

Name:

Medical Physics 710 / BME 710

Due: Oct. 11th, 2018

Journal Discussion 4: J Pipe Motion Correction With PROPELLER MRI: Application to Head Motion and Free-Breathing Cardiac Imaging, MRM 1999

Question 1: Describe the two types of motion artifacts in MRI discussed by the paper. (3 points)

Question 2: Rotation of an object in image space corresponds to (2 points)

- A: A shift of the corresponding k-space data
- B: Rotation of the corresponding k-space data
- C: Accumulation of phase in the corresponding k-space data
- D: Inversion of the corresponding k-space data

Question 3: List the four corrections or processes that are applied prior to the final reconstruction of a PROPELLER data set. (3 points)

Question 4: Could one change the order of the correction steps and compensate for translational motion before correction for rotational motion? Explain your answer. (2 points)