

KIC 006964159

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})
006964159-01	OBS	3129.01	25.503716	139.357030	197.1	3.589	11.3	11.5	0.88	5815	1.48	27.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006964159-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

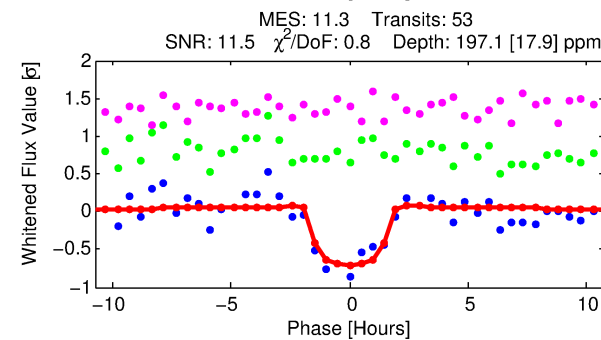
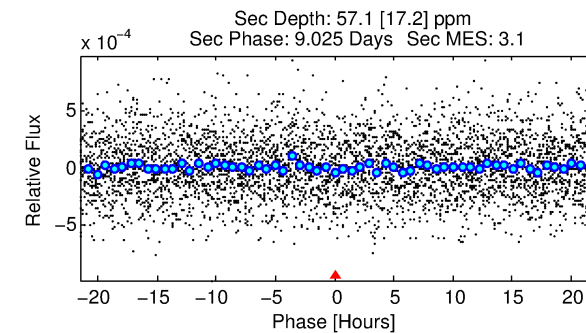
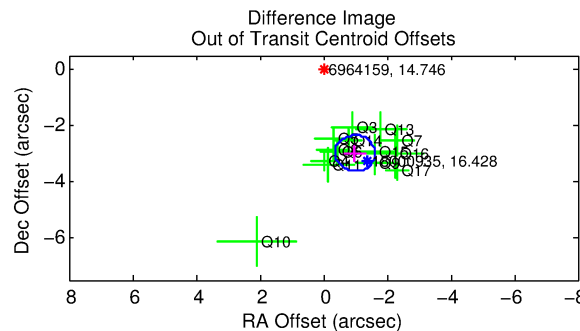
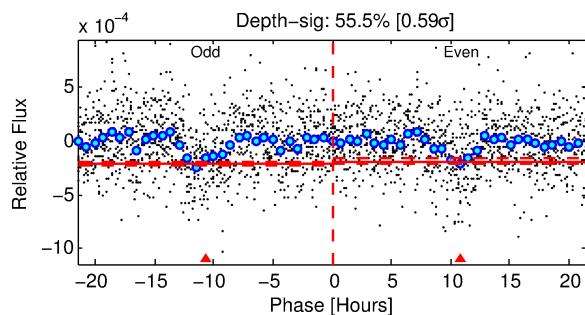
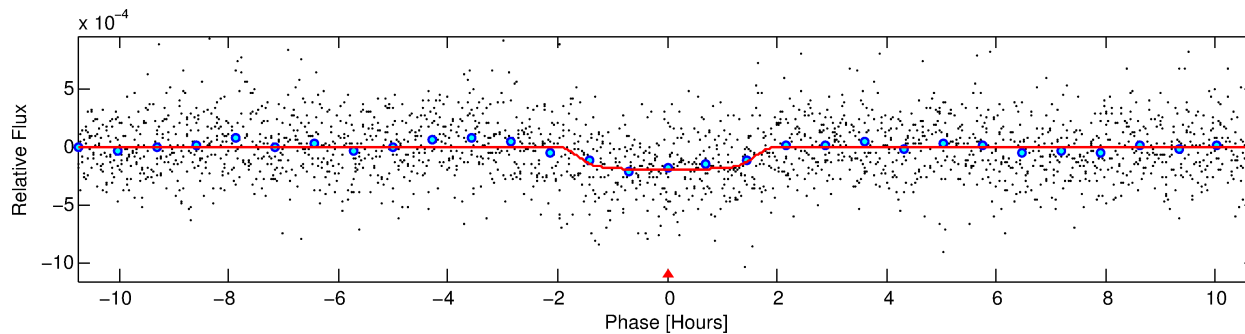
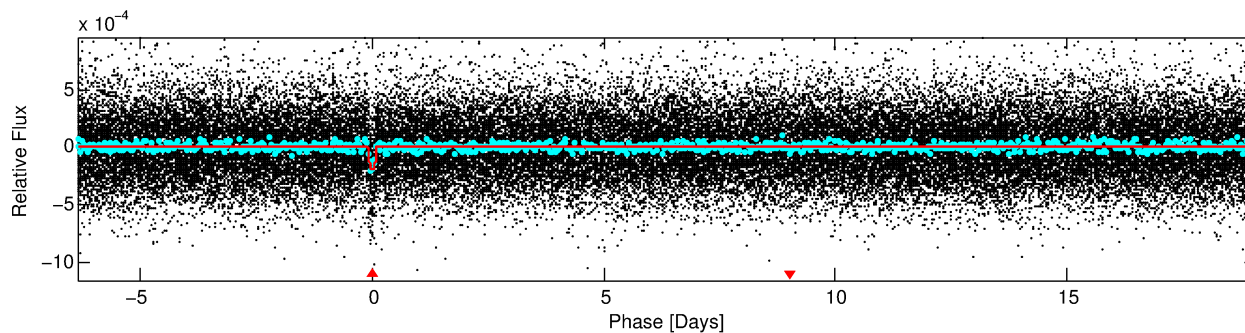
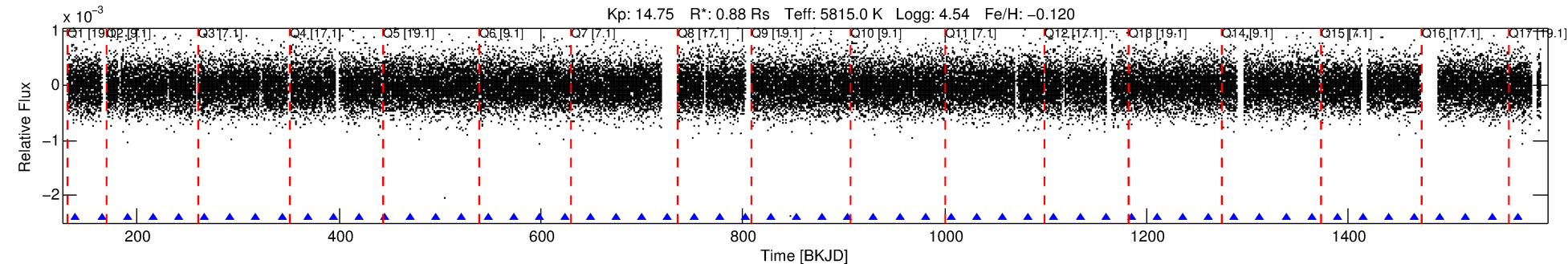
Ephemeris Match Information For 006964159-01

No Significant Match Found

DV One-Page Summary

KIC: 6964159 Candidate: 1 of 1 Period: 25.504 d
KOI: K03129.01 Corr: 0.982

Kp: 14.75 R*: 0.88 Rs Teff: 5815.0 K Logg: 4.54 Fe/H: -0.120



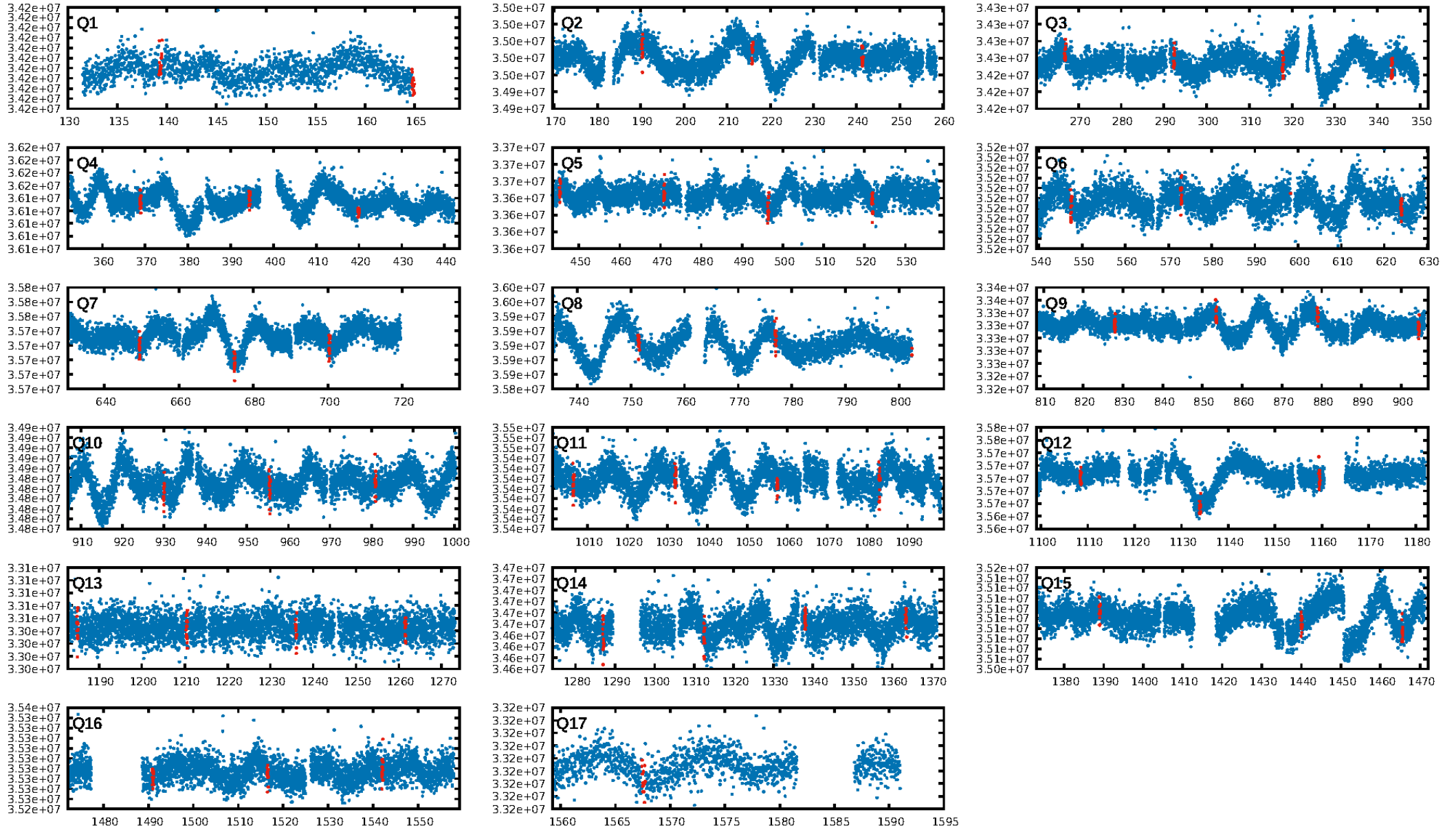
DV Fit Results:

Period = 25.50372 [0.00020] d
Epoch = 139.3570 [0.0065] BKJD
Rp/R* = 0.0154 [0.0051]
a/R* = 24.45 [39.41]
b = 0.91 [0.31]
Seff = 27.90 [10.86]
Teq = 586 [57] K
Rp = 1.48 [0.66] Re
a = 0.1680 [0.0424] AU
Ag = 407.75 [332.85] [1.22σ]
Teffp = 4072 [751] K [4.63σ]

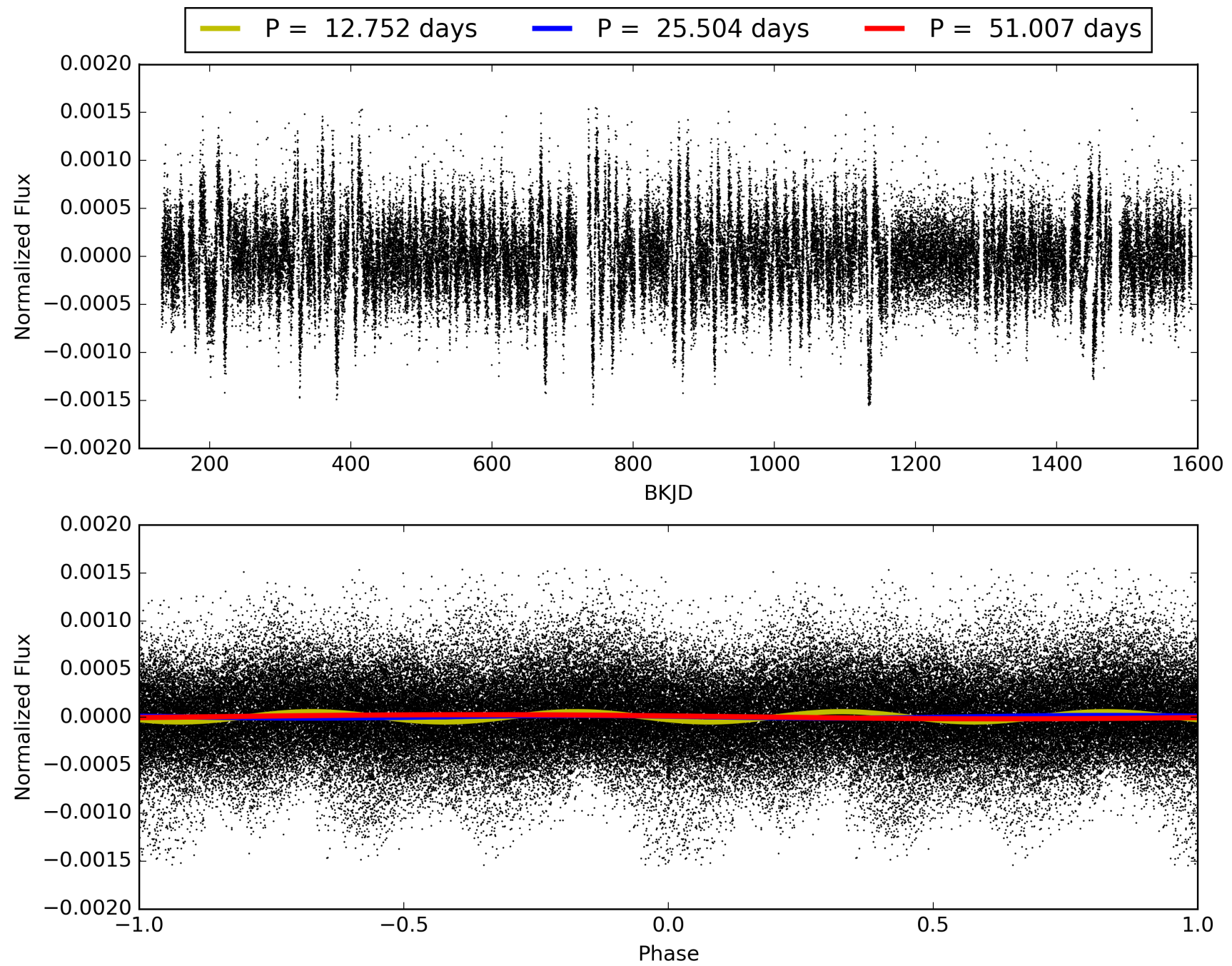
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.42e-28
RollingBand-fgt: 1.00 [50/50]
GhostDiagnostic-chr: 1.664
Centroid-sig: 0.0%
Centroid-so: 3.244 arcsec [2.98σ]
OotOffset-rm: 3.152 arcsec [14.82σ]
KicOffset-rm: 3.390 arcsec [15.95σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006964159-01, PDC Light Curves

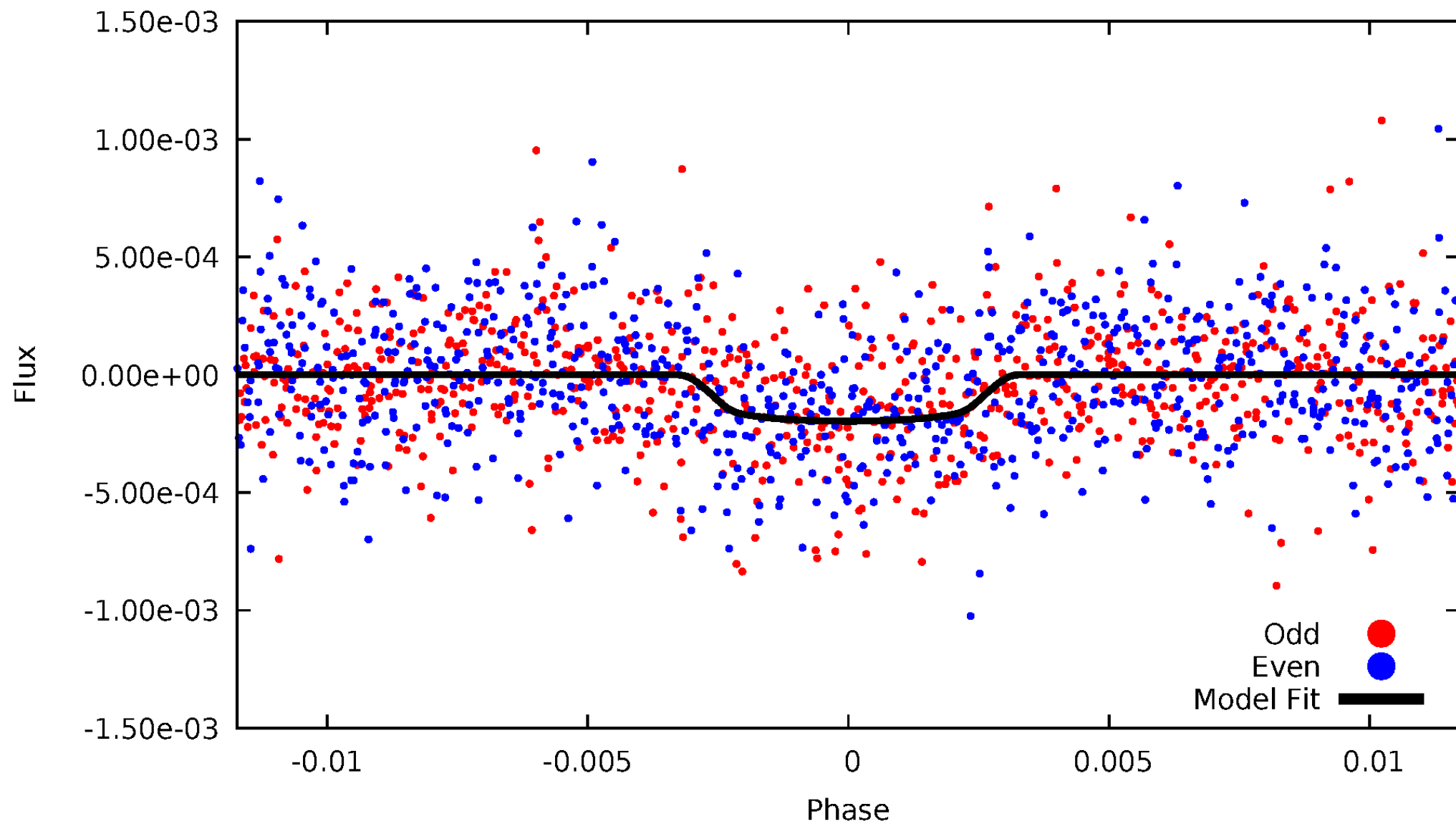


TCE 006964159-01



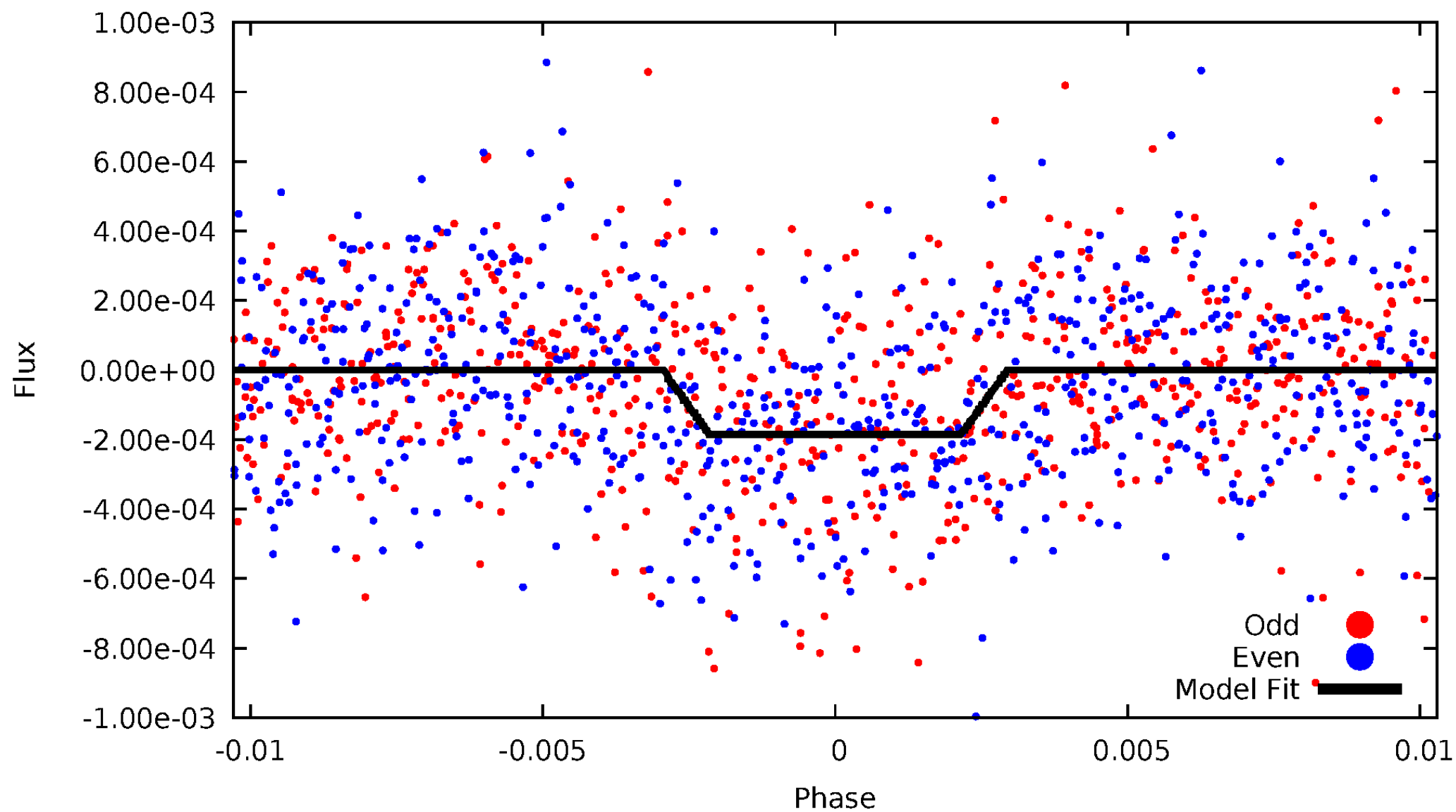
DV Odd/Even

TCE 006964159-01

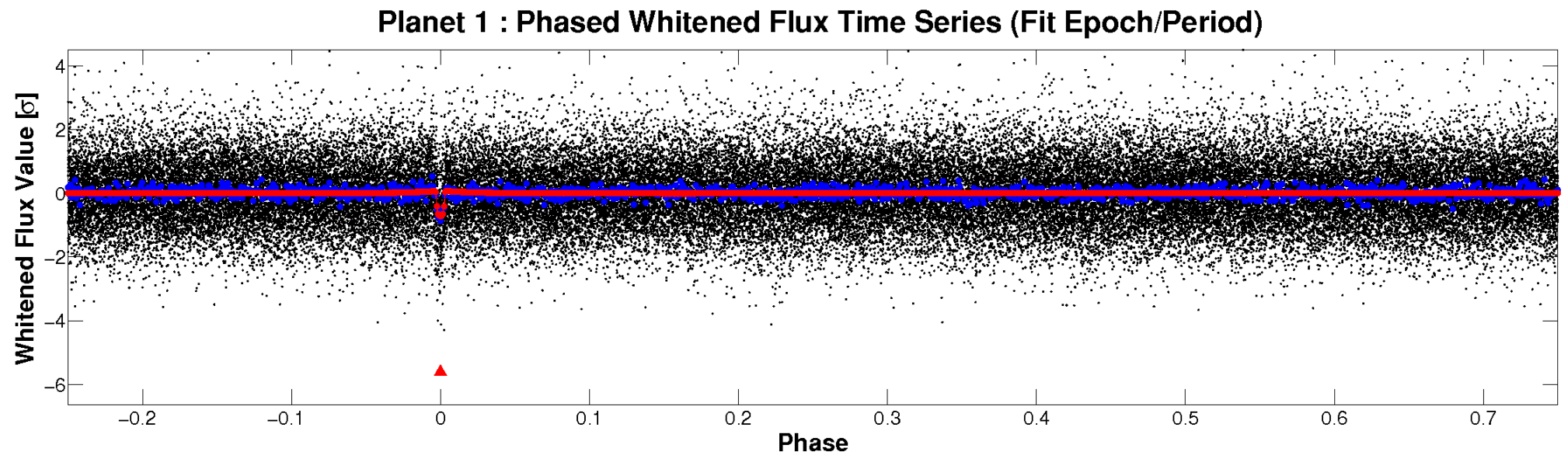
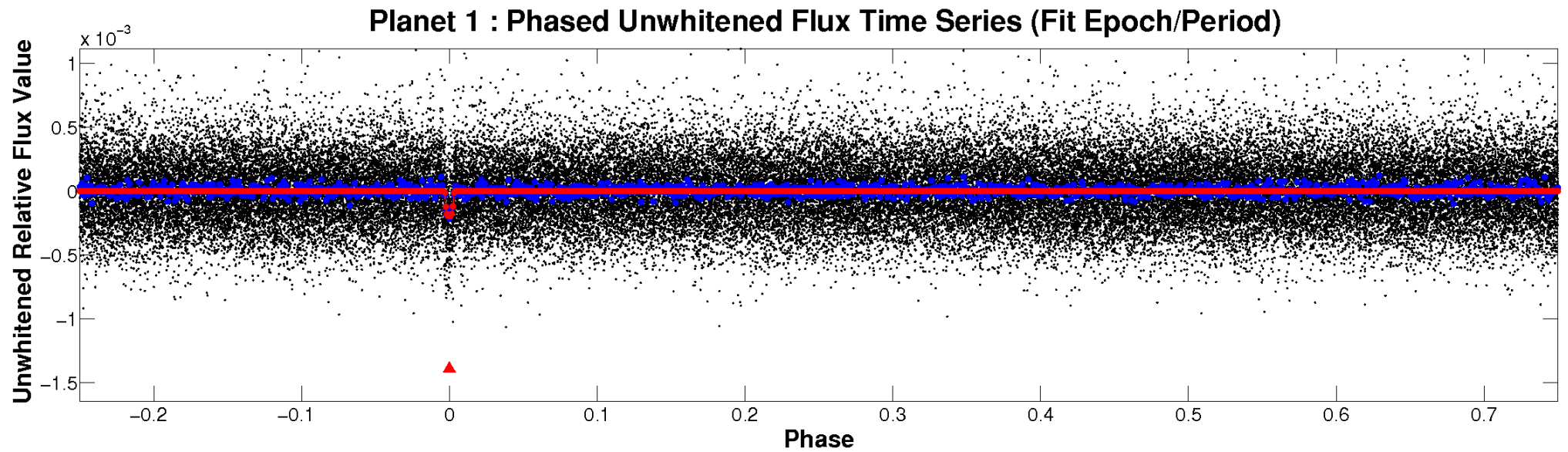


ALT Odd/Even

TCE 006964159-01

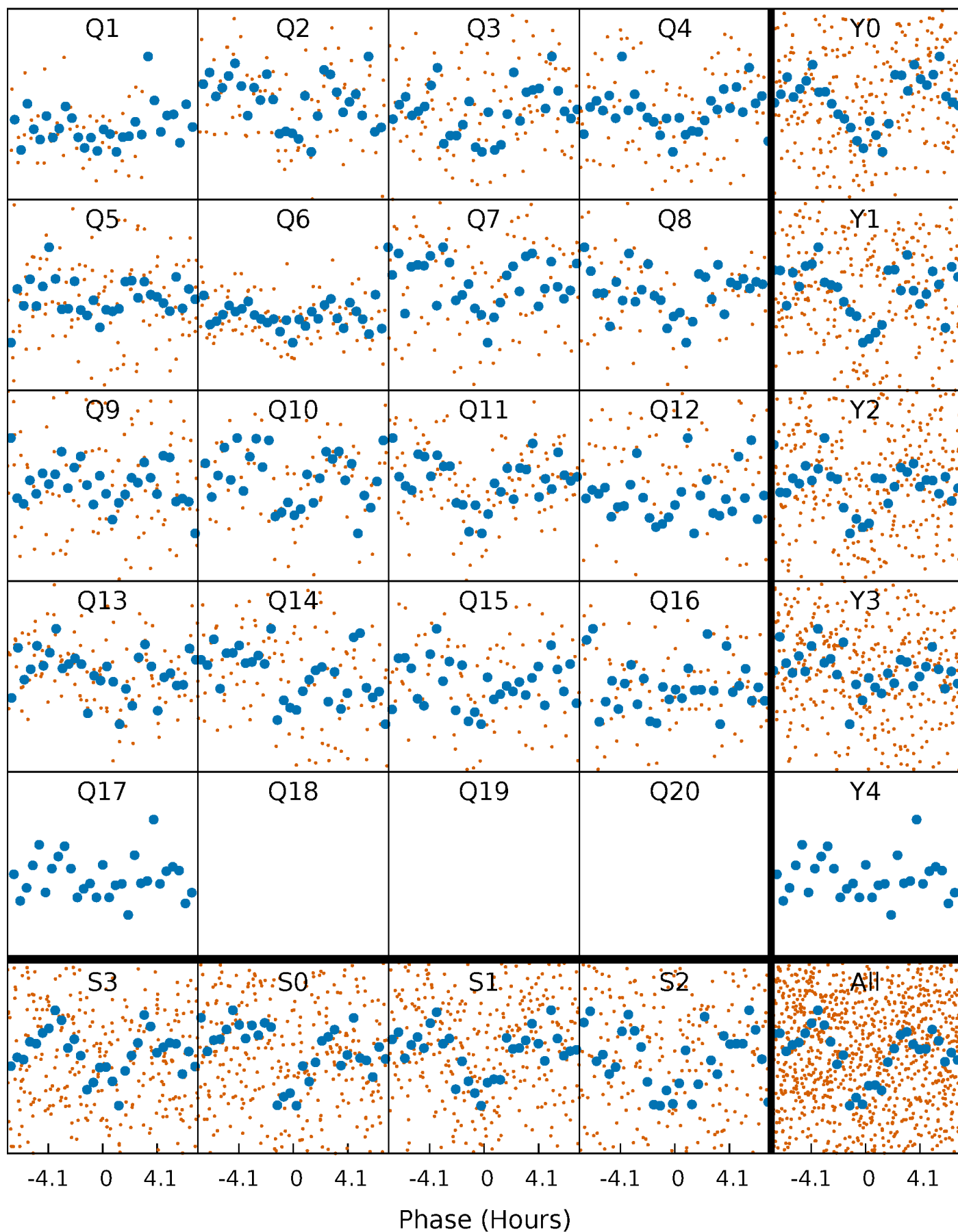


Non-Whitened Vs. Whitened Light Curve



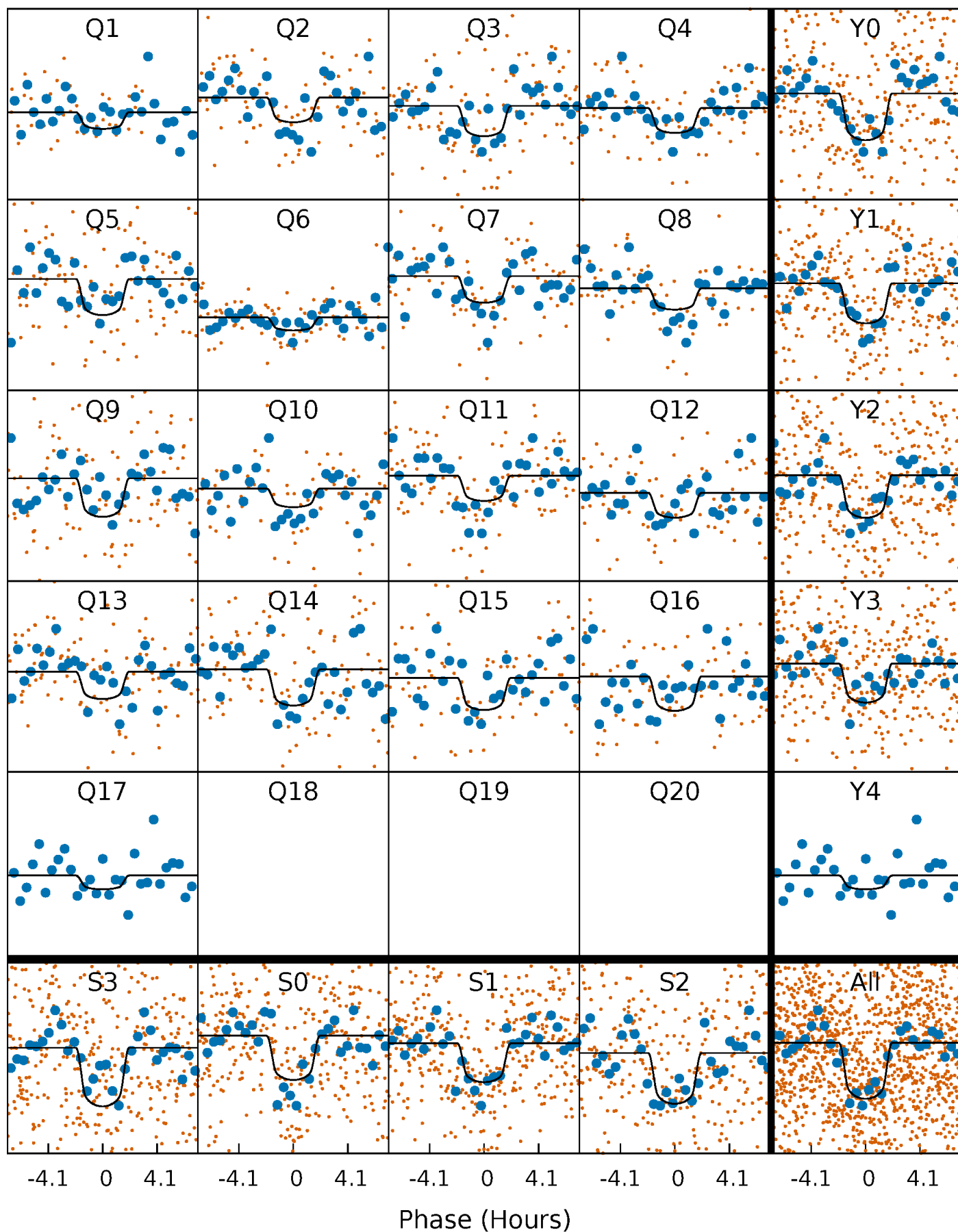
PDC Quarter-Phased Transit Curves

TCE 006964159-01 P= 25.503716 Days $T_0=139.357030$ (BKJD)



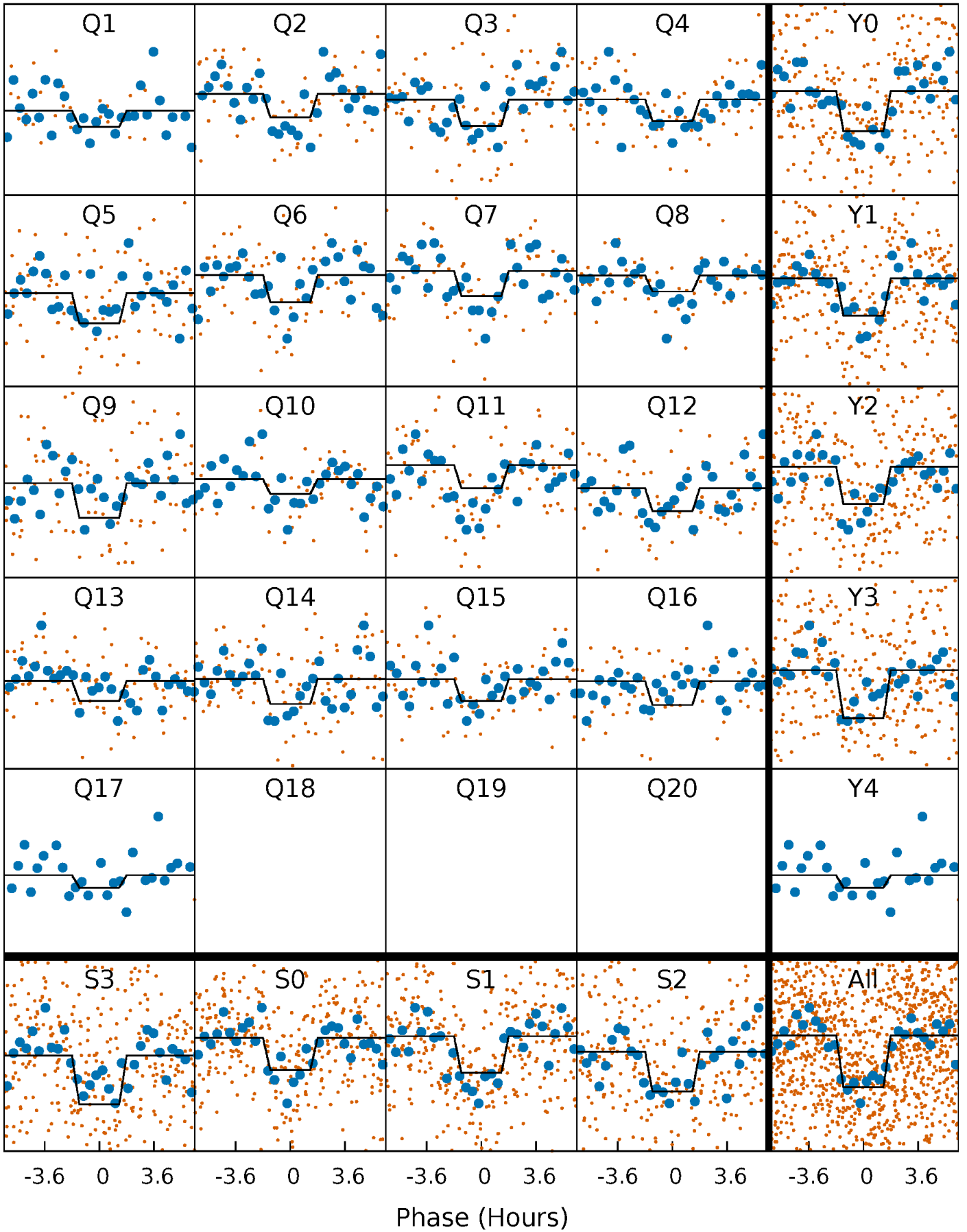
DV Quarter-Phased Transit Curves

TCE 006964159-01 P= 25.503716 Days $T_0=139.357030$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

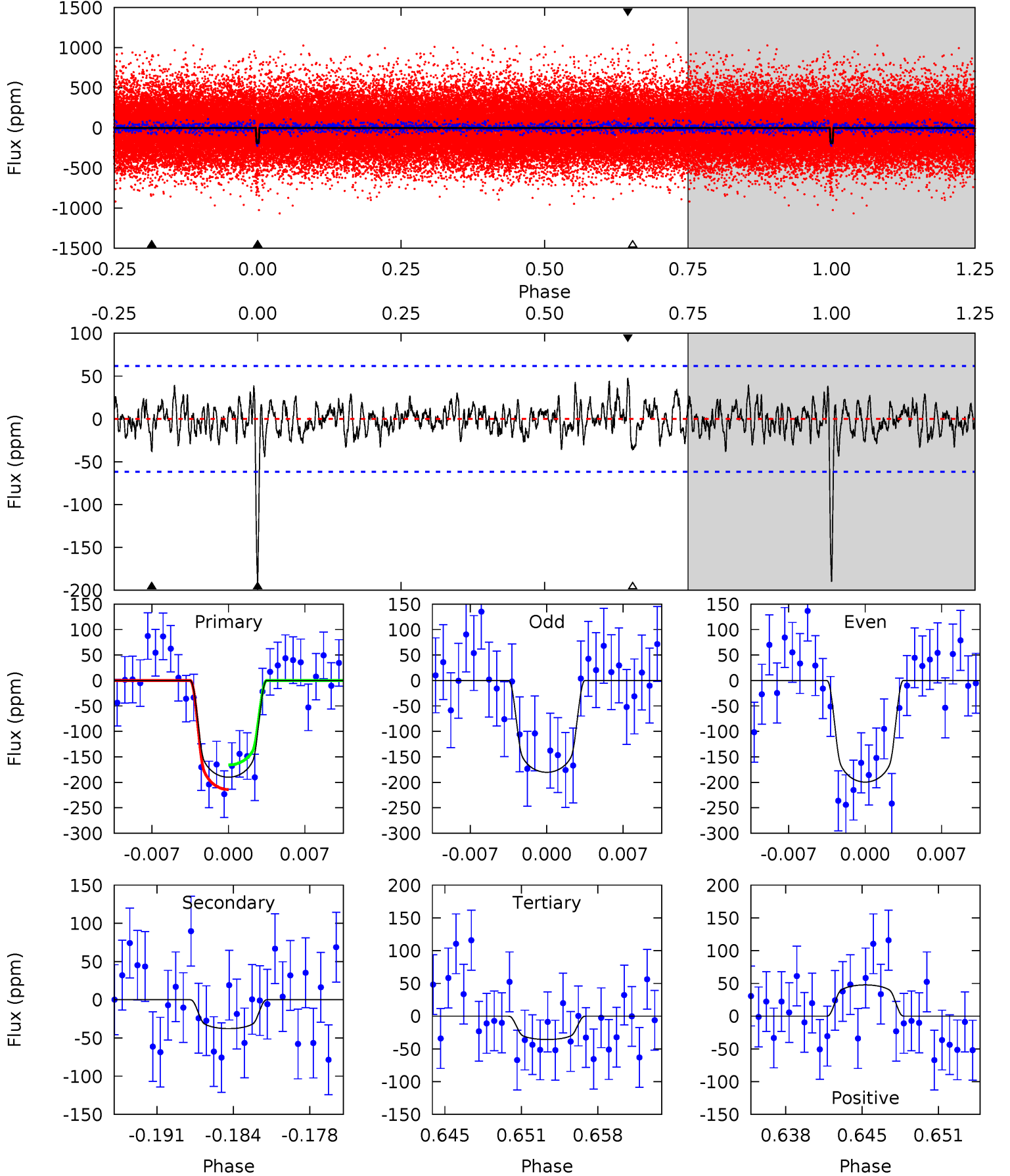
TCE 006964159-01 P= 25.503774 Days $T_0=139.355315$ (BKJD)



DV Model-Shift Uniqueness Test

006964159-01, P = 25.503716 Days, E = 113.853314 Days

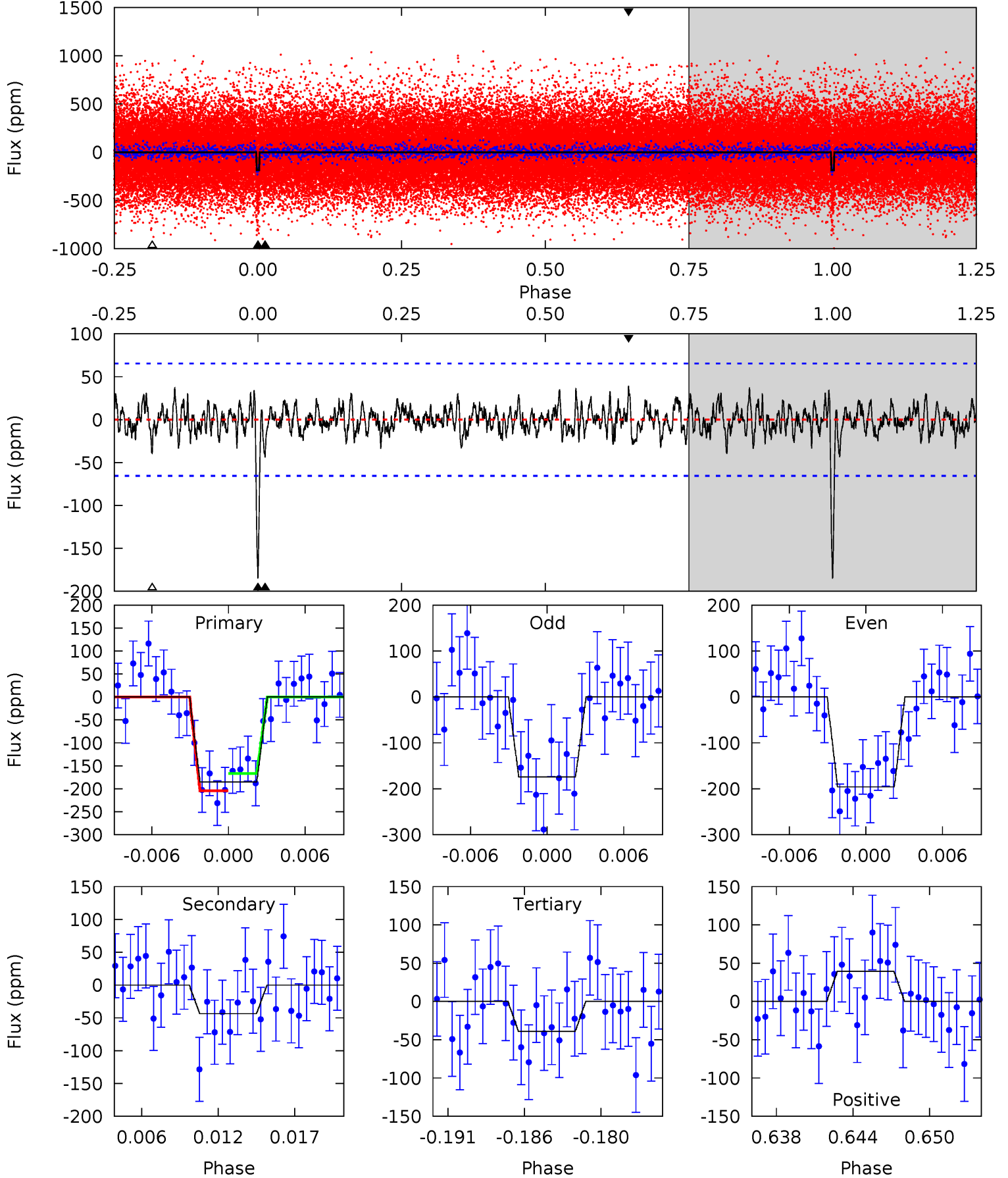
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.12	2.96	3.94	5.11	2.72	1.15	12.7	11.8	0.17	-0.82	0.80	1.11	0.20	2.00



Alt Model-Shift Uniqueness Test

006964159-01, P = 25.503774 Days, E = 113.851541 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.42	3.08	3.08	5.13	2.76	1.00	11.4	11.4	0.35	0.34	0.85	1.14	0.18	1.47



Stellar Parameters For KIC 006964159

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5815^{+157}_{-175}	$4.540^{+0.036}_{-0.204}$	$-0.120^{+0.300}_{-0.300}$	$0.877^{+0.260}_{-0.087}$	$0.973^{+0.116}_{-0.126}$	$2.032^{+0.415}_{-1.070}$
	+3%/-3%	+1%/-4%	+250%/-250%	+30%/-10%	+12%/-13%	+20%/-53%
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 006964159-01 / KOI 3129.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-38 ± 12	$1.55^{+0.57}_{-0.51}$	837^{+57}_{-37}	3961^{+624}_{-456}	224^{+308}_{-111}
Alt.	-44 ± 13	$1.36^{+0.55}_{-0.53}$	840^{+57}_{-38}	4275^{+915}_{-480}	351^{+575}_{-184}

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 $A_{obs} \gg 1.0$

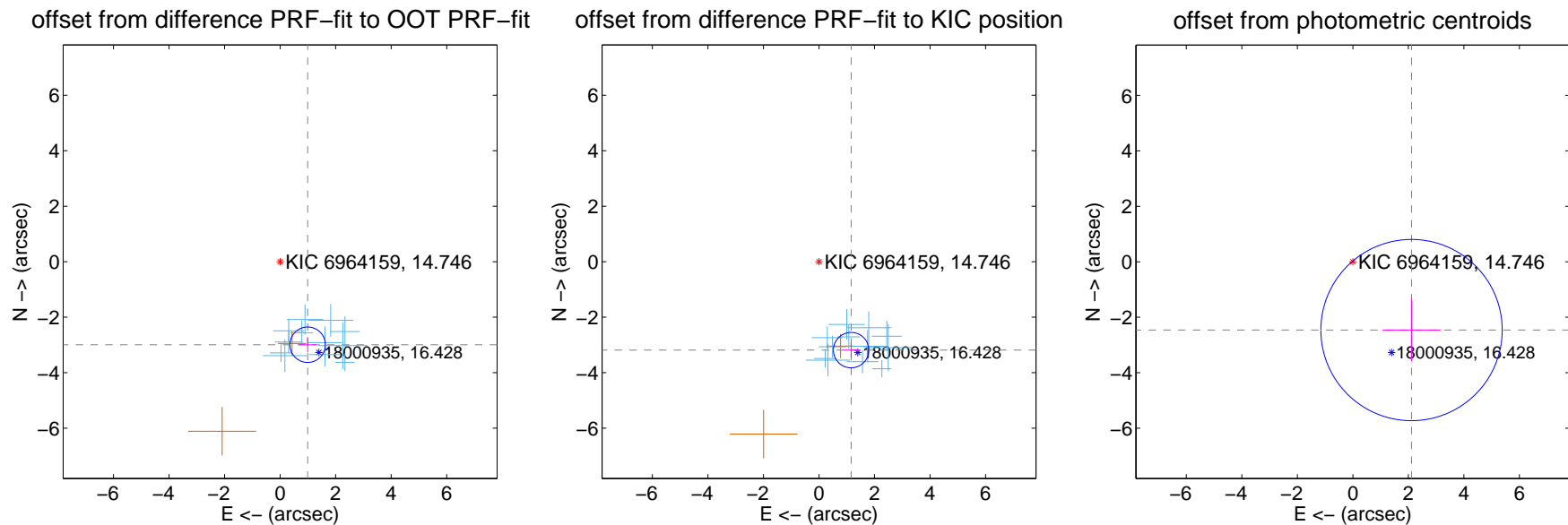
DV Centroid Data

Supplemental centroid analysis for 006964159-01. Kepler magnitude: 14.75. Transit SNR 11.50

There are 12 quarters with good PRF difference image offsets

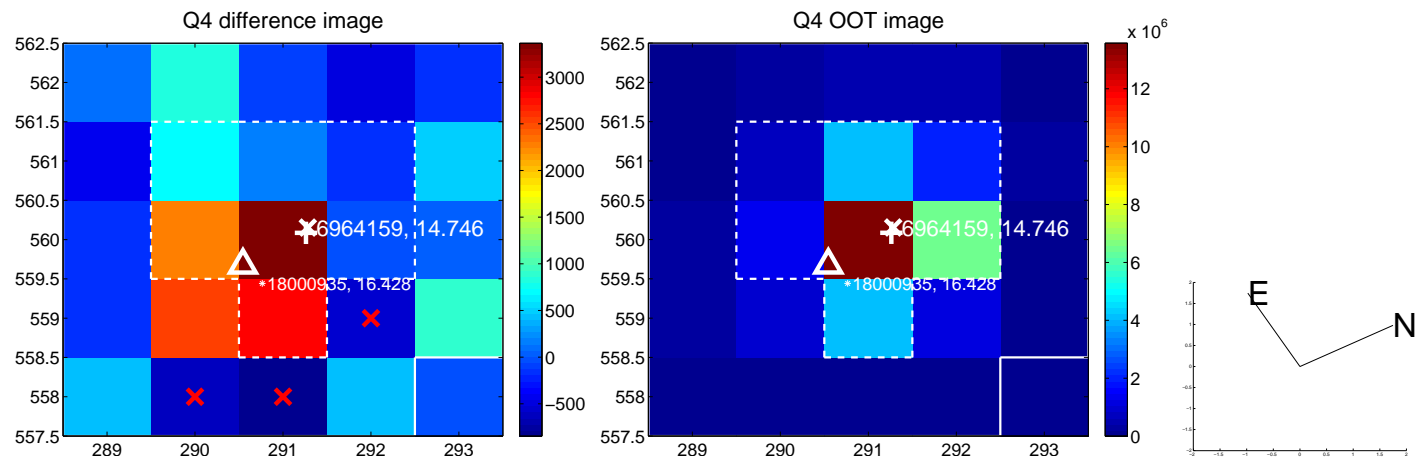
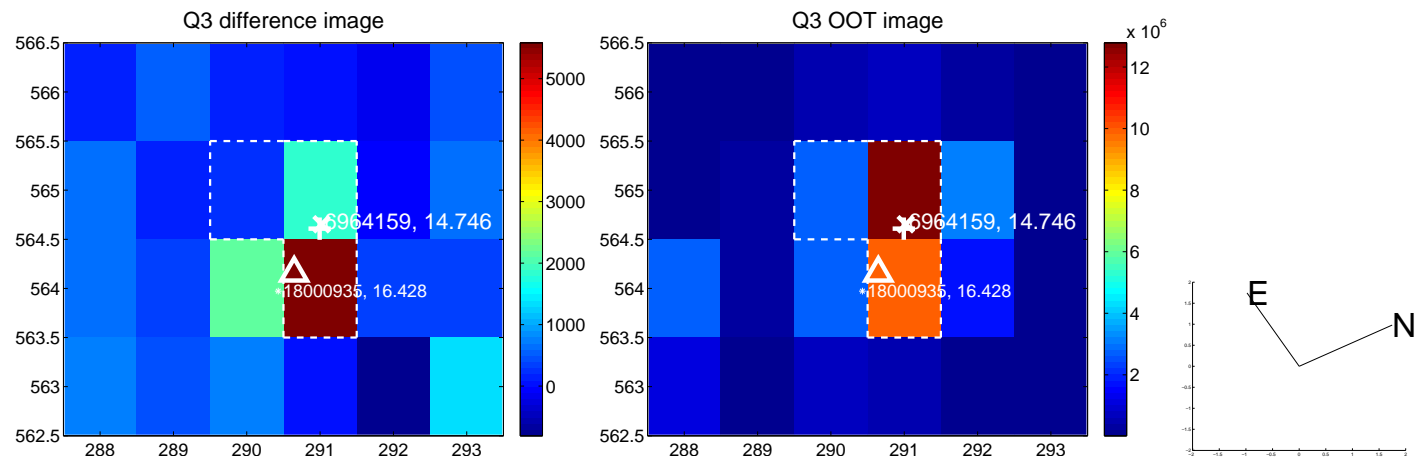
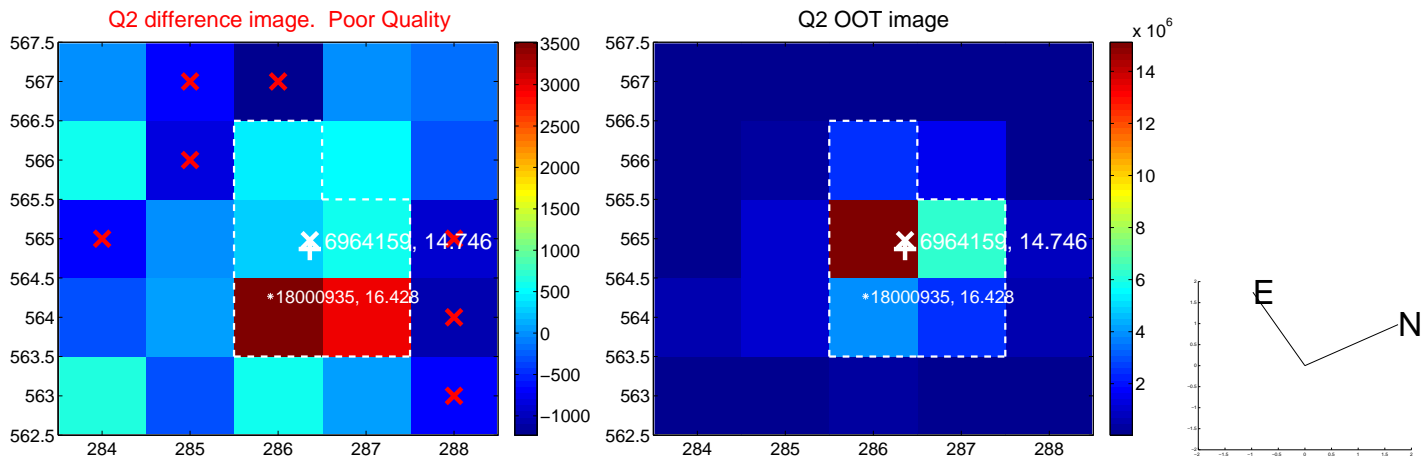
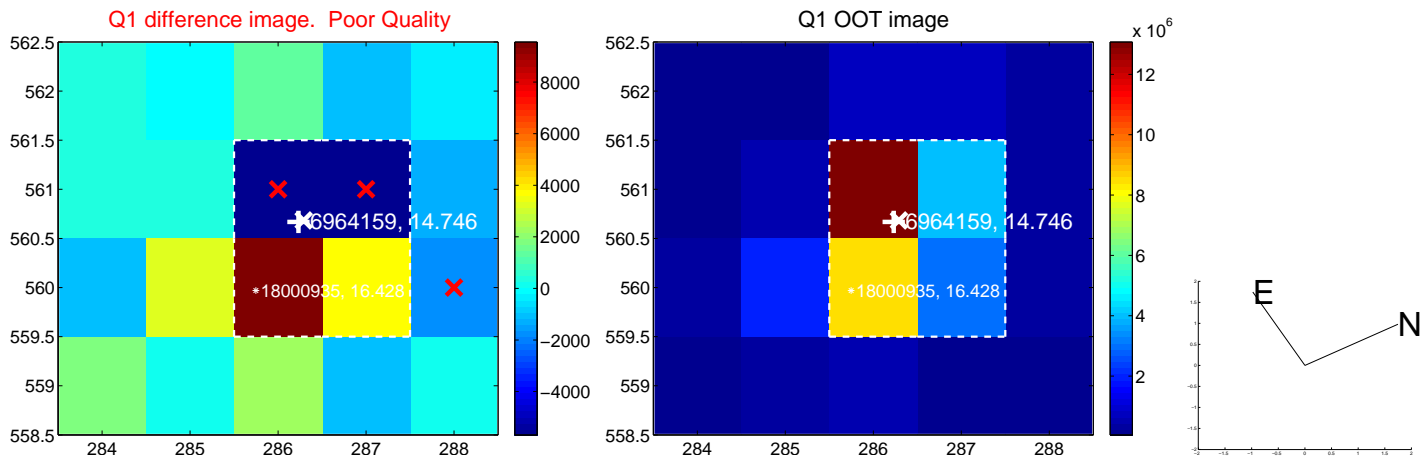
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.152 ± 0.213	14.82	-0.992 ± 0.312	-2.992 ± 0.271
PRF-fit source offset from KIC position	3.390 ± 0.213	15.95	-1.157 ± 0.298	-3.186 ± 0.273
photometric centroid source offset	3.24 ± 1.09	2.98	-2.11 ± 1.05	-2.46 ± 1.12

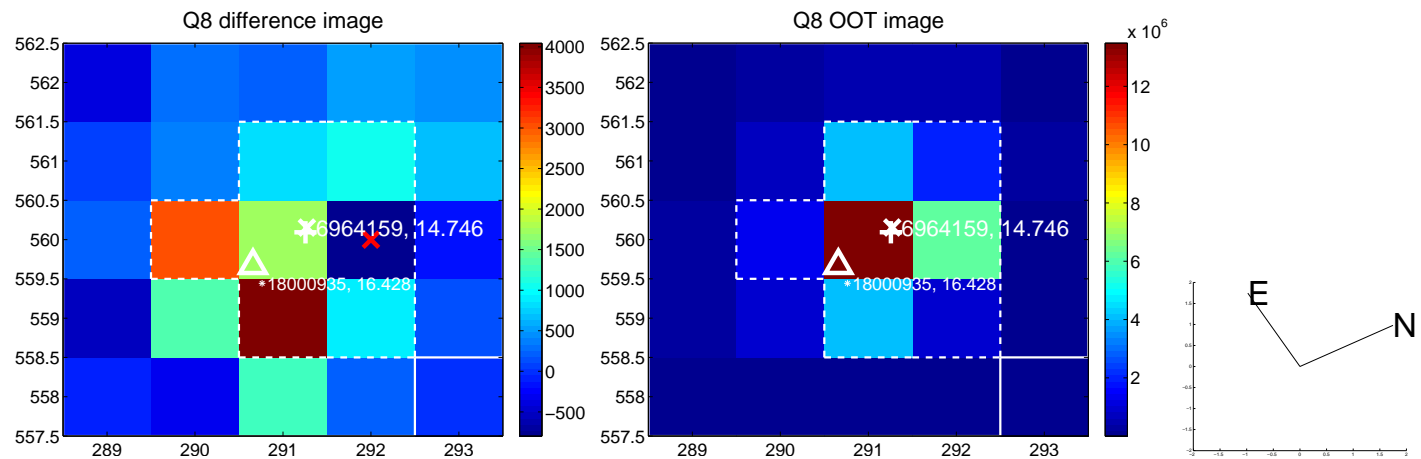
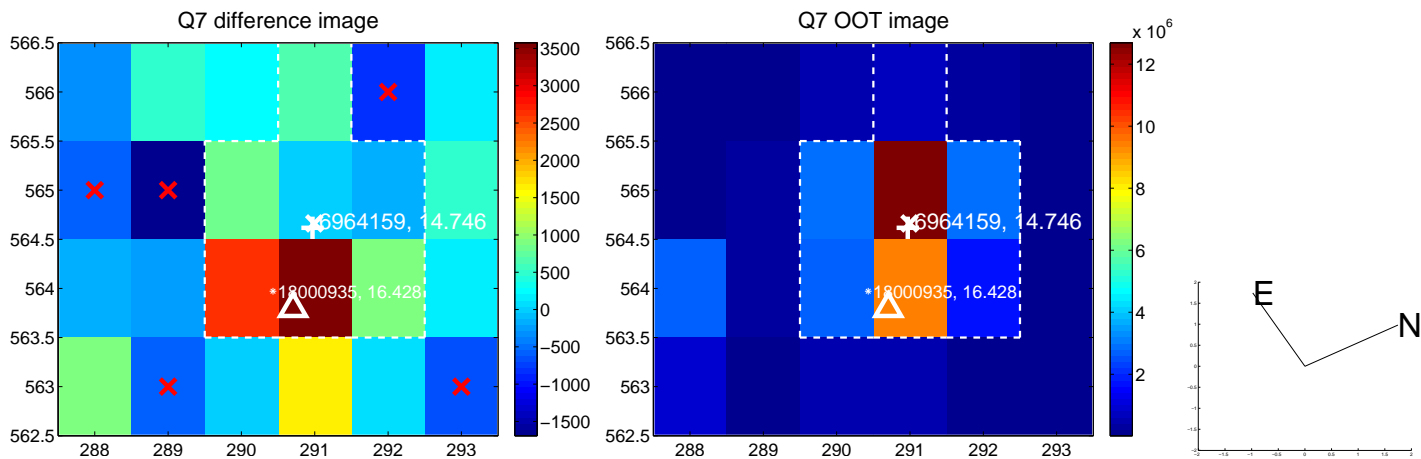
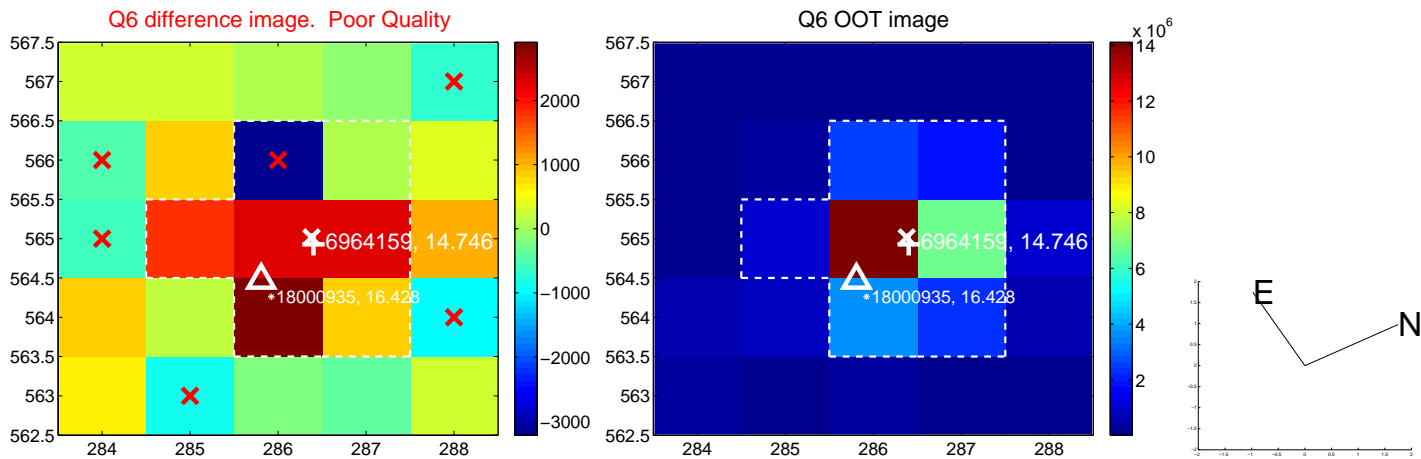
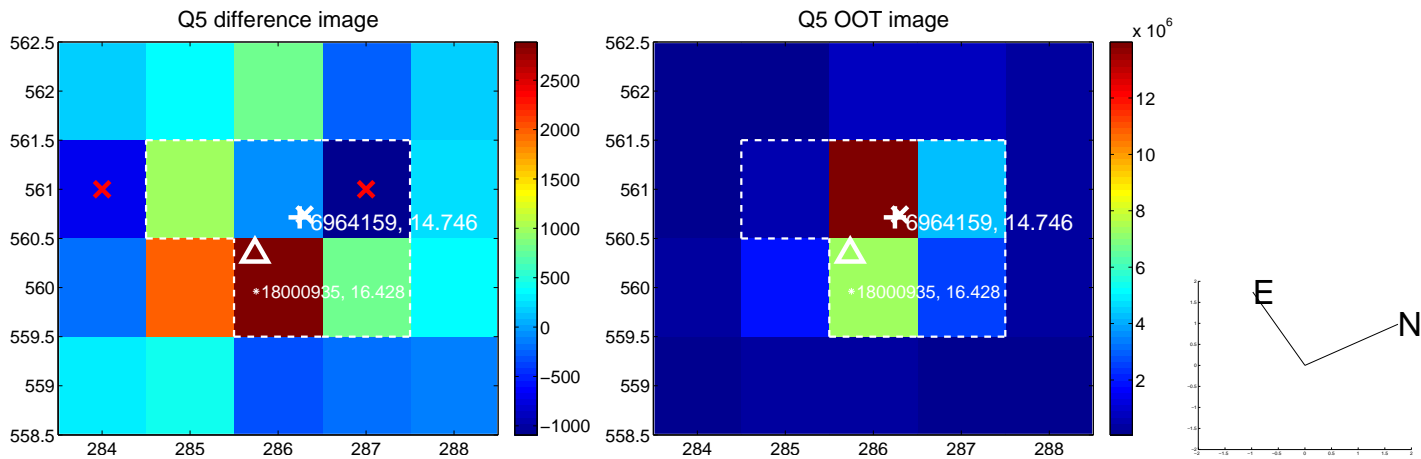


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

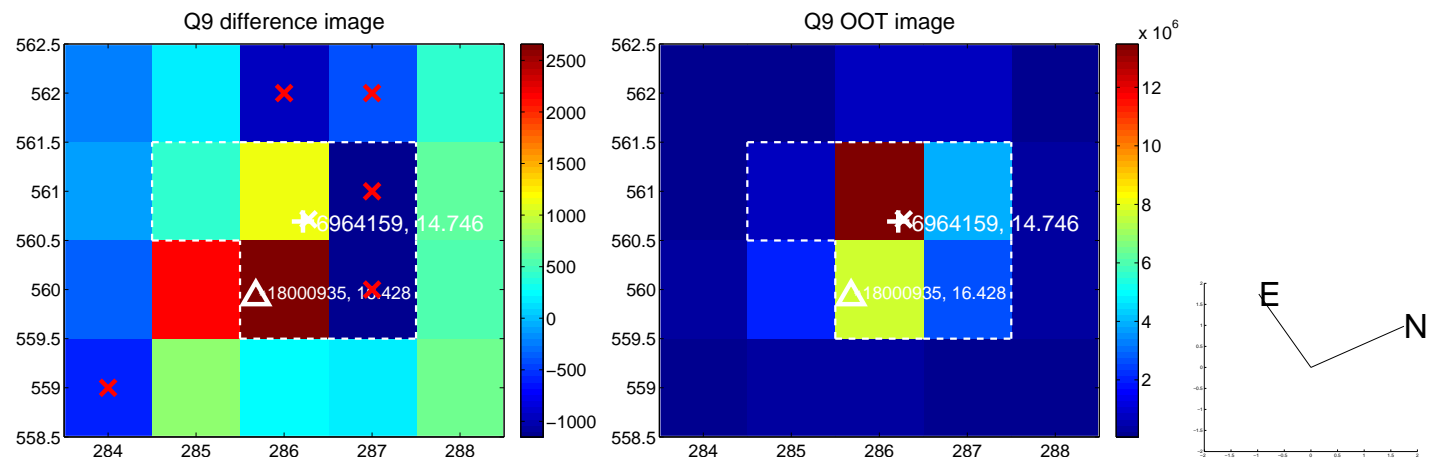
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



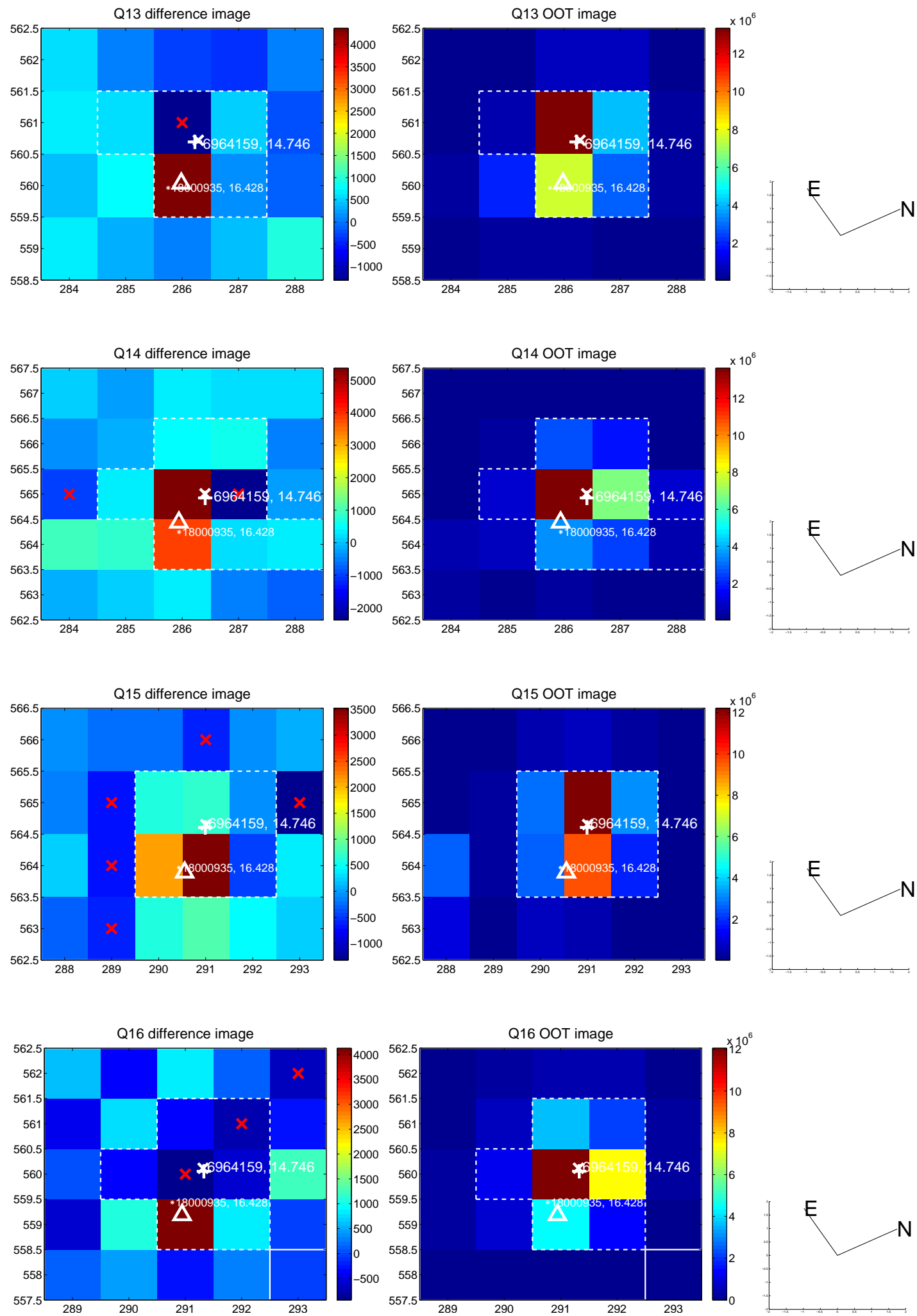
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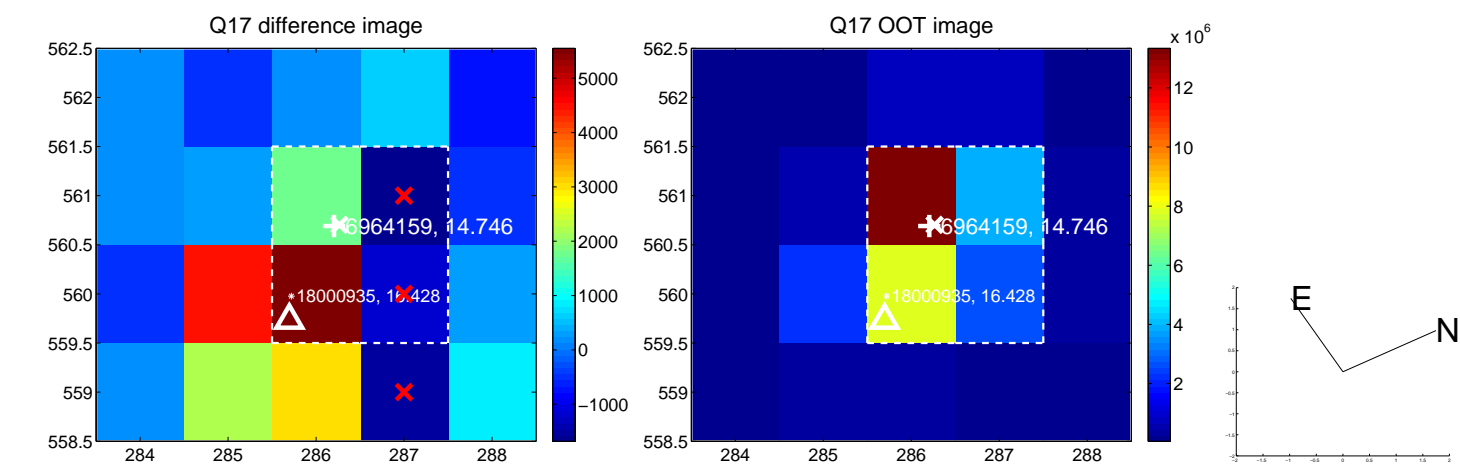
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



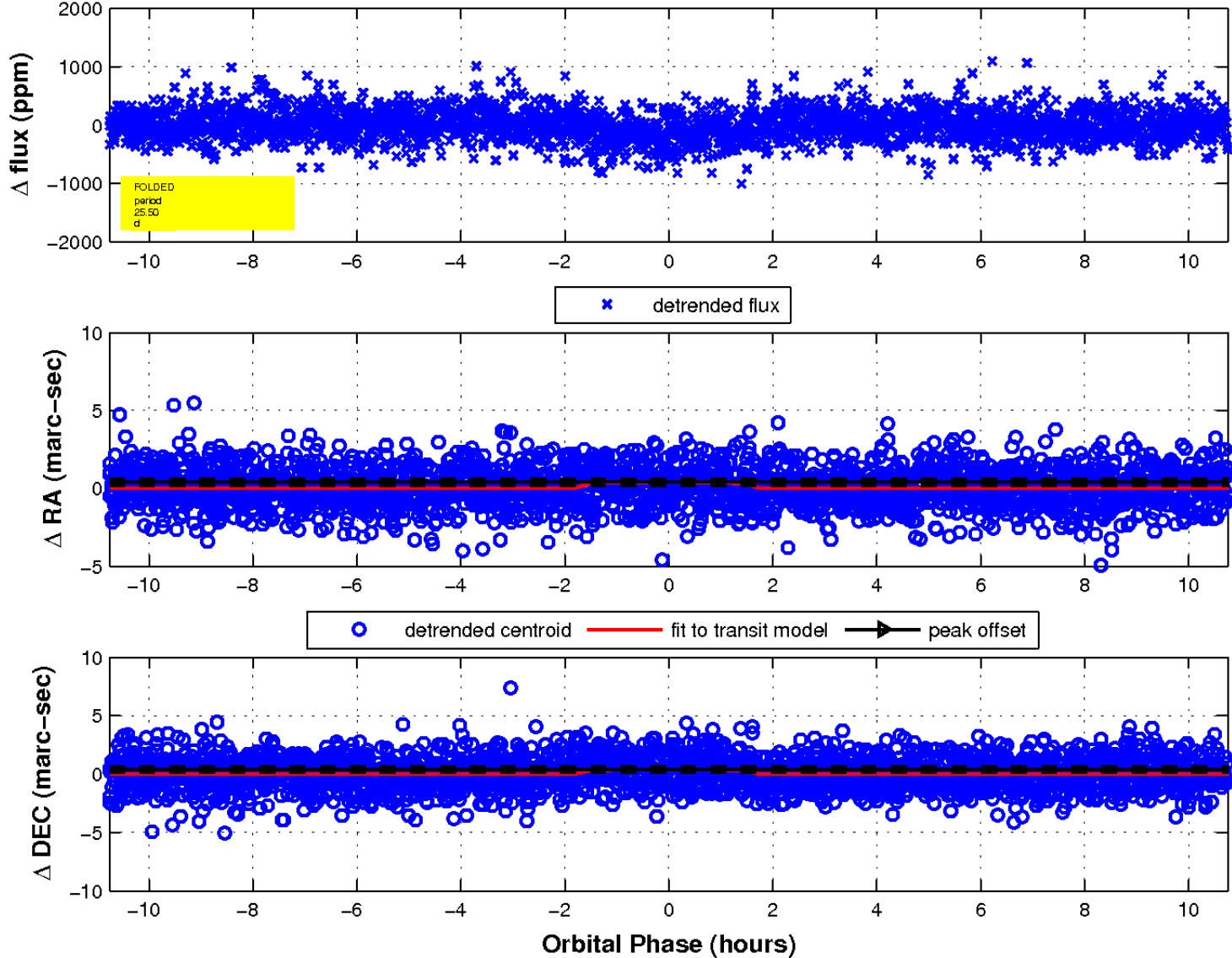
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

