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Depth inversion of a deep homogeneous layer using gravity and vertical gravity gradient disturbance

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In theory, the Moho is determined by the inversion of a homogeneous layer. Furthermore, in mathematical view, the purpose of this work is to find a solution of the Fredholm equation of first kind. In this research, referring the well known achievements by Moritz, Wang and Sjöberg and aiming to apply GOCE in the refining of crust-mantle boundary, we present general expressions of the depth inversion for a deep homogeneous layer using gravity and gravity gradient disturbance in the frequency and space domain. Finally, among others, we verity the formulae through a closed - loop simulation using the GOCO03S model.