

Artifacts and Goofs

Bad things happen to Good Images

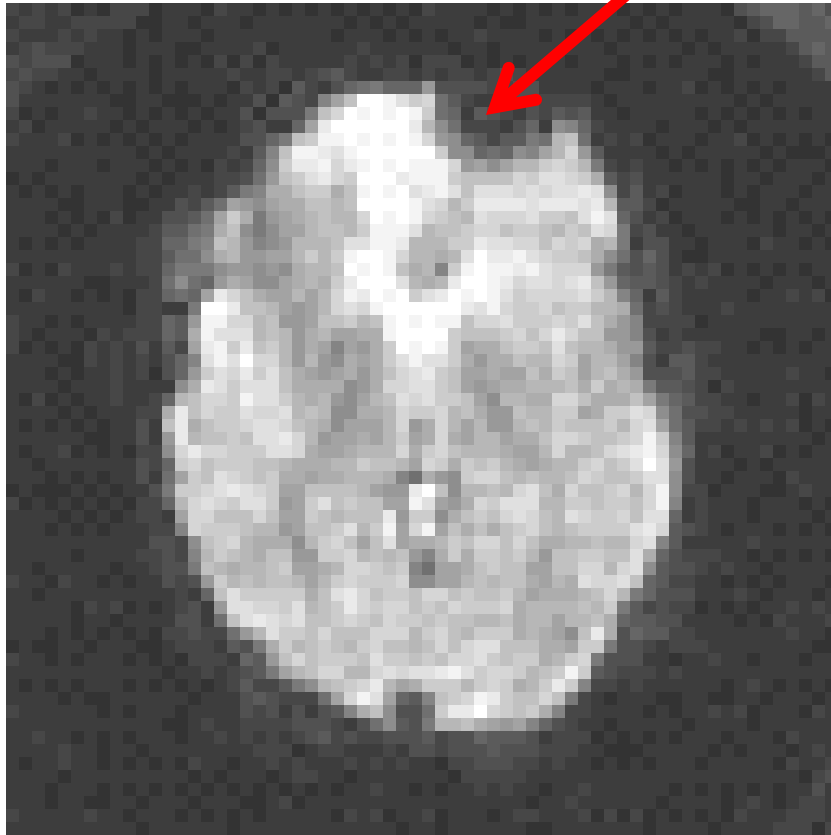
Never, never trust that all those automated things are going right.

Watch movies of 4d series, to make sure they don't contain anything weird (excessive movements or spikes)

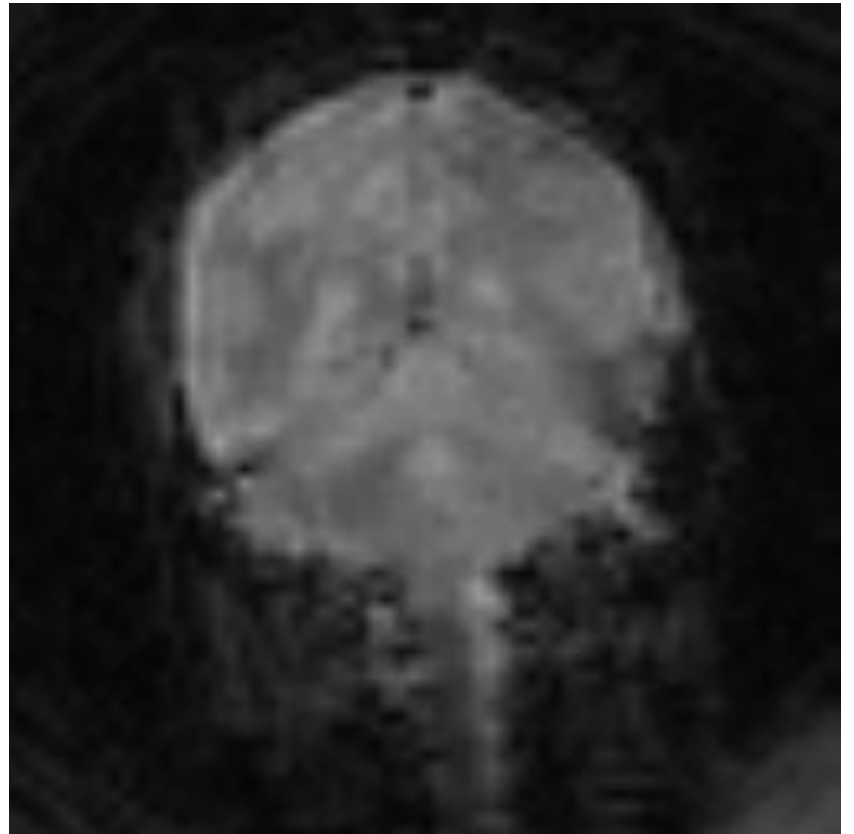
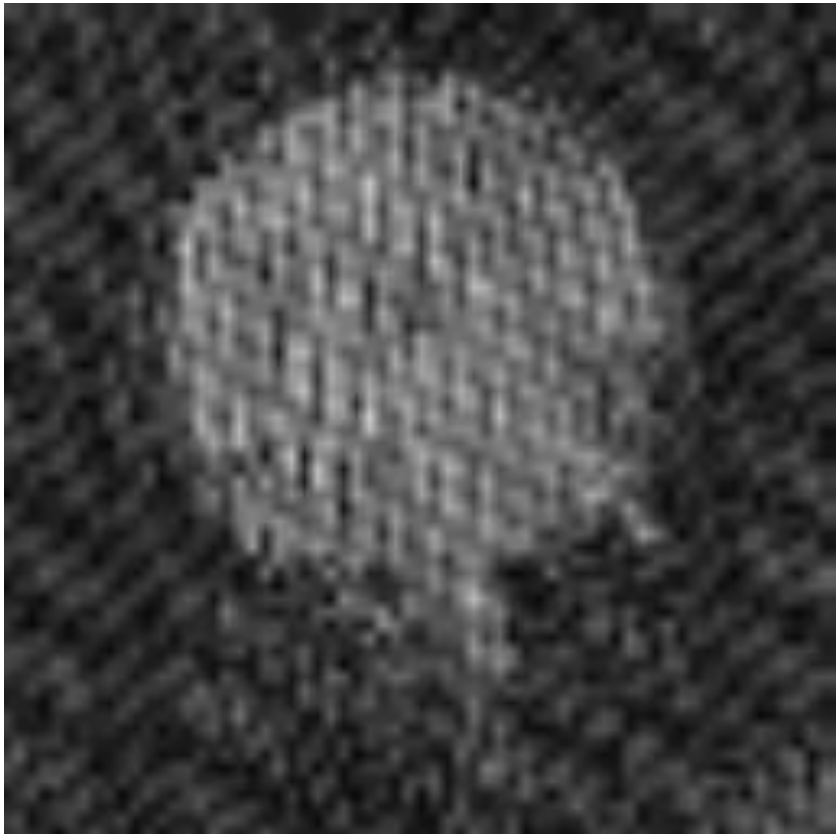
Look at 3D images after they come off the scanner, and after you manipulate them.

Here are examples of problems, to help you spot things that look wrong.

Possible Goggle Artifact

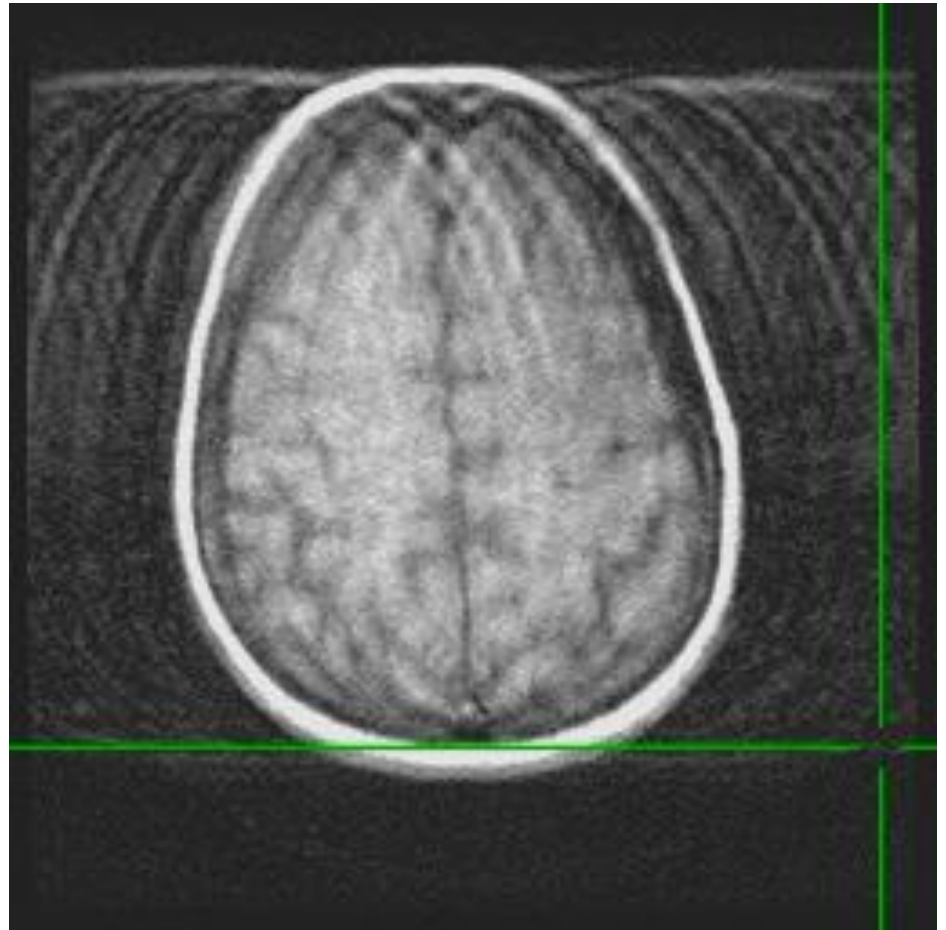


Unknown Artifact (Left)

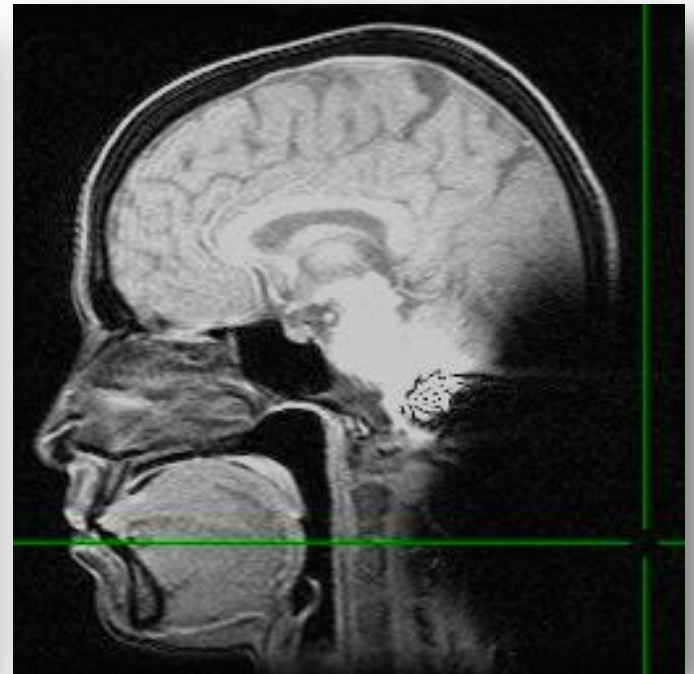
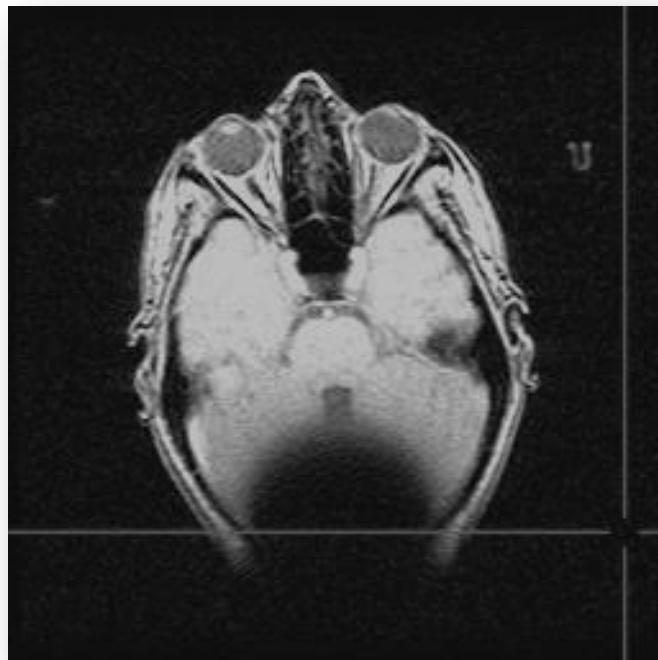


Excessive Movement

- Because people try to hold still, you could expect this effect to be less pronounced in your own images

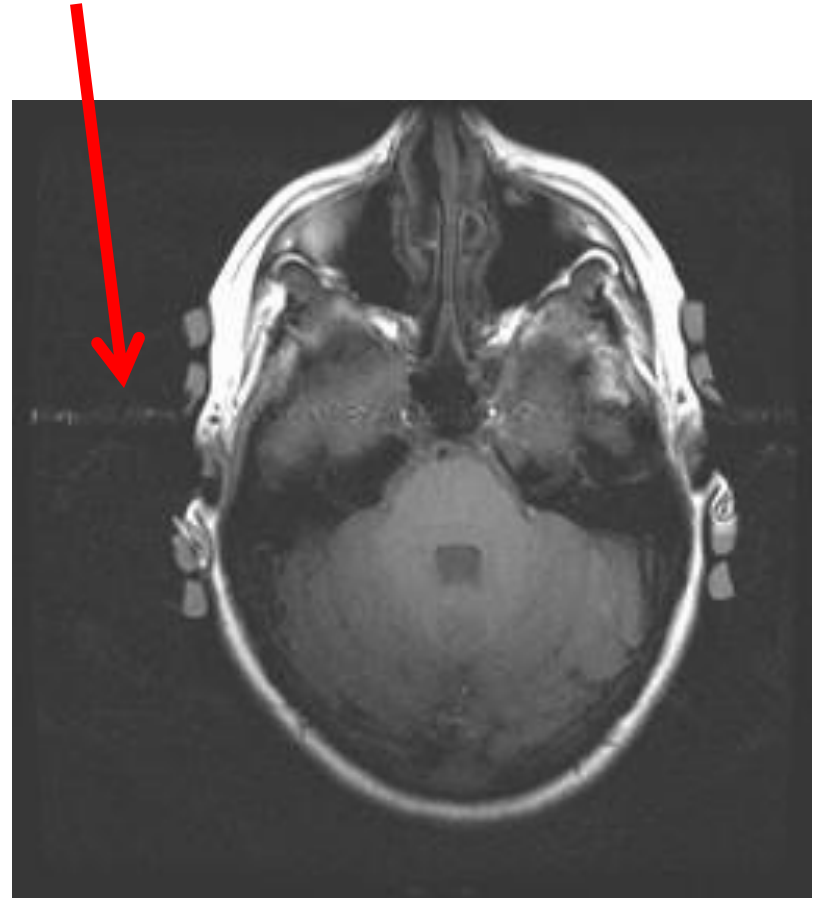


Susceptibility Artifact caused by PonyTail Holder



Blood Flow Artifact

- Anatomical image with a line of interference caused by blood flowing through the carotid arteries.
- A true RF (Radio Frequency) artifact, would show noise distributed from one side of the image to the other (like this one) BUT would also occur in every slice.

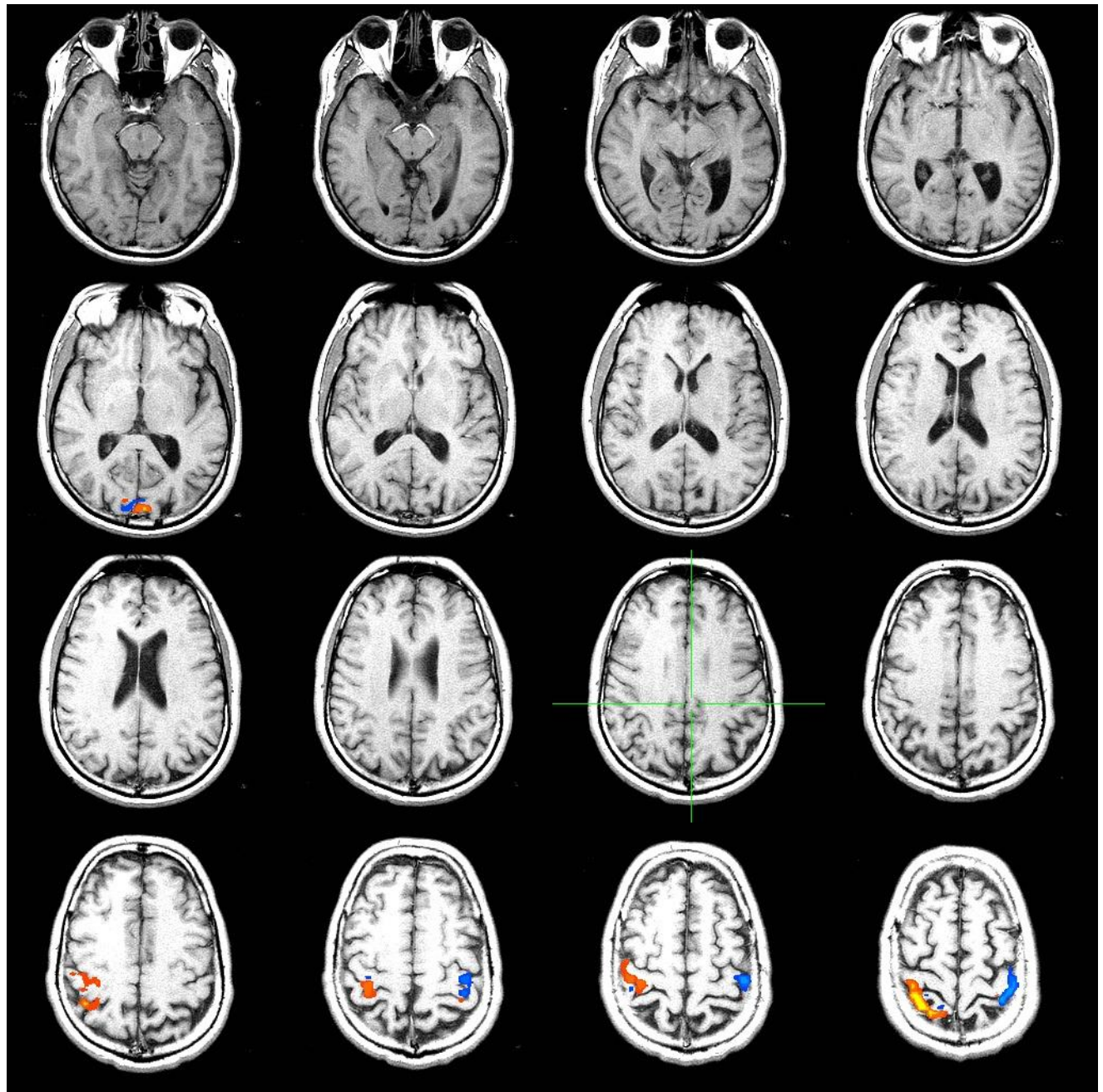


Minor Zipper Artifact

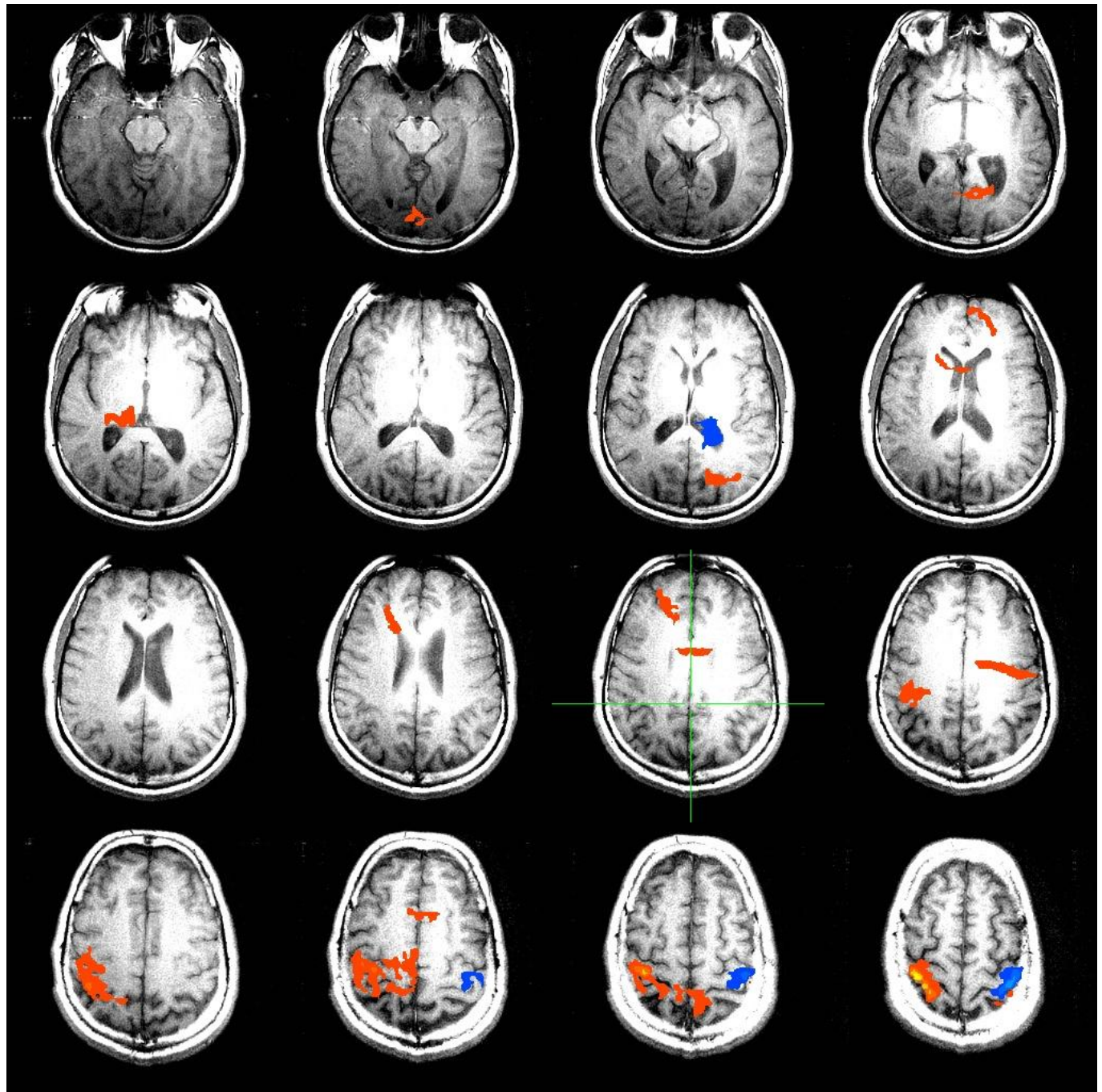
- A minor artifact appears only in images from subjects wearing the goggles.
- Looks like a small zipper in the middle of the image.
- It does NOT extend from one side of the image to the other,
- But it DOES appear in all slices.



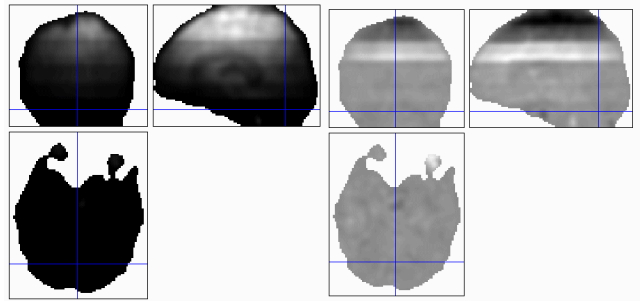
1.5T



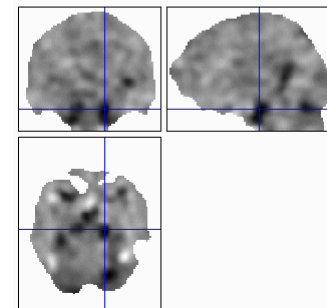
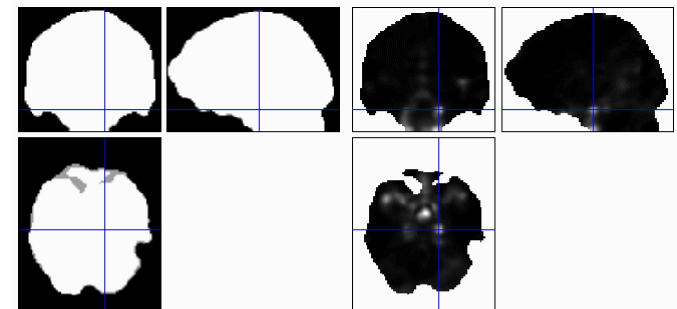
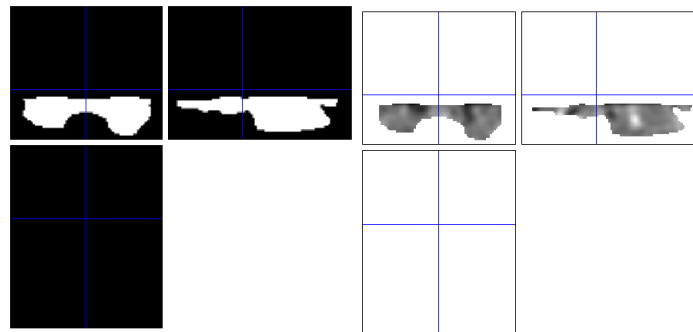
3T



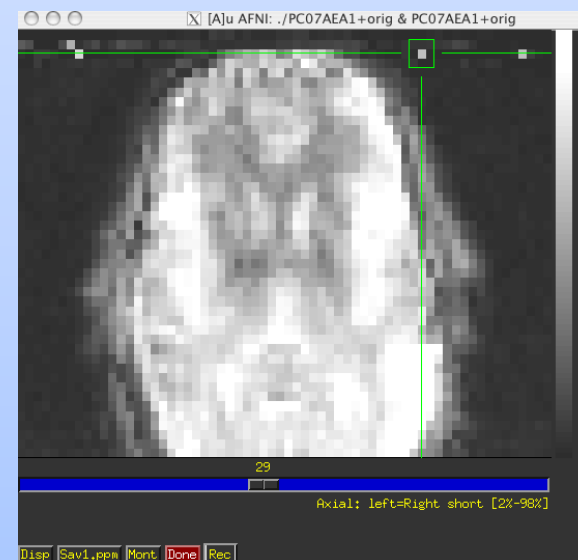
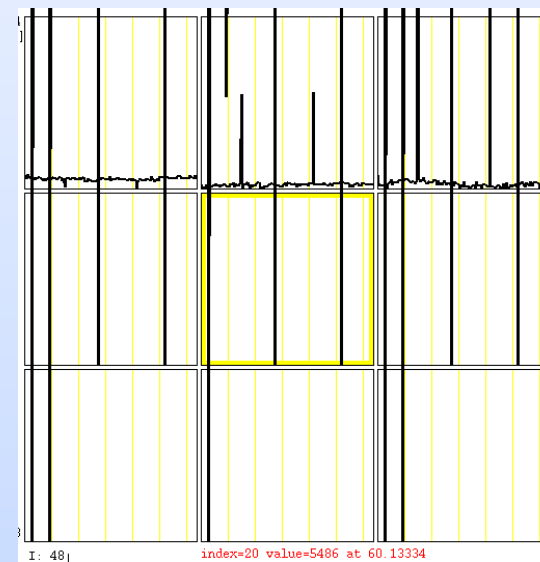
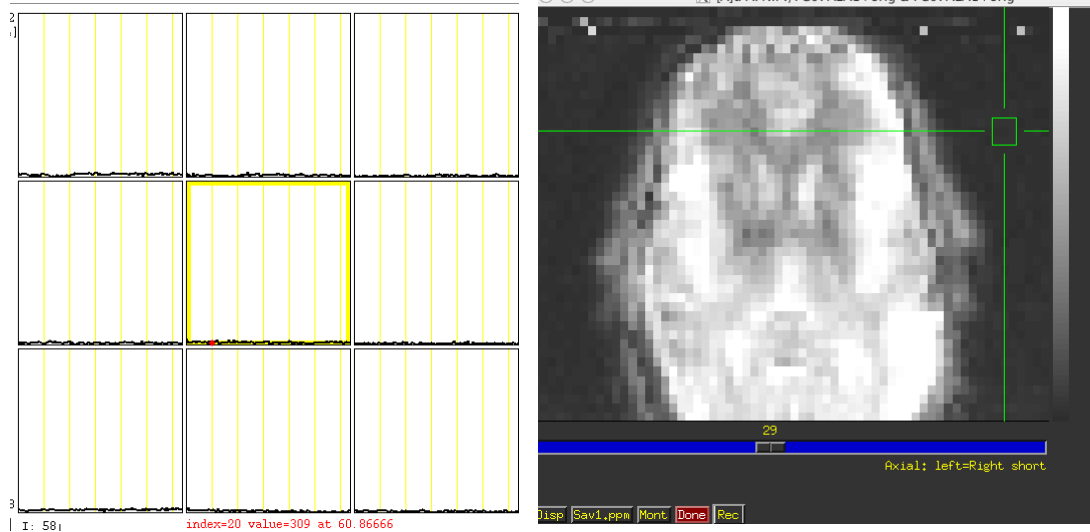
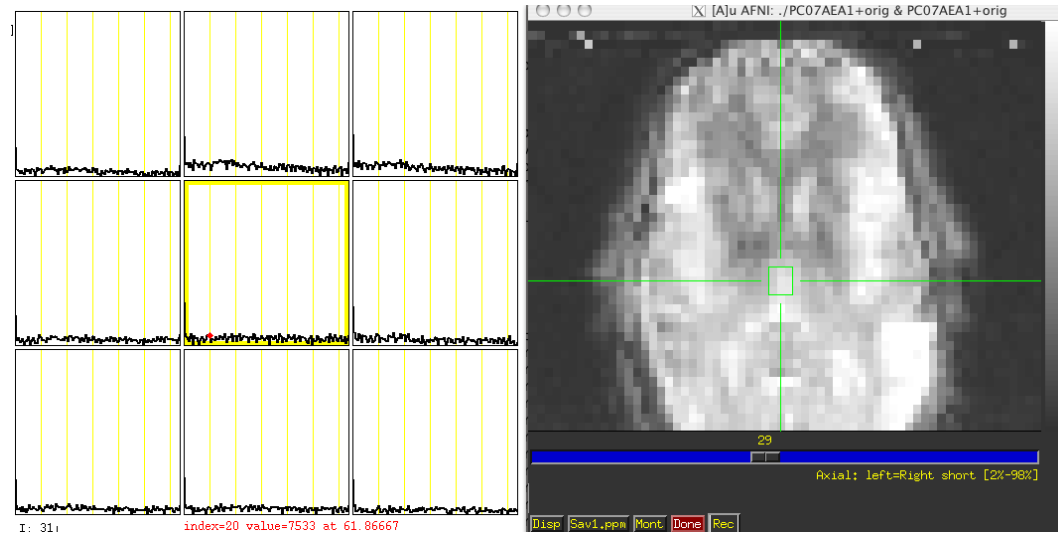
- Here you see a bad ResMS.img (middle) and corresponding bad con.img (far right).



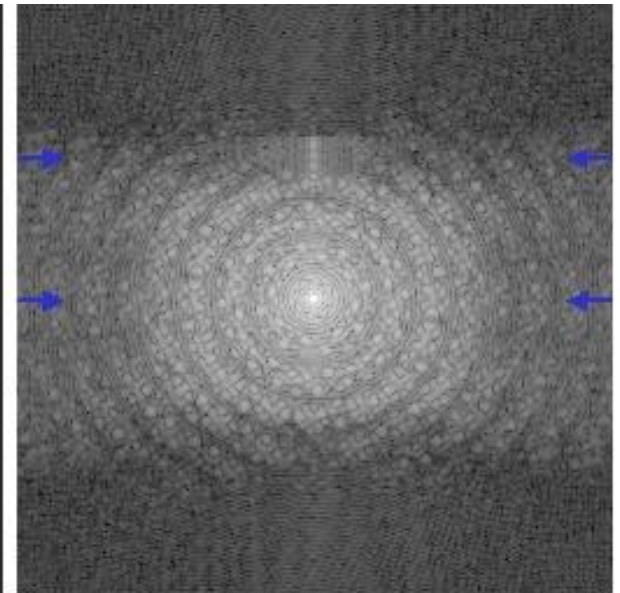
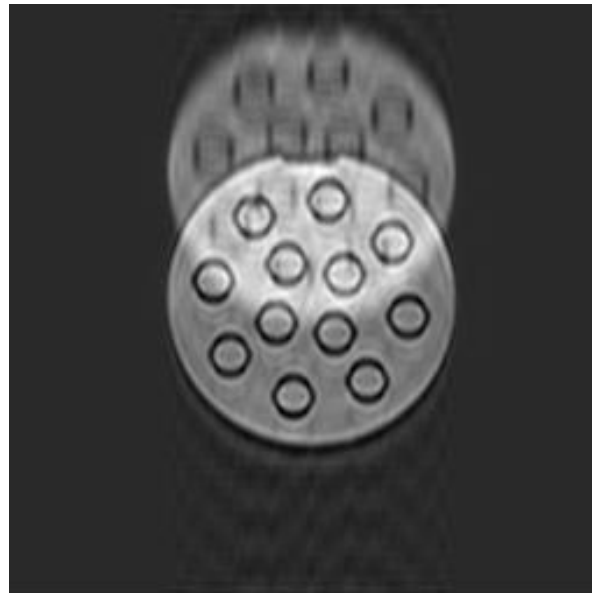
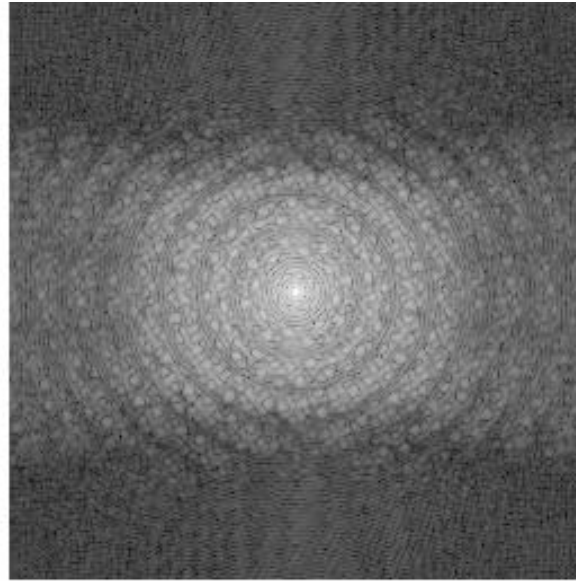
- Note the striping associated with bad slices.
- And here, you see a bad mask (middle) and the corresponding bad con.img



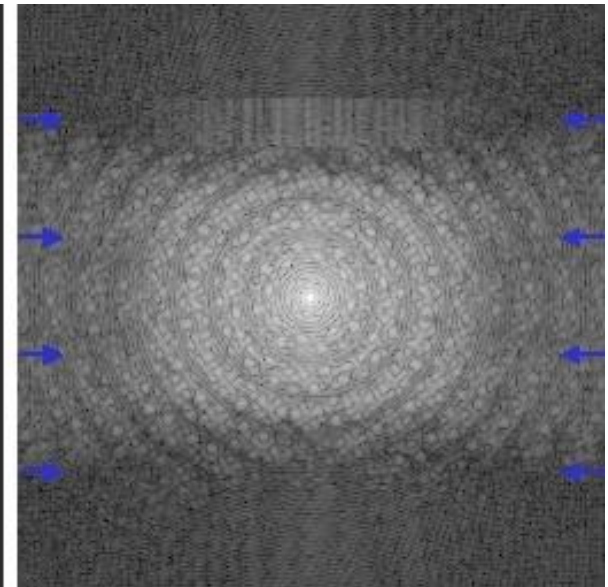
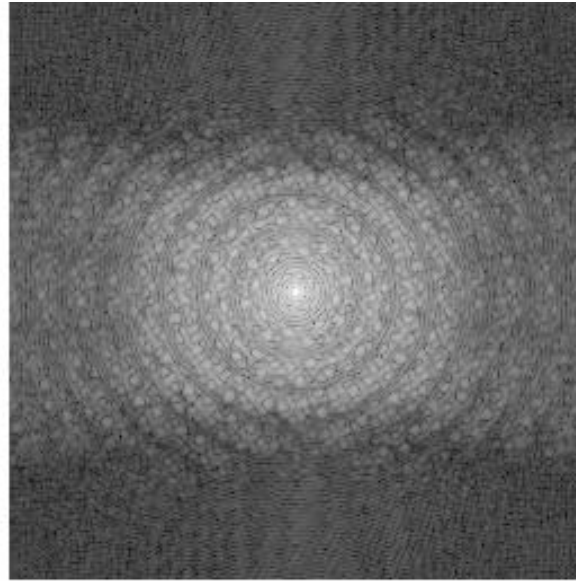
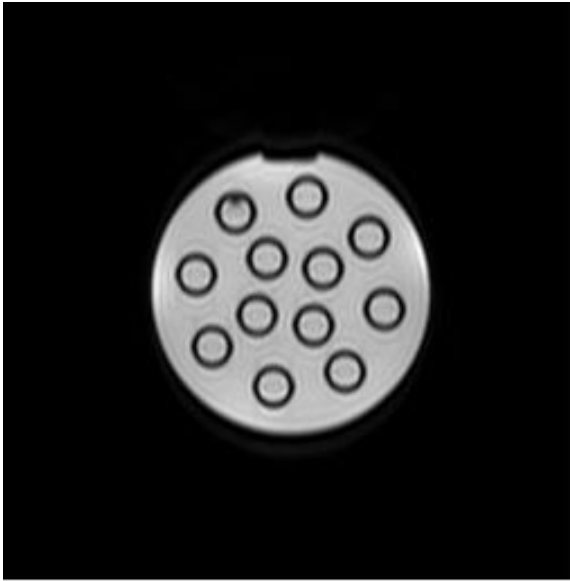
Unknown Artifact (thanks Carolyn Fort)



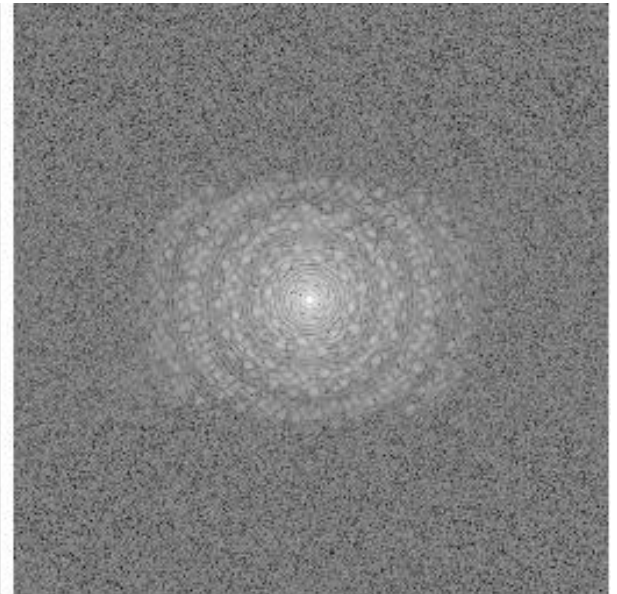
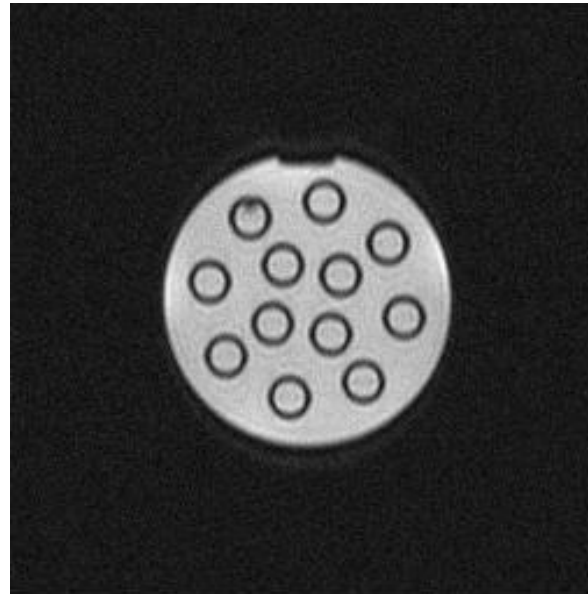
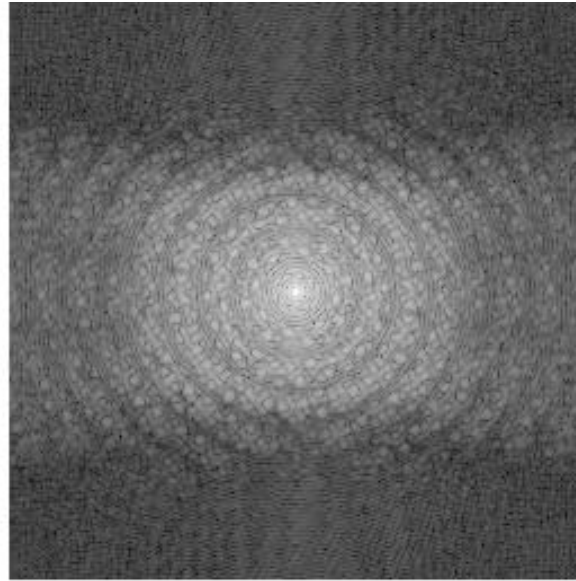
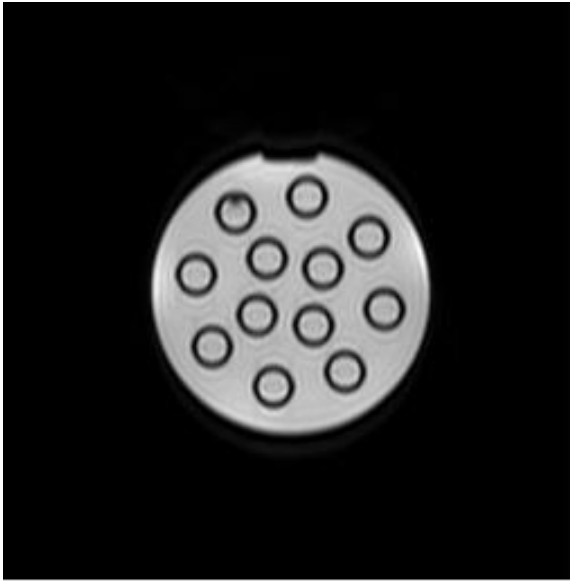
Sudden Random Movement



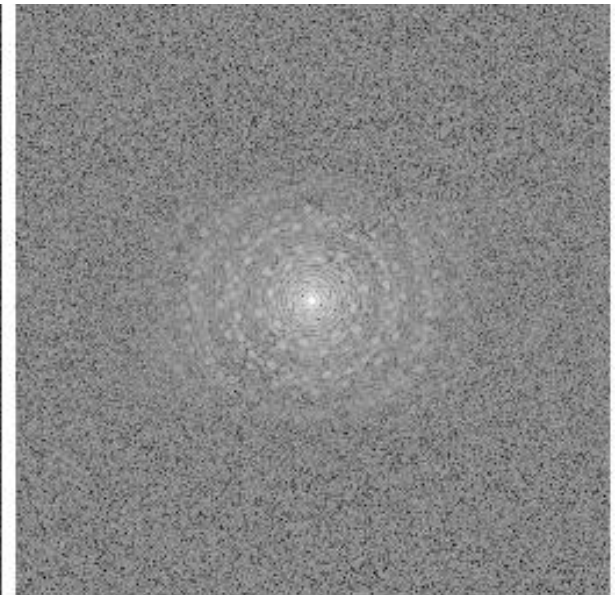
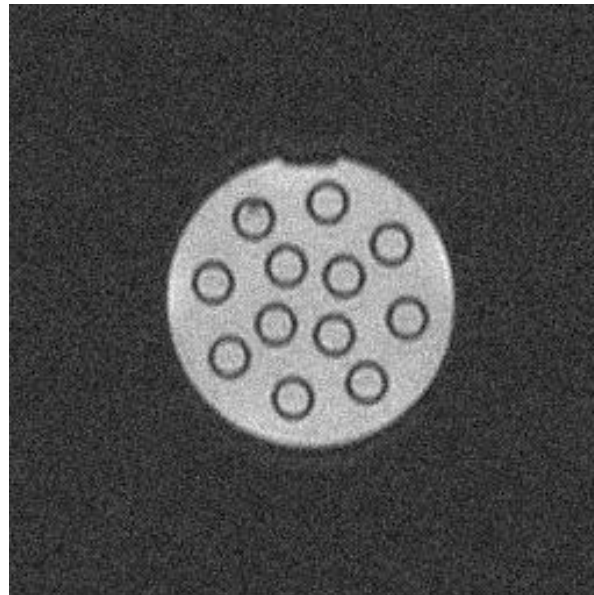
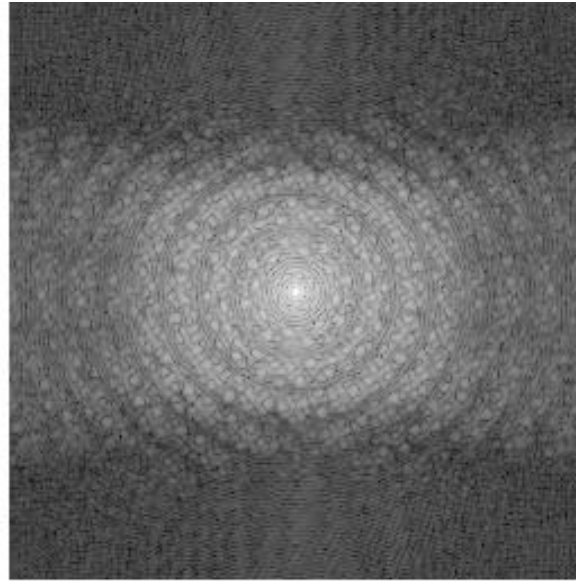
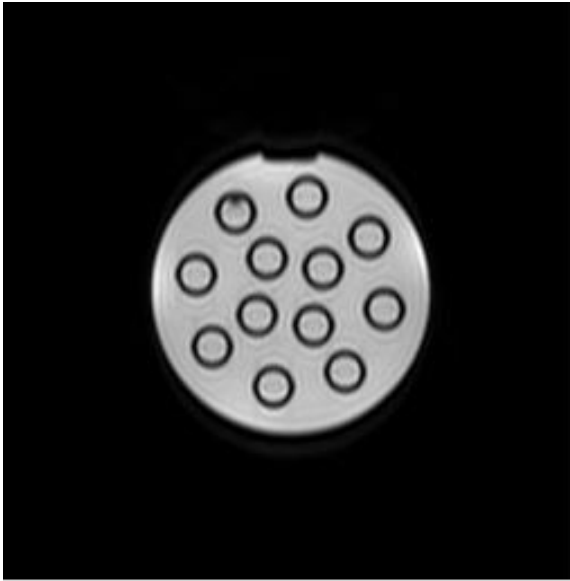
Periodic Motion



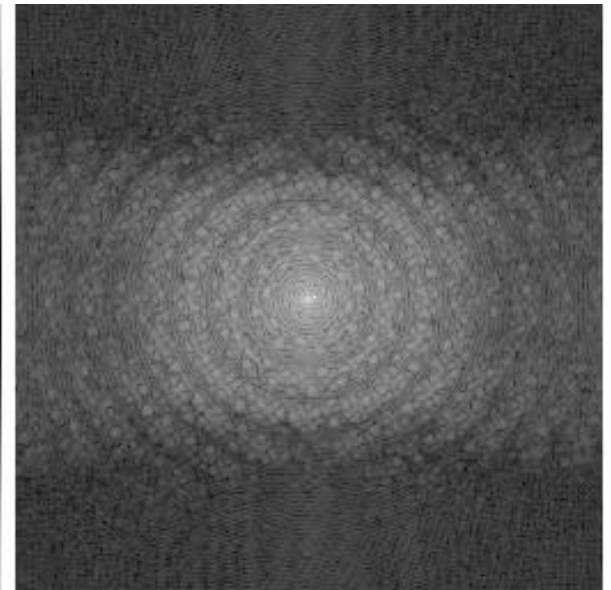
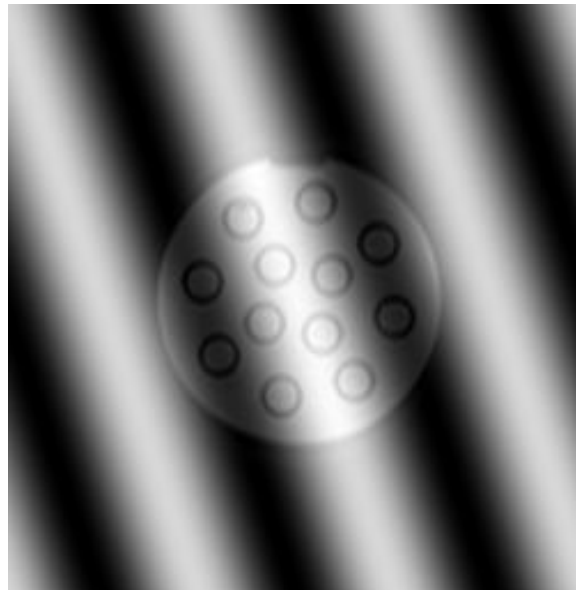
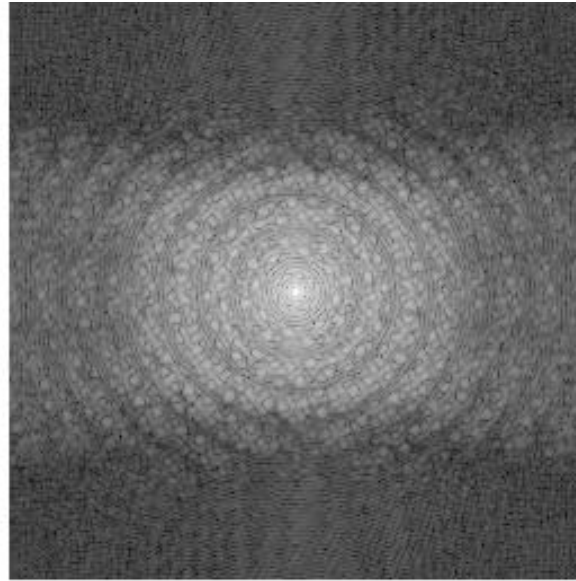
Random Noise



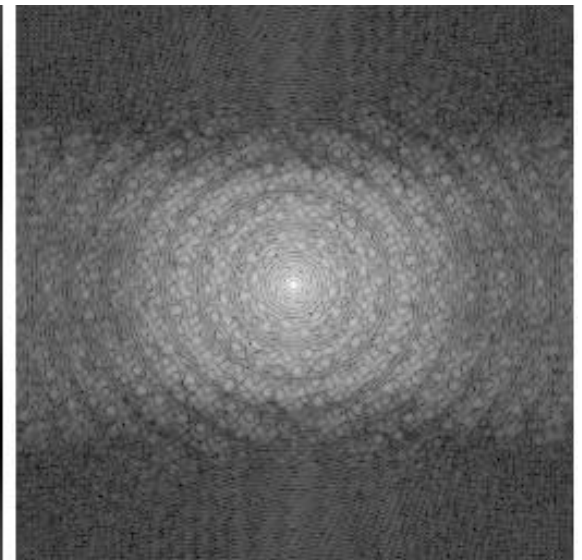
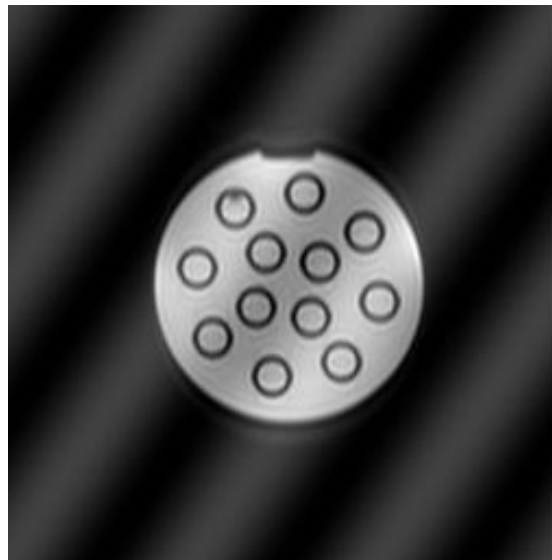
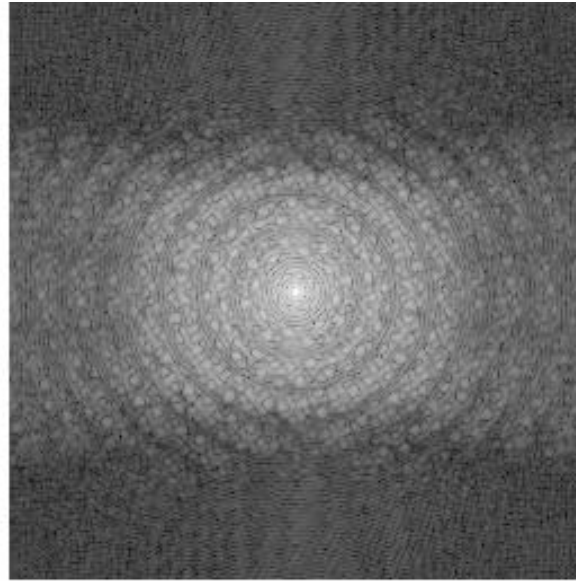
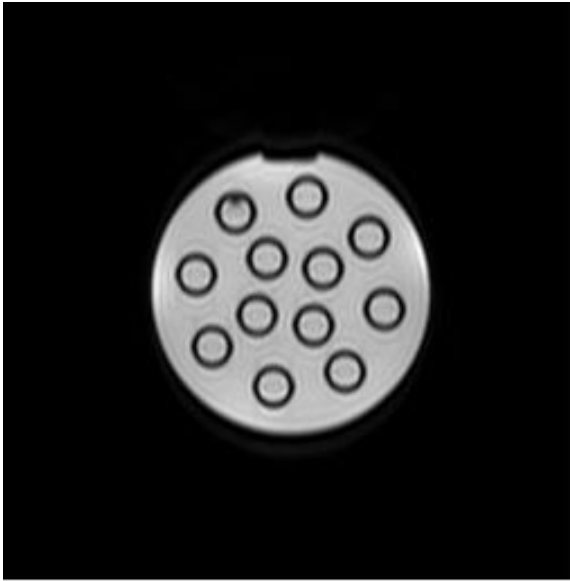
More Random Noise



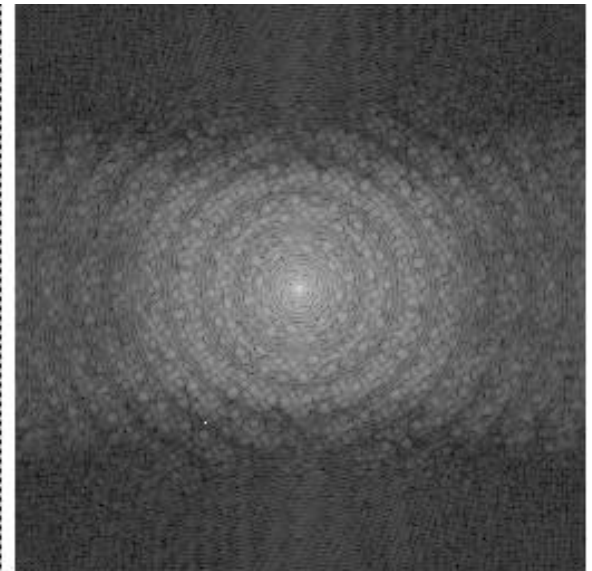
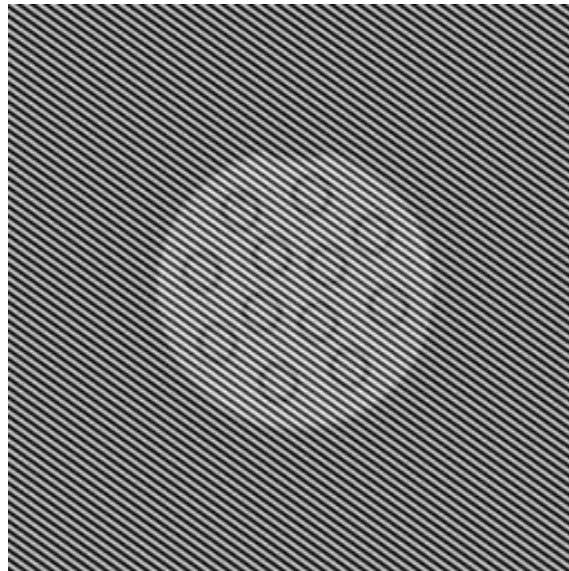
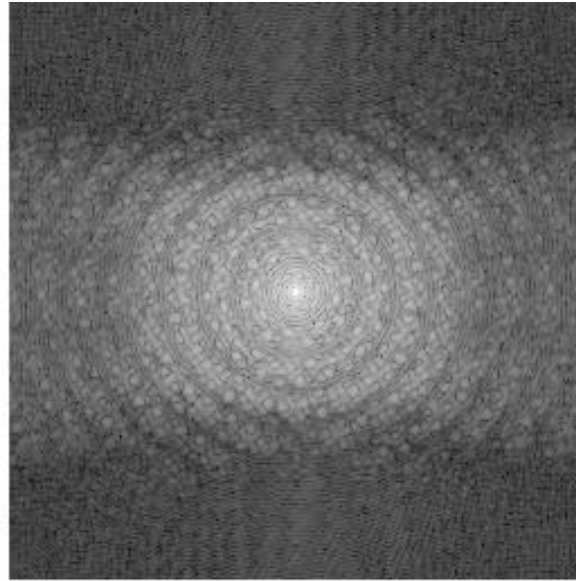
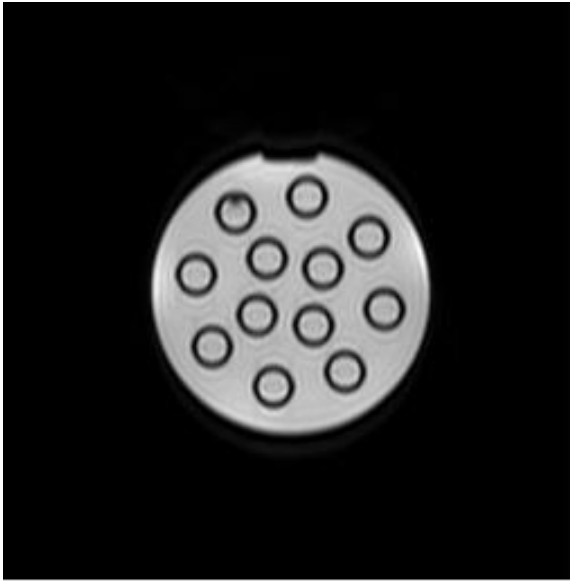
Large Central RF Spike



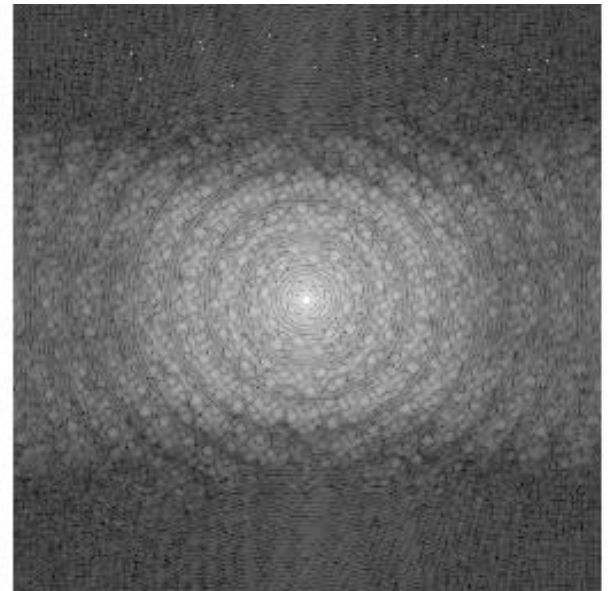
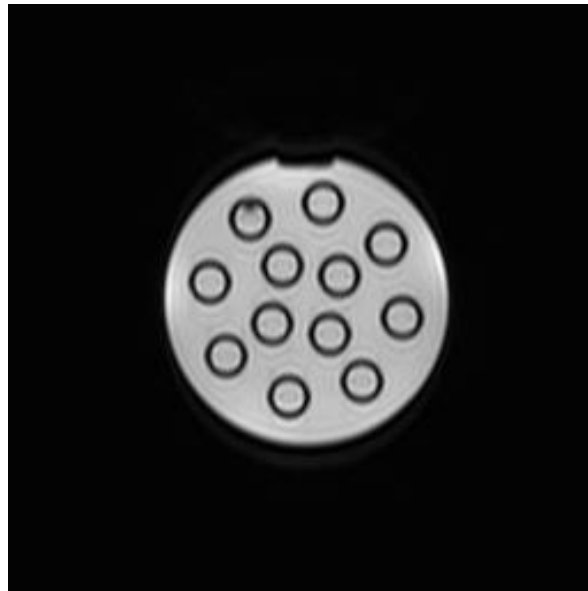
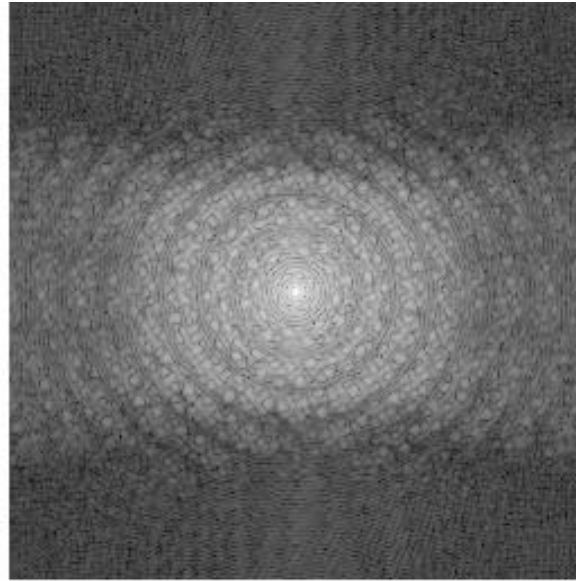
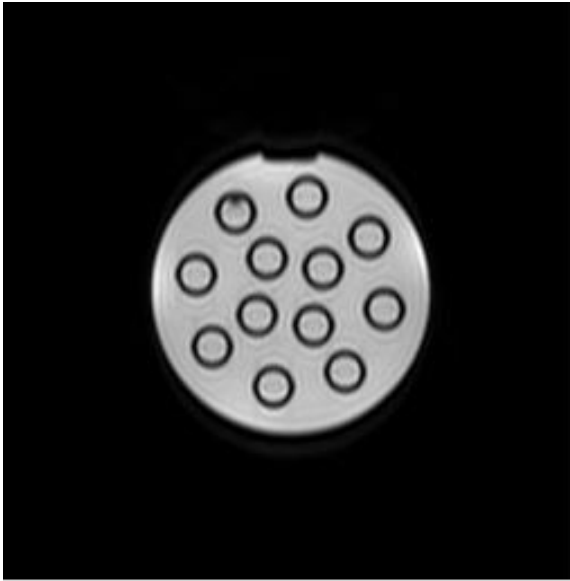
Small Central RF Spike



Large Peripheral RF Spike



Small Peripheral RF Spikes



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