

### High resolution precipitation estimation from weather radar by Artificial Neural Network

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Weather radar is a measurement apparatus that could detect intensity of cloud by reflectivity of radio wave. It is being used in rain forecasting because of its characteristic such as real time estimation, high resolution and short time interval. Even if these things seems highly attractive, it can't be used alone because of low accuracy. AWS(Automatic Weather System) is a sensing system of weather property such as humidity, precipitation, pressure, temperature, etc. AWS also has an attractive characteristic such as real time estimation and short time interval and high accuracy but because of its sparsiry, it has a very low resolution.

In this research, a new precipitation which has the advantages of these two measurements is generated by methodology of statistics such like ANN(Artificial Neural Network). Input variables of neural network is chosen in AWS and radar. By preprocessing some properties and training of neural network, high resolution and accuracy precipitation could be acquired.