Participants:  

<table>
<thead>
<tr>
<th>Autism Spectrum Disorder (ASD; n=20)</th>
<th>Typically Developing (TD; n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td><strong>IQ</strong></td>
</tr>
<tr>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>13.3</td>
<td>2.0</td>
</tr>
</tbody>
</table>

ADOS Calibrated Severity derived from Autism Diagnostic Observation Schedule (ADOS); 1 (least severe) - 10 (most severe)

**Methods**

**Participants:**

- Autism Spectrum Disorder (ASD; n=20)
- Typically Developing (TD; n=18)

**Participants:**

- Autism Spectrum Disorder (ASD; n=20)
- Typically Developing (TD; n=18)

**Tasks:**

1. Time
   - 16.7ms
   - 8 external noise levels, 480 trials total
   - Measured contrast threshold (%)
   - Fit the Perceptual Template Model (PTM) to estimate level of internal additive noise

2. Fixation
   - Moving Object
   - Ocluder

Invisible Time

**Results cont.**

- 70% increase in internal additive noise in ASD
- 13% worse external noise filtering in ASD

**Conclusions**

- Individuals with ASD have higher internal additive noise
- Higher internal additive noise is associated with greater ASD symptom severity
- Individuals with ASD have higher response variability under prediction demands, which may be due to more general response variability in motion tasks
- Higher response variability is not related to either internal noise or ASD symptom severity

**Future Directions**

- More fully characterize response variability without prediction demands
- Investigate how this measure of internal additive noise relates to other perceptual tasks in ASD

**References**

2. Park et al. (2016). Evidence for elevated internal noise in autism spectrum disorder. VSS abstract
4. Di Martino et al. (2010). Increased internal additive noise in autism spectrum disorder (ASD) is associated with higher internal additive noise

**Acknowledgements & Contact**

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Contact Info: kimberly.schauder@rochester.edu