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Triple-point magnetic flux rope analysis for the 2020 April 19 CME observed in situ by Solar Orbiter, Bepi Colombo, and WIND

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We present initial results for a triple-point analysis for the in situ magnetic field measurements of a CME observed at three independent locations. On the 19th of April 2020, Solar Orbiter observed a CME in situ at a radial distance of around 0.8 au. This CME was subsequently also detected by the Wind and Bepi Colombo satellites closer to Earth. This triple in situ measurement of a CME provides us the unique opportunity to test the consistency of the measurements with our own 3D Coronal Rope Ejection (3DCORE) model. A triple measurement allows for up to seven different data combinations to be analyzed (three single-point, three dual-point, and one single triple-point combination) which gives us information on how our analysis pipeline responds to multi-point measurements and how the results change with measurements at differing radial and longitudinal distances. The goal of this study is to test whether all three in situ measurements can still be described by a slightly bent flux rope geometry and how adding additional measurements can improve the accuracy of inferred model parameters.