Evidence of fracturing droplets and spicules during SPICULE RF06

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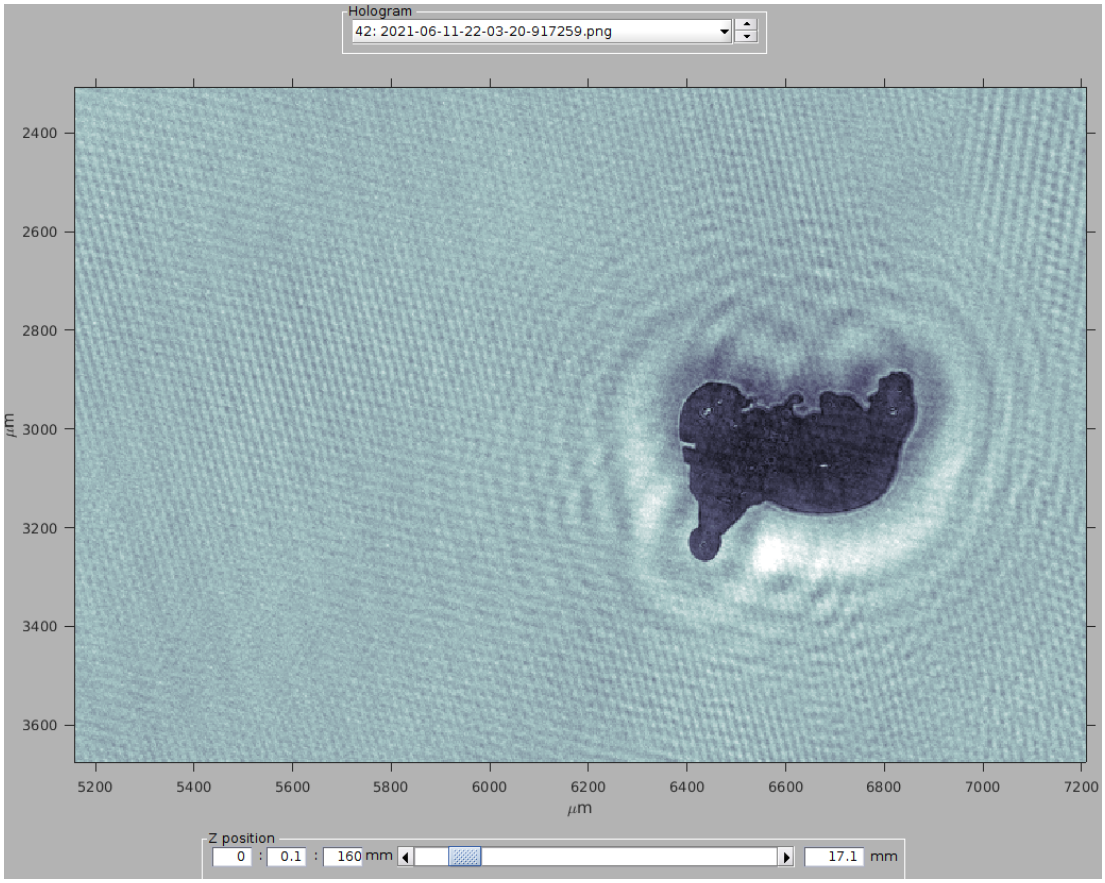
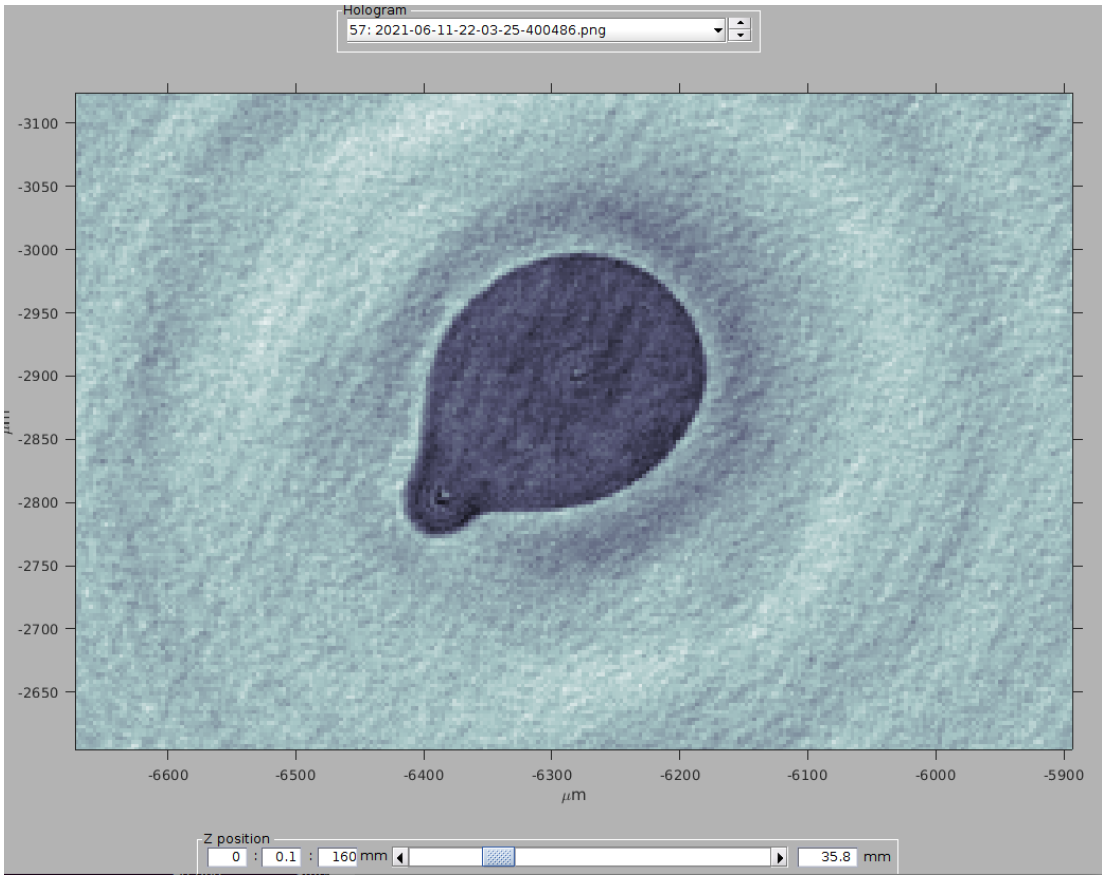
Table 1

Possible fracturing droplets and spicules seen in holodec.

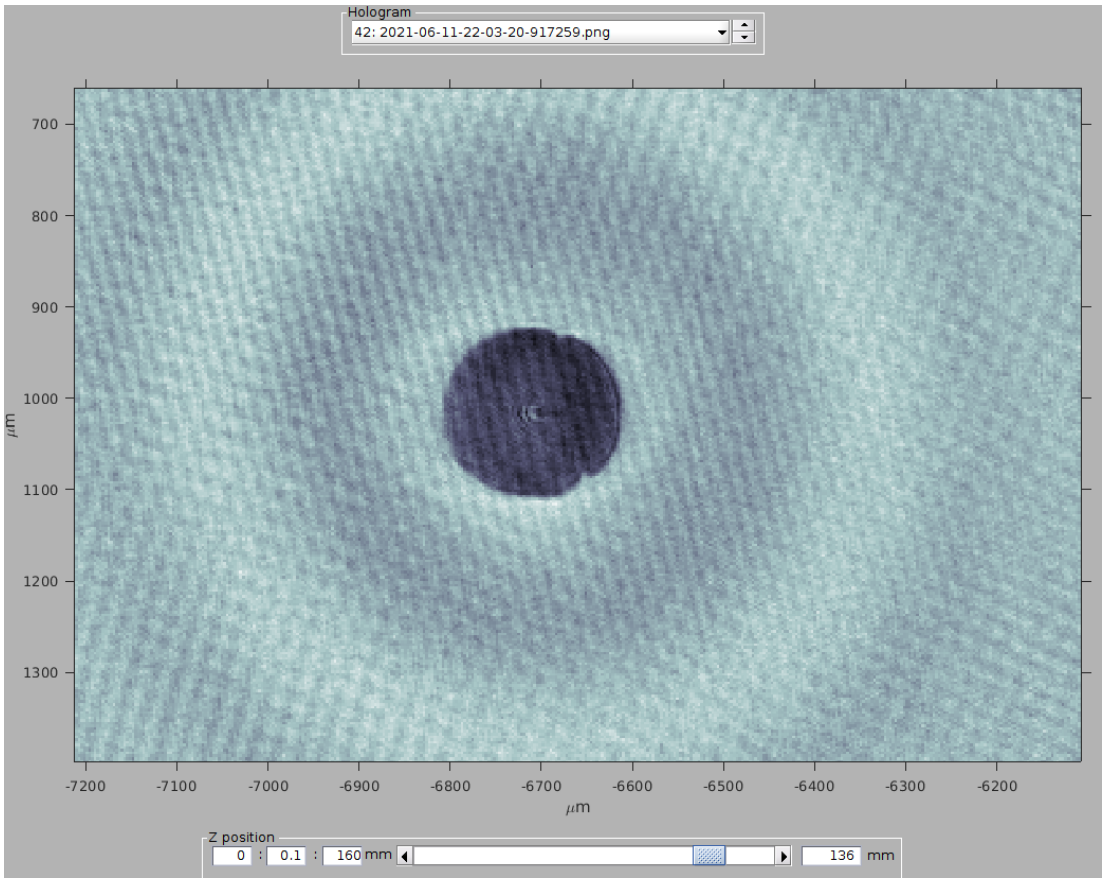
	**(A)** Timestamp: 22:03:20 Size: 0.47mm long



(B)

Timestamp:
22:03:25

Size:
0.2 mm diameter



(C)

Timestamp:
22:03:25

Size:
0.2 mm diameter

Figure 1

Summary of conditions.

This was a kind of rare event where these were seen. They were observed in what appears to be a shaft of precipitation, with very low concentrations. Ambient temperature was -2.7 C.

LINK TO VIDEO

Figure 2

Vertical wind velocity, keeping in mind that the aircraft is mid-turn during this measurement.

First particle (A) was observed in a downdraft of -3.2 m/s and the particles (B) and (C) were observed in a weak updraft of +1.23 m/s.

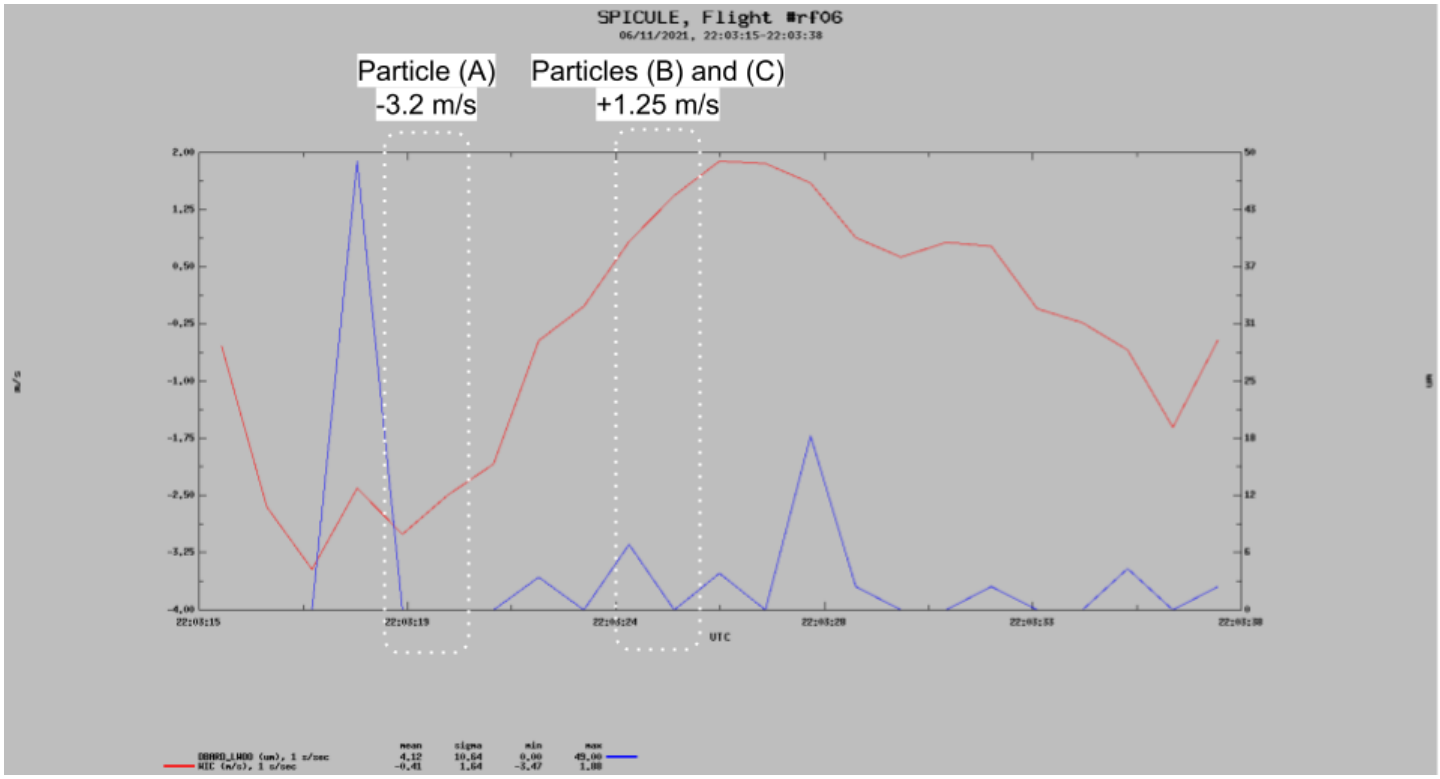


Figure 3

Height above cloud base.

These were shallow clouds that were being penetrated near the tops. But the region where these were detected is not a typical clean cloud pass, as can be seen from the camera video.

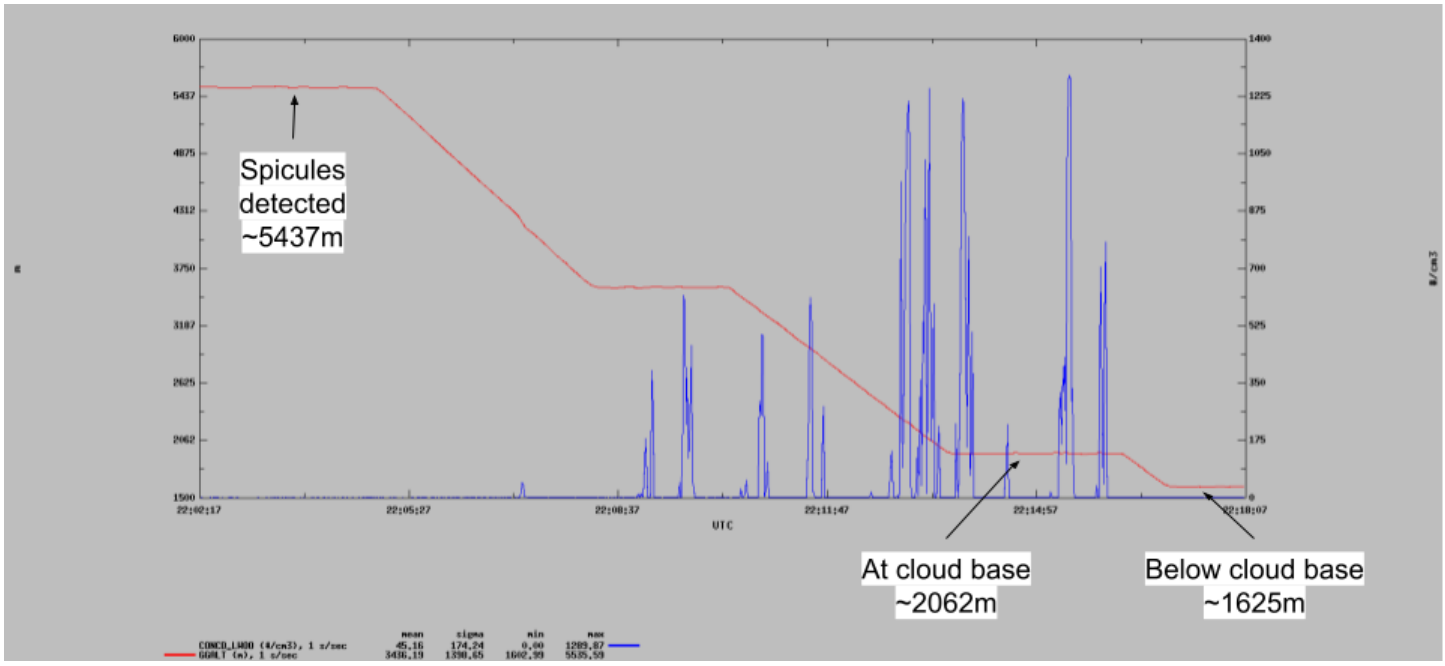


Figure 4

Low concentrations.

CDP detects nothing in terms of droplet number concentration in this region where the spicules are detected in holodec. However, Dbar has a spike.