Plain Language Summary: The Global Precipitation Measurement (GPM) Dual-Frequency (DF) Precipitation Radar (DPR) has operated in full scan (FS) mode in both the Ku-band and Ka-band since May 2018. For the first time in the DPR level 2 (L2) version V06X experimental algorithms, the DF processing has been made on the 245 km wide full swath data. In previous versions up to V06A, the DF processing is limited to the 125 km wide inner swath data only. This paper describes the V06X precipitation type classification algorithm that detects bright-band (BB) and classifies precipitation as stratiform, convective, and other.
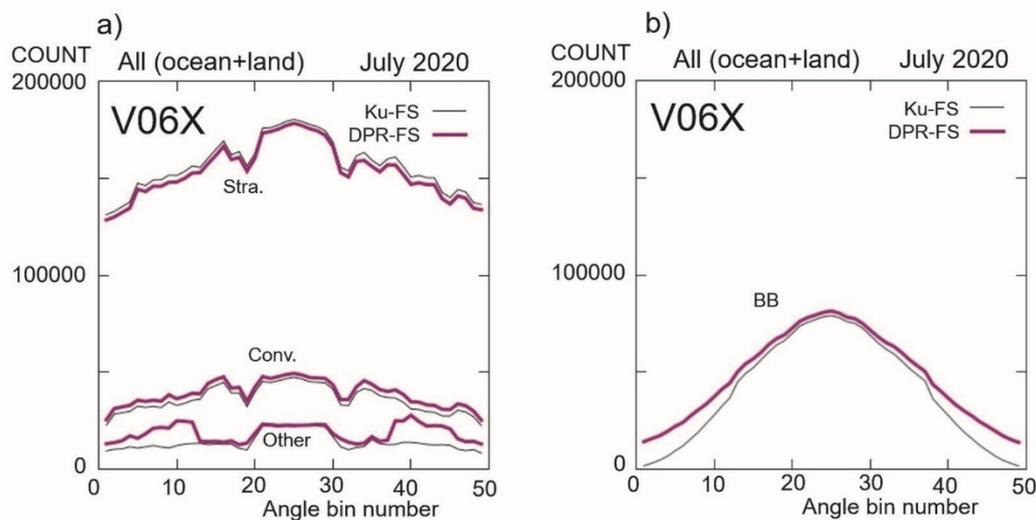

Figure 1. Angle bin dependence of counts of a) precipitation types and b) BB. The inner swath corresponds to angle bins from 13 to 37, and the outer swath the rest of angle bins. Thin lines show the single frequency Ku-FS data and thick lines the DF processed DPR-FS data. In a), the difference between Ku-FS counts and DPR-FS counts for stratiform type and that for convective type are small and almost parallel shifted. This fact indicates that the DF processing works well not only in the inner swath but also in the outer swath. In b), the advantage of the DF processing shows up in the detection of BB in the outer swath.

- The GPM DPR L2 V06X algorithms output the DF processed FS data for the first time.
- The DF processing in the precipitation type classification algorithm works well not only in the inner swath but also in the outer swath.
- The advantage of the DF processing shows up in the detection of BB in the outer swath.