Figure 1. Case study example of the cloud band identification processing steps for 18 April 2016 using OLR over the South Pacific ocean. a) Daily mean OLR data in shading and 210 W.m2 isocontour in yellow, b) binarization, c) morphological dilation, d) connected component labeling with different colors indicating distinct identified features, e) cloud systems with a size below a threshold value are removed and geometrical properties are calculated to filter tropical-extratropical cloud bands, f) cloud band after filtering. The life of each cloud band is tracked between two consecutive time steps (see section 2.4).
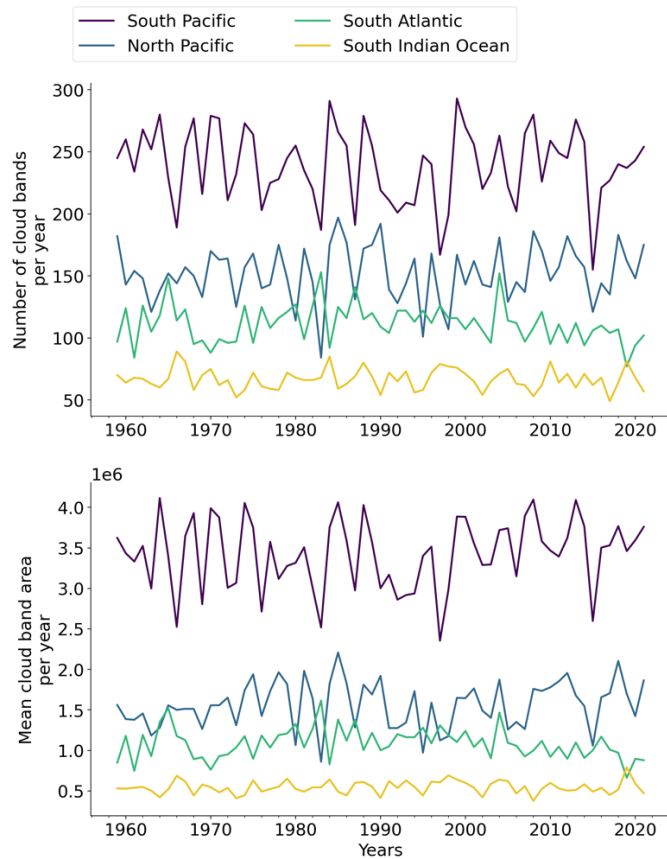
Figure 8. Time series of a) the number of cloud bands per year for each domain defined in Figure 2, and b) of the mean cloud band area per year (expressed in km^2).
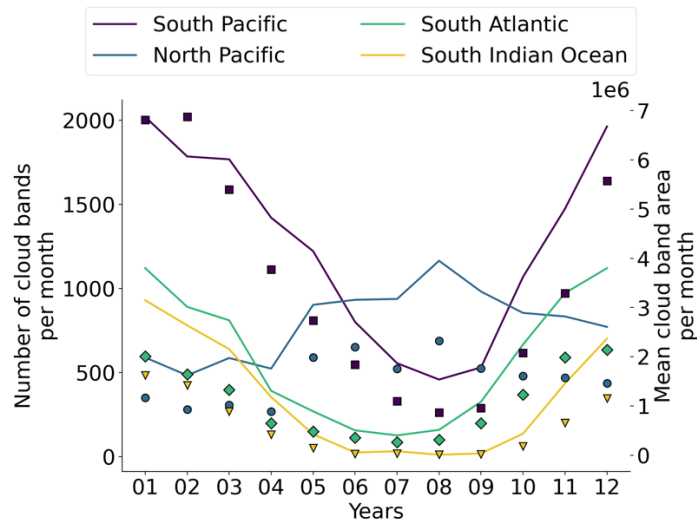

Figure 9. Annual cycle of the number of cloud bands per month (lines) for each domain defined in Figure 2, overlaid by the annual cycle of mean cloud band area (markers: squares - South Pacific, circles - North Pacific, diamonds - South Atlantic, triangles - South Indian Ocean). Marker colors correspond to line colors