

KIC 011622544

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})
011622544-01	OBS	No	592.698588	357.505177	314.3	13.923	7.7	6.9	0.80	5044	1.53	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011622544-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

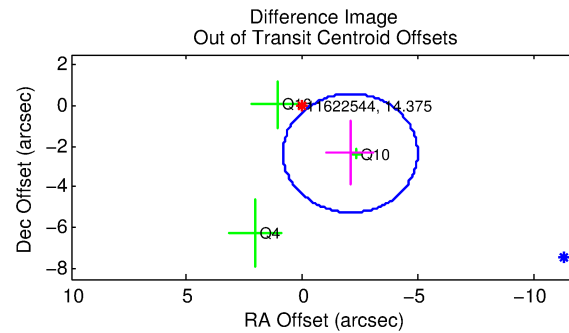
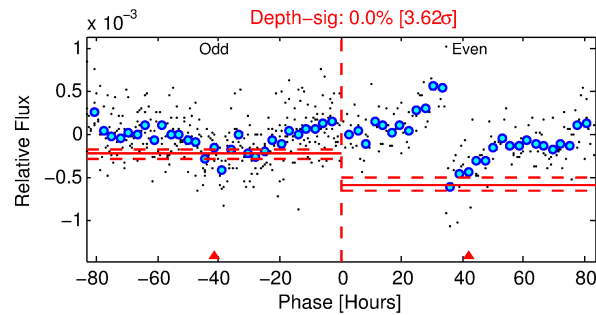
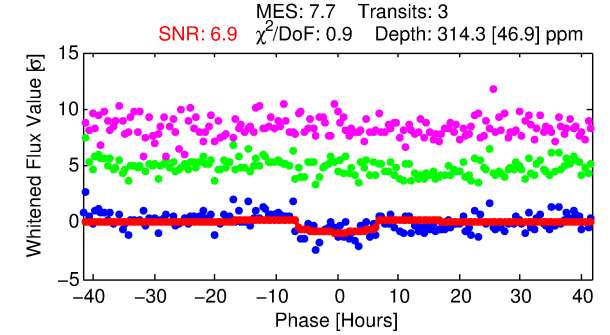
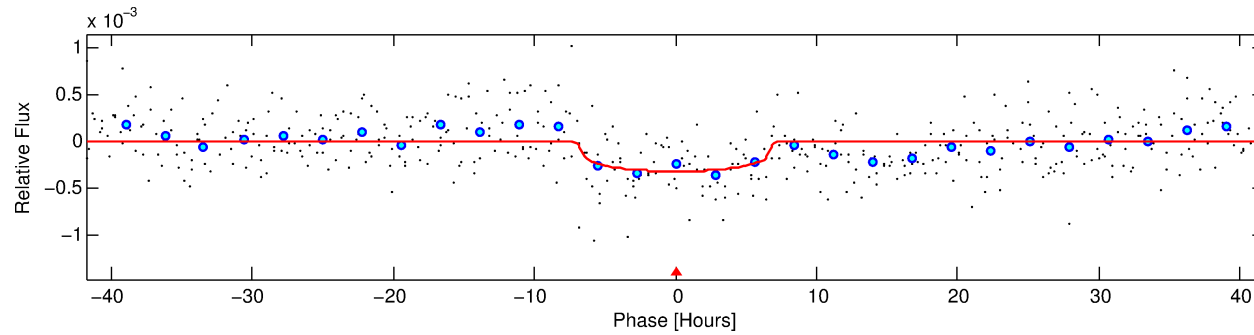
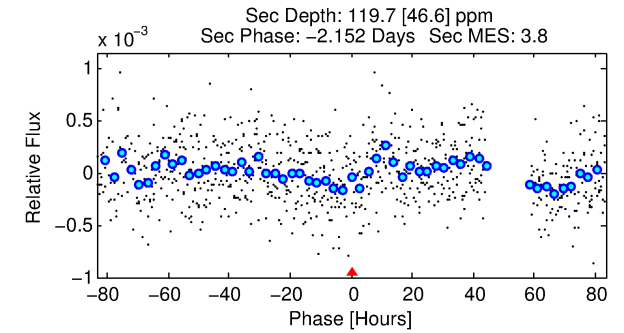
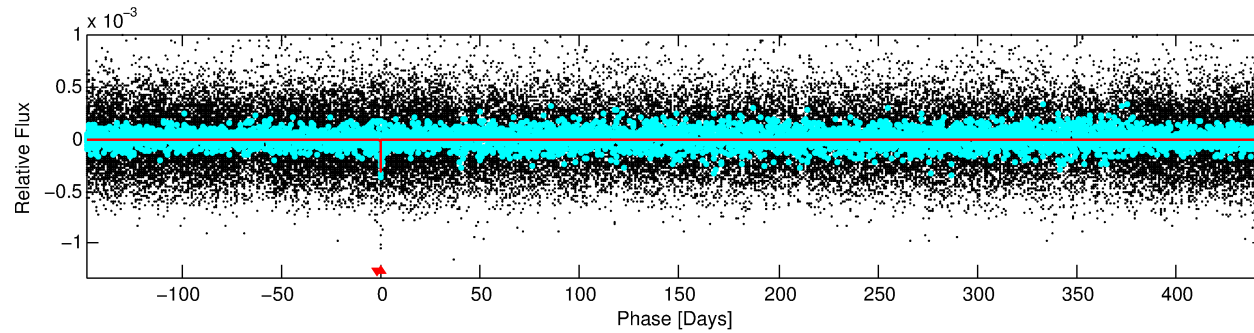
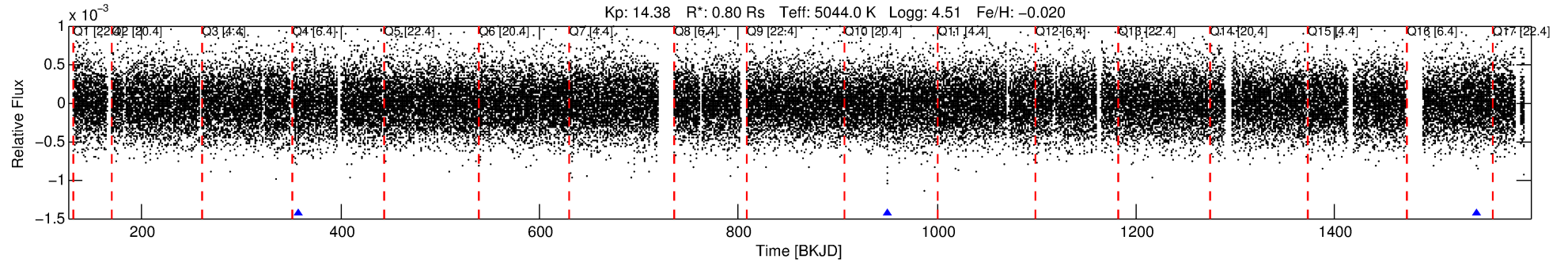
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011622544-01

No Significant Match Found

DV One-Page Summary

KIC: 11622544 Candidate: 1 of 1 Period: 592.699 d



DV Fit Results:

Period = 592.69859 [0.01915] d
Epoch = 357.5052 [0.0246] BKJD
Rp/R* = 0.0174 [0.0112]
a/R* = 234.55 [531.74]
b = 0.72 [1.56]
Seff = 0.23 [0.04]
Teq = 178 [8] K
Rp = 1.53 [1.00] Re
a = 1.2631 [0.1209] AU
Ag = 44867.13 [60538.40] [0.74 σ]
Teff = 3995 [1345] K [2.84 σ]

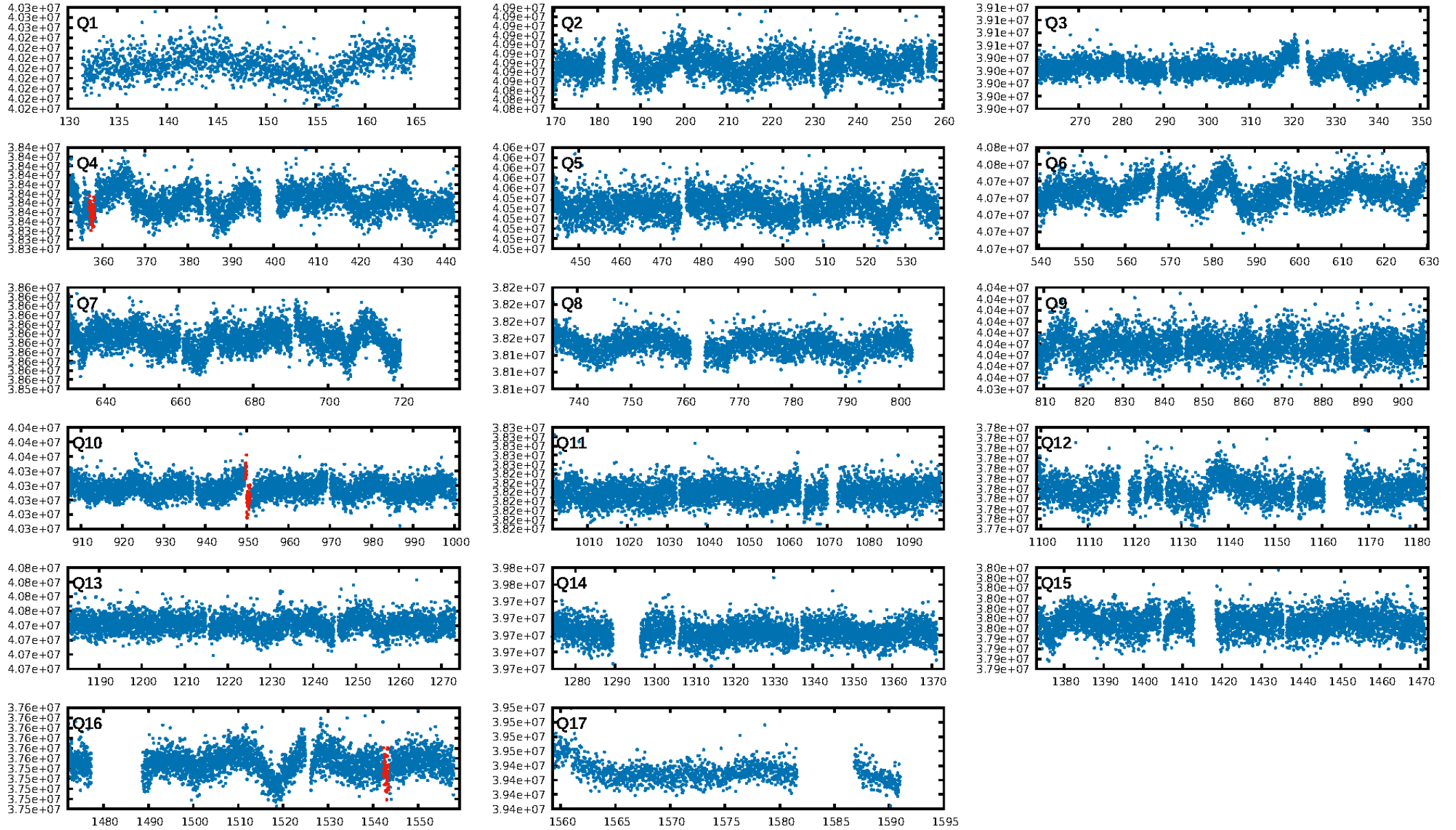
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 5.12e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.917
Centroid-sig: 2.2%
Centroid-so: 2.285 arcsec [1.28 σ]
OotOffset-rm: 3.128 arcsec [3.23 σ]
KicOffset-rm: 2.926 arcsec [3.21 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

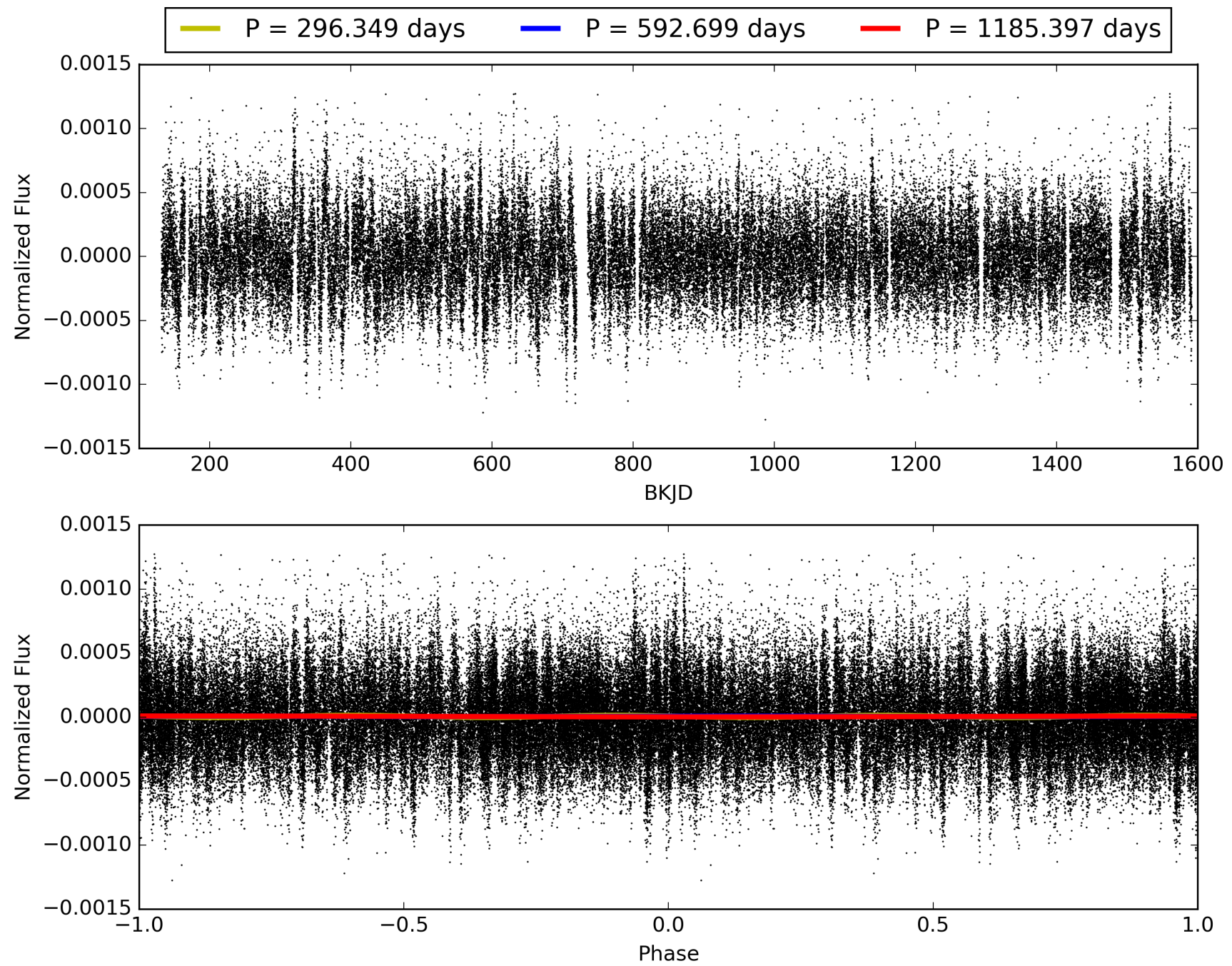
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:49:12 Z

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

TCE 011622544-01, PDC Light Curves

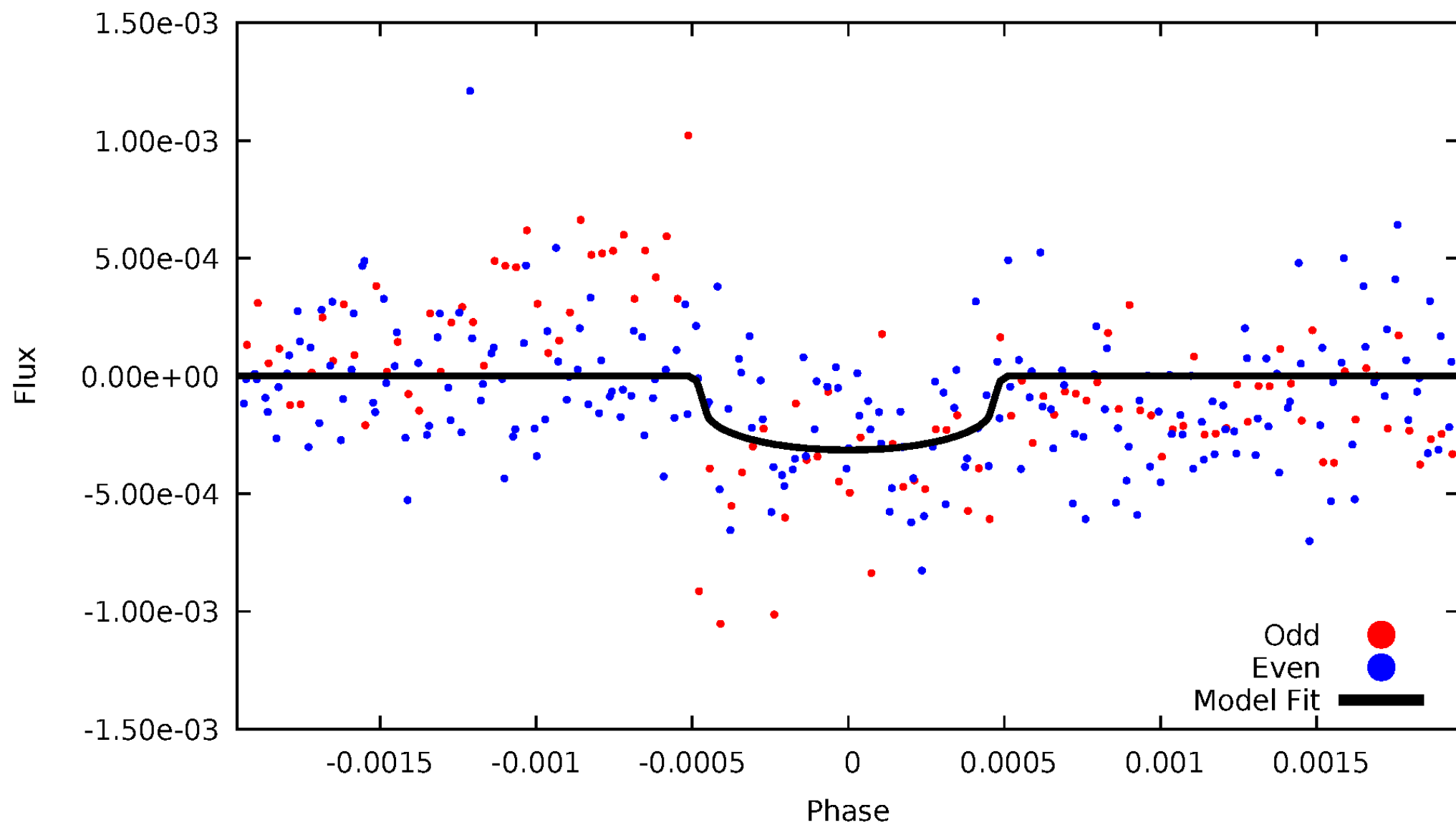


TCE 011622544-01



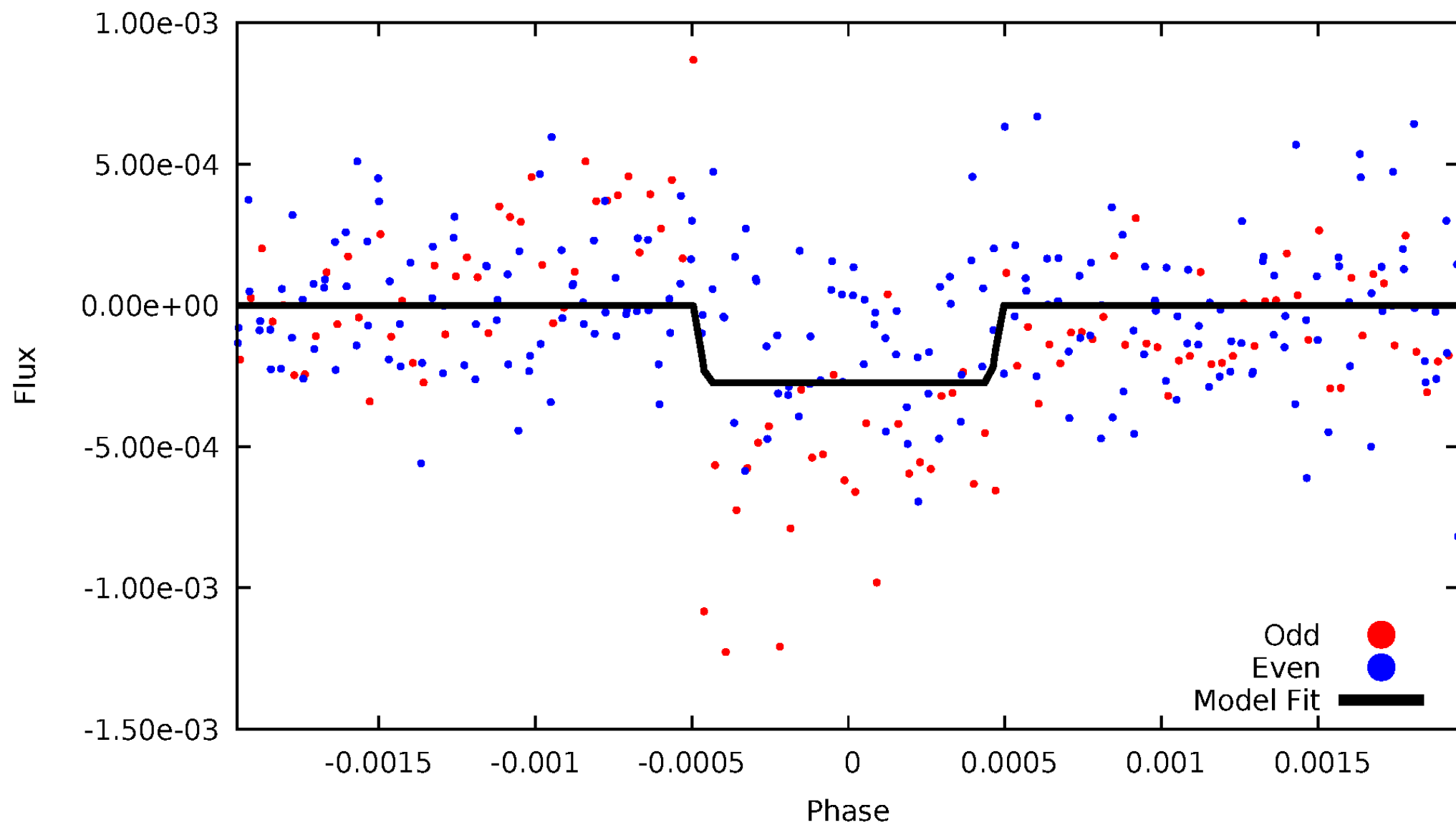
DV Odd/Even

TCE 011622544-01



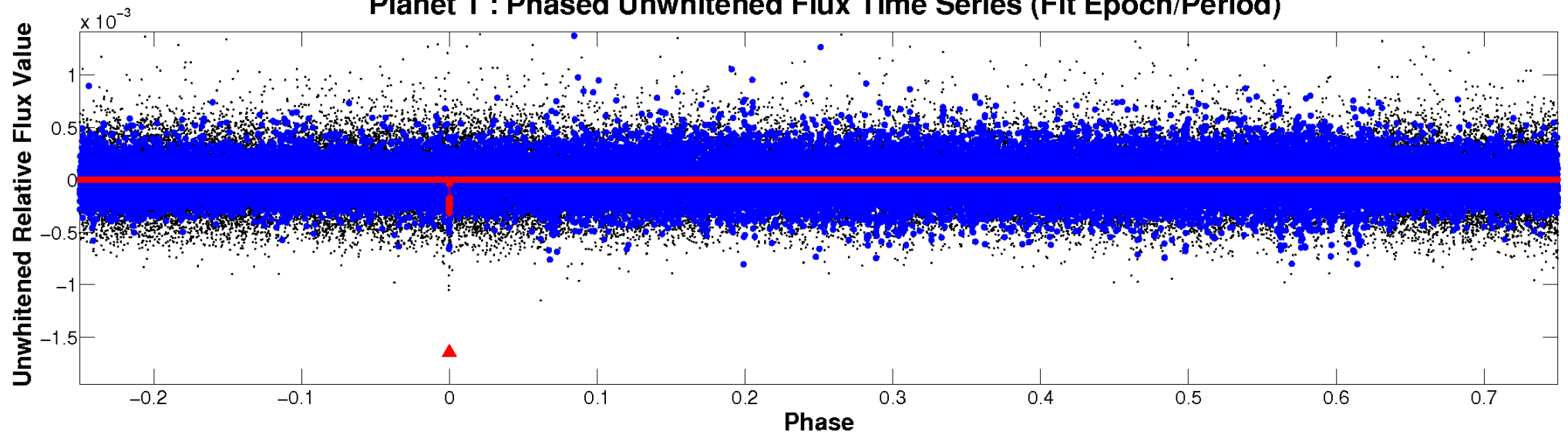
ALT Odd/Even

TCE 011622544-01

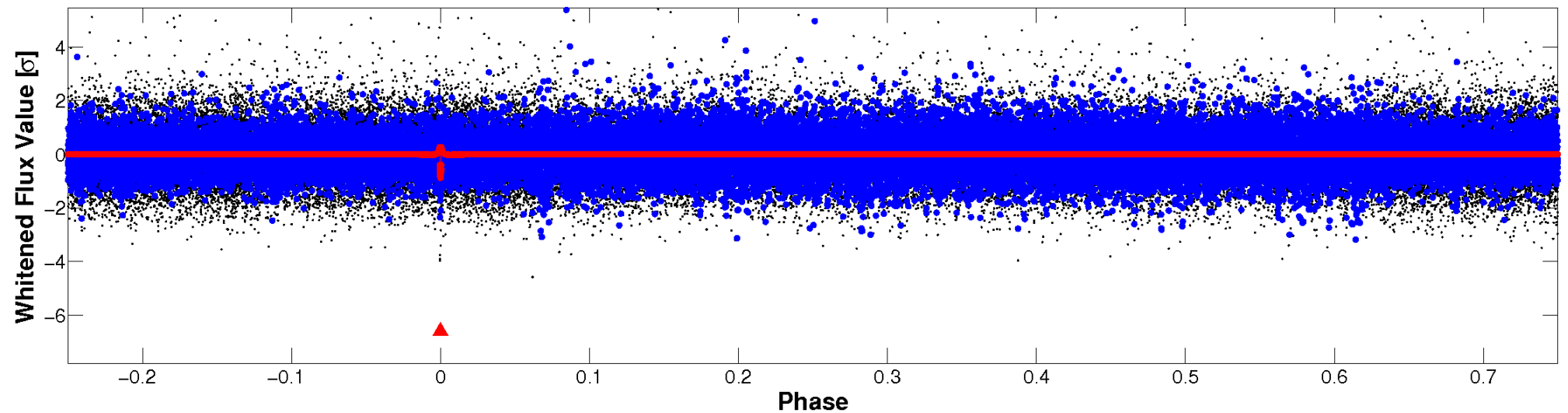


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

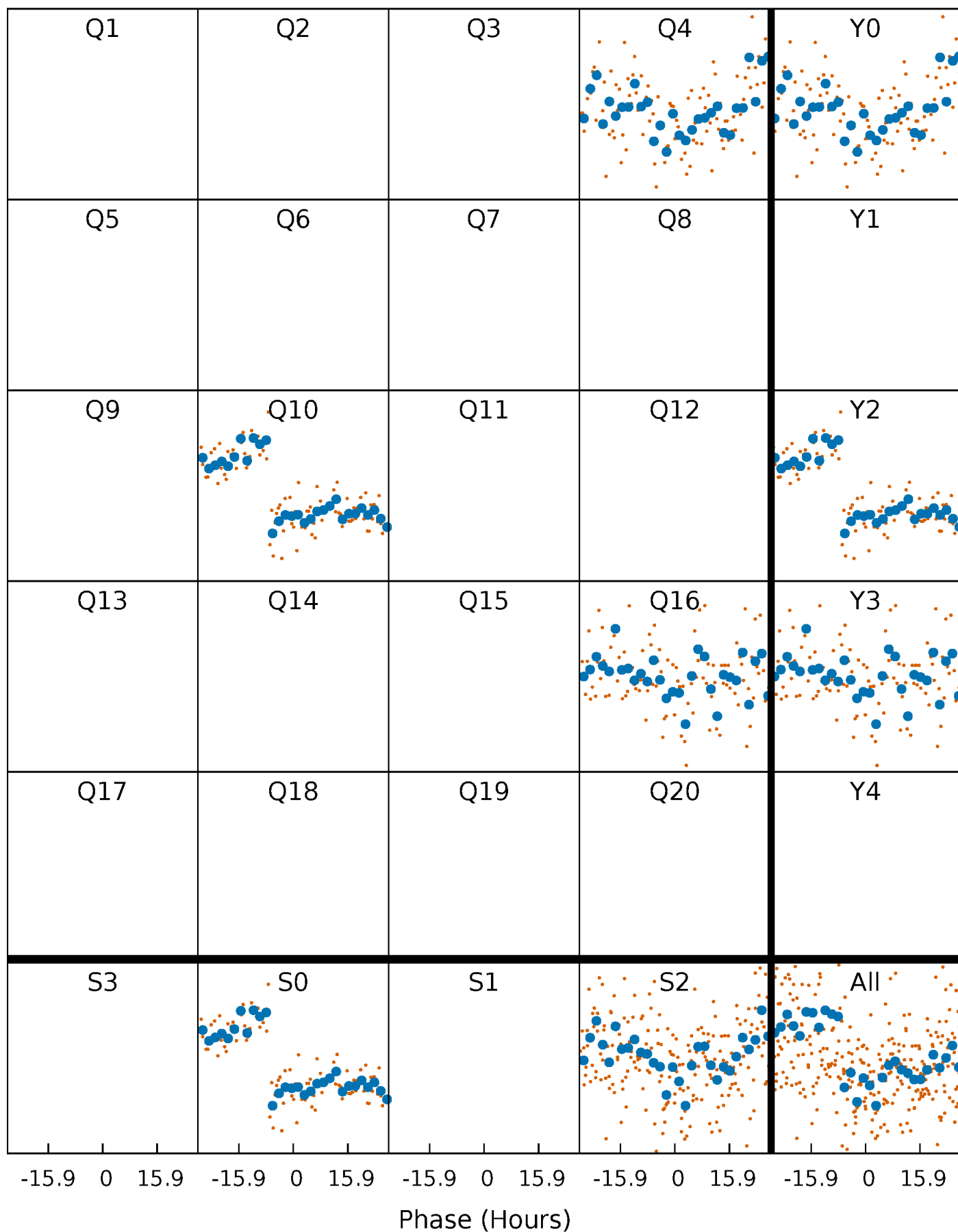


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



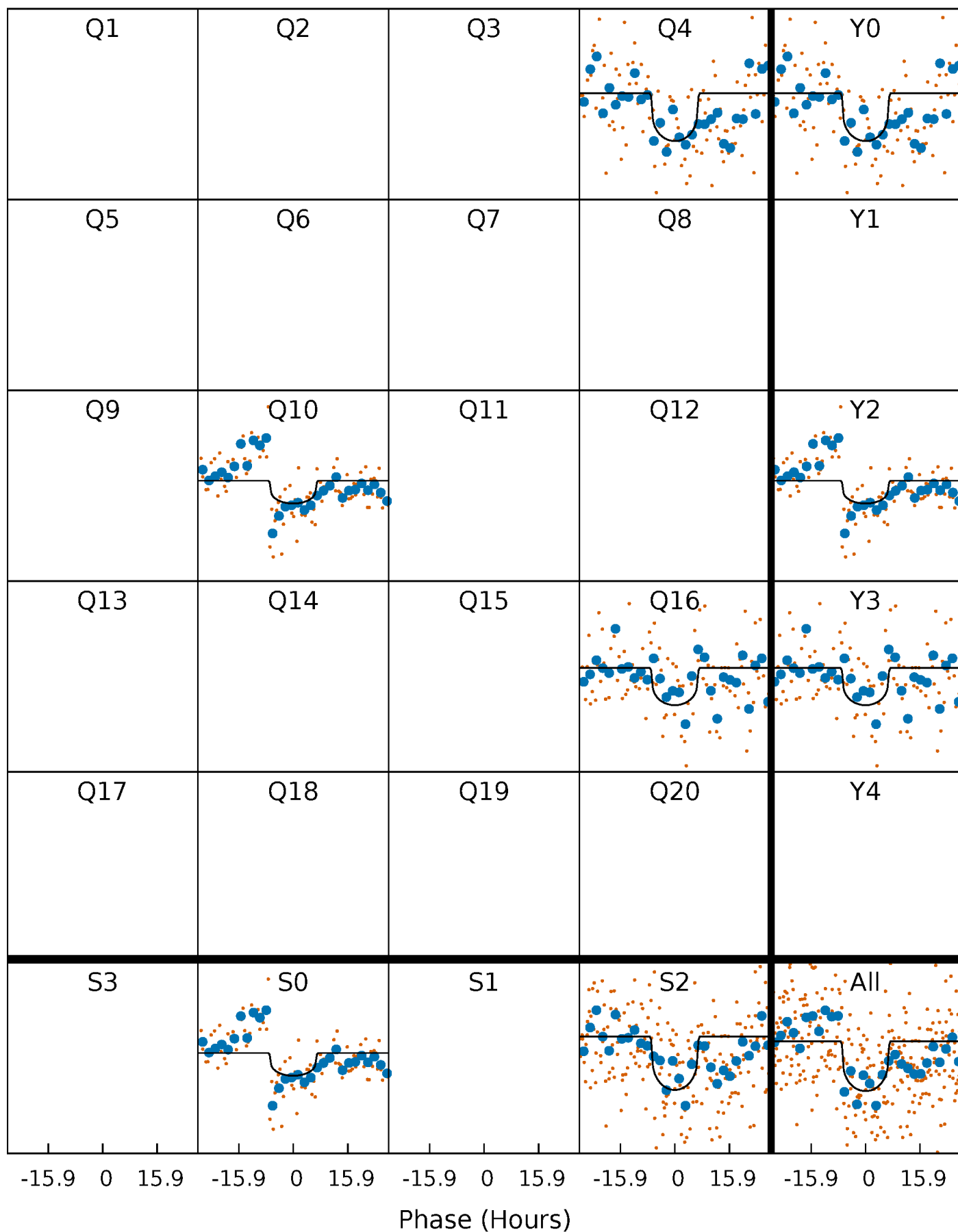
PDC Quarter-Phased Transit Curves

TCE 011622544-01 P=592.698588 Days $T_0=357.505177$ (BKJD)



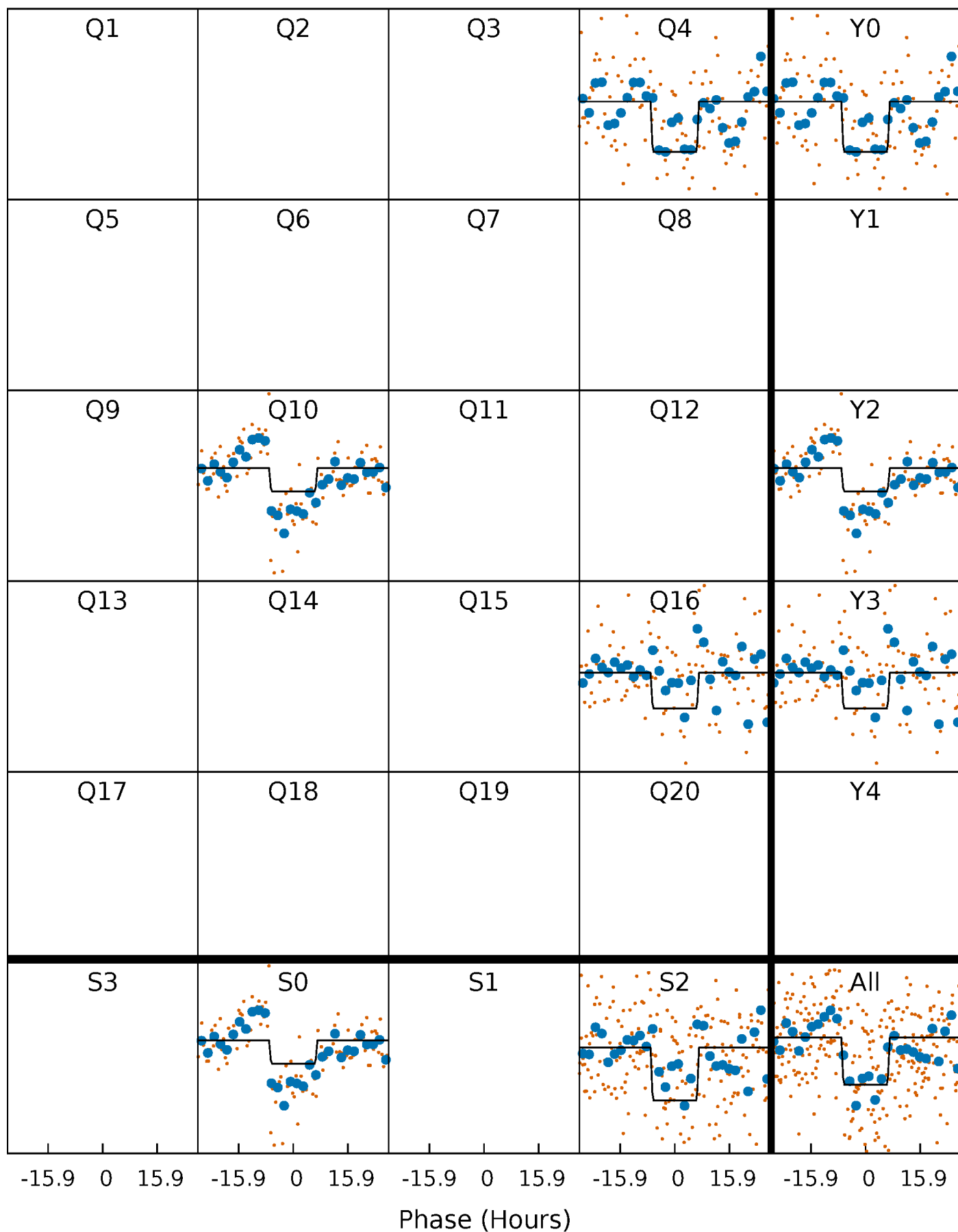
DV Quarter-Phased Transit Curves

TCE 011622544-01 P=592.698588 Days $T_0=357.505177$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

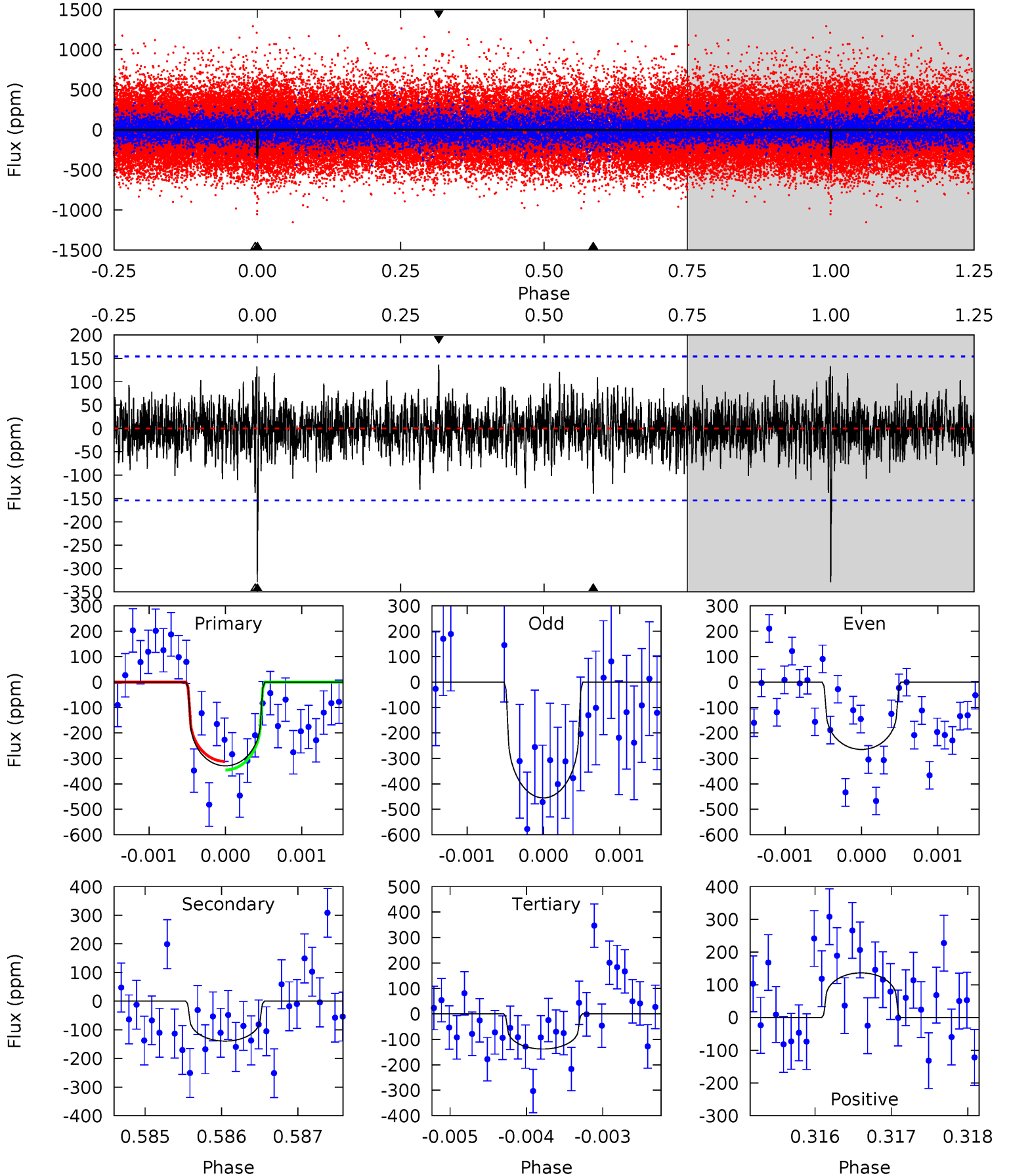
TCE 011622544-01 P=592.716275 Days $T_0=357.477016$ (BKJD)



DV Model-Shift Uniqueness Test

011622544-01, P = 592.698588 Days, E = 357.505177 Days

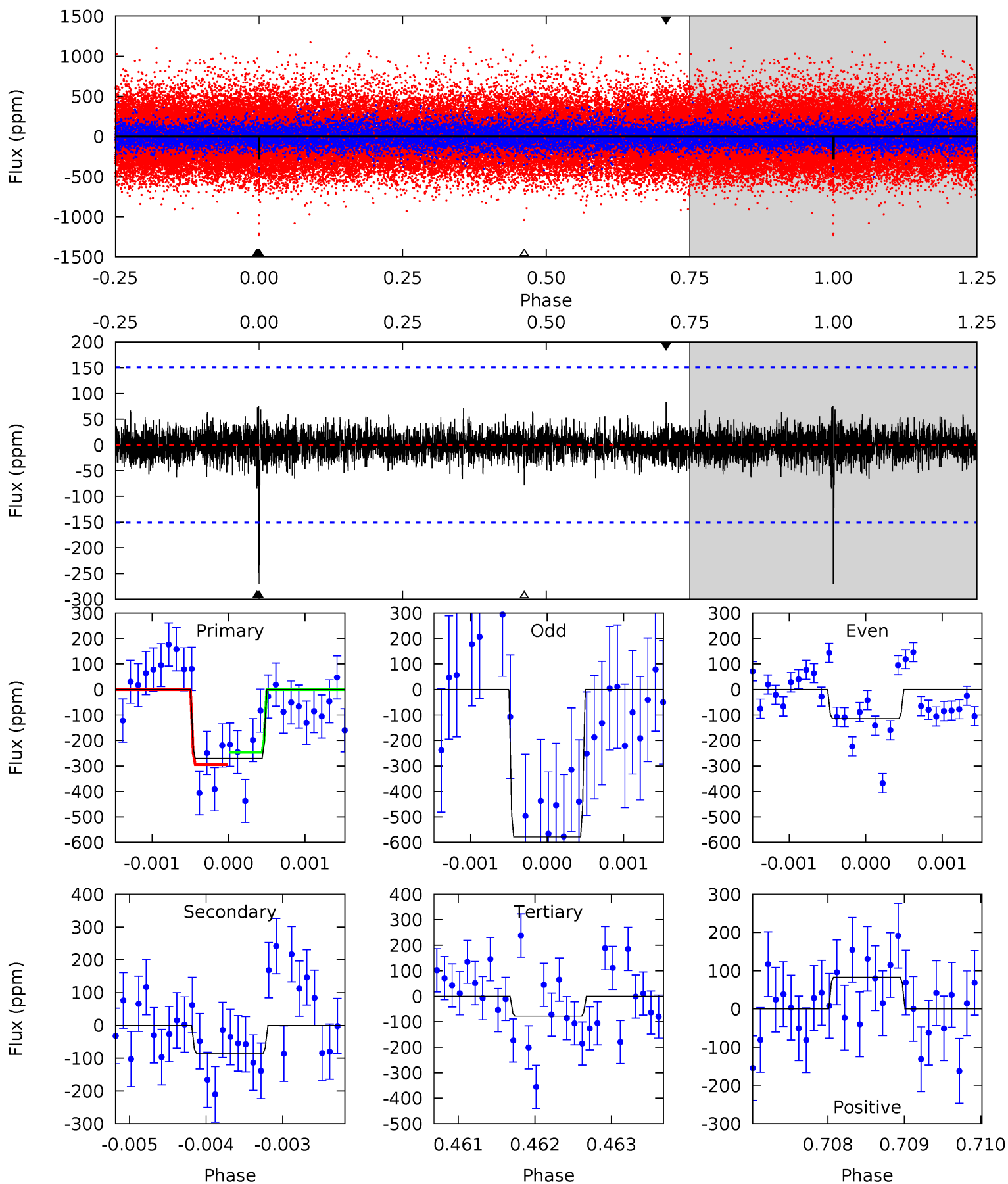
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	4.93	4.88	4.83	5.45	3.29	1.28	6.77	6.82	0.05	0.10	3.23	1.05	0.29	0.60



Alt Model-Shift Uniqueness Test

011622544-01, P = 592.716275 Days, E = 357.477016 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.78	3.07	2.83	3.00	5.45	3.29	0.68	6.95	6.78	0.25	0.07	7.95	1.55	0.23	0.86



Stellar Parameters For KIC 011622544

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5044^{+151}_{-151}	$4.511^{+0.082}_{-0.067}$	$-0.020^{+0.300}_{-0.300}$	$0.804^{+0.079}_{-0.087}$	$0.764^{+0.095}_{-0.055}$	$2.071^{+0.741}_{-0.459}$
	+3%/-3%	+2%/-1%	+1500%/-1500%	+10%/-11%	+12%/-7%	+36%/-22%
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 011622544-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-139±28	$1.60^{+1.04}_{-0.81}$	248^{+11}_{-10}	4218^{+1495}_{-672}	$46093^{+152087}_{-29667}$
Alt.	-85±28	$1.53^{+1.06}_{-0.79}$	248^{+10}_{-11}	3935^{+1334}_{-654}	$32478^{+109973}_{-22041}$

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

DV Centroid Data

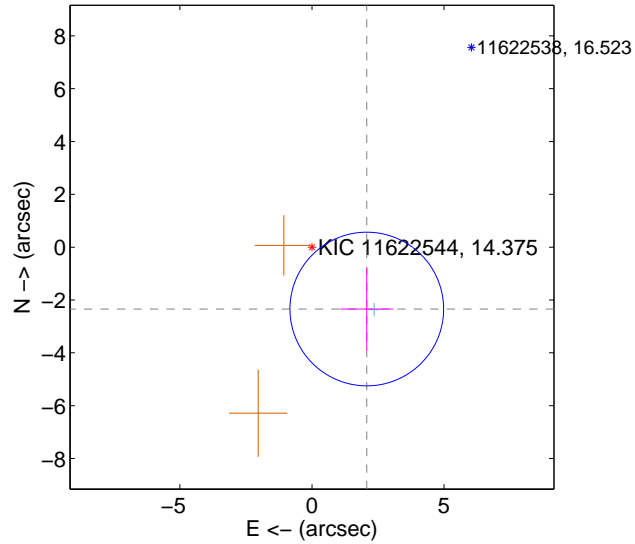
Supplemental centroid analysis for 011622544-01. Kepler magnitude: 14.38. Transit SNR 6.91

There are 1 quarters with good PRF difference image offsets

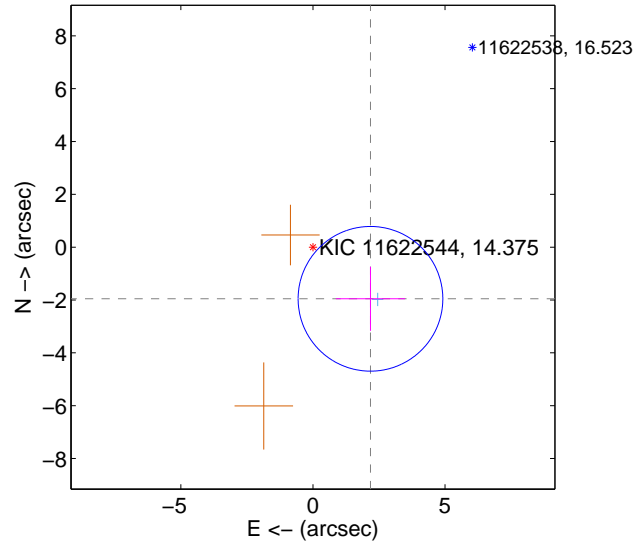
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.128 ± 0.969	3.23	-2.075 ± 1.005	-2.341 ± 1.551
PRF-fit source offset from KIC position	2.926 ± 0.913	3.21	-2.178 ± 1.310	-1.955 ± 1.210
photometric centroid source offset	2.29 ± 1.78	1.28	-1.25 ± 2.06	-1.91 ± 1.65

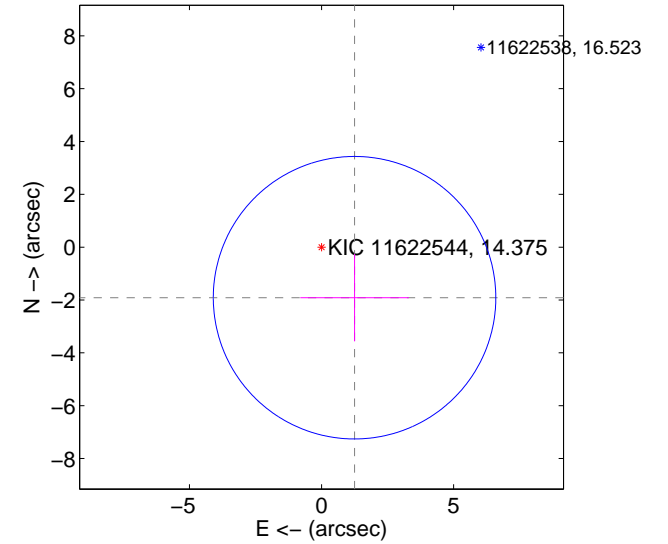
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

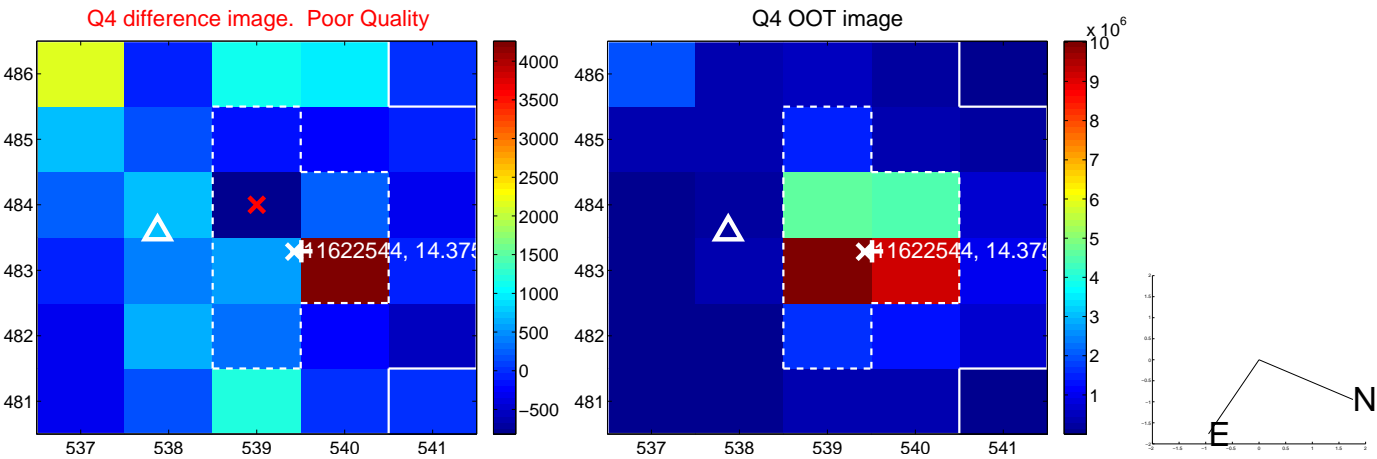


offset from photometric centroids



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- σ uncertainty. Blue circle: three- σ . 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 \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.

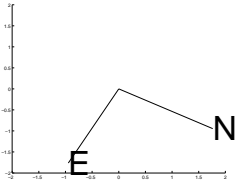
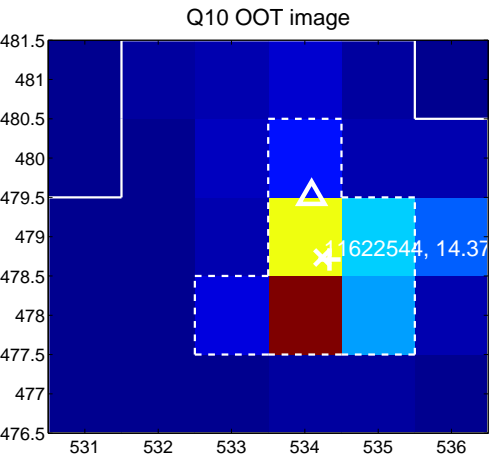
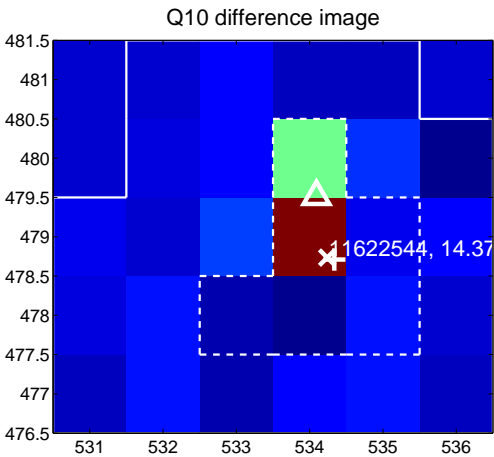


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

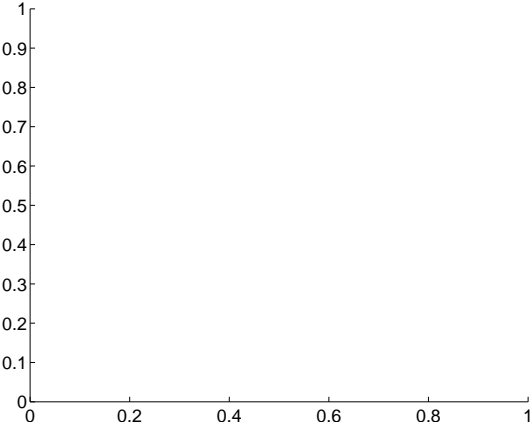
Q9 no difference image



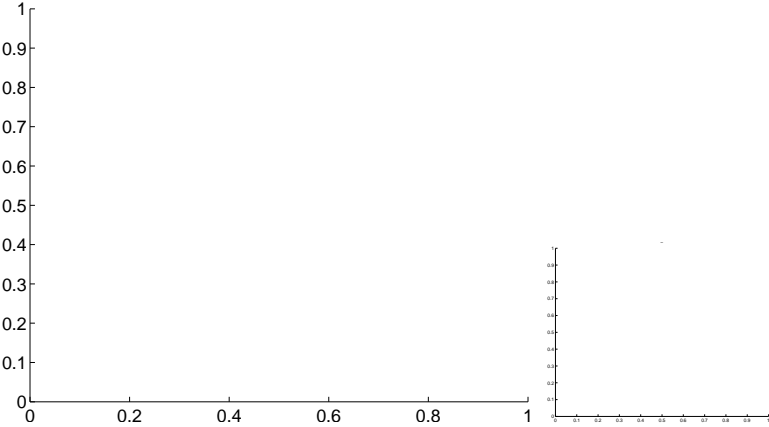
Q9 no OOT image



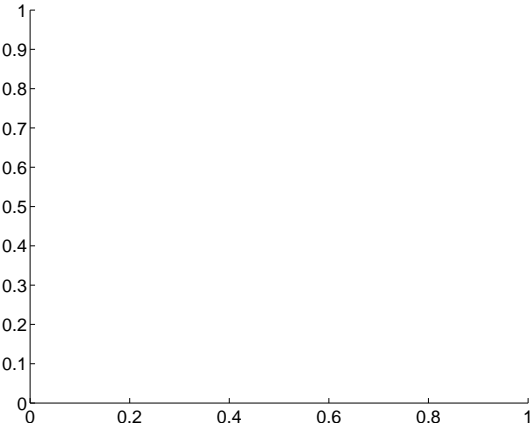
Q11 no difference image



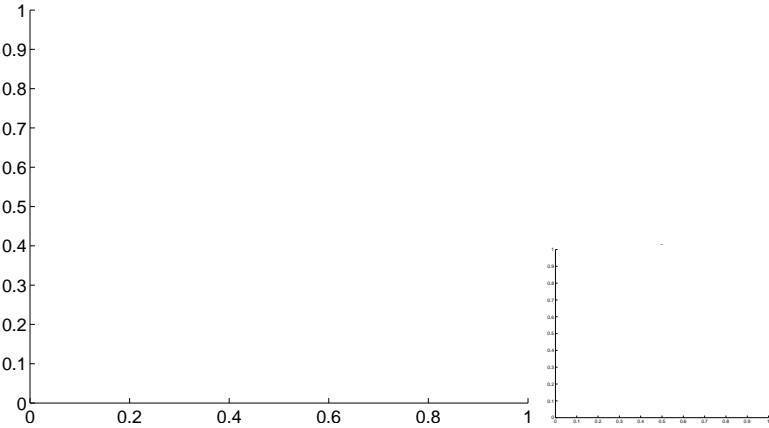
Q11 no OOT image



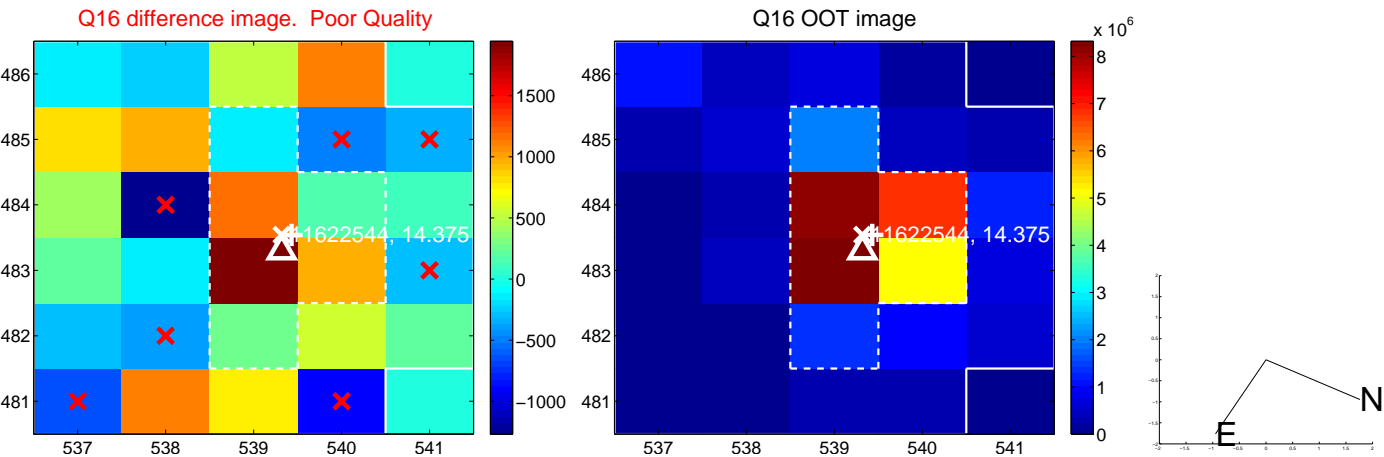
Q12 no difference image



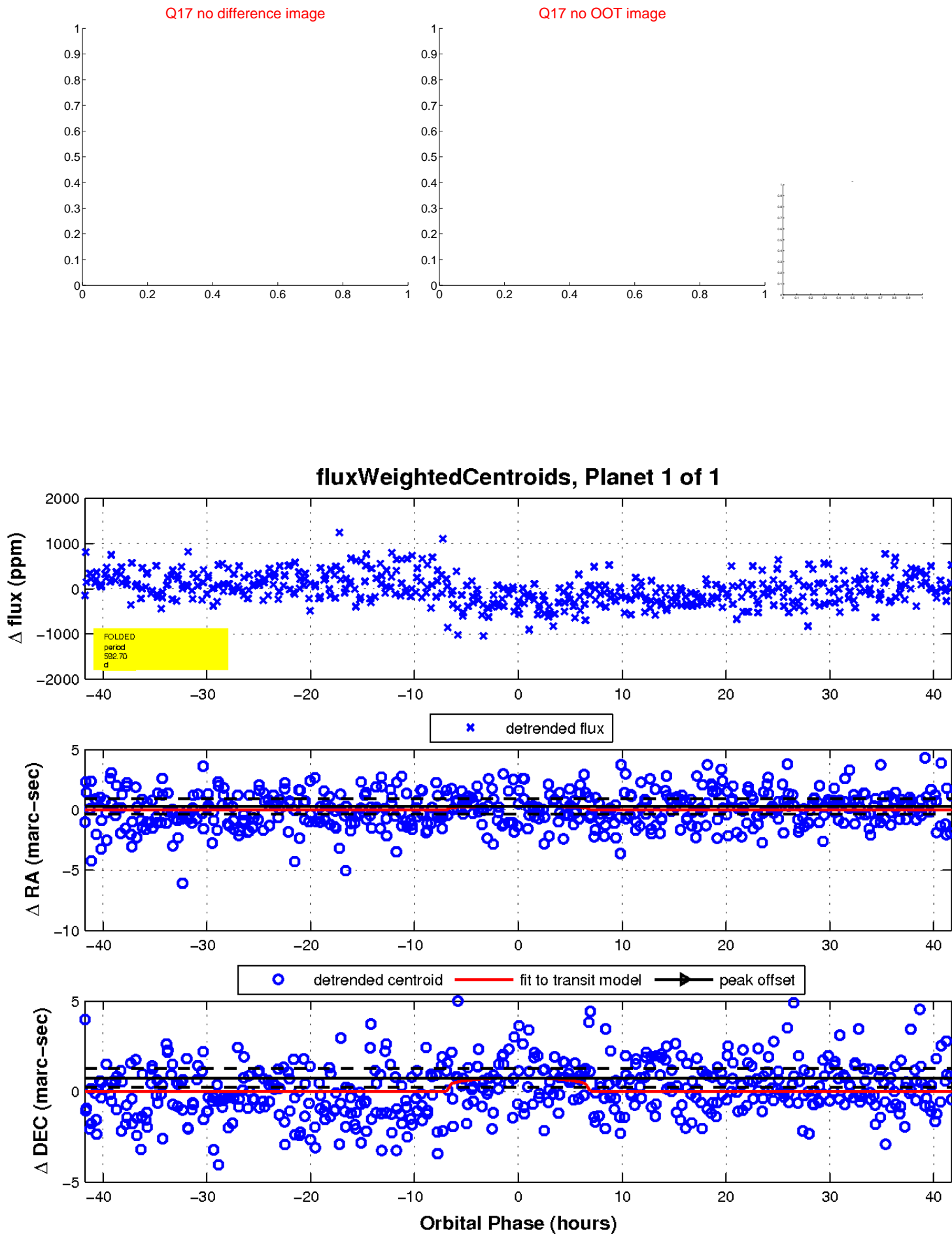
Q12 no OOT image



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.



UKIRT Image

