

Table 1: Median Reduced  $\chi^2$ : 0.95 – Maximum-Likelihood Reduced  $\chi^2$ : 1.06

Parameter	Median and $1\sigma$ Values	Maximum-Likelihood
$P$ (days)	$71.69007^{+0.00036}_{-0.00032}$	71.69007
$t_{tran}$ (days)	$43072.579^{+0.036}_{-0.039}$	43072.585
$K_1$ (km/s)	$30.075^{+0.071}_{-0.070}$	30.104
$\gamma_1(km/s)$	$1.88^{+0.33}_{-0.33}$	1.82
$\gamma_2(km/s)$	$1.79^{+0.24}_{-0.24}$	1.72
$\gamma_3(km/s)$	$1.27^{+0.52}_{-0.52}$	1.09
$\gamma_4(km/s)$	$0.72^{+0.13}_{-0.13}$	0.73
$\gamma_5(km/s)$	$0.981^{+0.076}_{-0.076}$	0.983
$\gamma_6(km/s)$	$0.68^{+0.13}_{-0.13}$	0.73
$\gamma_7(km/s)$	$0.39^{+0.11}_{-0.12}$	0.45
$\sigma_j^2(km/s)^2$	$0.043^{+0.073}_{-0.032}$	0.035
$M_{error,1}$	$0.29^{+0.24}_{-0.12}$	0.17
$M_{error,2}$	$0.97^{+0.39}_{-0.25}$	0.89
$M_{error,3}$	$2.0^{+2.5}_{-1.0}$	1.2
$M_{error,4}$	$1.04^{+0.38}_{-0.27}$	1.02
$M_{error,5}$	$0.68^{+0.16}_{-0.13}$	0.71
$M_{error,6}$	$0.67^{+0.51}_{-0.27}$	0.46
$M_{error,7}$	$0.91^{+0.75}_{-0.41}$	0.86

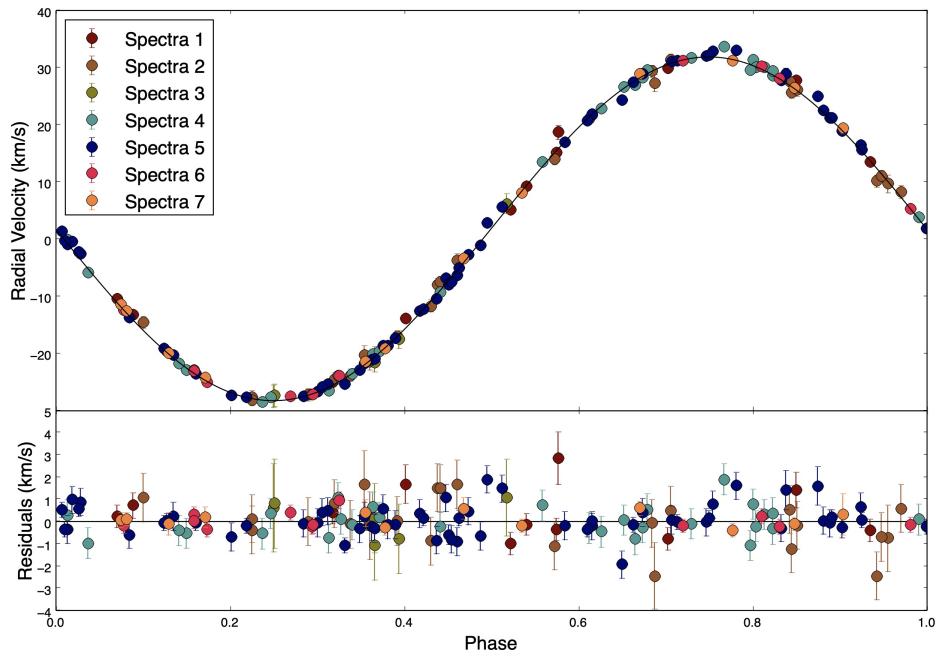


Figure 1: RV fit to median MCMC parameters. RMS residual velocity of  $0.77 \text{ km s}^{-1}$ .

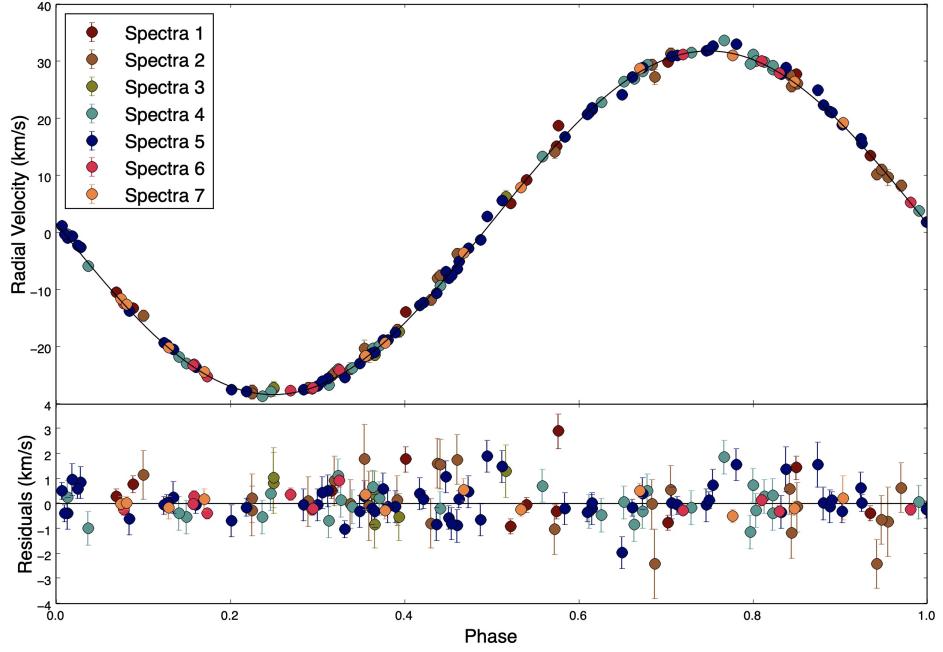


Figure 2: RV fit to maximum-likelihood MCMC parameters. RMS residual velocity of  $0.78 \text{ km s}^{-1}$ .

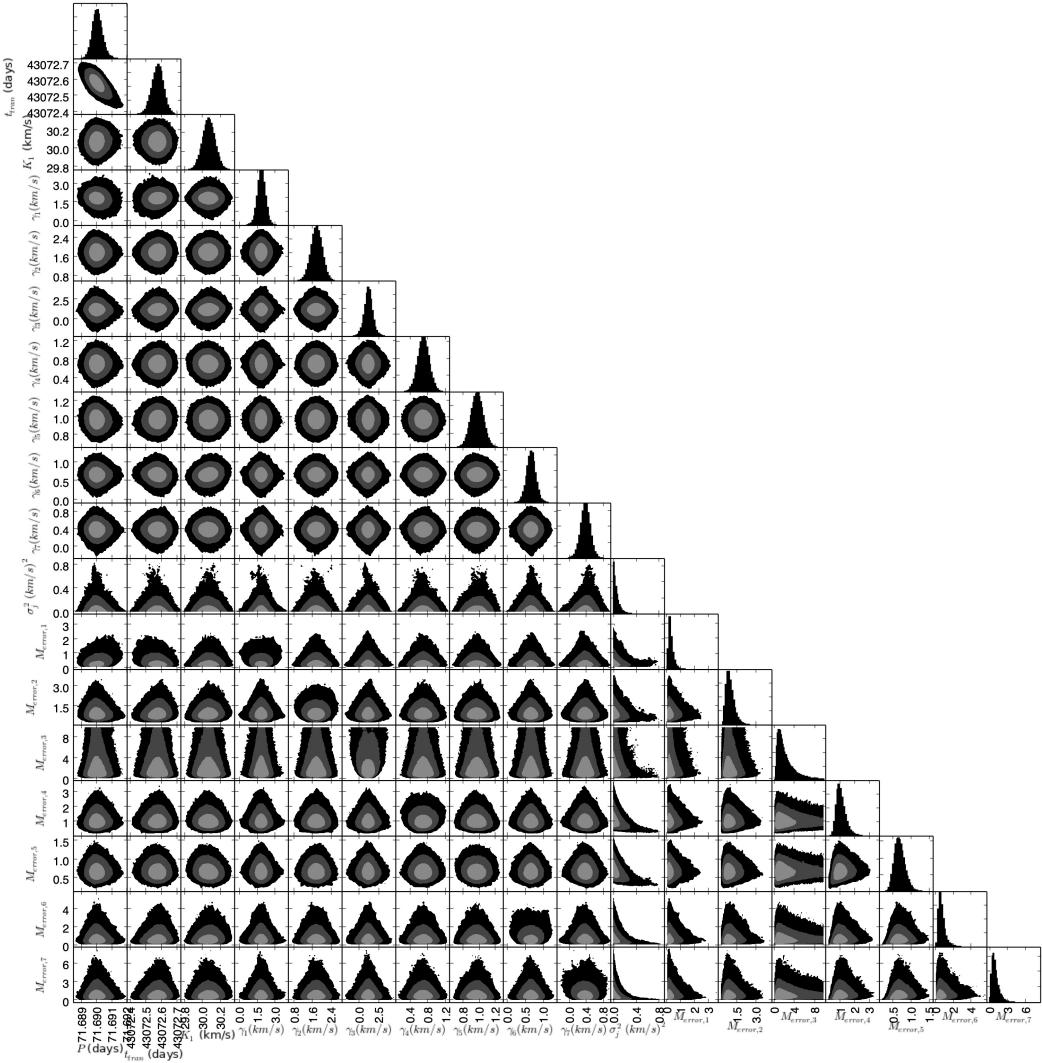


Figure 3: Contour plots showing the  $1\sigma$ ,  $2\sigma$ , and  $3\sigma$  constraints on pairs of parameters for the MCMC model.

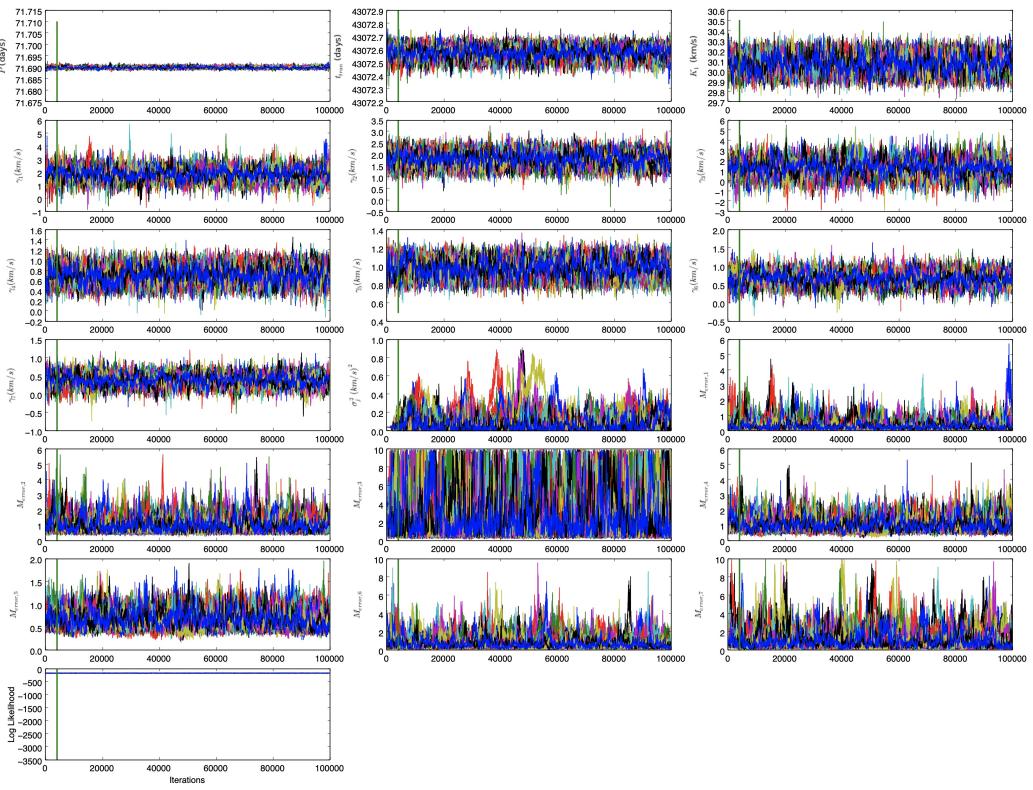


Figure 4: MCMC chains for all 50 walkers. Green line is burnout: 4000 steps.