

KIC 011037511

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})
011037511-01	OBS	2580.01	3.116060	133.847159	329.3	1.907	16.3	17.8	0.86	5591	1.83	377.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011037511-01	OBS	PC	1.00	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 011037511-01

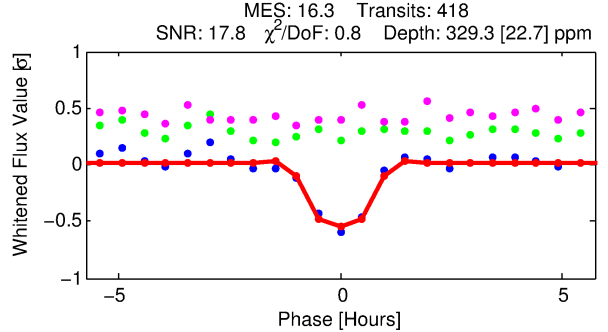
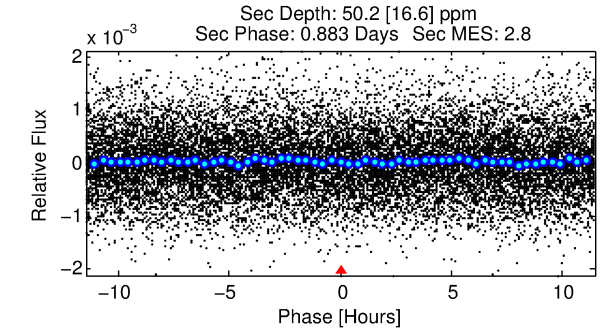
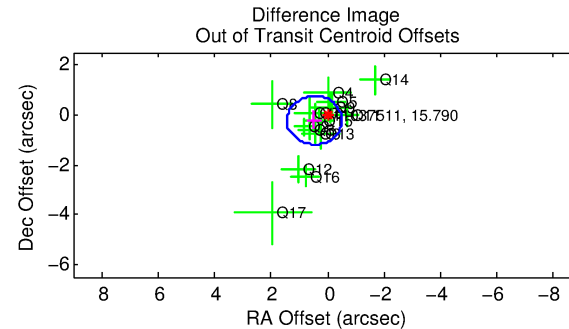
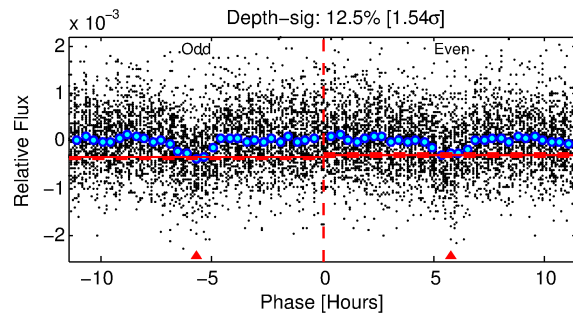
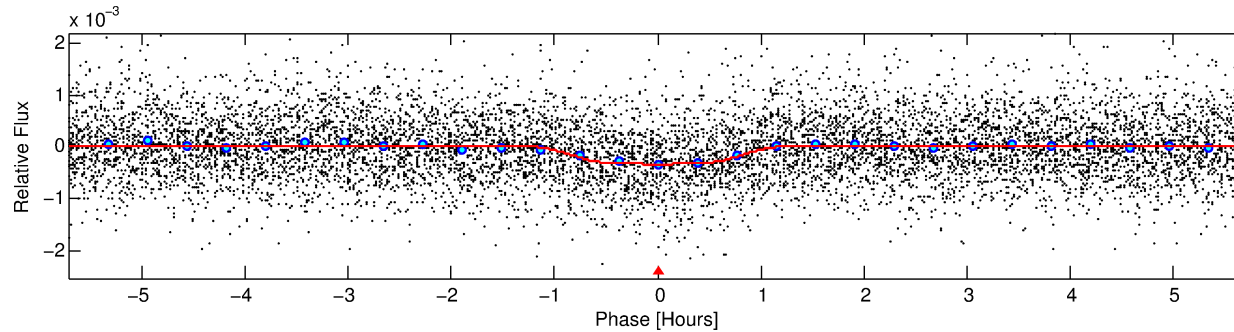
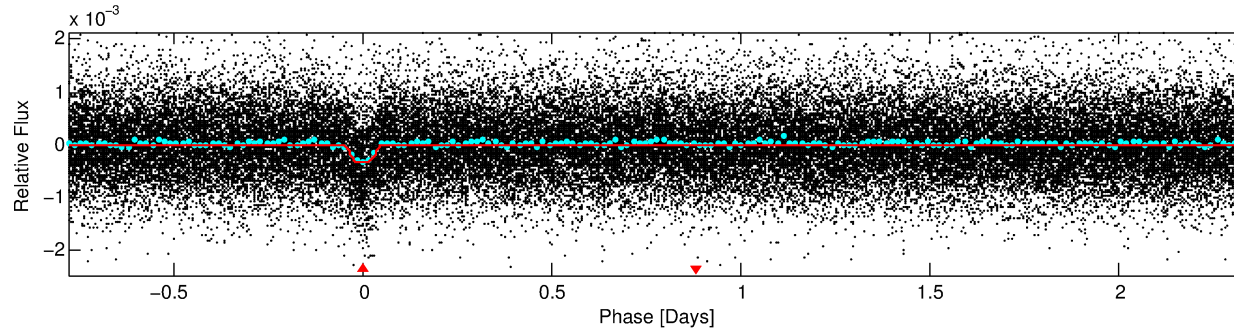
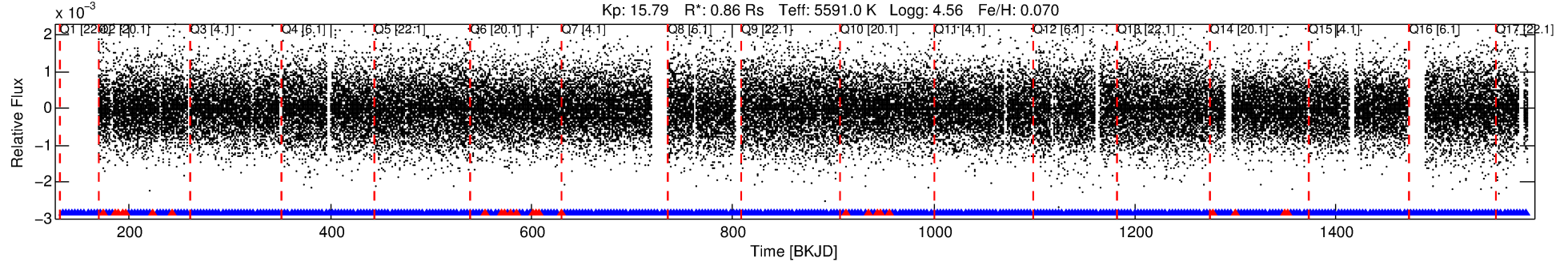
No Significant Match Found

DV One-Page Summary

KIC: 11037511 Candidate: 1 of 1 Period: 3.116 d

KOI: K02580.01 Corr: 0.953

Kp: 15.79 R*: 0.86 Rs Teff: 5591.0 K Logg: 4.56 Fe/H: 0.070



DV Fit Results:

Period = 3.11606 [0.00001] d
Epoch = 133.8472 [0.0019] BKJD
Rp/R* = 0.0195 [0.0100]
a/R* = 6.55 [14.44]
b = 0.88 [0.61]
Seff = 377.03 [138.74]
Teff = 1124 [103] K
Rp = 1.83 [1.07] Re
a = 0.0414 [0.0097] AU
Ag = 14.14 [16.01] [0.82σ]
Teffp = 3369 [917] K [2.43σ]

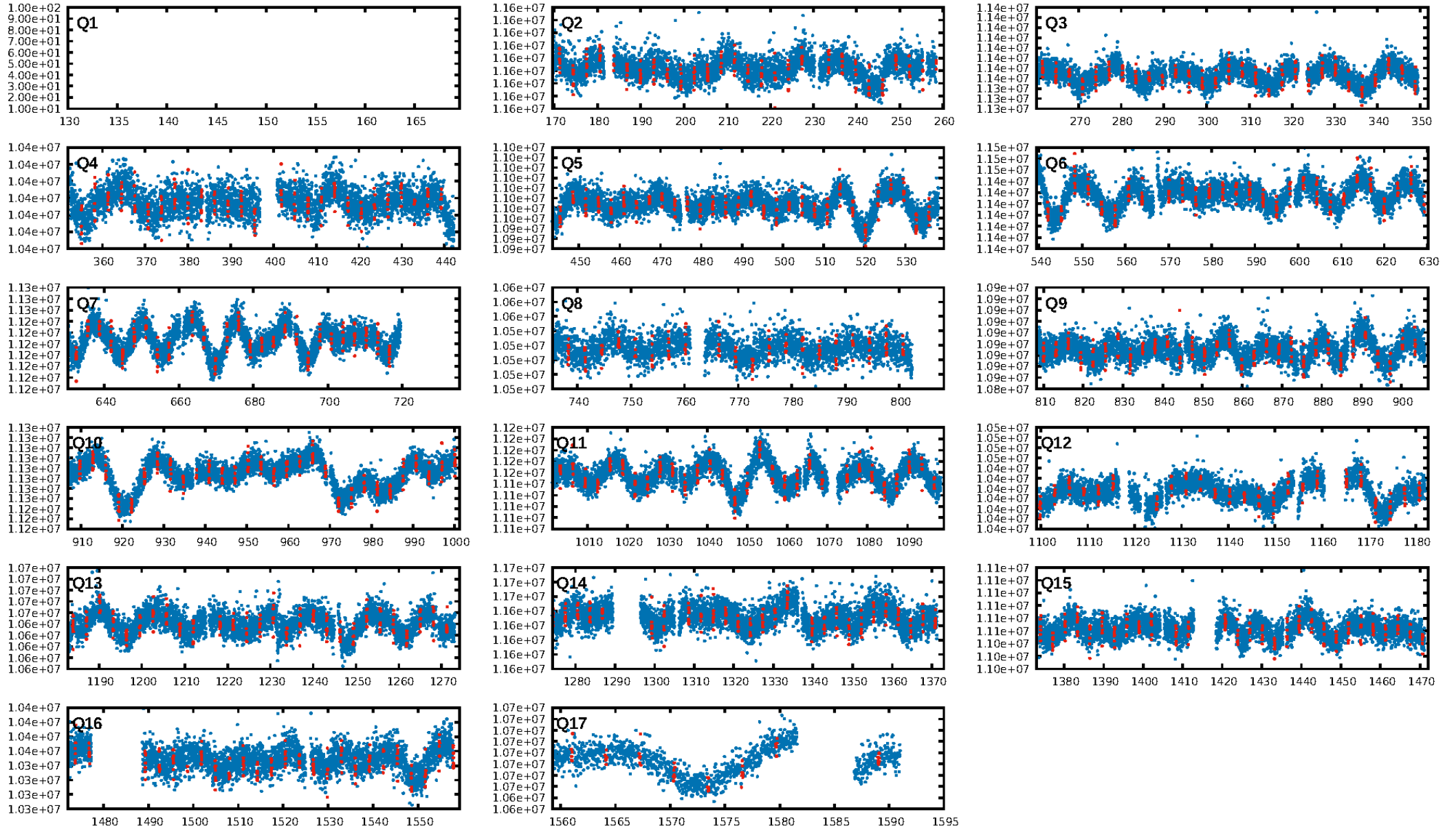
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.15e-58
RollingBand-fgt: 0.94 [385/410]
GhostDiagnostic-chr: 2.423
Centroid-sig: 0.0%
Centroid-so: 2.174 arcsec [2.60σ]
OotOffset-rm: 0.518 arcsec [1.61σ]
KicOffset-rm: 0.467 arcsec [1.28σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [16/16]

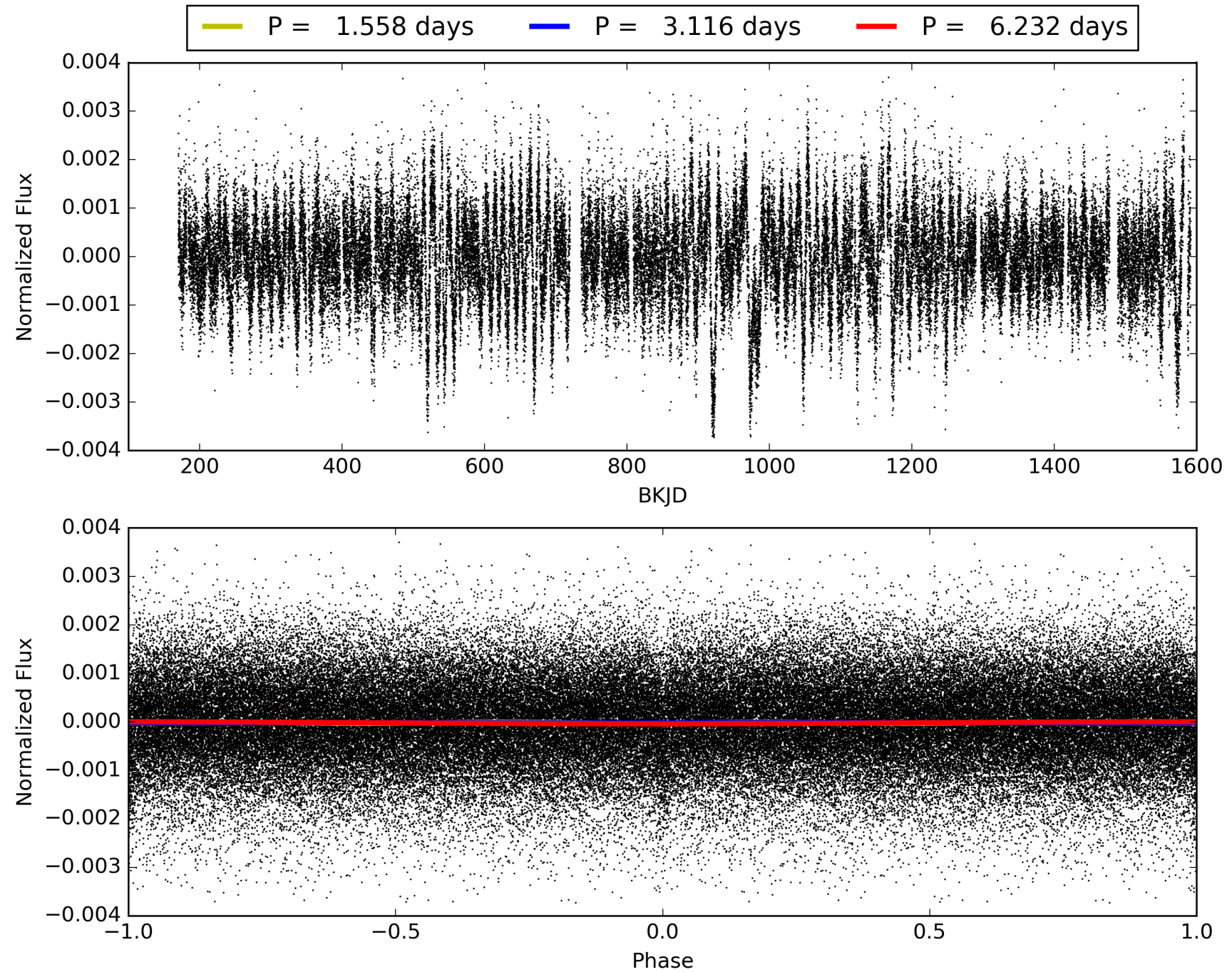
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:48:21 Z

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

TCE 011037511-01, PDC Light Curves

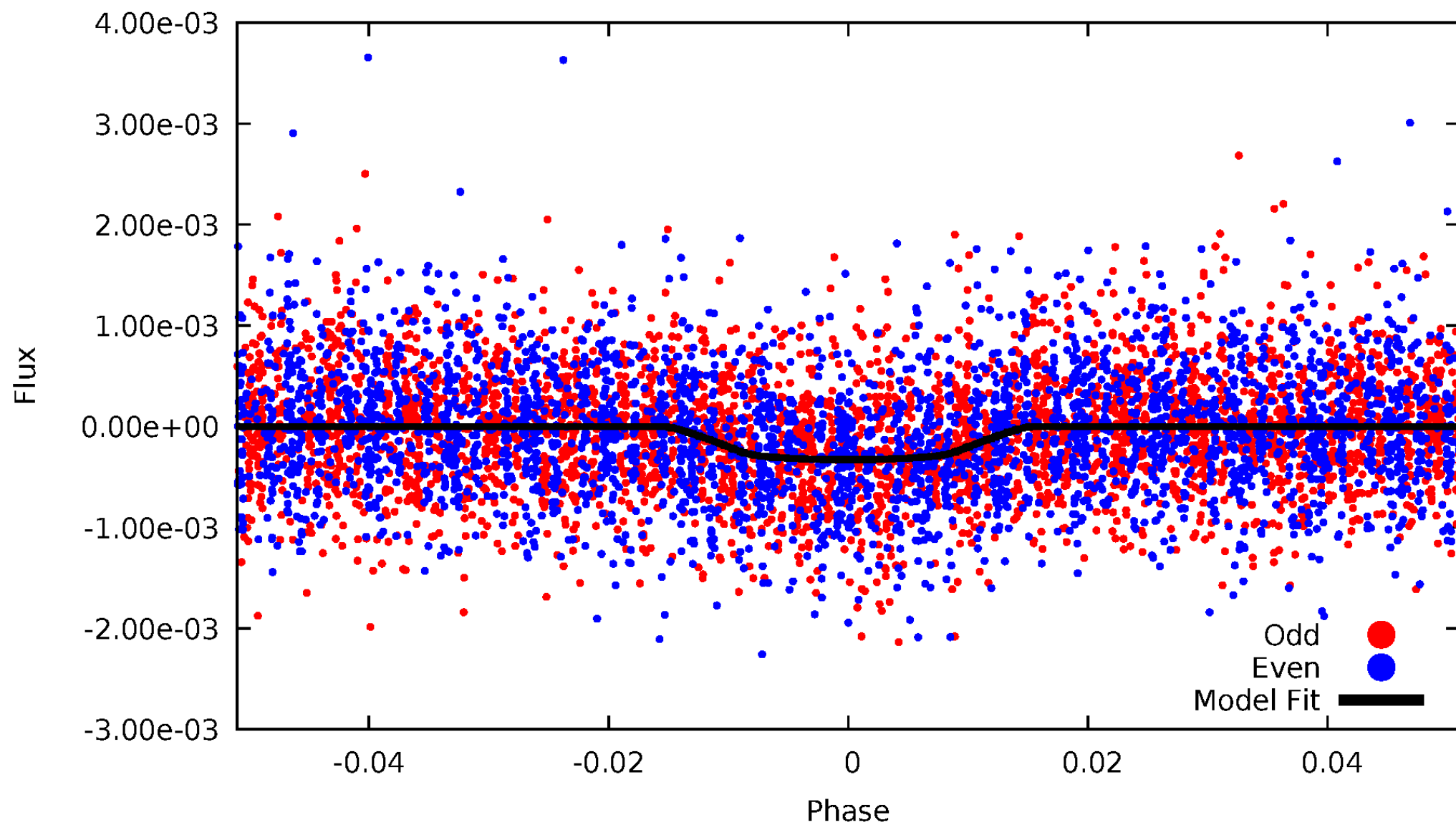


TCE 011037511-01



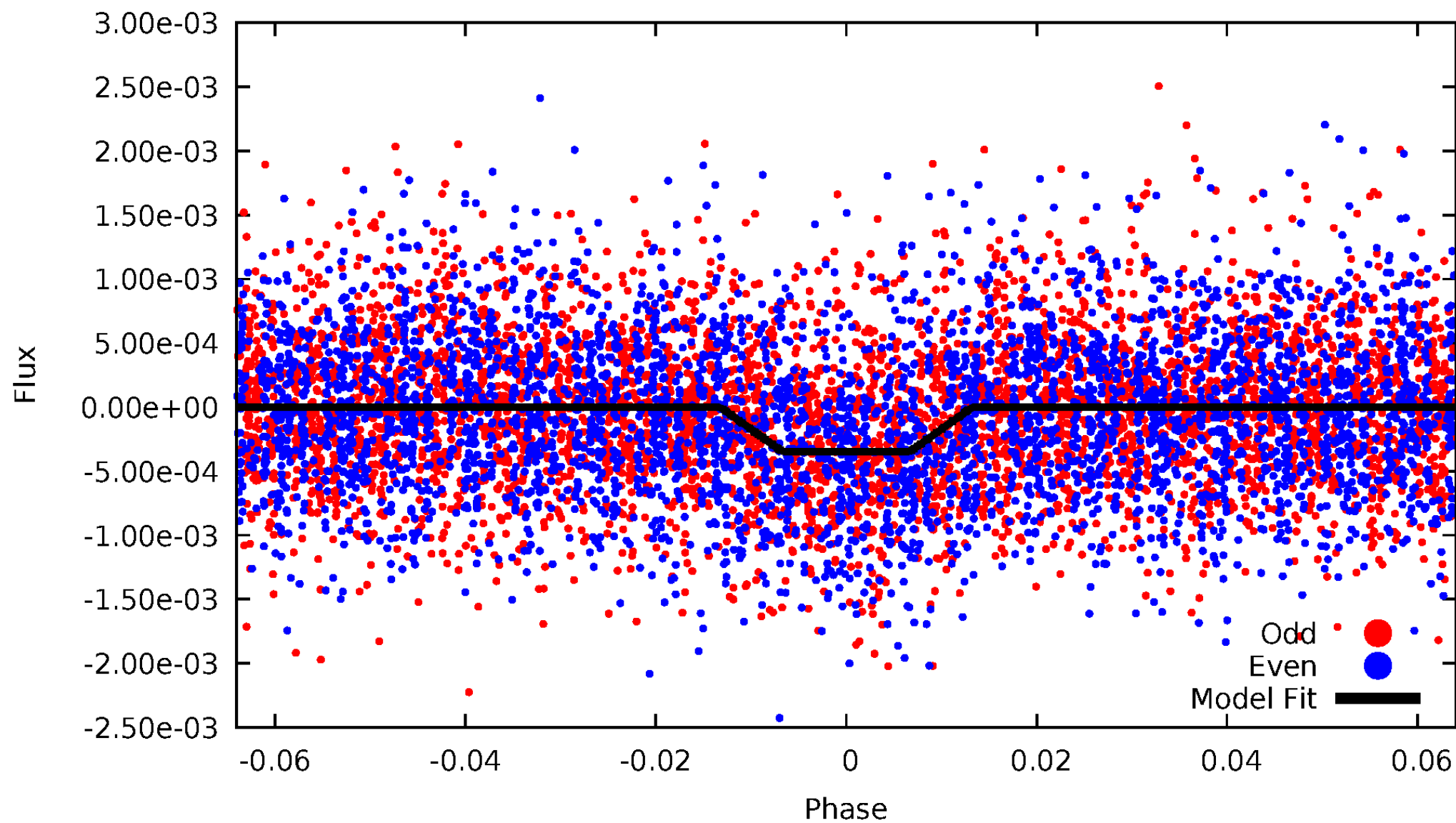
DV Odd/Even

TCE 011037511-01

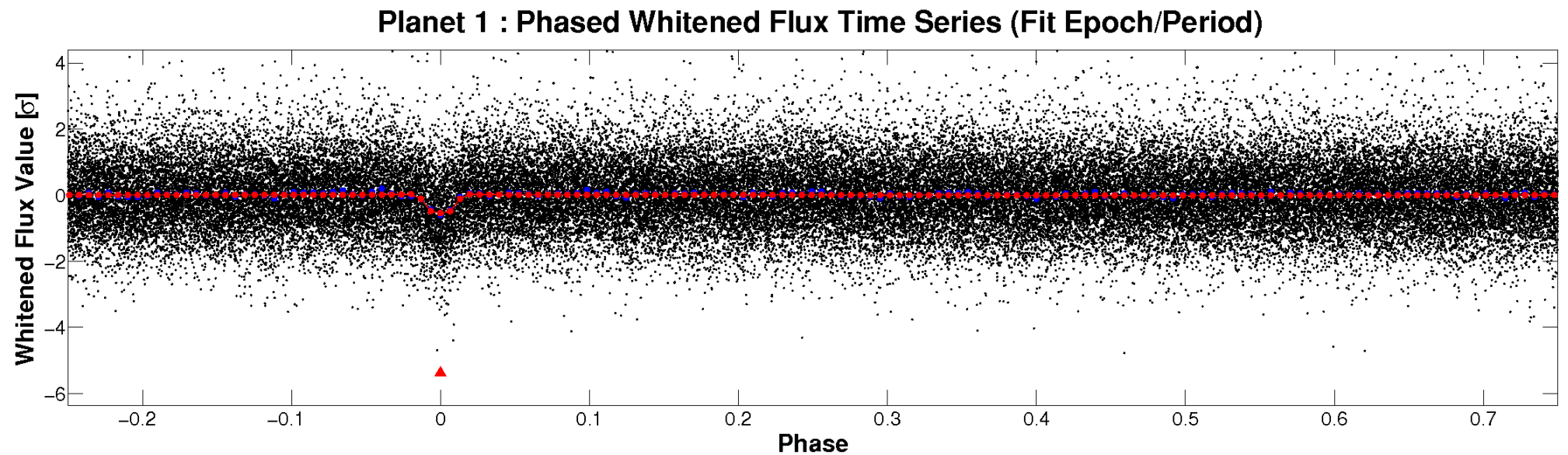
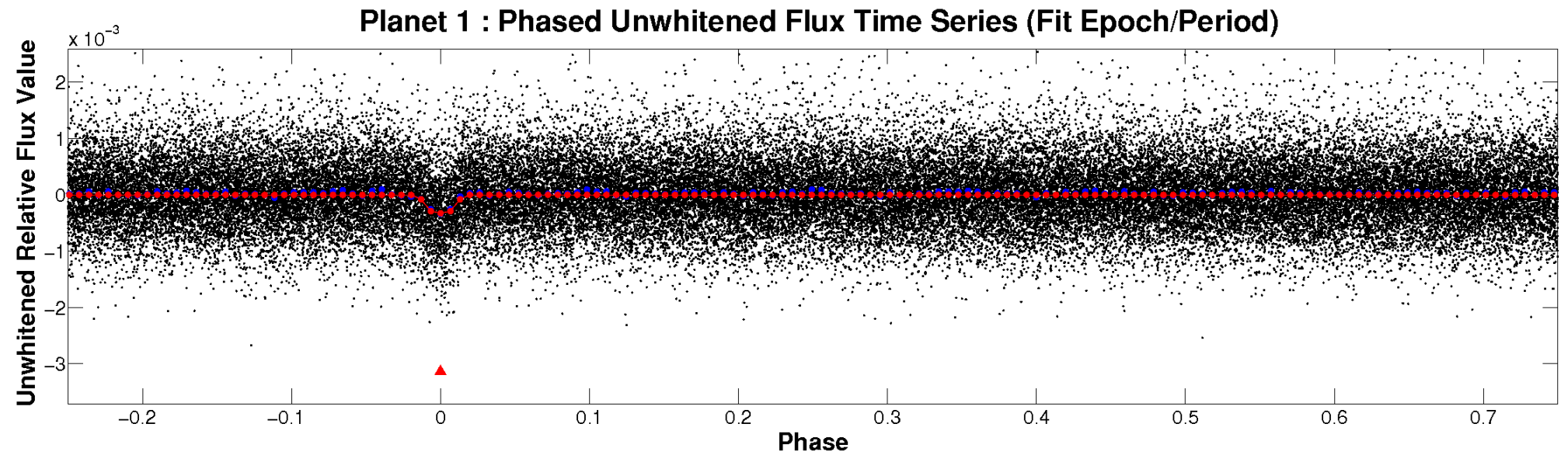


ALT Odd/Even

TCE 011037511-01

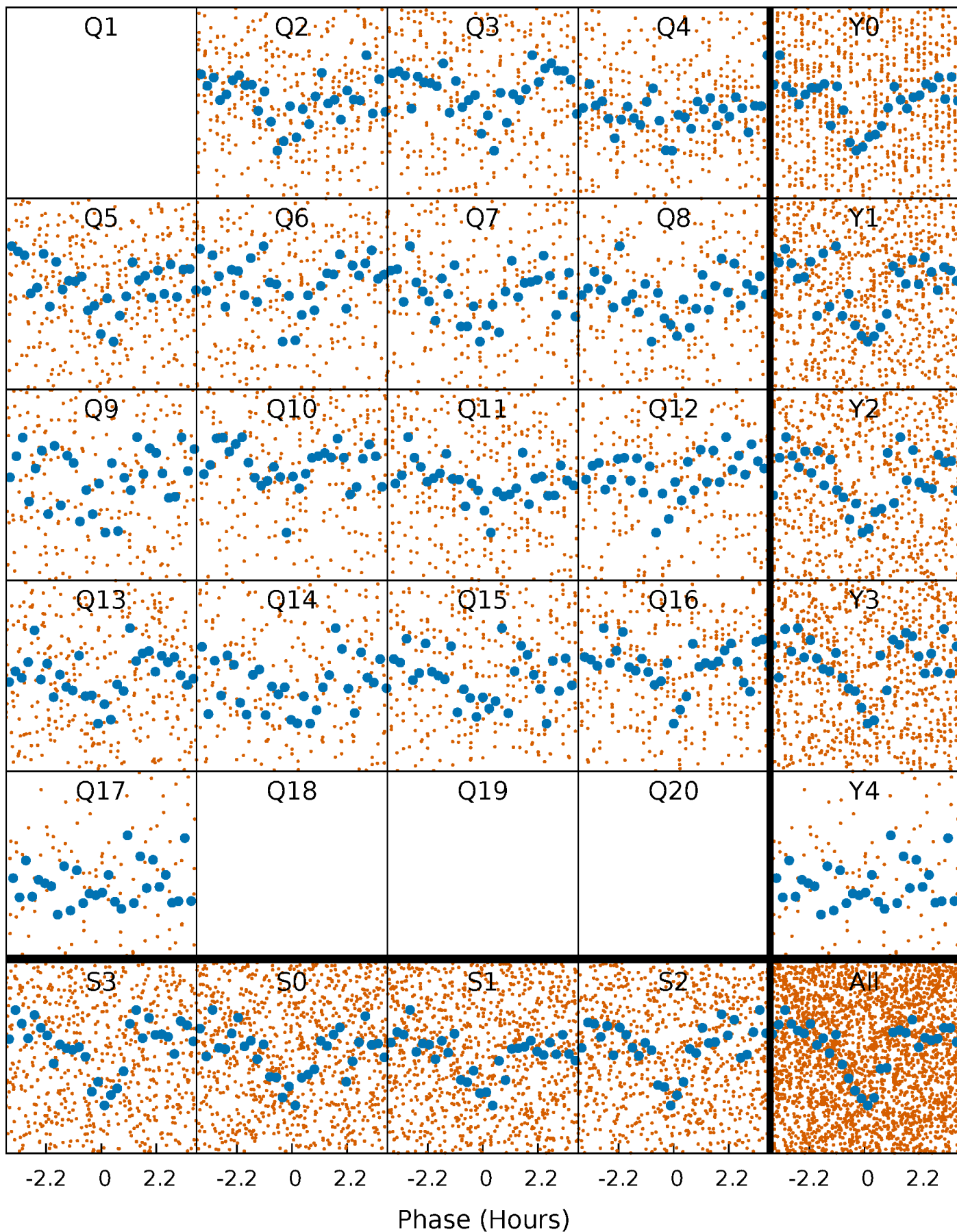


Non-Whitened Vs. Whitened Light Curve



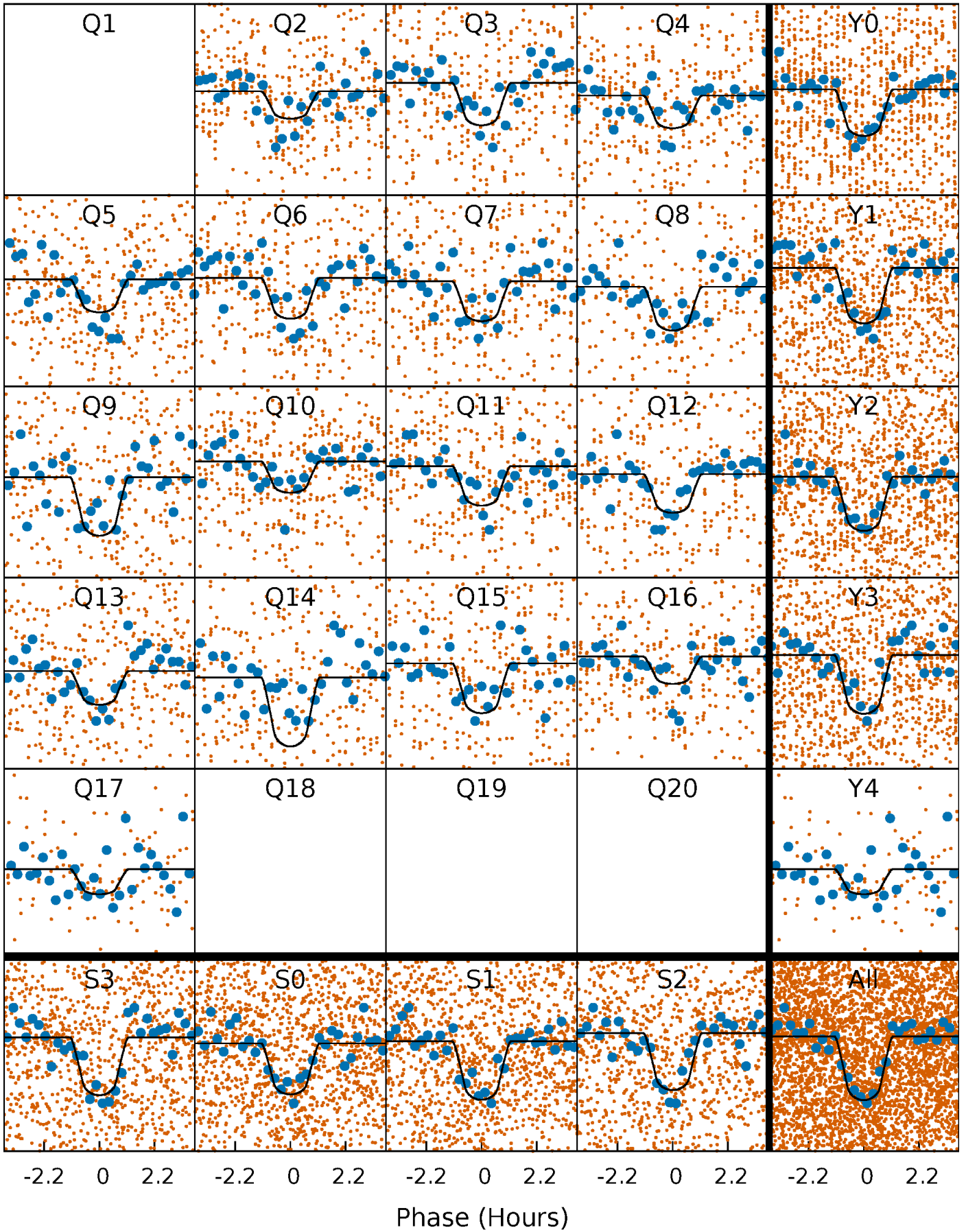
PDC Quarter-Phased Transit Curves

TCE 011037511-01 P= 3.116060 Days $T_0=133.847159$ (BKJD)



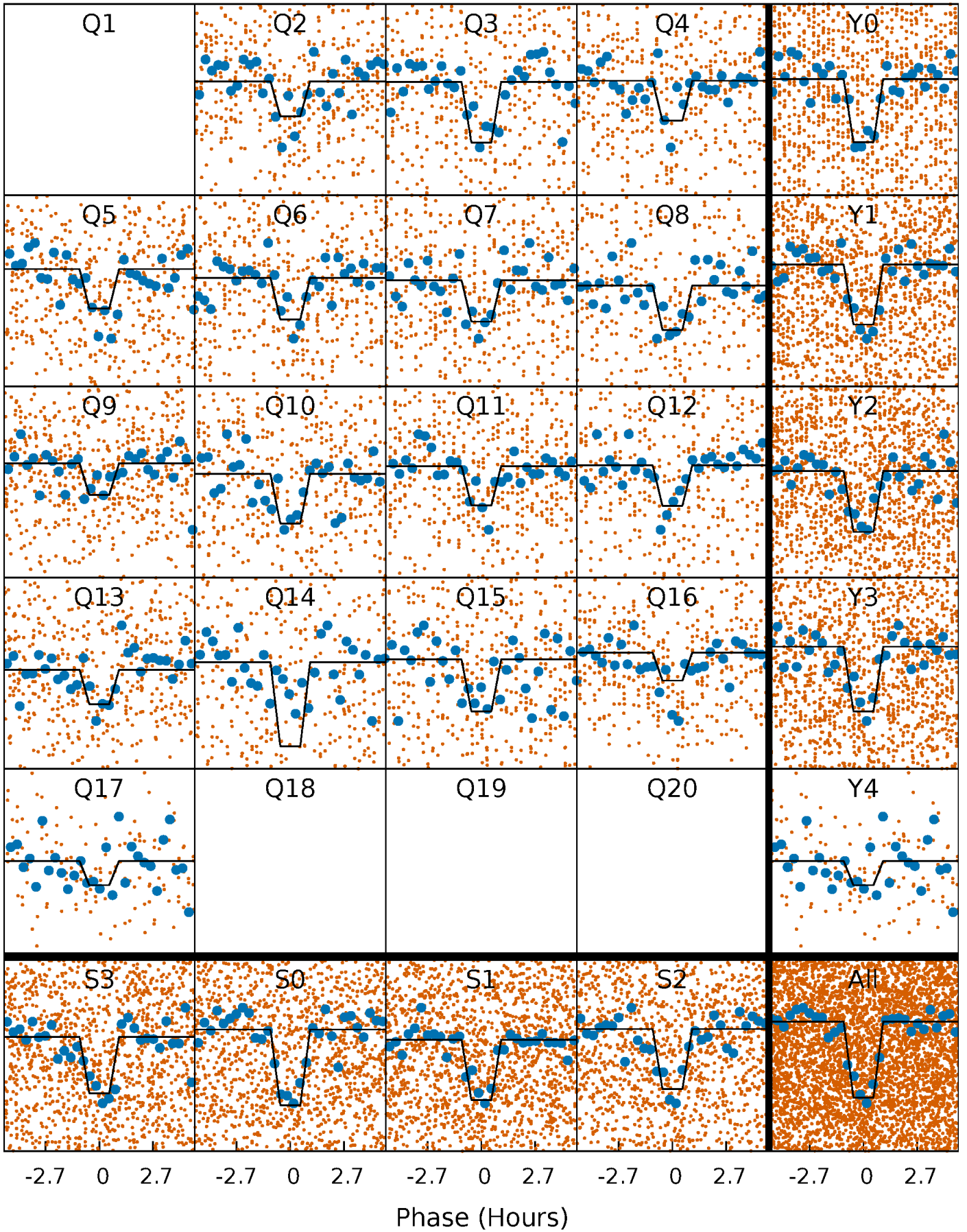
DV Quarter-Phased Transit Curves

TCE 011037511-01 P= 3.116060 Days $T_0=133.847159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

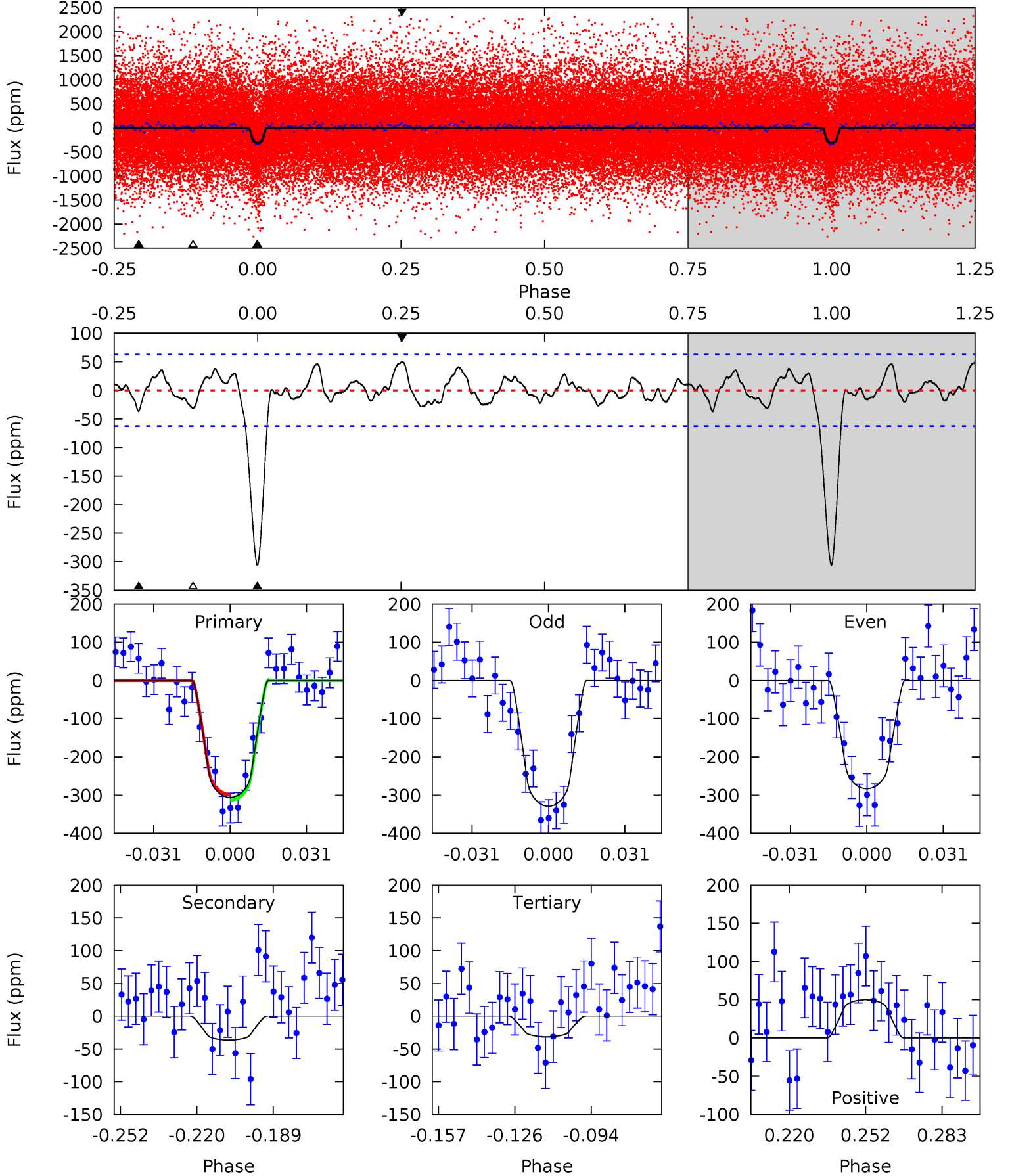
TCE 011037511-01 P= 3.116059 Days $T_0=133.846605$ (BKJD)



DV Model-Shift Uniqueness Test

011037511-01, P = 3.116060 Days, E = 133.847159 Days

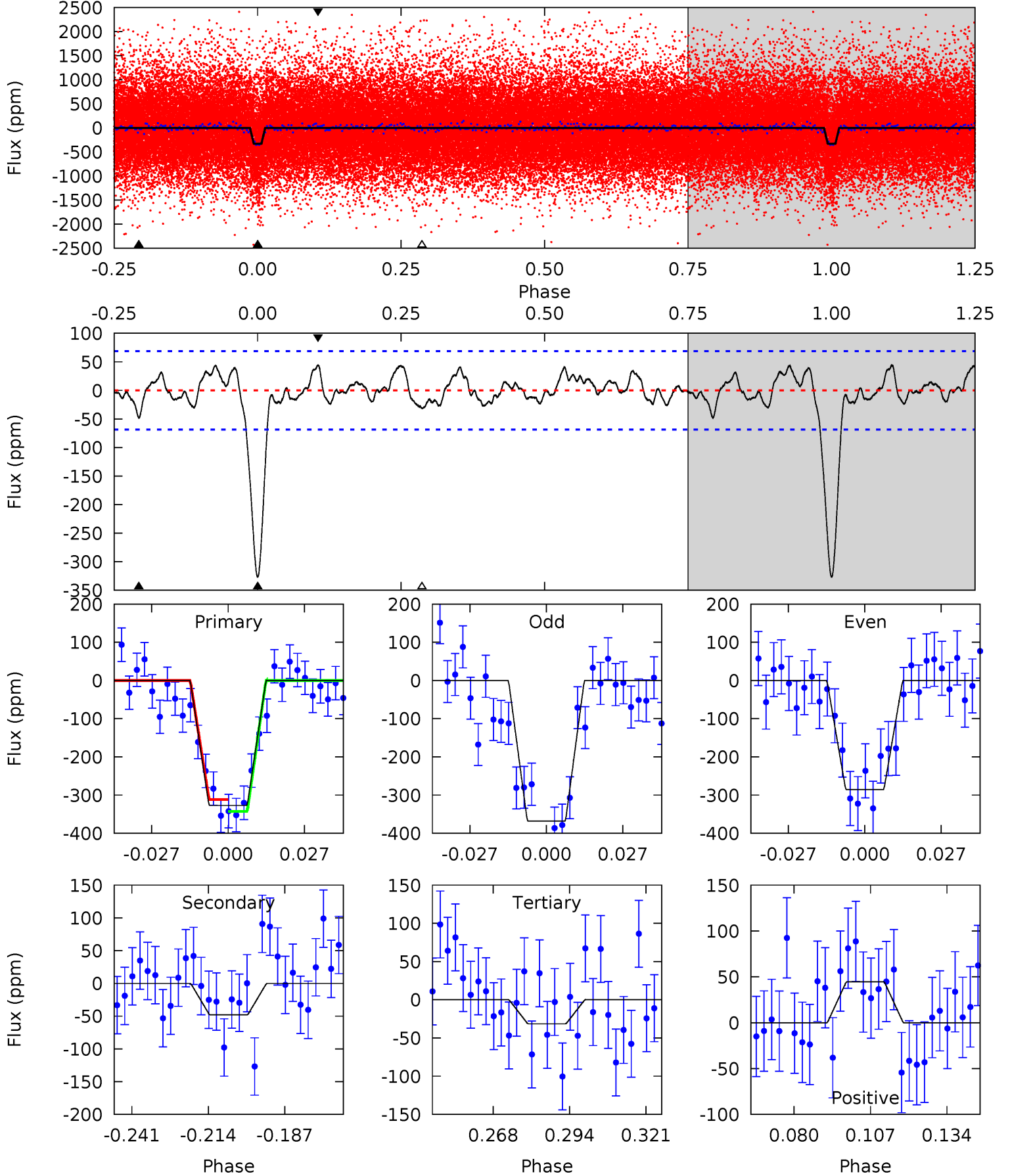
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	2.80	2.41	3.83	4.80	2.15	1.40	21.0	19.6	0.39	-1.02	1.77	1.03	0.14	0.55



Alt Model-Shift Uniqueness Test

011037511-01, P = 3.116059 Days, E = 133.846605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.0	3.38	2.22	3.13	4.83	2.22	1.31	20.8	19.9	1.16	0.26	2.90	0.92	0.12	1.12



Stellar Parameters For KIC 011037511

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5591^{+175}_{-194}	$4.559^{+0.033}_{-0.187}$	$0.070^{+0.250}_{-0.300}$	$0.860^{+0.237}_{-0.059}$	$0.977^{+0.085}_{-0.113}$	$2.163^{+0.394}_{-1.059}$
	+3%/-3%	+1%/-4%	+357%/-429%	+28%/-7%	+9%/-12%	+18%/-49%
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 011037511-01 / KOI 2580.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 13	$1.97^{+0.99}_{-0.96}$	1610^{+96}_{-80}	3478^{+961}_{-447}	$8.072^{+23.431}_{-4.692}$
Alt.	-48 ± 14	$1.88^{+0.91}_{-0.92}$	1607^{+91}_{-70}	3730^{+993}_{-518}	12^{+33}_{-7}

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

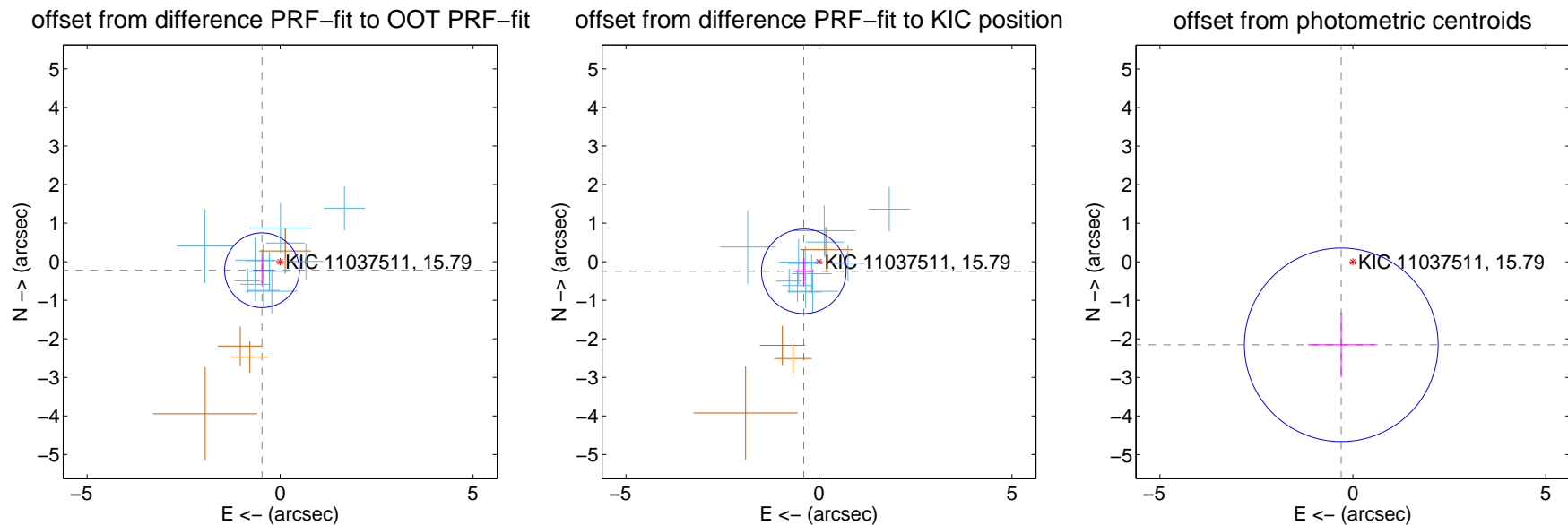
DV Centroid Data

Supplemental centroid analysis for 011037511-01. Kepler magnitude: 15.79. Transit SNR 17.82

There are 12 quarters with good PRF difference image offsets

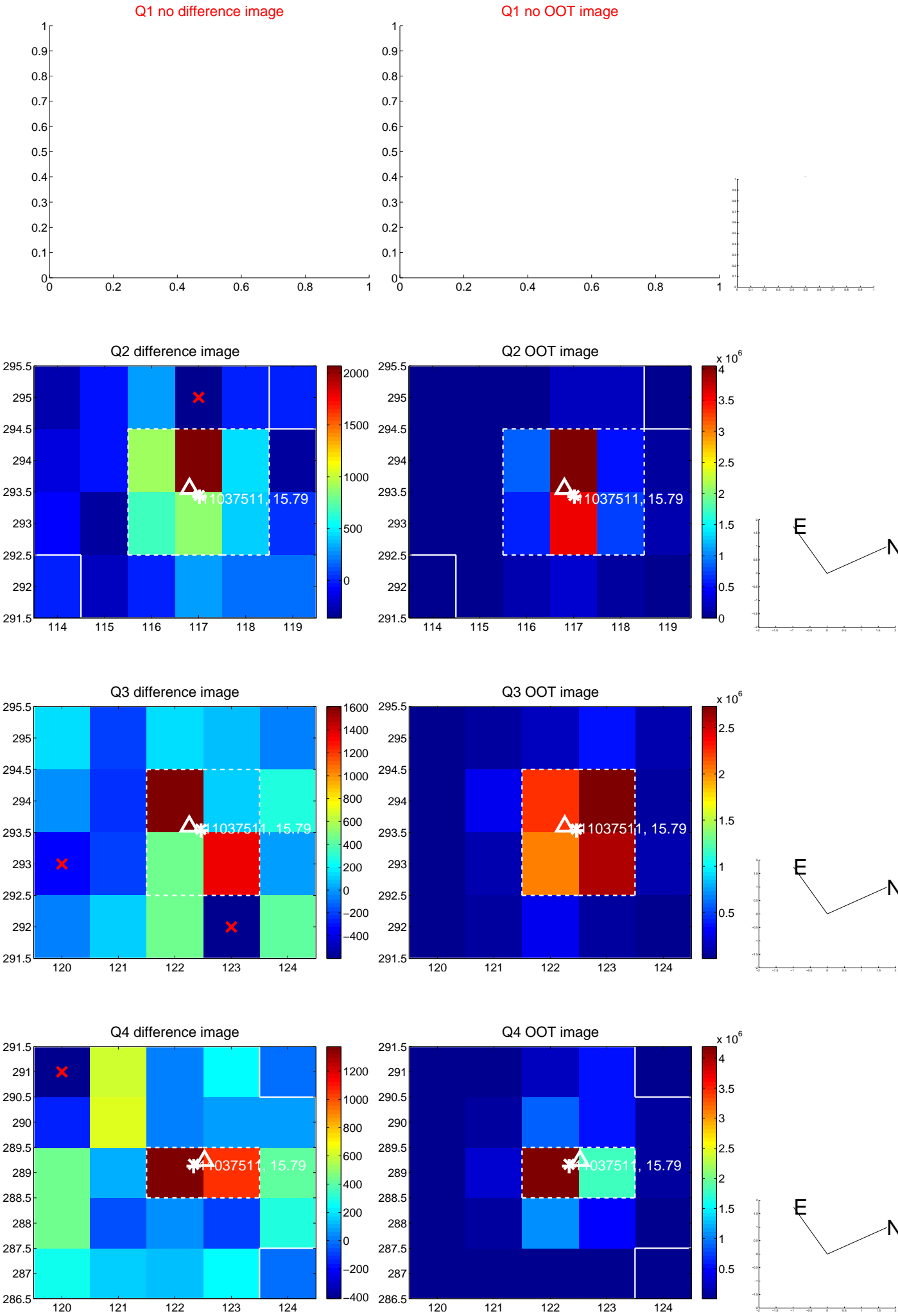
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.518 ± 0.323	1.61	0.469 ± 0.231	-0.221 ± 0.348
PRF-fit source offset from KIC position	0.467 ± 0.365	1.28	0.394 ± 0.242	-0.250 ± 0.364
photometric centroid source offset	2.17 ± 0.84	2.60	0.30 ± 0.87	-2.15 ± 0.84

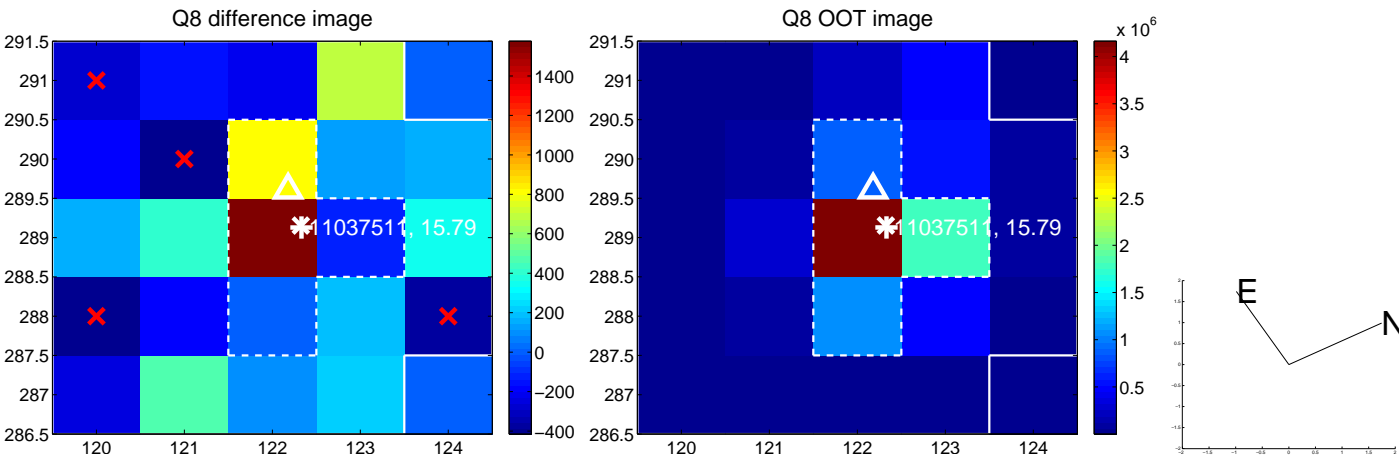
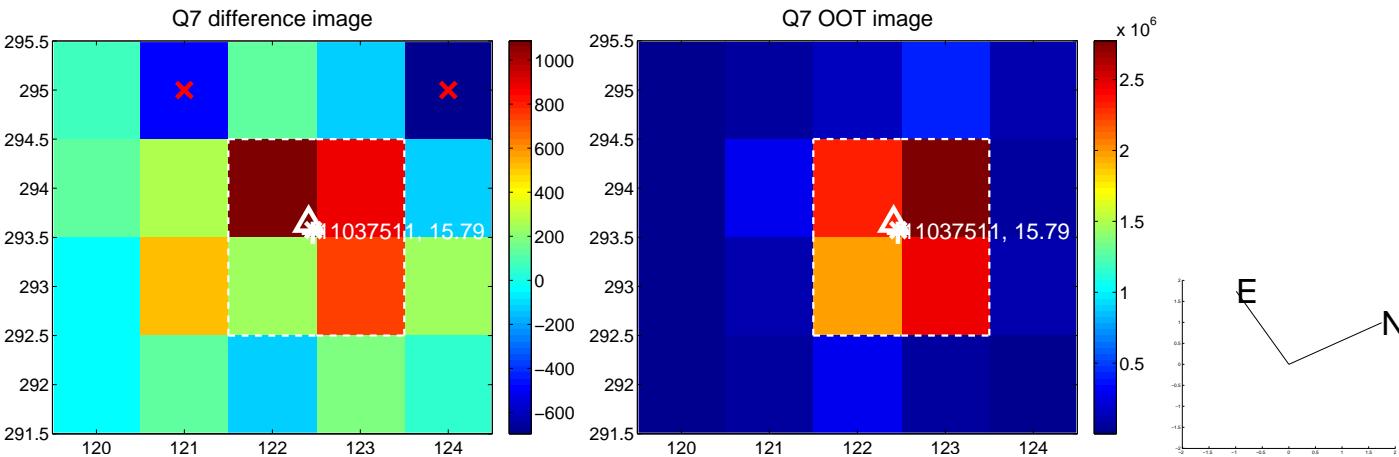
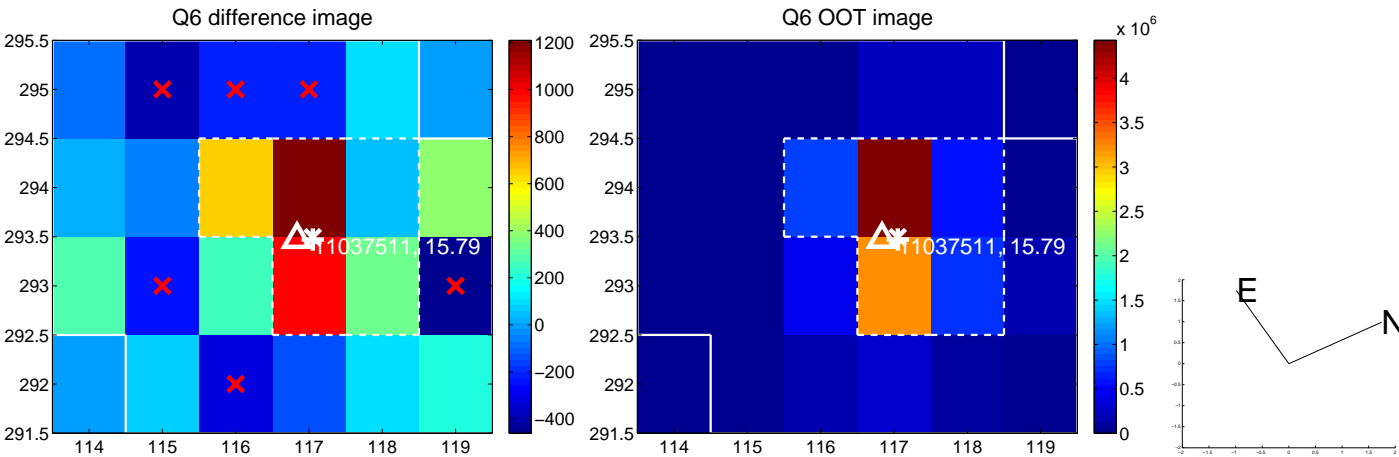
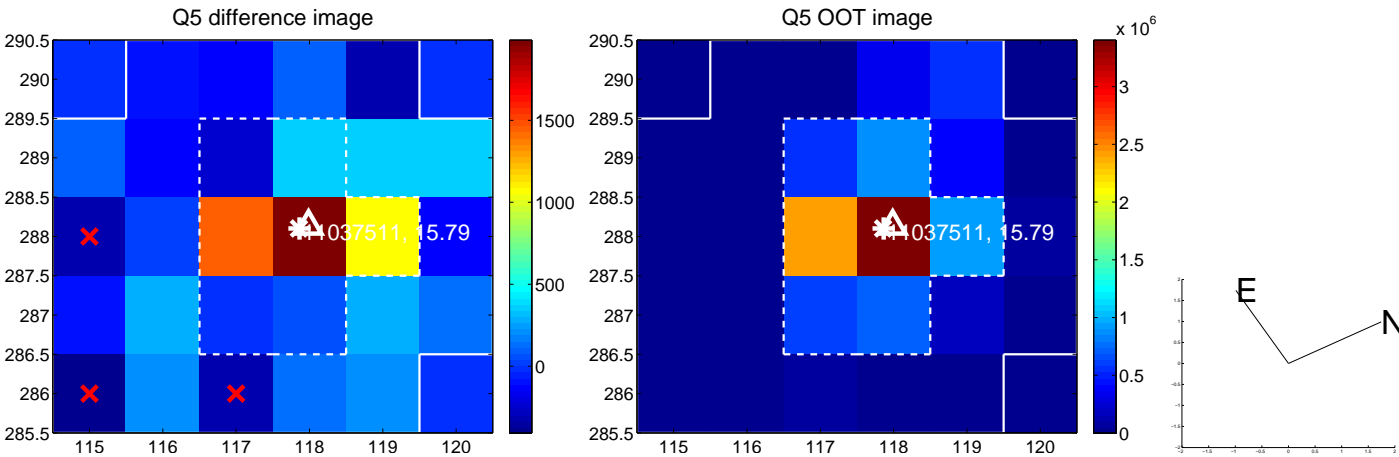


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

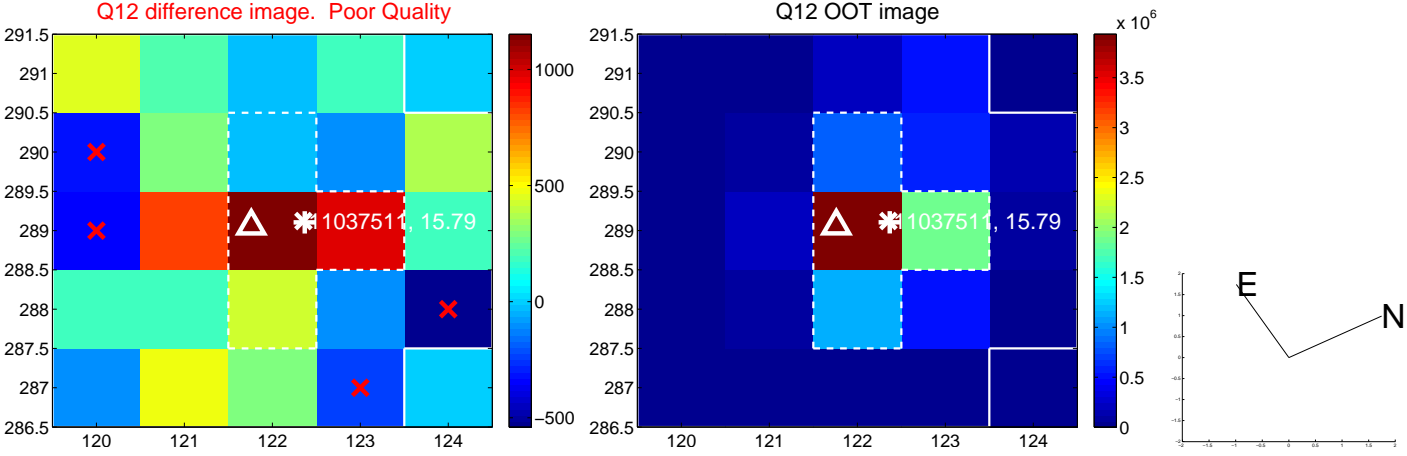
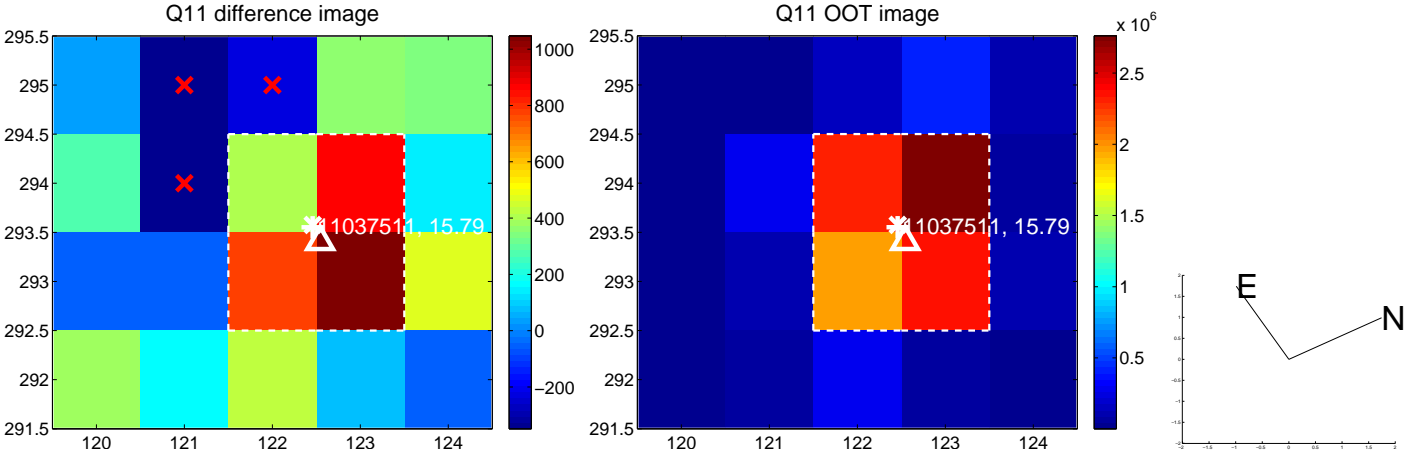
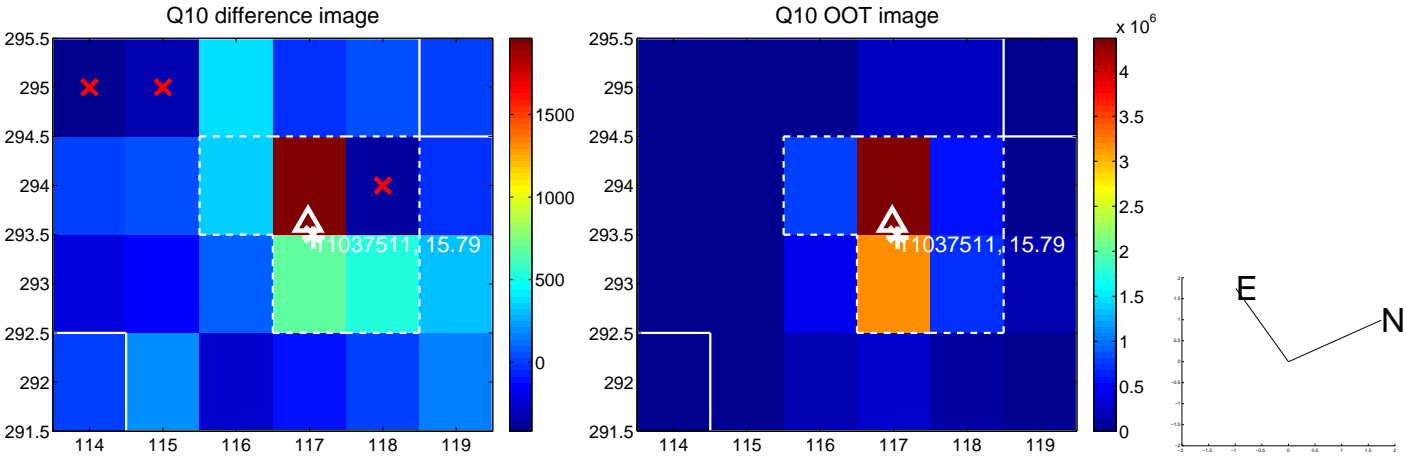
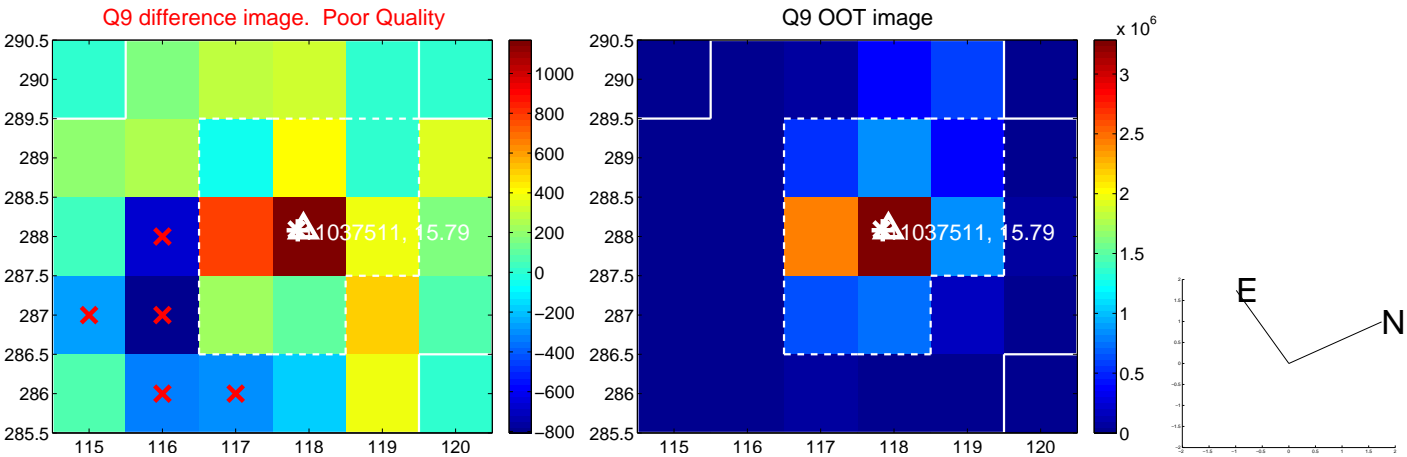
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



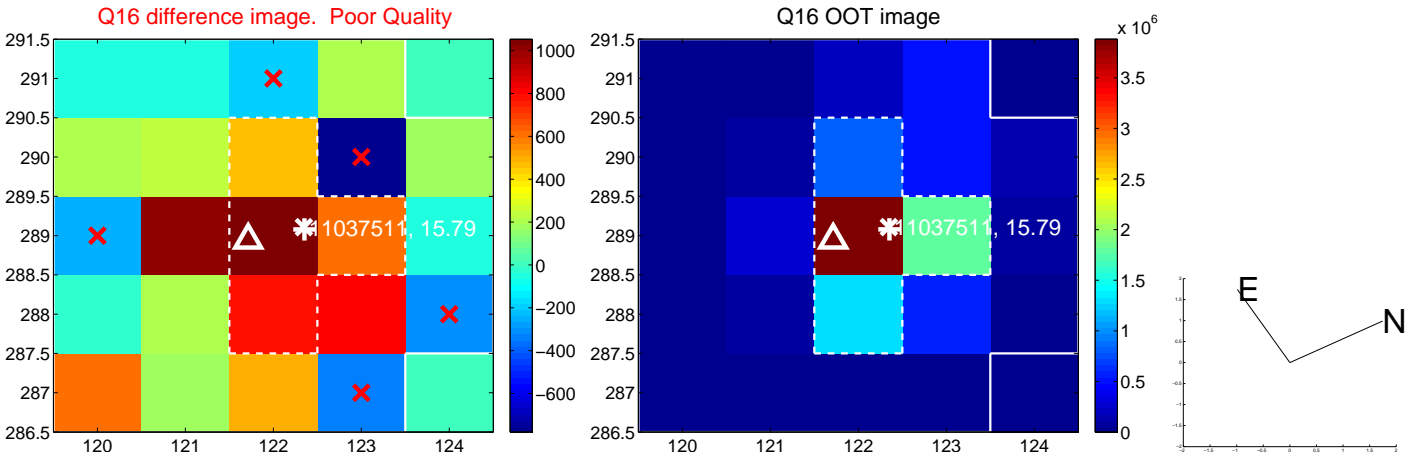
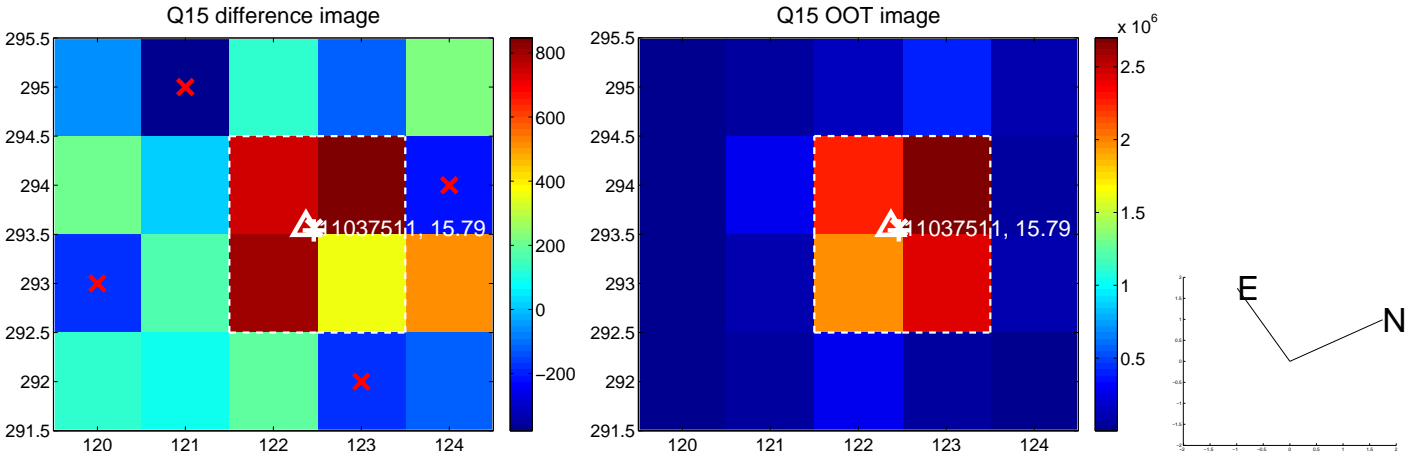
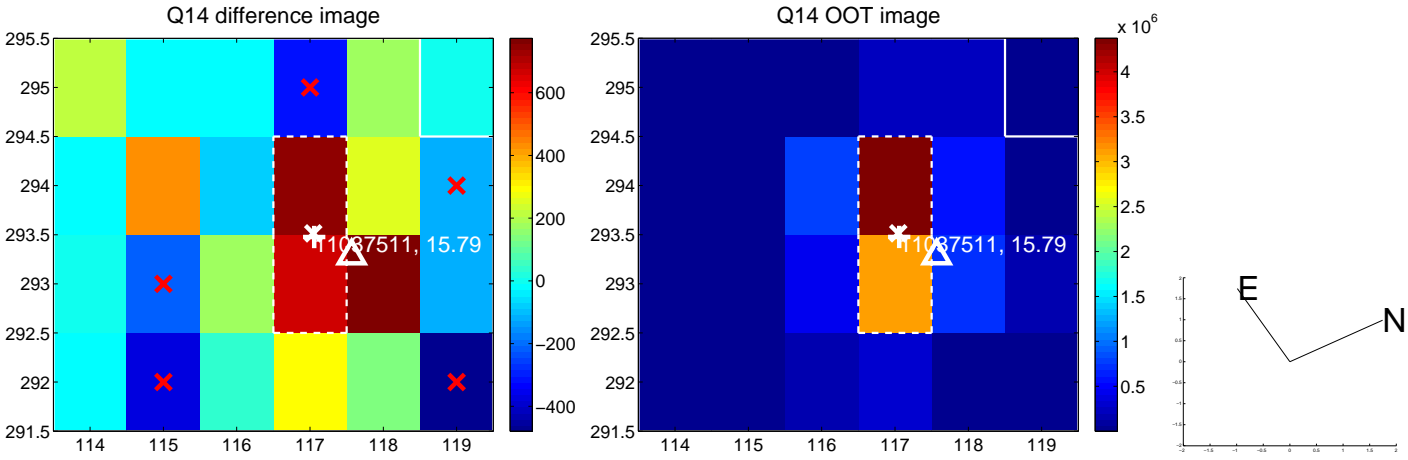
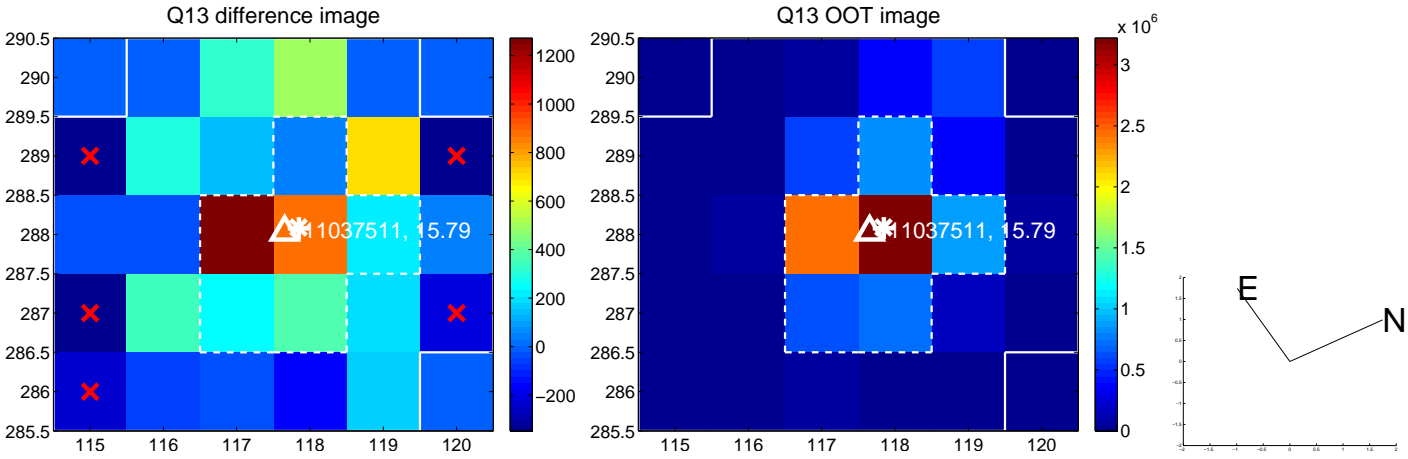
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



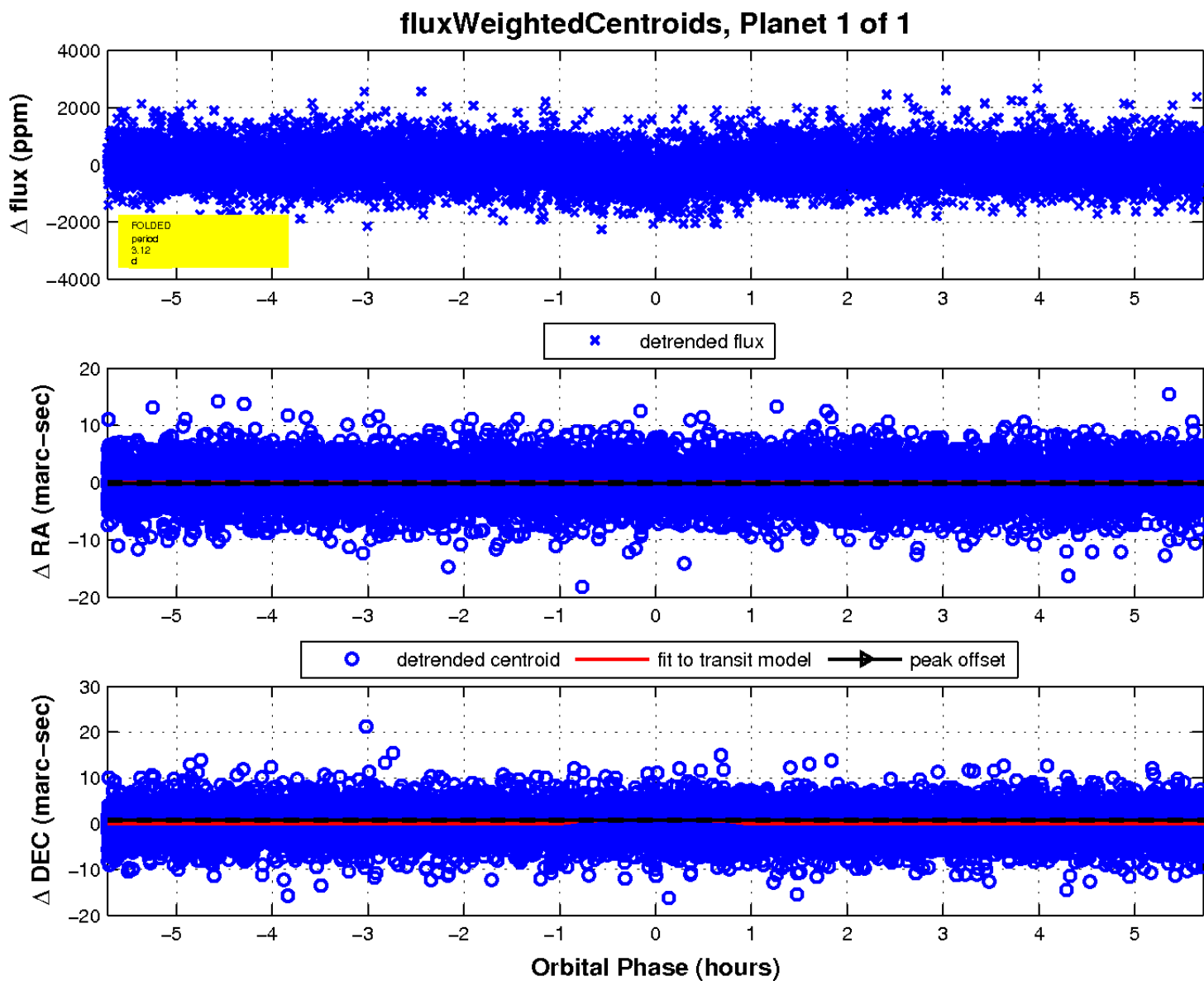
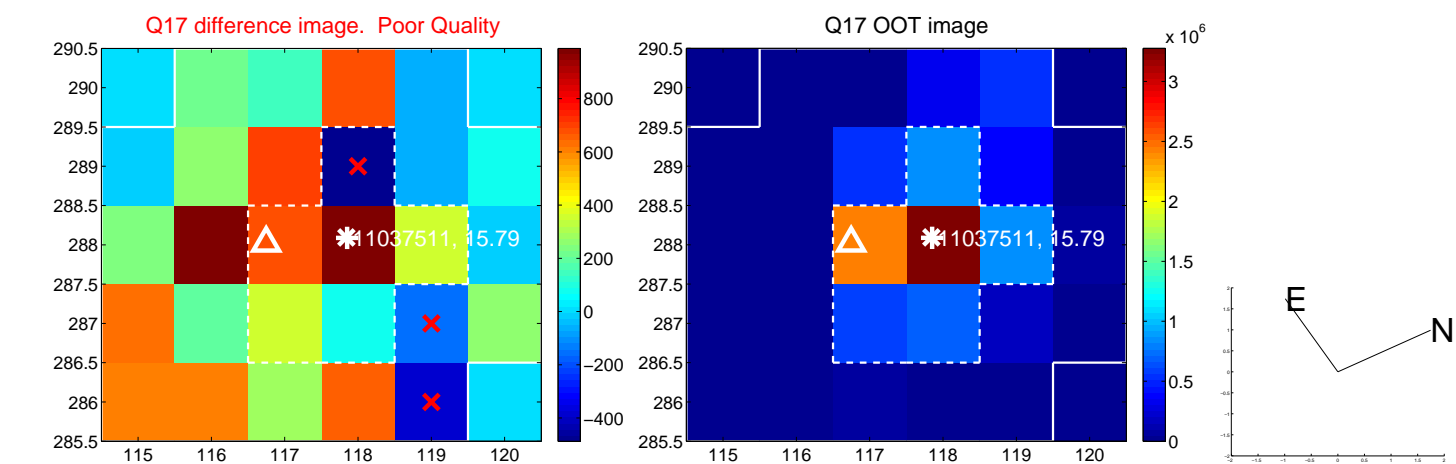
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

