SIO OBS CONNECTORS

Ocean Bottom Seismology Laboratory
Institute for Geophysics and Planetary Physics

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CONNECTOR TYPES

- 4x4 GENERATION LOGGER (7 IN OD)
CONNECTOR TYPES

- ABA GENERATION LOGGER (5.25 IN OD)
CONNECTOR TYPES

- COMM PORT, MINI USB SOLUTIONS
CABLE TYPES

- T240/40, Single Sided Neoprene cable

- T240/40, Single Sided PU cable

Substantial effort to convert all broad band sensors to differential… begins 2017.
- Trillium, Differential PU cable
CONNECTOR FAILURE MODES

- Seawater Intrusion

- Female Fatigue

- Excessive Torque
CABLE FAILURE MODES

- Sea Water Intrusion – Failure typically occurs around the end mold resulting in wicking down the length of the cable on the interior of the jacket. This is not always an obvious failure mode.

- Neoprene – Hardening of the neoprene jacket and end mold over time increasing the minimum bend radius and the potential for cracks and leaks.

- Polyurethane – Hardening of end mold at extremely low temperatures making it difficult to plug into the bulkhead and bleed all excess air out of the boot. The boot can become dislodged prior to deployment.
### SUMMARY

<table>
<thead>
<tr>
<th>Connector/Cable</th>
<th>Up Side</th>
<th>Down Side</th>
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<tbody>
<tr>
<td>VSK series</td>
<td>higher pin density, low cost, robust, readily available</td>
<td>large penetration, potential female socket fatigue</td>
</tr>
<tr>
<td>VSG series</td>
<td>low cost, robust, small penetration, readily available</td>
<td>low pin density, potential female socket fatigue</td>
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<tr>
<td>Polyurethane</td>
<td>shielded pairs, longevity, uv resistance</td>
<td>higher cost, longer lead time, rigid in extreme cold</td>
</tr>
<tr>
<td>Neoprene</td>
<td>low cost, readily available, shorter lead time</td>
<td>UV sensitive, no shielded pairs,</td>
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