

KIC 011974540

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})
011974540-01	OBS	0129.01	24.669189	132.864245	7410.4	6.997	431.8	455.0	9.33	5313	78.02	1153.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011974540-01	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.

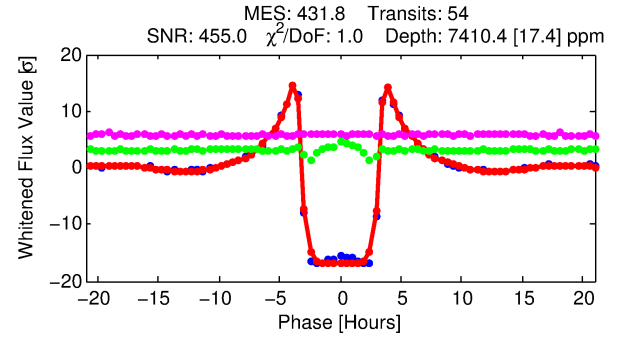
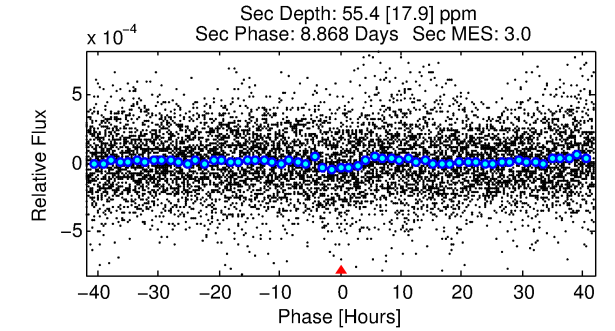
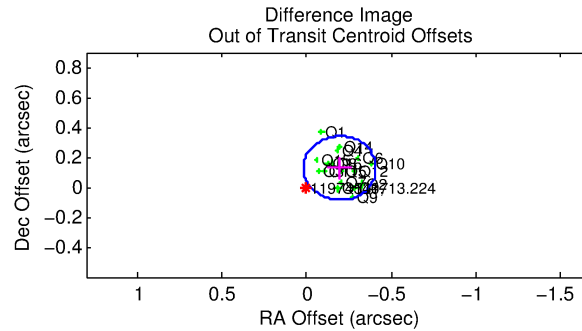
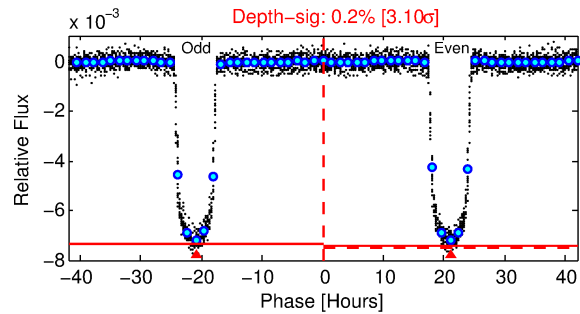
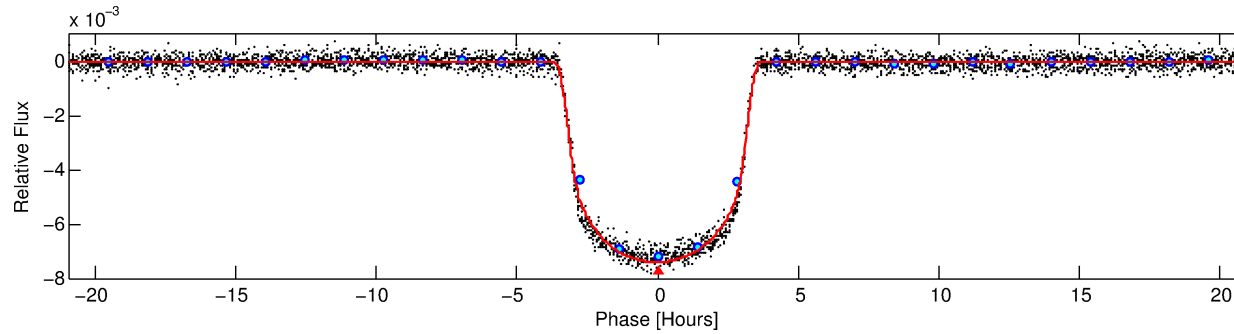
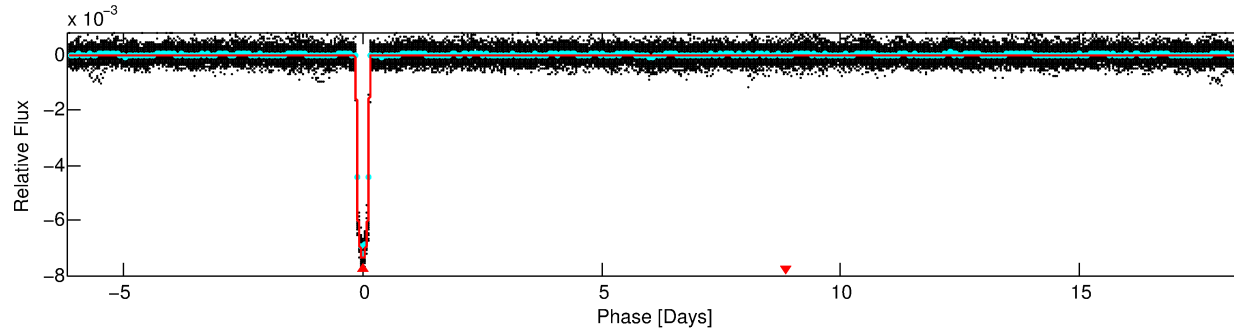
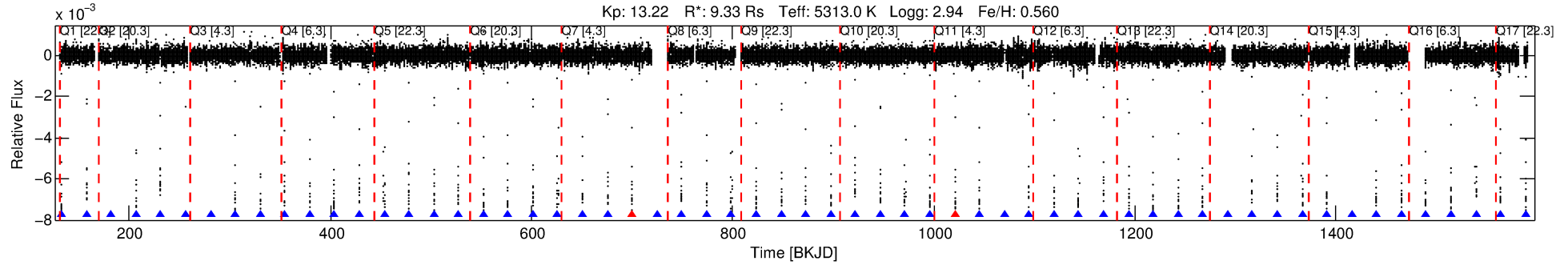
Ephemeris Match Information For 011974540-01

No Significant Match Found

DV One-Page Summary

KIC: 11974540 Candidate: 1 of 1 Period: 24.669 d

KOI: K00129.01 Corr: 0.994



DV Fit Results:

Period = 24.66919 [0.00001] d
Epoch = 132.8642 [0.0002] BKJD
Rp/R* = 0.0767 [0.0005]
a/R* = 29.00 [0.59]
b = 0.02 [1.36]
Seff = 1153.12 [763.57]
Teq = 1486 [246] K
Rp = 78.02 [32.01] Re
a = 0.2321 [0.0711] AU
Ag = 0.27 [0.14] [-5.35 σ]
Teffp = 1656 [259] K [0.47 σ]

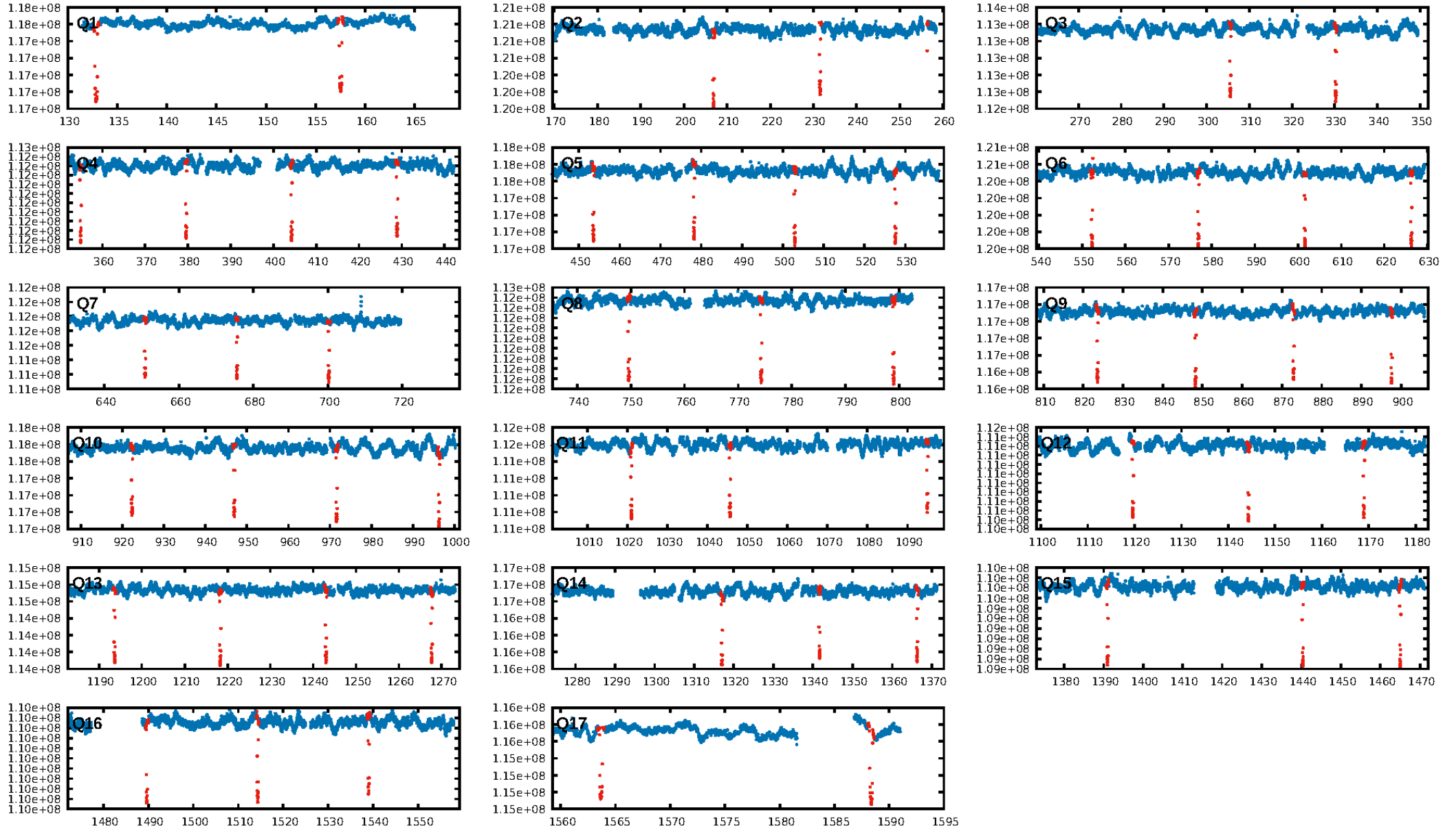
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.4%
ModelChiSquareGof-sig: 92.7%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [48/50]
GhostDiagnostic-chr: 3.56
Centroid-sig: 0.0%
Centroid-so: 0.254 arcsec [19.46 σ]
OotOffset-rm: 0.233 arcsec [3.26 σ]
KicOffset-rm: 0.017 arcsec [0.22 σ]
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]

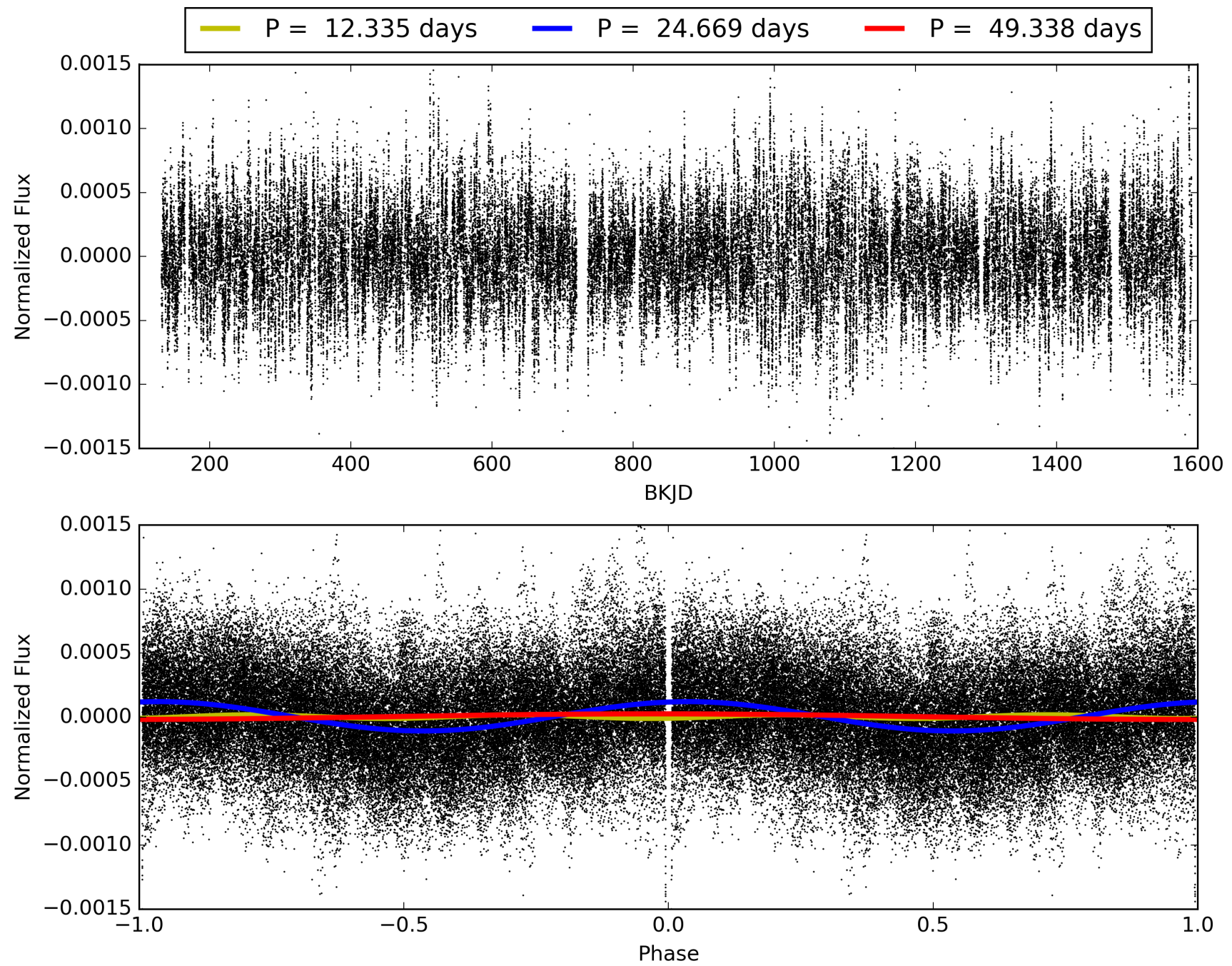
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:45:03 Z

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

TCE 011974540-01, PDC Light Curves

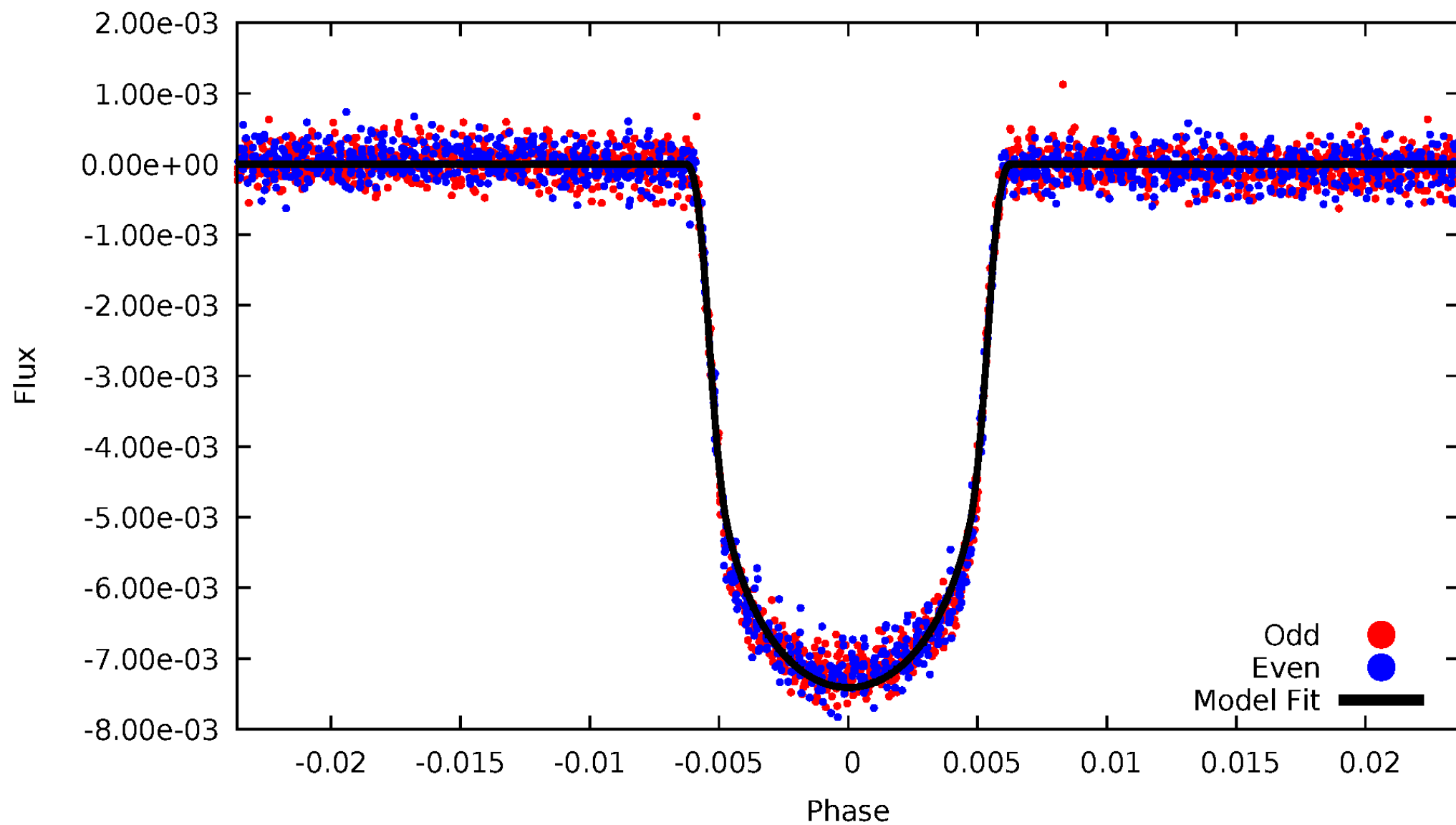


TCE 011974540-01



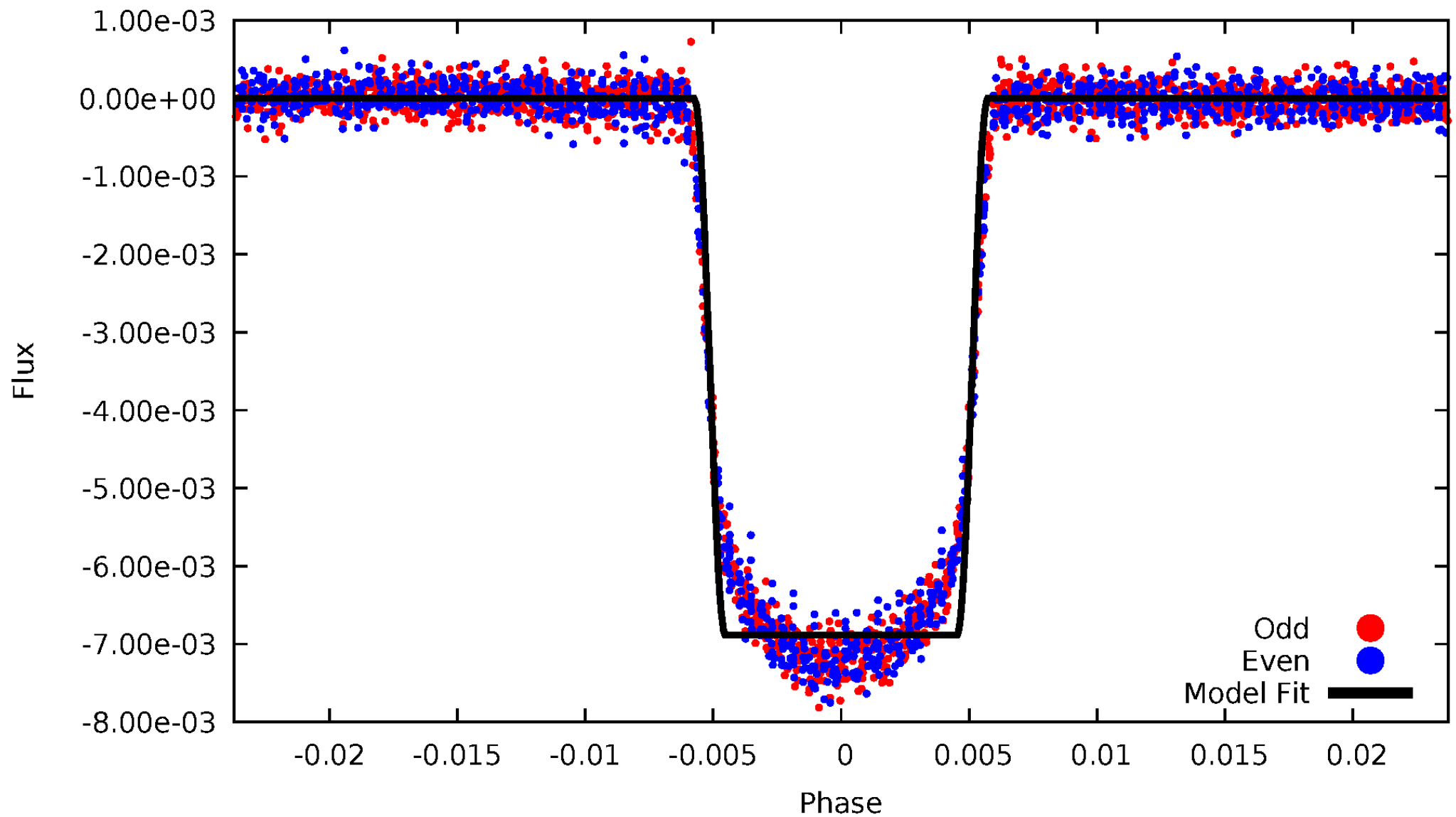
DV Odd/Even

TCE 011974540-01

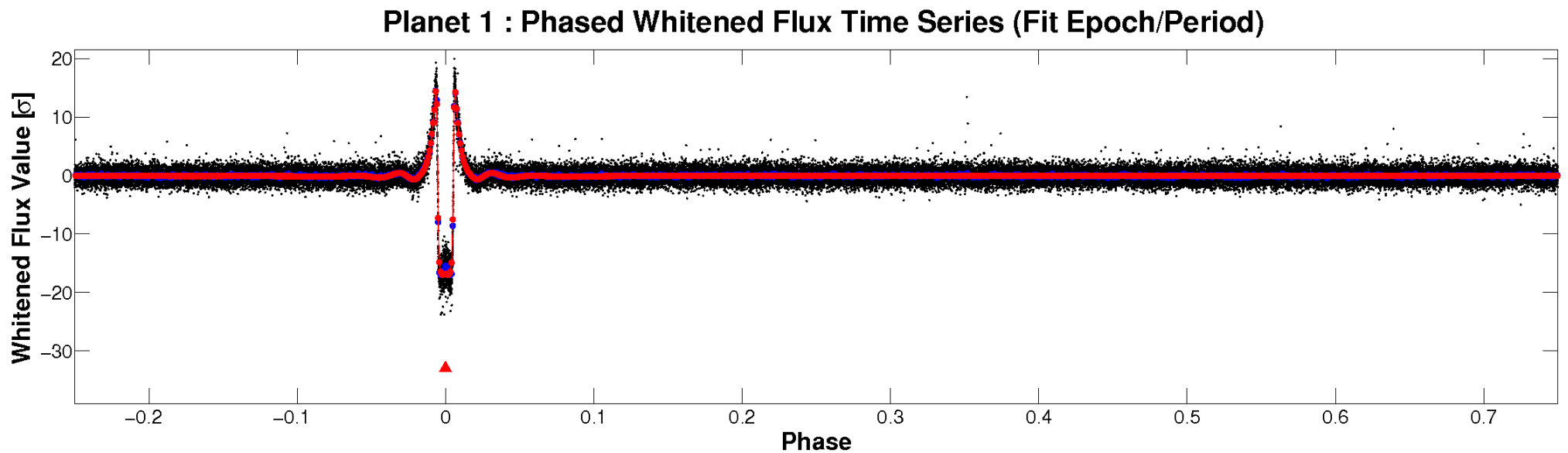
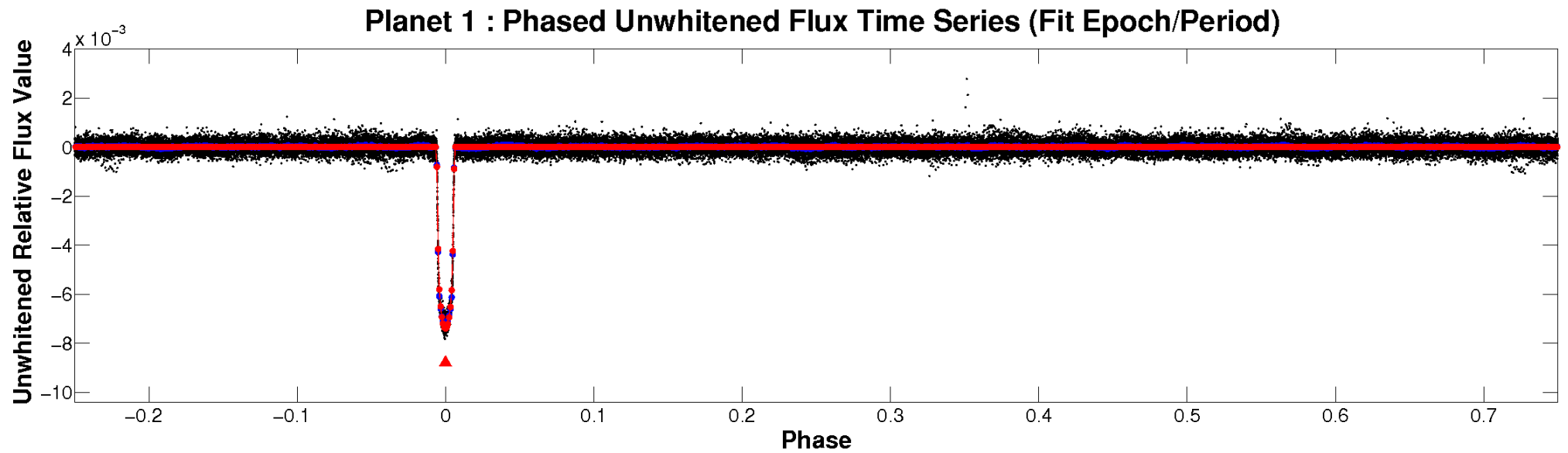


ALT Odd/Even

TCE 011974540-01

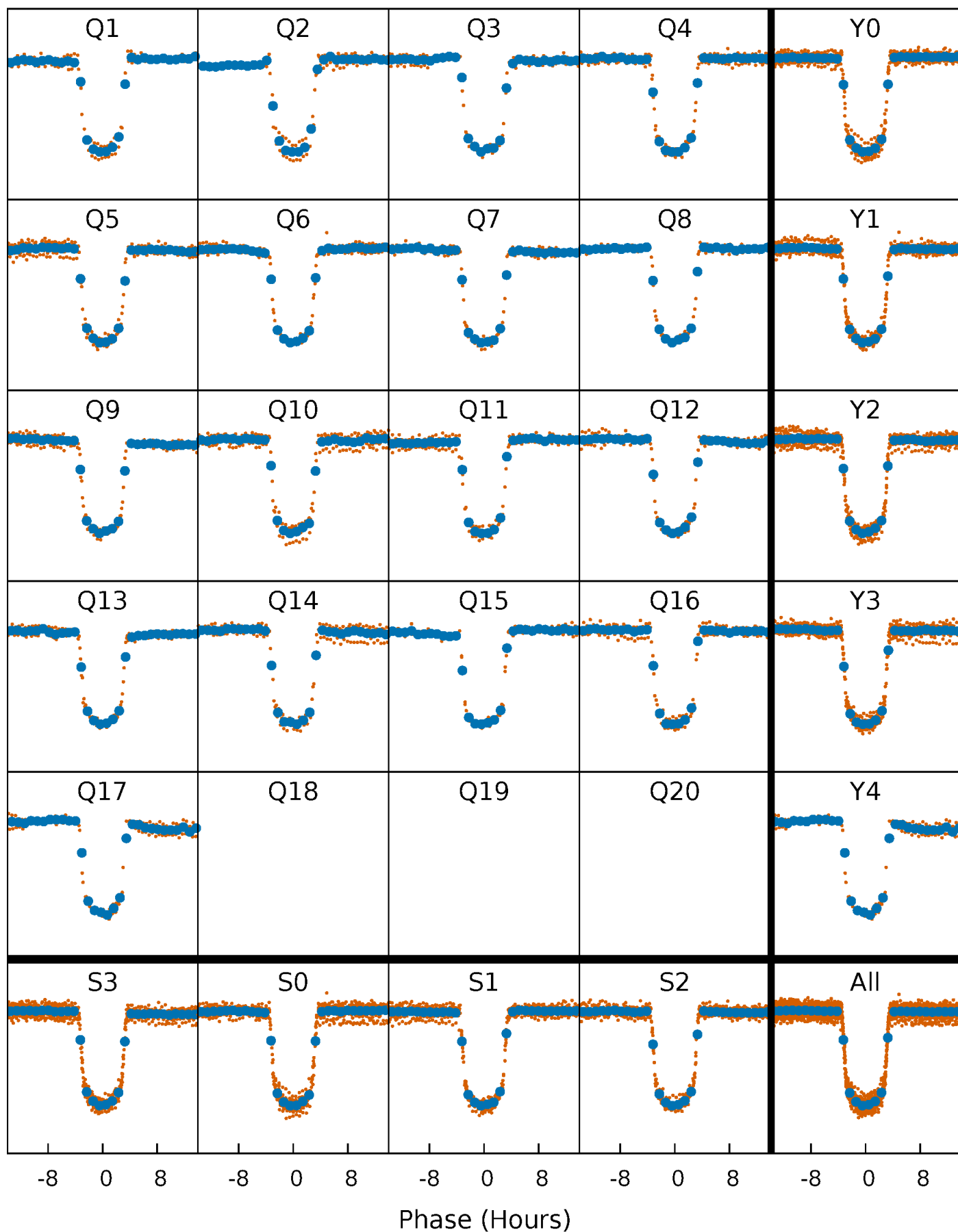


Non-Whitened Vs. Whitened Light Curve



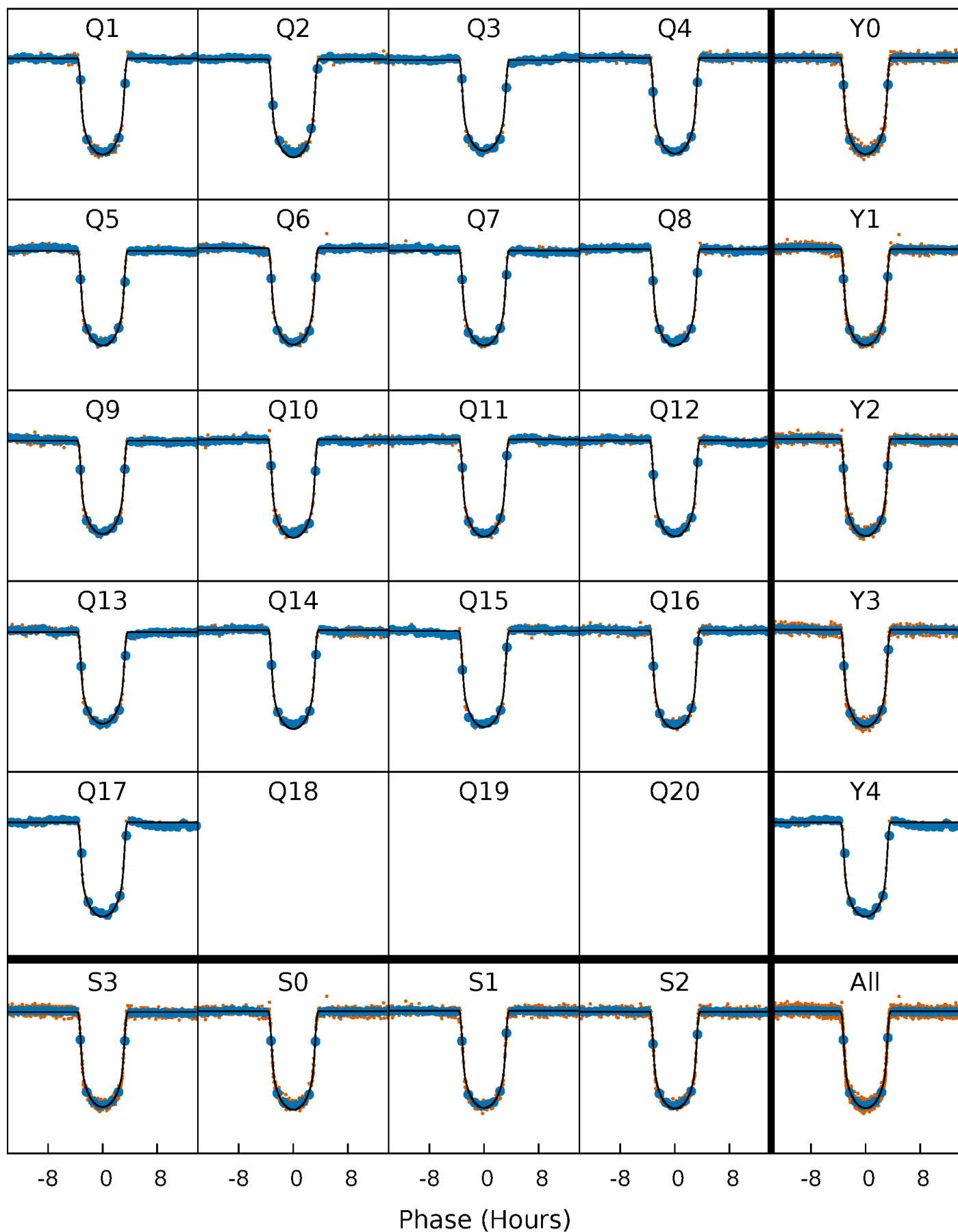
PDC Quarter-Phased Transit Curves

TCE 011974540-01 P= 24.669189 Days $T_0=132.864245$ (BKJD)



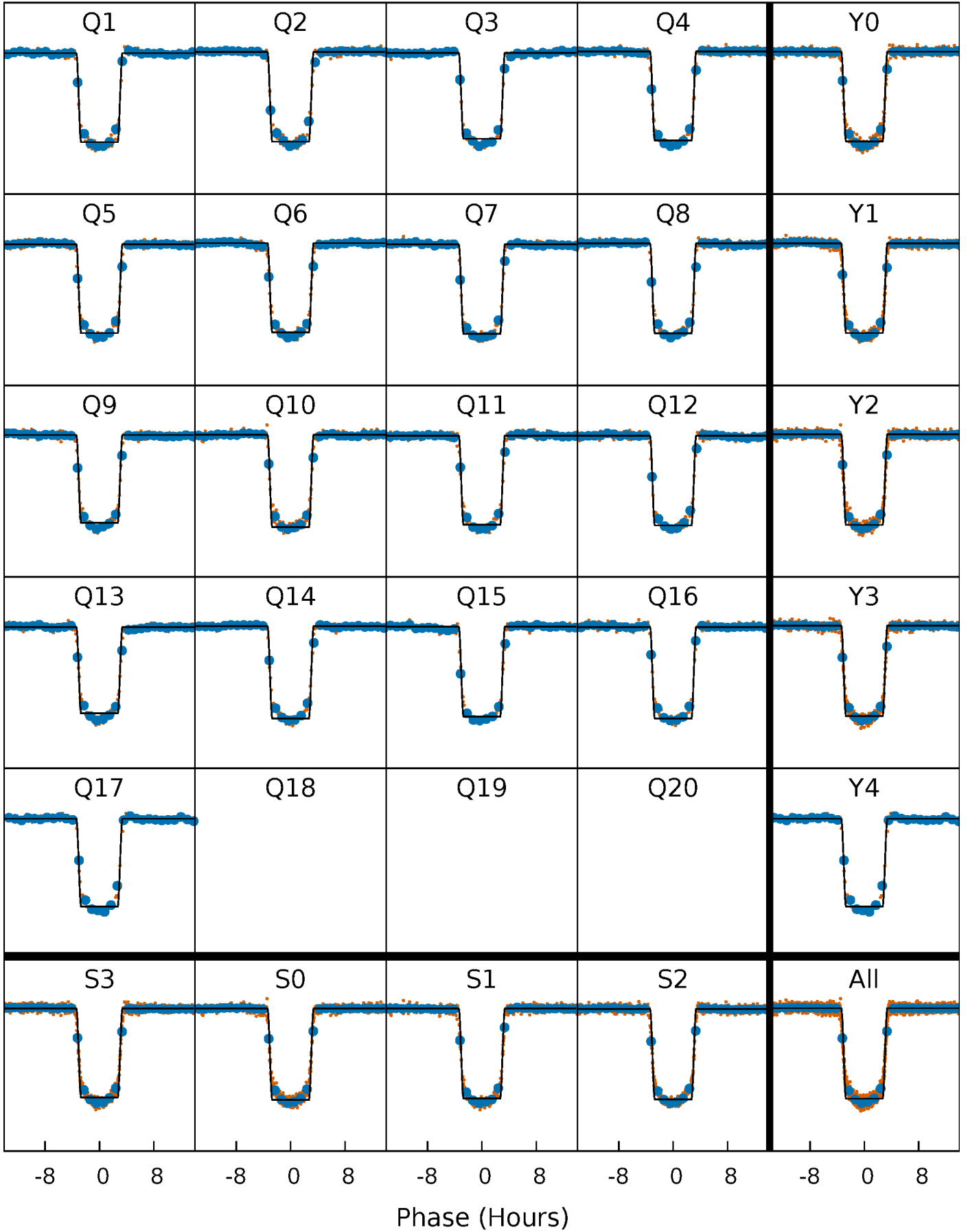
DV Quarter-Phased Transit Curves

TCE 011974540-01 P= 24.669189 Days $T_0=132.864245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

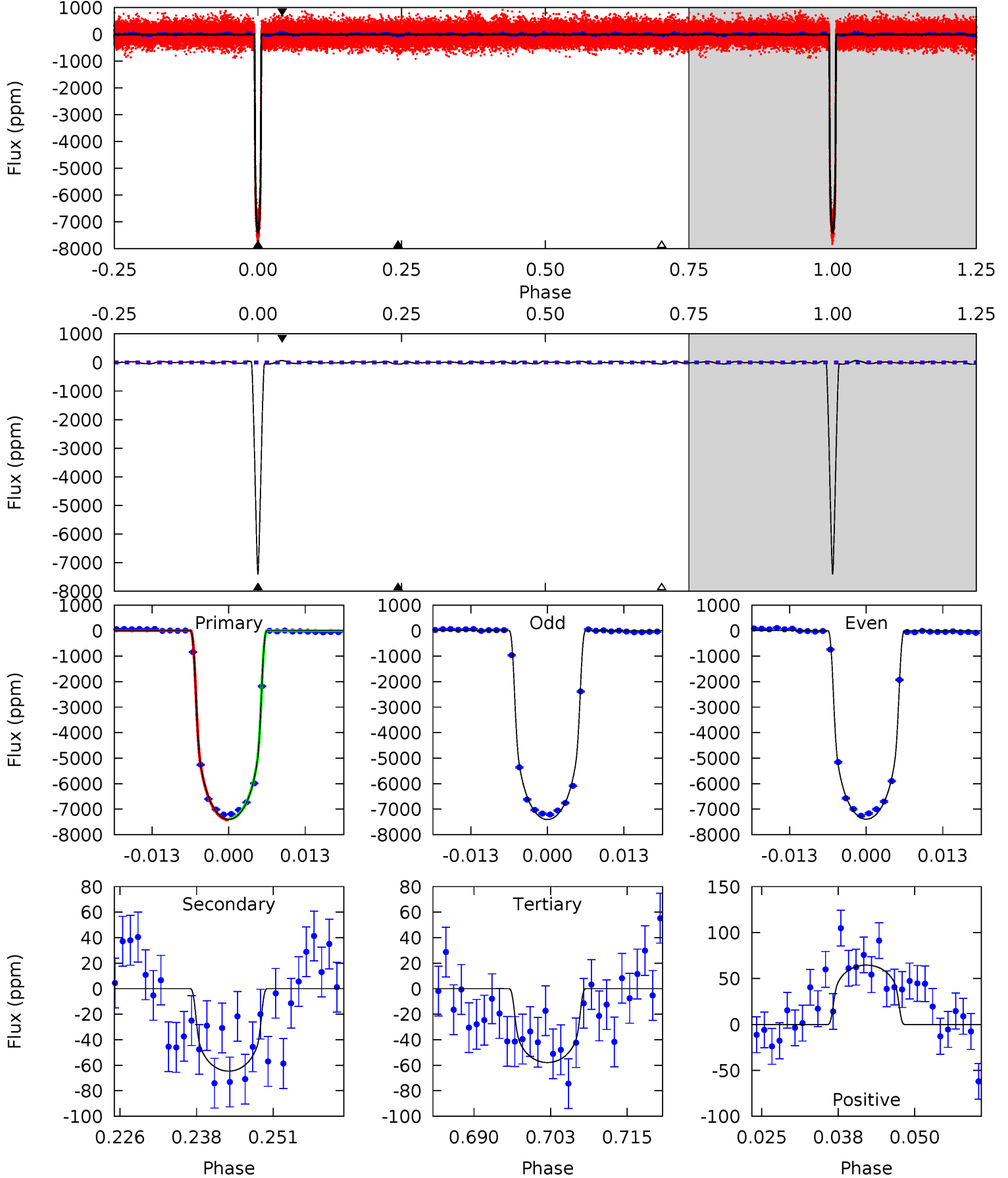
TCE 011974540-01 P= 24.669171 Days $T_0=132.864834$ (BKJD)



DV Model-Shift Uniqueness Test

011974540-01, P = 24.669189 Days, E = 108.195056 Days

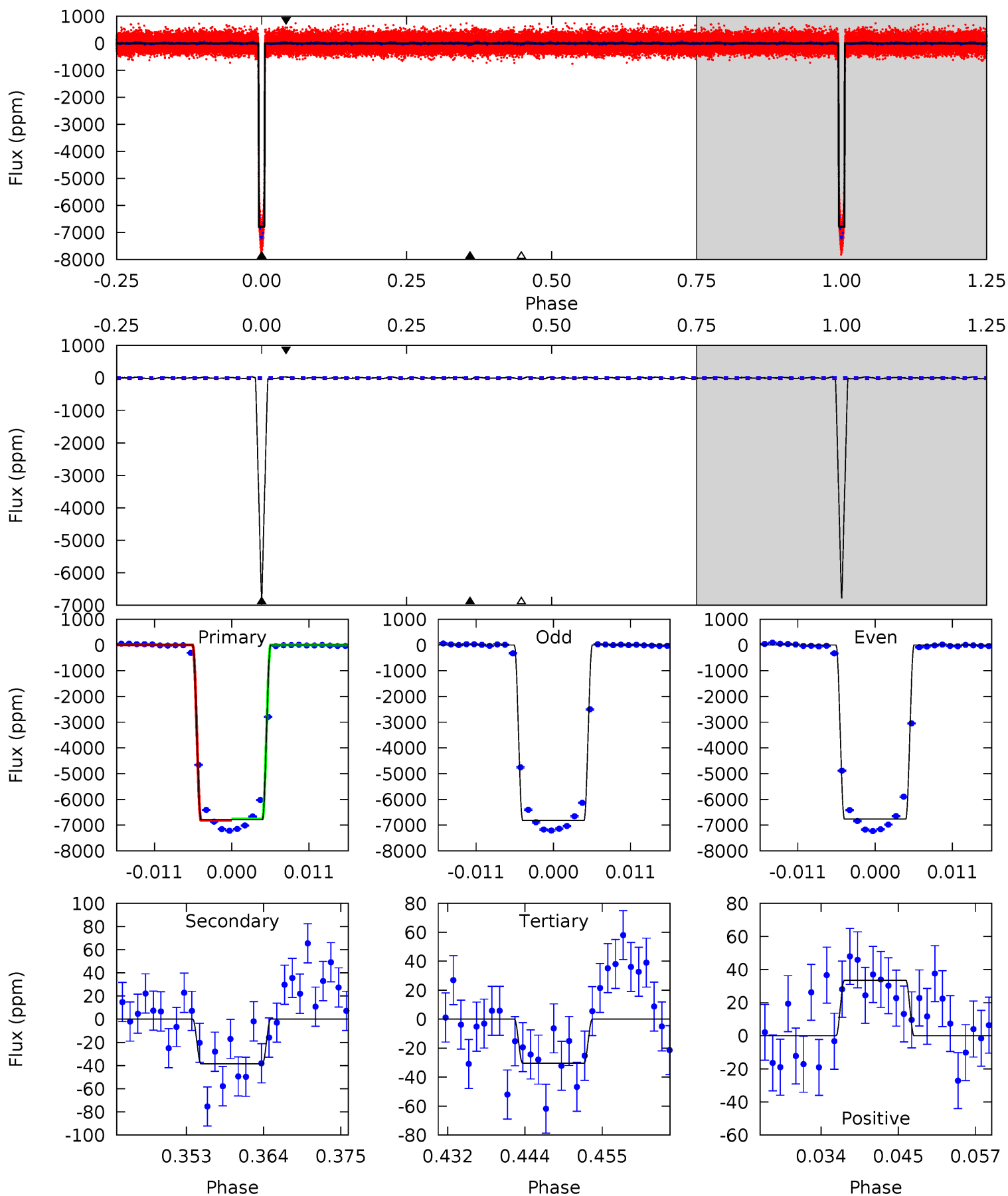
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
971.2	8.48	7.59	8.48	4.98	2.50	3.04	963.6	962.8	0.88	0.00	0.89	1.00	0.01	2.43



Alt Model-Shift Uniqueness Test

011974540-01, P = 24.669171 Days, E = 108.195663 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1022	5.79	4.57	5.05	5.00	2.53	1.96	1018	1017	1.22	0.74	4.18	1.00	0.01	4.18



Stellar Parameters For KIC 011974540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5313^{+328}_{-712}	$2.936^{+0.180}_{-0.180}$	$0.560^{+0.050}_{-0.150}$	$9.327^{+2.551}_{-3.826}$	$2.736^{+0.172}_{-1.463}$	$0.005^{+0.007}_{-0.002}$
	+6%/-13%	+6%/-6%	+9%/-27%	+27%/-41%	+6%/-53%	+148%/-45%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011974540-01 / KOI 0129.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-65 ± 8	$78.92^{+11.70}_{-15.76}$	2073^{+216}_{-272}	-1472^{+3668}_{-735}	$0.299^{+0.116}_{-0.073}$
Alt.	-38 ± 7	$85.05^{+12.93}_{-15.96}$	2050^{+235}_{-268}	-2284^{+251}_{-203}	$0.154^{+0.062}_{-0.046}$

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 $A_{obs} \gg 1.0$

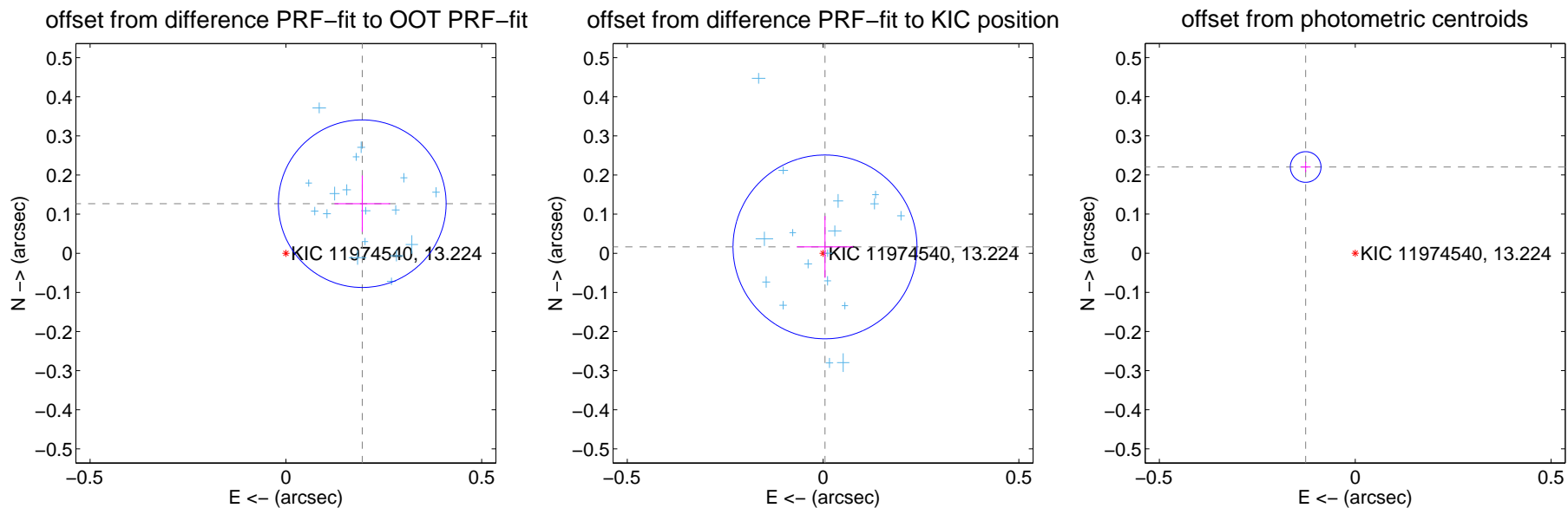
DV Centroid Data

Supplemental centroid analysis for 011974540-01. Kepler magnitude: 13.22. Transit SNR 454.97

There are 17 quarters with good PRF difference image offsets

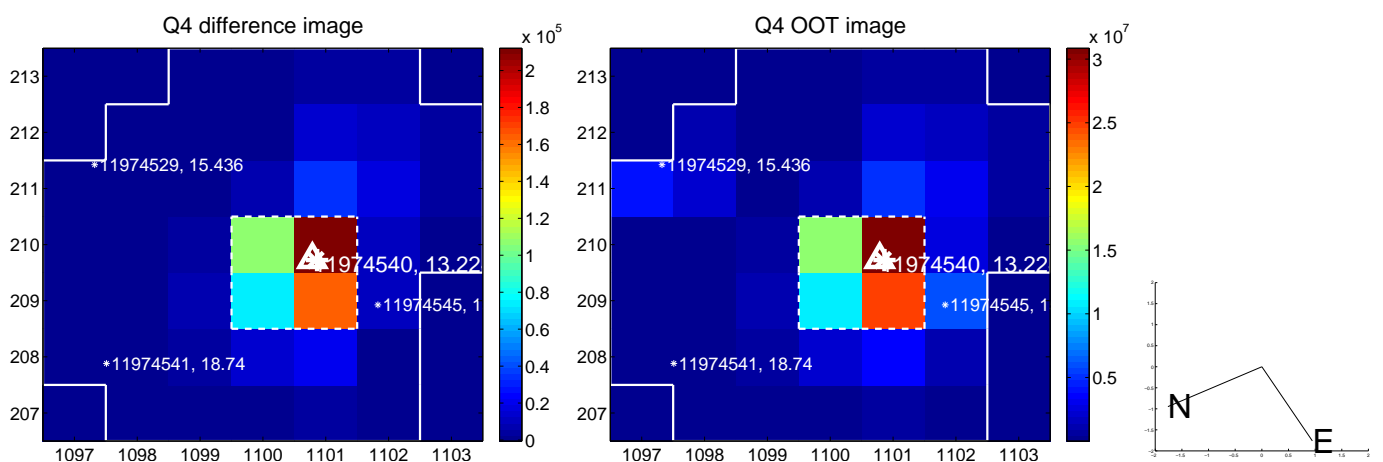
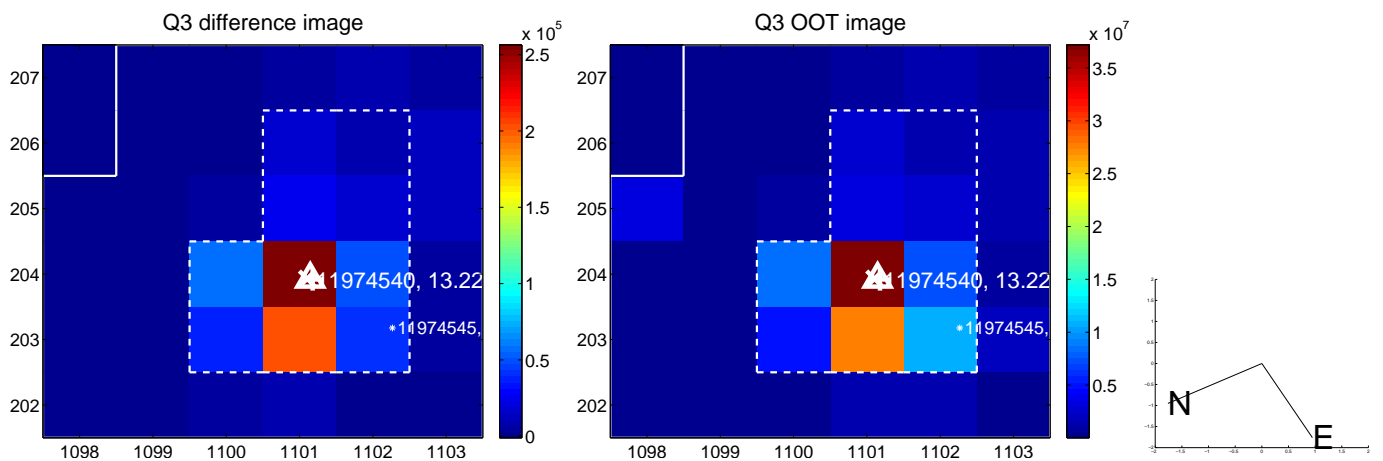
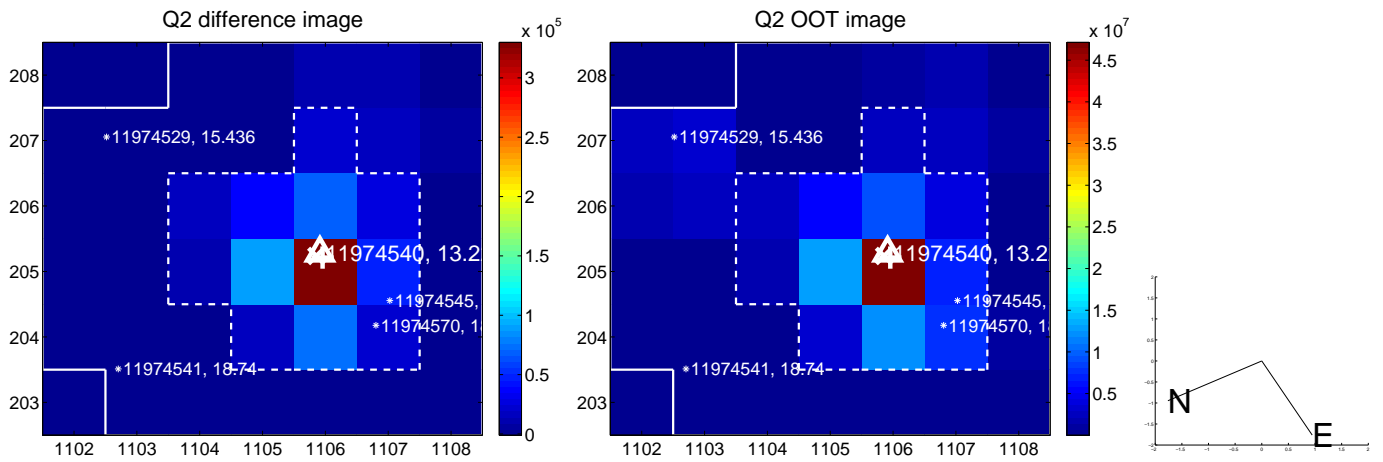
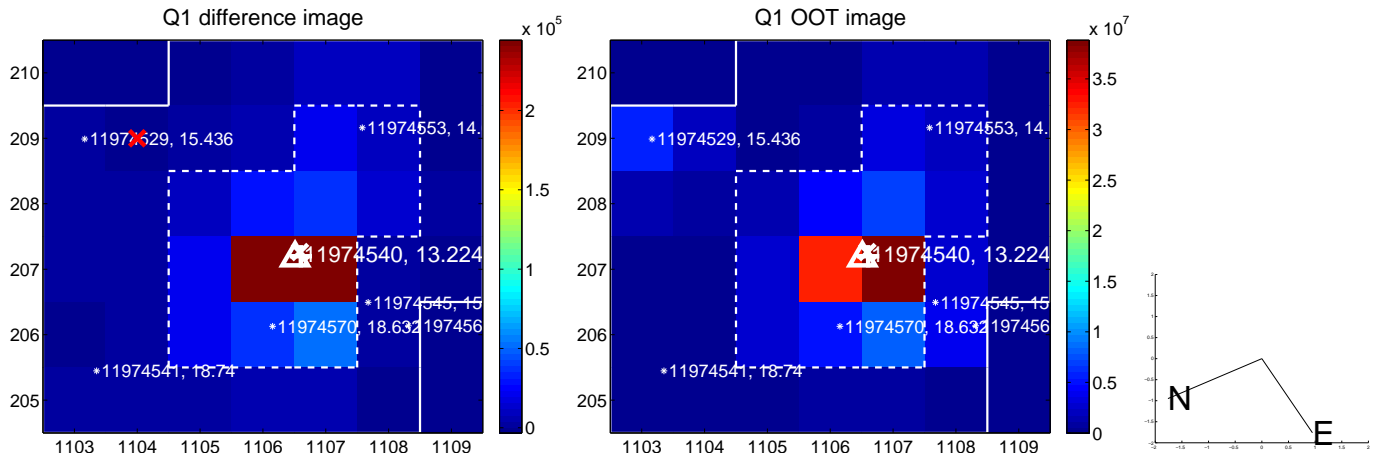
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.233 \pm 0.071	3.26	-0.195 \pm 0.071	0.127 \pm 0.072
PRF-fit source offset from KIC position	0.017 \pm 0.078	0.22	-0.005 \pm 0.072	0.016 \pm 0.079
photometric centroid source offset	0.25 \pm 0.01	19.46	0.13 \pm 0.01	0.22 \pm 0.01

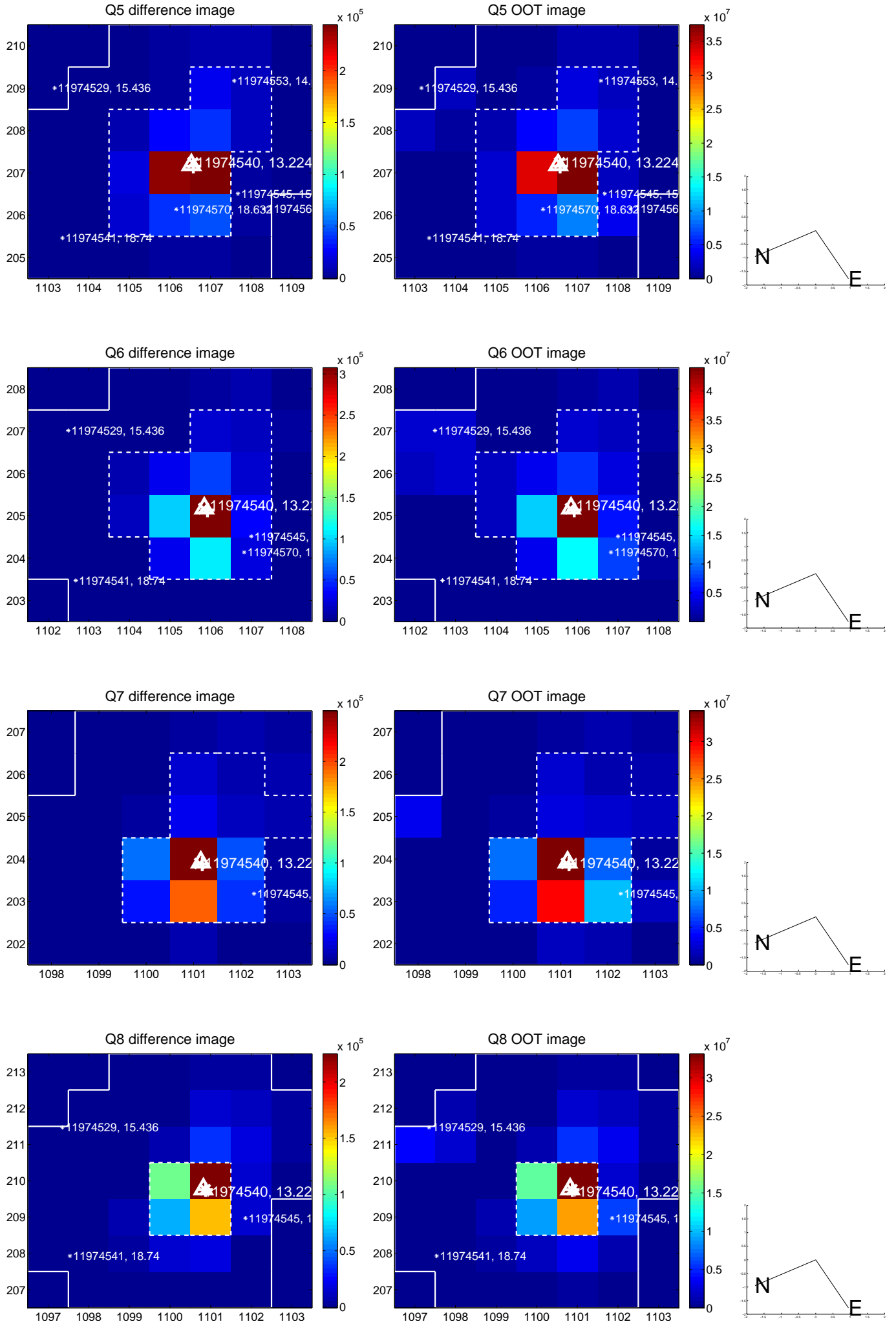


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

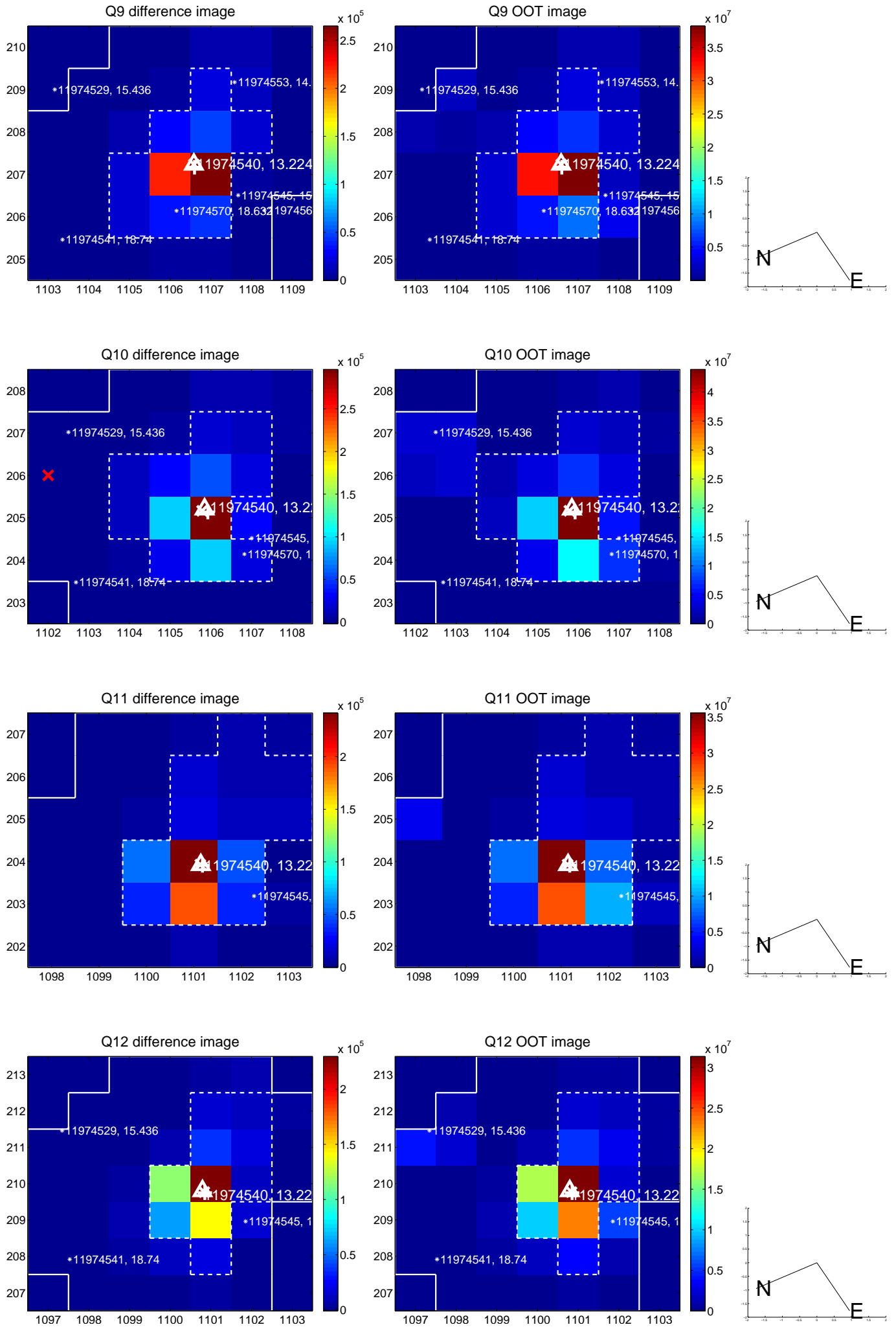
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



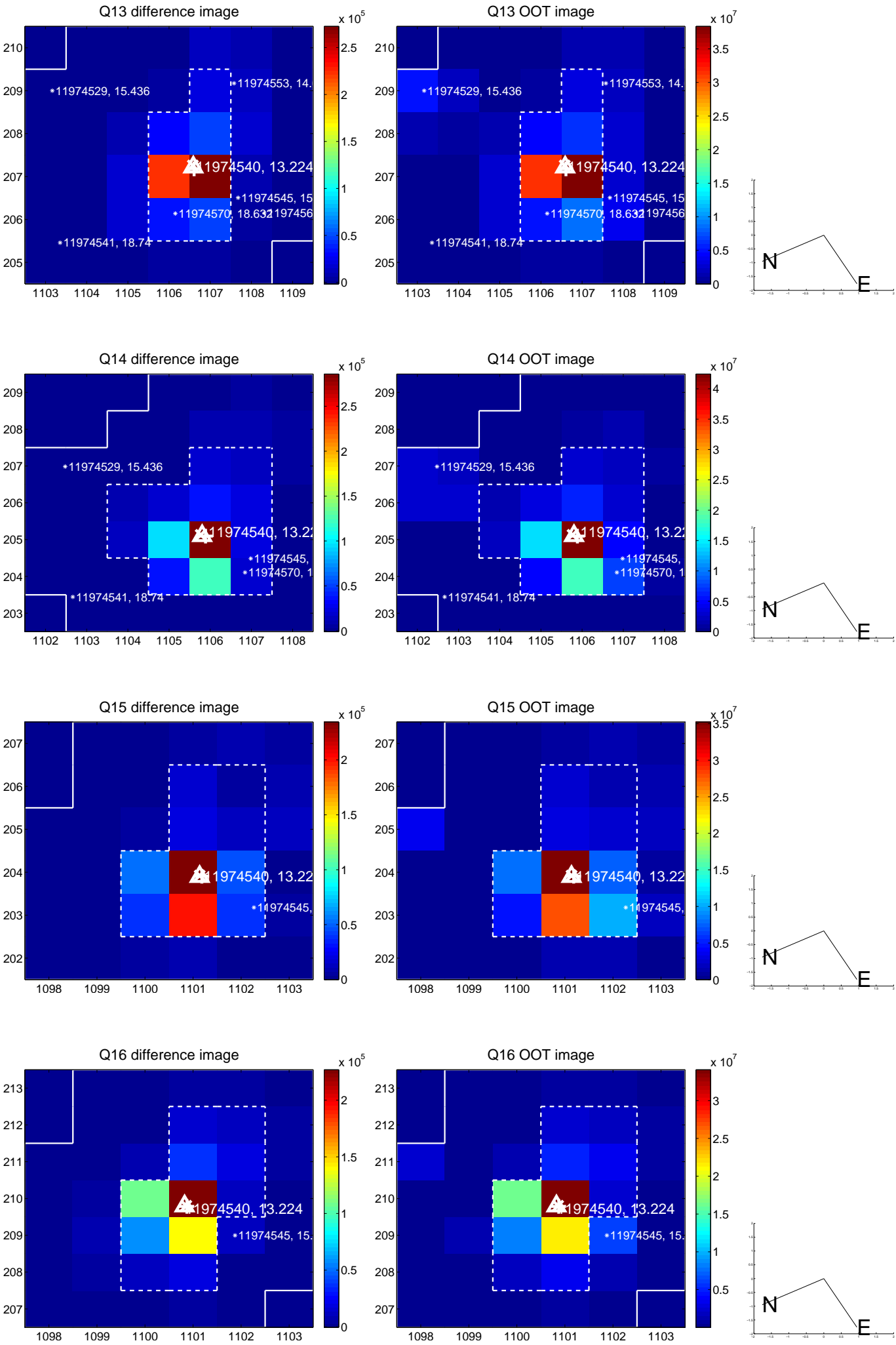
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



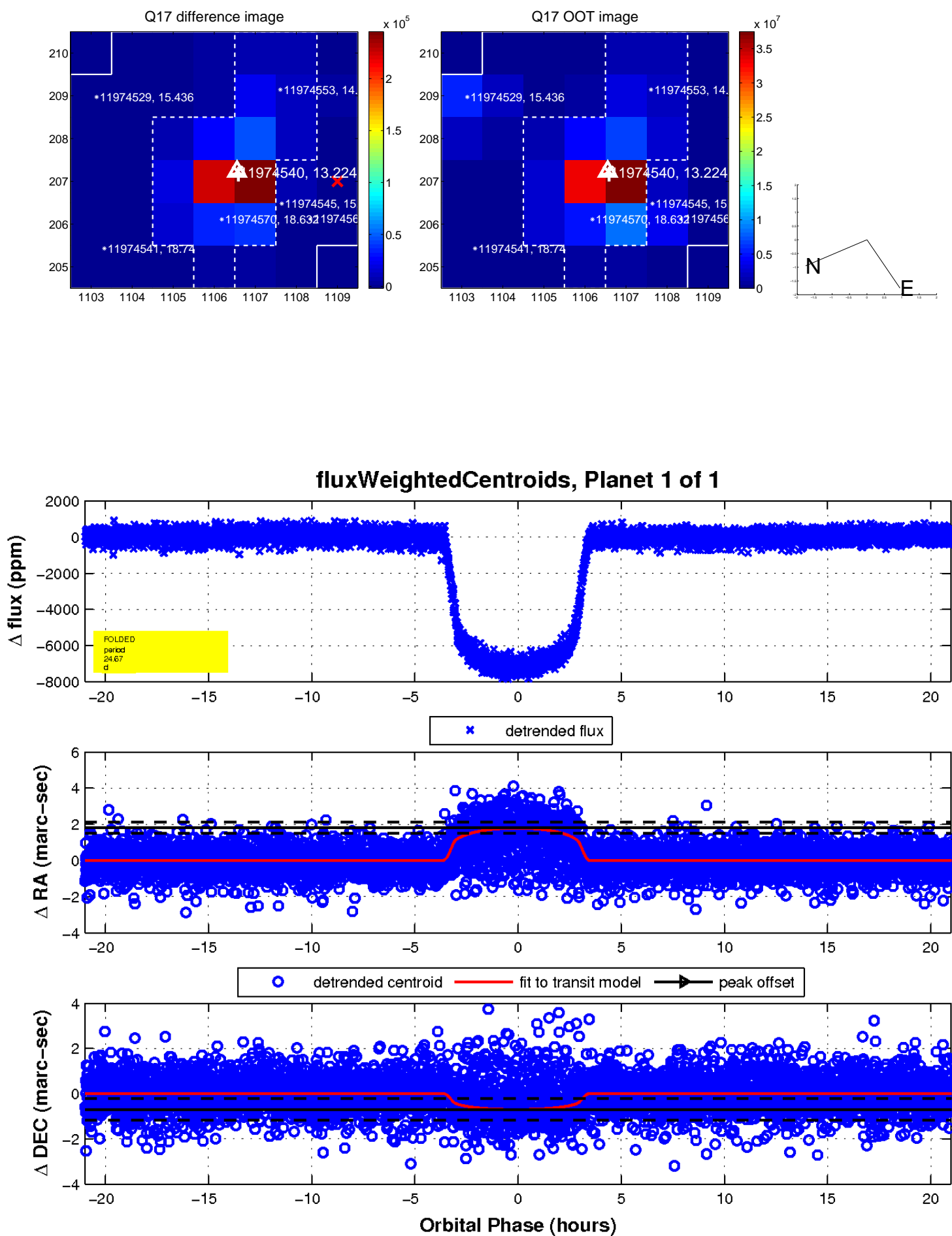
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

