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Current and Future Korean Geostationary Satellite AMV Quality Control Method

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Atmospheric Motion Vector (AMV) is very important data for numerical weather prediction (NWP) models as that provides valuable wind information. To get quality information of each vector, Quality Control (QC) is needed. There are two popular QC schemes are used which is Quality Indicator and (QI) (Holmund, 1998) Expected Error (EE) (Le Marshall, 2004) scheme. The QI is simple scheme that consists of five vector consistency tests. The EE is essentially an extension of the QI, but provides an output in the form of expected root-mean square error for each vector. For EE calculation, the five QI tests results and AMV's speed, pressure, NWP model vertical temperature gradient, and wind shear are needed. These values are used to extract linearly regression coefficients for EE calculation.

We will present AMV QC (only QI) characteristics of Current Korean geostationary satellite (COMS) as well as its improvements, and AMV QC plans (QI + EE) for the next Korean geostationary satellite Geo-Kompsat-2A (GK-2A).