

**Hong Kong, China**

**An Integrated Meteorological Data Quality Assurance System for operation of the Automatic Weather Station (AWS) Network in Hong Kong**

**H Y Mok**

**(Hong Kong Observatory, Hong Kong, China)**

The Hong Kong Observatory has developed and operated a new Automatic Weather Station (AWS) System with a capability to carry out data quality assurance automatically. The AWS data received by the central data acquisition system are passed to the Integrated Data Quality Assurance System for real-time data quality control. The System, which is highly automatic, serves to enhance data quality and at the same time reduce manual labour. Through various real-time and non-real-time automatic data quality control processes, the system carries out quality assurance for each piece of data received from the AWS by assigning a quality assurance flag to the data, filtering out erroneous data from the AWS, and alerting maintenance staff to action via automatic email. Operation of the AWSs can also be monitored via a webpage which displays the status of the AWS network in real-time. The advantage of this automatic alerting feature is that it enables early detection and diagnosis of faults as well as enhancing data availability. Apart from monitoring the operation of the AWS, the quality assurance flags also serve as an indication of quality, facilitating reference by users in future studies. This presentation will focus on the overall design concepts and quality assurance algorithms used for the System.