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The recommended location of rain gauge stations based on radar

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The characteristics of the watershed are important to reduce hydrologic disasters, such as the risk of dam flooding. In other words, quantitative precipitation estimation(QPE) is important to manage water resources in large regions. Both radar and rain gauged data are used to improve QPE. This study is dealt with suggesting the best location of additional rain gauged stations to be installed in order to improve QPE as entropy theory. Conditional entropy is used to quantitatively evaluate the location of additional gauged stations to be installed given the existing rainfall network. Because radar produces high-resolution precipitation estimates, it can be used to identify the high entropy points to reduce rainfall uncertainty. The data were collected from May 2018 to August 2019 in the Bukhan river dam basin. Road networks were also considered for the establishment for a practical approach.

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