

KIC 008622578

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})
008622578-01	OBS	No	374.767673	135.739089	453.9	30.611	9.7	12.8	0.95	6134	2.08	1.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008622578-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

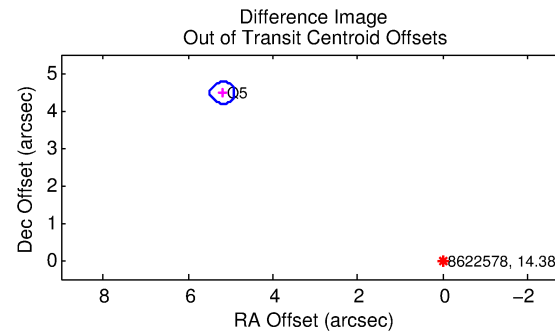
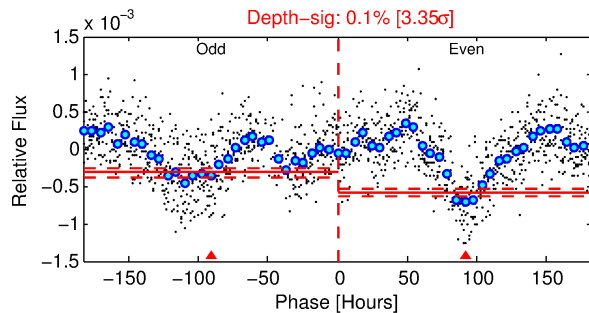
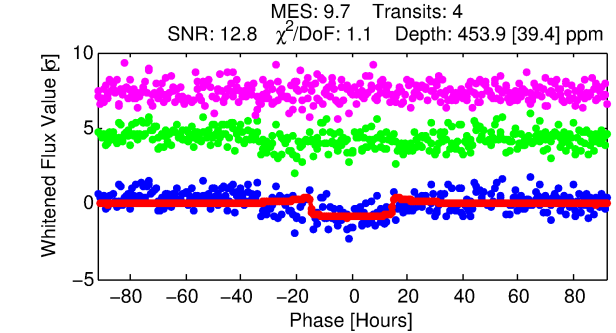
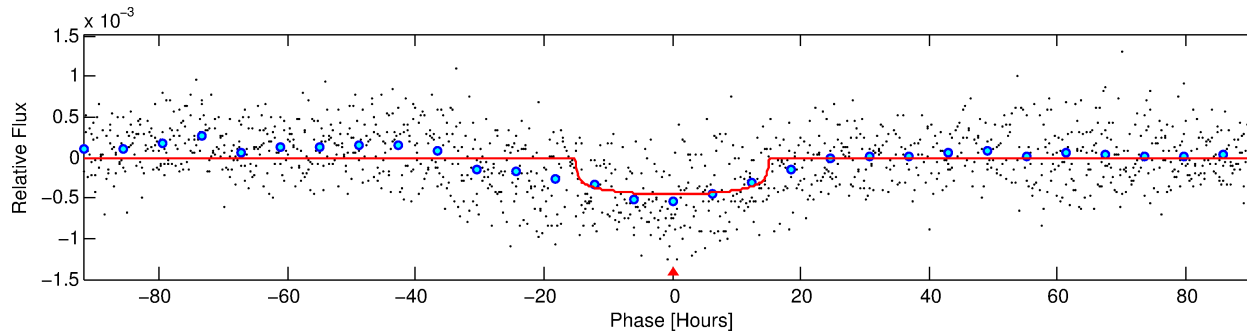
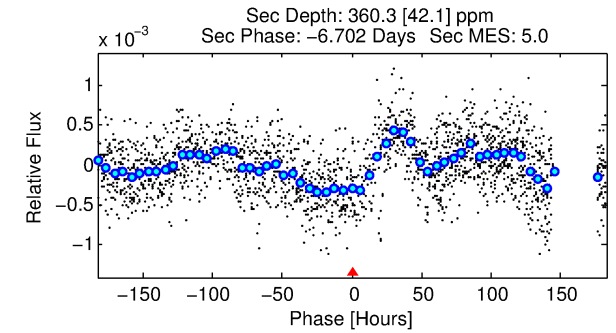
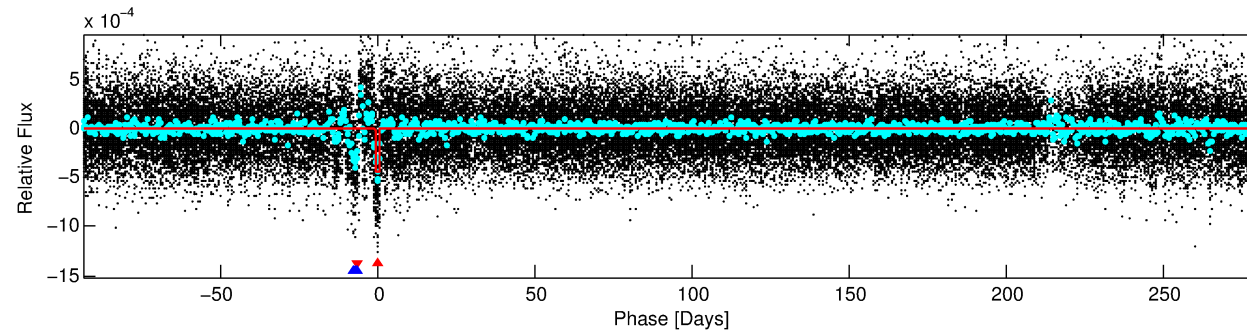
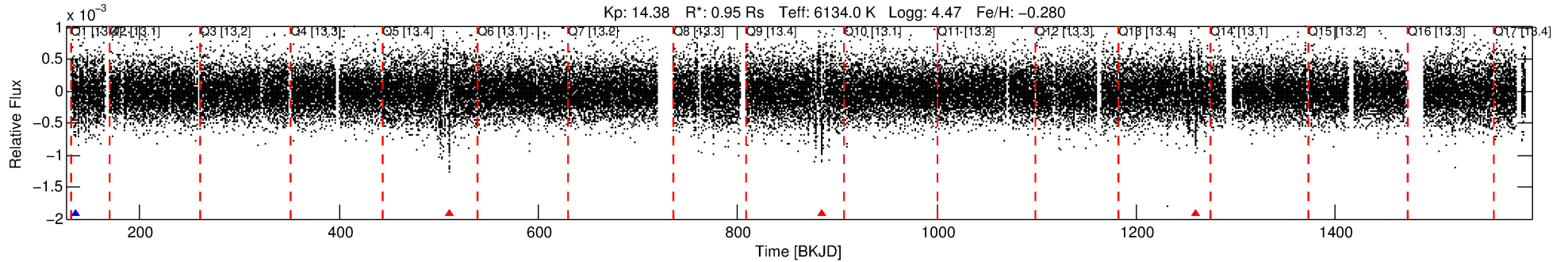
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008622578-01

No Significant Match Found

DV One-Page Summary

KIC: 8622578 Candidate: 1 of 2 Period: 374.768 d



DV Fit Results:

Period = 374.76767 [0.00961] d
Epoch = 135.7391 [0.0184] BKJD
Rp/R* = 0.0200 [0.0037]
a/R* = 85.31 [77.70]
b = 0.46 [1.58]
Seff = 1.12 [0.46]
Teq = 262 [27] K
Rp = 2.08 [0.75] Re
a = 1.0145 [0.2673] AU
Ag = 47133.07 [26064.12] [1.81σ]
Teffp = 5978 [618] K [9.24σ]

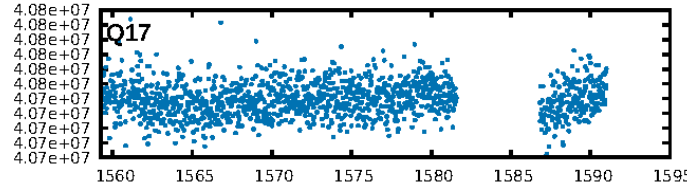
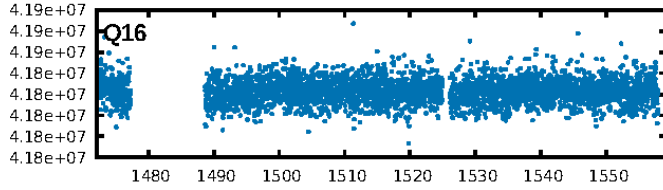
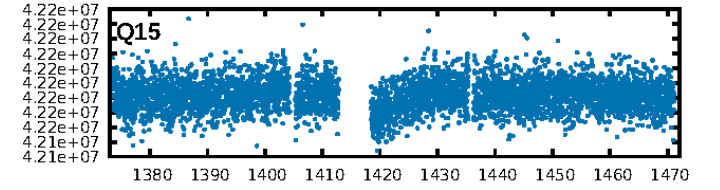
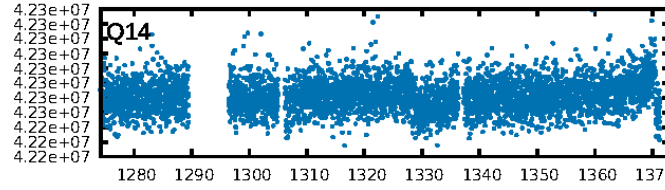
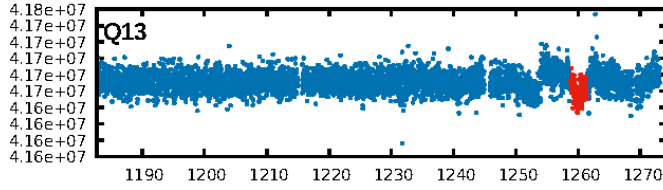
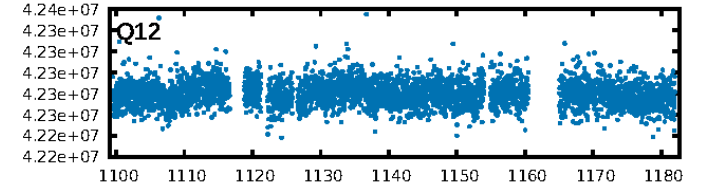
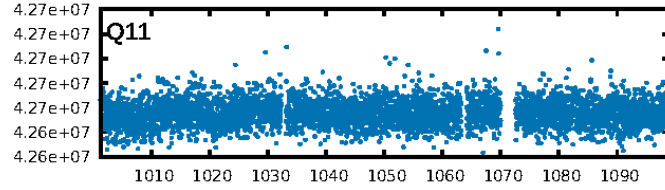
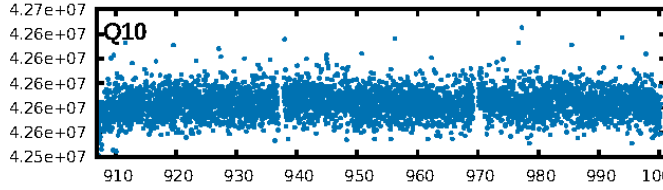
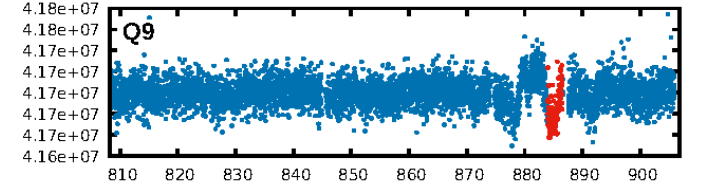
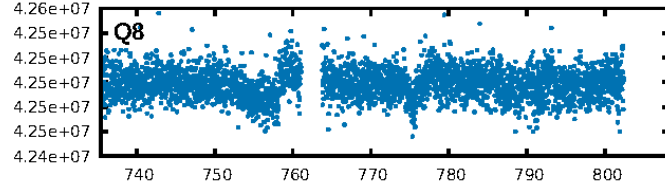
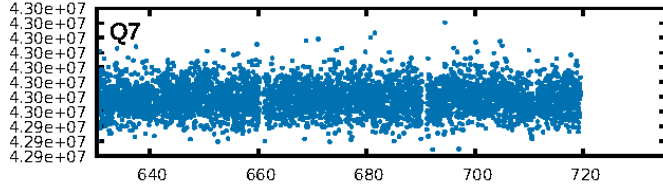
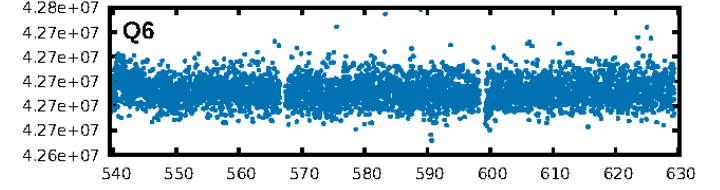
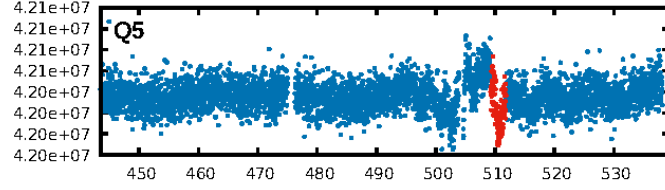
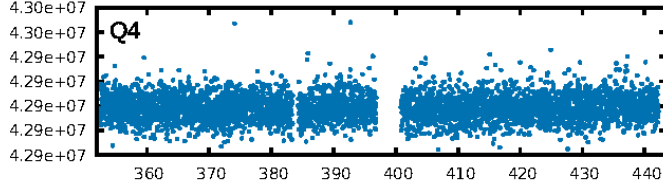
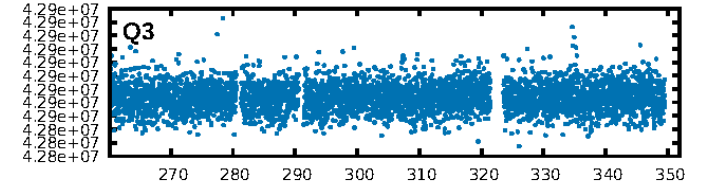
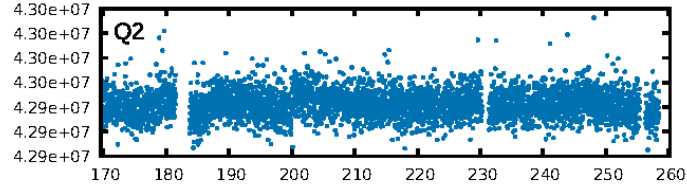
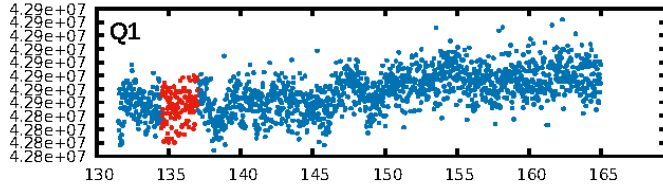
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 18.2% [0.23σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.41e-15
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 7.224
Centroid-sig: 11.2%
Centroid-so: 1.286 arcsec [1.41σ]
OotOffset-rm: 6.853 arcsec [71.52σ]
KicOffset-rm: 6.884 arcsec [71.84σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

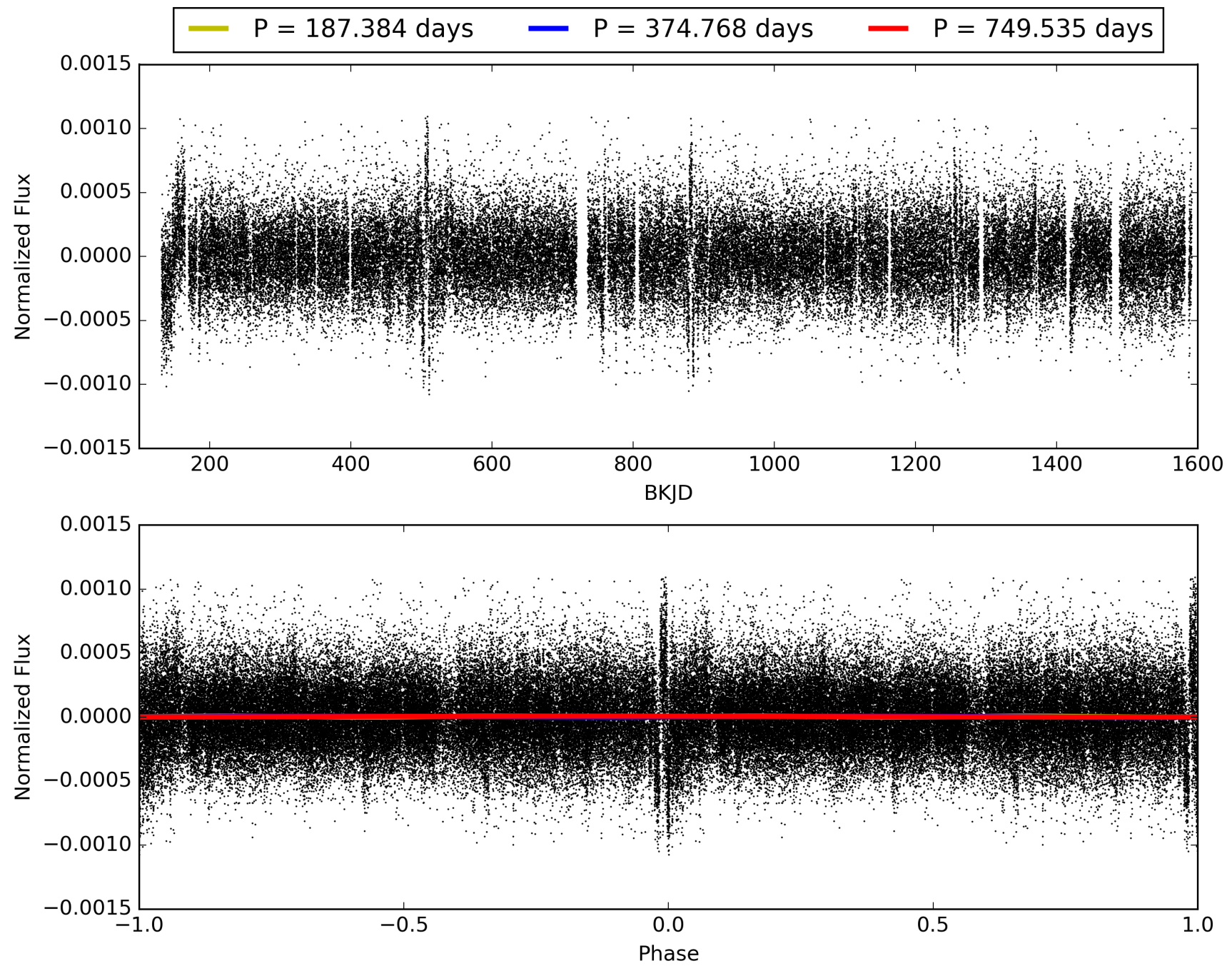
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:15:37 Z

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

TCE 008622578-01, PDC Light Curves

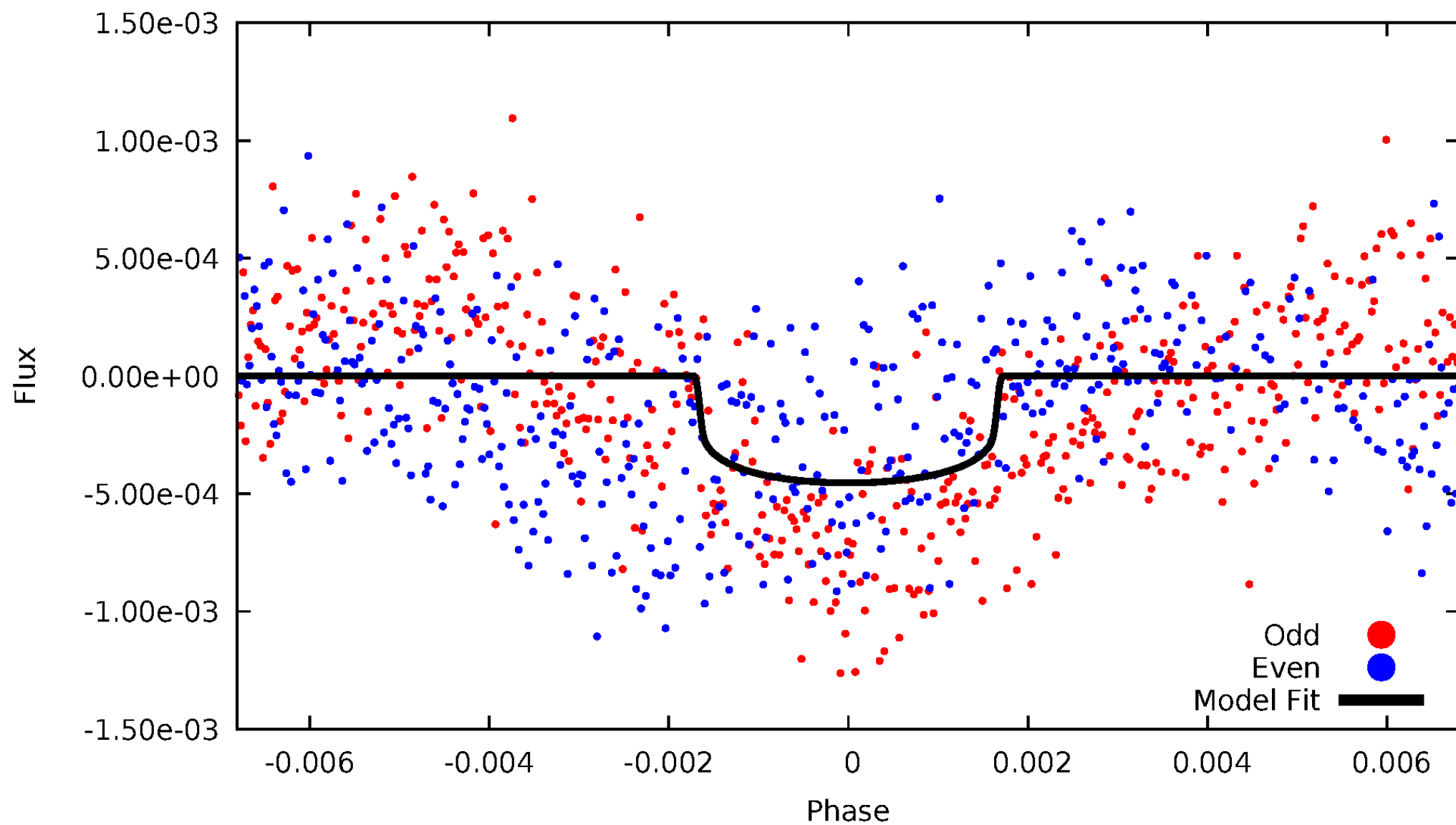


TCE 008622578-01



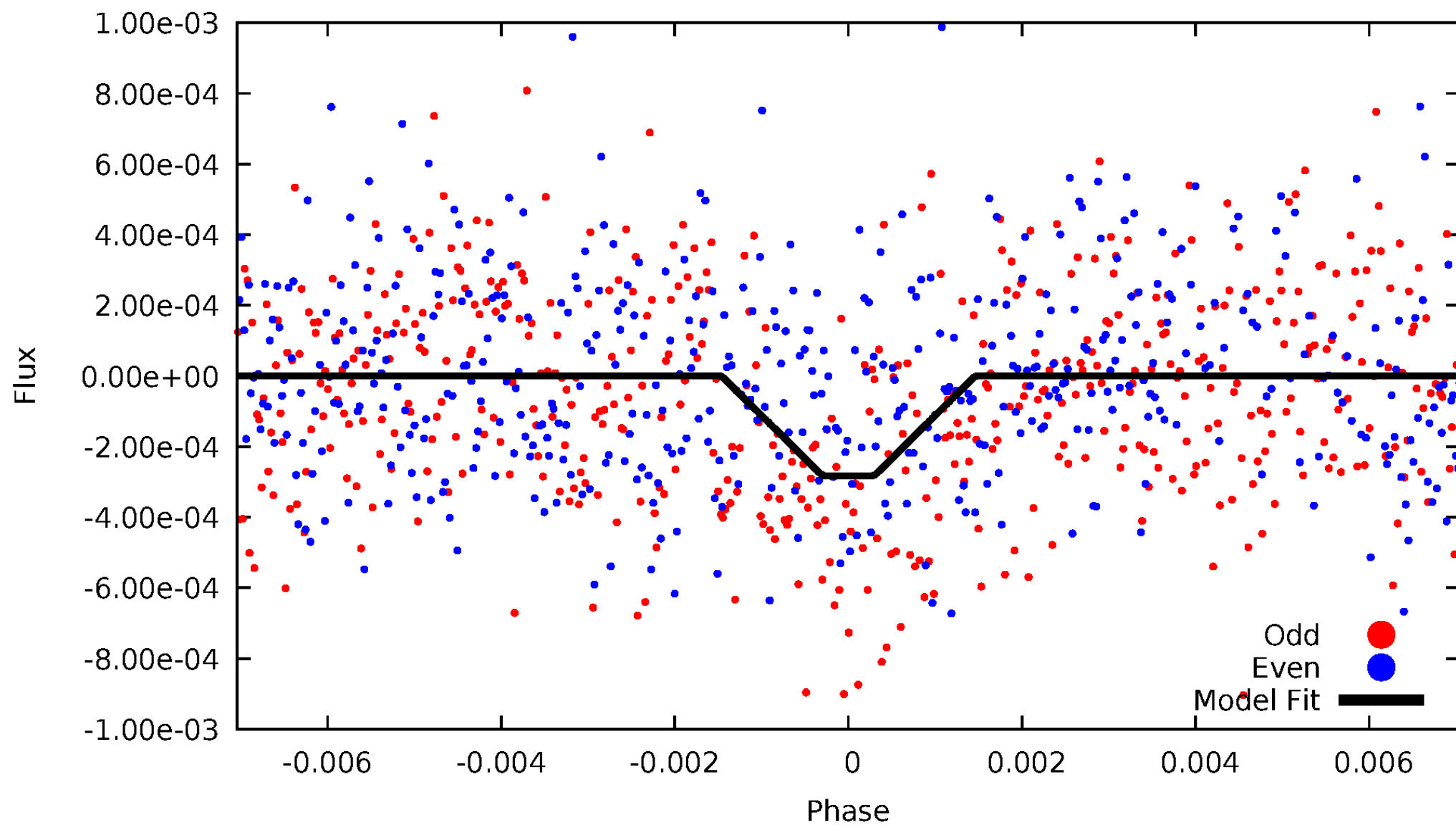
DV Odd/Even

TCE 008622578-01

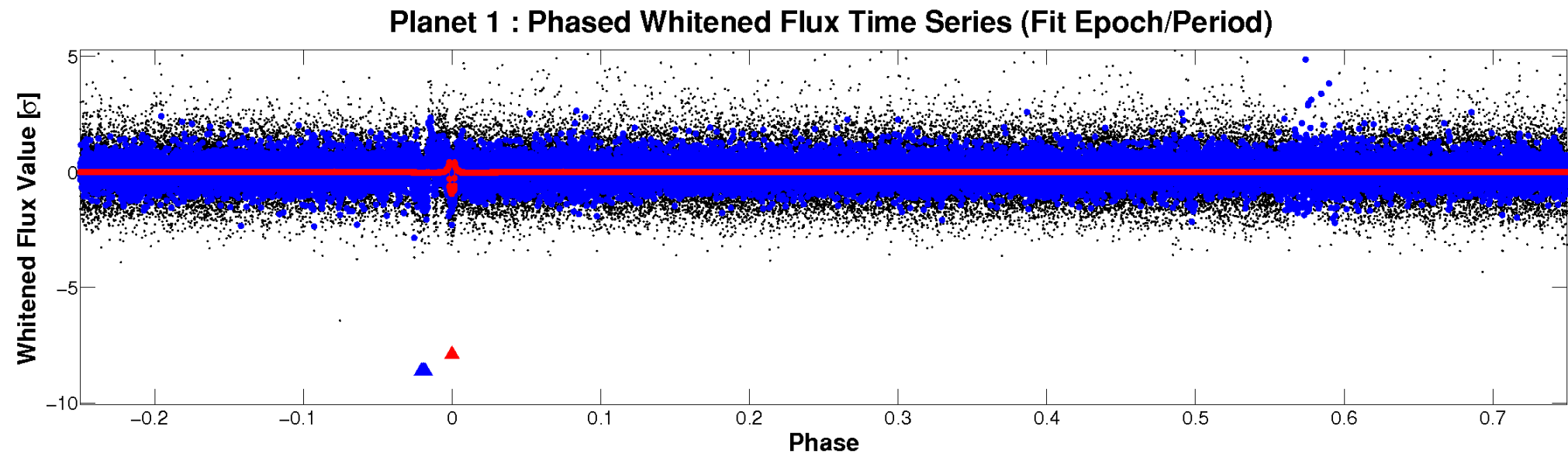
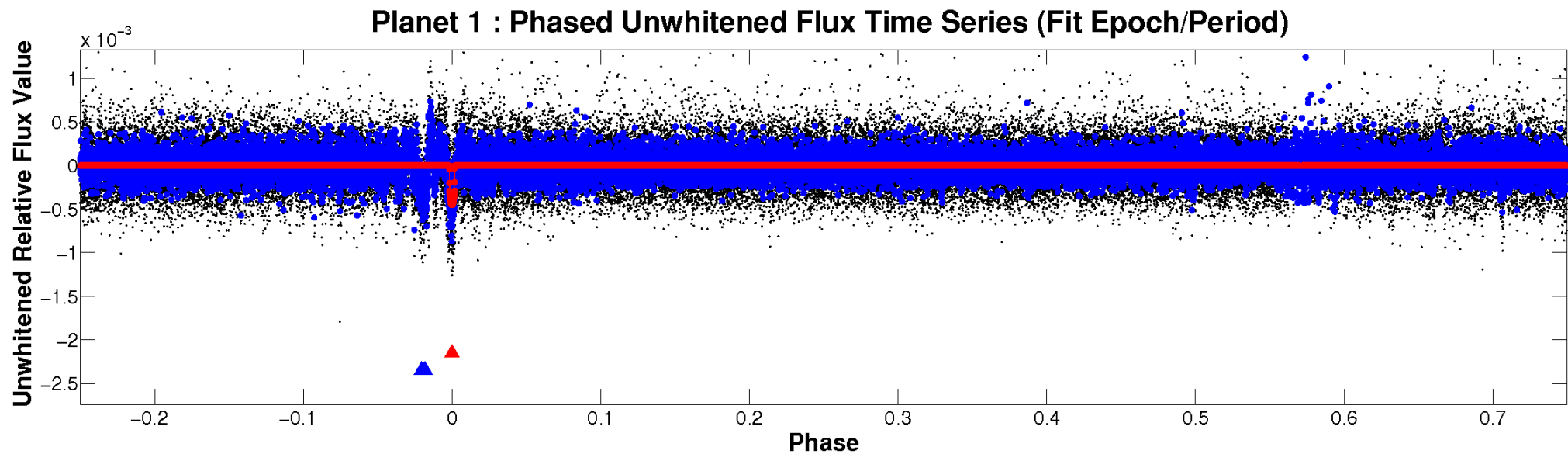


ALT Odd/Even

TCE 008622578-01

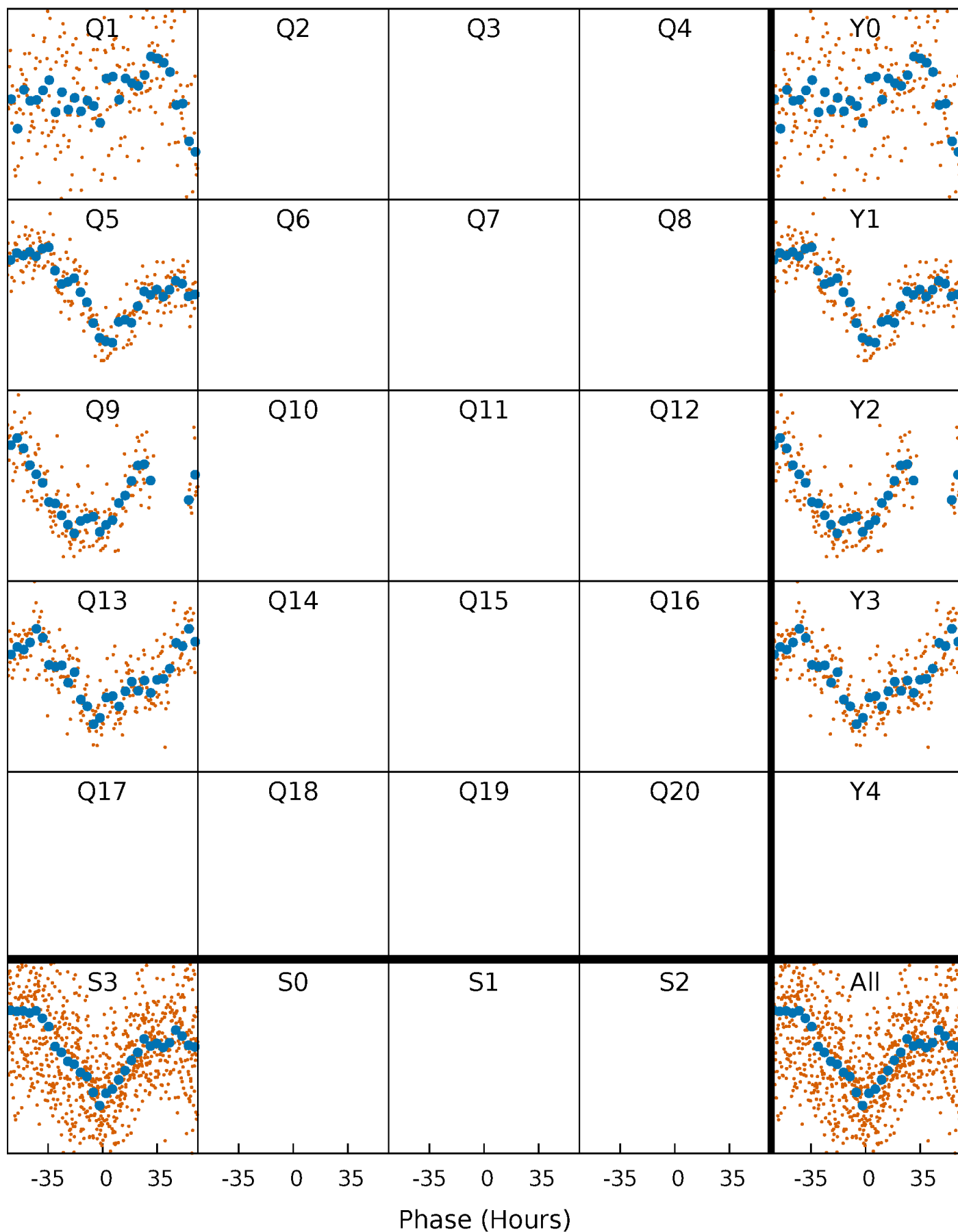


Non-Whitened Vs. Whitened Light Curve



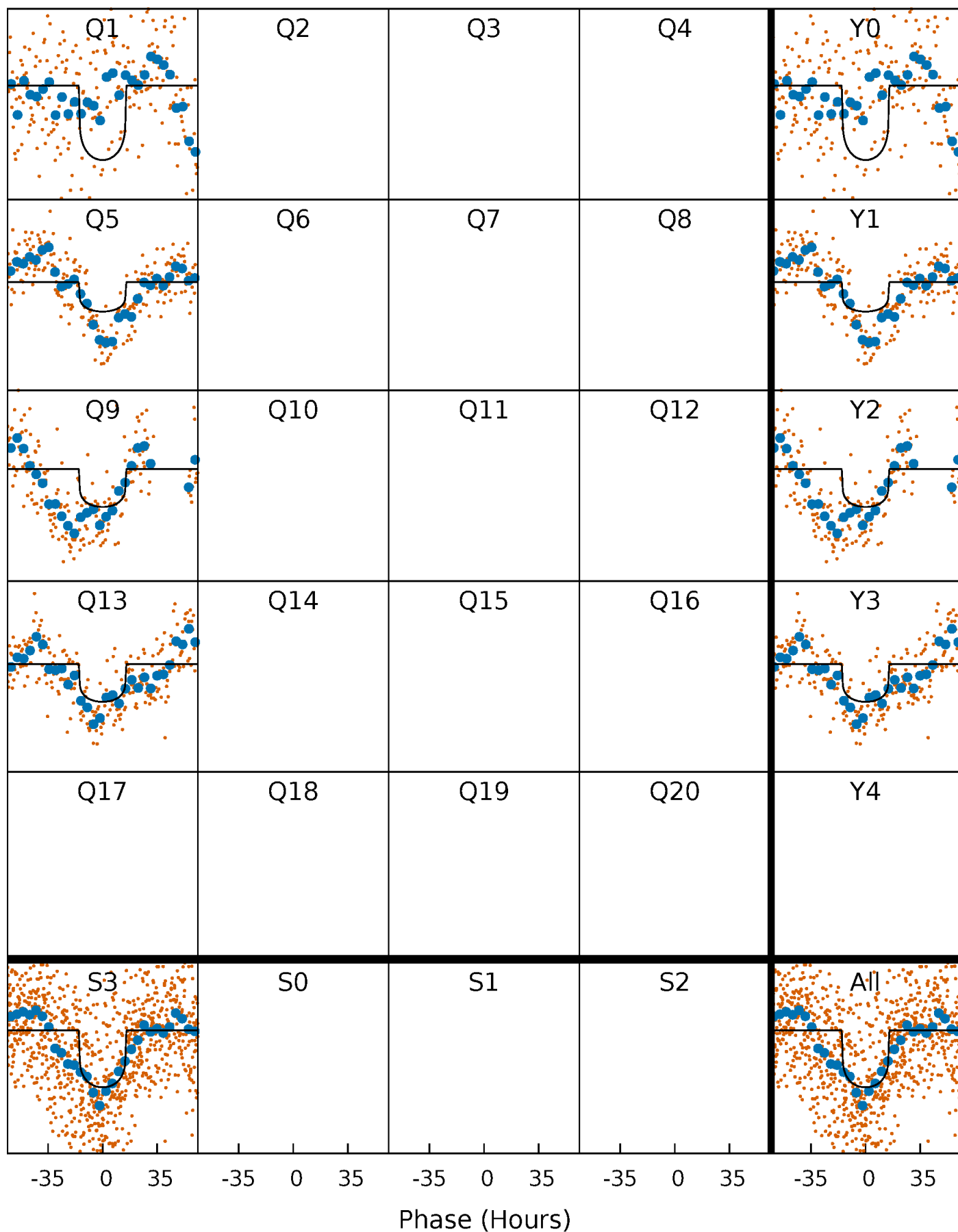
PDC Quarter-Phased Transit Curves

TCE 008622578-01 P=374.767673 Days $T_0=135.739089$ (BKJD)



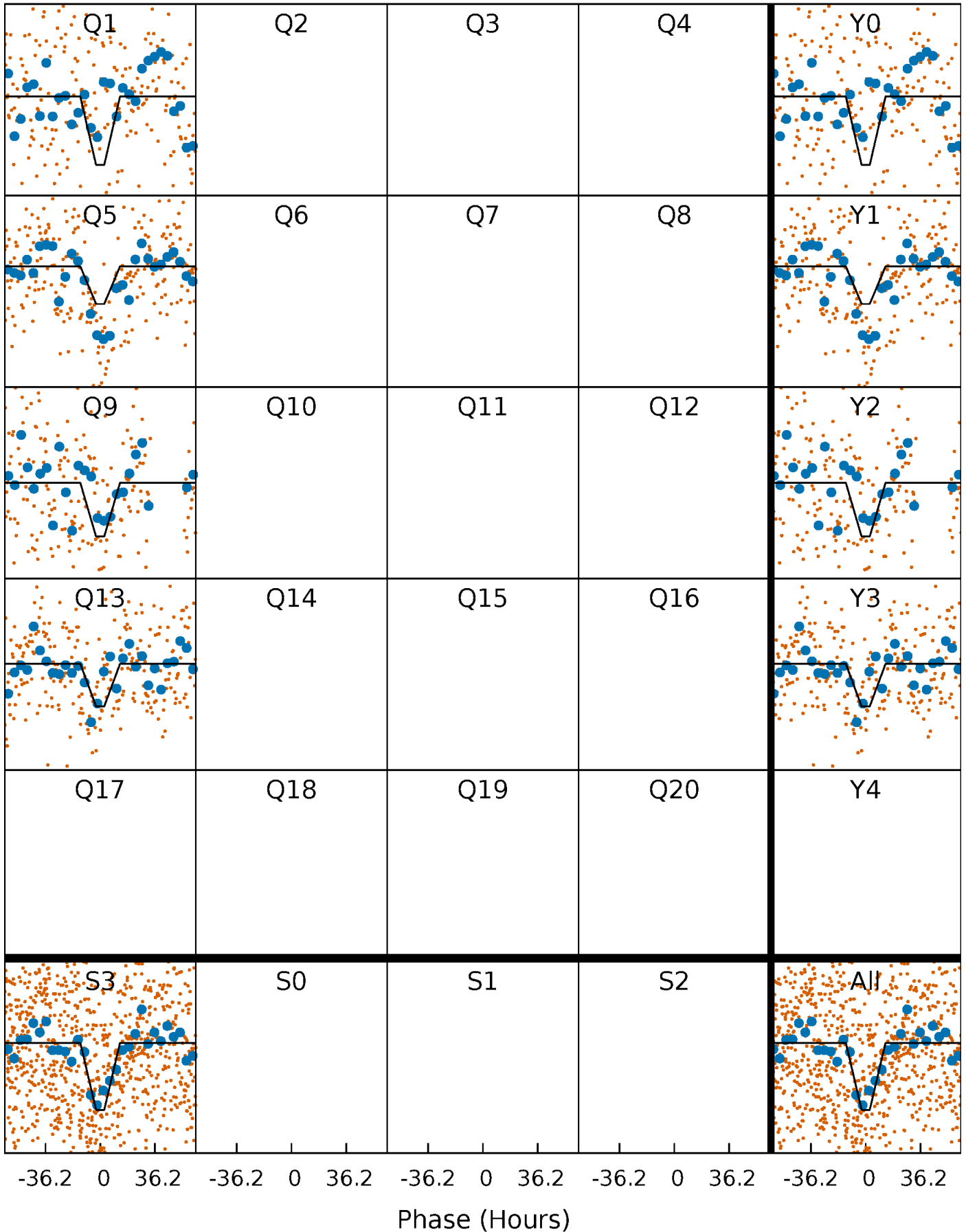
DV Quarter-Phased Transit Curves

TCE 008622578-01 P=374.767673 Days $T_0=135.739089$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

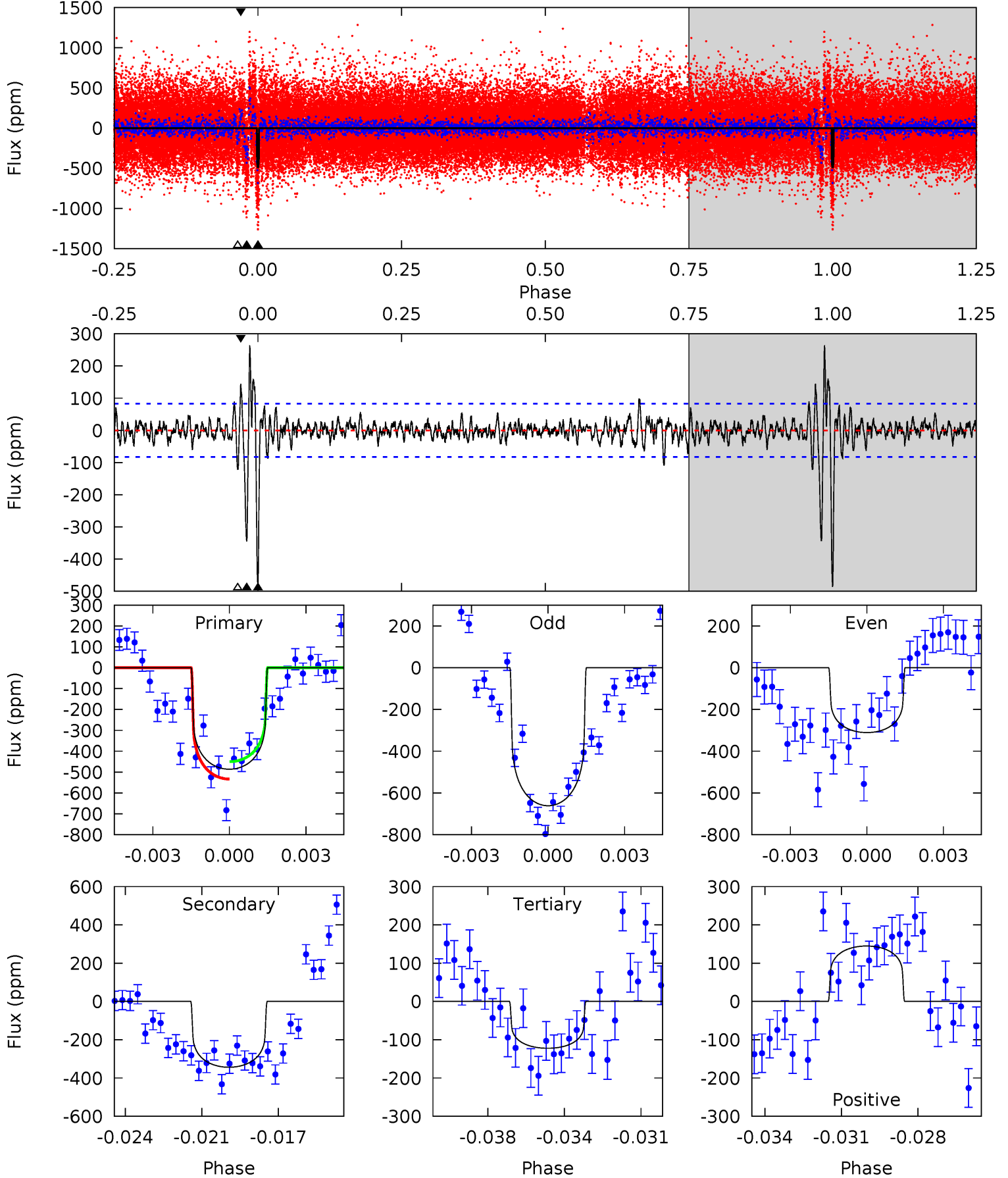
TCE 008622578-01 P=374.758302 Days $T_0=135.734785$ (BKJD)



DV Model-Shift Uniqueness Test

008622578-01, P = 374.767673 Days, E = 135.739089 Days

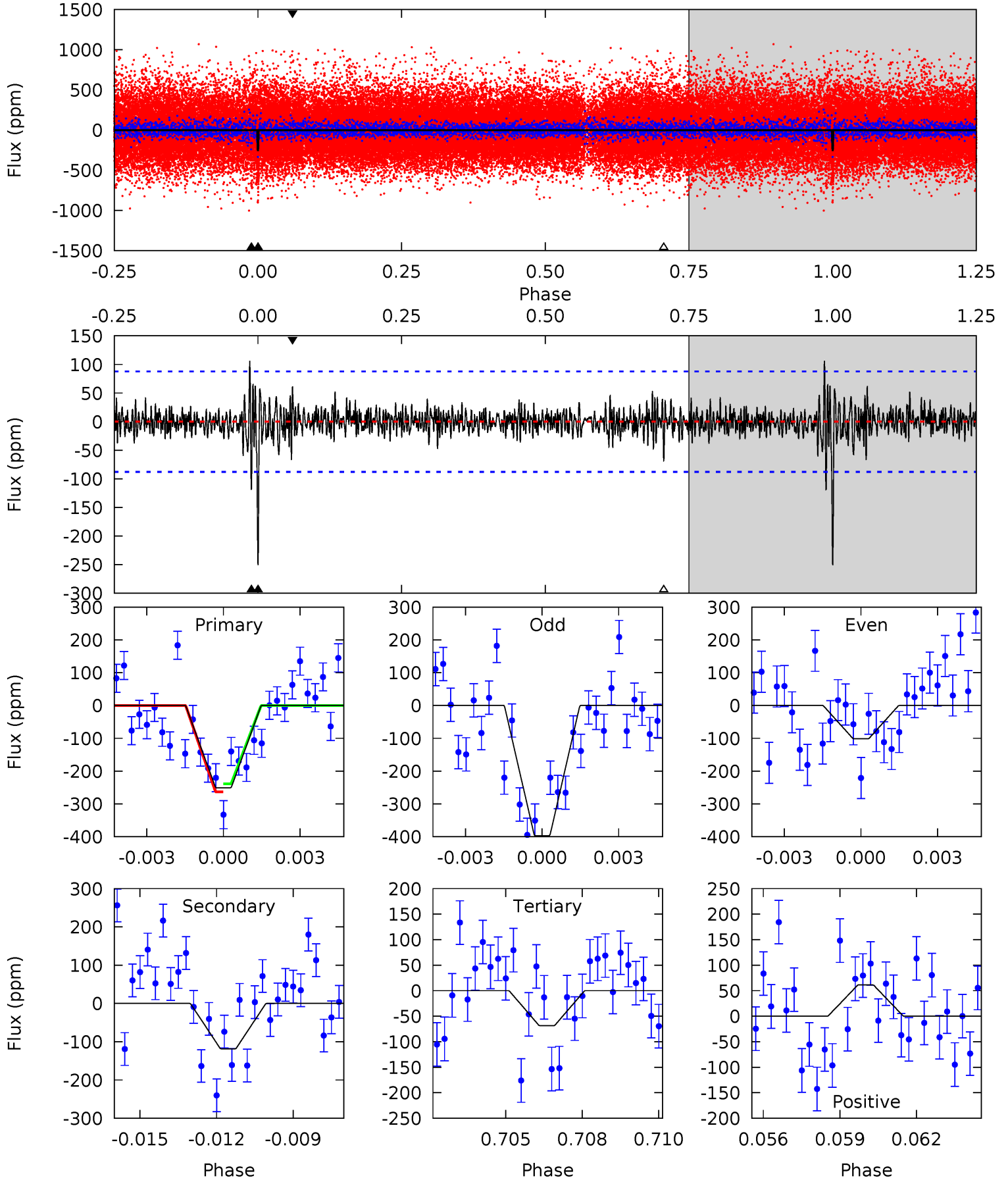
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.7	21.7	7.72	9.13	5.23	2.92	1.84	23.0	21.5	14.0	12.5	11.1	0.86	0.35	2.61



Alt Model-Shift Uniqueness Test

008622578-01, $P = 374.758302$ Days, $E = 135.734785$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	7.09	4.10	3.67	5.26	2.97	1.00	10.9	11.4	2.99	3.42	8.88	1.41	0.30	0.74



Stellar Parameters For KIC 008622578

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6134^{+164}_{-201}	$4.475^{+0.054}_{-0.216}$	$-0.280^{+0.300}_{-0.300}$	$0.954^{+0.293}_{-0.105}$	$0.986^{+0.141}_{-0.115}$	$1.601^{+0.454}_{-0.837}$
	+3%/-3%	+1%/-5%	+107%/-107%	+31%/-11%	+14%/-12%	+28%/-52%
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 008622578-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-344 ± 16	$2.15^{+0.54}_{-0.42}$	374^{+29}_{-18}	5934^{+732}_{-489}	41537^{+21862}_{-14631}
Alt.	-118 ± 17	$1.82^{+0.52}_{-0.42}$	375^{+29}_{-17}	5019^{+613}_{-425}	19421^{+13147}_{-7508}

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

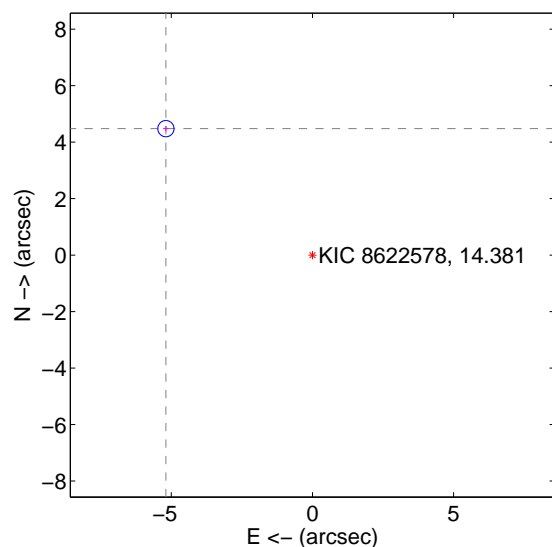
Supplemental centroid analysis for 008622578-01. Kepler magnitude: 14.38. Transit SNR 12.81

There are 1 quarters with good PRF difference image offsets

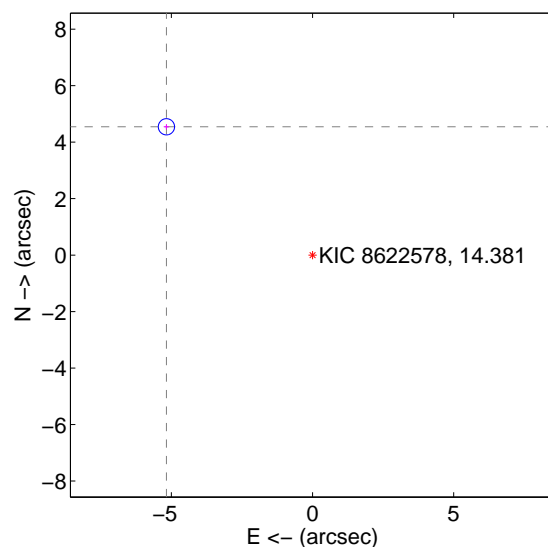
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.853 ± 0.096	71.52	5.188 ± 0.096	4.477 ± 0.096
PRF-fit source offset from KIC position	6.884 ± 0.096	71.84	5.172 ± 0.096	4.543 ± 0.096
photometric centroid source offset	1.29 ± 0.91	1.41	0.38 ± 0.90	1.23 ± 0.91

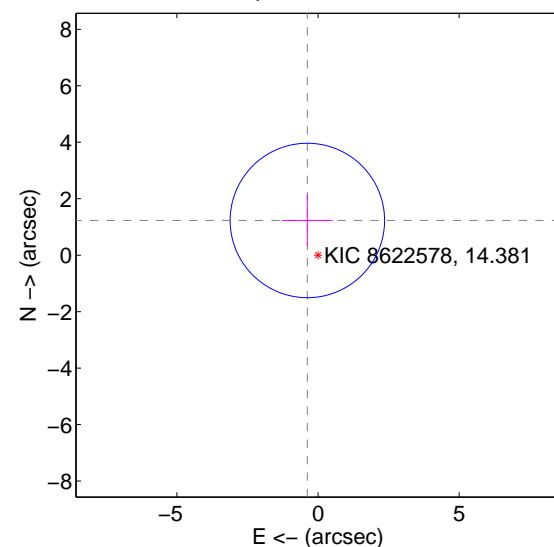
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

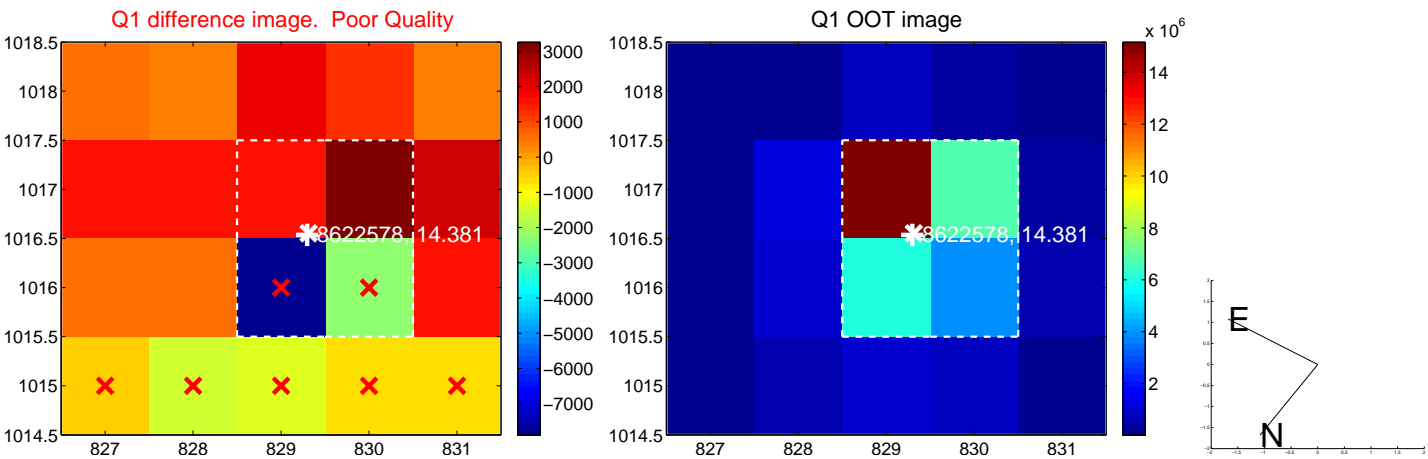


offset from photometric centroids

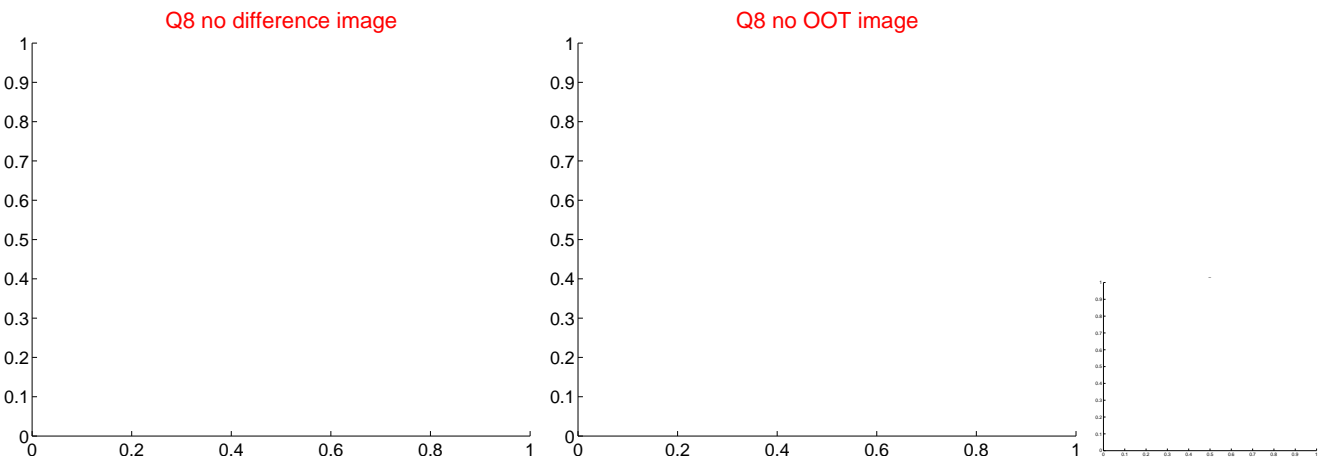
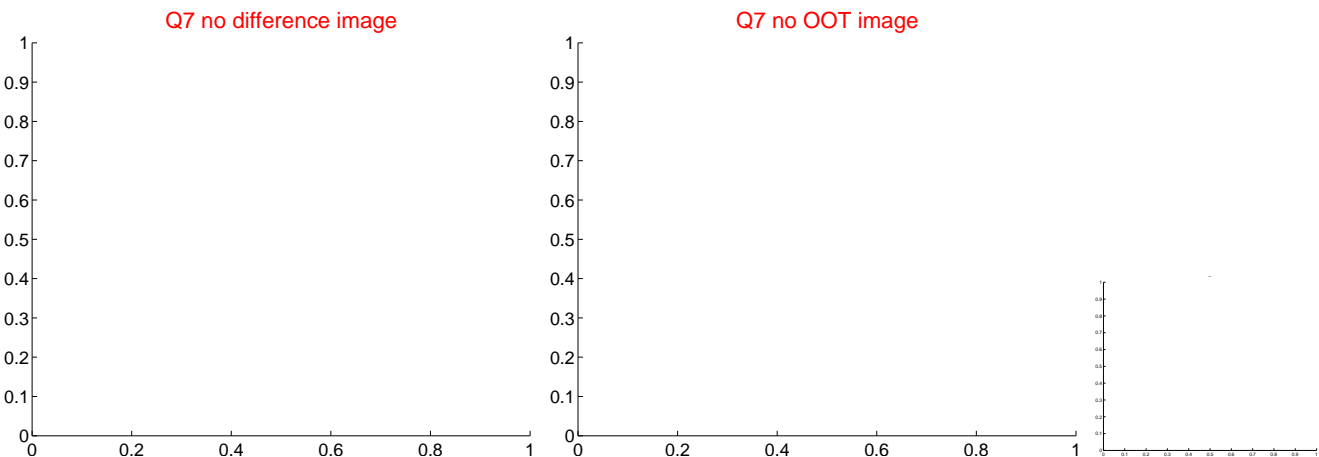
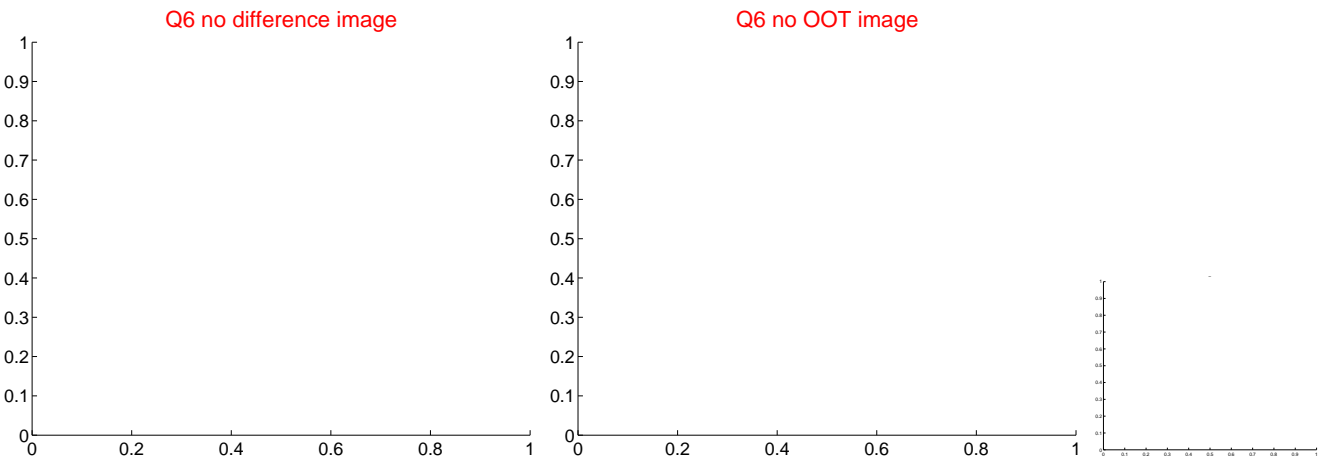
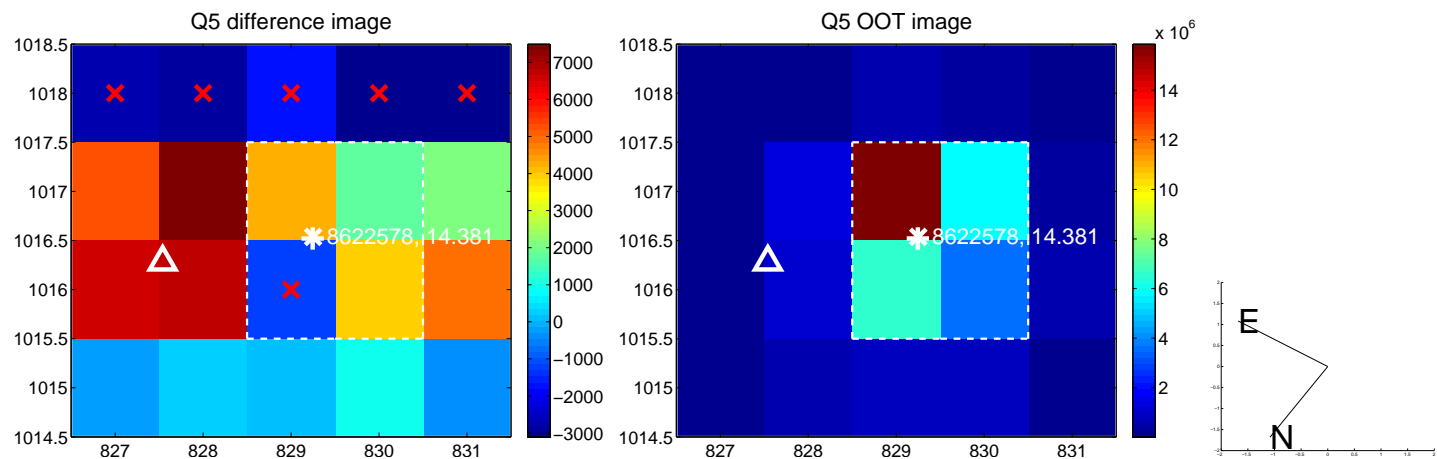


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



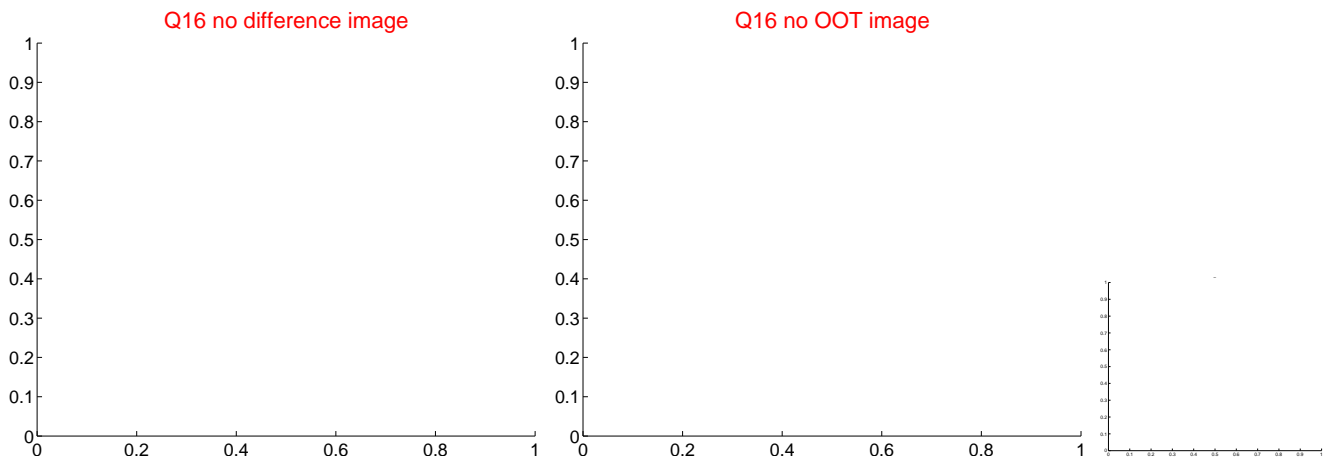
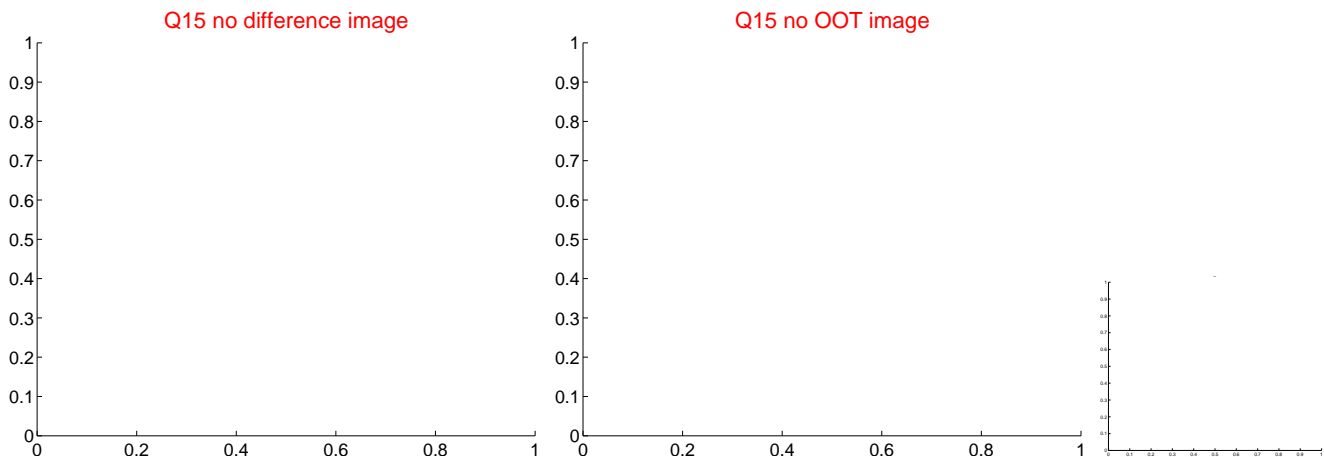
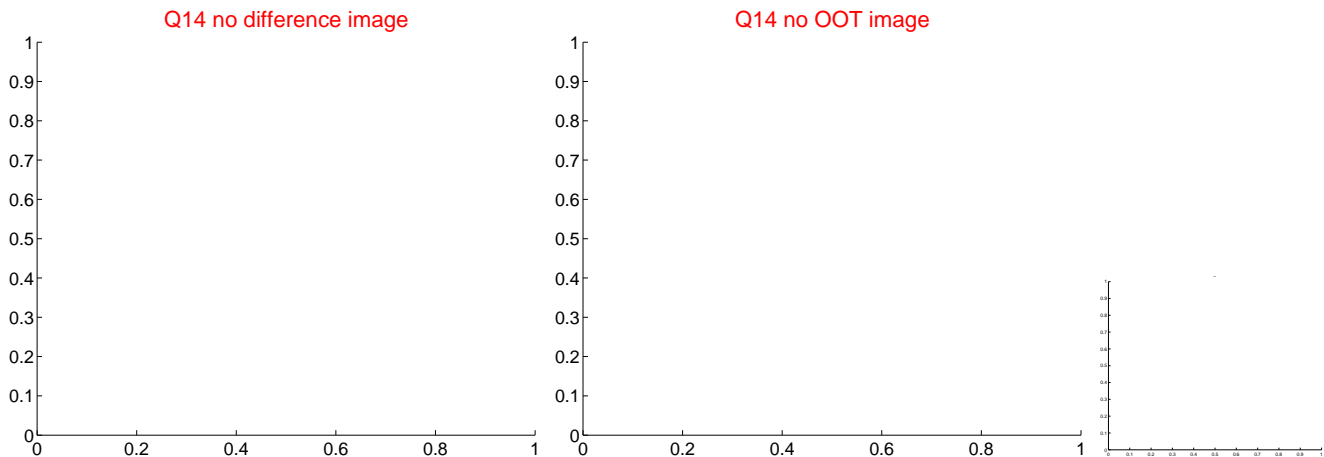
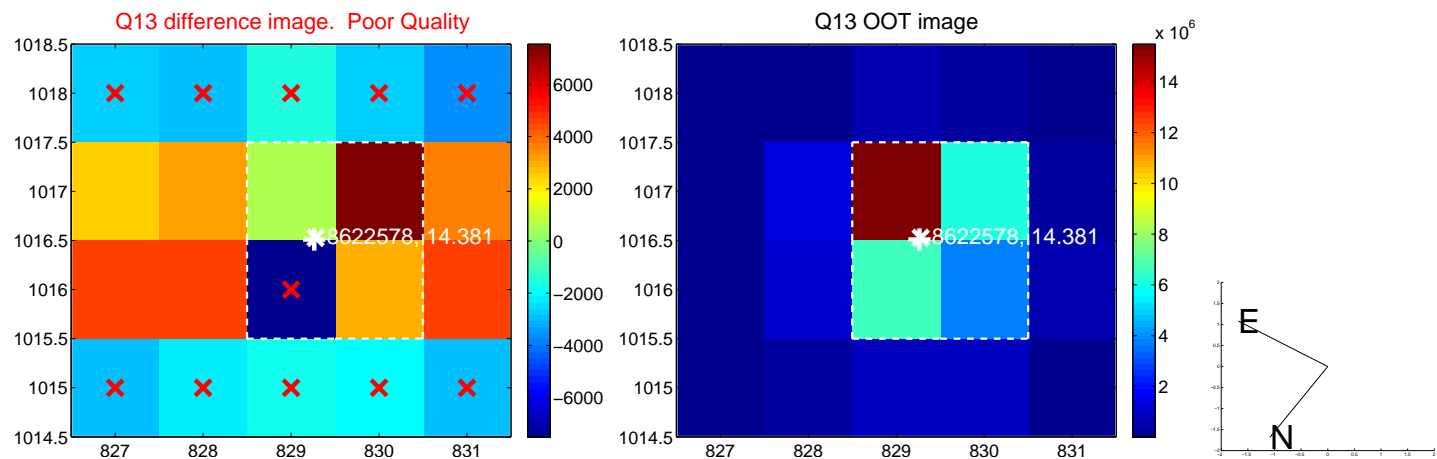
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



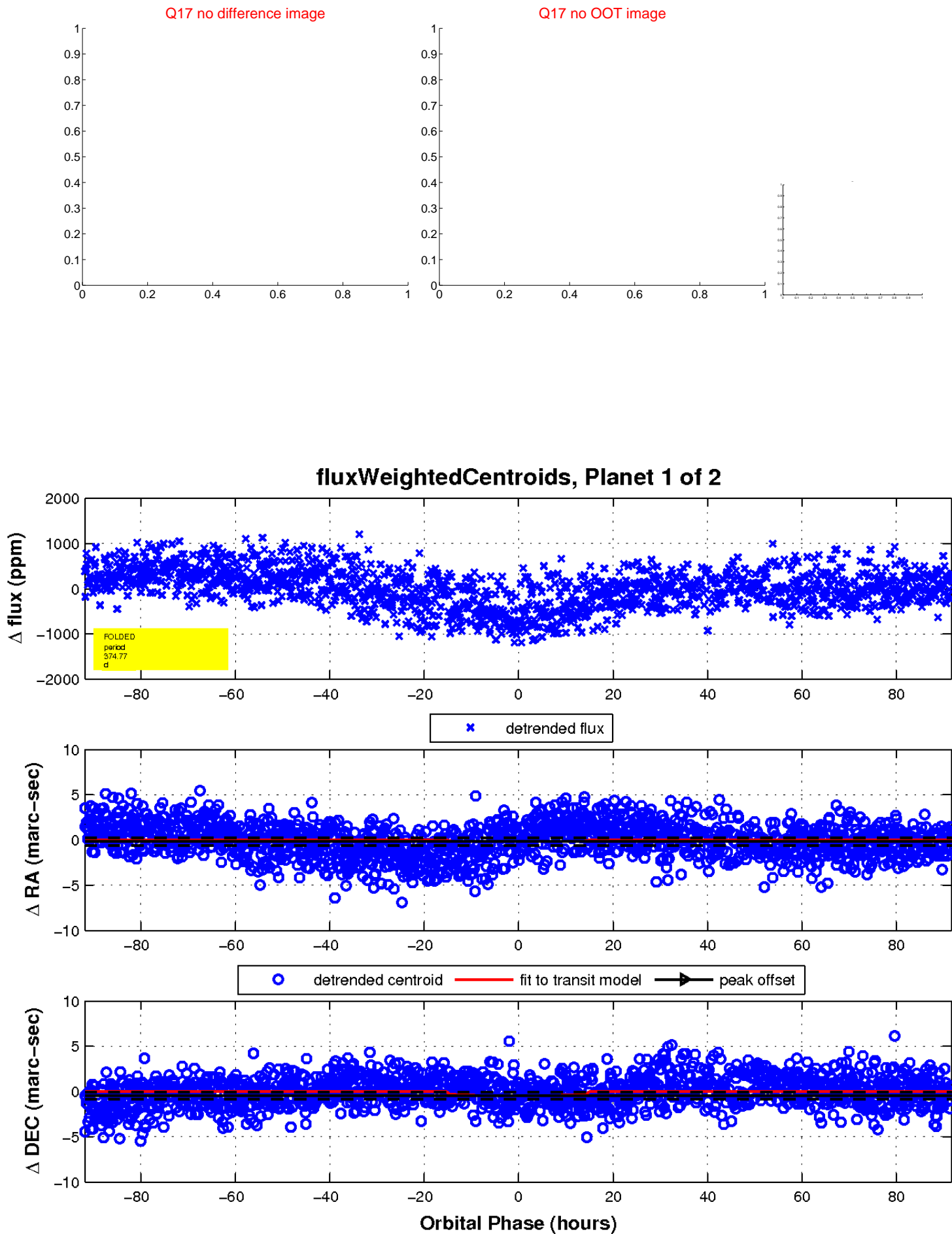
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

