

KIC 006312521

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})
006312521-01	OBS	3656.01	1.507762	132.943193	153064.8	3.064	1453.3	1118.5	2.76	5299	148.06	6801.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006312521-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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.

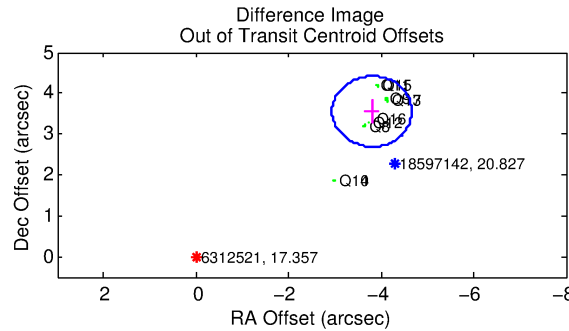
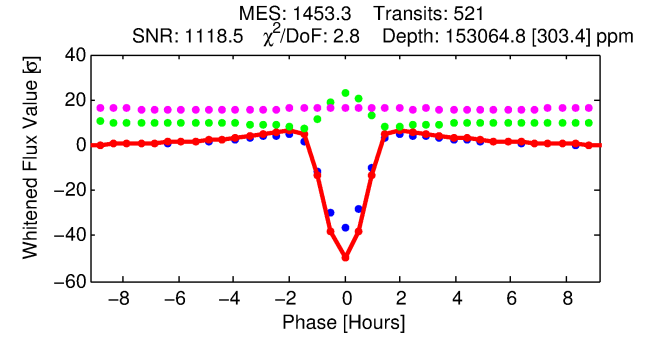
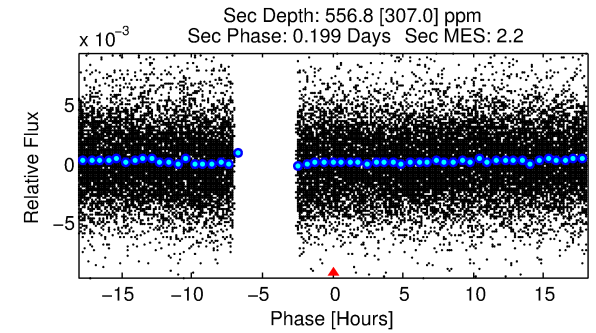
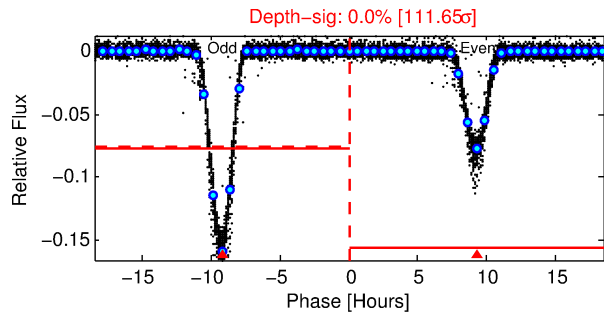
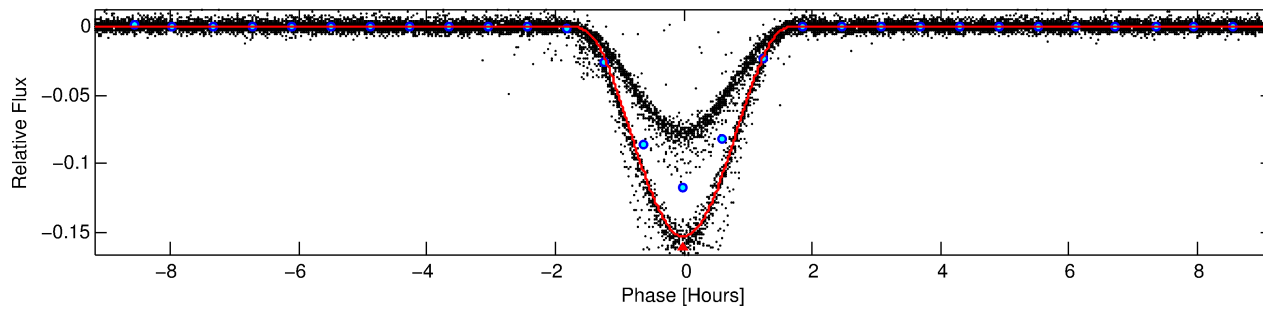
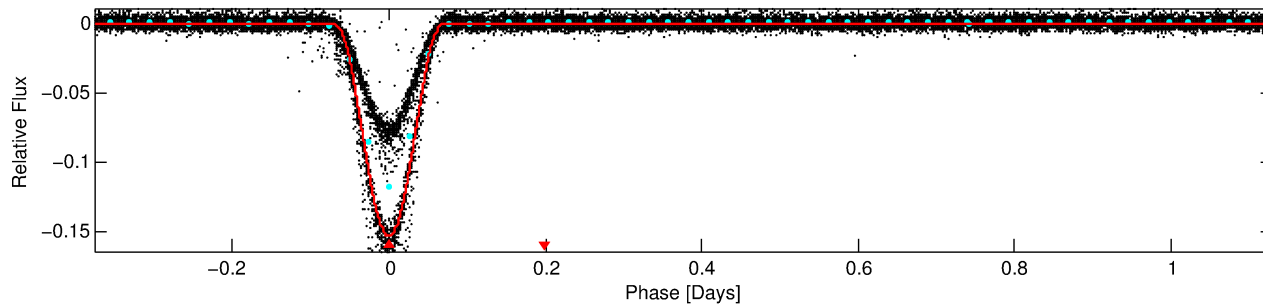
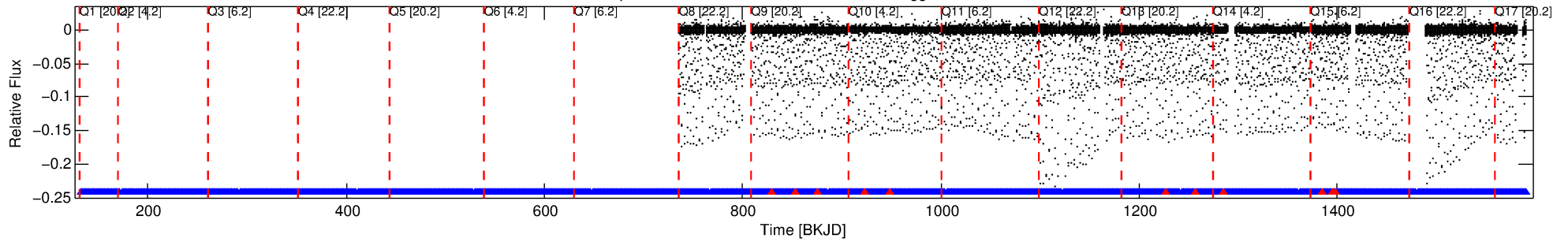
Ephemeris Match Information For 006312521-01

No Significant Match Found

DV One-Page Summary

KIC: 6312521 Candidate: 1 of 1 Period: 1.508 d
KOI: K03656 Corr: No Ephemeris Match

Kp: 17.36 R*: 2.76 Rs Teff: 5299.0 K Logg: 3.67 Fe/H: -0.160



DV Fit Results:

Period = 1.50776 [0.00000] d
Epoch = 132.9432 [0.0000] BKJD
Rp/R* = 0.4914 [0.0971]
a/R* = 4.79 [0.09]
b = 0.83 [0.15]
Seff = 6801.49 [9133.12]
Teff = 2316 [777] K
Rp = 148.06 [103.79] Re
a = 0.0281 [0.0217] AU
Ag = 0.01 [0.02] [-59.74σ]
Teffp = 1161 [202] K [-1.44σ]

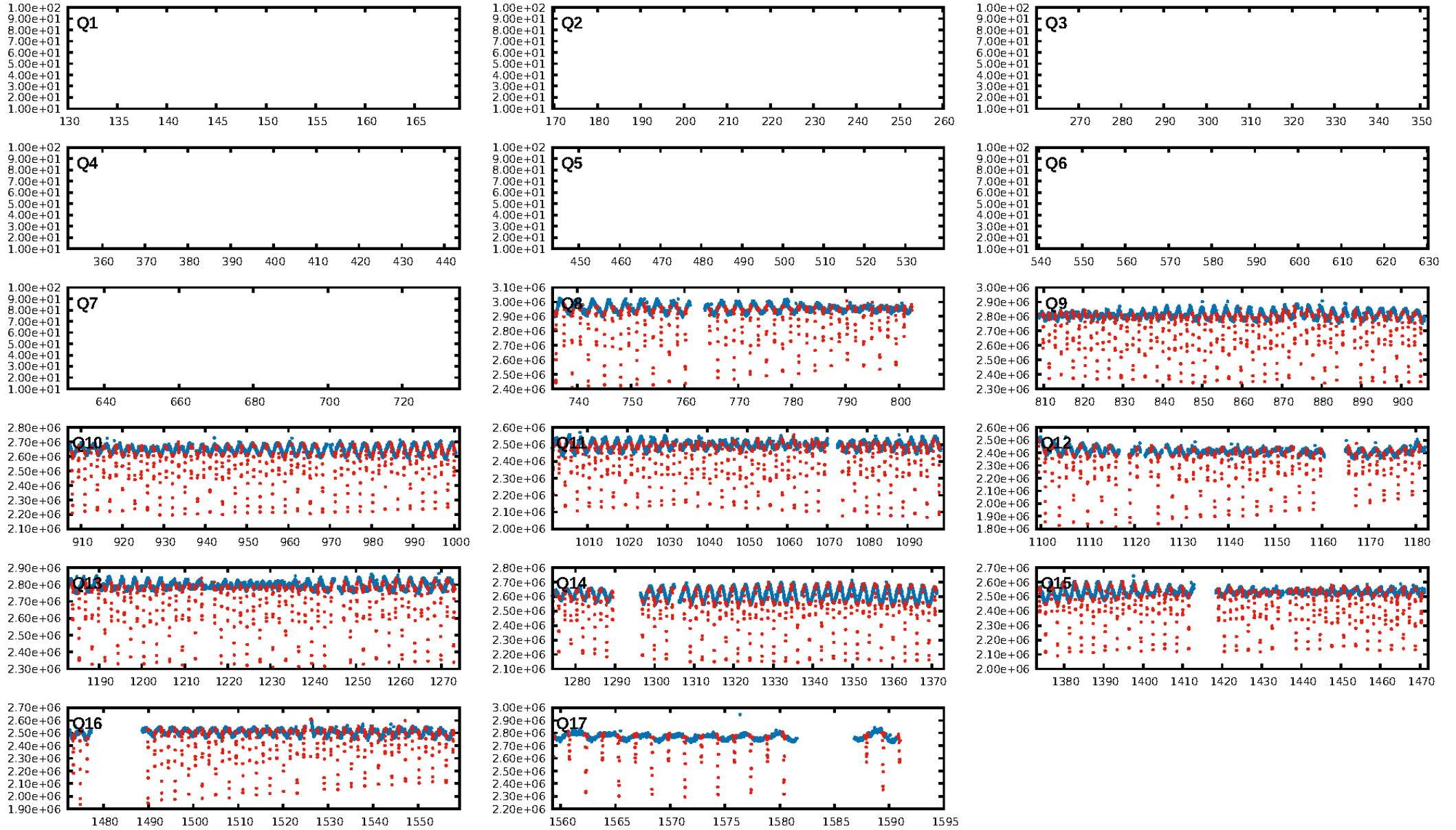
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-figt: 0.98 [492/503]
GhostDiagnostic-chr: 1.779
Centroid-sig: 0.0%
Centroid-so: 3.358 arcsec [1739.30σ]
OotOffset-rm: 5.201 arcsec [18.10σ]
KicOffset-rm: 0.176 arcsec [2.51σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

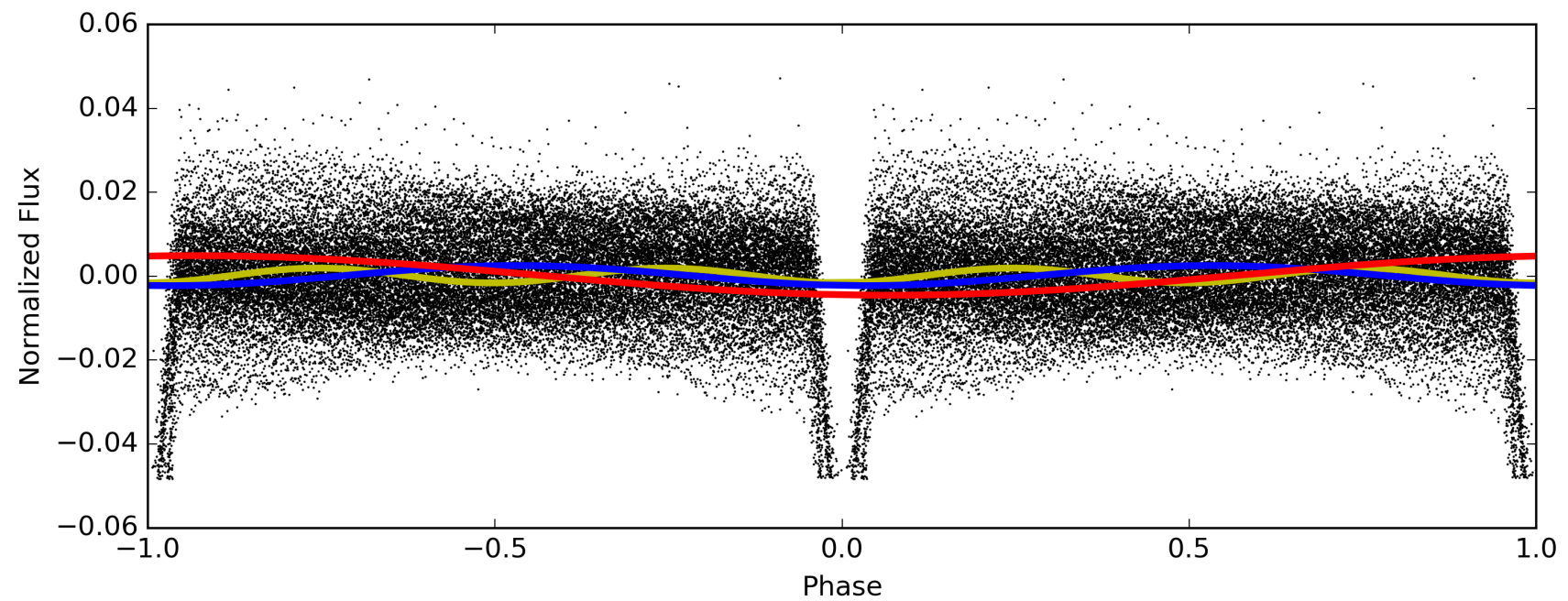
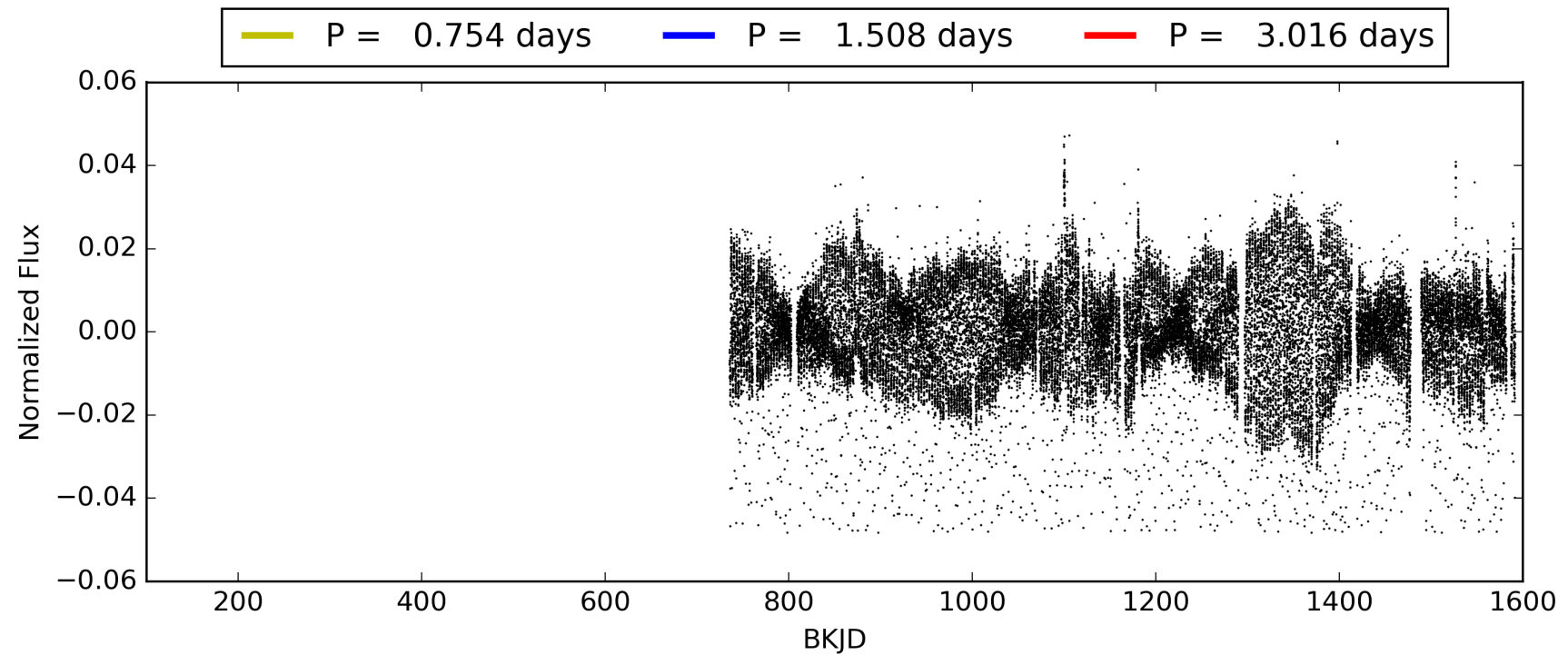
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:29:14 Z

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

TCE 006312521-01, PDC Light Curves

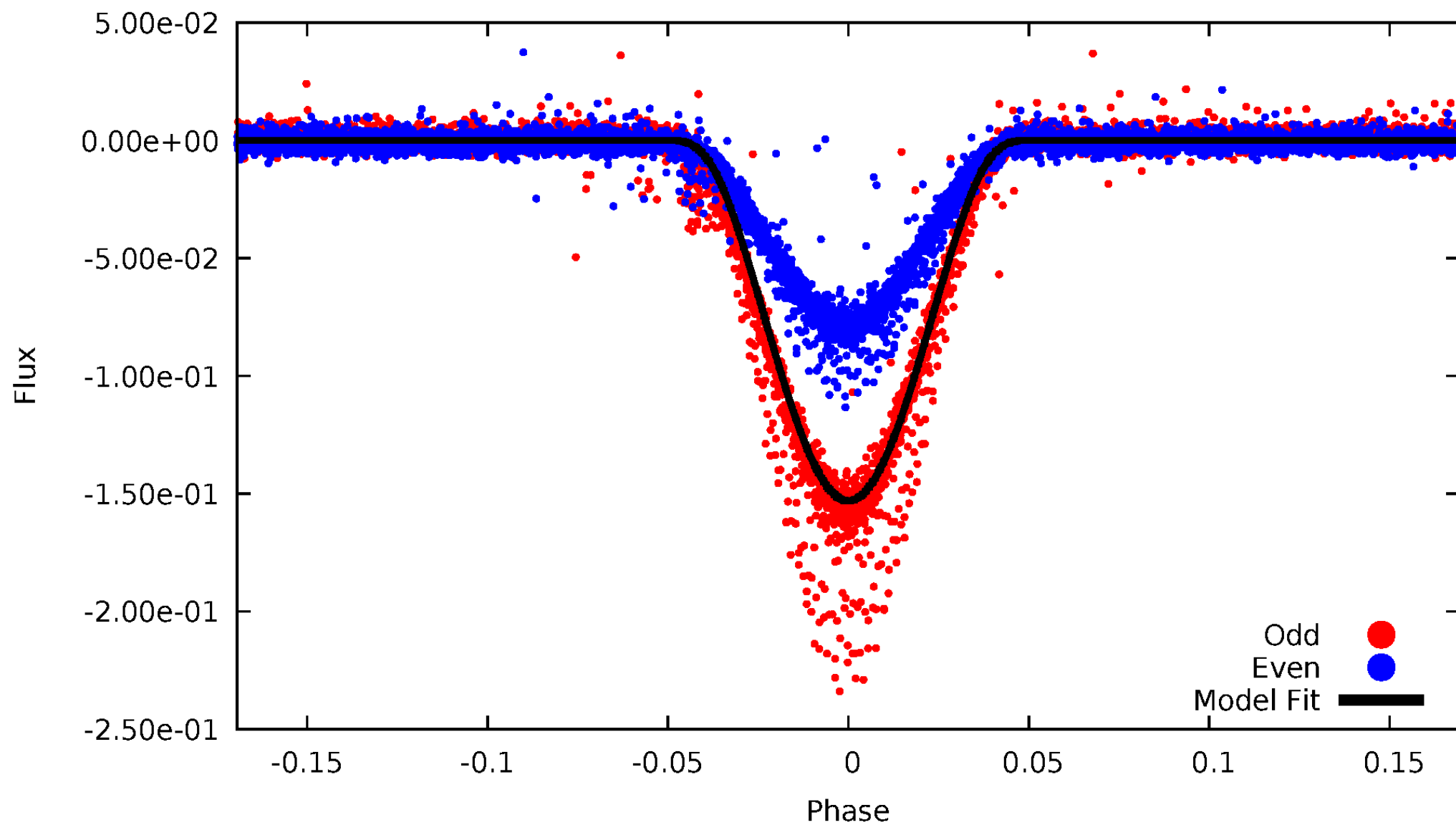


TCE 006312521-01



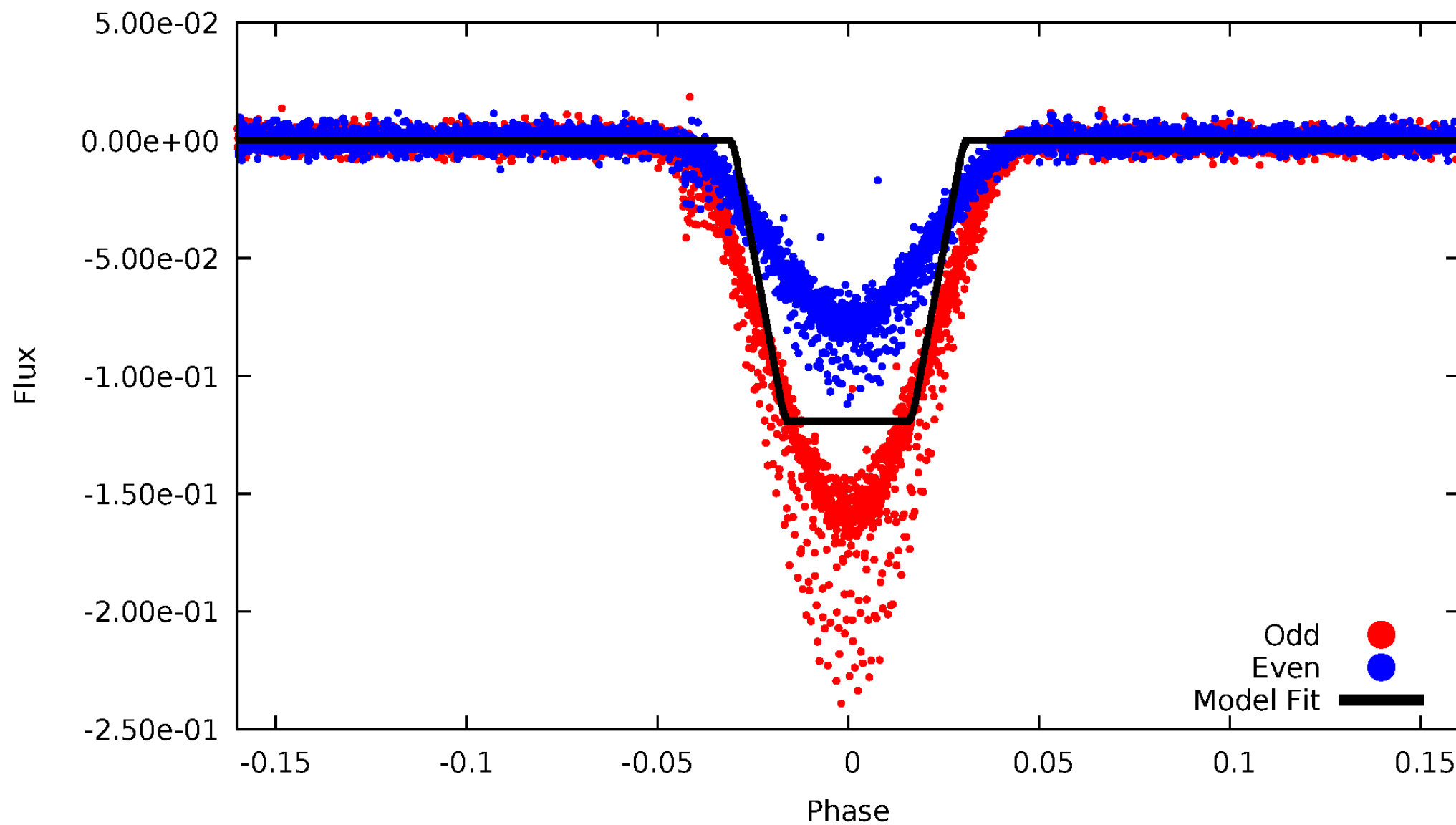
DV Odd/Even

TCE 006312521-01



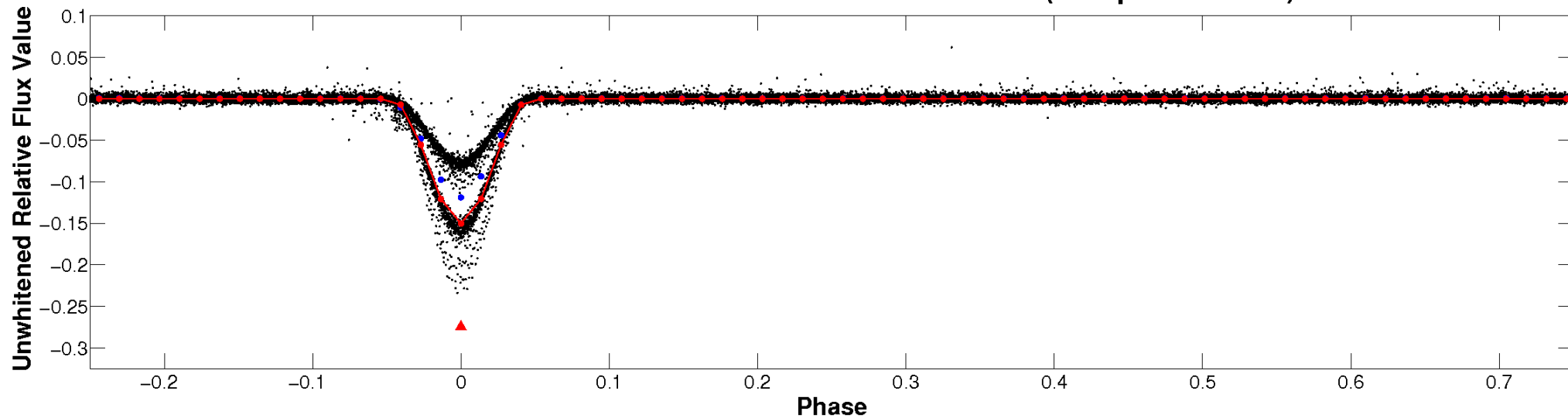
ALT Odd/Even

TCE 006312521-01

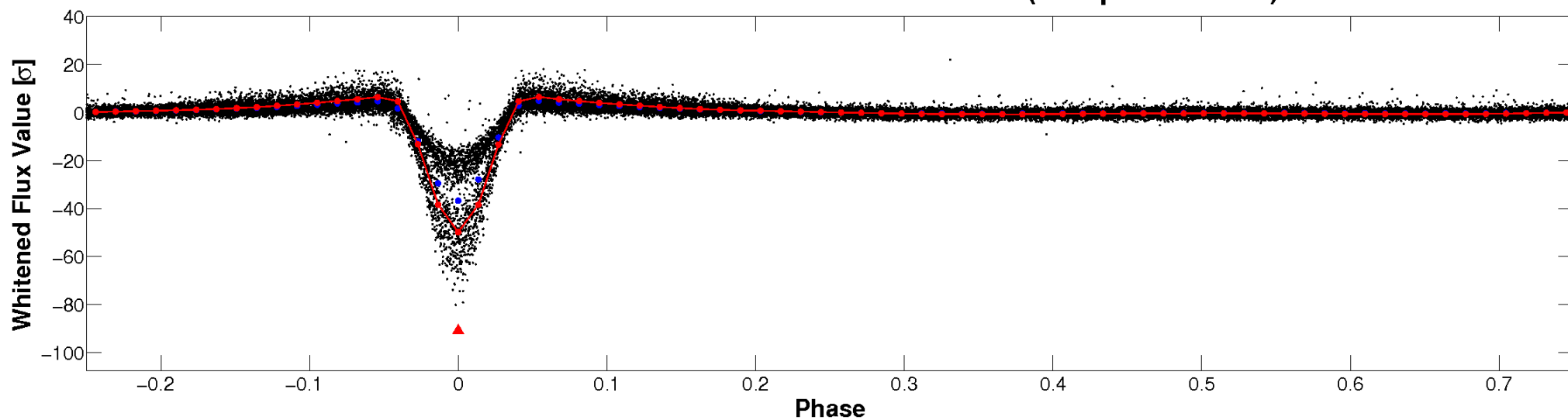


Non-Whitened Vs. Whitened Light Curve

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

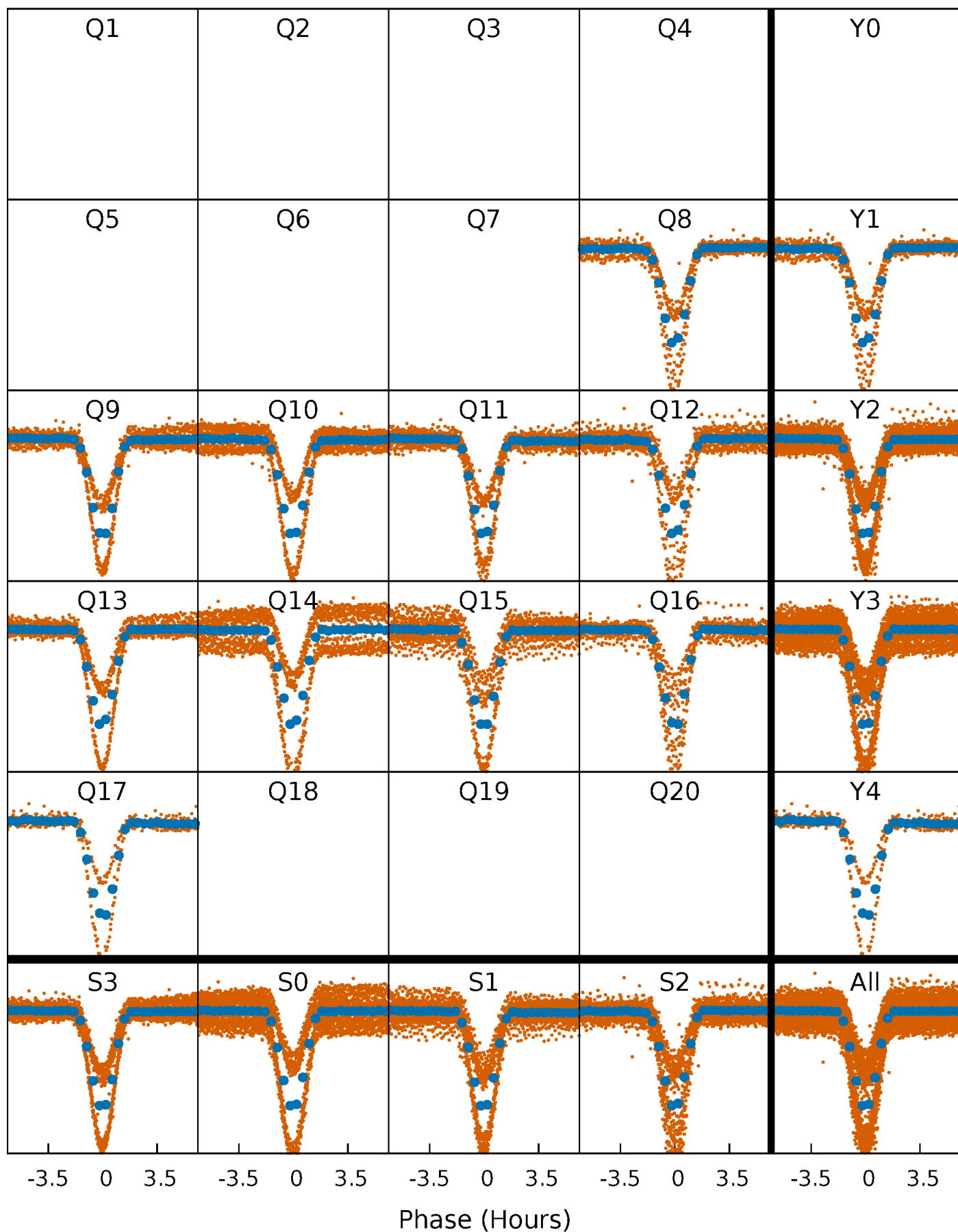


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



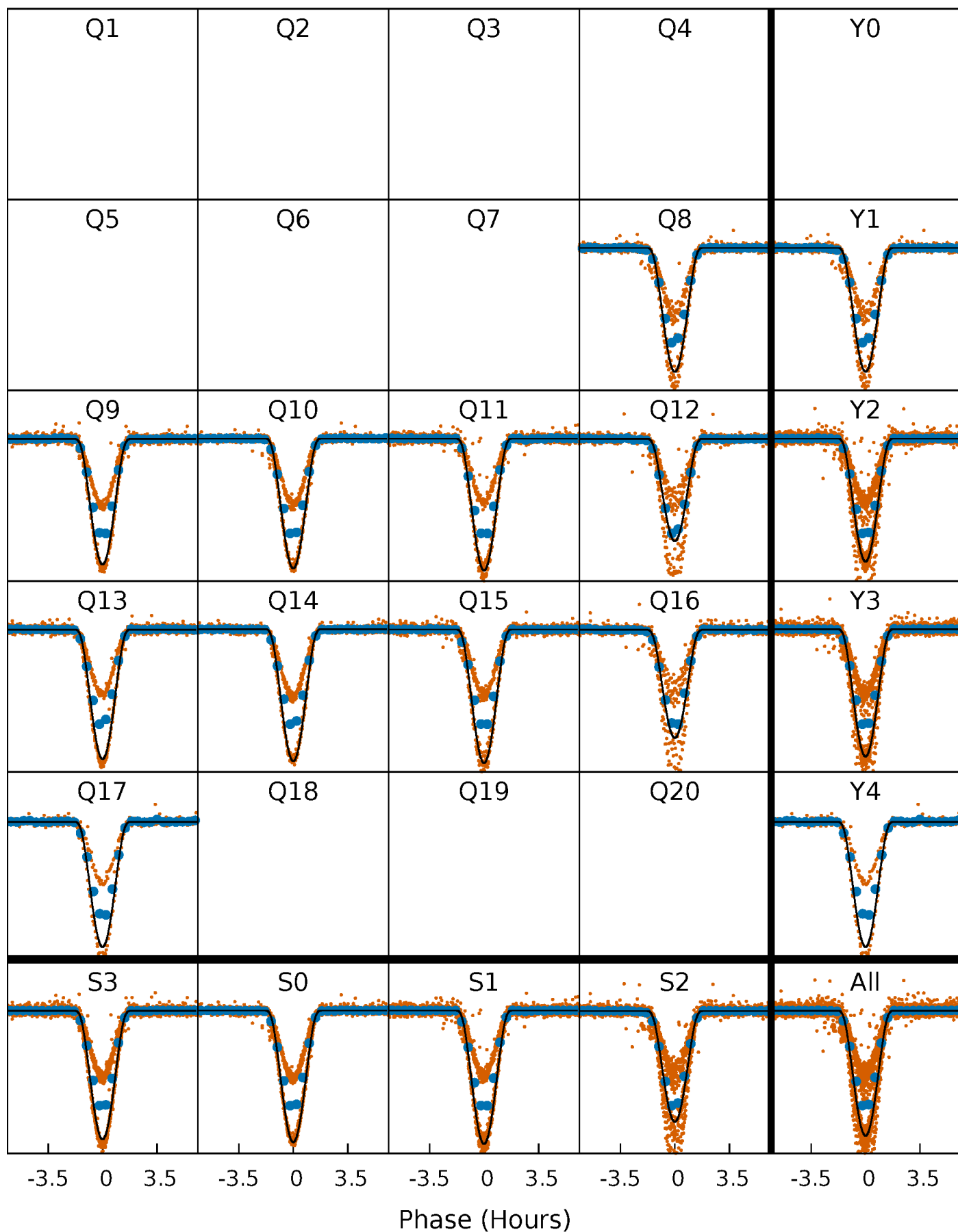
PDC Quarter-Phased Transit Curves

TCE 006312521-01 P= 1.507762 Days $T_0=132.943193$ (BKJD)



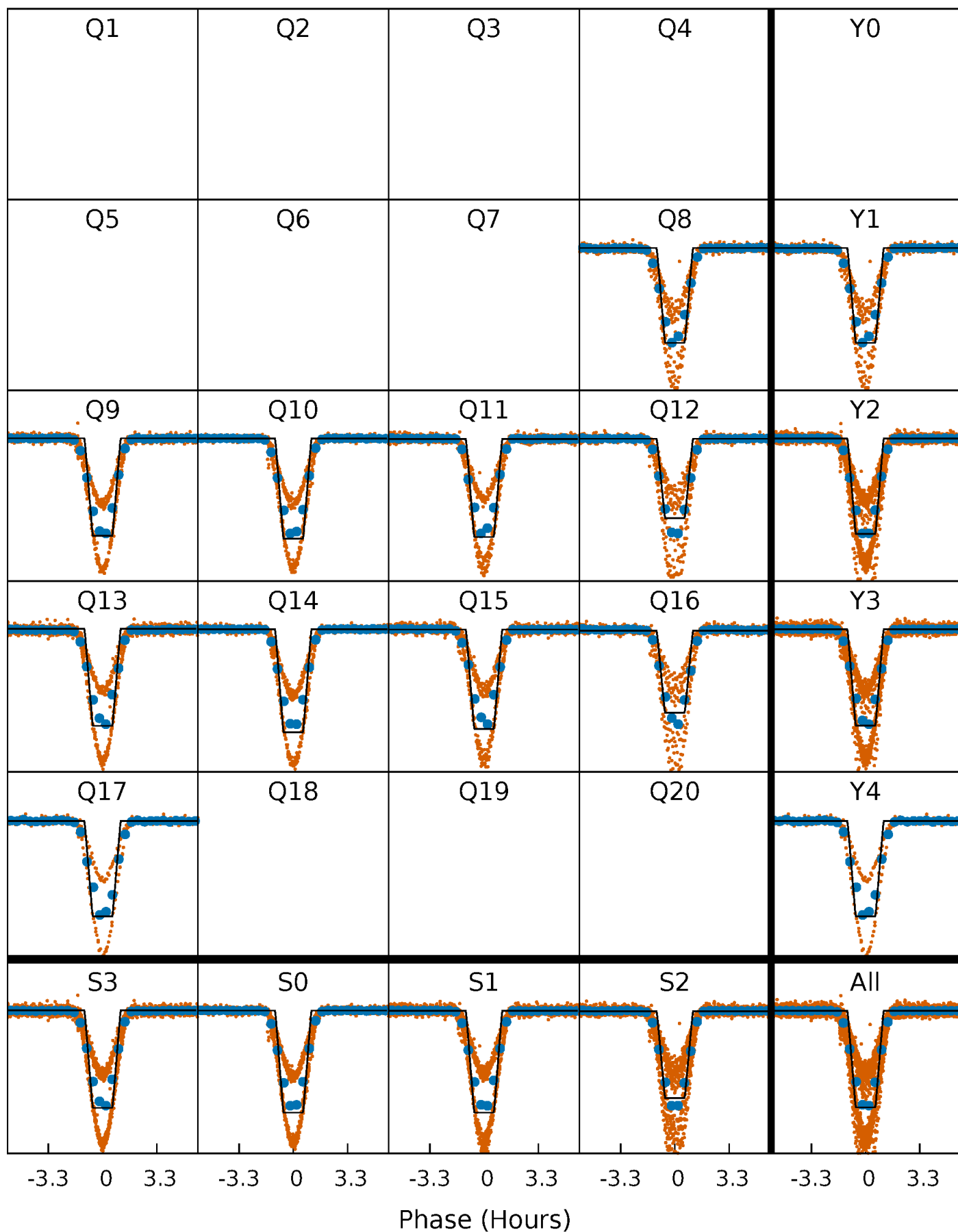
DV Quarter-Phased Transit Curves

TCE 006312521-01 P= 1.507762 Days $T_0=132.943193$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

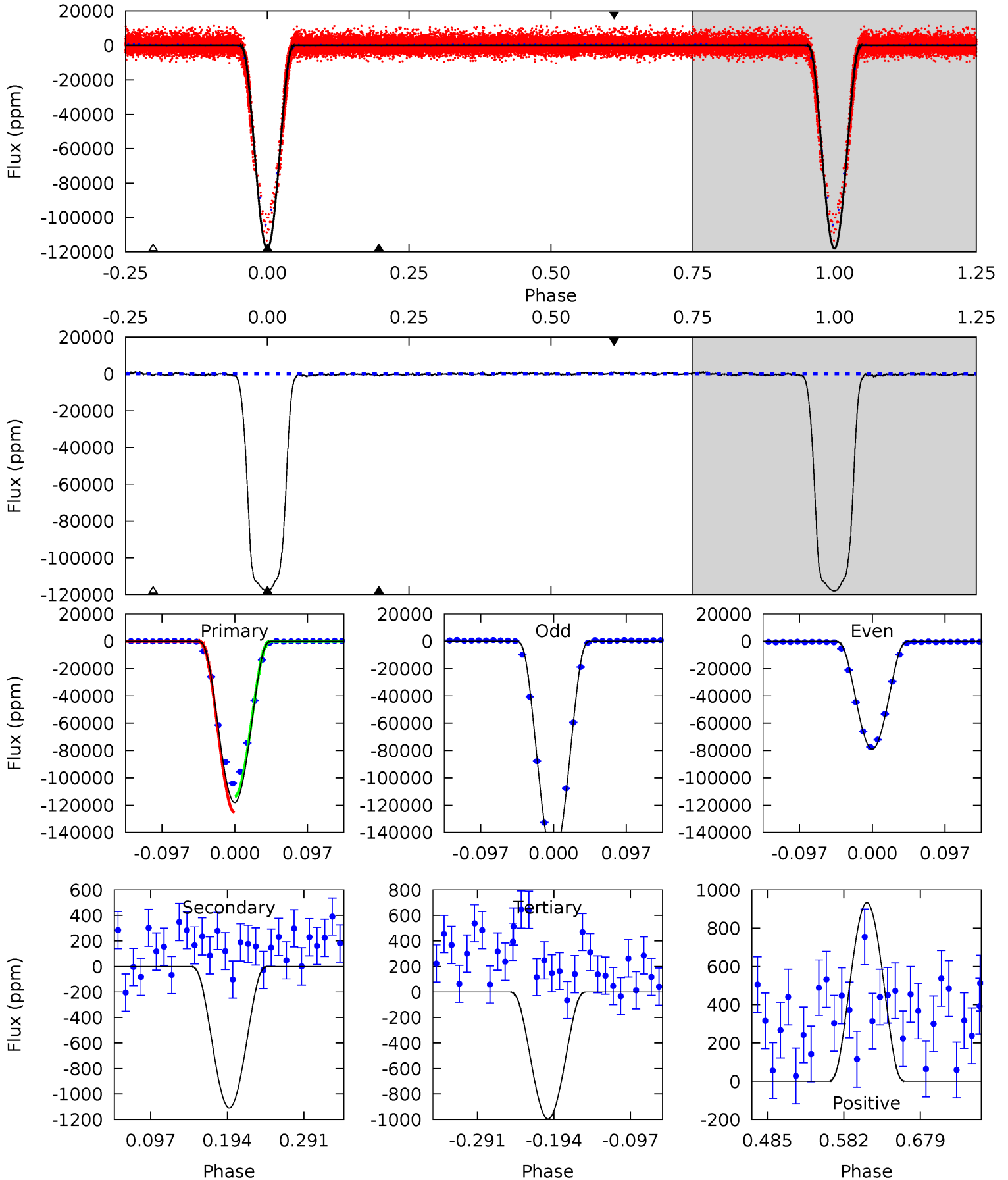
TCE 006312521-01 P= 1.507757 Days $T_0=132.945484$ (BKJD)



DV Model-Shift Uniqueness Test

006312521-01, P = 1.507762 Days, E = 132.943193 Days

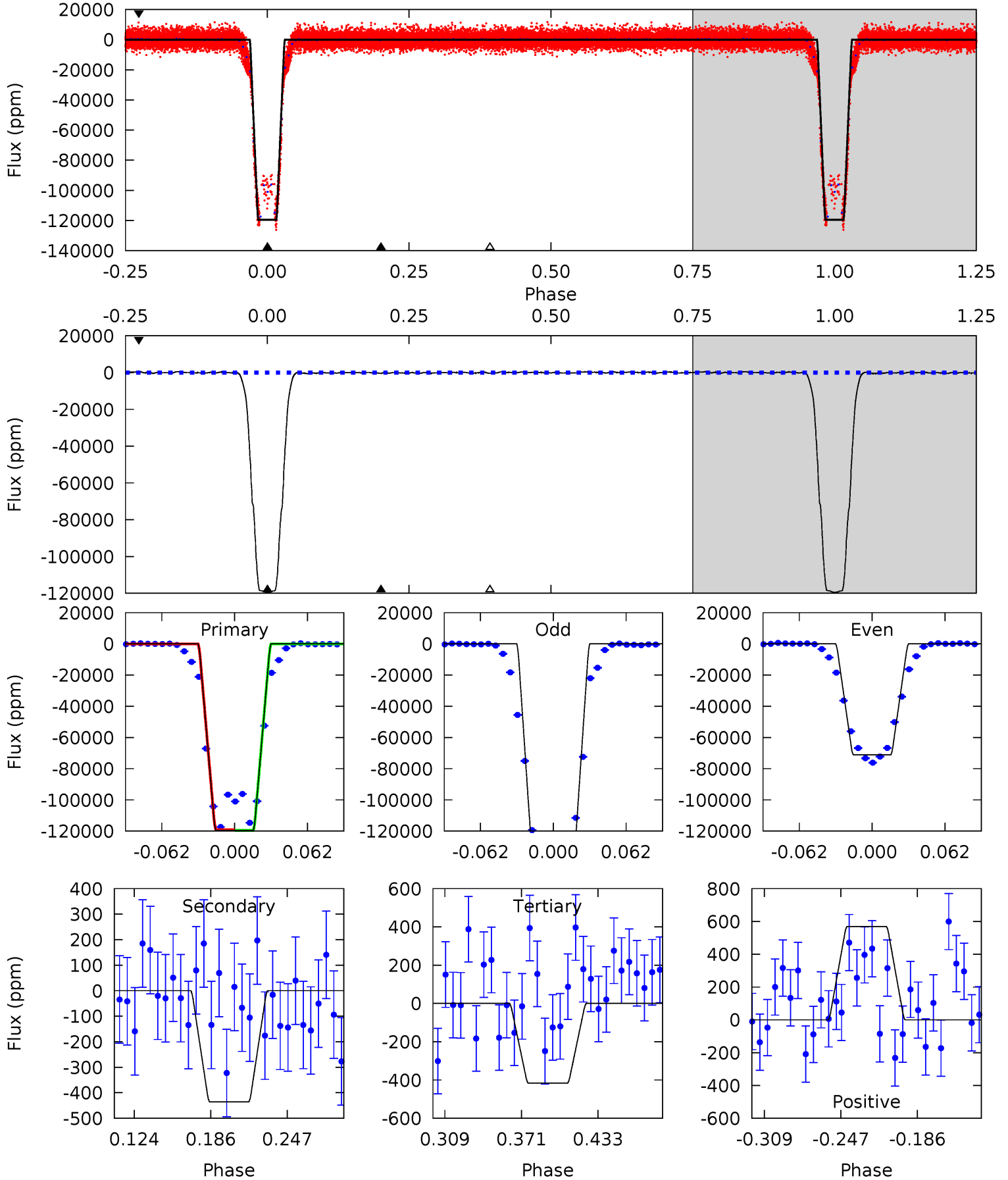
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1673	15.7	14.1	13.2	4.57	1.66	5.70	1659	1660	1.61	2.48	854.1	1.13	0.01	0



Alt Model-Shift Uniqueness Test

006312521-01, P = 1.507757 Days, E = 132.945484 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
971.3	3.54	3.39	4.63	4.66	1.87	1.63	967.9	966.7	0.15	-1.09	519.5	1.13	0.00	0



Stellar Parameters For KIC 006312521

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5299^{+211}_{-190}	$3.672^{+0.818}_{-0.273}$	$-0.160^{+0.350}_{-0.250}$	$2.761^{+1.000}_{-1.857}$	$1.306^{+0.160}_{-0.448}$	$0.087^{+1.765}_{-0.059}$
	+4%/-4%	+22%/-7%	+219%/-156%	+36%/-67%	+12%/-34%	+2020%/-68%
Source	KIC0	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 006312521-01 / KOI 3656.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1108 ± 71	$134.67^{+55.90}_{-48.78}$	3173^{+415}_{-578}	-3135^{+380}_{-263}	$0.025^{+0.036}_{-0.012}$
Alt.	-435 ± 123	$93.86^{+44.23}_{-38.53}$	3224^{+340}_{-582}	-3166^{+378}_{-224}	$0.020^{+0.037}_{-0.011}$

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

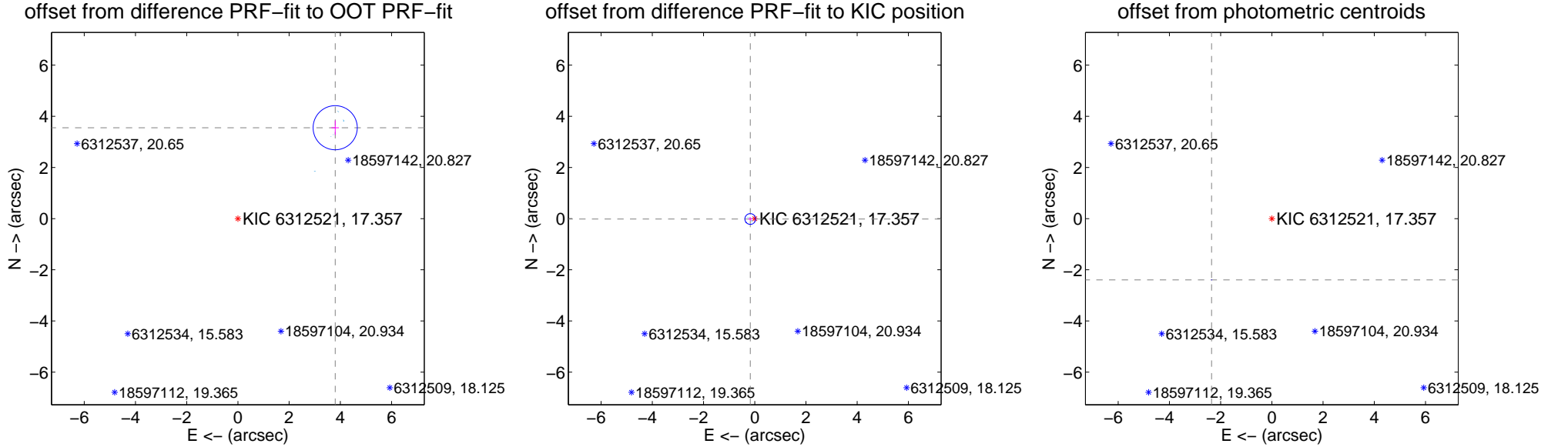
DV Centroid Data

Supplemental centroid analysis for 006312521-01. Kepler magnitude: 17.36. Transit SNR 1118.55

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.77 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.201 ± 0.287	18.10	-3.798 ± 0.148	3.553 ± 0.280
PRF-fit source offset from KIC position	0.176 ± 0.070	2.51	0.175 ± 0.070	-0.014 ± 0.071
photometric centroid source offset	3.36 ± 0.00	1739.30	2.35 ± 0.00	-2.39 ± 0.00

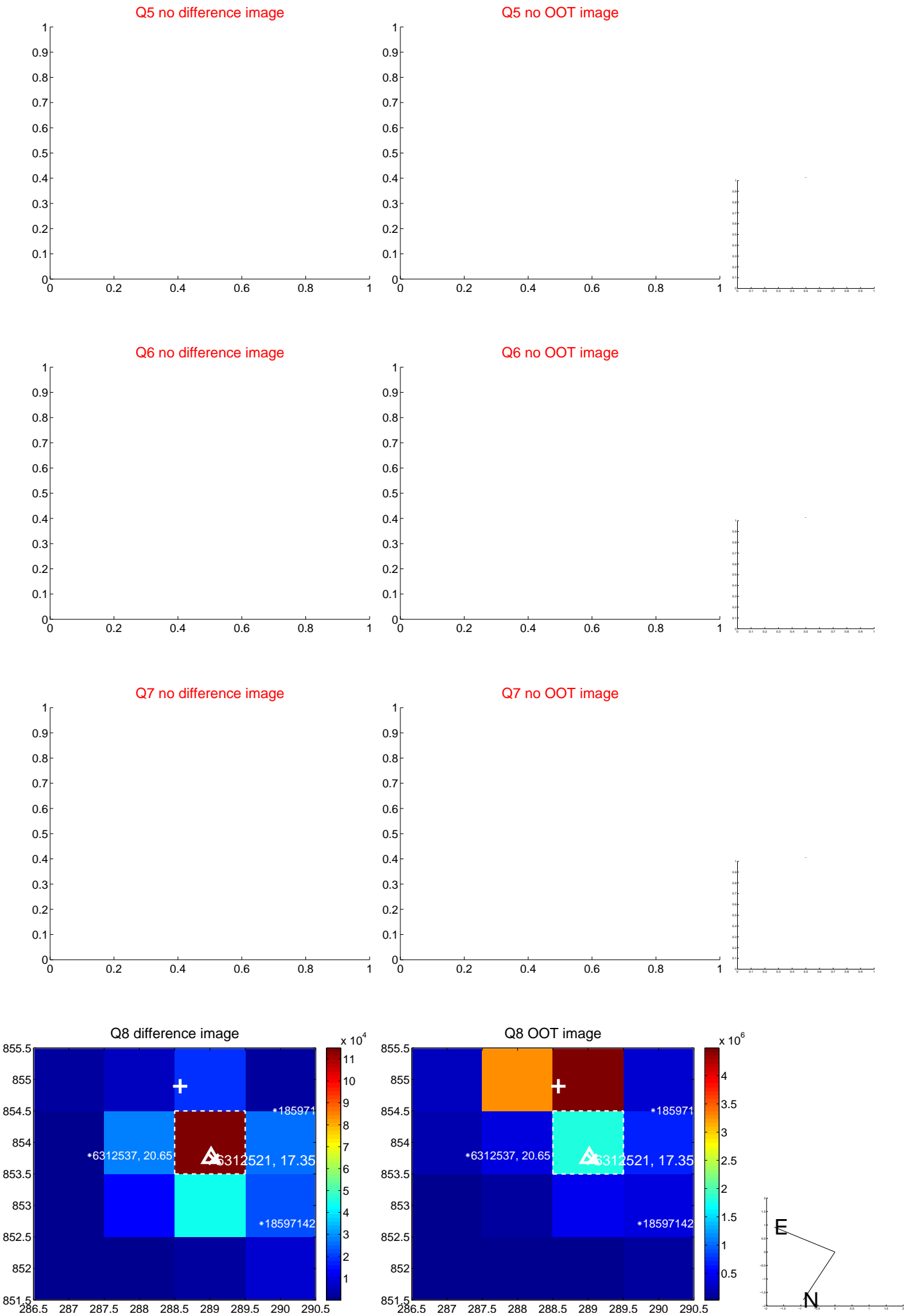


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

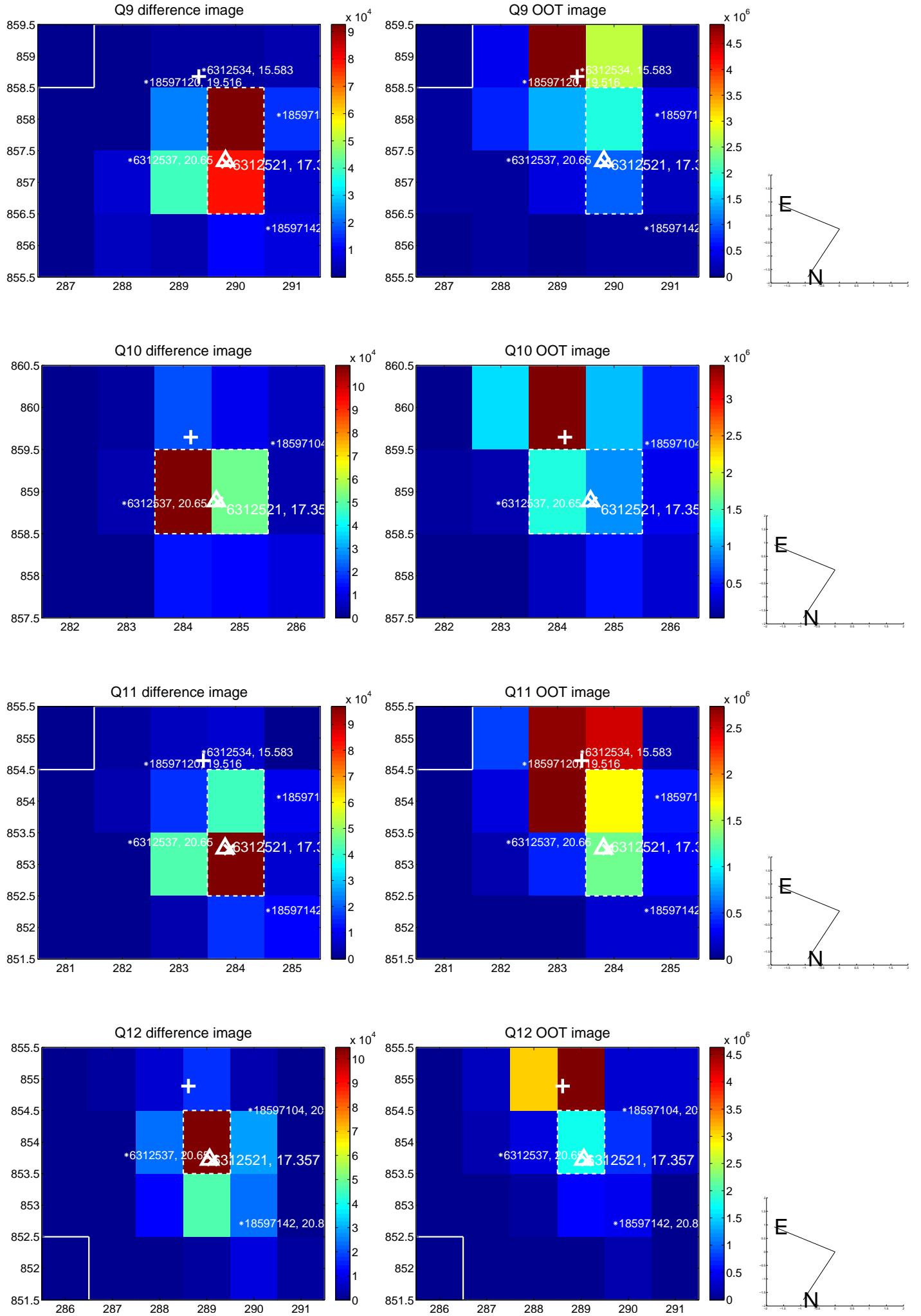
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



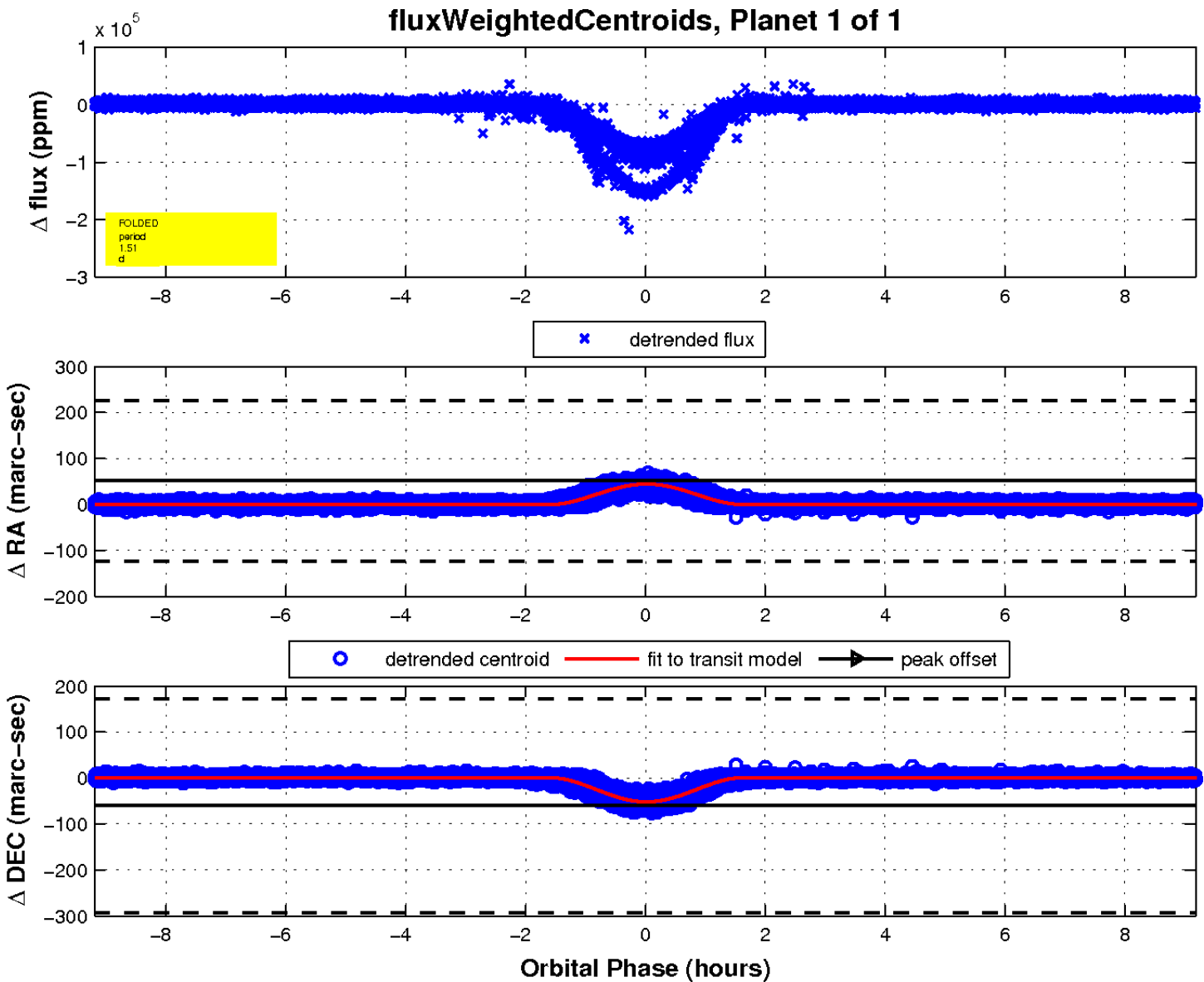
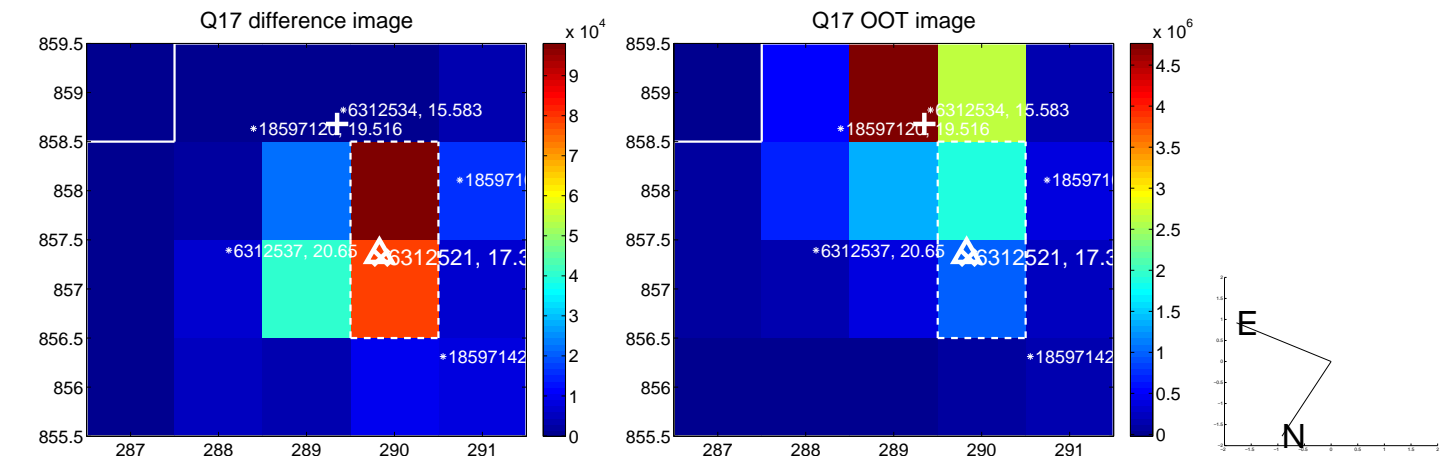
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

