Overview of NASA D3R's performance during the GV Field Campaigns –IFLOODS and IPHEX; Preliminary Results

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NASA D3R is a dual frequency, dual-polarization Doppler radar designed to operate at the frequencies of the GPM core satellite radar. The NASA D3R is a ground validation analog of the GPM–DPR. NASA D3R was developed with the purpose of collecting long term measurement statistics of the two frequencies at a given location and regime. The preliminary results and performance of the NASA D3R at the IFLOODS (Iowa Floods Experiment), and IPHEX (Integrated Precipitation & Hydrology Experiment) – Ground Validation field campaign are presented. The IFLOODS campaign was conducted in eastern Iowa from May 1 to June 15, 2013. The NASA D3R will be deployed for the IPHEX Campaign in western North Carolina from May 1st to June 15th, 2014. The IPHEX field campaign's goal is to characterize the spatial and temporal variability of microphysics and precipitation in the southern Appalachians. The NASA D3R is co-located with the NASA NPOL S-band radar to provide triple frequency observations along with an array of rain gauges and distrometers. Additionally, radar operation is coordinated with aircraft overpasses for in-situ measurements and downward looking radar observation. The D3R observations are summarized, and the preliminary findings are described.