Electronic Supplementary Material for the paper 'A multi-proxy inference of Jōmon population dynamics using Bayesian phase models, residential data, and summed probability distribution of 14C dates'

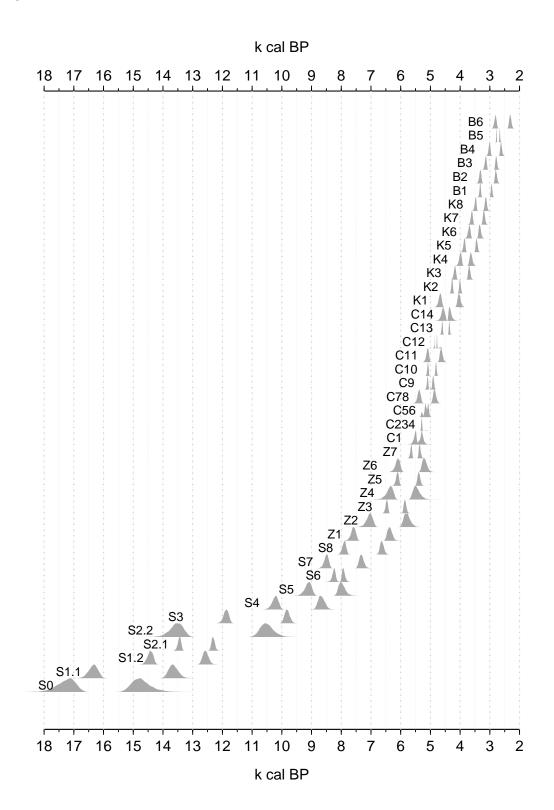
E.Crema

## Setup and Introduction

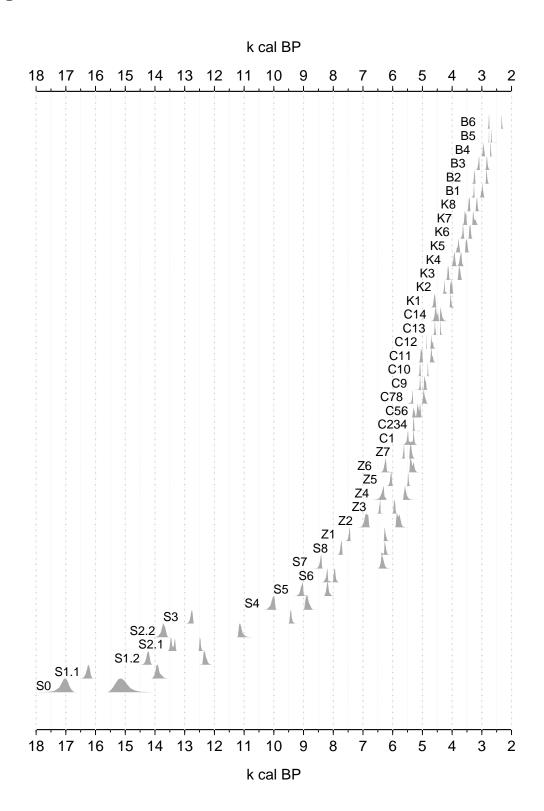
This pdf document was rendered from an R markdown document in order to ensure full reproducibility. Readers interested in accessing the source file and associated data can download the entire repository from  $\underline{\text{github}}$ . Notice that the entire workflow requires long processing time (i.e. > 24 hours) and the use of external software (i.e. OxCal), hence major analysis were pre-processed (see the log.R file in the repository) and stored into a series of R images. For further information please read the README.md document in the repository.

## Using different ceramic phase models

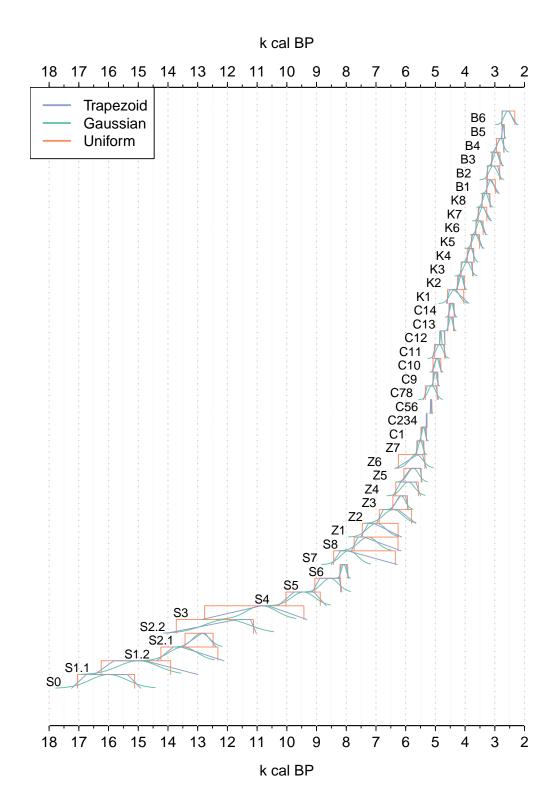
## ESM Figure 1. Posterior Distribution of Gaussian Model



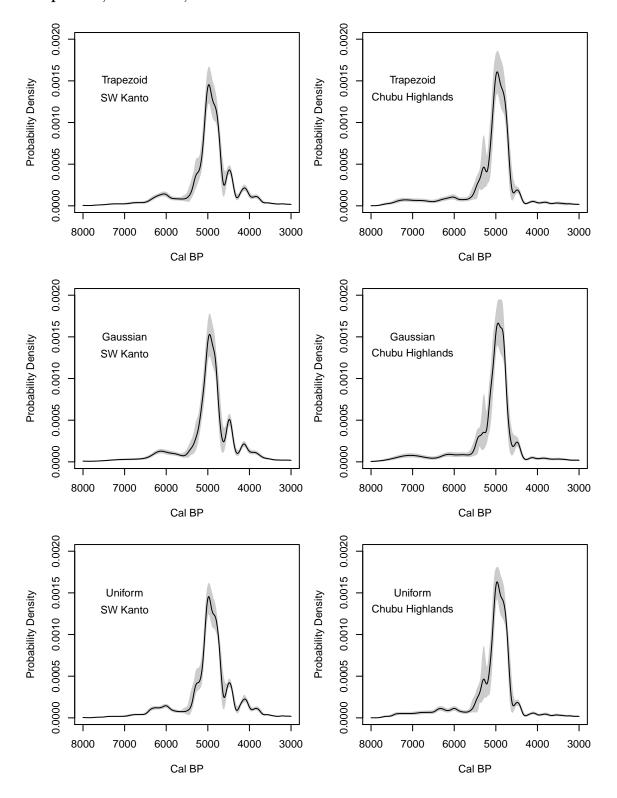
ESM Figure 2. Posterior Distribution of Uniform Model



ESM Figure 3. Comparison of Mean Posterior Parameters



ESM Figure 4. Comparison of pithouse KDE with ceramic phases based on Trapezoid, Gaussian, and Uniform Models



## ESM Figure 5: Bin-Sensitivty Analysis

