

VD coldbox data reconstruction (*CRP1*, *CRP1b*, *TDE*)

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VD coldbox data reconstruction (*CRP1*, *CRP1b*, *TDE*)

- A first preproduction has been run in March, run 429 and 455 (November 2021, TDE)
https://indico.fnal.gov/event/53604/contributions/236727/attachments/152901/198259/VD_CBprocessing_EP110322pdf
- The results from this preproduction have been analyzed:
 - <https://indico.fnal.gov/event/53777/>
 - <https://indico.fnal.gov/event/54070/>
- outcome: → add GnocchiCalorimetry_module
https://indico.fnal.gov/event/54070/contributions/238931/attachments/153924/199858/vg_gnocchi_calor_080422.pdf

Raw Data Reconstruction

- dunesw version: [v09_49_00d00](#)
- fcl file: [vdcoldbox_raw_tdedataprep_reco.fcl](#)

3 input datasets:

- runs 414, 426, 429, 431, 445, 455, 456, 457, 458, 459, 471, 472, 473, 480, 482, 483, 484, 485, 486, 487, 489, 533, 534 ([November 2021, CRP1](#))
- runs 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 742, 744 ([December 2021, CRP1](#))
- runs 1272, 1273, 1274, 1275, 1276, 1277, 1289, 1290, 1291, 1292, 1293, 1294, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1335, 1336, 1337, 1338, 1339, 1340, 1341 ([June 2022, CRP1B](#))

~ **2M of events**

Reconstruction output files are grouped in 3 output datasets:

- `vd_coldbox_top_Nov2021_reco_v094900d00`
- `vd_coldbox_top_Dec2021_reco_v094900d00`
- `vd_coldbox_top_crp1b_reco_v094900d00`

Summary table

	raw	reco
CRP1 November 2021	vd-coldbox-top_cycle1_cosmics_raw	vd_coldbox_top_Nov2021_reco_v094900d00
CRP1 December 2021	vd-coldbox-top_cycle2_cosmics_raw	vd_coldbox_top_Dec2021_reco_v094900d00
CRP1b June 2022	vd-coldbox-top_crp1b_cosmics_raw	vd_coldbox_top_crp1b_reco_v094900d00

to check dataset definition and contents:

```
samweb describe-definition 'vd_coldbox_top_Nov2021_reco_v094900d00'
```

```
samweb list-definition-files 'vd_coldbox_top_Nov2021_reco_v094900d00' --summary
```

Analysis tree production

- dunesw version: `v09_54_00d00`
- fcl file: `standard_anatree_vdcb1_data.fcl`

- one file for run:

`runid_reco_v094900d00_anatree_v095400d00.root`

with `runid` in

- 414, 426, 429, 431, 445, 455, 456, 457, 458, 459, 471, 472, 473, 480, 482, 483, 484, 485, 486, 487, 489, 533, 534
- 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 742, 744
- 1272, 1273, 1274, 1275, 1276, 1277, 1289, 1290, 1291, 1292, 1293, 1294, 1321, 1322, 1323, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1335, 1336, 1337, 1338, 1339, 1340, 1341

- being copied to tape

Conclusions

- LArSoft data production of CRP1 and CRP1b has been completed, and the output files (root ntuples) are available for analysis
- The production had been run with poms, within the production group
- The poms campaign setup for CRP1 and 1b data production can be re-used for CRP2 and CRP3
- Ready to produce CRP2 data once the mapping integration in LArSoft is completed, and data preparation tested (see talks by Slavic and David) . Mapping was already used and validated during the online analysis of CRP2 data in July