

KIC 005385304

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})
005385304-01	OBS	2370.01	78.732495	168.732511	412.1	3.920	16.2	16.9	2.76	6715	6.32	79.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385304-01	OBS	PC	0.98	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.

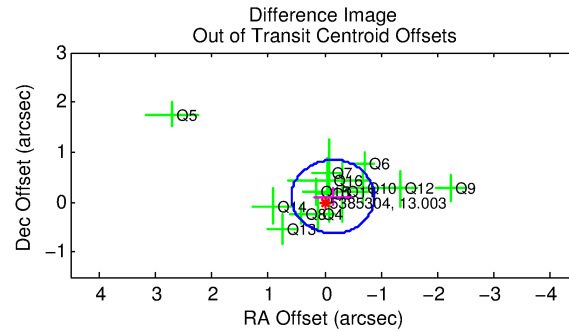
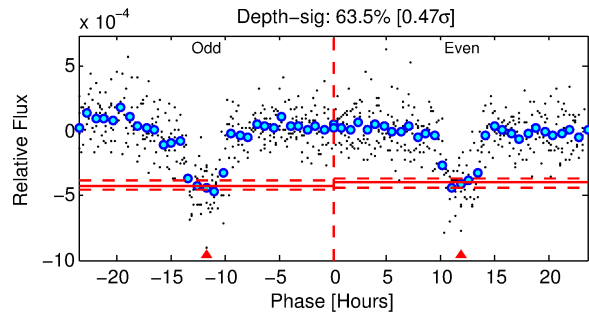
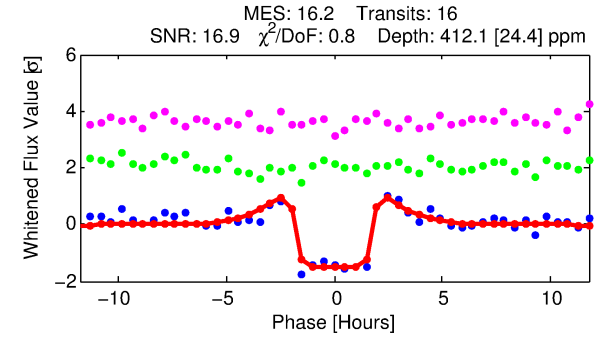
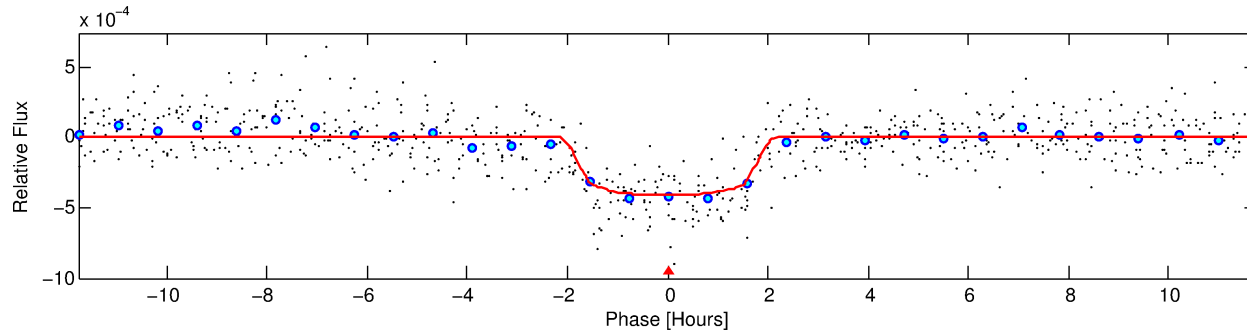
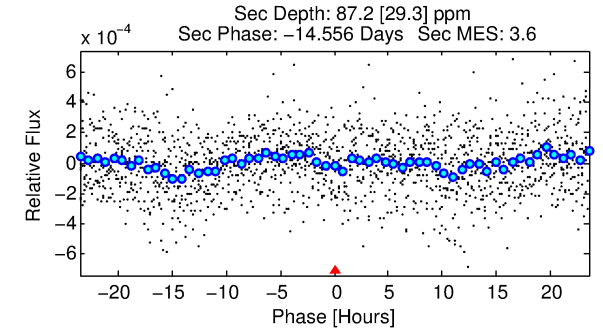
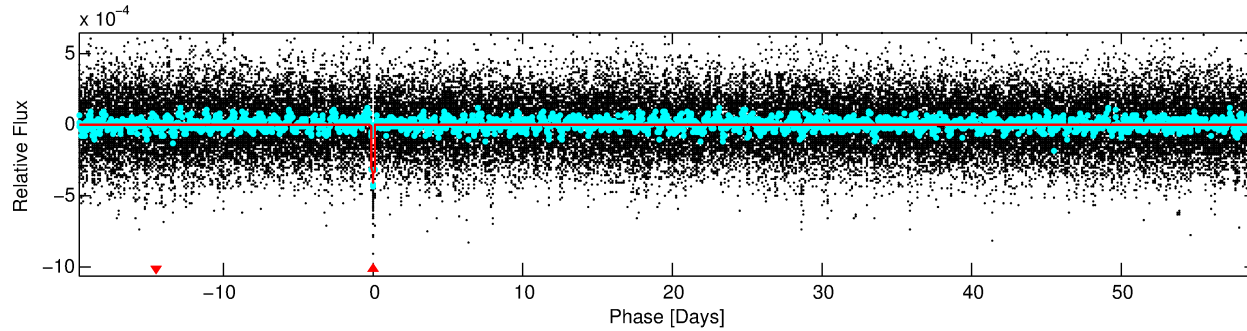
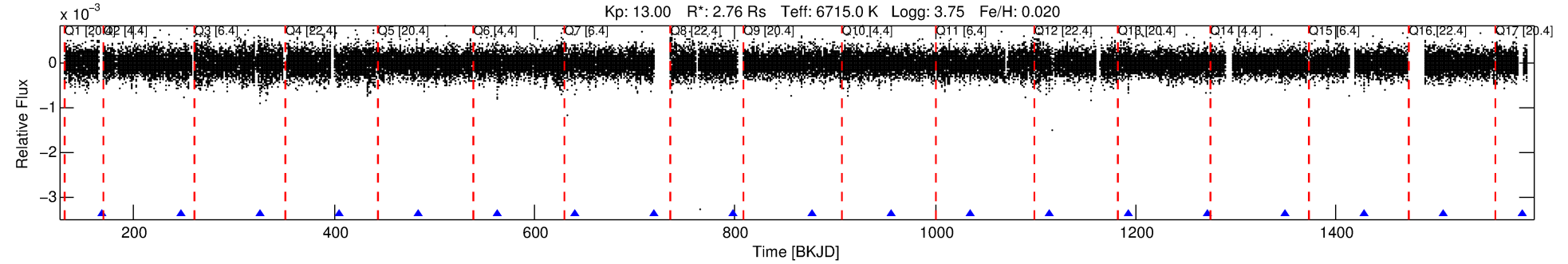
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005385304-01

No Significant Match Found

DV One-Page Summary

KIC: 5385304 Candidate: 1 of 1 Period: 78.732 d
KOI: K02370.01 Corr: 0.877



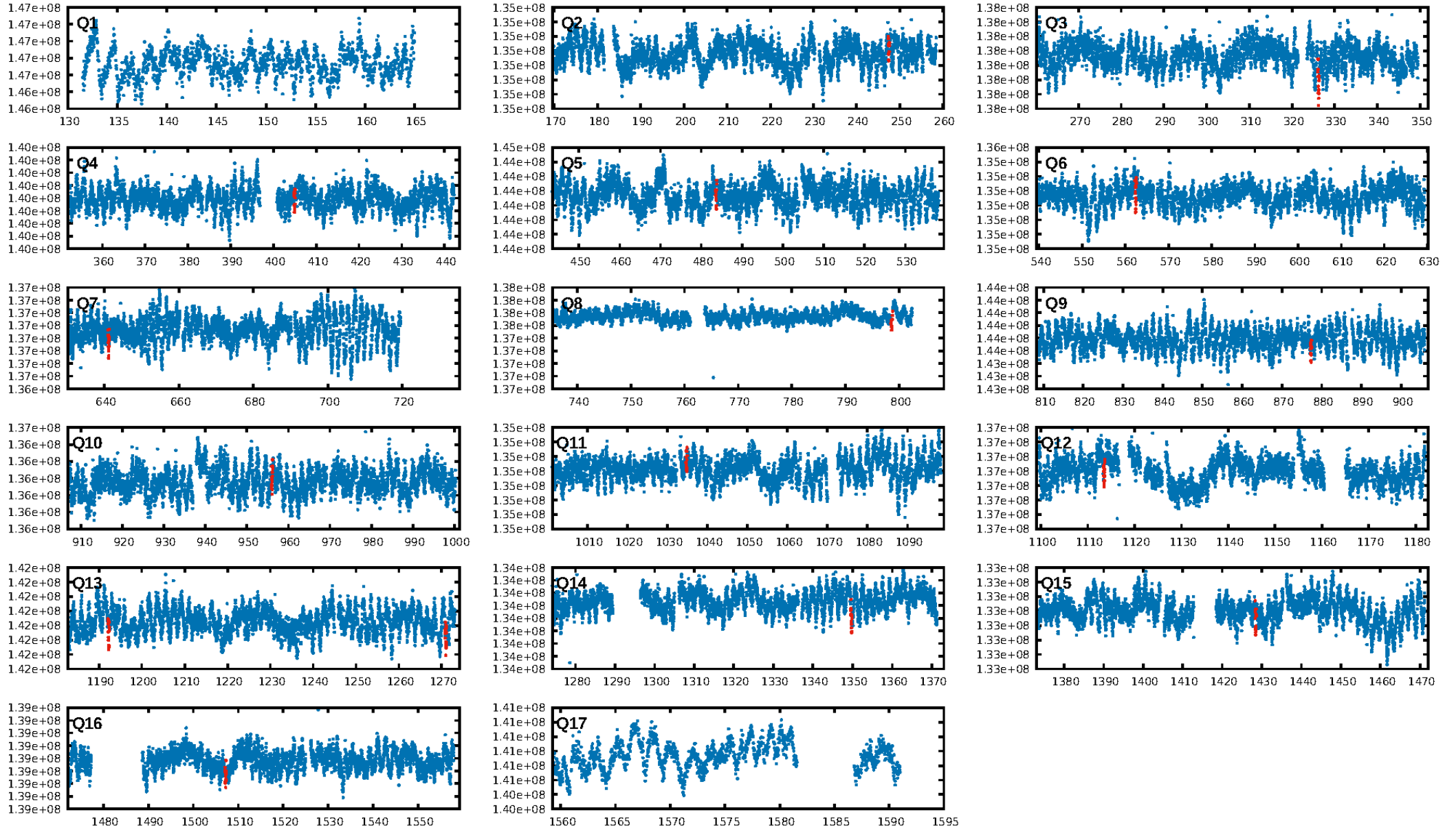
DV Fit Results:

Period = 78.73249 [0.00032] d
Epoch = 168.7325 [0.0034] BKJD
Rp/R* = 0.0210 [0.0029]
a/R* = 87.90 [65.99]
b = 0.85 [0.26]
Seff = 79.27 [41.04]
Teff = 761 [98] K
Rp = 6.32 [2.30] Re
a = 0.4188 [0.1327] AU
Ag = 210.86 [140.01] [1.50σ]
Teffp = 4483 [510] K [7.17σ]

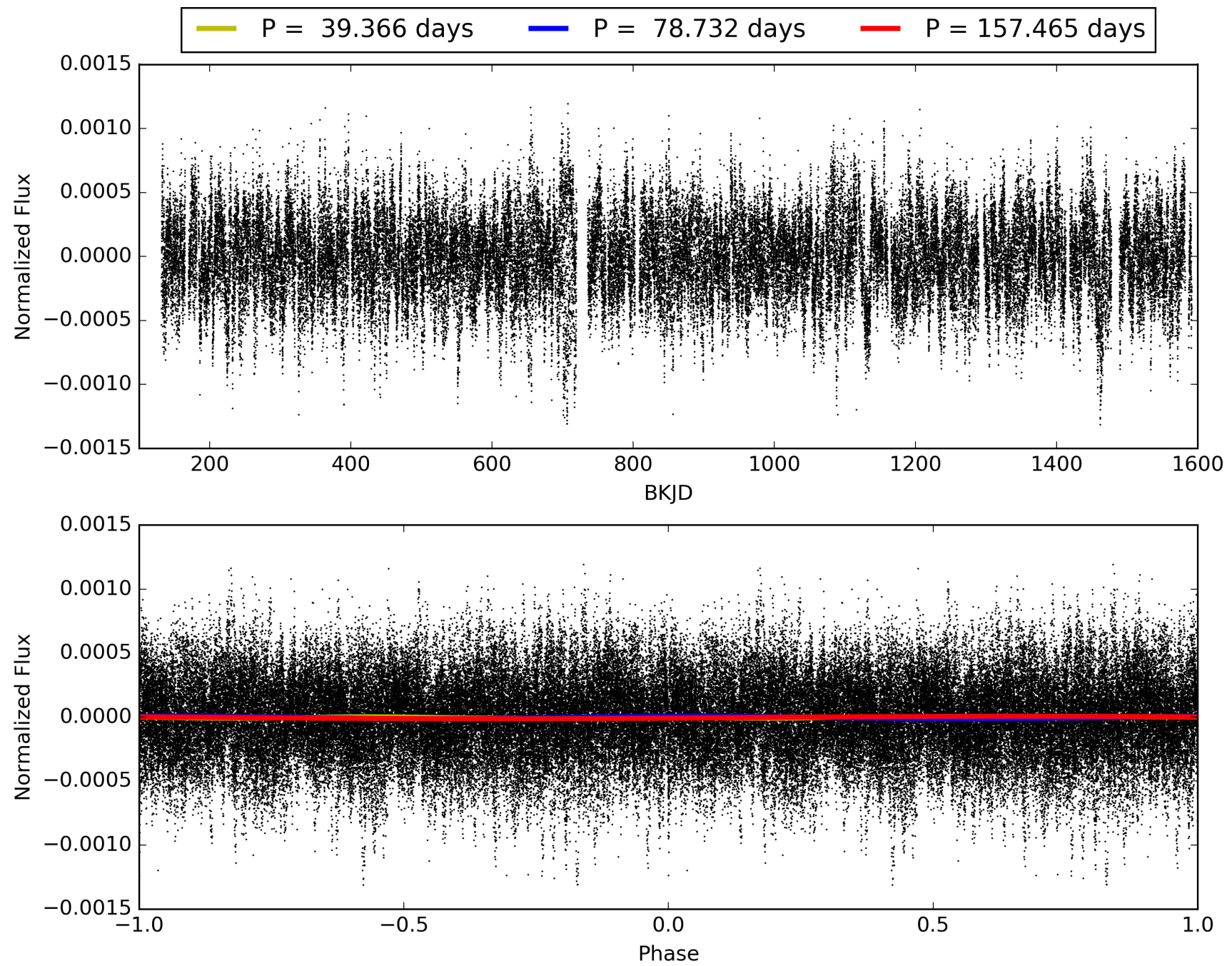
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.46e-58
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 42.7
Centroid-sig: 20.5%
Centroid-so: 1.165 arcsec [2.72σ]
OotOffset-rm: 0.180 arcsec [0.74σ]
KicOffset-rm: 0.274 arcsec [1.46σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 005385304-01, PDC Light Curves

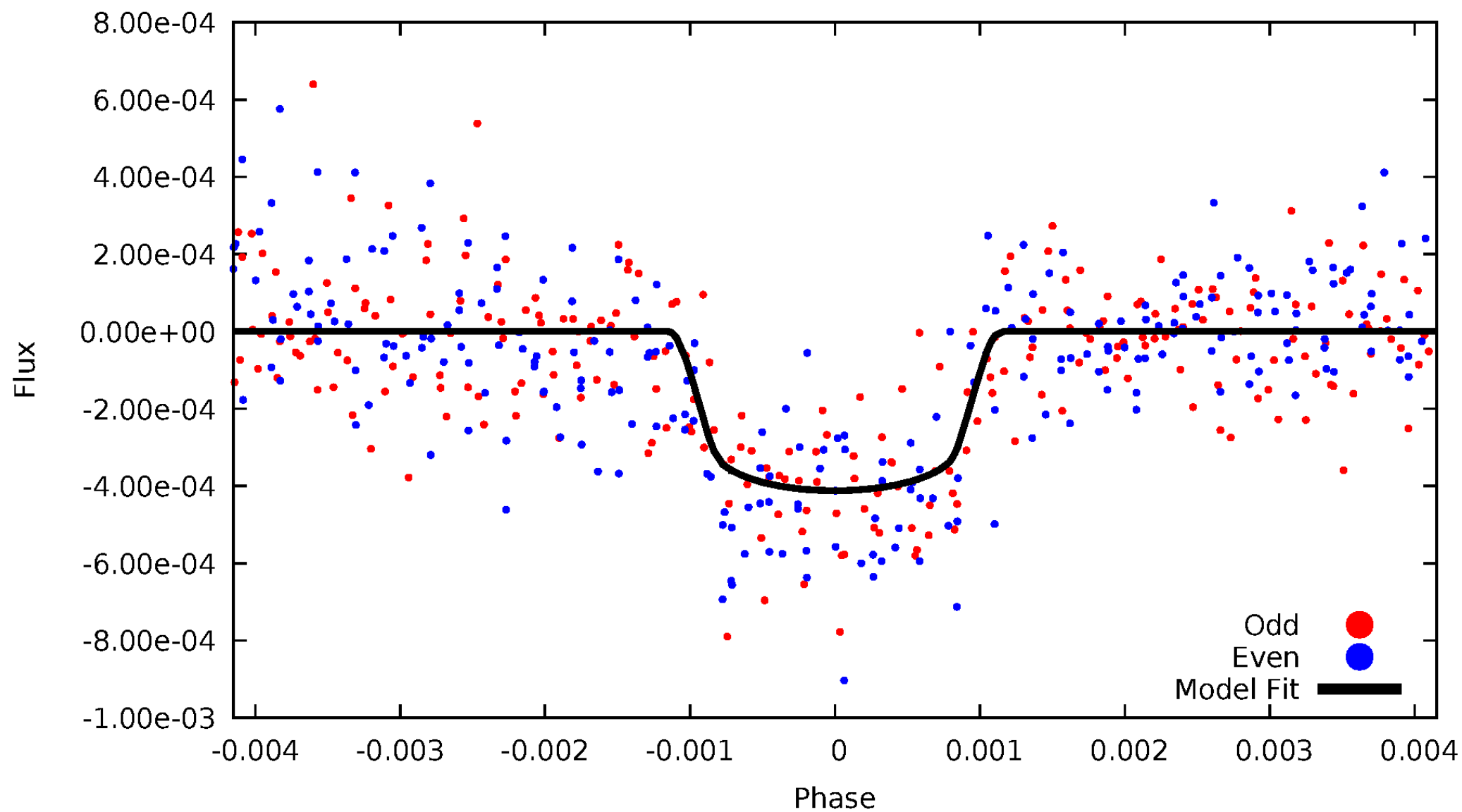


TCE 005385304-01



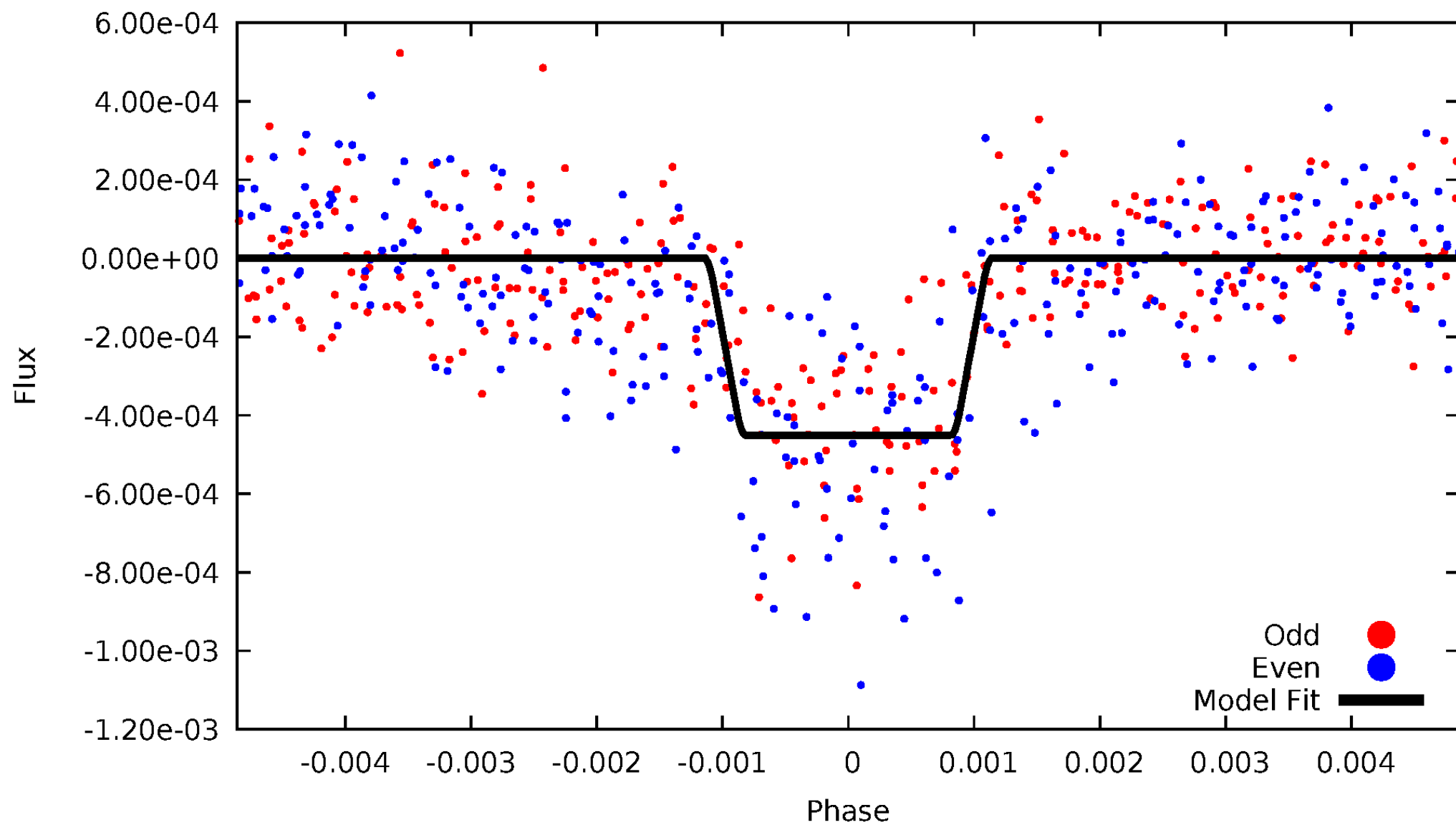
DV Odd/Even

TCE 005385304-01

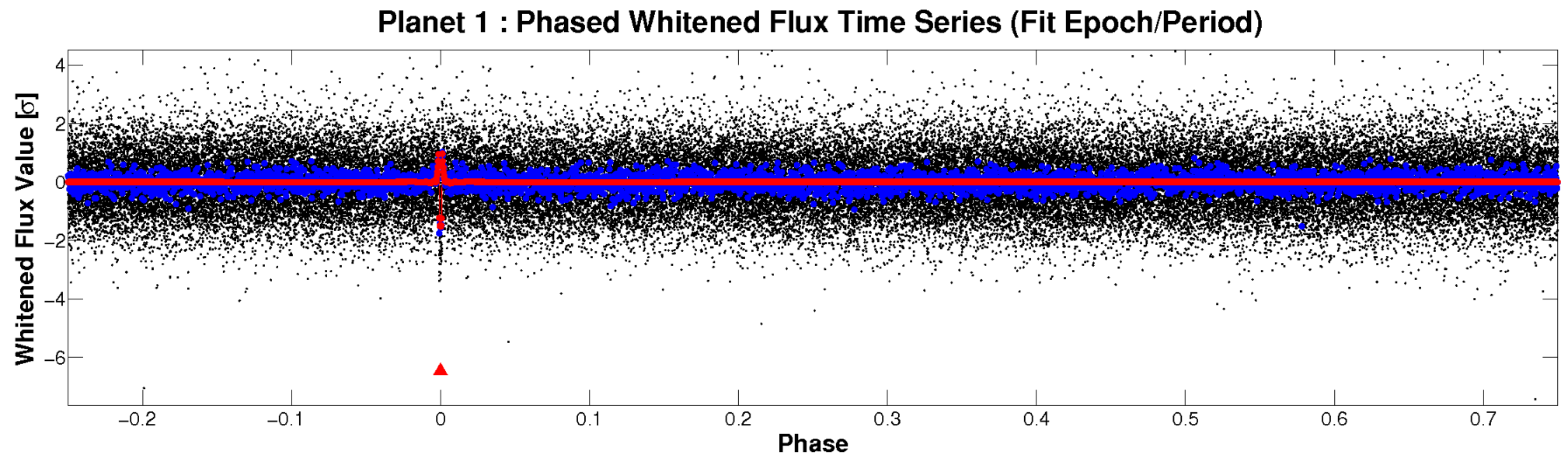
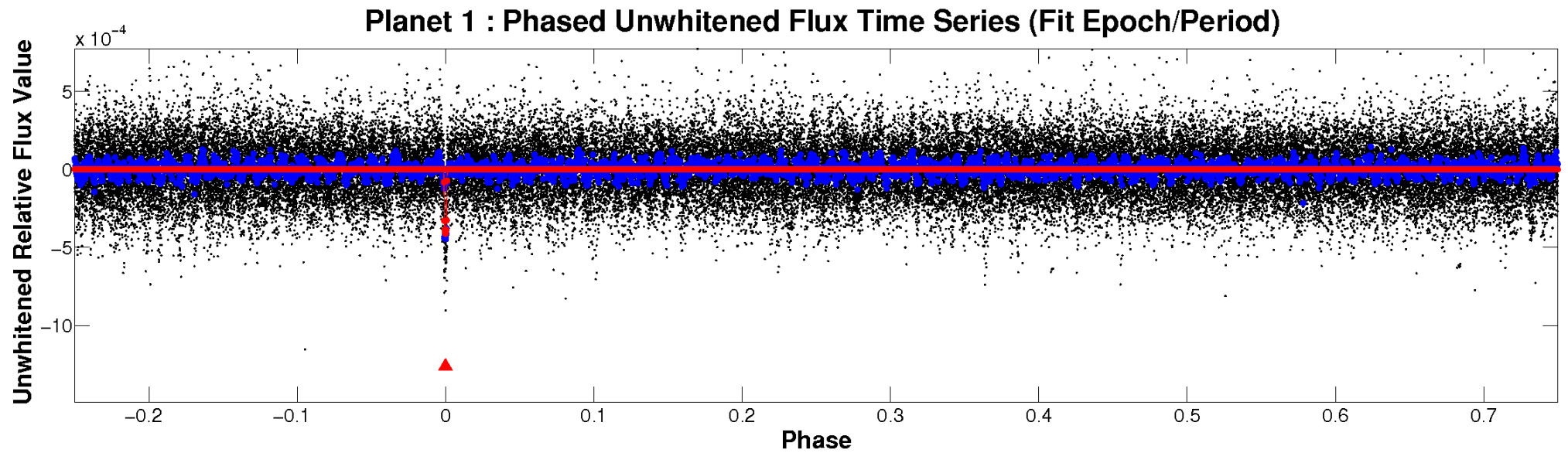


ALT Odd/Even

TCE 005385304-01

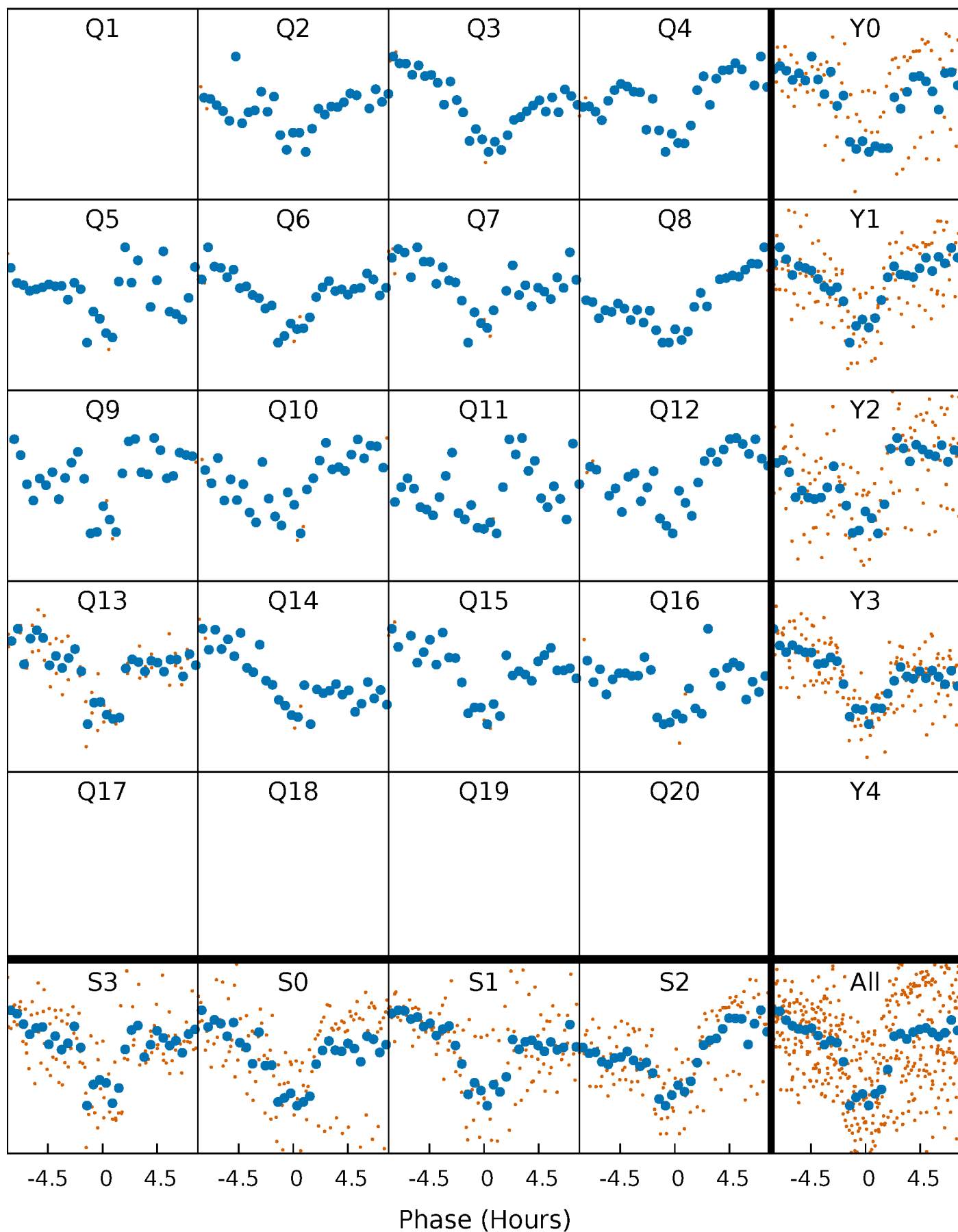


Non-Whitened Vs. Whitened Light Curve



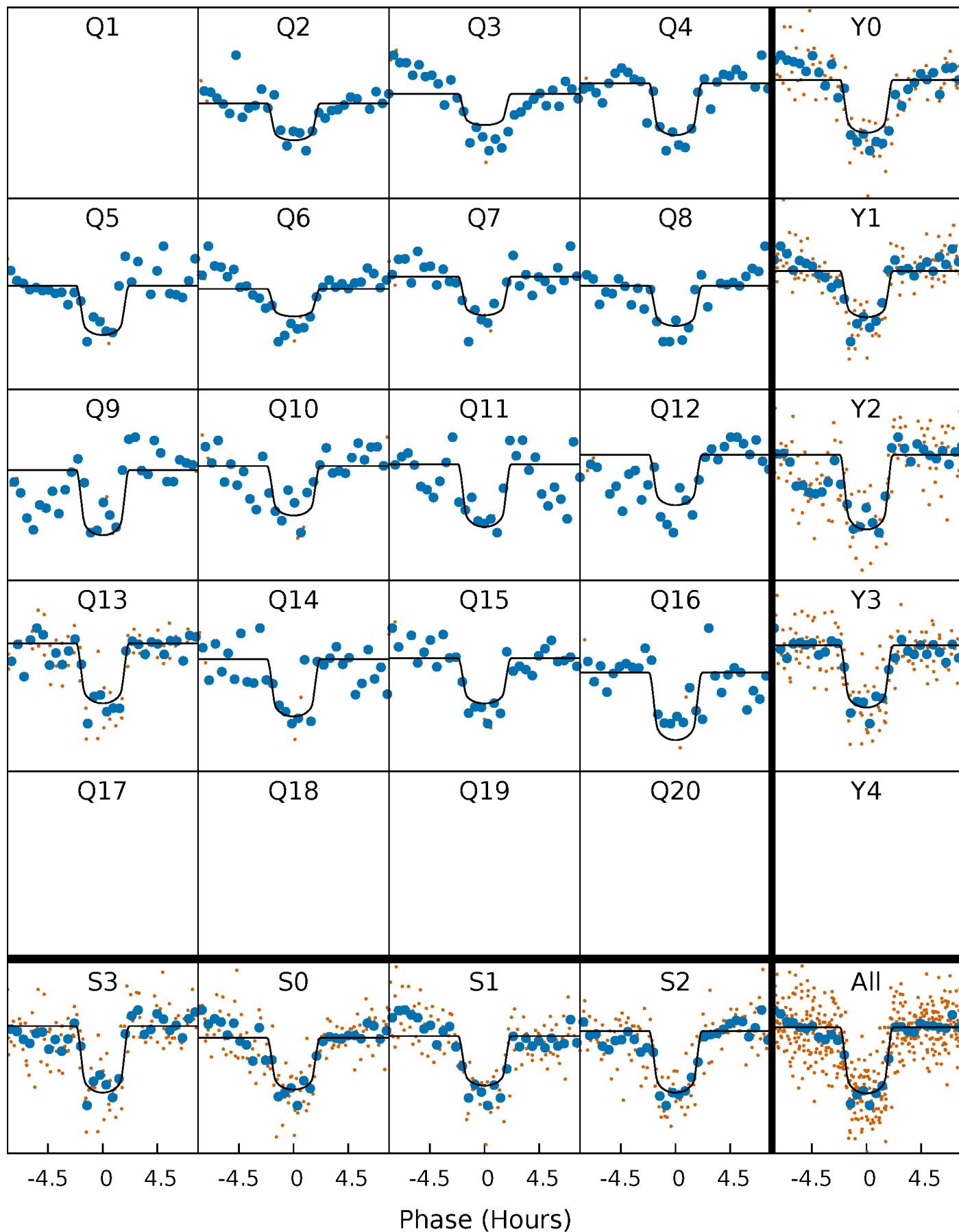
PDC Quarter-Phased Transit Curves

TCE 005385304-01 P= 78.732495 Days $T_0=168.732511$ (BKJD)



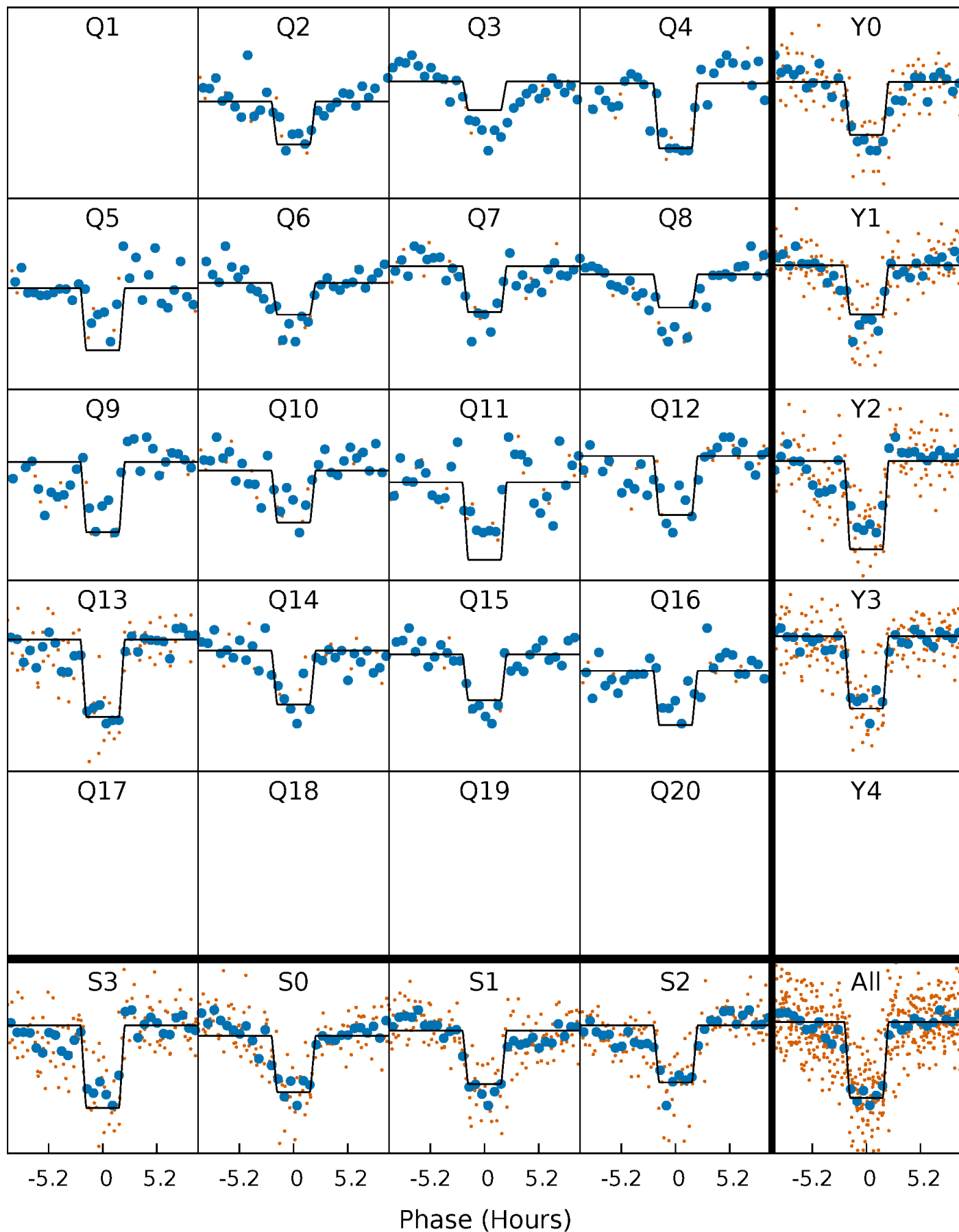
DV Quarter-Phased Transit Curves

TCE 005385304-01 P= 78.732495 Days $T_0=168.732511$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

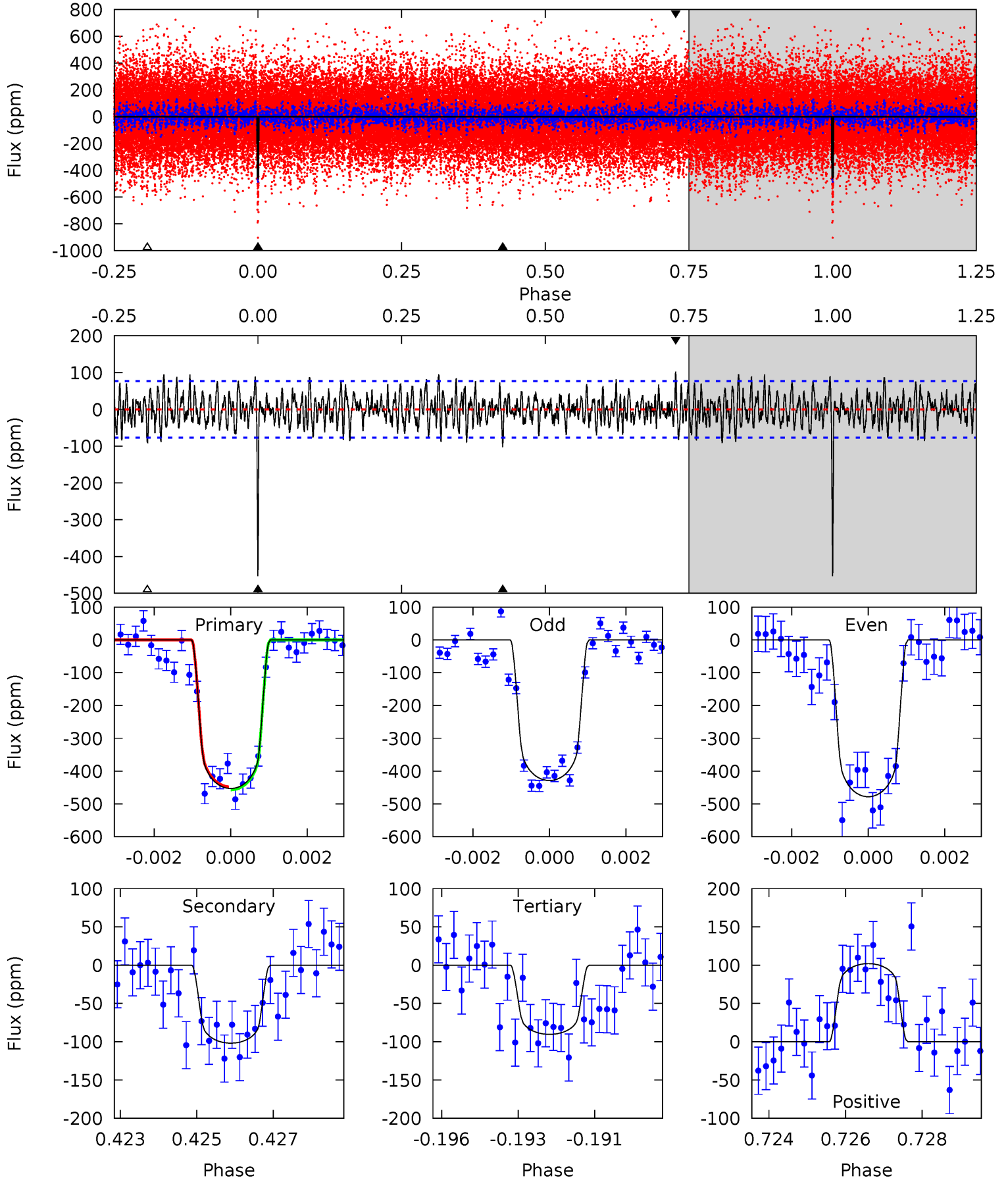
TCE 005385304-01 P= 78.732603 Days $T_0=168.729348$ (BKJD)



DV Model-Shift Uniqueness Test

005385304-01, P = 78.732495 Days, E = 90.000016 Days

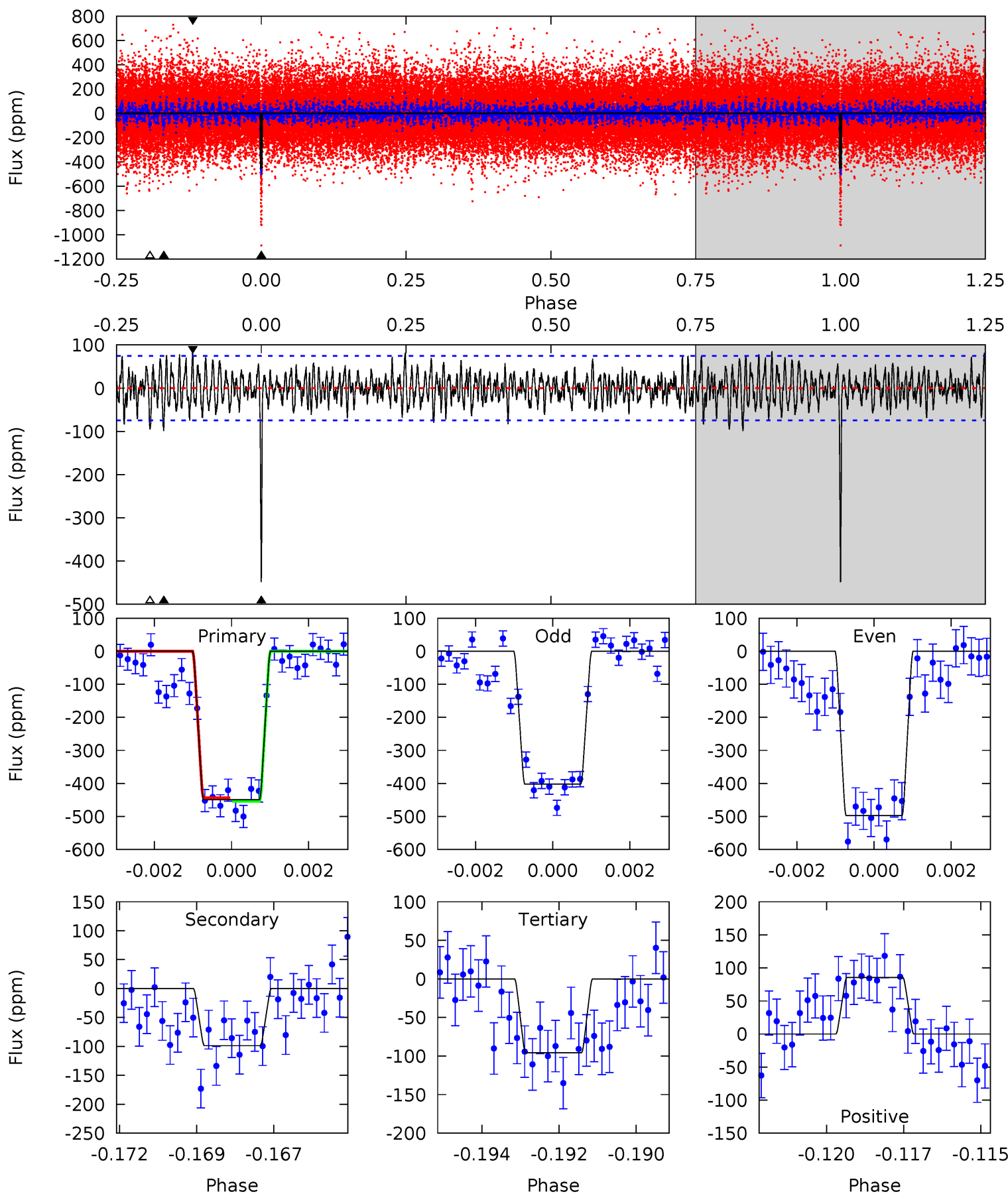
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.3	7.03	6.24	7.04	5.31	3.06	2.22	25.0	24.2	0.79	-0.01	1.72	1.02	0.18	0.31



Alt Model-Shift Uniqueness Test

005385304-01, P = 78.732603 Days, E = 89.996745 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.0	7.03	6.82	6.09	5.30	3.05	2.02	25.2	25.9	0.21	0.94	3.41	1.14	0.16	0.37



Stellar Parameters For KIC 005385304

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6715^{+179}_{-219}	$3.754^{+0.292}_{-0.097}$	$0.020^{+0.250}_{-0.300}$	$2.763^{+0.500}_{-0.928}$	$1.581^{+0.256}_{-0.256}$	$0.105^{+0.204}_{-0.031}$
	+3%/-3%	+8%/-3%	+1250%/-1500%	+18%/-34%	+16%/-16%	+193%/-30%
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 005385304-01 / KOI 2370.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-102 ± 14	$6.04^{+1.20}_{-1.20}$	1041^{+64}_{-87}	4764^{+349}_{-280}	274^{+157}_{-86}
Alt.	-99 ± 14	$6.10^{+1.24}_{-1.21}$	1036^{+66}_{-90}	4717^{+334}_{-317}	258^{+153}_{-82}

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

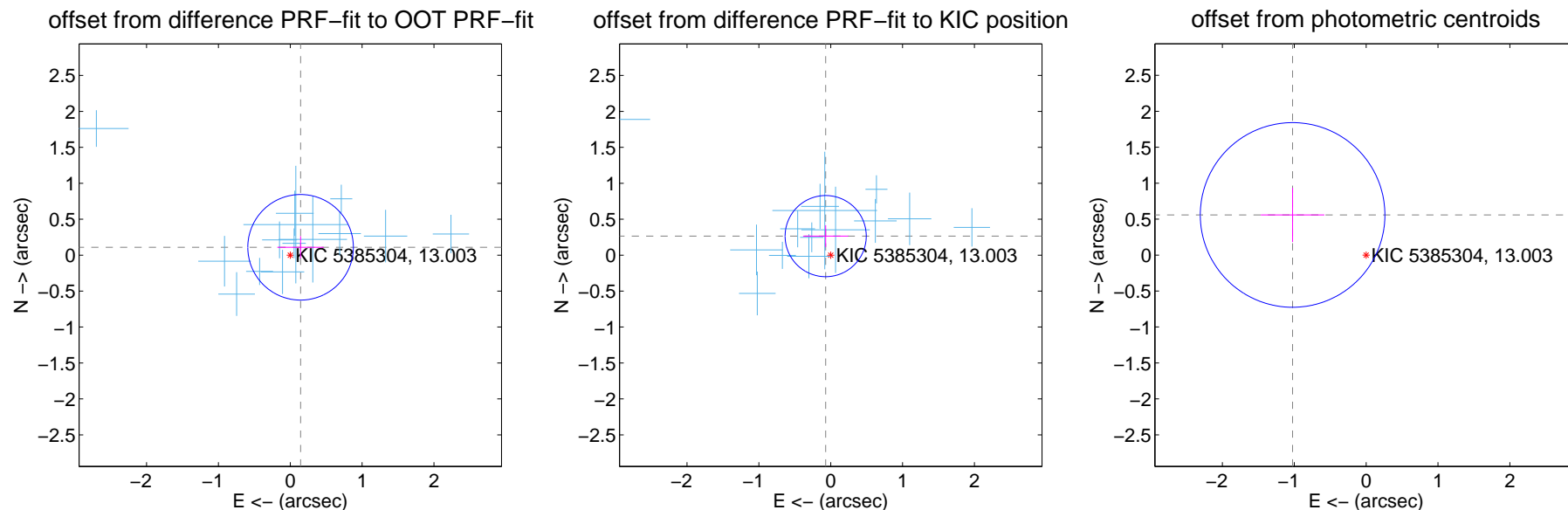
DV Centroid Data

Supplemental centroid analysis for 005385304-01. Kepler magnitude: 13.00. Transit SNR 16.91

There are 14 quarters with good PRF difference image offsets

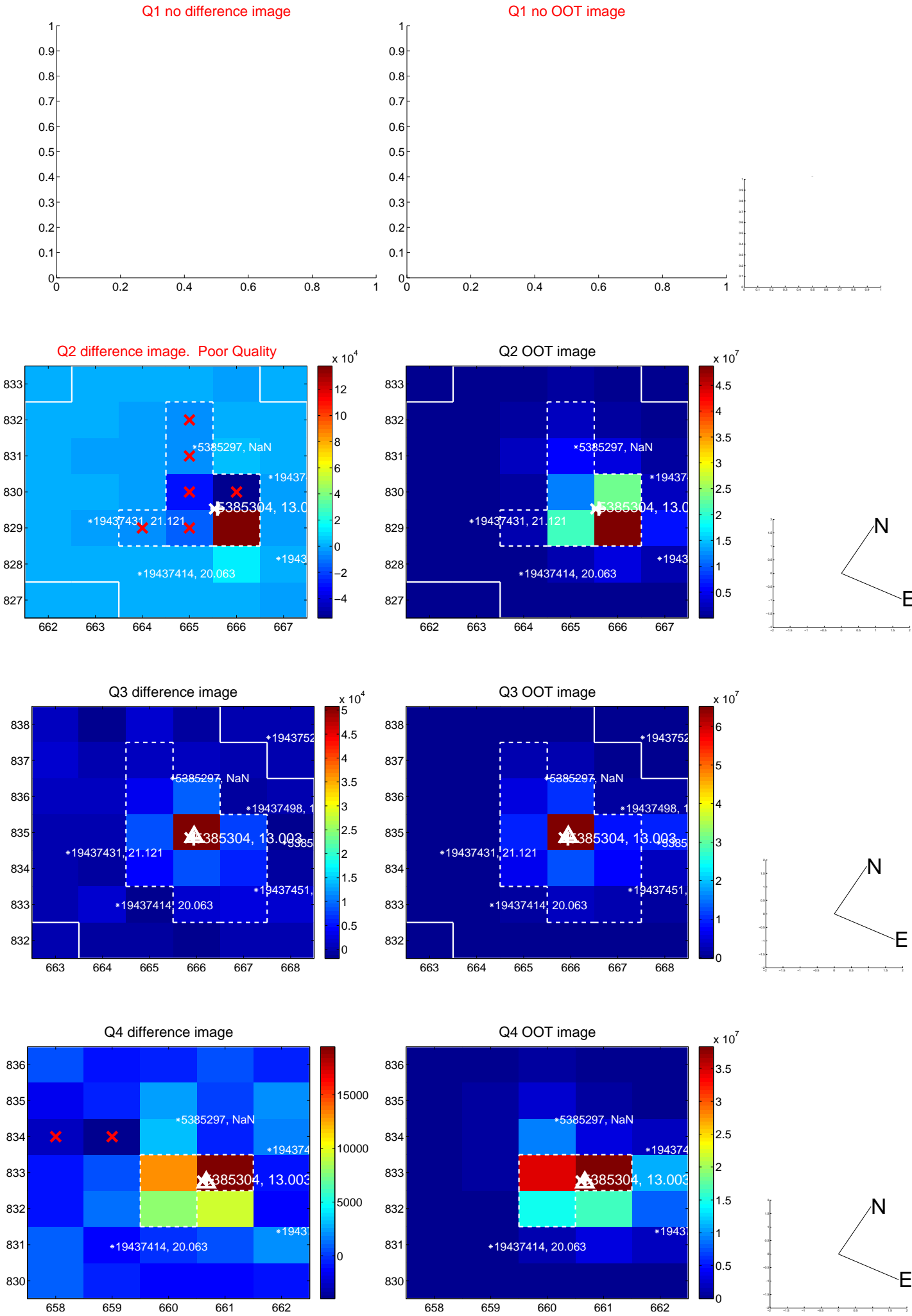
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.180 ± 0.245	0.74	-0.144 ± 0.323	0.109 ± 0.155
PRF-fit source offset from KIC position	0.274 ± 0.188	1.46	0.070 ± 0.315	0.265 ± 0.152
photometric centroid source offset	1.17 ± 0.43	2.72	1.02 ± 0.44	0.56 ± 0.38

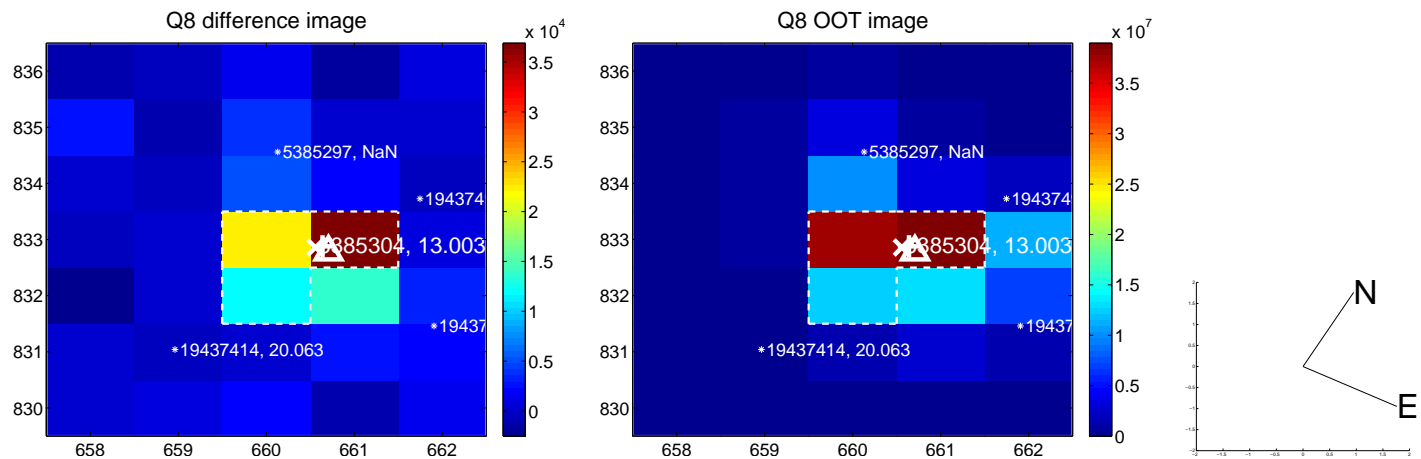
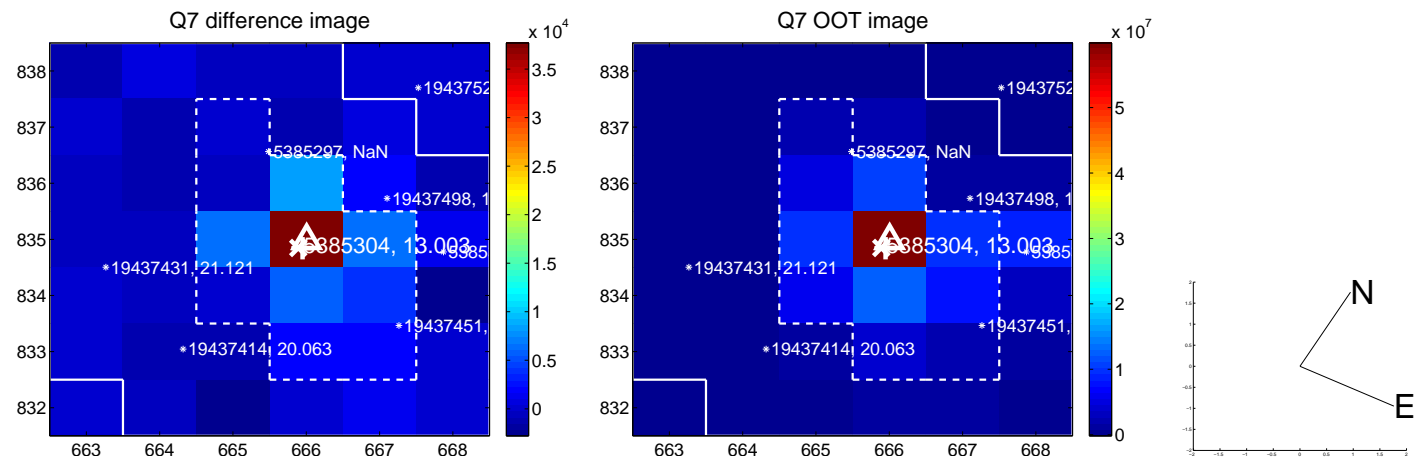
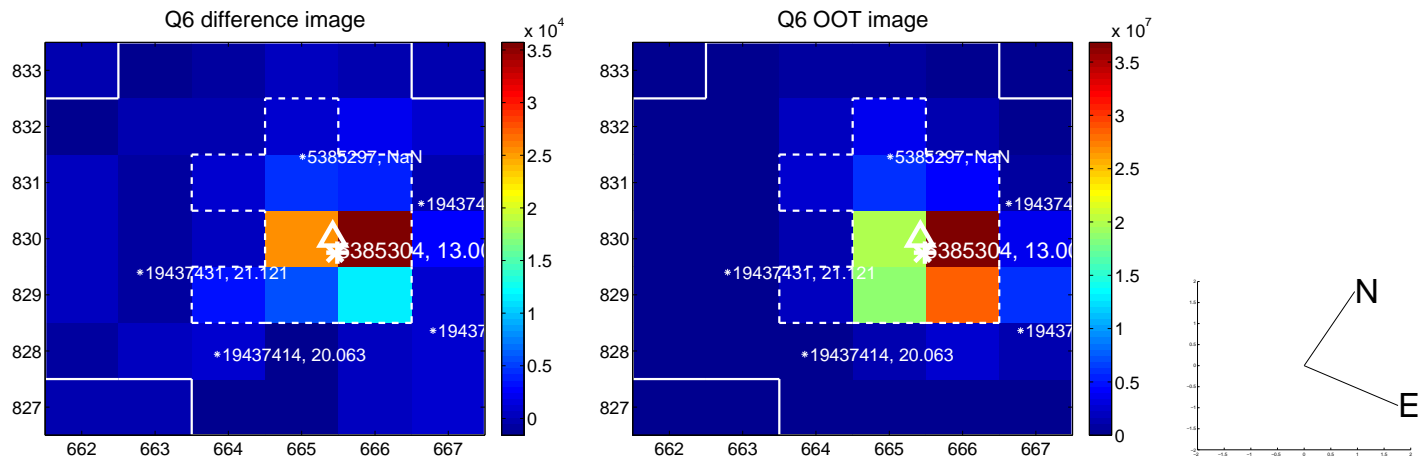
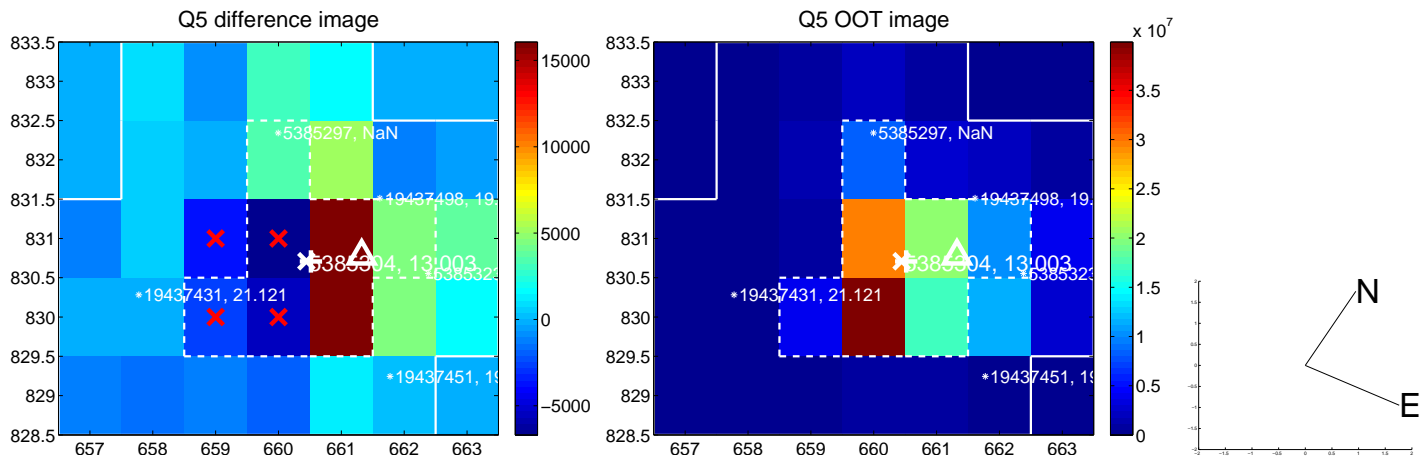


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

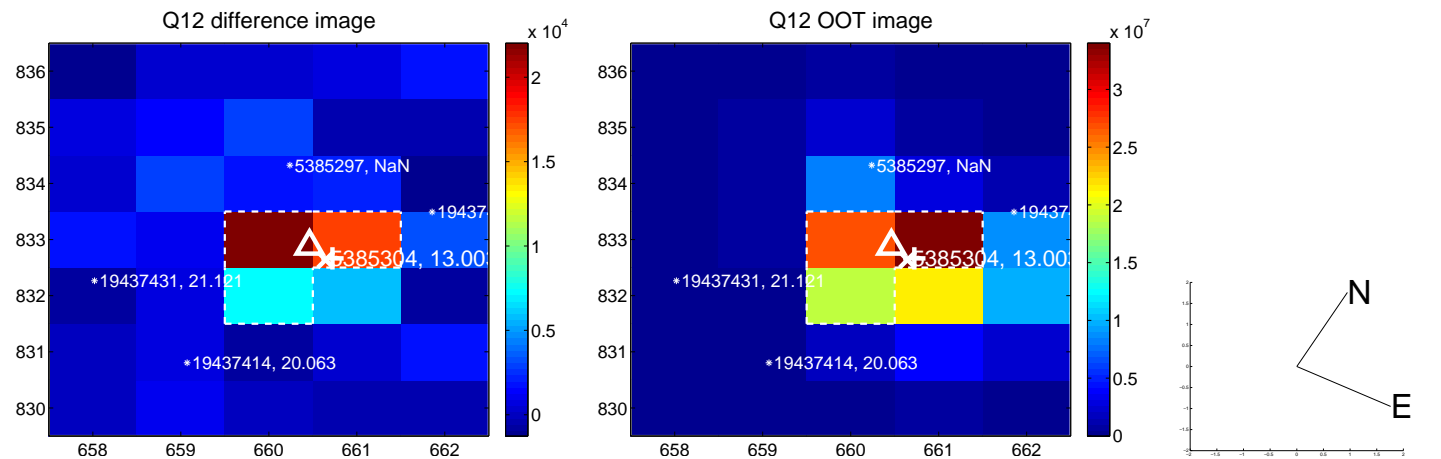
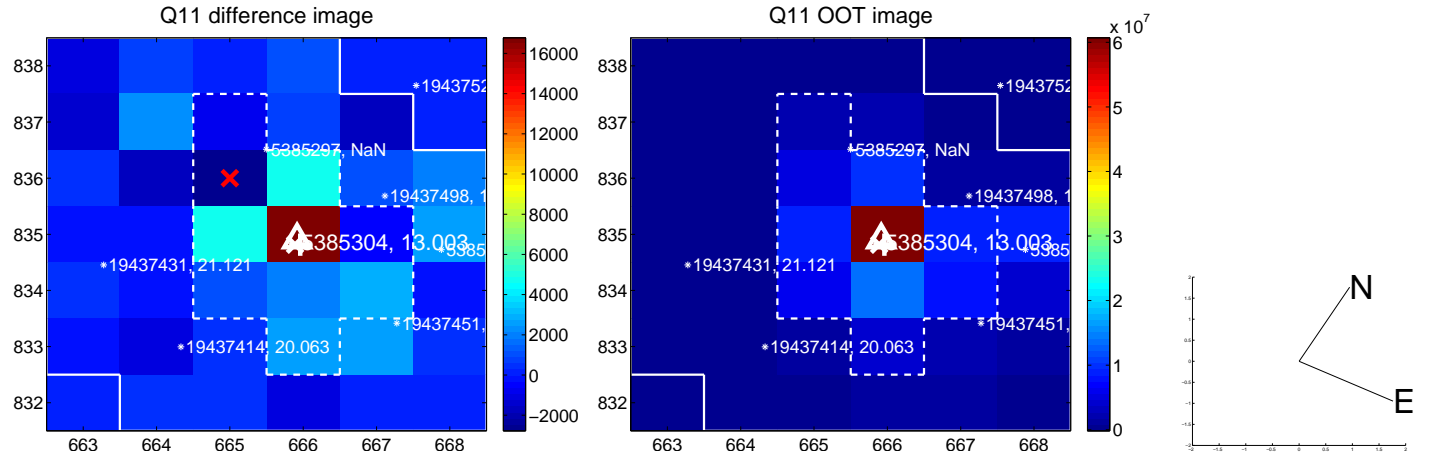
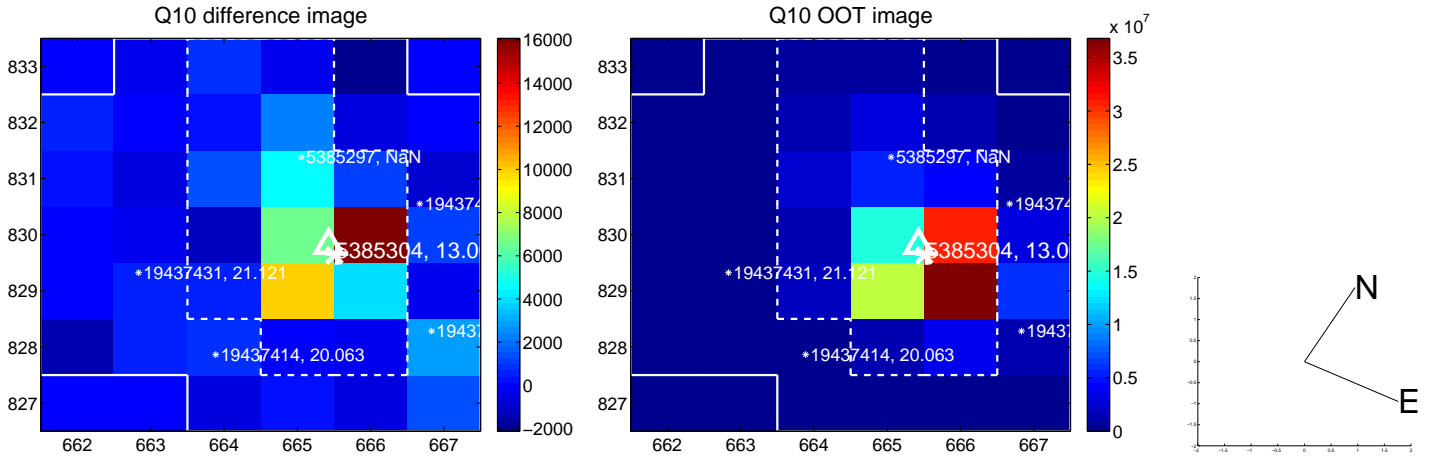
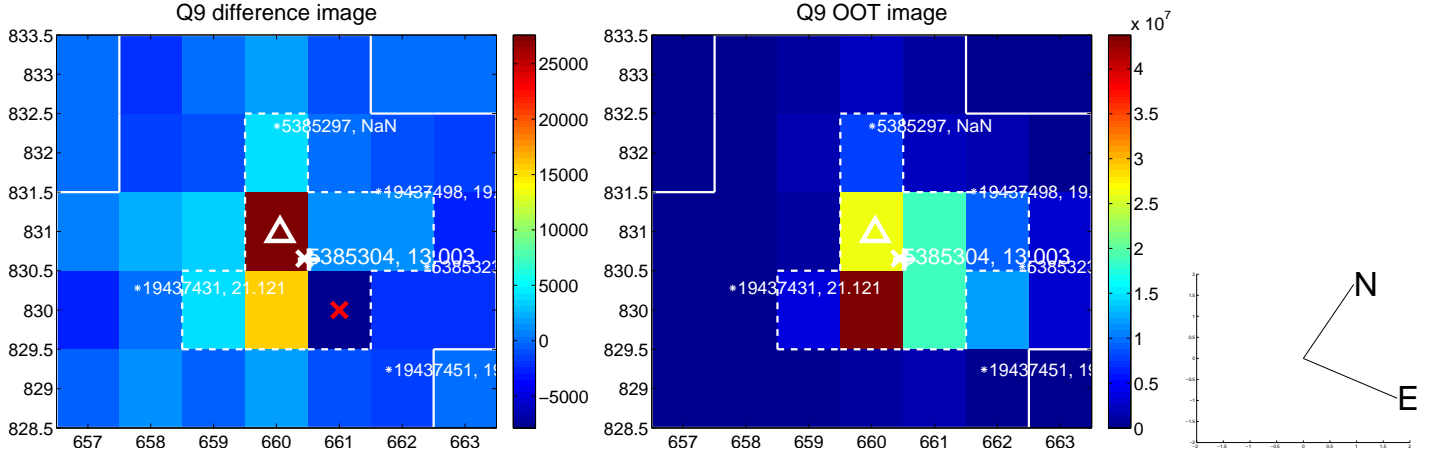
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



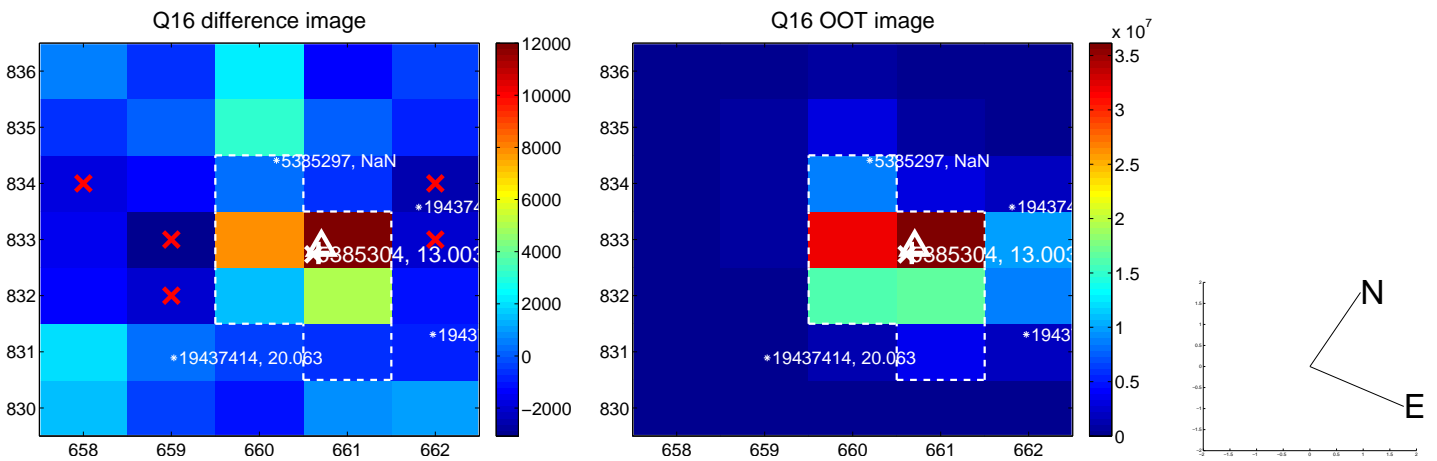
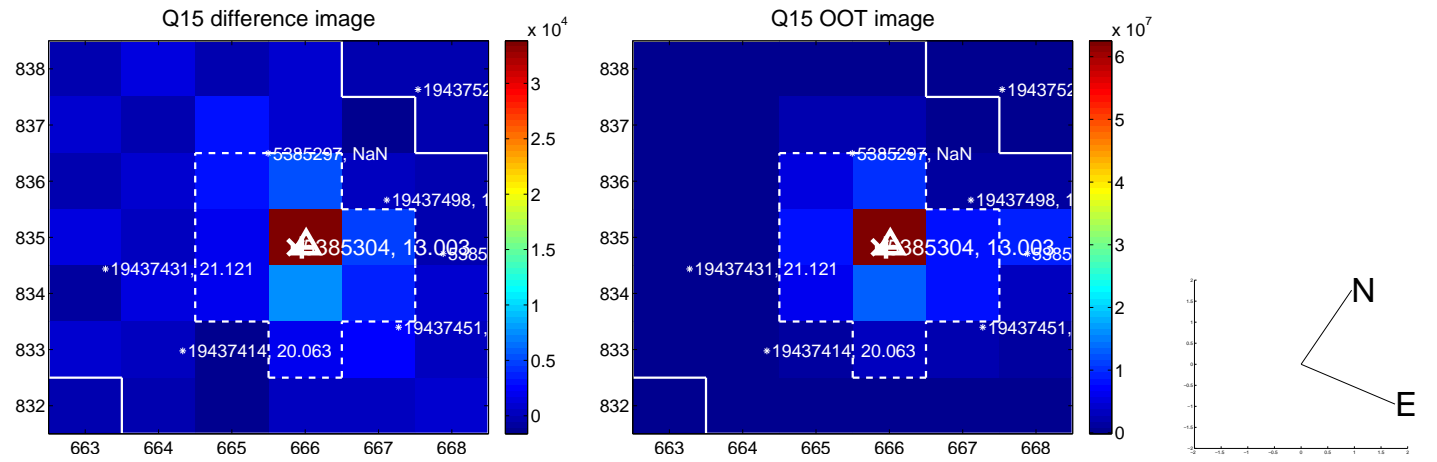
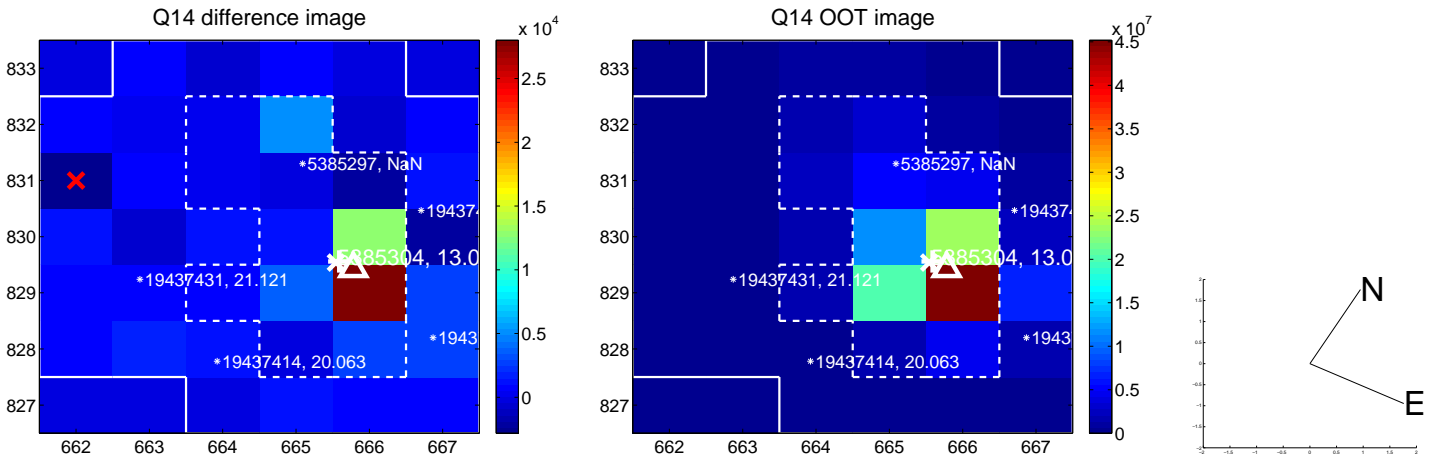
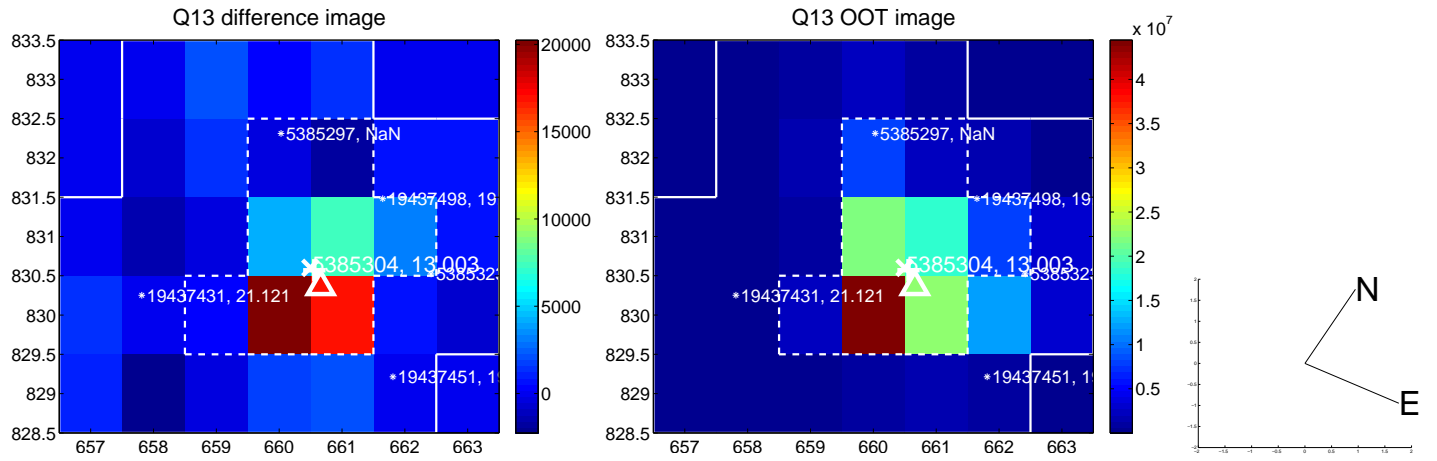
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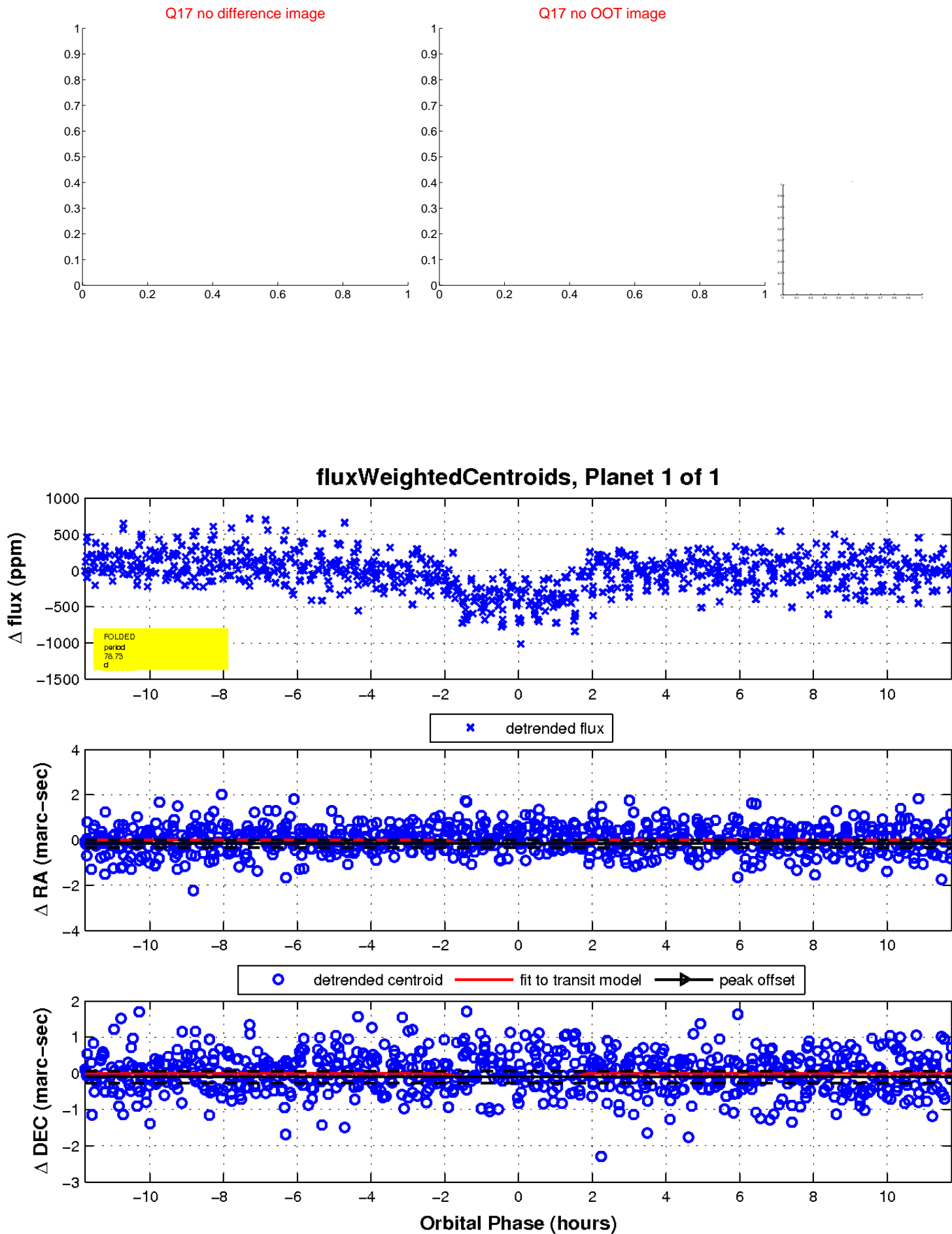
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UKIRT Image

Declination

