

<b>Program: Star Party</b>	<b>Volume 27, No.03 July 2021</b>
<b>Greg Smith – editor.</b>	<b>Meeting: July 9, 2021</b>

## Congratulations to Steve Powell!

Steve retired after 37 years of teaching physical sciences at Mark Morris High School in Longview.

### Last day in the classroom.



#### Teaching

Steve mainly taught elective physics and freshman physical science, but occasionally also math and astronomy. For much of the most recent school year, teaching was done via Zoom, but eventually switched to a hybrid model with some students in class and some on Zoom.

#### What was Steve's highest award?

The senior class last year voted him the "most dedicated educator." That meant a great deal to Steve.

#### Friends of Galileo

Steve has been a member of Friends of Galileo since the club started in 1995. He is our Treasurer (and past President and VP) and for years has arranged our meeting space at Mark Morris High School.

FoG gave a "Human Sundial" to Lower Columbia College in 2005. Steve was instrumental in its design (and describes it here <https://www.friendsofgalileo.com/blog/the-human-sundial>).

Club members first tried purchasing plans that were supposed to be accurate for Longview's coordinates. They tested the plans.

"In June of 2005 we used chalk to mark out part of the sundial on my asphalt basketball court. It failed miserably! So, I decided to do some online research on the mathematics for such a sundial. Then I created a spreadsheet that calculated the positions of the various parts of the sundial... When we were finally finished, we were delighted and relieved to see that the sundial was accurate to within a minute of the correct time. Not too shabby!"

More recently, Steve was the guest speaker for the FoG meeting in April.

He spoke about the tidal forces of the sun and moon on the earth - and the tidal forces affecting galaxies and black holes. He started with basic descriptions of vectors and acceleration and brought us along to fascinating descriptions of the largest structures in the universe.

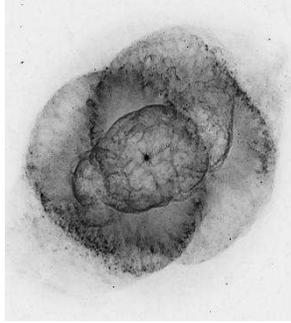
## **Retirement plans**

Steve says the reality of retirement hasn't really hit yet because he's taken off 37 summers already, but this fall it will sink in when he doesn't have to go back to school.

He's looking forward to traveling, reading, and home improvement projects.

Good luck in retirement, Steve!

Every Day is a Star Filled Day,  
Every Night is a Starry Night



## Hubble telescope spots red, white and blue stars in sparkly cluster

By Tariq Malik

It's a festive view for the Fourth of July.

The Hubble Space Telescope has captured a dazzling view of a distant star cluster, one filled with stars that sparkle in red, white, and blue, unveiled just in time for the Fourth of July U.S. holiday.

The photo, which NASA and the European Space Agency released July 2, shows the open star cluster NGC 330, a group of stars located about 180,000 light-years away in the Small Magellanic Cloud, a dwarf satellite galaxy to our own Milky Way, in the constellation Tucana, the Toucan.

"Because star clusters form from a single primordial cloud of gas and dust, all the stars they contain are roughly the same age," NASA and ESA officials wrote in an image description. "This makes them useful natural laboratories for astronomers to learn how stars form and evolve."

Astronomers used archived observations from Hubble's Wide Field Camera 3 in 2018 to create this image to support two different studies aimed at understanding how star clusters evolve and how large stars can grow before they explode as supernovas.

"The most stunning object in this image is actually the very small star cluster in the lower left corner of the image, surrounded by a nebula of ionized hydrogen (red) and dust (blue)," ESA officials said in a separate image description. "Named Galfor 1, the cluster was discovered in 2018 in Hubble's archival data, which was used to create this latest image from Hubble."

Scientists studying Galfor 1 will have to wait until NASA's new James Webb Space Telescope (while will launch later this year) can observe it to determine its surrounding nebula has a bow shock feature, ESA added.

The crisscross patterns of the brilliant stars here are actually an artifact of Hubble itself. They're called diffraction spikes and form when starlight reflects off the four vanes supporting Hubble's secondary mirror, ESA officials said.

While Hubble's view of NGC 330 may add some sparkle to those celebrating the Fourth of July holiday, American astronauts in space have no such luck. They'll be working through the holiday weekend to prepare a visiting SpaceX Dragon cargo ship for its return to Earth on Tuesday (July 6).

## Minutes of the June Meeting

### **General**

- Introductions, welcome everybody
- Program – Mike Fiest – **A new telescope that will revolutionize amateur astrophotography.**
- Short break
- Sky report
- Business meeting

### **Business Meeting Topics**

- Treasurer's report - Steve (please include mention of 2020-2021 dues options and AL dues)
- Anything else you feel needs to be discussed

### 👁 July 2021 Meeting 👁

DATE: **Friday July 9, 2021**

TIME 7:30pm

PLACE: Mike's Home

PROGRAM: **Business meeting and star party to follow**

Drinks :

Snacks :

The Star Report is posted on the clubs website : 1

It is listed in the blog portion of the website.

## Friends of Galileo Club Officers

PRESIDENT	Ted Gruber
VICE-PRESIDENT/ PROGRAM CHAIR	Mark Thorson
SECRETARY	Greg Smith
TREASURER	Steve Powell
WEBSITE	Ted Gruber
NEWSLETTER ED.	Greg Smith
ALCOR	Tom Meek

## Next Month's Newsletter Deadline

The deadline for items in next month's newsletter is:  
**Wednesday: seven days before next meeting.**

**Please feel free to send in your thoughts and experiences about your astronomical adventures.**

Submit your material by E-mail to: [grlyth@msn.com](mailto:grlyth@msn.com)

Greg Smith  
 1622 22<sup>nd</sup> Ave  
 Longview, WA

