

Figure 1. Study area: (a) Taihu Lake Basin location; (b) Taihu Lake Basin DEM and water conservancy division; (c) Taihu Lake Basin water conservancy division and prefecture-level city distribution; (d) Taihu Lake Basin water conservancy division and rainfall station distribution.

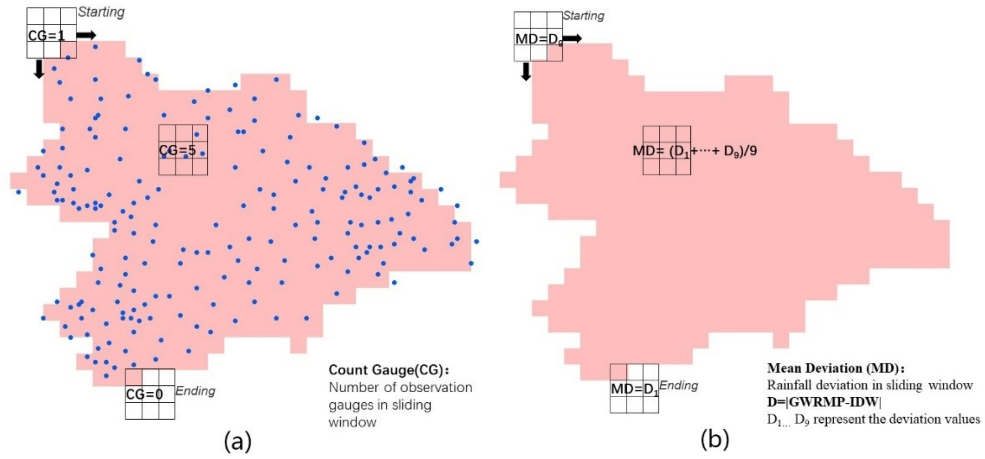


Figure 2. Density of rainfall stations in Taihu Lake basin based on 3×3 sliding window and statistical methods of monthly rainfall error between GWRMP and IDW.

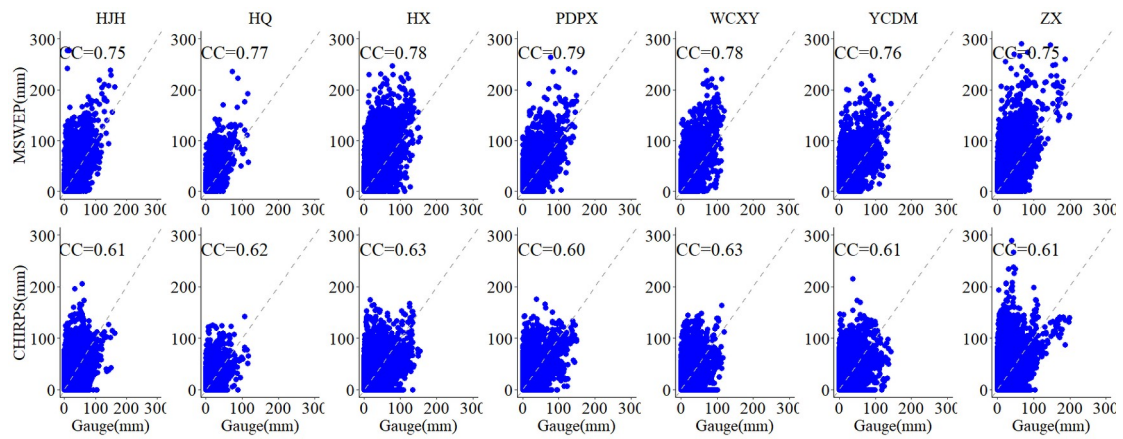


Figure 3. Scatter plots of MSWEP and CHIRPS daily precipitation versus rain gauge precipitation in different water conservancy sub-areas of the Taihu Lake basin, respectively (where the time series of MSWEP is from 1979 to 2016 and the time series of CHIRPS is from 1981 to 2016).

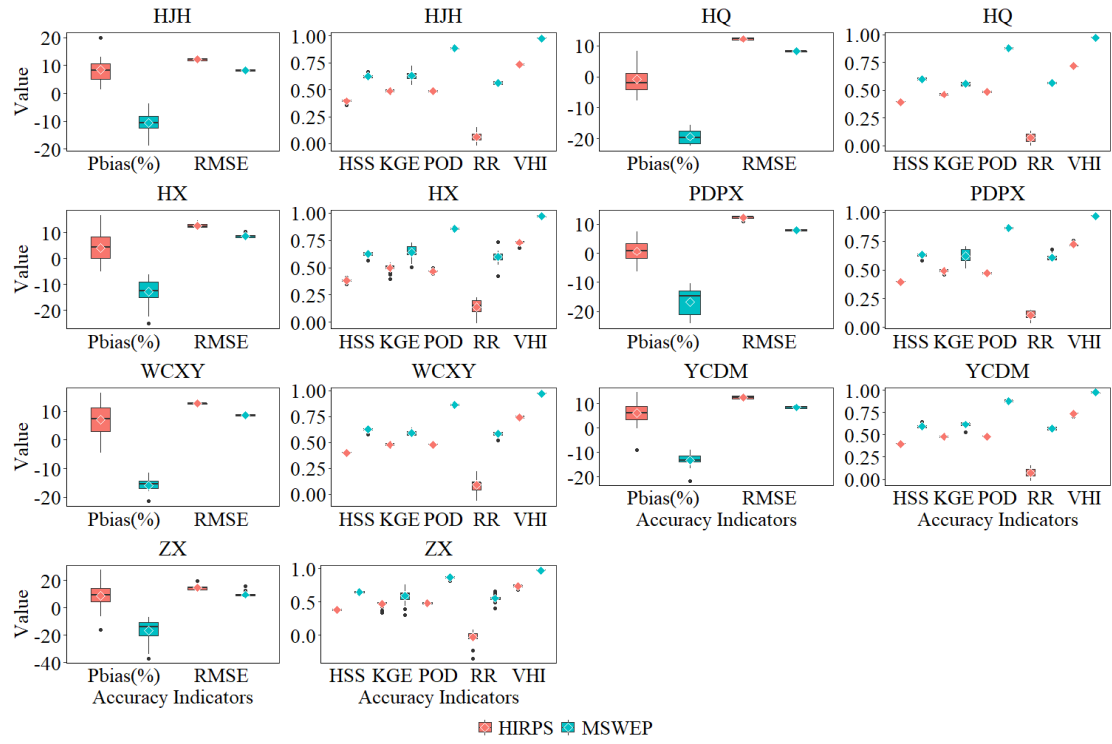


Figure 4. Evaluation results of daily precipitation accuracy of CHIRPS and MSWEP in different hydraulic zones of Taihu Lake basin based on time series scale.

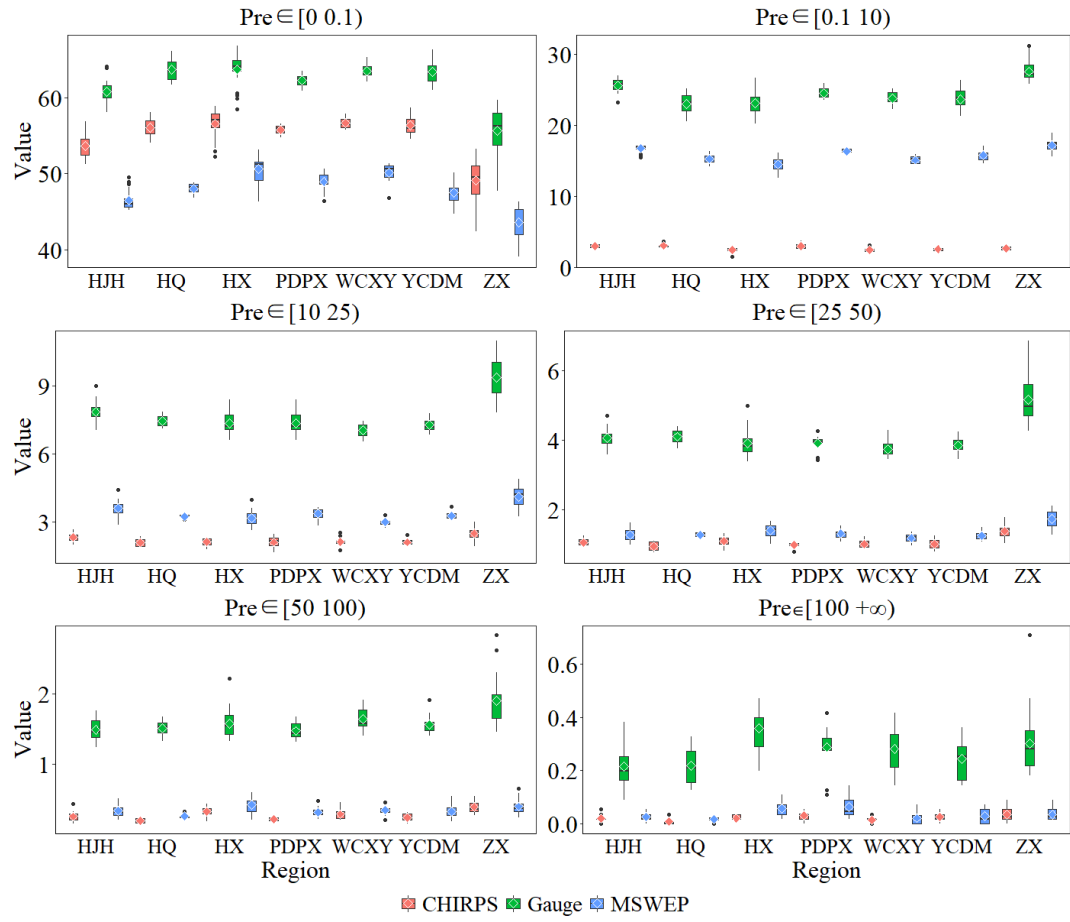


Figure 5. Frequency distribution of different levels of precipitation events accurately detected by rain gauges, CHIRPS, MSWEP, and GWRMP daily precipitation data in different hydraulic subdivisions of the Taihu Lake basin.

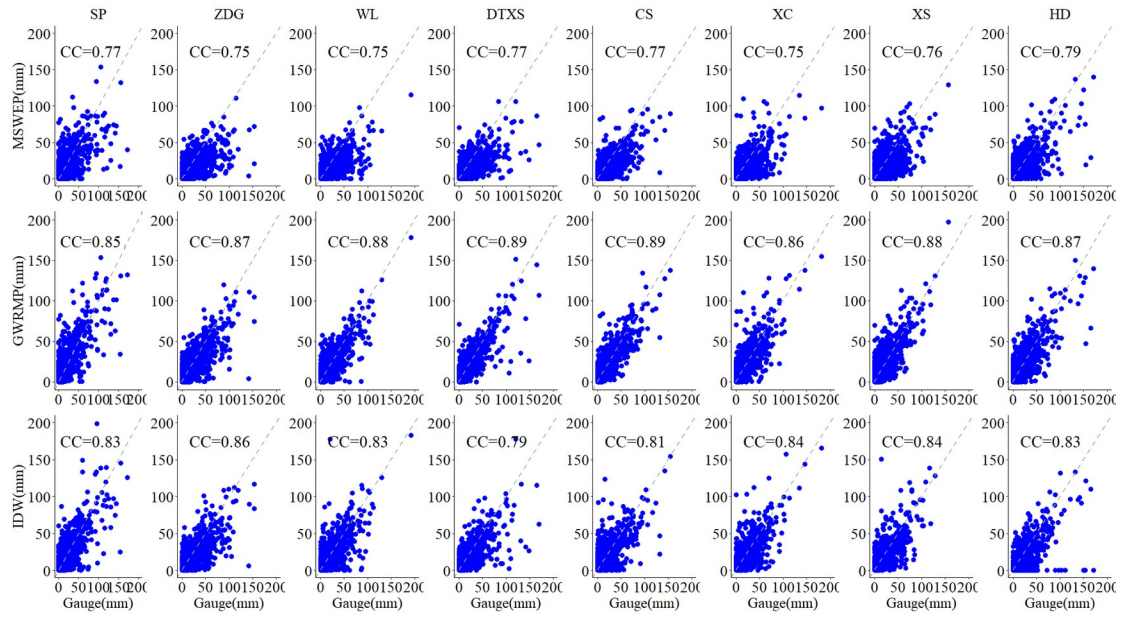


Figure 6. Scatter plots of daily precipitation of MSWEP, GWRMP, and IDW relative to the reserved eight baseline precipitation in the Taihu Basin from May to September 1979 to 2016.

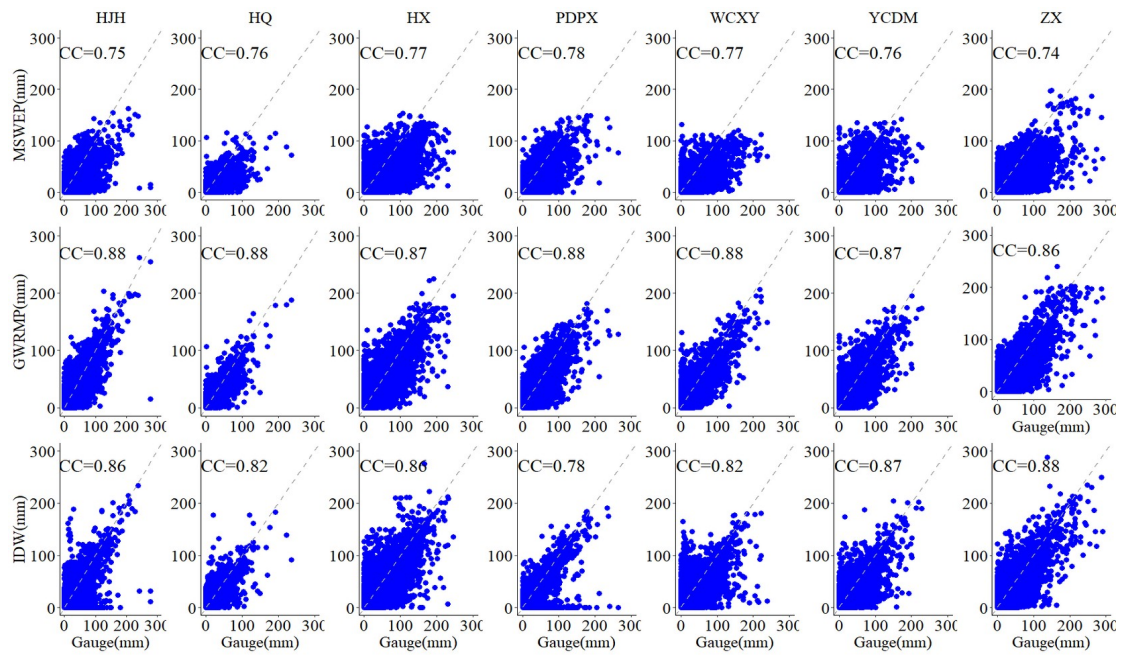


Figure 7. Scatter plots of daily precipitation relative to baseline precipitation for MSWEP, GWRMP, and IDW in seven hydraulic subdivisions of Taihu Basin from May to September 1979 to 2016.

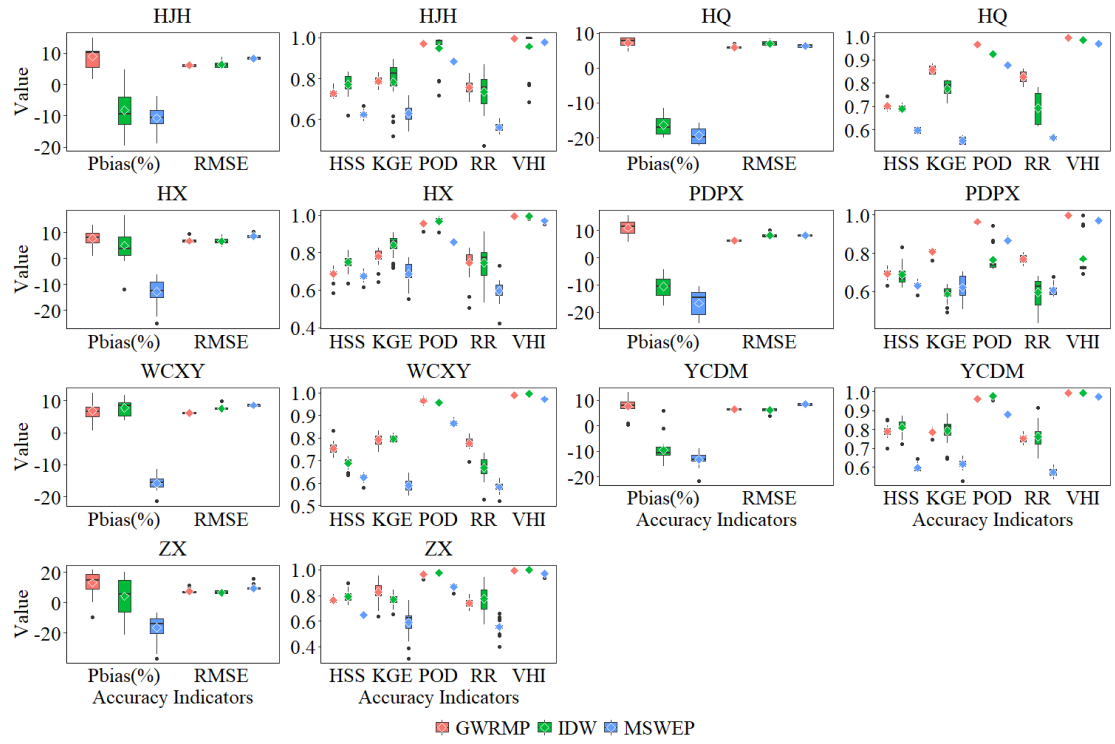


Figure 8. Evaluation results of temporal accuracy of daily rainfall of MSWEP, GWRMP, and IDW relative to baseline rainfall gauge precipitation in seven water conservancy divisions in Taihu Basin from May to September 1979 to 2016.



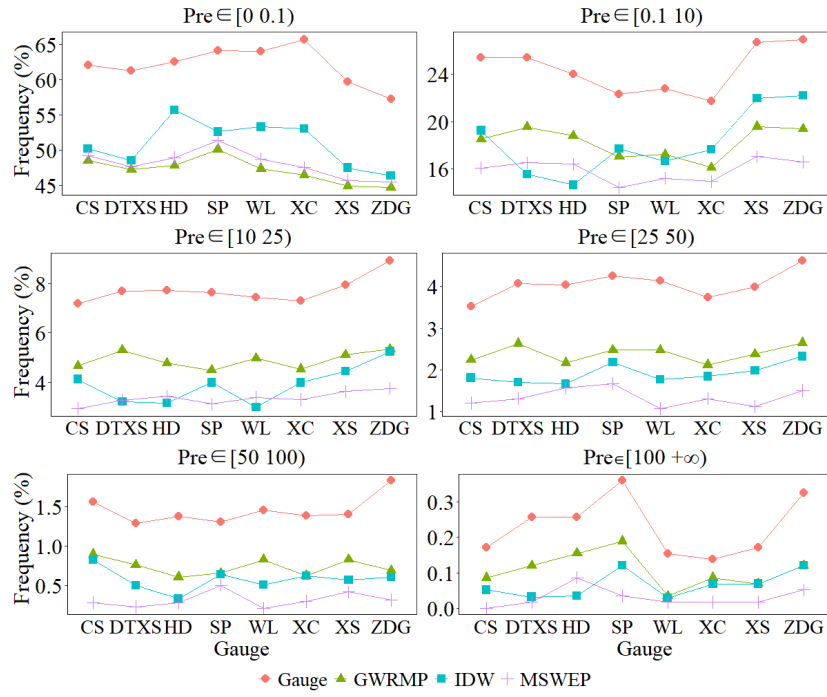


Figure 9. MSWEP, GWRMP, and IDW daily precipitation data in the Taihu Lake basin accurately detect the frequency distribution of different levels of precipitation events based on the reserved rain gauge benchmark.

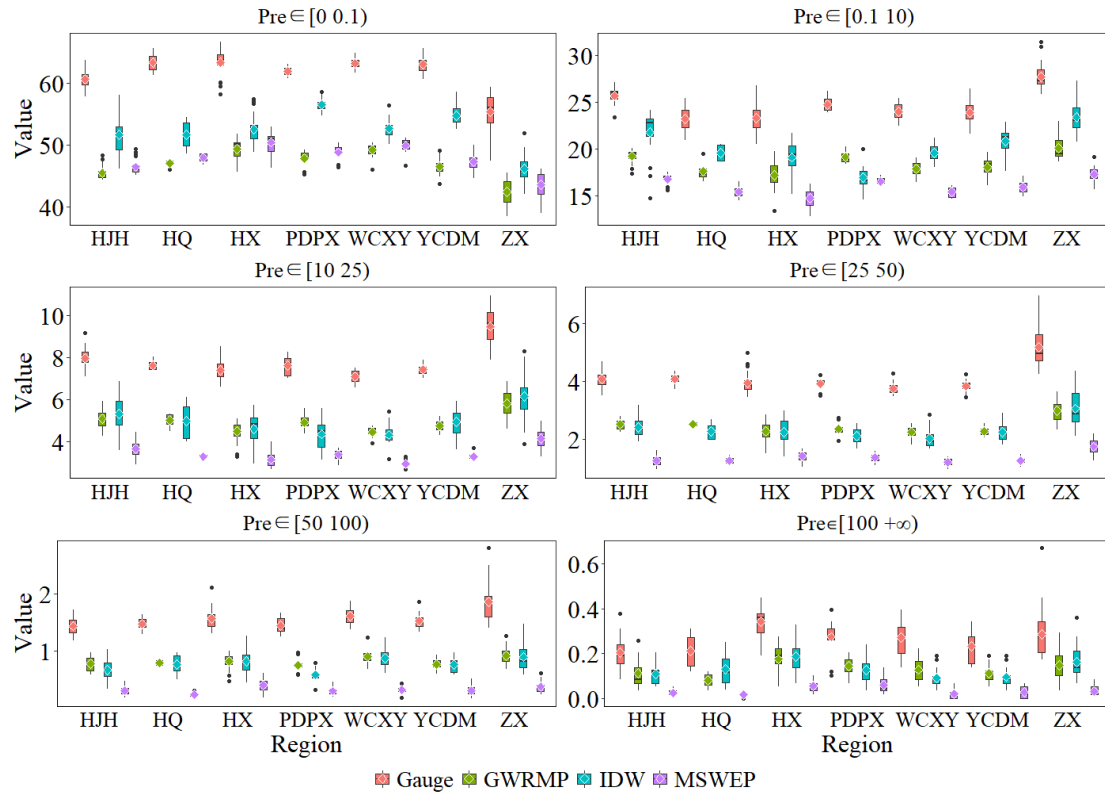


Figure 10. MSWEP, GWRMP, and IDW daily precipitation data in the Taihu Lake basin accurately detect the frequency distribution of different levels of precipitation events based on zonal rain gauge statistics.

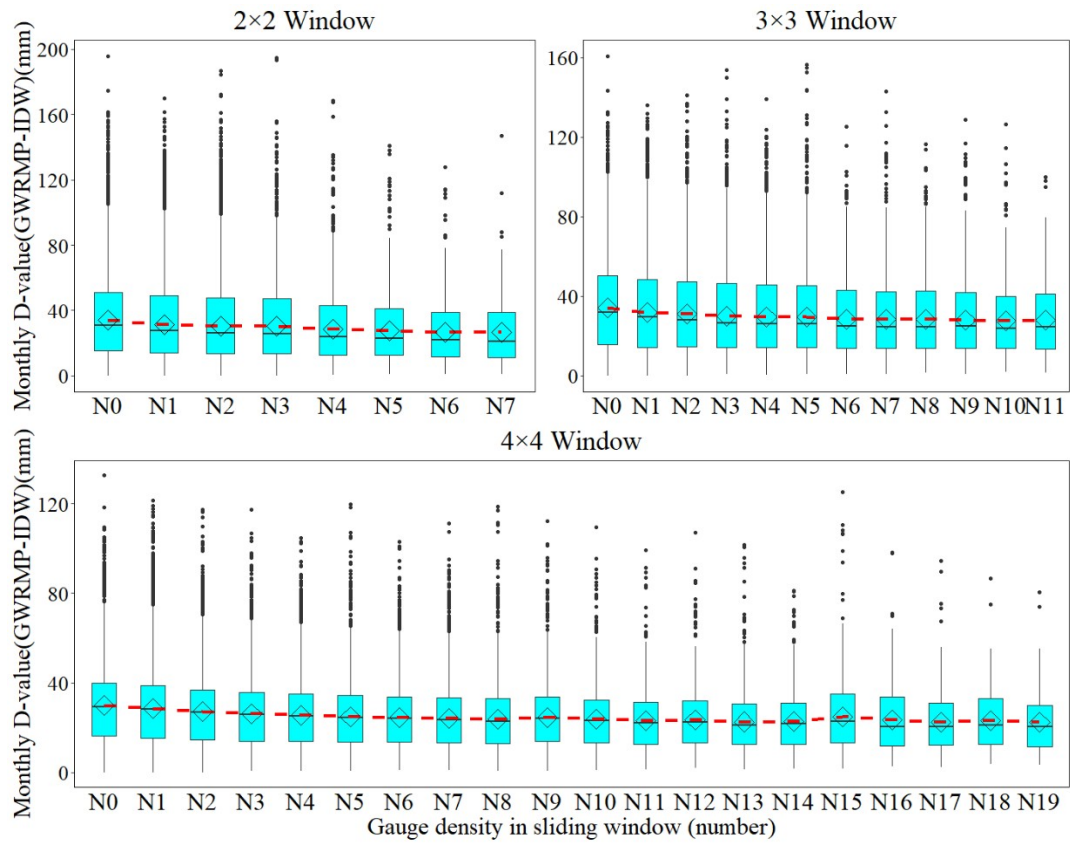


Figure 11. Statistical results of rainfall station density and monthly rainfall deviation of monthly GWRMP and IDW at different sliding window scales during the flood season in the Taihu Lake Basin from 1979 to 2016.