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# On the localization of infrasound sources with stratospheric arrivals

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The purpose of this study is to investigate how accurate and with what tools, the localization of a transient acoustic event can be done, starting from measured infrasound signals from stratospheric refractions. The tools to be used are until now, standard beamforming with Fisher Ratio statistics , theo- retical beamforming accuracy (Cramer Rao) and ray tracing backwards in time with winds turned around. This raytracing is done with one vertical atmosphere profile or with a three dimensional atmosphere profile. Amplitudes based on calculated Jacobians along the rays (using a generated set of 12 equations for the 3D Jacobian) and the possible influence of small scale structure of the atmosphere profile on localization will also be considered.