

各位同學：

這是一篇很經典(古老)的文獻 Charney et.al. (1969) ，篇幅雖短，但卻是史上第一篇討論可以使用對某個區域某種變數的歷史觀測資料，來修正數值預報模式對另一種變數在其它區域的預報，換句話說，就是我們今天在談的資料同化的雛型。

另外，這篇文章所採用的方法，也就是我們現今很常用的觀測系統模擬實驗(Observation System Simulation Experiment; OSSE)方法，又稱之為孿生子實驗(Identical Twin Experiment)方法。請大家閱讀後寫一頁的心得，其中要特別說明什麼是 OSSE。於 2021/09/29 前交給助教。

Dear Students:

This is a short but very classic (old) paper (Charney et al. 1969), which was the very **first** paper that talked about the concept of data assimilation. The experimental design adopted in this paper is called “Identical Twin Experiment”, or Observation System Simulation Experiment (OSSE) as we know today. This approach is still widely used by modern data assimilation researchers when they try to evaluate the performance their methods. Please read this paper, and submit a one-page report to TA by 2021/09/29. In your report, please explain what the OSSE experimental design is.