

Phantom QA Results: 32 CH

Date:07/23/2018

Dartmouth Brain Imaging Center (DBIC)

Measurement	Value	Comments
Signal-to-Noise Ratio (SNR)	238.6	
Signal-to-Fluctuation-Noise ratio (SFNR)	234.4	
Radius of Decorrelation (RDC) (fig 3)	8.7	
Drift (fig 1)	0.43	
Percent Fluctuation (fig 1)	0.05	
Fourier analysis of the residuals (fig 2)	<2	
Ghost Mean Percentage (fig 10)	2.24%	Better than the recommended level (3% <) in ref 2:

Table 1: Key measurements

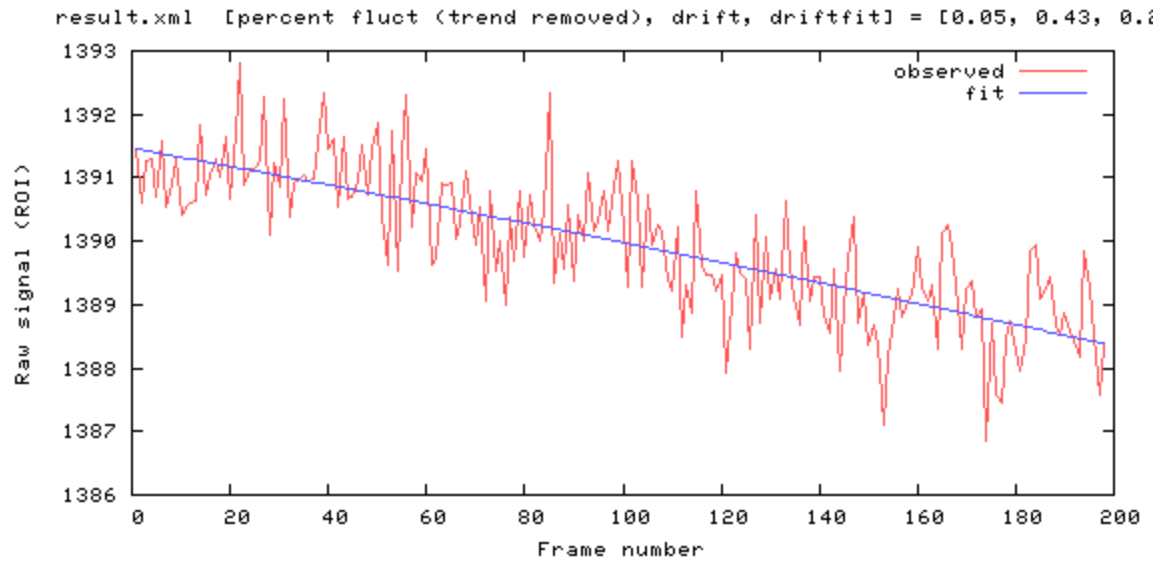


Figure 1

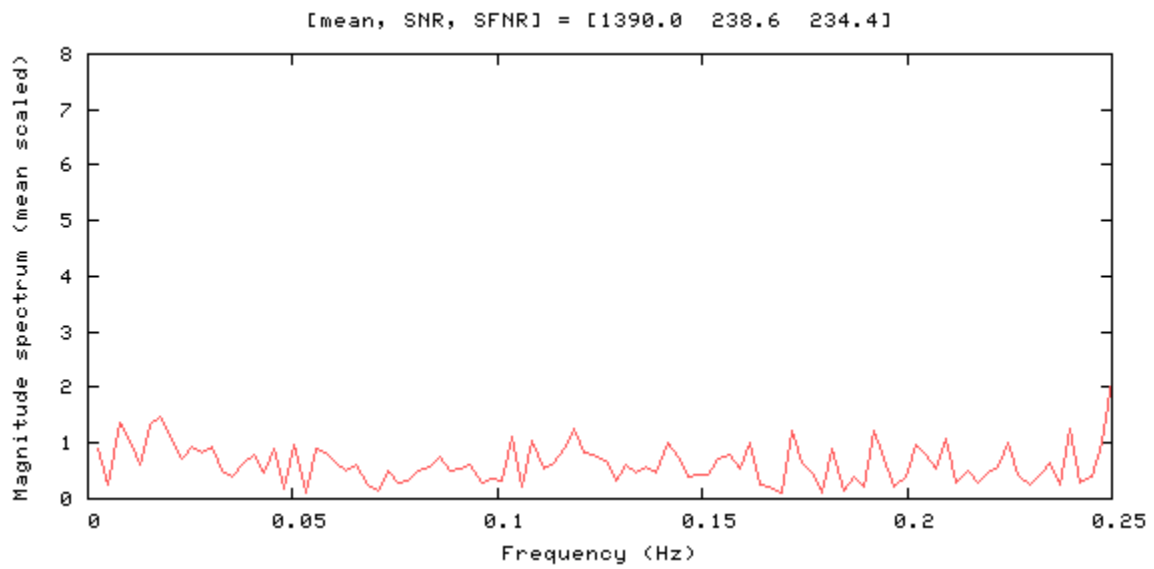


Figure 2

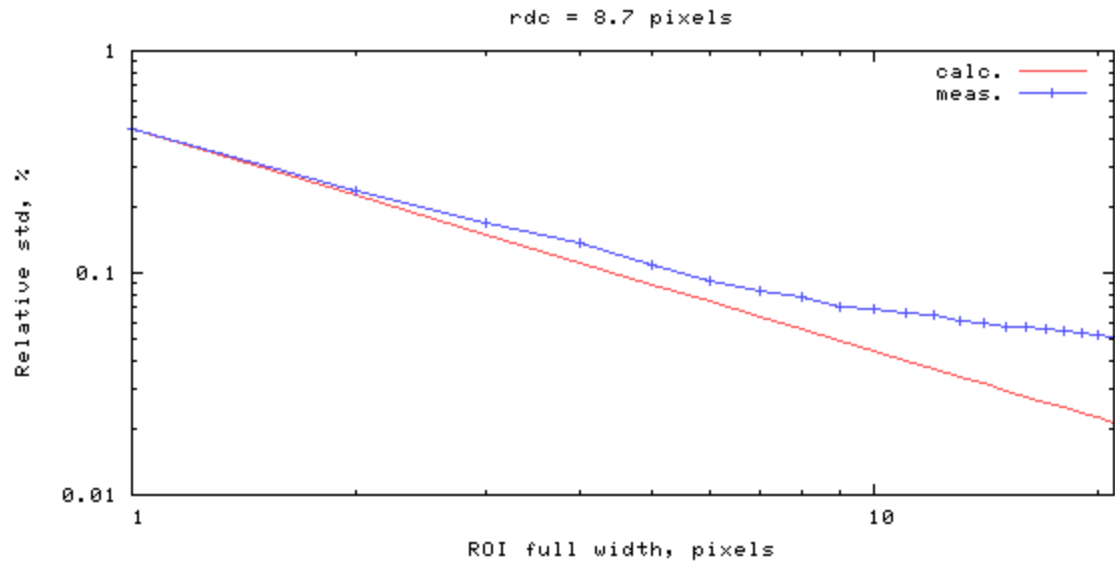


Figure 3

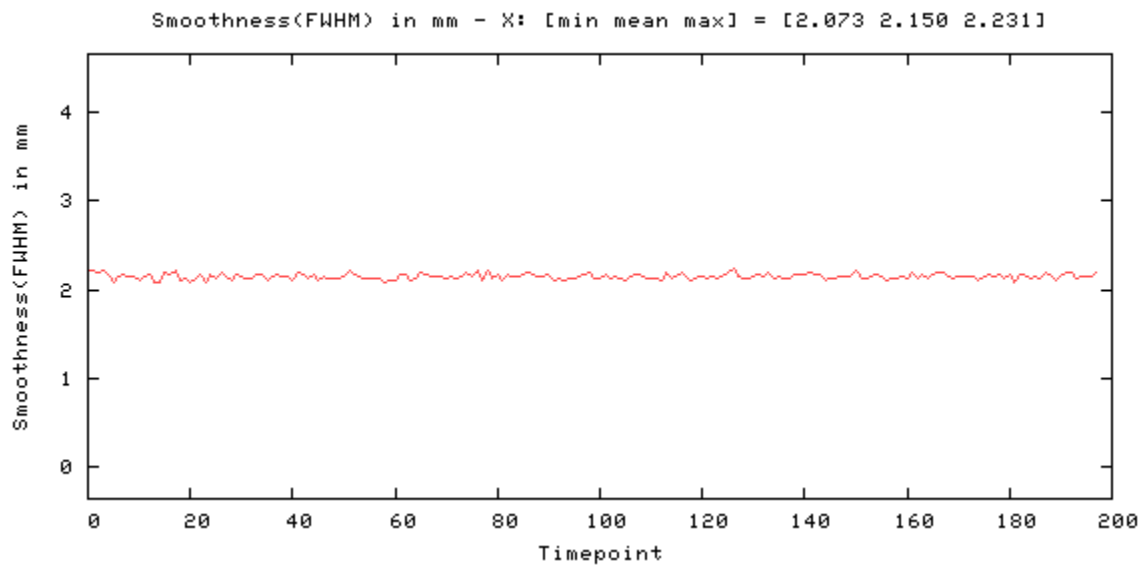


Figure 4

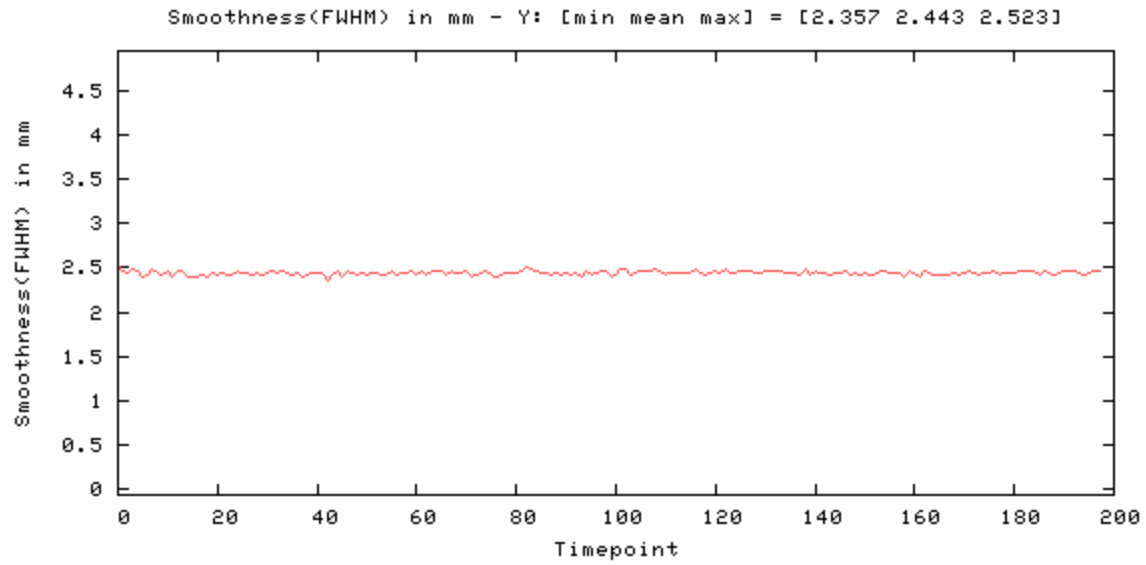


Figure 5

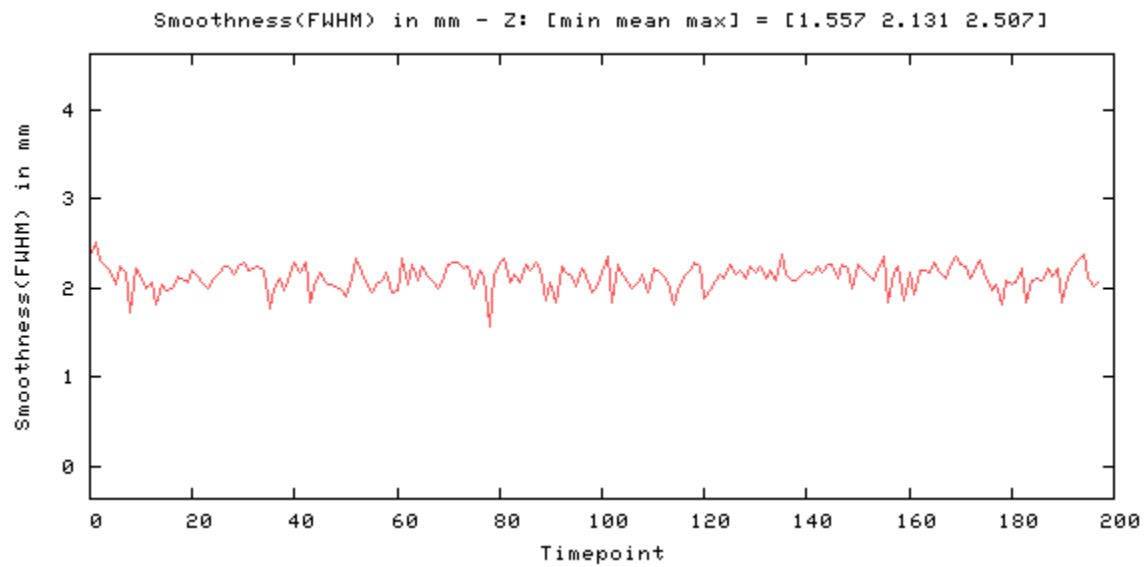


Figure 6

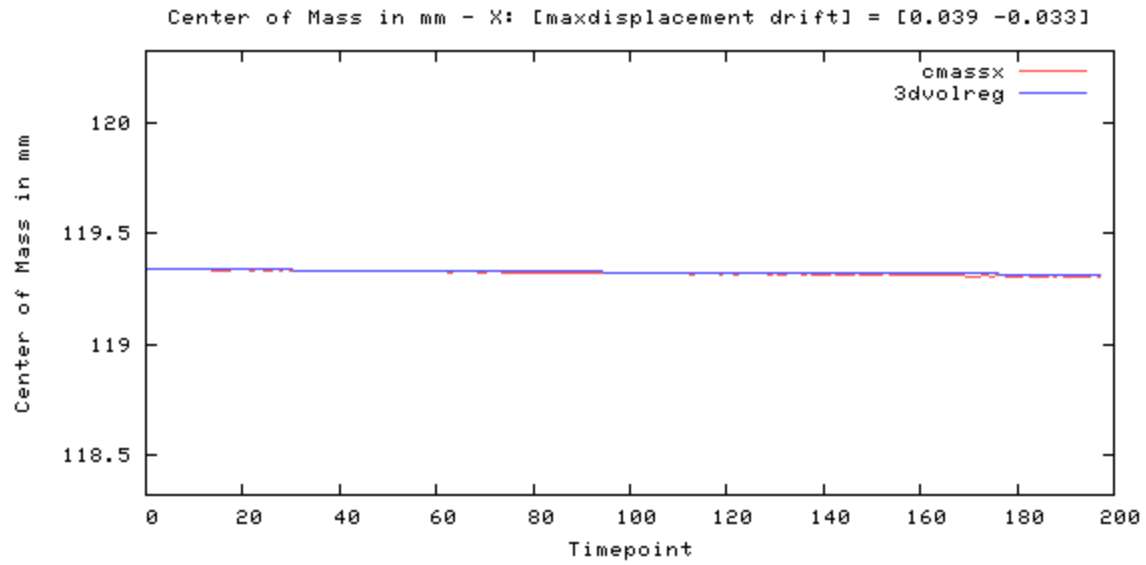


Figure 7

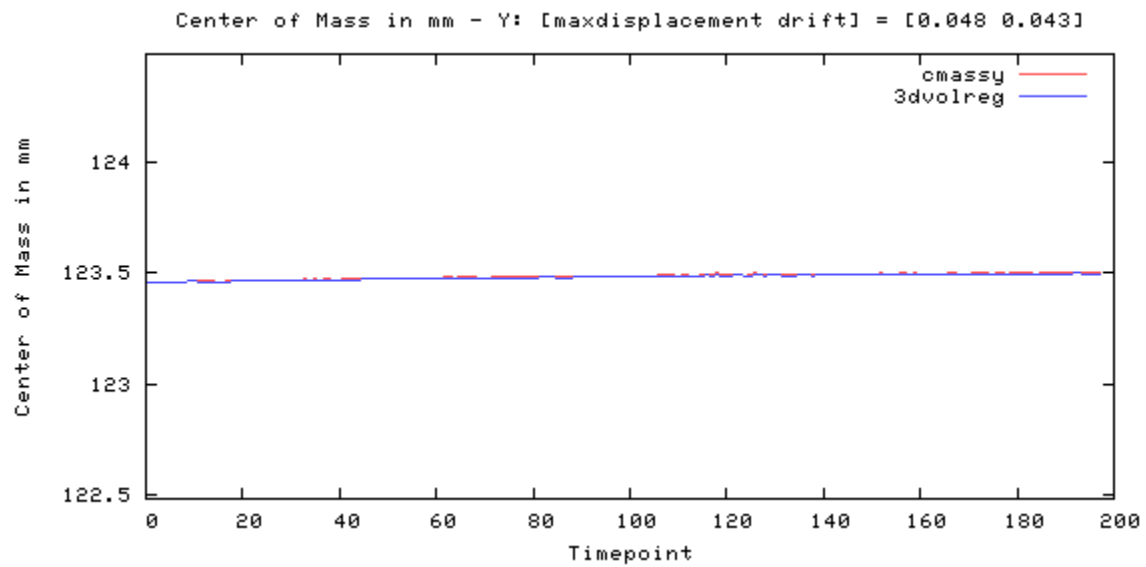


Figure 8

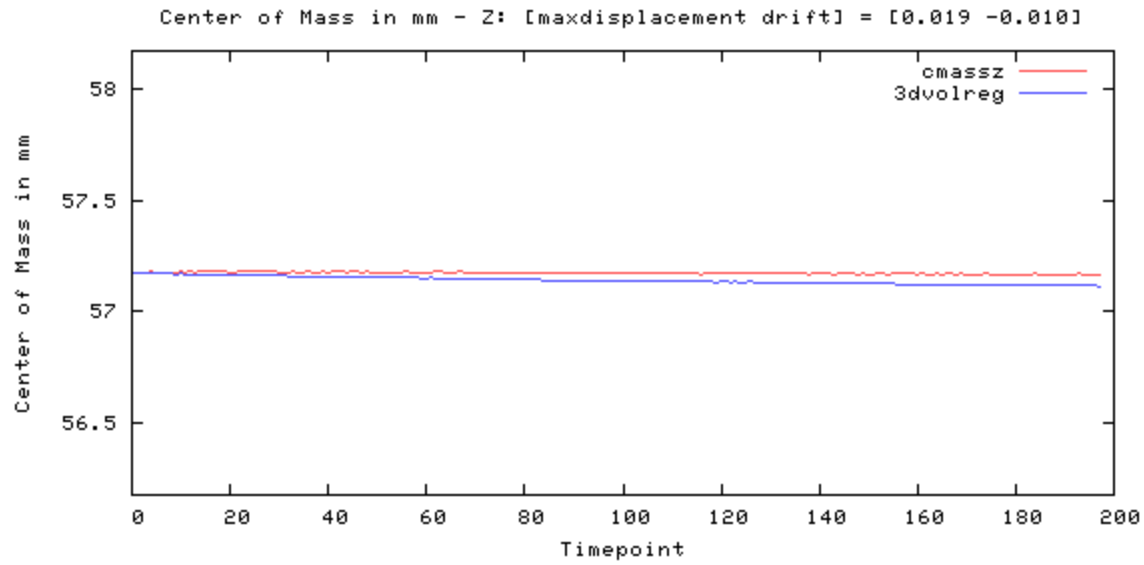


Figure 9

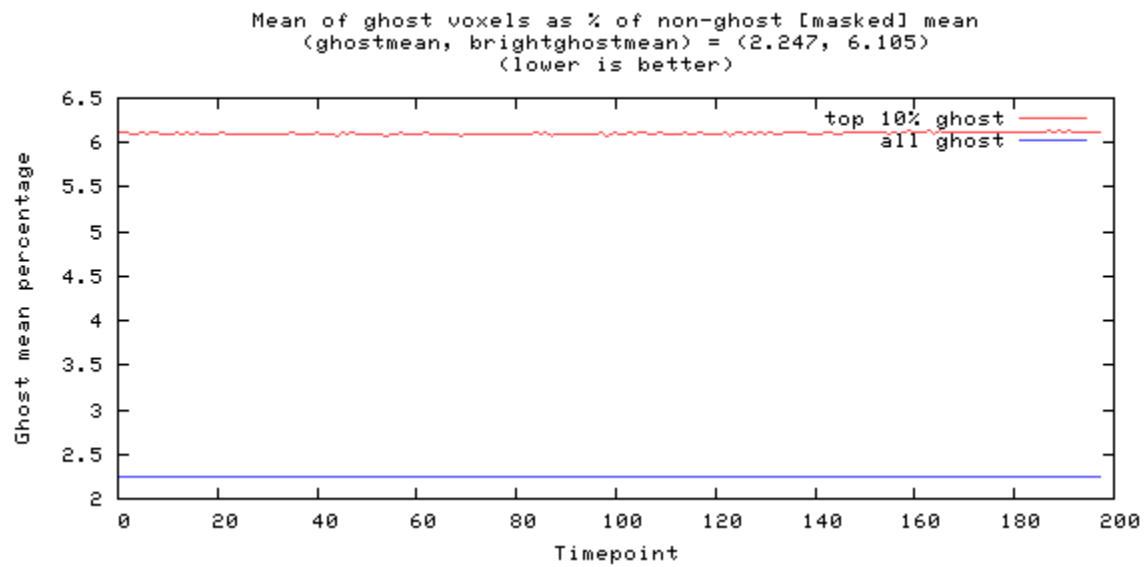


Figure 10

Odd-even difference image



image min: -250, image max: 304

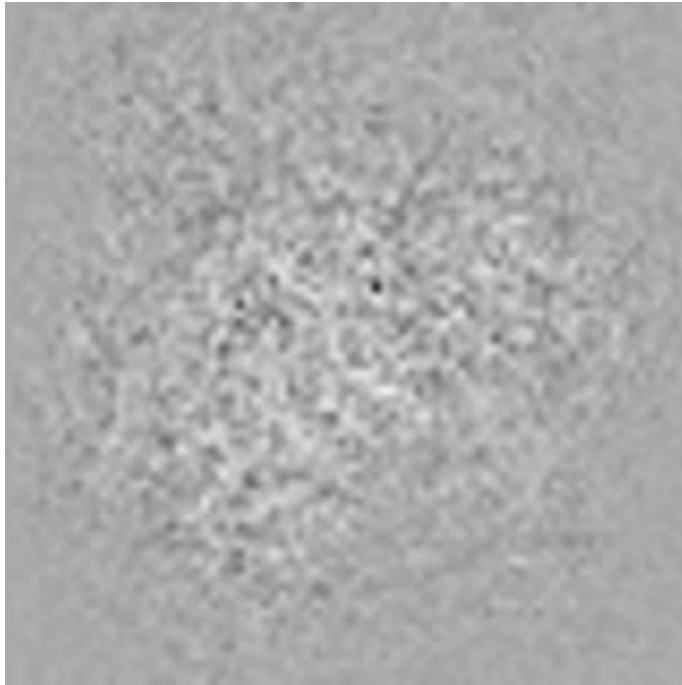


Figure 11

Mean image



image min: 0, image max: 2009.1

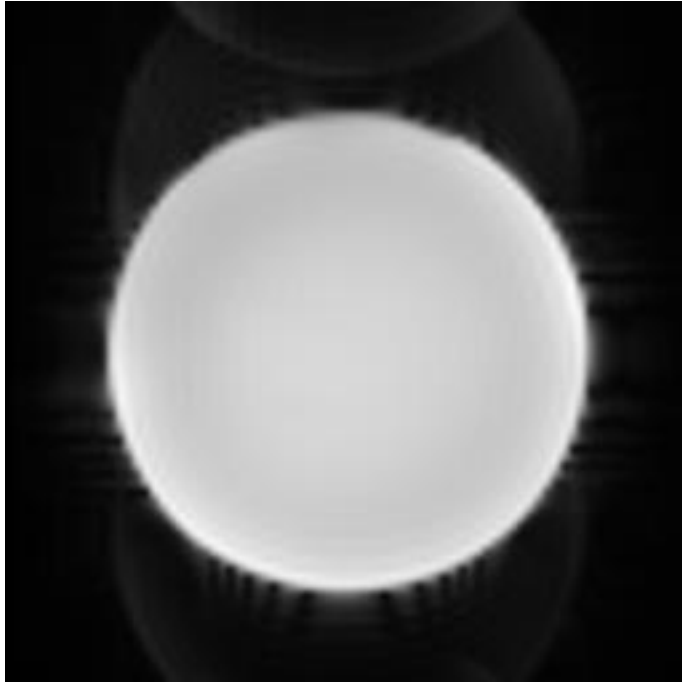


Figure 12

Standard Deviation image



image min: 0, image max: 7.02046

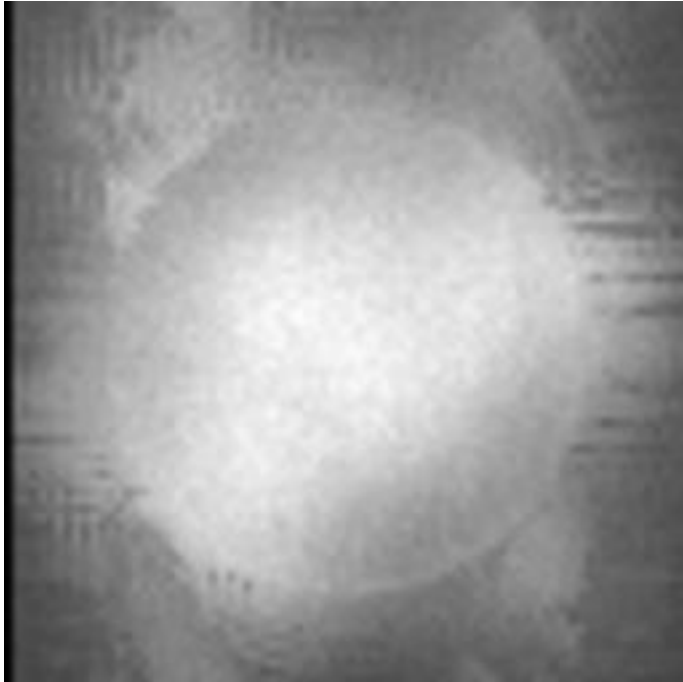


Figure 13

SFNR image



image min: 0, image max: 841.534

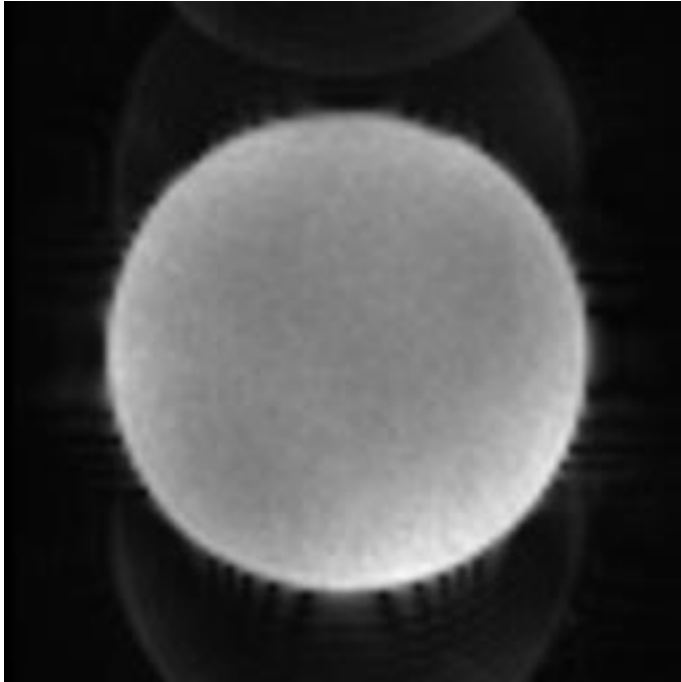


Figure 14

Acquisition parameters

Dimensions	80x80x30x200
Spacing	3mmx3mmx3.99mmx2000ms
Gap	0mmx0mmx0.49mmx0ms
Scanner	AWP66112
Psdname	%SiemensSeq%\ep2d_bold
Examnumber	58
Studyid	qa
Seriesnumber	5
Runnumber	1
Scanningsequence	EP
Sequencevariant	SK
Magneticfield	3
Description	func-bold_task-rest_acq-p2
Scandate	2018-07-23
Scantime	08:56:54
Tr	2000
Te	35.000000
Flipangle	90
prescribedslicespacing	3.99
Frequencydirection	1
Acquisitionmatrix	80 80
Bandwidth	185.2
Transmitcoilname	Body
Institution	Dartmouth College - PBS
Examdescription	dbic^QA
Scanner	AWP66112
scannermanufacturer	SIEMENS
Scannermodelname	Prisma
Fieldofview	240 240
Psdname	%SiemensSeq%\ep2d_bold
Protocolname	func-bold_task-rest_acq-p2 (func-bold_task-rest_acq-p2)

Institutionaddress	Maynard 3,Hanover,NH,US,03755
Institutionaldepartment name	Department
Scanoptions	FS
Mracquistiontype	2D
Sequencename	*epfid2d1_80
Angioflag	N
numaverages	1
imagingfrequency	123.252473
imagednucleus	1H
spacingbetweenslices	3.9899999880721
numphaseencodingsteps	79
echotrainlength	39
percentsampling	100
percentphasefieldofview	100
scannerserialnumber	66112
softwareversions	syngo MR E11
inplanephaseencoding direction	COL
variableflipangleflag	N
sar	0.05556707303979
dBdt	0
acquisitionnumber	1
instancenumber	1
samplesperpixel	1
photometricinterpretation	MONOCHROME2
rows	480
columns	480
bitsallocated	16
bitsstored	12
highbit	11
pixelbandwidth	2315
otherinfo	

sliceorder	2,4,6,8,10,12,14,16,18,20,22,24,26,28,30,1,3,5,7,9,11,13,15,17,19,21,23,25,27,29
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References:

1. Friedman L, Glover GH. Report on a multicenter fMRI quality assurance protocol. *J Magn Reson Imaging*. 2006a; 23(6):827–839. [PubMed: 16649196]
2. Acceptance Testing and Quality Assurance Procedures for Magnetic Resonance Imaging Facilities, AAPM Report No. 100
3. https://www.nitrc.org/projects/bxh_xcede_tools