



Italy 2k

*... available paleorecords in the context of a
Mediterranean climate reconstruction*

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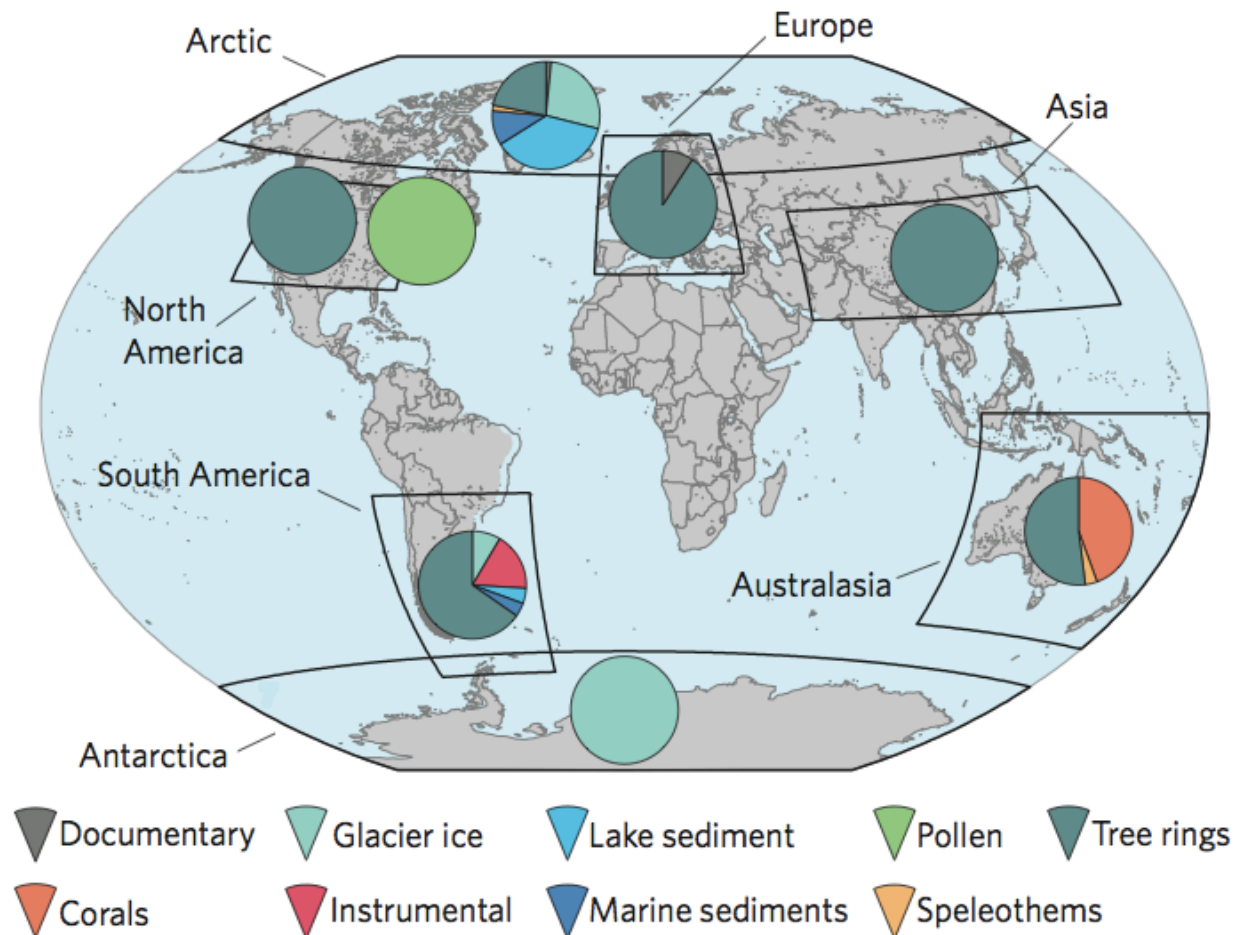
PAGES 2K





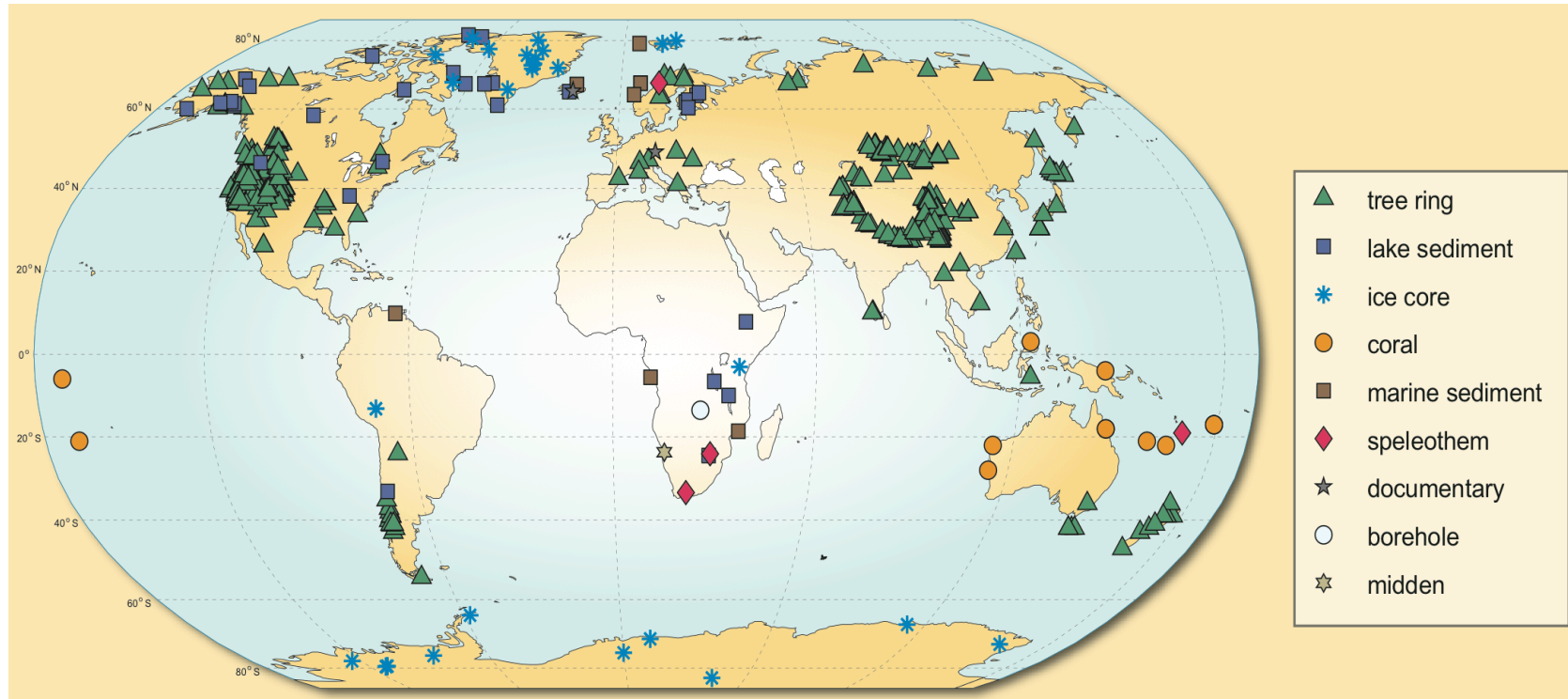
PAGES 2k Network

www.pages-igbp.org/workinggroups/2k-network



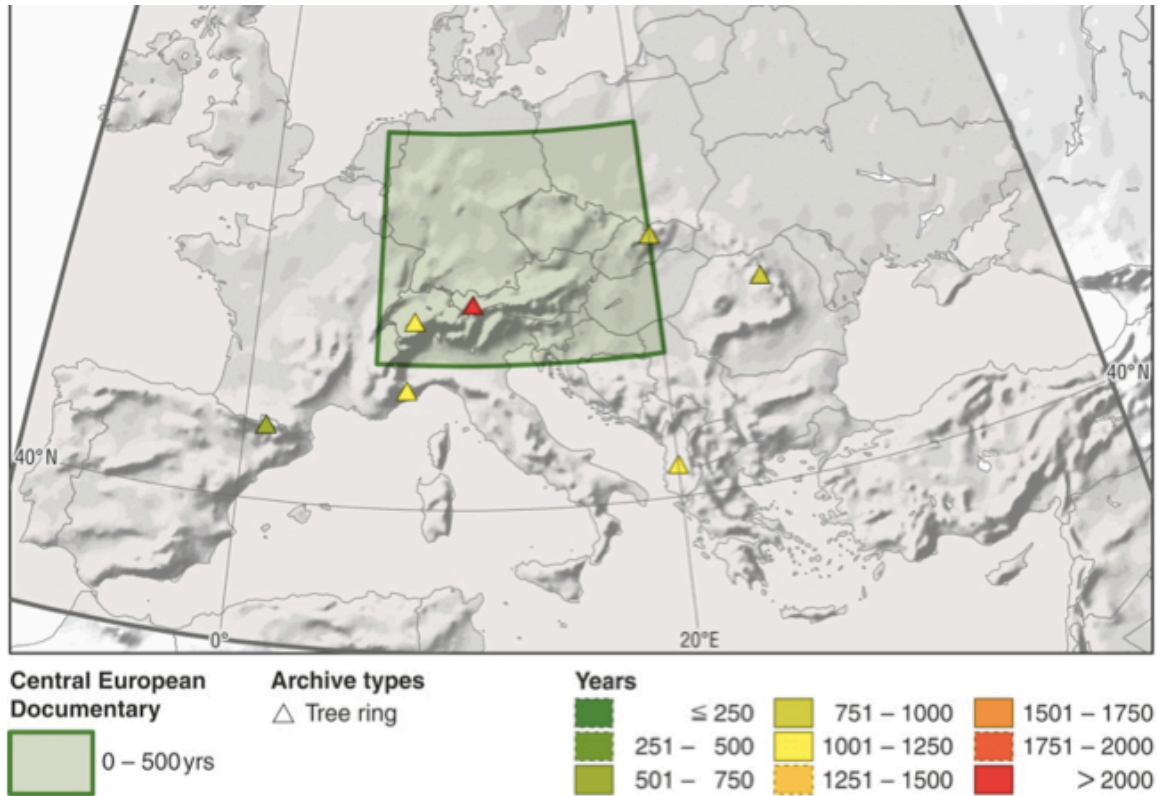


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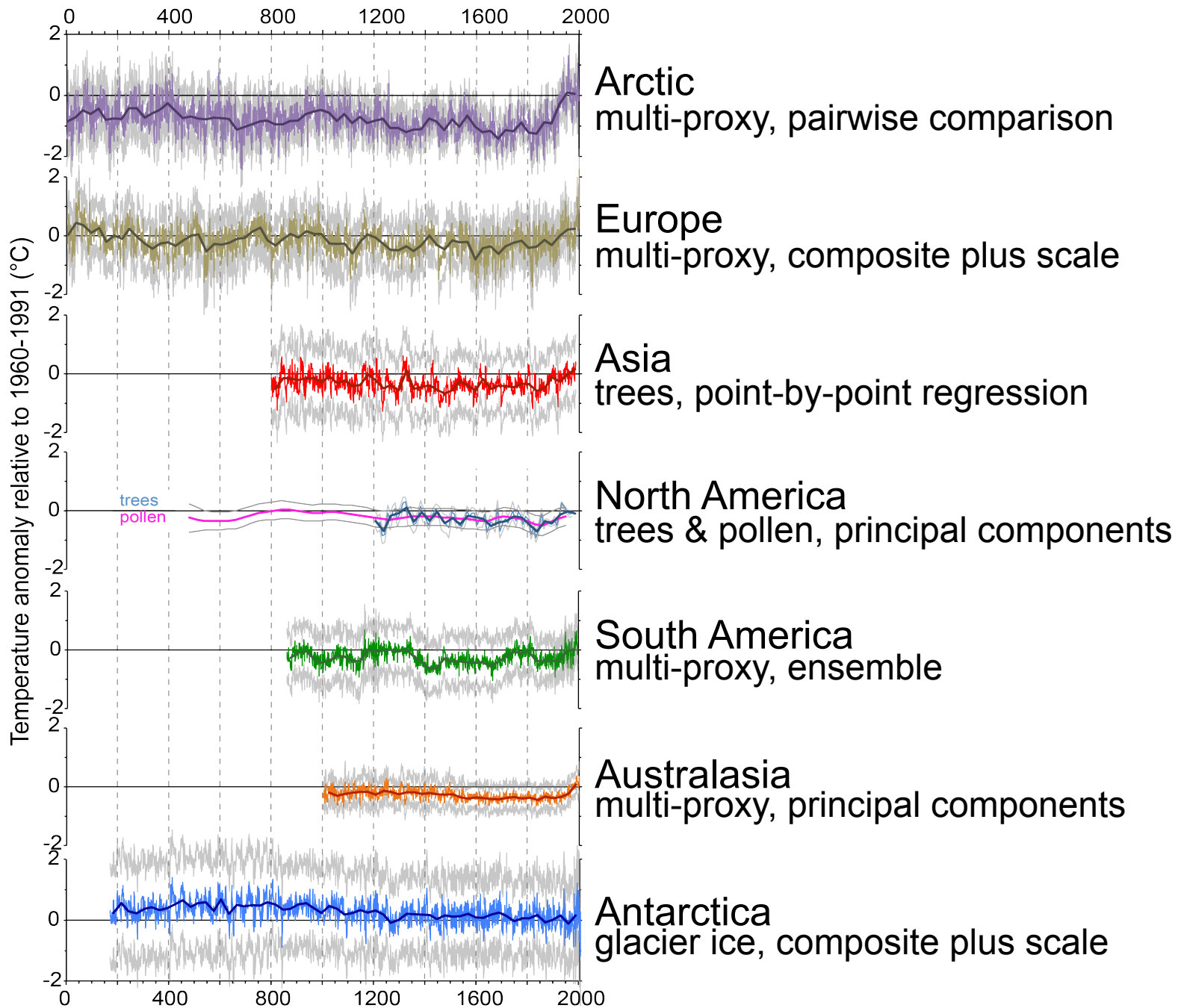


- 511 record in total
- Only 11 record (10TR + 1D) in Europe

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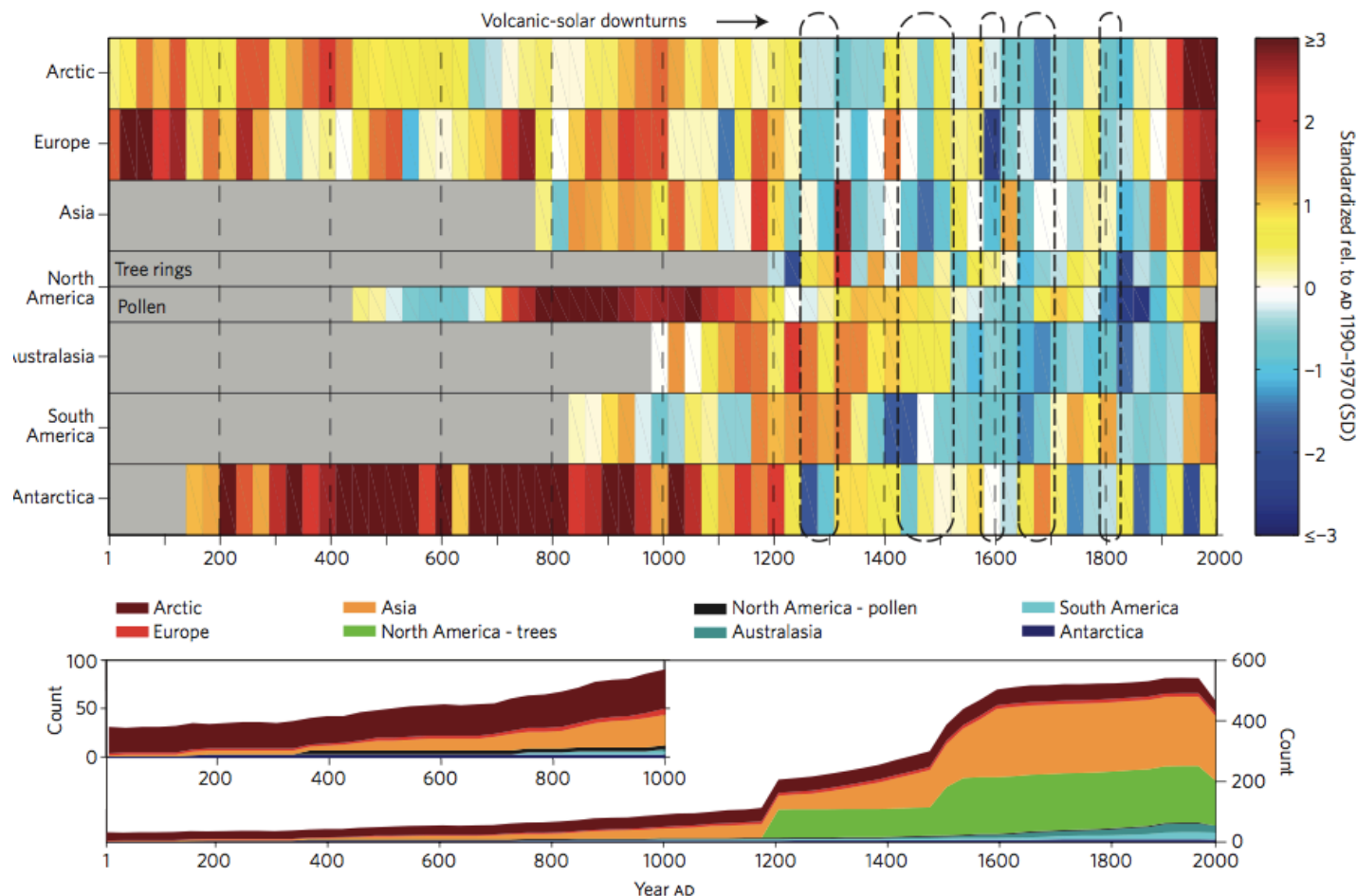
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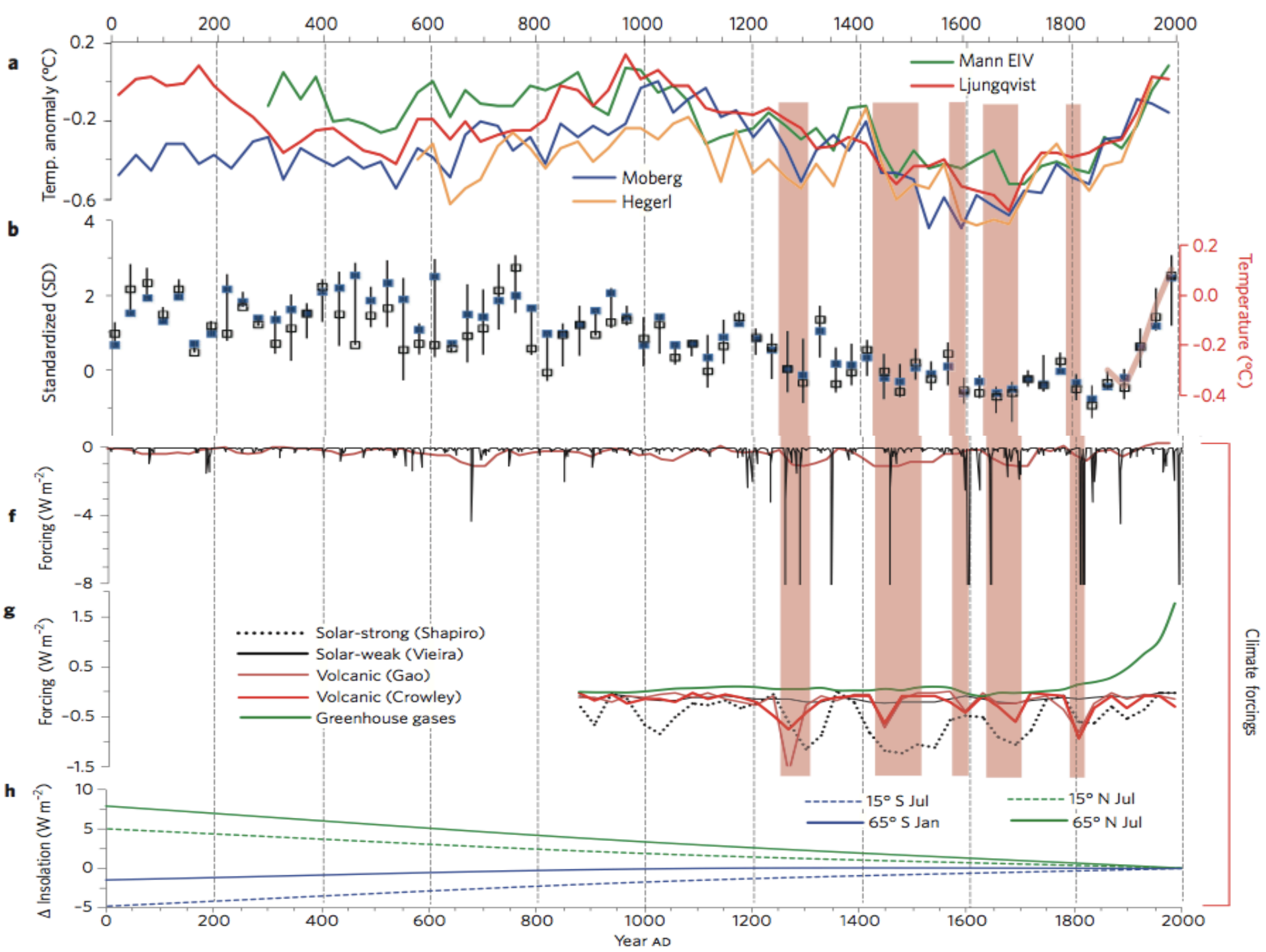




PAGES 2k Network

Continental-scale temperature reconstructions. 30-year-mean temperatures for the seven PAGES 2k Network regions







Euro-MED 2k Network

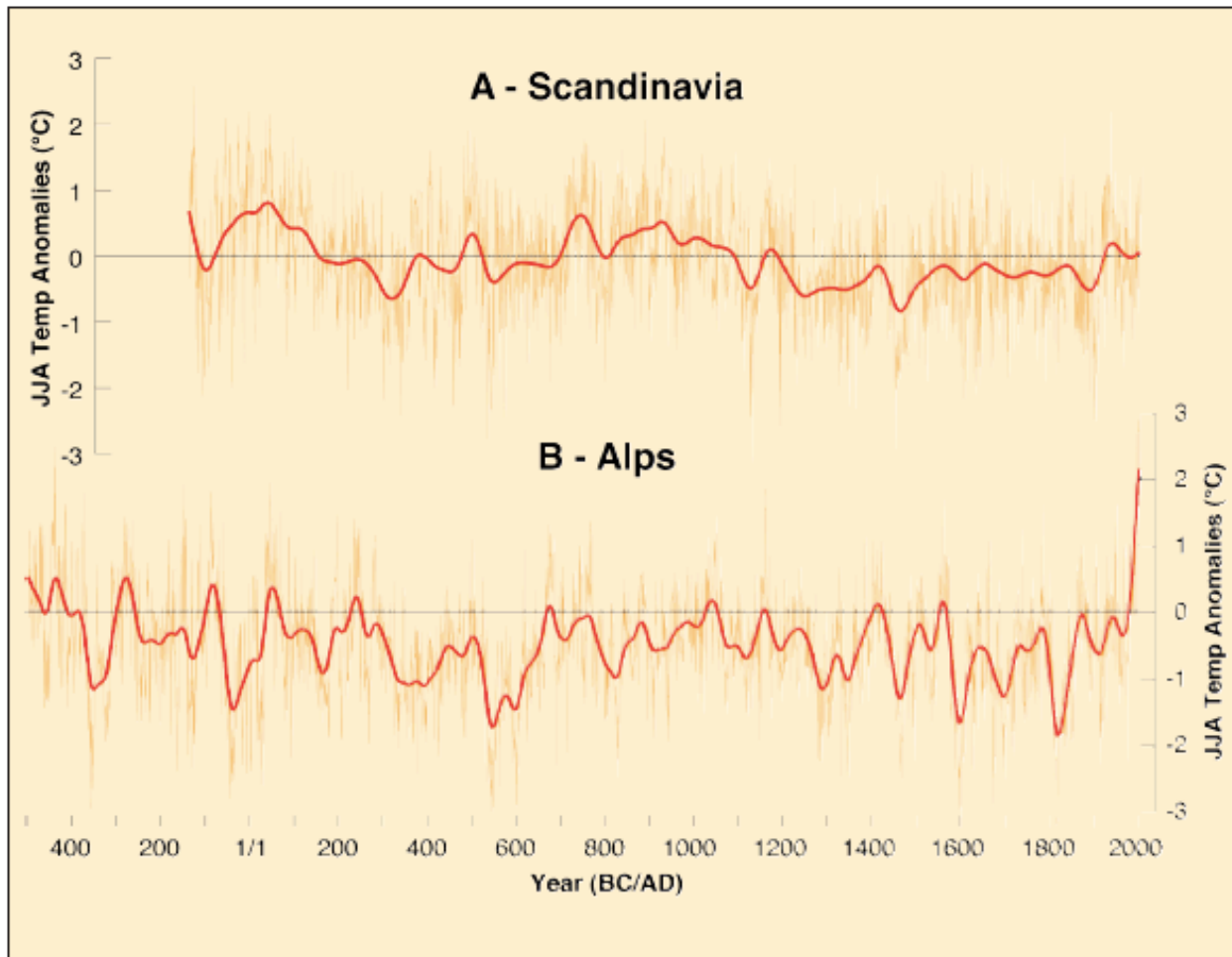


Figure 1: Reconstructed 2000 years of Northern Scandinavian (A) and Alpine (B) summer temperatures based on tree-ring data (Büntgen et al. 2011; Esper et al. 2012)



Italy 2k Project

- Lack of paleodata in Italy (last 2 kyr)
- Importance to have data from official databases (NOAA World Data Center for Paleoclimatology)
- NEED of a coordinated effort in Italy to manage existing data
- Use of adequate/standardized statistical tools
- Data/modeling effort is needed
- Climate Map of the last 2 kyr



Italy 2k Project

GOALS

Long-term goals of 2k

- Reconstruction of regional **2000 year** long **temperature** and **precipitation fields** and, if possible, reconstruction of circulation patterns and modes;
- **Data-model comparison** and diagnostic analyses with the ultimate goal to understand the mechanisms driving climate variability of the last 2k.

Short-term goals

- The preparation of a **central 2k database** to prepare uniform **synthesis and trans-regional** products.



Italy 2k Project

How to reach these goals?

- 1) Work of the regional groups
 - Regional expertize (data, methods, community)
 - Regional products best suited for that region
- 2) Trans-regional projects and topical Workshops
 - Climate does not stop at the regional borders
 - Larger scale studies (e.g. hemispherical reconstruction)
 - Trans-regional expertize, e.g. this meeting
 - External expertize, e.g. PMIP



Italy 2k Project

GOALS – practically

Data base: 2k regional working groups include all records that meet the common criteria.

Field reconstructions: Climate field reconstructions is the goal. But where data coverage is less dense index reconstructions sub-regions should be made.

High vs low resolution: Fusing annual-scale and lower-resolution time series remains an important goal, but given the methodological difficulties, separate annually resolved and lower-resolution reconstructions should be targeted.

Precipitation: To avoid the problem of colinearity of temperature and moisture, it might be necessary to reconstruct targets that combine multiple climatic influences



Italy 2k Project

Selection Criteria

- Demonstrated relation to climate, but not necessarily quantitative
- At least one numerical age per 500-year interval
- At least one analysis every 200 years
- Must span 500 years during the past 2k

Proxies

- Instrumental data
- Historical data
- Tree rings
- Speleothemes
- Glacier ice
- Peatbogs
- Documentary
- Lake sediments
- Marine sediments
- Pollen
- Corals
- ...



Ortles, 3905 m asl, Sep 2011