

# ***Interactive comment on “Application of particle swarm optimization for gravity inversion of 2.5-D sedimentary basins using variable density contrast” by Kunal Kishore Singh and Upendra Kumar Singh***

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Dear Sir First of all authors would like to wish a happy and prosperous new year 2017 to you. We really thankful to you for given appreciation words that encourage to authors to continue this work in future. We have improve the English and try to furnish all those comments and incorporated in the manuscript given by you accordingly which are highlighted in the manuscript.

1. In the manuscript mentioned 2.5D, it indicates the sedimentary basin having finite strike length. 2. Yes, PSO can be applied for 3D case, but we have not done in this

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paper and we are planning to work on 3D case in next paper. 3. We have compared the PSO results with published results mentioned in the page 7, line 139-143 and 153-159. 4. The sentence is modified and rewritten on page 1, line 16-17 and page 8, 167-169 (highlighted) 5. Gaussian noise is added to check the robustness of the technique so that method can be applied in real field data see page 6 line 119-120. 6. The profile like is drawn in Figure 8 see on page 21. 7. Authors thank to referee for reminding the application of PSO for layered structure case and we are continuously working on this and planning for next publication.

with kind regard Upendra

Please also note the supplement to this comment:

<http://www.geosci-instrum-method-data-syst-discuss.net/gi-2016-10/gi-2016-10-AC2-supplement.pdf>

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