



Use of ODB at Met Office

Adam Maycock

ECMWF reanalysis feedback 11th to 13th Nov 2014

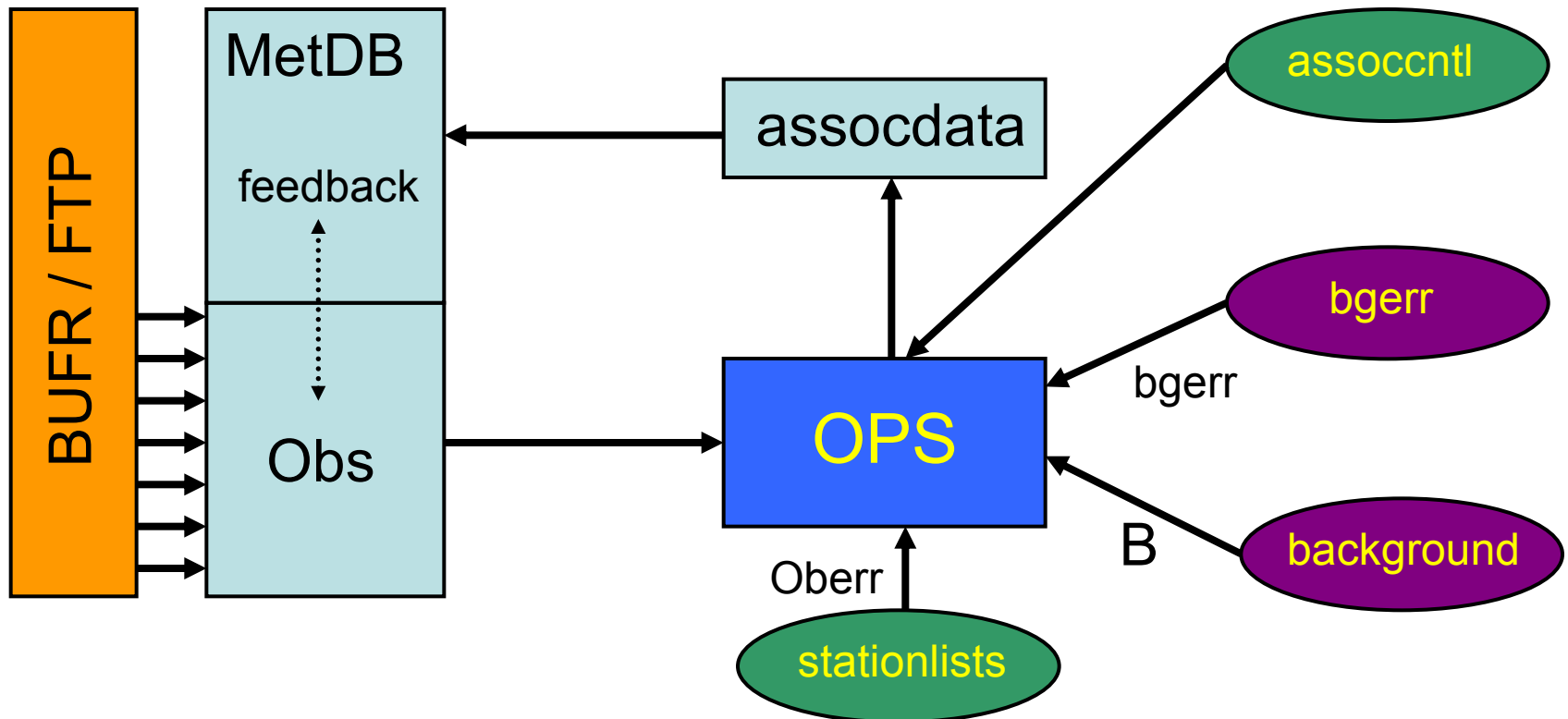


Contents

- What Met Office did before ODB
- Implementation in OPS
- Current status
- Work to do

The old way of doing it

- This is only suitable for operational NWP





MetDB mergeback issues

- MetDB provides convenient storage and interface, but no unified monitoring tools
- Therefore, huge number of separate, bespoke applications
- High maintenance costs, single experts
- Cannot use for research trials
- MetDB not owned by Weather Science
- Development can take a long time



Better solution?

ODB addresses these issues

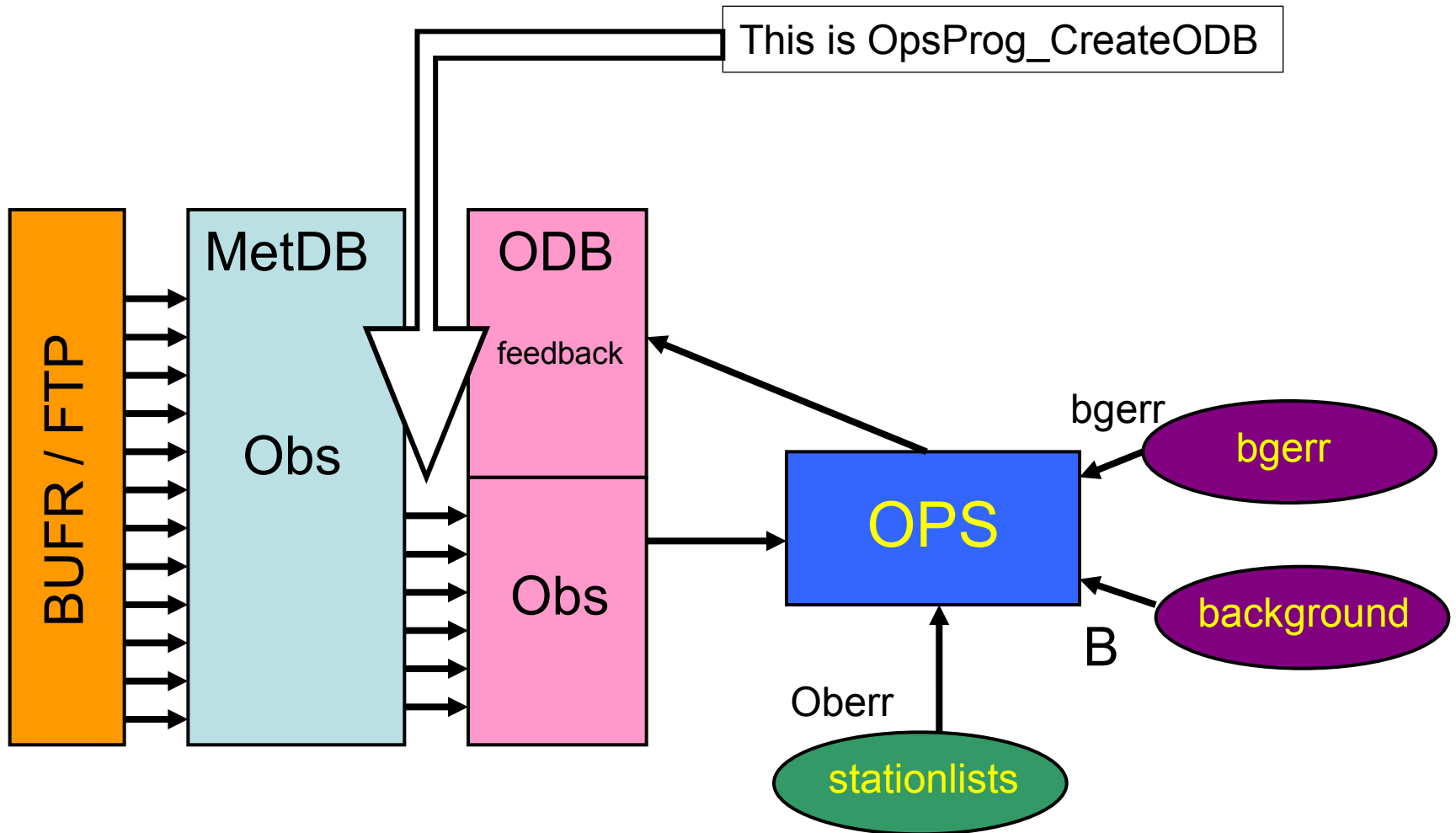
- With obstat, magics, Metview etc, all scientists can use the same basic framework
- Weather Science can “own” the system
- Implement in operations and any research experiment or trial



ODB content

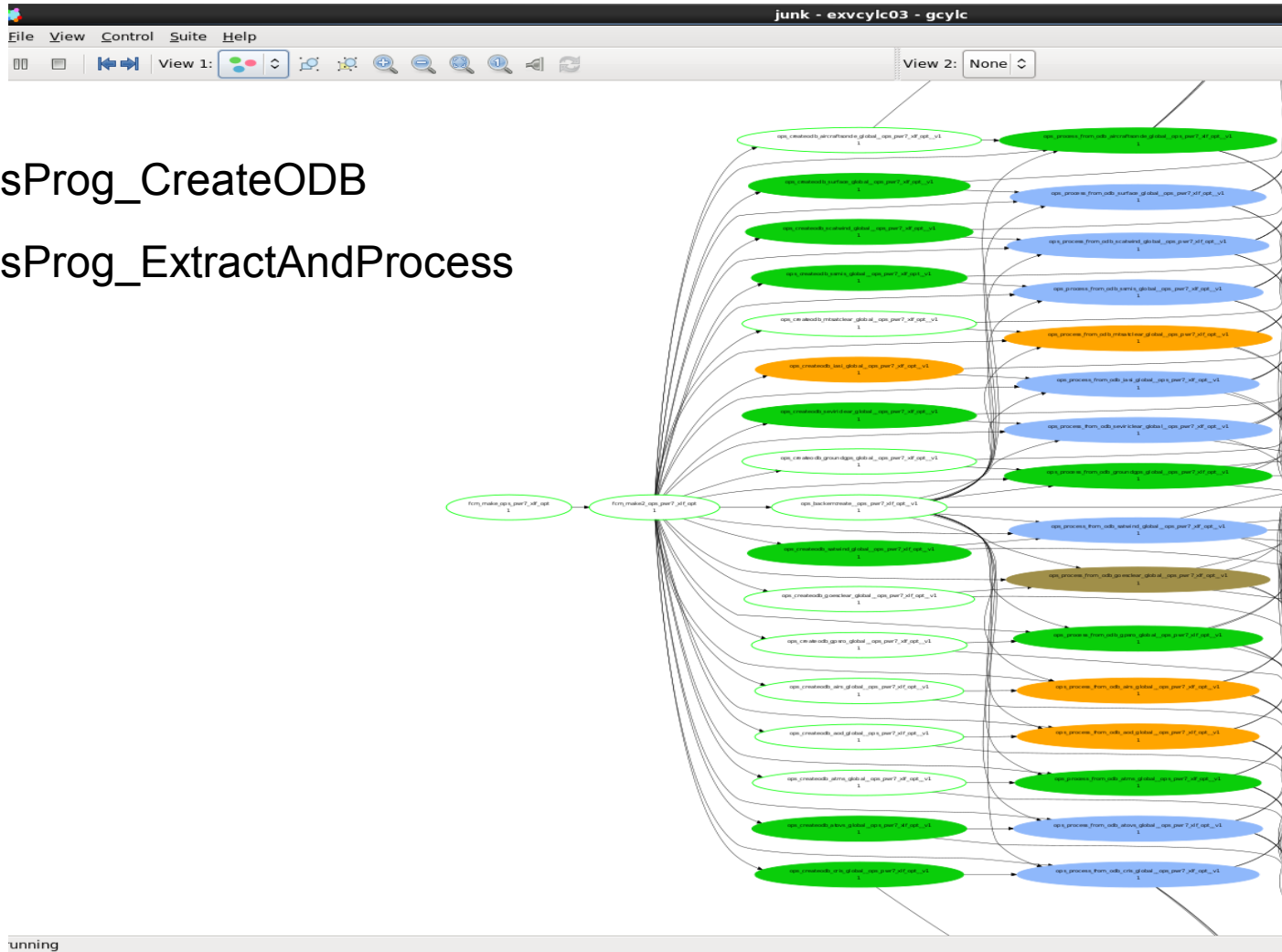
- We can put what we want in the ODB
- Any observed, derived, model background quantity, flag, correction, metadata. In fact anything that OPS knows about
- To do this, we add a column - or varno - to the ODB schema and update the OPS code to write to it
- The process is governed

Implementation in OPS





Implementation in rose suite



16 x OpsProg_CreateODB

16 x OpsProg_ExtractAndProcess



Current status

- Implemented in operational global model (UKV from Feb)
- Implemented in research global suite(s)
- ODBs archived as per-cycle tarballs
- From Feb 2015, will archive as per-cycle per ob type ODB-2
- From ~Jul 2015, use ODB server
- Will use same basic systems in reanalyses, although how/where to archive the data?





Work to do

- Continue development of the right tools for monitoring (different requirements for realtime NWP, research trials, reanalysis). Prioritisation issue.
- Make sure we can use and exchange the data effectively (get the ODB content right before starting a >30 year run!). Talk to the reanalysis community.



Acknowledgments

David Davies (OPS team; ODB developer)
Peter Kuchta and colleagues (ECMWF)



Met Office

Questions?

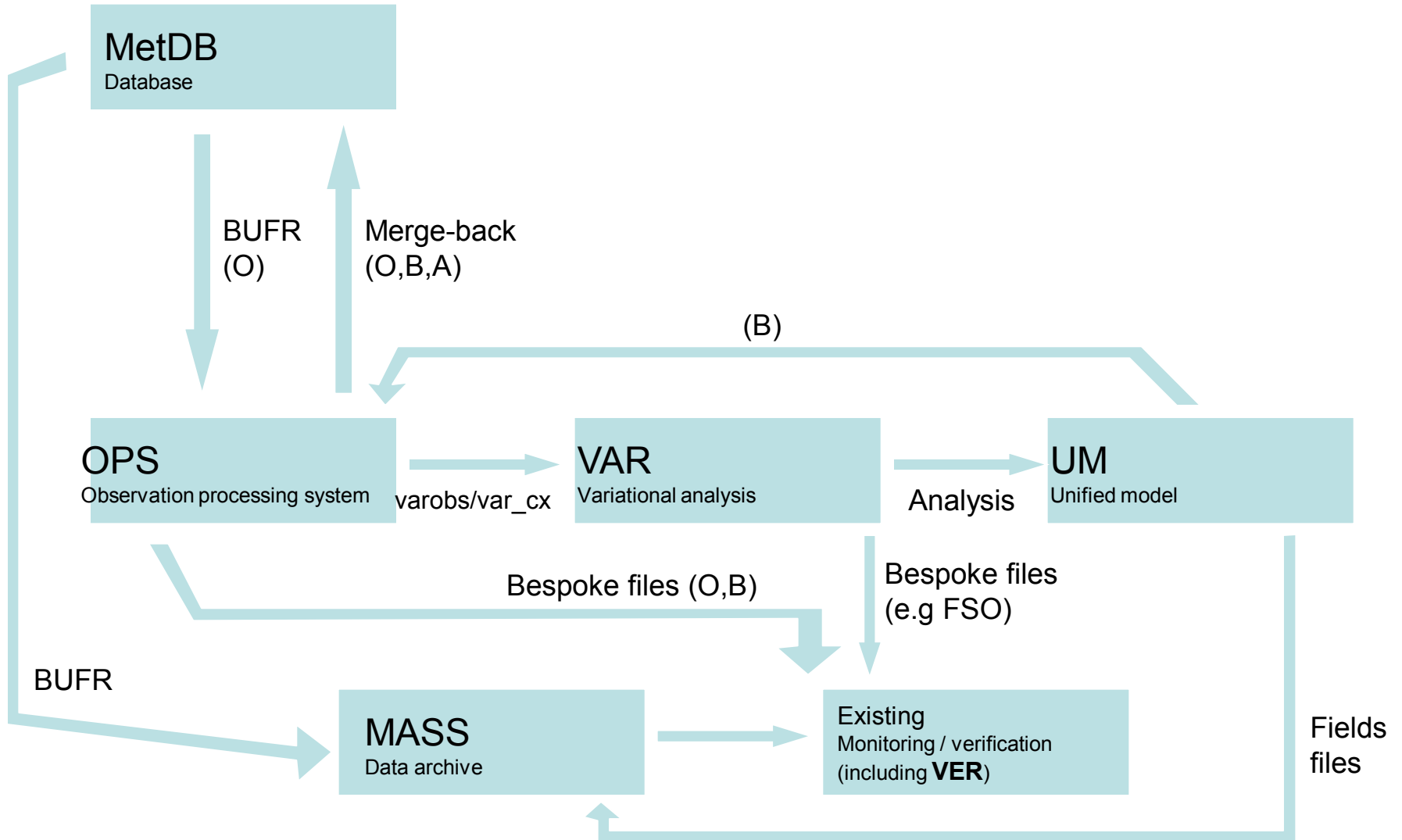


Observation Ingest: ODB, MetDB/MOODS

Met Office

Previous scenario

Adam Maycock



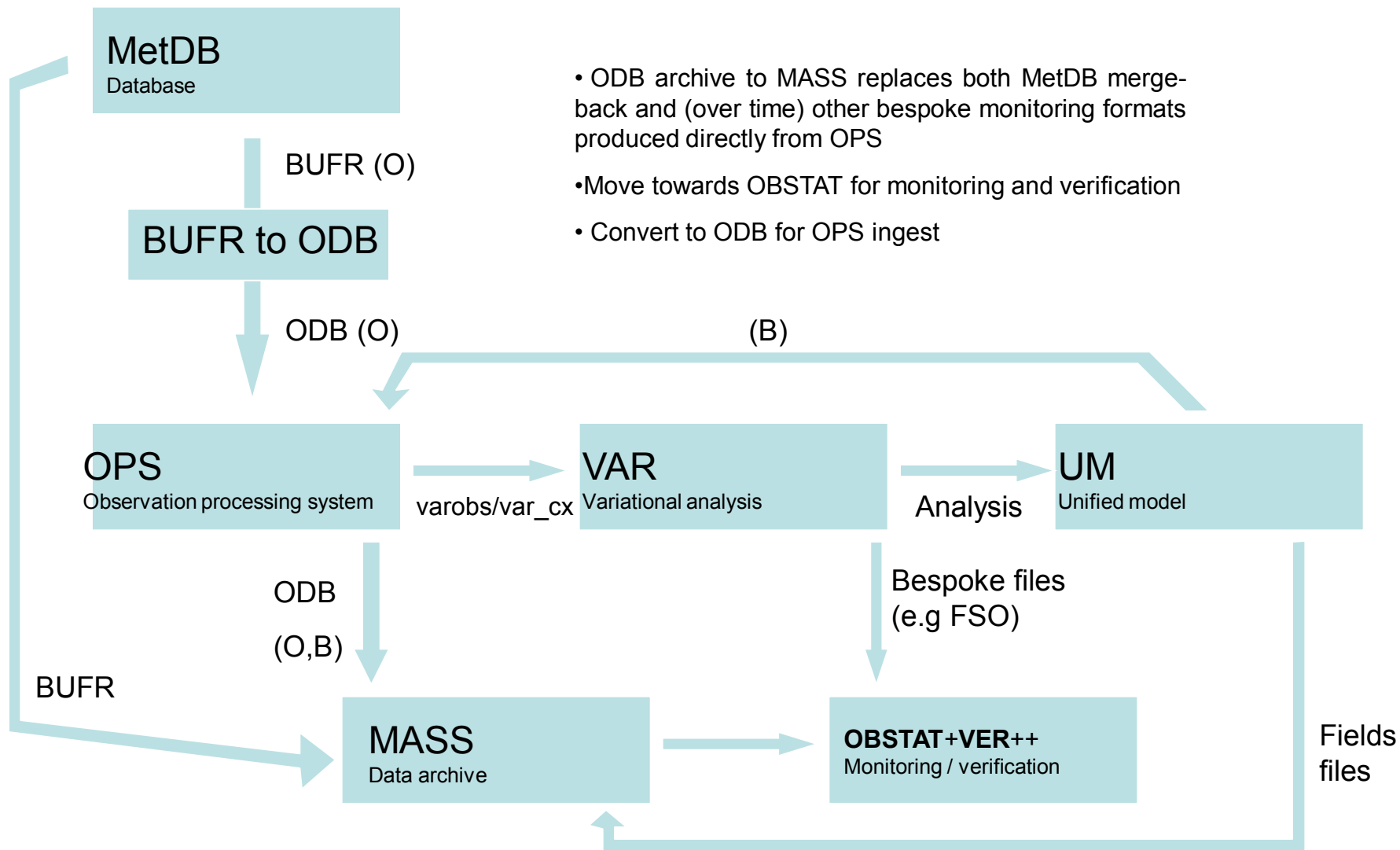


Met Office Since 2013

Observation Ingest: ODB, MetDB/MOODS

Adam Maycock

- ODB archive to MASS replaces both MetDB merge-back and (over time) other bespoke monitoring formats produced directly from OPS
- Move towards OBSTAT for monitoring and verification
- Convert to ODB for OPS ingest





Observation Ingest: ODB, MetDB/MOODS

Met Office Future Scenario

Adam Maycock

- MetDB replaced by MOODS
- Could convert to ODB as data arrives within MOODS rather than as separate one-off task.
- Could replace varobs and var_cx with ODB (not yet agreed).
- ODB output from VAR providing additional information for monitoring and verification
- Further progress to use of OBSTAT, unlikely to replace all existing tools
- VERSUS replaces VER (B)

