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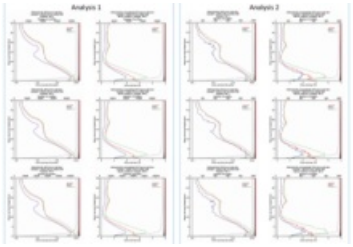
Precise estimation of error statistics is imperative in the evaluation of radio occultation (RO) data sets. The three-cornered hat (3CH) method provides a straightforward way to produce such estimates, specifically of error variance. A primary requirement for using this method is the existence of at least three data sets that contain co-located data. Gridded model data can easily satisfy this requirement, though the resultant estimates will contain the error variance contribution from representativeness differences between the data sets.

In this work, we remove the influence of representativeness by using the 3CH method with data sets consisting only of RO data. Doing so provides us with receiver-to-receiver and intermission estimates of the error variance. Given the small likelihood of triplets of co-located profiles in RO data sets, relatively dense observations are necessary. COSMIC-2 provides such density, and is thus the primary focus of our analysis.



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