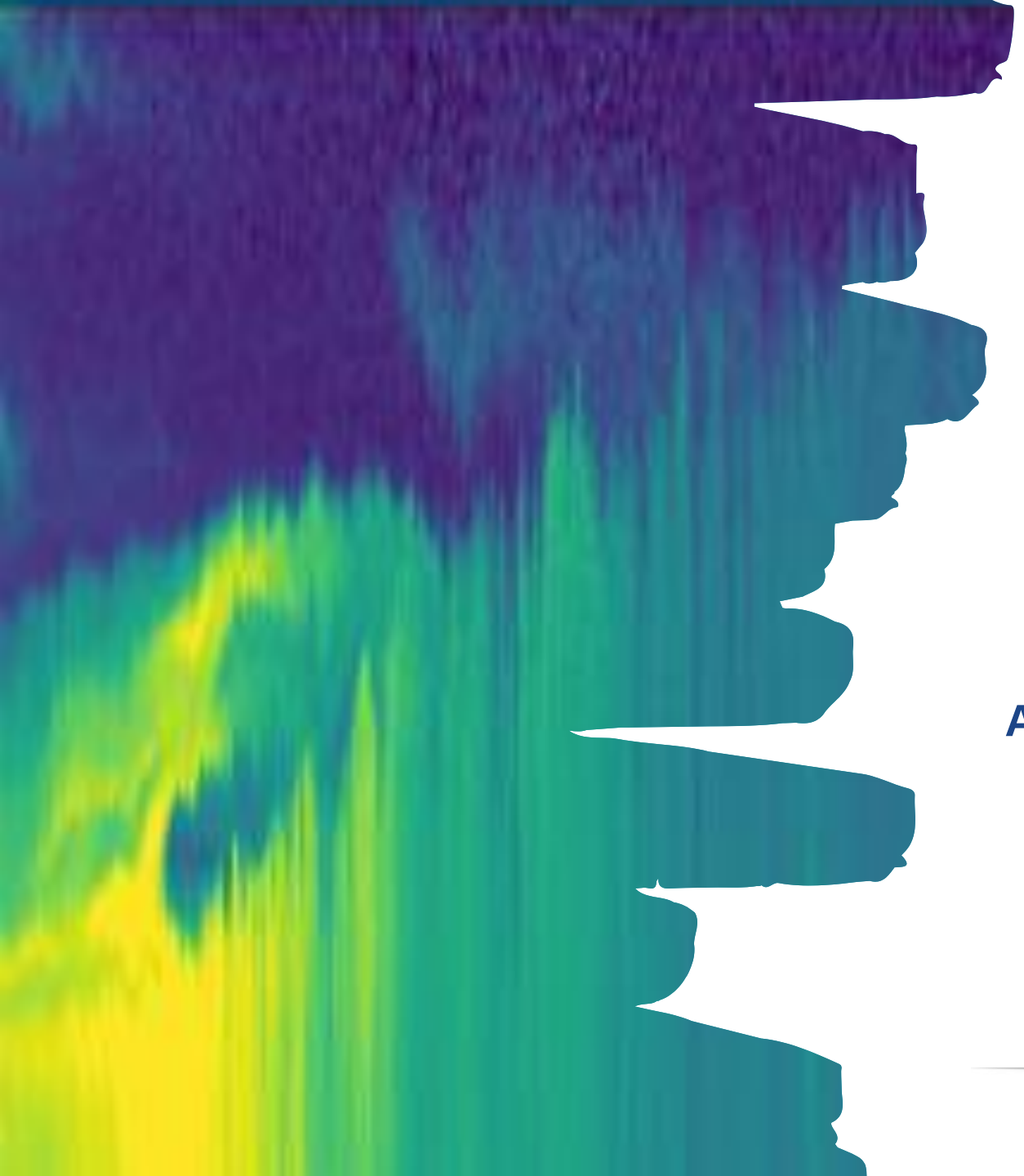

ACTRiS CCRES

ALC processing for CARS and CCRES products

Breakout session summary

CCRES Workshop, SIRTA – Nov 14-15th, 2022

This project receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No 871115

Advanced ALC products

Cloud remote sensing data centre units (CLU)

- Cloud base height
- Liquid water content
- Target classification / drizzle / precipitation/ …

AERIS-ESPRI

- ABL heights (ABL testbed method demonstration)

Aerosol remote sensing data centre units (ARES)

- Aerosol optical and microphysical properties
- Mass concentrations
- Aerosol typing

RCS → attenuated backscatter @ CLU

- CHM overlap: robust method available
- Vaisala near-range and background: assess against ‘cone’ measurements
- Rayleigh calibration: ALICEnet, SCC approach
- Liquid cloud method (CL31, CL51): several implementations
- Next: corrections and calibrations for Cimel, miniMPL, Campbell sensors

	Overlap	Near-range artefacts	background	Water vapour	Calibration
Lufft CHM15k, CHM8k	automatic method → python				Rayleigh → python
Vaisala CL31, CL51		Automatic method → python	Automatic method → python, check against cone measurements	To be discussed	Liquid cloud
Vaisala CL61		To be checked		Necessary?	Rayleigh
Cimel CE376					
Droplet MT miniMPL					
Campbell SkyVUE PRO				tbd	

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Data flow

SOPs

Sites with **ALC** (cloud, aerosol, RI-URBANS, external)

Raw RCS data

CLU

Corrected and calibrated attenuated backscatter

CLU

Cloud & precip products

AERIS

ABLH and characteristics

ARES

Aerosol properties*, mass, typing

CCRES

RI URBANS

CARS

*Retrieval comparison and development in RI-URBANS: ALICEnet & BASIC-evolution at AERIS-ICARE

Strategy

Working groups: corrections and calibrations

- CHM overlap: IPSL + CLU +E=PROFILE
- Vaisala near-range and background: plans at LMU and FMI to assess against ‘cone’ measurements
- Rayleigh calibration: ALICEnet, CARS/LMU, IPSL, KNMI, …
- Liquid cloud method (CL31, CL51): discussion between IPSL, E-PROFILE, FMI, Uni Cologne, …
- Next: corrections and calibrations for Cimel, miniMPL, Campbell sensors

Working groups: corrections and calibrations

- ABL height retrievals: ABL testbed at AERIS-ESPRI + partners
- Aerosol properties + mass: RI-URBANS, CARS/LMU, ALICEnet, ICARE, …
- Aerosol typing: RI-URBANS, CARS/LMU, ALICEnet …

New mailing list: please join!

https://listes.ipsl.fr/sympa/info/actris_alc

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