

KIC 006548709

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})
006548709-01	OBS	No	2.474052	133.624796	19.8	18.578	12.2	15.0	2.20	8022	1.17	9404.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006548709-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

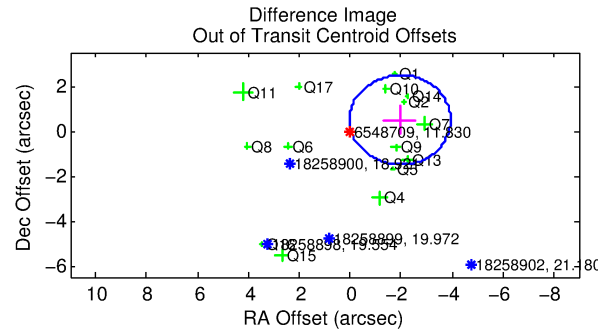
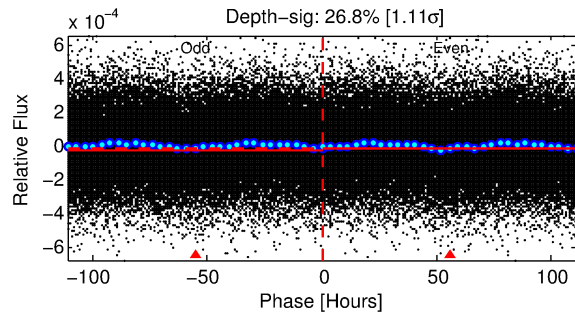
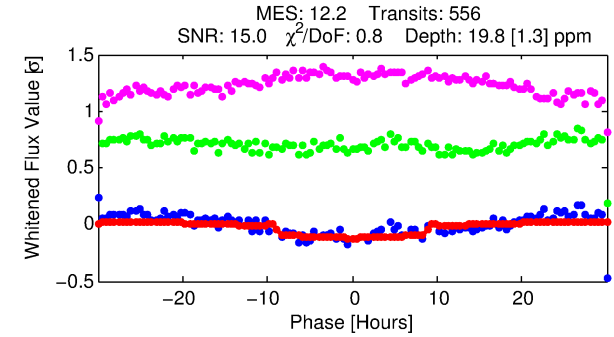
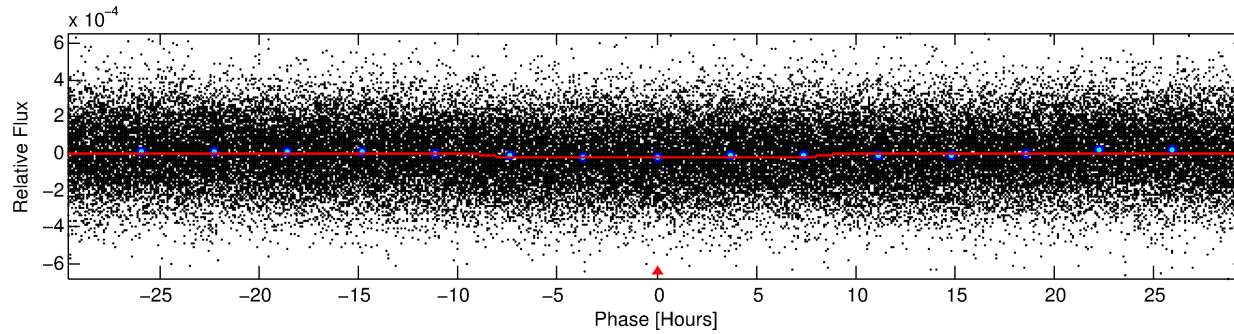
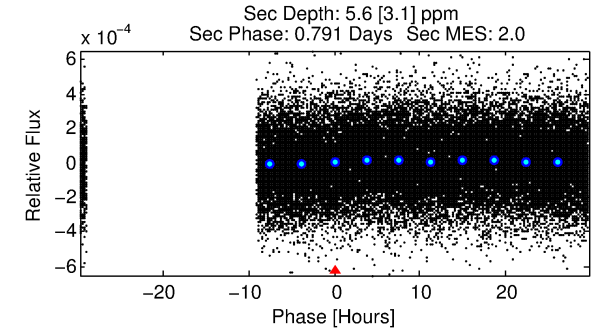
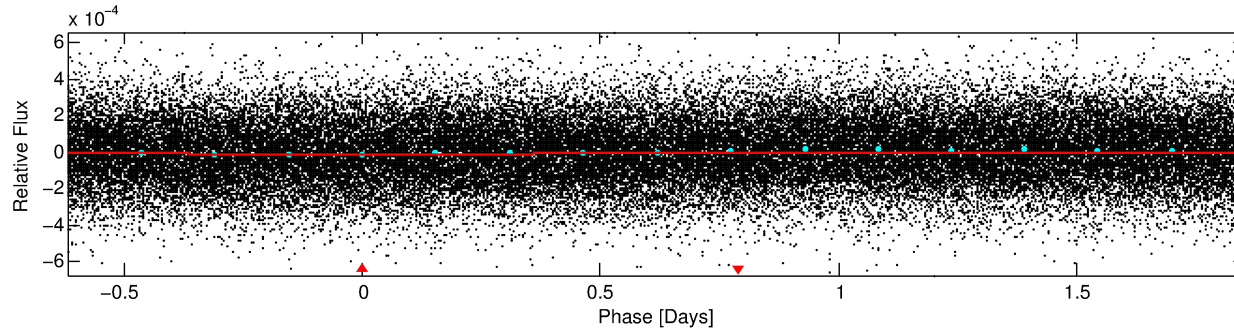
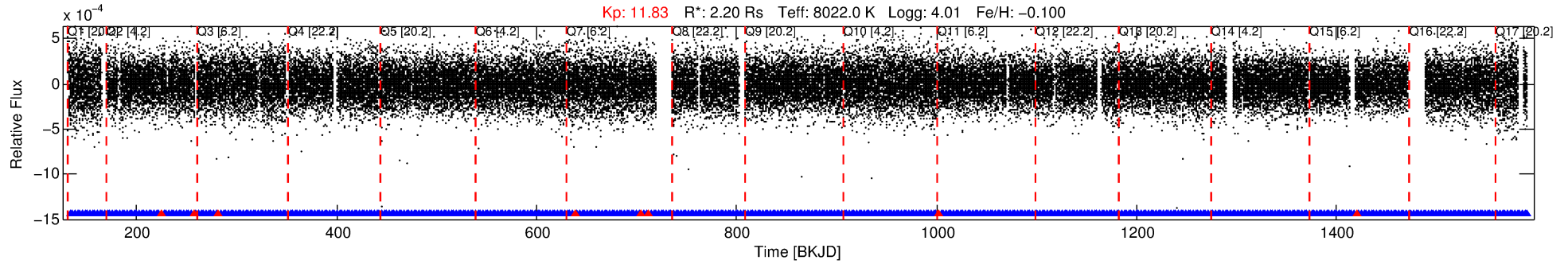
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006548709-01

No Significant Match Found

DV One-Page Summary

KIC: 6548709 Candidate: 1 of 1 Period: 2.474 d



DV Fit Results:

Period = 2.47405 [0.00004] d
Epoch = 133.6248 [0.0122] BKJD
Rp/R* = 0.0049 [0.0006]
a/R* = 1.04 [0.05]
b = 0.93 [0.11]
Seff = 9404.98 [3812.97]
Teq = 2511 [255] K
Rp = 1.17 [0.37] Re
a = 0.0437 [0.0109] AU
Ag = 4.29 [3.01] [1.09σ]
Teffp = 5588 [866] K [3.41σ]

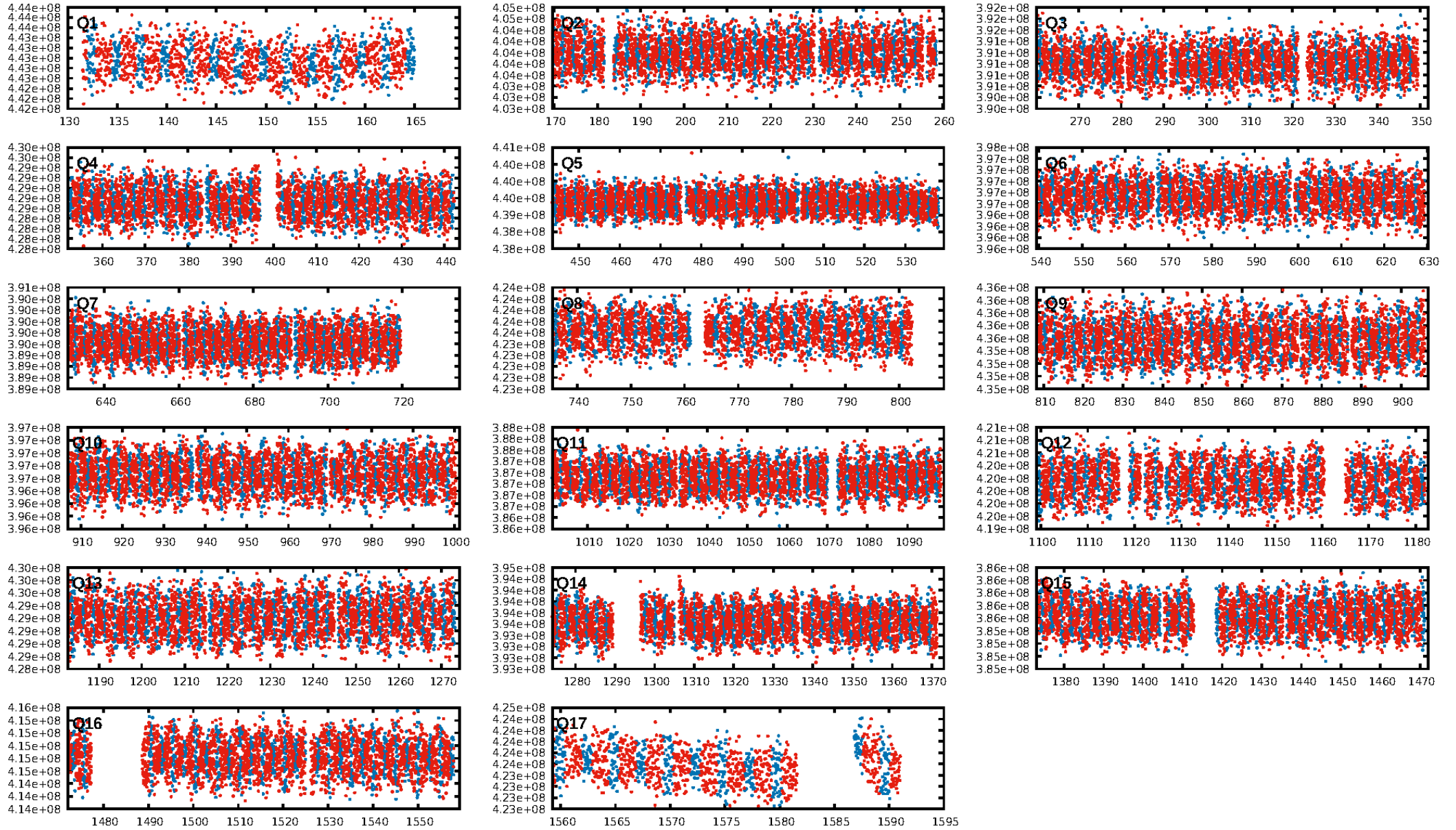
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.21e-100
RollingBand-fgt: 0.98 [523/531]
GhostDiagnostic-chr: -50.85
Centroid-sig: 26.1%
Centroid-so: 0.702 arcsec [1.14σ]
OotOffset-rm: 2.020 arcsec [3.05σ]
KicOffset-rm: 2.118 arcsec [2.87σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

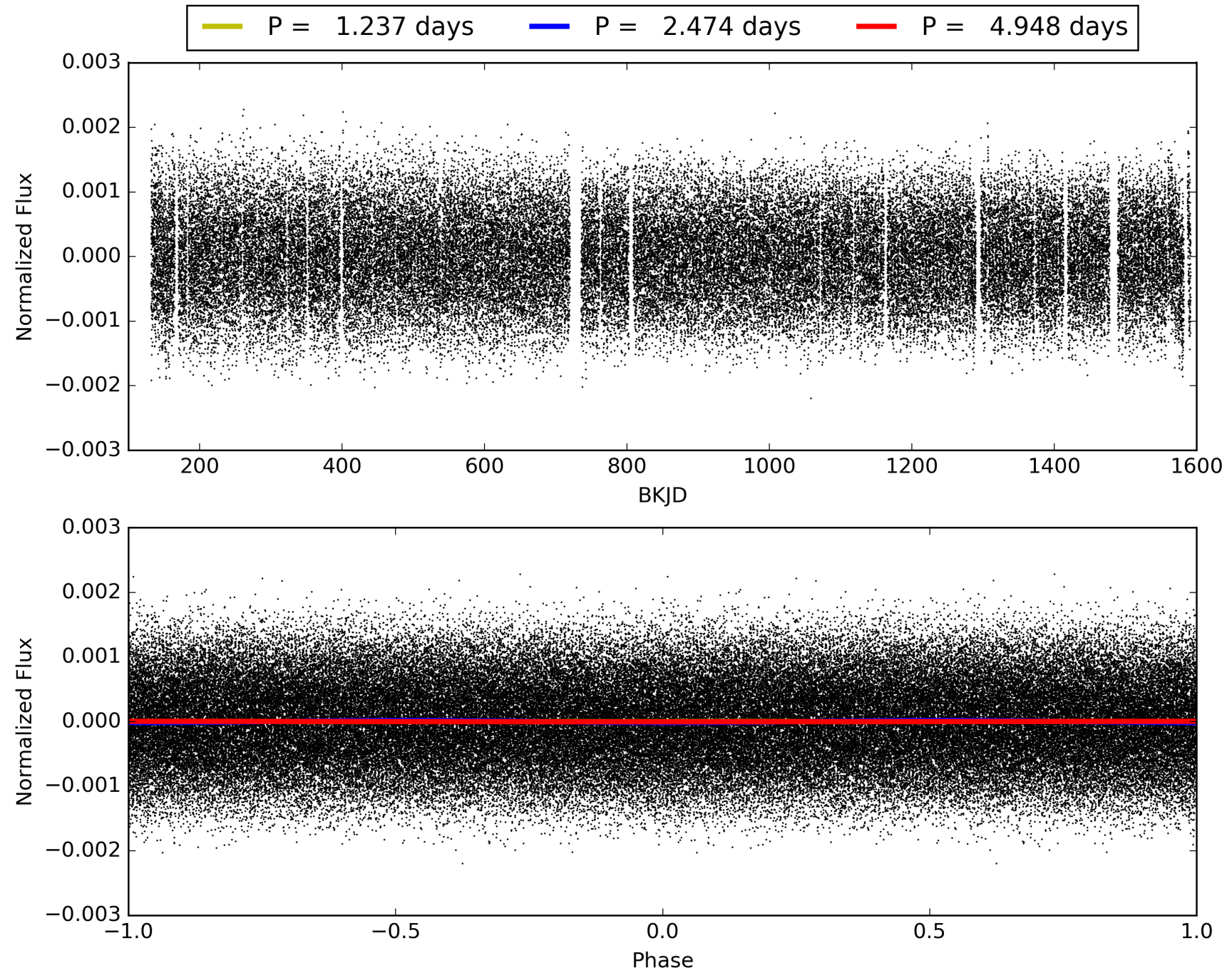
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:04:44 Z

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

TCE 006548709-01, PDC Light Curves

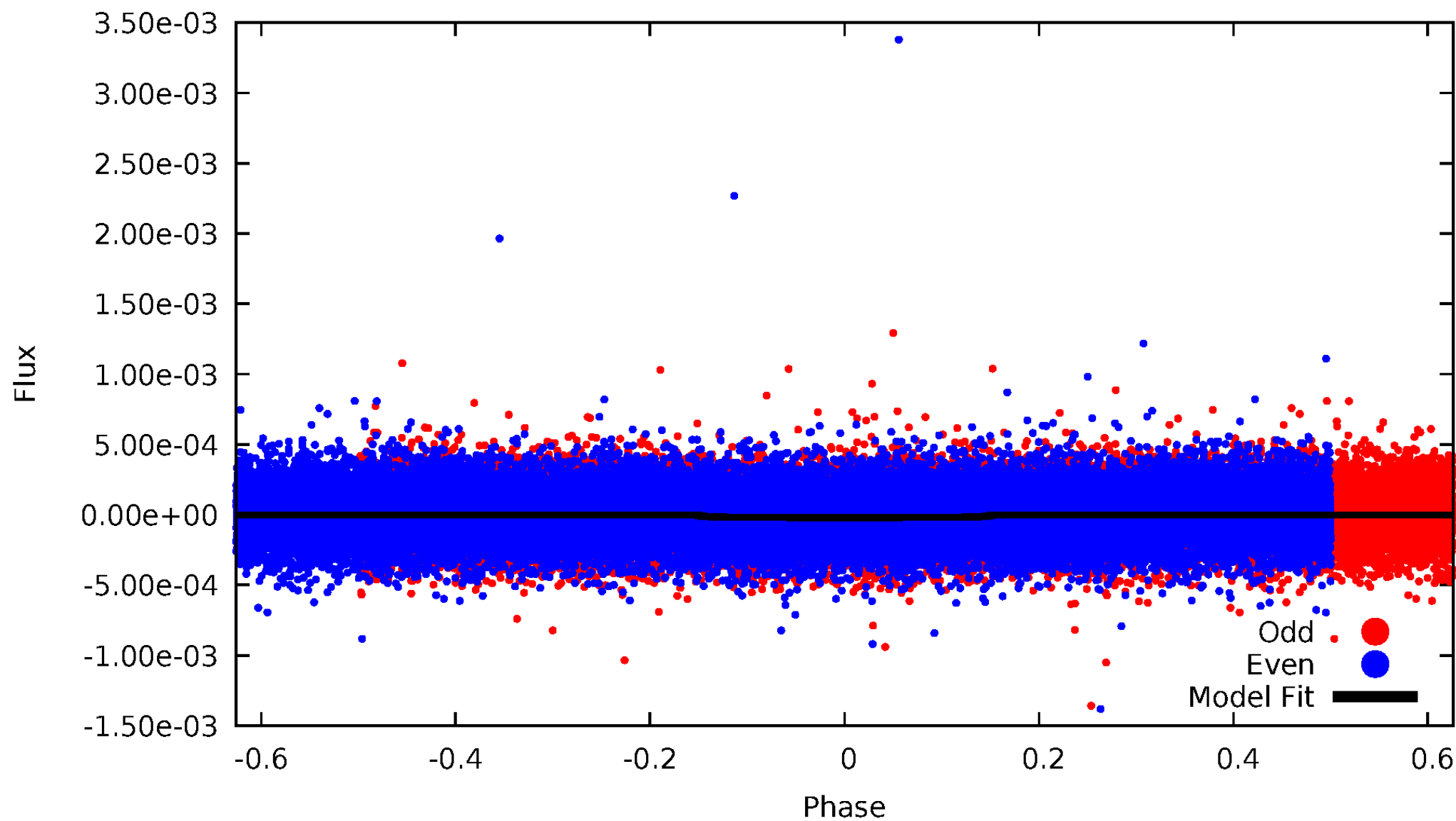


TCE 006548709-01



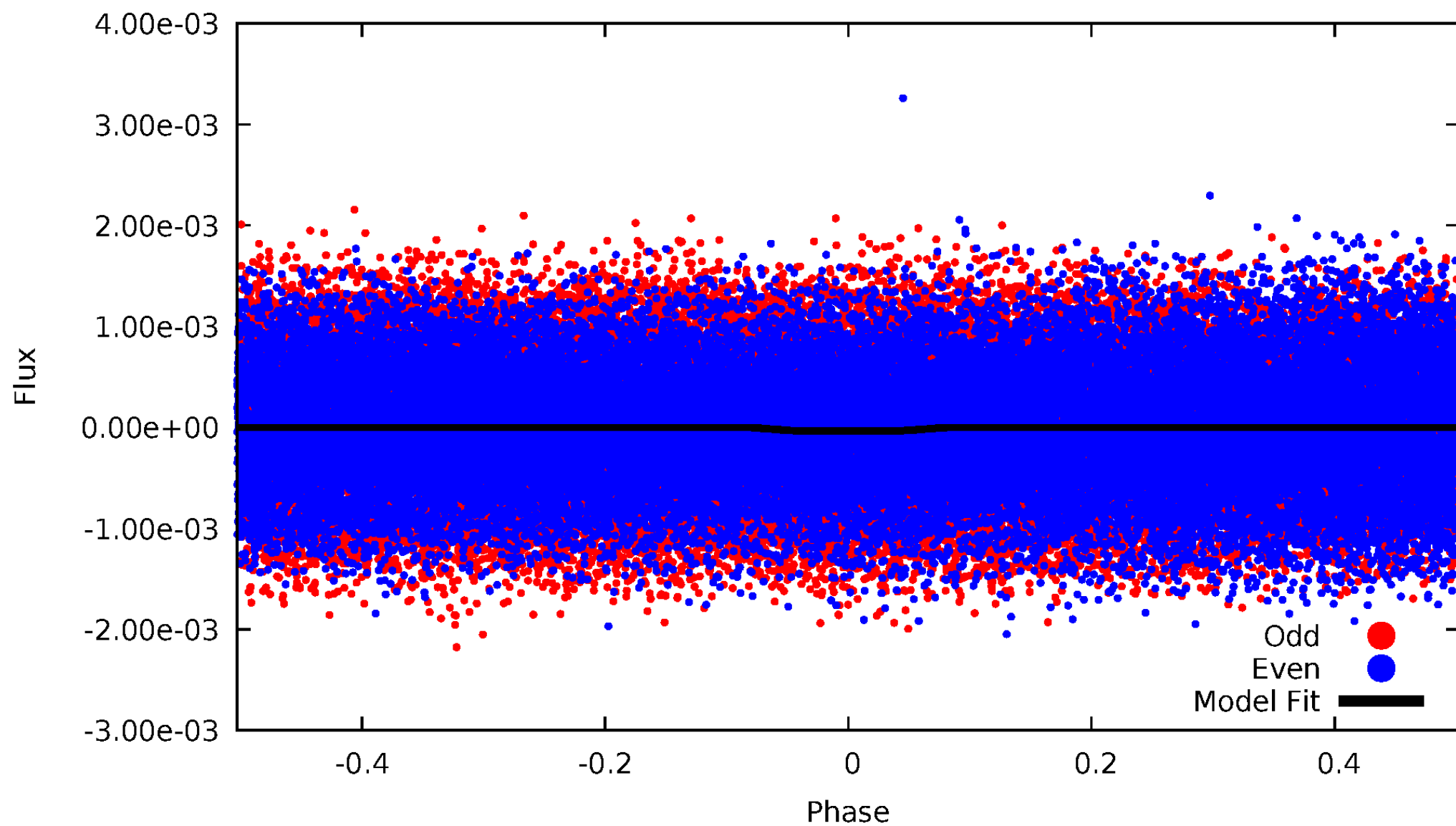
DV Odd/Even

TCE 006548709-01



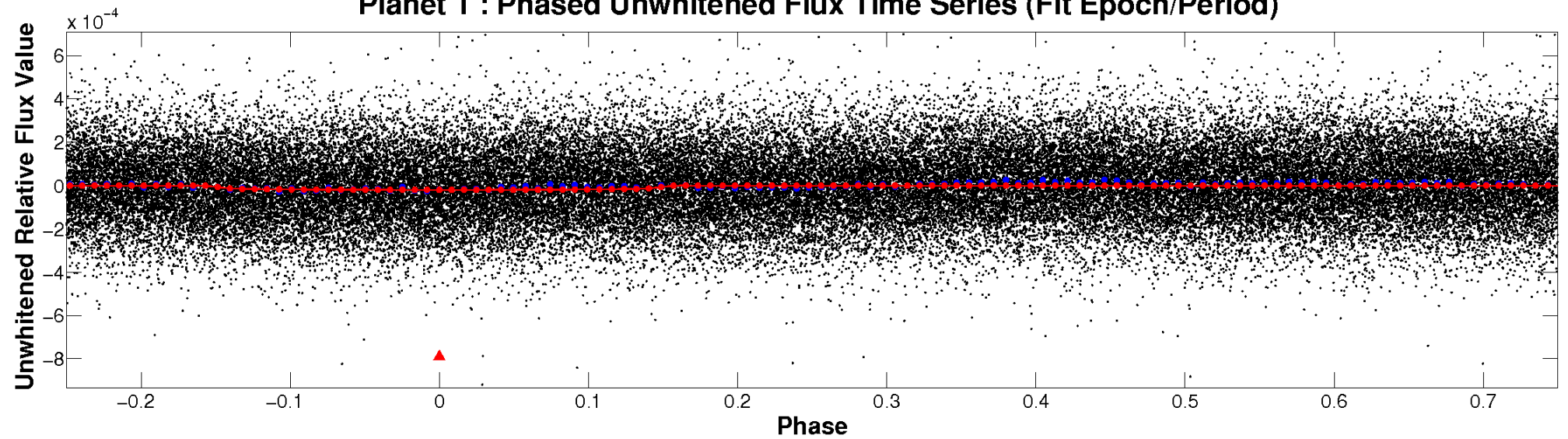
ALT Odd/Even

TCE 006548709-01

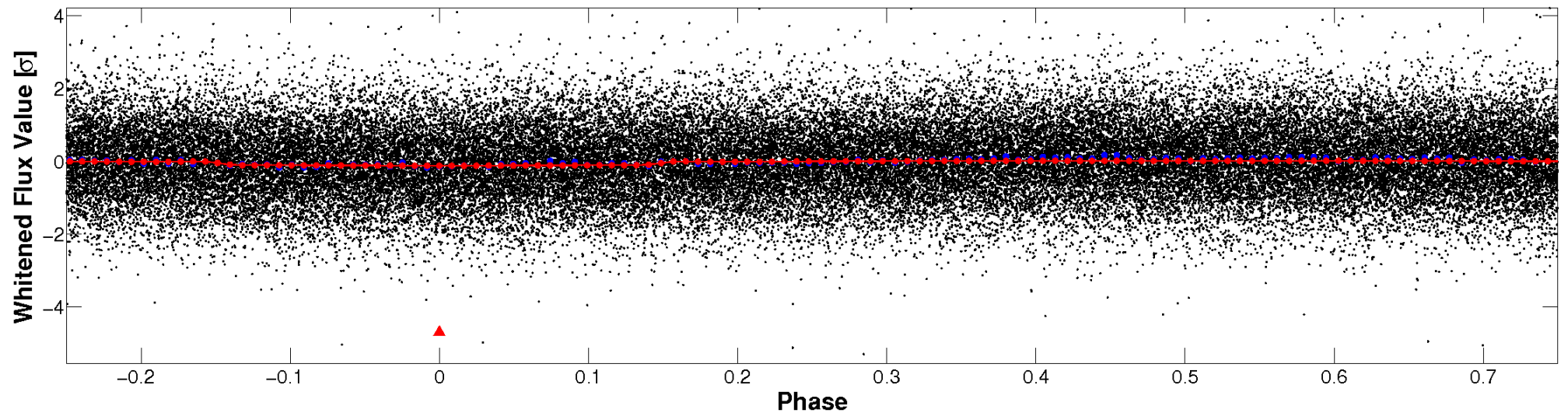


Non-Whitened Vs. Whitened Light Curve

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

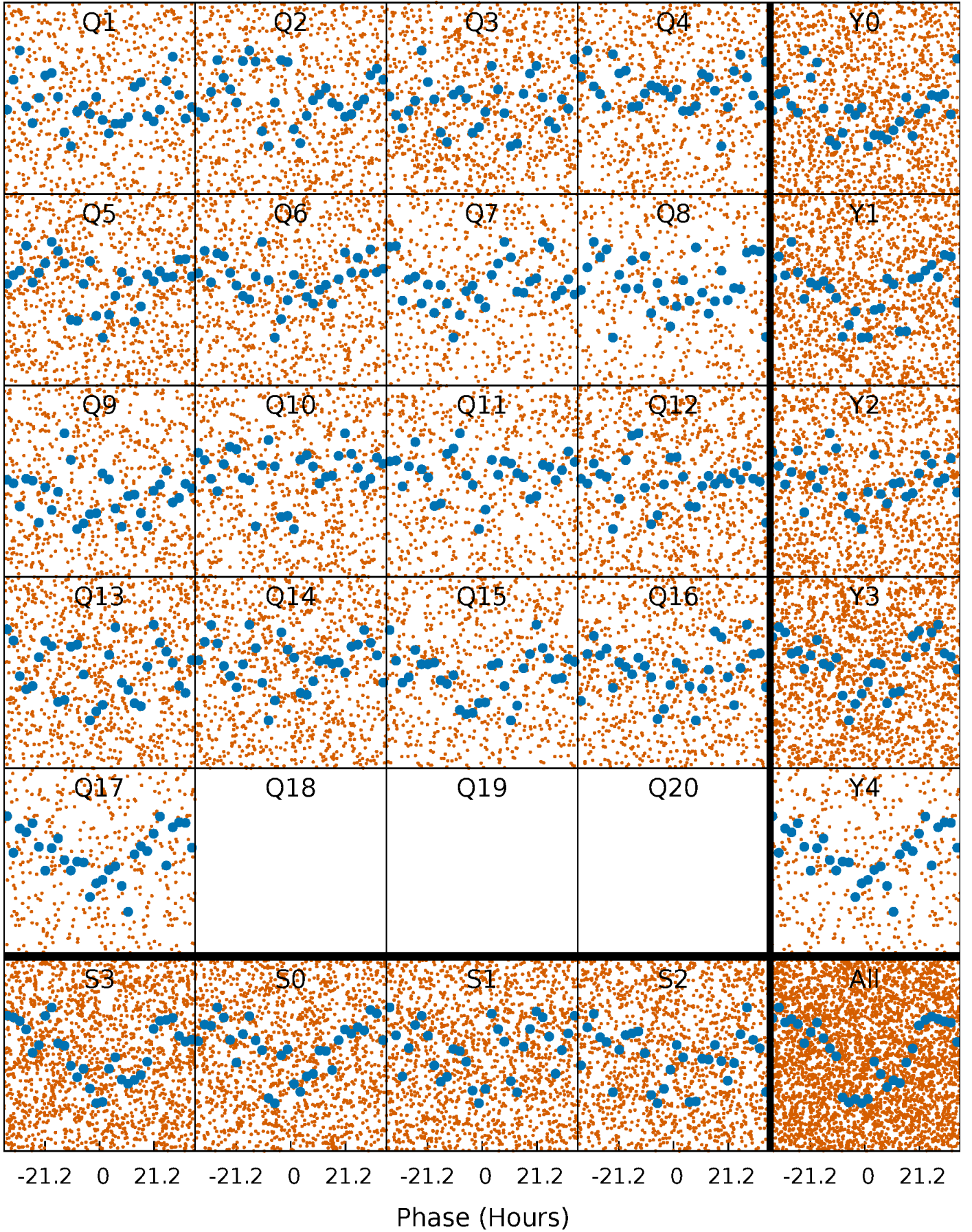


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



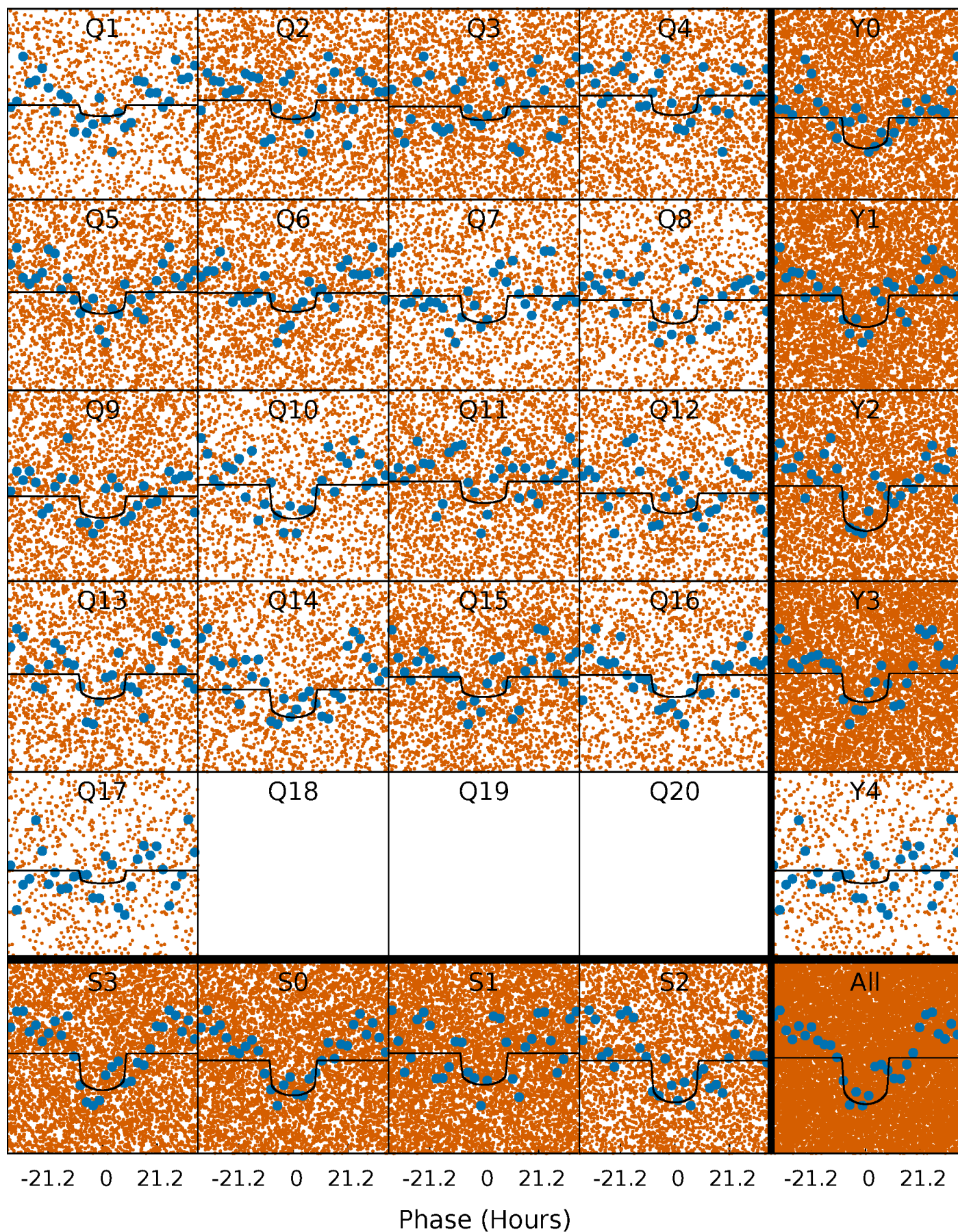
PDC Quarter-Phased Transit Curves

TCE 006548709-01 P= 2.474052 Days $T_0=133.624797$ (BKJD)



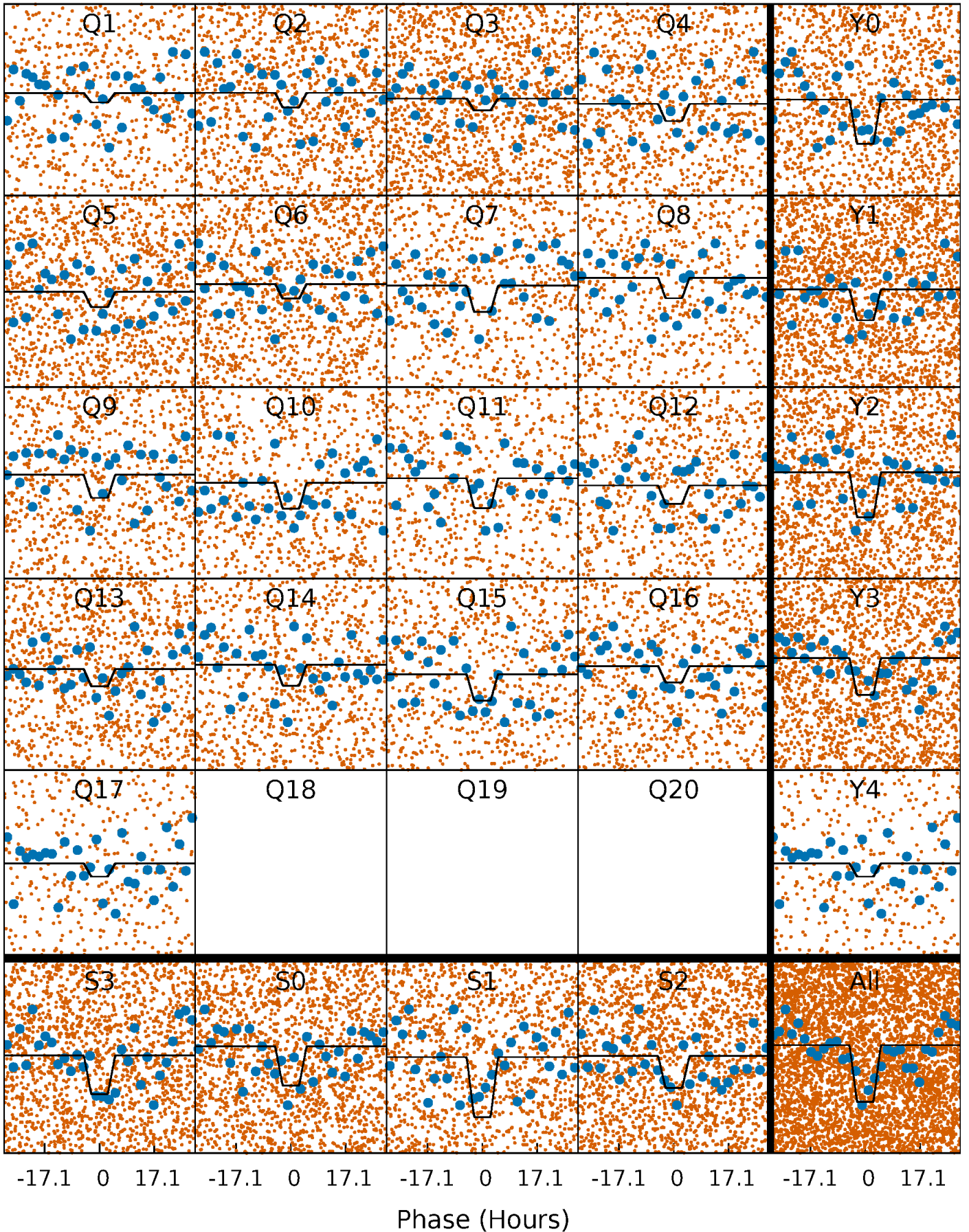
DV Quarter-Phased Transit Curves

TCE 006548709-01 P= 2.474052 Days $T_0=133.624797$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

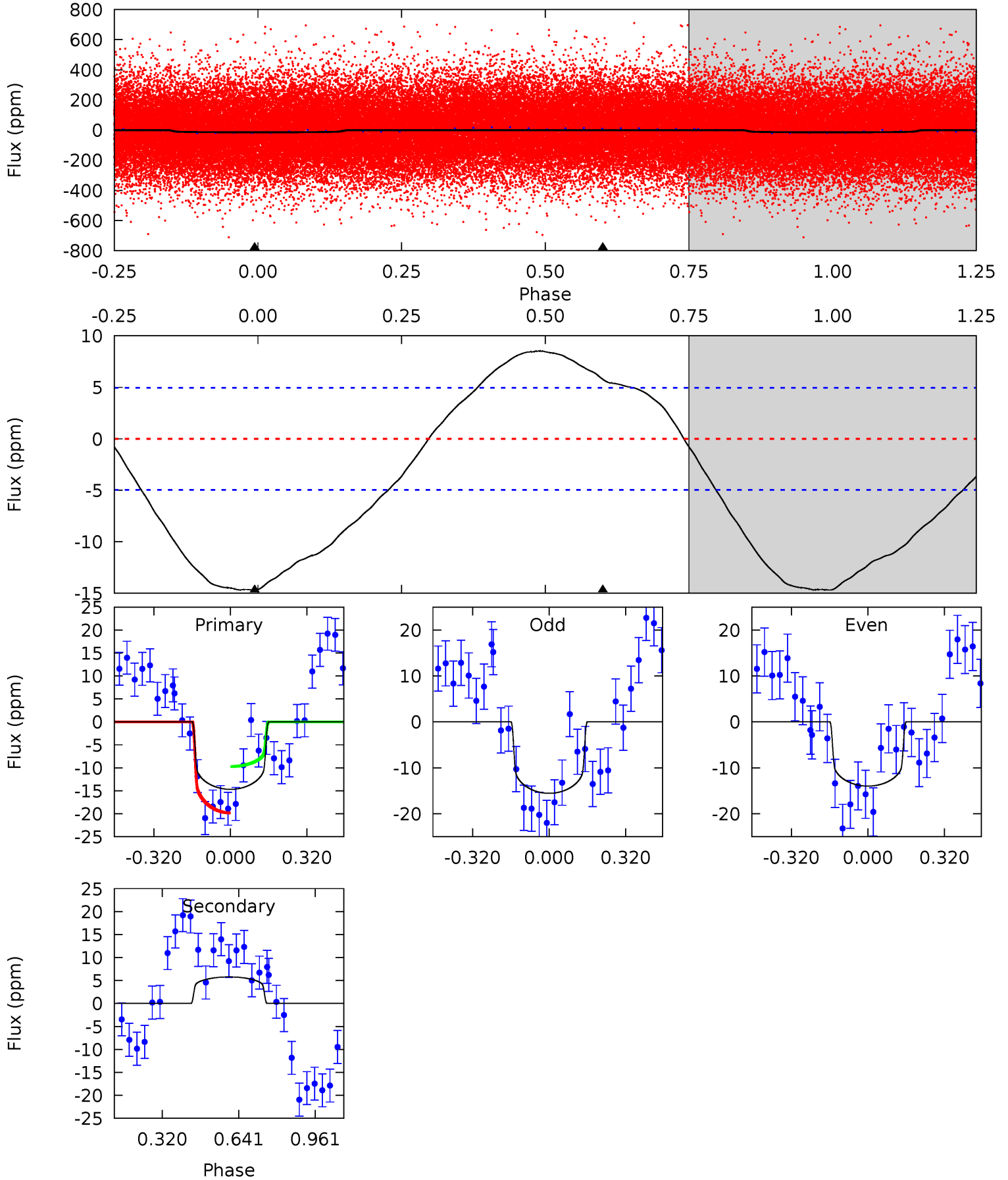
TCE 006548709-01 P= 2.473380 Days $T_0=133.744834$ (BKJD)



DV Model-Shift Uniqueness Test

006548709-01, P = 2.474052 Days, E = 131.150745 Days

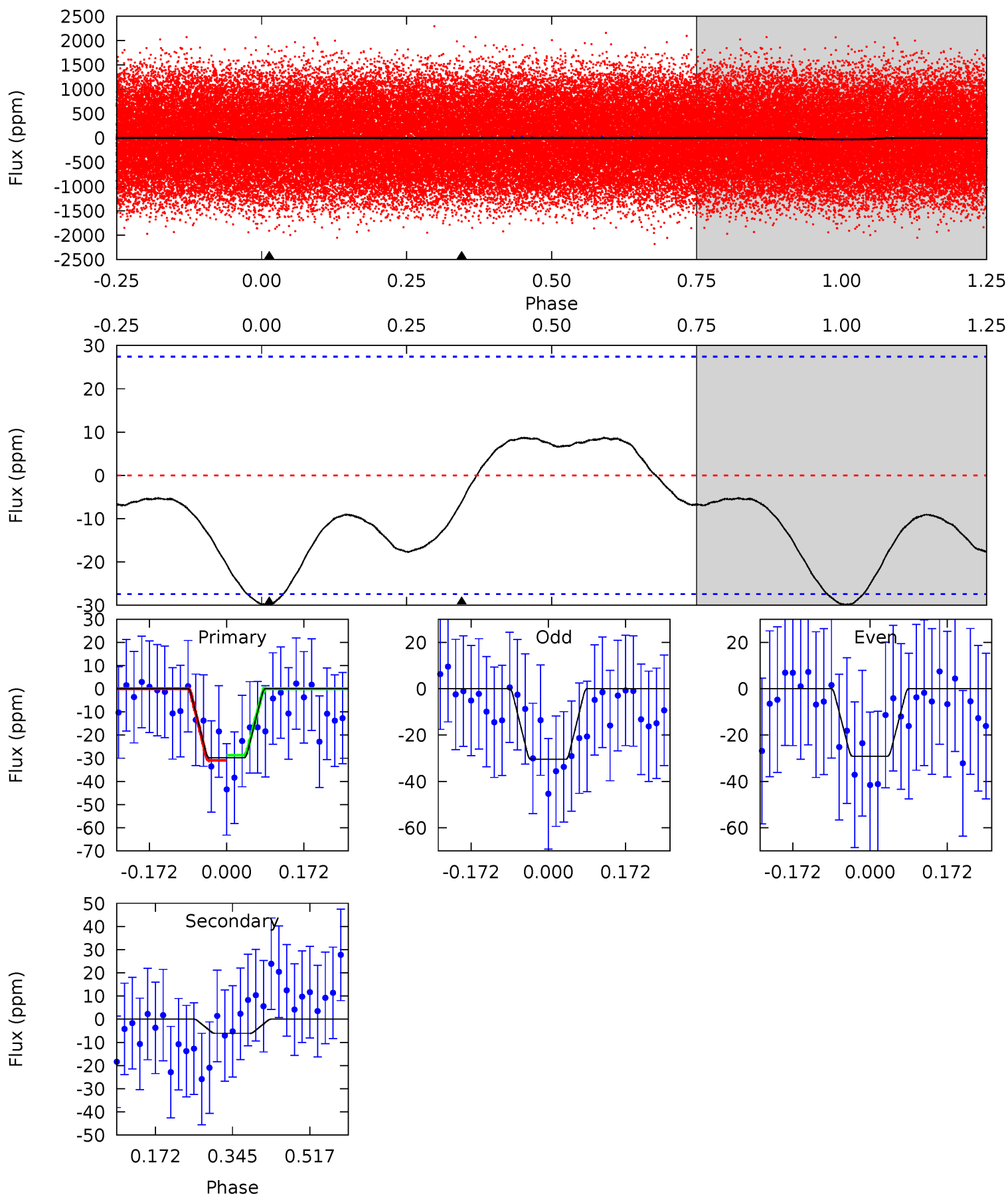
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	-5.03	0	0	4.31	0.99	1.86	12.8	12.8	-5.03	-5.03	0.68	1.01	0.37	4.34



Alt Model-Shift Uniqueness Test

006548709-01, P = 2.473380 Days, E = 131.271454 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.83	0.99	0	0	4.45	1.36	1.02	4.83	4.83	0.99	0.99	0.11	0.97	0.23	0.17



Stellar Parameters For KIC 006548709

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8022^{+225}_{-338}	$4.013^{+0.204}_{-0.136}$	$-0.100^{+0.200}_{-0.350}$	$2.202^{+0.429}_{-0.643}$	$1.821^{+0.119}_{-0.356}$	$0.240^{+0.283}_{-0.098}$
	+3%/-4%	+5%/-3%	+200%/-350%	+19%/-29%	+7%/-20%	+118%/-41%
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 006548709-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	6 ± 1	$1.14^{+0.20}_{-0.20}$	3480^{+252}_{-255}	-5582^{+378}_{-430}	$-4.478^{+1.430}_{-2.305}$
Alt.	-6 ± 6	$1.41^{+0.23}_{-0.23}$	3491^{+215}_{-275}	5013^{+902}_{-8078}	$3.187^{+3.832}_{-3.069}$

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

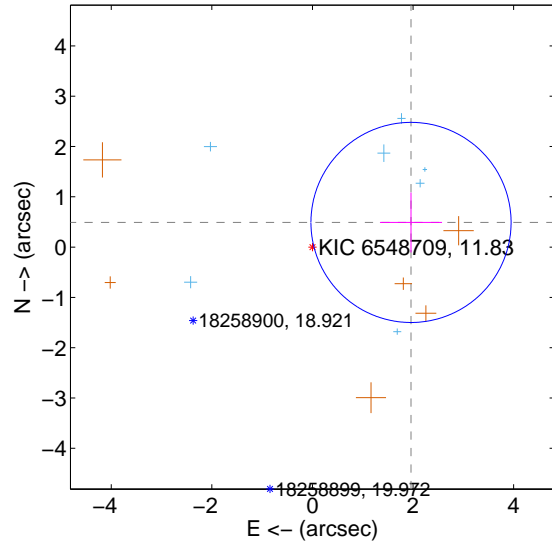
Supplemental centroid analysis for 006548709-01. **Kepler magnitude: 11.83.** Transit SNR 14.96

There are 7 quarters with good PRF difference image offsets

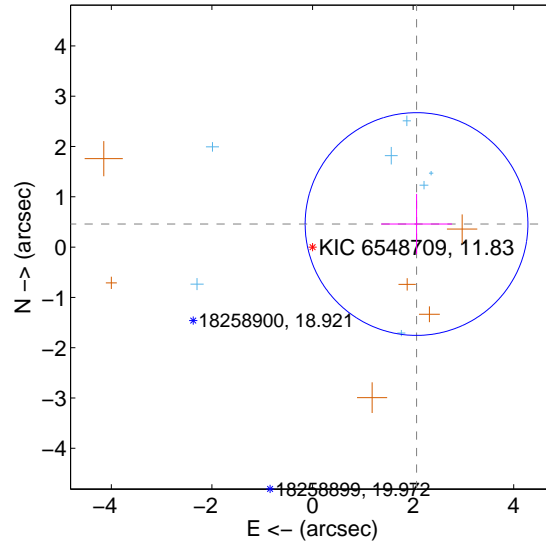
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.020 ± 0.663	3.05	-1.960 ± 0.617	0.490 ± 0.595
PRF-fit source offset from KIC position	2.118 ± 0.738	2.87	-2.068 ± 0.705	0.459 ± 0.598
photometric centroid source offset	0.70 ± 0.62	1.14	-0.67 ± 0.63	-0.21 ± 0.50

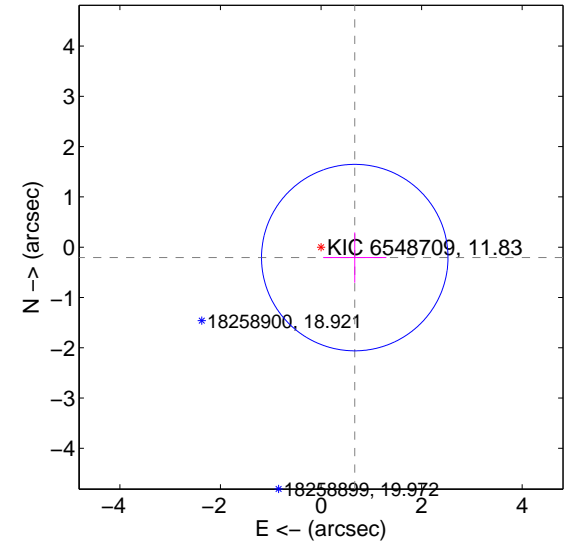
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

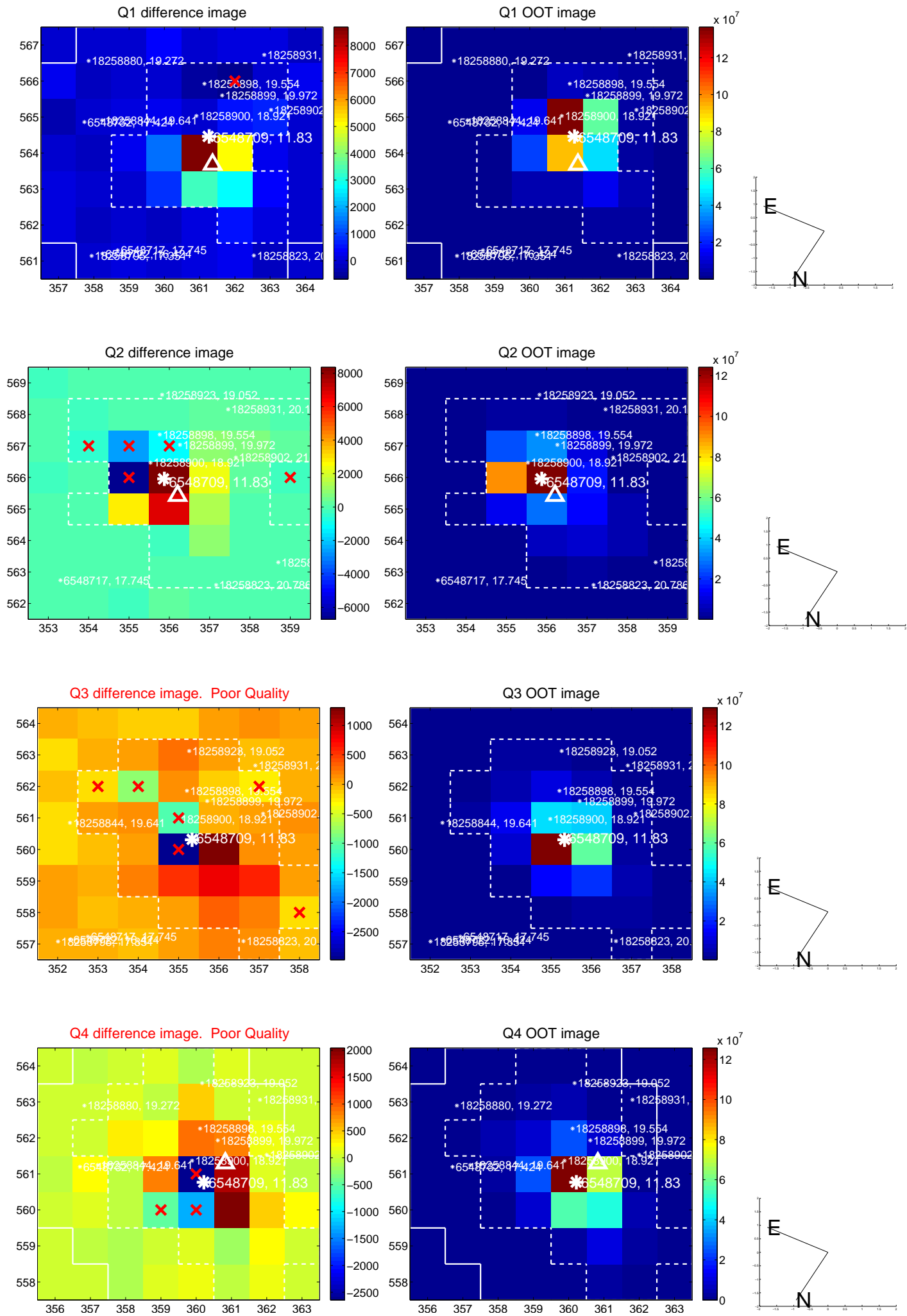


offset from photometric centroids

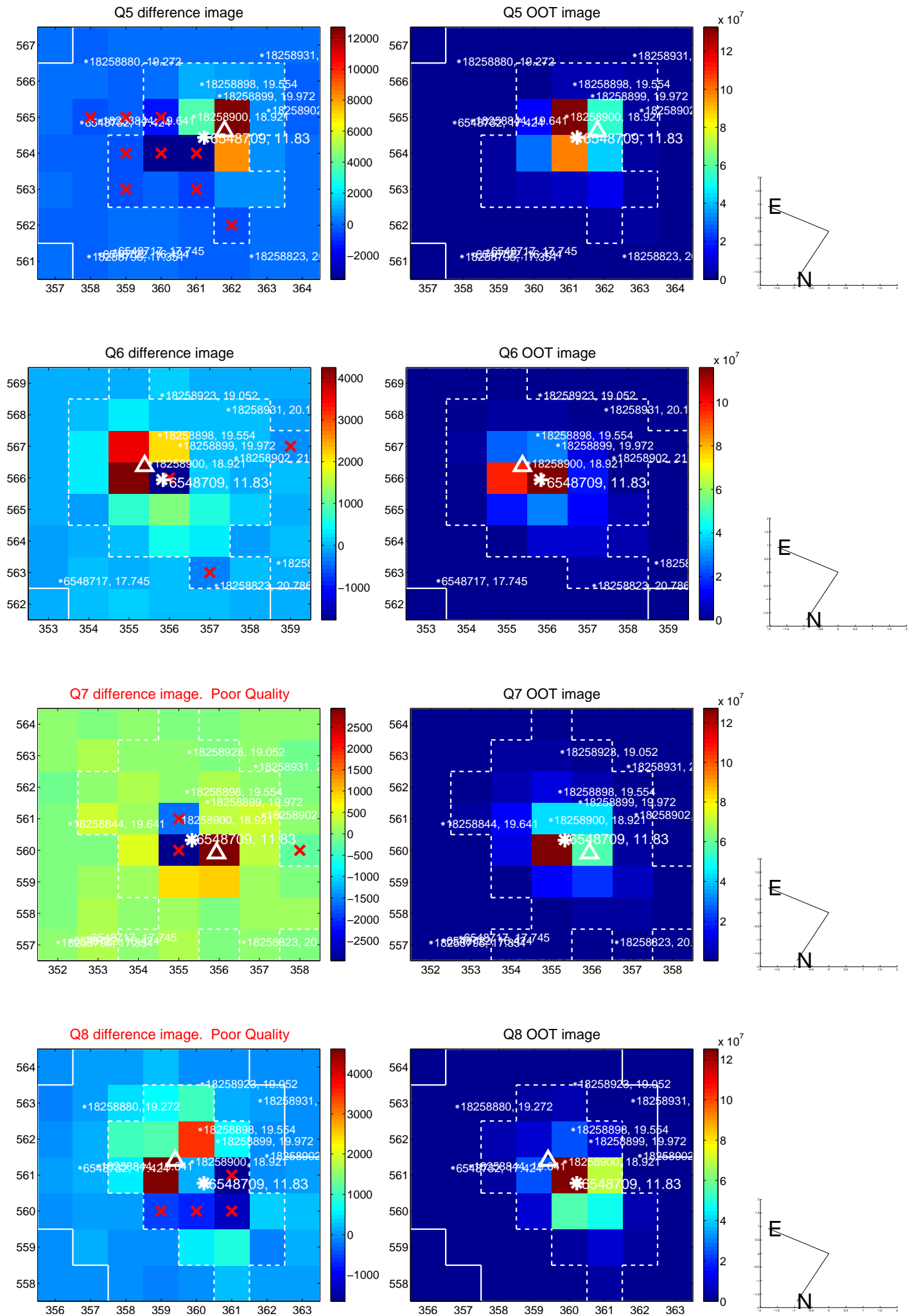


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

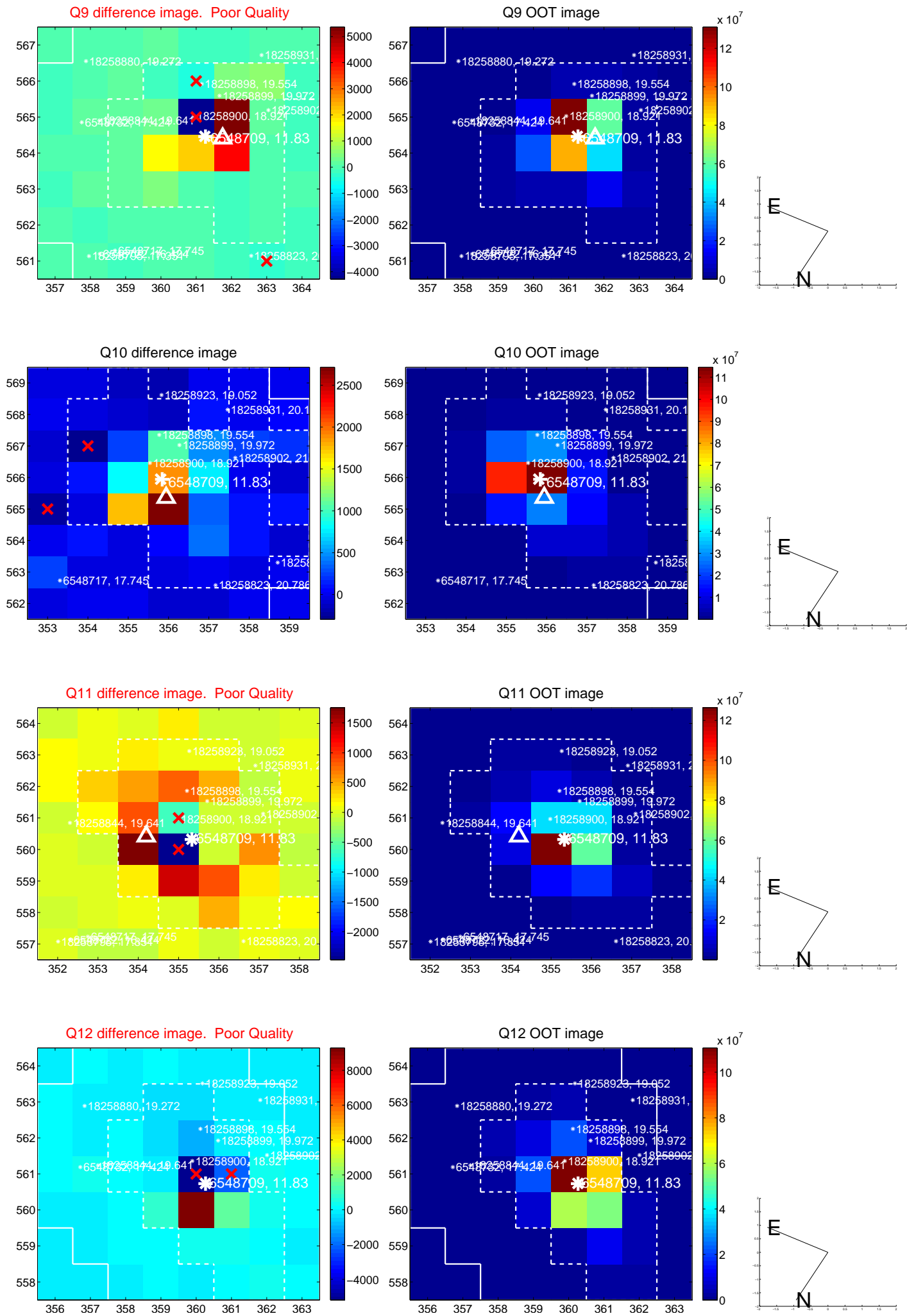
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



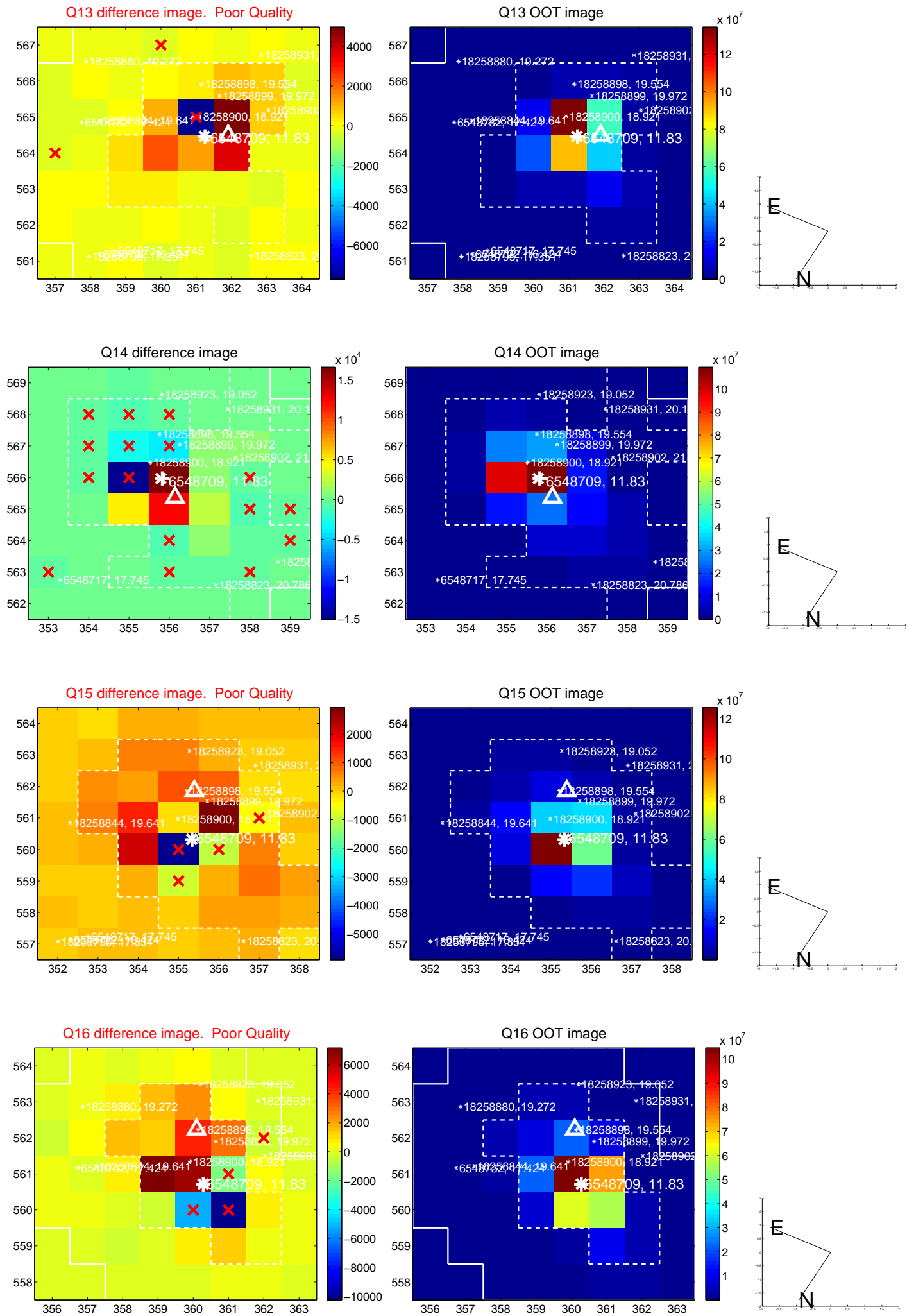
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



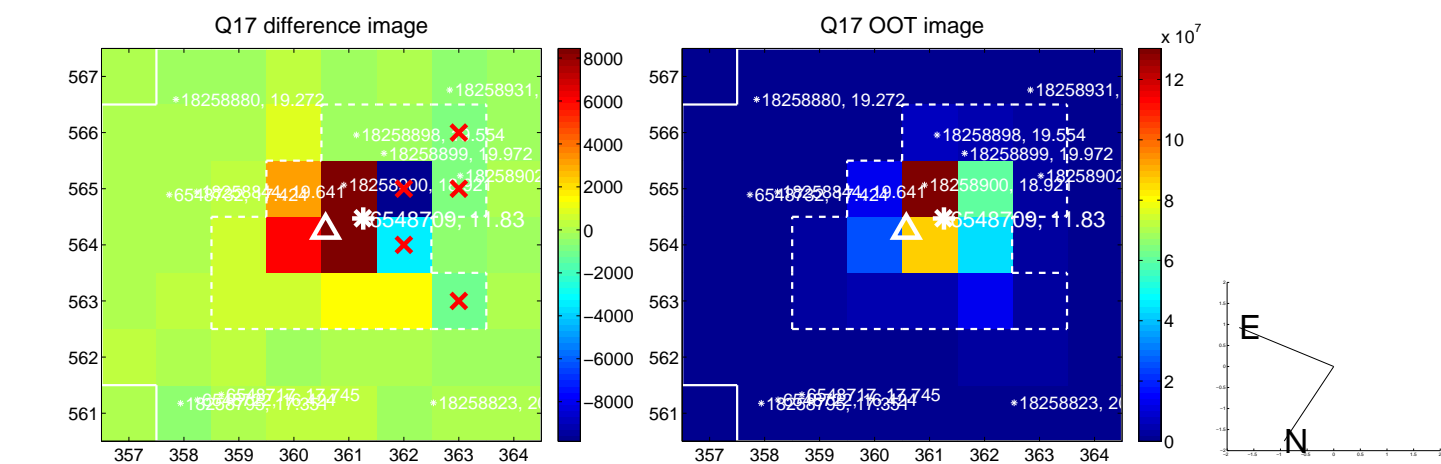
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



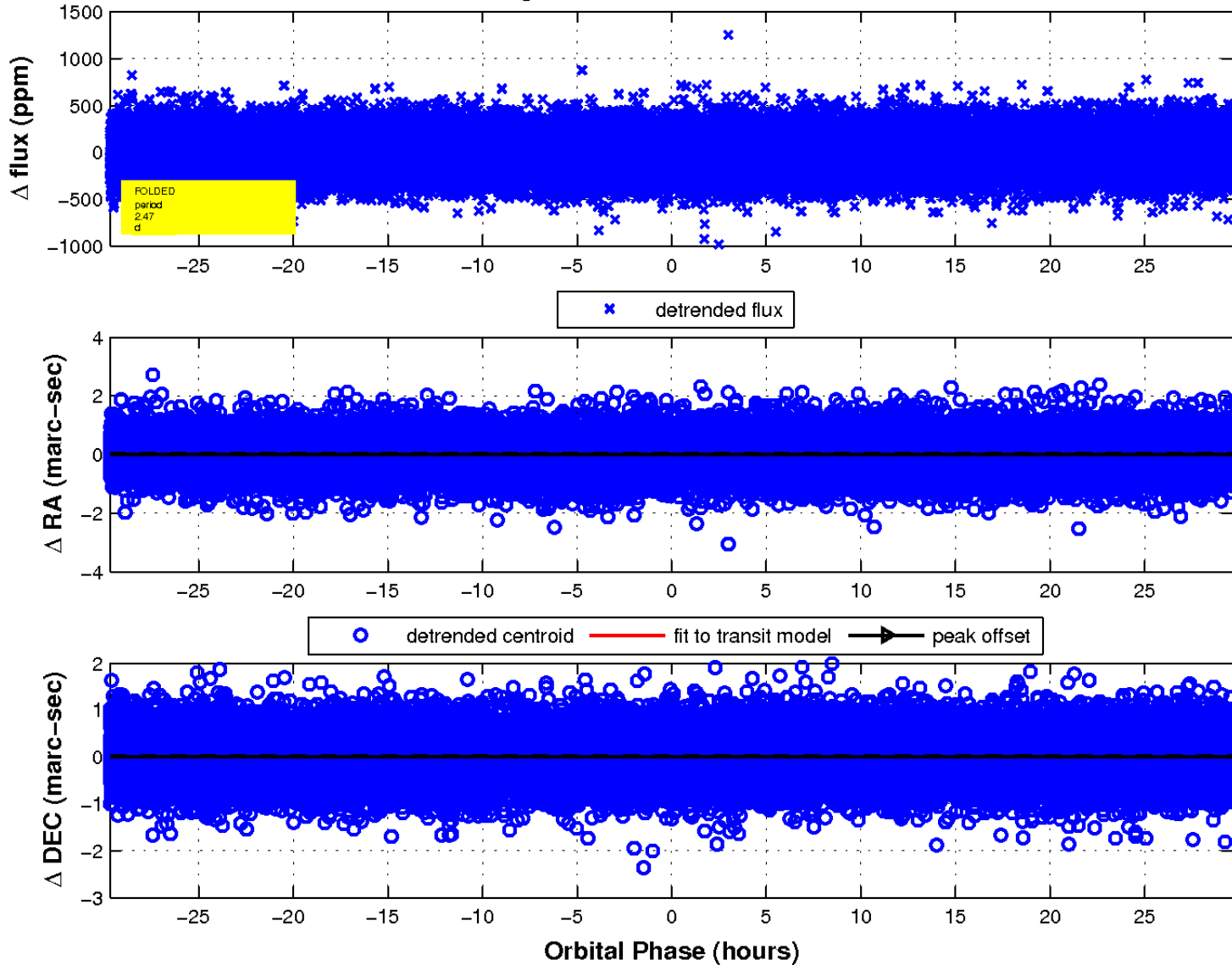
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

