

Trends of daily precipitation concentration in Central-Southern Chile

Sarricolea, Pablo

Meseguer-Ruiz, Óliver

Serrano-Notivoli, Roberto

Soto, María Victoria

Martin-Vide, Javier

© 2018 Elsevier B.V. The spatial and temporal variability of daily precipitation in Central-Southern Chile ($\sim 30^{\circ}$ – 46° S), considering 176 meteorological stations for the period of 1965–2015, was analysed by mean of the concentration index (CI). The CI was calculated for the complete period, for the wet season and year-to-year, for each meteorological station. In addition, the trends were computed for the whole period by locations and by moving windows for the complete territory. The CI values range from 0.502 to 0.755, agreeing with previous works in the Mediterranean area and marine west coast climates. Linear correlations have been established between both year and wet season CI values with geographical factors, such as latitude, longitude and elevation. These correlations are statistically significant for the yearly CI with latitude and longitude, with 0.38 and 0.39 Pearson's r values respectively (p -values lower than 0.001). However, the semiarid climates in Chile do not show the s