

# KIC 007026477

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007026477-01	OBS	No	525.689509	188.157160	353.2	20.451	9.6	9.6	1.54	6710	3.43	2.31

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007026477-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

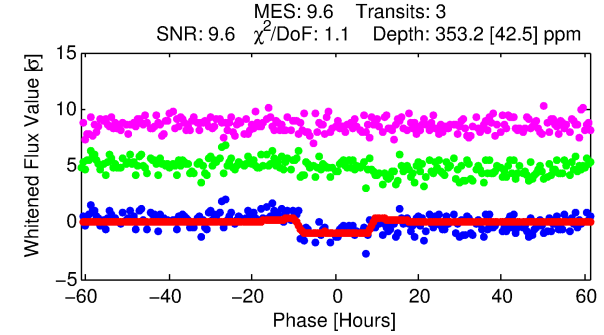
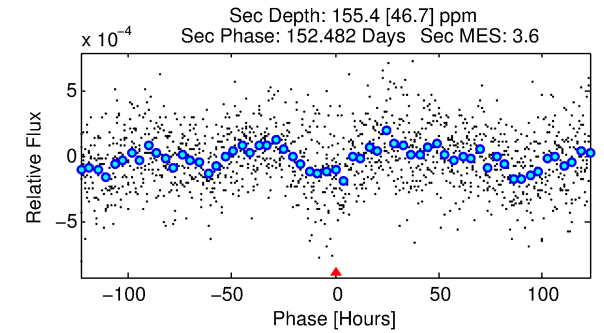
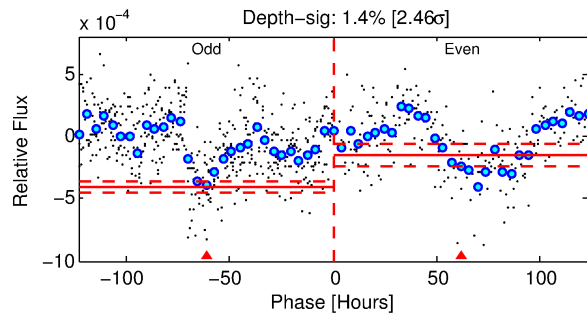
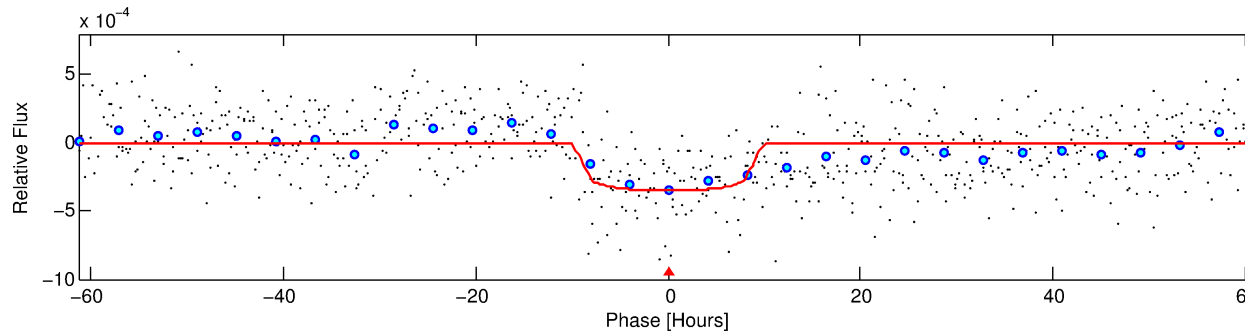
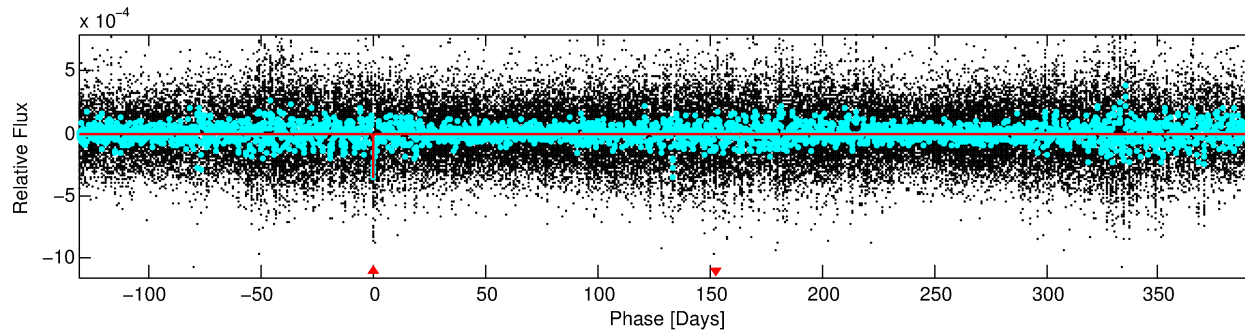
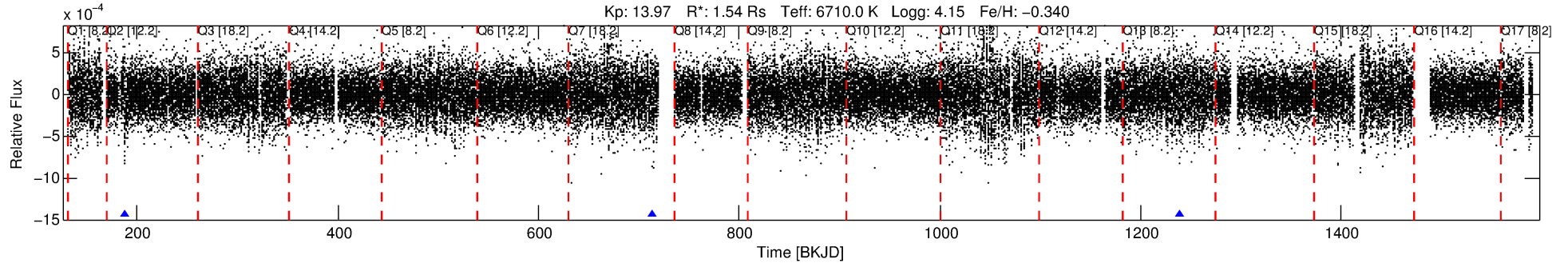
## Ephemeris Match Information For 007026477-01

No Significant Match Found

# DV One-Page Summary

KIC: 7026477 Candidate: 1 of 1 Period: 525.690 d  
KOI: K04101 Corr: No Ephemeris Match

Kp: 13.97 R\*: 1.54 Rs Teff: 6710.0 K Logg: 4.15 Fe/H: -0.340



## DV Fit Results:

Period = 525.68951 [0.01980] d  
Epoch = 188.1572 [0.0243] BKJD  
Rp/R\* = 0.0204 [0.0019]  
a/R\* = 85.85 [30.67]  
b = 0.92 [0.06]  
Seff = 2.31 [0.91]  
Teq = 314 [31] K  
Rp = 3.43 [1.01] Re  
a = 1.3657 [0.3319] AU  
Ag = 13522.27 [6835.40] [1.98σ]  
Teffp = 5239 [502] K [9.79σ]

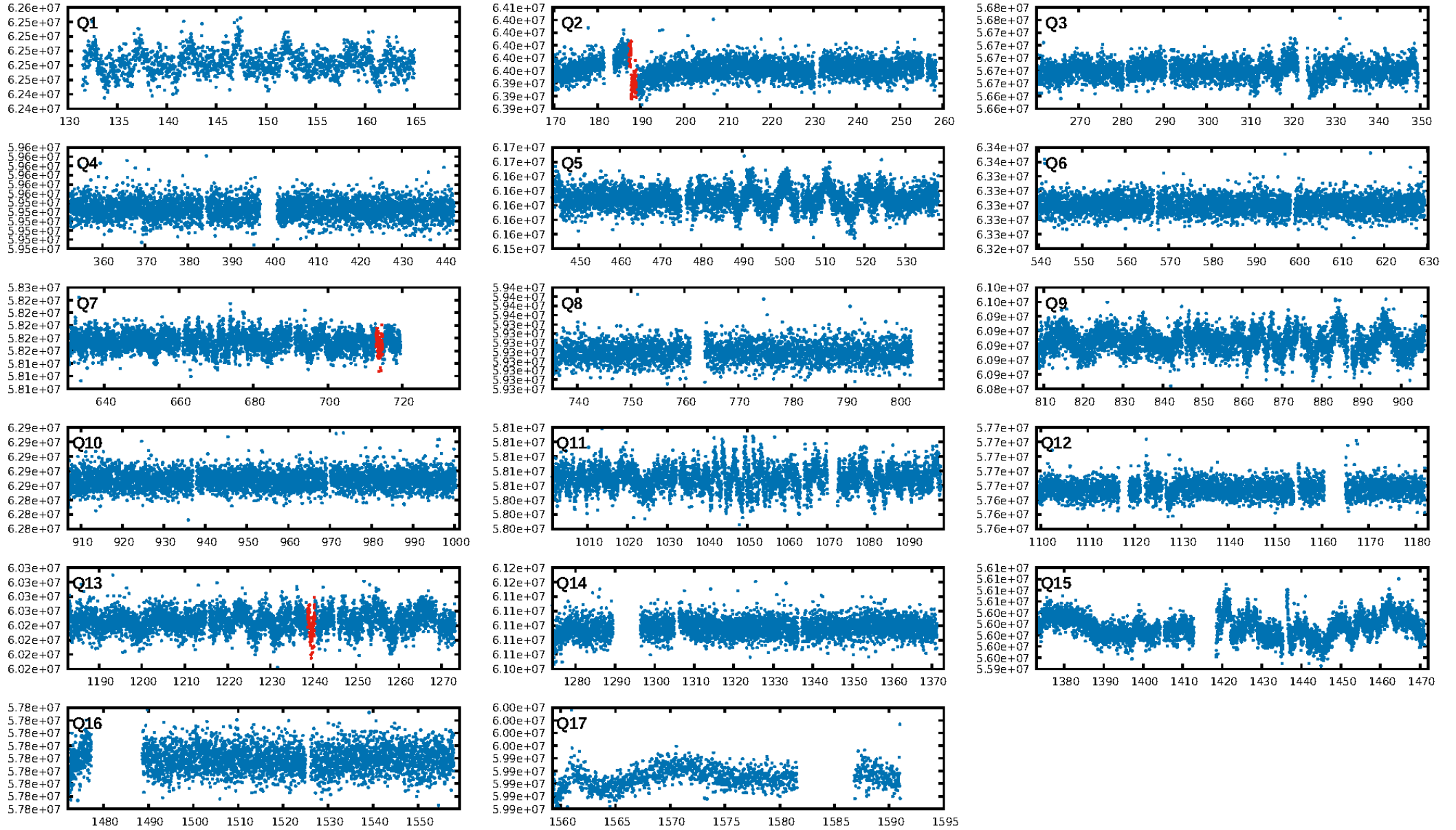
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 1.0%  
ModelChiSquareGof-sig: 99.3%  
Bootstrap-pfa: 1.08e-13  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -20.31  
Centroid-sig: 8.1%  
Centroid-so: 1.255 arcsec [1.08σ]  
OotOffset-rm: N/A  
OotOffset-st: 0/0/0 [0]  
KicOffset-rm: N/A  
KicOffset-st: 0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [2/2]

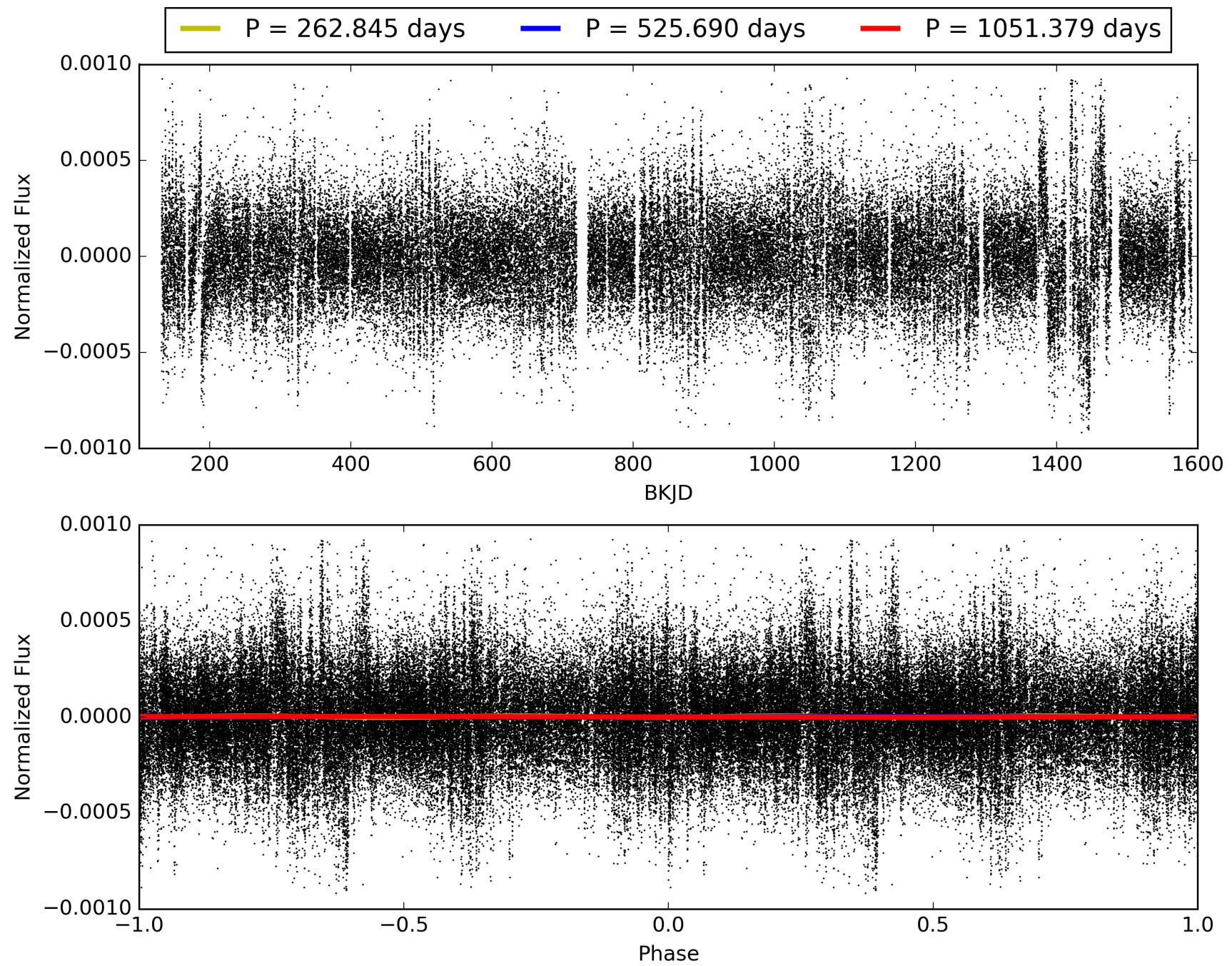
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:48:03 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007026477-01, PDC Light Curves

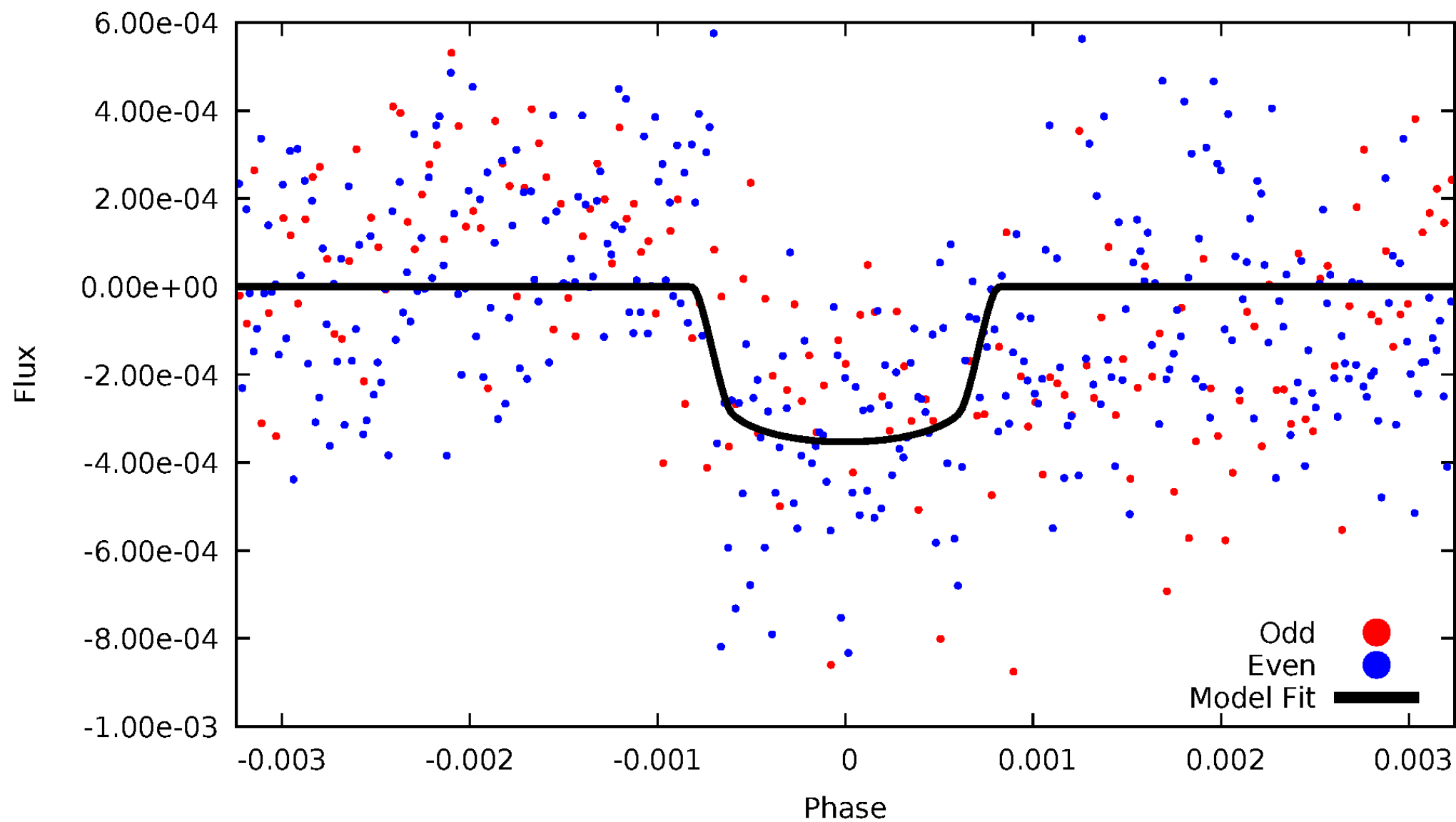


TCE 007026477-01



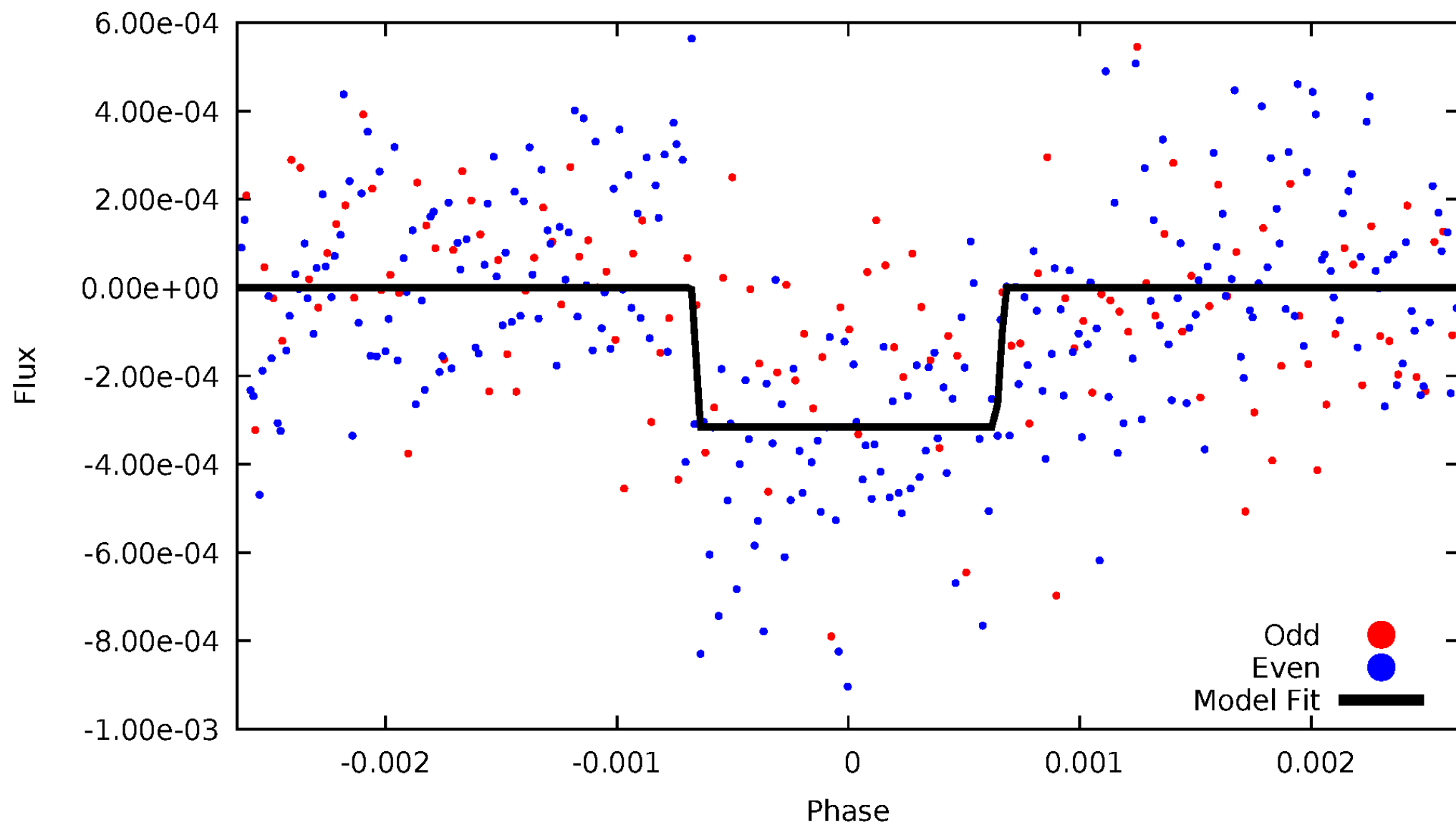
# DV Odd/Even

TCE 007026477-01



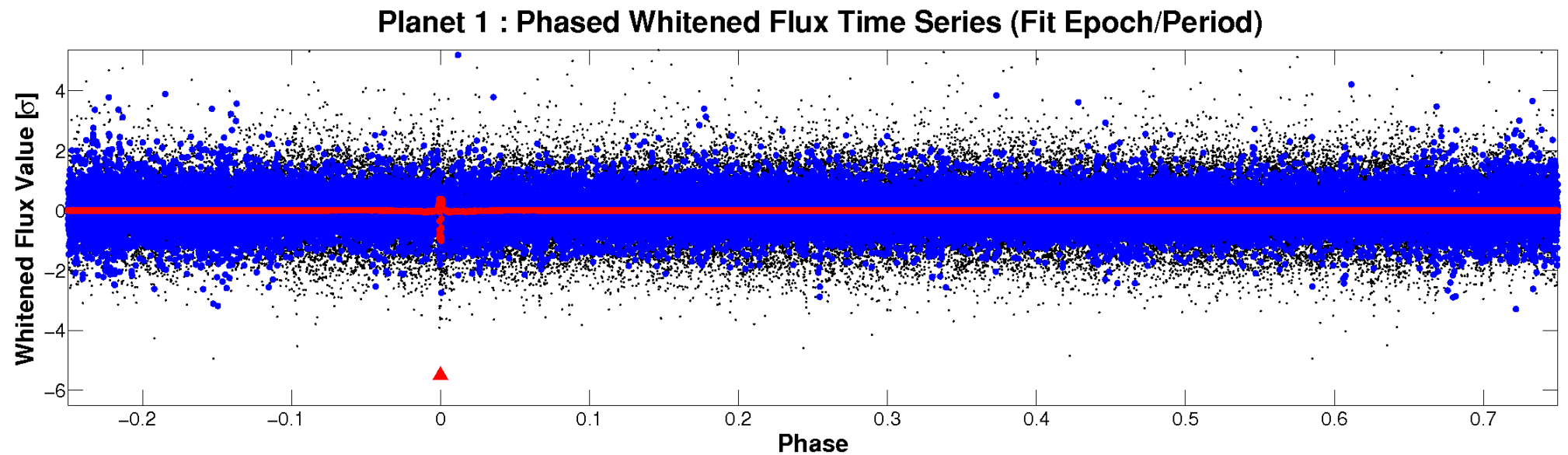
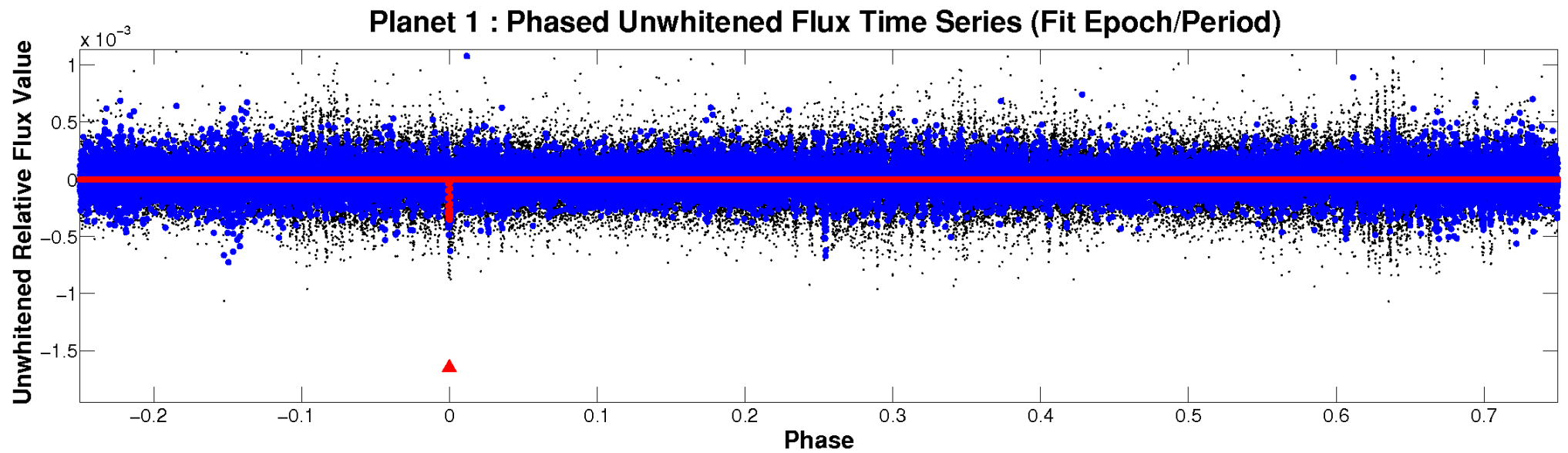
# ALT Odd/Even

TCE 007026477-01



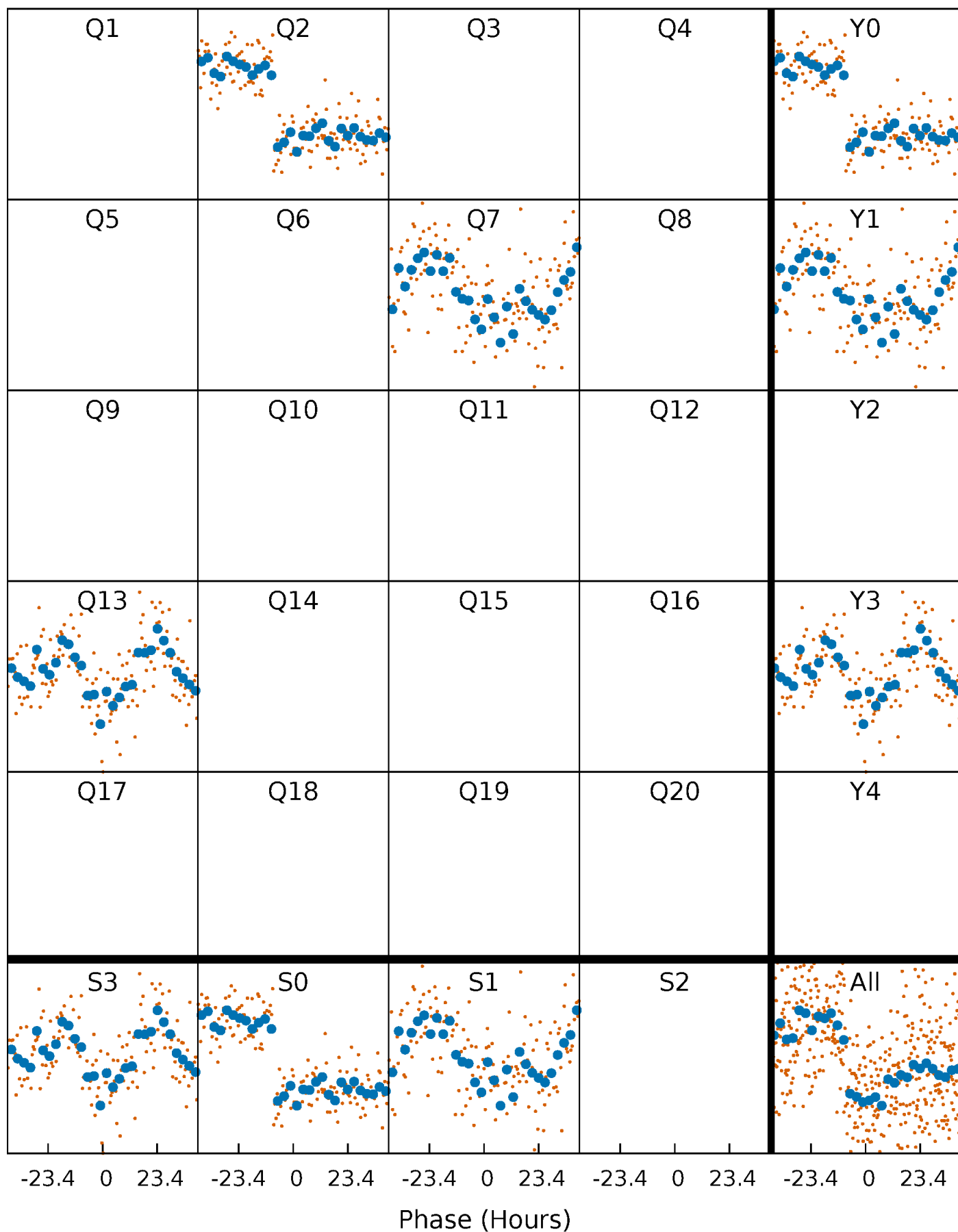


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

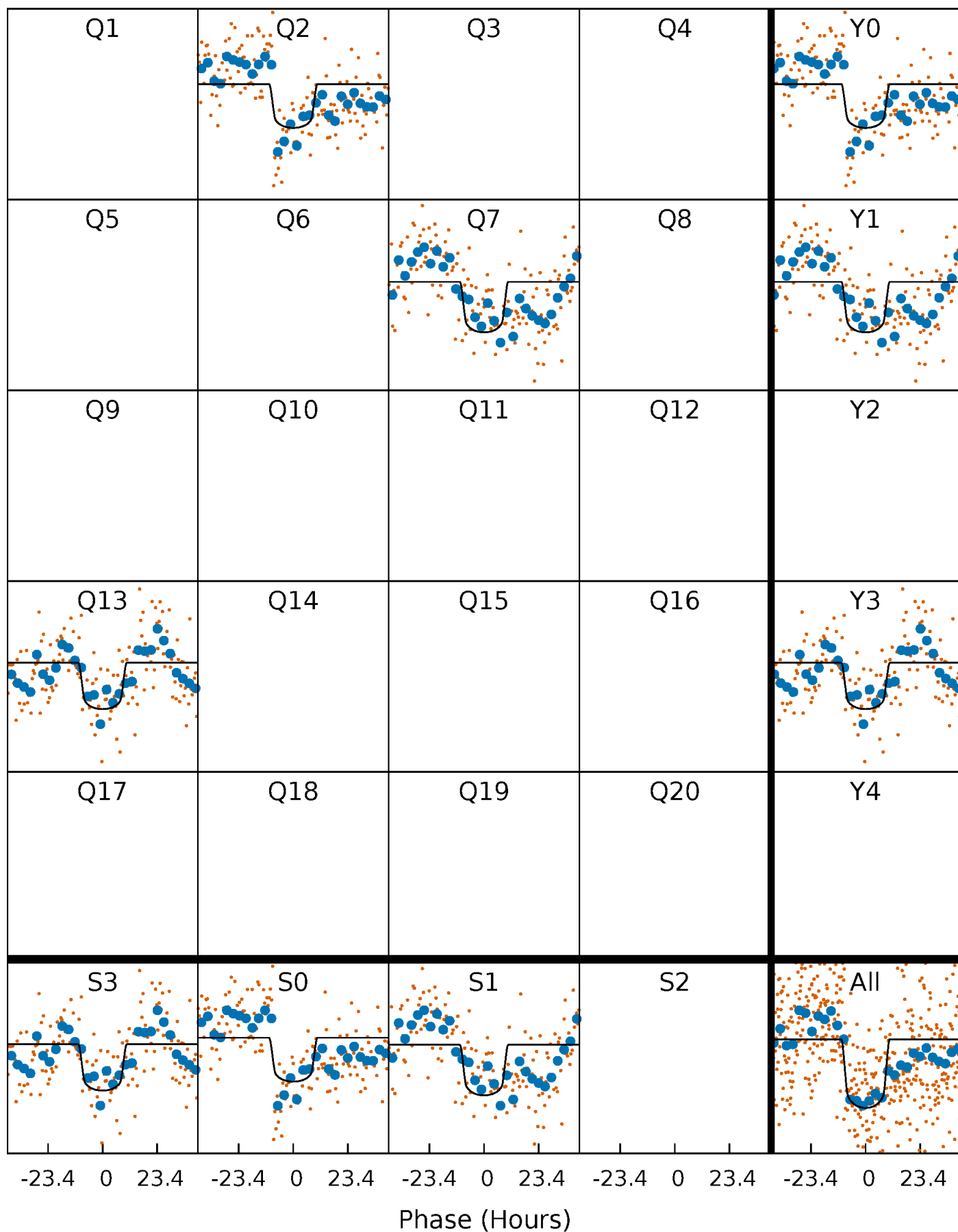
TCE 007026477-01 P=525.689509 Days  $T_0=188.157160$  (BKJD)





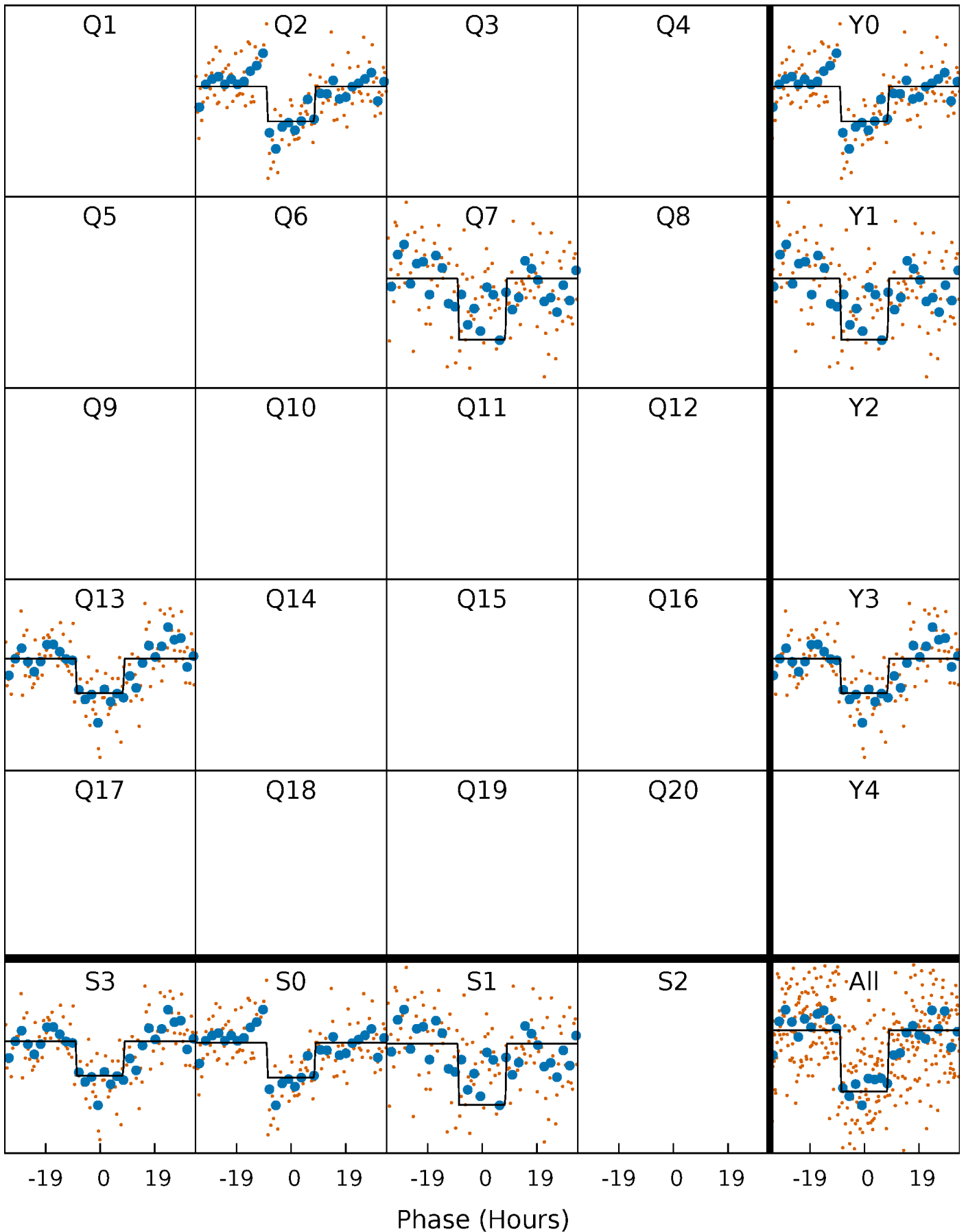
# DV Quarter-Phased Transit Curves

TCE 007026477-01 P=525.689509 Days  $T_0=188.157160$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

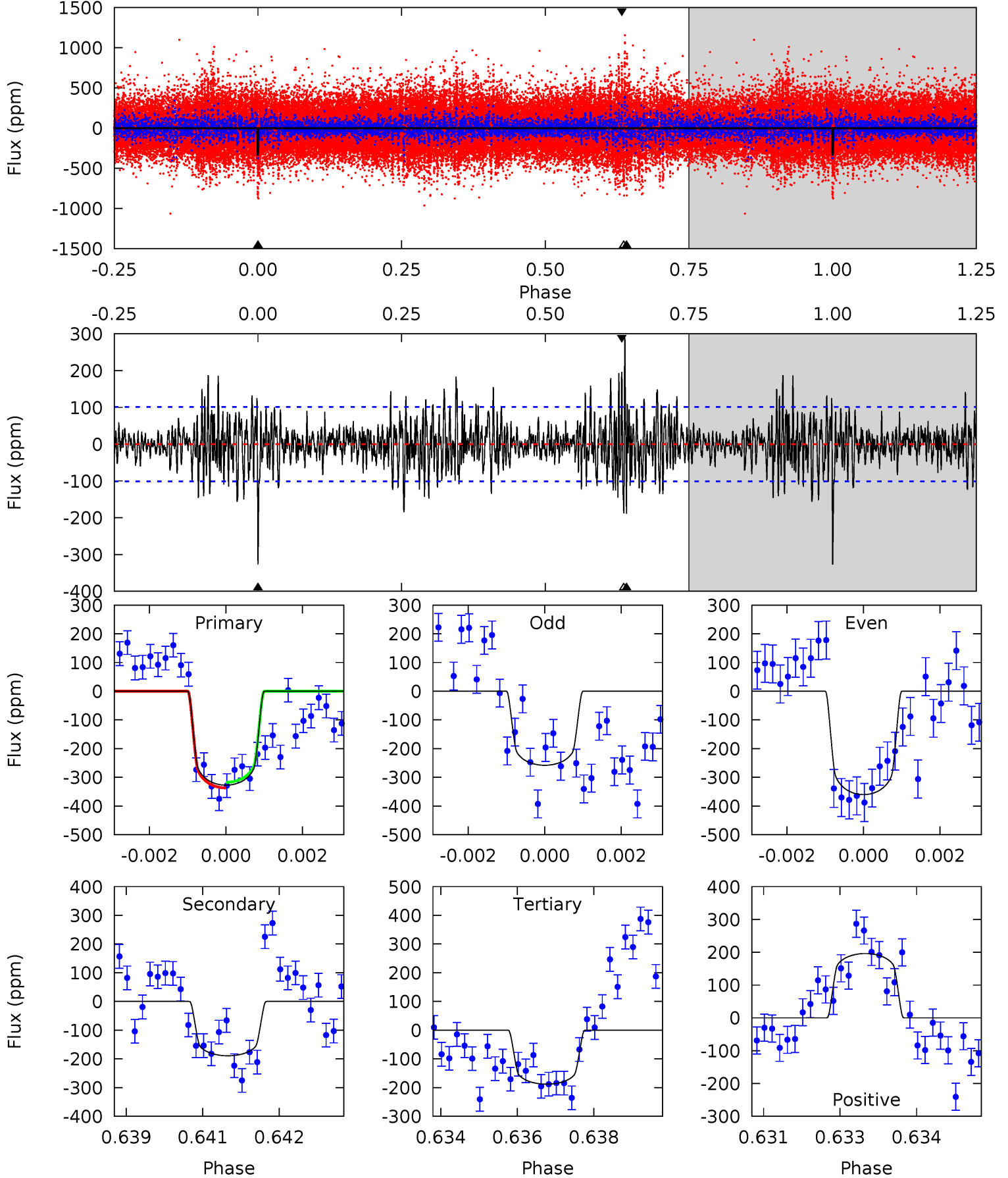
TCE 007026477-01 P=525.701009 Days  $T_0=188.144134$  (BKJD)



# DV Model-Shift Uniqueness Test

007026477-01,  $P = 525.689509$  Days,  $E = 188.157160$  Days

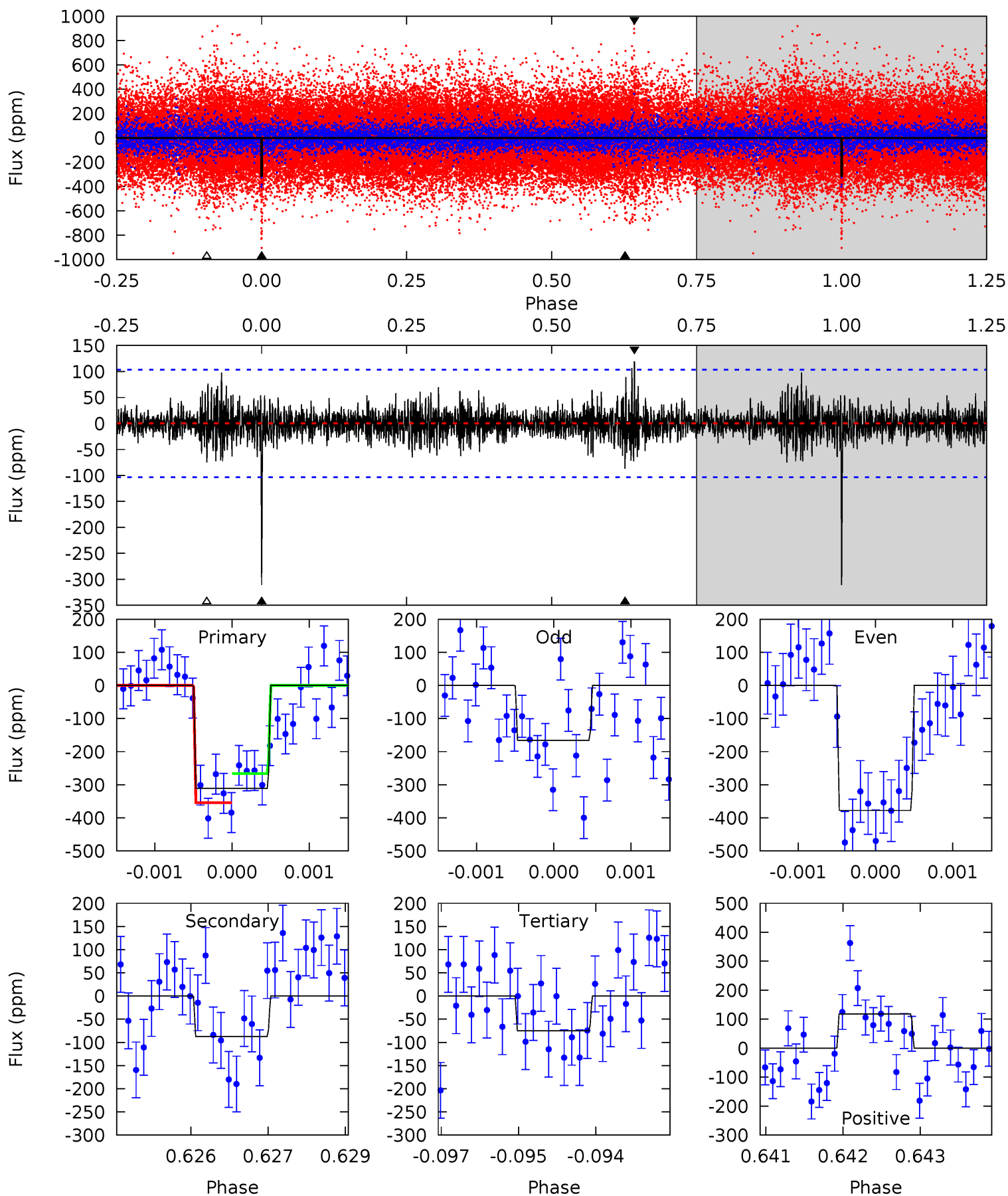
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	10.0	9.95	10.4	5.36	3.15	2.75	7.38	6.95	0.06	-0.36	2.57	1.04	0.47	0.52



# Alt Model-Shift Uniqueness Test

007026477-01, P = 525.701009 Days, E = 188.144134 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	4.55	3.91	6.17	5.40	3.20	1.05	12.3	10.1	0.63	-1.62	5.20	0.83	0.28	2.29



### Stellar Parameters For KIC 007026477

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6710^{+189}_{-260}$	$4.153^{+0.204}_{-0.167}$	$-0.340^{+0.250}_{-0.300}$	$1.539^{+0.429}_{-0.429}$	$1.237^{+0.170}_{-0.208}$	$0.477^{+0.562}_{-0.226}$
	+3%/-4%	+5%/-4%	+74%/-88%	+28%/-28%	+14%/-17%	+118%/-47%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 007026477-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-189 \pm 19$	$3.43^{+0.61}_{-0.54}$	$438^{+32}_{-33}$	$5478^{+327}_{-252}$	$16409^{+6444}_{-4379}$
Alt.	$-87 \pm 19$	$2.97^{+0.54}_{-0.56}$	$436^{+33}_{-34}$	$4922^{+384}_{-321}$	$10157^{+5527}_{-3360}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

## DV Centroid Data

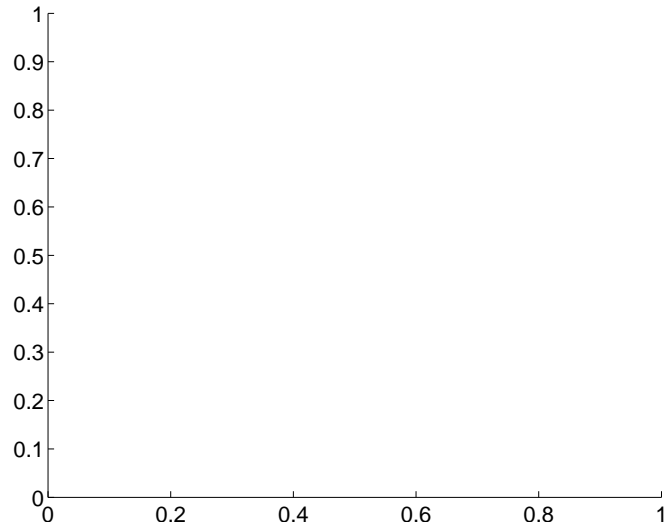
Supplemental centroid analysis for 007026477-01. Kepler magnitude: 13.97. Transit SNR 9.60

There are 0 quarters with good PRF difference image offsets

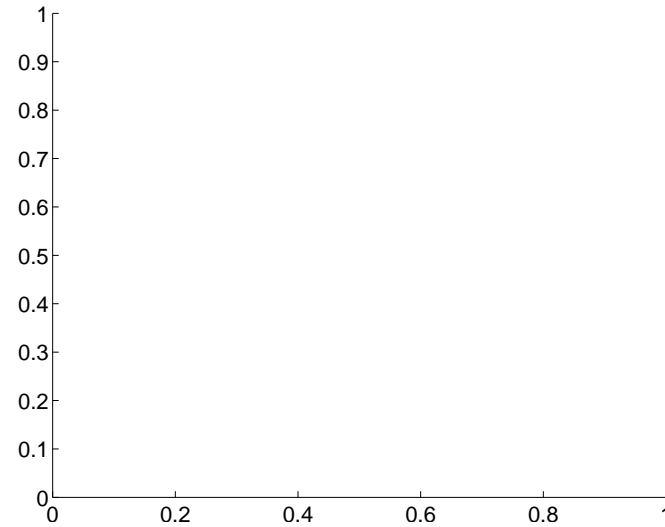
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	$1.25 \pm 1.16$	1.08	$-0.12 \pm 1.34$	$1.25 \pm 1.16$

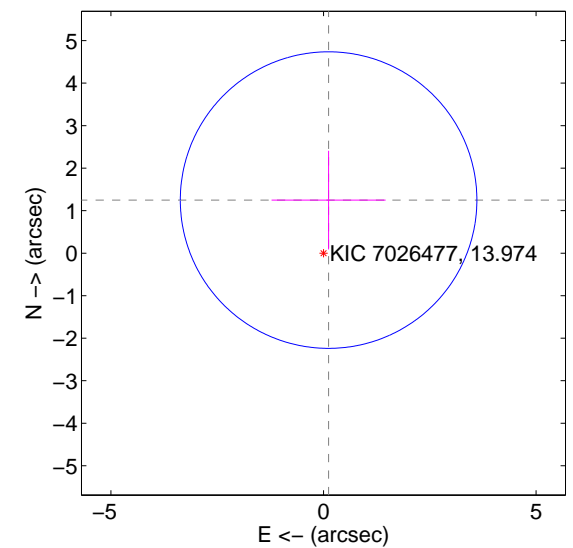
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



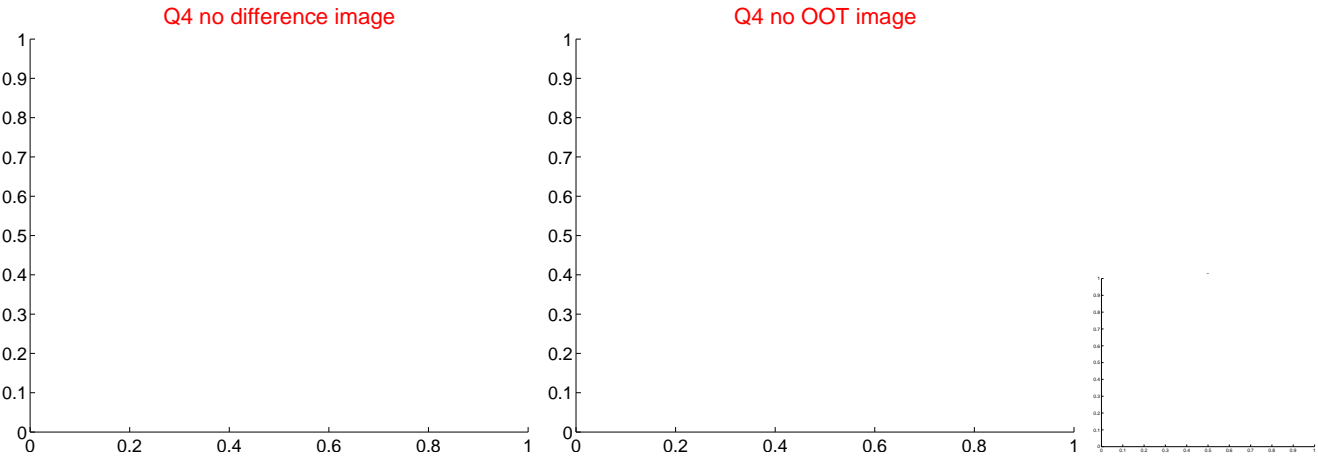
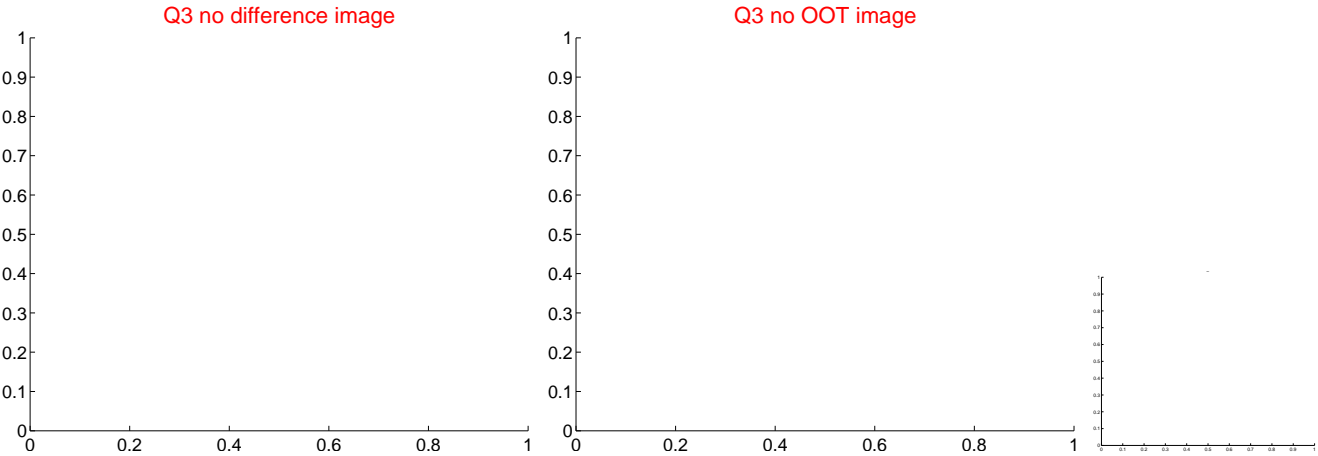
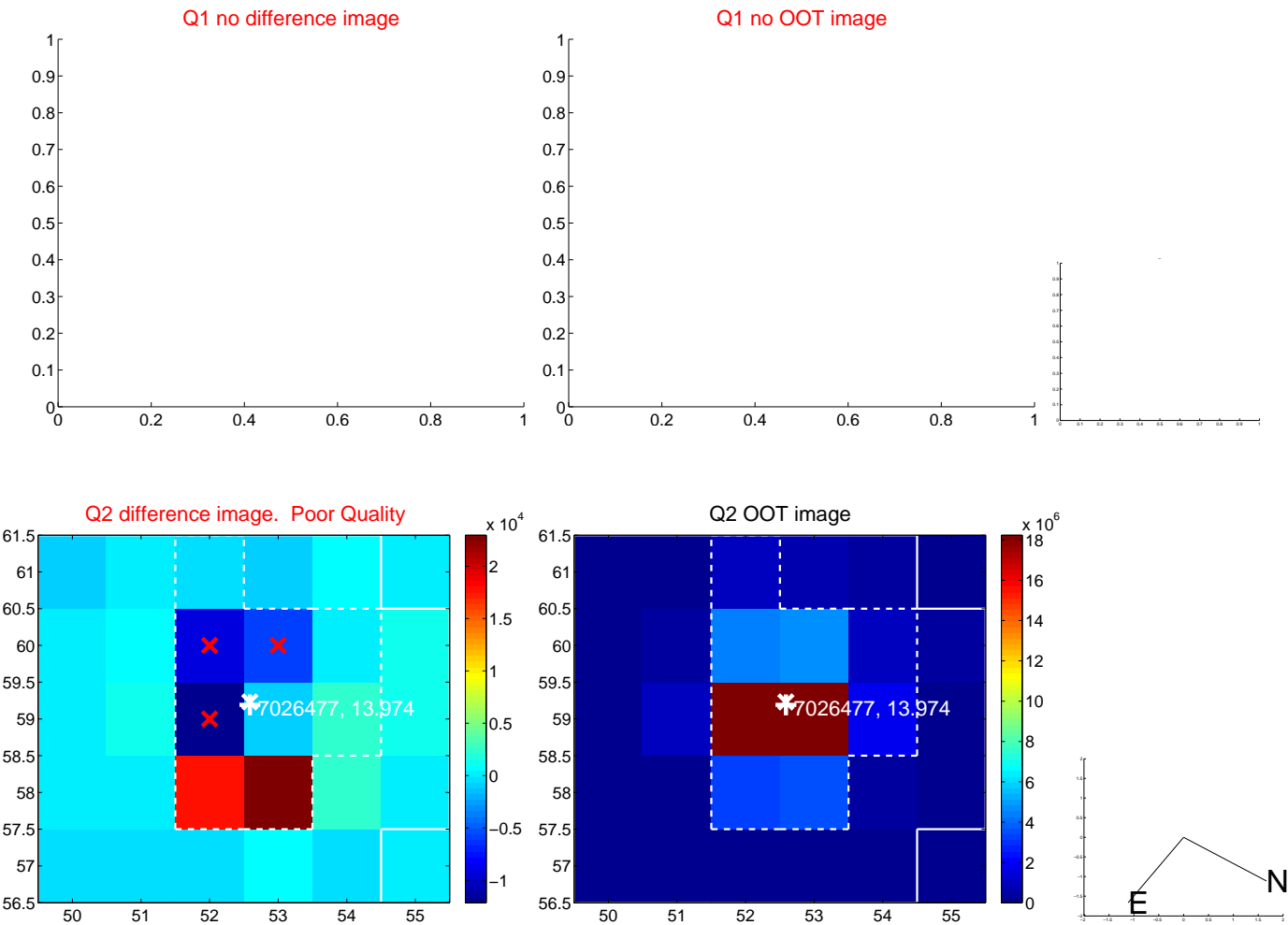
offset from photometric centroids



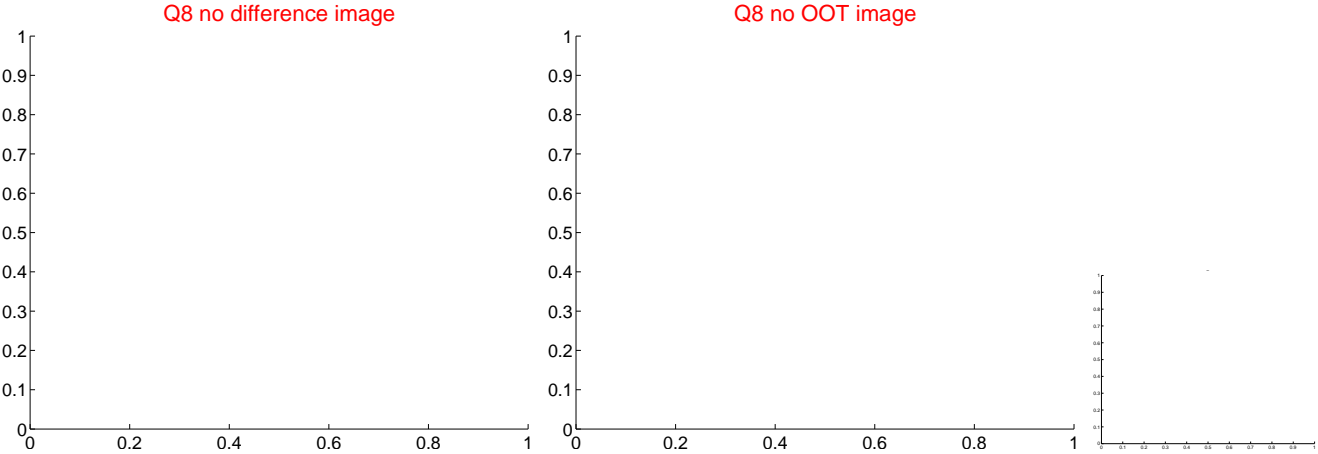
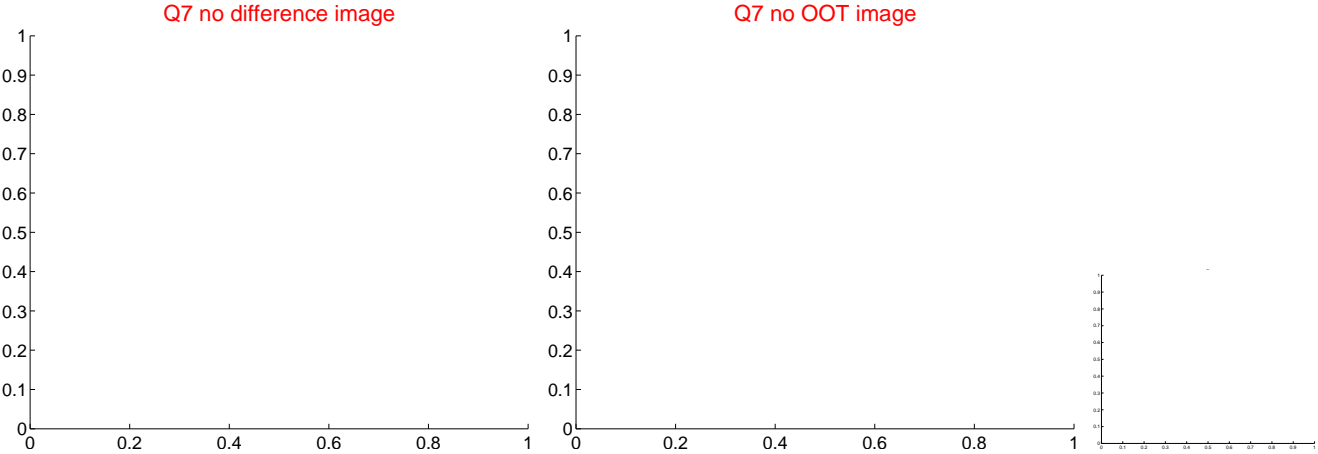
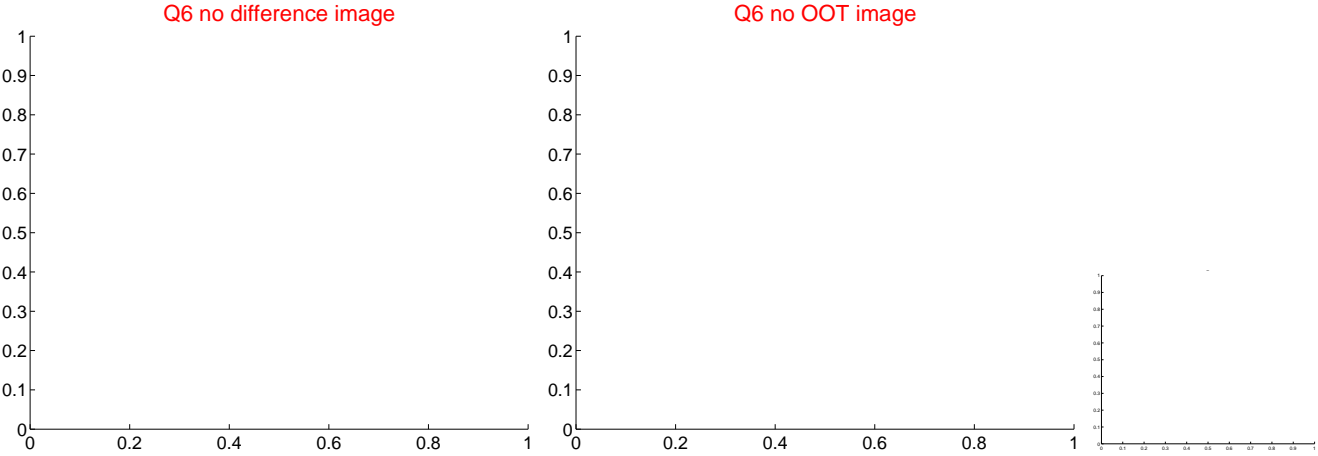
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



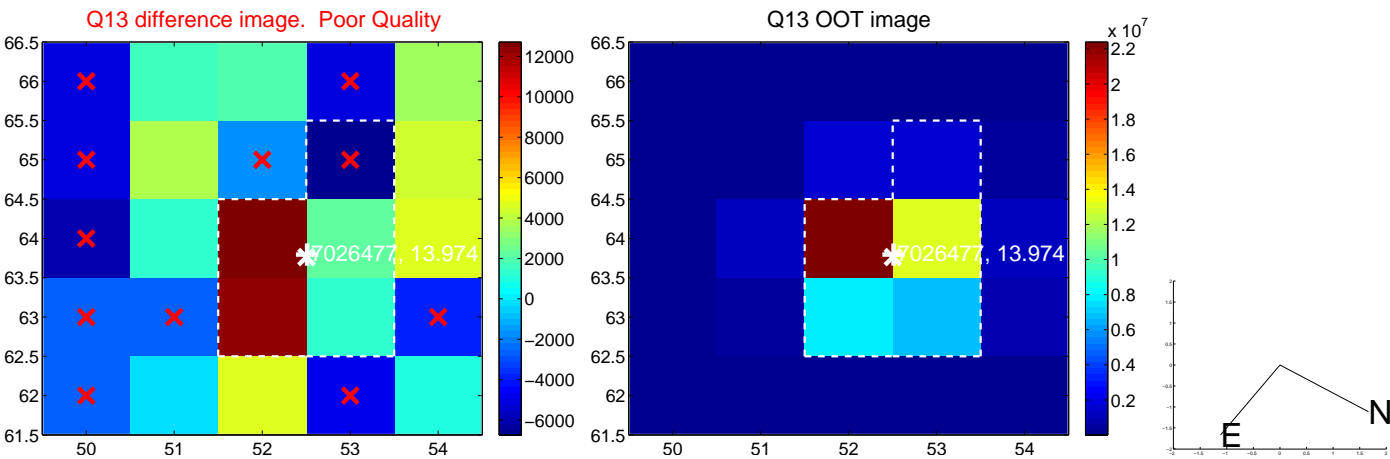
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



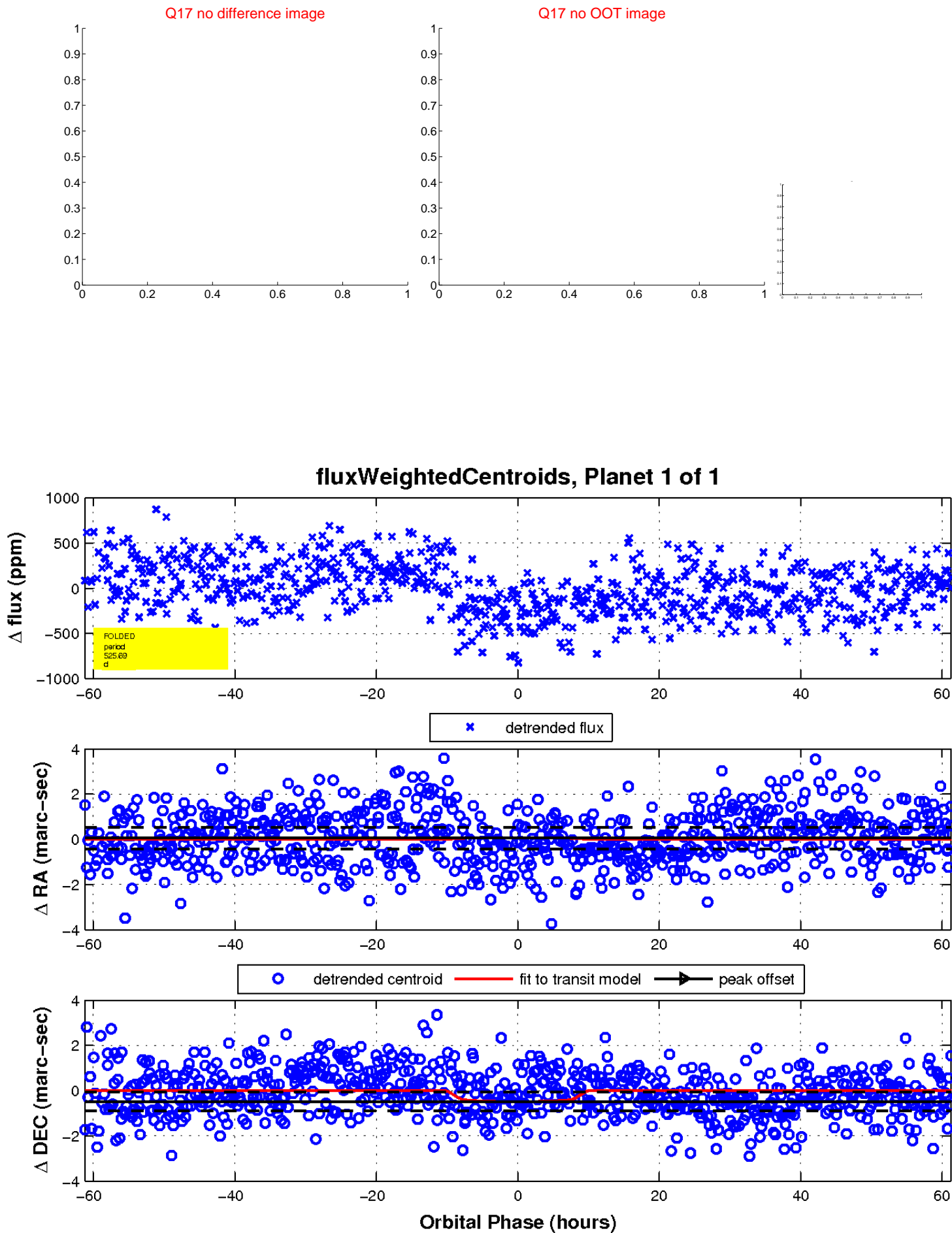
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

