

KIC 003659012

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})
003659012-01	OBS	No	0.568524	132.066183	28.5	2.600	10.3	10.8	5.38	7021	3.34	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003659012-01	OBS	FP	0.00	1	0	0	0	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.

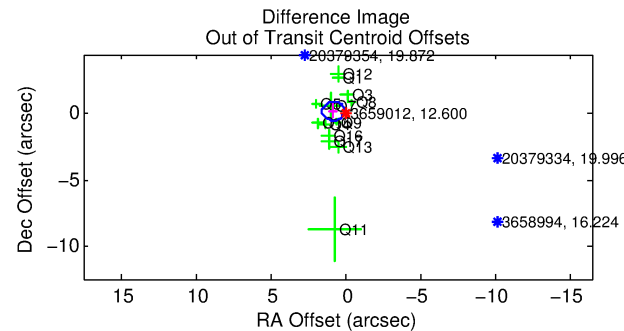
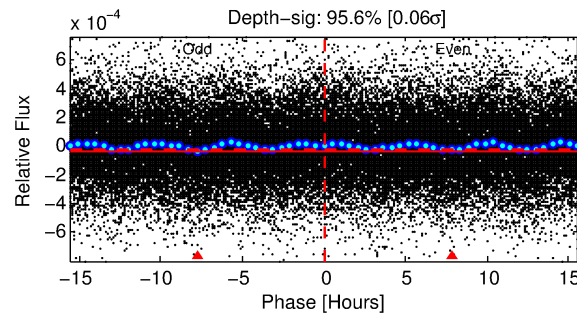
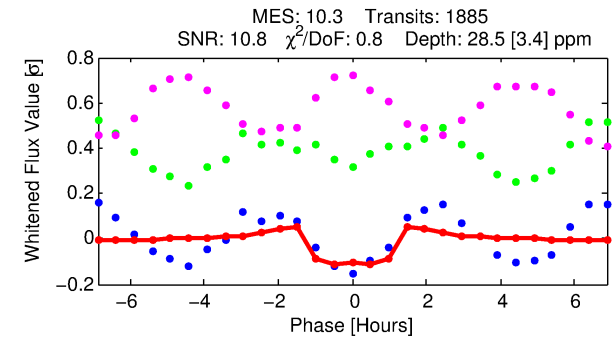
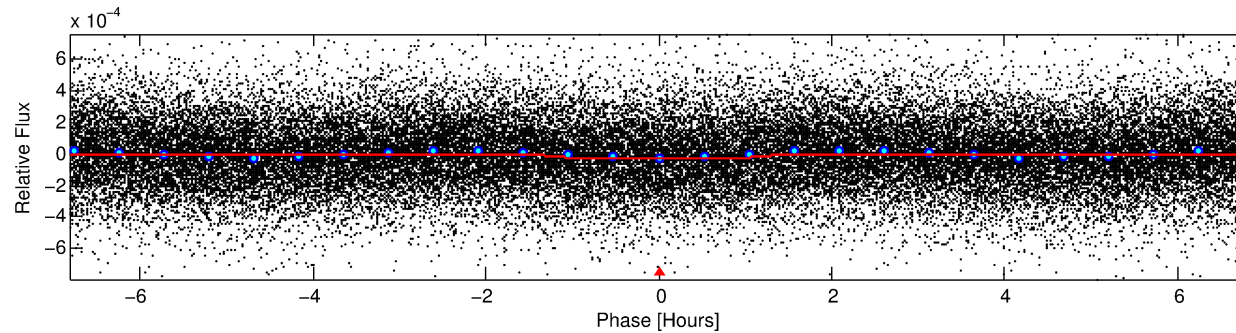
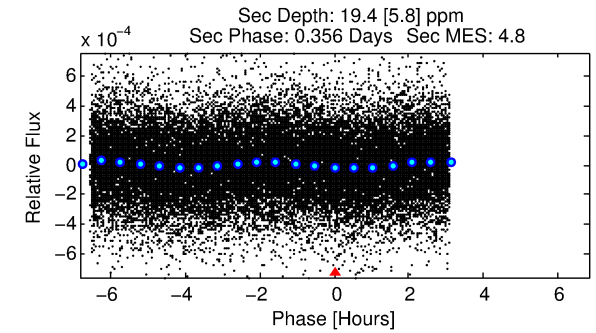
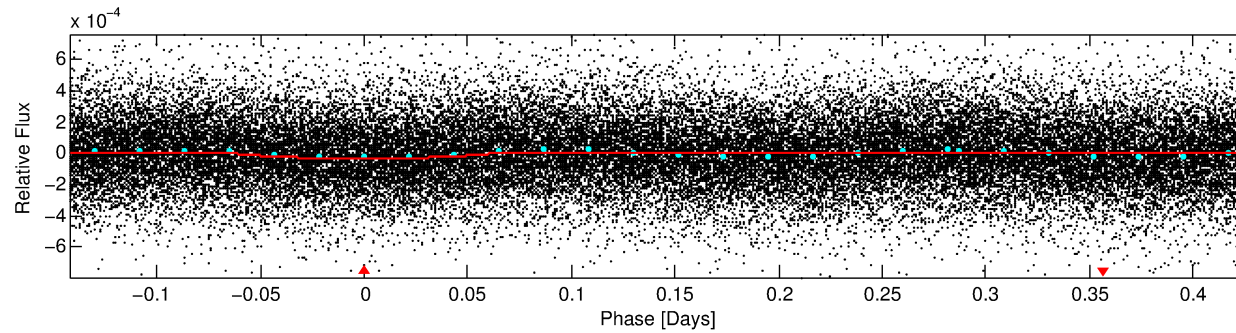
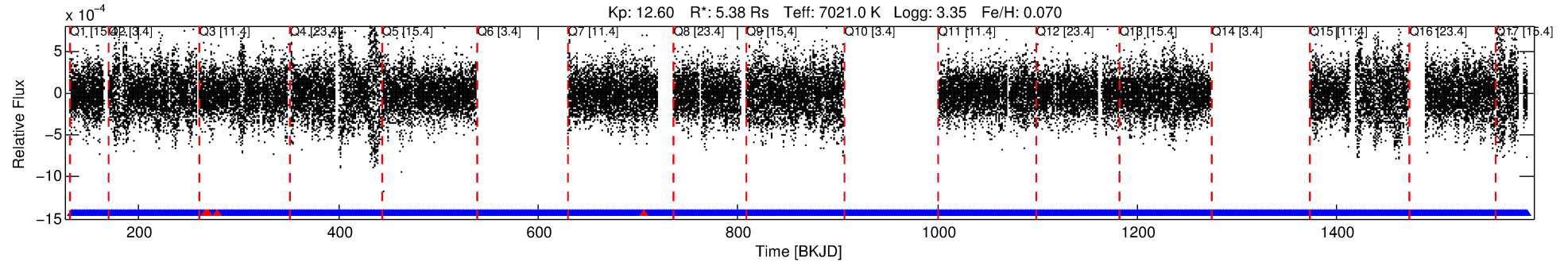
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003659012-01

No Significant Match Found

DV One-Page Summary

KIC: 3659012 Candidate: 1 of 1 Period: 0.569 d



DV Fit Results:

Period = 0.56852 [0.00001] d
Epoch = 132.0662 [0.0018] BKJD
Rp/R* = 0.0057 [0.0014]
a/R* = 1.20 [0.55]
b = 0.90 [0.32]
Seff = N/A
Teq = N/A
Rp = 3.34 [1.80] Re
a = N/A
Ag = N/A
Teffp = N/A

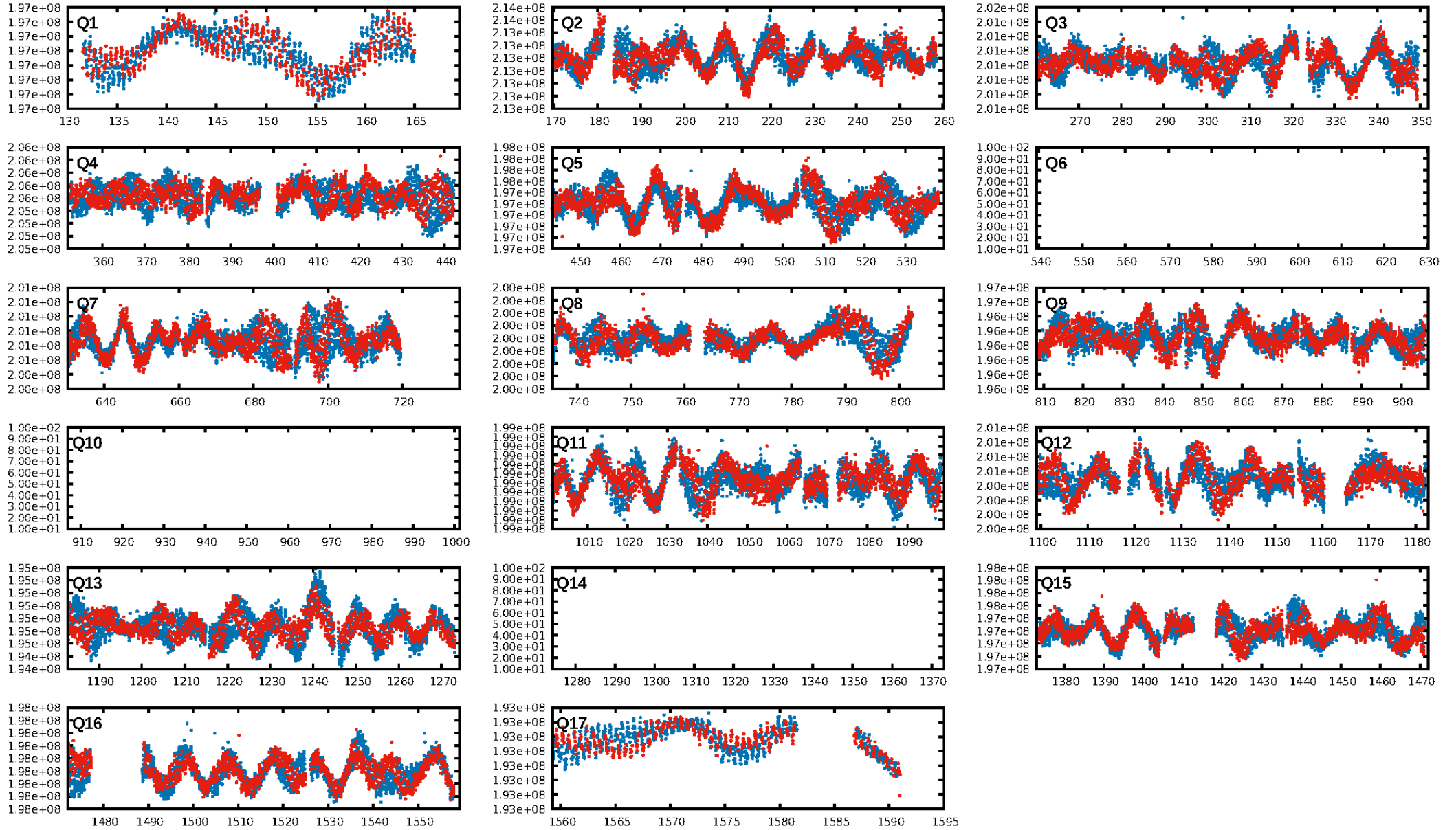
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.11e-18
RollingBand-fgt: 1.00 [1772/1778]
GhostDiagnostic-chr: 3.664
Centroid-sig: 14.9%
Centroid-so: 0.671 arcsec [1.02σ]
OotOffset-rm: 0.830 arcsec [3.46σ]
KicOffset-rm: 0.813 arcsec [2.57σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [14/14]

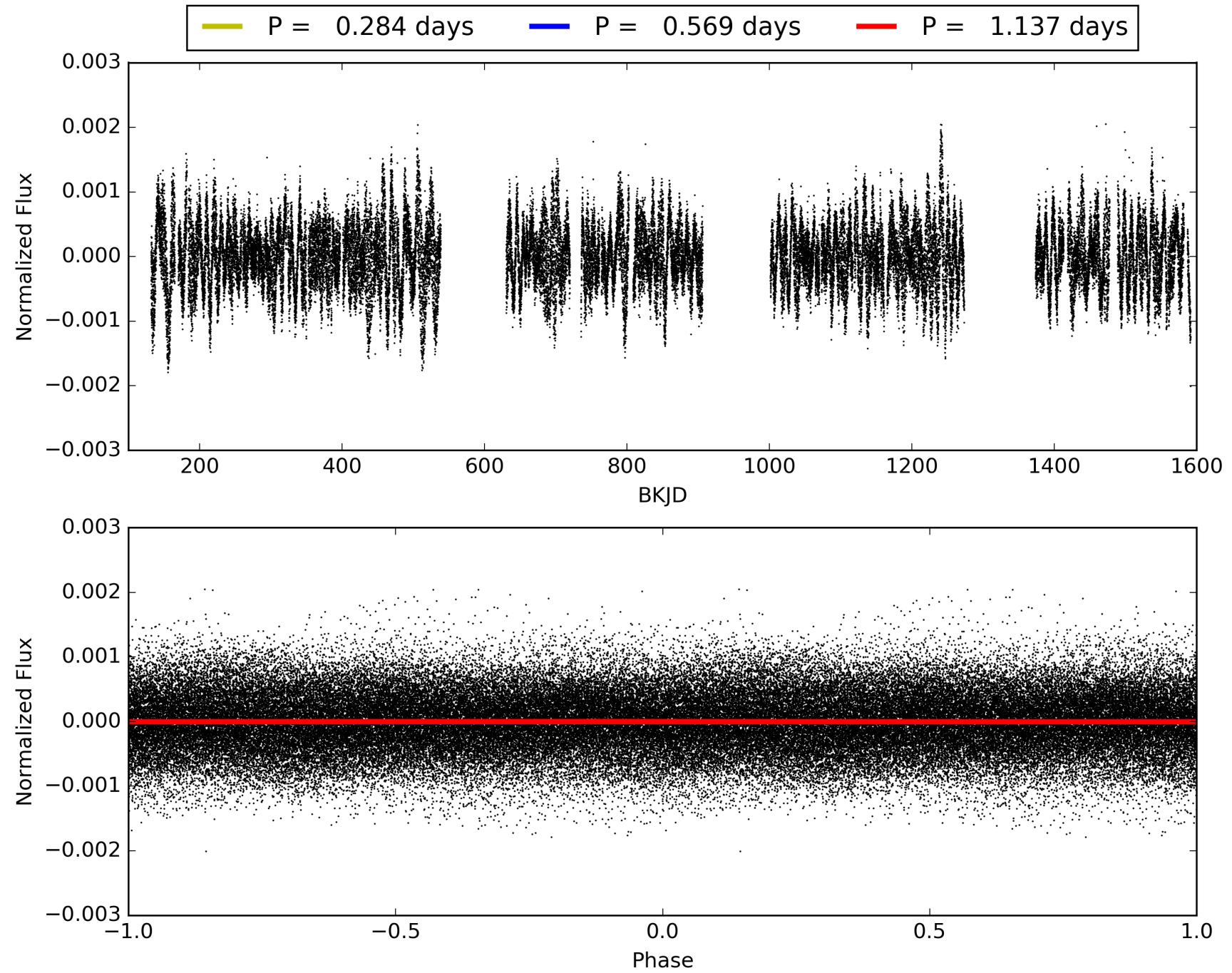
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:04:51 Z

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

TCE 003659012-01, PDC Light Curves

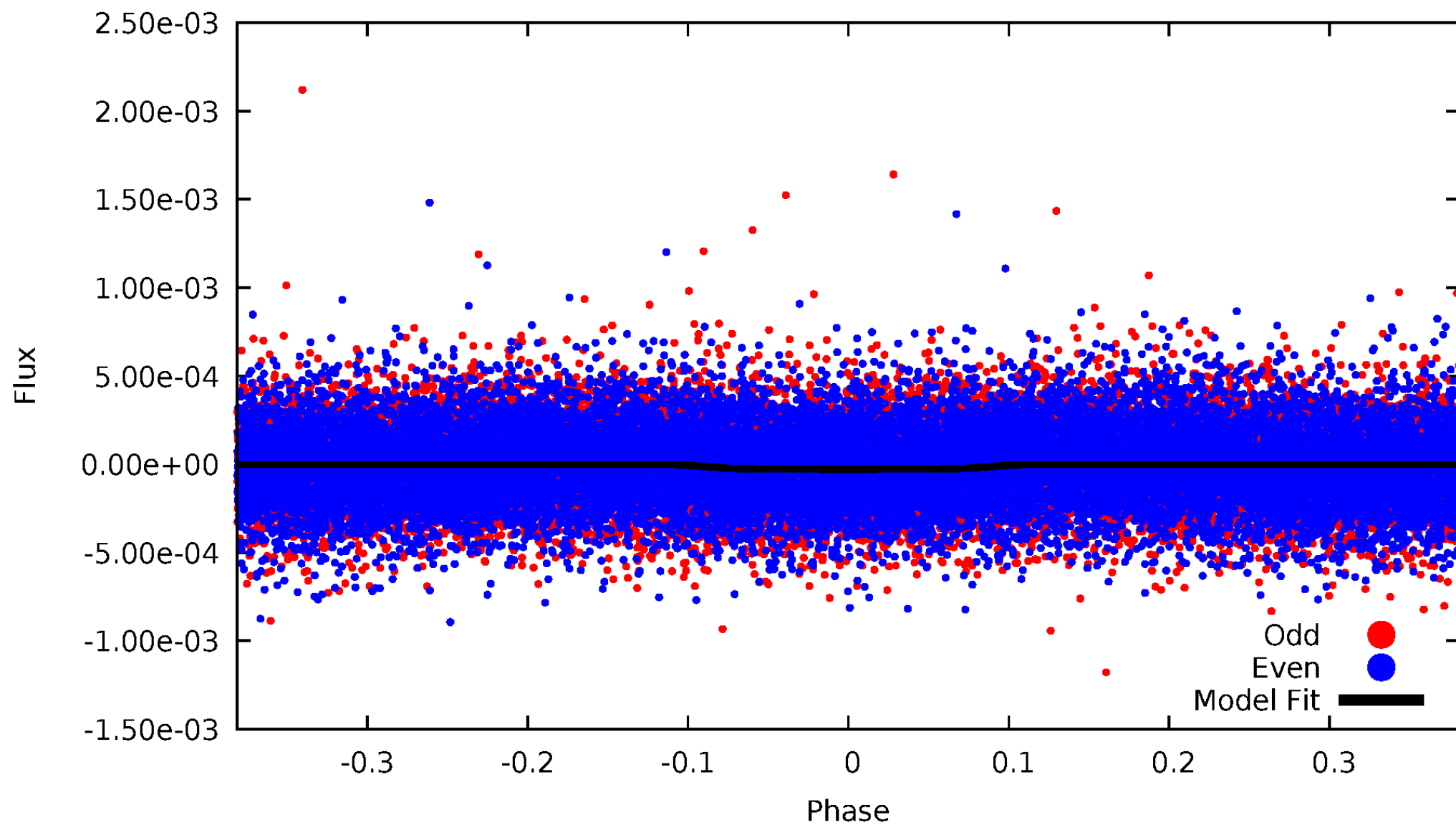


TCE 003659012-01



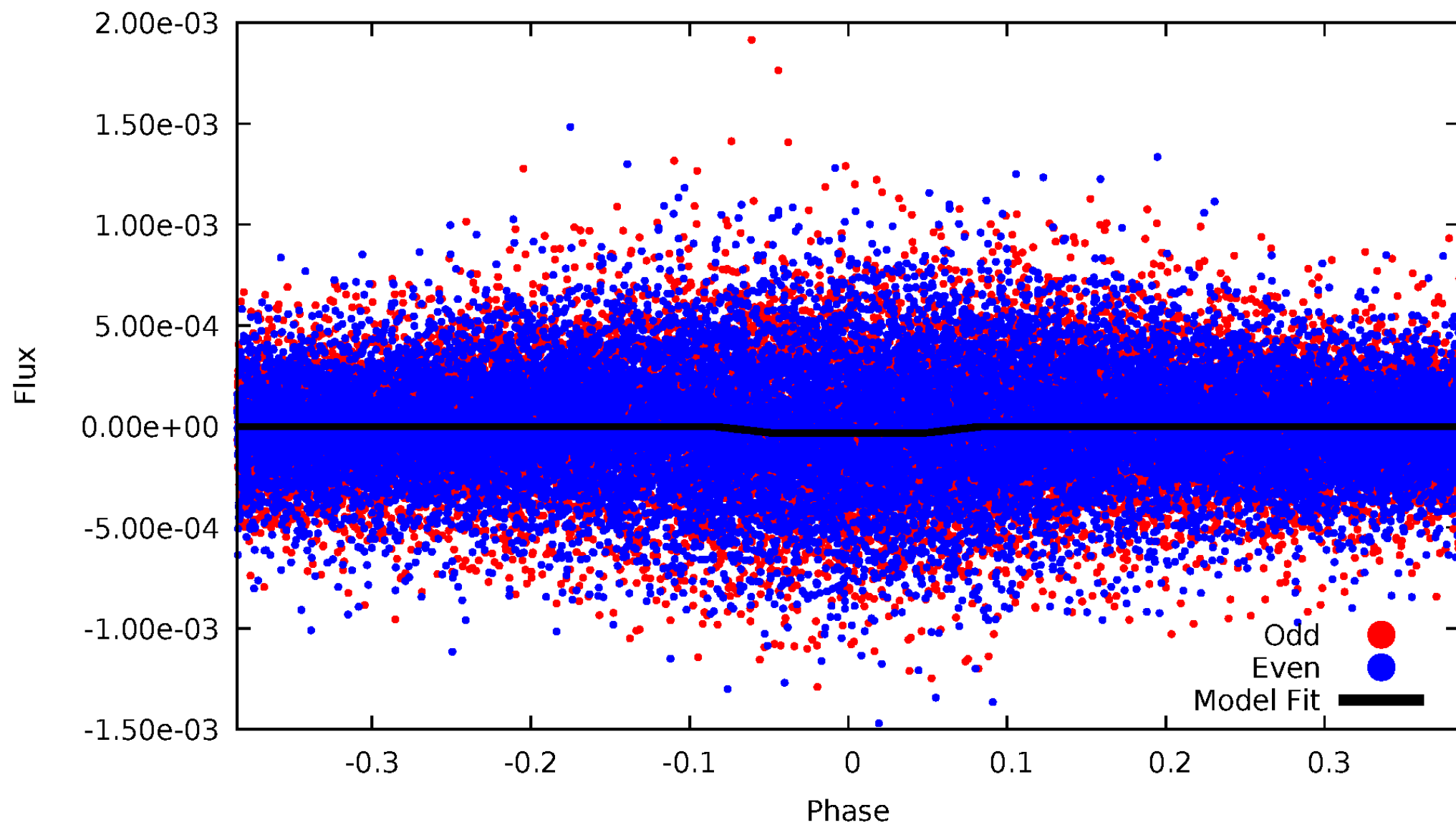
DV Odd/Even

TCE 003659012-01

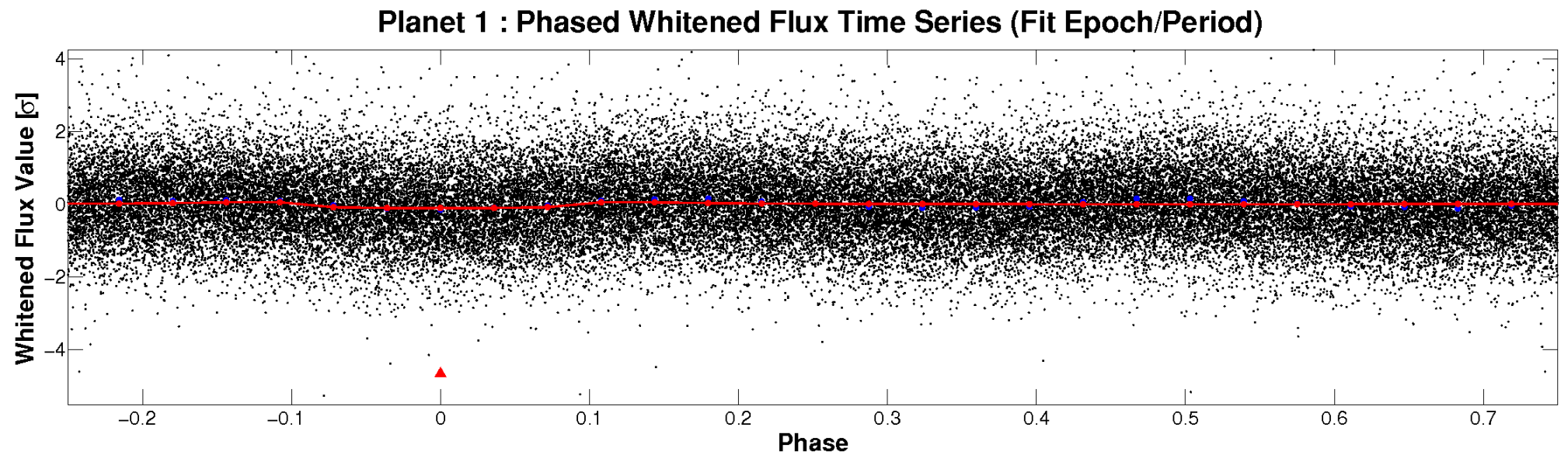
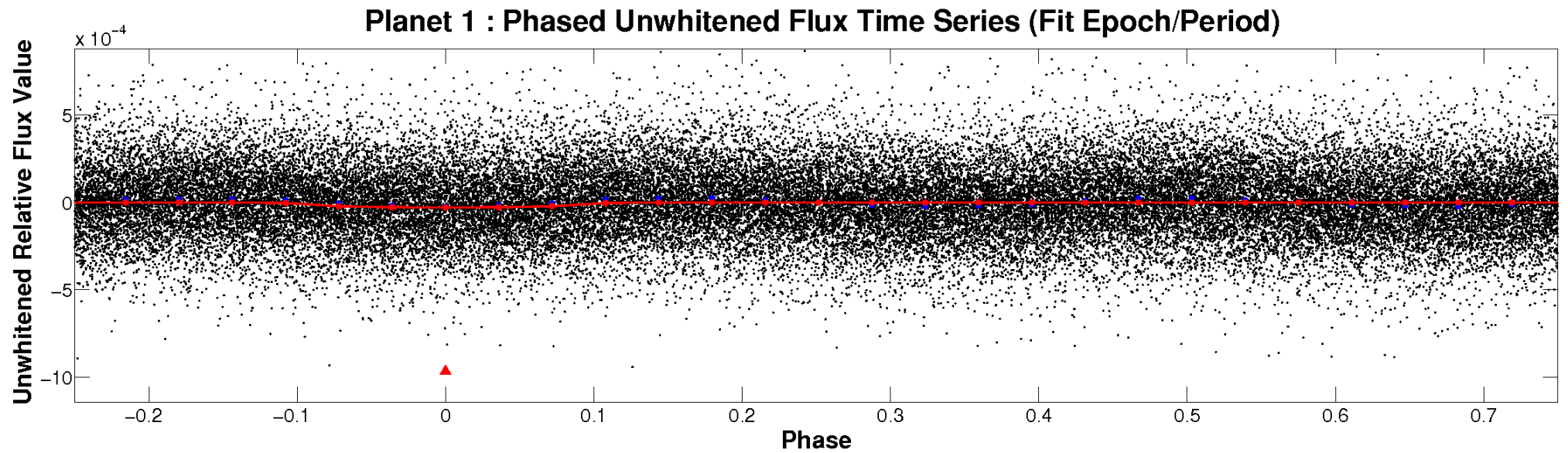


ALT Odd/Even

TCE 003659012-01

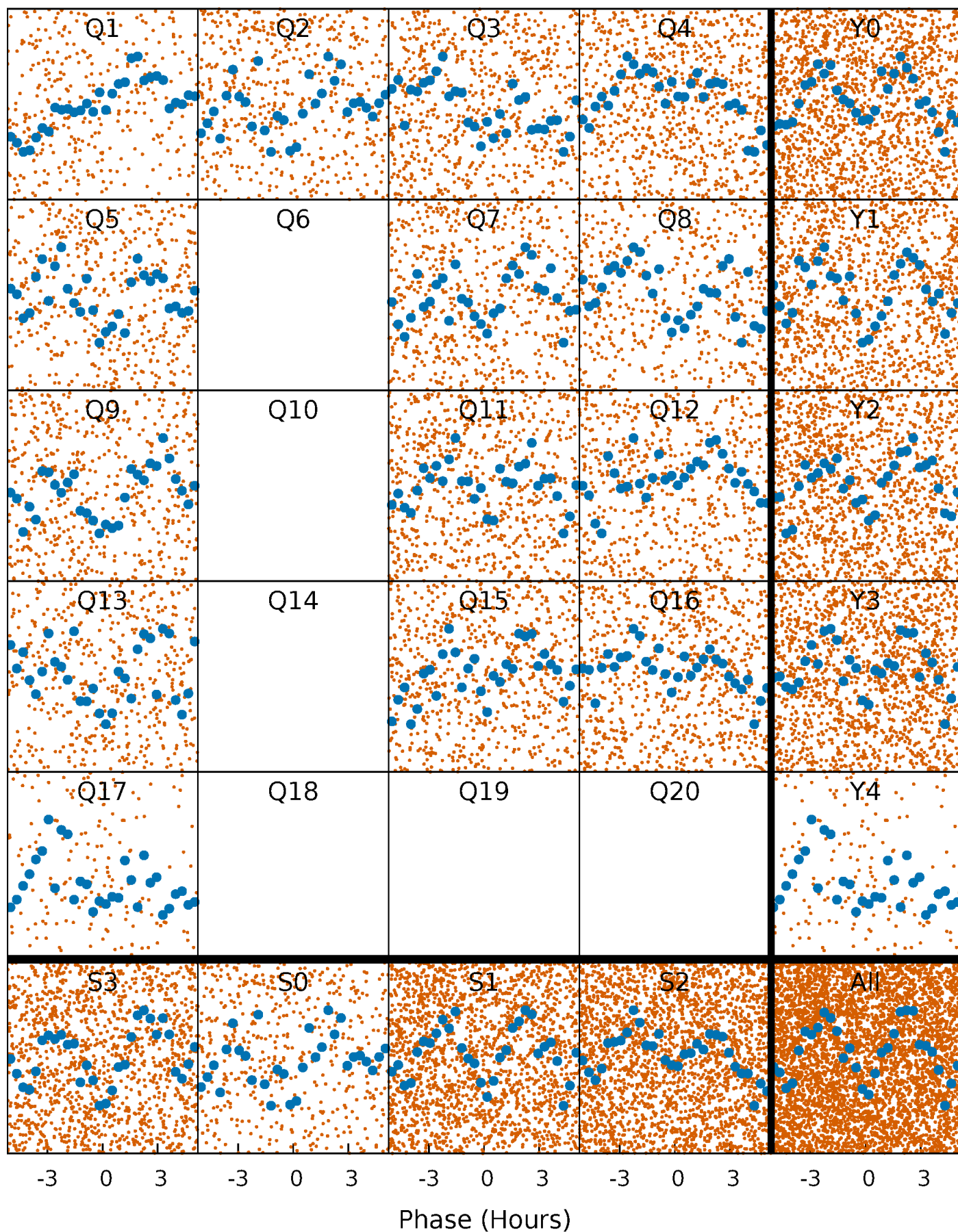


Non-Whitened Vs. Whitened Light Curve



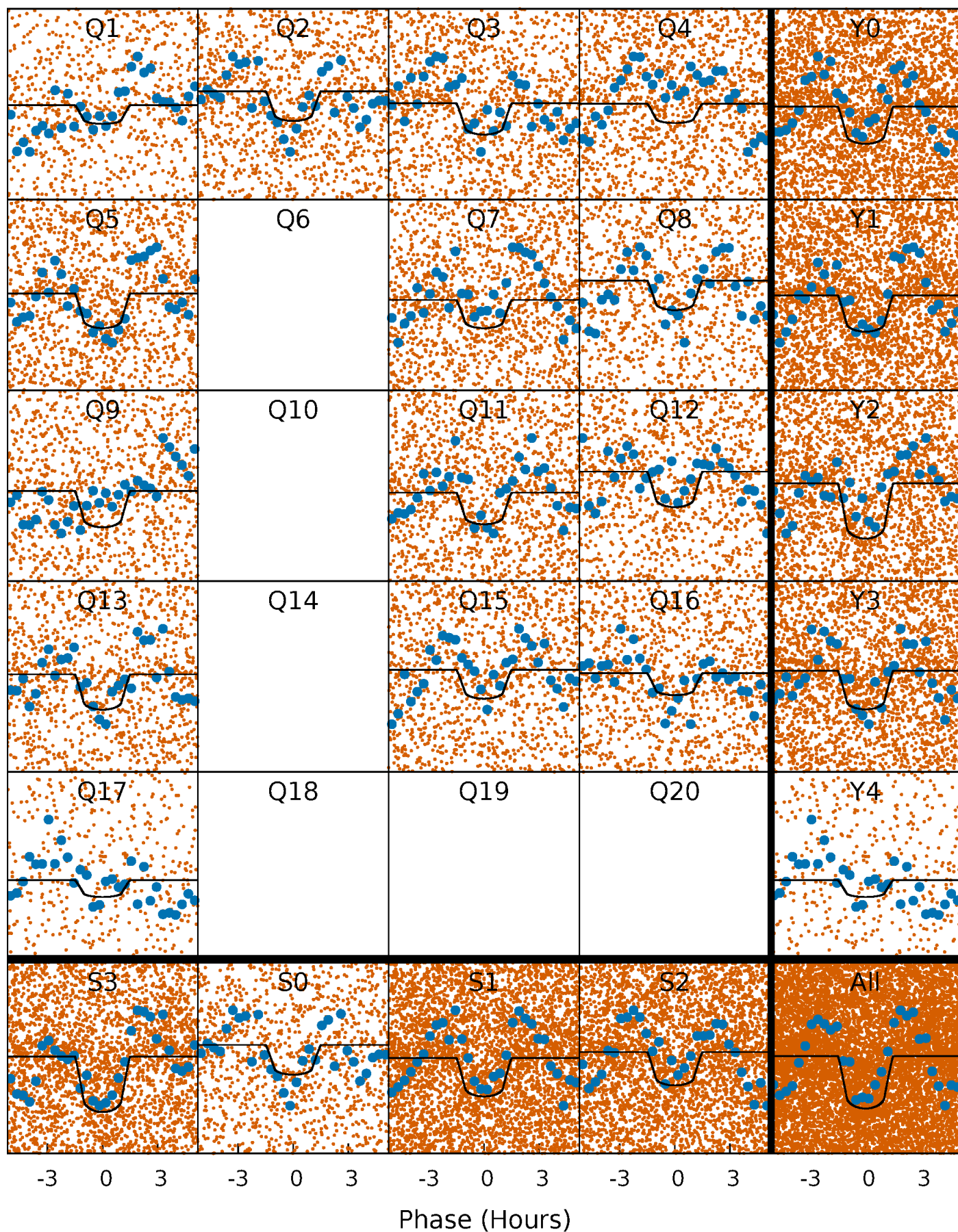
PDC Quarter-Phased Transit Curves

TCE 003659012-01 P= 0.568524 Days $T_0=132.066183$ (BKJD)



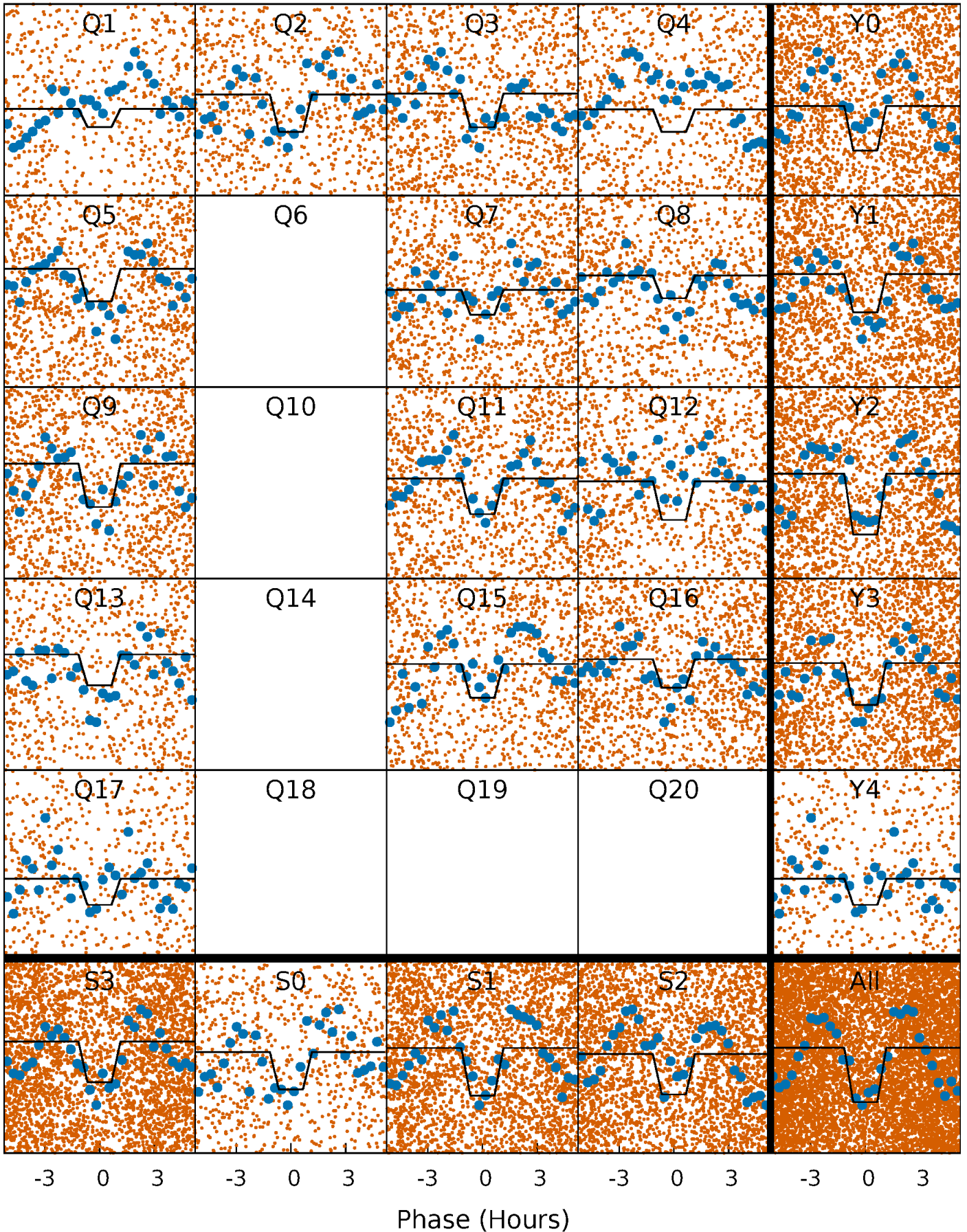
DV Quarter-Phased Transit Curves

TCE 003659012-01 P= 0.568524 Days $T_0=132.066183$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

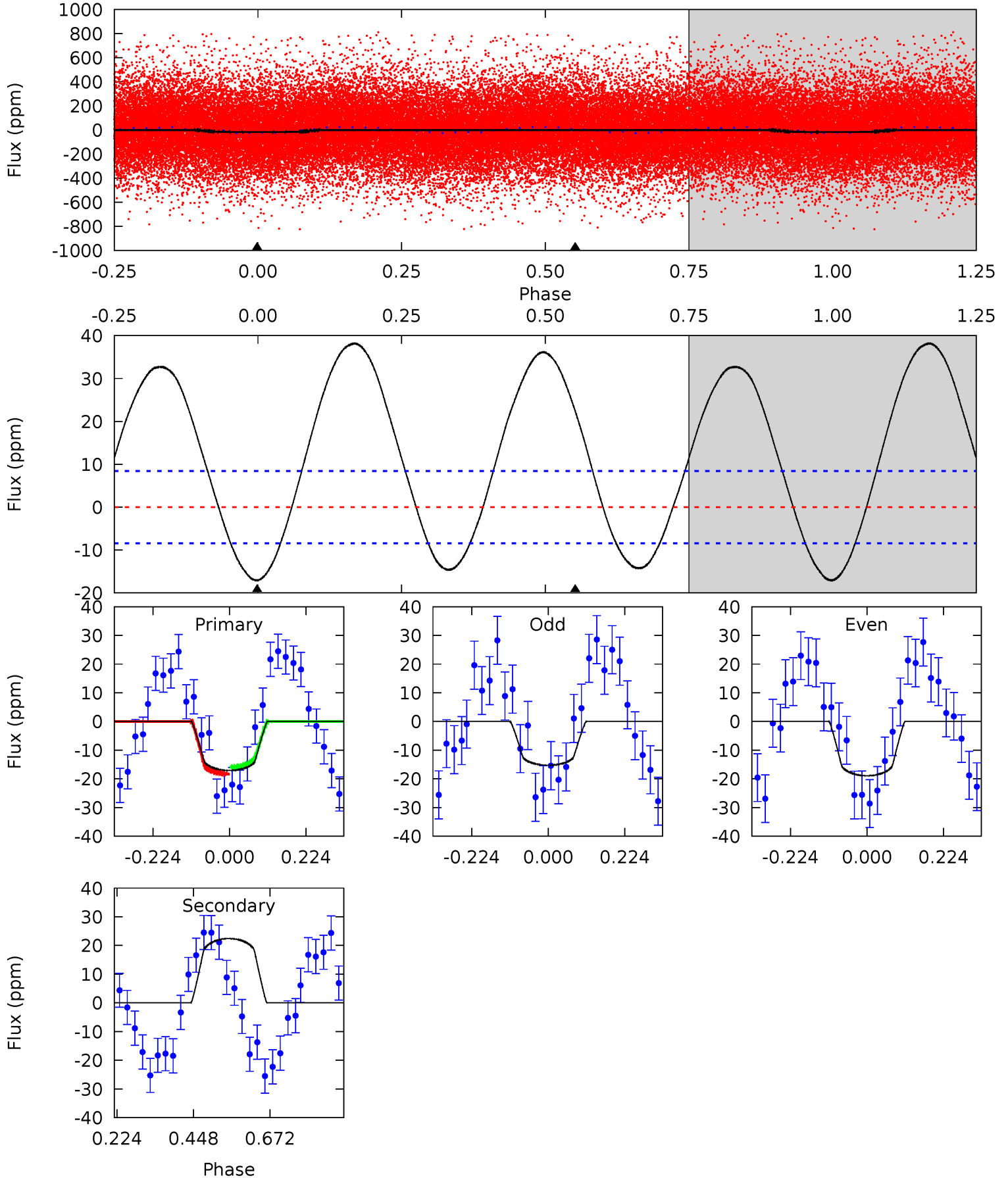
TCE 003659012-01 P= 0.568525 Days $T_0=132.066166$ (BKJD)



DV Model-Shift Uniqueness Test

003659012-01, P = 0.568524 Days, E = 131.497659 Days

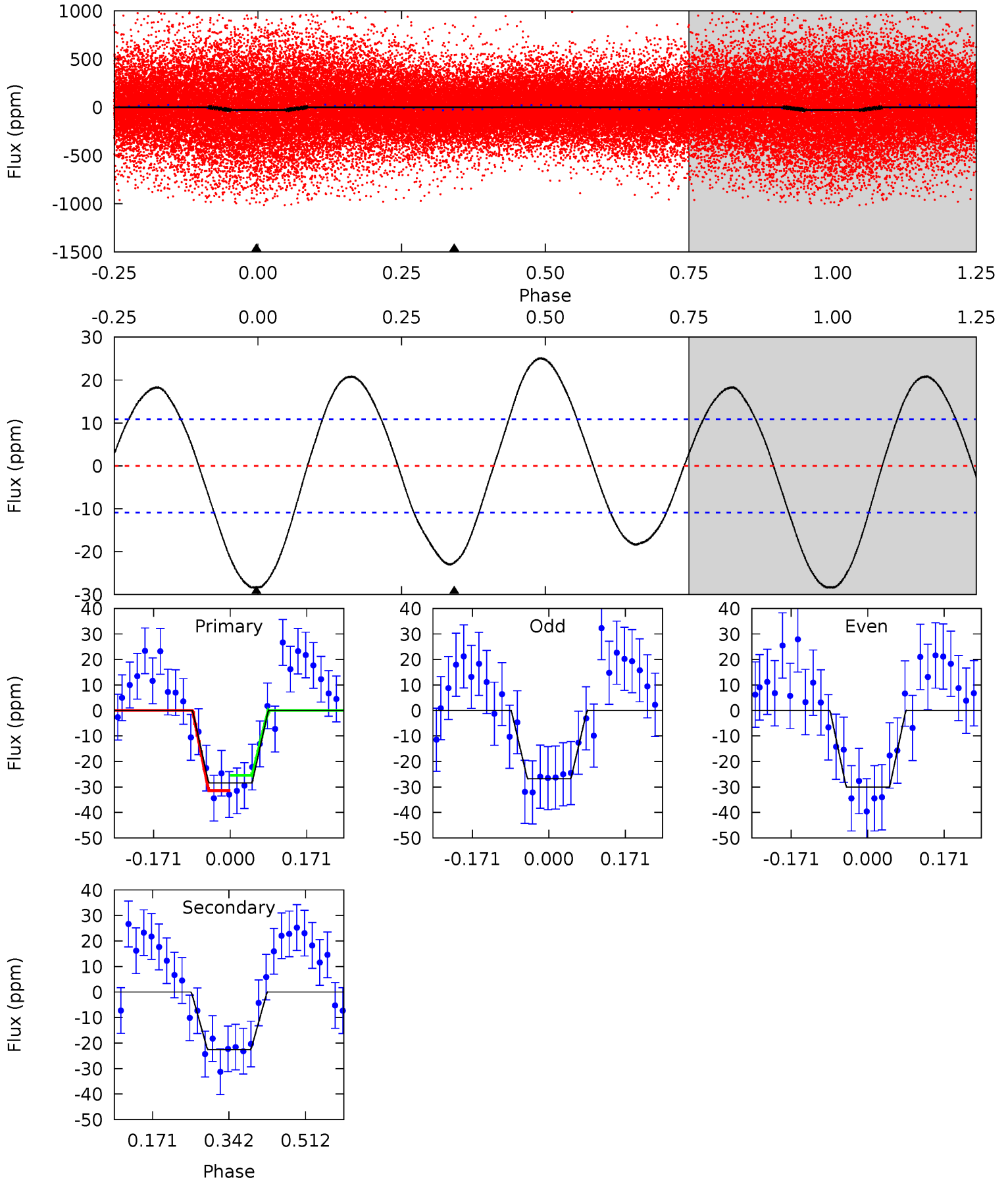
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.90	-11.7	0	0	4.39	1.22	6.28	8.90	8.90	-11.7	-11.7	0.96	0.77	0.69	0.62



Alt Model-Shift Uniqueness Test

003659012-01, P = 0.568525 Days, E = 131.497641 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	9.23	0	0	4.45	1.37	5.53	11.6	11.6	9.23	9.23	0.65	0.65	0.47	0.97



Stellar Parameters For KIC 003659012

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7021^{+169}_{-242}	$3.345^{+0.397}_{-0.106}$	$0.070^{+0.250}_{-0.250}$	$5.375^{+1.292}_{-2.584}$	$2.329^{+0.100}_{-0.500}$	$0.021^{+0.081}_{-0.009}$
	+2%/-3%	+12%/-3%	+357%/-357%	+24%/-48%	+4%/-21%	+384%/-42%
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 003659012-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	22 ± 2	$2.97^{+0.99}_{-0.95}$	7270^{+521}_{-861}	-7446^{+652}_{-827}	$-0.433^{+0.187}_{-0.494}$
Alt.	-23 ± 2	$2.99^{+1.02}_{-0.90}$	7251^{+552}_{-850}	4782^{+1572}_{-9102}	$0.430^{+0.433}_{-0.193}$

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

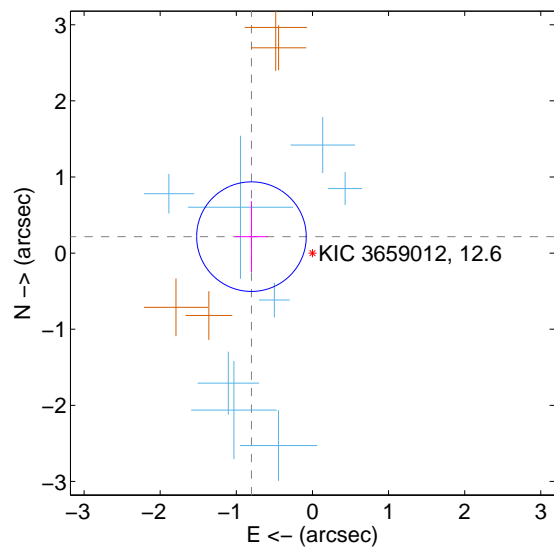
Supplemental centroid analysis for 003659012-01. Kepler magnitude: 12.60. Transit SNR 10.79

There are 8 quarters with good PRF difference image offsets

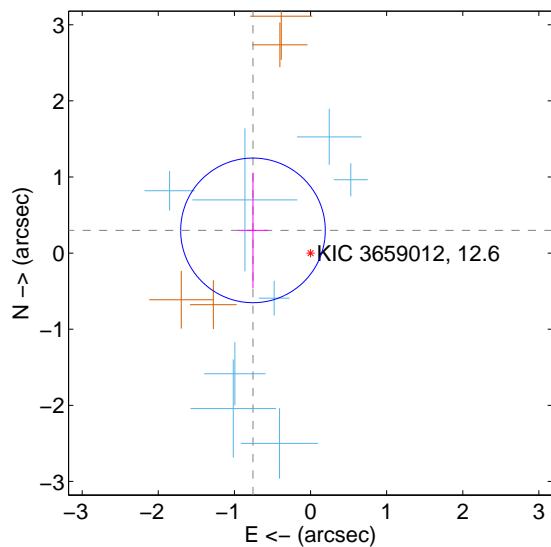
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.830 ± 0.240	3.46	0.801 ± 0.214	0.216 ± 0.467
PRF-fit source offset from KIC position	0.813 ± 0.317	2.57	0.756 ± 0.196	0.298 ± 0.760
photometric centroid source offset	0.67 ± 0.66	1.02	0.07 ± 0.62	-0.67 ± 0.66

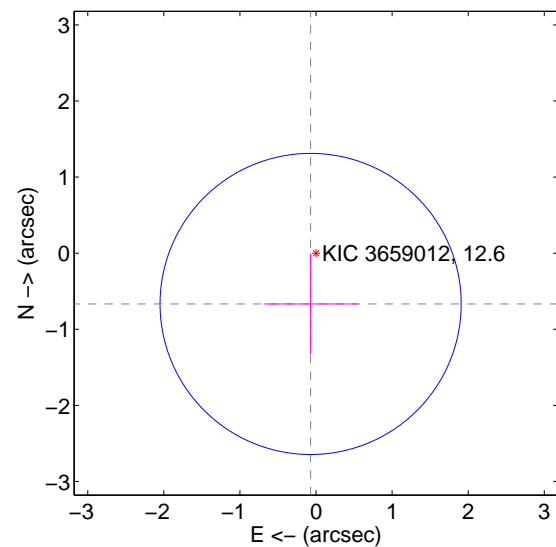
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

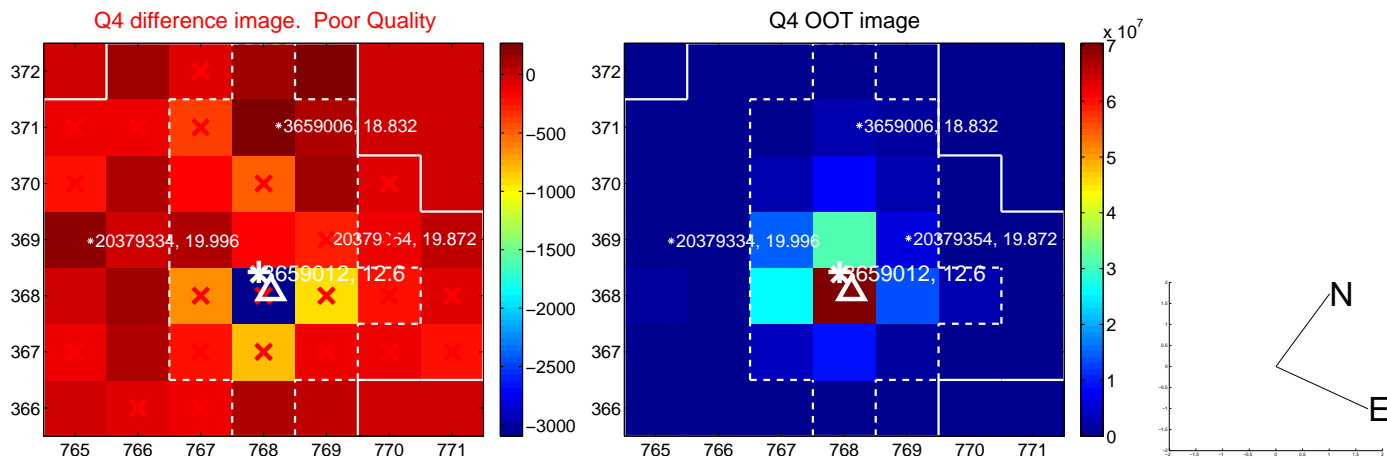
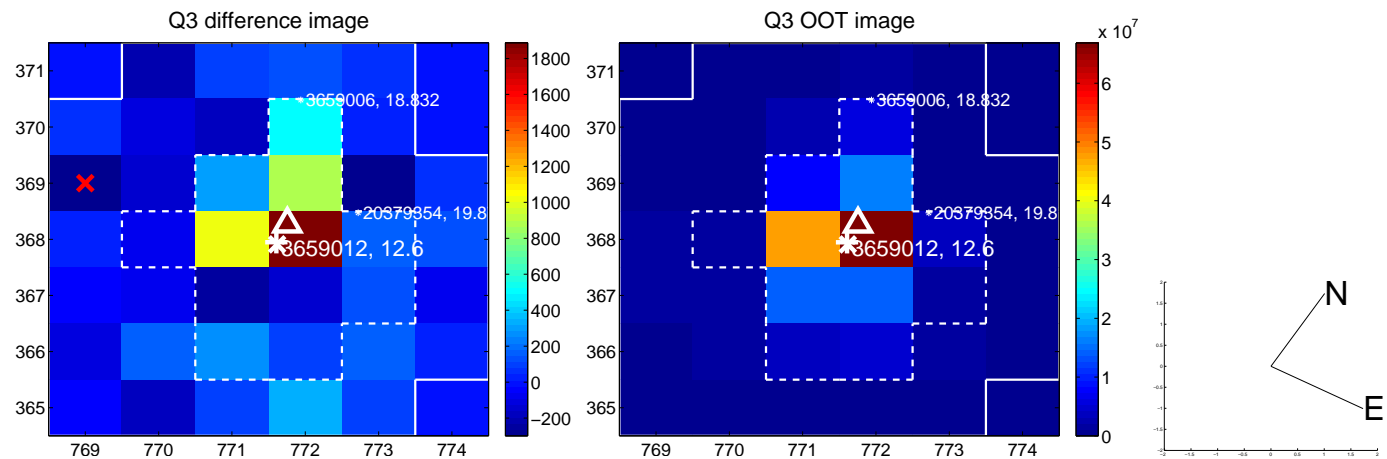
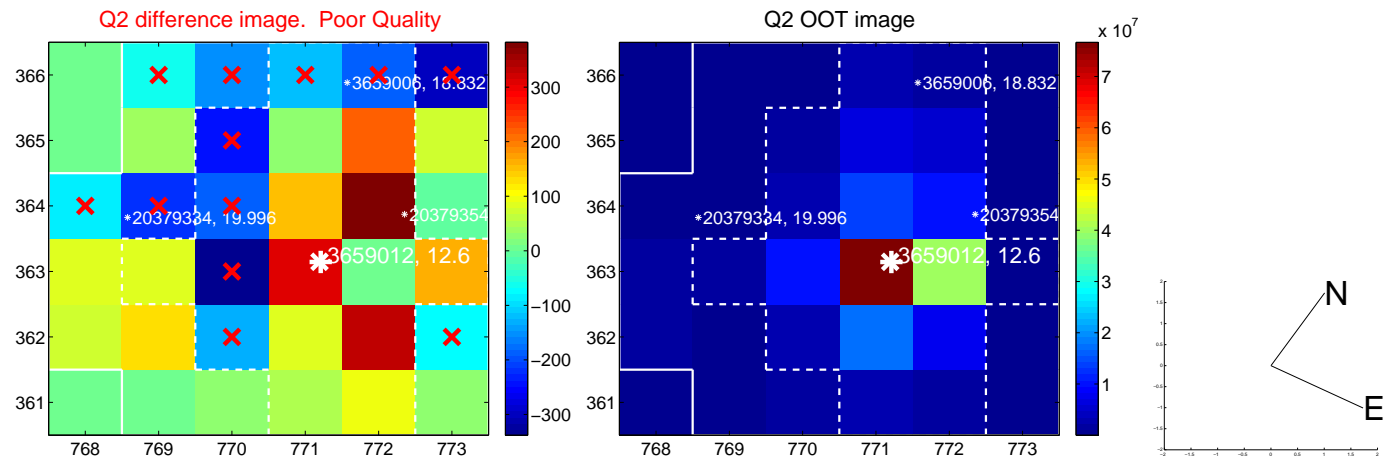
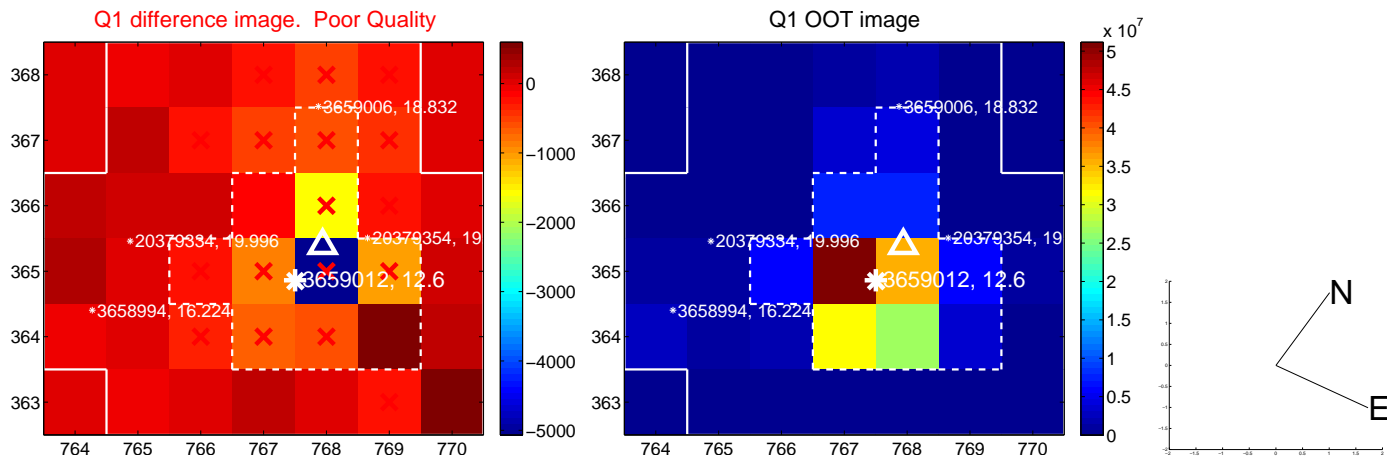


offset from photometric centroids

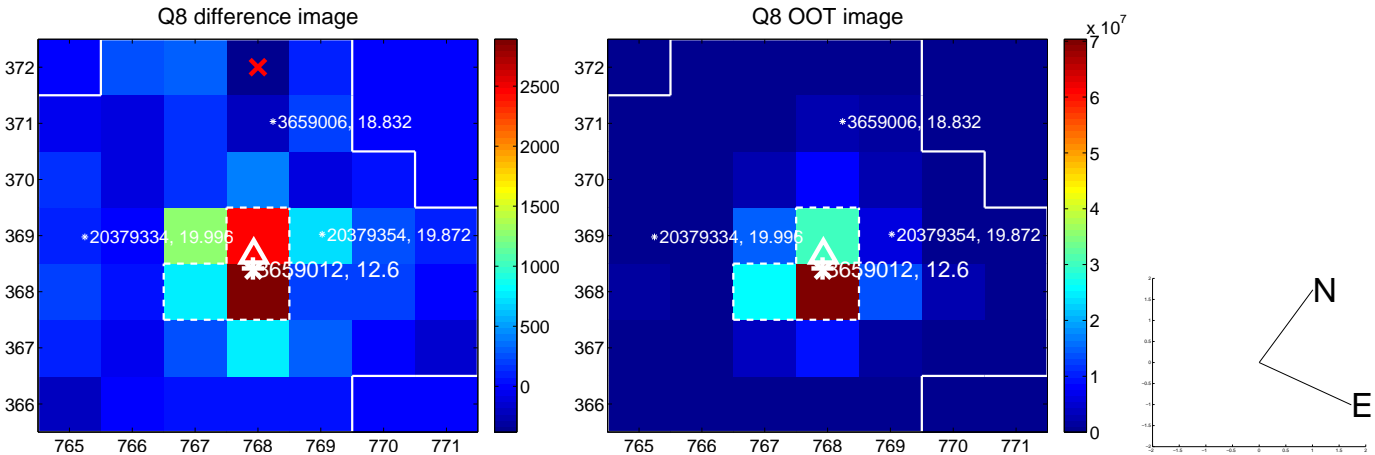
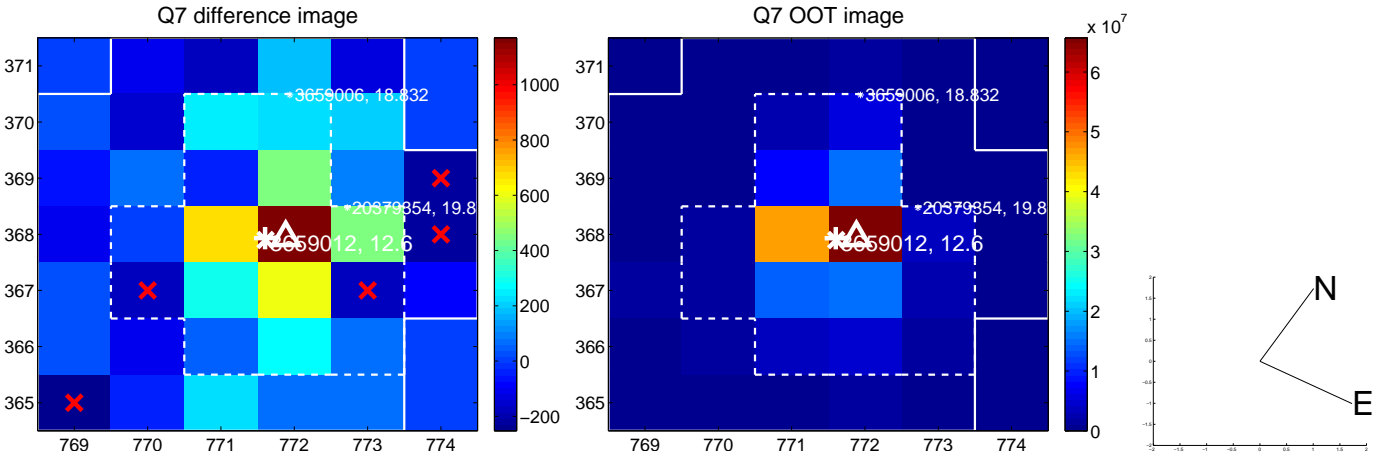
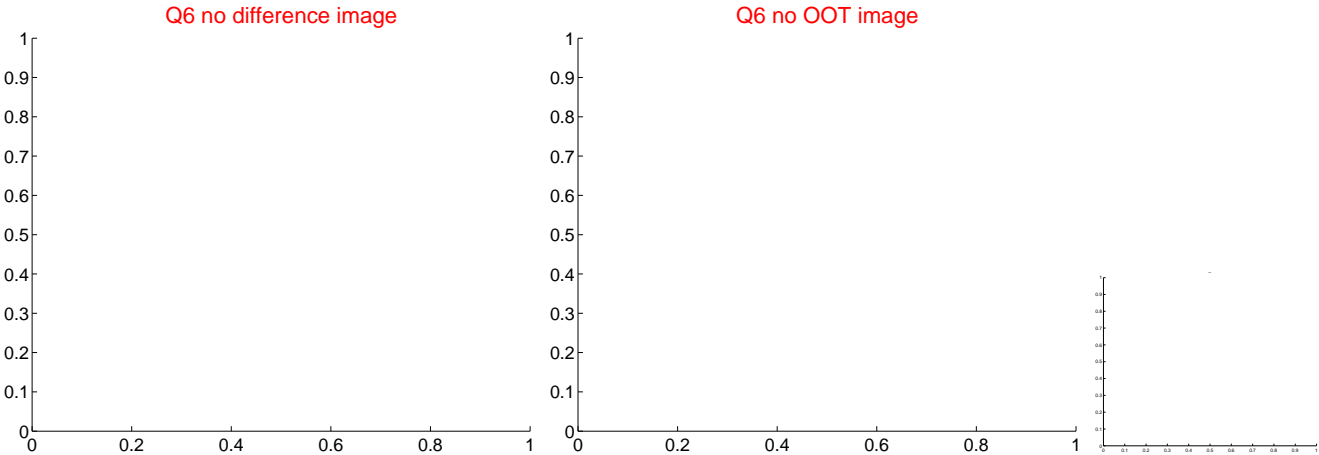
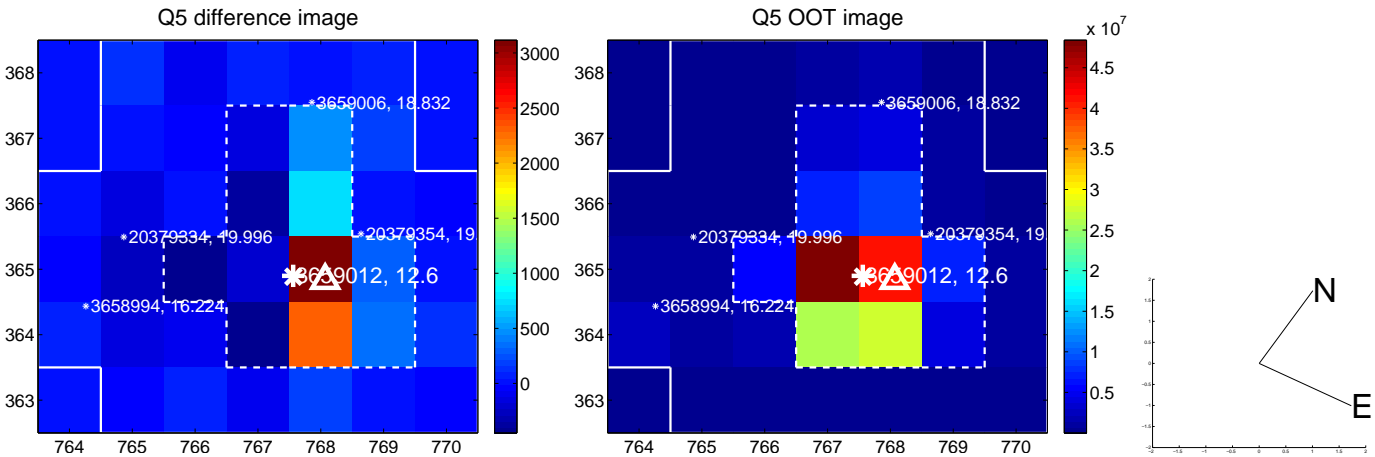


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

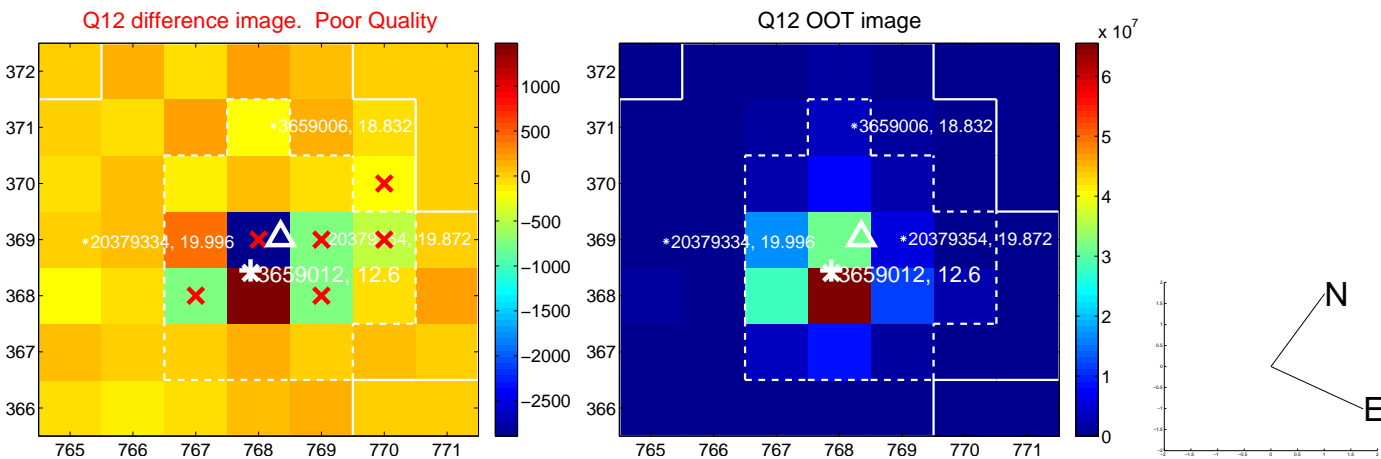
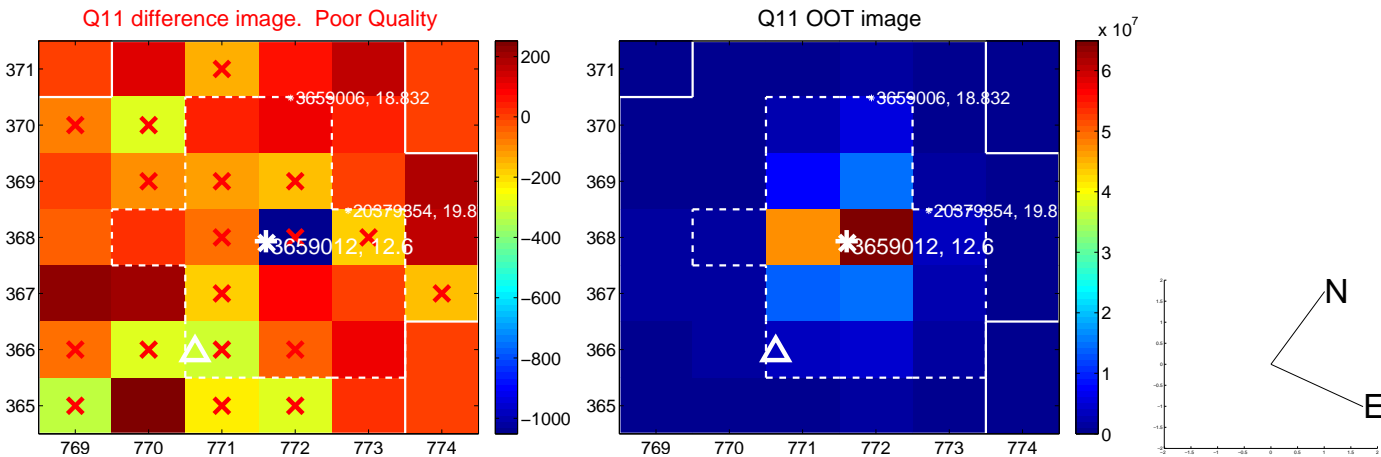
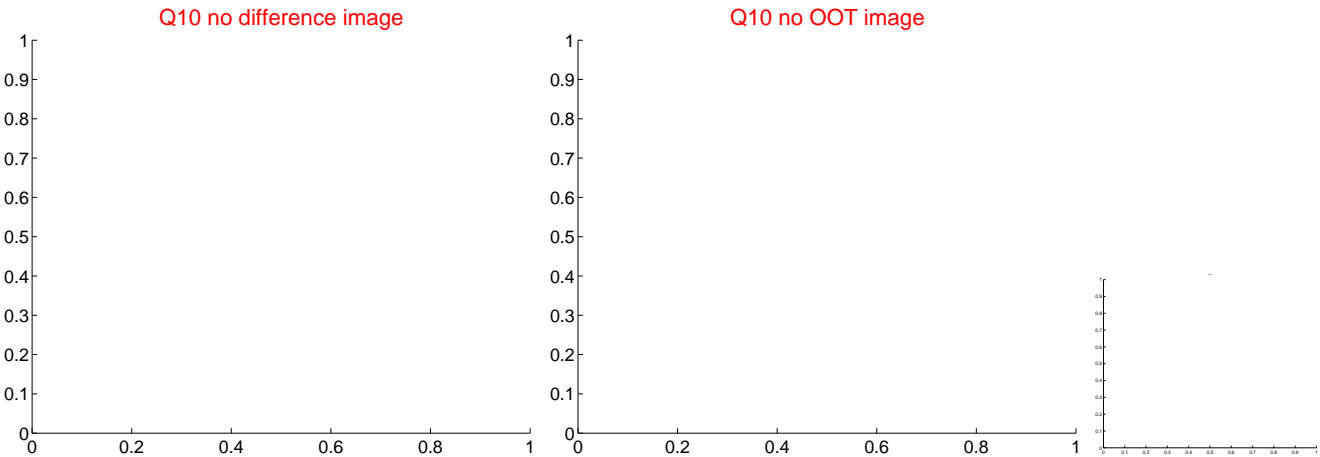
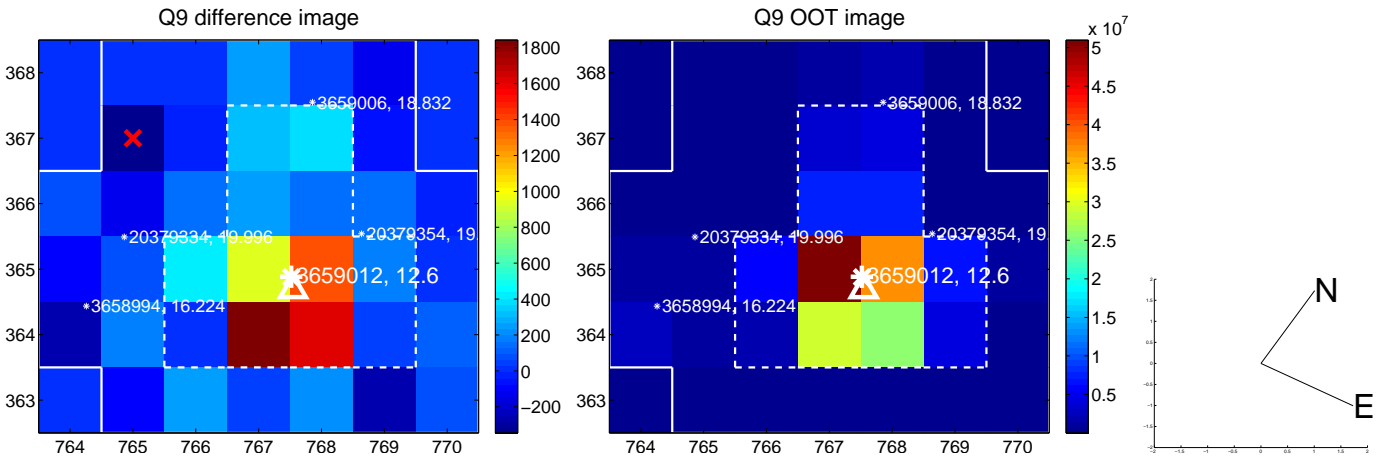
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



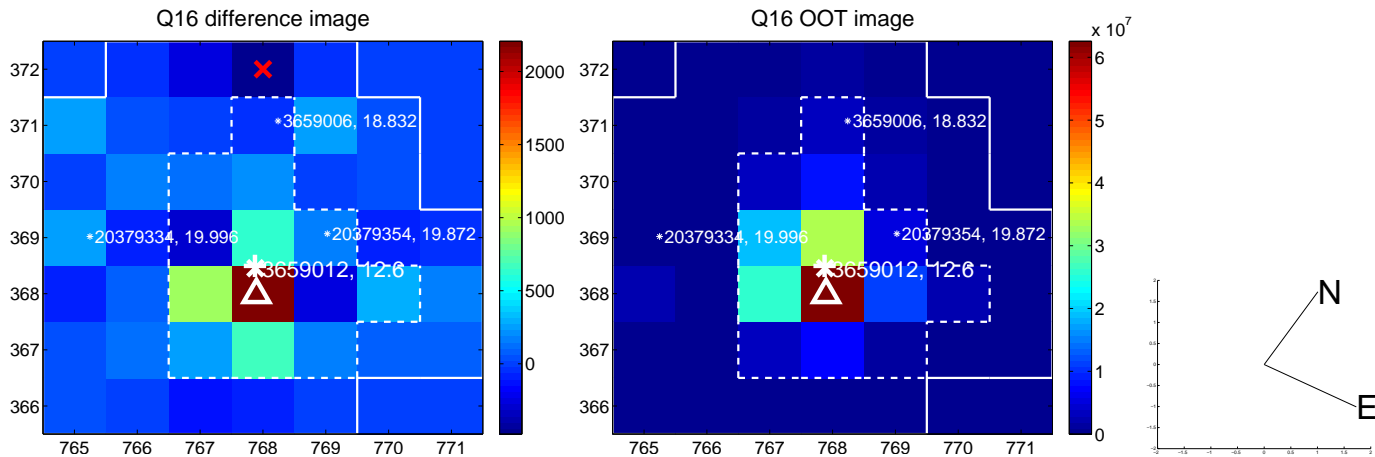
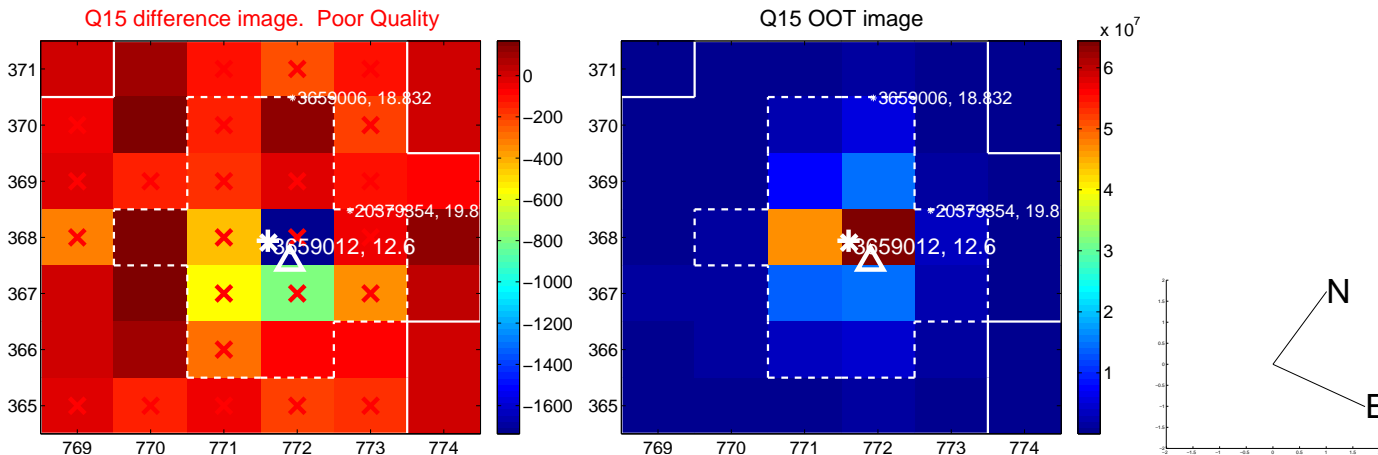
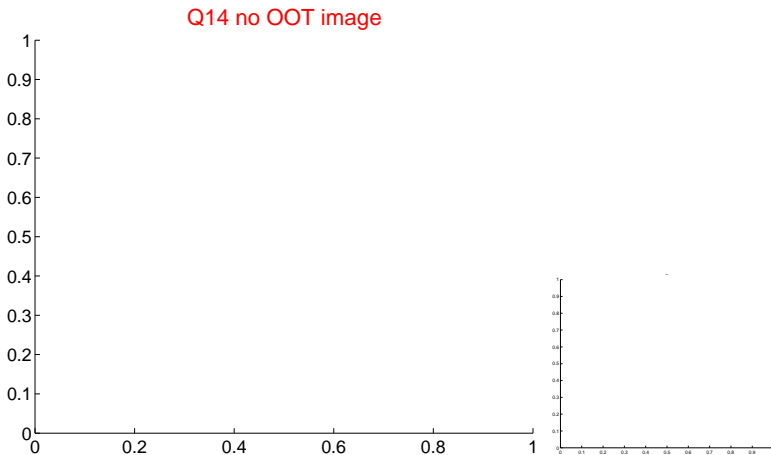
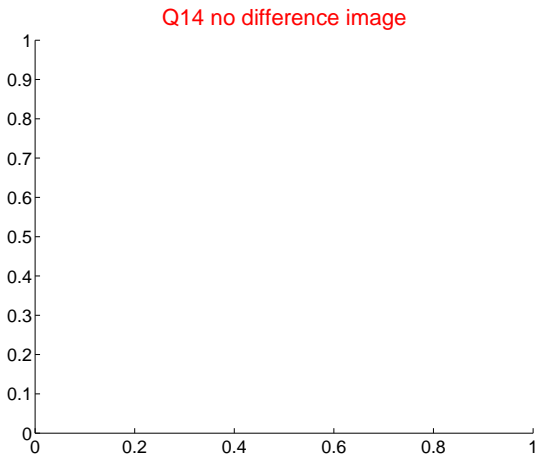
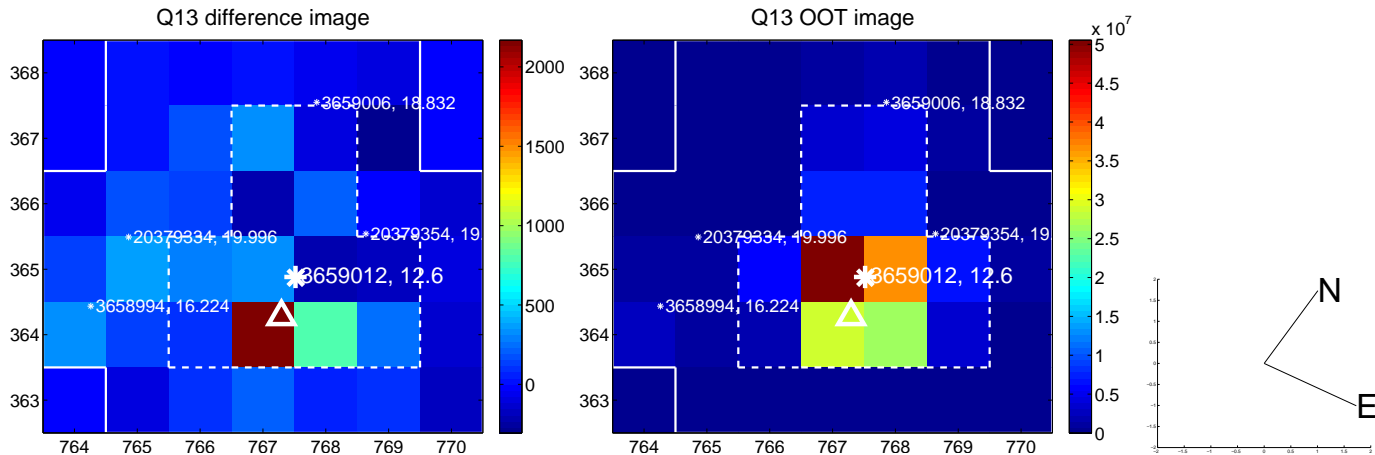
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



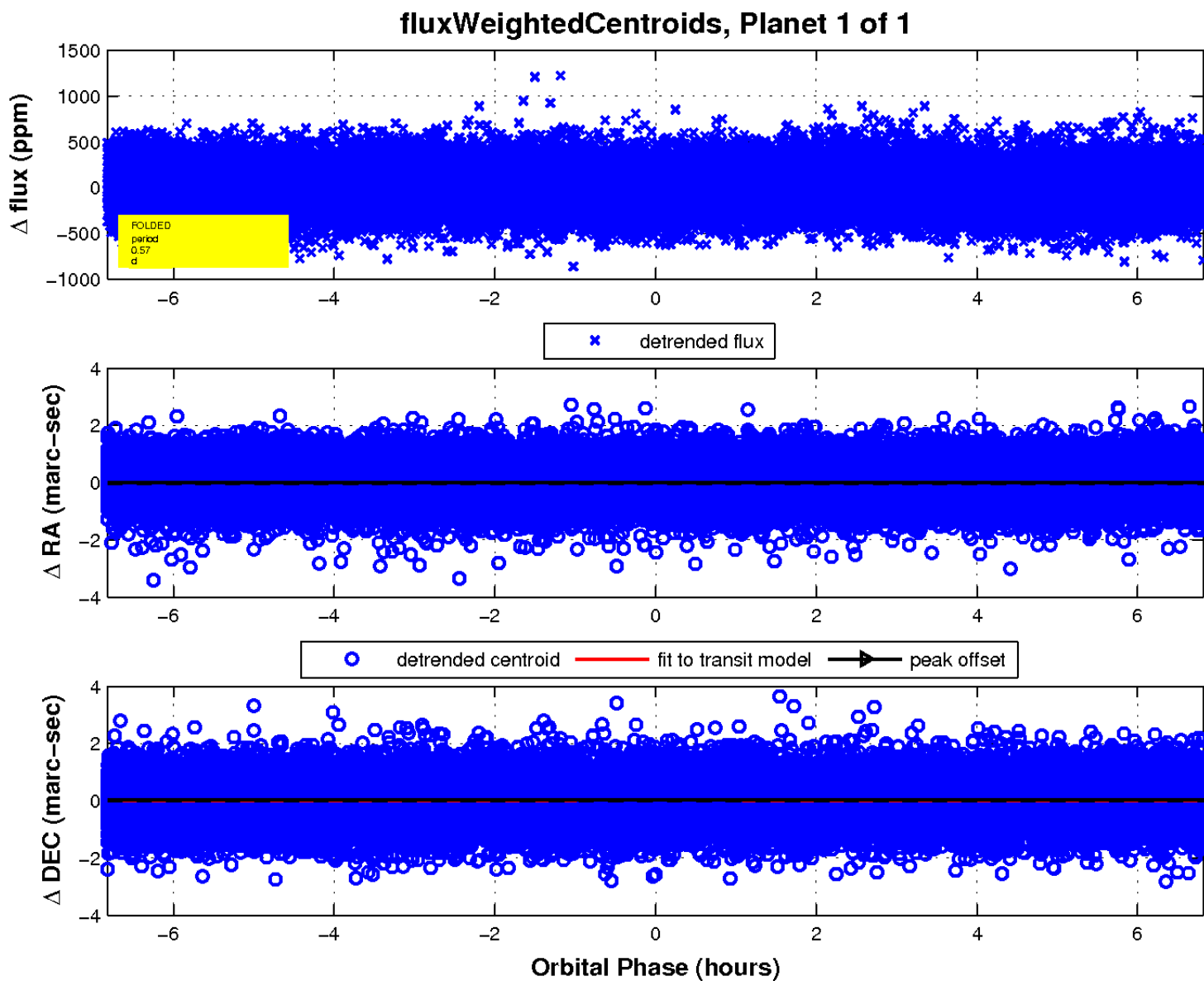
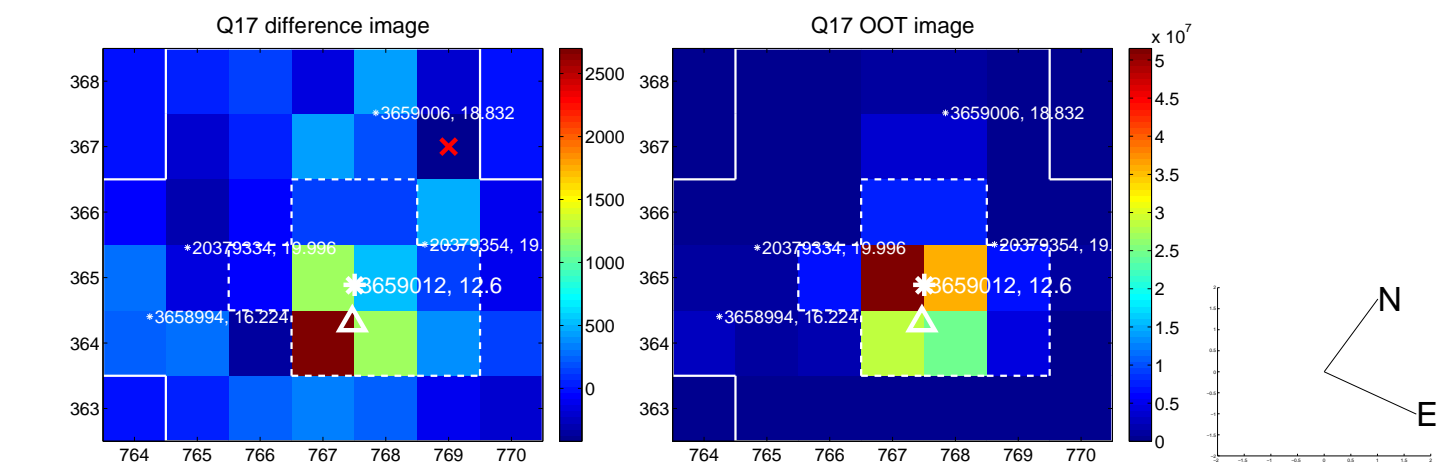
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

