

KIC 009726659

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})
009726659-01	OBS	1491.01	3.148653	133.381685	539.5	2.245	27.6	31.4	0.87	5258	2.36	343.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009726659-01	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.

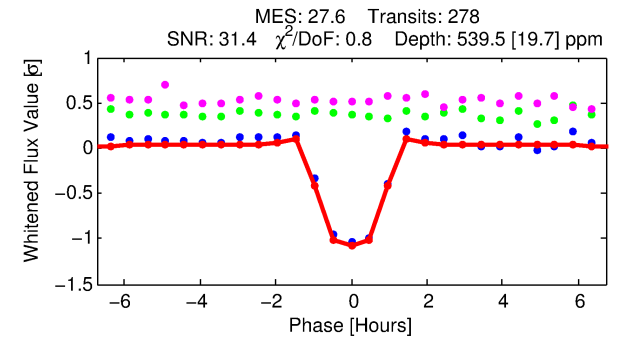
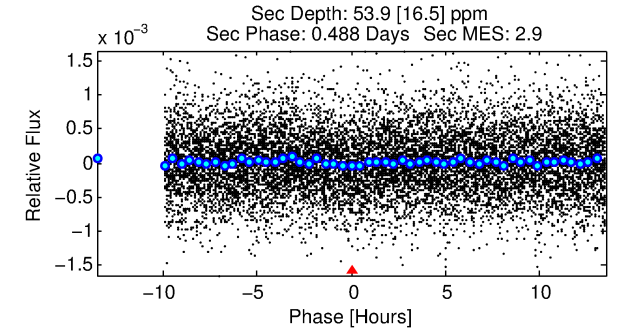
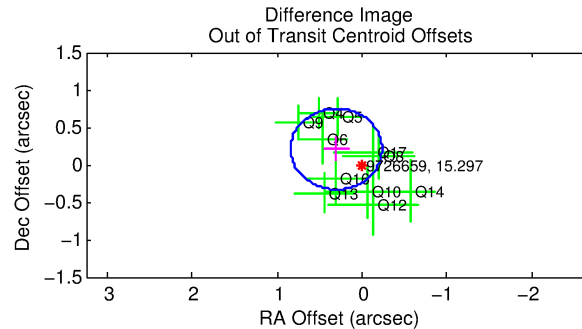
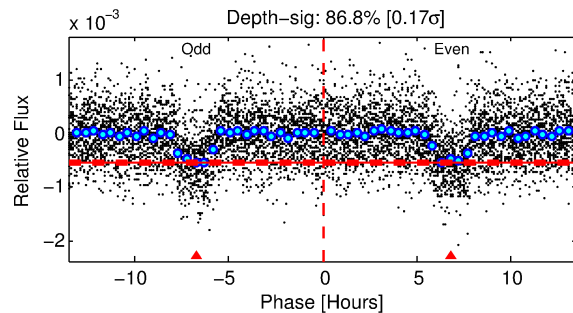
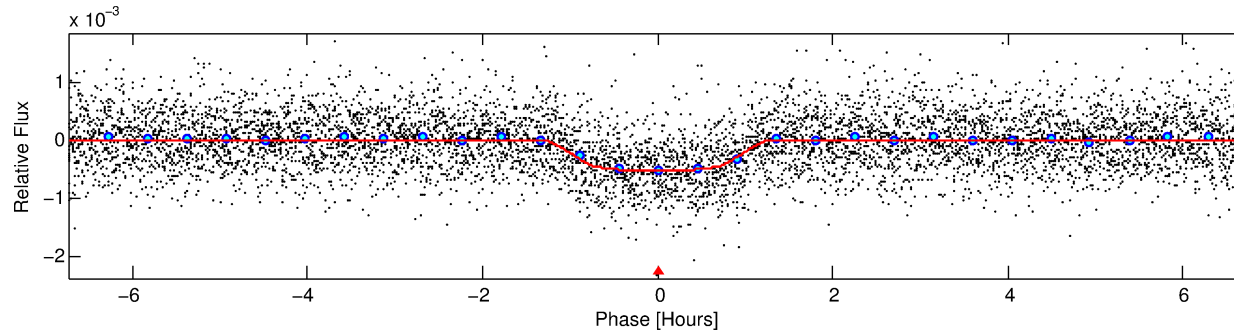
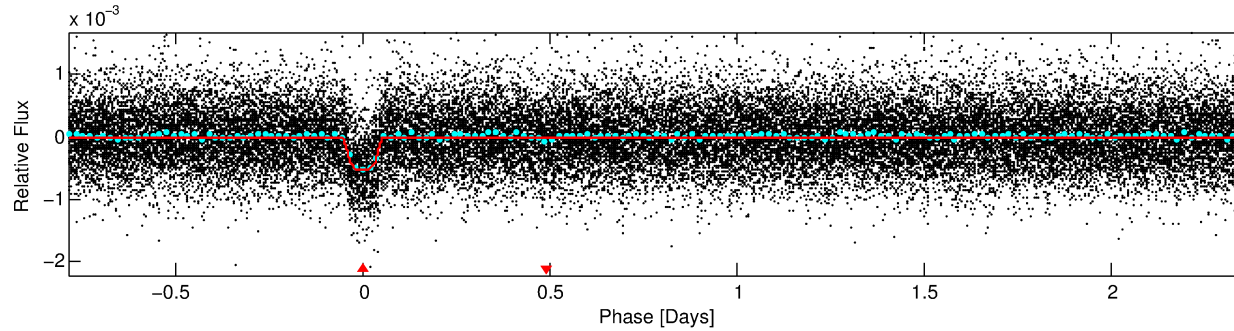
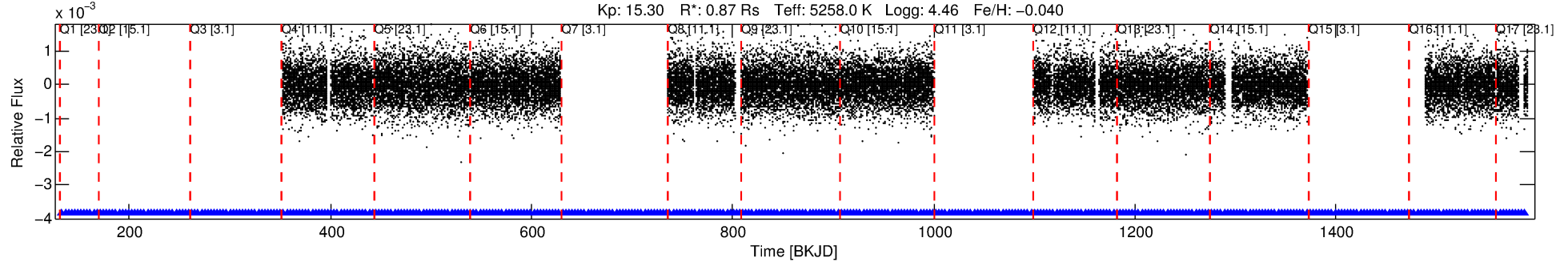
Ephemeris Match Information For 009726659-01

No Significant Match Found

DV One-Page Summary

KIC: 9726659 Candidate: 1 of 1 Period: 3.149 d
KOI: K01491.01 Corr: 0.978

Kp: 15.30 R*: 0.87 Rs Teff: 5258.0 K Logg: 4.46 Fe/H: -0.040



DV Fit Results:

Period = 3.14865 [0.00001] d
Epoch = 133.3817 [0.0011] BKJD
Rp/R* = 0.0248 [0.0059]
a/R* = 6.06 [5.60]
b = 0.86 [0.30]
Seff = 343.05 [103.04]
Teq = 1097 [82] K
Rp = 2.36 [0.71] Re
a = 0.0390 [0.0066] AU
Ag = 8.11 [5.08] [1.40σ]
Teffp = 2863 [419] K [4.14σ]

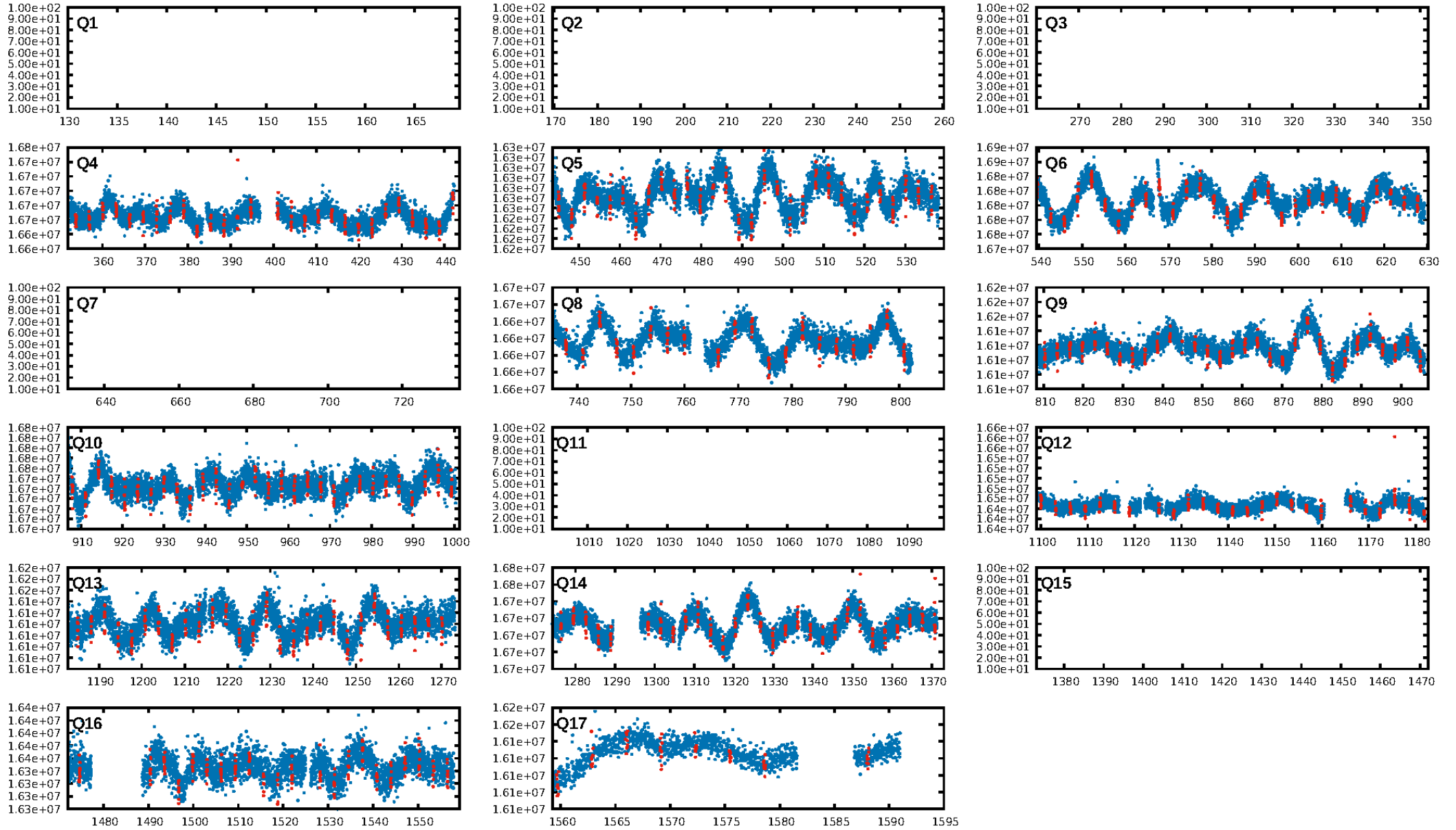
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.74e-162
RollingBand-fgt: 1.00 [270/270]
GhostDiagnostic-chr: -7.023
Centroid-sig: 0.0%
Centroid-so: 1.076 arcsec [2.46σ]
OotOffset-rm: 0.365 arcsec [2.03σ]
KicOffset-rm: 0.435 arcsec [2.63σ]
OotOffset-st: 3/0/4/4 [11]
KicOffset-st: 3/0/4/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [11/11]

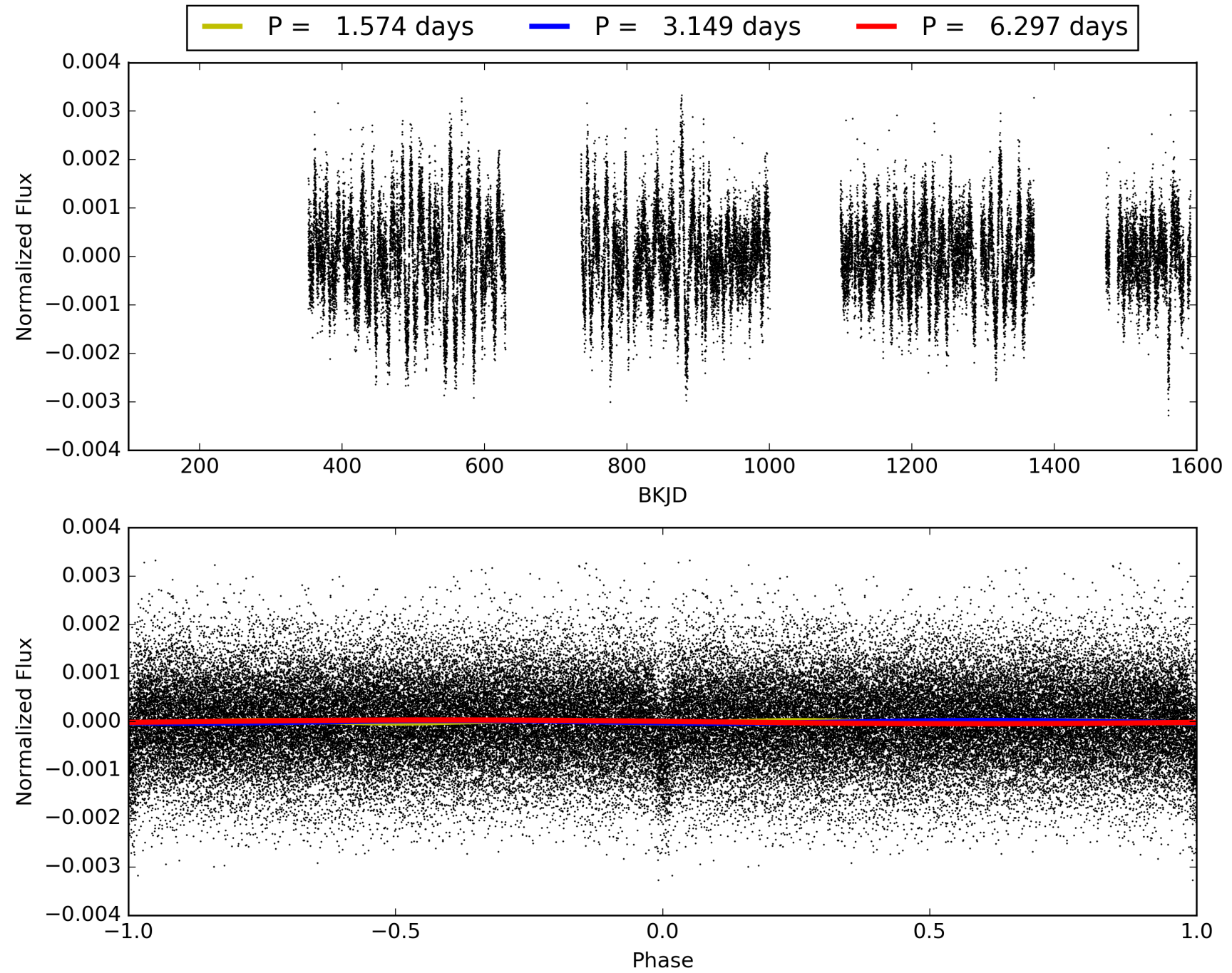
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:35:16 Z

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

TCE 009726659-01, PDC Light Curves

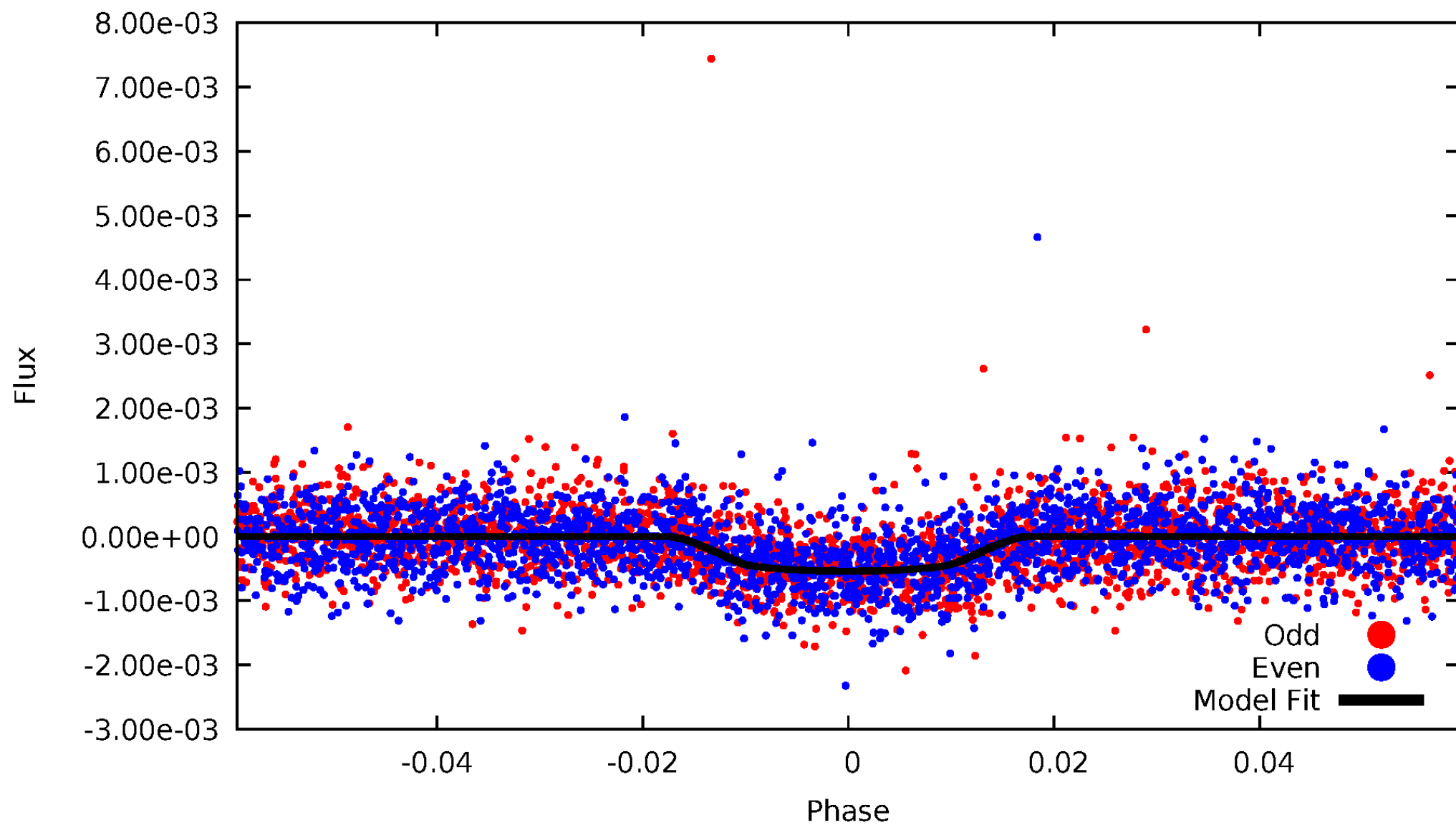


TCE 009726659-01



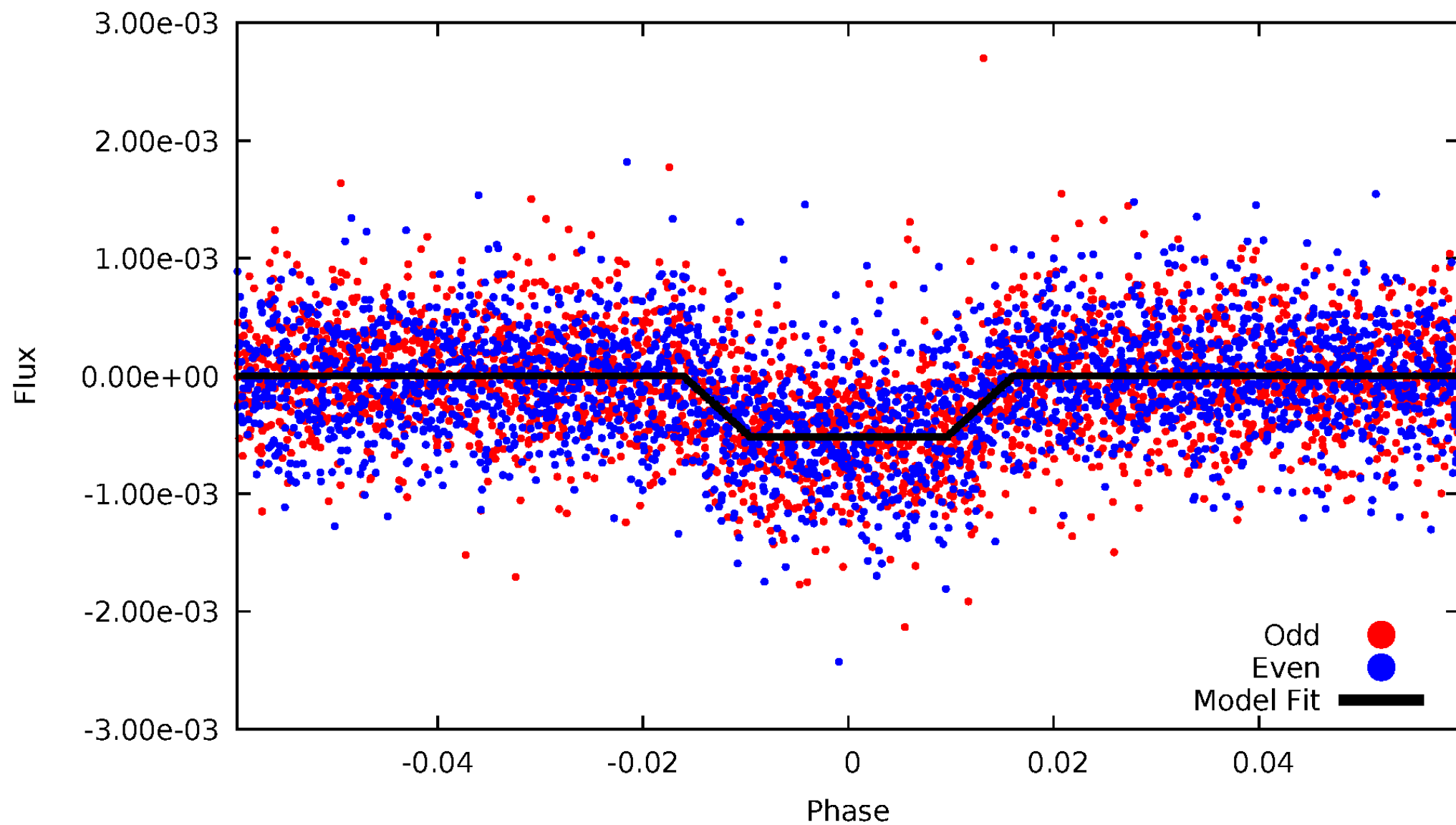
DV Odd/Even

TCE 009726659-01



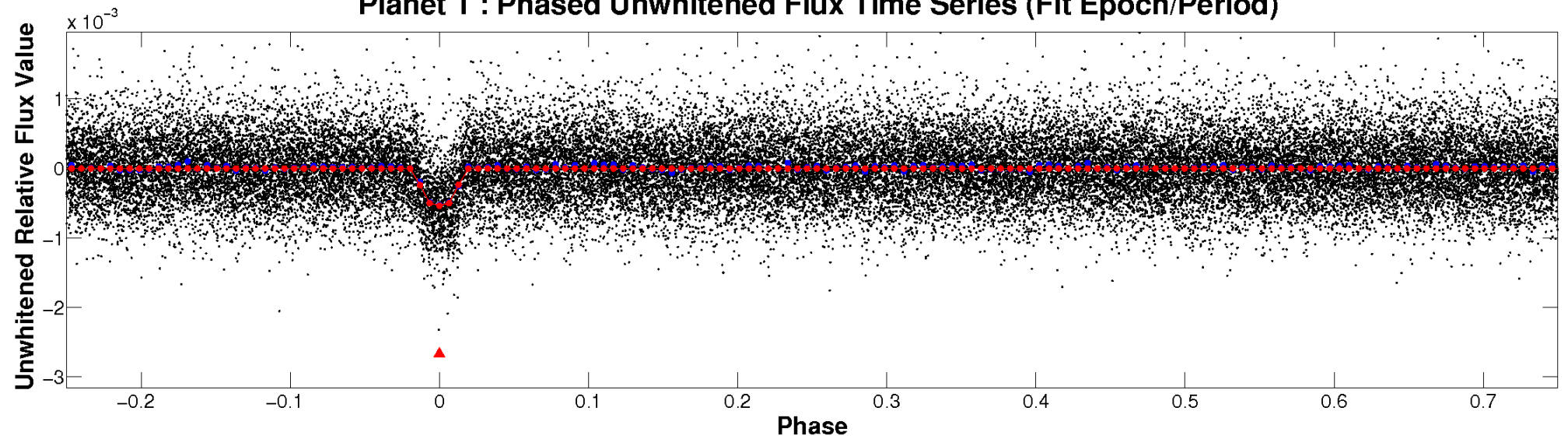
ALT Odd/Even

TCE 009726659-01

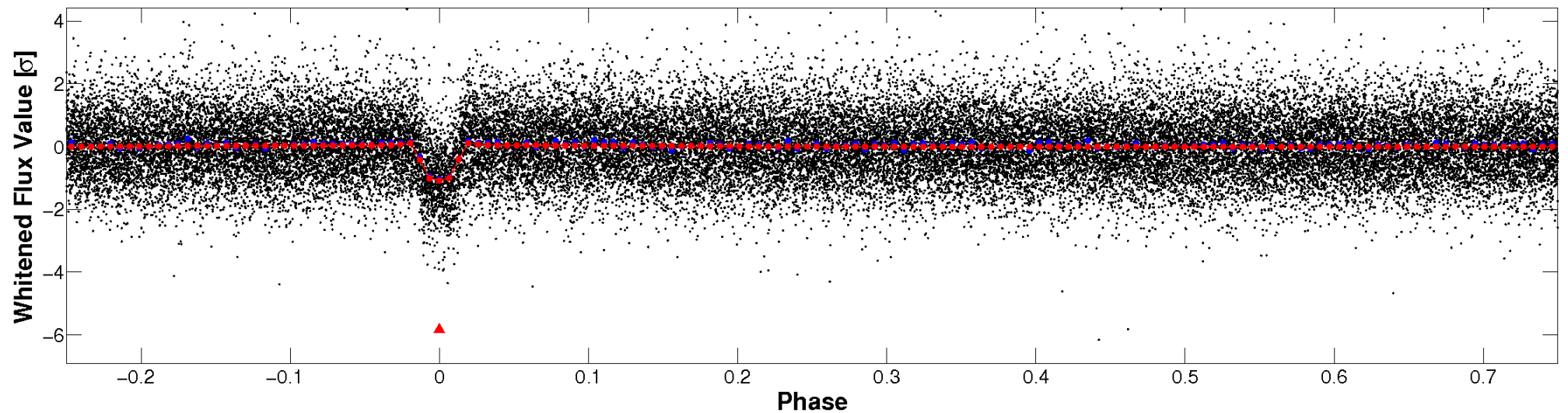


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

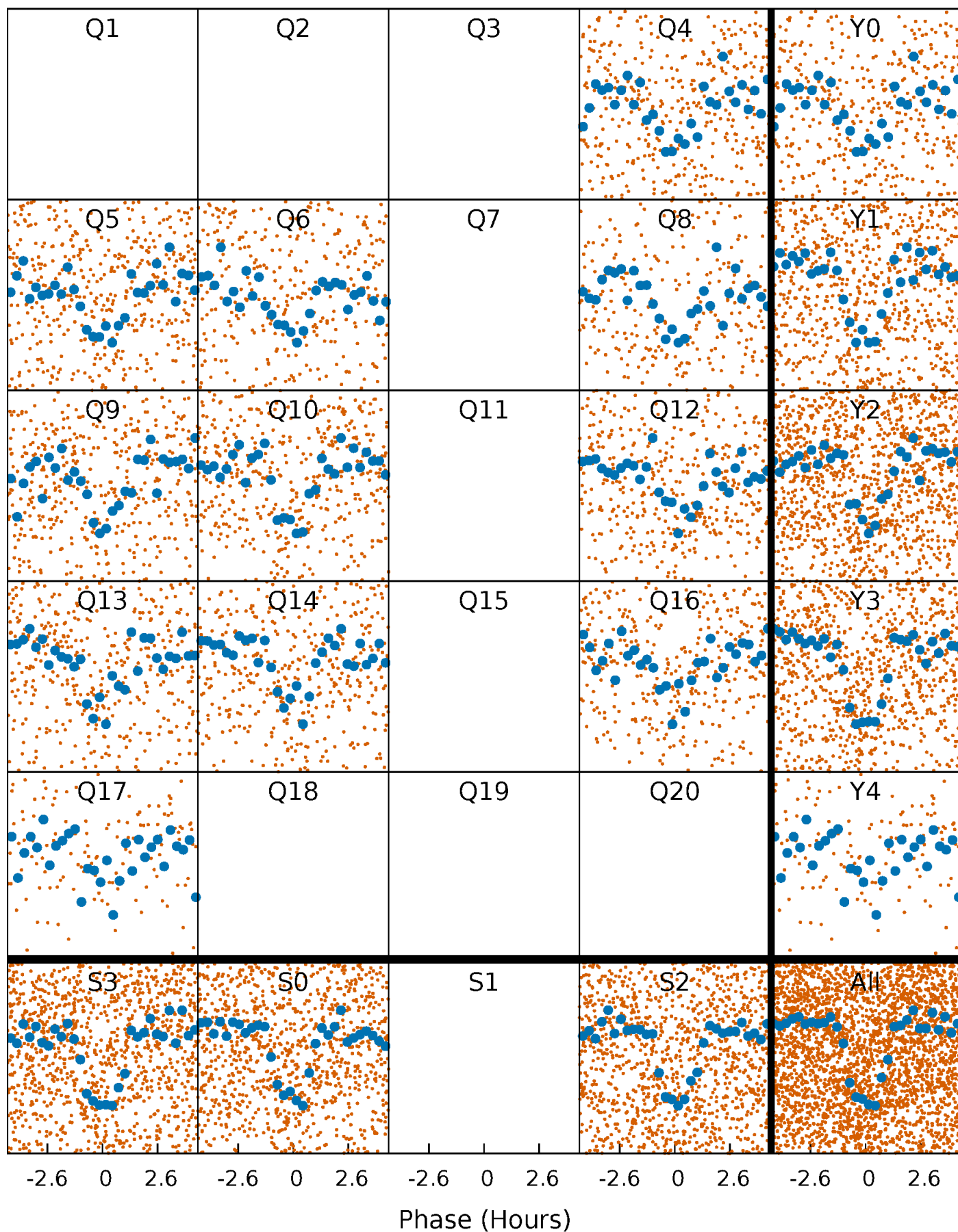


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



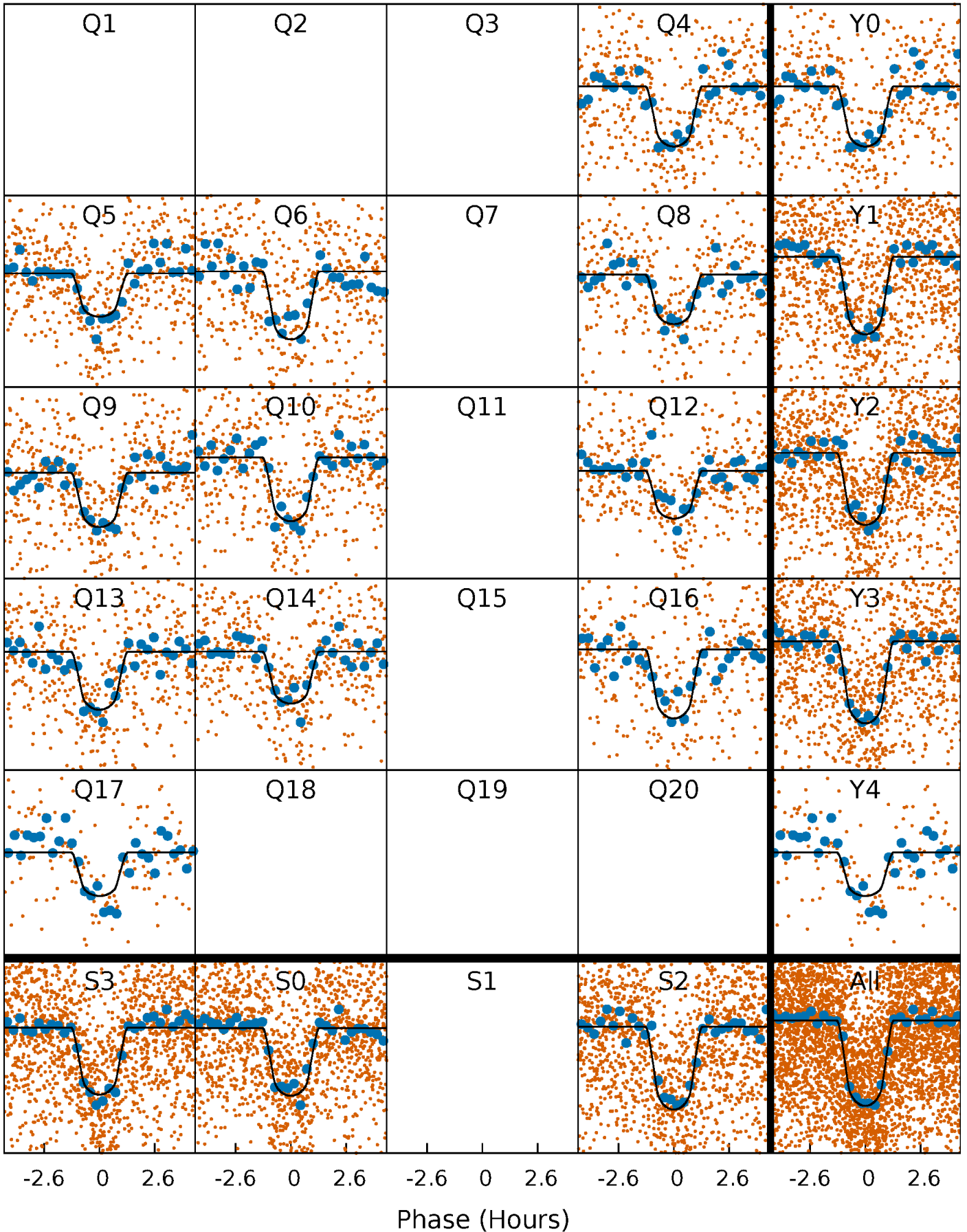
PDC Quarter-Phased Transit Curves

TCE 009726659-01 P= 3.148653 Days $T_0=133.381685$ (BKJD)



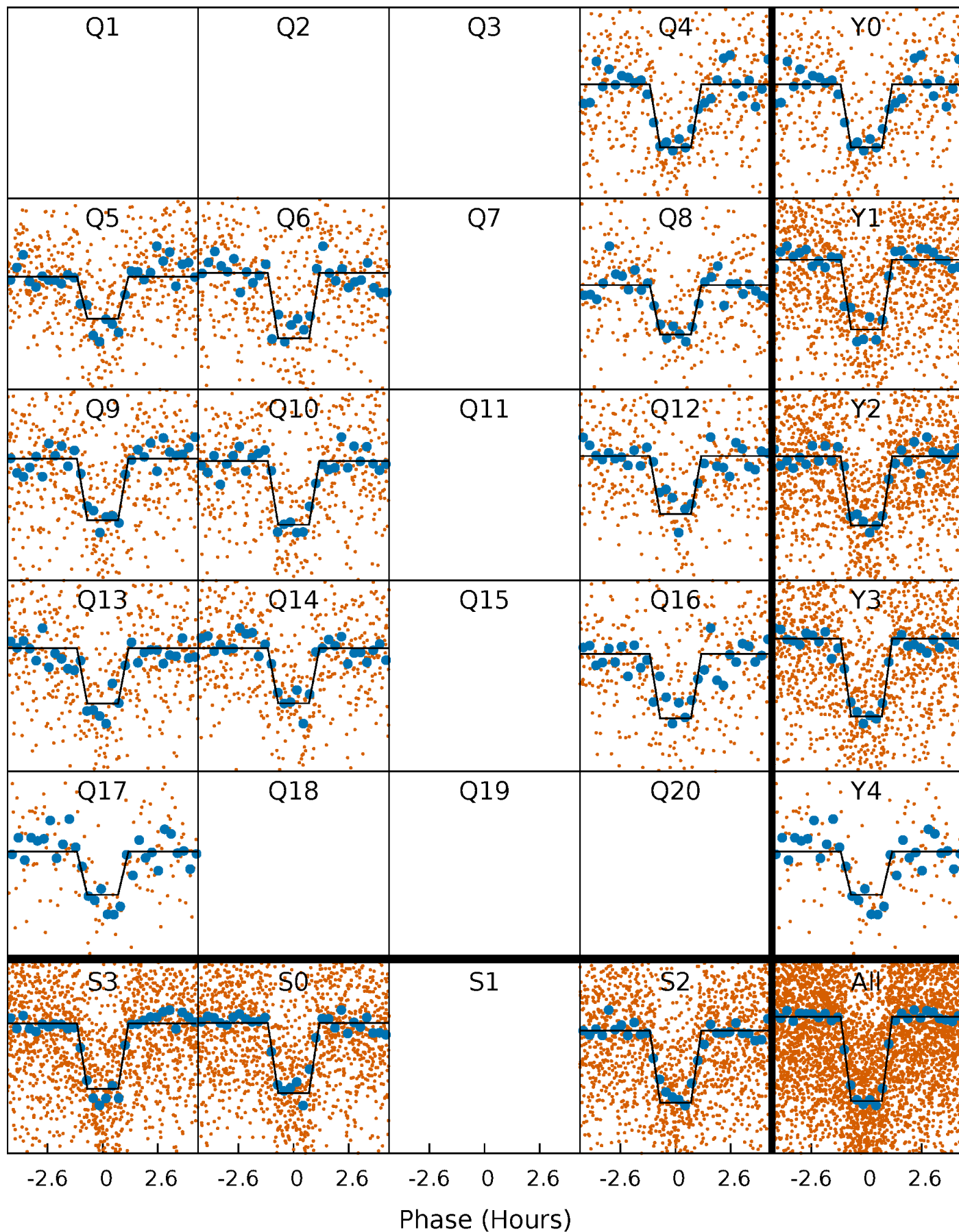
DV Quarter-Phased Transit Curves

TCE 009726659-01 P= 3.148653 Days $T_0=133.381685$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

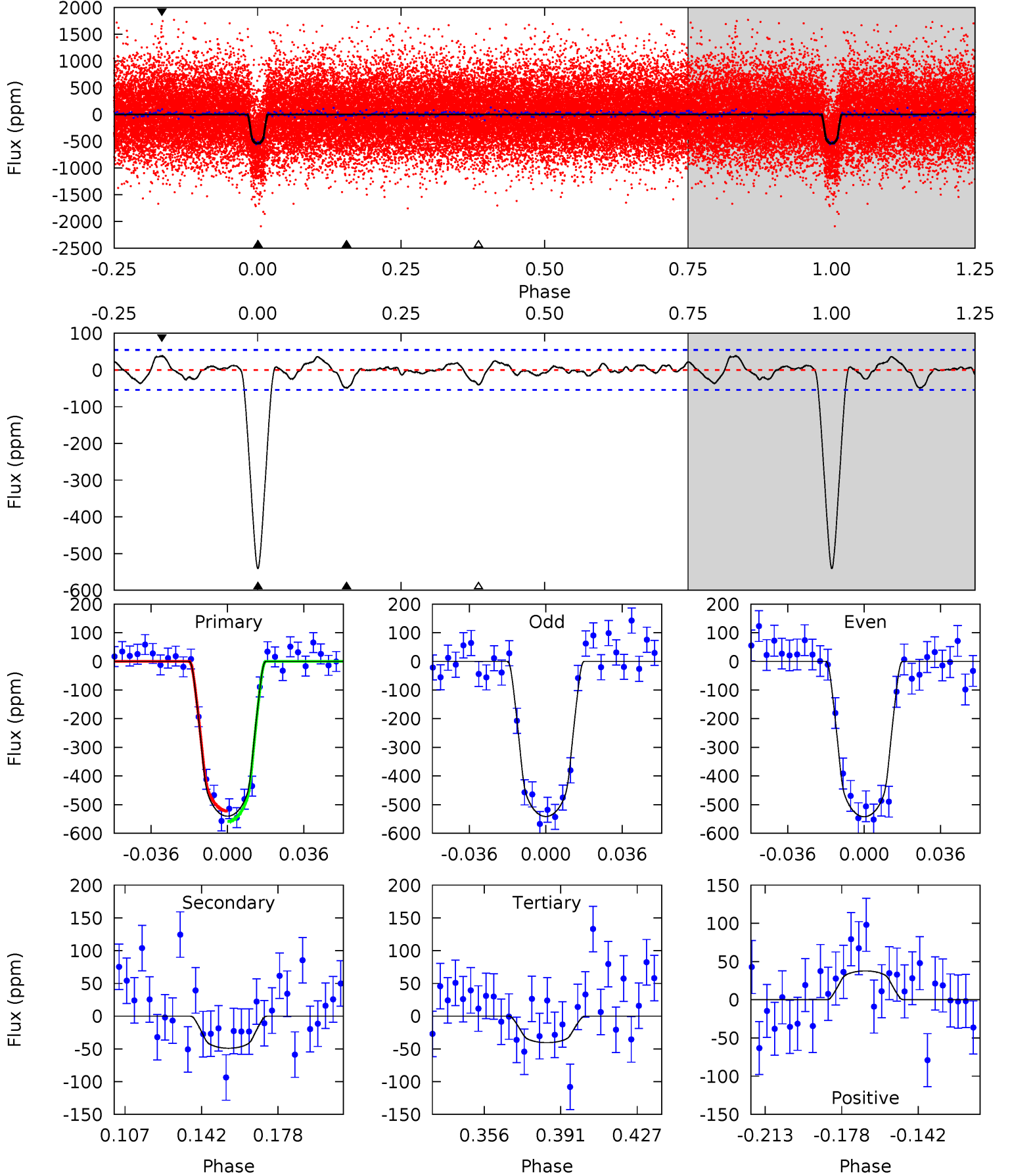
TCE 009726659-01 P= 3.148645 Days $T_0=133.384620$ (BKJD)



DV Model-Shift Uniqueness Test

009726659-01, P = 3.148653 Days, E = 133.381685 Days

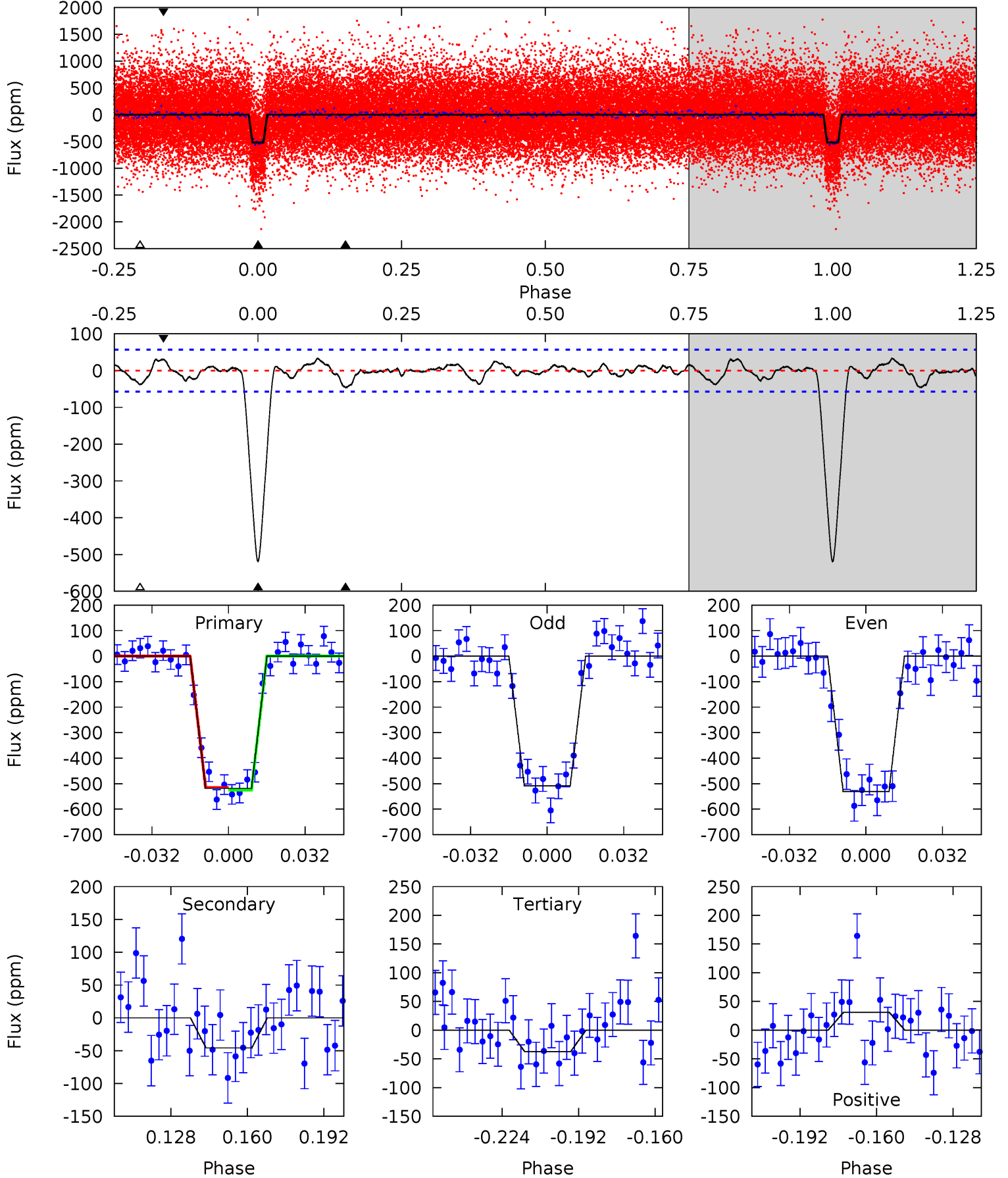
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.4	4.30	3.55	3.31	4.78	2.10	1.28	43.9	44.1	0.75	0.99	0.04	0.96	0.07	1.62



Alt Model-Shift Uniqueness Test

009726659-01, P = 3.148645 Days, E = 133.384620 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.7	3.86	3.17	2.61	4.80	2.14	1.12	40.6	41.1	0.69	1.25	0.92	1.02	0.06	0.45



Stellar Parameters For KIC 009726659

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5258^{+184}_{-184}	$4.458^{+0.112}_{-0.154}$	$-0.040^{+0.300}_{-0.300}$	$0.873^{+0.159}_{-0.119}$	$0.797^{+0.112}_{-0.060}$	$1.689^{+0.858}_{-0.664}$
	+3%/-3%	+3%/-3%	+750%/-750%	+18%/-14%	+14%/-8%	+51%/-39%
Source	KIC0	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 009726659-01 / KOI 1491.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-49 ± 11	$2.39^{+0.65}_{-0.59}$	1545^{+86}_{-82}	3301^{+344}_{-286}	$7.194^{+6.263}_{-3.093}$
Alt.	-46 ± 12	$2.21^{+0.70}_{-0.62}$	1546^{+92}_{-88}	3344^{+370}_{-294}	$7.649^{+7.102}_{-3.305}$

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 $A_{obs} \gg 1.0$

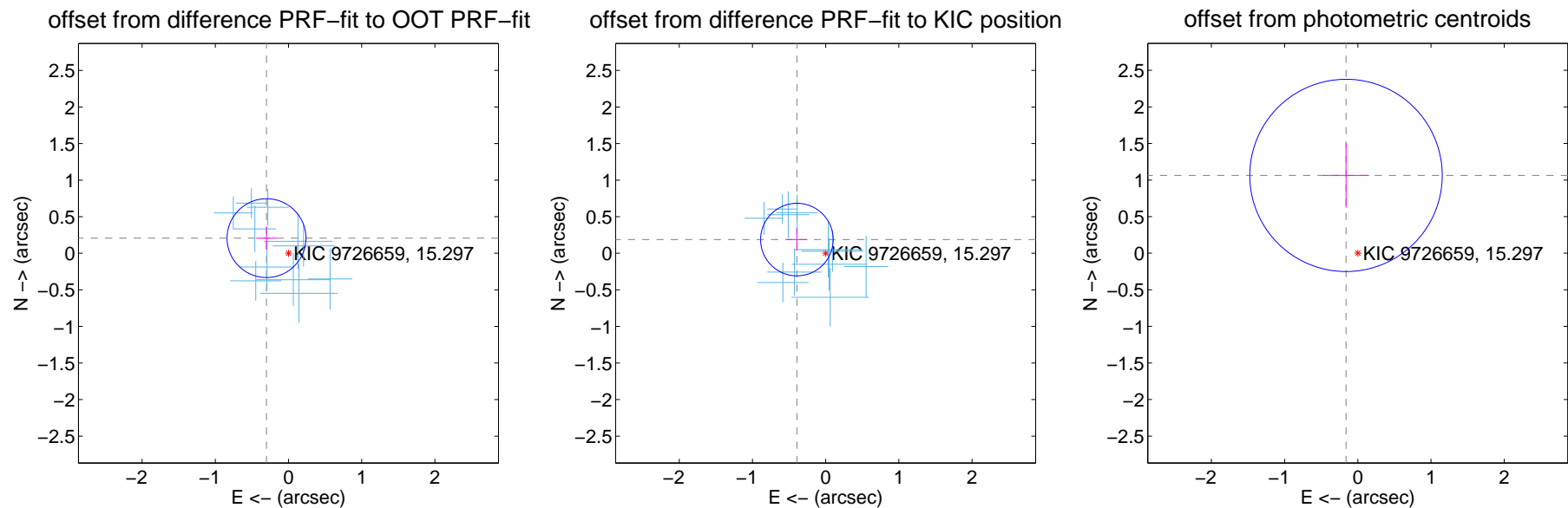
DV Centroid Data

Supplemental centroid analysis for 009726659-01. Kepler magnitude: 15.30. Transit SNR 31.39

There are 11 quarters with good PRF difference image offsets

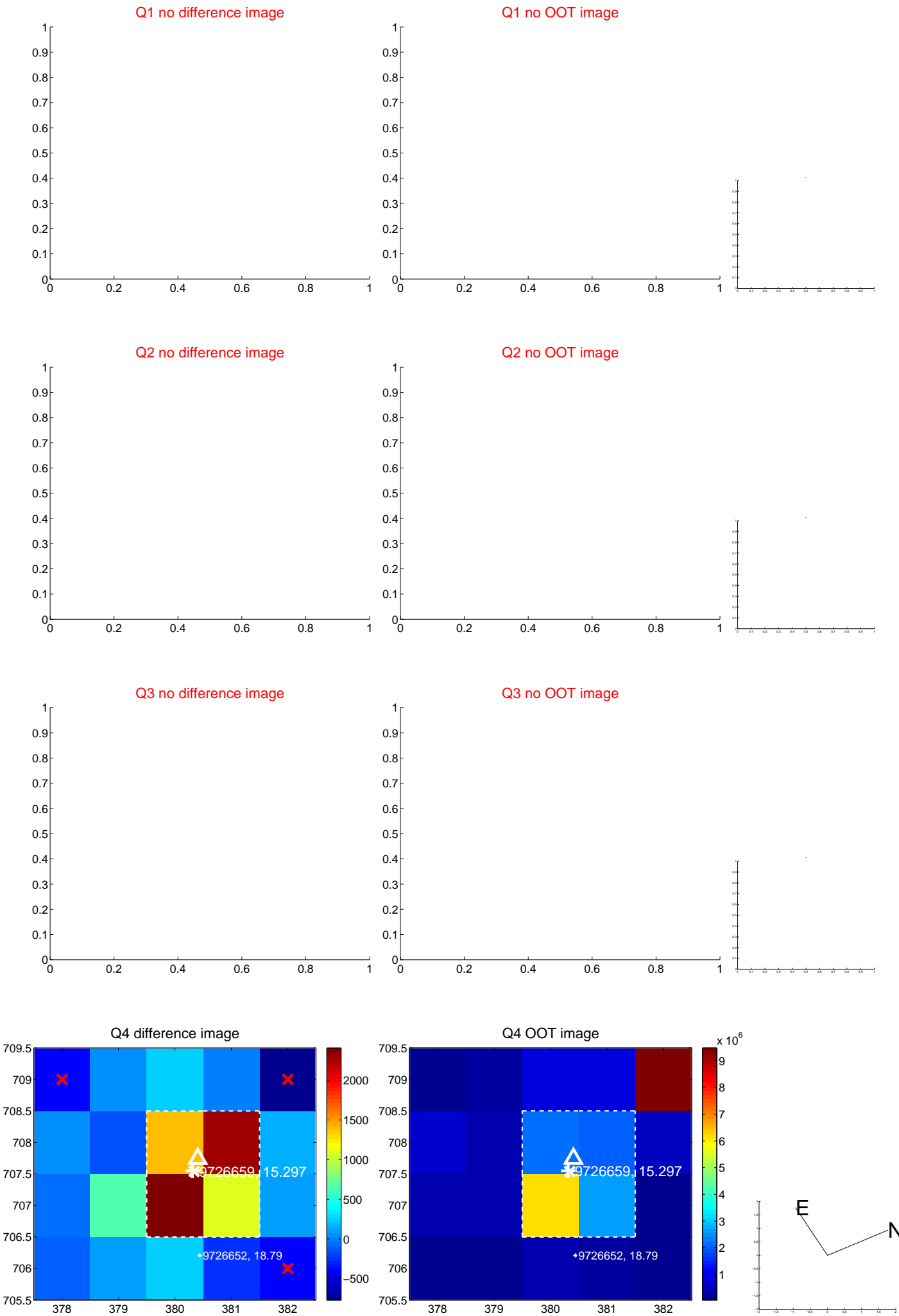
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.365 ± 0.180	2.03	0.300 ± 0.140	0.207 ± 0.157
PRF-fit source offset from KIC position	0.435 ± 0.165	2.63	0.393 ± 0.143	0.188 ± 0.150
photometric centroid source offset	1.08 ± 0.44	2.46	0.16 ± 0.31	1.06 ± 0.44

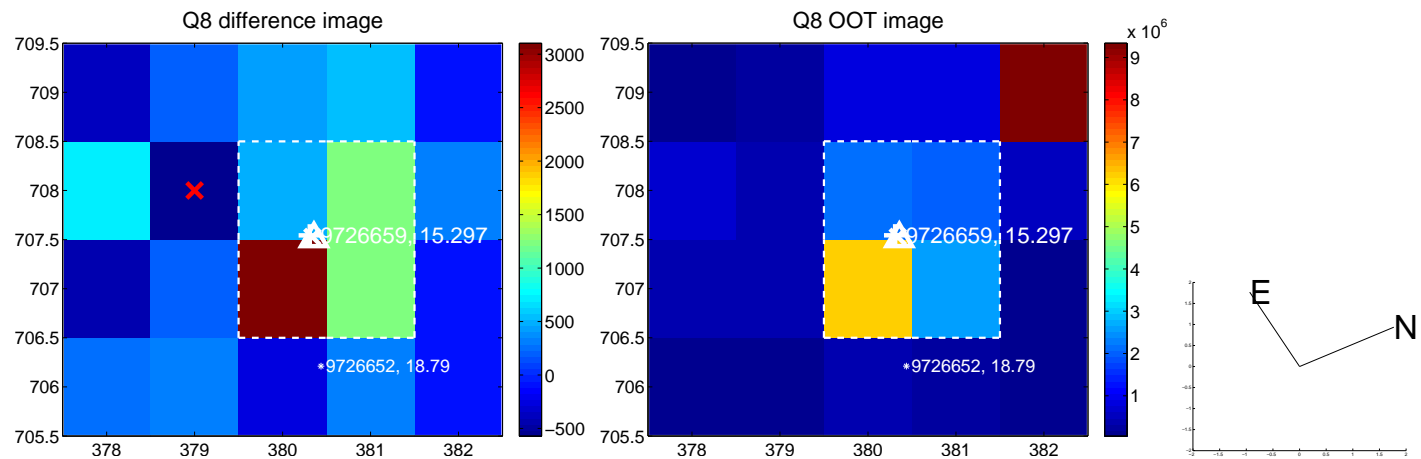
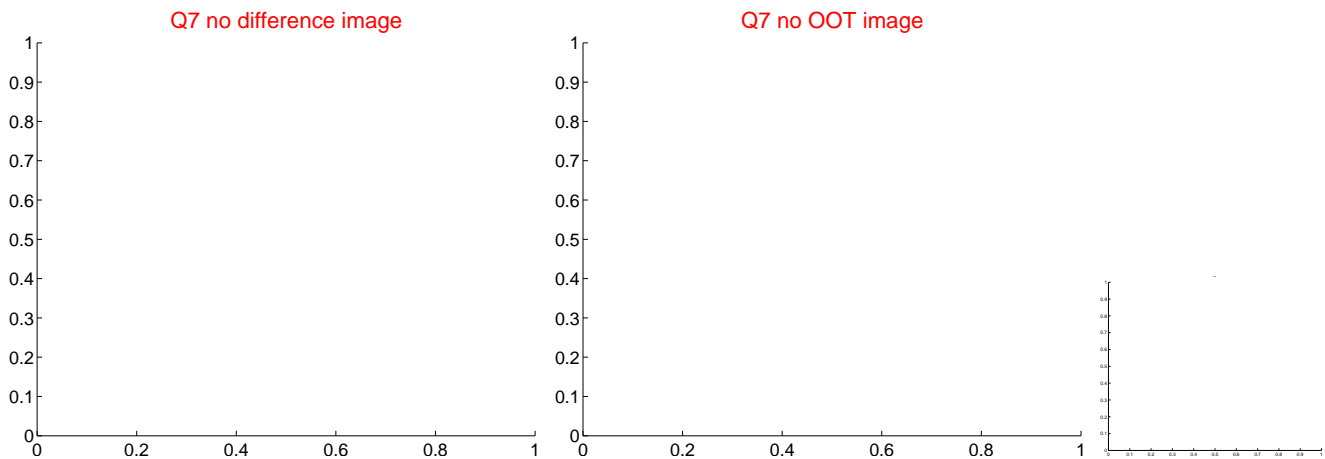
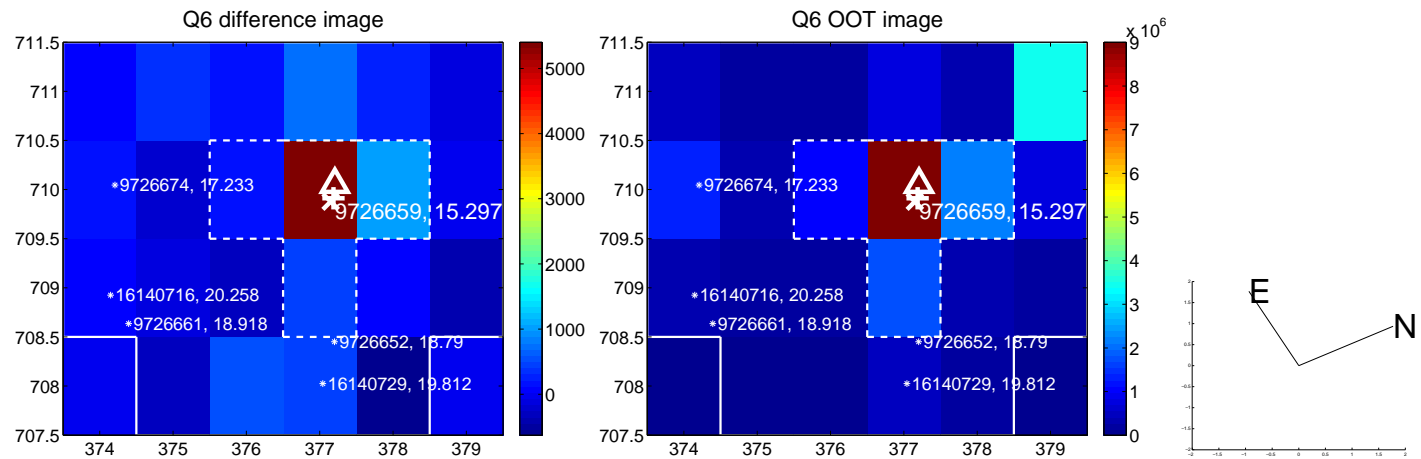
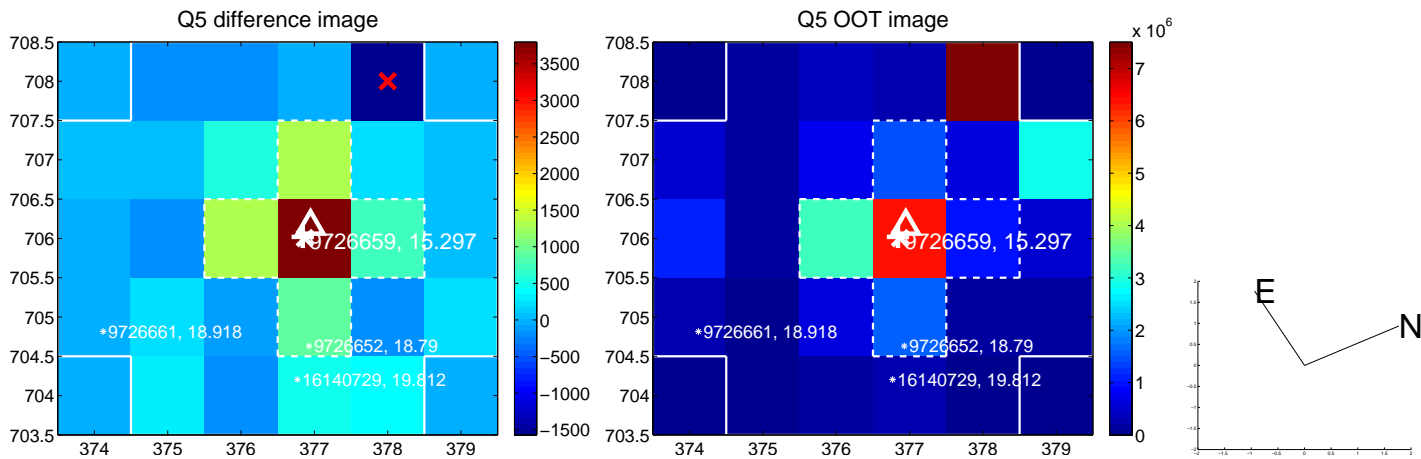


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

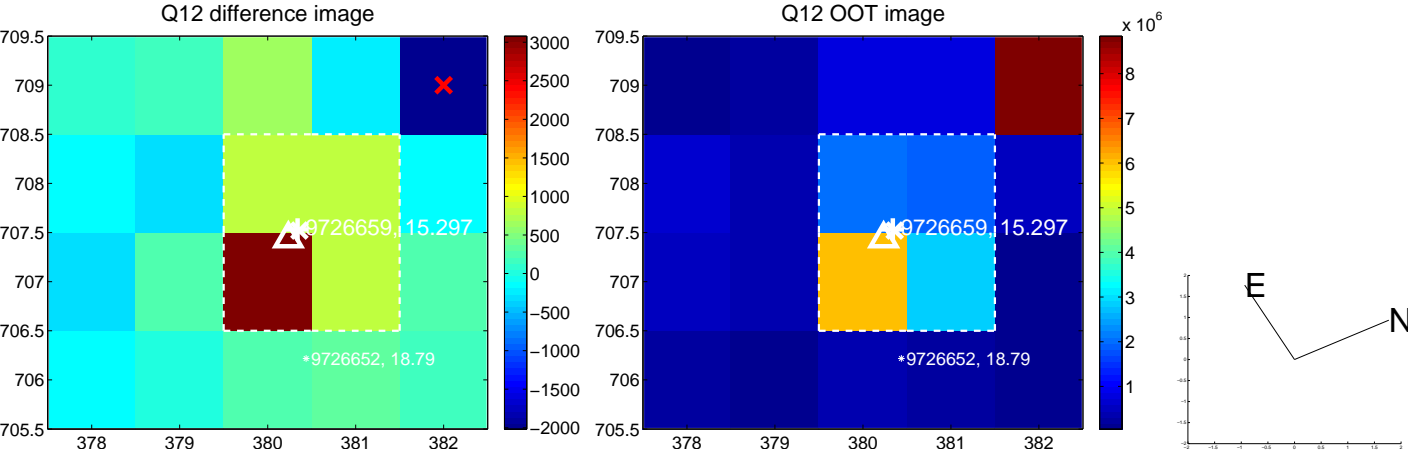
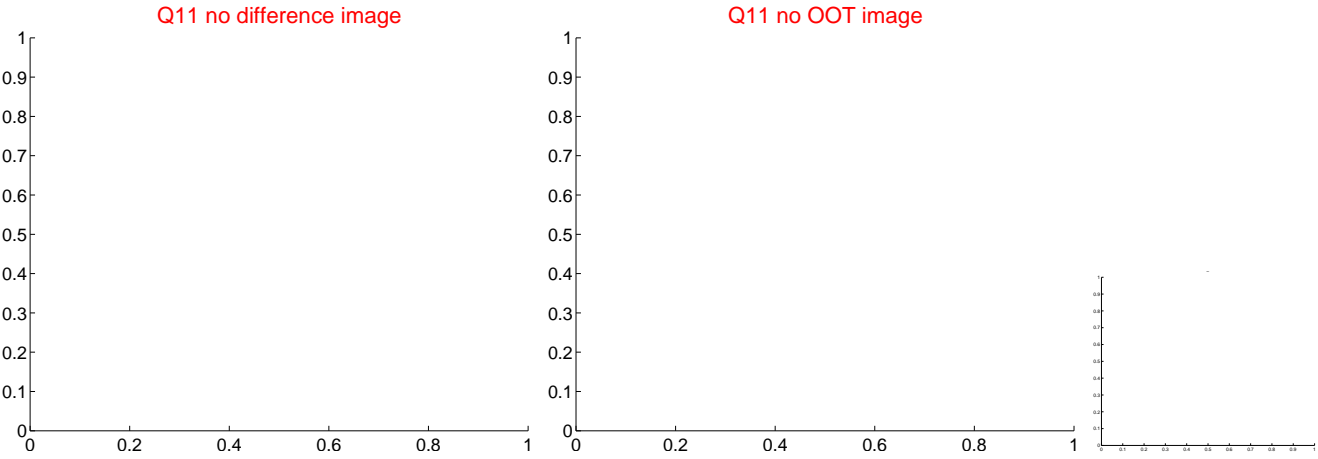
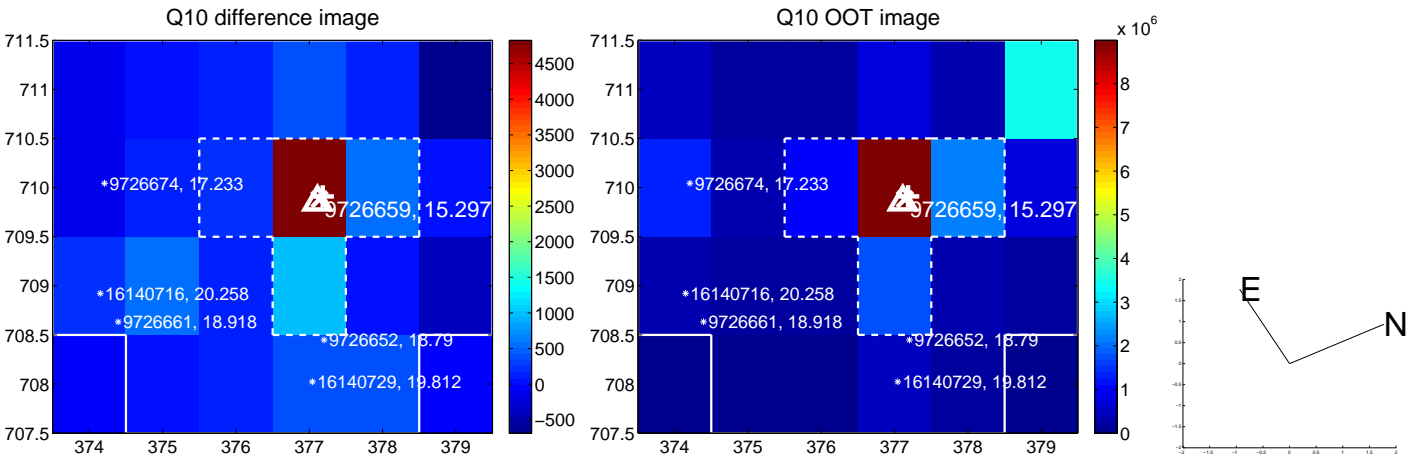
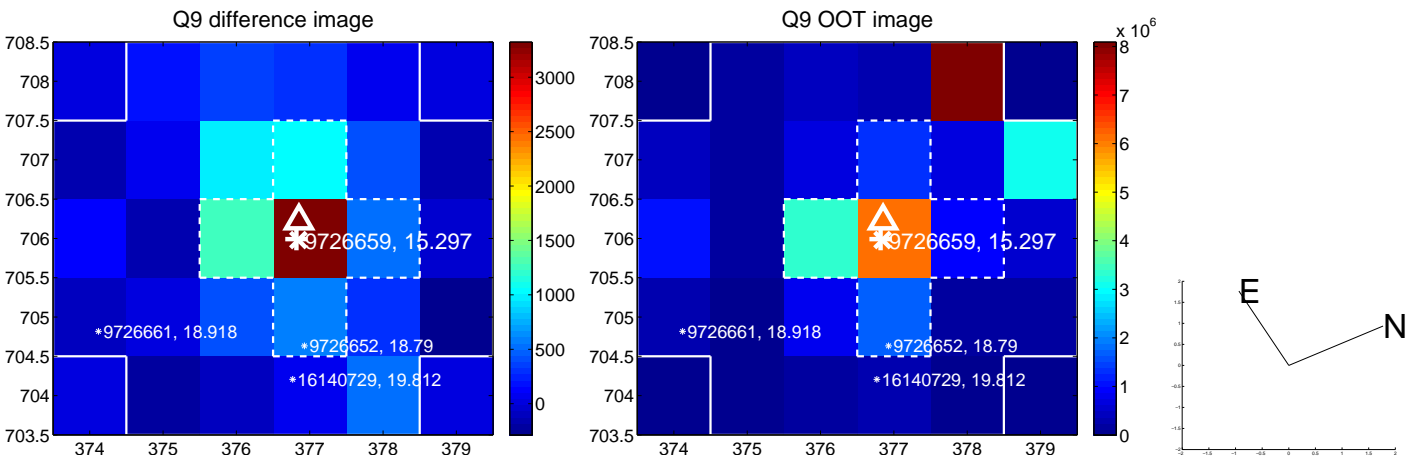
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



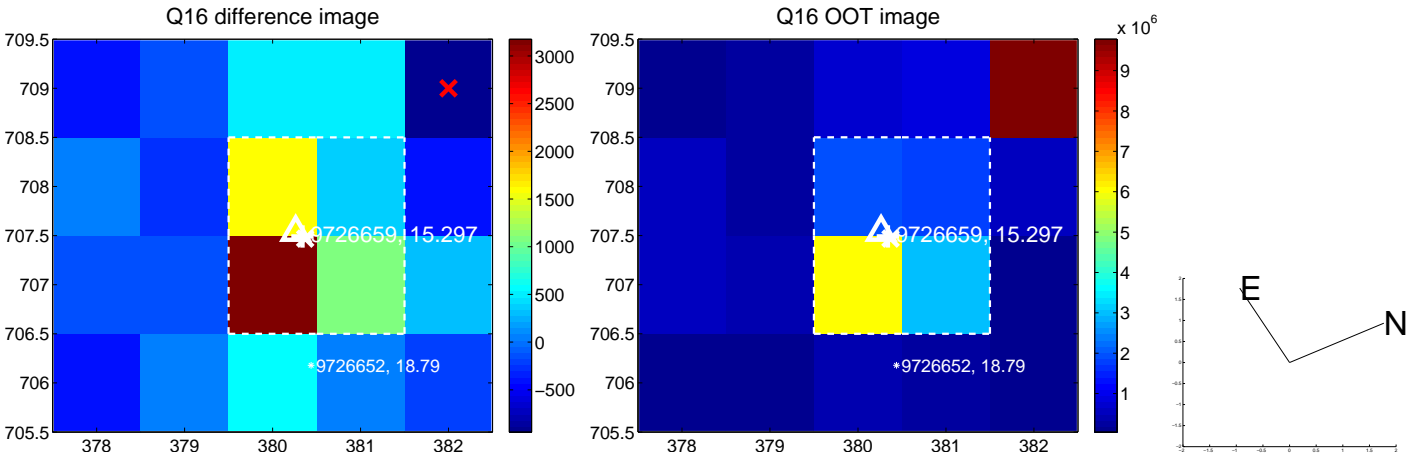
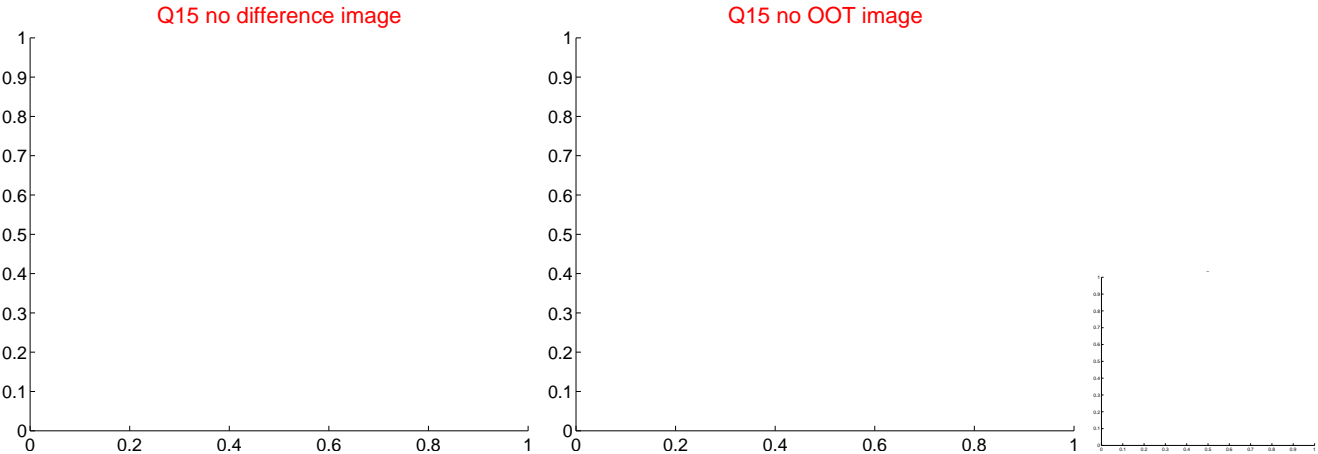
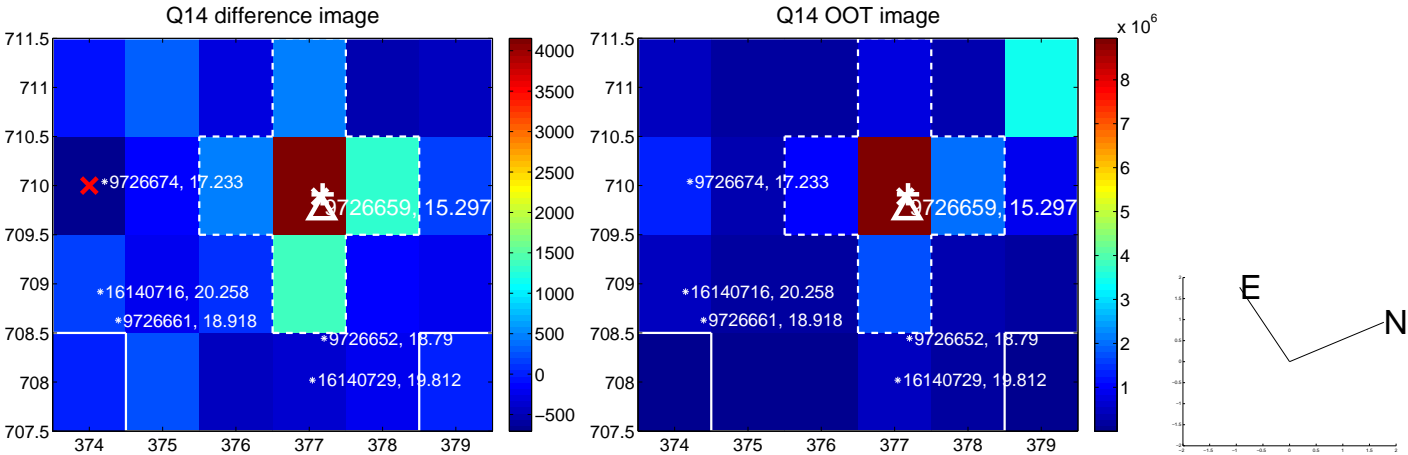
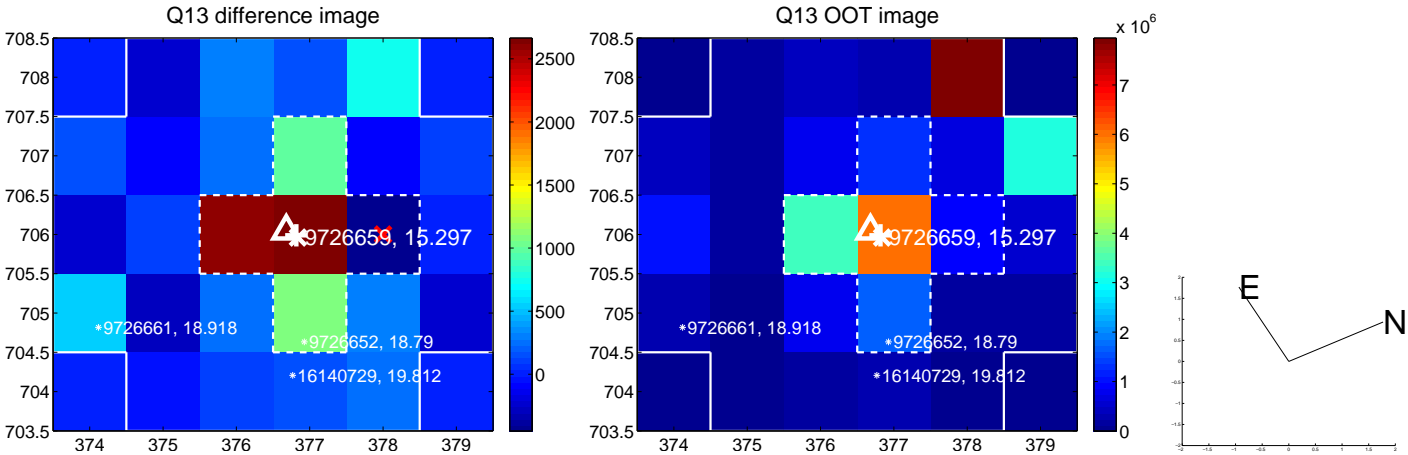
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



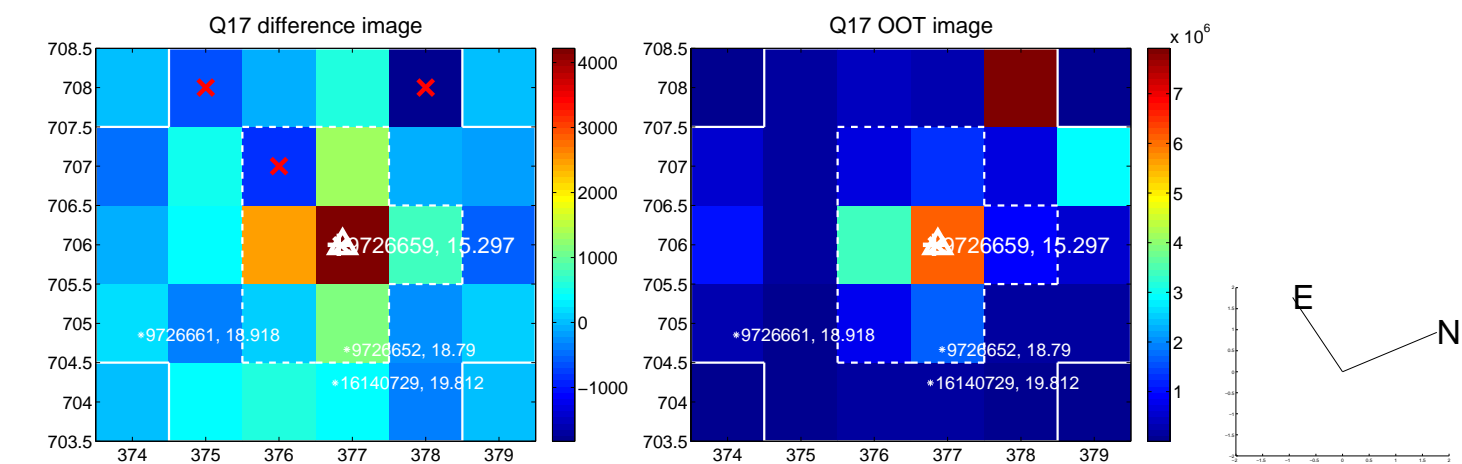
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



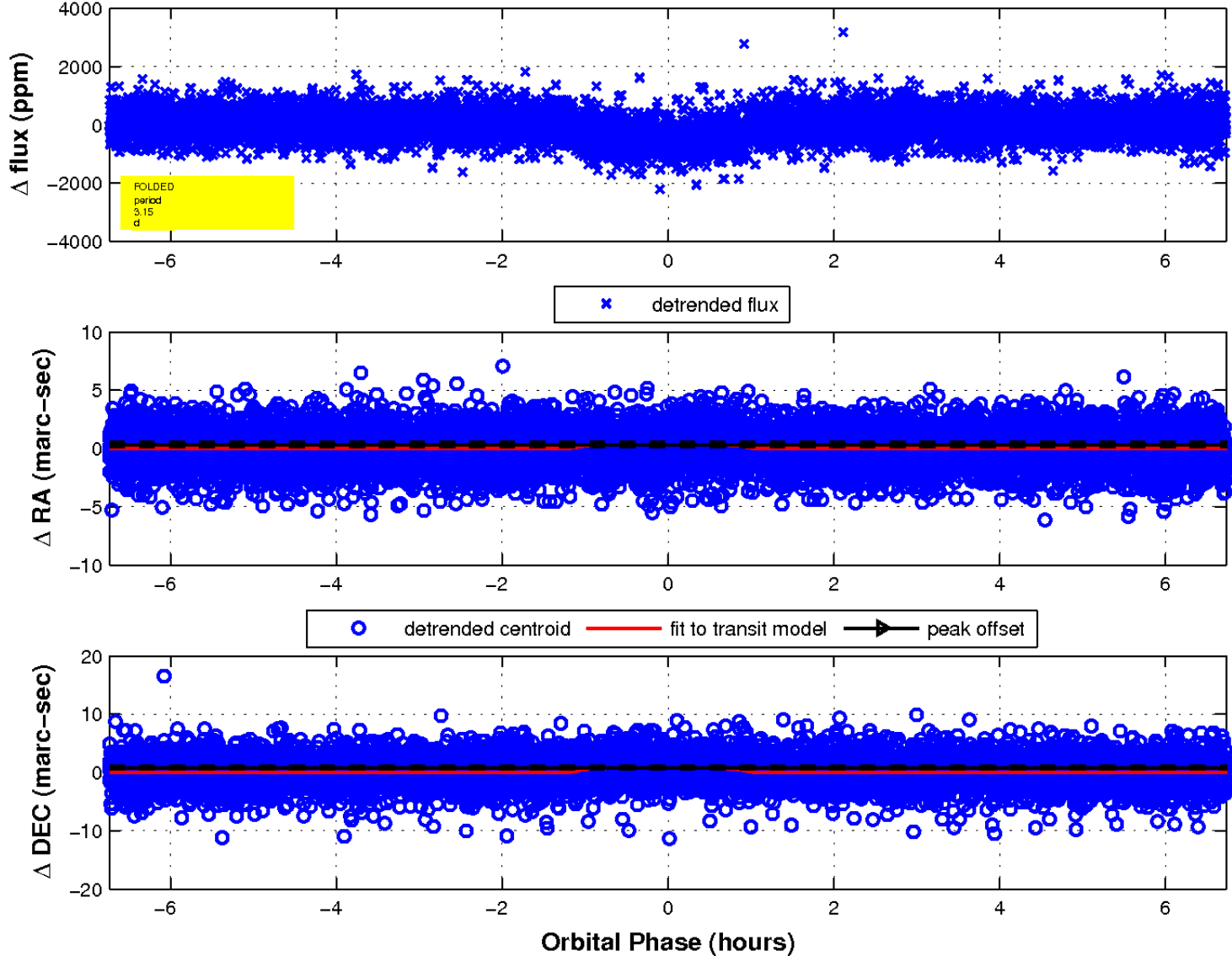
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

