## ExerciseTwoCM: Problem

The home-page data file **ExerciseTwoDCMData.dat** contains a sum of two sinusoidal signals and a linear polynomial $p(t)$ trend. The signal periods are between $P_{\min} = 0.5$ and $P_{\min} = 5.0$. Perform DCM analysis of these data. In other words, apply **dcm.py**.

Use the following control file name **TwoDCM.dat** Perform your DCM analysis using only these two commands
**cp TwoDCM.dat dcm.dat**
**python dcm.py**

Use **Tag=TwoDCM**. This will give the following figures
**TwoDCMz.eps** (Periodograms)
**TwoDCMgdet.eps** (Model)

**1/2 point:** Give the detected period values $P_1$ and $P_2$ using two decimal accuracy. Send these values two the assistant. Attach your **TwoDCM.dat**, **TwoDCMz.eps** and **TwoDCMgdet.eps** files to your e-mail.
**1/2 point:** Answer to this question in your e-mail: What is "odd" in your $P_1$ and $P_2$ values? Use less than 100 words in your answer.

### Tips

1. Use **TestStat=1** because the errors are known.
2. Test different **nL**, **nS** and **c** values.
3. Your figures should resemble Figures 1 and 2.

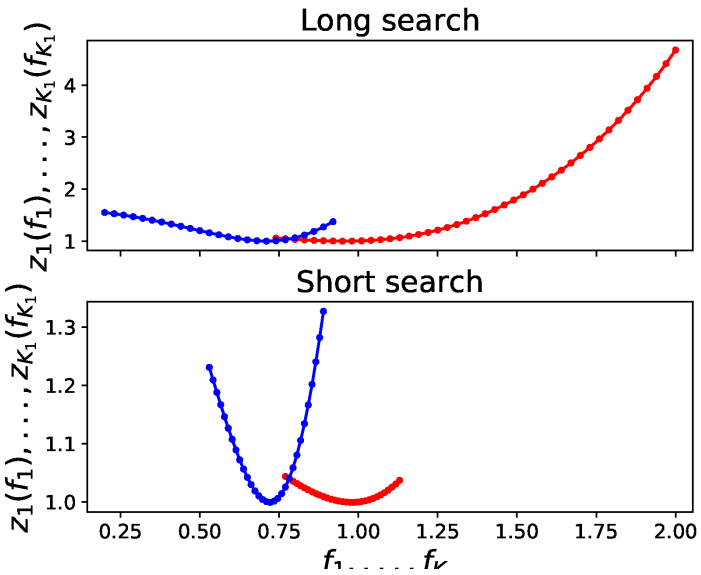


Figure 1: **TwoDCMz.eps** periodograms.

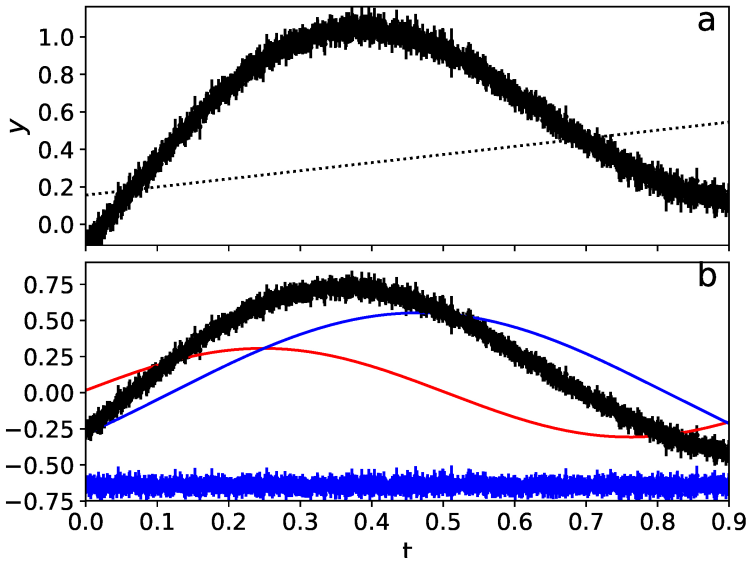


Figure 2: **TwoDCMgdet.eps** model.