



## **S-band NPOL and Iowa XPOL Radar Observations over Rain Gauge and 2D Video Disdrometer Networks during the IFloodS campaign**

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As part of the GPM ground validation campaign, the Iowa Flood Studies (IFloodS) was conducted in eastern Iowa from May to June 2013. This was the first GPM campaign focused on hydrology studies and featured four units of Iowa XPOL radars and several ground-based instruments for in situ observations. In this paper, we analyze radar observations from the S-band NPOL radar and the Iowa XPOLs at locations that hosted a network of 2D video disdrometers. Three events during May 2013 have been analyzed using NPOL radar data and the measurements from the 2DVDs, in terms of drop size distribution parameters and rainfall rates. Based on these results, we derive rain rate estimators for both NPOL and XPOL radars. The estimators were then applied to radar observations for another event (12 June 2013) and compared with rain gauge measurements. Reasonable agreement is found for both NPOL and for XPOL radars, especially after taking into account the time taken for drops to fall from the radar pulse volume over the gauge network to ground level.