DC3 Airborne Data Repository

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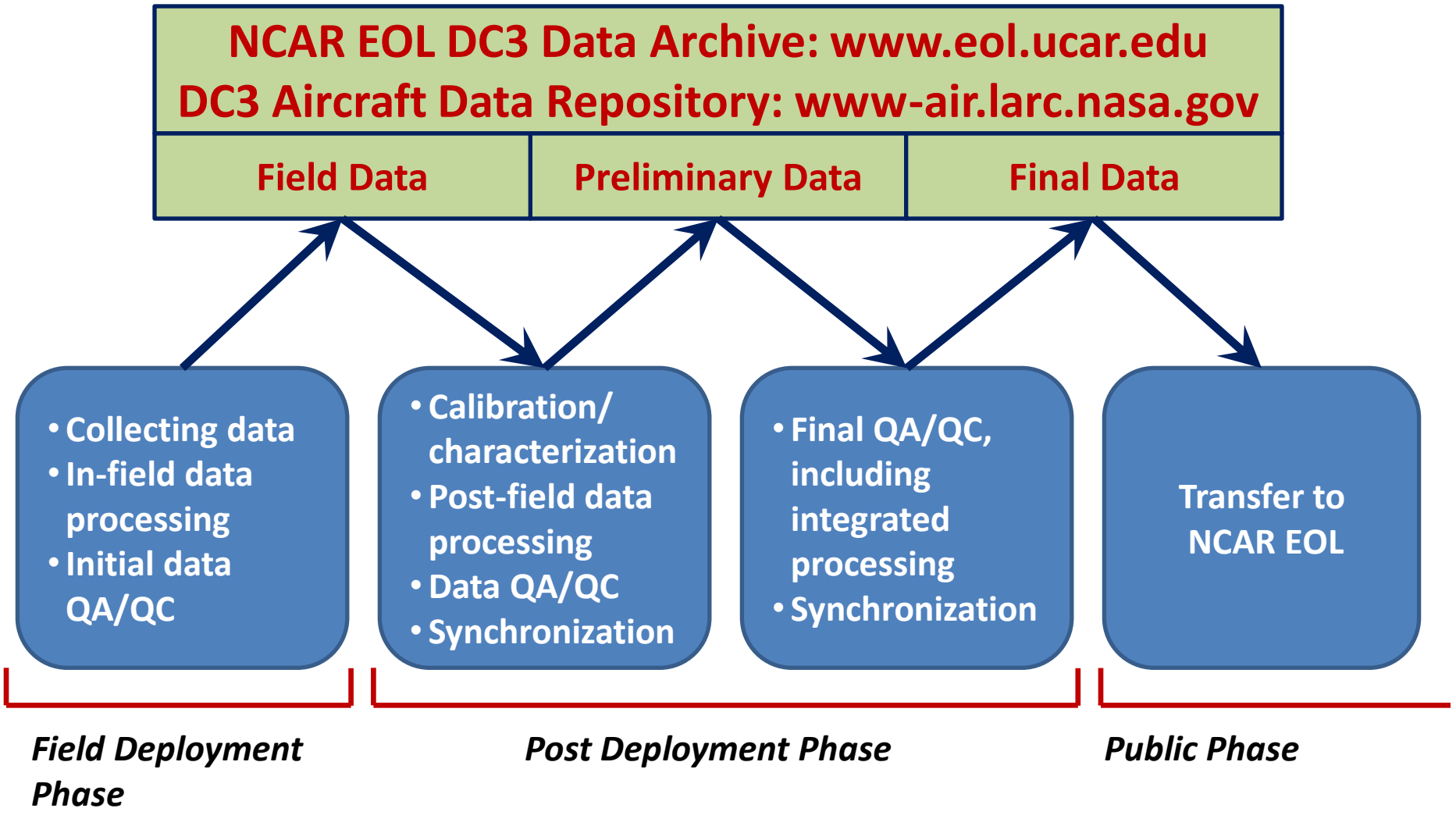
DC3 Aircraft Data Flow Overview



Proposed DC3 Aircraft Data Submission Timeline

Phase	Data Type	Deadline	Access Control
Field Deployment	Field Data	24 hour after each flight	Science teams and partners
Post-deployment	Preliminary Data	April 1, 2013	Science teams and partners
Public	Final Data	October 1, 2013	Public

- Exemptions may be granted on a case-by-case basis by project leadership
- Field and preliminary data may be obtained by groups other than science teams and partners per request to project leadership
- Data submission deadlines apply for both SEAC^{4}RS data and DC3 aircraft observational data
- Access control for field and preliminary data will be implemented through a single username and password for both SEAC^{4}RS and DC3

DC3 Aircraft Data Archive

Data Repository	Operation Period
Field Data Archive	04/20/12 – 03/31/13
Preliminary Data Archive	04/01/13 – 10/01/13
Final Data Archive	04/01/13 –

- **Preliminary and field data will be expunged after their operation periods, respectively**
- **The data archives will hold airborne observational data from NSF GV, NASA DC-8, and DLR Falcon**
- **Data revisions will be tracked by revision numbers in ICARTT filenames**

DC3 Aircraft Data Format Requirement

- **The data from SEAC^{4}RS field study and DC3 aircraft observations will conform to the International Consortium for Atmospheric Research on Transport and Transformation (ICARTT) data format standards**
- **ICARTT format has been widely used in airborne field studies since 2004 and is now one of the NASA Earth Science Division approved data system standards**
- **All incoming data files will be scanned to ensure compliance to the ICARTT format requirements.**
- **Assistance will be made available to the science team to trouble-shoot issues in generating ICARTT files**

DC3 Aircraft Data Format Requirement

- The ICARTT data files are self-describing and comma delimited ASCII files with two sections: data section and metadata section. Detailed description can be found at: http://www-air.larc.nasa.gov/missions/etc/IcarttDataFormat.htm
- ICARTT file header section requires metadata to ensure the data file self-describing feature. The metadata requirements include: data information, measurement description, measurement uncertainty and detection limits.
- ICARTT file names contain revision number for version control. Archived files cannot be overwritten. The revision number will be RA, RB, RC, … for field data and R0, R1, R2, … for the preliminary and final data
- The data file names will be prefixed with "DC3" or "SEAC4RS", respectively
- PI will need to register his/her dataID at the data archive after it is open. The DataID is a short description of measured parameter/species, instrument, or model (e.g., DC3-O3, SEAC4RS-PTRMS, etc)

- **Merge data products**

  The merge files will be generated for DC-8, GV, and Falcon data and will be made available at the data repositories. The merge files will be updated as the data files are revised

- **Aircraft data archive POC**

  The DC3 aircraft POC will monitor the data submission status in accordance with the data submission timeline, keep constant contact with NCAR EOL counterpart to keep EOL data site updated, and coordinate the efforts to support implementation of ICARTT format and the production of the data merge files

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Issues to be discussed

- Measurement time synchronization standard for GV, DC-8, and Falcon?
- Blind Intercomparison?
- Standardize variable names and units?
- Other comments, questions, or suggestions?

Questions, comments, advice?