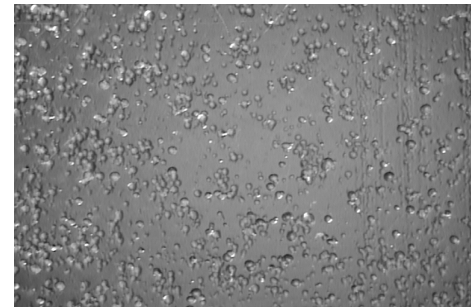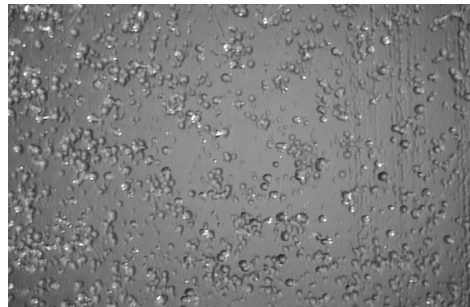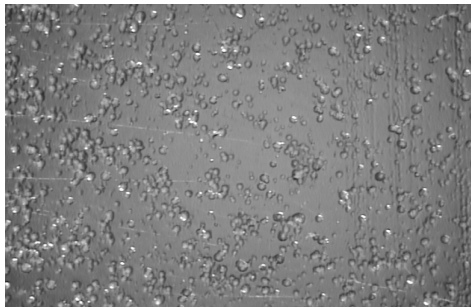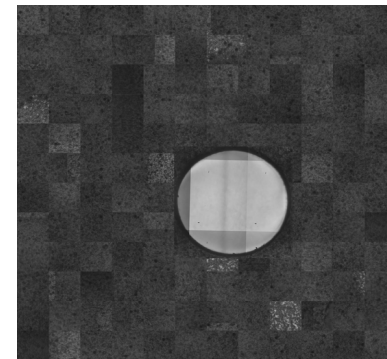# Moedal Update - 13Aug

LMillward

Data Collection

- Found work-around for collecting multi-config images across entire x-y plane.

- Have 4gb+, [440 images] X [10 channels]
8 fresnel + Halo + backlighting

- Can repeat at different configuration if required

Machine learning

- TensorFlow Input pipeline using old, resampled images as template

- Updated to use TF.dataset, and associated methods

- Data organising script

- Dataset generator, + labelling
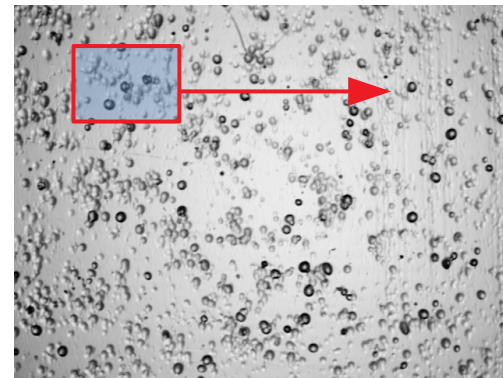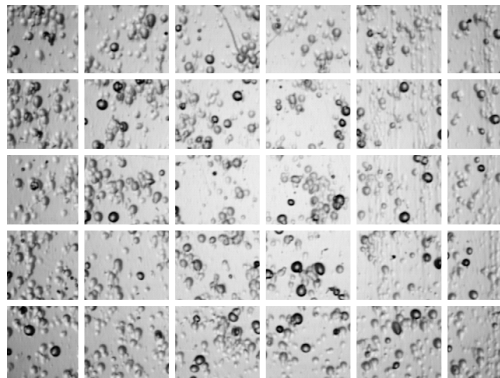
- CNN

- Run, Train, Test

ML with new data

- Need 'target'

- Are we classifying, position regression,....

- Need labeled data;

  - Possible with 10 channel data

  - Not possible with 1 channel data

ML : Input - x

- Region of interest is approx 28x28 ie, MNIST sized. Good starting-Point

- A: Split image, eg Hipster – Patches, OR

- B: Run modular CNN over whole image

ML : Target + labels

- Can create GiFs from the 10 channel data

- Use to ID / label candidates

- Some images not suitable, eg surface scratches, too many holes

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- Focus on features

- Eg, Count holes

- Identify light holes and dark holes