OBSERVATIONAL HUMOR

WHEN YOU'RE SHOCKED BY THE COSMIC BEAUTY
OF THE UNDERSIDE ON A FEW FRYING PANS
Sigma Orionis & Struve 761
Multipule Star Systems
Constellation: Orion

Sigma Orionis
Magnifications: 3.8, 10.3, 6.8 & 6.7

Struve 761
Magnifications: 7.9, 8.4 & 8.5

Telescope: 60mm Refractor
Eyepiece: 12mm Delos (76x)
Field of View: 0.94 degrees
Orientation: Diagonal View

Telescope: 155mm Refractor
Eyepiece: 4.7mm Ethos (232x)
Orientation: Diagonal View

Date: 26-December-2019
Time: 02:10 to 02:40 EST
Location: Deck of House
Drawing by: Richard Orr
**C/2017 T2 (PANSTARRS)**

**Comet**

- **Constellation:** Perseus
- **Magnitude:** 9.5
- **Distance:** 139,433,700 miles
- **Coma Size:** 7,500 miles (actual)
- **Coma Size:** 1.8 arcminutes (apparent)

- **Telescope:** 110mm Refractor
- **Eyepiece:** 4.7mm Ethos (164x)
- **Field of View:** 0.67 degrees
- **Orientation:** Diagonal View

**Date:** 12-January-2020
**Time:** 19:05 to 19:30 EST
**Location:** Carrs Mill Park
**Drawing by:** Richard Orr
Sun
24-December-2019
10:45 to 12:30 EST

Telescope: 155mm Refractor
Camera: Nikon D810
Solar Filter: Thousand Oaks

Richard Orr
Thanks to all of our Volunteers and Officers

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Phil Whitebloom</td>
<td><a href="mailto:president@howardastro.org">president@howardastro.org</a></td>
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<td>1st Vice President</td>
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<td>Treasurer</td>
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<td>Secretary</td>
<td>Cheryl Kerr</td>
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<tr>
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<td>David Stein</td>
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<tr>
<td>Publicity Chair +</td>
<td>Joel Goodman</td>
<td><a href="mailto:halpublicity@howardastro.org">halpublicity@howardastro.org</a></td>
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<tr>
<td>Observatory Director *</td>
<td>Joel Goodman</td>
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</tr>
<tr>
<td>Librarian +</td>
<td>Bob Dutilly</td>
<td><a href="mailto:librarian@howardastro.org">librarian@howardastro.org</a></td>
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<td>ALCor +</td>
<td>Steve Jaworwisky</td>
<td><a href="mailto:halcor@howardastro.org">halcor@howardastro.org</a></td>
</tr>
<tr>
<td>Webmaster *</td>
<td>Paul Montanaro</td>
<td>Use &quot;Contact Us&quot; Page</td>
</tr>
</tbody>
</table>
HAL 2019 Treasurer’s Report
HAL’s Key $$$ Events in 2019

• 2019 Starting Bank Balance: $8348.11
• 2019 Ending Bank Balance: $9279.25 *
  – $850 unavailable due to keyholder deposits
  – Spendable Amount Available: $8429.25
• 2019 Income: $7059.80
  – Memberships: $5670.57
  – Donations: $ 835.69
  – Equipment Sales: $ 242.45
  – Amazon Smile: $ 87.08
• 2019 Spend: $6128.74
  – Club Recurring: $3460.14
    • Website, CSC, AL, IDA, Insurance, Mailbox, Brochures, Property Tax
  – Observatory Non-Recurring: $1798.73
    • New Laptop, Illig Solar Filter, Painted Pier for Watson Display, Repair & Maintenance
HAL Member & Membership Growth
Behind the Scenes

• 2019 Club Membership Change:
  – +22 Memberships, +25 Members

• Howardastro YahooGroup Membership:
  – 428 (Fairly Static)

• Facebook Membership:
  – 432
  – Doubled in Past Year

• Impromptu List Membership
  – 152
2020 HAL Election

Election chair: Jim Johnson
## 2020 HAL Election

Only one nominee for each of the six elected HAL Board positions:

<table>
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<tr>
<th>Position</th>
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<tr>
<td>President</td>
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Tonight’s Guest Speaker

Gary Frishkorn

Software/Systems Engineer (Retired) – Johns Hopkins Applied Physics Lab

Title: “6 inch Aperture Binocular and Chair Mount"
February Guest Speaker

To Be Determined

Watch your email for information.
Next HAL Meeting

Thursday
February 20\textsuperscript{th}
7:00PM

Astro-School begins at 6:15