

Decimation and non-linear filtering

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- **Decimation:**

1) 3" x 3" 2) 1' x 1' 3) 2' x 2' 4) 5' x 5'

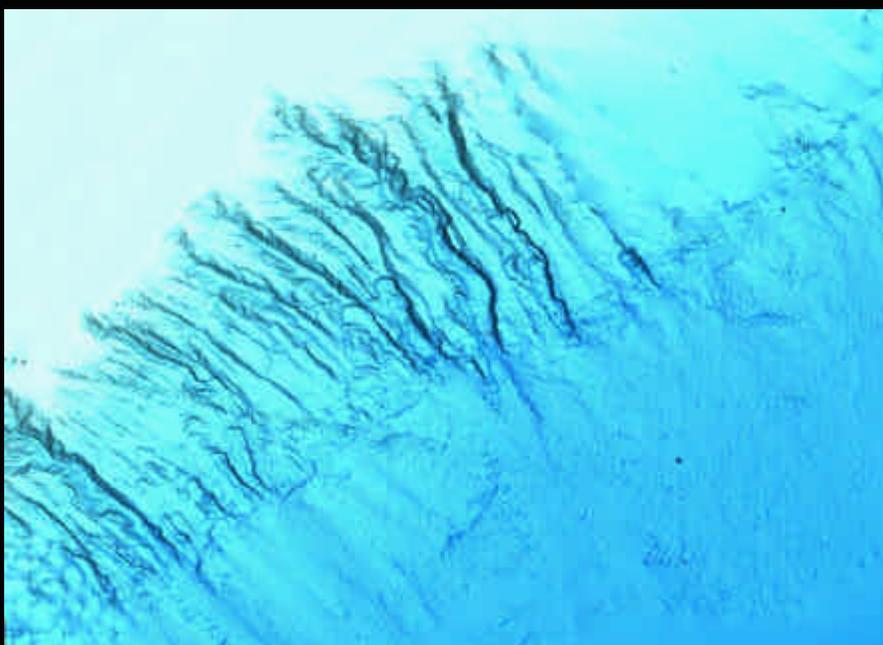
- **Non-Linear Filtering:**

5) Median filter 3" x 3" data with a 1' x 1' window

6) Median filter 3" x 3" data with a 3' x 3' window

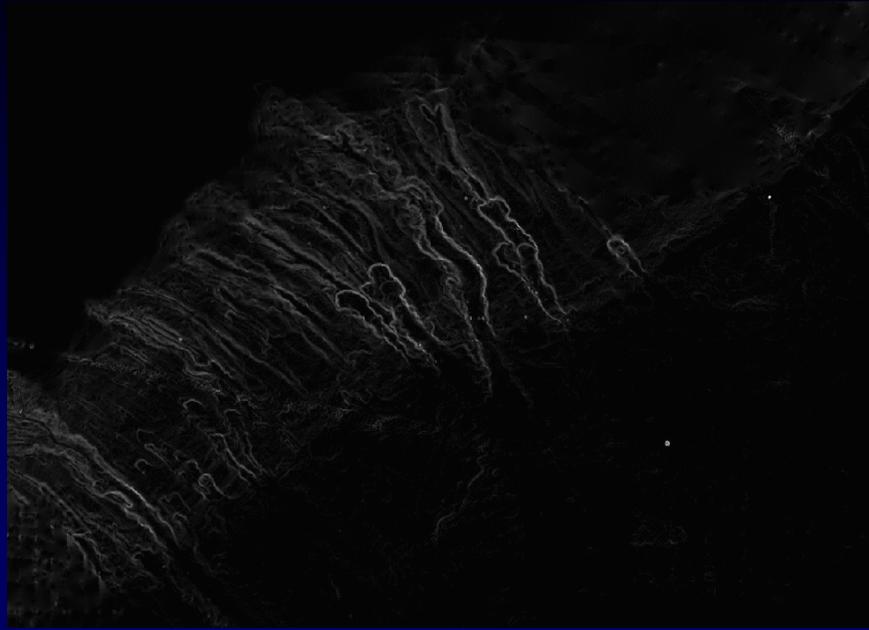
Digital Model of Hudson Canyon: 3" X 3"

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Absolute Value of the Gradient of 3" X 3" Data

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Absolute Value of the Gradient of 1' X 1' Data

24

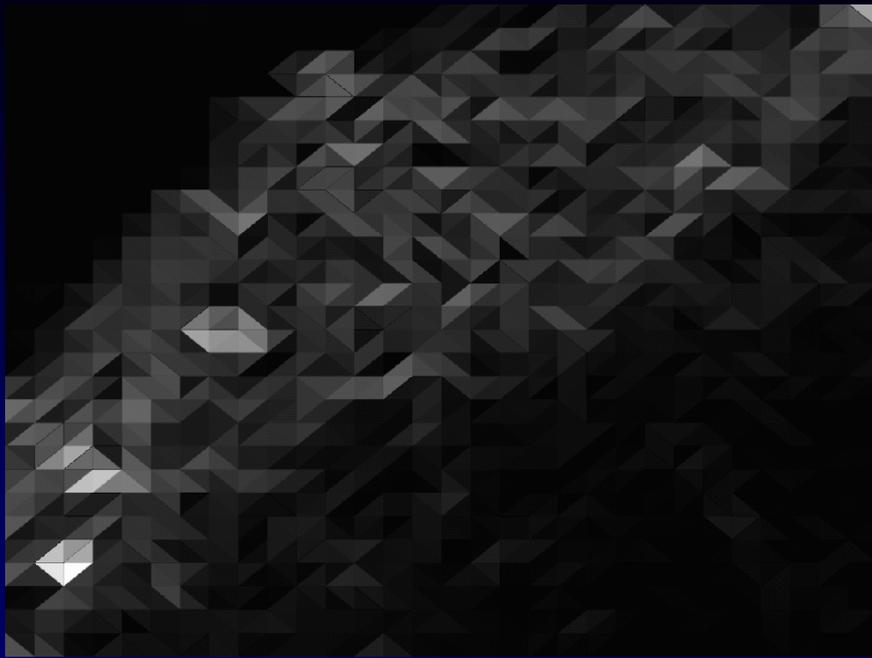


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Absolute Value of the Gradient of 2' X 2' Data

25

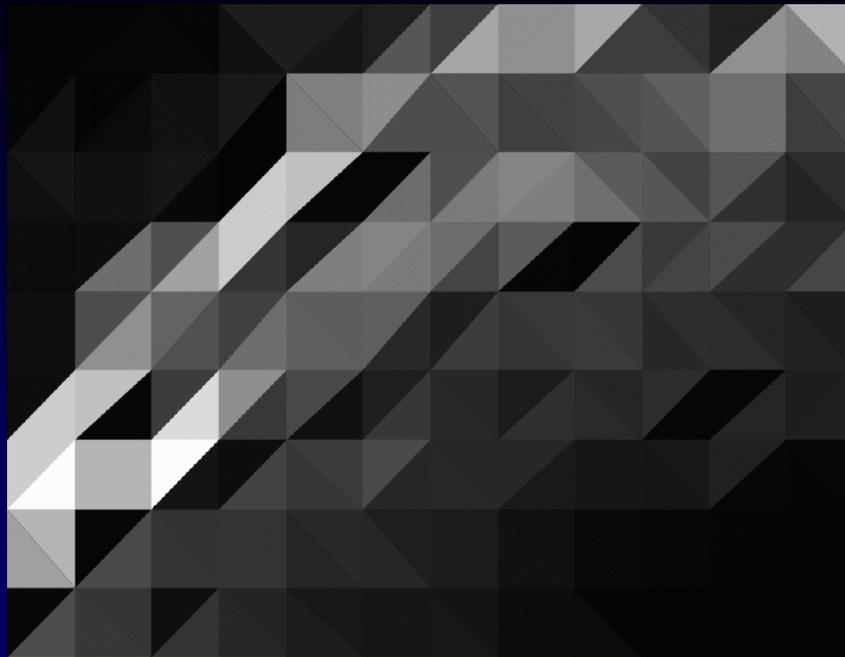


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Absolute Value of the Gradient of 5' X 5' Data

26

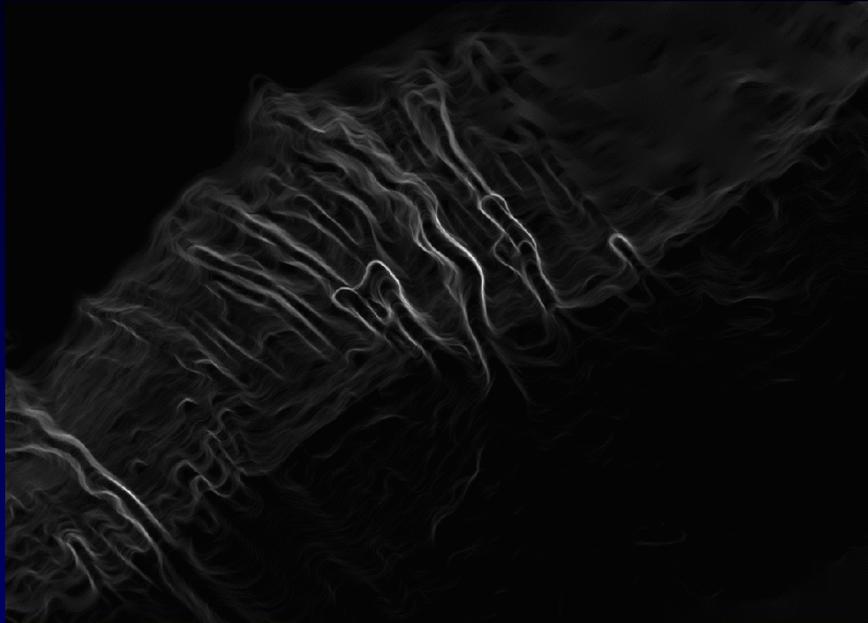


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Absolute value of the gradient of median filtered
3" x 3" data with a 1' x 1' window

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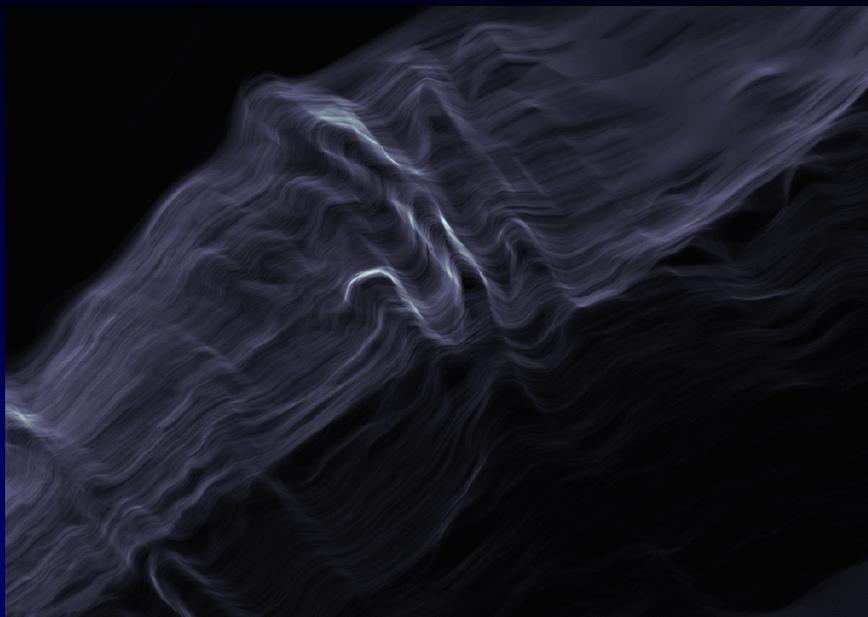


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Absolute value of the gradient of median filtered
3" x 3" data with a 3' x 3' window

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Linear Filtering

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- **Linear Filtering:**

7) FIR running average filter 3'' x 3'' data with a 1' x 1' window

8) FIR running average filter 3'' x 3'' data with a 3' x 3' window

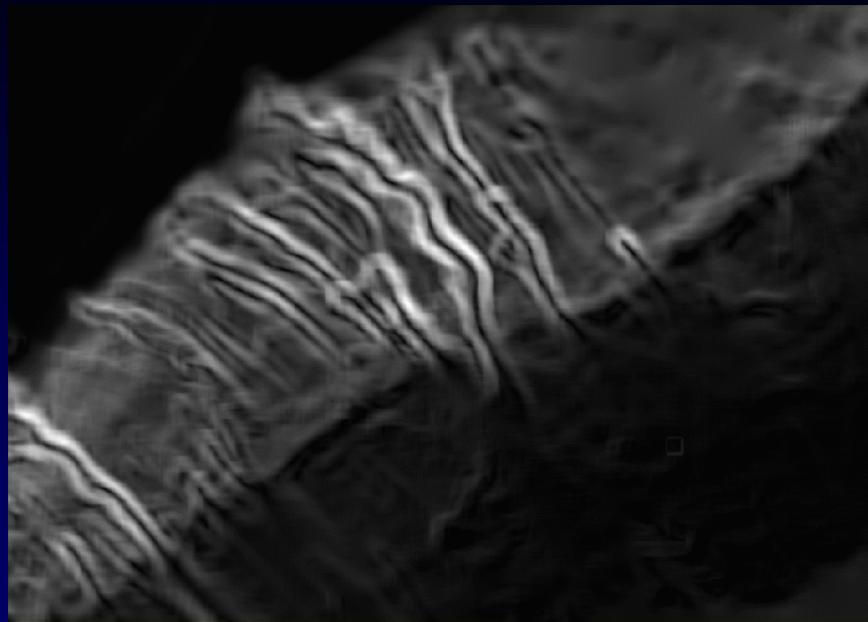
- **Linear Phase Filtering:**

9) FIR low-pass filter 3'' x 3'' data, order=20, cut-off = 3'

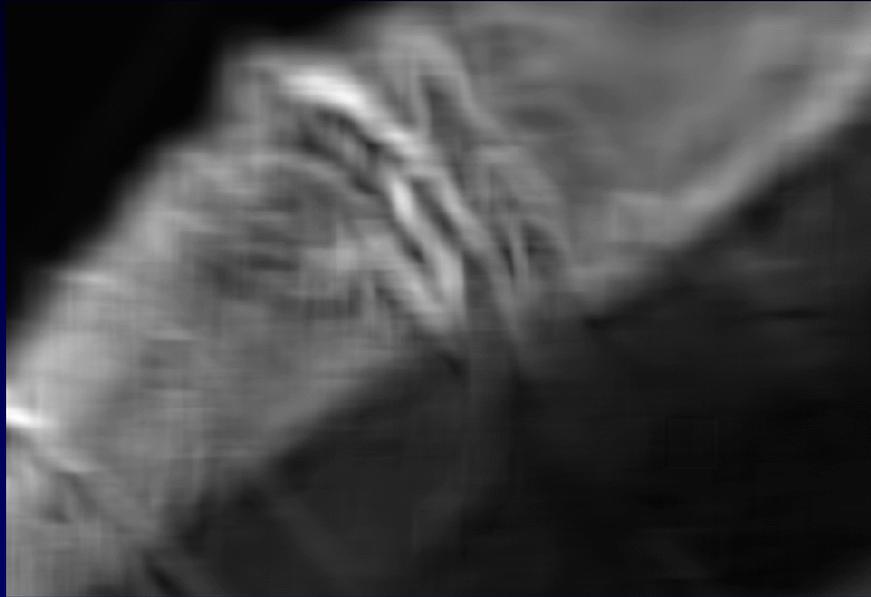
10) FIR low pass filter 3'' x 3'' data, order=60, cut-off = 3'

Absolute value of the gradient of FIR mean filtered 3'' x 3'' data with a 1' x 1' window

30



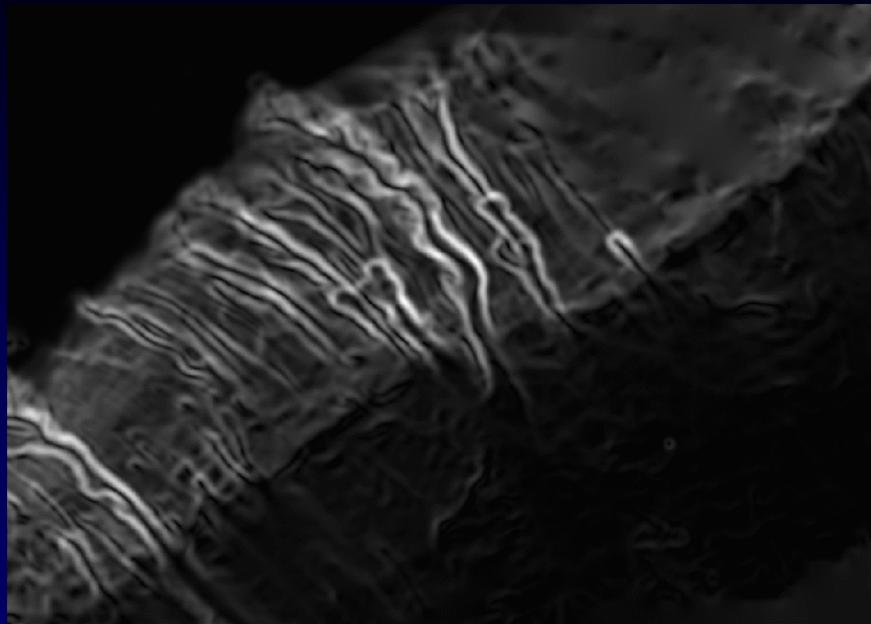
Absolute value of the gradient of FIR mean filtered
3" x 3" data with a 3' x 3' window 31



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Absolute value of the gradient of FIR linear-phased
low pass filtered 3" x 3" data of order 20, cut-off at 3' 32

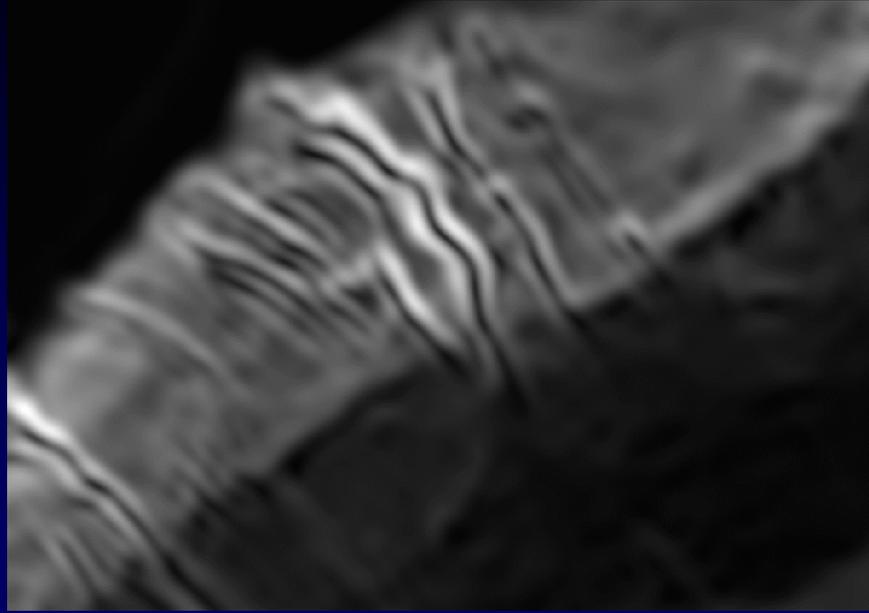


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Absolute value of the gradient of FIR linear-phased low pass filtered 3" x 3" data of order 60, cut-off at 3'

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Adaptive Filtering

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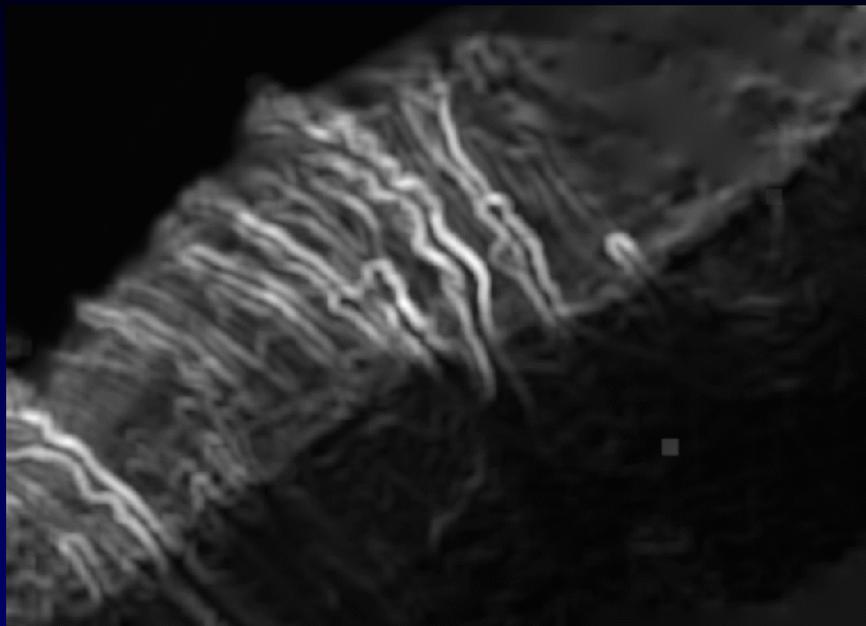
- **Local standard deviation:**
 - a) Standard deviation 3" x 3" data with a 1' x 1' window
 - b) Standard deviation 3" x 3" data with a 3' x 3' window
- **Adaptive Filtering:**
 - 11) Wiener adaptive filter 3" x 3" data with a 1' x 1' window
 - 12) Wiener adaptive filter 3" x 3" data with a 3' x 3' window

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Local standard deviation of the 3" x 3" data set
in a 1' x 1' window

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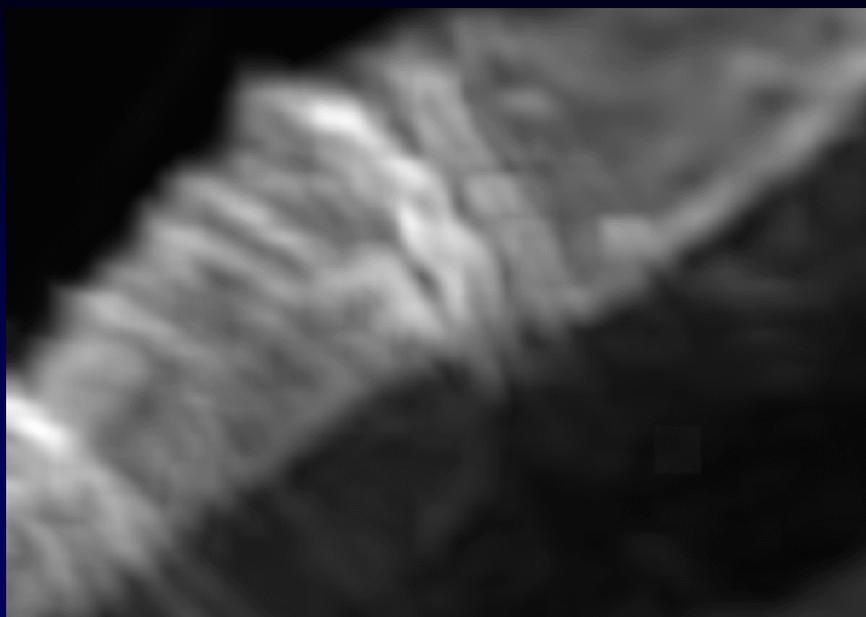


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Local standard deviation of the 3" x 3" data set
in a 3' x 3' window

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