

KIC 006387557

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})
006387557-01	OBS	5279.01	103.722121	176.072640	300.1	6.260	7.9	8.5	1.14	5784	2.21	6.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006387557-01	OBS	PC	0.77	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.

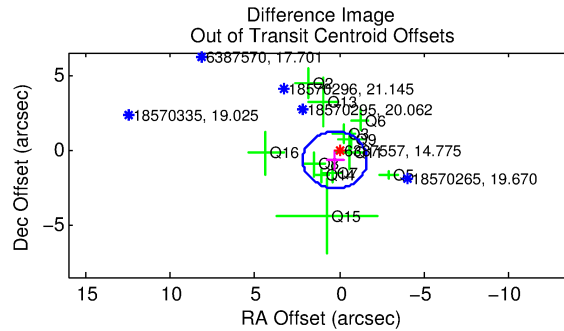
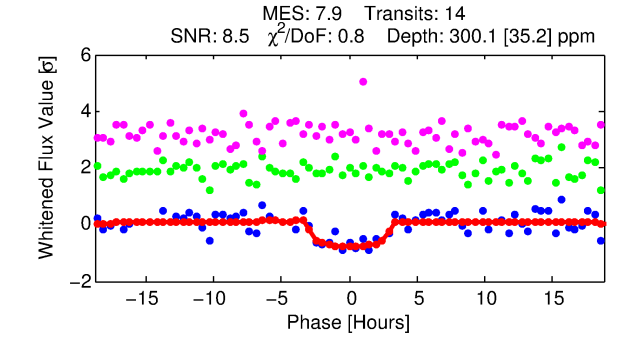
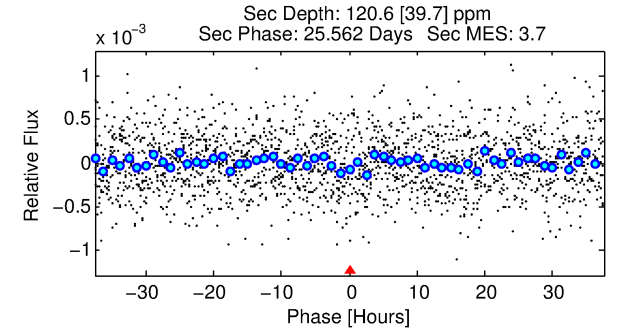
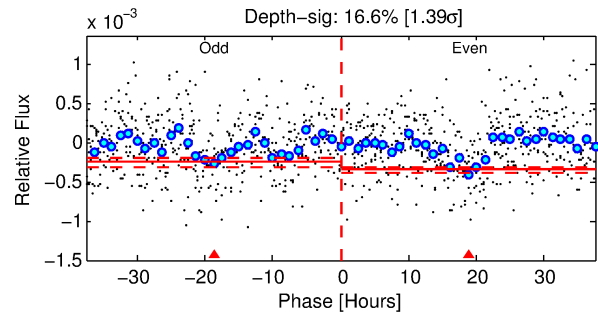
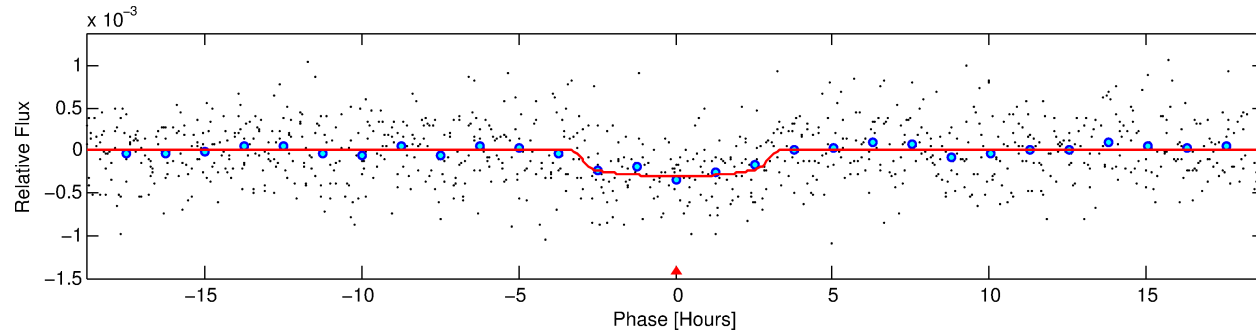
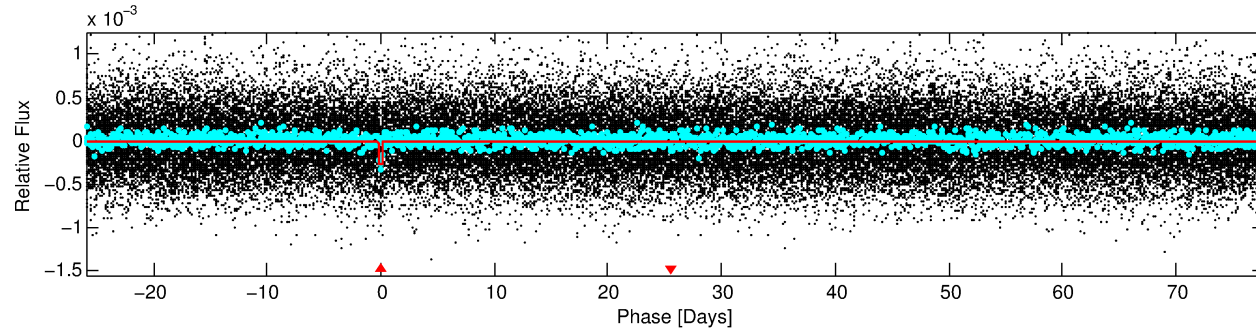
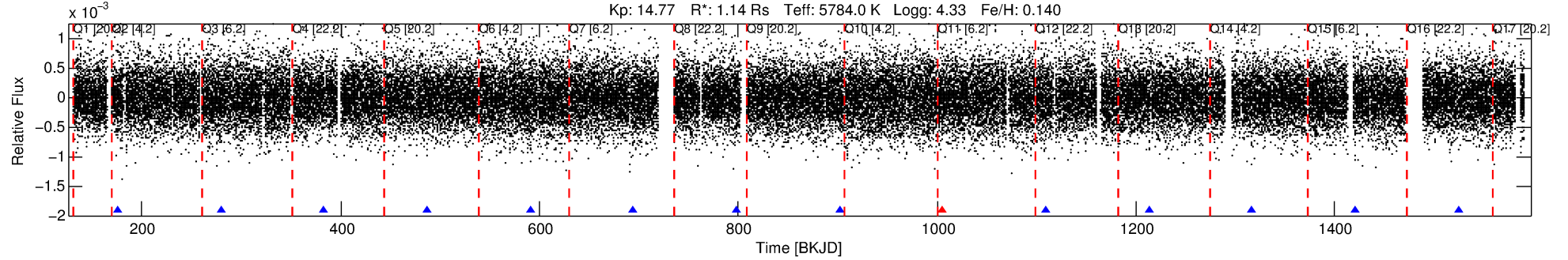
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006387557-01

No Significant Match Found

DV One-Page Summary

KIC: 6387557 Candidate: 1 of 1 Period: 103.722 d
KOI: K05279.01 Corr: 0.990



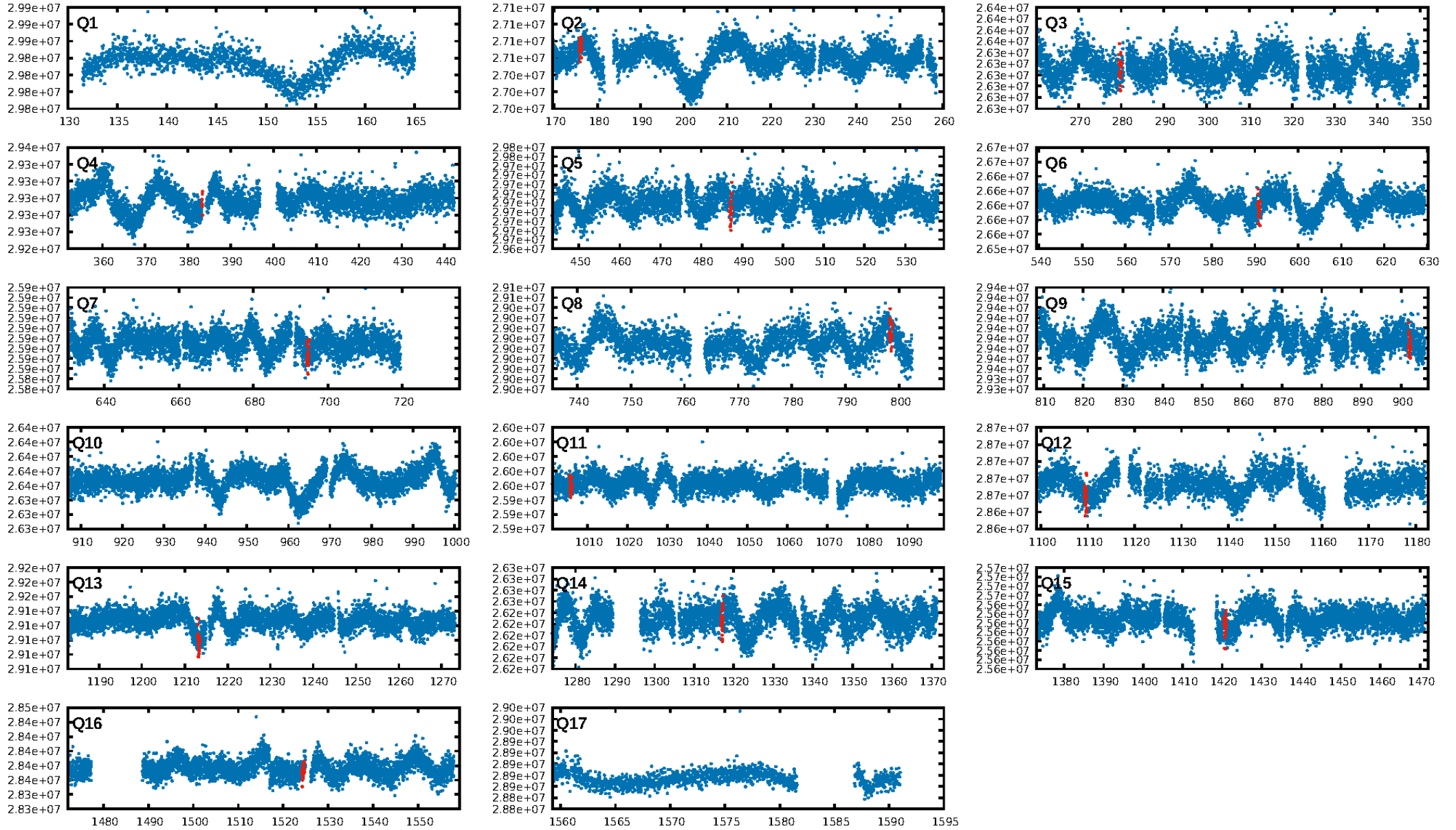
DV Fit Results:

Period = 103.72212 [0.00167] d
Epoch = 176.0726 [0.0124] BKJD
Rp/R* = 0.0177 [0.0117]
a/R* = 78.28 [232.17]
b = 0.81 [1.29]
Seff = 6.93 [1.49]
Teq = 414 [22] K
Rp = 2.21 [1.51] Re
a = 0.4348 [0.0610] AU
Ag = 2573.47 [3559.14] [0.72σ]
Teffp = 4556 [1559] K [2.66σ]

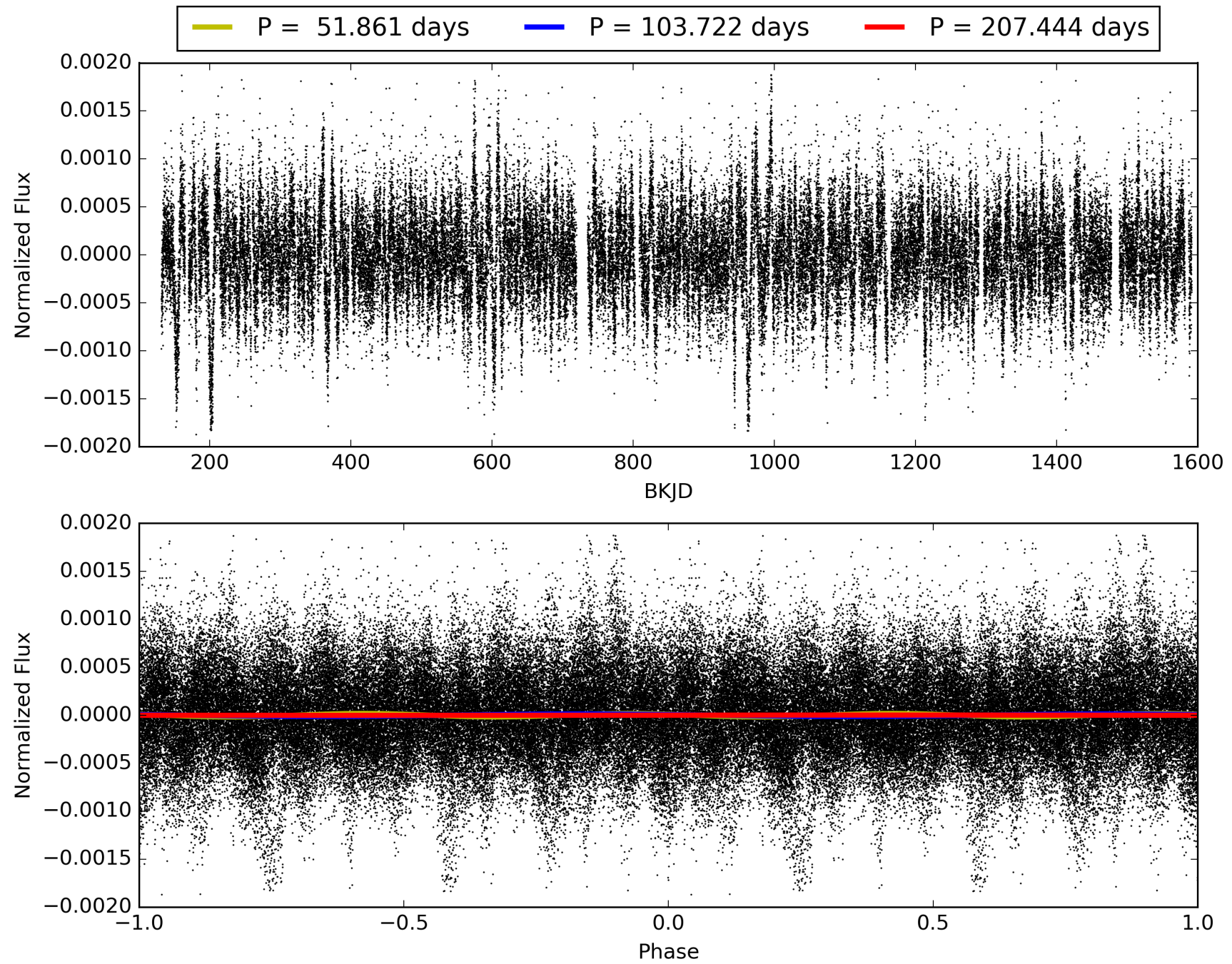
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 53.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.26e-13
RollingBand-fgt: 0.93 [13/14]
GhostDiagnostic-chr: 2.887
Centroid-sig: 0.2%
Centroid-so: 2.750 arcsec [1.78σ]
OotOffset-rm: 0.729 arcsec [1.15σ]
KicOffset-rm: 0.728 arcsec [1.07σ]
OotOffset-st: 3/4/2/3 [12]
KicOffset-st: 3/4/2/3 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006387557-01, PDC Light Curves

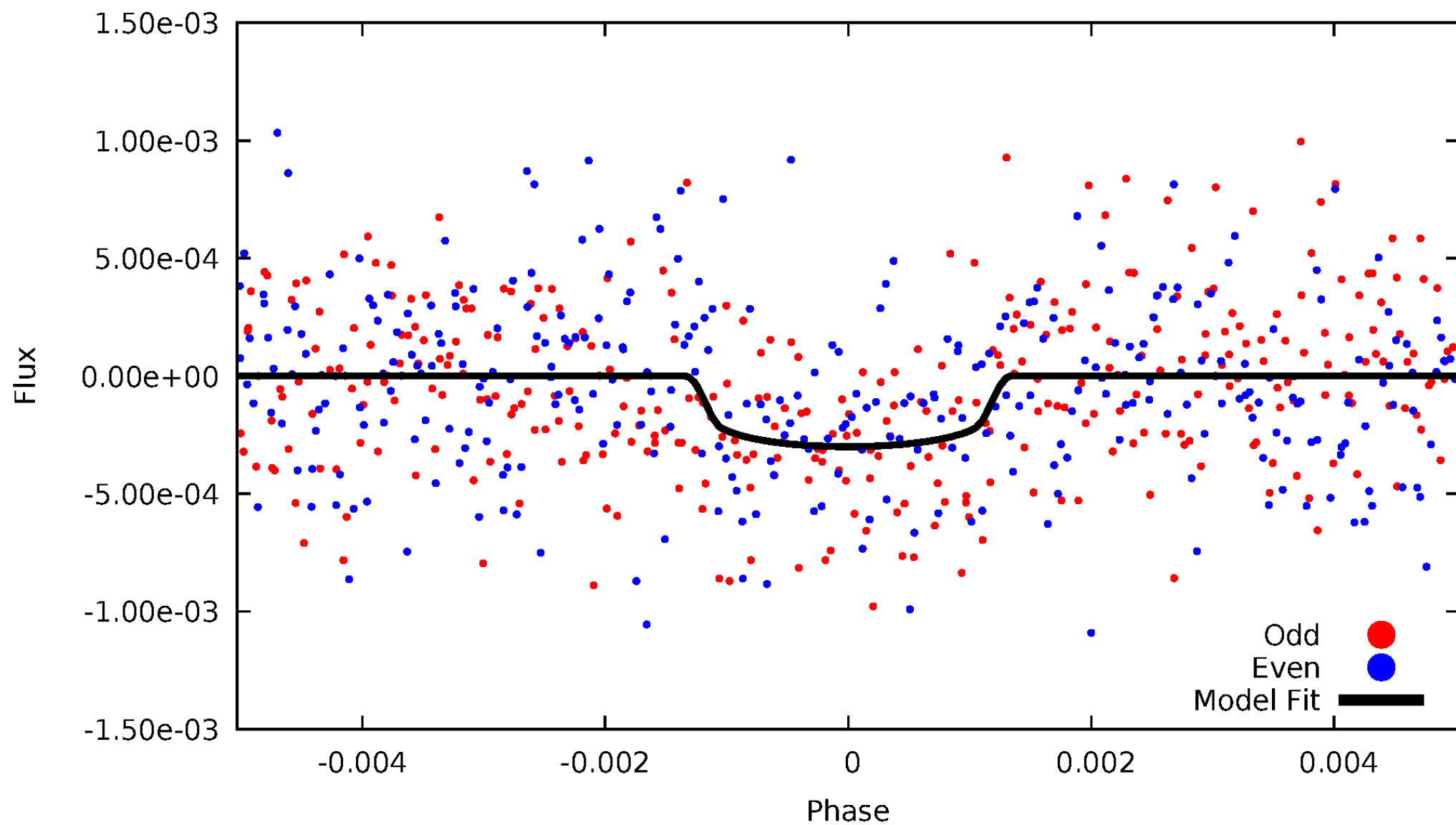


TCE 006387557-01



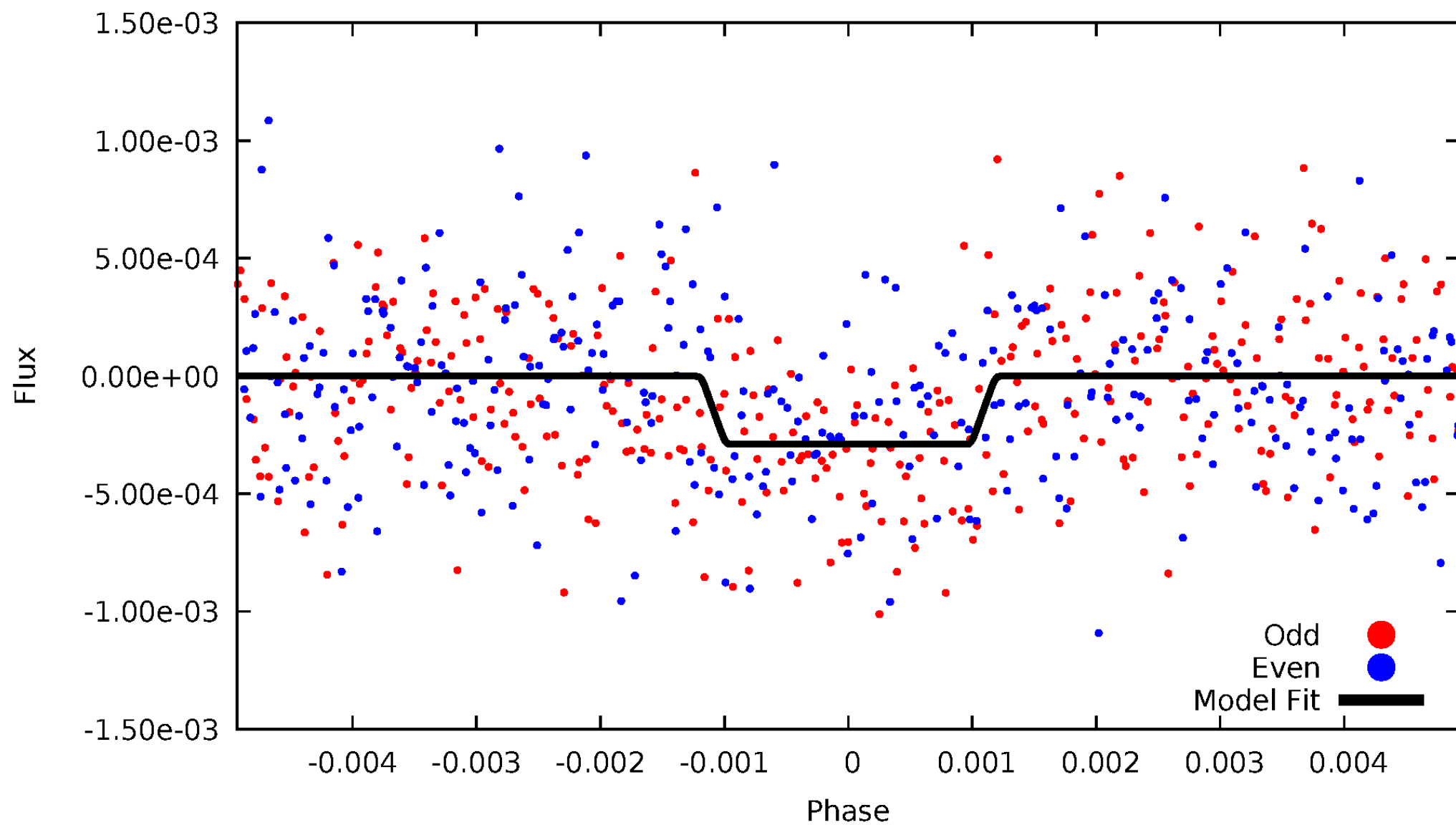
DV Odd/Even

TCE 006387557-01



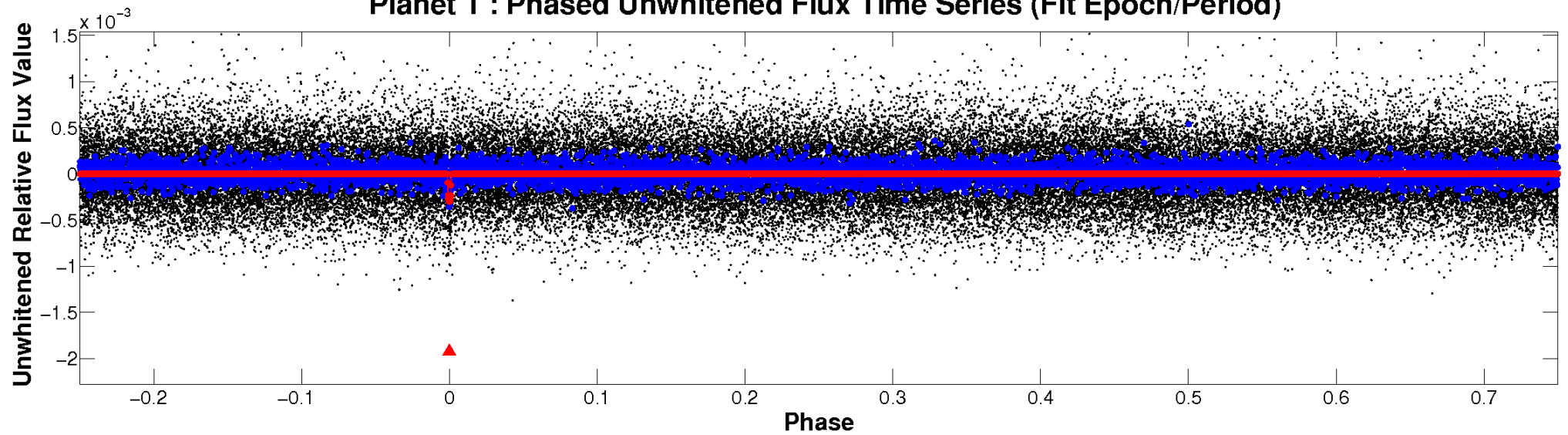
ALT Odd/Even

TCE 006387557-01

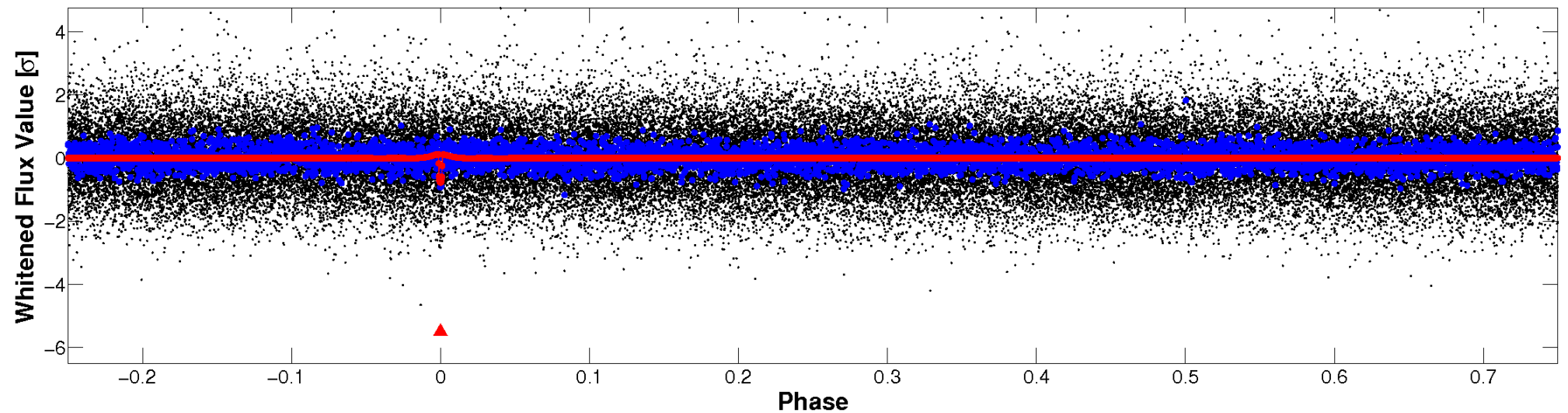


Non-Whitened Vs. Whitened Light Curve

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

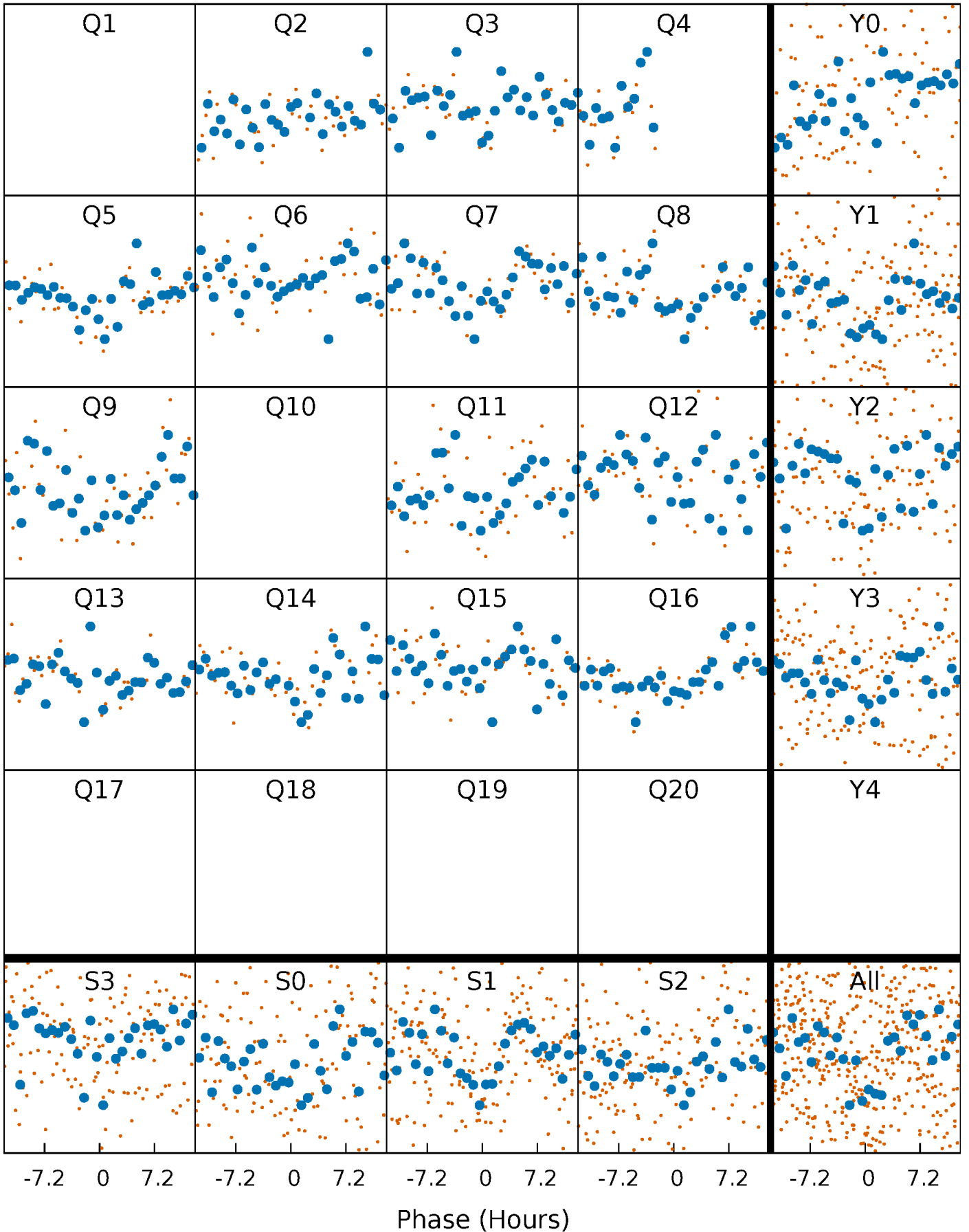


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



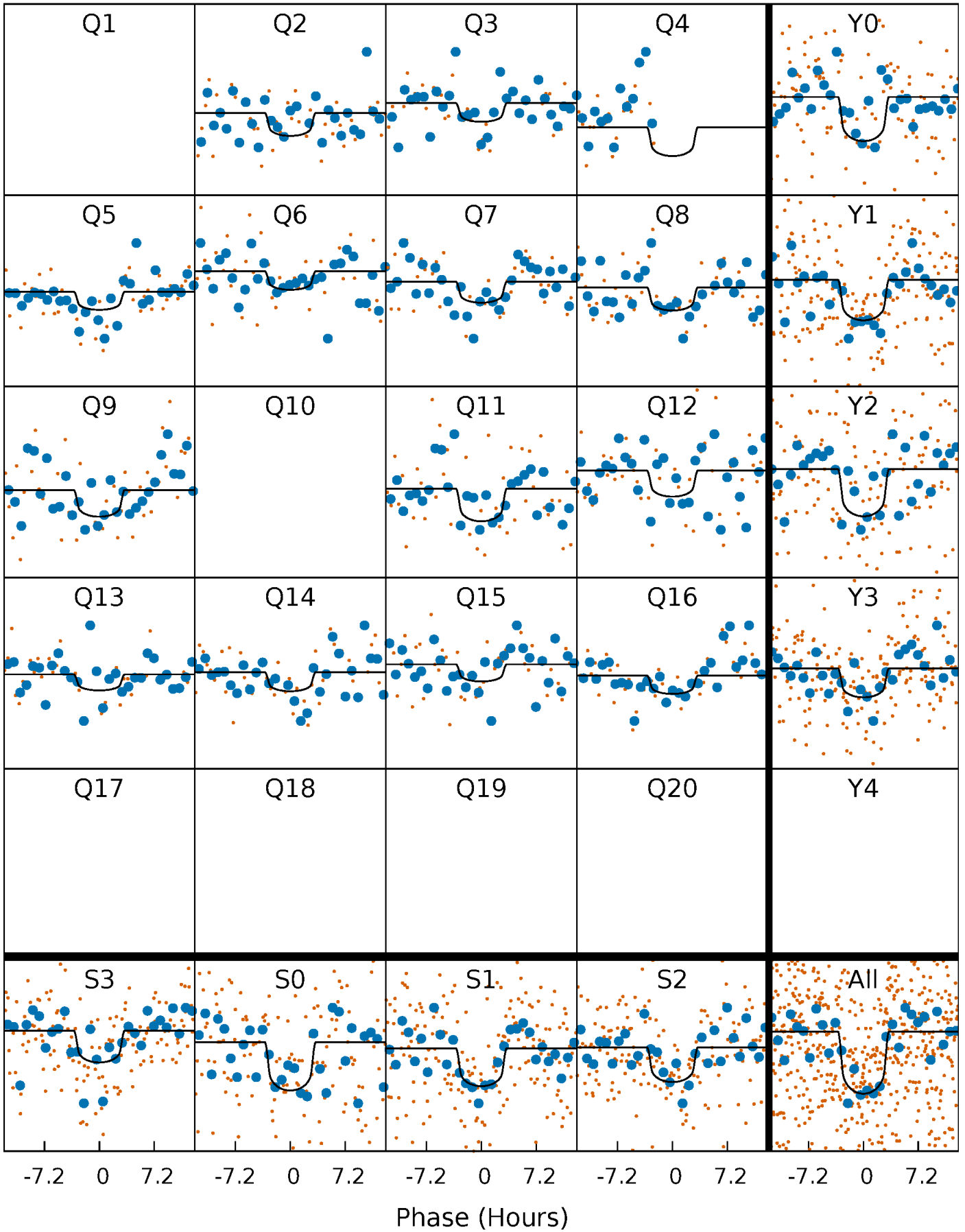
PDC Quarter-Phased Transit Curves

TCE 006387557-01 P=103.722121 Days $T_0=176.072640$ (BKJD)



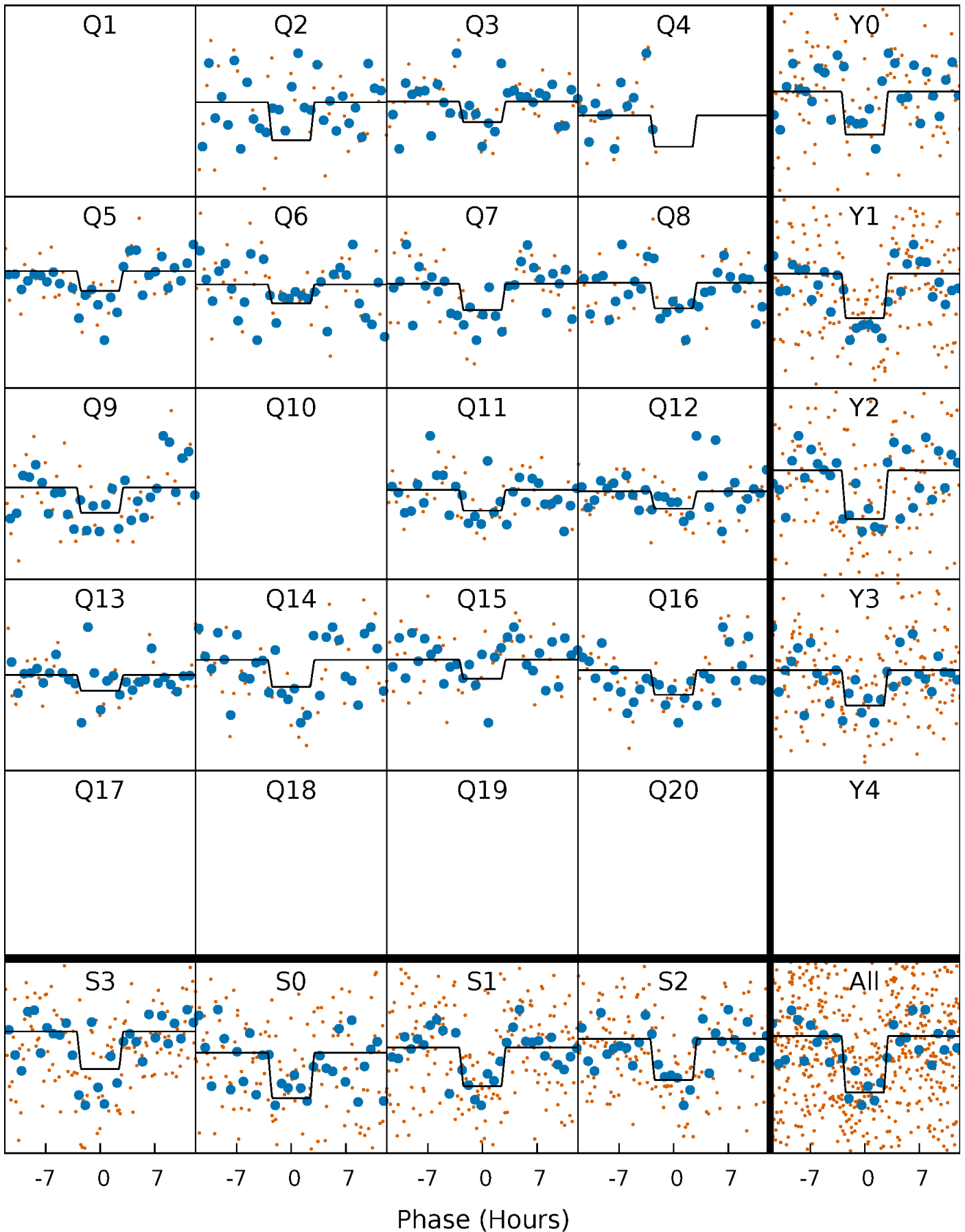
DV Quarter-Phased Transit Curves

TCE 006387557-01 P=103.722121 Days $T_0=176.072640$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

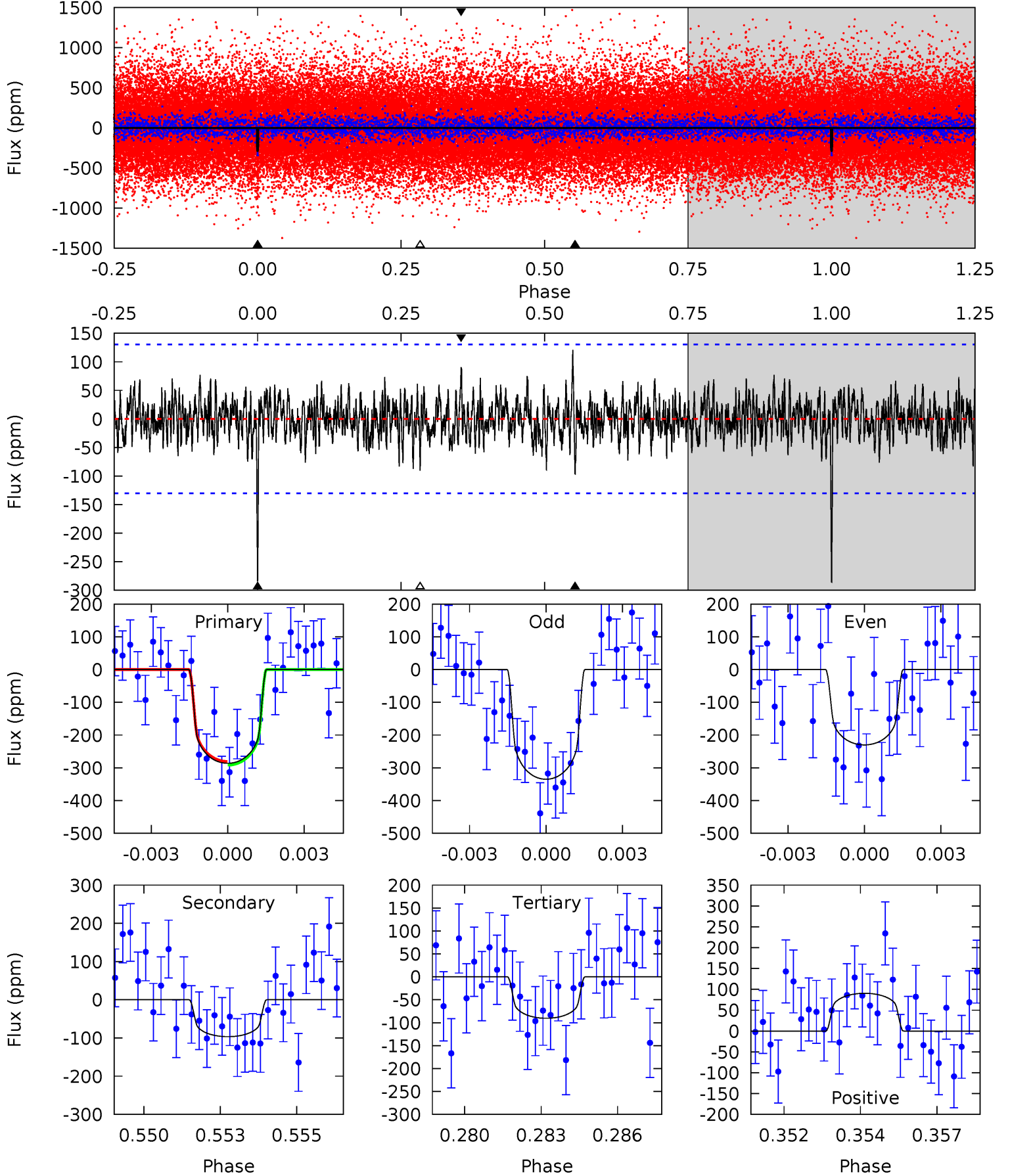
TCE 006387557-01 P=103.724620 Days $T_0=176.060418$ (BKJD)



DV Model-Shift Uniqueness Test

006387557-01, $P = 103.722121$ Days, $E = 72.350519$ Days

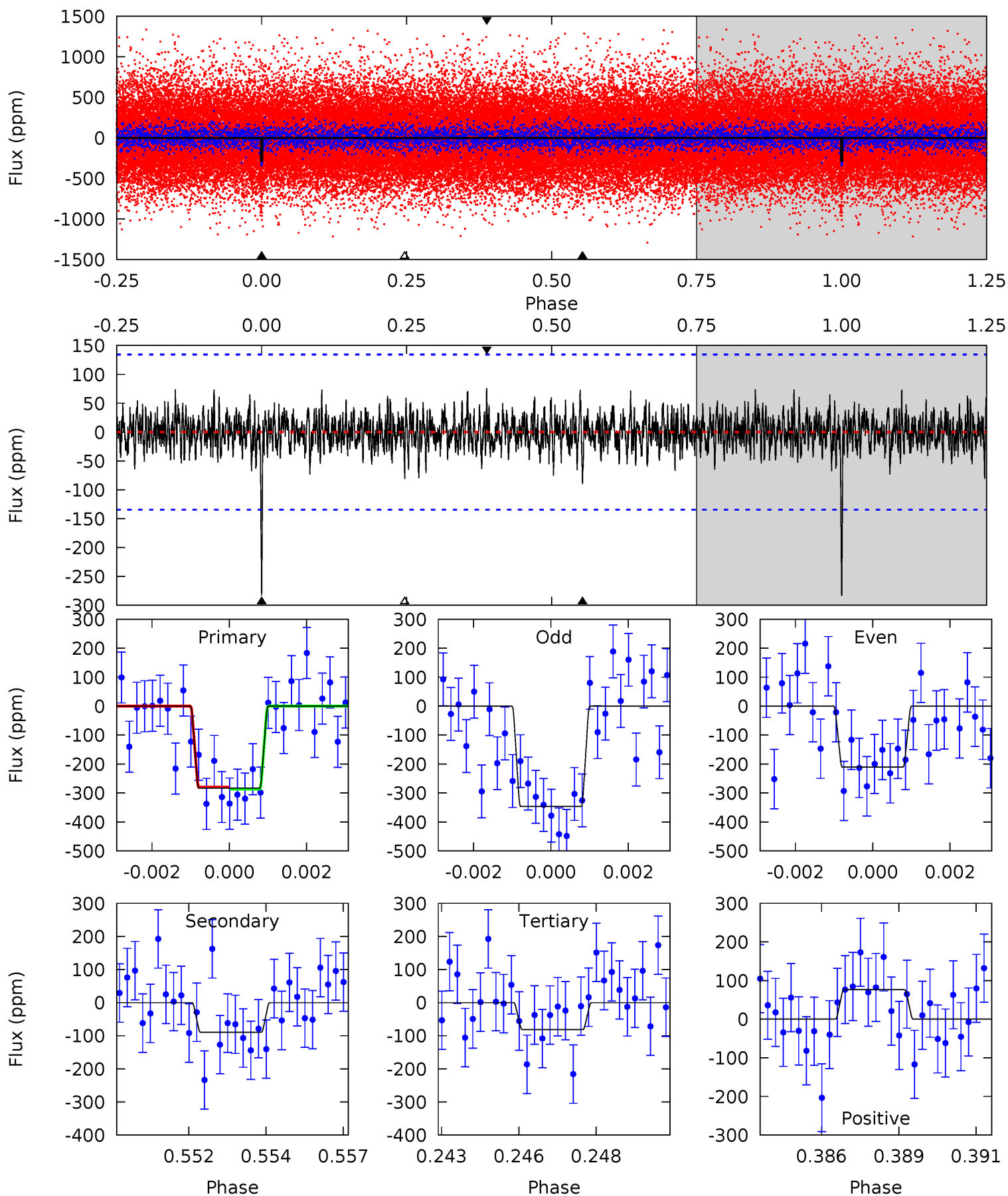
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	3.91	3.66	3.66	5.28	3.01	1.13	7.93	7.93	0.25	0.25	2.13	1.08	0.30	0.22



Alt Model-Shift Uniqueness Test

006387557-01, P = 103.724620 Days, E = 72.335798 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	3.51	3.19	3.00	5.29	3.03	0.92	7.96	8.15	0.32	0.52	2.68	1.06	0.21	0.13



Stellar Parameters For KIC 006387557

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5784^{+78}_{-78}	$4.330^{+0.115}_{-0.115}$	$0.140^{+0.150}_{-0.150}$	$1.143^{+0.187}_{-0.136}$	$1.019^{+0.073}_{-0.059}$	$0.961^{+0.462}_{-0.337}$
	+1%/-1%	+3%/-3%	+107%/-107%	+16%/-12%	+7%/-6%	+48%/-35%
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 006387557-01 / KOI 5279.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-97 ± 25	$2.42^{+1.48}_{-1.39}$	576^{+25}_{-21}	4330^{+1862}_{-685}	1718^{+7449}_{-1104}
Alt.	-89 ± 25	$2.28^{+1.53}_{-1.22}$	577^{+27}_{-22}	4357^{+1738}_{-772}	1790^{+6439}_{-1217}

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

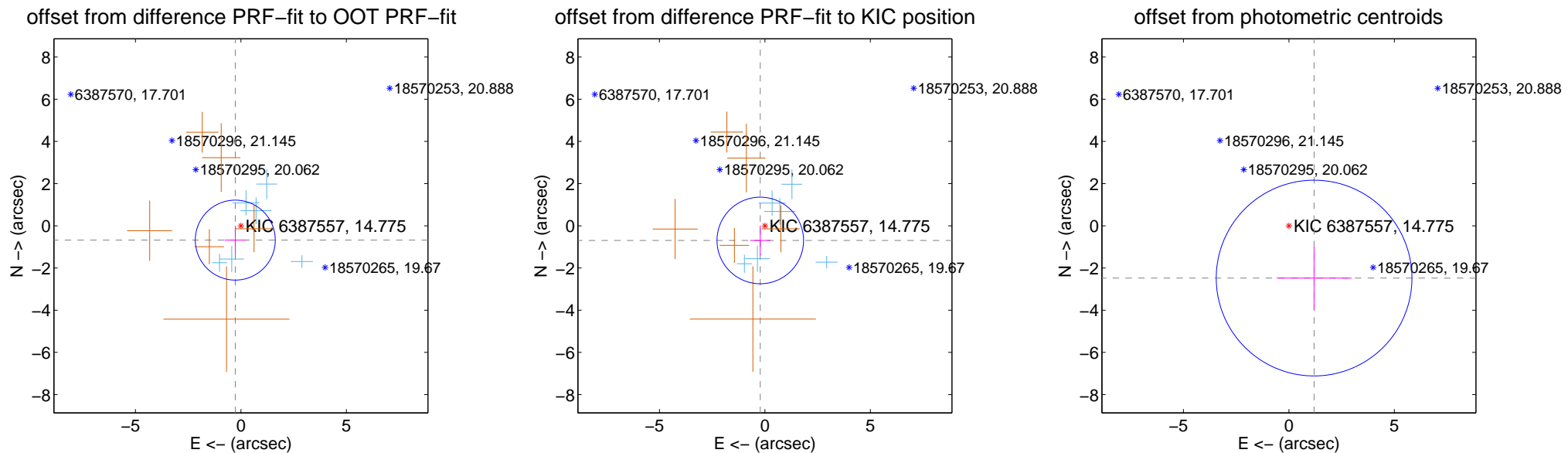
DV Centroid Data

Supplemental centroid analysis for 006387557-01. Kepler magnitude: 14.78. Transit SNR 8.50

There are 6 quarters with good PRF difference image offsets

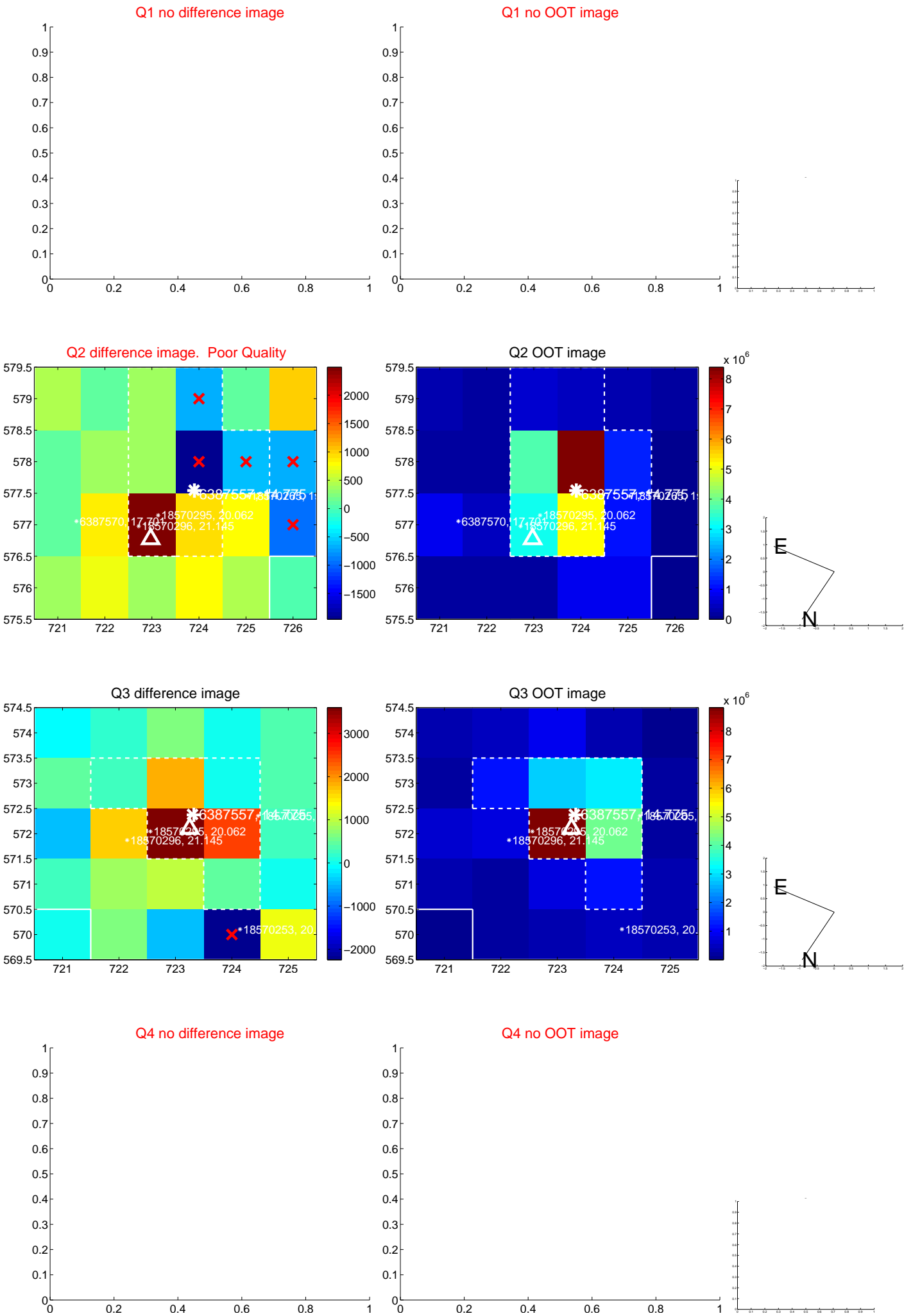
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.729 ± 0.632	1.15	0.266 ± 0.503	-0.678 ± 0.675
PRF-fit source offset from KIC position	0.728 ± 0.684	1.07	0.219 ± 0.480	-0.695 ± 0.708
photometric centroid source offset	2.75 ± 1.55	1.78	-1.19 ± 1.77	-2.48 ± 1.49

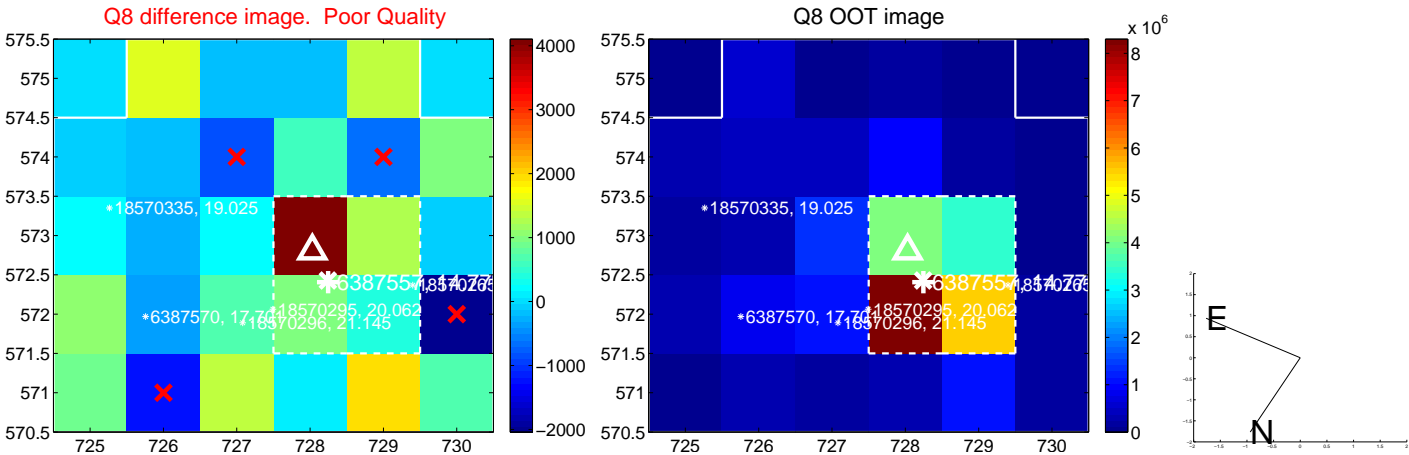
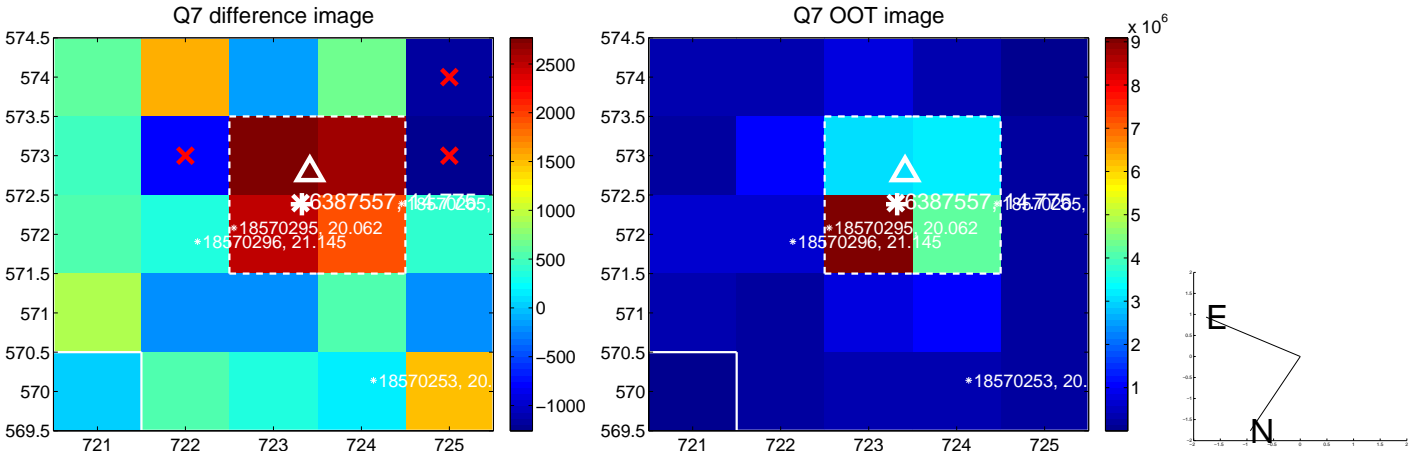
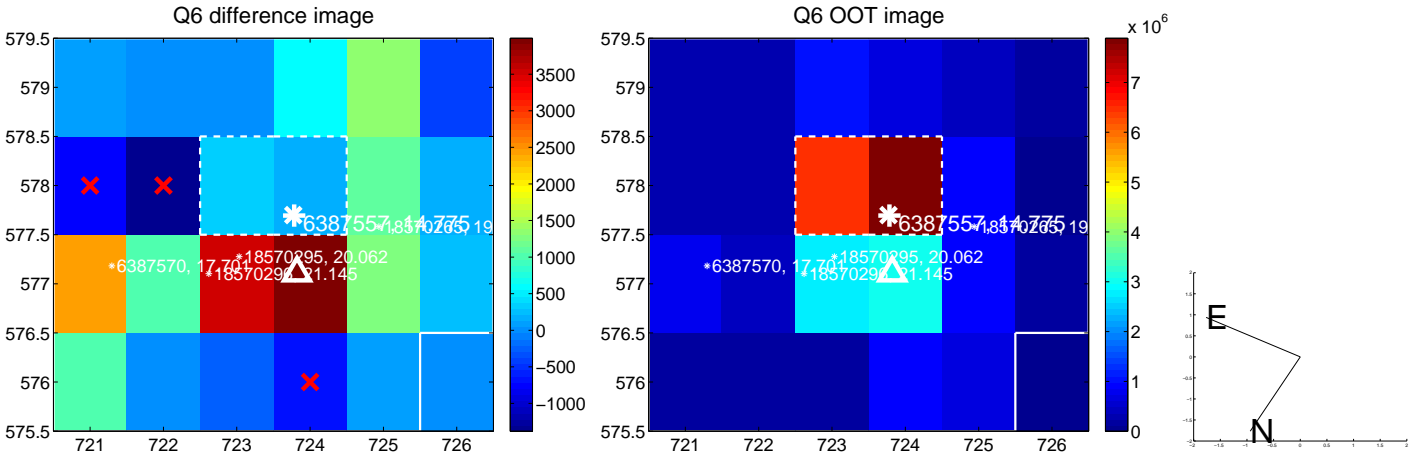
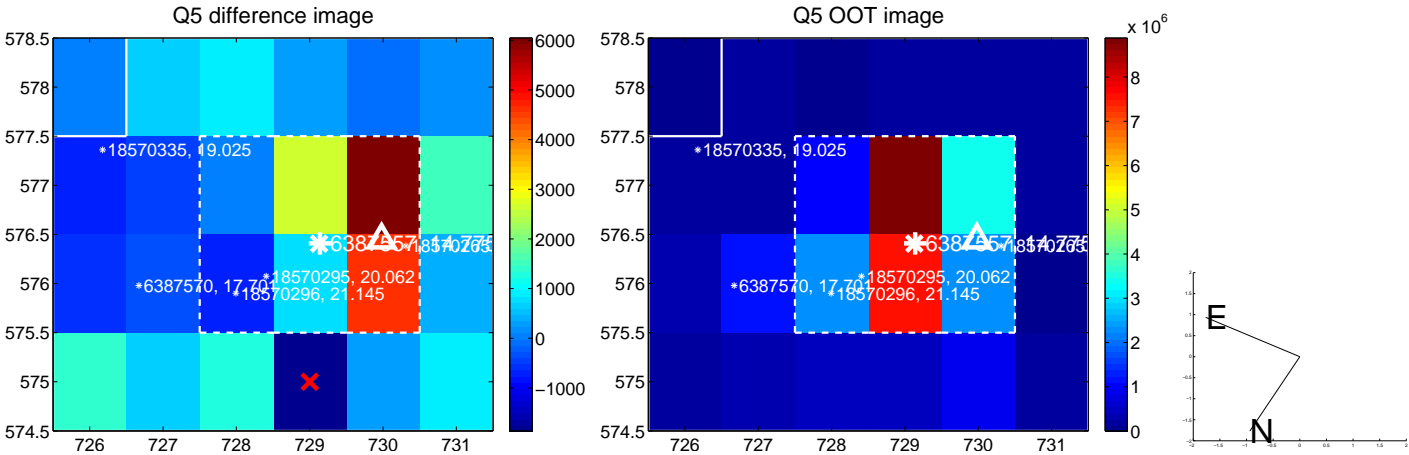


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

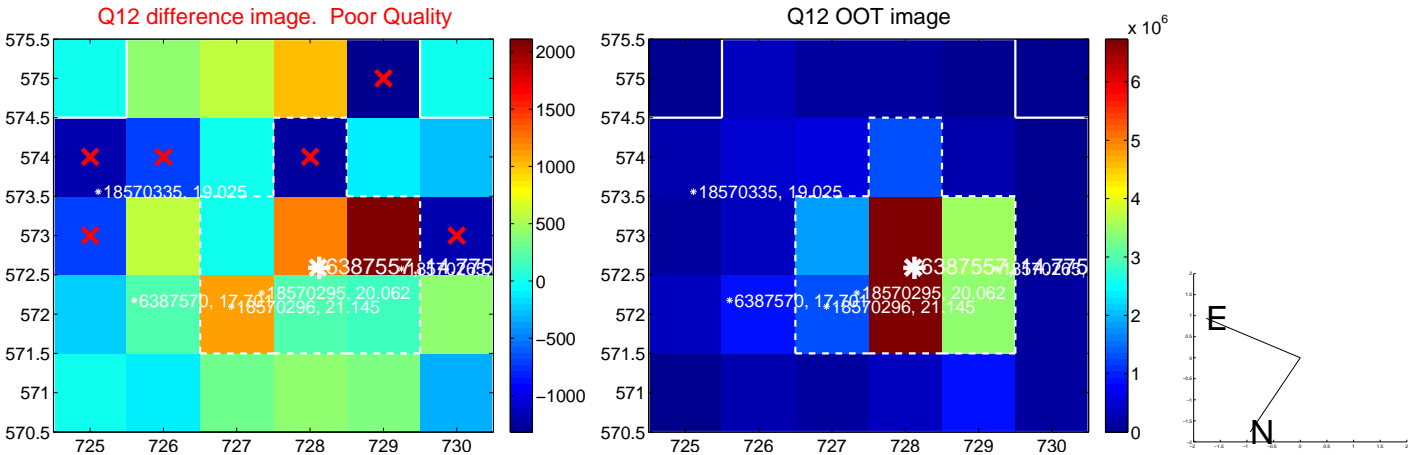
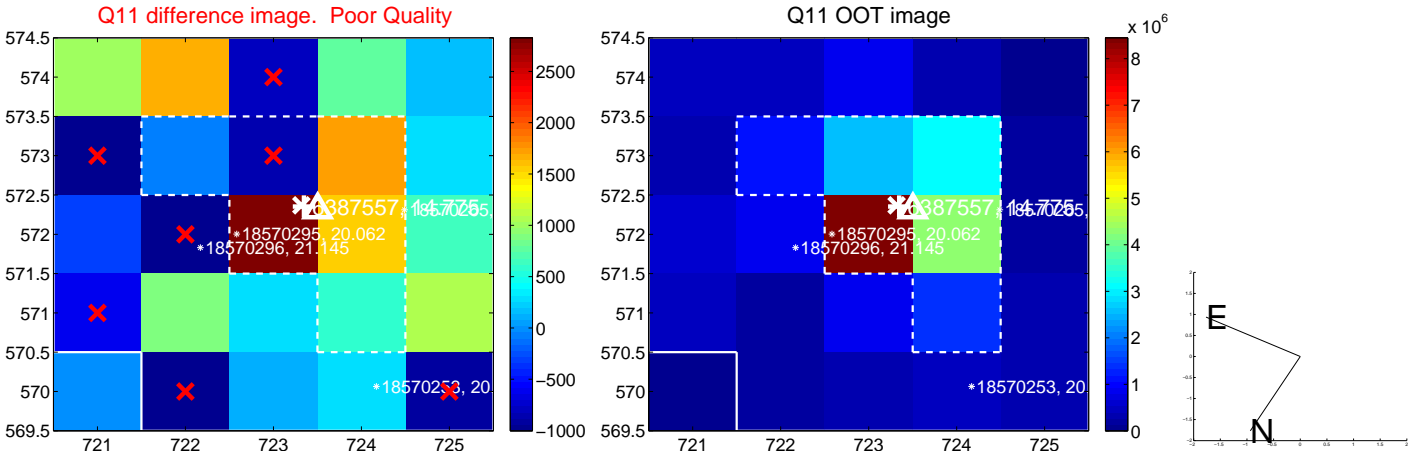
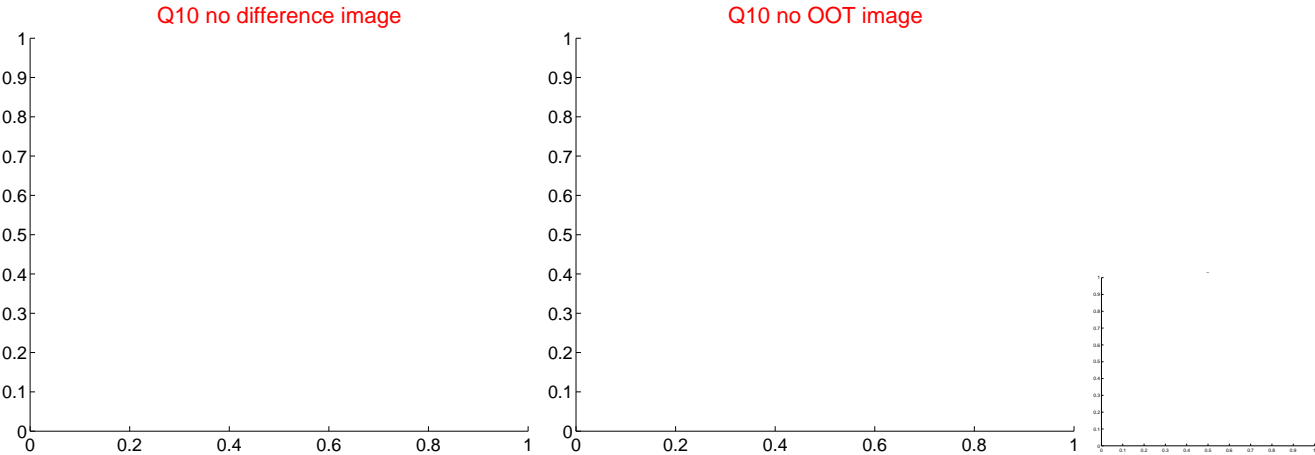
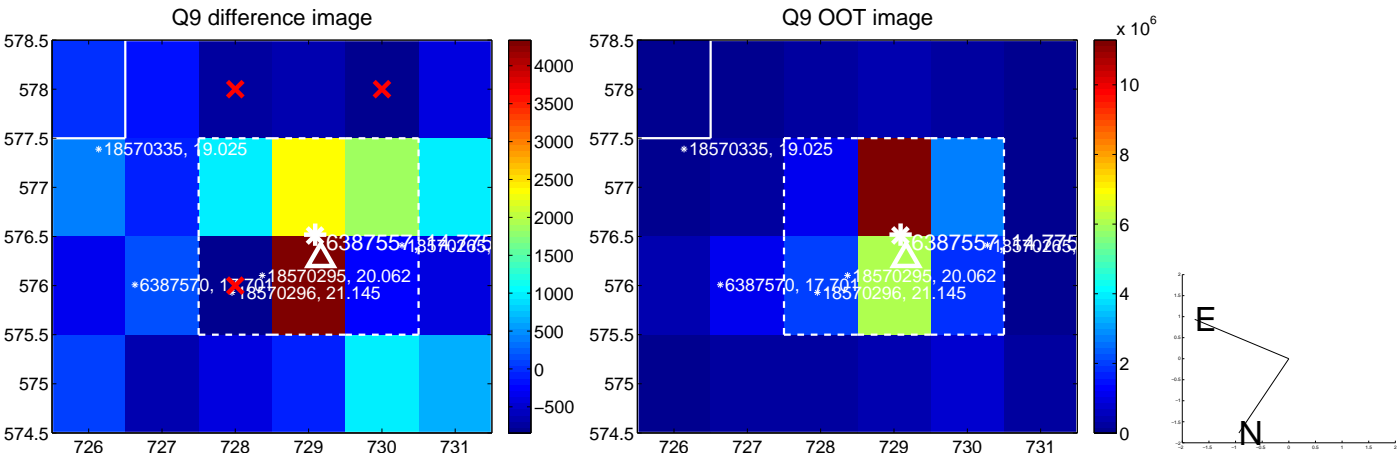
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



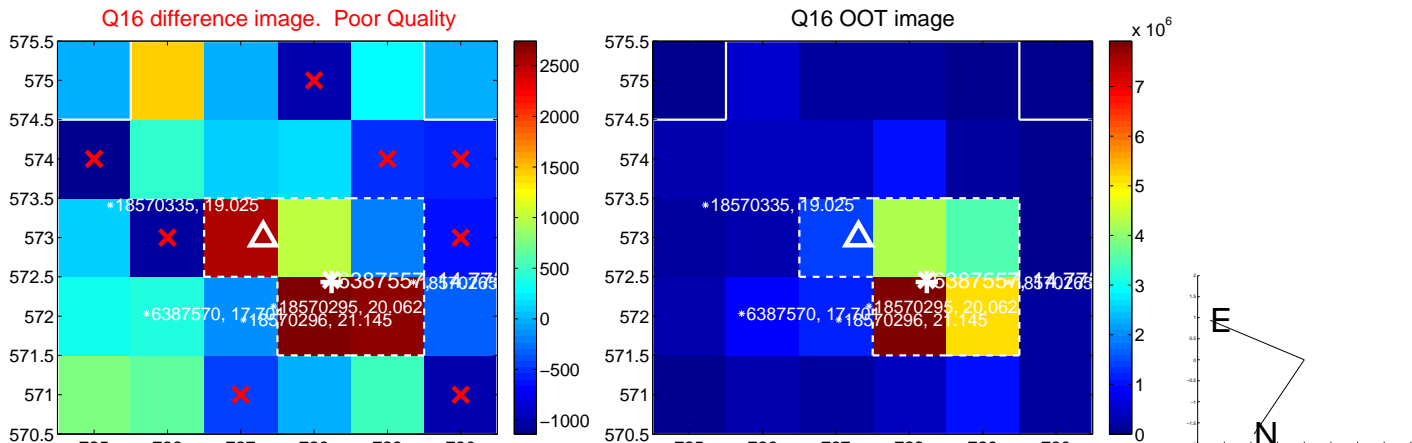
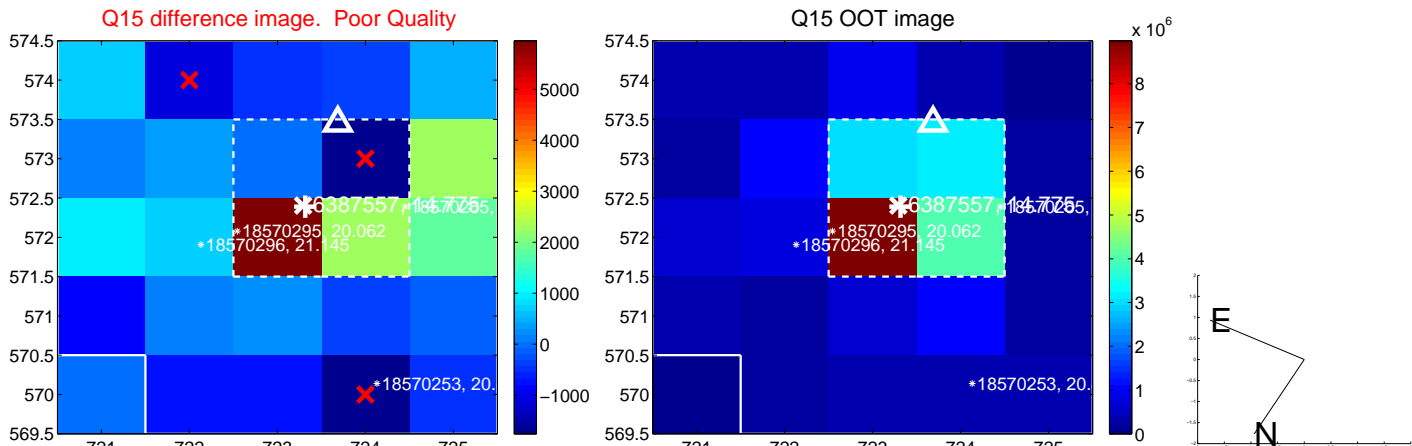
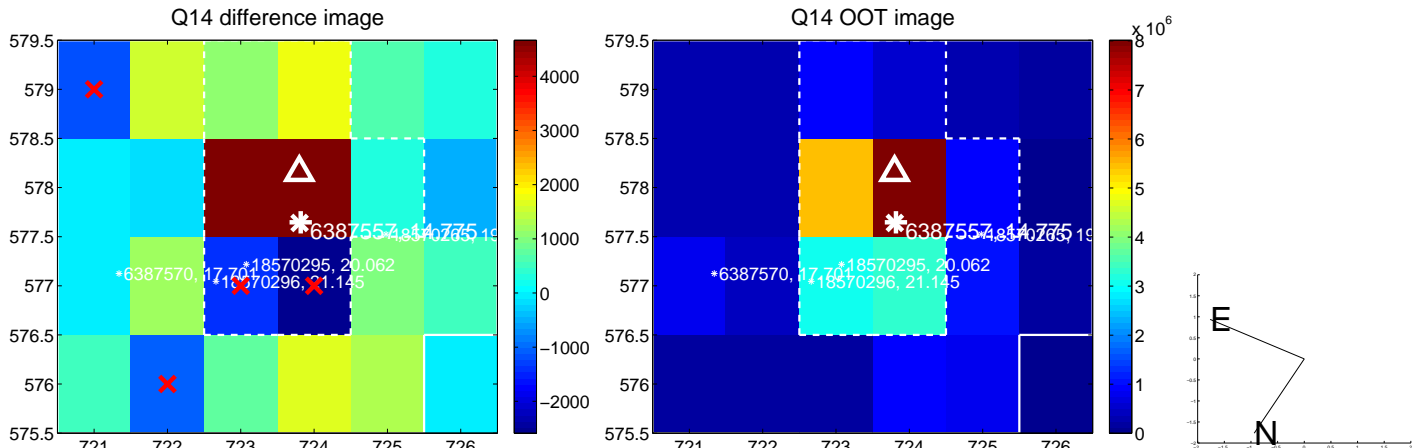
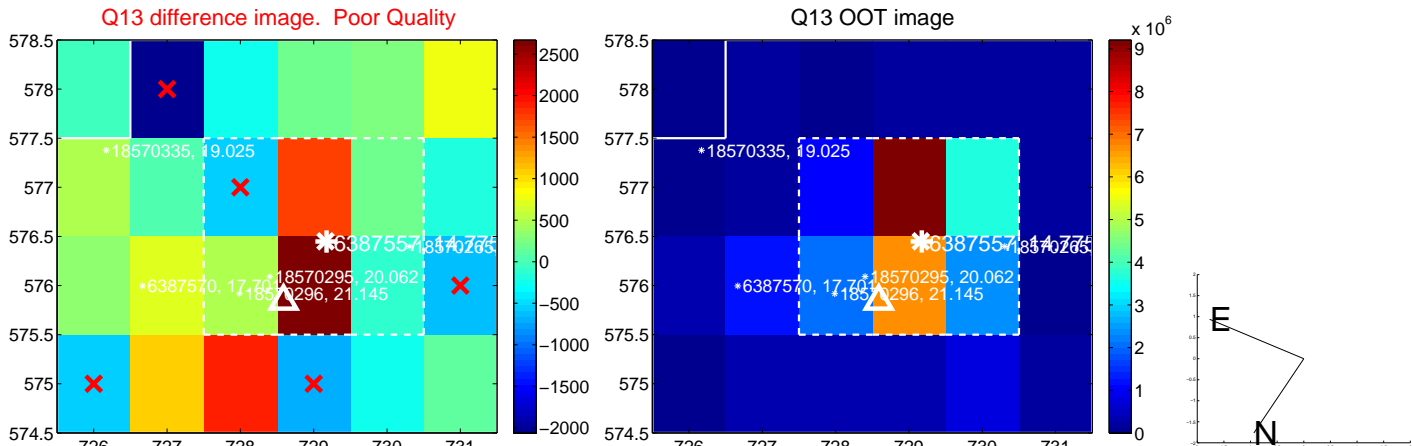
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



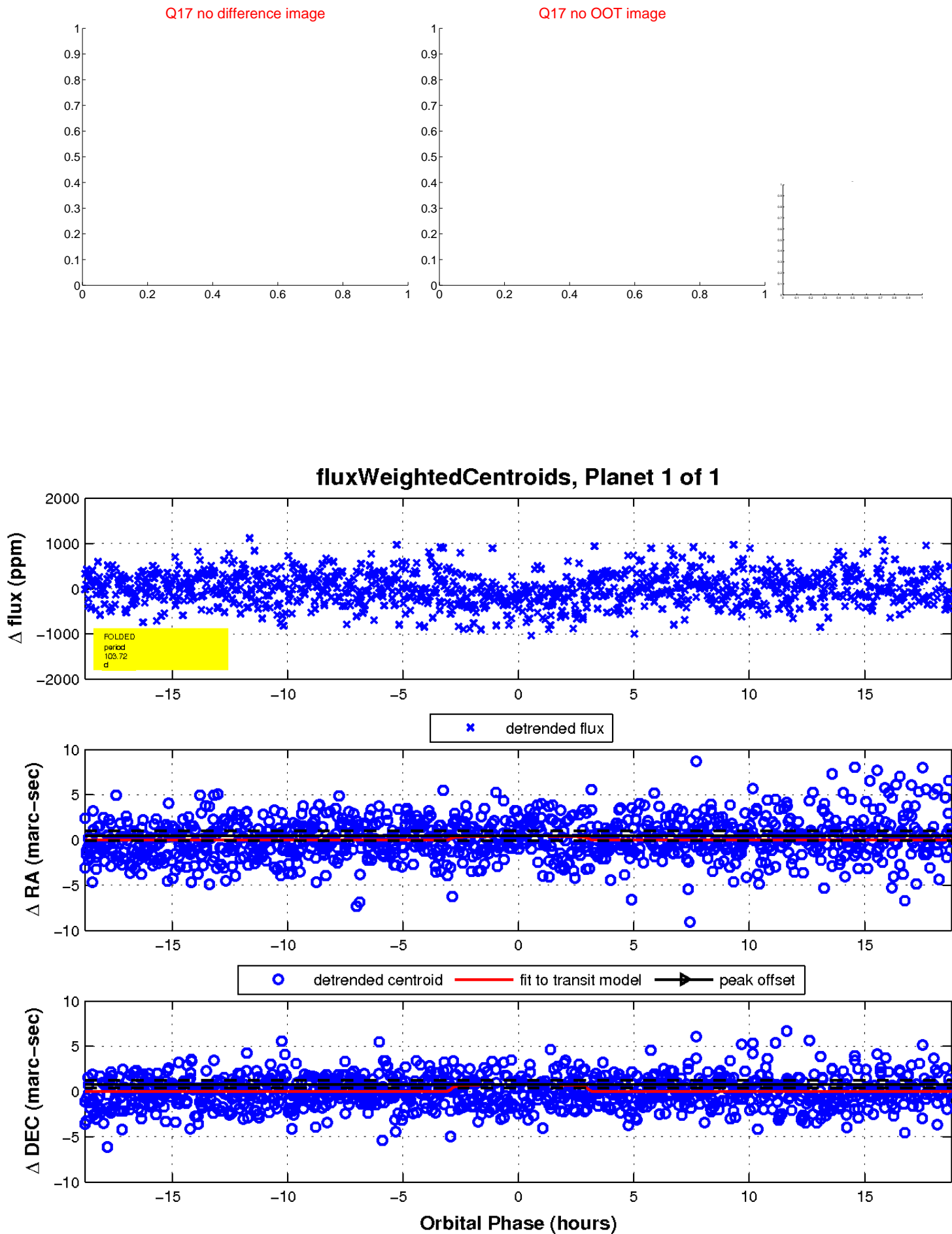
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

