Dynamical Behaviors of rainfalls in Korean peninsula KYUNGSIK KIM, Department of Physics, Pukyong National University, Pusan 608-737, Korea, SOO YONG KIM , GYUCHANG LIM, Department of Physics, Korea Advanced Institute of Science and Technology, Daejeon 305-701, Korea, KI-HO CHANG, JAE-WON JUNG, Global Environment System Research Laboratory, National Institute of Meteorological Research, KMA, Seoul 156-720, Korea, SANG-BUM PARK, Department of Business Administration, Hankuk Aviation University, Goyang 412-791, Korea, MYUNG-KUL YUM, Department of Pediatric Cardiology, Hanyang University, Kuri 471-701, Korea — Application of ideas from fractal and chaos theories to characterize rainfall is one of the most active and exciting areas of research in this field. Many studies performed thus far have yielded evidence of the existence of fractal and chaos properties in rainfall. In this work, we present a singularity spectrum of a rainfall time series to provide strong evidence of multifractality. A curdling cascade process in a well developed turbulence is presented as a candidate to describe the rainfall, and the analogy between the rainfall and turbulence is confirmed via the validity of the binomial multiplicative process to describe both systems.

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