

KIC 004282191

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})
004282191-01	OBS	3439.01	41.708269	153.538434	313.6	8.506	15.7	15.3	1.14	6434	2.18	32.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004282191-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

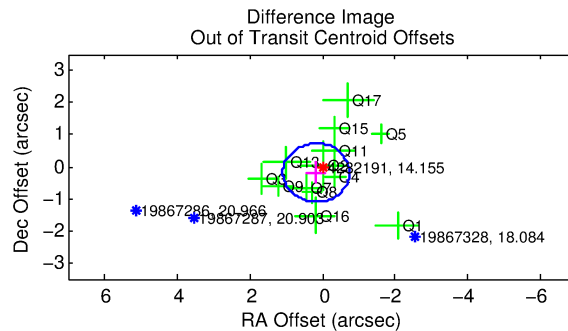
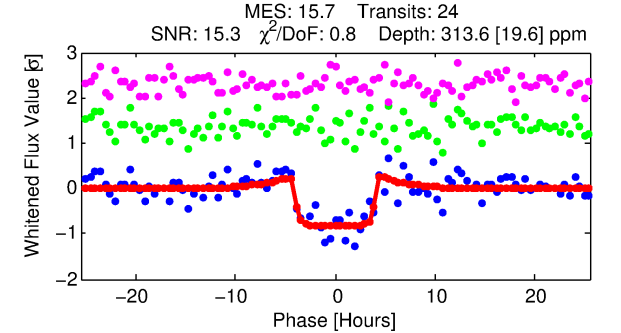
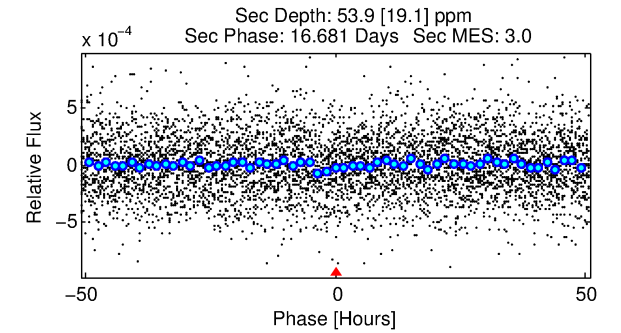
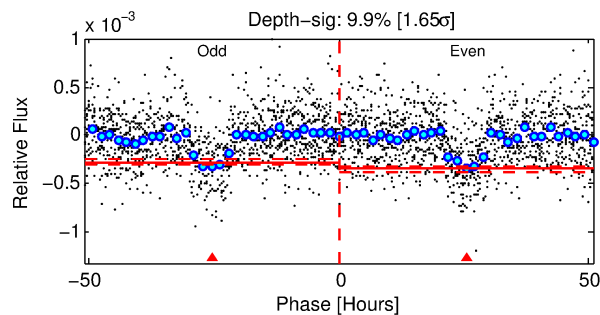
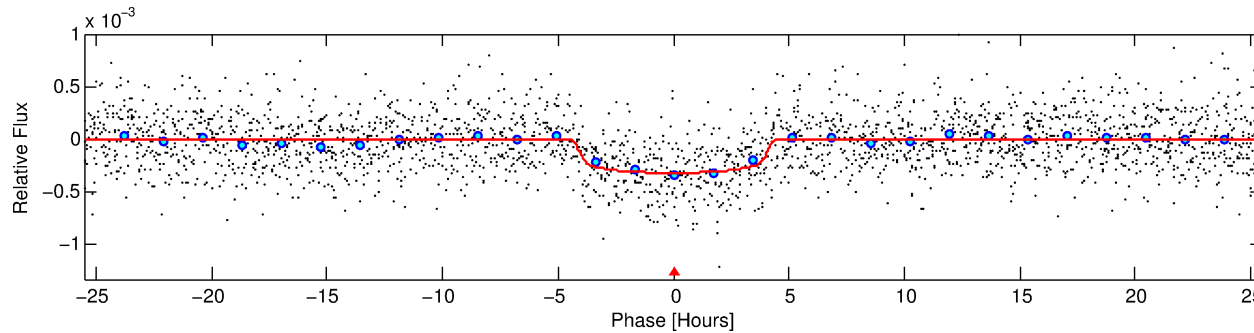
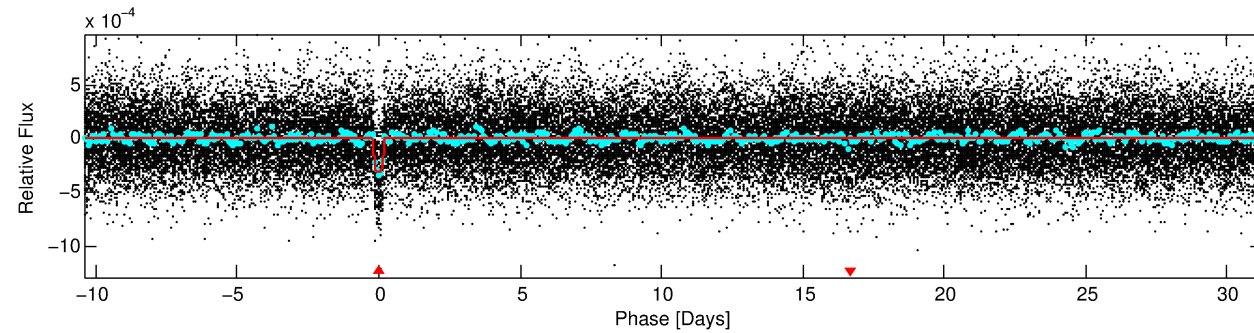
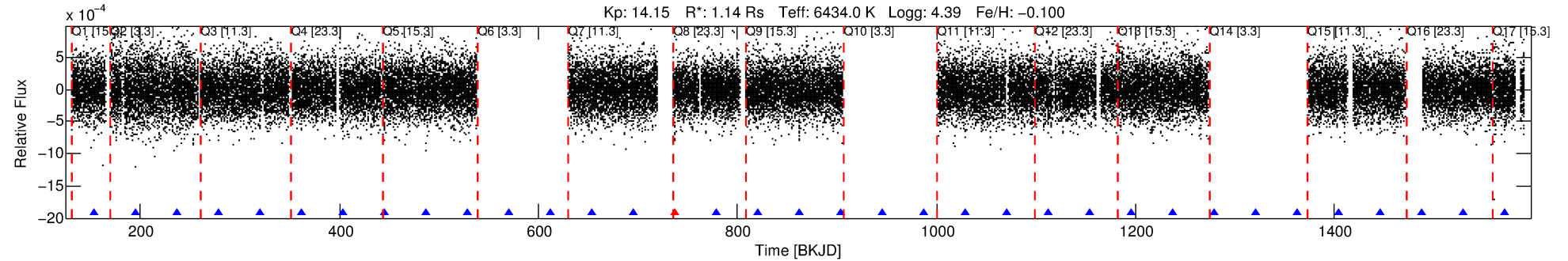
Ephemeris Match Information For 004282191-01

No Significant Match Found

DV One-Page Summary

KIC: 4282191 Candidate: 1 of 1 Period: 41.708 d

KOI: K03439.01 Corr: 0.992



DV Fit Results:

Period = 41.70827 [0.00035] d
Epoch = 153.5384 [0.0062] BKJD
Rp/R* = 0.0176 [0.0035]
a/R* = 26.07 [27.69]
b = 0.74 [0.65]
Seff = 32.31 [11.67]
Teff = 608 [55] K
Rp = 2.18 [0.77] Re
a = 0.2481 [0.0589] AU
Ag = 383.43 [243.32] [1.57σ]
Teffp = 4159 [575] K [6.15σ]

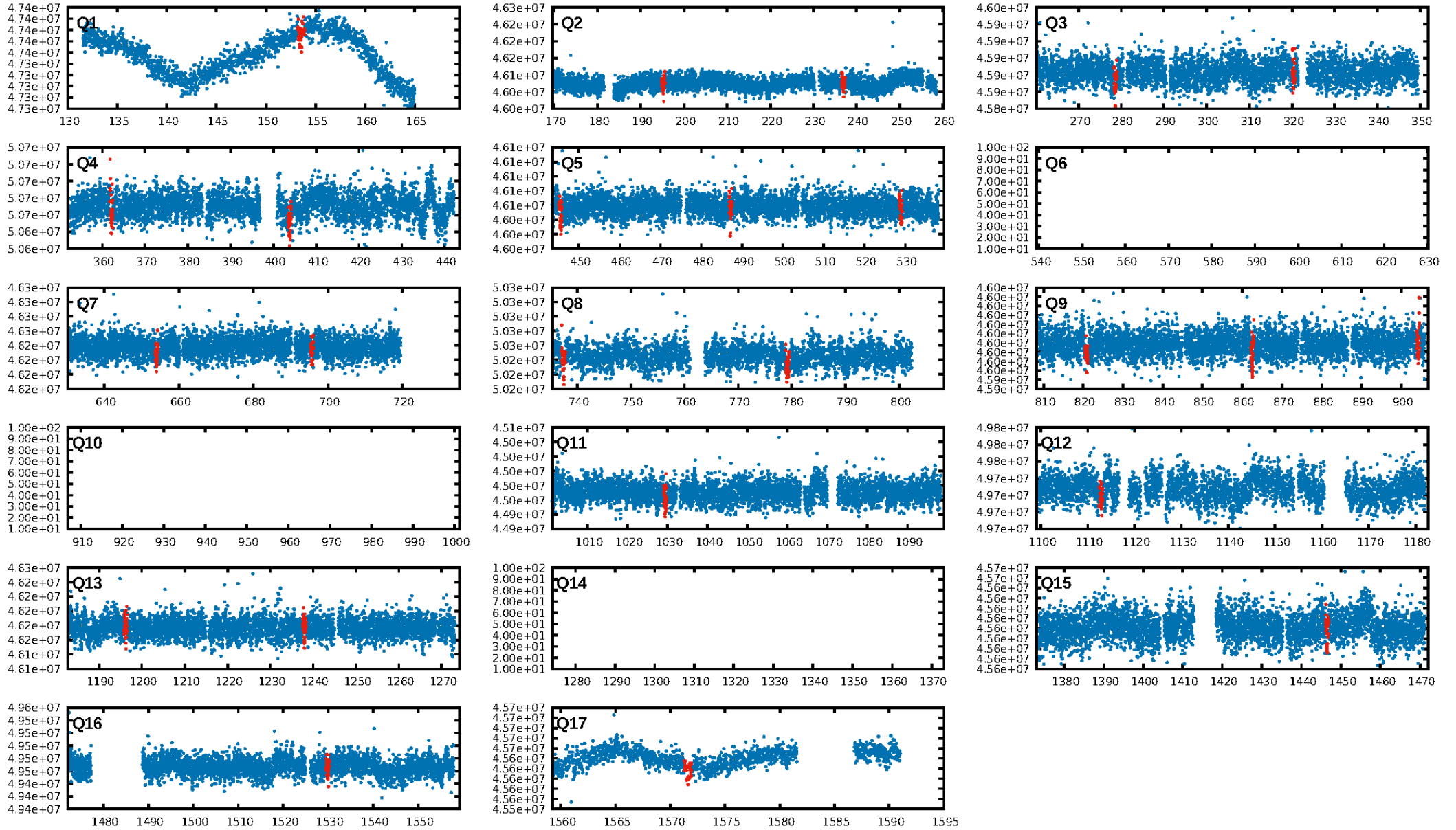
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.17e-54
RollingBand-fgt: 0.95 [21/22]
GhostDiagnostic-chr: 6.83
Centroid-sig: 20.6%
Centroid-so: 0.745 arcsec [1.10σ]
OotOffset-rm: 0.259 arcsec [0.85σ]
KicOffset-rm: 0.113 arcsec [0.39σ]
OotOffset-st: 1/4/3/5 [13]
KicOffset-st: 1/4/3/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

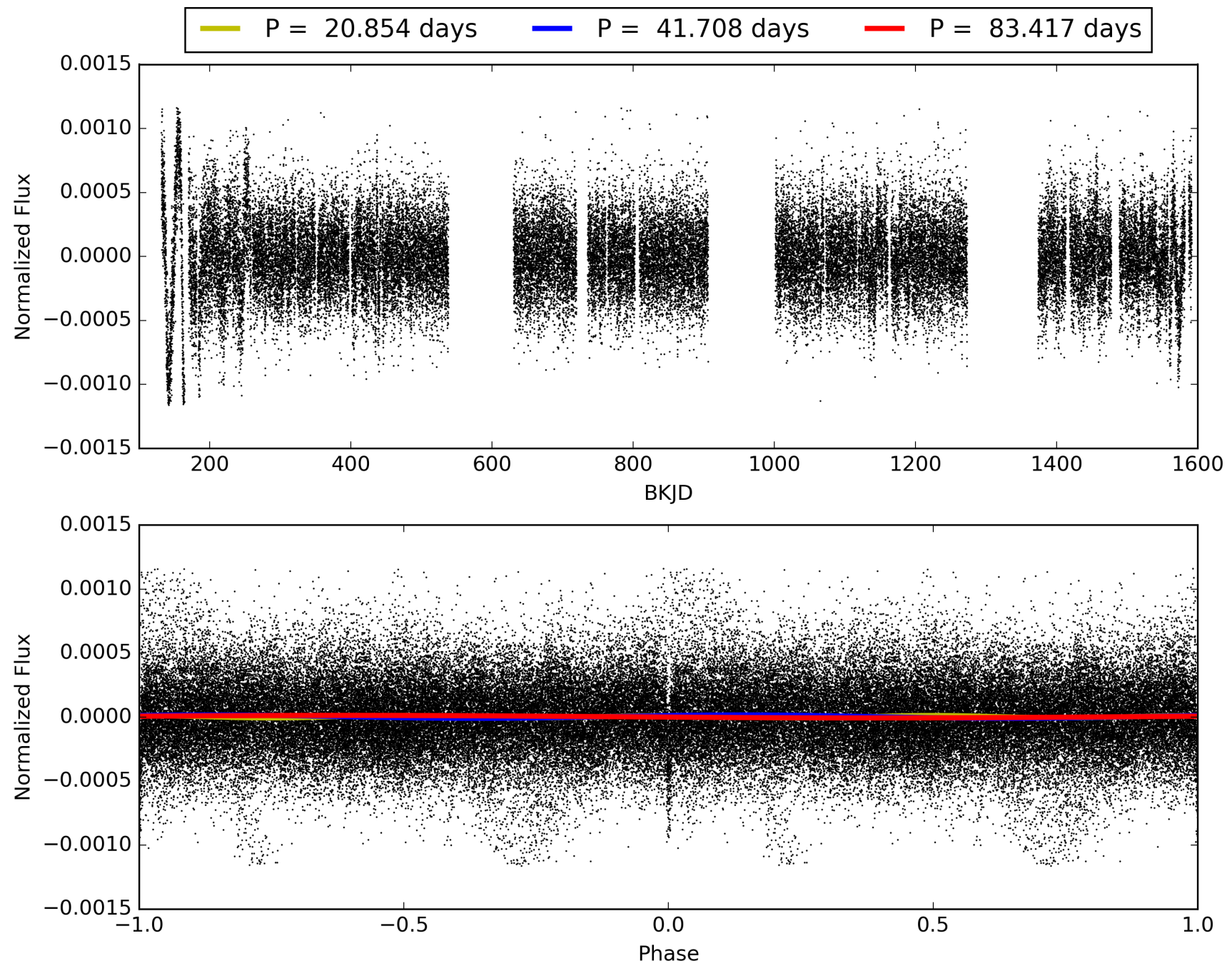
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:18:40 Z

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

TCE 004282191-01, PDC Light Curves

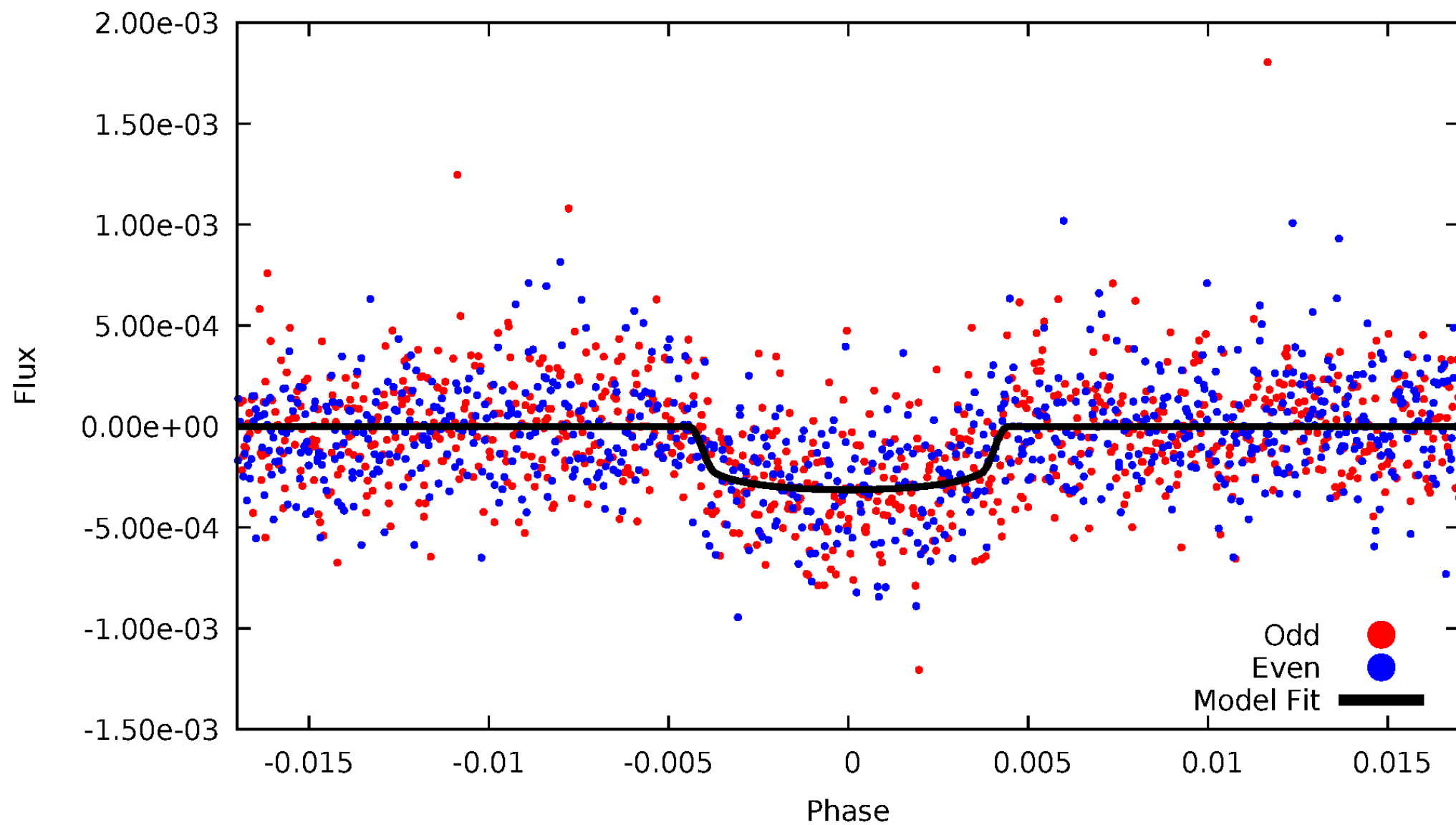


TCE 004282191-01



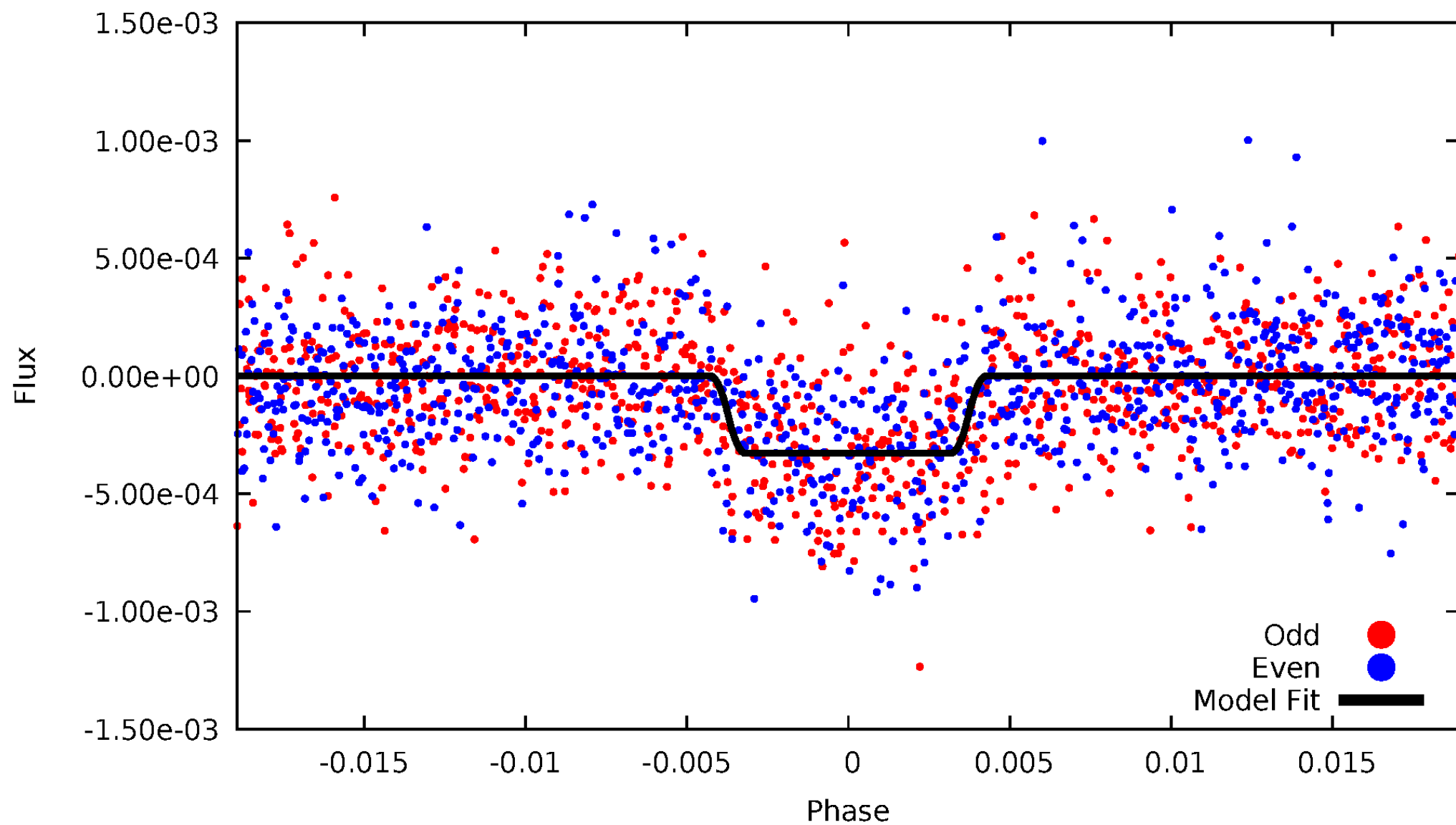
DV Odd/Even

TCE 004282191-01

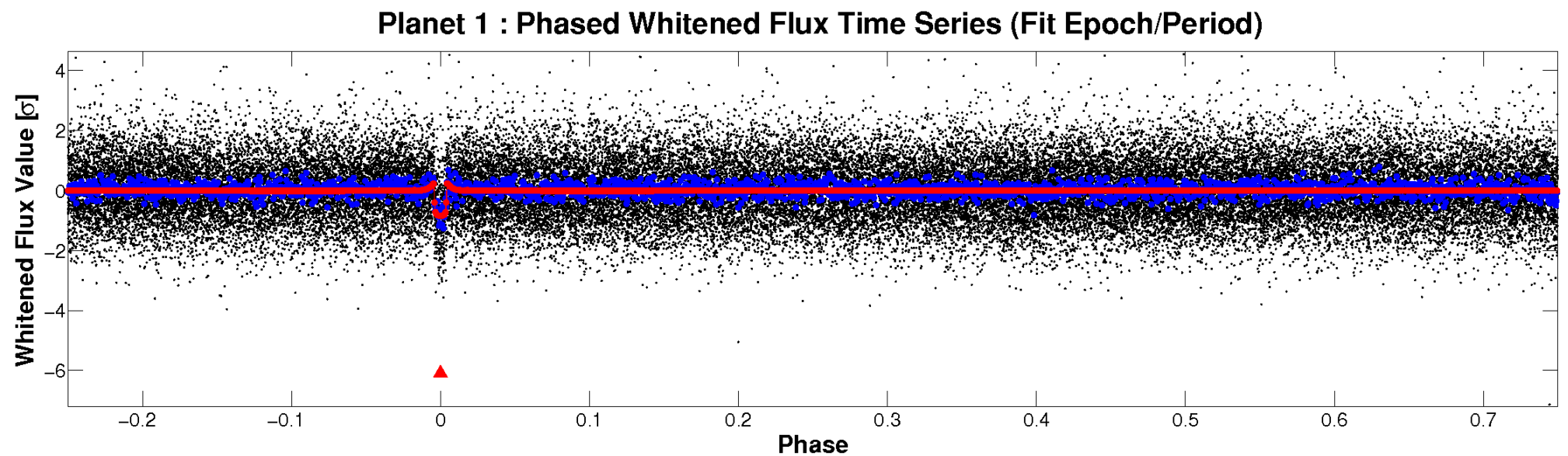
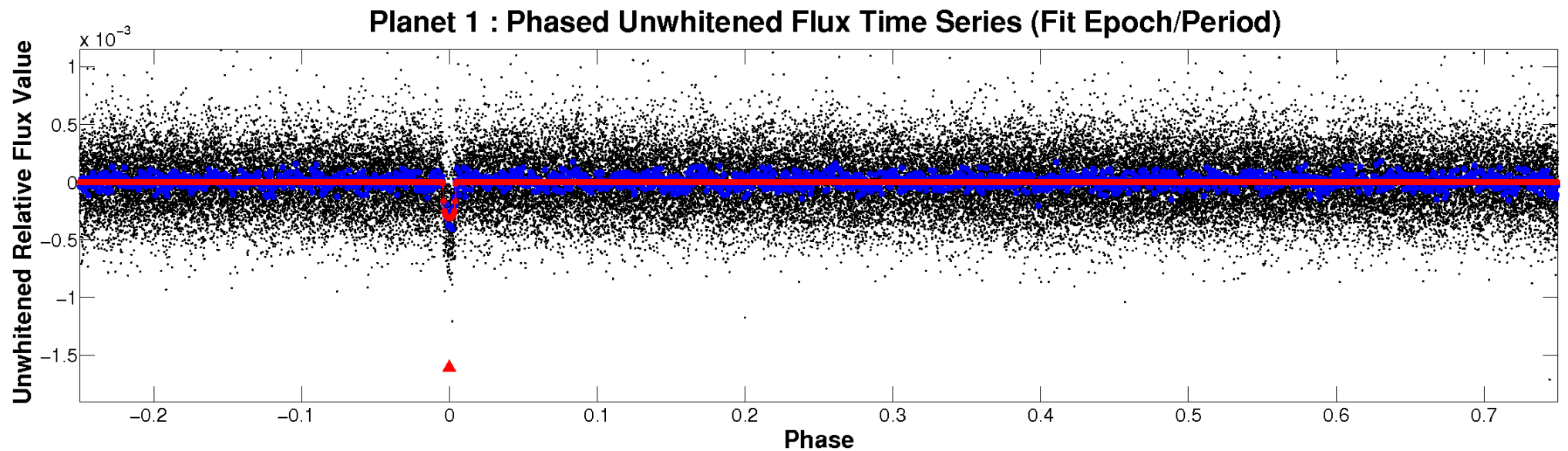


ALT Odd/Even

TCE 004282191-01

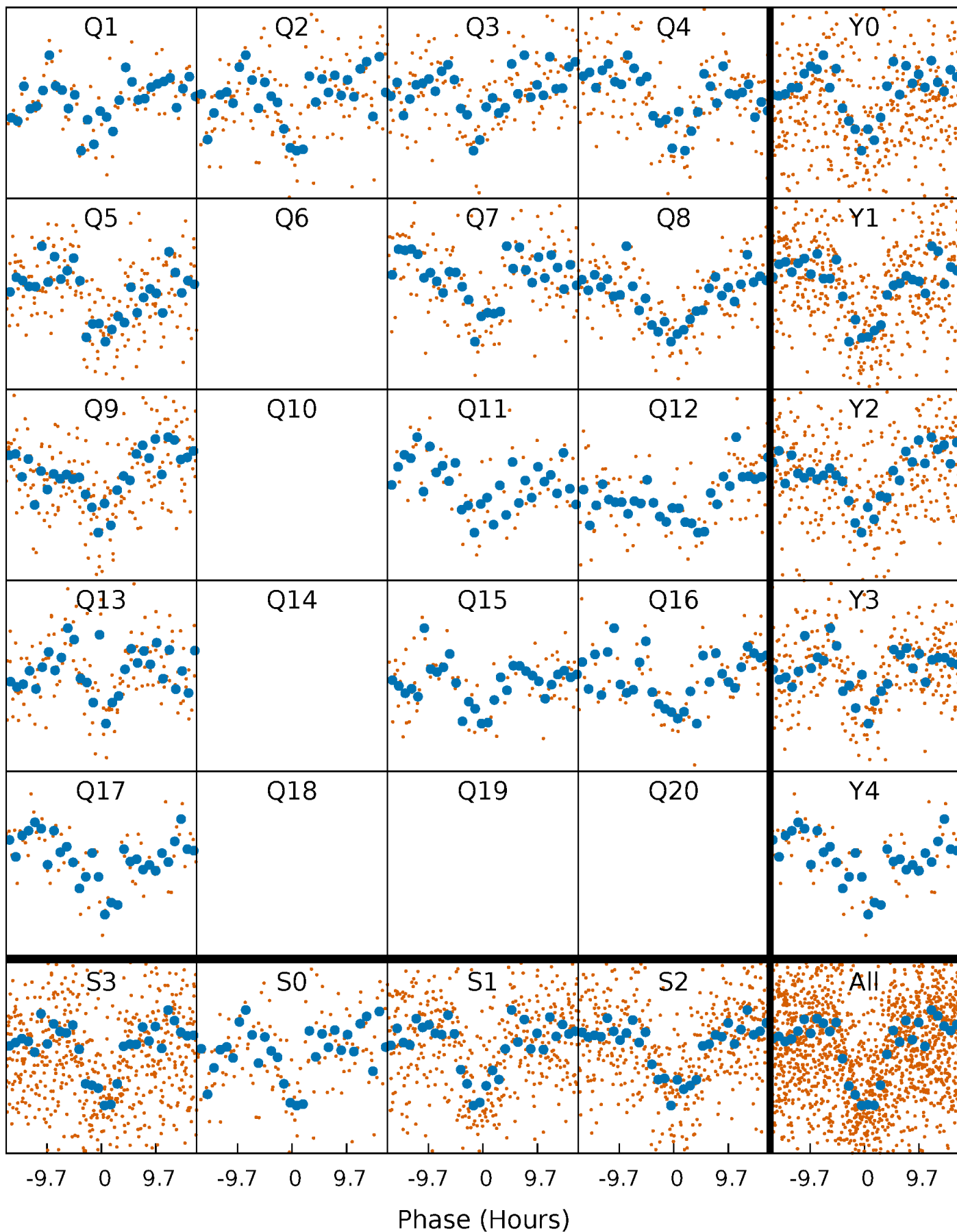


Non-Whitened Vs. Whitened Light Curve



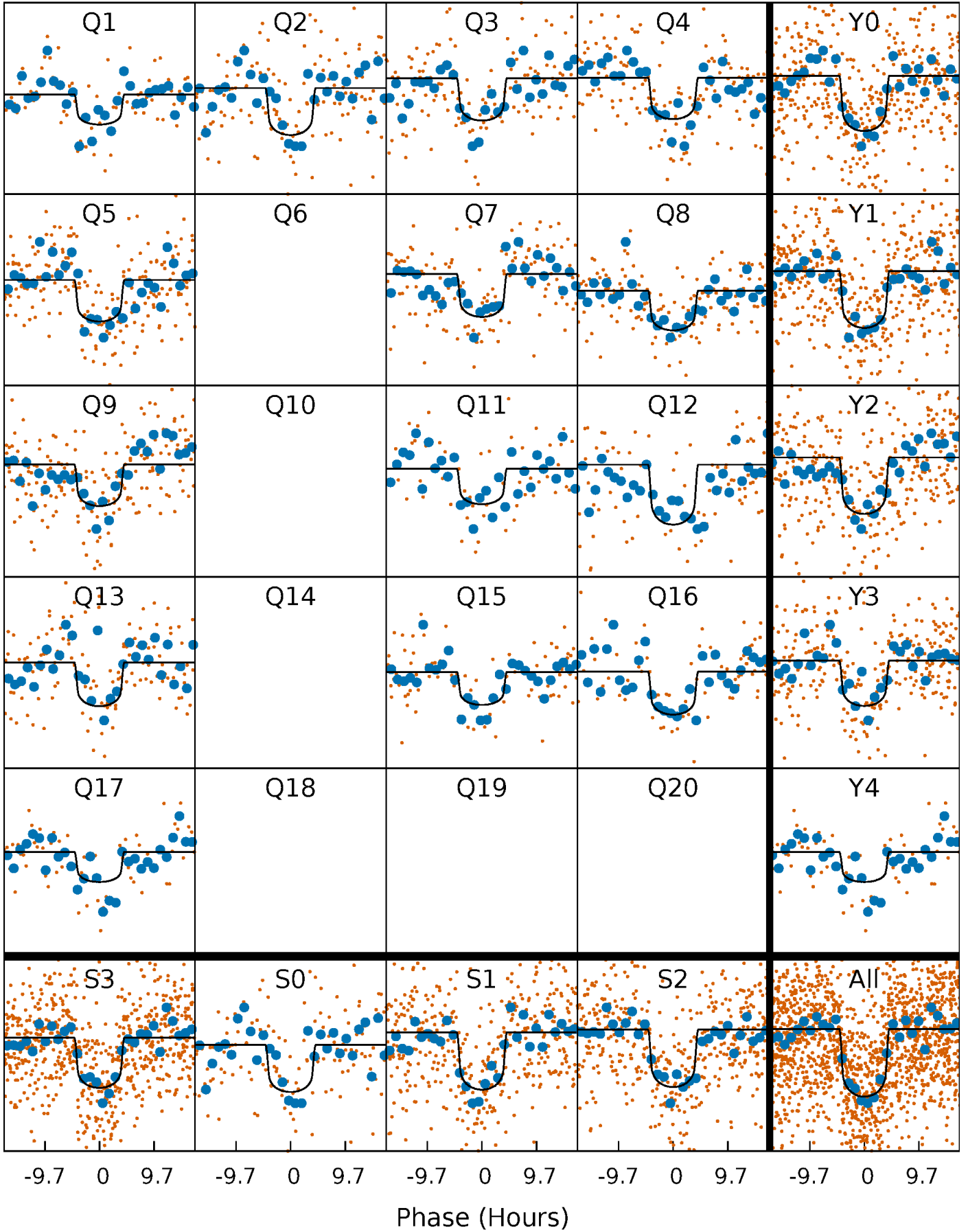
PDC Quarter-Phased Transit Curves

TCE 004282191-01 P= 41.708269 Days $T_0=153.538434$ (BKJD)



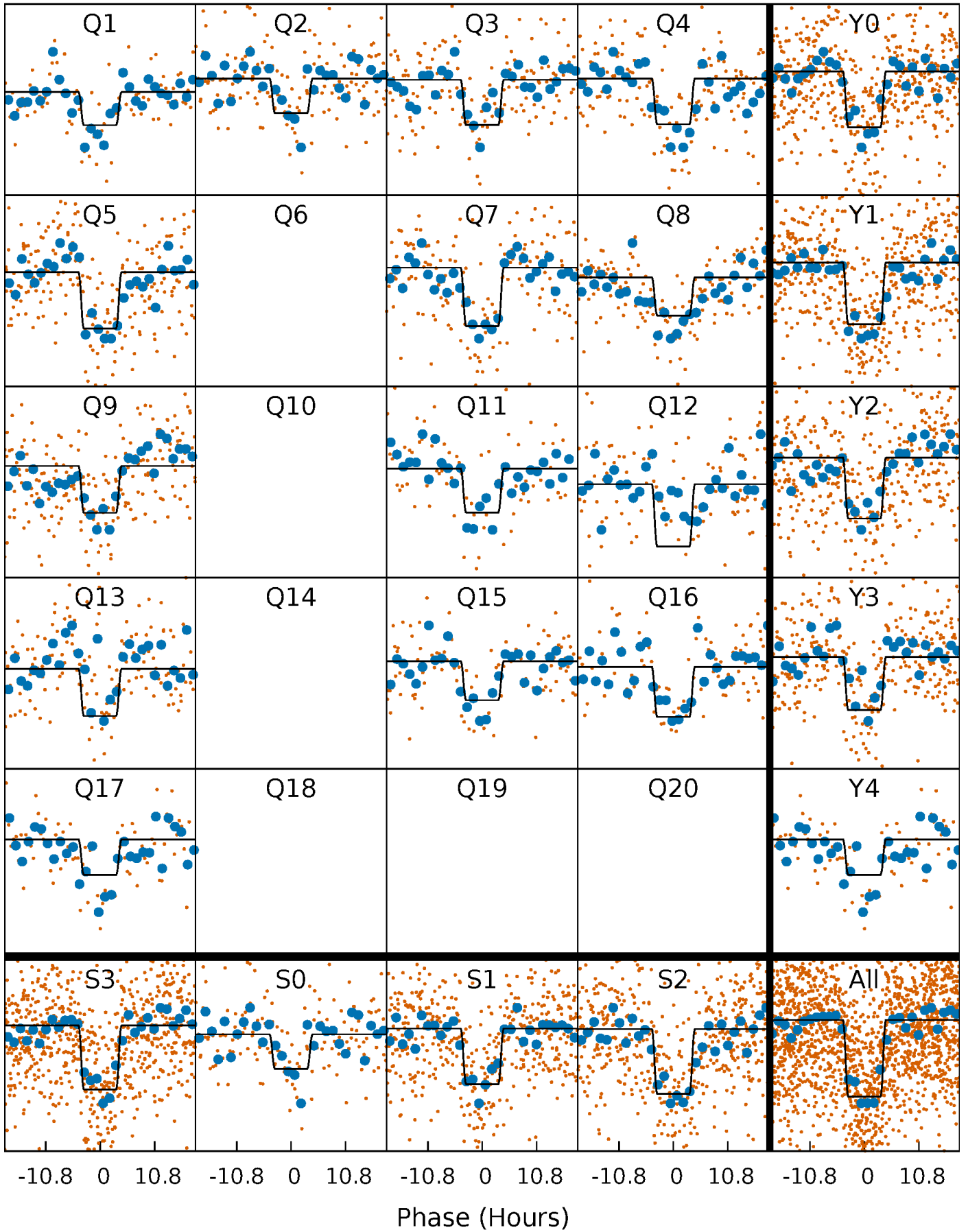
DV Quarter-Phased Transit Curves

TCE 004282191-01 P= 41.708269 Days $T_0=153.538434$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

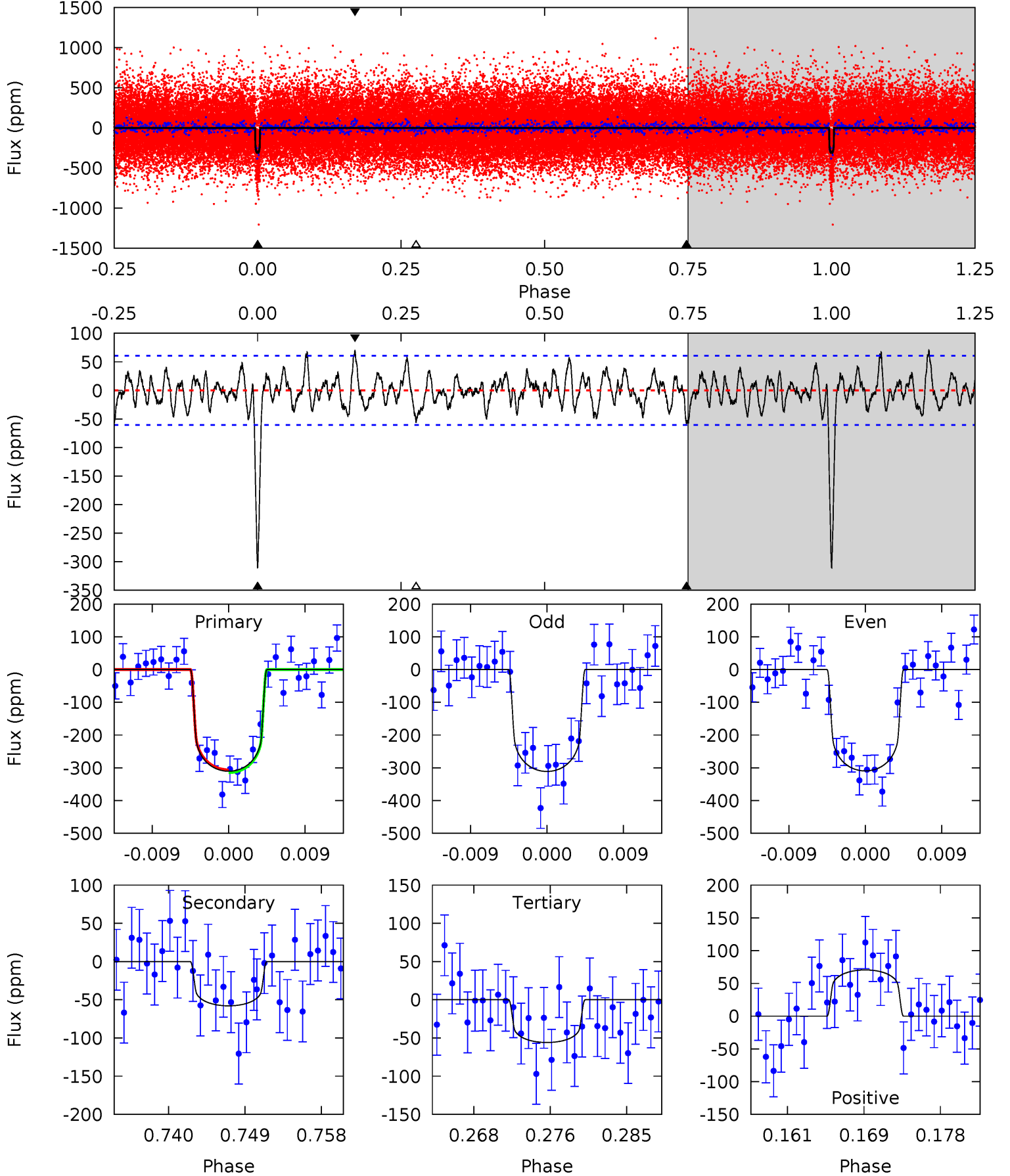
TCE 004282191-01 P= 41.708833 Days $T_0=153.527388$ (BKJD)



DV Model-Shift Uniqueness Test

004282191-01, P = 41.708269 Days, E = 111.830165 Days

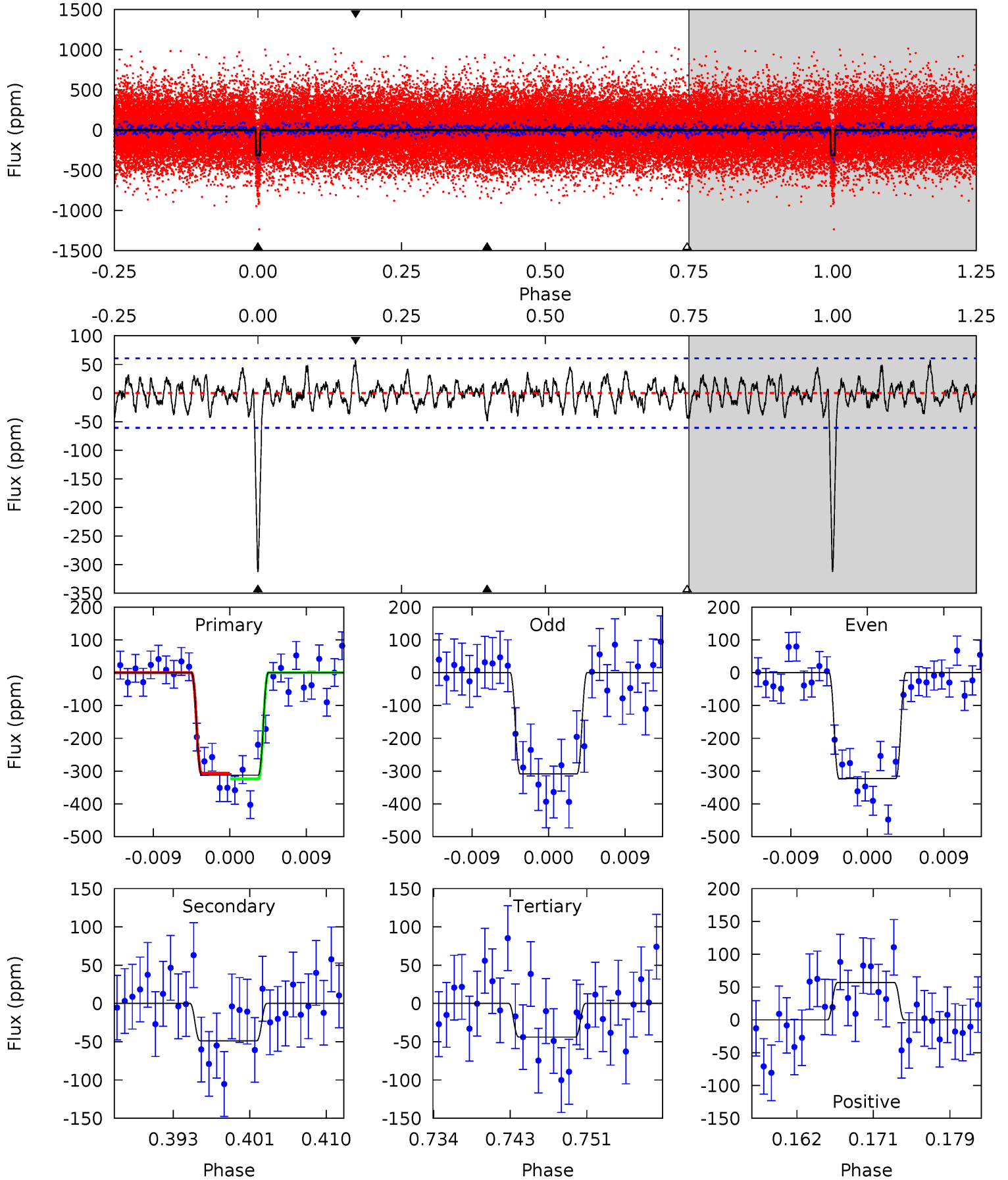
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	4.84	4.67	5.89	5.05	2.62	1.81	21.2	20.0	0.17	-1.05	0.07	1.03	0.19	0.36



Alt Model-Shift Uniqueness Test

004282191-01, P = 41.708833 Days, E = 111.818555 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	4.05	3.66	4.74	5.06	2.63	1.45	22.4	21.3	0.40	-0.69	0.58	0.96	0.15	0.69



Stellar Parameters For KIC 004282191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6434^{+144}_{-208}	$4.394^{+0.060}_{-0.180}$	$-0.100^{+0.250}_{-0.300}$	$1.138^{+0.330}_{-0.141}$	$1.169^{+0.162}_{-0.146}$	$1.119^{+0.368}_{-0.543}$
	+2%/-3%	+1%/-4%	+250%/-300%	+29%/-12%	+14%/-12%	+33%/-49%
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 004282191-01 / KOI 3439.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-58 ± 12	$2.26^{+0.53}_{-0.51}$	863^{+53}_{-41}	4425^{+487}_{-354}	377^{+265}_{-142}
Alt.	-49 ± 12	$2.36^{+0.61}_{-0.50}$	865^{+58}_{-39}	4218^{+453}_{-332}	279^{+213}_{-104}

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 $A_{obs} \gg 1.0$

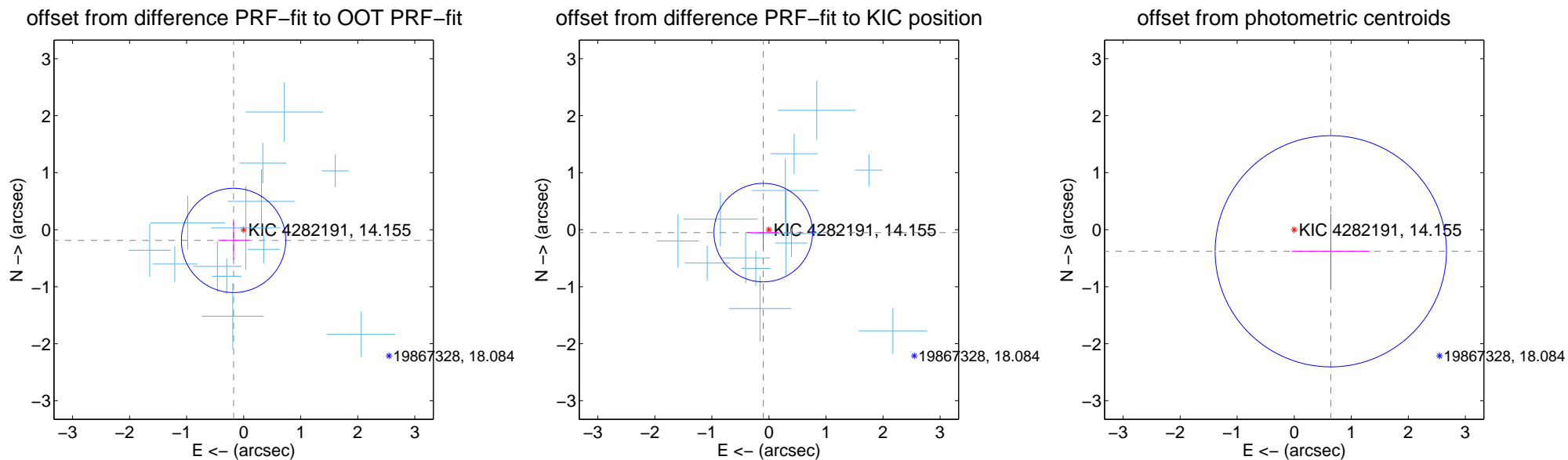
DV Centroid Data

Supplemental centroid analysis for 004282191-01. Kepler magnitude: 14.15. Transit SNR 15.29

There are 13 quarters with good PRF difference image offsets

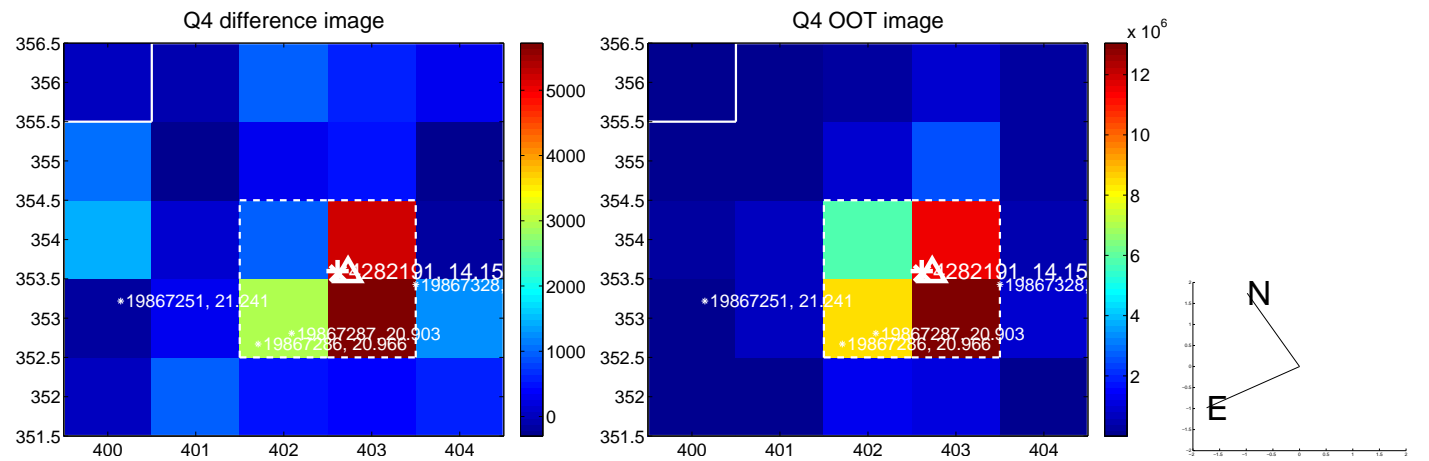
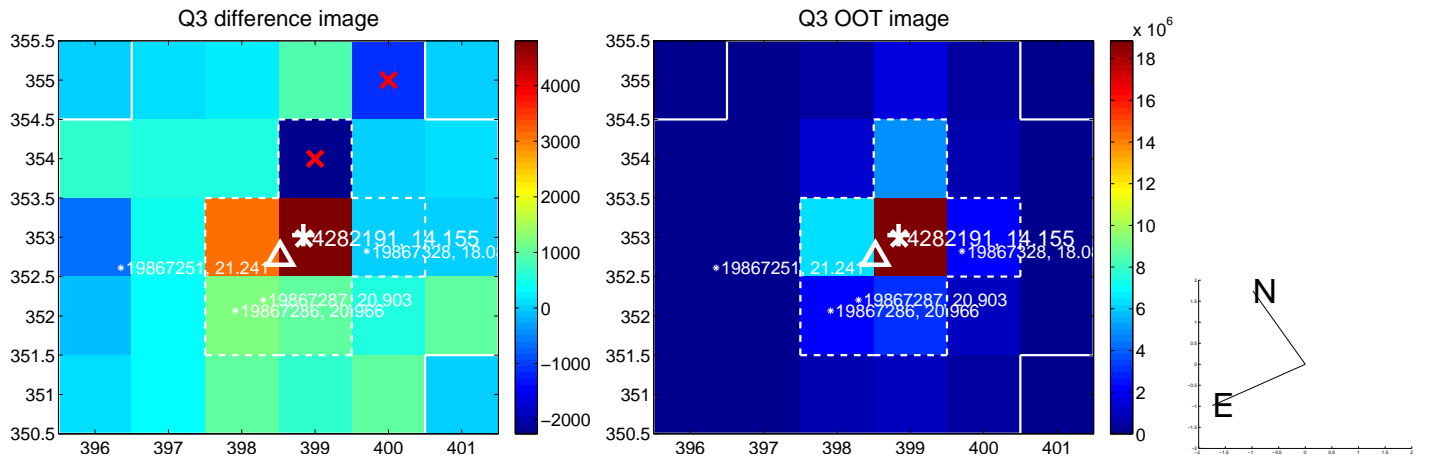
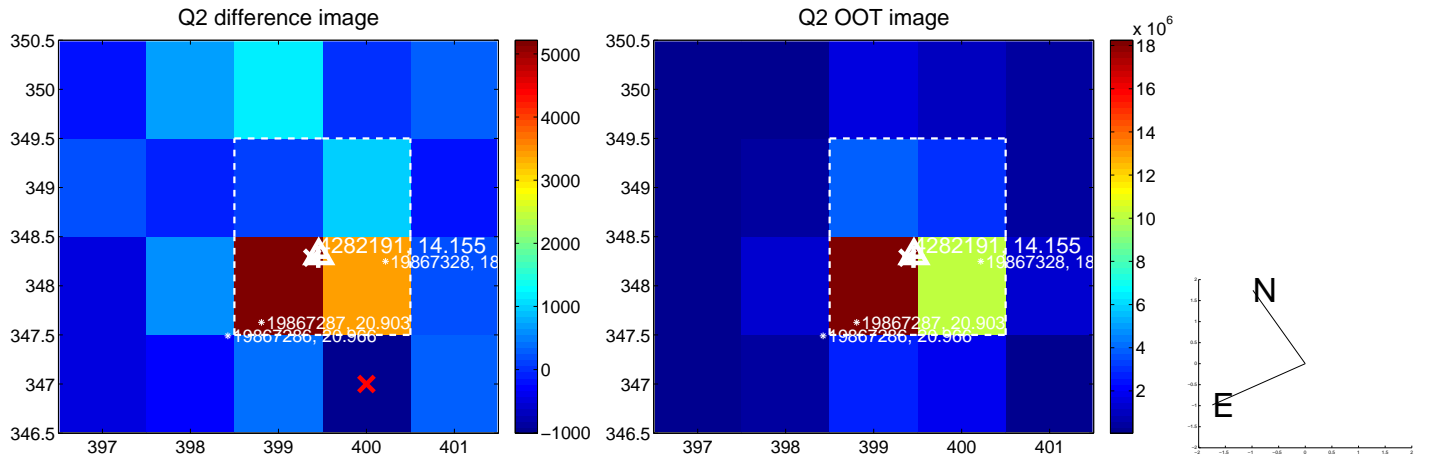
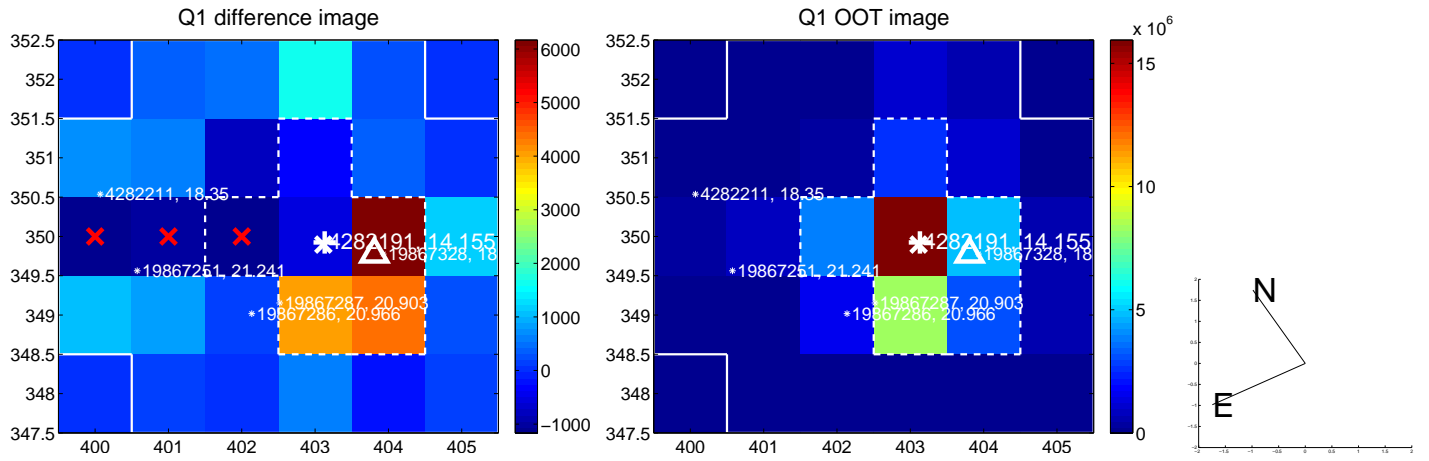
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.259 ± 0.305	0.85	0.178 ± 0.267	-0.188 ± 0.335
PRF-fit source offset from KIC position	0.113 ± 0.288	0.39	0.100 ± 0.280	-0.051 ± 0.289
photometric centroid source offset	0.74 ± 0.68	1.10	-0.64 ± 0.68	-0.38 ± 0.65

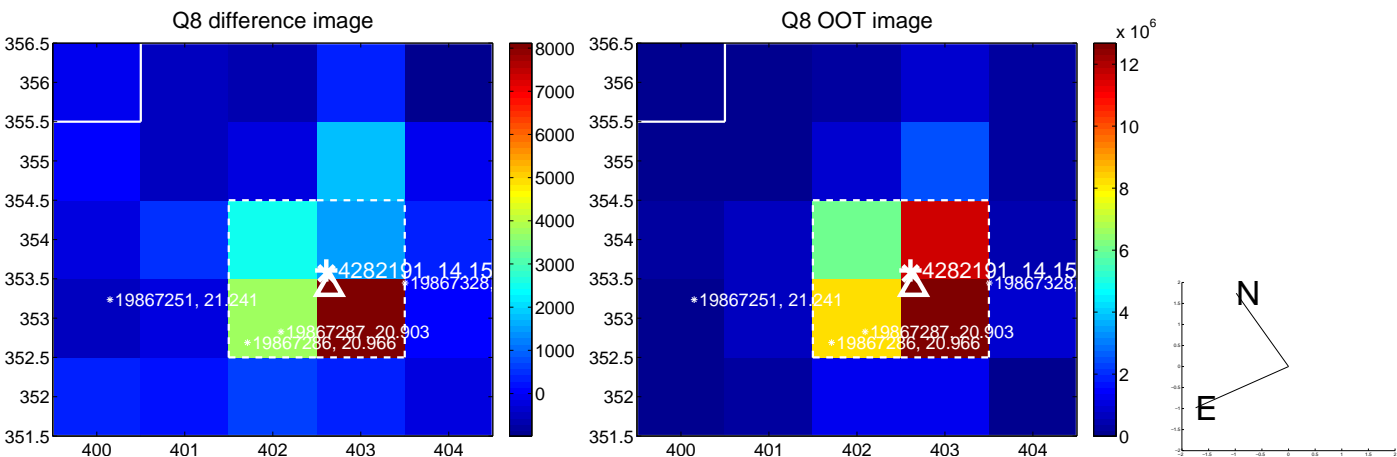
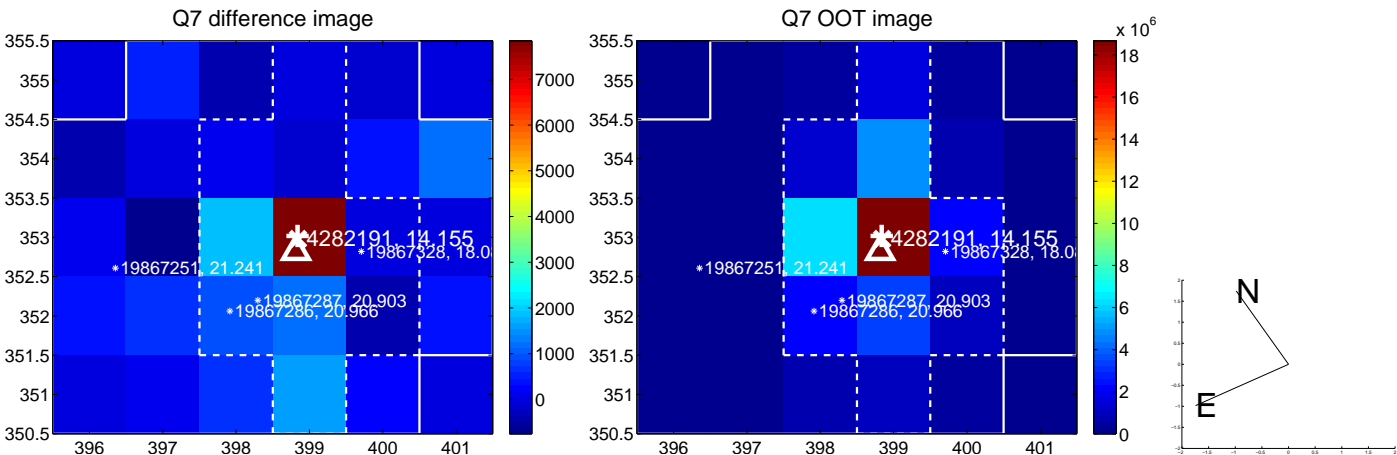
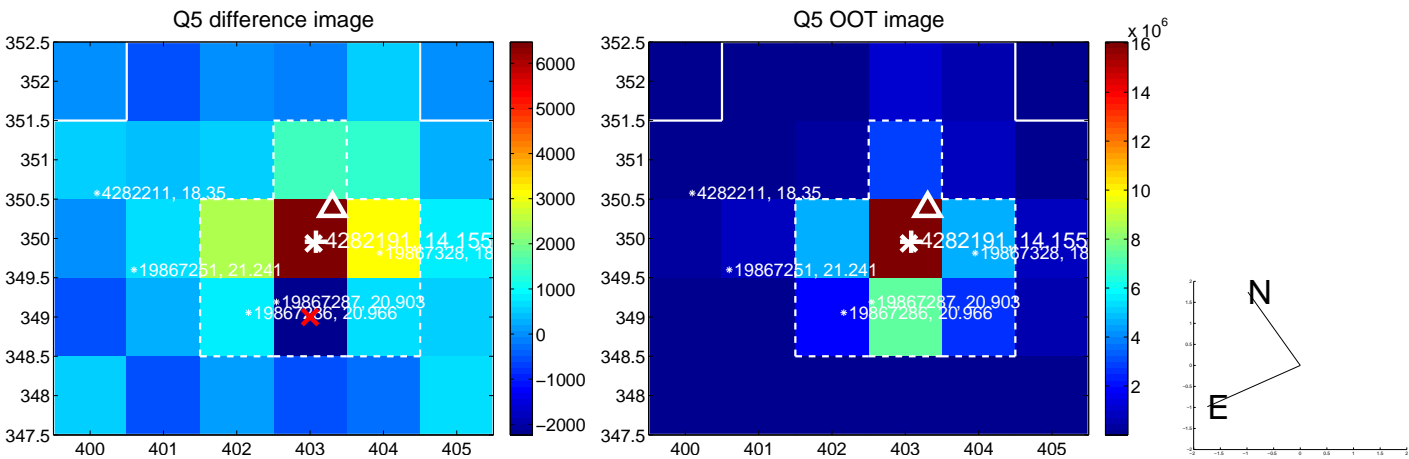


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

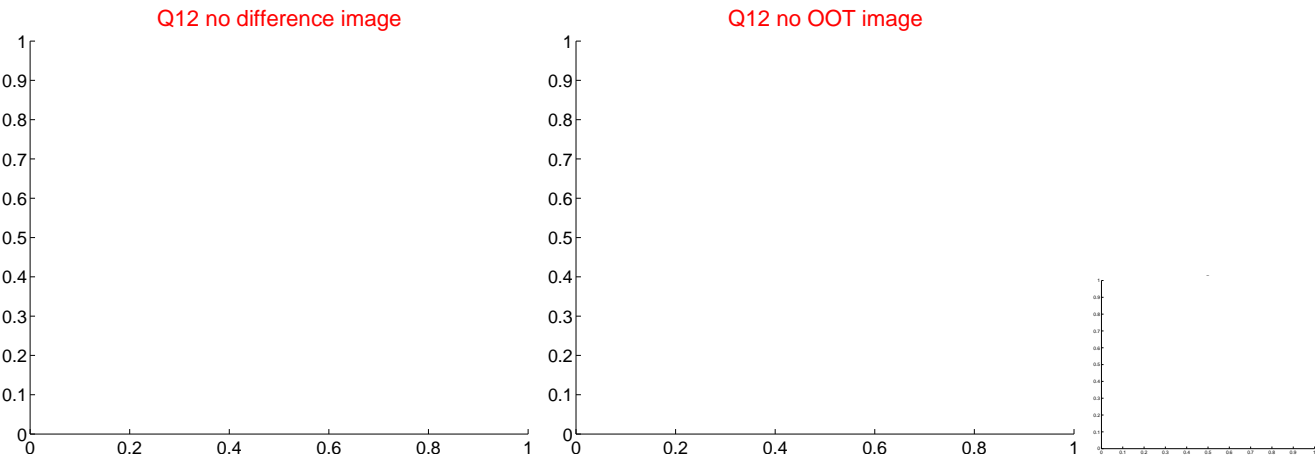
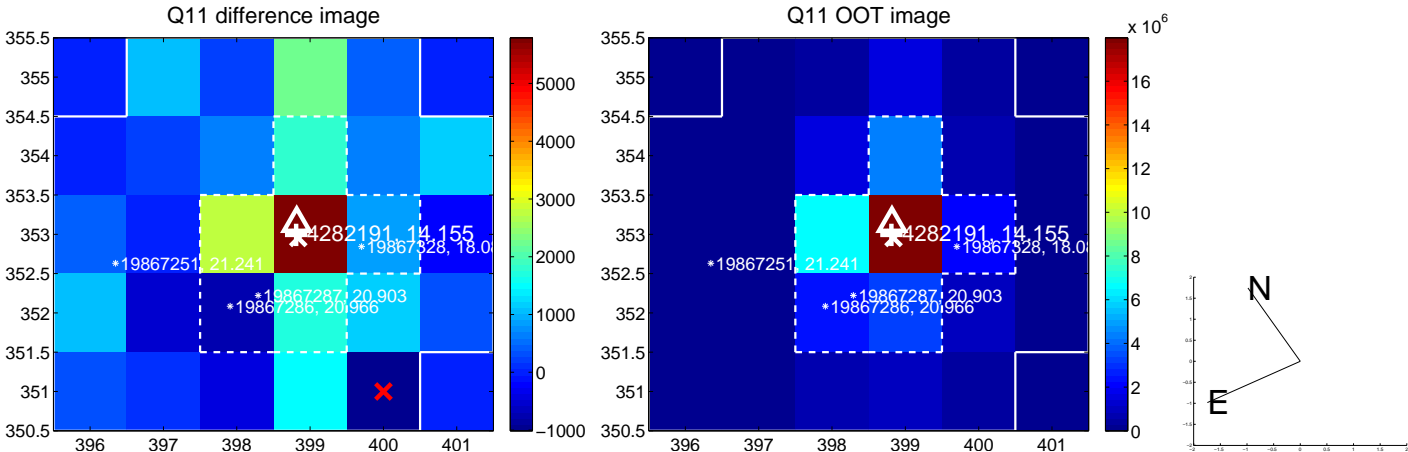
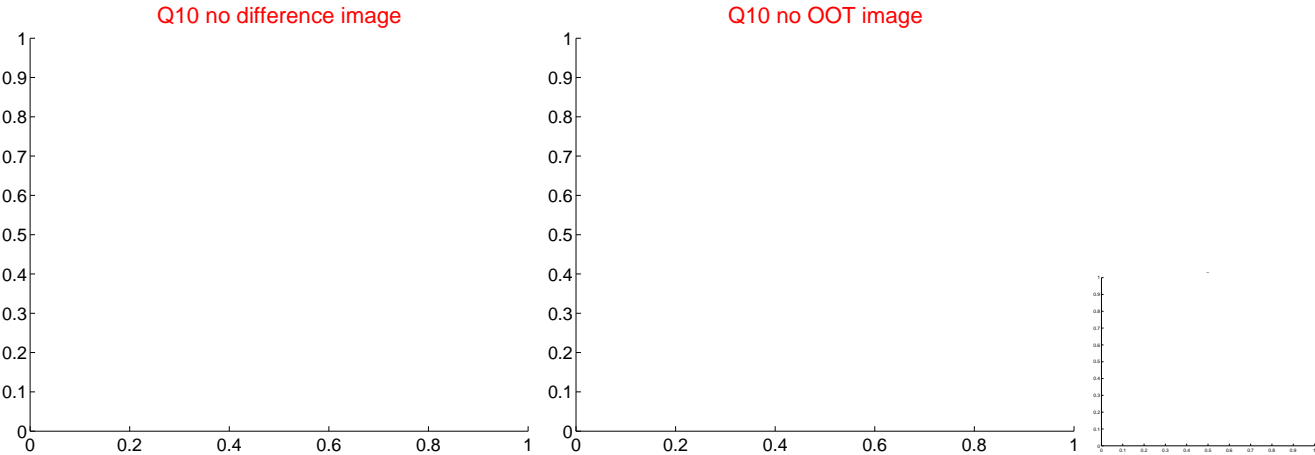
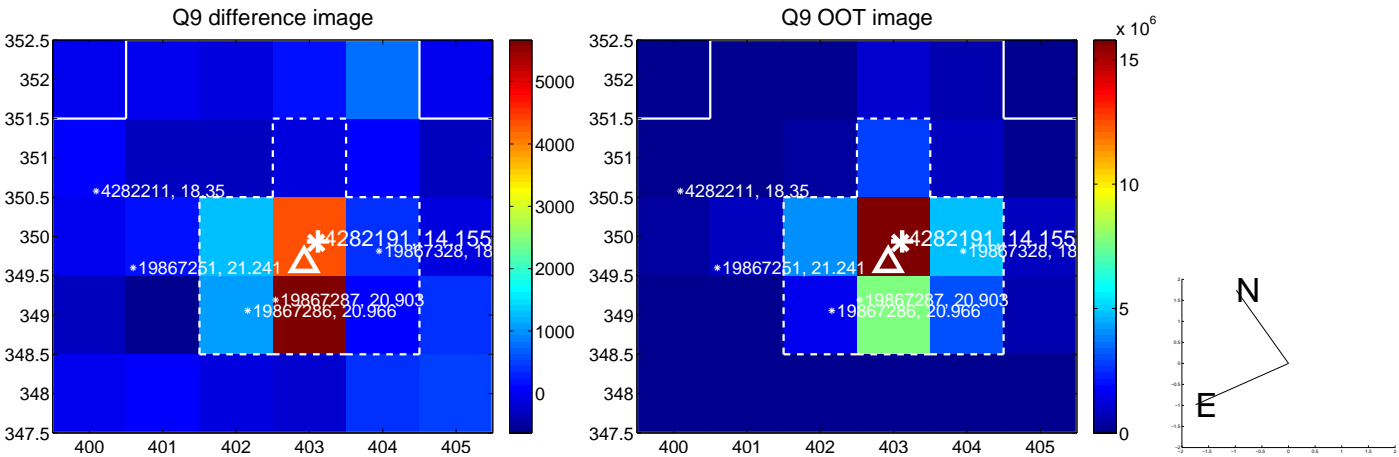
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



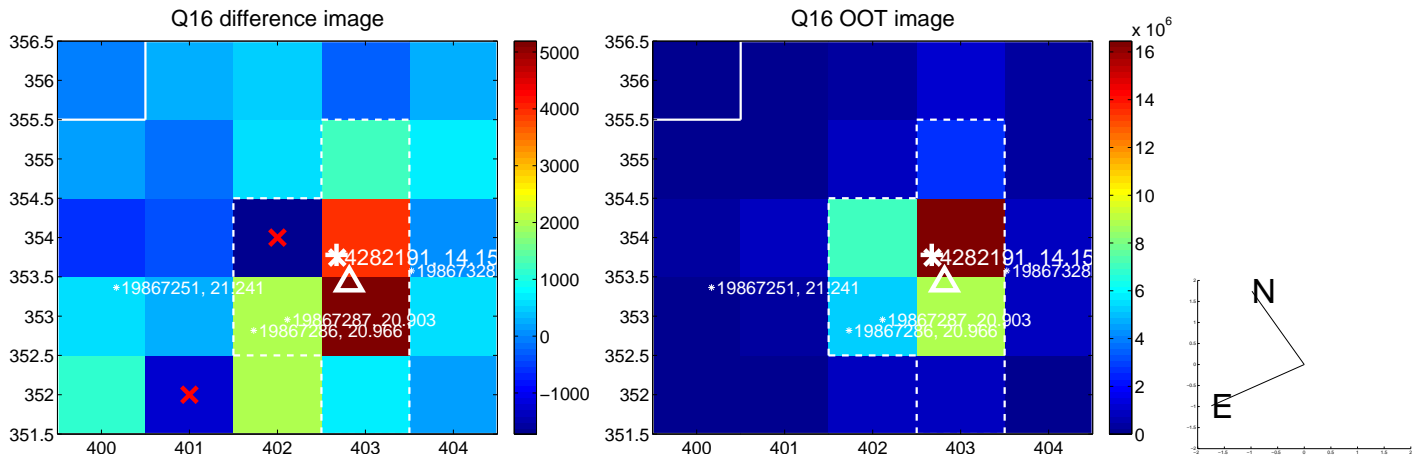
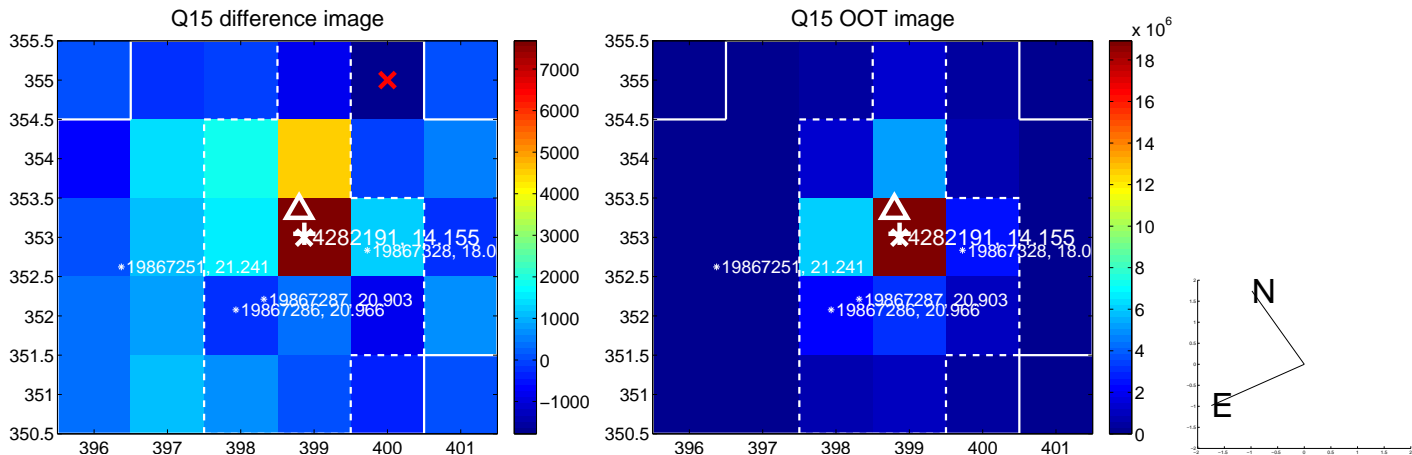
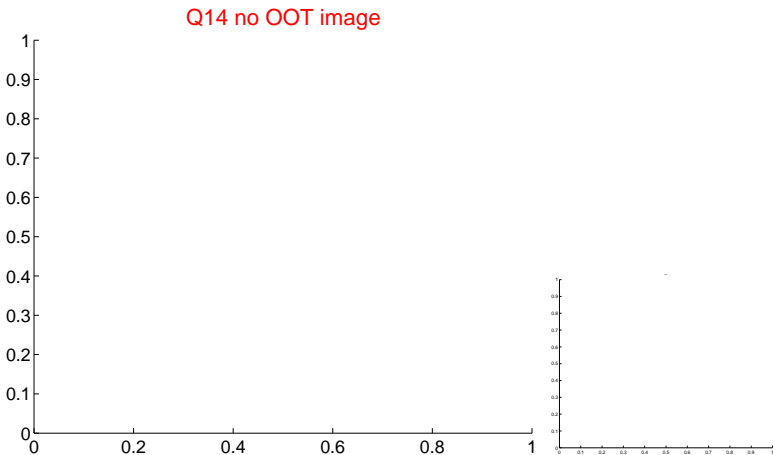
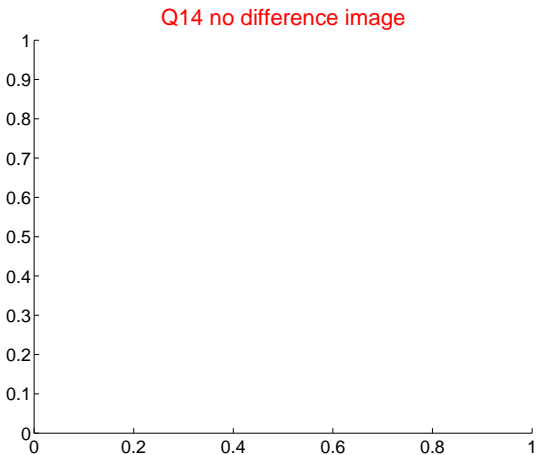
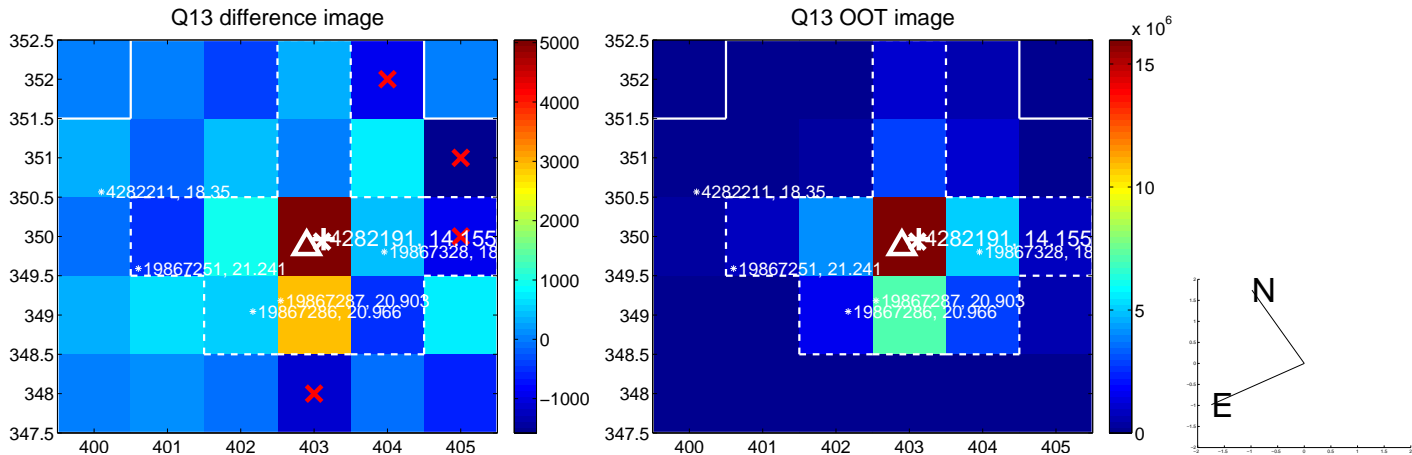
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



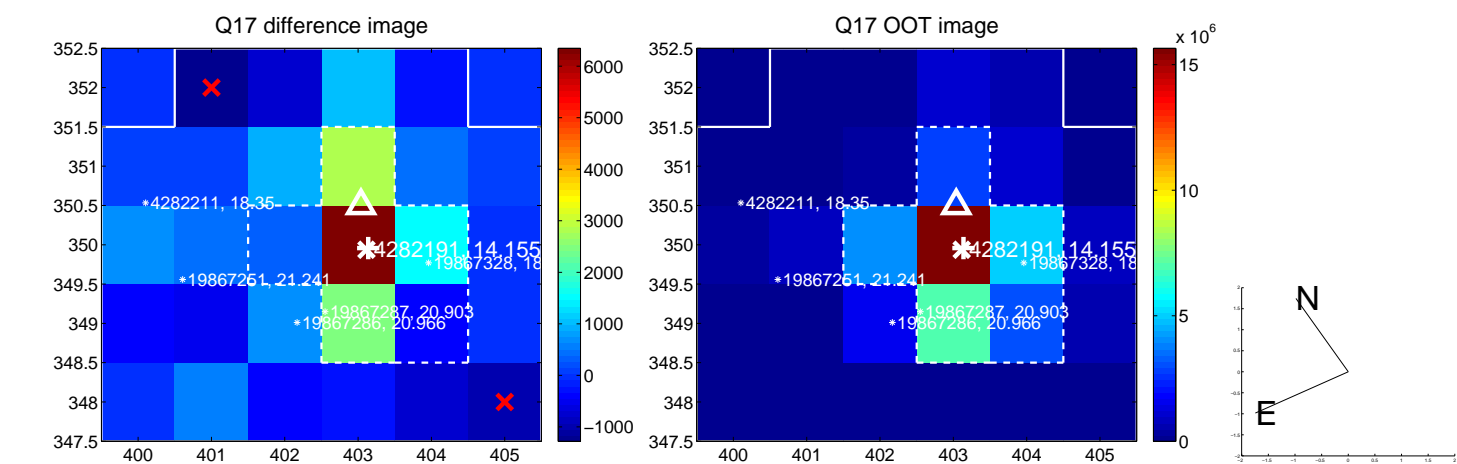
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



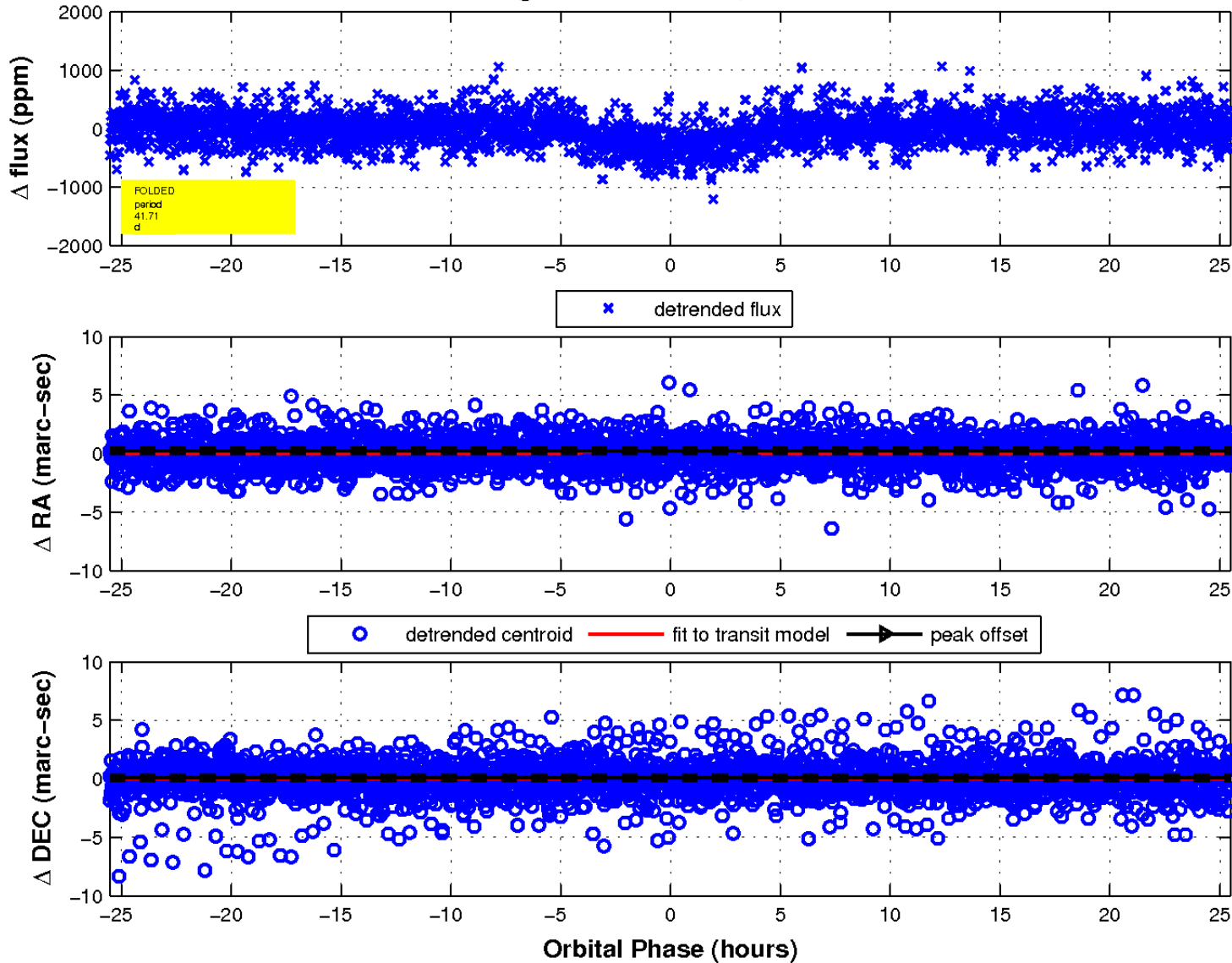
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

