

KIC 010082667

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})
010082667-01	OBS	No	312.575589	372.031101	226.0	6.017	7.6	7.3	0.92	5865	1.64	1.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010082667-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_ALT—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.

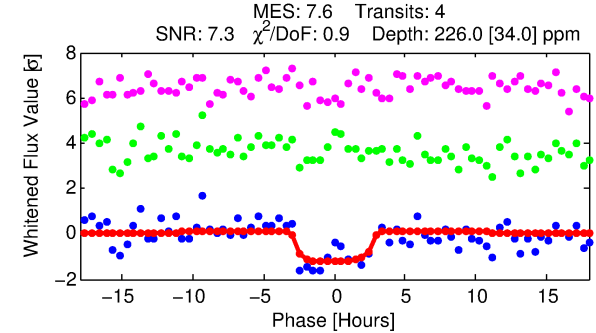
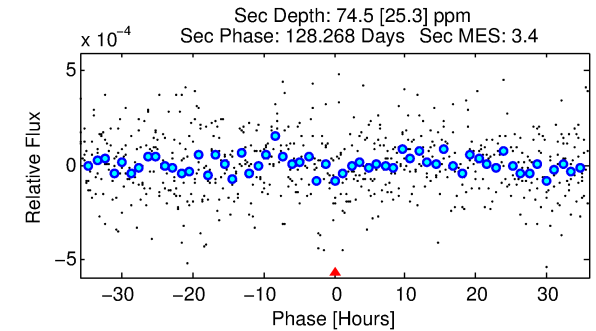
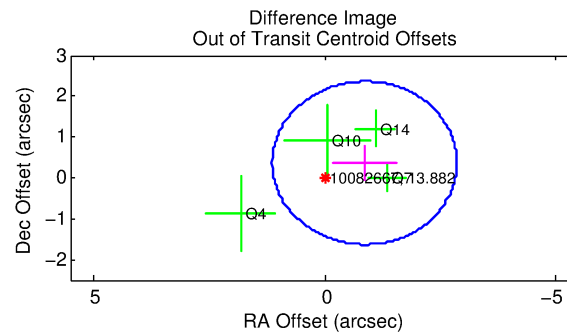
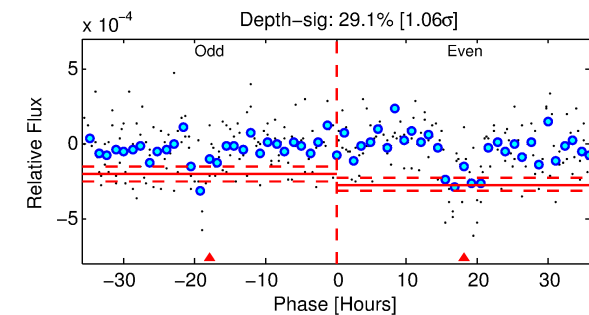
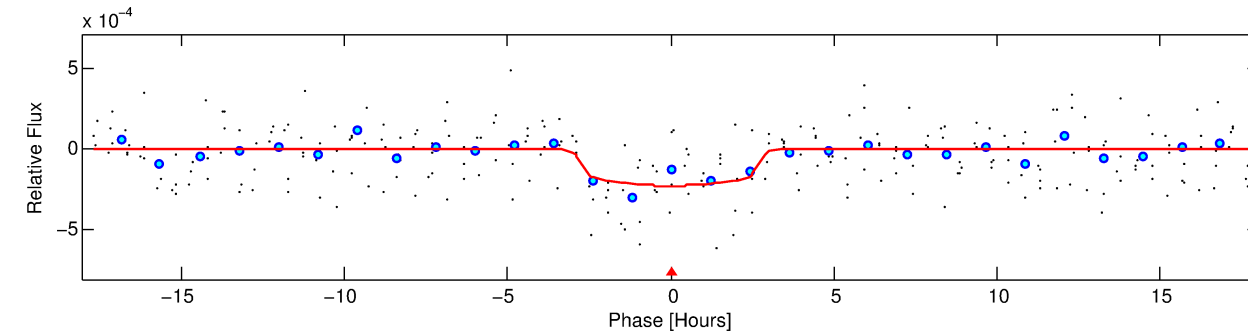
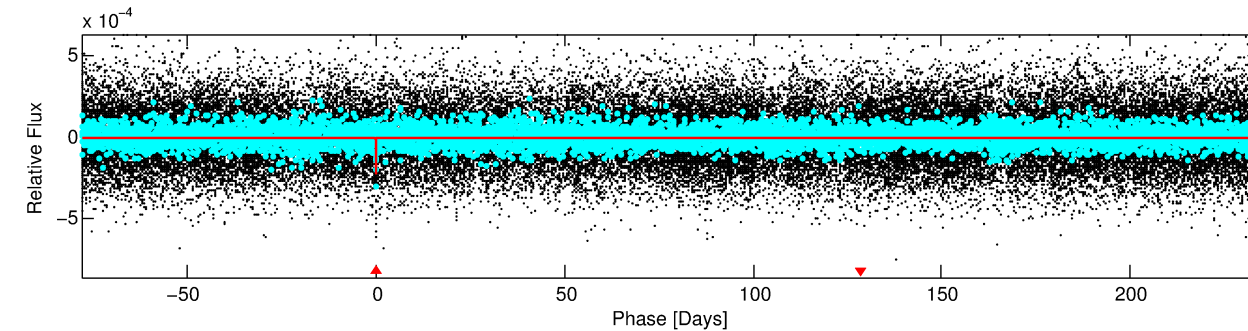
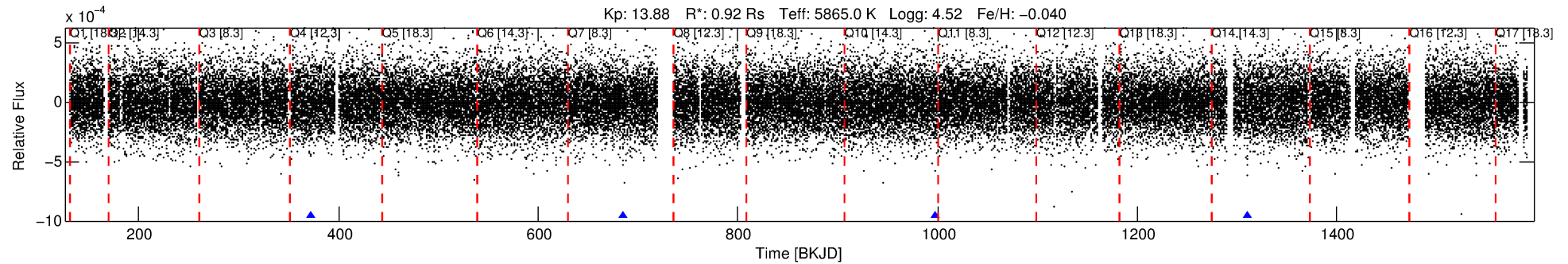
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010082667-01

No Significant Match Found

DV One-Page Summary

KIC: 10082667 Candidate: 1 of 1 Period: 312.576 d



DV Fit Results:

Period = 312.57559 [0.00842] d
Epoch = 372.0311 [0.0158] BKJD
Rp/R* = 0.0163 [0.0057]
a/R* = 187.66 [300.49]
b = 0.90 [0.35]
Seff = 1.09 [0.39]
Teq = 261 [23] K
Rp = 1.64 [0.72] Re
a = 0.9055 [0.2062] AU
Ag = 12565.14 [10627.43] [1.18 σ]
Teffp = 4265 [838] K [4.78 σ]

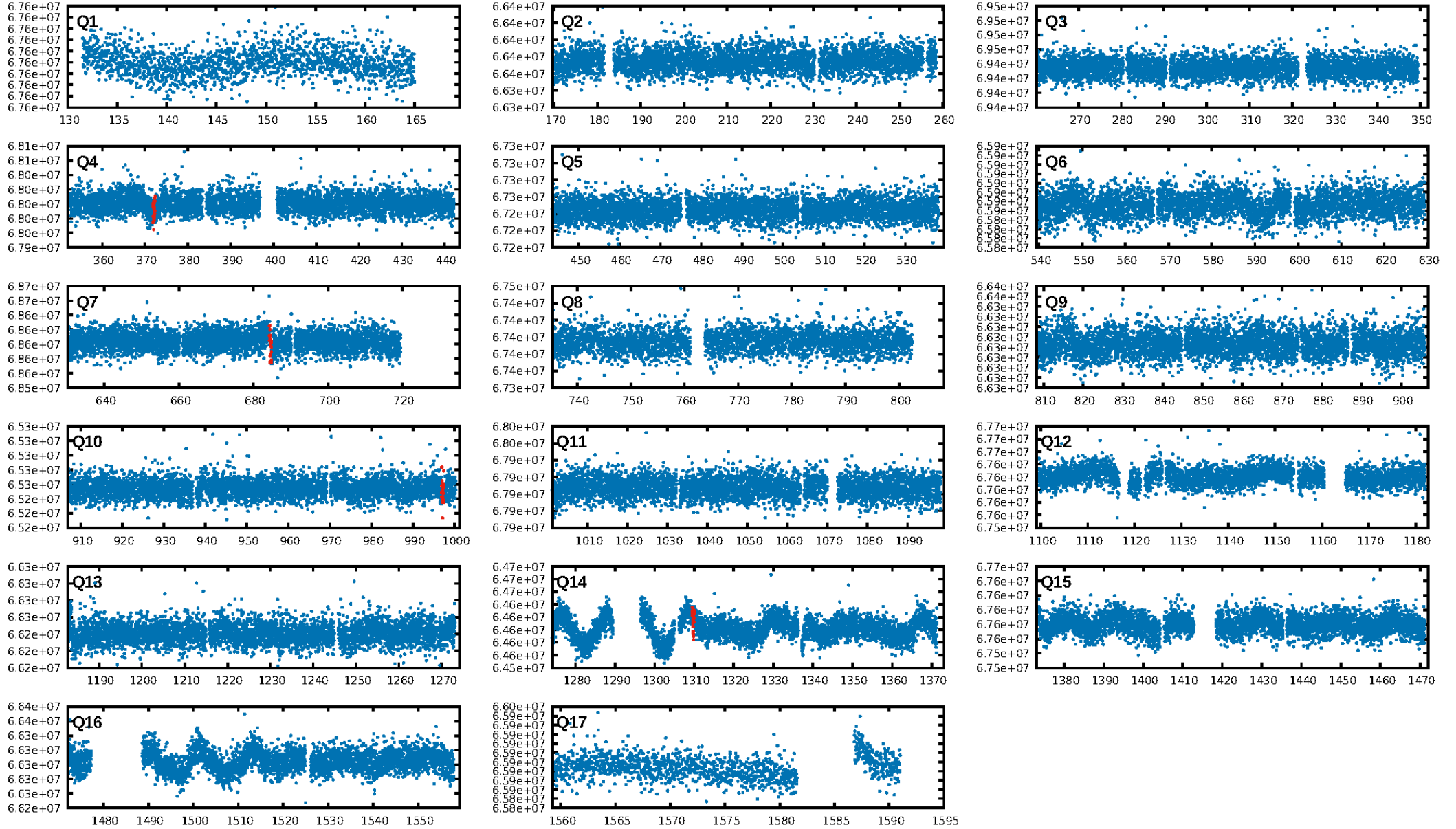
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 64.0%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 1.73e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 6.576
Centroid-sig: 15.1%
Centroid-so: 2.725 arcsec [1.45 σ]
OotOffset-rm: 0.937 arcsec [1.41 σ]
KicOffset-rm: 0.778 arcsec [1.17 σ]
OotOffset-st: 2/1/1/0 [4]
KicOffset-st: 2/1/1/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

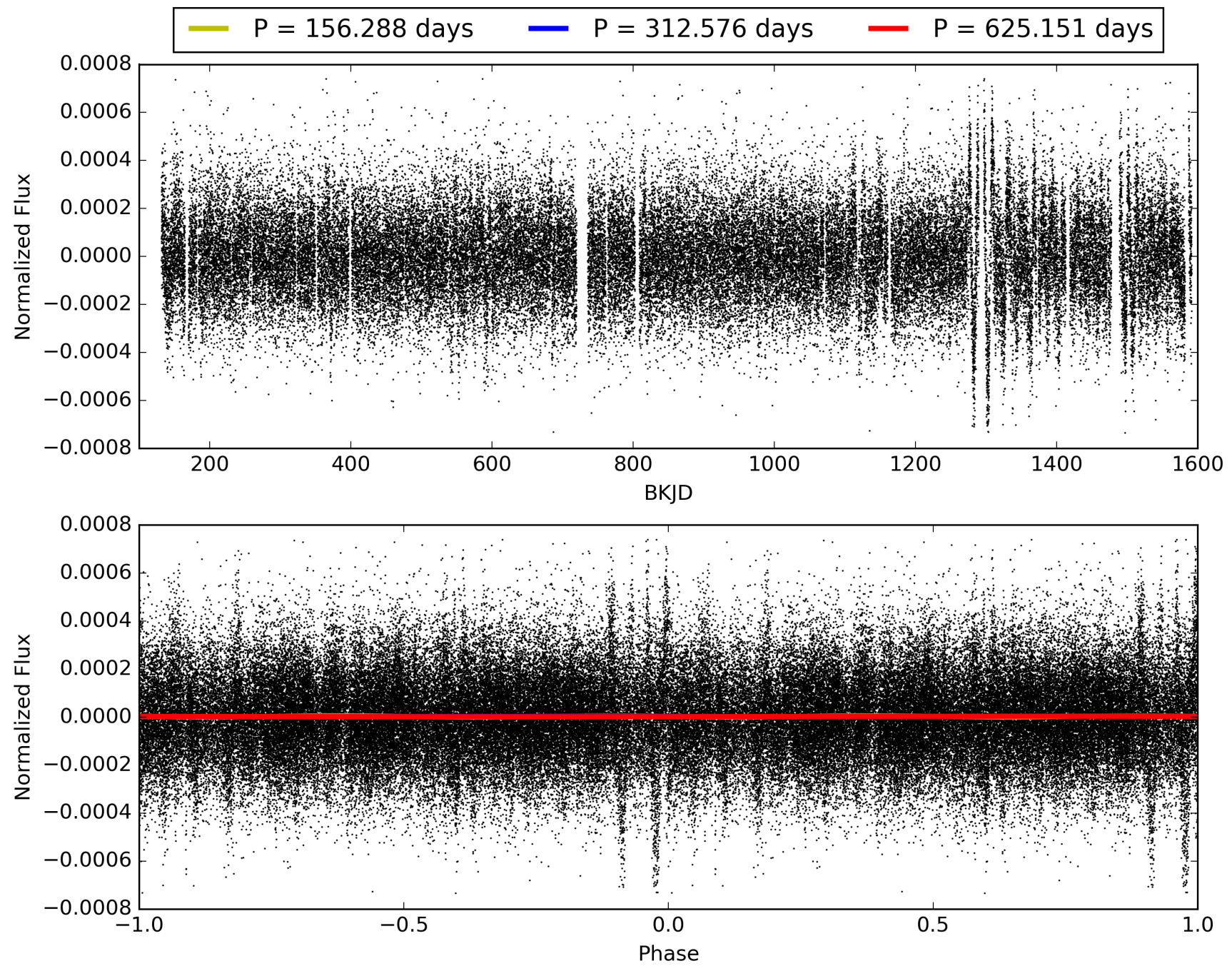
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 14:24:57 Z

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

TCE 010082667-01, PDC Light Curves

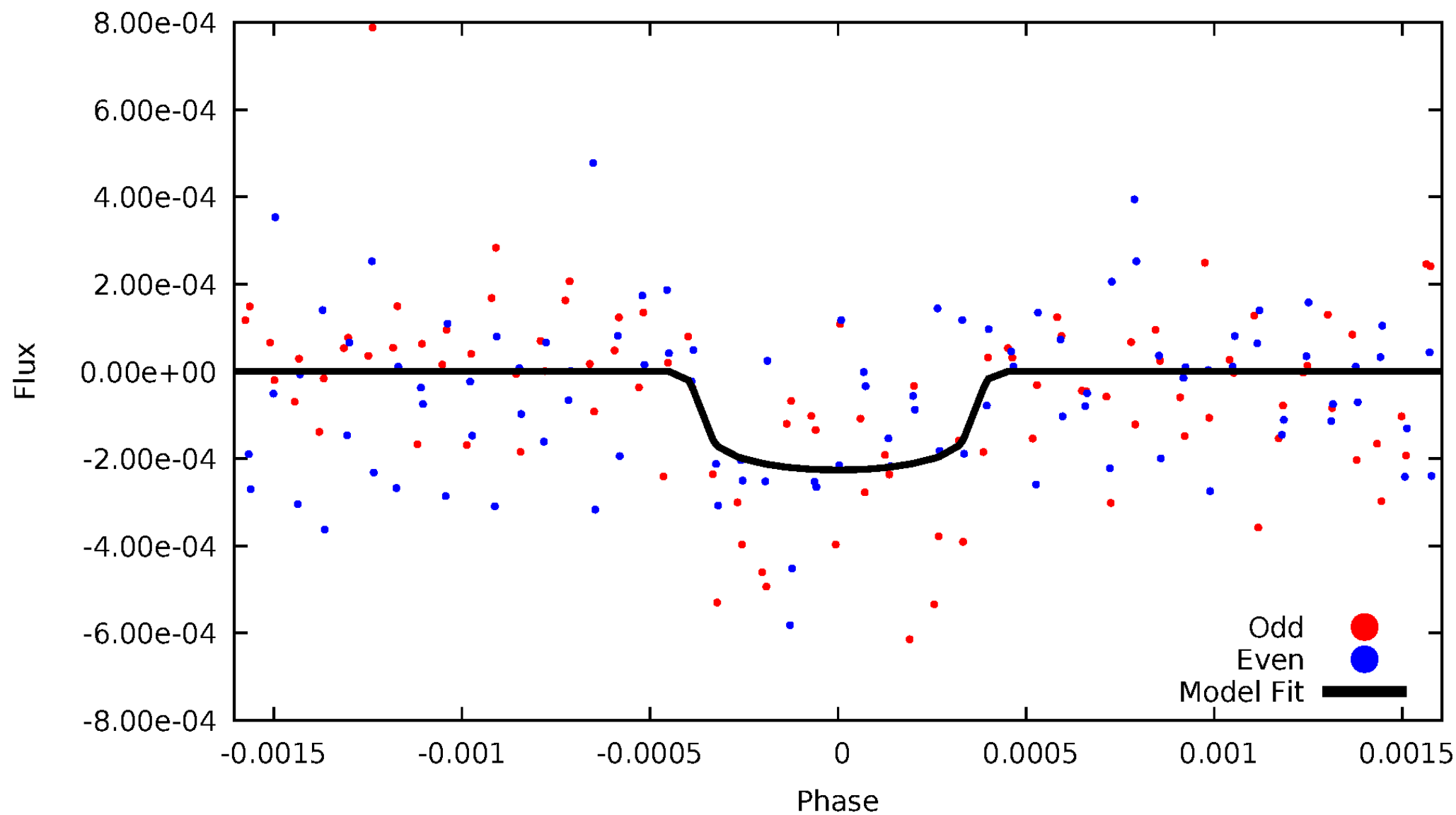


TCE 010082667-01



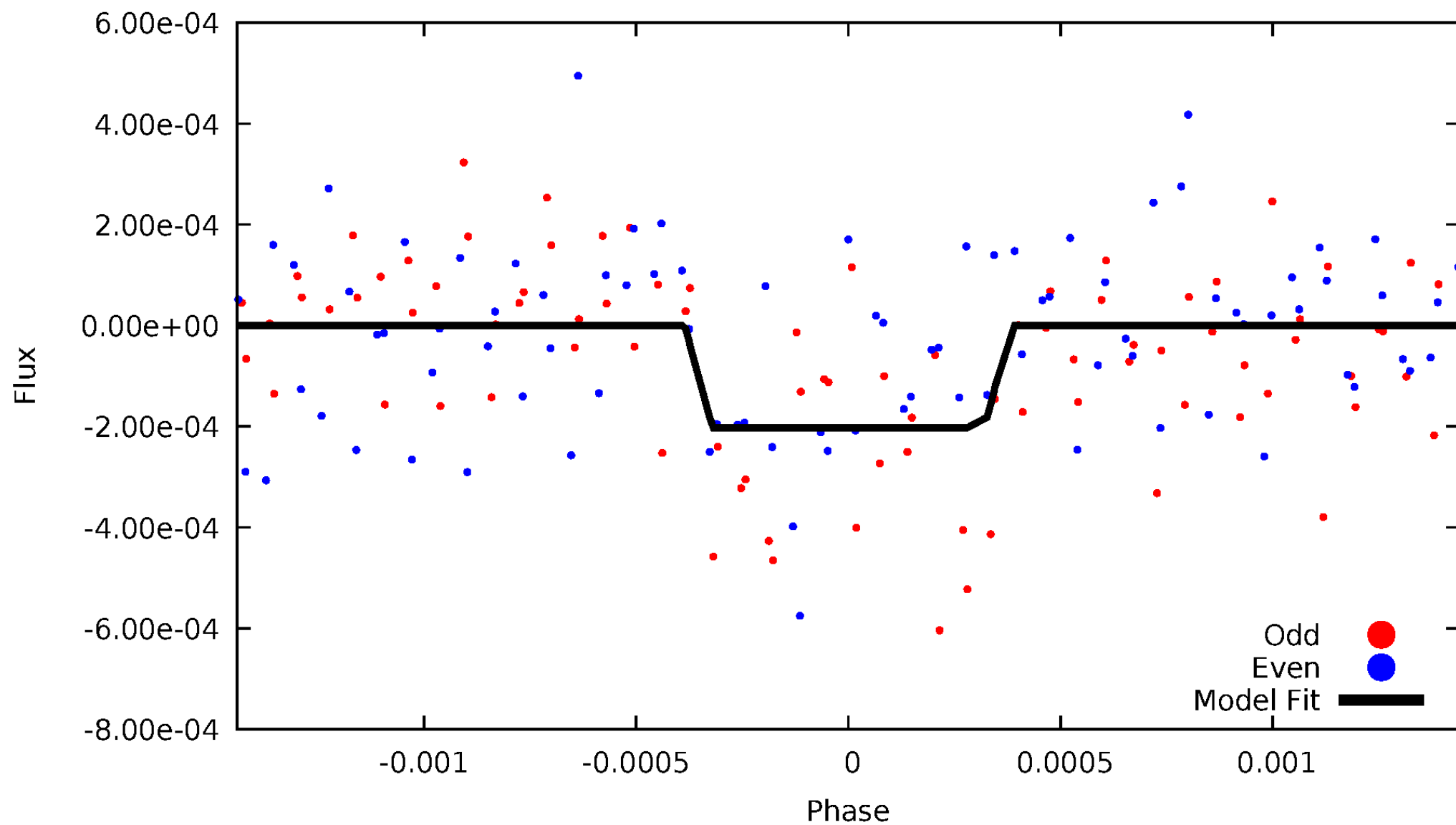
DV Odd/Even

TCE 010082667-01



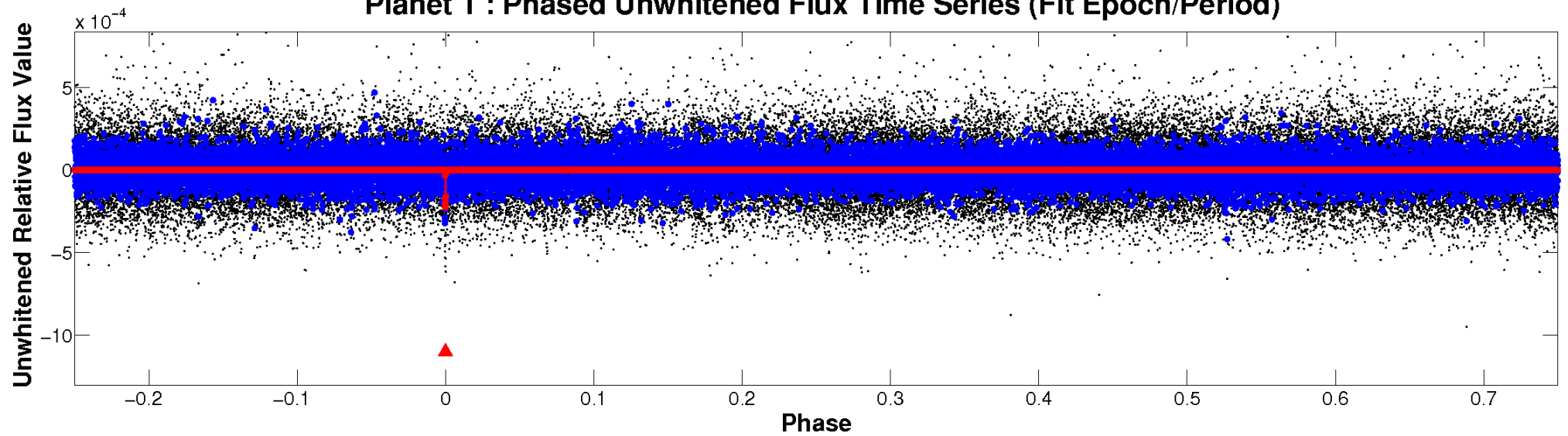
ALT Odd/Even

TCE 010082667-01

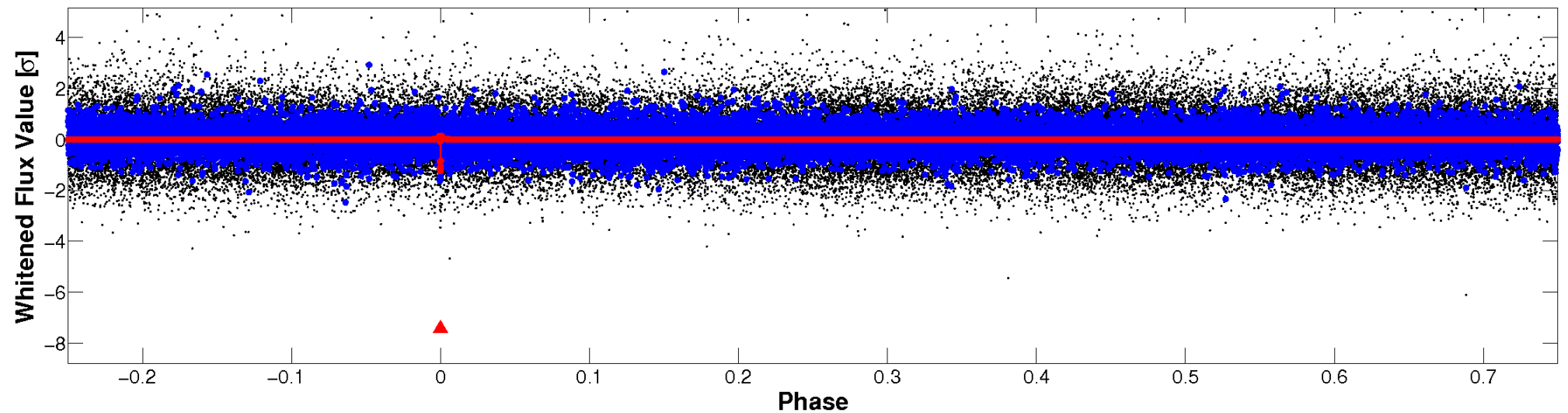


Non-Whitened Vs. Whitened Light Curve

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

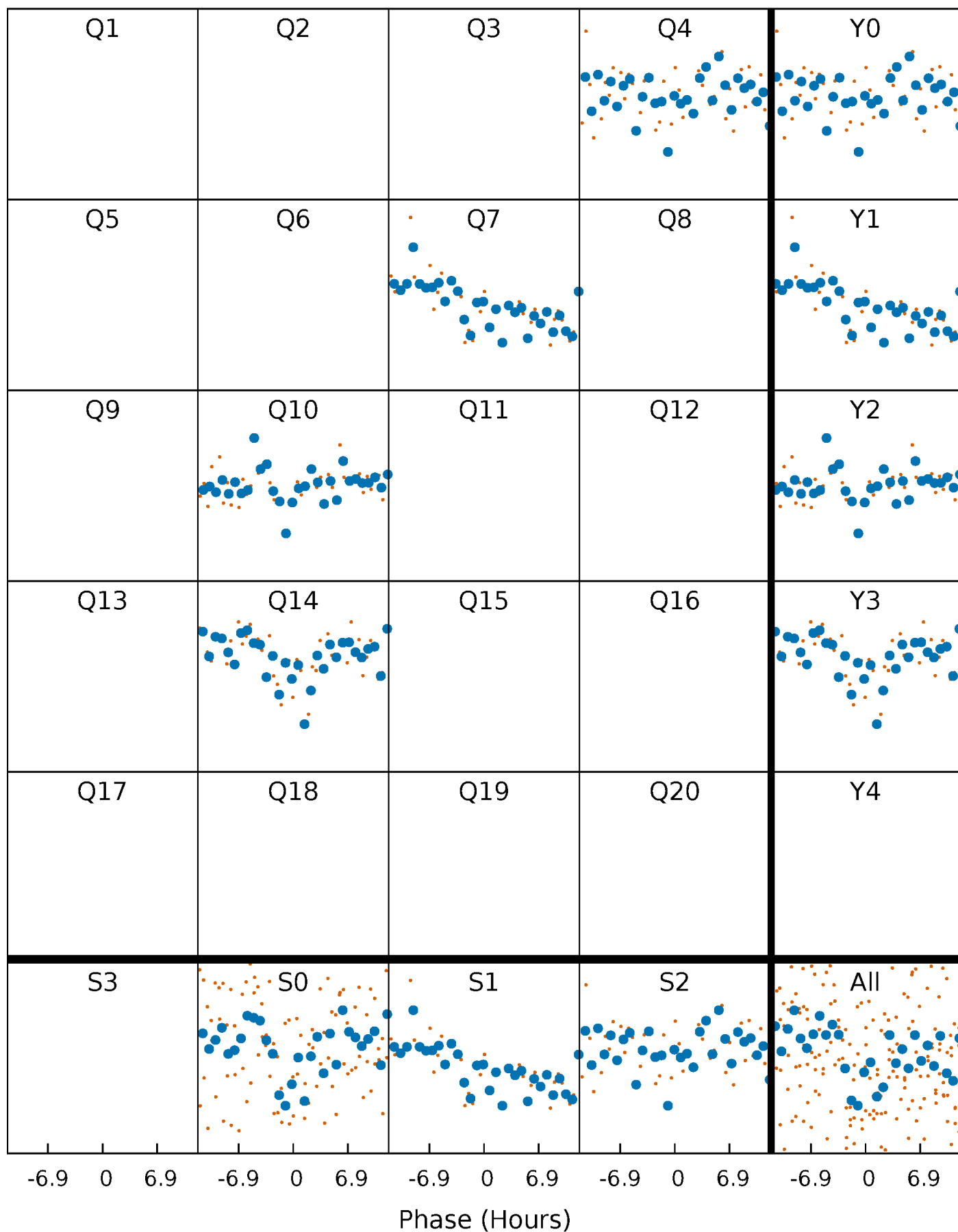


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



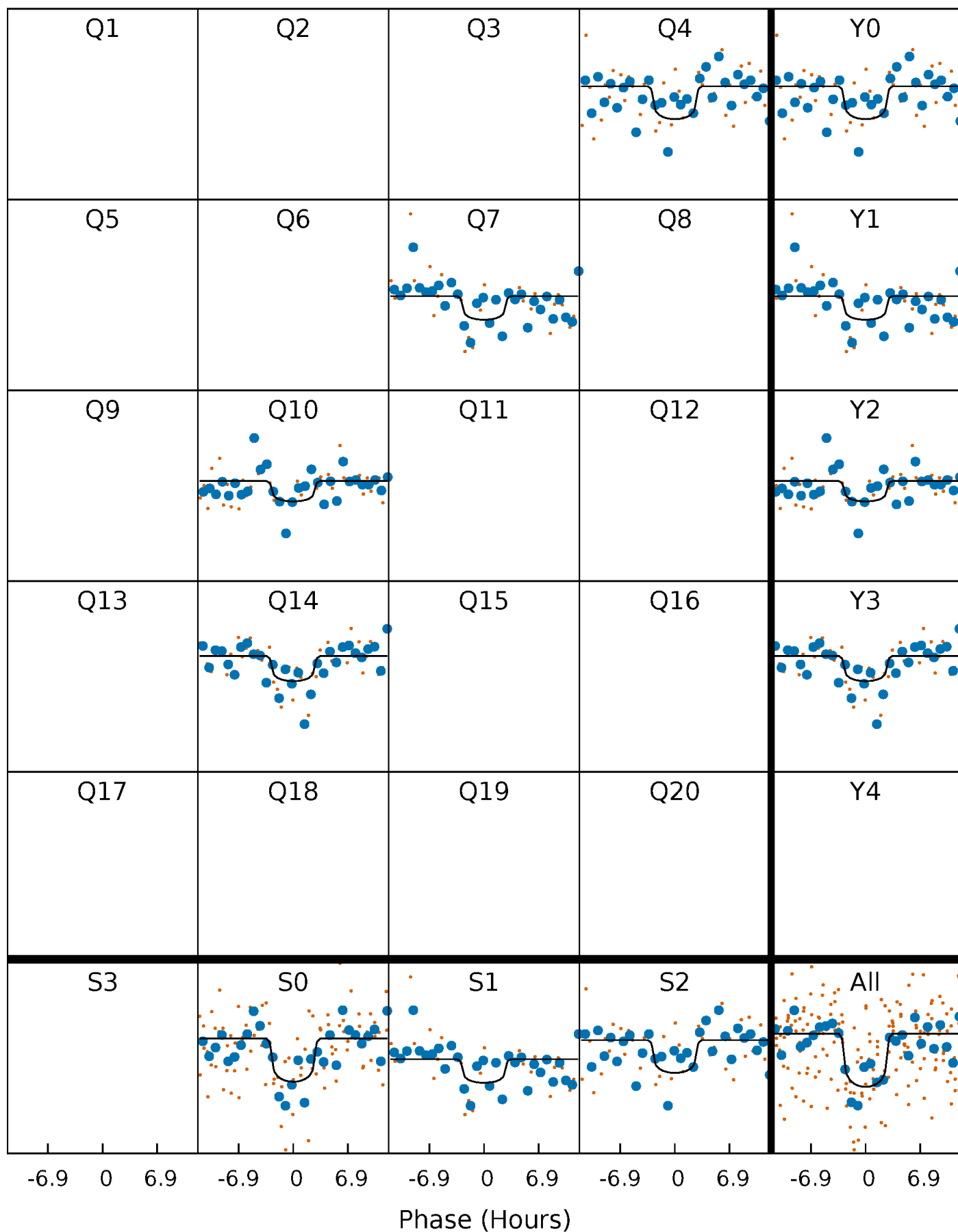
PDC Quarter-Phased Transit Curves

TCE 010082667-01 P=312.575589 Days $T_0=372.031101$ (BKJD)



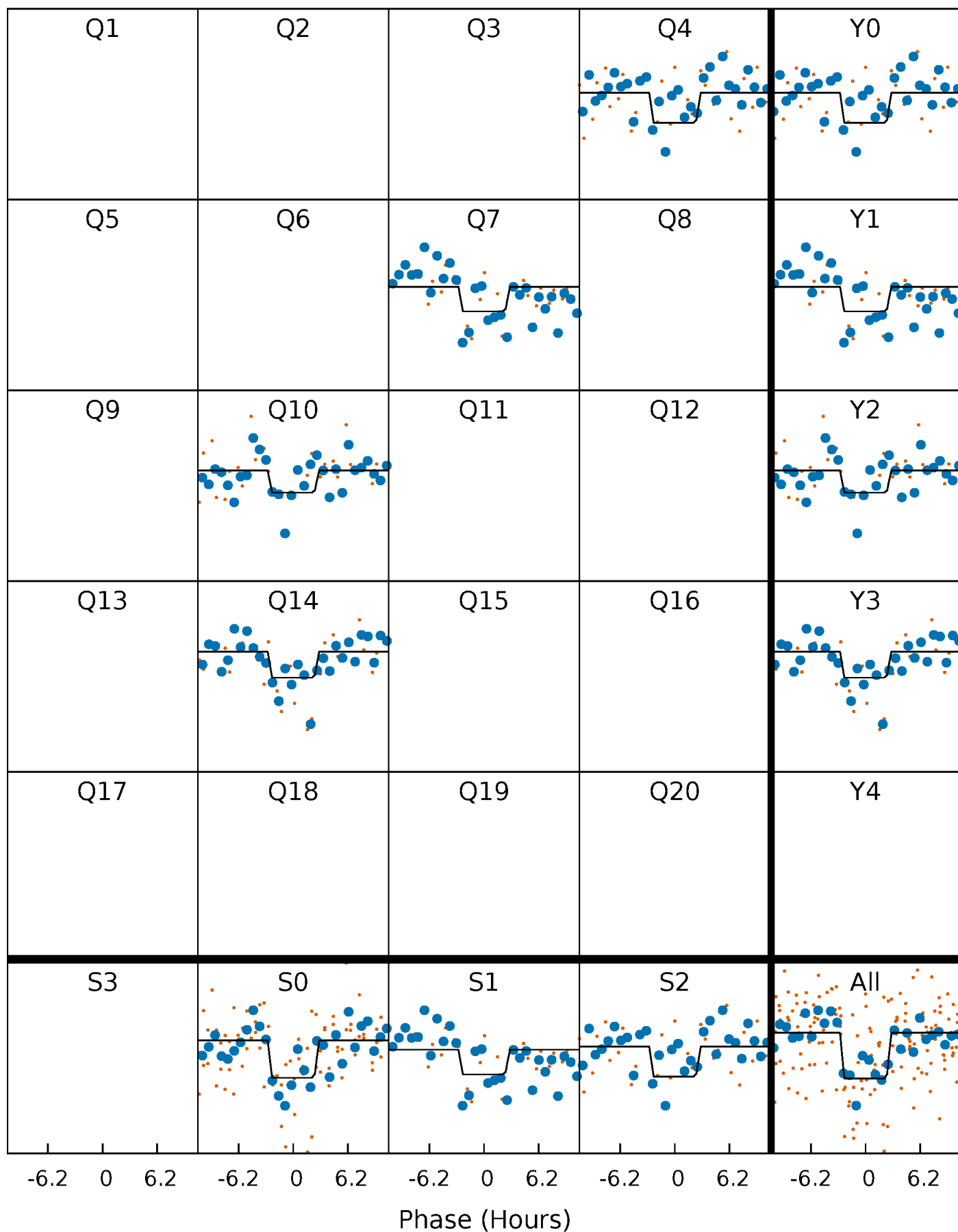
DV Quarter-Phased Transit Curves

TCE 010082667-01 P=312.575589 Days $T_0=372.031101$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

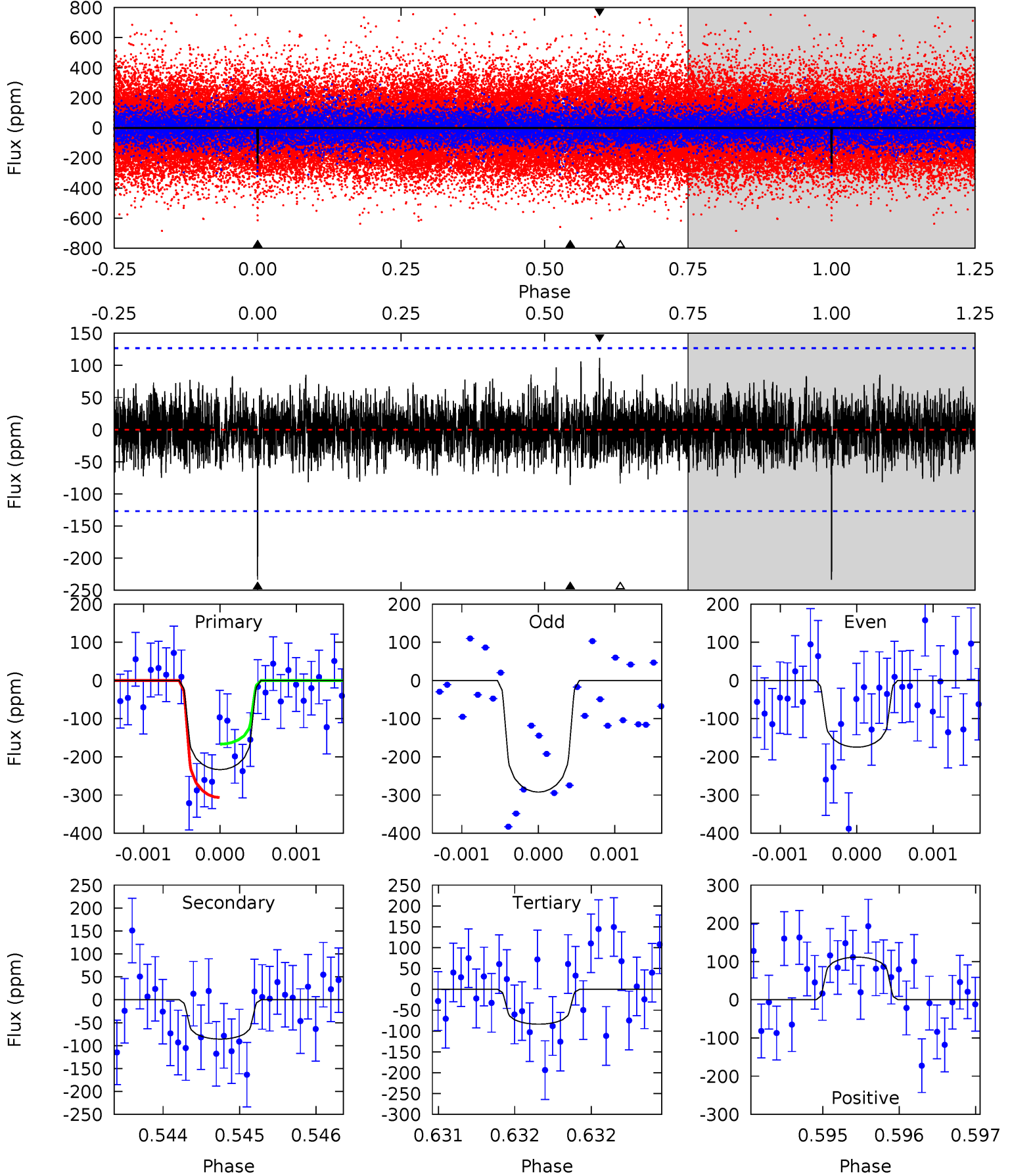
TCE 010082667-01 P=312.572167 Days $T_0=372.033637$ (BKJD)



DV Model-Shift Uniqueness Test

010082667-01, $P = 312.575589$ Days, $E = 59.455512$ Days

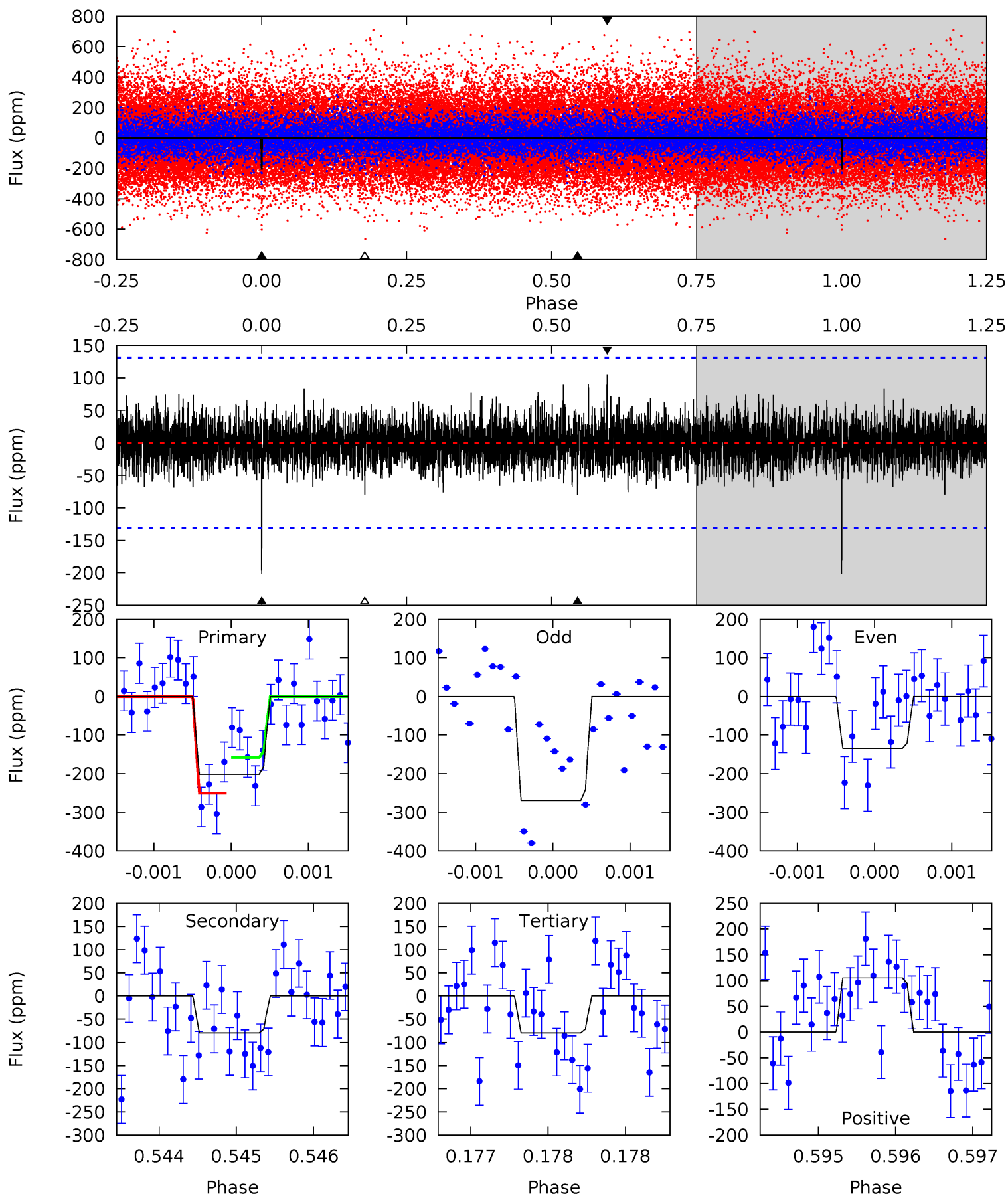
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	3.71	3.61	4.83	5.48	3.34	1.13	6.47	5.26	0.09	-1.12	2.54	1.06	0.32	3.01



Alt Model-Shift Uniqueness Test

010082667-01, P = 312.572167 Days, E = 59.461470 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	3.33	3.32	4.41	5.50	3.36	0.97	5.13	4.04	0.01	-1.08	2.82	1.04	0.34	1.91



Stellar Parameters For KIC 010082667

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5865^{+140}_{-175}	$4.518^{+0.046}_{-0.184}$	$-0.040^{+0.250}_{-0.300}$	$0.918^{+0.246}_{-0.082}$	$1.012^{+0.116}_{-0.127}$	$1.842^{+0.431}_{-0.858}$
	+2%/-3%	+1%/-4%	+625%/-750%	+27%/-9%	+11%/-13%	+23%/-47%
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 010082667-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-86 ± 23	$1.70^{+0.67}_{-0.62}$	370^{+25}_{-16}	4539^{+958}_{-528}	12792^{+18885}_{-6542}
Alt.	-80 ± 24	$1.51^{+0.63}_{-0.60}$	370^{+24}_{-16}	4689^{+1295}_{-600}	14899^{+30412}_{-8063}

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

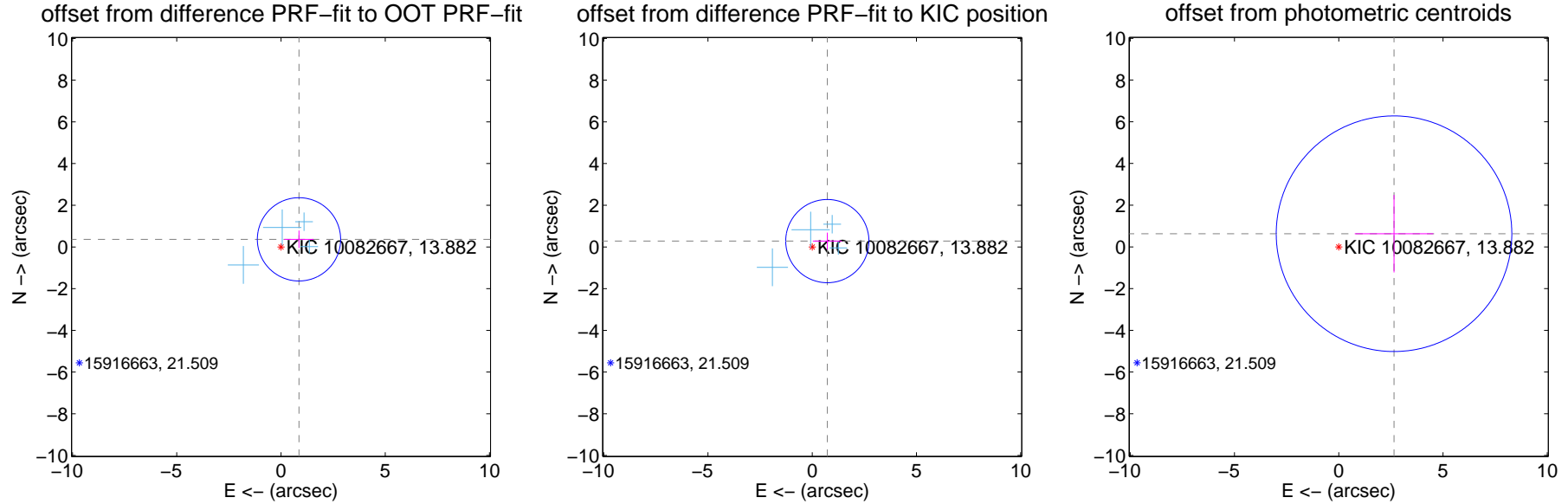
DV Centroid Data

Supplemental centroid analysis for 010082667-01. Kepler magnitude: 13.88. Transit SNR 7.28

There are 4 quarters with good PRF difference image offsets

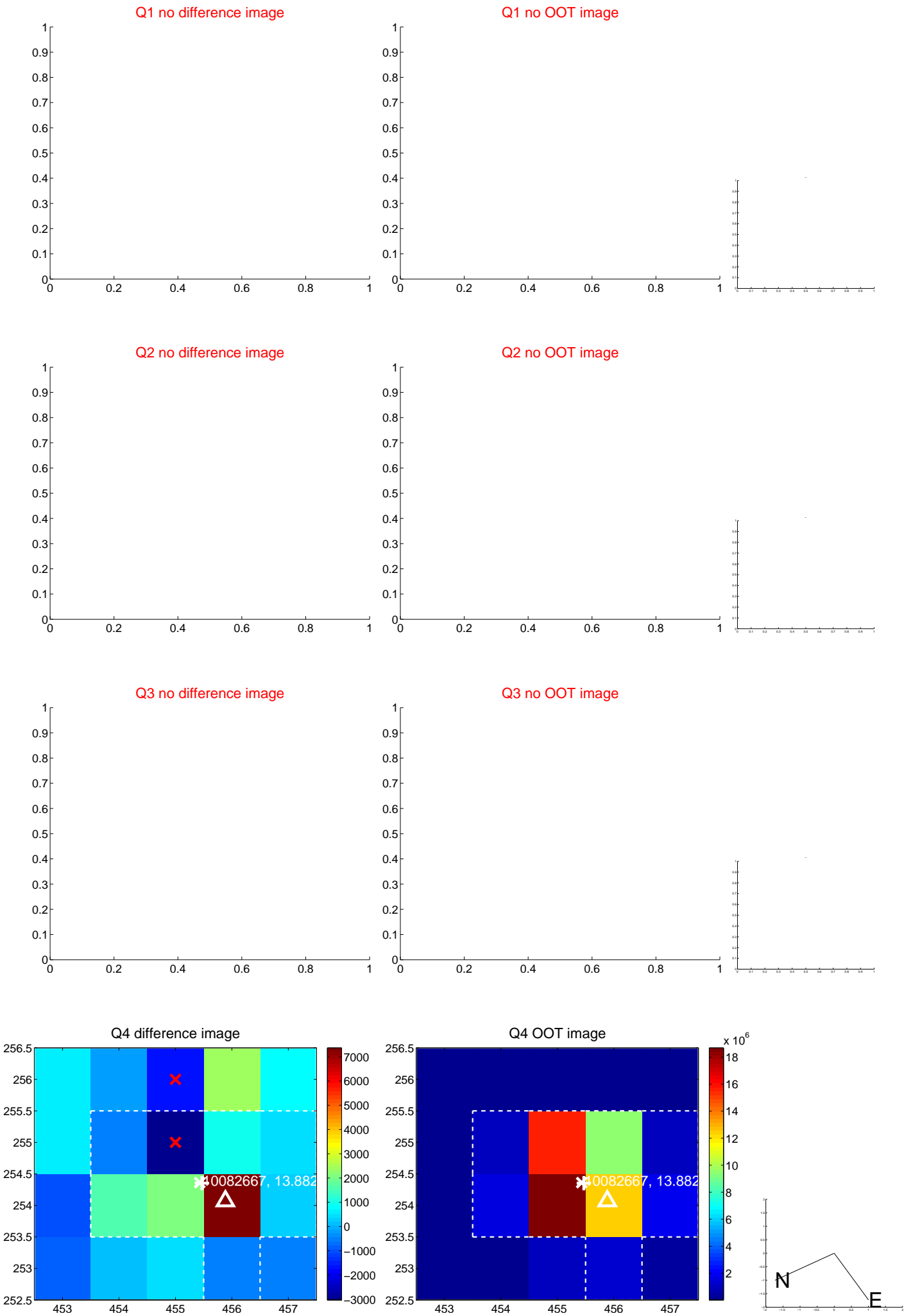
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.937 ± 0.666	1.41	-0.863 ± 0.701	0.365 ± 0.421
PRF-fit source offset from KIC position	0.778 ± 0.665	1.17	-0.725 ± 0.696	0.281 ± 0.408
photometric centroid source offset	2.73 ± 1.88	1.45	-2.65 ± 1.88	0.63 ± 1.86

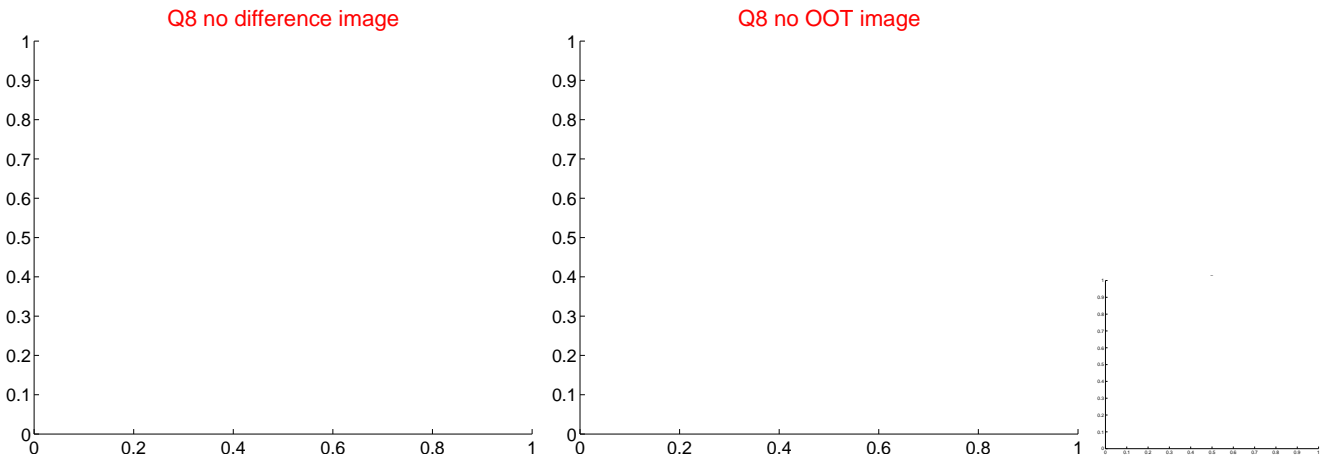
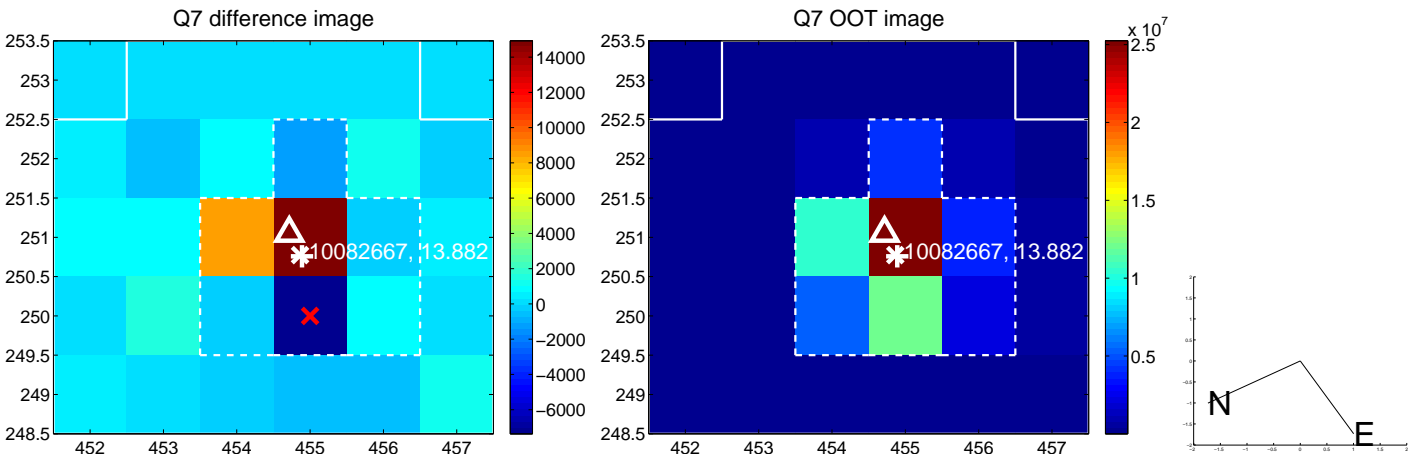
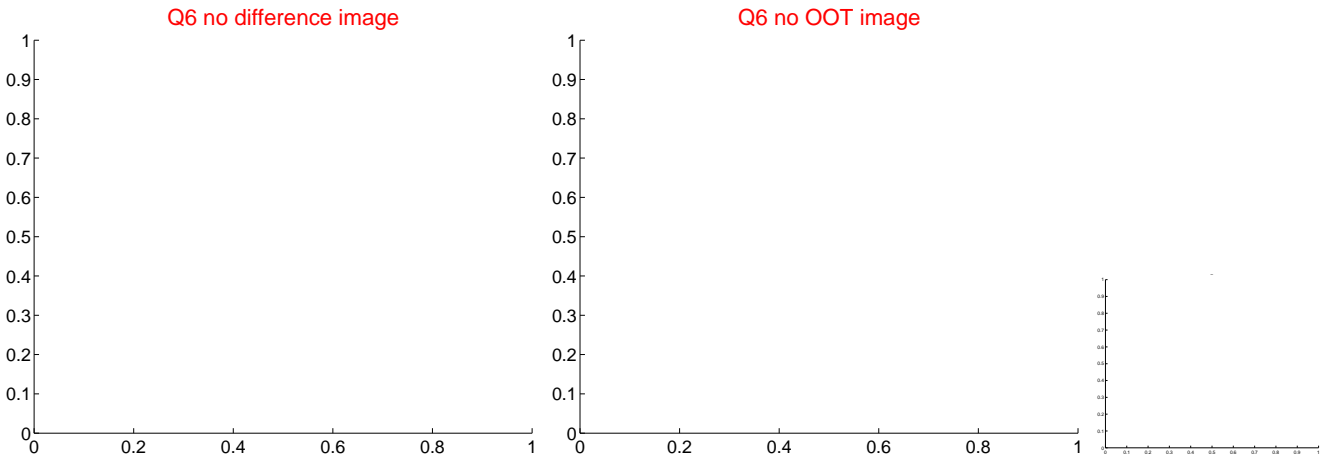
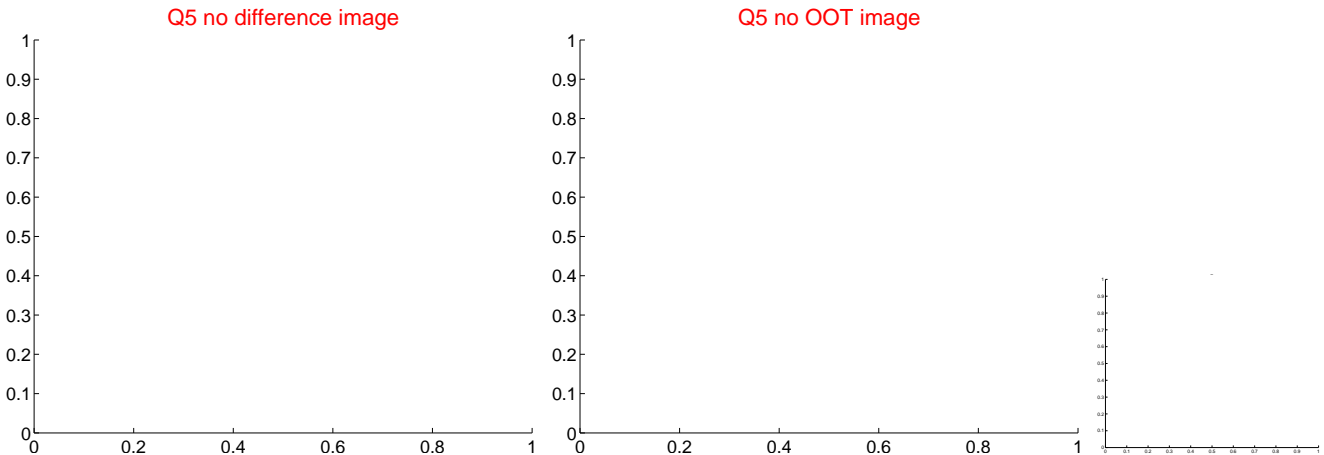


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

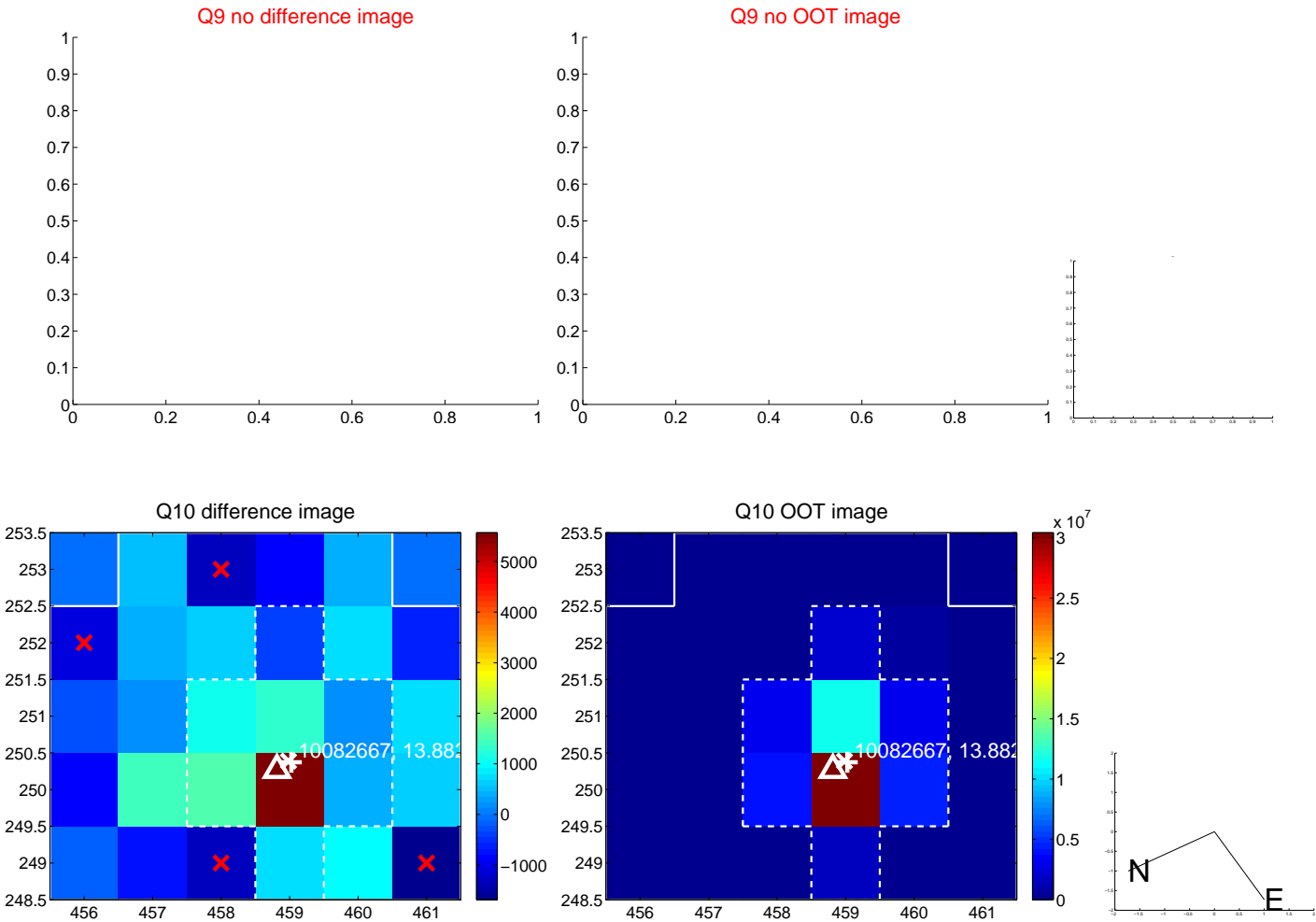
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



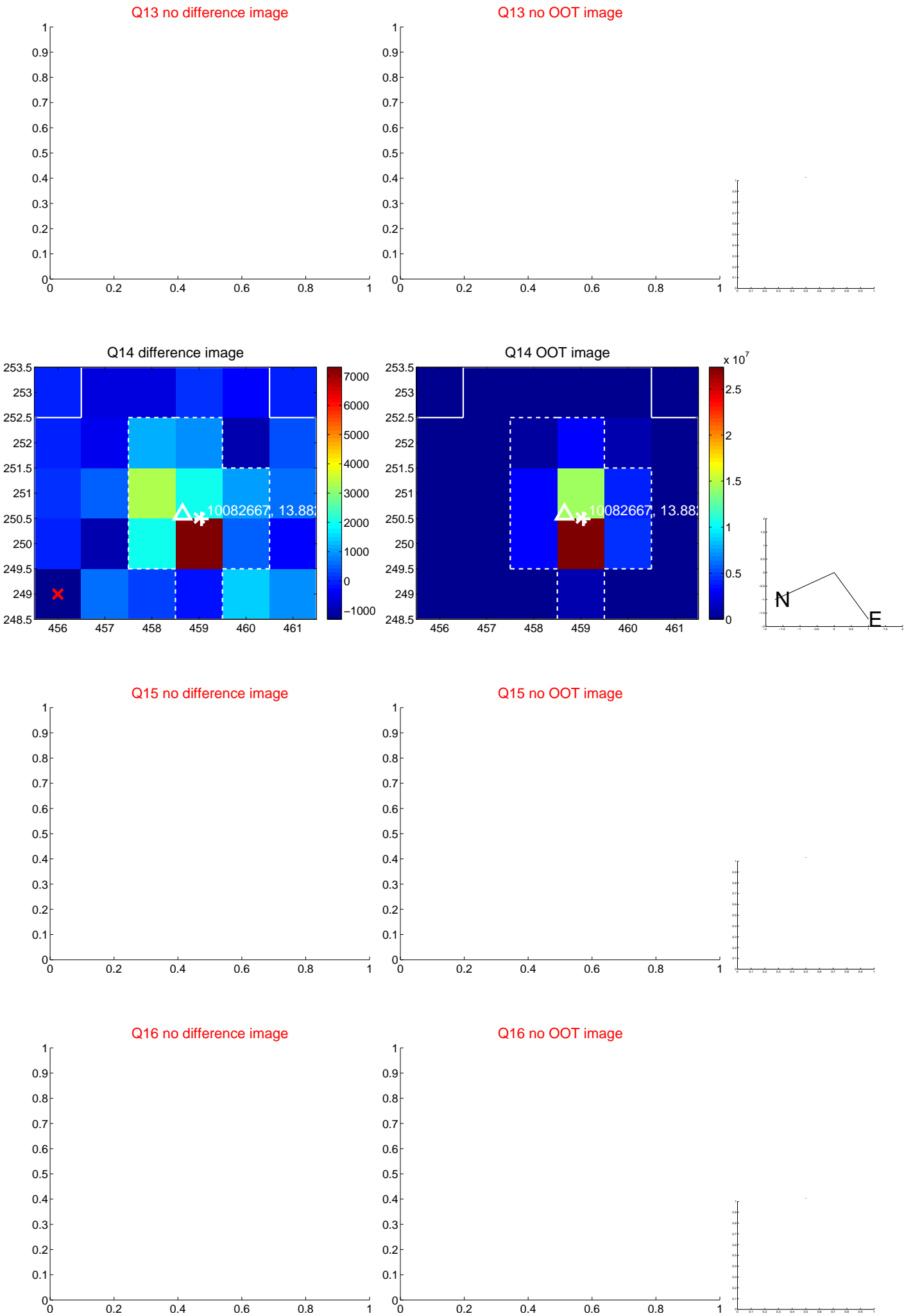
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



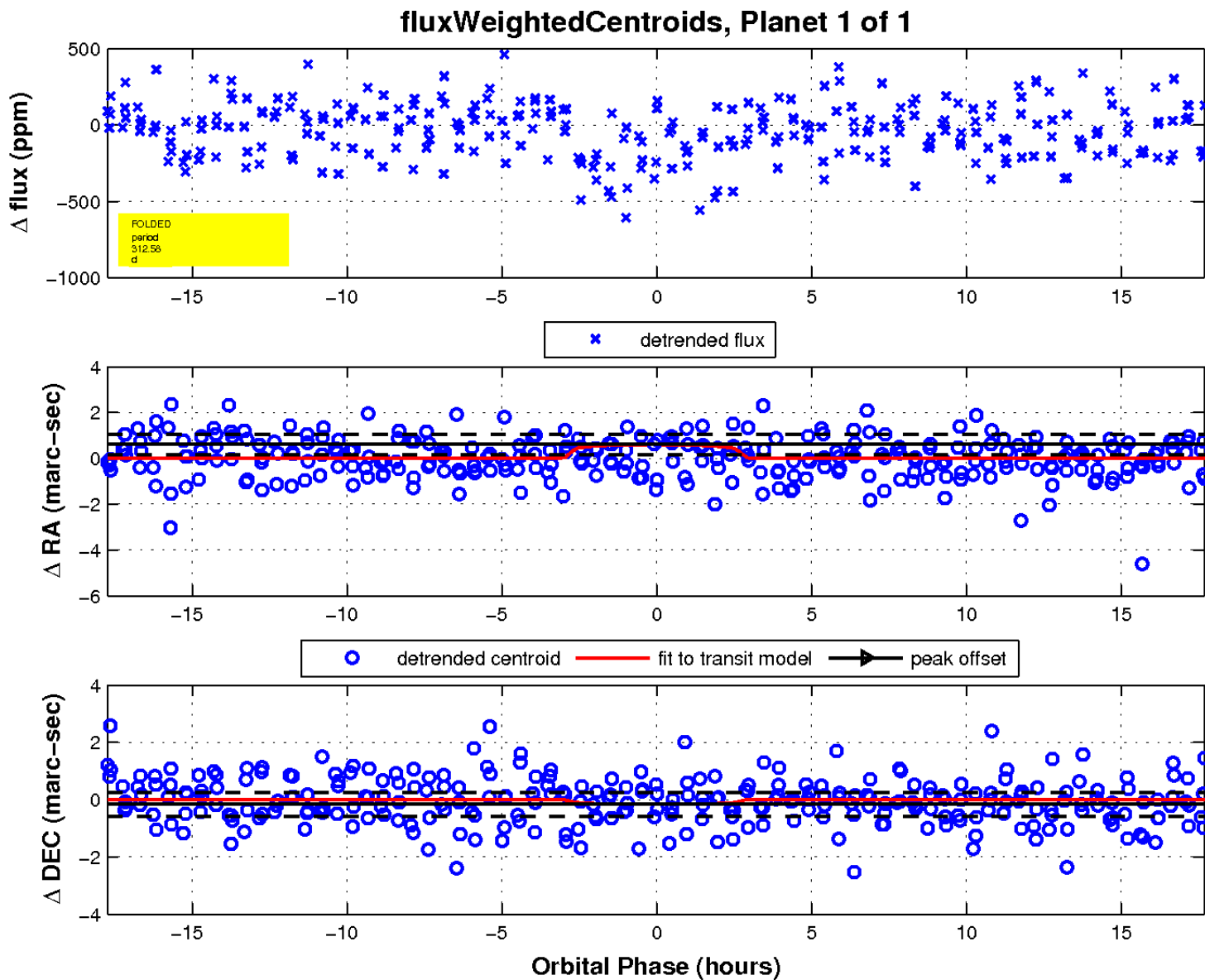
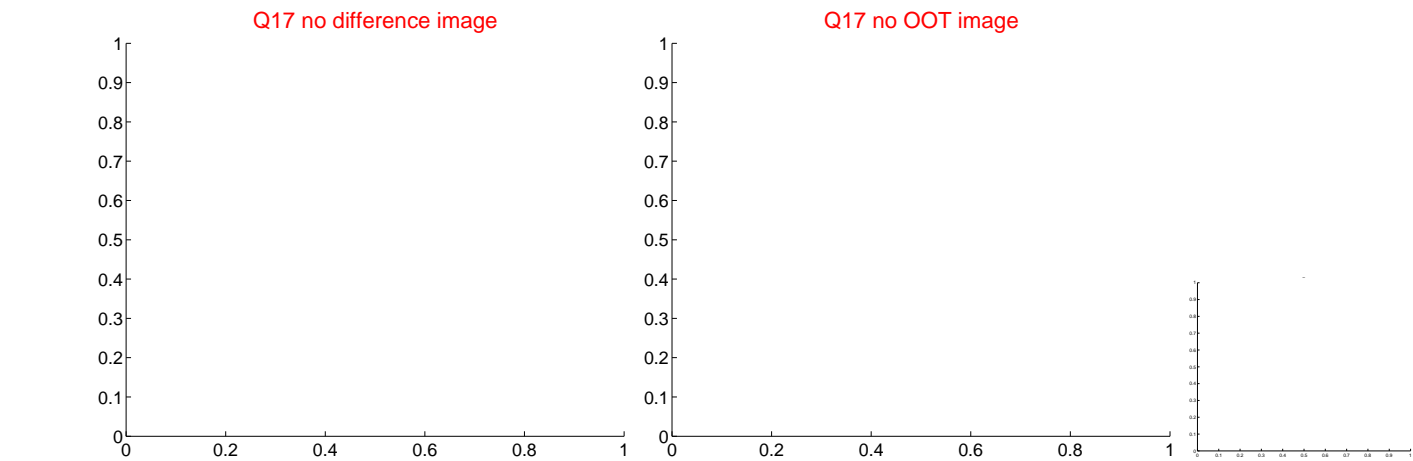
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

