

Challenges for Millennium Reanalysis

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Our systematic instrumental measurement for meteorological quantities only lasts 100 years at most, so they are too short to analyze recent big climate changes, like Little Ice Age or Medieval Warming Period. In our research group, we have made an offline data assimilation system for stable water isotopes and showed our success to reproduce ENSO changes during 19th to 21st century (Okazaki and Yoshimura, submitted). On the other hand, we have made data assimilation of weather information from old diaries (Toride et al., submitted). Thus, by combining those two data assimilation methods, we are trying to make 1000-year length atmospheric reanalysis product or "Millennium Reanalysis". At the presentation, I'd like to introduce these two new methods and current status of Millennium Reanalysis project.

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