Comparison of Differential Propagation Phase Algorithms in C-Band Weather Radar Measurements

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Range dependent Differential Propagation Phase is the only measurement quantity in polarimetric weather radars that contains information about the forward scattering. Three algorithms to calculate the differential propagation phase at the linear polarisation bases vertical and horizontal will be presented. These algorithms will be compared to each other using radar data of DLRs polarimetric weather radar POLDIRAD, Wessling, Germany.