

KIC 008036287

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})
008036287-01	OBS	3984.01	1.444463	132.805523	186.7	1.127	20.8	26.0	1.45	5305	2.13	2485.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008036287-01	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.

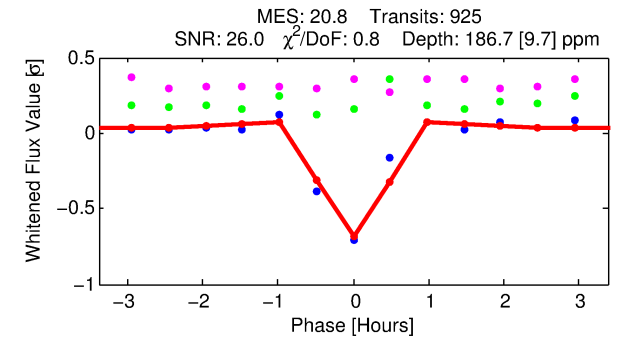
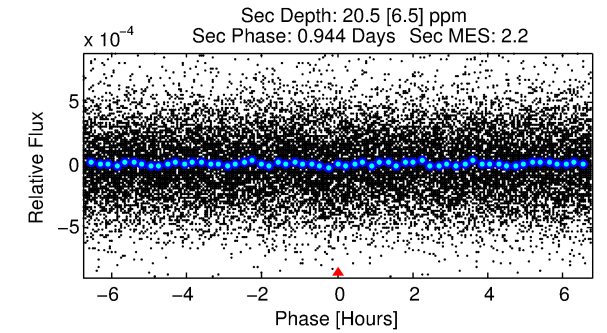
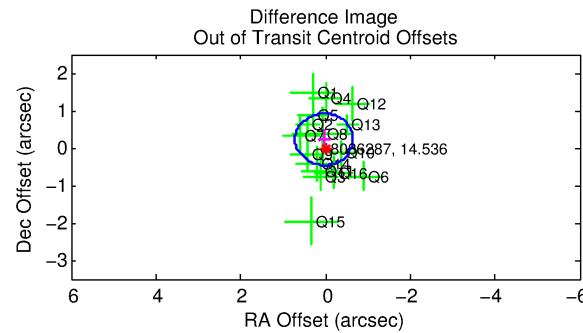
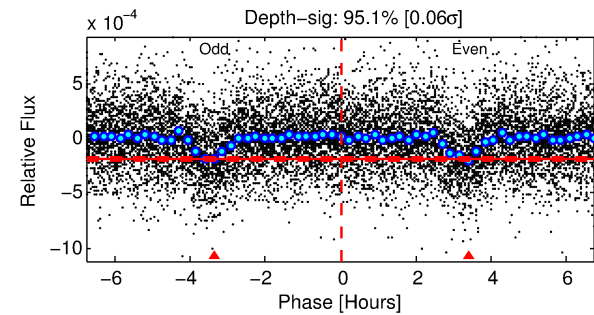
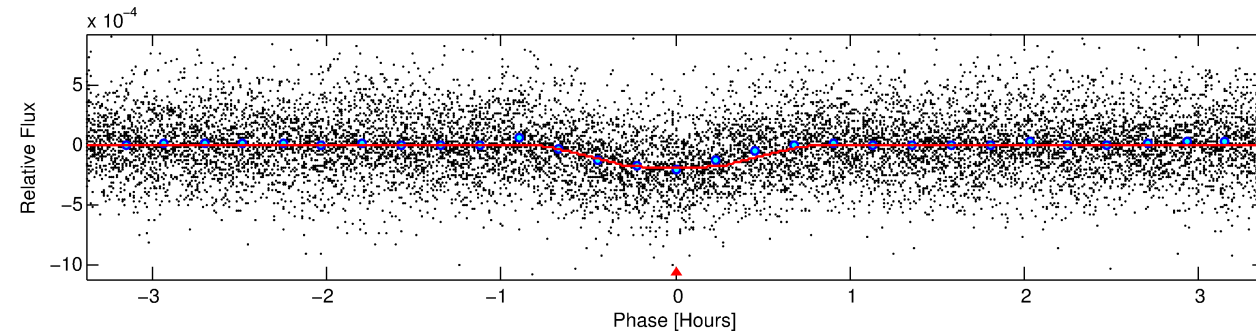
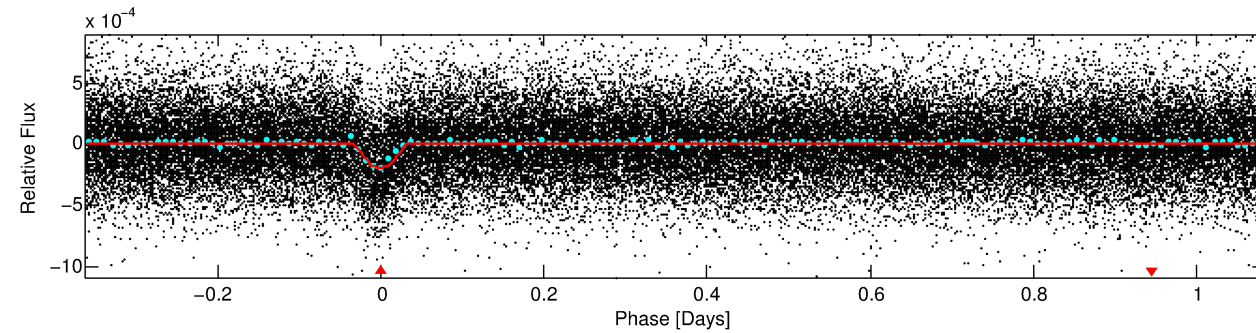
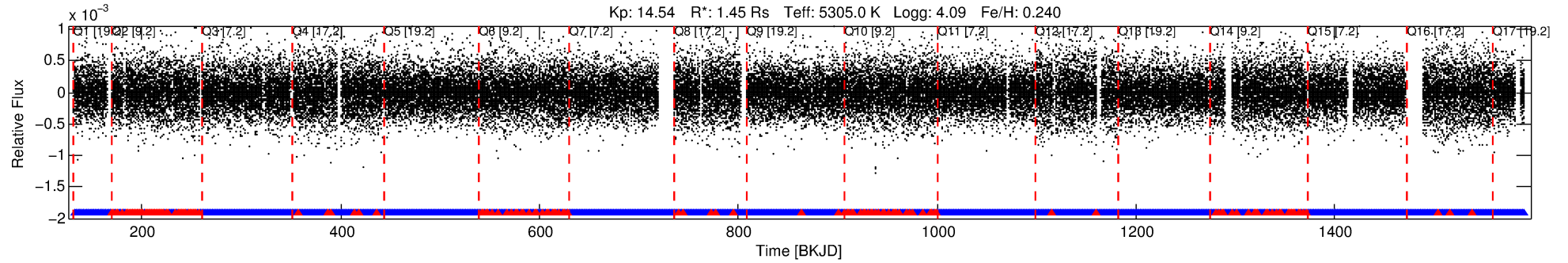
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008036287-01

No Significant Match Found

DV One-Page Summary

KIC: 8036287 Candidate: 1 of 1 Period: 1.444 d
KOI: K03984.01 Corr: 0.894



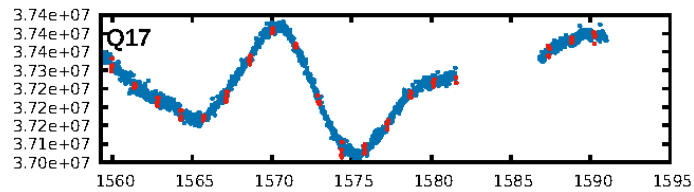
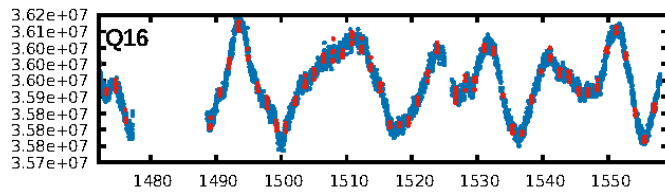
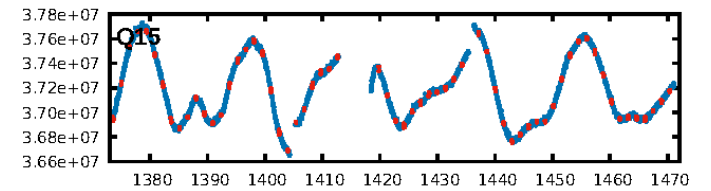
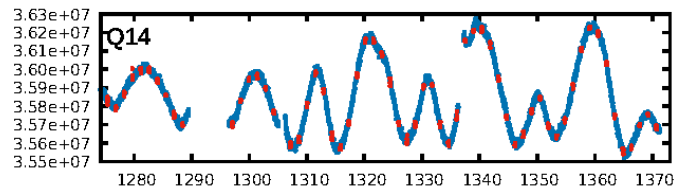
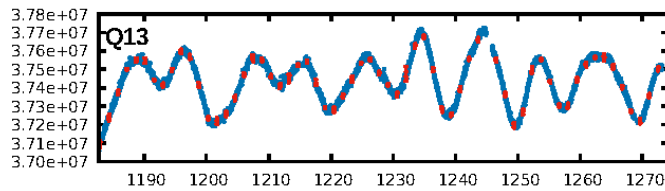
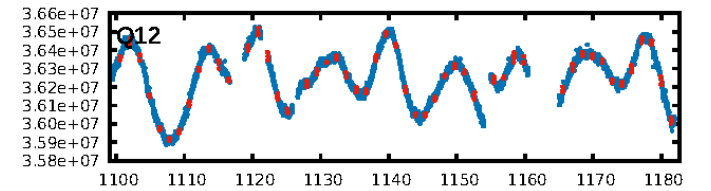
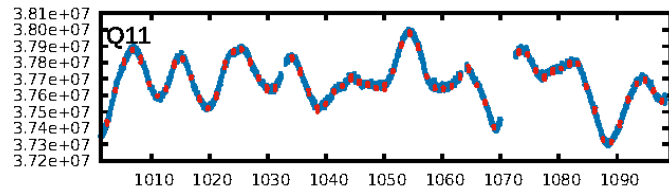
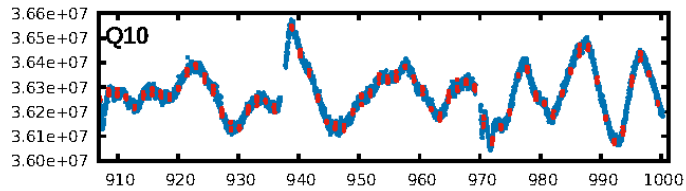
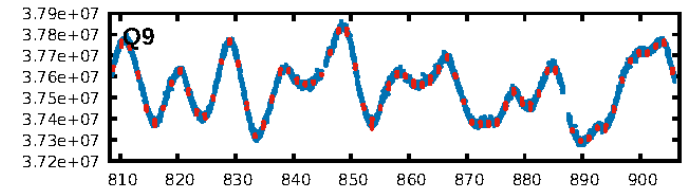
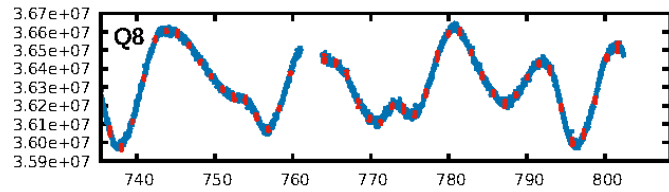
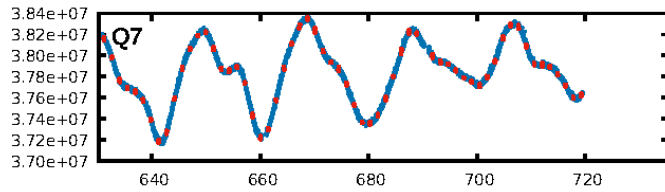
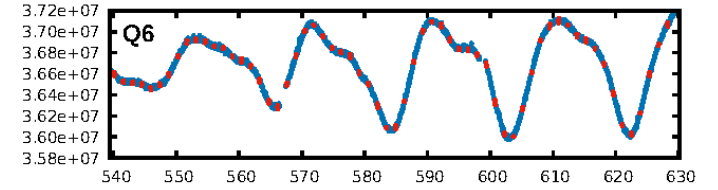
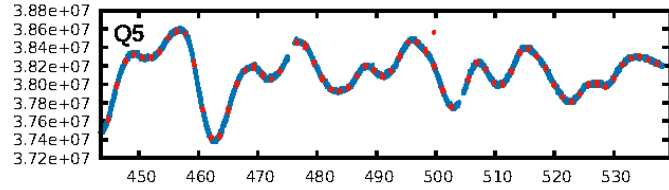
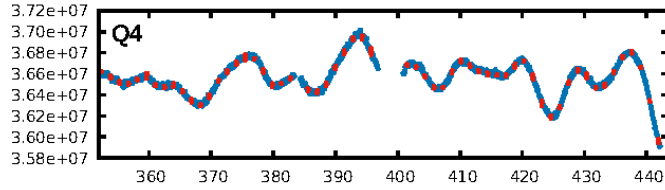
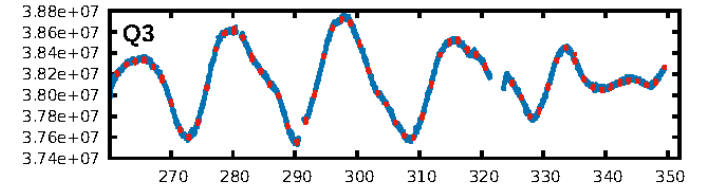
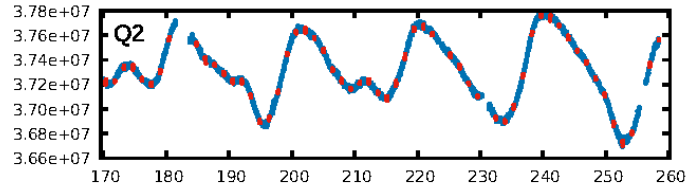
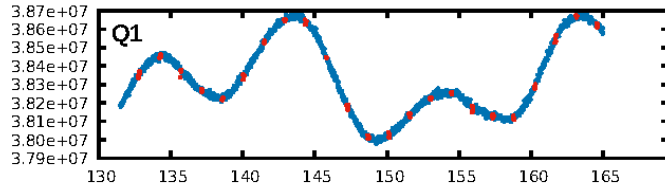
DV Fit Results:

Period = 1.44446 [0.00000] d
Epoch = 132.8055 [0.0007] BKJD
Rp/R* = 0.0135 [0.0037]
a/R* = 7.18 [7.15]
b = 0.70 [0.74]
Seff = 2485.46 [1723.76]
Teq = 1800 [312] K
Rp = 2.13 [1.04] Re
a = 0.0245 [0.0101] AU
Ag = 1.48 [1.38] [0.35 σ]
Teffp = 3072 [494] K [2.18 σ]

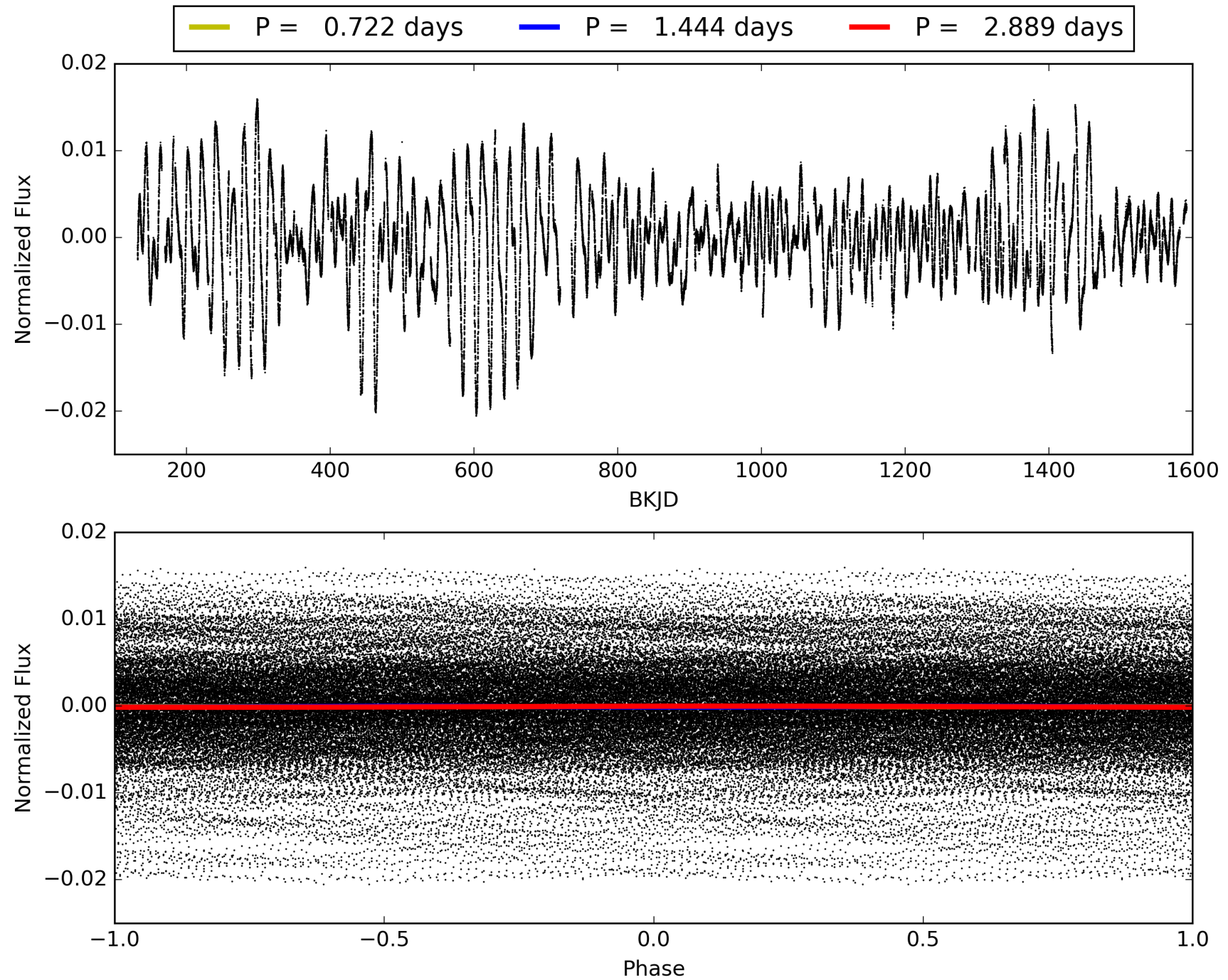
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.85e-91
RollingBand-fgt: 0.84 [738/883]
GhostDiagnostic-chr: 4.099
Centroid-sig: 87.7%
Centroid-so: 0.212 arcsec [0.45 σ]
OotOffset-rm: 0.231 arcsec [1.01 σ]
KicOffset-rm: 0.241 arcsec [1.12 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008036287-01, PDC Light Curves

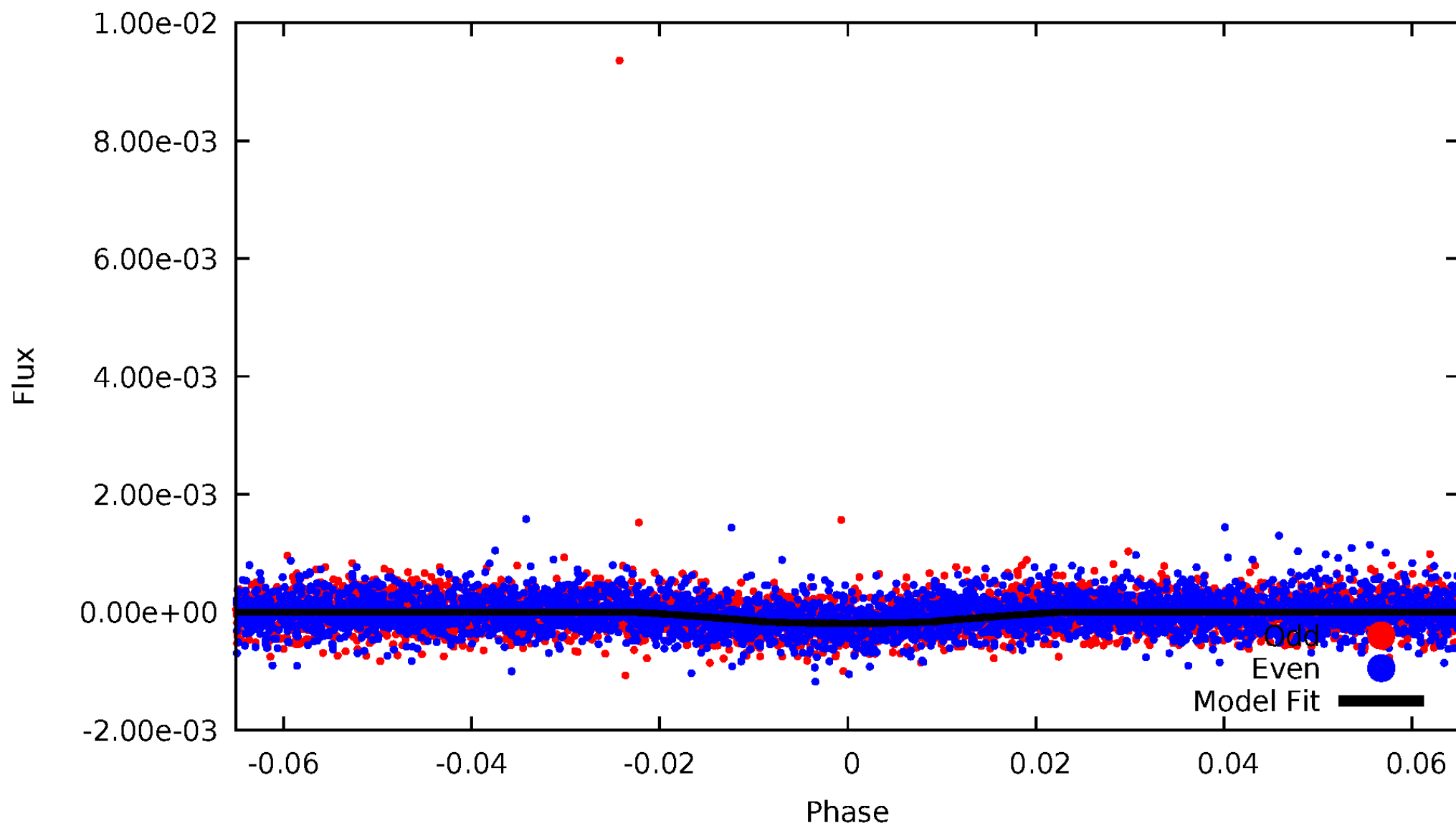


TCE 008036287-01



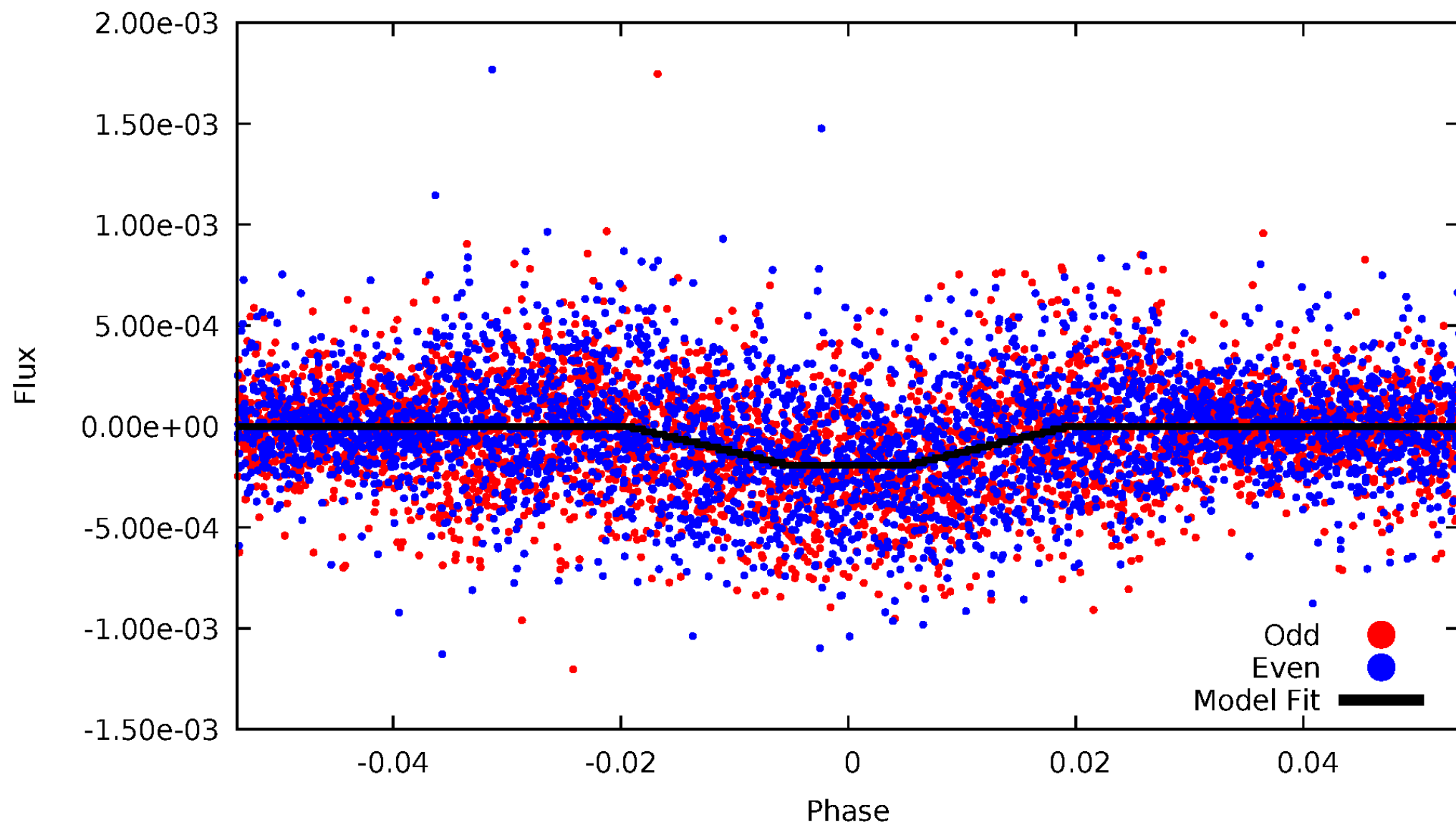
DV Odd/Even

TCE 008036287-01

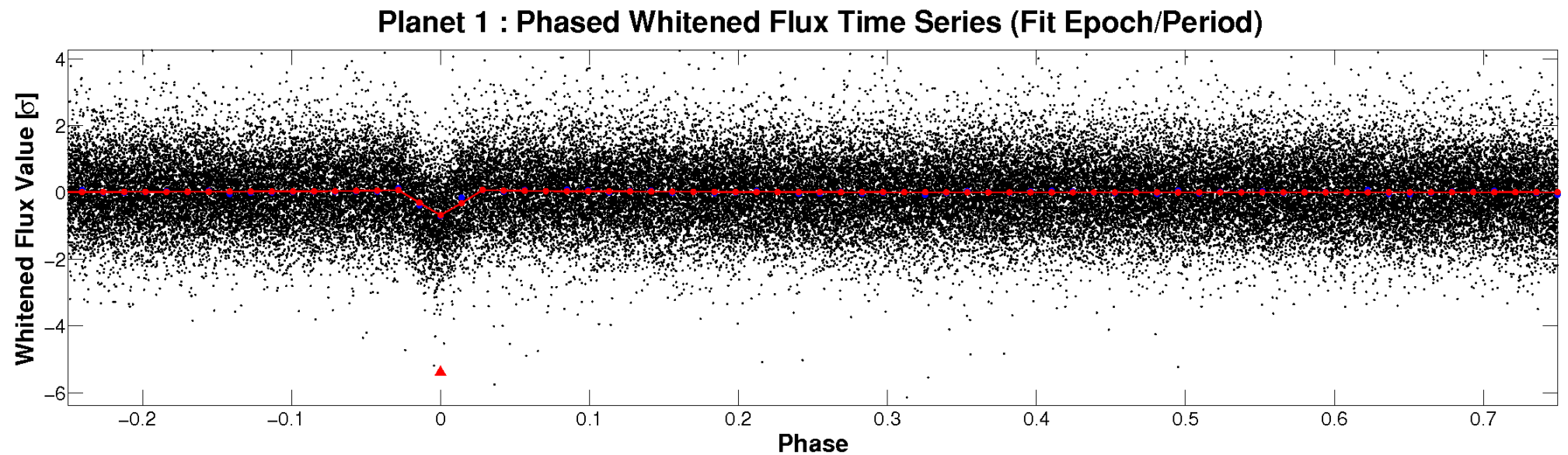
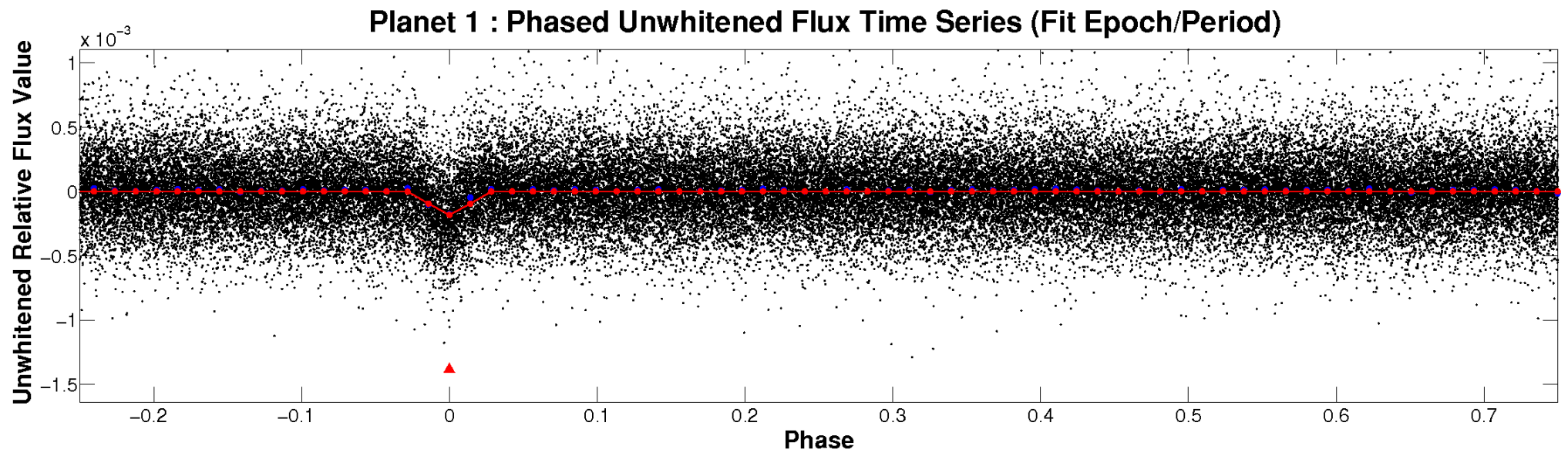


ALT Odd/Even

TCE 008036287-01

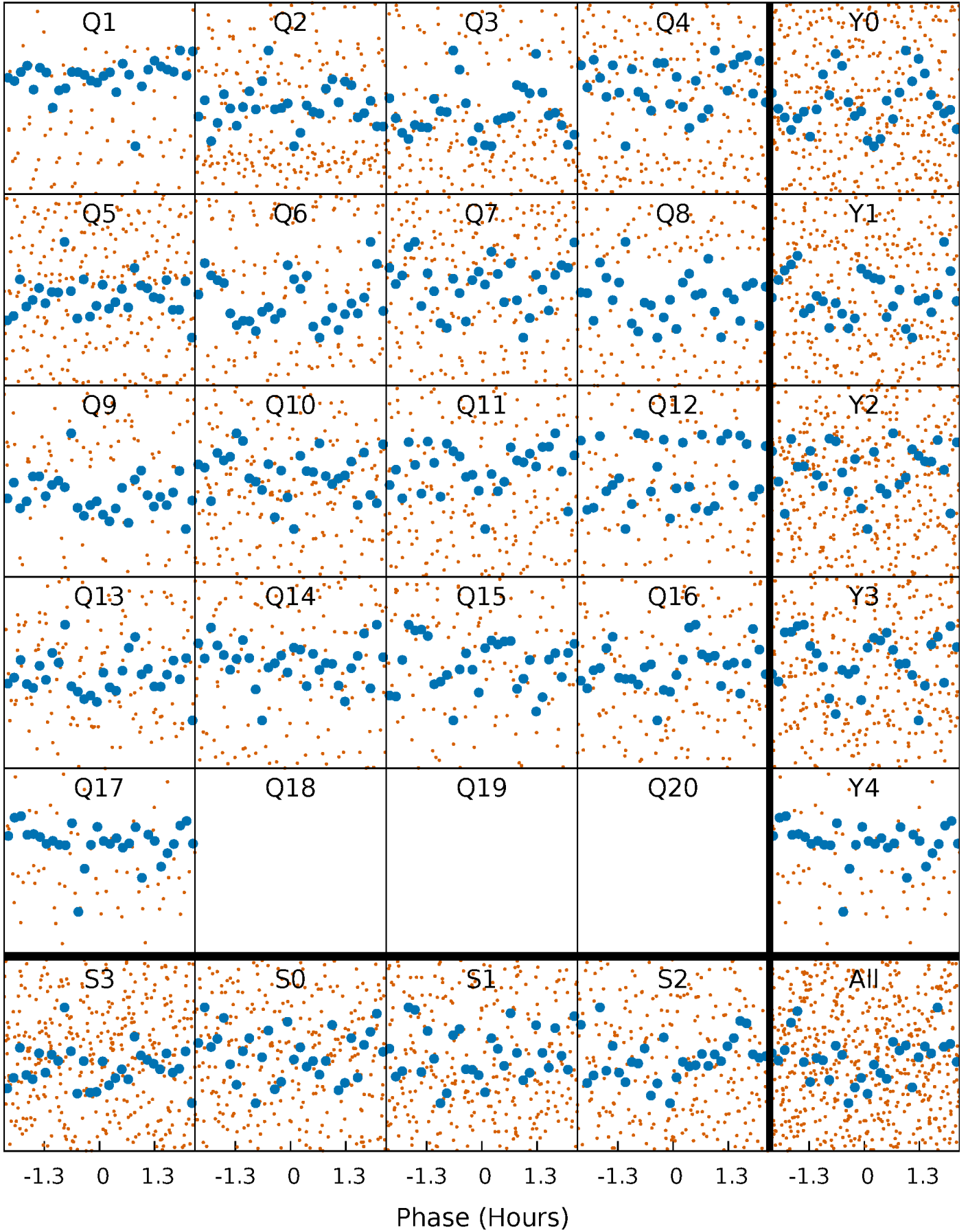


Non-Whitened Vs. Whitened Light Curve



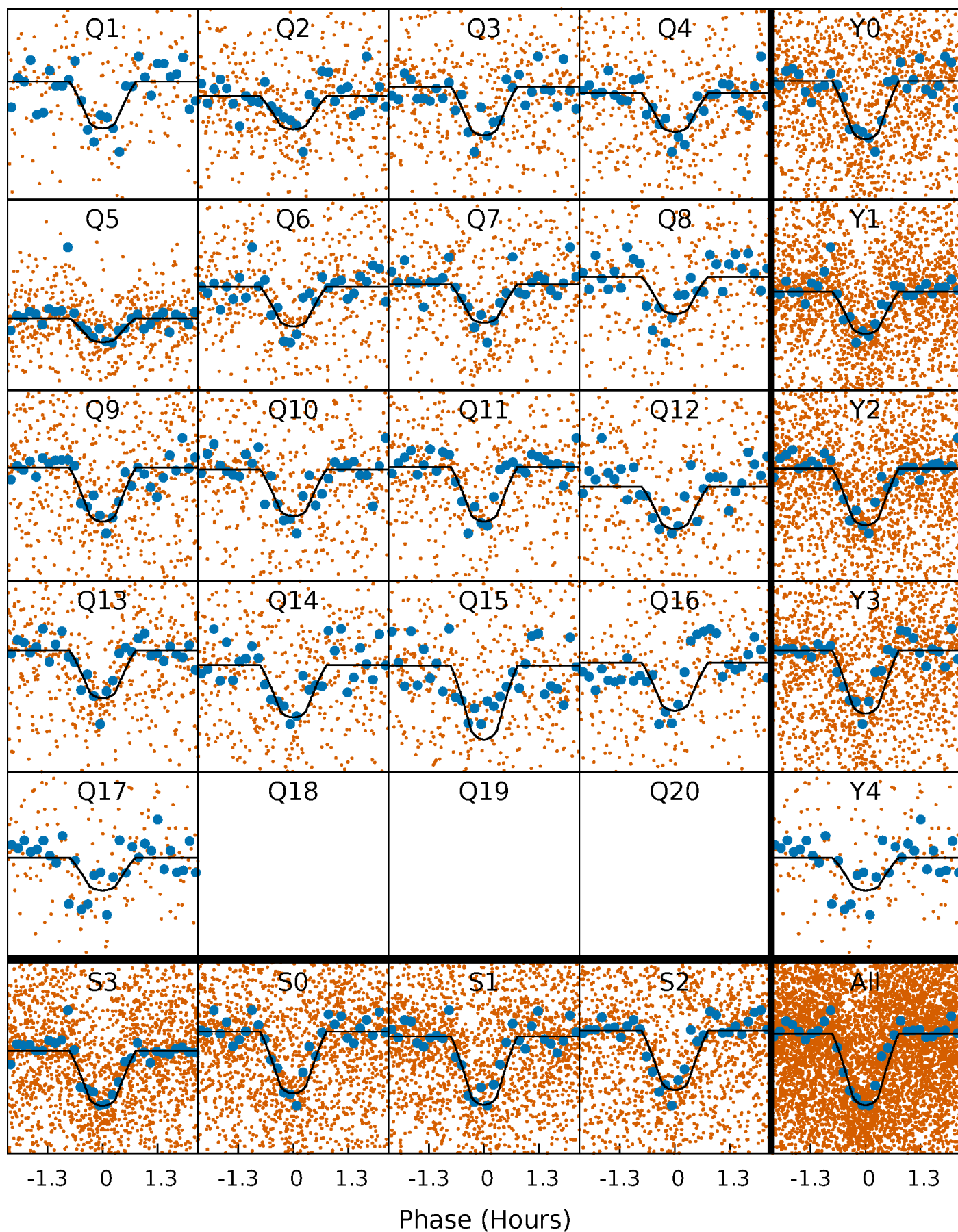
PDC Quarter-Phased Transit Curves

TCE 008036287-01 P= 1.444463 Days $T_0=132.805523$ (BKJD)



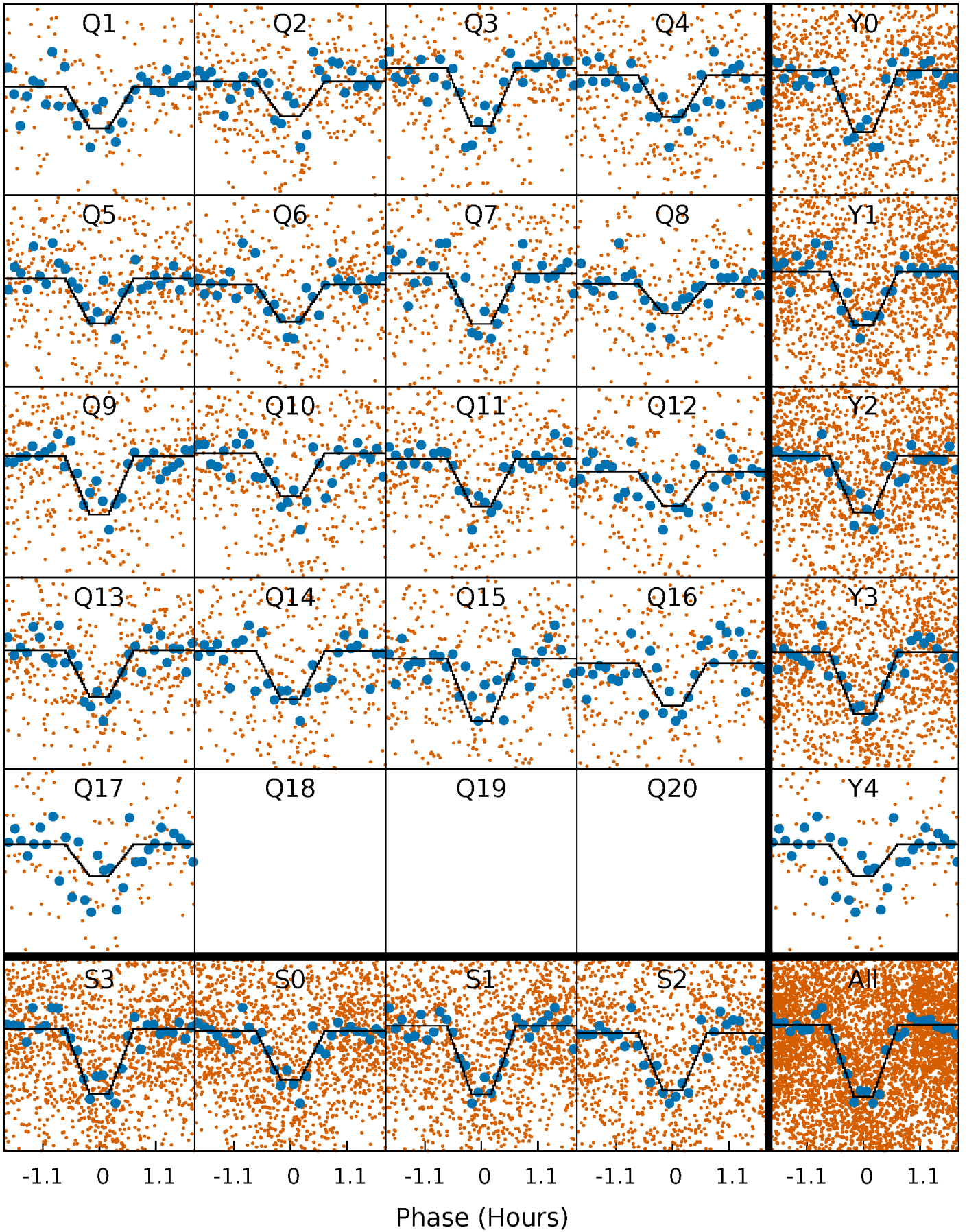
DV Quarter-Phased Transit Curves

TCE 008036287-01 P= 1.444463 Days $T_0=132.805523$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

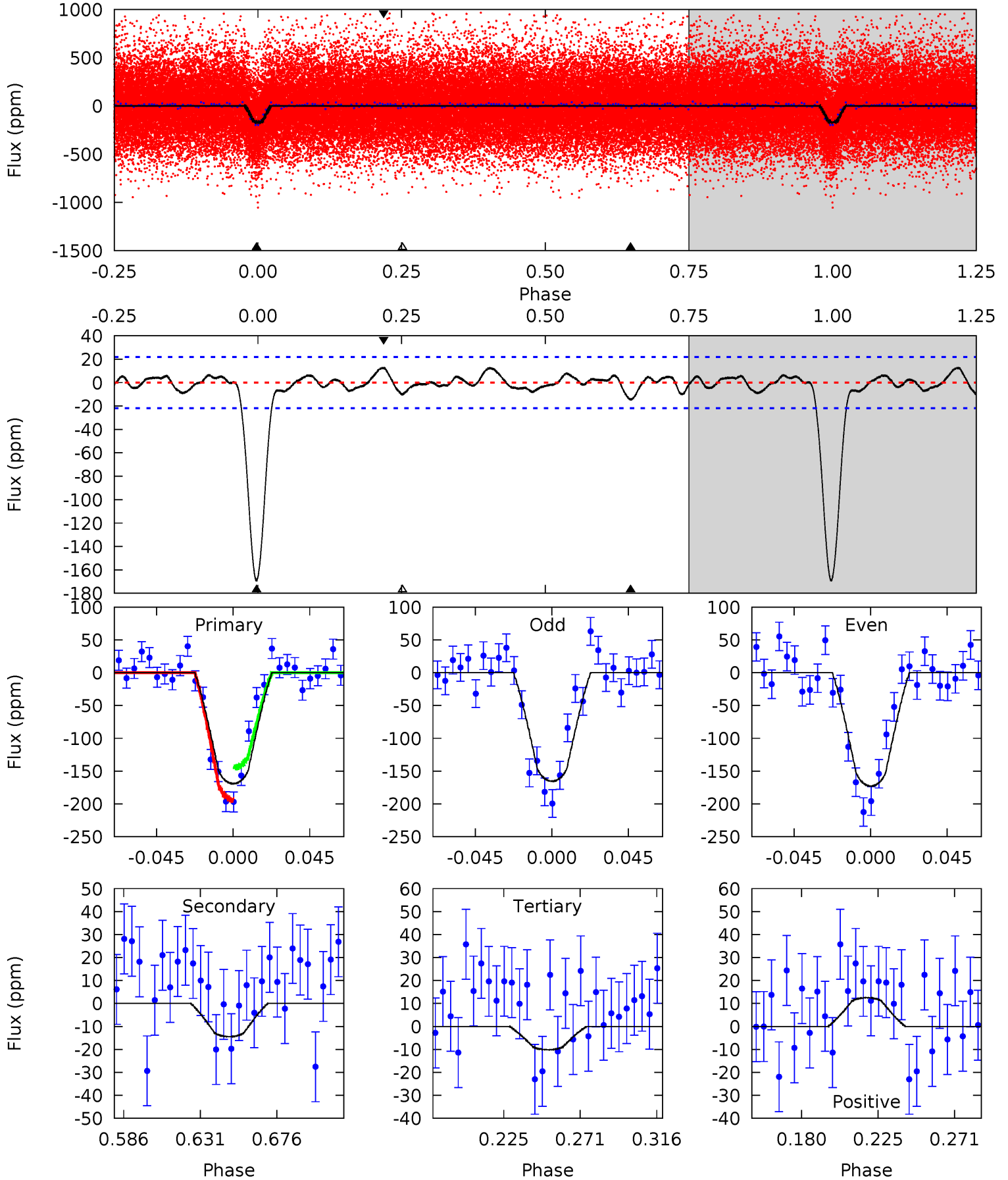
TCE 008036287-01 P= 1.444452 Days $T_0=132.806363$ (BKJD)



DV Model-Shift Uniqueness Test

008036287-01, P = 1.444463 Days, E = 131.361060 Days

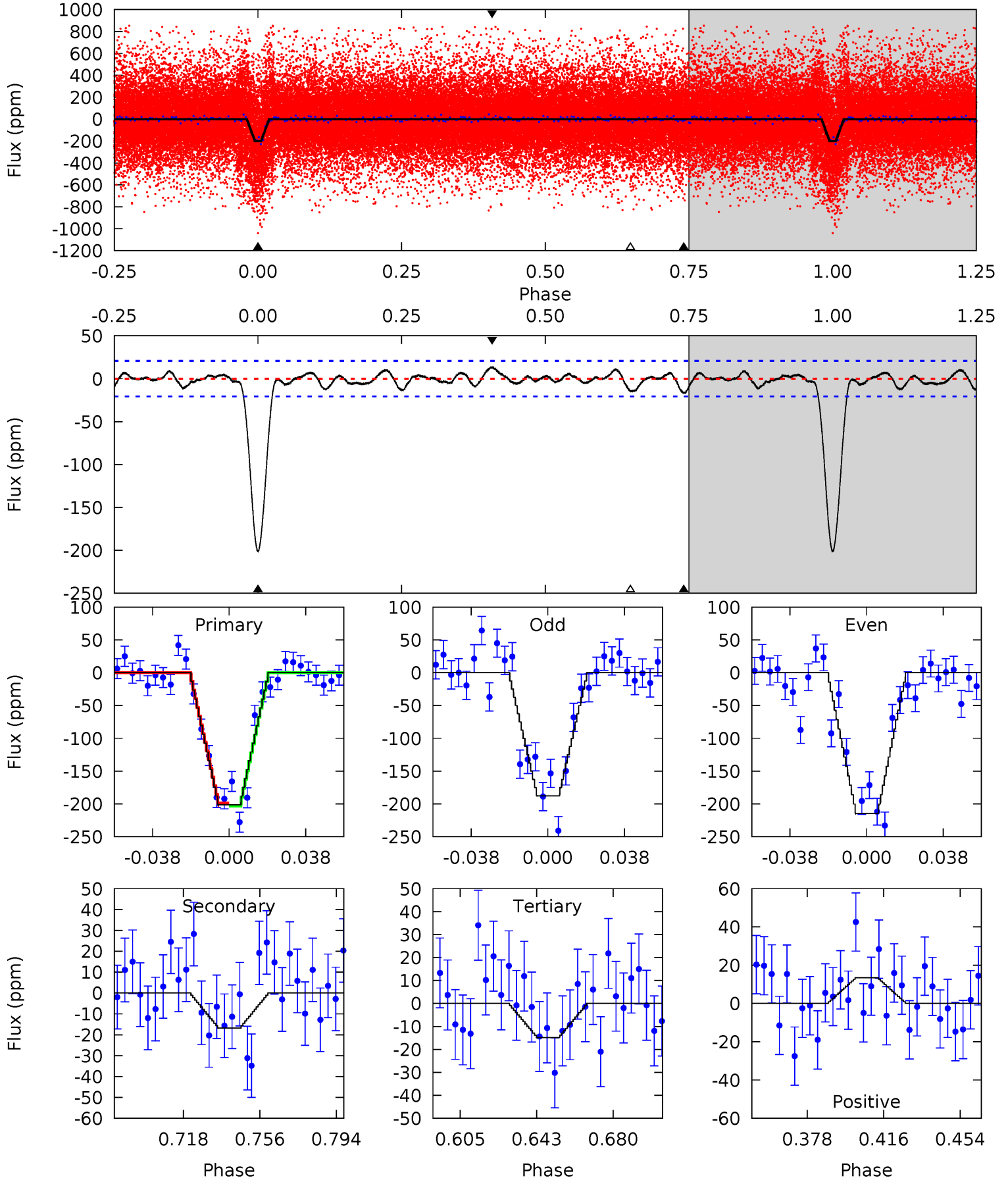
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.6	3.13	2.20	2.71	4.73	2.00	1.05	34.4	33.9	0.94	0.43	0.80	0.98	0.07	5.33



Alt Model-Shift Uniqueness Test

008036287-01, P = 1.444452 Days, E = 131.361911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.3	3.85	3.42	3.10	4.76	2.08	1.22	42.9	43.2	0.44	0.75	3.07	0.92	0.06	0.55



Stellar Parameters For KIC 008036287

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5305^{+159}_{-159}	$4.088^{+0.409}_{-0.189}$	$0.240^{+0.200}_{-0.250}$	$1.449^{+0.478}_{-0.585}$	$0.939^{+0.069}_{-0.089}$	$0.435^{+1.499}_{-0.245}$
	+3%/-3%	+10%/-5%	+83%/-104%	+33%/-40%	+7%/-9%	+345%/-56%
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 008036287-01 / KOI 3984.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 5	$2.00^{+0.71}_{-0.67}$	2479^{+212}_{-302}	3153^{+482}_{-395}	$1.157^{+1.535}_{-0.587}$
Alt.	-17 ± 4	$2.07^{+0.76}_{-0.64}$	2500^{+216}_{-304}	3224^{+453}_{-379}	$1.284^{+1.461}_{-0.646}$

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

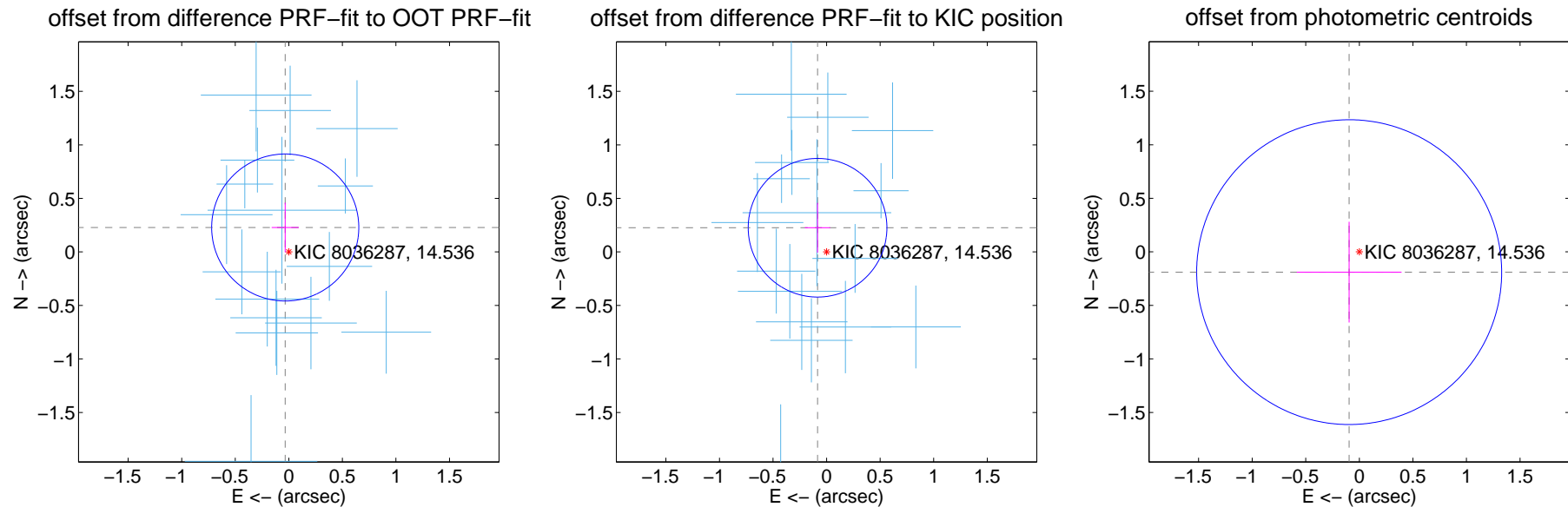
DV Centroid Data

Supplemental centroid analysis for 008036287-01. Kepler magnitude: 14.54. Transit SNR 25.99

There are 16 quarters with good PRF difference image offsets

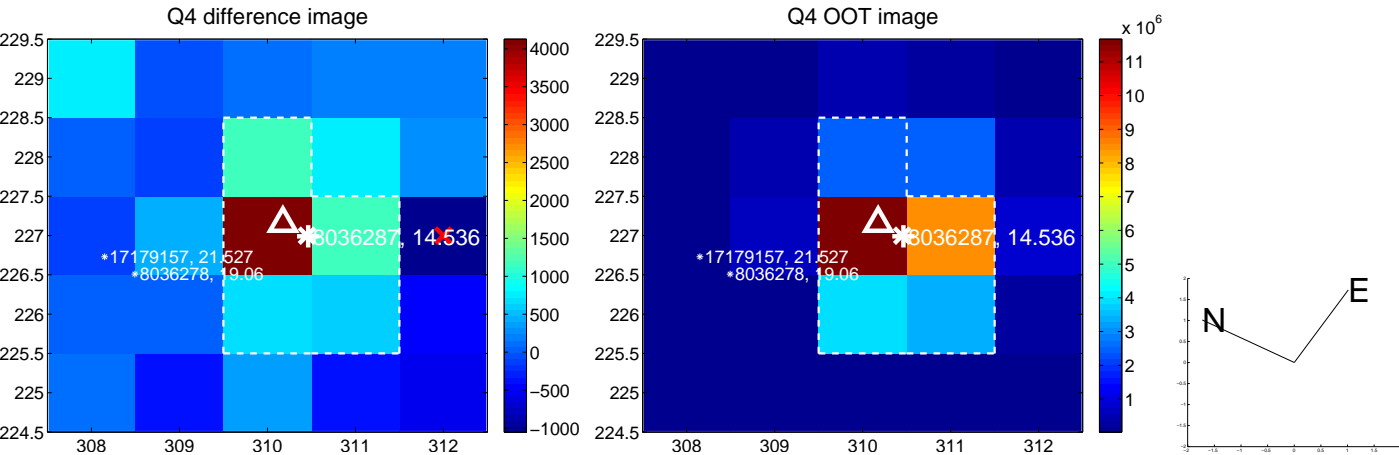
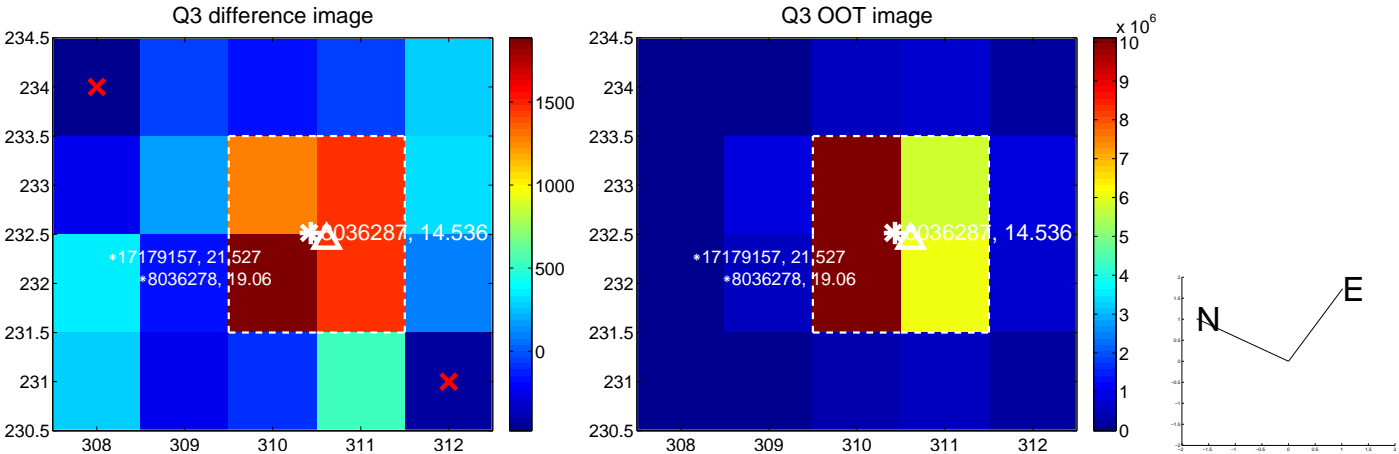
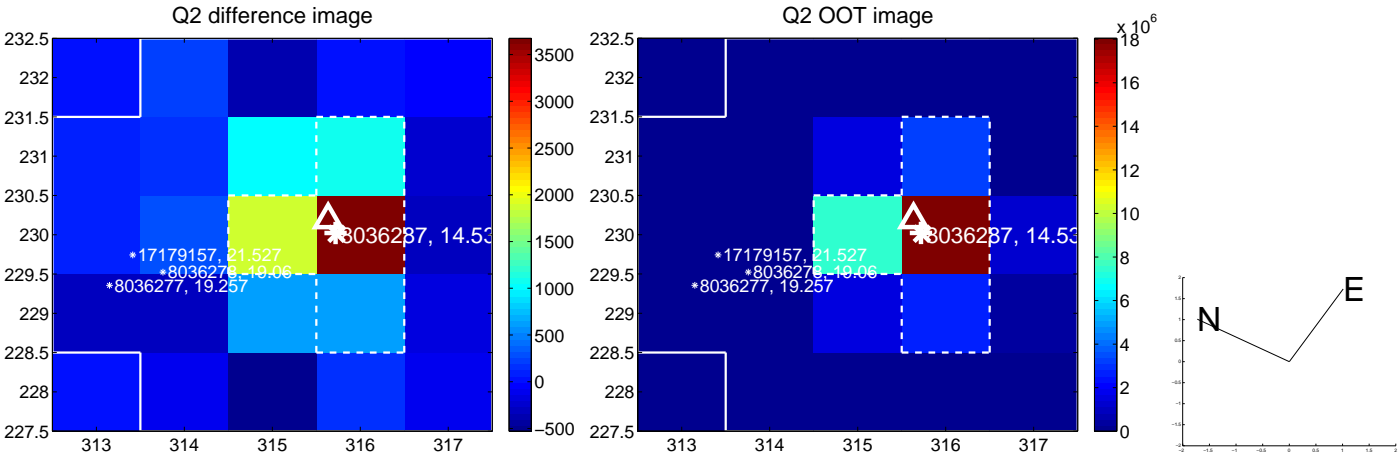
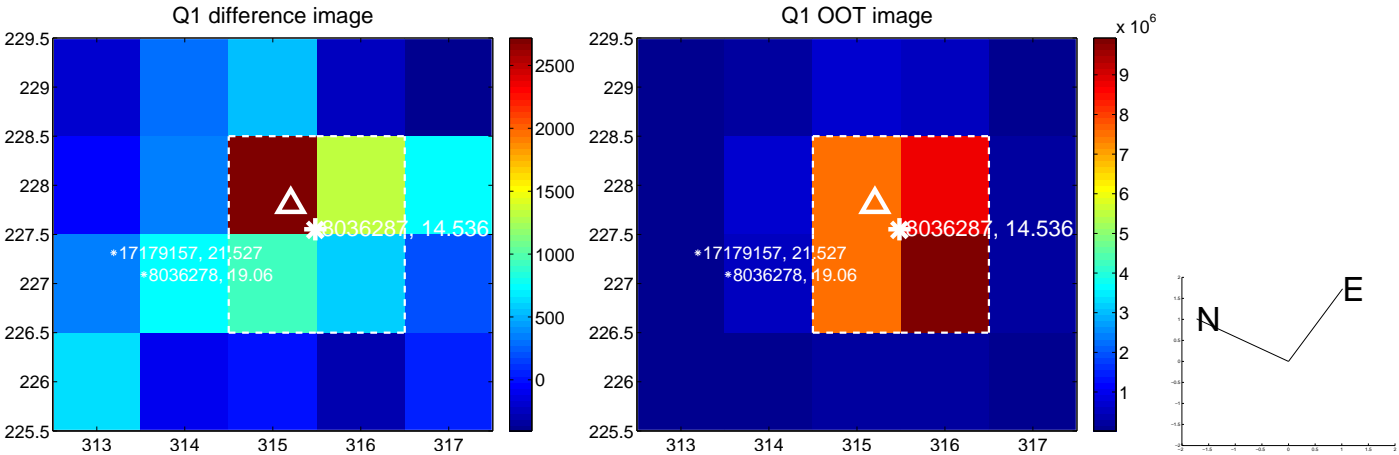
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.231 ± 0.229	1.01	0.033 ± 0.126	0.228 ± 0.232
PRF-fit source offset from KIC position	0.241 ± 0.216	1.12	0.084 ± 0.118	0.226 ± 0.233
photometric centroid source offset	0.21 ± 0.47	0.45	0.09 ± 0.49	-0.19 ± 0.47

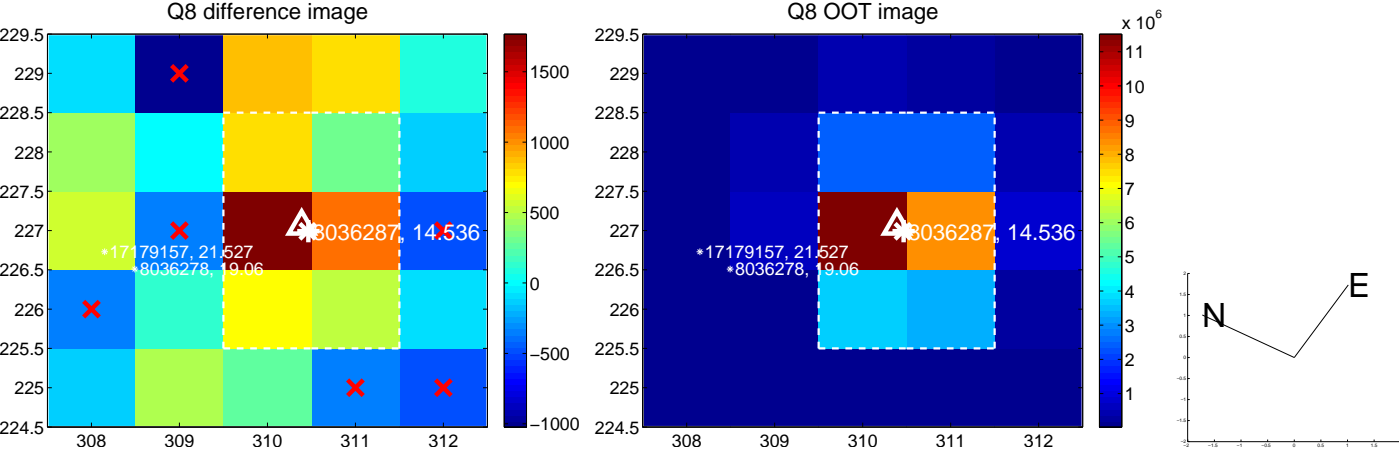
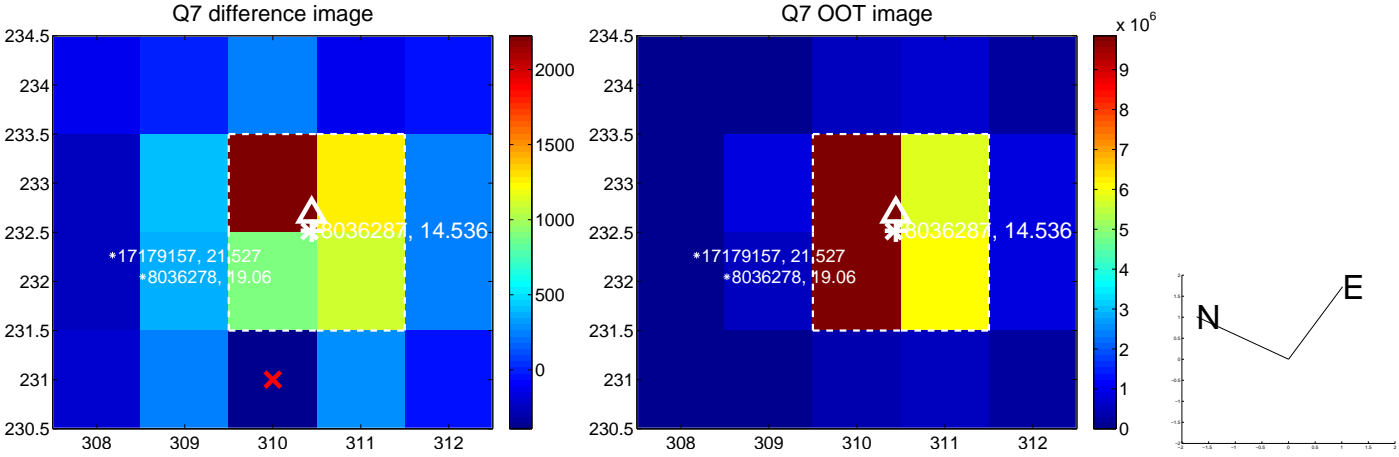
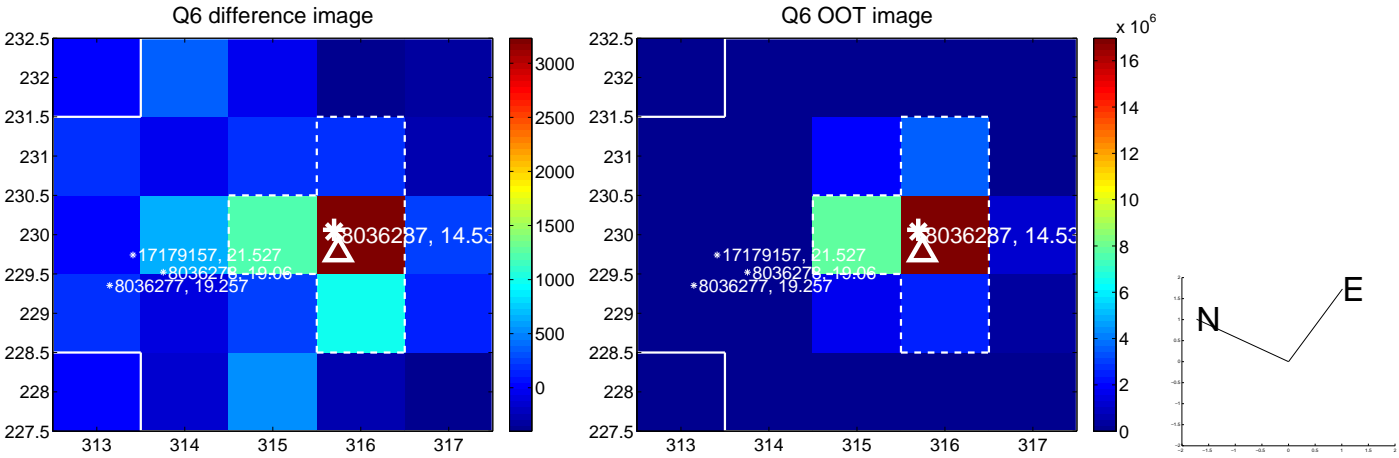
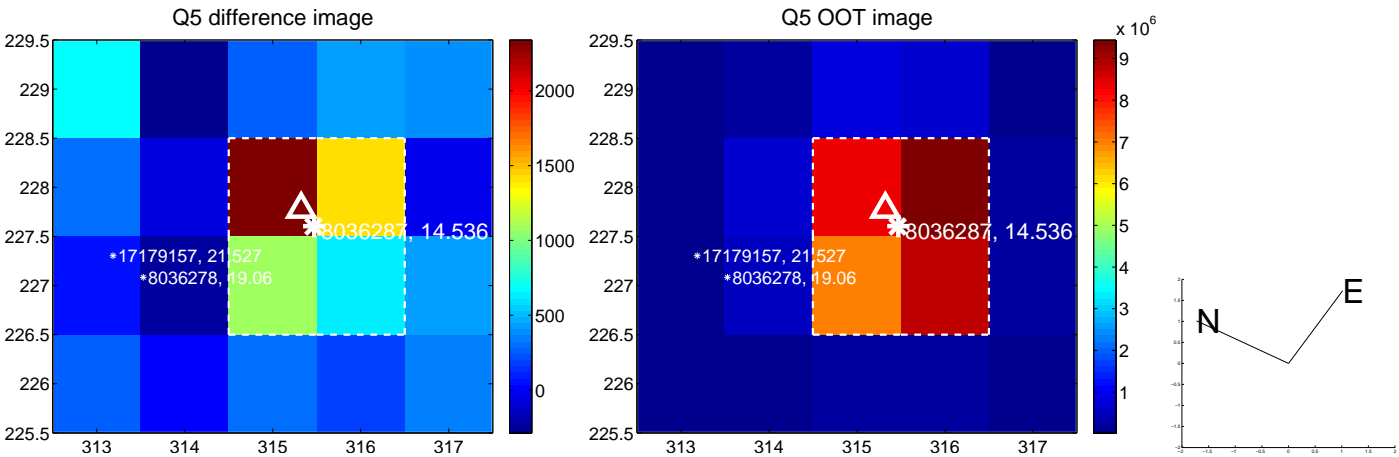


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

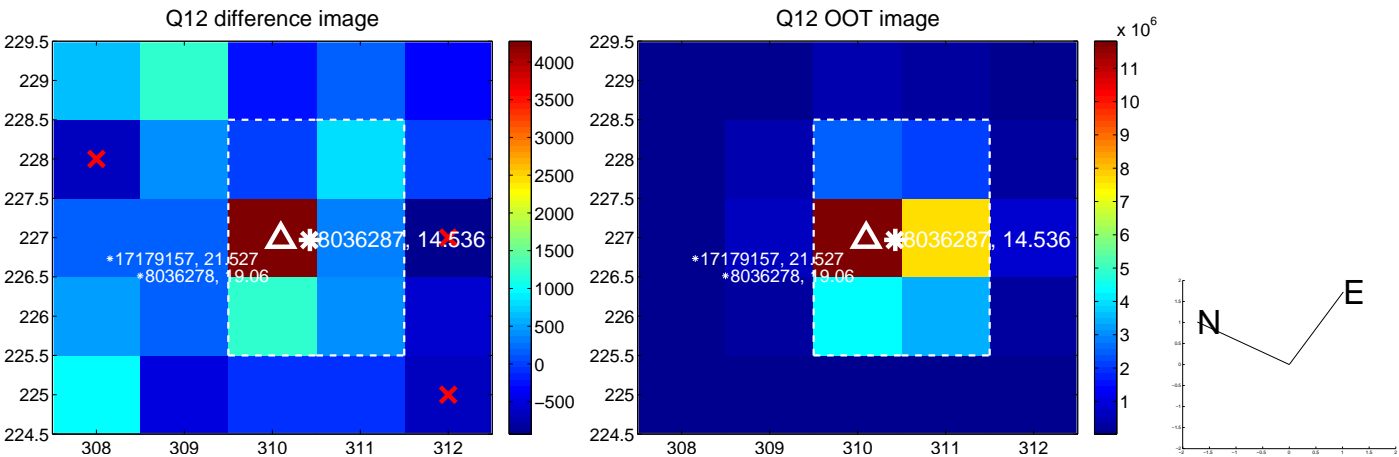
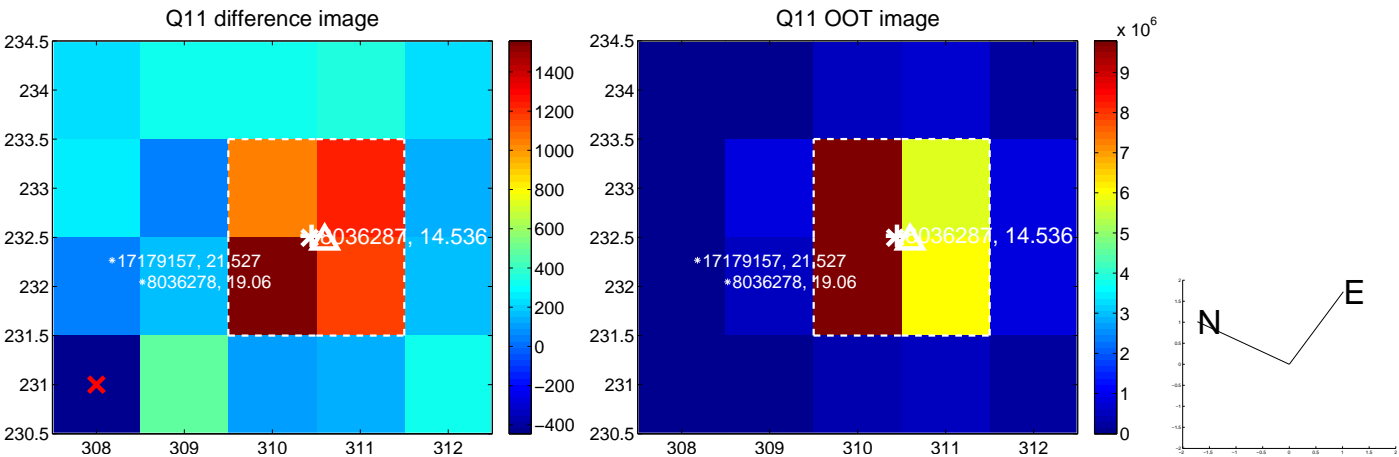
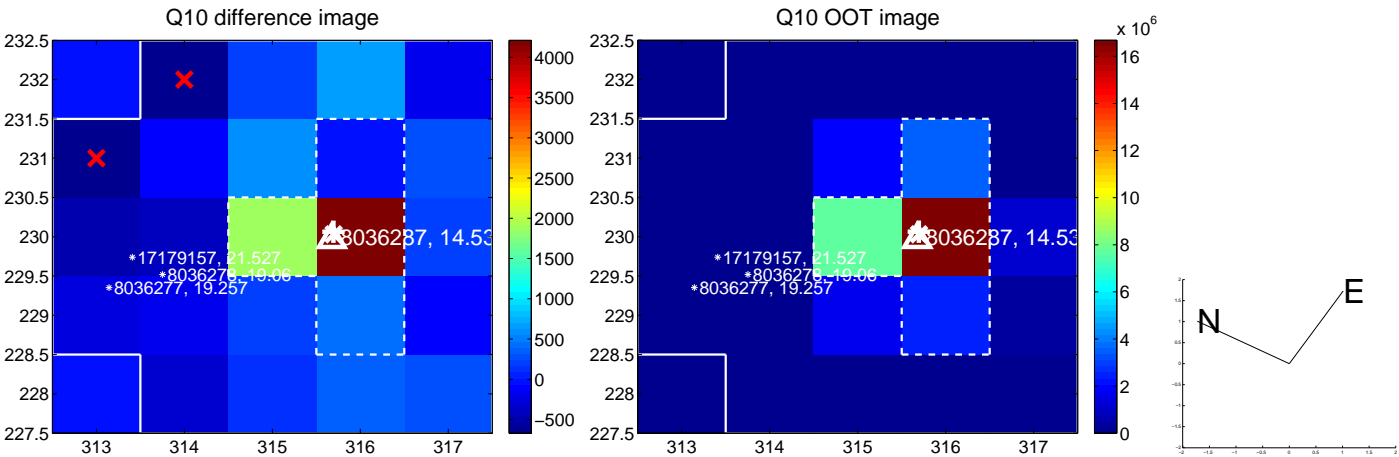
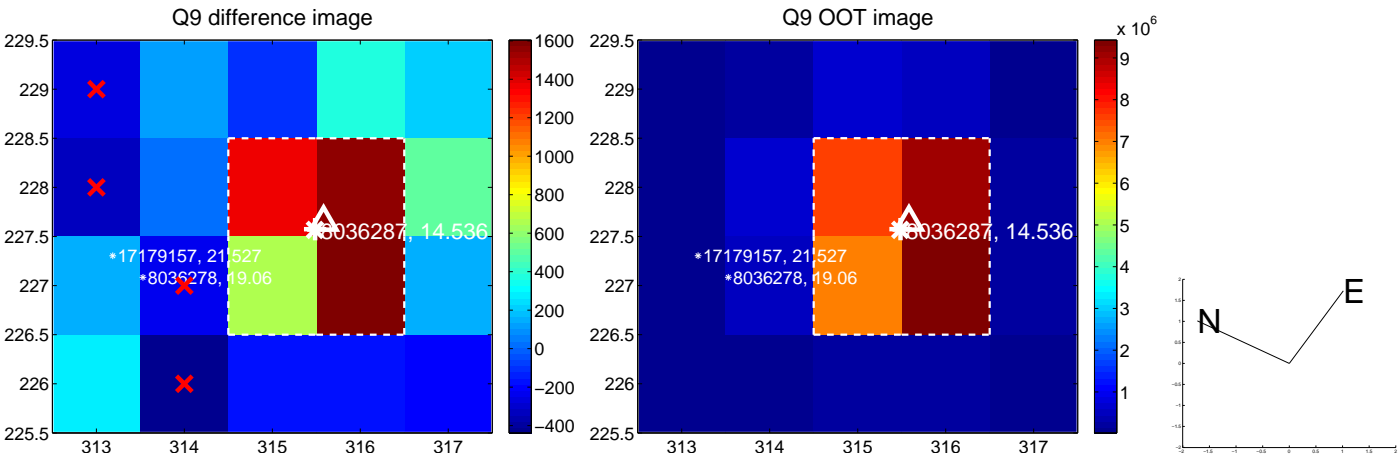
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



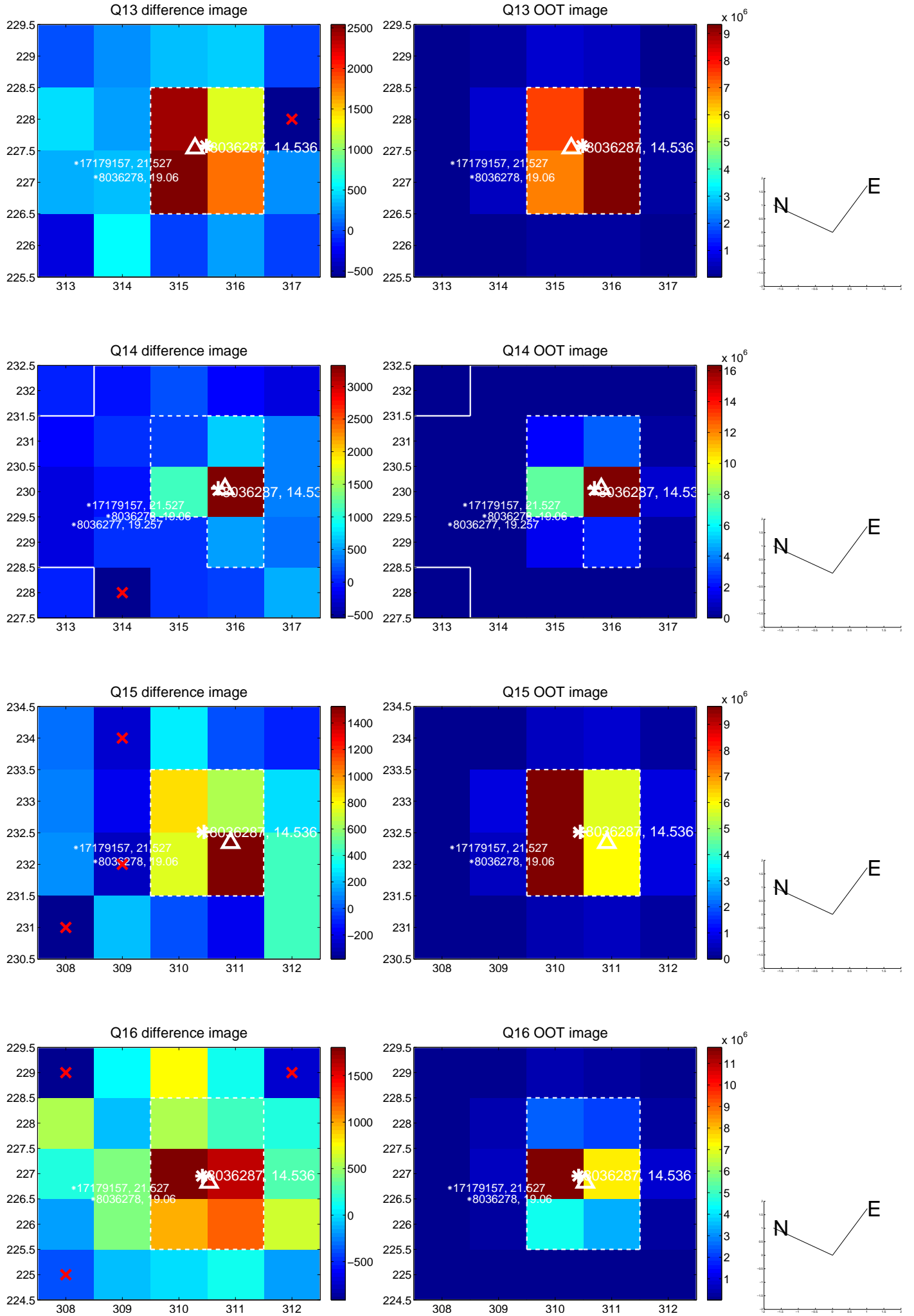
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



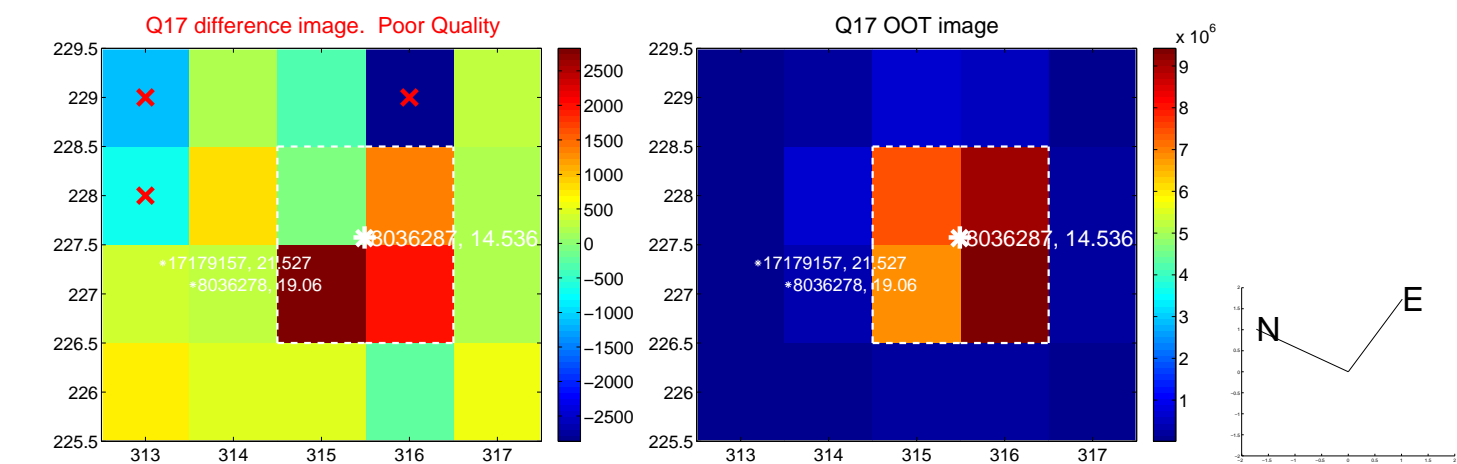
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



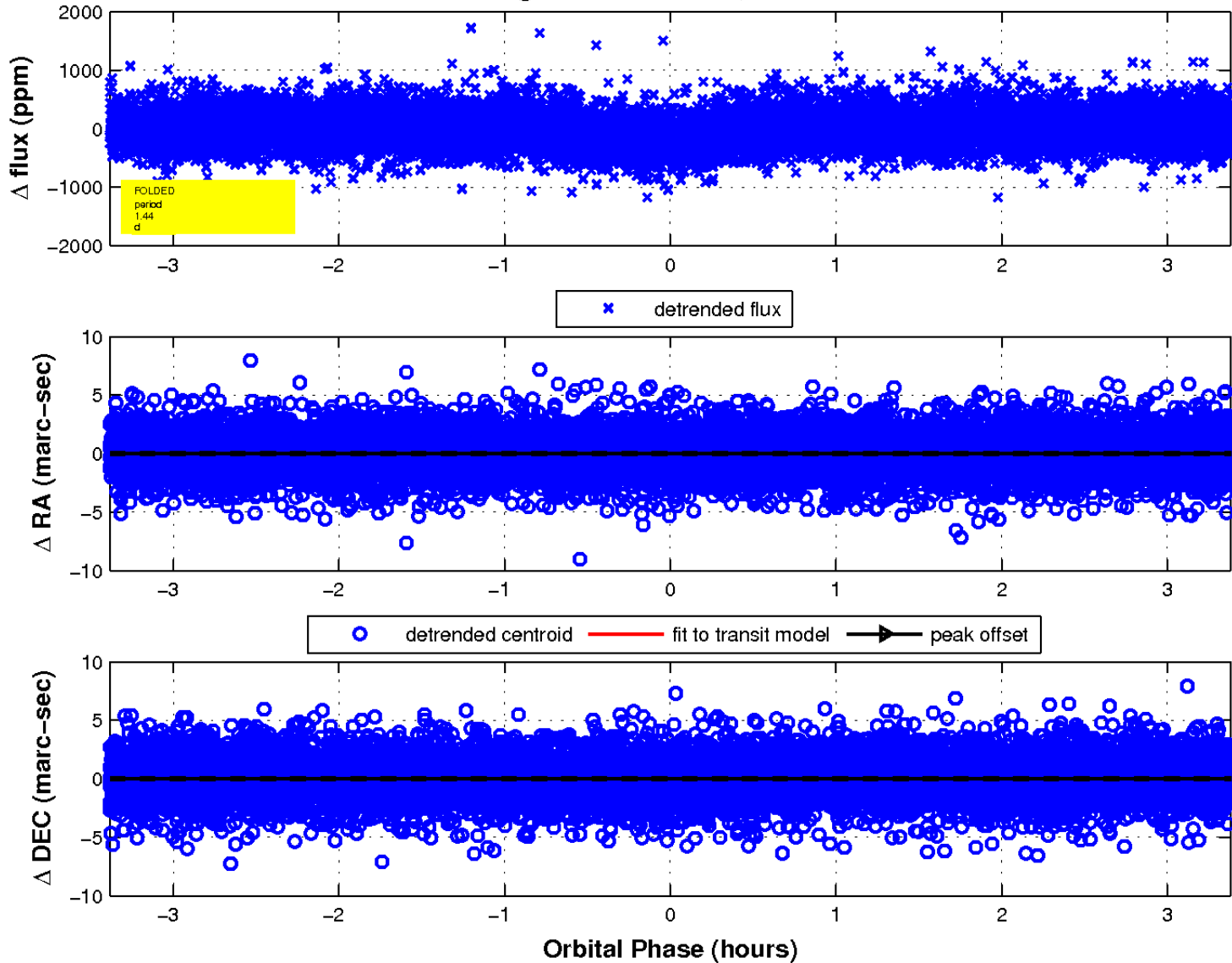
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

