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Hardness as a spectral peak estimator for gamma-ray bursts

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ABSTRACT

Simple hardness ratios are found to be a good estimator for the spectral peak energy in gamma-ray bursts (GRBs). Specifically, a high correlation strength is found between the νF_ν peak in the spectrum of Burst and Transient Source Experiment (BATSE) GRBs, $E_{\rm p,obs}$ and the hardness of GRBs, $\mathrm{HR_H}$, as defined by the fluences in channels 3 and 4, divided by the combined fluences in channels 1 and 2 of the BATSE Large Area Detectors (LADs). The correlation is independent of the type of the burst, whether long-duration GRB (LGRB) or short-duration (SGRB) and remains almost linear over the wide range of the BATSE energy window (20–2000 KeV). Based on Bayes theorem and Markov Chain Monte Carlo techniques, we also present multivariate analyses of the observational data while accounting for data truncation and sample incompleteness. Prediction intervals for the proposed $\mathrm{HR_H}$–$E_{\rm p,obs}$ relation are derived. Results and further simulations are used to compute $E_{\rm p,obs}$ estimates for nearly the entire BATSE catalogue: 2130 GRBs. Based on these estimates, we also obtain for the first time the asymptotic $E_{\rm p,obs}$ distribution of GRBs detectable by BATSE. The observed $E_{\rm p,obs}$ distribution is well fit by the sum of two Gaussians, possibly representing the $E_{\rm p,obs}$ distribution of BATSE LGRBs and SGRBs peaking at 140 and 520 KeV, respectively. These results may be useful for investigating the cosmological utility of the spectral peak energy in GRBs intrinsic luminosity estimates.

Key words: gamma-ray burst: general.

1 INTRODUCTION

One of the most widely used spectral parameters in the studies of gamma-ray bursts (GRBs) is the time-integrated νF_ν spectrum peak energy of these cosmic events. Since the early 1990s, there has been a growing trend (e.g. Liang 1989) to plot the GRBs spectra in the form of $E^2\,dE$ or νF_ν versus energy, where F_ν is the spectral flux at the frequency ν. This has the advantage of making it easy to discern the energy of the peak power from the burst. The νF_ν plot of many of the bursts' spectra shows a peak which is denoted by $E_{\rm p,obs}$.

Among all the gamma-ray observatories that have detected GRBs, the Burst and Transient Source Experiment (BATSE) onboard the now defunct Compton Gamma Ray Observatory (CGRO) has provided the largest GRB data base, consisting of observational data for 2704 GRBs. The $E_{\rm p,obs}$ of BATSE GRBs that have been spectrally analysed indicates a narrow distribution extending from tens of KeV to a few MeV (Preece et al. 2000). However, there has been great debate on whether the upper and lower cut-off in the tails of the $E_{\rm p,obs}$ distribution are intrinsic to GRBs or strongly affected by the sensitivity of detectors (e.g. Piran & Narayan 1996; Cohen et al. 1997; Higdon & Lingenfelter 1998; Lloyd & Petrosian 1999; Piran 2005).

The discovery of X-Ray Flashes (XRFs) with familiar temporal structure to GRBs but with typically lower peak energies (Kippen et al. 2002, 2004; Heise et al. 2001) indicates that the lower cut-off observed in the distribution of $E_{\rm p,obs}$ is not real and is due to either the low sensitivity of BATSE LAD detectors in this energy range or sample incompleteness caused by the limitations of the spectral analysis. Similarly, the reality of the observed cut-off in the upper tail of $E_{\rm p,obs}$ distribution has also been questioned. However, a study of the Solar Maximum Mission (SMM) data (Harris & Share 1998) suggests that there is a deficiency – by at least a factor of 5 – of GRBs with $E_{\rm p,obs}$ above 3 MeV relative to GRBs peaking at $\sim$0.5 MeV. But these data are consistent with a population of peak energy that extends up to 2 MeV.

There have also been reports on the existence of correlations between the rest-frame spectral peak energies ($E_{\rm p,int}$) of GRBs and their 1-s isotropic peak luminosity ($L_{\rm iso}$), as well as reports on correlations between $E_{\rm p,int}$ and isotropic-equivalent radiated energy ($E_{\rm iso}$) (Amati et al. 2002, Amati 2006; Schaefer 2007; Ghirlanda et al. 2007). However, one major problem with these relations is sample incompleteness. In particular, the Amati and the proposed $L_{\rm iso}$–$E_{\rm p,int}$ relations have been constructed from less than 100 bright GRBs. Several studies have questioned the validity of these

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relations, arguing that some GRBs do not obey them (e.g. Nakar & Piran 2005; Band & Preece 2005; Butler et al. 2007; Butler, Kocevski & Bloom 2009; Shahmoradi & Nemiroff 2009) and that it is plausible that some part of these relations are due to complex selection effects in the detection and measurement processes.

So far, the spectra of only 350 out of 2704 GRBs detected by BATSE have been analysed in detail using a variety of spectral models (e.g. Kaneko et al. 2006, hereafter K06). Although these 350 GRBs need to be especially bright to allow for accurate spectral analyses, inclusion rules, such as requiring a minimum flux or signal-to-noise ratio (S/N), may carry significant limitations and biases (Shahmoradi & Nemiroff 2009).

In this paper, we propose a novel method that is designed to increase the number of usable GRBs in spectral correlations and population studies while reducing limitations and biases: using a hardness ratio to estimate $E_{\rm p,obs}$. We define a new hardness ratio $\rm HR_H$ that is the sum of the fluences in channels 4 and 3 of BATSE LAD detectors, divided by the sum of the fluences in channels 2 and 1. Equivalently, this corresponds to dividing the energy fluence received by BATSE-triggered LADs in the energy range (300–2000 KeV) by the energy fluence received in the energy range (20–300 KeV). We will show here that this and other hardness ratios are in fact good estimators of $E_{\rm p,obs}$.

The plan of the paper is as follows. Section 2 describes the $\rm HR_H$–$E_{\rm p,obs}$ relation while briefly discussing the significant differences that exist between the reported values of $E_{\rm p,obs}$ of BATSE GRBs due to the use of different spectral models to fit the data. Section 3 presents the derivation of the prediction intervals for the relation. The estimation and prediction power of the relation will also be discussed in Section 3. Some examples on the applications of the relation, in particular the $E_{\rm p,obs}$ distribution of BATSE GRBs, will be discussed and the results will be summarized in Section 4.

2 $E_{\rm p,obs}$ ESTIMATION FOR BATSE BURSTS

The fluences in different channels are taken from the current BATSE catalogue available at the HEASARC archives.[1] Immediately, a strong correlation was found between $\rm HR_H$ and $E_{\rm p,obs}$ for 249 BATSE bright bursts that are common between the current BATSE catalogue and 350 BATSE bursts analysed by K06 (Kendall's $\tau_K = 0.68, 16\sigma$).

In fact, for many GRB detectors such as BATSE, $\rm HR_H$ might even be a preferred measure of GRB spectral peakedness in νF_ν than $E_{\rm p,obs}$ for several reasons. First, $\rm HR_H$ is relatively immune to details of GRB spectral analyses, and therefore, quite possibly, hiding fewer unexpected thresholds and hidden selection effects. Additionally, $\rm HR_H$ is easier to measure for faint GRBs, allowing $\rm HR_H$ to be computed with little statistical error for many more GRBs than 350 – in fact for most BATSE GRBs.

We use $\rm HR_H$ rather than any other definition of hardness ratio to estimate $E_{\rm p,obs}$ because of its relatively low statistical variance, the boundary energy between high and low energies (100 KeV), and its strong linear correlation with $E_{\rm p,obs}$ [Pearson's correlation coefficients: 0.89, 0.88 and 0.88 at $>13\sigma, >10\sigma$ and $>14\sigma$ significances for the three, Band, COMP(CPL) and SBPL spectral models, respectively]. The existence of such a strong positive correlation might not be very surprising since both parameters $E_{\rm p,obs}$ and $\rm HR_H$ are measures of the spectral hardness of a GRB. An unexpected but useful perk is that the relation is nearly linear over a wide range of BATSE $E_{\rm p,obs}$ energies.

2.1 Systematic errors in $E_{\rm p,obs}$ estimates

Although a decade has passed since BATSE ended its mission, less than one quarter of the total number of GRBs detected by BATSE have been spectrally analysed to date. Examples of such works include Ghirlanda et al. (2009), hereafter G09; K06; Yonetoku et al. (2004), hereafter Y04 and Preece et al. (2000). In an impressive work, K06 have analysed 350 brightest BATSE GRBs, and fit the spectra of the bursts with a variety of spectral models. BATSE GRBs spectra are most commonly fit with an empirically determined double power law connected by a smoothly fit transition region (Band et al. 1993; commonly referred to as the 'Band model'). When plotted as νF_ν versus ν, a peak energy is evident, usually referred to as $E_{\rm p,obs}$. Other spectral models exist that exhibit a similar peak. It has been noted, however, that spectral parameters including $E_{\rm p,obs}$ are highly dependent on which spectral model is being fit, leading to non-negligible differences in the various published values of the burst properties by independent authors (e.g. K06; Preece et al. 2002; Ghirlanda, Celotti & Ghisellini 2002; Collazzi & Schaefer 2008).

In order to show the biases produced by using different spectral models, we compared the peak energies of 161 BATSE GRBs obtained by Y04 using the Band model to the peak energies of the same bursts reported by K06 using three different models: Band, Comptonized Model (COMP; also known as CPL; Pendleton et al. 1997; Mazets et al. 1981) and Smoothly Broken Power Law (SBPL) (Ryde 1998; Preece et al. 2000). The variations are shown graphically in Fig. 1, which shows the difference in $E_{\rm p,obs}$ values reported by Y04 and K06 versus the square root of the sum of the squares of their 1σ error bars for each individual burst. We divided the whole sample into three subsamples delineated by Band, CPL and SBPL in K06. For any point that lies above the solid line in Fig. 1, the two reported values of $E_{\rm p,obs}$ of the GRB are inconsistent at more than their given 1σ uncertainties in Y04 and K06.

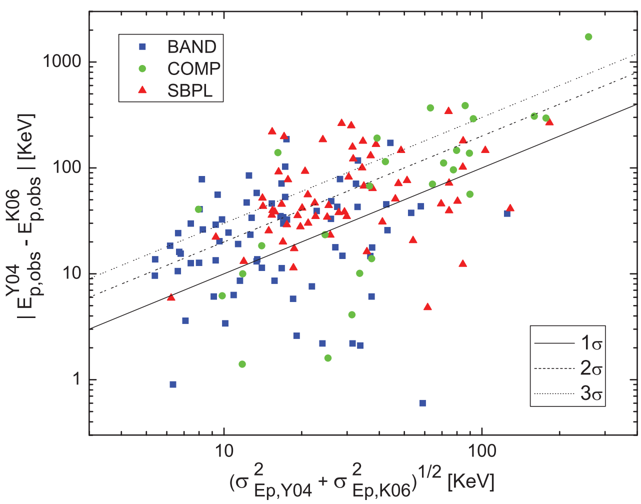

Figure 1. Differences in $E_{\rm p,obs}$ versus total 1σ errors in $E_{\rm p,obs}$ for Y04 and K06 GRBs. For any point that lies above the solid line/dashed line/dotted line, the two reported values of $E_{\rm p,obs}$ for that GRB are inconsistent at more than $1\sigma/2\sigma/3\sigma$ level. Therefore, 69 per cent (26 per cent) of all bursts have an $E_{\rm p,obs}$ reported by K06 that is inconsistent at the $>1\sigma$ ($>3\sigma$) level with the $E_{\rm p,obs}$ reported by Y04.

[1] http://gammaray.msfc.nasa.gov/batse/grb/catalog/current/

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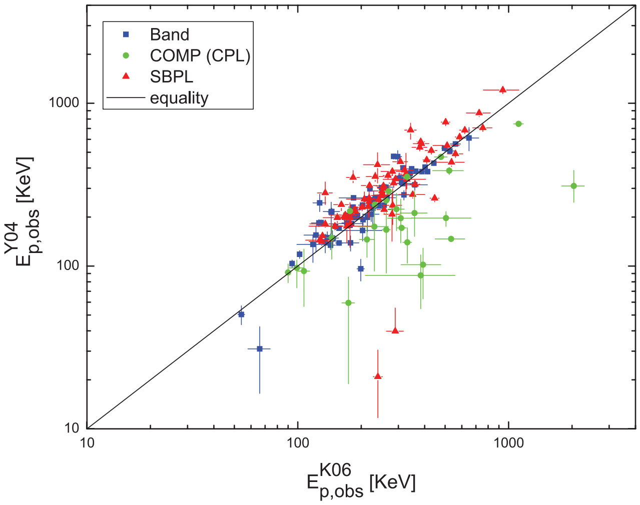

Figure 2. Direct comparison of $E_{\rm p,obs}$ estimates given by K06 and Y04 for the same sample of BATSE LGRBs. The sample for which K06 find Band as the best-fitting model (blue squares), the sample for which K06 find COMP as the best-fitting model (green circles) and the sample for which K06 find SBPL as the best-fitting model (red triangles). Note that Y04 use the Band model for all GRBs. The solid line in the graph delineates where the two $E_{\rm p,obs}$ estimates would be equal. Comparison of the two $E_{\rm p,obs}$ estimates reveals that the presumed spectral model can have a significant effect on the derived spectral parameters.

Surprisingly, 63 per cent of the Y04 $E_{\rm p,obs}$ are inconsistent with K06 $E_{\rm p,obs}$ for the GRBs best described by the Band model in K06 at $>1\sigma$ level. This ratio is even higher for the case of GRBs best described by COMP model (65 per cent) and by SBPL model (78 per cent). Overall, we find that 69 per cent (26 per cent) of all bursts have reported $E_{\rm p,obs}$ by K06 and Y04 that are inconsistent with each other at $>1\sigma$ ($>3\sigma$) level. Moreover, the $E_{\rm p,obs}$ differences do not show a Gaussian distribution about zero, particularly those described by CPL, and to a lesser extent those described by SBPL. This implies the existence of a systematic bias in $E_{\rm p,obs}$ of Y04 due to the use of the Band model as an 'a priori' best fit to all LGRBs.

Inspection of Fig. 2 indicates that Y04 underestimates $E_{\rm p,obs}$, relative to K06, for those LGRBs that are best fit by CPL, while Y04 slightly overestimates $E_{\rm p,obs}$ for GRBs best fit by SBPL. For one burst in the CPL subsample (BATSE trigger 6539) there is an extremely large difference between the two peak energies ($E_{\rm p,K06} = 2039 \pm 251, E_{\rm p,Y04} = 310.4^{64.2}_{76.9}$). Excluding this burst, the average difference of the peak energies for COMP subsample is 109 KeV. Overall, the similarity of Y04 and K06 $E_{\rm p,obs}$ estimates can be rejected at $>46\sigma$, $>35\sigma$ and $>74\sigma$ for the three Band, COMP and SBPL spectral models, respectively, according to χ^2 test. These discrepancies indicate that systematic errors and uncertainties due to model biases are significant. In addition, K06 find that very frequently, some time-resolved spectra cannot be adequately fit by the Band model.

2.2 $\mathbf{HR_H - E_{p,obs}}$ correlation

As shown in the previous section, the use of a specific spectral model as an 'a priori' best fit can result in a significant underestimation or overestimation of $E_{\rm p,obs}$ of GRBs. In order to nullify the possible effects of the spectral model, several authors attempted to simultaneously fit the spectra of GRBs with different models and choose the one with the least χ^2 value as the best fit. The most comprehensive analysis of this type for BATSE GRBs has been done by K06 who consider five different spectral models in their analyses and spectral fits. Although other authors (e.g. G09; Nava et al. 2008, hereafter N08; Y04; Band & Preece 2005) have extended the number of GRBs with measured $E_{\rm p,obs}$, for the reasons discussed above, we rely only on the sample of GRBs with measured $E_{\rm p,obs}$ reported by K06 to find the best linear fit for the $\mathrm{HR_H}$–$E_{\rm p,obs}$ relation. K06 provide the most precise $E_{\rm p,obs}$ measurement for the bright BATSE GRBs to date.

Fig. 3 shows the $\mathrm{HR_H} - E_{\rm p,obs}$ relation for 249 bursts – hereafter entitled the calibration sample – from K06 with measured $E_{\rm p,obs}$ that also have reported fluences in the current BATSE catalogue. In a standard 'Ordinary-Least-Squares' fit, here abbreviated as OLS(Y|X), it is assumed that there is one *dependent* and one *independent* variable. In the present case, however, there is no priority in assigning either of $E_{\rm p,obs}$ or of $\mathrm{HR_H}$ as the dependent or independent variables. For such occasions, alternative regression methods have been discussed by several authors (e.g. Strömberg 1940; Kermack & Haldane 1950; Isobe et al. 1990; Feigelson & Babu 1992; Babu & Feigelson 1996; Akritas & Bershadi 1996). Following these references, we rely only on the ordinary least squares, OLS(Y|X) and OLS(X|Y), and the bisector of these two lines (Isobe et al. 1990). Nevertheless, we also provide fits to the sample using other regression methods, including robust regressions that are powerful tools for outlier diagnostics. As will be seen in the later sections, the simulation of the $\mathrm{HR_H}$–$E_{\rm p,obs}$ relation indicates that *structural* regression models (e.g. Jöreskog 1973; Feigelson & Babu 1992) should be used for the calibration of the relation, since the systematic scatter in the data dominates random measurement noise. Therefore, with no weighting for the error bars we find

$$\mathrm{Log}\left(\frac{E_{\rm p,obs}}{300[\mathrm{KeV}]}\right) = 0.10 + 0.63\ \mathrm{Log}\left(\frac{\mathrm{HR_H}}{10}\right) \quad (1)$$

for OLS(Y|X), with intercept and slope uncertainties of $\sigma_a = 0.02$ and $\sigma_b = 0.05$, respectively, and

$$\mathrm{Log}\left(\frac{E_{\rm p,obs}}{300[\mathrm{KeV}]}\right) = 0.15 + 0.87\ \mathrm{Log}\left(\frac{\mathrm{HR_H}}{10}\right), \quad (2)$$

for OLS(X|Y), with intercept and slope uncertainties of $\sigma_a = 0.02$ and $\sigma_b = 0.002$, respectively, and

$$\mathrm{Log}\left(\frac{E_{\rm p,obs}}{300[\mathrm{KeV}]}\right) = 0.12 + 0.75\ \mathrm{Log}\left(\frac{\mathrm{HR_H}}{10}\right), \quad (3)$$

for the bisector line, with intercept and slope uncertainties of $\sigma_a = 0.01$ and $\sigma_b = 0.04$, respectively.

The uncertainties in the slopes and the intercepts are calculated using the formulae given in table 1 of Isobe et al. (1990). The formulae are obtained via the *delta method* which is based on the central limit theorem and therefore applies only to large samples ($N \gtrsim 30$). Here, there are $N = 249$ GRBs in the calibration sample. The uncertainties derived above are also in excellent agreement with the uncertainties we obtained via bootstrapping (Davison & Hinkley 1997) which is a superior method when Gauss–Markov assumptions in linear modelling do not hold (e.g. Placket 1950). The sample shows approximately the same dispersion around the three best linear fits (0.11 dex).

The common lack-of-fit *F*-test that is used together with linear regression in order to test for possible non-linearities in the data (e.g. Neter et al. 1996) requires the existence of replicates in the observations (i.e. observations with the same explanatory variable). Since the $\mathrm{HR_H}$–$E_{\rm p,obs}$ relation has no clear independent variable, we also fit the data with a second-order polynomial, and test the

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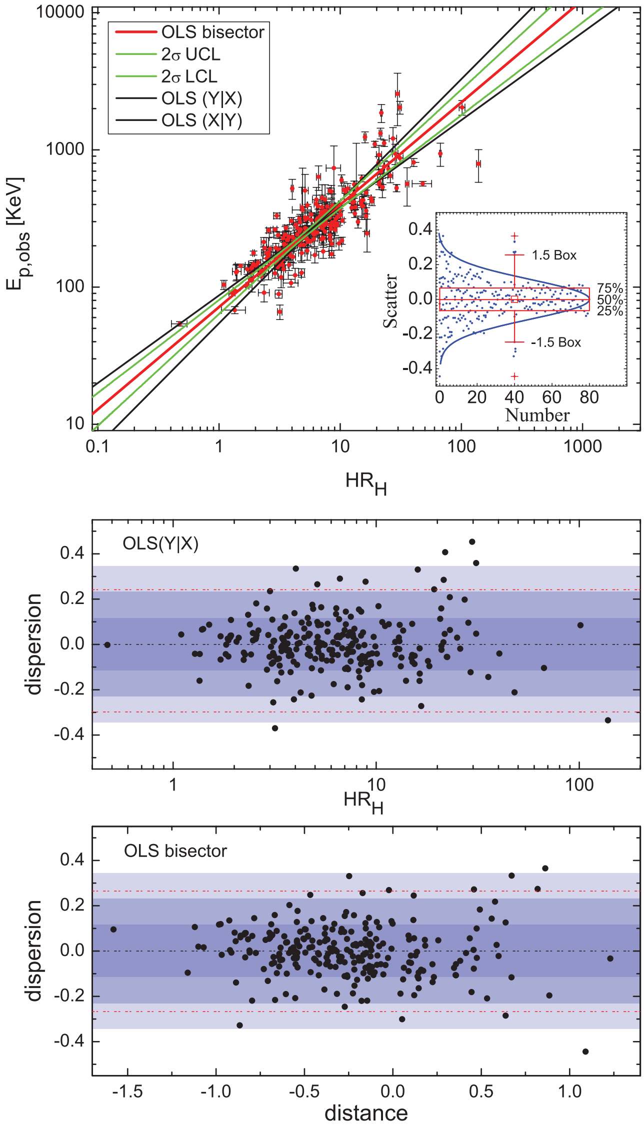

Figure 3. Top: plot of $E_{\rm p,obs}$ versus $\rm HR_H$ as defined in Section 1. $E_{\rm p,obs}$ of 249 bright BATSE bursts are taken from K06. The two green solid lines represent 2σ upper and lower confidence intervals for the mean response of OLS-bisector. The inset graph is the box–whisker plot (Tukey 1970, 1977) and histogram of the residuals of OLS-bisector. The distribution of the residuals (blue dots), while being symmetric about zero, is slightly heavy-tailed compared to Gaussian distribution shown as the solid blue curve. Middle: plot of OLS(Y|X) residuals versus the explanatory variable $\rm HR_H$. Bottom: plot of OLS-bisector residuals versus their distances from the barycentre of the sample projected on the bisector line. The three different background colours in the middle and the bottom plots are $1\sigma, 2\sigma$ and 3σ regions of the residuals from dark to light blue, respectively. The red dashed lines represent the interquartile ranges, beyond which points are generally considered as outliers. The only $>4\sigma$ outlier of OLS-bisector fit is GRB trigger 2679 (Figs 4–6).

coefficient of the second-order term against the null hypothesis of being zero using t-statistic. There is only a very weak 0.7σ evidence ($p = 0.48$) to reject the null hypothesis ,and therefore the linearity of the relation cannot be rejected *within the range of* the calibration sample. Following Feigelson & Babu (1992), the 1σ confidence intervals for the mean responses of the three OLS lines given a hardness ratio x_0 can also be derived as

$$\hat{\sigma}^2_{1,2,3} = \frac{1}{N^2}\sum_{i=1}^{N}\{y_i - \bar{y} - \hat{\beta}_{1,2,3}(x_i - \bar{x}) + \hat{a}_j(x_i - \bar{x})[y_i - \bar{y} - \hat{\beta}_1(x_i - \bar{x})] + \hat{b}_j(y_i - \bar{y})[y_i - \bar{y} - \hat{\beta}_2(x_i - \bar{x})]\}^2. \quad (4)$$

The indices 1,2,3 of the slope of the regression line, $\hat{\beta}$, correspond to OLS(Y|X), OLS(X|Y) and OLS-bisector, respectively, and x_i and y_i are $\log(\rm HR_H)$ and $\log(E_{\rm p,obs})$ of $N = 249$ GRBs in the calibration sample given in Table 1. Also $\bar{x}$ and $\bar{y}$ represent, respectively, the sample means of the regressor and the regressand in the calibration sample. The rest of the parameters are as follows:

$$\hat{a}_1 = \hat{\psi}, \quad ; \quad \hat{b}_1 = 0. \quad (5)$$

$$\hat{a}_2 = 0, \quad ; \quad \hat{b}_2 = \hat{\omega}. \quad (6)$$

$$\hat{a}_3 = \hat{\psi}\hat{\beta}_3\left[\left(1+\hat{\beta}_2^2\right)/\left(1+\hat{\beta}_1^2\right)\right]^{1/2}(\hat{\beta}_1 + \hat{\beta}_2)^{-1},$$

$$\hat{b}_3 = \hat{\omega}\hat{\beta}_3\left[\left(1+\hat{\beta}_1^2\right)/\left(1+\hat{\beta}_2^2\right)\right]^{1/2}(\hat{\beta}_1 + \hat{\beta}_2)^{-1}. \quad (7)$$

where

$$\hat{\psi} = \frac{N(x_0 - \bar{x})}{\sum_{i=1}^{N}(x_i - \bar{x})^2}, \quad ; \quad \hat{\omega} = \frac{N(x_0 - \bar{x})\hat{\beta}_2}{\sum_{i=1}^{N}(y_i - \bar{y})^2}. \quad (8)$$

The 2σ upper and lower confidence limits on the mean response for OLS-bisector line are depicted as green solid lines in Fig. 3.

To obtain the slope variances and the confidence intervals we did not rely on the standard formulae (e.g. Bevington & Robinson 2003) that are derived based on the restrictive Gauss–Markov assumptions, including the presumption of the homoscedasticity of residuals (i.e. uniform dispersion of data along the regression line) which should hold in order for OLS to be the Best Linear Unbiased Estimator (BLUE). In the presence of heteroscedasticity (i.e. non-uniform dispersion of data along the regression line), although OLS still remains unbiased, it may not be an efficient estimator. This means that although the slope and intercept of OLS line remain unbiased, the errors in the slope and intercept could be significantly underestimated, which in turn could result in the overestimation of the *t*-scores of the estimated coefficients and increase the chance of making type I error in hypothesis testings of the following sections. In addition, the confidence intervals on the mean response might not be reliable.

The classic assumption of homoscedasticity appears not to hold in $\rm HR_H$–$E_{\rm p,obs}$ relation. In order to identify heteroscedasticity in the residuals of OLS-bisector fit, we employ three classic heteroscedasticity tests: the White test (White 1980), the Glejser test (Glejser 1969) and the modified Levene's test (Levene 1960; Brown & Forsythe 1974) which is more robust against departures of the residuals from normality as compared to the Glejser test. According to these tests, the null hypothesis of homoscedasticity is rejected at 6σ ($p = 0.0024$), 3σ ($p = 0.0034$) and 2.4σ ($p = 0.019$), respectively. It should be noted that the residuals of OLS(Y|X) also show a significant evidence of heteroscedasticity at about the same significance levels as for the OLS-bisector fit.

Although the hypothesis of homoscedasticity is rejected, the general pattern of the heteroscedasticity is not clear in the residuals of the OLS fits to the calibration sample (Figs 3 and 4). It was therefore useful to simulate the relation beyond the ranges of $E_{\rm p,obs}$ and $\rm HR_H$ of the calibration sample GRBs to find the pattern. As shown

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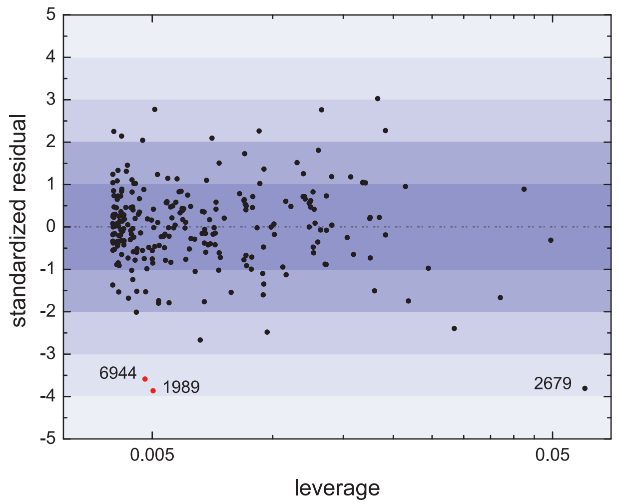

Figure 4. Plot of the standard residuals of OLS-bisector fit to the calibration sample versus their corresponding hat values (leverages) depicting the effects of individual data points on OLS-bisector line. The five differently coloured regions represent the $1\sigma, 2\sigma, 3\sigma, 4\sigma$ and 5σ of the standardized residuals from dark to light blue, respectively. Points with high leverages and standard residuals are considered to be *influential* observations that have significant effects on the slope and intercept of the bisector line. The two red points represent GRB triggers 1989 and 6944 that were excluded from the calibration sample, since their reported spectral parameters in K06 and BATSE catalogue are in contrast to each other (Fig. 6). Although far outliers to the bisector line, their exclusion has a very weak effect on the slope and intercept due to their closeness to the barycentre of the data. In contrast, GRB trigger 2679, although a high-leverage outlier to the bisector fit and influential point, was not excluded since it cannot be labelled as an sporadic outlier (Section 2 and Figs 5 and 6).

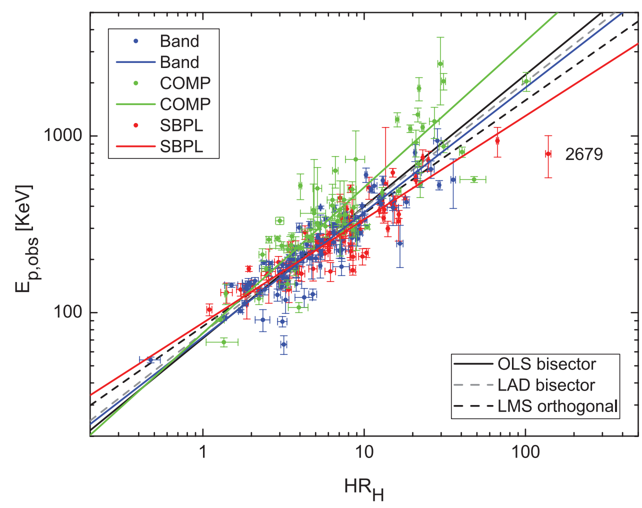

Figure 5. Plot of $E_{\mathrm{p,obs}}$ versus $\mathrm{HR_H}$ for the same sample of GRBs as in Fig. 3. The three colours correspond to the three different spectral models that K06 have used to analyse the spectra of the bursts. The colourful lines (blue, green and red) are OLS-bisector fits to corresponding samples. The slopes of the three lines and their corresponding 1σ uncertainties are $\hat{\beta}_{1,\mathrm{Band}} = 0.71$, $\hat{\sigma} = 0.04$, $\hat{\beta}_{1,\mathrm{COMP}} = 0.83$, $\hat{\sigma} = 0.06$, $\hat{\beta}_{1,\mathrm{SBPL}} = 0.59$ and $\hat{\sigma} = 0.04$. As implied by the variances, the slopes of the three lines are statistically, significantly different from each other. This causes the residuals of OLS-bisector fit to the entire sample (solid-black line) to be heteroscedastic as mentioned in Section 2. The two grey and black dashed lines represent, respectively, L_1 regression line, also known as LADs, and the high-breakdown LMS regression which uses the median of the squared residuals as the breakdown value. L_1 regression, although less sensitive to outliers compared to OLS, does not show any significant difference with OLS-bisector fit. However, since more than half of the sample are fit by either the Band or SBPL model, LMS line follows the trend in the sample of these two models and treats the COMP model bursts as outliers. This causes the slope of LMS regression (black dashed line) to be significantly different from OLS-bisector's, but similar to the bisector fits for the GRB samples of the Band and SBPL models. The labelled data point is GRB trigger 2679. Although a high-leverage $>4\sigma$ outlier (Fig. 4) to OLS-bisector (black solid) line and an *influential* observation in the regression, it was not excluded from the calibration sample due to the reasons discussed in Section 2 and also Fig. 6.

in Fig. 3 (middle and bottom), there is also evidence for the existence of $>3\sigma$ outliers, though they constitute a very small fraction ($<$1 per cent) of the calibration sample.

Although OLS-bisector's residuals resemble a Gaussian distribution (Fig. 3), a careful analysis indicates that it is heavy-tailed compared to a normal distribution. First, the Kolmogorov–Smirnov (KS) (Kolmogorov 1941; Smirnov 1948) test of normality for OLS-bisector residuals does not indicate a significant deviation from normality ($p = 0.28$). However, according to the Anderson–Darling test (Anderson & Darling 1952), a test that is more sensitive to the tails of the distribution than the KS test, the null hypothesis of normality is rejected at 1 per cent significance level.

Symmetry and normality of the residual distribution are of particular importance for works that study the population distribution of $E_{\mathrm{p,obs}}$ (e.g. Shahmoradi & Nemiroff 2009). If the symmetry and normality criteria do not hold, $\mathrm{HR_H}$ might be a biased indicator of the value of $E_{\mathrm{p,obs}}$, particularly in the large data sample outside of the small calibration data set. It is therefore useful to examine the validity of the symmetry and normality criteria beyond the range of the calibration sample by simulation.

Fig. 5 shows the calibration sample of Fig. 3, but fit to three different spectral models used by K06. Each model is shown by a different colour. As can be seen, GRBs that are fit by the COMP (CPL) model (green dots) are on average above the OLS-bisector fit for the entire sample (black solid line). Conversely, the two other groups of GRBs fit by the Band and SBPL models show trends that are different from the COMP model (green solid) line, but similar to each other. This means that for a given hardness ratio $\mathrm{HR_H}$ reported in the BATSE catalogue, there can be different $E_{\mathrm{p,obs}}$ associated with the burst, depending on which model has been used for the spectral analysis.

In addition, there is an intrinsic scatter in each of the three samples which is not due to the measurement error. The 'unexplained variances' of $E_{\mathrm{p,obs}}$ might be attributed to the fact that $\mathrm{HR_H}$ is not uniquely determined by $E_{\mathrm{p,obs}}$ and other free parameters of the three spectral models, such as the high and low energy photon indices create the observed dispersions in data. Another reason for the scatter in the data could be the fact that the two GRB parameters, $\mathrm{HR_H}$ and $E_{\mathrm{p,obs}}$, come from different sources, i.e. the BATSE catalogue and K06, which consider different time and energy interval and background fits in their spectral analyses of the bursts (e.g. see K06 and Table 1).

In order to show this effect more clearly, we also calculate the hardness ratios for the calibration sample using the spectral parameters given by K06. The new hardness ratio $\mathrm{HR_S}$ is defined in the same way as $\mathrm{HR_H}$: the fluence in 100–2000 KeV energy range divided by the fluence in 20–100 KeV energy range, corresponding to the ratio of the sum of the fluences in channels 4 and 3 of BATSE LADs to the sum of the fluences in channels 2 and 1.

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Table 1. Summary of the spectral properties of 249 BATSE GRBs used to calibrate the linear HR_H–$E_{p,obs}$ relation in Section 2.2. (The complete table of 249 GRBs and the description of the headings are available in the online version of this article.)

Trigger [a] (1)	Model [b] (2)	HR_H [c] (3)	A [d] (4)	$E_{p,obs}$ [e] (5)	α [f] (6)	β [g] (7)	E_{break} [h] (8)	Λ [i] (9)
105	SBPL	1.41 ± 0.12	3.28 ± 0.03	130 ± 17	−0.97 ± 0.08	−2.96 ± 0.13	126 ± 14	0.4
109	COMP	4.02 ± 0.08	0.81 ± 0.04	523 ± 87	−1.24 ± 0.06	—	—	—
130	BAND	3.80 ± 0.10	1.1 ± 0.15	180 ± 23	−1.23 ± 0.13	−2.33 ± 0.22	141 ± 31	—
143	SBPL	20.95 ± 0.13	4.82 ± 0.01	586 ± 28	−1.06 ± 0.01	−2.22 ± 0.03	420 ± 13	0.2
219	SBPL	3.49 ± 0.11	1.98 ± 0.01	240 ± 12	−1.23 ± 0.02	−2.28 ± 0.03	191 ± 8	0.2
226	COMP	6.34 ± 0.25	0.37 ± 0.03	404 ± 63	−1.05 ± 0.10	–	–	–
249	SBPL	7.09 ± 0.04	3.55 ± 0.01	446 ± 22	−1.06 ± 0.01	−3.30 ± 0.07	537 ± 21	0.5
298	SBPL	15.45 ± 0.47	1.31 ± 0.03	389 ± 67	−1.24 ± 0.04	−2.40 ± 0.28	387 ± 66	0.01
...	...	...	...	...	...	...	...	...

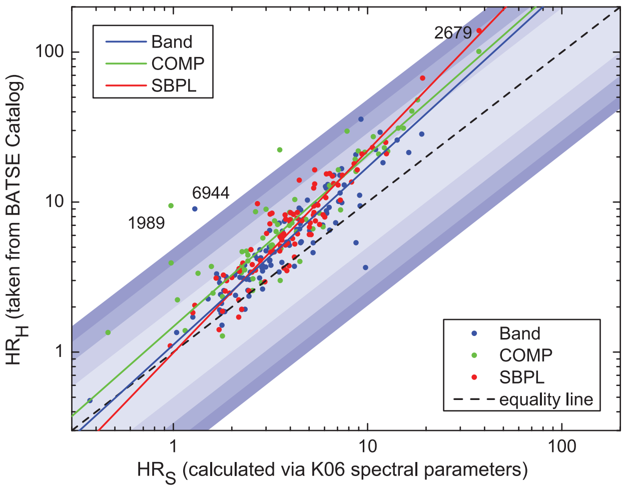

Figure 6. Plot of HR_H taken from BATSE catalogue versus HR_S calculated via the spectral parameters given by K06 for the calibration sample, in the same energy range as for HR_H. As seen the hardness ratios calculated via BATSE catalogue data are on average always greater than their counterparts calculated using the spectral parameters. In addition, the deviation from the equality line increases as the two hardness ratios increase. The coloured regions from dark to light represent the region of $HR_S/5 < HR_H < 5HR_S$, $HR_S/4 < HR_H < 4HR_S$, $HR_S/3 < HR_H < 3HR_S$ and $HR_S/2 < HR_H < 2HR_S$, respectively. The three blue, green and red coloured points and their OLS-bisector fits (the blue, green and red solid lines) correspond to the three Band, COMP and SBPL spectral models used by K06 to analyse the bursts. GRB trigger 1989 and 6944 are the two low-leverage outliers of HR_H–$E_{p,obs}$ relation (Fig. 4) that were excluded from the calibration as their reported spectral parameters in K06 and BATSE catalogue are in stark contrast to each other. The high-leverage $>4\sigma$ outlier to OLS-bisector line (Fig. 3), GRB trigger 2679, however, was not excluded from the calibration sample, since it lies along the general trend (the red OLS-bisector line) visible in the plot, though it is an *influential* point in the regression and its HR_H is five times larger than its HR_S.

Contrary to our initial guess, there is a systematic difference between these two hardness ratio estimates which tend to correlate positively with both hardness ratios HR_H and HR_S. HR_H from the BATSE catalogue appears to be, on average, greater than HR_S. The primary reasons for the biases in HR_H and HR_S will be investigated in a separate work (Shahmoradi & Nemiroff, in preparation). Fig. 6 shows graphically the systematic differences between these two hardness ratio estimates.

For the three spectral models we find the below relations for HR_H as a function of HR_S:

$$\mathrm{Log}(HR_H) = 0.09 + 1.12\,\mathrm{Log}(HR_S) \quad (9)$$

for the Band model GRBs,

$$\mathrm{Log}(HR_H) = 0.22 + 1.06\,\mathrm{Log}(HR_S) \quad (10)$$

for the COMP model GRBs and

$$\mathrm{Log}(HR_H) = 0.06 + 1.26\,\mathrm{Log}(HR_S) \quad (11)$$

for the SBPL model GRBs.

Heteroscedastic residuals and the presence of outliers are strong motivations to consider also robust regression methods such as L_1 (Karst 1958) – also known as the least absolute deviation (LAD) regression and high-breakdown regressions (e.g. Rousseeuw 1984) that are resistant to high-leverage outliers. These regression techniques effectively check that the OLS methods are not significantly affected by the presence of hidden outliers. Applying these regression methods to the entire 249 GRBs in the calibration sample, we find a weak evidence for the significance of the difference between slopes of L_1 and OLS regression lines, according to the uncertainties in the slopes. However, the least median of squares (LMS) line (Rousseeuw 1984) which uses the highest breakdown value (50 per cent) shows a significantly different slope compared to OLS-bisector fit to the entire calibration sample (Figs 3 and 5). Recall that the entire sample of 249 GRBs was divided into three groups by K06 – those GRBs best fit by the Band model, by the COMP model and by the SBPL model. Now the slope of the LMS line for all 249 GRBs in the K06 calibration sample appears more similar to the slopes of OLS-bisector lines for the sample of the Band and SBPL spectral models (Fig. 5). This is due partly to the fact that there is an intrinsic difference between the slopes of the bisector and orthogonal regression lines. But the main reason for the difference is the high breakdown value of LMS estimator. Since more than half of the calibration sample GRBs are fit by the Band and SBPL models, the LMS line would treat the COMP model GRBs as outliers, and therefore the LMS line follows approximately OLS-bisector lines for the two Band and SBPL GRB samples (blue and red solid lines in Fig. 5).

However, we expect that as more BATSE GRBs are added, the slopes of the two OLS and LMS regression lines would converge to each other. The reason is that the rest of BATSE catalogue GRBs are generally much fainter than 249 bright GRBs in the calibration sample and therefore of much lower S/N compared to the K06 sample. In these cases, the COMP model appears to be the preferred spectral model due to its simplicity and low number of free parameters compared to the Band and SBPL models, since having an additional free

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parameter usually results in highly cross-correlated, unconstrained parameter determinations (e.g. K06). This can in turn balance the number of COMP model GRBs compared to the number of GRBs well fit by the two other spectral models as more spectrally analysed bursts are added to the sample.

3 PREDICTION INTERVALS FOR $\mathrm{HR_H} - E_{\mathrm{p,obs}}$ RELATION

Unlike the analytical method used to derive confidence intervals for the mean responses of OLS regression lines in Section 2.2, the derivation of prediction intervals cannot be achieved without recourse to a detailed and accurate knowledge of the pattern of the heteroscedasticity in $\mathrm{HR_H}-E_{\mathrm{p,obs}}$ relation, in particular, beyond the range of the calibration sample where the relation might not have a linear behaviour. The prediction interval is, by definition, the interval within which the individual values of $E_{\mathrm{p,obs}}$ of BATSE GRBs would most likely fall given their hardness ratios. This is in contrast to the definition of the confidence interval *on the mean response* of OLS regression lines derived in Section 2.2.

To achieve this goal, we run extensive simulations of the relation over a wide range $\mathrm{HR_H}$ and $E_{\mathrm{p,obs}}$ for the Band, COMP and SBPL spectral models. The simulation algorithm is fairly simple and includes the following steps:

(i) Simulate a GRB by drawing randomly its spectral parameters from their parent distributions for each of the three GRB models. These include $E_{\mathrm{p,obs}}$ for the three models and their corresponding high- and low-energy photon indices.

(ii) Calculate the hardness ratio $\mathrm{HR_S}$ as defined in Section 2.2. The spectral forms of the three GRB models that are required to calculate $\mathrm{HR_S}$ have been given and discussed in detail by K06.

(iii) Map $\mathrm{HR_S}$ to $\mathrm{HR_H}$ via equations (9), (10) and (11). Here, we have essentially assumed that the bias seen between $\mathrm{HR_H}$ and $\mathrm{HR_S}$ in Section 2.2 (Fig. 6) remains linear over the entire range of BATSE GRBs hardness ratios. The assumption appears reasonable as we find that $\mathrm{HR_H}$ and $\mathrm{HR_S}$ of BATSE GRBs other than 249 GRBs considered here also follow the same patterns. These include GRBs analysed by N08 and G09.

(iv) Repeat Steps (i) to (iii) until the desired accuracy in the prediction intervals is achieved.

Steps (ii)–(iv) in the above algorithm are straightforward. The first step, however, requires the knowledge of the distributions of GRB spectral parameters for the three spectral models. To derive the parent distributions from which the random spectral parameters of the simulated GRB should be drawn, we present in the following section a comprehensive Bayesian multivariate analysis of the observational GRB data, mainly taken from K06, subject to truncations and sample-incompleteness effects that exists in the data sets.

3.1 Multivariate analysis of GRB spectral parameters

3.1.1 Observational data and sample selection

So far, the spectra of 342 BATSE GRBs have been simultaneously fit by a variety of spectral models (K06) – the most important models being Band, COMP, SBPL – to find the best-fitting model of GRBs. The sample includes the observational data for 118 GRBs best fit by the Band, 70 GRBs best fit by COMP and 137 GRBs best fit by SBPL models. This data set might therefore be used as an accurate proxy to derive the underlying probability density functions (PDF) of GRB spectral parameters. However, for the reason of better statistics, we increase the number of GRBs in the Band sample of K06 by including 32 BATSE GRBs that are well fit by the Band model in G09 and also 16 LGRBs fit by the Band model in N08.

Due to low S/N of GRBs analysed by G09 and N08, they consider only two spectral models of the Band and COMP. However, although low S/N GRBs spectra might be well fit by the Band or CPL (COMP), these two might have not been necessarily the best-fitting spectral models had GRBs had high enough S/N to perform a five-parameter model (e.g. SBPL) fit (K06; Band et al. 1993). Therefore, to ensure accuracy in the selected sample of GRBs from G09 and N08, we compared their derived fluences and hardness ratios to those given in the BATSE catalogue and excluded inconsistent bursts. In addition, since we ignore the uncertainties of the spectral data in the following analyses, we also require that the spectral parameters of GRBs taken from G09 and N08 should have 1σ uncertainties that are at least as small as the largest 1σ uncertainties in the K06 data.

In the same way, because of the small number of COMP model GRBs in K06 sample, we include 39 BATSE LGRBs from G09 that are well fit by COMP model. Also, 27 *Swift* (Gehrels et al. 2004) GRBs from Cabrera et al. (2007), 36 HETE-II GRBs from Pelangeon et al. (2008) and 22 HETE-II GRBs from Sakamoto et al. (2005) are included. In contrast, due to the significant inconsistencies that exist between the fluences and hardness ratios of the G09 SGRB sample and their corresponding values reported in the BATSE catalogue, none of the G09 SGRBs was included in the sample of COMP model GRBs considered here.

Except K06, no one has attempted to fit the spectra of a significant number of GRBs by SBPL model. We therefore rely only on 137 GRBs of K06 to constrain the parameters of this model.

3.1.2 Bayesian multivariate analysis of data

So far, only univariate analyses of the time-integrated spectral parameters of BATSE GRBs have been discussed in the literature (e.g. G09; Sakamoto et al. 2009), ignoring the possible underlying covariances that might exist between the parameters of a GRB model. This might not in general be true. Therefore, to explore the possible interrelationships between the GRB parameters we present below a multivariate analysis of the observational data given above.

According to Bayes' theorem, the joint posterior PDF of the set of parameters $\boldsymbol{\Theta}$ of each spectral model, given the observed data $\mathbf{D}$, the assumed statistical model M and the prior information I is

$$P(\boldsymbol{\Theta}|\mathbf{D},\mathrm{M},\mathrm{I}) \propto P(\boldsymbol{\Theta}|\mathrm{M},\mathrm{I}) \times P(\mathbf{D}|\boldsymbol{\Theta},\mathrm{M},\mathrm{I}). \tag{12}$$

The parameters to be estimated are the moments of the assumed statistical model. For example, if the assumed statistical model is multivariate normal distribution, the parameters to be constrained in each of the spectral models would be the means and variances of the low- and high-energy indices and the mean and variance of $\ln(E_{\mathrm{p,obs}})$ for the Band, COMP and SBPL models, as well as the possible correlations among the spectral parameters. The break scale Λ of SBPL model appears to be a discrete variable in the K06 sample. Therefore, the distribution of the break scale is considered separately. Also, the normalization factor of all the three models need not to be considered in the analysis, since the hardness ratio is independent of this parameter. Because of the large number of free parameters involved and the relatively small size of the observational data, comparison of a variety of statistical models to find the best seems impractical. To simplify, we assume that the spectral parameters of different GRB models – denoted by $\mathbf{X}$ – are drawn from a p-dimensional truncated multivariate normal distribution $\mathbf{D} \sim NT_p(\mu, \boldsymbol{\Sigma})$ where $\mathbf{X}$ is constrained to the region of

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the p-dimensional parameter space $R = \{a_i < \boldsymbol{X}_i < b_i, i = 1, p\}$. Here, the truncation on the observational data is set by physical constraints on GRB models. For example, the high-energy photon index of the Band and SBPL models should always be <0 to avoid energy catastrophe in the GRB prompt emission. Also in the COMP model, the photon index α must be >-2 by definition. In addition, the SBPL model has $E_{\rm p,obs}$ defined only when its low-energy index $\alpha > -2$ and its high-energy index $\beta < -2$. There is, however, no physical constraint on the possible values that $\ln(E_{\rm p,obs})$ could take and it can range from $-\infty$ to $+\infty$.

The likelihood of data for a GRB model with p free parameters (ignoring the normalization factor) can then be written as

$$P(\mathbf{D}|\boldsymbol{\Theta}) = (A(\mu, \boldsymbol{\Sigma}))^{-1} (2\pi)^{-Np/2} |\boldsymbol{\Sigma}|^{N/2} \times \exp\left(-\sum_{i=1}^{N} (\boldsymbol{D}_i - \mu)^T \boldsymbol{\Sigma}^{-1} (\boldsymbol{D}_i - \mu)/2 \right) \times \mathrm{I}_R(\mathbf{D}). \tag{13}$$

The $p \times 1$ vector μ and the $p \times p$ matrix $\boldsymbol{\Sigma} = \{\sigma_{ij}\}$ represent the mean vector and variance–covariance matrix of the truncated multivariate normal distribution to be estimated from the data $\mathbf{D} = [\boldsymbol{D}_1, \ldots, \boldsymbol{D}_N]$, where $\boldsymbol{D}_i$ is the ith $p \times 1$ observation vector which depending on the spectral model can be written as

$$\boldsymbol{D}_{{\rm Band},i} = \left[\ln(E_{\rm p,obs,i}), \alpha_i, \beta_i\right]^{\rm T} \tag{14}$$

$$\boldsymbol{D}_{{\rm COMP},i} = \left[\ln(E_{\rm p,obs,i}), \alpha_i\right]^{\rm T} \tag{15}$$

$$\boldsymbol{D}_{{\rm SBPL},i} = \left[\ln(E_{\rm p,obs,i}), \alpha_i, \beta_i\right]^{\rm T}. \tag{16}$$

The superscript T stands for 'Transpose'. Also, the term $\mathrm{I}_R(\mathbf{D})$ in the likelihood function (equation 13) is an indicator function that sets the likelihood to zero when $\mathbf{D}$ is outside the truncated region R and it is unity otherwise. Also, the term $(A(\mu, \boldsymbol{\Sigma}))^{-1}$ is a normalization factor which is due to the presence of truncation on data.

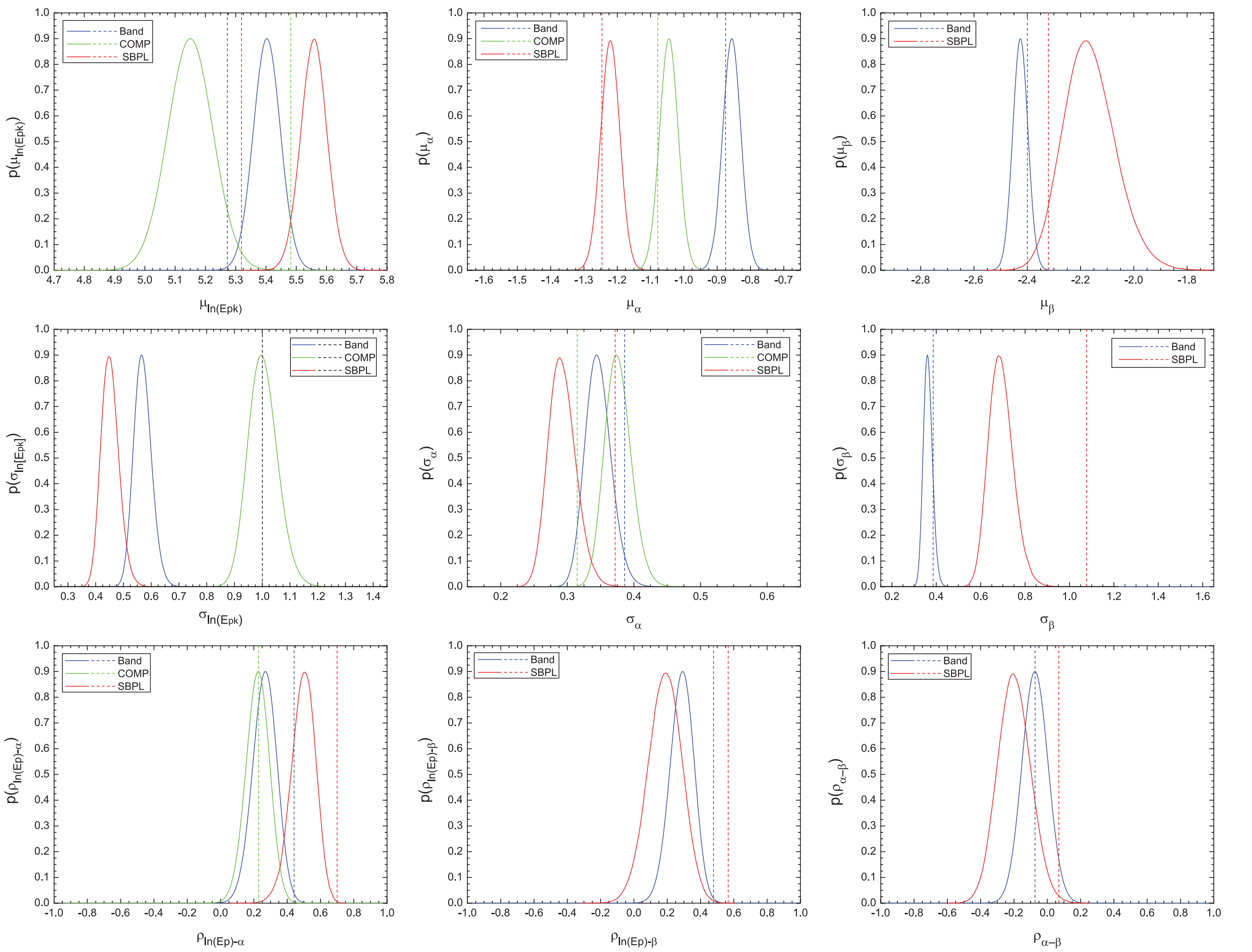

Figure 7. Posterior distributions of the parameters of the truncated multivariate normal distributions considered for the spectral parameters of the three GRB models: Band, COMP (CPL) and SBPL. The solid curves for each spectral model parameters are the marginal posterior PDFs derived from the Markov Chain Monte Carlo algorithm described in Section 3, excluding the possible effects of data truncation and sample incompleteness, mainly due to the flux limits set by different authors on the observed–analysed GRB samples (e.g. K06; G09; N08). The dashed-vertical lines in each graph represent the minimum χ^2 and the minimum KS-distance estimates of the parameters obtained numerically via simulation including the effects of data truncation and sample incompleteness on the spectrally analysed GRB samples.

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As the prior, we adopt the standard choice of the non-informative joint prior density for μ and $\boldsymbol{\Sigma}$ (Geisser & Cornfield 1963; Box & Tiao 1973; Dickey, Lindley & Press 1985)

$$p(\mu, \boldsymbol{\Sigma}) = p(\mu) \times p(\boldsymbol{\Sigma}) \propto 1 \times |\boldsymbol{\Sigma}|^{-(p+1)/2} \propto |\boldsymbol{\Sigma}|^{-(p+1)/2}. \quad (17)$$

In the absence of truncation, the analytical expressions for the resulting marginal posterior densities have been derived by Geisser & Cornfield (1963). In the presence of truncation, however, there are no analytical expressions for the marginals due to the term $(A(\mu, \boldsymbol{\Sigma}))^{-1}$ in the likelihood (equation 13). Therefore, we set up a Markov Chain Monte Carlo algorithm, widely known as the Gibbs sampler (Geman & Geman 1984) to obtain the marginal posterior densities. This is done by sampling iteratively from the conditional distributions of μ (p-dimensional multivariate normal distribution) and $\boldsymbol{\Sigma}$ (p-dimensional inverse-Wishart distribution), while updating the conditional variables at each iteration by the previous values (e.g. Geweke 1991; Rodriguez-Yam, Davis & Scharf 2004; Griffiths 2004). Iteration is then continued until convergence to the target density is assured (Raftery & Lewis 1992). The entire simulation algorithms are written in FORTRAN. The resulting marginal PDFs for the means and variances of the spectral parameters of the three GRB models in addition to the marginal posteriors of the correlation coefficients among the parameters are given in Fig. 7.

The above analysis, though mathematically accurate, is based on an erroneous presumption that the spectral parameters of the samples being studied can be regarded as purely *random* variables. Such an assumption is evidently not true. Since different sources (e.g. K06; G09; N08) have been used to collect information on the spectral parameters, the sample is very heterogeneous and suffers from various selection and truncation effects that vary from burst to burst. The simplest of these truncation effects is due to the flux or fluence limits set by these authors (e.g. K06; G09; N08) to ensure a minimum S/N in their spectral analyses. An example of such data truncation is well illustrated in Fig. 8. Therefore, it is likely that the posteriors derived based on these data sets would be biased, an important point that is generally overlooked in the literature (e.g. Sakamoto et al. 2009).

In particular, the distribution of $\ln(E_{\rm p,obs})$ is likely greatly affected in these flux-limited samples, which in turn could affect the distributions of other spectral parameters having non-zero covariances with $\ln(E_{\rm p,obs})$. To identify these potential biases, we also run an extensive set of Monte Carlo simulations for each of the three spectral models to obtain the likelihood functions numerically, subject to data truncation due to sample incompleteness, contrary to the above Bayesian approach where the likelihood could be written in an analytical form (equation 13).

3.1.3 Minimum χ^2/minimum KS-distance estimates of parameters subject to sample incompleteness

Similar to the Bayesian analysis of data in Section 3.1.2, it is assumed throughout the simulation that the spectral parameters of three GRB models (equations 14, 15, 16) are drawn from a truncated multivariate normal distribution. In addition to the truncations due to the physical constraints on the spectral parameters (Section 3.1.2), we also consider the truncation due to sample incompleteness and flux limits imposed on the observational data (Fig. 8). Once the effects of sample incompleteness are understood and modelled, the simulation algorithm is straightforward.

(i) Generate a random sample of the same size as the observational data from the truncated multivariate normal distribution with random mean vector and covariance matrix, subject to the truncation due to sample incompleteness.

(ii) Compare the similarity of the two simulated and observational samples by a proxy.

(iii) Repeat the above steps to find the most probable set of parameters that would maximize the similarity of the simulated and the observational data.

As seen in Fig. 8, the truncation on the observational data due to flux limits primarily affects the distribution of $\ln(E_{\rm p,obs})$ of BATSE GRBs. In particular, the variance of $\ln(E_{\rm p,obs})$ distribution is likely significantly underestimated in the K06 sample of GRBs. Although our simulations indicate that the flux limits might also directly affect the distributions of the GRB models' photon indices, we find it to be much weaker compared to the effects of truncation on $\ln(E_{\rm p,obs})$ distribution. Thus, for simplicity we assume that sample incompleteness only affects $\ln(E_{\rm p,obs})$ directly, and through that, it might affect the probability distribution of any of the rest of spectral parameters that have non-zero covariance with $\ln(E_{\rm p,obs})$.

To model the truncation due to flux limits on the data, we first estimate the most probable mean and variance of $\ln(E_{\rm p,obs})$ of BATSE GRBs for the three spectral models. This can be done knowing that the hardness ratio distribution of the BATSE GRBs shows an approximately Gaussian behaviour with a peak which is very close to the barycentre of the calibration sample that was used to derive the linear $\mathrm{HR_H} - E_{\rm p,obs}$ regression lines in Section 2.2. Therefore,

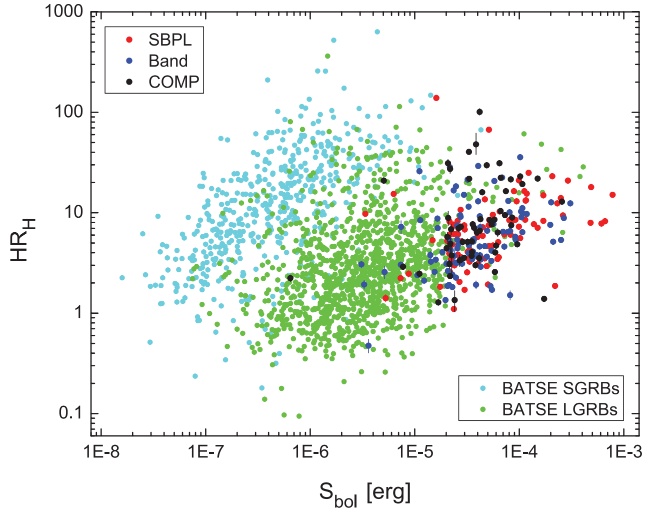

Figure 8. Plot of $\mathrm{HR_H}$ versus the bolometric fluence $S_{\rm bol}$ of the entire BATSE catalogue GRBs illustrating the effects of the flux limit in the K06's analysed sample of 350 bright BATSE GRBs. The flux-limit set by K06 was to ensure an accurate derivation of the spectral parameters. Although the derived parameters of GRBs in K06 have little uncertainties, the distribution of the spectral parameters of K06 sample might not represent the underlying distribution of the spectral parameters of the entire BATSE sample of GRBs due to the effects of data truncation and sample incompleteness imposed by requiring a minimum fluence ($\gtrsim 10^{-5}$ ergs) for the spectral analysis of GRBs. In particular, the variance of $\ln(E_{\rm p,obs})$ distribution of BATSE GRBs is likely significantly underestimated by the variance of $\ln(E_{\rm p,obs})$ in the sample of K06 GRBs.

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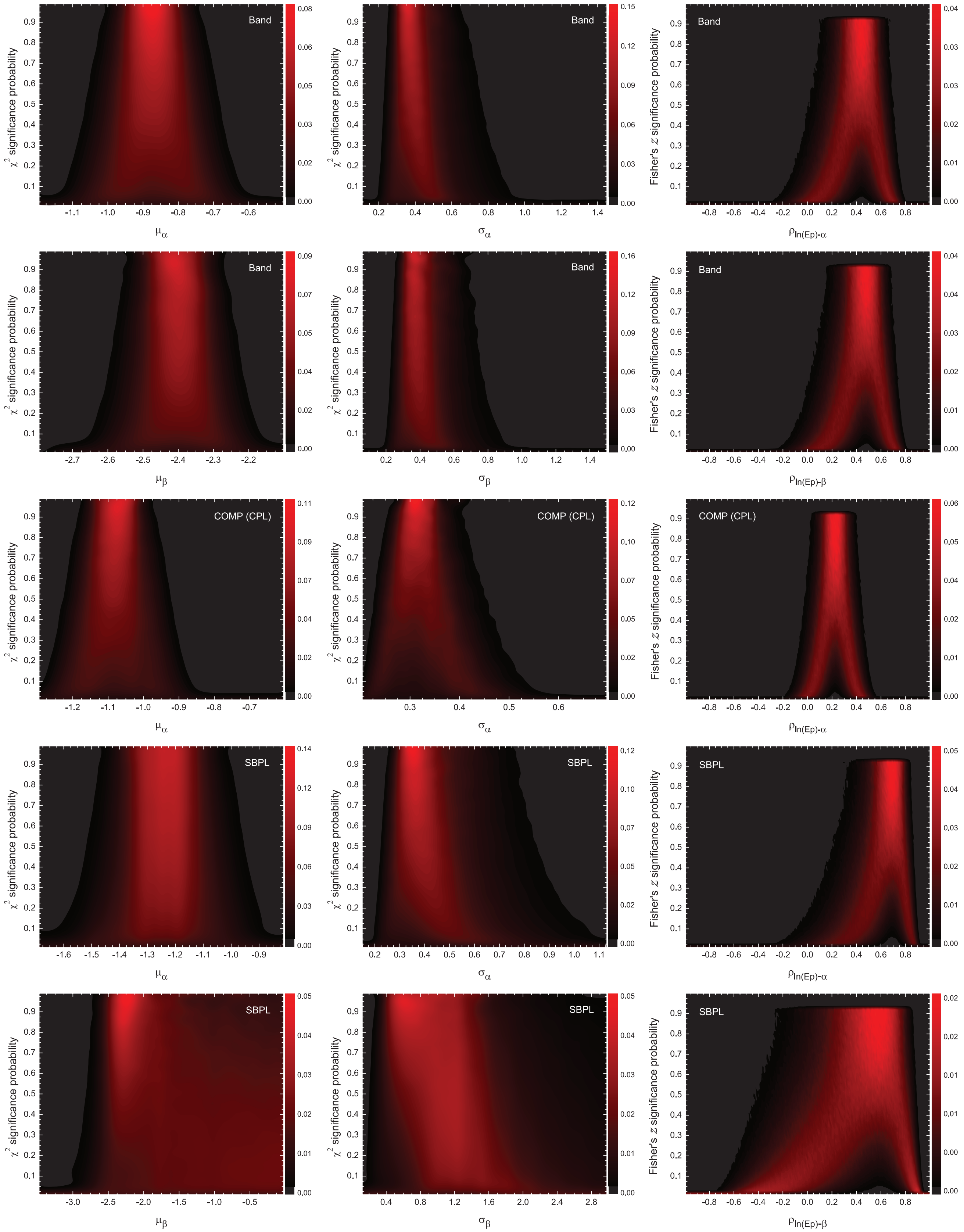

Figure 9. Marginalized likelihood contour plots of the observed data given different parameter values of the truncated multivariate normal distribution assumed for the spectral parameters of the three GRB models. The likelihoods are obtained via simulation including the effects of sample incompleteness as described in Section 3.1.3.

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since the $\mathrm{HR_H} - E_{\mathrm{p,obs}}$ relation is not a biased estimator of $\ln(E_{\mathrm{p,obs}})$ close to the barycentre of the data, it can be used to convert the mode of $\ln(\mathrm{HR_H})$ distribution to the mode of $\ln(E_{\mathrm{p,obs}})$ normal distribution for each spectral model, which can then be used as an estimate of the mean of $\ln(E_{\mathrm{p,obs}})$ of the entire BATSE GRBs for each spectral model *under the assumption of normality*.

To estimate the variance of $\ln(E_{\mathrm{p,obs}})$ distribution, we rely on the fact that there is a partial linear correlation between $\ln(E_{\mathrm{p,obs}})$ and the logarithm of bolometric 1-s peak flux $\ln(P_{\mathrm{bol}})$ of GRBs in the observer frame (e.g. N08; Lloyd, Petrosian & Mallozzi 2000). The hard-dim side of this correlation is likely affected by detector thresholds (e.g. Shahmoradi & Nemiroff 2009). However, the bright-soft region of the correlation is likely real, and originated from the physics of prompt emission. Depending on the spectral model considered, the 3σ limit of this relation in the bright-soft region intersects BATSE's trigger threshold ($\sim$0.3 ph s^{-1} for 1-s trigger in the energy range 50–300 KeV) at some point which can be regarded as the 3σ lower limit for $\ln(E_{\mathrm{p,obs}})$ of BATSE GRBs beyond which no burst could have been triggered by BATSE LADs (Shahmoradi & Nemiroff 2009). These estimates for different spectral models are depicted and compared with the estimates based on the observed samples in Fig. 7.

The effect of sample incompleteness on the observational data can then be modelled by fixing the mean and variance of $\ln(E_{\mathrm{p,obs}})$ distribution to the above estimates, and then creating simulated samples that have the same peak energies as in the observational sample. This means that the rest of spectral parameters of each model (i.e. photon indices) are drawn from their conditional distributions on $\ln(E_{\mathrm{p,obs}})$. Once the simulated sample is ready, it can be compared to observational data to infer the similarity of the two samples. Generally, the assessment of similarity requires the use of non-parametric multivariate goodness-of-fit tests. Such tests, although do exist, have been rarely discussed and treated in statistics due to difficulties in the interpretation of the test statistic (e.g.

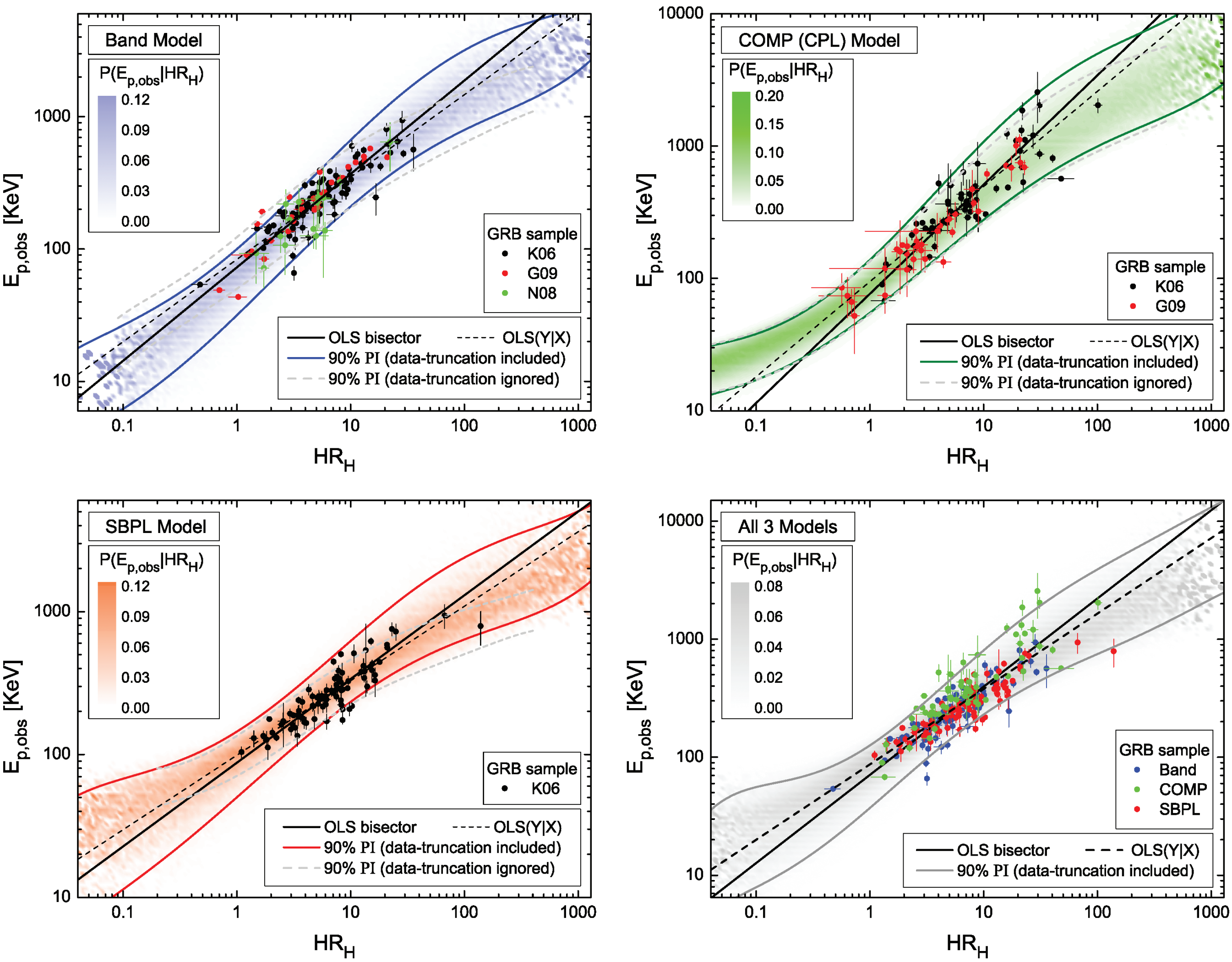

Figure 10. Plot of $E_{\mathrm{p,obs}}$ versus $\mathrm{HR_H}$ depicting the 90 per cent PI for the three spectral models. The solid-curve PI in each graph is based on the spectral parameters derived from the simulation including the effects of data truncation, mainly due to flux limits set on the analysed samples of GRBs by different authors (e.g. K06, N08, G09). In contrast, the grey dashed curves represent the 90 per cent PI for the case that no data truncation was considered. The colourful dots in each graph represent the analysed samples of BATSE GRBs by K06, N08 and G09, used to constrain the spectral parameter distributions of the simulation. The background contour plots in the graphs indicate the conditional chances of observing a specific $E_{\mathrm{p,obs}}$ given $\mathrm{HR_H}$. The fourth plot (bottom left) depicts the 90 per cent prediction intervals derived for the conditional weighted average of $\ln(E_{\mathrm{p,obs}})$ on $\ln(\mathrm{HR_H})$ of the three GRB models as given in equation (20). The prediction intervals are obtained by simulating 10 000 000 GRBs for each spectral model.

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Peacock 1983; Justel, Pena & Zamar 1997). In general, one can always use Pearson's χ^2 goodness-of-fit test (Pearson 1900; Fisher 1924) for any multivariate distribution. However, for the special case considered here, one would need an observed sample consisting of $N > 1000$ GRBs to avoid serious instabilities that occur in χ^2 tests due to small sample sizes (Cochran 1954). In addition, since it is already assumed that the data truncation mainly affects the distribution of $\ln(E_{\rm p,obs})$, this parameter is not a random variable in the simulation and it should be regarded as an explanatory variable – determined by the limitations of the analysis – for the rest of the spectral parameters that are considered as the response variables to $\ln(E_{\rm p,obs})$. In this case, the multivariate comparison of the spectral parameters can be reduced to a set of separate univariate goodness-of-fit tests for the marginal distributions of each of the spectral parameters. Then the likelihood of the data – given the random mean vector and covariance matrix of the truncated multivariate normal distribution – is assessed by the use of two separate non-parametric χ^2 and KS test statistics (e.g. Berkson 1980; Weber, Leemis & Kincaid 2006; Györfi, Vajda & Meulen 1996). To test for the significances of the similarities of the correlation coefficients between the spectral parameters, Fisher's z statistic (Fisher 1915, 1921) is used. The simulation then runs for a large number of iterations until the likelihood function reaches its asymptotic form and the most probable set of parameters are found. The resulting marginal likelihoods are shown partly in Fig. 9. It should be noted that although the most probable mean and variance of $\ln(E_{\rm p,obs})$ distribution derived by the above methods might only be approximations to the true population mean and variance, we find that small deviations ($\lesssim$0.1 dex) from these estimates result in negligible changes in the derived prediction intervals for the $\mathrm{HR_H} - E_{\rm p,obs}$ relation.

3.2 Derivation of the prediction intervals for $\mathrm{HR_H} - E_{\rm p,obs}$ relation

Now, in order to construct the prediction intervals of $\mathrm{HR_H} - E_{\rm p,obs}$ relation, first the spectral parameters of a simulated GRB are randomly drawn from the truncated multivariate normal distribution with its mean vector and covariance matrix fixed to their most probable values derived in Sections 3.1.2 and 3.1.3. The hardness ratio $\mathrm{HR_S}$ is then calculated for each simulated GRB based on its randomly given spectral parameters and mapped to $\mathrm{HR_H}$ via the linear relations (9), (10) and (11) between $\mathrm{HR_S}$ and $\mathrm{HR_H}$ in Section 2.2 (Fig. 6). The resulting 90 per cent Prediction Intervals (PI) for each spectral model (Fig. 10) are then fit by polynomials of the fifth order. The fits are summarized in Table 2.

As can seen in Section 2.2, also in Fig. 10, the conditional probability of having a particular $\ln(E_{\rm p,obs})$ given a hardness ratio $\mathrm{HR_H}$, $P(\ln(E_{\rm p,obs})|\ln(\mathrm{HR_H}))$, at the tails of the $\mathrm{HR_H}$–$E_{\rm p,obs}$ relation depends heavily on the spectral model that fits best the GRB spectrum. This means that in order to know the peak energy of a BATSE GRB given its hardness ratio $\mathrm{HR_H}$ from the BATSE catalogue, we would also need to know the best-fitting spectral model for the GRB beforehand, that is,

$$P\left(E_{\rm p,obs}|\mathrm{HR_H}\right) \propto \sum_{\rm Models} P\left(\mathrm{Model}\right) \times P\left(E_{\rm p,obs}|\mathrm{Model},\, \mathrm{HR_H}\right) \tag{18}$$

where the probability of having a specific spectral model as the best fit depends on the S/N of the GRB lightcurve and its hardness $\mathrm{HR_H}$ (K06; Band et al. 1993),

$$P\left(\mathrm{Model}\right) = P\left(\mathrm{Model}|\mathrm{S/N},\, \mathrm{HR_H}\right). \tag{19}$$

For example, K06 found that the ability to fit GRBs spectra with the Band and SBPL models depends on S/N, and also on whether the break energy of GRB in the two spectral models is inside the BASTE energy window. Generally, the most probable spectral model for a GRB can be found by simulation given its S/N and $\mathrm{HR_H}$. However, we leave this for the supplemental work to this paper (Shahmoradi & Nemiroff, in preparation), and assume here that P(Model) is independent of S/N and $\mathrm{HR_H}$ of the burst. Therefore, the probability $P(\ln(E_{\rm p,obs})|\ln(\mathrm{HR_H}))$ can be written as

$$\begin{aligned} P & \left(\ln(E_{\rm p,obs})|\ln(\mathrm{HR_H})\right) \\ & \propto P\left(\mathrm{Band}\right) \times P\left(\ln(E_{\rm p,obs})|\mathrm{Band},\, \ln(\mathrm{HR_H})\right) \\ & \quad + P\left(\mathrm{COMP}\right) \times P\left(\ln(E_{\rm p,obs})|\mathrm{COMP},\, \ln(\mathrm{HR_H})\right) \\ & \quad + P\left(\mathrm{SBPL}\right) \times P\left(\ln(E_{\rm p,obs})|\mathrm{SBPL},\, \ln(\mathrm{HR_H})\right) \end{aligned} \tag{20}$$

where

$$P\left(\mathrm{Band}\right) \sim 118/325 \tag{21}$$

Table 2. Coefficients of the fifth-order polynomial fits to the means and modes of $\mathrm{P}(E_{\rm p,obs}\mathrm{Model},\, \mathrm{HR_H})$ and the corresponding 90 per cent prediction intervals represented by Upper and Lower Confidence Levels (UCL and LCL) for the three GRB spectral models: Band, COMP (CPL) and SBPL. Also presented are the coefficients of the fifth-order polynomial fits to the mean of the weighted average of $\mathrm{P}(E_{\rm p,obs}\mathrm{Model},\, \mathrm{HR_H})$ of the three GRB models and the corresponding 90 per cent UCL and LCL derived in Section 3.2.

	a_0	a_1	a_2	a_3	a_4	a_5
			Band			
UCL	2.0	0.74	0.15	−0.047	−0.026	0.0067
LCL	1.5	0.83	0.065	−0.071	−0.008	0.0055
Mean	1.8	0.79	0.036	−0.06	0.0078	0.00032
Mode	1.8	0.74	0.0094	−0.048	0.0083	0.00021
			COMP (CPL)			
UCL	2.14	0.81	0.19	−0.094	−0.024	0.0098
LCL	1.74	0.66	0.11	−0.06	−0.012	0.0053
Mean	1.95	0.68	0.15	−0.061	−0.022	0.0074
Mode	1.92	0.62	0.12	−0.046	−0.013	0.0044
			SBPL			
UCL	2.16	0.5	0.19	−0.027	−0.038	0.0088
LCL	1.7	0.7	0.021	−0.049	−0.0094	0.0051
Mean	2.0	0.56	0.057	−0.034	−0.0011	0.00098
Mode	2.02	0.49	0.041	−0.026	0.0003	0.00057
			Weighted average of the three GRB models			
UCL	2.1	0.62	0.23	−0.049	−0.04	0.01
LCL	1.6	0.84	0.045	−0.1	0.0054	0.0048
Mean	1.9	0.68	0.11	−0.06	−0.012	0.0055

Note. The desired parameter can be estimated according to the equation:
$y = a_0 + a_1 x + a_2 x^2 + a_3 x^3 + a_4 x^4 + a_5 x^5$,
where y represents the logarithm of the parameter to be estimated and x represents $\log(\mathrm{HR_H})$. In general, the 90 per cent prediction intervals, represented by UCL and LCL, should always be reported with the estimated mean/mode of $E_{\rm p,obs}$.

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Table 3. Sample $E_{\mathrm{p,obs}}$ estimates for 2130 GRBs in the BATSE catalogue. (The complete table of 2130 GRBs and the description of the headings are available in the online version of this article.)

Trigger[a]	$\mathrm{HR_H}$ [b] hardness	Mean[$E_{\mathrm{p,obs}}$][c] OLS(Y|X)	Mean[$E_{\mathrm{p,obs}}$][d] OLS-bisector	Mode[$E_{\mathrm{p,obs}}$][e] Band	Mode[$E_{\mathrm{p,obs}}$][f] COMP(CPL)	Mode[$E_{\mathrm{p,obs}}$][g] SBPL	Mean[$E_{\mathrm{p,obs}}$][h] Expected
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
105*	1.41 ± 0.12	–	–	81^{+49}_{-39}	104^{+80}_{-34}	124^{+49}_{-60}	101^{+58}_{-48}
107	1.22†	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
108	64.20 ± 28.70	$1242.15^{+3.86}_{-3.85}$	$1595.74^{+5.92}_{-5.90}$	949^{+1573}_{-298}	1280^{+2725}_{-463}	795^{+1152}_{-242}	1297^{+1730}_{-633}
109*	4.02 ± 0.08	–	–	174^{+134}_{-72}	212^{+262}_{-66}	212^{+120}_{-80}	218^{+152}_{-92}
110	2.37 ± 0.80	$150.98^{+0.05}_{-0.05}$	$136.22^{+0.06}_{-0.06}$	119^{+78}_{-54}	147^{+145}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
111	0.68 ± 0.15	$67.68^{+0.12}_{-0.12}$	$53.38^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-48}	61^{+39}_{-32}
114	0.53†	$57.99^{+0.13}_{-0.13}$	$44.57^{+0.13}_{-0.12}$	40^{+25}_{-21}	57^{+28}_{-20}	77^{+32}_{-45}	53^{+36}_{-29}
121	2.35 ± 0.22	$150.16^{+0.06}_{-0.06}$	$135.36^{+0.06}_{-0.06}$	118^{+78}_{-53}	146^{+144}_{-47}	161^{+73}_{-70}	146^{+90}_{-65}
130*	3.80 ± 0.10	–	–	167^{+126}_{-70}	204^{+246}_{-64}	206^{+114}_{-79}	209^{+143}_{-88}
...	...	...	...	...	...	...	...

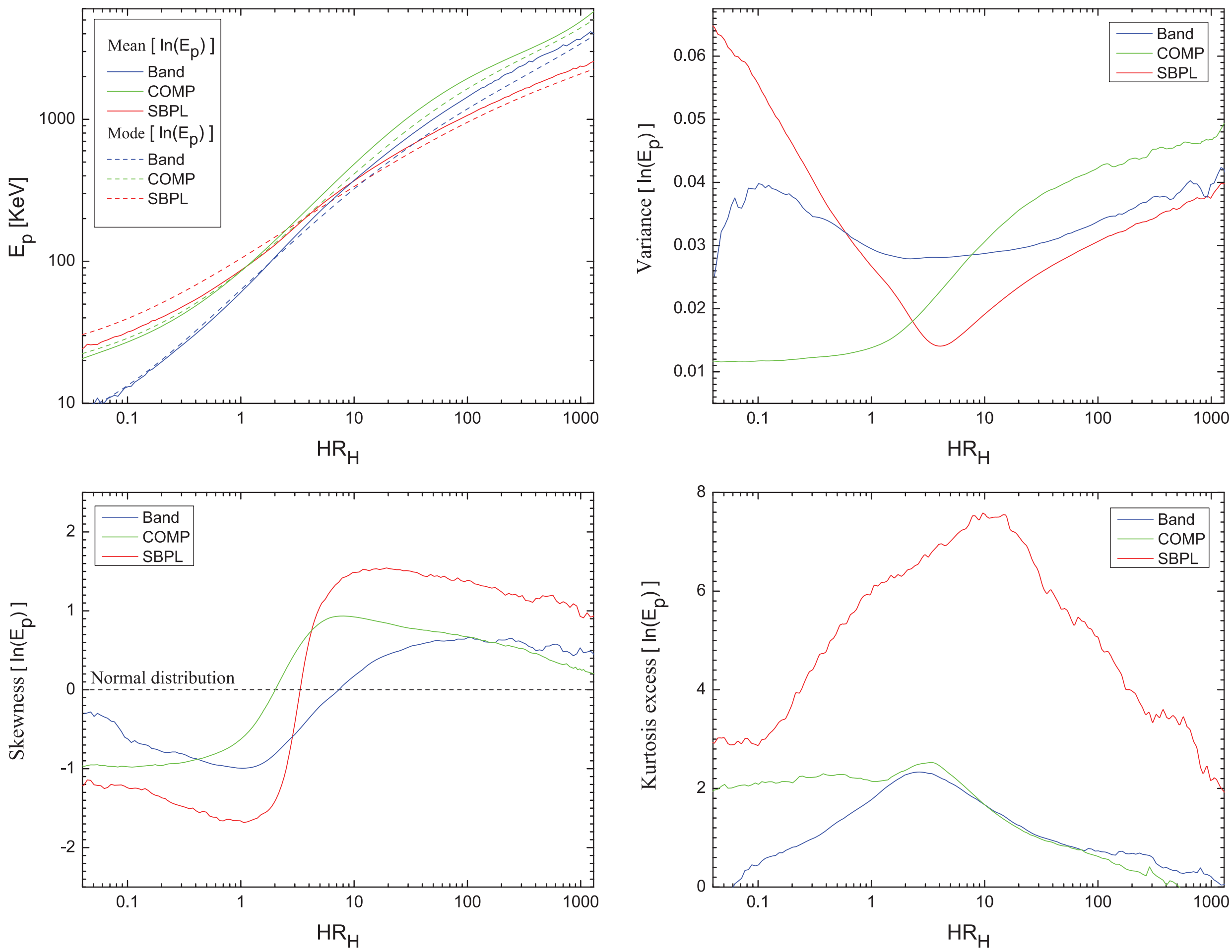

Figure 11. Plots of the first four moments of the conditional distribution $P\left(\ln(E_{\mathrm{p,obs}})|\mathrm{Model}, \ln(\mathrm{HR_H})\right)$ for the three GRB spectral models: Band, COMP(CPL) and SBPL. Top left: comparison of the modes (dashed curves) and means (solid curves) of $E_{\mathrm{p,obs}}$ given $\mathrm{HR_H}$ for the three spectral models. Top right: variance of $\ln(E_{\mathrm{p,obs}})$ given $\mathrm{HR_H}$ for the three GRB models. Bottom left: variation of the third standardized moment (skewness) of $P\left(\ln(E_{\mathrm{p,obs}})|\mathrm{Model}, \ln(\mathrm{HR_H})\right)$ versus $\mathrm{HR_H}$ for the three GRB models. The horizontal dashed line represents the third standardized moment of normal distribution. Bottom right: variation of the fourth standardized cumulant (the Kurtosis excess) versus $\mathrm{HR_H}$. As it had been implied by the calibration sample before in Section 2.2, $P\left(\ln(E_{\mathrm{p,obs}})|\mathrm{Model}, \ln(\mathrm{HR_H})\right)$ for all three GRB models exhibits a leptokurtic-type behaviour by being more *peaked* and *heavy-tailed* compared to normal distribution which has zero Kurtosis excess. The fact that $P\left(\ln(E_{\mathrm{p,obs}})|\mathrm{Model}, \ln(\mathrm{HR_H})\right)$ has the highest Kurtosis excess close to the barycentre of simulated data for the Band and SBPL models together with its low variance in the same region indicates the relative accuracy of $\mathrm{HR_H}$–$E_{\mathrm{p,obs}}$ relation in estimating $E_{\mathrm{p,obs}}$ close to the barycentre compared to the extreme ends of the relation. By contrast, the uncertainty in $E_{\mathrm{p,obs}}$ estimation appears to increase continuously with $\mathrm{HR_H}$ for the COMP (CPL) model.

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$$P\,(\text{COMP}) \sim 70/325 \tag{22}$$

$$P\,(\text{SBPL}) \sim 137/325. \tag{23}$$

The above probabilities have been estimated from the K06 time-integrated sample of GRBs assuming that the global fraction of GRBs best fit by each of the spectral models are the same as the fractions found in the K06 sample of GRBs. This might not be far from the truth, since the brightness of GRBs in K06 sample assures us that the spectral fits are not biased due to low S/N. The averaged 90 per cent PI for the $\mathrm{HR_H}$–$E_{\mathrm{p,obs}}$ relation is depicted in Fig. 10 (bottom right). The fifth-order polynomial fits to 90 per cent prediction intervals are also given in Table 2.

Based on the linear regression fits in Section 2.2, and the simulated conditional probabilities $P\left(\ln(E_{\mathrm{p,obs}})|\ln(\mathrm{HR_H})\right)$ and PIs for the three GRB models in Section 3.2, the mean and the most probable $E_{\mathrm{p,obs}}$ of 2130 BATSE catalogue GRBs are estimated and tabulated in Table 3.

It is useful to examine the behaviour of the conditional probability $\mathrm{P}(E_{\mathrm{p,obs}}|\mathrm{Model},\,\mathrm{HR_H})$ for the three GRB models for different $\mathrm{HR_H}$. Fig. 11 depicts the plots of the first four moments of $\mathrm{P}(E_{\mathrm{p,obs}}|\mathrm{Model},\,\mathrm{HR_H})$ given $\mathrm{HR_H}$. As seen, the conditional densities appear to be significantly different from the normal distribution by being highly skewed and leptokurtic. The plots also clarify the patterns of heteroscedasticity in the linear regressions discussed in Section 2.2. Although in such cases the OLS linear regressions are not *BLUE*, comparison of $\mathrm{Mean}[E_{\mathrm{p,obs}}]$ of 2130 BATSE GRBs derived from the simulation with their $\mathrm{Mean}[E_{\mathrm{p,obs}}]$ estimates by the $\mathrm{OLS}(E_{\mathrm{p,obs}}|\mathrm{HR_H})$ linear regression in Section 2.2 indicates the consistency of two methods over a wide range of BATSE $\mathrm{HR_H}$ (Fig. 12).

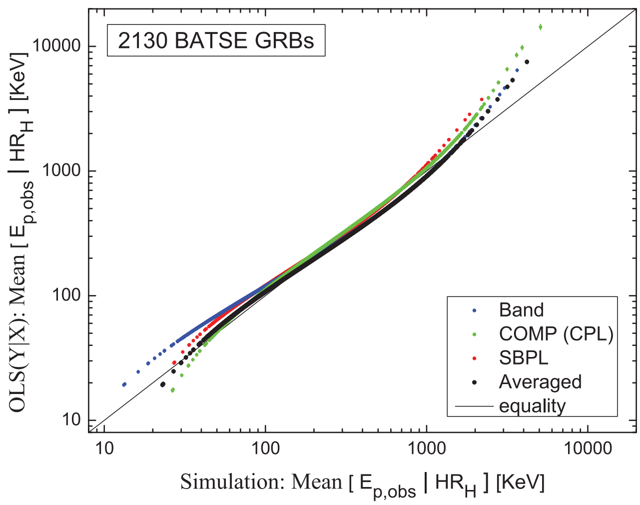

Figure 12. Plot of $\mathrm{Mean}[E_{\mathrm{p,obs}}]$ of 2130 GRBs in the BATSE catalogue estimated by the $\mathrm{OLS}(E_{\mathrm{p,obs}}|\mathrm{HR_H})$ linear regression (Section 2.2) versus $\mathrm{Mean}[E_{\mathrm{p,obs}}]$ estimates of the same bursts derived from the simulation of $\mathrm{HR_H}$–$E_{\mathrm{p,obs}}$ relation (Section 3.2), depicting the significance of the differences between the two estimates given different $\mathrm{HR_H}$. The blue/green/red circles correspond to the estimates of $E_{\mathrm{p,obs}}$ of the bursts assuming that all are best fit by the Band/COMP/SBPL models, respectively. The black circles represent $E_{\mathrm{p,obs}}$ estimates from the $\mathrm{OLS}(E_{\mathrm{p,obs}}|\mathrm{HR_H})$ linear regression fit to the entire calibration sample versus weighted averages of $E_{\mathrm{p,obs}}$ estimates of the three GRB models derived form the simulation (Section 3.2). The black solid line represents the equality. As seen, the two model-independent $E_{\mathrm{p,obs}}$ estimates (black circles) agree well with each other for almost the entire BATSE catalogue GRBs.

4 DISCUSSION AND SUMMARY

Throughout this work, we presented a simple method of estimating the spectral peak energies of BATSE GRBs via their hardness ratios $\mathrm{HR_H}$, defined as the sum of the fluences in channels 3 and 4 of BATSE LADs (100–2000 KeV), divided by the sum of the fluences in channels 2 and 1 (20–100 KeV), available in the BATSE GRB catalogue. Based on the strong correlation found between $\mathrm{HR_H}$ and $E_{\mathrm{p,obs}}$ of 249 bright BATSE GRBs, the $\mathrm{HR_H}$–$E_{\mathrm{p,obs}}$ relation was constructed and shown to be linear over the wide energy range of BATSE (Section 2.2). Although the relation is calibrated by a sample of 249 bright GRBs, since the hardness ratio is independent of GRB brightness, the relation can be used for nearly the entire BATSE sample: 2130 GRBs.

Using Markov Chain Monte Carlo techniques, we also presented a careful multivariate analysis of GRB spectral parameters for the three main GRB spectral models: Band, COMP (CPL) and SBPL, subject to the possible effects of data truncation and sample incompleteness on the observational data (Section 3.1). Similar to Shahmoradi & Nemiroff (2009), we find indications of significant – and in some cases strong – positive correlations among the high-/low-energy photon indices of the bright BATSE GRBs and their $E_{\mathrm{p,obs}}$. Investigation of the origins of such positive trends requires an accurate modelling of the possible role of the limited BATSE energy window in shaping the distribution of BATSE GRBs' spectral parameters. In general, the evolution of the photon indices with $E_{\mathrm{p,obs}}$, if intrinsic to GRBs, should be sought in the time-resolved spectral analyses of BATSE GRBs where the possible effects of the dispersion of $E_{\mathrm{p,obs}}$ distribution due to cosmological redshifts are eliminated (e.g. K06; Crider et al. 1997; Lloyd-Ronning & Petrosian 2002).

Based on the results of the multivariate analysis of observational data we also derived the 90 per cent prediction intervals for $\mathrm{HR_H}-E_{\mathrm{p,obs}}$ relation (Section 3.2 and Table 2). These estimates were then used to create a complete catalogue of $E_{\mathrm{p,obs}}$ estimates for 2130 BATSE GRBs with measured fluences available in the BATSE catalogue (Table 3). These estimates might be very useful in population studies of long- and short-duration GRBs, also in the studies of GRB hardness–brightness correlations (e.g. Shahmoradi & Nemiroff 2009) and the possible use of GRBs as cosmological tools.

As an immediate outcome of the analyses presented here, we have derived a probabilistic $E_{\mathrm{p,obs}}$ distribution of the entire BATSE GRBs for the first time by integrating the simulated conditional distributions $P(E_{\mathrm{p,obs}}|\mathrm{HR_H})$ (equation 20) in Section 3.2 over the entire BATSE catalogue GRB hardness ratios (Fig. 13),

$$P(E_{\mathrm{p,obs}}) \propto \sum_{i=1}^{2130} P(E_{\mathrm{p,obs}}|\mathrm{HR}_{\mathrm{H},i}). \tag{24}$$

As it was expected (e.g. Kouveliotou et al. 1993), the resulting distribution is significantly different from a single Gaussian distribution. By contrast, the sum of two Gaussians provides a better fit than the single Gaussian at 0.001 significance level. The two fits are summarized in Table 4. Assuming a lognormal distribution for the $E_{\mathrm{p,obs}}$ of BATSE LGRBs and SGRBs, the two Gaussian components of the mixture likely represent the $E_{\mathrm{p,obs}}$ PDFs of long- and short-duration BATSE GRBs with peaks at ∼140 and ∼520 KeV, respectively.

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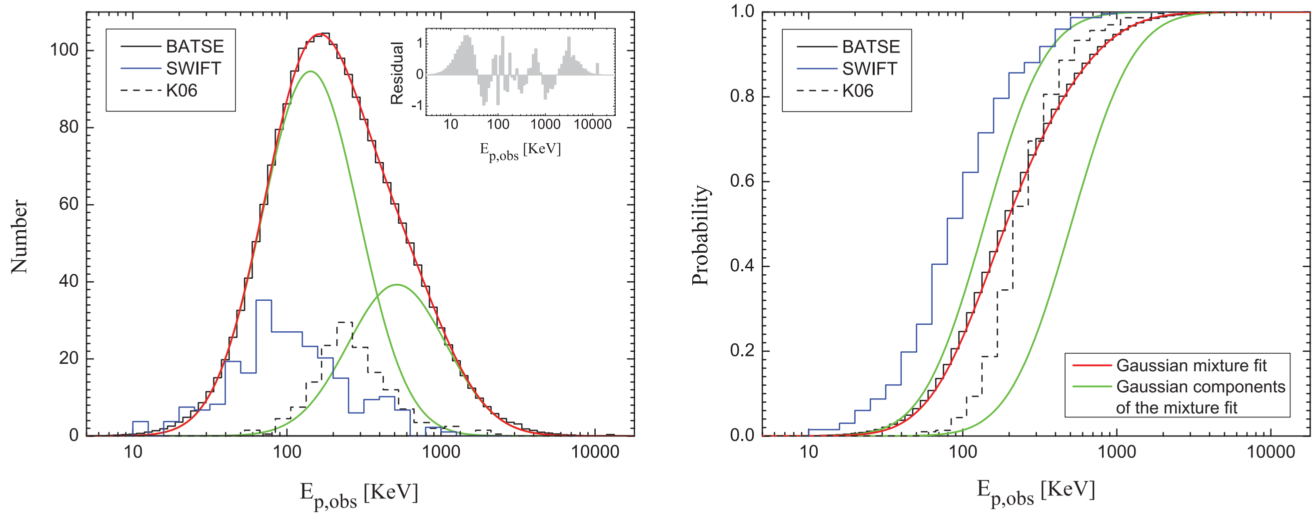

Figure 13. Left: the asymptotic $E_{\mathrm{p,obs}}$ distribution of 2130 BATSE GRBs derived from the integration of the conditional probability densities $P(E_{\mathrm{p,obs}}|\mathrm{HR_H})$ over the entire BATSE catalogue of GRB hardness ratios (equation 24). Mixture decomposition of the BATSE catalogue $E_{\mathrm{p,obs}}$ distribution (the black solid line) indicates that the distribution is well fit by the sum of two Gaussians (green solid lines) resulting in a reduced χ^2 value of 0.26. The inset graph represents the residuals of the fit. By contrast, a single Gaussian results in a poor fit to the BATSE catalogue $E_{\mathrm{p,obs}}$ distribution at >99.9 per cent confidence level with a resulting reduced χ^2 value of 9.6. The parameter estimates of the fits are given in Table 4. The two Gaussians might represent the $E_{\mathrm{p,obs}}$ distribution of BATSE LGRBs and SGRBs peaking at ∼140 and ∼520 KeV, respectively. The dashed-line histogram represents the $E_{\mathrm{p,obs}}$ distribution of 299 bright BATSE GRBs in K06. Although K06 sample mainly consists of LGRBs, the $E_{\mathrm{p,obs}}$ distribution of the sample is biased towards harder bursts, as has been predicted in Fig. 8. The solid blue histogram represents the $E_{\mathrm{p,obs}}$ distribution of *Swift* LGRBs taken from Butler, Bloom & Poznanski (2010). As expected, the *Swift* LGRBs appear to be much softer than BATSE GRBs due to the relative energy sensitivity of *Swift* as compared to BATSE. Right: normalized cumulative $E_{\mathrm{p,obs}}$ distribution of 2130 BATSE catalogue GRBs. The lines and colours have the same meaning as in the left plot. Assuming that the two Gaussians in the mixture fit to the BATSE $E_{\mathrm{p,obs}}$ distribution represent the $E_{\mathrm{p,obs}}$ density functions of BATSE LGRBs and SGRBs, then strong limits can be set on the fraction of BATSE LGRBs/SGRBs having an $E_{\mathrm{p,obs}}$ larger/smaller than a specified $E_{\mathrm{p,obs}}$. These limits might represent the global fractions of LGRBs/SGRBs having an $E_{\mathrm{p,obs}}$ larger/smaller than a specified $E_{\mathrm{p,obs}}$, provided that the effects of BATSE LAD's limited energy window (20–2000 KeV) on the global distribution of $E_{\mathrm{p,obs}}$ of GRBs are negligible.

Table 4. Parameter estimates of the Gaussian mixture and single Gaussian fits to the derived asymptotic $\log(E_{\mathrm{p,obs}})$ distribution of 2130 BATSE catalogue GRBs based on equation (24).

Model (1)	$\hat{A}$ (2)	$\hat{\mu}$ (3)	$\hat{\sigma^2}$ (4)	Area (5)	χ^2/d.o.f (6)
Mixture	–	–	–	–	0.26
Component 1	94.61	2.15	0.10	0.70	–
Component 2	39.28	2.71	0.10	0.30	–
Single Gaussian	102.55	2.28	0.17	–	9.6

Note. Columns (2), (3), (4) and (6) represent the maximum heights (normalization factors), means, variances and the reduced χ^2 values of the Gaussian fits, respectively. Column (5) represents the relative contributions of the two Gaussian components to the mixture fit. The standard errors on all estimated parameters are of the order of the third decimal places and therefore not reported.

It should be noted that although we focused our attention only on a specific definition of hardness ratio, other definitions might also show a strong correlation with $E_{\mathrm{p,obs}}$. In particular, the hardness ratios defined by the raw photon counts of GRBs might even appear as better and more straightforward estimators of $E_{\mathrm{p,obs}}$, since their calculations do not require folding of GRBs spectra with the Detector Response Matrices.

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SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article:

Table 1. Summary of the spectral properties of 249 BATSE GRBs used to calibrate the linear $\mathrm{HR_H}$–$E_{\mathrm{p,obs}}$ relation in Section 2.2.
Table 3. $E_{\mathrm{p,obs}}$ estimates for 2130 GRBs in the BATSE catalogue.

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Table 3: Summary of the spectral properties of 249 BATSE GRBs used to calibrate the linear HR_H–$E_{p,obs}$ relation in §2.2.*

Trigger [a] (1)	Model [b] (2)	HR_H [c] (3)	A [d] (4)	$E_{p,obs}$ [e] (5)	α [f] (6)	β [g] (7)	E_{break} [h] (8)	Λ [i] (9)
105	SBPL	1.41 ± 0.12	3.28 ± 0.03	130 ± 17	-0.97 ± 0.08	-2.96 ± 0.13	126 ± 14	0.4
109	COMP	4.02 ± 0.08	0.81 ± 0.04	523 ± 87	-1.24 ± 0.06	—	—	—
130	BAND	3.80 ± 0.10	1.1 ± 0.15	180 ± 23	-1.23 ± 0.13	-2.33 ± 0.22	141 ± 31	—
143	SBPL	20.95 ± 0.13	4.82 ± 0.01	586 ± 28	-1.06 ± 0.01	-2.22 ± 0.03	420 ± 13	0.2
219	SBPL	3.49 ± 0.11	1.98 ± 0.01	240 ± 12	-1.23 ± 0.02	-2.28 ± 0.03	191 ± 8	0.2
226	COMP	6.34 ± 0.25	0.37 ± 0.03	404 ± 63	-1.05 ± 0.10	—	—	—
249	SBPL	7.09 ± 0.04	3.55 ± 0.01	446 ± 22	-1.06 ± 0.01	-3.30 ± 0.07	537 ± 21	0.5
298	SBPL	15.45 ± 0.47	1.31 ± 0.03	389 ± 67	-1.24 ± 0.04	-2.40 ± 0.28	387 ± 66	0.01
351	COMP	3.72 ± 0.20	0.39 ± 0.03	174 ± 12	-1.42 ± 0.08	—	—	—
394	BAND	4.60 ± 0.10	1.72 ± 0.05	315 ± 13	-0.91 ± 0.03	-2.03 ± 0.04	175 ± 9	—
444	BAND	2.36 ± 0.25	51.8 ± 50.8	91 ± 13	0.18 ± 0.65	-2.11 ± 0.07	60 ± 7	—
451	BAND	1.91 ± 0.07	3.32 ± 0.19	143 ± 8	-1.47 ± 0.05	-2.41 ± 0.10	139 ± 16	—
543	COMP	2.90 ± 0.10	3.76 ± 0.11	263 ± 8	-0.97 ± 0.03	—	—	—
647	BAND	2.63 ± 0.06	4.99 ± 0.21	190 ± 3	-0.19 ± 0.05	-3.34 ± 0.17	178 ± 9	—
676	BAND	9.22 ± 0.18	0.71 ± 0.08	315 ± 36	-0.52 ± 0.14	-2.33 ± 0.25	204 ± 35	—
761	SBPL	4.30 ± 0.17	0.63 ± 0.4	285 ± 25	-1.24 ± 0.02	-2.43 ± 0.10	250 ± 17	0.2
973	SBPL	5.89 ± 0.13	1.49 ± 0.01	251 ± 27	-1.35 ± 0.03	-2.08 ± 0.03	156 ± 10	0.2
999	BAND	8.42 ± 0.38	2.73 ± 0.29	265 ± 26	-0.60 ± 0.11	-1.95 ± 0.06	140 ± 14	—
1025	SBPL	2.23 ± 0.13	4.66 ± 0.08	131 ± 6	-1.12 ± 0.05	-2.59 ± 0.06	125 ± 6	0.1
1121	SBPL	5.10 ± 0.10	1.37 ± 0.01	250 ± 16	-1.46 ± 0.01	-2.13 ± 0.04	213 ± 11	0.1
1122	BAND	3.15 ± 0.06	4.55 ± 0.16	157 ± 3	-0.93 ± 0.03	-2.48 ± 0.04	127 ± 4	—
1156	COMP	7.09 ± 0.57	0.17 ± 0.03	383 ± 174	-1.25 ± 0.24	—	—	—
1157	BAND	5.01 ± 0.13	2.19 ± 0.11	203 ± 9	-1.00 ± 0.05	-2.21 ± 0.05	135 ± 8	—
1288	SBPL	3.76 ± 0.16	0.7 ± 0.01	233 ± 22	-1.27 ± 0.04	-2.31 ± 0.11	211 ± 18	0.1
1385	SBPL	13.00 ± 0.25	0.97 ± 0.01	417 ± 52	-0.88 ± 0.02	-3.57 ± 0.28	488 ± 46	0.4
1419	COMP	2.34 ± 0.11	0.48 ± 0.02	213 ± 17	-1.65 ± 0.04	—	—	—
1440	SBPL	5.32 ± 0.17	0.9 ± 0.01	248 ± 25	-1.07 ± 0.03	-2.57 ± 0.10	209 ± 16	0.3
1468	COMP	40.43 ± 1.45	0.34 ± 0.01	811 ± 54	-0.55 ± 0.05	—	—	—
1480	BAND	16.67 ± 0.76	0.9 ± 0.29	246 ± 66	-0.50 ± 0.33	-1.76 ± 0.09	116 ± 29	—
1484	SBPL	2.47 ± 0.18	3.58 ± 0.04	162 ± 9	-1.50 ± 0.02	-2.63 ± 0.08	166 ± 9	0.1
1503	SBPL	1.10 ± 0.04	1.7 ± 0.02	104 ± 8	-1.54 ± 0.04	-3.22 ± 0.14	131 ± 9	0.2
1541	SBPL	7.69 ± 0.06	1.25 ± 0.01	290 ± 27	-1.25 ± 0.02	-2.58 ± 0.09	266 ± 20	0.3
1571	COMP	4.67 ± 0.62	0.59 ± 0.03	297 ± 42	-1.58 ± 0.06	—	—	—
1601	COMP	31.08 ± 1.93	0.48 ± 0.01	872 ± 68	-0.67 ± 0.05	—	—	—
1606	SBPL	3.46 ± 0.07	1.15 ± 0.01	189 ± 30	-1.41 ± 0.04	-2.80 ± 0.19	209 ± 28	0.3
1609	BAND	4.65 ± 0.08	4.06 ± 0.08	262 ± 7	-1.03 ± 0.02	-2.51 ± 0.07	213 ± 11	—
1623	BAND	11.54 ± 0.46	0.55 ± 0.02	522 ± 47	-0.87 ± 0.05	-2.53 ± 0.39	396 ± 97	—
1625	SBPL	13.32 ± 0.12	3.26 ± 0.01	383 ± 15	-1.07 ± 0.01	-2.30 ± 0.03	295 ± 9	0.2
1652	BAND	2.26 ± 0.10	1.41 ± 0.14	129 ± 6	-1.13 ± 0.09	-2.73 ± 0.22	131 ± 18	—
1663	SBPL	14.91 ± 0.09	4.18 ± 0.01	409 ± 13	-1.12 ± 0.01	-2.30 ± 0.03	319 ± 8	0.2
1676	BAND	3.45 ± 0.09	1.73 ± 0.05	206 ± 7	-1.25 ± 0.03	-2.85 ± 0.22	233 ± 32	—
1709	BAND	2.39 ± 0.09	5.45 ± 0.17	192 ± 5	-1.09 ± 0.03	-3.06 ± 0.23	221 ± 26	—
1711	SBPL	7.47 ± 0.16	3.07 ± 0.02	284 ± 20	-1.14 ± 0.02	-3.26 ± 0.19	311 ± 19	0.2
1712	SBPL	3.83 ± 0.14	0.48 ± 0.01	178 ± 13	-1.37 ± 0.04	-2.53 ± 0.10	175 ± 12	0.1
1886	SBPL	20.99 ± 0.23	2.85 ± 0.02	560 ± 47	-0.43 ± 0.03	-2.58 ± 0.06	315 ± 18	0.5
1997	BAND	3.18 ± 0.14	2.94 ± 1.84	66 ± 8	-1.08 ± 0.37	-2.06 ± 0.02	48 ± 4	—

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Trigger [a]	Model [b]	HR_H [c]	A [d]	$E_{p,obs}$ [e]	α [f]	β [g]	E_{break} [h]	Λ [i]
2061	COMP	8.54 ± 0.25	0.53 ± 0.05	294 ± 26	-0.65 ± 0.13	—	—	—
2080	BAND	3.96 ± 0.15	1.36 ± 0.05	303 ± 18	-1.12 ± 0.04	-2.39 ± 0.14	231 ± 28	—
2090	BAND	3.41 ± 0.16	1.13 ± 0.07	183 ± 9	-1.05 ± 0.06	-2.40 ± 0.10	143 ± 12	—
2110	BAND	13.01 ± 0.29	1.2 ± 0.02	459 ± 16	-0.66 ± 0.03	-3.00 ± 0.29	415 ± 51	—
2122	COMP	8.62 ± 0.43	0.47 ± 0.02	393 ± 84	-1.58 ± 0.06	—	—	—
2138	SBPL	3.11 ± 0.08	0.91 ± 0.01	161 ± 13	-1.65 ± 0.02	-2.73 ± 0.10	191 ± 14	0.2
2151	COMP	22.27 ± 0.50	7.21 ± 0.25	534 ± 86	-1.46 ± 0.06	—	—	—
2156	SBPL	8.31 ± 0.09	1.29 ± 0.01	281 ± 33	-1.45 ± 0.02	-2.30 ± 0.06	228 ± 21	0.3
2193	BAND	9.44 ± 0.33	1.4 ± 0.06	282 ± 7	0.47 ± 0.07	-2.89 ± 0.15	204 ± 10	—
2228	BAND	3.47 ± 0.13	1.37 ± 0.07	204 ± 8	-0.92 ± 0.05	-2.45 ± 0.09	156 ± 11	—
2287	COMP	3.00 ± 0.18	0.6 ± 0.02	331 ± 16	-1.03 ± 0.04	—	—	—
2316	BAND	3.32 ± 0.10	2.26 ± 0.07	157 ± 6	-1.57 ± 0.03	-2.57 ± 0.11	195 ± 23	—
2387	SBPL	3.41 ± 0.13	1.17 ± 0.01	135 ± 21	0.07 ± 0.28	-2.48 ± 0.06	69 ± 9	0.4
2389	SBPL	2.05 ± 0.07	1.31 ± 0.01	142 ± 11	-1.19 ± 0.03	-5.03 ± 0.39	224 ± 15	0.3
2431	BAND	4.05 ± 0.18	17.3 ± 0.78	199 ± 8	-0.99 ± 0.04	-2.19 ± 0.03	131 ± 6	—
2450	COMP	3.38 ± 0.20	0.91 ± 0.04	227 ± 9	-1.11 ± 0.04	—	—	—
2514	SBPL	9.76 ± 0.52	8.53 ± 0.17	208 ± 22	-1.34 ± 0.04	-2.76 ± 0.20	212 ± 21	0.1
2522	BAND	3.66 ± 0.25	1.12 ± 0.23	200 ± 11	0.91 ± 0.23	-2.00 ± 0.06	112 ± 6	—
2533	BAND	12.71 ± 0.12	2.69 ± 0.03	413 ± 8	-0.87 ± 0.01	-2.32 ± 0.04	278 ± 9	—
2537	BAND	1.35 ± 0.05	13.8 ± 0.5	94 ± 1	-1.40 ± 0.03	-2.88 ± 0.07	129 ± 6	—
2606	COMP	8.96 ± 0.24	0.53 ± 0.8	281 ± 56	-1.01 ± 0.18	—	—	—
2611	SBPL	10.71 ± 0.34	5.52 ± 0.04	511 ± 73	-1.21 ± 0.02	-2.83 ± 0.20	519 ± 59	0.3
2679	SBPL	138.50 ± 5.30	2.41 ± 0.09	792 ± 212	-0.54 ± 0.05	-2.13 ± 0.24	599 ± 94	0.1
2700	SBPL	4.82 ± 0.29	0.44 ± 0.01	177 ± 26	-1.23 ± 0.07	-2.72 ± 0.21	175 ± 22	0.2
2703	SBPL	6.15 ± 0.27	0.39 ± 0.4	282 ± 29	-1.36 ± 0.02	-2.53 ± 0.18	276 ± 26	0.1
2790	SBPL	3.14 ± 0.17	0.81 ± 0.01	188 ± 8	-1.59 ± 0.02	-2.60 ± 0.08	189 ± 8	0.01
2797	SBPL	5.25 ± 0.25	3.3 ± 0.03	255 ± 26	-1.00 ± 0.03	-2.57 ± 0.11	210 ± 17	0.3
2798	SBPL	12.43 ± 0.12	2.69 ± 0.01	379 ± 31	-1.13 ± 0.02	-2.25 ± 0.04	245 ± 13	0.3
2812	BAND	4.42 ± 0.21	1.75 ± 0.05	242 ± 8	-1.10 ± 0.03	-3.03 ± 0.35	273 ± 49	—
2831	SBPL	8.23 ± 0.04	1.78 ± 0.4	503 ± 24	-1.29 ± 0.00	-2.21 ± 0.03	382 ± 14	0.2
2852	SBPL	7.51 ± 0.16	1.71 ± 0.01	307 ± 25	-1.05 ± 0.02	-3.14 ± 0.16	327 ± 21	0.3
2855	SBPL	16.39 ± 0.18	1.84 ± 0.01	360 ± 19	-0.61 ± 0.03	-2.43 ± 0.05	241 ± 9	0.3
2856	SBPL	14.03 ± 0.20	1.82 ± 0.01	299 ± 30	-1.24 ± 0.02	-2.32 ± 0.09	245 ± 19	0.2
2863	SBPL	6.14 ± 0.54	0.58 ± 0.01	243 ± 46	-1.05 ± 0.06	-2.49 ± 0.25	208 ± 31	0.2
2889	SBPL	10.34 ± 0.27	0.55 ± 0.01	218 ± 13	-0.93 ± 0.04	-2.11 ± 0.08	212 ± 12	0.01
2891	COMP	23.05 ± 0.40	0.9 ± 0.01	1120 ± 60	-0.94 ± 0.02	—	—	—
2919	BAND	7.44 ± 0.34	1.67 ± 0.09	359 ± 53	-1.32 ± 0.05	-2.09 ± 0.13	216 ± 45	—
2993	COMP	31.07 ± 0.90	0.57 ± 0.01	2040 ± 219	-1.02 ± 0.02	—	—	—
2994	COMP	19.30 ± 0.36	1.16 ± 0.01	1100 ± 55	-1.13 ± 0.01	—	—	—
3035	COMP	4.71 ± 0.12	1.09 ± 0.03	263 ± 12	-1.30 ± 0.03	—	—	—
3042	BAND	6.47 ± 0.20	1.12 ± 0.04	250 ± 11	-1.07 ± 0.03	-2.47 ± 0.13	200 ± 20	—
3057	SBPL	15.05 ± 0.06	3.36 ± 0.01	620 ± 35	-1.08 ± 0.01	-2.39 ± 0.04	417 ± 15	0.4
3067	BAND	6.57 ± 0.10	4.93 ± 0.1	388 ± 18	-1.15 ± 0.02	-2.32 ± 0.08	279 ± 22	—
3071	COMP	3.53 ± 0.37	0.43 ± 0.06	241 ± 35	-1.17 ± 0.15	—	—	—
3087	BAND	7.24 ± 0.85	21 ± 4.31	182 ± 20	-0.59 ± 0.19	-2.22 ± 0.10	118 ± 13	—
3110	COMP	48.02 ± 8.78	0.98 ± 0.03	567 ± 22	-0.08 ± 0.06	—	—	—
3115	SBPL	6.07 ± 0.33	0.92 ± 0.01	255 ± 20	-0.97 ± 0.03	-2.29 ± 0.07	190 ± 11	0.2
3128	BAND	9.91 ± 0.12	2.49 ± 0.05	363 ± 9	-0.54 ± 0.03	-2.32 ± 0.05	234 ± 9	—
3138	COMP	2.47 ± 0.16	2.15 ± 0.07	177 ± 5	-1.38 ± 0.04	—	—	—

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Trigger [a]	Model [b]	HR_H [c]	A [d]	$E_{p,obs}$ [e]	α [f]	β [g]	E_{break} [h]	Λ [i]
3227	SBPL	5.58 ± 0.09	0.94 ± 0.01	257 ± 20	-1.33 ± 0.02	-2.30 ± 0.06	213 ± 13	0.2
3245	SBPL	9.41 ± 0.06	2.47 ± 0.01	291 ± 8	-1.07 ± 0.01	-2.30 ± 0.02	225 ± 5	0.2
3247	COMP	7.67 ± 0.43	0.2 ± 0.02	358 ± 53	-0.75 ± 0.14	—	—	—
3255	COMP	1.28 ± 0.08	1.24 ± 0.02	91 ± 2	-1.99 ± 0.00	—	—	—
3287	SBPL	3.92 ± 0.17	0.84 ± 0.01	168 ± 16	-1.46 ± 0.04	-2.48 ± 0.12	165 ± 15	0.1
3290	SBPL	1.83 ± 0.10	0.85 ± 0.01	127 ± 18	-1.77 ± 0.03	-2.80 ± 0.18	169 ± 21	0.2
3301	BAND	15.06 ± 0.62	0.76 ± 0.04	427 ± 48	-0.85 ± 0.06	-1.98 ± 0.11	222 ± 31	—
3330	SBPL	13.58 ± 0.42	0.4 ± 0.01	536 ± 581	-1.00 ± 0.04	-2.05 ± 0.11	271 ± 32	0.2
3345	SBPL	4.08 ± 0.20	2.05 ± 0.03	166 ± 16	-1.46 ± 0.03	-2.16 ± 0.06	145 ± 12	0.1
3352	BAND	1.51 ± 0.14	1.75 ± 0.09	143 ± 4	-1.14 ± 0.05	-2.57 ± 0.09	132 ± 8	—
3360	BAND	35.66 ± 1.20	0.31 ± 0.03	565 ± 176	-1.00 ± 0.09	-1.55 ± 0.06	169 ± 53	—
3408	BAND	6.40 ± 0.08	2.98 ± 0.03	308 ± 5	-1.04 ± 0.01	-2.70 ± 0.08	279 ± 14	—
3410	COMP	2.23 ± 0.13	6.62 ± 2.04	120 ± 9	-0.78 ± 0.29	—	—	—
3415	SBPL	2.55 ± 0.09	0.97 ± 0.01	168 ± 27	-1.51 ± 0.04	-2.81 ± 0.19	199 ± 28	0.3
3458	BAND	5.44 ± 0.13	3.44 ± 0.08	257 ± 5	-0.49 ± 0.03	-2.62 ± 0.06	193 ± 6	—
3464	COMP	5.13 ± 0.31	0.62 ± 0.03	321 ± 27	-1.14 ± 0.06	—	—	—
3480	BAND	8.75 ± 0.23	2.93 ± 0.1	341 ± 14	-0.56 ± 0.04	-2.64 ± 0.16	258 ± 21	—
3481	BAND	7.71 ± 0.15	1.46 ± 0.05	347 ± 24	-1.08 ± 0.04	-2.07 ± 0.07	200 ± 19	—
3489	BAND	6.62 ± 0.17	3.08 ± 0.08	314 ± 9	-0.70 ± 0.04	-3.33 ± 0.34	329 ± 42	—
3491	SBPL	3.60 ± 0.05	4.51 ± 0.02	186 ± 9	-1.65 ± 0.01	-2.31 ± 0.03	180 ± 8	0.2
3492	SBPL	8.43 ± 0.08	2.07 ± 0.01	373 ± 63	-1.50 ± 0.01	-2.75 ± 0.18	453 ± 59	0.4
3593	COMP	16.03 ± 0.38	0.63 ± 0.01	1240 ± 114	-1.16 ± 0.02	—	—	—
3634	BAND	7.18 ± 0.45	0.48 ± 0.08	229 ± 26	-0.55 ± 0.17	-2.25 ± 0.19	146 ± 21	—
3658	BAND	5.40 ± 0.12	5.36 ± 0.19	221 ± 6	-0.66 ± 0.03	-2.31 ± 0.05	148 ± 5	—
3663	COMP	5.13 ± 0.32	0.18 ± 0.01	505 ± 158	-1.51 ± 0.07	—	—	—
3736	COMP	20.93 ± 1.05	1.02 ± 0.04	920 ± 159	-0.89 ± 0.08	—	—	—
3765	BAND	3.65 ± 0.08	1.58 ± 0.05	220 ± 6	-0.97 ± 0.03	-2.58 ± 0.10	185 ± 12	—
3788	BAND	3.42 ± 0.10	3.34 ± 0.2	175 ± 5	-0.48 ± 0.06	-2.24 ± 0.04	114 ± 4	—
3860	BAND	22.39 ± 0.43	1.08 ± 0.02	535 ± 24	-0.57 ± 0.03	-2.33 ± 0.11	341 ± 26	—
3870	BAND	3.26 ± 0.16	2.42 ± 0.33	118 ± 19	-1.61 ± 0.01	-2.03 ± 0.03	76 ± 11	—
3891	BAND	3.79 ± 0.31	1.29 ± 0.25	145 ± 13	-0.69 ± 0.16	-2.05 ± 0.06	88 ± 8	—
3917	BAND	15.10 ± 1.21	0.61 ± 0.08	393 ± 82	-0.69 ± 0.17	-2.45 ± 0.66	276 ± 114	—
3918	BAND	5.36 ± 0.42	0.9 ± 0.09	319 ± 38	-0.52 ± 0.12	-1.80 ± 0.07	150 ± 18	—
3929	SBPL	7.62 ± 0.30	1.18 ± 0.01	351 ± 50	-1.39 ± 0.02	-2.48 ± 0.16	332 ± 39	0.2
3930	SBPL	15.48 ± 0.20	1.37 ± 0.01	430 ± 28	-1.16 ± 0.01	-2.48 ± 0.08	377 ± 19	0.2
3954	BAND	9.11 ± 0.29	2.31 ± 0.14	262 ± 24	-1.06 ± 0.06	-1.91 ± 0.04	131 ± 12	—
4039	COMP	21.51 ± 0.55	0.71 ± 0.01	1320 ± 119	-1.12 ± 0.02	—	—	—
4368	SBPL	1.87 ± 0.01	7 ± 0.03	112 ± 20	-0.77 ± 0.19	-2.48 ± 0.03	66 ± 9	0.5
4556	BAND	5.17 ± 0.13	7.19 ± 0.23	235 ± 7	-0.85 ± 0.03	-2.26 ± 0.05	157 ± 7	—
4701	COMP	4.05 ± 0.16	1.21 ± 0.04	232 ± 6	-1.00 ± 0.04	—	—	—
5304	BAND	6.46 ± 0.10	6.11 ± 0.09	285 ± 4	-0.63 ± 0.02	-2.41 ± 0.03	198 ± 5	—
5470	BAND	28.44 ± 1.51	1.49 ± 0.06	940 ± 159	-0.65 ± 0.07	-1.72 ± 0.11	384 ± 75	—
5473	COMP	6.99 ± 0.44	0.48 ± 0.03	354 ± 32	-0.98 ± 0.07	—	—	—
5486	BAND	5.35 ± 0.09	1.77 ± 0.26	184 ± 27	-0.96 ± 0.11	-1.67 ± 0.01	76 ± 10	—
5489	SBPL	4.64 ± 0.16	0.83 ± 0.01	219 ± 19	-1.31 ± 0.02	-2.34 ± 0.08	186 ± 13	0.2
5512	SBPL	8.50 ± 0.35	0.92 ± 0.01	174 ± 11	-1.30 ± 0.03	-2.08 ± 0.06	170 ± 11	0.01
5526	COMP	4.43 ± 0.28	0.44 ± 0.02	270 ± 19	-1.32 ± 0.04	—	—	—
5563	BAND	3.04 ± 0.13	7.63 ± 0.61	171 ± 9	-1.00 ± 0.07	-2.36 ± 0.08	129 ± 9	—
5567	SBPL	7.16 ± 0.12	2.33 ± 0.01	268 ± 14	-1.50 ± 0.01	-2.38 ± 0.06	260 ± 12	0.1

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Trigger [a]	Model [b]	HR_H [c]	A [d]	$E_{p,obs}$ [e]	α [f]	β [g]	E_{break} [h]	Λ [i]
5568	BAND	29.17 ± 0.50	3.91 ± 0.12	527 ± 32	-0.51 ± 0.05	-2.33 ± 0.13	335 ± 30	—
5591	COMP	7.50 ± 0.20	0.65 ± 0.05	435 ± 122	-1.40 ± 0.11	—	—	—
5606	BAND	4.73 ± 0.29	0.36 ± 0.08	203 ± 48	-1.15 ± 0.19	-2.13 ± 0.23	130 ± 39	—
5621	BAND	5.41 ± 0.11	7.94 ± 0.56	213 ± 13	-0.90 ± 0.07	-2.06 ± 0.04	125 ± 8	—
5624	BAND	7.28 ± 0.74	1.18 ± 0.25	227 ± 32	-0.31 ± 0.21	-1.88 ± 0.09	118 ± 16	—
5629	BAND	3.77 ± 0.11	3.25 ± 0.1	232 ± 6	-0.88 ± 0.03	-3.00 ± 0.24	233 ± 26	—
5632	COMP	27.28 ± 1.92	0.31 ± 0.01	1210 ± 243	-1.04 ± 0.06	—	—	—
5654	SBPL	6.08 ± 0.10	1.75 ± 0.01	242 ± 11	-0.70 ± 0.02	-2.47 ± 0.04	171 ± 6	0.3
5697	BAND	0.47 ± 0.07	40.3 ± 6.64	54 ± 2	-0.97 ± 0.12	-3.60 ± 0.12	82 ± 6	—
5704	BAND	2.11 ± 0.10	7.05 ± 0.47	151 ± 7	-1.29 ± 0.06	-2.57 ± 0.14	149 ± 17	—
5731	SBPL	2.56 ± 0.25	0.58 ± 0.01	171 ± 58	-1.69 ± 0.05	-2.05 ± 0.10	139 ± 34	0.1
5773	SBPL	1.93 ± 0.03	4.88 ± 0.02	177 ± 6	-0.87 ± 0.01	-4.37 ± 0.13	228 ± 6	0.3
5995	SBPL	23.07 ± 0.22	2.98 ± 0.01	755 ± 80	-0.79 ± 0.01	-2.39 ± 0.06	391 ± 24	0.5
6100	BAND	13.05 ± 0.16	2.08 ± 0.03	560 ± 32	-1.06 ± 0.02	-2.32 ± 0.14	389 ± 48	—
6115	COMP	16.37 ± 0.54	0.48 ± 0.01	487 ± 22	-0.75 ± 0.03	—	—	—
6124	BAND	9.72 ± 0.08	6.73 ± 0.06	402 ± 7	-0.89 ± 0.01	-2.70 ± 0.09	340 ± 17	—
6198	BAND	5.77 ± 0.05	10.4 ± 0.12	338 ± 8	-1.20 ± 0.01	-2.48 ± 0.06	282 ± 14	—
6235	SBPL	8.19 ± 0.14	5.06 ± 0.05	321 ± 33	-0.98 ± 0.03	-3.01 ± 0.18	320 ± 27	0.3
6240	COMP	4.90 ± 0.87	0.48 ± 0.05	365 ± 371	-1.15 ± 0.12	—	—	—
6249	SBPL	8.28 ± 0.58	0.29 ± 0.4	223 ± 25	-1.36 ± 0.03	-2.13 ± 0.13	218 ± 24	0.01
6266	SBPL	6.81 ± 0.25	0.72 ± 0.01	280 ± 24	-1.04 ± 0.02	-2.57 ± 0.13	249 ± 16	0.2
6274	BAND	2.90 ± 0.13	0.97 ± 0.12	126 ± 10	-1.34 ± 0.10	-2.35 ± 0.12	109 ± 15	—
6329	SBPL	3.51 ± 0.10	1.4 ± 0.01	202 ± 19	-1.27 ± 0.02	-2.70 ± 0.11	199 ± 15	0.3
6336	BAND	20.67 ± 0.35	1.96 ± 0.04	805 ± 89	-1.03 ± 0.03	-2.03 ± 0.15	429 ± 77	—
6353	SBPL	1.71 ± 0.10	0.68 ± 0.01	135 ± 11	-1.72 ± 0.02	-2.12 ± 0.04	134 ± 10	0.01
6380	SBPL	5.19 ± 0.38	0.42 ± 0.01	226 ± 33	-1.35 ± 0.03	-2.15 ± 0.12	190 ± 22	0.1
6389	BAND	4.61 ± 0.19	2.36 ± 0.18	203 ± 17	-1.12 ± 0.07	-2.06 ± 0.06	120 ± 12	—
6397	BAND	3.12 ± 0.15	2.46 ± 0.13	186 ± 6	-0.73 ± 0.05	-2.54 ± 0.12	145 ± 10	—
6404	SBPL	2.99 ± 0.11	1.03 ± 0.02	150 ± 14	-1.50 ± 0.04	-2.59 ± 0.14	153 ± 13	0.1
6414	SBPL	6.18 ± 0.47	0.7 ± 0.01	171 ± 21	-1.42 ± 0.03	-2.11 ± 0.08	141 ± 13	0.1
6453	BAND	1.71 ± 0.05	2.23 ± 0.13	102 ± 2	-1.26 ± 0.05	-2.62 ± 0.07	107 ± 6	—
6454	COMP	4.85 ± 0.17	0.2 ± 0.03	381 ± 153	-1.33 ± 0.16	—	—	—
6472	BAND	8.86 ± 0.09	1.46 ± 0.04	298 ± 13	-0.92 ± 0.03	-2.21 ± 0.07	191 ± 12	—
6525	SBPL	3.63 ± 0.21	0.91 ± 0.01	183 ± 13	-1.07 ± 0.03	-2.42 ± 0.13	168 ± 10	0.1
6526	COMP	1.39 ± 0.02	0.97 ± 0.3	128 ± 17	-1.22 ± 0.29	—	—	—
6539	COMP	101.40 ± 5.59	0.49 ± 0.01	2040 ± 251	-0.58 ± 0.05	—	—	—
6560	BAND	2.58 ± 0.12	2.11 ± 0.11	177 ± 5	-0.61 ± 0.05	-2.90 ± 0.21	158 ± 14	—
6570	BAND	3.11 ± 0.21	1.9 ± 0.53	89 ± 6	-1.10 ± 0.19	-2.20 ± 0.04	67 ± 5	—
6576	BAND	10.27 ± 0.17	1.52 ± 0.03	602 ± 56	-1.28 ± 0.03	-2.31 ± 0.22	444 ± 100	—
6581	SBPL	2.94 ± 0.16	0.77 ± 0.01	193 ± 15	-1.57 ± 0.02	-2.21 ± 0.07	190 ± 15	0.01
6587	BAND	7.59 ± 0.06	8.28 ± 0.09	311 ± 5	-0.90 ± 0.01	-2.38 ± 0.03	222 ± 6	—
6593	SBPL	4.72 ± 0.10	2.02 ± 0.01	218 ± 13	-1.23 ± 0.02	-2.30 ± 0.05	176 ± 8	0.2
6615	BAND	10.09 ± 0.33	0.61 ± 0.04	336 ± 25	-0.51 ± 0.07	-2.26 ± 0.20	209 ± 27	—
6629	SBPL	8.21 ± 0.22	0.28 ± 0.4	239 ± 34	-1.39 ± 0.03	-2.14 ± 0.10	202 ± 23	0.1
6630	COMP	3.56 ± 0.09	1.93 ± 0.05	270 ± 13	-1.45 ± 0.03	—	—	—
6642	COMP	7.26 ± 0.41	0.43 ± 0.02	289 ± 14	-0.57 ± 0.07	—	—	—
6665	SBPL	6.05 ± 0.08	4.13 ± 0.02	224 ± 7	-1.21 ± 0.01	-2.33 ± 0.03	183 ± 5	0.2
6694	BAND	18.28 ± 0.73	0.43 ± 0.02	422 ± 30	-0.23 ± 0.08	-2.31 ± 0.19	261 ± 29	—
6763	BAND	4.25 ± 0.53	1.75 ± 0.48	122 ± 15	-0.86 ± 0.20	-2.00 ± 0.05	73 ± 8	—

Continued on next page

Trigger [a]	Model [b]	HR_H [c]	A [d]	$E_{p,obs}$ [e]	α [f]	β [g]	E_{break} [h]	Λ [i]
6891	COMP	6.36 ± 0.47	0.5 ± 0.03	434 ± 99	-1.38 ± 0.08	—	—	—
6892	COMP	5.76 ± 0.52	0.28 ± 0.02	308 ± 41	-1.22 ± 0.08	—	—	—
6904	SBPL	67.06 ± 1.07	0.76 ± 0.01	939 ± 180	-0.99 ± 0.02	-2.08 ± 0.29	912 ± 171	0.01
6963	BAND	4.10 ± 0.08	5.27 ± 0.12	214 ± 3	-0.64 ± 0.02	-2.79 ± 0.08	182 ± 7	—
6985	SBPL	7.27 ± 0.08	3.59 ± 0.01	340 ± 25	-1.00 ± 0.01	-2.67 ± 0.07	284 ± 15	0.4
7012	SBPL	4.63 ± 0.12	1.96 ± 0.01	255 ± 16	-1.40 ± 0.01	-25.00 ± 0.08	245 ± 13	0.2
7028	BAND	7.03 ± 0.29	6.2 ± 1	223 ± 20	-0.25 ± 0.18	-2.08 ± 0.07	129 ± 11	—
7113	SBPL	7.95 ± 0.03	6.93 ± 0.01	339 ± 7	-0.93 ± 0.00	-2.74 ± 0.03	289 ± 4	0.3
7170	COMP	21.87 ± 0.33	0.61 ± 0.01	1860 ± 279	-1.23 ± 0.02	—	—	—
7236	COMP	3.08 ± 0.25	0.56 ± 0.03	239 ± 13	-0.94 ± 0.06	—	—	—
7240	BAND	25.93 ± 1.23	1.5 ± 0.07	649 ± 73	-0.54 ± 0.07	-2.26 ± 0.29	395 ± 77	—
7277	BAND	1.82 ± 0.07	5.41 ± 0.95	113 ± 4	-0.64 ± 0.14	-2.45 ± 0.05	88 ± 4	—
7281	BAND	3.06 ± 0.19	21.4 ± 3.45	140 ± 6	-0.23 ± 0.14	-2.54 ± 0.10	103 ± 6	—
7285	COMP	3.93 ± 0.55	0.53 ± 0.08	107 ± 7	-1.42 ± 0.13	—	—	—
7295	COMP	6.84 ± 0.63	1.08 ± 0.07	330 ± 19	-0.32 ± 0.09	—	—	—
7301	SBPL	7.81 ± 0.03	2.08 ± 0.01	386 ± 33	-1.40 ± 0.01	-2.21 ± 0.06	303 ± 18	0.2
7310	COMP	7.65 ± 0.32	0.65 ± 0.02	319 ± 15	-0.79 ± 0.04	—	—	—
7318	COMP	21.75 ± 0.97	1.27 ± 0.02	694 ± 30	-0.62 ± 0.03	—	—	—
7343	SBPL	17.99 ± 0.09	2.75 ± 0.4	444 ± 9	-0.98 ± 0.00	-2.29 ± 0.02	331 ± 4	0.2
7360	COMP	2.57 ± 0.10	1.47 ± 0.05	259 ± 11	-1.13 ± 0.04	—	—	—
7446	BAND	2.57 ± 0.33	3.38 ± 0.27	178 ± 17	-1.46 ± 0.08	-2.67 ± 0.42	214 ± 74	—
7457	COMP	8.87 ± 1.21	0.41 ± 0.04	737 ± 332	-1.07 ± 0.15	—	—	—
7464	SBPL	9.55 ± 0.25	0.89 ± 0.01	326 ± 26	-1.09 ± 0.02	-2.50 ± 0.11	284 ± 18	0.2
7475	BAND	1.86 ± 0.10	2.42 ± 0.12	138 ± 5	-1.31 ± 0.04	-2.36 ± 0.06	118 ± 8	—
7477	SBPL	5.71 ± 0.26	0.79 ± 0.01	216 ± 20	-1.26 ± 0.03	-2.11 ± 0.06	174 ± 12	0.1
7491	BAND	12.41 ± 0.07	5.11 ± 0.03	442 ± 7	-0.91 ± 0.01	-2.36 ± 0.04	306 ± 9	—
7503	SBPL	3.26 ± 0.18	0.55 ± 0.01	154 ± 22	-1.73 ± 0.03	-2.36 ± 0.12	159 ± 22	0.1
7515	BAND	3.73 ± 0.44	2.09 ± 0.28	187 ± 12	-0.32 ± 0.12	-2.20 ± 0.08	117 ± 8	—
7527	BAND	6.50 ± 0.40	4.48 ± 0.11	316 ± 8	-0.44 ± 0.03	-2.51 ± 0.09	222 ± 10	—
7530	BAND	1.93 ± 0.18	21.3 ± 2.15	147 ± 4	-0.17 ± 0.09	-2.73 ± 0.12	115 ± 6	—
7549	BAND	5.15 ± 0.05	2.62 ± 0.05	269 ± 8	-1.07 ± 0.02	-2.08 ± 0.03	159 ± 6	—
7560	BAND	1.87 ± 0.09	1.27 ± 0.09	136 ± 6	-1.24 ± 0.05	-2.41 ± 0.09	117 ± 10	—
7575	COMP	12.94 ± 0.16	1.09 ± 0.03	478 ± 33	-0.83 ± 0.04	—	—	—
7647	COMP	29.70 ± 1.12	0.3 ± 0.01	2560 ± 1060	-1.33 ± 0.05	—	—	—
7660	COMP	8.44 ± 0.49	0.38 ± 0.02	498 ± 53	-0.99 ± 0.06	—	—	—
7678	SBPL	8.52 ± 0.07	2.24 ± 0.01	285 ± 14	-1.04 ± 0.02	-2.33 ± 0.04	222 ± 9	0.2
7688	SBPL	8.52 ± 0.37	0.39 ± 0.01	207 ± 37	-1.13 ± 0.07	-2.22 ± 0.20	177 ± 25	0.1
7695	SBPL	25.04 ± 0.26	2.18 ± 0.01	725 ± 95	-0.90 ± 0.01	-4.17 ± 0.41	991 ± 96	0.4
7703	COMP	3.76 ± 1.16	0.82 ± 0.12	231 ± 38	-1.15 ± 0.15	—	—	—
7788	BAND	4.81 ± 0.27	1.23 ± 0.19	127 ± 9	-0.85 ± 0.11	-2.03 ± 0.04	78 ± 5	—
7794	BAND	4.20 ± 0.20	0.55 ± 0.04	220 ± 27	-1.28 ± 0.07	-2.25 ± 0.20	161 ± 36	—
7810	BAND	21.44 ± 1.16	0.91 ± 0.03	622 ± 47	-0.35 ± 0.07	-2.76 ± 0.49	467 ± 99	—
7868	BAND	3.11 ± 0.18	1.34 ± 0.13	144 ± 5	-0.50 ± 0.08	-2.52 ± 0.09	110 ± 6	—
7884	COMP	6.63 ± 0.27	0.63 ± 0.03	636 ± 129	-1.23 ± 0.06	—	—	—
7906	BAND	5.36 ± 0.03	9.17 ± 0.07	394 ± 7	-1.12 ± 0.01	-2.30 ± 0.03	278 ± 8	—
7929	SBPL	13.22 ± 0.23	0.82 ± 0.4	343 ± 22	-1.36 ± 0.01	-2.10 ± 0.06	336 ± 22	0.01
7932	BAND	2.42 ± 0.14	1.48 ± 0.2	135 ± 9	-1.13 ± 0.12	-2.51 ± 0.14	120 ± 14	—
7938	COMP	3.35 ± 0.37	0.7 ± 0.09	145 ± 8	-1.07 ± 0.13	—	—	—
7948	COMP	1.35 ± 0.30	0.95 ± 0.23	68 ± 4	-1.07 ± 0.18	—	—	—

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Trigger [a]	Model [b]	HR_H [c]	A [d]	$E_{p,obs}$ [e]	α [f]	β [g]	E_{break} [h]	Λ [i]
7954	BAND	3.69 ± 0.06	6.71 ± 0.14	220 ± 4	-0.83 ± 0.02	-2.70 ± 0.08	189 ± 8	—
7976	COMP	5.18 ± 0.22	0.62 ± 0.02	311 ± 16	-1.07 ± 0.04	—	—	—
7994	SBPL	7.49 ± 0.16	1.42 ± 0.01	254 ± 16	-0.60 ± 0.03	-3.22 ± 0.13	242 ± 12	0.3
8008	BAND	11.06 ± 0.24	2.34 ± 0.04	497 ± 15	-0.64 ± 0.02	-2.46 ± 0.10	346 ± 20	—
8087	SBPL	16.35 ± 0.46	0.21 ± 0.4	329 ± 75	-1.15 ± 0.04	-2.22 ± 0.16	240 ± 35	0.2
8098	BAND	1.92 ± 0.15	2.48 ± 0.41	146 ± 10	-0.75 ± 0.14	-2.43 ± 0.13	111 ± 11	—
8101	COMP	10.44 ± 0.35	0.71 ± 0.02	306 ± 9	-0.64 ± 0.04	—	—	—

NOTE. –
[⋆] The hardness ratios are calculated via the BATSE catalog data, while the rest of spectral parameters are taken from K06.
[a] Burst's trigger number as reported in the BATSE catalog.
[b] HR_H represents Hardness Ratio as defined in §2.2. No attempt was made to keep the significant digits. Values are rounded off at the $2nd$ decimal places.
[c] A represents the normalization factor of the assumed spectral model for each GRB in units of $0.01 ph\, s^{-1} cm^{-2}$.
[d] All spectral peaks $E_{p,obs}$ and the corresponding 1σ uncertainties are in units of KeV.
[e] α represents the low-energy photon index of the Band Model for GRBs best described by the Band model, and the low-energy photon index of SBPL Model for GRBs best described by SBPL, also the photon index of COMP model for GRBs best described by COMP.
[f] β represents the high-energy photon index of the Band Model for GRBs best described by the Band model, and the low-energy photon index of SBPL Model for GRBs best described by SBPL.
[g] E_{break} represents the break-energy of the Band Model for GRBs best described by the Band model, and the break-energy of SBPL Model for GRBs best described by SBPL. All reported break-energies and the corresponding 1σ uncertainties are in units of KeV.
[h] Λ represents the break scale of SBPL Model for GRBs best described by SBPL.

Table 4: $E_{p,obs}$ estimates for 2130 GRBs in the BATSE catalog.*

Trigger[a] (1)	HR_H [b] Hardness (2)	Mean$[E_{p,obs}]$[c] OLS(Y|X) (3)	Mean$[E_{p,obs}]$[d] OLS bisector (4)	Mode$[E_{p,obs}]$[e] Band (5)	Mode$[E_{p,obs}]$[f] COMP(CPL) (6)	Mode$[E_{p,obs}]$[g] SBPL (7)	Mean$[E_{p,obs}]$[h] Expected (8)
105*	1.41 ± 0.12	—	—	81^{+49}_{-39}	104^{+80}_{-34}	124^{+49}_{-60}	101^{+58}_{-48}
107	$1.22^{\dagger}$	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
108	64.20 ± 28.70	$1242.15^{+3.86}_{-3.85}$	$1595.74^{+5.92}_{-5.90}$	949^{+1573}_{-298}	1280^{+2725}_{-463}	795^{+1152}_{-242}	1297^{+1730}_{-633}
109*	4.02 ± 0.08	—	—	174^{+134}_{-72}	212^{+262}_{-66}	212^{+120}_{-80}	218^{+152}_{-92}
110	2.37 ± 0.80	$150.98^{+0.05}_{-0.05}$	$136.22^{+0.06}_{-0.06}$	119^{+78}_{-54}	147^{+145}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
111	0.68 ± 0.15	$67.68^{+0.12}_{-0.12}$	$53.38^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-48}	61^{+39}_{-32}
114	$0.53^{\dagger}$	$57.99^{+0.13}_{-0.13}$	$44.57^{+0.13}_{-0.12}$	40^{+25}_{-21}	57^{+28}_{-20}	77^{+32}_{-45}	53^{+36}_{-29}
121	2.35 ± 0.22	$150.16^{+0.06}_{-0.06}$	$135.36^{+0.06}_{-0.06}$	118^{+78}_{-53}	146^{+144}_{-47}	161^{+73}_{-70}	146^{+90}_{-65}
130*	3.80 ± 0.10	—	—	167^{+126}_{-70}	204^{+246}_{-64}	206^{+114}_{-79}	209^{+143}_{-88}
133	2.86 ± 0.57	$170.23^{+0.04}_{-0.04}$	$156.72^{+0.05}_{-0.05}$	137^{+94}_{-60}	167^{+179}_{-53}	178^{+88}_{-73}	169^{+108}_{-73}
138	4.55 ± 2.70	$229.01^{+0.03}_{-0.03}$	$221.58^{+0.04}_{-0.04}$	190^{+152}_{-77}	232^{+299}_{-72}	225^{+136}_{-83}	239^{+172}_{-100}
142	3.29 ± 0.11	$186.17^{+0.04}_{-0.04}$	$173.98^{+0.04}_{-0.04}$	151^{+109}_{-65}	184^{+210}_{-58}	191^{+100}_{-76}	188^{+124}_{-80}
143*	20.90 ± 0.13	—	—	512^{+685}_{-162}	661^{+1292}_{-214}	481^{+540}_{-134}	688^{+747}_{-303}
148	0.65 ± 0.17	$65.88^{+0.13}_{-0.13}$	$51.72^{+0.12}_{-0.12}$	46^{+28}_{-24}	64^{+35}_{-23}	85^{+33}_{-48}	60^{+38}_{-32}
160	2.58 ± 0.18	$159.39^{+0.05}_{-0.05}$	$145.13^{+0.05}_{-0.05}$	127^{+85}_{-56}	156^{+160}_{-49}	169^{+80}_{-71}	157^{+98}_{-69}
171	1.09 ± 0.29	$91.92^{+0.10}_{-0.10}$	$76.32^{+0.10}_{-0.10}$	67^{+39}_{-33}	88^{+60}_{-30}	109^{+42}_{-56}	84^{+49}_{-41}
179	1.09 ± 0.26	$91.92^{+0.10}_{-0.10}$	$76.32^{+0.10}_{-0.10}$	67^{+39}_{-33}	88^{+60}_{-30}	109^{+42}_{-56}	84^{+49}_{-41}
185	$1.98^{\dagger}$	$134.60^{+0.07}_{-0.07}$	$119.13^{+0.07}_{-0.07}$	105^{+66}_{-48}	130^{+118}_{-42}	147^{+64}_{-66}	129^{+77}_{-58}
204	29.00 ± 5.46	$747.65^{+1.17}_{-1.17}$	$882.11^{+1.64}_{-1.63}$	619^{+901}_{-191}	812^{+1658}_{-271}	560^{+694}_{-156}	840^{+976}_{-382}
206	14.70 ± 5.18	$484.40^{+0.34}_{-0.34}$	$531.40^{+0.43}_{-0.43}$	413^{+498}_{-137}	524^{+960}_{-166}	406^{+404}_{-116}	549^{+548}_{-234}
207	31.20 ± 11.90	$783.41^{+1.32}_{-1.32}$	$931.56^{+1.86}_{-1.86}$	645^{+955}_{-199}	849^{+1747}_{-285}	579^{+731}_{-162}	877^{+1033}_{-402}
211	0.99 ± 0.57	$86.39^{+0.11}_{-0.11}$	$70.98^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
214	0.49 ± 0.37	$55.09^{+0.13}_{-0.13}$	$41.97^{+0.13}_{-0.13}$	37^{+24}_{-20}	55^{+26}_{-20}	75^{+31}_{-44}	50^{+35}_{-28}
218	10.20 ± 3.35	$383.54^{+0.15}_{-0.15}$	$404.61^{+0.18}_{-0.18}$	328^{+350}_{-115}	409^{+686}_{-127}	339^{+292}_{-103}	428^{+388}_{-178}
219*	3.49 ± 0.11	—	—	158^{+116}_{-67}	192^{+224}_{-60}	197^{+105}_{-77}	196^{+132}_{-83}
222	2.92 ± 0.29	$172.51^{+0.04}_{-0.04}$	$159.17^{+0.05}_{-0.05}$	139^{+96}_{-61}	170^{+183}_{-54}	180^{+89}_{-74}	172^{+110}_{-74}
223	$1.44^{\dagger}$	$109.82^{+0.09}_{-0.09}$	$93.94^{+0.09}_{-0.09}$	83^{+49}_{-40}	105^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
226*	6.34 ± 0.25	—	—	239^{+215}_{-91}	293^{+426}_{-91}	267^{+187}_{-90}	305^{+242}_{-126}
228	0.87 ± 0.63	$79.60^{+0.11}_{-0.11}$	$64.51^{+0.11}_{-0.11}$	57^{+33}_{-29}	76^{+47}_{-26}	98^{+37}_{-52}	72^{+43}_{-37}
229	7.70 ± 4.68	$320.49^{+0.08}_{-0.08}$	$328.06^{+0.09}_{-0.09}$	272^{+263}_{-100}	336^{+520}_{-104}	294^{+224}_{-95}	351^{+294}_{-145}
235	7.06 ± 1.09	$303.21^{+0.06}_{-0.06}$	$307.50^{+0.07}_{-0.07}$	257^{+241}_{-96}	316^{+476}_{-98}	282^{+207}_{-93}	330^{+270}_{-136}
237	5.07 ± 2.07	$245.40^{+0.04}_{-0.04}$	$240.21^{+0.04}_{-0.04}$	205^{+170}_{-81}	250^{+336}_{-78}	238^{+151}_{-85}	259^{+192}_{-107}
249*	7.09 ± 0.04	—	—	258^{+242}_{-96}	317^{+478}_{-98}	282^{+208}_{-93}	331^{+271}_{-136}
254	$45.40^{\dagger}$	$995.52^{+2.36}_{-2.35}$	$1232.31^{+3.47}_{-3.46}$	792^{+1259}_{-244}	1058^{+2236}_{-369}	685^{+940}_{-198}	1083^{+1364}_{-514}
257	16.60 ± 0.50	$523.51^{+0.43}_{-0.43}$	$581.84^{+0.56}_{-0.56}$	445^{+558}_{-145}	568^{+1067}_{-181}	430^{+447}_{-122}	594^{+611}_{-256}
269	3.64 ± 0.85	$198.59^{+0.04}_{-0.04}$	$187.61^{+0.04}_{-0.04}$	162^{+121}_{-68}	198^{+234}_{-62}	201^{+110}_{-78}	202^{+137}_{-86}
288	7.69 ± 2.65	$320.22^{+0.08}_{-0.08}$	$327.74^{+0.09}_{-0.09}$	272^{+263}_{-100}	336^{+519}_{-104}	294^{+224}_{-95}	351^{+294}_{-145}
289	22.30 ± 17.50	$632.15^{+0.75}_{-0.75}$	$725.14^{+1.01}_{-1.01}$	532^{+725}_{-167}	689^{+1360}_{-224}	495^{+569}_{-138}	717^{+789}_{-317}
297	21.30 ± 3.07	$613.89^{+0.69}_{-0.69}$	$700.74^{+0.92}_{-0.92}$	517^{+697}_{-164}	669^{+1312}_{-217}	485^{+549}_{-135}	697^{+759}_{-307}
298*	15.40 ± 0.47	—	—	425^{+520}_{-140}	541^{+1000}_{-172}	415^{+420}_{-118}	566^{+572}_{-242}
332	1.87 ± 0.22	$129.77^{+0.07}_{-0.07}$	$114.15^{+0.07}_{-0.07}$	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
351*	3.72 ± 0.20	—	—	165^{+123}_{-69}	201^{+240}_{-63}	203^{+112}_{-78}	206^{+140}_{-87}
353	$1.59^{\dagger}$	$117.00^{+0.08}_{-0.08}$	$101.14^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+92}_{-37}	132^{+54}_{-62}	110^{+64}_{-51}
373	18.40 ± 15.40	$559.10^{+0.53}_{-0.53}$	$628.27^{+0.69}_{-0.69}$	474^{+612}_{-152}	608^{+1164}_{-195}	452^{+487}_{-127}	635^{+669}_{-276}
394*	4.60 ± 0.10	—	—	192^{+154}_{-77}	233^{+303}_{-73}	227^{+137}_{-83}	241^{+174}_{-100}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
398	2.86 ± 0.29	$170.23^{+0.04}_{-0.04}$	$156.72^{+0.05}_{-0.05}$	137^{+94}_{-60}	167^{+179}_{-53}	178^{+88}_{-73}	169^{+108}_{-73}
401	$2.08^{\dagger}$	$138.90^{+0.06}_{-0.06}$	$123.58^{+0.07}_{-0.07}$	108^{+69}_{-50}	134^{+125}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
404	2.04 ± 0.30	$137.19^{+0.06}_{-0.06}$	$121.81^{+0.07}_{-0.07}$	107^{+68}_{-49}	132^{+122}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
408	1.30 ± 0.23	$102.87^{+0.09}_{-0.09}$	$87.04^{+0.10}_{-0.10}$	77^{+45}_{-37}	98^{+73}_{-33}	119^{+47}_{-59}	95^{+55}_{-46}
414	1.20 ± 1.05	$97.75^{+0.10}_{-0.10}$	$81.99^{+0.10}_{-0.10}$	72^{+42}_{-35}	93^{+67}_{-31}	115^{+44}_{-58}	90^{+52}_{-44}
432	47.10 ± 8.80	$1019.17^{+2.49}_{-2.48}$	$1266.57^{+3.68}_{-3.67}$	808^{+1291}_{-249}	1080^{+2286}_{-378}	696^{+962}_{-202}	1104^{+1400}_{-526}
444*	2.36 ± 0.24	—	—	119^{+78}_{-54}	146^{+144}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
451*	1.91 ± 0.07	—	—	102^{+64}_{-47}	127^{+113}_{-41}	145^{+62}_{-66}	126^{+74}_{-57}
465	$1.58^{\dagger}$	$116.53^{+0.08}_{-0.08}$	$100.67^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+92}_{-37}	131^{+53}_{-62}	109^{+64}_{-51}
467	8.14 ± 0.39	$332.07^{+0.09}_{-0.09}$	$341.94^{+0.10}_{-0.10}$	283^{+278}_{-103}	349^{+550}_{-108}	303^{+237}_{-96}	365^{+311}_{-151}
469	9.02 ± 0.42	$354.57^{+0.11}_{-0.11}$	$369.16^{+0.13}_{-0.13}$	302^{+309}_{-108}	375^{+609}_{-117}	319^{+260}_{-99}	393^{+344}_{-163}
472	0.99 ± 0.94	$86.28^{+0.11}_{-0.11}$	$70.87^{+0.11}_{-0.11}$	62^{+37}_{-31}	83^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
473	0.76 ± 0.55	$72.83^{+0.12}_{-0.12}$	$58.15^{+0.12}_{-0.12}$	51^{+30}_{-26}	70^{+41}_{-24}	91^{+35}_{-50}	66^{+40}_{-34}
474	114.00 ± 9.60	$1792.55^{+8.18}_{-8.15}$	$2448.87^{+13.41}_{-13.34}$	1260^{+2120}_{-421}	1706^{+3580}_{-656}	1003^{+1515}_{-340}	1704^{+2488}_{-857}
480	40.40 ± 5.68	$924.01^{+1.98}_{-1.98}$	$1129.59^{+2.88}_{-2.87}$	744^{+1159}_{-228}	990^{+2078}_{-341}	650^{+872}_{-185}	1016^{+1254}_{-477}
486	2.78 ± 2.05	$167.18^{+0.05}_{-0.05}$	$153.44^{+0.05}_{-0.05}$	134^{+92}_{-59}	164^{+174}_{-52}	175^{+85}_{-73}	166^{+105}_{-72}
491	258.00 ± 129.00	$3020.40^{+21.58}_{-21.43}$	$4503.48^{+38.76}_{-38.43}$	1836^{+2786}_{-683}	2439^{+4934}_{-1005}	1356^{+1991}_{-522}	2406^{+4052}_{-1199}
493	0.92 ± 0.89	$82.60^{+0.11}_{-0.11}$	$67.36^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	101^{+38}_{-53}	75^{+44}_{-38}
501	1.25 ± 0.37	$100.33^{+0.09}_{-0.09}$	$84.53^{+0.10}_{-0.10}$	74^{+44}_{-36}	96^{+70}_{-32}	117^{+45}_{-58}	93^{+53}_{-45}
503	27.00 ± 1.75	$714.29^{+1.04}_{-1.04}$	$836.33^{+1.44}_{-1.44}$	594^{+851}_{-184}	777^{+1574}_{-257}	542^{+658}_{-150}	805^{+922}_{-364}
508	44.10 ± 40.60	$977.21^{+2.26}_{-2.25}$	$1205.89^{+3.31}_{-3.30}$	780^{+1234}_{-240}	1041^{+2196}_{-362}	676^{+923}_{-195}	1066^{+1336}_{-505}
512	40.90 ± 13.20	$931.30^{+2.02}_{-2.01}$	$1140.00^{+2.93}_{-2.93}$	749^{+1170}_{-230}	997^{+2095}_{-344}	654^{+879}_{-187}	1023^{+1266}_{-481}
516	0.71 ± 0.61	$69.72^{+0.12}_{-0.12}$	$55.26^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	63^{+39}_{-33}
526	1.97 ± 1.70	$134.16^{+0.07}_{-0.07}$	$118.68^{+0.07}_{-0.07}$	104^{+66}_{-48}	129^{+118}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
537	16.60 ± 3.21	$523.51^{+0.43}_{-0.43}$	$581.84^{+0.56}_{-0.56}$	445^{+558}_{-145}	568^{+1067}_{-181}	430^{+447}_{-122}	594^{+611}_{-256}
540	0.43 ± 0.33	$51.12^{+0.14}_{-0.14}$	$38.47^{+0.13}_{-0.13}$	34^{+22}_{-18}	52^{+23}_{-19}	71^{+30}_{-42}	47^{+34}_{-26}
543*	2.90 ± 0.10	—	—	138^{+96}_{-60}	169^{+182}_{-53}	179^{+89}_{-74}	171^{+109}_{-74}
547	12.70 ± 2.12	$441.20^{+0.25}_{-0.25}$	$476.48^{+0.31}_{-0.31}$	377^{+433}_{-128}	475^{+842}_{-149}	378^{+355}_{-111}	497^{+479}_{-210}
548	1.83 ± 0.15	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
549	6.33 ± 2.68	$282.79^{+0.05}_{-0.05}$	$283.46^{+0.05}_{-0.05}$	239^{+215}_{-91}	293^{+425}_{-91}	267^{+186}_{-90}	305^{+241}_{-126}
550	$0.90^{\dagger}$	$81.45^{+0.11}_{-0.11}$	$66.27^{+0.11}_{-0.11}$	58^{+34}_{-29}	78^{+49}_{-27}	100^{+38}_{-53}	74^{+44}_{-38}
551	17.00 ± 2.28	$531.54^{+0.45}_{-0.45}$	$592.26^{+0.59}_{-0.58}$	452^{+570}_{-147}	577^{+1089}_{-184}	435^{+457}_{-123}	604^{+624}_{-261}
555	25.90 ± 11.70	$695.56^{+0.97}_{-0.97}$	$810.78^{+1.33}_{-1.33}$	580^{+822}_{-180}	757^{+1526}_{-250}	531^{+638}_{-148}	786^{+892}_{-353}
559	34.20 ± 10.10	$830.72^{+1.53}_{-1.53}$	$997.59^{+2.18}_{-2.17}$	679^{+1025}_{-209}	897^{+1862}_{-304}	604^{+780}_{-170}	925^{+1108}_{-427}
563	2.26 ± 0.23	$146.46^{+0.06}_{-0.06}$	$131.48^{+0.06}_{-0.06}$	115^{+75}_{-52}	142^{+137}_{-45}	158^{+71}_{-69}	142^{+86}_{-63}
568	57.60 ± 14.70	$1158.99^{+3.32}_{-3.31}$	$1471.70^{+5.03}_{-5.01}$	898^{+1472}_{-279}	1208^{+2569}_{-432}	759^{+1084}_{-227}	1227^{+1609}_{-594}
575	6.73 ± 1.37	$294.07^{+0.06}_{-0.06}$	$296.71^{+0.06}_{-0.06}$	249^{+229}_{-94}	306^{+453}_{-95}	275^{+198}_{-92}	318^{+257}_{-131}
577	1.92 ± 0.38	$131.98^{+0.07}_{-0.07}$	$116.42^{+0.07}_{-0.07}$	102^{+64}_{-47}	127^{+114}_{-41}	145^{+62}_{-66}	126^{+75}_{-57}
591	2.23 ± 0.77	$145.22^{+0.06}_{-0.06}$	$130.17^{+0.06}_{-0.06}$	114^{+74}_{-52}	141^{+135}_{-45}	157^{+70}_{-69}	141^{+85}_{-63}
593	0.95 ± 0.35	$83.97^{+0.11}_{-0.11}$	$68.67^{+0.11}_{-0.11}$	61^{+35}_{-30}	80^{+52}_{-27}	102^{+39}_{-54}	77^{+45}_{-38}
594	5.60 ± 0.58	$261.50^{+0.04}_{-0.04}$	$258.70^{+0.04}_{-0.04}$	220^{+189}_{-86}	268^{+374}_{-83}	251^{+166}_{-87}	278^{+213}_{-115}
603	5.24 ± 1.24	$250.63^{+0.04}_{-0.04}$	$246.19^{+0.04}_{-0.04}$	210^{+176}_{-83}	256^{+349}_{-79}	242^{+155}_{-86}	265^{+199}_{-110}
606	2.64 ± 0.48	$161.75^{+0.05}_{-0.05}$	$147.64^{+0.05}_{-0.05}$	129^{+87}_{-57}	158^{+164}_{-50}	171^{+81}_{-72}	159^{+100}_{-70}
612	3.34 ± 0.32	$187.97^{+0.04}_{-0.04}$	$175.95^{+0.04}_{-0.04}$	153^{+110}_{-65}	186^{+213}_{-59}	192^{+101}_{-76}	190^{+126}_{-81}
630	1.12 ± 0.63	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
640	13.80 ± 13.20	$465.24^{+0.30}_{-0.30}$	$506.94^{+0.37}_{-0.37}$	397^{+469}_{-133}	502^{+908}_{-159}	393^{+382}_{-114}	526^{+517}_{-223}
647*	2.63 ± 0.06	—	—	129^{+87}_{-57}	158^{+163}_{-50}	170^{+81}_{-72}	159^{+100}_{-69}
658	2.17 ± 0.58	$142.71^{+0.06}_{-0.06}$	$127.55^{+0.07}_{-0.07}$	112^{+72}_{-51}	138^{+131}_{-44}	154^{+69}_{-68}	138^{+83}_{-62}
659	0.57 ± 0.07	$60.89^{+0.13}_{-0.13}$	$47.18^{+0.12}_{-0.12}$	42^{+26}_{-22}	60^{+30}_{-21}	80^{+32}_{-46}	55^{+37}_{-30}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
660	6.52 ± 0.36	$288.18^{+0.05}_{-0.05}$	$289.78^{+0.06}_{-0.06}$	244^{+222}_{-93}	299^{+439}_{-92}	271^{+192}_{-91}	311^{+249}_{-128}
666	1.79 ± 1.25	$126.20^{+0.07}_{-0.07}$	$110.49^{+0.08}_{-0.08}$	97^{+60}_{-45}	121^{+105}_{-39}	140^{+59}_{-65}	120^{+70}_{-55}
673	1.08 ± 0.96	$91.38^{+0.10}_{-0.10}$	$75.80^{+0.10}_{-0.10}$	67^{+39}_{-33}	87^{+60}_{-29}	109^{+42}_{-56}	84^{+49}_{-41}
676*	9.22 ± 0.18	—	—	307^{+316}_{-110}	381^{+622}_{-118}	322^{+266}_{-100}	399^{+352}_{-165}
677	104.00 ± 15.90	$1690.45^{+7.29}_{-7.26}$	$2286.79^{+11.82}_{-11.76}$	1206^{+2034}_{-398}	1633^{+3441}_{-622}	968^{+1458}_{-322}	1635^{+2352}_{-820}
678	42.60 ± 0.39	$955.85^{+2.15}_{-2.14}$	$1175.16^{+3.13}_{-3.13}$	766^{+1204}_{-235}	1020^{+2149}_{-353}	666^{+903}_{-191}	1046^{+1304}_{-494}
680	0.79 ± 0.27	$74.78^{+0.12}_{-0.12}$	$59.97^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+42}_{-25}	93^{+36}_{-51}	68^{+41}_{-35}
685	0.82 ± 0.50	$76.52^{+0.12}_{-0.12}$	$61.61^{+0.12}_{-0.12}$	54^{+32}_{-28}	74^{+44}_{-25}	95^{+36}_{-51}	69^{+42}_{-36}
686	4.75 ± 1.51	$235.39^{+0.03}_{-0.03}$	$228.81^{+0.04}_{-0.04}$	196^{+159}_{-79}	239^{+314}_{-74}	230^{+141}_{-84}	247^{+180}_{-103}
690	$1.52^{\dagger}$	$113.68^{+0.08}_{-0.08}$	$97.80^{+0.09}_{-0.09}$	86^{+52}_{-41}	109^{+88}_{-36}	129^{+52}_{-62}	106^{+62}_{-50}
692	1.16 ± 0.38	$95.65^{+0.10}_{-0.10}$	$79.95^{+0.10}_{-0.10}$	70^{+41}_{-35}	91^{+65}_{-31}	113^{+43}_{-57}	88^{+51}_{-43}
704	4.36 ± 0.85	$222.86^{+0.03}_{-0.03}$	$214.64^{+0.04}_{-0.04}$	184^{+146}_{-75}	225^{+286}_{-70}	221^{+130}_{-82}	232^{+165}_{-97}
717	$0.77^{\dagger}$	$73.56^{+0.12}_{-0.12}$	$58.83^{+0.12}_{-0.12}$	52^{+31}_{-26}	71^{+41}_{-25}	92^{+35}_{-50}	67^{+41}_{-35}
727	2.95 ± 0.81	$173.64^{+0.04}_{-0.04}$	$160.38^{+0.05}_{-0.05}$	140^{+97}_{-61}	171^{+185}_{-54}	181^{+90}_{-74}	173^{+111}_{-75}
729	84.60 ± 36.00	$1481.58^{+5.59}_{-5.57}$	$1960.41^{+8.85}_{-8.81}$	1091^{+1836}_{-351}	1476^{+3131}_{-550}	891^{+1326}_{-285}	1485^{+2068}_{-738}
734	$58.50^{\dagger}$	$1170.52^{+3.39}_{-3.38}$	$1488.82^{+5.15}_{-5.13}$	905^{+1486}_{-282}	1218^{+2591}_{-436}	764^{+1094}_{-229}	1237^{+1626}_{-600}
741	7.49 ± 4.88	$314.88^{+0.07}_{-0.07}$	$321.36^{+0.08}_{-0.08}$	267^{+256}_{-99}	329^{+506}_{-102}	290^{+219}_{-94}	344^{+286}_{-142}
752	2.04 ± 1.12	$137.19^{+0.06}_{-0.06}$	$121.81^{+0.07}_{-0.07}$	107^{+68}_{-49}	132^{+122}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
753	1.28 ± 0.68	$101.86^{+0.09}_{-0.09}$	$86.04^{+0.10}_{-0.10}$	76^{+45}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
755	5.26 ± 2.84	$251.24^{+0.04}_{-0.04}$	$246.89^{+0.04}_{-0.04}$	210^{+177}_{-83}	257^{+350}_{-80}	243^{+156}_{-86}	266^{+200}_{-110}
761*	4.30 ± 0.17	—	—	183^{+144}_{-75}	223^{+282}_{-69}	219^{+128}_{-81}	229^{+163}_{-96}
764	1.09 ± 0.30	$91.92^{+0.10}_{-0.10}$	$76.32^{+0.10}_{-0.10}$	67^{+39}_{-33}	88^{+60}_{-30}	109^{+42}_{-56}	84^{+49}_{-41}
773	1.09 ± 0.22	$91.92^{+0.10}_{-0.10}$	$76.32^{+0.10}_{-0.10}$	67^{+39}_{-33}	88^{+60}_{-30}	109^{+42}_{-56}	84^{+49}_{-41}
788	2.26 ± 1.14	$146.46^{+0.06}_{-0.06}$	$131.48^{+0.06}_{-0.06}$	115^{+75}_{-52}	142^{+137}_{-45}	158^{+71}_{-69}	142^{+86}_{-63}
795	2.06 ± 0.30	$138.04^{+0.06}_{-0.06}$	$122.70^{+0.07}_{-0.07}$	108^{+68}_{-49}	133^{+124}_{-43}	150^{+66}_{-67}	133^{+79}_{-60}
799	$1.42^{\dagger}$	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
803	3.31 ± 0.85	$186.89^{+0.04}_{-0.04}$	$174.77^{+0.04}_{-0.04}$	152^{+109}_{-65}	185^{+211}_{-58}	192^{+100}_{-76}	189^{+125}_{-80}
809	5.62 ± 0.82	$262.09^{+0.04}_{-0.04}$	$259.39^{+0.04}_{-0.04}$	220^{+190}_{-86}	269^{+375}_{-83}	251^{+166}_{-87}	279^{+214}_{-115}
815	0.71 ± 0.45	$69.84^{+0.12}_{-0.12}$	$55.38^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	63^{+39}_{-33}
816	$0.26^{\dagger}$	$36.89^{+0.14}_{-0.14}$	$26.28^{+0.13}_{-0.12}$	24^{+18}_{-13}	40^{+15}_{-15}	57^{+29}_{-36}	36^{+33}_{-21}
820	11.80 ± 2.17	$420.96^{+0.21}_{-0.21}$	$451.06^{+0.26}_{-0.26}$	360^{+404}_{-123}	452^{+787}_{-142}	364^{+333}_{-108}	473^{+447}_{-199}
824	0.60 ± 0.24	$62.71^{+0.13}_{-0.13}$	$48.83^{+0.12}_{-0.12}$	43^{+26}_{-22}	61^{+32}_{-22}	82^{+32}_{-47}	57^{+37}_{-31}
825	3.47 ± 0.75	$192.61^{+0.04}_{-0.04}$	$181.03^{+0.04}_{-0.04}$	157^{+115}_{-67}	191^{+222}_{-60}	196^{+105}_{-77}	195^{+131}_{-83}
829	1.08 ± 0.03	$91.38^{+0.10}_{-0.10}$	$75.80^{+0.10}_{-0.10}$	67^{+39}_{-33}	87^{+60}_{-29}	109^{+42}_{-56}	84^{+49}_{-41}
830	22.70 ± 4.02	$639.37^{+0.77}_{-0.77}$	$734.82^{+1.04}_{-1.04}$	537^{+736}_{-169}	696^{+1379}_{-227}	500^{+577}_{-139}	725^{+800}_{-322}
834	$2.20^{\dagger}$	$143.97^{+0.06}_{-0.06}$	$128.86^{+0.06}_{-0.06}$	113^{+73}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
836	7.46 ± 7.21	$314.07^{+0.07}_{-0.07}$	$320.40^{+0.08}_{-0.08}$	267^{+255}_{-99}	329^{+504}_{-102}	290^{+218}_{-94}	343^{+285}_{-142}
840	18.00 ± 2.71	$551.30^{+0.50}_{-0.50}$	$618.06^{+0.66}_{-0.66}$	468^{+600}_{-151}	600^{+1143}_{-192}	447^{+479}_{-126}	626^{+657}_{-272}
841	2.30 ± 0.19	$148.11^{+0.06}_{-0.06}$	$133.21^{+0.06}_{-0.06}$	117^{+76}_{-53}	144^{+140}_{-46}	159^{+72}_{-69}	144^{+88}_{-64}
845	22.20 ± 12.00	$630.34^{+0.74}_{-0.74}$	$722.71^{+1.00}_{-1.00}$	530^{+722}_{-167}	687^{+1355}_{-224}	494^{+567}_{-137}	715^{+786}_{-316}
856	1.84 ± 1.69	$128.44^{+0.07}_{-0.07}$	$112.78^{+0.08}_{-0.08}$	99^{+61}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
867	18.40 ± 1.52	$559.10^{+0.53}_{-0.53}$	$628.27^{+0.69}_{-0.69}$	474^{+612}_{-152}	608^{+1164}_{-195}	452^{+487}_{-127}	635^{+669}_{-276}
869	6.16 ± 0.44	$277.91^{+0.05}_{-0.05}$	$277.76^{+0.05}_{-0.05}$	234^{+209}_{-90}	287^{+413}_{-89}	263^{+182}_{-89}	299^{+235}_{-123}
871	2.58 ± 0.73	$159.39^{+0.05}_{-0.05}$	$145.13^{+0.05}_{-0.05}$	127^{+85}_{-56}	156^{+160}_{-49}	169^{+80}_{-71}	157^{+98}_{-69}
878	48.00 ± 29.10	$1031.57^{+2.56}_{-2.55}$	$1284.57^{+3.79}_{-3.78}$	816^{+1307}_{-251}	1092^{+2312}_{-383}	702^{+973}_{-204}	1116^{+1419}_{-532}
906	12.30 ± 2.24	$432.27^{+0.23}_{-0.23}$	$465.24^{+0.29}_{-0.28}$	369^{+420}_{-126}	465^{+818}_{-146}	372^{+345}_{-109}	487^{+465}_{-205}
907	1.67 ± 0.10	$120.72^{+0.08}_{-0.08}$	$104.92^{+0.08}_{-0.08}$	92^{+56}_{-44}	116^{+97}_{-38}	135^{+56}_{-63}	114^{+66}_{-53}
909	$2.54^{\dagger}$	$157.81^{+0.05}_{-0.05}$	$143.45^{+0.06}_{-0.06}$	125^{+84}_{-56}	154^{+157}_{-49}	167^{+79}_{-71}	155^{+96}_{-68}
914	1.89 ± 0.34	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
927	$0.46^{\dagger}$	$53.20^{+0.14}_{-0.13}$	$40.30^{+0.13}_{-0.13}$	36^{+23}_{-19}	53^{+25}_{-19}	73^{+31}_{-43}	49^{+35}_{-27}
929	$39.30^{\dagger}$	$907.86^{+1.90}_{-1.90}$	$1106.57^{+2.75}_{-2.74}$	733^{+1136}_{-225}	974^{+2042}_{-334}	643^{+857}_{-183}	1000^{+1229}_{-469}
936	11.60 ± 2.40	$416.39^{+0.20}_{-0.20}$	$445.35^{+0.25}_{-0.25}$	356^{+397}_{-122}	446^{+775}_{-140}	361^{+328}_{-107}	468^{+440}_{-196}
938	0.87 ± 0.41	$79.54^{+0.11}_{-0.11}$	$64.45^{+0.11}_{-0.11}$	57^{+33}_{-29}	76^{+47}_{-26}	98^{+37}_{-52}	72^{+43}_{-37}
942	16.70 ± 6.64	$525.52^{+0.44}_{-0.44}$	$584.45^{+0.56}_{-0.56}$	447^{+561}_{-145}	571^{+1073}_{-182}	432^{+450}_{-122}	597^{+615}_{-257}
946	6.17 ± 2.71	$278.20^{+0.05}_{-0.05}$	$278.10^{+0.05}_{-0.05}$	235^{+209}_{-90}	287^{+414}_{-89}	263^{+182}_{-89}	299^{+235}_{-123}
973*	5.89 ± 0.13	—	—	227^{+199}_{-88}	278^{+394}_{-86}	257^{+174}_{-88}	289^{+224}_{-119}
974	16.10 ± 8.49	$513.38^{+0.41}_{-0.41}$	$568.71^{+0.52}_{-0.52}$	437^{+542}_{-143}	557^{+1040}_{-177}	424^{+436}_{-120}	583^{+595}_{-250}
981	$0.77^{\dagger}$	$73.87^{+0.12}_{-0.12}$	$59.12^{+0.12}_{-0.12}$	52^{+31}_{-27}	71^{+42}_{-25}	92^{+35}_{-51}	67^{+41}_{-35}
999*	8.42 ± 0.38	—	—	289^{+288}_{-105}	358^{+569}_{-111}	308^{+244}_{-97}	374^{+322}_{-155}
1008	4.28 ± 0.08	$220.24^{+0.03}_{-0.03}$	$211.70^{+0.04}_{-0.04}$	182^{+143}_{-75}	222^{+280}_{-69}	218^{+128}_{-81}	228^{+162}_{-95}
1009	2.50 ± 0.34	$156.22^{+0.05}_{-0.05}$	$141.76^{+0.06}_{-0.06}$	124^{+82}_{-55}	152^{+154}_{-48}	166^{+78}_{-71}	153^{+95}_{-67}
1025*	2.23 ± 0.13	—	—	114^{+74}_{-52}	141^{+135}_{-45}	157^{+70}_{-69}	141^{+85}_{-63}
1036	1.42 ± 0.21	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
1039	0.81 ± 0.25	$76.16^{+0.12}_{-0.12}$	$61.27^{+0.12}_{-0.12}$	54^{+32}_{-27}	73^{+44}_{-25}	95^{+36}_{-51}	69^{+42}_{-36}
1042	0.55 ± 0.35	$59.31^{+0.13}_{-0.13}$	$45.76^{+0.12}_{-0.12}$	41^{+25}_{-21}	59^{+29}_{-21}	79^{+32}_{-46}	54^{+36}_{-29}
1046	1.42 ± 0.29	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
1051	$3.73^{\dagger}$	$201.71^{+0.03}_{-0.03}$	$191.06^{+0.04}_{-0.04}$	165^{+124}_{-69}	201^{+241}_{-63}	204^{+112}_{-78}	206^{+141}_{-87}
1071	2.22 ± 0.38	$144.80^{+0.06}_{-0.06}$	$129.74^{+0.06}_{-0.06}$	114^{+73}_{-52}	140^{+135}_{-45}	156^{+70}_{-68}	140^{+85}_{-62}
1073	5.12 ± 1.40	$246.95^{+0.04}_{-0.04}$	$241.97^{+0.04}_{-0.04}$	206^{+172}_{-82}	252^{+340}_{-78}	239^{+152}_{-85}	261^{+194}_{-108}
1076	35.60 ± 5.46	$852.29^{+1.63}_{-1.63}$	$1027.89^{+2.33}_{-2.33}$	694^{+1057}_{-213}	919^{+1913}_{-312}	615^{+802}_{-173}	946^{+1142}_{-439}
1085	2.27 ± 0.02	$146.88^{+0.06}_{-0.06}$	$131.91^{+0.06}_{-0.06}$	116^{+75}_{-52}	142^{+138}_{-46}	158^{+71}_{-69}	143^{+87}_{-63}
1086	$1.02^{\dagger}$	$88.11^{+0.11}_{-0.11}$	$72.63^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+56}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
1087	2.41 ± 1.67	$152.60^{+0.05}_{-0.05}$	$137.93^{+0.06}_{-0.06}$	121^{+80}_{-54}	148^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
1088	53.70 ± 4.87	$1108.23^{+3.01}_{-3.00}$	$1396.72^{+4.52}_{-4.50}$	866^{+1408}_{-268}	1162^{+2470}_{-412}	737^{+1041}_{-218}	1184^{+1534}_{-570}
1096	$1.65^{\dagger}$	$119.80^{+0.08}_{-0.08}$	$103.98^{+0.08}_{-0.08}$	91^{+56}_{-43}	115^{+96}_{-38}	134^{+55}_{-63}	113^{+66}_{-52}
1097	6.43 ± 2.50	$285.63^{+0.05}_{-0.05}$	$286.79^{+0.06}_{-0.06}$	241^{+218}_{-92}	296^{+432}_{-92}	269^{+189}_{-90}	308^{+245}_{-127}
1102	9.42 ± 2.98	$364.54^{+0.13}_{-0.13}$	$381.30^{+0.15}_{-0.15}$	311^{+323}_{-111}	387^{+635}_{-120}	326^{+271}_{-101}	405^{+359}_{-168}
1110	2.61 ± 0.64	$160.57^{+0.05}_{-0.05}$	$146.38^{+0.05}_{-0.05}$	128^{+86}_{-57}	157^{+162}_{-50}	170^{+81}_{-72}	158^{+99}_{-69}
1112	32.00 ± 4.47	$796.18^{+1.38}_{-1.38}$	$949.32^{+1.94}_{-1.94}$	654^{+974}_{-201}	862^{+1778}_{-290}	586^{+744}_{-164}	890^{+1054}_{-409}
1114	0.94 ± 0.16	$83.69^{+0.11}_{-0.11}$	$68.39^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	102^{+39}_{-54}	76^{+45}_{-38}
1118	3.94 ± 0.60	$208.89^{+0.03}_{-0.03}$	$199.02^{+0.04}_{-0.04}$	172^{+131}_{-71}	209^{+256}_{-65}	209^{+118}_{-80}	215^{+149}_{-90}
1120	$1.70^{\dagger}$	$122.10^{+0.08}_{-0.08}$	$106.32^{+0.08}_{-0.08}$	93^{+57}_{-44}	117^{+99}_{-38}	136^{+56}_{-64}	115^{+67}_{-53}
1121*	5.10 ± 0.10	—	—	206^{+172}_{-82}	251^{+339}_{-78}	239^{+151}_{-85}	260^{+194}_{-108}
1122*	3.15 ± 0.06	—	—	146^{+104}_{-63}	179^{+200}_{-56}	187^{+96}_{-75}	182^{+119}_{-78}
1123	3.77 ± 2.06	$203.09^{+0.03}_{-0.03}$	$192.58^{+0.04}_{-0.04}$	166^{+125}_{-70}	203^{+244}_{-63}	205^{+113}_{-79}	208^{+142}_{-88}
1125	1.01 ± 1.00	$87.56^{+0.11}_{-0.11}$	$72.10^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+55}_{-28}	105^{+40}_{-55}	80^{+47}_{-40}
1126	4.87 ± 1.36	$239.17^{+0.03}_{-0.03}$	$233.10^{+0.04}_{-0.04}$	199^{+163}_{-80}	243^{+322}_{-75}	233^{+145}_{-84}	251^{+185}_{-104}
1128	$2.41^{\dagger}$	$152.60^{+0.05}_{-0.05}$	$137.93^{+0.06}_{-0.06}$	121^{+80}_{-54}	148^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
1129	4.91 ± 2.32	$240.43^{+0.03}_{-0.03}$	$234.53^{+0.04}_{-0.04}$	200^{+165}_{-80}	245^{+325}_{-76}	234^{+146}_{-84}	253^{+186}_{-105}
1141	6.83 ± 0.10	$296.86^{+0.06}_{-0.06}$	$300.00^{+0.07}_{-0.07}$	251^{+233}_{-95}	309^{+460}_{-96}	277^{+200}_{-92}	322^{+261}_{-133}
1142	$3.54^{\dagger}$	$195.09^{+0.04}_{-0.04}$	$183.75^{+0.04}_{-0.04}$	159^{+117}_{-67}	194^{+227}_{-61}	198^{+107}_{-77}	198^{+133}_{-84}
1145	0.89 ± 0.57	$80.59^{+0.11}_{-0.11}$	$65.45^{+0.11}_{-0.11}$	58^{+34}_{-29}	77^{+48}_{-26}	99^{+38}_{-53}	73^{+44}_{-37}
1148	8.81 ± 0.64	$349.28^{+0.11}_{-0.11}$	$362.73^{+0.12}_{-0.12}$	298^{+302}_{-107}	369^{+595}_{-115}	315^{+255}_{-99}	386^{+337}_{-160}
1150	0.95 ± 0.19	$84.20^{+0.11}_{-0.11}$	$68.88^{+0.11}_{-0.11}$	61^{+36}_{-30}	81^{+52}_{-27}	102^{+39}_{-54}	77^{+45}_{-39}
1152	6.39 ± 1.71	$284.50^{+0.05}_{-0.05}$	$285.46^{+0.06}_{-0.06}$	240^{+217}_{-92}	295^{+430}_{-91}	268^{+188}_{-90}	307^{+244}_{-127}
1153	$0.77^{\dagger}$	$73.44^{+0.12}_{-0.12}$	$58.72^{+0.12}_{-0.12}$	52^{+31}_{-26}	71^{+41}_{-25}	92^{+35}_{-50}	67^{+41}_{-35}
1154	81.50 ± 15.70	$1446.67^{+5.32}_{-5.30}$	$1906.57^{+8.39}_{-8.35}$	1071^{+1800}_{-344}	1448^{+3076}_{-538}	878^{+1303}_{-279}	1458^{+2019}_{-723}
1156*	7.09 ± 0.57	—	—	258^{+242}_{-96}	317^{+478}_{-98}	282^{+208}_{-93}	331^{+271}_{-136}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
1157*	5.01 ± 0.13	—	—	203^{+168}_{-81}	248^{+332}_{-77}	237^{+149}_{-85}	257^{+190}_{-106}
1159	5.62 ± 0.50	$262.09^{+0.04}_{-0.04}$	$259.39^{+0.04}_{-0.04}$	220^{+190}_{-86}	269^{+375}_{-83}	251^{+166}_{-87}	279^{+214}_{-115}
1167	$1.33^{\dagger}$	$104.38^{+0.09}_{-0.09}$	$88.53^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+75}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
1190	1.87 ± 0.28	$129.77^{+0.07}_{-0.07}$	$114.15^{+0.07}_{-0.07}$	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
1192	1.23 ± 0.69	$99.30^{+0.09}_{-0.09}$	$83.52^{+0.10}_{-0.10}$	74^{+43}_{-36}	95^{+69}_{-32}	116^{+45}_{-58}	92^{+53}_{-44}
1196	4.85 ± 1.05	$238.55^{+0.03}_{-0.03}$	$232.39^{+0.04}_{-0.04}$	199^{+163}_{-80}	242^{+321}_{-75}	233^{+144}_{-84}	251^{+184}_{-104}
1197	0.86 ± 0.19	$79.01^{+0.11}_{-0.11}$	$63.95^{+0.11}_{-0.11}$	56^{+33}_{-29}	76^{+47}_{-26}	97^{+37}_{-52}	72^{+43}_{-37}
1200	1.08 ± 0.15	$91.38^{+0.10}_{-0.10}$	$75.80^{+0.10}_{-0.10}$	67^{+39}_{-33}	87^{+60}_{-29}	109^{+42}_{-56}	84^{+49}_{-41}
1204	2.14 ± 0.70	$141.45^{+0.06}_{-0.06}$	$126.23^{+0.07}_{-0.07}$	111^{+71}_{-51}	137^{+129}_{-44}	153^{+68}_{-68}	137^{+82}_{-61}
1211	4.01 ± 1.08	$211.26^{+0.03}_{-0.03}$	$201.65^{+0.04}_{-0.04}$	174^{+133}_{-72}	212^{+261}_{-66}	211^{+120}_{-80}	218^{+151}_{-91}
1212	0.51 ± 0.31	$56.23^{+0.13}_{-0.13}$	$42.99^{+0.13}_{-0.13}$	38^{+24}_{-20}	56^{+27}_{-20}	76^{+31}_{-44}	51^{+35}_{-28}
1213	5.38 ± 1.97	$254.89^{+0.04}_{-0.04}$	$251.08^{+0.04}_{-0.04}$	214^{+181}_{-84}	261^{+358}_{-81}	245^{+159}_{-86}	270^{+204}_{-112}
1218	2.02 ± 0.28	$136.33^{+0.06}_{-0.06}$	$120.92^{+0.07}_{-0.07}$	106^{+67}_{-49}	132^{+121}_{-42}	149^{+65}_{-67}	131^{+78}_{-59}
1221	0.70 ± 0.51	$69.27^{+0.12}_{-0.12}$	$54.85^{+0.12}_{-0.12}$	49^{+29}_{-25}	67^{+37}_{-23}	88^{+34}_{-49}	63^{+39}_{-33}
1223	$1.74^{\dagger}$	$123.93^{+0.07}_{-0.07}$	$108.18^{+0.08}_{-0.08}$	95^{+58}_{-45}	119^{+102}_{-39}	138^{+57}_{-64}	117^{+69}_{-54}
1235	1.59 ± 0.15	$117.00^{+0.08}_{-0.08}$	$101.14^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+92}_{-37}	132^{+54}_{-62}	110^{+64}_{-51}
1244	0.67 ± 0.24	$67.55^{+0.12}_{-0.12}$	$53.26^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-48}	61^{+39}_{-32}
1279	1.43 ± 0.47	$109.33^{+0.09}_{-0.09}$	$93.45^{+0.09}_{-0.09}$	82^{+49}_{-40}	104^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
1288*	3.76 ± 0.16	—	—	166^{+125}_{-70}	202^{+243}_{-63}	204^{+113}_{-79}	207^{+142}_{-87}
1289	4.58 ± 1.40	$229.98^{+0.03}_{-0.03}$	$222.67^{+0.04}_{-0.04}$	191^{+153}_{-77}	233^{+302}_{-72}	226^{+137}_{-83}	240^{+173}_{-100}
1291	10.10 ± 0.85	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
1297	36.40 ± 20.90	$864.48^{+1.69}_{-1.69}$	$1045.07^{+2.42}_{-2.41}$	703^{+1074}_{-216}	931^{+1941}_{-317}	621^{+814}_{-175}	958^{+1162}_{-446}
1298	$0.99^{\dagger}$	$86.50^{+0.11}_{-0.11}$	$71.09^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
1301	1.18 ± 1.07	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
1303	30.40 ± 2.25	$770.51^{+1.27}_{-1.27}$	$913.69^{+1.78}_{-1.77}$	636^{+936}_{-196}	836^{+1715}_{-280}	572^{+718}_{-160}	864^{+1013}_{-395}
1306	1.90 ± 0.82	$131.10^{+0.07}_{-0.07}$	$115.52^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+113}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
1307	15.20 ± 4.56	$494.86^{+0.36}_{-0.36}$	$544.83^{+0.46}_{-0.46}$	422^{+514}_{-139}	536^{+989}_{-170}	412^{+415}_{-118}	561^{+565}_{-240}
1308	$3.10^{\dagger}$	$179.23^{+0.04}_{-0.04}$	$166.43^{+0.04}_{-0.04}$	145^{+102}_{-63}	177^{+196}_{-56}	185^{+94}_{-75}	180^{+117}_{-77}
1310	1.34 ± 1.07	$104.89^{+0.09}_{-0.09}$	$89.03^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+76}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
1311	$0.60^{\dagger}$	$62.71^{+0.13}_{-0.13}$	$48.83^{+0.12}_{-0.12}$	43^{+26}_{-22}	61^{+32}_{-22}	82^{+32}_{-47}	57^{+37}_{-31}
1318	$1.56^{\dagger}$	$115.58^{+0.08}_{-0.08}$	$99.72^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+90}_{-36}	131^{+53}_{-62}	108^{+63}_{-51}
1319	$0.40^{\dagger}$	$48.53^{+0.14}_{-0.14}$	$36.20^{+0.13}_{-0.13}$	32^{+22}_{-17}	50^{+22}_{-18}	68^{+30}_{-41}	45^{+34}_{-25}
1321	1.73 ± 0.10	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
1328	0.64 ± 0.29	$65.35^{+0.13}_{-0.13}$	$51.24^{+0.12}_{-0.12}$	45^{+27}_{-23}	64^{+34}_{-22}	84^{+33}_{-48}	59^{+38}_{-32}
1346	5.83 ± 1.29	$268.31^{+0.04}_{-0.04}$	$266.58^{+0.05}_{-0.05}$	226^{+197}_{-87}	276^{+390}_{-86}	256^{+172}_{-88}	287^{+222}_{-118}
1359	32.30 ± 8.84	$800.94^{+1.40}_{-1.40}$	$955.95^{+1.97}_{-1.97}$	658^{+981}_{-202}	867^{+1790}_{-292}	588^{+749}_{-165}	895^{+1061}_{-411}
1365	1.93 ± 0.81	$132.41^{+0.07}_{-0.07}$	$116.87^{+0.07}_{-0.07}$	103^{+64}_{-48}	128^{+115}_{-41}	145^{+62}_{-66}	127^{+75}_{-57}
1379	$0.72^{\dagger}$	$70.84^{+0.12}_{-0.12}$	$56.31^{+0.12}_{-0.12}$	50^{+30}_{-25}	69^{+39}_{-24}	90^{+35}_{-50}	64^{+40}_{-34}
1382	2.84 ± 0.99	$169.47^{+0.04}_{-0.04}$	$155.90^{+0.05}_{-0.05}$	136^{+94}_{-60}	166^{+178}_{-53}	177^{+87}_{-73}	168^{+107}_{-73}
1384	$9.89^{\dagger}$	$376.06^{+0.14}_{-0.14}$	$395.40^{+0.17}_{-0.17}$	321^{+339}_{-113}	400^{+666}_{-125}	334^{+283}_{-102}	419^{+377}_{-174}
1385*	13.00 ± 0.25	—	—	383^{+443}_{-129}	482^{+860}_{-152}	382^{+363}_{-112}	505^{+489}_{-214}
1388	1.37 ± 0.45	$106.38^{+0.09}_{-0.09}$	$90.51^{+0.09}_{-0.09}$	80^{+47}_{-38}	102^{+78}_{-34}	122^{+48}_{-60}	99^{+57}_{-47}
1390	14.70 ± 3.00	$484.40^{+0.34}_{-0.34}$	$531.40^{+0.43}_{-0.43}$	413^{+498}_{-137}	524^{+960}_{-166}	406^{+404}_{-116}	549^{+548}_{-234}
1396	2.30 ± 0.57	$148.11^{+0.06}_{-0.06}$	$133.21^{+0.06}_{-0.06}$	117^{+76}_{-53}	144^{+140}_{-46}	159^{+72}_{-69}	144^{+88}_{-64}
1404	5.92 ± 3.76	$270.94^{+0.04}_{-0.04}$	$269.65^{+0.05}_{-0.05}$	228^{+200}_{-88}	279^{+397}_{-86}	258^{+175}_{-88}	290^{+225}_{-120}
1406	3.65 ± 0.20	$198.94^{+0.04}_{-0.04}$	$187.99^{+0.04}_{-0.04}$	163^{+121}_{-68}	198^{+235}_{-62}	201^{+110}_{-78}	203^{+138}_{-86}
1413	1.03 ± 0.46	$88.66^{+0.10}_{-0.10}$	$73.16^{+0.11}_{-0.11}$	64^{+38}_{-32}	85^{+57}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
1416	0.94 ± 0.46	$83.69^{+0.11}_{-0.11}$	$68.39^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	102^{+39}_{-54}	76^{+45}_{-38}
1419*	2.34 ± 0.12	—	—	118^{+77}_{-53}	145^{+143}_{-46}	160^{+73}_{-69}	146^{+89}_{-64}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
1422	2.09 ± 0.25	$139.33^{+0.06}_{-0.06}$	$124.03^{+0.07}_{-0.07}$	109^{+69}_{-50}	135^{+126}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
1425	1.73 ± 0.10	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
1430	0.93 ± 0.67	$82.77^{+0.11}_{-0.11}$	$67.53^{+0.11}_{-0.11}$	60^{+35}_{-30}	79^{+50}_{-27}	101^{+38}_{-53}	75^{+45}_{-38}
1432	0.64 ± 0.28	$65.49^{+0.13}_{-0.13}$	$51.36^{+0.12}_{-0.12}$	45^{+27}_{-23}	64^{+34}_{-22}	85^{+33}_{-48}	59^{+38}_{-32}
1435	21.40 ± 17.90	$615.73^{+0.70}_{-0.69}$	$703.20^{+0.93}_{-0.93}$	519^{+700}_{-164}	671^{+1316}_{-218}	486^{+551}_{-135}	699^{+762}_{-308}
1439	3.62 ± 2.68	$197.89^{+0.04}_{-0.04}$	$186.84^{+0.04}_{-0.04}$	162^{+120}_{-68}	197^{+233}_{-62}	200^{+109}_{-78}	202^{+136}_{-85}
1440*	5.32 ± 0.17	—	—	212^{+179}_{-84}	259^{+354}_{-80}	244^{+158}_{-86}	268^{+202}_{-111}
1443	3.33 ± 0.31	$187.61^{+0.04}_{-0.04}$	$175.55^{+0.04}_{-0.04}$	152^{+110}_{-65}	186^{+212}_{-58}	192^{+101}_{-76}	189^{+125}_{-81}
1446	2.68 ± 0.50	$163.31^{+0.05}_{-0.05}$	$149.30^{+0.05}_{-0.05}$	130^{+88}_{-58}	160^{+167}_{-51}	172^{+83}_{-72}	161^{+101}_{-70}
1447	5.19 ± 0.36	$249.10^{+0.04}_{-0.04}$	$244.44^{+0.04}_{-0.04}$	208^{+175}_{-82}	254^{+345}_{-79}	241^{+154}_{-85}	263^{+197}_{-109}
1449	2.89 ± 0.47	$171.37^{+0.04}_{-0.04}$	$157.94^{+0.05}_{-0.05}$	138^{+95}_{-60}	168^{+181}_{-53}	179^{+88}_{-73}	171^{+109}_{-74}
1452	2.54 ± 0.75	$157.81^{+0.05}_{-0.05}$	$143.45^{+0.06}_{-0.06}$	125^{+84}_{-56}	154^{+157}_{-49}	167^{+79}_{-71}	155^{+96}_{-68}
1453	12.20 ± 1.33	$430.02^{+0.23}_{-0.23}$	$462.42^{+0.28}_{-0.28}$	368^{+417}_{-125}	462^{+812}_{-145}	370^{+343}_{-109}	484^{+461}_{-204}
1456	1.91 ± 1.05	$131.54^{+0.07}_{-0.07}$	$115.97^{+0.07}_{-0.07}$	102^{+64}_{-47}	127^{+113}_{-41}	145^{+62}_{-66}	126^{+74}_{-57}
1458	1.00 ± 0.38	$86.89^{+0.11}_{-0.11}$	$71.46^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+55}_{-28}	105^{+40}_{-55}	79^{+46}_{-40}
1459	0.71 ± 0.18	$70.22^{+0.12}_{-0.12}$	$55.72^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	64^{+40}_{-33}
1461	46.70 ± 39.30	$1013.63^{+2.46}_{-2.45}$	$1258.53^{+3.63}_{-3.62}$	804^{+1283}_{-248}	1075^{+2275}_{-376}	693^{+957}_{-201}	1099^{+1392}_{-523}
1462	10.70 ± 0.98	$395.45^{+0.17}_{-0.17}$	$419.31^{+0.20}_{-0.20}$	338^{+367}_{-118}	422^{+718}_{-132}	347^{+305}_{-105}	442^{+407}_{-185}
1463	$0.65^{\dagger}$	$65.88^{+0.13}_{-0.13}$	$51.72^{+0.12}_{-0.12}$	46^{+28}_{-24}	64^{+35}_{-23}	85^{+33}_{-48}	60^{+38}_{-32}
1465	6.48 ± 2.10	$287.05^{+0.05}_{-0.05}$	$288.45^{+0.06}_{-0.06}$	243^{+220}_{-92}	298^{+436}_{-92}	270^{+191}_{-91}	310^{+247}_{-128}
1466	8.86 ± 1.02	$350.54^{+0.11}_{-0.11}$	$364.26^{+0.13}_{-0.13}$	299^{+304}_{-107}	371^{+598}_{-115}	316^{+256}_{-99}	388^{+338}_{-161}
1467	4.45 ± 0.28	$225.78^{+0.03}_{-0.03}$	$217.94^{+0.04}_{-0.04}$	187^{+149}_{-76}	228^{+292}_{-71}	223^{+133}_{-82}	235^{+168}_{-98}
1468*	40.40 ± 1.45	—	—	744^{+1159}_{-228}	990^{+2078}_{-341}	650^{+872}_{-185}	1016^{+1254}_{-477}
1469	1.65 ± 0.54	$119.80^{+0.08}_{-0.08}$	$103.98^{+0.08}_{-0.08}$	91^{+56}_{-43}	115^{+96}_{-38}	134^{+55}_{-63}	113^{+66}_{-52}
1472	3.10 ± 0.35	$179.23^{+0.04}_{-0.04}$	$166.43^{+0.04}_{-0.04}$	145^{+102}_{-63}	177^{+196}_{-56}	185^{+94}_{-75}	180^{+117}_{-77}
1473	9.43 ± 0.08	$364.79^{+0.13}_{-0.13}$	$381.60^{+0.15}_{-0.15}$	311^{+323}_{-111}	387^{+636}_{-120}	326^{+271}_{-101}	405^{+360}_{-168}
1479	$10.30^{\dagger}$	$385.94^{+0.16}_{-0.16}$	$407.56^{+0.19}_{-0.19}$	330^{+353}_{-115}	411^{+692}_{-128}	341^{+294}_{-103}	431^{+392}_{-180}
1480*	16.70 ± 0.76	—	—	447^{+561}_{-145}	571^{+1073}_{-182}	432^{+450}_{-122}	597^{+615}_{-257}
1481	$0.84^{\dagger}$	$77.89^{+0.11}_{-0.11}$	$62.90^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+45}_{-26}	96^{+37}_{-52}	71^{+42}_{-36}
1482	1.31 ± 1.12	$103.38^{+0.09}_{-0.09}$	$87.54^{+0.10}_{-0.10}$	77^{+46}_{-37}	99^{+74}_{-33}	120^{+47}_{-59}	96^{+55}_{-46}
1484*	2.47 ± 0.18	—	—	123^{+81}_{-55}	151^{+152}_{-48}	165^{+77}_{-70}	152^{+94}_{-67}
1485	0.94 ± 0.79	$83.57^{+0.11}_{-0.11}$	$68.29^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	102^{+39}_{-54}	76^{+45}_{-38}
1489	3.42 ± 1.61	$190.83^{+0.04}_{-0.04}$	$179.08^{+0.04}_{-0.04}$	155^{+113}_{-66}	189^{+219}_{-59}	195^{+103}_{-77}	193^{+129}_{-82}
1492	1.84 ± 1.79	$128.44^{+0.07}_{-0.07}$	$112.78^{+0.08}_{-0.08}$	99^{+61}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
1503*	1.10 ± 0.04	—	—	68^{+40}_{-33}	88^{+61}_{-30}	110^{+42}_{-56}	85^{+49}_{-42}
1515	6.21 ± 0.78	$279.35^{+0.05}_{-0.05}$	$279.44^{+0.05}_{-0.05}$	236^{+211}_{-90}	289^{+417}_{-89}	264^{+183}_{-90}	300^{+237}_{-124}
1518	10.20 ± 3.41	$383.54^{+0.15}_{-0.15}$	$404.61^{+0.18}_{-0.18}$	328^{+350}_{-115}	409^{+686}_{-127}	339^{+292}_{-103}	428^{+388}_{-178}
1533	2.01 ± 0.13	$135.89^{+0.06}_{-0.06}$	$120.47^{+0.07}_{-0.07}$	106^{+67}_{-49}	131^{+120}_{-42}	148^{+64}_{-67}	130^{+78}_{-59}
1540	1.50 ± 0.38	$112.72^{+0.08}_{-0.08}$	$96.84^{+0.09}_{-0.09}$	85^{+51}_{-41}	108^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-50}
1541*	7.69 ± 0.06	—	—	272^{+263}_{-100}	336^{+519}_{-104}	294^{+224}_{-95}	351^{+294}_{-145}
1546	67.60 ± 26.60	$1283.78^{+4.14}_{-4.13}$	$1658.36^{+6.39}_{-6.37}$	975^{+1622}_{-307}	1315^{+2800}_{-479}	812^{+1184}_{-250}	1331^{+1790}_{-652}
1551	24.10 ± 4.09	$664.28^{+0.86}_{-0.86}$	$768.37^{+1.17}_{-1.17}$	556^{+774}_{-174}	723^{+1445}_{-237}	514^{+604}_{-143}	752^{+841}_{-336}
1552	1.50 ± 0.84	$112.72^{+0.08}_{-0.08}$	$96.84^{+0.09}_{-0.09}$	85^{+51}_{-41}	108^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-50}
1553	28.70 ± 0.75	$742.70^{+1.15}_{-1.15}$	$875.30^{+1.61}_{-1.60}$	615^{+894}_{-190}	807^{+1646}_{-269}	557^{+688}_{-155}	835^{+968}_{-379}
1558	3.36 ± 1.65	$188.69^{+0.04}_{-0.04}$	$176.73^{+0.04}_{-0.04}$	153^{+111}_{-65}	187^{+215}_{-59}	193^{+102}_{-76}	191^{+127}_{-81}
1559	5.08 ± 0.52	$245.71^{+0.04}_{-0.04}$	$240.56^{+0.04}_{-0.04}$	205^{+171}_{-82}	250^{+337}_{-78}	238^{+151}_{-85}	259^{+193}_{-108}
1561	1.22 ± 0.65	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
1566	39.70 ± 20.50	$913.75^{+1.93}_{-1.93}$	$1114.96^{+2.79}_{-2.79}$	737^{+1145}_{-226}	980^{+2055}_{-337}	645^{+862}_{-184}	1006^{+1238}_{-472}
1567	3.25 ± 0.99	$184.72^{+0.04}_{-0.04}$	$172.40^{+0.04}_{-0.04}$	150^{+107}_{-64}	183^{+207}_{-57}	190^{+99}_{-76}	186^{+122}_{-79}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
1571*	4.67 ± 0.62	—	—	194^{+156}_{-78}	236^{+308}_{-73}	228^{+139}_{-83}	244^{+177}_{-101}
1574	5.24 ± 0.91	$250.63^{+0.04}_{-0.04}$	$246.19^{+0.04}_{-0.04}$	210^{+176}_{-83}	256^{+349}_{-79}	242^{+155}_{-86}	265^{+199}_{-110}
1578	3.57 ± 0.16	$196.14^{+0.04}_{-0.04}$	$184.91^{+0.04}_{-0.04}$	160^{+118}_{-68}	195^{+229}_{-61}	199^{+108}_{-78}	200^{+135}_{-85}
1579	25.50 ± 1.36	$688.68^{+0.95}_{-0.94}$	$801.42^{+1.30}_{-1.29}$	575^{+812}_{-179}	750^{+1508}_{-247}	528^{+631}_{-146}	778^{+881}_{-349}
1580	6.70 ± 0.90	$293.24^{+0.06}_{-0.06}$	$295.73^{+0.06}_{-0.06}$	248^{+228}_{-94}	305^{+451}_{-94}	274^{+197}_{-91}	317^{+256}_{-131}
1586	2.05 ± 0.40	$137.62^{+0.06}_{-0.06}$	$122.25^{+0.07}_{-0.07}$	107^{+68}_{-49}	133^{+123}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
1588	28.60 ± 5.87	$741.05^{+1.15}_{-1.15}$	$873.02^{+1.60}_{-1.59}$	614^{+891}_{-190}	805^{+1642}_{-268}	556^{+687}_{-155}	834^{+965}_{-378}
1590	0.64 ± 0.19	$65.68^{+0.13}_{-0.13}$	$51.54^{+0.12}_{-0.12}$	46^{+28}_{-24}	64^{+34}_{-22}	85^{+33}_{-48}	60^{+38}_{-32}
1601*	31.10 ± 1.93	—	—	644^{+953}_{-198}	847^{+1743}_{-284}	578^{+729}_{-161}	876^{+1031}_{-401}
1604	5.64 ± 1.70	$262.69^{+0.04}_{-0.04}$	$260.08^{+0.04}_{-0.04}$	221^{+191}_{-86}	270^{+377}_{-84}	251^{+167}_{-87}	280^{+215}_{-116}
1606*	3.46 ± 0.07	—	—	157^{+115}_{-67}	191^{+222}_{-60}	196^{+105}_{-77}	195^{+130}_{-83}
1609*	4.65 ± 0.08	—	—	193^{+156}_{-78}	235^{+307}_{-73}	228^{+139}_{-83}	243^{+176}_{-101}
1611	$2.21^{\dagger}$	$144.38^{+0.06}_{-0.06}$	$129.30^{+0.06}_{-0.06}$	113^{+73}_{-52}	140^{+134}_{-45}	156^{+70}_{-68}	140^{+85}_{-62}
1614	2.48 ± 0.61	$155.42^{+0.05}_{-0.05}$	$140.91^{+0.06}_{-0.06}$	123^{+82}_{-55}	151^{+153}_{-48}	165^{+77}_{-71}	152^{+94}_{-67}
1623*	11.50 ± 0.46	—	—	354^{+394}_{-122}	444^{+768}_{-139}	360^{+325}_{-107}	465^{+436}_{-195}
1625*	13.30 ± 0.12	—	—	388^{+453}_{-130}	490^{+878}_{-154}	386^{+370}_{-112}	513^{+500}_{-217}
1626	6.89 ± 2.16	$298.52^{+0.06}_{-0.06}$	$301.96^{+0.07}_{-0.07}$	253^{+235}_{-95}	311^{+464}_{-96}	278^{+202}_{-92}	324^{+263}_{-134}
1628	2.00 ± 0.27	$135.46^{+0.06}_{-0.06}$	$120.02^{+0.07}_{-0.07}$	105^{+66}_{-49}	131^{+120}_{-42}	148^{+64}_{-67}	130^{+77}_{-59}
1634	50.50 ± 14.60	$1065.57^{+2.75}_{-2.75}$	$1334.16^{+4.11}_{-4.09}$	838^{+1352}_{-259}	1123^{+2383}_{-396}	717^{+1004}_{-210}	1146^{+1470}_{-549}
1635	6.26 ± 2.81	$280.78^{+0.05}_{-0.05}$	$281.12^{+0.05}_{-0.05}$	237^{+212}_{-91}	290^{+420}_{-90}	265^{+184}_{-90}	302^{+239}_{-125}
1636	1.66 ± 0.97	$120.26^{+0.08}_{-0.08}$	$104.45^{+0.08}_{-0.08}$	92^{+56}_{-43}	115^{+97}_{-38}	135^{+55}_{-63}	113^{+66}_{-52}
1637	$16.60^{\dagger}$	$523.51^{+0.43}_{-0.43}$	$581.84^{+0.56}_{-0.56}$	445^{+558}_{-145}	568^{+1067}_{-181}	430^{+447}_{-122}	594^{+611}_{-256}
1642	3.06 ± 0.80	$177.75^{+0.04}_{-0.04}$	$164.82^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	178^{+115}_{-76}
1646	1.18 ± 0.55	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
1651	5.30 ± 0.74	$252.46^{+0.04}_{-0.04}$	$248.29^{+0.04}_{-0.04}$	211^{+179}_{-83}	258^{+353}_{-80}	244^{+157}_{-86}	267^{+201}_{-111}
1652*	2.26 ± 0.10	—	—	115^{+75}_{-52}	142^{+137}_{-45}	158^{+71}_{-69}	142^{+86}_{-63}
1653	1.49 ± 0.95	$112.24^{+0.08}_{-0.08}$	$96.36^{+0.09}_{-0.09}$	85^{+51}_{-41}	107^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-49}
1655	2.28 ± 0.86	$147.29^{+0.06}_{-0.06}$	$132.34^{+0.06}_{-0.06}$	116^{+75}_{-52}	143^{+139}_{-46}	158^{+72}_{-69}	143^{+87}_{-63}
1656	1.07 ± 0.45	$90.84^{+0.10}_{-0.10}$	$75.27^{+0.11}_{-0.10}$	66^{+39}_{-33}	87^{+59}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
1657	3.05 ± 1.27	$177.37^{+0.04}_{-0.04}$	$164.42^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	177^{+115}_{-76}
1659	19.10 ± 9.06	$572.59^{+0.56}_{-0.56}$	$646.02^{+0.74}_{-0.74}$	485^{+633}_{-155}	623^{+1201}_{-201}	460^{+503}_{-129}	650^{+691}_{-284}
1660	1.43 ± 0.32	$109.33^{+0.09}_{-0.09}$	$93.45^{+0.09}_{-0.09}$	82^{+49}_{-40}	104^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
1661	12.70 ± 1.79	$441.20^{+0.25}_{-0.25}$	$476.48^{+0.31}_{-0.31}$	377^{+433}_{-128}	475^{+842}_{-149}	378^{+355}_{-111}	497^{+479}_{-210}
1662	6.40 ± 6.24	$284.78^{+0.05}_{-0.05}$	$285.79^{+0.06}_{-0.06}$	240^{+217}_{-92}	295^{+430}_{-91}	268^{+188}_{-90}	307^{+244}_{-127}
1663*	14.90 ± 0.09	—	—	417^{+505}_{-138}	529^{+972}_{-168}	408^{+408}_{-117}	554^{+555}_{-236}
1664	1.18 ± 0.10	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
1665	47.00 ± 8.70	$1017.79^{+2.48}_{-2.48}$	$1264.56^{+3.67}_{-3.66}$	807^{+1289}_{-249}	1079^{+2283}_{-377}	695^{+960}_{-202}	1103^{+1398}_{-525}
1667	0.73 ± 0.71	$71.47^{+0.12}_{-0.12}$	$56.88^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+39}_{-24}	90^{+35}_{-50}	65^{+40}_{-34}
1676*	3.45 ± 0.09	—	—	156^{+114}_{-66}	191^{+221}_{-60}	196^{+104}_{-77}	195^{+130}_{-83}
1679	8.43 ± 4.00	$339.58^{+0.10}_{-0.10}$	$350.99^{+0.11}_{-0.11}$	289^{+289}_{-105}	358^{+569}_{-111}	308^{+244}_{-97}	374^{+322}_{-155}
1680	$24.70^{\dagger}$	$674.80^{+0.90}_{-0.89}$	$782.59^{+1.22}_{-1.22}$	564^{+790}_{-176}	735^{+1472}_{-241}	520^{+615}_{-144}	763^{+858}_{-341}
1683	5.97 ± 0.25	$272.40^{+0.05}_{-0.05}$	$271.34^{+0.05}_{-0.05}$	229^{+202}_{-89}	281^{+400}_{-87}	259^{+176}_{-89}	292^{+227}_{-121}
1687	$1.04^{\dagger}$	$89.21^{+0.10}_{-0.10}$	$73.69^{+0.11}_{-0.11}$	65^{+38}_{-32}	85^{+57}_{-29}	107^{+41}_{-55}	82^{+48}_{-40}
1693	$0.77^{\dagger}$	$73.32^{+0.12}_{-0.12}$	$58.61^{+0.12}_{-0.12}$	52^{+31}_{-26}	71^{+41}_{-25}	92^{+35}_{-50}	66^{+41}_{-35}
1694	23.20 ± 7.64	$648.33^{+0.80}_{-0.80}$	$746.86^{+1.09}_{-1.08}$	544^{+750}_{-171}	706^{+1403}_{-231}	505^{+587}_{-140}	735^{+815}_{-327}
1700	4.64 ± 1.26	$231.90^{+0.03}_{-0.03}$	$224.84^{+0.04}_{-0.04}$	193^{+155}_{-78}	235^{+306}_{-73}	228^{+138}_{-83}	242^{+176}_{-101}
1701	1.05 ± 0.87	$89.75^{+0.10}_{-0.10}$	$74.22^{+0.11}_{-0.11}$	65^{+38}_{-32}	86^{+58}_{-29}	107^{+41}_{-55}	82^{+48}_{-41}
1704	10.40 ± 3.11	$388.33^{+0.16}_{-0.16}$	$410.51^{+0.19}_{-0.19}$	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}
1709*	2.39 ± 0.09	—	—	120^{+79}_{-54}	148^{+146}_{-47}	162^{+75}_{-70}	148^{+91}_{-65}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
1711*	7.47 ± 0.16	—	—	267^{+255}_{-99}	329^{+504}_{-102}	290^{+218}_{-94}	343^{+285}_{-142}
1712*	3.83 ± 0.14	—	—	168^{+127}_{-70}	205^{+248}_{-64}	206^{+115}_{-79}	210^{+144}_{-89}
1714	1.97 ± 1.63	$134.16^{+0.07}_{-0.07}$	$118.68^{+0.07}_{-0.07}$	104^{+66}_{-48}	129^{+118}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
1717	2.91 ± 0.33	$172.13^{+0.04}_{-0.04}$	$158.76^{+0.05}_{-0.05}$	138^{+96}_{-60}	169^{+183}_{-53}	179^{+89}_{-74}	171^{+110}_{-74}
1719	36.90 ± 13.70	$872.04^{+1.72}_{-1.72}$	$1055.76^{+2.48}_{-2.47}$	708^{+1085}_{-217}	938^{+1959}_{-320}	625^{+821}_{-177}	966^{+1173}_{-450}
1730	2.45 ± 0.80	$154.21^{+0.05}_{-0.05}$	$139.64^{+0.06}_{-0.06}$	122^{+81}_{-55}	150^{+150}_{-48}	164^{+76}_{-70}	151^{+93}_{-66}
1731	9.07 ± 0.62	$355.83^{+0.12}_{-0.12}$	$370.68^{+0.13}_{-0.13}$	304^{+311}_{-109}	377^{+612}_{-117}	320^{+262}_{-100}	394^{+346}_{-163}
1733	20.00 ± 0.67	$589.68^{+0.61}_{-0.61}$	$668.59^{+0.82}_{-0.81}$	498^{+659}_{-159}	642^{+1247}_{-207}	471^{+522}_{-131}	670^{+719}_{-293}
1734	0.88 ± 0.53	$80.24^{+0.11}_{-0.11}$	$65.11^{+0.11}_{-0.11}$	57^{+34}_{-29}	77^{+48}_{-26}	98^{+37}_{-53}	73^{+43}_{-37}
1736	$2.27^{\dagger}$	$146.88^{+0.06}_{-0.06}$	$131.91^{+0.06}_{-0.06}$	116^{+75}_{-52}	142^{+138}_{-46}	158^{+71}_{-69}	143^{+87}_{-63}
1740	7.16 ± 2.90	$305.94^{+0.07}_{-0.07}$	$310.74^{+0.07}_{-0.07}$	259^{+244}_{-97}	319^{+483}_{-99}	284^{+210}_{-93}	333^{+274}_{-137}
1741	15.20 ± 6.44	$494.86^{+0.36}_{-0.36}$	$544.83^{+0.46}_{-0.46}$	422^{+514}_{-139}	536^{+989}_{-170}	412^{+415}_{-118}	561^{+565}_{-240}
1742	1.95 ± 0.60	$133.29^{+0.07}_{-0.07}$	$117.78^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+116}_{-42}	146^{+63}_{-66}	128^{+76}_{-58}
1747	17.30 ± 13.80	$537.51^{+0.47}_{-0.47}$	$600.04^{+0.61}_{-0.61}$	457^{+579}_{-148}	584^{+1106}_{-187}	439^{+463}_{-124}	610^{+634}_{-264}
1760	10.10 ± 0.97	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
1791	$0.24^{\dagger}$	$34.59^{+0.14}_{-0.14}$	$24.38^{+0.12}_{-0.12}$	23^{+17}_{-12}	39^{+14}_{-15}	54^{+29}_{-35}	34^{+33}_{-20}
1806	1.60 ± 0.79	$117.47^{+0.08}_{-0.08}$	$101.62^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+93}_{-37}	132^{+54}_{-63}	110^{+64}_{-51}
1807	1.41 ± 0.09	$108.35^{+0.09}_{-0.09}$	$92.47^{+0.09}_{-0.09}$	81^{+49}_{-39}	104^{+80}_{-34}	124^{+49}_{-60}	101^{+58}_{-48}
1815	3.78 ± 0.32	$203.43^{+0.03}_{-0.03}$	$192.96^{+0.04}_{-0.04}$	167^{+126}_{-70}	203^{+244}_{-64}	205^{+114}_{-79}	208^{+143}_{-88}
1819	14.50 ± 2.57	$480.18^{+0.33}_{-0.33}$	$526.00^{+0.42}_{-0.42}$	410^{+492}_{-136}	519^{+949}_{-164}	403^{+399}_{-116}	544^{+541}_{-232}
1830	19.50 ± 4.26	$580.22^{+0.59}_{-0.59}$	$656.08^{+0.78}_{-0.77}$	491^{+645}_{-157}	632^{+1221}_{-204}	465^{+511}_{-130}	659^{+704}_{-288}
1851	25.70 ± 13.90	$692.13^{+0.96}_{-0.96}$	$806.10^{+1.31}_{-1.31}$	577^{+817}_{-180}	753^{+1517}_{-248}	529^{+634}_{-147}	782^{+886}_{-351}
1883	4.56 ± 0.28	$229.33^{+0.03}_{-0.03}$	$221.94^{+0.04}_{-0.04}$	190^{+153}_{-77}	232^{+300}_{-72}	226^{+136}_{-83}	239^{+173}_{-100}
1885	1.75 ± 0.23	$124.39^{+0.07}_{-0.07}$	$108.64^{+0.08}_{-0.08}$	95^{+59}_{-45}	119^{+103}_{-39}	138^{+58}_{-64}	118^{+69}_{-54}
1886*	21.00 ± 0.23	—	—	513^{+688}_{-162}	663^{+1297}_{-215}	482^{+542}_{-134}	691^{+750}_{-304}
1922	2.82 ± 0.59	$168.71^{+0.05}_{-0.05}$	$155.08^{+0.05}_{-0.05}$	135^{+93}_{-59}	166^{+176}_{-52}	176^{+86}_{-73}	167^{+107}_{-72}
1924	5.09 ± 0.84	$246.02^{+0.04}_{-0.04}$	$240.91^{+0.04}_{-0.04}$	206^{+171}_{-82}	251^{+338}_{-78}	239^{+151}_{-85}	260^{+193}_{-108}
1953	8.74 ± 5.03	$347.50^{+0.11}_{-0.11}$	$360.57^{+0.12}_{-0.12}$	296^{+299}_{-107}	367^{+590}_{-114}	314^{+253}_{-98}	384^{+334}_{-159}
1956	2.42 ± 0.26	$153.00^{+0.05}_{-0.05}$	$138.36^{+0.06}_{-0.06}$	121^{+80}_{-54}	149^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
1967	1.62 ± 0.16	$118.40^{+0.08}_{-0.08}$	$102.56^{+0.08}_{-0.08}$	90^{+55}_{-43}	113^{+94}_{-37}	133^{+54}_{-63}	111^{+65}_{-52}
1968	11.00 ± 5.59	$402.50^{+0.18}_{-0.18}$	$428.05^{+0.22}_{-0.22}$	344^{+377}_{-119}	430^{+737}_{-135}	352^{+312}_{-106}	451^{+418}_{-189}
1974	0.40 ± 0.07	$48.53^{+0.14}_{-0.14}$	$36.20^{+0.13}_{-0.13}$	32^{+22}_{-17}	50^{+22}_{-18}	68^{+30}_{-41}	45^{+34}_{-25}
1982	9.36 ± 0.42	$363.05^{+0.12}_{-0.12}$	$379.49^{+0.15}_{-0.15}$	310^{+321}_{-110}	385^{+631}_{-120}	325^{+269}_{-100}	403^{+357}_{-167}
1989	9.46 ± 0.42	$365.53^{+0.13}_{-0.13}$	$382.51^{+0.15}_{-0.15}$	312^{+324}_{-111}	388^{+638}_{-121}	326^{+272}_{-101}	406^{+361}_{-169}
1993	0.42 ± 0.15	$49.91^{+0.14}_{-0.14}$	$37.41^{+0.13}_{-0.13}$	33^{+22}_{-18}	51^{+23}_{-18}	70^{+30}_{-42}	46^{+34}_{-26}
1997*	3.18 ± 0.14	—	—	147^{+105}_{-63}	180^{+202}_{-57}	188^{+97}_{-75}	183^{+120}_{-78}
2003	15.30 ± 8.02	$496.94^{+0.37}_{-0.37}$	$547.50^{+0.47}_{-0.47}$	424^{+517}_{-139}	538^{+995}_{-171}	414^{+418}_{-118}	563^{+568}_{-241}
2018	0.58 ± 0.18	$61.30^{+0.13}_{-0.13}$	$47.55^{+0.12}_{-0.12}$	42^{+26}_{-22}	60^{+31}_{-21}	81^{+32}_{-46}	56^{+37}_{-30}
2019	3.78 ± 0.42	$203.43^{+0.03}_{-0.03}$	$192.96^{+0.04}_{-0.04}$	167^{+126}_{-70}	203^{+244}_{-64}	205^{+114}_{-79}	208^{+143}_{-88}
2035	3.00 ± 2.65	$175.51^{+0.04}_{-0.04}$	$162.41^{+0.05}_{-0.05}$	141^{+99}_{-61}	173^{+189}_{-55}	182^{+92}_{-74}	175^{+113}_{-75}
2037	17.50 ± 1.01	$541.47^{+0.48}_{-0.48}$	$605.21^{+0.62}_{-0.62}$	460^{+585}_{-149}	589^{+1116}_{-188}	441^{+468}_{-124}	615^{+641}_{-266}
2040	18.60 ± 10.60	$562.97^{+0.54}_{-0.54}$	$633.36^{+0.70}_{-0.70}$	477^{+618}_{-153}	613^{+1175}_{-197}	455^{+492}_{-127}	640^{+676}_{-278}
2041	37.30 ± 5.20	$878.07^{+1.75}_{-1.75}$	$1064.29^{+2.52}_{-2.51}$	712^{+1094}_{-219}	944^{+1973}_{-323}	628^{+827}_{-178}	972^{+1183}_{-453}
2043	$3.66^{\dagger}$	$199.28^{+0.04}_{-0.04}$	$188.37^{+0.04}_{-0.04}$	163^{+121}_{-69}	199^{+236}_{-62}	202^{+110}_{-78}	203^{+138}_{-86}
2044	51.30 ± 17.60	$1076.33^{+2.82}_{-2.81}$	$1349.89^{+4.21}_{-4.19}$	845^{+1366}_{-261}	1133^{+2405}_{-400}	722^{+1013}_{-212}	1156^{+1486}_{-554}
2047	3.06 ± 1.11	$177.75^{+0.04}_{-0.04}$	$164.82^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	178^{+115}_{-76}
2049	21.40 ± 7.57	$615.73^{+0.70}_{-0.69}$	$703.20^{+0.93}_{-0.93}$	519^{+700}_{-164}	671^{+1316}_{-218}	486^{+551}_{-135}	699^{+762}_{-308}
2053	4.87 ± 1.49	$239.17^{+0.03}_{-0.03}$	$233.10^{+0.04}_{-0.04}$	199^{+163}_{-80}	243^{+322}_{-75}	233^{+145}_{-84}	251^{+185}_{-104}
2056	10.40 ± 7.61	$388.33^{+0.16}_{-0.16}$	$410.51^{+0.19}_{-0.19}$	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
2061*	8.54 ± 0.24	—	—	292^{+292}_{-106}	361^{+577}_{-112}	310^{+247}_{-98}	378^{+326}_{-156}
2067	5.52 ± 0.05	$259.10^{+0.04}_{-0.04}$	$255.94^{+0.04}_{-0.04}$	217^{+186}_{-85}	266^{+368}_{-82}	249^{+163}_{-87}	276^{+210}_{-114}
2068	4.04 ± 0.55	$212.26^{+0.03}_{-0.03}$	$202.78^{+0.04}_{-0.04}$	175^{+135}_{-72}	213^{+263}_{-66}	212^{+121}_{-80}	219^{+152}_{-92}
2069	$2.41^{\dagger}$	$152.60^{+0.05}_{-0.05}$	$137.93^{+0.06}_{-0.06}$	121^{+80}_{-54}	148^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
2070	2.09 ± 0.67	$139.33^{+0.06}_{-0.06}$	$124.03^{+0.07}_{-0.07}$	109^{+69}_{-50}	135^{+126}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
2074	3.89 ± 0.25	$207.20^{+0.03}_{-0.03}$	$197.14^{+0.04}_{-0.04}$	170^{+129}_{-71}	207^{+252}_{-65}	208^{+117}_{-79}	213^{+147}_{-90}
2077	1.25 ± 0.30	$100.33^{+0.09}_{-0.09}$	$84.53^{+0.10}_{-0.10}$	74^{+44}_{-36}	96^{+70}_{-32}	117^{+45}_{-58}	93^{+53}_{-45}
2079	1.97 ± 0.81	$134.16^{+0.07}_{-0.07}$	$118.68^{+0.07}_{-0.07}$	104^{+66}_{-48}	129^{+118}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
2080*	3.96 ± 0.15	—	—	172^{+132}_{-72}	210^{+257}_{-66}	210^{+119}_{-80}	216^{+149}_{-91}
2081	20.30 ± 3.46	$595.32^{+0.63}_{-0.63}$	$676.06^{+0.84}_{-0.84}$	503^{+668}_{-160}	648^{+1262}_{-210}	474^{+528}_{-132}	676^{+729}_{-297}
2083	4.81 ± 0.05	$237.29^{+0.03}_{-0.03}$	$230.96^{+0.04}_{-0.04}$	198^{+161}_{-79}	241^{+318}_{-75}	232^{+143}_{-84}	249^{+182}_{-103}
2087	5.99 ± 0.97	$272.99^{+0.05}_{-0.05}$	$272.02^{+0.05}_{-0.05}$	230^{+203}_{-89}	281^{+402}_{-87}	259^{+177}_{-89}	293^{+228}_{-121}
2090*	3.41 ± 0.16	—	—	155^{+113}_{-66}	189^{+218}_{-59}	194^{+103}_{-77}	193^{+128}_{-82}
2093	2.98 ± 0.78	$174.76^{+0.04}_{-0.04}$	$161.60^{+0.05}_{-0.05}$	141^{+98}_{-61}	172^{+188}_{-54}	181^{+91}_{-74}	174^{+112}_{-75}
2095	522.00 ± 427.00	$4737.72^{+46.67}_{-46.22}$	$7617.84^{+90.63}_{-89.57}$	2517^{+3113}_{-970}	3244^{+6790}_{-1369}	1712^{+2380}_{-671}	3171^{+6174}_{-1481}
2099	5.25 ± 2.17	$250.93^{+0.04}_{-0.04}$	$246.54^{+0.04}_{-0.04}$	210^{+177}_{-83}	256^{+349}_{-79}	242^{+156}_{-86}	266^{+199}_{-110}
2101	6.16 ± 0.69	$277.91^{+0.05}_{-0.05}$	$277.76^{+0.05}_{-0.05}$	234^{+209}_{-90}	287^{+413}_{-89}	263^{+182}_{-89}	299^{+235}_{-123}
2102	1.70 ± 0.39	$122.10^{+0.08}_{-0.08}$	$106.32^{+0.08}_{-0.08}$	93^{+57}_{-44}	117^{+99}_{-38}	136^{+56}_{-64}	115^{+67}_{-53}
2103	18.30 ± 5.01	$557.15^{+0.52}_{-0.52}$	$625.73^{+0.68}_{-0.68}$	472^{+609}_{-152}	606^{+1159}_{-195}	451^{+485}_{-127}	633^{+666}_{-275}
2105	$1.03^{\dagger}$	$88.66^{+0.10}_{-0.10}$	$73.16^{+0.11}_{-0.11}$	64^{+38}_{-32}	85^{+57}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
2106	7.85 ± 0.55	$324.46^{+0.08}_{-0.08}$	$332.82^{+0.09}_{-0.09}$	276^{+268}_{-101}	341^{+530}_{-106}	297^{+229}_{-95}	356^{+300}_{-147}
2110*	13.00 ± 0.29	—	—	383^{+443}_{-129}	482^{+860}_{-152}	382^{+363}_{-112}	505^{+489}_{-214}
2111	1.56 ± 0.32	$115.58^{+0.08}_{-0.08}$	$99.72^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+90}_{-36}	131^{+53}_{-62}	108^{+63}_{-51}
2112	20.20 ± 2.97	$593.44^{+0.63}_{-0.63}$	$673.57^{+0.83}_{-0.83}$	501^{+665}_{-159}	646^{+1257}_{-209}	473^{+526}_{-132}	674^{+725}_{-296}
2114	7.82 ± 5.01	$323.67^{+0.08}_{-0.08}$	$331.87^{+0.09}_{-0.09}$	275^{+267}_{-101}	340^{+528}_{-105}	297^{+228}_{-95}	355^{+299}_{-147}
2115	4.09 ± 1.90	$213.94^{+0.03}_{-0.03}$	$204.65^{+0.04}_{-0.04}$	176^{+136}_{-73}	215^{+267}_{-67}	213^{+122}_{-80}	221^{+154}_{-93}
2117	42.20 ± 34.10	$950.10^{+2.12}_{-2.11}$	$1166.92^{+3.09}_{-3.08}$	762^{+1196}_{-234}	1015^{+2137}_{-351}	663^{+897}_{-190}	1040^{+1295}_{-491}
2119	1.81 ± 0.67	$127.09^{+0.07}_{-0.07}$	$111.41^{+0.08}_{-0.08}$	98^{+61}_{-46}	122^{+107}_{-40}	141^{+59}_{-65}	121^{+71}_{-55}
2122*	8.62 ± 0.43	—	—	294^{+295}_{-106}	364^{+582}_{-113}	312^{+250}_{-98}	380^{+329}_{-157}
2123	1.24 ± 0.17	$99.82^{+0.09}_{-0.09}$	$84.02^{+0.10}_{-0.10}$	74^{+44}_{-36}	95^{+70}_{-32}	116^{+45}_{-58}	92^{+53}_{-45}
2125	34.90 ± 1.94	$841.55^{+1.58}_{-1.58}$	$1012.78^{+2.25}_{-2.25}$	687^{+1041}_{-211}	908^{+1887}_{-308}	609^{+791}_{-171}	936^{+1125}_{-433}
2126	8.77 ± 2.27	$348.26^{+0.11}_{-0.11}$	$361.50^{+0.12}_{-0.12}$	297^{+300}_{-107}	368^{+592}_{-114}	314^{+254}_{-99}	385^{+335}_{-159}
2129	1.08 ± 0.89	$91.38^{+0.10}_{-0.10}$	$75.80^{+0.10}_{-0.10}$	67^{+39}_{-33}	87^{+60}_{-29}	109^{+42}_{-56}	84^{+49}_{-41}
2132	$2.71^{\dagger}$	$164.48^{+0.05}_{-0.05}$	$150.55^{+0.05}_{-0.05}$	131^{+89}_{-58}	161^{+169}_{-51}	173^{+83}_{-72}	163^{+102}_{-71}
2133	1.43 ± 1.29	$109.33^{+0.09}_{-0.09}$	$93.45^{+0.09}_{-0.09}$	82^{+49}_{-40}	104^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
2138*	3.11 ± 0.08	—	—	145^{+103}_{-63}	177^{+197}_{-56}	185^{+95}_{-75}	180^{+117}_{-77}
2140	$0.55^{\dagger}$	$59.52^{+0.13}_{-0.13}$	$45.94^{+0.12}_{-0.12}$	41^{+25}_{-21}	59^{+29}_{-21}	79^{+32}_{-46}	54^{+36}_{-29}
2142	4.99 ± 2.78	$242.92^{+0.04}_{-0.04}$	$237.37^{+0.04}_{-0.04}$	203^{+168}_{-81}	247^{+331}_{-77}	236^{+148}_{-85}	256^{+189}_{-106}
2143	4.37 ± 1.13	$223.18^{+0.03}_{-0.03}$	$215.01^{+0.04}_{-0.04}$	185^{+146}_{-75}	225^{+287}_{-70}	221^{+131}_{-82}	232^{+165}_{-97}
2145	13.30 ± 8.05	$454.40^{+0.27}_{-0.27}$	$493.18^{+0.34}_{-0.34}$	388^{+453}_{-130}	490^{+878}_{-154}	386^{+370}_{-112}	513^{+500}_{-217}
2146	32.30 ± 17.20	$800.94^{+1.40}_{-1.40}$	$955.95^{+1.97}_{-1.97}$	658^{+981}_{-202}	867^{+1790}_{-292}	588^{+749}_{-165}	895^{+1061}_{-411}
2148	1.50 ± 0.53	$112.72^{+0.08}_{-0.08}$	$96.84^{+0.09}_{-0.09}$	85^{+51}_{-41}	108^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-50}
2149	1.03 ± 0.13	$88.66^{+0.10}_{-0.10}$	$73.16^{+0.11}_{-0.11}$	64^{+38}_{-32}	85^{+57}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
2151*	22.30 ± 0.50	—	—	532^{+725}_{-167}	689^{+1360}_{-224}	495^{+569}_{-138}	717^{+789}_{-317}
2152	$0.14^{\dagger}$	$24.66^{+0.14}_{-0.14}$	$16.42^{+0.11}_{-0.11}$	16^{+15}_{-9}	31^{+11}_{-12}	44^{+29}_{-31}	27^{+33}_{-17}
2155	26.50 ± 5.32	$705.81^{+1.01}_{-1.01}$	$824.75^{+1.39}_{-1.39}$	588^{+838}_{-183}	768^{+1552}_{-254}	537^{+649}_{-149}	796^{+908}_{-359}
2156*	8.31 ± 0.09	—	—	287^{+284}_{-104}	354^{+561}_{-110}	306^{+241}_{-97}	370^{+318}_{-153}
2159	$2.25^{\dagger}$	$146.05^{+0.06}_{-0.06}$	$131.04^{+0.06}_{-0.06}$	115^{+74}_{-52}	142^{+137}_{-45}	157^{+71}_{-69}	142^{+86}_{-63}
2161	24.50 ± 15.90	$671.31^{+0.88}_{-0.88}$	$777.86^{+1.20}_{-1.20}$	562^{+785}_{-175}	731^{+1463}_{-240}	518^{+612}_{-144}	760^{+852}_{-339}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
2163	17.30 ± 5.46	$537.51^{+0.47}_{-0.47}$	$600.04^{+0.61}_{-0.61}$	457^{+579}_{-148}	584^{+1106}_{-187}	439^{+463}_{-124}	610^{+634}_{-264}
2167	23.60 ± 4.69	$655.45^{+0.83}_{-0.83}$	$756.44^{+1.12}_{-1.12}$	550^{+761}_{-172}	714^{+1421}_{-234}	509^{+594}_{-141}	742^{+827}_{-331}
2181	2.56 ± 0.86	$158.60^{+0.05}_{-0.05}$	$144.29^{+0.06}_{-0.06}$	126^{+84}_{-56}	155^{+158}_{-49}	168^{+79}_{-71}	156^{+97}_{-68}
2187	1.87 ± 1.65	$129.77^{+0.07}_{-0.07}$	$114.15^{+0.07}_{-0.07}$	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
2188	2.50 ± 0.63	$156.22^{+0.05}_{-0.05}$	$141.76^{+0.06}_{-0.06}$	124^{+82}_{-55}	152^{+154}_{-48}	166^{+78}_{-71}	153^{+95}_{-67}
2189	2.09 ± 0.70	$139.33^{+0.06}_{-0.06}$	$124.03^{+0.07}_{-0.07}$	109^{+69}_{-50}	135^{+126}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
2190	3.62 ± 0.35	$197.89^{+0.04}_{-0.04}$	$186.84^{+0.04}_{-0.04}$	162^{+120}_{-68}	197^{+233}_{-62}	200^{+109}_{-78}	202^{+136}_{-85}
2191	8.07 ± 1.63	$330.24^{+0.09}_{-0.09}$	$339.75^{+0.10}_{-0.10}$	281^{+276}_{-103}	347^{+545}_{-108}	301^{+235}_{-96}	363^{+308}_{-150}
2193*	9.44 ± 0.33	—	—	312^{+324}_{-111}	387^{+636}_{-120}	326^{+272}_{-101}	405^{+360}_{-168}
2197	2.35 ± 0.41	$150.16^{+0.06}_{-0.06}$	$135.36^{+0.06}_{-0.06}$	118^{+78}_{-53}	146^{+144}_{-47}	161^{+73}_{-70}	146^{+90}_{-65}
2201	13.10 ± 5.56	$450.02^{+0.27}_{-0.27}$	$487.63^{+0.33}_{-0.33}$	384^{+447}_{-129}	485^{+866}_{-153}	384^{+365}_{-112}	508^{+493}_{-215}
2202	$0.56^{\dagger}$	$59.80^{+0.13}_{-0.13}$	$46.19^{+0.12}_{-0.12}$	41^{+25}_{-21}	59^{+30}_{-21}	79^{+32}_{-46}	54^{+36}_{-30}
2203	3.65 ± 1.09	$198.94^{+0.04}_{-0.04}$	$187.99^{+0.04}_{-0.04}$	163^{+121}_{-68}	198^{+235}_{-62}	201^{+110}_{-78}	203^{+138}_{-86}
2204	2.52 ± 2.47	$157.01^{+0.05}_{-0.05}$	$142.60^{+0.06}_{-0.06}$	125^{+83}_{-56}	153^{+155}_{-49}	167^{+78}_{-71}	154^{+96}_{-68}
2205	$95.00^{\dagger}$	$1595.48^{+6.50}_{-6.47}$	$2137.50^{+10.42}_{-10.37}$	1154^{+1947}_{-377}	1563^{+3305}_{-590}	934^{+1400}_{-306}	1568^{+2224}_{-783}
2206	14.30 ± 6.41	$475.94^{+0.32}_{-0.32}$	$520.58^{+0.40}_{-0.40}$	406^{+485}_{-135}	515^{+937}_{-163}	400^{+394}_{-115}	539^{+534}_{-229}
2207	$0.76^{\dagger}$	$72.83^{+0.12}_{-0.12}$	$58.15^{+0.12}_{-0.12}$	51^{+30}_{-26}	70^{+41}_{-24}	91^{+35}_{-50}	66^{+40}_{-34}
2211	6.64 ± 0.51	$291.56^{+0.06}_{-0.06}$	$293.75^{+0.06}_{-0.06}$	247^{+226}_{-93}	303^{+447}_{-94}	273^{+195}_{-91}	315^{+253}_{-130}
2213	3.36 ± 0.52	$188.69^{+0.04}_{-0.04}$	$176.73^{+0.04}_{-0.04}$	153^{+111}_{-65}	187^{+215}_{-59}	193^{+102}_{-76}	191^{+127}_{-81}
2217	91.00 ± 8.63	$1552.23^{+6.14}_{-6.12}$	$2070.00^{+9.81}_{-9.77}$	1130^{+1906}_{-367}	1530^{+3240}_{-575}	918^{+1373}_{-298}	1537^{+2165}_{-766}
2219	1.22 ± 0.71	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
2220	11.90 ± 3.51	$423.23^{+0.22}_{-0.22}$	$453.91^{+0.26}_{-0.26}$	362^{+407}_{-124}	454^{+793}_{-142}	366^{+335}_{-108}	476^{+450}_{-200}
2228*	3.47 ± 0.13	—	—	157^{+115}_{-67}	191^{+222}_{-60}	196^{+105}_{-77}	195^{+131}_{-83}
2230	$1.32^{\dagger}$	$103.88^{+0.09}_{-0.09}$	$88.04^{+0.09}_{-0.09}$	77^{+46}_{-38}	99^{+75}_{-33}	120^{+47}_{-59}	96^{+56}_{-46}
2232	3.91 ± 0.28	$207.88^{+0.03}_{-0.03}$	$197.89^{+0.04}_{-0.04}$	171^{+130}_{-71}	208^{+254}_{-65}	209^{+117}_{-79}	214^{+148}_{-90}
2233	11.20 ± 4.50	$407.16^{+0.19}_{-0.19}$	$433.84^{+0.23}_{-0.23}$	348^{+384}_{-120}	436^{+749}_{-136}	355^{+317}_{-106}	457^{+425}_{-191}
2240	1.14 ± 0.73	$94.60^{+0.10}_{-0.10}$	$78.92^{+0.10}_{-0.10}$	70^{+41}_{-34}	90^{+63}_{-30}	112^{+43}_{-57}	87^{+50}_{-43}
2244	1.86 ± 0.65	$129.33^{+0.07}_{-0.07}$	$113.70^{+0.08}_{-0.07}$	100^{+62}_{-46}	124^{+110}_{-40}	143^{+60}_{-65}	123^{+73}_{-56}
2252	1.78 ± 0.46	$125.74^{+0.07}_{-0.07}$	$110.03^{+0.08}_{-0.08}$	97^{+60}_{-45}	121^{+105}_{-39}	140^{+58}_{-64}	119^{+70}_{-55}
2253	1.89 ± 0.35	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
2254	3.38 ± 1.20	$189.41^{+0.04}_{-0.04}$	$177.52^{+0.04}_{-0.04}$	154^{+112}_{-66}	188^{+216}_{-59}	194^{+102}_{-77}	192^{+127}_{-82}
2255	2.61 ± 0.14	$160.57^{+0.05}_{-0.05}$	$146.38^{+0.05}_{-0.05}$	128^{+86}_{-57}	157^{+162}_{-50}	170^{+81}_{-72}	158^{+99}_{-69}
2265	4.61 ± 2.20	$230.94^{+0.03}_{-0.03}$	$223.76^{+0.04}_{-0.04}$	192^{+154}_{-78}	234^{+304}_{-73}	227^{+137}_{-83}	241^{+174}_{-100}
2267	6.62 ± 1.13	$290.99^{+0.06}_{-0.06}$	$293.09^{+0.06}_{-0.06}$	246^{+225}_{-93}	302^{+446}_{-93}	273^{+194}_{-91}	315^{+253}_{-130}
2268	2.38 ± 1.44	$151.38^{+0.05}_{-0.05}$	$136.65^{+0.06}_{-0.06}$	120^{+79}_{-54}	147^{+146}_{-47}	162^{+74}_{-70}	148^{+91}_{-65}
2271	1.85 ± 0.75	$128.88^{+0.07}_{-0.07}$	$113.24^{+0.08}_{-0.08}$	99^{+62}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	123^{+72}_{-56}
2273	22.00 ± 1.22	$626.70^{+0.73}_{-0.73}$	$717.85^{+0.98}_{-0.98}$	527^{+717}_{-166}	683^{+1346}_{-222}	492^{+563}_{-137}	711^{+780}_{-314}
2276	4.39 ± 0.42	$223.83^{+0.03}_{-0.03}$	$215.74^{+0.04}_{-0.04}$	185^{+147}_{-76}	226^{+288}_{-70}	221^{+131}_{-82}	233^{+166}_{-97}
2277	3.74 ± 0.76	$202.06^{+0.03}_{-0.03}$	$191.44^{+0.04}_{-0.04}$	166^{+124}_{-69}	202^{+242}_{-63}	204^{+112}_{-79}	207^{+141}_{-87}
2279	13.80 ± 3.04	$465.24^{+0.30}_{-0.30}$	$506.94^{+0.37}_{-0.37}$	397^{+469}_{-133}	502^{+908}_{-159}	393^{+382}_{-114}	526^{+517}_{-223}
2283	$174.00^{\dagger}$	$2348.47^{+13.68}_{-13.61}$	$3356.97^{+23.52}_{-23.36}$	1536^{+2496}_{-544}	2065^{+4243}_{-827}	1178^{+1771}_{-430}	2048^{+3208}_{-1033}
2287*	3.00 ± 0.18	—	—	141^{+99}_{-61}	173^{+189}_{-55}	182^{+92}_{-74}	175^{+113}_{-75}
2288	12.10 ± 7.94	$427.76^{+0.22}_{-0.22}$	$459.59^{+0.27}_{-0.27}$	366^{+414}_{-125}	460^{+805}_{-144}	369^{+340}_{-109}	481^{+457}_{-202}
2289	$1.44^{\dagger}$	$109.82^{+0.09}_{-0.09}$	$93.94^{+0.09}_{-0.09}$	83^{+49}_{-40}	105^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
2290	$0.94^{\dagger}$	$83.51^{+0.11}_{-0.11}$	$68.23^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	101^{+39}_{-54}	76^{+45}_{-38}
2291	53.10 ± 51.90	$1100.30^{+2.96}_{-2.95}$	$1385.06^{+4.44}_{-4.42}$	861^{+1398}_{-266}	1155^{+2454}_{-409}	733^{+1034}_{-217}	1177^{+1522}_{-566}
2298	1.94 ± 0.38	$132.85^{+0.07}_{-0.07}$	$117.33^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+115}_{-41}	146^{+63}_{-66}	127^{+75}_{-58}
2304	2.18 ± 0.90	$143.13^{+0.06}_{-0.06}$	$127.99^{+0.07}_{-0.07}$	112^{+72}_{-51}	139^{+132}_{-44}	155^{+69}_{-68}	138^{+84}_{-62}
2306	10.10 ± 1.97	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}

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Trigger[a]	HR_H [b] Hardness	Mean[$E_{p,obs}$][c] OLS(Y|X)	Mean[$E_{p,obs}$][d] OLS bisector	Mode[$E_{p,obs}$][e] Band	Mode[$E_{p,obs}$][f] COMP(CPL)	Mode[$E_{p,obs}$][g] SBPL	Mean[$E_{p,obs}$][h] Expected
2309	10.90 ± 1.31	$400.16^{+0.18}_{-0.18}$	$425.15^{+0.21}_{-0.21}$	342^{+373}_{-119}	428^{+731}_{-134}	350^{+310}_{-105}	448^{+414}_{-187}
2310	2.21 ± 1.72	$144.38^{+0.06}_{-0.06}$	$129.30^{+0.06}_{-0.06}$	113^{+73}_{-52}	140^{+134}_{-45}	156^{+70}_{-68}	140^{+85}_{-62}
2311	5.57 ± 2.44	$260.60^{+0.04}_{-0.04}$	$257.66^{+0.04}_{-0.04}$	219^{+188}_{-85}	267^{+372}_{-83}	250^{+165}_{-87}	277^{+212}_{-115}
2312	29.10 ± 9.57	$749.30^{+1.18}_{-1.18}$	$884.38^{+1.65}_{-1.64}$	620^{+904}_{-192}	813^{+1662}_{-271}	561^{+695}_{-156}	842^{+979}_{-383}
2315	2.71 ± 0.33	$164.48^{+0.05}_{-0.05}$	$150.55^{+0.05}_{-0.05}$	131^{+89}_{-58}	161^{+169}_{-51}	173^{+83}_{-72}	163^{+102}_{-71}
2316*	3.32 ± 0.10	—	—	152^{+110}_{-65}	186^{+212}_{-58}	192^{+101}_{-76}	189^{+125}_{-81}
2317	1.31 ± 0.16	$103.38^{+0.09}_{-0.09}$	$87.54^{+0.10}_{-0.10}$	77^{+46}_{-37}	99^{+74}_{-33}	120^{+47}_{-59}	96^{+55}_{-46}
2320	7.21 ± 0.48	$307.31^{+0.07}_{-0.07}$	$312.36^{+0.07}_{-0.07}$	261^{+246}_{-97}	321^{+486}_{-99}	285^{+211}_{-93}	335^{+275}_{-138}
2321	2.76 ± 0.25	$166.41^{+0.05}_{-0.05}$	$152.61^{+0.05}_{-0.05}$	133^{+91}_{-59}	163^{+172}_{-52}	175^{+85}_{-73}	165^{+104}_{-72}
2324	2.79 ± 0.41	$167.56^{+0.05}_{-0.05}$	$153.85^{+0.05}_{-0.05}$	134^{+92}_{-59}	164^{+174}_{-52}	175^{+86}_{-73}	166^{+105}_{-72}
2325	$3.45^{\dagger}$	$191.90^{+0.04}_{-0.04}$	$180.25^{+0.04}_{-0.04}$	156^{+114}_{-66}	191^{+221}_{-60}	196^{+104}_{-77}	195^{+130}_{-83}
2326	64.60 ± 26.10	$1247.09^{+3.89}_{-3.88}$	$1603.15^{+5.98}_{-5.95}$	952^{+1579}_{-299}	1284^{+2734}_{-465}	797^{+1155}_{-243}	1301^{+1737}_{-636}
2327	$6.83^{\dagger}$	$296.86^{+0.06}_{-0.06}$	$300.00^{+0.07}_{-0.07}$	251^{+233}_{-95}	309^{+460}_{-96}	277^{+200}_{-92}	322^{+261}_{-133}
2328	1.91 ± 0.36	$131.54^{+0.07}_{-0.07}$	$115.97^{+0.07}_{-0.07}$	102^{+64}_{-47}	127^{+113}_{-41}	145^{+62}_{-66}	126^{+74}_{-57}
2329	22.90 ± 0.13	$642.96^{+0.79}_{-0.78}$	$739.64^{+1.06}_{-1.06}$	540^{+742}_{-170}	700^{+1389}_{-229}	502^{+581}_{-139}	729^{+806}_{-324}
2330	22.20 ± 1.87	$630.34^{+0.74}_{-0.74}$	$722.71^{+1.00}_{-1.00}$	530^{+722}_{-167}	687^{+1355}_{-224}	494^{+567}_{-137}	715^{+786}_{-316}
2332	18.30 ± 16.40	$557.15^{+0.52}_{-0.52}$	$625.73^{+0.68}_{-0.68}$	472^{+609}_{-152}	606^{+1159}_{-195}	451^{+485}_{-127}	633^{+666}_{-275}
2340	2.59 ± 0.61	$159.79^{+0.05}_{-0.05}$	$145.55^{+0.05}_{-0.05}$	127^{+85}_{-57}	156^{+160}_{-50}	169^{+80}_{-71}	157^{+98}_{-69}
2344	20.20 ± 3.49	$593.44^{+0.63}_{-0.63}$	$673.57^{+0.83}_{-0.83}$	501^{+665}_{-159}	646^{+1257}_{-209}	473^{+526}_{-132}	674^{+725}_{-296}
2345	5.47 ± 1.16	$257.60^{+0.04}_{-0.04}$	$254.21^{+0.04}_{-0.04}$	216^{+185}_{-85}	264^{+365}_{-82}	248^{+162}_{-87}	274^{+208}_{-113}
2346	1.44 ± 0.30	$109.82^{+0.09}_{-0.09}$	$93.94^{+0.09}_{-0.09}$	83^{+49}_{-40}	105^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
2347	3.50 ± 1.98	$193.67^{+0.04}_{-0.04}$	$182.20^{+0.04}_{-0.04}$	158^{+116}_{-67}	193^{+224}_{-60}	197^{+106}_{-77}	197^{+132}_{-83}
2349	$1.00^{\dagger}$	$86.83^{+0.11}_{-0.11}$	$71.41^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+55}_{-28}	105^{+40}_{-55}	79^{+46}_{-40}
2352	3.89 ± 2.46	$207.20^{+0.03}_{-0.03}$	$197.14^{+0.04}_{-0.04}$	170^{+129}_{-71}	207^{+252}_{-65}	208^{+117}_{-79}	213^{+147}_{-90}
2353	9.01 ± 2.43	$354.32^{+0.11}_{-0.11}$	$368.85^{+0.13}_{-0.13}$	302^{+309}_{-108}	375^{+608}_{-116}	319^{+260}_{-99}	392^{+344}_{-163}
2357	5.11 ± 1.44	$246.64^{+0.04}_{-0.04}$	$241.62^{+0.04}_{-0.04}$	206^{+172}_{-82}	252^{+339}_{-78}	239^{+152}_{-85}	260^{+194}_{-108}
2358	$12.00^{\dagger}$	$425.50^{+0.22}_{-0.22}$	$456.75^{+0.27}_{-0.27}$	364^{+410}_{-124}	457^{+799}_{-143}	367^{+338}_{-109}	479^{+454}_{-201}
2360	4.61 ± 2.32	$230.94^{+0.03}_{-0.03}$	$223.76^{+0.04}_{-0.04}$	192^{+154}_{-78}	234^{+304}_{-73}	227^{+137}_{-83}	241^{+174}_{-100}
2362	0.67 ± 0.53	$67.23^{+0.12}_{-0.12}$	$52.97^{+0.12}_{-0.12}$	47^{+28}_{-24}	65^{+36}_{-23}	86^{+34}_{-48}	61^{+38}_{-32}
2365	$5.80^{\dagger}$	$267.42^{+0.04}_{-0.04}$	$265.56^{+0.05}_{-0.05}$	225^{+196}_{-87}	275^{+388}_{-85}	255^{+171}_{-88}	286^{+221}_{-118}
2367	2.54 ± 1.37	$157.81^{+0.05}_{-0.05}$	$143.45^{+0.06}_{-0.06}$	125^{+84}_{-56}	154^{+157}_{-49}	167^{+79}_{-71}	155^{+96}_{-68}
2368	10.10 ± 5.62	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
2371	3.91 ± 0.16	$207.88^{+0.03}_{-0.03}$	$197.89^{+0.04}_{-0.04}$	171^{+130}_{-71}	208^{+254}_{-65}	209^{+117}_{-79}	214^{+148}_{-90}
2372	9.82 ± 8.92	$374.35^{+0.14}_{-0.14}$	$393.31^{+0.16}_{-0.16}$	320^{+337}_{-113}	398^{+661}_{-124}	333^{+282}_{-102}	417^{+374}_{-173}
2373	1.51 ± 0.80	$113.20^{+0.08}_{-0.08}$	$97.32^{+0.09}_{-0.09}$	86^{+51}_{-41}	108^{+87}_{-36}	128^{+52}_{-62}	106^{+61}_{-50}
2375	7.79 ± 1.52	$322.88^{+0.08}_{-0.08}$	$330.92^{+0.09}_{-0.09}$	275^{+266}_{-101}	339^{+526}_{-105}	296^{+227}_{-95}	354^{+298}_{-146}
2377	37.80 ± 3.51	$885.57^{+1.79}_{-1.79}$	$1074.91^{+2.58}_{-2.57}$	717^{+1105}_{-220}	952^{+1990}_{-326}	631^{+835}_{-179}	979^{+1195}_{-457}
2380	4.82 ± 0.73	$237.60^{+0.03}_{-0.03}$	$231.32^{+0.04}_{-0.04}$	198^{+162}_{-79}	241^{+319}_{-75}	232^{+143}_{-84}	249^{+183}_{-104}
2381	$0.68^{\dagger}$	$67.94^{+0.12}_{-0.12}$	$53.62^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-49}	62^{+39}_{-33}
2382	$12.50^{\dagger}$	$436.74^{+0.24}_{-0.24}$	$470.88^{+0.30}_{-0.30}$	373^{+427}_{-127}	470^{+830}_{-148}	375^{+350}_{-110}	492^{+472}_{-207}
2383	19.50 ± 0.90	$580.22^{+0.59}_{-0.59}$	$656.08^{+0.78}_{-0.77}$	491^{+645}_{-157}	632^{+1221}_{-204}	465^{+511}_{-130}	659^{+704}_{-288}
2384	$6.72^{\dagger}$	$293.80^{+0.06}_{-0.06}$	$296.38^{+0.06}_{-0.06}$	249^{+229}_{-94}	305^{+453}_{-94}	275^{+197}_{-91}	318^{+257}_{-131}
2385	2.73 ± 1.48	$165.25^{+0.05}_{-0.05}$	$151.38^{+0.05}_{-0.05}$	132^{+90}_{-58}	162^{+170}_{-51}	174^{+84}_{-72}	163^{+103}_{-71}
2387*	3.41 ± 0.13	—	—	155^{+113}_{-66}	189^{+218}_{-59}	194^{+103}_{-77}	193^{+128}_{-82}
2389*	2.05 ± 0.07	—	—	107^{+68}_{-49}	133^{+123}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
2391	12.10 ± 3.41	$427.76^{+0.22}_{-0.22}$	$459.59^{+0.27}_{-0.27}$	366^{+414}_{-125}	460^{+805}_{-144}	369^{+340}_{-109}	481^{+457}_{-202}
2392	1.29 ± 1.01	$102.37^{+0.09}_{-0.09}$	$86.54^{+0.10}_{-0.10}$	76^{+45}_{-37}	98^{+73}_{-33}	119^{+46}_{-59}	95^{+55}_{-45}
2393	1.03 ± 0.18	$88.66^{+0.10}_{-0.10}$	$73.16^{+0.11}_{-0.11}$	64^{+38}_{-32}	85^{+57}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
2394	2.50 ± 0.54	$156.22^{+0.05}_{-0.05}$	$141.76^{+0.06}_{-0.06}$	124^{+82}_{-55}	152^{+154}_{-48}	166^{+78}_{-71}	153^{+95}_{-67}

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Trigger[a]	HR_H [b] Hardness	Mean[$E_{p,obs}$][c] OLS(Y|X)	Mean[$E_{p,obs}$][d] OLS bisector	Mode[$E_{p,obs}$][e] Band	Mode[$E_{p,obs}$][f] COMP(CPL)	Mode[$E_{p,obs}$][g] SBPL	Mean[$E_{p,obs}$][h] Expected
2395	$5.61^{\dagger}$	$261.79^{+0.04}_{-0.04}$	$259.04^{+0.04}_{-0.04}$	220^{+189}_{-86}	269^{+375}_{-83}	251^{+166}_{-87}	279^{+213}_{-115}
2401	8.56 ± 8.46	$342.91^{+0.10}_{-0.10}$	$355.02^{+0.12}_{-0.12}$	292^{+293}_{-106}	362^{+578}_{-112}	311^{+248}_{-98}	378^{+327}_{-157}
2405	5.02 ± 2.56	$243.85^{+0.04}_{-0.04}$	$238.44^{+0.04}_{-0.04}$	204^{+169}_{-81}	248^{+333}_{-77}	237^{+149}_{-85}	257^{+190}_{-107}
2408	4.08 ± 3.12	$213.60^{+0.03}_{-0.03}$	$204.27^{+0.04}_{-0.04}$	176^{+136}_{-73}	215^{+266}_{-67}	213^{+122}_{-80}	220^{+154}_{-92}
2412	174.00 ± 35.50	$2348.47^{+13.68}_{-13.61}$	$3356.97^{+23.52}_{-23.36}$	1536^{+2496}_{-544}	2065^{+4243}_{-827}	1178^{+1771}_{-430}	2048^{+3208}_{-1033}
2419	7.41 ± 2.23	$312.72^{+0.07}_{-0.07}$	$318.80^{+0.08}_{-0.08}$	265^{+253}_{-99}	327^{+500}_{-101}	289^{+216}_{-94}	341^{+283}_{-141}
2423	1.12 ± 0.75	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
2424	$20.80^{\dagger}$	$604.64^{+0.66}_{-0.66}$	$688.44^{+0.88}_{-0.88}$	510^{+683}_{-162}	659^{+1287}_{-213}	479^{+538}_{-134}	686^{+744}_{-302}
2428	7.24 ± 0.73	$308.12^{+0.07}_{-0.07}$	$313.33^{+0.08}_{-0.08}$	261^{+247}_{-97}	322^{+488}_{-100}	285^{+212}_{-93}	336^{+277}_{-139}
2429	2.75 ± 0.20	$166.02^{+0.05}_{-0.05}$	$152.20^{+0.05}_{-0.05}$	133^{+91}_{-58}	163^{+171}_{-52}	174^{+85}_{-73}	164^{+104}_{-71}
2430	2.17 ± 0.84	$142.71^{+0.06}_{-0.06}$	$127.55^{+0.07}_{-0.07}$	112^{+72}_{-51}	138^{+131}_{-44}	154^{+69}_{-68}	138^{+83}_{-62}
2431*	4.05 ± 0.18	—	—	175^{+135}_{-72}	213^{+264}_{-67}	212^{+121}_{-80}	219^{+153}_{-92}
2432	3.74 ± 0.63	$202.06^{+0.03}_{-0.03}$	$191.44^{+0.04}_{-0.04}$	166^{+124}_{-69}	202^{+242}_{-63}	204^{+112}_{-79}	207^{+141}_{-87}
2434	$1.18^{\dagger}$	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
2435	1.52 ± 0.27	$113.68^{+0.08}_{-0.08}$	$97.80^{+0.09}_{-0.09}$	86^{+52}_{-41}	109^{+88}_{-36}	129^{+52}_{-62}	106^{+62}_{-50}
2436	7.30 ± 0.39	$309.75^{+0.07}_{-0.07}$	$315.26^{+0.08}_{-0.08}$	263^{+249}_{-98}	324^{+493}_{-100}	287^{+213}_{-94}	338^{+279}_{-139}
2437	3.41 ± 2.47	$190.48^{+0.04}_{-0.04}$	$178.69^{+0.04}_{-0.04}$	155^{+113}_{-66}	189^{+218}_{-59}	194^{+103}_{-77}	193^{+128}_{-82}
2438	0.81 ± 0.47	$75.74^{+0.12}_{-0.12}$	$60.88^{+0.12}_{-0.12}$	54^{+32}_{-27}	73^{+43}_{-25}	94^{+36}_{-51}	69^{+42}_{-35}
2440	1.24 ± 0.50	$99.82^{+0.09}_{-0.09}$	$84.02^{+0.10}_{-0.10}$	74^{+44}_{-36}	95^{+70}_{-32}	116^{+45}_{-58}	92^{+53}_{-45}
2441	6.84 ± 2.04	$297.14^{+0.06}_{-0.06}$	$300.32^{+0.07}_{-0.07}$	252^{+233}_{-95}	309^{+461}_{-96}	277^{+201}_{-92}	322^{+261}_{-133}
2442	$0.98^{\dagger}$	$85.83^{+0.11}_{-0.11}$	$70.44^{+0.11}_{-0.11}$	62^{+36}_{-31}	82^{+54}_{-28}	104^{+39}_{-54}	78^{+46}_{-39}
2443	5.78 ± 0.65	$266.83^{+0.04}_{-0.04}$	$264.88^{+0.05}_{-0.05}$	224^{+195}_{-87}	274^{+387}_{-85}	255^{+171}_{-88}	285^{+220}_{-118}
2446	4.99 ± 0.39	$242.92^{+0.04}_{-0.04}$	$237.37^{+0.04}_{-0.04}$	203^{+168}_{-81}	247^{+331}_{-77}	236^{+148}_{-85}	256^{+189}_{-106}
2447	1.71 ± 0.90	$122.56^{+0.07}_{-0.07}$	$106.79^{+0.08}_{-0.08}$	94^{+57}_{-44}	118^{+100}_{-38}	137^{+57}_{-64}	116^{+68}_{-53}
2448	42.50 ± 13.30	$954.41^{+2.14}_{-2.13}$	$1173.10^{+3.12}_{-3.11}$	765^{+1202}_{-235}	1019^{+2146}_{-353}	665^{+901}_{-191}	1045^{+1301}_{-493}
2449	37.90 ± 19.60	$887.07^{+1.80}_{-1.79}$	$1077.03^{+2.59}_{-2.58}$	718^{+1107}_{-220}	953^{+1994}_{-326}	632^{+836}_{-179}	980^{+1197}_{-458}
2450*	3.38 ± 0.20	—	—	154^{+112}_{-66}	188^{+216}_{-59}	194^{+102}_{-77}	192^{+127}_{-82}
2451	1.31 ± 0.20	$103.38^{+0.09}_{-0.09}$	$87.54^{+0.10}_{-0.10}$	77^{+46}_{-37}	99^{+74}_{-33}	120^{+47}_{-59}	96^{+55}_{-46}
2452	0.99 ± 0.24	$86.22^{+0.11}_{-0.11}$	$70.82^{+0.11}_{-0.11}$	62^{+37}_{-31}	82^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
2453	$0.60^{\dagger}$	$62.51^{+0.13}_{-0.13}$	$48.65^{+0.12}_{-0.12}$	43^{+26}_{-22}	61^{+32}_{-22}	82^{+32}_{-47}	57^{+37}_{-31}
2454	7.21 ± 5.21	$307.31^{+0.07}_{-0.07}$	$312.36^{+0.07}_{-0.07}$	261^{+246}_{-97}	321^{+486}_{-99}	285^{+211}_{-93}	335^{+275}_{-138}
2458	1.35 ± 0.81	$105.38^{+0.09}_{-0.09}$	$89.52^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
2460	$0.70^{\dagger}$	$69.46^{+0.12}_{-0.12}$	$55.03^{+0.12}_{-0.12}$	49^{+29}_{-25}	67^{+38}_{-23}	88^{+34}_{-49}	63^{+39}_{-33}
2463	$2.82^{\dagger}$	$168.71^{+0.05}_{-0.05}$	$155.08^{+0.05}_{-0.05}$	135^{+93}_{-59}	166^{+176}_{-52}	176^{+86}_{-73}	167^{+107}_{-72}
2464	$0.51^{\dagger}$	$56.87^{+0.13}_{-0.13}$	$43.56^{+0.13}_{-0.13}$	39^{+24}_{-20}	56^{+27}_{-20}	76^{+31}_{-45}	52^{+36}_{-28}
2472	3.79 ± 1.45	$203.78^{+0.03}_{-0.03}$	$193.34^{+0.04}_{-0.04}$	167^{+126}_{-70}	204^{+245}_{-64}	205^{+114}_{-79}	209^{+143}_{-88}
2476	0.85 ± 0.09	$78.42^{+0.11}_{-0.11}$	$63.40^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	97^{+37}_{-52}	71^{+43}_{-36}
2477	1.90 ± 0.39	$131.10^{+0.07}_{-0.07}$	$115.52^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+113}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
2482	1.12 ± 0.26	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
2484	2.20 ± 0.51	$143.97^{+0.06}_{-0.06}$	$128.86^{+0.06}_{-0.06}$	113^{+73}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
2485	$1.92^{\dagger}$	$131.98^{+0.07}_{-0.07}$	$116.42^{+0.07}_{-0.07}$	102^{+64}_{-47}	127^{+114}_{-41}	145^{+62}_{-66}	126^{+75}_{-57}
2487	26.60 ± 9.40	$707.51^{+1.02}_{-1.02}$	$827.07^{+1.40}_{-1.40}$	589^{+840}_{-183}	770^{+1556}_{-255}	538^{+651}_{-149}	798^{+911}_{-360}
2495	9.53 ± 1.58	$367.25^{+0.13}_{-0.13}$	$384.62^{+0.15}_{-0.15}$	314^{+327}_{-111}	390^{+642}_{-121}	328^{+274}_{-101}	408^{+364}_{-170}
2496	$3.01^{\dagger}$	$175.89^{+0.04}_{-0.04}$	$162.81^{+0.05}_{-0.05}$	142^{+99}_{-62}	173^{+190}_{-55}	182^{+92}_{-74}	176^{+114}_{-76}
2500	3.48 ± 0.44	$192.97^{+0.04}_{-0.04}$	$181.42^{+0.04}_{-0.04}$	157^{+115}_{-67}	192^{+223}_{-60}	196^{+105}_{-77}	196^{+131}_{-83}
2502	33.20 ± 8.53	$815.13^{+1.46}_{-1.46}$	$975.75^{+2.07}_{-2.07}$	668^{+1002}_{-205}	881^{+1824}_{-298}	596^{+764}_{-167}	909^{+1084}_{-419}
2504	$12.80^{\dagger}$	$443.41^{+0.25}_{-0.25}$	$479.28^{+0.31}_{-0.31}$	379^{+437}_{-128}	477^{+848}_{-150}	379^{+358}_{-111}	500^{+482}_{-211}
2505	1.69 ± 0.58	$121.65^{+0.08}_{-0.08}$	$105.85^{+0.08}_{-0.08}$	93^{+57}_{-44}	117^{+99}_{-38}	136^{+56}_{-64}	115^{+67}_{-53}
2508	39.20 ± 15.40	$906.38^{+1.89}_{-1.89}$	$1104.47^{+2.74}_{-2.73}$	732^{+1134}_{-225}	972^{+2038}_{-334}	642^{+855}_{-182}	999^{+1227}_{-468}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
2509	12.10 ± 1.74	$427.76^{+0.22}_{-0.22}$	$459.59^{+0.27}_{-0.27}$	366^{+414}_{-125}	460^{+805}_{-144}	369^{+340}_{-109}	481^{+457}_{-202}
2510	2.45 ± 0.85	$154.21^{+0.05}_{-0.05}$	$139.64^{+0.06}_{-0.06}$	122^{+81}_{-55}	150^{+150}_{-48}	164^{+76}_{-70}	151^{+93}_{-66}
2511	0.82 ± 0.52	$76.70^{+0.12}_{-0.12}$	$61.78^{+0.12}_{-0.12}$	55^{+32}_{-28}	74^{+44}_{-25}	95^{+36}_{-51}	70^{+42}_{-36}
2512	5.72 ± 1.92	$265.06^{+0.04}_{-0.04}$	$262.82^{+0.05}_{-0.05}$	223^{+193}_{-87}	272^{+382}_{-84}	253^{+169}_{-88}	283^{+218}_{-117}
2513	17.80 ± 13.40	$547.38^{+0.49}_{-0.49}$	$612.93^{+0.64}_{-0.64}$	465^{+594}_{-150}	595^{+1132}_{-191}	445^{+474}_{-125}	622^{+650}_{-270}
2514*	9.76 ± 0.52	—	—	318^{+335}_{-113}	396^{+657}_{-123}	332^{+280}_{-102}	415^{+372}_{-173}
2515	1.99 ± 1.47	$135.03^{+0.07}_{-0.07}$	$119.57^{+0.07}_{-0.07}$	105^{+66}_{-48}	130^{+119}_{-42}	148^{+64}_{-66}	129^{+77}_{-58}
2519	1.69 ± 0.42	$121.65^{+0.08}_{-0.08}$	$105.85^{+0.08}_{-0.08}$	93^{+57}_{-44}	117^{+99}_{-38}	136^{+56}_{-64}	115^{+67}_{-53}
2522*	3.66 ± 0.25	—	—	163^{+121}_{-69}	199^{+236}_{-62}	202^{+110}_{-78}	203^{+138}_{-86}
2523	21.30 ± 3.64	$613.89^{+0.69}_{-0.69}$	$700.74^{+0.92}_{-0.92}$	517^{+697}_{-164}	669^{+1312}_{-217}	485^{+549}_{-135}	697^{+759}_{-307}
2528	$0.67^{\dagger}$	$67.30^{+0.12}_{-0.12}$	$53.03^{+0.12}_{-0.12}$	47^{+28}_{-24}	65^{+36}_{-23}	86^{+34}_{-48}	61^{+39}_{-32}
2529	$1.77^{\dagger}$	$125.29^{+0.07}_{-0.07}$	$109.57^{+0.08}_{-0.08}$	96^{+59}_{-45}	120^{+104}_{-39}	139^{+58}_{-64}	119^{+70}_{-54}
2530	1.18 ± 0.09	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
2533*	12.70 ± 0.12	—	—	377^{+433}_{-128}	475^{+842}_{-149}	378^{+355}_{-111}	497^{+479}_{-210}
2536	21.60 ± 13.40	$619.40^{+0.71}_{-0.71}$	$708.09^{+0.95}_{-0.95}$	522^{+705}_{-165}	675^{+1326}_{-219}	488^{+555}_{-136}	703^{+768}_{-310}
2537*	1.35 ± 0.05	—	—	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
2541	3.59 ± 1.39	$196.84^{+0.04}_{-0.04}$	$185.68^{+0.04}_{-0.04}$	161^{+119}_{-68}	196^{+231}_{-61}	200^{+108}_{-78}	200^{+135}_{-85}
2551	6.69 ± 5.70	$292.96^{+0.06}_{-0.06}$	$295.40^{+0.06}_{-0.06}$	248^{+228}_{-94}	304^{+450}_{-94}	274^{+196}_{-91}	317^{+255}_{-131}
2560	11.30 ± 2.35	$409.48^{+0.19}_{-0.19}$	$436.73^{+0.23}_{-0.23}$	350^{+387}_{-121}	439^{+756}_{-137}	357^{+320}_{-106}	459^{+429}_{-192}
2564	14.40 ± 14.00	$478.06^{+0.32}_{-0.32}$	$523.29^{+0.41}_{-0.41}$	408^{+489}_{-135}	517^{+943}_{-164}	402^{+396}_{-116}	541^{+538}_{-230}
2569	2.91 ± 2.12	$172.13^{+0.04}_{-0.04}$	$158.76^{+0.05}_{-0.05}$	138^{+96}_{-60}	169^{+183}_{-53}	179^{+89}_{-74}	171^{+110}_{-74}
2570	6.43 ± 0.59	$285.63^{+0.05}_{-0.05}$	$286.79^{+0.06}_{-0.06}$	241^{+218}_{-92}	296^{+432}_{-92}	269^{+189}_{-90}	308^{+245}_{-127}
2571	15.50 ± 0.38	$501.08^{+0.38}_{-0.38}$	$552.83^{+0.48}_{-0.48}$	427^{+523}_{-140}	543^{+1006}_{-173}	416^{+422}_{-119}	568^{+575}_{-243}
2581	4.26 ± 0.82	$219.58^{+0.03}_{-0.03}$	$210.96^{+0.04}_{-0.04}$	181^{+142}_{-74}	221^{+279}_{-69}	218^{+127}_{-81}	228^{+161}_{-95}
2583	22.40 ± 6.10	$633.96^{+0.75}_{-0.75}$	$727.56^{+1.02}_{-1.01}$	533^{+728}_{-168}	691^{+1365}_{-225}	497^{+571}_{-138}	719^{+792}_{-318}
2585	$0.85^{\dagger}$	$78.30^{+0.11}_{-0.11}$	$63.29^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	97^{+37}_{-52}	71^{+43}_{-36}
2586	4.86 ± 0.29	$238.86^{+0.03}_{-0.03}$	$232.75^{+0.04}_{-0.04}$	199^{+163}_{-80}	243^{+322}_{-75}	233^{+145}_{-84}	251^{+184}_{-104}
2589	3.12 ± 2.26	$179.96^{+0.04}_{-0.04}$	$167.23^{+0.04}_{-0.04}$	145^{+103}_{-63}	178^{+198}_{-56}	186^{+95}_{-75}	181^{+118}_{-77}
2593	1.95 ± 0.77	$133.29^{+0.07}_{-0.07}$	$117.78^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+116}_{-42}	146^{+63}_{-66}	128^{+76}_{-58}
2597	9.36 ± 8.35	$363.05^{+0.12}_{-0.12}$	$379.49^{+0.15}_{-0.15}$	310^{+321}_{-110}	385^{+631}_{-120}	325^{+269}_{-100}	403^{+357}_{-167}
2599	114.00 ± 47.70	$1792.55^{+8.18}_{-8.15}$	$2448.87^{+13.41}_{-13.34}$	1260^{+2120}_{-421}	1706^{+3580}_{-656}	1003^{+1515}_{-340}	1704^{+2488}_{-857}
2600	1.13 ± 0.25	$94.06^{+0.10}_{-0.10}$	$78.40^{+0.10}_{-0.10}$	69^{+40}_{-34}	90^{+63}_{-30}	111^{+43}_{-57}	86^{+50}_{-42}
2603	1.07 ± 0.17	$90.84^{+0.10}_{-0.10}$	$75.27^{+0.11}_{-0.10}$	66^{+39}_{-33}	87^{+59}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
2606*	8.96 ± 0.24	—	—	301^{+307}_{-108}	373^{+605}_{-116}	318^{+259}_{-99}	391^{+342}_{-162}
2608	$0.68^{\dagger}$	$67.68^{+0.12}_{-0.12}$	$53.38^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-48}	61^{+39}_{-32}
2610	19.70 ± 3.82	$584.02^{+0.60}_{-0.60}$	$661.09^{+0.79}_{-0.79}$	494^{+651}_{-157}	636^{+1232}_{-205}	467^{+515}_{-131}	663^{+710}_{-290}
2611*	10.70 ± 0.34	—	—	338^{+367}_{-118}	422^{+718}_{-132}	347^{+305}_{-105}	442^{+407}_{-185}
2614	27.80 ± 2.18	$727.74^{+1.09}_{-1.09}$	$854.74^{+1.52}_{-1.51}$	604^{+871}_{-187}	791^{+1608}_{-263}	549^{+673}_{-153}	820^{+944}_{-371}
2615	20.90 ± 9.56	$606.50^{+0.67}_{-0.67}$	$690.91^{+0.89}_{-0.89}$	512^{+685}_{-162}	661^{+1292}_{-214}	481^{+540}_{-134}	688^{+747}_{-303}
2619	4.85 ± 0.42	$238.55^{+0.03}_{-0.03}$	$232.39^{+0.04}_{-0.04}$	199^{+163}_{-80}	242^{+321}_{-75}	233^{+144}_{-84}	251^{+184}_{-104}
2620	1.06 ± 0.52	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
2623	4.55 ± 1.68	$229.01^{+0.03}_{-0.03}$	$221.58^{+0.04}_{-0.04}$	190^{+152}_{-77}	232^{+299}_{-72}	225^{+136}_{-83}	239^{+172}_{-100}
2628	2.49 ± 0.18	$155.82^{+0.05}_{-0.05}$	$141.33^{+0.06}_{-0.06}$	124^{+82}_{-55}	152^{+153}_{-48}	166^{+77}_{-71}	153^{+95}_{-67}
2632	3.02 ± 2.25	$176.26^{+0.04}_{-0.04}$	$163.21^{+0.05}_{-0.05}$	142^{+100}_{-62}	174^{+190}_{-55}	183^{+92}_{-74}	176^{+114}_{-76}
2633	$6.07^{\dagger}$	$275.31^{+0.05}_{-0.05}$	$274.73^{+0.05}_{-0.05}$	232^{+206}_{-89}	284^{+407}_{-88}	261^{+179}_{-89}	295^{+231}_{-122}
2634	3.31 ± 0.85	$186.89^{+0.04}_{-0.04}$	$174.77^{+0.04}_{-0.04}$	152^{+109}_{-65}	185^{+211}_{-58}	192^{+100}_{-76}	189^{+125}_{-80}
2636	0.94 ± 0.63	$83.46^{+0.11}_{-0.11}$	$68.18^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	101^{+39}_{-54}	76^{+45}_{-38}
2640	5.22 ± 1.90	$250.02^{+0.04}_{-0.04}$	$245.49^{+0.04}_{-0.04}$	209^{+176}_{-83}	255^{+347}_{-79}	242^{+155}_{-86}	264^{+198}_{-110}
2641	4.26 ± 2.53	$219.58^{+0.03}_{-0.03}$	$210.96^{+0.04}_{-0.04}$	181^{+142}_{-74}	221^{+279}_{-69}	218^{+127}_{-81}	228^{+161}_{-95}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
2649	5.28 ± 3.50	$251.85^{+0.04}_{-0.04}$	$247.59^{+0.04}_{-0.04}$	211^{+178}_{-83}	257^{+351}_{-80}	243^{+157}_{-86}	267^{+201}_{-110}
2660	0.71 ± 0.31	$70.16^{+0.12}_{-0.12}$	$55.67^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	64^{+39}_{-33}
2662	3.15 ± 0.73	$181.07^{+0.04}_{-0.04}$	$168.43^{+0.04}_{-0.04}$	146^{+104}_{-63}	179^{+200}_{-56}	187^{+96}_{-75}	182^{+119}_{-78}
2663	1.22 ± 0.65	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
2664	3.85 ± 1.50	$205.83^{+0.03}_{-0.03}$	$195.62^{+0.04}_{-0.04}$	169^{+128}_{-70}	206^{+249}_{-64}	207^{+116}_{-79}	211^{+145}_{-89}
2665	2.84 ± 0.75	$169.47^{+0.04}_{-0.04}$	$155.90^{+0.05}_{-0.05}$	136^{+94}_{-60}	166^{+178}_{-53}	177^{+87}_{-73}	168^{+107}_{-73}
2671	$0.42^{\dagger}$	$50.06^{+0.14}_{-0.14}$	$37.54^{+0.13}_{-0.13}$	34^{+22}_{-18}	51^{+23}_{-18}	70^{+30}_{-42}	46^{+34}_{-26}
2677	5.85 ± 3.24	$268.89^{+0.04}_{-0.04}$	$267.27^{+0.05}_{-0.05}$	226^{+198}_{-88}	277^{+392}_{-86}	256^{+173}_{-88}	288^{+223}_{-119}
2679*	139.00 ± 5.30	—	—	1384^{+2302}_{-476}	1870^{+3885}_{-733}	1083^{+1638}_{-381}	1860^{+2805}_{-939}
2680	12.10 ± 7.54	$427.76^{+0.22}_{-0.22}$	$459.59^{+0.27}_{-0.27}$	366^{+414}_{-125}	460^{+805}_{-144}	369^{+340}_{-109}	481^{+457}_{-202}
2681	2.84 ± 0.31	$169.47^{+0.04}_{-0.04}$	$155.90^{+0.05}_{-0.05}$	136^{+94}_{-60}	166^{+178}_{-53}	177^{+87}_{-73}	168^{+107}_{-73}
2688	2.58 ± 0.61	$159.39^{+0.05}_{-0.05}$	$145.13^{+0.05}_{-0.05}$	127^{+85}_{-56}	156^{+160}_{-49}	169^{+80}_{-71}	157^{+98}_{-69}
2690	28.90 ± 12.30	$746.01^{+1.17}_{-1.17}$	$879.84^{+1.63}_{-1.62}$	618^{+899}_{-191}	810^{+1654}_{-270}	559^{+692}_{-156}	839^{+973}_{-381}
2691	66.80 ± 13.10	$1274.06^{+4.08}_{-4.06}$	$1643.70^{+6.28}_{-6.26}$	969^{+1610}_{-305}	1307^{+2783}_{-475}	808^{+1177}_{-248}	1323^{+1776}_{-648}
2693	$5.78^{\dagger}$	$266.83^{+0.04}_{-0.04}$	$264.88^{+0.05}_{-0.05}$	224^{+195}_{-87}	274^{+387}_{-85}	255^{+171}_{-88}	285^{+220}_{-118}
2695	3.24 ± 1.09	$184.36^{+0.04}_{-0.04}$	$172.00^{+0.04}_{-0.04}$	149^{+107}_{-64}	182^{+206}_{-57}	189^{+98}_{-76}	186^{+122}_{-79}
2696	1.22 ± 0.22	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
2697	3.43 ± 0.72	$191.19^{+0.04}_{-0.04}$	$179.47^{+0.04}_{-0.04}$	156^{+114}_{-66}	190^{+220}_{-60}	195^{+104}_{-77}	194^{+129}_{-82}
2700*	4.82 ± 0.29	—	—	198^{+162}_{-79}	241^{+319}_{-75}	232^{+143}_{-84}	249^{+183}_{-104}
2701	10.60 ± 5.96	$393.09^{+0.17}_{-0.17}$	$416.39^{+0.20}_{-0.20}$	336^{+363}_{-117}	420^{+711}_{-131}	346^{+302}_{-104}	440^{+403}_{-183}
2703*	6.15 ± 0.27	—	—	234^{+209}_{-90}	287^{+413}_{-89}	263^{+181}_{-89}	298^{+234}_{-123}
2706	3.74 ± 0.44	$202.06^{+0.03}_{-0.03}$	$191.44^{+0.04}_{-0.04}$	166^{+124}_{-69}	202^{+242}_{-63}	204^{+112}_{-79}	207^{+141}_{-87}
2709	3.36 ± 0.34	$188.69^{+0.04}_{-0.04}$	$176.73^{+0.04}_{-0.04}$	153^{+111}_{-65}	187^{+215}_{-59}	193^{+102}_{-76}	191^{+127}_{-81}
2711	0.70 ± 0.38	$69.02^{+0.12}_{-0.12}$	$54.62^{+0.12}_{-0.12}$	48^{+29}_{-25}	67^{+37}_{-23}	88^{+34}_{-49}	63^{+39}_{-33}
2715	148.00 ± 8.79	$2117.80^{+11.28}_{-11.22}$	$2975.22^{+19.04}_{-18.91}$	1425^{+2358}_{-494}	1923^{+3984}_{-759}	1109^{+1675}_{-394}	1911^{+2913}_{-965}
2719	2.04 ± 1.52	$137.19^{+0.06}_{-0.06}$	$121.81^{+0.07}_{-0.07}$	107^{+68}_{-49}	132^{+122}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
2725	17.30 ± 6.83	$537.51^{+0.47}_{-0.47}$	$600.04^{+0.61}_{-0.61}$	457^{+579}_{-148}	584^{+1106}_{-187}	439^{+463}_{-124}	610^{+634}_{-264}
2727	13.40 ± 3.92	$456.58^{+0.28}_{-0.28}$	$495.94^{+0.35}_{-0.35}$	390^{+456}_{-131}	493^{+884}_{-155}	388^{+372}_{-113}	516^{+503}_{-218}
2728	40.80 ± 6.05	$929.85^{+2.01}_{-2.01}$	$1137.92^{+2.92}_{-2.91}$	748^{+1168}_{-230}	995^{+2091}_{-343}	653^{+878}_{-186}	1021^{+1263}_{-480}
2736	4.08 ± 0.67	$213.60^{+0.03}_{-0.03}$	$204.27^{+0.04}_{-0.04}$	176^{+136}_{-73}	215^{+266}_{-67}	213^{+122}_{-80}	220^{+154}_{-92}
2748	$2.62^{\dagger}$	$160.97^{+0.05}_{-0.05}$	$146.80^{+0.05}_{-0.05}$	128^{+86}_{-57}	157^{+162}_{-50}	170^{+81}_{-72}	159^{+99}_{-69}
2749	3.21 ± 1.63	$183.26^{+0.04}_{-0.04}$	$170.81^{+0.04}_{-0.04}$	148^{+106}_{-64}	181^{+204}_{-57}	189^{+97}_{-76}	184^{+121}_{-79}
2750	$1.28^{\dagger}$	$101.86^{+0.09}_{-0.09}$	$86.04^{+0.10}_{-0.10}$	76^{+45}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
2751	2.94 ± 2.25	$173.26^{+0.04}_{-0.04}$	$159.98^{+0.05}_{-0.05}$	139^{+97}_{-61}	170^{+185}_{-54}	180^{+90}_{-74}	173^{+111}_{-74}
2753	3.23 ± 1.03	$183.99^{+0.04}_{-0.04}$	$171.61^{+0.04}_{-0.04}$	149^{+107}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+122}_{-79}
2755	$6.11^{\dagger}$	$276.47^{+0.05}_{-0.05}$	$276.08^{+0.05}_{-0.05}$	233^{+207}_{-90}	285^{+410}_{-88}	262^{+180}_{-89}	297^{+233}_{-123}
2757	$66.50^{\dagger}$	$1270.40^{+4.05}_{-4.04}$	$1638.19^{+6.24}_{-6.21}$	967^{+1606}_{-304}	1304^{+2777}_{-474}	807^{+1174}_{-247}	1320^{+1771}_{-646}
2760	7.54 ± 3.70	$316.22^{+0.07}_{-0.07}$	$322.96^{+0.08}_{-0.08}$	269^{+257}_{-99}	331^{+509}_{-103}	291^{+220}_{-94}	346^{+288}_{-143}
2767	$2.41^{\dagger}$	$152.60^{+0.05}_{-0.05}$	$137.93^{+0.06}_{-0.06}$	121^{+80}_{-54}	148^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
2770	17.90 ± 1.03	$549.34^{+0.50}_{-0.50}$	$615.49^{+0.65}_{-0.65}$	466^{+597}_{-150}	597^{+1138}_{-192}	446^{+476}_{-126}	624^{+653}_{-271}
2774	6.58 ± 1.51	$289.87^{+0.05}_{-0.05}$	$291.77^{+0.06}_{-0.06}$	245^{+224}_{-93}	301^{+443}_{-93}	272^{+193}_{-91}	313^{+251}_{-129}
2775	12.50 ± 5.74	$436.74^{+0.24}_{-0.24}$	$470.88^{+0.30}_{-0.30}$	373^{+427}_{-127}	470^{+830}_{-148}	375^{+350}_{-110}	492^{+472}_{-207}
2776	$6.48^{\dagger}$	$287.05^{+0.05}_{-0.05}$	$288.45^{+0.06}_{-0.06}$	243^{+220}_{-92}	298^{+436}_{-92}	270^{+191}_{-91}	310^{+247}_{-128}
2780	10.60 ± 0.70	$393.09^{+0.17}_{-0.17}$	$416.39^{+0.20}_{-0.20}$	336^{+363}_{-117}	420^{+711}_{-131}	346^{+302}_{-104}	440^{+403}_{-183}
2788	14.90 ± 2.64	$488.60^{+0.35}_{-0.35}$	$536.79^{+0.44}_{-0.44}$	417^{+505}_{-138}	529^{+972}_{-168}	408^{+408}_{-117}	554^{+555}_{-236}
2790*	3.14 ± 0.17	—	—	146^{+104}_{-63}	178^{+199}_{-56}	186^{+95}_{-75}	181^{+118}_{-78}
2793	21.10 ± 1.42	$610.20^{+0.68}_{-0.68}$	$695.83^{+0.91}_{-0.90}$	514^{+691}_{-163}	665^{+1302}_{-216}	483^{+544}_{-134}	693^{+753}_{-305}
2795	53.50 ± 13.70	$1105.59^{+2.99}_{-2.98}$	$1392.84^{+4.49}_{-4.48}$	864^{+1404}_{-268}	1160^{+2464}_{-411}	736^{+1039}_{-217}	1181^{+1530}_{-569}
2797*	5.25 ± 0.25	—	—	210^{+177}_{-83}	256^{+349}_{-79}	242^{+156}_{-86}	266^{+199}_{-110}

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Trigger^a	HR_H ^{b} Hardness	Mean$[E_{p,obs}]^c$ OLS(Y|X)	Mean$[E_{p,obs}]^d$ OLS bisector	Mode$[E_{p,obs}]^e$ Band	Mode$[E_{p,obs}]^f$ COMP(CPL)	Mode$[E_{p,obs}]^g$ SBPL	Mean$[E_{p,obs}]^h$ Expected
2798*	12.40 ± 0.12	—	—	371^{+424}_{-126}	467^{+824}_{-147}	373^{+348}_{-110}	489^{+468}_{-206}
2799	3.49 ± 0.82	$193.32^{+0.04}_{-0.04}$	$181.81^{+0.04}_{-0.04}$	158^{+116}_{-67}	192^{+224}_{-60}	197^{+105}_{-77}	196^{+132}_{-83}
2800	24.20 ± 9.73	$666.04^{+0.86}_{-0.86}$	$770.74^{+1.18}_{-1.17}$	558^{+777}_{-174}	725^{+1449}_{-238}	515^{+606}_{-143}	754^{+844}_{-337}
2801	$4.08^{\dagger}$	$213.60^{+0.03}_{-0.03}$	$204.27^{+0.04}_{-0.04}$	176^{+136}_{-73}	215^{+266}_{-67}	213^{+122}_{-80}	220^{+154}_{-92}
2810	7.11 ± 4.53	$304.58^{+0.07}_{-0.07}$	$309.12^{+0.07}_{-0.07}$	258^{+242}_{-97}	318^{+480}_{-98}	283^{+208}_{-93}	331^{+272}_{-137}
2812*	4.42 ± 0.21	—	—	186^{+148}_{-76}	227^{+290}_{-71}	222^{+132}_{-82}	234^{+167}_{-98}
2814	15.70 ± 11.30	$505.20^{+0.39}_{-0.39}$	$558.14^{+0.49}_{-0.49}$	430^{+530}_{-141}	548^{+1017}_{-174}	419^{+427}_{-119}	573^{+582}_{-246}
2815	4.80 ± 0.81	$236.97^{+0.03}_{-0.03}$	$230.60^{+0.04}_{-0.04}$	197^{+161}_{-79}	241^{+317}_{-75}	232^{+143}_{-84}	249^{+182}_{-103}
2821	2.46 ± 2.18	$154.61^{+0.05}_{-0.05}$	$140.06^{+0.06}_{-0.06}$	122^{+81}_{-55}	151^{+151}_{-48}	165^{+76}_{-70}	151^{+93}_{-67}
2823	$1.85^{\dagger}$	$128.88^{+0.07}_{-0.07}$	$113.24^{+0.08}_{-0.08}$	99^{+62}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	123^{+72}_{-56}
2825	34.00 ± 28.00	$827.62^{+1.52}_{-1.51}$	$993.23^{+2.16}_{-2.15}$	677^{+1020}_{-208}	894^{+1854}_{-302}	602^{+777}_{-169}	922^{+1103}_{-426}
2828	16.00 ± 7.07	$511.34^{+0.40}_{-0.40}$	$566.08^{+0.51}_{-0.51}$	435^{+539}_{-142}	555^{+1034}_{-177}	423^{+434}_{-120}	580^{+592}_{-249}
2830	$0.89^{\dagger}$	$80.59^{+0.11}_{-0.11}$	$65.45^{+0.11}_{-0.11}$	58^{+34}_{-29}	77^{+48}_{-26}	99^{+38}_{-53}	73^{+44}_{-37}
2831*	8.23 ± 0.04	—	—	285^{+282}_{-104}	352^{+556}_{-109}	304^{+239}_{-97}	368^{+315}_{-152}
2834	28.50 ± 1.95	$739.39^{+1.14}_{-1.14}$	$870.74^{+1.59}_{-1.58}$	613^{+889}_{-190}	803^{+1637}_{-267}	555^{+685}_{-155}	832^{+963}_{-377}
2843	10.50 ± 2.64	$390.71^{+0.16}_{-0.16}$	$413.45^{+0.19}_{-0.19}$	334^{+360}_{-117}	417^{+705}_{-130}	344^{+299}_{-104}	437^{+400}_{-182}
2844	$2.09^{\dagger}$	$139.33^{+0.06}_{-0.06}$	$124.03^{+0.07}_{-0.07}$	109^{+69}_{-50}	135^{+126}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
2846	$6.70^{\dagger}$	$293.24^{+0.06}_{-0.06}$	$295.73^{+0.06}_{-0.06}$	248^{+228}_{-94}	305^{+451}_{-94}	274^{+197}_{-91}	317^{+256}_{-131}
2848	1.25 ± 1.14	$100.33^{+0.09}_{-0.09}$	$84.53^{+0.10}_{-0.10}$	74^{+44}_{-36}	96^{+70}_{-32}	117^{+45}_{-58}	93^{+53}_{-45}
2849	$1.46^{\dagger}$	$110.79^{+0.08}_{-0.08}$	$94.91^{+0.09}_{-0.09}$	83^{+50}_{-40}	106^{+84}_{-35}	126^{+50}_{-61}	103^{+60}_{-49}
2850	$0.51^{\dagger}$	$56.52^{+0.13}_{-0.13}$	$43.25^{+0.13}_{-0.13}$	38^{+24}_{-20}	56^{+27}_{-20}	76^{+31}_{-44}	52^{+36}_{-28}
2851	$2.74^{\dagger}$	$165.64^{+0.05}_{-0.05}$	$151.79^{+0.05}_{-0.05}$	132^{+90}_{-58}	162^{+171}_{-51}	174^{+84}_{-72}	164^{+104}_{-71}
2852*	7.51 ± 0.16	—	—	268^{+256}_{-99}	330^{+507}_{-102}	291^{+219}_{-94}	345^{+287}_{-142}
2853	4.11 ± 1.15	$214.61^{+0.03}_{-0.03}$	$205.39^{+0.04}_{-0.04}$	177^{+137}_{-73}	216^{+268}_{-67}	214^{+123}_{-80}	222^{+155}_{-93}
2855*	16.40 ± 0.18	—	—	442^{+552}_{-144}	564^{+1056}_{-180}	428^{+443}_{-121}	590^{+605}_{-254}
2856*	14.00 ± 0.20	—	—	401^{+476}_{-134}	507^{+920}_{-160}	396^{+387}_{-114}	531^{+524}_{-226}
2857	3.07 ± 2.19	$178.12^{+0.04}_{-0.04}$	$165.23^{+0.05}_{-0.05}$	144^{+101}_{-62}	176^{+194}_{-55}	184^{+93}_{-75}	178^{+116}_{-77}
2858	3.01 ± 1.54	$175.89^{+0.04}_{-0.04}$	$162.81^{+0.05}_{-0.05}$	142^{+99}_{-62}	173^{+190}_{-55}	182^{+92}_{-74}	176^{+114}_{-76}
2860	9.52 ± 4.20	$367.01^{+0.13}_{-0.13}$	$384.31^{+0.15}_{-0.15}$	313^{+326}_{-111}	390^{+642}_{-121}	328^{+274}_{-101}	408^{+363}_{-169}
2861	8.66 ± 5.26	$345.47^{+0.10}_{-0.10}$	$358.11^{+0.12}_{-0.12}$	294^{+297}_{-106}	365^{+585}_{-113}	312^{+251}_{-98}	381^{+331}_{-158}
2862	5.80 ± 2.10	$267.42^{+0.04}_{-0.04}$	$265.56^{+0.05}_{-0.05}$	225^{+196}_{-87}	275^{+388}_{-85}	255^{+171}_{-88}	286^{+221}_{-118}
2863*	6.14 ± 0.54	—	—	234^{+208}_{-90}	286^{+412}_{-89}	263^{+181}_{-89}	298^{+234}_{-123}
2864	5.29 ± 1.37	$252.15^{+0.04}_{-0.04}$	$247.94^{+0.04}_{-0.04}$	211^{+178}_{-83}	258^{+352}_{-80}	243^{+157}_{-86}	267^{+201}_{-111}
2873	$4.64^{\dagger}$	$231.90^{+0.03}_{-0.03}$	$224.84^{+0.04}_{-0.04}$	193^{+155}_{-78}	235^{+306}_{-73}	228^{+138}_{-83}	242^{+176}_{-101}
2877	1.20 ± 0.11	$97.75^{+0.10}_{-0.10}$	$81.99^{+0.10}_{-0.10}$	72^{+42}_{-35}	93^{+67}_{-31}	115^{+44}_{-58}	90^{+52}_{-44}
2879	$3.45^{\dagger}$	$191.90^{+0.04}_{-0.04}$	$180.25^{+0.04}_{-0.04}$	156^{+114}_{-66}	191^{+221}_{-60}	196^{+104}_{-77}	195^{+130}_{-83}
2880	1.51 ± 0.53	$113.20^{+0.08}_{-0.08}$	$97.32^{+0.09}_{-0.09}$	86^{+51}_{-41}	108^{+87}_{-36}	128^{+52}_{-62}	106^{+61}_{-50}
2889*	10.30 ± 0.27	—	—	330^{+353}_{-115}	411^{+692}_{-128}	341^{+294}_{-103}	431^{+392}_{-180}
2890	19.30 ± 0.56	$576.41^{+0.58}_{-0.58}$	$651.06^{+0.76}_{-0.76}$	488^{+639}_{-156}	627^{+1211}_{-202}	463^{+507}_{-129}	655^{+698}_{-286}
2891*	23.00 ± 0.41	—	—	541^{+744}_{-170}	702^{+1393}_{-229}	503^{+583}_{-140}	731^{+809}_{-325}
2892	$2.33^{\dagger}$	$149.34^{+0.06}_{-0.06}$	$134.50^{+0.06}_{-0.06}$	118^{+77}_{-53}	145^{+142}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
2894	5.44 ± 0.41	$256.70^{+0.04}_{-0.04}$	$253.17^{+0.04}_{-0.04}$	215^{+184}_{-84}	263^{+363}_{-81}	247^{+161}_{-87}	273^{+207}_{-113}
2896	1.83 ± 0.34	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
2897	0.37 ± 0.06	$45.78^{+0.14}_{-0.14}$	$33.82^{+0.13}_{-0.13}$	30^{+21}_{-16}	47^{+20}_{-17}	65^{+30}_{-40}	43^{+34}_{-24}
2898	4.49 ± 2.19	$227.08^{+0.03}_{-0.03}$	$219.40^{+0.04}_{-0.04}$	188^{+150}_{-76}	230^{+295}_{-71}	224^{+134}_{-82}	237^{+170}_{-99}
2900	11.10 ± 5.34	$404.83^{+0.18}_{-0.18}$	$430.95^{+0.22}_{-0.22}$	346^{+380}_{-120}	433^{+743}_{-135}	353^{+315}_{-106}	454^{+421}_{-190}
2901	$0.09^{\dagger}$	$19.25^{+0.13}_{-0.13}$	$12.30^{+0.11}_{-0.10}$	13^{+13}_{-7}	28^{+10}_{-11}	39^{+28}_{-28}	23^{+32}_{-15}
2910	135.00 ± 54.30	$1997.00^{+10.09}_{-10.04}$	$2778.03^{+16.85}_{-16.75}$	1365^{+2276}_{-467}	1845^{+3840}_{-722}	1071^{+1620}_{-374}	1837^{+2756}_{-927}
2913	2.12 ± 0.38	$140.60^{+0.06}_{-0.06}$	$125.35^{+0.07}_{-0.07}$	110^{+70}_{-50}	136^{+128}_{-44}	153^{+67}_{-68}	136^{+82}_{-61}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
2916	5.66 ± 2.31	$263.28^{+0.04}_{-0.04}$	$260.76^{+0.04}_{-0.04}$	221^{+191}_{-86}	270^{+378}_{-84}	252^{+167}_{-87}	281^{+215}_{-116}
2917	$0.45^{\dagger}$	$52.46^{+0.14}_{-0.14}$	$39.65^{+0.13}_{-0.13}$	35^{+23}_{-19}	53^{+24}_{-19}	72^{+31}_{-43}	48^{+35}_{-27}
2918	19.60 ± 4.76	$582.12^{+0.59}_{-0.59}$	$658.59^{+0.78}_{-0.78}$	492^{+648}_{-157}	634^{+1226}_{-204}	466^{+513}_{-130}	661^{+707}_{-289}
2919*	7.44 ± 0.34	—	—	266^{+254}_{-99}	328^{+502}_{-102}	289^{+217}_{-94}	342^{+284}_{-141}
2922	2.59 ± 0.35	$159.79^{+0.05}_{-0.05}$	$145.55^{+0.05}_{-0.05}$	127^{+85}_{-57}	156^{+160}_{-50}	169^{+80}_{-71}	157^{+98}_{-69}
2924	3.00 ± 0.72	$175.51^{+0.04}_{-0.04}$	$162.41^{+0.05}_{-0.05}$	141^{+99}_{-61}	173^{+189}_{-55}	182^{+92}_{-74}	175^{+113}_{-75}
2925	1.91 ± 0.87	$131.54^{+0.07}_{-0.07}$	$115.97^{+0.07}_{-0.07}$	102^{+64}_{-47}	127^{+113}_{-41}	145^{+62}_{-66}	126^{+74}_{-57}
2927	0.79 ± 0.58	$74.90^{+0.12}_{-0.12}$	$60.09^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	93^{+36}_{-51}	68^{+41}_{-35}
2929	13.50 ± 0.22	$458.75^{+0.28}_{-0.28}$	$498.70^{+0.35}_{-0.35}$	392^{+460}_{-131}	495^{+890}_{-156}	389^{+375}_{-113}	518^{+507}_{-220}
2931	5.29 ± 1.66	$252.15^{+0.04}_{-0.04}$	$247.94^{+0.04}_{-0.04}$	211^{+178}_{-83}	258^{+352}_{-80}	243^{+157}_{-86}	267^{+201}_{-111}
2932	2.02 ± 0.68	$136.33^{+0.06}_{-0.06}$	$120.92^{+0.07}_{-0.07}$	106^{+67}_{-49}	132^{+121}_{-42}	149^{+65}_{-67}	131^{+78}_{-59}
2933	27.10 ± 6.05	$715.98^{+1.05}_{-1.05}$	$838.64^{+1.45}_{-1.45}$	595^{+853}_{-185}	779^{+1578}_{-258}	543^{+660}_{-151}	807^{+925}_{-364}
2944	5.37 ± 1.47	$254.58^{+0.04}_{-0.04}$	$250.73^{+0.04}_{-0.04}$	213^{+181}_{-84}	261^{+358}_{-81}	245^{+159}_{-86}	270^{+204}_{-112}
2945	$0.78^{\dagger}$	$74.05^{+0.12}_{-0.12}$	$59.29^{+0.12}_{-0.12}$	52^{+31}_{-27}	71^{+42}_{-25}	93^{+35}_{-51}	67^{+41}_{-35}
2947	0.90 ± 0.64	$81.34^{+0.11}_{-0.11}$	$66.16^{+0.11}_{-0.11}$	58^{+34}_{-29}	78^{+49}_{-27}	99^{+38}_{-53}	74^{+44}_{-37}
2948	2.94 ± 0.60	$173.26^{+0.04}_{-0.04}$	$159.98^{+0.05}_{-0.05}$	139^{+97}_{-61}	170^{+185}_{-54}	180^{+90}_{-74}	173^{+111}_{-74}
2950	1.20 ± 0.25	$97.75^{+0.10}_{-0.10}$	$81.99^{+0.10}_{-0.10}$	72^{+42}_{-35}	93^{+67}_{-31}	115^{+44}_{-58}	90^{+52}_{-44}
2951	1.79 ± 0.75	$126.20^{+0.07}_{-0.07}$	$110.49^{+0.08}_{-0.08}$	97^{+60}_{-45}	121^{+105}_{-39}	140^{+59}_{-65}	120^{+70}_{-55}
2952	36.40 ± 3.33	$864.48^{+1.69}_{-1.69}$	$1045.07^{+2.42}_{-2.41}$	703^{+1074}_{-216}	931^{+1941}_{-317}	621^{+814}_{-175}	958^{+1162}_{-446}
2953	5.80 ± 0.11	$267.42^{+0.04}_{-0.04}$	$265.56^{+0.05}_{-0.05}$	225^{+196}_{-87}	275^{+388}_{-85}	255^{+171}_{-88}	286^{+221}_{-118}
2958	3.06 ± 0.35	$177.75^{+0.04}_{-0.04}$	$164.82^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	178^{+115}_{-76}
2961	12.10 ± 1.68	$427.76^{+0.22}_{-0.22}$	$459.59^{+0.27}_{-0.27}$	366^{+414}_{-125}	460^{+805}_{-144}	369^{+340}_{-109}	481^{+457}_{-202}
2964	$3.49^{\dagger}$	$193.32^{+0.04}_{-0.04}$	$181.81^{+0.04}_{-0.04}$	158^{+116}_{-67}	192^{+224}_{-60}	197^{+105}_{-77}	196^{+132}_{-83}
2966	7.52 ± 6.13	$315.68^{+0.07}_{-0.07}$	$322.32^{+0.08}_{-0.08}$	268^{+257}_{-99}	330^{+508}_{-102}	291^{+220}_{-94}	345^{+287}_{-142}
2973	5.26 ± 2.83	$251.24^{+0.04}_{-0.04}$	$246.89^{+0.04}_{-0.04}$	210^{+177}_{-83}	257^{+350}_{-80}	243^{+156}_{-86}	266^{+200}_{-110}
2975	39.90 ± 10.80	$916.69^{+1.94}_{-1.94}$	$1119.15^{+2.82}_{-2.81}$	739^{+1149}_{-227}	982^{+2062}_{-338}	647^{+865}_{-184}	1009^{+1243}_{-473}
2977	11.60 ± 2.45	$416.39^{+0.20}_{-0.20}$	$445.35^{+0.25}_{-0.25}$	356^{+397}_{-122}	446^{+775}_{-140}	361^{+328}_{-107}	468^{+440}_{-196}
2978	5.10 ± 1.22	$246.33^{+0.04}_{-0.04}$	$241.27^{+0.04}_{-0.04}$	206^{+172}_{-82}	251^{+339}_{-78}	239^{+151}_{-85}	260^{+194}_{-108}
2980	$0.18^{\dagger}$	$29.09^{+0.14}_{-0.14}$	$19.92^{+0.12}_{-0.12}$	19^{+16}_{-10}	35^{+12}_{-13}	49^{+29}_{-33}	30^{+33}_{-18}
2984	14.20 ± 0.52	$473.81^{+0.31}_{-0.31}$	$517.86^{+0.40}_{-0.40}$	404^{+482}_{-135}	512^{+931}_{-162}	399^{+392}_{-115}	536^{+531}_{-228}
2985	1.50 ± 0.95	$112.72^{+0.08}_{-0.08}$	$96.84^{+0.09}_{-0.09}$	85^{+51}_{-41}	108^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-50}
2986	$2.39^{\dagger}$	$151.79^{+0.05}_{-0.05}$	$137.08^{+0.06}_{-0.06}$	120^{+79}_{-54}	148^{+146}_{-47}	162^{+75}_{-70}	148^{+91}_{-65}
2987	$14.80^{\dagger}$	$486.50^{+0.34}_{-0.34}$	$534.10^{+0.43}_{-0.43}$	415^{+501}_{-137}	527^{+966}_{-167}	407^{+406}_{-117}	551^{+551}_{-235}
2988	18.30 ± 5.66	$557.15^{+0.52}_{-0.52}$	$625.73^{+0.68}_{-0.68}$	472^{+609}_{-152}	606^{+1159}_{-195}	451^{+485}_{-127}	633^{+666}_{-275}
2990	$0.61^{\dagger}$	$63.58^{+0.13}_{-0.13}$	$49.62^{+0.12}_{-0.12}$	44^{+27}_{-23}	62^{+33}_{-22}	83^{+33}_{-47}	58^{+37}_{-31}
2992	$4.23^{\dagger}$	$218.59^{+0.03}_{-0.03}$	$209.85^{+0.04}_{-0.04}$	181^{+141}_{-74}	220^{+277}_{-69}	217^{+126}_{-81}	226^{+160}_{-95}
2993*	31.10 ± 0.90	—	—	644^{+953}_{-198}	847^{+1743}_{-284}	578^{+729}_{-161}	876^{+1031}_{-401}
2994*	19.30 ± 0.36	—	—	488^{+639}_{-156}	627^{+1211}_{-202}	463^{+507}_{-129}	655^{+698}_{-286}
2995	15.60 ± 4.06	$503.14^{+0.38}_{-0.38}$	$555.49^{+0.49}_{-0.49}$	429^{+527}_{-141}	545^{+1012}_{-173}	418^{+425}_{-119}	571^{+578}_{-245}
2996	2.16 ± 0.85	$142.29^{+0.06}_{-0.06}$	$127.11^{+0.07}_{-0.07}$	111^{+72}_{-51}	138^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}
2998	0.98 ± 0.52	$85.88^{+0.11}_{-0.11}$	$70.50^{+0.11}_{-0.11}$	62^{+36}_{-31}	82^{+54}_{-28}	104^{+39}_{-54}	78^{+46}_{-39}
3001	2.70 ± 0.40	$164.09^{+0.05}_{-0.05}$	$150.13^{+0.05}_{-0.05}$	131^{+89}_{-58}	161^{+168}_{-51}	173^{+83}_{-72}	162^{+102}_{-71}
3003	12.90 ± 0.40	$445.62^{+0.26}_{-0.26}$	$482.07^{+0.32}_{-0.32}$	381^{+440}_{-129}	480^{+854}_{-151}	381^{+360}_{-111}	503^{+486}_{-212}
3005	4.83 ± 1.24	$237.92^{+0.03}_{-0.03}$	$231.67^{+0.04}_{-0.04}$	198^{+162}_{-79}	242^{+319}_{-75}	232^{+144}_{-84}	250^{+183}_{-104}
3011	10.50 ± 1.88	$390.71^{+0.16}_{-0.16}$	$413.45^{+0.19}_{-0.19}$	334^{+360}_{-117}	417^{+705}_{-130}	344^{+299}_{-104}	437^{+400}_{-182}
3012	1.49 ± 1.45	$112.24^{+0.08}_{-0.08}$	$96.36^{+0.09}_{-0.09}$	85^{+51}_{-41}	107^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-49}
3015	4.99 ± 1.07	$242.92^{+0.04}_{-0.04}$	$237.37^{+0.04}_{-0.04}$	203^{+168}_{-81}	247^{+331}_{-77}	236^{+148}_{-85}	256^{+189}_{-106}
3016	$363.00^{\dagger}$	$3756.55^{+31.56}_{-31.30}$	$5809.73^{+58.87}_{-58.28}$	2139^{+2976}_{-819}	2801^{+5680}_{-1175}	1522^{+2173}_{-600}	2754^{+4966}_{-1339}
3017	2.16 ± 0.37	$142.29^{+0.06}_{-0.06}$	$127.11^{+0.07}_{-0.07}$	111^{+72}_{-51}	138^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3026	2.68 ± 1.24	$163.31^{+0.05}_{-0.05}$	$149.30^{+0.05}_{-0.05}$	130^{+88}_{-58}	160^{+167}_{-51}	172^{+83}_{-72}	161^{+101}_{-70}
3027	110.00 ± 36.50	$1752.12^{+7.83}_{-7.79}$	$2384.49^{+12.77}_{-12.70}$	1239^{+2087}_{-412}	1677^{+3526}_{-643}	989^{+1493}_{-333}	1677^{+2434}_{-842}
3028	$0.41^{\dagger}$	$49.15^{+0.14}_{-0.14}$	$36.74^{+0.13}_{-0.13}$	33^{+22}_{-17}	50^{+22}_{-18}	69^{+30}_{-42}	45^{+34}_{-26}
3029	33.80 ± 5.30	$824.50^{+1.50}_{-1.50}$	$988.87^{+2.13}_{-2.13}$	674^{+1016}_{-207}	891^{+1847}_{-301}	600^{+774}_{-168}	919^{+1099}_{-424}
3030	1.88 ± 0.67	$130.21^{+0.07}_{-0.07}$	$114.61^{+0.07}_{-0.07}$	101^{+63}_{-47}	125^{+111}_{-41}	144^{+61}_{-65}	124^{+73}_{-56}
3032	4.98 ± 1.15	$242.61^{+0.04}_{-0.04}$	$237.02^{+0.04}_{-0.04}$	202^{+167}_{-81}	247^{+330}_{-77}	236^{+148}_{-85}	255^{+189}_{-106}
3035*	4.71 ± 0.12	—	—	195^{+158}_{-78}	237^{+311}_{-74}	229^{+140}_{-83}	245^{+178}_{-102}
3037	14.80 ± 10.80	$486.50^{+0.34}_{-0.34}$	$534.10^{+0.43}_{-0.43}$	415^{+501}_{-137}	527^{+966}_{-167}	407^{+406}_{-117}	551^{+551}_{-235}
3038	35.60 ± 9.56	$852.29^{+1.63}_{-1.63}$	$1027.89^{+2.33}_{-2.33}$	694^{+1057}_{-213}	919^{+1913}_{-312}	615^{+802}_{-173}	946^{+1142}_{-439}
3039	4.43 ± 0.60	$225.14^{+0.03}_{-0.03}$	$217.21^{+0.04}_{-0.04}$	187^{+148}_{-76}	227^{+291}_{-71}	222^{+132}_{-82}	234^{+168}_{-98}
3040	2.05 ± 0.65	$137.62^{+0.06}_{-0.06}$	$122.25^{+0.07}_{-0.07}$	107^{+68}_{-49}	133^{+123}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
3042*	6.47 ± 0.20	—	—	242^{+220}_{-92}	297^{+435}_{-92}	270^{+190}_{-91}	309^{+247}_{-128}
3043	$1.24^{\dagger}$	$99.82^{+0.09}_{-0.09}$	$84.02^{+0.10}_{-0.10}$	74^{+44}_{-36}	95^{+70}_{-32}	116^{+45}_{-58}	92^{+53}_{-45}
3044	34.80 ± 2.35	$840.01^{+1.57}_{-1.57}$	$1010.61^{+2.24}_{-2.24}$	685^{+1039}_{-211}	906^{+1884}_{-307}	608^{+789}_{-171}	934^{+1123}_{-432}
3051	$210.00^{\dagger}$	$2648.23^{+17.05}_{-16.94}$	$3862.47^{+29.93}_{-29.70}$	1673^{+2643}_{-608}	2238^{+4559}_{-910}	1261^{+1878}_{-473}	2214^{+3586}_{-1113}
3055	1.14 ± 0.13	$94.60^{+0.10}_{-0.10}$	$78.92^{+0.10}_{-0.10}$	70^{+41}_{-34}	90^{+63}_{-30}	112^{+43}_{-57}	87^{+50}_{-43}
3056	1.34 ± 0.18	$104.89^{+0.09}_{-0.09}$	$89.03^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+76}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
3057*	15.10 ± 0.06	—	—	420^{+511}_{-139}	534^{+983}_{-169}	411^{+413}_{-118}	558^{+562}_{-239}
3066	22.90 ± 8.29	$642.96^{+0.79}_{-0.78}$	$739.64^{+1.06}_{-1.06}$	540^{+742}_{-170}	700^{+1389}_{-229}	502^{+581}_{-139}	729^{+806}_{-324}
3067*	6.57 ± 0.10	—	—	245^{+223}_{-93}	300^{+442}_{-93}	272^{+193}_{-91}	313^{+251}_{-129}
3068	1.27 ± 1.08	$101.35^{+0.09}_{-0.09}$	$85.54^{+0.10}_{-0.10}$	75^{+44}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
3070	5.62 ± 1.18	$262.09^{+0.04}_{-0.04}$	$259.39^{+0.04}_{-0.04}$	220^{+190}_{-86}	269^{+375}_{-83}	251^{+166}_{-87}	279^{+214}_{-115}
3071*	3.53 ± 0.37	—	—	159^{+117}_{-67}	194^{+227}_{-61}	198^{+106}_{-77}	198^{+133}_{-84}
3072	2.44 ± 1.28	$153.81^{+0.05}_{-0.05}$	$139.21^{+0.06}_{-0.06}$	122^{+81}_{-55}	150^{+150}_{-48}	164^{+76}_{-70}	150^{+93}_{-66}
3073	11.40 ± 9.05	$411.79^{+0.20}_{-0.20}$	$439.61^{+0.24}_{-0.24}$	352^{+390}_{-121}	441^{+762}_{-138}	358^{+323}_{-107}	462^{+432}_{-194}
3074	1.40 ± 0.77	$107.86^{+0.09}_{-0.09}$	$91.99^{+0.09}_{-0.09}$	81^{+48}_{-39}	103^{+80}_{-34}	124^{+49}_{-60}	100^{+58}_{-48}
3075	1.48 ± 0.39	$111.76^{+0.08}_{-0.08}$	$95.88^{+0.09}_{-0.09}$	84^{+51}_{-40}	107^{+85}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
3076	3.26 ± 0.47	$185.08^{+0.04}_{-0.04}$	$172.79^{+0.04}_{-0.04}$	150^{+108}_{-64}	183^{+207}_{-58}	190^{+99}_{-76}	187^{+123}_{-80}
3078	89.50 ± 17.30	$1535.84^{+6.01}_{-5.99}$	$2044.50^{+9.59}_{-9.54}$	1121^{+1890}_{-364}	1518^{+3215}_{-569}	912^{+1362}_{-295}	1525^{+2142}_{-760}
3080	20.50 ± 4.76	$599.06^{+0.64}_{-0.64}$	$681.02^{+0.86}_{-0.85}$	506^{+674}_{-161}	652^{+1272}_{-211}	476^{+532}_{-133}	680^{+735}_{-299}
3084	3.48 ± 0.60	$192.97^{+0.04}_{-0.04}$	$181.42^{+0.04}_{-0.04}$	157^{+115}_{-67}	192^{+223}_{-60}	196^{+105}_{-77}	196^{+131}_{-83}
3085	7.70 ± 2.96	$320.49^{+0.08}_{-0.08}$	$328.06^{+0.09}_{-0.09}$	272^{+263}_{-100}	336^{+520}_{-104}	294^{+224}_{-95}	351^{+294}_{-145}
3087*	7.24 ± 0.85	—	—	261^{+247}_{-97}	322^{+488}_{-100}	285^{+212}_{-93}	336^{+277}_{-139}
3088	$5.41^{\dagger}$	$255.79^{+0.04}_{-0.04}$	$252.12^{+0.04}_{-0.04}$	214^{+182}_{-84}	262^{+361}_{-81}	246^{+160}_{-86}	272^{+206}_{-112}
3089	1.46 ± 0.26	$110.79^{+0.08}_{-0.08}$	$94.91^{+0.09}_{-0.09}$	83^{+50}_{-40}	106^{+84}_{-35}	126^{+50}_{-61}	103^{+60}_{-49}
3091	1.07 ± 0.98	$90.84^{+0.10}_{-0.10}$	$75.27^{+0.11}_{-0.10}$	66^{+39}_{-33}	87^{+59}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
3093	1.36 ± 0.29	$105.88^{+0.09}_{-0.09}$	$90.02^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-34}	122^{+48}_{-60}	98^{+57}_{-47}
3094	54.70 ± 16.80	$1121.37^{+3.09}_{-3.08}$	$1416.07^{+4.65}_{-4.63}$	874^{+1425}_{-271}	1174^{+2496}_{-417}	743^{+1052}_{-220}	1195^{+1553}_{-576}
3096	1.41 ± 0.56	$108.35^{+0.09}_{-0.09}$	$92.47^{+0.09}_{-0.09}$	81^{+49}_{-39}	104^{+80}_{-34}	124^{+49}_{-60}	101^{+58}_{-48}
3100	0.39 ± 0.11	$47.28^{+0.14}_{-0.14}$	$35.12^{+0.13}_{-0.13}$	32^{+21}_{-17}	49^{+21}_{-18}	67^{+30}_{-41}	44^{+34}_{-25}
3101	5.96 ± 0.78	$272.11^{+0.05}_{-0.05}$	$271.01^{+0.05}_{-0.05}$	229^{+202}_{-88}	280^{+399}_{-87}	259^{+176}_{-89}	291^{+227}_{-120}
3102	3.86 ± 0.64	$206.17^{+0.03}_{-0.03}$	$196.00^{+0.04}_{-0.04}$	169^{+128}_{-71}	206^{+250}_{-64}	207^{+116}_{-79}	212^{+146}_{-89}
3103	0.68 ± 0.55	$68.00^{+0.12}_{-0.12}$	$53.68^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-49}	62^{+39}_{-33}
3105	6.53 ± 0.34	$288.46^{+0.05}_{-0.05}$	$290.11^{+0.06}_{-0.06}$	244^{+222}_{-93}	299^{+439}_{-93}	271^{+192}_{-91}	312^{+249}_{-129}
3109	1.09 ± 0.20	$91.92^{+0.10}_{-0.10}$	$76.32^{+0.10}_{-0.10}$	67^{+39}_{-33}	88^{+60}_{-30}	109^{+42}_{-56}	84^{+49}_{-41}
3110*	48.00 ± 8.78	—	—	816^{+1307}_{-251}	1092^{+2312}_{-383}	702^{+973}_{-204}	1116^{+1419}_{-532}
3113	36.10 ± 2.32	$859.92^{+1.67}_{-1.66}$	$1038.64^{+2.39}_{-2.38}$	699^{+1068}_{-215}	926^{+1931}_{-315}	619^{+809}_{-174}	954^{+1154}_{-443}
3114	3.90 ± 3.12	$207.54^{+0.03}_{-0.03}$	$197.51^{+0.04}_{-0.04}$	171^{+130}_{-71}	208^{+253}_{-65}	208^{+117}_{-79}	213^{+147}_{-90}
3115*	6.07 ± 0.33	—	—	232^{+206}_{-89}	284^{+407}_{-88}	261^{+179}_{-89}	295^{+231}_{-122}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3118	19.30 ± 9.31	$576.41^{+0.58}_{-0.58}$	$651.06^{+0.76}_{-0.76}$	488^{+639}_{-156}	627^{+1211}_{-202}	463^{+507}_{-129}	655^{+698}_{-286}
3119	3.55 ± 0.95	$195.44^{+0.04}_{-0.04}$	$184.14^{+0.04}_{-0.04}$	160^{+118}_{-67}	194^{+228}_{-61}	198^{+107}_{-78}	199^{+134}_{-84}
3120	1.35 ± 0.75	$105.38^{+0.09}_{-0.09}$	$89.52^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
3121	31.10 ± 8.00	$781.80^{+1.32}_{-1.31}$	$929.33^{+1.85}_{-1.85}$	644^{+953}_{-198}	847^{+1743}_{-284}	578^{+729}_{-161}	876^{+1031}_{-401}
3127	$0.94^{\dagger}$	$83.57^{+0.11}_{-0.11}$	$68.29^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	102^{+39}_{-54}	76^{+45}_{-38}
3128*	9.91 ± 0.12	—	—	322^{+340}_{-113}	401^{+667}_{-125}	334^{+284}_{-102}	419^{+378}_{-175}
3129	1.14 ± 0.80	$94.60^{+0.10}_{-0.10}$	$78.92^{+0.10}_{-0.10}$	70^{+41}_{-34}	90^{+63}_{-30}	112^{+43}_{-57}	87^{+50}_{-43}
3130	$0.66^{\dagger}$	$66.46^{+0.12}_{-0.12}$	$52.26^{+0.12}_{-0.12}$	46^{+28}_{-24}	65^{+35}_{-23}	85^{+33}_{-48}	60^{+38}_{-32}
3131	0.98 ± 0.47	$85.83^{+0.11}_{-0.11}$	$70.44^{+0.11}_{-0.11}$	62^{+36}_{-31}	82^{+54}_{-28}	104^{+39}_{-54}	78^{+46}_{-39}
3132	0.59 ± 0.56	$62.24^{+0.13}_{-0.13}$	$48.41^{+0.12}_{-0.12}$	43^{+26}_{-22}	61^{+32}_{-22}	81^{+32}_{-47}	57^{+37}_{-30}
3134	$1.21^{\dagger}$	$98.27^{+0.10}_{-0.10}$	$82.50^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-31}	115^{+44}_{-58}	91^{+52}_{-44}
3135	$0.80^{\dagger}$	$75.14^{+0.12}_{-0.12}$	$60.31^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	94^{+36}_{-51}	68^{+41}_{-35}
3136	$2.83^{\dagger}$	$169.09^{+0.04}_{-0.04}$	$155.49^{+0.05}_{-0.05}$	136^{+93}_{-59}	166^{+177}_{-52}	177^{+87}_{-73}	168^{+107}_{-73}
3137	61.10 ± 35.80	$1203.50^{+3.60}_{-3.59}$	$1537.90^{+5.50}_{-5.48}$	926^{+1527}_{-289}	1247^{+2654}_{-449}	778^{+1121}_{-235}	1265^{+1674}_{-615}
3138*	2.47 ± 0.16	—	—	123^{+81}_{-55}	151^{+152}_{-48}	165^{+77}_{-70}	152^{+94}_{-67}
3139	$0.87^{\dagger}$	$79.48^{+0.11}_{-0.11}$	$64.40^{+0.11}_{-0.11}$	57^{+33}_{-29}	76^{+47}_{-26}	98^{+37}_{-52}	72^{+43}_{-37}
3141	$0.34^{\dagger}$	$43.92^{+0.14}_{-0.14}$	$32.22^{+0.13}_{-0.13}$	29^{+20}_{-15}	46^{+19}_{-17}	64^{+30}_{-39}	41^{+33}_{-24}
3142	8.24 ± 1.78	$334.67^{+0.09}_{-0.09}$	$345.07^{+0.10}_{-0.10}$	285^{+282}_{-104}	352^{+557}_{-109}	305^{+239}_{-97}	368^{+315}_{-152}
3143	6.71 ± 1.24	$293.52^{+0.06}_{-0.06}$	$296.06^{+0.06}_{-0.06}$	248^{+228}_{-94}	305^{+452}_{-94}	275^{+197}_{-91}	318^{+256}_{-131}
3144	17.60 ± 11.30	$543.44^{+0.48}_{-0.48}$	$607.78^{+0.63}_{-0.63}$	461^{+588}_{-149}	591^{+1122}_{-189}	443^{+470}_{-125}	617^{+644}_{-267}
3146	12.10 ± 6.16	$427.76^{+0.22}_{-0.22}$	$459.59^{+0.27}_{-0.27}$	366^{+414}_{-125}	460^{+805}_{-144}	369^{+340}_{-109}	481^{+457}_{-202}
3152	22.50 ± 1.95	$635.76^{+0.76}_{-0.76}$	$729.99^{+1.03}_{-1.02}$	534^{+731}_{-168}	693^{+1370}_{-226}	498^{+573}_{-138}	721^{+795}_{-320}
3153	6.50 ± 2.68	$287.61^{+0.05}_{-0.05}$	$289.12^{+0.06}_{-0.06}$	243^{+221}_{-92}	298^{+437}_{-92}	270^{+191}_{-91}	310^{+248}_{-128}
3155	10.10 ± 3.13	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
3156	1.28 ± 0.61	$101.86^{+0.09}_{-0.09}$	$86.04^{+0.10}_{-0.10}$	76^{+45}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
3159	$0.81^{\dagger}$	$75.86^{+0.12}_{-0.12}$	$60.99^{+0.12}_{-0.12}$	54^{+32}_{-27}	73^{+43}_{-25}	94^{+36}_{-51}	69^{+42}_{-35}
3160	$7.71^{\dagger}$	$320.75^{+0.08}_{-0.08}$	$328.38^{+0.09}_{-0.09}$	273^{+263}_{-100}	336^{+521}_{-104}	295^{+225}_{-95}	351^{+295}_{-145}
3164	31.00 ± 9.62	$780.19^{+1.31}_{-1.31}$	$927.10^{+1.84}_{-1.84}$	643^{+950}_{-198}	845^{+1739}_{-284}	577^{+728}_{-161}	874^{+1028}_{-400}
3166	$0.86^{\dagger}$	$79.19^{+0.11}_{-0.11}$	$64.12^{+0.11}_{-0.11}$	57^{+33}_{-29}	76^{+47}_{-26}	97^{+37}_{-52}	72^{+43}_{-37}
3167	$0.93^{\dagger}$	$82.77^{+0.11}_{-0.11}$	$67.53^{+0.11}_{-0.11}$	60^{+35}_{-30}	79^{+50}_{-27}	101^{+38}_{-53}	75^{+45}_{-38}
3168	3.28 ± 2.01	$185.81^{+0.04}_{-0.04}$	$173.58^{+0.04}_{-0.04}$	151^{+108}_{-65}	184^{+209}_{-58}	191^{+99}_{-76}	187^{+124}_{-80}
3171	17.60 ± 2.16	$543.44^{+0.48}_{-0.48}$	$607.78^{+0.63}_{-0.63}$	461^{+588}_{-149}	591^{+1122}_{-189}	443^{+470}_{-125}	617^{+644}_{-267}
3173	29.80 ± 2.26	$760.77^{+1.23}_{-1.23}$	$900.20^{+1.72}_{-1.71}$	628^{+921}_{-194}	825^{+1691}_{-276}	567^{+707}_{-158}	854^{+997}_{-389}
3174	7.00 ± 1.76	$301.56^{+0.06}_{-0.06}$	$305.55^{+0.07}_{-0.07}$	256^{+239}_{-96}	314^{+472}_{-97}	281^{+205}_{-92}	328^{+267}_{-135}
3177	2.15 ± 0.52	$141.87^{+0.06}_{-0.06}$	$126.67^{+0.07}_{-0.07}$	111^{+71}_{-51}	137^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}
3178	15.80 ± 0.21	$507.25^{+0.39}_{-0.39}$	$560.79^{+0.50}_{-0.50}$	432^{+533}_{-142}	550^{+1023}_{-175}	420^{+429}_{-120}	575^{+585}_{-247}
3193	1.89 ± 0.43	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
3212	3.05 ± 0.36	$177.37^{+0.04}_{-0.04}$	$164.42^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	177^{+115}_{-76}
3215	12.60 ± 1.27	$438.97^{+0.24}_{-0.24}$	$473.68^{+0.30}_{-0.30}$	375^{+430}_{-127}	472^{+836}_{-148}	376^{+353}_{-110}	495^{+475}_{-209}
3217	3.21 ± 0.54	$183.26^{+0.04}_{-0.04}$	$170.81^{+0.04}_{-0.04}$	148^{+106}_{-64}	181^{+204}_{-57}	189^{+97}_{-76}	184^{+121}_{-79}
3218	62.60 ± 25.00	$1222.29^{+3.73}_{-3.72}$	$1565.98^{+5.70}_{-5.68}$	937^{+1549}_{-293}	1263^{+2689}_{-456}	786^{+1136}_{-238}	1281^{+1701}_{-624}
3220	7.50 ± 0.84	$315.14^{+0.07}_{-0.07}$	$321.68^{+0.08}_{-0.08}$	268^{+256}_{-99}	330^{+506}_{-102}	291^{+219}_{-94}	344^{+287}_{-142}
3227*	5.58 ± 0.09	—	—	219^{+188}_{-86}	268^{+373}_{-83}	250^{+165}_{-87}	278^{+212}_{-115}
3229	2.17 ± 1.59	$142.71^{+0.06}_{-0.06}$	$127.55^{+0.07}_{-0.07}$	112^{+72}_{-51}	138^{+131}_{-44}	154^{+69}_{-68}	138^{+83}_{-62}
3237	1.83 ± 0.29	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
3238	1.57 ± 0.85	$116.05^{+0.08}_{-0.08}$	$100.19^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+91}_{-36}	131^{+53}_{-62}	109^{+63}_{-51}
3241	3.03 ± 0.07	$176.63^{+0.04}_{-0.04}$	$163.62^{+0.05}_{-0.05}$	142^{+100}_{-62}	174^{+191}_{-55}	183^{+92}_{-74}	177^{+114}_{-76}
3242	0.42 ± 0.12	$50.21^{+0.14}_{-0.14}$	$37.67^{+0.13}_{-0.13}$	34^{+22}_{-18}	51^{+23}_{-18}	70^{+30}_{-42}	46^{+34}_{-26}
3245*	9.41 ± 0.06	—	—	311^{+323}_{-111}	386^{+634}_{-120}	326^{+271}_{-101}	404^{+359}_{-168}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3246	1.60 ± 0.31	$117.47^{+0.08}_{-0.08}$	$101.62^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+93}_{-37}	132^{+54}_{-63}	110^{+64}_{-51}
3247*	7.67 ± 0.43	—	—	272^{+262}_{-100}	335^{+518}_{-104}	294^{+224}_{-95}	350^{+293}_{-144}
3248	50.20 ± 22.20	$1061.53^{+2.73}_{-2.72}$	$1328.24^{+4.07}_{-4.06}$	836^{+1347}_{-258}	1120^{+2375}_{-394}	716^{+1000}_{-210}	1142^{+1464}_{-547}
3255*	1.28 ± 0.08	—	—	76^{+45}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
3256	0.75 ± 0.19	$72.64^{+0.12}_{-0.12}$	$57.98^{+0.12}_{-0.12}$	51^{+30}_{-26}	70^{+40}_{-24}	91^{+35}_{-50}	66^{+40}_{-34}
3257	2.81 ± 0.19	$168.33^{+0.05}_{-0.05}$	$154.67^{+0.05}_{-0.05}$	135^{+93}_{-59}	165^{+176}_{-52}	176^{+86}_{-73}	167^{+106}_{-72}
3259	6.07 ± 0.45	$275.31^{+0.05}_{-0.05}$	$274.73^{+0.05}_{-0.05}$	232^{+206}_{-89}	284^{+407}_{-88}	261^{+179}_{-89}	295^{+231}_{-122}
3266	15.10 ± 7.11	$492.78^{+0.36}_{-0.36}$	$542.15^{+0.45}_{-0.45}$	420^{+511}_{-139}	534^{+983}_{-169}	411^{+413}_{-118}	558^{+562}_{-239}
3267	2.83 ± 0.97	$169.09^{+0.04}_{-0.04}$	$155.49^{+0.05}_{-0.05}$	136^{+93}_{-59}	166^{+177}_{-52}	177^{+87}_{-73}	168^{+107}_{-73}
3269	22.80 ± 1.31	$641.17^{+0.78}_{-0.78}$	$737.23^{+1.05}_{-1.05}$	539^{+739}_{-169}	698^{+1384}_{-228}	501^{+579}_{-139}	727^{+803}_{-323}
3273	1.60 ± 0.35	$117.47^{+0.08}_{-0.08}$	$101.62^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+93}_{-37}	132^{+54}_{-63}	110^{+64}_{-51}
3276	6.20 ± 1.50	$279.06^{+0.05}_{-0.05}$	$279.10^{+0.05}_{-0.05}$	235^{+210}_{-90}	288^{+416}_{-89}	264^{+183}_{-90}	300^{+236}_{-124}
3278	49.20 ± 21.70	$1047.97^{+2.65}_{-2.65}$	$1308.45^{+3.94}_{-3.93}$	827^{+1329}_{-255}	1107^{+2347}_{-389}	709^{+988}_{-207}	1130^{+1444}_{-540}
3279	0.66 ± 0.46	$66.91^{+0.12}_{-0.12}$	$52.67^{+0.12}_{-0.12}$	47^{+28}_{-24}	65^{+35}_{-23}	86^{+33}_{-48}	61^{+38}_{-32}
3280	$2.30^{\dagger}$	$148.11^{+0.06}_{-0.06}$	$133.21^{+0.06}_{-0.06}$	117^{+76}_{-53}	144^{+140}_{-46}	159^{+72}_{-69}	144^{+88}_{-64}
3282	10.80 ± 3.82	$397.81^{+0.17}_{-0.17}$	$422.23^{+0.21}_{-0.21}$	340^{+370}_{-118}	425^{+724}_{-133}	349^{+307}_{-105}	445^{+411}_{-186}
3283	3.13 ± 0.52	$180.33^{+0.04}_{-0.04}$	$167.63^{+0.04}_{-0.04}$	146^{+103}_{-63}	178^{+198}_{-56}	186^{+95}_{-75}	181^{+118}_{-78}
3284	6.29 ± 5.12	$281.64^{+0.05}_{-0.05}$	$282.12^{+0.05}_{-0.05}$	238^{+213}_{-91}	291^{+423}_{-90}	266^{+185}_{-90}	303^{+240}_{-125}
3286	$257.00^{\dagger}$	$3012.91^{+21.49}_{-21.34}$	$4490.46^{+38.58}_{-38.25}$	1833^{+2784}_{-681}	2435^{+4927}_{-1003}	1354^{+1989}_{-521}	2402^{+4043}_{-1197}
3287*	3.92 ± 0.17	—	—	171^{+130}_{-71}	209^{+254}_{-65}	209^{+118}_{-80}	214^{+148}_{-90}
3290*	1.83 ± 0.10	—	—	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
3292	5.27 ± 1.12	$251.54^{+0.04}_{-0.04}$	$247.24^{+0.04}_{-0.04}$	211^{+178}_{-83}	257^{+351}_{-80}	243^{+156}_{-86}	266^{+200}_{-110}
3293	$5.20^{\dagger}$	$249.40^{+0.04}_{-0.04}$	$244.79^{+0.04}_{-0.04}$	209^{+175}_{-83}	255^{+346}_{-79}	241^{+154}_{-86}	264^{+197}_{-109}
3294	37.40 ± 7.31	$879.57^{+1.76}_{-1.76}$	$1066.41^{+2.53}_{-2.53}$	713^{+1096}_{-219}	946^{+1977}_{-323}	628^{+829}_{-178}	973^{+1185}_{-454}
3296	18.70 ± 9.15	$564.90^{+0.54}_{-0.54}$	$635.90^{+0.71}_{-0.71}$	479^{+621}_{-154}	615^{+1180}_{-198}	456^{+494}_{-128}	642^{+679}_{-279}
3297	15.80 ± 3.98	$507.25^{+0.39}_{-0.39}$	$560.79^{+0.50}_{-0.50}$	432^{+533}_{-142}	550^{+1023}_{-175}	420^{+429}_{-120}	575^{+585}_{-247}
3299	1.06 ± 0.48	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
3301*	15.10 ± 0.62	—	—	420^{+511}_{-139}	534^{+983}_{-169}	411^{+413}_{-118}	558^{+562}_{-239}
3303	1.64 ± 0.16	$119.33^{+0.08}_{-0.08}$	$103.51^{+0.08}_{-0.08}$	91^{+55}_{-43}	114^{+95}_{-37}	134^{+55}_{-63}	112^{+65}_{-52}
3306	1.74 ± 0.15	$123.93^{+0.07}_{-0.07}$	$108.18^{+0.08}_{-0.08}$	95^{+58}_{-45}	119^{+102}_{-39}	138^{+57}_{-64}	117^{+69}_{-54}
3307	1.85 ± 0.82	$128.88^{+0.07}_{-0.07}$	$113.24^{+0.08}_{-0.08}$	99^{+62}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	123^{+72}_{-56}
3308	10.40 ± 6.56	$388.33^{+0.16}_{-0.16}$	$410.51^{+0.19}_{-0.19}$	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}
3319	4.41 ± 1.00	$224.49^{+0.03}_{-0.03}$	$216.48^{+0.04}_{-0.04}$	186^{+147}_{-76}	227^{+289}_{-71}	222^{+132}_{-82}	233^{+167}_{-97}
3320	1.74 ± 0.18	$123.93^{+0.07}_{-0.07}$	$108.18^{+0.08}_{-0.08}$	95^{+58}_{-45}	119^{+102}_{-39}	138^{+57}_{-64}	117^{+69}_{-54}
3321	7.95 ± 2.12	$327.10^{+0.08}_{-0.08}$	$335.97^{+0.10}_{-0.10}$	278^{+272}_{-102}	344^{+537}_{-106}	299^{+231}_{-96}	359^{+304}_{-148}
3322	2.95 ± 1.47	$173.64^{+0.04}_{-0.04}$	$160.38^{+0.05}_{-0.05}$	140^{+97}_{-61}	171^{+185}_{-54}	181^{+90}_{-74}	173^{+111}_{-75}
3323	28.30 ± 7.72	$736.08^{+1.13}_{-1.13}$	$866.18^{+1.57}_{-1.56}$	610^{+884}_{-189}	800^{+1629}_{-266}	554^{+681}_{-154}	828^{+957}_{-376}
3324	2.74 ± 1.85	$165.64^{+0.05}_{-0.05}$	$151.79^{+0.05}_{-0.05}$	132^{+90}_{-58}	162^{+171}_{-51}	174^{+84}_{-72}	164^{+104}_{-71}
3325	10.40 ± 5.70	$388.33^{+0.16}_{-0.16}$	$410.51^{+0.19}_{-0.19}$	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}
3328	5.54 ± 1.99	$259.70^{+0.04}_{-0.04}$	$256.63^{+0.04}_{-0.04}$	218^{+187}_{-85}	266^{+370}_{-83}	249^{+164}_{-87}	276^{+211}_{-114}
3330*	13.60 ± 0.42	—	—	394^{+463}_{-132}	497^{+896}_{-157}	391^{+377}_{-113}	521^{+510}_{-221}
3333	4.80 ± 3.31	$236.97^{+0.03}_{-0.03}$	$230.60^{+0.04}_{-0.04}$	197^{+161}_{-79}	241^{+317}_{-75}	232^{+143}_{-84}	249^{+182}_{-103}
3335	28.90 ± 12.80	$746.01^{+1.17}_{-1.17}$	$879.84^{+1.63}_{-1.62}$	618^{+899}_{-191}	810^{+1654}_{-270}	559^{+692}_{-156}	839^{+973}_{-381}
3336	2.98 ± 0.30	$174.76^{+0.04}_{-0.04}$	$161.60^{+0.05}_{-0.05}$	141^{+98}_{-61}	172^{+188}_{-54}	181^{+91}_{-74}	174^{+112}_{-75}
3337	2.56 ± 1.25	$158.60^{+0.05}_{-0.05}$	$144.29^{+0.06}_{-0.06}$	126^{+84}_{-56}	155^{+158}_{-49}	168^{+79}_{-71}	156^{+97}_{-68}
3338	$1.89^{\dagger}$	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
3339	17.30 ± 3.64	$537.51^{+0.47}_{-0.47}$	$600.04^{+0.61}_{-0.61}$	457^{+579}_{-148}	584^{+1106}_{-187}	439^{+463}_{-124}	610^{+634}_{-264}
3340	7.71 ± 2.22	$320.75^{+0.08}_{-0.08}$	$328.38^{+0.09}_{-0.09}$	273^{+263}_{-100}	336^{+521}_{-104}	295^{+225}_{-95}	351^{+295}_{-145}
3342	55.80 ± 19.40	$1135.72^{+3.18}_{-3.17}$	$1437.26^{+4.79}_{-4.77}$	883^{+1443}_{-274}	1187^{+2524}_{-423}	749^{+1064}_{-223}	1207^{+1575}_{-583}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3345*	4.08 ± 0.20	—	—	176^{+136}_{-73}	215^{+266}_{-67}	213^{+122}_{-80}	220^{+154}_{-92}
3347	2.79 ± 0.72	$167.56^{+0.05}_{-0.05}$	$153.85^{+0.05}_{-0.05}$	134^{+92}_{-59}	164^{+174}_{-52}	175^{+86}_{-73}	166^{+105}_{-72}
3349	6.19 ± 2.02	$278.77^{+0.05}_{-0.05}$	$278.77^{+0.05}_{-0.05}$	235^{+210}_{-90}	288^{+416}_{-89}	264^{+182}_{-89}	300^{+236}_{-124}
3350	8.14 ± 2.01	$332.07^{+0.09}_{-0.09}$	$341.94^{+0.10}_{-0.10}$	283^{+278}_{-103}	349^{+550}_{-108}	303^{+237}_{-96}	365^{+311}_{-151}
3351	2.04 ± 0.35	$137.19^{+0.06}_{-0.06}$	$121.81^{+0.07}_{-0.07}$	107^{+68}_{-49}	132^{+122}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
3352*	1.51 ± 0.14	—	—	86^{+51}_{-41}	108^{+87}_{-36}	128^{+52}_{-62}	106^{+61}_{-50}
3356	1.11 ± 0.34	$93.00^{+0.10}_{-0.10}$	$77.36^{+0.10}_{-0.10}$	68^{+40}_{-34}	89^{+62}_{-30}	110^{+42}_{-56}	85^{+49}_{-42}
3357	32.90 ± 9.07	$810.41^{+1.44}_{-1.44}$	$969.16^{+2.04}_{-2.03}$	664^{+995}_{-204}	876^{+1813}_{-296}	593^{+759}_{-166}	905^{+1076}_{-416}
3358	2.21 ± 0.72	$144.38^{+0.06}_{-0.06}$	$129.30^{+0.06}_{-0.06}$	113^{+73}_{-52}	140^{+134}_{-45}	156^{+70}_{-68}	140^{+85}_{-62}
3359	10.30 ± 2.56	$385.94^{+0.16}_{-0.16}$	$407.56^{+0.19}_{-0.19}$	330^{+353}_{-115}	411^{+692}_{-128}	341^{+294}_{-103}	431^{+392}_{-180}
3360*	35.70 ± 1.20	—	—	695^{+1059}_{-213}	920^{+1916}_{-313}	615^{+803}_{-173}	948^{+1145}_{-440}
3364	5.49 ± 0.82	$258.20^{+0.04}_{-0.04}$	$254.90^{+0.04}_{-0.04}$	217^{+185}_{-85}	265^{+366}_{-82}	248^{+163}_{-87}	274^{+209}_{-114}
3366	1.45 ± 0.07	$110.31^{+0.08}_{-0.08}$	$94.42^{+0.09}_{-0.09}$	83^{+50}_{-40}	105^{+83}_{-35}	126^{+50}_{-61}	103^{+59}_{-49}
3369	0.46 ± 0.22	$53.27^{+0.14}_{-0.13}$	$40.36^{+0.13}_{-0.13}$	36^{+23}_{-19}	53^{+25}_{-19}	73^{+31}_{-43}	49^{+35}_{-27}
3370	4.32 ± 1.93	$221.55^{+0.03}_{-0.03}$	$213.17^{+0.04}_{-0.04}$	183^{+144}_{-75}	223^{+283}_{-70}	219^{+129}_{-82}	230^{+163}_{-96}
3374	14.30 ± 5.71	$475.94^{+0.32}_{-0.32}$	$520.58^{+0.40}_{-0.40}$	406^{+485}_{-135}	515^{+937}_{-163}	400^{+394}_{-115}	539^{+534}_{-229}
3378	25.90 ± 8.10	$695.56^{+0.97}_{-0.97}$	$810.78^{+1.33}_{-1.33}$	580^{+822}_{-180}	757^{+1526}_{-250}	531^{+638}_{-148}	786^{+892}_{-353}
3379	7.28 ± 2.25	$309.21^{+0.07}_{-0.07}$	$314.62^{+0.08}_{-0.08}$	262^{+248}_{-98}	323^{+491}_{-100}	286^{+213}_{-93}	337^{+278}_{-139}
3384	6.17 ± 5.23	$278.20^{+0.05}_{-0.05}$	$278.10^{+0.05}_{-0.05}$	235^{+209}_{-90}	287^{+414}_{-89}	263^{+182}_{-89}	299^{+235}_{-123}
3403	1.32 ± 0.42	$103.88^{+0.09}_{-0.09}$	$88.04^{+0.09}_{-0.09}$	77^{+46}_{-38}	99^{+75}_{-33}	120^{+47}_{-59}	96^{+56}_{-46}
3405	32.10 ± 2.65	$797.77^{+1.38}_{-1.38}$	$951.53^{+1.95}_{-1.95}$	655^{+976}_{-202}	864^{+1782}_{-291}	587^{+746}_{-164}	892^{+1056}_{-410}
3406	0.52 ± 0.31	$57.43^{+0.13}_{-0.13}$	$44.07^{+0.13}_{-0.12}$	39^{+24}_{-20}	57^{+28}_{-20}	77^{+31}_{-45}	52^{+36}_{-29}
3407	3.27 ± 0.78	$185.44^{+0.04}_{-0.04}$	$173.19^{+0.04}_{-0.04}$	150^{+108}_{-64}	184^{+208}_{-58}	190^{+99}_{-76}	187^{+123}_{-80}
3408*	6.40 ± 0.08	—	—	240^{+217}_{-92}	295^{+430}_{-91}	268^{+188}_{-90}	307^{+244}_{-127}
3410*	2.23 ± 0.13	—	—	114^{+74}_{-52}	141^{+135}_{-45}	157^{+70}_{-69}	141^{+85}_{-63}
3412	14.00 ± 0.44	$469.53^{+0.31}_{-0.31}$	$512.41^{+0.38}_{-0.38}$	401^{+476}_{-134}	507^{+920}_{-160}	396^{+387}_{-114}	531^{+524}_{-226}
3415*	2.55 ± 0.09	—	—	126^{+84}_{-56}	154^{+157}_{-49}	168^{+79}_{-71}	155^{+97}_{-68}
3416	1.99 ± 1.04	$135.03^{+0.07}_{-0.07}$	$119.57^{+0.07}_{-0.07}$	105^{+66}_{-48}	130^{+119}_{-42}	148^{+64}_{-66}	129^{+77}_{-58}
3436	5.14 ± 0.44	$247.56^{+0.04}_{-0.04}$	$242.68^{+0.04}_{-0.04}$	207^{+173}_{-82}	253^{+341}_{-78}	240^{+153}_{-85}	261^{+195}_{-108}
3437	$54.90^{\dagger}$	$1123.98^{+3.10}_{-3.09}$	$1419.93^{+4.67}_{-4.66}$	876^{+1428}_{-272}	1176^{+2501}_{-418}	744^{+1054}_{-221}	1197^{+1557}_{-578}
3439	3.03 ± 0.55	$176.63^{+0.04}_{-0.04}$	$163.62^{+0.05}_{-0.05}$	142^{+100}_{-62}	174^{+191}_{-55}	183^{+92}_{-74}	177^{+114}_{-76}
3440	3.11 ± 0.62	$179.60^{+0.04}_{-0.04}$	$166.83^{+0.04}_{-0.04}$	145^{+103}_{-63}	177^{+197}_{-56}	185^{+95}_{-75}	180^{+117}_{-77}
3441	$6.85^{\dagger}$	$297.41^{+0.06}_{-0.06}$	$300.65^{+0.07}_{-0.07}$	252^{+233}_{-95}	309^{+462}_{-96}	278^{+201}_{-92}	323^{+262}_{-133}
3448	5.77 ± 0.26	$266.54^{+0.04}_{-0.04}$	$264.53^{+0.05}_{-0.05}$	224^{+195}_{-87}	274^{+386}_{-85}	254^{+170}_{-88}	285^{+220}_{-118}
3458*	5.44 ± 0.13	—	—	215^{+184}_{-84}	263^{+363}_{-81}	247^{+161}_{-87}	273^{+207}_{-113}
3464*	5.13 ± 0.32	—	—	207^{+173}_{-82}	252^{+341}_{-78}	240^{+152}_{-85}	261^{+195}_{-108}
3465	26.70 ± 7.89	$709.21^{+1.02}_{-1.02}$	$829.38^{+1.41}_{-1.41}$	590^{+843}_{-183}	771^{+1561}_{-255}	539^{+653}_{-150}	800^{+914}_{-361}
3466	1.92 ± 0.80	$131.98^{+0.07}_{-0.07}$	$116.42^{+0.07}_{-0.07}$	102^{+64}_{-47}	127^{+114}_{-41}	145^{+62}_{-66}	126^{+75}_{-57}
3467	2.71 ± 0.56	$164.48^{+0.05}_{-0.05}$	$150.55^{+0.05}_{-0.05}$	131^{+89}_{-58}	161^{+169}_{-51}	173^{+83}_{-72}	163^{+102}_{-71}
3471	8.26 ± 2.79	$335.19^{+0.09}_{-0.09}$	$345.70^{+0.11}_{-0.11}$	285^{+283}_{-104}	353^{+558}_{-109}	305^{+240}_{-97}	369^{+316}_{-153}
3472	2.07 ± 0.59	$138.47^{+0.06}_{-0.06}$	$123.14^{+0.07}_{-0.07}$	108^{+69}_{-50}	134^{+124}_{-43}	151^{+66}_{-67}	133^{+80}_{-60}
3476	63.10 ± 50.70	$1228.51^{+3.77}_{-3.76}$	$1575.30^{+5.77}_{-5.75}$	941^{+1557}_{-295}	1268^{+2700}_{-458}	789^{+1141}_{-240}	1286^{+1710}_{-627}
3477	14.20 ± 10.20	$473.81^{+0.31}_{-0.31}$	$517.86^{+0.40}_{-0.40}$	404^{+482}_{-135}	512^{+931}_{-162}	399^{+392}_{-115}	536^{+531}_{-228}
3480*	8.75 ± 0.23	—	—	296^{+300}_{-107}	367^{+591}_{-114}	314^{+253}_{-98}	384^{+334}_{-159}
3481*	7.71 ± 0.15	—	—	273^{+263}_{-100}	336^{+521}_{-104}	295^{+225}_{-95}	351^{+295}_{-145}
3485	0.79 ± 0.17	$75.08^{+0.12}_{-0.12}$	$60.26^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	94^{+36}_{-51}	68^{+41}_{-35}
3486	1.26 ± 0.43	$100.84^{+0.09}_{-0.09}$	$85.03^{+0.10}_{-0.10}$	75^{+44}_{-37}	96^{+71}_{-32}	117^{+46}_{-58}	93^{+54}_{-45}
3487	33.80 ± 20.90	$824.50^{+1.50}_{-1.50}$	$988.87^{+2.13}_{-2.13}$	674^{+1016}_{-207}	891^{+1847}_{-301}	600^{+774}_{-168}	919^{+1099}_{-424}
3488	4.49 ± 0.61	$227.08^{+0.03}_{-0.03}$	$219.40^{+0.04}_{-0.04}$	188^{+150}_{-76}	230^{+295}_{-71}	224^{+134}_{-82}	237^{+170}_{-99}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3489*	6.62 ± 0.17	—	—	246^{+225}_{-93}	302^{+446}_{-93}	273^{+194}_{-91}	315^{+253}_{-130}
3491*	3.60 ± 0.05	—	—	161^{+119}_{-68}	196^{+232}_{-61}	200^{+108}_{-78}	201^{+136}_{-85}
3492*	8.43 ± 0.08	—	—	289^{+289}_{-105}	358^{+569}_{-111}	308^{+244}_{-97}	374^{+322}_{-155}
3493	21.10 ± 5.16	$610.20^{+0.68}_{-0.68}$	$695.83^{+0.91}_{-0.90}$	514^{+691}_{-163}	665^{+1302}_{-216}	483^{+544}_{-134}	693^{+753}_{-305}
3494	8.01 ± 5.91	$328.67^{+0.09}_{-0.09}$	$337.86^{+0.10}_{-0.10}$	280^{+274}_{-102}	345^{+541}_{-107}	300^{+233}_{-96}	361^{+306}_{-149}
3502	19.60 ± 4.34	$582.12^{+0.59}_{-0.59}$	$658.59^{+0.78}_{-0.78}$	492^{+648}_{-157}	634^{+1226}_{-204}	466^{+513}_{-130}	661^{+707}_{-289}
3503	1.43 ± 0.48	$109.33^{+0.09}_{-0.09}$	$93.45^{+0.09}_{-0.09}$	82^{+49}_{-40}	104^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
3505	$3.07^{\dagger}$	$178.12^{+0.04}_{-0.04}$	$165.23^{+0.05}_{-0.05}$	144^{+101}_{-62}	176^{+194}_{-55}	184^{+93}_{-75}	178^{+116}_{-77}
3509	2.28 ± 0.42	$147.29^{+0.06}_{-0.06}$	$132.34^{+0.06}_{-0.06}$	116^{+75}_{-52}	143^{+139}_{-46}	158^{+72}_{-69}	143^{+87}_{-63}
3510	5.95 ± 4.78	$271.82^{+0.05}_{-0.05}$	$270.67^{+0.05}_{-0.05}$	229^{+201}_{-88}	280^{+399}_{-87}	258^{+176}_{-89}	291^{+227}_{-120}
3511	0.47 ± 0.36	$53.56^{+0.13}_{-0.13}$	$40.62^{+0.13}_{-0.13}$	36^{+23}_{-19}	54^{+25}_{-19}	73^{+31}_{-43}	49^{+35}_{-27}
3512	5.04 ± 0.36	$244.47^{+0.04}_{-0.04}$	$239.15^{+0.04}_{-0.04}$	204^{+169}_{-81}	249^{+334}_{-77}	237^{+150}_{-85}	258^{+191}_{-107}
3514	3.75 ± 0.69	$202.40^{+0.03}_{-0.03}$	$191.82^{+0.04}_{-0.04}$	166^{+124}_{-69}	202^{+242}_{-63}	204^{+113}_{-79}	207^{+141}_{-87}
3515	1.64 ± 0.75	$119.33^{+0.08}_{-0.08}$	$103.51^{+0.08}_{-0.08}$	91^{+55}_{-43}	114^{+95}_{-37}	134^{+55}_{-63}	112^{+65}_{-52}
3516	6.09 ± 0.47	$275.89^{+0.05}_{-0.05}$	$275.40^{+0.05}_{-0.05}$	233^{+206}_{-89}	285^{+409}_{-88}	261^{+180}_{-89}	296^{+232}_{-122}
3523	28.60 ± 0.17	$741.05^{+1.15}_{-1.15}$	$873.02^{+1.60}_{-1.59}$	614^{+891}_{-190}	805^{+1642}_{-268}	556^{+687}_{-155}	834^{+965}_{-378}
3527	2.55 ± 0.55	$158.20^{+0.05}_{-0.05}$	$143.87^{+0.06}_{-0.06}$	126^{+84}_{-56}	154^{+157}_{-49}	168^{+79}_{-71}	155^{+97}_{-68}
3528	$0.96^{\dagger}$	$84.54^{+0.11}_{-0.11}$	$69.21^{+0.11}_{-0.11}$	61^{+36}_{-31}	81^{+52}_{-28}	102^{+39}_{-54}	77^{+45}_{-39}
3530	4.82 ± 1.72	$237.60^{+0.03}_{-0.03}$	$231.32^{+0.04}_{-0.04}$	198^{+162}_{-79}	241^{+319}_{-75}	232^{+143}_{-84}	249^{+183}_{-104}
3545	30.90 ± 5.85	$778.59^{+1.30}_{-1.30}$	$924.87^{+1.83}_{-1.82}$	641^{+948}_{-198}	844^{+1735}_{-283}	576^{+726}_{-161}	872^{+1025}_{-399}
3552	0.66 ± 0.56	$66.65^{+0.12}_{-0.12}$	$52.44^{+0.12}_{-0.12}$	46^{+28}_{-24}	65^{+35}_{-23}	86^{+33}_{-48}	60^{+38}_{-32}
3567	5.31 ± 0.73	$252.76^{+0.04}_{-0.04}$	$248.64^{+0.04}_{-0.04}$	212^{+179}_{-83}	258^{+353}_{-80}	244^{+157}_{-86}	268^{+202}_{-111}
3569	1.57 ± 0.36	$116.05^{+0.08}_{-0.08}$	$100.19^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+91}_{-36}	131^{+53}_{-62}	109^{+63}_{-51}
3588	0.73 ± 0.21	$71.34^{+0.12}_{-0.12}$	$56.77^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+39}_{-24}	90^{+35}_{-50}	65^{+40}_{-34}
3593*	16.00 ± 0.38	—	—	435^{+539}_{-142}	555^{+1034}_{-177}	423^{+434}_{-120}	580^{+592}_{-249}
3598	3.72 ± 0.42	$201.37^{+0.03}_{-0.03}$	$190.67^{+0.04}_{-0.04}$	165^{+123}_{-69}	201^{+240}_{-63}	203^{+112}_{-78}	206^{+140}_{-87}
3606	16.10 ± 1.70	$513.38^{+0.41}_{-0.41}$	$568.71^{+0.52}_{-0.52}$	437^{+542}_{-143}	557^{+1040}_{-177}	424^{+436}_{-120}	583^{+595}_{-250}
3608	2.81 ± 0.48	$168.33^{+0.05}_{-0.05}$	$154.67^{+0.05}_{-0.05}$	135^{+93}_{-59}	165^{+176}_{-52}	176^{+86}_{-73}	167^{+106}_{-72}
3611	3.50 ± 2.16	$193.67^{+0.04}_{-0.04}$	$182.20^{+0.04}_{-0.04}$	158^{+116}_{-67}	193^{+224}_{-60}	197^{+106}_{-77}	197^{+132}_{-83}
3618	5.21 ± 0.34	$249.71^{+0.04}_{-0.04}$	$245.14^{+0.04}_{-0.04}$	209^{+175}_{-83}	255^{+346}_{-79}	242^{+155}_{-86}	264^{+198}_{-109}
3634*	7.18 ± 0.45	—	—	260^{+245}_{-97}	320^{+484}_{-99}	284^{+210}_{-93}	334^{+274}_{-138}
3637	2.01 ± 0.23	$135.89^{+0.06}_{-0.06}$	$120.47^{+0.07}_{-0.07}$	106^{+67}_{-49}	131^{+120}_{-42}	148^{+64}_{-67}	130^{+78}_{-59}
3639	3.28 ± 2.94	$185.81^{+0.04}_{-0.04}$	$173.58^{+0.04}_{-0.04}$	151^{+108}_{-65}	184^{+209}_{-58}	191^{+99}_{-76}	187^{+124}_{-80}
3640	3.50 ± 1.65	$193.67^{+0.04}_{-0.04}$	$182.20^{+0.04}_{-0.04}$	158^{+116}_{-67}	193^{+224}_{-60}	197^{+106}_{-77}	197^{+132}_{-83}
3642	7.69 ± 1.23	$320.22^{+0.08}_{-0.08}$	$327.74^{+0.09}_{-0.09}$	272^{+263}_{-100}	336^{+519}_{-104}	294^{+224}_{-95}	351^{+294}_{-145}
3643	2.20 ± 1.97	$143.97^{+0.06}_{-0.06}$	$128.86^{+0.06}_{-0.06}$	113^{+73}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
3644	3.21 ± 0.39	$183.26^{+0.04}_{-0.04}$	$170.81^{+0.04}_{-0.04}$	148^{+106}_{-64}	181^{+204}_{-57}	189^{+97}_{-76}	184^{+121}_{-79}
3647	1.20 ± 0.43	$97.75^{+0.10}_{-0.10}$	$81.99^{+0.10}_{-0.10}$	72^{+42}_{-35}	93^{+67}_{-31}	115^{+44}_{-58}	90^{+52}_{-44}
3648	2.00 ± 0.13	$135.46^{+0.06}_{-0.06}$	$120.02^{+0.07}_{-0.07}$	105^{+66}_{-49}	131^{+120}_{-42}	148^{+64}_{-67}	130^{+77}_{-59}
3649	3.52 ± 1.09	$194.38^{+0.04}_{-0.04}$	$182.97^{+0.04}_{-0.04}$	159^{+117}_{-67}	193^{+226}_{-61}	198^{+106}_{-77}	197^{+133}_{-84}
3652	2.35 ± 2.26	$150.16^{+0.06}_{-0.06}$	$135.36^{+0.06}_{-0.06}$	118^{+78}_{-53}	146^{+144}_{-47}	161^{+73}_{-70}	146^{+90}_{-65}
3654	4.31 ± 0.38	$221.22^{+0.03}_{-0.03}$	$212.80^{+0.04}_{-0.04}$	183^{+144}_{-75}	223^{+282}_{-69}	219^{+129}_{-81}	230^{+163}_{-96}
3655	4.52 ± 1.02	$228.05^{+0.03}_{-0.03}$	$220.49^{+0.04}_{-0.04}$	189^{+151}_{-77}	231^{+297}_{-72}	225^{+135}_{-82}	238^{+171}_{-99}
3658*	5.40 ± 0.12	—	—	214^{+182}_{-84}	262^{+360}_{-81}	246^{+160}_{-86}	271^{+205}_{-112}
3662	13.80 ± 0.65	$465.24^{+0.30}_{-0.30}$	$506.94^{+0.37}_{-0.37}$	397^{+469}_{-133}	502^{+908}_{-159}	393^{+382}_{-114}	526^{+517}_{-223}
3663*	5.13 ± 0.32	—	—	207^{+173}_{-82}	252^{+341}_{-78}	240^{+152}_{-85}	261^{+195}_{-108}
3664	0.56 ± 0.34	$60.41^{+0.13}_{-0.13}$	$46.75^{+0.12}_{-0.12}$	41^{+26}_{-22}	59^{+30}_{-21}	80^{+32}_{-46}	55^{+36}_{-30}
3665	46.20 ± 5.27	$1006.69^{+2.42}_{-2.41}$	$1248.47^{+3.57}_{-3.56}$	800^{+1274}_{-246}	1069^{+2260}_{-373}	690^{+950}_{-200}	1093^{+1381}_{-520}
3668	109.00 ± 14.30	$1741.92^{+7.74}_{-7.70}$	$2368.31^{+12.61}_{-12.55}$	1234^{+2078}_{-410}	1670^{+3512}_{-639}	986^{+1487}_{-331}	1670^{+2421}_{-839}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3671	16.00 ± 2.83	$511.34^{+0.40}_{-0.40}$	$566.08^{+0.51}_{-0.51}$	435^{+539}_{-142}	555^{+1034}_{-177}	423^{+434}_{-120}	580^{+592}_{-249}
3717	0.67 ± 0.32	$67.36^{+0.12}_{-0.12}$	$53.09^{+0.12}_{-0.12}$	47^{+28}_{-24}	65^{+36}_{-23}	86^{+34}_{-48}	61^{+39}_{-32}
3722	6.30 ± 1.95	$281.93^{+0.05}_{-0.05}$	$282.46^{+0.05}_{-0.05}$	238^{+214}_{-91}	292^{+423}_{-90}	266^{+185}_{-90}	304^{+240}_{-125}
3728	4.48 ± 3.43	$226.76^{+0.03}_{-0.03}$	$219.03^{+0.04}_{-0.04}$	188^{+150}_{-76}	229^{+294}_{-71}	224^{+134}_{-82}	236^{+169}_{-99}
3733	$1.49^{\dagger}$	$112.24^{+0.08}_{-0.08}$	$96.36^{+0.09}_{-0.09}$	85^{+51}_{-41}	107^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-49}
3735	49.70 ± 5.01	$1054.76^{+2.69}_{-2.68}$	$1318.36^{+4.00}_{-3.99}$	831^{+1338}_{-257}	1113^{+2361}_{-392}	712^{+994}_{-208}	1136^{+1454}_{-544}
3736*	20.90 ± 1.05	—	—	512^{+685}_{-162}	661^{+1292}_{-214}	481^{+540}_{-134}	688^{+747}_{-303}
3737	21.90 ± 4.45	$624.88^{+0.73}_{-0.72}$	$715.42^{+0.97}_{-0.97}$	526^{+714}_{-166}	681^{+1341}_{-221}	491^{+561}_{-137}	709^{+777}_{-313}
3740	$0.57^{\dagger}$	$60.48^{+0.13}_{-0.13}$	$46.81^{+0.12}_{-0.12}$	42^{+26}_{-22}	60^{+30}_{-21}	80^{+32}_{-46}	55^{+37}_{-30}
3742	91.80 ± 55.10	$1560.94^{+6.21}_{-6.19}$	$2083.56^{+9.94}_{-9.89}$	1135^{+1915}_{-369}	1537^{+3253}_{-578}	921^{+1378}_{-299}	1543^{+2177}_{-770}
3745	1.62 ± 0.44	$118.40^{+0.08}_{-0.08}$	$102.56^{+0.08}_{-0.08}$	90^{+55}_{-43}	113^{+94}_{-37}	133^{+54}_{-63}	111^{+65}_{-52}
3751	15.20 ± 3.11	$494.86^{+0.36}_{-0.36}$	$544.83^{+0.46}_{-0.46}$	422^{+514}_{-139}	536^{+989}_{-170}	412^{+415}_{-118}	561^{+565}_{-240}
3765*	3.65 ± 0.08	—	—	163^{+121}_{-68}	198^{+235}_{-62}	201^{+110}_{-78}	203^{+138}_{-86}
3766	3.42 ± 1.04	$190.83^{+0.04}_{-0.04}$	$179.08^{+0.04}_{-0.04}$	155^{+113}_{-66}	189^{+219}_{-59}	195^{+103}_{-77}	193^{+129}_{-82}
3768	0.62 ± 0.50	$63.84^{+0.13}_{-0.13}$	$49.86^{+0.12}_{-0.12}$	44^{+27}_{-23}	62^{+33}_{-22}	83^{+33}_{-47}	58^{+37}_{-31}
3770	18.50 ± 2.68	$561.04^{+0.53}_{-0.53}$	$630.82^{+0.70}_{-0.70}$	476^{+615}_{-153}	610^{+1169}_{-196}	453^{+490}_{-127}	637^{+673}_{-277}
3771	3.43 ± 0.77	$191.19^{+0.04}_{-0.04}$	$179.47^{+0.04}_{-0.04}$	156^{+114}_{-66}	190^{+220}_{-60}	195^{+104}_{-77}	194^{+129}_{-82}
3772	9.07 ± 1.38	$355.83^{+0.12}_{-0.12}$	$370.68^{+0.13}_{-0.13}$	304^{+311}_{-109}	377^{+612}_{-117}	320^{+262}_{-100}	394^{+346}_{-163}
3773	2.94 ± 1.07	$173.26^{+0.04}_{-0.04}$	$159.98^{+0.05}_{-0.05}$	139^{+97}_{-61}	170^{+185}_{-54}	180^{+90}_{-74}	173^{+111}_{-74}
3774	$1.29^{\dagger}$	$102.37^{+0.09}_{-0.09}$	$86.54^{+0.10}_{-0.10}$	76^{+45}_{-37}	98^{+73}_{-33}	119^{+46}_{-59}	95^{+55}_{-45}
3776	2.13 ± 0.15	$141.02^{+0.06}_{-0.06}$	$125.79^{+0.07}_{-0.07}$	110^{+71}_{-50}	136^{+128}_{-44}	153^{+68}_{-68}	136^{+82}_{-61}
3779	1.08 ± 0.67	$91.38^{+0.10}_{-0.10}$	$75.80^{+0.10}_{-0.10}$	67^{+39}_{-33}	87^{+60}_{-29}	109^{+42}_{-56}	84^{+49}_{-41}
3782	1.88 ± 1.65	$130.21^{+0.07}_{-0.07}$	$114.61^{+0.07}_{-0.07}$	101^{+63}_{-47}	125^{+111}_{-41}	144^{+61}_{-65}	124^{+73}_{-56}
3788*	3.42 ± 0.10	—	—	155^{+113}_{-66}	189^{+219}_{-59}	195^{+103}_{-77}	193^{+129}_{-82}
3789	3.67 ± 0.58	$199.63^{+0.04}_{-0.04}$	$188.76^{+0.04}_{-0.04}$	163^{+122}_{-69}	199^{+237}_{-62}	202^{+110}_{-78}	204^{+138}_{-86}
3791	43.80 ± 8.48	$972.96^{+2.24}_{-2.23}$	$1199.77^{+3.28}_{-3.27}$	777^{+1228}_{-239}	1037^{+2187}_{-360}	674^{+919}_{-194}	1062^{+1330}_{-502}
3792	$1.12^{\dagger}$	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
3799	2.69 ± 2.36	$163.70^{+0.05}_{-0.05}$	$149.72^{+0.05}_{-0.05}$	131^{+89}_{-58}	160^{+167}_{-51}	172^{+83}_{-72}	162^{+102}_{-70}
3800	$0.99^{\dagger}$	$86.28^{+0.11}_{-0.11}$	$70.87^{+0.11}_{-0.11}$	62^{+37}_{-31}	83^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
3801	2.44 ± 1.00	$153.81^{+0.05}_{-0.05}$	$139.21^{+0.06}_{-0.06}$	122^{+81}_{-55}	150^{+150}_{-48}	164^{+76}_{-70}	150^{+93}_{-66}
3805	2.60 ± 0.75	$160.18^{+0.05}_{-0.05}$	$145.97^{+0.05}_{-0.05}$	128^{+86}_{-57}	156^{+161}_{-50}	169^{+80}_{-71}	158^{+99}_{-69}
3807	6.49 ± 1.62	$287.33^{+0.05}_{-0.05}$	$288.78^{+0.06}_{-0.06}$	243^{+221}_{-92}	298^{+437}_{-92}	270^{+191}_{-91}	310^{+248}_{-128}
3810	24.30 ± 9.81	$667.80^{+0.87}_{-0.87}$	$773.12^{+1.19}_{-1.18}$	559^{+780}_{-175}	727^{+1454}_{-239}	516^{+608}_{-143}	756^{+847}_{-338}
3811	0.64 ± 0.17	$65.35^{+0.13}_{-0.13}$	$51.24^{+0.12}_{-0.12}$	45^{+27}_{-23}	64^{+34}_{-22}	84^{+33}_{-48}	59^{+38}_{-32}
3814	1.73 ± 0.84	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
3815	0.56 ± 0.21	$60.28^{+0.13}_{-0.13}$	$46.63^{+0.12}_{-0.12}$	41^{+26}_{-22}	59^{+30}_{-21}	80^{+32}_{-46}	55^{+36}_{-30}
3819	0.92 ± 0.51	$82.37^{+0.11}_{-0.11}$	$67.14^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	100^{+38}_{-53}	75^{+44}_{-38}
3840	$1.22^{\dagger}$	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
3843	3.09 ± 0.22	$178.86^{+0.04}_{-0.04}$	$166.03^{+0.05}_{-0.05}$	144^{+102}_{-62}	176^{+195}_{-56}	185^{+94}_{-75}	179^{+116}_{-77}
3853	4.05 ± 1.50	$212.60^{+0.03}_{-0.03}$	$203.15^{+0.04}_{-0.04}$	175^{+135}_{-72}	213^{+264}_{-67}	212^{+121}_{-80}	219^{+153}_{-92}
3860*	22.40 ± 0.43	—	—	533^{+728}_{-168}	691^{+1365}_{-225}	497^{+571}_{-138}	719^{+792}_{-318}
3864	38.70 ± 6.35	$898.98^{+1.86}_{-1.85}$	$1093.94^{+2.68}_{-2.67}$	727^{+1124}_{-223}	965^{+2021}_{-331}	638^{+848}_{-181}	992^{+1216}_{-464}
3866	7.77 ± 0.58	$322.35^{+0.08}_{-0.08}$	$330.28^{+0.09}_{-0.09}$	274^{+266}_{-101}	338^{+525}_{-105}	296^{+226}_{-95}	353^{+297}_{-146}
3867	23.80 ± 3.51	$658.99^{+0.84}_{-0.84}$	$761.22^{+1.14}_{-1.14}$	552^{+766}_{-173}	718^{+1431}_{-235}	511^{+598}_{-142}	746^{+832}_{-333}
3868	9.05 ± 4.13	$355.33^{+0.11}_{-0.11}$	$370.07^{+0.13}_{-0.13}$	303^{+310}_{-109}	376^{+611}_{-117}	319^{+261}_{-99}	394^{+346}_{-163}
3869	2.50 ± 0.74	$156.22^{+0.05}_{-0.05}$	$141.76^{+0.06}_{-0.06}$	124^{+82}_{-55}	152^{+154}_{-48}	166^{+78}_{-71}	153^{+95}_{-67}
3870*	3.26 ± 0.16	—	—	150^{+108}_{-64}	183^{+207}_{-58}	190^{+99}_{-76}	187^{+123}_{-80}
3871	5.28 ± 1.06	$251.85^{+0.04}_{-0.04}$	$247.59^{+0.04}_{-0.04}$	211^{+178}_{-83}	257^{+351}_{-80}	243^{+157}_{-86}	267^{+201}_{-110}
3875	0.70 ± 0.23	$69.46^{+0.12}_{-0.12}$	$55.03^{+0.12}_{-0.12}$	49^{+29}_{-25}	67^{+38}_{-23}	88^{+34}_{-49}	63^{+39}_{-33}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
3879	1.34 ± 0.29	$104.89^{+0.09}_{-0.09}$	$89.03^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+76}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
3886	3.54 ± 0.79	$195.09^{+0.04}_{-0.04}$	$183.75^{+0.04}_{-0.04}$	159^{+117}_{-67}	194^{+227}_{-61}	198^{+107}_{-77}	198^{+133}_{-84}
3888	18.60 ± 3.56	$562.97^{+0.54}_{-0.54}$	$633.36^{+0.70}_{-0.70}$	477^{+618}_{-153}	613^{+1175}_{-197}	455^{+492}_{-127}	640^{+676}_{-278}
3889	21.00 ± 5.07	$608.35^{+0.67}_{-0.67}$	$693.37^{+0.90}_{-0.90}$	513^{+688}_{-162}	663^{+1297}_{-215}	482^{+542}_{-134}	691^{+750}_{-304}
3890	1.38 ± 0.69	$106.87^{+0.09}_{-0.09}$	$91.00^{+0.09}_{-0.09}$	80^{+48}_{-39}	102^{+79}_{-34}	123^{+48}_{-60}	99^{+57}_{-47}
3891*	3.79 ± 0.31	—	—	167^{+126}_{-70}	204^{+245}_{-64}	205^{+114}_{-79}	209^{+143}_{-88}
3892	1.96 ± 0.51	$133.73^{+0.07}_{-0.07}$	$118.23^{+0.07}_{-0.07}$	104^{+65}_{-48}	129^{+117}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
3893	2.17 ± 0.09	$142.71^{+0.06}_{-0.06}$	$127.55^{+0.07}_{-0.07}$	112^{+72}_{-51}	138^{+131}_{-44}	154^{+69}_{-68}	138^{+83}_{-62}
3894	10.40 ± 6.23	$388.33^{+0.16}_{-0.16}$	$410.51^{+0.19}_{-0.19}$	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}
3895	4.57 ± 4.10	$229.65^{+0.03}_{-0.03}$	$222.31^{+0.04}_{-0.04}$	191^{+153}_{-77}	232^{+301}_{-72}	226^{+136}_{-83}	240^{+173}_{-100}
3899	4.51 ± 2.03	$227.72^{+0.03}_{-0.03}$	$220.13^{+0.04}_{-0.04}$	189^{+151}_{-77}	230^{+297}_{-72}	224^{+135}_{-82}	237^{+171}_{-99}
3900	0.95 ± 0.56	$84.14^{+0.11}_{-0.11}$	$68.83^{+0.11}_{-0.11}$	61^{+36}_{-30}	81^{+52}_{-27}	102^{+39}_{-54}	77^{+45}_{-39}
3901	1.12 ± 0.76	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
3902	26.10 ± 2.25	$698.99^{+0.98}_{-0.98}$	$815.44^{+1.35}_{-1.35}$	583^{+827}_{-181}	761^{+1535}_{-251}	533^{+642}_{-148}	789^{+897}_{-355}
3903	5.77 ± 2.29	$266.54^{+0.04}_{-0.04}$	$264.53^{+0.05}_{-0.05}$	224^{+195}_{-87}	274^{+386}_{-85}	254^{+170}_{-88}	285^{+220}_{-118}
3904	18.40 ± 10.30	$559.10^{+0.53}_{-0.53}$	$628.27^{+0.69}_{-0.69}$	474^{+612}_{-152}	608^{+1164}_{-195}	452^{+487}_{-127}	635^{+669}_{-276}
3905	4.82 ± 0.28	$237.60^{+0.03}_{-0.03}$	$231.32^{+0.04}_{-0.04}$	198^{+162}_{-79}	241^{+319}_{-75}	232^{+143}_{-84}	249^{+183}_{-104}
3906	2.37 ± 0.28	$150.98^{+0.05}_{-0.05}$	$136.22^{+0.06}_{-0.06}$	119^{+78}_{-54}	147^{+145}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
3908	4.75 ± 2.89	$235.39^{+0.03}_{-0.03}$	$228.81^{+0.04}_{-0.04}$	196^{+159}_{-79}	239^{+314}_{-74}	230^{+141}_{-84}	247^{+180}_{-103}
3909	1.41 ± 0.33	$108.35^{+0.09}_{-0.09}$	$92.47^{+0.09}_{-0.09}$	81^{+49}_{-39}	104^{+80}_{-34}	124^{+49}_{-60}	101^{+58}_{-48}
3910	$1.31^{\dagger}$	$103.38^{+0.09}_{-0.09}$	$87.54^{+0.10}_{-0.10}$	77^{+46}_{-37}	99^{+74}_{-33}	120^{+47}_{-59}	96^{+55}_{-46}
3912	2.71 ± 0.21	$164.48^{+0.05}_{-0.05}$	$150.55^{+0.05}_{-0.05}$	131^{+89}_{-58}	161^{+169}_{-51}	173^{+83}_{-72}	163^{+102}_{-71}
3913	2.81 ± 0.22	$168.33^{+0.05}_{-0.05}$	$154.67^{+0.05}_{-0.05}$	135^{+93}_{-59}	165^{+176}_{-52}	176^{+86}_{-73}	167^{+106}_{-72}
3914	1.52 ± 1.23	$113.68^{+0.08}_{-0.08}$	$97.80^{+0.09}_{-0.09}$	86^{+52}_{-41}	109^{+88}_{-36}	129^{+52}_{-62}	106^{+62}_{-50}
3916	2.15 ± 0.33	$141.87^{+0.06}_{-0.06}$	$126.67^{+0.07}_{-0.07}$	111^{+71}_{-51}	137^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}
3917*	15.10 ± 1.21	—	—	420^{+511}_{-139}	534^{+983}_{-169}	411^{+413}_{-118}	558^{+562}_{-239}
3918*	5.36 ± 0.42	—	—	213^{+181}_{-84}	260^{+357}_{-81}	245^{+159}_{-86}	270^{+204}_{-112}
3919	4.21 ± 3.57	$217.93^{+0.03}_{-0.03}$	$209.11^{+0.04}_{-0.04}$	180^{+140}_{-74}	219^{+275}_{-68}	217^{+126}_{-81}	226^{+159}_{-94}
3921	38.60 ± 6.64	$897.50^{+1.85}_{-1.84}$	$1091.83^{+2.67}_{-2.66}$	726^{+1122}_{-223}	964^{+2018}_{-330}	637^{+847}_{-181}	990^{+1213}_{-463}
3924	3.54 ± 1.56	$195.09^{+0.04}_{-0.04}$	$183.75^{+0.04}_{-0.04}$	159^{+117}_{-67}	194^{+227}_{-61}	198^{+107}_{-77}	198^{+133}_{-84}
3926	23.80 ± 4.74	$658.99^{+0.84}_{-0.84}$	$761.22^{+1.14}_{-1.14}$	552^{+766}_{-173}	718^{+1431}_{-235}	511^{+598}_{-142}	746^{+832}_{-333}
3929*	7.62 ± 0.30	—	—	270^{+260}_{-100}	333^{+515}_{-103}	293^{+222}_{-95}	348^{+291}_{-144}
3930*	15.50 ± 0.20	—	—	427^{+523}_{-140}	543^{+1006}_{-173}	416^{+422}_{-119}	568^{+575}_{-243}
3935	26.50 ± 4.69	$705.81^{+1.01}_{-1.01}$	$824.75^{+1.39}_{-1.39}$	588^{+838}_{-183}	768^{+1552}_{-254}	537^{+649}_{-149}	796^{+908}_{-359}
3936	3.29 ± 0.20	$186.17^{+0.04}_{-0.04}$	$173.98^{+0.04}_{-0.04}$	151^{+109}_{-65}	184^{+210}_{-58}	191^{+100}_{-76}	188^{+124}_{-80}
3939	2.36 ± 0.72	$150.57^{+0.05}_{-0.05}$	$135.79^{+0.06}_{-0.06}$	119^{+78}_{-54}	146^{+144}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
3940	3.71 ± 0.92	$201.02^{+0.03}_{-0.03}$	$190.29^{+0.04}_{-0.04}$	165^{+123}_{-69}	201^{+239}_{-63}	203^{+112}_{-78}	205^{+140}_{-87}
3941	$0.77^{\dagger}$	$73.44^{+0.12}_{-0.12}$	$58.72^{+0.12}_{-0.12}$	52^{+31}_{-26}	71^{+41}_{-25}	92^{+35}_{-50}	67^{+41}_{-35}
3954*	9.11 ± 0.29	—	—	304^{+312}_{-109}	378^{+615}_{-117}	320^{+263}_{-100}	395^{+348}_{-164}
4039*	21.50 ± 0.55	—	—	520^{+702}_{-164}	673^{+1321}_{-219}	487^{+553}_{-136}	701^{+765}_{-309}
4048	8.09 ± 0.35	$330.76^{+0.09}_{-0.09}$	$340.38^{+0.10}_{-0.10}$	281^{+277}_{-103}	348^{+546}_{-108}	302^{+235}_{-96}	363^{+309}_{-150}
4095	$0.93^{\dagger}$	$82.95^{+0.11}_{-0.11}$	$67.69^{+0.11}_{-0.11}$	60^{+35}_{-30}	79^{+51}_{-27}	101^{+38}_{-53}	76^{+45}_{-38}
4146	1.32 ± 0.47	$103.88^{+0.09}_{-0.09}$	$88.04^{+0.09}_{-0.09}$	77^{+46}_{-38}	99^{+75}_{-33}	120^{+47}_{-59}	96^{+56}_{-46}
4157	1.01 ± 0.20	$87.56^{+0.11}_{-0.11}$	$72.10^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+55}_{-28}	105^{+40}_{-55}	80^{+47}_{-40}
4216	3.87 ± 0.71	$206.51^{+0.03}_{-0.03}$	$196.38^{+0.04}_{-0.04}$	170^{+129}_{-71}	207^{+251}_{-65}	207^{+116}_{-79}	212^{+146}_{-89}
4251	$0.18^{\dagger}$	$28.89^{+0.14}_{-0.14}$	$19.75^{+0.12}_{-0.12}$	19^{+16}_{-10}	34^{+12}_{-13}	49^{+29}_{-33}	30^{+33}_{-18}
4256	1.44 ± 0.86	$109.82^{+0.09}_{-0.09}$	$93.94^{+0.09}_{-0.09}$	83^{+49}_{-40}	105^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
4312	0.96 ± 0.12	$84.99^{+0.11}_{-0.11}$	$69.64^{+0.11}_{-0.11}$	61^{+36}_{-31}	81^{+53}_{-28}	103^{+39}_{-54}	77^{+46}_{-39}
4327	7.70 ± 1.05	$320.49^{+0.08}_{-0.08}$	$328.06^{+0.09}_{-0.09}$	272^{+263}_{-100}	336^{+520}_{-104}	294^{+224}_{-95}	351^{+294}_{-145}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
4350	2.17 ± 0.19	$142.71^{+0.06}_{-0.06}$	$127.55^{+0.07}_{-0.07}$	112^{+72}_{-51}	138^{+131}_{-44}	154^{+69}_{-68}	138^{+83}_{-62}
4368*	1.87 ± 0.01	—	—	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
4388	1.98 ± 1.26	$134.60^{+0.07}_{-0.07}$	$119.13^{+0.07}_{-0.07}$	105^{+66}_{-48}	130^{+118}_{-42}	147^{+64}_{-66}	129^{+77}_{-58}
4556*	5.17 ± 0.13	—	—	208^{+174}_{-82}	254^{+344}_{-79}	241^{+153}_{-85}	263^{+196}_{-109}
4569	5.05 ± 0.69	$244.78^{+0.04}_{-0.04}$	$239.50^{+0.04}_{-0.04}$	204^{+170}_{-81}	249^{+335}_{-77}	238^{+150}_{-85}	258^{+192}_{-107}
4653	0.95 ± 0.61	$84.25^{+0.11}_{-0.11}$	$68.94^{+0.11}_{-0.11}$	61^{+36}_{-30}	81^{+52}_{-27}	102^{+39}_{-54}	77^{+45}_{-39}
4660	29.40 ± 2.23	$754.23^{+1.20}_{-1.20}$	$891.17^{+1.68}_{-1.67}$	624^{+911}_{-193}	819^{+1675}_{-273}	563^{+701}_{-157}	847^{+986}_{-386}
4701*	4.05 ± 0.16	—	—	175^{+135}_{-72}	213^{+264}_{-67}	212^{+121}_{-80}	219^{+153}_{-92}
4710	4.91 ± 0.69	$240.43^{+0.03}_{-0.03}$	$234.53^{+0.04}_{-0.04}$	200^{+165}_{-80}	245^{+325}_{-76}	234^{+146}_{-84}	253^{+186}_{-105}
4744	7.74 ± 4.03	$321.55^{+0.08}_{-0.08}$	$329.33^{+0.09}_{-0.09}$	273^{+265}_{-101}	337^{+523}_{-104}	295^{+226}_{-95}	352^{+296}_{-145}
4745	6.44 ± 2.14	$285.92^{+0.05}_{-0.05}$	$287.12^{+0.06}_{-0.06}$	242^{+219}_{-92}	296^{+433}_{-92}	269^{+189}_{-90}	308^{+246}_{-127}
4776	21.90 ± 2.64	$624.88^{+0.73}_{-0.72}$	$715.42^{+0.97}_{-0.97}$	526^{+714}_{-166}	681^{+1341}_{-221}	491^{+561}_{-137}	709^{+777}_{-313}
4807	79.20 ± 54.50	$1420.45^{+5.12}_{-5.10}$	$1866.30^{+8.05}_{-8.02}$	1055^{+1773}_{-338}	1427^{+3033}_{-528}	867^{+1284}_{-274}	1438^{+1983}_{-712}
4814	4.11 ± 0.53	$214.61^{+0.03}_{-0.03}$	$205.39^{+0.04}_{-0.04}$	177^{+137}_{-73}	216^{+268}_{-67}	214^{+123}_{-80}	222^{+155}_{-93}
4871	8.48 ± 4.72	$340.86^{+0.10}_{-0.10}$	$352.54^{+0.11}_{-0.11}$	290^{+290}_{-105}	359^{+573}_{-112}	309^{+246}_{-98}	376^{+324}_{-156}
4939	3.20 ± 0.77	$182.90^{+0.04}_{-0.04}$	$170.42^{+0.04}_{-0.04}$	148^{+106}_{-64}	181^{+203}_{-57}	188^{+97}_{-75}	184^{+121}_{-79}
4955	8.34 ± 2.22	$337.26^{+0.09}_{-0.09}$	$348.19^{+0.11}_{-0.11}$	287^{+285}_{-104}	355^{+563}_{-110}	307^{+242}_{-97}	371^{+319}_{-154}
4959	7.48 ± 1.72	$314.61^{+0.07}_{-0.07}$	$321.04^{+0.08}_{-0.08}$	267^{+255}_{-99}	329^{+505}_{-102}	290^{+218}_{-94}	344^{+286}_{-142}
5079	12.40 ± 6.09	$434.51^{+0.24}_{-0.24}$	$468.06^{+0.29}_{-0.29}$	371^{+424}_{-126}	467^{+824}_{-147}	373^{+348}_{-110}	489^{+468}_{-206}
5080	0.45 ± 0.22	$52.39^{+0.14}_{-0.14}$	$39.58^{+0.13}_{-0.13}$	35^{+23}_{-19}	53^{+24}_{-19}	72^{+31}_{-43}	48^{+35}_{-27}
5123	$3.11^{\dagger}$	$179.60^{+0.04}_{-0.04}$	$166.83^{+0.04}_{-0.04}$	145^{+103}_{-63}	177^{+197}_{-56}	185^{+95}_{-75}	180^{+117}_{-77}
5206	70.90 ± 10.90	$1323.47^{+4.42}_{-4.40}$	$1718.38^{+6.86}_{-6.83}$	999^{+1667}_{-316}	1349^{+2870}_{-493}	829^{+1214}_{-257}	1363^{+1846}_{-670}
5212	26.10 ± 7.63	$698.99^{+0.98}_{-0.98}$	$815.44^{+1.35}_{-1.35}$	583^{+827}_{-181}	761^{+1535}_{-251}	533^{+642}_{-148}	789^{+897}_{-355}
5255	0.49 ± 0.25	$54.87^{+0.13}_{-0.13}$	$41.78^{+0.13}_{-0.13}$	37^{+24}_{-19}	55^{+26}_{-20}	74^{+31}_{-44}	50^{+35}_{-28}
5277	28.60 ± 2.08	$741.05^{+1.15}_{-1.15}$	$873.02^{+1.60}_{-1.59}$	614^{+891}_{-190}	805^{+1642}_{-268}	556^{+687}_{-155}	834^{+965}_{-378}
5304*	6.46 ± 0.10	—	—	242^{+219}_{-92}	297^{+434}_{-92}	269^{+190}_{-91}	309^{+246}_{-128}
5305	3.87 ± 1.58	$206.51^{+0.03}_{-0.03}$	$196.38^{+0.04}_{-0.04}$	170^{+129}_{-71}	207^{+251}_{-65}	207^{+116}_{-79}	212^{+146}_{-89}
5339	44.20 ± 1.75	$978.63^{+2.27}_{-2.26}$	$1207.93^{+3.33}_{-3.32}$	781^{+1235}_{-240}	1042^{+2199}_{-362}	677^{+924}_{-195}	1067^{+1339}_{-505}
5379	14.30 ± 1.70	$475.94^{+0.32}_{-0.32}$	$520.58^{+0.40}_{-0.40}$	406^{+485}_{-135}	515^{+937}_{-163}	400^{+394}_{-115}	539^{+534}_{-229}
5387	1.96 ± 0.24	$133.73^{+0.07}_{-0.07}$	$118.23^{+0.07}_{-0.07}$	104^{+65}_{-48}	129^{+117}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
5389	2.51 ± 0.22	$156.61^{+0.05}_{-0.05}$	$142.18^{+0.06}_{-0.06}$	124^{+83}_{-56}	153^{+155}_{-49}	166^{+78}_{-71}	154^{+95}_{-67}
5407	3.86 ± 0.65	$206.17^{+0.03}_{-0.03}$	$196.00^{+0.04}_{-0.04}$	169^{+128}_{-71}	206^{+250}_{-64}	207^{+116}_{-79}	212^{+146}_{-89}
5409	3.23 ± 0.39	$183.99^{+0.04}_{-0.04}$	$171.61^{+0.04}_{-0.04}$	149^{+107}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+122}_{-79}
5410	1.18 ± 0.96	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
5411	0.71 ± 0.32	$69.90^{+0.12}_{-0.12}$	$55.43^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	63^{+39}_{-33}
5412	2.26 ± 0.47	$146.46^{+0.06}_{-0.06}$	$131.48^{+0.06}_{-0.06}$	115^{+75}_{-52}	142^{+137}_{-45}	158^{+71}_{-69}	142^{+86}_{-63}
5413	1.66 ± 0.15	$120.26^{+0.08}_{-0.08}$	$104.45^{+0.08}_{-0.08}$	92^{+56}_{-43}	115^{+97}_{-38}	135^{+55}_{-63}	113^{+66}_{-52}
5415	1.74 ± 0.29	$123.93^{+0.07}_{-0.07}$	$108.18^{+0.08}_{-0.08}$	95^{+58}_{-45}	119^{+102}_{-39}	138^{+57}_{-64}	117^{+69}_{-54}
5416	2.28 ± 0.43	$147.29^{+0.06}_{-0.06}$	$132.34^{+0.06}_{-0.06}$	116^{+75}_{-52}	143^{+139}_{-46}	158^{+72}_{-69}	143^{+87}_{-63}
5417	4.71 ± 0.19	$234.12^{+0.03}_{-0.03}$	$227.37^{+0.04}_{-0.04}$	195^{+158}_{-78}	237^{+311}_{-74}	229^{+140}_{-83}	245^{+178}_{-102}
5419	0.95 ± 0.21	$84.37^{+0.11}_{-0.11}$	$69.04^{+0.11}_{-0.11}$	61^{+36}_{-31}	81^{+52}_{-27}	102^{+39}_{-54}	77^{+45}_{-39}
5420	6.75 ± 1.50	$294.63^{+0.06}_{-0.06}$	$297.37^{+0.06}_{-0.06}$	249^{+230}_{-94}	306^{+455}_{-95}	275^{+198}_{-92}	319^{+258}_{-132}
5421	2.36 ± 0.28	$150.57^{+0.05}_{-0.05}$	$135.79^{+0.06}_{-0.06}$	119^{+78}_{-54}	146^{+144}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
5423	1.22 ± 0.98	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
5425	20.10 ± 6.90	$591.57^{+0.62}_{-0.62}$	$671.08^{+0.82}_{-0.82}$	500^{+662}_{-159}	644^{+1252}_{-208}	472^{+524}_{-132}	672^{+722}_{-295}
5427	2.23 ± 0.36	$145.22^{+0.06}_{-0.06}$	$130.17^{+0.06}_{-0.06}$	114^{+74}_{-52}	141^{+135}_{-45}	157^{+70}_{-69}	141^{+85}_{-63}
5428	0.58 ± 0.55	$61.43^{+0.13}_{-0.13}$	$47.67^{+0.12}_{-0.12}$	42^{+26}_{-22}	60^{+31}_{-21}	81^{+32}_{-46}	56^{+37}_{-30}
5429	5.16 ± 0.80	$248.18^{+0.04}_{-0.04}$	$243.38^{+0.04}_{-0.04}$	207^{+174}_{-82}	253^{+343}_{-79}	240^{+153}_{-85}	262^{+196}_{-109}
5433	4.88 ± 1.09	$239.49^{+0.03}_{-0.03}$	$233.46^{+0.04}_{-0.04}$	200^{+164}_{-80}	243^{+323}_{-76}	234^{+145}_{-84}	252^{+185}_{-105}

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Trigger[a]	HR_H [b] Hardness	Mean[$E_{p,obs}$][c] OLS(Y|X)	Mean[$E_{p,obs}$][d] OLS bisector	Mode[$E_{p,obs}$][e] Band	Mode[$E_{p,obs}$][f] COMP(CPL)	Mode[$E_{p,obs}$][g] SBPL	Mean[$E_{p,obs}$][h] Expected
5434	5.07 ± 1.24	$245.40^{+0.04}_{-0.04}$	$240.21^{+0.04}_{-0.04}$	205^{+170}_{-81}	250^{+336}_{-78}	238^{+151}_{-85}	259^{+192}_{-107}
5436	0.39 ± 0.09	$47.75^{+0.14}_{-0.14}$	$35.52^{+0.13}_{-0.13}$	32^{+21}_{-17}	49^{+21}_{-18}	67^{+30}_{-41}	44^{+34}_{-25}
5439	14.50 ± 1.35	$480.18^{+0.33}_{-0.33}$	$526.00^{+0.42}_{-0.42}$	410^{+492}_{-136}	519^{+949}_{-164}	403^{+399}_{-116}	544^{+541}_{-232}
5443	$1.02^{\dagger}$	$88.11^{+0.11}_{-0.11}$	$72.63^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+56}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
5446	1.28 ± 0.64	$101.86^{+0.09}_{-0.09}$	$86.04^{+0.10}_{-0.10}$	76^{+45}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
5447	0.40 ± 0.13	$48.06^{+0.14}_{-0.14}$	$35.80^{+0.13}_{-0.13}$	32^{+21}_{-17}	49^{+22}_{-18}	68^{+30}_{-41}	45^{+34}_{-25}
5448	77.10 ± 24.00	$1396.28^{+4.94}_{-4.93}$	$1829.26^{+7.75}_{-7.71}$	1041^{+1747}_{-332}	1408^{+2994}_{-520}	858^{+1267}_{-270}	1420^{+1949}_{-702}
5450	8.02 ± 0.81	$328.93^{+0.09}_{-0.09}$	$338.18^{+0.10}_{-0.10}$	280^{+274}_{-102}	346^{+542}_{-107}	301^{+233}_{-96}	361^{+307}_{-149}
5451	2.54 ± 0.19	$157.81^{+0.05}_{-0.05}$	$143.45^{+0.06}_{-0.06}$	125^{+84}_{-56}	154^{+157}_{-49}	167^{+79}_{-71}	155^{+96}_{-68}
5452	5.50 ± 2.00	$258.50^{+0.04}_{-0.04}$	$255.25^{+0.04}_{-0.04}$	217^{+186}_{-85}	265^{+367}_{-82}	248^{+163}_{-87}	275^{+209}_{-114}
5453	7.64 ± 3.57	$318.89^{+0.08}_{-0.08}$	$326.15^{+0.09}_{-0.09}$	271^{+261}_{-100}	334^{+516}_{-104}	293^{+223}_{-95}	349^{+292}_{-144}
5454	1.53 ± 0.66	$114.16^{+0.08}_{-0.08}$	$98.28^{+0.09}_{-0.09}$	86^{+52}_{-41}	109^{+88}_{-36}	129^{+52}_{-62}	107^{+62}_{-50}
5456	3.60 ± 0.76	$197.19^{+0.04}_{-0.04}$	$186.07^{+0.04}_{-0.04}$	161^{+119}_{-68}	196^{+232}_{-61}	200^{+108}_{-78}	201^{+136}_{-85}
5457	7.94 ± 0.92	$326.83^{+0.08}_{-0.08}$	$335.66^{+0.10}_{-0.10}$	278^{+272}_{-102}	343^{+536}_{-106}	299^{+231}_{-96}	359^{+303}_{-148}
5458	$0.69^{\dagger}$	$68.89^{+0.12}_{-0.12}$	$54.50^{+0.12}_{-0.12}$	48^{+29}_{-25}	67^{+37}_{-23}	88^{+34}_{-49}	62^{+39}_{-33}
5459	$1.81^{\dagger}$	$127.09^{+0.07}_{-0.07}$	$111.41^{+0.08}_{-0.08}$	98^{+61}_{-46}	122^{+107}_{-40}	141^{+59}_{-65}	121^{+71}_{-55}
5461	8.84 ± 3.94	$350.04^{+0.11}_{-0.11}$	$363.65^{+0.13}_{-0.13}$	298^{+303}_{-107}	370^{+597}_{-115}	316^{+256}_{-99}	387^{+338}_{-160}
5462	$3.11^{\dagger}$	$179.60^{+0.04}_{-0.04}$	$166.83^{+0.04}_{-0.04}$	145^{+103}_{-63}	177^{+197}_{-56}	185^{+95}_{-75}	180^{+117}_{-77}
5463	6.02 ± 0.70	$273.86^{+0.05}_{-0.05}$	$273.04^{+0.05}_{-0.05}$	231^{+204}_{-89}	282^{+404}_{-87}	260^{+178}_{-89}	294^{+229}_{-121}
5464	7.86 ± 0.75	$324.73^{+0.08}_{-0.08}$	$333.13^{+0.09}_{-0.09}$	276^{+269}_{-101}	341^{+531}_{-106}	297^{+229}_{-96}	356^{+300}_{-147}
5465	$0.75^{\dagger}$	$72.27^{+0.12}_{-0.12}$	$57.63^{+0.12}_{-0.12}$	51^{+30}_{-26}	70^{+40}_{-24}	91^{+35}_{-50}	66^{+40}_{-34}
5466	0.84 ± 0.71	$78.07^{+0.11}_{-0.11}$	$63.06^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	96^{+37}_{-52}	71^{+42}_{-36}
5467	20.40 ± 3.38	$597.19^{+0.64}_{-0.64}$	$678.54^{+0.85}_{-0.85}$	504^{+671}_{-160}	650^{+1267}_{-210}	475^{+530}_{-133}	678^{+732}_{-298}
5469	8.49 ± 1.82	$341.12^{+0.10}_{-0.10}$	$352.85^{+0.11}_{-0.11}$	291^{+291}_{-105}	360^{+573}_{-112}	309^{+246}_{-98}	376^{+324}_{-156}
5470*	28.40 ± 1.51	—	—	611^{+886}_{-189}	801^{+1633}_{-267}	555^{+683}_{-154}	830^{+960}_{-377}
5471	111.00 ± 9.07	$1762.27^{+7.92}_{-7.88}$	$2400.64^{+12.93}_{-12.86}$	1244^{+2095}_{-415}	1685^{+3540}_{-646}	993^{+1499}_{-335}	1684^{+2448}_{-846}
5472	1.70 ± 0.45	$122.10^{+0.08}_{-0.08}$	$106.32^{+0.08}_{-0.08}$	93^{+57}_{-44}	117^{+99}_{-38}	136^{+56}_{-64}	115^{+67}_{-53}
5473*	6.99 ± 0.44	—	—	255^{+238}_{-96}	314^{+471}_{-97}	280^{+205}_{-92}	327^{+267}_{-135}
5474	0.79 ± 0.24	$74.78^{+0.12}_{-0.12}$	$59.97^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+42}_{-25}	93^{+36}_{-51}	68^{+41}_{-35}
5475	5.77 ± 1.04	$266.54^{+0.04}_{-0.04}$	$264.53^{+0.05}_{-0.05}$	224^{+195}_{-87}	274^{+386}_{-85}	254^{+170}_{-88}	285^{+220}_{-118}
5476	1.68 ± 0.32	$121.18^{+0.08}_{-0.08}$	$105.39^{+0.08}_{-0.08}$	93^{+57}_{-44}	116^{+98}_{-38}	136^{+56}_{-63}	114^{+67}_{-53}
5477	61.00 ± 0.92	$1202.24^{+3.60}_{-3.59}$	$1536.03^{+5.48}_{-5.46}$	925^{+1525}_{-289}	1246^{+2651}_{-448}	778^{+1120}_{-235}	1264^{+1672}_{-615}
5478	2.33 ± 0.43	$149.34^{+0.06}_{-0.06}$	$134.50^{+0.06}_{-0.06}$	118^{+77}_{-53}	145^{+142}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
5479	2.89 ± 0.31	$171.37^{+0.04}_{-0.04}$	$157.94^{+0.05}_{-0.05}$	138^{+95}_{-60}	168^{+181}_{-53}	179^{+88}_{-73}	171^{+109}_{-74}
5480	0.51 ± 0.17	$56.80^{+0.13}_{-0.13}$	$43.50^{+0.13}_{-0.13}$	39^{+24}_{-20}	56^{+27}_{-20}	76^{+31}_{-45}	52^{+36}_{-28}
5482	2.94 ± 0.69	$173.26^{+0.04}_{-0.04}$	$159.98^{+0.05}_{-0.05}$	139^{+97}_{-61}	170^{+185}_{-54}	180^{+90}_{-74}	173^{+111}_{-74}
5483	$0.62^{\dagger}$	$64.24^{+0.13}_{-0.13}$	$50.22^{+0.12}_{-0.12}$	44^{+27}_{-23}	63^{+33}_{-22}	83^{+33}_{-47}	58^{+38}_{-31}
5484	4.78 ± 0.52	$236.34^{+0.03}_{-0.03}$	$229.88^{+0.04}_{-0.04}$	197^{+160}_{-79}	240^{+316}_{-75}	231^{+142}_{-84}	248^{+181}_{-103}
5485	6.84 ± 3.99	$297.14^{+0.06}_{-0.06}$	$300.32^{+0.07}_{-0.07}$	252^{+233}_{-95}	309^{+461}_{-96}	277^{+201}_{-92}	322^{+261}_{-133}
5486*	5.35 ± 0.09	—	—	213^{+180}_{-84}	260^{+356}_{-81}	245^{+159}_{-86}	269^{+203}_{-111}
5487	$0.43^{\dagger}$	$50.67^{+0.14}_{-0.14}$	$38.07^{+0.13}_{-0.13}$	34^{+22}_{-18}	51^{+23}_{-19}	70^{+30}_{-42}	47^{+34}_{-26}
5488	8.99 ± 5.54	$353.82^{+0.11}_{-0.11}$	$368.24^{+0.13}_{-0.13}$	302^{+308}_{-108}	374^{+607}_{-116}	318^{+260}_{-99}	392^{+343}_{-162}
5489*	4.64 ± 0.16	—	—	193^{+155}_{-78}	235^{+306}_{-73}	228^{+138}_{-83}	242^{+176}_{-101}
5490	1.02 ± 0.36	$88.11^{+0.11}_{-0.11}$	$72.63^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+56}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
5491	2.20 ± 1.74	$143.97^{+0.06}_{-0.06}$	$128.86^{+0.06}_{-0.06}$	113^{+73}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
5492	11.70 ± 2.29	$418.68^{+0.21}_{-0.21}$	$448.21^{+0.25}_{-0.25}$	358^{+400}_{-123}	449^{+781}_{-141}	363^{+330}_{-108}	470^{+443}_{-197}
5493	2.79 ± 0.70	$167.56^{+0.05}_{-0.05}$	$153.85^{+0.05}_{-0.05}$	134^{+92}_{-59}	164^{+174}_{-52}	175^{+86}_{-73}	166^{+105}_{-72}
5494	9.00 ± 4.61	$354.07^{+0.11}_{-0.11}$	$368.55^{+0.13}_{-0.13}$	302^{+308}_{-108}	375^{+607}_{-116}	318^{+260}_{-99}	392^{+344}_{-163}
5495	2.54 ± 0.63	$157.81^{+0.05}_{-0.05}$	$143.45^{+0.06}_{-0.06}$	125^{+84}_{-56}	154^{+157}_{-49}	167^{+79}_{-71}	155^{+96}_{-68}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
5497	0.63 ± 0.42	$64.76^{+0.13}_{-0.13}$	$50.70^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+34}_{-22}	84^{+33}_{-47}	59^{+38}_{-31}
5498	15.30 ± 12.20	$496.94^{+0.37}_{-0.37}$	$547.50^{+0.47}_{-0.47}$	424^{+517}_{-139}	538^{+995}_{-171}	414^{+418}_{-118}	563^{+568}_{-241}
5499	23.00 ± 5.19	$644.75^{+0.79}_{-0.79}$	$742.05^{+1.07}_{-1.07}$	541^{+744}_{-170}	702^{+1393}_{-229}	503^{+583}_{-140}	731^{+809}_{-325}
5500	10.80 ± 2.08	$397.81^{+0.17}_{-0.17}$	$422.23^{+0.21}_{-0.21}$	340^{+370}_{-118}	425^{+724}_{-133}	349^{+307}_{-105}	445^{+411}_{-186}
5501	$2.03^{\dagger}$	$136.76^{+0.06}_{-0.06}$	$121.36^{+0.07}_{-0.07}$	106^{+67}_{-49}	132^{+122}_{-43}	149^{+65}_{-67}	131^{+78}_{-59}
5502	633.00 ± 216.00	$5358.68^{+57.18}_{-56.57}$	$8796.06^{+113.41}_{-111.96}$	2748^{+3163}_{-1047}	3514^{+7612}_{-1479}	1818^{+2508}_{-698}	3416^{+6926}_{-1555}
5503	$0.35^{\dagger}$	$44.65^{+0.14}_{-0.14}$	$32.85^{+0.13}_{-0.13}$	30^{+20}_{-16}	46^{+19}_{-17}	64^{+30}_{-40}	42^{+34}_{-24}
5504	0.95 ± 0.54	$84.42^{+0.11}_{-0.11}$	$69.10^{+0.11}_{-0.11}$	61^{+36}_{-31}	81^{+52}_{-28}	102^{+39}_{-54}	77^{+45}_{-39}
5505	6.10 ± 1.93	$276.18^{+0.05}_{-0.05}$	$275.74^{+0.05}_{-0.05}$	233^{+207}_{-90}	285^{+409}_{-88}	262^{+180}_{-89}	296^{+232}_{-122}
5507	$0.85^{\dagger}$	$78.48^{+0.11}_{-0.11}$	$63.45^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	97^{+37}_{-52}	71^{+43}_{-36}
5508	0.61 ± 0.59	$63.51^{+0.13}_{-0.13}$	$49.56^{+0.12}_{-0.12}$	44^{+27}_{-23}	62^{+33}_{-22}	83^{+33}_{-47}	58^{+37}_{-31}
5509	5.12 ± 1.01	$246.95^{+0.04}_{-0.04}$	$241.97^{+0.04}_{-0.04}$	206^{+172}_{-82}	252^{+340}_{-78}	239^{+152}_{-85}	261^{+194}_{-108}
5510	1.03 ± 0.68	$88.66^{+0.10}_{-0.10}$	$73.16^{+0.11}_{-0.11}$	64^{+38}_{-32}	85^{+57}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
5512*	8.50 ± 0.35	—	—	291^{+291}_{-105}	360^{+574}_{-112}	309^{+246}_{-98}	376^{+325}_{-156}
5513	4.55 ± 4.27	$229.01^{+0.03}_{-0.03}$	$221.58^{+0.04}_{-0.04}$	190^{+152}_{-77}	232^{+299}_{-72}	225^{+136}_{-83}	239^{+172}_{-100}
5514	$1.96^{\dagger}$	$133.73^{+0.07}_{-0.07}$	$118.23^{+0.07}_{-0.07}$	104^{+65}_{-48}	129^{+117}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
5515	3.58 ± 0.92	$196.49^{+0.04}_{-0.04}$	$185.29^{+0.04}_{-0.04}$	160^{+119}_{-68}	196^{+230}_{-61}	199^{+108}_{-78}	200^{+135}_{-85}
5516	1.89 ± 0.69	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
5517	2.23 ± 0.67	$145.22^{+0.06}_{-0.06}$	$130.17^{+0.06}_{-0.06}$	114^{+74}_{-52}	141^{+135}_{-45}	157^{+70}_{-69}	141^{+85}_{-63}
5518	3.68 ± 0.32	$199.98^{+0.04}_{-0.04}$	$189.14^{+0.04}_{-0.04}$	164^{+122}_{-69}	199^{+237}_{-62}	202^{+111}_{-78}	204^{+139}_{-86}
5523	2.16 ± 0.30	$142.29^{+0.06}_{-0.06}$	$127.11^{+0.07}_{-0.07}$	111^{+72}_{-51}	138^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}
5524	$1.29^{\dagger}$	$102.37^{+0.09}_{-0.09}$	$86.54^{+0.10}_{-0.10}$	76^{+45}_{-37}	98^{+73}_{-33}	119^{+46}_{-59}	95^{+55}_{-45}
5526*	4.43 ± 0.28	—	—	187^{+148}_{-76}	227^{+291}_{-71}	222^{+132}_{-82}	234^{+168}_{-98}
5527	56.70 ± 3.08	$1147.39^{+3.25}_{-3.24}$	$1454.52^{+4.91}_{-4.89}$	891^{+1457}_{-277}	1197^{+2547}_{-427}	754^{+1074}_{-225}	1217^{+1592}_{-589}
5528	29.60 ± 4.68	$757.50^{+1.21}_{-1.21}$	$895.69^{+1.70}_{-1.69}$	626^{+916}_{-193}	822^{+1683}_{-275}	565^{+704}_{-157}	851^{+992}_{-387}
5529	9.01 ± 1.82	$354.32^{+0.11}_{-0.11}$	$368.85^{+0.13}_{-0.13}$	302^{+309}_{-108}	375^{+608}_{-116}	319^{+260}_{-99}	392^{+344}_{-163}
5530	0.69 ± 0.07	$68.70^{+0.12}_{-0.12}$	$54.32^{+0.12}_{-0.12}$	48^{+29}_{-25}	67^{+37}_{-23}	88^{+34}_{-49}	62^{+39}_{-33}
5531	1.30 ± 0.24	$102.87^{+0.09}_{-0.09}$	$87.04^{+0.10}_{-0.10}$	77^{+45}_{-37}	98^{+73}_{-33}	119^{+47}_{-59}	95^{+55}_{-46}
5532	10.80 ± 2.58	$397.81^{+0.17}_{-0.17}$	$422.23^{+0.21}_{-0.21}$	340^{+370}_{-118}	425^{+724}_{-133}	349^{+307}_{-105}	445^{+411}_{-186}
5533	57.00 ± 4.67	$1151.26^{+3.27}_{-3.26}$	$1460.25^{+4.95}_{-4.93}$	893^{+1462}_{-278}	1201^{+2554}_{-429}	756^{+1077}_{-226}	1221^{+1598}_{-591}
5534	1.24 ± 0.14	$99.82^{+0.09}_{-0.09}$	$84.02^{+0.10}_{-0.10}$	74^{+44}_{-36}	95^{+70}_{-32}	116^{+45}_{-58}	92^{+53}_{-45}
5536	$1.90^{\dagger}$	$131.10^{+0.07}_{-0.07}$	$115.52^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+113}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
5537	20.30 ± 10.90	$595.32^{+0.63}_{-0.63}$	$676.06^{+0.84}_{-0.84}$	503^{+668}_{-160}	648^{+1262}_{-210}	474^{+528}_{-132}	676^{+729}_{-297}
5538	11.80 ± 1.97	$420.96^{+0.21}_{-0.21}$	$451.06^{+0.26}_{-0.26}$	360^{+404}_{-123}	452^{+787}_{-142}	364^{+333}_{-108}	473^{+447}_{-199}
5539	1.13 ± 0.86	$94.06^{+0.10}_{-0.10}$	$78.40^{+0.10}_{-0.10}$	69^{+40}_{-34}	90^{+63}_{-30}	111^{+43}_{-57}	86^{+50}_{-42}
5540	2.55 ± 0.96	$158.20^{+0.05}_{-0.05}$	$143.87^{+0.06}_{-0.06}$	126^{+84}_{-56}	154^{+157}_{-49}	168^{+79}_{-71}	155^{+97}_{-68}
5541	2.57 ± 0.63	$159.00^{+0.05}_{-0.05}$	$144.71^{+0.06}_{-0.06}$	126^{+85}_{-56}	155^{+159}_{-49}	168^{+80}_{-71}	156^{+97}_{-68}
5542	8.17 ± 0.92	$332.85^{+0.09}_{-0.09}$	$342.88^{+0.10}_{-0.10}$	283^{+280}_{-103}	350^{+552}_{-109}	303^{+237}_{-97}	366^{+312}_{-151}
5543	25.10 ± 19.90	$681.76^{+0.92}_{-0.92}$	$792.02^{+1.26}_{-1.26}$	570^{+801}_{-178}	742^{+1490}_{-244}	524^{+623}_{-145}	771^{+869}_{-345}
5545	6.74 ± 1.46	$294.35^{+0.06}_{-0.06}$	$297.04^{+0.06}_{-0.06}$	249^{+229}_{-94}	306^{+454}_{-95}	275^{+198}_{-92}	319^{+257}_{-131}
5546	44.10 ± 14.10	$977.21^{+2.26}_{-2.25}$	$1205.89^{+3.31}_{-3.30}$	780^{+1234}_{-240}	1041^{+2196}_{-362}	676^{+923}_{-195}	1066^{+1336}_{-505}
5547	41.80 ± 6.96	$944.34^{+2.09}_{-2.08}$	$1158.66^{+3.04}_{-3.03}$	758^{+1188}_{-233}	1009^{+2124}_{-349}	660^{+892}_{-189}	1035^{+1286}_{-488}
5548	1.79 ± 0.22	$126.20^{+0.07}_{-0.07}$	$110.49^{+0.08}_{-0.08}$	97^{+60}_{-45}	121^{+105}_{-39}	140^{+59}_{-65}	120^{+70}_{-55}
5551	1.07 ± 0.20	$90.84^{+0.10}_{-0.10}$	$75.27^{+0.11}_{-0.10}$	66^{+39}_{-33}	87^{+59}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
5554	9.41 ± 0.90	$364.29^{+0.13}_{-0.13}$	$381.00^{+0.15}_{-0.15}$	311^{+323}_{-111}	386^{+634}_{-120}	326^{+271}_{-101}	404^{+359}_{-168}
5555	1.31 ± 0.33	$103.38^{+0.09}_{-0.09}$	$87.54^{+0.10}_{-0.10}$	77^{+46}_{-37}	99^{+74}_{-33}	120^{+47}_{-59}	96^{+55}_{-46}
5556	1.35 ± 0.89	$105.38^{+0.09}_{-0.09}$	$89.52^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
5557	$1.33^{\dagger}$	$104.38^{+0.09}_{-0.09}$	$88.53^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+75}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
5559	12.90 ± 3.80	$445.62^{+0.26}_{-0.26}$	$482.07^{+0.32}_{-0.32}$	381^{+440}_{-129}	480^{+854}_{-151}	381^{+360}_{-111}	503^{+486}_{-212}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
5560	23.00 ± 13.90	$644.75^{+0.79}_{-0.79}$	$742.05^{+1.07}_{-1.07}$	541^{+744}_{-170}	702^{+1393}_{-229}	503^{+583}_{-140}	731^{+809}_{-325}
5561	1.23 ± 0.15	$99.30^{+0.09}_{-0.09}$	$83.52^{+0.10}_{-0.10}$	74^{+43}_{-36}	95^{+69}_{-32}	116^{+45}_{-58}	92^{+53}_{-44}
5562	26.80 ± 6.43	$710.91^{+1.03}_{-1.03}$	$831.70^{+1.42}_{-1.42}$	591^{+846}_{-184}	773^{+1565}_{-256}	540^{+654}_{-150}	802^{+917}_{-362}
5563*	3.04 ± 0.13	—	—	143^{+100}_{-62}	174^{+192}_{-55}	183^{+93}_{-74}	177^{+115}_{-76}
5564	55.50 ± 10.60	$1131.82^{+3.15}_{-3.14}$	$1431.49^{+4.75}_{-4.74}$	881^{+1438}_{-273}	1183^{+2516}_{-421}	747^{+1061}_{-222}	1204^{+1569}_{-581}
5565	$0.52^{\dagger}$	$56.94^{+0.13}_{-0.13}$	$43.63^{+0.13}_{-0.13}$	39^{+24}_{-20}	57^{+27}_{-20}	76^{+31}_{-45}	52^{+36}_{-29}
5566	6.58 ± 0.66	$289.87^{+0.05}_{-0.05}$	$291.77^{+0.06}_{-0.06}$	245^{+224}_{-93}	301^{+443}_{-93}	272^{+193}_{-91}	313^{+251}_{-129}
5567*	7.16 ± 0.12	—	—	259^{+244}_{-97}	319^{+483}_{-99}	284^{+210}_{-93}	333^{+274}_{-137}
5568*	29.20 ± 0.50	—	—	621^{+906}_{-192}	815^{+1666}_{-272}	562^{+697}_{-156}	844^{+981}_{-384}
5569	0.65 ± 0.32	$66.01^{+0.13}_{-0.12}$	$51.84^{+0.12}_{-0.12}$	46^{+28}_{-24}	64^{+35}_{-23}	85^{+33}_{-48}	60^{+38}_{-32}
5571	4.74 ± 1.28	$235.08^{+0.03}_{-0.03}$	$228.45^{+0.04}_{-0.04}$	196^{+159}_{-79}	239^{+313}_{-74}	230^{+141}_{-83}	246^{+180}_{-102}
5572	4.81 ± 1.30	$237.29^{+0.03}_{-0.03}$	$230.96^{+0.04}_{-0.04}$	198^{+161}_{-79}	241^{+318}_{-75}	232^{+143}_{-84}	249^{+182}_{-103}
5573	15.40 ± 6.11	$499.01^{+0.37}_{-0.37}$	$550.17^{+0.47}_{-0.47}$	425^{+520}_{-140}	541^{+1000}_{-172}	415^{+420}_{-118}	566^{+572}_{-242}
5574	2.13 ± 0.34	$141.02^{+0.06}_{-0.06}$	$125.79^{+0.07}_{-0.07}$	110^{+71}_{-50}	136^{+128}_{-44}	153^{+68}_{-68}	136^{+82}_{-61}
5575	3.49 ± 0.19	$193.32^{+0.04}_{-0.04}$	$181.81^{+0.04}_{-0.04}$	158^{+116}_{-67}	192^{+224}_{-60}	197^{+105}_{-77}	196^{+132}_{-83}
5576	24.40 ± 12.60	$669.55^{+0.88}_{-0.88}$	$775.49^{+1.19}_{-1.19}$	560^{+782}_{-175}	729^{+1458}_{-239}	517^{+610}_{-143}	758^{+850}_{-339}
5581	0.94 ± 0.89	$83.80^{+0.11}_{-0.11}$	$68.50^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	102^{+39}_{-54}	76^{+45}_{-38}
5585	5.14 ± 0.59	$247.56^{+0.04}_{-0.04}$	$242.68^{+0.04}_{-0.04}$	207^{+173}_{-82}	253^{+341}_{-78}	240^{+153}_{-85}	261^{+195}_{-108}
5589	0.71 ± 0.27	$69.78^{+0.12}_{-0.12}$	$55.32^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	63^{+39}_{-33}
5590	0.66 ± 0.23	$66.72^{+0.12}_{-0.12}$	$52.50^{+0.12}_{-0.12}$	46^{+28}_{-24}	65^{+35}_{-23}	86^{+33}_{-48}	60^{+38}_{-32}
5591*	7.50 ± 0.20	—	—	268^{+256}_{-99}	330^{+506}_{-102}	291^{+219}_{-94}	344^{+287}_{-142}
5592	$5.21^{\dagger}$	$249.71^{+0.04}_{-0.04}$	$245.14^{+0.04}_{-0.04}$	209^{+175}_{-83}	255^{+346}_{-79}	242^{+155}_{-86}	264^{+198}_{-109}
5593	3.03 ± 0.33	$176.63^{+0.04}_{-0.04}$	$163.62^{+0.05}_{-0.05}$	142^{+100}_{-62}	174^{+191}_{-55}	183^{+92}_{-74}	177^{+114}_{-76}
5594	2.12 ± 0.95	$140.60^{+0.06}_{-0.06}$	$125.35^{+0.07}_{-0.07}$	110^{+70}_{-50}	136^{+128}_{-44}	153^{+67}_{-68}	136^{+82}_{-61}
5595	19.10 ± 4.14	$572.59^{+0.56}_{-0.56}$	$646.02^{+0.74}_{-0.74}$	485^{+633}_{-155}	623^{+1201}_{-201}	460^{+503}_{-129}	650^{+691}_{-284}
5597	6.69 ± 0.42	$292.96^{+0.06}_{-0.06}$	$295.40^{+0.06}_{-0.06}$	248^{+228}_{-94}	304^{+450}_{-94}	274^{+196}_{-91}	317^{+255}_{-131}
5599	25.20 ± 2.72	$683.50^{+0.93}_{-0.93}$	$794.38^{+1.27}_{-1.27}$	571^{+804}_{-178}	744^{+1495}_{-245}	525^{+625}_{-146}	773^{+872}_{-346}
5601	5.22 ± 0.29	$250.02^{+0.04}_{-0.04}$	$245.49^{+0.04}_{-0.04}$	209^{+176}_{-83}	255^{+347}_{-79}	242^{+155}_{-86}	264^{+198}_{-110}
5603	15.80 ± 1.60	$507.25^{+0.39}_{-0.39}$	$560.79^{+0.50}_{-0.50}$	432^{+533}_{-142}	550^{+1023}_{-175}	420^{+429}_{-120}	575^{+585}_{-247}
5604	13.60 ± 0.59	$460.92^{+0.29}_{-0.29}$	$501.45^{+0.36}_{-0.36}$	394^{+463}_{-132}	497^{+896}_{-157}	391^{+377}_{-113}	521^{+510}_{-221}
5605	$1.88^{\dagger}$	$130.21^{+0.07}_{-0.07}$	$114.61^{+0.07}_{-0.07}$	101^{+63}_{-47}	125^{+111}_{-41}	144^{+61}_{-65}	124^{+73}_{-56}
5606*	4.73 ± 0.29	—	—	195^{+159}_{-79}	238^{+312}_{-74}	230^{+141}_{-83}	246^{+179}_{-102}
5607	19.70 ± 1.65	$584.02^{+0.60}_{-0.60}$	$661.09^{+0.79}_{-0.79}$	494^{+651}_{-157}	636^{+1232}_{-205}	467^{+515}_{-131}	663^{+710}_{-290}
5608	3.62 ± 0.96	$197.89^{+0.04}_{-0.04}$	$186.84^{+0.04}_{-0.04}$	162^{+120}_{-68}	197^{+233}_{-62}	200^{+109}_{-78}	202^{+136}_{-85}
5610	0.84 ± 0.29	$78.13^{+0.11}_{-0.11}$	$63.12^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	96^{+37}_{-52}	71^{+43}_{-36}
5612	40.50 ± 5.88	$925.47^{+1.99}_{-1.98}$	$1131.68^{+2.89}_{-2.88}$	745^{+1161}_{-229}	991^{+2082}_{-341}	651^{+874}_{-186}	1017^{+1257}_{-478}
5614	6.37 ± 0.03	$283.93^{+0.05}_{-0.05}$	$284.79^{+0.06}_{-0.06}$	240^{+216}_{-91}	294^{+428}_{-91}	268^{+187}_{-90}	306^{+243}_{-126}
5615	$0.32^{\dagger}$	$41.76^{+0.14}_{-0.14}$	$30.38^{+0.13}_{-0.13}$	28^{+19}_{-15}	44^{+18}_{-16}	62^{+29}_{-39}	40^{+33}_{-23}
5617	9.50 ± 0.51	$366.51^{+0.13}_{-0.13}$	$383.71^{+0.15}_{-0.15}$	313^{+326}_{-111}	389^{+640}_{-121}	327^{+273}_{-101}	407^{+362}_{-169}
5618	18.00 ± 5.22	$551.30^{+0.50}_{-0.50}$	$618.06^{+0.66}_{-0.66}$	468^{+600}_{-151}	600^{+1143}_{-192}	447^{+479}_{-126}	626^{+657}_{-272}
5619	9.53 ± 4.82	$367.25^{+0.13}_{-0.13}$	$384.62^{+0.15}_{-0.15}$	314^{+327}_{-111}	390^{+642}_{-121}	328^{+274}_{-101}	408^{+364}_{-170}
5620	$3.33^{\dagger}$	$187.61^{+0.04}_{-0.04}$	$175.55^{+0.04}_{-0.04}$	152^{+110}_{-65}	186^{+212}_{-58}	192^{+101}_{-76}	189^{+125}_{-81}
5621*	5.41 ± 0.11	—	—	214^{+182}_{-84}	262^{+361}_{-81}	246^{+160}_{-86}	272^{+206}_{-112}
5622	0.44 ± 0.22	$51.19^{+0.14}_{-0.14}$	$38.53^{+0.13}_{-0.13}$	34^{+22}_{-18}	52^{+24}_{-19}	71^{+30}_{-42}	47^{+34}_{-26}
5624*	7.28 ± 0.74	—	—	262^{+248}_{-98}	323^{+491}_{-100}	286^{+213}_{-93}	337^{+278}_{-139}
5626	6.55 ± 3.52	$289.03^{+0.05}_{-0.05}$	$290.77^{+0.06}_{-0.06}$	244^{+223}_{-93}	300^{+441}_{-93}	271^{+193}_{-91}	312^{+250}_{-129}
5627	$0.49^{\dagger}$	$55.52^{+0.13}_{-0.13}$	$42.36^{+0.13}_{-0.13}$	38^{+24}_{-20}	55^{+26}_{-20}	75^{+31}_{-44}	51^{+35}_{-28}
5628	4.15 ± 0.17	$215.94^{+0.03}_{-0.03}$	$206.88^{+0.04}_{-0.04}$	178^{+138}_{-73}	217^{+271}_{-68}	215^{+124}_{-81}	223^{+157}_{-94}
5629*	3.77 ± 0.11	—	—	166^{+125}_{-70}	203^{+244}_{-63}	205^{+113}_{-79}	208^{+142}_{-88}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
5631	0.83 ± 0.14	$77.24^{+0.12}_{-0.12}$	$62.28^{+0.11}_{-0.11}$	55^{+32}_{-28}	74^{+45}_{-26}	96^{+36}_{-52}	70^{+42}_{-36}
5632*	27.30 ± 1.92	—	—	598^{+858}_{-185}	782^{+1587}_{-259}	545^{+664}_{-151}	811^{+930}_{-366}
5633	1.95 ± 1.75	$133.29^{+0.07}_{-0.07}$	$117.78^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+116}_{-42}	146^{+63}_{-66}	128^{+76}_{-58}
5634	0.40 ± 0.36	$48.14^{+0.14}_{-0.14}$	$35.86^{+0.13}_{-0.13}$	32^{+21}_{-17}	49^{+22}_{-18}	68^{+30}_{-41}	45^{+34}_{-25}
5635	4.60 ± 1.52	$230.62^{+0.03}_{-0.03}$	$223.39^{+0.04}_{-0.04}$	192^{+154}_{-77}	233^{+303}_{-73}	227^{+137}_{-83}	241^{+174}_{-100}
5637	5.17 ± 0.67	$248.48^{+0.04}_{-0.04}$	$243.73^{+0.04}_{-0.04}$	208^{+174}_{-82}	254^{+344}_{-79}	241^{+153}_{-85}	263^{+196}_{-109}
5638	9.65 ± 4.44	$370.20^{+0.13}_{-0.13}$	$388.22^{+0.16}_{-0.16}$	316^{+331}_{-112}	393^{+650}_{-122}	330^{+277}_{-101}	412^{+368}_{-171}
5640	2.08 ± 1.19	$138.90^{+0.06}_{-0.06}$	$123.58^{+0.07}_{-0.07}$	108^{+69}_{-50}	134^{+125}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
5642	3.52 ± 0.30	$194.38^{+0.04}_{-0.04}$	$182.97^{+0.04}_{-0.04}$	159^{+117}_{-67}	193^{+226}_{-61}	198^{+106}_{-77}	197^{+133}_{-84}
5644	7.37 ± 0.49	$311.64^{+0.07}_{-0.07}$	$317.52^{+0.08}_{-0.08}$	265^{+252}_{-98}	326^{+497}_{-101}	288^{+215}_{-94}	340^{+282}_{-140}
5645	1.96 ± 0.55	$133.73^{+0.07}_{-0.07}$	$118.23^{+0.07}_{-0.07}$	104^{+65}_{-48}	129^{+117}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
5646	4.01 ± 1.69	$211.26^{+0.03}_{-0.03}$	$201.65^{+0.04}_{-0.04}$	174^{+133}_{-72}	212^{+261}_{-66}	211^{+120}_{-80}	218^{+151}_{-91}
5647	77.10 ± 14.20	$1396.28^{+4.94}_{-4.93}$	$1829.26^{+7.75}_{-7.71}$	1041^{+1747}_{-332}	1408^{+2994}_{-520}	858^{+1267}_{-270}	1420^{+1949}_{-702}
5648	1.10 ± 0.62	$92.46^{+0.10}_{-0.10}$	$76.84^{+0.10}_{-0.10}$	68^{+40}_{-33}	88^{+61}_{-30}	110^{+42}_{-56}	85^{+49}_{-42}
5650	42.40 ± 15.00	$952.98^{+2.13}_{-2.13}$	$1171.04^{+3.11}_{-3.10}$	764^{+1200}_{-235}	1018^{+2143}_{-352}	665^{+900}_{-190}	1043^{+1299}_{-492}
5654*	6.08 ± 0.10	—	—	232^{+206}_{-89}	284^{+408}_{-88}	261^{+179}_{-89}	296^{+232}_{-122}
5655	1.12 ± 0.47	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
5664	3.23 ± 3.09	$183.99^{+0.04}_{-0.04}$	$171.61^{+0.04}_{-0.04}$	149^{+107}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+122}_{-79}
5667	3.50 ± 1.22	$193.67^{+0.04}_{-0.04}$	$182.20^{+0.04}_{-0.04}$	158^{+116}_{-67}	193^{+224}_{-60}	197^{+106}_{-77}	197^{+132}_{-83}
5669	1.37 ± 0.32	$106.38^{+0.09}_{-0.09}$	$90.51^{+0.09}_{-0.09}$	80^{+47}_{-38}	102^{+78}_{-34}	122^{+48}_{-60}	99^{+57}_{-47}
5697*	0.47 ± 0.07	—	—	37^{+23}_{-19}	54^{+25}_{-19}	74^{+31}_{-44}	50^{+35}_{-27}
5704*	2.11 ± 0.10	—	—	109^{+70}_{-50}	136^{+127}_{-44}	152^{+67}_{-68}	135^{+81}_{-61}
5706	2.44 ± 0.31	$153.81^{+0.05}_{-0.05}$	$139.21^{+0.06}_{-0.06}$	122^{+81}_{-55}	150^{+150}_{-48}	164^{+76}_{-70}	150^{+93}_{-66}
5711	14.90 ± 0.26	$488.60^{+0.35}_{-0.35}$	$536.79^{+0.44}_{-0.44}$	417^{+505}_{-138}	529^{+972}_{-168}	408^{+408}_{-117}	554^{+555}_{-236}
5713	2.27 ± 0.99	$146.88^{+0.06}_{-0.06}$	$131.91^{+0.06}_{-0.06}$	116^{+75}_{-52}	142^{+138}_{-46}	158^{+71}_{-69}	143^{+87}_{-63}
5715	$0.38^{\dagger}$	$46.73^{+0.14}_{-0.14}$	$34.64^{+0.13}_{-0.13}$	31^{+21}_{-16}	48^{+21}_{-18}	66^{+30}_{-41}	43^{+34}_{-25}
5716	0.54 ± 0.37	$58.55^{+0.13}_{-0.13}$	$45.07^{+0.12}_{-0.12}$	40^{+25}_{-21}	58^{+29}_{-21}	78^{+32}_{-45}	53^{+36}_{-29}
5718	2.46 ± 2.05	$154.61^{+0.05}_{-0.05}$	$140.06^{+0.06}_{-0.06}$	122^{+81}_{-55}	151^{+151}_{-48}	165^{+76}_{-70}	151^{+93}_{-67}
5719	3.42 ± 0.64	$190.83^{+0.04}_{-0.04}$	$179.08^{+0.04}_{-0.04}$	155^{+113}_{-66}	189^{+219}_{-59}	195^{+103}_{-77}	193^{+129}_{-82}
5721	9.05 ± 0.78	$355.33^{+0.11}_{-0.11}$	$370.07^{+0.13}_{-0.13}$	303^{+310}_{-109}	376^{+611}_{-117}	319^{+261}_{-99}	394^{+346}_{-163}
5723	1.88 ± 1.74	$130.21^{+0.07}_{-0.07}$	$114.61^{+0.07}_{-0.07}$	101^{+63}_{-47}	125^{+111}_{-41}	144^{+61}_{-65}	124^{+73}_{-56}
5724	21.90 ± 6.58	$624.88^{+0.73}_{-0.72}$	$715.42^{+0.97}_{-0.97}$	526^{+714}_{-166}	681^{+1341}_{-221}	491^{+561}_{-137}	709^{+777}_{-313}
5725	15.70 ± 0.97	$505.20^{+0.39}_{-0.39}$	$558.14^{+0.49}_{-0.49}$	430^{+530}_{-141}	548^{+1017}_{-174}	419^{+427}_{-119}	573^{+582}_{-246}
5726	1.11 ± 0.15	$93.00^{+0.10}_{-0.10}$	$77.36^{+0.10}_{-0.10}$	68^{+40}_{-34}	89^{+62}_{-30}	110^{+42}_{-56}	85^{+49}_{-42}
5729	1.86 ± 0.14	$129.33^{+0.07}_{-0.07}$	$113.70^{+0.08}_{-0.07}$	100^{+62}_{-46}	124^{+110}_{-40}	143^{+60}_{-65}	123^{+73}_{-56}
5730	5.47 ± 2.79	$257.60^{+0.04}_{-0.04}$	$254.21^{+0.04}_{-0.04}$	216^{+185}_{-85}	264^{+365}_{-82}	248^{+162}_{-87}	274^{+208}_{-113}
5731*	2.56 ± 0.25	—	—	126^{+84}_{-56}	155^{+158}_{-49}	168^{+79}_{-71}	156^{+97}_{-68}
5733	$4.86^{\dagger}$	$238.86^{+0.03}_{-0.03}$	$232.75^{+0.04}_{-0.04}$	199^{+163}_{-80}	243^{+322}_{-75}	233^{+145}_{-84}	251^{+184}_{-104}
5736	$1.36^{\dagger}$	$105.88^{+0.09}_{-0.09}$	$90.02^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-34}	122^{+48}_{-60}	98^{+57}_{-47}
5740	26.00 ± 9.72	$697.28^{+0.98}_{-0.98}$	$813.11^{+1.34}_{-1.34}$	581^{+825}_{-181}	759^{+1530}_{-250}	532^{+640}_{-148}	787^{+895}_{-354}
5770	19.40 ± 8.46	$578.32^{+0.58}_{-0.58}$	$653.57^{+0.77}_{-0.77}$	489^{+642}_{-156}	630^{+1216}_{-203}	464^{+509}_{-130}	657^{+701}_{-287}
5773*	1.93 ± 0.03	—	—	103^{+64}_{-48}	128^{+115}_{-41}	145^{+62}_{-66}	127^{+75}_{-57}
5867	3.59 ± 0.72	$196.84^{+0.04}_{-0.04}$	$185.68^{+0.04}_{-0.04}$	161^{+119}_{-68}	196^{+231}_{-61}	200^{+108}_{-78}	200^{+135}_{-85}
5890	$0.67^{\dagger}$	$67.43^{+0.12}_{-0.12}$	$53.15^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	86^{+34}_{-48}	61^{+39}_{-32}
5955	1.36 ± 0.77	$105.88^{+0.09}_{-0.09}$	$90.02^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-34}	122^{+48}_{-60}	98^{+57}_{-47}
5983	10.80 ± 2.55	$397.81^{+0.17}_{-0.17}$	$422.23^{+0.21}_{-0.21}$	340^{+370}_{-118}	425^{+724}_{-133}	349^{+307}_{-105}	445^{+411}_{-186}
5989	0.76 ± 0.04	$72.95^{+0.12}_{-0.12}$	$58.26^{+0.12}_{-0.12}$	51^{+30}_{-26}	70^{+41}_{-24}	92^{+35}_{-50}	66^{+40}_{-34}
5992	$1.25^{\dagger}$	$100.33^{+0.09}_{-0.09}$	$84.53^{+0.10}_{-0.10}$	74^{+44}_{-36}	96^{+70}_{-32}	117^{+45}_{-58}	93^{+53}_{-45}
5995*	23.10 ± 0.22	—	—	543^{+747}_{-170}	704^{+1398}_{-230}	504^{+585}_{-140}	733^{+812}_{-326}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
6004	1.15 ± 0.24	$95.13^{+0.10}_{-0.10}$	$79.43^{+0.10}_{-0.10}$	70^{+41}_{-34}	91^{+64}_{-30}	112^{+43}_{-57}	87^{+51}_{-43}
6082	1.04 ± 0.36	$89.21^{+0.10}_{-0.10}$	$73.69^{+0.11}_{-0.11}$	65^{+38}_{-32}	85^{+57}_{-29}	107^{+41}_{-55}	82^{+48}_{-40}
6083	1.39 ± 0.50	$107.37^{+0.09}_{-0.09}$	$91.49^{+0.09}_{-0.09}$	81^{+48}_{-39}	103^{+79}_{-34}	123^{+49}_{-60}	100^{+58}_{-47}
6090	2.60 ± 0.42	$160.18^{+0.05}_{-0.05}$	$145.97^{+0.05}_{-0.05}$	128^{+86}_{-57}	156^{+161}_{-50}	169^{+80}_{-71}	158^{+99}_{-69}
6091	0.84 ± 0.61	$77.71^{+0.11}_{-0.11}$	$62.73^{+0.11}_{-0.11}$	55^{+33}_{-28}	75^{+45}_{-26}	96^{+37}_{-52}	71^{+42}_{-36}
6096	10.20 ± 2.55	$383.54^{+0.15}_{-0.15}$	$404.61^{+0.18}_{-0.18}$	328^{+350}_{-115}	409^{+686}_{-127}	339^{+292}_{-103}	428^{+388}_{-178}
6098	1.48 ± 0.26	$111.76^{+0.08}_{-0.08}$	$95.88^{+0.09}_{-0.09}$	84^{+51}_{-40}	107^{+85}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
6100*	13.10 ± 0.16	—	—	384^{+447}_{-129}	485^{+866}_{-153}	384^{+365}_{-112}	508^{+493}_{-215}
6101	2.14 ± 0.45	$141.45^{+0.06}_{-0.06}$	$126.23^{+0.07}_{-0.07}$	111^{+71}_{-51}	137^{+129}_{-44}	153^{+68}_{-68}	137^{+82}_{-61}
6102	1.16 ± 0.75	$95.65^{+0.10}_{-0.10}$	$79.95^{+0.10}_{-0.10}$	70^{+41}_{-35}	91^{+65}_{-31}	113^{+43}_{-57}	88^{+51}_{-43}
6103	2.61 ± 0.35	$160.57^{+0.05}_{-0.05}$	$146.38^{+0.05}_{-0.05}$	128^{+86}_{-57}	157^{+162}_{-50}	170^{+81}_{-72}	158^{+99}_{-69}
6104	0.53 ± 0.47	$57.99^{+0.13}_{-0.13}$	$44.57^{+0.13}_{-0.12}$	40^{+25}_{-21}	57^{+28}_{-20}	77^{+32}_{-45}	53^{+36}_{-29}
6105	$6.61^{\dagger}$	$290.71^{+0.06}_{-0.06}$	$292.76^{+0.06}_{-0.06}$	246^{+225}_{-93}	302^{+445}_{-93}	273^{+194}_{-91}	314^{+252}_{-130}
6111	10.10 ± 0.89	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
6113	2.64 ± 0.30	$161.75^{+0.05}_{-0.05}$	$147.64^{+0.05}_{-0.05}$	129^{+87}_{-57}	158^{+164}_{-50}	171^{+81}_{-72}	159^{+100}_{-70}
6115*	16.40 ± 0.54	—	—	442^{+552}_{-144}	564^{+1056}_{-180}	428^{+443}_{-121}	590^{+605}_{-254}
6117	15.90 ± 3.96	$509.30^{+0.40}_{-0.40}$	$563.43^{+0.51}_{-0.51}$	434^{+536}_{-142}	552^{+1029}_{-176}	422^{+432}_{-120}	578^{+588}_{-248}
6118	1.12 ± 0.35	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
6119	4.26 ± 3.53	$219.58^{+0.03}_{-0.03}$	$210.96^{+0.04}_{-0.04}$	181^{+142}_{-74}	221^{+279}_{-69}	218^{+127}_{-81}	228^{+161}_{-95}
6120	18.90 ± 10.50	$568.75^{+0.55}_{-0.55}$	$640.96^{+0.73}_{-0.73}$	482^{+627}_{-154}	619^{+1190}_{-199}	458^{+498}_{-128}	646^{+685}_{-282}
6123	44.40 ± 4.28	$981.45^{+2.28}_{-2.28}$	$1212.00^{+3.35}_{-3.34}$	783^{+1239}_{-241}	1045^{+2205}_{-363}	678^{+927}_{-195}	1070^{+1343}_{-507}
6124*	9.72 ± 0.08	—	—	318^{+333}_{-112}	395^{+655}_{-123}	331^{+279}_{-102}	414^{+371}_{-172}
6127	17.30 ± 3.05	$537.51^{+0.47}_{-0.47}$	$600.04^{+0.61}_{-0.61}$	457^{+579}_{-148}	584^{+1106}_{-187}	439^{+463}_{-124}	610^{+634}_{-264}
6128	0.66 ± 0.17	$66.52^{+0.12}_{-0.12}$	$52.32^{+0.12}_{-0.12}$	46^{+28}_{-24}	65^{+35}_{-23}	86^{+33}_{-48}	60^{+38}_{-32}
6131	12.30 ± 4.44	$432.27^{+0.23}_{-0.23}$	$465.24^{+0.29}_{-0.28}$	369^{+420}_{-126}	465^{+818}_{-146}	372^{+345}_{-109}	487^{+465}_{-205}
6134	$2.37^{\dagger}$	$150.98^{+0.05}_{-0.05}$	$136.22^{+0.06}_{-0.06}$	119^{+78}_{-54}	147^{+145}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
6135	30.20 ± 10.40	$767.27^{+1.25}_{-1.25}$	$909.20^{+1.76}_{-1.75}$	633^{+931}_{-195}	832^{+1707}_{-278}	570^{+714}_{-159}	861^{+1007}_{-393}
6136	1.47 ± 0.95	$111.28^{+0.08}_{-0.08}$	$95.39^{+0.09}_{-0.09}$	84^{+50}_{-40}	106^{+84}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
6137	6.65 ± 5.09	$291.84^{+0.06}_{-0.06}$	$294.08^{+0.06}_{-0.06}$	247^{+226}_{-93}	303^{+448}_{-94}	273^{+195}_{-91}	316^{+254}_{-130}
6139	3.47 ± 2.83	$192.61^{+0.04}_{-0.04}$	$181.03^{+0.04}_{-0.04}$	157^{+115}_{-67}	191^{+222}_{-60}	196^{+105}_{-77}	195^{+131}_{-83}
6141	8.75 ± 2.55	$347.76^{+0.11}_{-0.11}$	$360.88^{+0.12}_{-0.12}$	296^{+300}_{-107}	367^{+591}_{-114}	314^{+253}_{-98}	384^{+334}_{-159}
6145	7.21 ± 2.45	$307.31^{+0.07}_{-0.07}$	$312.36^{+0.07}_{-0.07}$	261^{+246}_{-97}	321^{+486}_{-99}	285^{+211}_{-93}	335^{+275}_{-138}
6147	1.26 ± 0.40	$100.84^{+0.09}_{-0.09}$	$85.03^{+0.10}_{-0.10}$	75^{+44}_{-37}	96^{+71}_{-32}	117^{+46}_{-58}	93^{+54}_{-45}
6148	8.04 ± 1.71	$329.46^{+0.09}_{-0.09}$	$338.81^{+0.10}_{-0.10}$	280^{+275}_{-103}	346^{+543}_{-107}	301^{+234}_{-96}	362^{+307}_{-150}
6149	$14.30^{\dagger}$	$475.94^{+0.32}_{-0.32}$	$520.58^{+0.40}_{-0.40}$	406^{+485}_{-135}	515^{+937}_{-163}	400^{+394}_{-115}	539^{+534}_{-229}
6151	12.70 ± 3.24	$441.20^{+0.25}_{-0.25}$	$476.48^{+0.31}_{-0.31}$	377^{+433}_{-128}	475^{+842}_{-149}	378^{+355}_{-111}	497^{+479}_{-210}
6152	3.45 ± 1.10	$191.90^{+0.04}_{-0.04}$	$180.25^{+0.04}_{-0.04}$	156^{+114}_{-66}	191^{+221}_{-60}	196^{+104}_{-77}	195^{+130}_{-83}
6153	7.08 ± 5.04	$303.75^{+0.06}_{-0.06}$	$308.15^{+0.07}_{-0.07}$	257^{+241}_{-96}	317^{+477}_{-98}	282^{+207}_{-93}	330^{+270}_{-136}
6154	1.57 ± 0.28	$116.05^{+0.08}_{-0.08}$	$100.19^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+91}_{-36}	131^{+53}_{-62}	109^{+63}_{-51}
6158	$1.12^{\dagger}$	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
6159	0.74 ± 0.09	$71.72^{+0.12}_{-0.12}$	$57.11^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+40}_{-24}	90^{+35}_{-50}	65^{+40}_{-34}
6160	1.60 ± 0.89	$117.47^{+0.08}_{-0.08}$	$101.62^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+93}_{-37}	132^{+54}_{-63}	110^{+64}_{-51}
6165	1.44 ± 0.83	$109.82^{+0.09}_{-0.09}$	$93.94^{+0.09}_{-0.09}$	83^{+49}_{-40}	105^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
6166	$4.24^{\dagger}$	$218.92^{+0.03}_{-0.03}$	$210.22^{+0.04}_{-0.04}$	181^{+141}_{-74}	220^{+277}_{-69}	217^{+127}_{-81}	227^{+160}_{-95}
6167	0.63 ± 0.14	$64.63^{+0.13}_{-0.13}$	$50.58^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+33}_{-22}	84^{+33}_{-47}	59^{+38}_{-31}
6168	15.90 ± 0.17	$509.30^{+0.40}_{-0.40}$	$563.43^{+0.51}_{-0.51}$	434^{+536}_{-142}	552^{+1029}_{-176}	422^{+432}_{-120}	578^{+588}_{-248}
6176	0.51 ± 0.44	$56.23^{+0.13}_{-0.13}$	$42.99^{+0.13}_{-0.13}$	38^{+24}_{-20}	56^{+27}_{-20}	76^{+31}_{-44}	51^{+35}_{-28}
6178	39.60 ± 15.00	$912.28^{+1.92}_{-1.92}$	$1112.86^{+2.78}_{-2.78}$	736^{+1143}_{-226}	978^{+2052}_{-336}	645^{+861}_{-183}	1005^{+1236}_{-471}
6180	4.05 ± 3.37	$212.60^{+0.03}_{-0.03}$	$203.15^{+0.04}_{-0.04}$	175^{+135}_{-72}	213^{+264}_{-67}	212^{+121}_{-80}	219^{+153}_{-92}

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Trigger[a]	HR_H [b] Hardness	Mean[$E_{p,obs}$][c] OLS(Y|X)	Mean[$E_{p,obs}$][d] OLS bisector	Mode[$E_{p,obs}$][e] Band	Mode[$E_{p,obs}$][f] COMP(CPL)	Mode[$E_{p,obs}$][g] SBPL	Mean[$E_{p,obs}$][h] Expected
6182	23.40 ± 8.14	$651.89^{+0.82}_{-0.81}$	$751.66^{+1.10}_{-1.10}$	547^{+755}_{-171}	710^{+1412}_{-232}	507^{+590}_{-141}	738^{+821}_{-329}
6186	0.92 ± 0.37	$82.37^{+0.11}_{-0.11}$	$67.14^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	100^{+38}_{-53}	75^{+44}_{-38}
6188	3.23 ± 2.12	$183.99^{+0.04}_{-0.04}$	$171.61^{+0.04}_{-0.04}$	149^{+107}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+122}_{-79}
6189	15.30 ± 1.84	$496.94^{+0.37}_{-0.37}$	$547.50^{+0.47}_{-0.47}$	424^{+517}_{-139}	538^{+995}_{-171}	414^{+418}_{-118}	563^{+568}_{-241}
6190	2.63 ± 1.05	$161.36^{+0.05}_{-0.05}$	$147.22^{+0.05}_{-0.05}$	129^{+87}_{-57}	158^{+163}_{-50}	170^{+81}_{-72}	159^{+100}_{-69}
6194	0.85 ± 0.15	$78.60^{+0.11}_{-0.11}$	$63.56^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	97^{+37}_{-52}	71^{+43}_{-36}
6198*	5.77 ± 0.05	—	—	224^{+195}_{-87}	274^{+386}_{-85}	254^{+170}_{-88}	285^{+220}_{-118}
6204	$2.20^{\dagger}$	$143.97^{+0.06}_{-0.06}$	$128.86^{+0.06}_{-0.06}$	113^{+73}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
6205	24.80 ± 10.70	$676.55^{+0.90}_{-0.90}$	$784.95^{+1.23}_{-1.23}$	566^{+793}_{-177}	737^{+1477}_{-242}	521^{+617}_{-145}	765^{+861}_{-342}
6206	0.31 ± 0.26	$40.83^{+0.14}_{-0.14}$	$29.59^{+0.13}_{-0.13}$	27^{+19}_{-14}	43^{+17}_{-16}	61^{+29}_{-38}	39^{+33}_{-23}
6207	3.62 ± 0.43	$197.89^{+0.04}_{-0.04}$	$186.84^{+0.04}_{-0.04}$	162^{+120}_{-68}	197^{+233}_{-62}	200^{+109}_{-78}	202^{+136}_{-85}
6209	2.21 ± 0.67	$144.38^{+0.06}_{-0.06}$	$129.30^{+0.06}_{-0.06}$	113^{+73}_{-52}	140^{+134}_{-45}	156^{+70}_{-68}	140^{+85}_{-62}
6212	$1.10^{\dagger}$	$92.46^{+0.10}_{-0.10}$	$76.84^{+0.10}_{-0.10}$	68^{+40}_{-33}	88^{+61}_{-30}	110^{+42}_{-56}	85^{+49}_{-42}
6214	4.95 ± 0.35	$241.68^{+0.04}_{-0.04}$	$235.95^{+0.04}_{-0.04}$	202^{+166}_{-80}	246^{+328}_{-76}	235^{+147}_{-84}	254^{+188}_{-106}
6215	62.10 ± 16.00	$1216.04^{+3.69}_{-3.68}$	$1556.64^{+5.63}_{-5.61}$	933^{+1542}_{-292}	1258^{+2677}_{-453}	784^{+1131}_{-237}	1275^{+1692}_{-621}
6216	1.43 ± 0.40	$109.33^{+0.09}_{-0.09}$	$93.45^{+0.09}_{-0.09}$	82^{+49}_{-40}	104^{+82}_{-35}	125^{+50}_{-61}	102^{+59}_{-48}
6219	21.00 ± 18.90	$608.35^{+0.67}_{-0.67}$	$693.37^{+0.90}_{-0.90}$	513^{+688}_{-162}	663^{+1297}_{-215}	482^{+542}_{-134}	691^{+750}_{-304}
6222	2.48 ± 0.68	$155.42^{+0.05}_{-0.05}$	$140.91^{+0.06}_{-0.06}$	123^{+82}_{-55}	151^{+153}_{-48}	165^{+77}_{-71}	152^{+94}_{-67}
6223	2.33 ± 2.25	$149.34^{+0.06}_{-0.06}$	$134.50^{+0.06}_{-0.06}$	118^{+77}_{-53}	145^{+142}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
6225	8.27 ± 1.16	$335.45^{+0.09}_{-0.09}$	$346.01^{+0.11}_{-0.11}$	286^{+283}_{-104}	353^{+559}_{-110}	305^{+240}_{-97}	369^{+316}_{-153}
6226	3.12 ± 0.33	$179.96^{+0.04}_{-0.04}$	$167.23^{+0.04}_{-0.04}$	145^{+103}_{-63}	178^{+198}_{-56}	186^{+95}_{-75}	181^{+118}_{-77}
6227	$2.06^{\dagger}$	$138.04^{+0.06}_{-0.06}$	$122.70^{+0.07}_{-0.07}$	108^{+68}_{-49}	133^{+124}_{-43}	150^{+66}_{-67}	133^{+79}_{-60}
6228	6.40 ± 2.75	$284.78^{+0.05}_{-0.05}$	$285.79^{+0.06}_{-0.06}$	240^{+217}_{-92}	295^{+430}_{-91}	268^{+188}_{-90}	307^{+244}_{-127}
6230	12.00 ± 3.99	$425.50^{+0.22}_{-0.22}$	$456.75^{+0.27}_{-0.27}$	364^{+410}_{-124}	457^{+799}_{-143}	367^{+338}_{-109}	479^{+454}_{-201}
6233	$0.47^{\dagger}$	$53.42^{+0.14}_{-0.13}$	$40.49^{+0.13}_{-0.13}$	36^{+23}_{-19}	54^{+25}_{-19}	73^{+31}_{-43}	49^{+35}_{-27}
6234	2.88 ± 1.29	$170.99^{+0.04}_{-0.04}$	$157.54^{+0.05}_{-0.05}$	137^{+95}_{-60}	168^{+181}_{-53}	178^{+88}_{-73}	170^{+109}_{-73}
6235*	8.19 ± 0.14	—	—	284^{+280}_{-103}	351^{+553}_{-109}	304^{+238}_{-97}	367^{+313}_{-152}
6236	11.00 ± 2.98	$402.50^{+0.18}_{-0.18}$	$428.05^{+0.22}_{-0.22}$	344^{+377}_{-119}	430^{+737}_{-135}	352^{+312}_{-106}	451^{+418}_{-189}
6237	5.04 ± 3.60	$244.47^{+0.04}_{-0.04}$	$239.15^{+0.04}_{-0.04}$	204^{+169}_{-81}	249^{+334}_{-77}	237^{+150}_{-85}	258^{+191}_{-107}
6238	$4.31^{\dagger}$	$221.22^{+0.03}_{-0.03}$	$212.80^{+0.04}_{-0.04}$	183^{+144}_{-75}	223^{+282}_{-69}	219^{+129}_{-81}	230^{+163}_{-96}
6240*	4.90 ± 0.88	—	—	200^{+165}_{-80}	244^{+324}_{-76}	234^{+146}_{-84}	252^{+186}_{-105}
6241	3.40 ± 0.97	$190.12^{+0.04}_{-0.04}$	$178.30^{+0.04}_{-0.04}$	155^{+113}_{-66}	189^{+217}_{-59}	194^{+103}_{-77}	192^{+128}_{-82}
6242	2.43 ± 0.71	$153.41^{+0.05}_{-0.05}$	$138.79^{+0.06}_{-0.06}$	121^{+80}_{-54}	149^{+149}_{-48}	164^{+76}_{-70}	150^{+92}_{-66}
6243	7.27 ± 3.07	$308.94^{+0.07}_{-0.07}$	$314.30^{+0.08}_{-0.08}$	262^{+248}_{-98}	323^{+491}_{-100}	286^{+213}_{-93}	337^{+278}_{-139}
6244	3.95 ± 0.88	$209.23^{+0.03}_{-0.03}$	$199.40^{+0.04}_{-0.04}$	172^{+131}_{-71}	210^{+257}_{-65}	210^{+118}_{-80}	215^{+149}_{-90}
6249*	8.28 ± 0.58	—	—	286^{+283}_{-104}	353^{+559}_{-110}	305^{+240}_{-97}	370^{+316}_{-153}
6251	7.92 ± 0.92	$326.31^{+0.08}_{-0.08}$	$335.03^{+0.09}_{-0.09}$	278^{+271}_{-102}	343^{+535}_{-106}	299^{+231}_{-96}	358^{+303}_{-148}
6263	1.18 ± 0.50	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
6265	20.60 ± 4.21	$600.92^{+0.65}_{-0.65}$	$683.49^{+0.86}_{-0.86}$	507^{+677}_{-161}	654^{+1277}_{-212}	477^{+534}_{-133}	682^{+738}_{-300}
6266*	6.81 ± 0.25	—	—	251^{+232}_{-95}	308^{+459}_{-95}	277^{+200}_{-92}	321^{+260}_{-132}
6267	2.33 ± 1.51	$149.34^{+0.06}_{-0.06}$	$134.50^{+0.06}_{-0.06}$	118^{+77}_{-53}	145^{+142}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
6269	2.51 ± 1.20	$156.61^{+0.05}_{-0.05}$	$142.18^{+0.06}_{-0.06}$	124^{+83}_{-56}	153^{+155}_{-49}	166^{+78}_{-71}	154^{+95}_{-67}
6270	2.03 ± 0.78	$136.76^{+0.06}_{-0.06}$	$121.36^{+0.07}_{-0.07}$	106^{+67}_{-49}	132^{+122}_{-43}	149^{+65}_{-67}	131^{+78}_{-59}
6271	8.27 ± 3.72	$335.45^{+0.09}_{-0.09}$	$346.01^{+0.11}_{-0.11}$	286^{+283}_{-104}	353^{+559}_{-110}	305^{+240}_{-97}	369^{+316}_{-153}
6272	0.67 ± 0.11	$67.55^{+0.12}_{-0.12}$	$53.26^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-48}	61^{+39}_{-32}
6273	3.36 ± 1.37	$188.69^{+0.04}_{-0.04}$	$176.73^{+0.04}_{-0.04}$	153^{+111}_{-65}	187^{+215}_{-59}	193^{+102}_{-76}	191^{+127}_{-81}
6274*	2.90 ± 0.13	—	—	138^{+96}_{-60}	169^{+182}_{-53}	179^{+89}_{-74}	171^{+109}_{-74}
6275	15.10 ± 6.87	$492.78^{+0.36}_{-0.36}$	$542.15^{+0.45}_{-0.45}$	420^{+511}_{-139}	534^{+983}_{-169}	411^{+413}_{-118}	558^{+562}_{-239}
6278	$9.22^{\dagger}$	$359.58^{+0.12}_{-0.12}$	$375.24^{+0.14}_{-0.14}$	307^{+316}_{-110}	381^{+622}_{-118}	322^{+266}_{-100}	399^{+352}_{-165}

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Trigger[a]	HR_H [b] Hardness	Mean[$E_{p,obs}$][c] OLS(Y|X)	Mean[$E_{p,obs}$][d] OLS bisector	Mode[$E_{p,obs}$][e] Band	Mode[$E_{p,obs}$][f] COMP(CPL)	Mode[$E_{p,obs}$][g] SBPL	Mean[$E_{p,obs}$][h] Expected
6279	1.85 ± 0.40	$128.88^{+0.07}_{-0.07}$	$113.24^{+0.08}_{-0.08}$	99^{+62}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	123^{+72}_{-56}
6280	2.37 ± 0.28	$150.98^{+0.05}_{-0.05}$	$136.22^{+0.06}_{-0.06}$	119^{+78}_{-54}	147^{+145}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
6281	67.50 ± 33.20	$1282.57^{+4.13}_{-4.12}$	$1656.53^{+6.38}_{-6.35}$	974^{+1620}_{-307}	1314^{+2798}_{-478}	812^{+1183}_{-249}	1330^{+1788}_{-652}
6283	0.42 ± 0.29	$49.99^{+0.14}_{-0.14}$	$37.47^{+0.13}_{-0.13}$	34^{+22}_{-18}	51^{+23}_{-18}	70^{+30}_{-42}	46^{+34}_{-26}
6284	$6.55^{\dagger}$	$289.03^{+0.05}_{-0.05}$	$290.77^{+0.06}_{-0.06}$	244^{+223}_{-93}	300^{+441}_{-93}	271^{+193}_{-91}	312^{+250}_{-129}
6285	1.27 ± 0.35	$101.35^{+0.09}_{-0.09}$	$85.54^{+0.10}_{-0.10}$	75^{+44}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
6288	0.83 ± 0.26	$77.06^{+0.12}_{-0.12}$	$62.11^{+0.12}_{-0.11}$	55^{+32}_{-28}	74^{+45}_{-26}	95^{+36}_{-52}	70^{+42}_{-36}
6292	44.10 ± 15.00	$977.21^{+2.26}_{-2.25}$	$1205.89^{+3.31}_{-3.30}$	780^{+1234}_{-240}	1041^{+2196}_{-362}	676^{+923}_{-195}	1066^{+1336}_{-505}
6293	66.90 ± 1.08	$1275.27^{+4.08}_{-4.07}$	$1645.53^{+6.29}_{-6.27}$	970^{+1612}_{-305}	1308^{+2785}_{-475}	809^{+1177}_{-248}	1324^{+1778}_{-648}
6294	0.82 ± 0.61	$76.88^{+0.12}_{-0.12}$	$61.95^{+0.12}_{-0.11}$	55^{+32}_{-28}	74^{+44}_{-25}	95^{+36}_{-52}	70^{+42}_{-36}
6295	1.12 ± 0.43	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
6296	$0.38^{\dagger}$	$47.13^{+0.14}_{-0.14}$	$34.98^{+0.13}_{-0.13}$	31^{+21}_{-17}	48^{+21}_{-18}	67^{+30}_{-41}	44^{+34}_{-25}
6298	$2.36^{\dagger}$	$150.57^{+0.05}_{-0.05}$	$135.79^{+0.06}_{-0.06}$	119^{+78}_{-54}	146^{+144}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
6299	3.50 ± 2.14	$193.67^{+0.04}_{-0.04}$	$182.20^{+0.04}_{-0.04}$	158^{+116}_{-67}	193^{+224}_{-60}	197^{+106}_{-77}	197^{+132}_{-83}
6300	$0.39^{\dagger}$	$47.28^{+0.14}_{-0.14}$	$35.12^{+0.13}_{-0.13}$	32^{+21}_{-17}	49^{+21}_{-18}	67^{+30}_{-41}	44^{+34}_{-25}
6301	20.10 ± 5.31	$591.57^{+0.62}_{-0.62}$	$671.08^{+0.82}_{-0.82}$	500^{+662}_{-159}	644^{+1252}_{-208}	472^{+524}_{-132}	672^{+722}_{-295}
6303	3.51 ± 0.30	$194.03^{+0.04}_{-0.04}$	$182.59^{+0.04}_{-0.04}$	158^{+116}_{-67}	193^{+225}_{-60}	197^{+106}_{-77}	197^{+132}_{-84}
6304	1.80 ± 0.65	$126.65^{+0.07}_{-0.07}$	$110.95^{+0.08}_{-0.08}$	97^{+60}_{-46}	122^{+106}_{-40}	140^{+59}_{-65}	120^{+71}_{-55}
6305	1.94 ± 0.84	$132.85^{+0.07}_{-0.07}$	$117.33^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+115}_{-41}	146^{+63}_{-66}	127^{+75}_{-58}
6306	10.70 ± 2.11	$395.45^{+0.17}_{-0.17}$	$419.31^{+0.20}_{-0.20}$	338^{+367}_{-118}	422^{+718}_{-132}	347^{+305}_{-105}	442^{+407}_{-185}
6307	32.60 ± 4.94	$805.68^{+1.42}_{-1.42}$	$962.57^{+2.01}_{-2.00}$	661^{+988}_{-203}	872^{+1801}_{-294}	591^{+754}_{-165}	900^{+1069}_{-414}
6308	$2.16^{\dagger}$	$142.29^{+0.06}_{-0.06}$	$127.11^{+0.07}_{-0.07}$	111^{+72}_{-51}	138^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}
6309	1.83 ± 0.92	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
6314	36.90 ± 10.40	$872.04^{+1.72}_{-1.72}$	$1055.76^{+2.48}_{-2.47}$	708^{+1085}_{-217}	938^{+1959}_{-320}	625^{+821}_{-177}	966^{+1173}_{-450}
6315	1.50 ± 0.25	$112.72^{+0.08}_{-0.08}$	$96.84^{+0.09}_{-0.09}$	85^{+51}_{-41}	108^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-50}
6317	1.49 ± 0.80	$112.24^{+0.08}_{-0.08}$	$96.36^{+0.09}_{-0.09}$	85^{+51}_{-41}	107^{+86}_{-35}	128^{+51}_{-61}	105^{+61}_{-49}
6319	2.95 ± 1.38	$173.64^{+0.04}_{-0.04}$	$160.38^{+0.05}_{-0.05}$	140^{+97}_{-61}	171^{+185}_{-54}	181^{+90}_{-74}	173^{+111}_{-75}
6320	0.80 ± 0.25	$75.26^{+0.12}_{-0.12}$	$60.43^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	94^{+36}_{-51}	68^{+41}_{-35}
6321	2.25 ± 0.34	$146.05^{+0.06}_{-0.06}$	$131.04^{+0.06}_{-0.06}$	115^{+74}_{-52}	142^{+137}_{-45}	157^{+71}_{-69}	142^{+86}_{-63}
6322	1.00 ± 0.28	$86.89^{+0.11}_{-0.11}$	$71.46^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+55}_{-28}	105^{+40}_{-55}	79^{+46}_{-40}
6323	3.94 ± 2.33	$208.89^{+0.03}_{-0.03}$	$199.02^{+0.04}_{-0.04}$	172^{+131}_{-71}	209^{+256}_{-65}	209^{+118}_{-80}	215^{+149}_{-90}
6328	1.33 ± 0.40	$104.38^{+0.09}_{-0.09}$	$88.53^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+75}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
6329*	3.51 ± 0.10	—	—	158^{+116}_{-67}	193^{+225}_{-60}	197^{+106}_{-77}	197^{+132}_{-84}
6330	3.57 ± 2.91	$196.14^{+0.04}_{-0.04}$	$184.91^{+0.04}_{-0.04}$	160^{+118}_{-68}	195^{+229}_{-61}	199^{+108}_{-78}	200^{+135}_{-85}
6331	$1.48^{\dagger}$	$111.76^{+0.08}_{-0.08}$	$95.88^{+0.09}_{-0.09}$	84^{+51}_{-40}	107^{+85}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
6334	3.93 ± 2.40	$208.55^{+0.03}_{-0.03}$	$198.65^{+0.04}_{-0.04}$	171^{+131}_{-71}	209^{+255}_{-65}	209^{+118}_{-80}	214^{+148}_{-90}
6335	1.83 ± 0.32	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
6336*	20.70 ± 0.35	—	—	509^{+680}_{-161}	657^{+1282}_{-213}	478^{+536}_{-133}	684^{+741}_{-301}
6337	8.67 ± 1.26	$345.72^{+0.10}_{-0.10}$	$358.42^{+0.12}_{-0.12}$	295^{+297}_{-106}	365^{+585}_{-113}	313^{+251}_{-98}	382^{+331}_{-158}
6338	53.20 ± 39.60	$1101.62^{+2.97}_{-2.96}$	$1387.01^{+4.45}_{-4.44}$	862^{+1399}_{-267}	1156^{+2456}_{-410}	734^{+1035}_{-217}	1178^{+1524}_{-567}
6339	25.90 ± 3.60	$695.56^{+0.97}_{-0.97}$	$810.78^{+1.33}_{-1.33}$	580^{+822}_{-180}	757^{+1526}_{-250}	531^{+638}_{-148}	786^{+892}_{-353}
6341	28.00 ± 4.43	$731.08^{+1.11}_{-1.11}$	$859.32^{+1.54}_{-1.53}$	607^{+876}_{-188}	794^{+1616}_{-264}	551^{+676}_{-153}	823^{+949}_{-373}
6342	9.89 ± 9.28	$376.06^{+0.14}_{-0.14}$	$395.40^{+0.17}_{-0.17}$	321^{+339}_{-113}	400^{+666}_{-125}	334^{+283}_{-102}	419^{+377}_{-174}
6343	$3.55^{\dagger}$	$195.44^{+0.04}_{-0.04}$	$184.14^{+0.04}_{-0.04}$	160^{+118}_{-67}	194^{+228}_{-61}	198^{+107}_{-78}	199^{+134}_{-84}
6344	2.33 ± 0.42	$149.34^{+0.06}_{-0.06}$	$134.50^{+0.06}_{-0.06}$	118^{+77}_{-53}	145^{+142}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
6345	0.80 ± 0.56	$75.68^{+0.12}_{-0.12}$	$60.82^{+0.12}_{-0.12}$	54^{+32}_{-27}	73^{+43}_{-25}	94^{+36}_{-51}	69^{+42}_{-35}
6346	3.52 ± 0.67	$194.38^{+0.04}_{-0.04}$	$182.97^{+0.04}_{-0.04}$	159^{+117}_{-67}	193^{+226}_{-61}	198^{+106}_{-77}	197^{+133}_{-84}
6347	13.20 ± 10.40	$452.21^{+0.27}_{-0.27}$	$490.41^{+0.34}_{-0.34}$	386^{+450}_{-130}	488^{+872}_{-154}	385^{+368}_{-112}	511^{+496}_{-216}
6349	14.30 ± 0.61	$475.94^{+0.32}_{-0.32}$	$520.58^{+0.40}_{-0.40}$	406^{+485}_{-135}	515^{+937}_{-163}	400^{+394}_{-115}	539^{+534}_{-229}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
6351	2.09 ± 0.51	$139.33^{+0.06}_{-0.06}$	$124.03^{+0.07}_{-0.07}$	109^{+69}_{-50}	135^{+126}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
6353*	1.71 ± 0.10	—	—	94^{+57}_{-44}	118^{+100}_{-38}	137^{+57}_{-64}	116^{+68}_{-53}
6354	62.70 ± 45.20	$1223.53^{+3.74}_{-3.72}$	$1567.84^{+5.72}_{-5.69}$	938^{+1551}_{-294}	1264^{+2691}_{-456}	787^{+1137}_{-239}	1282^{+1703}_{-625}
6355	3.69 ± 1.39	$200.33^{+0.03}_{-0.03}$	$189.52^{+0.04}_{-0.04}$	164^{+122}_{-69}	200^{+238}_{-63}	202^{+111}_{-78}	205^{+139}_{-86}
6361	15.30 ± 10.40	$496.94^{+0.37}_{-0.37}$	$547.50^{+0.47}_{-0.47}$	424^{+517}_{-139}	538^{+995}_{-171}	414^{+418}_{-118}	563^{+568}_{-241}
6366	1.06 ± 0.79	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
6368	34.50 ± 3.68	$835.37^{+1.55}_{-1.55}$	$1004.11^{+2.21}_{-2.21}$	682^{+1032}_{-210}	902^{+1873}_{-306}	606^{+785}_{-170}	930^{+1116}_{-430}
6369	1.54 ± 1.07	$114.63^{+0.08}_{-0.08}$	$98.76^{+0.09}_{-0.09}$	87^{+52}_{-41}	110^{+89}_{-36}	130^{+52}_{-62}	107^{+62}_{-50}
6370	$3.38^{\dagger}$	$189.41^{+0.04}_{-0.04}$	$177.52^{+0.04}_{-0.04}$	154^{+112}_{-66}	188^{+216}_{-59}	194^{+102}_{-77}	192^{+127}_{-82}
6372	5.85 ± 2.90	$268.89^{+0.04}_{-0.04}$	$267.27^{+0.05}_{-0.05}$	226^{+198}_{-88}	277^{+392}_{-86}	256^{+173}_{-88}	288^{+223}_{-119}
6375	6.32 ± 2.04	$282.50^{+0.05}_{-0.05}$	$283.12^{+0.05}_{-0.05}$	238^{+215}_{-91}	292^{+425}_{-90}	266^{+186}_{-90}	304^{+241}_{-126}
6376	7.78 ± 6.08	$322.61^{+0.08}_{-0.08}$	$330.60^{+0.09}_{-0.09}$	274^{+266}_{-101}	338^{+525}_{-105}	296^{+227}_{-95}	353^{+297}_{-146}
6380*	5.19 ± 0.38	—	—	208^{+175}_{-82}	254^{+345}_{-79}	241^{+154}_{-85}	263^{+197}_{-109}
6385	6.51 ± 2.92	$287.90^{+0.05}_{-0.05}$	$289.45^{+0.06}_{-0.06}$	243^{+221}_{-92}	299^{+438}_{-92}	270^{+191}_{-91}	311^{+248}_{-128}
6386	27.50 ± 10.60	$722.71^{+1.08}_{-1.07}$	$847.85^{+1.49}_{-1.48}$	600^{+864}_{-186}	786^{+1595}_{-261}	546^{+667}_{-152}	814^{+936}_{-368}
6388	2.88 ± 0.78	$170.99^{+0.04}_{-0.04}$	$157.54^{+0.05}_{-0.05}$	137^{+95}_{-60}	168^{+181}_{-53}	178^{+88}_{-73}	170^{+109}_{-73}
6389*	4.61 ± 0.19	—	—	192^{+154}_{-78}	234^{+304}_{-73}	227^{+137}_{-83}	241^{+174}_{-100}
6390	43.30 ± 3.16	$965.85^{+2.20}_{-2.19}$	$1189.54^{+3.22}_{-3.21}$	772^{+1218}_{-237}	1030^{+2171}_{-357}	671^{+912}_{-193}	1055^{+1319}_{-499}
6393	$0.62^{\dagger}$	$64.04^{+0.13}_{-0.13}$	$50.04^{+0.12}_{-0.12}$	44^{+27}_{-23}	63^{+33}_{-22}	83^{+33}_{-47}	58^{+38}_{-31}
6395	39.40 ± 12.00	$909.34^{+1.91}_{-1.90}$	$1108.67^{+2.76}_{-2.75}$	734^{+1139}_{-225}	975^{+2045}_{-335}	643^{+858}_{-183}	1002^{+1232}_{-469}
6396	4.11 ± 0.76	$214.61^{+0.03}_{-0.03}$	$205.39^{+0.04}_{-0.04}$	177^{+137}_{-73}	216^{+268}_{-67}	214^{+123}_{-80}	222^{+155}_{-93}
6397*	3.12 ± 0.15	—	—	145^{+103}_{-63}	178^{+198}_{-56}	186^{+95}_{-75}	181^{+118}_{-77}
6398	66.40 ± 46.80	$1269.18^{+4.04}_{-4.03}$	$1636.35^{+6.22}_{-6.20}$	966^{+1605}_{-304}	1303^{+2774}_{-473}	806^{+1173}_{-247}	1319^{+1769}_{-646}
6399	0.86 ± 0.41	$78.77^{+0.11}_{-0.11}$	$63.73^{+0.11}_{-0.11}$	56^{+33}_{-28}	76^{+46}_{-26}	97^{+37}_{-52}	72^{+43}_{-37}
6400	5.94 ± 0.96	$271.53^{+0.04}_{-0.04}$	$270.33^{+0.05}_{-0.05}$	229^{+201}_{-88}	280^{+398}_{-87}	258^{+175}_{-89}	291^{+226}_{-120}
6401	11.30 ± 3.37	$409.48^{+0.19}_{-0.19}$	$436.73^{+0.23}_{-0.23}$	350^{+387}_{-121}	439^{+756}_{-137}	357^{+320}_{-106}	459^{+429}_{-192}
6404*	2.99 ± 0.11	—	—	141^{+99}_{-61}	172^{+188}_{-54}	182^{+91}_{-74}	175^{+113}_{-75}
6405	3.33 ± 0.89	$187.61^{+0.04}_{-0.04}$	$175.55^{+0.04}_{-0.04}$	152^{+110}_{-65}	186^{+212}_{-58}	192^{+101}_{-76}	189^{+125}_{-81}
6408	7.93 ± 4.25	$326.57^{+0.08}_{-0.08}$	$335.34^{+0.09}_{-0.09}$	278^{+271}_{-102}	343^{+536}_{-106}	299^{+231}_{-96}	358^{+303}_{-148}
6409	0.55 ± 0.39	$59.18^{+0.13}_{-0.13}$	$45.63^{+0.12}_{-0.12}$	41^{+25}_{-21}	58^{+29}_{-21}	79^{+32}_{-45}	54^{+36}_{-29}
6411	3.12 ± 2.61	$179.96^{+0.04}_{-0.04}$	$167.23^{+0.04}_{-0.04}$	145^{+103}_{-63}	178^{+198}_{-56}	186^{+95}_{-75}	181^{+118}_{-77}
6412	12.50 ± 10.40	$436.74^{+0.24}_{-0.24}$	$470.88^{+0.30}_{-0.30}$	373^{+427}_{-127}	470^{+830}_{-148}	375^{+350}_{-110}	492^{+472}_{-207}
6413	1.14 ± 0.37	$94.60^{+0.10}_{-0.10}$	$78.92^{+0.10}_{-0.10}$	70^{+41}_{-34}	90^{+63}_{-30}	112^{+43}_{-57}	87^{+50}_{-43}
6414*	6.18 ± 0.47	—	—	235^{+210}_{-90}	288^{+415}_{-89}	263^{+182}_{-89}	299^{+236}_{-124}
6419	$0.44^{\dagger}$	$51.72^{+0.14}_{-0.14}$	$38.99^{+0.13}_{-0.13}$	35^{+23}_{-18}	52^{+24}_{-19}	71^{+30}_{-43}	48^{+35}_{-27}
6422	0.70 ± 0.07	$69.46^{+0.12}_{-0.12}$	$55.03^{+0.12}_{-0.12}$	49^{+29}_{-25}	67^{+38}_{-23}	88^{+34}_{-49}	63^{+39}_{-33}
6425	4.96 ± 0.75	$241.99^{+0.04}_{-0.04}$	$236.31^{+0.04}_{-0.04}$	202^{+167}_{-81}	246^{+329}_{-76}	236^{+147}_{-84}	255^{+188}_{-106}
6427	24.60 ± 7.94	$673.06^{+0.89}_{-0.89}$	$780.22^{+1.21}_{-1.21}$	563^{+788}_{-176}	733^{+1467}_{-241}	519^{+614}_{-144}	761^{+855}_{-340}
6435	4.70 ± 3.60	$233.81^{+0.03}_{-0.03}$	$227.01^{+0.04}_{-0.04}$	194^{+158}_{-78}	237^{+310}_{-74}	229^{+140}_{-83}	245^{+178}_{-102}
6436	10.10 ± 1.32	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
6437	$0.59^{\dagger}$	$62.24^{+0.13}_{-0.13}$	$48.41^{+0.12}_{-0.12}$	43^{+26}_{-22}	61^{+32}_{-22}	81^{+32}_{-47}	57^{+37}_{-30}
6439	$4.07^{\dagger}$	$213.27^{+0.03}_{-0.03}$	$203.90^{+0.04}_{-0.04}$	176^{+136}_{-73}	214^{+265}_{-67}	213^{+122}_{-80}	220^{+154}_{-92}
6440	2.43 ± 0.78	$153.41^{+0.05}_{-0.05}$	$138.79^{+0.06}_{-0.06}$	121^{+80}_{-54}	149^{+149}_{-48}	164^{+76}_{-70}	150^{+92}_{-66}
6443	24.90 ± 7.84	$678.29^{+0.91}_{-0.91}$	$787.31^{+1.24}_{-1.24}$	567^{+796}_{-177}	738^{+1481}_{-243}	522^{+619}_{-145}	767^{+864}_{-343}
6444	1.35 ± 0.91	$105.38^{+0.09}_{-0.09}$	$89.52^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
6445	23.30 ± 10.30	$650.11^{+0.81}_{-0.81}$	$749.26^{+1.10}_{-1.09}$	545^{+753}_{-171}	708^{+1407}_{-232}	506^{+588}_{-140}	737^{+818}_{-328}
6446	4.25 ± 1.15	$219.25^{+0.03}_{-0.03}$	$210.59^{+0.04}_{-0.04}$	181^{+142}_{-74}	221^{+278}_{-69}	218^{+127}_{-81}	227^{+161}_{-95}
6447	$3.39^{\dagger}$	$189.76^{+0.04}_{-0.04}$	$177.91^{+0.04}_{-0.04}$	154^{+112}_{-66}	188^{+217}_{-59}	194^{+103}_{-77}	192^{+128}_{-82}
6448	0.91 ± 0.37	$82.14^{+0.11}_{-0.11}$	$66.93^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	100^{+38}_{-53}	75^{+44}_{-38}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
6450	$1.73^{\dagger}$	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
6451	4.03 ± 1.21	$211.93^{+0.03}_{-0.03}$	$202.40^{+0.04}_{-0.04}$	175^{+134}_{-72}	213^{+262}_{-66}	212^{+121}_{-80}	218^{+152}_{-92}
6452	$3.53^{\dagger}$	$194.73^{+0.04}_{-0.04}$	$183.36^{+0.04}_{-0.04}$	159^{+117}_{-67}	194^{+227}_{-61}	198^{+106}_{-77}	198^{+133}_{-84}
6453*	1.71 ± 0.05	—	—	94^{+57}_{-44}	118^{+100}_{-38}	137^{+57}_{-64}	116^{+68}_{-53}
6454*	4.85 ± 0.17	—	—	199^{+163}_{-80}	242^{+321}_{-75}	233^{+144}_{-84}	251^{+184}_{-104}
6462	26.70 ± 11.40	$709.21^{+1.02}_{-1.02}$	$829.38^{+1.41}_{-1.41}$	590^{+843}_{-183}	771^{+1561}_{-255}	539^{+653}_{-150}	800^{+914}_{-361}
6469	$2.07^{\dagger}$	$138.47^{+0.06}_{-0.06}$	$123.14^{+0.07}_{-0.07}$	108^{+69}_{-50}	134^{+124}_{-43}	151^{+66}_{-67}	133^{+80}_{-60}
6472*	8.86 ± 0.09	—	—	299^{+304}_{-107}	371^{+598}_{-115}	316^{+256}_{-99}	388^{+338}_{-161}
6476	22.00 ± 0.79	$626.70^{+0.73}_{-0.73}$	$717.85^{+0.98}_{-0.98}$	527^{+717}_{-166}	683^{+1346}_{-222}	492^{+563}_{-137}	711^{+780}_{-314}
6479	6.09 ± 1.09	$275.89^{+0.05}_{-0.05}$	$275.40^{+0.05}_{-0.05}$	233^{+206}_{-89}	285^{+409}_{-88}	261^{+180}_{-89}	296^{+232}_{-122}
6486	9.20 ± 3.48	$359.08^{+0.12}_{-0.12}$	$374.64^{+0.14}_{-0.14}$	306^{+315}_{-109}	380^{+621}_{-118}	322^{+265}_{-100}	398^{+351}_{-165}
6487	$0.69^{\dagger}$	$68.83^{+0.12}_{-0.12}$	$54.44^{+0.12}_{-0.12}$	48^{+29}_{-25}	67^{+37}_{-23}	88^{+34}_{-49}	62^{+39}_{-33}
6488	13.40 ± 5.85	$456.58^{+0.28}_{-0.28}$	$495.94^{+0.35}_{-0.35}$	390^{+456}_{-131}	493^{+884}_{-155}	388^{+372}_{-113}	516^{+503}_{-218}
6489	1.48 ± 0.12	$111.76^{+0.08}_{-0.08}$	$95.88^{+0.09}_{-0.09}$	84^{+51}_{-40}	107^{+85}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
6490	1.12 ± 0.69	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
6497	9.73 ± 5.54	$372.16^{+0.14}_{-0.14}$	$390.62^{+0.16}_{-0.16}$	318^{+334}_{-112}	396^{+655}_{-123}	331^{+279}_{-102}	414^{+371}_{-172}
6498	0.83 ± 0.27	$77.53^{+0.11}_{-0.11}$	$62.56^{+0.11}_{-0.11}$	55^{+32}_{-28}	75^{+45}_{-26}	96^{+37}_{-52}	70^{+42}_{-36}
6504	2.08 ± 0.36	$138.90^{+0.06}_{-0.06}$	$123.58^{+0.07}_{-0.07}$	108^{+69}_{-50}	134^{+125}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
6519	20.80 ± 5.52	$604.64^{+0.66}_{-0.66}$	$688.44^{+0.88}_{-0.88}$	510^{+683}_{-162}	659^{+1287}_{-213}	479^{+538}_{-134}	686^{+744}_{-302}
6520	0.62 ± 0.55	$63.97^{+0.13}_{-0.13}$	$49.98^{+0.12}_{-0.12}$	44^{+27}_{-23}	63^{+33}_{-22}	83^{+33}_{-47}	58^{+37}_{-31}
6521	1.33 ± 0.28	$104.38^{+0.09}_{-0.09}$	$88.53^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+75}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
6522	2.14 ± 0.72	$141.45^{+0.06}_{-0.06}$	$126.23^{+0.07}_{-0.07}$	111^{+71}_{-51}	137^{+129}_{-44}	153^{+68}_{-68}	137^{+82}_{-61}
6523	0.72 ± 0.27	$70.84^{+0.12}_{-0.12}$	$56.31^{+0.12}_{-0.12}$	50^{+30}_{-25}	69^{+39}_{-24}	90^{+35}_{-50}	64^{+40}_{-34}
6525*	3.63 ± 0.21	—	—	162^{+120}_{-68}	198^{+234}_{-62}	201^{+109}_{-78}	202^{+137}_{-85}
6526*	1.39 ± 0.02	—	—	81^{+48}_{-39}	103^{+79}_{-34}	123^{+49}_{-60}	100^{+58}_{-47}
6527	0.87 ± 0.18	$79.42^{+0.11}_{-0.11}$	$64.34^{+0.11}_{-0.11}$	57^{+33}_{-29}	76^{+47}_{-26}	98^{+37}_{-52}	72^{+43}_{-37}
6528	2.99 ± 0.35	$175.14^{+0.04}_{-0.04}$	$162.00^{+0.05}_{-0.05}$	141^{+99}_{-61}	172^{+188}_{-54}	182^{+91}_{-74}	175^{+113}_{-75}
6529	2.18 ± 1.41	$143.13^{+0.06}_{-0.06}$	$127.99^{+0.07}_{-0.07}$	112^{+72}_{-51}	139^{+132}_{-44}	155^{+69}_{-68}	138^{+84}_{-62}
6531	1.89 ± 0.86	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
6533	4.31 ± 0.32	$221.22^{+0.03}_{-0.03}$	$212.80^{+0.04}_{-0.04}$	183^{+144}_{-75}	223^{+282}_{-69}	219^{+129}_{-81}	230^{+163}_{-96}
6534	1.03 ± 0.82	$88.66^{+0.10}_{-0.10}$	$73.16^{+0.11}_{-0.11}$	64^{+38}_{-32}	85^{+57}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
6535	20.20 ± 0.98	$593.44^{+0.63}_{-0.63}$	$673.57^{+0.83}_{-0.83}$	501^{+665}_{-159}	646^{+1257}_{-209}	473^{+526}_{-132}	674^{+725}_{-296}
6536	5.51 ± 3.34	$258.80^{+0.04}_{-0.04}$	$255.59^{+0.04}_{-0.04}$	217^{+186}_{-85}	265^{+368}_{-82}	248^{+163}_{-87}	275^{+209}_{-114}
6538	2.82 ± 1.02	$168.71^{+0.05}_{-0.05}$	$155.08^{+0.05}_{-0.05}$	135^{+93}_{-59}	166^{+176}_{-52}	176^{+86}_{-73}	167^{+107}_{-72}
6539*	101.00 ± 5.59	—	—	1189^{+2006}_{-391}	1610^{+3397}_{-612}	957^{+1439}_{-317}	1613^{+2310}_{-808}
6540	$8.44^{\dagger}$	$339.84^{+0.10}_{-0.10}$	$351.30^{+0.11}_{-0.11}$	290^{+289}_{-105}	358^{+570}_{-111}	308^{+245}_{-97}	375^{+323}_{-155}
6542	17.80 ± 10.90	$547.38^{+0.49}_{-0.49}$	$612.93^{+0.64}_{-0.64}$	465^{+594}_{-150}	595^{+1132}_{-191}	445^{+474}_{-125}	622^{+650}_{-270}
6543	$15.80^{\dagger}$	$507.25^{+0.39}_{-0.39}$	$560.79^{+0.50}_{-0.50}$	432^{+533}_{-142}	550^{+1023}_{-175}	420^{+429}_{-120}	575^{+585}_{-247}
6544	8.14 ± 1.17	$332.07^{+0.09}_{-0.09}$	$341.94^{+0.10}_{-0.10}$	283^{+278}_{-103}	349^{+550}_{-108}	303^{+237}_{-96}	365^{+311}_{-151}
6545	1.07 ± 0.67	$90.84^{+0.10}_{-0.10}$	$75.27^{+0.11}_{-0.10}$	66^{+39}_{-33}	87^{+59}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
6546	0.63 ± 0.26	$65.03^{+0.13}_{-0.13}$	$50.94^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+34}_{-22}	84^{+33}_{-48}	59^{+38}_{-31}
6547	$16.90^{\dagger}$	$529.54^{+0.45}_{-0.45}$	$589.66^{+0.58}_{-0.58}$	450^{+567}_{-146}	575^{+1084}_{-184}	434^{+454}_{-123}	601^{+621}_{-259}
6550	2.80 ± 0.59	$167.94^{+0.05}_{-0.05}$	$154.26^{+0.05}_{-0.05}$	135^{+92}_{-59}	165^{+175}_{-52}	176^{+86}_{-73}	167^{+106}_{-72}
6551	1.04 ± 0.89	$89.21^{+0.10}_{-0.10}$	$73.69^{+0.11}_{-0.11}$	65^{+38}_{-32}	85^{+57}_{-29}	107^{+41}_{-55}	82^{+48}_{-40}
6552	0.79 ± 0.71	$74.84^{+0.12}_{-0.12}$	$60.03^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	93^{+36}_{-51}	68^{+41}_{-35}
6554	0.47 ± 0.17	$53.86^{+0.13}_{-0.13}$	$40.88^{+0.13}_{-0.13}$	36^{+23}_{-19}	54^{+25}_{-19}	73^{+31}_{-43}	49^{+35}_{-27}
6557	1.18 ± 0.38	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
6560*	2.58 ± 0.12	—	—	127^{+85}_{-56}	156^{+160}_{-49}	169^{+80}_{-71}	157^{+98}_{-69}
6562	$1.71^{\dagger}$	$122.56^{+0.07}_{-0.07}$	$106.79^{+0.08}_{-0.08}$	94^{+57}_{-44}	118^{+100}_{-38}	137^{+57}_{-64}	116^{+68}_{-53}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
6564	2.05 ± 0.46	$137.62^{+0.06}_{-0.06}$	$122.25^{+0.07}_{-0.07}$	107^{+68}_{-49}	133^{+123}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
6566	3.61 ± 0.81	$197.54^{+0.04}_{-0.04}$	$186.45^{+0.04}_{-0.04}$	161^{+120}_{-68}	197^{+232}_{-62}	200^{+109}_{-78}	201^{+136}_{-85}
6569	$1.37^{\dagger}$	$106.38^{+0.09}_{-0.09}$	$90.51^{+0.09}_{-0.09}$	80^{+47}_{-38}	102^{+78}_{-34}	122^{+48}_{-60}	99^{+57}_{-47}
6570*	3.11 ± 0.21	—	—	145^{+103}_{-63}	177^{+197}_{-56}	185^{+95}_{-75}	180^{+117}_{-77}
6571	$2.25^{\dagger}$	$146.05^{+0.06}_{-0.06}$	$131.04^{+0.06}_{-0.06}$	115^{+74}_{-52}	142^{+137}_{-45}	157^{+71}_{-69}	142^{+86}_{-63}
6573	6.37 ± 3.94	$283.93^{+0.05}_{-0.05}$	$284.79^{+0.06}_{-0.06}$	240^{+216}_{-91}	294^{+428}_{-91}	268^{+187}_{-90}	306^{+243}_{-126}
6576*	10.30 ± 0.17	—	—	330^{+353}_{-115}	411^{+692}_{-128}	341^{+294}_{-103}	431^{+392}_{-180}
6577	2.19 ± 1.03	$143.55^{+0.06}_{-0.06}$	$128.43^{+0.06}_{-0.06}$	113^{+72}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
6578	1.67 ± 0.57	$120.72^{+0.08}_{-0.08}$	$104.92^{+0.08}_{-0.08}$	92^{+56}_{-44}	116^{+97}_{-38}	135^{+56}_{-63}	114^{+66}_{-53}
6579	12.60 ± 2.42	$438.97^{+0.24}_{-0.24}$	$473.68^{+0.30}_{-0.30}$	375^{+430}_{-127}	472^{+836}_{-148}	376^{+353}_{-110}	495^{+475}_{-209}
6580	6.80 ± 1.53	$296.02^{+0.06}_{-0.06}$	$299.01^{+0.06}_{-0.06}$	251^{+231}_{-94}	308^{+458}_{-95}	277^{+200}_{-92}	321^{+260}_{-132}
6581*	2.94 ± 0.16	—	—	139^{+97}_{-61}	170^{+185}_{-54}	180^{+90}_{-74}	173^{+111}_{-74}
6582	0.74 ± 0.39	$71.59^{+0.12}_{-0.12}$	$57.00^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+40}_{-24}	90^{+35}_{-50}	65^{+40}_{-34}
6583	1.29 ± 0.53	$102.37^{+0.09}_{-0.09}$	$86.54^{+0.10}_{-0.10}$	76^{+45}_{-37}	98^{+73}_{-33}	119^{+46}_{-59}	95^{+55}_{-45}
6585	1.63 ± 0.55	$118.87^{+0.08}_{-0.08}$	$103.04^{+0.08}_{-0.08}$	91^{+55}_{-43}	114^{+95}_{-37}	134^{+55}_{-63}	112^{+65}_{-52}
6586	$0.84^{\dagger}$	$77.89^{+0.11}_{-0.11}$	$62.90^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+45}_{-26}	96^{+37}_{-52}	71^{+42}_{-36}
6587*	7.59 ± 0.06	—	—	270^{+259}_{-100}	333^{+512}_{-103}	292^{+221}_{-95}	347^{+290}_{-143}
6589	1.70 ± 0.81	$122.10^{+0.08}_{-0.08}$	$106.32^{+0.08}_{-0.08}$	93^{+57}_{-44}	117^{+99}_{-38}	136^{+56}_{-64}	115^{+67}_{-53}
6590	4.98 ± 0.84	$242.61^{+0.04}_{-0.04}$	$237.02^{+0.04}_{-0.04}$	202^{+167}_{-81}	247^{+330}_{-77}	236^{+148}_{-85}	255^{+189}_{-106}
6591	11.20 ± 3.09	$407.16^{+0.19}_{-0.19}$	$433.84^{+0.23}_{-0.23}$	348^{+384}_{-120}	436^{+749}_{-136}	355^{+317}_{-106}	457^{+425}_{-191}
6592	1.87 ± 0.51	$129.77^{+0.07}_{-0.07}$	$114.15^{+0.07}_{-0.07}$	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
6593*	4.72 ± 0.10	—	—	195^{+158}_{-79}	238^{+312}_{-74}	230^{+141}_{-83}	246^{+179}_{-102}
6598	1.96 ± 0.41	$133.73^{+0.07}_{-0.07}$	$118.23^{+0.07}_{-0.07}$	104^{+65}_{-48}	129^{+117}_{-42}	147^{+63}_{-66}	128^{+76}_{-58}
6599	8.76 ± 2.11	$348.01^{+0.11}_{-0.11}$	$361.19^{+0.12}_{-0.12}$	297^{+300}_{-107}	368^{+591}_{-114}	314^{+253}_{-98}	385^{+335}_{-159}
6600	2.69 ± 0.85	$163.70^{+0.05}_{-0.05}$	$149.72^{+0.05}_{-0.05}$	131^{+89}_{-58}	160^{+167}_{-51}	172^{+83}_{-72}	162^{+102}_{-70}
6601	2.31 ± 1.35	$148.52^{+0.06}_{-0.06}$	$133.64^{+0.06}_{-0.06}$	117^{+76}_{-53}	144^{+141}_{-46}	159^{+72}_{-69}	144^{+88}_{-64}
6602	12.70 ± 1.55	$441.20^{+0.25}_{-0.25}$	$476.48^{+0.31}_{-0.31}$	377^{+433}_{-128}	475^{+842}_{-149}	378^{+355}_{-111}	497^{+479}_{-210}
6605	2.32 ± 0.25	$148.93^{+0.06}_{-0.06}$	$134.07^{+0.06}_{-0.06}$	117^{+77}_{-53}	145^{+141}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
6606	10.40 ± 1.20	$388.33^{+0.16}_{-0.16}$	$410.51^{+0.19}_{-0.19}$	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}
6610	1.18 ± 0.28	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
6611	2.43 ± 1.03	$153.41^{+0.05}_{-0.05}$	$138.79^{+0.06}_{-0.06}$	121^{+80}_{-54}	149^{+149}_{-48}	164^{+76}_{-70}	150^{+92}_{-66}
6613	$1.89^{\dagger}$	$130.65^{+0.07}_{-0.07}$	$115.06^{+0.07}_{-0.07}$	101^{+63}_{-47}	126^{+112}_{-41}	144^{+61}_{-66}	125^{+74}_{-57}
6615*	10.10 ± 0.33	—	—	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
6616	5.10 ± 2.79	$246.33^{+0.04}_{-0.04}$	$241.27^{+0.04}_{-0.04}$	206^{+172}_{-82}	251^{+339}_{-78}	239^{+151}_{-85}	260^{+194}_{-108}
6619	2.98 ± 0.65	$174.76^{+0.04}_{-0.04}$	$161.60^{+0.05}_{-0.05}$	141^{+98}_{-61}	172^{+188}_{-54}	181^{+91}_{-74}	174^{+112}_{-75}
6620	1.18 ± 0.68	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
6621	2.99 ± 0.34	$175.14^{+0.04}_{-0.04}$	$162.00^{+0.05}_{-0.05}$	141^{+99}_{-61}	172^{+188}_{-54}	182^{+91}_{-74}	175^{+113}_{-75}
6622	1.59 ± 0.45	$117.00^{+0.08}_{-0.08}$	$101.14^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+92}_{-37}	132^{+54}_{-62}	110^{+64}_{-51}
6625	0.71 ± 0.14	$69.78^{+0.12}_{-0.12}$	$55.32^{+0.12}_{-0.12}$	49^{+29}_{-25}	68^{+38}_{-24}	89^{+34}_{-49}	63^{+39}_{-33}
6629*	8.21 ± 0.23	—	—	284^{+281}_{-104}	351^{+555}_{-109}	304^{+238}_{-97}	367^{+314}_{-152}
6630*	3.56 ± 0.09	—	—	160^{+118}_{-68}	195^{+229}_{-61}	199^{+107}_{-78}	199^{+134}_{-84}
6631	3.92 ± 1.81	$208.22^{+0.03}_{-0.03}$	$198.27^{+0.04}_{-0.04}$	171^{+130}_{-71}	209^{+254}_{-65}	209^{+118}_{-80}	214^{+148}_{-90}
6632	$0.47^{\dagger}$	$53.42^{+0.14}_{-0.13}$	$40.49^{+0.13}_{-0.13}$	36^{+23}_{-19}	54^{+25}_{-19}	73^{+31}_{-43}	49^{+35}_{-27}
6634	2.43 ± 1.70	$153.41^{+0.05}_{-0.05}$	$138.79^{+0.06}_{-0.06}$	121^{+80}_{-54}	149^{+149}_{-48}	164^{+76}_{-70}	150^{+92}_{-66}
6635	1.84 ± 0.18	$128.44^{+0.07}_{-0.07}$	$112.78^{+0.08}_{-0.08}$	99^{+61}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
6638	35.80 ± 5.30	$855.35^{+1.65}_{-1.64}$	$1032.20^{+2.35}_{-2.35}$	696^{+1061}_{-214}	922^{+1920}_{-314}	616^{+805}_{-174}	949^{+1147}_{-441}
6640	31.20 ± 3.90	$783.41^{+1.32}_{-1.32}$	$931.56^{+1.86}_{-1.86}$	645^{+955}_{-199}	849^{+1747}_{-285}	579^{+731}_{-162}	877^{+1033}_{-402}
6641	4.02 ± 1.39	$211.59^{+0.03}_{-0.03}$	$202.03^{+0.04}_{-0.04}$	174^{+134}_{-72}	212^{+262}_{-66}	212^{+120}_{-80}	218^{+152}_{-92}
6642*	7.26 ± 0.41	—	—	262^{+248}_{-98}	322^{+490}_{-100}	286^{+212}_{-93}	336^{+277}_{-139}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
6643	7.61 ± 4.69	$318.09^{+0.08}_{-0.08}$	$325.20^{+0.09}_{-0.09}$	270^{+260}_{-100}	333^{+514}_{-103}	293^{+222}_{-95}	348^{+291}_{-144}
6645	12.40 ± 10.80	$434.51^{+0.24}_{-0.24}$	$468.06^{+0.29}_{-0.29}$	371^{+424}_{-126}	467^{+824}_{-147}	373^{+348}_{-110}	489^{+468}_{-206}
6648	5.92 ± 1.33	$270.94^{+0.04}_{-0.04}$	$269.65^{+0.05}_{-0.05}$	228^{+200}_{-88}	279^{+397}_{-86}	258^{+175}_{-88}	290^{+225}_{-120}
6649	0.69 ± 0.56	$68.39^{+0.12}_{-0.12}$	$54.03^{+0.12}_{-0.12}$	48^{+29}_{-25}	66^{+37}_{-23}	87^{+34}_{-49}	62^{+39}_{-33}
6655	7.18 ± 0.90	$306.49^{+0.07}_{-0.07}$	$311.39^{+0.07}_{-0.07}$	260^{+245}_{-97}	320^{+484}_{-99}	284^{+210}_{-93}	334^{+274}_{-138}
6657	1.57 ± 0.31	$116.05^{+0.08}_{-0.08}$	$100.19^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+91}_{-36}	131^{+53}_{-62}	109^{+63}_{-51}
6658	$1.59^{\dagger}$	$117.00^{+0.08}_{-0.08}$	$101.14^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+92}_{-37}	132^{+54}_{-62}	110^{+64}_{-51}
6659	8.15 ± 2.35	$332.33^{+0.09}_{-0.09}$	$342.26^{+0.10}_{-0.10}$	283^{+279}_{-103}	350^{+551}_{-108}	303^{+237}_{-96}	365^{+312}_{-151}
6662	6.18 ± 3.16	$278.49^{+0.05}_{-0.05}$	$278.43^{+0.05}_{-0.05}$	235^{+210}_{-90}	288^{+415}_{-89}	263^{+182}_{-89}	299^{+236}_{-124}
6665*	6.05 ± 0.08	—	—	231^{+205}_{-89}	283^{+406}_{-88}	261^{+178}_{-89}	295^{+231}_{-122}
6666	1.98 ± 1.00	$134.60^{+0.07}_{-0.07}$	$119.13^{+0.07}_{-0.07}$	105^{+66}_{-48}	130^{+118}_{-42}	147^{+64}_{-66}	129^{+77}_{-58}
6668	14.40 ± 0.69	$478.06^{+0.32}_{-0.32}$	$523.29^{+0.41}_{-0.41}$	408^{+489}_{-135}	517^{+943}_{-164}	402^{+396}_{-116}	541^{+538}_{-230}
6670	41.80 ± 5.04	$944.34^{+2.09}_{-2.08}$	$1158.66^{+3.04}_{-3.03}$	758^{+1188}_{-233}	1009^{+2124}_{-349}	660^{+892}_{-189}	1035^{+1286}_{-488}
6671	18.30 ± 3.45	$557.15^{+0.52}_{-0.52}$	$625.73^{+0.68}_{-0.68}$	472^{+609}_{-152}	606^{+1159}_{-195}	451^{+485}_{-127}	633^{+666}_{-275}
6672	1.73 ± 0.16	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
6673	1.38 ± 0.77	$106.87^{+0.09}_{-0.09}$	$91.00^{+0.09}_{-0.09}$	80^{+48}_{-39}	102^{+79}_{-34}	123^{+48}_{-60}	99^{+57}_{-47}
6674	2.05 ± 0.66	$137.62^{+0.06}_{-0.06}$	$122.25^{+0.07}_{-0.07}$	107^{+68}_{-49}	133^{+123}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
6676	4.60 ± 1.13	$230.62^{+0.03}_{-0.03}$	$223.39^{+0.04}_{-0.04}$	192^{+154}_{-77}	233^{+303}_{-73}	227^{+137}_{-83}	241^{+174}_{-100}
6678	$0.91^{\dagger}$	$82.09^{+0.11}_{-0.11}$	$66.87^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	100^{+38}_{-53}	75^{+44}_{-38}
6679	19.30 ± 1.80	$576.41^{+0.58}_{-0.58}$	$651.06^{+0.76}_{-0.76}$	488^{+639}_{-156}	627^{+1211}_{-202}	463^{+507}_{-129}	655^{+698}_{-286}
6682	$8.18^{\dagger}$	$333.11^{+0.09}_{-0.09}$	$343.20^{+0.10}_{-0.10}$	284^{+280}_{-103}	350^{+553}_{-109}	304^{+238}_{-97}	366^{+313}_{-151}
6683	2.19 ± 0.30	$143.55^{+0.06}_{-0.06}$	$128.43^{+0.06}_{-0.06}$	113^{+72}_{-51}	139^{+133}_{-45}	155^{+69}_{-68}	139^{+84}_{-62}
6686	$2.17^{\dagger}$	$142.71^{+0.06}_{-0.06}$	$127.55^{+0.07}_{-0.07}$	112^{+72}_{-51}	138^{+131}_{-44}	154^{+69}_{-68}	138^{+83}_{-62}
6689	13.20 ± 7.20	$452.21^{+0.27}_{-0.27}$	$490.41^{+0.34}_{-0.34}$	386^{+450}_{-130}	488^{+872}_{-154}	385^{+368}_{-112}	511^{+496}_{-216}
6690	17.20 ± 5.25	$535.52^{+0.46}_{-0.46}$	$597.45^{+0.60}_{-0.60}$	455^{+576}_{-147}	582^{+1100}_{-186}	438^{+461}_{-124}	608^{+631}_{-263}
6693	8.09 ± 3.06	$330.76^{+0.09}_{-0.09}$	$340.38^{+0.10}_{-0.10}$	281^{+277}_{-103}	348^{+546}_{-108}	302^{+235}_{-96}	363^{+309}_{-150}
6694*	18.30 ± 0.73	—	—	472^{+609}_{-152}	606^{+1159}_{-195}	451^{+485}_{-127}	633^{+666}_{-275}
6695	6.33 ± 3.71	$282.79^{+0.05}_{-0.05}$	$283.46^{+0.05}_{-0.05}$	239^{+215}_{-91}	293^{+425}_{-91}	267^{+186}_{-90}	305^{+241}_{-126}
6697	9.32 ± 2.39	$362.06^{+0.12}_{-0.12}$	$378.28^{+0.14}_{-0.14}$	309^{+319}_{-110}	384^{+628}_{-119}	324^{+268}_{-100}	402^{+356}_{-167}
6698	40.90 ± 6.78	$931.30^{+2.02}_{-2.01}$	$1140.00^{+2.93}_{-2.93}$	749^{+1170}_{-230}	997^{+2095}_{-344}	654^{+879}_{-187}	1023^{+1266}_{-481}
6700	59.10 ± 30.40	$1178.18^{+3.44}_{-3.43}$	$1500.20^{+5.23}_{-5.21}$	910^{+1496}_{-284}	1225^{+2606}_{-439}	768^{+1100}_{-231}	1244^{+1637}_{-604}
6702	9.22 ± 1.44	$359.58^{+0.12}_{-0.12}$	$375.24^{+0.14}_{-0.14}$	307^{+316}_{-110}	381^{+622}_{-118}	322^{+266}_{-100}	399^{+352}_{-165}
6707	1.42 ± 0.38	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
6708	8.56 ± 1.42	$342.91^{+0.10}_{-0.10}$	$355.02^{+0.12}_{-0.12}$	292^{+293}_{-106}	362^{+578}_{-112}	311^{+248}_{-98}	378^{+327}_{-157}
6710	8.47 ± 6.47	$340.61^{+0.10}_{-0.10}$	$352.23^{+0.11}_{-0.11}$	290^{+290}_{-105}	359^{+572}_{-111}	309^{+246}_{-98}	376^{+324}_{-155}
6715	16.20 ± 2.66	$515.42^{+0.41}_{-0.41}$	$571.35^{+0.53}_{-0.53}$	439^{+545}_{-143}	559^{+1045}_{-178}	425^{+438}_{-121}	585^{+598}_{-251}
6716	0.60 ± 0.40	$63.04^{+0.13}_{-0.13}$	$49.14^{+0.12}_{-0.12}$	44^{+27}_{-23}	62^{+32}_{-22}	82^{+33}_{-47}	57^{+37}_{-31}
6718	$1.20^{\dagger}$	$97.75^{+0.10}_{-0.10}$	$81.99^{+0.10}_{-0.10}$	72^{+42}_{-35}	93^{+67}_{-31}	115^{+44}_{-58}	90^{+52}_{-44}
6720	0.72 ± 0.43	$70.53^{+0.12}_{-0.12}$	$56.02^{+0.12}_{-0.12}$	50^{+29}_{-25}	68^{+39}_{-24}	89^{+34}_{-49}	64^{+40}_{-33}
6745	1.16 ± 0.33	$95.65^{+0.10}_{-0.10}$	$79.95^{+0.10}_{-0.10}$	70^{+41}_{-35}	91^{+65}_{-31}	113^{+43}_{-57}	88^{+51}_{-43}
6753	35.60 ± 7.94	$852.29^{+1.63}_{-1.63}$	$1027.89^{+2.33}_{-2.33}$	694^{+1057}_{-213}	919^{+1913}_{-312}	615^{+802}_{-173}	946^{+1142}_{-439}
6757	9.65 ± 2.73	$370.20^{+0.13}_{-0.13}$	$388.22^{+0.16}_{-0.16}$	316^{+331}_{-112}	393^{+650}_{-122}	330^{+277}_{-101}	412^{+368}_{-171}
6762	2.32 ± 0.77	$148.93^{+0.06}_{-0.06}$	$134.07^{+0.06}_{-0.06}$	117^{+77}_{-53}	145^{+141}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
6763*	4.25 ± 0.53	—	—	181^{+142}_{-74}	221^{+278}_{-69}	218^{+127}_{-81}	227^{+161}_{-95}
6764	2.64 ± 0.33	$161.75^{+0.05}_{-0.05}$	$147.64^{+0.05}_{-0.05}$	129^{+87}_{-57}	158^{+164}_{-50}	171^{+81}_{-72}	159^{+100}_{-70}
6767	1.42 ± 0.70	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
6774	2.32 ± 2.01	$148.93^{+0.06}_{-0.06}$	$134.07^{+0.06}_{-0.06}$	117^{+77}_{-53}	145^{+141}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
6782	14.70 ± 5.55	$484.40^{+0.34}_{-0.34}$	$531.40^{+0.43}_{-0.43}$	413^{+498}_{-137}	524^{+960}_{-166}	406^{+404}_{-116}	549^{+548}_{-234}
6786	$2.70^{\dagger}$	$164.09^{+0.05}_{-0.05}$	$150.13^{+0.05}_{-0.05}$	131^{+89}_{-58}	161^{+168}_{-51}	173^{+83}_{-72}	162^{+102}_{-71}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
6787	23.40 ± 8.28	$651.89^{+0.82}_{-0.81}$	$751.66^{+1.10}_{-1.10}$	547^{+755}_{-171}	710^{+1412}_{-232}	507^{+590}_{-141}	738^{+821}_{-329}
6788	45.40 ± 3.29	$995.52^{+2.36}_{-2.35}$	$1232.31^{+3.47}_{-3.46}$	792^{+1259}_{-244}	1058^{+2236}_{-369}	685^{+940}_{-198}	1083^{+1364}_{-514}
6796	$1.51^{\dagger}$	$113.20^{+0.08}_{-0.08}$	$97.32^{+0.09}_{-0.09}$	86^{+51}_{-41}	108^{+87}_{-36}	128^{+52}_{-62}	106^{+61}_{-50}
6800	8.01 ± 2.53	$328.67^{+0.09}_{-0.09}$	$337.86^{+0.10}_{-0.10}$	280^{+274}_{-102}	345^{+541}_{-107}	300^{+233}_{-96}	361^{+306}_{-149}
6802	3.20 ± 0.88	$182.90^{+0.04}_{-0.04}$	$170.42^{+0.04}_{-0.04}$	148^{+106}_{-64}	181^{+203}_{-57}	188^{+97}_{-75}	184^{+121}_{-79}
6814	2.83 ± 0.34	$169.09^{+0.04}_{-0.04}$	$155.49^{+0.05}_{-0.05}$	136^{+93}_{-59}	166^{+177}_{-52}	177^{+87}_{-73}	168^{+107}_{-73}
6816	1.84 ± 0.25	$128.44^{+0.07}_{-0.07}$	$112.78^{+0.08}_{-0.08}$	99^{+61}_{-46}	124^{+109}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
6817	10.70 ± 1.47	$395.45^{+0.17}_{-0.17}$	$419.31^{+0.20}_{-0.20}$	338^{+367}_{-118}	422^{+718}_{-132}	347^{+305}_{-105}	442^{+407}_{-185}
6824	37.60 ± 3.43	$882.57^{+1.78}_{-1.77}$	$1070.67^{+2.55}_{-2.55}$	715^{+1100}_{-220}	949^{+1984}_{-324}	630^{+832}_{-178}	976^{+1190}_{-455}
6830	1.06 ± 0.55	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
6831	2.41 ± 1.56	$152.60^{+0.05}_{-0.05}$	$137.93^{+0.06}_{-0.06}$	121^{+80}_{-54}	148^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
6853	2.97 ± 1.34	$174.39^{+0.04}_{-0.04}$	$161.19^{+0.05}_{-0.05}$	140^{+98}_{-61}	172^{+187}_{-54}	181^{+91}_{-74}	174^{+112}_{-75}
6866	$3.05^{\dagger}$	$177.37^{+0.04}_{-0.04}$	$164.42^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	177^{+115}_{-76}
6867	$0.92^{\dagger}$	$82.37^{+0.11}_{-0.11}$	$67.14^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	100^{+38}_{-53}	75^{+44}_{-38}
6870	6.42 ± 3.11	$285.35^{+0.05}_{-0.05}$	$286.46^{+0.06}_{-0.06}$	241^{+218}_{-92}	296^{+432}_{-91}	269^{+189}_{-90}	308^{+245}_{-127}
6877	1.48 ± 0.18	$111.76^{+0.08}_{-0.08}$	$95.88^{+0.09}_{-0.09}$	84^{+51}_{-40}	107^{+85}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
6880	2.82 ± 0.75	$168.71^{+0.05}_{-0.05}$	$155.08^{+0.05}_{-0.05}$	135^{+93}_{-59}	166^{+176}_{-52}	176^{+86}_{-73}	167^{+107}_{-72}
6882	2.03 ± 0.62	$136.76^{+0.06}_{-0.06}$	$121.36^{+0.07}_{-0.07}$	106^{+67}_{-49}	132^{+122}_{-43}	149^{+65}_{-67}	131^{+78}_{-59}
6884	$0.63^{\dagger}$	$64.50^{+0.13}_{-0.13}$	$50.46^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+33}_{-22}	84^{+33}_{-47}	58^{+38}_{-31}
6886	5.49 ± 1.80	$258.20^{+0.04}_{-0.04}$	$254.90^{+0.04}_{-0.04}$	217^{+185}_{-85}	265^{+366}_{-82}	248^{+163}_{-87}	274^{+209}_{-114}
6891*	6.36 ± 0.47	—	—	239^{+216}_{-91}	294^{+427}_{-91}	267^{+187}_{-90}	306^{+243}_{-126}
6892*	5.76 ± 0.52	—	—	224^{+195}_{-87}	274^{+385}_{-85}	254^{+170}_{-88}	284^{+219}_{-117}
6903	1.57 ± 0.73	$116.05^{+0.08}_{-0.08}$	$100.19^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+91}_{-36}	131^{+53}_{-62}	109^{+63}_{-51}
6904*	67.10 ± 1.07	—	—	971^{+1615}_{-306}	1310^{+2790}_{-476}	810^{+1179}_{-249}	1326^{+1781}_{-650}
6911	$0.63^{\dagger}$	$64.76^{+0.13}_{-0.13}$	$50.70^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+34}_{-22}	84^{+33}_{-47}	59^{+38}_{-31}
6914	1.45 ± 0.94	$110.31^{+0.08}_{-0.08}$	$94.42^{+0.09}_{-0.09}$	83^{+50}_{-40}	105^{+83}_{-35}	126^{+50}_{-61}	103^{+59}_{-49}
6916	9.66 ± 2.35	$370.45^{+0.13}_{-0.13}$	$388.52^{+0.16}_{-0.16}$	316^{+331}_{-112}	394^{+651}_{-122}	330^{+277}_{-101}	412^{+368}_{-171}
6917	3.32 ± 0.68	$187.25^{+0.04}_{-0.04}$	$175.16^{+0.04}_{-0.04}$	152^{+110}_{-65}	186^{+212}_{-58}	192^{+101}_{-76}	189^{+125}_{-81}
6927	1.35 ± 0.55	$105.38^{+0.09}_{-0.09}$	$89.52^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
6930	1.22 ± 0.30	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
6931	29.40 ± 6.71	$754.23^{+1.20}_{-1.20}$	$891.17^{+1.68}_{-1.67}$	624^{+911}_{-193}	819^{+1675}_{-273}	563^{+701}_{-157}	847^{+986}_{-386}
6935	3.55 ± 0.68	$195.44^{+0.04}_{-0.04}$	$184.14^{+0.04}_{-0.04}$	160^{+118}_{-67}	194^{+228}_{-61}	198^{+107}_{-78}	199^{+134}_{-84}
6938	2.14 ± 0.62	$141.45^{+0.06}_{-0.06}$	$126.23^{+0.07}_{-0.07}$	111^{+71}_{-51}	137^{+129}_{-44}	153^{+68}_{-68}	137^{+82}_{-61}
6939	0.78 ± 0.57	$73.93^{+0.12}_{-0.12}$	$59.18^{+0.12}_{-0.12}$	52^{+31}_{-27}	71^{+42}_{-25}	93^{+35}_{-51}	67^{+41}_{-35}
6943	29.90 ± 14.20	$762.39^{+1.23}_{-1.23}$	$902.45^{+1.73}_{-1.72}$	630^{+924}_{-194}	827^{+1695}_{-276}	568^{+709}_{-158}	856^{+1000}_{-390}
6944	9.01 ± 0.17	$354.32^{+0.11}_{-0.11}$	$368.85^{+0.13}_{-0.13}$	302^{+309}_{-108}	375^{+608}_{-116}	319^{+260}_{-99}	392^{+344}_{-163}
6950	5.86 ± 2.10	$269.19^{+0.04}_{-0.04}$	$267.61^{+0.05}_{-0.05}$	226^{+198}_{-88}	277^{+392}_{-86}	256^{+173}_{-88}	288^{+223}_{-119}
6953	0.93 ± 0.33	$82.89^{+0.11}_{-0.11}$	$67.63^{+0.11}_{-0.11}$	60^{+35}_{-30}	79^{+50}_{-27}	101^{+38}_{-53}	75^{+45}_{-38}
6963*	4.10 ± 0.08	—	—	177^{+137}_{-73}	215^{+267}_{-67}	214^{+123}_{-80}	221^{+155}_{-93}
6985*	7.27 ± 0.08	—	—	262^{+248}_{-98}	323^{+491}_{-100}	286^{+213}_{-93}	337^{+278}_{-139}
6987	7.30 ± 2.28	$309.75^{+0.07}_{-0.07}$	$315.26^{+0.08}_{-0.08}$	263^{+249}_{-98}	324^{+493}_{-100}	287^{+213}_{-94}	338^{+279}_{-139}
6989	0.75 ± 0.38	$72.27^{+0.12}_{-0.12}$	$57.63^{+0.12}_{-0.12}$	51^{+30}_{-26}	70^{+40}_{-24}	91^{+35}_{-50}	66^{+40}_{-34}
7000	1.13 ± 0.53	$94.06^{+0.10}_{-0.10}$	$78.40^{+0.10}_{-0.10}$	69^{+40}_{-34}	90^{+63}_{-30}	111^{+43}_{-57}	86^{+50}_{-42}
7009	58.10 ± 9.10	$1165.41^{+3.36}_{-3.35}$	$1481.22^{+5.09}_{-5.08}$	902^{+1480}_{-281}	1213^{+2582}_{-434}	762^{+1089}_{-228}	1233^{+1618}_{-598}
7012*	4.63 ± 0.12	—	—	192^{+155}_{-78}	235^{+305}_{-73}	227^{+138}_{-83}	242^{+175}_{-101}
7028*	7.03 ± 0.29	—	—	256^{+240}_{-96}	315^{+474}_{-98}	281^{+206}_{-93}	329^{+269}_{-136}
7030	1.82 ± 0.97	$127.54^{+0.07}_{-0.07}$	$111.87^{+0.08}_{-0.08}$	98^{+61}_{-46}	123^{+107}_{-40}	141^{+59}_{-65}	121^{+71}_{-55}
7060	8.69 ± 6.84	$346.23^{+0.10}_{-0.10}$	$359.03^{+0.12}_{-0.12}$	295^{+298}_{-106}	366^{+587}_{-113}	313^{+251}_{-98}	382^{+332}_{-158}
7063	36.80 ± 7.36	$870.53^{+1.72}_{-1.71}$	$1053.63^{+2.46}_{-2.46}$	707^{+1083}_{-217}	937^{+1956}_{-320}	624^{+820}_{-176}	964^{+1171}_{-449}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7064	10.10 ± 1.65	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
7078	4.17 ± 4.09	$216.60^{+0.03}_{-0.03}$	$207.63^{+0.04}_{-0.04}$	179^{+139}_{-74}	218^{+272}_{-68}	216^{+125}_{-81}	224^{+157}_{-94}
7087	4.89 ± 0.59	$239.80^{+0.03}_{-0.03}$	$233.82^{+0.04}_{-0.04}$	200^{+164}_{-80}	244^{+324}_{-76}	234^{+145}_{-84}	252^{+185}_{-105}
7102	12.00 ± 5.18	$425.50^{+0.22}_{-0.22}$	$456.75^{+0.27}_{-0.27}$	364^{+410}_{-124}	457^{+799}_{-143}	367^{+338}_{-109}	479^{+454}_{-201}
7106	47.90 ± 13.30	$1030.20^{+2.55}_{-2.54}$	$1282.58^{+3.78}_{-3.77}$	815^{+1305}_{-251}	1091^{+2310}_{-382}	701^{+972}_{-204}	1114^{+1417}_{-531}
7108	4.47 ± 1.15	$226.43^{+0.03}_{-0.03}$	$218.67^{+0.04}_{-0.04}$	188^{+149}_{-76}	229^{+294}_{-71}	223^{+133}_{-82}	236^{+169}_{-98}
7110	3.99 ± 1.46	$210.58^{+0.03}_{-0.03}$	$200.90^{+0.04}_{-0.04}$	173^{+133}_{-72}	211^{+259}_{-66}	211^{+120}_{-80}	217^{+151}_{-91}
7111	0.54 ± 0.45	$58.62^{+0.13}_{-0.13}$	$45.13^{+0.12}_{-0.12}$	40^{+25}_{-21}	58^{+29}_{-21}	78^{+32}_{-45}	53^{+36}_{-29}
7113*	7.95 ± 0.03	—	—	278^{+272}_{-102}	344^{+537}_{-106}	299^{+231}_{-96}	359^{+304}_{-148}
7116	$0.35^{\dagger}$	$44.57^{+0.14}_{-0.14}$	$32.78^{+0.13}_{-0.13}$	30^{+20}_{-16}	46^{+19}_{-17}	64^{+30}_{-40}	42^{+34}_{-24}
7130	$0.63^{\dagger}$	$64.44^{+0.13}_{-0.13}$	$50.40^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+33}_{-22}	84^{+33}_{-47}	58^{+38}_{-31}
7133	9.58 ± 0.98	$368.48^{+0.13}_{-0.13}$	$386.12^{+0.15}_{-0.15}$	315^{+328}_{-112}	391^{+646}_{-122}	329^{+275}_{-101}	410^{+365}_{-170}
7142	19.10 ± 1.27	$572.59^{+0.56}_{-0.56}$	$646.02^{+0.74}_{-0.74}$	485^{+633}_{-155}	623^{+1201}_{-201}	460^{+503}_{-129}	650^{+691}_{-284}
7147	1.28 ± 0.40	$101.86^{+0.09}_{-0.09}$	$86.04^{+0.10}_{-0.10}$	76^{+45}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
7148	37.20 ± 15.40	$876.56^{+1.75}_{-1.74}$	$1062.16^{+2.51}_{-2.50}$	711^{+1092}_{-218}	943^{+1970}_{-322}	627^{+826}_{-177}	970^{+1180}_{-452}
7159	80.70 ± 60.40	$1437.58^{+5.25}_{-5.23}$	$1892.60^{+8.27}_{-8.24}$	1065^{+1791}_{-341}	1441^{+3061}_{-534}	874^{+1296}_{-277}	1451^{+2007}_{-719}
7164	$0.78^{\dagger}$	$73.99^{+0.12}_{-0.12}$	$59.23^{+0.12}_{-0.12}$	52^{+31}_{-27}	71^{+42}_{-25}	93^{+35}_{-51}	67^{+41}_{-35}
7167	1.00 ± 0.88	$87.00^{+0.11}_{-0.11}$	$71.57^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+55}_{-28}	105^{+40}_{-55}	79^{+46}_{-40}
7170*	21.90 ± 0.33	—	—	526^{+714}_{-166}	681^{+1341}_{-221}	491^{+561}_{-137}	709^{+777}_{-313}
7172	5.01 ± 0.35	$243.54^{+0.04}_{-0.04}$	$238.08^{+0.04}_{-0.04}$	203^{+168}_{-81}	248^{+332}_{-77}	237^{+149}_{-85}	257^{+190}_{-106}
7173	53.40 ± 9.20	$1104.27^{+2.98}_{-2.98}$	$1390.89^{+4.48}_{-4.46}$	863^{+1403}_{-267}	1159^{+2462}_{-411}	735^{+1037}_{-217}	1180^{+1528}_{-568}
7178	1.02 ± 0.68	$88.11^{+0.11}_{-0.11}$	$72.63^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+56}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
7183	$0.95^{\dagger}$	$84.48^{+0.11}_{-0.11}$	$69.15^{+0.11}_{-0.11}$	61^{+36}_{-31}	81^{+52}_{-28}	102^{+39}_{-54}	77^{+45}_{-39}
7185	0.73 ± 0.07	$71.28^{+0.12}_{-0.12}$	$56.71^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+39}_{-24}	90^{+35}_{-50}	65^{+40}_{-34}
7187	5.88 ± 2.65	$269.77^{+0.04}_{-0.04}$	$268.29^{+0.05}_{-0.05}$	227^{+199}_{-88}	278^{+394}_{-86}	257^{+174}_{-88}	289^{+224}_{-119}
7191	5.72 ± 3.95	$265.06^{+0.04}_{-0.04}$	$262.82^{+0.05}_{-0.05}$	223^{+193}_{-87}	272^{+382}_{-84}	253^{+169}_{-88}	283^{+218}_{-117}
7206	4.18 ± 1.10	$216.93^{+0.03}_{-0.03}$	$208.00^{+0.04}_{-0.04}$	179^{+139}_{-74}	218^{+273}_{-68}	216^{+125}_{-81}	224^{+158}_{-94}
7207	2.01 ± 0.38	$135.89^{+0.06}_{-0.06}$	$120.47^{+0.07}_{-0.07}$	106^{+67}_{-49}	131^{+120}_{-42}	148^{+64}_{-67}	130^{+78}_{-59}
7209	1.94 ± 0.51	$132.85^{+0.07}_{-0.07}$	$117.33^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+115}_{-41}	146^{+63}_{-66}	127^{+75}_{-58}
7213	3.86 ± 1.14	$206.17^{+0.03}_{-0.03}$	$196.00^{+0.04}_{-0.04}$	169^{+128}_{-71}	206^{+250}_{-64}	207^{+116}_{-79}	212^{+146}_{-89}
7219	3.02 ± 0.25	$176.26^{+0.04}_{-0.04}$	$163.21^{+0.05}_{-0.05}$	142^{+100}_{-62}	174^{+190}_{-55}	183^{+92}_{-74}	176^{+114}_{-76}
7227	10.10 ± 6.41	$381.14^{+0.15}_{-0.15}$	$401.65^{+0.18}_{-0.18}$	326^{+346}_{-114}	406^{+679}_{-126}	337^{+289}_{-103}	425^{+385}_{-177}
7228	2.55 ± 0.73	$158.20^{+0.05}_{-0.05}$	$143.87^{+0.06}_{-0.06}$	126^{+84}_{-56}	154^{+157}_{-49}	168^{+79}_{-71}	155^{+97}_{-68}
7230	8.44 ± 0.60	$339.84^{+0.10}_{-0.10}$	$351.30^{+0.11}_{-0.11}$	290^{+289}_{-105}	358^{+570}_{-111}	308^{+245}_{-97}	375^{+323}_{-155}
7233	$0.68^{\dagger}$	$67.75^{+0.12}_{-0.12}$	$53.44^{+0.12}_{-0.12}$	47^{+28}_{-24}	66^{+36}_{-23}	87^{+34}_{-49}	61^{+39}_{-32}
7236*	3.08 ± 0.25	—	—	144^{+102}_{-62}	176^{+195}_{-55}	185^{+94}_{-75}	179^{+116}_{-77}
7238	9.03 ± 3.55	$354.83^{+0.11}_{-0.11}$	$369.46^{+0.13}_{-0.13}$	303^{+309}_{-108}	376^{+609}_{-117}	319^{+261}_{-99}	393^{+345}_{-163}
7240*	25.90 ± 1.23	—	—	580^{+822}_{-180}	757^{+1526}_{-250}	531^{+638}_{-148}	786^{+892}_{-353}
7247	27.00 ± 0.44	$714.29^{+1.04}_{-1.04}$	$836.33^{+1.44}_{-1.44}$	594^{+851}_{-184}	777^{+1574}_{-257}	542^{+658}_{-150}	805^{+922}_{-364}
7250	1.47 ± 0.23	$111.28^{+0.08}_{-0.08}$	$95.39^{+0.09}_{-0.09}$	84^{+50}_{-40}	106^{+84}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
7255	4.85 ± 0.20	$238.55^{+0.03}_{-0.03}$	$232.39^{+0.04}_{-0.04}$	199^{+163}_{-80}	242^{+321}_{-75}	233^{+144}_{-84}	251^{+184}_{-104}
7263	9.04 ± 1.65	$355.08^{+0.11}_{-0.11}$	$369.77^{+0.13}_{-0.13}$	303^{+310}_{-109}	376^{+610}_{-117}	319^{+261}_{-99}	393^{+345}_{-163}
7270	4.12 ± 0.60	$214.94^{+0.03}_{-0.03}$	$205.77^{+0.04}_{-0.04}$	177^{+137}_{-73}	216^{+269}_{-67}	214^{+123}_{-81}	222^{+156}_{-93}
7277*	1.82 ± 0.07	—	—	98^{+61}_{-46}	123^{+107}_{-40}	141^{+59}_{-65}	121^{+71}_{-55}
7281*	3.06 ± 0.19	—	—	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	178^{+115}_{-76}
7283	19.70 ± 5.74	$584.02^{+0.60}_{-0.60}$	$661.09^{+0.79}_{-0.79}$	494^{+651}_{-157}	636^{+1232}_{-205}	467^{+515}_{-131}	663^{+710}_{-290}
7285*	3.93 ± 0.55	—	—	171^{+131}_{-71}	209^{+255}_{-65}	209^{+118}_{-80}	214^{+148}_{-90}
7287	24.60 ± 9.45	$673.06^{+0.89}_{-0.89}$	$780.22^{+1.21}_{-1.21}$	563^{+788}_{-176}	733^{+1467}_{-241}	519^{+614}_{-144}	761^{+855}_{-340}
7290	71.10 ± 6.13	$1325.85^{+4.44}_{-4.42}$	$1721.99^{+6.88}_{-6.86}$	1000^{+1670}_{-316}	1350^{+2874}_{-494}	830^{+1216}_{-257}	1365^{+1850}_{-671}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7292	7.42 ± 2.82	$312.99^{+0.07}_{-0.07}$	$319.12^{+0.08}_{-0.08}$	266^{+253}_{-99}	327^{+501}_{-101}	289^{+217}_{-94}	342^{+284}_{-141}
7293	2.73 ± 0.23	$165.25^{+0.05}_{-0.05}$	$151.38^{+0.05}_{-0.05}$	132^{+90}_{-58}	162^{+170}_{-51}	174^{+84}_{-72}	163^{+103}_{-71}
7294	62.90 ± 25.30	$1226.02^{+3.75}_{-3.74}$	$1571.57^{+5.74}_{-5.72}$	940^{+1554}_{-294}	1266^{+2696}_{-457}	788^{+1139}_{-239}	1284^{+1707}_{-626}
7295*	6.84 ± 0.63	—	—	252^{+233}_{-95}	309^{+461}_{-96}	277^{+201}_{-92}	322^{+261}_{-133}
7297	29.10 ± 10.20	$749.30^{+1.18}_{-1.18}$	$884.38^{+1.65}_{-1.64}$	620^{+904}_{-192}	813^{+1662}_{-271}	561^{+695}_{-156}	842^{+979}_{-383}
7298	2.87 ± 0.79	$170.61^{+0.04}_{-0.04}$	$157.13^{+0.05}_{-0.05}$	137^{+95}_{-60}	168^{+180}_{-53}	178^{+88}_{-73}	170^{+108}_{-73}
7301*	7.81 ± 0.03	—	—	275^{+267}_{-101}	339^{+527}_{-105}	297^{+228}_{-95}	354^{+299}_{-146}
7305	24.50 ± 1.31	$671.31^{+0.88}_{-0.88}$	$777.86^{+1.20}_{-1.20}$	562^{+785}_{-175}	731^{+1463}_{-240}	518^{+612}_{-144}	760^{+852}_{-339}
7310*	7.65 ± 0.33	—	—	271^{+261}_{-100}	334^{+517}_{-104}	293^{+223}_{-95}	349^{+292}_{-144}
7318*	21.80 ± 0.97	—	—	524^{+711}_{-166}	679^{+1336}_{-221}	490^{+559}_{-136}	707^{+774}_{-312}
7319	4.12 ± 0.46	$214.94^{+0.03}_{-0.03}$	$205.77^{+0.04}_{-0.04}$	177^{+137}_{-73}	216^{+269}_{-67}	214^{+123}_{-81}	222^{+156}_{-93}
7322	6.35 ± 0.97	$283.36^{+0.05}_{-0.05}$	$284.13^{+0.06}_{-0.06}$	239^{+216}_{-91}	293^{+427}_{-91}	267^{+187}_{-90}	305^{+242}_{-126}
7323	3.07 ± 0.92	$178.12^{+0.04}_{-0.04}$	$165.23^{+0.05}_{-0.05}$	144^{+101}_{-62}	176^{+194}_{-55}	184^{+93}_{-75}	178^{+116}_{-77}
7328	0.88 ± 0.28	$80.12^{+0.11}_{-0.11}$	$65.00^{+0.11}_{-0.11}$	57^{+34}_{-29}	77^{+48}_{-26}	98^{+37}_{-53}	73^{+43}_{-37}
7329	44.50 ± 2.25	$982.86^{+2.29}_{-2.28}$	$1214.04^{+3.36}_{-3.35}$	784^{+1241}_{-241}	1046^{+2208}_{-364}	679^{+928}_{-196}	1071^{+1345}_{-507}
7335	9.53 ± 1.94	$367.25^{+0.13}_{-0.13}$	$384.62^{+0.15}_{-0.15}$	314^{+327}_{-111}	390^{+642}_{-121}	328^{+274}_{-101}	408^{+364}_{-170}
7343*	18.00 ± 0.09	—	—	468^{+600}_{-151}	600^{+1143}_{-192}	447^{+479}_{-126}	626^{+657}_{-272}
7344	57.80 ± 15.40	$1161.56^{+3.34}_{-3.33}$	$1475.51^{+5.05}_{-5.04}$	900^{+1475}_{-280}	1210^{+2574}_{-433}	760^{+1086}_{-228}	1230^{+1613}_{-596}
7352	2.16 ± 1.30	$142.29^{+0.06}_{-0.06}$	$127.11^{+0.07}_{-0.07}$	111^{+72}_{-51}	138^{+130}_{-44}	154^{+68}_{-68}	137^{+83}_{-61}
7353	130.00 ± 10.80	$1949.43^{+9.63}_{-9.58}$	$2700.92^{+16.02}_{-15.92}$	1341^{+2242}_{-457}	1813^{+3782}_{-707}	1056^{+1597}_{-366}	1807^{+2694}_{-911}
7357	7.76 ± 2.59	$322.08^{+0.08}_{-0.08}$	$329.97^{+0.09}_{-0.09}$	274^{+265}_{-101}	338^{+524}_{-105}	296^{+226}_{-95}	353^{+297}_{-146}
7358	4.46 ± 1.31	$226.11^{+0.03}_{-0.03}$	$218.30^{+0.04}_{-0.04}$	187^{+149}_{-76}	228^{+293}_{-71}	223^{+133}_{-82}	235^{+169}_{-98}
7359	102.00 ± 98.40	$1669.61^{+7.11}_{-7.08}$	$2253.91^{+11.51}_{-11.45}$	1195^{+2015}_{-394}	1618^{+3412}_{-615}	960^{+1445}_{-319}	1620^{+2324}_{-812}
7360*	2.57 ± 0.10	—	—	126^{+85}_{-56}	155^{+159}_{-49}	168^{+80}_{-71}	156^{+97}_{-68}
7361	$3.21^{\dagger}$	$183.26^{+0.04}_{-0.04}$	$170.81^{+0.04}_{-0.04}$	148^{+106}_{-64}	181^{+204}_{-57}	189^{+97}_{-76}	184^{+121}_{-79}
7366	24.70 ± 5.07	$674.80^{+0.90}_{-0.89}$	$782.59^{+1.22}_{-1.22}$	564^{+790}_{-176}	735^{+1472}_{-241}	520^{+615}_{-144}	763^{+858}_{-341}
7367	$1.36^{\dagger}$	$105.88^{+0.09}_{-0.09}$	$90.02^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-34}	122^{+48}_{-60}	98^{+57}_{-47}
7369	5.58 ± 1.00	$260.90^{+0.04}_{-0.04}$	$258.01^{+0.04}_{-0.04}$	219^{+188}_{-86}	268^{+373}_{-83}	250^{+165}_{-87}	278^{+212}_{-115}
7371	2.33 ± 1.87	$149.34^{+0.06}_{-0.06}$	$134.50^{+0.06}_{-0.06}$	118^{+77}_{-53}	145^{+142}_{-46}	160^{+73}_{-69}	145^{+89}_{-64}
7374	2.85 ± 0.29	$169.85^{+0.04}_{-0.04}$	$156.31^{+0.05}_{-0.05}$	136^{+94}_{-60}	167^{+178}_{-53}	177^{+87}_{-73}	169^{+108}_{-73}
7375	10.50 ± 2.11	$390.71^{+0.16}_{-0.16}$	$413.45^{+0.19}_{-0.19}$	334^{+360}_{-117}	417^{+705}_{-130}	344^{+299}_{-104}	437^{+400}_{-182}
7376	1.26 ± 1.07	$100.84^{+0.09}_{-0.09}$	$85.03^{+0.10}_{-0.10}$	75^{+44}_{-37}	96^{+71}_{-32}	117^{+46}_{-58}	93^{+54}_{-45}
7377	$1.20^{\dagger}$	$97.75^{+0.10}_{-0.10}$	$81.99^{+0.10}_{-0.10}$	72^{+42}_{-35}	93^{+67}_{-31}	115^{+44}_{-58}	90^{+52}_{-44}
7378	50.10 ± 3.61	$1060.18^{+2.72}_{-2.72}$	$1326.26^{+4.06}_{-4.04}$	835^{+1345}_{-258}	1118^{+2372}_{-394}	715^{+999}_{-209}	1141^{+1462}_{-546}
7379	3.22 ± 0.67	$183.63^{+0.04}_{-0.04}$	$171.21^{+0.04}_{-0.04}$	149^{+106}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+121}_{-79}
7381	4.15 ± 3.17	$215.94^{+0.03}_{-0.03}$	$206.88^{+0.04}_{-0.04}$	178^{+138}_{-73}	217^{+271}_{-68}	215^{+124}_{-81}	223^{+157}_{-94}
7386	8.02 ± 3.22	$328.93^{+0.09}_{-0.09}$	$338.18^{+0.10}_{-0.10}$	280^{+274}_{-102}	346^{+542}_{-107}	301^{+233}_{-96}	361^{+307}_{-149}
7387	1.55 ± 0.58	$115.11^{+0.08}_{-0.08}$	$99.24^{+0.09}_{-0.09}$	87^{+53}_{-42}	110^{+90}_{-36}	130^{+53}_{-62}	108^{+63}_{-50}
7390	3.06 ± 0.25	$177.75^{+0.04}_{-0.04}$	$164.82^{+0.05}_{-0.05}$	143^{+101}_{-62}	175^{+193}_{-55}	184^{+93}_{-75}	178^{+115}_{-76}
7403	2.83 ± 0.45	$169.09^{+0.04}_{-0.04}$	$155.49^{+0.05}_{-0.05}$	136^{+93}_{-59}	166^{+177}_{-52}	177^{+87}_{-73}	168^{+107}_{-73}
7404	1.87 ± 0.83	$129.77^{+0.07}_{-0.07}$	$114.15^{+0.07}_{-0.07}$	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
7427	14.20 ± 3.46	$473.81^{+0.31}_{-0.31}$	$517.86^{+0.40}_{-0.40}$	404^{+482}_{-135}	512^{+931}_{-162}	399^{+392}_{-115}	536^{+531}_{-228}
7429	5.31 ± 0.26	$252.76^{+0.04}_{-0.04}$	$248.64^{+0.04}_{-0.04}$	212^{+179}_{-83}	258^{+353}_{-80}	244^{+157}_{-86}	268^{+202}_{-111}
7430	$4.26^{\dagger}$	$219.58^{+0.03}_{-0.03}$	$210.96^{+0.04}_{-0.04}$	181^{+142}_{-74}	221^{+279}_{-69}	218^{+127}_{-81}	228^{+161}_{-95}
7432	1.42 ± 0.82	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
7433	1.78 ± 0.93	$125.74^{+0.07}_{-0.07}$	$110.03^{+0.08}_{-0.08}$	97^{+60}_{-45}	121^{+105}_{-39}	140^{+58}_{-64}	119^{+70}_{-55}
7440	14.10 ± 7.17	$471.67^{+0.31}_{-0.31}$	$515.14^{+0.39}_{-0.39}$	403^{+479}_{-134}	510^{+925}_{-161}	398^{+389}_{-115}	534^{+527}_{-227}
7443	1.64 ± 1.14	$119.33^{+0.08}_{-0.08}$	$103.51^{+0.08}_{-0.08}$	91^{+55}_{-43}	114^{+95}_{-37}	134^{+55}_{-63}	112^{+65}_{-52}
7446*	2.57 ± 0.33	—	—	126^{+85}_{-56}	155^{+159}_{-49}	168^{+80}_{-71}	156^{+97}_{-68}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7447	5.24 ± 2.16	$250.63^{+0.04}_{-0.04}$	$246.19^{+0.04}_{-0.04}$	210^{+176}_{-83}	256^{+349}_{-79}	242^{+155}_{-86}	265^{+199}_{-110}
7448	$1.76^{\dagger}$	$124.84^{+0.07}_{-0.07}$	$109.11^{+0.08}_{-0.08}$	96^{+59}_{-45}	120^{+103}_{-39}	139^{+58}_{-64}	118^{+69}_{-54}
7449	2.35 ± 1.14	$150.16^{+0.06}_{-0.06}$	$135.36^{+0.06}_{-0.06}$	118^{+78}_{-53}	146^{+144}_{-47}	161^{+73}_{-70}	146^{+90}_{-65}
7451	0.83 ± 0.41	$77.42^{+0.12}_{-0.11}$	$62.45^{+0.11}_{-0.11}$	55^{+32}_{-28}	74^{+45}_{-26}	96^{+36}_{-52}	70^{+42}_{-36}
7452	1.27 ± 0.88	$101.35^{+0.09}_{-0.09}$	$85.54^{+0.10}_{-0.10}$	75^{+44}_{-37}	97^{+72}_{-32}	118^{+46}_{-59}	94^{+54}_{-45}
7453	$6.13^{\dagger}$	$277.05^{+0.05}_{-0.05}$	$276.75^{+0.05}_{-0.05}$	234^{+208}_{-90}	286^{+411}_{-89}	262^{+181}_{-89}	298^{+234}_{-123}
7455	4.77 ± 2.84	$236.03^{+0.03}_{-0.03}$	$229.52^{+0.04}_{-0.04}$	196^{+160}_{-79}	240^{+315}_{-74}	231^{+142}_{-84}	247^{+181}_{-103}
7456	114.00 ± 11.80	$1792.55^{+8.18}_{-8.15}$	$2448.87^{+13.41}_{-13.34}$	1260^{+2120}_{-421}	1706^{+3580}_{-656}	1003^{+1515}_{-340}	1704^{+2488}_{-857}
7457*	8.87 ± 1.21	—	—	299^{+304}_{-108}	371^{+599}_{-115}	316^{+256}_{-99}	388^{+339}_{-161}
7460	1.79 ± 1.30	$126.20^{+0.07}_{-0.07}$	$110.49^{+0.08}_{-0.08}$	97^{+60}_{-45}	121^{+105}_{-39}	140^{+59}_{-65}	120^{+70}_{-55}
7464*	9.55 ± 0.25	—	—	314^{+327}_{-111}	390^{+644}_{-121}	328^{+274}_{-101}	409^{+364}_{-170}
7469	0.50 ± 0.27	$56.02^{+0.13}_{-0.13}$	$42.80^{+0.13}_{-0.13}$	38^{+24}_{-20}	56^{+27}_{-20}	75^{+31}_{-44}	51^{+35}_{-28}
7472	35.60 ± 4.26	$852.29^{+1.63}_{-1.63}$	$1027.89^{+2.33}_{-2.33}$	694^{+1057}_{-213}	919^{+1913}_{-312}	615^{+802}_{-173}	946^{+1142}_{-439}
7475*	1.86 ± 0.10	—	—	100^{+62}_{-46}	124^{+110}_{-40}	143^{+60}_{-65}	123^{+73}_{-56}
7477*	5.71 ± 0.26	—	—	222^{+193}_{-87}	272^{+382}_{-84}	253^{+169}_{-88}	282^{+217}_{-117}
7481	1.17 ± 0.34	$96.18^{+0.10}_{-0.10}$	$80.46^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+65}_{-31}	113^{+44}_{-57}	88^{+51}_{-43}
7485	1.83 ± 1.13	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
7486	1.57 ± 0.93	$116.05^{+0.08}_{-0.08}$	$100.19^{+0.09}_{-0.09}$	88^{+53}_{-42}	111^{+91}_{-36}	131^{+53}_{-62}	109^{+63}_{-51}
7487	0.89 ± 0.57	$80.82^{+0.11}_{-0.11}$	$65.67^{+0.11}_{-0.11}$	58^{+34}_{-29}	77^{+48}_{-27}	99^{+38}_{-53}	73^{+44}_{-37}
7488	10.20 ± 1.15	$383.54^{+0.15}_{-0.15}$	$404.61^{+0.18}_{-0.18}$	328^{+350}_{-115}	409^{+686}_{-127}	339^{+292}_{-103}	428^{+388}_{-178}
7491*	12.40 ± 0.07	—	—	371^{+424}_{-126}	467^{+824}_{-147}	373^{+348}_{-110}	489^{+468}_{-206}
7493	0.93 ± 0.70	$83.17^{+0.11}_{-0.11}$	$67.91^{+0.11}_{-0.11}$	60^{+35}_{-30}	80^{+51}_{-27}	101^{+38}_{-53}	76^{+45}_{-38}
7494	1.83 ± 0.55	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
7495	5.61 ± 4.85	$261.79^{+0.04}_{-0.04}$	$259.04^{+0.04}_{-0.04}$	220^{+189}_{-86}	269^{+375}_{-83}	251^{+166}_{-87}	279^{+213}_{-115}
7496	9.72 ± 7.82	$371.91^{+0.14}_{-0.14}$	$390.32^{+0.16}_{-0.16}$	318^{+333}_{-112}	395^{+655}_{-123}	331^{+279}_{-102}	414^{+371}_{-172}
7497	1.67 ± 0.27	$120.72^{+0.08}_{-0.08}$	$104.92^{+0.08}_{-0.08}$	92^{+56}_{-44}	116^{+97}_{-38}	135^{+56}_{-63}	114^{+66}_{-53}
7500	2.08 ± 0.80	$138.90^{+0.06}_{-0.06}$	$123.58^{+0.07}_{-0.07}$	108^{+69}_{-50}	134^{+125}_{-43}	151^{+66}_{-67}	134^{+80}_{-60}
7502	2.21 ± 0.31	$144.38^{+0.06}_{-0.06}$	$129.30^{+0.06}_{-0.06}$	113^{+73}_{-52}	140^{+134}_{-45}	156^{+70}_{-68}	140^{+85}_{-62}
7503*	3.26 ± 0.18	—	—	150^{+108}_{-64}	183^{+207}_{-58}	190^{+99}_{-76}	187^{+123}_{-80}
7504	2.66 ± 0.50	$162.53^{+0.05}_{-0.05}$	$148.47^{+0.05}_{-0.05}$	130^{+88}_{-57}	159^{+165}_{-50}	171^{+82}_{-72}	160^{+101}_{-70}
7508	6.88 ± 6.71	$298.24^{+0.06}_{-0.06}$	$301.63^{+0.07}_{-0.07}$	253^{+234}_{-95}	310^{+464}_{-96}	278^{+202}_{-92}	324^{+263}_{-133}
7509	$0.46^{\dagger}$	$52.68^{+0.14}_{-0.14}$	$39.84^{+0.13}_{-0.13}$	36^{+23}_{-19}	53^{+25}_{-19}	72^{+31}_{-43}	48^{+35}_{-27}
7514	$2.76^{\dagger}$	$166.41^{+0.05}_{-0.05}$	$152.61^{+0.05}_{-0.05}$	133^{+91}_{-59}	163^{+172}_{-52}	175^{+85}_{-73}	165^{+104}_{-72}
7515*	3.73 ± 0.44	—	—	165^{+124}_{-69}	201^{+241}_{-63}	204^{+112}_{-78}	206^{+141}_{-87}
7517	$0.99^{\dagger}$	$86.39^{+0.11}_{-0.11}$	$70.98^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
7518	8.99 ± 0.72	$353.82^{+0.11}_{-0.11}$	$368.24^{+0.13}_{-0.13}$	302^{+308}_{-108}	374^{+607}_{-116}	318^{+260}_{-99}	392^{+343}_{-162}
7520	3.53 ± 0.19	$194.73^{+0.04}_{-0.04}$	$183.36^{+0.04}_{-0.04}$	159^{+117}_{-67}	194^{+227}_{-61}	198^{+106}_{-77}	198^{+133}_{-84}
7523	2.78 ± 1.03	$167.18^{+0.05}_{-0.05}$	$153.44^{+0.05}_{-0.05}$	134^{+92}_{-59}	164^{+174}_{-52}	175^{+85}_{-73}	166^{+105}_{-72}
7526	51.40 ± 26.50	$1077.67^{+2.82}_{-2.82}$	$1351.85^{+4.22}_{-4.21}$	846^{+1368}_{-262}	1134^{+2408}_{-401}	723^{+1014}_{-212}	1157^{+1488}_{-555}
7527*	6.50 ± 0.40	—	—	243^{+221}_{-92}	298^{+437}_{-92}	270^{+191}_{-91}	310^{+248}_{-128}
7528	3.67 ± 1.34	$199.63^{+0.04}_{-0.04}$	$188.76^{+0.04}_{-0.04}$	163^{+122}_{-69}	199^{+237}_{-62}	202^{+110}_{-78}	204^{+138}_{-86}
7529	2.72 ± 0.31	$164.86^{+0.05}_{-0.05}$	$150.96^{+0.05}_{-0.05}$	132^{+90}_{-58}	161^{+169}_{-51}	173^{+84}_{-72}	163^{+103}_{-71}
7530*	1.93 ± 0.18	—	—	103^{+64}_{-48}	128^{+115}_{-41}	145^{+62}_{-66}	127^{+75}_{-57}
7532	2.12 ± 1.45	$140.60^{+0.06}_{-0.06}$	$125.35^{+0.07}_{-0.07}$	110^{+70}_{-50}	136^{+128}_{-44}	153^{+67}_{-68}	136^{+82}_{-61}
7533	3.24 ± 1.23	$184.36^{+0.04}_{-0.04}$	$172.00^{+0.04}_{-0.04}$	149^{+107}_{-64}	182^{+206}_{-57}	189^{+98}_{-76}	186^{+122}_{-79}
7535	$2.55^{\dagger}$	$158.20^{+0.05}_{-0.05}$	$143.87^{+0.06}_{-0.06}$	126^{+84}_{-56}	154^{+157}_{-49}	168^{+79}_{-71}	155^{+97}_{-68}
7547	13.20 ± 2.84	$452.21^{+0.27}_{-0.27}$	$490.41^{+0.34}_{-0.34}$	386^{+450}_{-130}	488^{+872}_{-154}	385^{+368}_{-112}	511^{+496}_{-216}
7548	2.68 ± 0.29	$163.31^{+0.05}_{-0.05}$	$149.30^{+0.05}_{-0.05}$	130^{+88}_{-58}	160^{+167}_{-51}	172^{+83}_{-72}	161^{+101}_{-70}
7549*	5.15 ± 0.05	—	—	207^{+173}_{-82}	253^{+342}_{-78}	240^{+153}_{-85}	262^{+195}_{-109}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7550	2.48 ± 0.34	$155.42^{+0.05}_{-0.05}$	$140.91^{+0.06}_{-0.06}$	123^{+82}_{-55}	151^{+153}_{-48}	165^{+77}_{-71}	152^{+94}_{-67}
7551	$0.48^{\dagger}$	$54.51^{+0.13}_{-0.13}$	$41.46^{+0.13}_{-0.13}$	37^{+23}_{-19}	54^{+26}_{-20}	74^{+31}_{-44}	50^{+35}_{-28}
7552	$0.53^{\dagger}$	$58.27^{+0.13}_{-0.13}$	$44.82^{+0.13}_{-0.12}$	40^{+25}_{-21}	58^{+28}_{-21}	78^{+32}_{-45}	53^{+36}_{-29}
7554	9.32 ± 7.46	$362.06^{+0.12}_{-0.12}$	$378.28^{+0.14}_{-0.14}$	309^{+319}_{-110}	384^{+628}_{-119}	324^{+268}_{-100}	402^{+356}_{-167}
7559	$1.31^{\dagger}$	$103.38^{+0.09}_{-0.09}$	$87.54^{+0.10}_{-0.10}$	77^{+46}_{-37}	99^{+74}_{-33}	120^{+47}_{-59}	96^{+55}_{-46}
7560*	1.87 ± 0.09	—	—	100^{+62}_{-47}	125^{+111}_{-40}	143^{+61}_{-65}	124^{+73}_{-56}
7563	7.41 ± 3.10	$312.72^{+0.07}_{-0.07}$	$318.80^{+0.08}_{-0.08}$	265^{+253}_{-99}	327^{+500}_{-101}	289^{+216}_{-94}	341^{+283}_{-141}
7564	0.66 ± 0.63	$66.65^{+0.12}_{-0.12}$	$52.44^{+0.12}_{-0.12}$	46^{+28}_{-24}	65^{+35}_{-23}	86^{+33}_{-48}	60^{+38}_{-32}
7566	4.17 ± 0.89	$216.60^{+0.03}_{-0.03}$	$207.63^{+0.04}_{-0.04}$	179^{+139}_{-74}	218^{+272}_{-68}	216^{+125}_{-81}	224^{+157}_{-94}
7567	0.64 ± 0.51	$65.09^{+0.13}_{-0.13}$	$51.00^{+0.12}_{-0.12}$	45^{+27}_{-23}	63^{+34}_{-22}	84^{+33}_{-48}	59^{+38}_{-31}
7568	8.20 ± 2.76	$333.63^{+0.09}_{-0.09}$	$343.82^{+0.10}_{-0.10}$	284^{+281}_{-104}	351^{+554}_{-109}	304^{+238}_{-97}	367^{+313}_{-152}
7573	4.13 ± 0.97	$215.27^{+0.03}_{-0.03}$	$206.14^{+0.04}_{-0.04}$	178^{+138}_{-73}	216^{+269}_{-67}	214^{+124}_{-81}	222^{+156}_{-93}
7575*	12.90 ± 0.16	—	—	381^{+440}_{-129}	480^{+854}_{-151}	381^{+360}_{-111}	503^{+486}_{-212}
7576	8.01 ± 3.22	$328.67^{+0.09}_{-0.09}$	$337.86^{+0.10}_{-0.10}$	280^{+274}_{-102}	345^{+541}_{-107}	300^{+233}_{-96}	361^{+306}_{-149}
7579	3.95 ± 0.93	$209.23^{+0.03}_{-0.03}$	$199.40^{+0.04}_{-0.04}$	172^{+131}_{-71}	210^{+257}_{-65}	210^{+118}_{-80}	215^{+149}_{-90}
7580	1.21 ± 1.02	$98.27^{+0.10}_{-0.10}$	$82.50^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-31}	115^{+44}_{-58}	91^{+52}_{-44}
7581	40.80 ± 10.50	$929.85^{+2.01}_{-2.01}$	$1137.92^{+2.92}_{-2.91}$	748^{+1168}_{-230}	995^{+2091}_{-343}	653^{+878}_{-186}	1021^{+1263}_{-480}
7584	$17.40^{\dagger}$	$539.49^{+0.47}_{-0.47}$	$602.62^{+0.61}_{-0.61}$	458^{+582}_{-148}	586^{+1111}_{-188}	440^{+465}_{-124}	613^{+637}_{-265}
7587	2.64 ± 2.01	$161.75^{+0.05}_{-0.05}$	$147.64^{+0.05}_{-0.05}$	129^{+87}_{-57}	158^{+164}_{-50}	171^{+81}_{-72}	159^{+100}_{-70}
7588	2.12 ± 0.33	$140.60^{+0.06}_{-0.06}$	$125.35^{+0.07}_{-0.07}$	110^{+70}_{-50}	136^{+128}_{-44}	153^{+67}_{-68}	136^{+82}_{-61}
7595	3.44 ± 3.01	$191.55^{+0.04}_{-0.04}$	$179.86^{+0.04}_{-0.04}$	156^{+114}_{-66}	190^{+220}_{-60}	195^{+104}_{-77}	194^{+130}_{-82}
7597	5.05 ± 1.63	$244.78^{+0.04}_{-0.04}$	$239.50^{+0.04}_{-0.04}$	204^{+170}_{-81}	249^{+335}_{-77}	238^{+150}_{-85}	258^{+192}_{-107}
7598	1.04 ± 0.15	$89.21^{+0.10}_{-0.10}$	$73.69^{+0.11}_{-0.11}$	65^{+38}_{-32}	85^{+57}_{-29}	107^{+41}_{-55}	82^{+48}_{-40}
7599	33.80 ± 6.57	$824.50^{+1.50}_{-1.50}$	$988.87^{+2.13}_{-2.13}$	674^{+1016}_{-207}	891^{+1847}_{-301}	600^{+774}_{-168}	919^{+1099}_{-424}
7601	11.40 ± 5.31	$411.79^{+0.20}_{-0.20}$	$439.61^{+0.24}_{-0.24}$	352^{+390}_{-121}	441^{+762}_{-138}	358^{+323}_{-107}	462^{+432}_{-194}
7602	13.20 ± 7.50	$452.21^{+0.27}_{-0.27}$	$490.41^{+0.34}_{-0.34}$	386^{+450}_{-130}	488^{+872}_{-154}	385^{+368}_{-112}	511^{+496}_{-216}
7603	$1.22^{\dagger}$	$98.78^{+0.10}_{-0.10}$	$83.01^{+0.10}_{-0.10}$	73^{+43}_{-36}	94^{+68}_{-32}	116^{+45}_{-58}	91^{+53}_{-44}
7604	$0.77^{\dagger}$	$73.81^{+0.12}_{-0.12}$	$59.06^{+0.12}_{-0.12}$	52^{+31}_{-27}	71^{+42}_{-25}	92^{+35}_{-51}	67^{+41}_{-35}
7605	1.88 ± 0.16	$130.21^{+0.07}_{-0.07}$	$114.61^{+0.07}_{-0.07}$	101^{+63}_{-47}	125^{+111}_{-41}	144^{+61}_{-65}	124^{+73}_{-56}
7606	4.63 ± 2.14	$231.58^{+0.03}_{-0.03}$	$224.48^{+0.04}_{-0.04}$	192^{+155}_{-78}	235^{+305}_{-73}	227^{+138}_{-83}	242^{+175}_{-101}
7607	2.13 ± 0.24	$141.02^{+0.06}_{-0.06}$	$125.79^{+0.07}_{-0.07}$	110^{+71}_{-50}	136^{+128}_{-44}	153^{+68}_{-68}	136^{+82}_{-61}
7608	1.55 ± 0.66	$115.11^{+0.08}_{-0.08}$	$99.24^{+0.09}_{-0.09}$	87^{+53}_{-42}	110^{+90}_{-36}	130^{+53}_{-62}	108^{+63}_{-50}
7609	1.04 ± 0.20	$89.21^{+0.10}_{-0.10}$	$73.69^{+0.11}_{-0.11}$	65^{+38}_{-32}	85^{+57}_{-29}	107^{+41}_{-55}	82^{+48}_{-40}
7614	3.01 ± 0.37	$175.89^{+0.04}_{-0.04}$	$162.81^{+0.05}_{-0.05}$	142^{+99}_{-62}	173^{+190}_{-55}	182^{+92}_{-74}	176^{+114}_{-76}
7615	0.91 ± 0.63	$81.68^{+0.11}_{-0.11}$	$66.49^{+0.11}_{-0.11}$	59^{+34}_{-30}	78^{+49}_{-27}	100^{+38}_{-53}	74^{+44}_{-38}
7616	$1.81^{\dagger}$	$127.09^{+0.07}_{-0.07}$	$111.41^{+0.08}_{-0.08}$	98^{+61}_{-46}	122^{+107}_{-40}	141^{+59}_{-65}	121^{+71}_{-55}
7617	5.31 ± 0.95	$252.76^{+0.04}_{-0.04}$	$248.64^{+0.04}_{-0.04}$	212^{+179}_{-83}	258^{+353}_{-80}	244^{+157}_{-86}	268^{+202}_{-111}
7619	0.79 ± 0.51	$74.90^{+0.12}_{-0.12}$	$60.09^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	93^{+36}_{-51}	68^{+41}_{-35}
7625	1.40 ± 0.57	$107.86^{+0.09}_{-0.09}$	$91.99^{+0.09}_{-0.09}$	81^{+48}_{-39}	103^{+80}_{-34}	124^{+49}_{-60}	100^{+58}_{-48}
7626	18.70 ± 5.12	$564.90^{+0.54}_{-0.54}$	$635.90^{+0.71}_{-0.71}$	479^{+621}_{-154}	615^{+1180}_{-198}	456^{+494}_{-128}	642^{+679}_{-279}
7630	3.22 ± 0.59	$183.63^{+0.04}_{-0.04}$	$171.21^{+0.04}_{-0.04}$	149^{+106}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+121}_{-79}
7635	4.34 ± 1.03	$222.20^{+0.03}_{-0.03}$	$213.91^{+0.04}_{-0.04}$	184^{+145}_{-75}	224^{+284}_{-70}	220^{+130}_{-82}	231^{+164}_{-96}
7638	0.99 ± 0.31	$86.39^{+0.11}_{-0.11}$	$70.98^{+0.11}_{-0.11}$	63^{+37}_{-31}	83^{+54}_{-28}	104^{+40}_{-54}	79^{+46}_{-39}
7639	$2.90^{\dagger}$	$171.75^{+0.04}_{-0.04}$	$158.35^{+0.05}_{-0.05}$	138^{+96}_{-60}	169^{+182}_{-53}	179^{+89}_{-74}	171^{+109}_{-74}
7642	0.79 ± 0.66	$74.90^{+0.12}_{-0.12}$	$60.09^{+0.12}_{-0.12}$	53^{+31}_{-27}	72^{+43}_{-25}	93^{+36}_{-51}	68^{+41}_{-35}
7645	1.25 ± 0.65	$100.33^{+0.09}_{-0.09}$	$84.53^{+0.10}_{-0.10}$	74^{+44}_{-36}	96^{+70}_{-32}	117^{+45}_{-58}	93^{+53}_{-45}
7647*	29.70 ± 1.12	—	—	627^{+919}_{-194}	824^{+1687}_{-275}	566^{+706}_{-158}	852^{+994}_{-388}
7648	2.95 ± 0.37	$173.64^{+0.04}_{-0.04}$	$160.38^{+0.05}_{-0.05}$	140^{+97}_{-61}	171^{+185}_{-54}	181^{+90}_{-74}	173^{+111}_{-75}
7654	2.58 ± 0.85	$159.39^{+0.05}_{-0.05}$	$145.13^{+0.05}_{-0.05}$	127^{+85}_{-56}	156^{+160}_{-49}	169^{+80}_{-71}	157^{+98}_{-69}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7656	39.60 ± 6.92	$912.28^{+1.92}_{-1.92}$	$1112.86^{+2.78}_{-2.78}$	736^{+1143}_{-226}	978^{+2052}_{-336}	645^{+861}_{-183}	1005^{+1236}_{-471}
7657	1.83 ± 0.28	$127.99^{+0.07}_{-0.07}$	$112.33^{+0.08}_{-0.08}$	99^{+61}_{-46}	123^{+108}_{-40}	142^{+60}_{-65}	122^{+72}_{-56}
7660*	8.44 ± 0.49	—	—	290^{+289}_{-105}	358^{+570}_{-111}	308^{+245}_{-97}	375^{+323}_{-155}
7662	$1.09^{\dagger}$	$91.92^{+0.10}_{-0.10}$	$76.32^{+0.10}_{-0.10}$	67^{+39}_{-33}	88^{+60}_{-30}	109^{+42}_{-56}	84^{+49}_{-41}
7663	3.70 ± 0.54	$200.67^{+0.03}_{-0.03}$	$189.91^{+0.04}_{-0.04}$	164^{+123}_{-69}	200^{+239}_{-63}	203^{+111}_{-78}	205^{+139}_{-87}
7671	$2.91^{\dagger}$	$172.13^{+0.04}_{-0.04}$	$158.76^{+0.05}_{-0.05}$	138^{+96}_{-60}	169^{+183}_{-53}	179^{+89}_{-74}	171^{+110}_{-74}
7674	14.80 ± 6.63	$486.50^{+0.34}_{-0.34}$	$534.10^{+0.43}_{-0.43}$	415^{+501}_{-137}	527^{+966}_{-167}	407^{+406}_{-117}	551^{+551}_{-235}
7677	6.31 ± 1.16	$282.21^{+0.05}_{-0.05}$	$282.79^{+0.05}_{-0.05}$	238^{+214}_{-91}	292^{+424}_{-90}	266^{+186}_{-90}	304^{+241}_{-125}
7678*	8.52 ± 0.07	—	—	291^{+292}_{-105}	361^{+575}_{-112}	310^{+247}_{-98}	377^{+326}_{-156}
7683	$0.40^{\dagger}$	$48.06^{+0.14}_{-0.14}$	$35.80^{+0.13}_{-0.13}$	32^{+21}_{-17}	49^{+22}_{-18}	68^{+30}_{-41}	45^{+34}_{-25}
7684	22.20 ± 2.55	$630.34^{+0.74}_{-0.74}$	$722.71^{+1.00}_{-1.00}$	530^{+722}_{-167}	687^{+1355}_{-224}	494^{+567}_{-137}	715^{+786}_{-316}
7688*	8.52 ± 0.37	—	—	291^{+292}_{-105}	361^{+575}_{-112}	310^{+247}_{-98}	377^{+326}_{-156}
7695*	25.00 ± 0.26	—	—	568^{+798}_{-177}	740^{+1486}_{-244}	523^{+621}_{-145}	769^{+867}_{-344}
7701	2.62 ± 0.62	$160.97^{+0.05}_{-0.05}$	$146.80^{+0.05}_{-0.05}$	128^{+86}_{-57}	157^{+162}_{-50}	170^{+81}_{-72}	159^{+99}_{-69}
7703*	3.76 ± 1.16	—	—	166^{+125}_{-70}	202^{+243}_{-63}	204^{+113}_{-79}	207^{+142}_{-87}
7705	4.86 ± 1.79	$238.86^{+0.03}_{-0.03}$	$232.75^{+0.04}_{-0.04}$	199^{+163}_{-80}	243^{+322}_{-75}	233^{+145}_{-84}	251^{+184}_{-104}
7706	20.00 ± 5.15	$589.68^{+0.61}_{-0.61}$	$668.59^{+0.82}_{-0.81}$	498^{+659}_{-159}	642^{+1247}_{-207}	471^{+522}_{-131}	670^{+719}_{-293}
7707	3.04 ± 0.84	$177.00^{+0.04}_{-0.04}$	$164.02^{+0.05}_{-0.05}$	143^{+100}_{-62}	174^{+192}_{-55}	183^{+93}_{-74}	177^{+115}_{-76}
7710	10.20 ± 4.43	$383.54^{+0.15}_{-0.15}$	$404.61^{+0.18}_{-0.18}$	328^{+350}_{-115}	409^{+686}_{-127}	339^{+292}_{-103}	428^{+388}_{-178}
7711	2.47 ± 0.32	$155.02^{+0.05}_{-0.05}$	$140.49^{+0.06}_{-0.06}$	123^{+81}_{-55}	151^{+152}_{-48}	165^{+77}_{-70}	152^{+94}_{-67}
7727	1.12 ± 0.12	$93.53^{+0.10}_{-0.10}$	$77.88^{+0.10}_{-0.10}$	69^{+40}_{-34}	89^{+62}_{-30}	111^{+42}_{-56}	86^{+50}_{-42}
7729	7.14 ± 1.46	$305.40^{+0.07}_{-0.07}$	$310.09^{+0.07}_{-0.07}$	259^{+243}_{-97}	319^{+482}_{-99}	283^{+209}_{-93}	332^{+273}_{-137}
7734	3.43 ± 2.24	$191.19^{+0.04}_{-0.04}$	$179.47^{+0.04}_{-0.04}$	156^{+114}_{-66}	190^{+220}_{-60}	195^{+104}_{-77}	194^{+129}_{-82}
7735	54.90 ± 24.30	$1123.98^{+3.10}_{-3.09}$	$1419.93^{+4.67}_{-4.66}$	876^{+1428}_{-272}	1176^{+2501}_{-418}	744^{+1054}_{-221}	1197^{+1557}_{-578}
7741	$0.21^{\dagger}$	$31.91^{+0.14}_{-0.14}$	$22.19^{+0.12}_{-0.12}$	21^{+17}_{-11}	37^{+13}_{-14}	52^{+29}_{-34}	32^{+33}_{-20}
7744	0.73 ± 0.18	$71.40^{+0.12}_{-0.12}$	$56.83^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+39}_{-24}	90^{+35}_{-50}	65^{+40}_{-34}
7745	4.50 ± 2.40	$227.40^{+0.03}_{-0.03}$	$219.76^{+0.04}_{-0.04}$	189^{+151}_{-77}	230^{+296}_{-71}	224^{+134}_{-82}	237^{+170}_{-99}
7749	6.93 ± 4.55	$299.63^{+0.06}_{-0.06}$	$303.27^{+0.07}_{-0.07}$	254^{+236}_{-95}	312^{+467}_{-97}	279^{+203}_{-92}	325^{+265}_{-134}
7750	1.06 ± 0.32	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
7752	6.31 ± 0.70	$282.21^{+0.05}_{-0.05}$	$282.79^{+0.05}_{-0.05}$	238^{+214}_{-91}	292^{+424}_{-90}	266^{+186}_{-90}	304^{+241}_{-125}
7753	6.24 ± 1.08	$280.21^{+0.05}_{-0.05}$	$280.45^{+0.05}_{-0.05}$	236^{+212}_{-91}	290^{+419}_{-90}	265^{+184}_{-90}	301^{+238}_{-124}
7754	1.93 ± 1.69	$132.41^{+0.07}_{-0.07}$	$116.87^{+0.07}_{-0.07}$	103^{+64}_{-48}	128^{+115}_{-41}	145^{+62}_{-66}	127^{+75}_{-57}
7762	1.01 ± 0.30	$87.56^{+0.11}_{-0.11}$	$72.10^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+55}_{-28}	105^{+40}_{-55}	80^{+47}_{-40}
7766	48.20 ± 1.07	$1034.31^{+2.57}_{-2.57}$	$1288.56^{+3.82}_{-3.81}$	818^{+1311}_{-252}	1094^{+2318}_{-384}	703^{+976}_{-205}	1118^{+1423}_{-534}
7769	1.06 ± 0.30	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
7770	1.86 ± 0.43	$129.33^{+0.07}_{-0.07}$	$113.70^{+0.08}_{-0.07}$	100^{+62}_{-46}	124^{+110}_{-40}	143^{+60}_{-65}	123^{+73}_{-56}
7775	6.24 ± 1.31	$280.21^{+0.05}_{-0.05}$	$280.45^{+0.05}_{-0.05}$	236^{+212}_{-91}	290^{+419}_{-90}	265^{+184}_{-90}	301^{+238}_{-124}
7780	3.48 ± 3.23	$192.97^{+0.04}_{-0.04}$	$181.42^{+0.04}_{-0.04}$	157^{+115}_{-67}	192^{+223}_{-60}	196^{+105}_{-77}	196^{+131}_{-83}
7781	1.33 ± 0.21	$104.38^{+0.09}_{-0.09}$	$88.53^{+0.09}_{-0.09}$	78^{+46}_{-38}	100^{+75}_{-33}	121^{+47}_{-59}	97^{+56}_{-46}
7784	2.00 ± 0.36	$135.46^{+0.06}_{-0.06}$	$120.02^{+0.07}_{-0.07}$	105^{+66}_{-49}	131^{+120}_{-42}	148^{+64}_{-67}	130^{+77}_{-59}
7785	1.15 ± 0.10	$95.13^{+0.10}_{-0.10}$	$79.43^{+0.10}_{-0.10}$	70^{+41}_{-34}	91^{+64}_{-30}	112^{+43}_{-57}	87^{+51}_{-43}
7786	3.22 ± 0.64	$183.63^{+0.04}_{-0.04}$	$171.21^{+0.04}_{-0.04}$	149^{+106}_{-64}	182^{+205}_{-57}	189^{+98}_{-76}	185^{+121}_{-79}
7788*	4.81 ± 0.27	—	—	198^{+161}_{-79}	241^{+318}_{-75}	232^{+143}_{-84}	249^{+182}_{-103}
7789	61.20 ± 10.50	$1204.75^{+3.61}_{-3.60}$	$1539.78^{+5.51}_{-5.49}$	926^{+1528}_{-289}	1248^{+2656}_{-449}	779^{+1122}_{-235}	1266^{+1676}_{-616}
7790	0.26 ± 0.22	$36.71^{+0.14}_{-0.14}$	$26.13^{+0.13}_{-0.12}$	24^{+18}_{-13}	40^{+15}_{-15}	56^{+29}_{-36}	36^{+33}_{-21}
7791	$0.51^{\dagger}$	$56.37^{+0.13}_{-0.13}$	$43.12^{+0.13}_{-0.13}$	38^{+24}_{-20}	56^{+27}_{-20}	76^{+31}_{-44}	51^{+36}_{-28}
7792	0.30 ± 0.16	$40.49^{+0.14}_{-0.14}$	$29.30^{+0.13}_{-0.13}$	27^{+19}_{-14}	43^{+17}_{-16}	60^{+29}_{-38}	39^{+33}_{-23}
7793	40.50 ± 2.67	$925.47^{+1.99}_{-1.98}$	$1131.68^{+2.89}_{-2.88}$	745^{+1161}_{-229}	991^{+2082}_{-341}	651^{+874}_{-186}	1017^{+1257}_{-478}
7794*	4.20 ± 0.20	—	—	180^{+140}_{-74}	219^{+274}_{-68}	216^{+126}_{-81}	225^{+159}_{-94}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7795	1.02 ± 0.76	$88.11^{+0.11}_{-0.11}$	$72.63^{+0.11}_{-0.11}$	64^{+37}_{-32}	84^{+56}_{-29}	106^{+40}_{-55}	81^{+47}_{-40}
7798	1.73 ± 1.50	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
7800	$5.99^{\dagger}$	$272.99^{+0.05}_{-0.05}$	$272.02^{+0.05}_{-0.05}$	230^{+203}_{-89}	281^{+402}_{-87}	259^{+177}_{-89}	293^{+228}_{-121}
7802	2.60 ± 2.20	$160.18^{+0.05}_{-0.05}$	$145.97^{+0.05}_{-0.05}$	128^{+86}_{-57}	156^{+161}_{-50}	169^{+80}_{-71}	158^{+99}_{-69}
7803	2.29 ± 0.77	$147.70^{+0.06}_{-0.06}$	$132.78^{+0.06}_{-0.06}$	116^{+76}_{-53}	143^{+139}_{-46}	159^{+72}_{-69}	144^{+87}_{-64}
7805	3.60 ± 3.08	$197.19^{+0.04}_{-0.04}$	$186.07^{+0.04}_{-0.04}$	161^{+119}_{-68}	196^{+232}_{-61}	200^{+108}_{-78}	201^{+136}_{-85}
7810*	21.40 ± 1.16	—	—	519^{+700}_{-164}	671^{+1316}_{-218}	486^{+551}_{-135}	699^{+762}_{-308}
7811	$1.73^{\dagger}$	$123.48^{+0.07}_{-0.07}$	$107.72^{+0.08}_{-0.08}$	95^{+58}_{-44}	119^{+101}_{-39}	138^{+57}_{-64}	117^{+68}_{-54}
7812	$1.42^{\dagger}$	$108.84^{+0.09}_{-0.09}$	$92.96^{+0.09}_{-0.09}$	82^{+49}_{-39}	104^{+81}_{-34}	125^{+49}_{-60}	101^{+59}_{-48}
7813	1.93 ± 0.62	$132.41^{+0.07}_{-0.07}$	$116.87^{+0.07}_{-0.07}$	103^{+64}_{-48}	128^{+115}_{-41}	145^{+62}_{-66}	127^{+75}_{-57}
7814	$1070.00^{\dagger}$	$7493.62^{+97.93}_{-96.67}$	$13011.84^{+205.77}_{-202.56}$	3517^{+3265}_{-1191}	4450^{+11550}_{-1805}	2131^{+3028}_{-683}	4189^{+9358}_{-1765}
7818	2.28 ± 0.49	$147.29^{+0.06}_{-0.06}$	$132.34^{+0.06}_{-0.06}$	116^{+75}_{-52}	143^{+139}_{-46}	158^{+72}_{-69}	143^{+87}_{-63}
7822	1.95 ± 0.26	$133.29^{+0.07}_{-0.07}$	$117.78^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+116}_{-42}	146^{+63}_{-66}	128^{+76}_{-58}
7825	$0.95^{\dagger}$	$83.97^{+0.11}_{-0.11}$	$68.67^{+0.11}_{-0.11}$	61^{+35}_{-30}	80^{+52}_{-27}	102^{+39}_{-54}	77^{+45}_{-38}
7827	12.50 ± 7.29	$436.74^{+0.24}_{-0.24}$	$470.88^{+0.30}_{-0.30}$	373^{+427}_{-127}	470^{+830}_{-148}	375^{+350}_{-110}	492^{+472}_{-207}
7830	$3.99^{\dagger}$	$210.58^{+0.03}_{-0.03}$	$200.90^{+0.04}_{-0.04}$	173^{+133}_{-72}	211^{+259}_{-66}	211^{+120}_{-80}	217^{+151}_{-91}
7831	4.95 ± 0.81	$241.68^{+0.04}_{-0.04}$	$235.95^{+0.04}_{-0.04}$	202^{+166}_{-80}	246^{+328}_{-76}	235^{+147}_{-84}	254^{+188}_{-106}
7835	0.85 ± 0.08	$78.42^{+0.11}_{-0.11}$	$63.40^{+0.11}_{-0.11}$	56^{+33}_{-28}	75^{+46}_{-26}	97^{+37}_{-52}	71^{+43}_{-36}
7838	2.52 ± 0.75	$157.01^{+0.05}_{-0.05}$	$142.60^{+0.06}_{-0.06}$	125^{+83}_{-56}	153^{+155}_{-49}	167^{+78}_{-71}	154^{+96}_{-68}
7840	2.81 ± 0.26	$168.33^{+0.05}_{-0.05}$	$154.67^{+0.05}_{-0.05}$	135^{+93}_{-59}	165^{+176}_{-52}	176^{+86}_{-73}	167^{+106}_{-72}
7841	1.58 ± 0.51	$116.53^{+0.08}_{-0.08}$	$100.67^{+0.08}_{-0.08}$	89^{+54}_{-42}	112^{+92}_{-37}	131^{+53}_{-62}	109^{+64}_{-51}
7843	2.27 ± 0.59	$146.88^{+0.06}_{-0.06}$	$131.91^{+0.06}_{-0.06}$	116^{+75}_{-52}	142^{+138}_{-46}	158^{+71}_{-69}	143^{+87}_{-63}
7845	17.80 ± 1.00	$547.38^{+0.49}_{-0.49}$	$612.93^{+0.64}_{-0.64}$	465^{+594}_{-150}	595^{+1132}_{-191}	445^{+474}_{-125}	622^{+650}_{-270}
7855	13.30 ± 6.29	$454.40^{+0.27}_{-0.27}$	$493.18^{+0.34}_{-0.34}$	388^{+453}_{-130}	490^{+878}_{-154}	386^{+370}_{-112}	513^{+500}_{-217}
7858	1.13 ± 0.15	$94.06^{+0.10}_{-0.10}$	$78.40^{+0.10}_{-0.10}$	69^{+40}_{-34}	90^{+63}_{-30}	111^{+43}_{-57}	86^{+50}_{-42}
7862	$0.57^{\dagger}$	$61.03^{+0.13}_{-0.13}$	$47.30^{+0.12}_{-0.12}$	42^{+26}_{-22}	60^{+31}_{-21}	80^{+32}_{-46}	55^{+37}_{-30}
7868*	3.11 ± 0.18	—	—	145^{+103}_{-63}	177^{+197}_{-56}	185^{+95}_{-75}	180^{+117}_{-77}
7872	12.90 ± 4.67	$445.62^{+0.26}_{-0.26}$	$482.07^{+0.32}_{-0.32}$	381^{+440}_{-129}	480^{+854}_{-151}	381^{+360}_{-111}	503^{+486}_{-212}
7875	41.90 ± 35.30	$945.78^{+2.09}_{-2.09}$	$1160.73^{+3.05}_{-3.04}$	759^{+1190}_{-233}	1011^{+2127}_{-349}	661^{+893}_{-189}	1036^{+1288}_{-488}
7876	$2.04^{\dagger}$	$137.19^{+0.06}_{-0.06}$	$121.81^{+0.07}_{-0.07}$	107^{+68}_{-49}	132^{+122}_{-43}	150^{+65}_{-67}	132^{+79}_{-59}
7884*	6.63 ± 0.27	—	—	246^{+225}_{-93}	302^{+446}_{-94}	273^{+195}_{-91}	315^{+253}_{-130}
7885	$1.54^{\dagger}$	$114.63^{+0.08}_{-0.08}$	$98.76^{+0.09}_{-0.09}$	87^{+52}_{-41}	110^{+89}_{-36}	130^{+52}_{-62}	107^{+62}_{-50}
7886	3.47 ± 1.10	$192.61^{+0.04}_{-0.04}$	$181.03^{+0.04}_{-0.04}$	157^{+115}_{-67}	191^{+222}_{-60}	196^{+105}_{-77}	195^{+131}_{-83}
7888	$0.10^{\dagger}$	$19.57^{+0.13}_{-0.13}$	$12.54^{+0.11}_{-0.10}$	13^{+13}_{-7}	28^{+10}_{-11}	39^{+28}_{-28}	23^{+32}_{-15}
7899	$3.71^{\dagger}$	$201.02^{+0.03}_{-0.03}$	$190.29^{+0.04}_{-0.04}$	165^{+123}_{-69}	201^{+239}_{-63}	203^{+112}_{-78}	205^{+140}_{-87}
7900	6.38 ± 1.31	$284.21^{+0.05}_{-0.05}$	$285.13^{+0.06}_{-0.06}$	240^{+217}_{-92}	294^{+429}_{-91}	268^{+188}_{-90}	306^{+243}_{-126}
7901	91.30 ± 12.40	$1555.50^{+6.17}_{-6.15}$	$2075.09^{+9.86}_{-9.81}$	1132^{+1909}_{-368}	1533^{+3245}_{-576}	919^{+1375}_{-298}	1539^{+2169}_{-767}
7902	0.54 ± 0.37	$58.48^{+0.13}_{-0.13}$	$45.01^{+0.12}_{-0.12}$	40^{+25}_{-21}	58^{+29}_{-21}	78^{+32}_{-45}	53^{+36}_{-29}
7903	6.63 ± 1.54	$291.28^{+0.06}_{-0.06}$	$293.42^{+0.06}_{-0.06}$	246^{+225}_{-93}	302^{+446}_{-94}	273^{+195}_{-91}	315^{+253}_{-130}
7906*	5.36 ± 0.03	—	—	213^{+181}_{-84}	260^{+357}_{-81}	245^{+159}_{-86}	270^{+204}_{-112}
7912	9.77 ± 1.57	$373.13^{+0.14}_{-0.14}$	$391.82^{+0.16}_{-0.16}$	319^{+335}_{-113}	397^{+658}_{-123}	332^{+280}_{-102}	415^{+373}_{-173}
7918	13.90 ± 3.72	$467.39^{+0.30}_{-0.30}$	$509.68^{+0.38}_{-0.38}$	399^{+473}_{-133}	505^{+914}_{-159}	395^{+384}_{-114}	529^{+521}_{-225}
7922	3.27 ± 2.21	$185.44^{+0.04}_{-0.04}$	$173.19^{+0.04}_{-0.04}$	150^{+108}_{-64}	184^{+208}_{-58}	190^{+99}_{-76}	187^{+123}_{-80}
7923	0.92 ± 0.61	$82.32^{+0.11}_{-0.11}$	$67.09^{+0.11}_{-0.11}$	59^{+35}_{-30}	79^{+50}_{-27}	100^{+38}_{-53}	75^{+44}_{-38}
7924	17.20 ± 6.53	$535.52^{+0.46}_{-0.46}$	$597.45^{+0.60}_{-0.60}$	455^{+576}_{-147}	582^{+1100}_{-186}	438^{+461}_{-124}	608^{+631}_{-263}
7929*	13.20 ± 0.23	—	—	386^{+450}_{-130}	488^{+872}_{-154}	385^{+368}_{-112}	511^{+496}_{-216}
7932*	2.42 ± 0.14	—	—	121^{+80}_{-54}	149^{+148}_{-47}	163^{+75}_{-70}	149^{+92}_{-66}
7934	$0.37^{\dagger}$	$46.26^{+0.14}_{-0.14}$	$34.23^{+0.13}_{-0.13}$	31^{+21}_{-16}	48^{+20}_{-17}	66^{+30}_{-40}	43^{+34}_{-25}
7936	2.47 ± 2.12	$155.02^{+0.05}_{-0.05}$	$140.49^{+0.06}_{-0.06}$	123^{+81}_{-55}	151^{+152}_{-48}	165^{+77}_{-70}	152^{+94}_{-67}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
7938*	3.35 ± 0.37	—	—	153^{+111}_{-65}	187^{+214}_{-59}	193^{+101}_{-76}	190^{+126}_{-81}
7939	2.18 ± 0.18	$143.13^{+0.06}_{-0.06}$	$127.99^{+0.07}_{-0.07}$	112^{+72}_{-51}	139^{+132}_{-44}	155^{+69}_{-68}	138^{+84}_{-62}
7942	$0.86^{\dagger}$	$78.95^{+0.11}_{-0.11}$	$63.90^{+0.11}_{-0.11}$	56^{+33}_{-28}	76^{+46}_{-26}	97^{+37}_{-52}	72^{+43}_{-37}
7943	22.10 ± 2.97	$628.52^{+0.74}_{-0.74}$	$720.28^{+0.99}_{-0.99}$	529^{+719}_{-167}	685^{+1350}_{-223}	493^{+565}_{-137}	713^{+783}_{-315}
7948*	1.35 ± 0.30	—	—	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
7952	3.37 ± 3.05	$189.05^{+0.04}_{-0.04}$	$177.13^{+0.04}_{-0.04}$	154^{+111}_{-66}	187^{+215}_{-59}	193^{+102}_{-76}	191^{+127}_{-81}
7954*	3.69 ± 0.06	—	—	164^{+122}_{-69}	200^{+238}_{-63}	202^{+111}_{-78}	205^{+139}_{-86}
7963	34.50 ± 7.39	$835.37^{+1.55}_{-1.55}$	$1004.11^{+2.21}_{-2.21}$	682^{+1032}_{-210}	902^{+1873}_{-306}	606^{+785}_{-170}	930^{+1116}_{-430}
7968	0.60 ± 0.39	$62.64^{+0.13}_{-0.13}$	$48.77^{+0.12}_{-0.12}$	43^{+26}_{-22}	61^{+32}_{-22}	82^{+32}_{-47}	57^{+37}_{-31}
7969	0.73 ± 0.08	$71.03^{+0.12}_{-0.12}$	$56.48^{+0.12}_{-0.12}$	50^{+30}_{-26}	69^{+39}_{-24}	90^{+35}_{-50}	64^{+40}_{-34}
7970	2.23 ± 1.66	$145.22^{+0.06}_{-0.06}$	$130.17^{+0.06}_{-0.06}$	114^{+74}_{-52}	141^{+135}_{-45}	157^{+70}_{-69}	141^{+85}_{-63}
7973	5.61 ± 3.48	$261.79^{+0.04}_{-0.04}$	$259.04^{+0.04}_{-0.04}$	220^{+189}_{-86}	269^{+375}_{-83}	251^{+166}_{-87}	279^{+213}_{-115}
7976*	5.18 ± 0.22	—	—	208^{+174}_{-82}	254^{+344}_{-79}	241^{+154}_{-85}	263^{+197}_{-109}
7979	48.20 ± 12.50	$1034.31^{+2.57}_{-2.57}$	$1288.56^{+3.82}_{-3.81}$	818^{+1311}_{-252}	1094^{+2318}_{-384}	703^{+976}_{-205}	1118^{+1423}_{-534}
7980	5.98 ± 2.57	$272.70^{+0.05}_{-0.05}$	$271.68^{+0.05}_{-0.05}$	230^{+203}_{-89}	281^{+401}_{-87}	259^{+176}_{-89}	292^{+228}_{-121}
7984	7.12 ± 0.43	$304.85^{+0.07}_{-0.07}$	$309.45^{+0.07}_{-0.07}$	258^{+243}_{-97}	318^{+480}_{-98}	283^{+208}_{-93}	332^{+272}_{-137}
7987	12.30 ± 0.74	$432.27^{+0.23}_{-0.23}$	$465.24^{+0.29}_{-0.28}$	369^{+420}_{-126}	465^{+818}_{-146}	372^{+345}_{-109}	487^{+465}_{-205}
7988	23.00 ± 5.37	$644.75^{+0.79}_{-0.79}$	$742.05^{+1.07}_{-1.07}$	541^{+744}_{-170}	702^{+1393}_{-229}	503^{+583}_{-140}	731^{+809}_{-325}
7989	6.87 ± 1.13	$297.97^{+0.06}_{-0.06}$	$301.31^{+0.07}_{-0.07}$	252^{+234}_{-95}	310^{+463}_{-96}	278^{+201}_{-92}	323^{+262}_{-133}
7992	0.69 ± 0.52	$68.77^{+0.12}_{-0.12}$	$54.38^{+0.12}_{-0.12}$	48^{+29}_{-25}	67^{+37}_{-23}	88^{+34}_{-49}	62^{+39}_{-33}
7994*	7.49 ± 0.16	—	—	267^{+256}_{-99}	329^{+506}_{-102}	290^{+219}_{-94}	344^{+286}_{-142}
7995	33.90 ± 12.00	$826.06^{+1.51}_{-1.51}$	$991.05^{+2.15}_{-2.14}$	676^{+1018}_{-208}	892^{+1850}_{-302}	601^{+775}_{-169}	920^{+1101}_{-425}
7997	4.01 ± 0.59	$211.26^{+0.03}_{-0.03}$	$201.65^{+0.04}_{-0.04}$	174^{+133}_{-72}	212^{+261}_{-66}	211^{+120}_{-80}	218^{+151}_{-91}
7998	0.57 ± 0.25	$60.48^{+0.13}_{-0.13}$	$46.81^{+0.12}_{-0.12}$	42^{+26}_{-22}	60^{+30}_{-21}	80^{+32}_{-46}	55^{+37}_{-30}
7999	8.50 ± 6.42	$341.38^{+0.10}_{-0.10}$	$353.16^{+0.11}_{-0.11}$	291^{+291}_{-105}	360^{+574}_{-112}	309^{+246}_{-98}	376^{+325}_{-156}
8001	3.98 ± 0.67	$210.25^{+0.03}_{-0.03}$	$200.53^{+0.04}_{-0.04}$	173^{+132}_{-72}	211^{+259}_{-66}	210^{+119}_{-80}	216^{+150}_{-91}
8004	3.75 ± 2.64	$202.40^{+0.03}_{-0.03}$	$191.82^{+0.04}_{-0.04}$	166^{+124}_{-69}	202^{+242}_{-63}	204^{+113}_{-79}	207^{+141}_{-87}
8008*	11.10 ± 0.24	—	—	346^{+380}_{-120}	433^{+743}_{-135}	353^{+315}_{-106}	454^{+421}_{-190}
8009	2.90 ± 1.02	$171.75^{+0.04}_{-0.04}$	$158.35^{+0.05}_{-0.05}$	138^{+96}_{-60}	169^{+182}_{-53}	179^{+89}_{-74}	171^{+109}_{-74}
8012	1.39 ± 0.50	$107.37^{+0.09}_{-0.09}$	$91.49^{+0.09}_{-0.09}$	81^{+48}_{-39}	103^{+79}_{-34}	123^{+49}_{-60}	100^{+58}_{-47}
8018	11.00 ± 6.27	$402.50^{+0.18}_{-0.18}$	$428.05^{+0.22}_{-0.22}$	344^{+377}_{-119}	430^{+737}_{-135}	352^{+312}_{-106}	451^{+418}_{-189}
8019	1.18 ± 0.46	$96.70^{+0.10}_{-0.10}$	$80.97^{+0.10}_{-0.10}$	71^{+42}_{-35}	92^{+66}_{-31}	114^{+44}_{-57}	89^{+51}_{-43}
8022	2.37 ± 0.20	$150.98^{+0.05}_{-0.05}$	$136.22^{+0.06}_{-0.06}$	119^{+78}_{-54}	147^{+145}_{-47}	161^{+74}_{-70}	147^{+90}_{-65}
8026	2.76 ± 0.52	$166.41^{+0.05}_{-0.05}$	$152.61^{+0.05}_{-0.05}$	133^{+91}_{-59}	163^{+172}_{-52}	175^{+85}_{-73}	165^{+104}_{-72}
8027	52.20 ± 4.77	$1088.35^{+2.89}_{-2.88}$	$1367.51^{+4.32}_{-4.31}$	853^{+1382}_{-264}	1144^{+2430}_{-405}	728^{+1024}_{-214}	1166^{+1504}_{-560}
8030	2.74 ± 0.27	$165.64^{+0.05}_{-0.05}$	$151.79^{+0.05}_{-0.05}$	132^{+90}_{-58}	162^{+171}_{-51}	174^{+84}_{-72}	164^{+104}_{-71}
8035	21.10 ± 12.70	$610.20^{+0.68}_{-0.68}$	$695.83^{+0.91}_{-0.90}$	514^{+691}_{-163}	665^{+1302}_{-216}	483^{+544}_{-134}	693^{+753}_{-305}
8036	0.72 ± 0.31	$70.53^{+0.12}_{-0.12}$	$56.02^{+0.12}_{-0.12}$	50^{+29}_{-25}	68^{+39}_{-24}	89^{+34}_{-49}	64^{+40}_{-33}
8039	$1.06^{\dagger}$	$90.30^{+0.10}_{-0.10}$	$74.75^{+0.11}_{-0.11}$	66^{+39}_{-33}	86^{+58}_{-29}	108^{+41}_{-56}	83^{+48}_{-41}
8041	$13.10^{\dagger}$	$450.02^{+0.27}_{-0.27}$	$487.63^{+0.33}_{-0.33}$	384^{+447}_{-129}	485^{+866}_{-153}	384^{+365}_{-112}	508^{+493}_{-215}
8045	1.94 ± 1.11	$132.85^{+0.07}_{-0.07}$	$117.33^{+0.07}_{-0.07}$	103^{+65}_{-48}	128^{+115}_{-41}	146^{+63}_{-66}	127^{+75}_{-58}
8047	22.40 ± 4.99	$633.96^{+0.75}_{-0.75}$	$727.56^{+1.02}_{-1.01}$	533^{+728}_{-168}	691^{+1365}_{-225}	497^{+571}_{-138}	719^{+792}_{-318}
8049	1.88 ± 0.14	$130.21^{+0.07}_{-0.07}$	$114.61^{+0.07}_{-0.07}$	101^{+63}_{-47}	125^{+111}_{-41}	144^{+61}_{-65}	124^{+73}_{-56}
8050	0.62 ± 0.30	$64.11^{+0.13}_{-0.13}$	$50.10^{+0.12}_{-0.12}$	44^{+27}_{-23}	63^{+33}_{-22}	83^{+33}_{-47}	58^{+38}_{-31}
8054	3.37 ± 1.44	$189.05^{+0.04}_{-0.04}$	$177.13^{+0.04}_{-0.04}$	154^{+111}_{-66}	187^{+215}_{-59}	193^{+102}_{-76}	191^{+127}_{-81}
8059	5.08 ± 1.06	$245.71^{+0.04}_{-0.04}$	$240.56^{+0.04}_{-0.04}$	205^{+171}_{-82}	250^{+337}_{-78}	238^{+151}_{-85}	259^{+193}_{-108}
8061	32.40 ± 5.99	$802.52^{+1.41}_{-1.40}$	$958.16^{+1.99}_{-1.98}$	659^{+983}_{-203}	868^{+1794}_{-292}	589^{+751}_{-165}	897^{+1064}_{-412}
8062	9.74 ± 1.96	$372.40^{+0.14}_{-0.14}$	$390.92^{+0.16}_{-0.16}$	318^{+334}_{-112}	396^{+656}_{-123}	331^{+280}_{-102}	414^{+371}_{-172}
8063	8.17 ± 0.87	$332.85^{+0.09}_{-0.09}$	$342.88^{+0.10}_{-0.10}$	283^{+280}_{-103}	350^{+552}_{-109}	303^{+237}_{-97}	366^{+312}_{-151}

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Trigger[a]	HR_H [b] Hardness	Mean$[E_{p,obs}]$[c] OLS(Y|X)	Mean$[E_{p,obs}]$[d] OLS bisector	Mode$[E_{p,obs}]$[e] Band	Mode$[E_{p,obs}]$[f] COMP(CPL)	Mode$[E_{p,obs}]$[g] SBPL	Mean$[E_{p,obs}]$[h] Expected
8064	2.12 ± 0.55	$140.60^{+0.06}_{-0.06}$	$125.35^{+0.07}_{-0.07}$	110^{+70}_{-50}	136^{+128}_{-44}	153^{+67}_{-68}	136^{+82}_{-61}
8066	1.35 ± 0.66	$105.38^{+0.09}_{-0.09}$	$89.52^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-33}	121^{+48}_{-60}	98^{+56}_{-47}
8072	10.80 ± 5.49	$397.81^{+0.17}_{-0.17}$	$422.23^{+0.21}_{-0.21}$	340^{+370}_{-118}	425^{+724}_{-133}	349^{+307}_{-105}	445^{+411}_{-186}
8073	6.03 ± 0.98	$274.15^{+0.05}_{-0.05}$	$273.38^{+0.05}_{-0.05}$	231^{+204}_{-89}	283^{+404}_{-88}	260^{+178}_{-89}	294^{+230}_{-121}
8075	2.39 ± 0.17	$151.79^{+0.05}_{-0.05}$	$137.08^{+0.06}_{-0.06}$	120^{+79}_{-54}	148^{+146}_{-47}	162^{+75}_{-70}	148^{+91}_{-65}
8076	40.30 ± 24.30	$922.55^{+1.97}_{-1.97}$	$1127.50^{+2.86}_{-2.86}$	743^{+1157}_{-228}	988^{+2075}_{-340}	650^{+871}_{-185}	1014^{+1252}_{-476}
8077	$2.85^{\dagger}$	$169.85^{+0.04}_{-0.04}$	$156.31^{+0.05}_{-0.05}$	136^{+94}_{-60}	167^{+178}_{-53}	177^{+87}_{-73}	169^{+108}_{-73}
8079	35.90 ± 8.37	$856.87^{+1.65}_{-1.65}$	$1034.35^{+2.36}_{-2.36}$	697^{+1063}_{-214}	923^{+1924}_{-314}	617^{+806}_{-174}	951^{+1150}_{-441}
8082	12.00 ± 3.43	$425.50^{+0.22}_{-0.22}$	$456.75^{+0.27}_{-0.27}$	364^{+410}_{-124}	457^{+799}_{-143}	367^{+338}_{-109}	479^{+454}_{-201}
8084	1.32 ± 0.14	$103.88^{+0.09}_{-0.09}$	$88.04^{+0.09}_{-0.09}$	77^{+46}_{-38}	99^{+75}_{-33}	120^{+47}_{-59}	96^{+56}_{-46}
8085	21.30 ± 1.94	$613.89^{+0.69}_{-0.69}$	$700.74^{+0.92}_{-0.92}$	517^{+697}_{-164}	669^{+1312}_{-217}	485^{+549}_{-135}	697^{+759}_{-307}
8086	7.77 ± 1.00	$322.35^{+0.08}_{-0.08}$	$330.28^{+0.09}_{-0.09}$	274^{+266}_{-101}	338^{+525}_{-105}	296^{+226}_{-95}	353^{+297}_{-146}
8087*	16.40 ± 0.46	—	—	442^{+552}_{-144}	564^{+1056}_{-180}	428^{+443}_{-121}	590^{+605}_{-254}
8089	24.10 ± 8.32	$664.28^{+0.86}_{-0.86}$	$768.37^{+1.17}_{-1.17}$	556^{+774}_{-174}	723^{+1445}_{-237}	514^{+604}_{-143}	752^{+841}_{-336}
8097	51.20 ± 17.10	$1074.99^{+2.81}_{-2.80}$	$1347.92^{+4.20}_{-4.18}$	844^{+1365}_{-261}	1132^{+2402}_{-400}	722^{+1012}_{-212}	1154^{+1484}_{-554}
8098*	1.92 ± 0.15	—	—	102^{+64}_{-47}	127^{+114}_{-41}	145^{+62}_{-66}	126^{+75}_{-57}
8099	1.36 ± 0.18	$105.88^{+0.09}_{-0.09}$	$90.02^{+0.09}_{-0.09}$	79^{+47}_{-38}	101^{+77}_{-34}	122^{+48}_{-60}	98^{+57}_{-47}
8101*	10.40 ± 0.35	—	—	332^{+356}_{-116}	414^{+699}_{-129}	342^{+297}_{-104}	434^{+396}_{-181}
8102	1.11 ± 0.72	$93.00^{+0.10}_{-0.10}$	$77.36^{+0.10}_{-0.10}$	68^{+40}_{-34}	89^{+62}_{-30}	110^{+42}_{-56}	85^{+49}_{-42}
8104	16.40 ± 1.98	$519.47^{+0.42}_{-0.42}$	$576.60^{+0.54}_{-0.54}$	442^{+552}_{-144}	564^{+1056}_{-180}	428^{+443}_{-121}	590^{+605}_{-254}
8105	3.31 ± 1.17	$186.89^{+0.04}_{-0.04}$	$174.77^{+0.04}_{-0.04}$	152^{+109}_{-65}	185^{+211}_{-58}	192^{+100}_{-76}	189^{+125}_{-80}
8110	16.40 ± 1.67	$519.47^{+0.42}_{-0.42}$	$576.60^{+0.54}_{-0.54}$	442^{+552}_{-144}	564^{+1056}_{-180}	428^{+443}_{-121}	590^{+605}_{-254}
8111	3.91 ± 0.38	$207.88^{+0.03}_{-0.03}$	$197.89^{+0.04}_{-0.04}$	171^{+130}_{-71}	208^{+254}_{-65}	209^{+117}_{-79}	214^{+148}_{-90}
8112	1.48 ± 1.05	$111.76^{+0.08}_{-0.08}$	$95.88^{+0.09}_{-0.09}$	84^{+51}_{-40}	107^{+85}_{-35}	127^{+51}_{-61}	104^{+60}_{-49}
8116	4.21 ± 0.33	$217.93^{+0.03}_{-0.03}$	$209.11^{+0.04}_{-0.04}$	180^{+140}_{-74}	219^{+275}_{-68}	217^{+126}_{-81}	226^{+159}_{-94}
8120	28.30 ± 3.40	$736.08^{+1.13}_{-1.13}$	$866.18^{+1.57}_{-1.56}$	610^{+884}_{-189}	800^{+1629}_{-266}	554^{+681}_{-154}	828^{+957}_{-376}
8121	0.80 ± 0.14	$75.62^{+0.12}_{-0.12}$	$60.76^{+0.12}_{-0.12}$	54^{+32}_{-27}	73^{+43}_{-25}	94^{+36}_{-51}	69^{+42}_{-35}

NOTE. –
* All $E_{p,obs}$ estimates are in units of KeV. Overall, we recommend the use of either $E_{p,obs}$ estimates from OLS($E_{p,obs}|HR_H$) (column 3) or the expected $E_{p,obs}$ estimates from the simulation (column 8) together with the 90% upper and lower prediction intervals given in column (8). $E_{p,obs}$ by the OLS-bisector (column 4) might be useful in cases where both HR_H and $E_{p,obs}$ need to be treated impartially (e.g. Shahmoradi & Nemiroff 2009a; Isobe et al. 1990). The model-dependent simulation-based estimates of $E_{p,obs}$ (columns 5 & 6 & 7) might be used only in cases where the best fit spectral model of the GRB is known independently. In general, the 90% lower and upper prediction intervals on the estimated $E_{p,obs}$ *should always* be reported and considered in analyses.
[a] Burst's trigger number as reported in the BATSE catalog. Triggers that are labeled by $*$ in column (1), represent GRBs used to derive the regression lines in §2.2. Therefore, their $E_{p,obs}$ estimates from the linear regressions are not given.
[b] HR_H represents hardness Ratio as defined in §2.2. No attempt was made to keep the significant digits. Values are rounded off at the *2nd* decimal places. For 262 GRBs marked by † in column (2), the uncertainties in the fluences are greater than their reported fluences in BATSE catalog. Therefore, for these GRBs, the error propagation also results in HR_H uncertainties that are larger than the value of HR_H . In these cases, the uncertainties on HR_H are not reported.
[c] Mean response of OLS($E_{p,obs}|HR_H$) (Eqn. (1)) with the corresponding 1σ uncertainties on the mean response. No attempt was made to keep the significant digits. Values are rounded off at the *2nd* decimal places.
[d] Mean response of OLS-bisector (Eqn. (3)) with the corresponding 1σ uncertainties on the mean response. No attempt was made to keep the significant digits. Values are rounded off at the *2nd* decimal places.
[e] Most probable $E_{p,obs}$ with 90% Prediction Interval (PI) derived from simulation in case of the Band model as the best spectral fit.
[f] Most probable $E_{p,obs}$ with 90% PI derived from simulation in case of the COMP (CPL) model as the best spectral fit.
[g] Most probable $E_{p,obs}$ with 90% PI derived from simulation in case of the SBPL model as the best spectral fit.
[h] The weighted average of $E_{p,obs}$ of the three GRB models with 90% PI derived from simulation according to Eqns. (20)-(23).