

Summary

This is a book, containing the results summarized from the Light curve simulated data from Alex, shown in figure(1). Here we have used 3 filters from the data. The original time delay and magnification in the data is found in the title of the plot. We tried with changing the node spacing in the reconstruction process. So an array of node spacing prior range was chosen and for each of this value, the reconstruction was done and the results are compared, which can be seen in the table in next page. The posterior plots and the reconstructed images for each of this rows from the table are subsequently presented in the following pages in the same order as of the rows in the table's node-space values. Changing the upper range of the time delay maximum range, can however change the reconstruction and the fitting statistics. The upper range of this parameter which is called as 'dt_max'in the program, used in this run of the code, can be found in the naming nomenclature of the folder TD_30, meaning the upper range of the time delay max is 30 day (the default lower limit is 0). The folder name also shows the number of parameter used which is $NP = 8$.

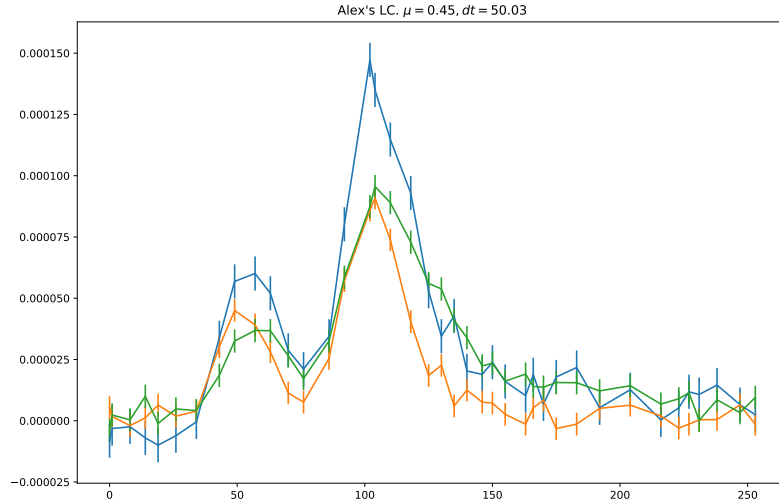
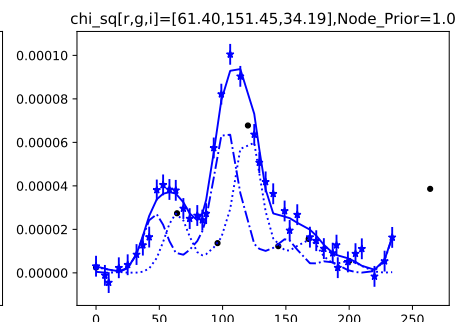
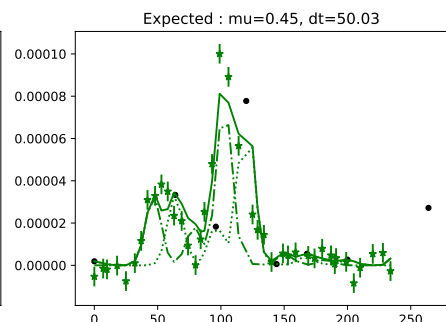
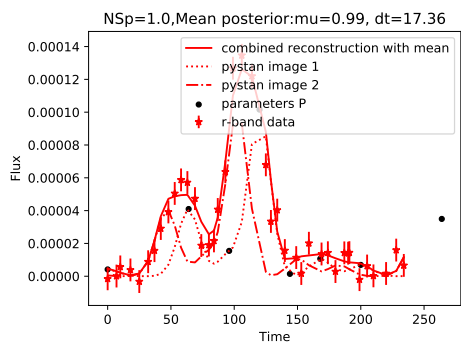
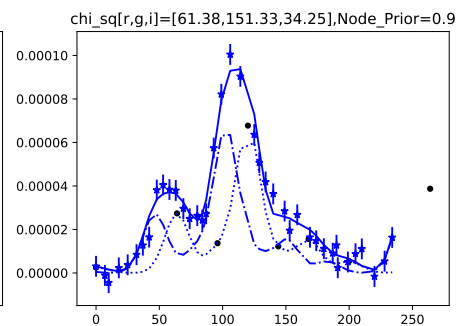
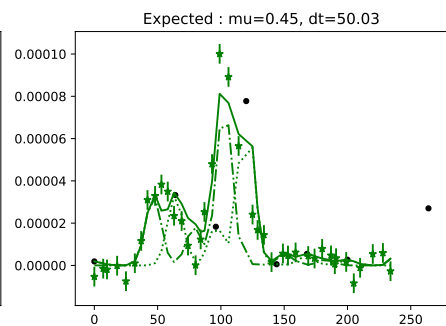
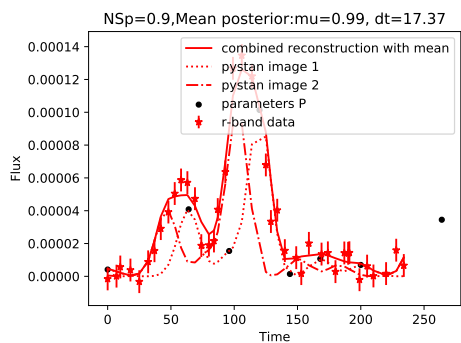
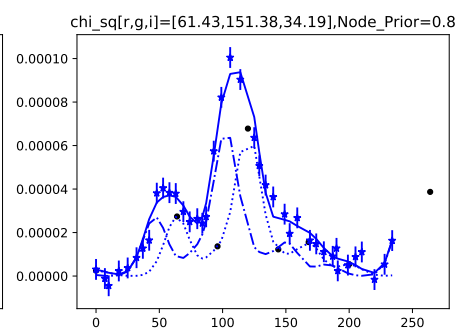
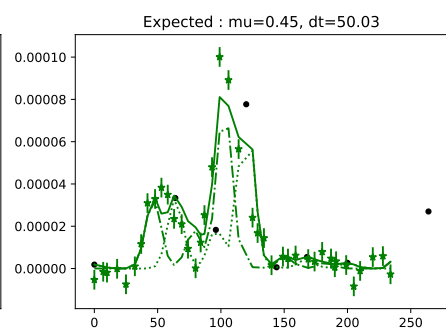
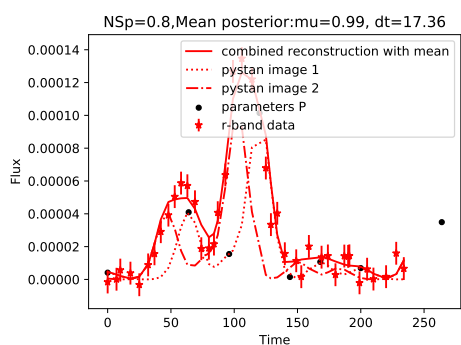
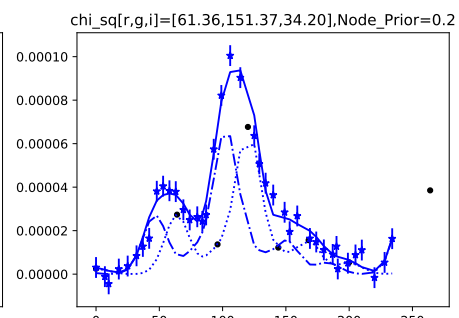
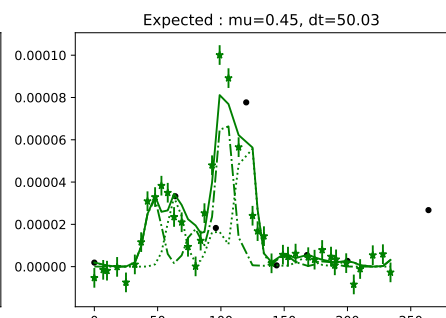
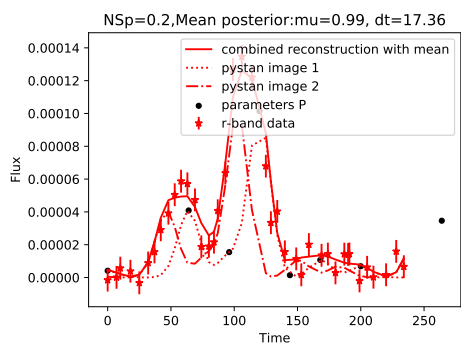


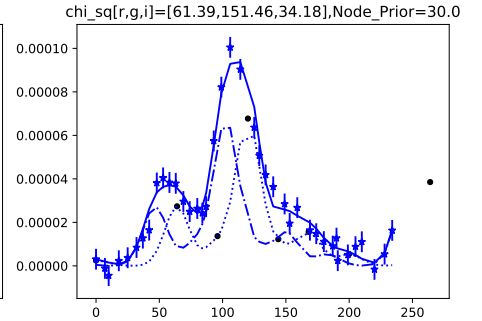
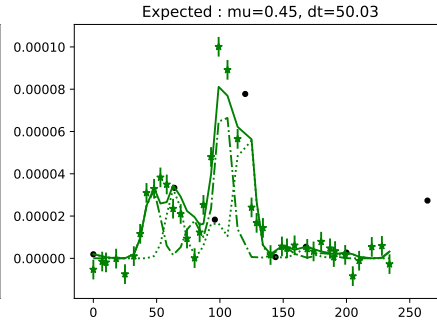
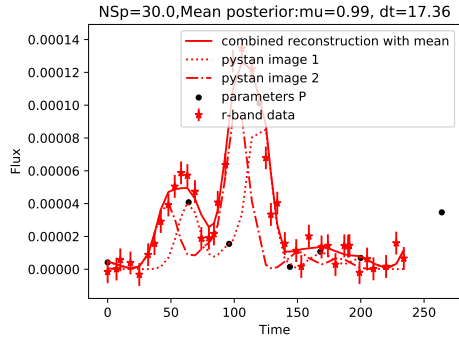
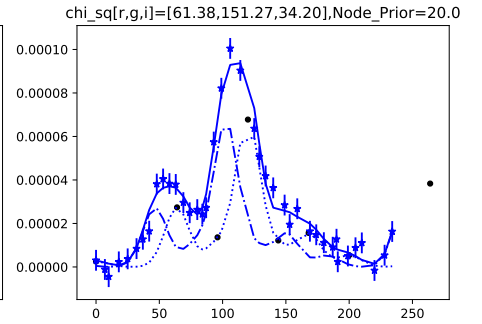
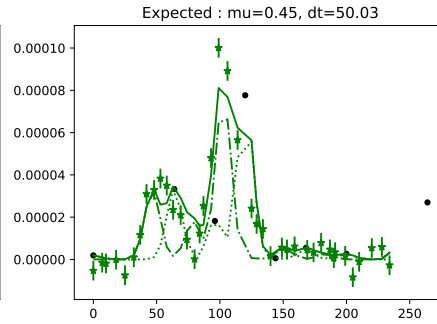
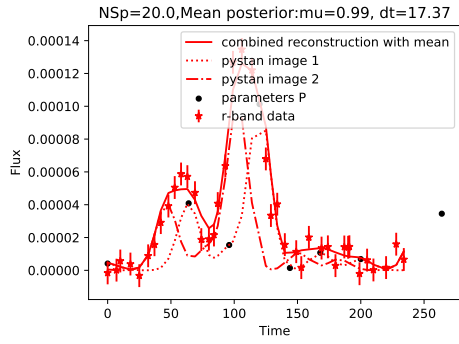
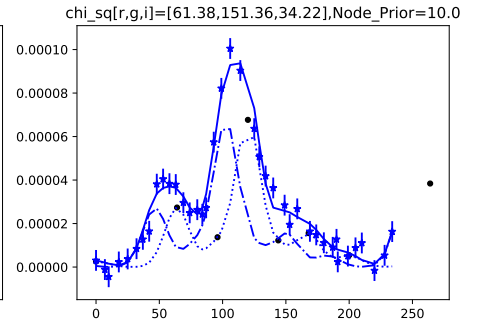
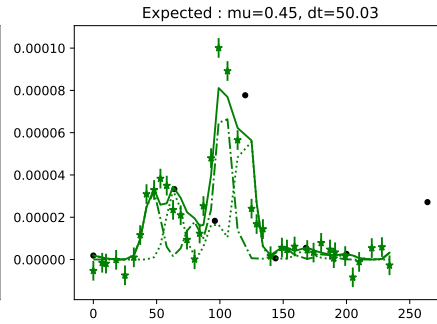
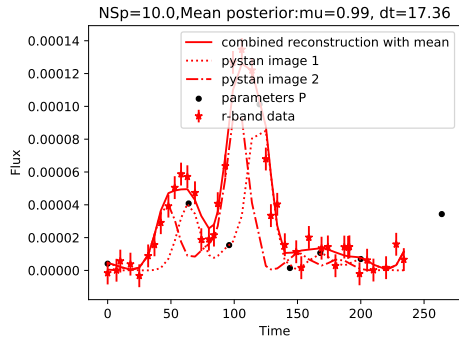
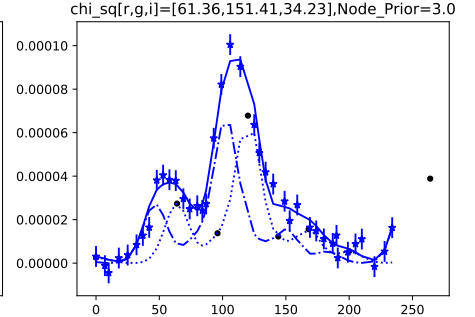
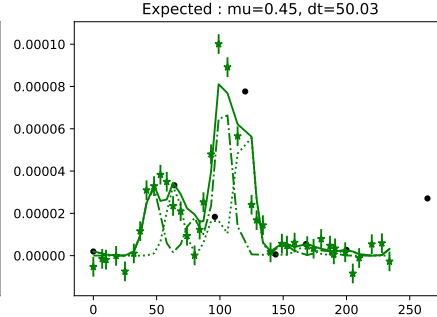
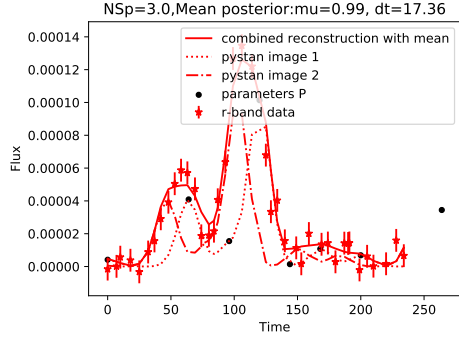
Figure 1: Alex's simulated light curve, customised to produce 2 images, with a time delay and magnification(ralative) shown in the top header of the plot. Here we used only 3 filter data, which are shown above.

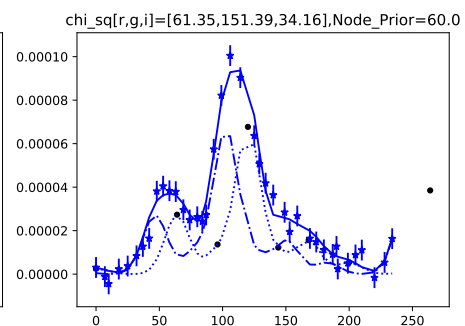
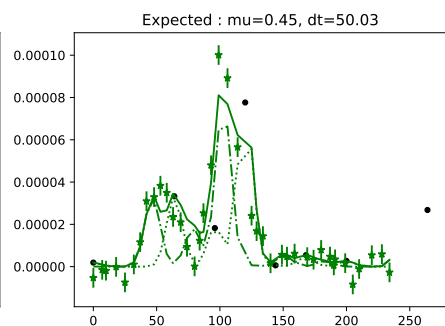
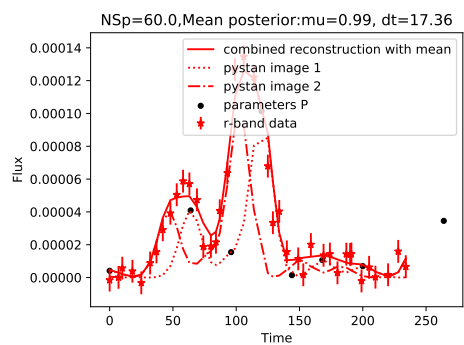
X-axis = Time Delay in Days, Y-Axis = Flux.

Table in the next page, showing the reconstruction statistics, **as a function of the node space parameter(1st column)** for a given dt_max(which in this case is 30 for $NP = 8$ parameters).

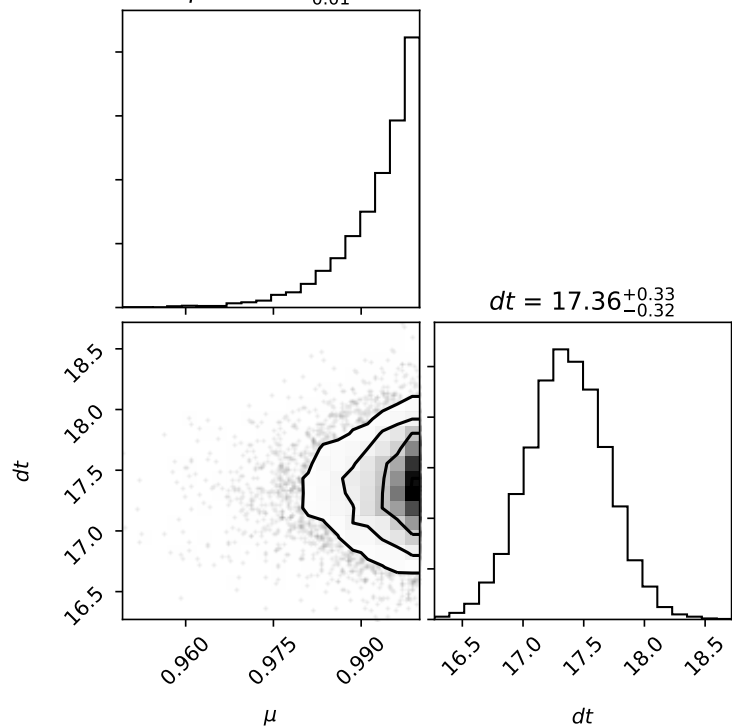
nspace	mu_expec	dt_expec	mu_pos	dt_pos	chi_r	chi_g	chi_i
0.2	0.4477611940298508	50.0321	0.9927794068729269	17.363526059919078	61.35730803267261	151.3690184118854	34.19734858369664
0.8	0.4477611940298508	50.0321	0.9926622850912531	17.358733547748983	61.43409214990397	151.37795369939667	34.19352771851544
0.9	0.4477611940298508	50.0321	0.9926579649396249	17.36629902230795	61.379593618612844	151.33477349225805	34.24591431645907
1.0	0.4477611940298508	50.0321	0.9926719751061813	17.361041234603807	61.39676501965202	151.45062217675493	34.18567914163512
3.0	0.4477611940298508	50.0321	0.9927042787788444	17.35677176982791	61.36129570966715	151.41157022326362	34.23283480451586
10.0	0.4477611940298508	50.0321	0.9925444624016575	17.35962807343355	61.375465152022414	151.36377904558063	34.21777540811385
20.0	0.4477611940298508	50.0321	0.9926840810537286	17.36940383048857	61.37897646979091	151.27468786731322	34.20147054776956
30.0	0.4477611940298508	50.0321	0.9926518828275536	17.355578864529072	61.39404033352922	151.4562305903428	34.18196654034557
60.0	0.4477611940298508	50.0321	0.9928291447203602	17.3617287174555	61.348978116464274	151.39146095199277	34.16484213093807



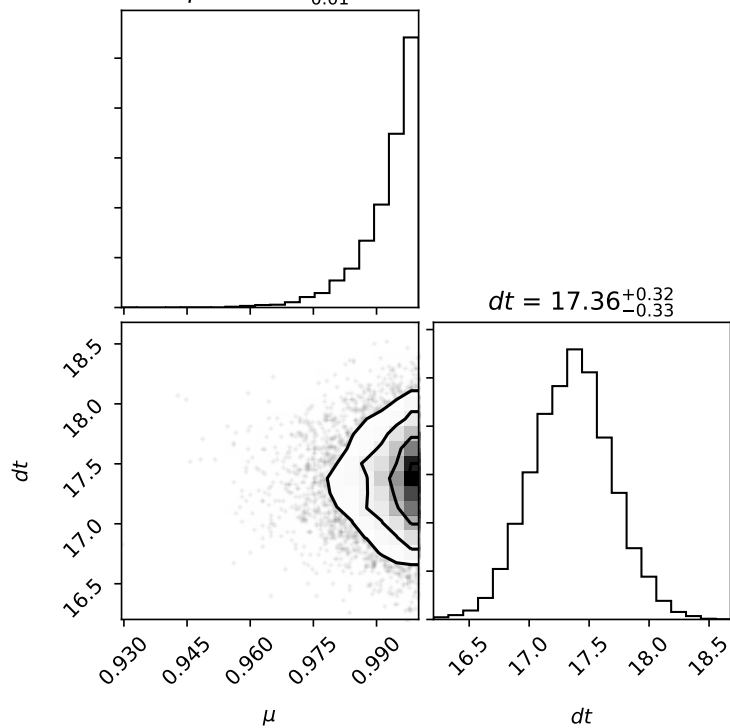




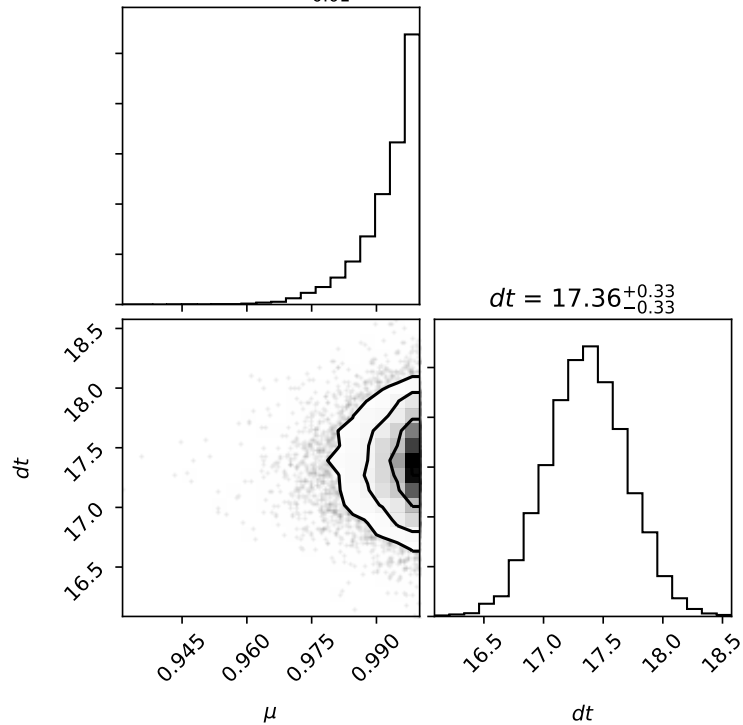
$$\mu = 0.99^{+0.00}_{-0.01}$$



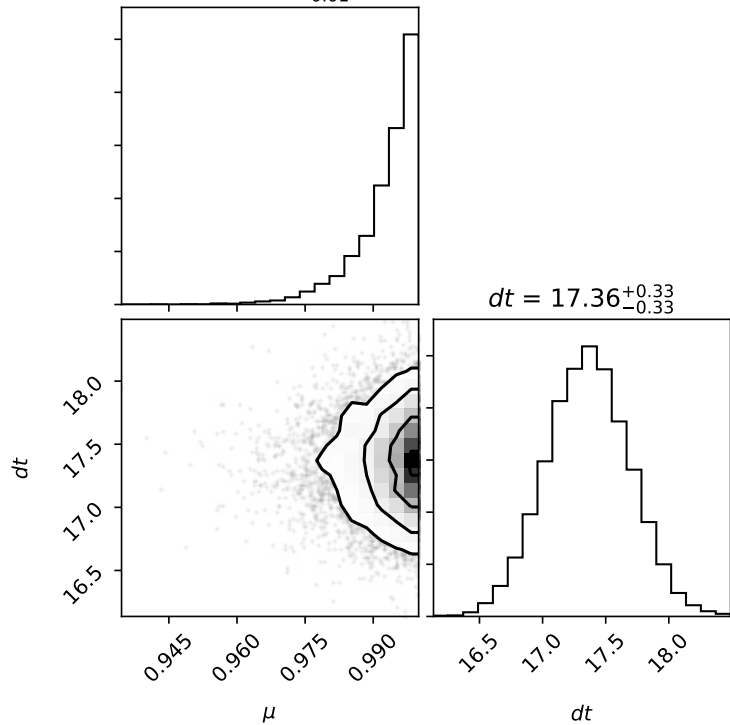
$$\mu = 0.99^{+0.00}_{-0.01}$$

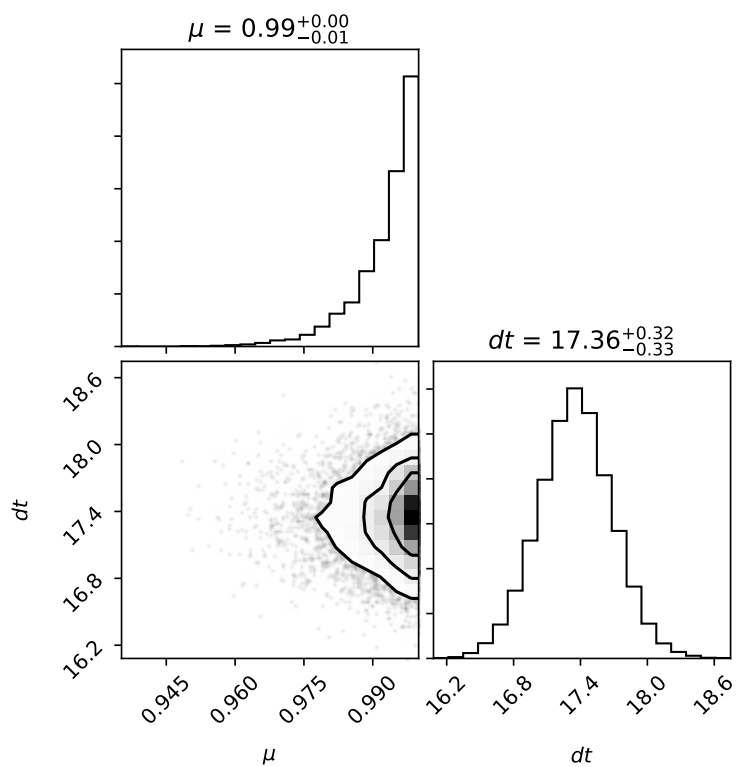
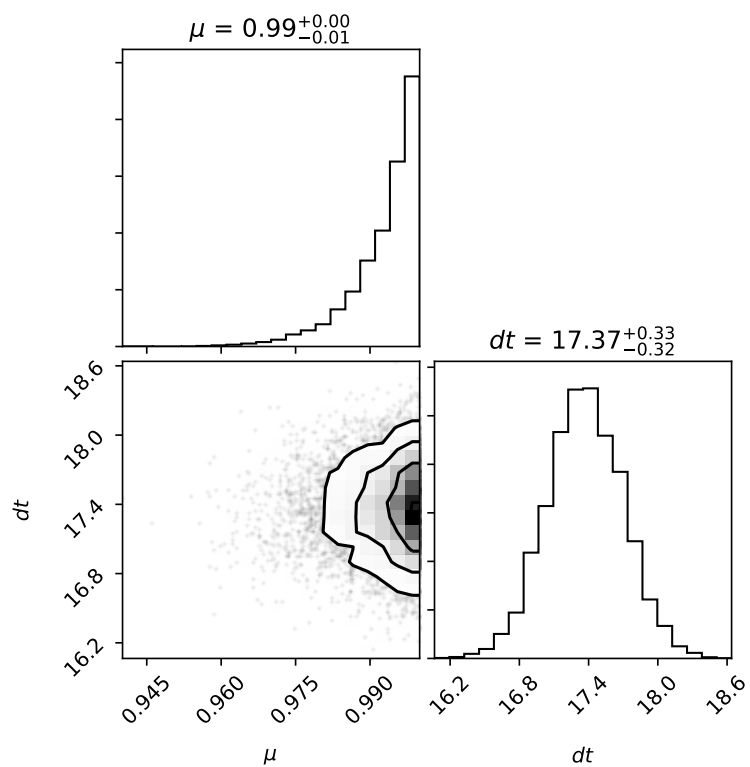
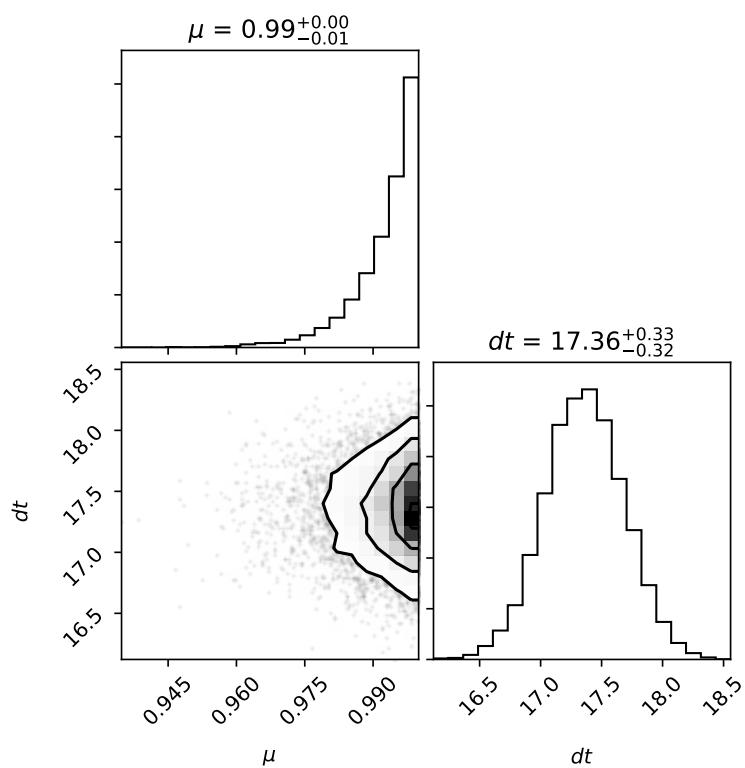
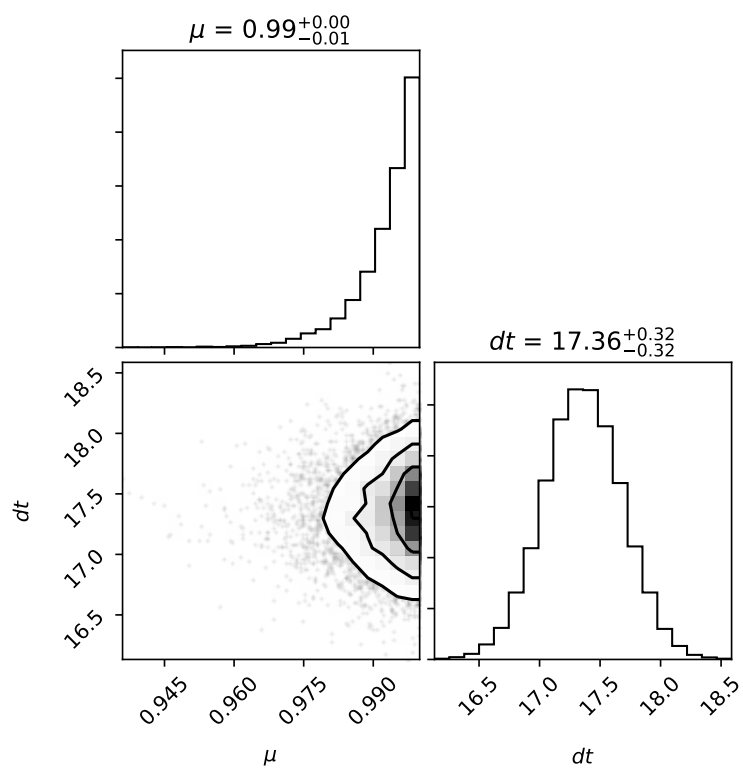


$$\mu = 0.99^{+0.00}_{-0.01}$$



$$\mu = 0.99^{+0.00}_{-0.01}$$





$$\mu = 0.99^{+0.00}_{-0.01}$$

