Dartmouth Brain Imaging Center (DBIC)
QA Report 32 CH
11202023

Measurements

<table>
<thead>
<tr>
<th>Measurements</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean signal (mean)</td>
<td>1616.2</td>
</tr>
<tr>
<td>Signal to Noise Ratio (SNR)</td>
<td>247.9</td>
</tr>
<tr>
<td>Signal to Fluctuation Ratio (SFNR)</td>
<td>242.9</td>
</tr>
<tr>
<td>Percent Fluctuation</td>
<td>0.06</td>
</tr>
<tr>
<td>Drift</td>
<td>0.30</td>
</tr>
<tr>
<td>Radius of Decorrelation (RDC)</td>
<td>7.6</td>
</tr>
<tr>
<td>Mean Ghost Percentage</td>
<td>2.028</td>
</tr>
<tr>
<td>Standard Deviation (std)</td>
<td>0.89</td>
</tr>
</tbody>
</table>

Signal

result.xml [percent fluct (trend removed), drift, driftfit] = [0.06, 0.30, 0.].

Frame number

Raw signal (ROI)

0  20  40  60  80  100  120  140  160  180  200

1613.5 1614 1614.5 1615 1615.5 1616 1616.5 1617 1617.5 1618 1618.5

observed  fit
Frequency Spectrum

\[ \text{[mean, SNR, SFNR]} = [1616.2, 247.9, 242.9] \]

Raduis of Decorrelation

\[ \text{rdc} = 7.6 \text{ pixels} \]
Smoothness - X

\[\text{Smoothness (FWHM) in mm - X: [min mean max] = [2.074 2.168 2.236]}\]

Smoothness - Y

\[\text{Smoothness (FWHM) in mm - Y: [min mean max] = [2.385 2.450 2.511]}\]
Smoothness - Z

Smoothness (FWHM) in mm - Z: [min mean max] = [1.601 1.897 2.175]

Center of Mass - X

Center of Mass in mm - X: [max displacement drift] = [0.023 -0.019]
Center of Mass - Y

Center of Mass in mm - Y: [max displacement drift] = [0.025 -0.020]

Center of Mass - Z

Center of Mass in mm - Z: [max displacement drift] = [0.010 -0.003]
Ghost

Mean of ghost voxels as % of non-ghost [masked] mean
(ghostmean, brightghostmean) = (2.028, 5.025)
(lower is better)

Odd-Even Difference Image
Mean Image

Standard Deviation Image