

KIC 010555142

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})
010555142-01	OBS	No	0.842044	131.537668	33.1	1.155	10.7	11.0	4.24	7221	2.48	90035.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010555142-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

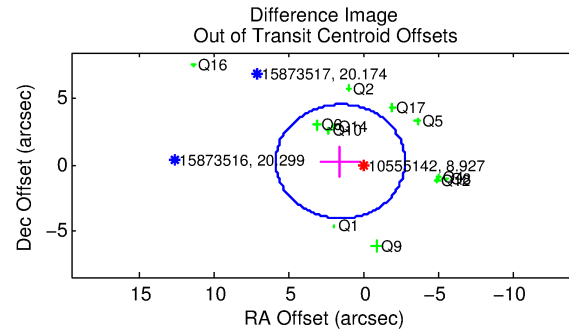
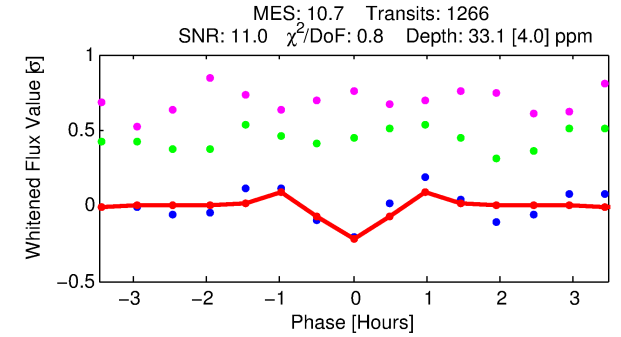
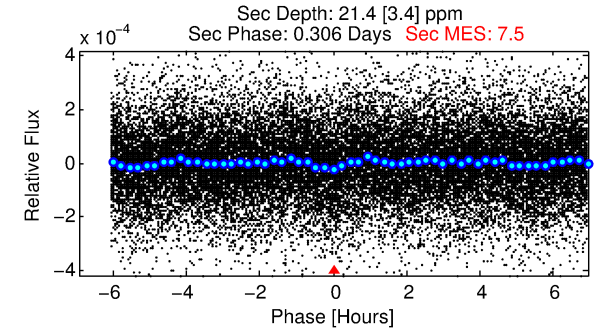
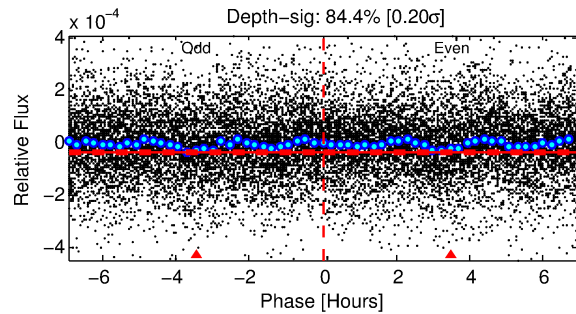
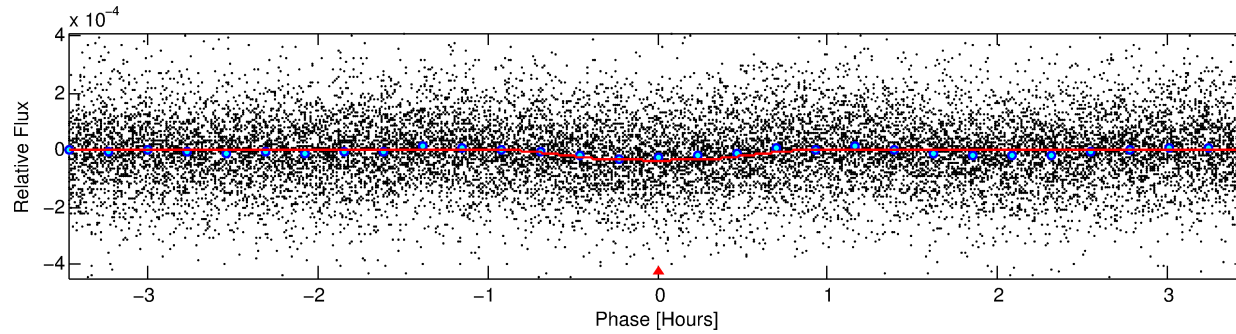
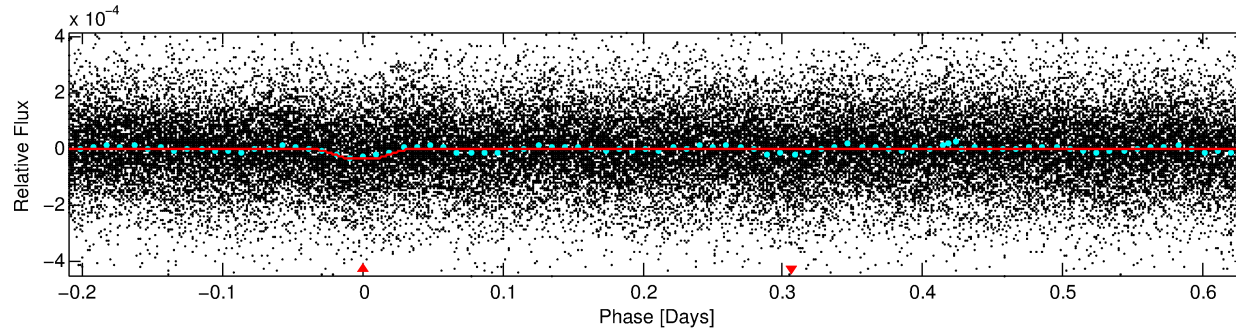
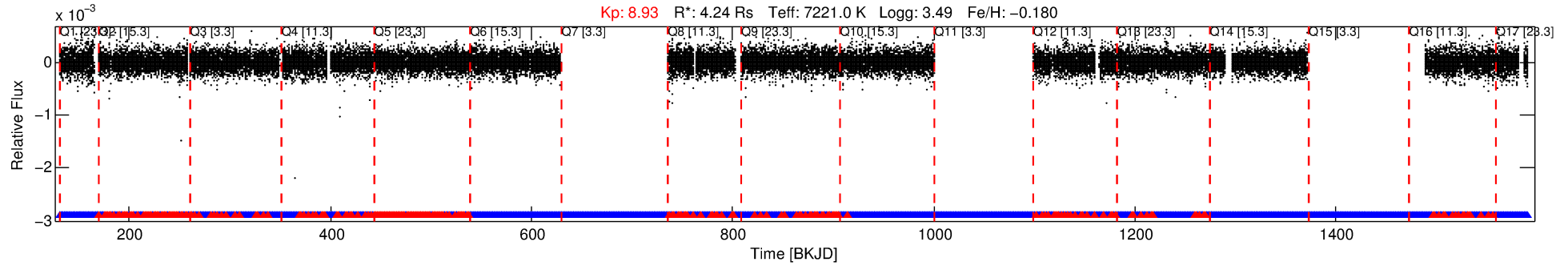
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010555142-01

No Significant Match Found

DV One-Page Summary

KIC: 10555142 Candidate: 1 of 1 Period: 0.842 d



DV Fit Results:

Period = 0.84204 [0.00001] d
Epoch = 131.5377 [0.0011] BKJD
Rp/R* = 0.0054 [0.0020]
a/R* = 5.38 [9.45]
b = 0.30 [5.54]
Seff = 90035.60 [92227.29]
Teq = 4417 [1131] K
Rp = 2.48 [1.75] Re
a = 0.0221 [0.0135] AU
Ag = 0.93 [1.17] [-0.06 σ]
Teffp = 6706 [1293] K [1.33 σ]

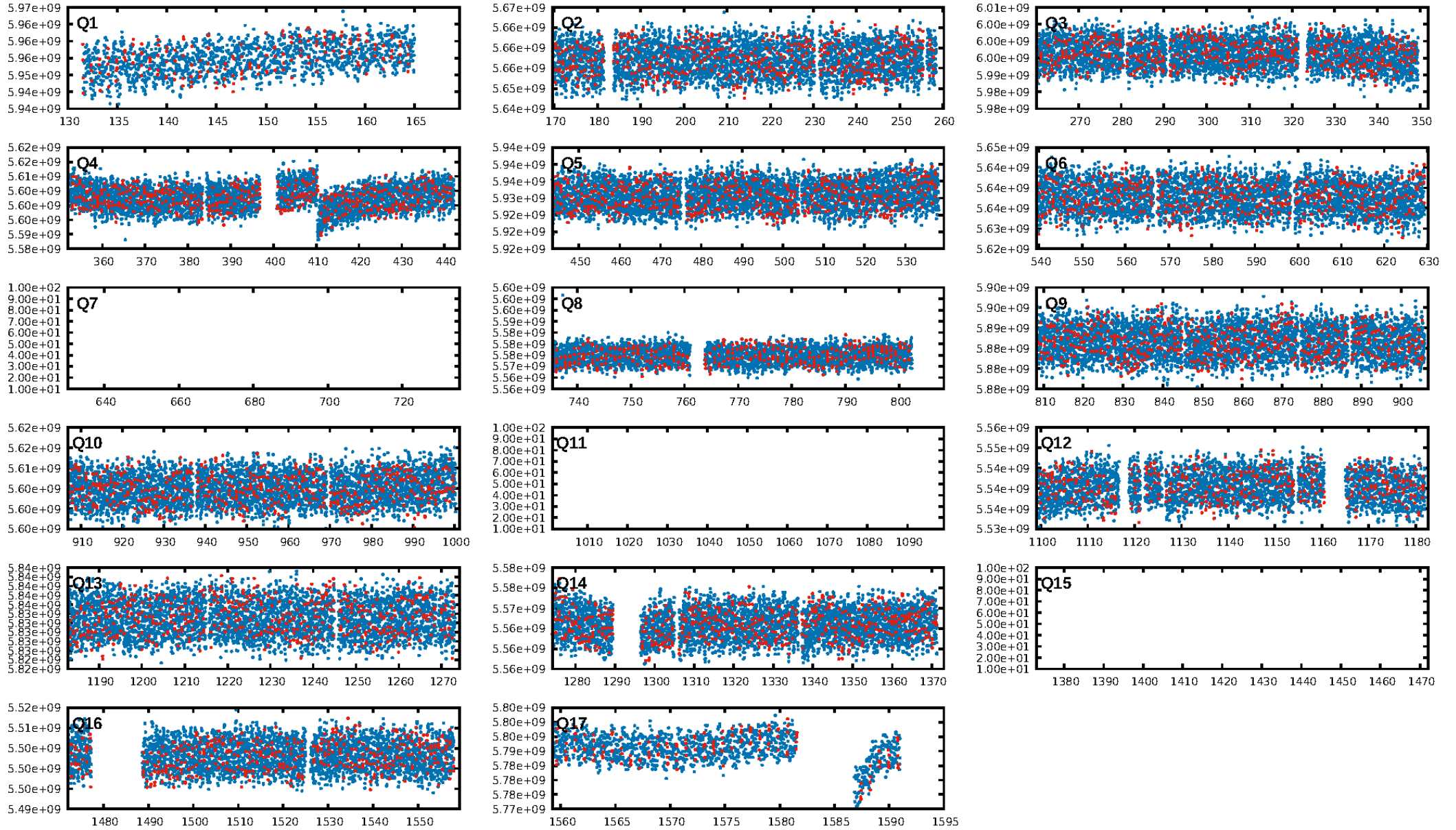
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.88e-25
RollingBand-fgt: 0.77 [916/1194]
GhostDiagnostic-chr: N/A
Centroid-sig: 10.8%
Centroid-so: 1.017 arcsec [1.29 σ]
OotOffset-rm: 1.524 arcsec [1.06 σ]
OotOffset-st: 4/0/4/4 [12]
KicOffset-rm: 1.001 arcsec [0.68 σ]
KicOffset-st: 4/0/4/4 [12]
DiffImageQuality-fgm: 0.00 [0/12]
DiffImageOverlap-fno: 1.00 [14/14]

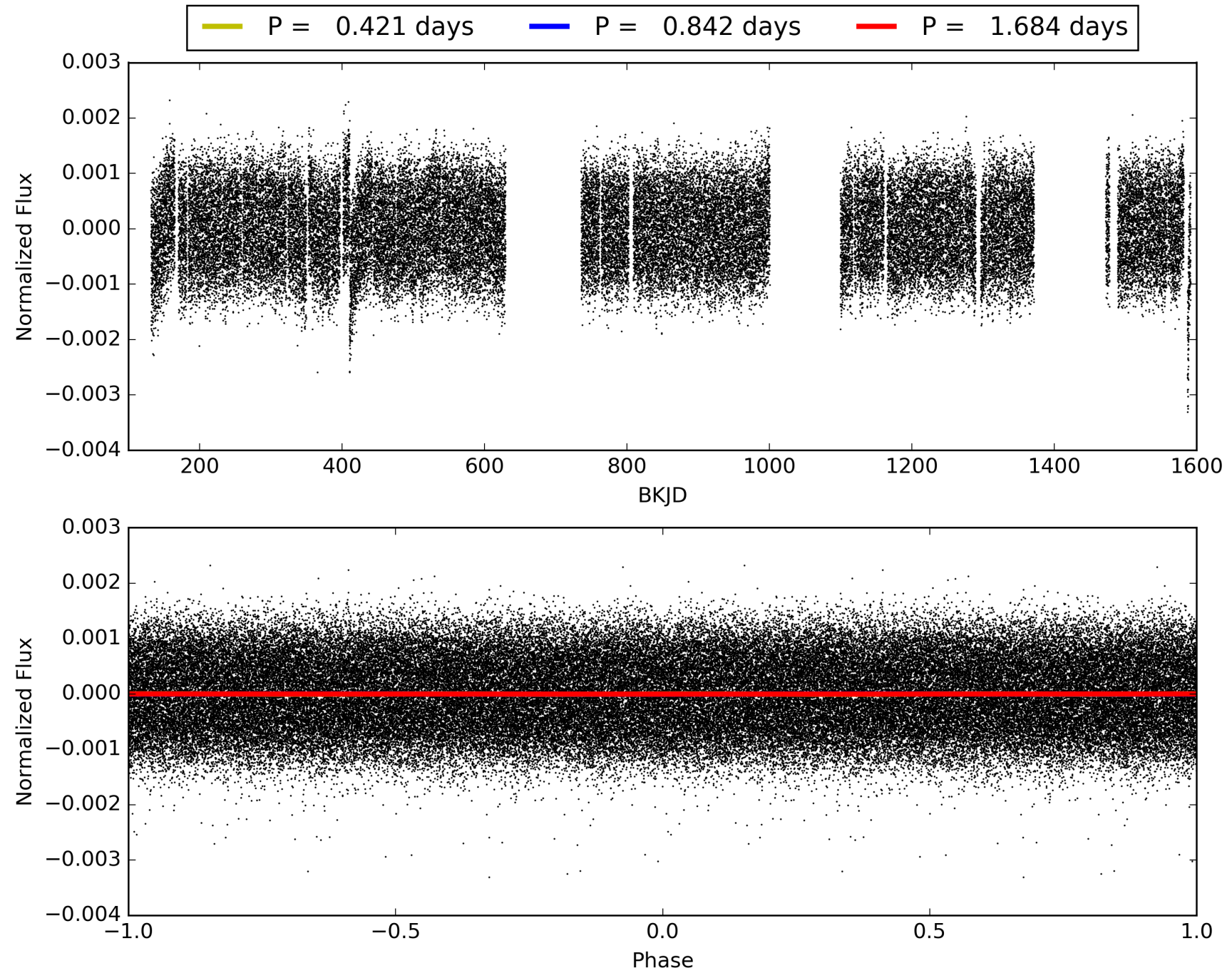
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:15:52 Z

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

TCE 010555142-01, PDC Light Curves

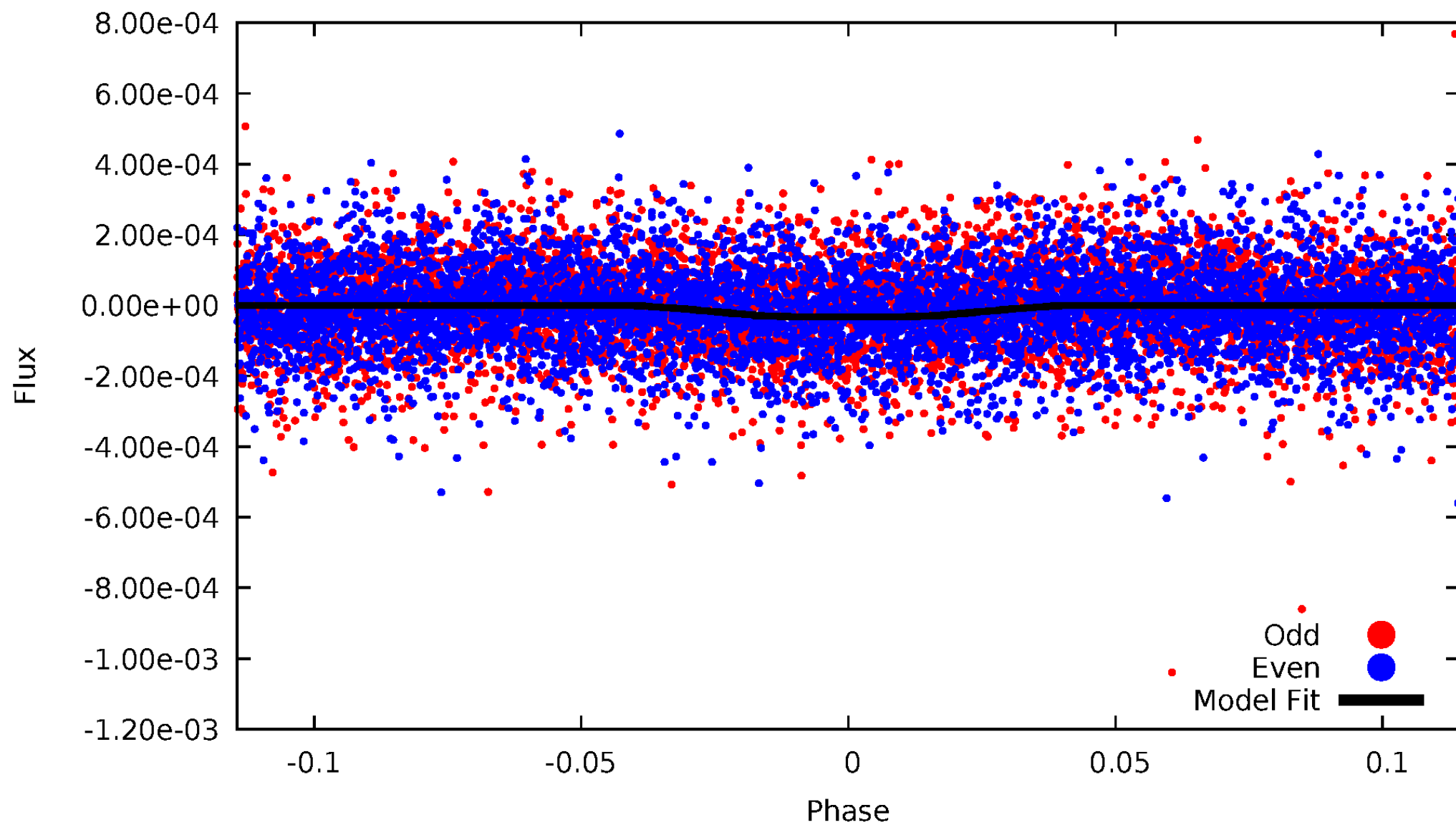


TCE 010555142-01



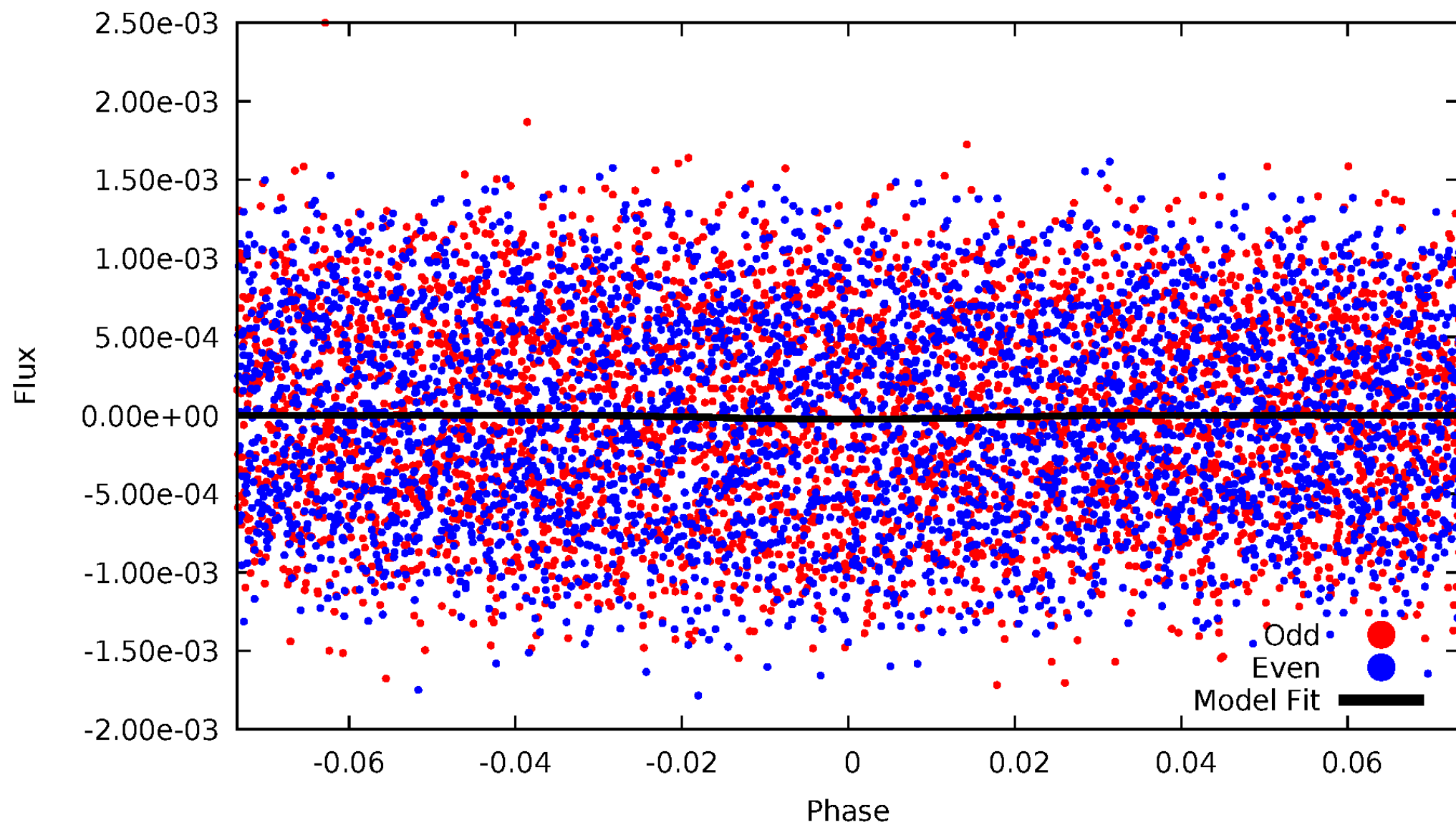
DV Odd/Even

TCE 010555142-01

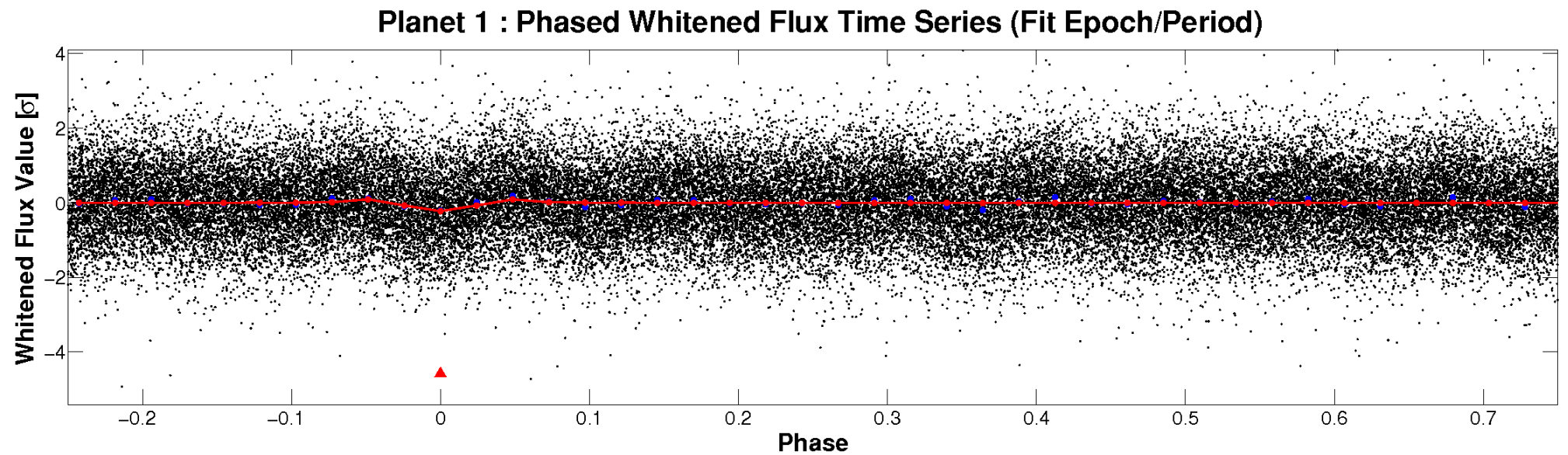
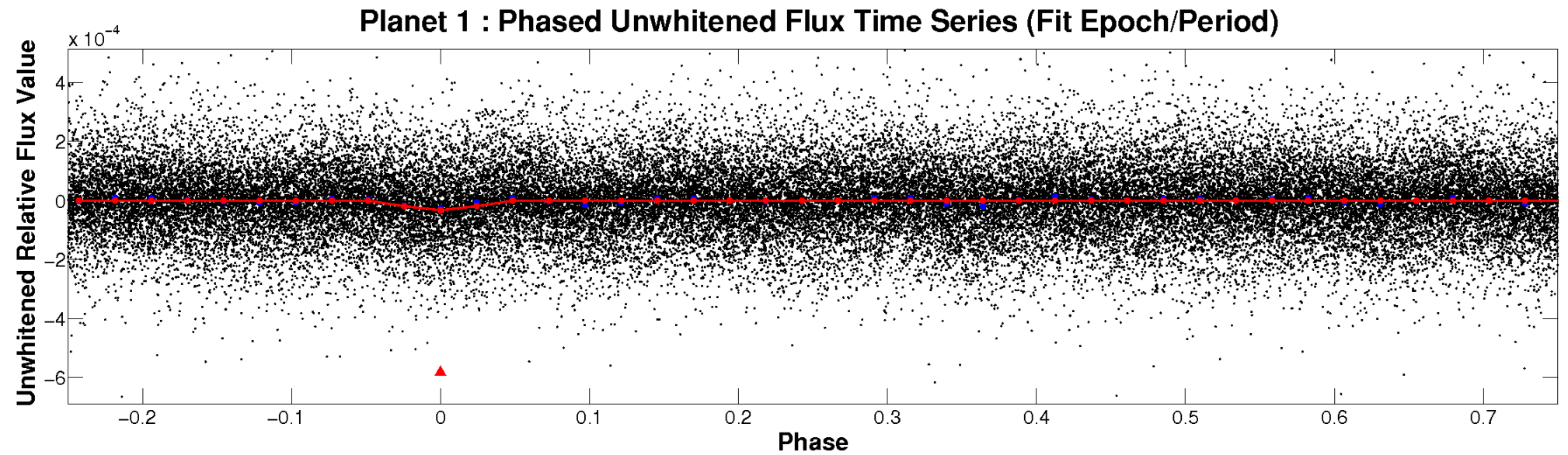


ALT Odd/Even

TCE 010555142-01

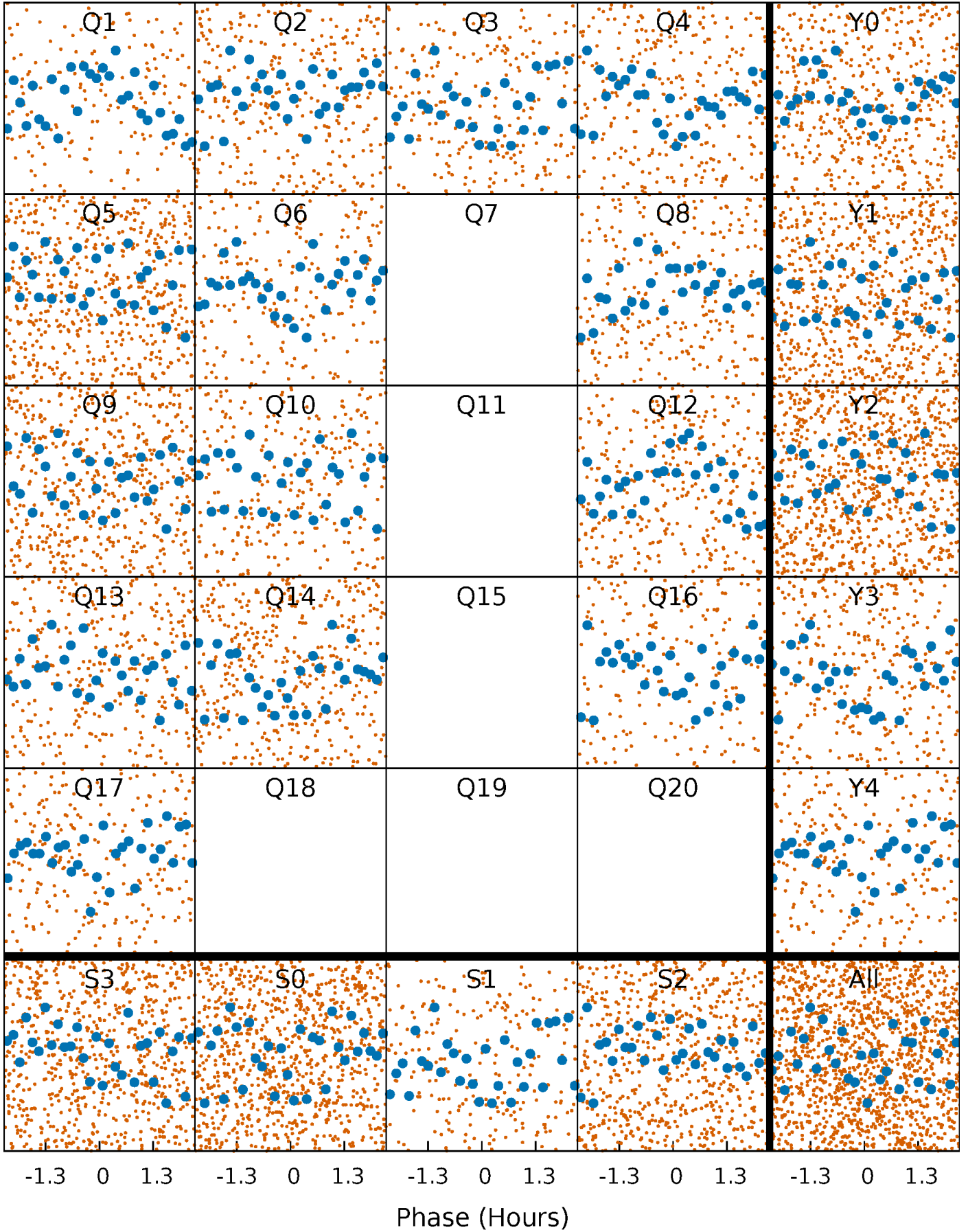


Non-Whitened Vs. Whitened Light Curve



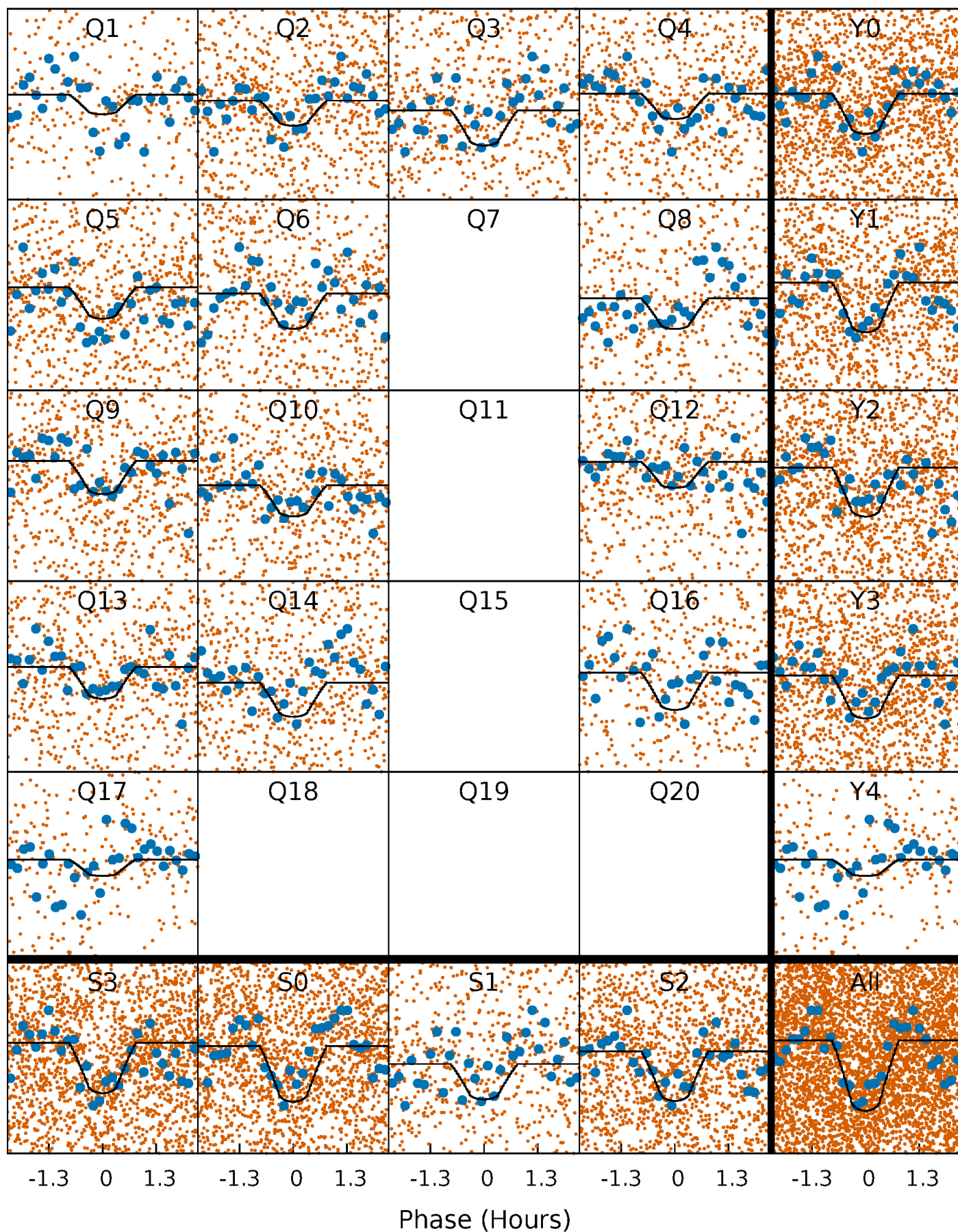
PDC Quarter-Phased Transit Curves

TCE 010555142-01 P= 0.842044 Days $T_0=131.537668$ (BKJD)



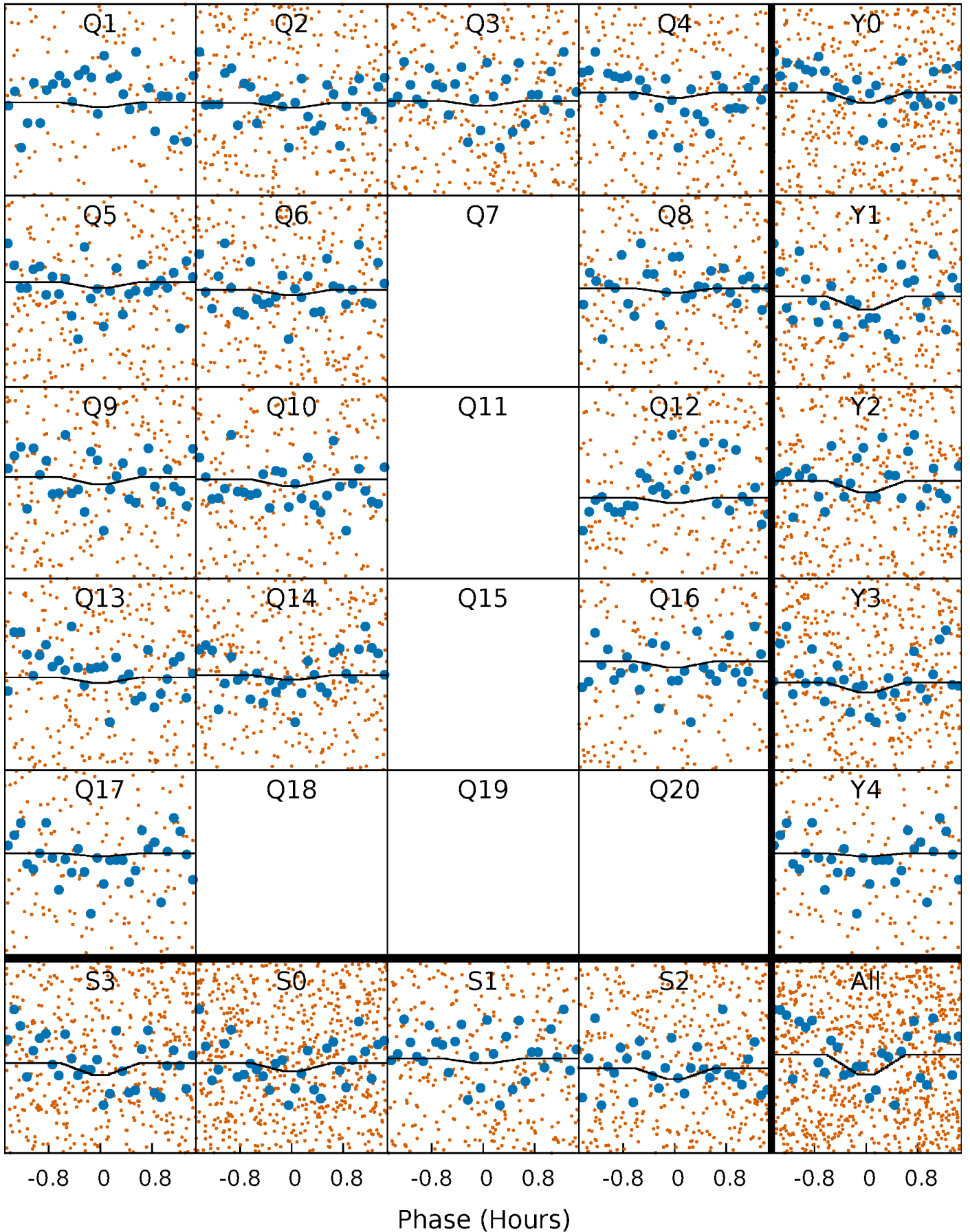
DV Quarter-Phased Transit Curves

TCE 010555142-01 P= 0.842044 Days $T_0=131.537668$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

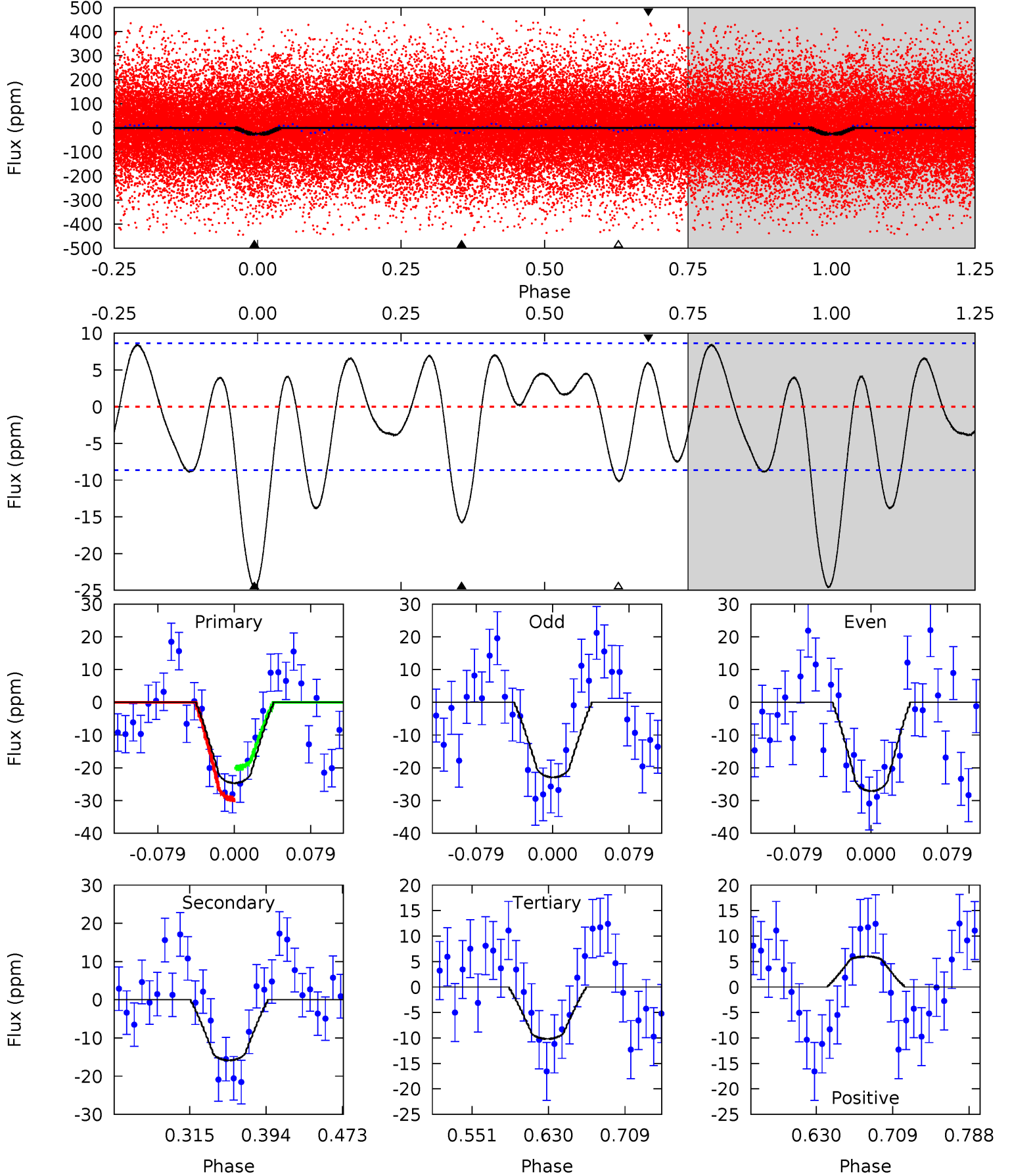
TCE 010555142-01 P= 0.842041 Days $T_0=131.540500$ (BKJD)



DV Model-Shift Uniqueness Test

010555142-01, P = 0.842044 Days, E = 130.695624 Days

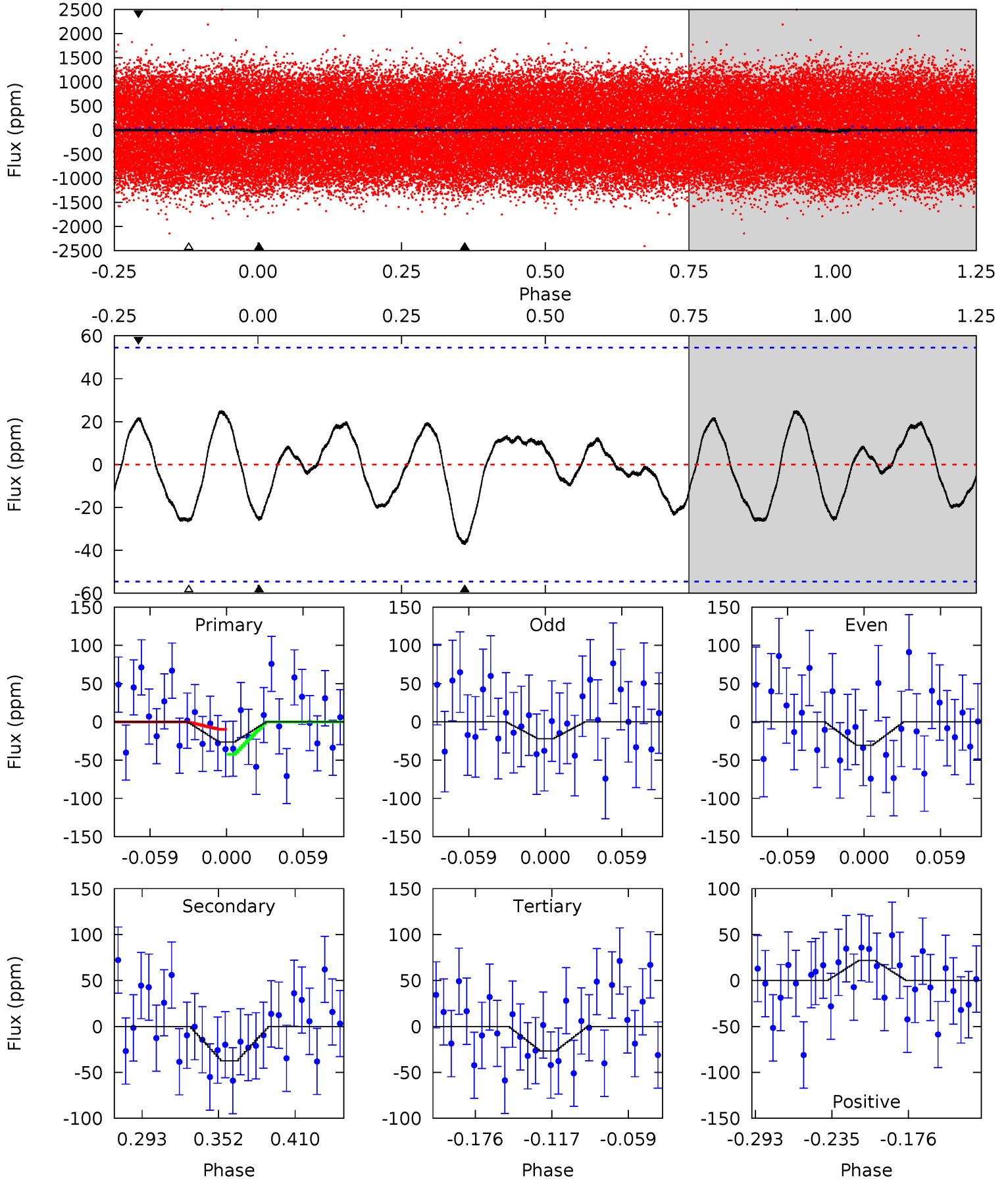
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	8.46	5.44	3.21	4.61	1.76	2.87	7.74	9.97	3.03	5.26	1.13	0.86	0.26	2.53



Alt Model-Shift Uniqueness Test

010555142-01, P = 0.842041 Days, E = 130.698459 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.25	3.21	2.28	1.88	4.68	1.89	1.09	-0.03	0.37	0.93	1.33	0.38	1.38	0.40	1.38



Stellar Parameters For KIC 010555142

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7221^{+226}_{-302}	$3.488^{+0.604}_{-0.071}$	$-0.180^{+0.250}_{-0.300}$	$4.240^{+0.284}_{-2.557}$	$2.018^{+0.069}_{-0.651}$	$0.037^{+0.357}_{-0.009}$
	+3%/-4%	+17%/-2%	+139%/-167%	+7%/-60%	+3%/-32%	+957%/-23%
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 010555142-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-16 ± 2	$2.18^{+1.02}_{-0.93}$	5991^{+413}_{-931}	5533^{+1768}_{-1326}	$0.854^{+1.589}_{-0.435}$
Alt.	-37 ± 12	$1.97^{+0.96}_{-0.87}$	5987^{+387}_{-834}	7791^{+3412}_{-1790}	$2.407^{+4.932}_{-1.382}$

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 $A_{obs} \gg 1.0$

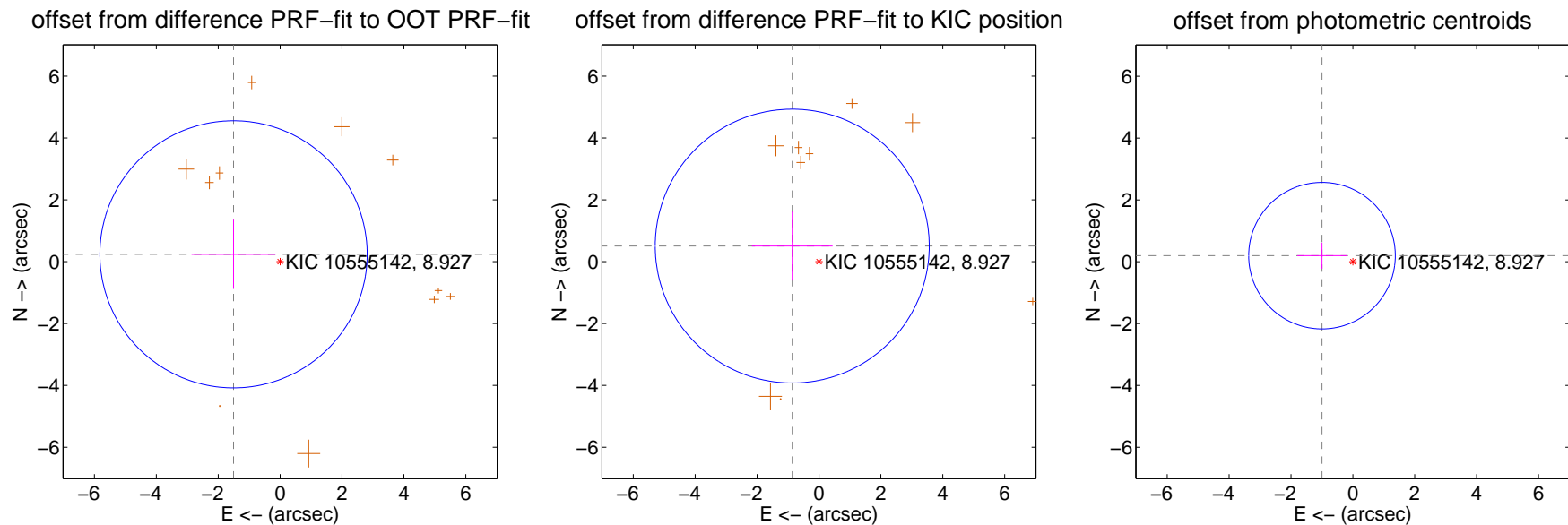
DV Centroid Data

Supplemental centroid analysis for 010555142-01. **Kepler magnitude: 8.93.** Transit SNR 11.01

There are 0 quarters with good PRF difference image offsets

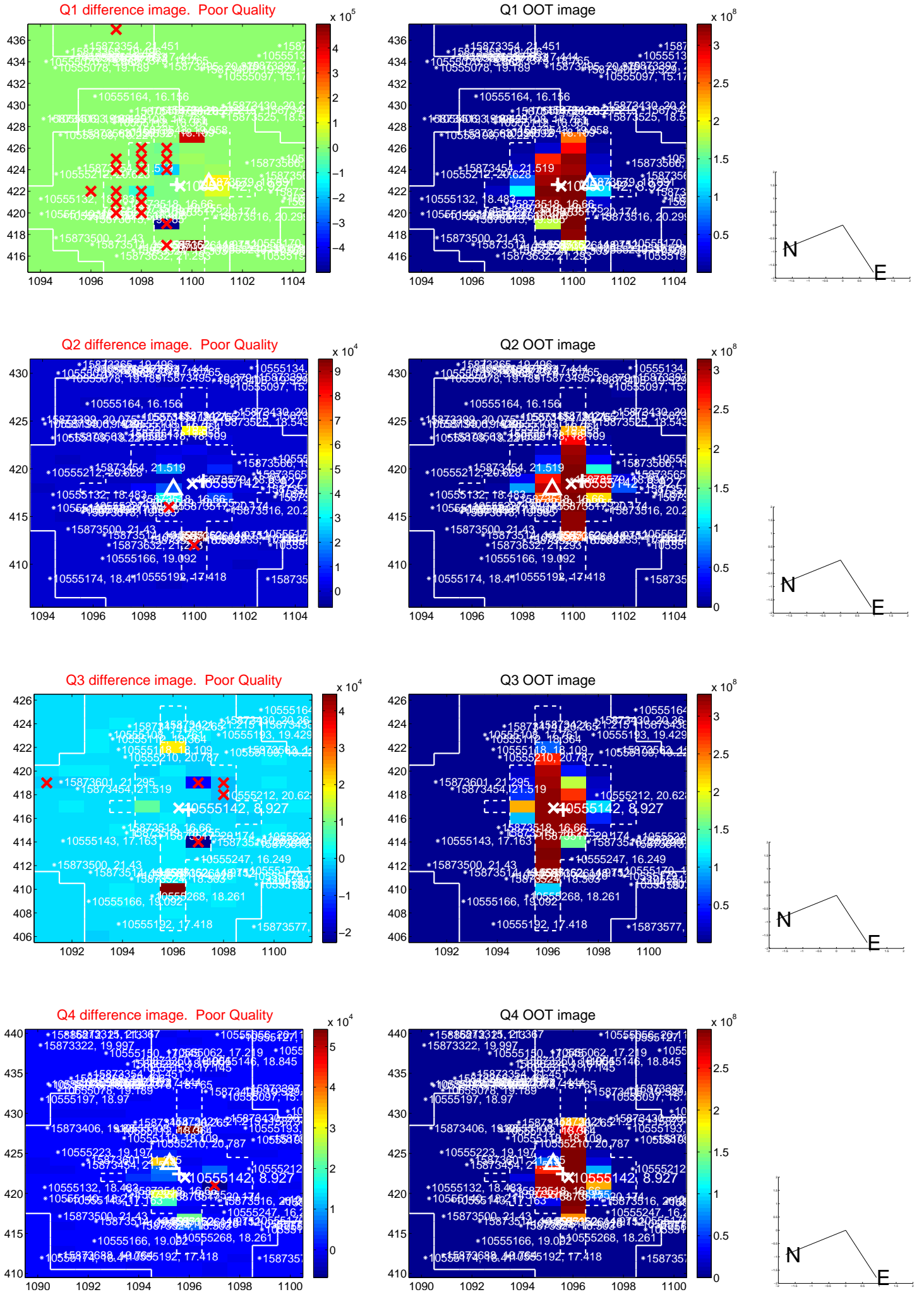
The direct PRF centroid is offset from the target star catalog position by about 1.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.524 ± 1.439	1.06	1.505 ± 1.356	0.238 ± 1.119
PRF-fit source offset from KIC position	1.001 ± 1.475	0.68	0.864 ± 1.305	0.505 ± 1.114
photometric centroid source offset	1.02 ± 0.79	1.29	1.00 ± 0.80	0.20 ± 0.42

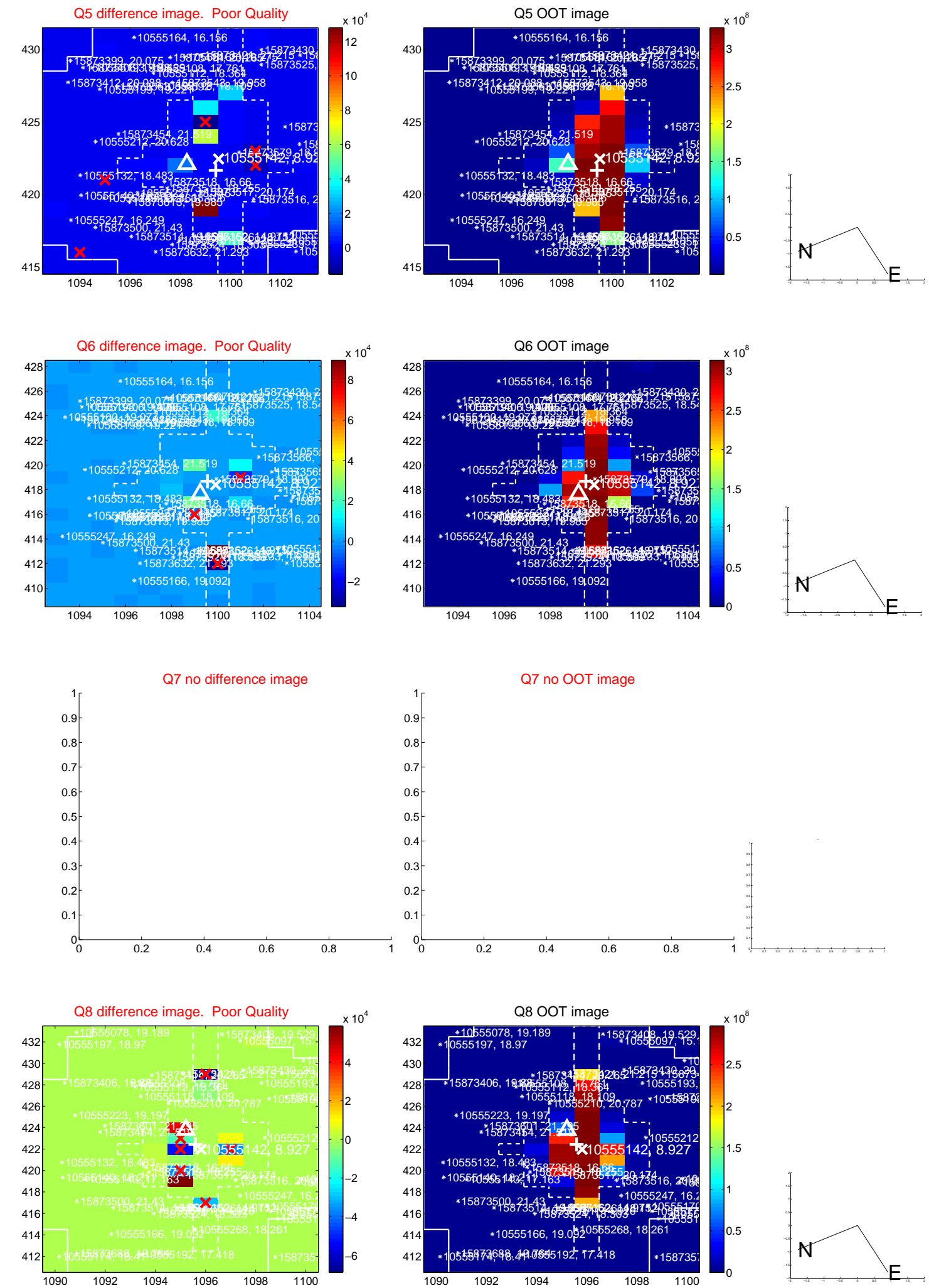


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

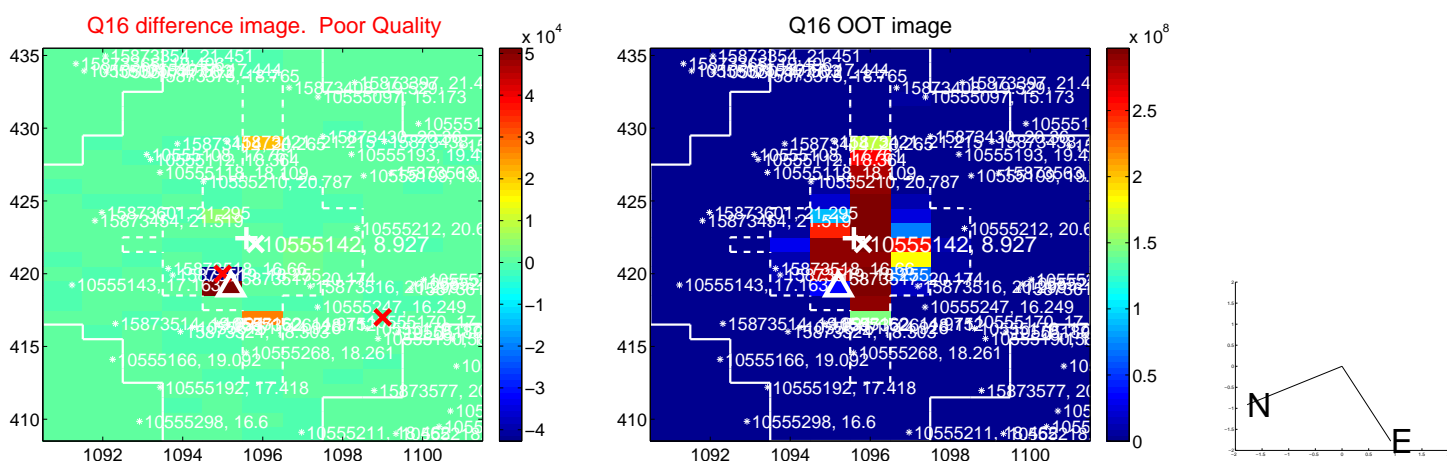
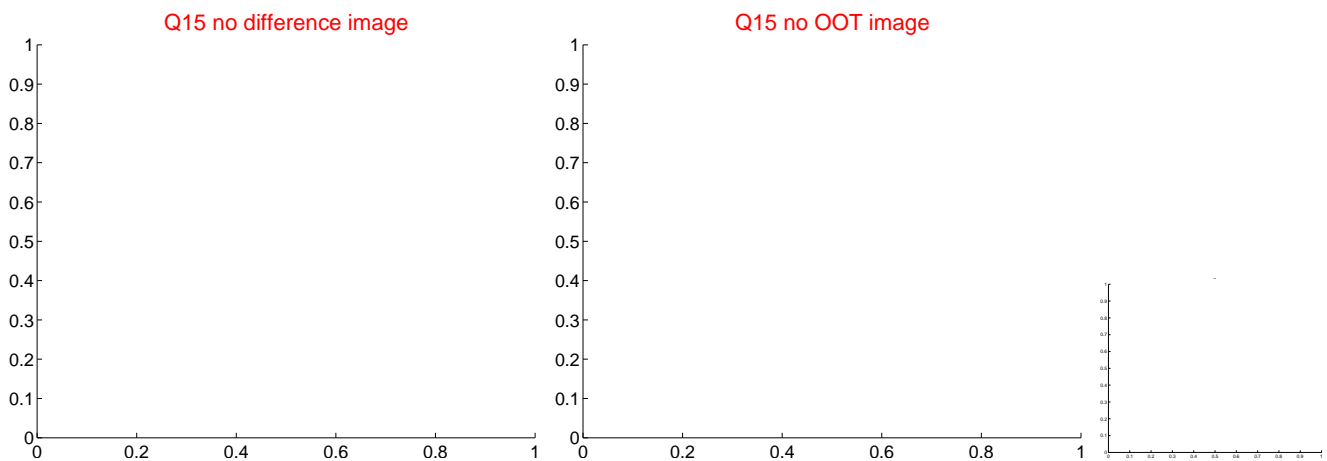
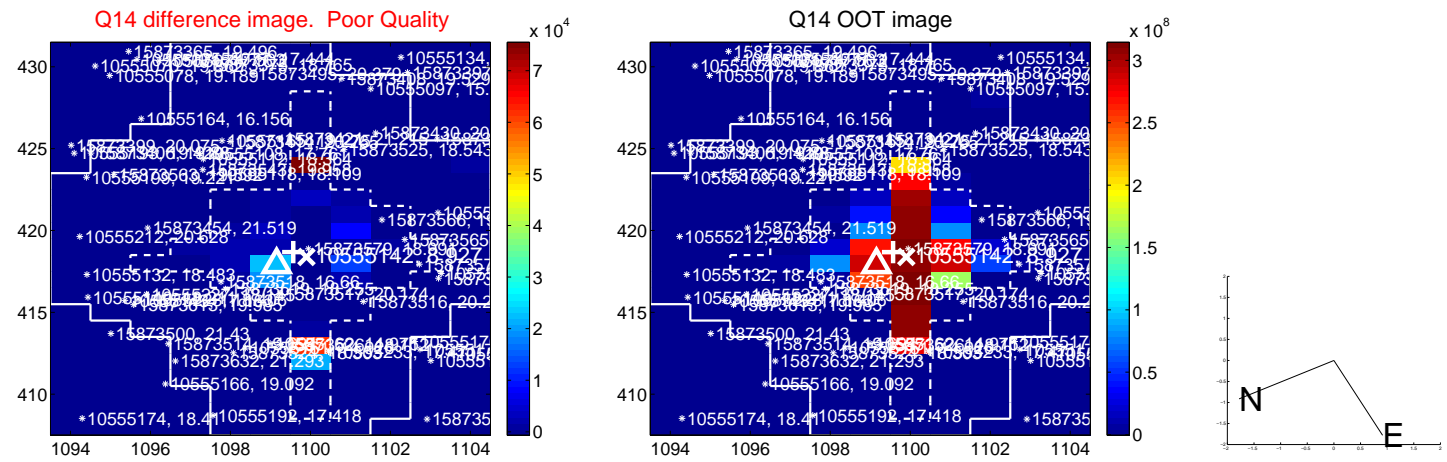
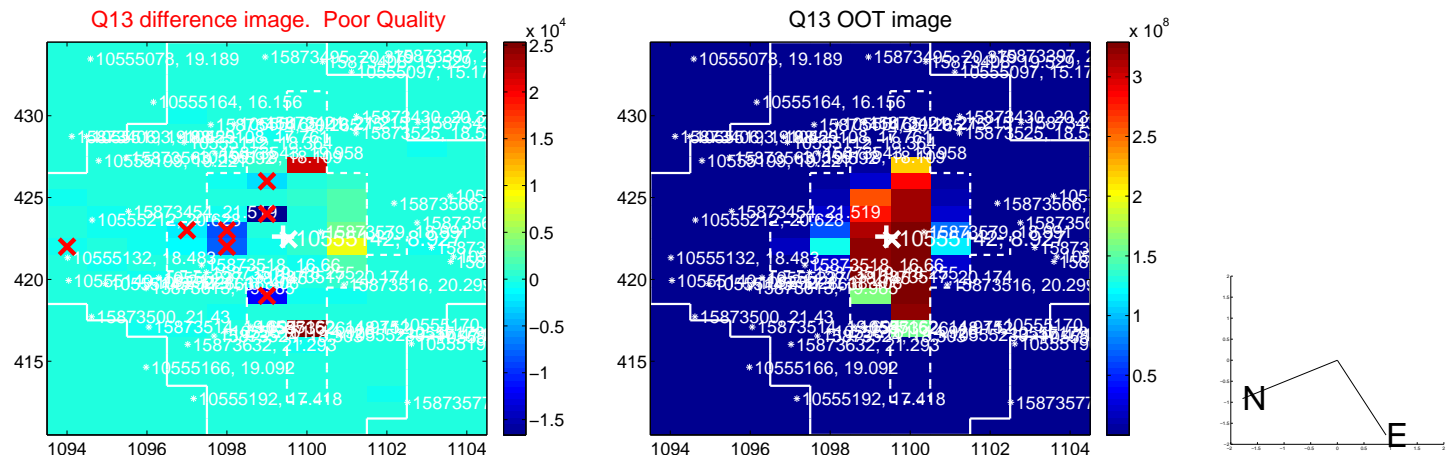
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



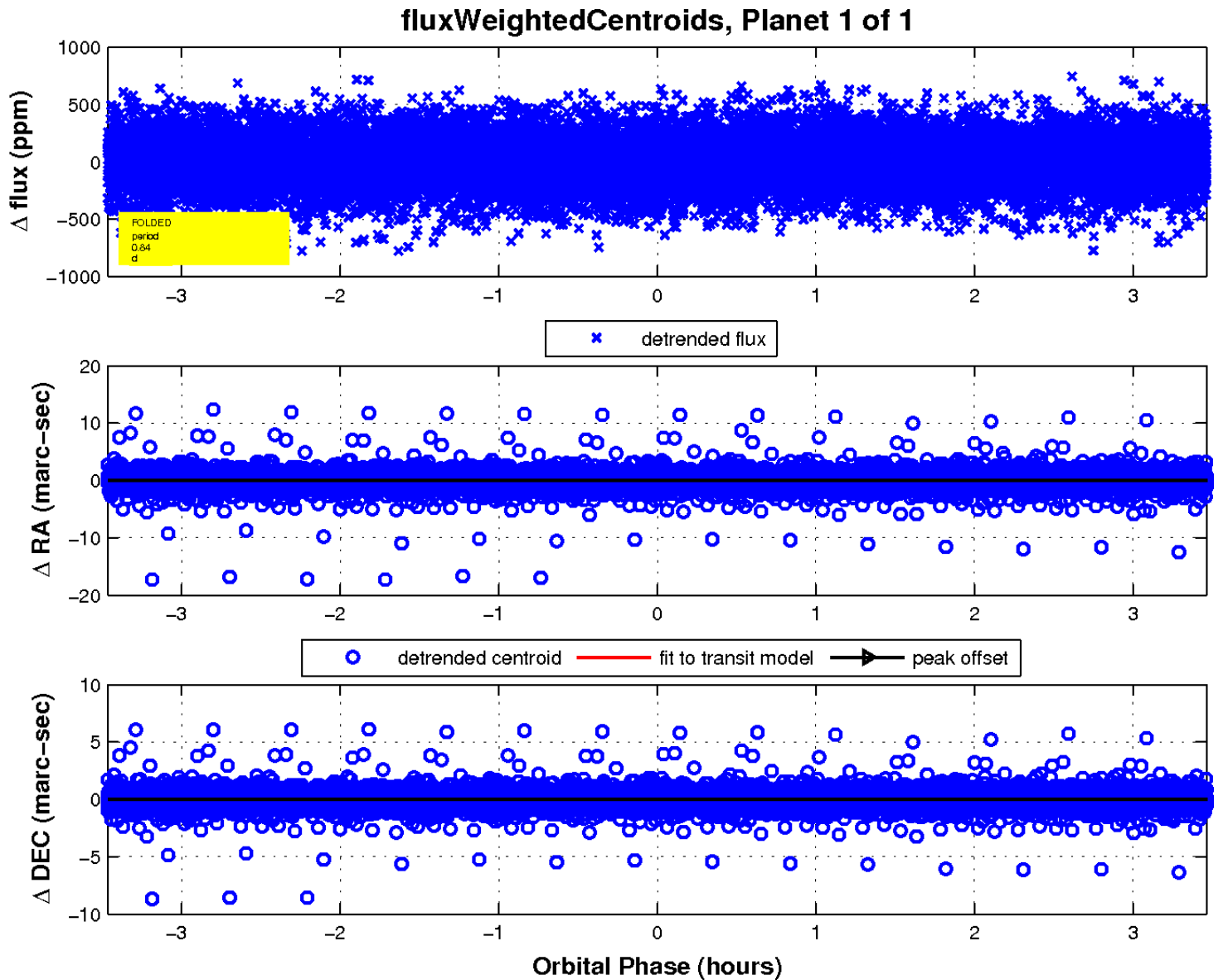
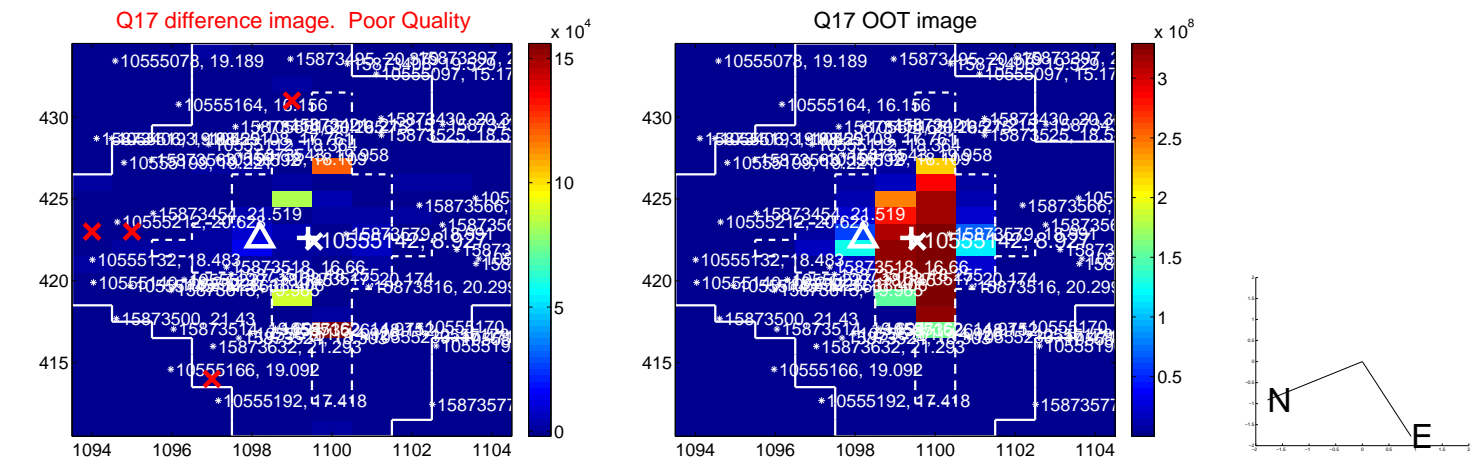
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

