

KIC 007772914

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})
007772914-01	OBS	3339.01	23.133432	154.454046	461.5	3.559	19.6	20.2	0.93	5712	2.52	39.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007772914-01	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.

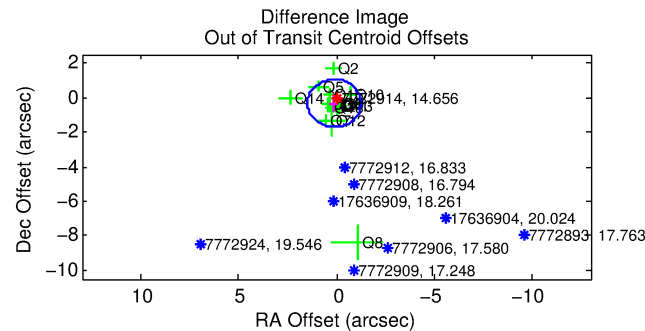
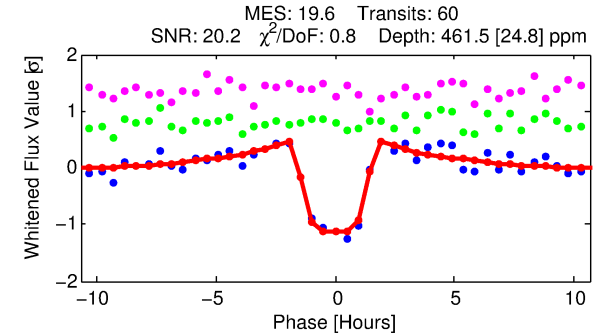
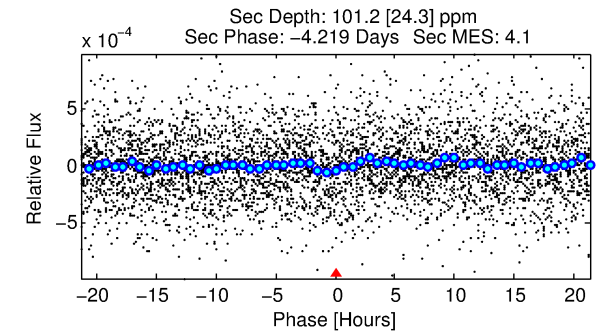
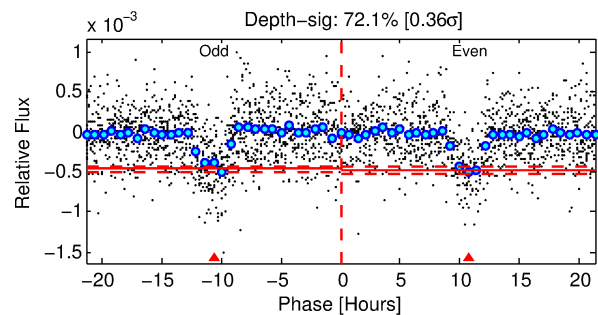
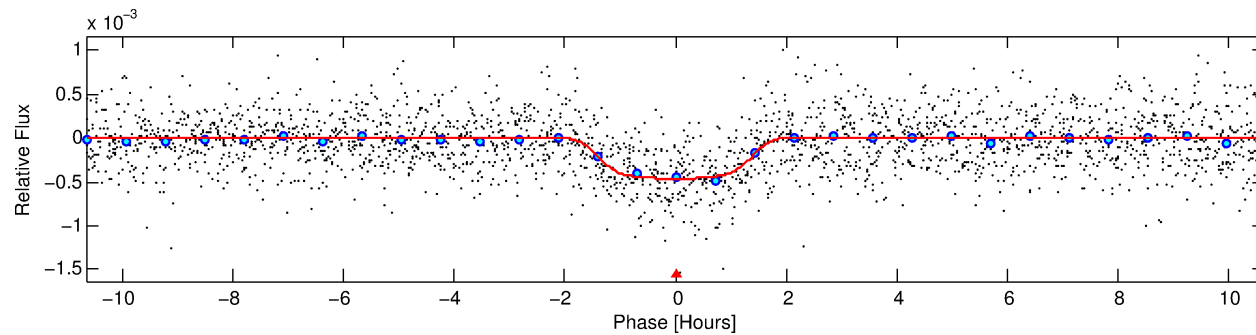
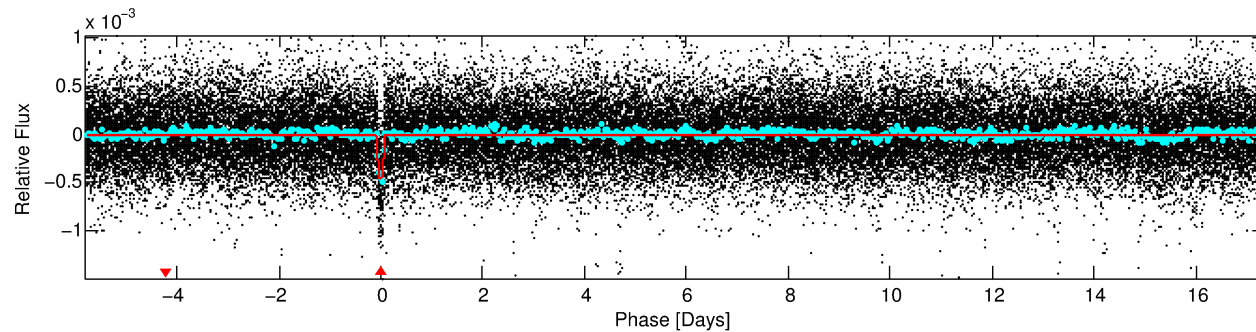
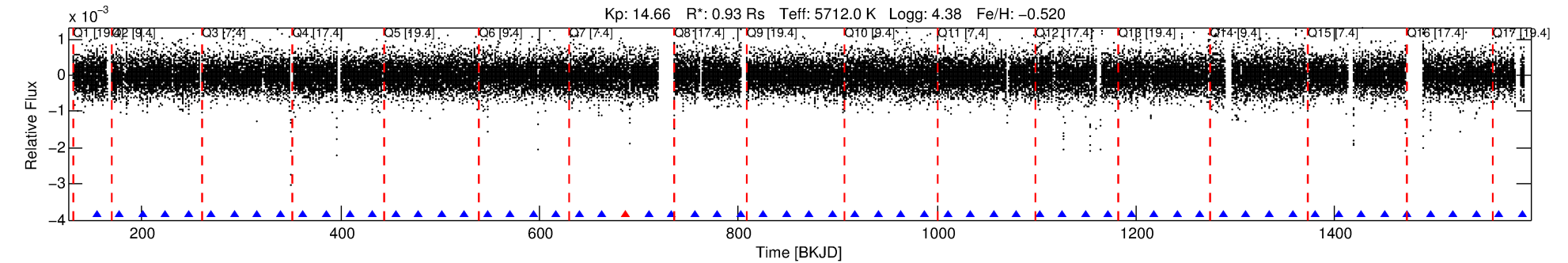
Ephemeris Match Information For 007772914-01

No Significant Match Found

DV One-Page Summary

KIC: 7772914 Candidate: 1 of 1 Period: 23.133 d

KOI: K03339.01 Corr: 0.932



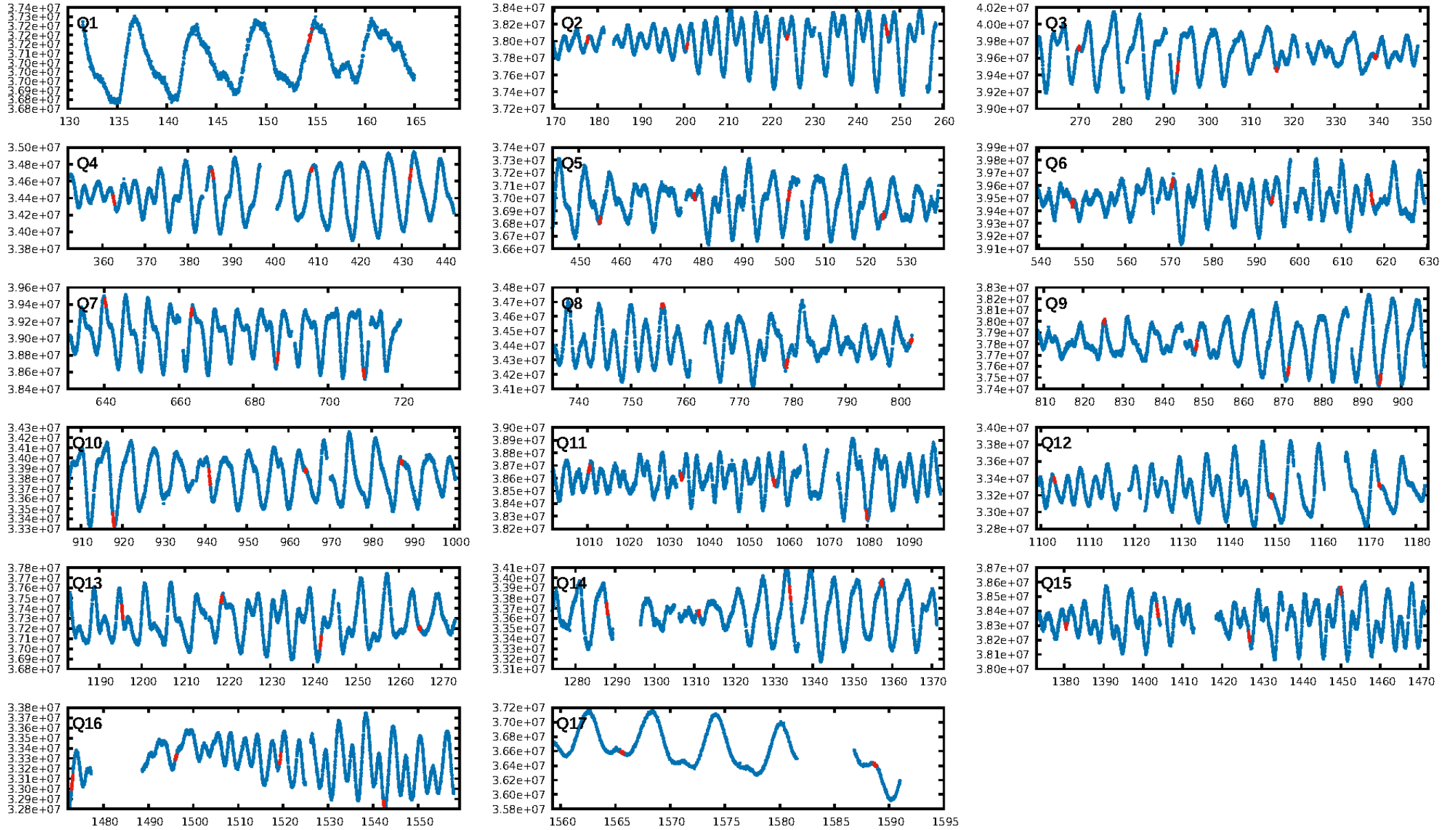
DV Fit Results:

Period = 23.13343 [0.00009] d
Epoch = 154.4540 [0.0031] BKJD
Rp/R* = 0.0248 [0.0012]
a/R* = 19.19 [3.23]
b = 0.95 [0.02]
Seff = 39.26 [16.81]
Teq = 638 [68] K
Rp = 2.52 [0.80] Re
a = 0.1453 [0.0397] AU
Ag = 184.98 [89.86] [2.05 σ]
Teffp = 3640 [259] K [11.20 σ]

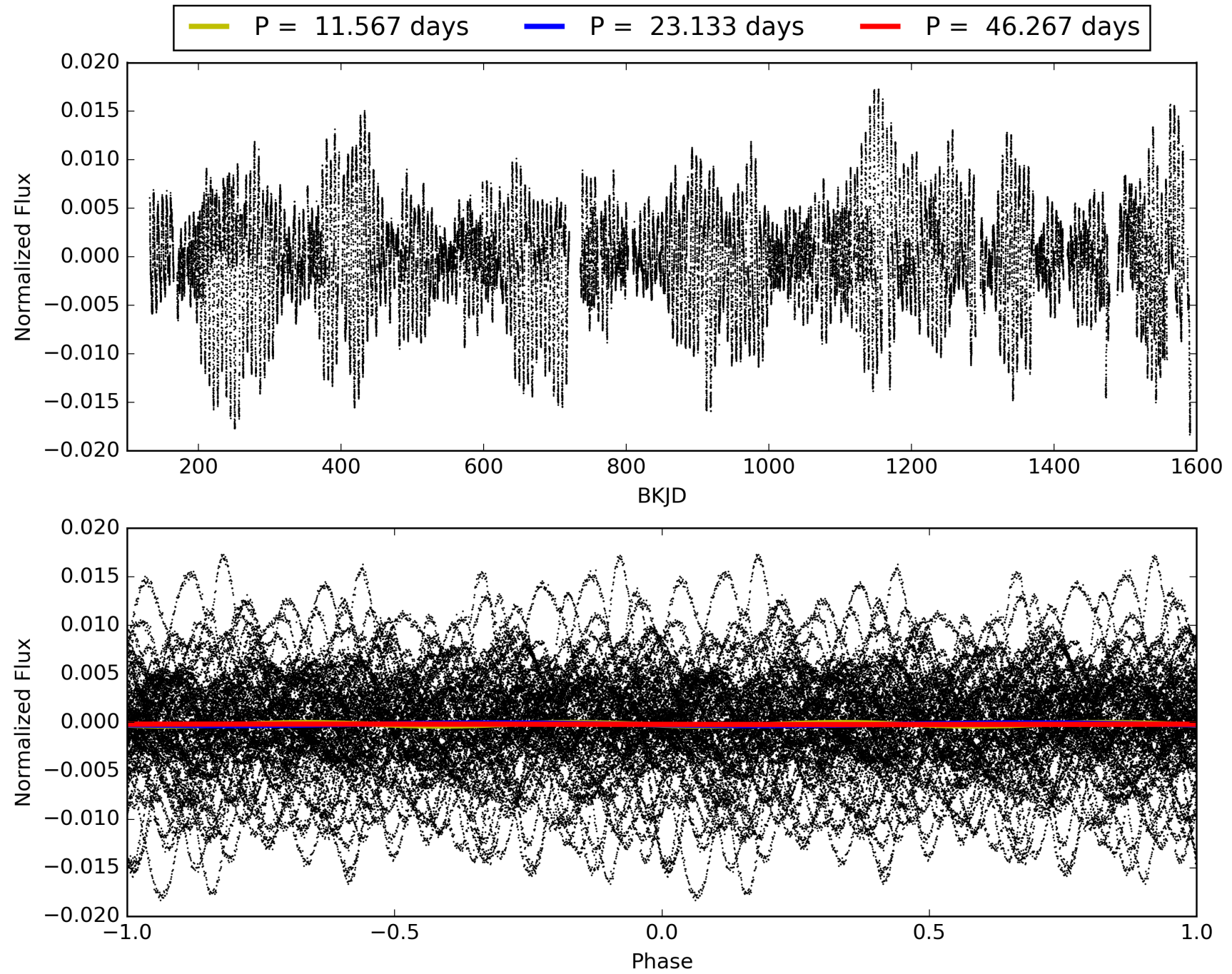
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.06e-76
RollingBand-fgt: 0.98 [56/57]
GhostDiagnostic-chr: 2.244
Centroid-sig: 0.0%
Centroid-so: 0.923 arcsec [2.16 σ]
OotOffset-rm: 0.345 arcsec [0.75 σ]
KicOffset-rm: 0.162 arcsec [0.33 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007772914-01, PDC Light Curves

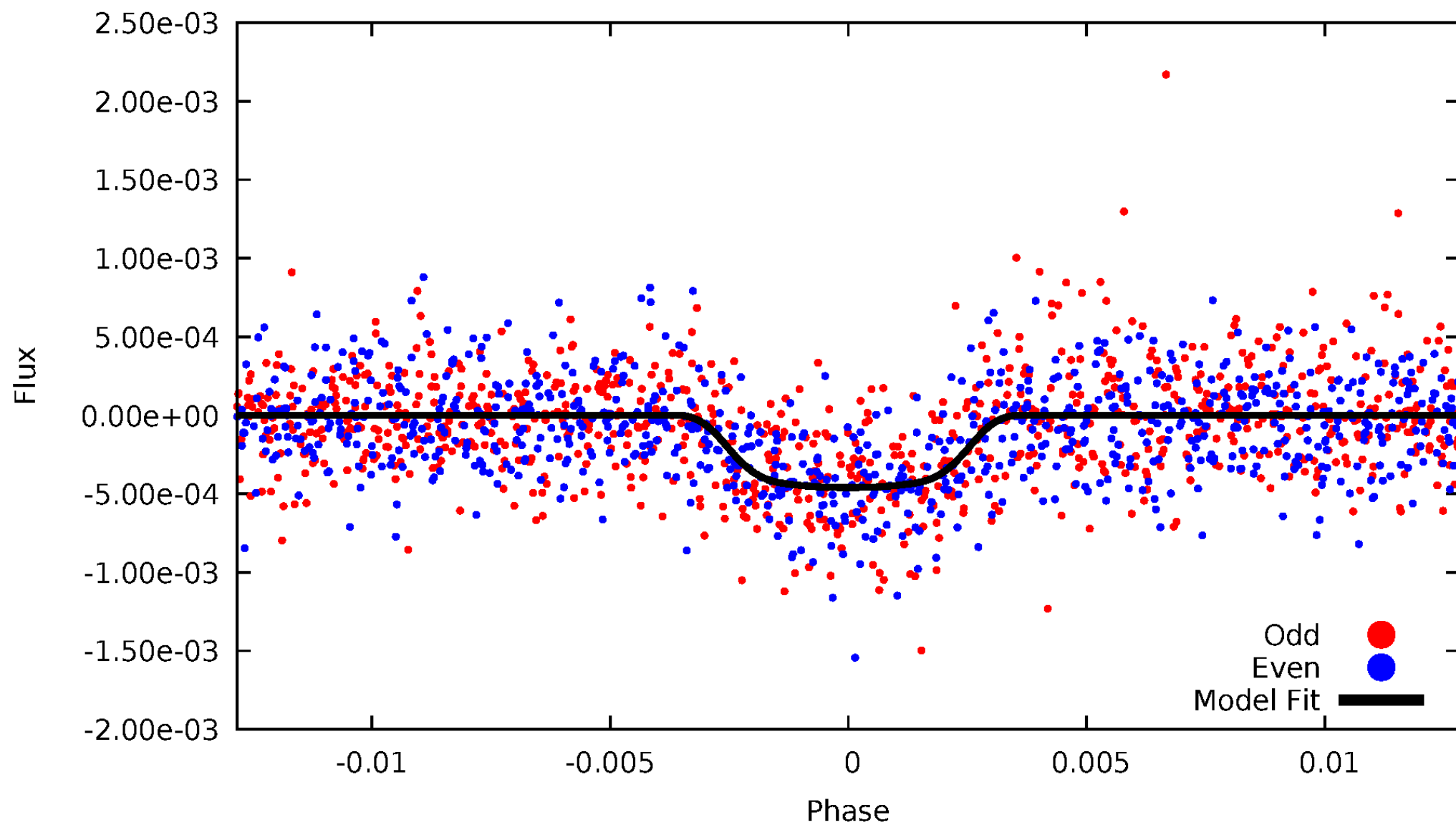


TCE 007772914-01



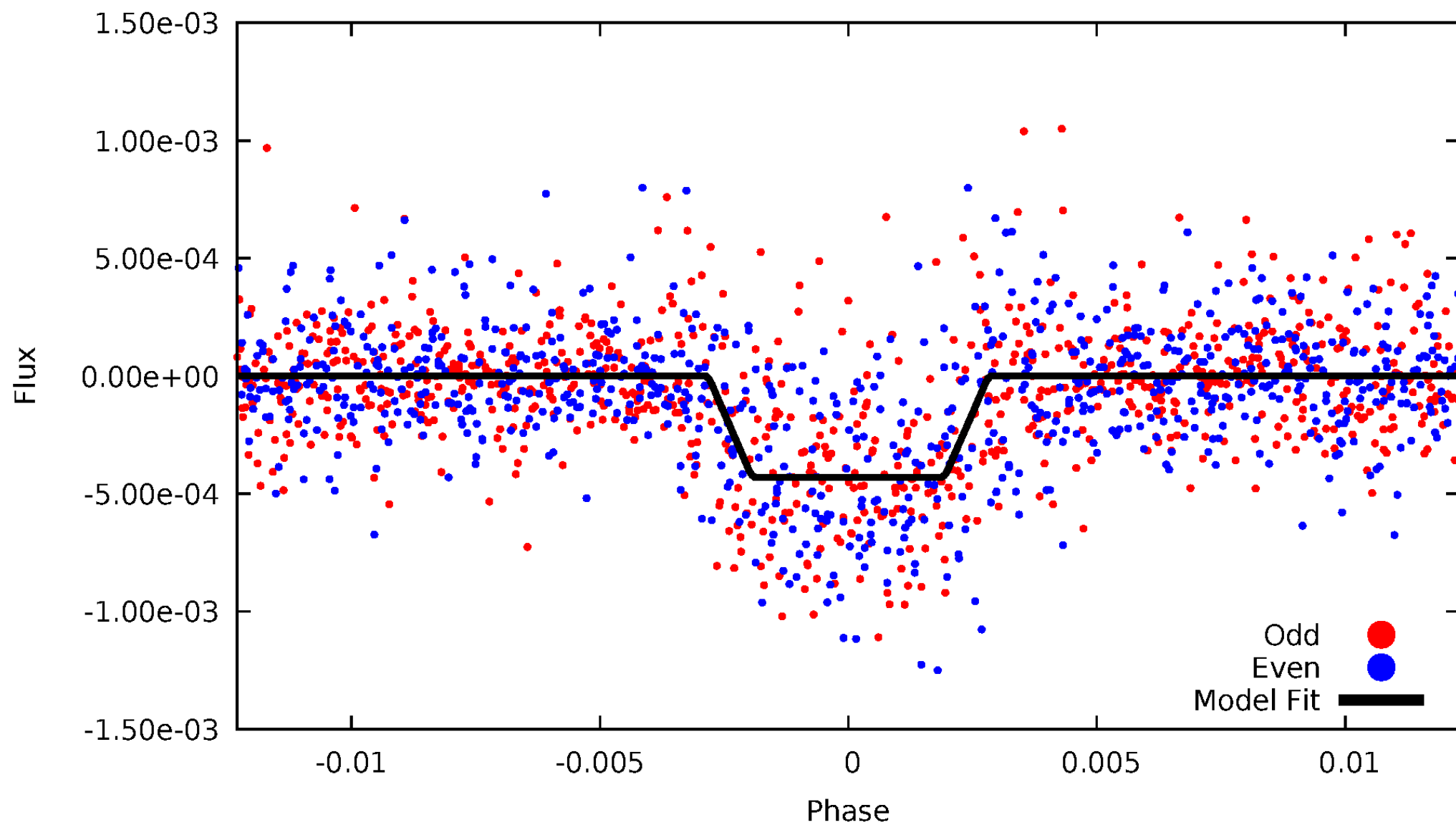
DV Odd/Even

TCE 007772914-01



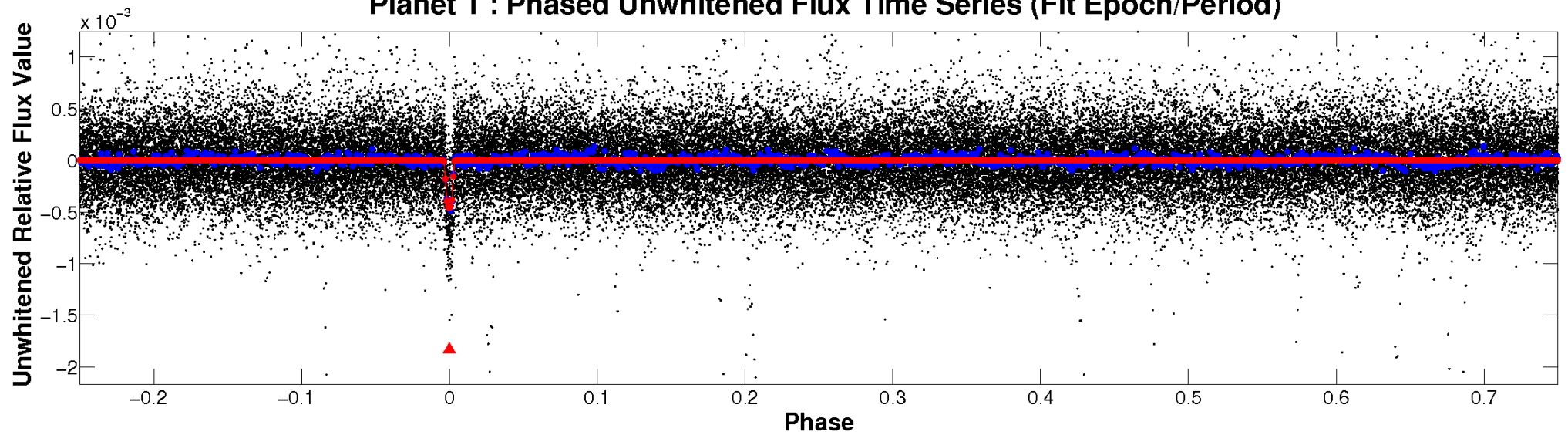
ALT Odd/Even

TCE 007772914-01

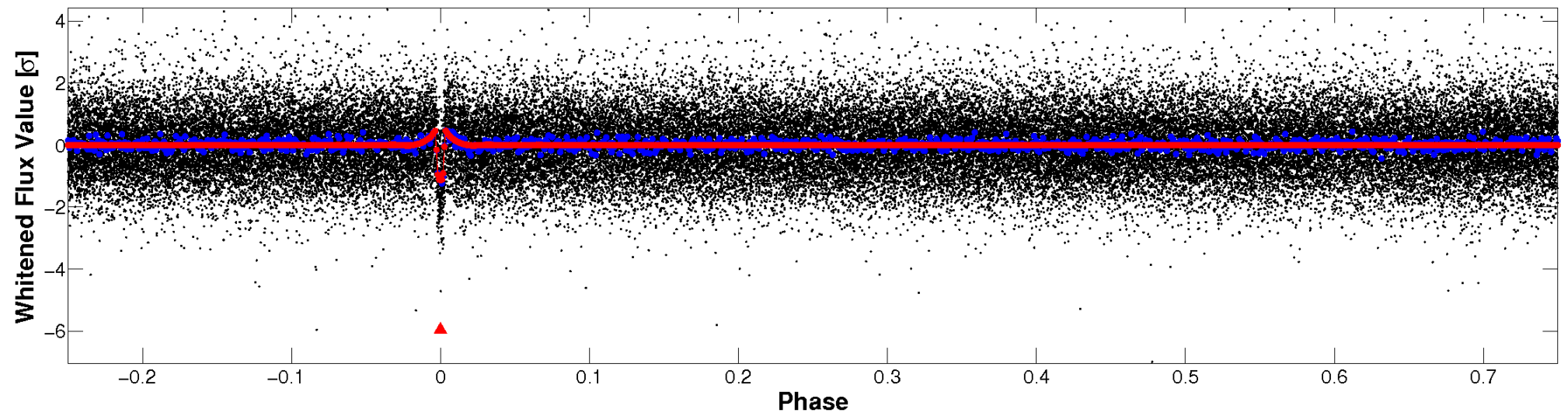


Non-Whitened Vs. Whitened Light Curve

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

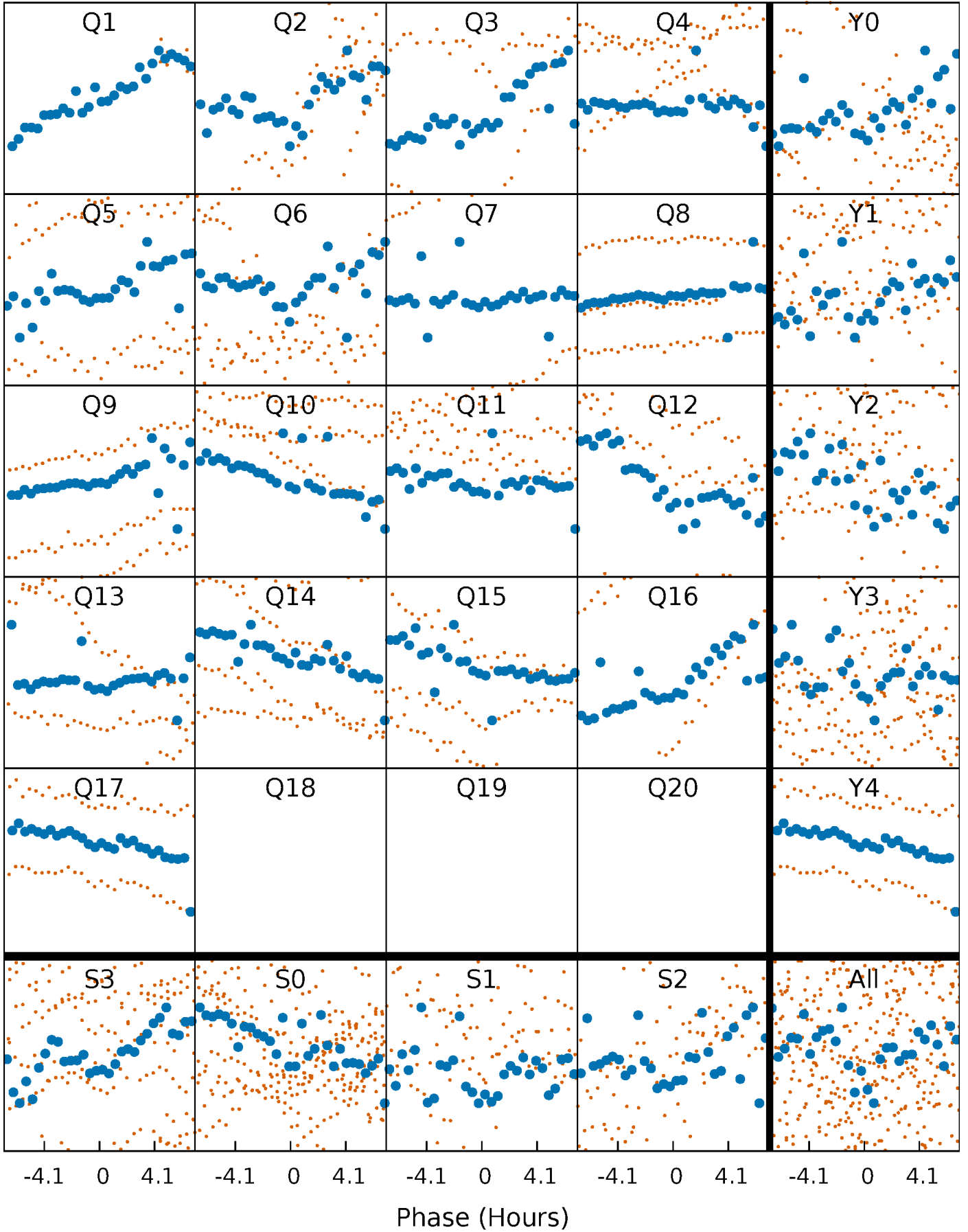


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



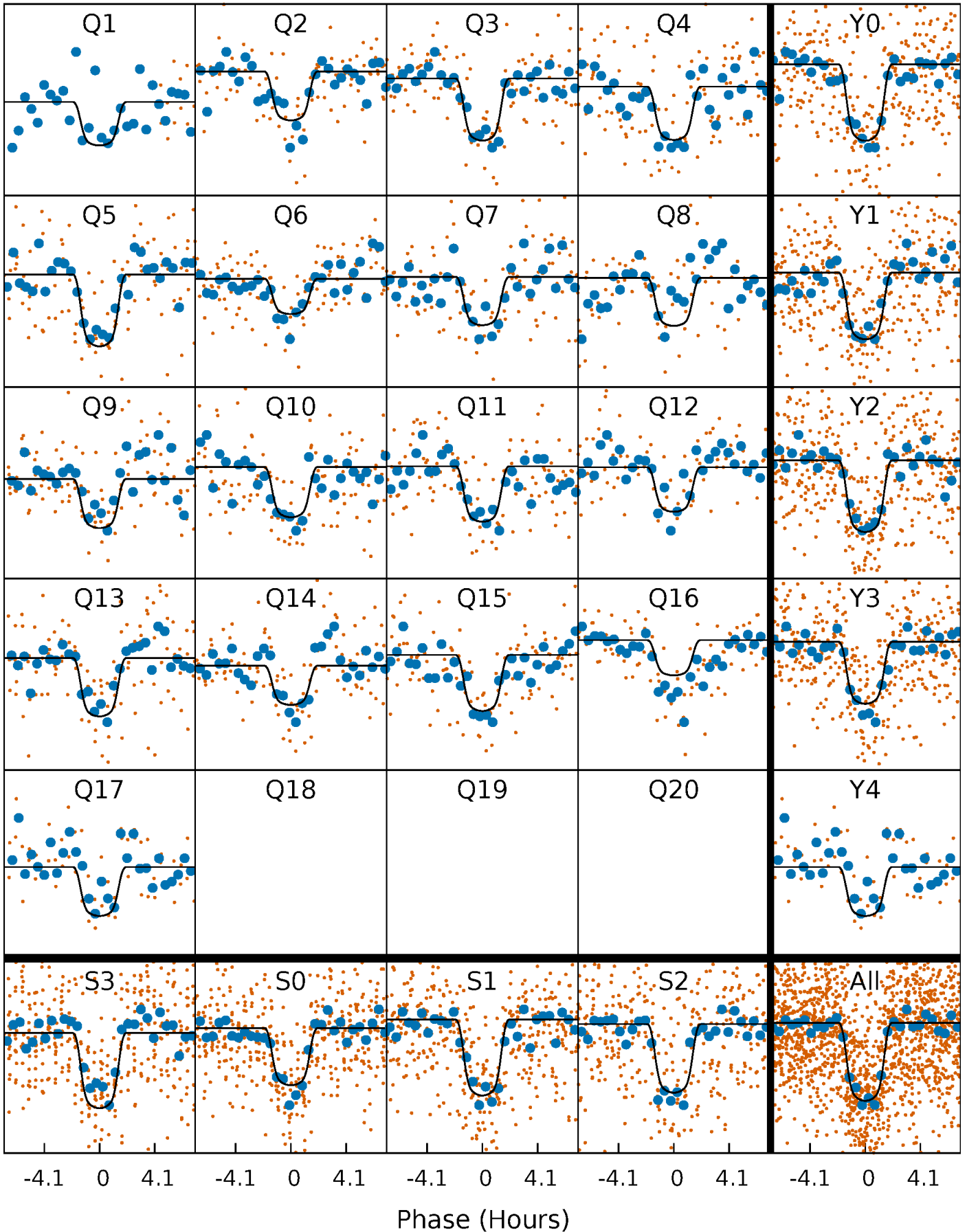
PDC Quarter-Phased Transit Curves

TCE 007772914-01 P= 23.133432 Days $T_0=154.454047$ (BKJD)



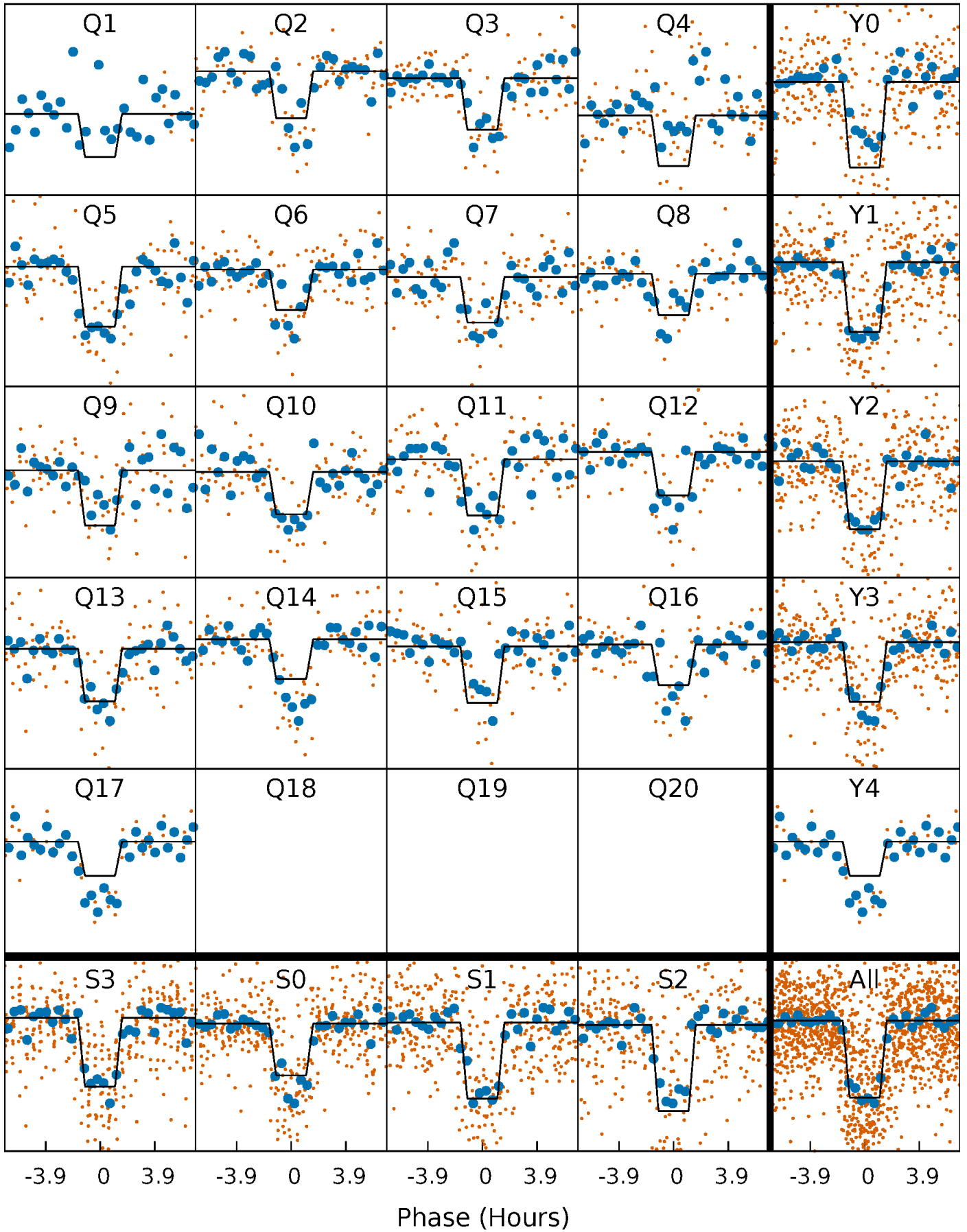
DV Quarter-Phased Transit Curves

TCE 007772914-01 P= 23.133432 Days $T_0=154.454047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

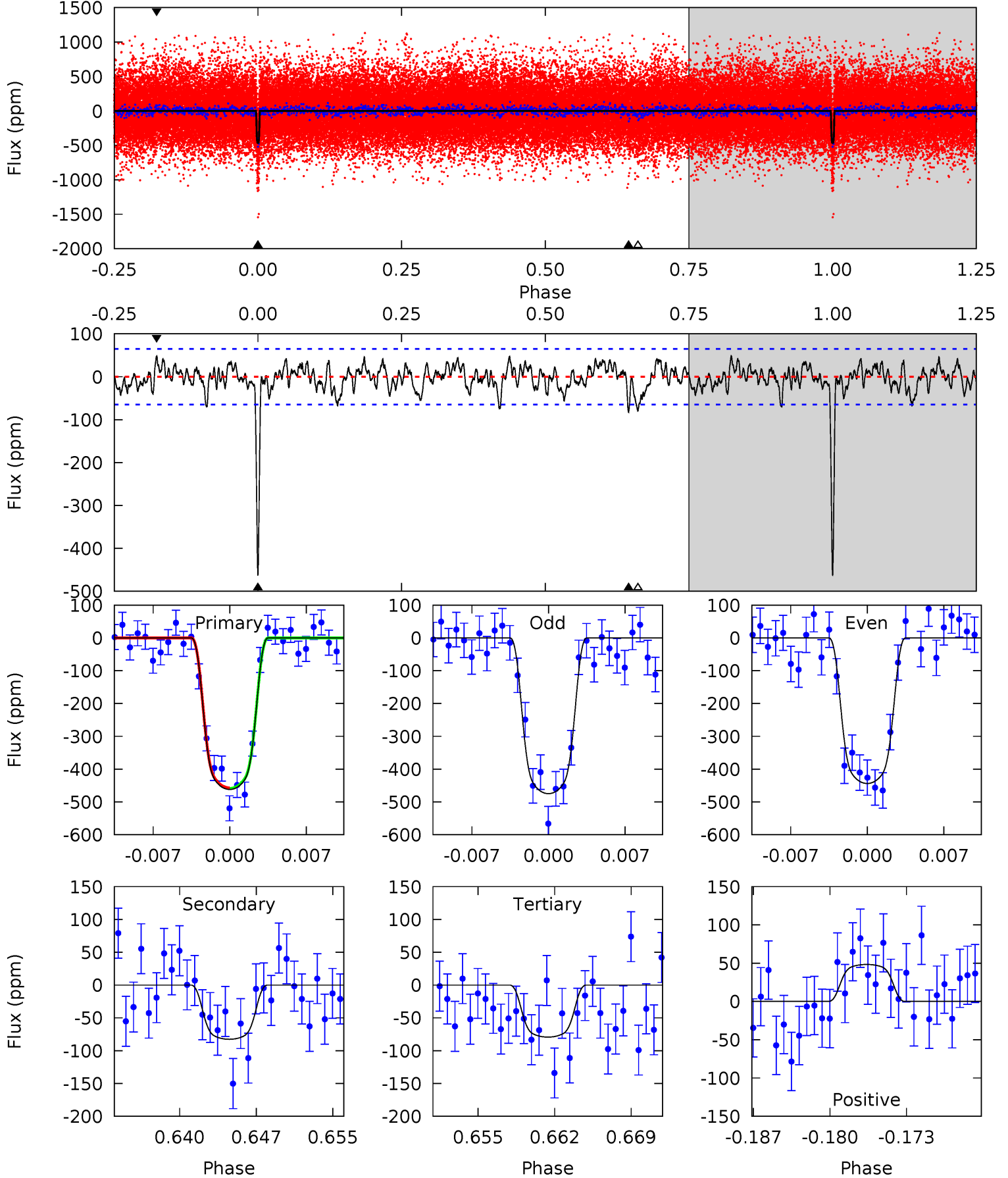
TCE 007772914-01 P= 23.133476 Days $T_0=154.452955$ (BKJD)



DV Model-Shift Uniqueness Test

007772914-01, P = 23.133432 Days, E = 131.320615 Days

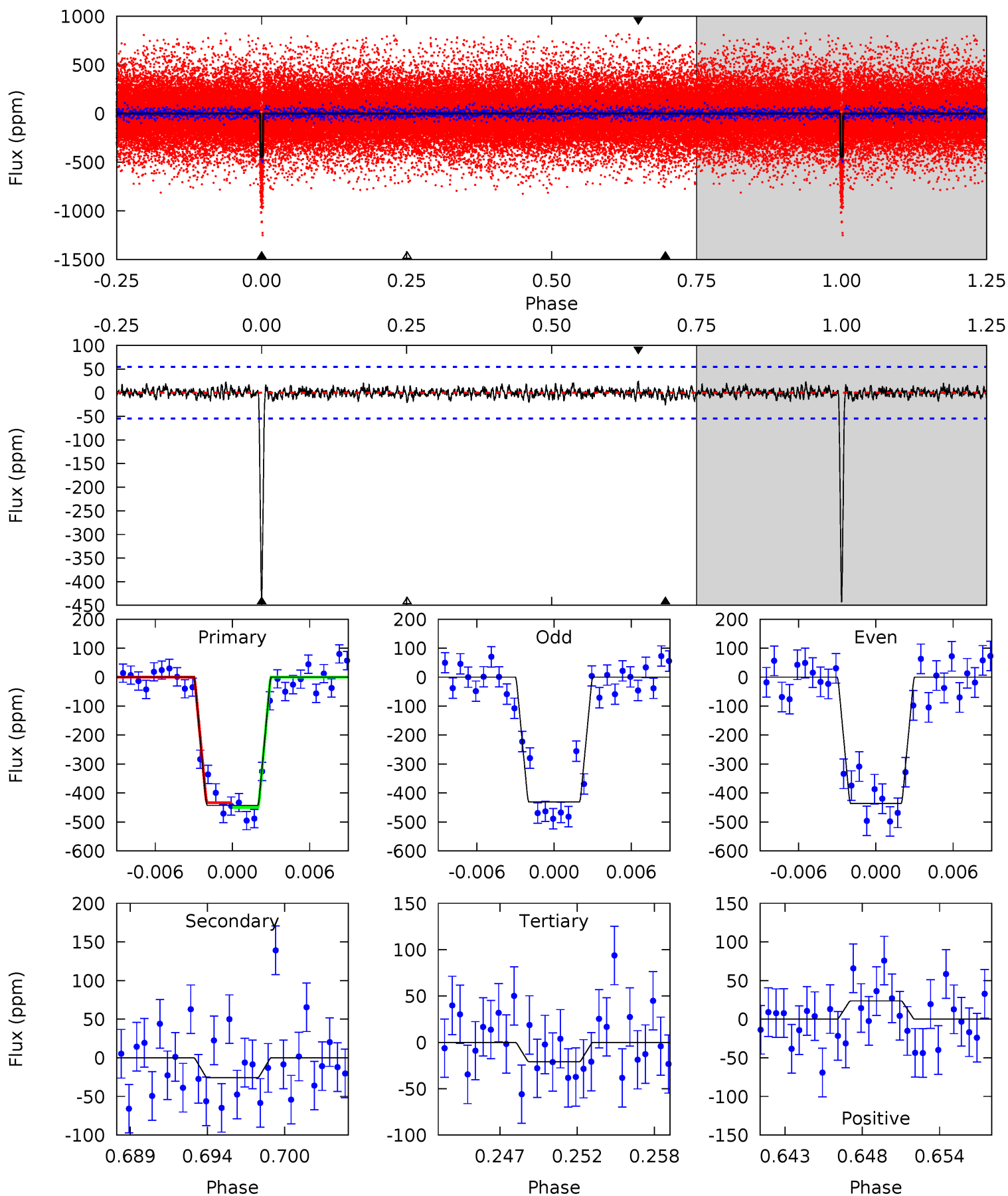
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.2	6.48	6.22	3.79	5.09	2.69	1.83	30.0	32.4	0.26	2.69	1.21	0.95	0.09	0.06



Alt Model-Shift Uniqueness Test

007772914-01, P = 23.133476 Days, E = 131.319479 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.5	2.40	1.95	2.21	5.13	2.76	0.64	39.5	39.3	0.46	0.20	0.22	1.04	0.05	0



Stellar Parameters For KIC 007772914

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5712^{+170}_{-170}	$4.382^{+0.189}_{-0.231}$	$-0.520^{+0.350}_{-0.250}$	$0.932^{+0.291}_{-0.170}$	$0.763^{+0.121}_{-0.048}$	$1.328^{+1.251}_{-0.738}$
	+3%/-3%	+4%/-5%	+67%/-48%	+31%/-18%	+16%/-6%	+94%/-56%
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 007772914-01 / KOI 3339.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-83 ± 13	$2.55^{+0.46}_{-0.32}$	893^{+74}_{-57}	3826^{+130}_{-147}	149^{+53}_{-45}
Alt.	-26 ± 11	$2.14^{+0.37}_{-0.30}$	890^{+79}_{-60}	3348^{+213}_{-269}	64^{+42}_{-30}

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 $A_{obs} \gg 1.0$

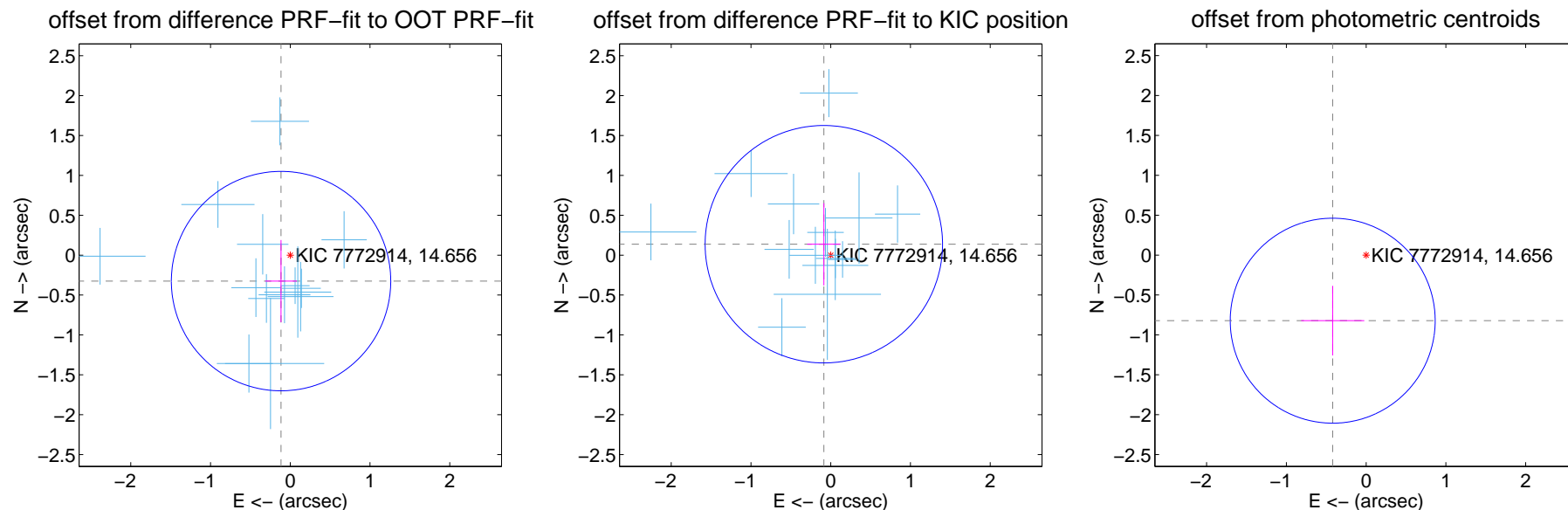
DV Centroid Data

Supplemental centroid analysis for 007772914-01. Kepler magnitude: 14.66. Transit SNR 20.15

There are 14 quarters with good PRF difference image offsets

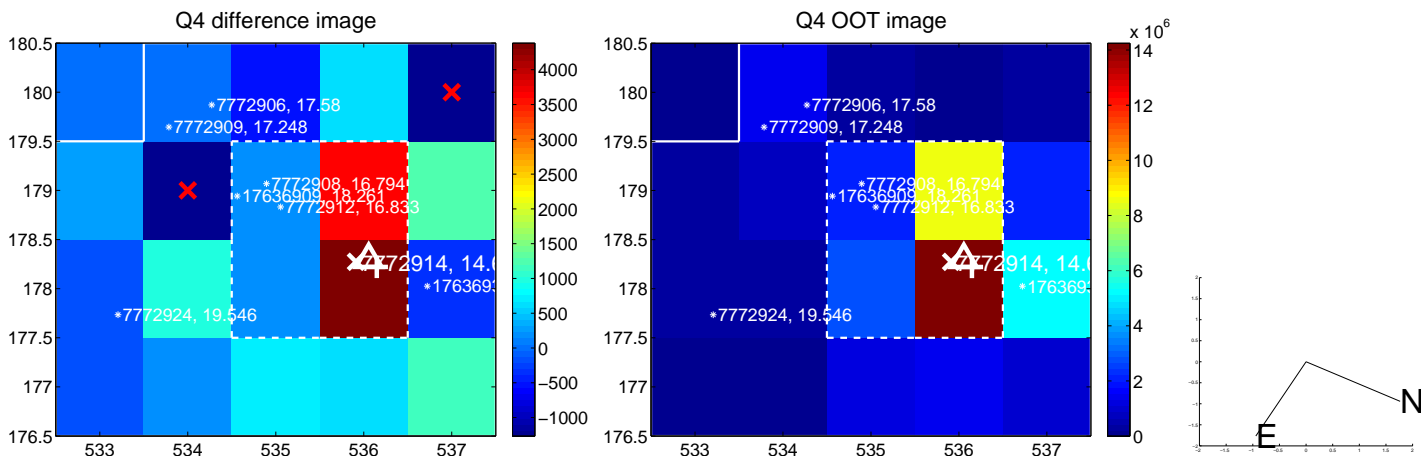
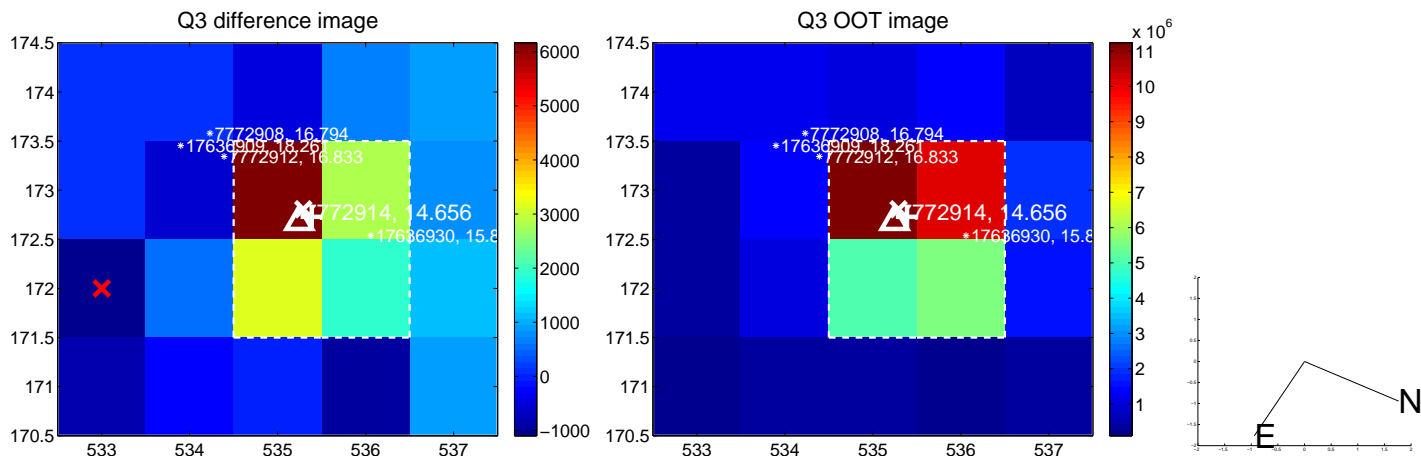
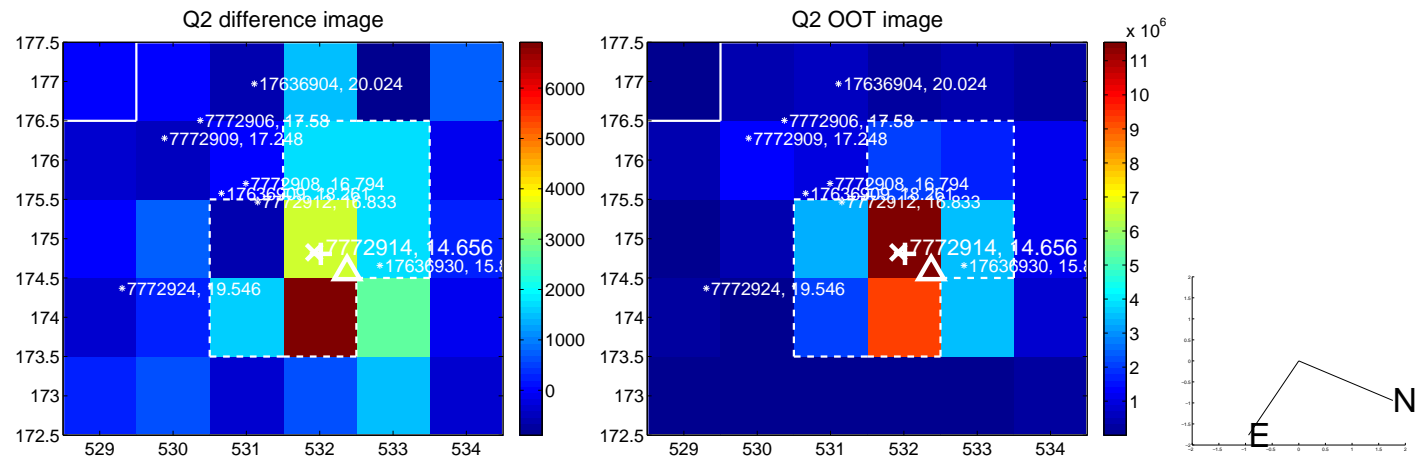
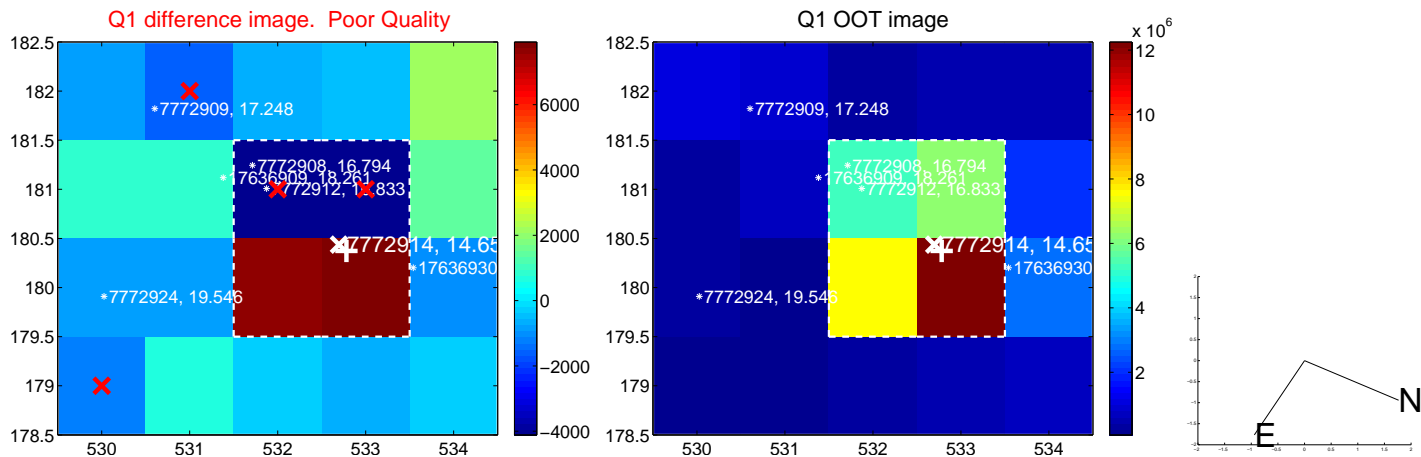
The direct PRF centroid is offset from the target star catalog position by about 0.86 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.345 ± 0.458	0.75	0.116 ± 0.197	-0.325 ± 0.515
PRF-fit source offset from KIC position	0.162 ± 0.496	0.33	0.086 ± 0.208	0.137 ± 0.516
photometric centroid source offset	0.92 ± 0.43	2.16	0.42 ± 0.40	-0.82 ± 0.44

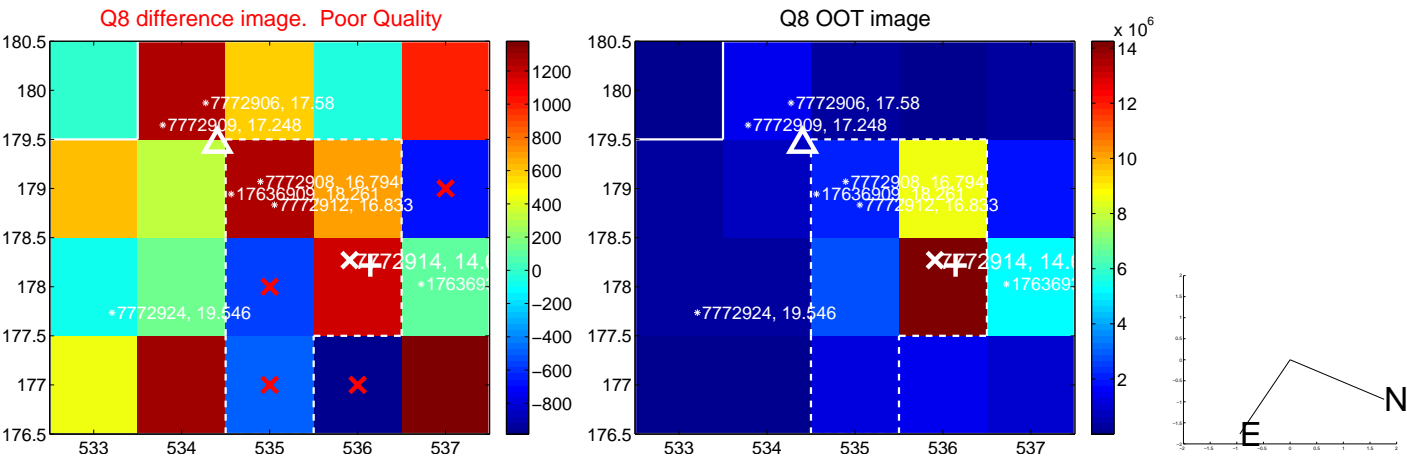
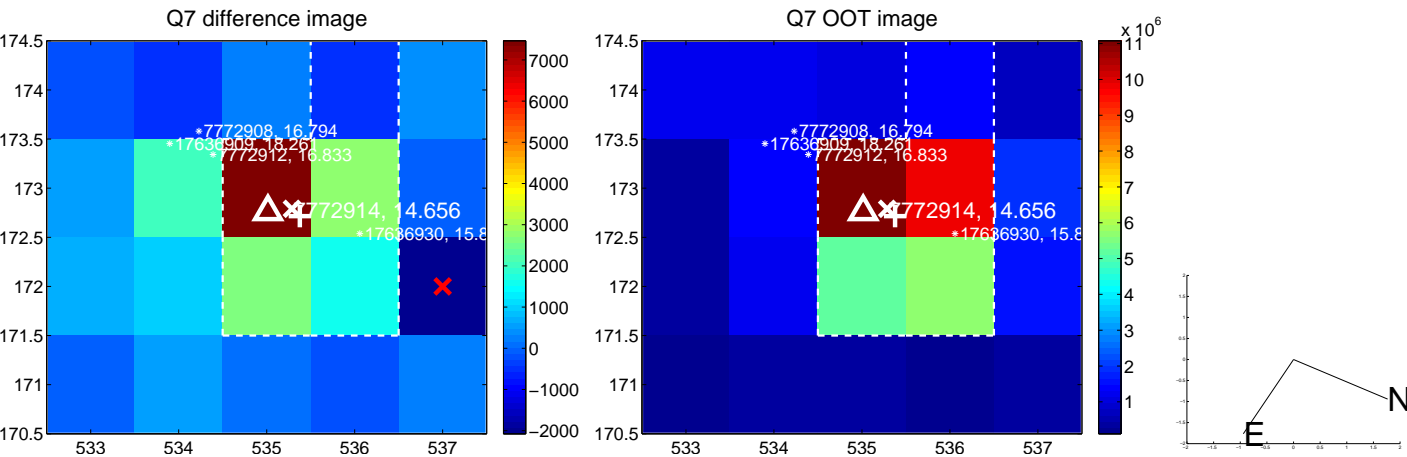
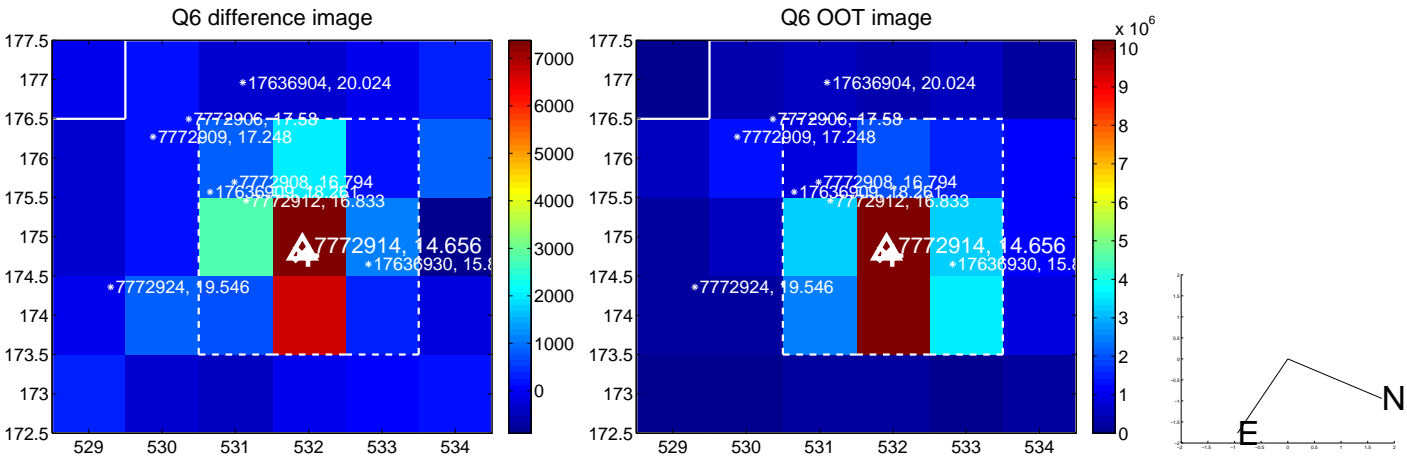
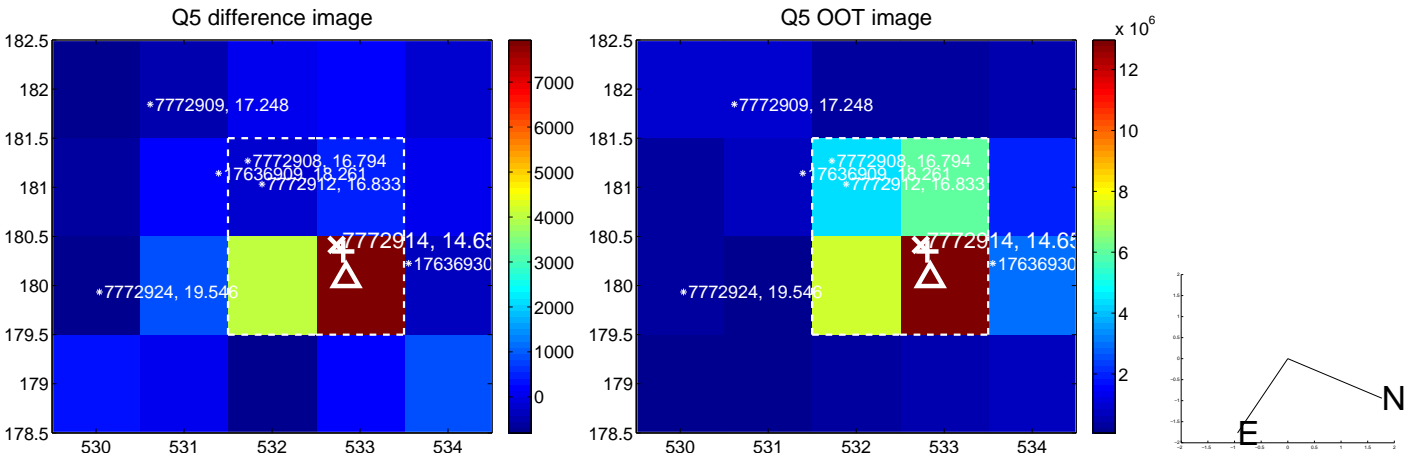


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

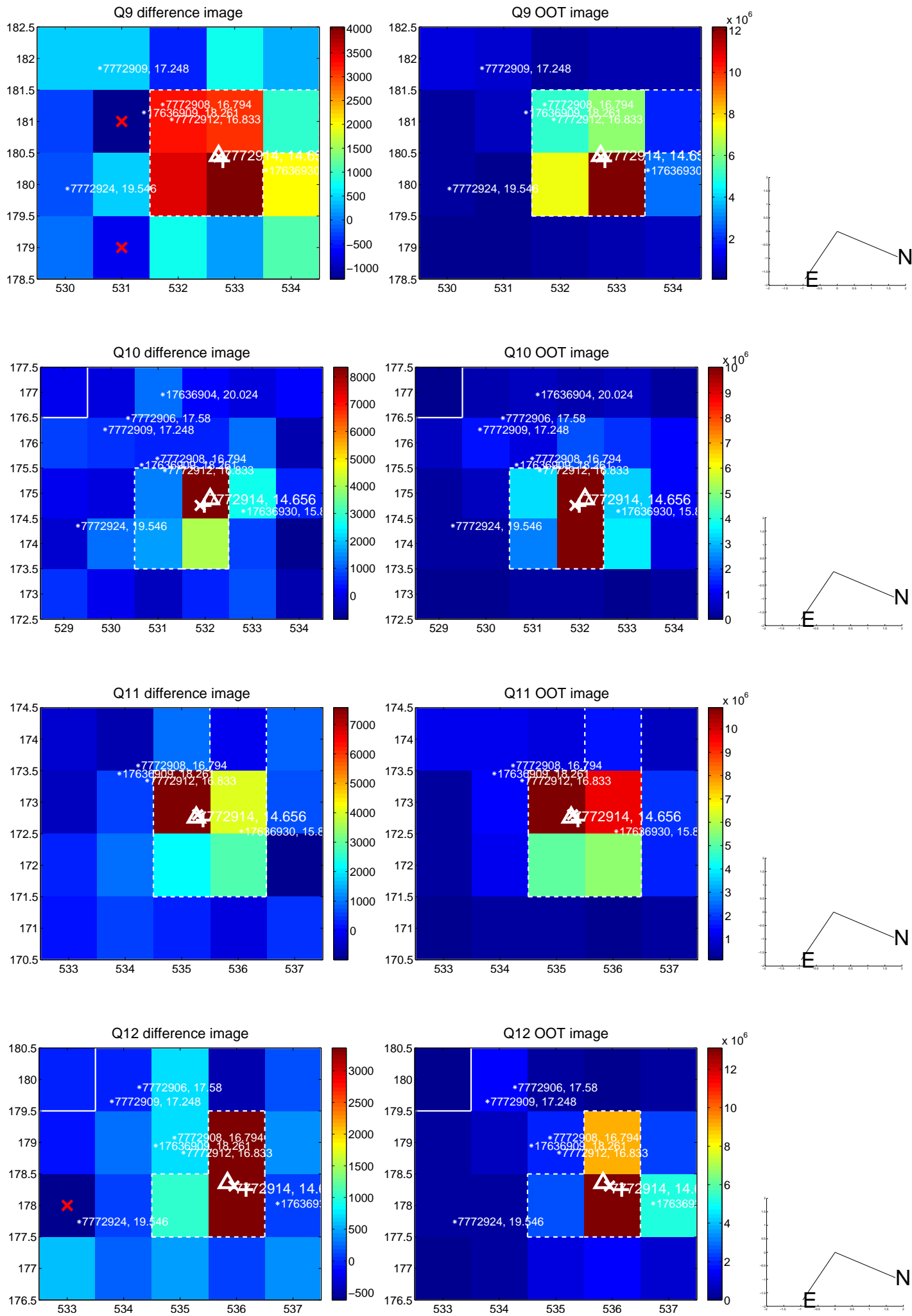
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



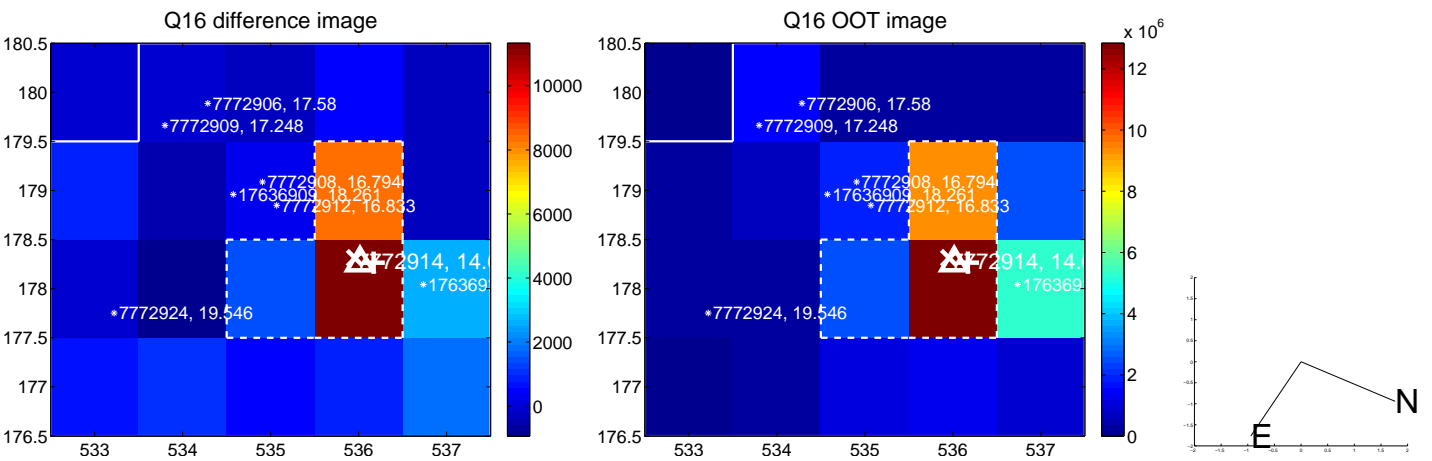
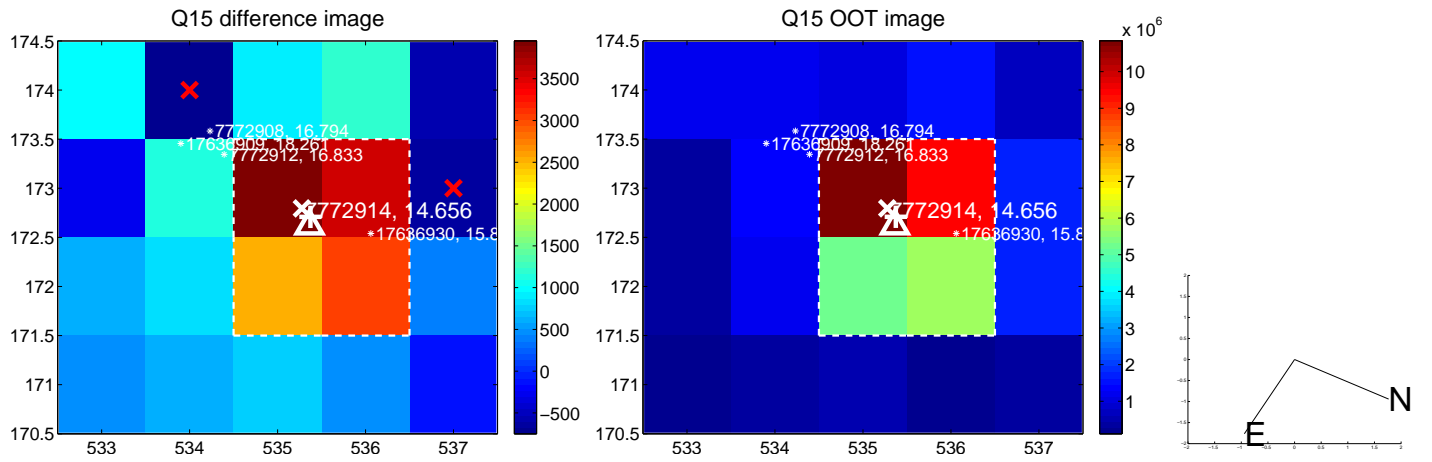
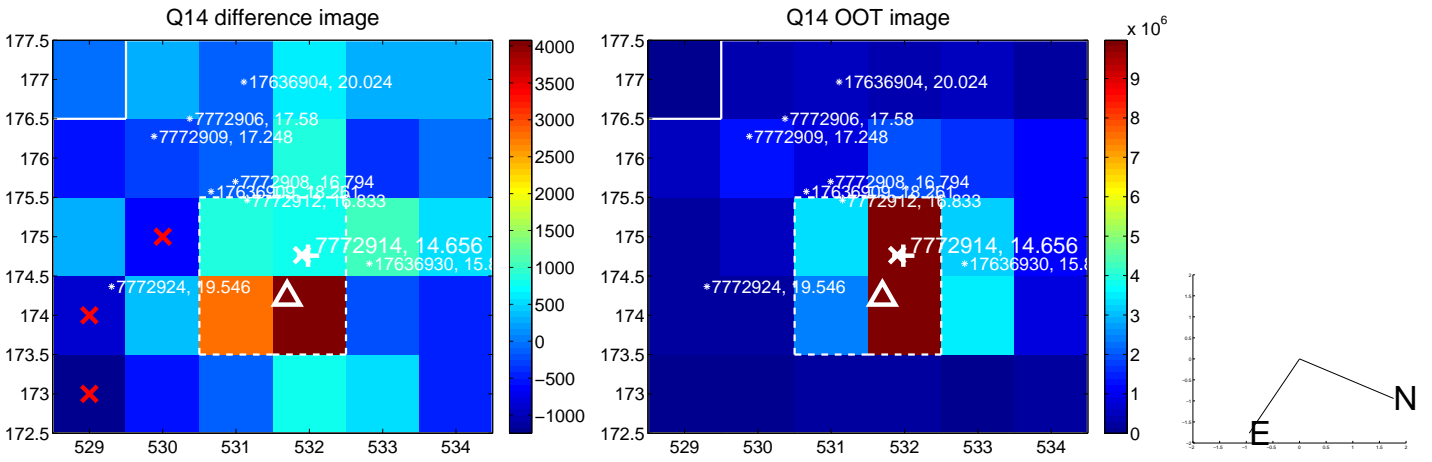
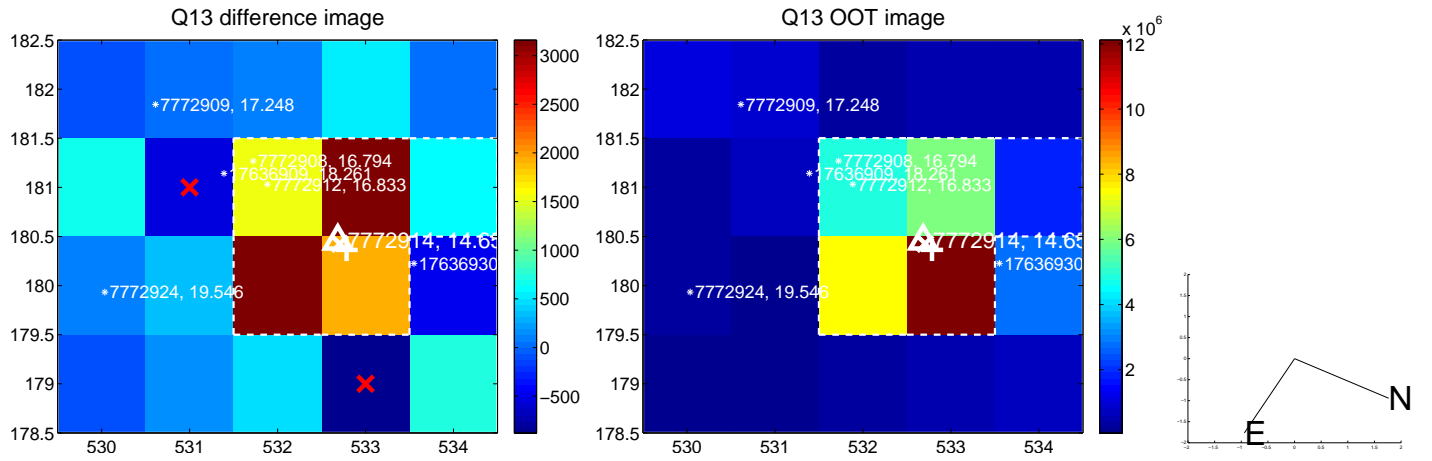
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

