Analysis Local Pressure System in Stationary Front Crossing South Taiwan by Hilbert-Huang Transform

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Stationary front results in heavy rain in the late spring and early summer in Taiwan. Heavy rain usually causes natural hazards. Besides, some low pressure system will form in stationary front, such as tornado and local low pressure center, which causes extremely torrential rain, thunder, and strong wind. In this study, we use the empirical mode decomposition (EMD) to analysis pressure, temperature, and humidity of south cities in Taiwan, when the local low pressure system in stationary front cross through south Taiwan. Then, the Hilbert-Huang transform (HHT) is used to calculate the relation between frequency and time. This result can be applied in the field of the weather forecast.