC (measured)	284 (283.62)
PA AD (measured)	285 (284.11)
PA AE (measured)	289 (288.29)



Notes: This is a "mighty fine" system with 5 stars of decreasing magnitude all lined up, curving towards the NW. I can't stop admiring it! In fact, the 4 companion stars are so much in alignment (within a spread of 5 degrees) that I skipped adding my usual angle lines, since those markers would all be jumbled up on top of one another.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



## STF 761

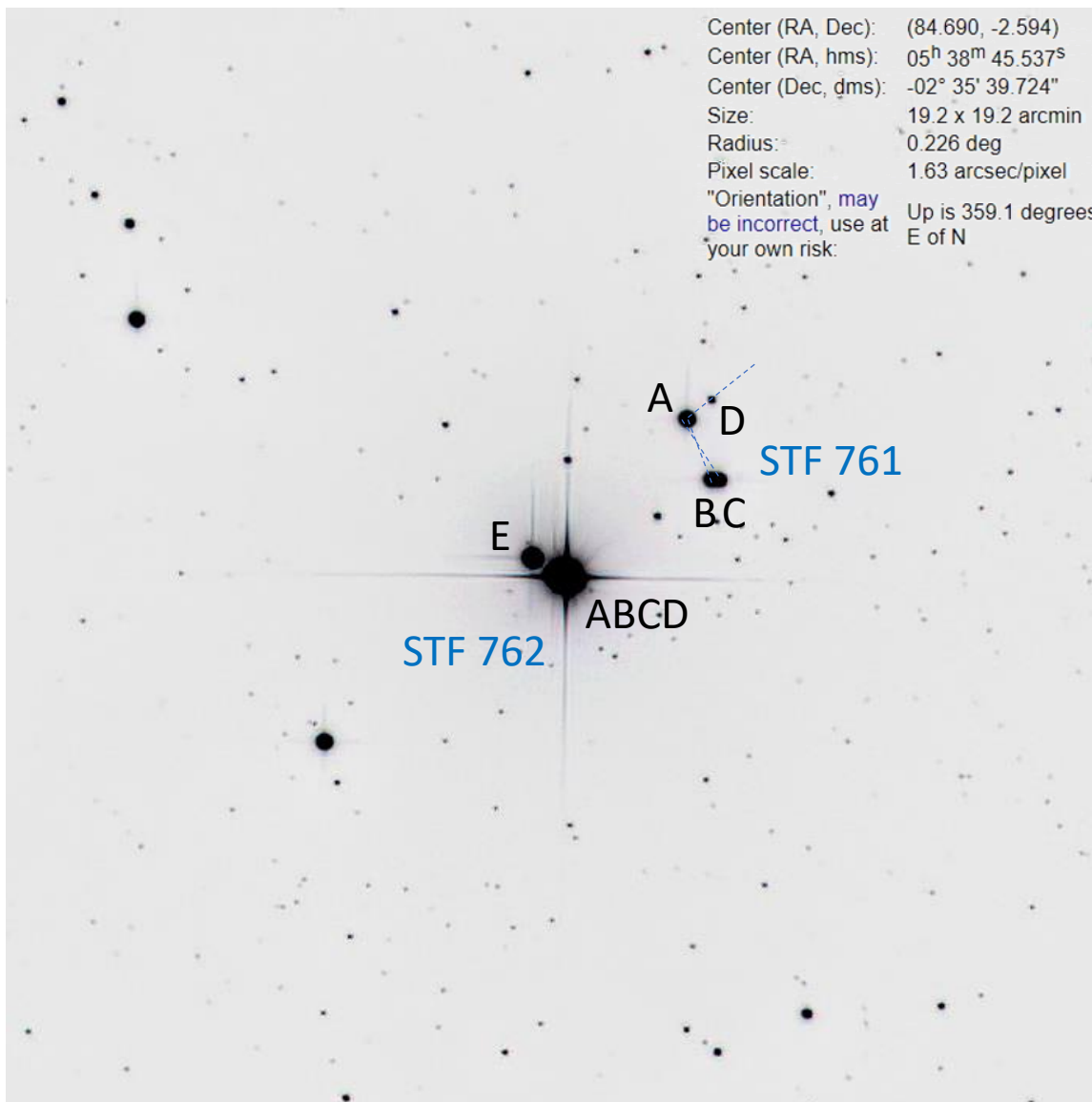
Mag A	7.86
Mag B	8.39
Mag C	8.55
Mag D	11.85
Sep AB	68.1"
Sep AC	72.1"
Sep AD	32.7"
Sep BC	8.5"
PA AB (measured)	202 (202.25)
PA AC (measured)	209 (208.83)
PA AD (measured)	308 (307.95)
PA BC (measured)	269 (268.64)

## STF 762

Mag AB	3.76
Mag E	6.34
Sep AB,E	41.4"
PA AB,E (measured)	62 (62.38)

# #090 STF 761 & 762 (SAO 132401) in Orion

2024.08.31 18:10:06 UTC  
SLOOH Aus1 1x20s, cropped, inverted



Notes: This was a tricky one! The ABCD stars in bright STF 762 are piled up on top of one another, and by process of elimination by PA & separation, the outlier star must be E. STF 761 is the smaller of the two systems, with the ABC stars all of similar magnitude. Its BC pair is tight but is the duo is set well apart from A. The dainty D star is easily split off to the upper right side of A.

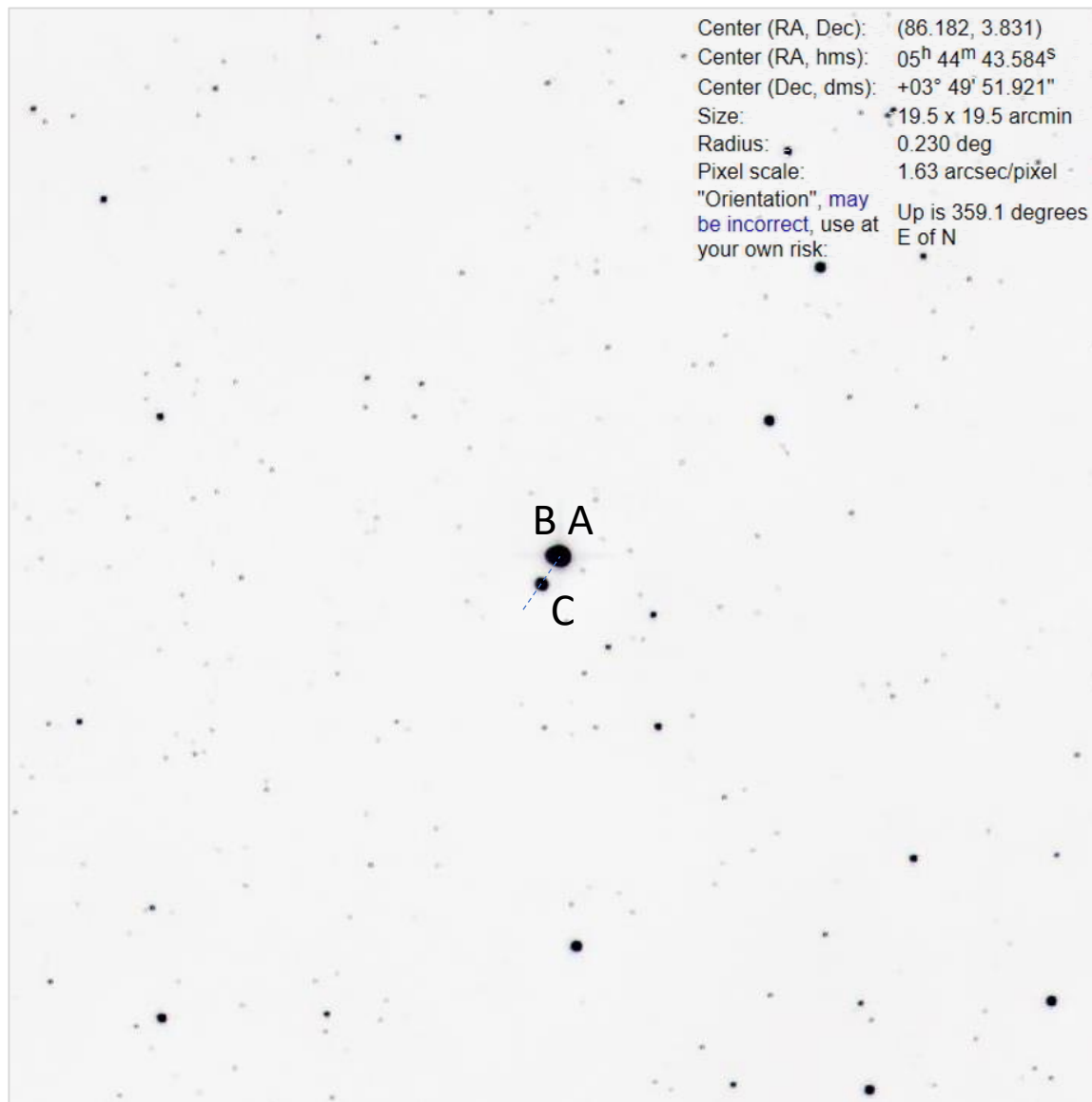
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

Star System Data is from StelleDoppie

#091 **STF 788** (SAO 113093) in Orion  
 2024.08.30 18:31:06 UTC  
 SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	7.61
Mag B	10.05
Mag C	10.37
Sep AB	7.5"
Sep AC	36.2"
PA AB (measured)	91 (90.15)
PA AC (measured)	149 (148.21)



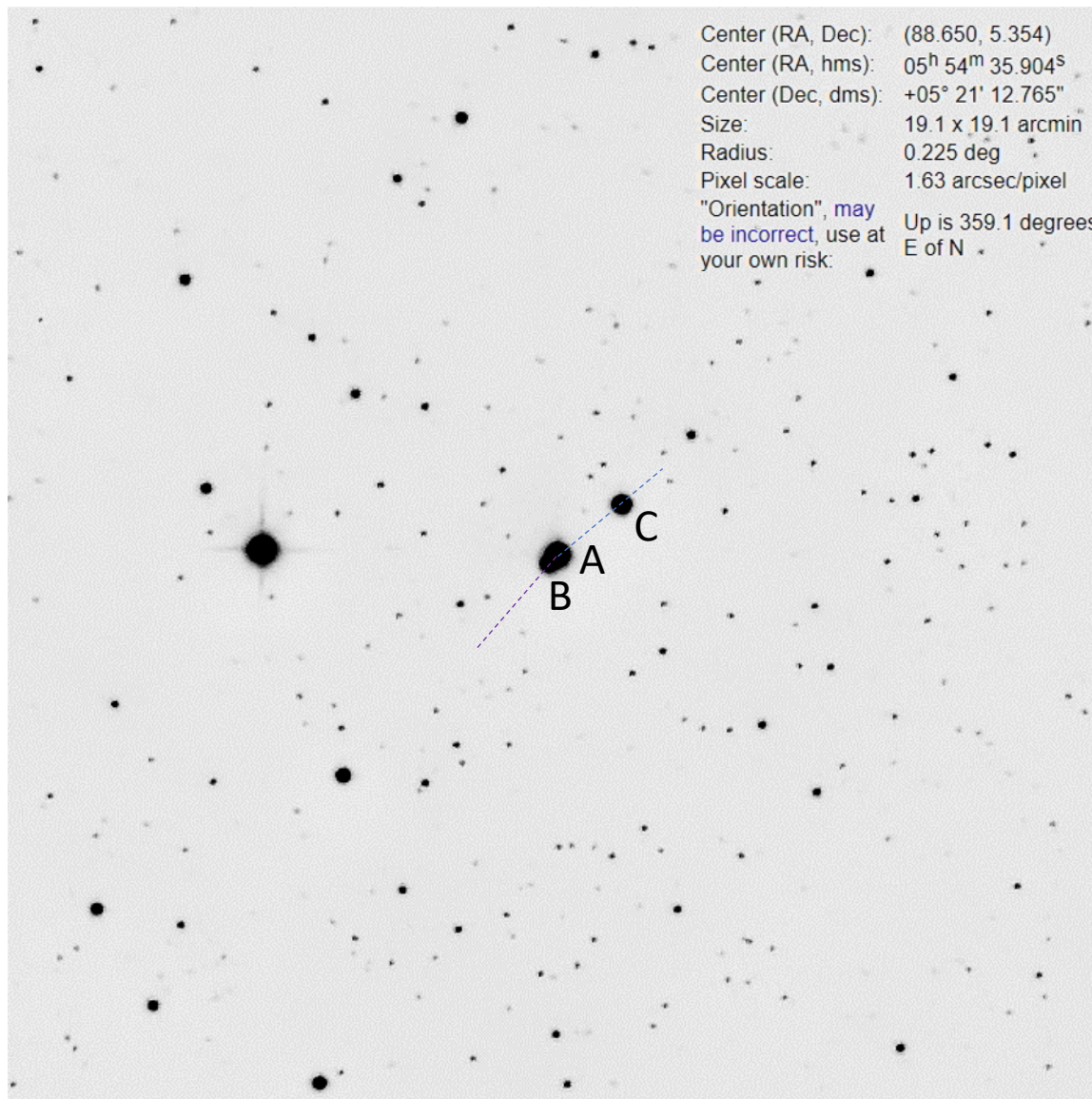
Notes: This is a relatively simple system of three stars. The A star is the brightest at mag 7.61. The B & C stars are similar in magnitude at 10.05 & 10.37 respectively. The B star sits close enough to A that half its diameter overlaps with that of A. In contrast, the C star sits cleanly away from A at ~7 o'clock.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#092 STF 815 (SAO 113262) in Orion  
2024.08.30 18:35:14 UTC  
SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	8.35
Mag B	9.82
Mag C	9.75
Sep AB	13.1"
Sep AC	85.4"
PA AB (measured)	137 (137.37)
PA AC (measured)	309 (309.58)



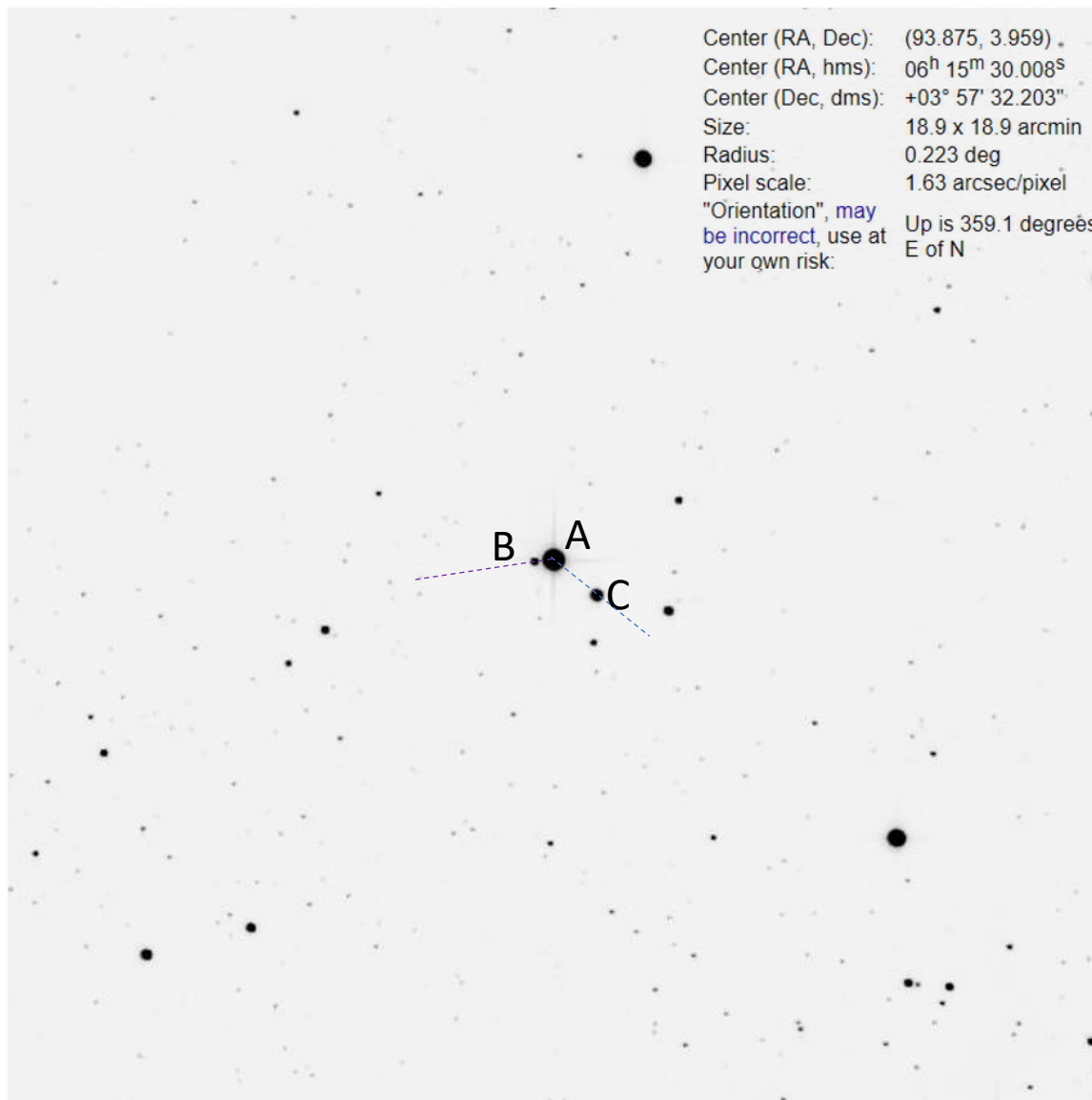
Notes: Another simple system, this has the A & B stars overlapping at about a 45 degree angle, with the C star well separated off to the NW. The B & C stars are roughly equal in magnitude while the A star is ~1½ mags brighter.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#093 **BU 193** (SAO 113645) in Orion  
 2024.08.31 18:15:57 UTC  
 SLOOH Aus1 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	6.99
Mag B	12.38
Mag C	10.02
Sep AB	19.7"
Sep AC	57.8"
PA AB (measured)	97 (97.85)
PA AC (measured)	232 (231.76)



Notes: Little B is snugged up close to the east side of bright A, but it is cleanly split with 20" separation. The C star sits almost 3X further out (~60") to the SW.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

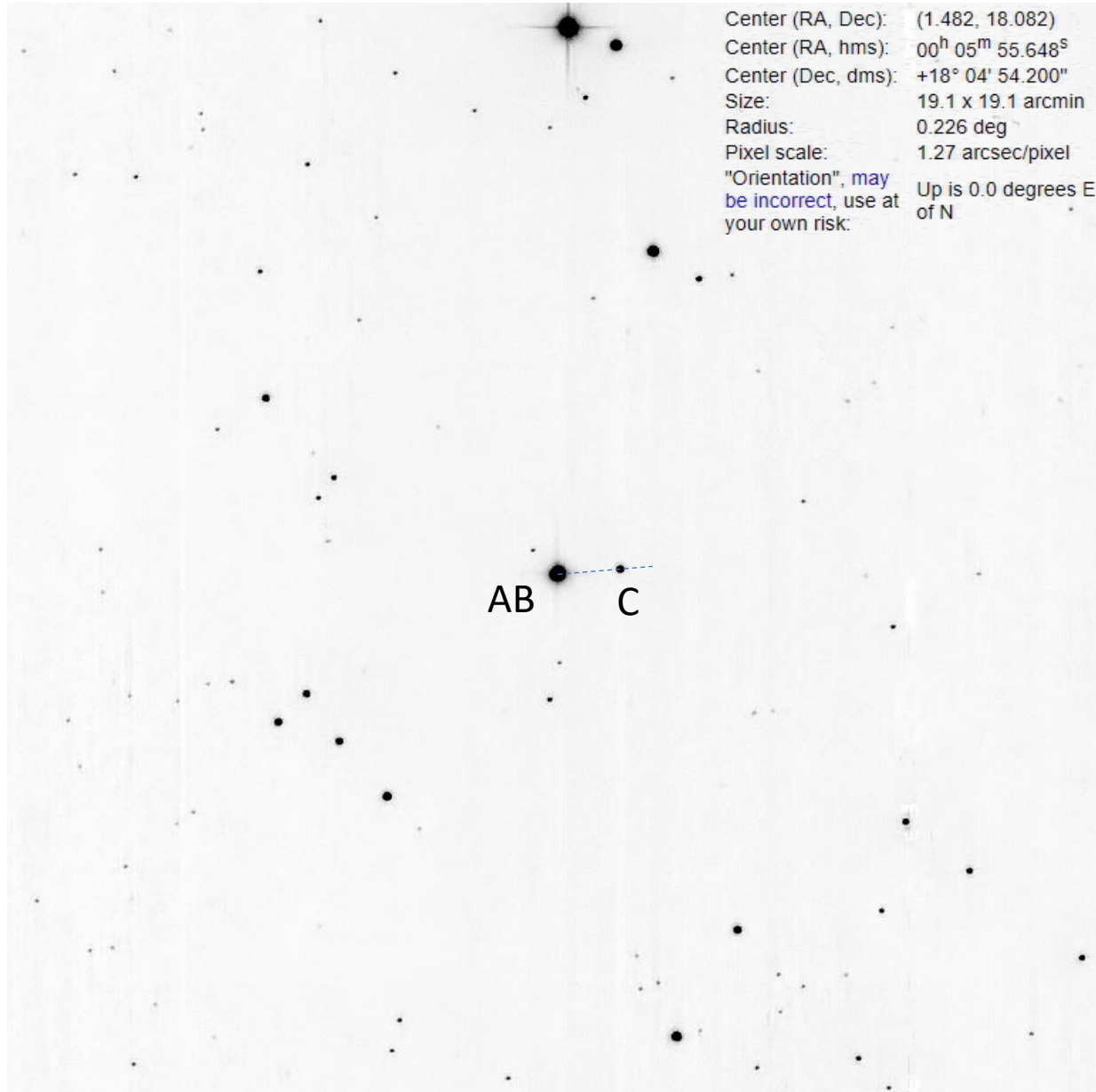
# #094 STF 3060ABCD (SAO 91707) in Perseus

2024.08.08 04:27:06 UTC

SLOOH Canary2 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	9.32
Mag B	9.65
Mag C	12.15
Sep AB	3.4"
Sep AC	65.1"
PA AB (measured)	136 (nd)
PA AC (measured)	273 (274.24)



Notes: The AB stars are too close to split. However, if I zoom in, I can see a slight out-of-roundness along the upper right edge as if the 2<sup>nd</sup> star is trying to bulge out. The tiny C star is sitting almost directly to the West.

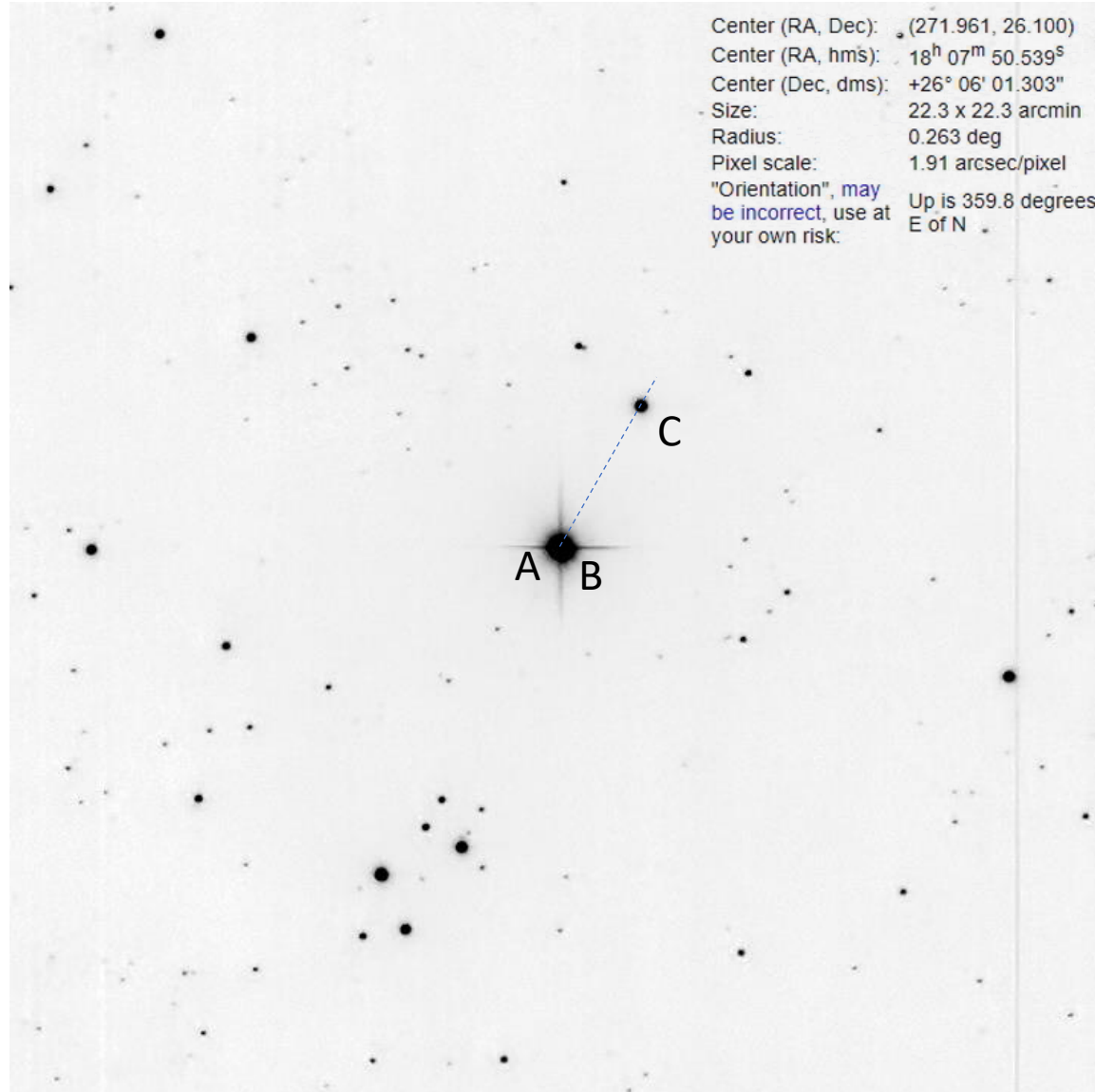
PA measurements were made using java tool *OnScreenProtractor* from SourceForge.  
FOV analyzed by nova.astrometry.net  
(see box in upper right)



#095 STF 2799 (SAO 107165) in Pegasus  
 2024.08.11 02:32:43 UTC  
 SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	7.37
Mag B	7.44
Mag C	10.20
Sep AB	1.9"
Sep AC	135.9"
PA AB (measured)	259 (nd)
PA AC (measured)	331 (330.34)



Notes: The AB stars sit on top of one another, with only the slightest hint of a B-star bulge on the lower right quadrant. The C star is 3 mags dimmer and 70x further away.

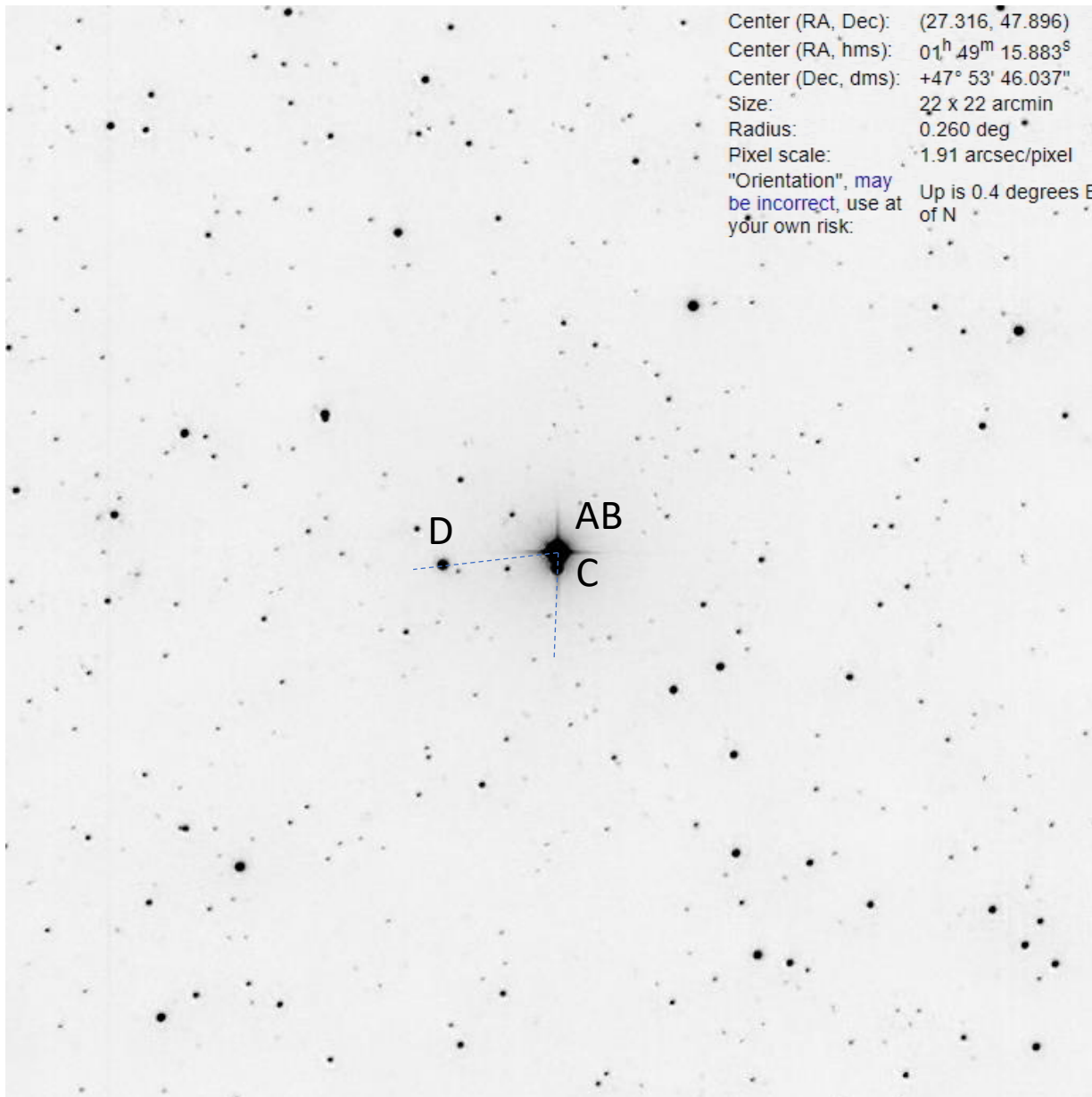
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#096 STF 162 (SAO 37536) in Perseus  
 2024.08.07 02:42:19 UTC  
 SLOOH Canary2 1x50s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	6.47
Mag B	7.22
Mag C	9.24
Mag D	10.01
Sep AB	2.0"
Sep AC	20.7"
Sep AD	138.7"
PA AB (measured)	199 (nd)
PA AC (measured)	178 (177.7)
PA AD (measured)	98.6 (96.7 )

PA measurements were made using java tool *OnScreenProtractor* from SourceForge.  
 FOV analyzed by nova.astrometry.net (see box in upper right)



Notes:

The AB stars are too close to split. The C star is seen as a small bleb dropping off of the bottom of the AB pair. The mag 10 D star sits off to itself directly to the East.

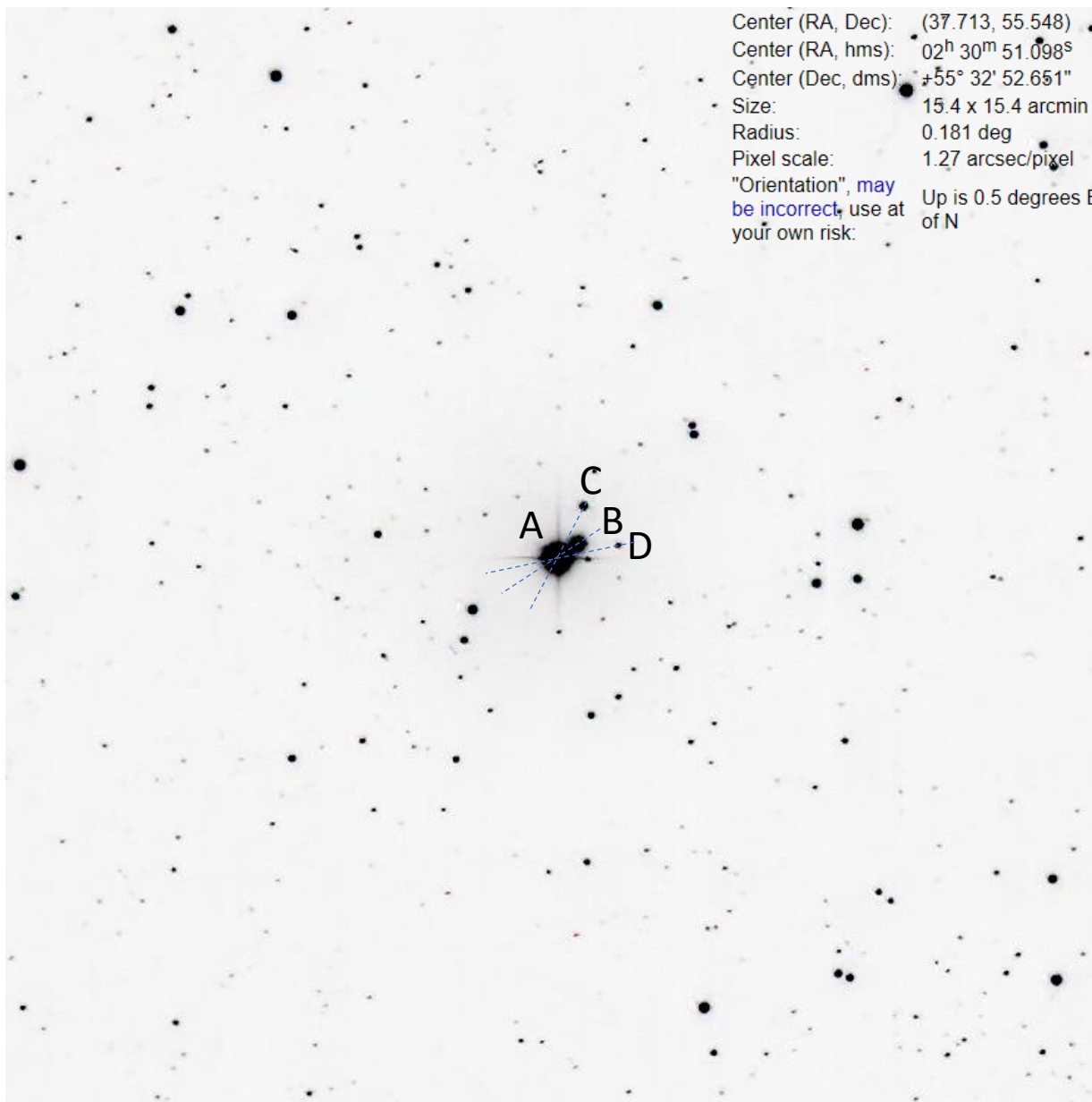


#097 STF 270 (SAO 23389) in Perseus  
2024.08.09 03:22:07 UTC  
SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	7.00
Mag B	9.66
Mag C	11.37
Mag D	14.20
Sep AB	21.3"
Sep AC	48.0"
Sep AD	51.1"
PA AB (measured)	305 (305.41)
PA AC (measured)	333 (333.71)
PA AD (measured)	281 (281.75)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge.  
FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: This is a crowded system with 4 member all within 1' of one another. The AB pair would split if the A star weren't quite so bright. The little C star and diminutive D star sit on either side of B, but are twice as far from the primary star than B.

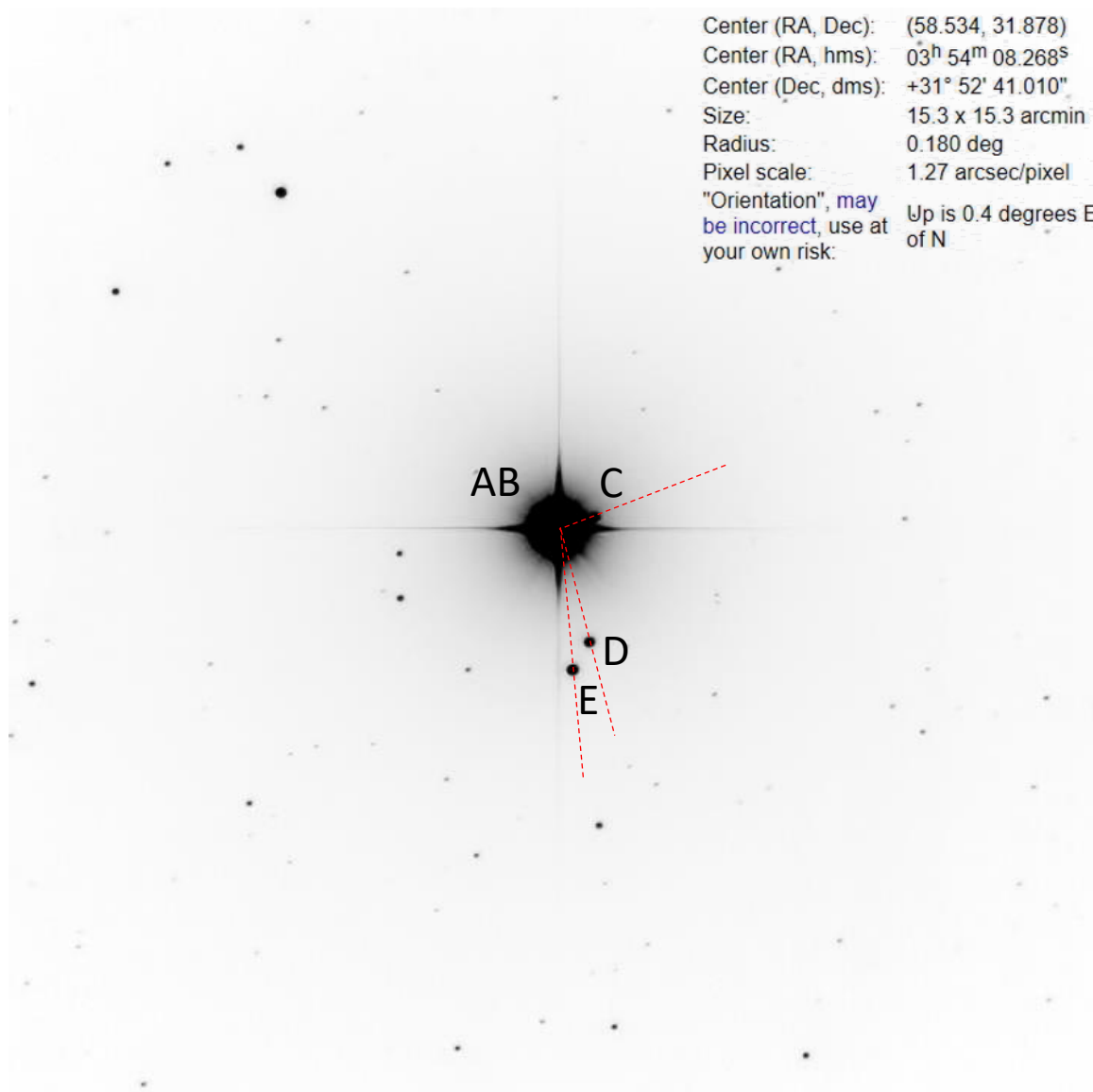
# #098 STF 464 /Zeta Per (SAO 56799) in Perseus

2024.08.11 03:52:00 UTC

SLOOH Canary2 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	2.86
Mag B	9.16
Mag C	11.24
Mag D	10.44
Mag E	9.96
Sep AB	12.8"
Sep AC	33.3"
Sep AD	98.6"
Sep AE	120.00"
PA AB (measured)	208 (nd)
PA AC (measured)	286 (288.16)
PA AD (measured)	195 (195.45)
PA AE (measured)	186 (185.33)



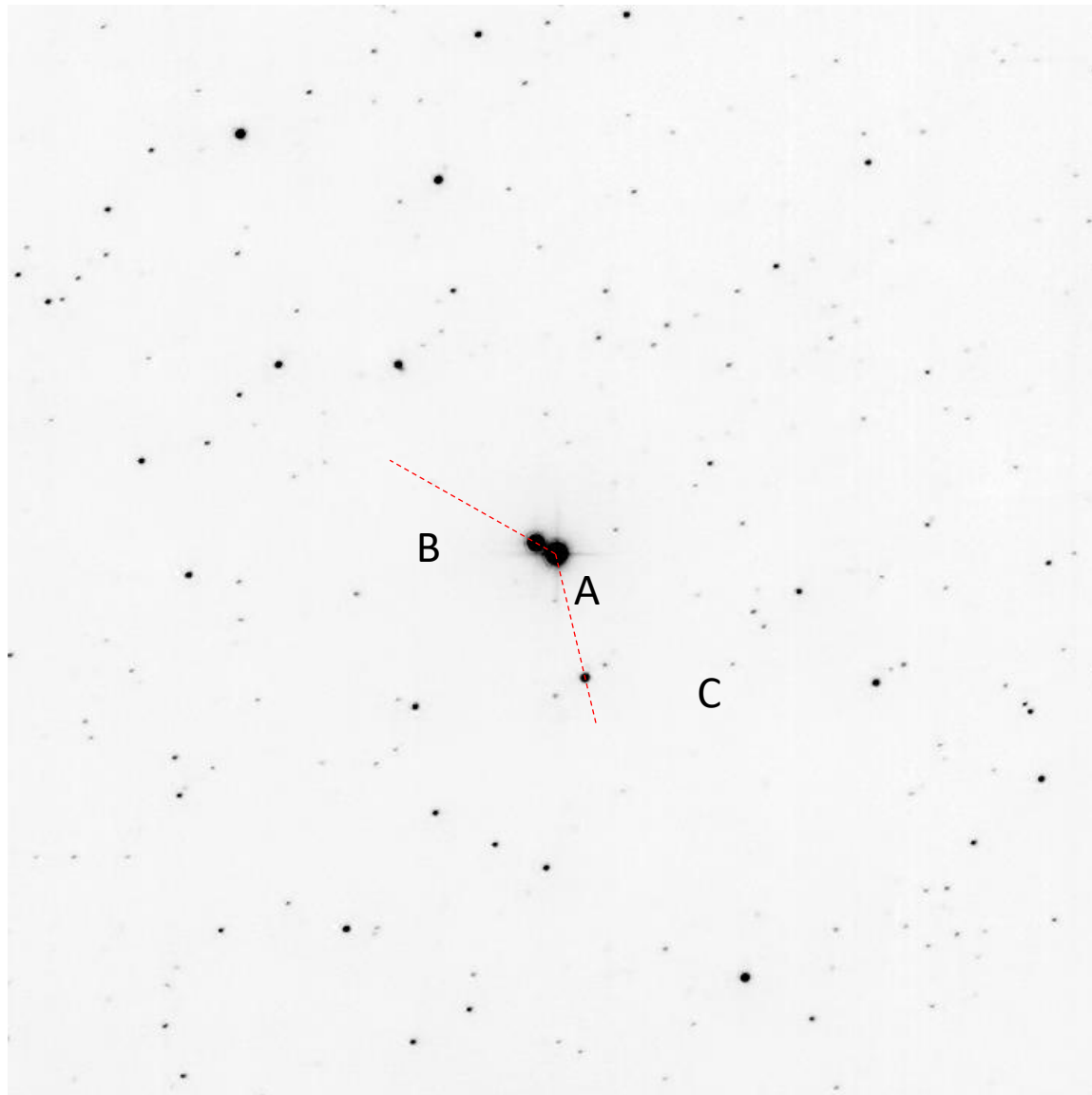
Notes: Zeta Persei is so bright that it masks the mag 9 B star 13" to the SW. Do you think the little spike at 4 o'clock might be off of B? The mag11 C star is just able to peek out from behind A on the right. A nice pairing of D+E sits roughly 2' south.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge.  
FOV analyzed by nova.astrometry.net (see box in upper right)

#099 STF 533 (SAO 57211) in Perseus  
2024.08.11 03:47:07 UTC  
SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
(from StelleDoppie)

Mag A	7.3
Mag B	8.49
Mag C	12.00
Sep AB	19.0"
Sep AC	106.9"
PA AB (measured)	62 (61.17)
PA AC (measured)	193 (193.38)



Notes: This is a straightforward star system, with the AB stars cleanly split and easily identifiable with 1 mag difference in their brightness. Their dimmer C companion is a spry little star, seen as a wide split to the SSW.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

# #100 HJ 4106 + LDS 223 (SAO 199328) in Pyxis

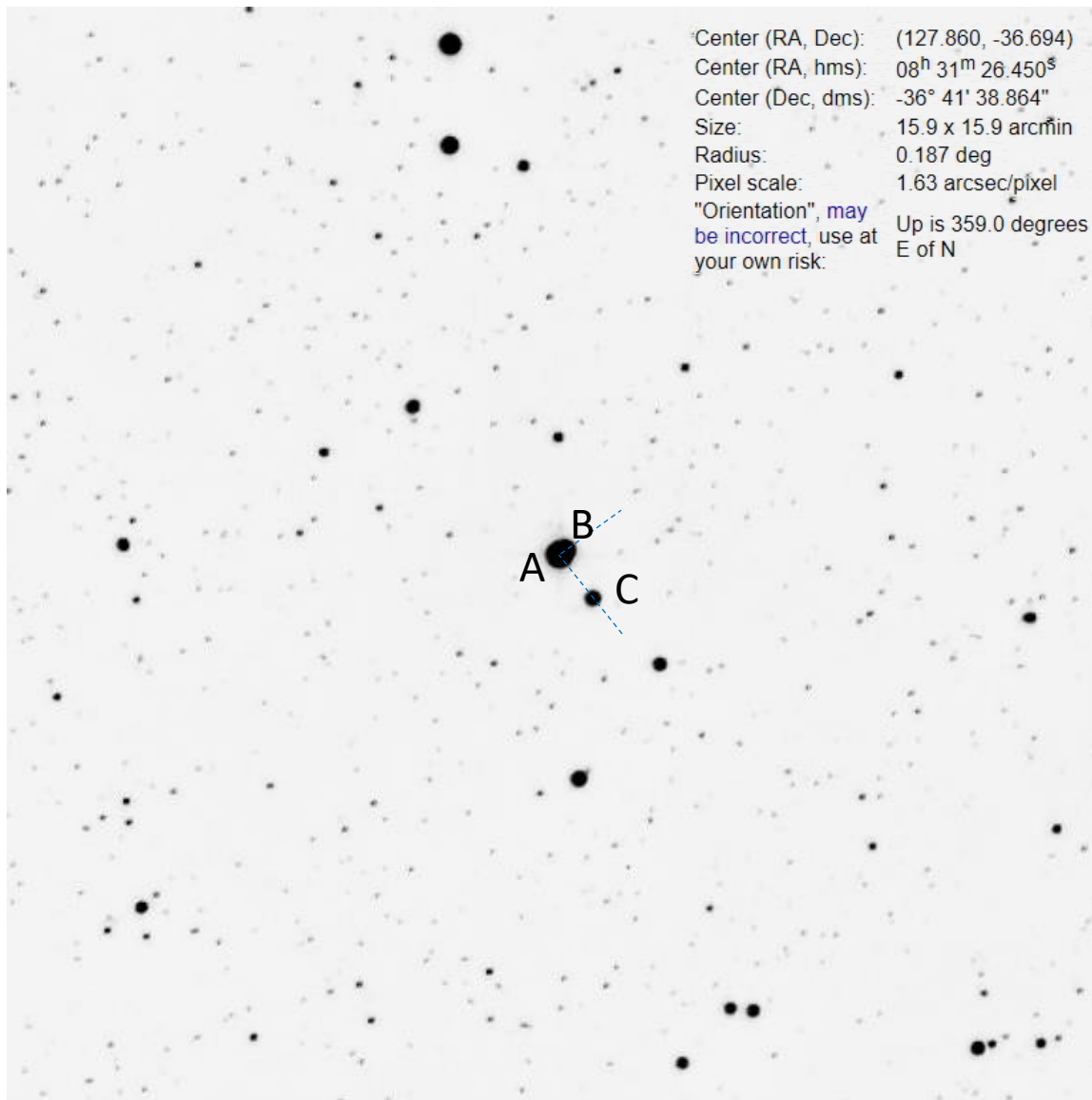
2024.09.03 18:32:10 UTC

SLOOH AUS1 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	7.86
Mag B	9.90
Mag C	10.35
Sep AB	6.2"
Sep AC	47.7"
PA AB (measured)	308 (308.66)
PA AC (measured)	219 (218.77)

Center (RA, Dec): (127.860, -36.694)  
Center (RA, hms): 08<sup>h</sup> 31<sup>m</sup> 26.450<sup>s</sup>  
Center (Dec, dms): -36° 41' 38.864"  
Size: 15.9 x 15.9 arcmin  
Radius: 0.187 deg  
Pixel scale: 1.63 arcsec/pixel  
"Orientation", may be incorrect, use at your own risk: Up is 359.0 degrees E of N



Notes: at 6" separation, the glow of A&B stars overlaps here making the stars too close to split. However, it's easy to see the smaller B bulging out of the upper right quadrant of A. The smaller / dimmer C star separates cleanly to the SW.

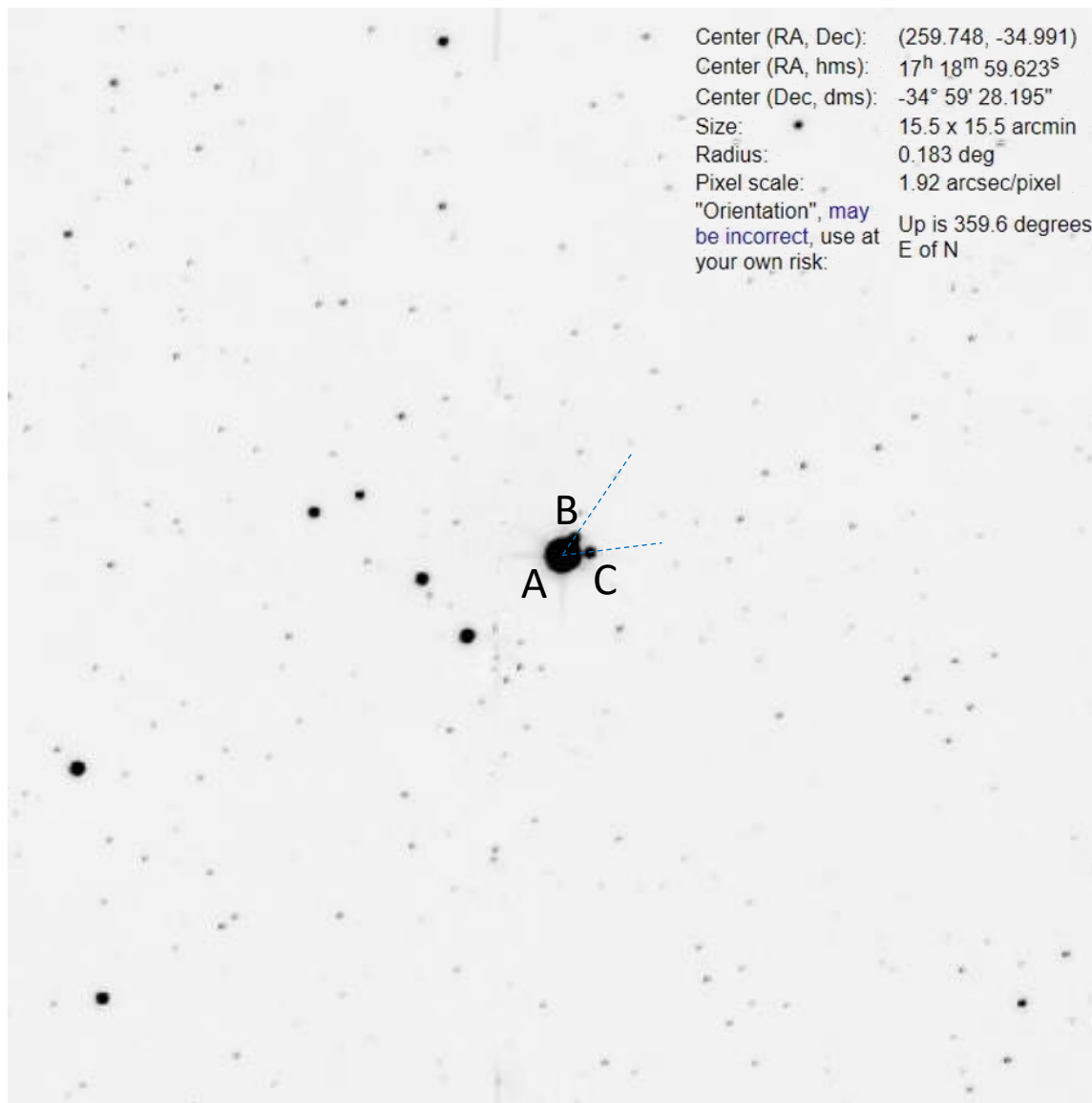
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#101 **HDO 204** (SAO 199589) in Pyxis  
 2024.09.03 18:36:18 UTC  
 SLOOH AUS1 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	6.96
Mag B	11.90
Mag C	11.8
Sep AB	15.6"
Sep AC	20.1"
PA AB (measured)	327 (327.40)
PA AC (measured)	278 (277.71)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: What a cute little group! It looks like a Mickey Mouse hat, with one of its ears escaping. The big A star is 5 mags brighter than dainty, evenly matched B & C. These little stars are both shining as hard as they can at mag 12.

# #103 WDS 17190-3459 (SAO 208670) in Scorpius

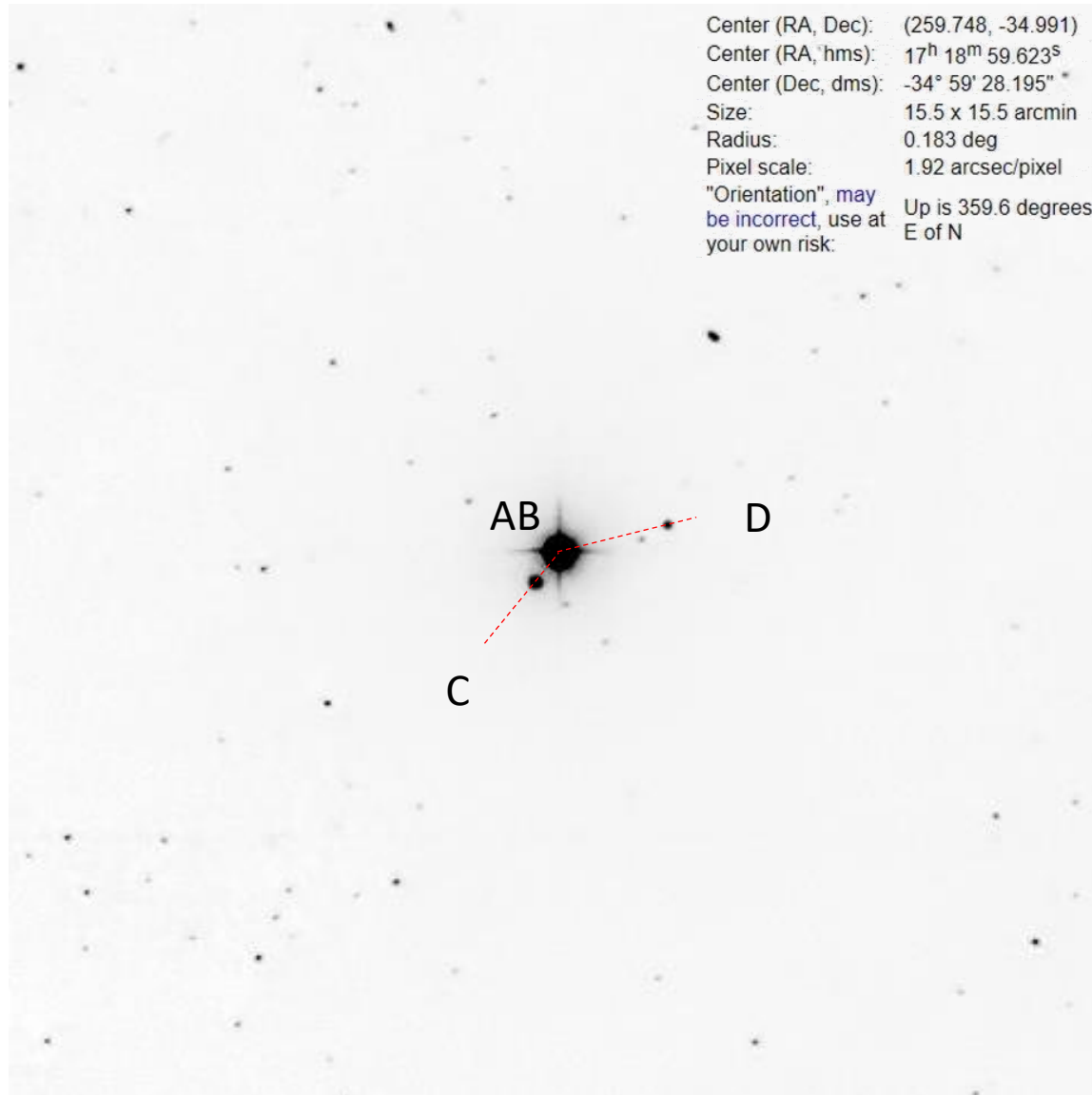
2024.08.12 05:20:58 UTC

SLOOH Chile2 1x20s, cropped, inverted

## Star System Data

(from StelleDoppie)

Mag A	6.37
Mag B	7.38
Mag C	10.27
Mag D	12.45
Sep AB	1.3"
Sep AC	32.6'
Sep AD	92"
PA AB (measured)	323 (nd)
PA AC (measured)	142 (142.20)
PA AD (measured)	285 (282.77)



Notes: The brightest two members of this system (A,B) cannot be split due to their 1.3" separation. Star C sets itself apart nicely to the SE and dimmer star D sits to the NW, 3X further out than C.

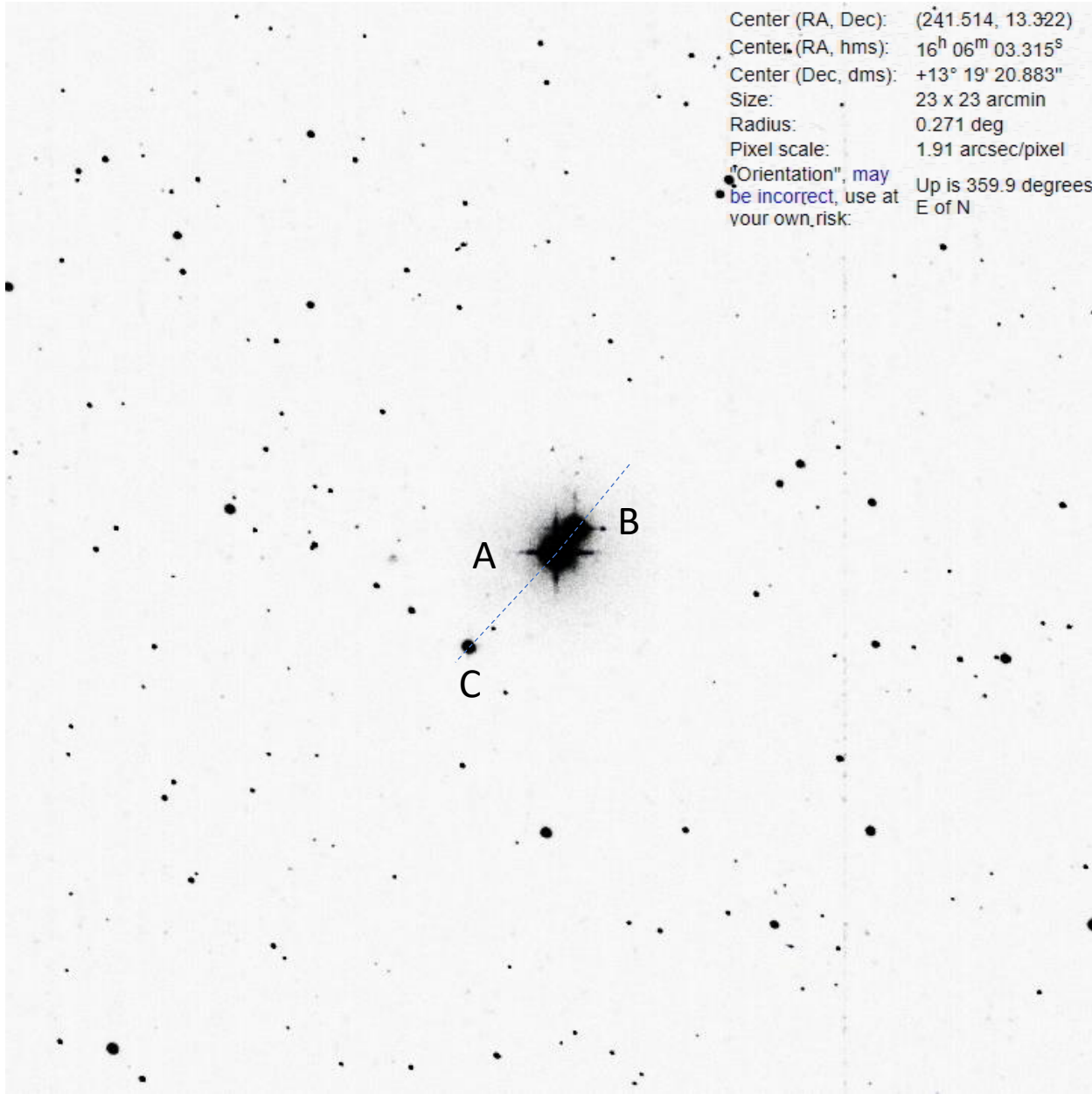
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#104 STF 2007 (SAO 101922) in Serpens  
 2024.08.07 23:46:35 UTC  
 SLOOH Canary2 1x50s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	6.89
Mag B	7.98
Mag C	10.81
Sep AB	37.7"
Sep AC	162.7"
PA AB (measured)	322 (322.04)
PA AC (measured)	137 (137.78)

Center (RA, Dec): (241.514, 13.322)  
 Center (RA, hms): 16<sup>h</sup> 06<sup>m</sup> 03.315<sup>s</sup>  
 Center (Dec, dms): +13° 19' 20.883"  
 Size: 23 x 23 arcmin  
 Radius: 0.271 deg  
 Pixel scale: 1.91 arcsec/pixel  
 "Orientation", may be incorrect, use at your own risk: Up is 359.9 degrees E of N



Notes:

The AB stars sit one on top of the other at about a 45° angle with their own distinct star spikes. The A star is 1 mag brighter than the B star, with the C star is another 3 mags dimmer than B.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Star System Data  
(from StelleDoppie)

### STFA 7

Mag A	7.41
Mag B	7.81
Mag C	13.00
Sep AB	44.1"
Sep BC	12.3"
PA AB (measured)	234 (234.31)
PA BC (measured)	0 (0)

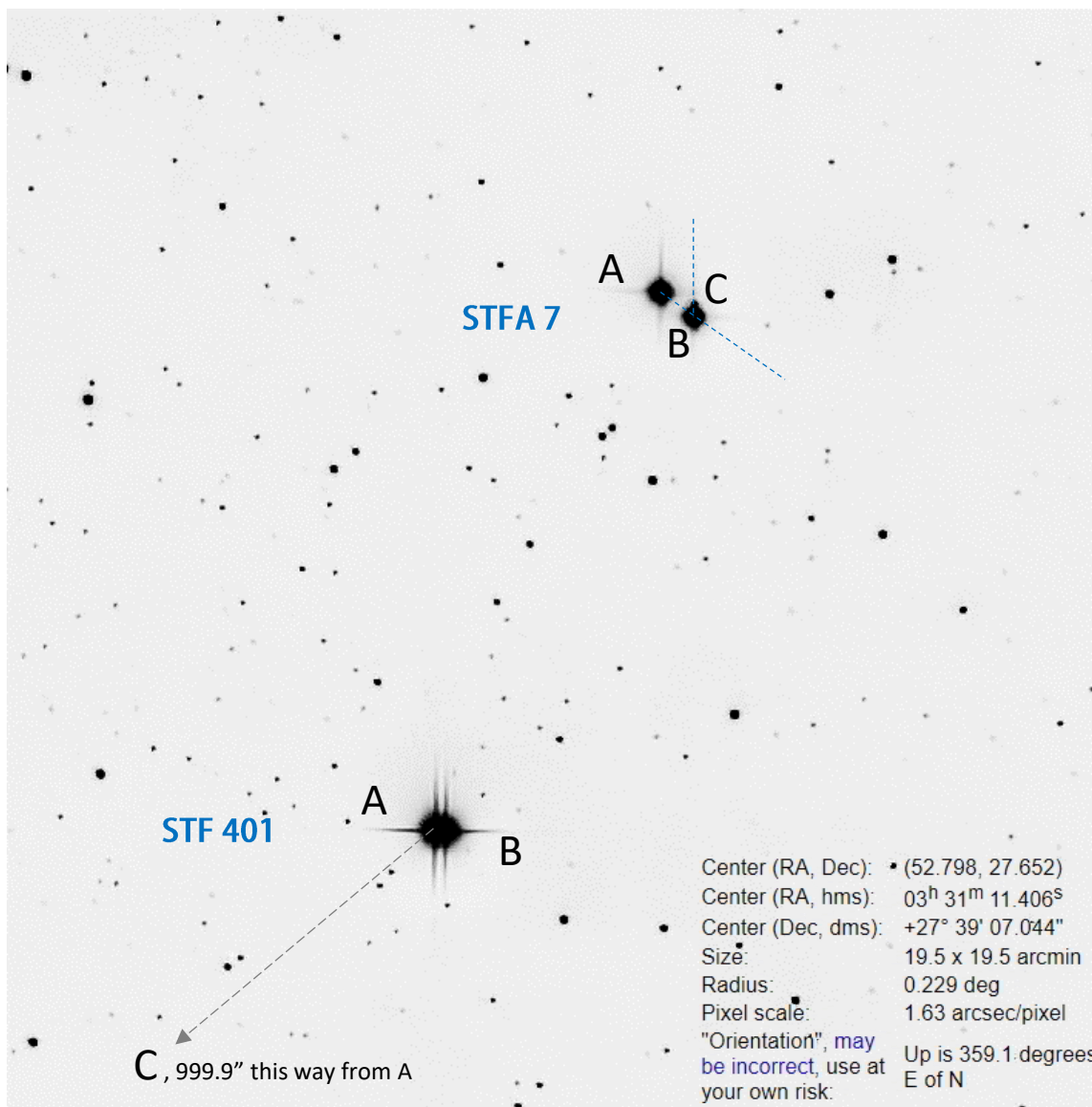
### STF 401

Mag A	6.58
Mag B	6.93
Mag C	10.88
Sep AB	11.5"
Sep BC	999.9" (not in frame)
PA AB (measured)	270 (270)
PA BC (measured)	129 (not in frame)

## #106 STFA 7 STF 401 (SAO 75964) in Taurus

2024.09.01 18:11:10 UTC

SLOOH AUS1 1x20s, cropped, inverted



Notes: Such an interesting FOV with two multiple star systems! In order to get the close splits, I wasn't able to include the C star of STF 401 since it's 1000" to the SE, but I have indicated its location with an arrow. I love the two sets of spikes on the AB pair of STF 401.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in lower right)

# #107 STFA 8 / Alcyone (SAO 76199) in Taurus

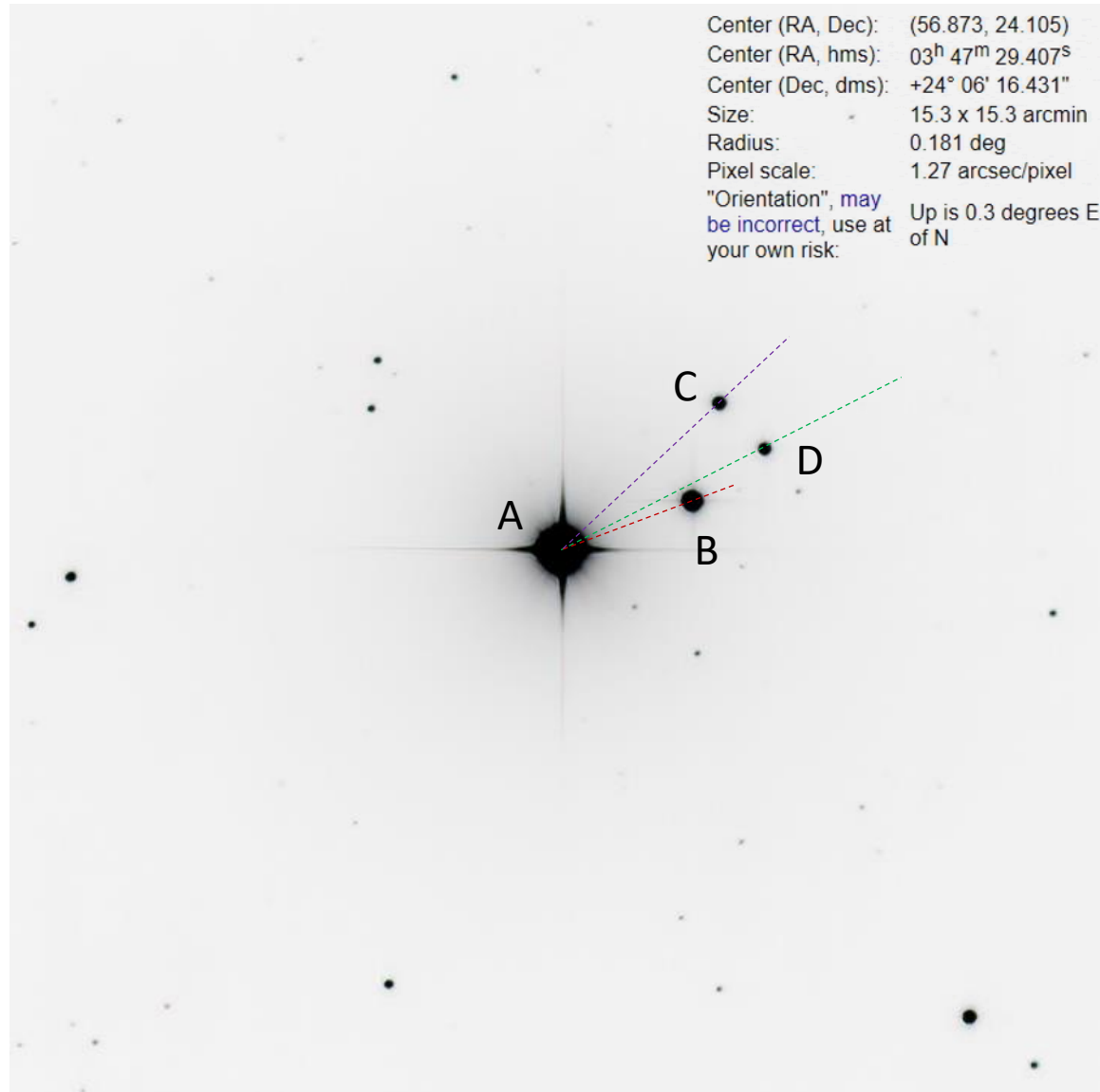
2024.08.14 03:47:06 UTC

SLOOH Canary2 1x20s, cropped, inverted

## Star System Data (from StelleDoppie)

Mag A	2.83
Mag B	6.27
Mag C	8.22
Mag D	8.73
Sep AB	117.6"
Sep AC	182.0"
Sep AD	191.8"
PA AB (measured)	291 (290.79)
PA AC (measured)	313 (313.23)
PA AD (measured)	297 (296.65)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: I had not realized that beautiful Alcyone was part of a multi-star system, always in search of the nebulosity surrounding it. The B-C-D group members all have a nice wide split from Alcyone (A). Whose brightness reigns here; but the B,C,D stars hold their own at mag 6 (B) and mag 8/9 (C,D). A nice looking system!

# #108 STF 258 + BU 876 AB (BD +32 434) in Triangulum

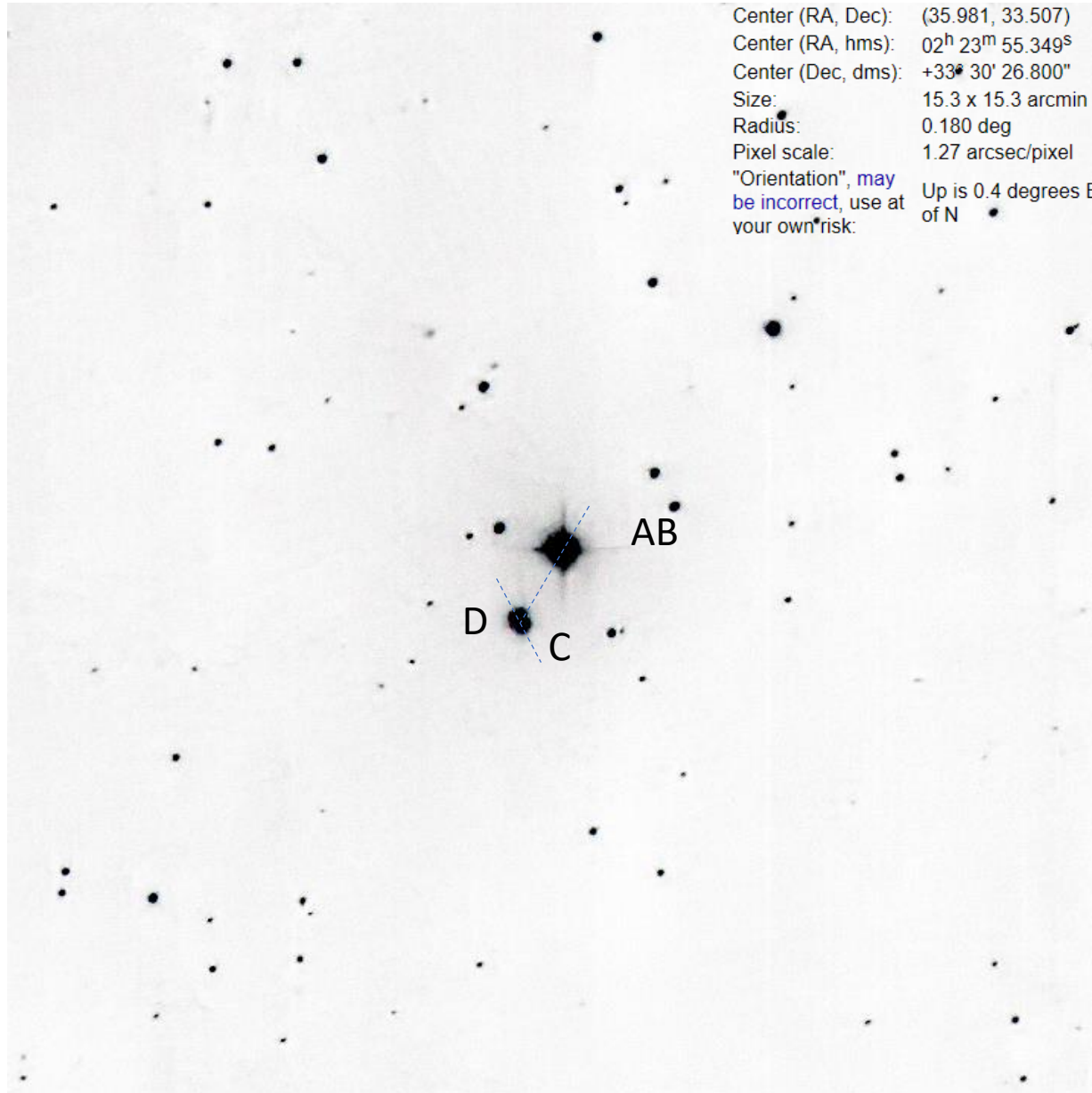
2024.08.07 23:46:35 UTC

SLOOH Canary2 1x50s, cropped, inverted

## Star System Data

(from StelleDoppie)

Mag A	7.93
Mag B	11.27
Mag C	10.16
Mag D	10.61
Sep AB	1.2"
Sep AC	70.9'
Sep CD	6.4"
PA AB (measured)	243 (nd)
PA AC (measured)	151 (151.26)
PA CD (measured)	30 (28.24)



Center (RA, Dec): (35.981, 33.507)  
Center (RA, hms): 02<sup>h</sup> 23<sup>m</sup> 55.349<sup>s</sup>  
Center (Dec, dms): +33° 30' 26.800"  
Size: 15.3 x 15.3 arcmin  
Radius: 0.180 deg  
Pixel scale: 1.27 arcsec/pixel  
"Orientation", may be incorrect, use at your own risk: Up is 0.4 degrees E of N

Notes: The AB pair is too close to split at 1.2". Both CD members can definitely be detected and are overlapping one another at a 30° angle.

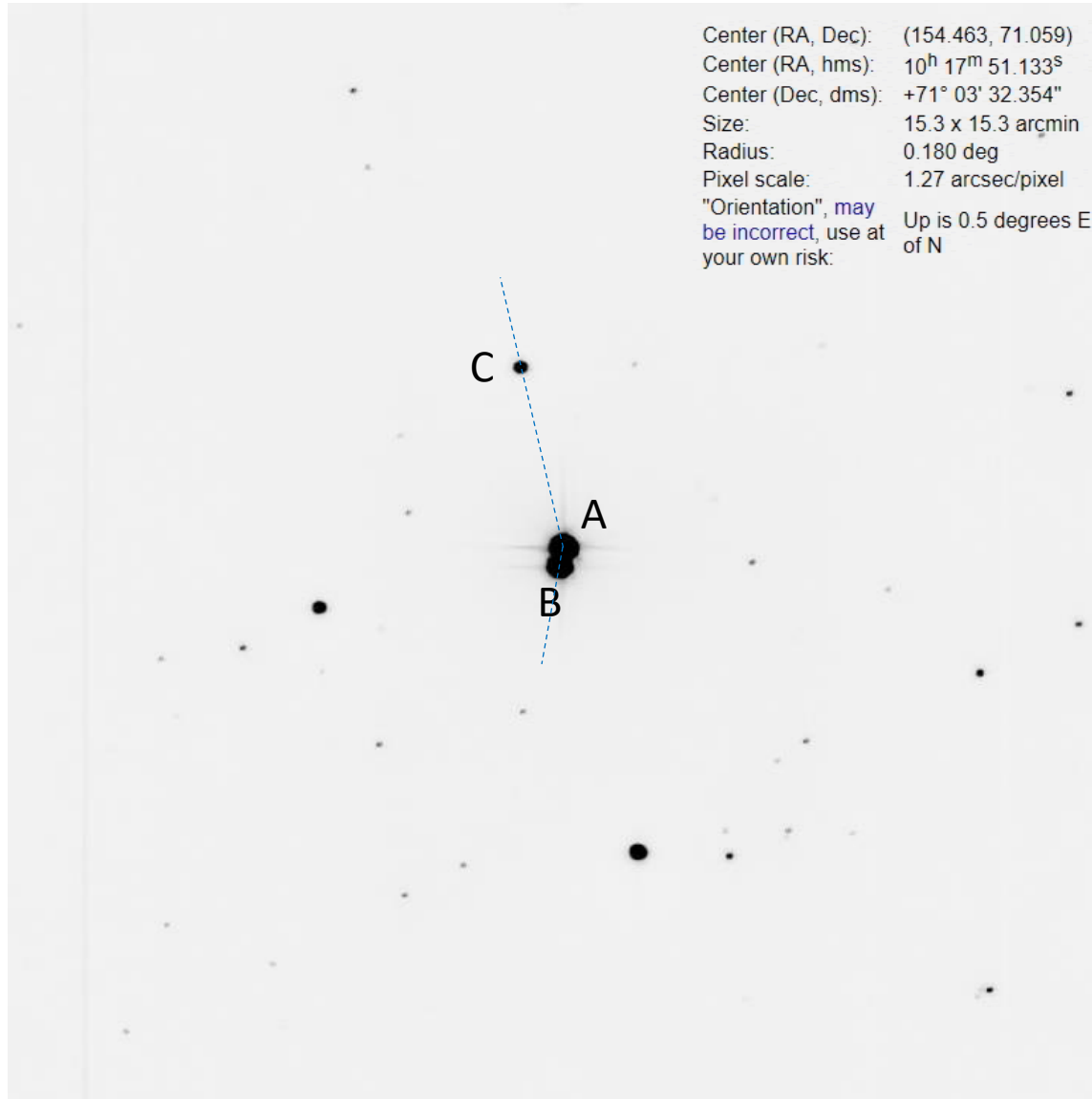
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#109 STF 1415 (SAO 7099) in Ursa Major  
 2024.09.08 05:12:05 UTC  
 SLOOH Ca2 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	6.65
Mag B	7.27
Mag C	10.85
Sep AB	16.5"
Sep AC	153.3"
PA AB (measured)	168 (168.04)
PA AC (measured)	13 (12.84)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)



Notes: This is a nice, simple system with three visible stars. A & B are the brightest, and while they do not totally split, they are each obvious in this image. The smaller C star is exactly where it's supposed to be, a good ways to the North of A.

# #111 STF 1608 ABC / MZ UMa (SAO 28287) in Ursa Major

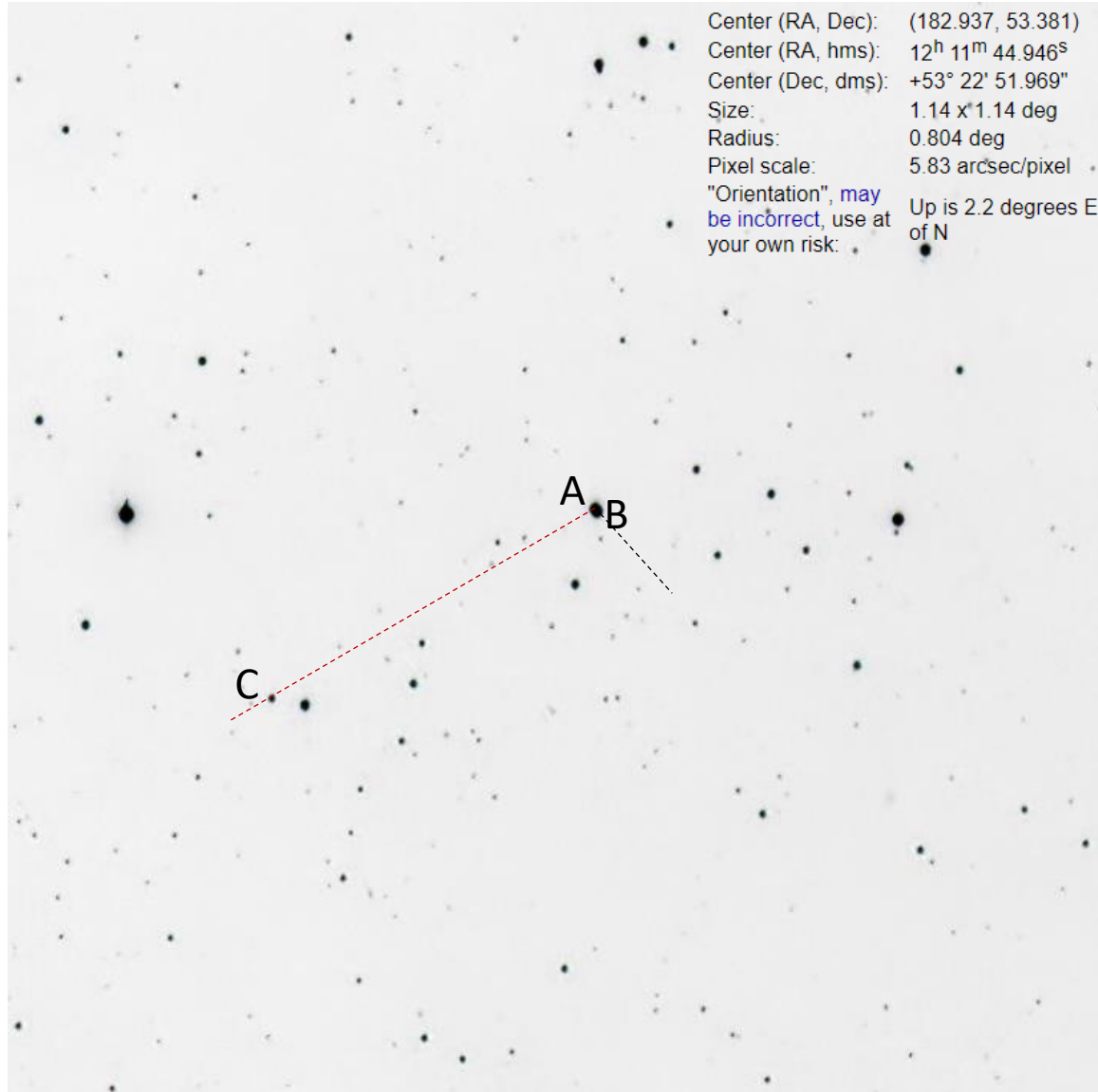
2024.08.07 23:46:35 UTC

SLOOH Canary2 UltraWide, 1x20s, cropped, inverted

## Star System Data

(from StelleDoppie)

Mag A	8.11
Mag B	8.27
Mag C	11.27
Sep AB	13.6"
Sep AC	999.9'
PA AB (measured)	221 (221.91)
PA AC (measured)	117 (119.4)



Notes: This was a tricky one to map. I had to widen the crop to include star C, far away from star A at 999.9'. In contrast, A & B are quite close together (13.6') and are both bright, with nearly identical magnitudes. This causes them to overlap here into a squashed elongated blob.

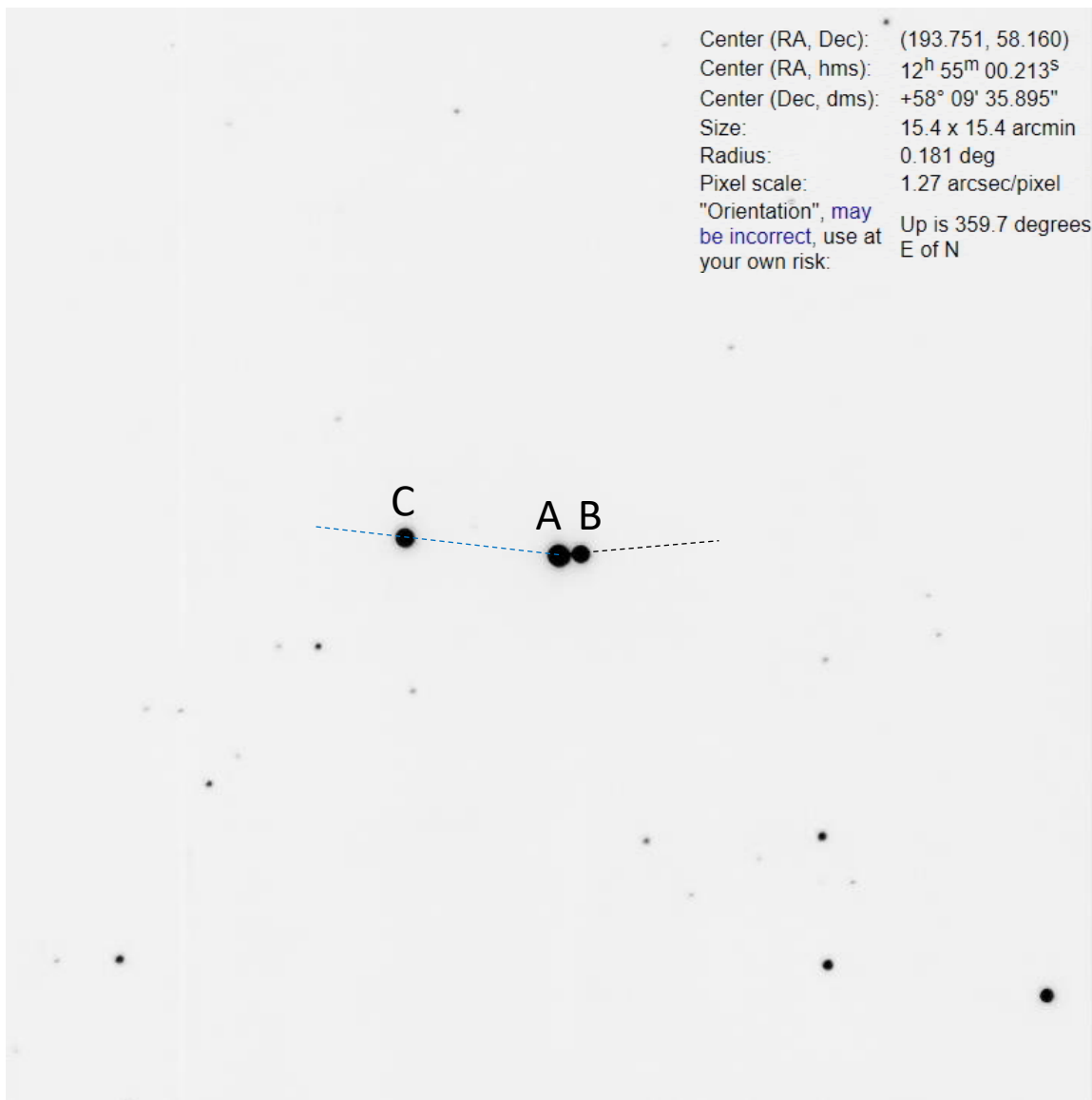
PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

#112 STF 1691 ABC (SAO 28561) in Ursa Major  
 2024.09.03 20:52:20 UTC  
 SLOOH Canary2 UltraWide, 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	8.58
Mag B	9.80
Mag C	9.61
Sep AB	18.5"
Sep AC	130.3'
PA AB (measured)	275 (275.17)
PA AC (measured)	84 (83.82)

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

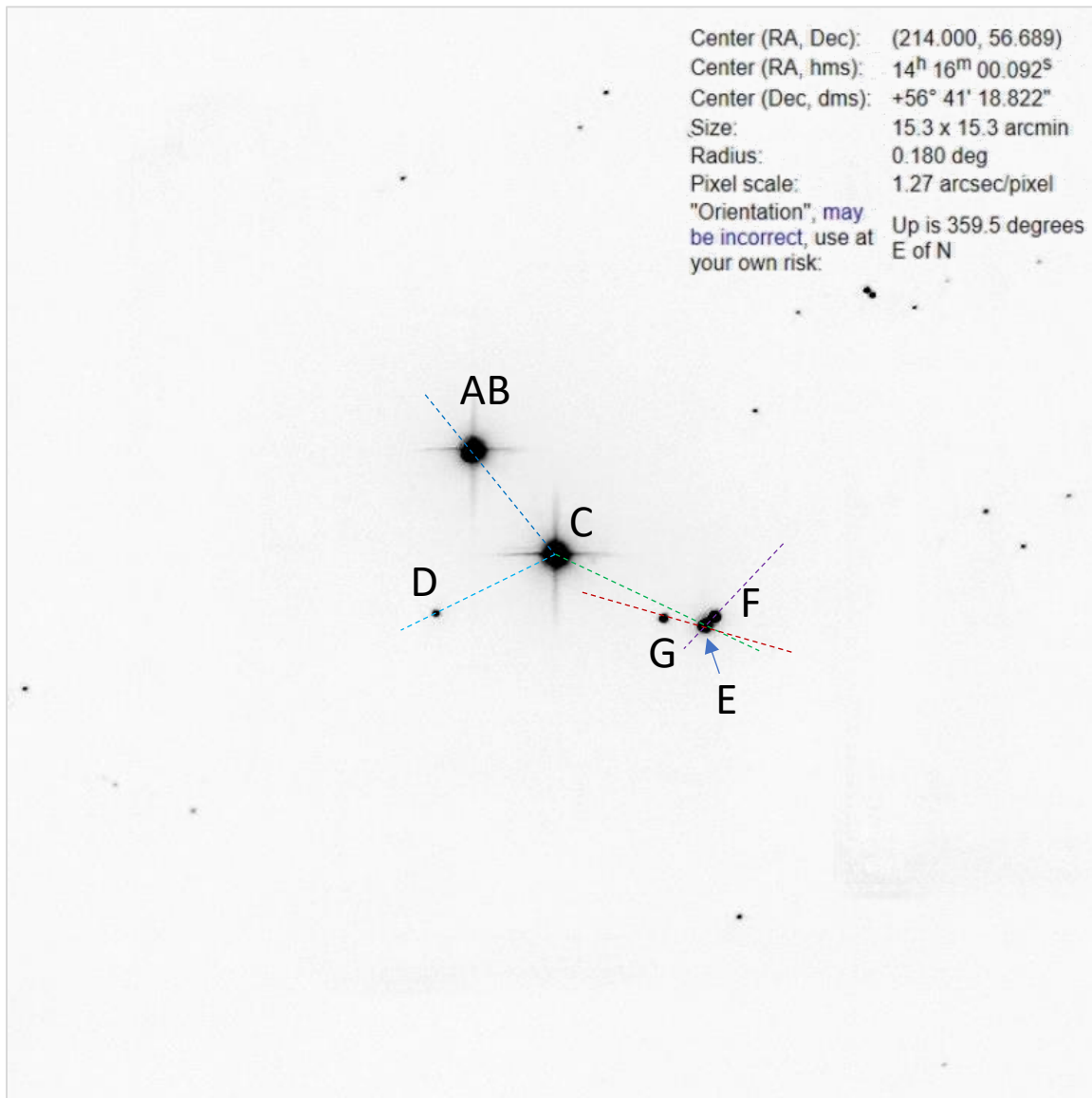


Notes: This is a straight forward multiple star system with 3 members, all within ~1 mag of brightness. B is just barely split in this image, kissing a close goodbye to A. Star C is 7 times further away from A, sitting off to the east.



#113 STF 1830 & 1831 (SAO 29064) in Ursa Major  
 2024.08.28 21:10:11 UTC  
 SLOOH Canary2 1x20s, cropped, inverted

Mag A	7.16
Mag B	9.56
Mag C	6.73
Mag D	13.08
Mag E	9.33
Mag F	10.28
Mag G	12.17
Sep AB	5.8"
Sep AC	112.2"
Sep CD	112.1"
Sep CE	138.2"
Sep EF	10.6"
Sep EG	35.2"
PA AB (measured)	138 (nd)
PA AC (measured)	219 (218.55)
PA CD (measured)	116 (116.47)
PA CE (measured)	245 (245.40)
PA EF (measured)	312 (313.54)
PA EG (measured)	81 (81.79)



Notes: What a complicated group! It took a while to identify and correctly place all of the members. Stars A&B are quite close together and show as one merged image. The other five members split well and their placement can be placed accurately by their position angles and relative magnitudes.

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)

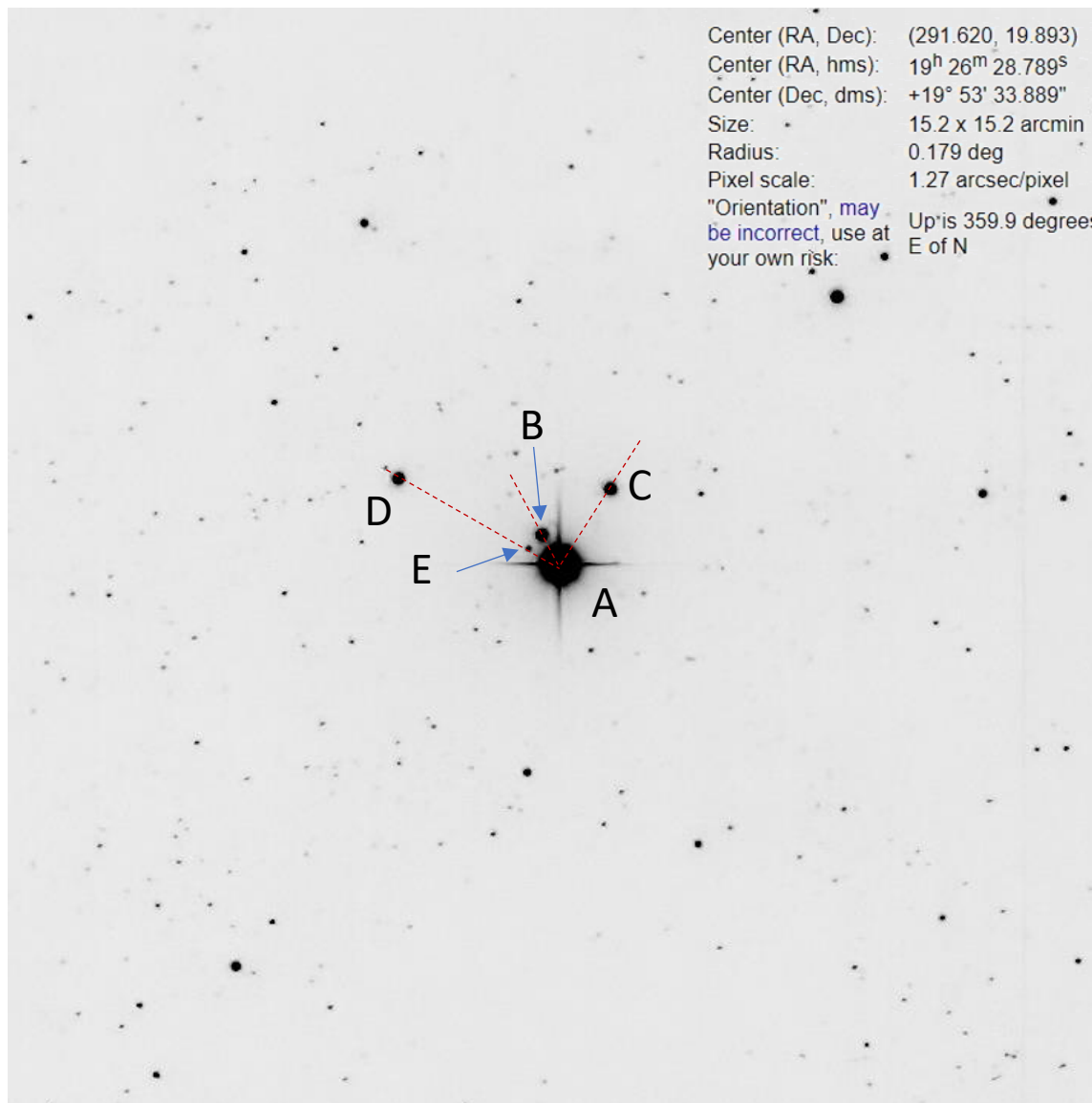
Star System Data from StelleDoppie



#114 STF 2521 (SAO 104839) in Vulpecula  
 2024.08.10 02:12:03 UTC  
 SLOOH Canary2 1x20s, cropped, inverted

Star System Data  
 (from StelleDoppie)

Mag A	5.82
Mag B	10.50
Mag C	10.54
Mag D	10.57
Mag E	14.50
Sep AB	29.0"
Sep AC	75.1"
Sep AD	152.1"
Sep AE	28.5"
PA AB (measured)	31 (29.55)
PA AC (measured)	326 (324.68)
PA AD (measured)	62 (62.17)
PA AE (measured)	66 (65.72)



Notes: What a nifty star system! All 5 stars split cleanly from one another. The brightest star is mag 5.8 while the dimmest is mag 14.5; these are joined by 3 stars that are almost identical in brightness at mag 10.5. Plus the little E star sure is cute!

PA measurements were made using java tool *OnScreenProtractor* from SourceForge. FOV analyzed by nova.astrometry.net (see box in upper right)