

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_20, meaning the upper range of the time delay max is 20 day (the default lower limit is 0). The folder name also shows the number of parameter used which is $NP = 8$.

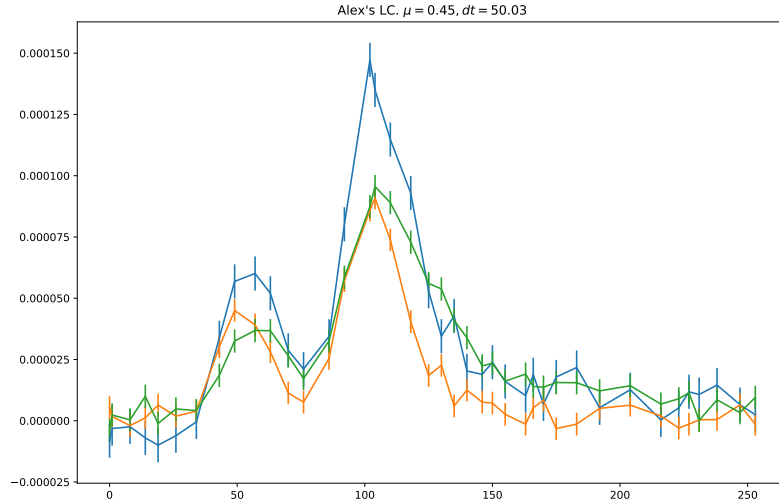
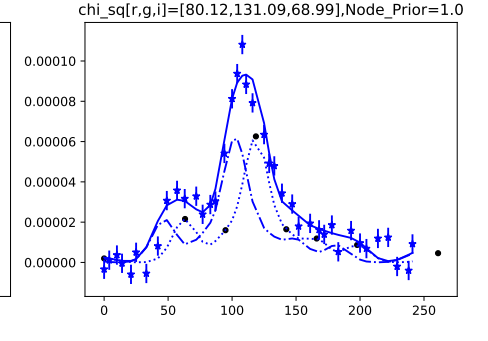
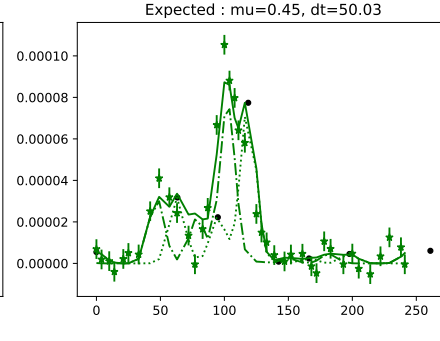
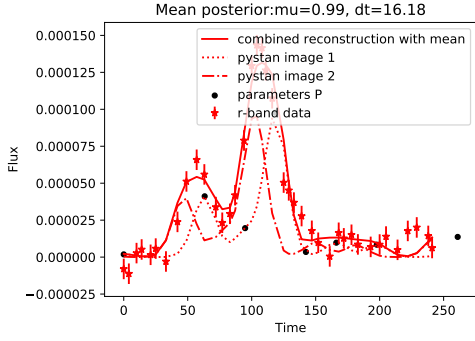
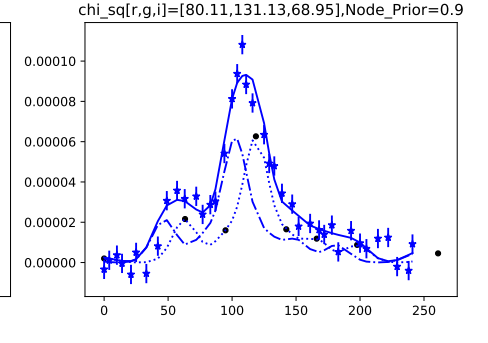
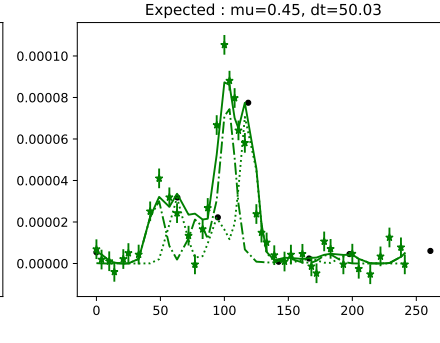
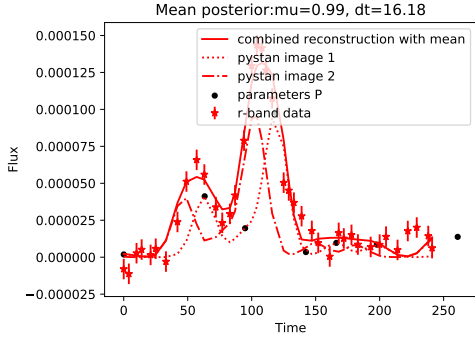
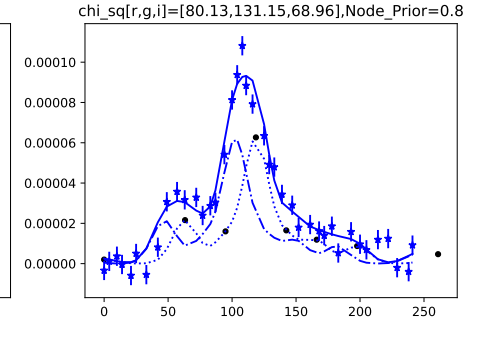
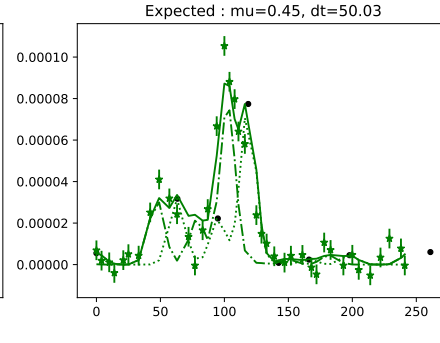
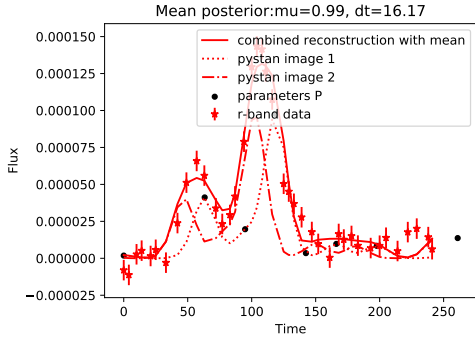
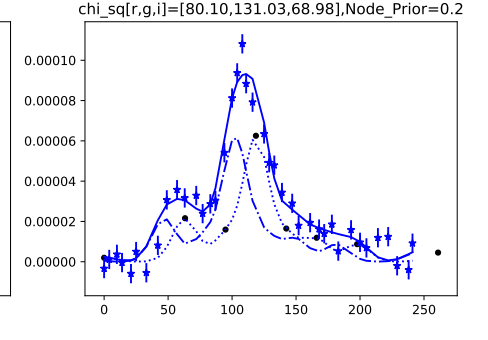
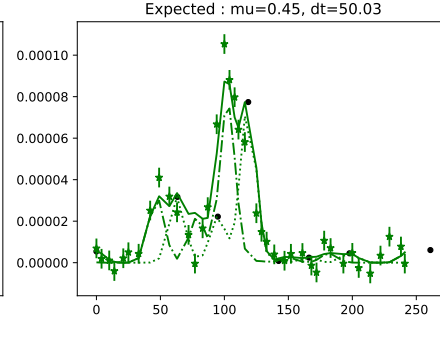
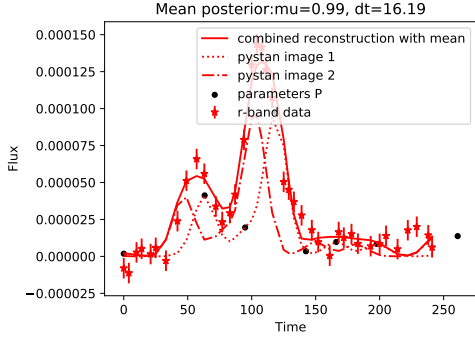


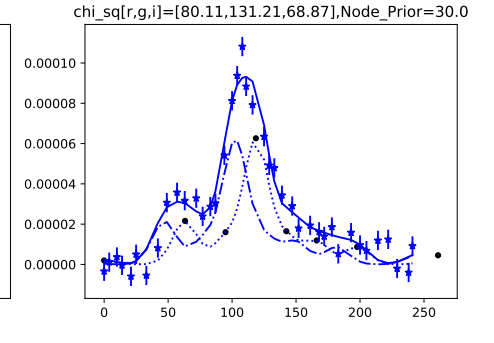
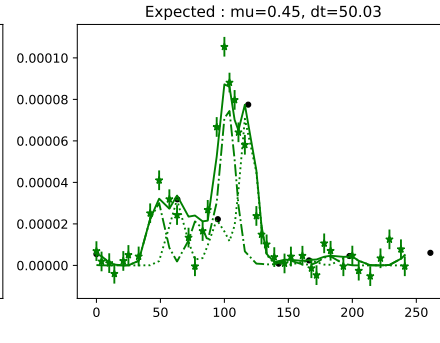
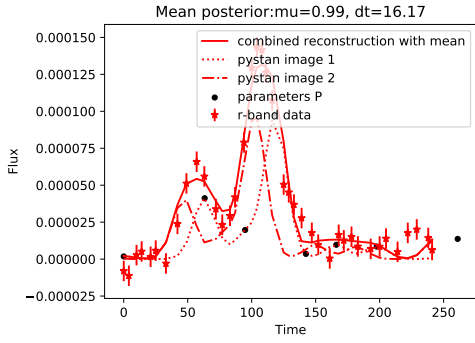
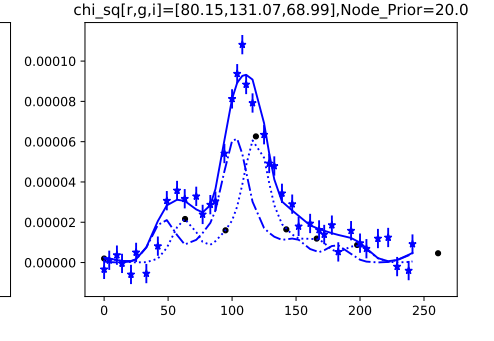
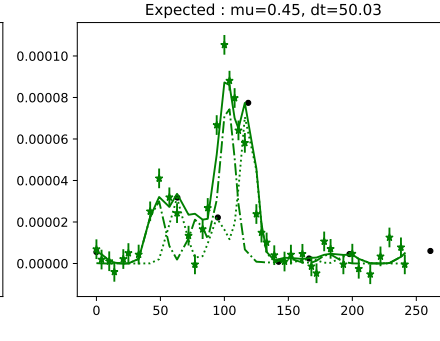
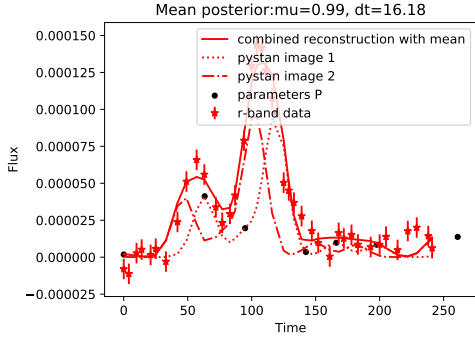
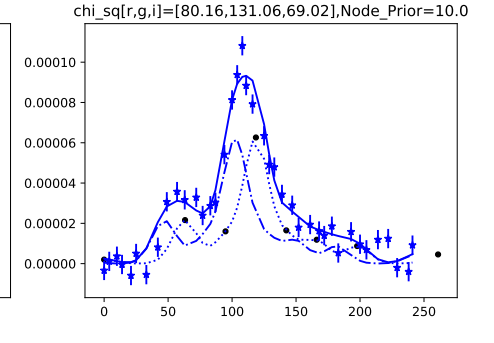
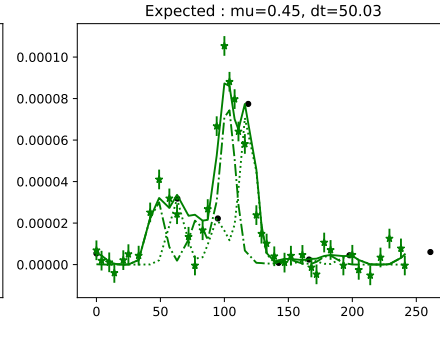
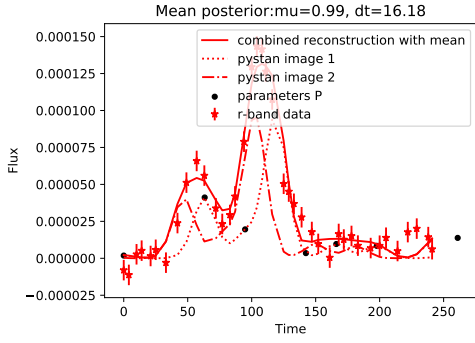
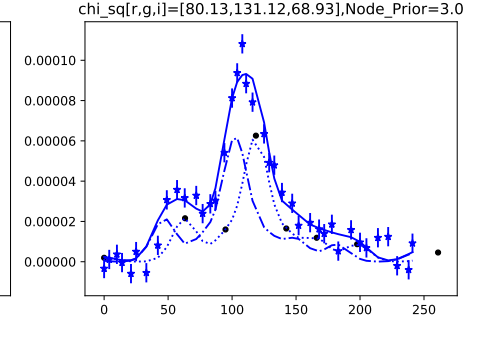
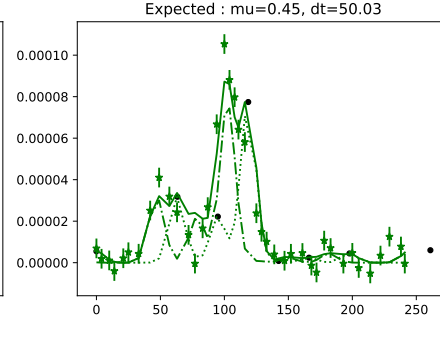
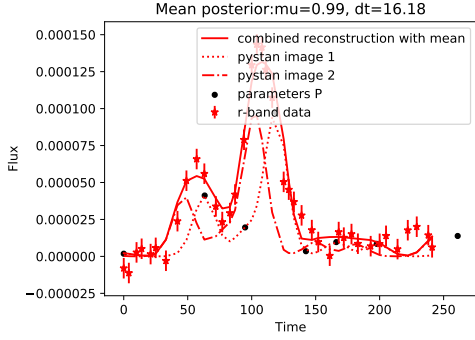
Figure 1: Alex's simulated light curve, customised to produce 2 images, with a time delay and magnification(ralative) shown in the top header of the plot. Here we used only 3 filter data, which are shown above.

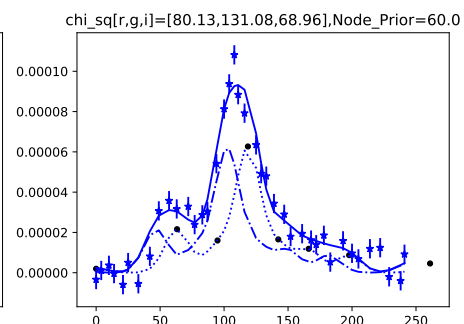
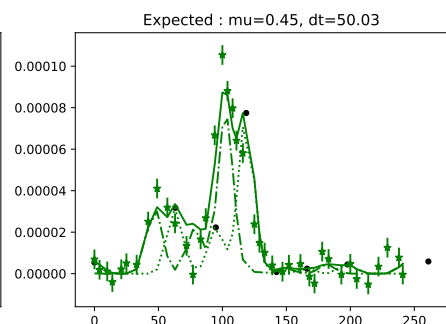
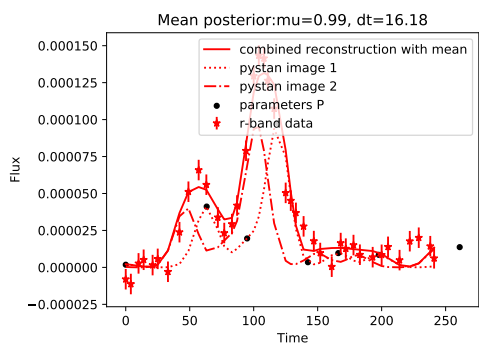
X-axis = Time Delay in Days, Y-Axis = Flux.

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 20 for $NP = 8$ parameters).

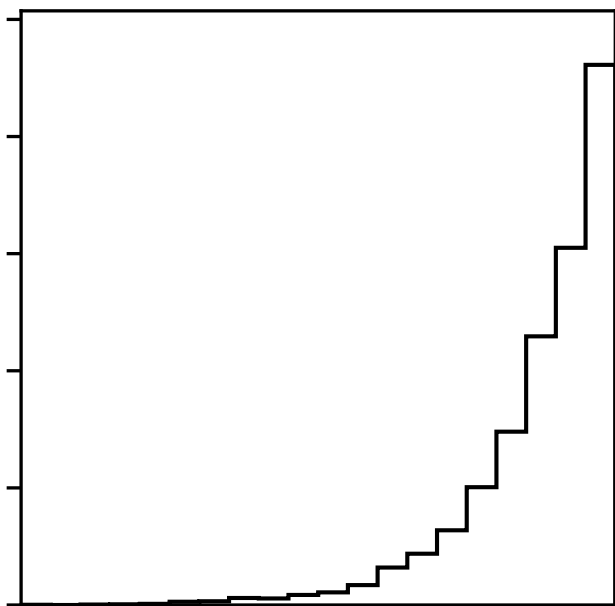
nspace	mu_expec	dt_expec	mu_pos	dt_pos	chi_r	chi_g	chi_i
0.2	0.4477611940298508	50.0321	0.9921058329154687	16.18647091829342	80.09580837000946	131.03290283006262	68.98434103889153
0.8	0.4477611940298508	50.0321	0.9920982879233741	16.170705968621267	80.13326209006286	131.15093756257875	68.9617592312583
0.9	0.4477611940298508	50.0321	0.9920604229925446	16.177267630478163	80.11017736549275	131.1323014950797	68.94901709806962
1.0	0.4477611940298508	50.0321	0.9920519032485408	16.181014447733173	80.12314531790764	131.09052331571564	68.98973600496683
3.0	0.4477611940298508	50.0321	0.9919818024748918	16.175313207104825	80.13345272295004	131.11994271650903	68.92840406412142
10.0	0.4477611940298508	50.0321	0.9920982404061518	16.18202268531231	80.15779349327232	131.0615346359975	69.01554441283315
20.0	0.4477611940298508	50.0321	0.9919720825584951	16.182893737753485	80.14806677137594	131.07368832291266	68.99098467188995
30.0	0.4477611940298508	50.0321	0.9918889510909407	16.16812277422163	80.10523621962469	131.21350108933285	68.87267897845163
60.0	0.4477611940298508	50.0321	0.9919078636684375	16.179790498861326	80.13151287456645	131.07818857420057	68.96029658260055



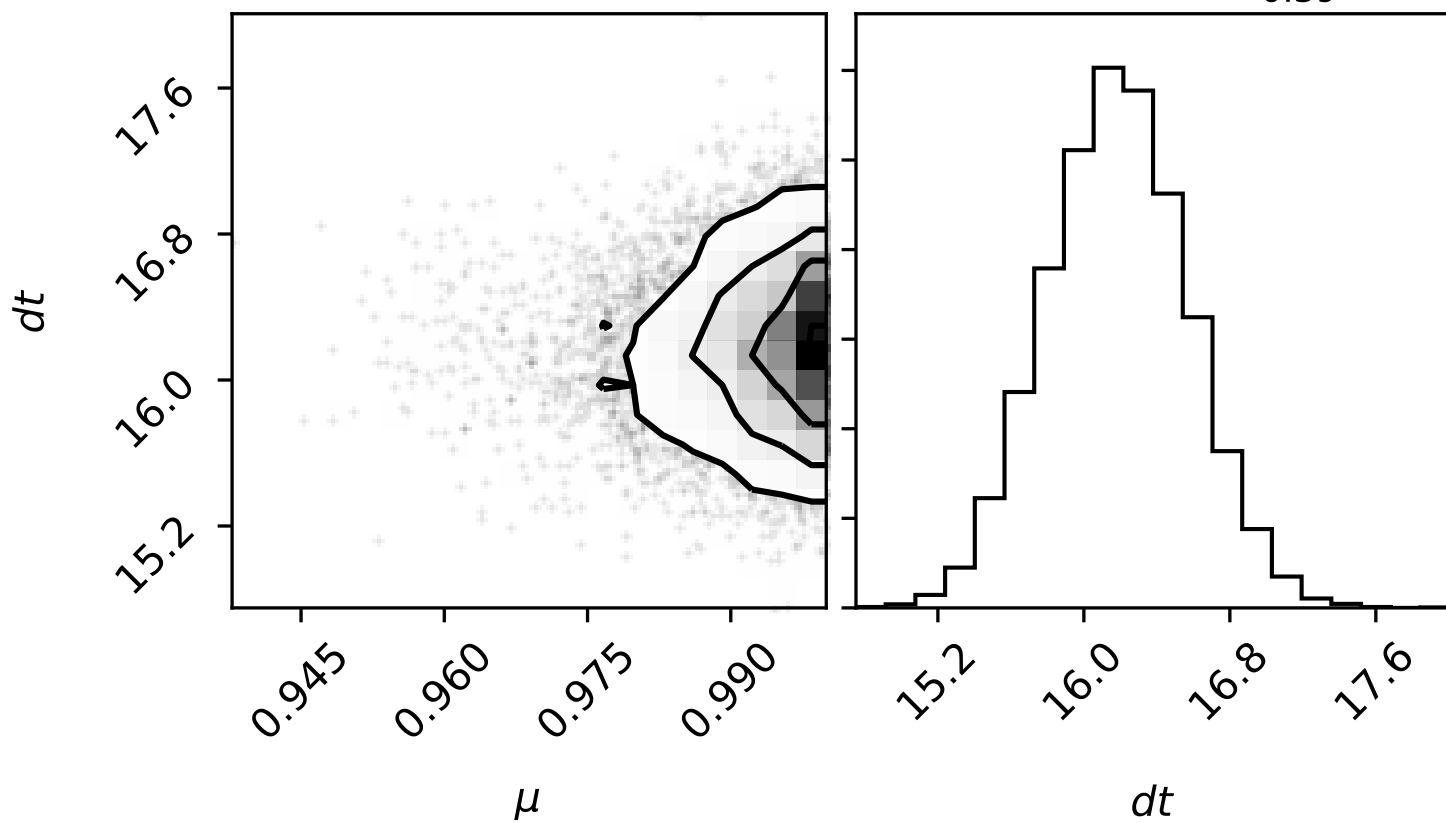




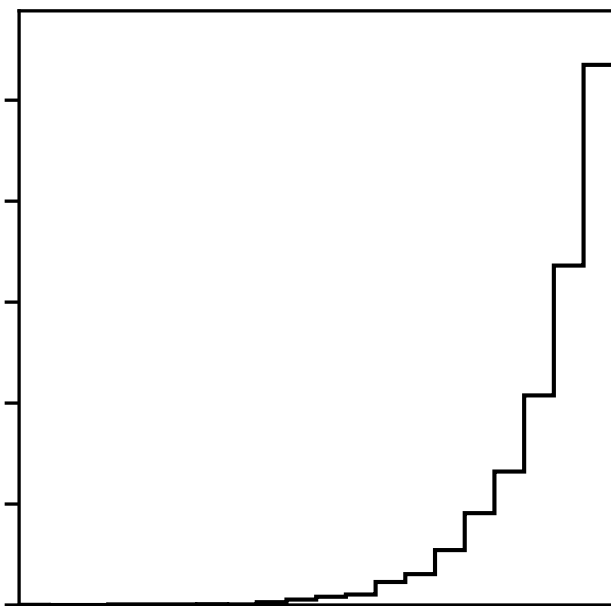
$$\mu = 0.99^{+0.00}_{-0.01}$$



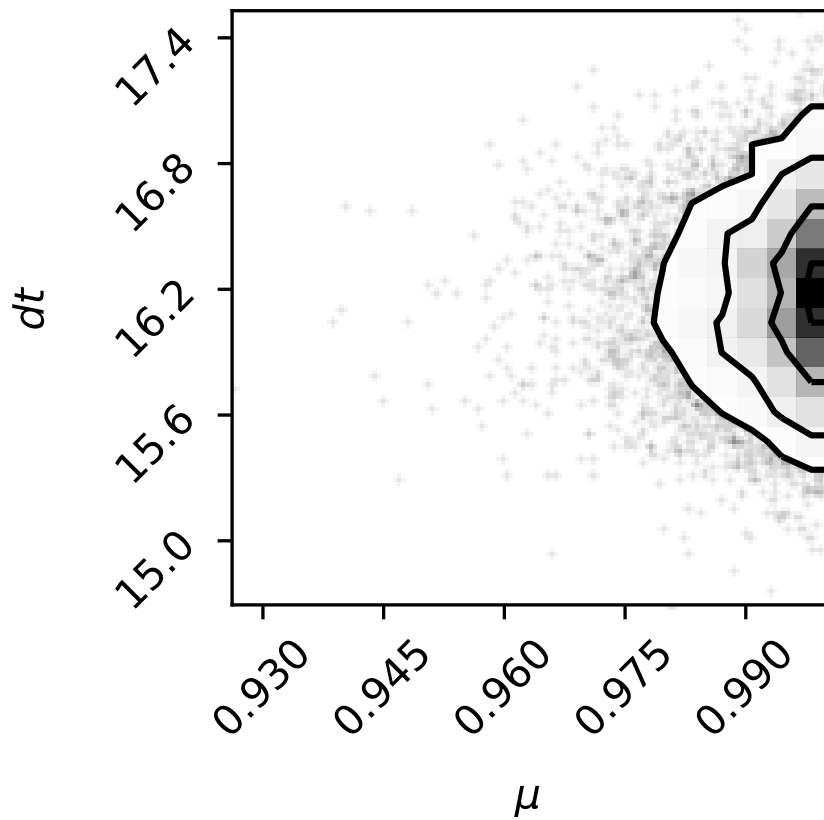
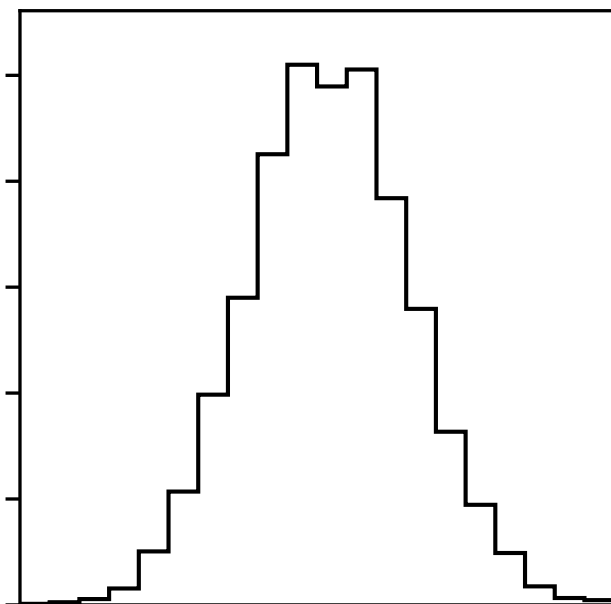
$$dt = 16.19^{+0.39}_{-0.39}$$



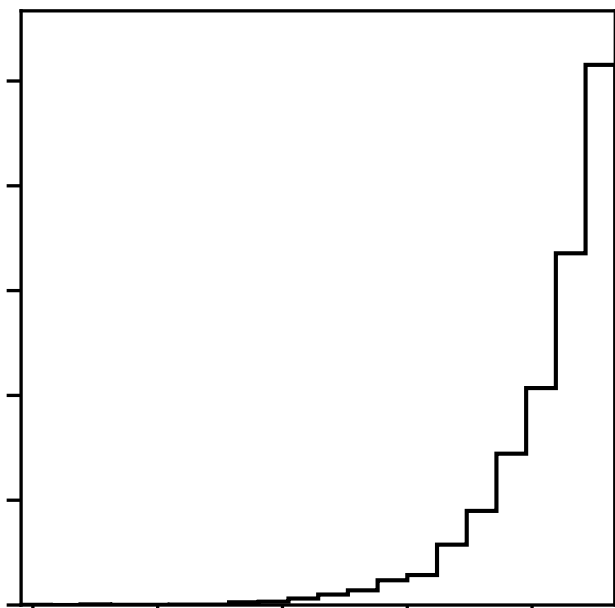
$$\mu = 0.99^{+0.00}_{-0.01}$$



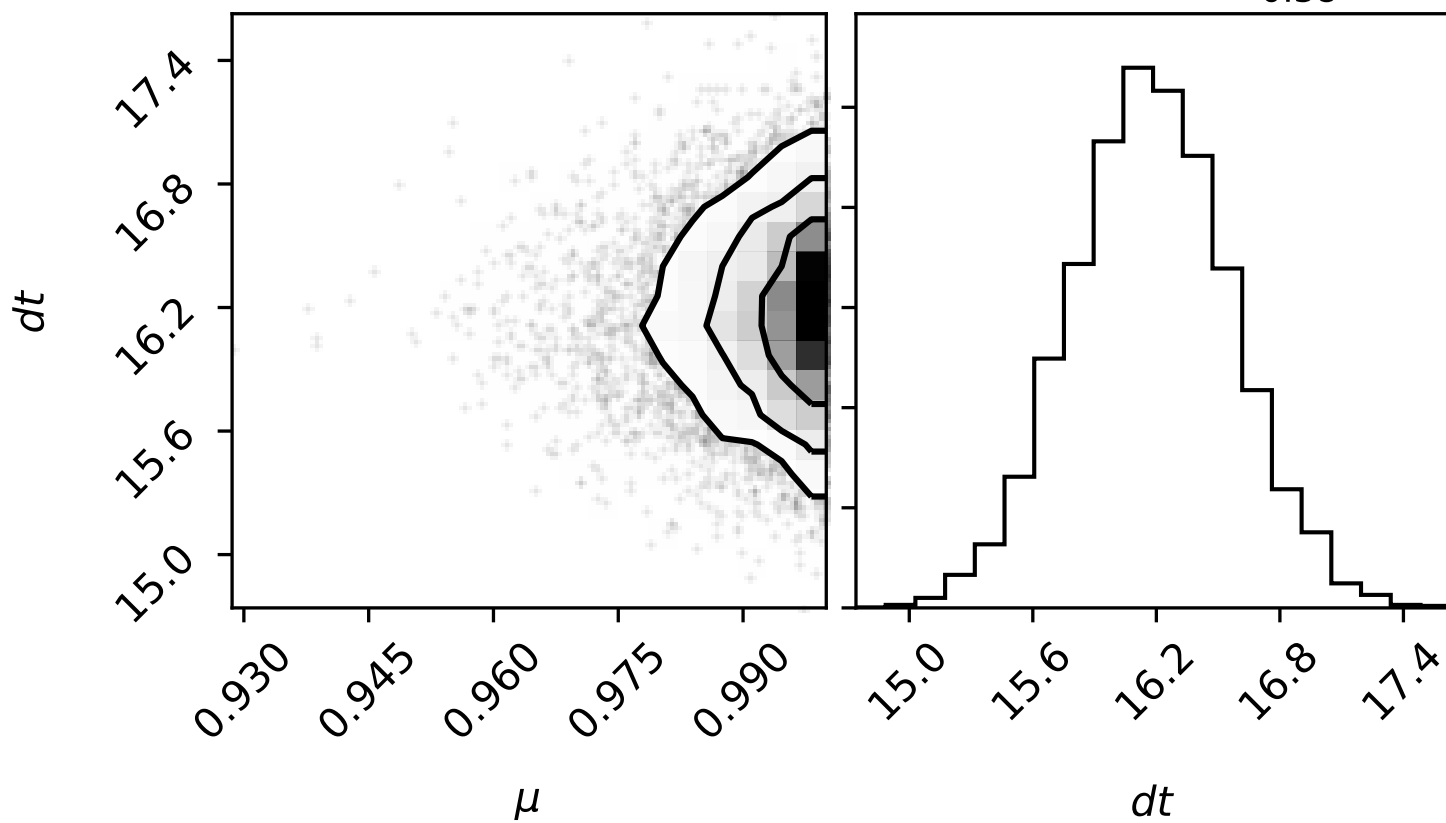
$$dt = 16.17^{+0.39}_{-0.38}$$



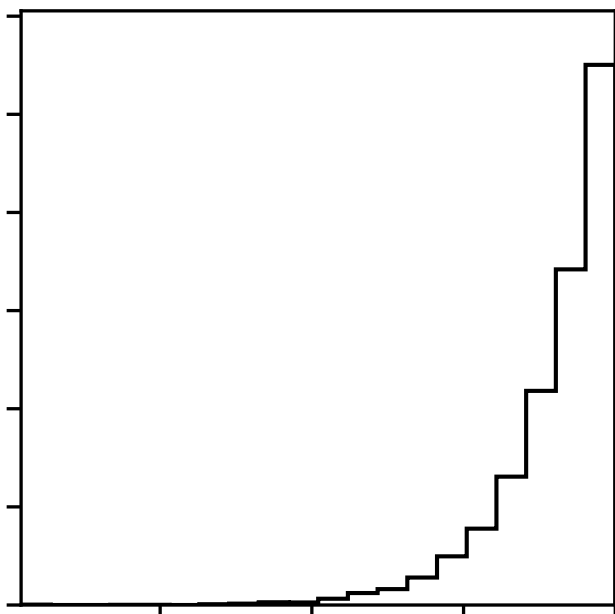
$$\mu = 0.99^{+0.00}_{-0.01}$$



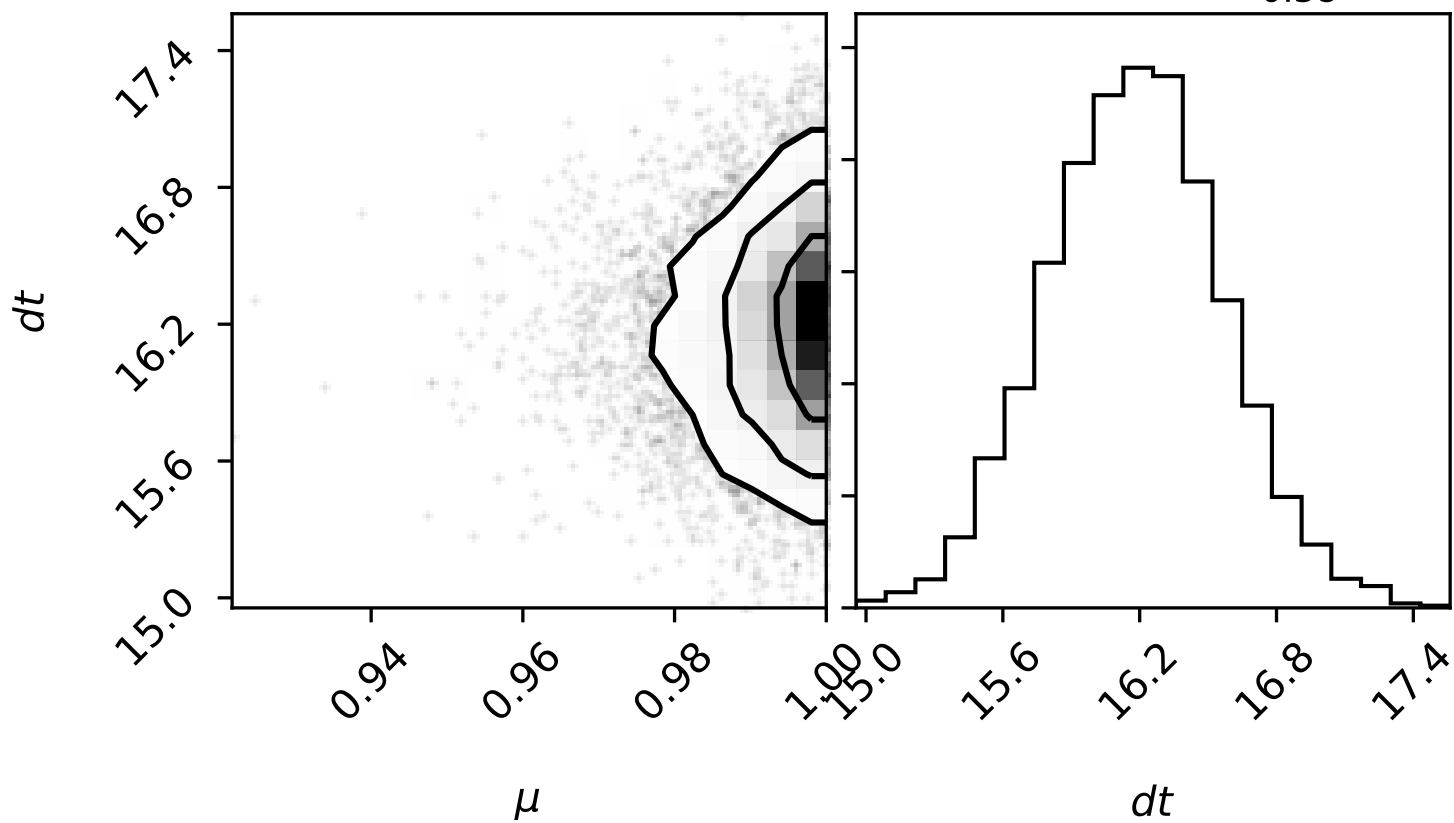
$$dt = 16.17^{+0.39}_{-0.38}$$



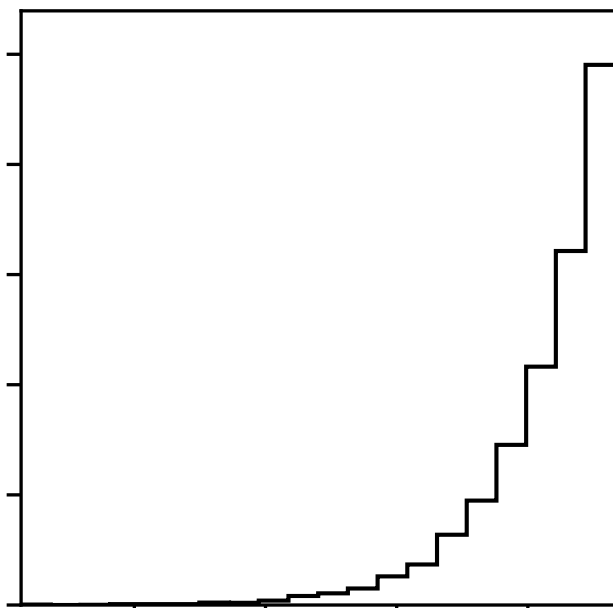
$$\mu = 0.99^{+0.00}_{-0.01}$$



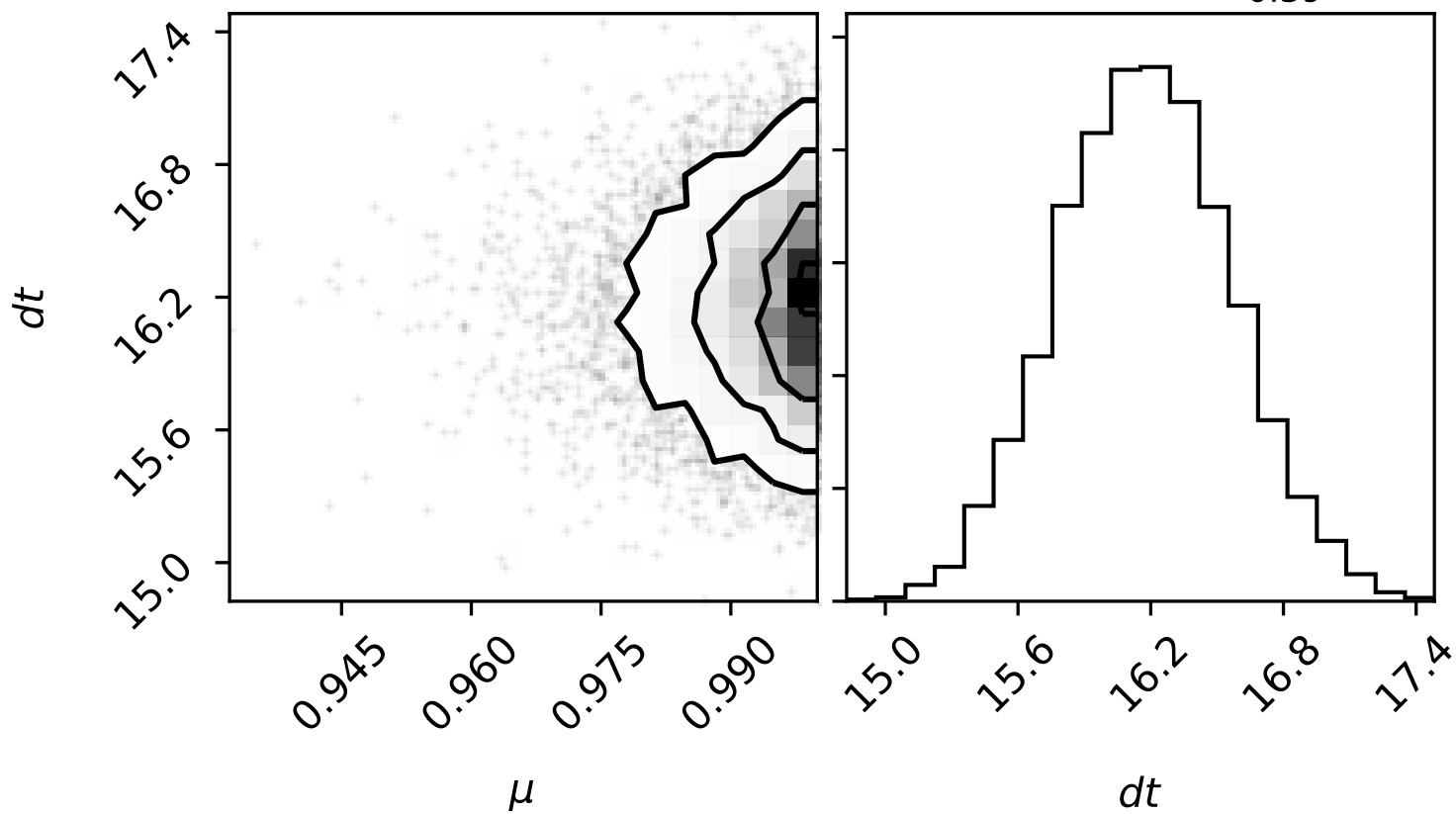
$$dt = 16.18^{+0.37}_{-0.38}$$



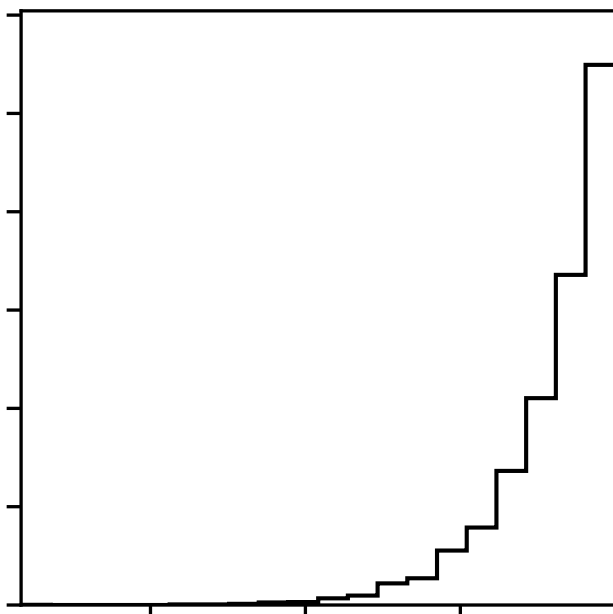
$$\mu = 0.99^{+0.00}_{-0.01}$$



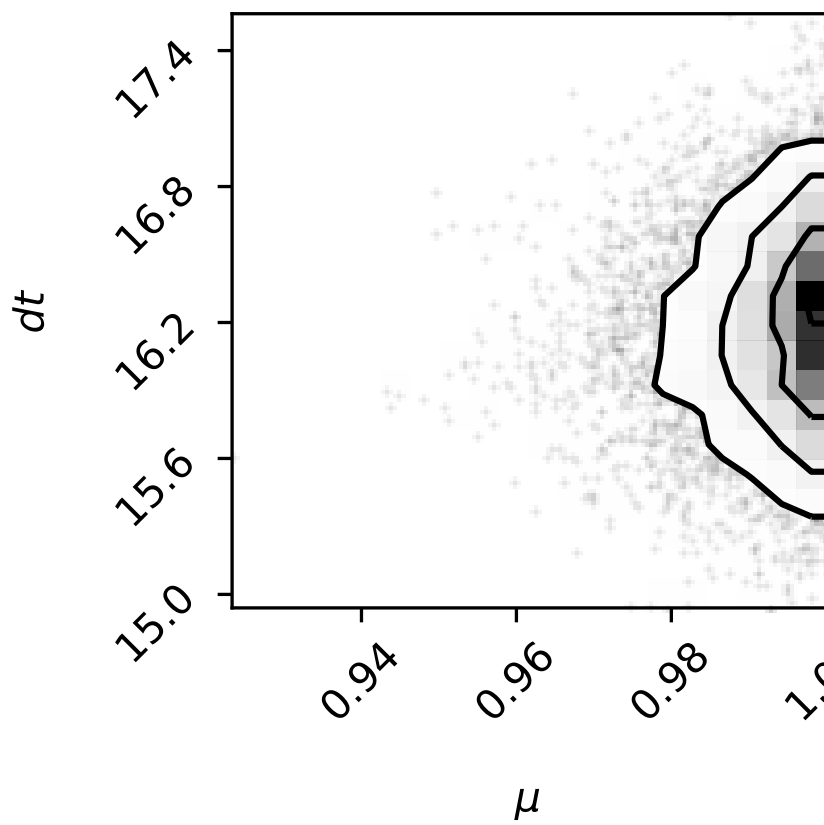
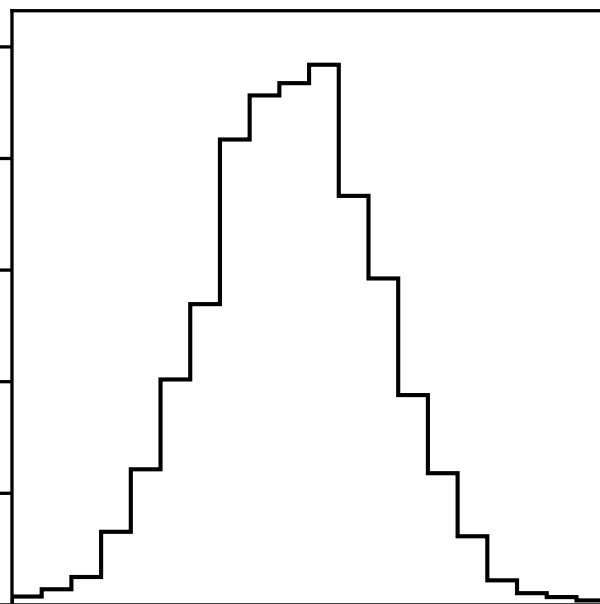
$$dt = 16.17^{+0.39}_{-0.39}$$



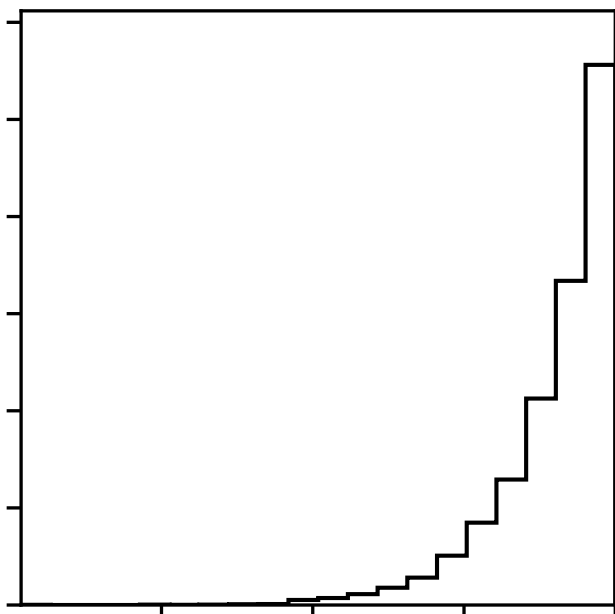
$$\mu = 0.99^{+0.00}_{-0.01}$$



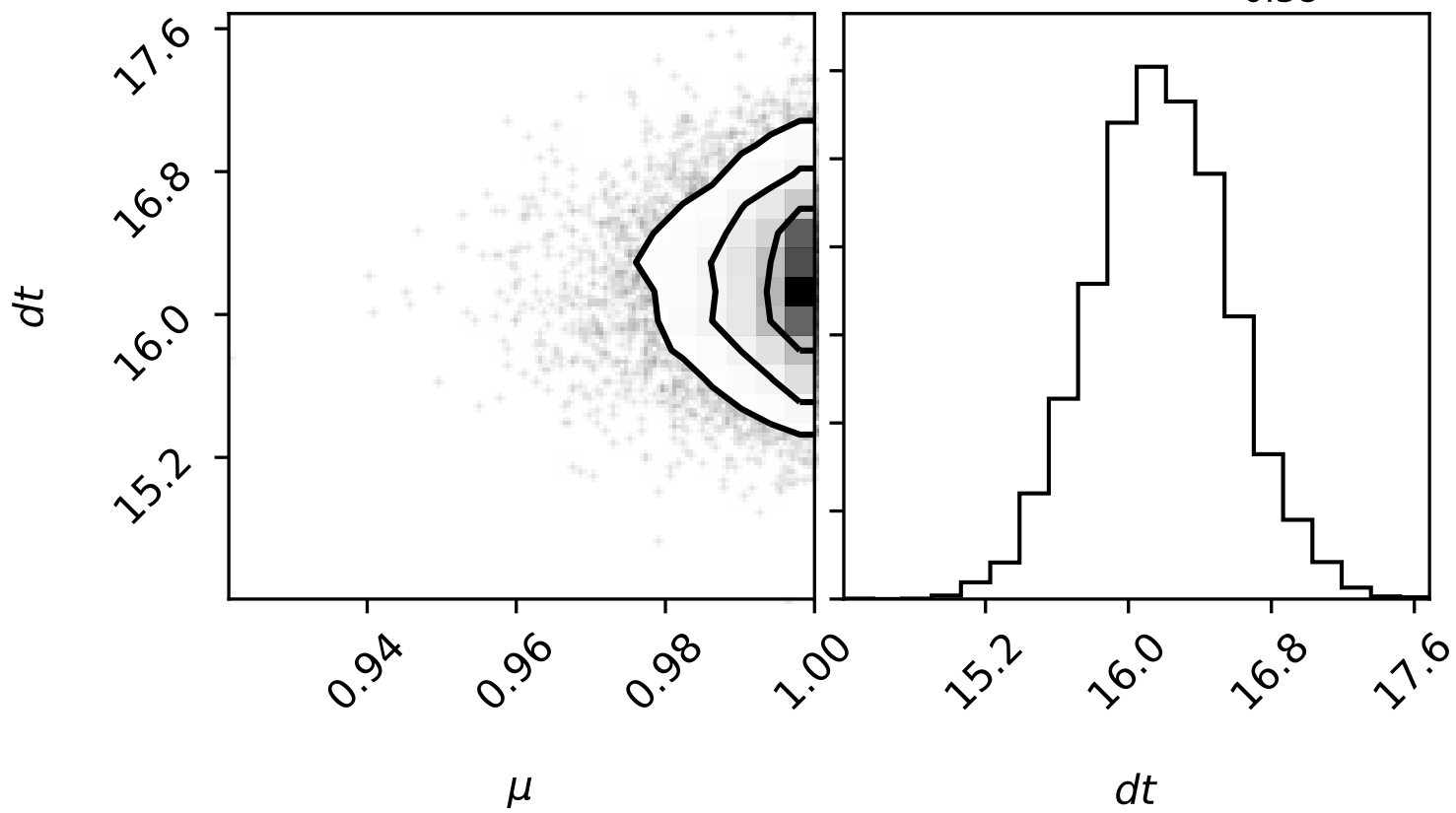
$$dt = 16.18^{+0.39}_{-0.38}$$



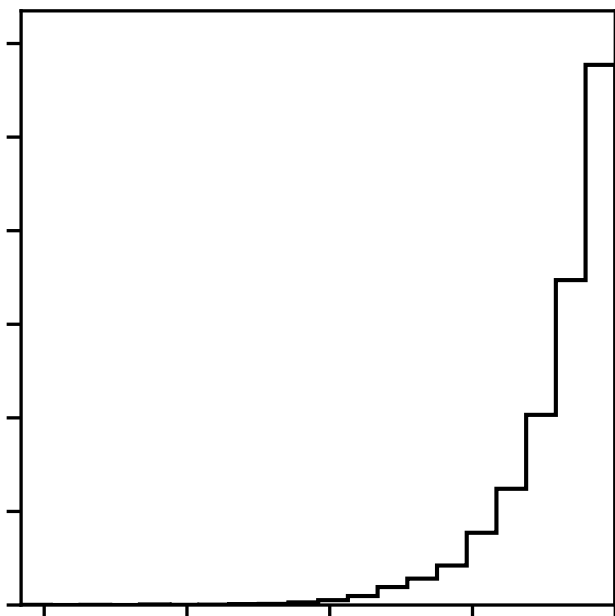
$$\mu = 0.99^{+0.00}_{-0.01}$$



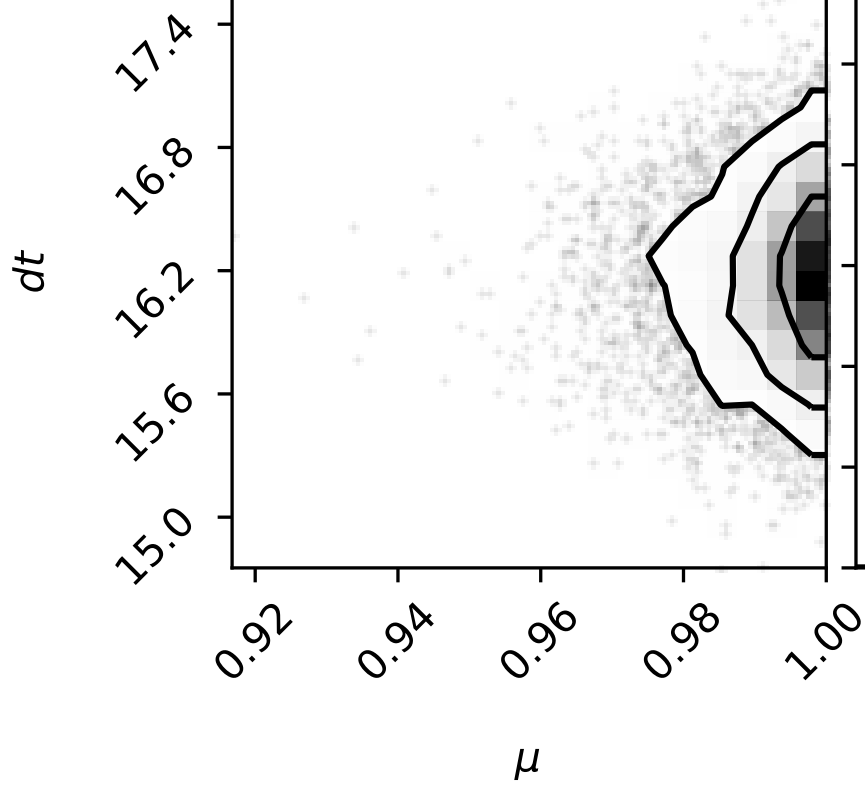
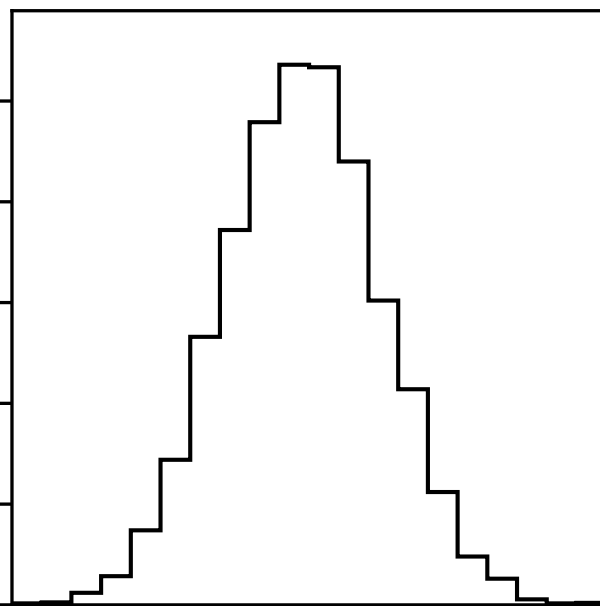
$$dt = 16.18^{+0.38}_{-0.38}$$



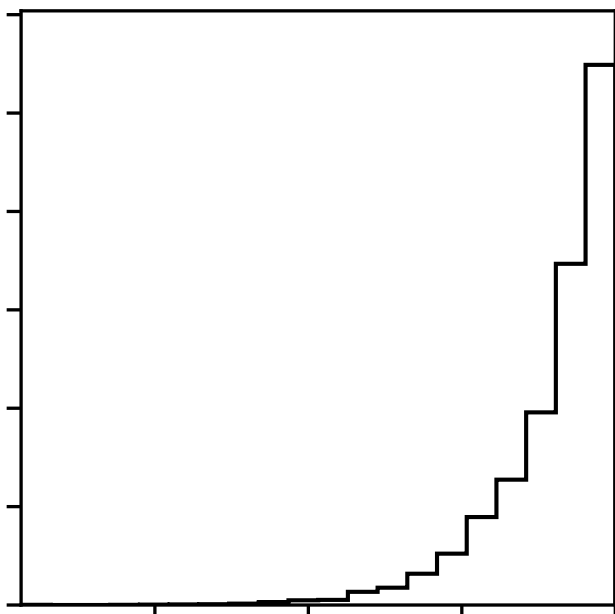
$$\mu = 0.99^{+0.00}_{-0.01}$$



$$dt = 16.17^{+0.38}_{-0.38}$$



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



$$dt = 16.18^{+0.38}_{-0.39}$$

