

KIC 006546582

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})
006546582-01	OBS	No	7.208542	137.360380	28.1	29.718	7.5	6.4	3.60	6098	2.06	2223.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006546582-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

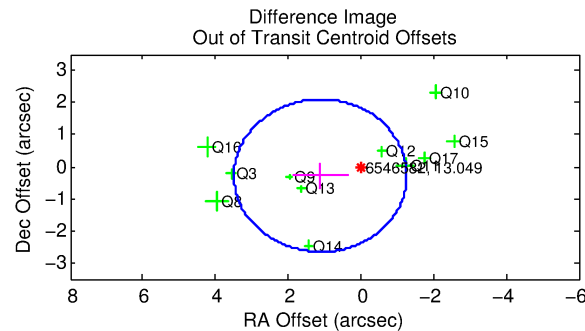
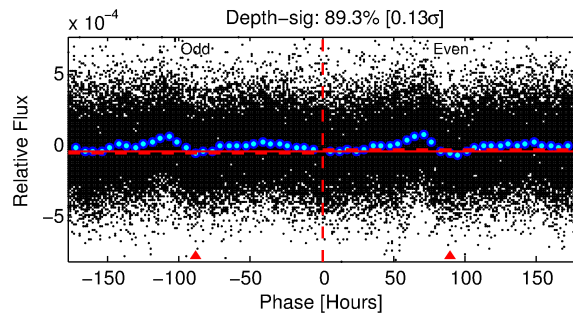
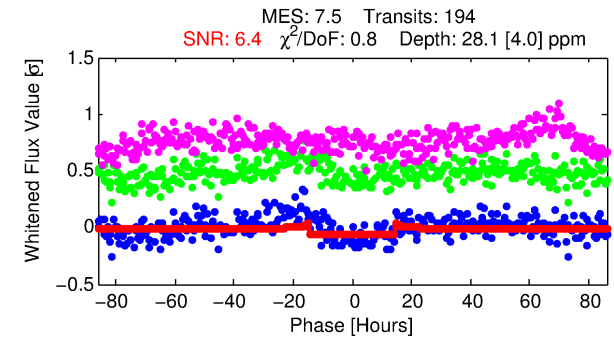
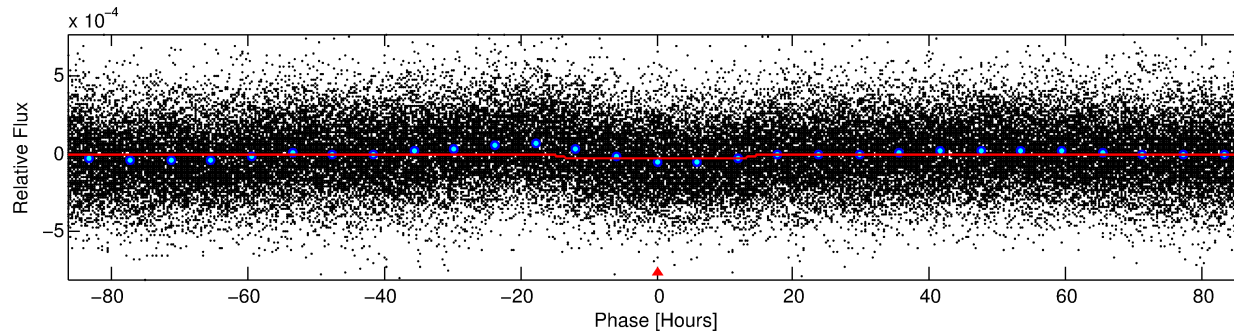
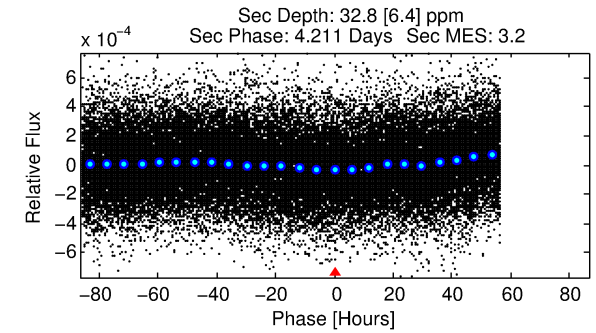
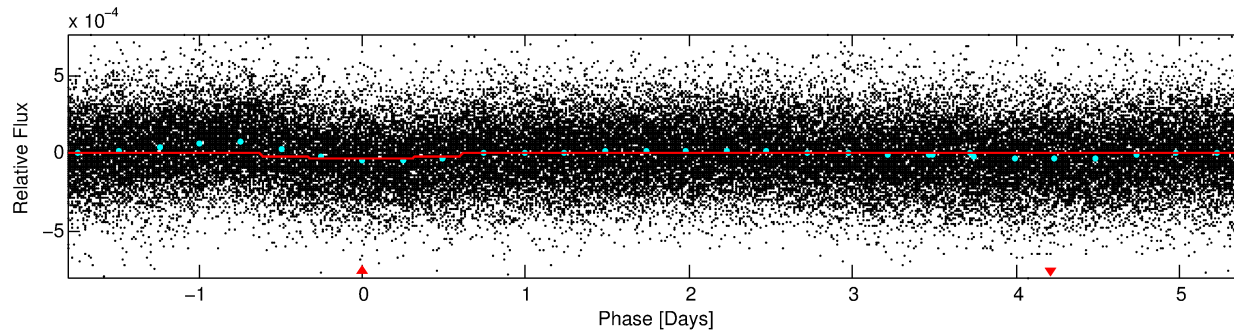
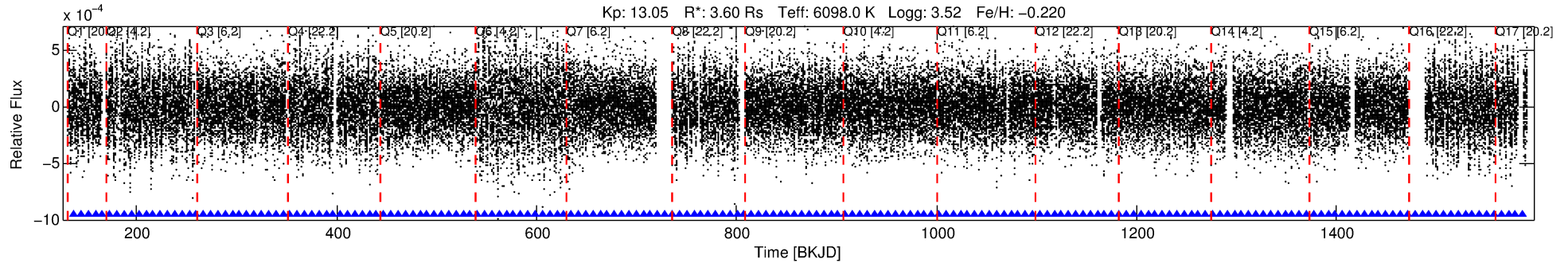
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006546582-01

No Significant Match Found

DV One-Page Summary

KIC: 6546582 Candidate: 1 of 1 Period: 7.209 d



DV Fit Results:

Period = 7.20854 [0.00020] d
Epoch = 137.3604 [0.0205] BKJD
Rp/R* = 0.0052 [0.0011]
a/R* = 1.53 [0.87]
b = 0.73 [0.64]
Seff = 2223.91 [1459.17]
Teq = 1751 [287] K
Rp = 2.06 [0.99] Re
a = 0.0851 [0.0348] AU
Ag = 30.84 [24.35] [1.23σ]
Teffp = 6380 [751] K [5.76σ]

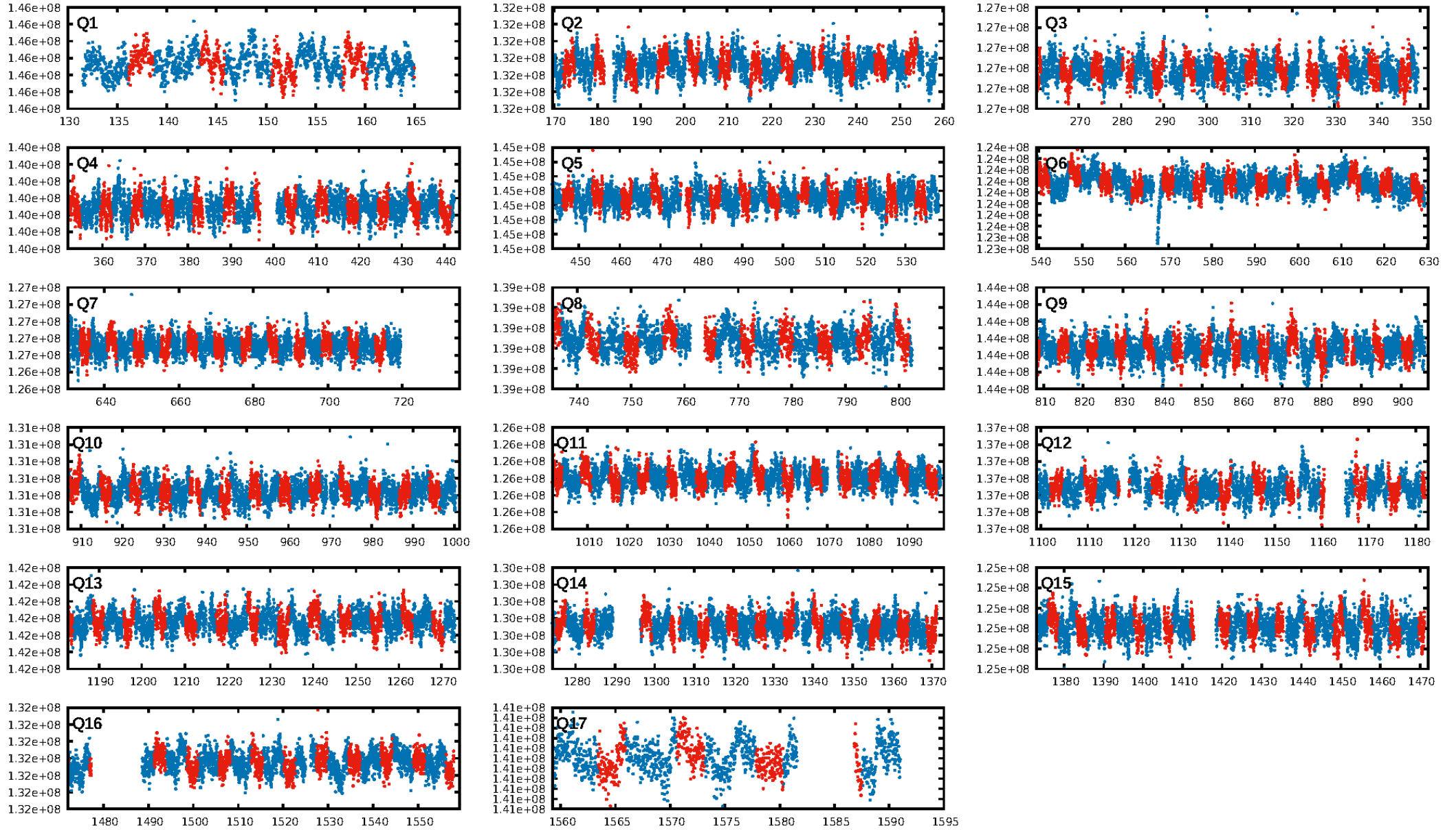
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.29e-12
RollingBand-fgt: 1.00 [186/186]
GhostDiagnostic-chr: 1.266
Centroid-sig: 10.5%
Centroid-so: 0.887 arcsec [1.03σ]
OotOffset-rm: 1.152 arcsec [1.45σ]
KicOffset-rm: 1.155 arcsec [1.40σ]
OotOffset-st: 2/3/3/3 [11]
KicOffset-st: 2/3/3/3 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 1.00 [17/17]

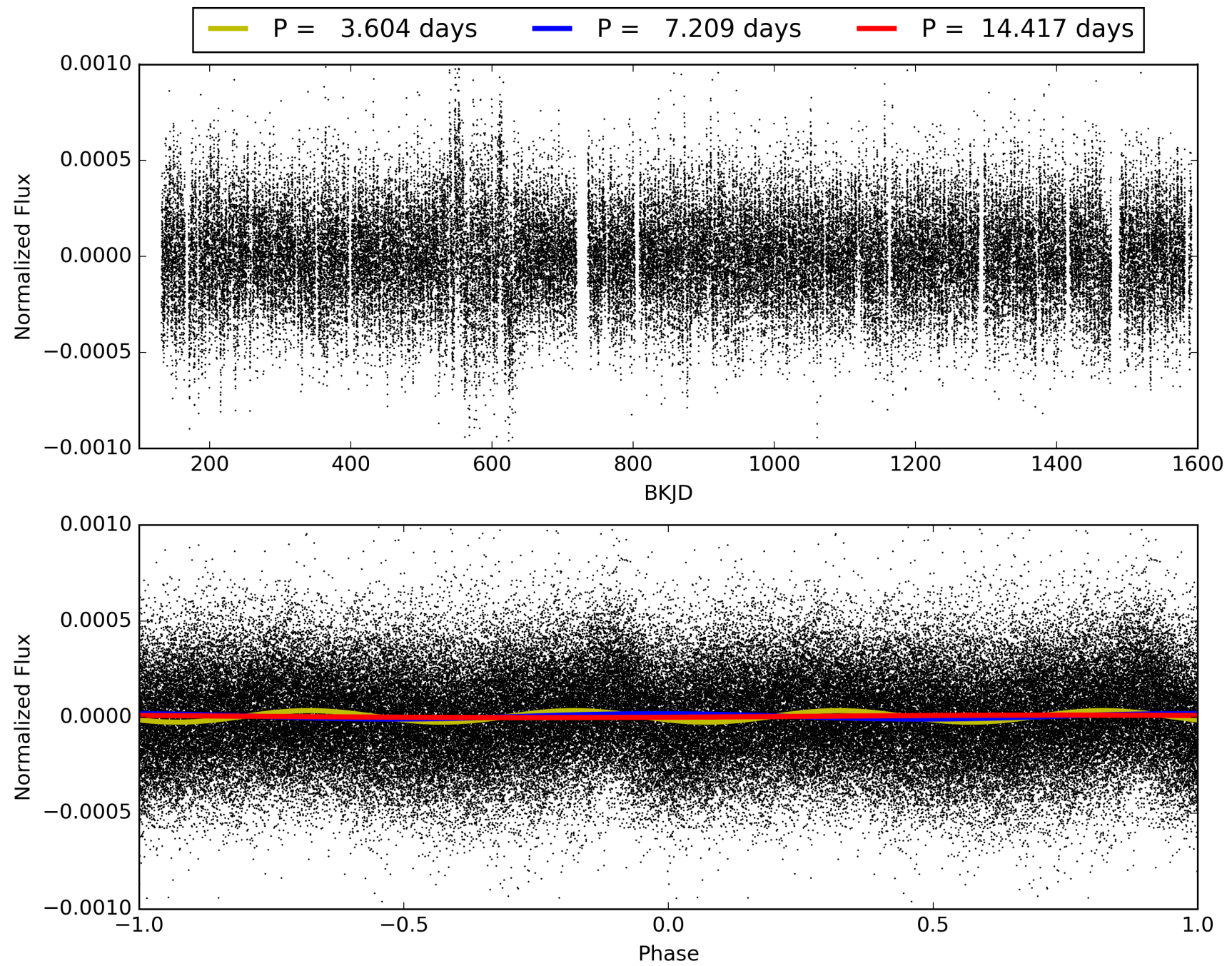
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:29:00 Z

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

TCE 006546582-01, PDC Light Curves

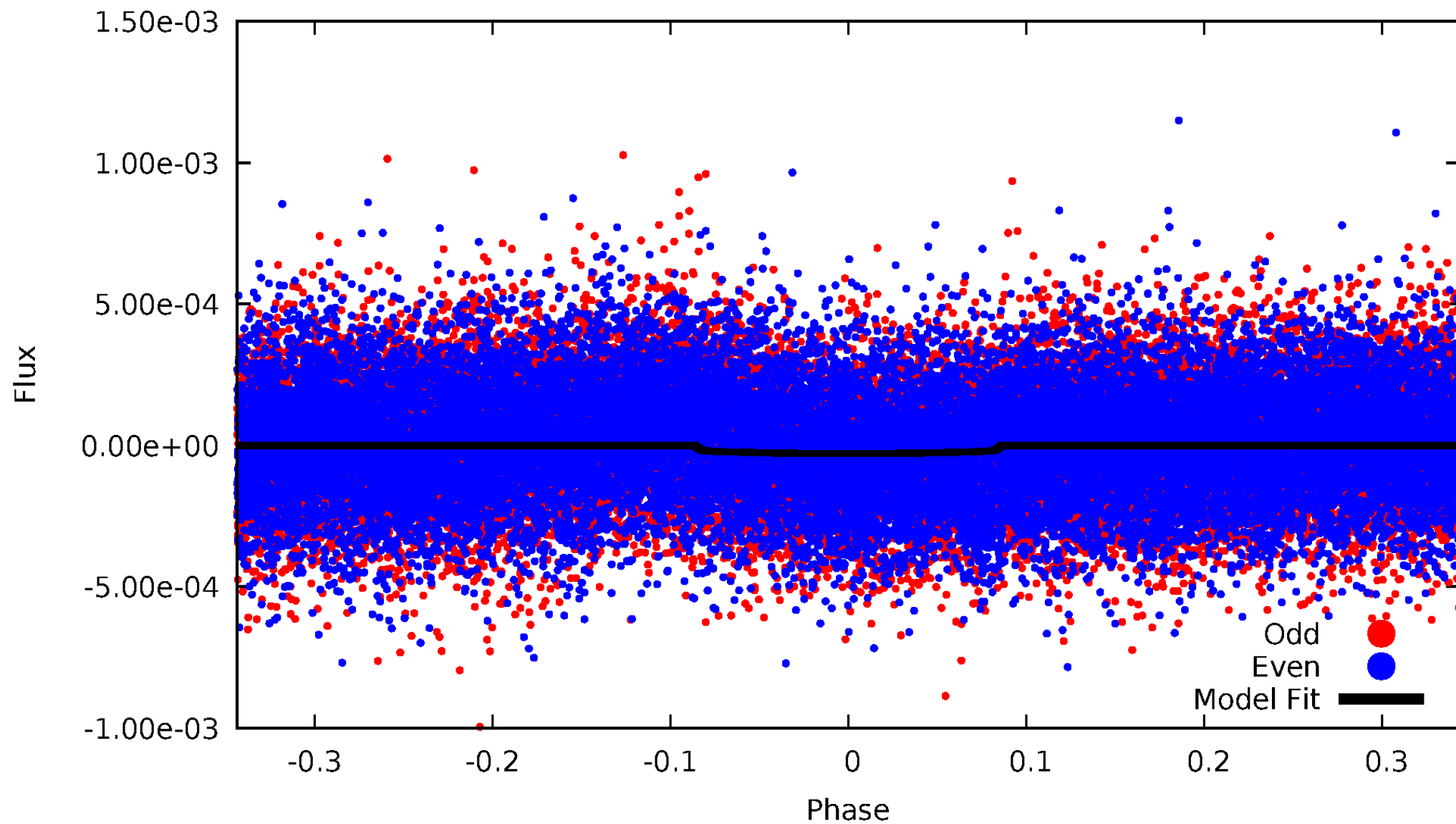


TCE 006546582-01



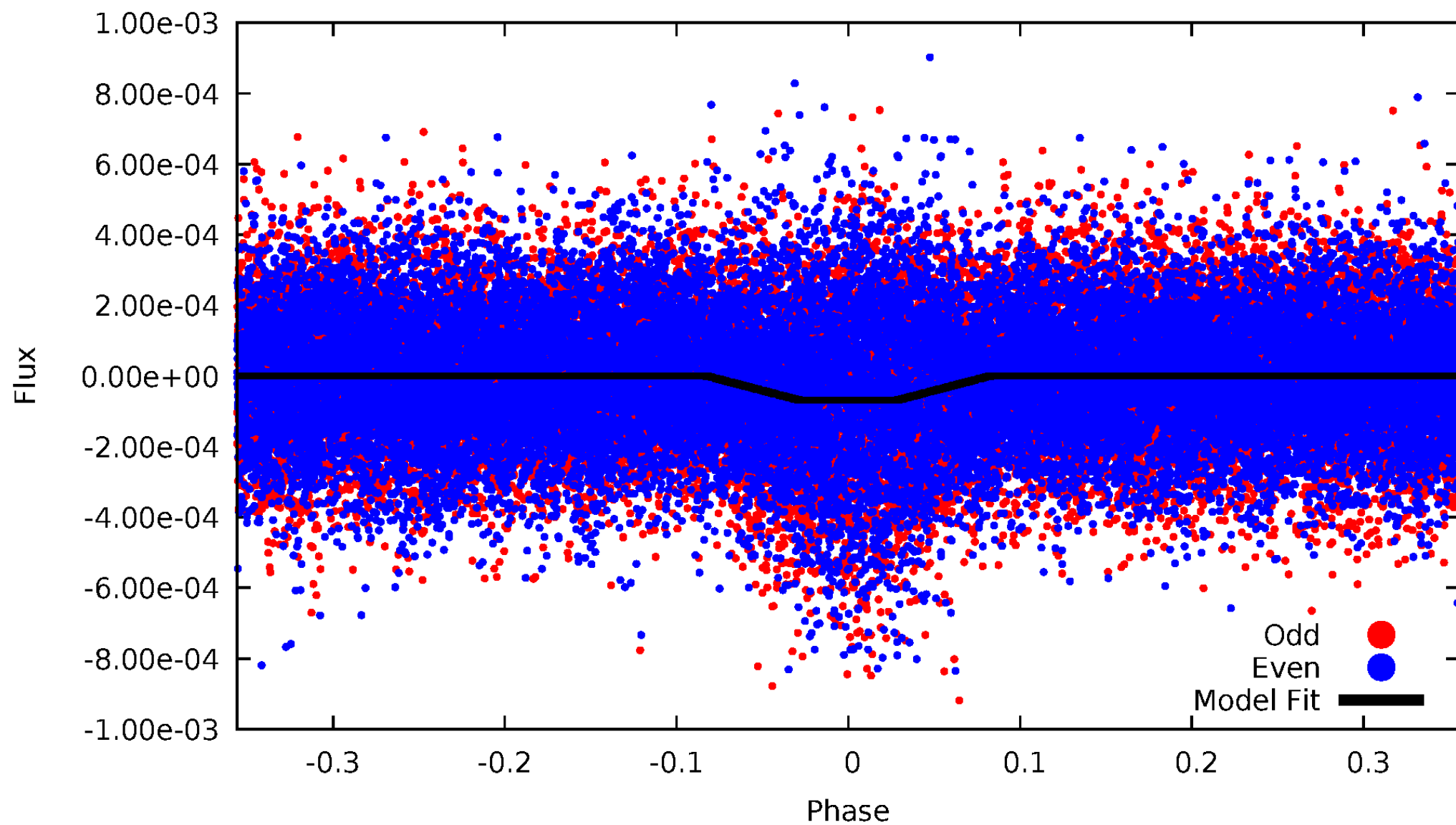
DV Odd/Even

TCE 006546582-01

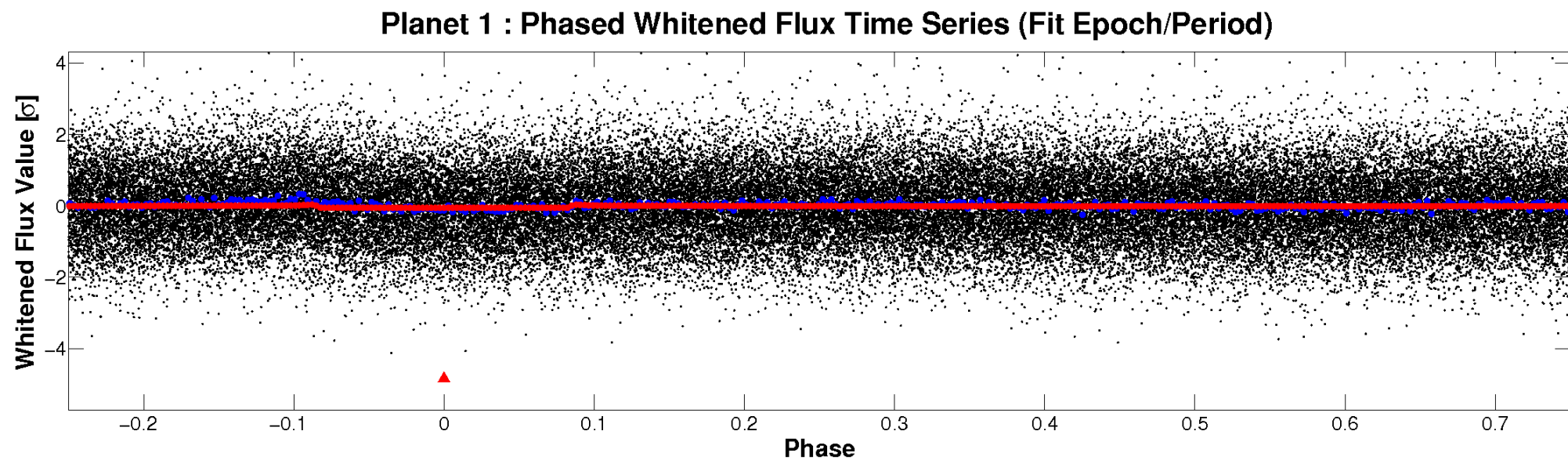
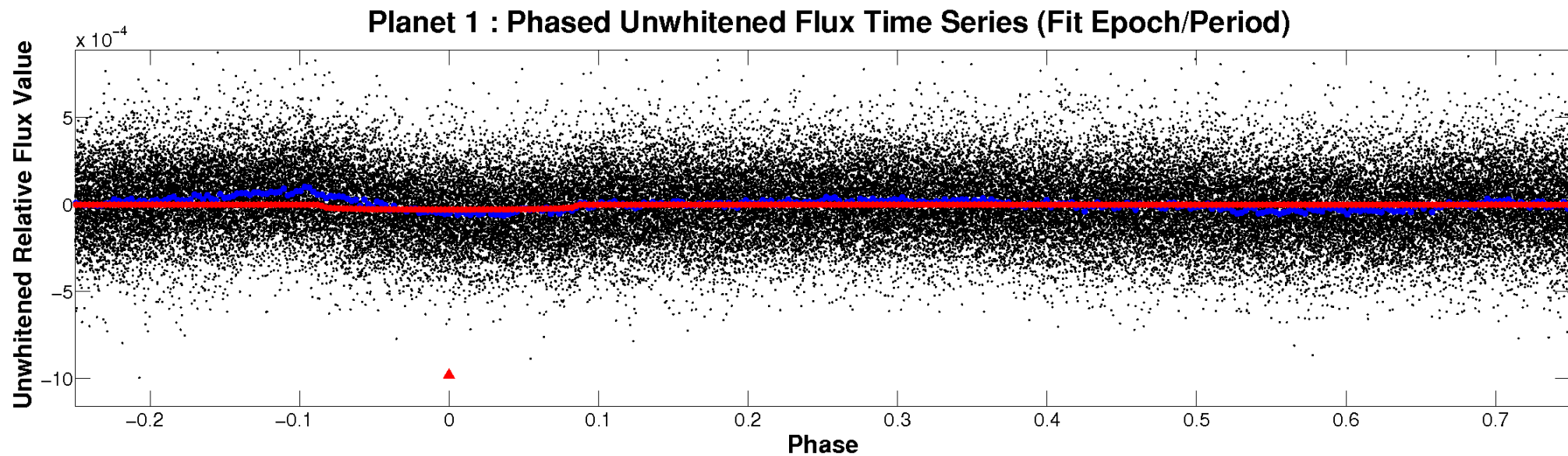


ALT Odd/Even

TCE 006546582-01

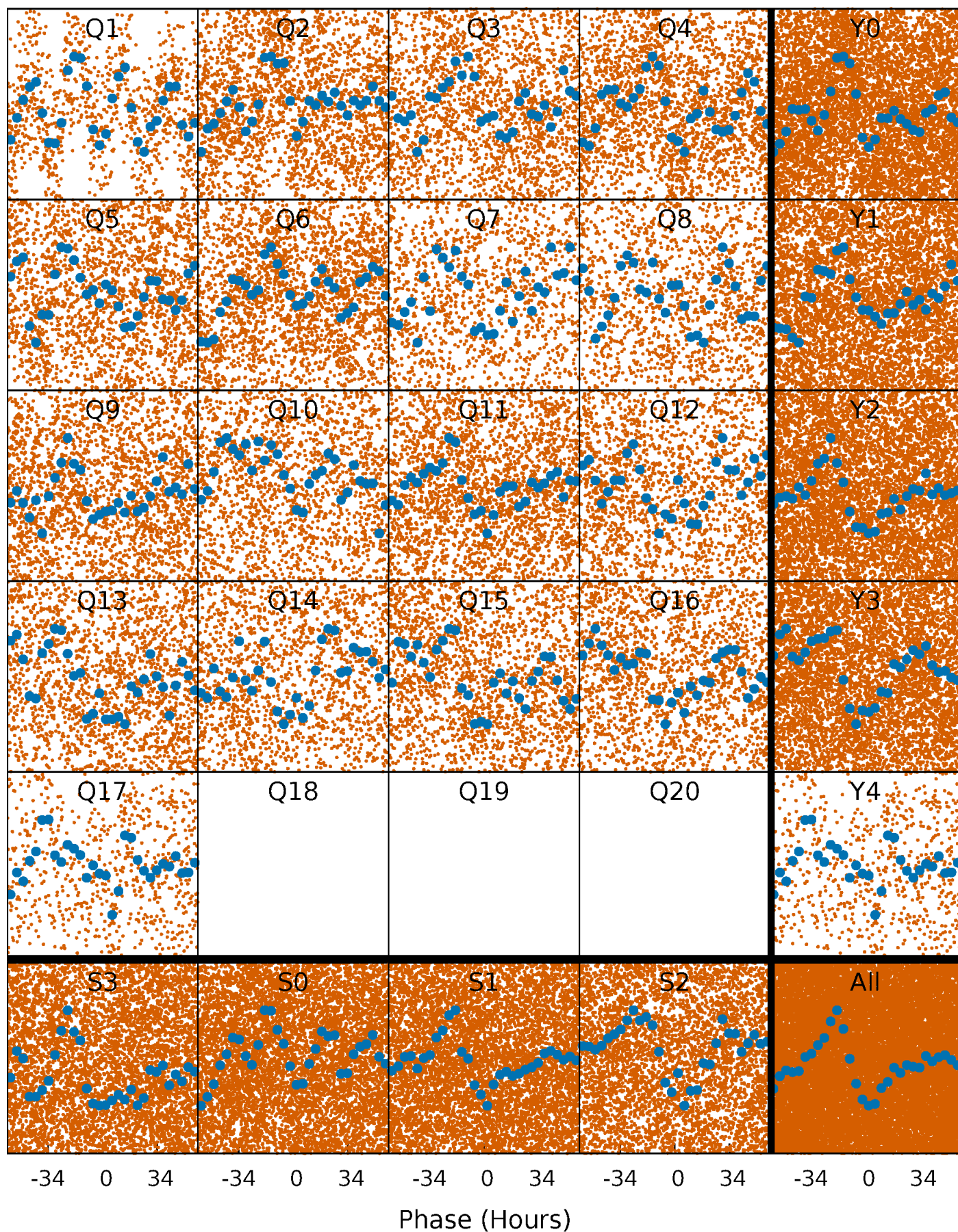


Non-Whitened Vs. Whitened Light Curve



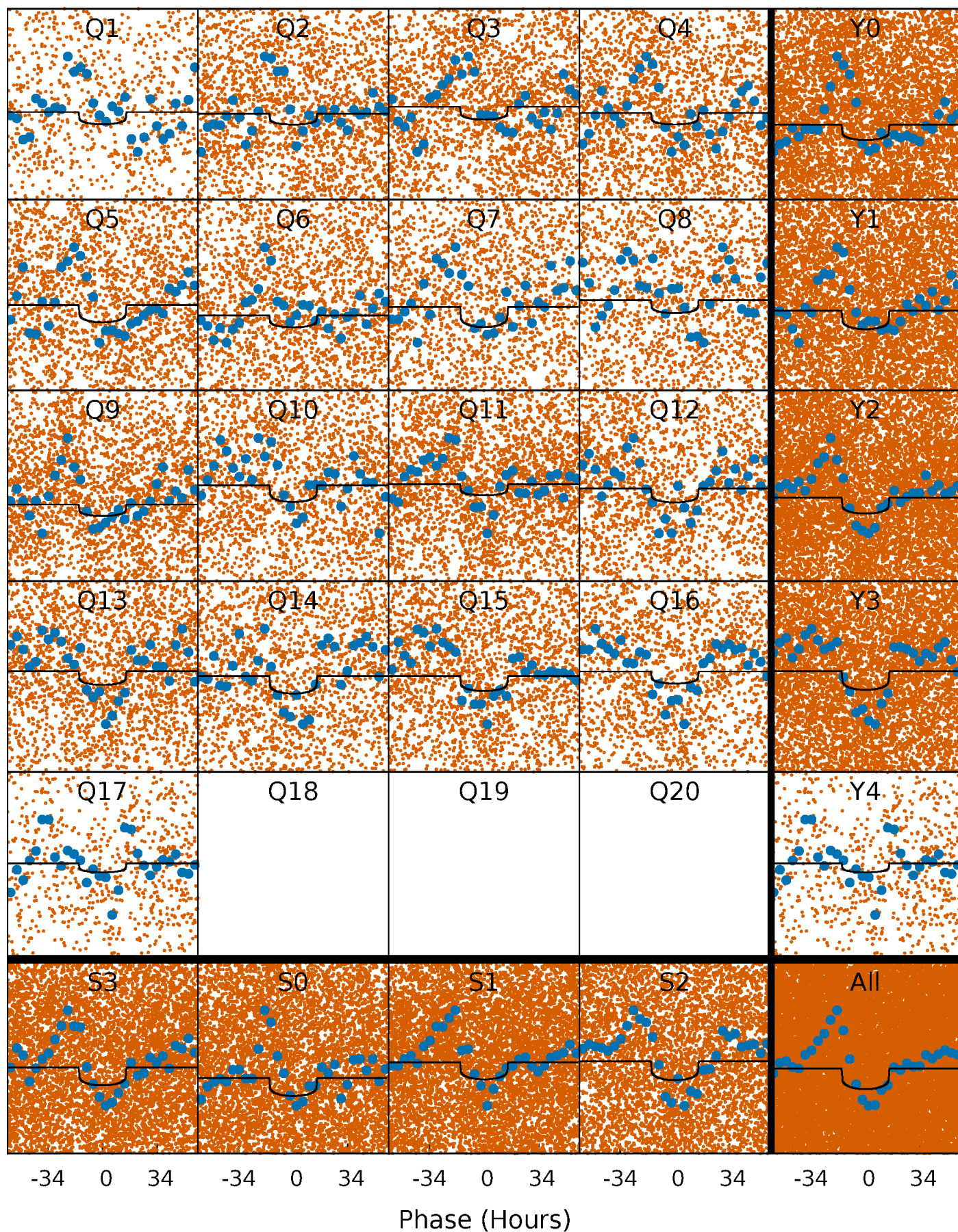
PDC Quarter-Phased Transit Curves

TCE 006546582-01 P= 7.208542 Days $T_0=137.360379$ (BKJD)



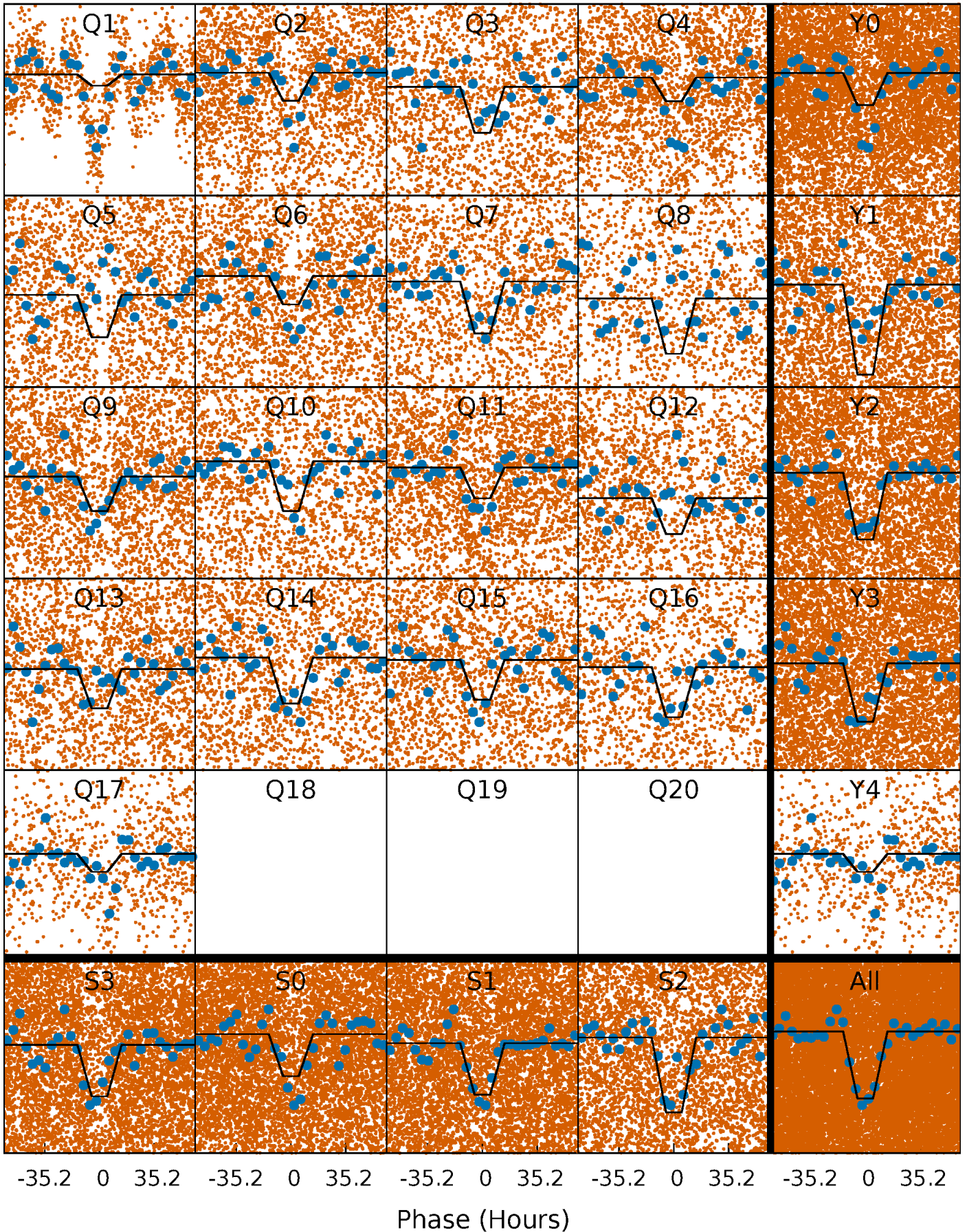
DV Quarter-Phased Transit Curves

TCE 006546582-01 P= 7.208542 Days $T_0=137.360379$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

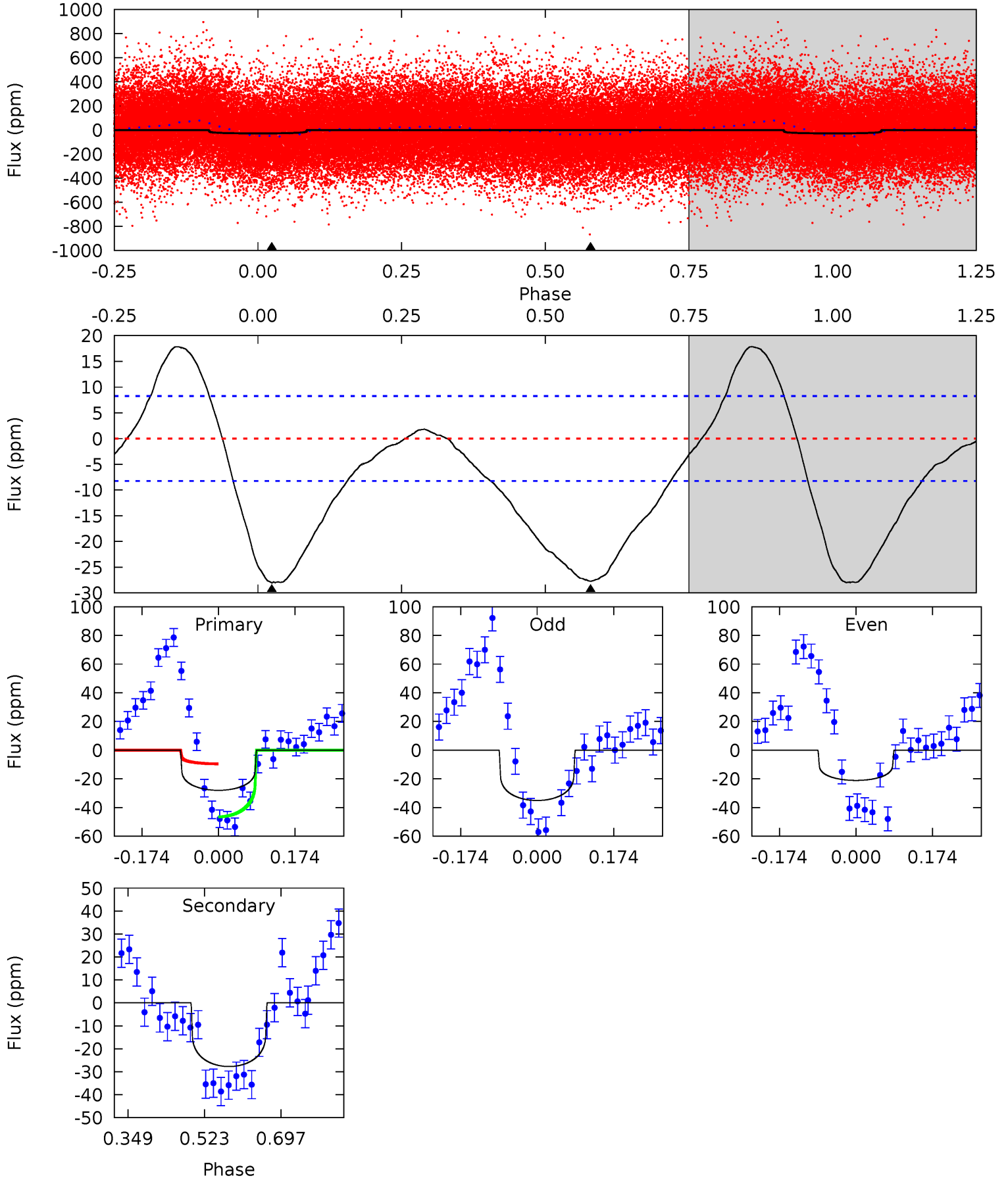
TCE 006546582-01 P= 7.208360 Days $T_0=137.363669$ (BKJD)



DV Model-Shift Uniqueness Test

006546582-01, P = 7.208542 Days, E = 130.151837 Days

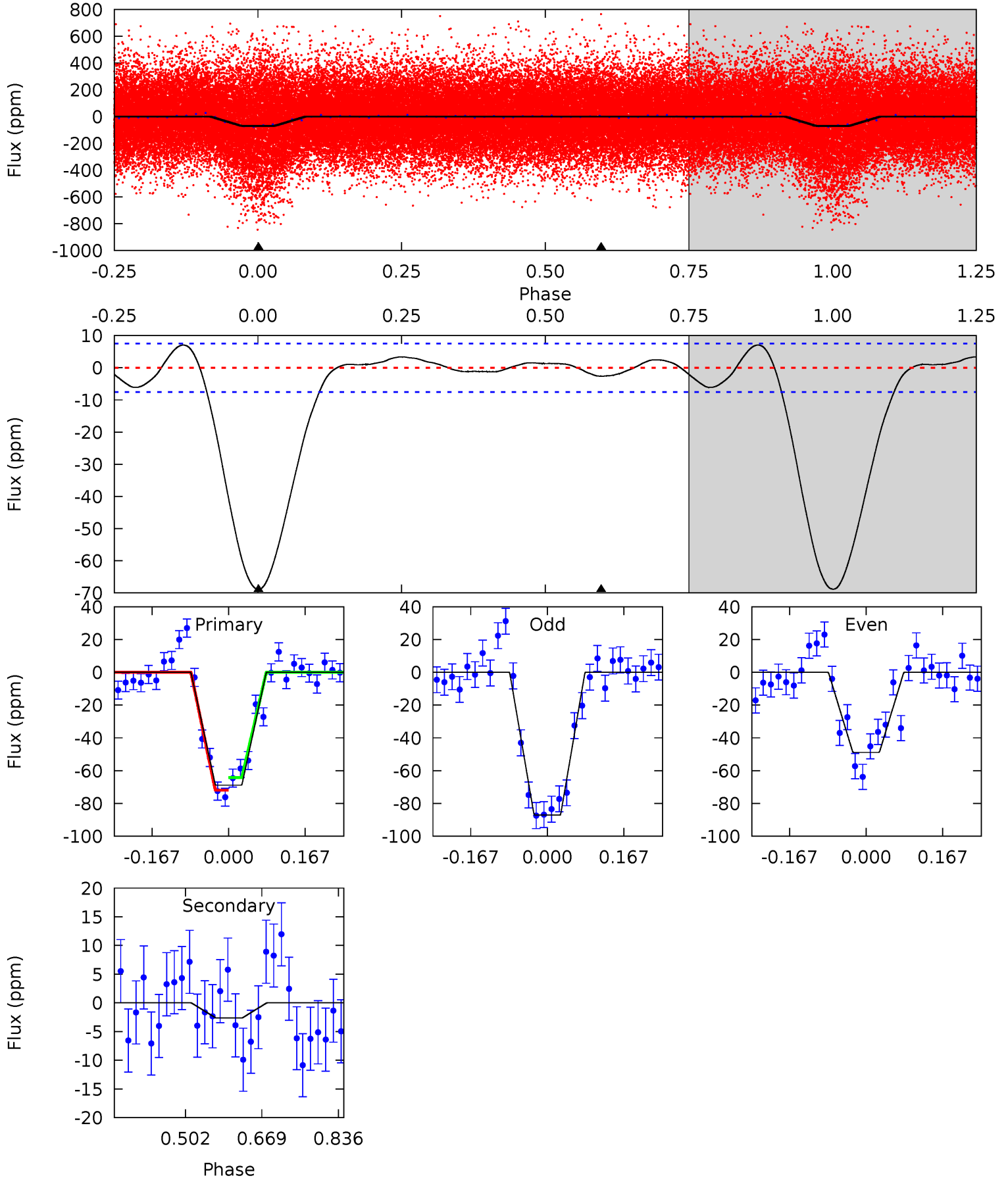
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	14.9	0	0	4.45	1.36	3.03	15.1	15.1	14.9	14.9	3.75	0.66	0.39	9.82



Alt Model-Shift Uniqueness Test

006546582-01, P = 7.208360 Days, E = 130.155309 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.7	1.55	0	0	4.46	1.38	1.59	40.7	40.7	1.55	1.55	11.2	1.03	0.09	2.25



Stellar Parameters For KIC 006546582

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6098^{+183}_{-165}	$3.523^{+0.375}_{-0.125}$	$-0.220^{+0.350}_{-0.300}$	$3.605^{+0.674}_{-1.574}$	$1.582^{+0.185}_{-0.431}$	$0.048^{+0.167}_{-0.015}$
	+3%/-3%	+11%/-4%	+159%/-136%	+19%/-44%	+12%/-27%	+351%/-31%
Source	PHO1	FLK73	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 006546582-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28 ± 2	$1.90^{+0.62}_{-0.57}$	2406^{+149}_{-271}	6116^{+885}_{-585}	31^{+27}_{-13}
Alt.	-3 ± 2	$3.07^{+0.67}_{-0.74}$	2419^{+167}_{-246}	3061^{+395}_{-757}	$1.017^{+1.052}_{-0.657}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

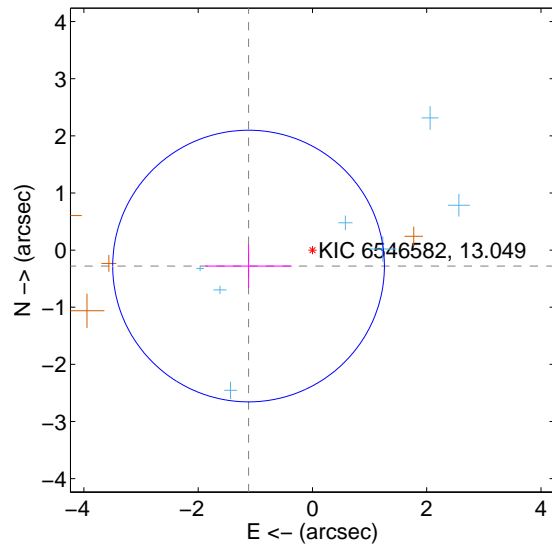
Supplemental centroid analysis for 006546582-01. Kepler magnitude: 13.05. Transit SNR 6.45

There are 7 quarters with good PRF difference image offsets

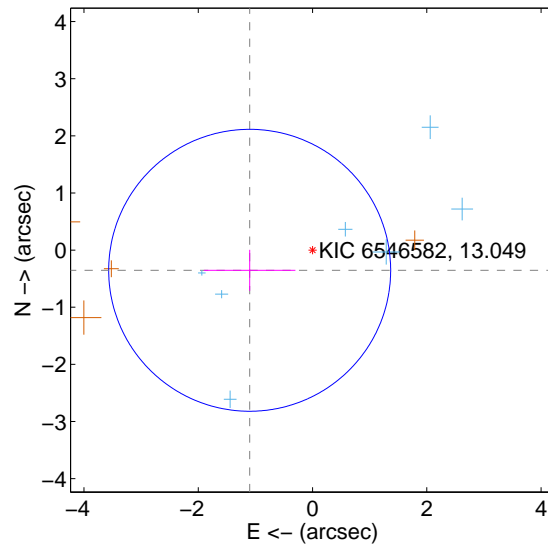
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.152 ± 0.792	1.45	1.118 ± 0.754	-0.279 ± 0.380
PRF-fit source offset from KIC position	1.155 ± 0.822	1.40	1.100 ± 0.801	-0.353 ± 0.359
photometric centroid source offset	0.89 ± 0.86	1.03	-0.16 ± 0.94	0.87 ± 0.86

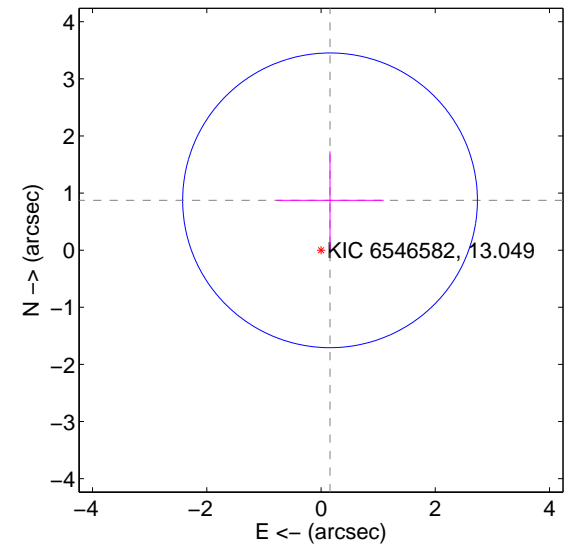
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

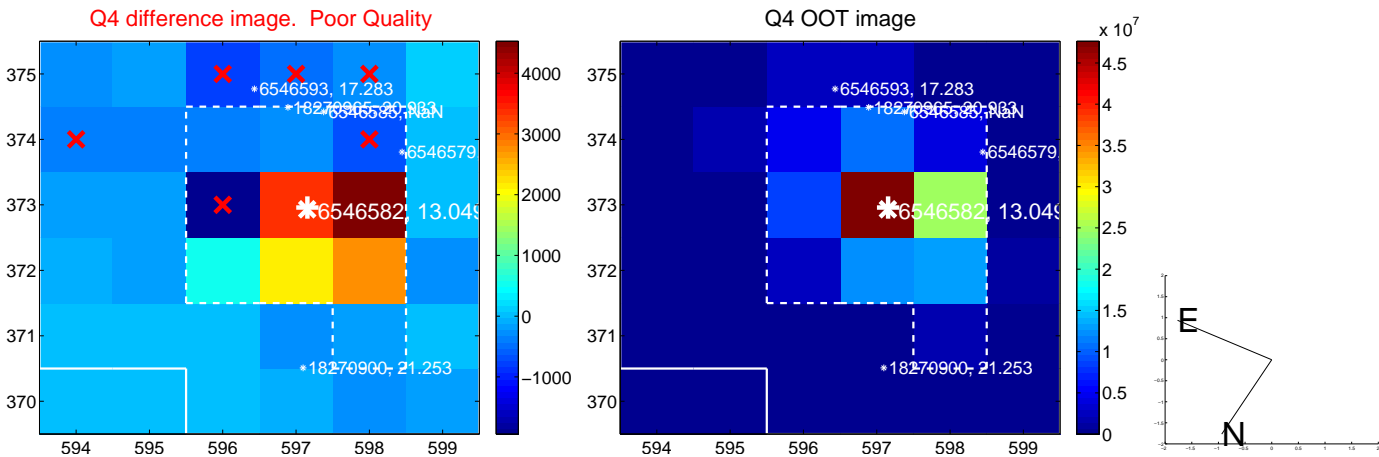
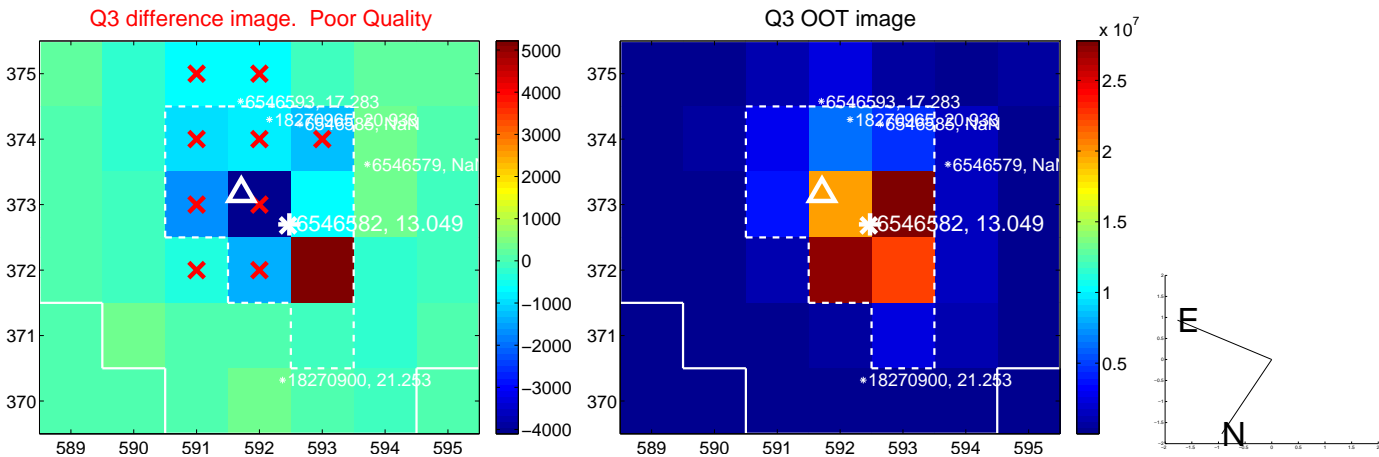
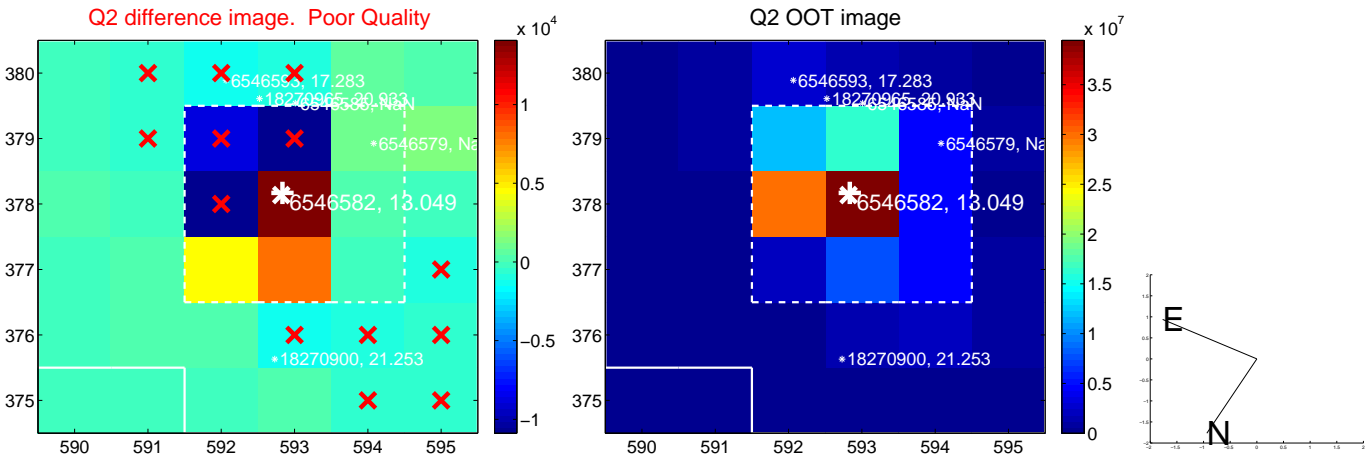
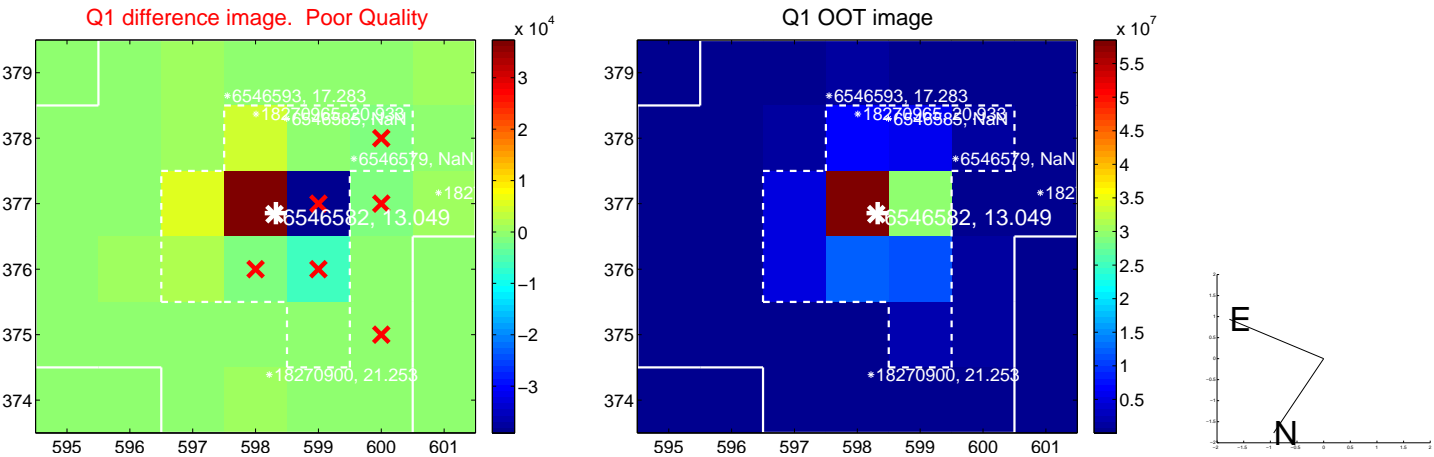


offset from photometric centroids

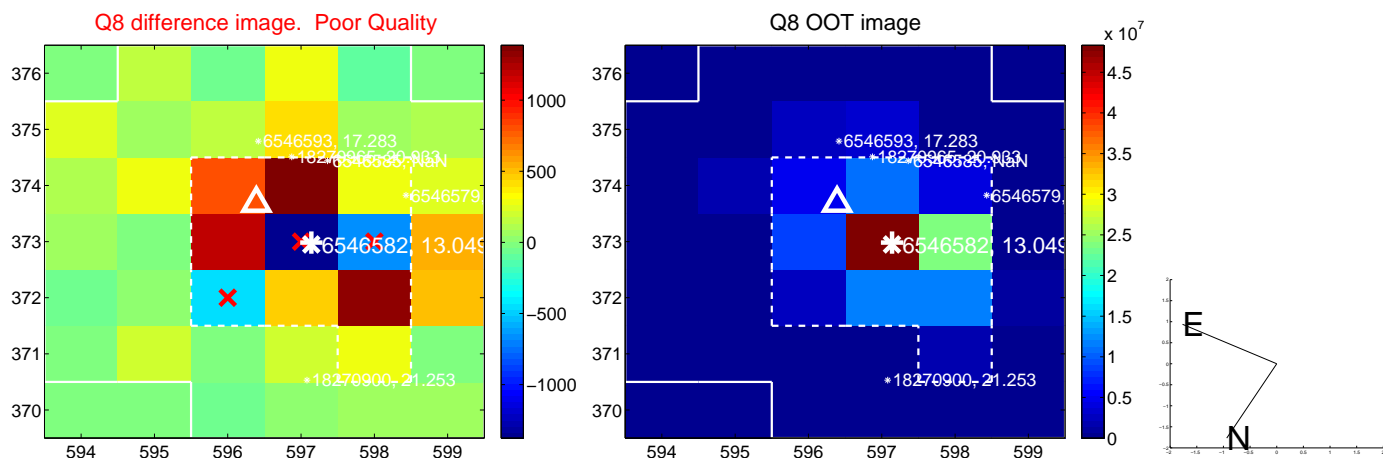
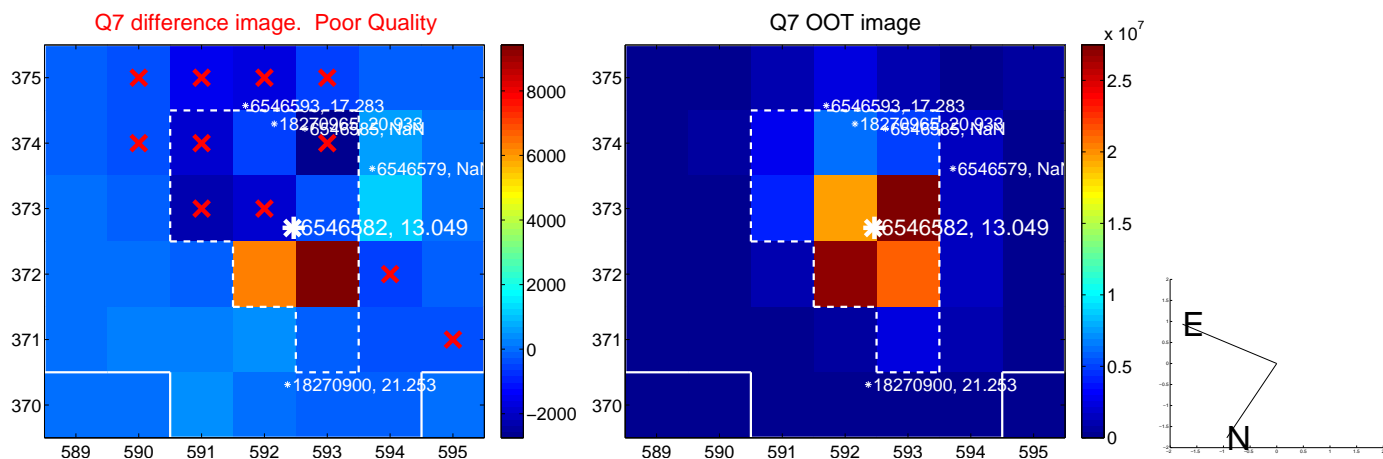
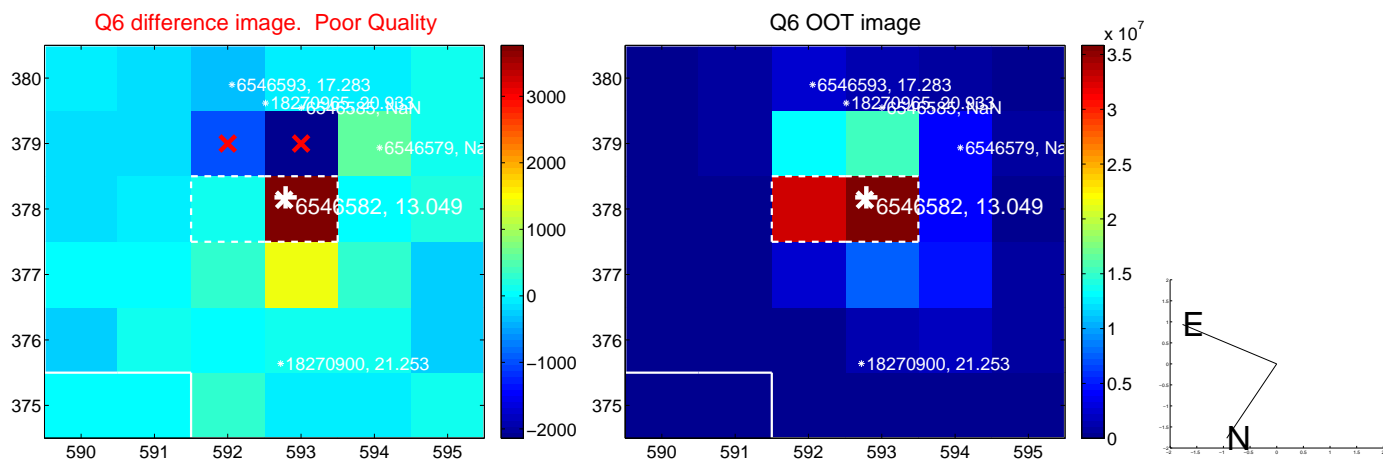
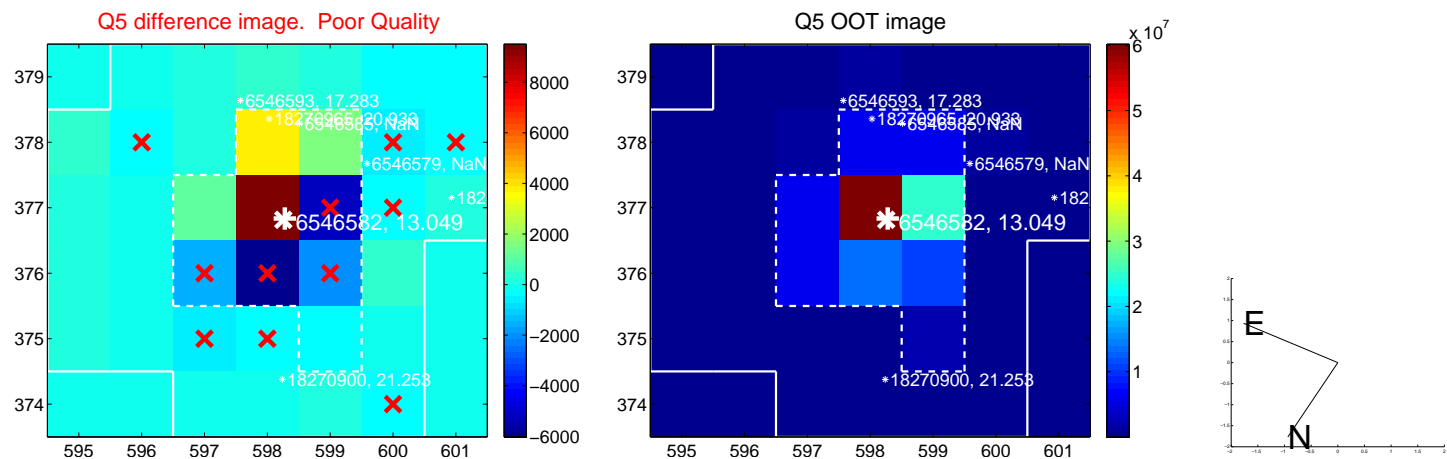


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

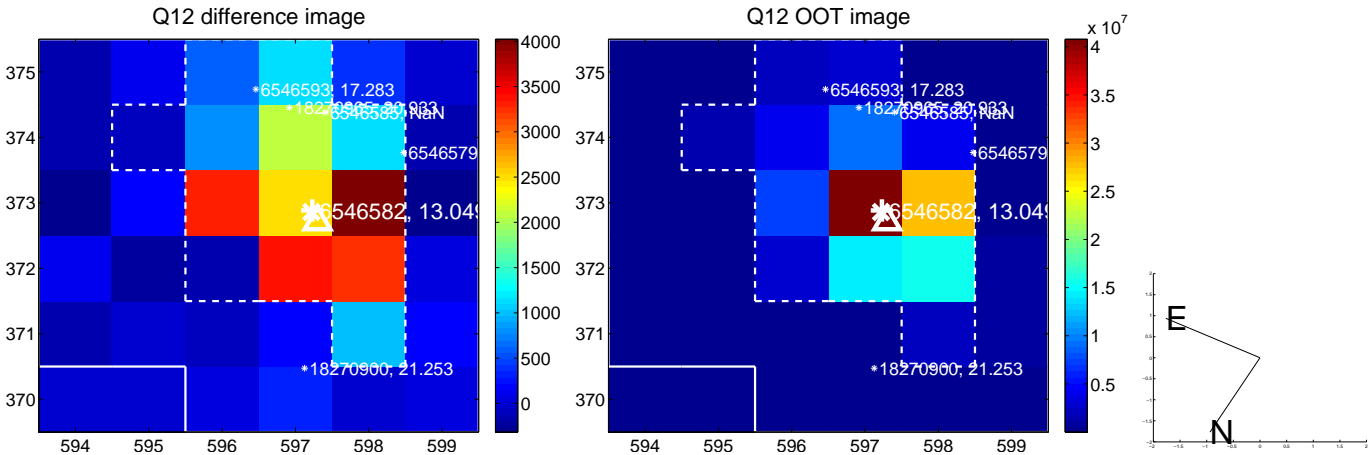
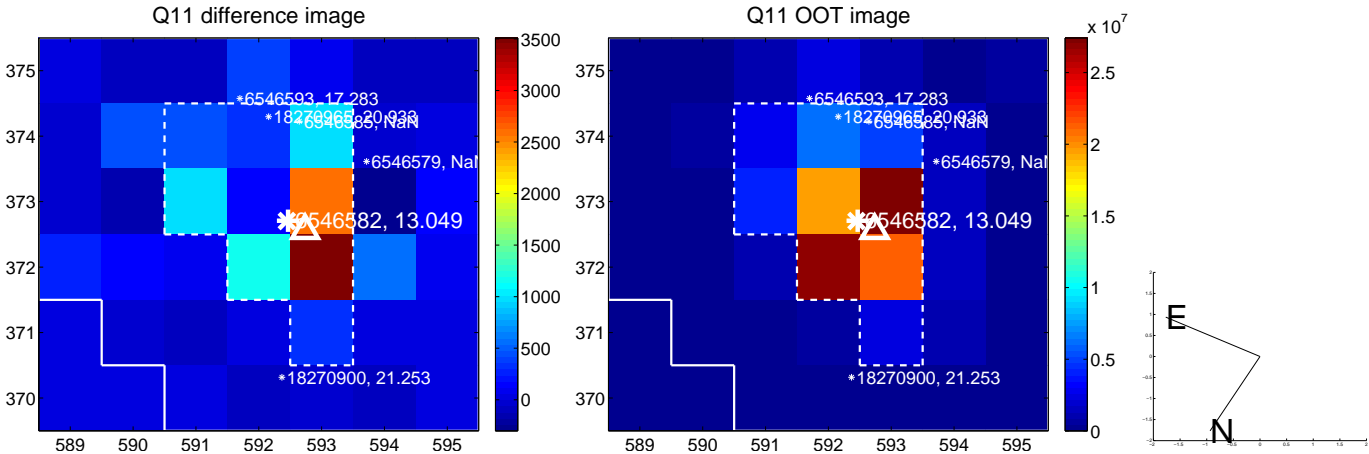
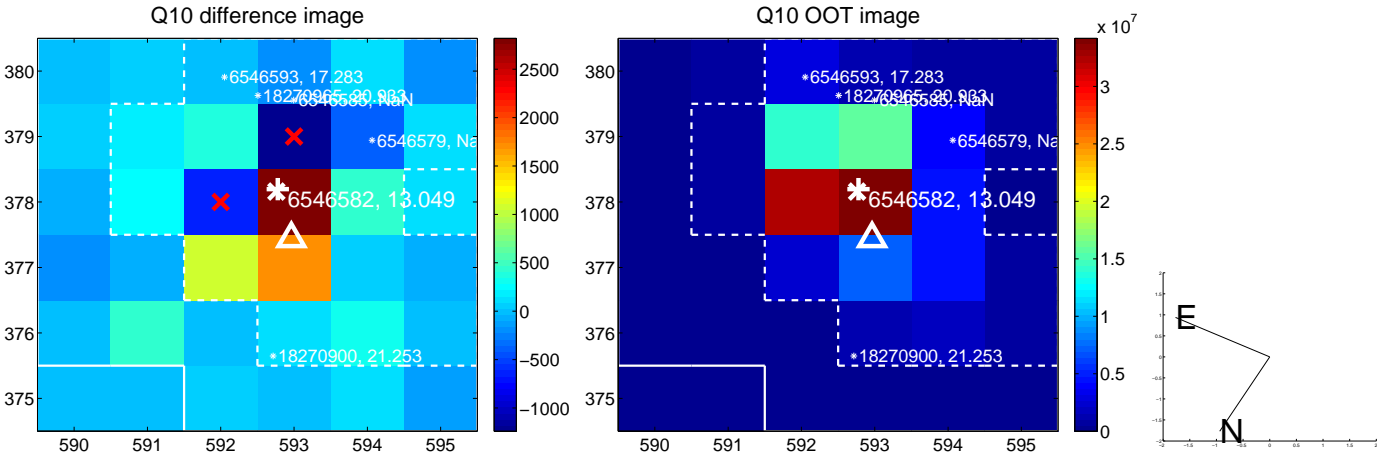
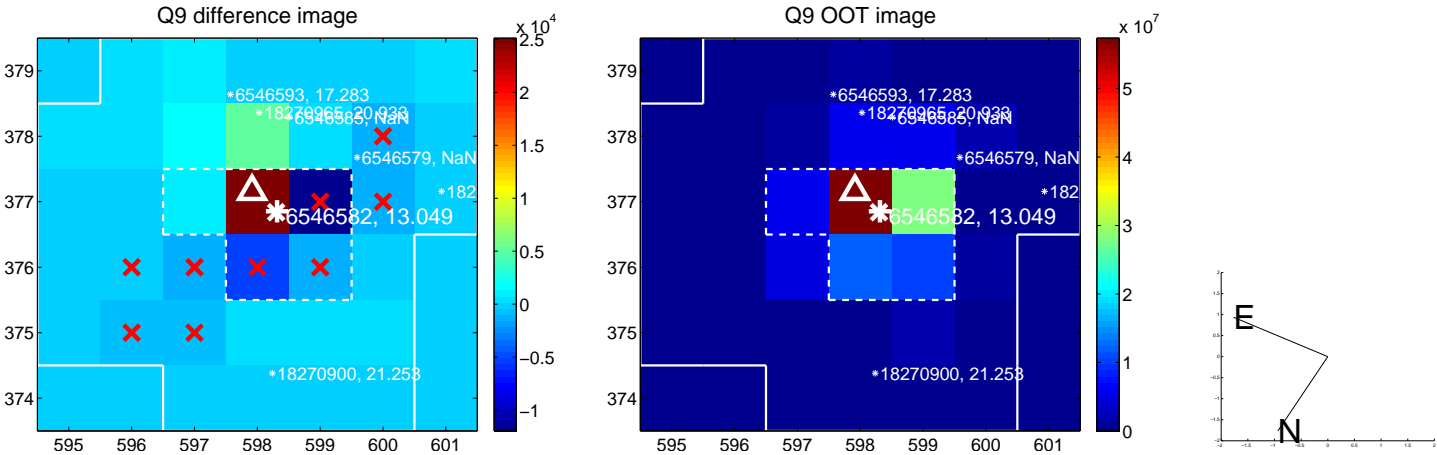
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



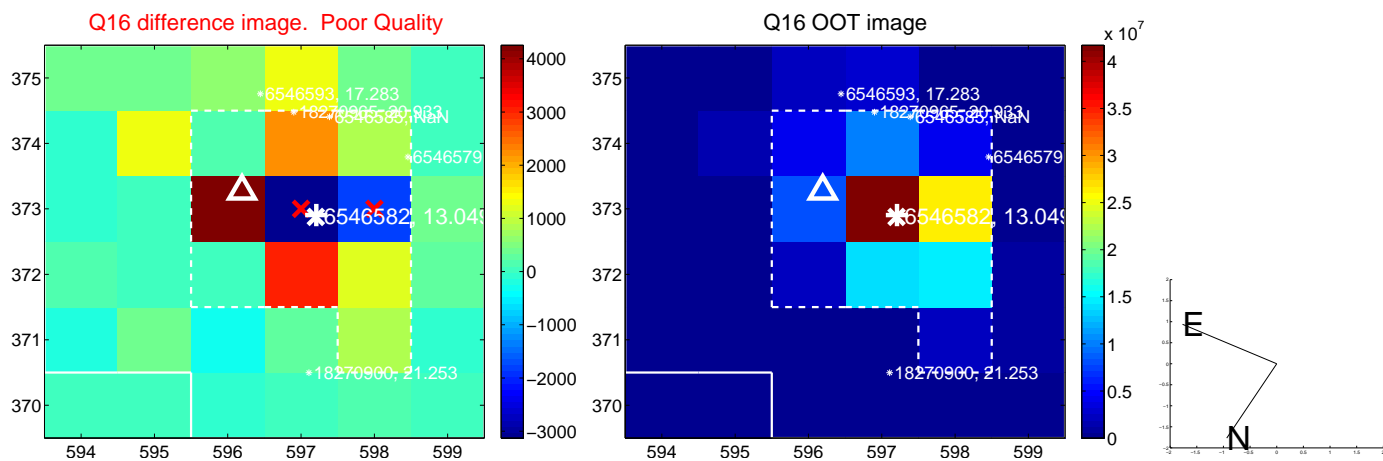
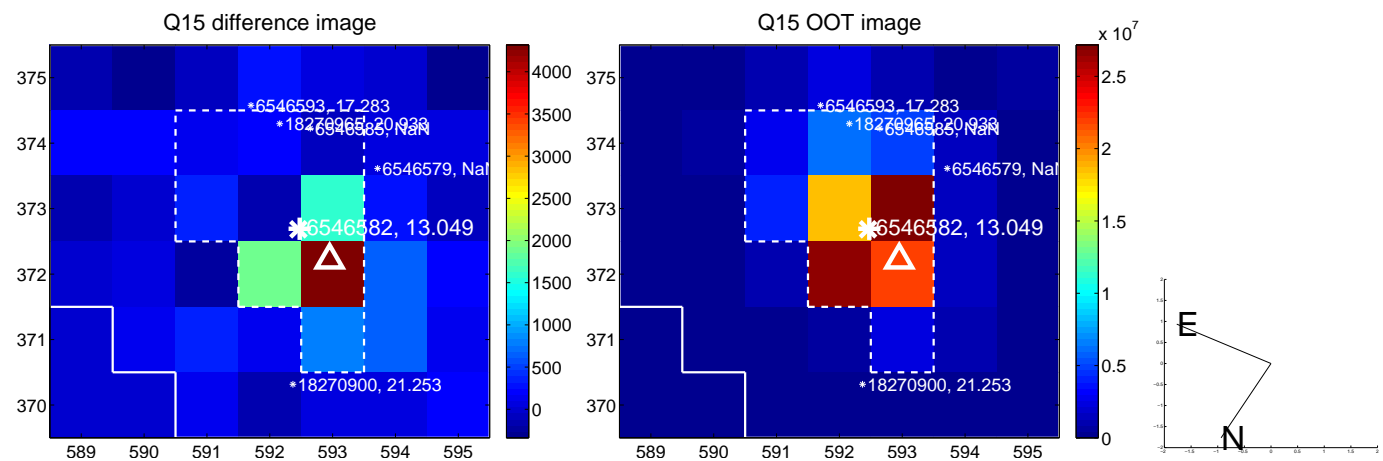
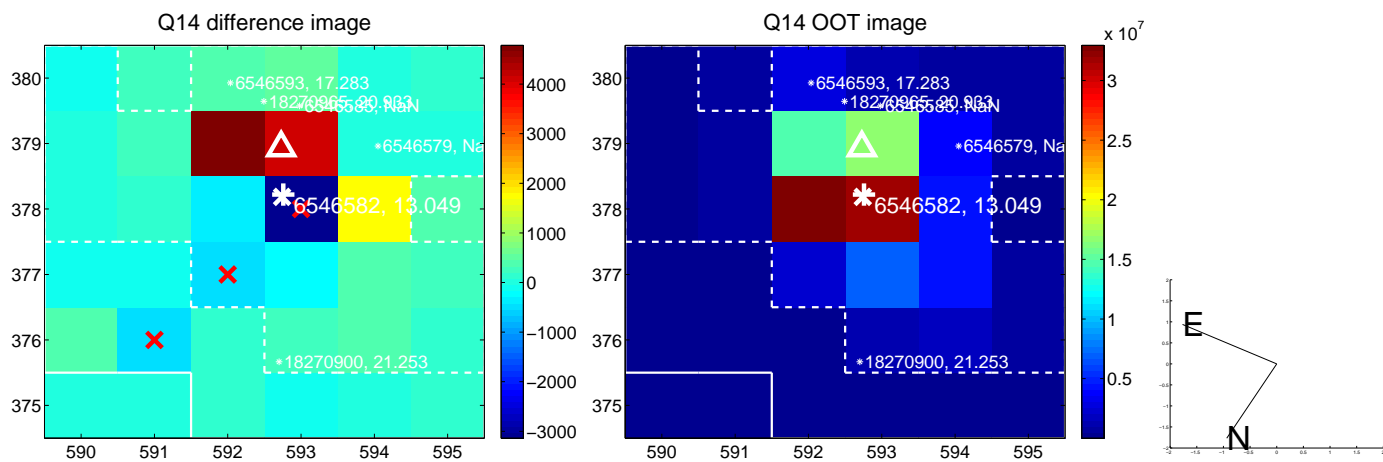
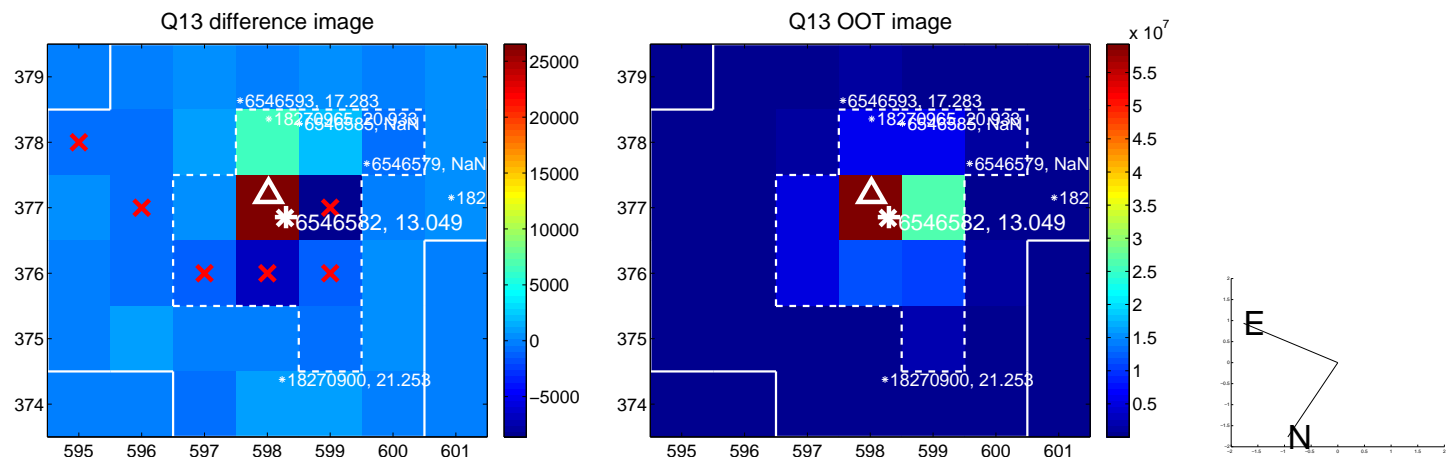
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



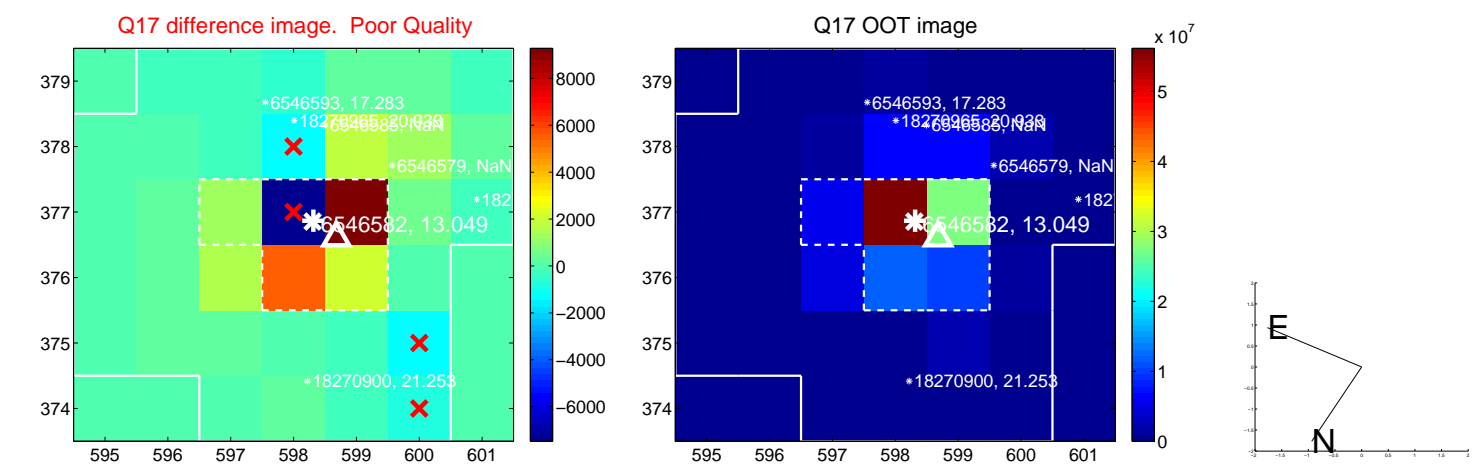
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



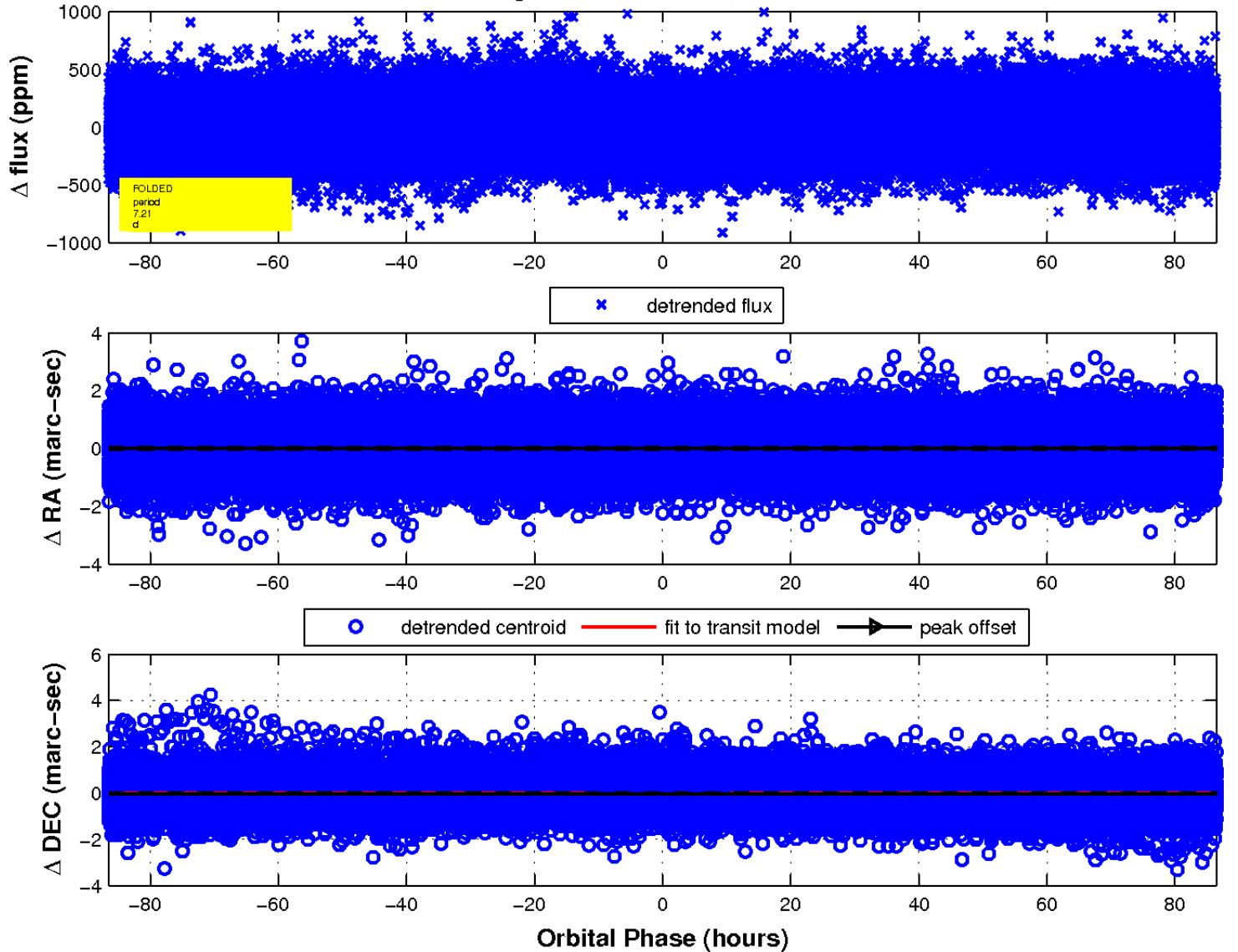
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

