

KIC 005398002

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})
005398002-01	OBS	3213.01	14.158856	133.966859	148.1	36.758	24.3	31.3	3.75	8753	8.68	3151.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005398002-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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 005398002-01

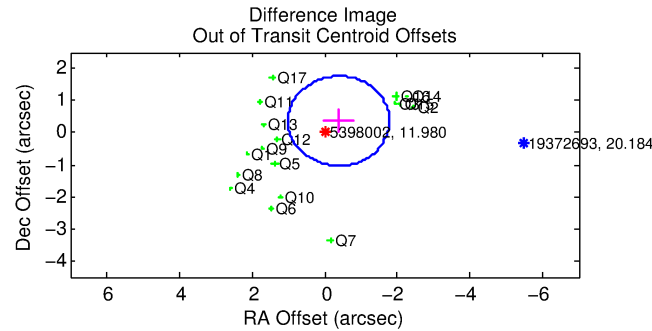
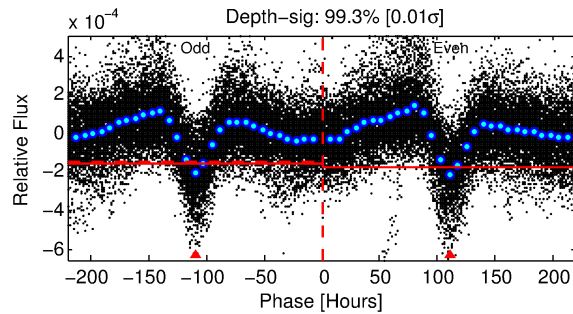
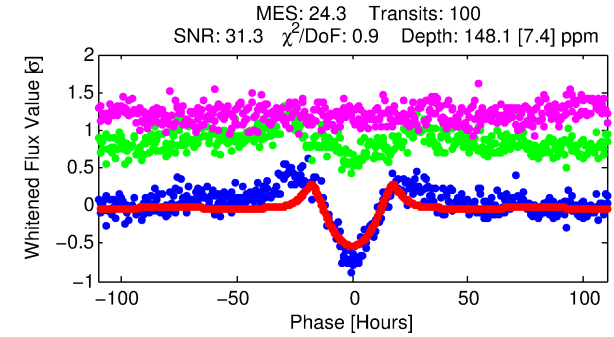
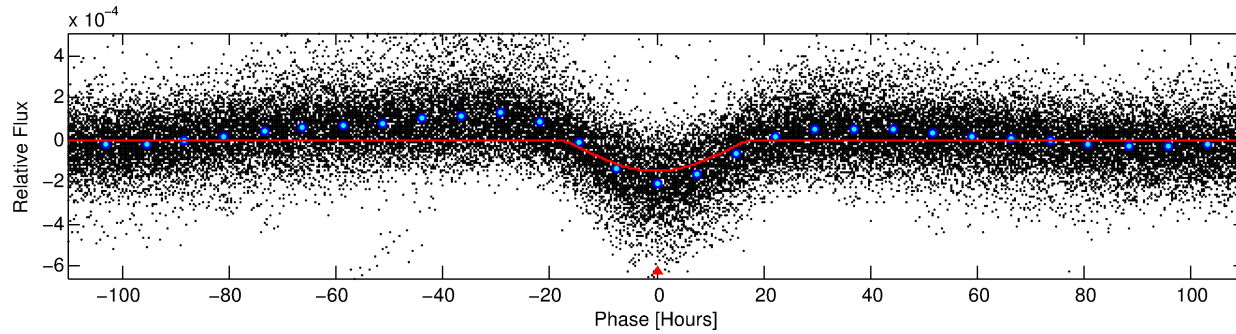
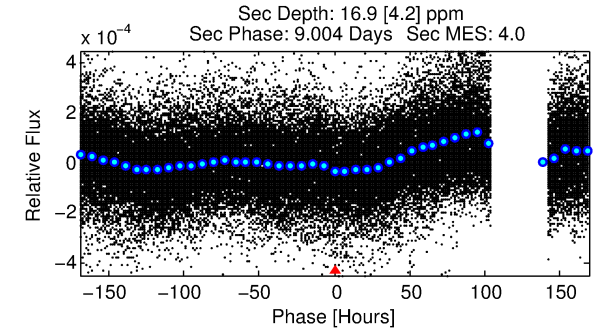
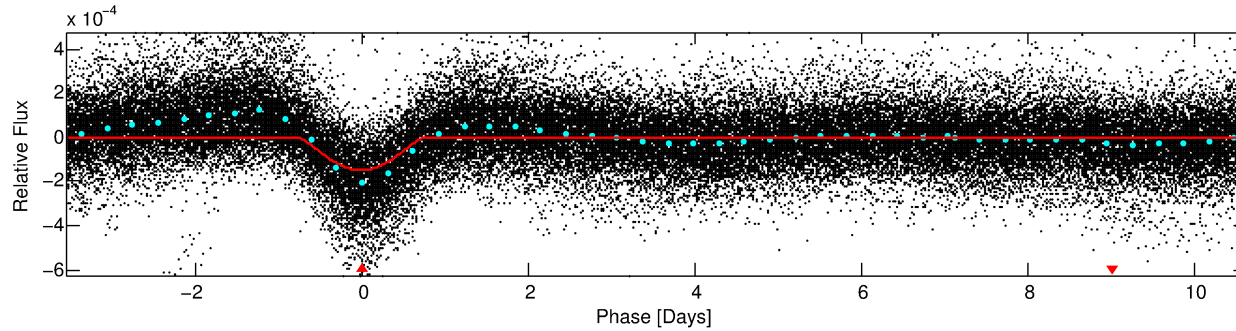
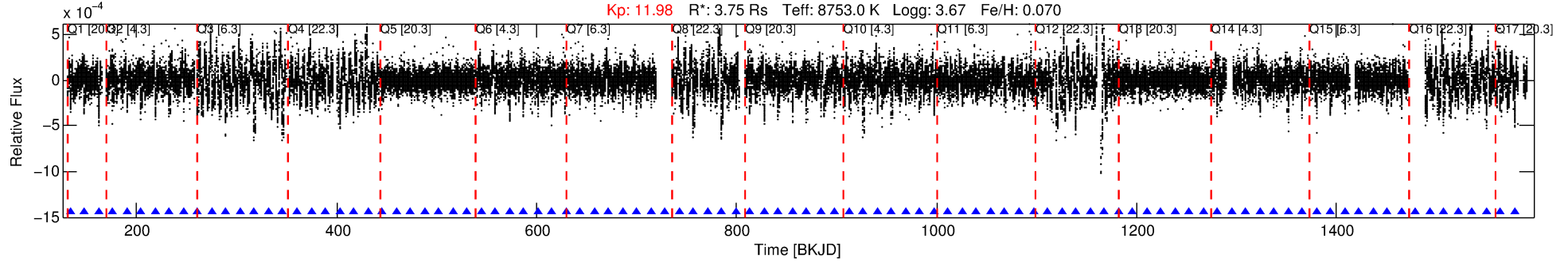
No Significant Match Found

DV One-Page Summary

KIC: 5398002 Candidate: 1 of 1 Period: 14.159 d

KOI: K03213 Corr: No Ephemeris Match

Kp: 11.98 R*: 3.75 Rs Teff: 8753.0 K Logg: 3.67 Fe/H: 0.070



DV Fit Results:

Period = 14.15886 [0.00031] d
Epoch = 133.9669 [0.0173] BKJD
Rp/R* = 0.0212 [0.0081]
a/R* = 1.18 [0.02]
b = 1.00 [0.01]
Seff = 3151.59 [2687.94]
Teff = 1911 [407] K
Rp = 8.68 [5.48] Re
a = 0.1530 [0.0776] AU
Ag = 2.89 [3.35] [0.57σ]
Teffp = 3853 [793] K [2.18σ]

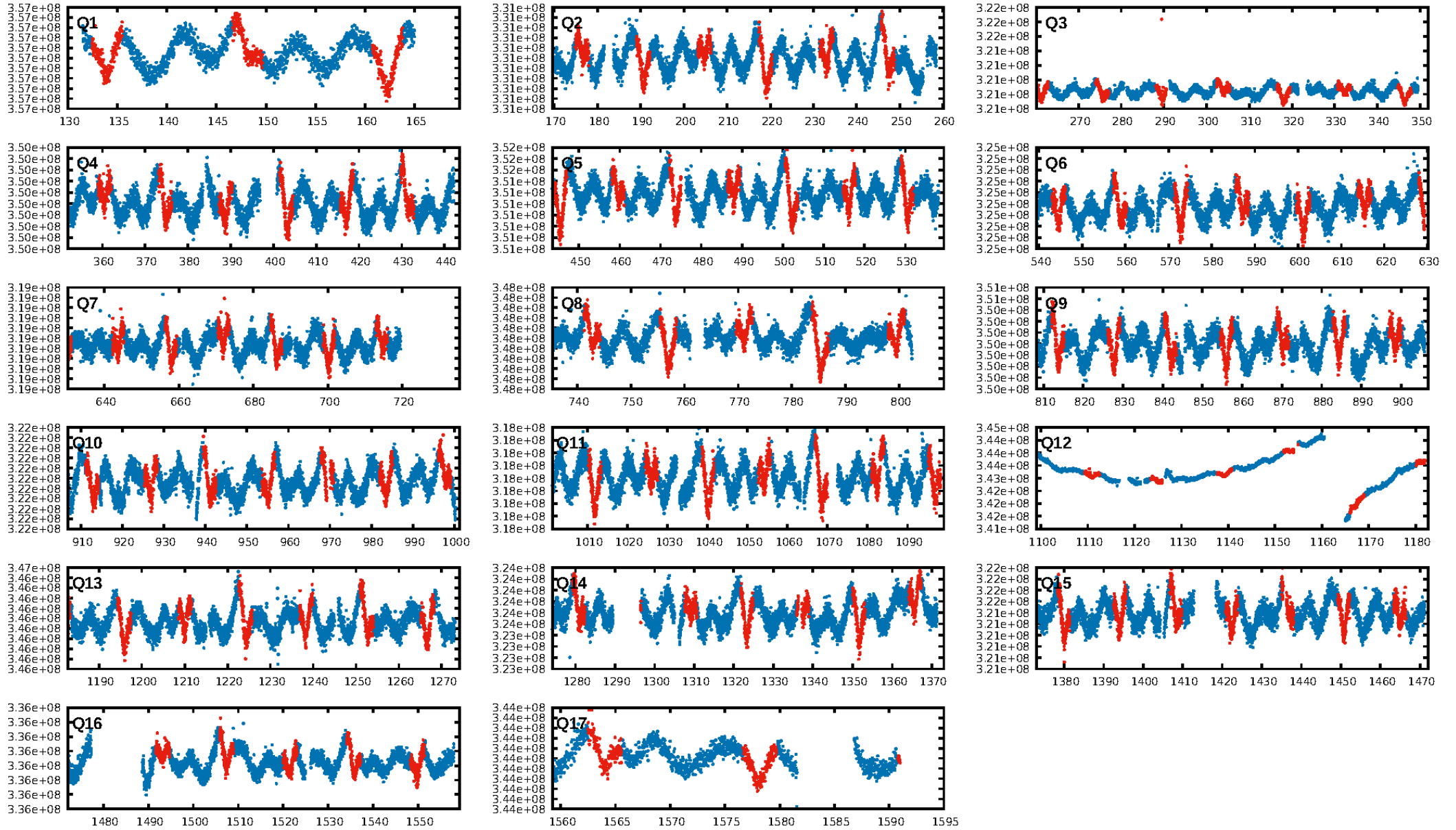
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.60e-140
RollingBand-fgt: 1.00 [95/95]
GhostDiagnostic-chr: 2.405
Centroid-sig: 68.0%
Centroid-so: 0.472 arcsec [1.50σ]
OotOffset-rm: 0.526 arcsec [1.13σ]
KicOffset-rm: 0.481 arcsec [0.96σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

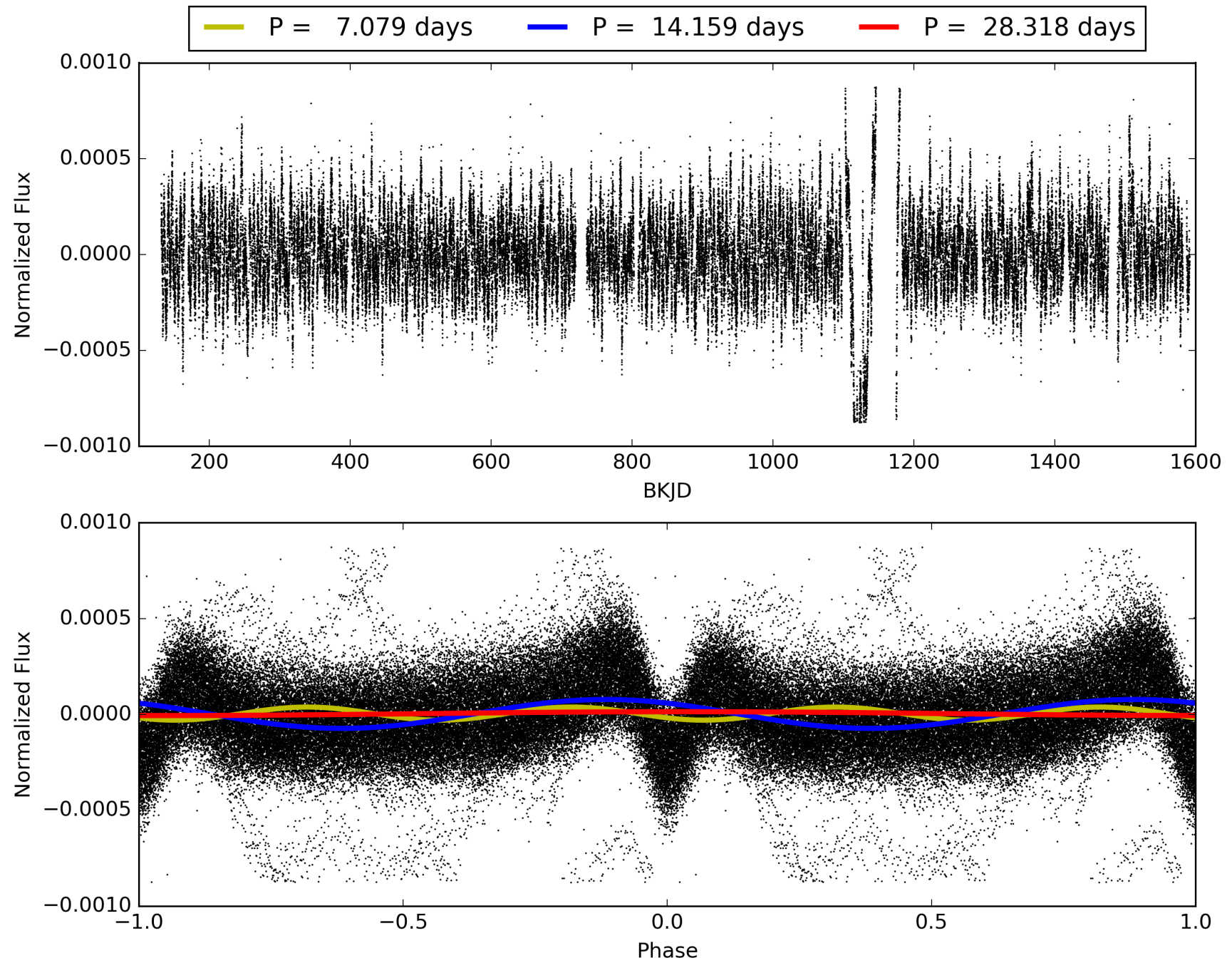
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:09:34 Z

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

TCE 005398002-01, PDC Light Curves

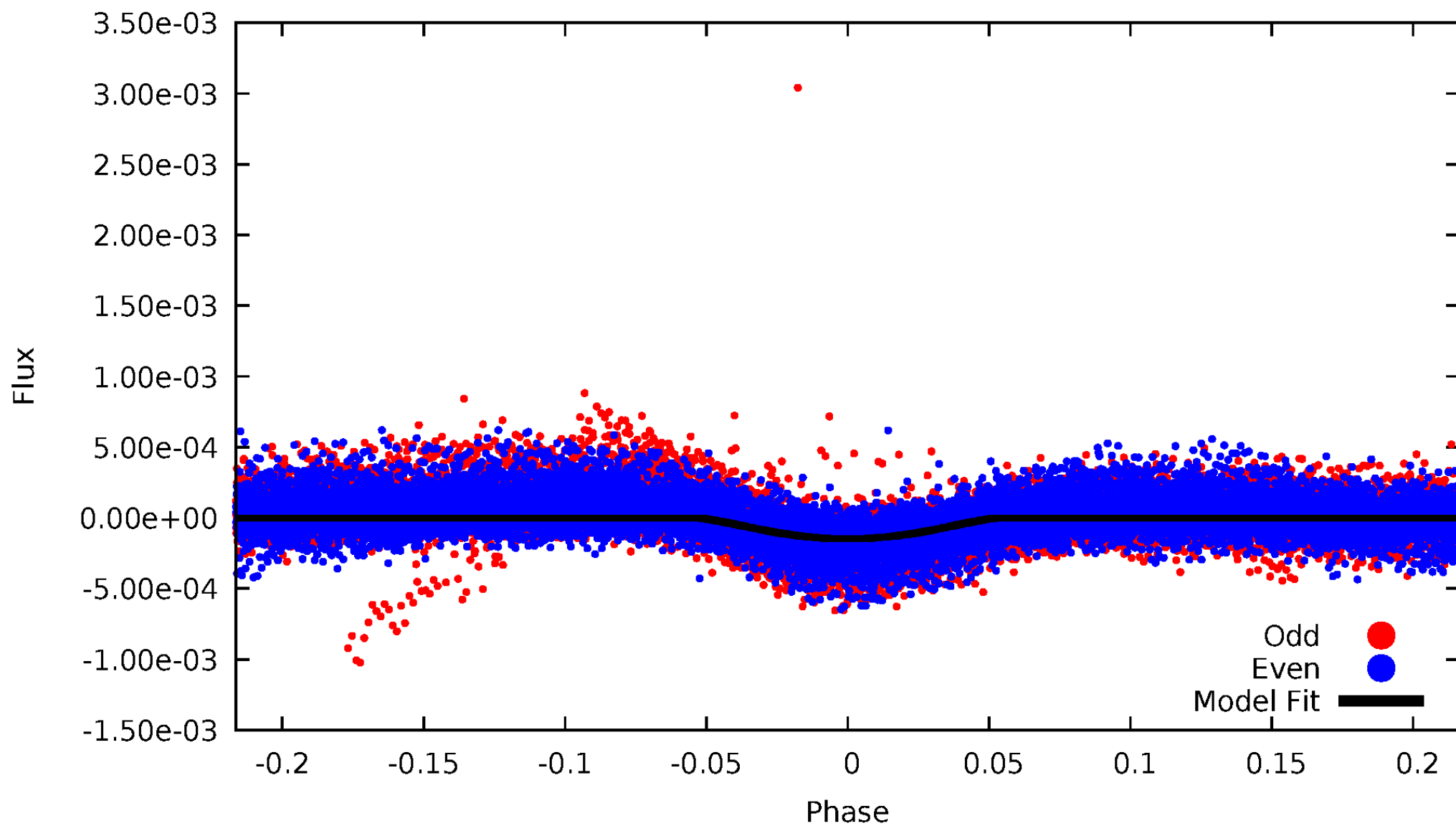


TCE 005398002-01



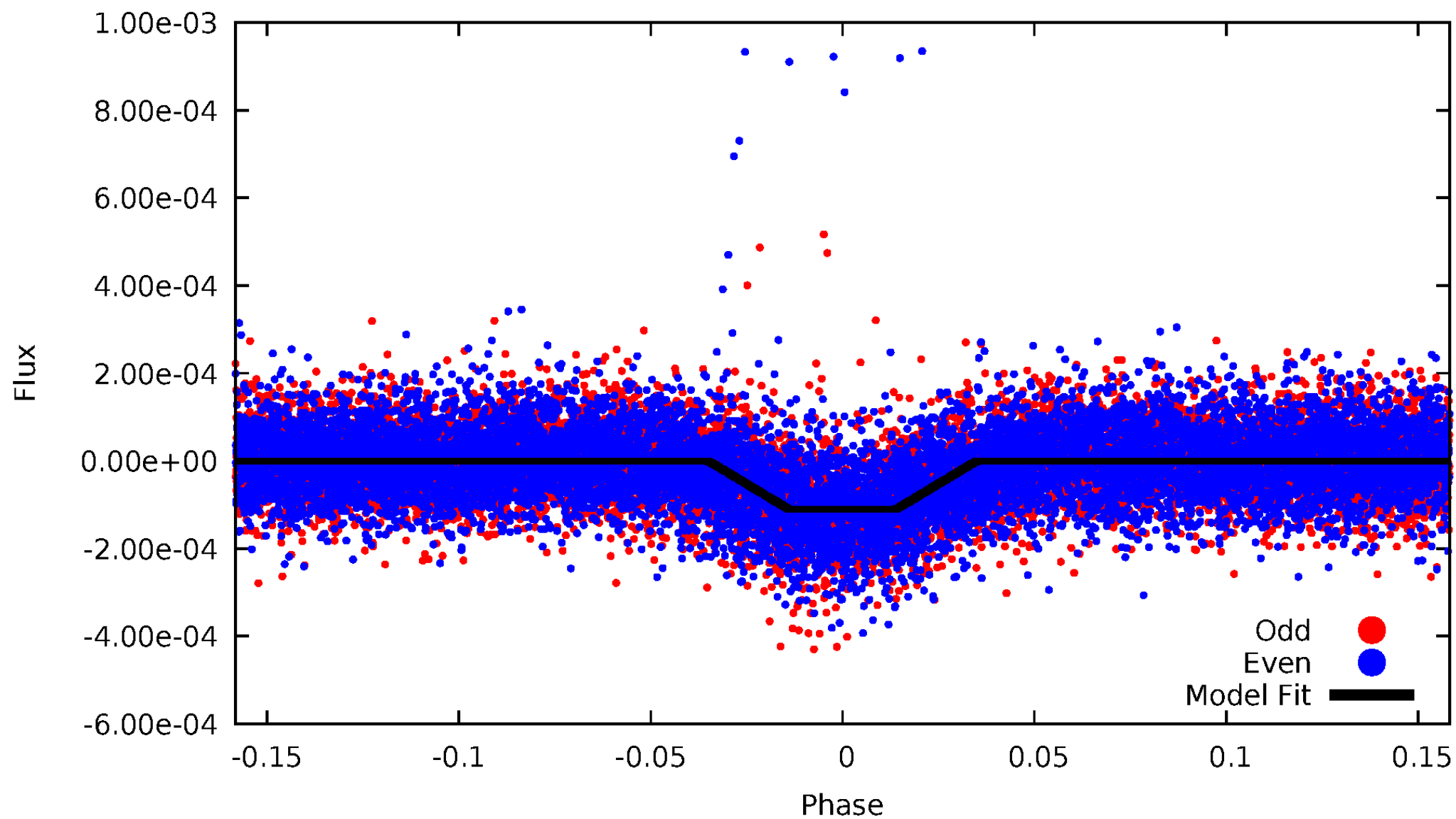
DV Odd/Even

TCE 005398002-01



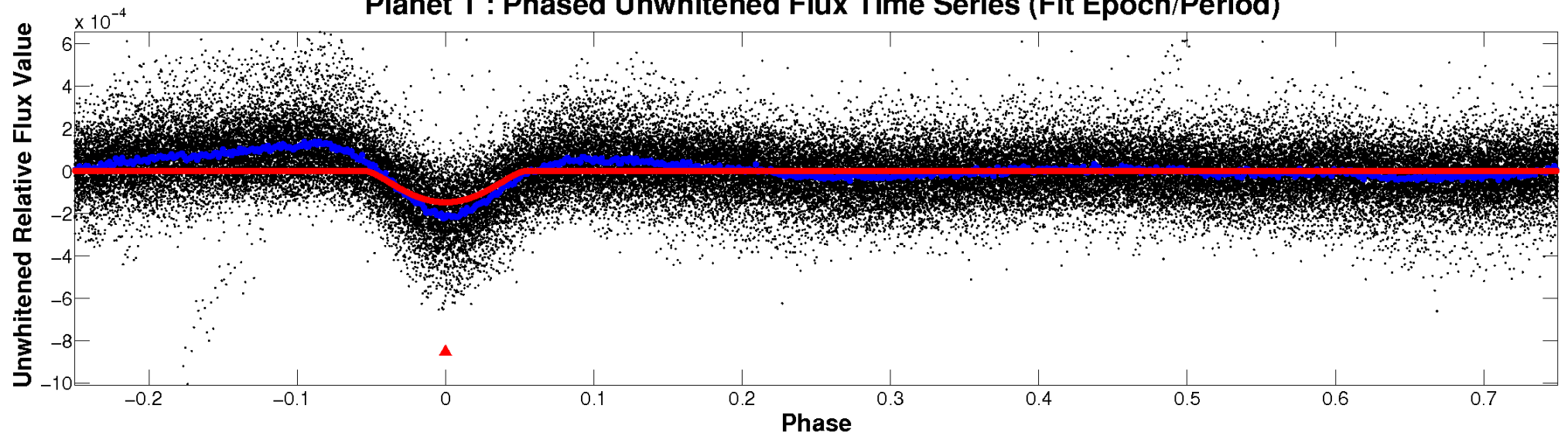
ALT Odd/Even

TCE 005398002-01

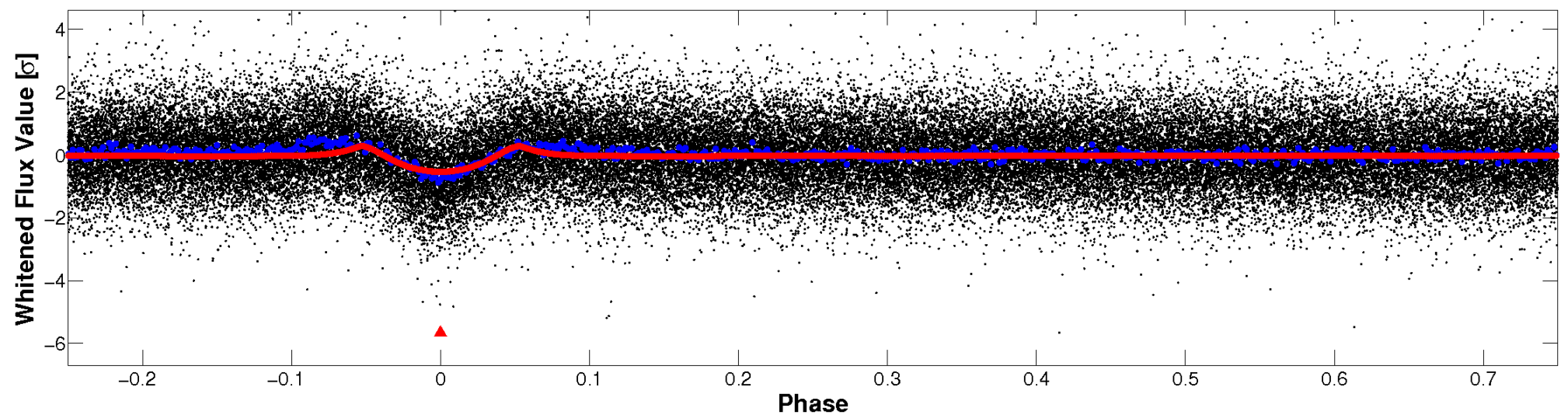


Non-Whitened Vs. Whitened Light Curve

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

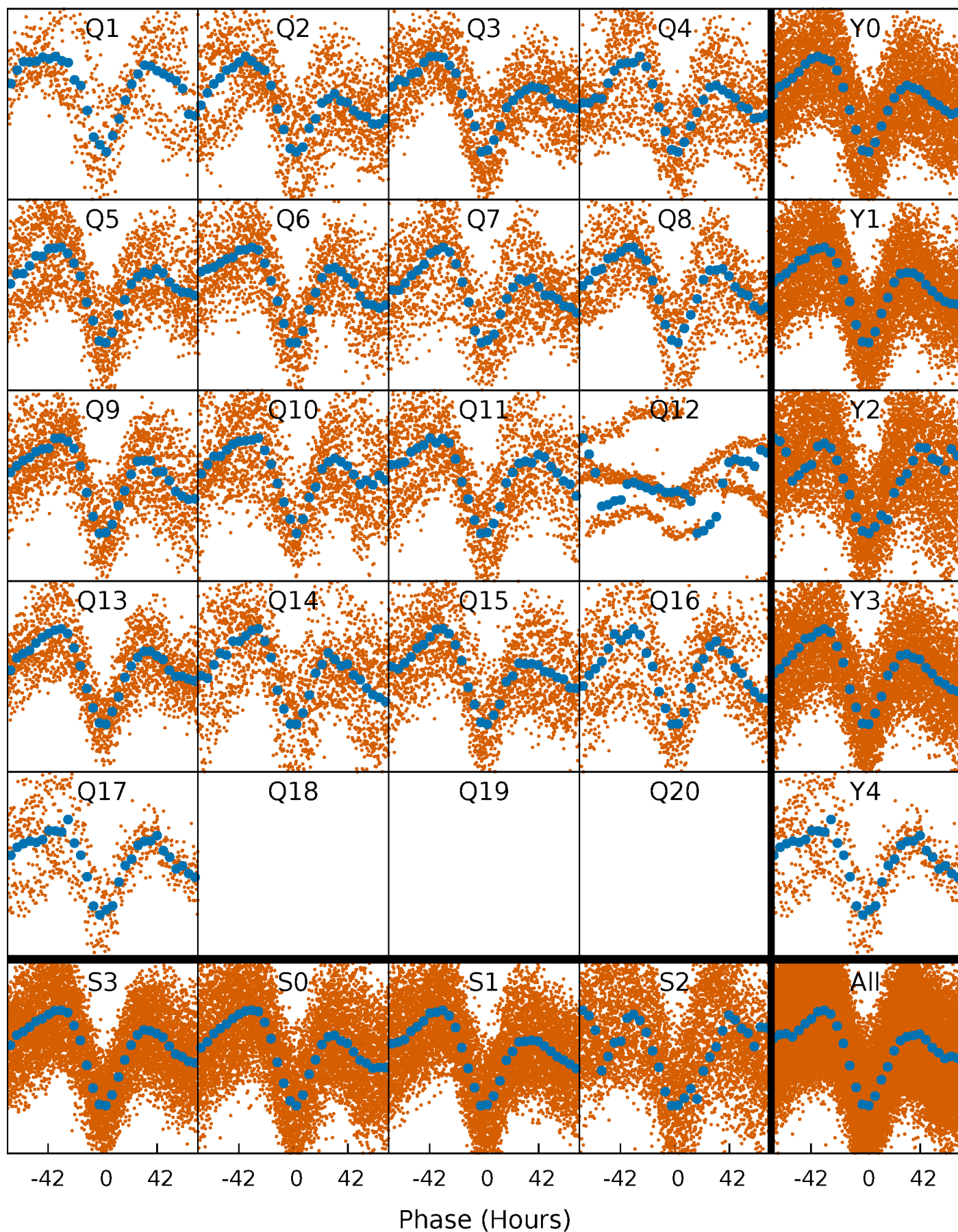


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



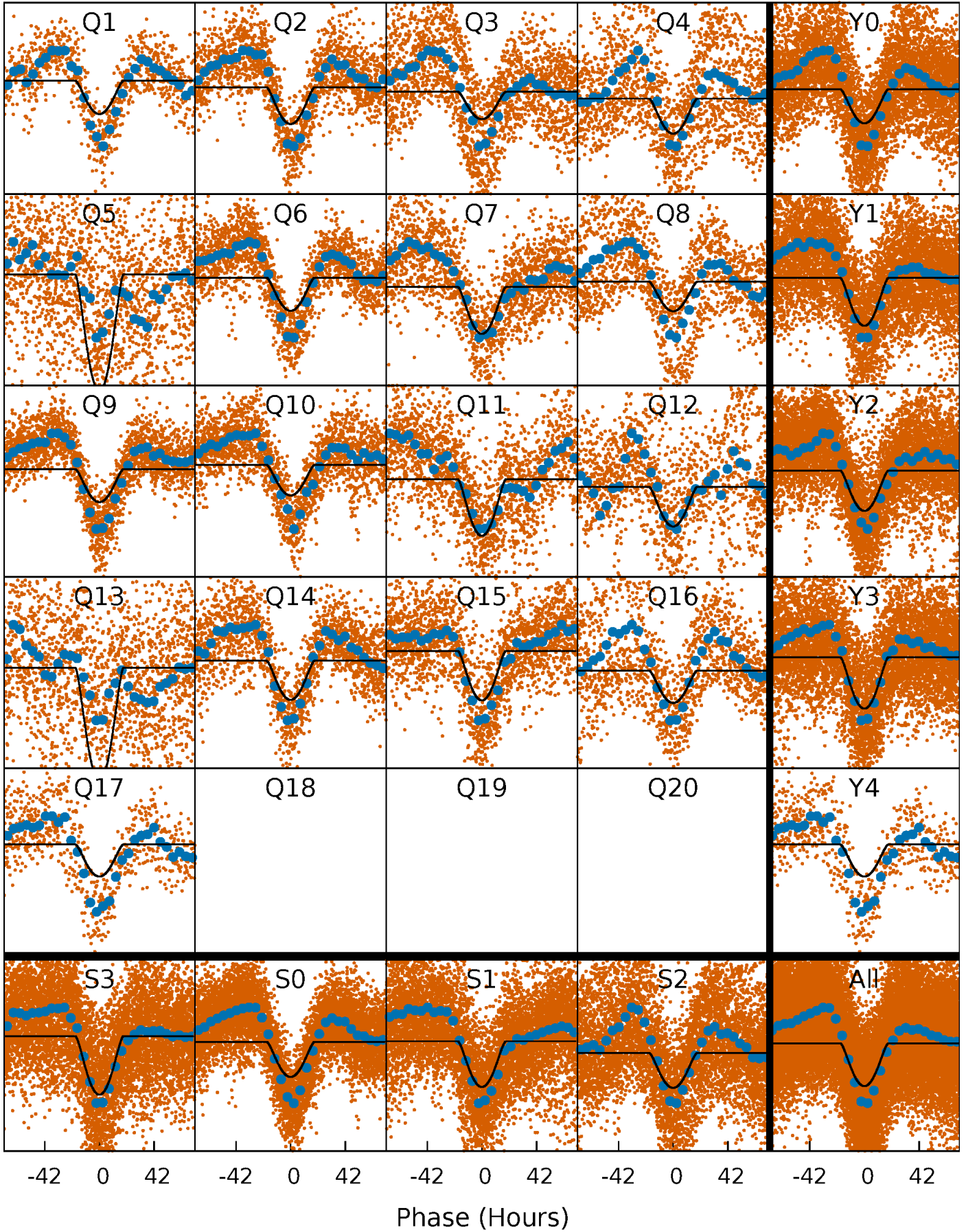
PDC Quarter-Phased Transit Curves

TCE 005398002-01 P= 14.158856 Days $T_0=133.966859$ (BKJD)



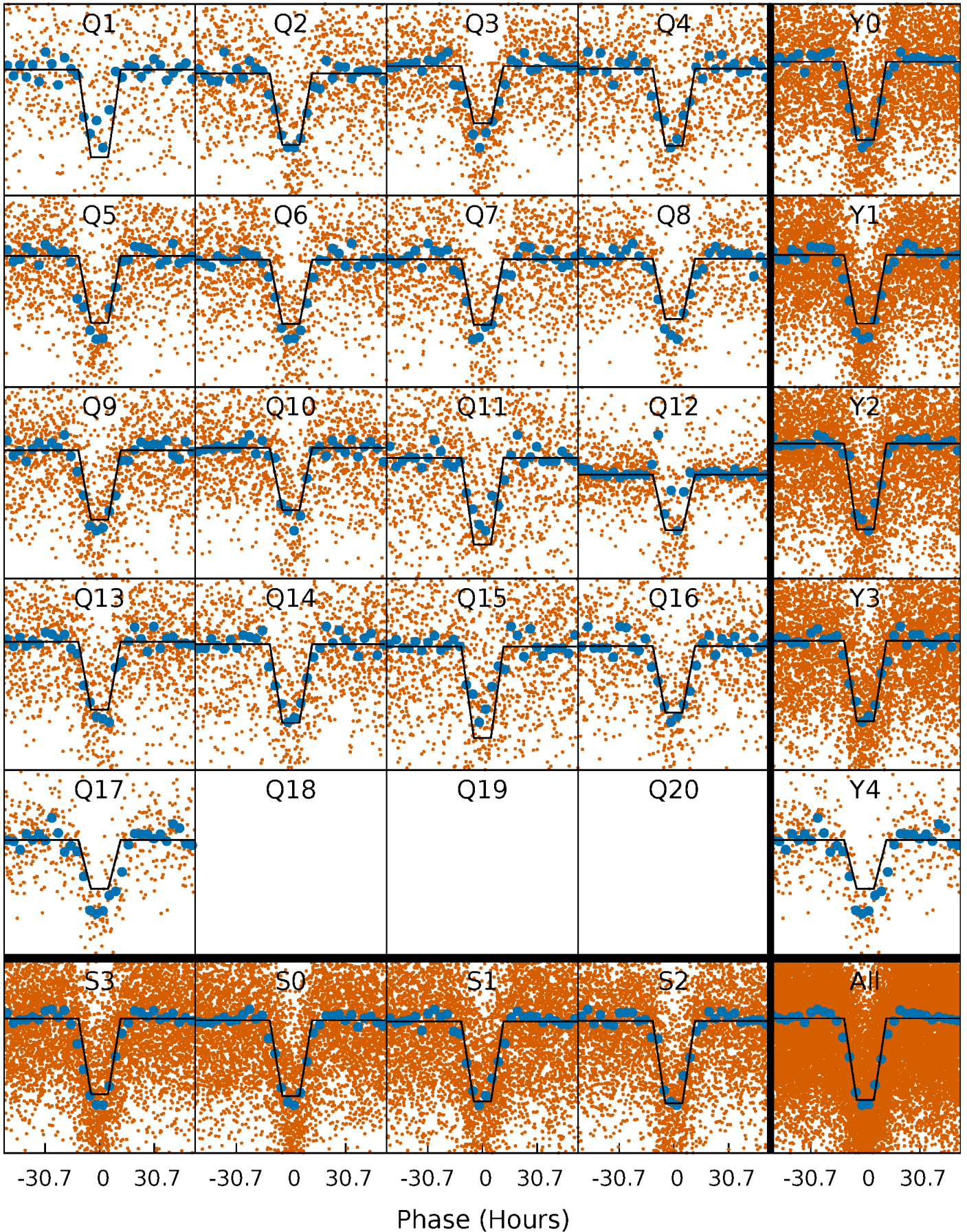
DV Quarter-Phased Transit Curves

TCE 005398002-01 P= 14.158856 Days $T_0=133.966859$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

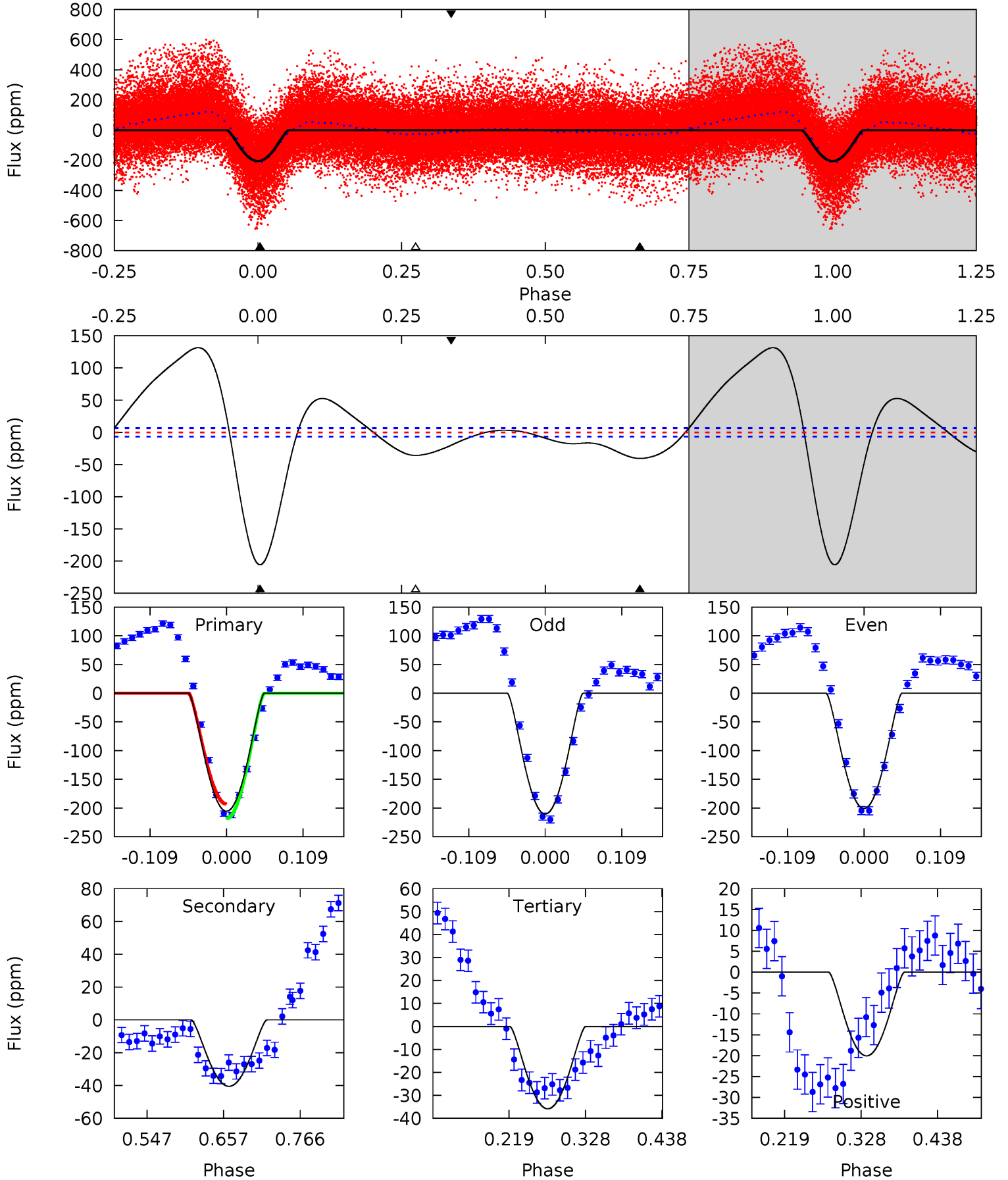
TCE 005398002-01 P= 14.158030 Days $T_0=133.992200$ (BKJD)



DV Model-Shift Uniqueness Test

005398002-01, P = 14.158856 Days, E = 119.808003 Days

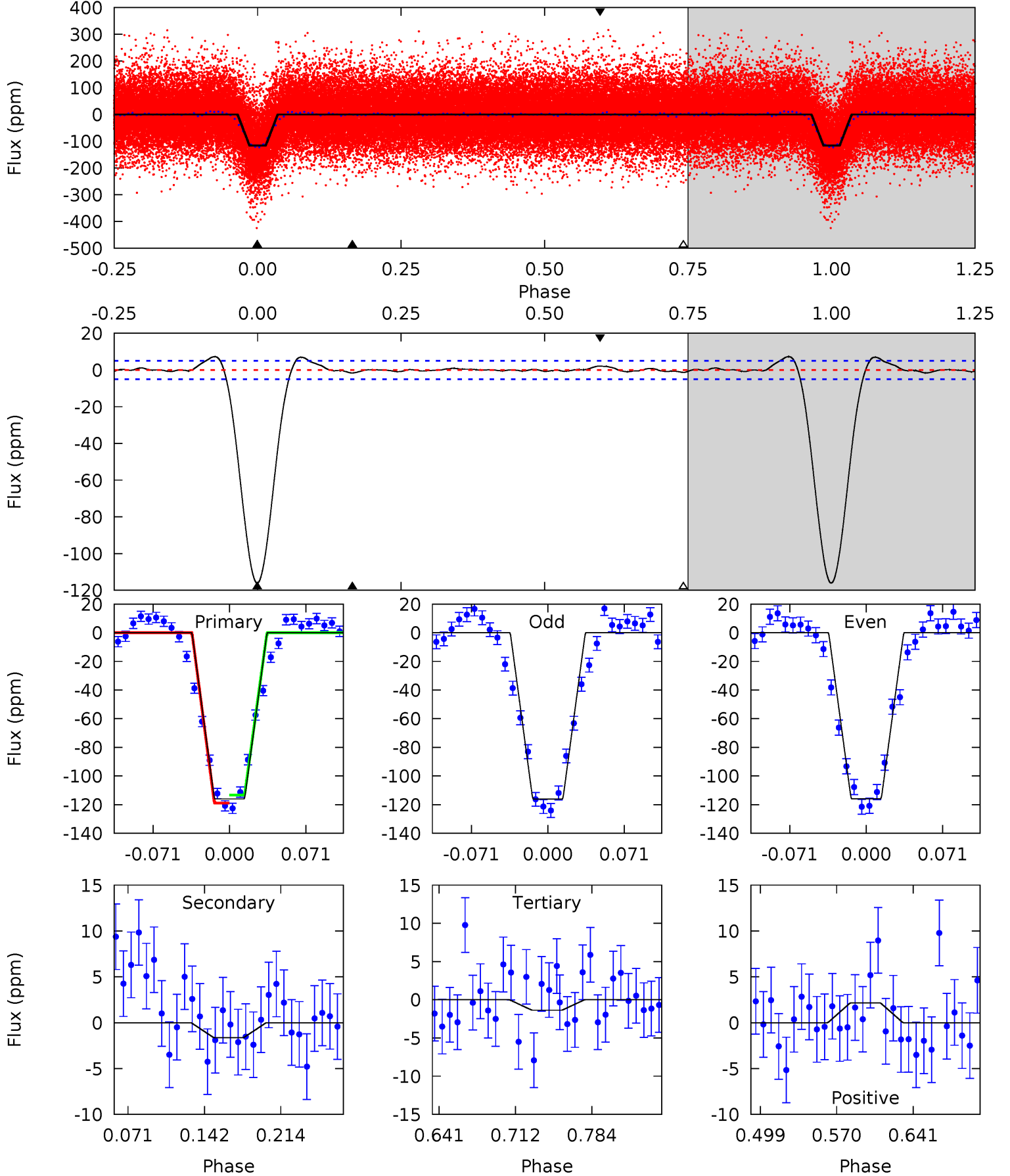
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
140.4	27.7	24.5	-13.7	4.55	1.60	31.5	115.9	154.1	3.17	41.4	3.25	0.98	0.39	8.52



Alt Model-Shift Uniqueness Test

005398002-01, P = 14.158030 Days, E = 119.834170 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
107.3	1.50	1.26	2.00	4.64	1.80	1.57	106.0	105.3	0.24	-0.50	0.08	0.88	0.06	2.60



Stellar Parameters For KIC 005398002

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8753^{+240}_{-411}	$3.668^{+0.496}_{-0.124}$	$0.070^{+0.200}_{-0.600}$	$3.746^{+1.014}_{-1.884}$	$2.385^{+0.334}_{-0.780}$	$0.064^{+0.331}_{-0.025}$
	+3%/-5%	+14%/-3%	+286%/-857%	+27%/-50%	+14%/-33%	+517%/-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 005398002-01 / KOI 3213.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-41 ± 1	$7.41^{+4.04}_{-3.35}$	2551^{+239}_{-352}	4682^{+1175}_{-580}	$9.577^{+19.168}_{-5.555}$
Alt.	-2 ± 1	$4.14^{+3.21}_{-2.55}$	2580^{+203}_{-355}	3089^{+1336}_{-5449}	$1.066^{+5.772}_{-0.842}$

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 $A_{obs} \gg 1.0$

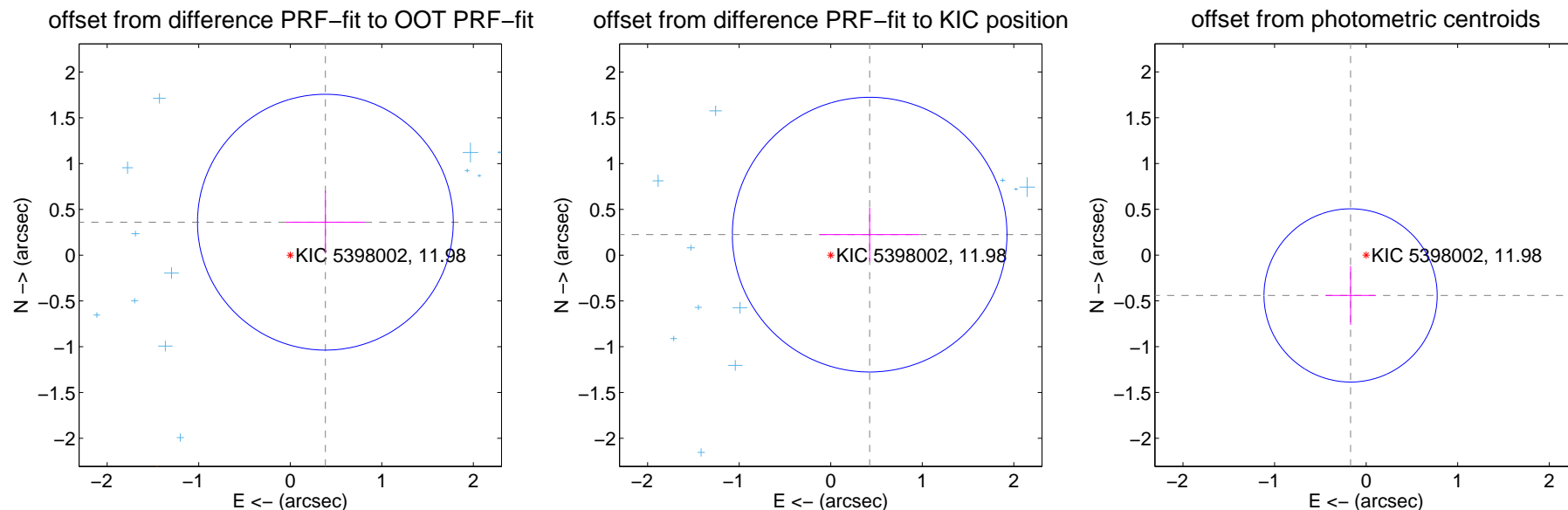
DV Centroid Data

Supplemental centroid analysis for 005398002-01. **Kepler magnitude: 11.98.** Transit SNR 31.34

There are 16 quarters with good PRF difference image offsets

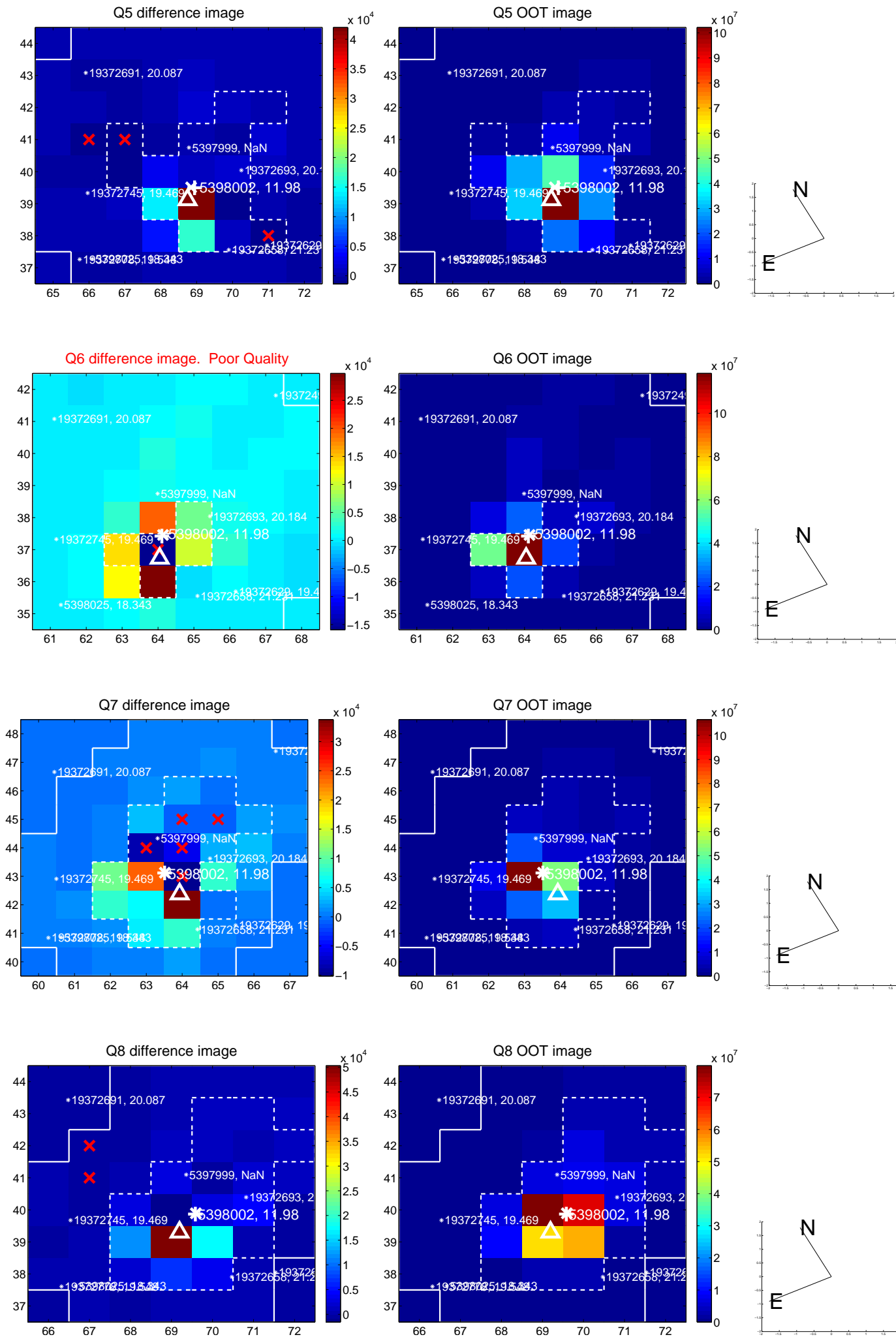
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.526 ± 0.466	1.13	-0.383 ± 0.433	0.360 ± 0.344
PRF-fit source offset from KIC position	0.481 ± 0.500	0.96	-0.425 ± 0.543	0.224 ± 0.294
photometric centroid source offset	0.47 ± 0.32	1.50	0.17 ± 0.27	-0.44 ± 0.32

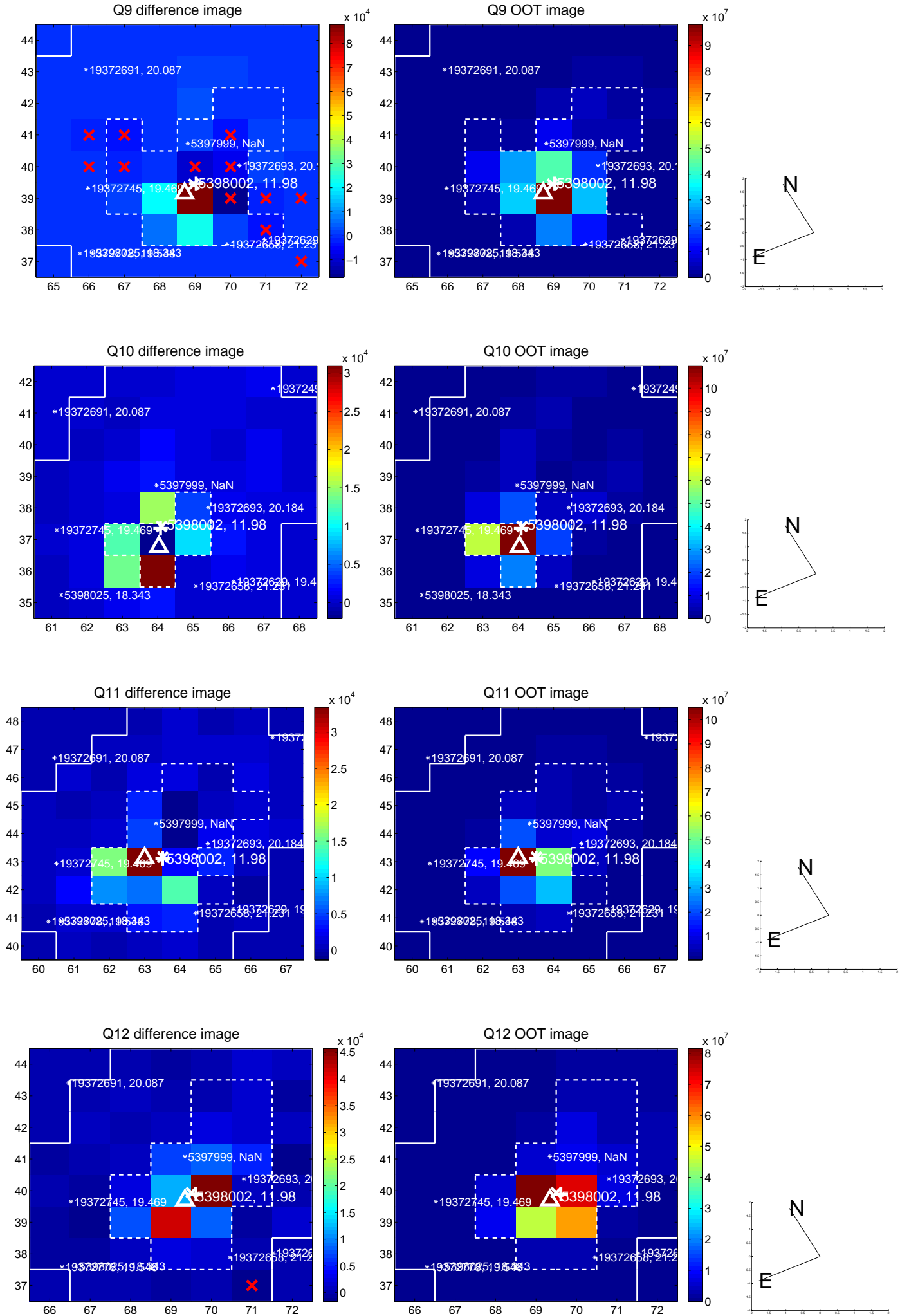


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

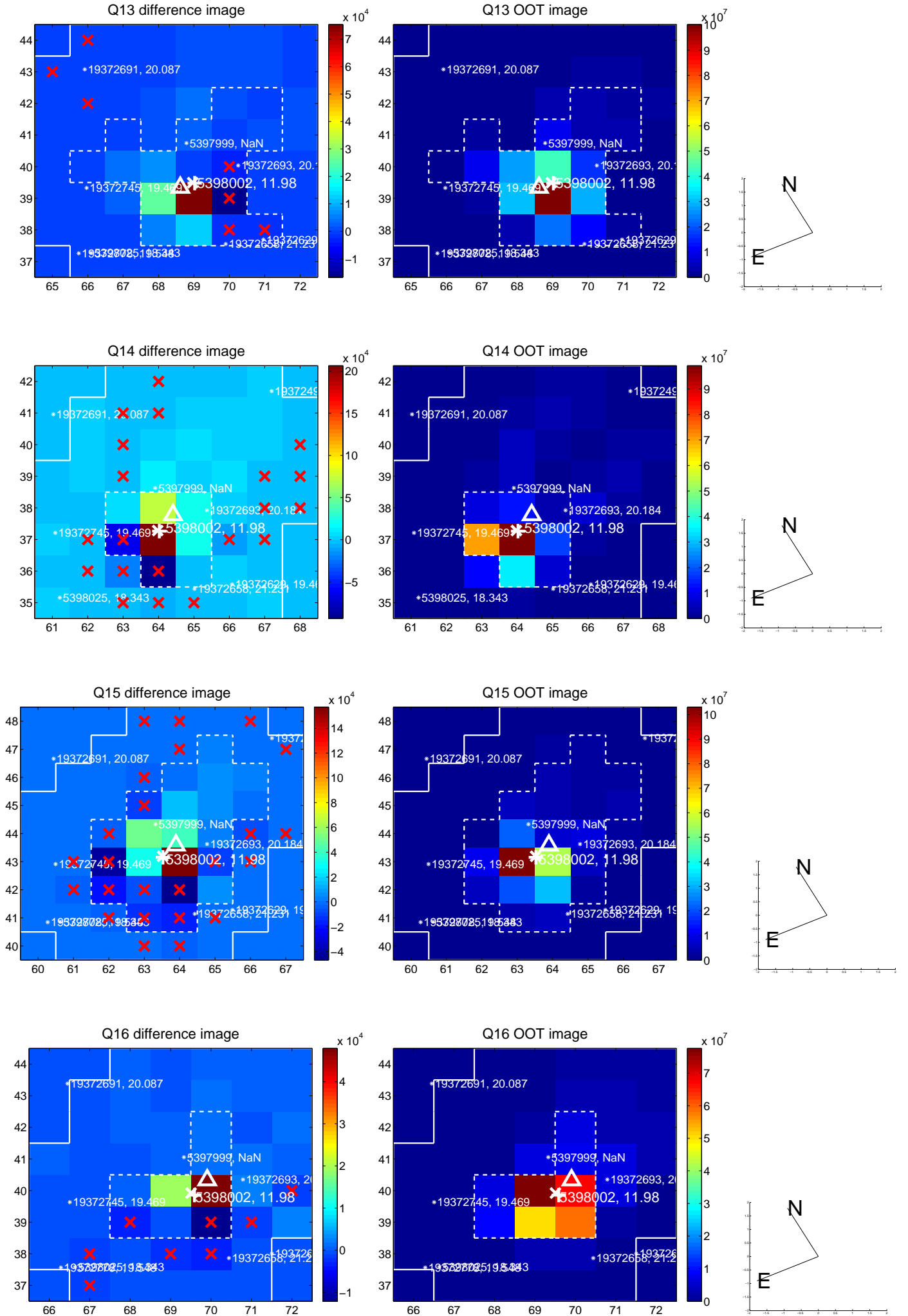
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



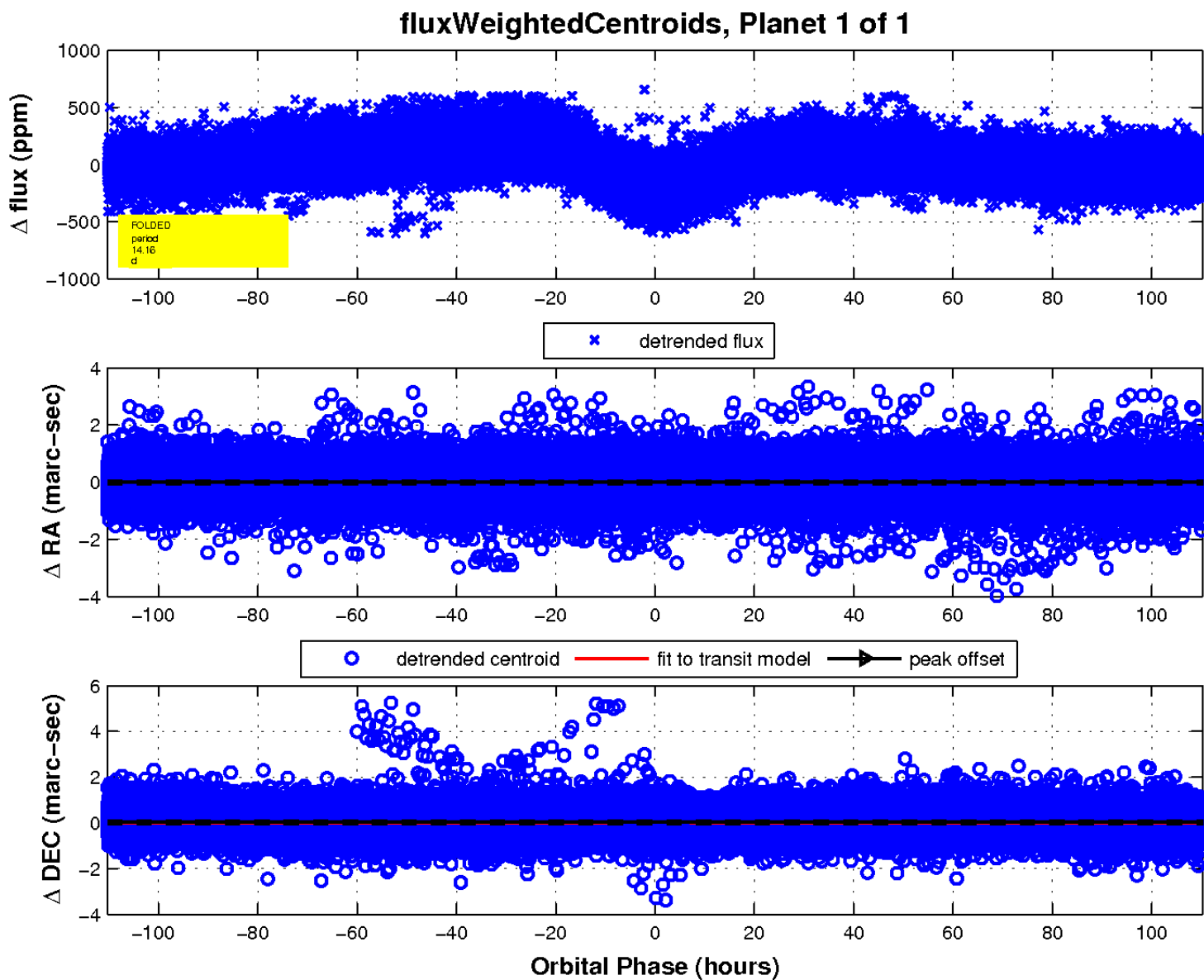
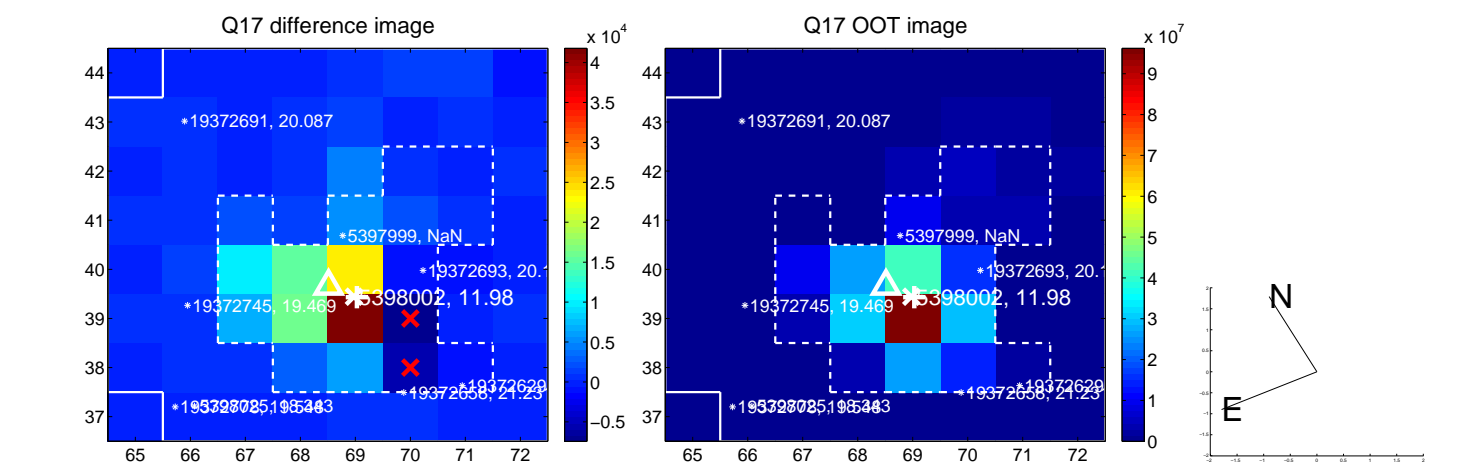
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

