Notes about DA discussion

• Radar data exchange
  – OPERA does not provide 3D Volume data
  – Regional exchange necessary for the time being
  – Interaction with OPERA encouraged
    • National representatives
    • C-SRNWPW and EWGLAM meeting Oct?
    • Data processing centres (MF, Met Office, SMHI?)
  – Work out a list of minimum requirements NWP
  – QC varies and difficult to enforce at source
Ensemble methods / 4D-VAR

• Open mind – both have strengths
• 4D-VAR provides full rank flow dependent $B$
• ETKF / EKF provide additional information
  – Balances at meso-scale (moist balance, hydrometeors?)
  – May provide non-linear effects (hybrid)
  – Scales automatically over # members
Displacement errors

• Have been shown to work and do things our linear methods cannot handle

• Several or many approaches
  – Morphing, field adjustment through cost function, ensemble weighting (hybrid, DWD)

• Will be continued
RUC and imbalances

• MF experience of short cycling
  – Spinup at 1 h
  – DFI / IDFI / Jc DFI / DFI forward only, frequency, which variables – choices and effects important

• HARMONIE RUC
  – Positive impact if ALL data (satellites used)

• Which observations provide extra benefit in RUC?