



The Crab's X-ray Ephemerides

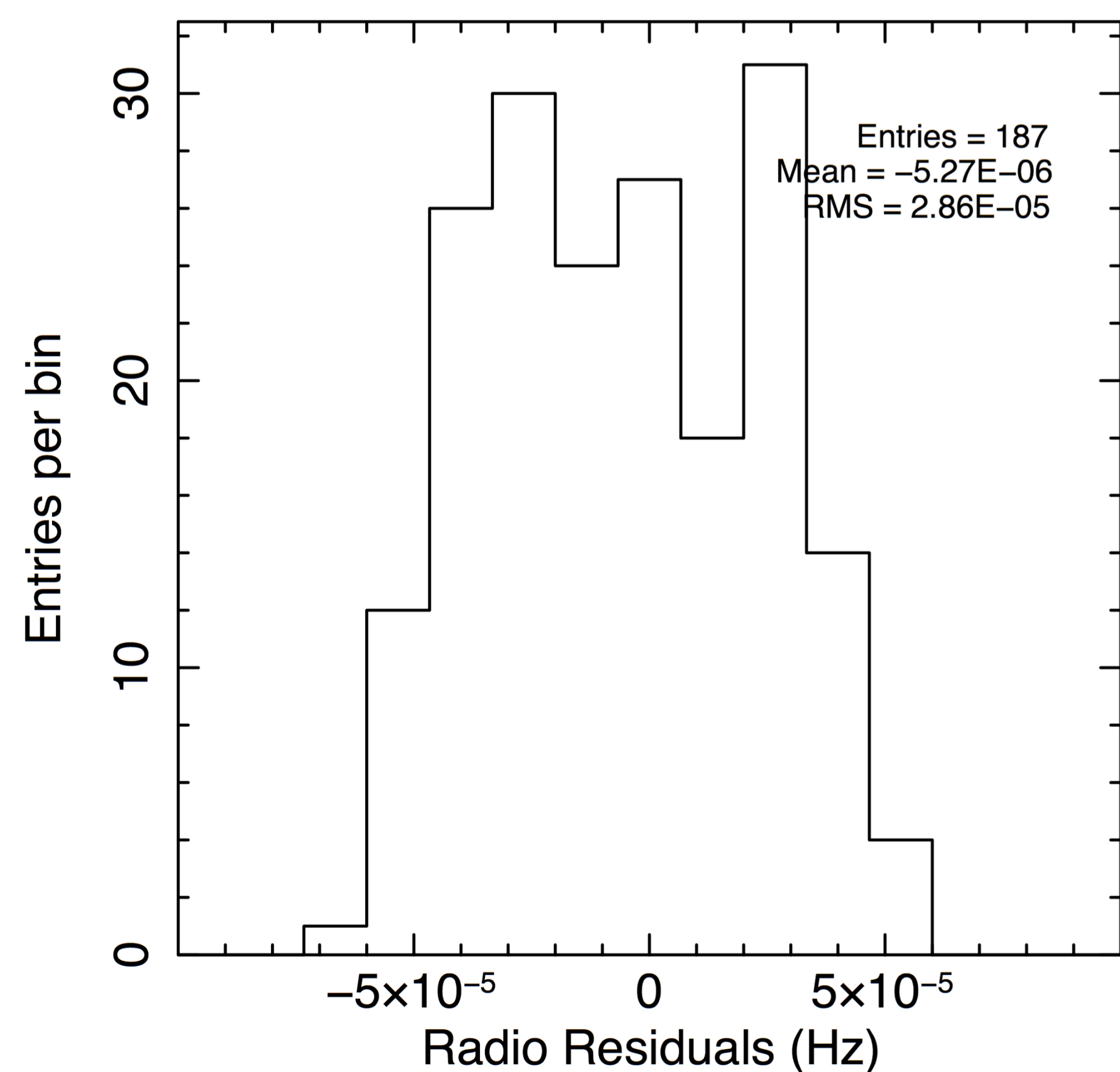
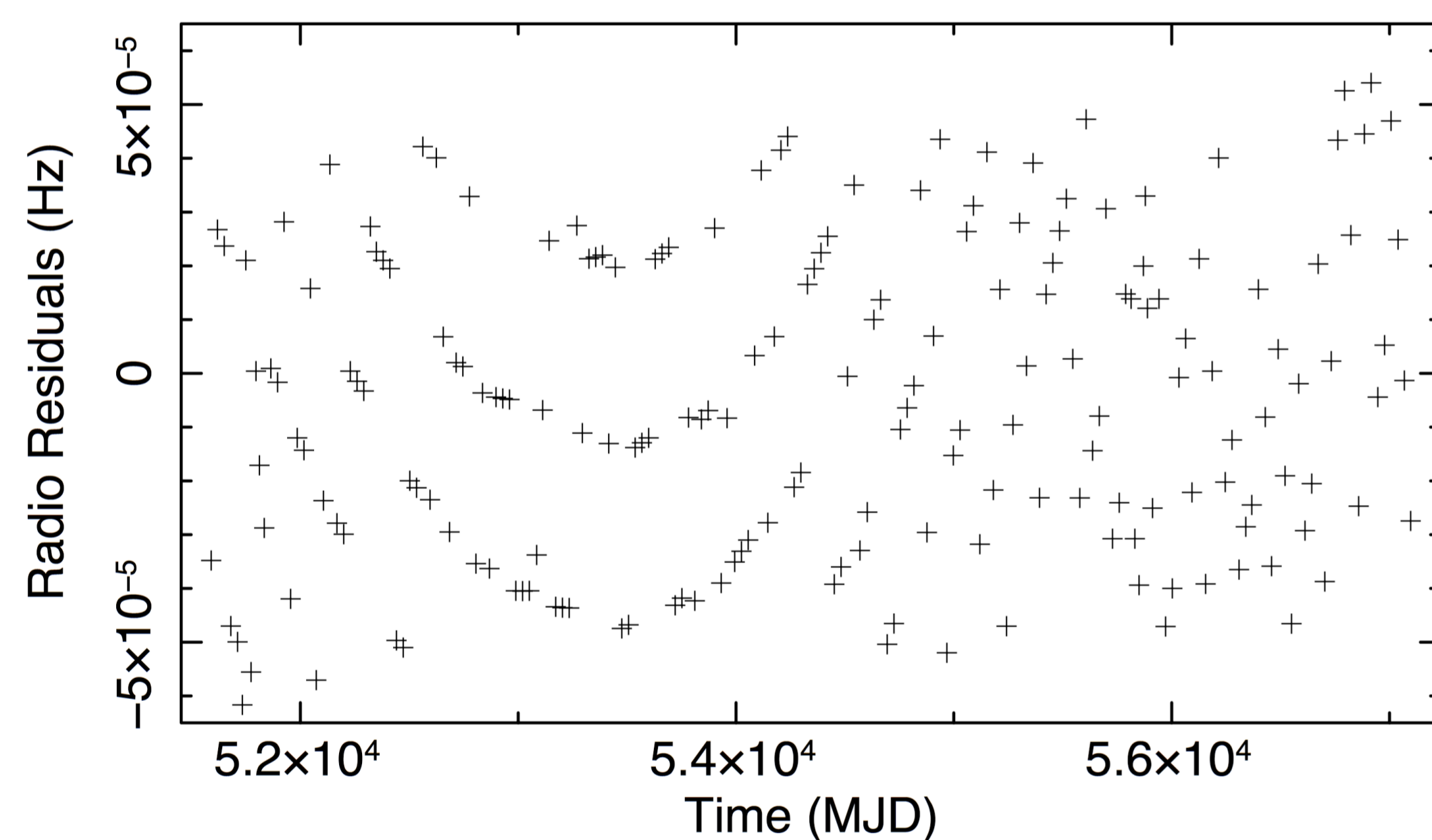
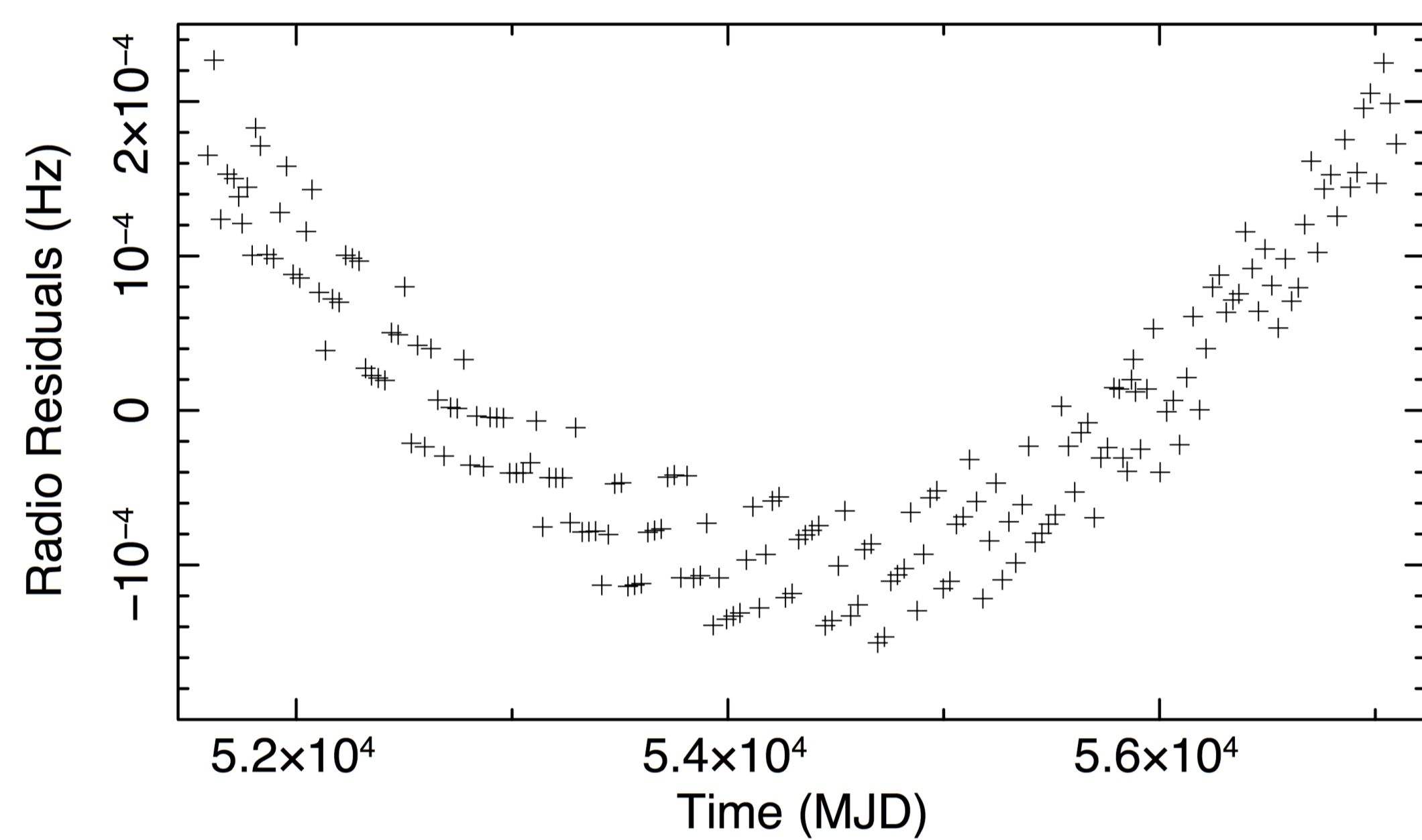
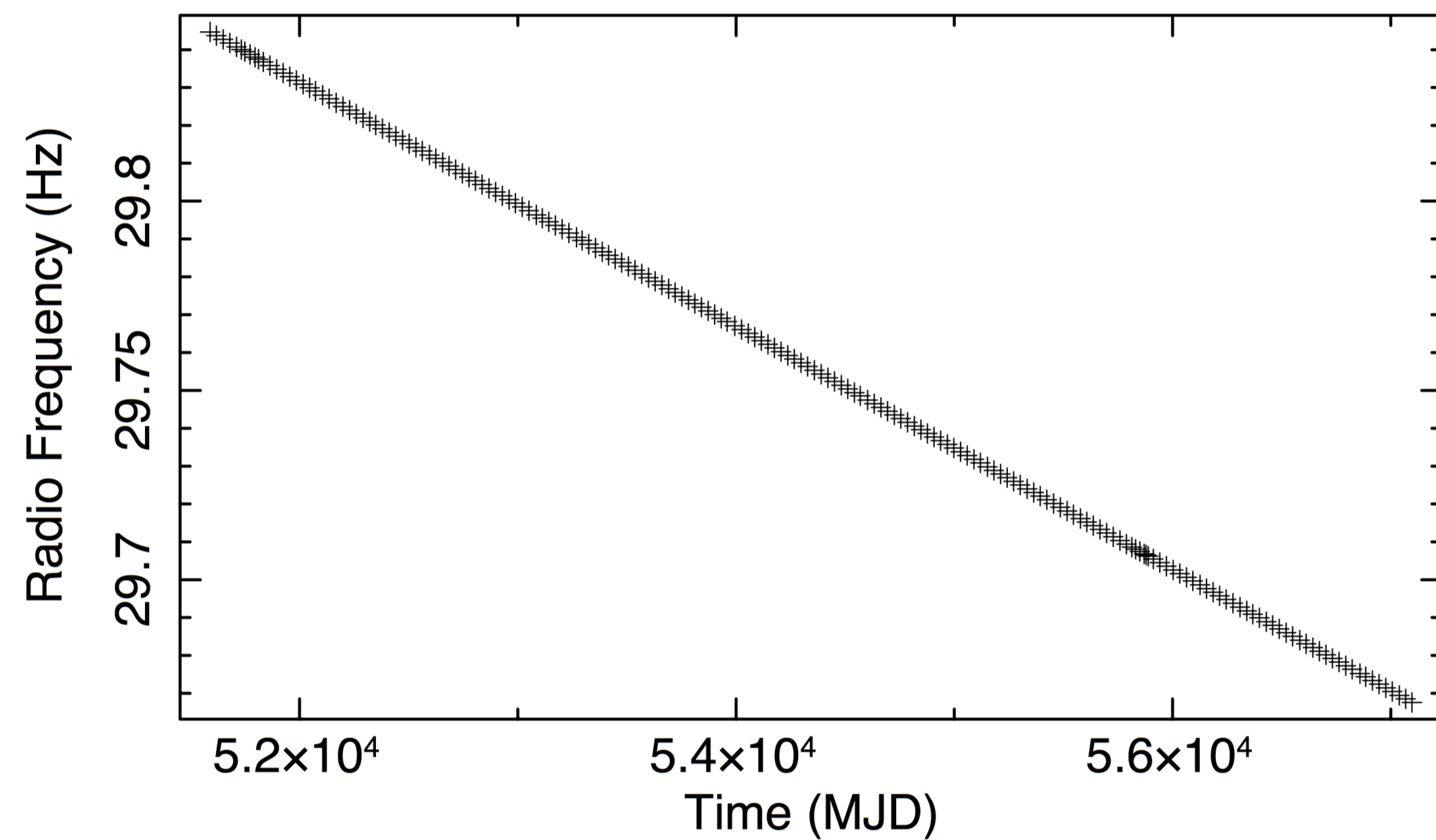
Timing with Jodrell Bank and XMM-Newton



G. Belanger

European Space Astronomy Centre, ESA, Spain

Jodrell Bank



Modelling

$$y = ax^2 + bx + c$$

First Order

JB

$$b = -3.216173e-5 ; c = 31.50370$$

XMM

$$b = -3.214161e-5 ; c = 31.50281$$

Second Order

JB

$$a = 4.012402e-11 ; b = -4.361369e-6 ; c = 0.118416$$

XMM

$$a = 4.098592e-11 ; b = -4.468682e-6 ; c = 0.121741$$

Combined Model

JB

$$a = 4.012412e-11 ; b = -3.652313e-5 ; c = 31.622123$$

XMM

$$a = 4.098592e-11 ; b = -3.661479e-5 ; c = 31.624552$$

Final Residuals

JB

$$\text{RMS} = 2.86e-5 ; \text{Mean} = -5.25e-6$$

XMM

$$\text{RMS} = 4.96e-6 ; \text{Mean} = 7.48e-7$$

XMM-Newton PN

