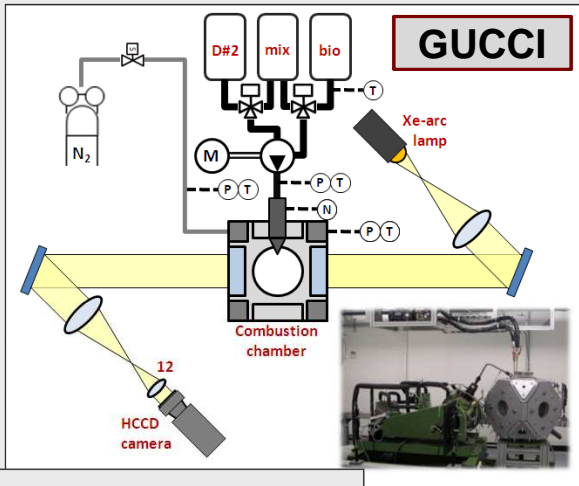


Interpretation of spray image data in a constant volume combustion chamber

Jonas Galle

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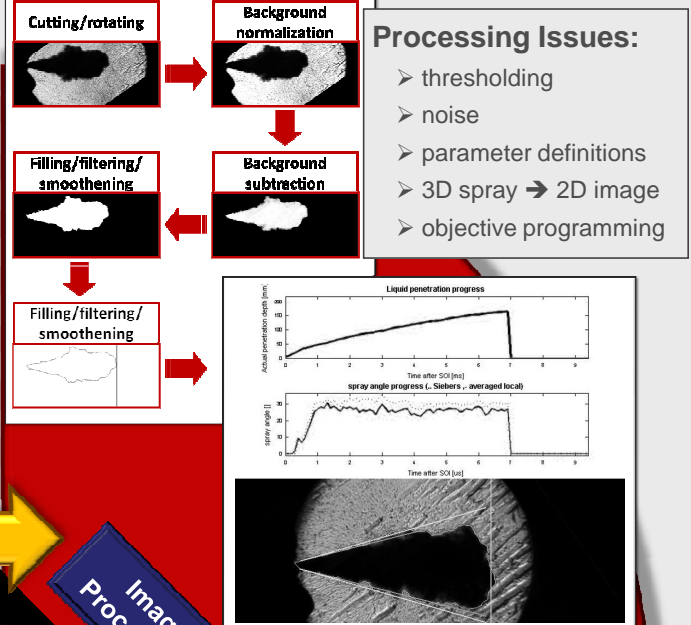
Ghent University Combustion Chamber I



Experimental issues:

- synchronisation
- reproducibility
- optical setup alignment

Spray Parameters Calculation



Data
Acquisition

Image
Processing

Analysis /
Conclusions

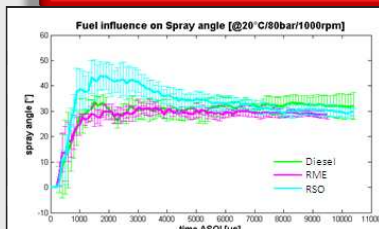
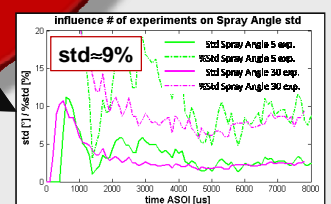
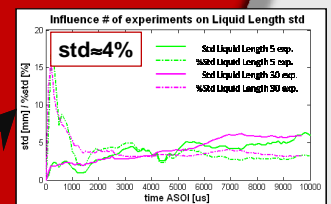
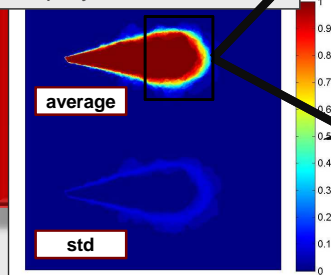
Averaging /
Deviations

High standard deviations:

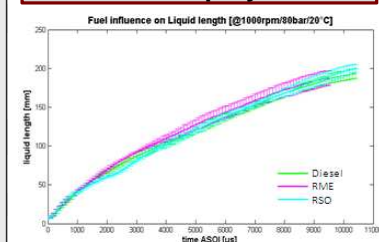
- sprays are sensitive processes
- uncontrollable ambient turbulence

Averaged sprays:

- loss of information?
- real spray ≠ averaged spray



Cold sprays

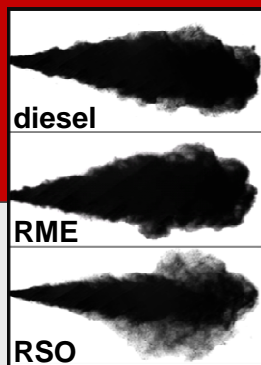


No significant difference for

- Liquid Length (SAE1999-01-0528)
- Spray angle (SAE1999-01-0528)

Structural difference

➔ Not captured BUT needed



Results Experiments

Accuracy & Reproducibility

