

KIC 006452607

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})
006452607-01	OBS	No	4.164614	135.390770	79.8	9.363	9.5	10.3	1.21	6568	1.36	831.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006452607-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

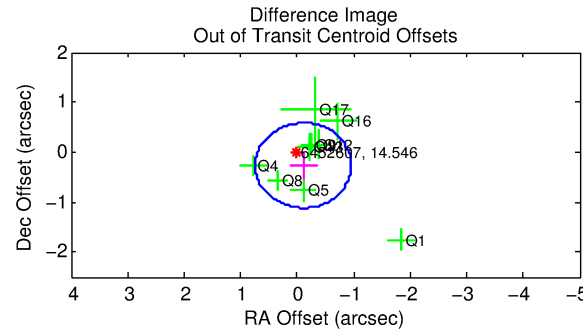
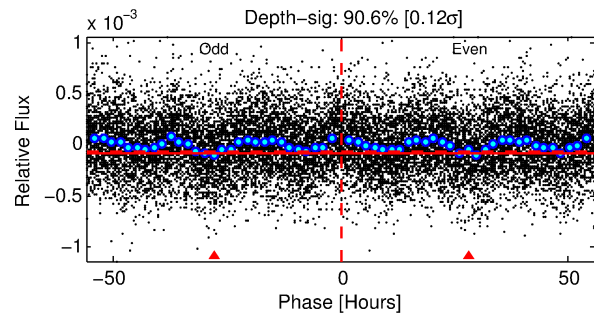
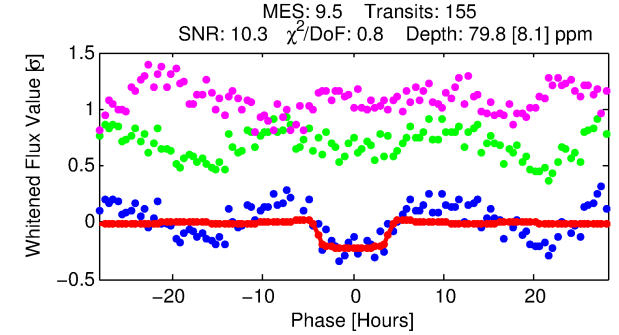
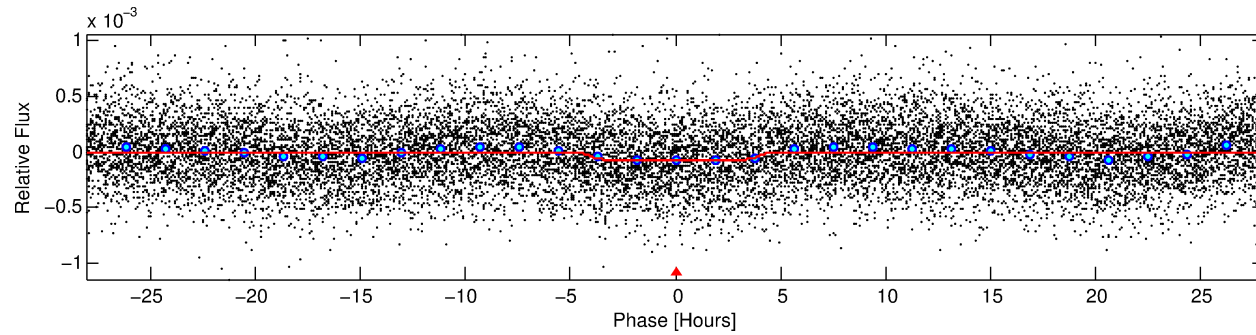
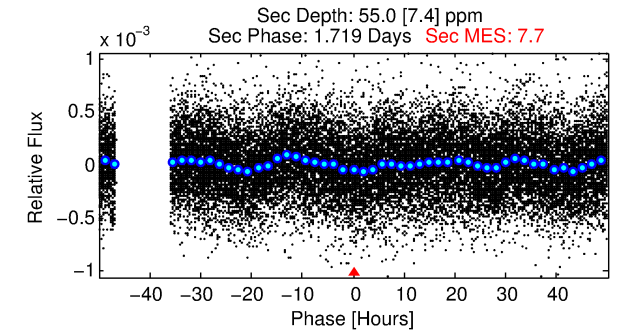
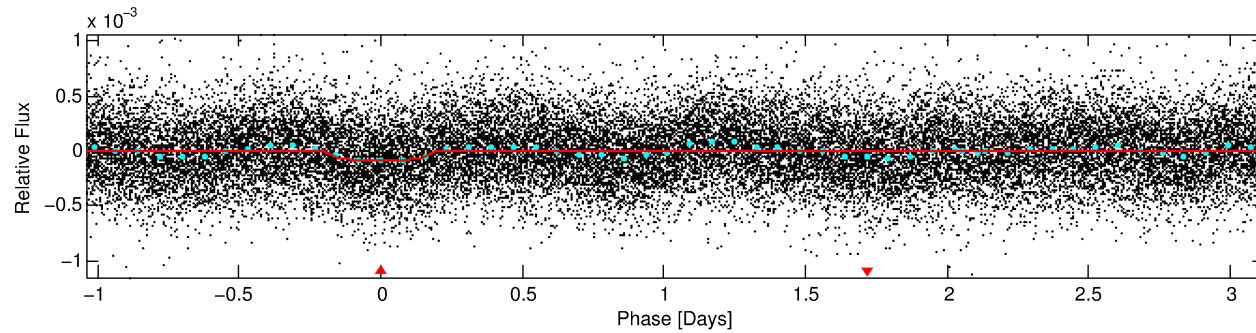
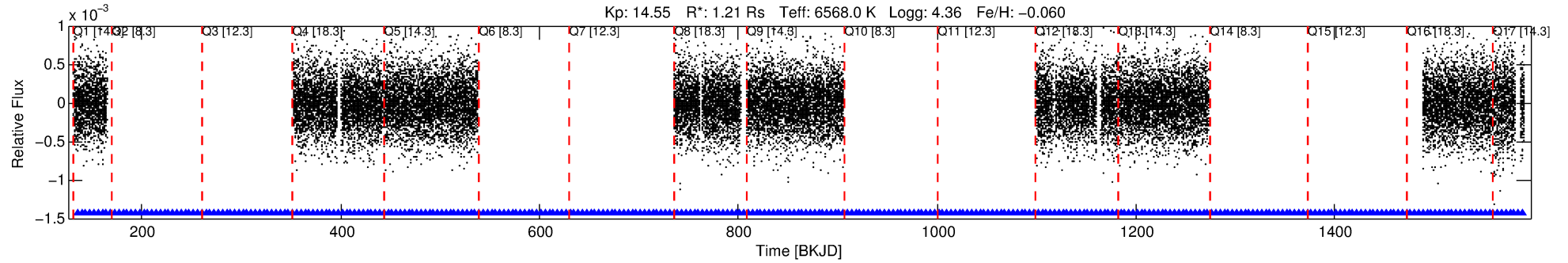
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006452607-01

No Significant Match Found

DV One-Page Summary

KIC: 6452607 Candidate: 1 of 1 Period: 4.165 d



DV Fit Results:

Period = 4.16461 [0.00008] d
Epoch = 135.3908 [0.0140] BKJD
Rp/R* = 0.0103 [0.0009]
a/R* = 1.43 [0.31]
b = 0.96 [0.03]
Seff = 831.68 [316.10]
Teff = 1369 [130] K
Rp = 1.36 [0.43] Re
a = 0.0542 [0.0134] AU
Ag = 47.83 [19.61] [2.39σ]
Teffp = 5568 [376] K [10.55σ]

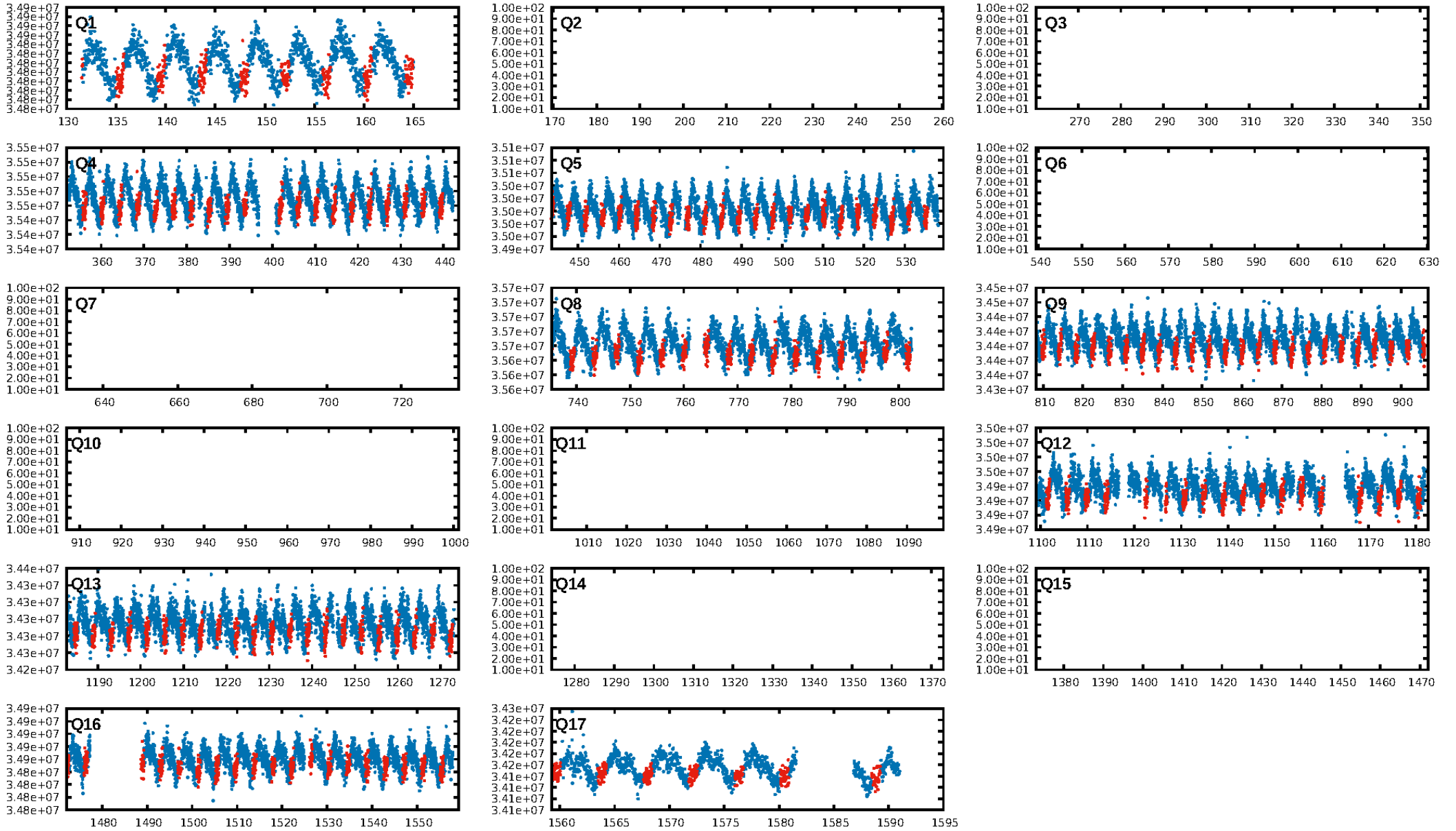
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.00e-20
RollingBand-fgt: 1.00 [140/140]
GhostDiagnostic-chr: 0.8964
Centroid-sig: 0.0%
Centroid-so: 2.466 arcsec [2.65σ]
OotOffset-rm: 0.286 arcsec [1.01σ]
KicOffset-rm: 0.370 arcsec [1.32σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

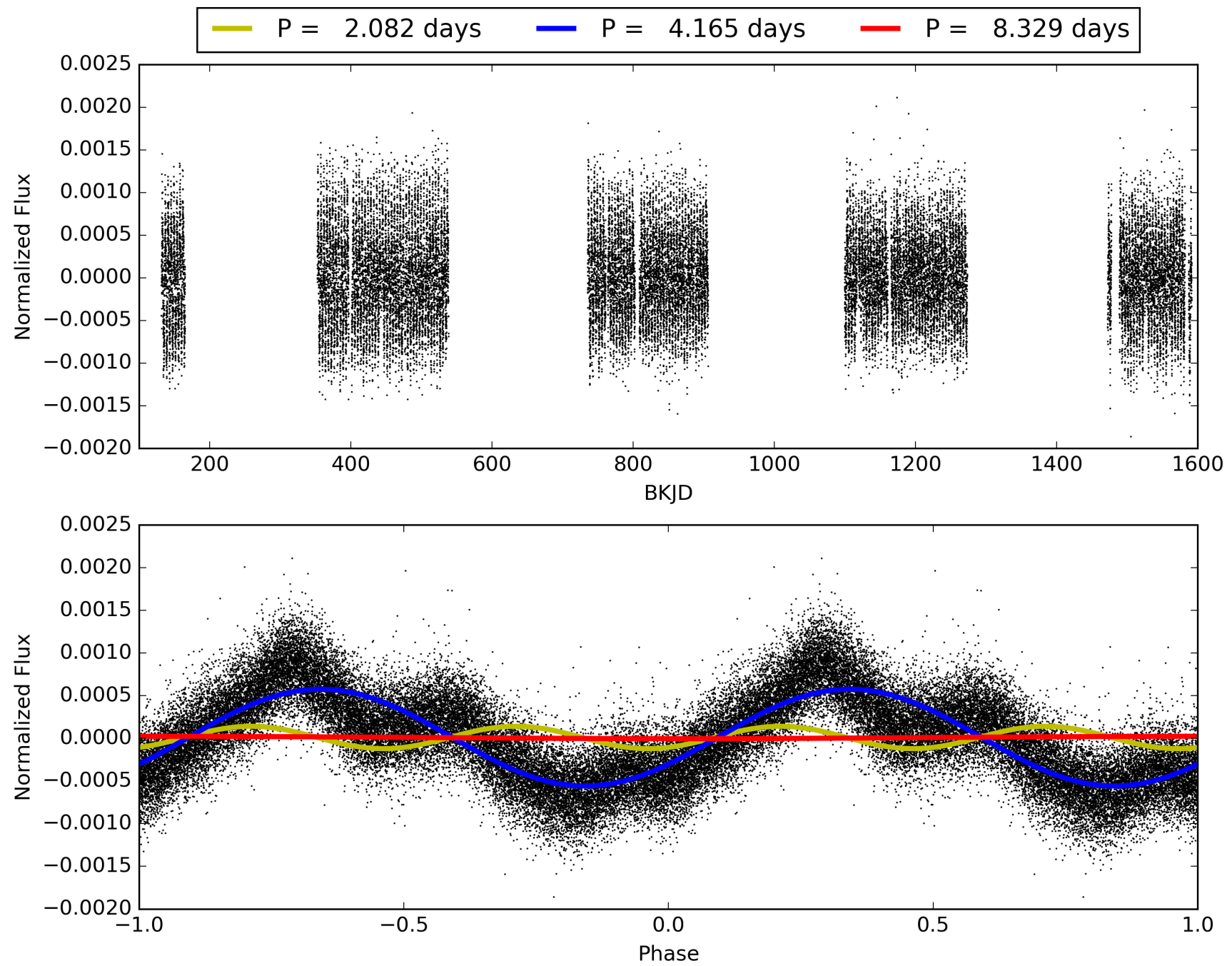
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:12:39 Z

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

TCE 006452607-01, PDC Light Curves

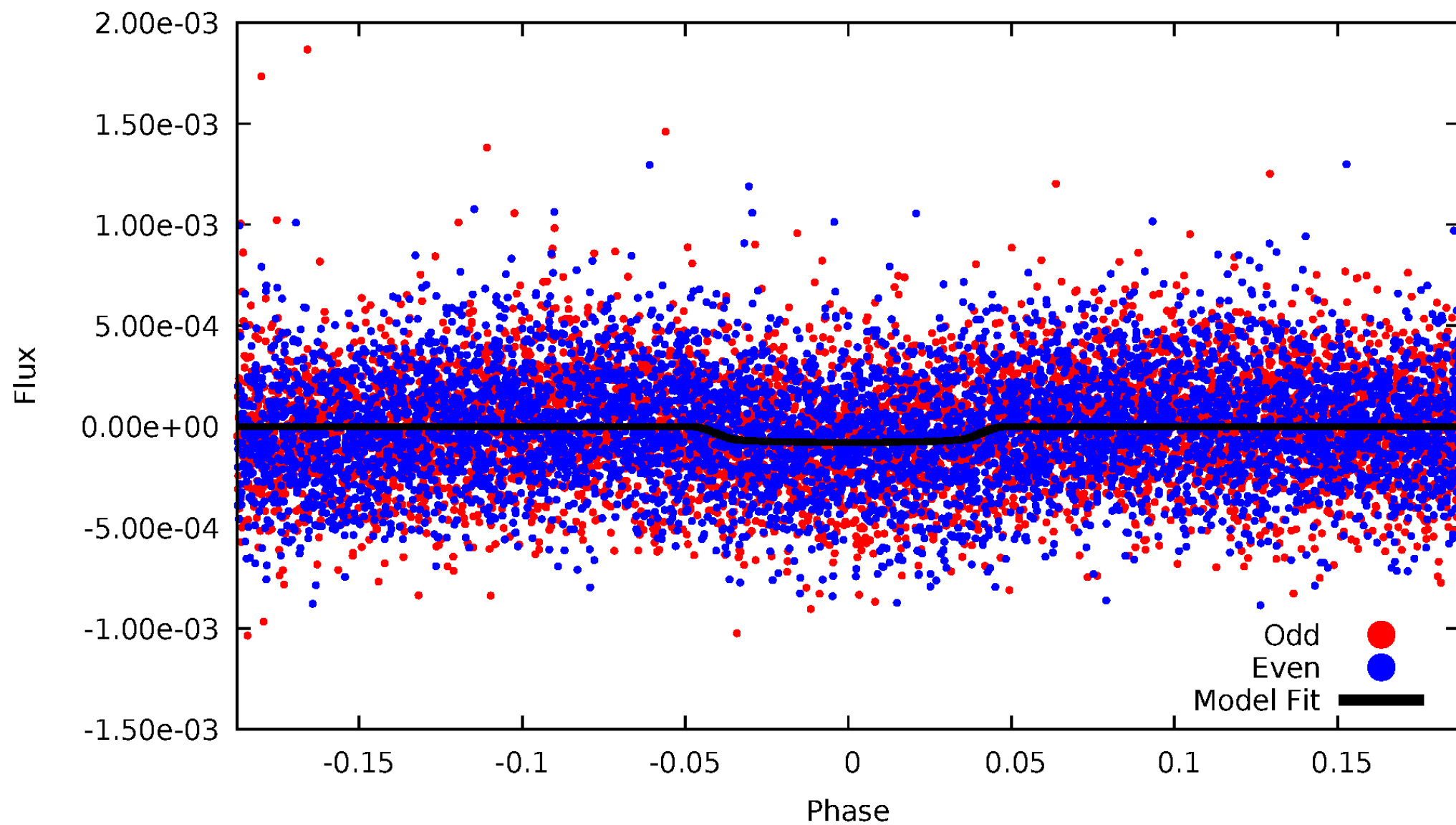


TCE 006452607-01



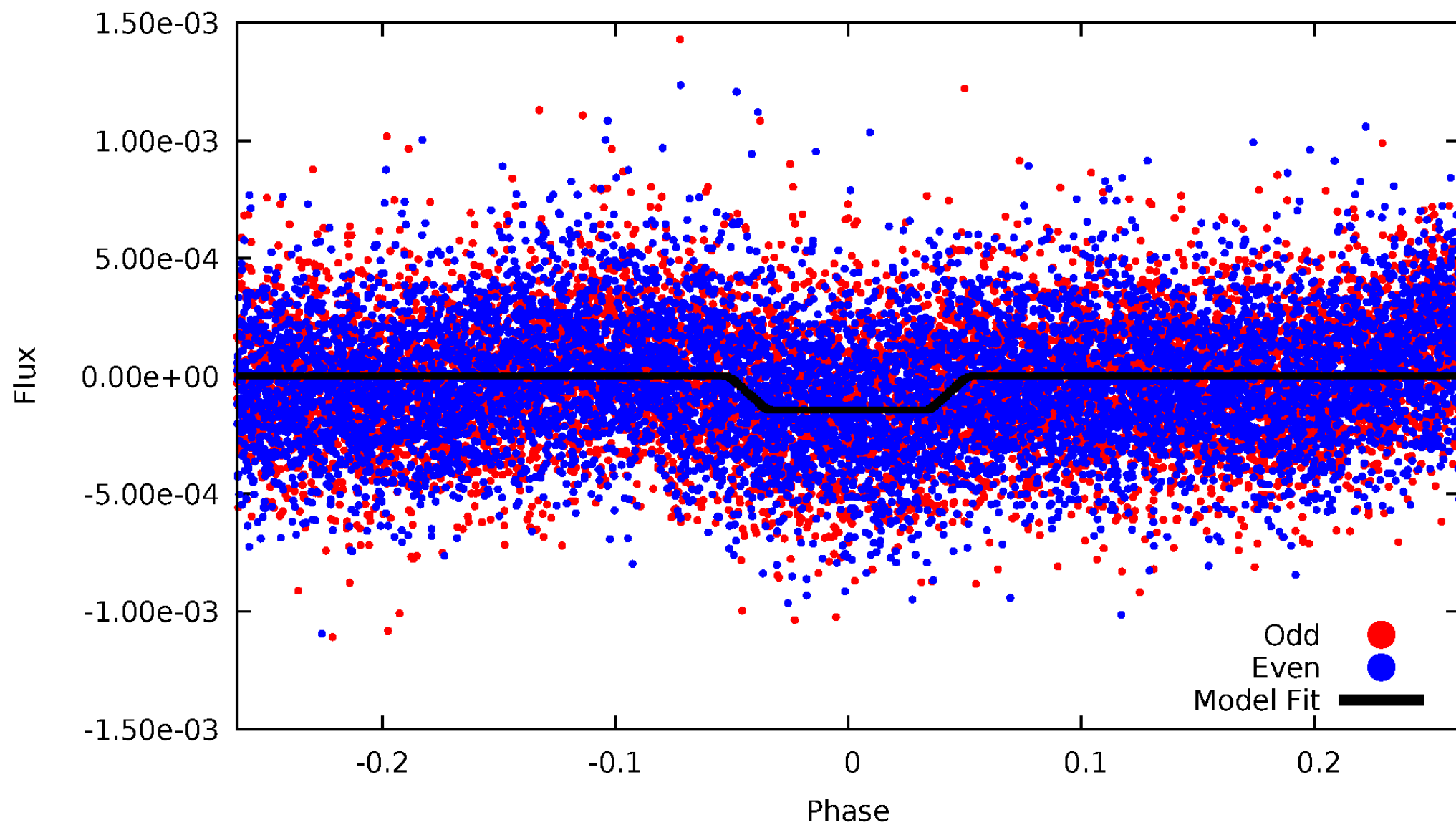
DV Odd/Even

TCE 006452607-01



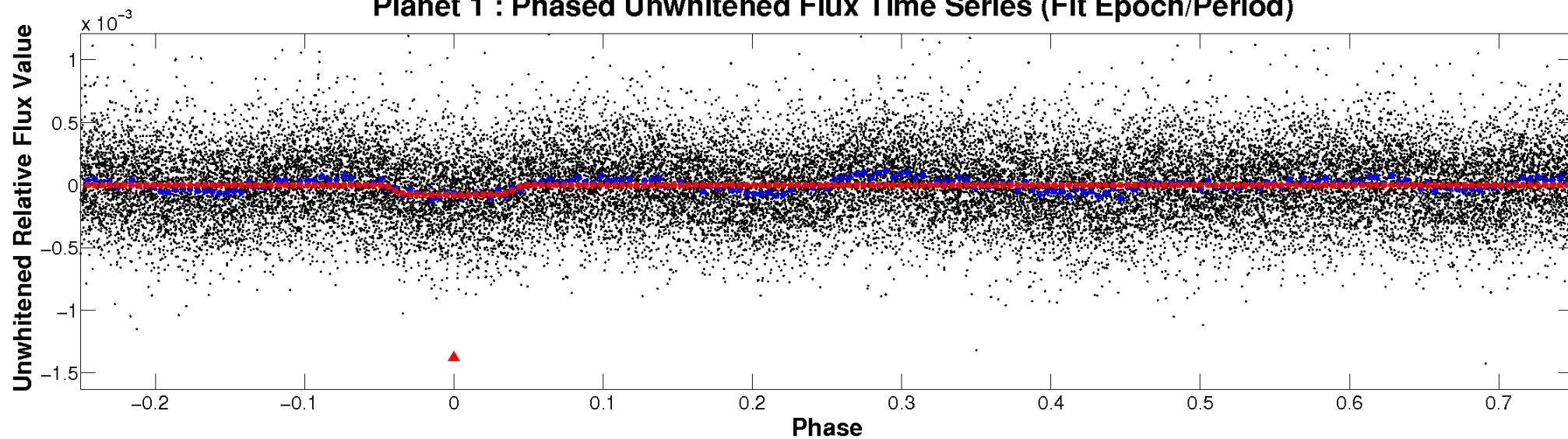
ALT Odd/Even

TCE 006452607-01

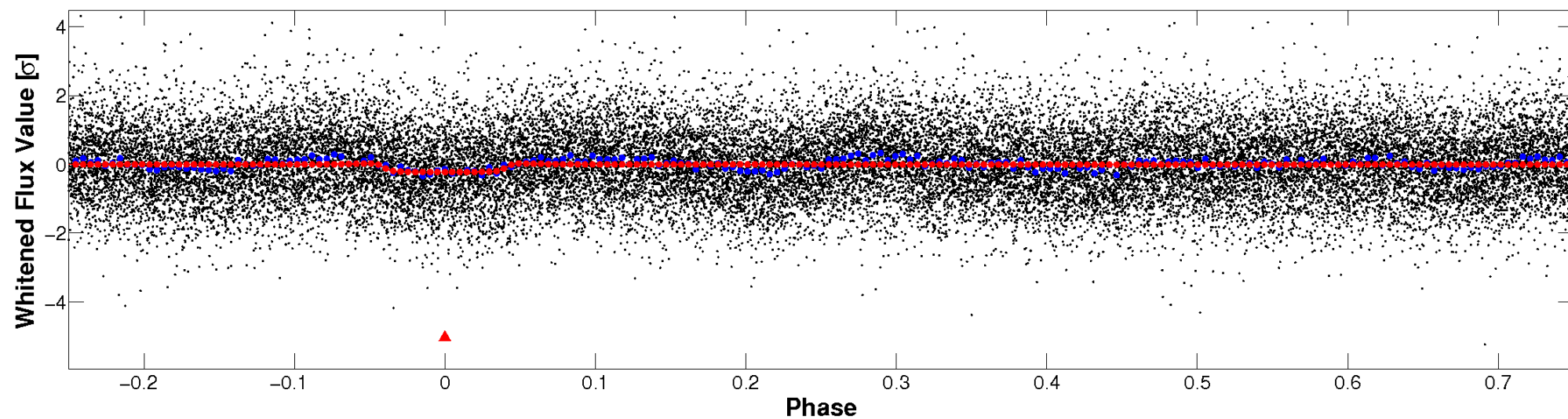


Non-Whitened Vs. Whitened Light Curve

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

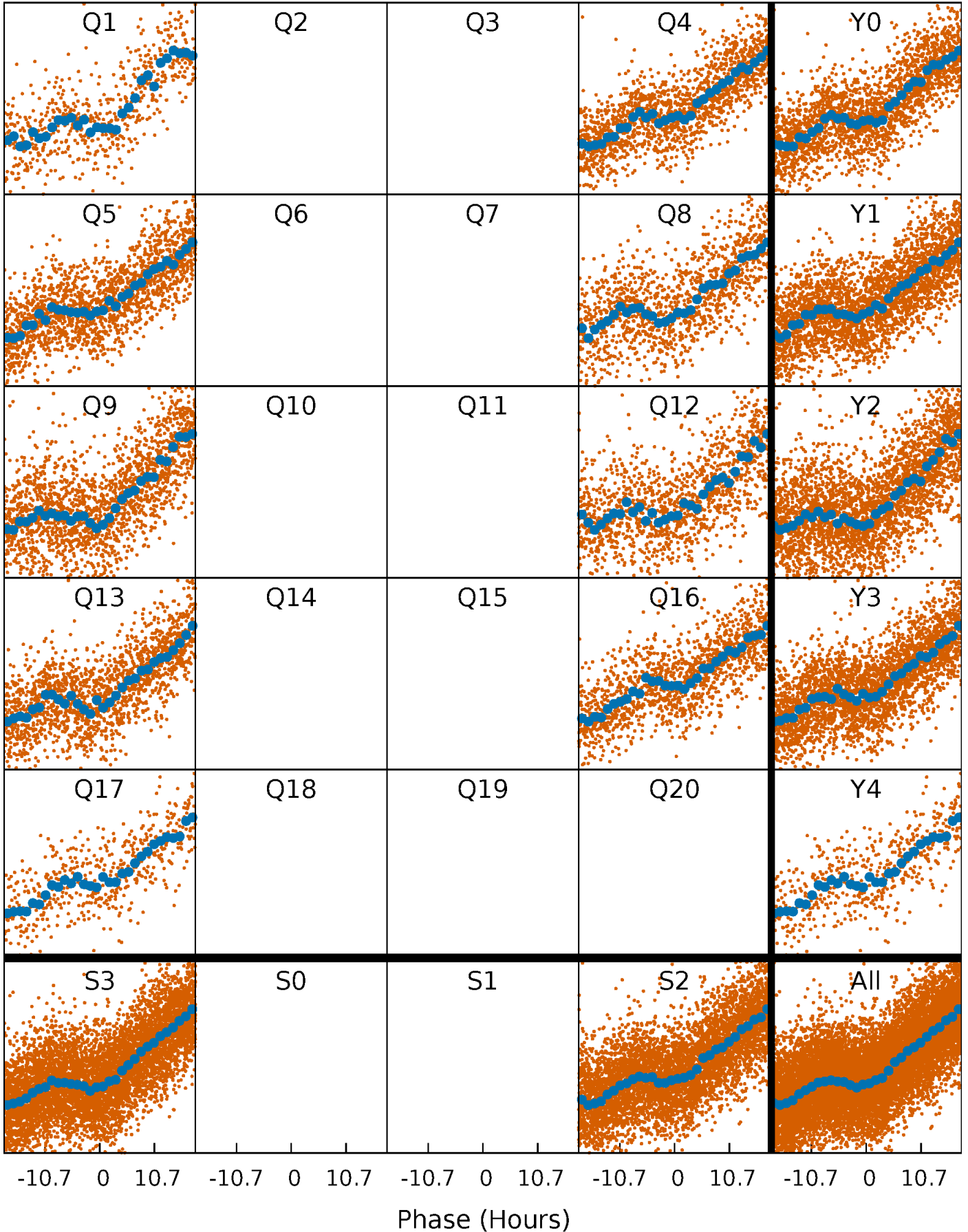


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



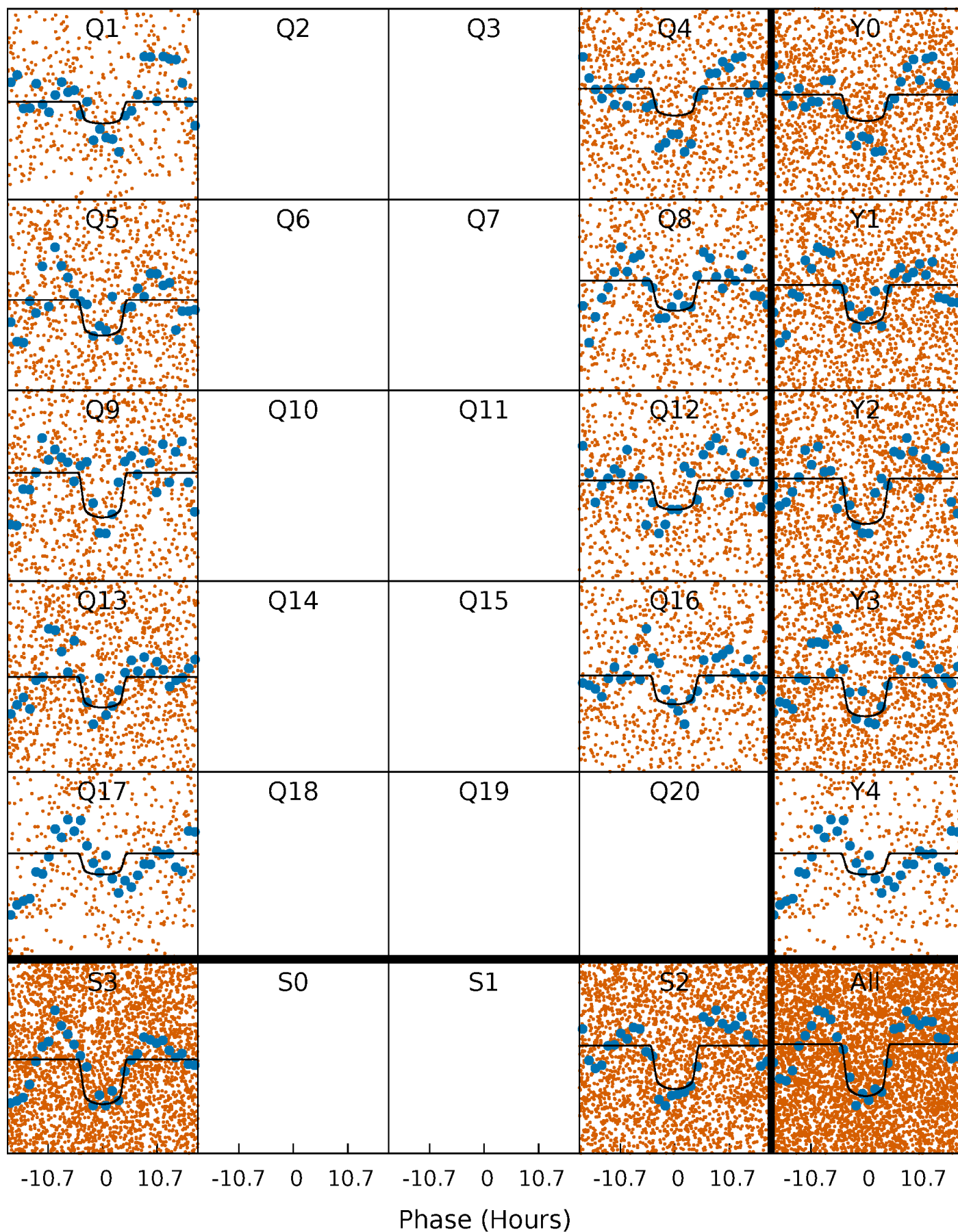
PDC Quarter-Phased Transit Curves

TCE 006452607-01 P= 4.164614 Days $T_0=135.390770$ (BKJD)



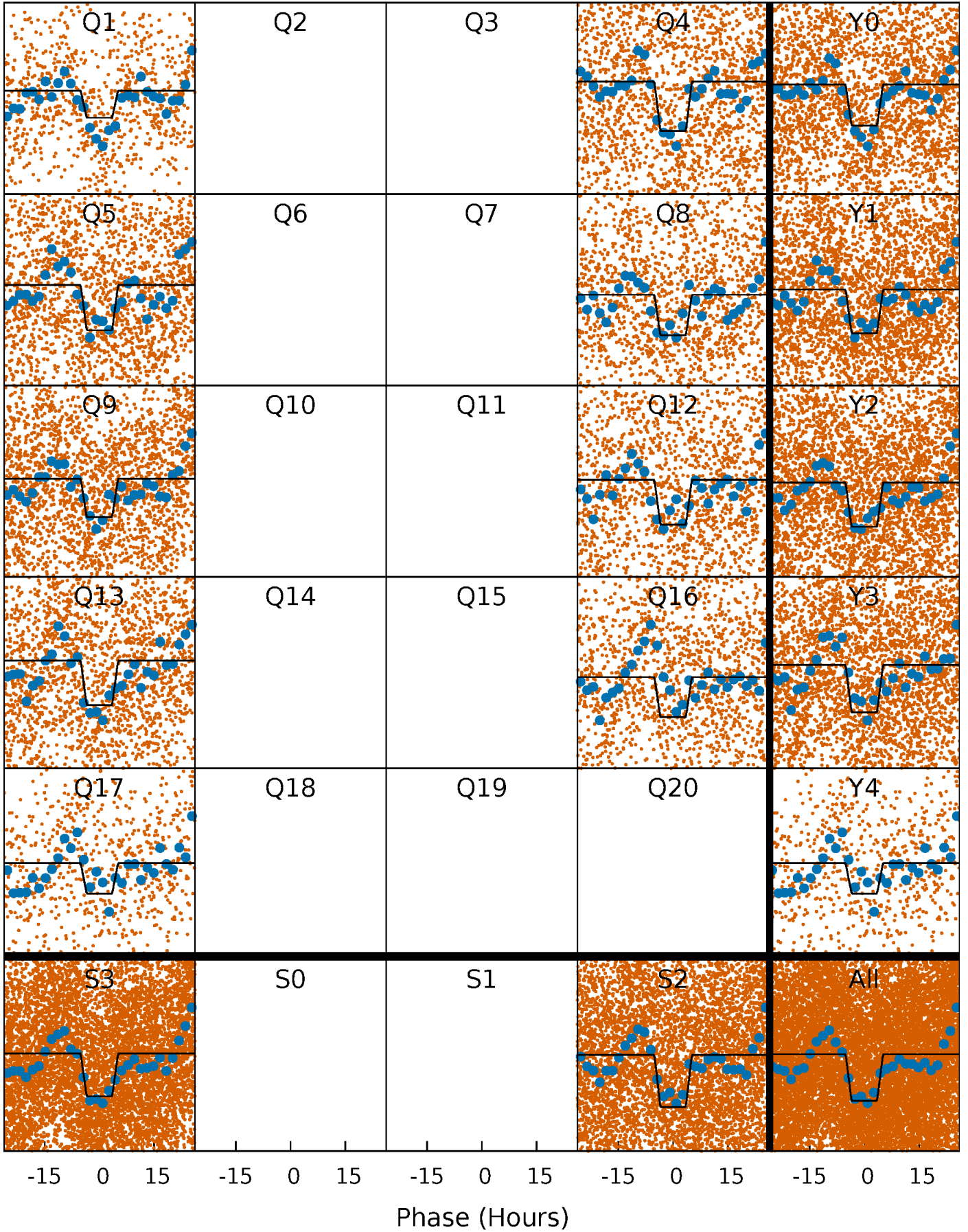
DV Quarter-Phased Transit Curves

TCE 006452607-01 P= 4.164614 Days $T_0=135.390770$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

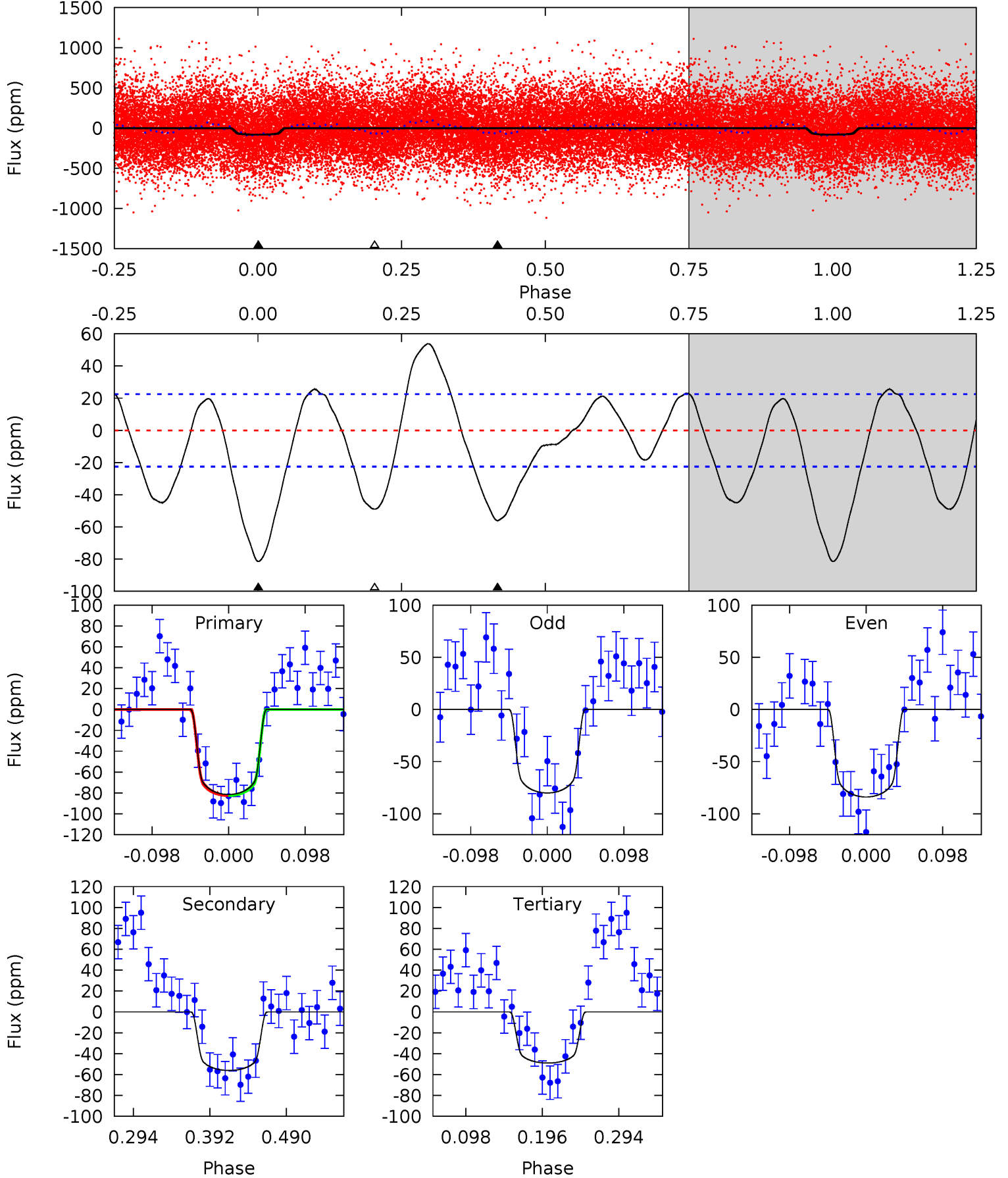
TCE 006452607-01 P= 4.164511 Days $T_0=135.464250$ (BKJD)



DV Model-Shift Uniqueness Test

006452607-01, P = 4.164614 Days, E = 131.226156 Days

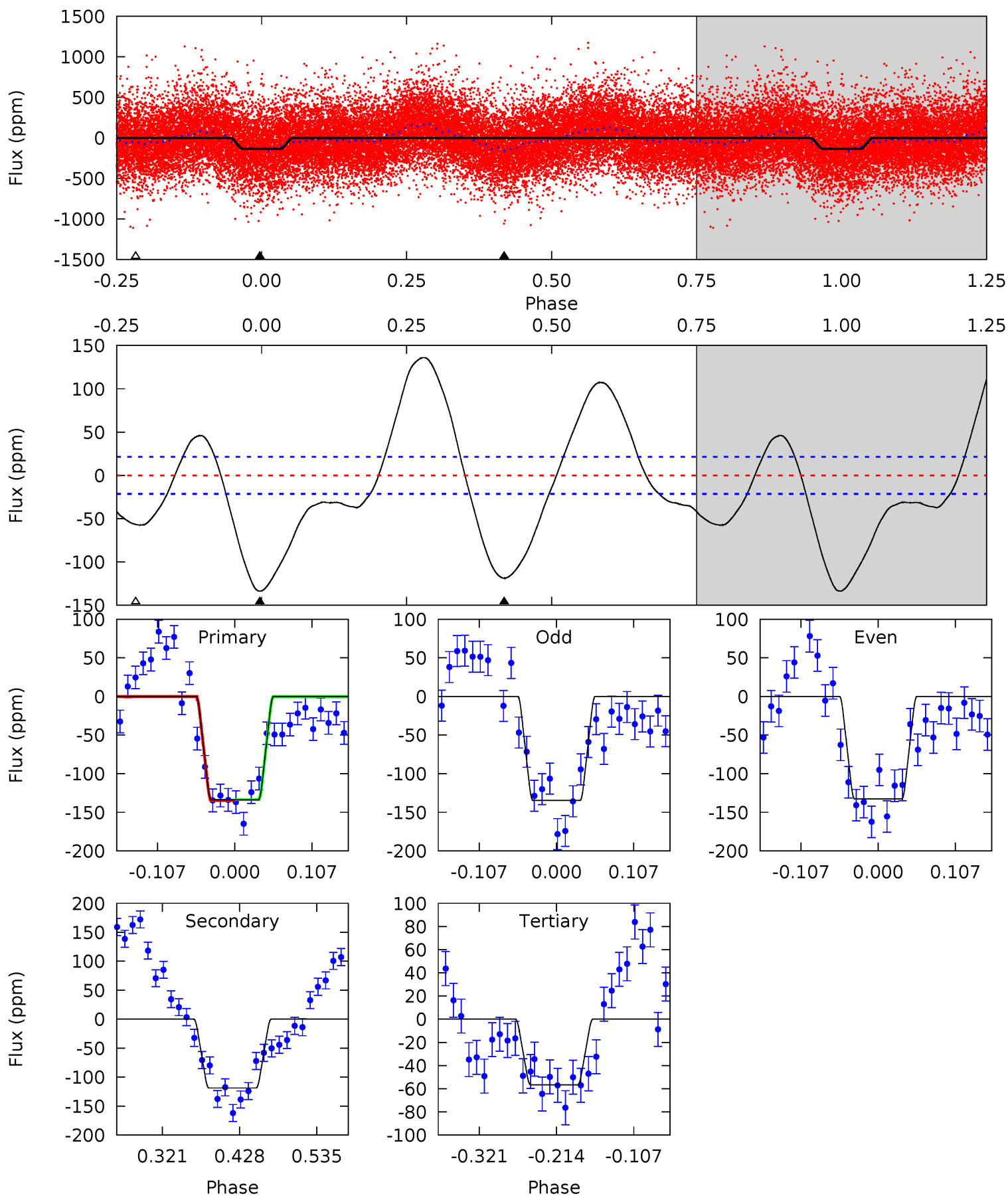
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	11.4	9.95	0	4.57	1.65	5.35	6.59	16.5	1.44	11.4	0.39	1.23	0.40	0.00



Alt Model-Shift Uniqueness Test

006452607-01, P = 4.164511 Days, E = 131.299739 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.5	25.3	12.1	0	4.55	1.61	13.0	16.4	28.5	13.3	25.3	0.19	0.96	0.50	0.11



Stellar Parameters For KIC 006452607

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6568^{+164}_{-258}	$4.360^{+0.078}_{-0.182}$	$-0.060^{+0.250}_{-0.350}$	$1.211^{+0.371}_{-0.159}$	$1.229^{+0.174}_{-0.174}$	$0.975^{+0.331}_{-0.478}$
	+2%/-4%	+2%/-4%	+417%/-583%	+31%/-13%	+14%/-14%	+34%/-49%
Source	KIC0	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 006452607-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-56 ± 5	$1.40^{+0.24}_{-0.18}$	1937^{+139}_{-111}	5559^{+322}_{-294}	45^{+13}_{-11}
Alt.	-119 ± 5	$1.63^{+0.27}_{-0.20}$	1931^{+127}_{-102}	6208^{+332}_{-338}	72^{+20}_{-18}

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 $A_{obs} \gg 1.0$

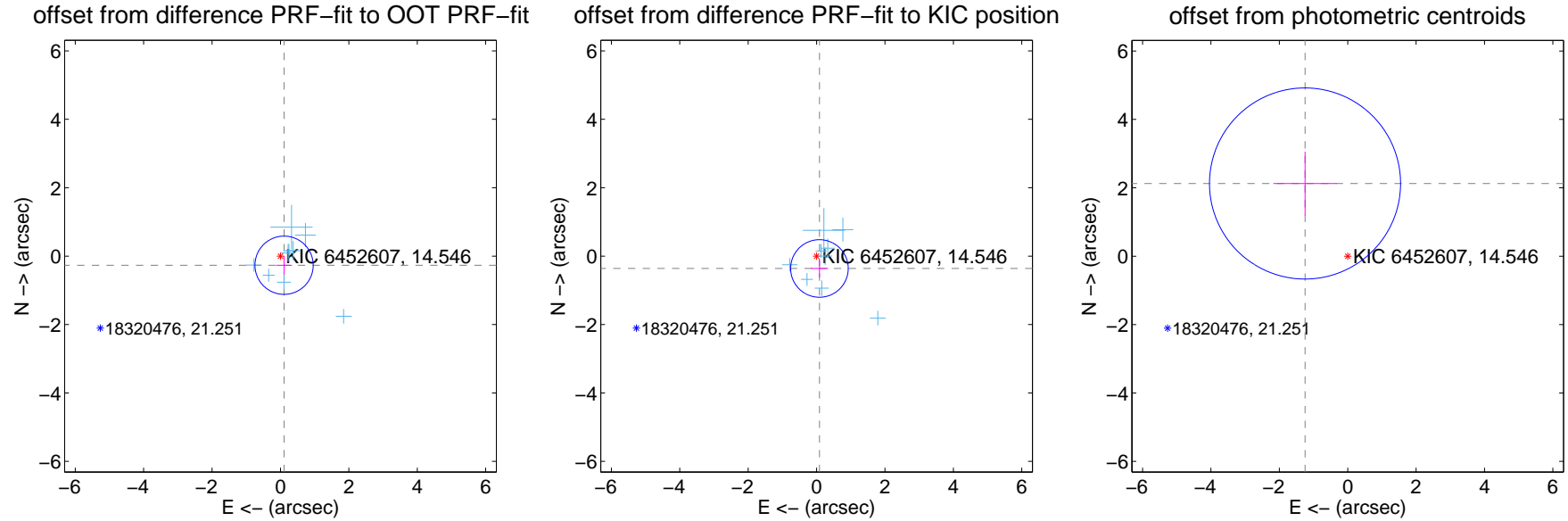
DV Centroid Data

Supplemental centroid analysis for 006452607-01. Kepler magnitude: 14.55. Transit SNR 10.26

There are 9 quarters with good PRF difference image offsets

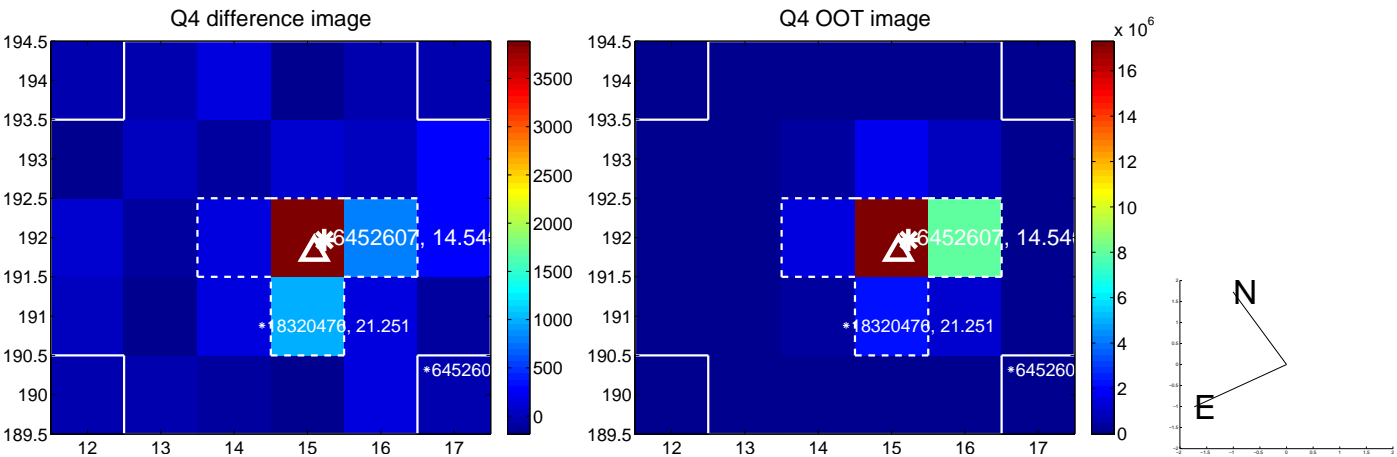
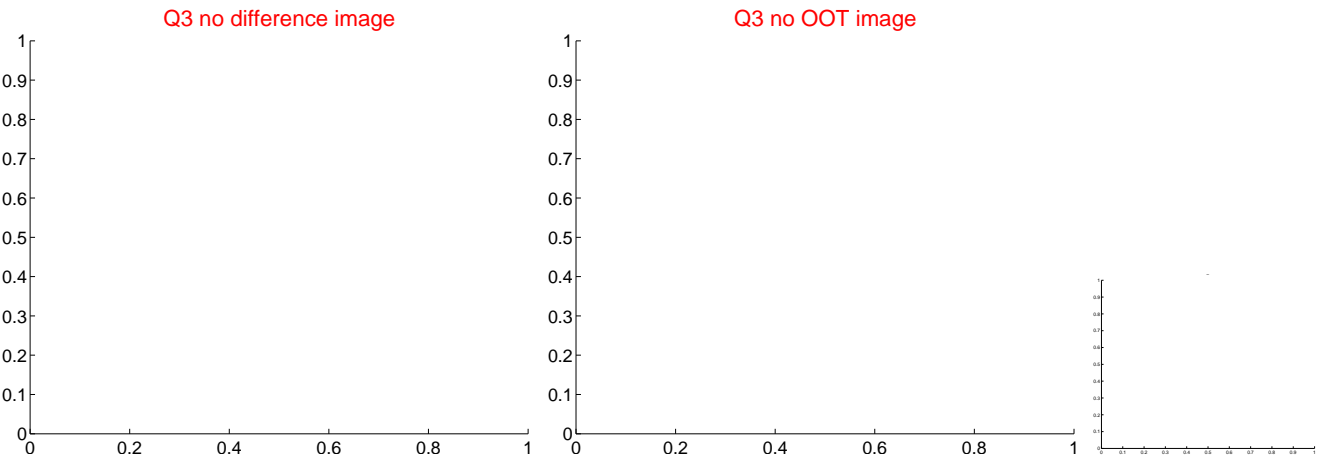
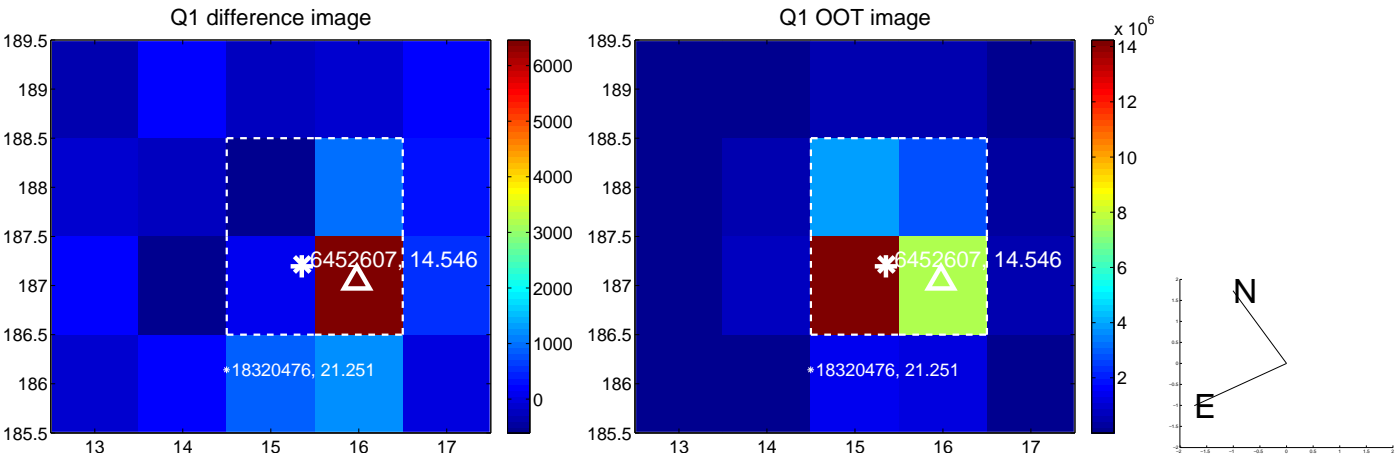
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.286 ± 0.284	1.01	-0.106 ± 0.229	-0.266 ± 0.266
PRF-fit source offset from KIC position	0.370 ± 0.281	1.32	-0.084 ± 0.256	-0.361 ± 0.262
photometric centroid source offset	2.47 ± 0.93	2.65	1.25 ± 0.93	2.13 ± 0.93

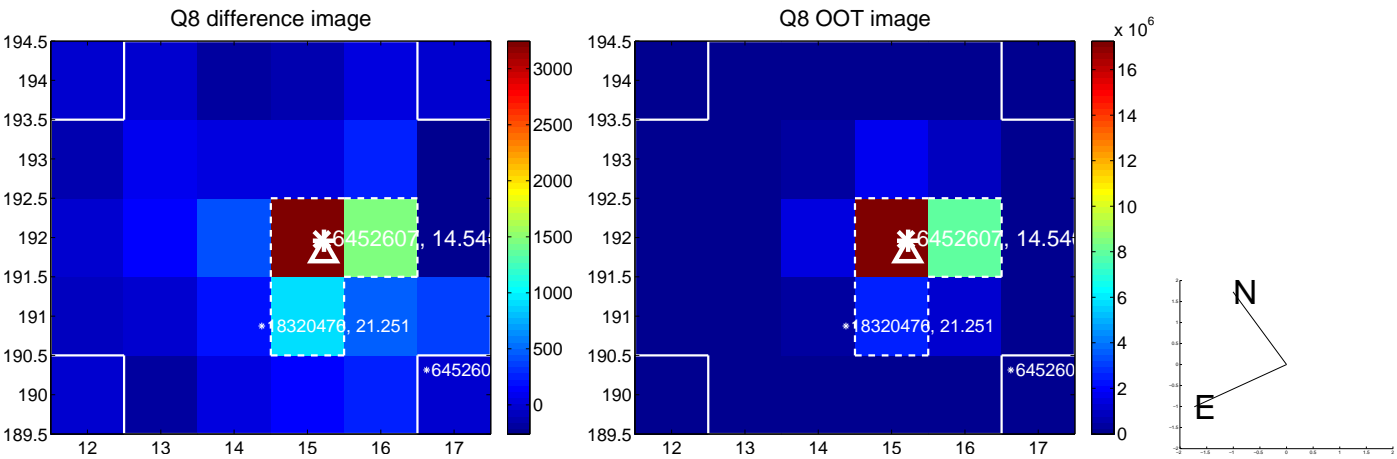
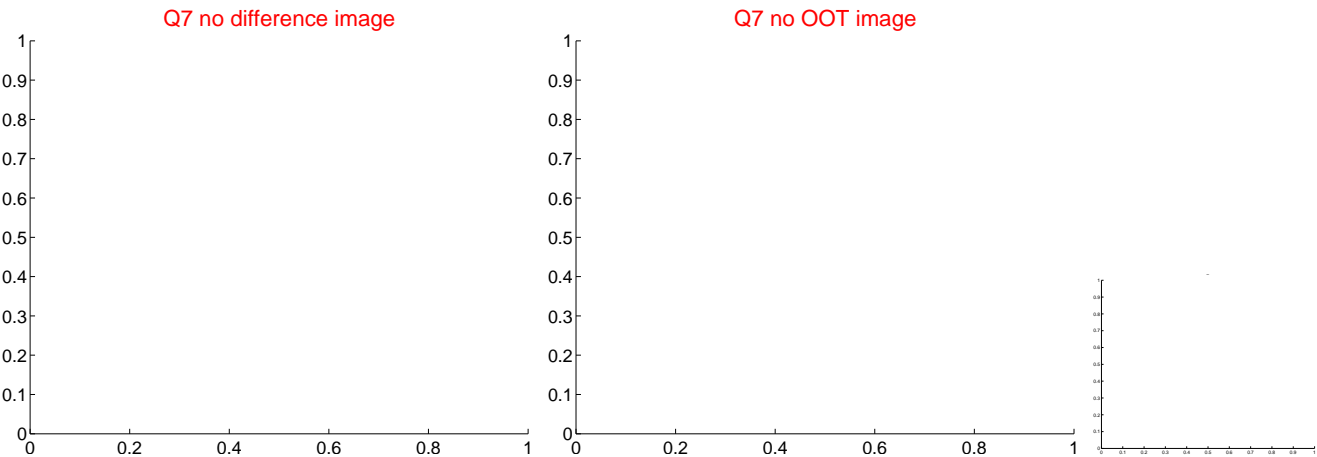
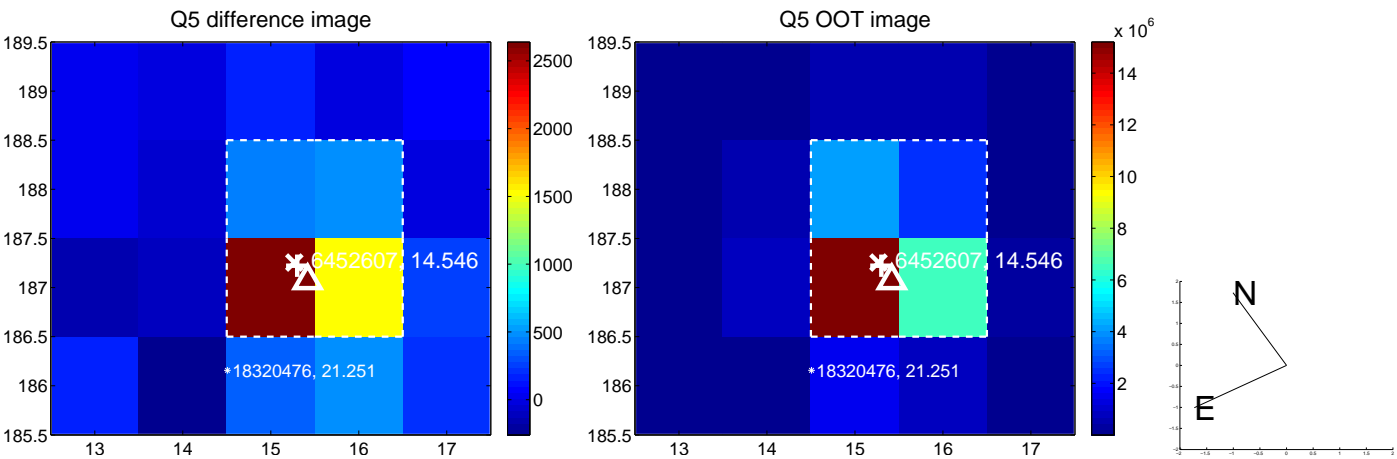


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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.

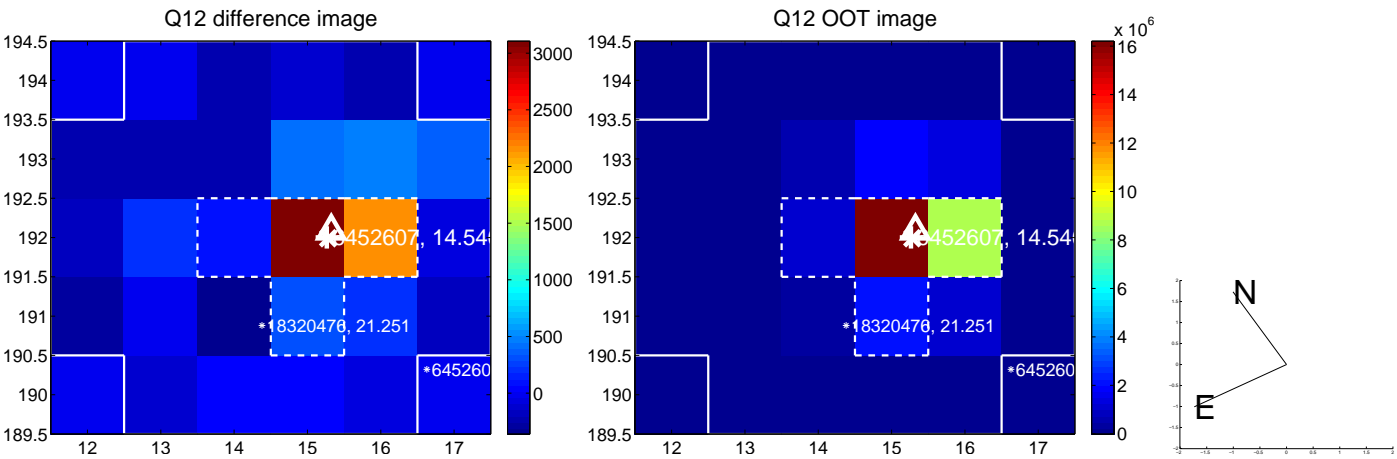
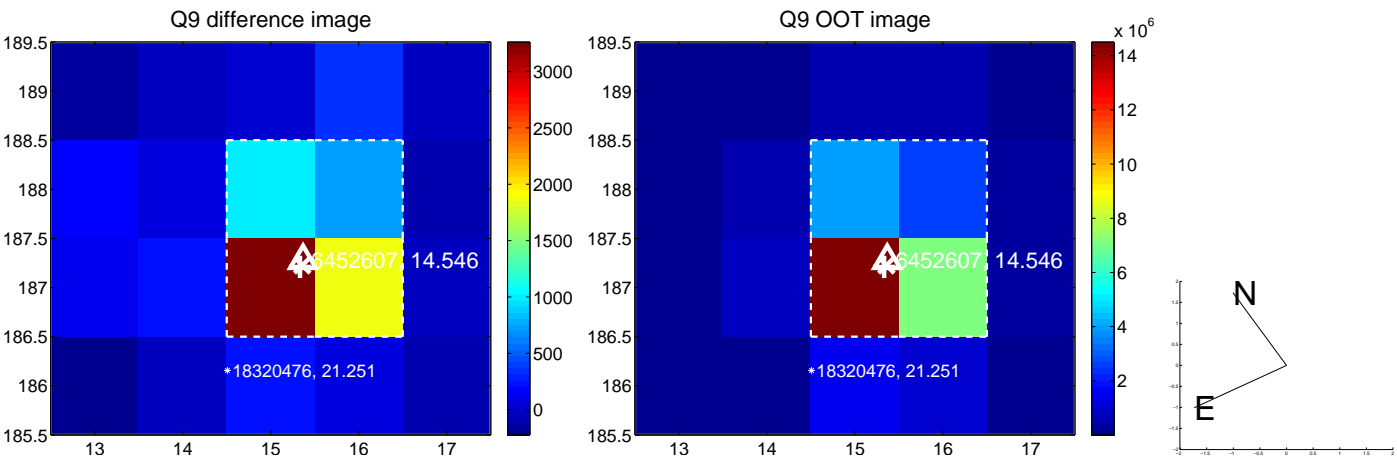
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



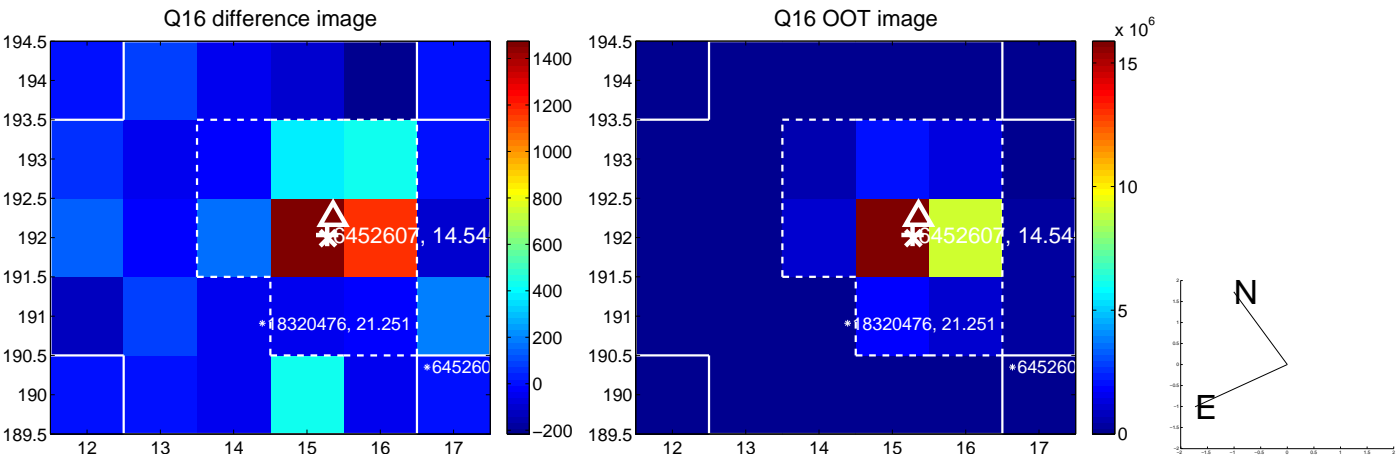
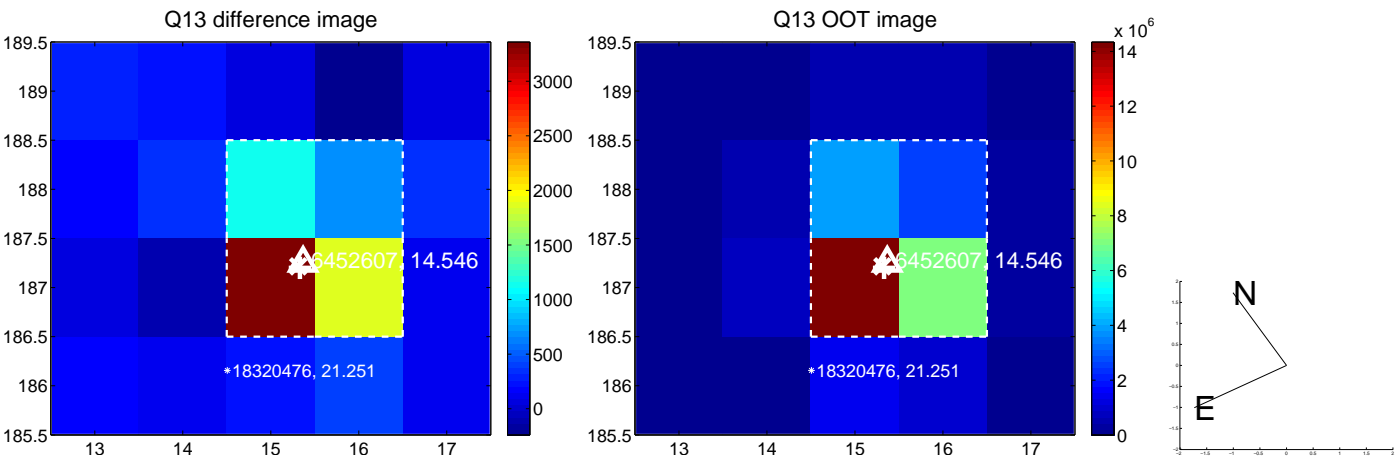
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



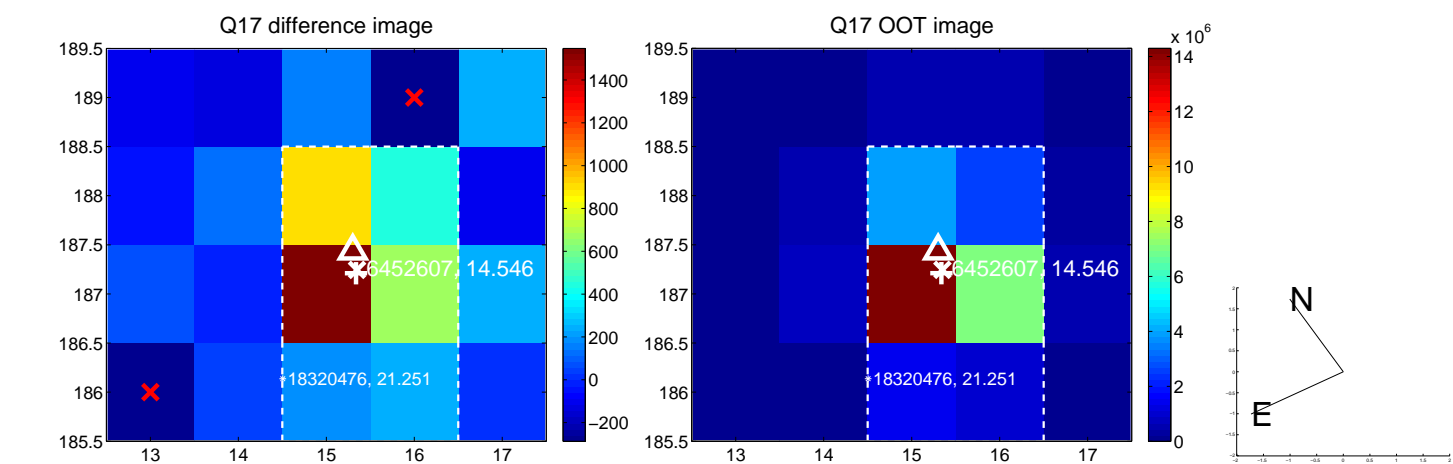
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



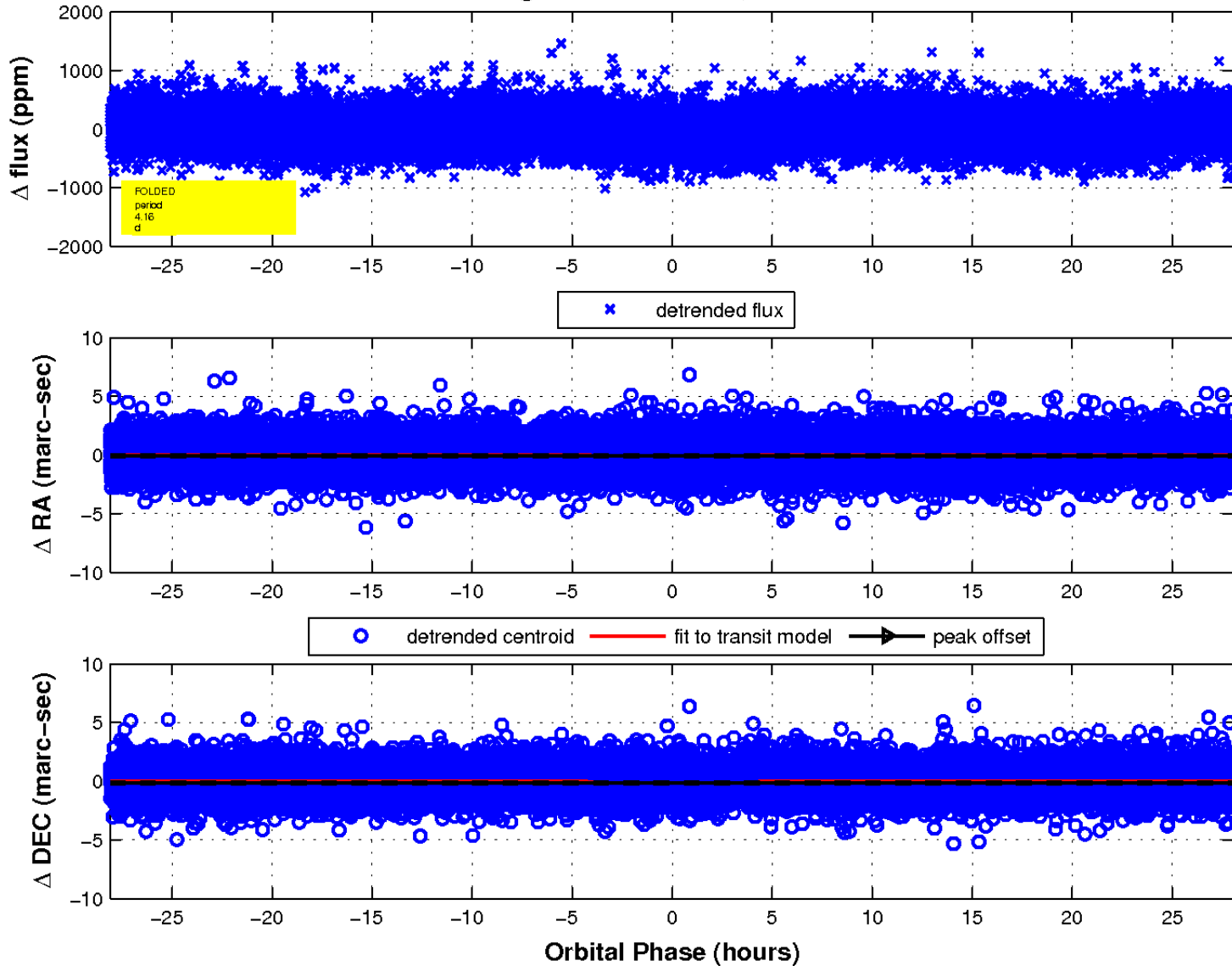
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

