

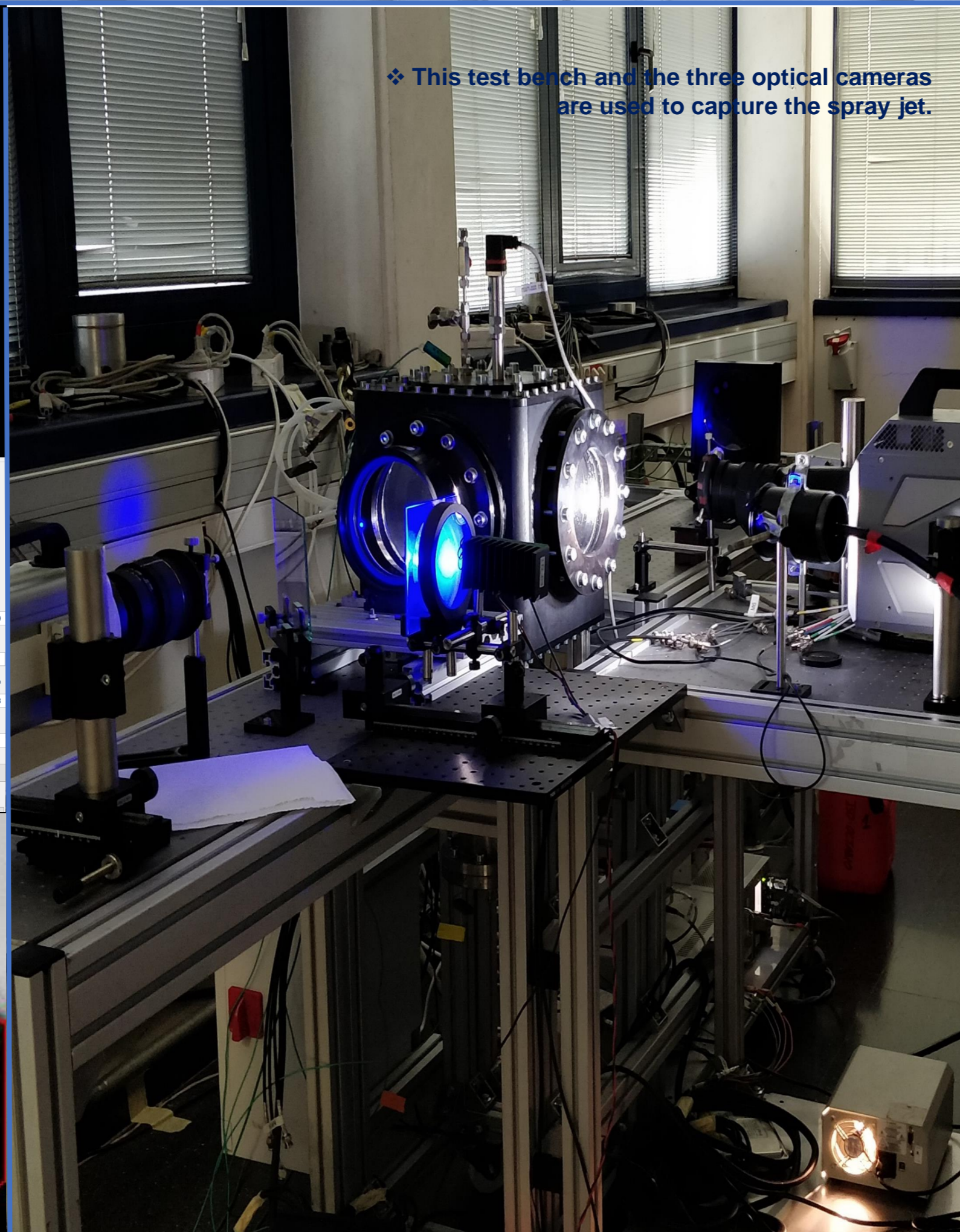
DIRECT INJECTION TEST BENCH IN GDI ENGINES

OBJECTIVES INTO NEAR AND FAR FIELD:

- OBSERVE LIQUID AND VAPOR SPRAY
- CONDITIONS FLASH BOILING
- CONDITIONS COLLAPSE

IMAGING TECHNIQUES

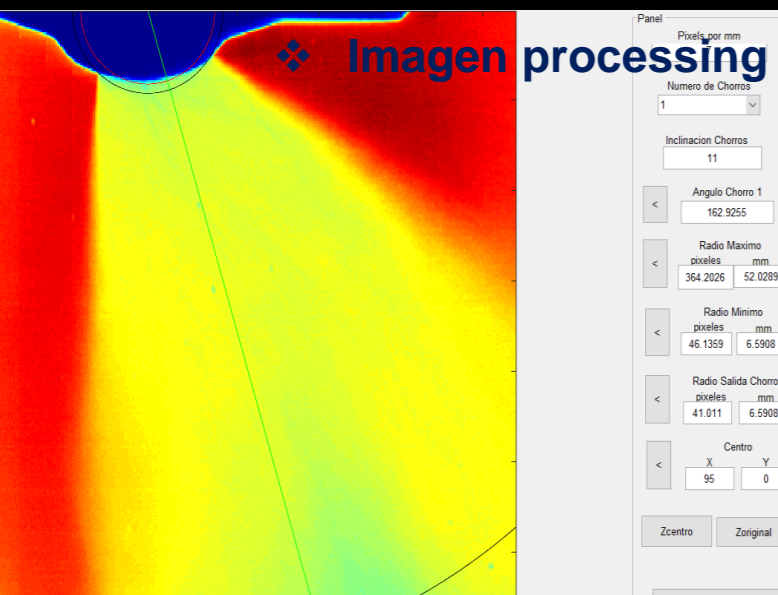
- DBI TECHNIQUE
- SCHLIEREN TECHNIQUE
- MIE TECHNIQUE



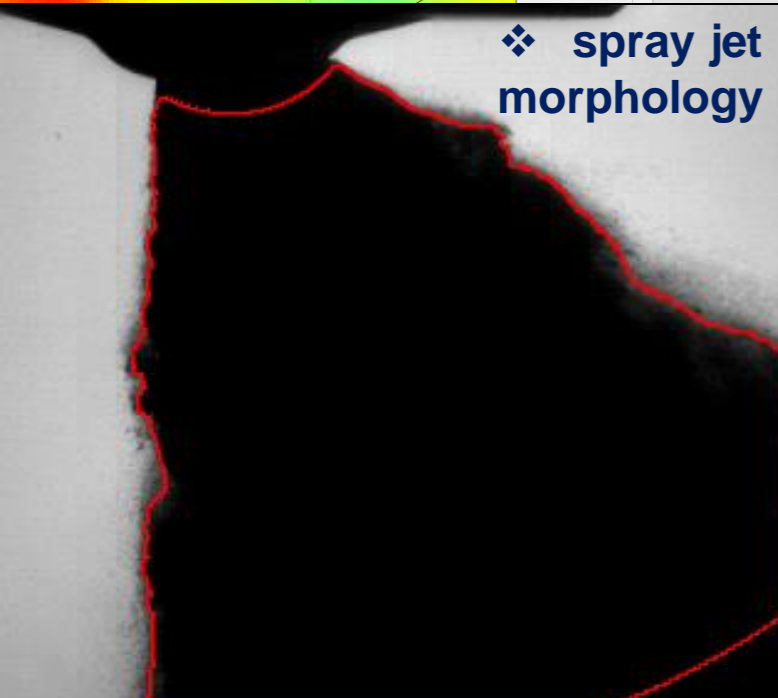
❖ This test bench and the three optical cameras are used to capture the spray jet.

POSTPROCESSED ANALYSIS

- FURTHEST
- SPRAY ANGLE
- VELOCITY
- WIDTH
- OBSERVATION OF SPRAY COLLAPSE AND FLASH BOILING



❖ Imagen processing



❖ spray jet morphology

