HST.583 Functional Magnetic Resonance Imaging: Data Acquisition and Analysis
Fall 2008

Diffusion Tensor Imaging Analysis

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Course Report
HST.583

1. Why are at least six different gradient directions necessary to compute the tensors?

2. Write the linear system of equations to be solved in order to compute the tensor from a DWI acquisition with n gradients and 1 baseline.

3. Which parameters will you need to know in order to run a DTI analysis?

4. Why do the ventricles appear dark in the Diffusion Weighted Images?

5. Select an image from the Diffusion Weighted Imaging volume showing an artifact, and propose an explanation of its origin.