**Dartmouth Brain Imaging Center (DBIC)**

**QA Report 32 CH**

**12122022**

**Measurements**

<table>
<thead>
<tr>
<th>Measurements</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean signal (mean)</td>
<td>1614.3</td>
</tr>
<tr>
<td>Signal to Noise Ratio (SNR)</td>
<td>263.4</td>
</tr>
<tr>
<td>Signal to Fluctuation Ratio (SFNR)</td>
<td>274.5</td>
</tr>
<tr>
<td>Percent Fluctuation</td>
<td>0.05</td>
</tr>
<tr>
<td>Drift</td>
<td>0.32</td>
</tr>
<tr>
<td>Radius of Decorrelation (RDC)</td>
<td>7.5</td>
</tr>
<tr>
<td>Mean Ghost Percentage</td>
<td>2.010</td>
</tr>
<tr>
<td>Standard Deviation (std)</td>
<td>0.87</td>
</tr>
</tbody>
</table>

**Signal**

[result.xml](result.xml) [percent fluct (trend removed), drift, driftfit] = [0.05, 0.32, 0.1]

![Signal plot](signal.png)
Frequency Spectrum

(mean, SNR, SFNR) = [164.3, 263.4, 274.5]

Raduis of Decorrelation

rdc = 7.5 pixels
Smoothness -X

Smoothness (FWHM) in μm - X: [min mean max] = [2.120 2.193 2.309]

Smoothness -Y

Smoothness (FWHM) in μm - Y: [min mean max] = [2.408 2.501 2.648]
Smoothness -Z

Smoothness (FWHM) in mm - Z: [min mean max] = [1.426 2.216 2.68]

Center of Mass -X

Center of Mass in mm - X: [max displacement drift] = [0.045 0.043]
Center of Mass -Y

Center of Mass in mm - Y: [max displacement drift] = [0.046 0.043]

Center of Mass -Z

Center of Mass in mm - Z: [max displacement drift] = [0.03 0.026]
Ghost

Mean of ghost voxels as % of non-ghost [masked] mean
(ghostmean, brightghostmean) = (2.010, 5.312)
(lower is better)

![Ghost Graph](image)

Odd-Even Difference Image

![Odd-Even Image](image)