

Subject: Reviewers' Report

Title: Bayesian estimation for the mean of delta-gamma distributions with application to rainfall data in Thailand.

In this manuscript, credible interval (CI) and highest posterior density (HPD) interval for the mean and the difference between the means of the delta-gamma distribution are constructed. For Bayesian method, the Jeffreys' prior and uniform prior are taken into consideration. Also the CI and HPD intervals are derived based on fiducial quantities. The numerical computation is performed for comparing the efficacies of five proposed methods in terms of their coverage probabilities and expected lengths.

The structure of the manuscript is satisfactory. The paper is logically and technically in standard paper format. The computation part and simulation is reasonable. The results and Tables are clear and acceptable. In general, after some minor revision, the paper is suitable for acceptance. I invite the authors to make minor revisions to improve the presentation, which the comments are listed below:

- i) Motivation of the paper needs to be illustrated.
- ii) In equation (8), the last term of the joint posterior density of θ will be $\exp(-\frac{x_{n(1)}}{2\sigma^2})$ instead of $\exp(\frac{x_{n(1)}}{2\sigma^2})$. Also the equations (10), (20) and (22) need to be corrected in similar manner.
- iii) Each equation should be ended either with "." Or with ",".
- iv) The resolution of all the plots (Figures 1 - 9) needs to be improved. I suggests, produce your graphics in PDF (do not convert it from png, jpeg, ... , to pdf).
- v) The line before equation (17), "Thus, the Fisher information ...", after the word 'for', " ϕ " is missing.