

KIC 006044553

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})
006044553-01	OBS	2646.01	0.532059	131.940460	79.0	2.482	19.2	14.1	0.70	5271	0.62	2430.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006044553-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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 006044553-01

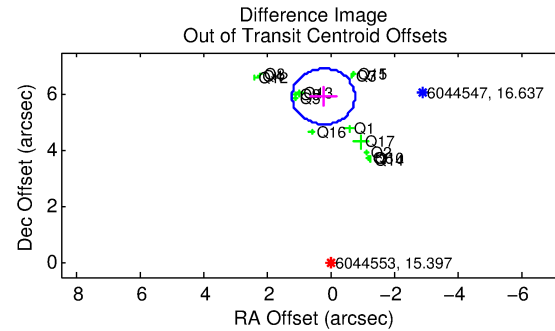
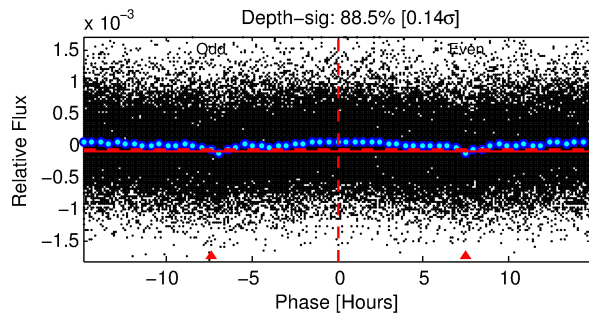
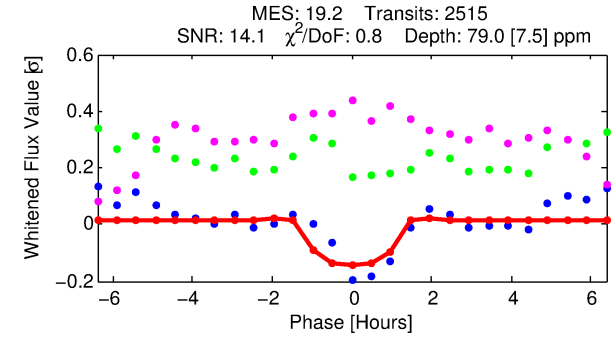
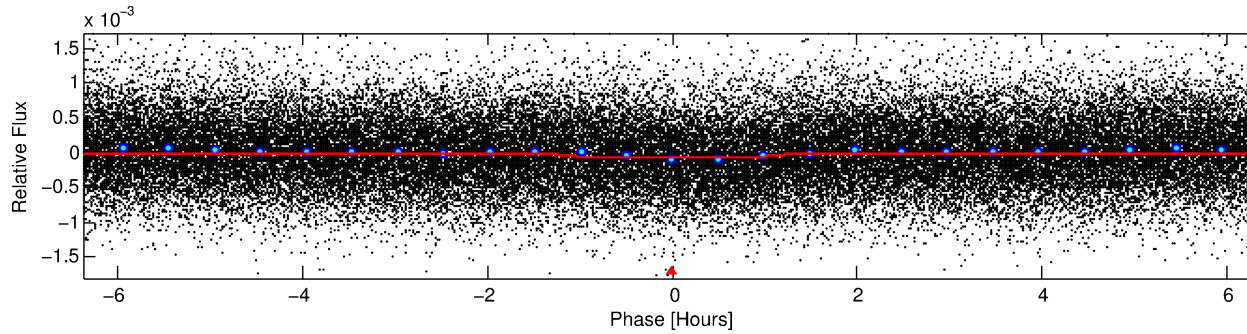
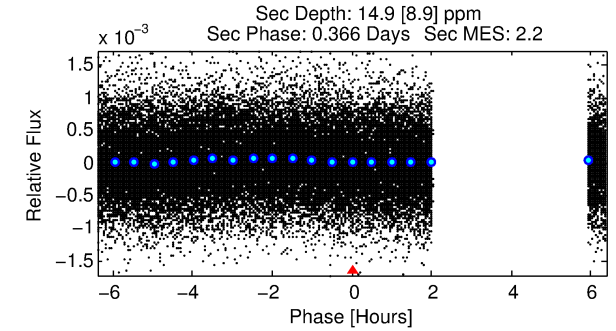
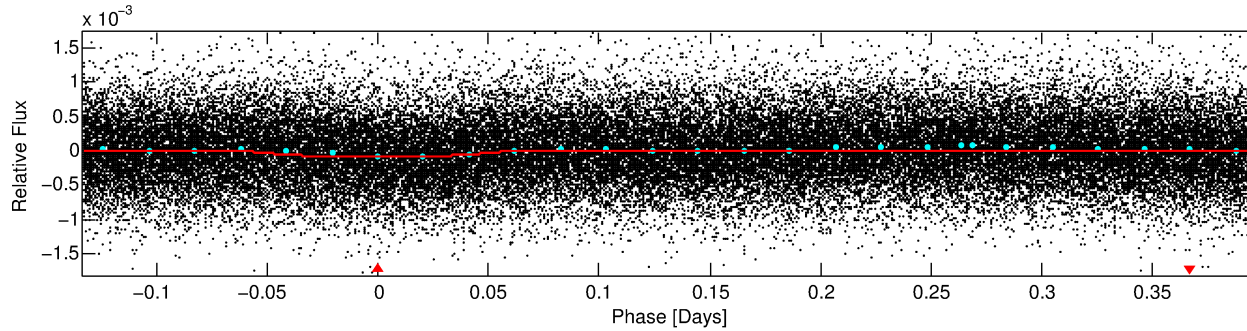
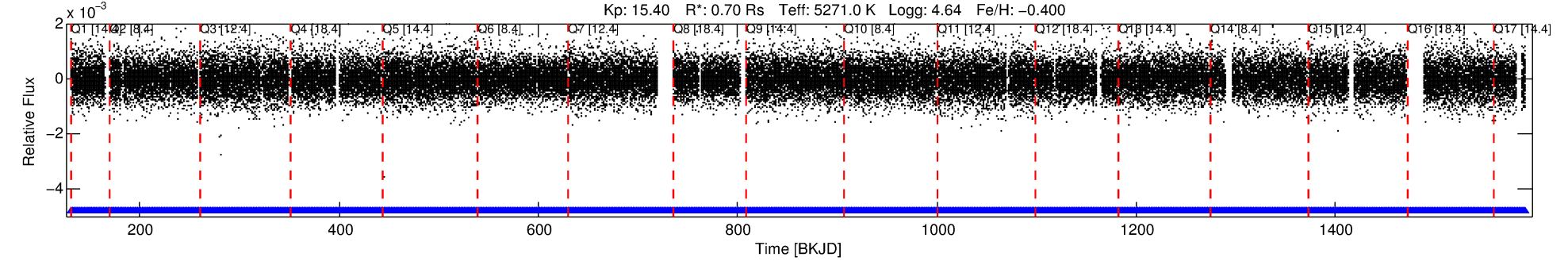
No Significant Match Found

DV One-Page Summary

KIC: 6044553 Candidate: 1 of 1 Period: 0.532 d

KOI: K02646.01 Corr: 0.768

Kp: 15.40 R*: 0.70 Rs Teff: 5271.0 K Logg: 4.64 Fe/H: -0.400



DV Fit Results:

Period = 0.53206 [0.00001] d
Epoch = 131.9405 [0.0021] BKJD
Rp/R* = 0.0081 [0.0077]
a/R* = 1.71 [4.20]
b = 0.30 [11.55]
Seff = 2430.85 [503.80]
Teq = 1790 [93] K
Rp = 0.62 [0.59] Re
a = 0.0118 [0.0014] AU
Ag = 2.99 [5.95] [0.33σ]
Teffp = 3640 [1808] K [1.02σ]

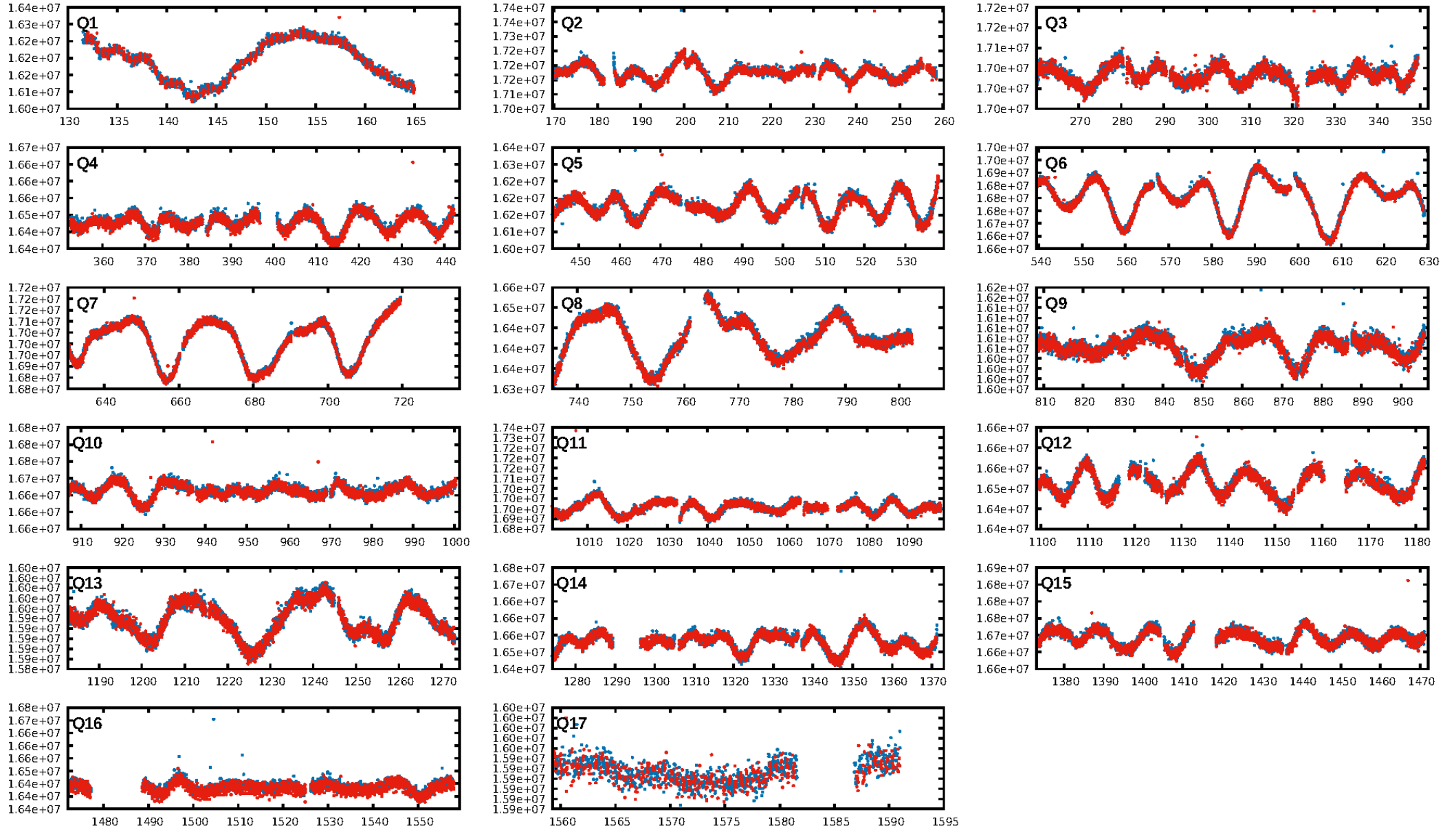
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.38e-63
RollingBand-fgt: 1.00 [2402/2402]
GhostDiagnostic-chr: -0.5244
Centroid-sig: 0.0%
Centroid-so: 3.620 arcsec [4.47σ]
OotOffset-rm: 5.935 arcsec [18.00σ]
KicOffset-rm: 5.847 arcsec [17.62σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

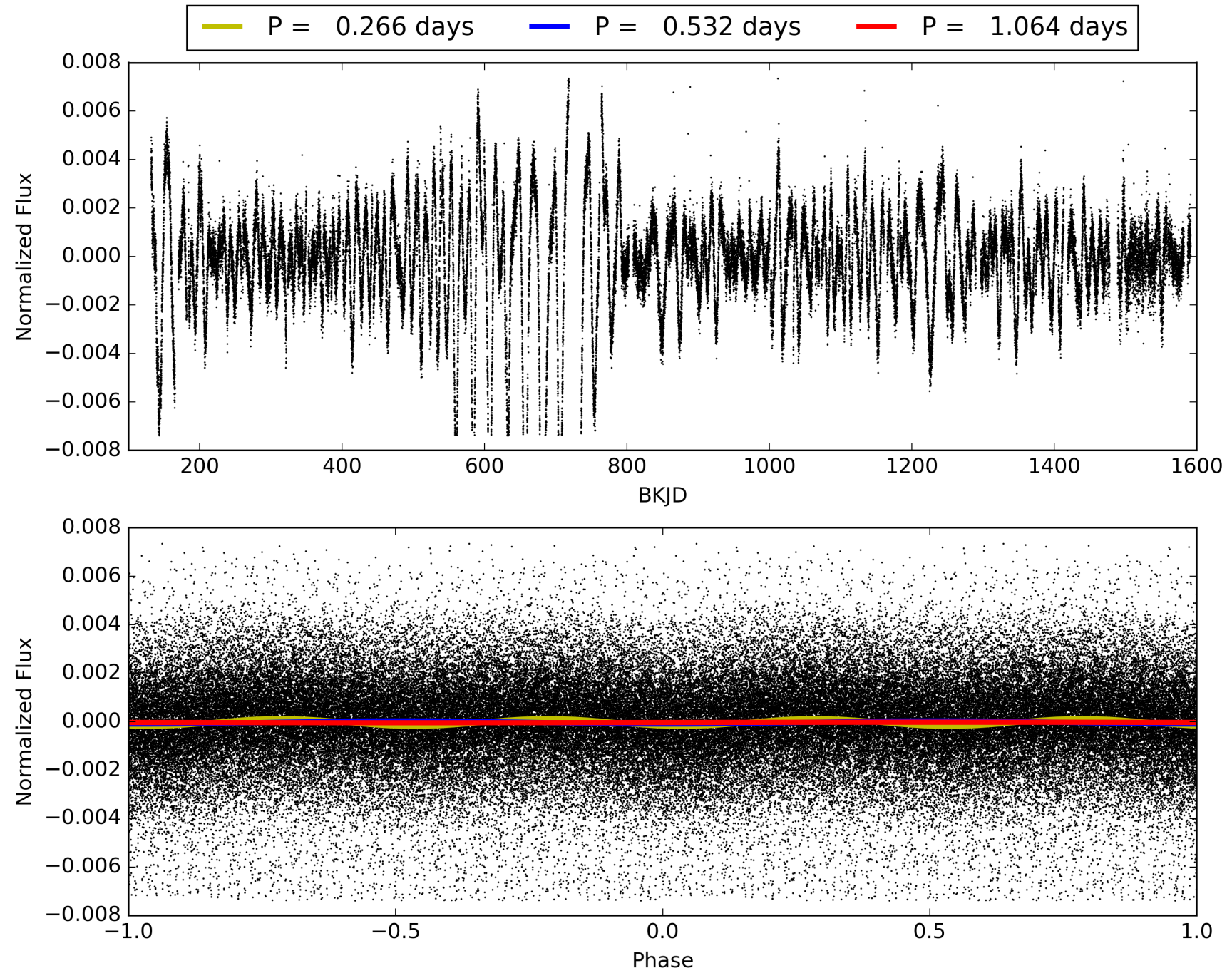
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:34:04 Z

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

TCE 006044553-01, PDC Light Curves

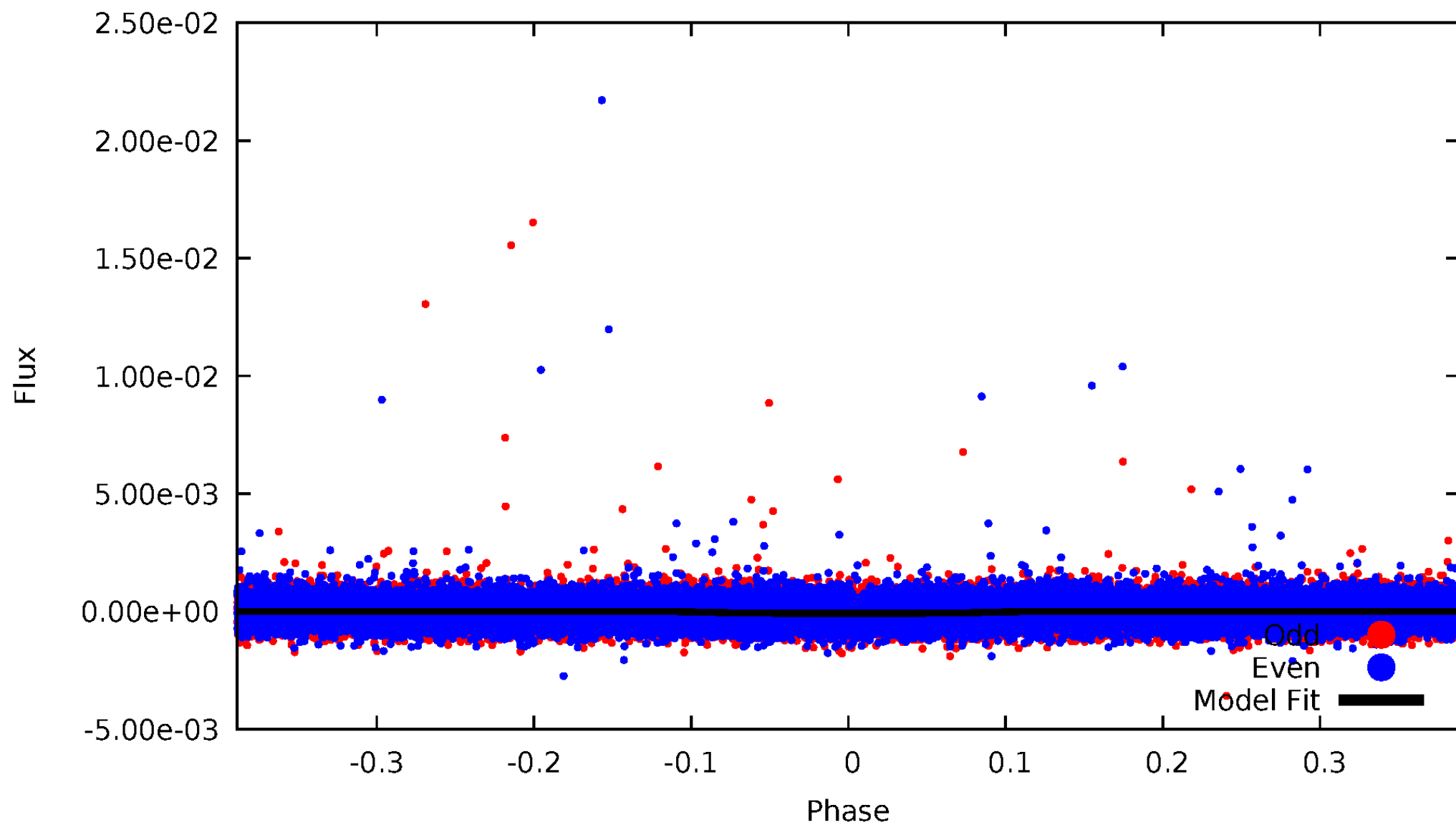


TCE 006044553-01



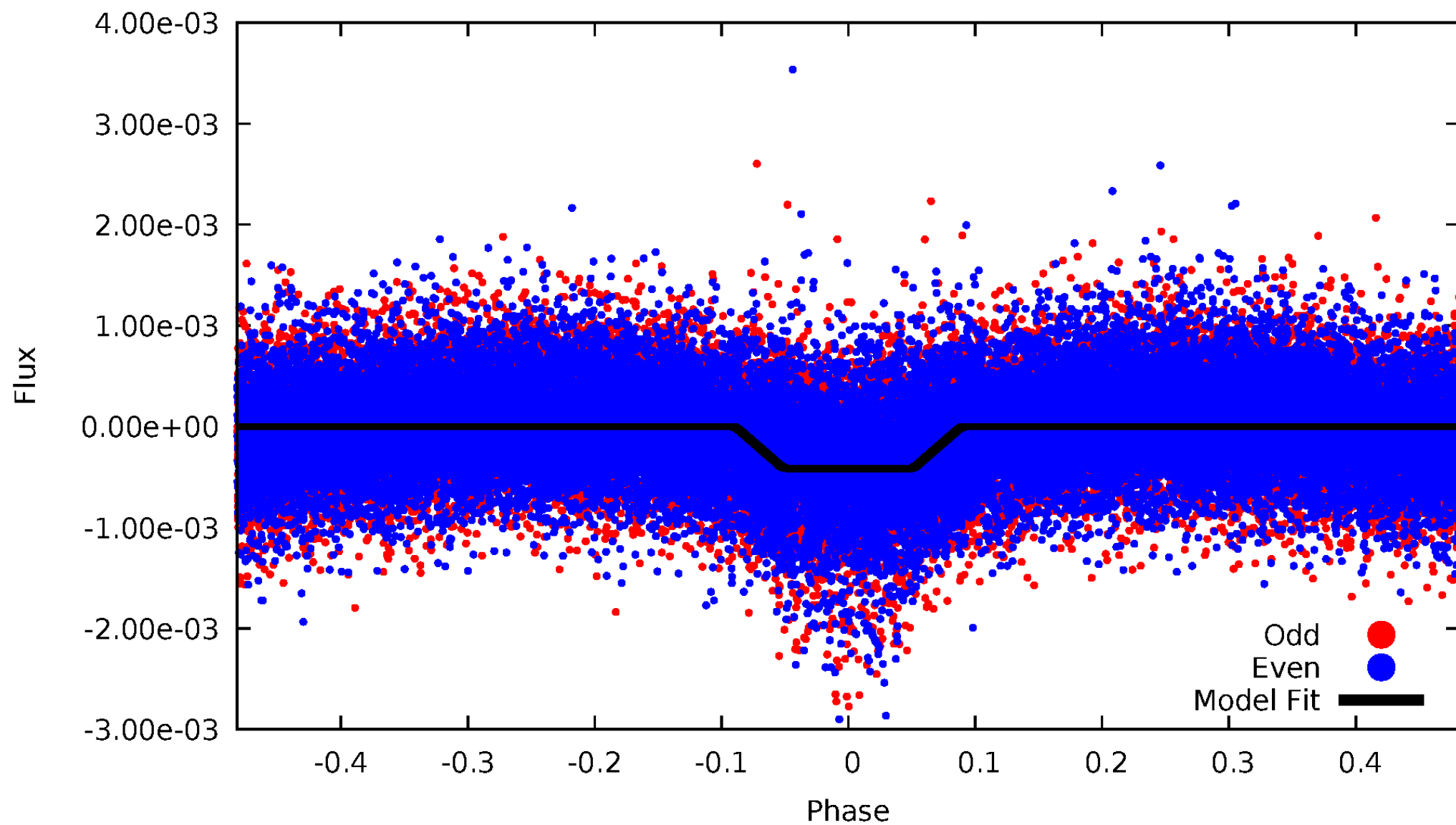
DV Odd/Even

TCE 006044553-01



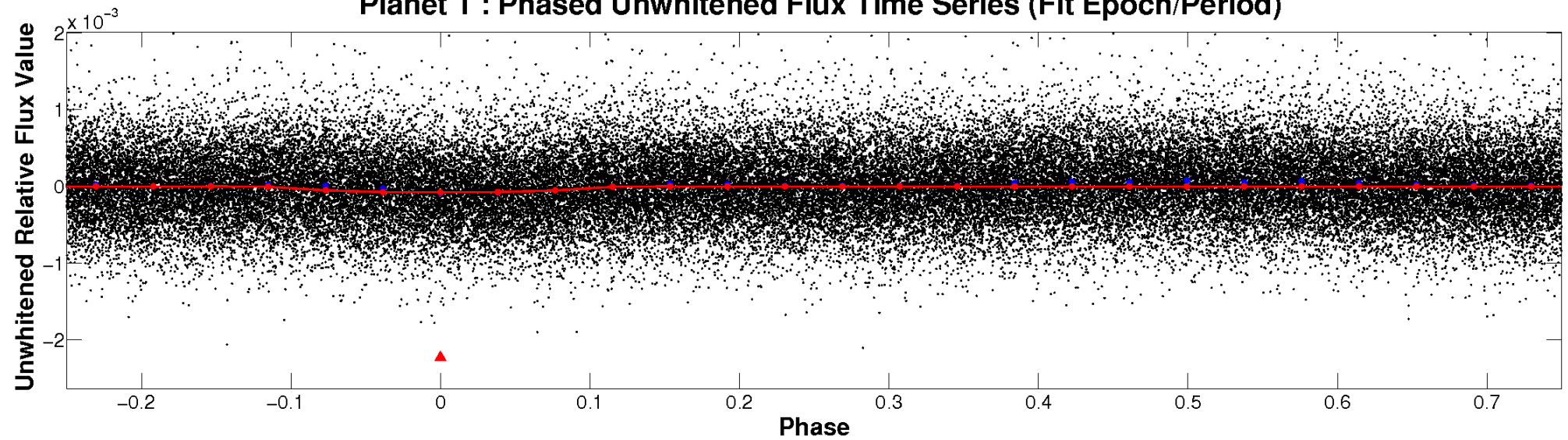
ALT Odd/Even

TCE 006044553-01

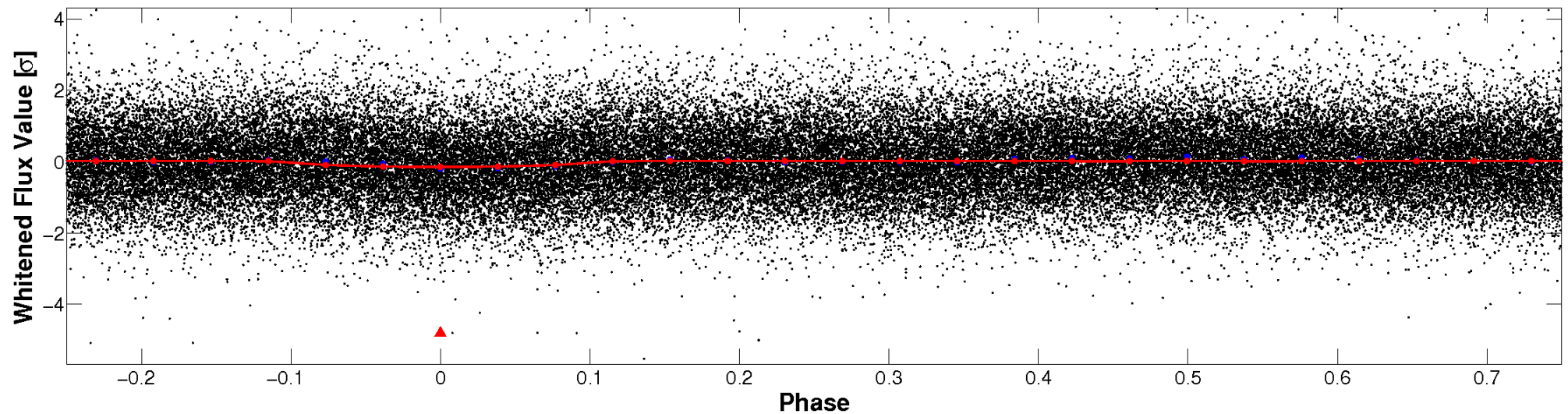


Non-Whitened Vs. Whitened Light Curve

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

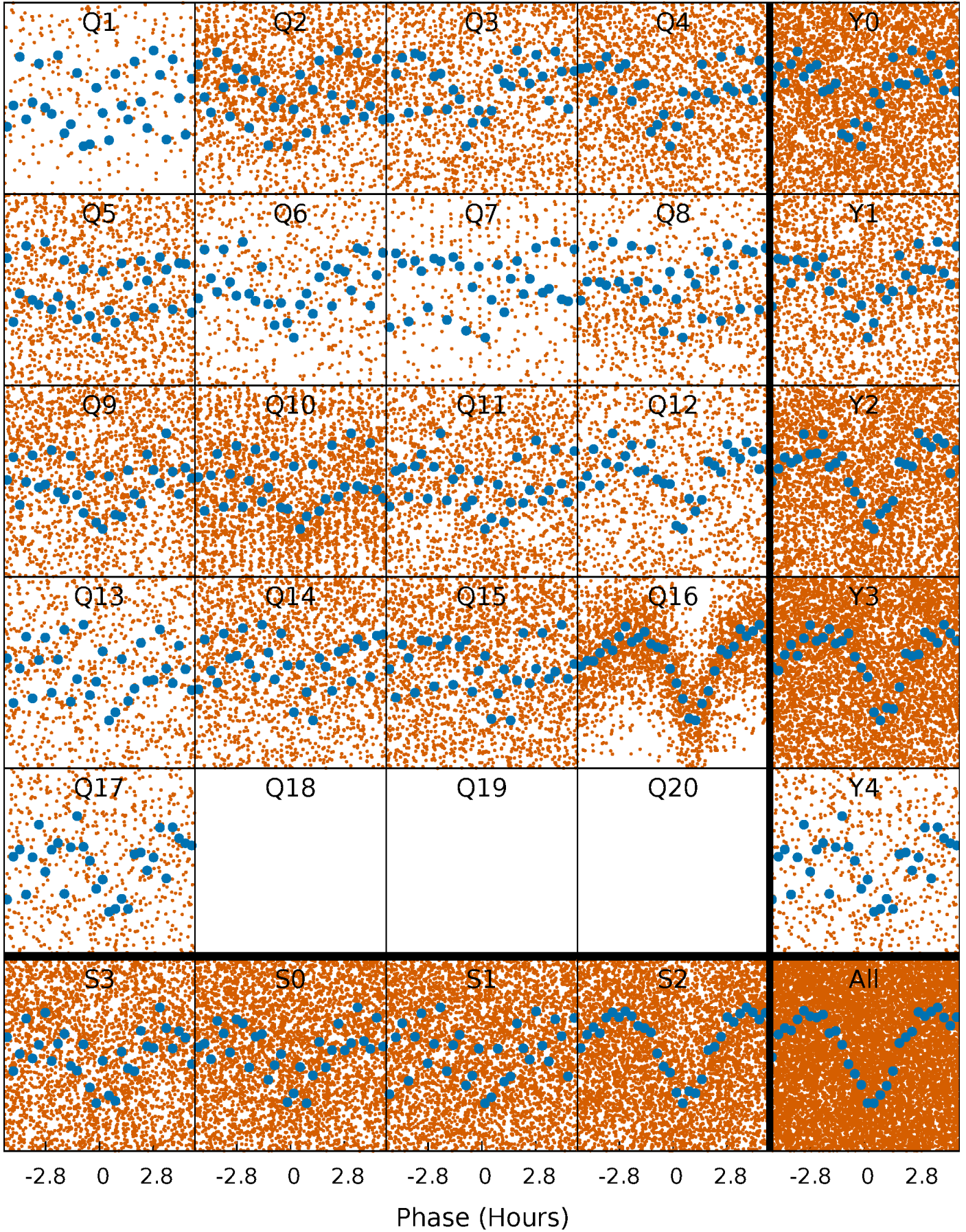


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



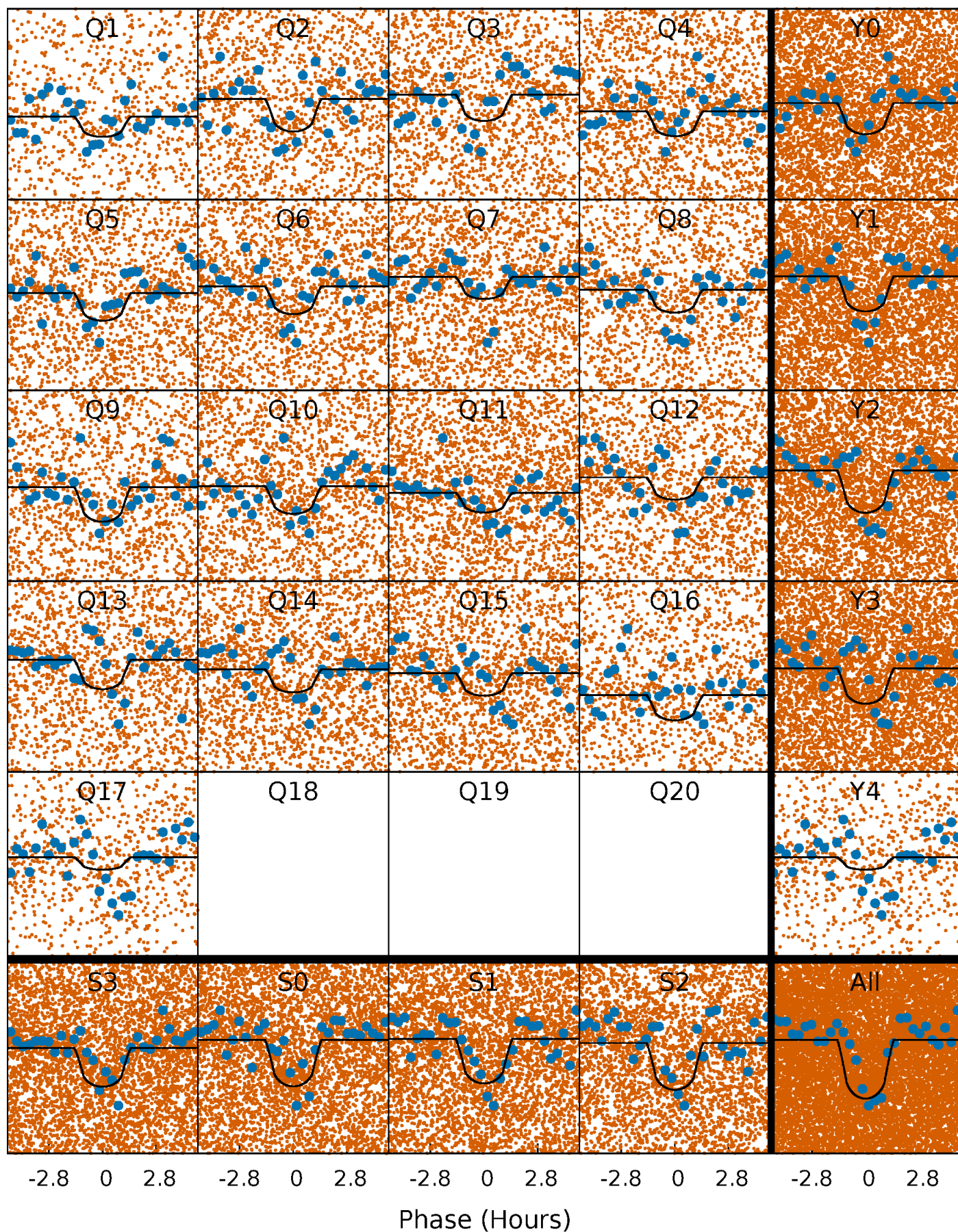
PDC Quarter-Phased Transit Curves

TCE 006044553-01 P= 0.532059 Days $T_0=131.940460$ (BKJD)



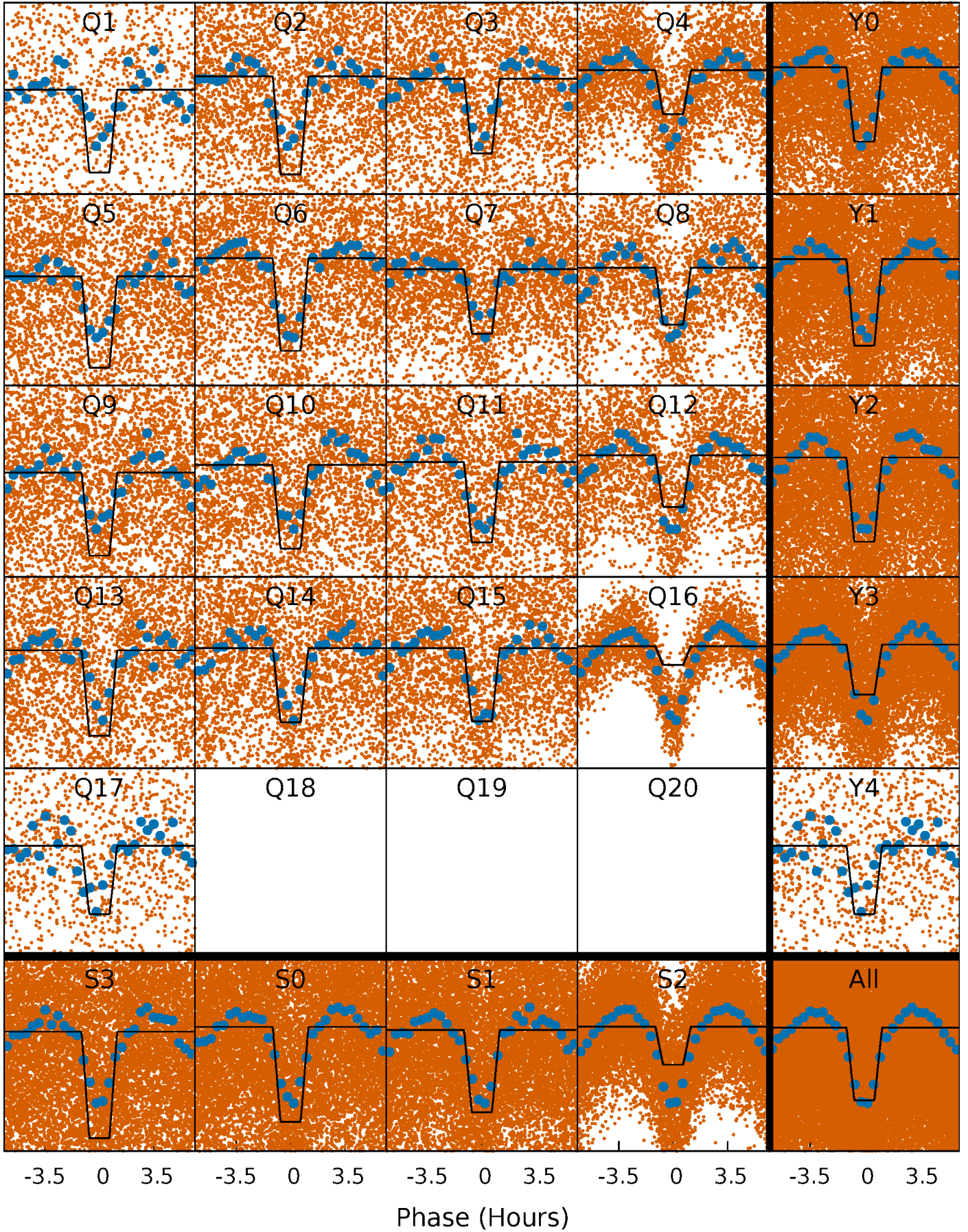
DV Quarter-Phased Transit Curves

TCE 006044553-01 P= 0.532059 Days $T_0=131.940460$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

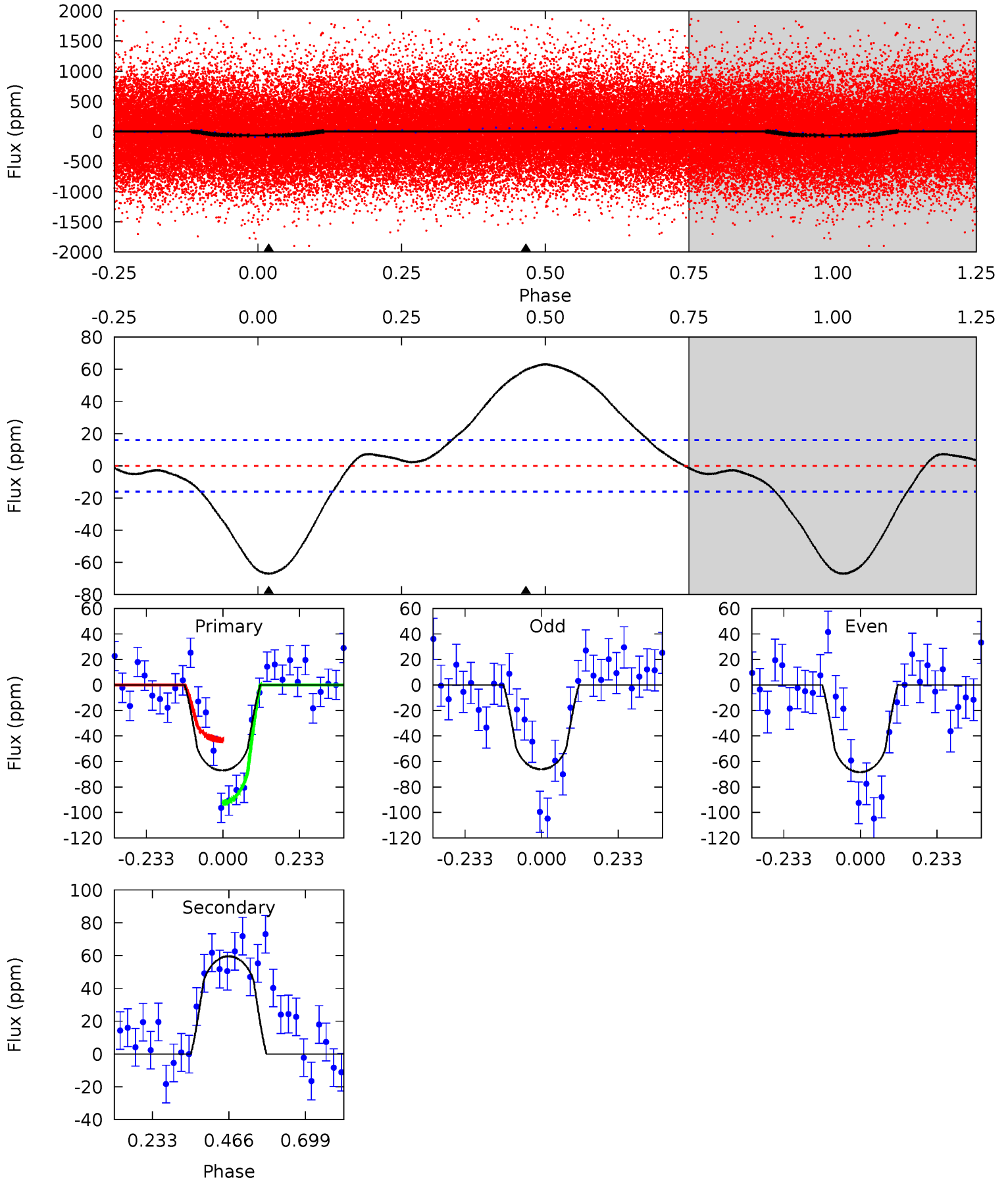
TCE 006044553-01 P= 0.532084 Days $T_0=131.916992$ (BKJD)



DV Model-Shift Uniqueness Test

006044553-01, P = 0.532059 Days, E = 131.408401 Days

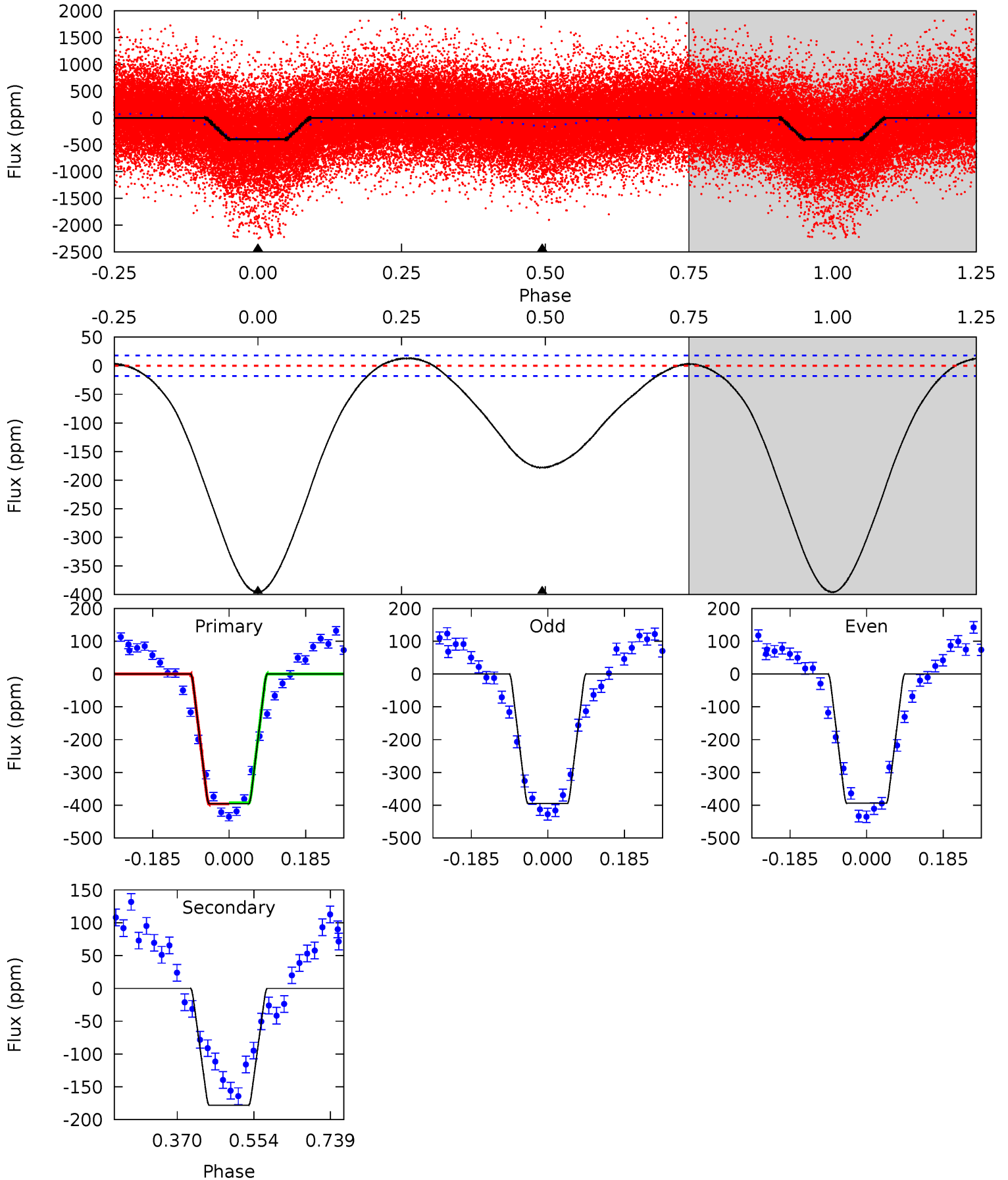
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	-16.3	0	0	4.38	1.19	1.44	18.3	18.3	-16.3	-16.3	0.31	0.85	0.49	6.63



Alt Model-Shift Uniqueness Test

006044553-01, P = 0.532084 Days, E = 131.384908 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
97.7	44.0	0	0	4.43	1.33	2.69	97.7	97.7	44.0	44.0	0.07	1.08	0.03	0.44



Stellar Parameters For KIC 006044553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5271^{+158}_{-142}	$4.636^{+0.030}_{-0.090}$	$-0.400^{+0.350}_{-0.300}$	$0.698^{+0.102}_{-0.051}$	$0.773^{+0.076}_{-0.076}$	$3.199^{+0.496}_{-0.912}$
	+3%/-3%	+1%/-2%	+87%/-75%	+15%/-7%	+10%/-10%	+15%/-29%
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 006044553-01 / KOI 2646.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	60 ± 4	$0.75^{+0.53}_{-0.47}$	2537^{+106}_{-86}	-4844^{+846}_{-2933}	$-8.020^{+5.255}_{-50.226}$
Alt.	-178 ± 4	$1.60^{+0.61}_{-0.63}$	2538^{+96}_{-91}	4380^{+949}_{-530}	$5.246^{+8.421}_{-2.484}$

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

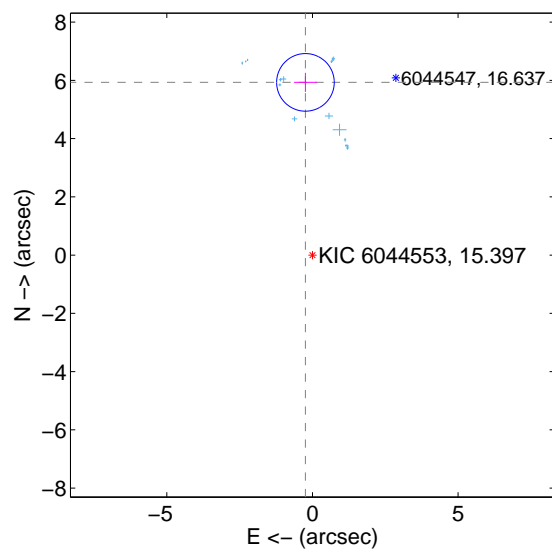
Supplemental centroid analysis for 006044553-01. Kepler magnitude: 15.40. Transit SNR 14.12

There are 17 quarters with good PRF difference image offsets

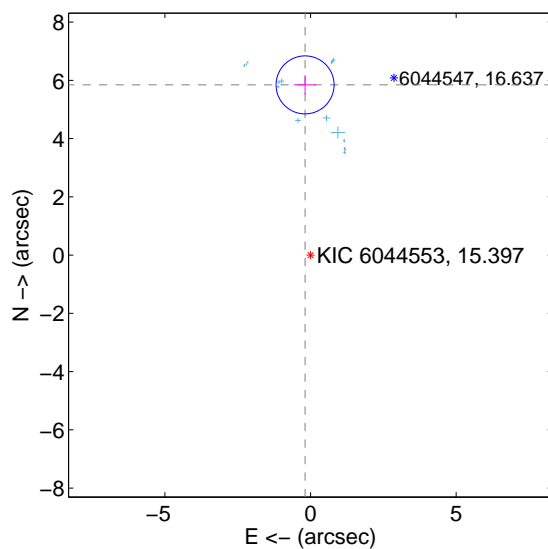
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.935 ± 0.330	18.00	0.240 ± 0.390	5.930 ± 0.330
PRF-fit source offset from KIC position	5.847 ± 0.332	17.62	0.188 ± 0.383	5.844 ± 0.332
photometric centroid source offset	3.62 ± 0.81	4.47	0.65 ± 0.89	3.56 ± 0.81

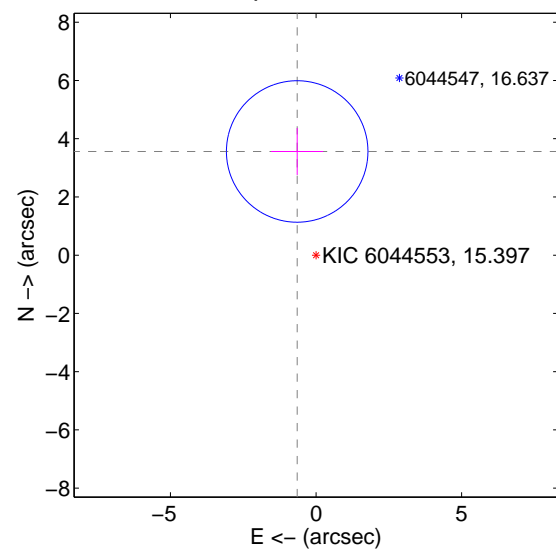
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

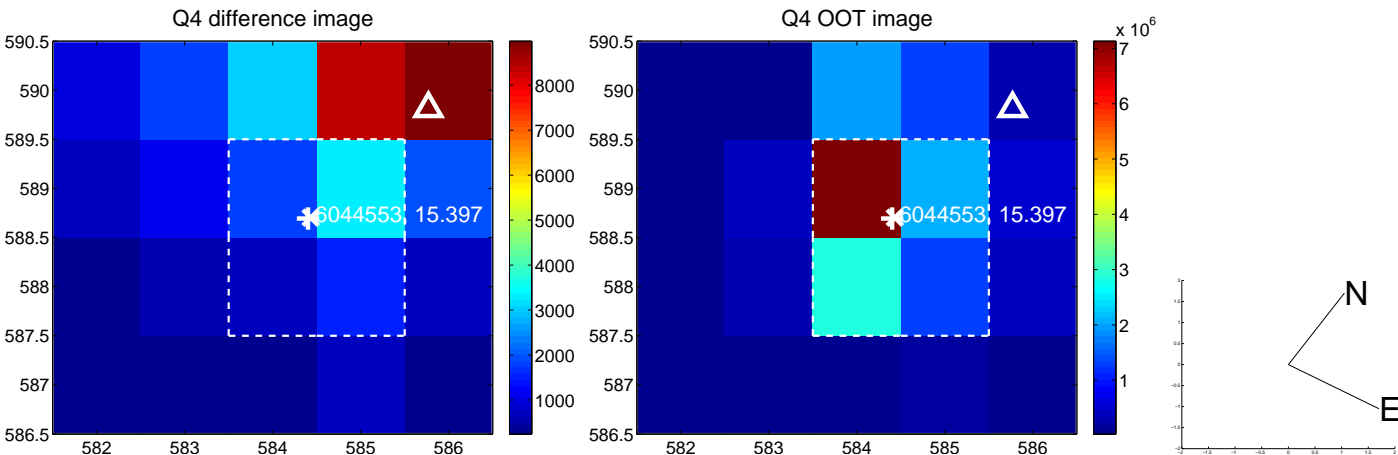
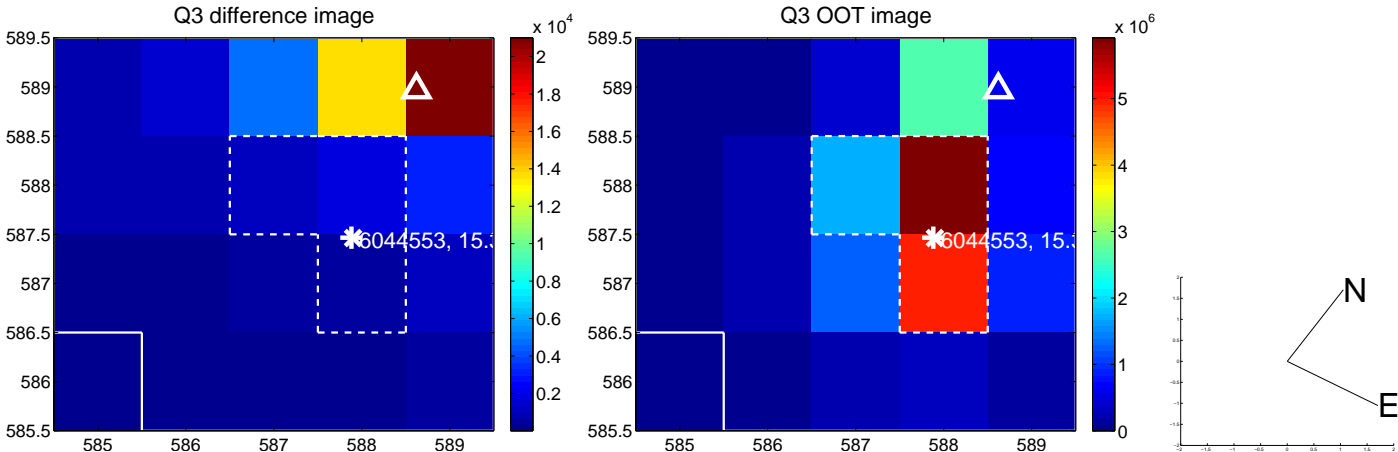
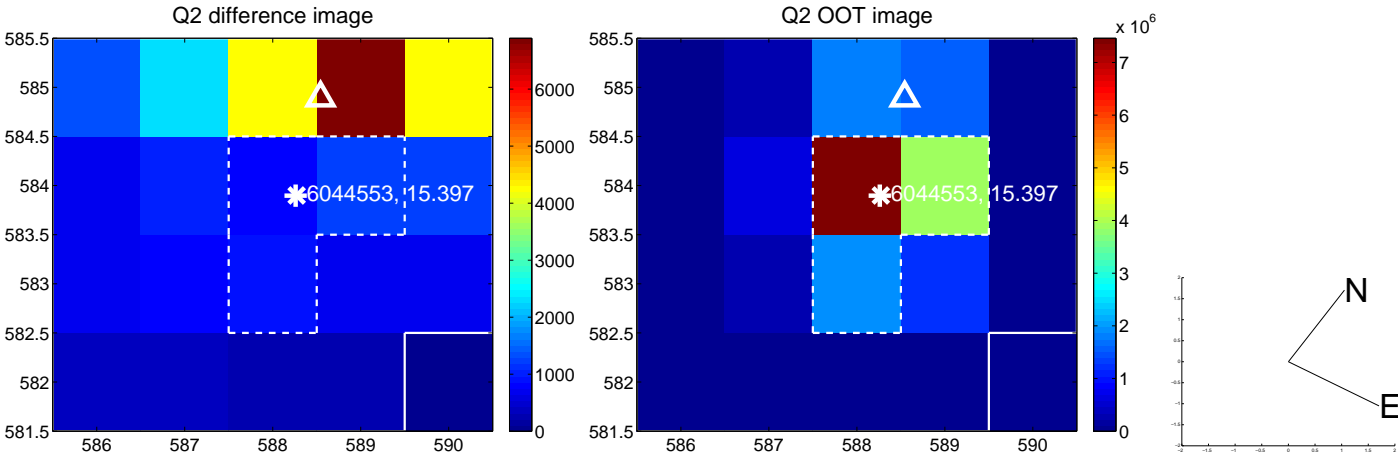
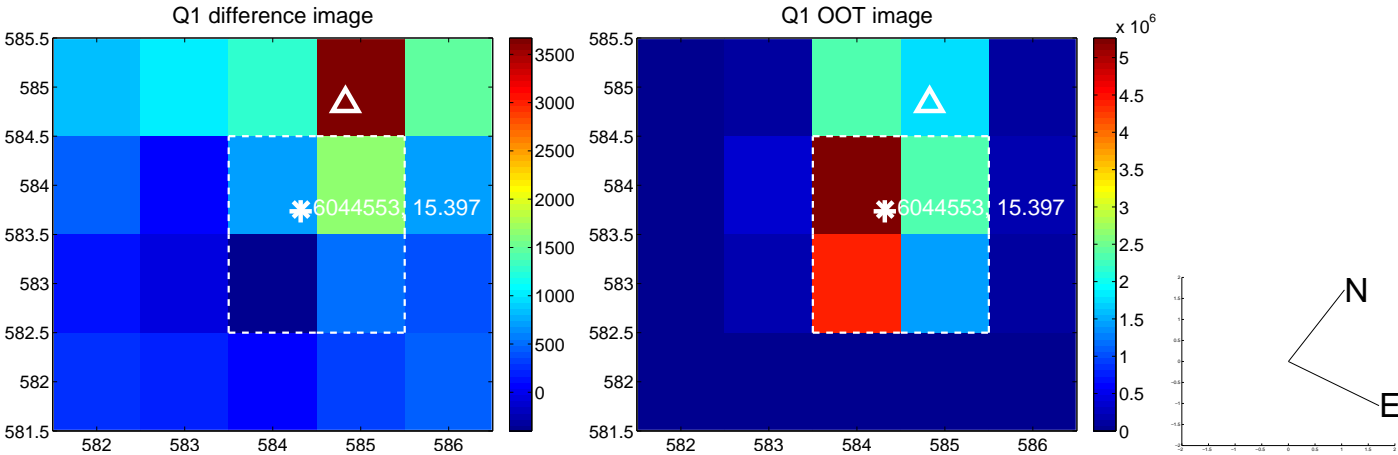


offset from photometric centroids

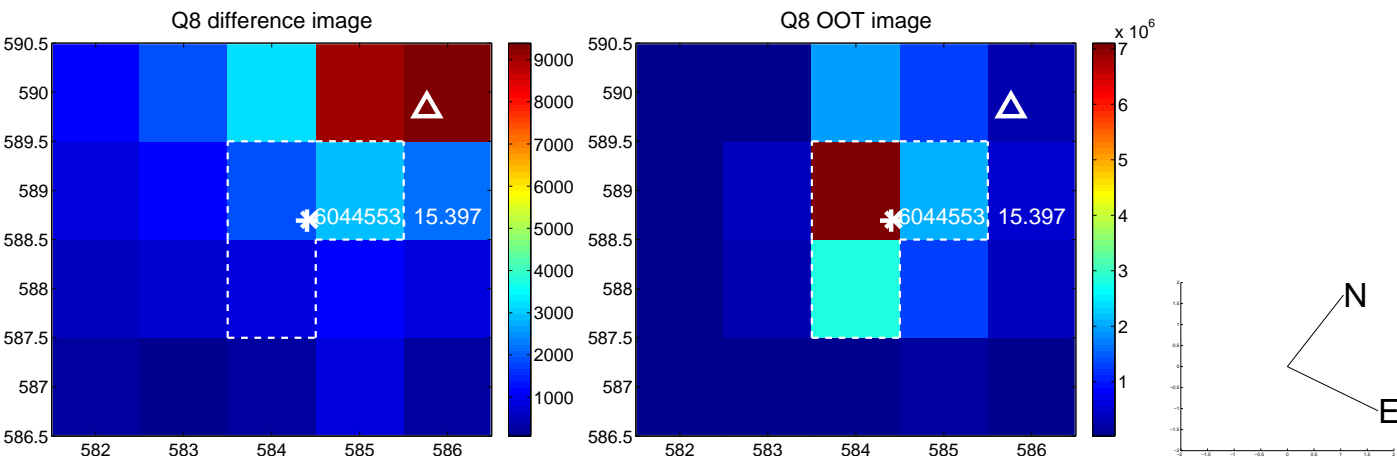
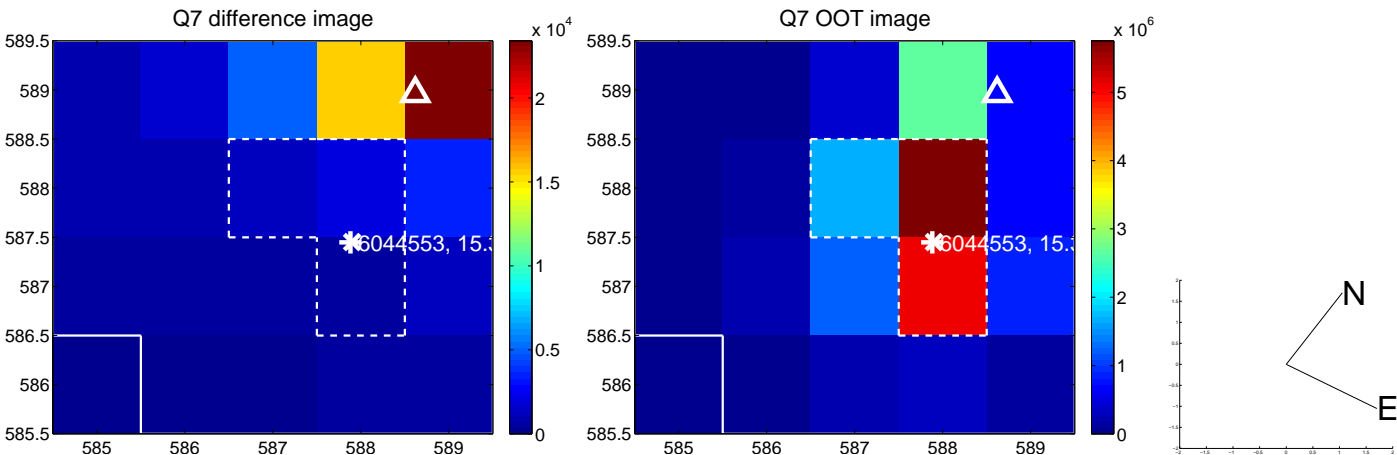
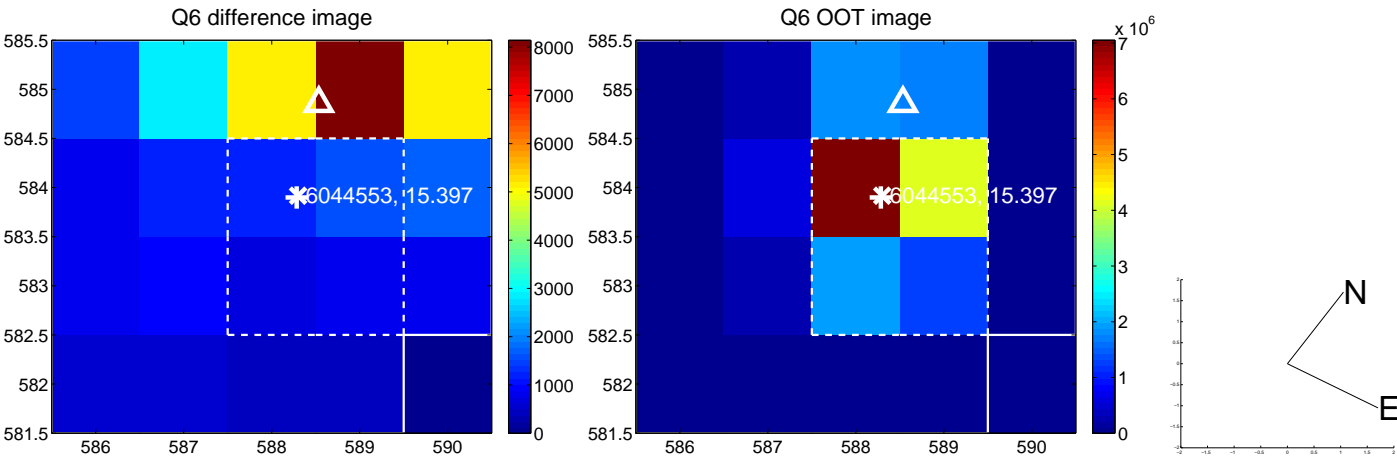
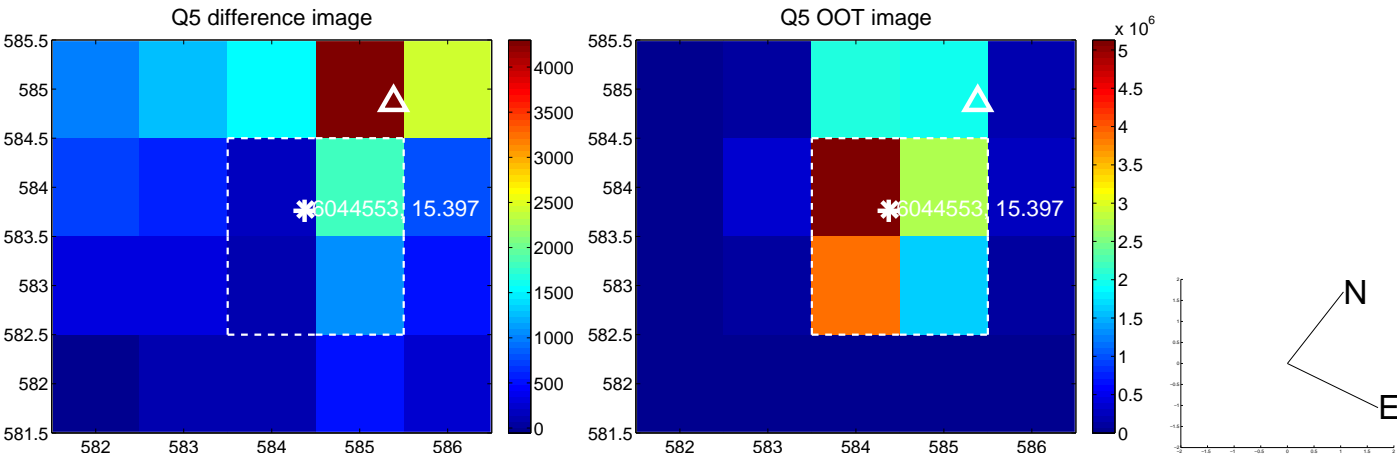


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

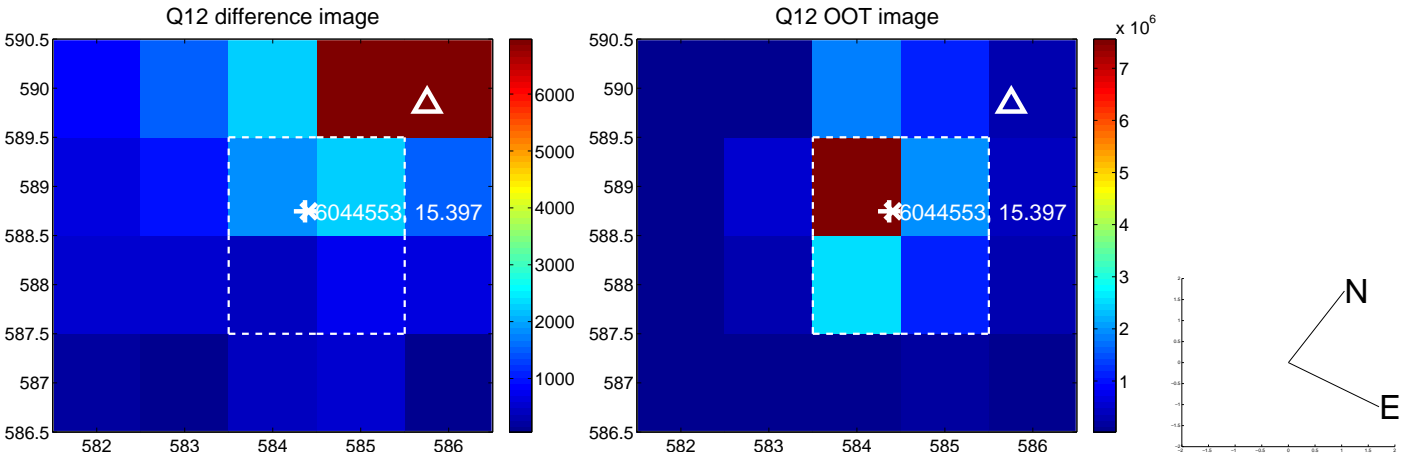
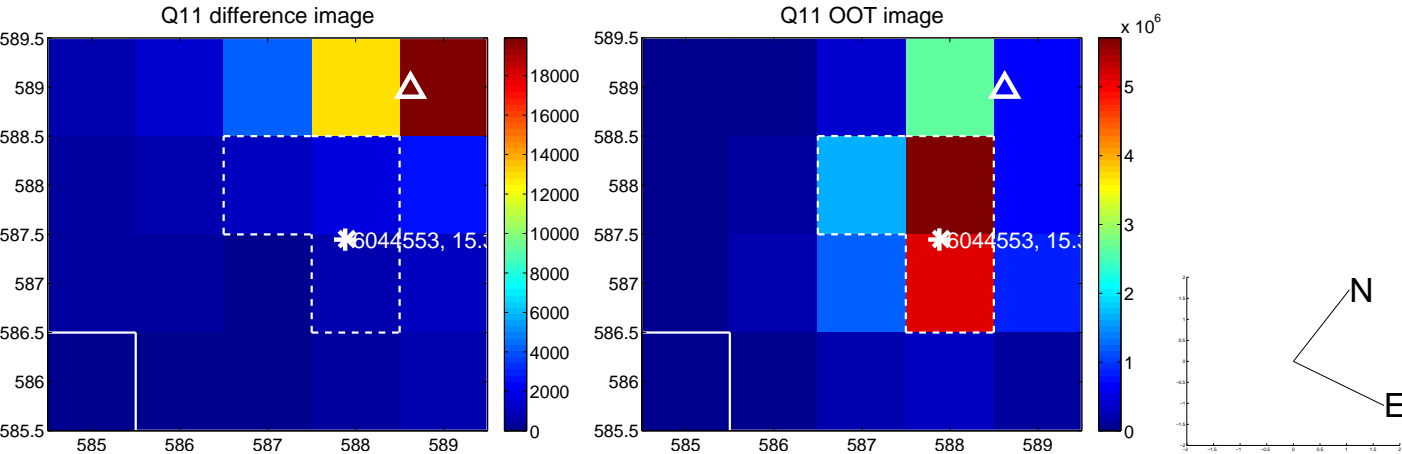
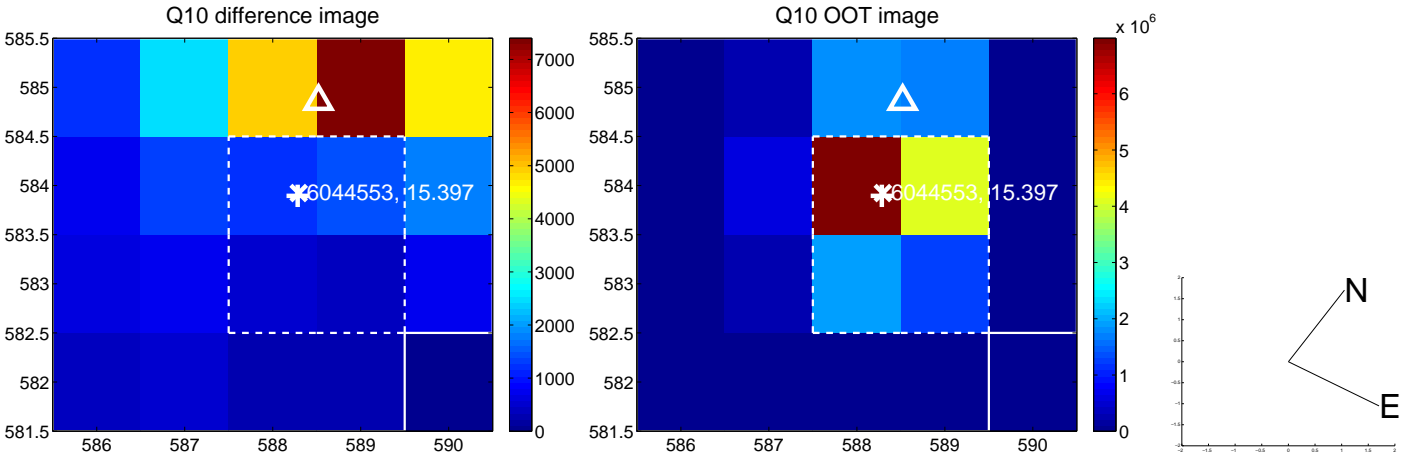
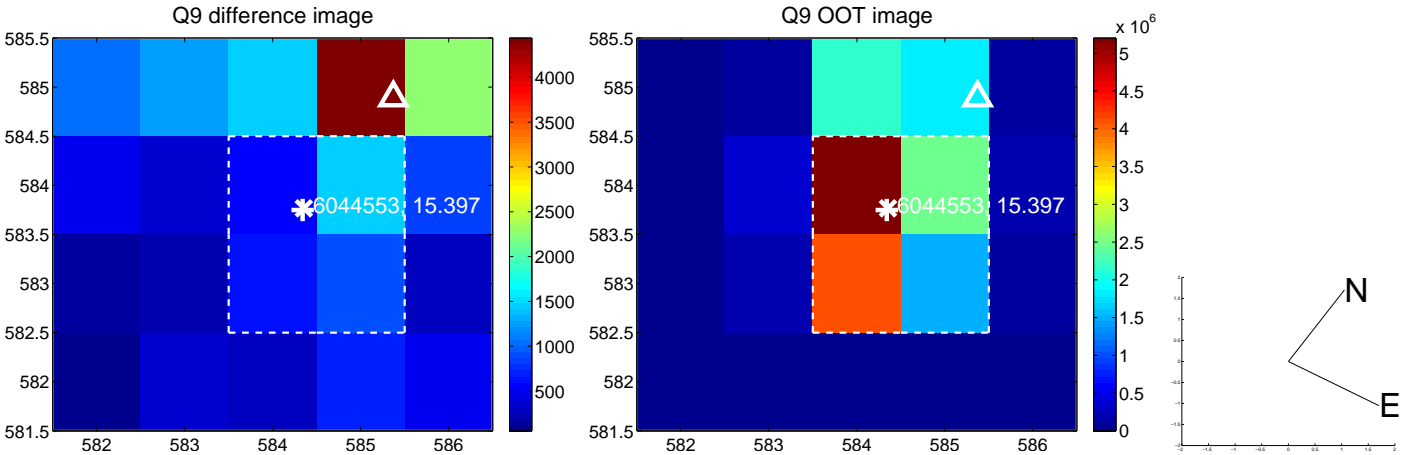
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



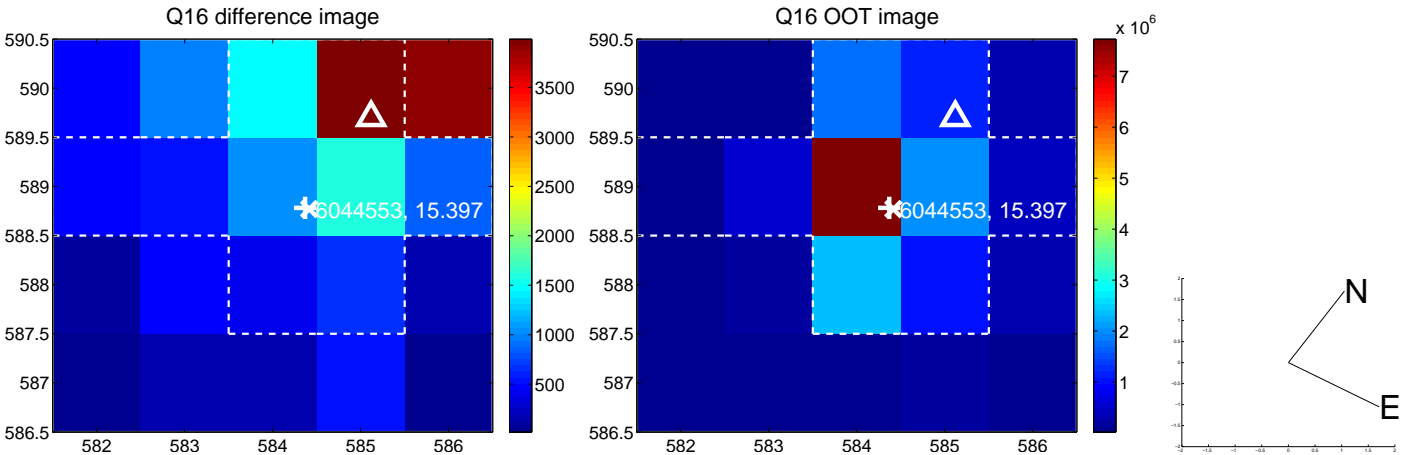
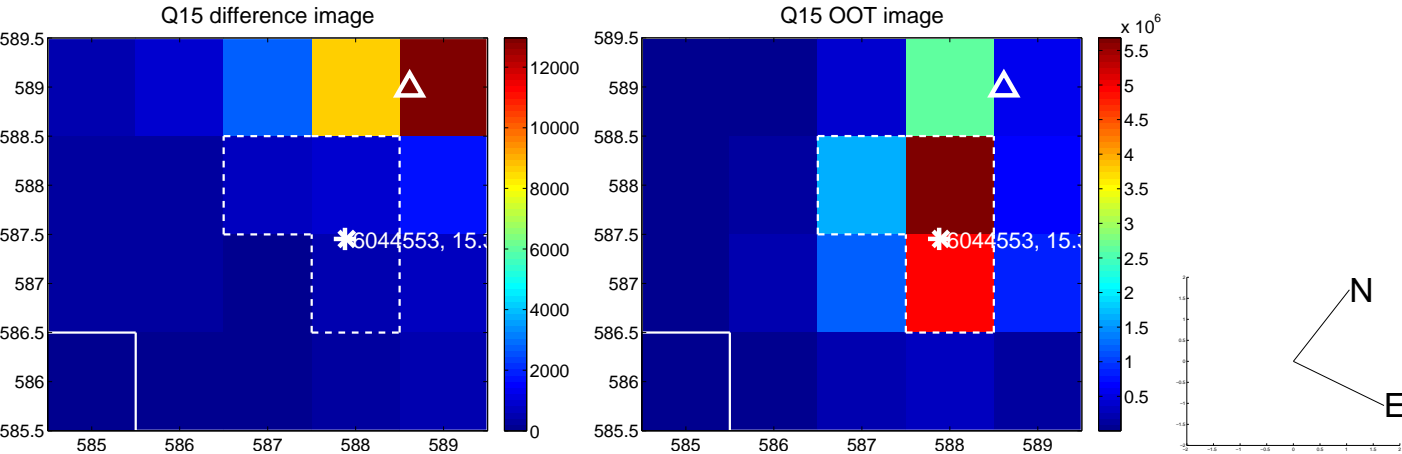
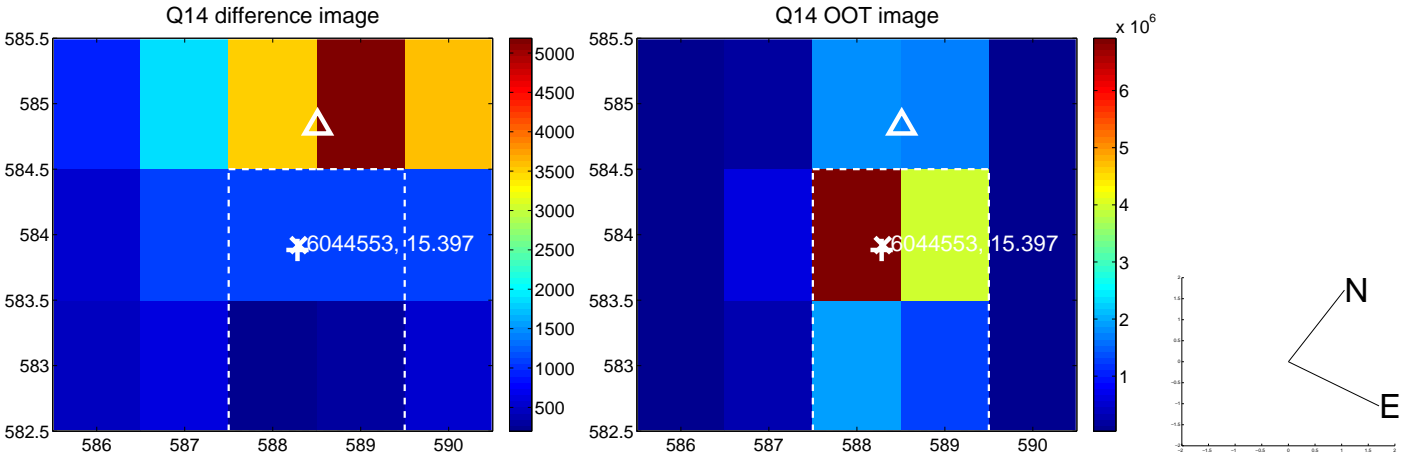
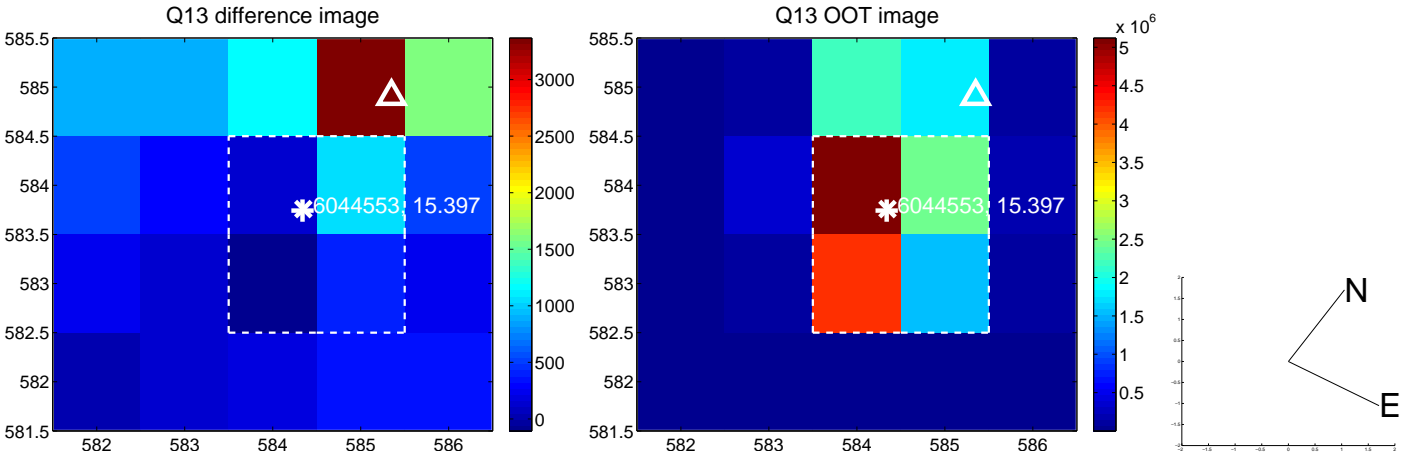
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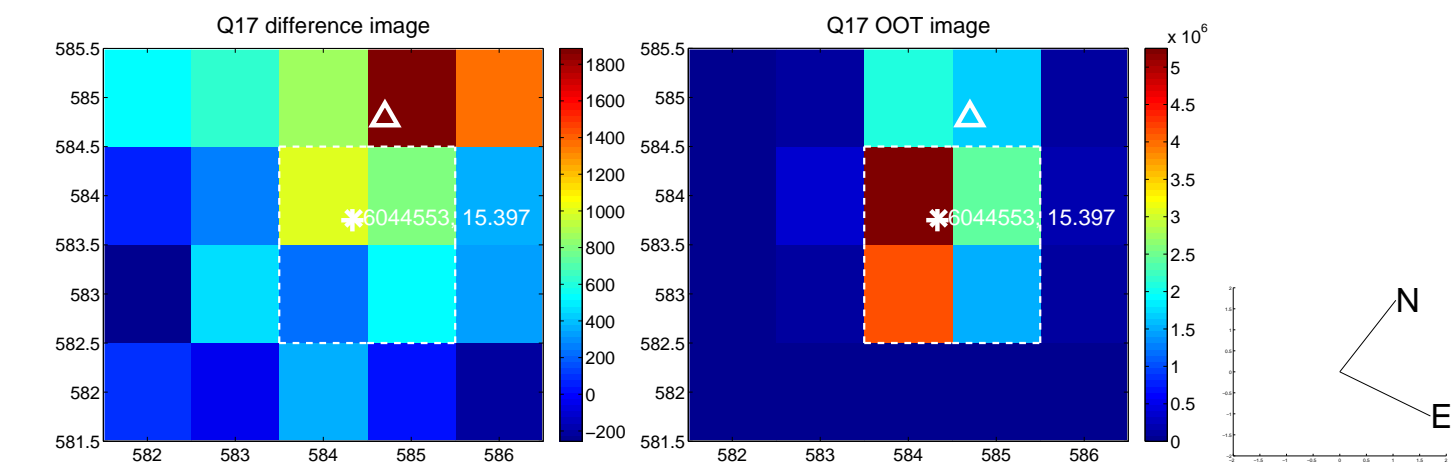
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



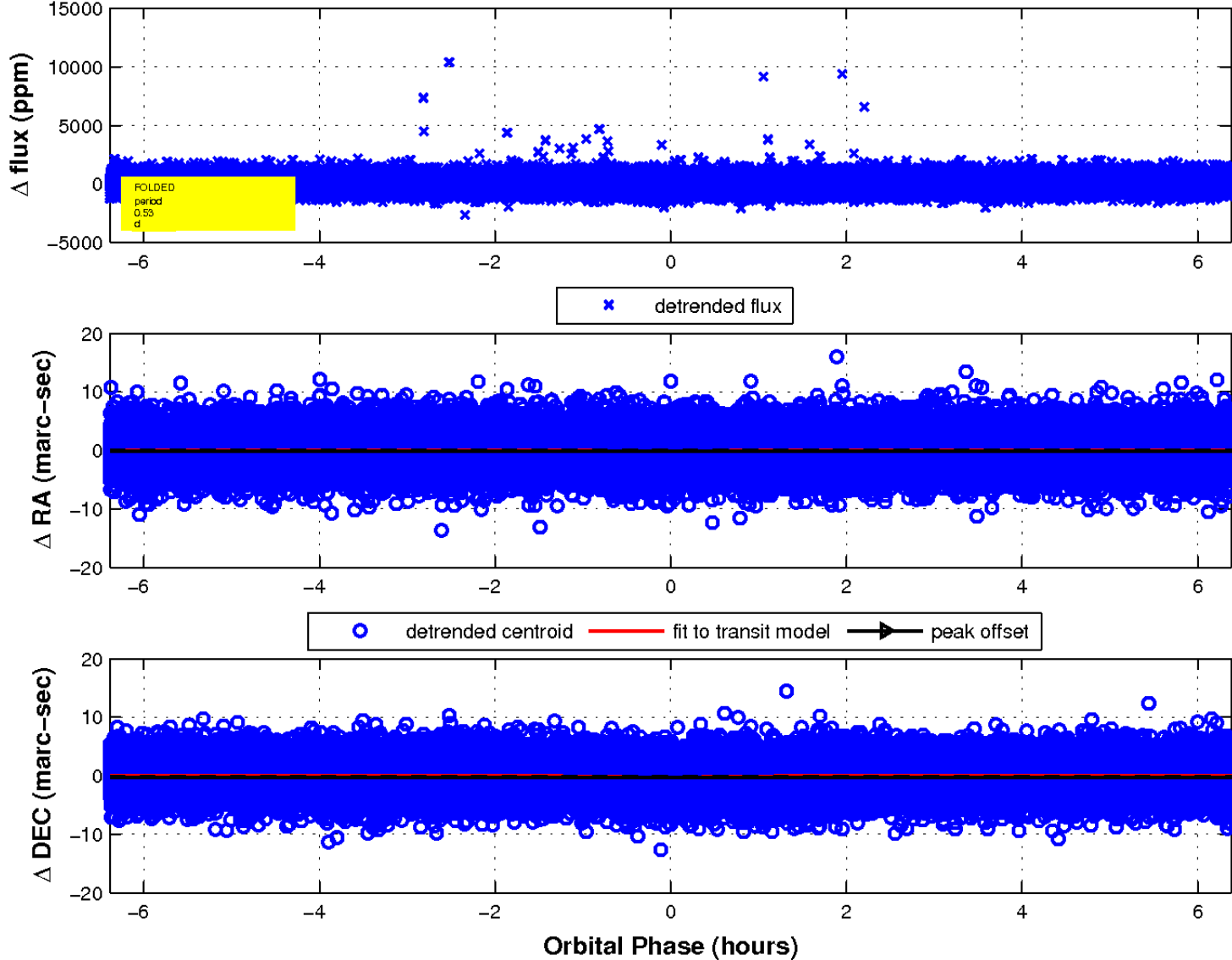
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

