

Towards a FAIR path for the Einstein Telescope

The third generation Gravitational Wave detectors such as the Einstein Telescope, and the future instruments for astronomy and astrophysics to be released in the next years will generate an increased amount of data of considerable complexity, that will be available to the astrophysics community. This poses important challenges in order to store, process, integrate, distribute, share and analyze these vast amounts of data in a way that is safe, organized and efficient. The FAIR principles —Findable, Accessible, Interoperable, and Reusable—are therefore crucial for Gravitational Wave science by enhancing good data and software management practices.

In the context of Working Package 8 (Computing and Data Access) from the Einstein Telescope Preparatory Phase project (ET-PP), we present our vision of a potential strategy for data and software management for the Einstein Telescope based on the FAIR principles. By leveraging on published resources, we explore how a future FAIR path for ET could be implemented, also identifying topics in which further work is required. Establishment of a solid and curated FAIR path for Gravitational Wave science will ensure that current and future researchers from the field can easily identify, locate, access and reuse open materials and resources for successful implementation of the FAIR principles along the scientific data and software life cycles, providing them with the robust framework necessary for advancing this transformative area of astrophysics.

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