WHOI-MISO Deep-sea cameras on ROV Jason for RR2102
(advantages of fixed focus, automated imaging)

D. Fornari - WHOI
R. Parnell-Turner – SIO
T. Barreyre – U. Bergen
J. McDermott – Lehigh U.
WHOI-NDSF *Jason* and *Sentry* Teams were extremely helpful in the implementation and setup of the various MISO cameras on the vehicles for RR2102.

Their efforts to think innovatively about improving vehicle imaging capabilities and willingness to experiment with new approaches are acknowledged and much appreciated.

They contributed greatly to accomplishing the imaging components of the RR2102 Geology and Biology Teams’ research objectives.
### WHOI-MISO cameras RR2102 – Imagery Acquisition Totals

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Brow 12MP Images</td>
<td>236,869</td>
</tr>
<tr>
<td>Total Down-looking 24MP Images</td>
<td>49,412</td>
</tr>
<tr>
<td>Total Dual Manip 12MP Images</td>
<td>110,738</td>
</tr>
<tr>
<td>Total 4k Dual Manip Videos</td>
<td>301</td>
</tr>
<tr>
<td>Total Elevator 12MP Images</td>
<td>27,970</td>
</tr>
<tr>
<td>Total Elevator 4k Videos</td>
<td>137</td>
</tr>
<tr>
<td>Total Volume of MISO Imagery</td>
<td>5 TB</td>
</tr>
</tbody>
</table>

A HUGE thanks to Jyun-Nai Wu (SIO) for helping to manage and process the MISO camera imagery collected on RR2102.
Everyone was watching the live feed from the Jason Sulis4k camera via Zoom, FaceTime and YouTube

*Expanded Bandwidth a GREAT success*
WHOI-MISO Deep-sea camera on AUV *Sentry* for RR2102 (24MP OIS still camera and upgraded 300 watt/sec strobe)

*Sentry D581*
- 5 sec rep rate
- 6 m alt
- 8 m track spacing

1.5 m Strobe head to camera
NDSF Elevator
with MISO Imaging Systems
RR2102
4k video from MISO GoPro
manipulator camera
Expert *Jason* Team piloting, navigation and engineering support contributed to the success of the *Jason* elevator for both sample collection and vehicle imaging using MISO camera & lighting systems.

Fixed-focus deep-sea cameras should be considered for future upgrades as part of the standard suite of cameras for ROV *Jason* and HOV *Alvin*. AUV *Sentry’s* camera and lighting can also be improved.