Fog intensity (LWC) highest during the first 2-3 of 5 h of fog

Nocturnal fog in the Central Namib is linked to an advection of the quasi-permanent stratus layer above the South Atlantic from the Northwest.[1]

Beside standard met. measurements, FogNet (Fig 1) records fog water input with Juvik fog collectors. The derived monthly fog/stratus frequency from these measurements depends on the station's elevation/dist. to the coast (P-1-21).

Microsensors were installed temporarily for comparison, but measured input appears correlated to amounts of drizzle instead (P-2-07/P-2-09).

A sonic anemometer (IRGASON, Fig 2A) and cloud droplet probe (CDP, Fig 2B) setup deliver information about fog characteristics: droplet size distribution (DSD), liquid water content (LWC) and turbulent liquid water flux (LWF).[2,3,4]

The setup of CDP+Sonic was deployed in turn at Gobabeb (GB), Vogelfederberg (VF) and GB again (black markers in Fig 1). More than 150 fog events between the two stations of varying duration/intensity/fog water input were recorded.

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Fog events in Gobabeb are dynamic over their life time and fog water input (NRWI/FP) appears to react to a short decrease of droplets numbers (Fig 3).

Droplets up to ~40 μm are dominant in Gobabeb. Droplets below ~14 μm contribute little to LWC due to their small size (Fig 4A/C).

A decrease of small and large droplets (<10 and >40 μm) indicates a weakening after ~3h (Fig 4B/C).[1]

Total LWF over the course of one event is typically downward but upward fluxes are not negligible and show no correlation to LWC on a 30 min basis (Fig 5).

Total LWF at Gobabeb (Fig 6A) and Vogelfederberg (Fig 6B) appears to be a net gain for the surface over the course of one event is typically downward but upward fluxes are not negligible and show no correlation to LWC on a 30 min basis (Fig 5).

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