New sensing methods within the TWIGA project

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TWIGA Partners





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TWIGA Project



TWIGA

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TWIGA Service Sectors





Global Earth Observation System of Systems





Value Chain Approach for all Services



TUDelft

TWIGA

TWIGA activities and partners











TUDelft

Distributed Temperature Sensing Soil Moisture





Steele-Dunne et al., 2010

DTS Soil Moisture

A

UDelft





Position cable (yellow line). A: Place where DTS apparatus and cold/warm calibration baths will be placed. B: Place where end-point calibration bath will be installed. Location: https://www.google.com/maps/@6.6908106.-1.517288.400m/data=!3m1!1e3

Distributed Temperature Sensing Soil Moisture





TUDelft





UAVs Soil Moisture

fUDelft







SAR Soil Moisture







Intervalometer Rainfall







Intervalometer Rainfall





 10 intervalometers, 1 acoustic disdrometer, 2 TB

∀ TUDelft



Didier de Villiers Intervalometer Rainfall





Didier de Villiers Intervalometer Rainfall

Delft



PMF of drop counts drops per 10s for Disdro @ PolePole for storm 21 and data start 12, dispersion = 1.0



Didier de Villiers Intervalometer Rainfall

Delft



- 31/413 rainfall patches are classified as Poissonian!
- Mean Dispersion (Poisson) = 1.12
- Mean Dispersion (Non Poisson) = 1.75
- Mean Drop Arrival = 1.00 drops per 10s
- Mean Drop Arrival = 1.98 drops per 10s

Didier de Villiers Intervalometer Rainfall





Didier de Villiers Intervalometer Rainfall

∀ TUDelft





Jan-Jaap Pape (UU) Intervalometer Rainfall

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Intervalometer / Disdrometer Rainfall

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Kumasi Hackathon







Kumasi Hackathon Plastic spectrometer

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Kumasi Hackathon Irrigation advice

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Kumasi Hackathon Particles / LoRa







AS3935 - Lightning









Article

Delft

Potential of Cost-Efficient Single Frequency GNSS Receivers for Water Vapor Monitoring

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GNSS / Precipitable Water Vapor



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