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# Field System DBBC Implementation

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# Basic Commands (DDC)

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- ◆ DBBCIFx
  - ⊕ IF set-up and read-back
- ◆ DBBCxx
  - ⊕ Individual channel set-up and read-back
- ◆ DBBCFORM=
  - ⊕ Formatter set-up and read-back
- ◆ DBBC=...
  - ⊕ Arbitrary commands
    - ◆ PPS\_SYNC
    - ◆ CONT\_CAL
- ◆ CHEKR support needed to verify set-up
- ◆ DRUDG support will generate
  - ⊕ DBBCIFx
  - ⊕ DBBCxx
  - ⊕ DBBCFORM

# Radiometry -non-continuous (DDC)

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- ◆ Basic operation has been demonstrated
- ◆ Fivept
  - ⊕ Pointing data flows into pdplt
- ◆ Onoff
  - ⊕ Data flows into gnplt
- ◆ Detectors
  - ⊕ All available supported
    - Each sideband
    - Each IF
- ◆ Resolution
  - ⊕ If the operating point is 300 counts resolution is 0.67%

# Radiometry - continuous (DDC)

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- ◆ Should be parallel to non-continuous case
- ◆ More samples (low cal) are required for useful results
- ◆ Use 1 Hz sampling
  - ⊕ Avoids long delay waiting for turn-over
  - ⊕ More precise selection of samples
  - ⊕ Minimal loss of data if sample is missed
- ◆ Integration with gnplt/antabfs
  - ⊕ Use continuous cal for Onoff?
  - ⊕ Separate Hi/low calibration?
- ◆ Error analysis need to determine requirements

# PFB support

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- ◆ Apparently straightforward
- ◆ Radiometry – any changes needed?

# Operational Issues

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- ◆ Can we use side-band AGC?
  - ⊕ Help compensate for band slope and RFI
  - ⊕ What target level (affects resolution)
  - ⊕ Must shut-off IF AGC to use?
  - ⊕ Will this cause other problems?
- ◆ Want to use D/A for phase-cal checks
- ◆ DBBC allow more than one connection?
- ◆ Documentation for calibration procedures
- ◆ Plans for phase-cal extraction?