

KIC 003869014

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})
003869014-01	OBS	1205.01	8.638483	139.944957	392.1	5.608	29.9	32.8	3.05	5684	6.62	959.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003869014-01	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 003869014-01

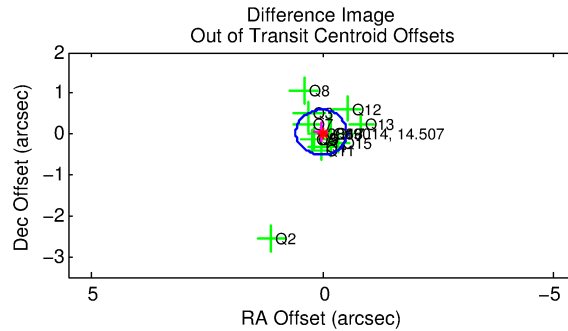
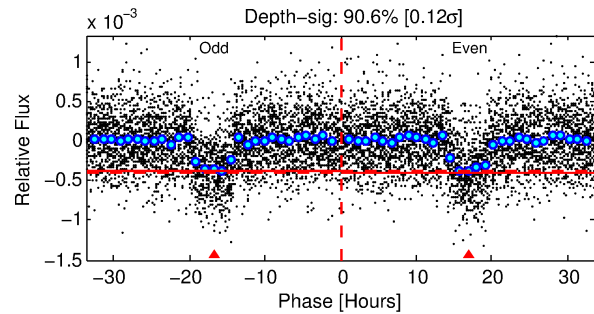
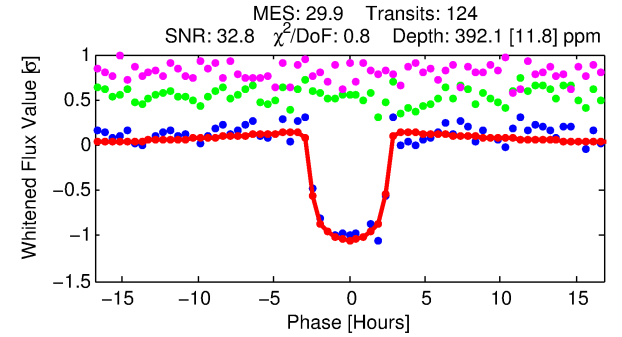
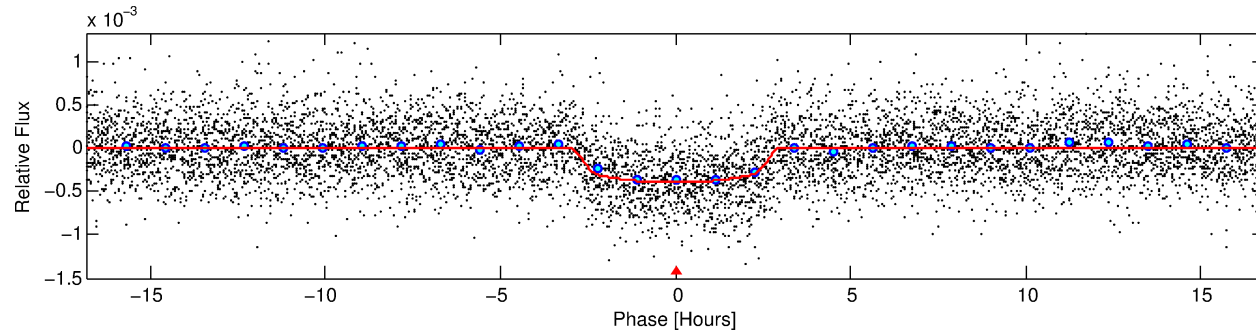
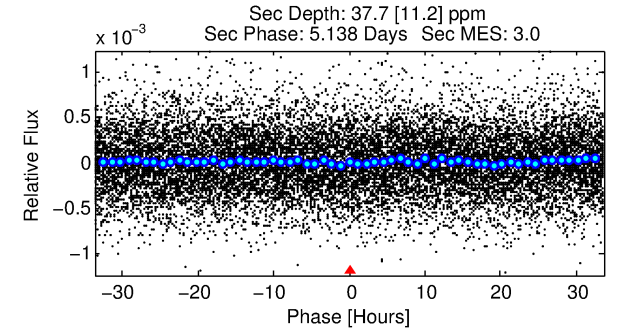
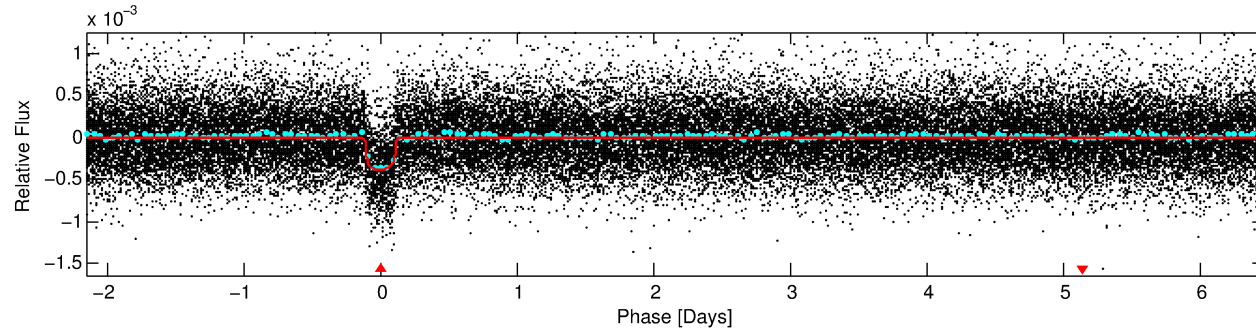
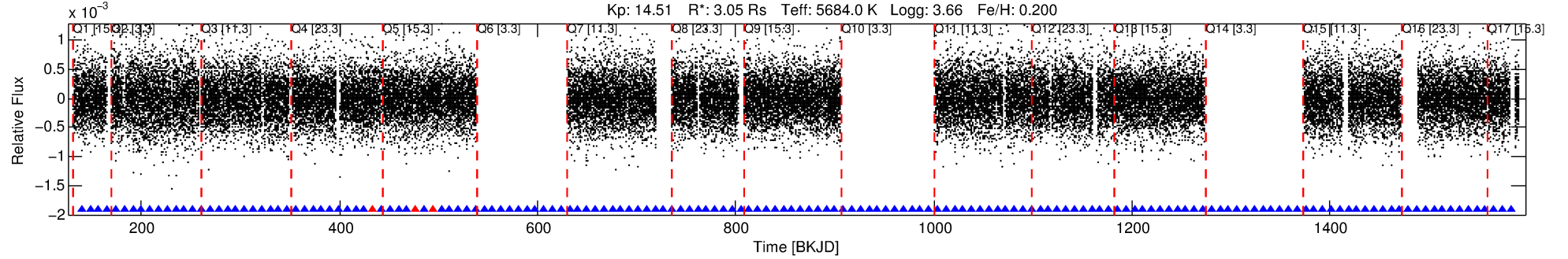
No Significant Match Found

DV One-Page Summary

KIC: 3869014 Candidate: 1 of 1 Period: 8.638 d

KOI: K01205.01 Corr: 0.984

Kp: 14.51 R*: 3.05 Rs Teff: 5684.0 K Logg: 3.66 Fe/H: 0.200



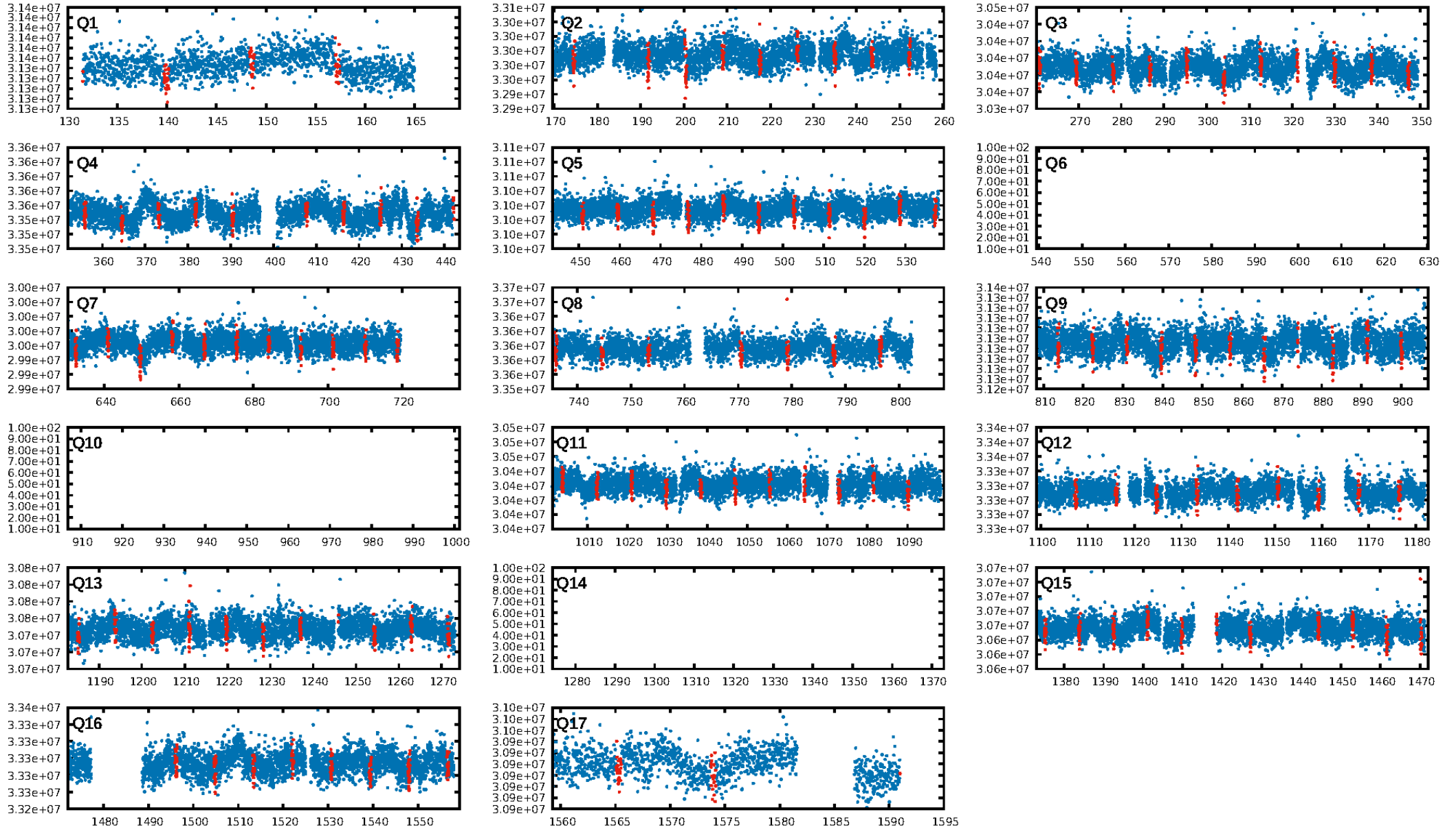
DV Fit Results:

Period = 8.63848 [0.00003] d
Epoch = 139.9450 [0.0028] BKJD
Rp/R* = 0.0199 [0.0040]
a/R* = 7.86 [6.62]
b = 0.77 [0.45]
Seff = 959.58 [503.01]
Teff = 1419 [186] K
Rp = 6.62 [2.75] Re
a = 0.0951 [0.0318] AU
Ag = 4.28 [3.08] [1.07σ]
Teffp = 3156 [394] K [3.99σ]

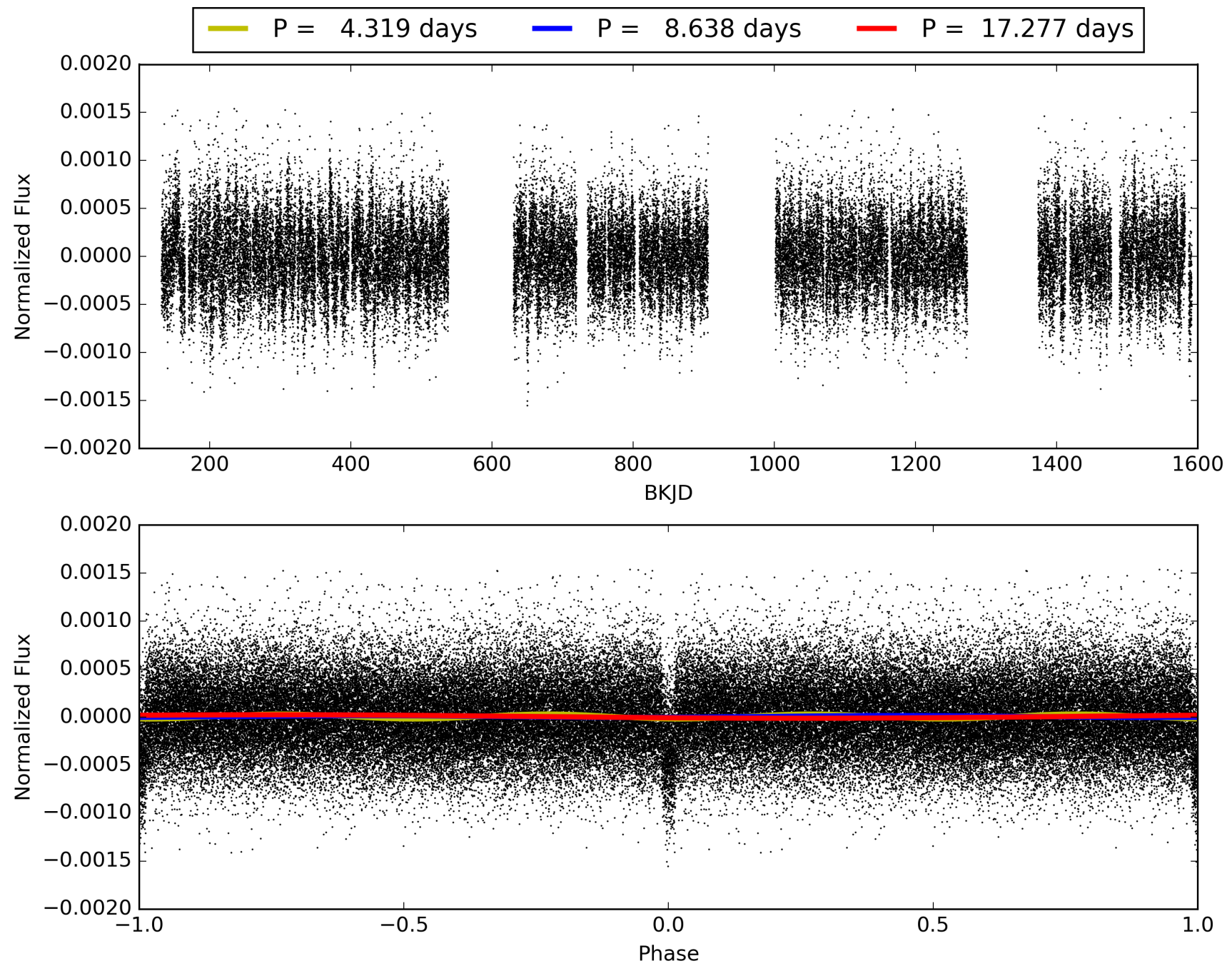
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.91e-196
RollingBand-fgt: 0.97 [116/119]
GhostDiagnostic-chr: 3.392
Centroid-sig: 86.6%
Centroid-so: 0.224 arcsec [0.55σ]
OotOffset-rm: 0.048 arcsec [0.26σ]
KicOffset-rm: 0.085 arcsec [0.38σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003869014-01, PDC Light Curves

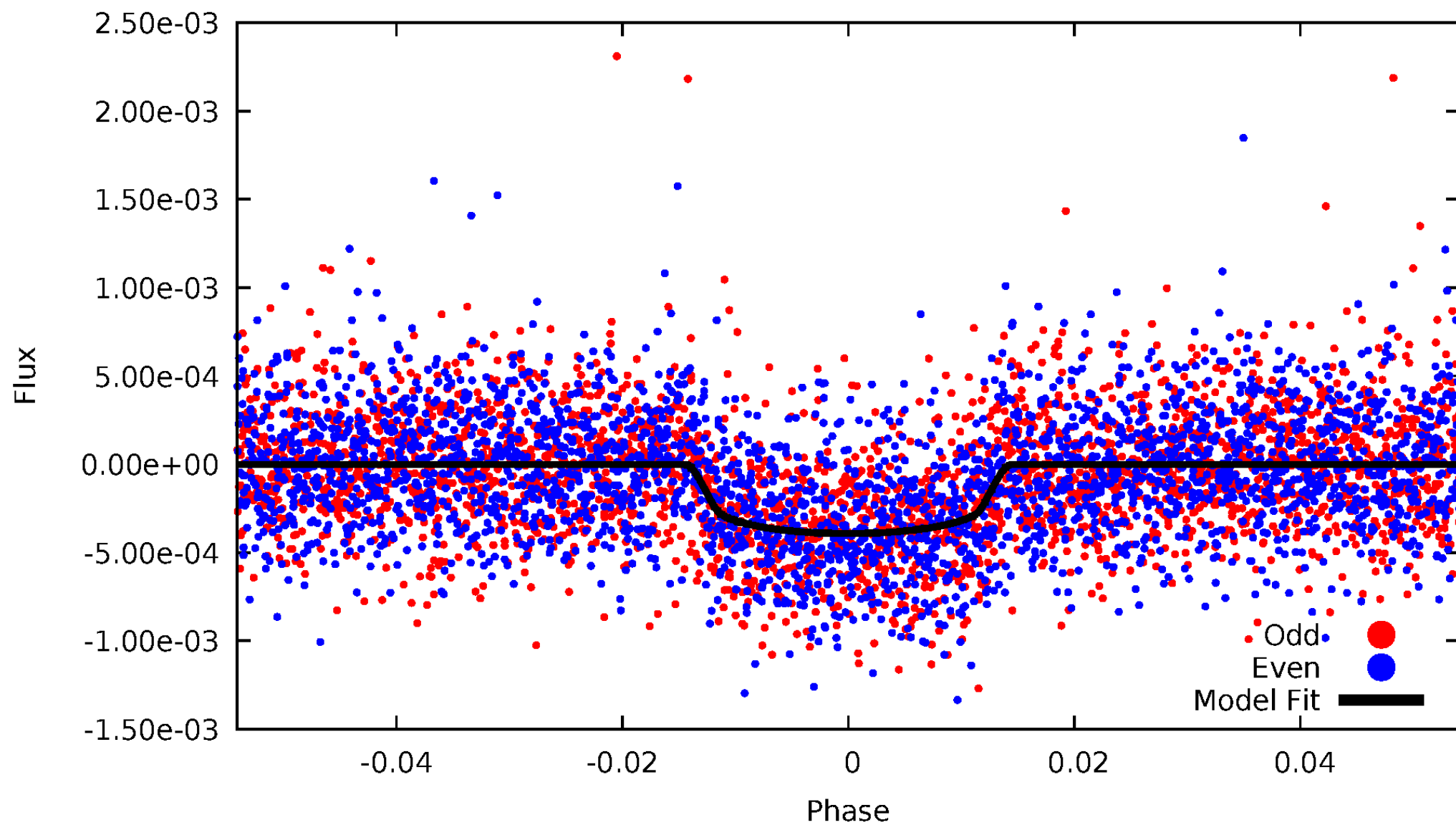


TCE 003869014-01



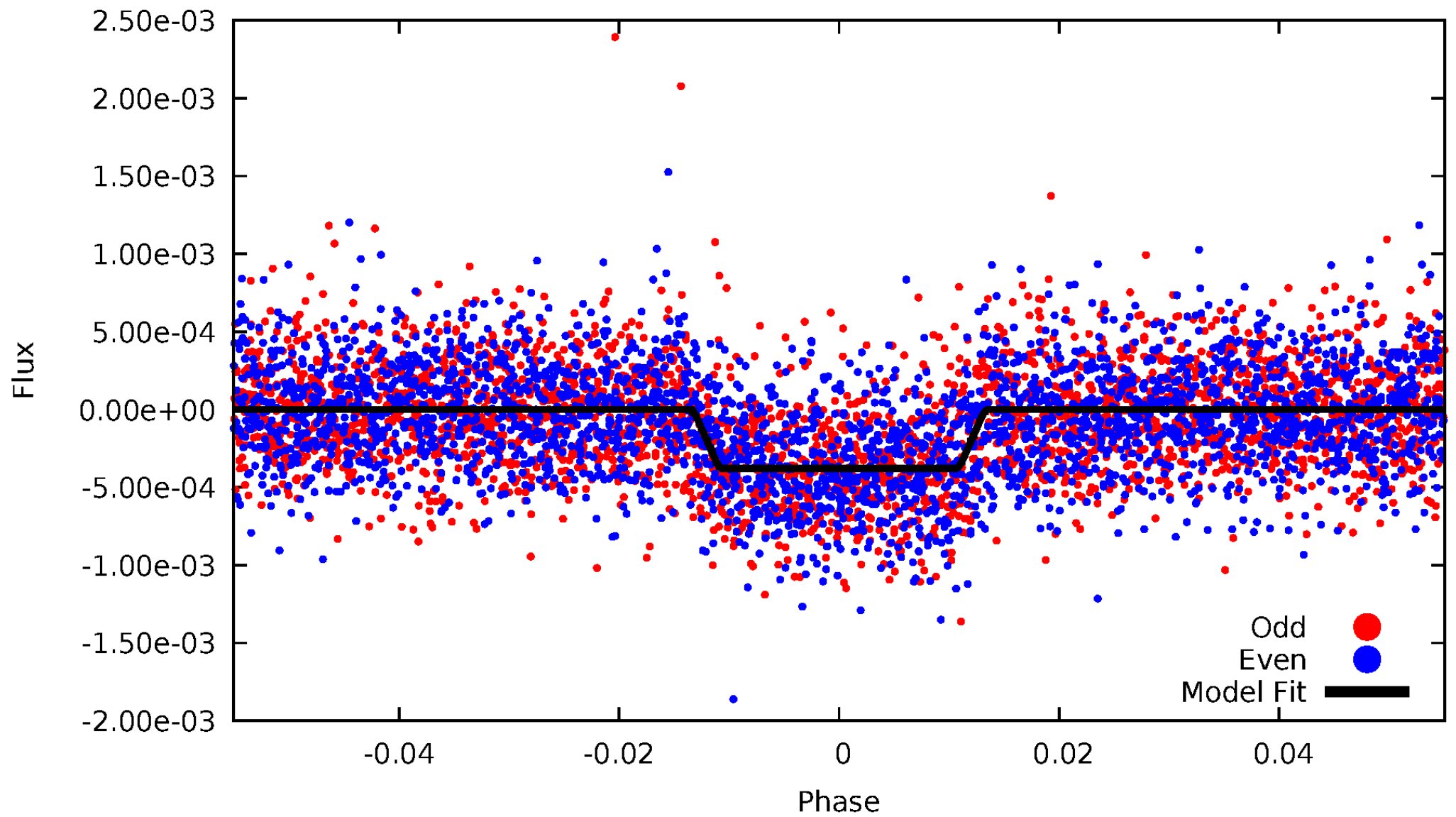
DV Odd/Even

TCE 003869014-01

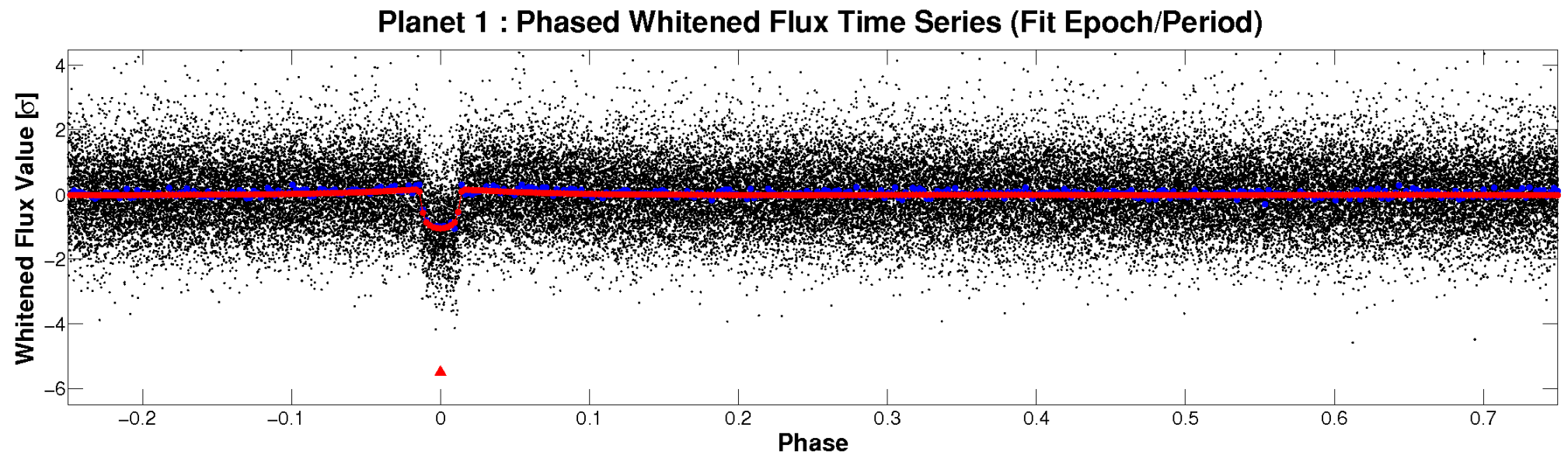
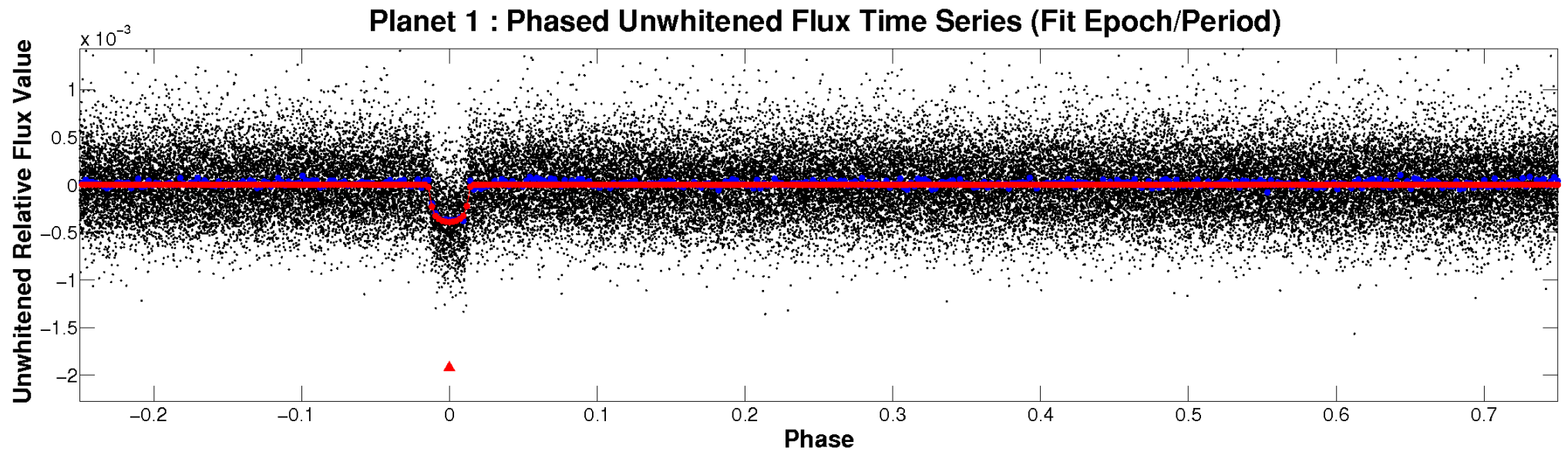


ALT Odd/Even

TCE 003869014-01

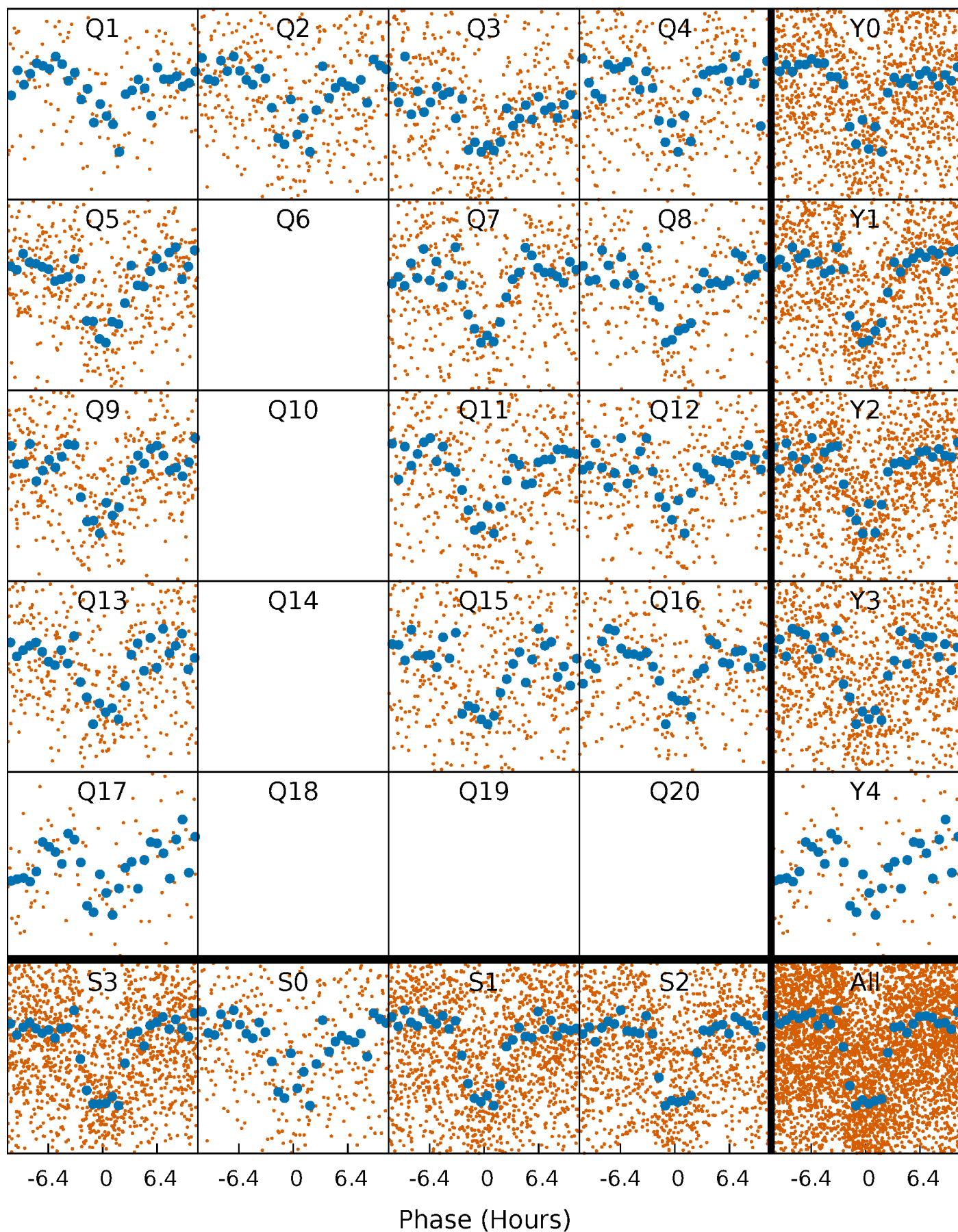


Non-Whitened Vs. Whitened Light Curve



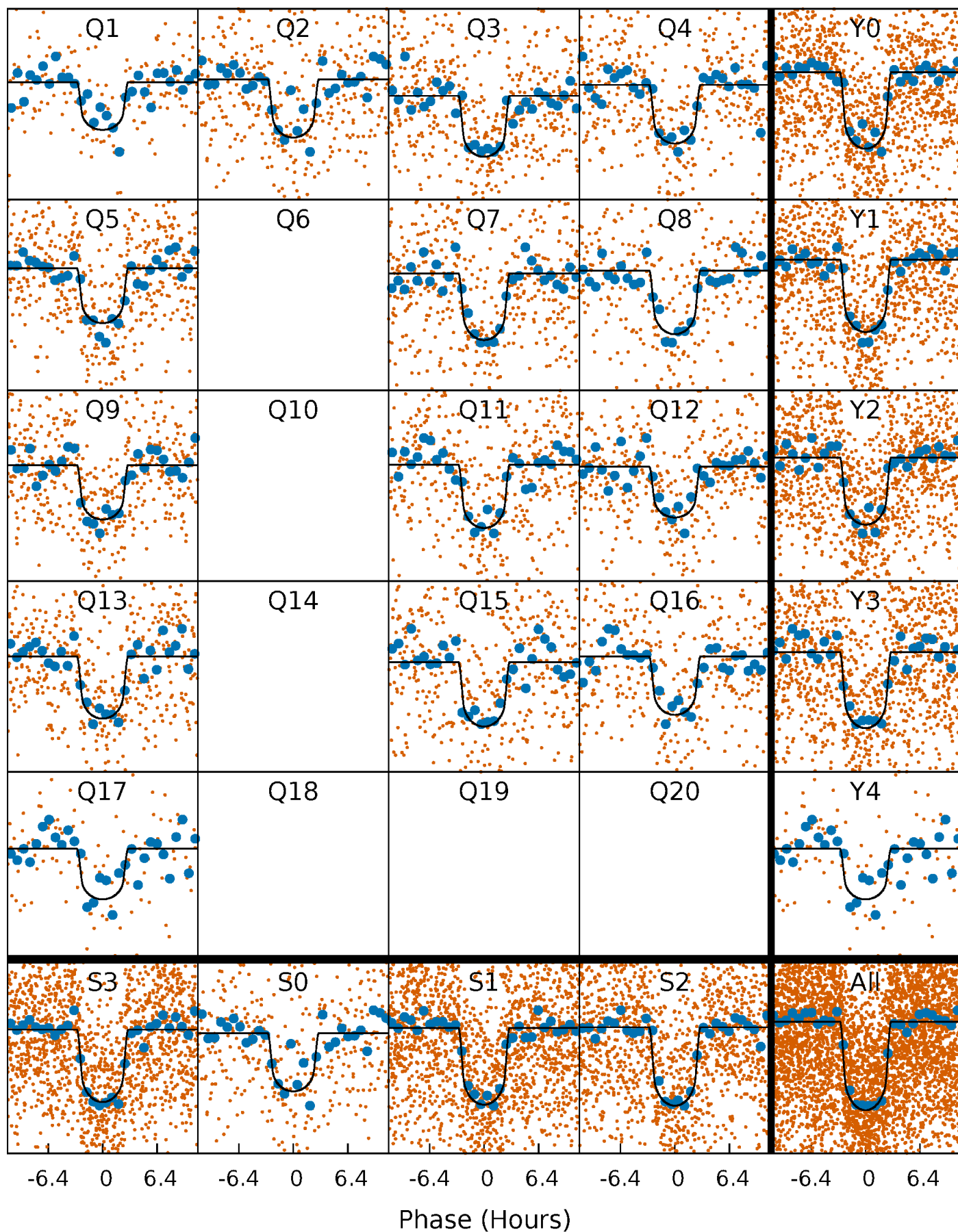
PDC Quarter-Phased Transit Curves

TCE 003869014-01 P= 8.638483 Days $T_0=139.944957$ (BKJD)



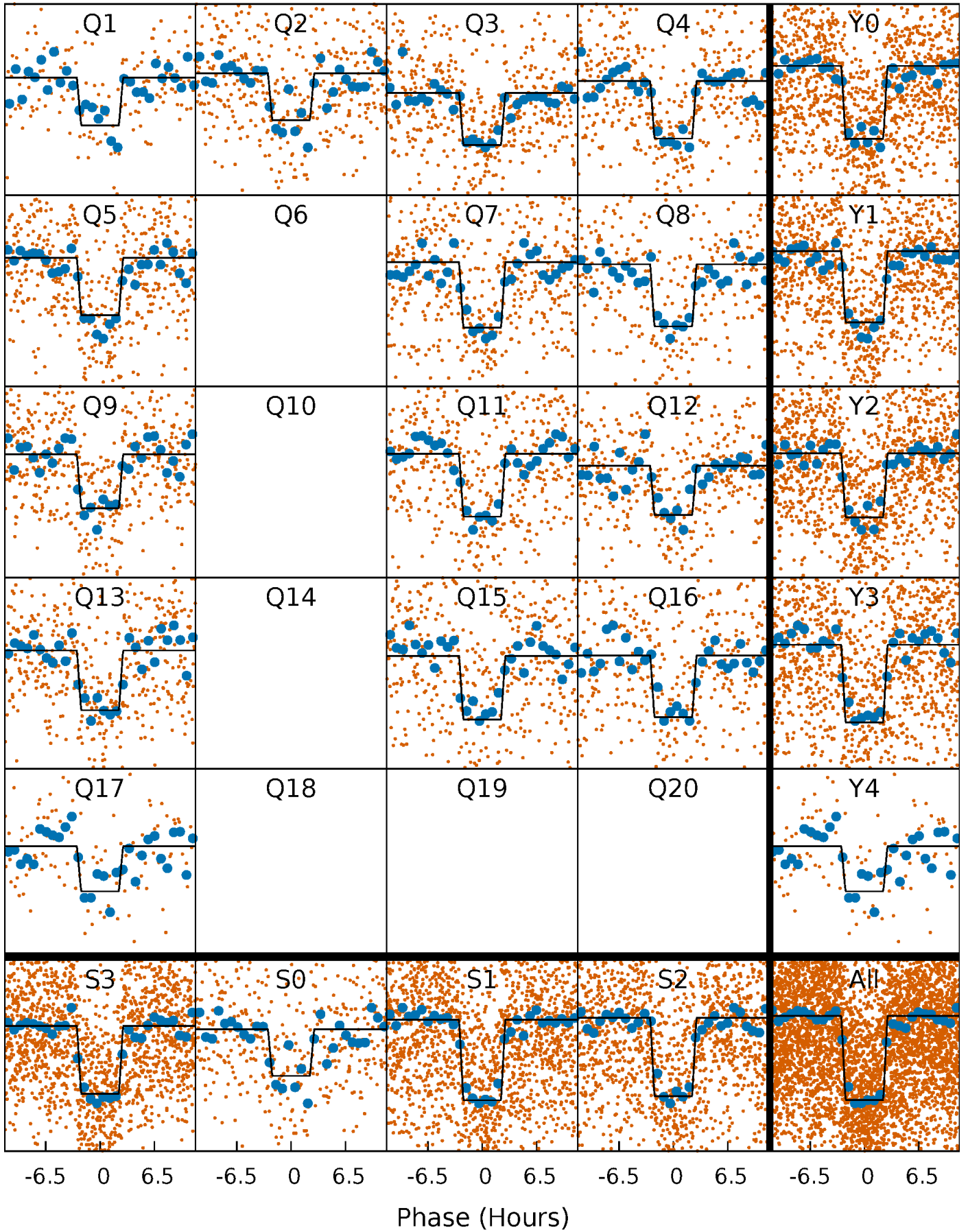
DV Quarter-Phased Transit Curves

TCE 003869014-01 P= 8.638483 Days $T_0=139.944957$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

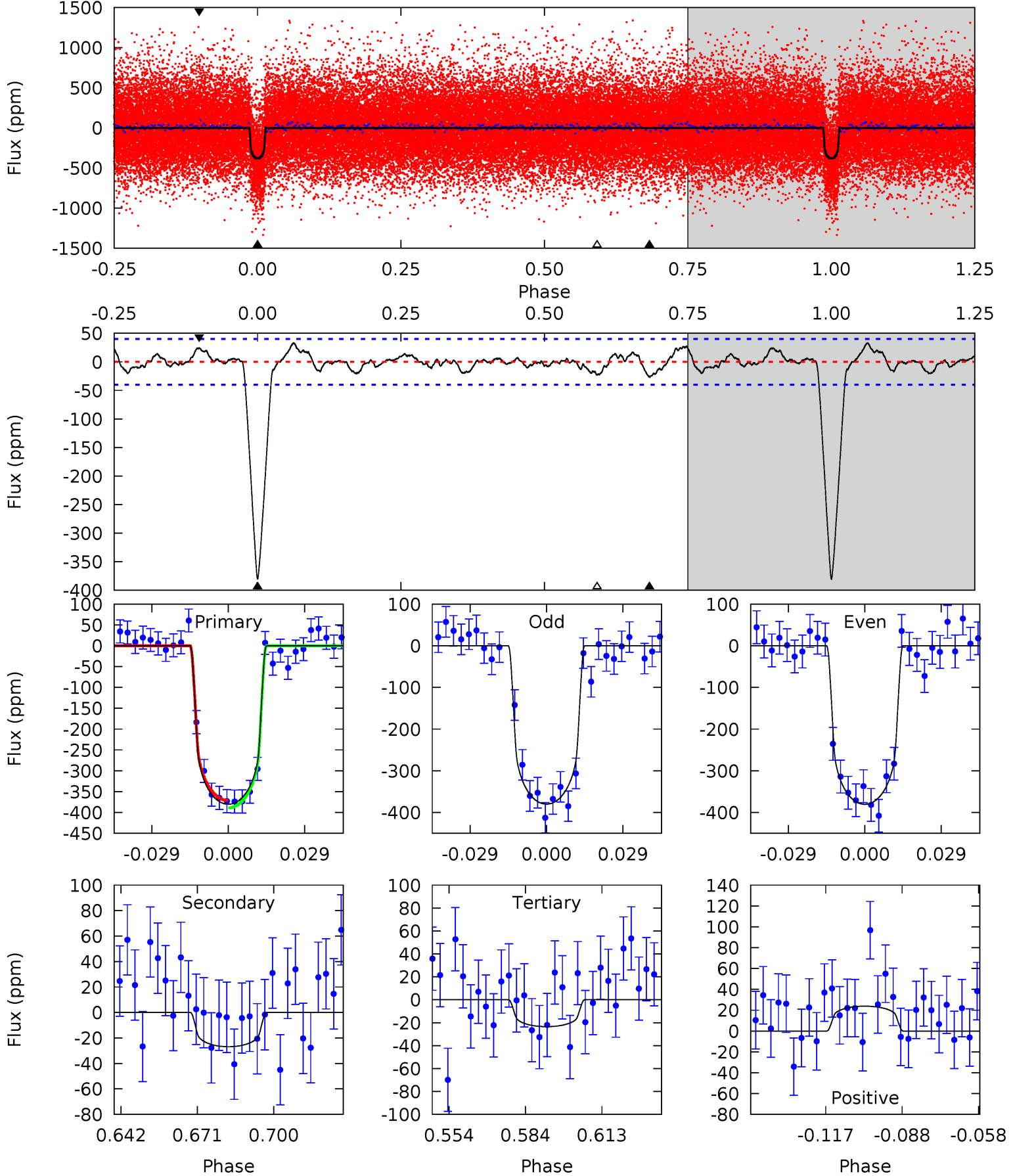
TCE 003869014-01 P= 8.638451 Days $T_0=139.948783$ (BKJD)



DV Model-Shift Uniqueness Test

003869014-01, P = 8.638483 Days, E = 131.306474 Days

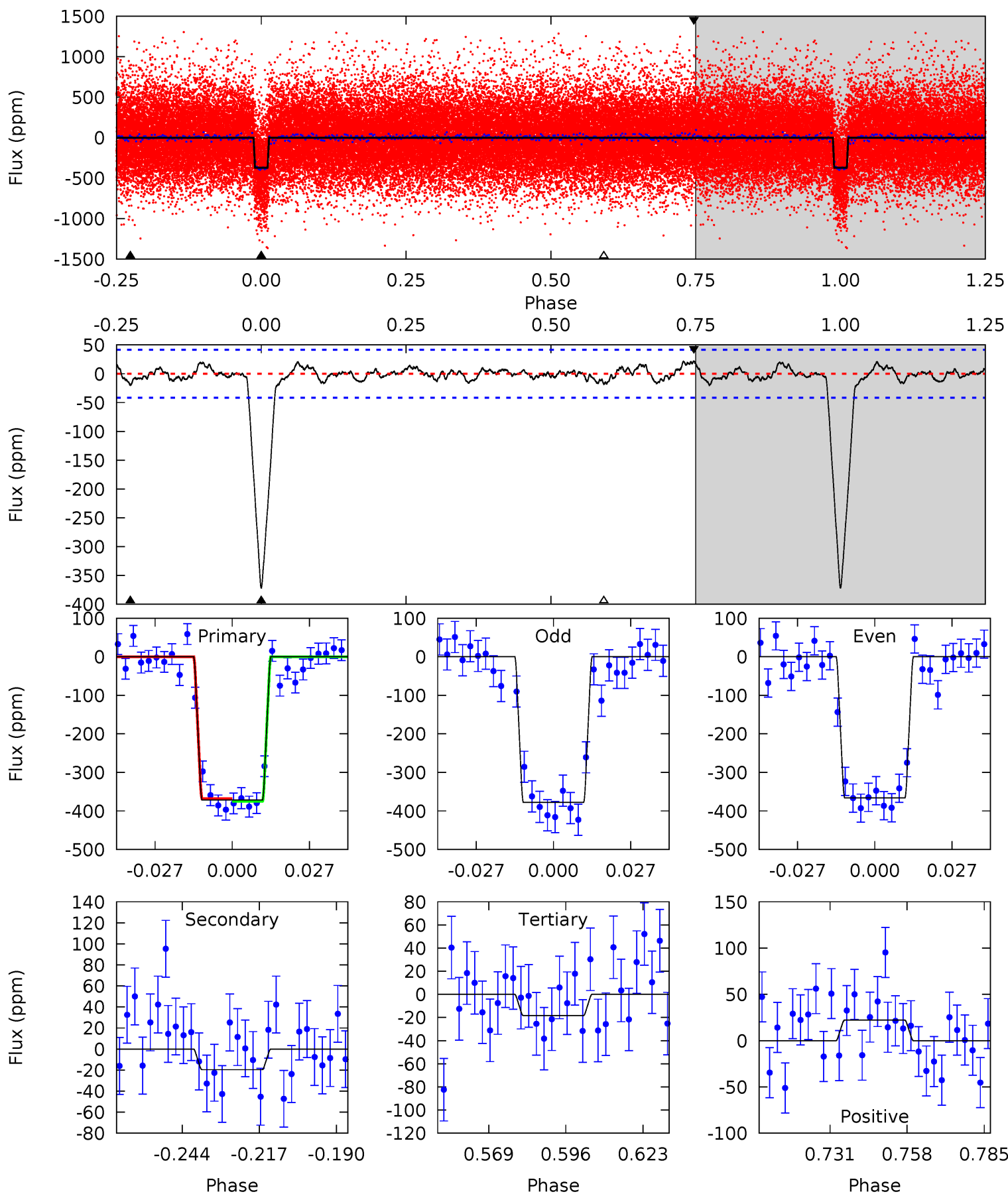
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.5	3.22	2.81	2.85	4.82	2.18	1.27	42.7	42.7	0.41	0.37	0.03	0.96	0.08	1.07



Alt Model-Shift Uniqueness Test

003869014-01, P = 8.638451 Days, E = 131.310332 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	2.29	2.13	2.57	4.83	2.21	0.97	41.1	40.6	0.16	-0.28	0.70	1.03	0.06	0.39



Stellar Parameters For KIC 003869014

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5684^{+85}_{-76}	$3.657^{+0.300}_{-0.100}$	$0.200^{+0.150}_{-0.150}$	$3.046^{+0.598}_{-1.111}$	$1.536^{+0.146}_{-0.340}$	$0.077^{+0.172}_{-0.025}$
	+1%/-1%	+8%/-3%	+75%/-75%	+20%/-36%	+10%/-22%	+225%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003869014-01 / KOI 1205.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 8	$6.16^{+1.66}_{-1.52}$	1952^{+108}_{-175}	3353^{+311}_{-273}	$3.362^{+2.913}_{-1.465}$
Alt.	-20 ± 9	$6.02^{+1.70}_{-1.58}$	1954^{+104}_{-188}	3213^{+355}_{-356}	$2.600^{+2.508}_{-1.371}$

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 $A_{\text{obs}} \gg 1.0$

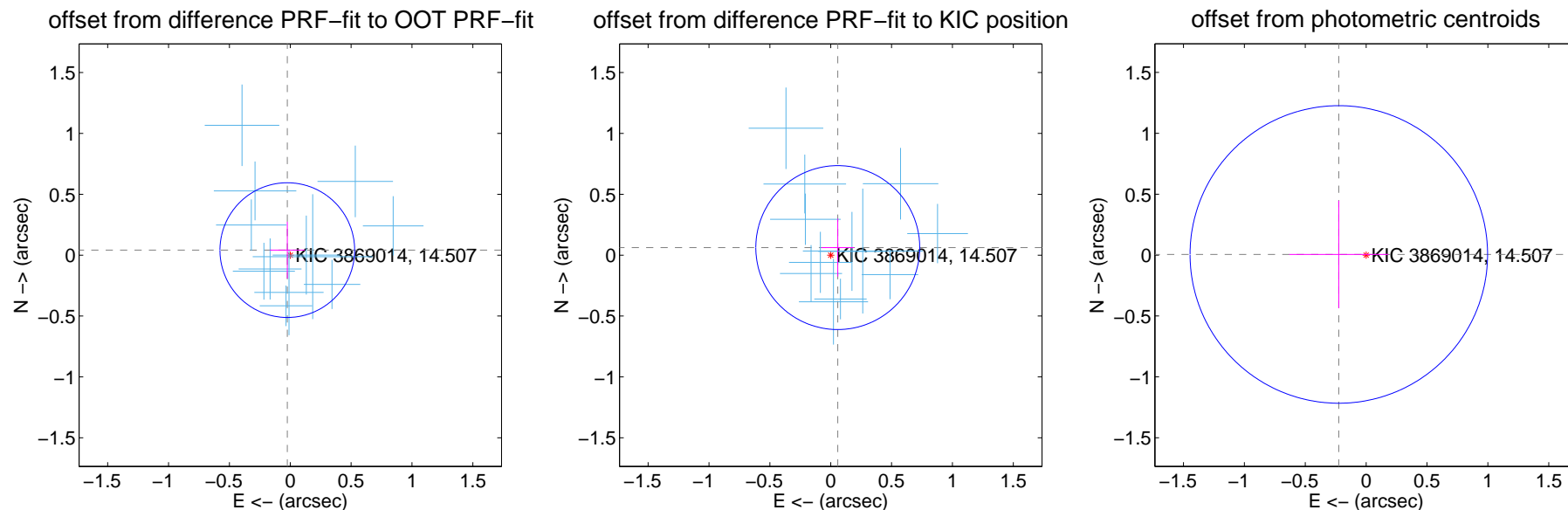
DV Centroid Data

Supplemental centroid analysis for 003869014-01. Kepler magnitude: 14.51. Transit SNR 32.79

There are 13 quarters with good PRF difference image offsets

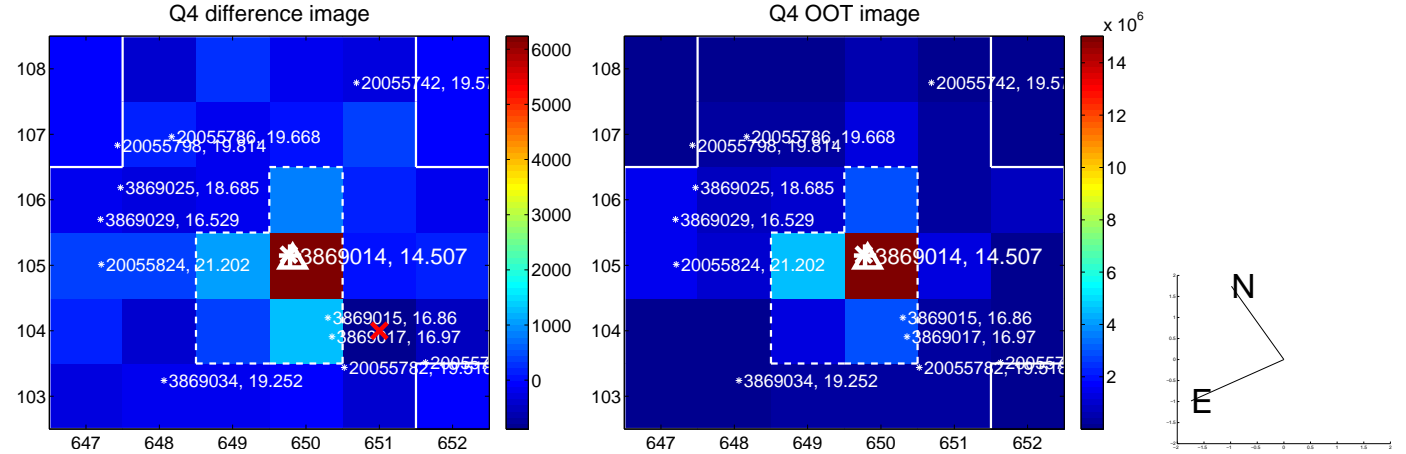
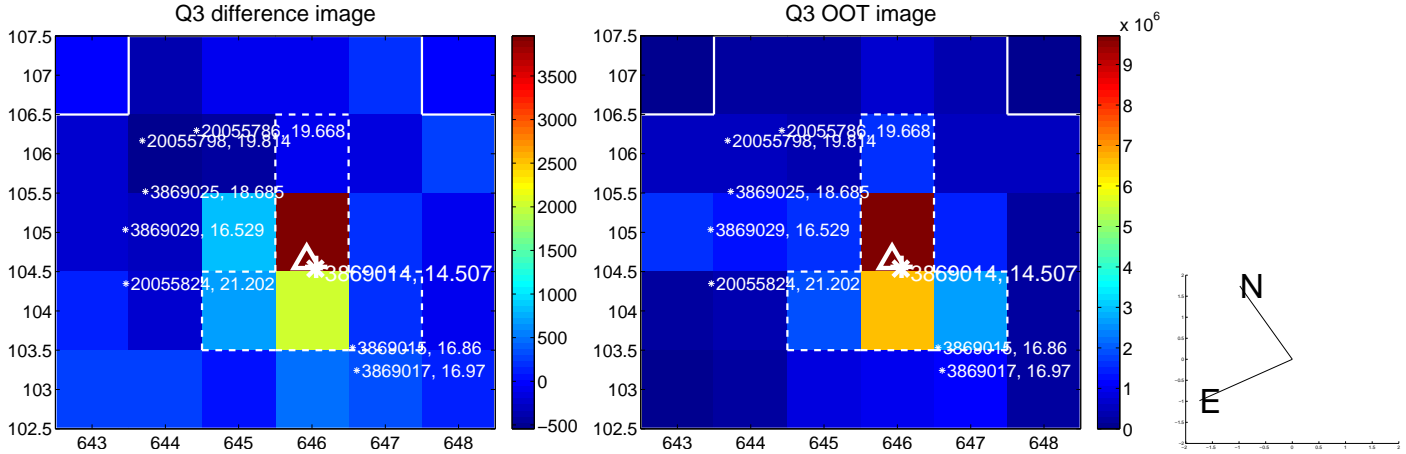
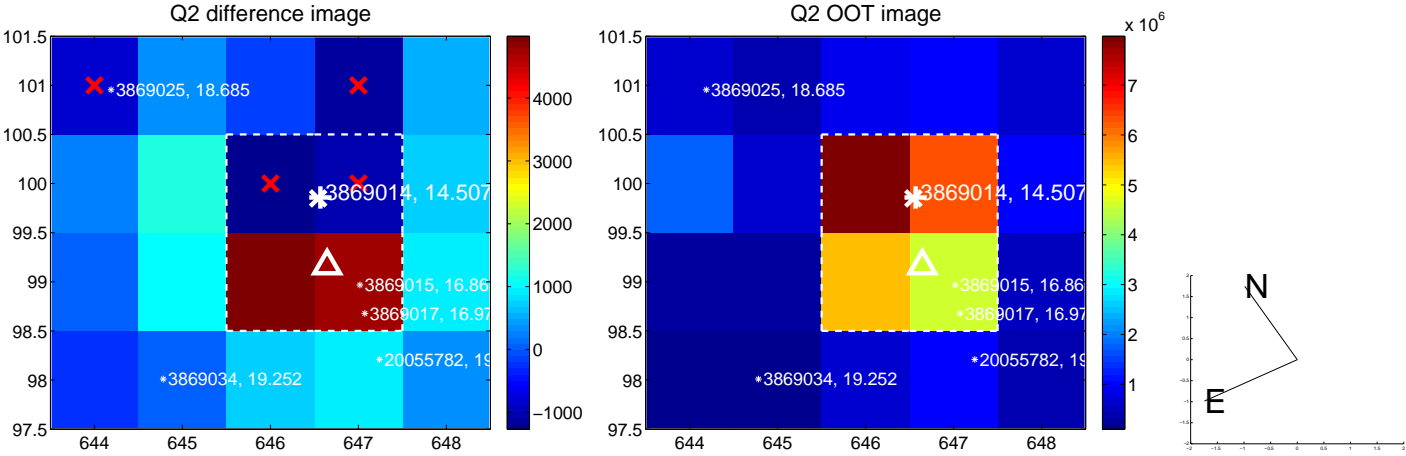
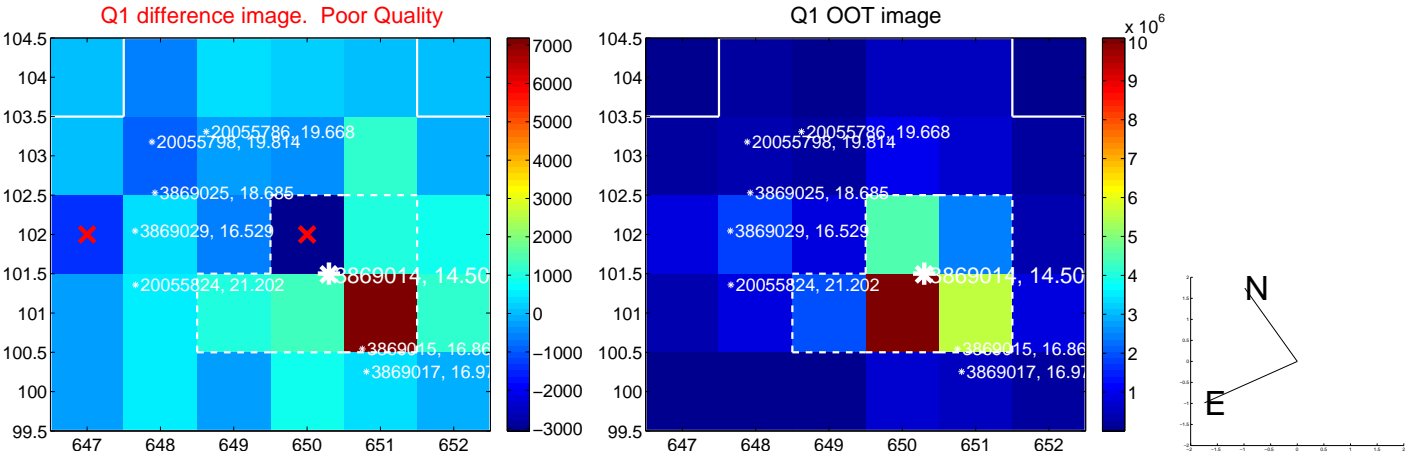
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.184	0.26	0.024 ± 0.143	0.041 ± 0.233
PRF-fit source offset from KIC position	0.085 ± 0.224	0.38	-0.058 ± 0.134	0.062 ± 0.238
photometric centroid source offset	0.22 ± 0.41	0.55	0.22 ± 0.41	0.01 ± 0.44

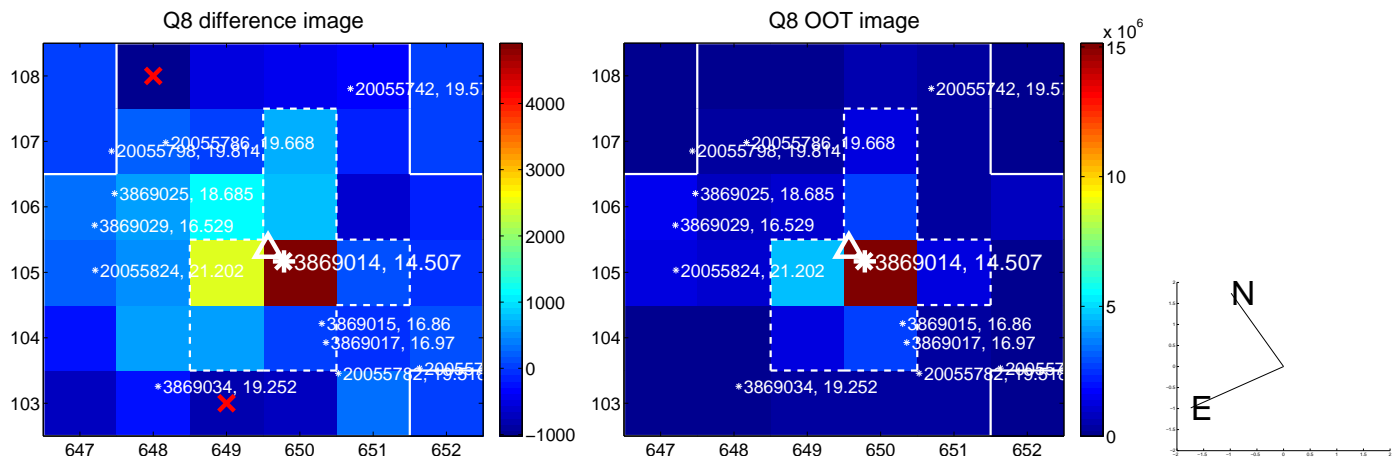
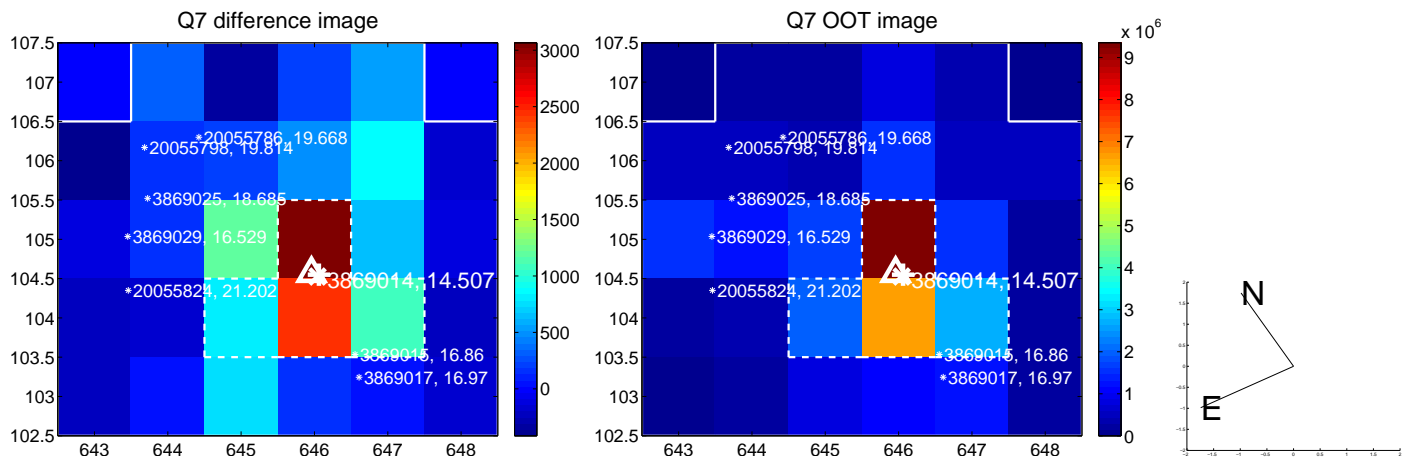
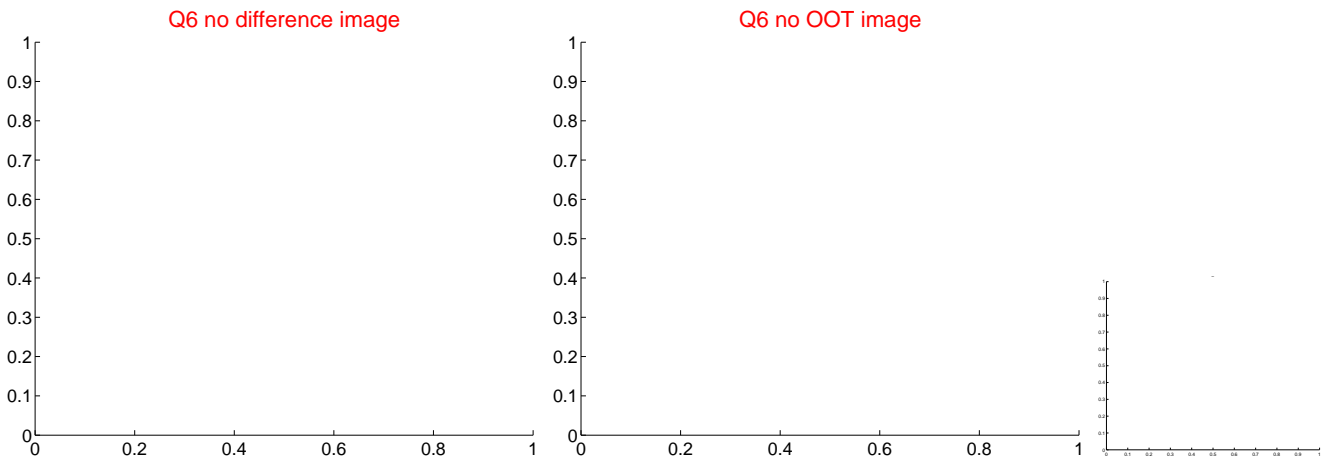
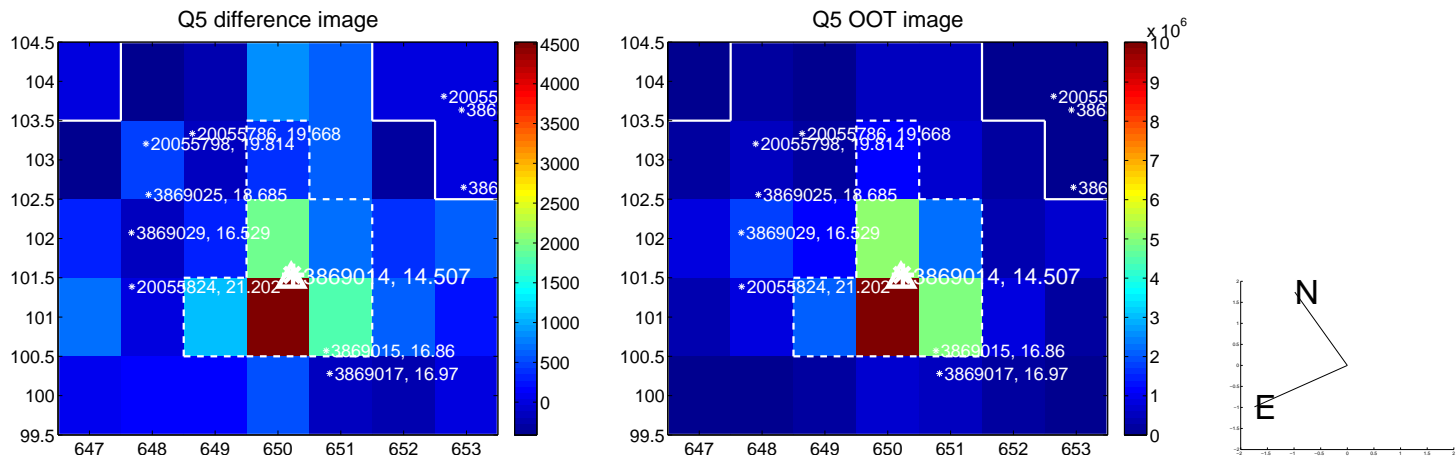


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

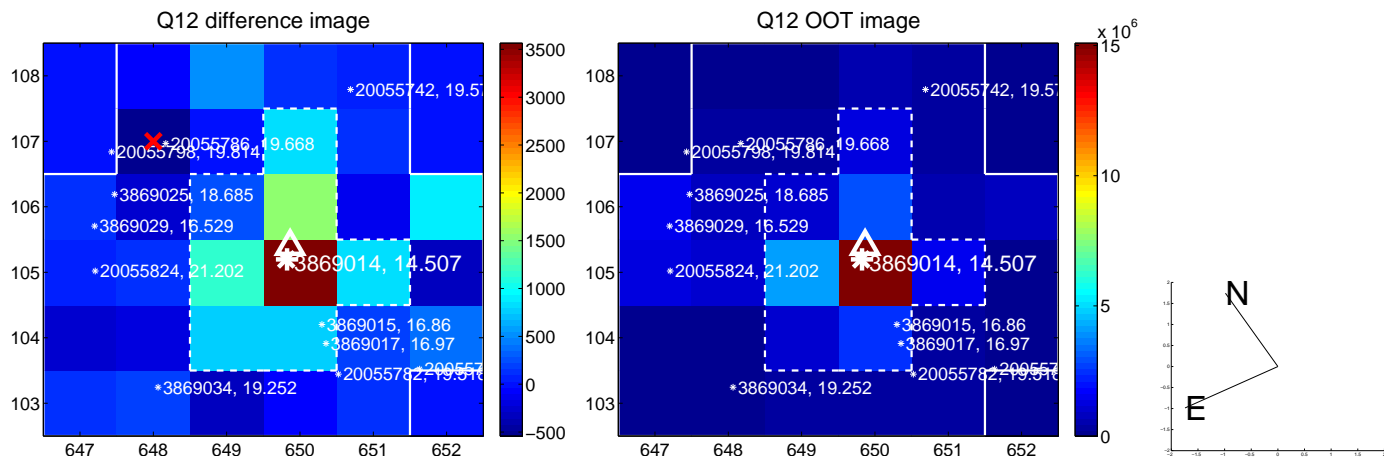
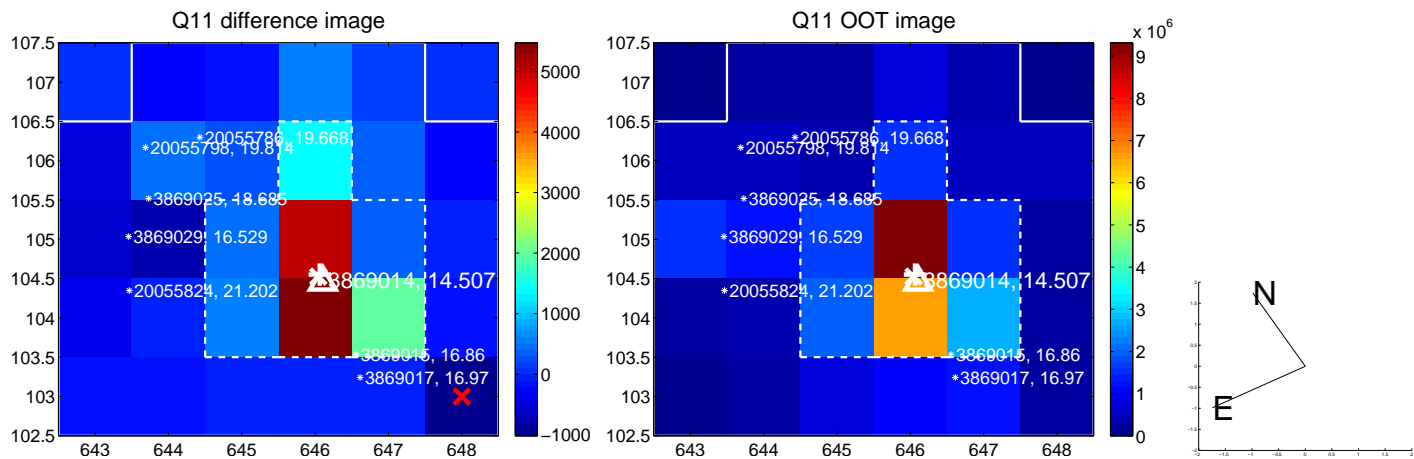
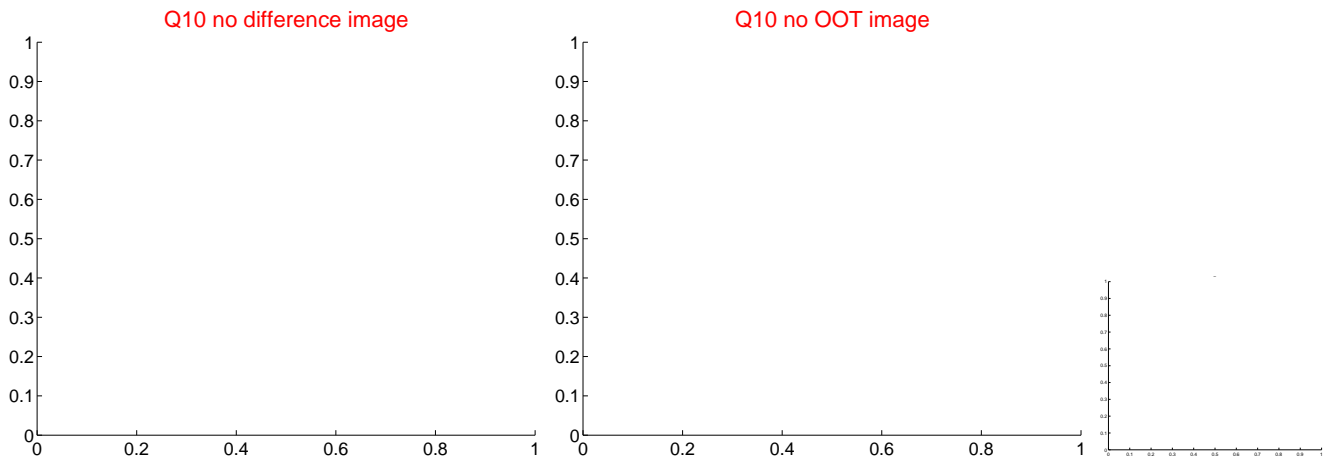
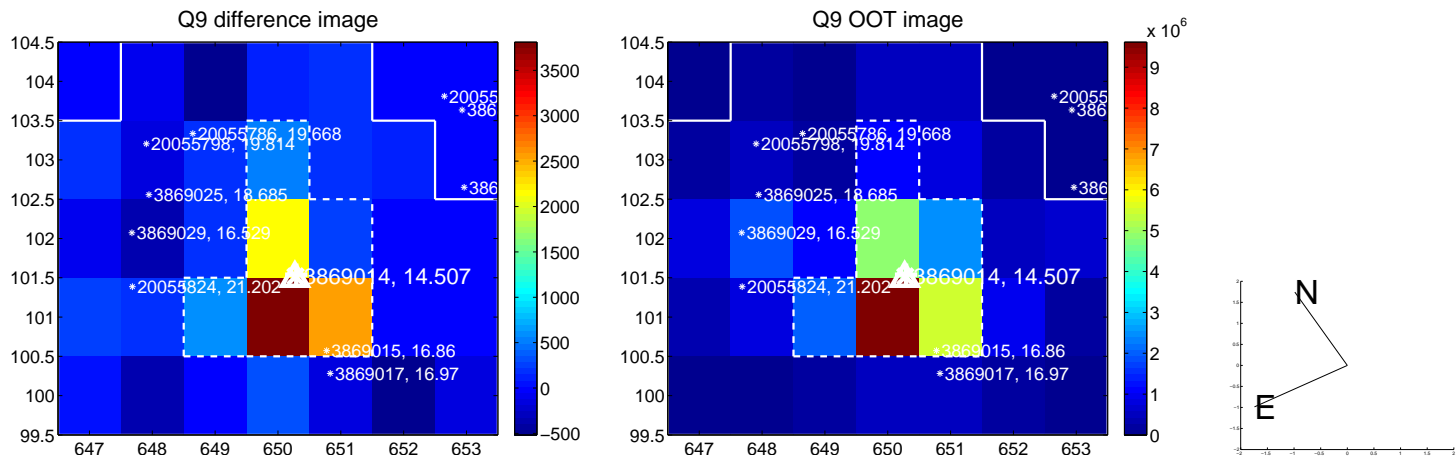
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



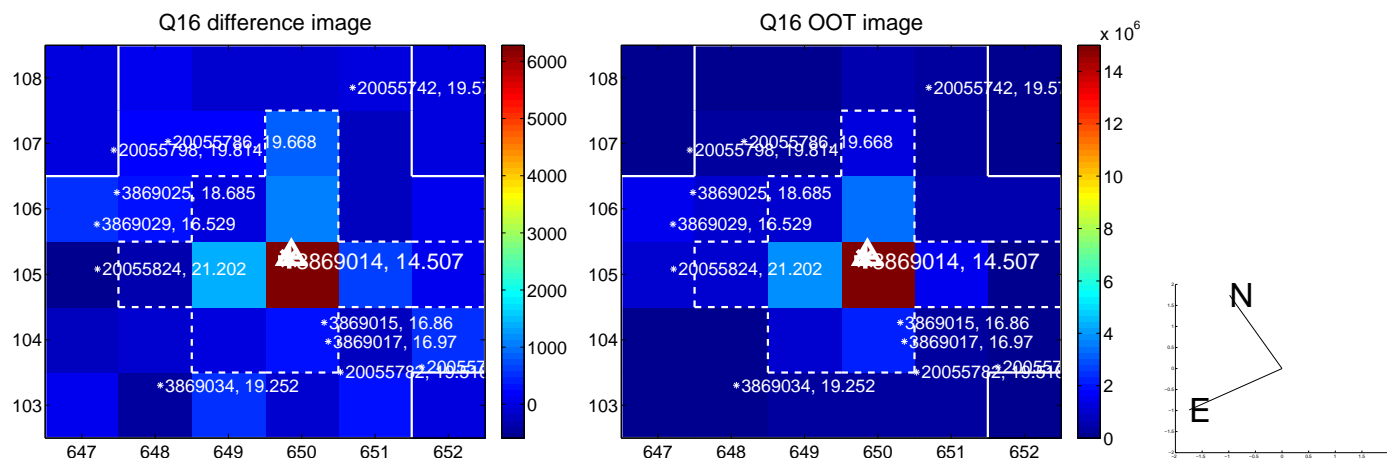
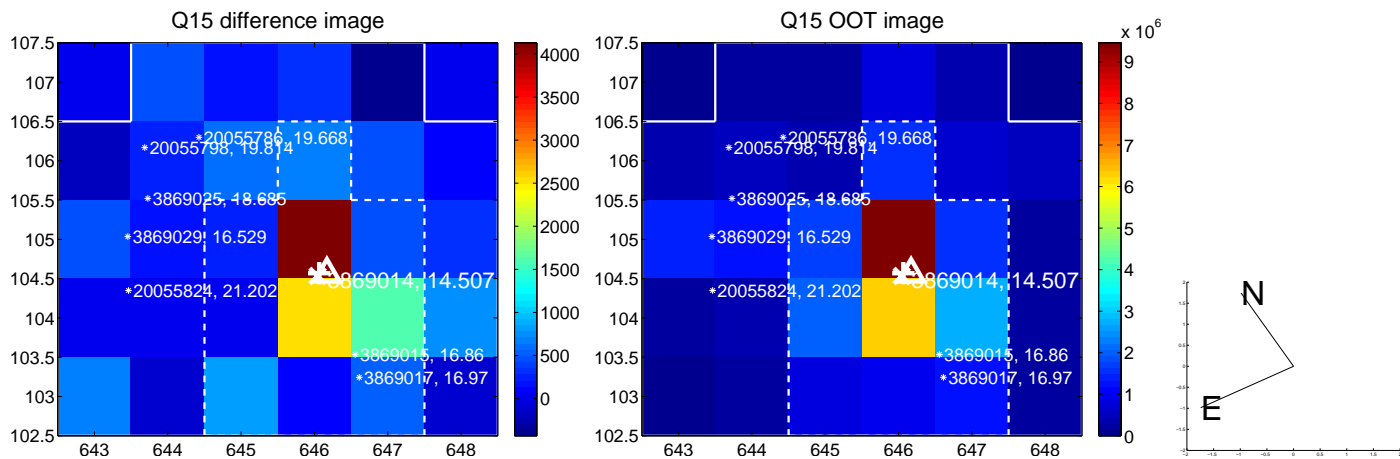
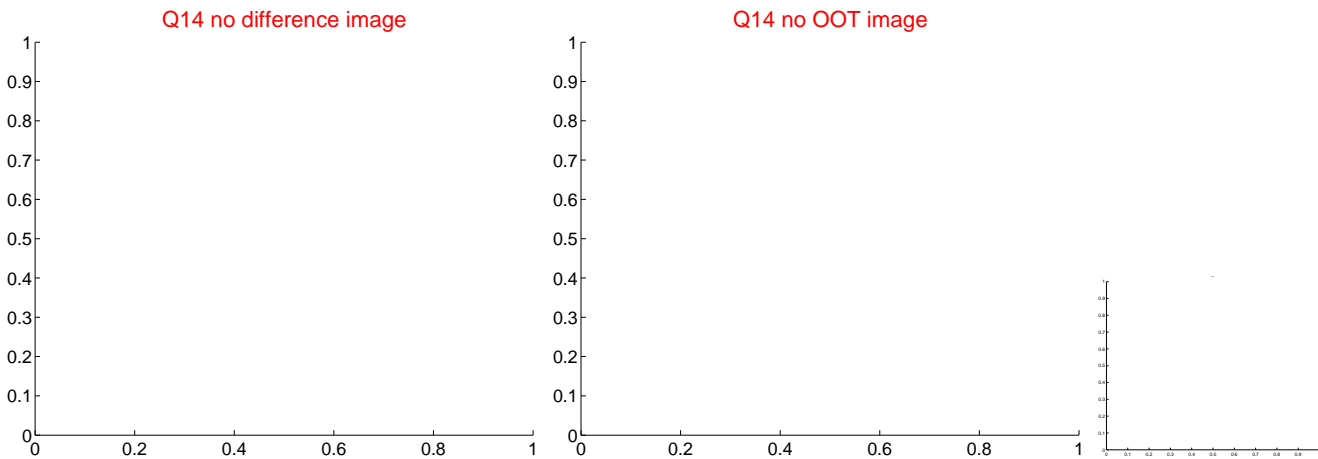
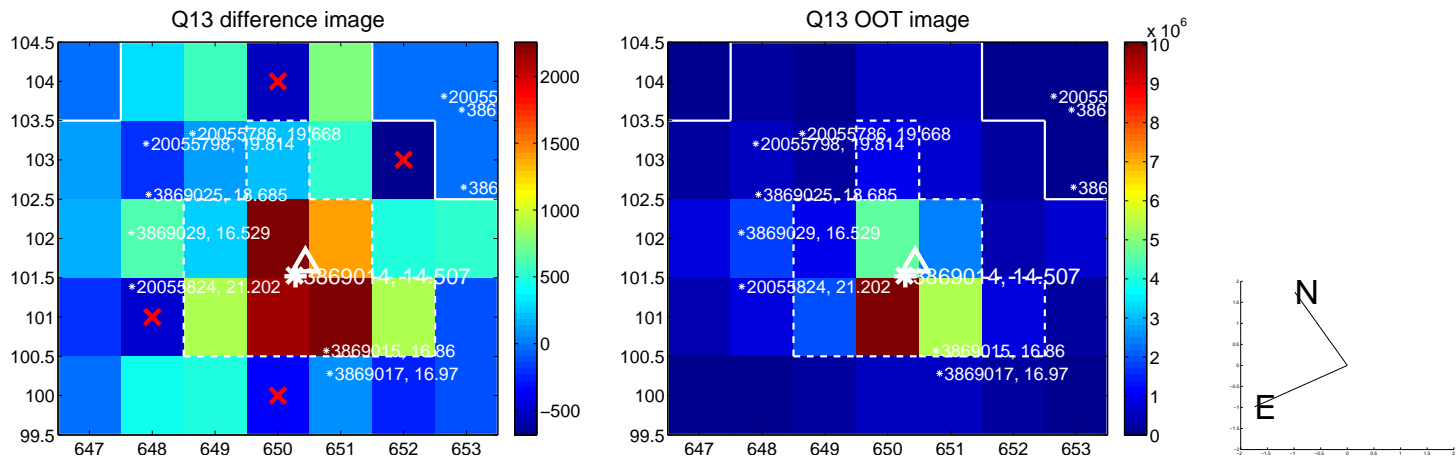
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



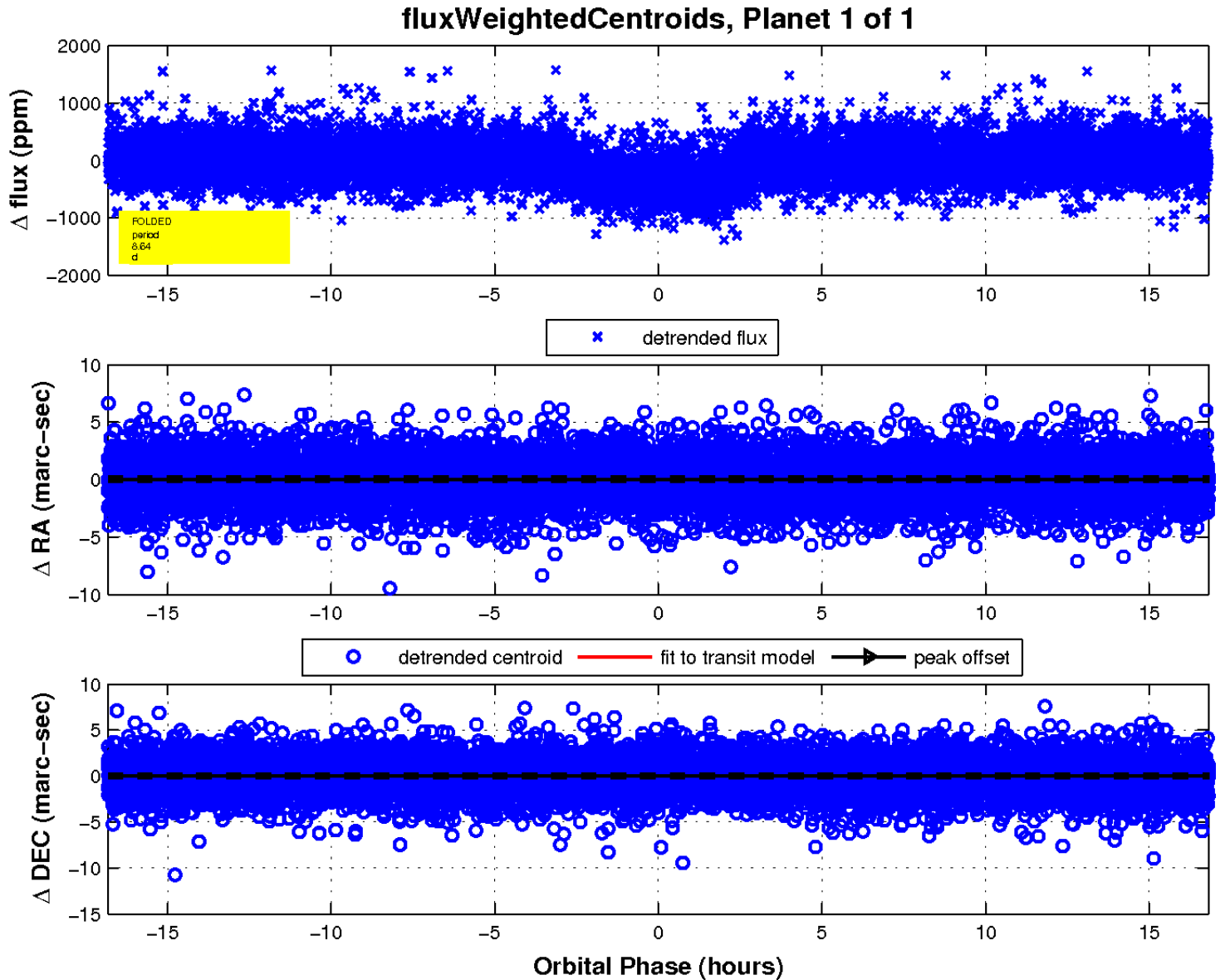
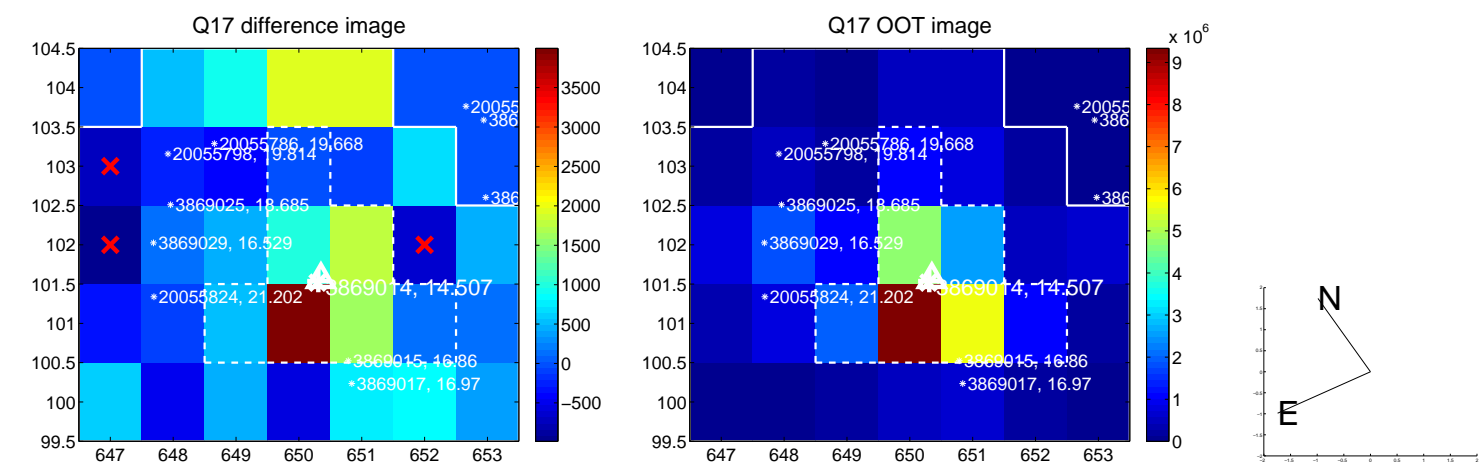
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UKIRT Image

Declination

