IO - August 2013

Issue 2013-08

Eugene Astronomical Society
Annual Club Dues $25
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EAS is a proud member of:
The Astronomical League
The World's Largest Federation of Amateur Astronomers

Next Meeting Thursday, August 15th
Remote Imaging: Challenges and Rewards
(Or, How to Take Pretty Pictures and Occasionally Get Some Sleep)
by Brandt Schram

At our August 15th meeting, Brandt Schram will talk about the challenge of building, using, and maintaining a remote observatory, including some of what can be accomplished and the limitations imposed by operating remotely. Topics for discussion will include control and protection of the imaging equipment, target selection, and retrieval and processing of the image data.

Time and weather permitting, Brandt will have the group select a target, then go through the process of creating an imaging plan, send it to the observatory, and start the imaging run. This should be a fascinating look into how Brandt captures his amazing astrophotos (like the one on p.3). Don't miss it!

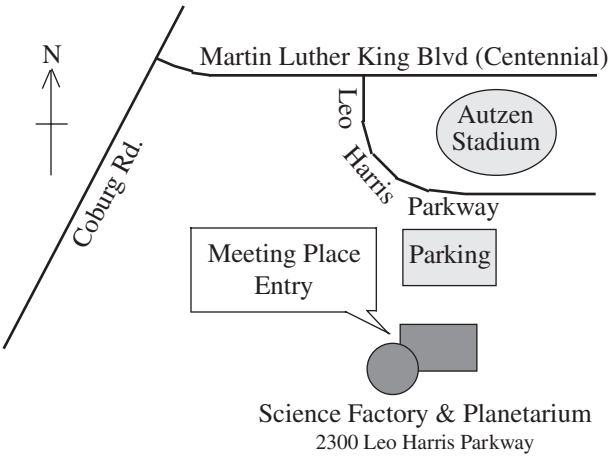
We also encourage people to bring any new gear or projects they would like to show the rest of the club. **The meeting is at 7:00 on Thursday, August15th at the Science Factory planetarium**. See below for directions.

EAS Returns to Science Factory

Due to uncertainty over the future of EWEB's meeting space, **the Eugene Astronomical Society will once again be meeting at the Science Factory's planetarium. Meetings will be on the third Thursday of the month.** The Science Factory has generously agreed to allow us to meet there in exchange for occasional public programs on astronomy from EAS volunteers.

The planetarium is a natural place for an astronomy club to meet. Planetarium Director Sue Peterson is excited to have us there, and we're pleased to be going back. Not only does this provide comfortable and appropriate meeting space, but there's an opportunity for EAS volunteers to learn to run the new MediaGlobe projector and volunteer at the planetarium as well.

Mark your calendars. Third Thursday of the month from here on out, at the Science Factory's planetarium. The Science Factory is at 2300 Leo Harris Parkway, to the southwest of Autzen Stadium.



July Meeting Report: How to Build a Telescope

At our July 25th meeting, Jerry Oltion gave a talk on how to build a telescope. He started at the beginning with a replica of Galileo's telescope and gave a brief history of telescope design since then, talking about how the unweildy mounts of previous centuries led to the Dobsonian revolution, the introduction of truss-tube dobs for portability, and onward to newer designs like his own trackball and Mel Bartels's folding zip-dob. Jerry and other club members displayed many other homebuilt observing items, including focusers, finders, mirror cells, and an adjustible chair. Mel showed off the beginning of what may become the next big revolution in telescope design: an f/2.8 mirror that he has ground and figured to near-perfection. Modern coma correctors will allow fast mirrors like this to present stunning wide-field views, and at f/2.8, a 24-inch scope could be aimed at the zenith and not require a ladder.

The meeting concluded with a good old fashioned telescope-raising: we assembled the 8" Orion dob that we'll be giving away at our August 3rd dark-sky star party.

Our next meeting will be on Thursday, August 15th, at 7:00 PM at the Science Factory planetarium, 2300 Leo Harris Parkway, behind Autzen Stadium.

Here's our meeting schedule through the end of 2013. We now meet on the 3rd Thursday of each month.

August 15 September 19 October 17 November 21 December 19

Dark-Sky Star Party at Dexter State Park August 3rd

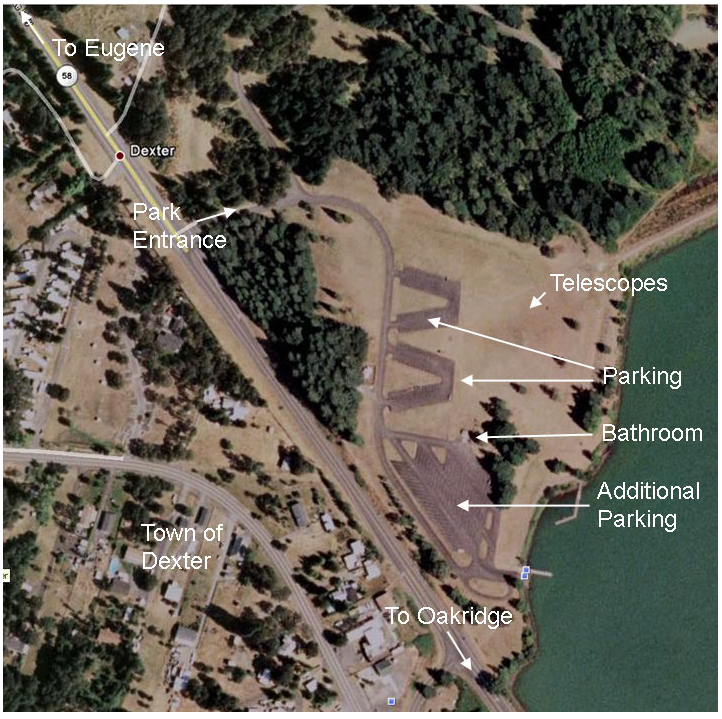
Remember our upcoming Dark Sky Star Party on Saturday, August 3rd. It will be held at Dexter State Park, about 15 miles southeast of Eugene on Highway 58. The site is right at the lower end of Dexter Reservoir and just across the highway from the town of Dexter itself. It has wonderful wide-open views in all directions, and sky dark enough to reveal the Milky Way.

The party will start at dusk, which should be around 9:00. Get there early to set up and learn where everything is. We'll be setting up in the grass to the east of the first parking lot.

We'll be giving away two telescopes this year, so interest should be even higher than usual. We need volunteers to run the information table, help put red filter material on flashlights, help with the telescope giveaway, and so on. If you can help with any of these things, please contact Jerry Oltion at j.oltion@sff.net or 541-343-4758 to let him know.

We'll also coordinate things via the email list, and hopefully between us all we'll anticipate everything we need and have a smooth party.

The main thing is to have lots of club members there with telescopes! Bring yours, and help show people how beautiful the deep, dark sky can be.



NGC 5907 and Star Streams

In June and early July Brandt Schram went deep into Draco to photograph not just a galaxy, but the evidence of a long-ago galactic merger. About this image, Brandt writes:

"This is my latest attempt to reach the limit of my site, equipment and skill. I think the site and equipment have more to give but my skill has given up.

"22.5 hours of CRGB with 30 minutes clear subs and 15 each for RGB cropped and scaled to ~50%. I started in June and I'm running out of imaging time so this will have to be it until next year. The color data was taken during really bad through-the-jetstream seeing but it's all I have to work with.

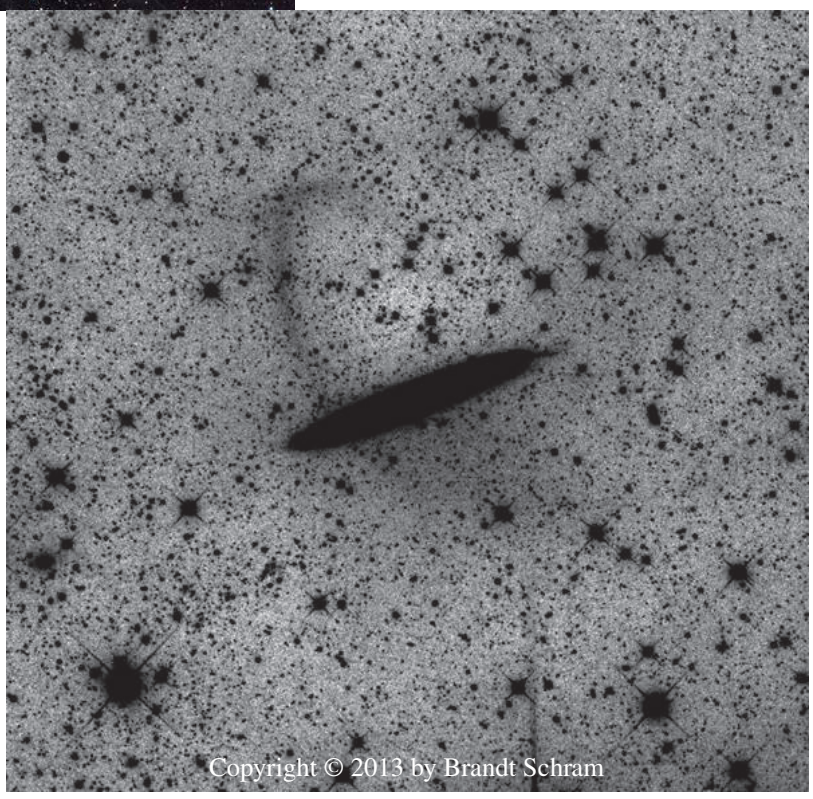
"NGC 5907 is in Draco and 40-50 Mly away. It used to be considered a loner, but in 2006 amateur R. Jay GeBany along with an team of professional astronomers detected star streams around the galaxy. Jay used his, according to the paper, "small" 20-inch RCOS in New Mexico.

"The star streams are just visible in this image but it depends on your monitor settings. The inverted image shows them fairly well.

"The streams are thought to be formed by the remains of at least one dwarf galaxy that orbited NGC 5907 4 billion years ago. The star streams stretch 150,000 light years away from NGC 5907 and are thought to contain not only stars and star clusters but dark matter as well.

"Here is a link to an N-body simulation of what is thought to be the method of formation: <http://www.cosmotography.com/images/ngc5907_animation.html>

"I've really wanted to have a go at this galaxy. Jay's work with the pros is inspiring and while I was hoping for a little more I'm happy with these results. Jay is also one of the board members of the Advanced Imaging Conference that is held each October in Santa Clara."

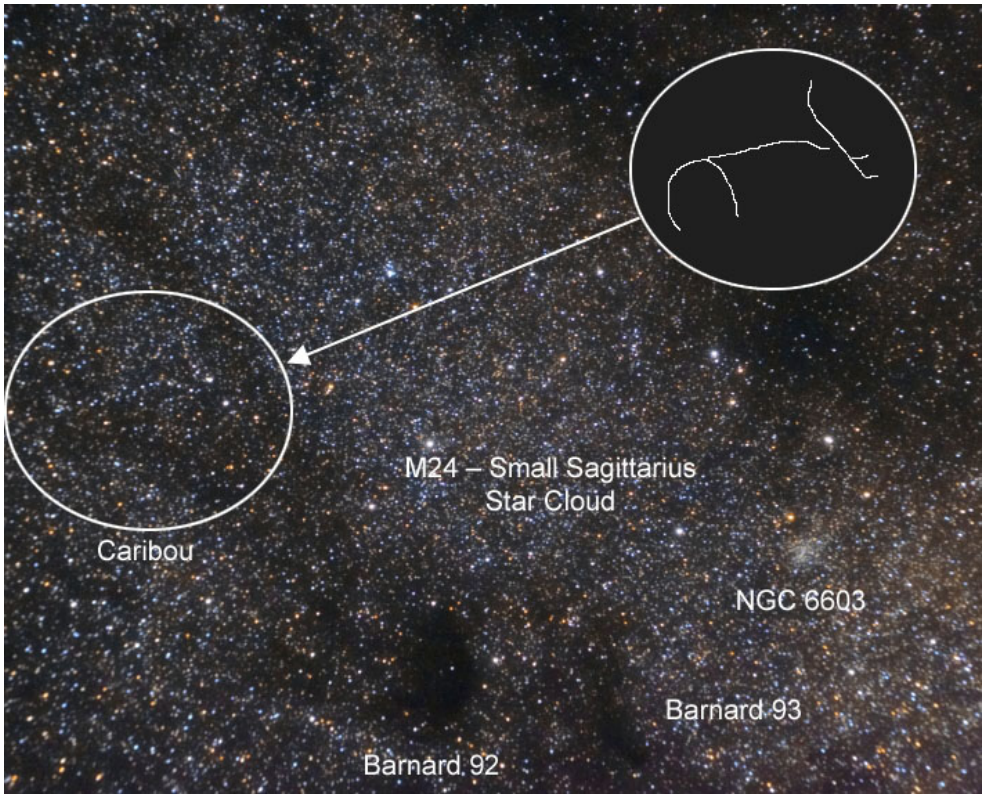


Observing Hightlight: The Caribou in the Cloud

Add a caribou to the list of wildlife seen at Eagle's Ridge. On the night of July 28th, while looking at the Small Sagittarius Star Cloud (also known as M24), Jerry Oltion found a caribou in the star cloud. He had Jon Schwartz take a look, and Jon confirmed it. Sure enough: a caribou. Not a moose or an elk or a deer; the antlers are distinctively *Rangifer tarandus*.

Jerry wrote to Sue French to see if she knew of any previous sightings of this stellar stag, but she says that while the antlers and back have been described as a river, the whole caribou is a new one on her.

Be the first person on your block to spot the caribou! Here's how: First find the Small Sagittarius star cloud. This is the distinct puff of "steam" rising outof the Sagittarius teapot above the Lagoon and Trifid nebulae. Using a low-power eyepiece, look for the two dark smudges of Barnard 92 and 93. They'll look like two black kidney beans, or a coal miner's lungs, with the one on the left (in the telescope's reversed image) more distinct than the one on the right. If your sky is too light polluted to let you find them, go for NGC 6603 instead. NGC 6603 is commonly mistaken for M24, but the entire stretch of Milky Way it's embedded in is actually M24. Using the photo below as a guide, move about 3/4 of a degree southwest of Barnard 92, or 1.5 degrees west of NGC 6603, to the caribou. It will be right side up this time of year unless you're using a refractor or an SCT with a diagonal.



This is the telescope view; north is down and west is to the left

The rump of the caribou is prominent, as is its back and the arch of its neck, but what really sets it off are the antlers. This isn't some yearling buck; this is a trophy patriarch with a rack to rival a reindeer.

Or it could be a triceratops, I suppose. There's no telling what people will see in asterisms.

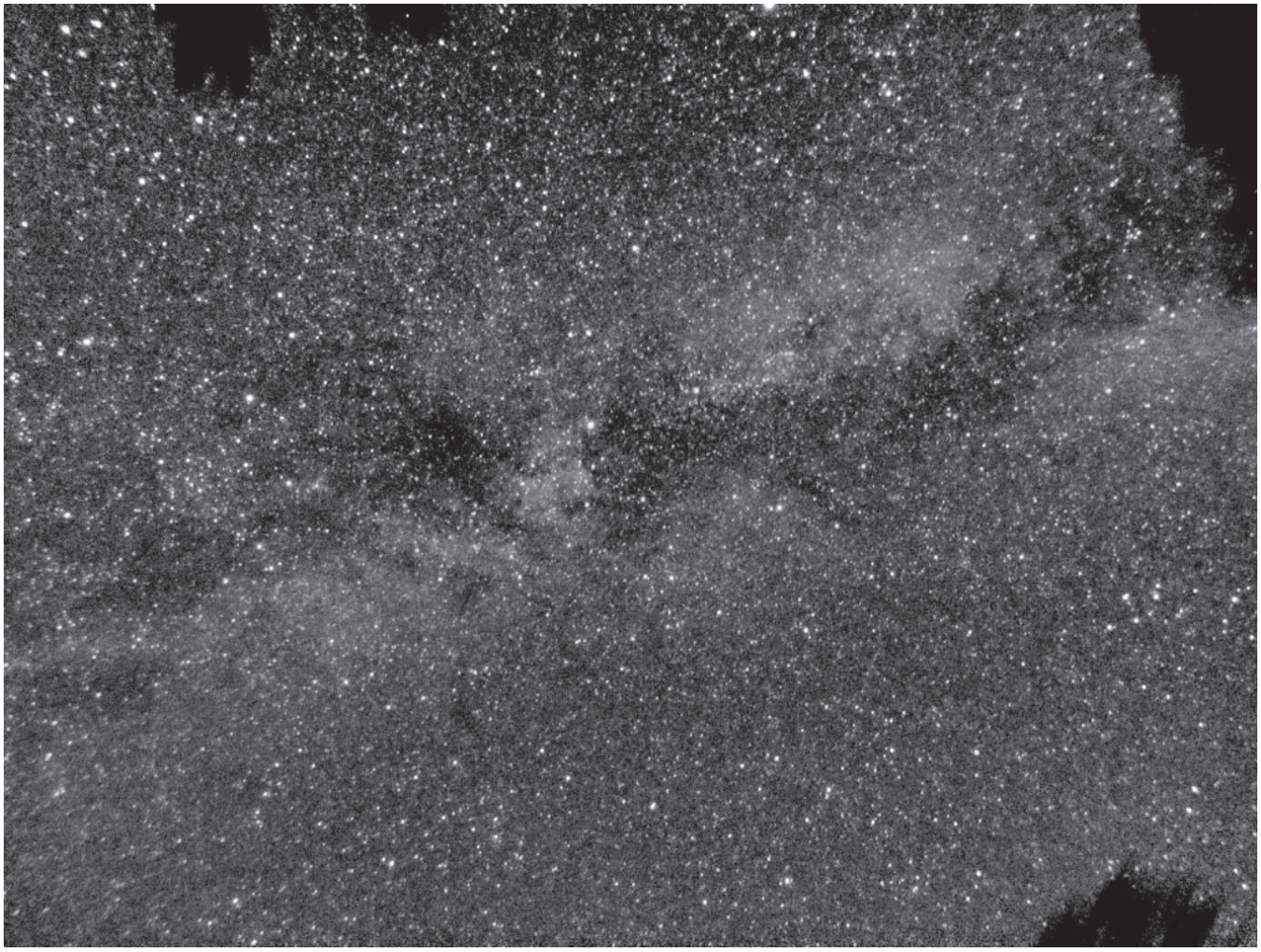
Eagle's Ridge Site Open Again

The road closure to our Eagle's Ridge observing site was indeed temporary. The BLM was using the gate to block access to their road-maintenance machinery while they worked on a landslide farther up the main road, and they removed the machinery and unlocked the gate in mid-July when they were finished. Our observing site is once again accessible and ready for use.

Milky Way from Gordon Lakes

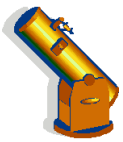
Alan Gillespie and his son, Cims, went camping at Gordon Lakes in July, and while they were there Alan took this long exposure of the sky straight overhead. (Those are trees at the edges of the frame.) Cygnus stretches prominently to the upper right from Deneb at center, and the North America Nebula stands out quite well just below and to the left of Deneb.

This is a stack of 10 exposures shot 7/8/13 from 10:59 till 11:12pm. Each exposure was 25 seconds, f/3.2, ISO5997, 28mm effecftive focal length. They were stacked in Deep Sky Stacker and processed in Photoshop CS2.



Thank You Castle Storage

For the last six years, Castle Storage has generously provided EAS a place to store its telescopes and equipment. EAS would like to thank Castle Storage for their generosity and support for our group. Please give them a call if you need a storage space, and tell your friends. They are great people and offer secure and quality storage units.



Observing in August

New 1st Q Full Last Q

August 6	August 14	August 20	August 28
Mercury Rise: 4:38 AM	Mercury Rise: 5:16 AM	Mercury Rise: 5:55AM	Mercury lost in Sun
Venus Set: 9:54 PM	Venus Set: 9:41 PM	Venus Set: 9:31 PM	Venus Set: 9:17 PM
Mars Rise: 3:40 AM	Mars Rise: 3:34 AM	Mars Rise: 3:30 AM	Mars Rise: 3:25 AM
Jupiter Rise: 3:11 AM	Jupiter Rise: 2:47 AM	Jupiter Rise: 2:29 AM	Jupiter Rise: 2:04 AM
Saturn Set: 11:44 PM	Saturn Set: 11:13 PM	Saturn Set: 10:51 PM	Saturn Set: 10:21 PM
Uranus Rise: 10:36 PM	Uranus Rise: 10:04 PM	Uranus Rise: 9:40 PM	Uranus Rise: 9:08 PM
Neptune Rise: 9:13 PM	Neptune Rise: 8:42 PM	Neptune Rise: 8:18 PM	Neptune Set: 6:30 AM
Pluto Set: 3:33 AM	Pluto Set: 3:01 AM	Pluto Set: 2:37 AM	Pluto Set: 2:05 AM

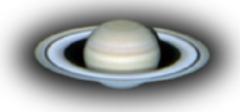
All times: Pacific Standard Time (Nov 3, 2013-March 9, 2014) = UT -8 hours or U.S. Pacific Daylight Time (March 10-November 2, 2013) = UT -7 hours.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
8/1/2013	01:40	16:51	06:01	20:36	03:59	22:37
8/2/2013	02:26	17:39	06:02	20:35	04:01	22:35
8/3/2013	03:16	18:21	06:03	20:33	04:03	22:33
8/4/2013	04:10	18:59	06:04	20:32	04:05	22:31
8/5/2013	05:07	19:33	06:05	20:31	04:07	22:29
8/6/2013	06:06	20:04	06:06	20:29	04:08	22:26
8/7/2013	07:06	20:33	06:07	20:28	04:10	22:24
8/8/2013	08:07	21:01	06:09	20:27	04:12	22:22
8/9/2013	09:10	21:28	06:10	20:25	04:14	22:20
8/10/2013	10:13	21:56	06:11	20:24	04:16	22:18
8/11/2013	11:18	22:27	06:12	20:22	04:18	22:16
8/12/2013	12:24	23:01	06:13	20:21	04:19	22:14
8/13/2013	13:31	23:40	06:14	20:19	04:21	22:12
8/14/2013	14:38		06:15	20:18	04:23	22:10
8/15/2013	15:43	00:27	06:17	20:16	04:25	22:07
8/16/2013	16:43	01:21	06:18	20:15	04:26	22:05
8/17/2013	17:37	02:23	06:19	20:13	04:28	22:03
8/18/2013	18:24	03:33	06:20	20:11	04:30	22:01
8/19/2013	19:05	04:46	06:21	20:10	04:32	21:59
8/20/2013	19:41	06:01	06:22	20:08	04:33	21:57
8/21/2013	20:14	07:15	06:23	20:07	04:35	21:54
8/22/2013	20:45	08:27	06:25	20:05	04:37	21:52
8/23/2013	21:16	09:37	06:26	20:03	04:38	21:50
8/24/2013	21:48	10:44	06:27	20:02	04:40	21:48
8/25/2013	22:21	11:49	06:28	20:00	04:42	21:46
8/26/2013	22:58	12:51	06:29	19:58	04:43	21:44
8/27/2013	23:38	13:49	06:30	19:56	04:45	21:41
8/28/2013		14:44	06:31	19:55	04:46	21:39
8/29/2013	00:22	15:33	06:33	19:53	04:48	21:37
8/30/2013	01:10	16:17	06:34	19:51	04:50	21:35
8/31/2013	02:03	16:57	06:35	19:49	04:51	21:33

All times are for Eugene, Oregon, Latitude 44º 3' Longitude 123º 06' for listed date

Items of Interest This Month

Pegasus and Aquarius return to night sky
Virgo, Libra, Boötes setting early
Good month for observing Neptune
8/9 Moon passes 5° south of Venus
8/11 - 13 Perseid meteor shower
8/12 Moon 4° below Saturn
8/13 Lunar Elvis visible tonight?
8/13 Moon near Zubenelgenubi at Sunset
8/16 First Quarter Friday Star Party



For Current Occultation Information

Visit Derek C. Breit's web site: http://www.poyntsource.com/New/Regions/EAS.htm

Go to Regional Events and click on the Eugene, Oregon section. This will take you to a current list of Lunar & asteroid events for the Eugene area.