

KIC 005688910

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})
005688910-01	OBS	2856.01	25.873159	143.282772	682.3	5.617	16.6	17.6	1.09	6036	3.32	46.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005688910-01	OBS	PC	0.92	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.

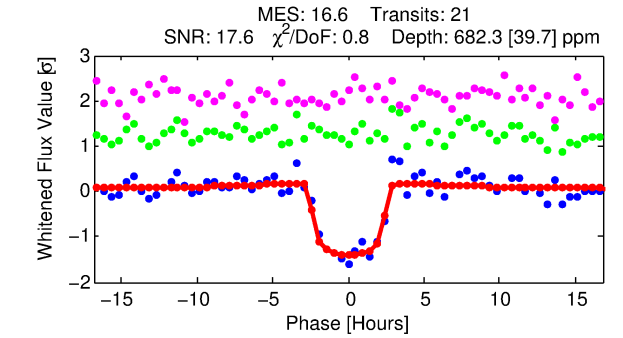
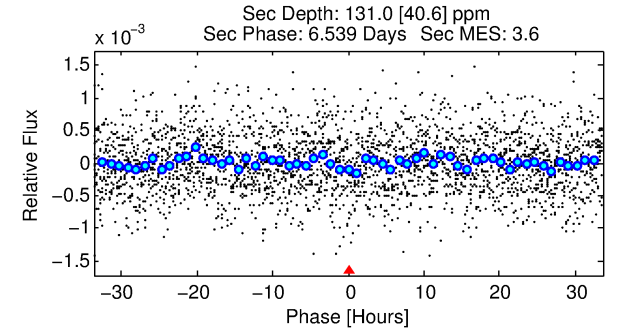
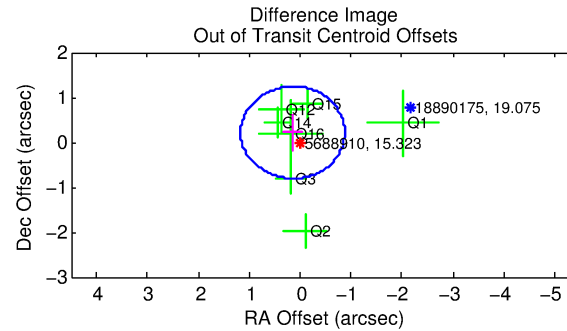
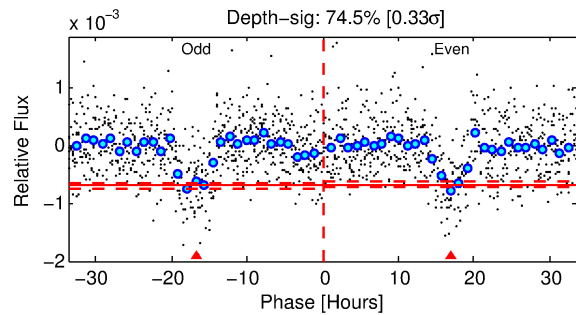
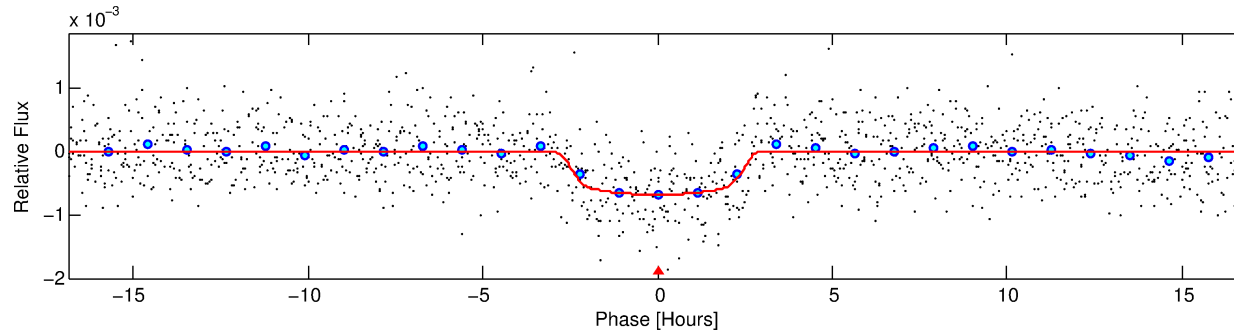
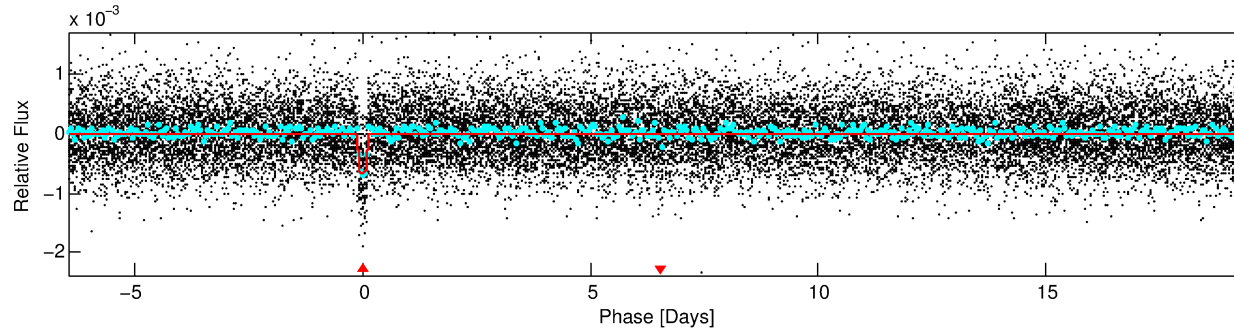
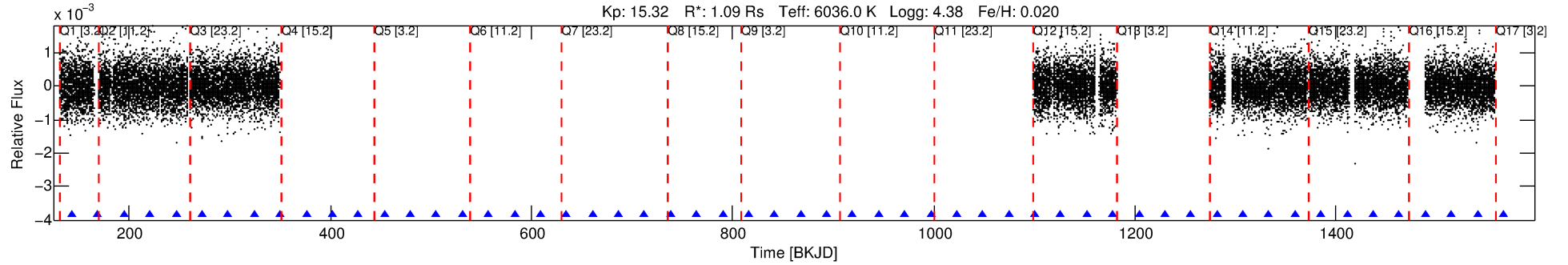
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005688910-01

No Significant Match Found

DV One-Page Summary

KIC: 5688910 Candidate: 1 of 1 Period: 25.873 d
KOI: K02856.01 Corr: 0.984



DV Fit Results:

Period = 25.87316 [0.00016] d
Epoch = 143.2828 [0.0062] BKJD
Rp/R* = 0.0278 [0.0028]
a/R* = 18.72 [8.55]
b = 0.88 [0.12]
Seff = 46.90 [19.21]
Teq = 667 [68] K
Rp = 3.32 [1.10] Re
a = 0.1741 [0.0461] AU
Ag = 198.57 [105.97] [1.86 σ]
Teffp = 3873 [383] K [8.25 σ]

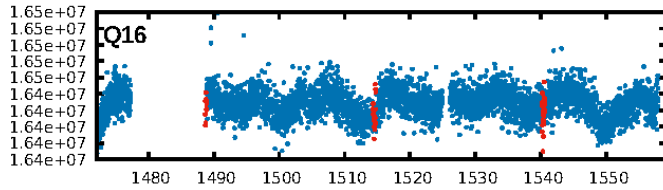
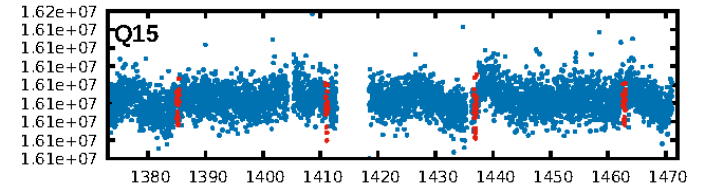
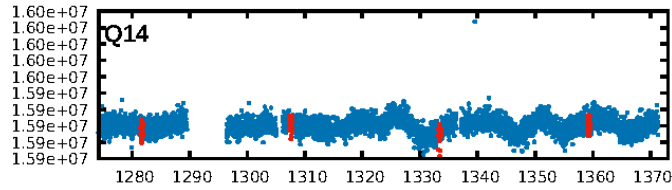
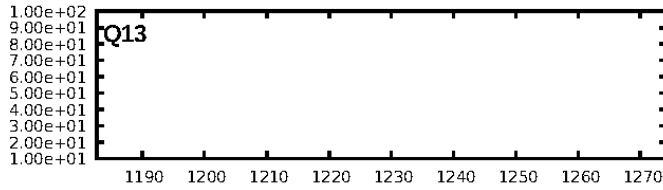
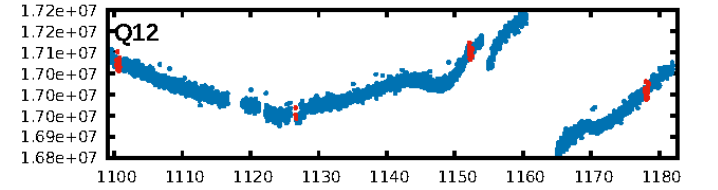
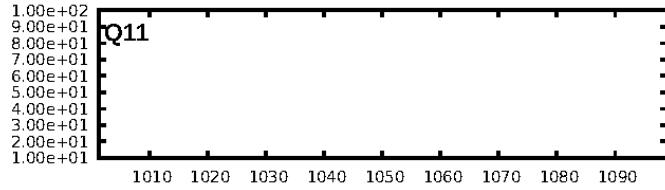
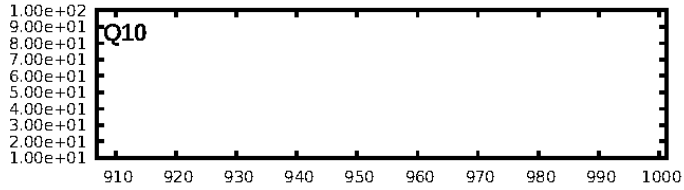
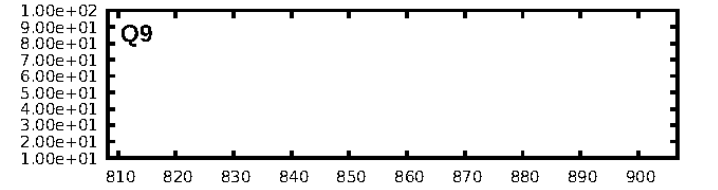
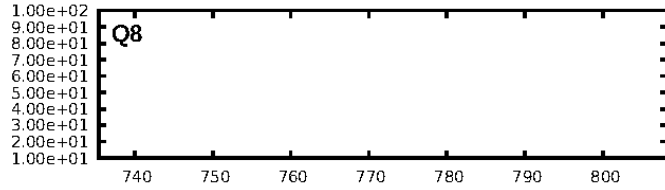
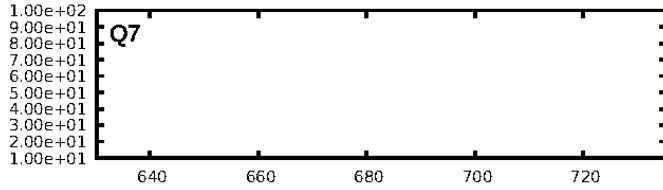
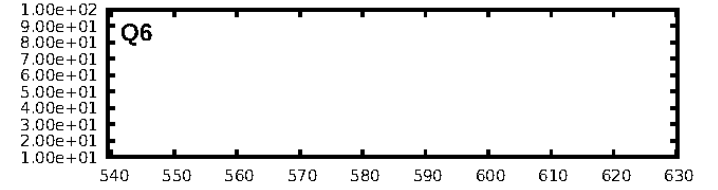
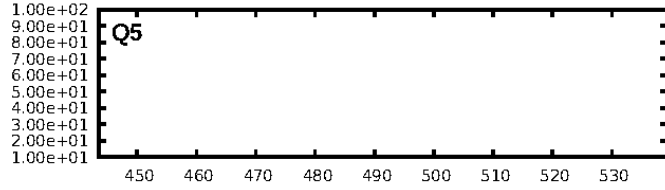
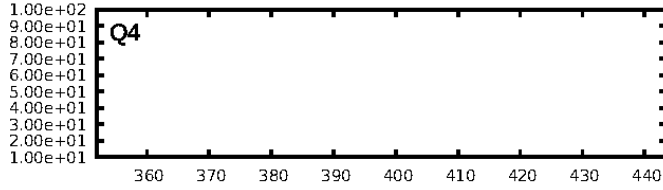
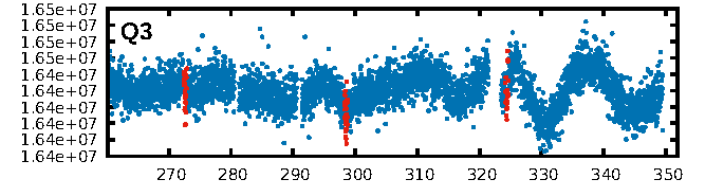
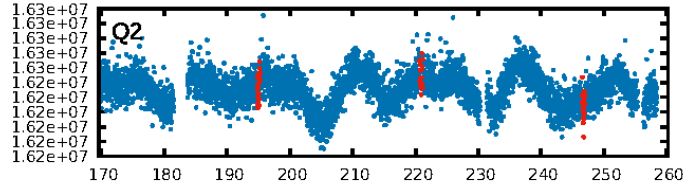
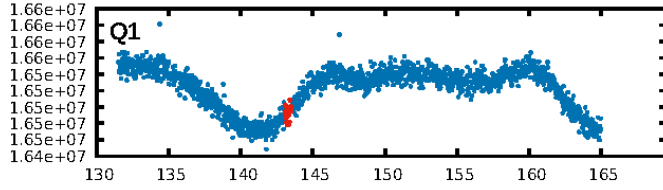
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 78.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.26e-60
RollingBand-fgt: 1.00 [20/20]
GhostDiagnostic-chr: 4.255
Centroid-sig: 73.9%
Centroid-so: 0.270 arcsec [0.33 σ]
OotOffset-rm: 0.261 arcsec [0.76 σ]
KicOffset-rm: 0.665 arcsec [1.98 σ]
OotOffset-st: 2/2/2/1 [7]
KicOffset-st: 2/2/2/1 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [7/7]

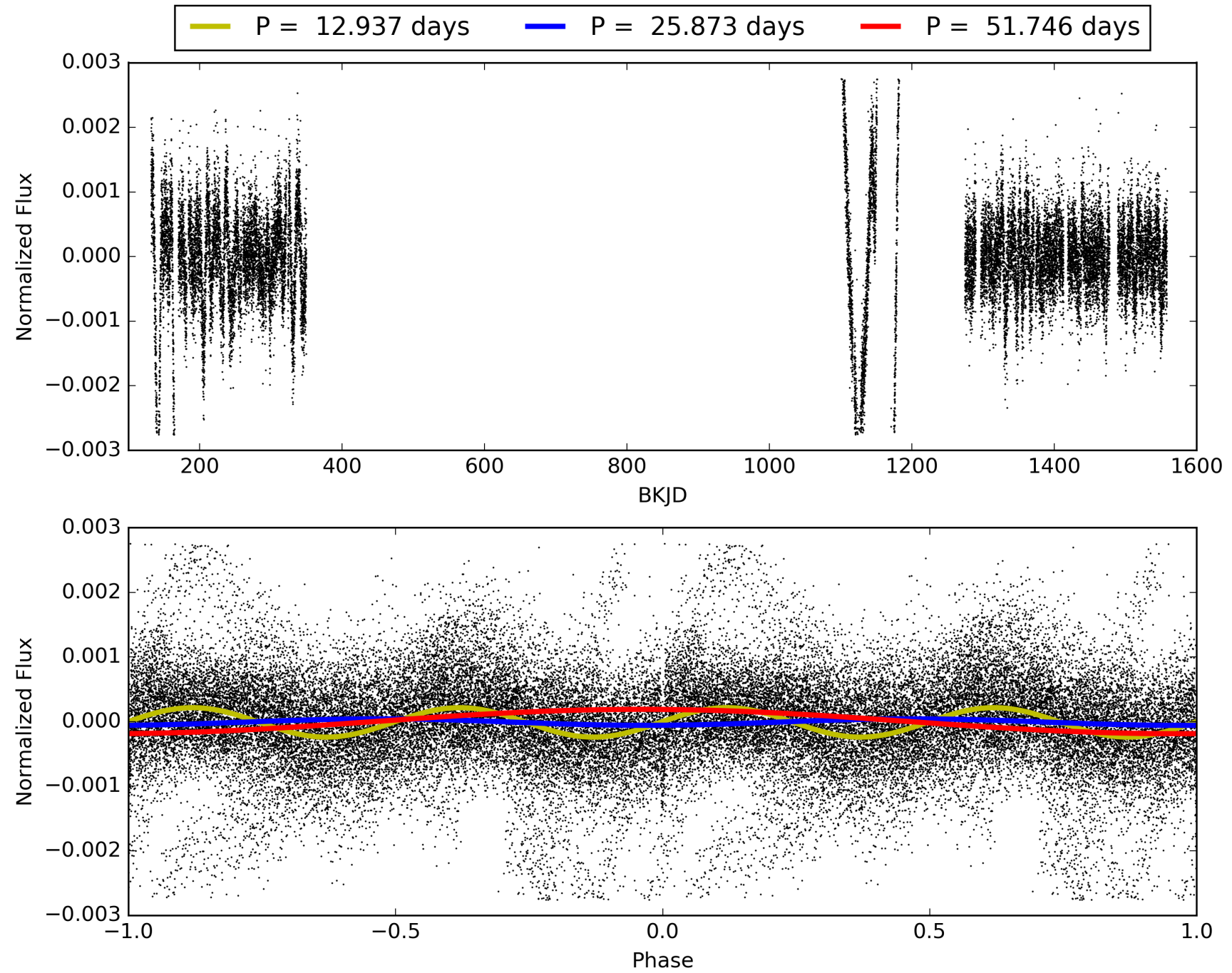
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:37:48 Z

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

TCE 005688910-01, PDC Light Curves

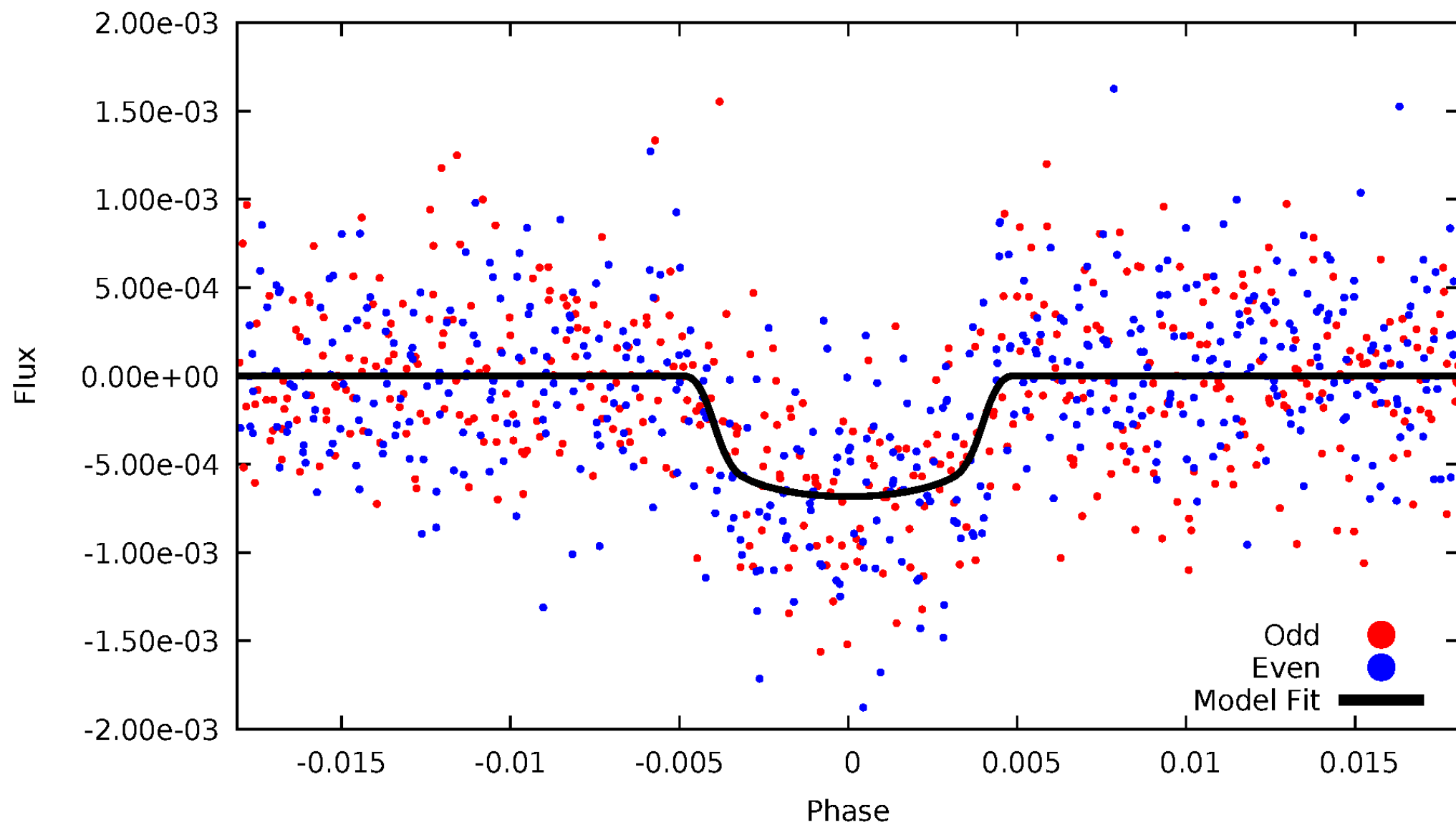


TCE 005688910-01



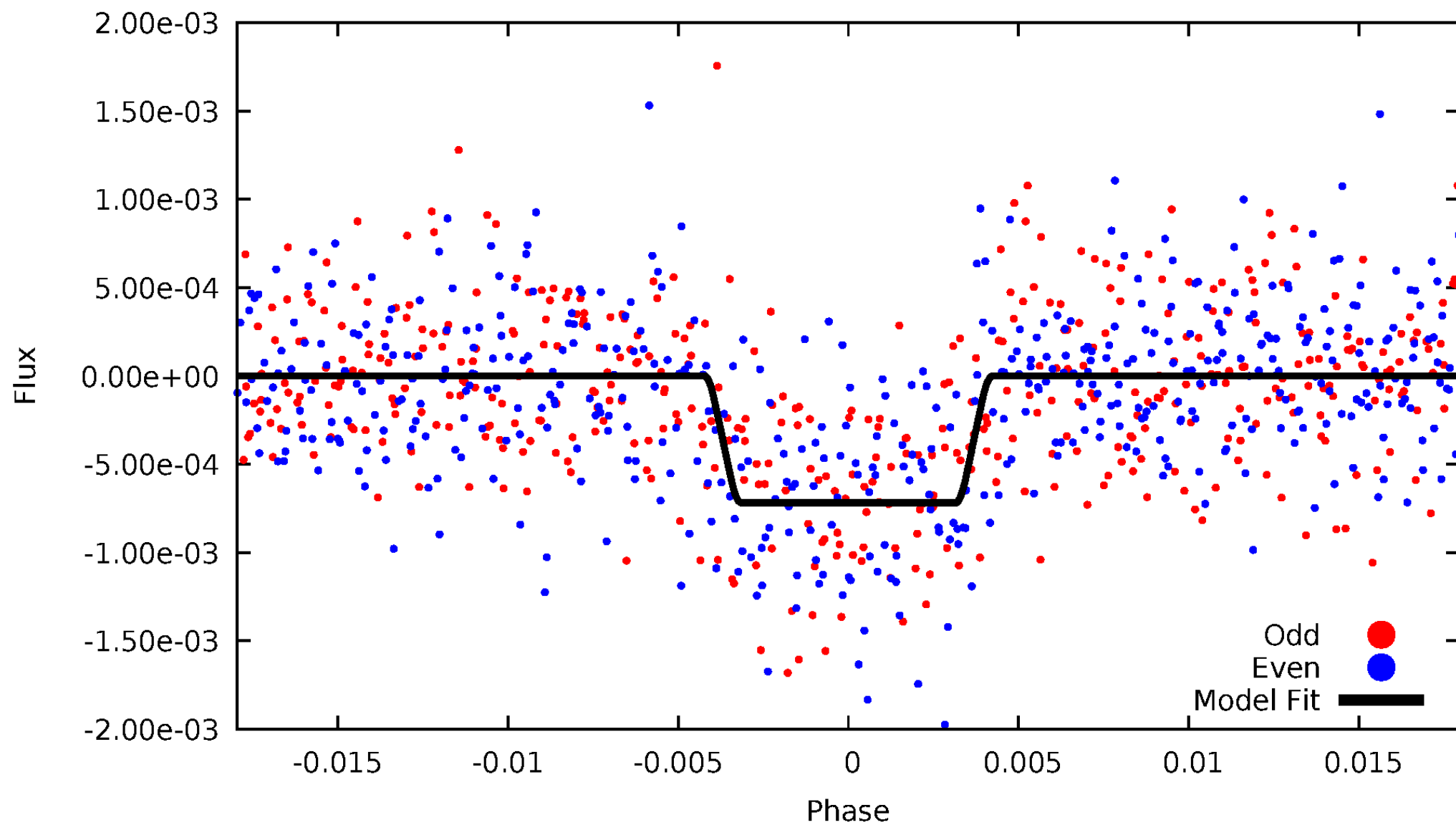
DV Odd/Even

TCE 005688910-01

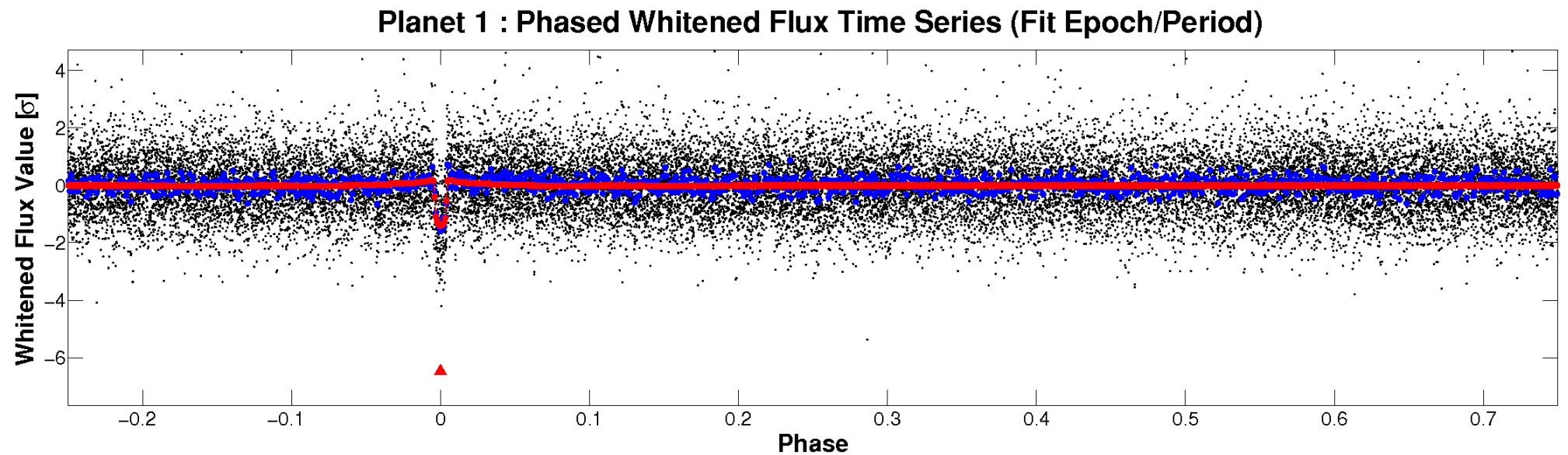
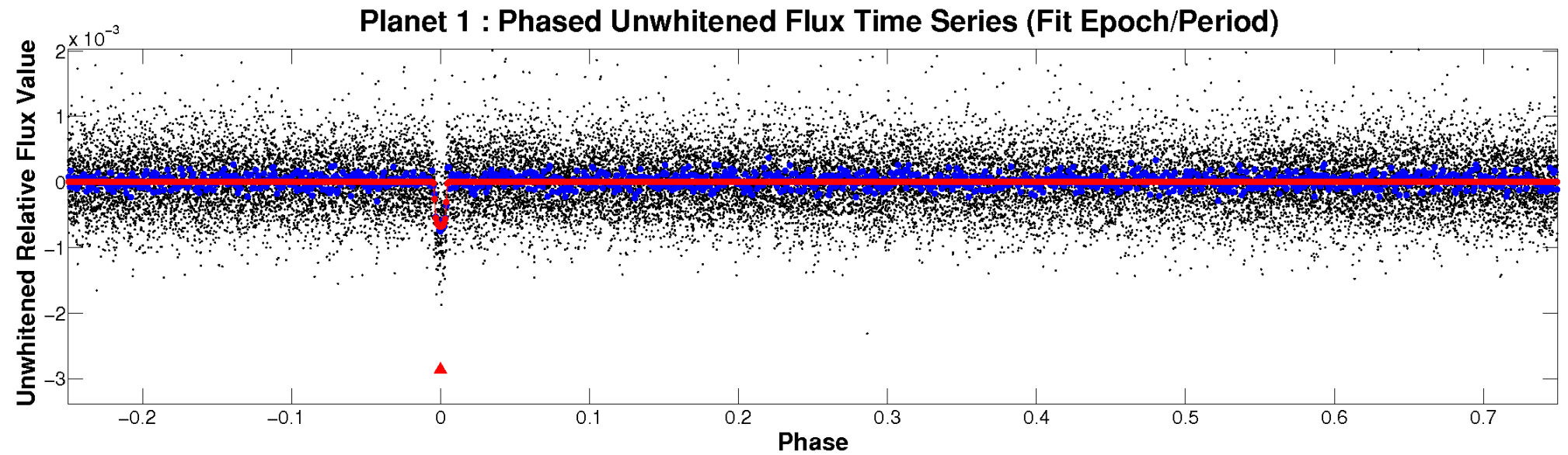


ALT Odd/Even

TCE 005688910-01

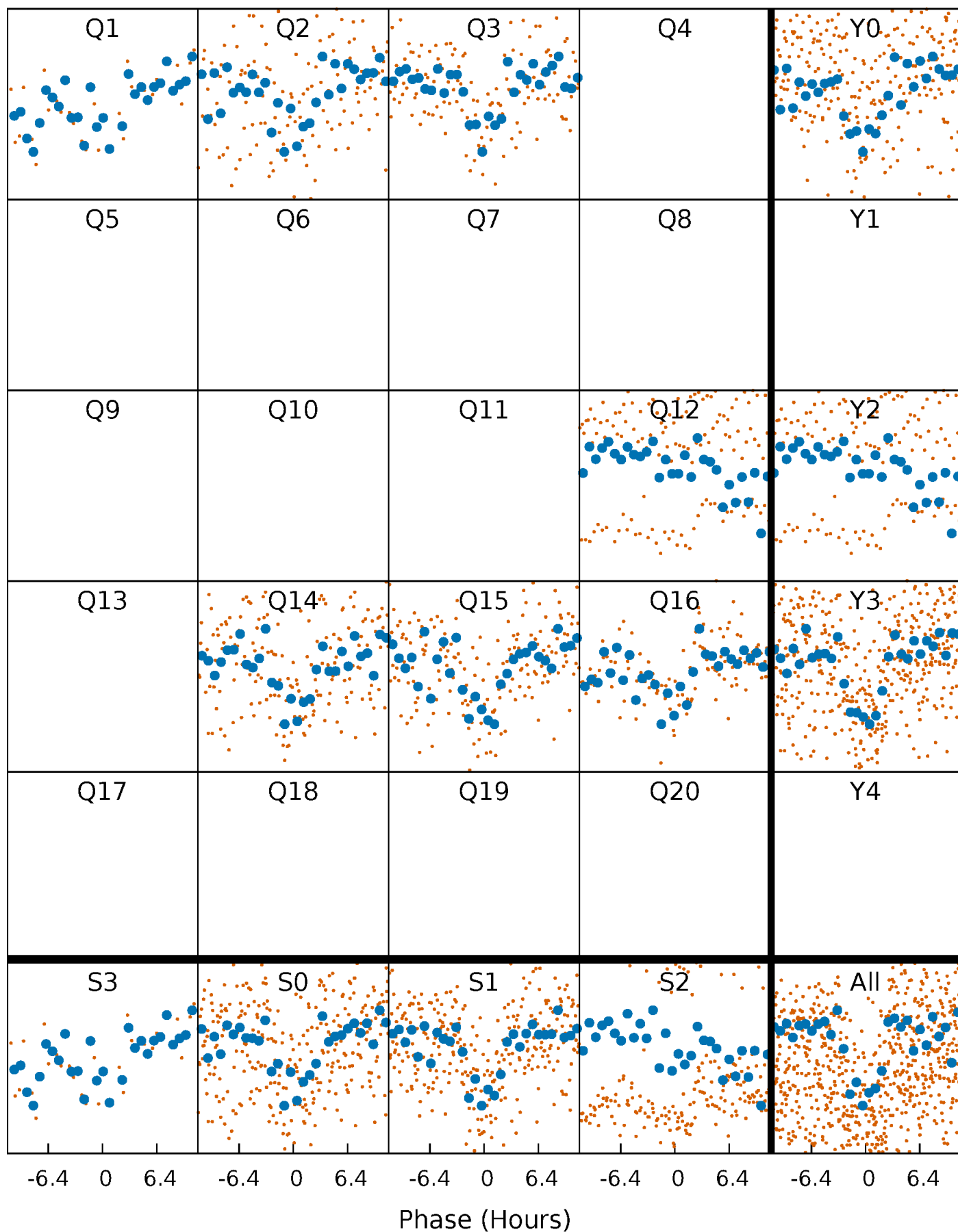


Non-Whitened Vs. Whitened Light Curve



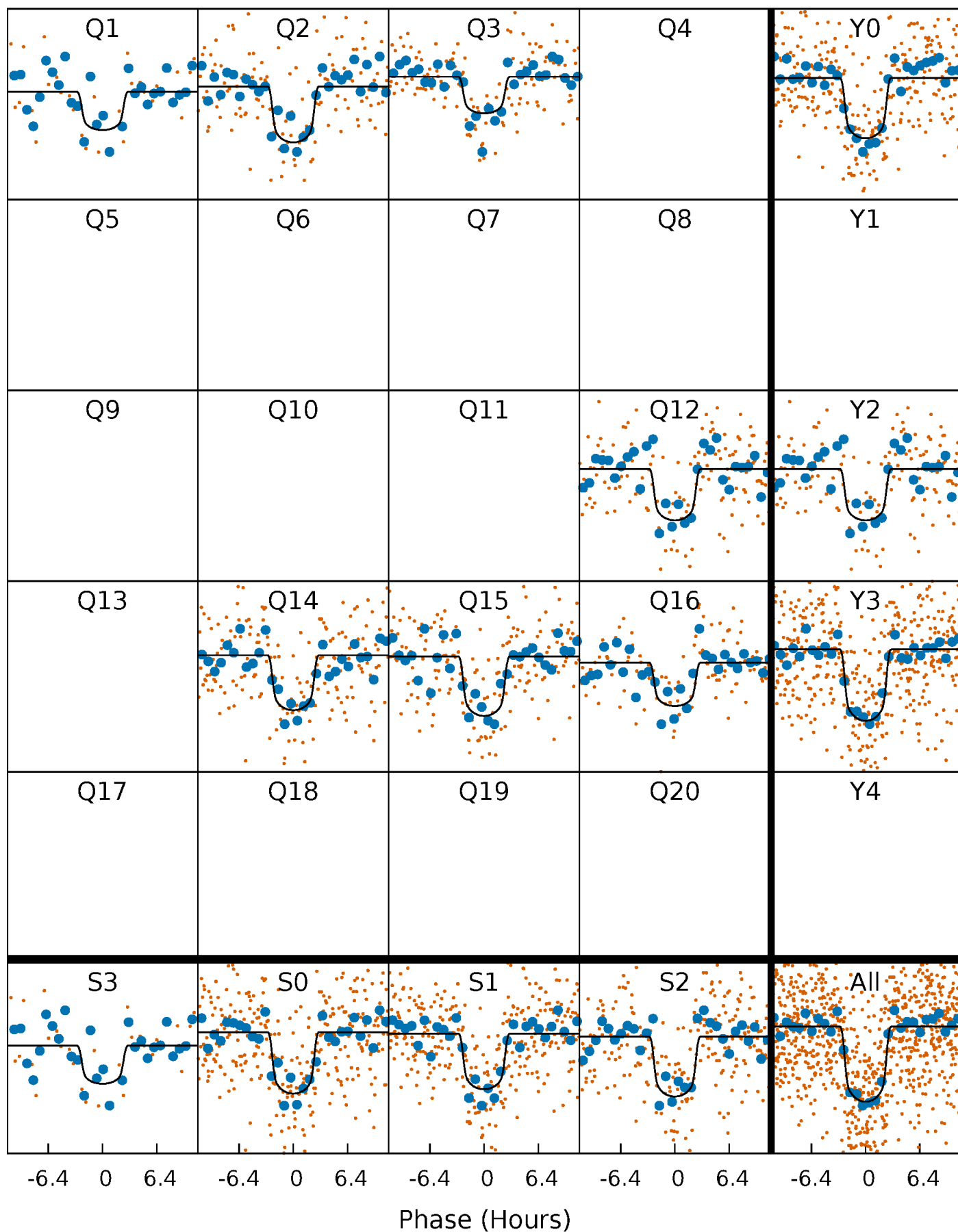
PDC Quarter-Phased Transit Curves

TCE 005688910-01 P= 25.873159 Days $T_0=143.282772$ (BKJD)



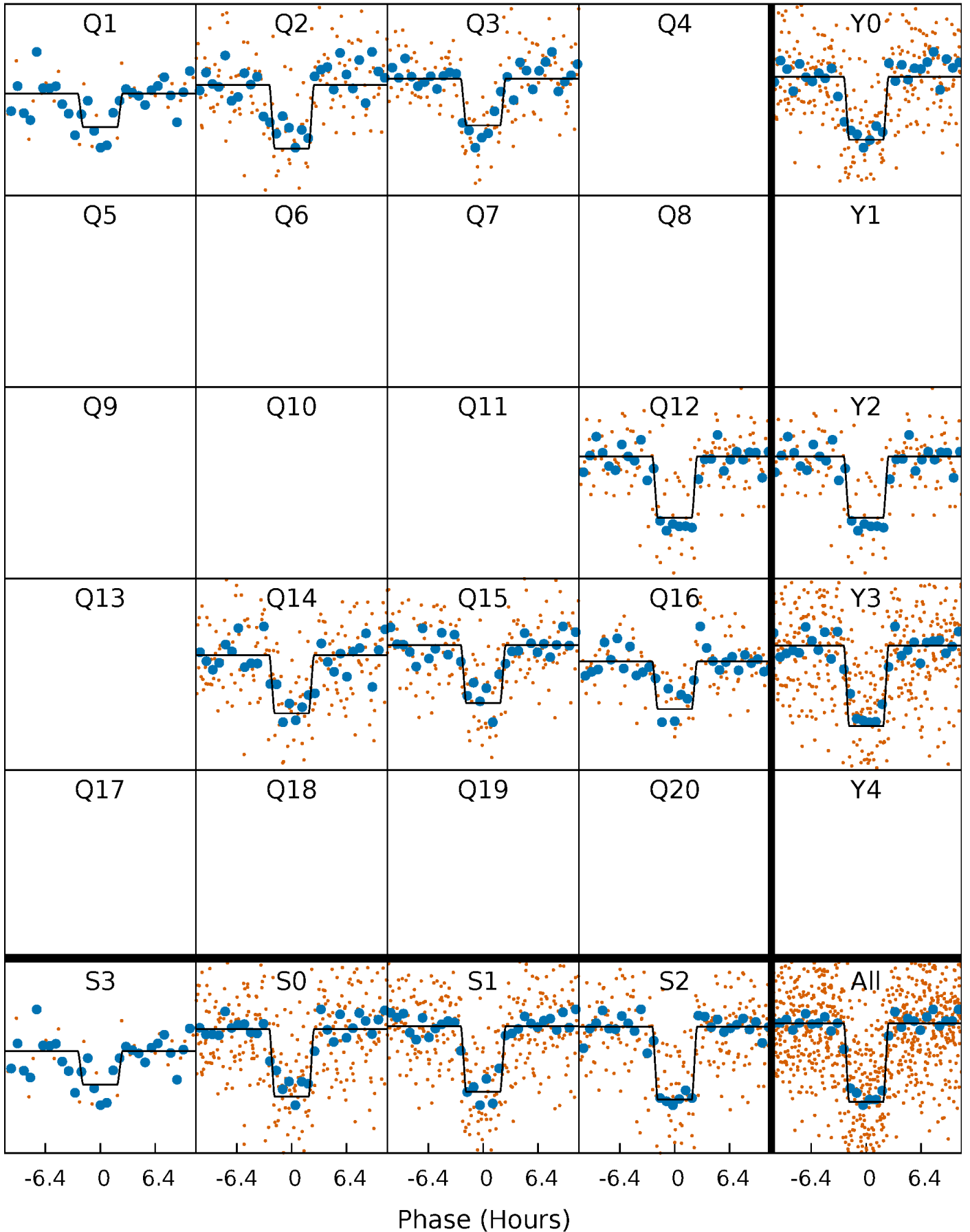
DV Quarter-Phased Transit Curves

TCE 005688910-01 P= 25.873159 Days $T_0=143.282772$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

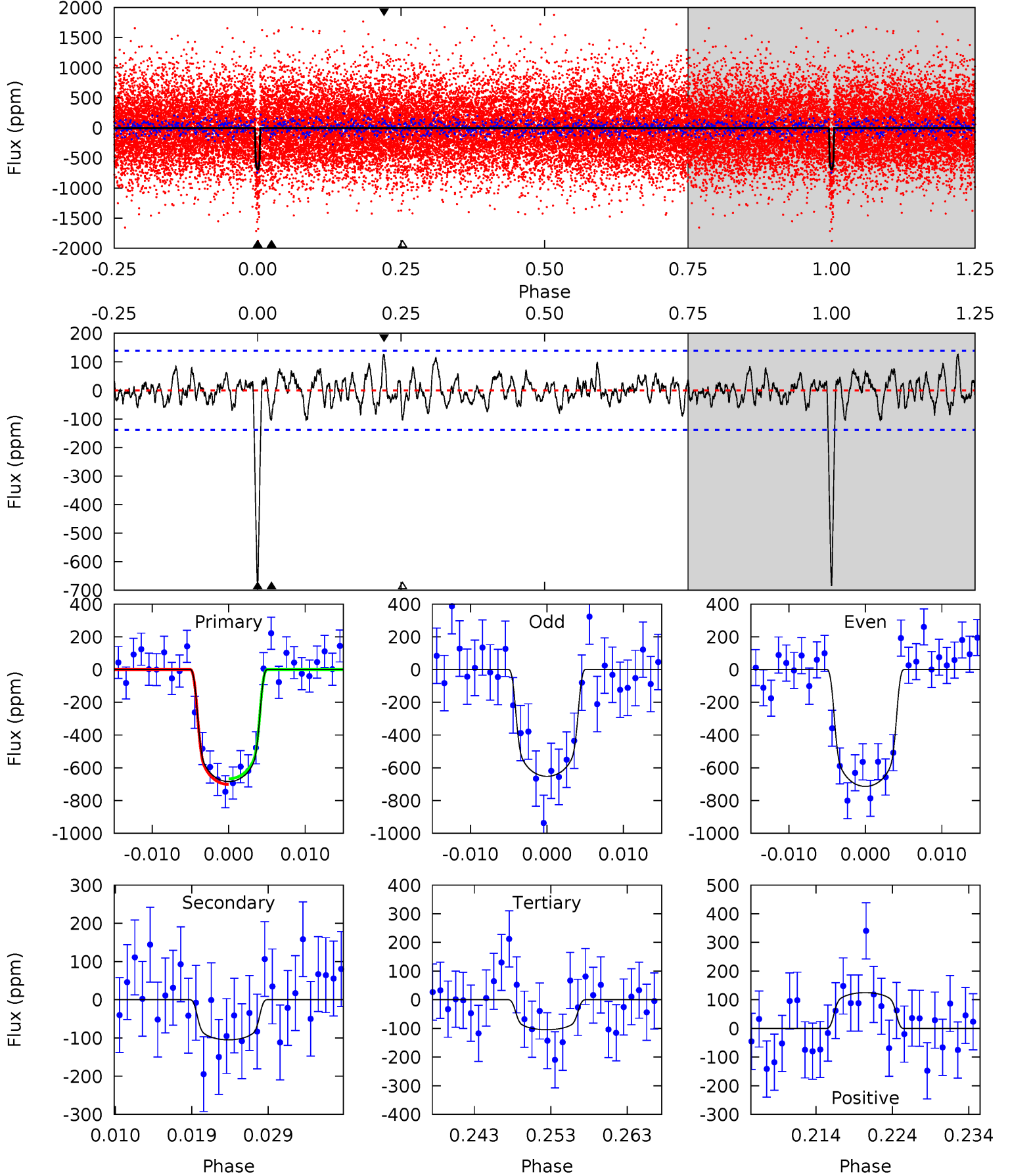
TCE 005688910-01 P= 25.872682 Days $T_0=143.301664$ (BKJD)



DV Model-Shift Uniqueness Test

005688910-01, P = 25.873159 Days, E = 117.409613 Days

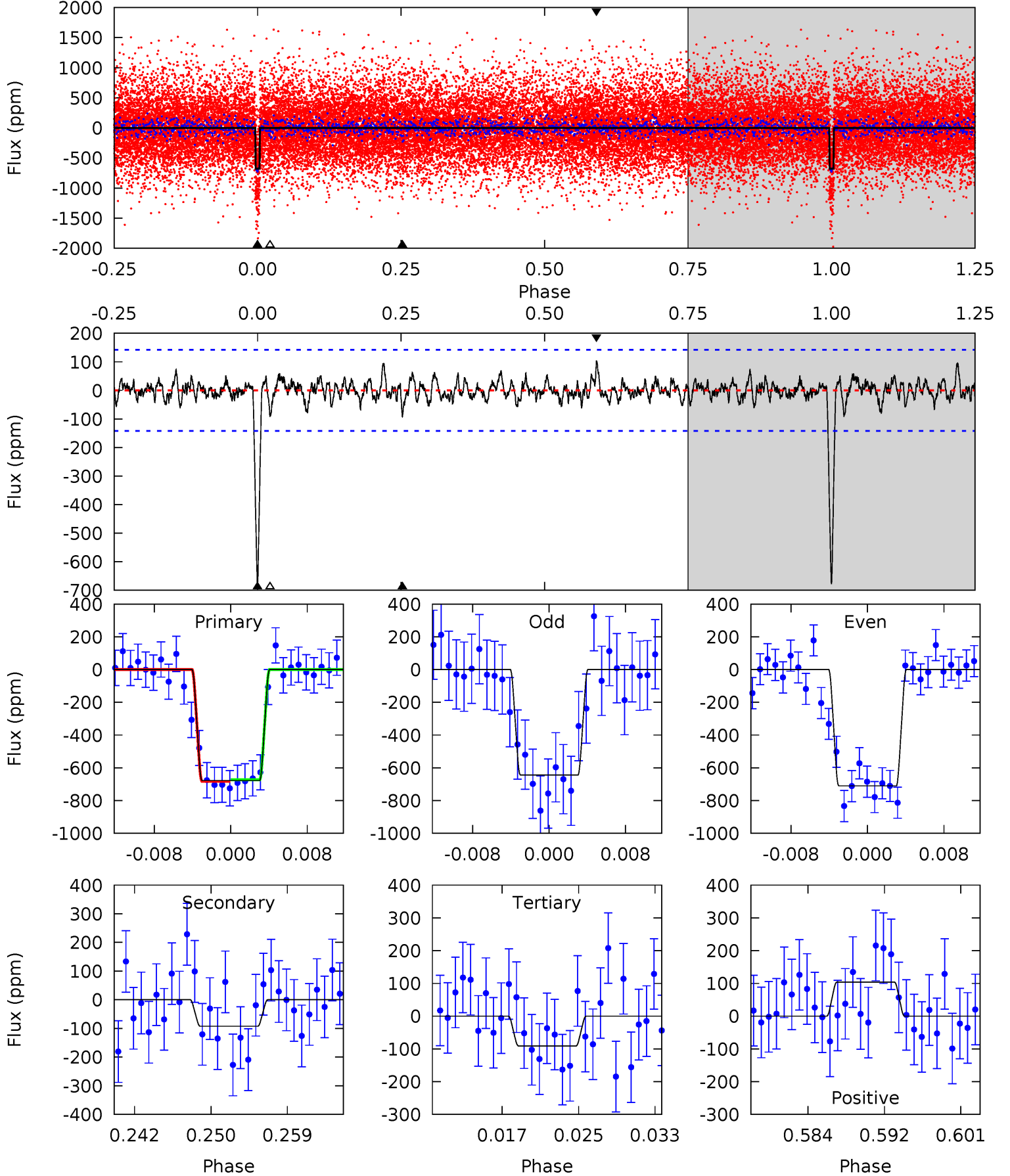
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	3.81	3.80	4.54	5.03	2.59	1.36	21.1	20.3	0.01	-0.73	1.12	0.98	0.15	0.63



Alt Model-Shift Uniqueness Test

005688910-01, $P = 25.872682$ Days, $E = 117.428982$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	3.28	3.24	3.69	5.06	2.64	0.96	20.9	20.4	0.05	-0.41	1.18	1.03	0.13	0.18



Stellar Parameters For KIC 005688910

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6036^{+190}_{-211}	$4.382^{+0.090}_{-0.210}$	$0.020^{+0.250}_{-0.300}$	$1.093^{+0.345}_{-0.148}$	$1.048^{+0.160}_{-0.120}$	$1.131^{+0.537}_{-0.583}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+32%/-14%	+15%/-11%	+47%/-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 005688910-01 / KOI 2856.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-105 ± 28	$3.38^{+0.69}_{-0.45}$	944^{+78}_{-50}	3965^{+258}_{-250}	145^{+66}_{-51}
Alt.	-92 ± 28	$3.31^{+0.61}_{-0.47}$	949^{+66}_{-52}	3944^{+273}_{-293}	138^{+65}_{-55}

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

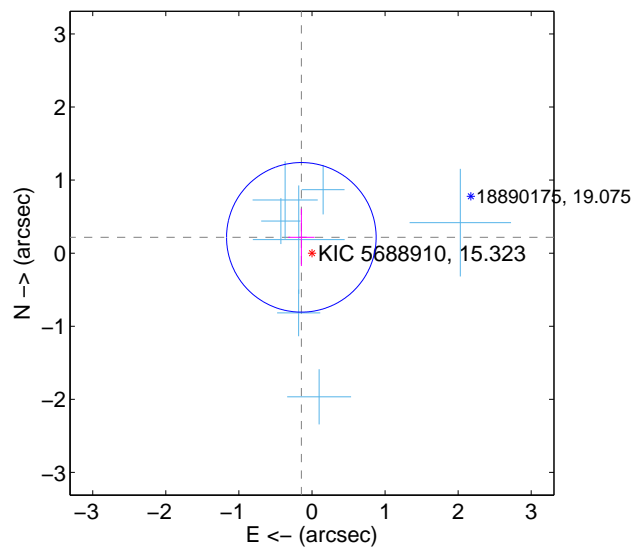
Supplemental centroid analysis for 005688910-01. Kepler magnitude: 15.32. Transit SNR 17.58

There are 7 quarters with good PRF difference image offsets

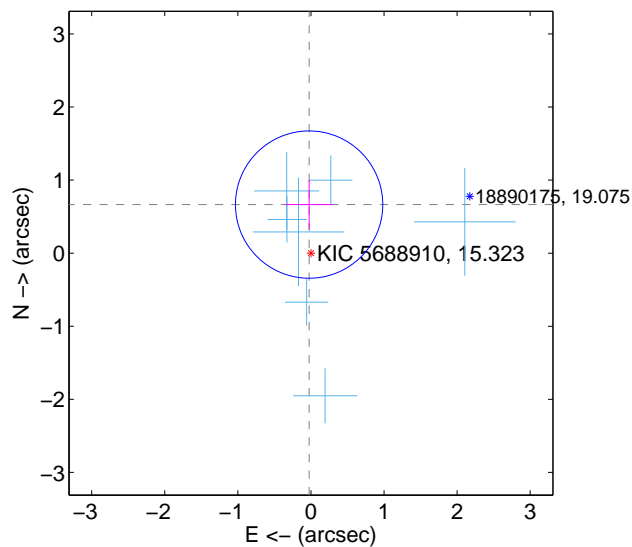
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.261 ± 0.341	0.76	0.145 ± 0.181	0.217 ± 0.393
PRF-fit source offset from KIC position	0.665 ± 0.336	1.98	0.025 ± 0.325	0.665 ± 0.338
photometric centroid source offset	0.27 ± 0.83	0.33	0.19 ± 0.85	-0.19 ± 0.81

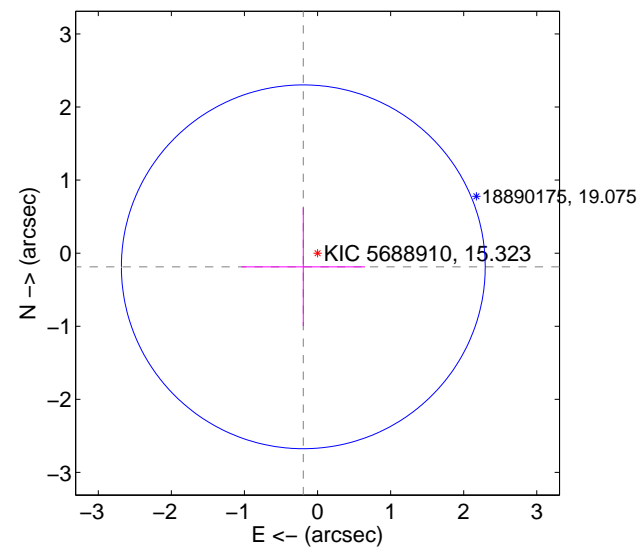
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

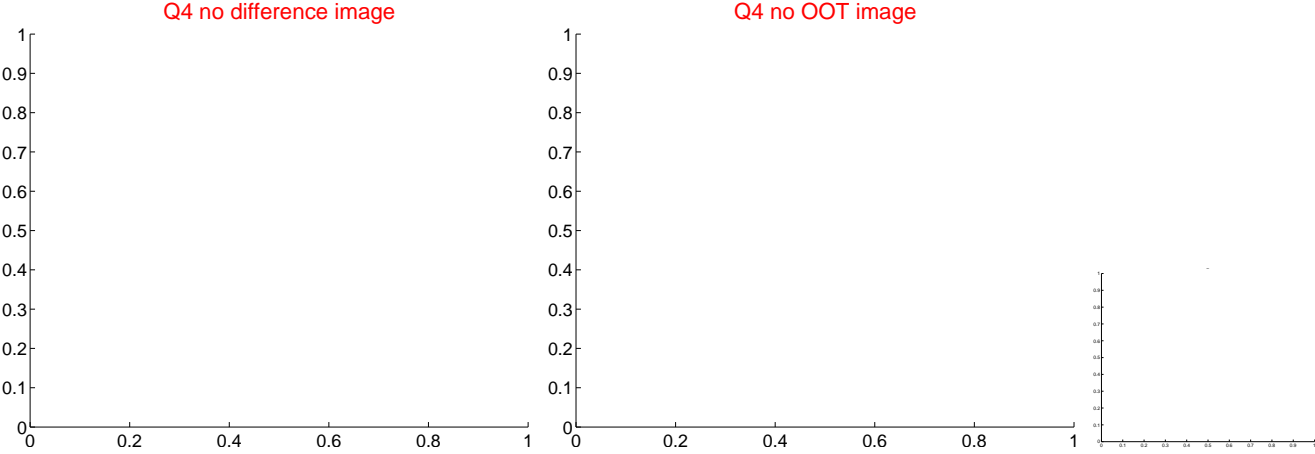
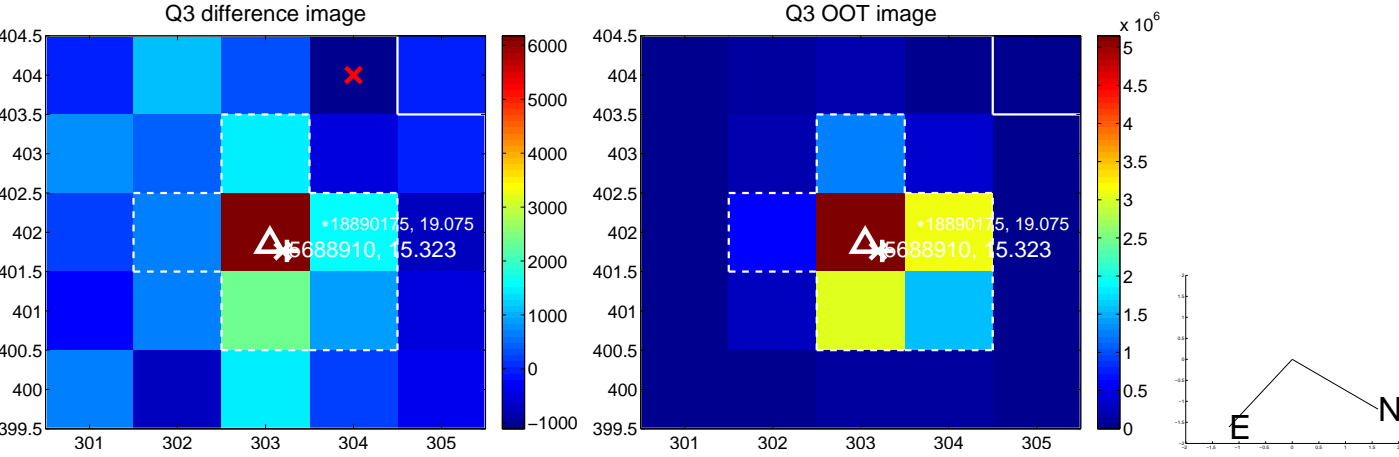
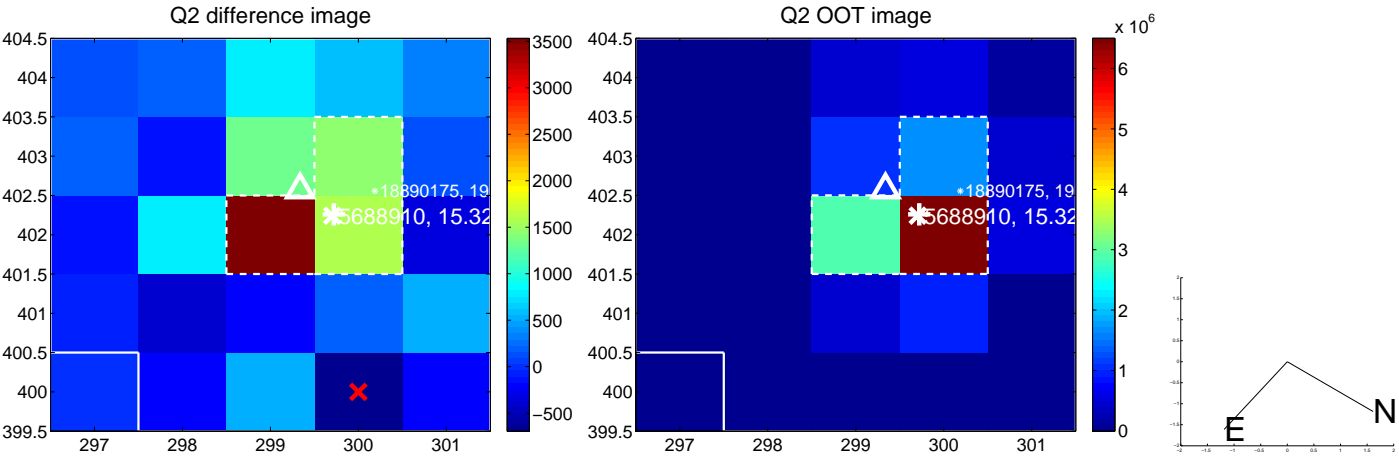
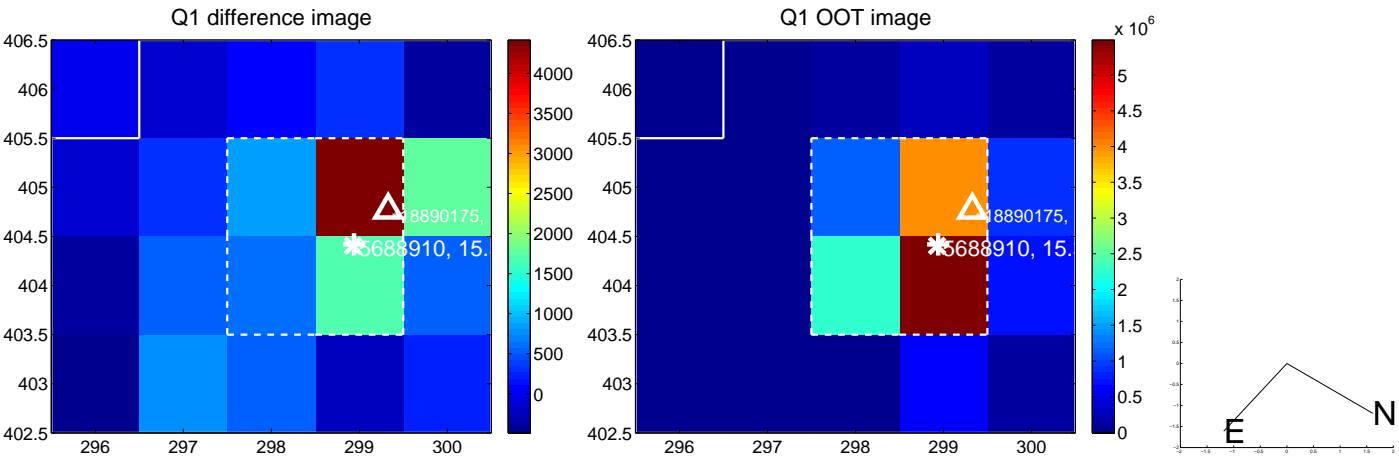


offset from photometric centroids



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.

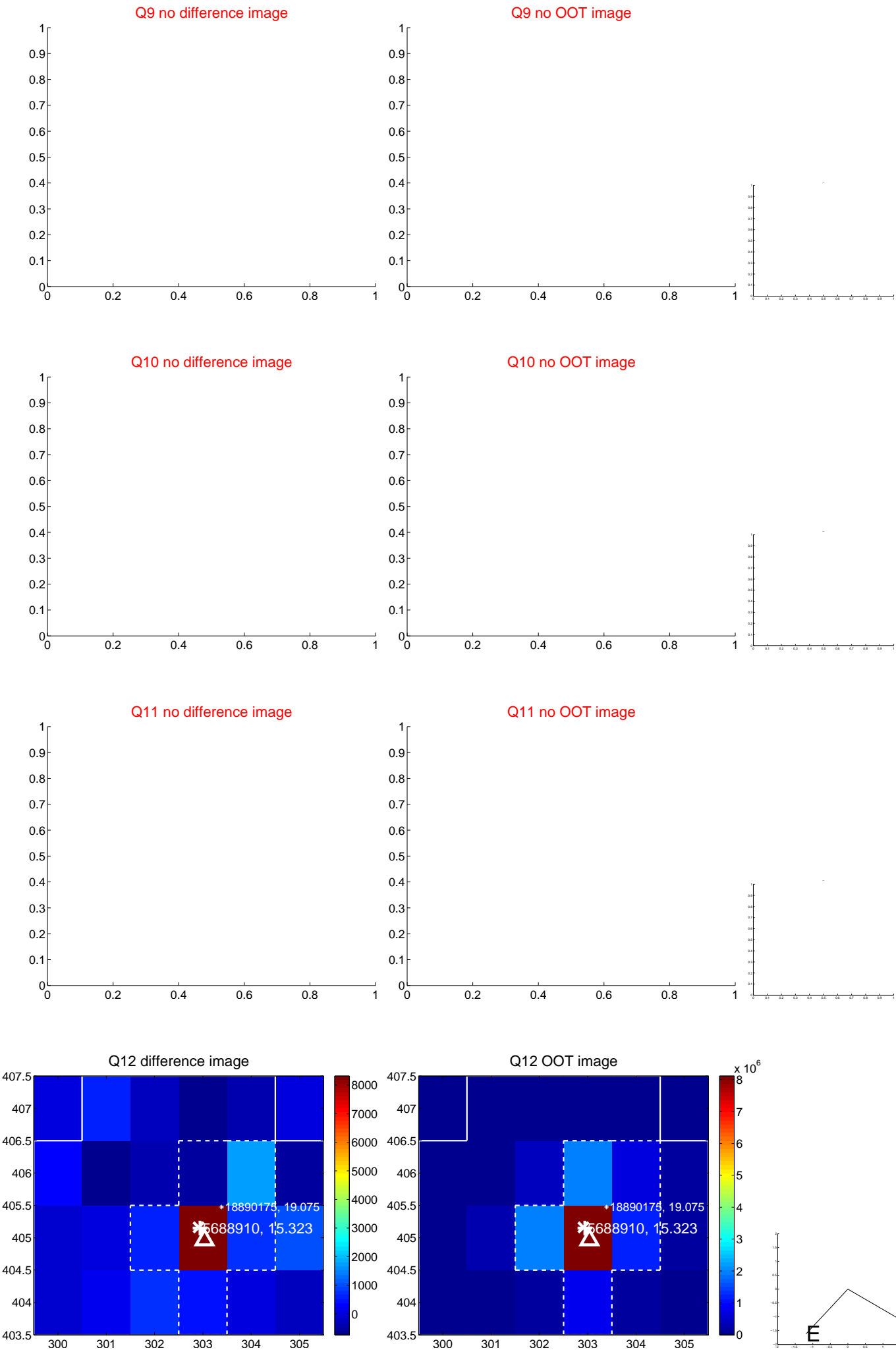
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



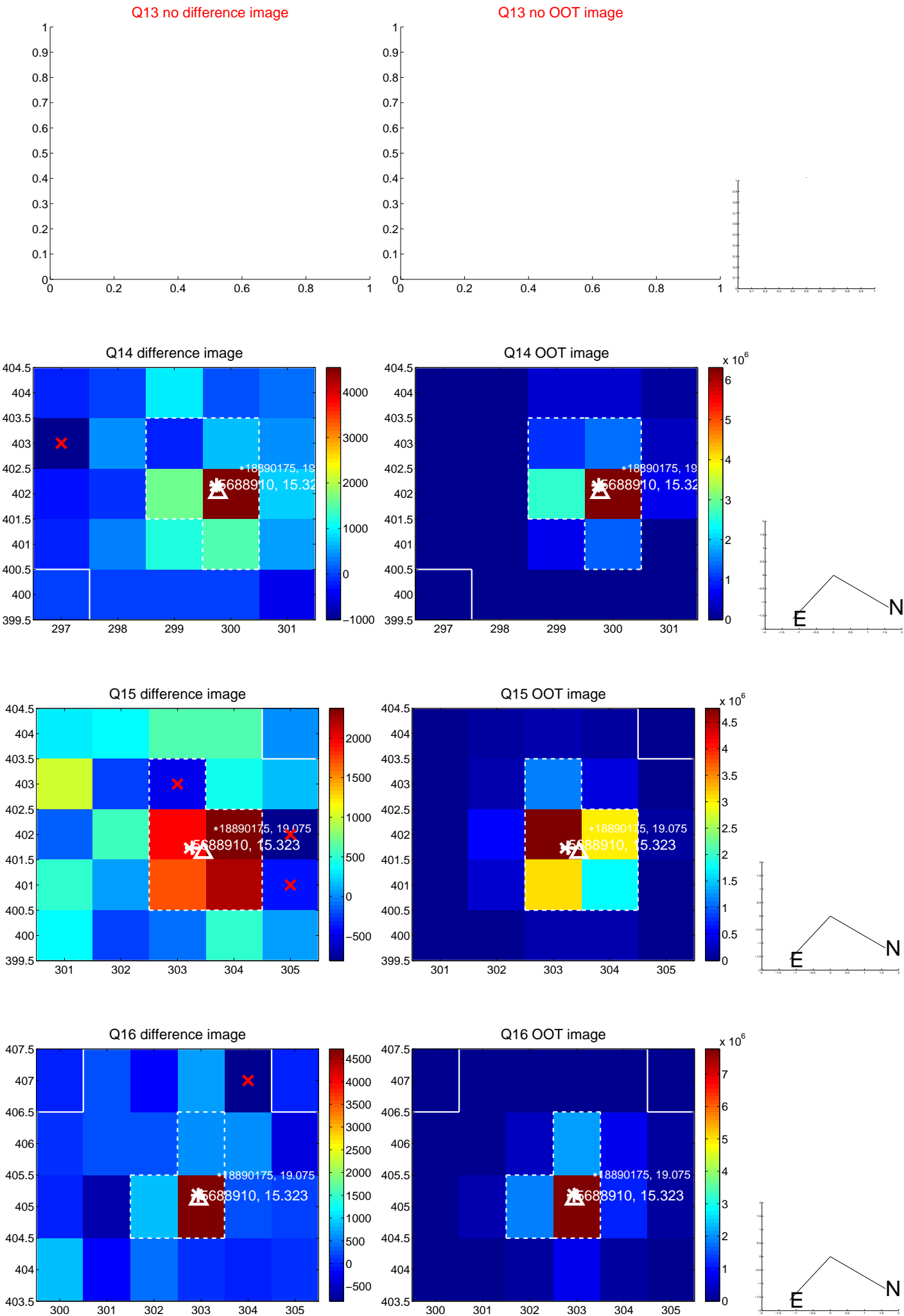
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



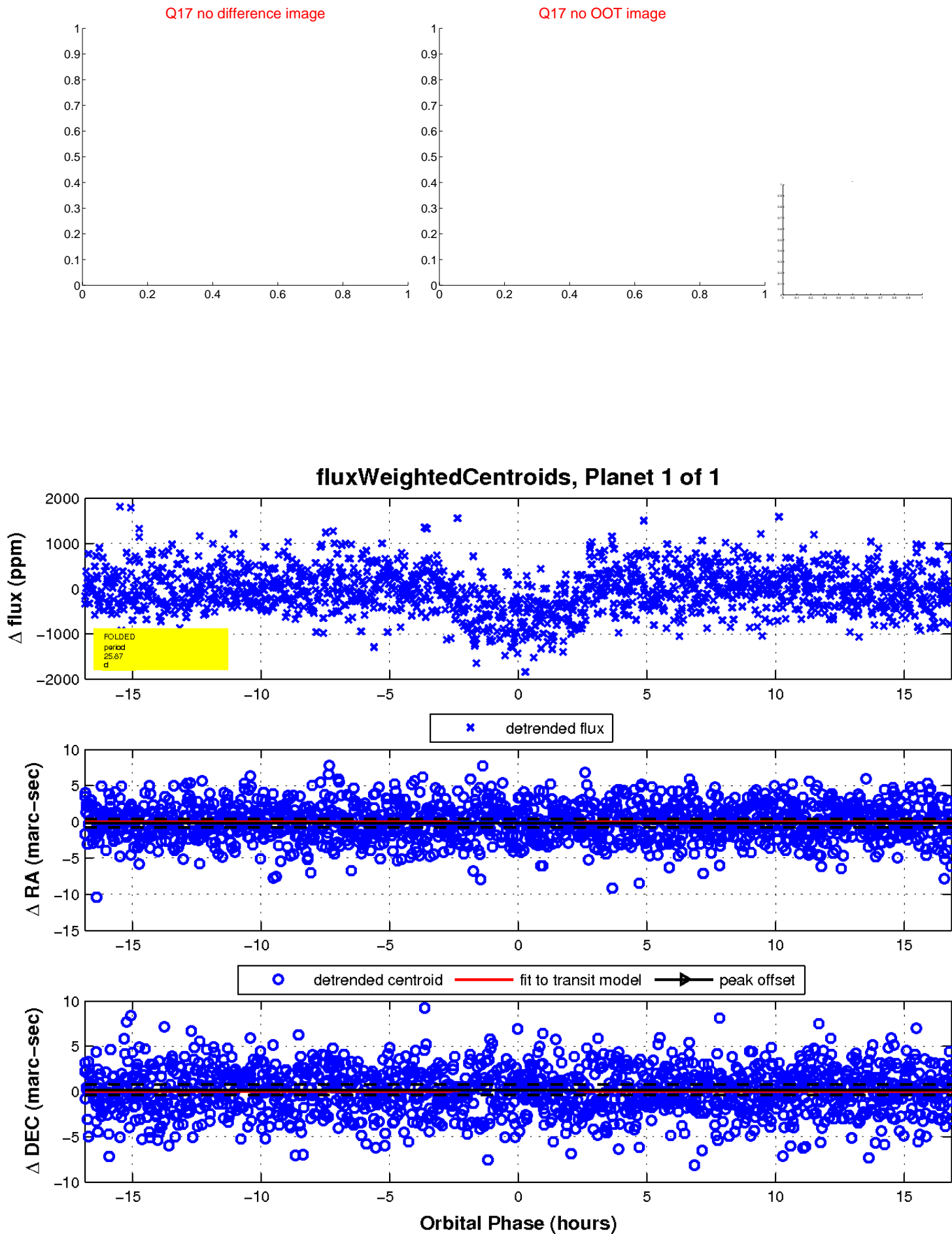
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

