

KIC 009886661

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})
009886661-01	OBS	1606.01	5.082739	133.212194	268.7	1.862	33.8	38.0	0.86	5430	1.70	175.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009886661-01	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.

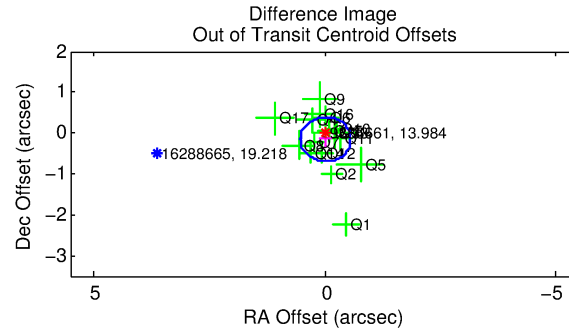
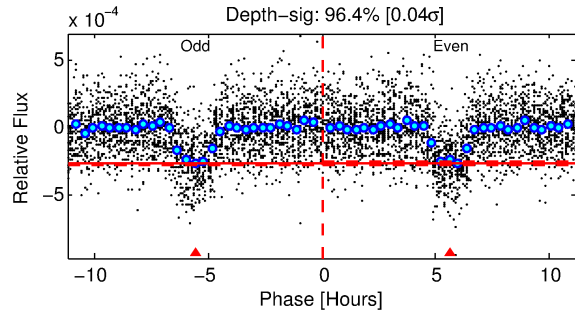
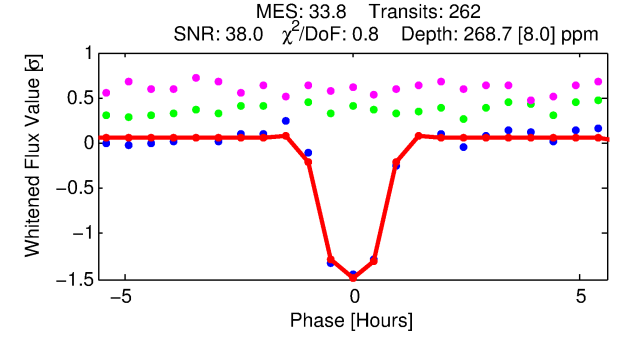
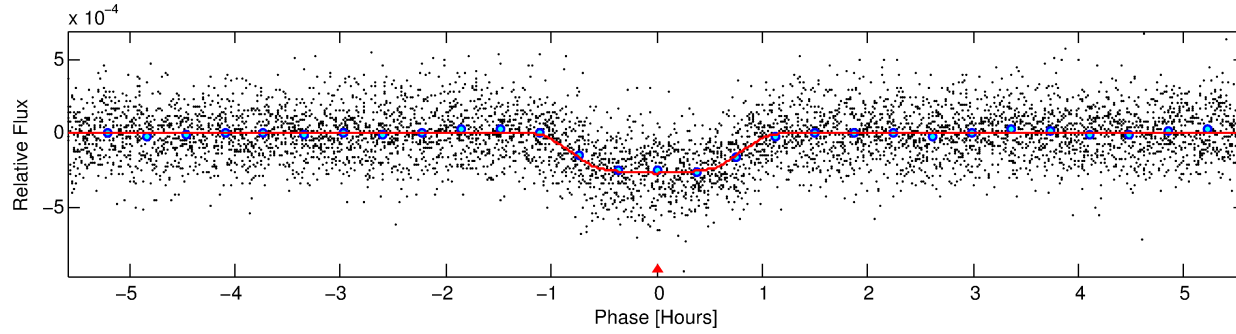
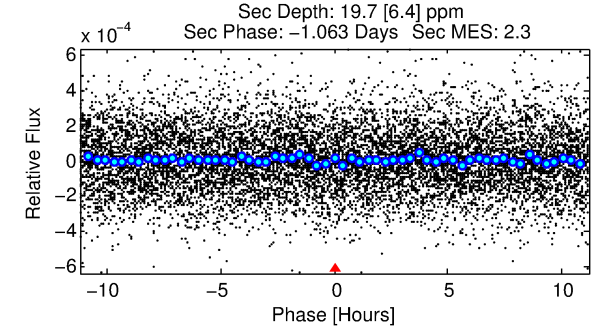
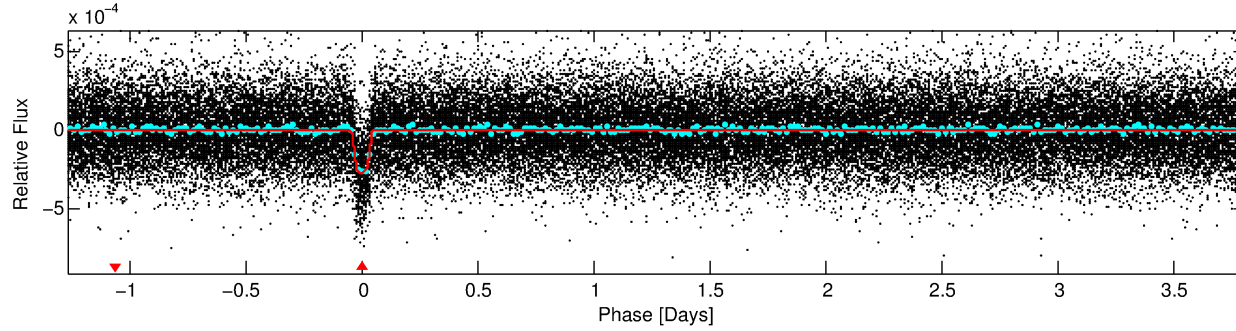
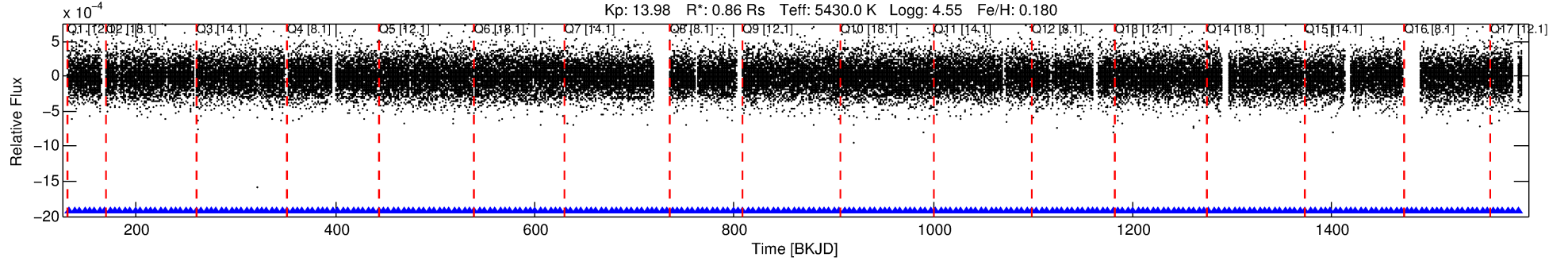
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009886661-01

No Significant Match Found

DV One-Page Summary

KIC: 9886661 Candidate: 1 of 1 Period: 5.083 d
KOI: K01606.01 Corr: 0.965



DV Fit Results:

Period = 5.08274 [0.00001] d
Epoch = 133.2122 [0.0010] BKJD
Rp/R* = 0.0181 [0.0038]
a/R* = 9.97 [8.83]
b = 0.90 [0.19]
Seff = 175.50 [35.31]
Teq = 928 [47] K
Rp = 1.70 [0.41] Re
a = 0.0572 [0.0066] AU
Ag = 12.29 [6.87] [1.64σ]
Teffp = 2687 [358] K [4.87σ]

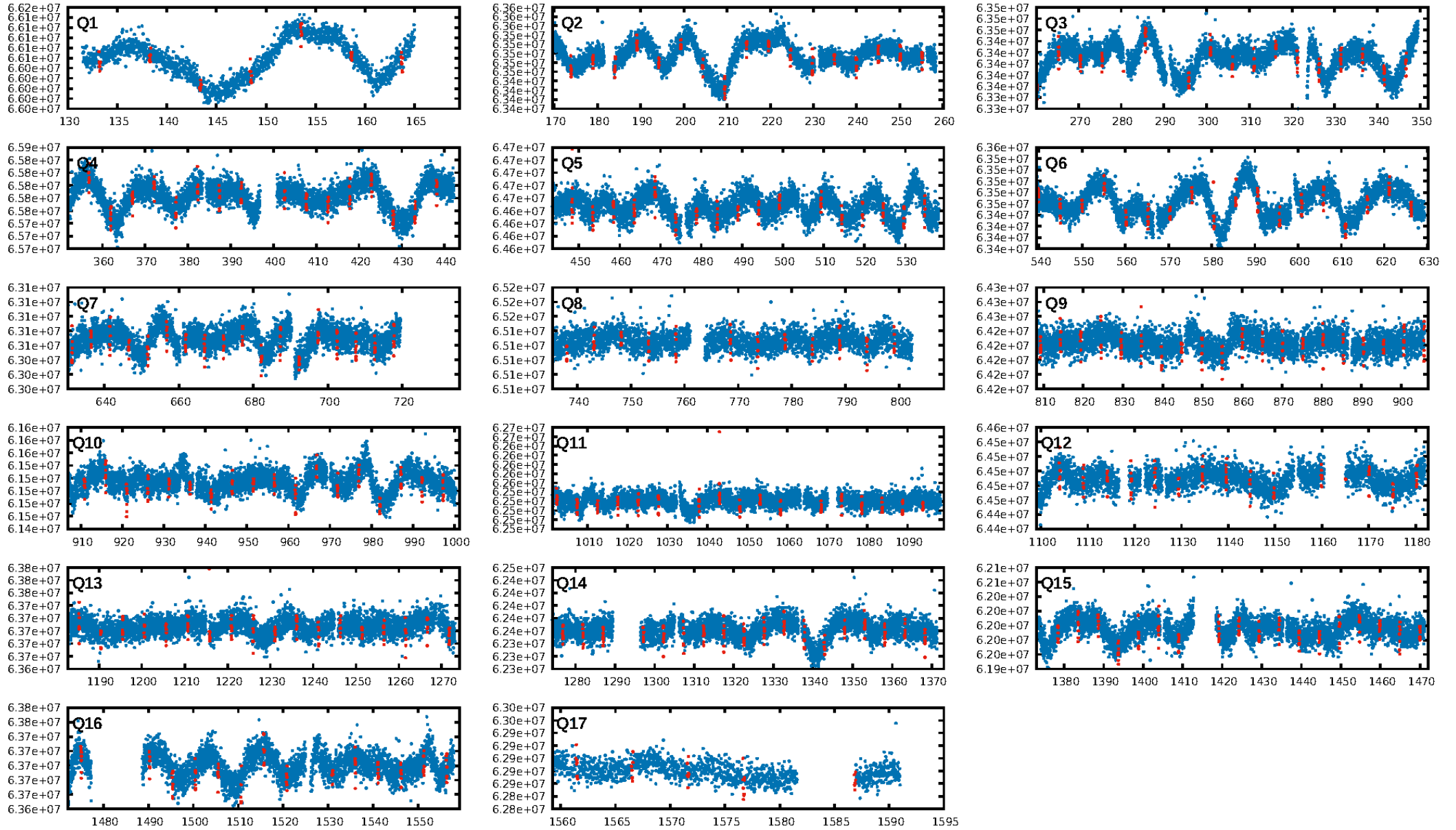
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.26e-240
RollingBand-fgt: 1.00 [250/250]
GhostDiagnostic-chr: 3.865
Centroid-sig: 0.6%
Centroid-so: 0.664 arcsec [2.21σ]
OotOffset-rm: 0.152 arcsec [0.84σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.067 arcsec [0.61σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

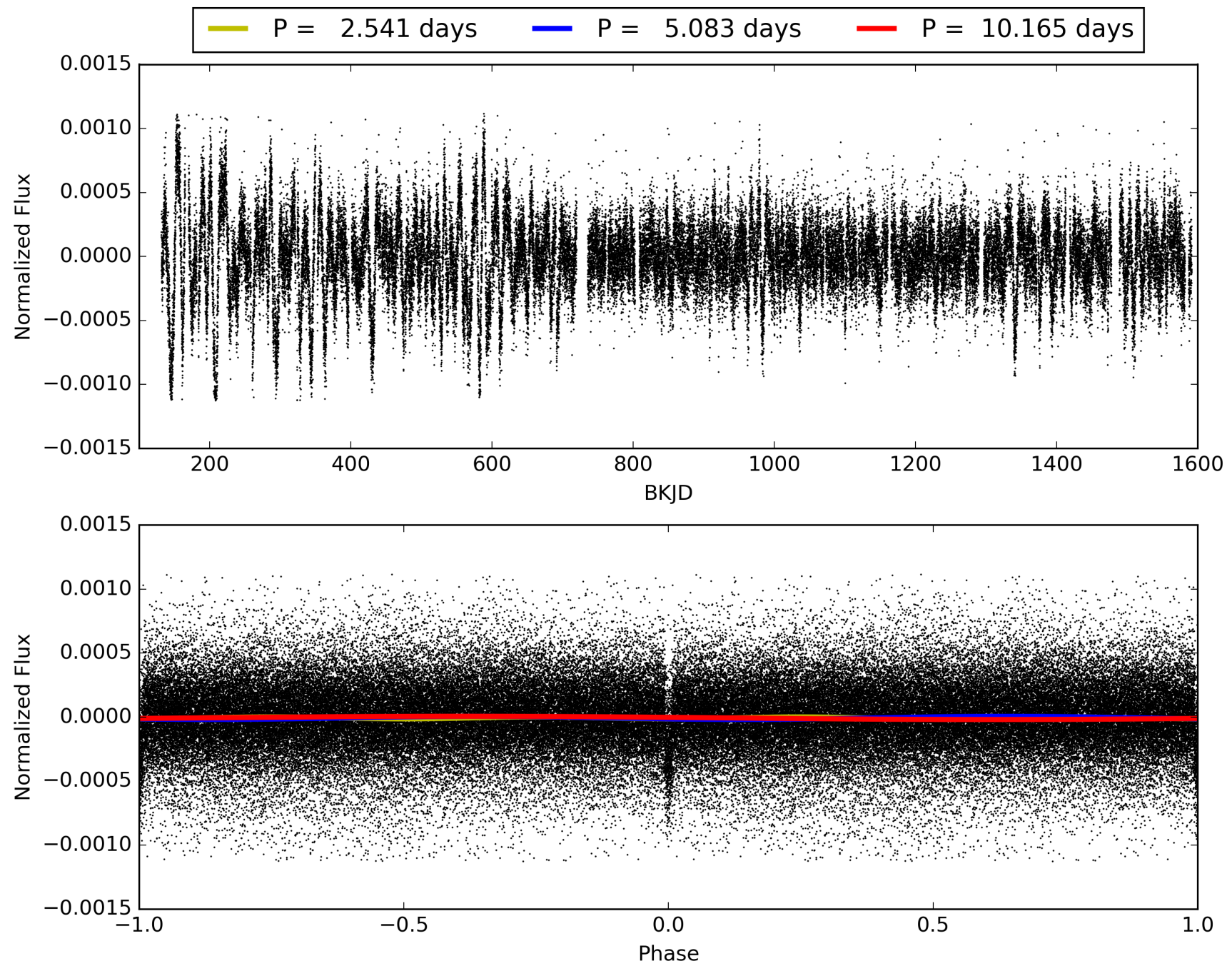
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:54:09 Z

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

TCE 009886661-01, PDC Light Curves

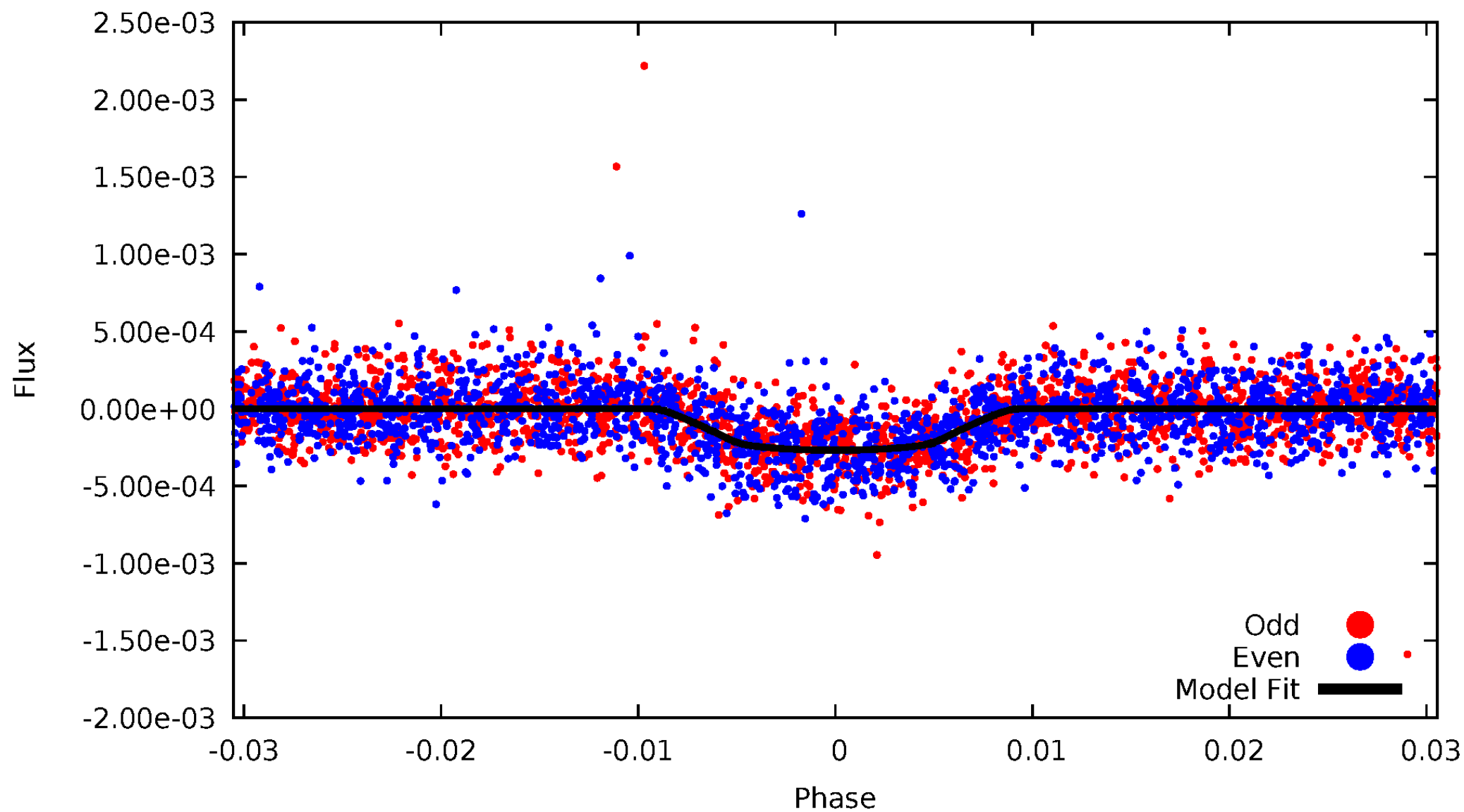


TCE 009886661-01



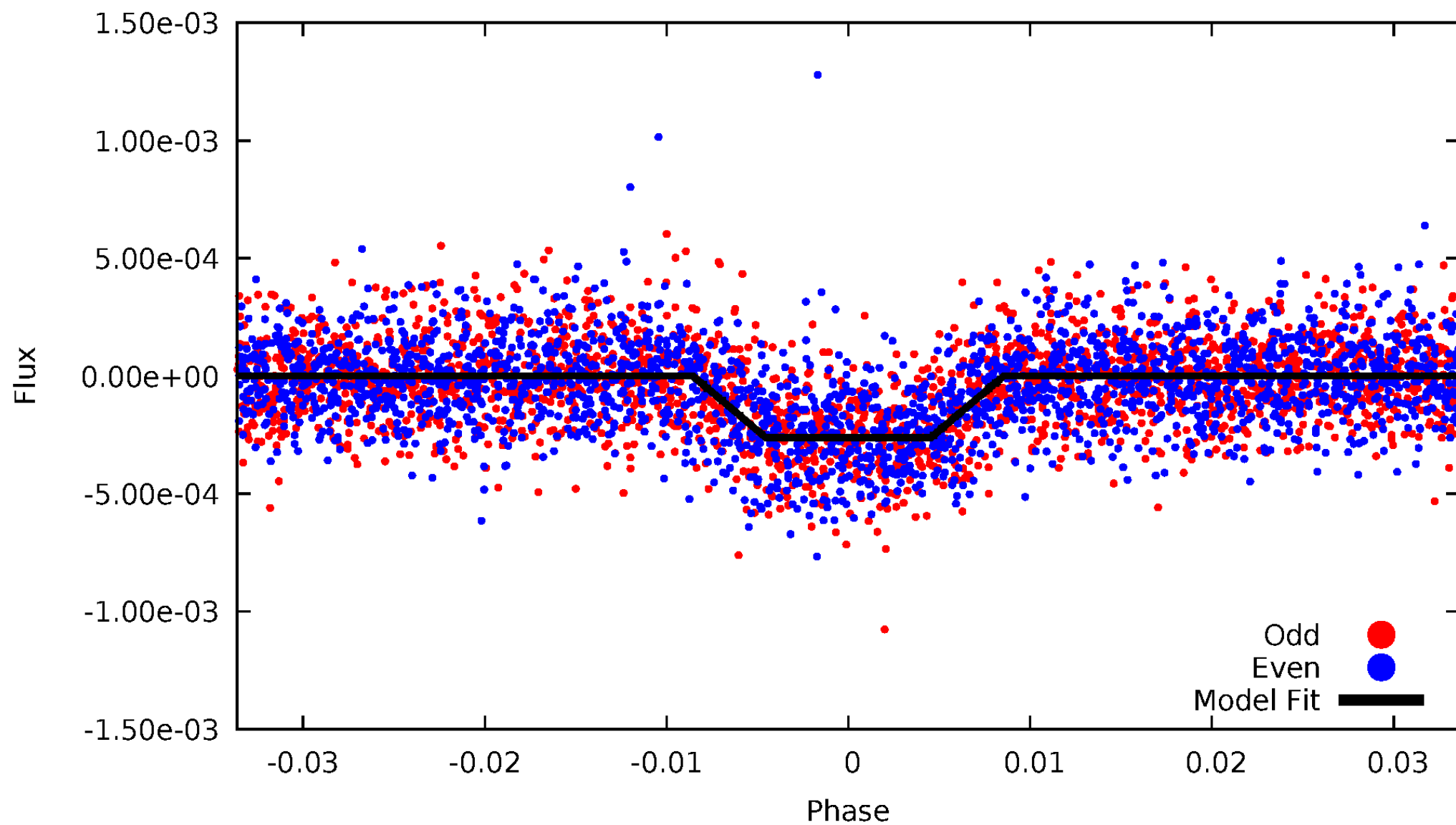
DV Odd/Even

TCE 009886661-01

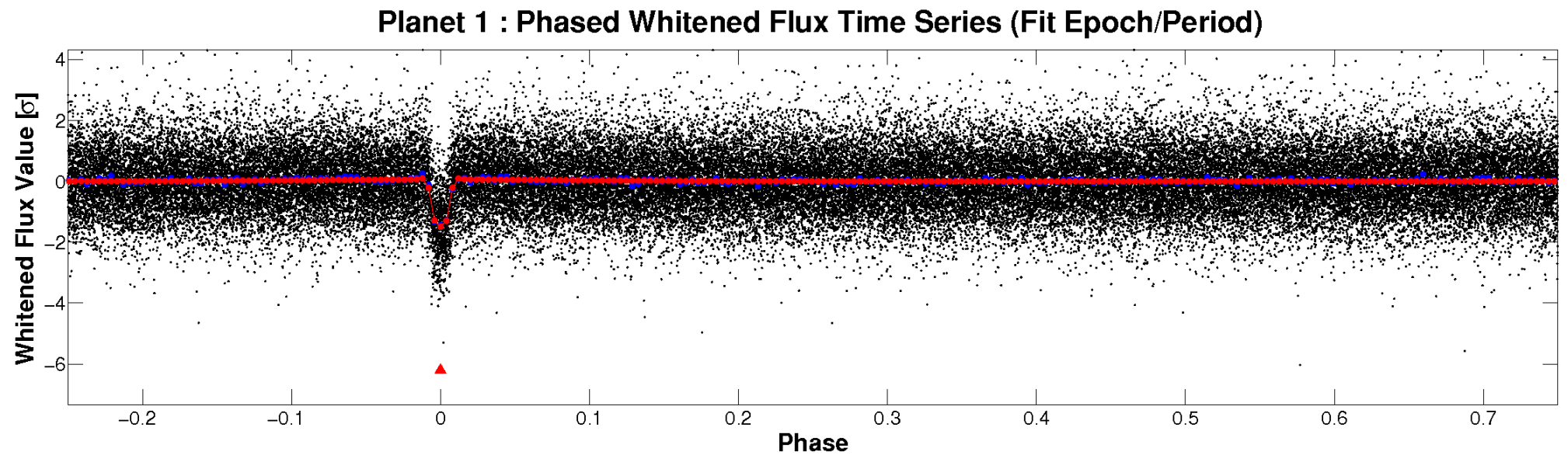
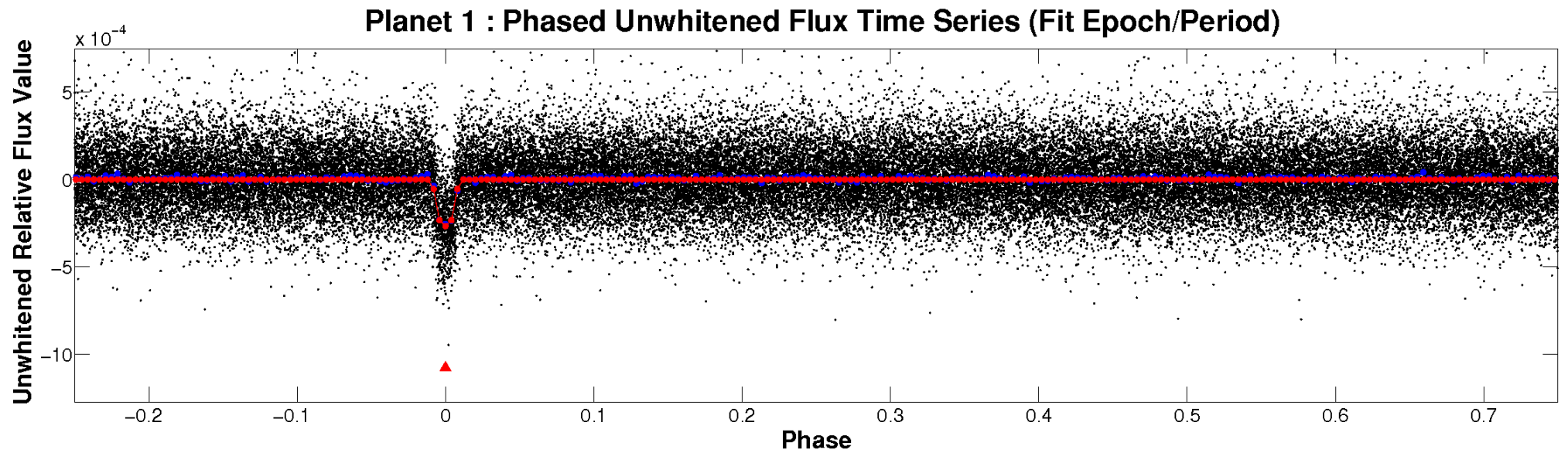


ALT Odd/Even

TCE 009886661-01

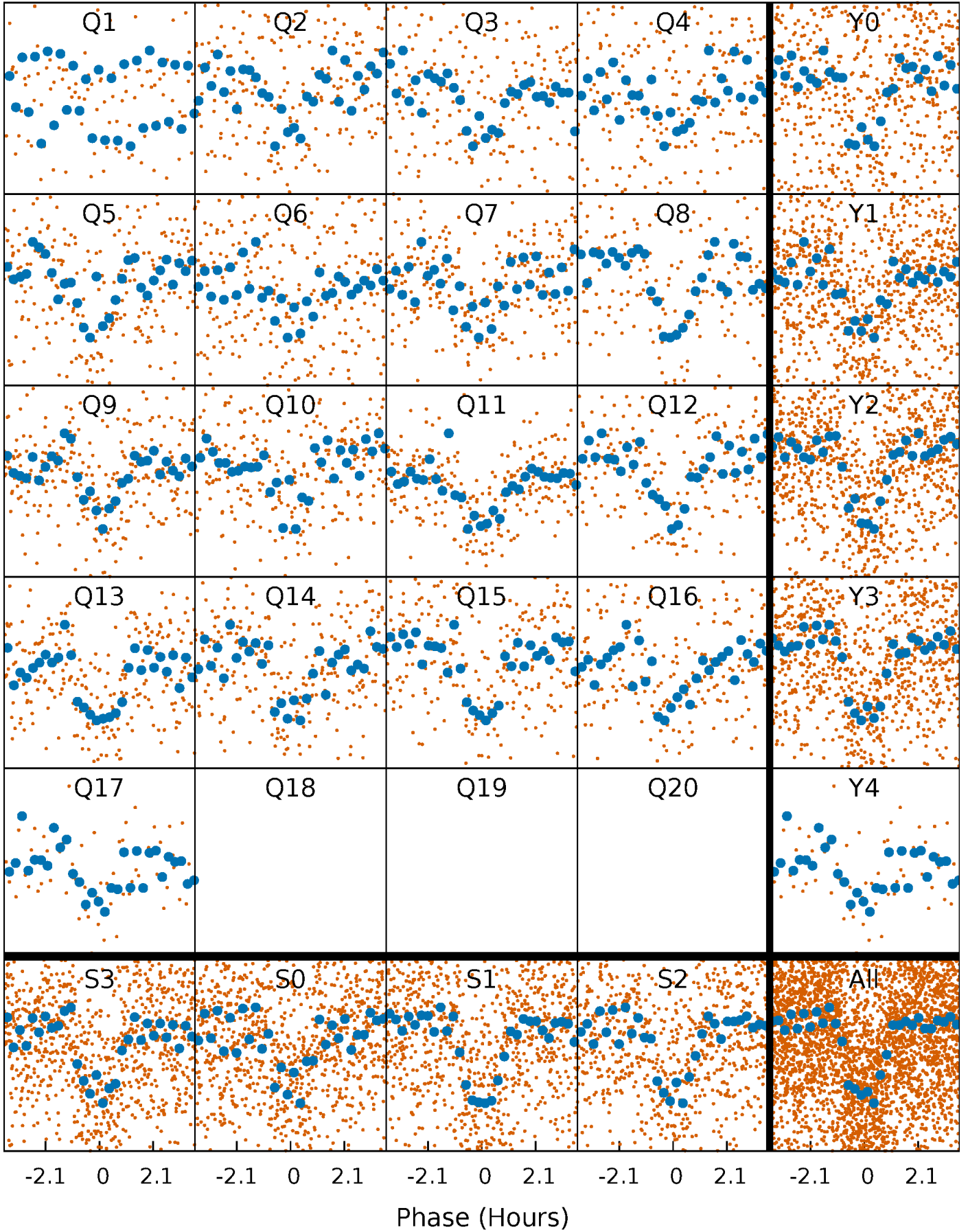


Non-Whitened Vs. Whitened Light Curve



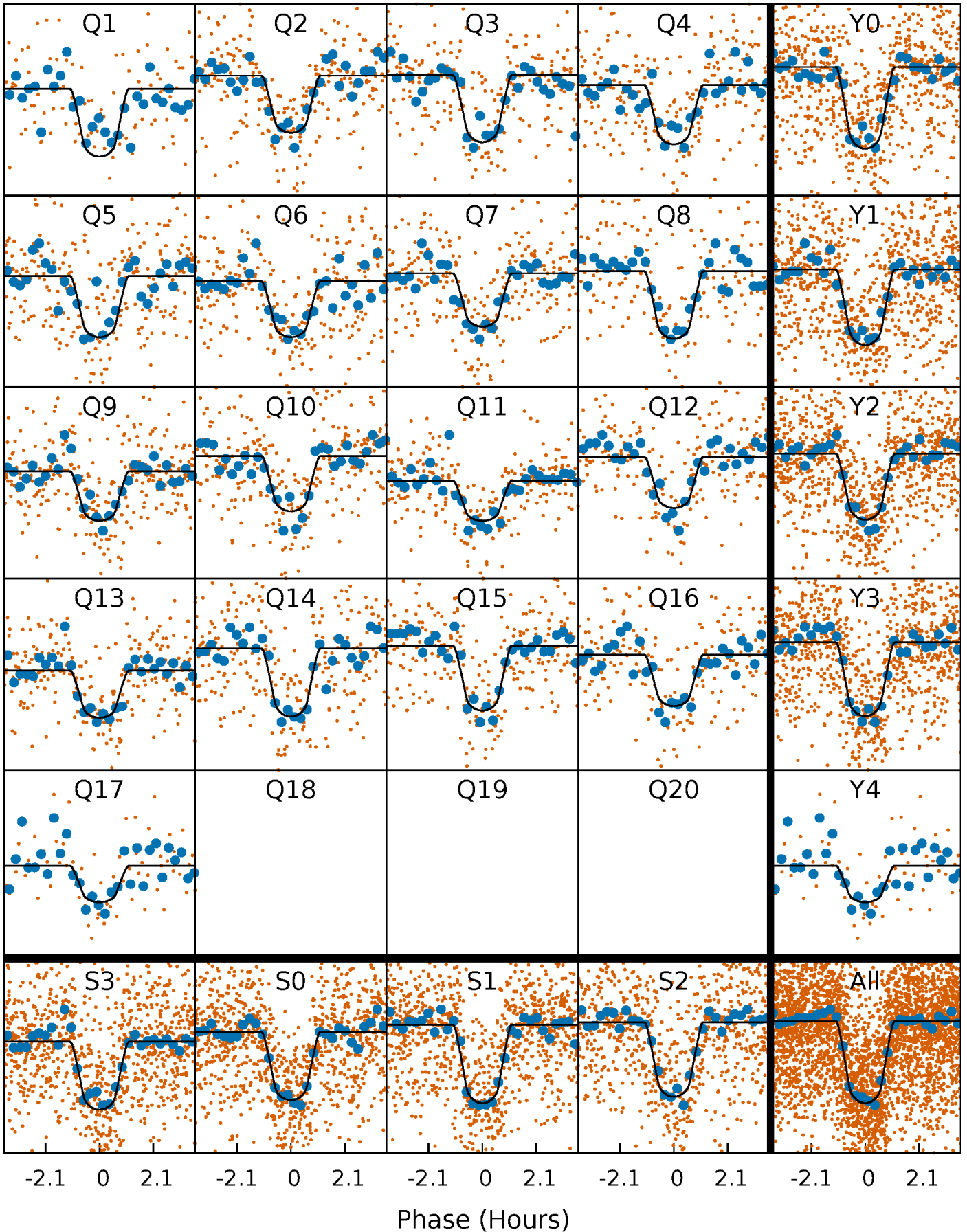
PDC Quarter-Phased Transit Curves

TCE 009886661-01 P= 5.082739 Days $T_0=133.212194$ (BKJD)



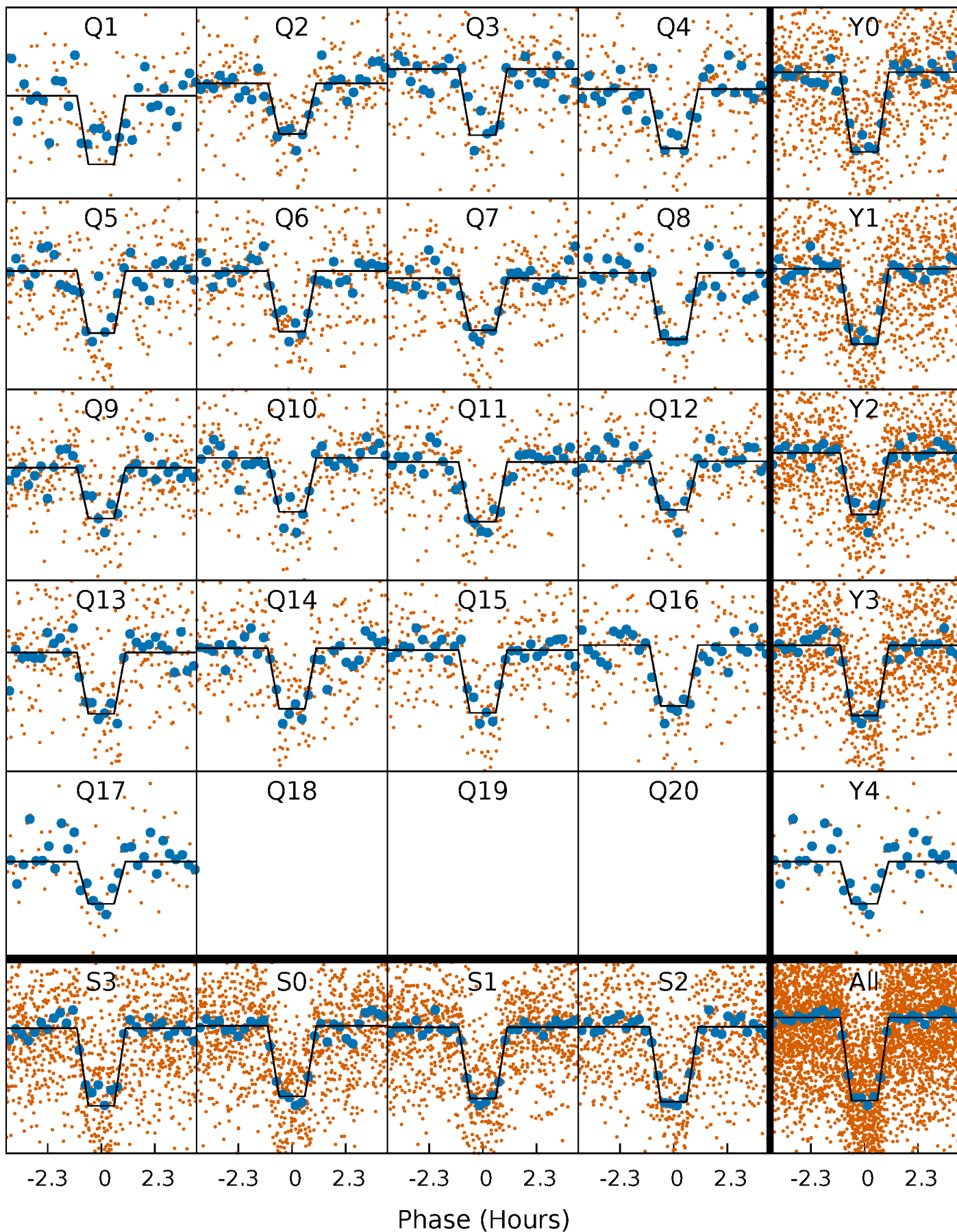
DV Quarter-Phased Transit Curves

TCE 009886661-01 P= 5.082739 Days $T_0=133.212194$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

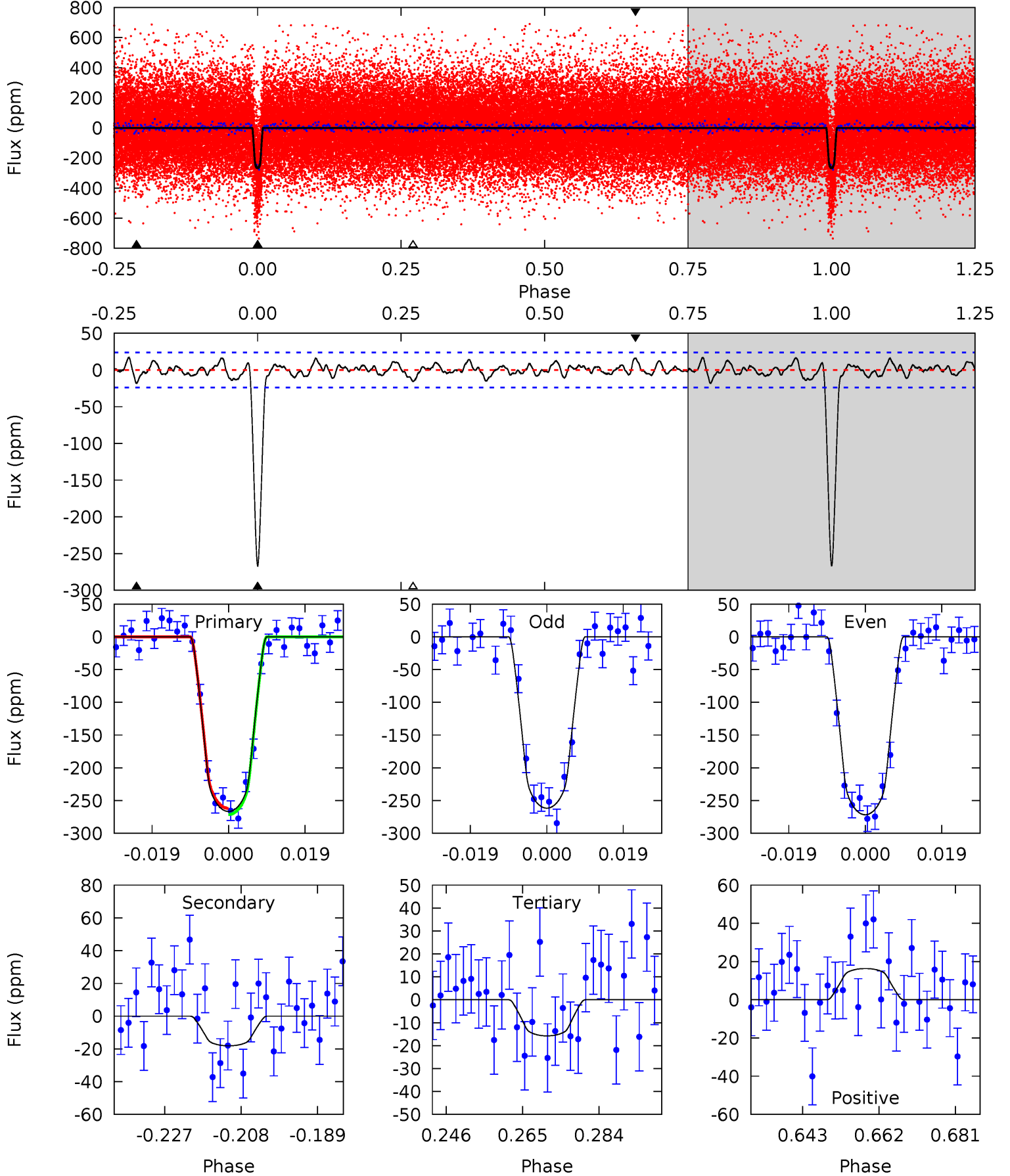
TCE 009886661-01 P= 5.082747 Days $T_0=133.211538$ (BKJD)



DV Model-Shift Uniqueness Test

009886661-01, P = 5.082739 Days, E = 128.129455 Days

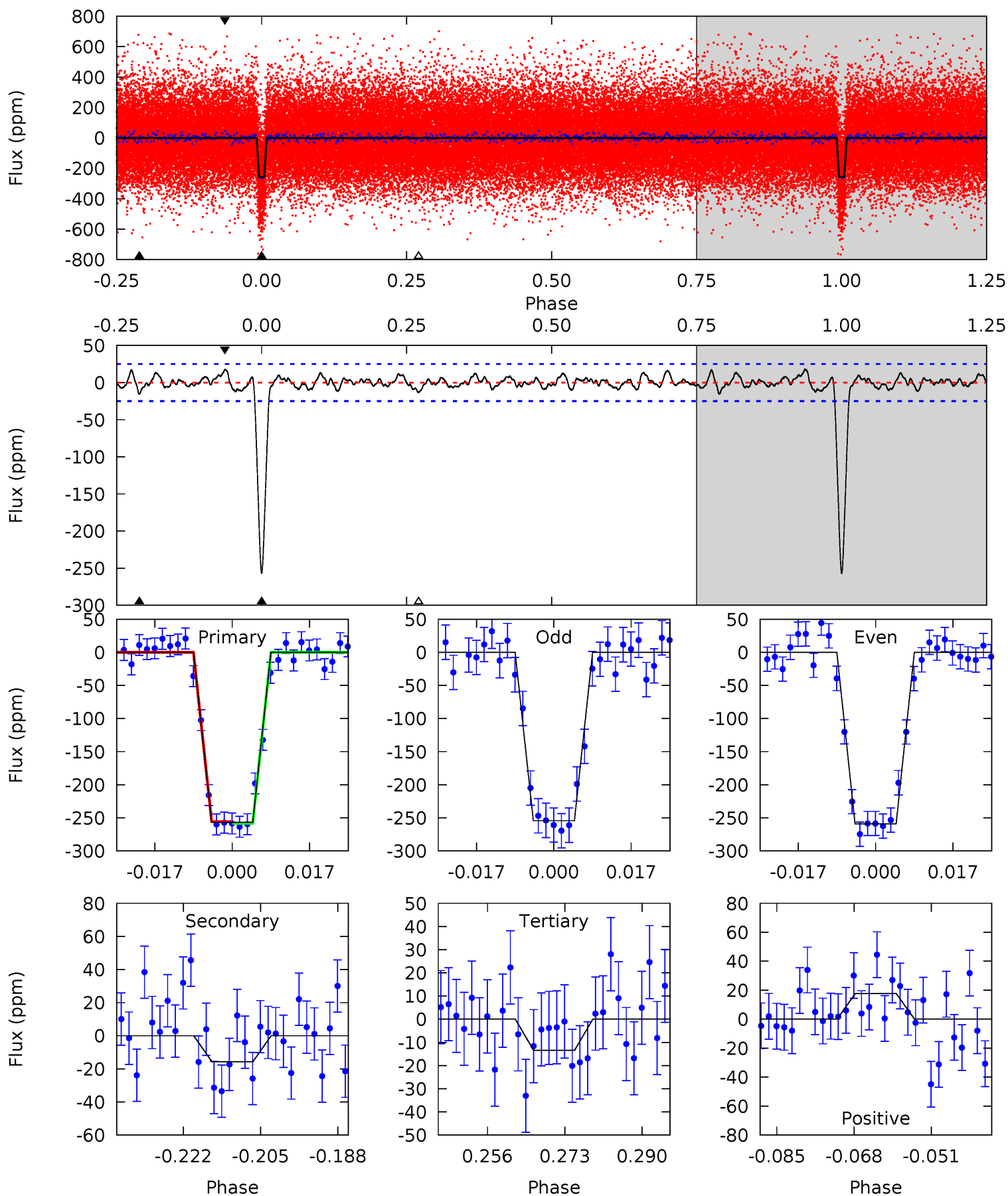
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.9	3.73	3.25	3.37	4.90	2.35	1.27	51.7	51.6	0.49	0.37	1.03	1.00	0.06	0.96



Alt Model-Shift Uniqueness Test

009886661-01, P = 5.082747 Days, E = 128.128791 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.6	3.08	2.64	3.47	4.92	2.39	1.15	47.9	47.1	0.44	-0.39	0.48	1.03	0.06	0.25



Stellar Parameters For KIC 009886661

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5430^{+97}_{-108}	$4.555^{+0.018}_{-0.108}$	$0.180^{+0.150}_{-0.150}$	$0.858^{+0.105}_{-0.035}$	$0.961^{+0.035}_{-0.070}$	$2.145^{+0.197}_{-0.668}$
	+2%/-2%	+0%/-2%	+83%/-83%	+12%/-4%	+4%/-7%	+9%/-31%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 009886661-01 / KOI 1606.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 5	$1.75^{+0.36}_{-0.36}$	1312^{+43}_{-34}	3179^{+261}_{-233}	10^{+7}_{-4}
Alt.	-16 ± 5	$1.56^{+0.37}_{-0.39}$	1315^{+46}_{-34}	3214^{+366}_{-261}	11^{+11}_{-5}

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 $A_{obs} \gg 1.0$

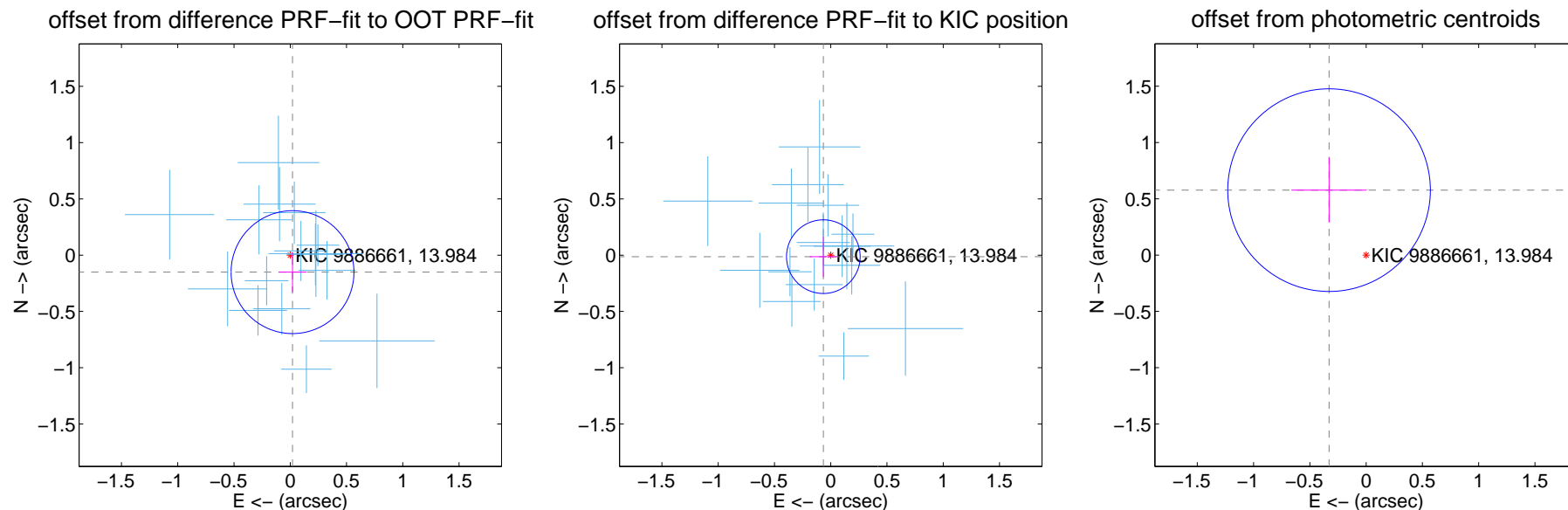
DV Centroid Data

Supplemental centroid analysis for 009886661-01. Kepler magnitude: 13.98. Transit SNR 37.97

There are 17 quarters with good PRF difference image offsets

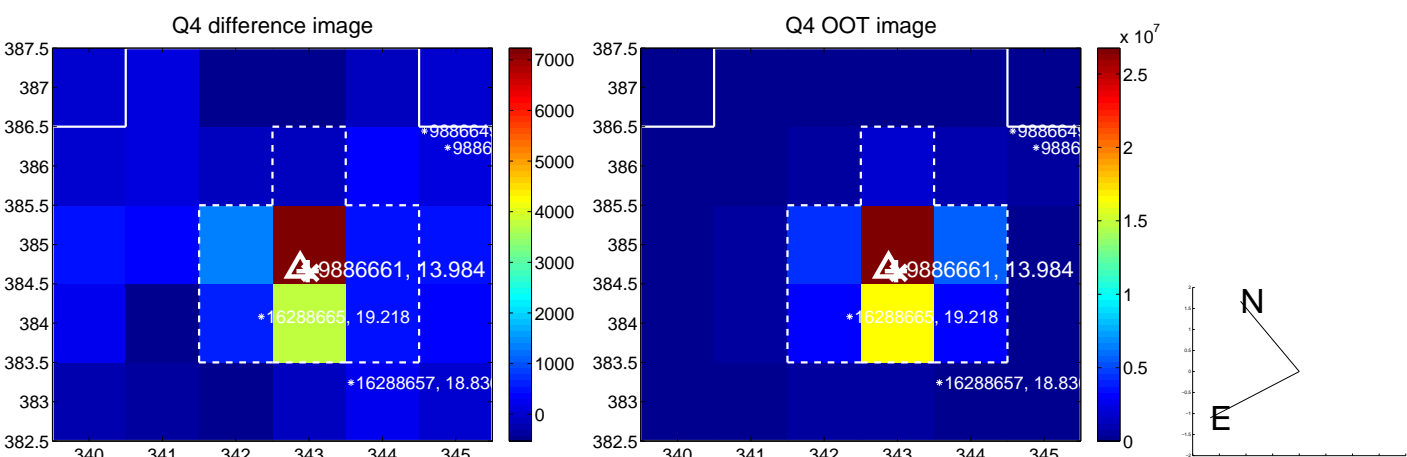
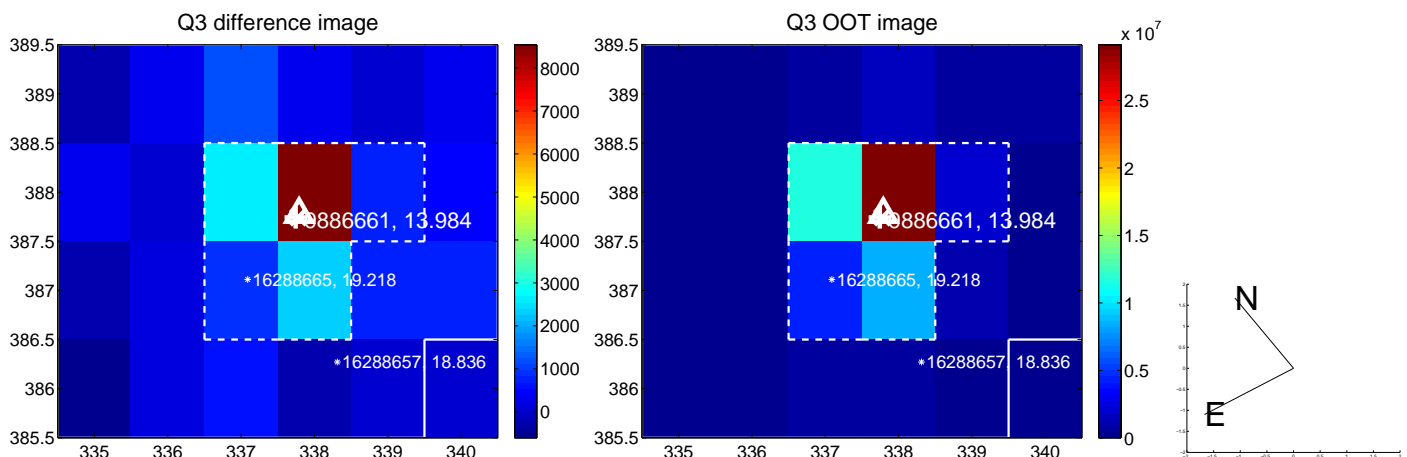
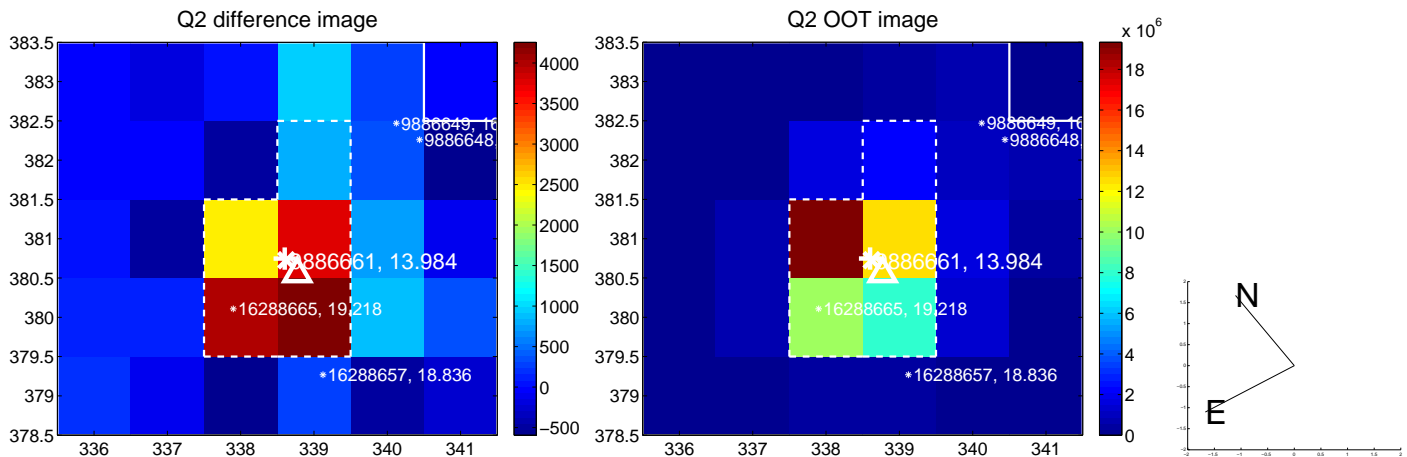
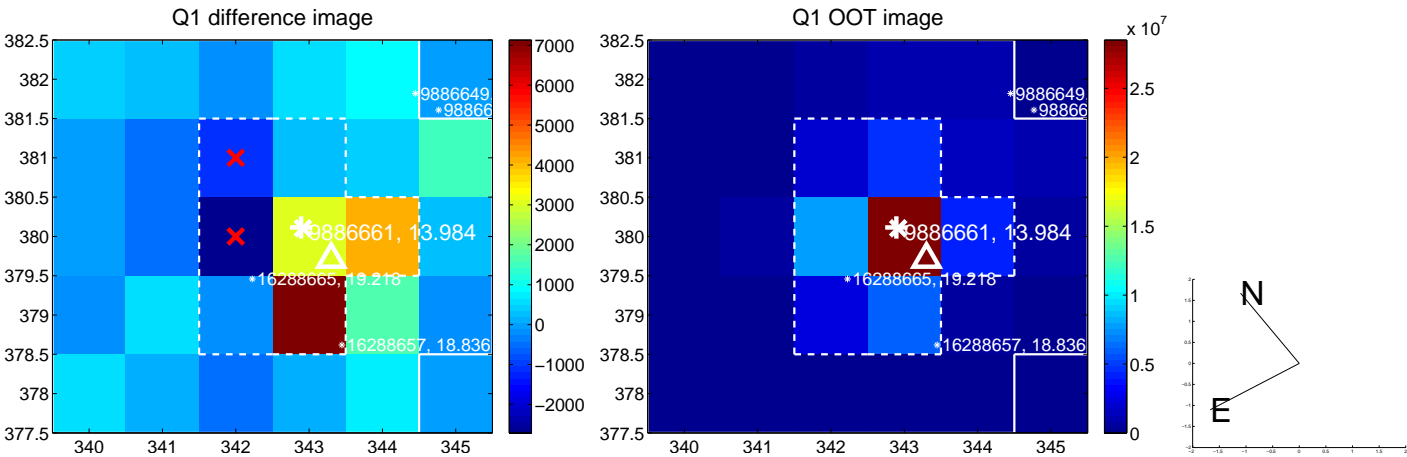
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.182	0.84	-0.020 ± 0.124	-0.151 ± 0.176
PRF-fit source offset from KIC position	0.067 ± 0.109	0.61	0.066 ± 0.119	-0.013 ± 0.180
photometric centroid source offset	0.66 ± 0.30	2.21	0.33 ± 0.33	0.58 ± 0.29

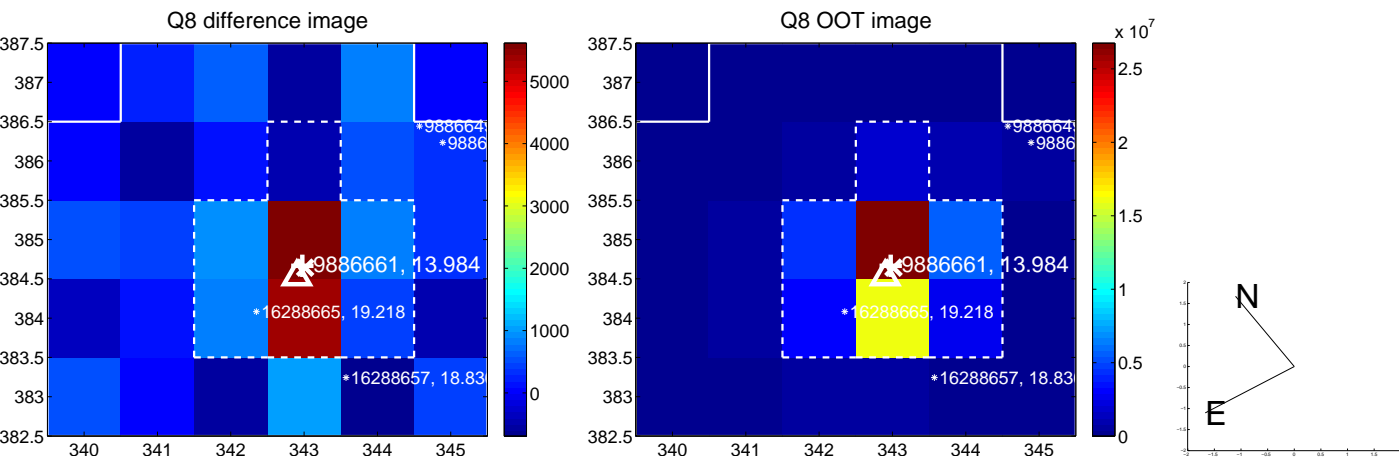
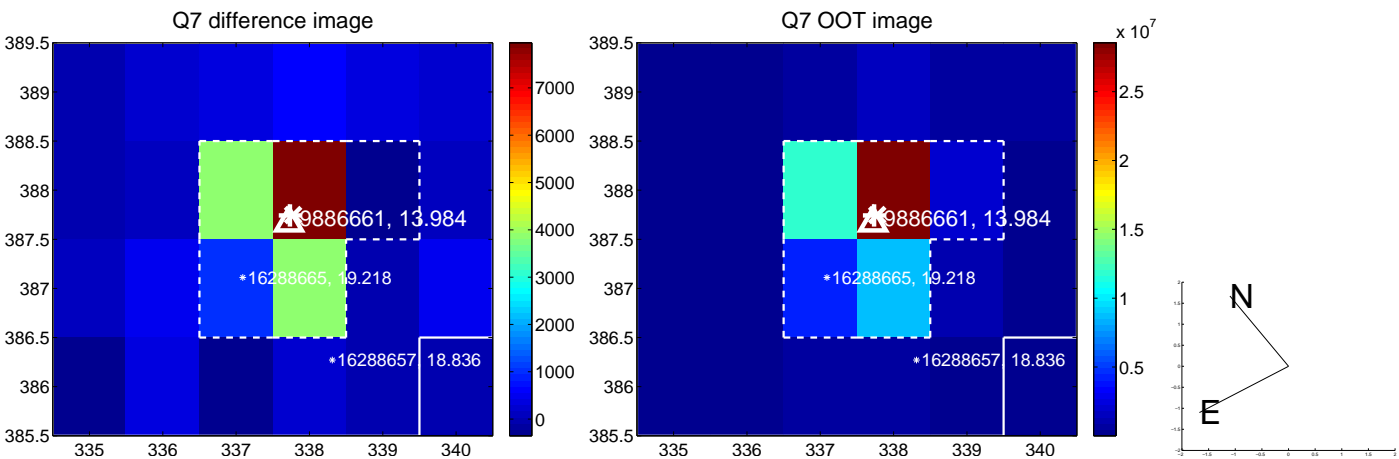
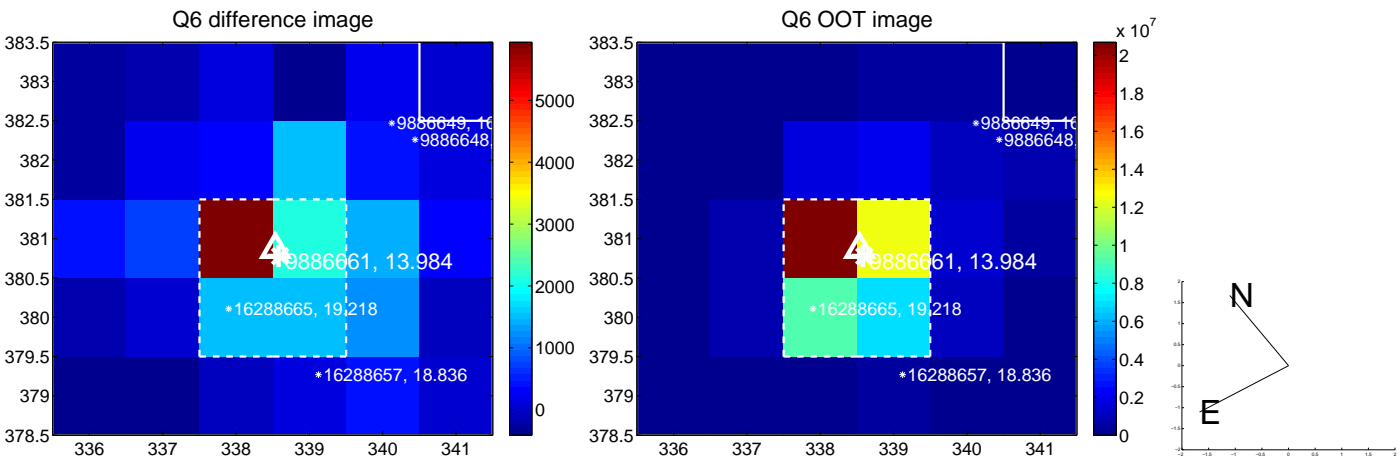
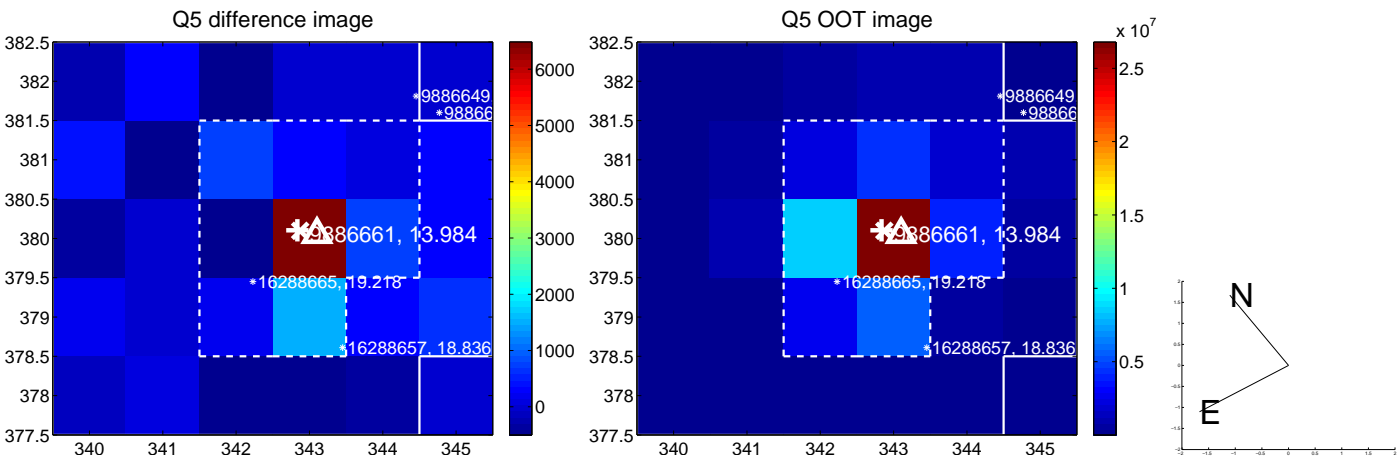


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

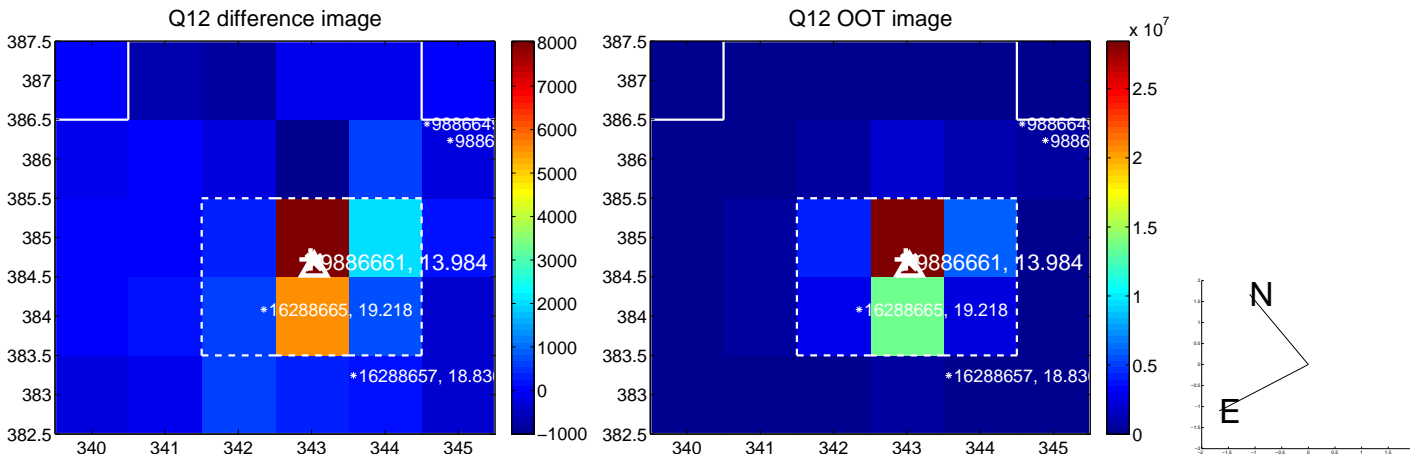
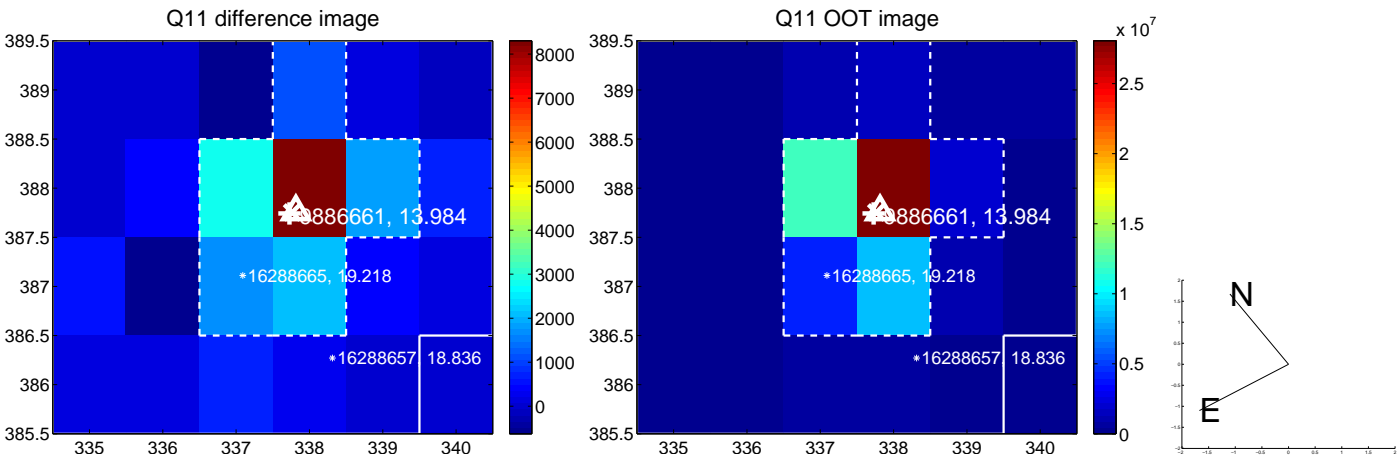
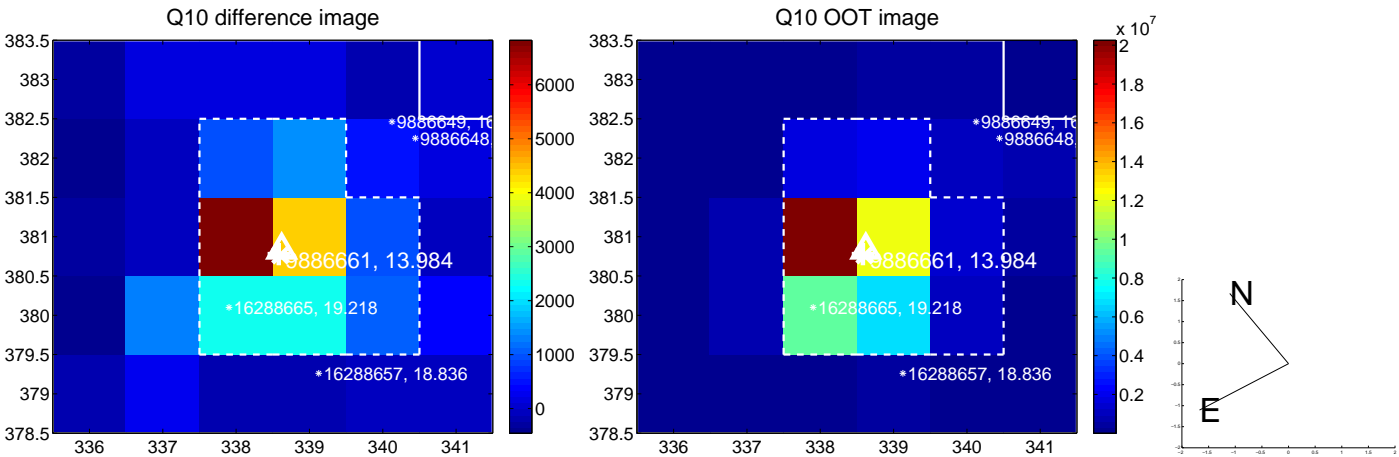
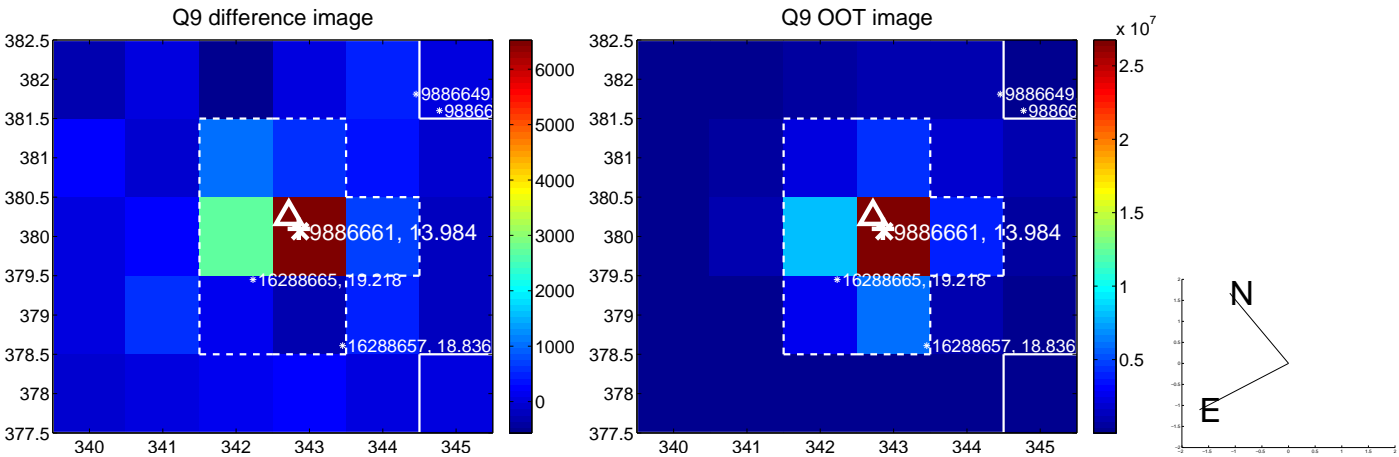
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



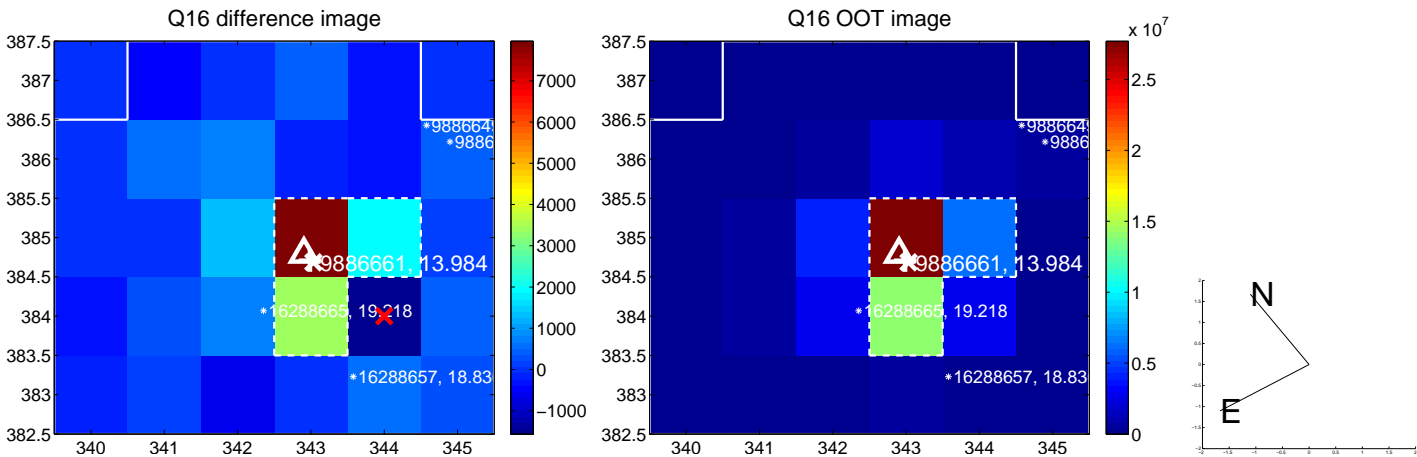
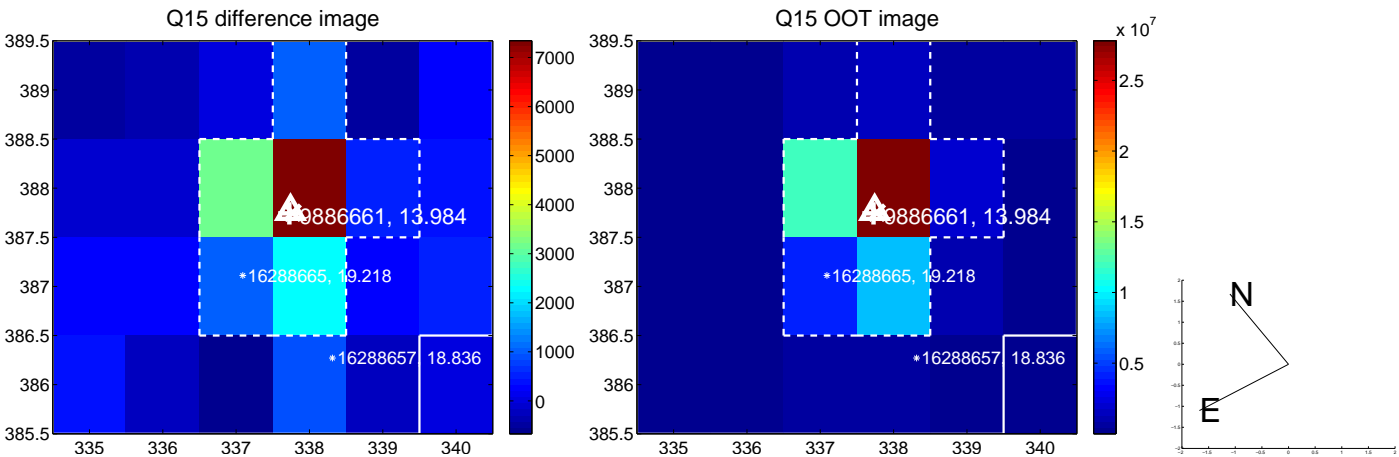
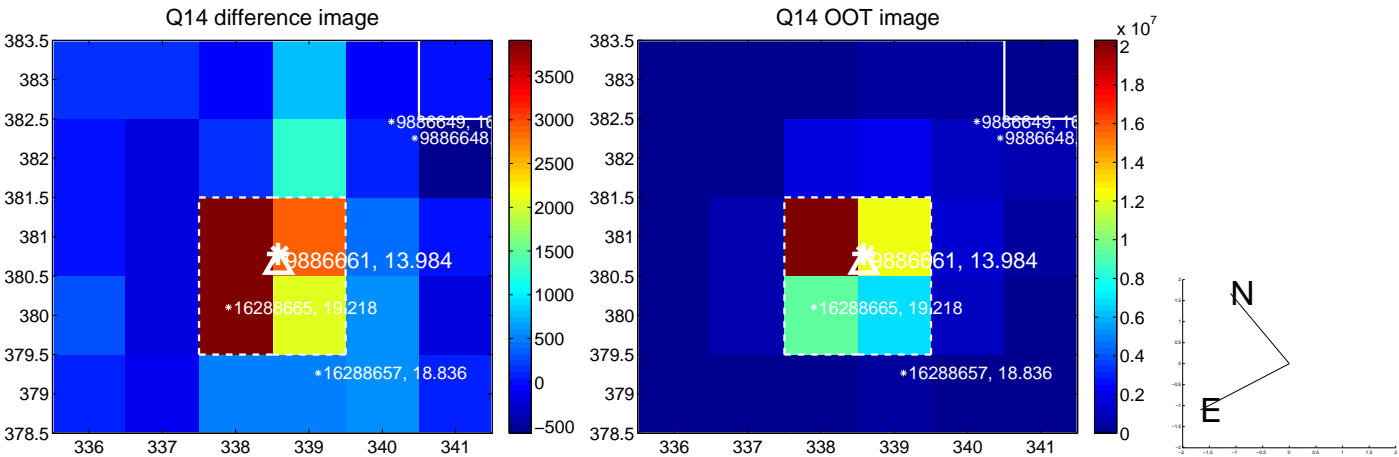
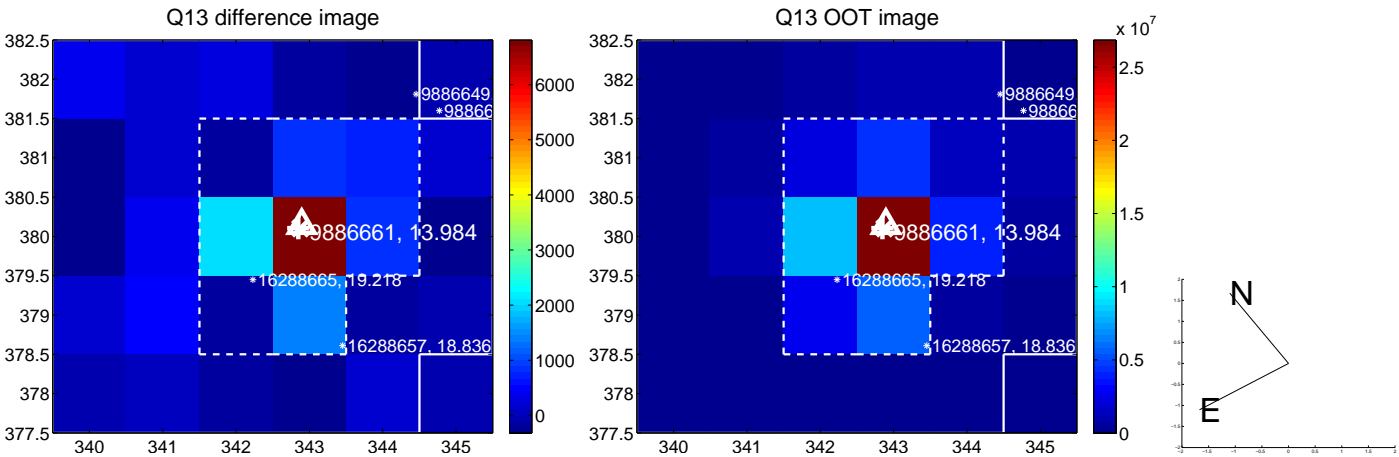
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



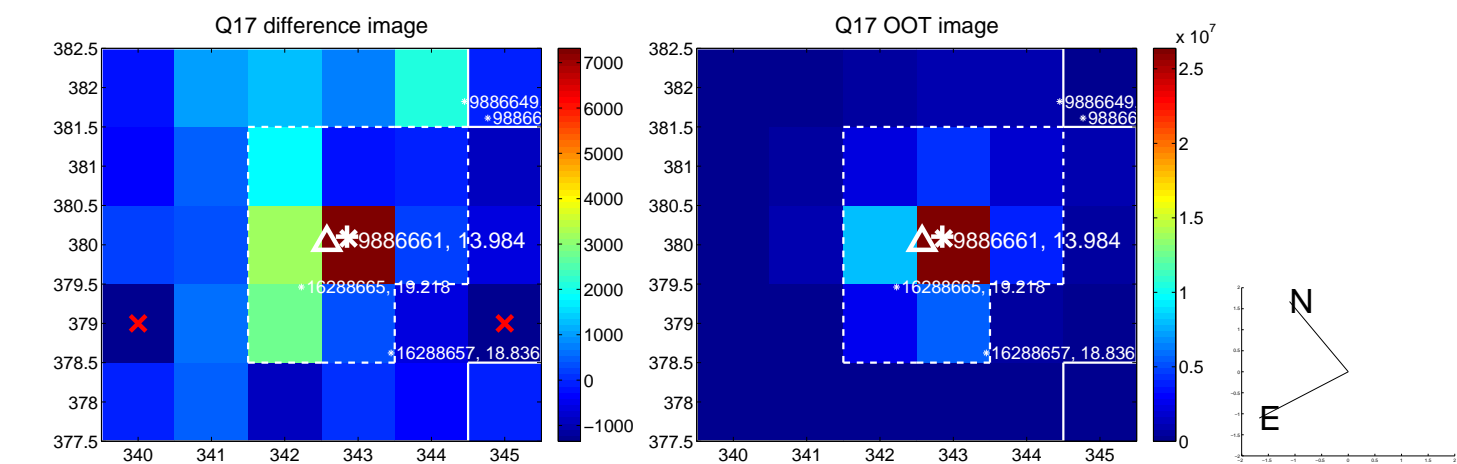
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



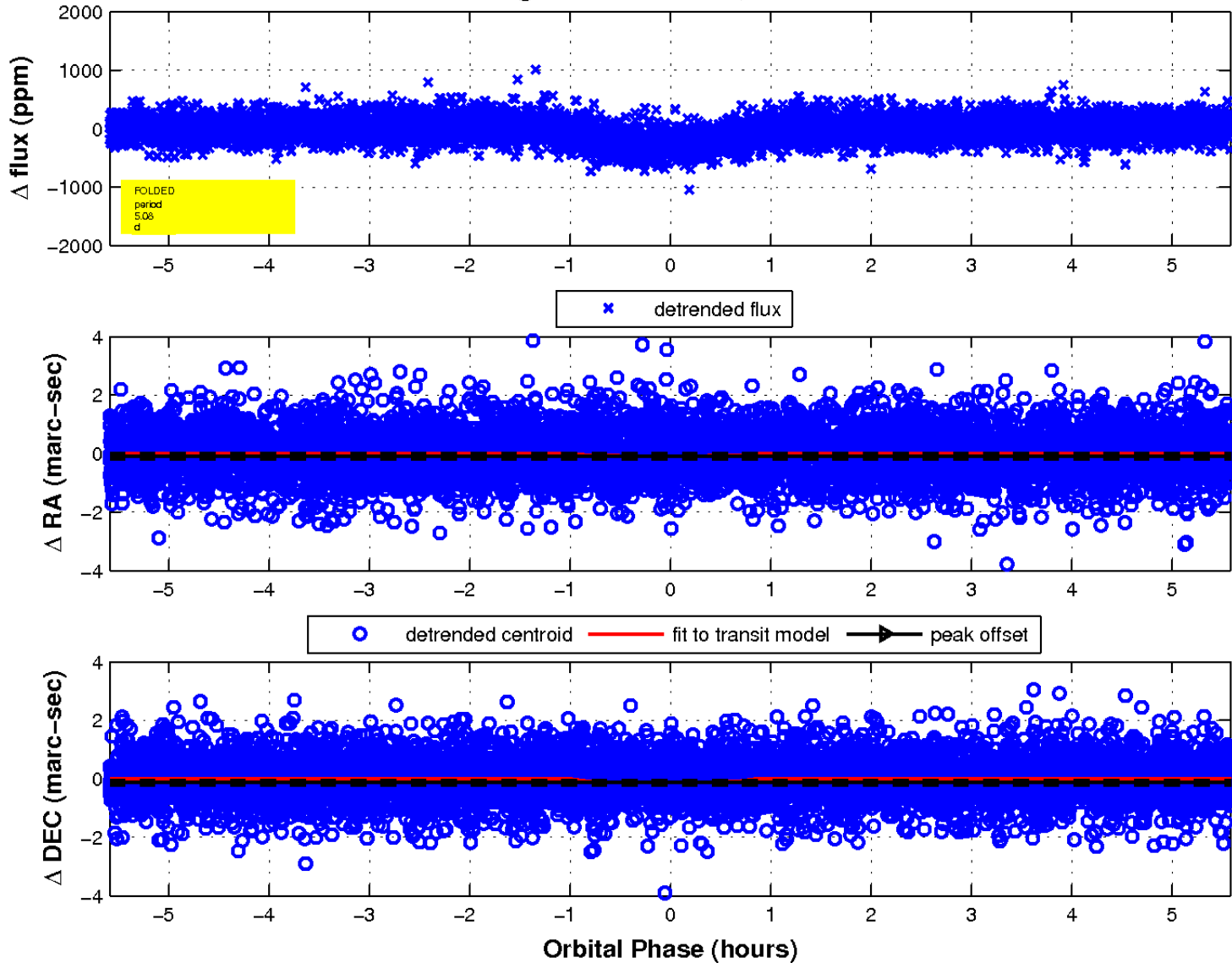
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

