Diagnostic Medical Image Processing (DMIP)
WS 2015/16
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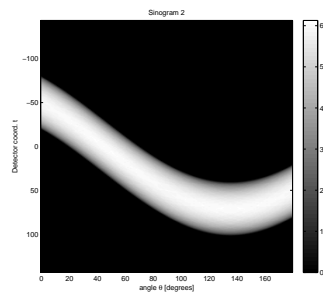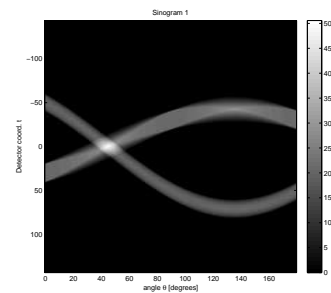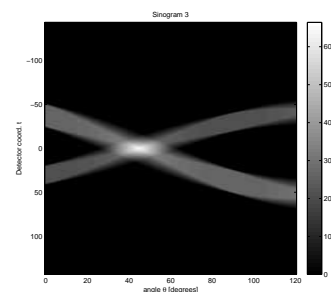Bastian Bier, Room 09.157   bastian.bier@fau.de

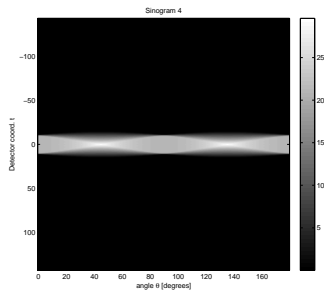**Exercise 5: Sinograms and Filtered Backprojection (FBP) for Parallel Beam**

1   Sinograms

What is a sinogram?

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Hereafter you can see some sinograms of different images. Motivate which types of input images produce such sinograms.

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2 Filtered Backprojection (FBP) for parallel beam

What is the maximal angle that makes sense to acquire projections?

Which artifacts appear if we have a too small number of projections?

What type of artifacts appear if the projections are truncated?

For the Filtered Backprojection we can use different filter kernels. List them!

Now you should complete the gaps in *DMIP_ParallelBeam.java* implementing a CT scan and reconstruction. First start without filter kernels. Then implement the two most known filter kernels!