

OSB Update

ET Monthly Meeting, Sept. 5th
2023

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Blue Book

- Next major ET community challenge
- OSB division coordinators will give updates at the 2nd ET annual meeting in Orsay (<https://indico.ijclab.in2p3.fr/event/9686>)
- Goals:
 - 1st draft of each division chapter expected by the end of the year
 - more concrete version by beginning of summer 2024

MDC 1 (2023)

- Data available at:
 - [/cvmfs/et-gw.osgstorage.org/et-gw/PUBLIC/MDC1](https://cvmfs.et-gw.osgstorage.org/et-gw/PUBLIC/MDC1)
- OSB MDC page
 - <https://wiki.et-gw.eu/OSB/DataAnalysisPlatform/MDC>
- OSB data description:
 - <https://docs.google.com/document/d/1tSQtca9VgUF7DL5N5Xtp1IDiH9fIZaVEWkkyD8wL-pl/edit>
- EIB MDC page:
 - https://wiki.et-gw.eu/EIB/SoftwareFrameworks/WebHome?validation_key=e2698d03b6eff5856cfab4654d3fbfe5

MDC 1 (2023)

- 1 month of data in two data sets
 - BNS (59540), BBH (6578), NSBH (1977) + noise
 - Coloured Gaussian noise, no artefacts (PSD mimics ET 10km)
- Frame format for E1,E2,E3 and null stream E0 (1.3 TB)
- 1270 segments of 2048s, sampled at 8192 Hz
- Non-blind data set (i.e. injection parameters available)
- No formal end date

Goal of MDC 1

- Stress-test computational infrastructure
- Estimate computational cost of detection/PE
- Compute the detection efficiency
- Population rate
- Mass distribution for various populations
- Spin distribution for BBH/NSBH populations
- NS-EOS
- Using a predetermined cosmology, determine the merger rate (z)