

# A Bayesian Approach to Historical Climatology for the Burgundian Low Countries in the 15<sup>th</sup> Century: Supplemental Material

CHANTAL CAMENISCH<sup>1,2</sup>, FERNANDO JAUME-SANTERO<sup>1,3,4</sup>, SAM WHITE<sup>5</sup>, QING PEI<sup>6</sup>, RALF HAND<sup>1,7</sup>, CHRISTIAN ROHR<sup>1,2</sup>, AND STEFAN BRÖNNIMANN<sup>1,7</sup>

<sup>1</sup>*Oeschger Centre for Climate Change Research, University of Bern, Switzerland*

<sup>2</sup>*Institute of History, Section of Economic, Social and Environmental History, University of Bern, Switzerland*

<sup>3</sup>*Department of Radiology and Medical Informatics, University of Geneva, Switzerland*

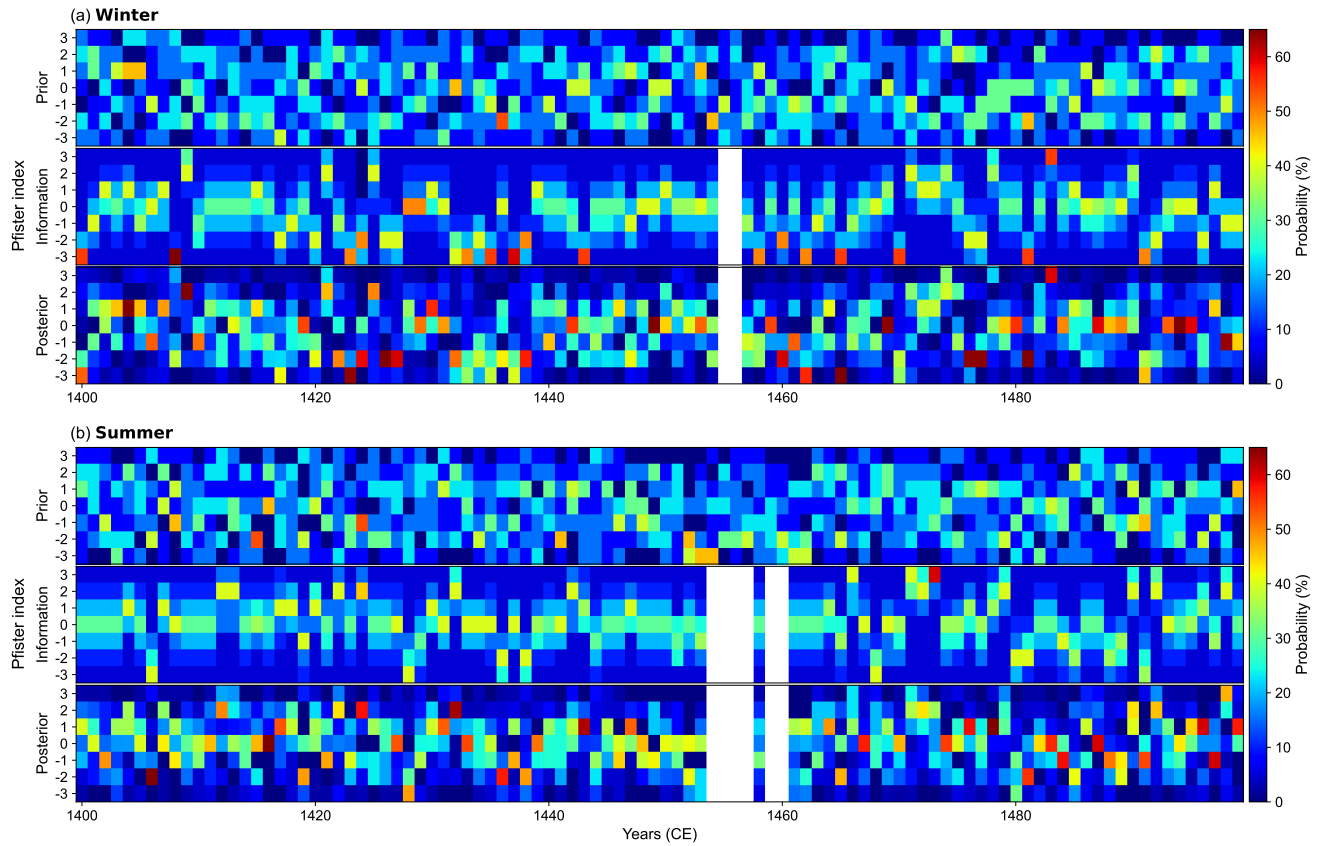
<sup>4</sup>*Haute école de gestion de Genève, University of Applied Sciences Western Switzerland, Switzerland*

<sup>5</sup>*Department of History, Ohio State University, Columbus, USA*

<sup>6</sup>*Department of Social Sciences, Education University of Hong Kong, China*

<sup>7</sup>*Institute of Geography, Climate Unit, University of Bern, Switzerland*

# 1. SUPPLEMENTAL FIGURES



**Fig. S1.** Prior, historical information, and posterior probability distributions of seasonal temperatures in the Burgundian Low Countries for (a) winters and (b) summers ranging from 1400 CE to 1499 CE. Top panels represent the prior probability distribution,  $p(\text{Climate})$ , extracted from 2-meter air temperatures of the 13-member CESM-LME and converted into Pfister indices. Middle panels illustrate the probability distribution of the information,  $p(\text{Observations} \mid \text{Climate})/p(\text{Observations})$ , acquired from historical archives compiled and converted into Pfister indices by historians. Bottom panels depict the posterior probability distribution,  $p(\text{Climate} \mid \text{Observation})$ . White spaces are shown when there are no observations available and therefore the posterior matches the prior.