



News from the Pellet target

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Current status of the prototype

1. Stable long time jet and droplet production (many hours)
2. Almost no usage of the heaters for tuning of the temperature distributions.

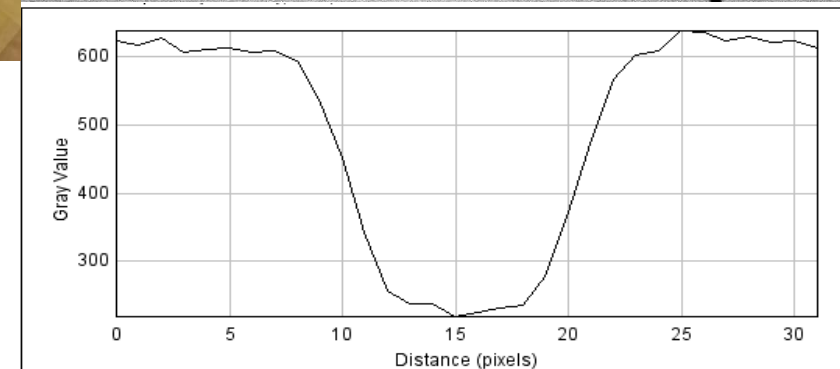
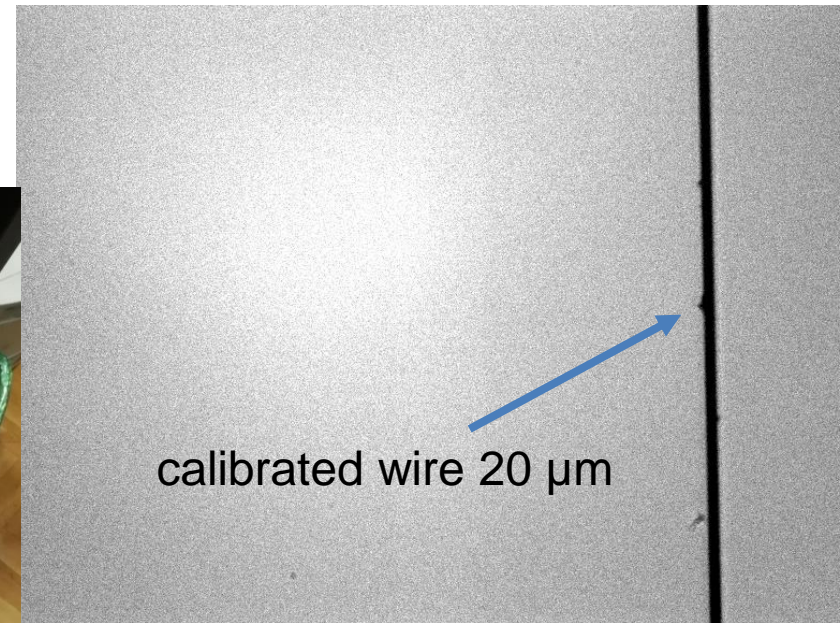
Current activities

1. Development (upgrade) of the diagnostic system.
2. Measurement of the parameters of the pellets.
3. Step by step decrease of the nozzle diameter.
4. Operation and study of the adjustment system.
5. Continue R&D for TDR
6. Preparation of the draft of the TDR

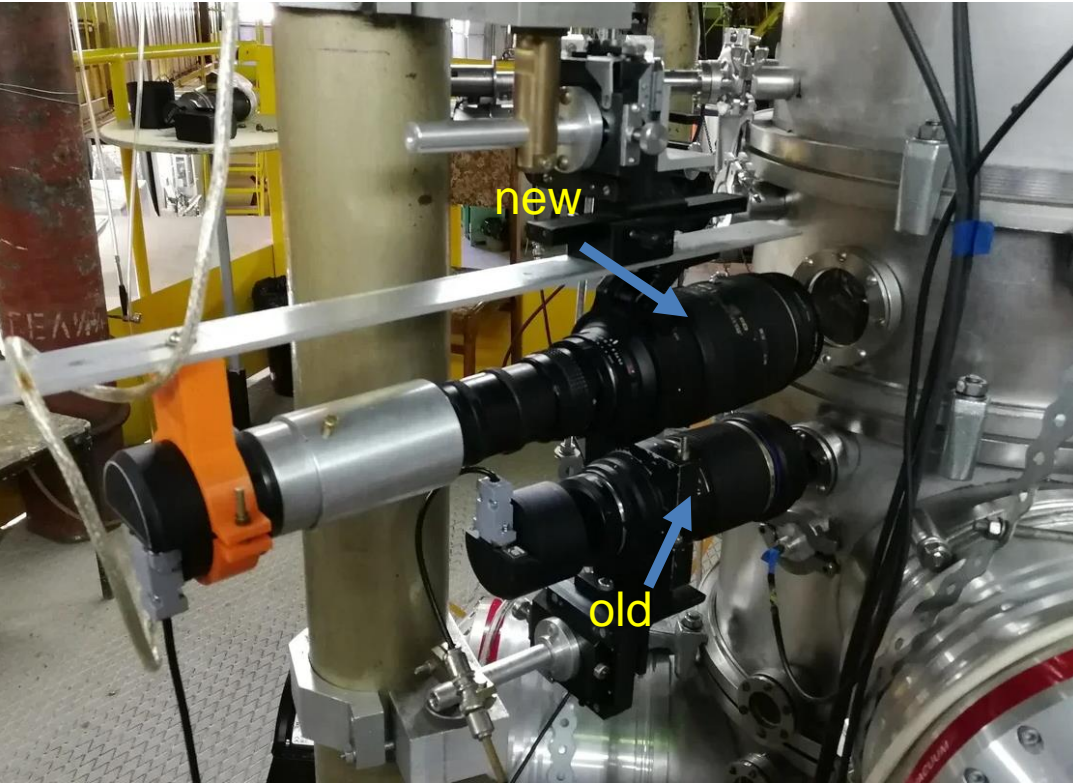
Test of the prototype of the new diagnostic system



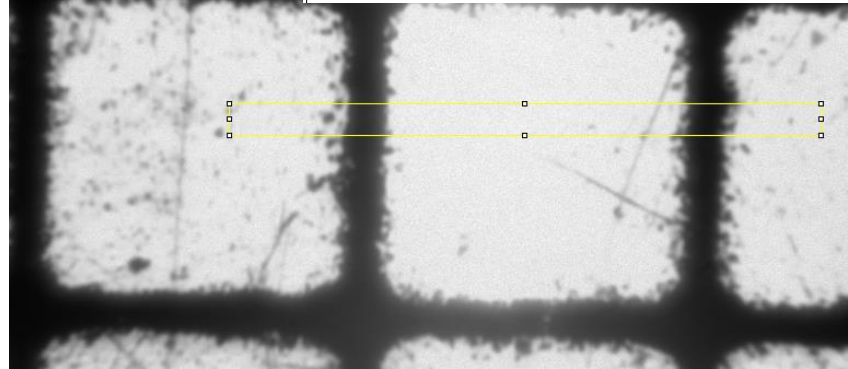
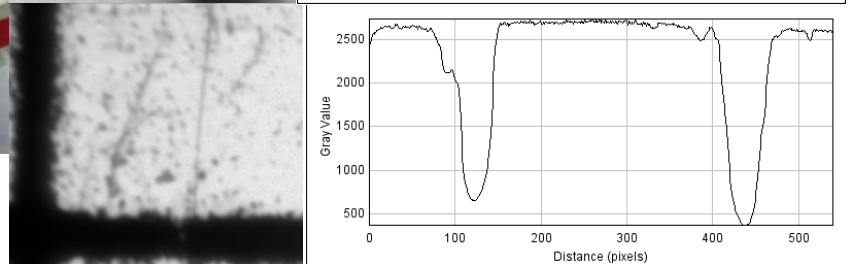
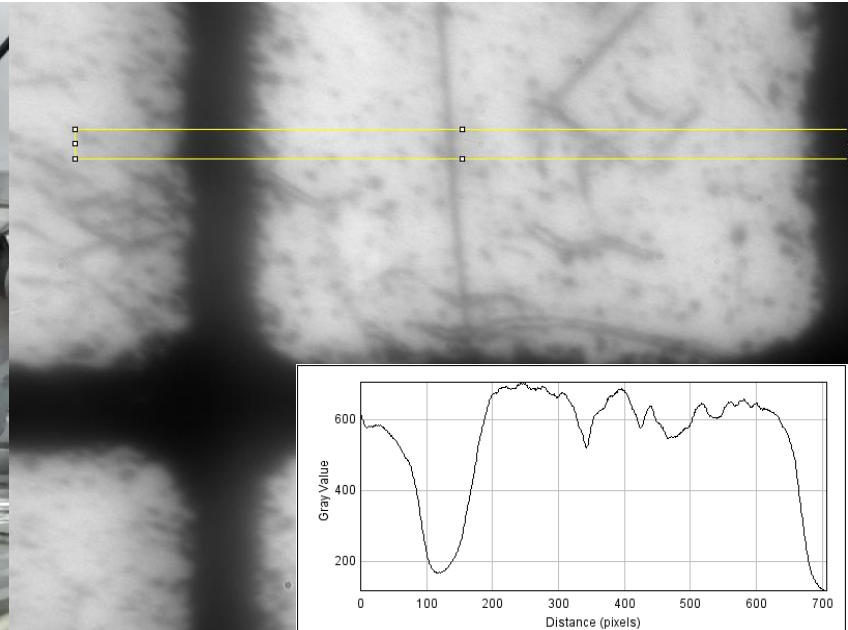
CCD camera SDU 285
Nikon 80-400mm f/4.5-5.6D ED VR AF Zoom-Nikkor
Close-up lens +3 dioptré
Resolution: 2 μ m/pixel



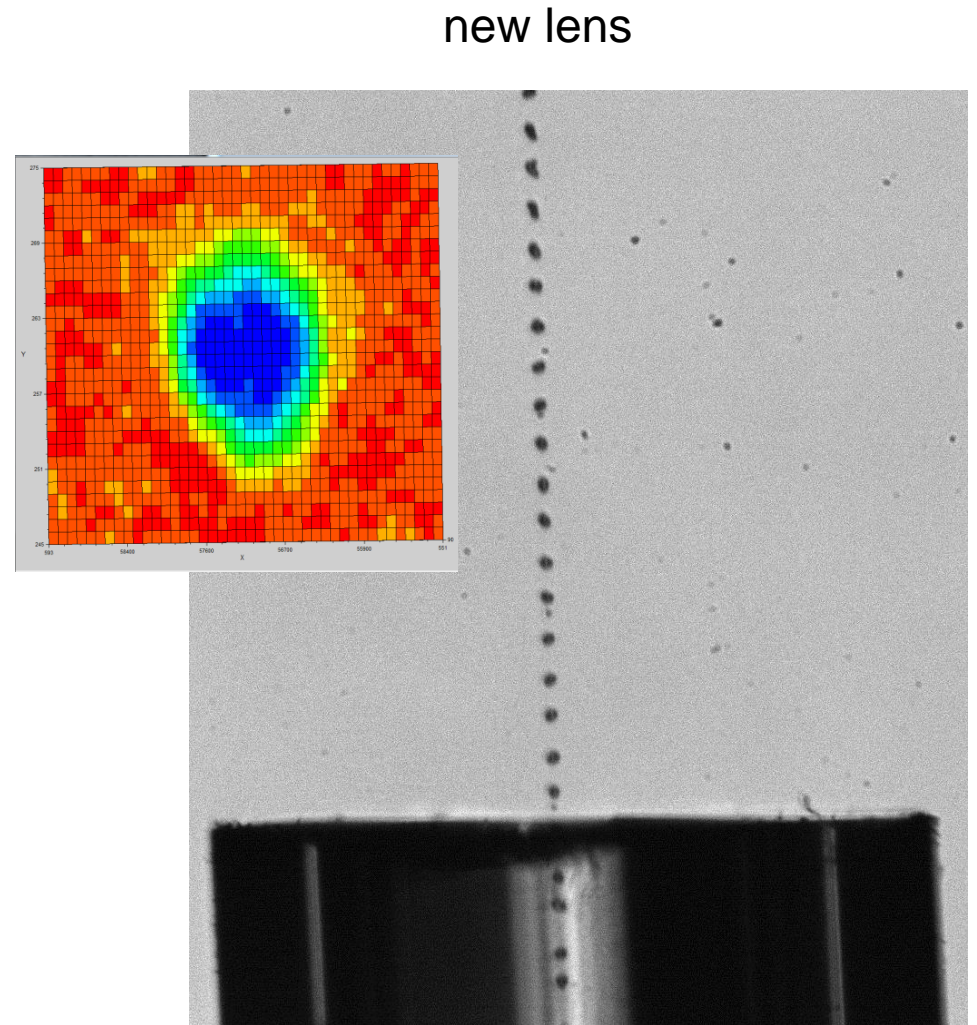
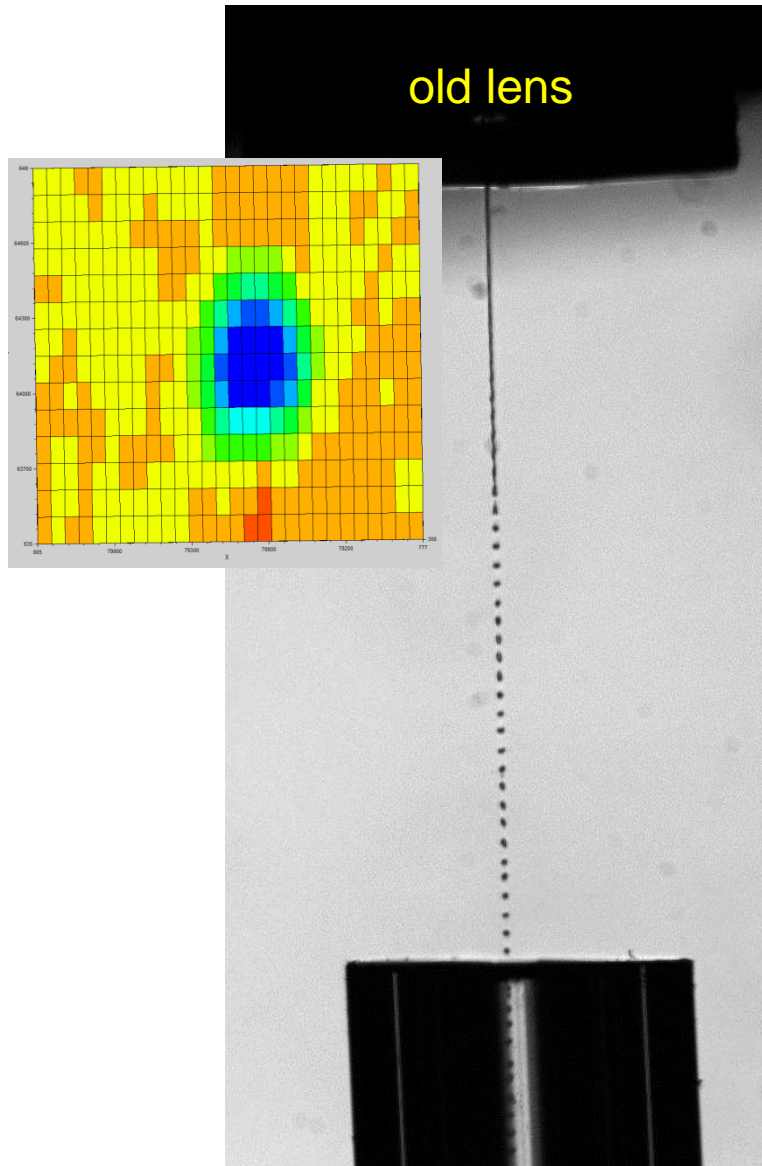
Installation of the new diagnostic system



CCD camera SDU 285
Nikon 80-400mm f/4.5-5.6D ED VR AF Zoom-Nikkor
teleconverter 2x
Close-up lens +3 diopre
Resolution : $\sim 1.7 \mu\text{m}/\text{pixel}$



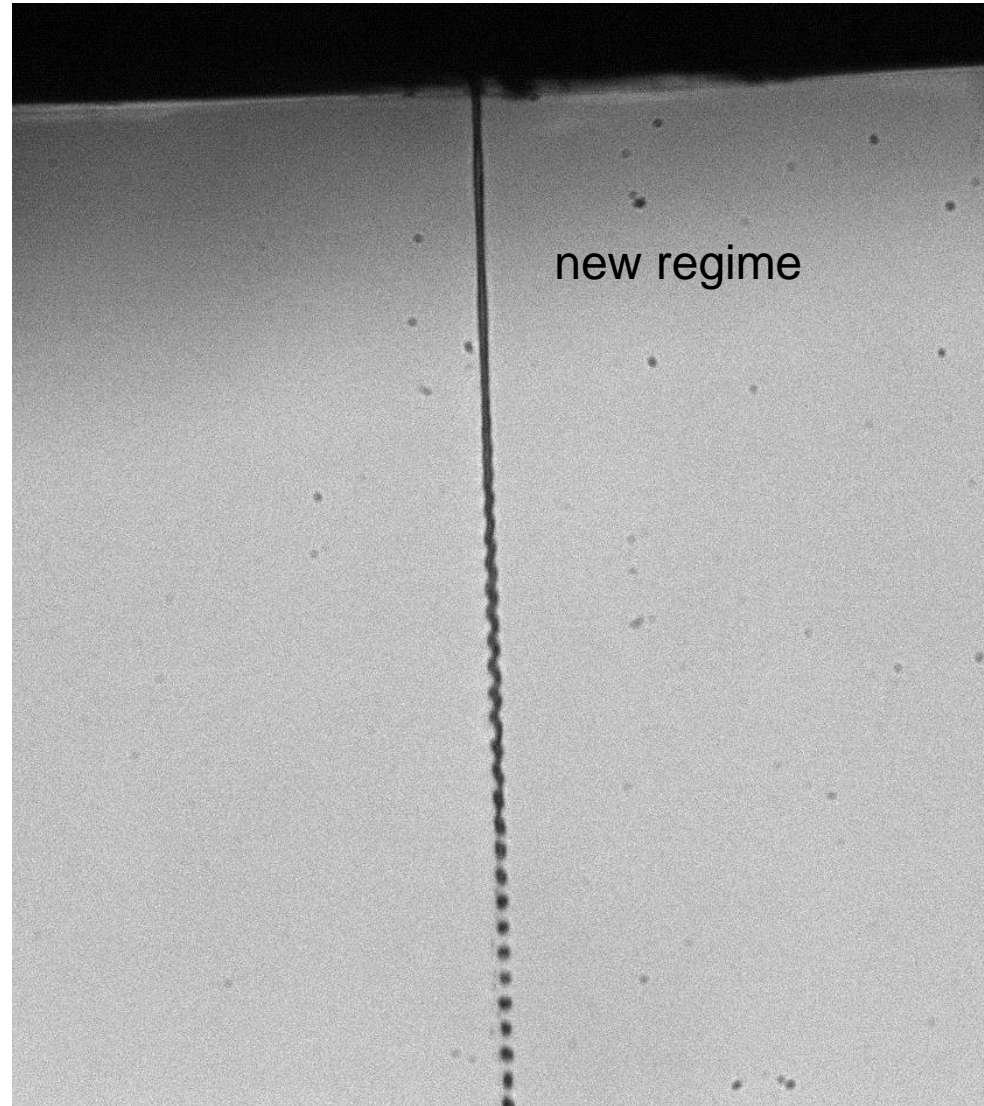
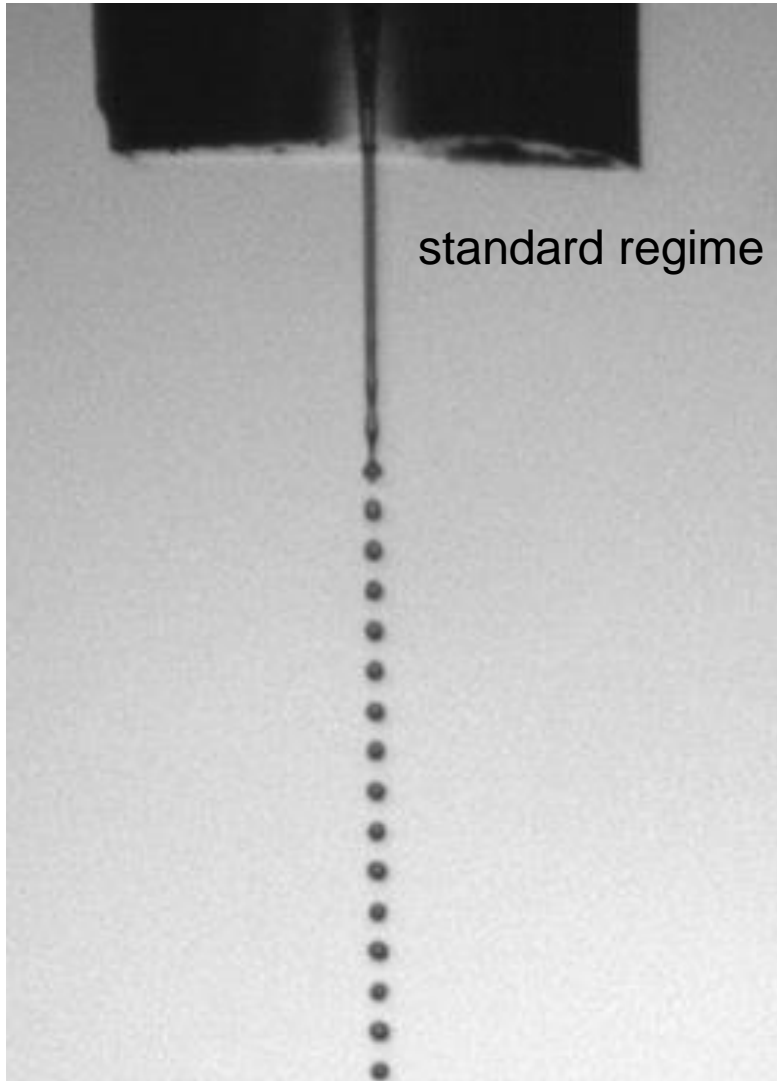
Measurement of the pellets



Resolution : improved from $6.4 \mu\text{m}/\text{pixel}$ to $\sim 2 \mu\text{m}/\text{pixel}$

Observed effects

Comparison with the standard droplet formation regime



Observed effects

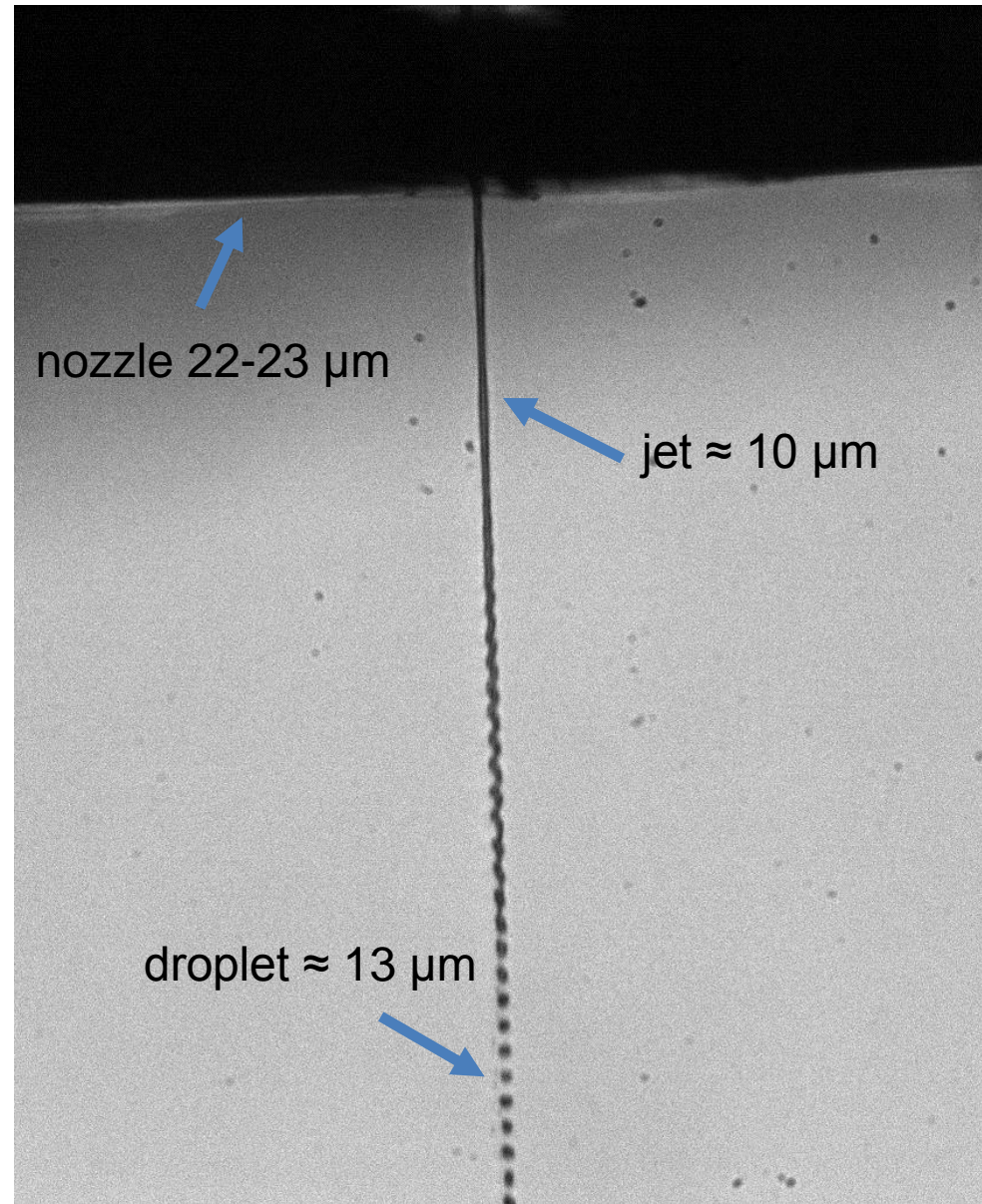
Effect N1: jet diameter is much smaller as the nozzle diameter

Effect N2: droplet diameter is $\approx 13 \mu\text{m}$

This is the first observations.

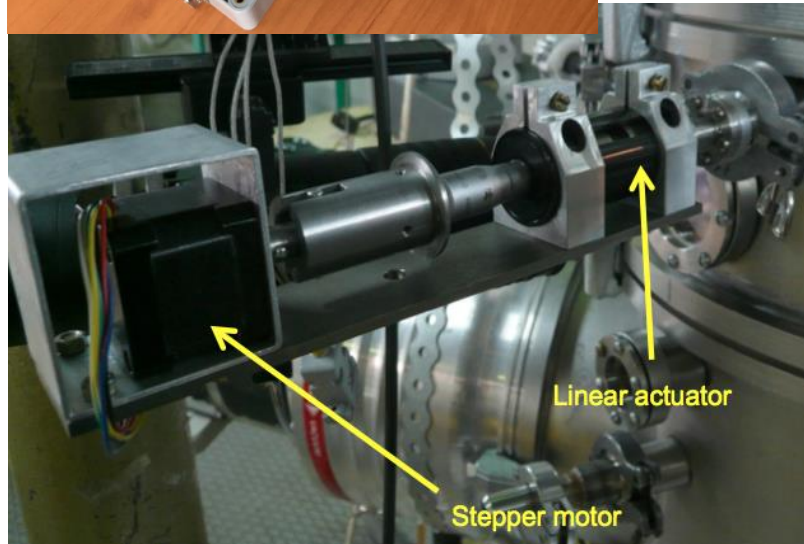
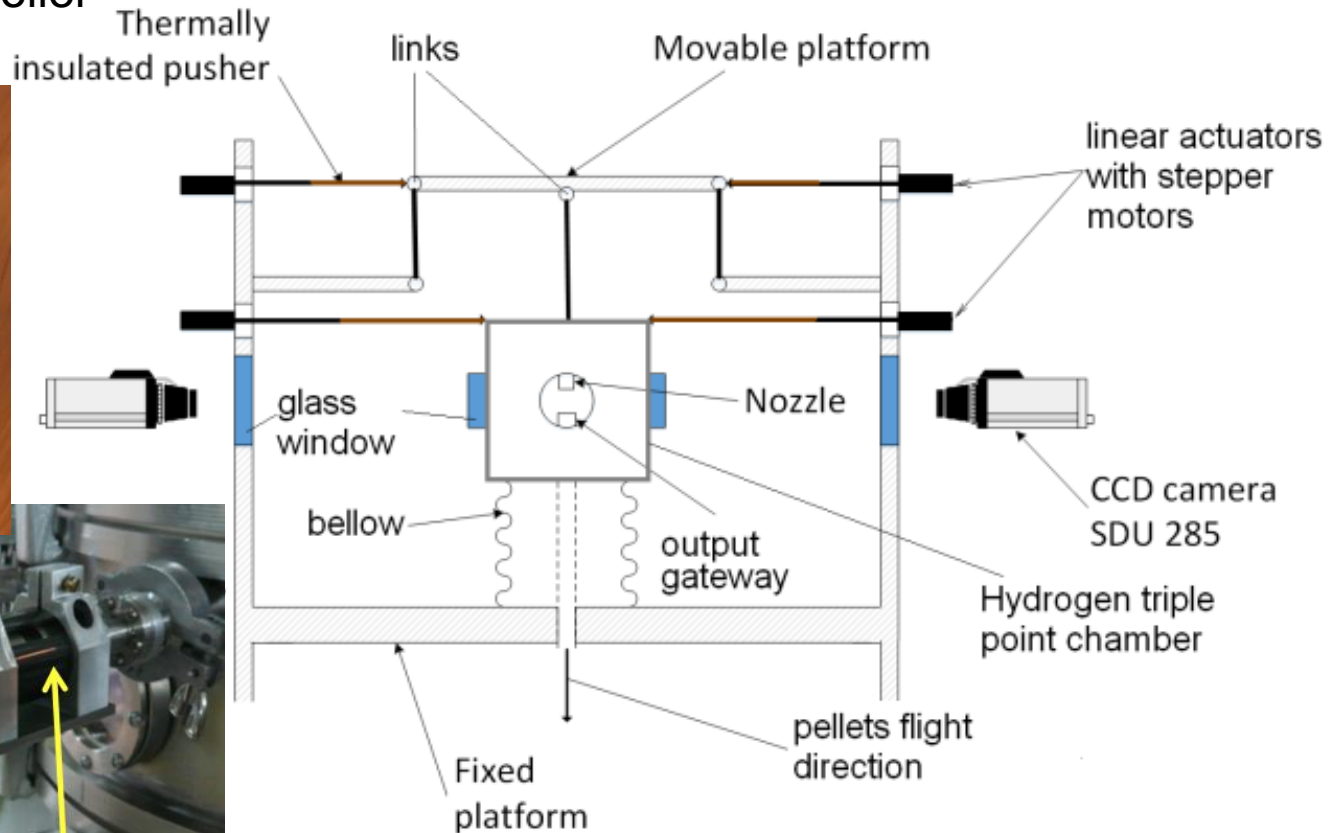
No explanations.

Additional investigation is needed.



Development of the adjustment system

- MDC Vacuum BLM-133-1-03 UHV linear actuator
- Movement by stepper motors, 3 μm linear steps
- Onitex OSM-42R controller



New elements are installed. Commissioning and tests are going on.