

# Research Output of Stefan Brönnimann since 2014

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## Data sets

- Stickler, A., S. Brönnimann, S. Jourdain, E. Roucaute, A. M. Sterin, D. Nikolaev, M. A. Valente, R. Wartenburger, H. Hersbach, L. Ramella Pralungo, D. P. Dee (2014) ERA-CLIM Historical Upper-Air Data 1900-1972. PANGAEA, doi: 10.1594/PANGAEA.821222,
- Ramella Pralungo, L., L. Haimberger, A. Stickler, and S. Brönnimann (2014) A global historical radiosondes and tracked balloons archive on standard pressure levels back to the 1920s. PANGAEA, doi: 10.1594/PANGAEA.823617
- Compo, G. P., J. S. Whitaker, P. D. Sardeshmukh, N. Matsui, R. J. Allan, X. Yin, B. E. Gleason, R. S. Vose, G. Rutledge, P. Bessemoulin, S. Brönnimann, M. Brunet, R. I. Crouthamel, A. N. Grant, P. Y. Groisman, P. D. Jones, M. Kruk, A. C. Kruger, G. J. Marshall, M. Maugeri, H. Y. Mok, Ø. Nordli, T. F. Ross, R. M. Trigo, X. Wang, S. D. Woodruff, and S. J. Worley (2015) NOAA/CIRES Twentieth Century Global Reanalysis Version 2c, NCAR, Boulder, DOI: 10.5065/D6N877TW
- Franke, J., S. Brönnimann, J. Bhend, and Y. Brugnara (2017) Ensemble Kalman Fitting Paleo-Reanalysis Version 1 (EKF400\_v1). World Data Center for Climate at Deutsches Klimarechenzentrum, DOI: 10.1594/WDCC/EKF400\_v1
- Rajczak, J., S. Brönnimann, E. M. Fischer, C. C. Raible, M. Rohrer, and C. Schär (2018) Daily precipitation and temperature time series from multiple climate model simulations for the Aare river catchment (Switzerland). Eidgenössische Technische Hochschule Zürich, PANGAEA, DOI: 10.1594/PANGAEA.886881

## Videos

- “Weather Reconstructions” (2017), 6:05 min, [youtu.be/Ux46HVU7H\\_g](https://youtu.be/Ux46HVU7H_g) (Pfister, L, L. Meyer, S. Brönnimann)
- “Historische Wetterdaten” (2018), 6:28 min, [youtu.be/Vw3dSUwbZ-w](https://youtu.be/Vw3dSUwbZ-w) (Pfister, L, L. Meyer, S. Brönnimann)
- “Hochwasser 1868” (2018), 6:58 min, [youtu.be/l2AtsZWpsuU](https://youtu.be/l2AtsZWpsuU) (Pfister, L, L. Meyer, S. Brönnimann)

## E-learning

- Hunziker, S. and S. Brönnimann (2014) The Great Climate Poker.
- Brönnimann, S., A. Giesche, S. Hunziker and M. Jacques-Coper (2015) *CLIMANDES Climate science e-learning course*. Geographica Bernensia U27. doi:10.4480/GB2015.U27.
- Brönnimann, S., A. Martynov, and M. Stürmer (2017) CERA-20C visualisation using Earth Null School
- Brönnimann, S., L. Pfister and L. Meyer (2019) *Weather Reconstruction*. University of Bern, Innovative Teaching.

## Papers in peer-reviewed journals

- Arfeuille, F., D. Weisenstein, H. Mack, E. Rozanov, T. Peter, and S. Brönnimann (2014) Volcanic forcing for climate modeling: a new microphysics-based dataset covering years 1600–present. *Clim. Past* 10, 359-375.
- Breitenmoser, P., S. Brönnimann, and D. Frank (2014) Forward modelling of tree-ring width and comparison with a global network of tree-ring chronologies, *Clim. Past* 10, 437-449.
- Wegmann, M., S. Brönnimann, J. Bhend, J. Franke, D. Folini, M. Wild, and J. Luterbacher (2014) Volcanic influence on European summer precipitation through monsoons: Possible cause for "Years Without a Summer". *J. Clim.* 27, 3683–3691.
- Brönnimann, S., C. Appenzeller, M. Croci-Maspoli, J. Fuhrer, M. Grosjean, R. Hohmann, K. Ingold, R. Knutti, M. A. Liniger, C. C. Raible, R. Rötthlisberger, C. Schär, S. C. Scherrer, K. Strassmann, and P. Thalmann (2014) Climate change in Switzerland: A review of physical, institutional and political aspects. *WIREs Climate Change* 5, 461–481.
- Ramella Pralungo, L., L. Haimberger, A. Stickler, and S. Brönnimann (2014) A global radiosonde and tracked balloon archive on 16 pressure levels (GRASP) back to 1905 – Part 1: Merging and interpolation to 00:00 and 12:00 GMT, *Earth Syst. Sci. Data* 6, 185-200.
- Anet, J. G., S. Muthers, E. V. Rozanov, C. C. Raible, A. Stenke, A. I. Shapiro, S. Brönnimann, F. Arfeuille, Y. Brugnara, J. Beer, F. Steinhilber, W. Schmutz, and T. Peter (2014) Impact of solar vs. volcanic activity variations on tropospheric temperatures and precipitation during the Dalton Minimum, *Clim. Past* 10, 921-938.

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- Stickler, A., S. Brönnimann, M. A. Valente, J. Bethke, A. Sterin, S. Jourdain, E. Roucaute, M. V. Vasquez, D. A. Reyes, R. Allan, and D. Dee (2014) ERA-CLIM: Historical Surface and Upper-Air Data for Future Reanalyses. *B. Amer. Meteorol. Soc.* 95, 1419–1430.
- Jacques-Coper, M. and S. Brönnimann (2014) Summer temperature in the eastern part of southern South America: its variability in the twentieth century and a teleconnection with Oceania. *Clim. Dynam.* 43, 2111–2130.
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- Labbé, T., C. Pfister, S. Brönnimann, D. Rousseau, J. Franke and B. Bois (2018) The longest homogeneous series of Grape Harvest Dates, Beaune 1354-2018, and its significance for the understanding of past and present climate. *Clim. Past. Disc.*

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- Imfeld, N., C. Barreto Schuler, K. Milagros Correa Marrou, K. Sedlmeier, S. Gubler, M. Jacques-Coper, and S. Brönnimann (2019) Summertime precipitation deficits in the Peruvian Highlands since 1964. *Int. J. Climatol.* (accepted).
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- Brönnimann, S., L. Frigerio, M. Schwander, M. Rohrer, P. Stucki and J. Franke (2019) Causes for increased flood frequency in central Europe in the 19th century. *Clim. Past Disc.*
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### **Books**

#### **Edited Books (with numerous co-authored contributions)**

- Brönnimann, S. (2017) *Historical Weather Extremes in Reanalyses*. Geographica Bernensia G92, 132 pp.

#### **Monographs**

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