

KIC 003648131

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})
003648131-01	OBS	No	0.947024	132.319226	25.5	5.171	9.1	10.6	2.49	7709	1.43	35844.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003648131-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

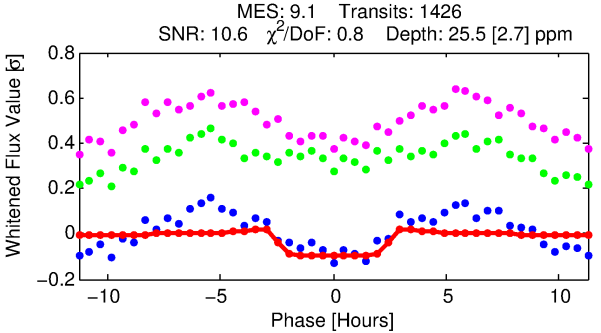
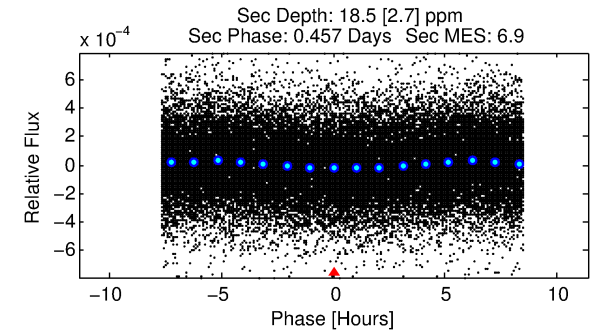
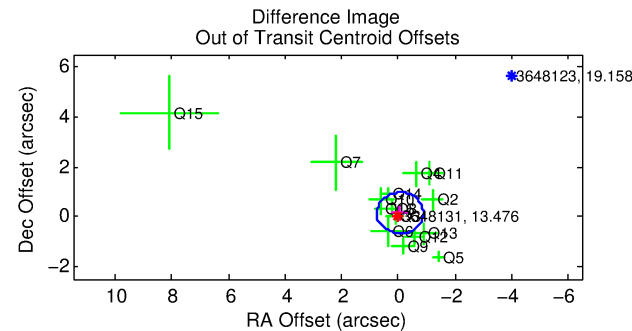
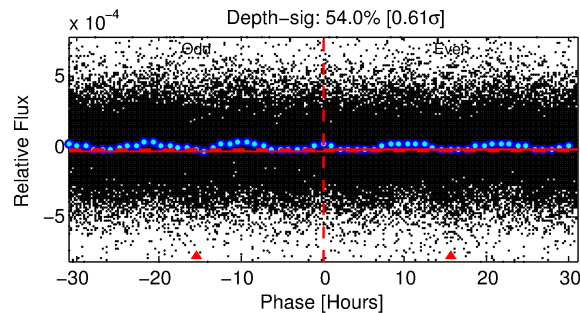
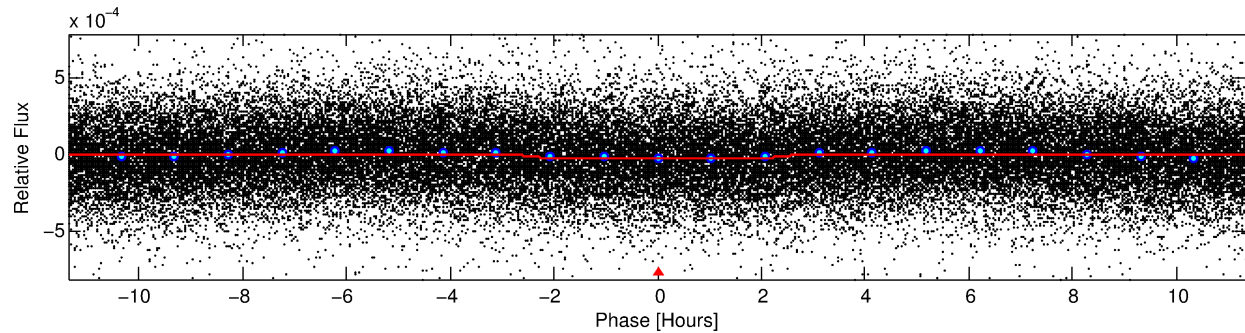
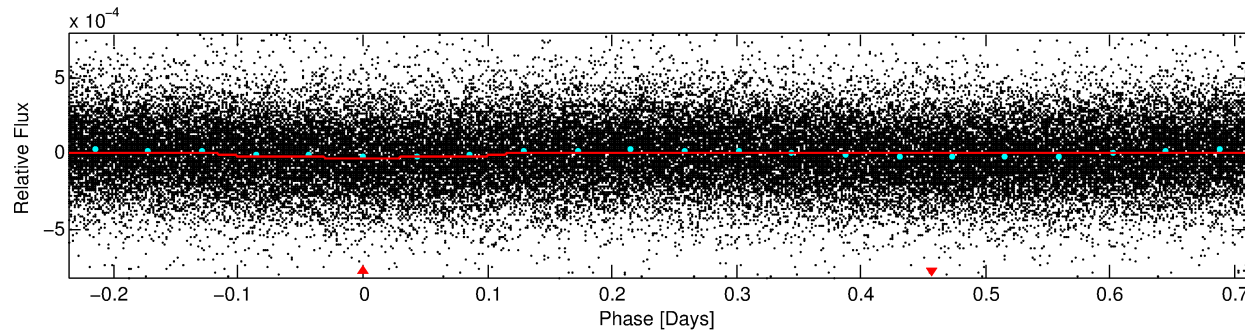
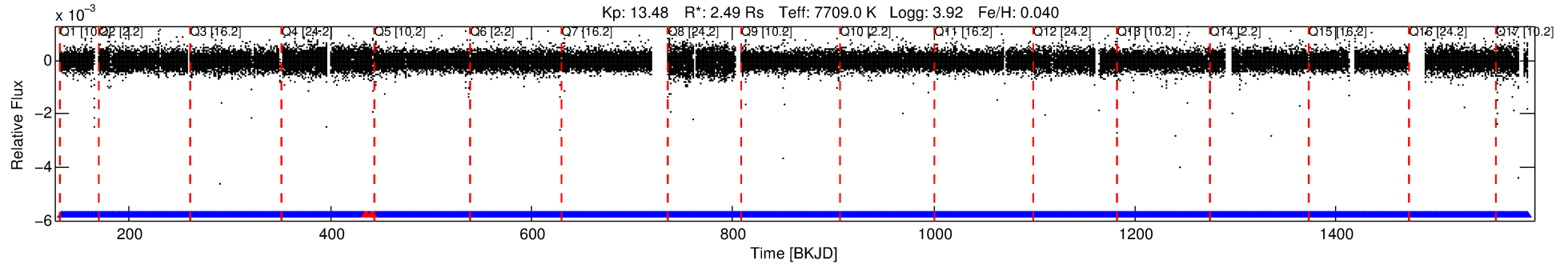
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003648131-01

No Significant Match Found

DV One-Page Summary

KIC: 3648131 Candidate: 1 of 1 Period: 0.947 d



DV Fit Results:

Period = 0.94702 [0.00001] d
Epoch = 132.3192 [0.0042] BKJD
Rp/R* = 0.0053 [0.0021]
a/R* = 1.16 [0.74]
b = 0.88 [0.69]
Seff = 35844.43 [16863.55]
Teq = 3509 [413] K
Rp = 1.43 [0.75] Re
a = 0.0234 [0.0068] AU
Ag = 2.71 [2.50] [0.68 σ]
Teffp = 6962 [1440] K [2.31 σ]

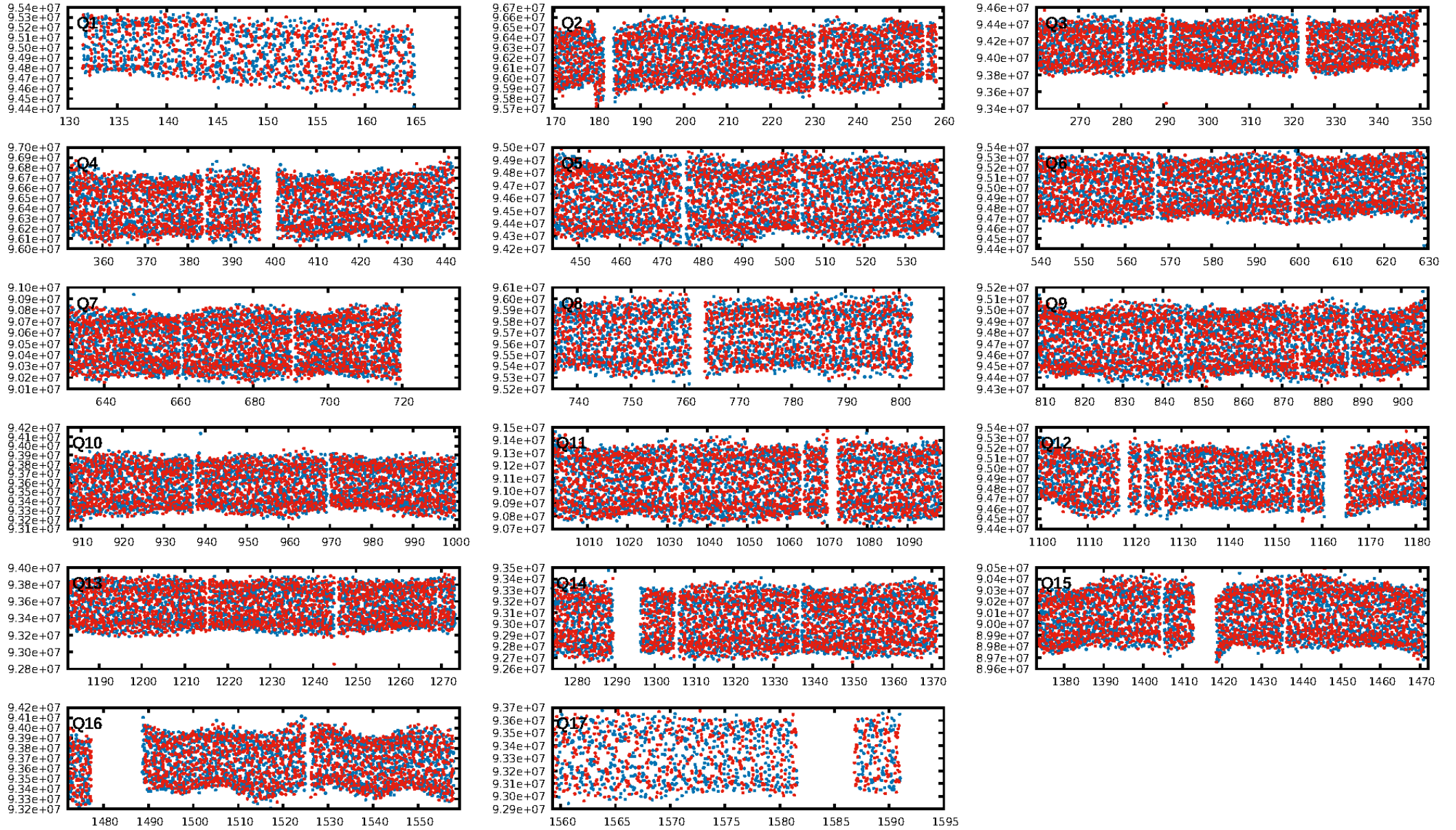
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.34e-14
RollingBand-fgt: 1.00 [1358/1362]
GhostDiagnostic-chr: 2.679
Centroid-sig: 0.2%
Centroid-so: 1.956 arcsec [1.92 σ]
OotOffset-rm: 0.160 arcsec [0.58 σ]
KicOffset-rm: 0.233 arcsec [0.84 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 1.00 [17/17]

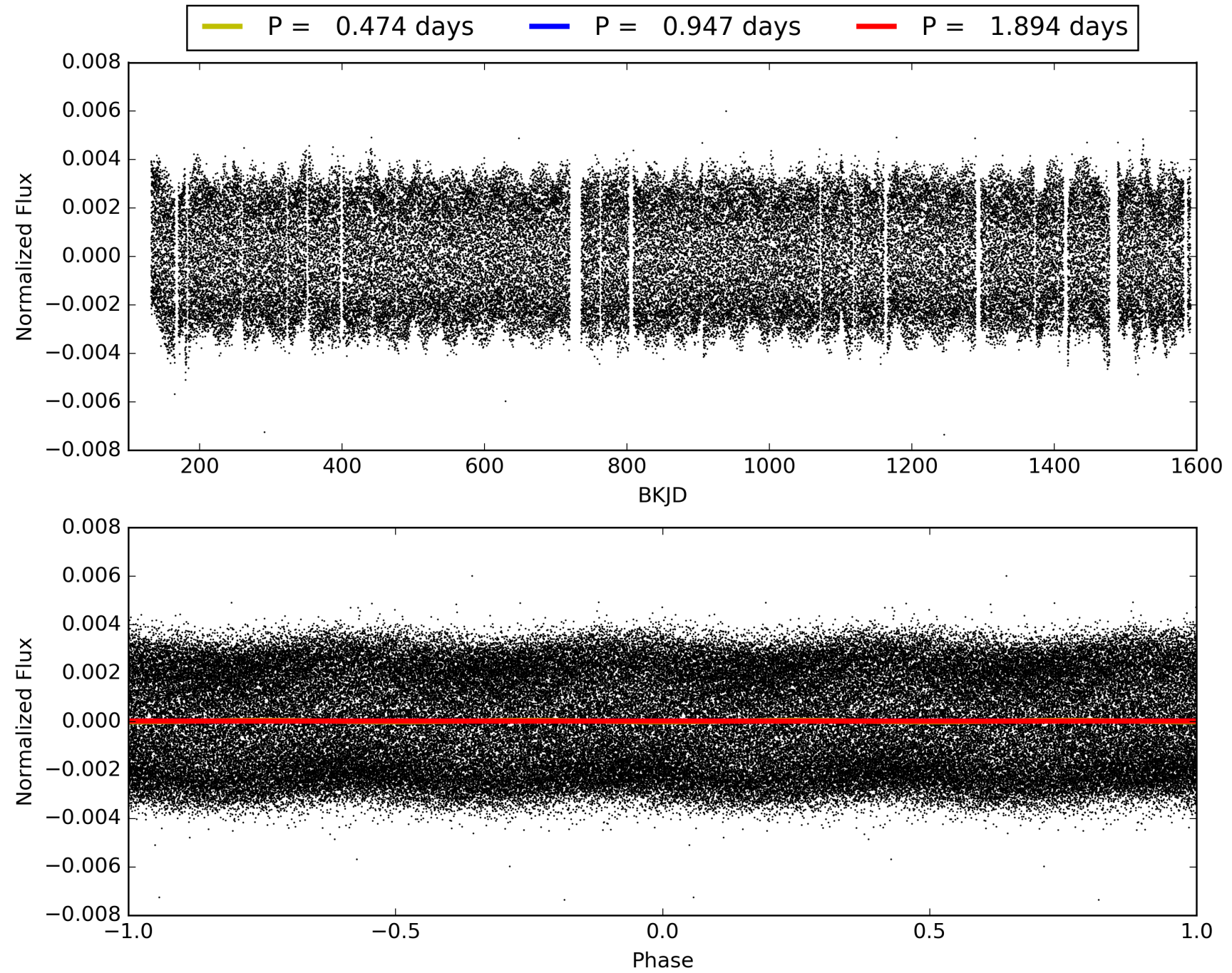
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:35:47 Z

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

TCE 003648131-01, PDC Light Curves

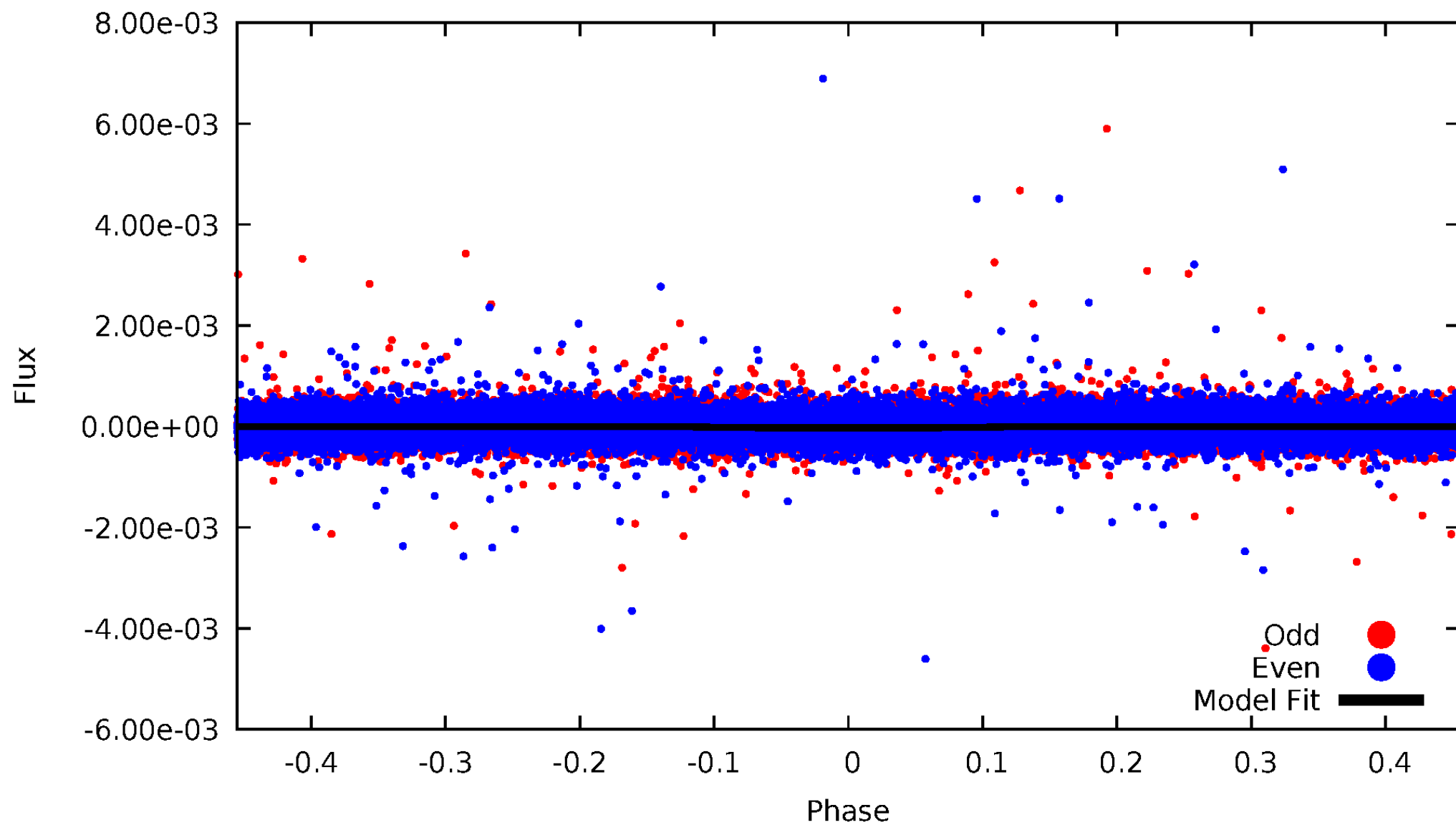


TCE 003648131-01



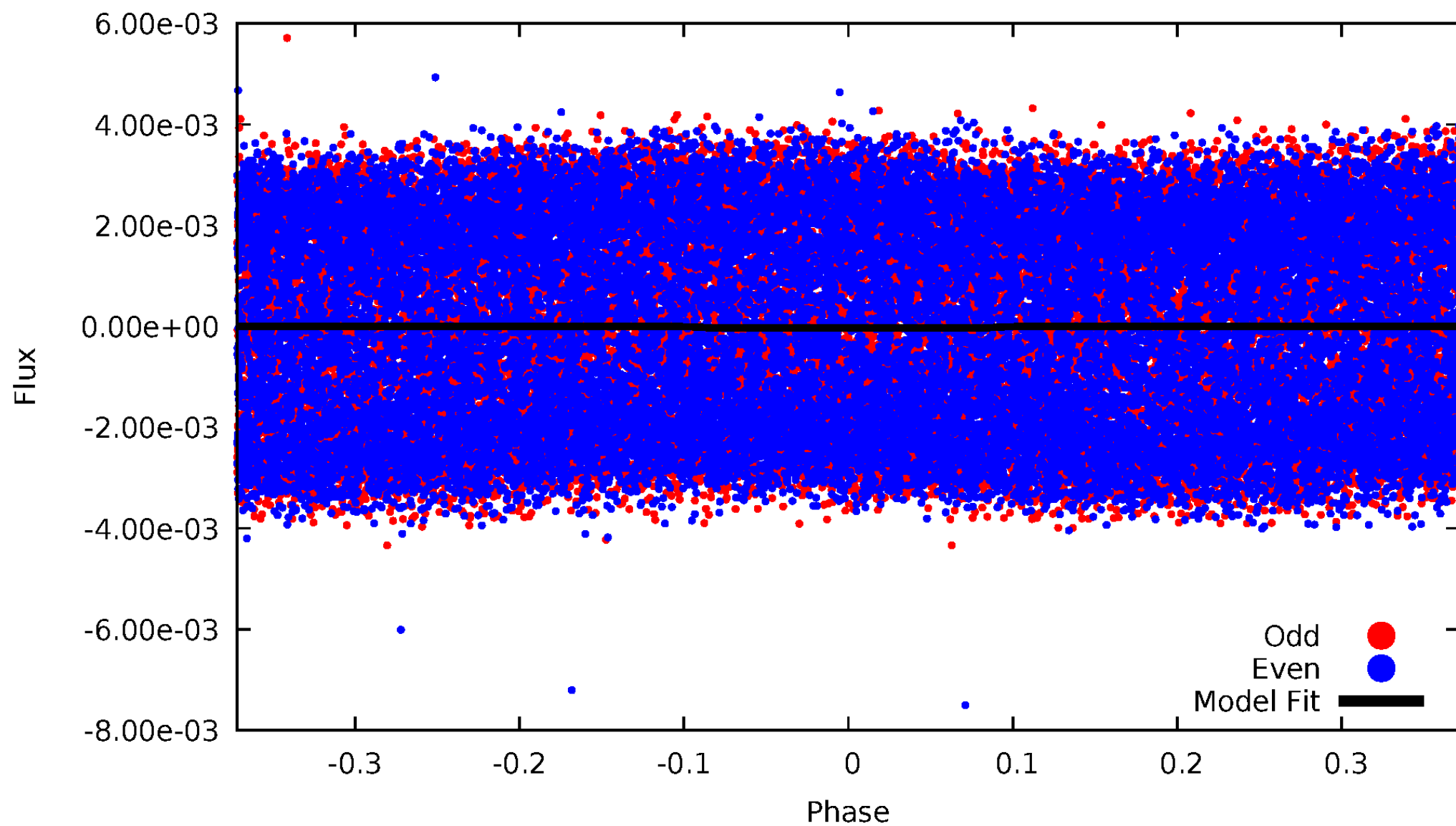
DV Odd/Even

TCE 003648131-01

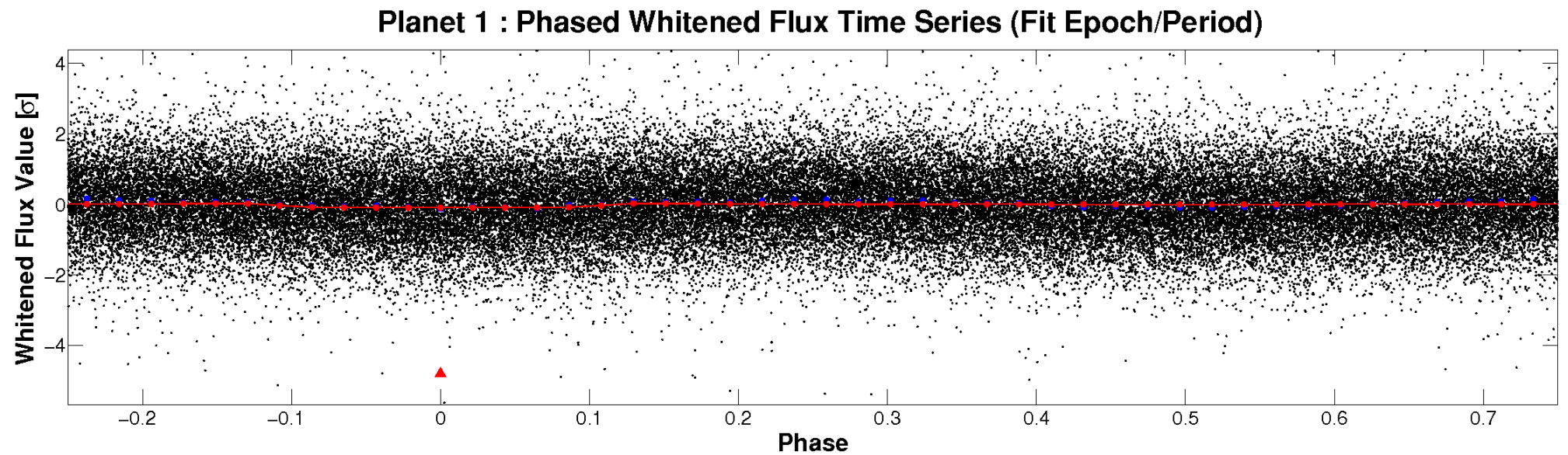
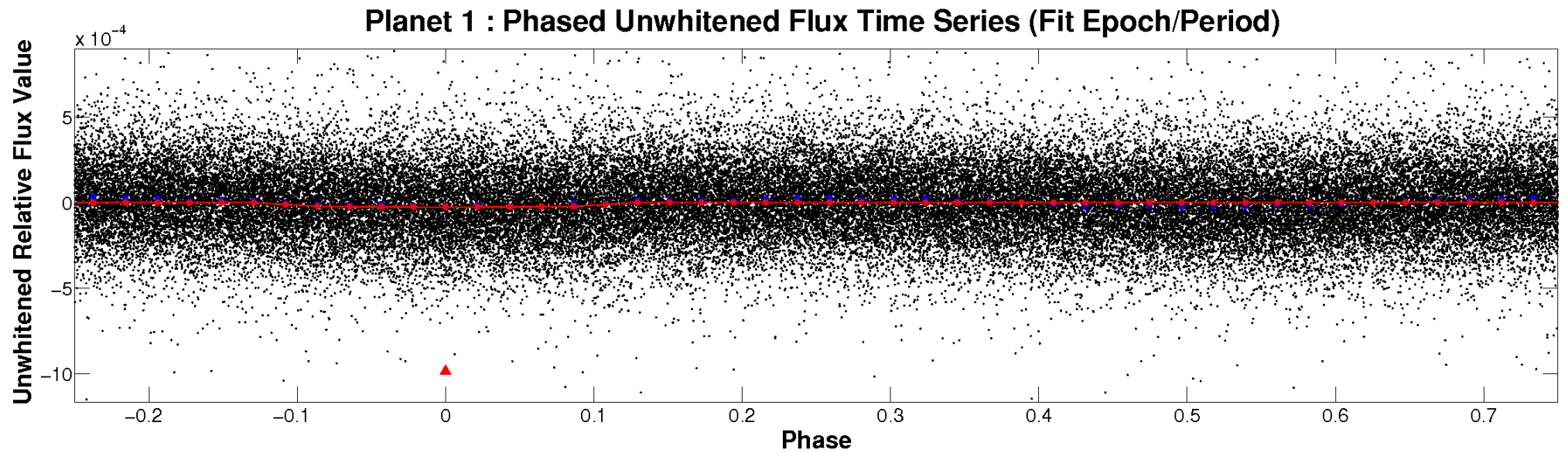


ALT Odd/Even

TCE 003648131-01

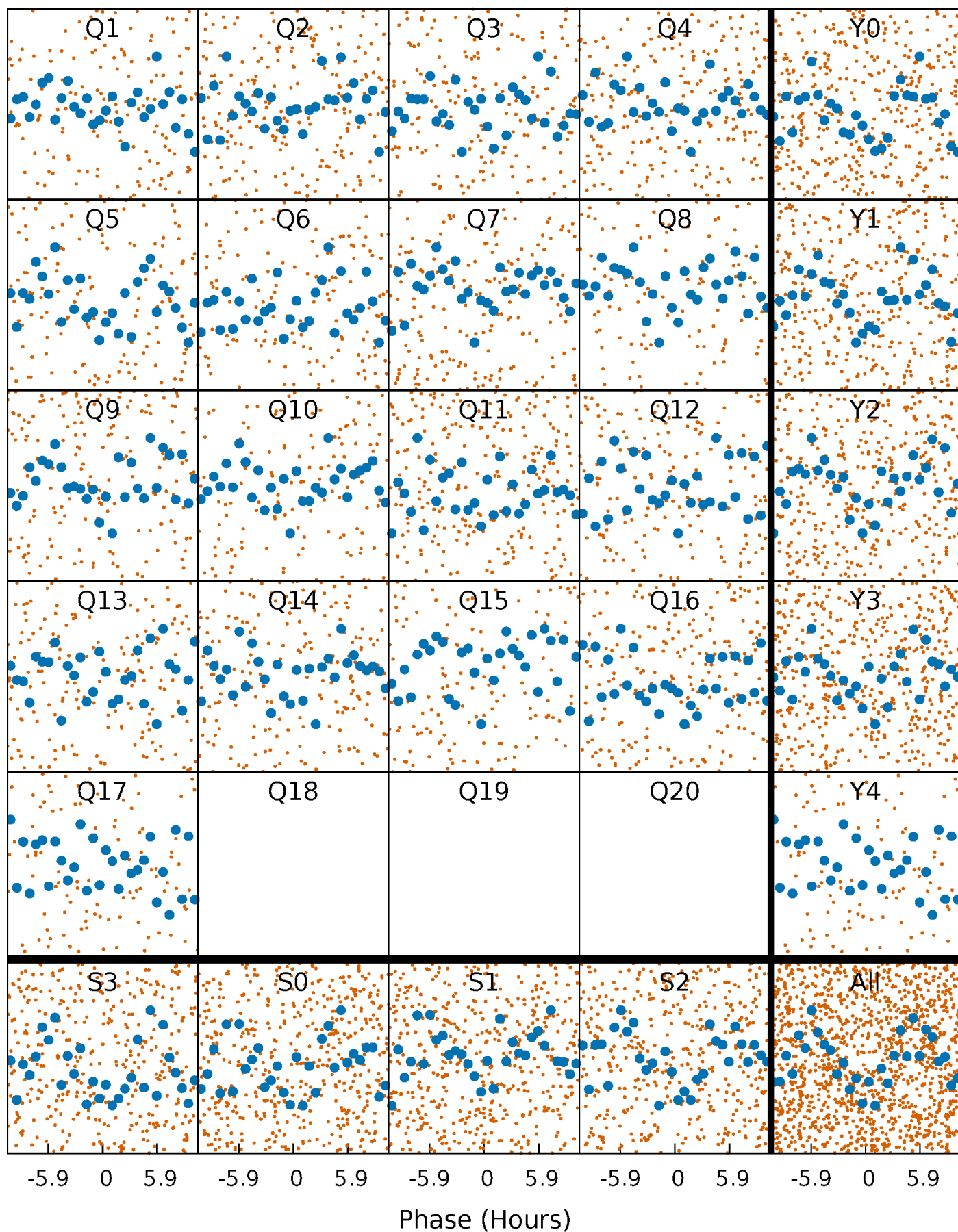


Non-Whitened Vs. Whitened Light Curve



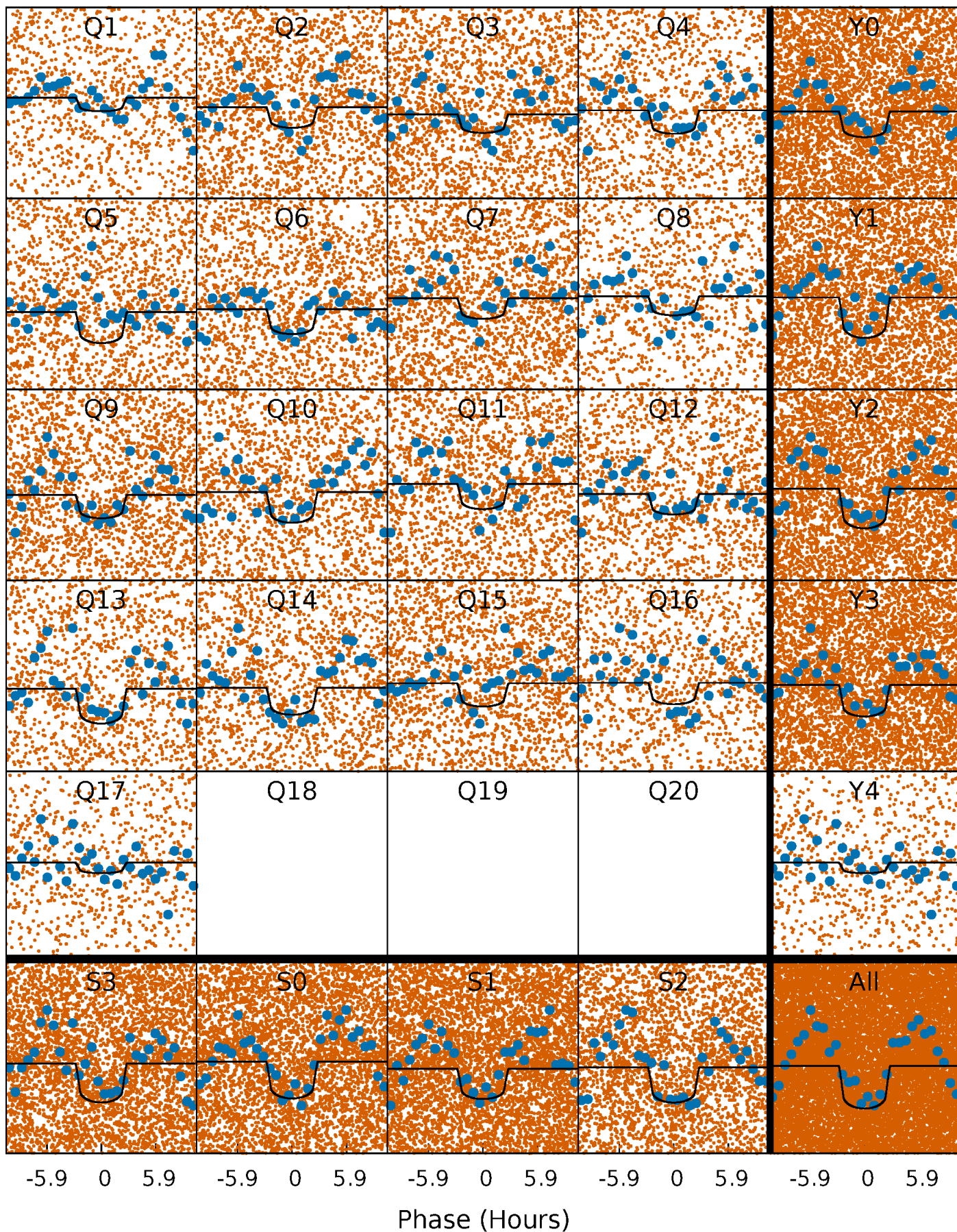
PDC Quarter-Phased Transit Curves

TCE 003648131-01 P= 0.947024 Days $T_0=132.319226$ (BKJD)



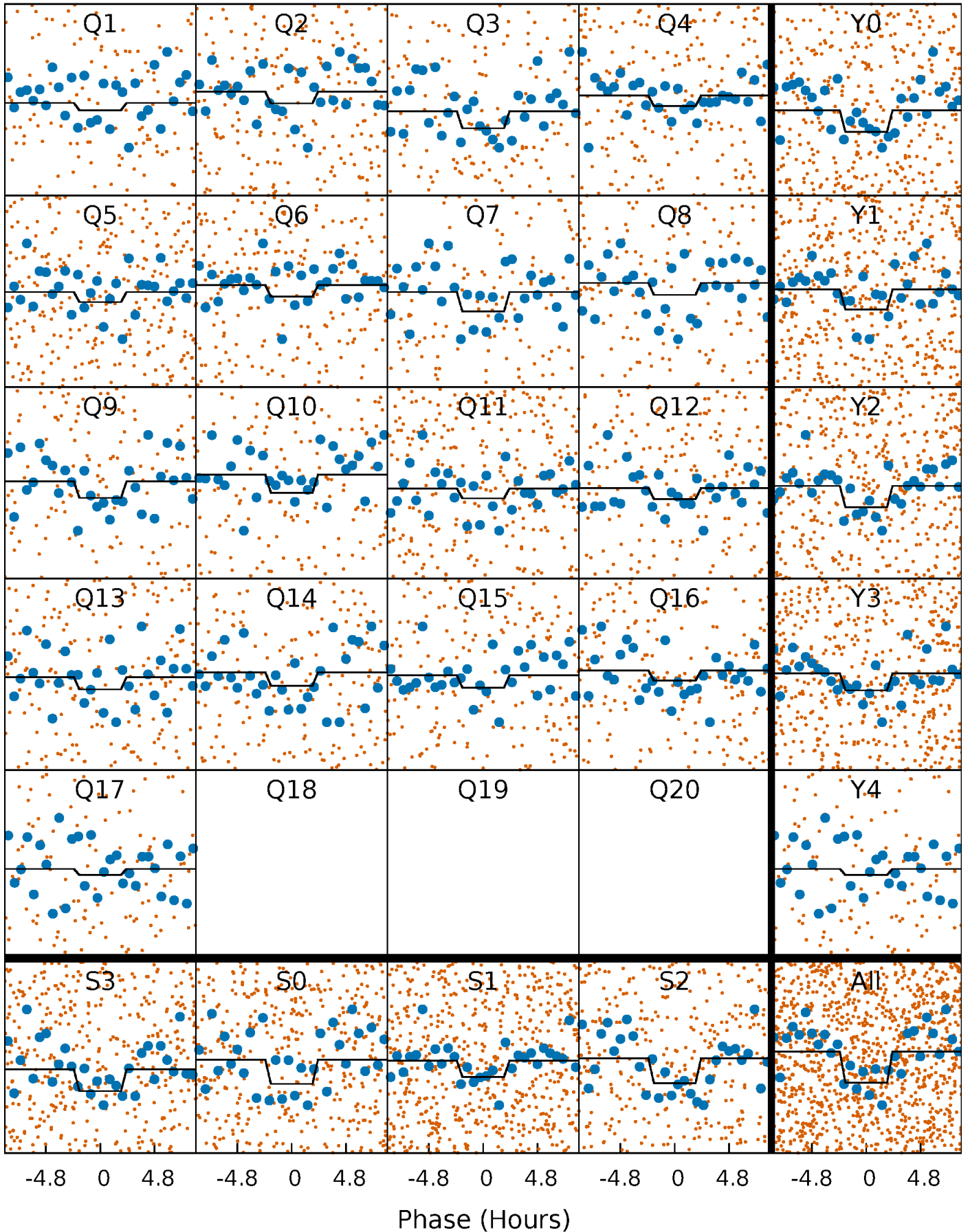
DV Quarter-Phased Transit Curves

TCE 003648131-01 P= 0.947024 Days $T_0=132.319226$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

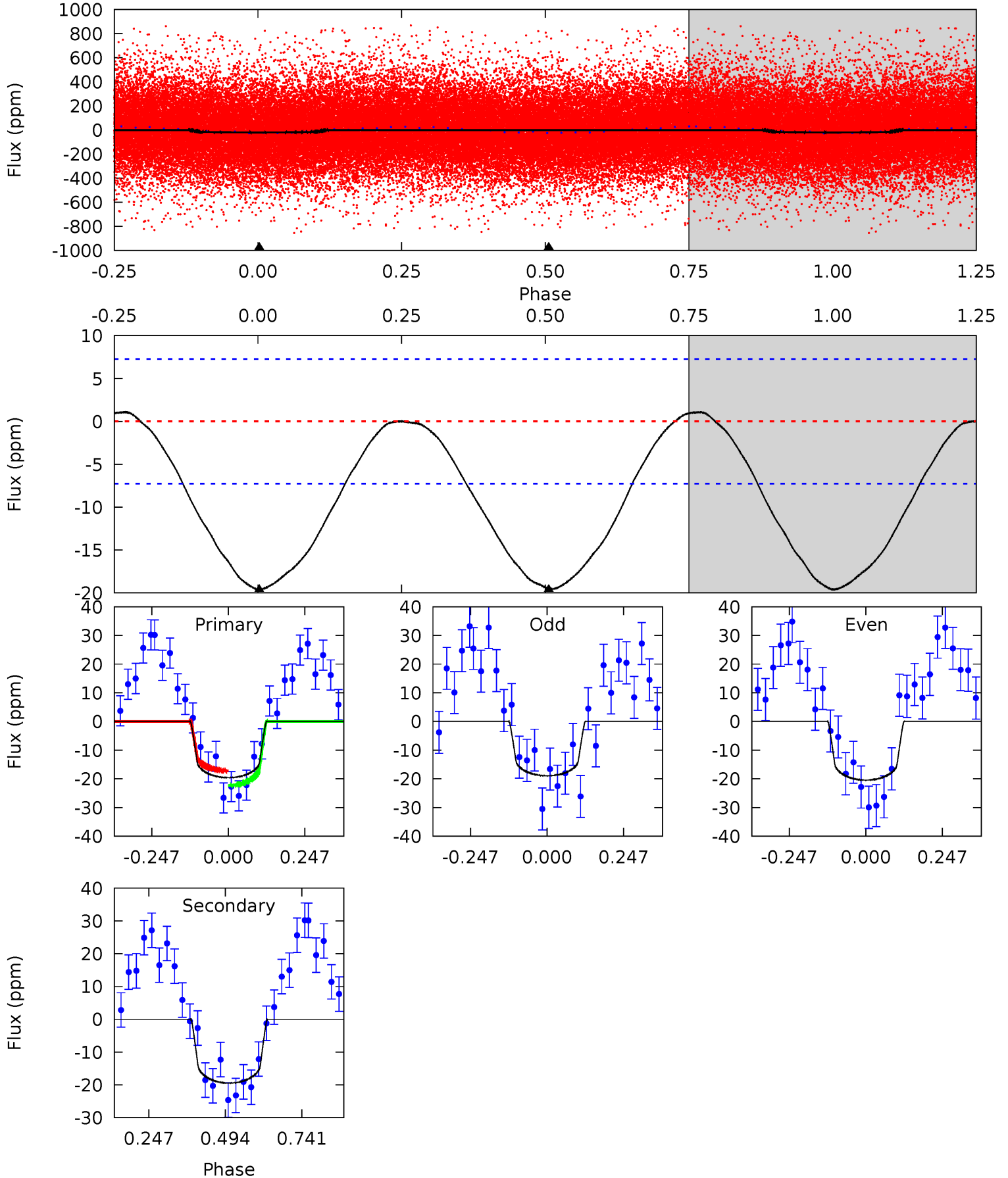
TCE 003648131-01 P= 0.947022 Days $T_0=132.306577$ (BKJD)



DV Model-Shift Uniqueness Test

003648131-01, P = 0.947024 Days, E = 131.372202 Days

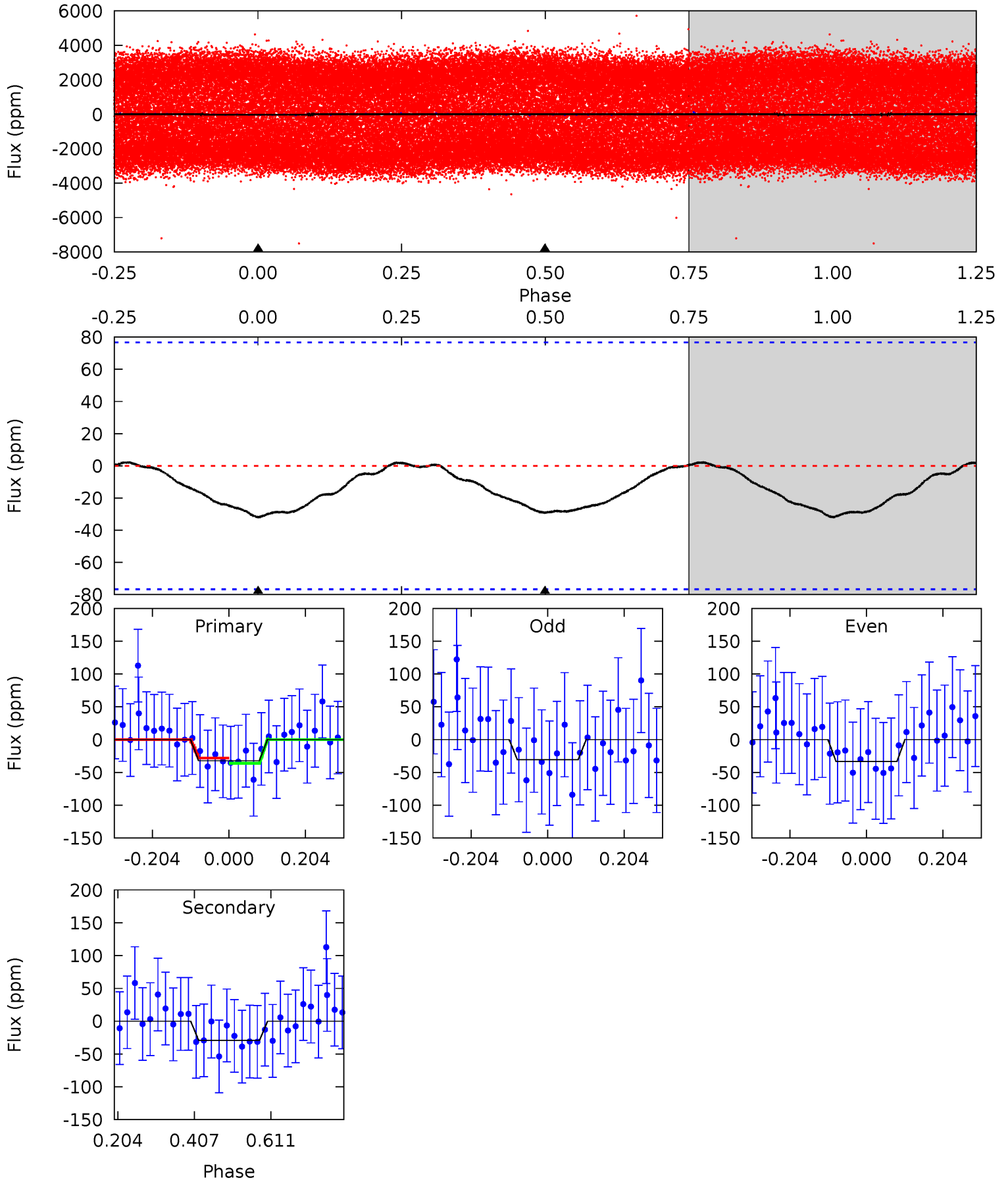
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	11.7	0	0	4.37	1.16	0.31	11.8	11.8	11.7	11.7	0.46	0.96	0.05	1.53



Alt Model-Shift Uniqueness Test

003648131-01, P = 0.947022 Days, E = 131.359555 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.85	1.68	0	0	4.41	1.27	0.09	1.85	1.85	1.68	1.68	0.08	1.00	0.07	0.23



Stellar Parameters For KIC 003648131

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7709^{+214}_{-322}	$3.925^{+0.247}_{-0.133}$	$0.040^{+0.200}_{-0.350}$	$2.489^{+0.448}_{-0.832}$	$1.900^{+0.097}_{-0.412}$	$0.174^{+0.297}_{-0.060}$
	+3%/-4%	+6%/-3%	+500%/-875%	+18%/-33%	+5%/-22%	+171%/-35%
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 003648131-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19±2	$1.34^{+0.66}_{-0.55}$	4873^{+313}_{-412}	6813^{+2669}_{-1310}	$3.155^{+5.816}_{-1.723}$
Alt.	-29±17	$1.43^{+0.63}_{-0.54}$	4848^{+339}_{-415}	7158^{+3032}_{-1916}	$3.722^{+7.423}_{-2.555}$

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 $A_{obs} \gg 1.0$

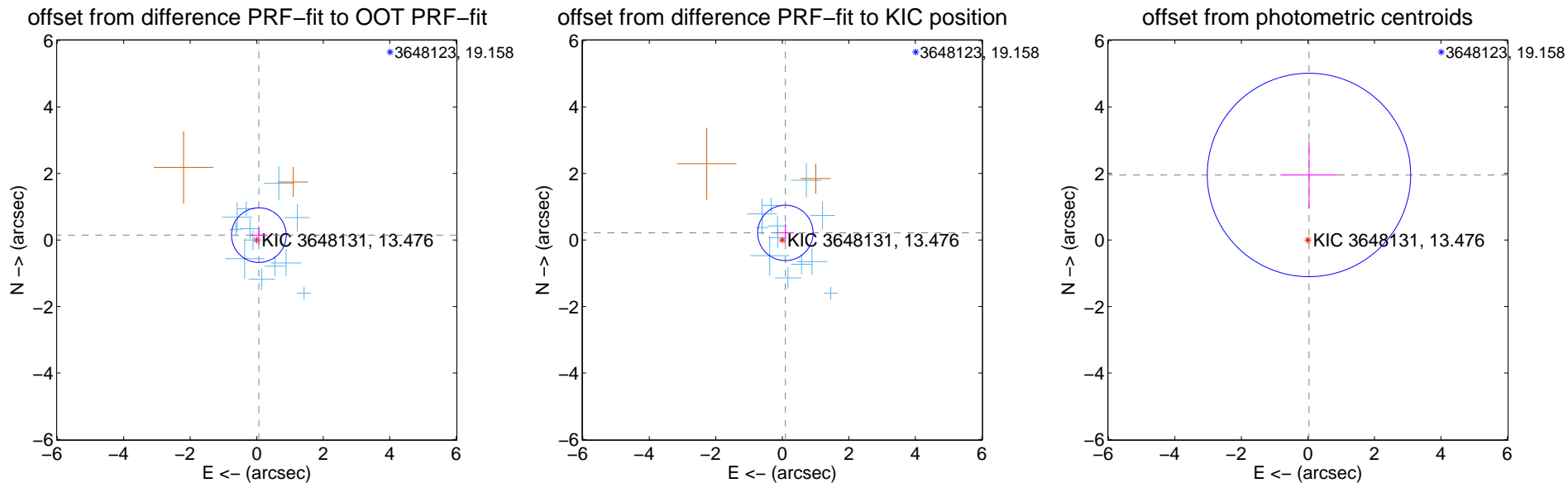
DV Centroid Data

Supplemental centroid analysis for 003648131-01. Kepler magnitude: 13.48. Transit SNR 10.59

There are 12 quarters with good PRF difference image offsets

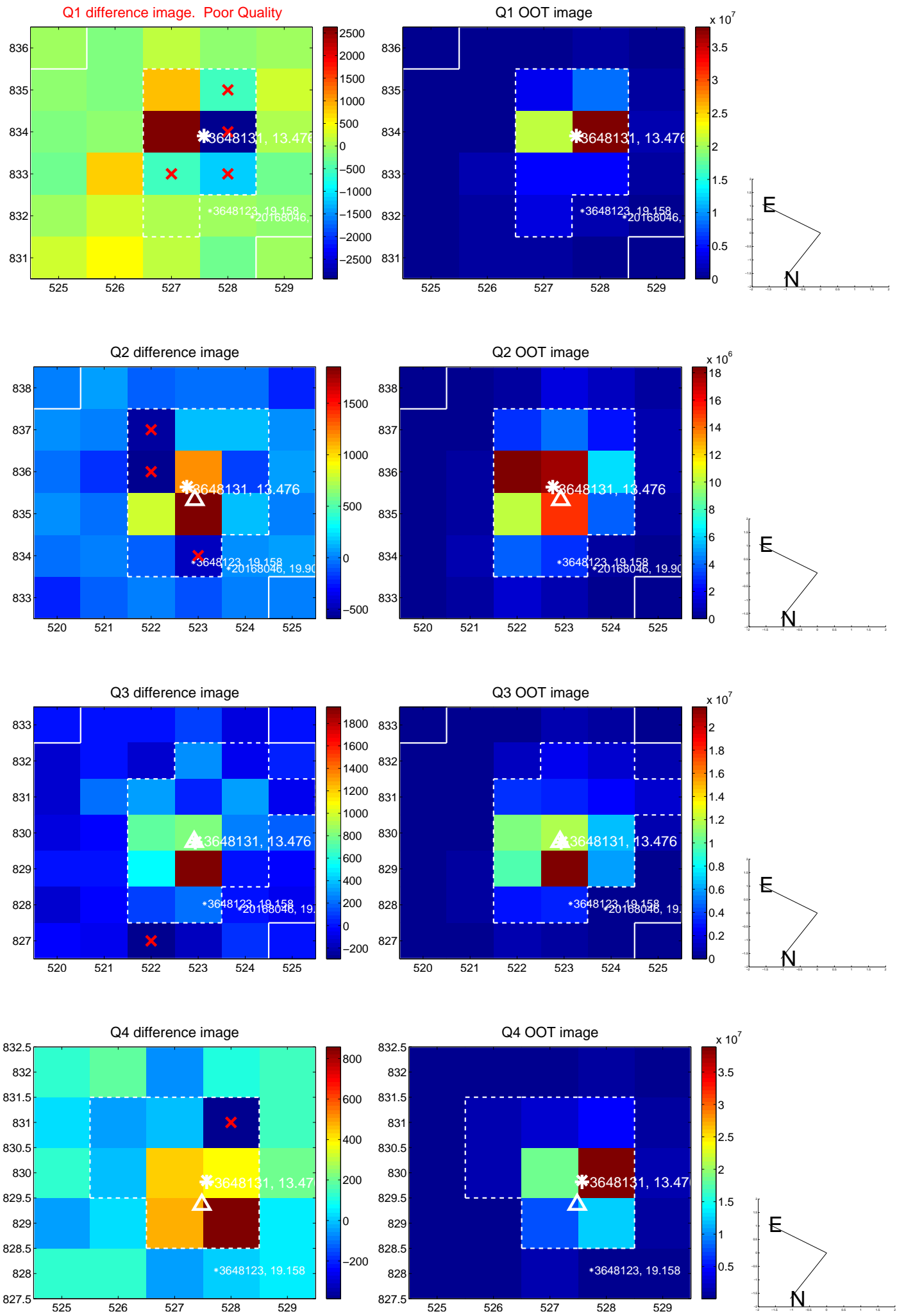
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.160 ± 0.274	0.58	-0.064 ± 0.259	0.146 ± 0.277
PRF-fit source offset from KIC position	0.233 ± 0.278	0.84	-0.092 ± 0.257	0.214 ± 0.281
photometric centroid source offset	1.96 ± 1.02	1.92	-0.03 ± 0.86	1.96 ± 1.02

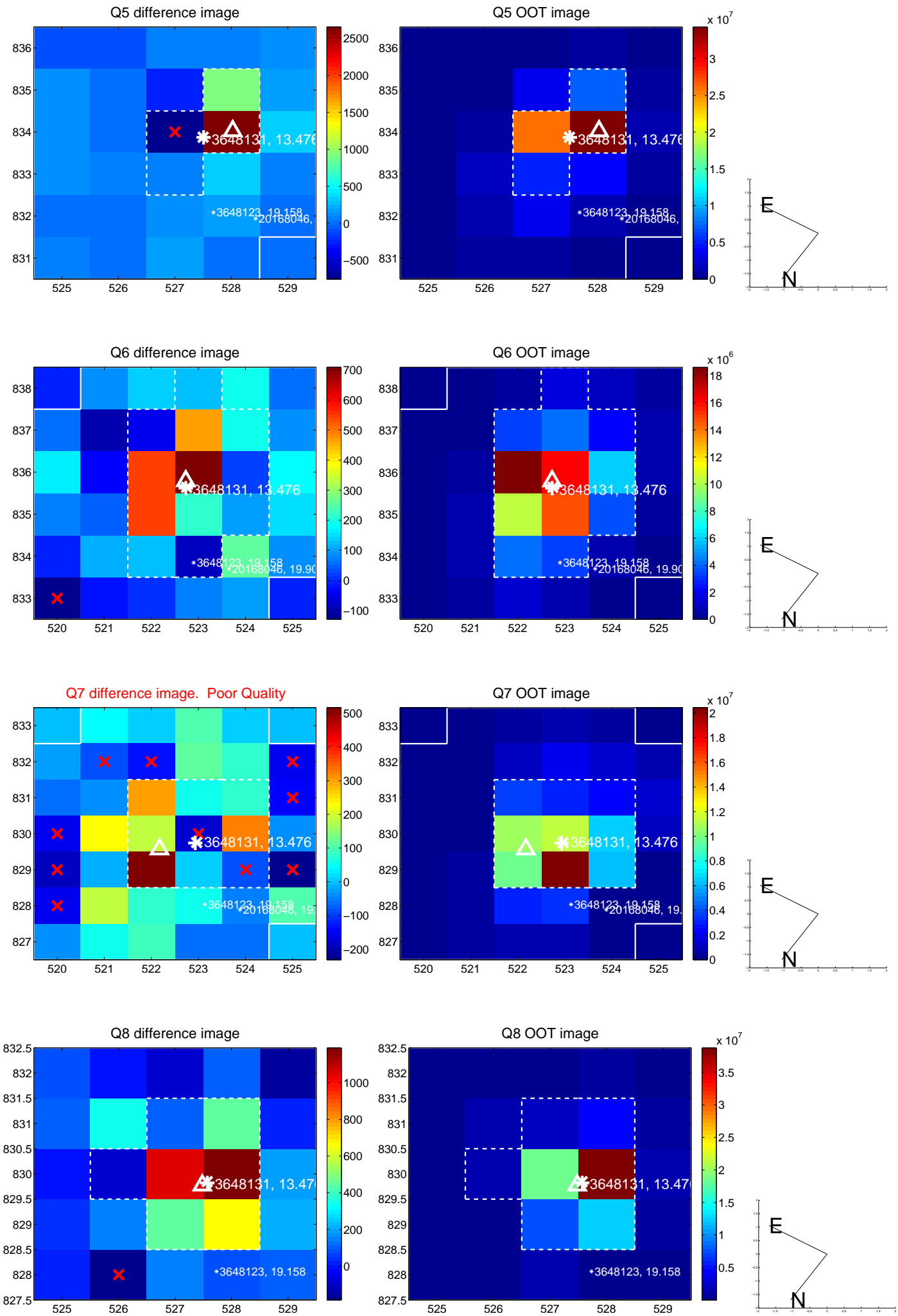


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

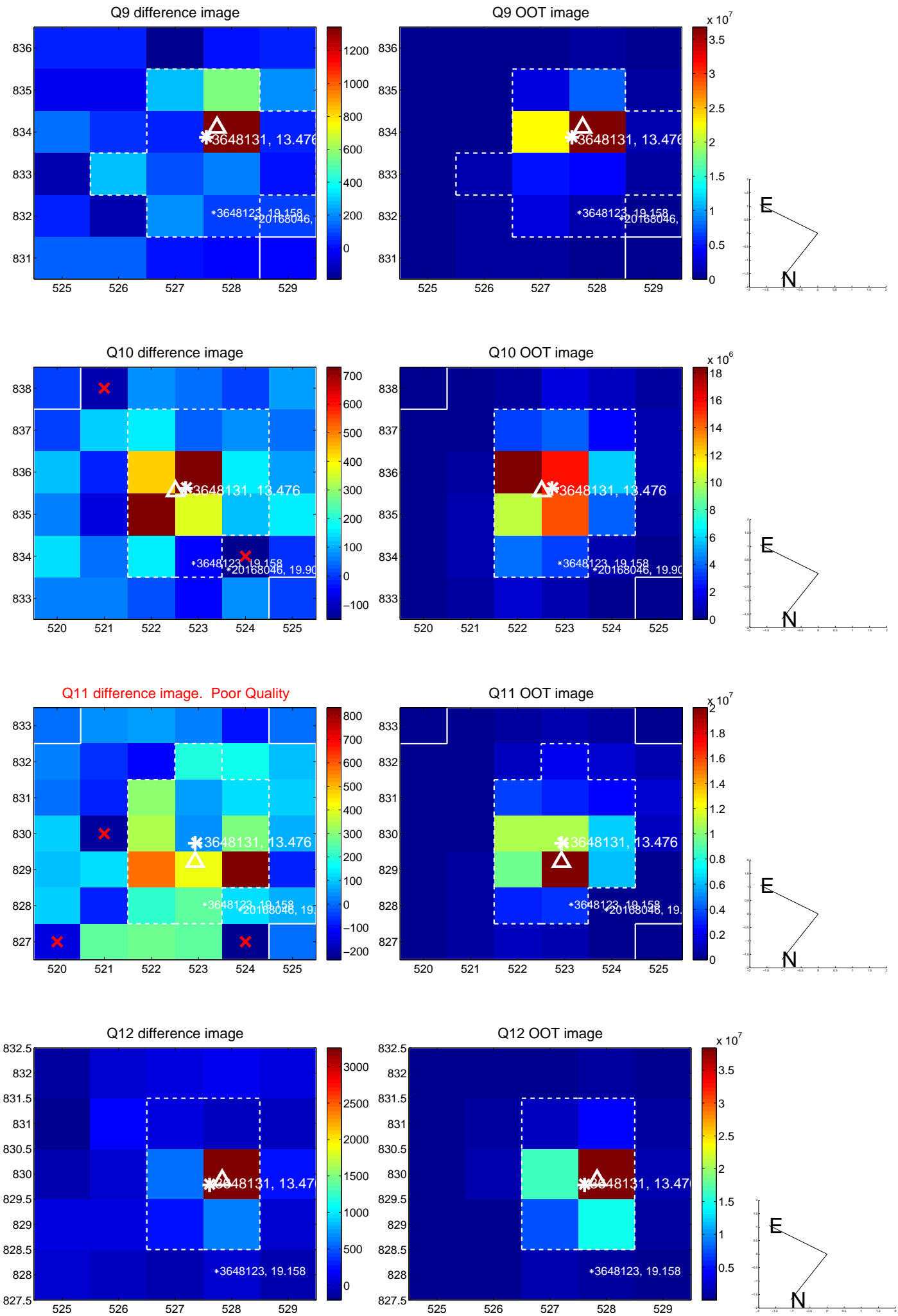
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



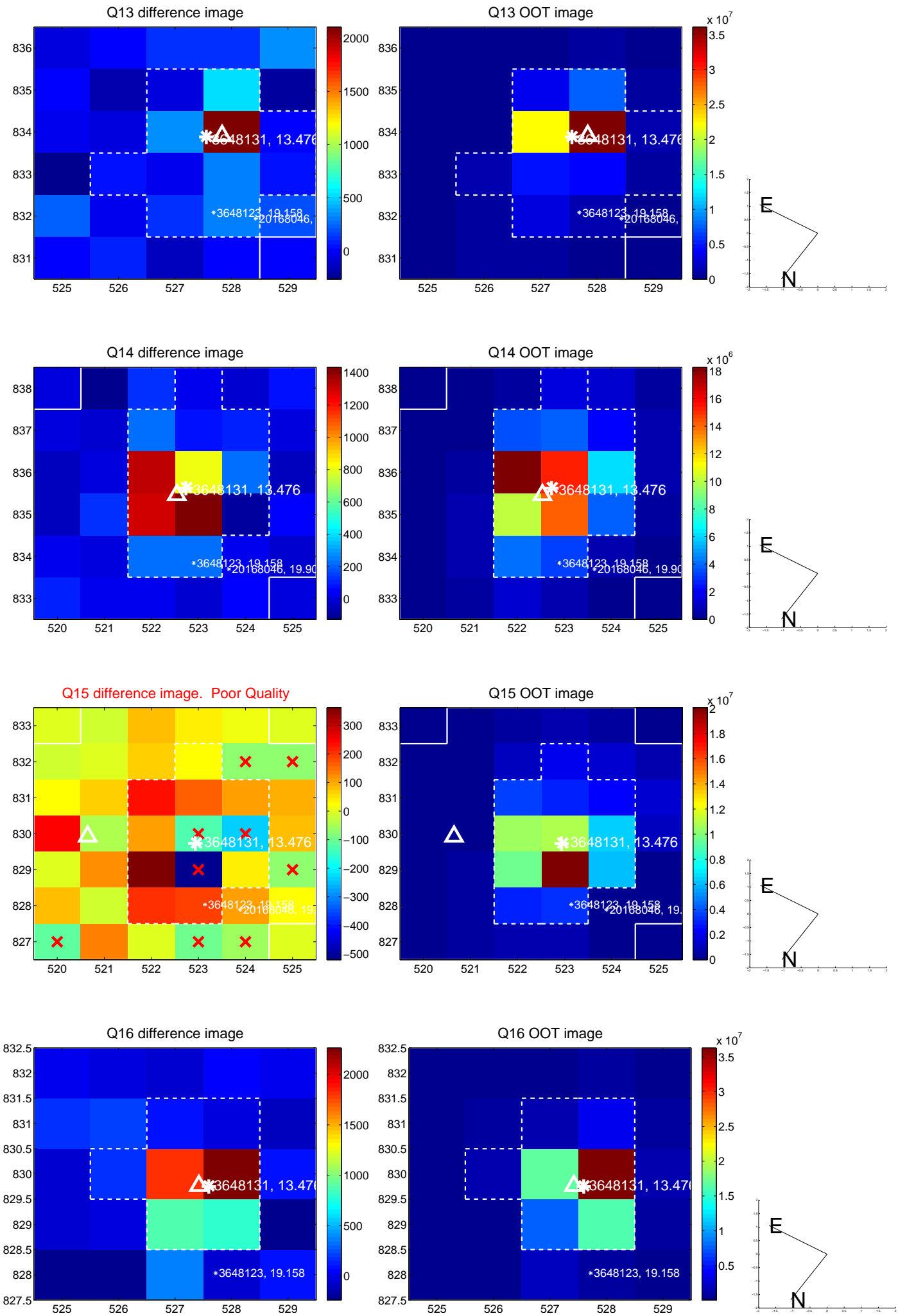
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



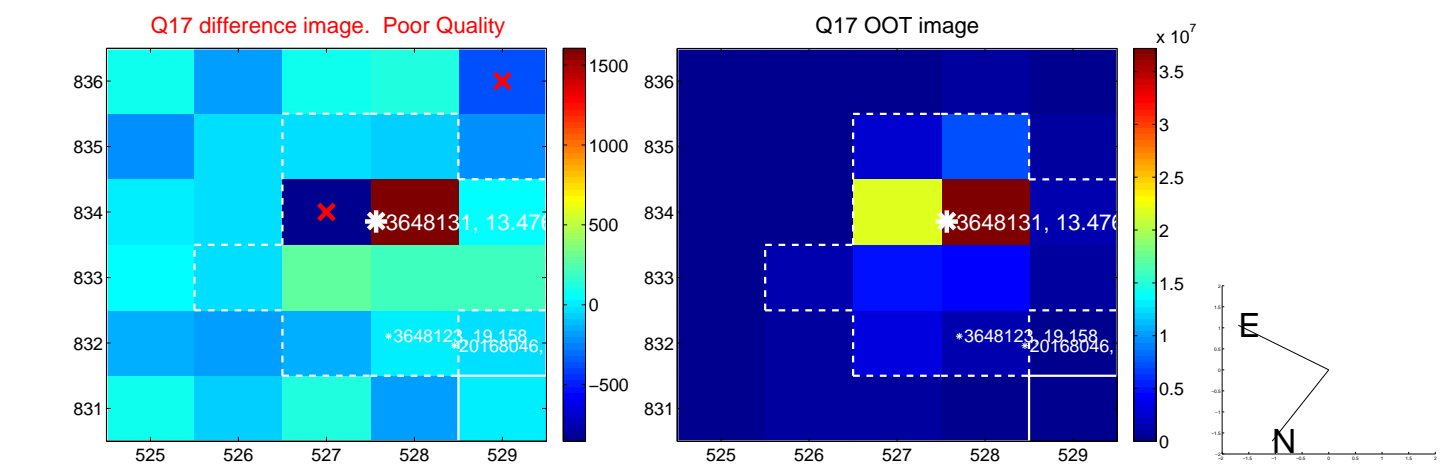
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



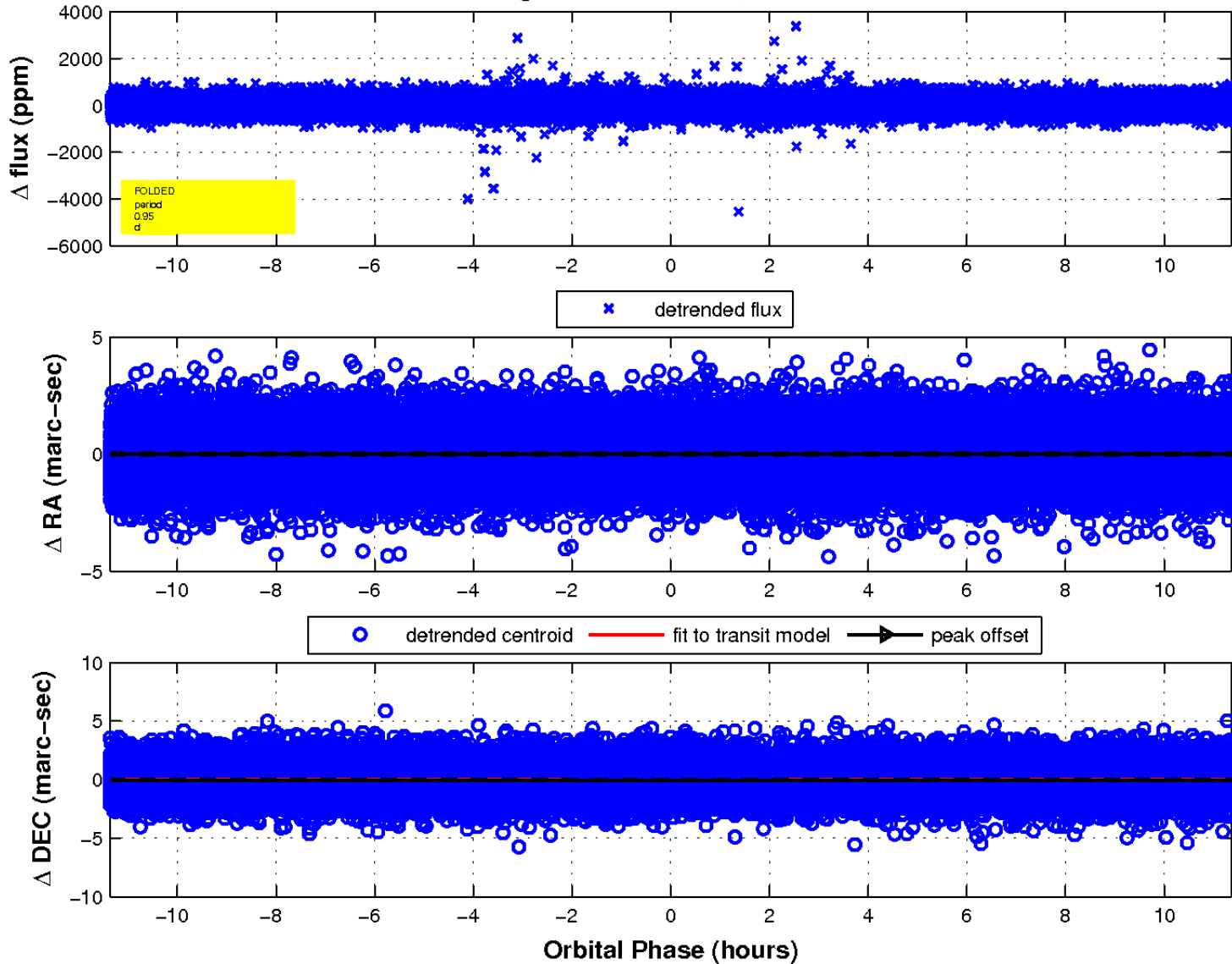
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

