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Handling systematic effects before combining space techniques at the level of normal equations

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Combining reference frames of various geodetic techniques requires expressing them in a unique homogeneous frame. However, this is not perfectly realized. Due to inaccuracies in coordinates, individual reference frames are affected by systematic effects. Consequently, before their combination, it is necessary to identify, calculate and remove these effects with respect to a standard reference such as ITRF2008. Simultaneously Earth orientation parameters (EOPs) and celestial frame are considered. EOPs are estimated with a sub daily time resolution and quasars coordinates are constrained to be aligned with respect to a celestial reference such as ICRF2 by using non rotation condition. The poster presents the approach we have applied for that and the improvement that can be obtained in this process.