



UNIMORE

UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA

**Climate
Change & Public
Health**



Climate change: evidence from the centenary series of the Geophysical Observatory of Modena

Sergio Teggi, Luca Lombroso - Osservatorio Geofisico di Modena

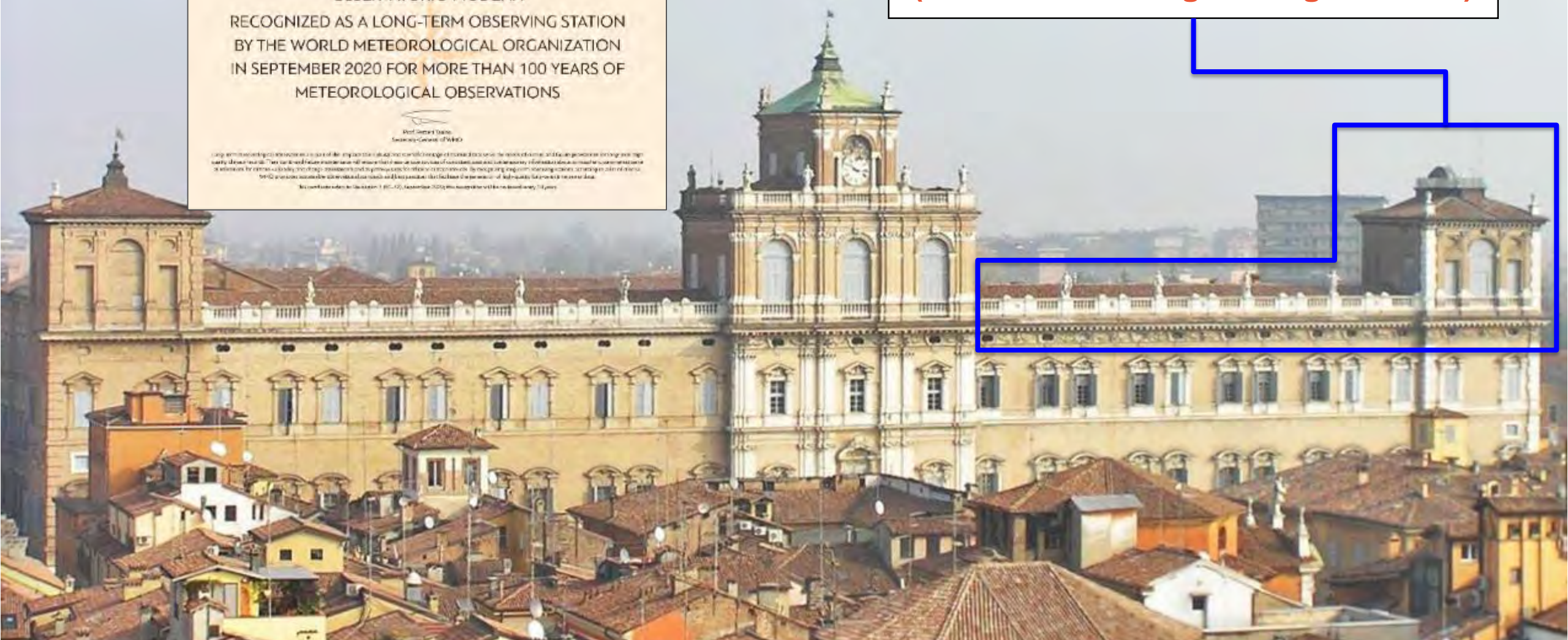
Dipartimento di Ingegneria "Enzo Ferrari "

Reggio Emilia, 9th June 2023



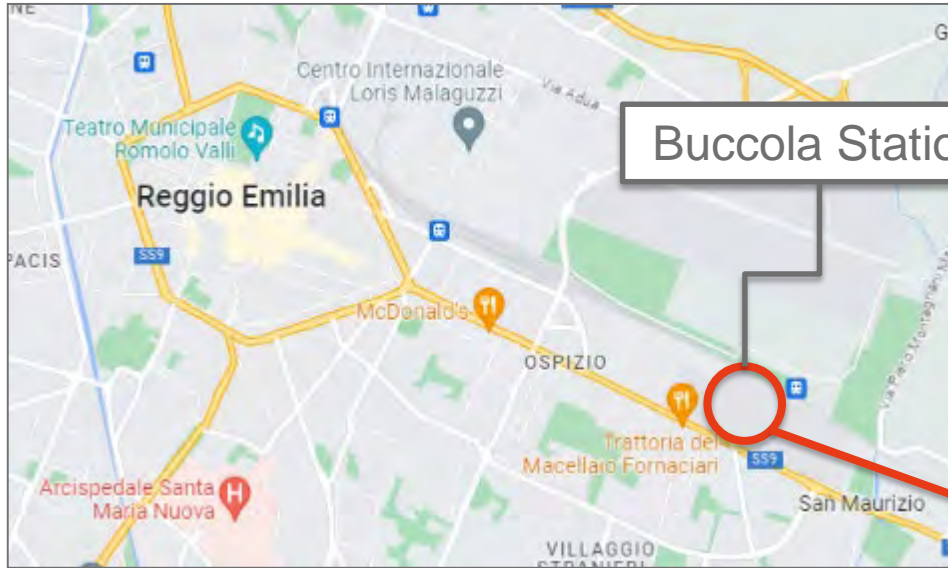
OSSERVATORIO GEOFISICO DI MODENA

Centennial observing station
(World Meteorological Organization)





Where we take measurements



Buccola Station

Data flux



Via Caruso Station

Palazzo Ducale
Hystorical Station

Policlinico Station

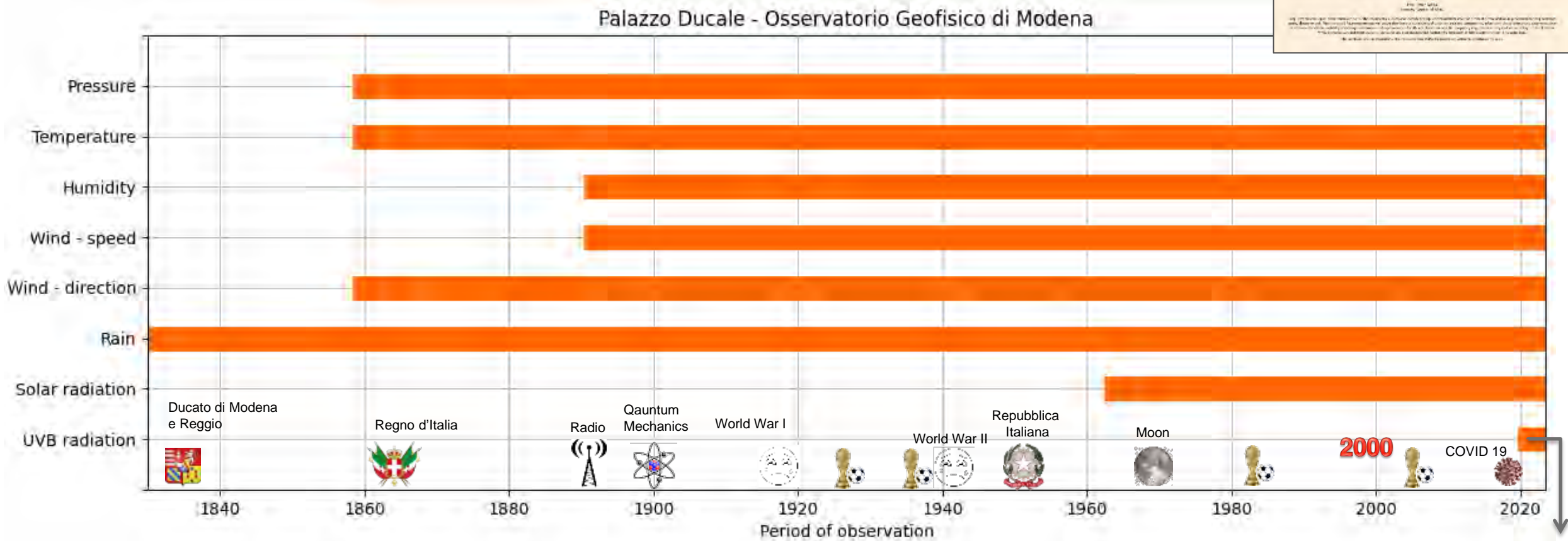
Campus DIEF
Master Station

Campus DIEF



Dataset consistency

First of all: the Centennial Series



UVB radiation: the most recent

190 anni, ma non li dimostra, è ancora molto giovanile e alla moda

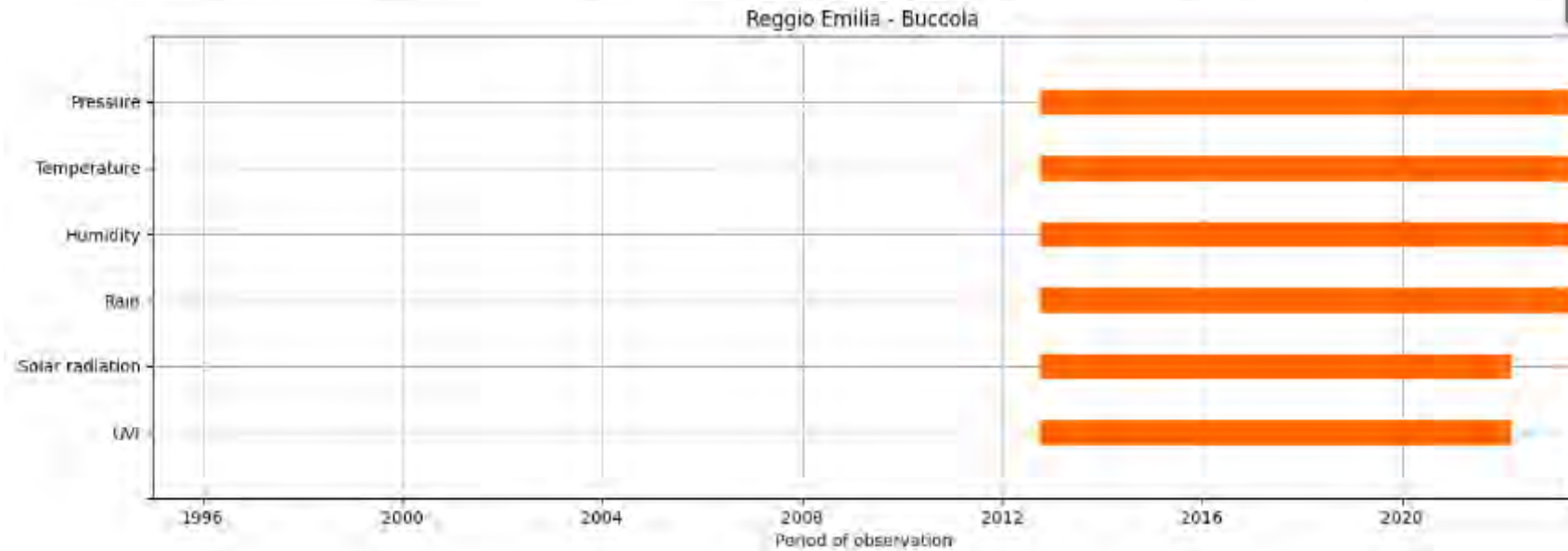
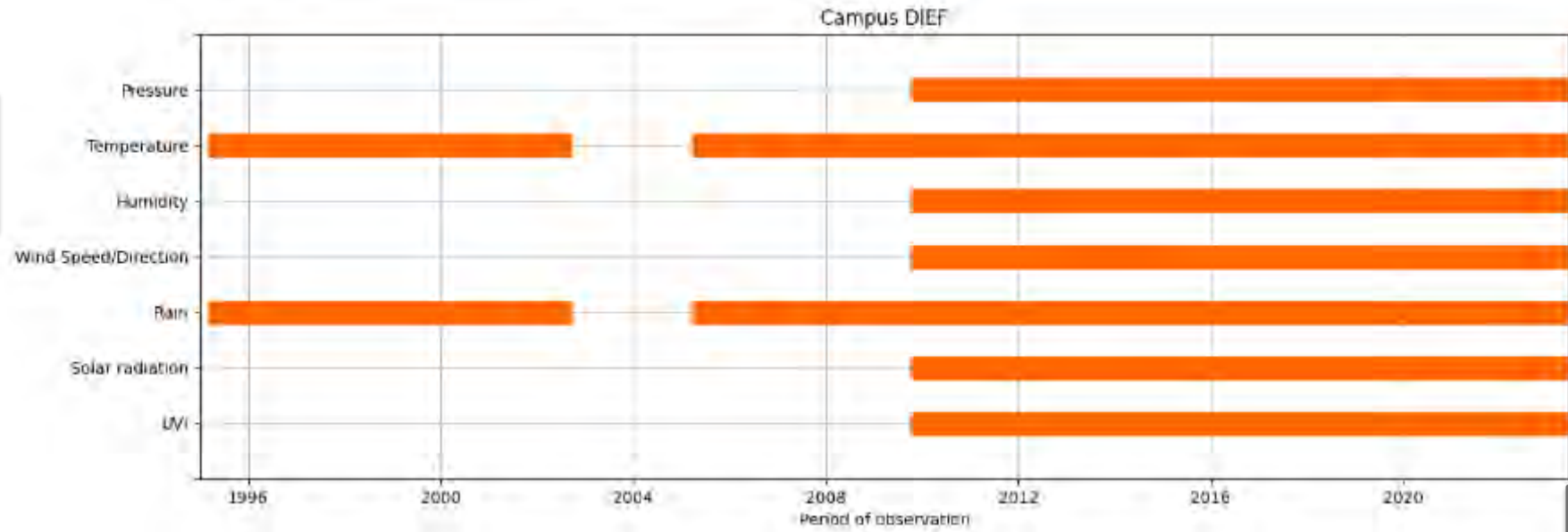


Just born:  **Measurements of CO₂ fluxes**



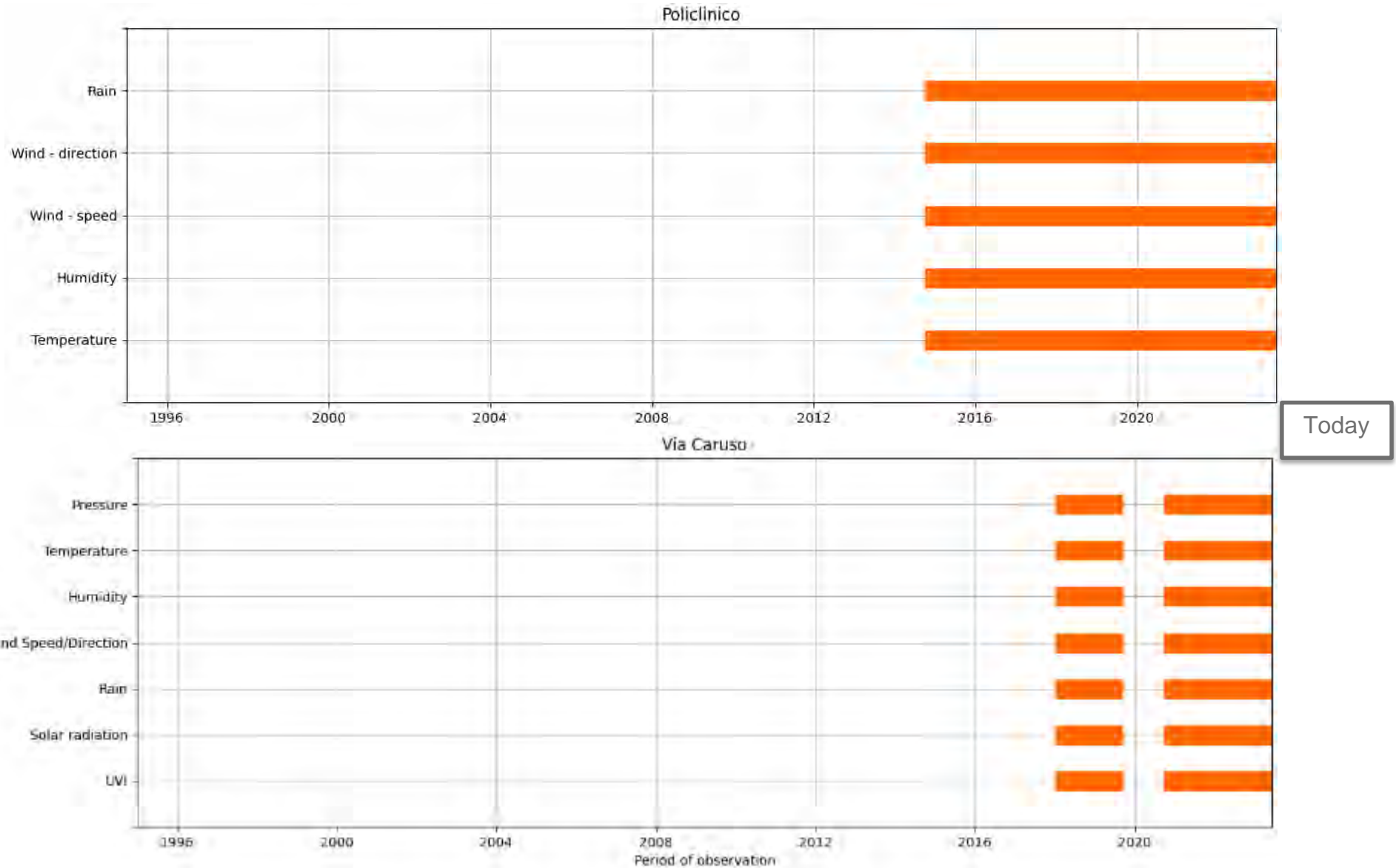
Dataset consistency

Principal quantities
measured
Data stored each 10 min.



Dataset consistency

Principal quantities
measured
Data stored each 10 min.








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Why meteorological observation?

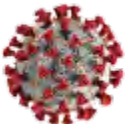
Climate Change & Public Health



Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze

CREAGEN - Environmental, Genetic and Nutritional Epidemiology Research Center



Epidemiology
Population health

Providing support for research, education and third mission activities



UNIMORE Osservatorio Geofisico di Modena
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Dissemination to the public

Osservatorio Geofisico di Modena, Italy
07/05/2023, 16:50

Temp: 22.2°C	Rain Day: 5 mm	Wind Speed: 11.5 km/h	Cloud Cover: NA
▲ High T: 25.9°C (14:20)	Humidity: 80%	Direction: 231° (sw)	Visibility Class: Class A (> 15 km)
▼ Low T: 17.7°C (6:20)	Pressure: 1008 mb	Wind Gust: 40.0 km/h (15:40)	



Dipartimento di Scienze Chimiche e Geologiche



Unimore Sostenibile

13 CLIMATE ACTION




Laboratorio di Analisi, Rilevamento e Monitoraggio Ambientale




MuseOmoRE




Hydrologic Research Lab
University of Modena and Reggio Emilia, Italy



idrologia.unimore.it



EELab Energy Efficiency Laboratory




Laboratorio di Geomatica




METE **AERONAUTICA MILITARE**





Some Climate Change evidences



Historical Balcony

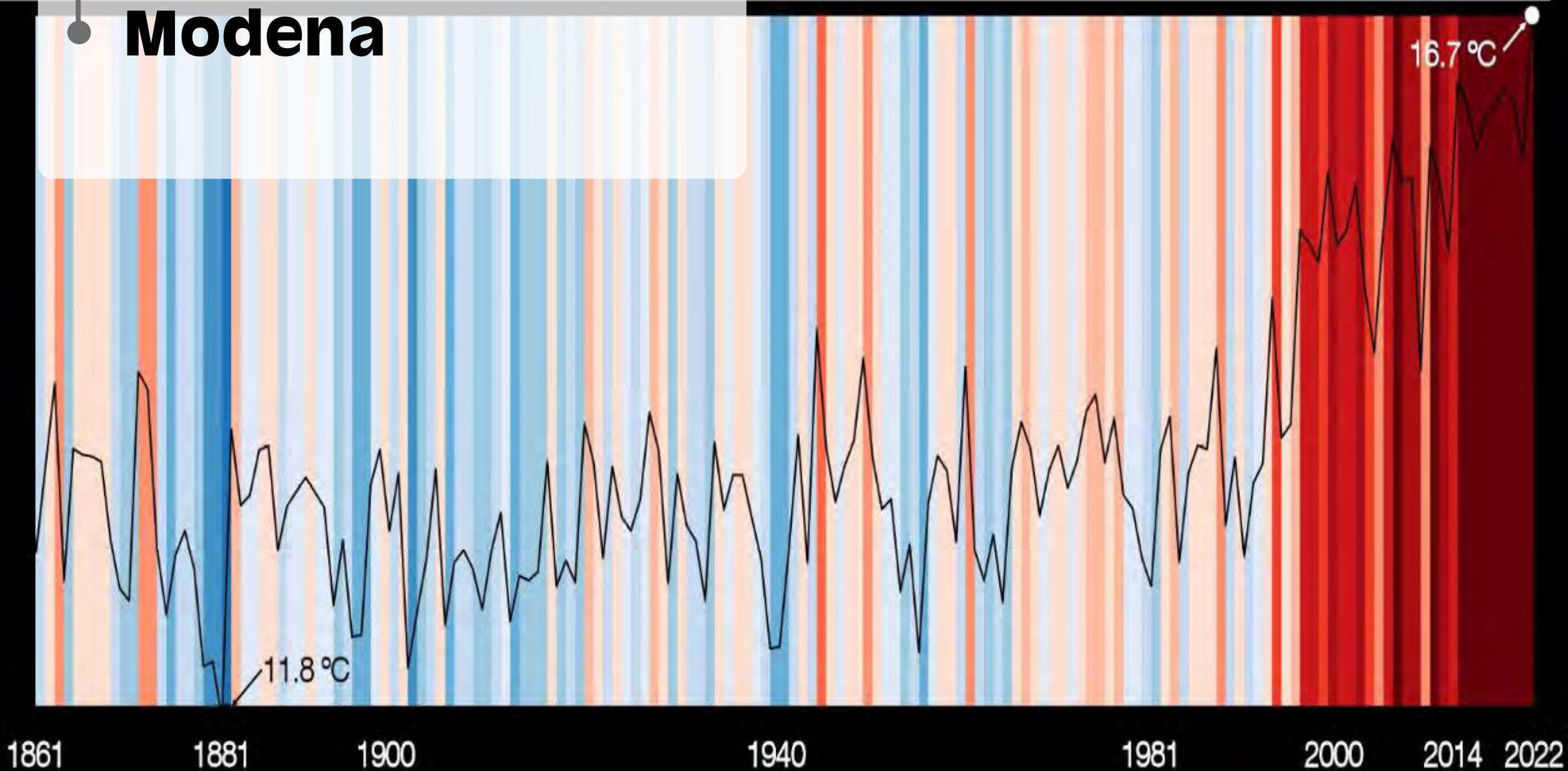
Preindustrial

1861-1900: 13.1°C

1991-2020: 14.7°C

Warming Stripes - mean year temperature – Geophysical Observatory Modena

- **Modena**



Modena



1861 – 1990: no significant trend

1861 – 2010: + 0.1 °C/decade

1981 – 2010: + 0.85 °C/decade

1991 – 2020: + 0.84 °C/decade

