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Verifying the impact of additional breaks in station coordinates on VLBI scale drift

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With the establishment of the International Terrestrial Reference Frame 2020 (ITRF2020), investigations revealed an unexpected positive VLBI scale drift after about 2014.0. Given the crucial role of Very Long Baseline Interferometry (VLBI) in determining the ITRF scale, this peculiar behavior raises concerns. Within the VLBI community, several studies have been conducted to decipher the cause behind this pattern. A recent study by the Onsala Space Observatory (OSO) explored the introduction of additional discontinuities in the station positions of NYALES20 and/or in the positions of MATERA, WETTZELL, and ONSALA60 due to repairs or replacements. They found that the introduction significantly mitigated the scale drift with respect to ITRF2020.

Utilizing our newest state-of-the-art combination software, *VieCompy*, developed at the Vienna Center for VLBI, we independently assess the impact of these additional breaks on session-wise estimated scale through a combination of VLBI sessions at the normal equation level.