

# The Objective View

Newsletter of the Northern Colorado Astronomical Society

July 2008

Nate Perkins, President

pres@ 970 207 0863

Greg Halac, Vice President, Web Editor

vp@ 970 223 7210

Dave Chamness, Secretary and AL Correspondent

sec@ 970 482 1794

Robert Michael, Treasurer

treas@ 970 482 3615

Dan Laszlo, Newsletter Editor

objview@ Office 970 498 9226

add ncastro.org to complete email address

Longmont Astronomical Society July 17 7 pm Dr.  
Suzanne Traub-Metlay, ESA Herschel and Planck missions.  
FRCC, 2121 Miller Rd. See new web page design at:  
<http://www.longmontastro.org/>

## June 5 Program: Potluck Dinner and Telescope Help

Members were favored with clearing skies as the Sun set, allowing a few views with an H-alpha solar scope. Several guests brought their scopes for alignment and advice. Fine views were had of the Moon and Saturn, with apertures up to Nate Perkins' 16 inch ultralight. Thank you to all who assisted!

**Next Meeting: July 10 7:30 pm**

**Black Holes by Dave Chamness  
Club Business at 7:15 pm**

**Discovery Science Center  
703 E Prospect Ave, Fort Collins**

<http://www.ncastro.org/Sites/DiscoveryCtr.htm>

**Club Brochure:** [http://www.ncastro.org/Contrib/2008\\_Brochure.pdf](http://www.ncastro.org/Contrib/2008_Brochure.pdf)

## NCAS Programs

Aug 7 Roger Appeldorn

Sept 4 Dr Andrea Schweitzer Intl Year of Astronomy

## Rocky Mountain National Park Starwatching

At Upper Beaver Meadows trailhead, July 4, 11, 25; Aug 8, 22

At end of July, please send a tally of your hours plus an estimate for August to Jeff\_Maugans at nps.gov

**Weekend Under the Stars, Foxpark WY July 31-Aug 3**

## Other Events

Little Thompson Observatory Star Night:

July closure for maintenance <http://www.starkids.org>

CSU Madison Macdonald Observatory Public Nights

On East Drive, north of Pitkin Street

Tuesdays after dusk if clear, when class is in session

Cheyenne Astronomical Society Aug 15 9 pm

Cheyenne Botanic Garden

<http://home.bresnan.net/~curranm/>

Chamberlin Observatory Open House, dusk to 10 pm

Jul 12, Aug 9, Sep 6, Oct 4, Nov 8, Dec 6 303 871 5172

<http://www.du.edu/~rstencil/Chamberlin/>

## Treasurer's Report for July 2008 from Robert Michael

Ck#225 to Astronomical League, dues-- \$245.00.

Cking balance \$748.79 (+ \$100. in petty cash)

Bob

## Rocky Mountain Star Stare 2008 Report

From Mike Prochoda:

RMSS 2008 was a huge success! I have attended this star party in 2006, 2007, and now in 2008. This year's event was by far the best! My thumbnail review: great site with fantastic observing on 3/4 nights. A total of over 250 registered star party attendees were present. For the sordid details and attached pictures, please read further.

The site is located at almost 10,000 feet in the Pike National Forest, just above the southern flank of South Park, and slightly below (but within sight-of) Kenosha Pass. It was a 70 mile drive from Denver on Hwy. 285, and took me a little over an hour to drive from South Denver. I arrived Wednesday morning (7/2/08) to clear skies and warm temperatures. The site consisted of wide-open flat fields with several patches of short stunted Aspen trees (none over 15 feet tall) scattered about. Several large observing fields were available with wide-open views of the horizon for 360 degrees. Spectacular snowfield-spotted mountains surrounded the site, and Pike's Peak was visible to the Southeast in a notch between the closer mountain ranges. I pitched my tent in the aspen trees and set up my 8' F/7 Newtonian nearby in the observing field. I wandered the observing field to meet with old friends and check-out some interesting scopes. Neil from the DAS brought his recently acquired 36' dob. which was a real beast and needed an engine hoist to unload from his large flatbed trailer. A fellow from Wisconsin had an 18' F/15 Yolo reflector (unobstructed tilted reflector design) which was massive, with about a 20' long truss tube. The usual suspects (dobs, newts, and SCTs) dotted the observing fields. The event was well-organized and the staff from CSAS were helpful with instructions, directions, etc. Wednesday afternoon clouded-up some and we had a brief rain shower,



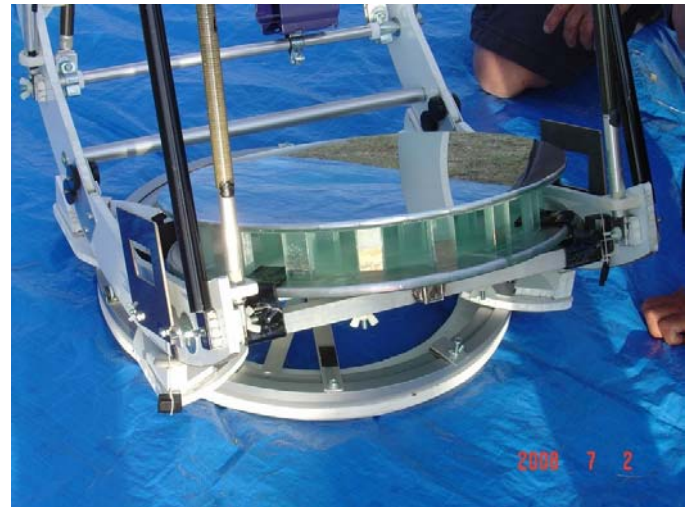
but the skies cleared nicely by dusk.

Wednesday night (7/2/08) was spectacular with clear skies all night long. I graded the Transparency (T) at 4/5 and the seeing at Pickering (P) 7/10. Views through Neil's 36' were stunning! Stephan's quintet showed all 5 members clearly (with direct, not averted vision) - same for NGC 7331 with its 4 companion galaxies (Deer Lick group). Star clouds and HII regions in M31 were fantastic. M17 showed exquisite nebulous detail beyond what I have ever seen before. M22 filled the field with myriad stars in amazing lanes and streamers. We resolved small NGC globulars in Sagittarius to the core! With my 8' Newtonian I spent the rest of the night working on my observing list to great satisfaction - views with the 8' rivaled views in 10-12' scopes under lesser observing conditions. I observed several 15th magnitude galaxies (which were in the field of my brighter targets), in Coma/Virgo with my 8'. The Milky Way was spectacular from this site - dark nebulae filled the Sagittarius / Ophiuchus / Scorpius Milky Way and the Milky Way was clearly visible in Lyra, Aquila, and Cepheus. There was a front-range light dome which extended to about 25 degrees over Denver, but the skies to the South, West, and North were light-dome-free. I observed until dawn and only had to battle a little dew on eyepieces in the wee hours (frost never formed).

Thursday (7/3/08) began clear but clouded over later in the afternoon with threatening thunderstorms, however, no significant rain ever fell. We had another spectacular night of observing from dusk till dawn with T of 4/5 and seeing of P 8/10. Fantastic seeing provided great views of globulars, double stars, open clusters, and Jupiter. I worked on my observing list all night long. Once again some dew on eyepieces and finder by 3:30 AM, but this did not preclude observing. No frost or wind.

Friday (7/4/08) was clear during the day, but became progressively more cloudy in the afternoon. By dusk only a few sucker holes of clear sky remained. Distant fireworks display at Fairplay Colorado was enjoyed by all (too distant to hear any booms). Fortunately, the clouds began clearing some by 10:30 PM, and within an hour the whole sky was clear for

another night of fantastic observing. Unfortunately, many RMSS attendees had already gone to bed because of the earlier clouds, but I (despite significant sleep deprivation) managed to get in another amazing night of viewing with my Newtonian from about 11:30 PM until dawn. Transparency of 4/5 and seeing of 7/10, with no dew at all on Friday.



20 inch ultralight with sandwich mirror

Saturday (7/5/08) started off clear, but thunderstorms built early. We had rain on and off all day long on Saturday. Fortunately, many talks and events were planned for that day, so we were otherwise occupied. Great door prizes (including Nagler eyepieces) and a raffle prize of a TeleVue Ethos 13 mm (darn, I didn't win it) were given away at the final-night event. By dusk the observing field had dried, but the clouds remained with no sign of relenting. I turned-in at about 10 PM as it was getting chilly and the skies remained overcast. I awoke at 12:30 AM with about 80% of the sky clear and the Milky Way blazing away near the zenith and to the South. I uncovered my scope and began observing, but only got in 3 objects when new clouds formed overhead and the site was socked-in once again. I had been fooled by the always-possible sucker hole! I stayed up for another hour to see if the

skies would clear again, but they never did, and so I covered my scope and got a good night of sleep for a change. Sunday (7/6/08) I awoke early and packed up for the return journey under partly-cloudy skies. Most other RMSS attendees followed suit, but a few were planning on staying for another night. I wished them luck.

Overall 3/4 nights were great with excellent observing conditions. Great organization and implementation of this event by CSAS (Colo. Sprgs. Astro. Soc.). Only red lights were seen at night and no noise was heard in the mornings before 10:30 AM. Great talks, especially by Dr. Mark Bottorff of SW Univ. in Texas (talks on lunar observing and dark matter).

Of particular note, CSAS has just purchased 35 acres of land near Gardiner Colorado (West of Walsenberg) at about 8000 feet elevation. Reports are that this site has nice open fields with a perimeter of trees for camping, and is amazingly dark with absolutely no light domes in any direction. This will be the site of RMSS 2009, so RMSS is no longer at the mercy of the Forest Service and we will now be able to park our cars anywhere on the observing fields (yeah!).

### **May 30-31 at RAC from Chris Norman and Gary G**

On Sun, Jun 1, 2008 at 9:57 PM, Gary Garzone <[gary30views@comcast.net](mailto:gary30views@comcast.net)> wrote:

Friday night was cloud out till 3 am, not a good night for viewing. We just had a few sucker holes before I shut down scope, then of course it cleared but was late already, 3 am, so I went to bed and missed out on only about hour of views anyway..

Saturday night we had clearing around 12:30 am when skies opened up. Dave Dunn showed up for some observing too. He left early around 11 PM because of too many clouds, so we thanked him and sure enough, hour later we were in full swing observing again, skies had cleared up nicely. Good Transparency, poor seeing mostly, but very clear Milky way and dust bands easily seen..

Vern R., Tom T., Chris N., Glenn F., and my wife Carol and myself had a real good night of viewing. Vern once again bagged a faint comet on laptop, I tried to find with 30 scope but no luck. I was in right area, had RA and DEC numbers and was checking out location in telrad, no luck, too small and faint I guess?

We did all the favorites, Veil and some planetary nebula, globulars, edge on galaxies, tea pot nebula wonders, wow!, summer is here.

Another great night at RAC.

I thought the weather might skunk our observing but it turned out great! The views of M51, the Veil, Crescent and Trifid nebulas were spectacular, and it was really nice to see my old friend Andromeda. The views of Jupiter right before going to bed were awesome! If Fox park is even darker than RAC, I

can't imagine the views we'll have there. Thanks Gary, Dave, Glenn, and Vern for the views and the company,

Chris

The picasa link below is for the pictures I took of the sunset. <http://picasaweb.google.com/chris.norman27/PawneeRAC529612008?authkey=BnuoOoEmDFg>

### **Seeing Study and Time of Night**

Greetings from Blacksburg, VA. I've been working here on QSO outflows with Nahum Arav about 80 hours a week for the past month or so and will return to Colorado in a couple of weeks to put the last polishing touches on the PN paper. Phew!

Anyway, the measurement of seeing for a given night was the best quartile point spread function of the star during the part of the night I actually observed. This was determined by determining the mean and standard deviation of the seeing over the course of the night and taking the division between the 75% worst seeing and 25% best seeing on the bell shape curve as the actual seeing for the night. I always battled with thermal expansion and fluctuations with focusing which is why I simply don't adopt the average.

Indeed, I did find the seeing to get considerably better about an hour after beginning my observations at sunset. Since I usually observed for a few hours on a given night, the best quartile usually came from the measurements taken later in the evening. However, I do not know whether this is due to the mirror reaching thermal equilibrium with the dome (the 24" mirror is 6-8" thick and takes that long to cool!) or whether the atmospheric turbulence actually died off later in the night. Maybe that new seeing measurement device that has been mentioned on the FRAC can determine which it is.

Cheers, Max Moe

### **Podcasts by Astronomers, from Andrea Schweitzer**

If you would like to listen in on lectures by some of the best professional astronomers around, visit: <http://www.astrosociety.org/education/podcast/index.html>

Podcasts of Nontechnical Astronomy Talks Available Without Charge

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Audio recordings of twelve public lectures by noted astronomers are now available as free MP3 downloads at the web site of the nonprofit Astronomical Society of the Pacific (ASP):

<http://www.astrosociety.org/education/podcast/index.html>

These talks were recorded at Foothill College in the Silicon Valley Astronomy Lecture Series. They are made available to the public through the kind support of a donor with a strong interest in education who wishes to remain anonymous. Each hour-long lecture on some exciting development in our study of the universe is followed by an extensive question and answer period, in which the speaker gives further details and personal glimpses about the topics under discussion.

Among the talks now available are:

\* Dr. Jill Tarter (SETI Institute): "Better Searches for Signals from Extra-terrestrial Civilizations"

\* Dr. Geoff Marcy (U. of California, Berkeley): "Hunting for Earth-like Planets Among the Stars"

\* Dr. David Morrison (NASA Ames Research Center): "Asteroid Impacts and the Evolution of Life on Earth"

\* Dr. David Grinspoon (Denver Museum of Nature & Science): "Climate Catastrophes in the Solar System"

\* Dr. Bruce Margon (University of California, Santa Cruz): "Results from the Hubble Space Telescope"

\* Dr. Dale Cruikshank (NASA Ames): "The Planet Pluto: Maligned but Not Forgotten"

\* Dr. Alex Filippenko (University of California, Berkeley): "Dark Energy and the Runaway Universe"

\* Dr. Frank Drake (SETI Institute): "Estimating the Chances of Life Out There"

A few talks are also available as video files (instructions can be found on the same page.)

These lectures are co-sponsored by:

- + NASA's Ames Research Center
- + The SETI Institute
- + The Foothill College Astronomy Program
- + The Astronomical Society of the Pacific.

Background:

Founded in 1999, the Silicon Valley Astronomy Lectures are presented on six Wednesday evenings during each school year at Foothill College, in the heart of California's Silicon Valley. Speakers over the years have included Nobel-prize winners, members of the National Academy of Sciences, the first woman in history to discover a planet, an astrophysicist who is an award-winning science fiction writer, and many other well-known scientists explaining astronomical developments in

everyday language.

The series is moderated by Foothill's astronomy instructor Andrew Fraknoi and sponsored by the Astronomical Society of the Pacific, the SETI Institute, NASA's Ames Research Center, and the Foothill College Astronomy Program.

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Andrew Fraknoi, Chair, Astronomy Program  
Foothill College, 12345 El Monte Rd.,  
Los Altos Hills, CA 94022, USA

Telephone: (650) 949-7288

E-mail: [fraknoiandrew@fhda.edu](mailto:fraknoiandrew@fhda.edu)

### **Infrared Data Sets Available, from Andrea Schweitzer**

Tons of infrared and submillimeter astronomy data and images to peruse - Andrea

### **WHAT'S NEW AT THE INFRARED SCIENCE ARCHIVE (IRSA)?**

Since our last update, the NASA/IPAC Infrared Science Archive (IRSA) has announced the following new data sets accessible through our query engines and inventory services:

- Final data release from the Two Micron All-Sky Survey (2MASS) Extended Mission. These data cover the Large and Small Magellanic Clouds and include

- \* Long Exposure (6x) catalogs
- \* Long Exposure (6x) images
- \* Scan/calibration databases

- Catalogs from

- \* Deep Near Infrared Survey of the Southern Sky (DENIS) 3rd Release
- \* "Point Sources in a Spitzer/IRAC Survey of the Galactic Center" ( Ramirez et al. 2008)
- \* Infrared Astronomical Satellite (IRAS) 1.2-Jy Redshift Survey
  - \* IRAS Comet Survey
  - \* IRAS Asteroid Survey
  - \* IRAS Large Galaxies Catalog

- In concert with the Spitzer Science Center, new Spitzer Legacy data sets including

- \* Final data delivery from "From Molecular Cores to Planet-Forming Disks" (C2D)
- \* Final deliveries from "Galactic Legacy Infrared Midplane Survey Extraordinaire" (GLIMPSE-I)
- \* First deliveries from GLIMPSE-II.
- \* Images from "A 24 and 70 Micron Survey of the Inner Galactic Disk with MIPS" (MIPSGAL)
- \* 5th data delivery from "The Spitzer Infrared Nearby Galaxies Survey" (SINGS)

These data and their associated documentation are available through our website, [irsa.ipac.caltech.edu](http://irsa.ipac.caltech.edu)  
<http://irsa.ipac.caltech.edu/about.html>

**Phoenix Mars Lander Spies Ice in Trench**

Mission updates at:  
[http://www.nasa.gov/mission\\_pages/phoenix/main/index.html](http://www.nasa.gov/mission_pages/phoenix/main/index.html)

**Best Looks**

Moon By Mercury 7/1, by Mars and Saturn 7/6, by Jupiter 7/17  
 Mercury In E at dawn first week  
 Mars Low in W early evening  
 By Saturn first 2 weeks  
 Jupiter In S in middle of night  
 Saturn Low in W early evening  
 Uranus In Aquarius, middle of night  
 Neptune In Capricornus, middle of night  
 Pluto In Sagittarius, middle of the night

International Space Station Passes for Loveland – Fort Collins July 2008

Date	Mag	Starts			Max. altitude			Ends		
		Time	Alt.	Az.	Time	Alt.	Az.	Time	Alt.	Az.
<a href="#">8 Jul</a>	0.2	02:33:32	21	NE	02:33:32	21	NE	02:34:39	10	NE
<a href="#">8 Jul</a>	0.3	04:05:23	10	WNW	04:07:16	16	NNW	04:09:10	10	NNE
<a href="#">9 Jul</a>	-0.4	02:56:05	28	N	02:56:05	28	N	02:58:15	10	NE
<a href="#">9 Jul</a>	0.9	04:30:43	10	NNW	04:31:31	11	N	04:32:17	10	N
<a href="#">10 Jul</a>	0.4	03:18:35	13	NW	03:19:42	16	NNW	03:21:35	10	NNE
<a href="#">11 Jul</a>	0.7	02:09:38	18	NNE	02:09:38	18	NNE	02:10:39	10	NE
<a href="#">11 Jul</a>	1.0	03:43:09	10	NNW	03:43:55	11	N	03:44:39	10	N
<a href="#">11 Jul</a>	1.2	05:19:06	10	N	05:20:16	11	NNE	05:21:07	10	NNE
<a href="#">12 Jul</a>	0.6	02:32:04	16	NNW	02:32:14	16	NNW	02:33:56	10	NNE
<a href="#">13 Jul</a>	1.2	02:55:33	10	NNW	02:56:16	11	N	02:56:58	10	N
<a href="#">14 Jul</a>	1.1	01:45:24	14	N	01:45:24	14	N	01:46:15	10	NNE
<a href="#">14 Jul</a>	0.8	04:54:33	10	NNW	04:56:37	17	NNE	04:58:39	10	ENE
<a href="#">15 Jul</a>	1.3	02:07:53	10	NNW	02:08:34	11	N	02:09:14	10	N
<a href="#">15 Jul</a>	1.3	03:43:45	10	N	03:44:46	11	NNE	03:45:46	10	NNE
<a href="#">15 Jul</a>	-0.5	05:17:51	10	NW	05:20:34	35	NNE	05:23:17	10	E
<a href="#">16 Jul</a>	0.8	04:06:50	10	NNW	04:08:53	17	NNE	04:10:56	10	ENE
<a href="#">17 Jul</a>	1.4	01:20:40	10	NNW	01:20:49	11	N	01:21:27	10	N
<a href="#">17 Jul</a>	1.4	02:56:00	10	N	02:57:01	11	NNE	02:58:00	10	NNE
<a href="#">17 Jul</a>	-0.6	04:30:06	10	NW	04:32:49	36	NNE	04:35:31	10	E
<a href="#">17 Jul</a>	0.3	22:30:33	10	SW	22:30:53	13	SW	22:30:53	13	SW
<a href="#">18 Jul</a>	0.8	03:19:03	10	NNW	03:21:06	17	NNE	03:23:09	10	ENE
<a href="#">18 Jul</a>	-2.5	04:53:38	10	WNW	04:56:31	70	SW	04:59:24	10	SE
<a href="#">18 Jul</a>	-1.4	21:19:37	10	SSW	21:22:03	26	SE	21:24:30	10	ENE
<a href="#">18 Jul</a>	-0.3	22:54:35	10	W	22:57:09	29	NNW	22:59:42	10	NE
<a href="#">19 Jul</a>	1.4	00:32:26	10	NNW	00:33:01	10	N	00:33:36	10	N
<a href="#">19 Jul</a>	1.4	02:08:13	10	N	02:09:13	11	NNE	02:10:12	10	NNE
<a href="#">19 Jul</a>	-0.7	03:42:18	10	NW	03:45:00	36	NNE	03:47:43	10	E

<a href="#">19 Jul</a>	-0.9	05:17:48	10	W	05:20:00	20	SW	05:22:12	10	S
<a href="#">19 Jul</a>	-2.4	21:42:43	10	SW	21:45:34	85	NW	21:48:26	10	NE
<a href="#">19 Jul</a>	1.0	23:19:17	10	WNW	23:21:05	15	NNW	23:22:53	10	NNE
<a href="#">20 Jul</a>	-2.5	04:05:49	10	WNW	04:08:41	69	SW	04:11:33	10	SE
<a href="#">20 Jul</a>	-0.2	22:06:45	10	W	22:09:18	28	NNW	22:11:51	10	NE
<a href="#">20 Jul</a>	1.4	23:44:37	10	NNW	23:45:10	10	N	23:45:44	10	N
<a href="#">21 Jul</a>	-2.3	20:54:51	10	SW	20:57:41	84	NW	21:00:33	10	NE
<a href="#">21 Jul</a>	1.0	22:31:26	10	WNW	22:33:13	15	NNW	22:34:59	10	NNE
<a href="#">22 Jul</a>	-0.1	21:18:51	10	W	21:21:24	28	NNW	21:23:56	10	NE
<a href="#">22 Jul</a>	1.4	22:56:45	10	NNW	22:57:16	10	N	22:57:48	10	N
<a href="#">23 Jul</a>	0.9	21:43:31	10	WNW	21:45:17	15	NNW	21:47:03	10	NNE
<a href="#">24 Jul</a>	-0.1	20:30:54	10	W	20:33:27	28	NNW	20:35:59	10	NE
<a href="#">24 Jul</a>	1.3	22:08:49	10	NNW	22:09:19	10	N	22:09:49	10	N
<a href="#">24 Jul</a>	1.1	23:44:31	10	N	23:45:19	11	N	23:45:19	11	N
<a href="#">25 Jul</a>	0.9	20:55:32	10	WNW	20:57:19	15	NNW	20:59:04	10	NNE
<a href="#">26 Jul</a>	1.4	00:07:26	10	NNW	00:07:31	10	NNW	00:07:31	10	NNW
<a href="#">26 Jul</a>	1.2	21:20:51	10	NNW	21:21:19	10	N	21:21:48	10	N
<a href="#">26 Jul</a>	0.9	22:56:31	10	N	22:57:30	11	NNE	22:58:19	10	NNE
<a href="#">27 Jul</a>	0.7	23:19:24	10	NNW	23:20:32	15	N	23:20:32	15	N
<a href="#">28 Jul</a>	1.1	20:32:48	10	NNW	20:33:16	10	N	20:33:43	10	N
<a href="#">28 Jul</a>	0.8	22:08:28	10	N	22:09:26	11	NNE	22:10:25	10	NNE
<a href="#">28 Jul</a>	1.2	23:42:31	10	NW	23:42:45	12	NW	23:42:45	12	NW
<a href="#">29 Jul</a>	0.1	22:31:19	10	NNW	22:33:22	18	NNE	22:33:36	17	NNE
<a href="#">30 Jul</a>	0.7	21:20:22	10	N	21:21:20	11	NNE	21:22:18	10	NNE
<a href="#">30 Jul</a>	0.1	22:54:24	10	NW	22:55:51	23	NNW	22:55:51	23	NNW
<a href="#">31 Jul</a>	0.0	21:43:11	10	NNW	21:45:14	18	NNE	21:46:44	13	ENE
<a href="#">31 Jul</a>	1.0	23:17:47	10	WNW	23:18:07	13	WNW	23:18:07	13	WNW
<a href="#">1 Aug</a>	0.6	20:32:12	10	N	20:33:11	11	NNE	20:34:09	10	NNE
<a href="#">1 Aug</a>	-1.3	22:06:15	10	NW	22:08:57	37	NNE	22:09:02	36	NE
<a href="#">2 Aug</a>	0.0	20:55:00	10	NNW	20:57:03	18	NNE	20:59:05	10	ENE
<a href="#">2 Aug</a>	-0.7	22:29:36	10	WNW	22:31:22	33	WNW	22:31:22	33	WNW

<http://www.heavens-above.com/main.aspx?lat=40.4997&lng=-105.05736&loc=Fort+Collins+CO+USA&alt=0&tz=MST>