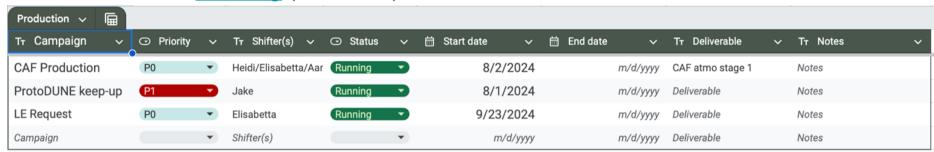# Production Report

CRAB meeting, 12/20/2024
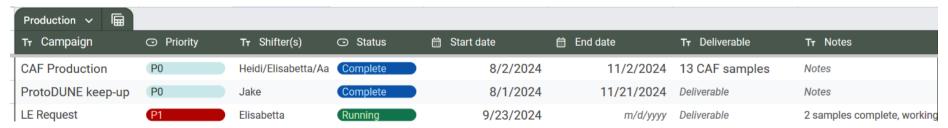
Elisabetta Pennacchio, IP2I
Aaron Higuera, Rice University
Matt Kramer, LBL

Ongoing campaigns

- ## Last CRAB meeting (Nov 15th)

Campaign	Priority	Shifter(s)	Status	Start date	End date	Deliverable	Notes
CAF Production	P0	Heidi/Elisabetta/Aar	Running	8/2/2024	m/d/yyyy	CAF atmo stage 1	Notes
ProtoDUNE keep-up	P1	Jake	Running	8/1/2024	m/d/yyyy	Deliverable	Notes
LE Request	P0	Elisabetta	Running	9/23/2024	m/d/yyyy	Deliverable	Notes
Campaign		Shifter(s)		m/d/yyyy	m/d/yyyy	Deliverable	Notes

- ## Today

Campaign	Priority	Shifter(s)	Status	Start date	End date	Deliverable	Notes
CAF Production	P0	Heidi/Elisabetta/Aa	Complete	8/2/2024	11/2/2024	13 CAF samples	Notes
ProtoDUNE keep-up	P0	Jake	Complete	8/1/2024	11/21/2024	Deliverable	Notes
LE Request	P1	Elisabetta	Running	9/23/2024	m/d/yyyy	Deliverable	2 samples complete, working

CAF campaign:

- Required datasets (13) have been produced, total data volume ~62 GB

- The production report has been prepared and made available on DocDB ([DUNE-doc-32503-v1](#))

- CAF files currently are at `/pnfs/dune/persistent/dunepro/caf_fd_2024/` Need to move them out of dunepro (`/pnfs/dune/persistent/physicsgroups`)

- CAF files are also in MetaCat and Rucio, should we target any RSE to have a copy on disk?

- **LE production :**

  - FDHD and FDVD with and without background, 10M events, ~1.1PB (footprint)
  - validation samples (13) completed (650K events, 55 TB)
  - 11/15: Formal approval for full production received from production requester
  - first 2 samples completed (FDHD, FDVD no background, 1.6M events, 1.5TB)
  - merging required: merged files already produced, declaration to MetaCat ongoing
  - production of the next sample (FDVD Radiological background) will start on January 7th(no merging needed)
  - 2.4 M of events, expected volume ~560 TB
  - production output to be stored on RSEs identified by data management team

ND productions and prototypes

- **Reprocessing of O(10TB) of 2x2/FSD data** at NERSC *(MK)*
  - 1 CAF output = 1 charge file + 2-3 light files (+ ~5% of a MINERvA file)
  - 2x2's 2-hour "sandbox" data processed through "flow" calib stage (including charge + light trigger matching)
    - SPINE reco, Pandora reco, CAF-making under debugment
  - Processing of full 2x2, FSD dataset after validation of sandbox files
- **Reprocessing using justIN** *(Tammy Walton)*
  - Successful tests (MINERvA software; ndlar_flow)
  - Further tests on hold, pending justIN enhancements for creating Rucio certificate
  - One charge file = one job, but one light file may be needed by multiple jobs. Need a better solution than redundant "rucio download" calls

ND productions and prototypes (continued)

- **2x2 MC: 1E19-POT-RHC MiniRun6.2** complete *(Noë Roy)*
  - Main new highlight: Pandora reconstruction
- **ND-LAr + TMS** productions *(Alex Booth)*
  - **MicroProdN1.1:** 1E18 POT RHC using MiniRun6 software
  - **MicroProdN3.1:** FHC equivalent
  - larnd-sim now uses much less VRAM in tests at NERSC *(Madan Timalsina)*
    - Recently tested full-scale ND-LAr light sim for first time
- 2x2 sample with **Snowstorm systematic variations** at NERSC *(Andrew Cudd)*
- Additional **samples with systematic variations** at ANL *(Aleena Rafique)*
  - Need good solution for accessing CVMFS from worker node
    - HEP-CCE testing with cvmfsexec on worker, Squid proxy on login node