



THE CYPRUS
INSTITUTE

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Atmospheric experimental activities in Cyprus : The ENVI-MED 'CyAr' project

French partners: (involved in the field observations)



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MOTIVATIONS



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MOTIVATIONS

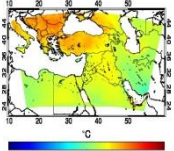
Dramatic climate changes: warmer and drier

A strategic receptor site downwind of emissions from 3 continents

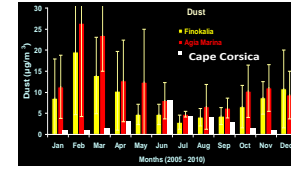
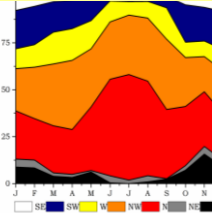
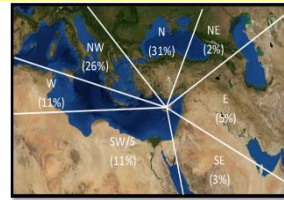
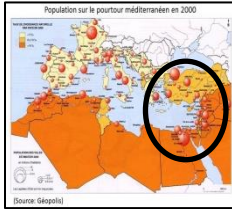
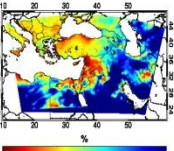
Increasing anthropogenic pressure

A region characterized by the highest dust loading in the Mediterranean

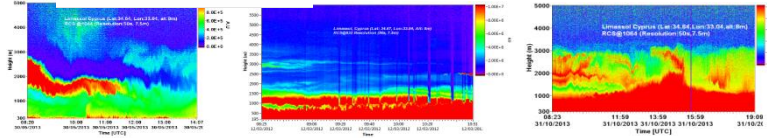
TX JJA (2040 2069-1981-1990)



RR JJA (2040 2069-1981-1990)



A real world laboratory to investigate properties (IN, Abs.) from African / Middle East desert dust



OBJECTIVES & STRATEGY

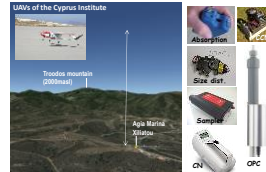
Implementation of ground-based observations

Extending field observations horizontally and vertically

Increase Research Activities & Integrate EU networks

Instrument	Parameter	T
Aerosol Chemistry		
Chemical Ionization Mass Spectrometer (CIMS)	Organic Aerosols (OA)	30 min
Aerosol Chemical Ionization Mass Spectrometer (ACIMS)	Organic Aerosols (OA)	30 min
Aerosol Chemical Ionization Mass Spectrometer (ACIMS)	Organic Aerosols (OA)	30 min
TEOM & TSI-PM10	PM ₁₀ & PM _{2.5}	1 min
Aerosol physical properties		
USC OPC	Number Concentration (0.3-10 μm)	1 min
USC SAPS	Number Concentration (0.3-10 μm)	1 min
HTDMA	Hygroscopicity	10 min
Aerosol optical properties		
Aethalometer (AE33)	Aerosol Absorption	1 min
USC Nephelometer	Light scattering	1 min

Vertical in-situ measurements with UAVs



Regional ground-based Observations

