Contribution ID: **56** Type: **Oral**

Use of MARTe2 to enhance the JET Real-Time Central Controller.

Tuesday 6 July 2021 14:40 (10 minutes)

JET experiments include feedback control implemented via the real-time central controller (RTCC). This system is highly data driven. Controllers can be adapted and tuned during experimental sessions by expert users. The original implementation has been expanded and updated many times. For future campaigns, further growth in terms of both capacity and capability is desirable, but this is not practical within existing constraints. A new system to provide improved functionality based on use of the MARTe2 framework has been designed and prototyped. We report on the project status, including a particular focus on the quality processes that have been used to minimise deployment risks in a mature environment at a critical time. We also outline the future roadmap for developing the application and supporting ecosystem which could have benefits in other contexts.

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Session Classification: Plasma Control 2

Track Classification: Plasma Control