

Technical processing of GEMS observations at ECMWF

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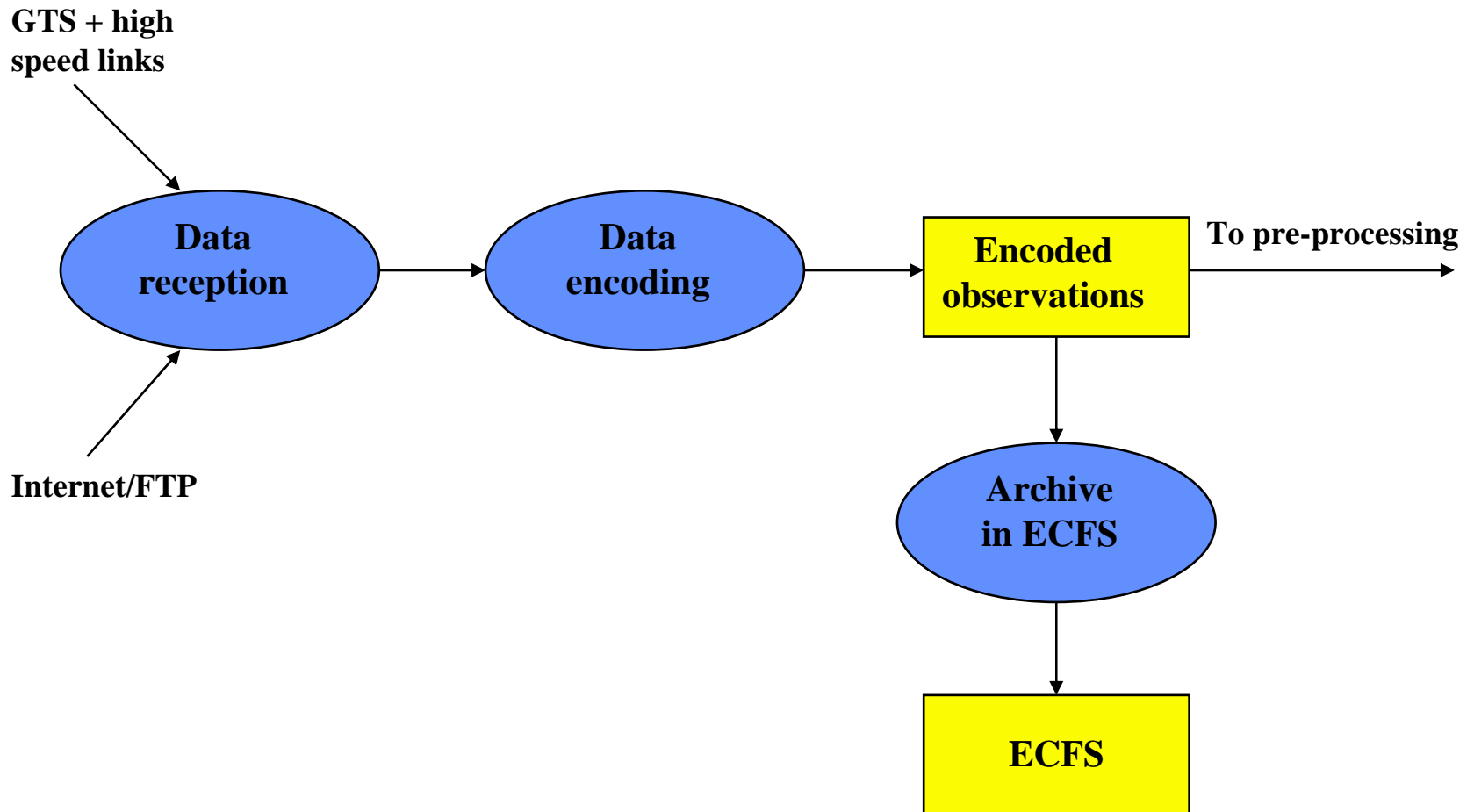
Operations Department

Introduction

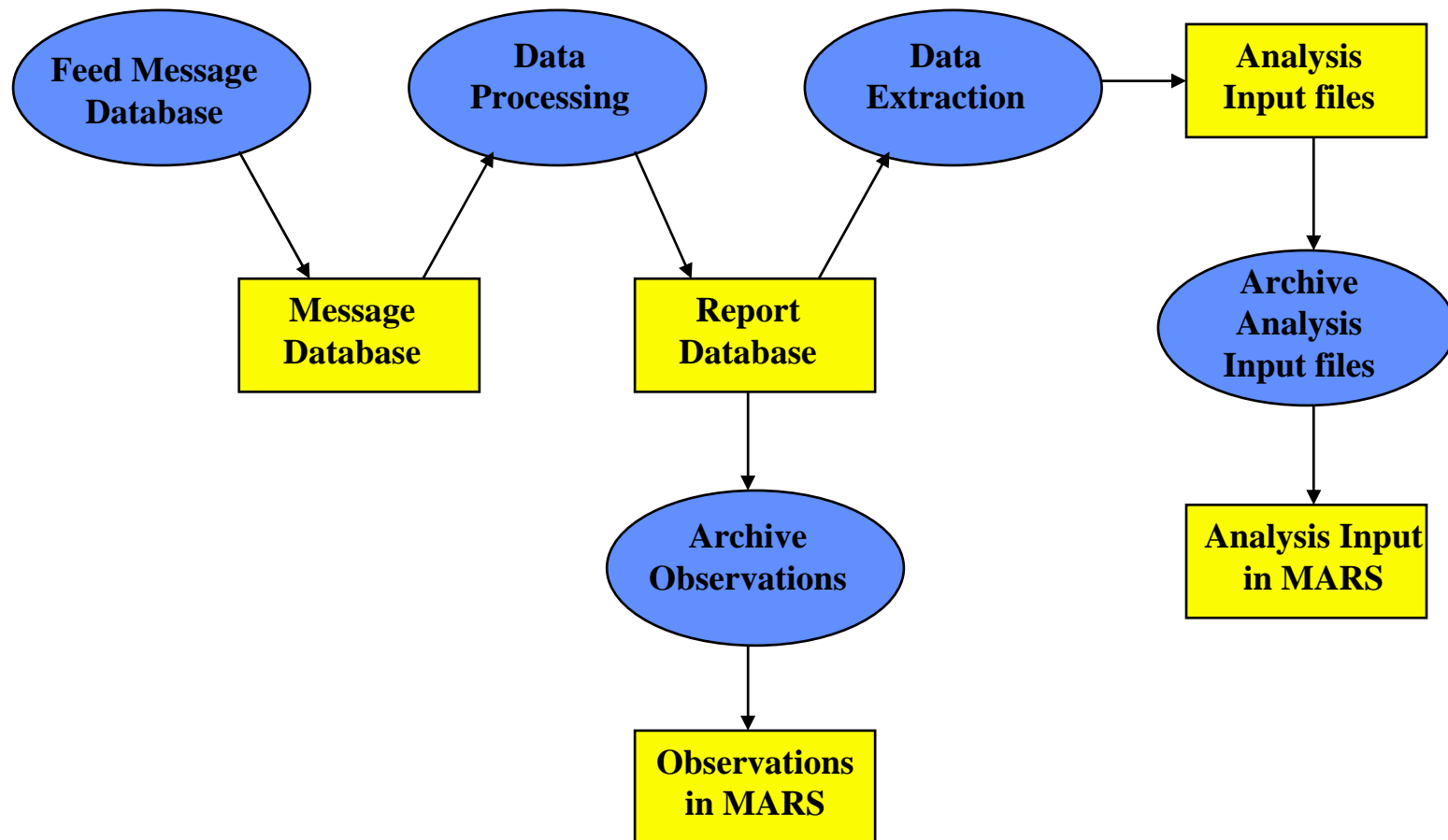
- **Data acquisition and pre-processing at ECMWF**
 - Acquiring and encoding data
 - Pre-processing in preparation for analyses

- **Observation processing within GEMS PRO**
 - BUFR issues
 - Encoding software
 - Data acquired

Data acquisition at ECMWF



Observation pre-processing at ECMWF



Observation processing within GEMS PRO – BUFR encoding

● **BUFR definitions**

- **Proposals to WMO**
 - **Have been reviewed by Expert Team**
 - **Majority accepted (rejection of aerosol types – To Be Clarified)**
 - **Awaiting official report (should be soon)**
- **Constructed local BUFR tables including new GEMS parameters (as in proposals)**
- **Using these new BUFR tables for first encoding of GEMS observations**

● **Encoding software**

- **Under construction; reads raw data format and encodes into BUFR**
- **initially for KNMI SCIAMACHY NO₂ and MODIS Aerosol**

Observation processing within GEMS PRO – data acquisition

- **MODIS Aerosol (Terra & Aqua) for 2003**
([ec:/oparch/gems/modisaerosol/aqua\[terra\]/YYYYMM/DD/*.raw.gz](ec:/oparch/gems/modisaerosol/aqua[terra]/YYYYMM/DD/*.raw.gz))
- **KNMI SCIAMACHY NO₂ for 2003 and 2004**
(ec:/oparch/gems/sciamachy/knmi_no2/YYYYMM/DD/no2track*.raw.gz)
- **MOPITT CO for 2003 and 2004**
(ec:/oparch/gems/mopitt_co/YYYYMM/DD/*.raw.gz)
- **AURA TES CH₄ and CO for July 2005**
([ec:/oparch/gems/tes_ch4\[co\]/200507/DD/TES-Aura_L2-CH4\[CO\]*.raw.gz](ec:/oparch/gems/tes_ch4[co]/200507/DD/TES-Aura_L2-CH4[CO]*.raw.gz))
- **KNMI GOME HCHO for December 2001**
(ec:/oparch/gems/gome/knmi_hcho/200112/DD/ch2otrack*.raw.gz)