

KIC 012062667

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
012062667-01	OBS	1487.01	2.929265	133.727842	204.3	6.181	38.6	42.5	2.25	6634	6.04	4712.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012062667-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 012062667-01

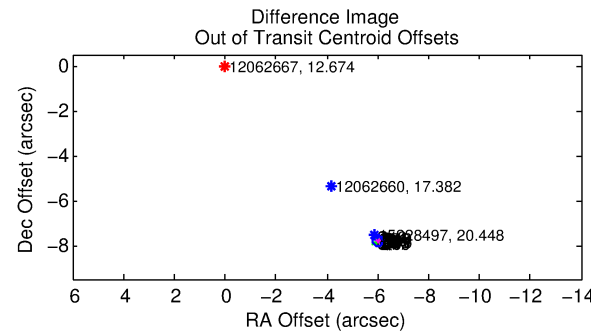
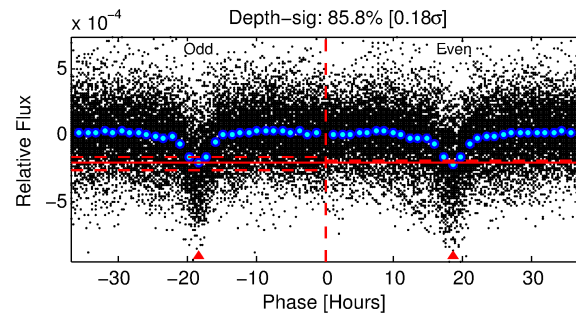
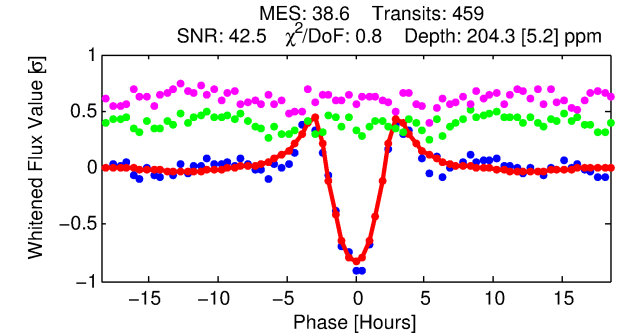
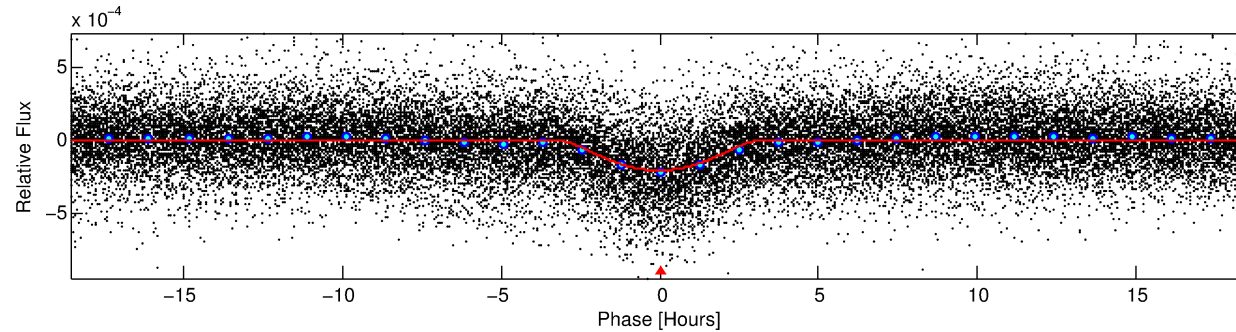
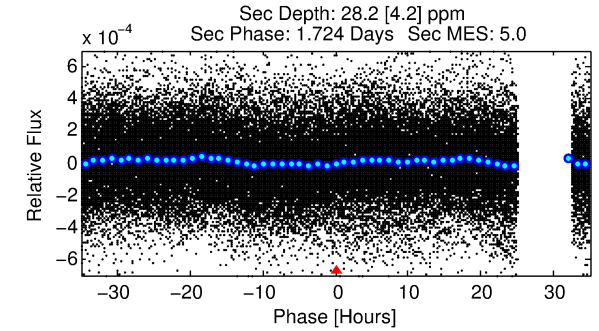
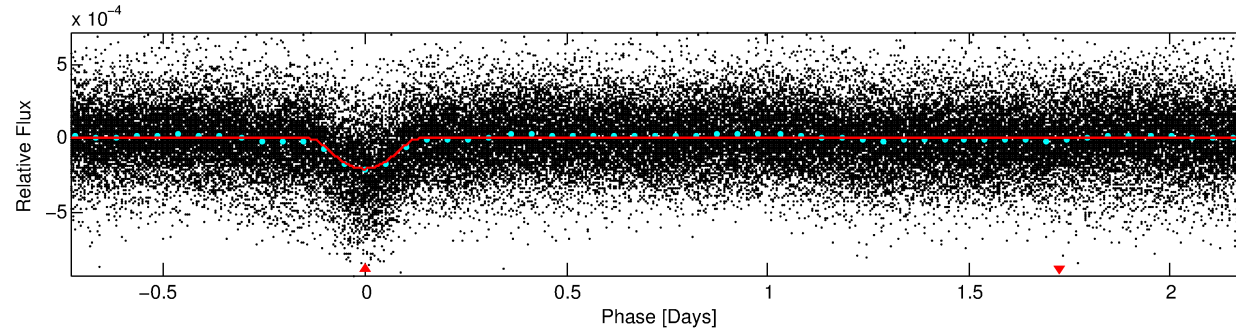
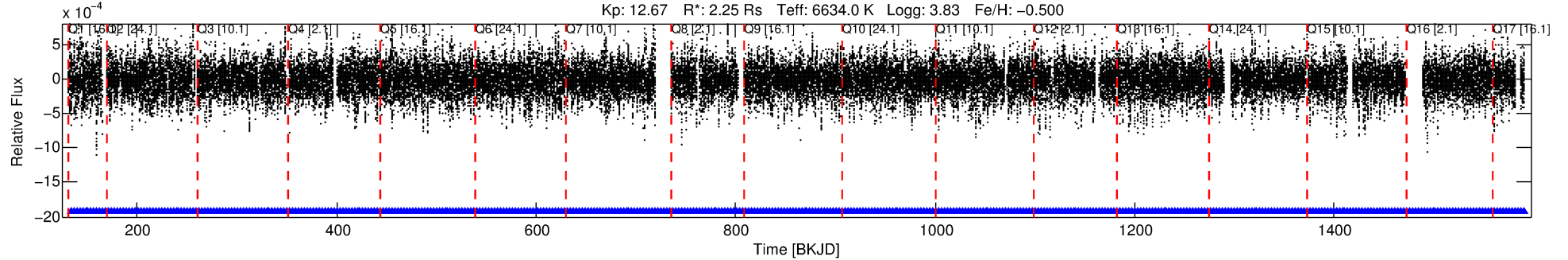
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
012062667-01	12062667	3746.01	12062660	1:1	6.8	1	-2	17.38	12.67	580.05	Direct-PRF	0	0.85	0.64

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 12062667 Candidate: 1 of 1 Period: 2.929 d
KOI: K01487.01 Corr: 0.956

Kp: 12.67 R*: 2.25 Rs Teff: 6634.0 K Logg: 3.83 Fe/H: -0.500



DV Fit Results:

Period = 2.92926 [0.00001] d
Epoch = 133.7278 [0.0020] BKJD
Rp/R* = 0.0246 [0.0085]
a/R* = 1.31 [0.04]
b = 1.00 [0.01]
Seff = 4712.32 [2467.20]
Teq = 2113 [277] K
Rp = 6.04 [2.90] Re
a = 0.0432 [0.0139] AU
Ag = 0.79 [0.69] [-0.30σ]
Teff = 3084 [549] K [1.58σ]

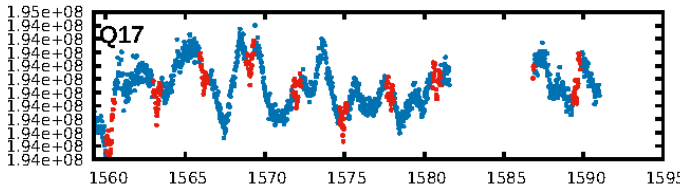
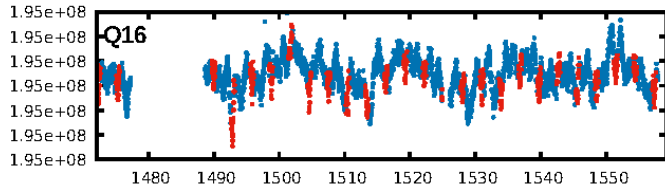
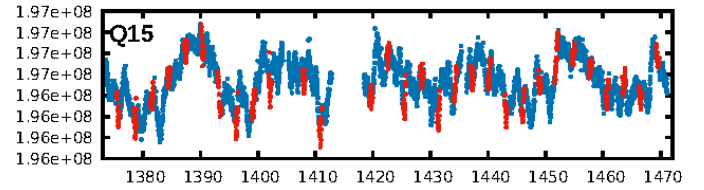
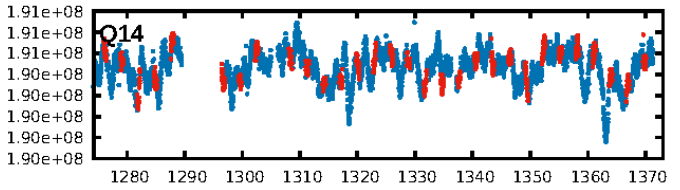
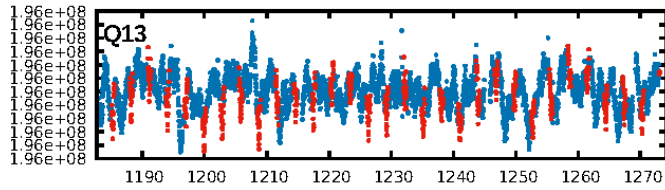
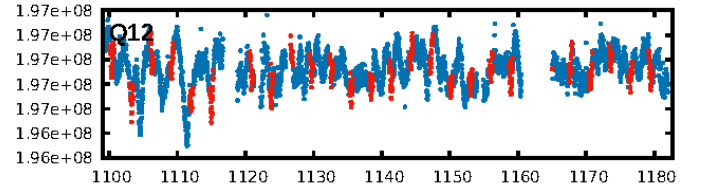
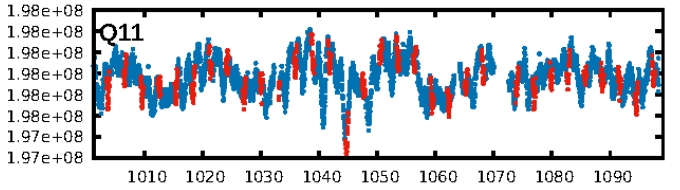
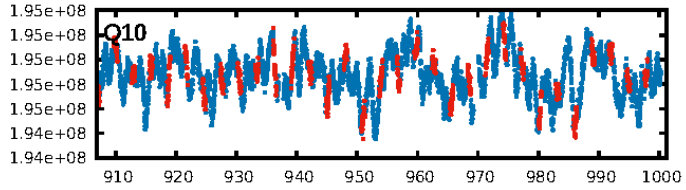
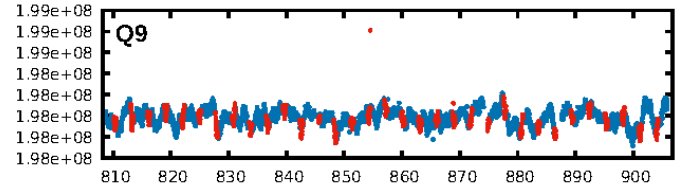
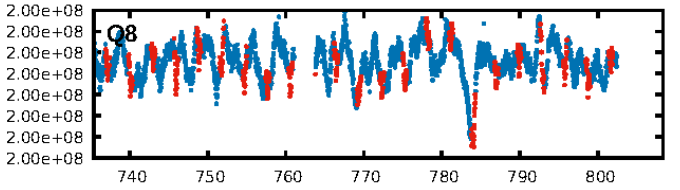
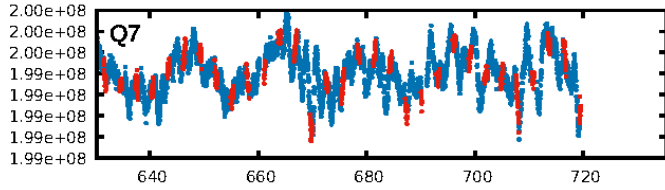
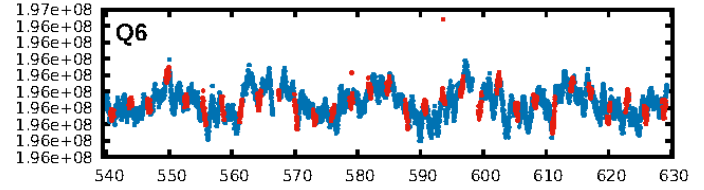
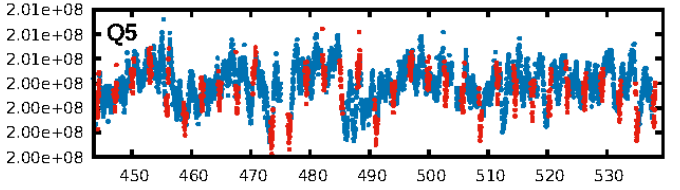
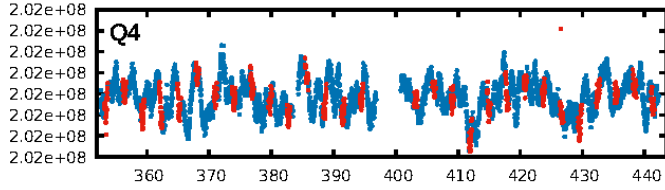
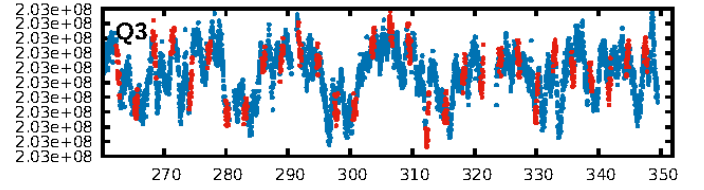
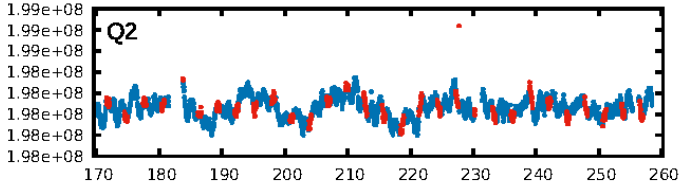
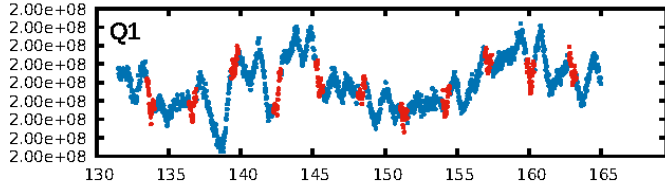
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 4.31e-291
RollingBand-fgt: 1.00 [439/439]
GhostDiagnostic-chr: -0.1082
Centroid-sig: 0.0%
Centroid-so: 44.483 arcsec [216.87σ]
OotOffset-rm: 9.844 arcsec [138.26σ]
KicOffset-rm: 9.820 arcsec [129.93σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

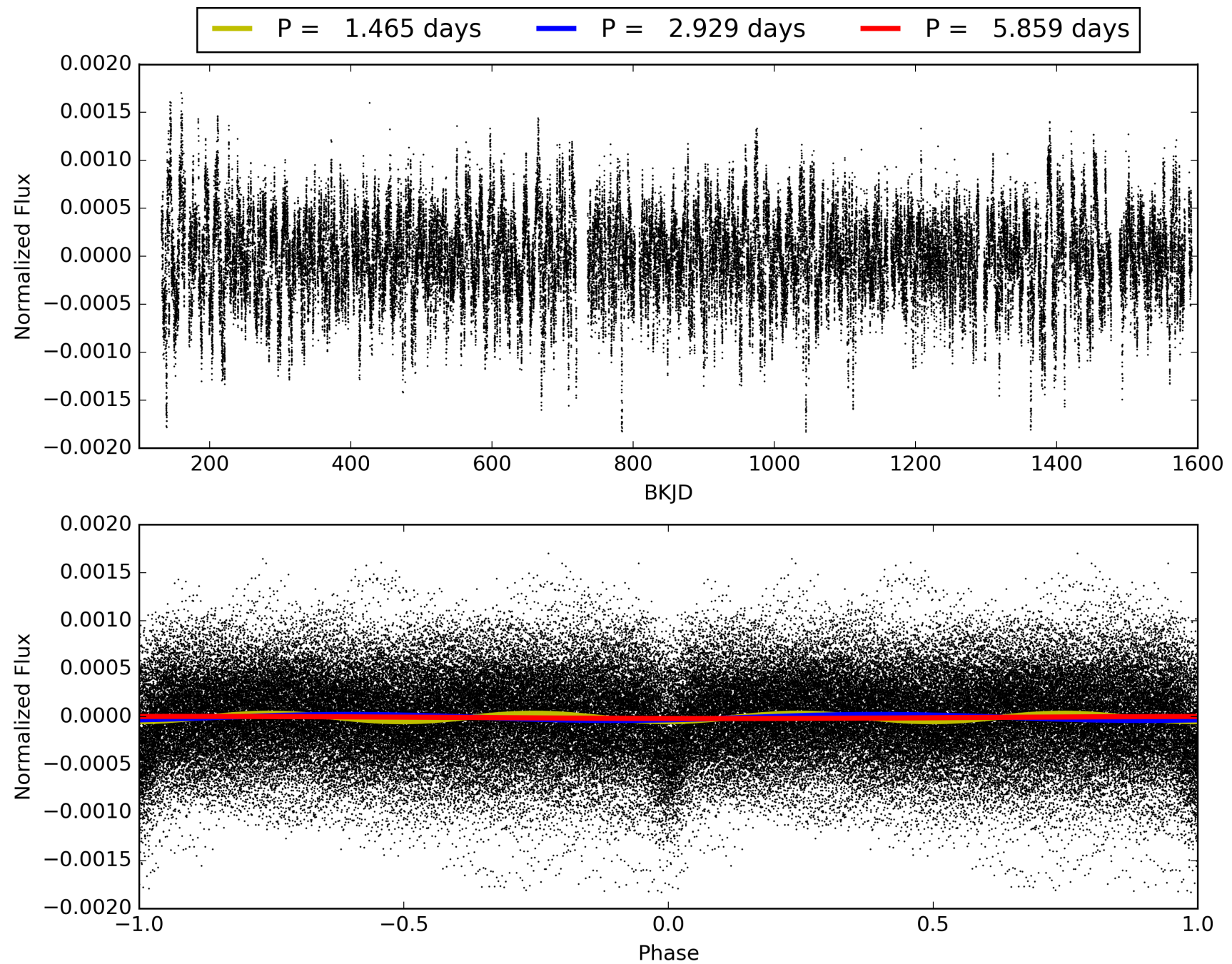
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:48:31 Z

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

TCE 012062667-01, PDC Light Curves

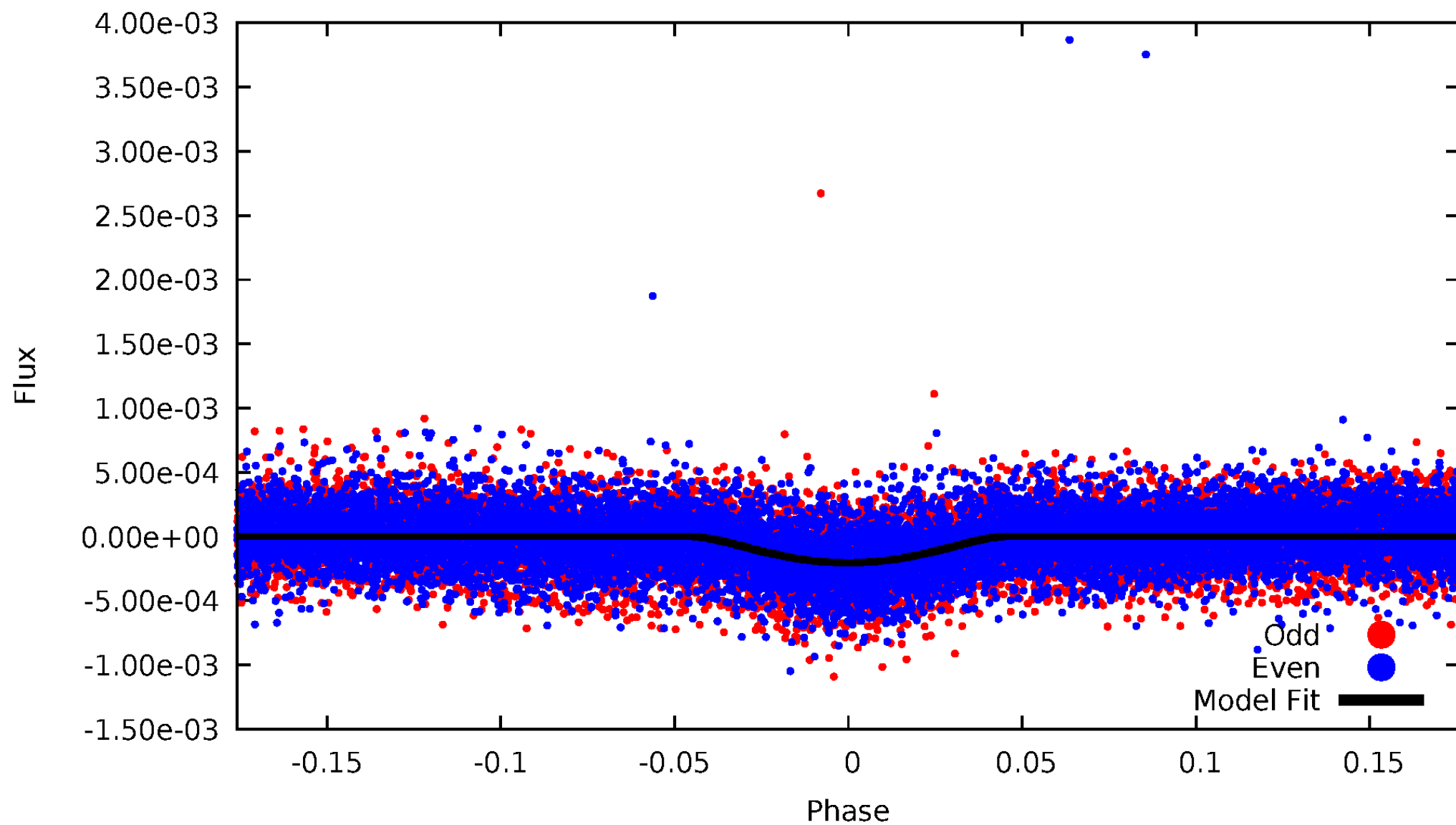


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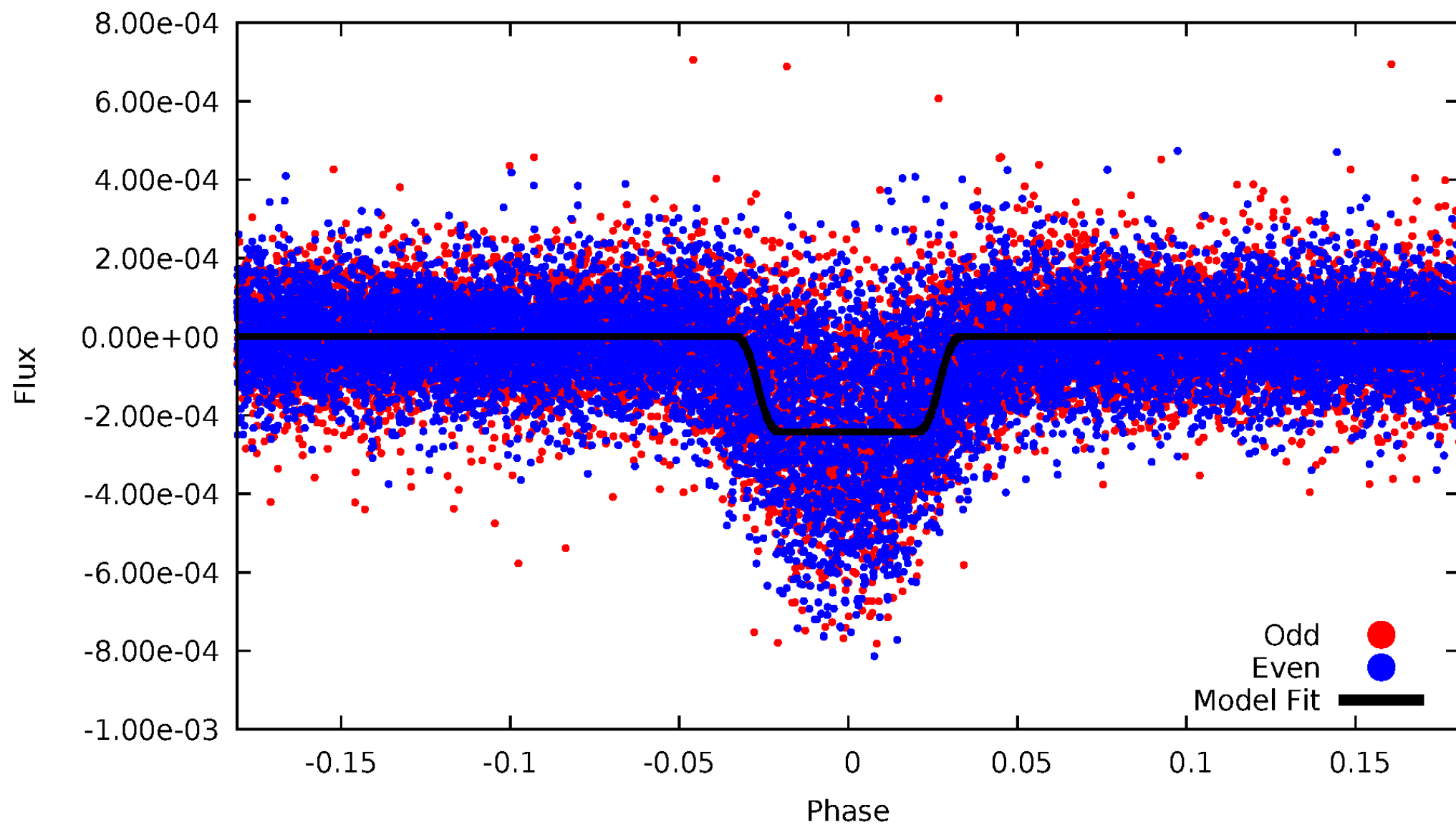
DV Odd/Even

TCE 012062667-01

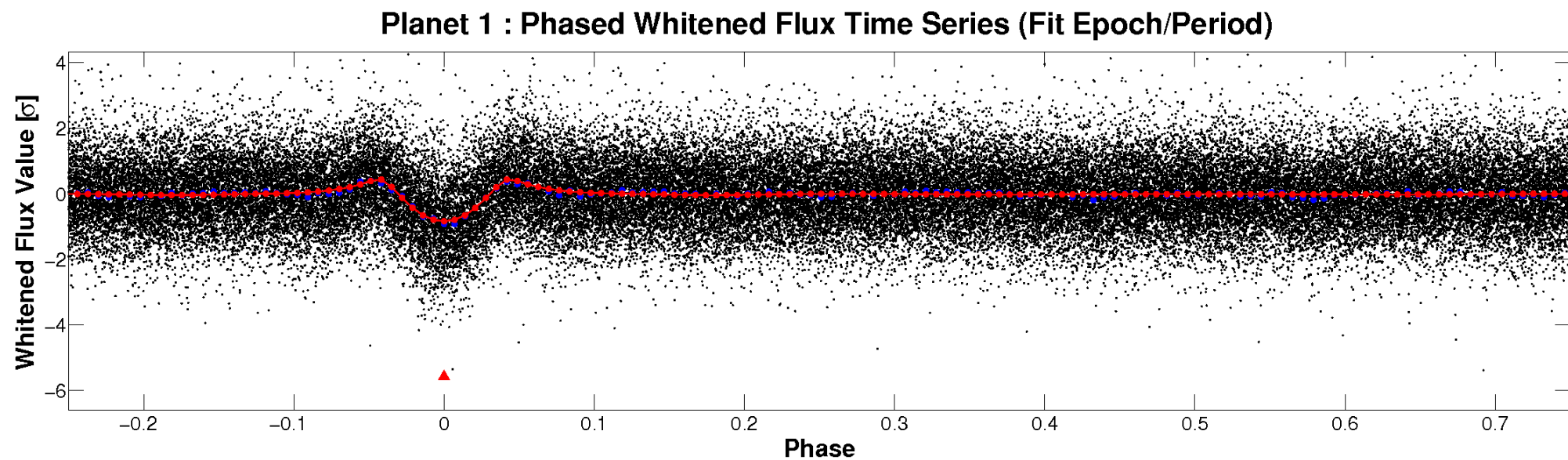
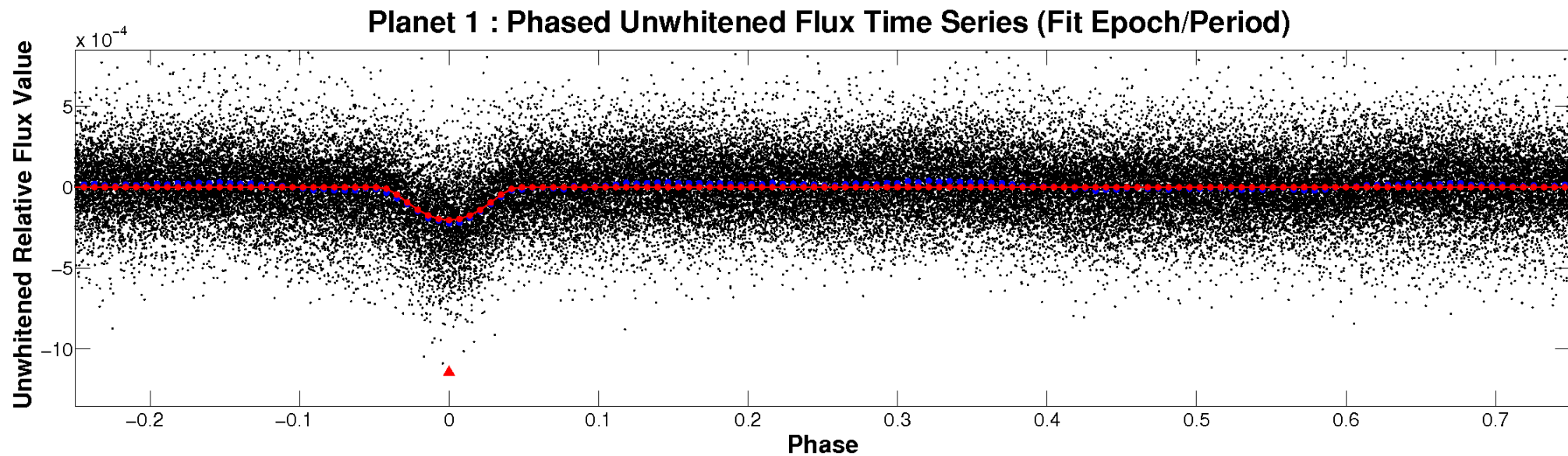


ALT Odd/Even

TCE 012062667-01

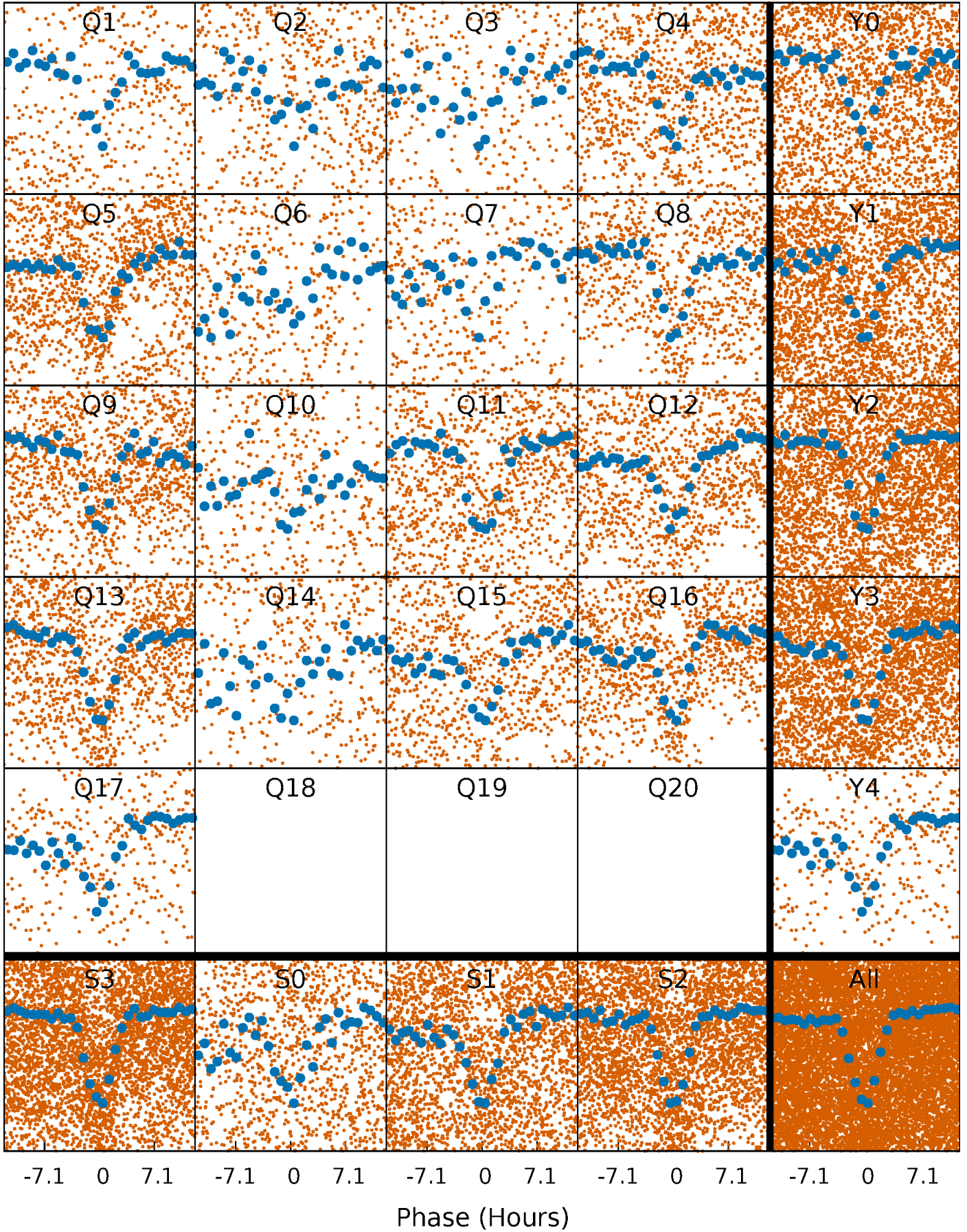


Non-Whitened Vs. Whitened Light Curve



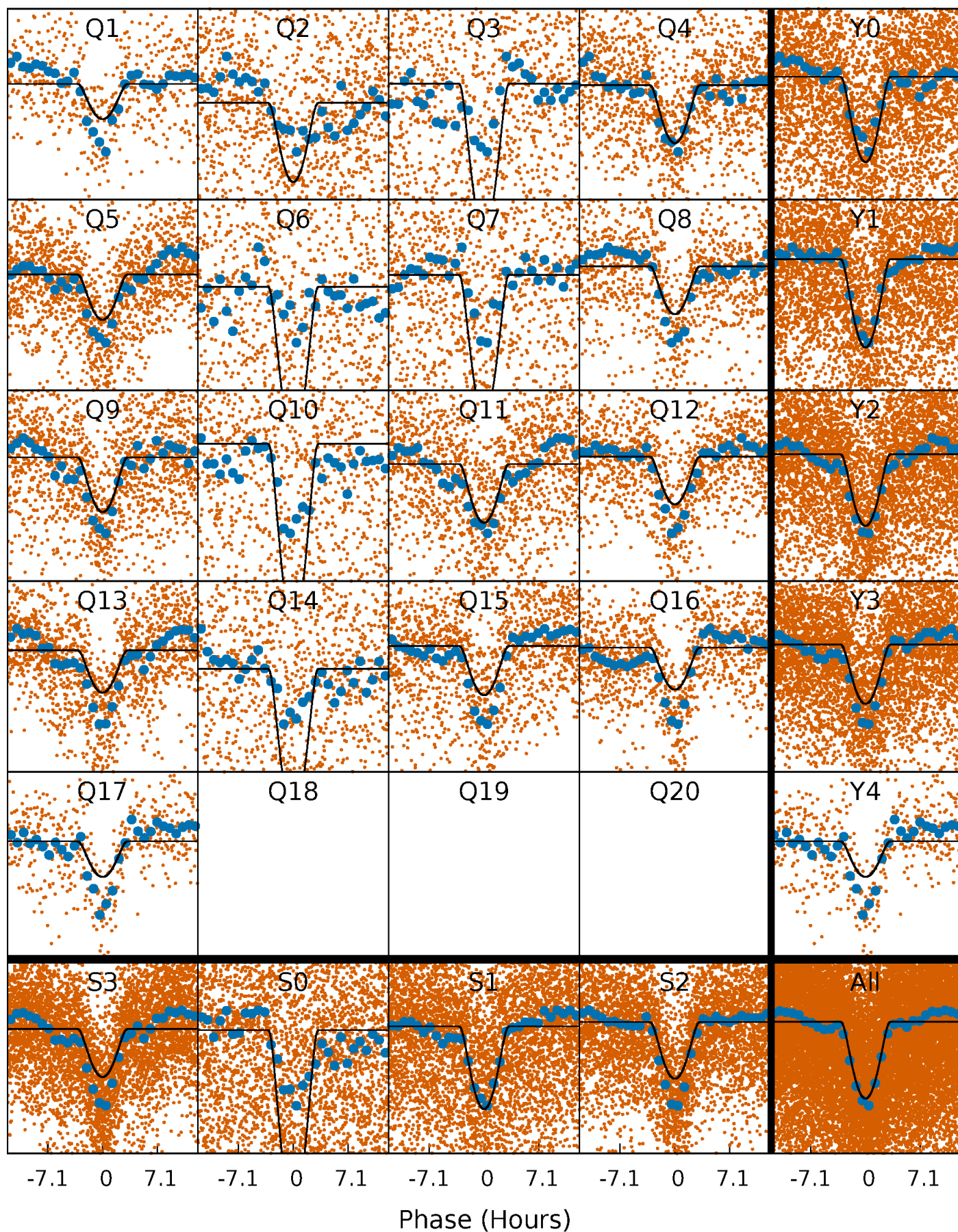
PDC Quarter-Phased Transit Curves

TCE 012062667-01 P= 2.929265 Days $T_0=133.727842$ (BKJD)



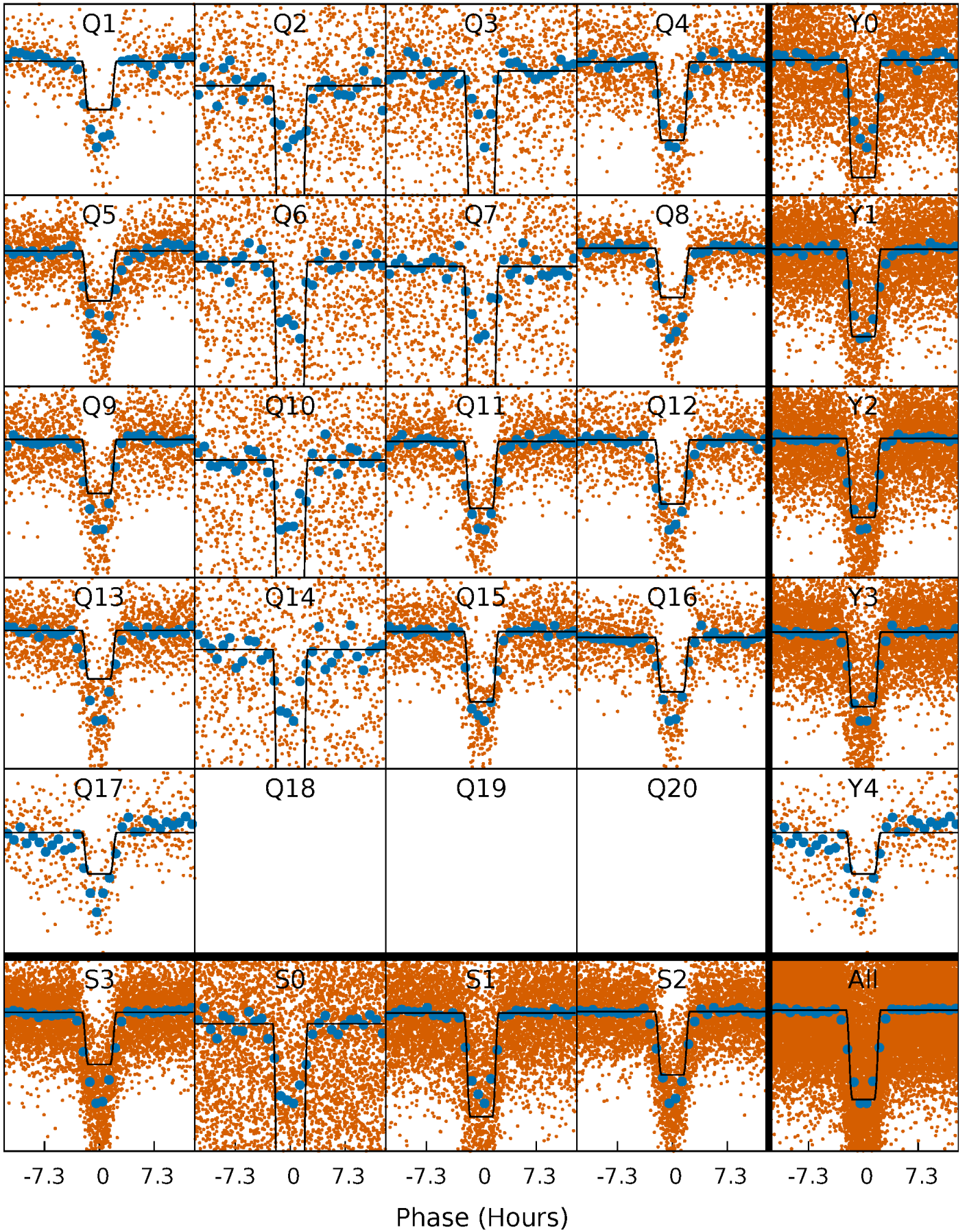
DV Quarter-Phased Transit Curves

TCE 012062667-01 P= 2.929265 Days $T_0=133.727842$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

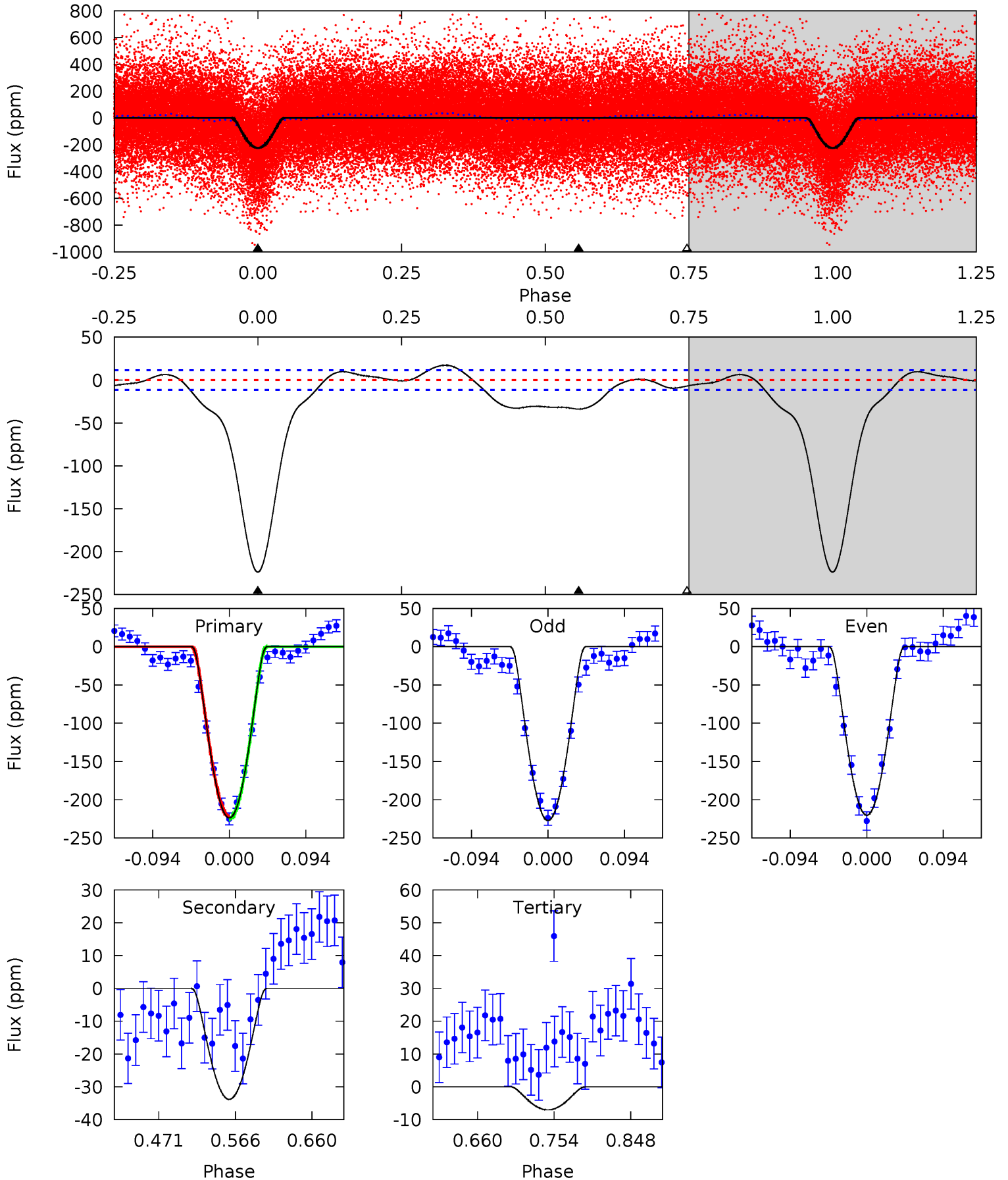
TCE 012062667-01 P= 2.929304 Days $T_0=133.717386$ (BKJD)



DV Model-Shift Uniqueness Test

012062667-01, P = 2.929265 Days, E = 130.798577 Days

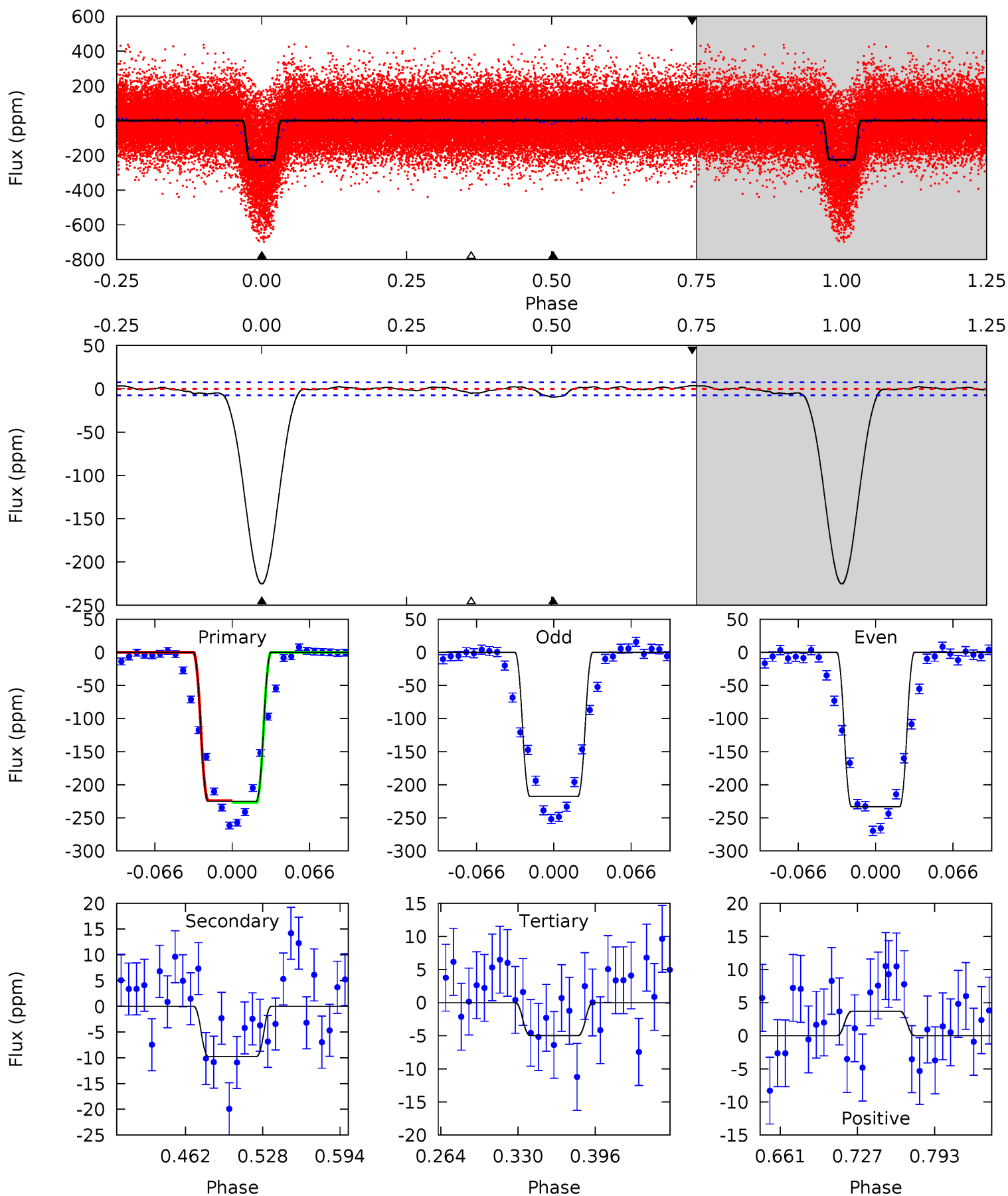
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.7	13.6	2.82	0	4.58	1.67	4.85	86.9	89.7	10.7	13.6	1.40	1.03	0.07	0.58



Alt Model-Shift Uniqueness Test

012062667-01, P = 2.929304 Days, E = 130.788082 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
142.0	6.16	3.14	2.34	4.65	1.84	1.42	138.9	139.7	3.02	3.82	4.89	1.00	0.02	1.01



Stellar Parameters For KIC 012062667

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6634^{+161}_{-181}	$3.831^{+0.300}_{-0.100}$	$-0.500^{+0.300}_{-0.300}$	$2.251^{+0.407}_{-0.756}$	$1.253^{+0.220}_{-0.198}$	$0.155^{+0.315}_{-0.047}$
	+2%/-3%	+8%/-3%	+60%/-60%	+18%/-34%	+18%/-16%	+203%/-31%
Source	PHO1	FLK73	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 012062667-01 / KOI 1487.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-34 ± 2	$5.60^{+2.41}_{-2.00}$	2892^{+170}_{-229}	3474^{+653}_{-514}	$1.121^{+1.560}_{-0.568}$
Alt.	-10 ± 2	$3.54^{+2.29}_{-1.85}$	2916^{+174}_{-258}	3220^{+1194}_{-5153}	$0.789^{+2.861}_{-0.495}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

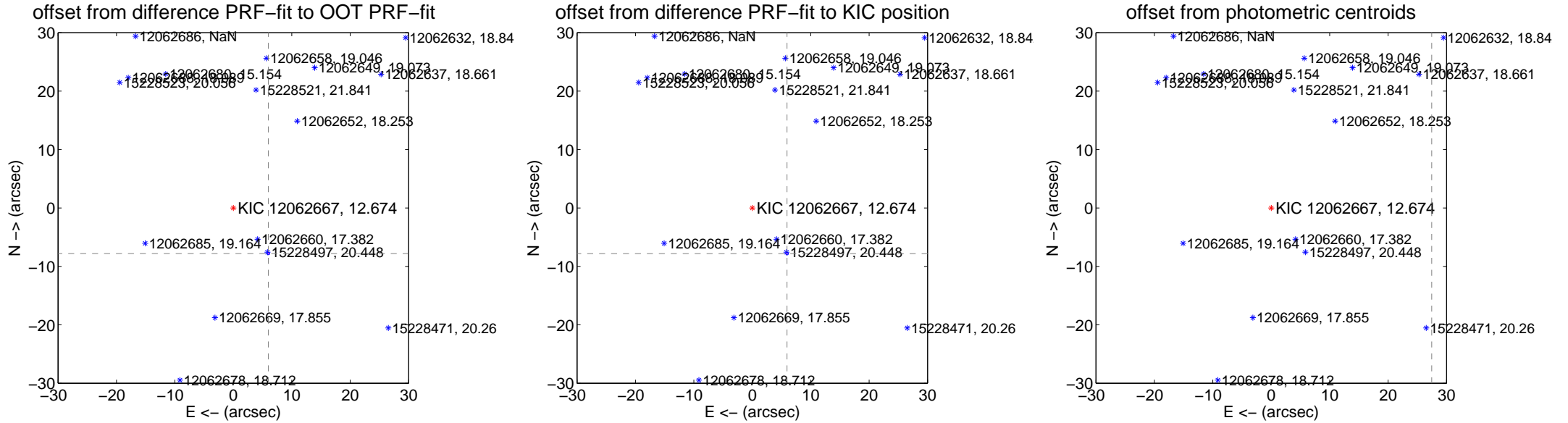
DV Centroid Data

Supplemental centroid analysis for 012062667-01. Kepler magnitude: 12.67. Transit SNR 42.47

There are 17 quarters with good PRF difference image offsets

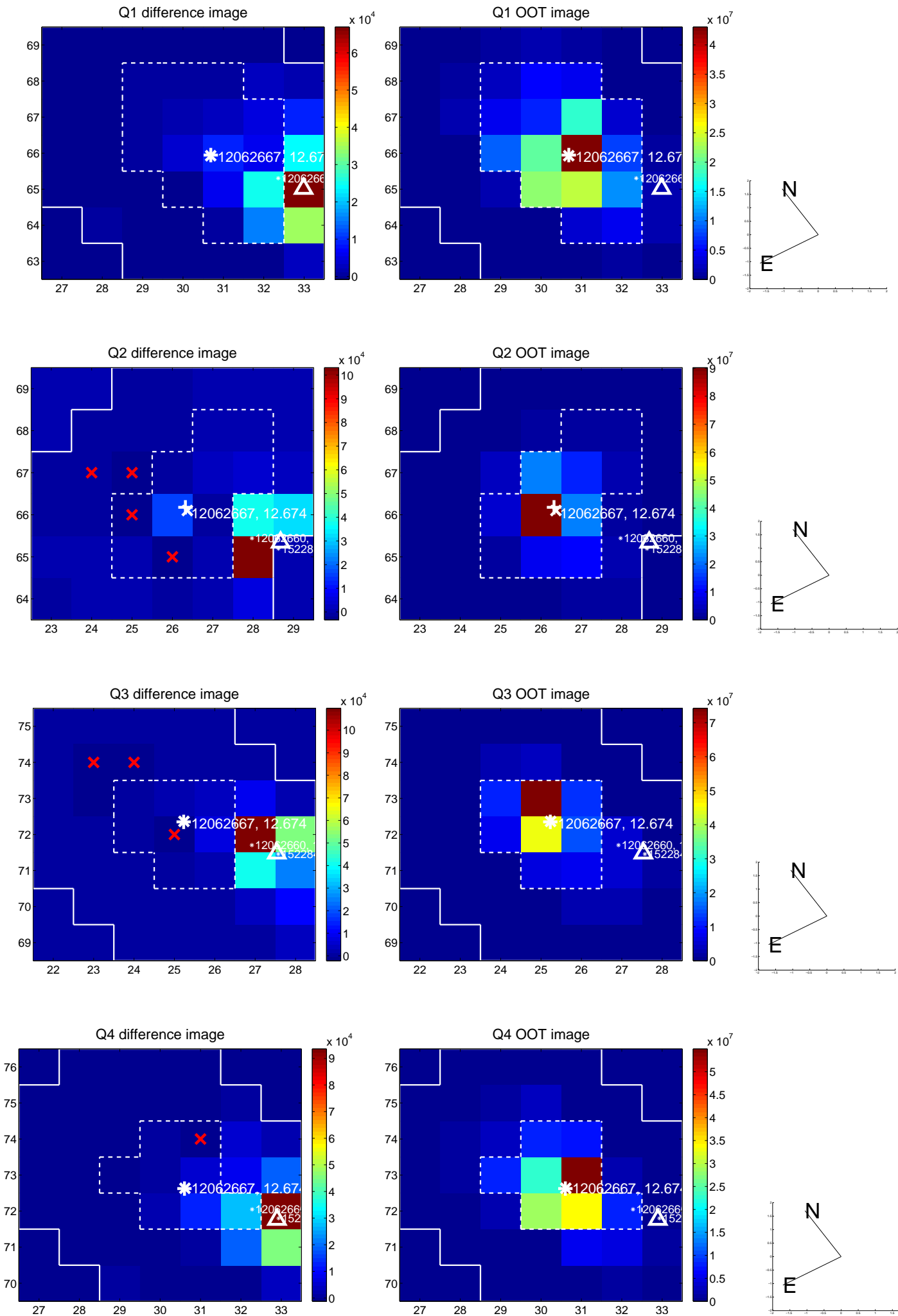
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.844 ± 0.071	138.26	-5.998 ± 0.071	-7.806 ± 0.070
PRF-fit source offset from KIC position	9.820 ± 0.076	129.93	-5.946 ± 0.071	-7.816 ± 0.082
photometric centroid source offset	44.49 ± 0.21	216.88	-27.47 ± 0.18	-34.99 ± 0.22

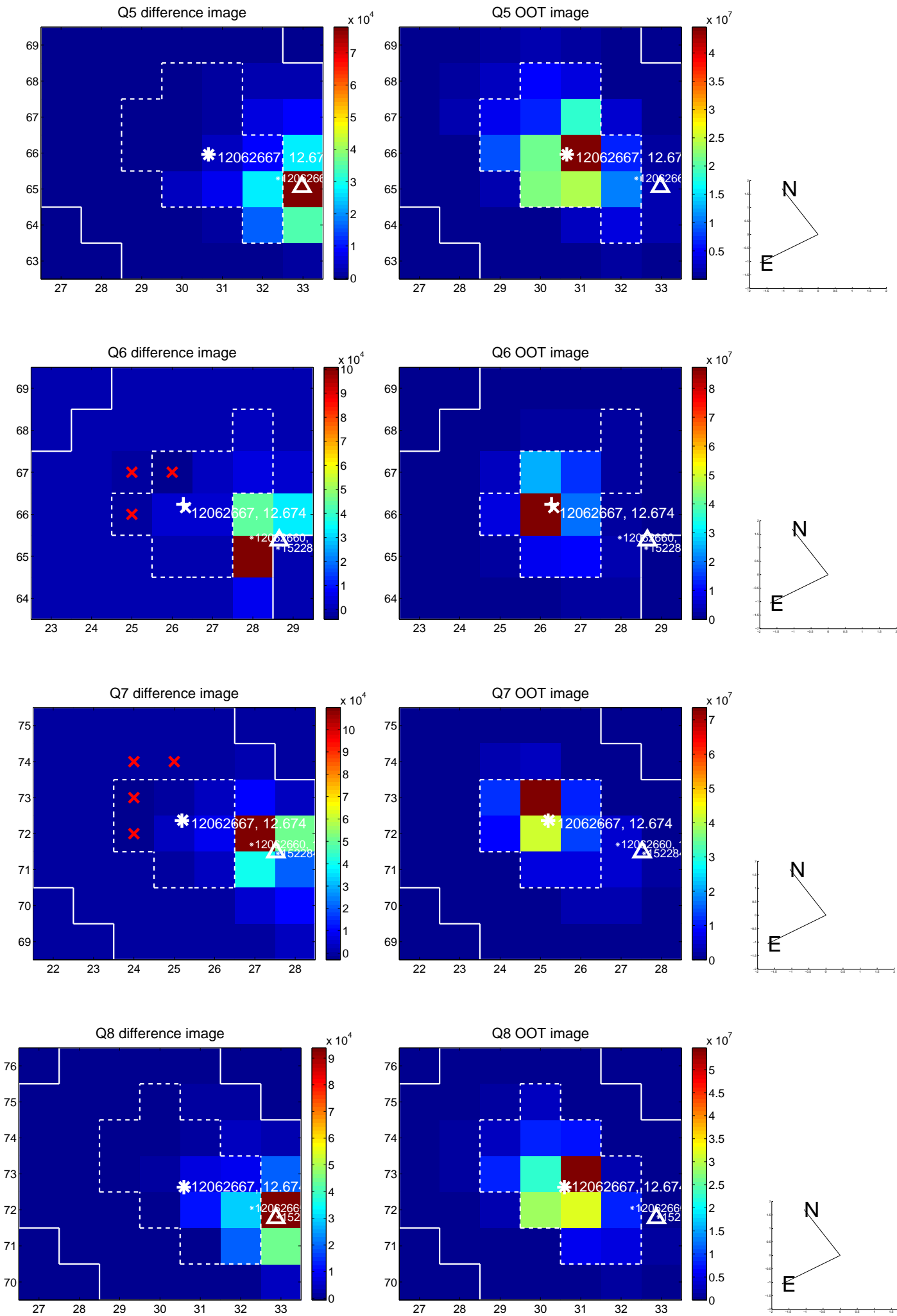


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

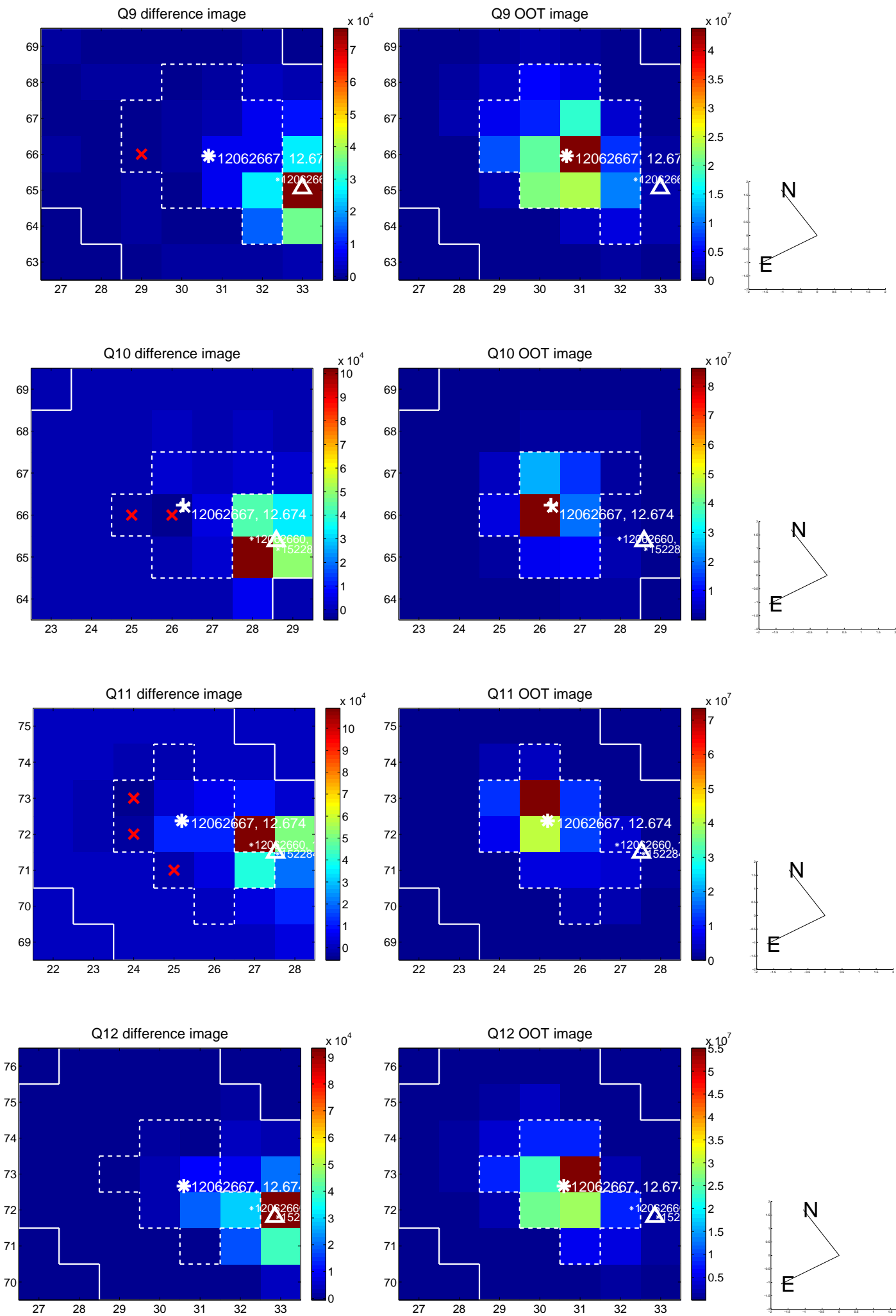
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



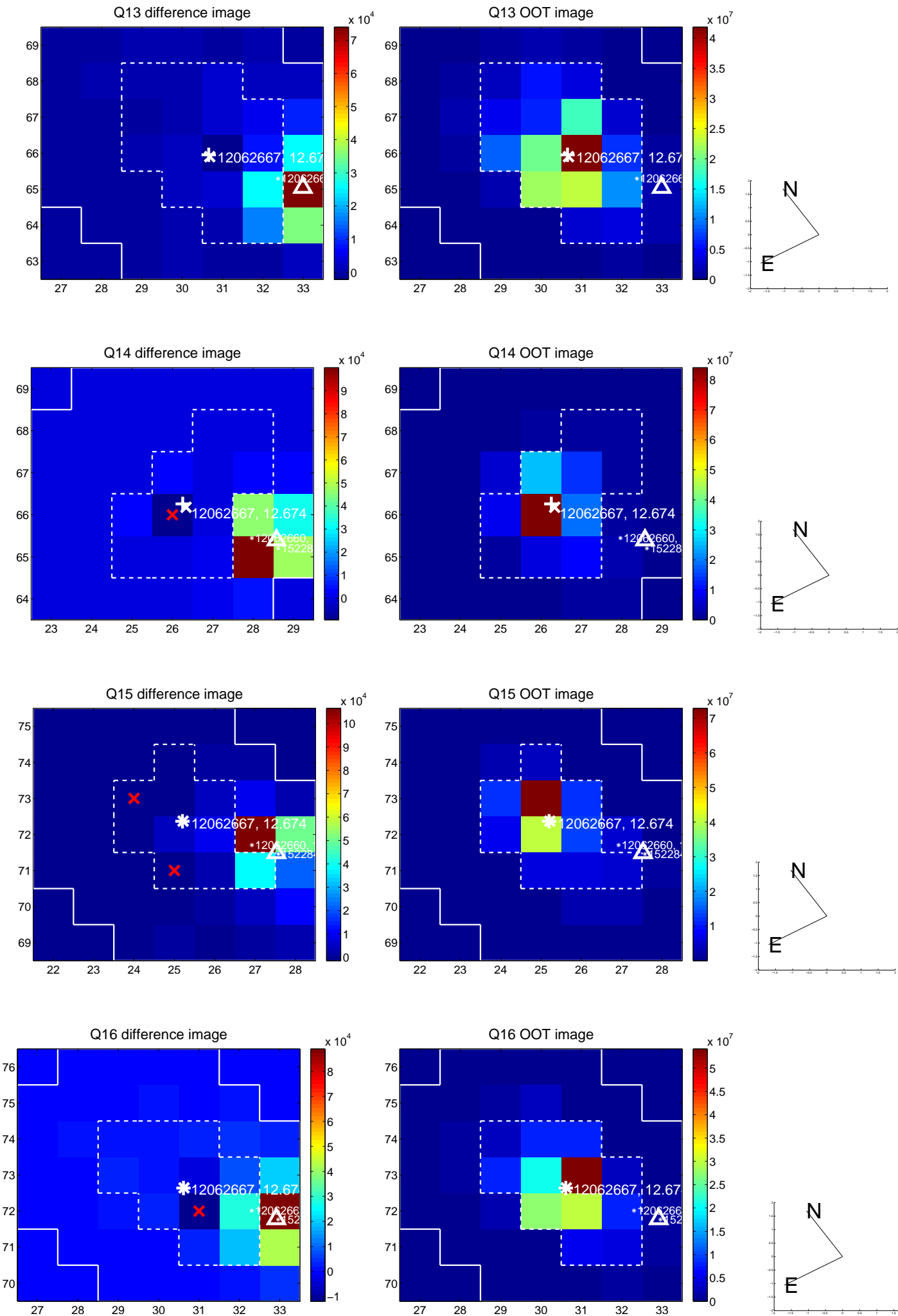
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



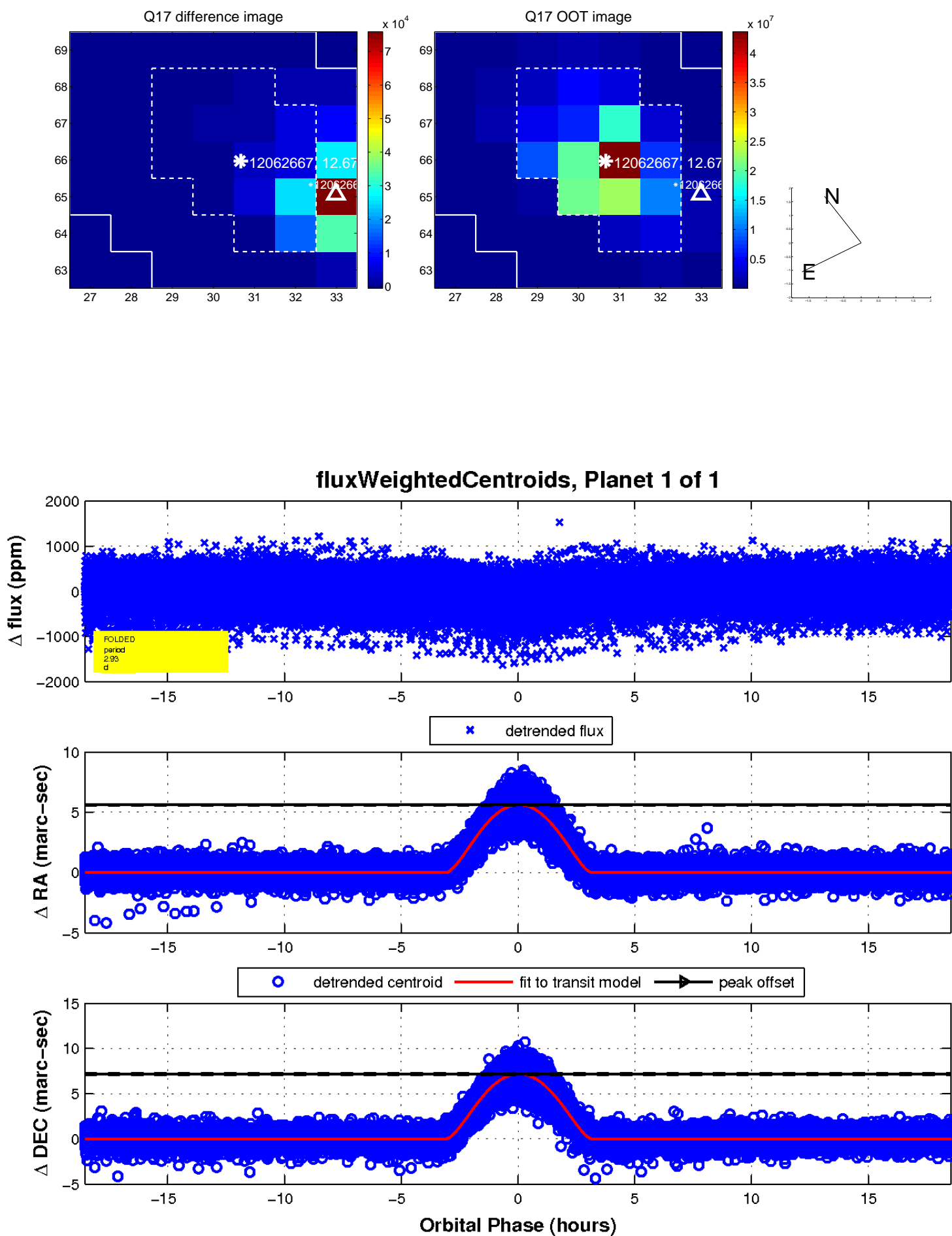
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

