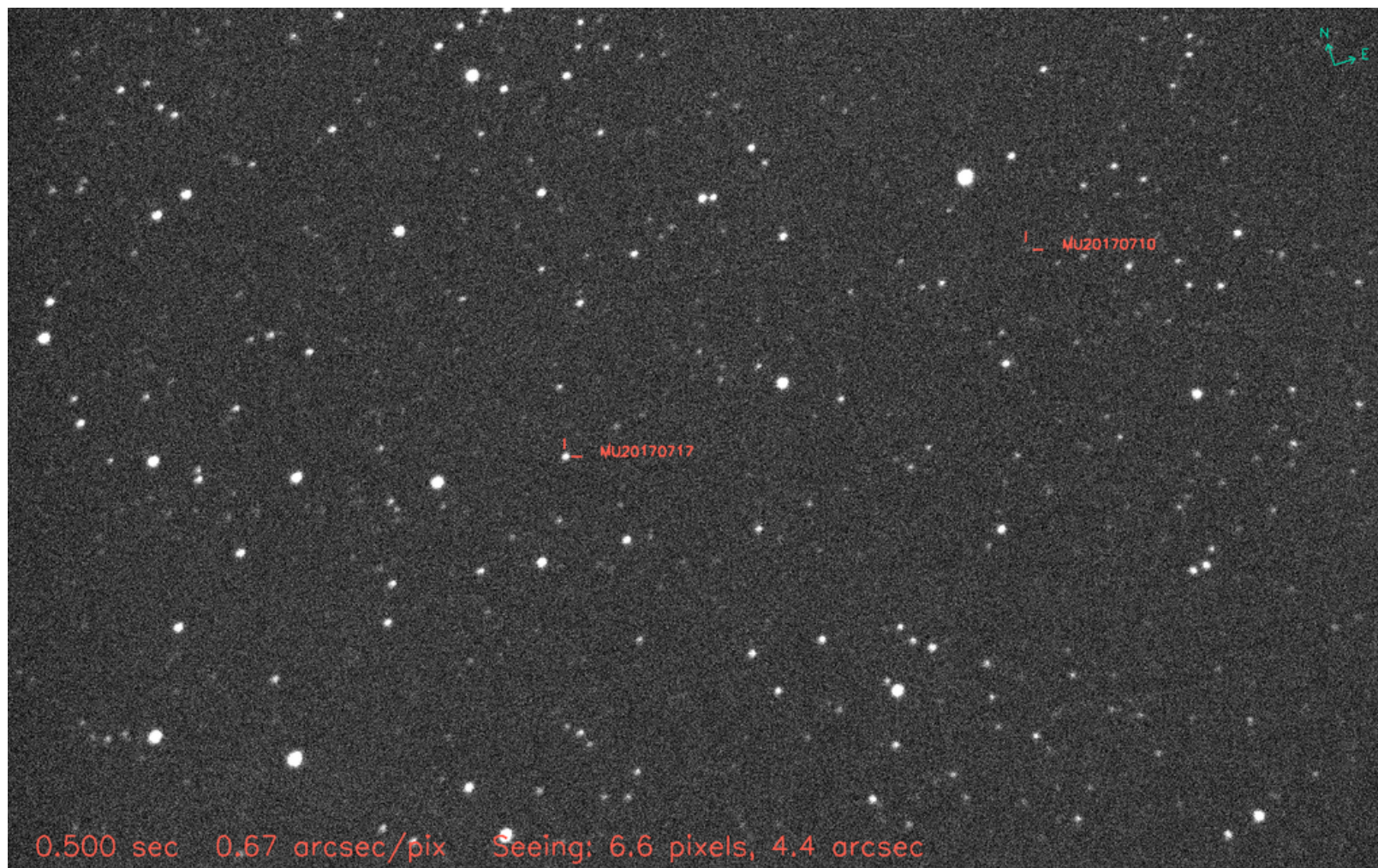


## 2017 July 17 Occultation by 2014 MU69

Star:  
equinox: 2000.0, epoch: 2017.539  
RA, Dec: 19:00:08.29154 -20:39:37.9827  
g': 12.602

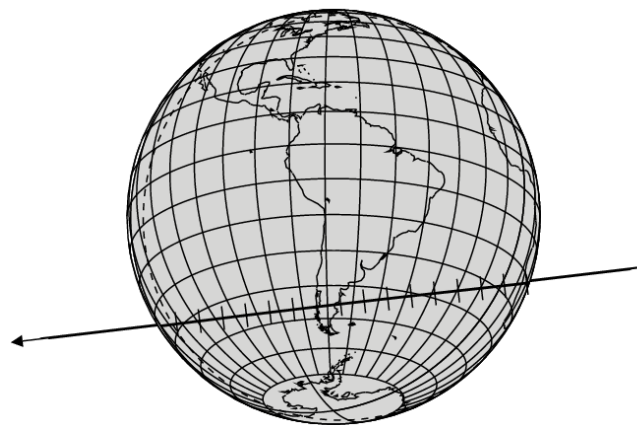
[Satellite cloud loop.](#)



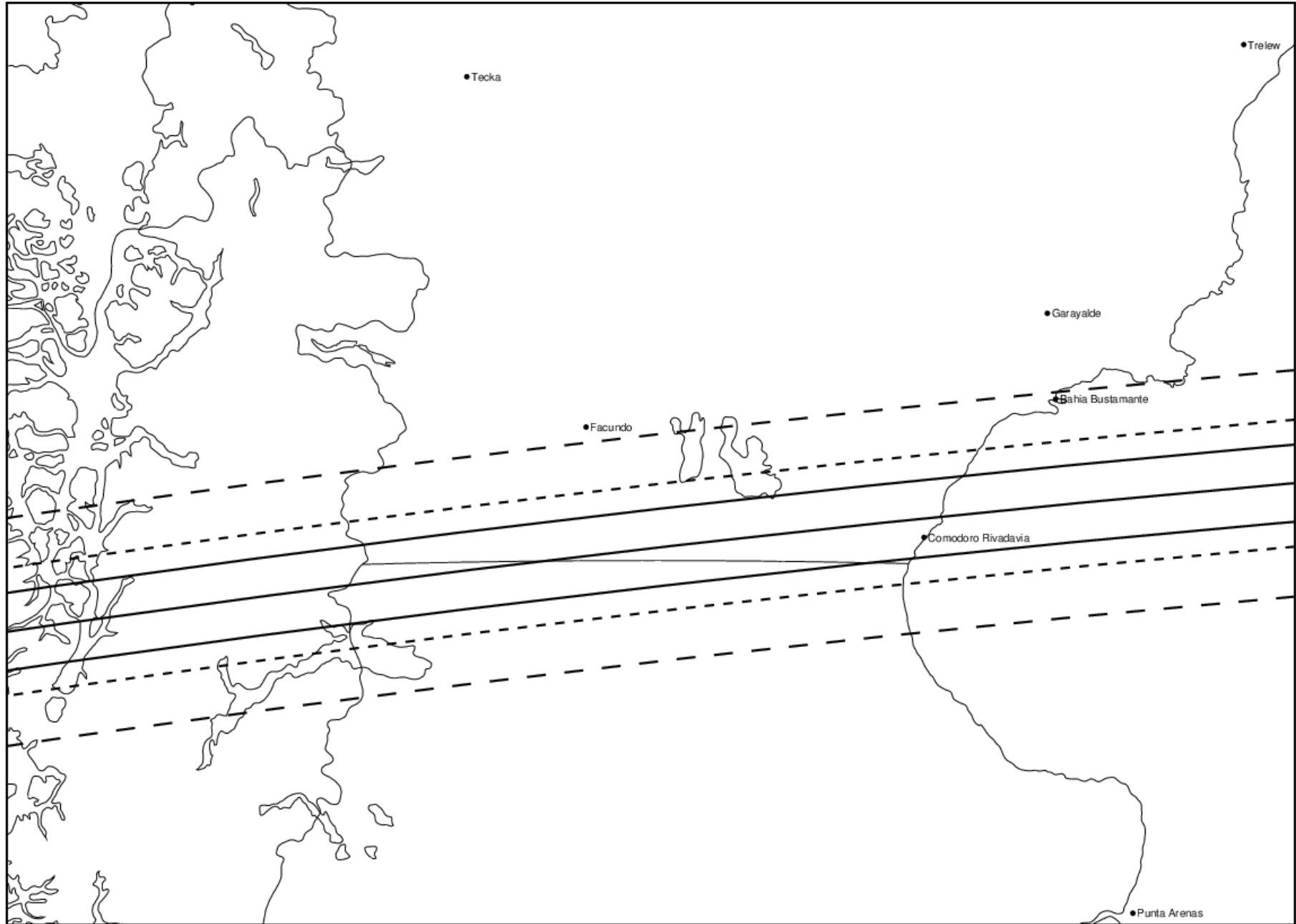
Click to invert. This is taken with the 16" Dob and the QHY174 camera on 2017-03-19 12:21 UT. At the time the target elevation was ~20 degrees. Gain=48, offset=0, and exposure time was 0.5 sec.

Occultation of MU20170617 by 14MU69 SBP-170710-lc1gr  
2017/07/17 03:49:55

RA: 19 00 08.2915 DEC: -20 39 37.983  
Diam: 40.0 = 0.001as Max Duration: 1.7s Q: \*\*\*\*  
Solar elongation: 169.3  
Lunar elongation: 105.1 Illuminated: 46.2%  
Sun altitude at -12.0 shown dotted  
Ticks from: 03:46:00 to 03:53:30 every 30 sec



Occultation of MU20170717 by 2014MU69 SBP-170710-lc1gr



## Shadow Center Line

U.T. Day/Time	Lat (Deg)	Lon (Deg)	Sun Alt (Deg)	Star Alt (Deg)	Moon Alt (Deg)
Jul 17,2017 3:46: 0.0	-20.61	-20.64	-20.1R	9.8S	57.8R
Jul 17,2017 3:46:15.0	-25.11	-9.44	-31.1R	20.9S	47.7R
Jul 17,2017 3:46:30.0	-28.03	-2.07	-38.0R	27.9S	40.7R
Jul 17,2017 3:46:45.0	-30.39	4.07	-43.5R	33.4S	35.0R
Jul 17,2017 3:47: 0.0	-32.41	9.55	-48.1R	38.2S	30.0R
Jul 17,2017 3:47:15.0	-34.20	14.64	-52.0R	42.4S	25.4R
Jul 17,2017 3:47:30.0	-35.80	19.49	-55.5R	46.2S	21.2R
Jul 17,2017 3:47:45.0	-37.26	24.16	-58.6R	49.6S	17.2R
Jul 17,2017 3:48: 0.0	-38.58	28.73	-61.2R	52.7S	13.4R
Jul 17,2017 3:48:15.0	-39.80	33.23	-63.4R	55.5S	9.8R
Jul 17,2017 3:48:30.0	-40.90	37.69	-65.1R	57.9S	6.3R
Jul 17,2017 3:48:45.0	-41.91	42.14	-66.3R	60.1S	2.9R
Jul 17,2017 3:49: 0.0	-42.82	46.60	-67.0R	61.9S	-0.4R
Jul 17,2017 3:49:15.0	-43.63	51.08	-67.2R	63.4S	-3.6R
Jul 17,2017 3:49:30.0	-44.35	55.60	-66.8R	64.4S	-6.8R
Jul 17,2017 3:49:45.0	-44.98	60.16	-65.9S	65.0S	-10.0R
Jul 17,2017 3:50: 0.0	-45.50	64.78	-64.6S	65.0S	-13.1R
Jul 17,2017 3:50:15.0	-45.93	69.47	-62.9S	64.6R	-16.2R
Jul 17,2017 3:50:30.0	-46.26	74.23	-60.9S	63.8R	-19.3R
Jul 17,2017 3:50:45.0	-46.48	79.07	-58.6S	62.5R	-22.4R
Jul 17,2017 3:51: 0.0	-46.59	84.00	-56.0S	60.8R	-25.6R
Jul 17,2017 3:51:15.0	-46.59	89.03	-53.3S	58.8R	-28.7R
Jul 17,2017 3:51:30.0	-46.45	94.16	-50.3S	56.4R	-31.9R
Jul 17,2017 3:51:45.0	-46.19	99.42	-47.1S	53.7R	-35.2R
Jul 17,2017 3:52: 0.0	-45.78	104.82	-43.7S	50.7R	-38.5R
Jul 17,2017 3:52:15.0	-45.20	110.39	-40.1S	47.4R	-41.9R
Jul 17,2017 3:52:30.0	-44.44	116.17	-36.1S	43.8R	-45.3R
Jul 17,2017 3:52:45.0	-43.47	122.23	-31.9S	39.8R	-48.8R
Jul 17,2017 3:53: 0.0	-42.23	128.68	-27.2S	35.3R	-52.3R
Jul 17,2017 3:53:15.0	-40.64	135.72	-21.8S	30.1R	-55.8R
Jul 17,2017 3:53:30.0	-38.51	143.80	-15.3S	23.7R	-59.0R
Jul 17,2017 3:53:45.0	-35.28	154.28	-6.4S	14.9R	-60.9S

West longitude is positive in this table. Timing and position is computed for sea level on WGS84 datum.

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