

KIC 007512130

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})
007512130-01	OBS	No	3.739775	131.880801	35.7	11.391	8.0	8.9	1.03	6108	0.73	547.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007512130-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

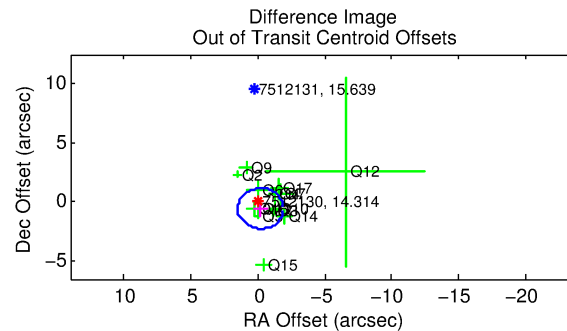
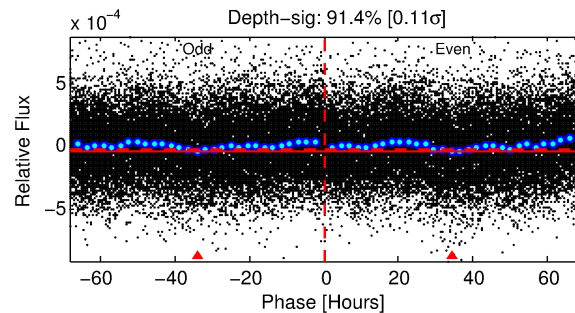
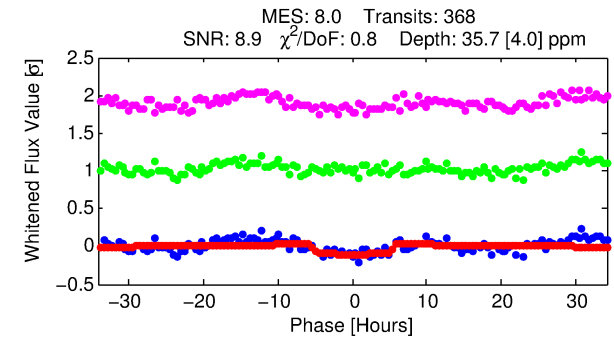
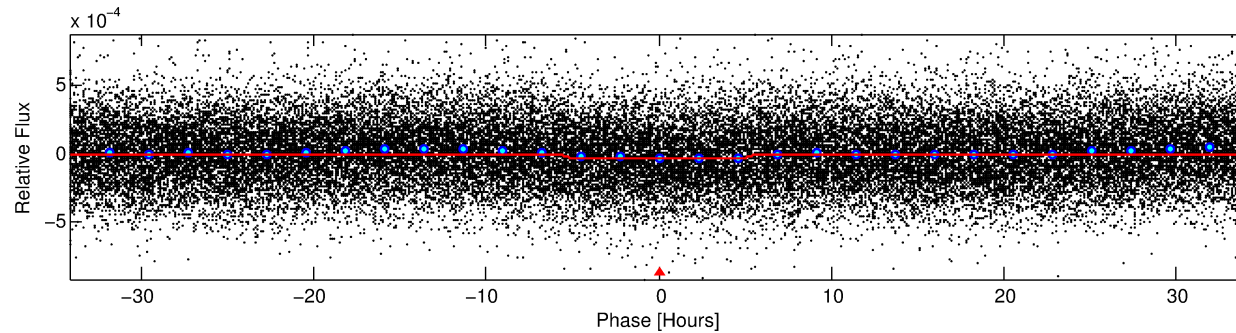
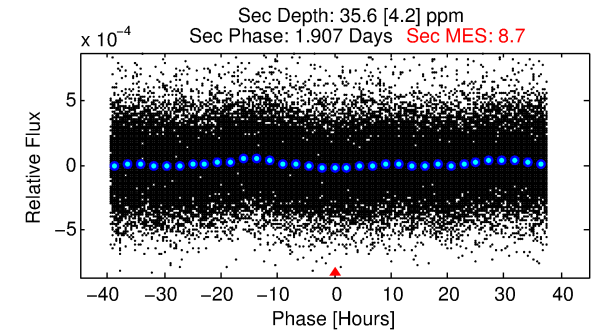
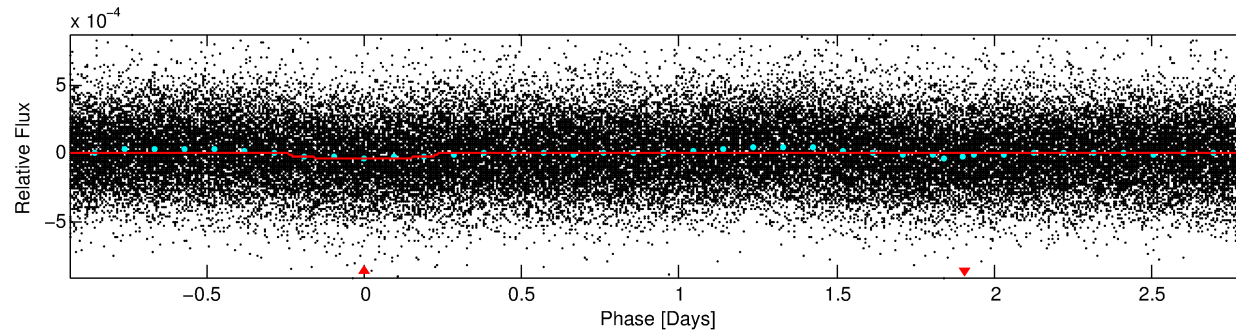
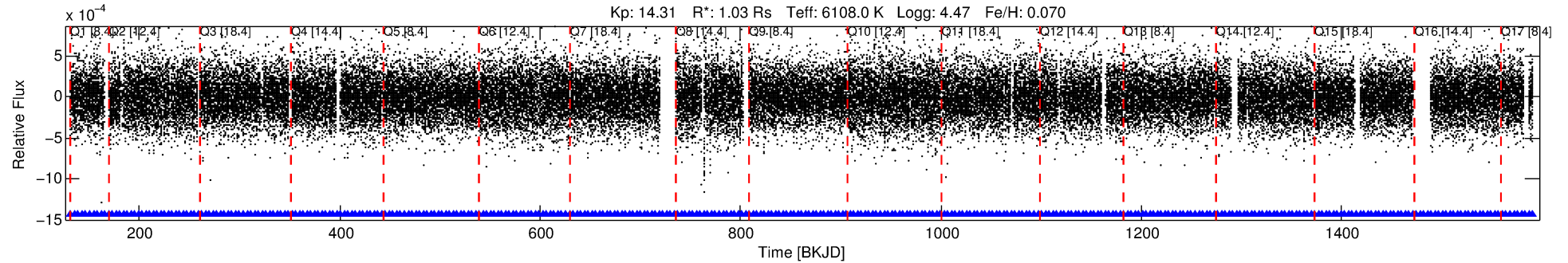
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007512130-01

No Significant Match Found

DV One-Page Summary

KIC: 7512130 Candidate: 1 of 1 Period: 3.740 d



DV Fit Results:

Period = 3.73978 [0.00006] d
Epoch = 131.8808 [0.0106] BKJD
Rp/R* = 0.0065 [0.0015]
a/R* = 1.45 [0.91]
b = 0.90 [0.24]
Seff = 547.76 [231.29]
Teq = 1234 [130] K
Rp = 0.73 [0.29] Re
a = 0.0491 [0.0136] AU
Ag = 89.21 [55.45] [1.59σ]
Teffp = 5862 [729] K [6.25σ]

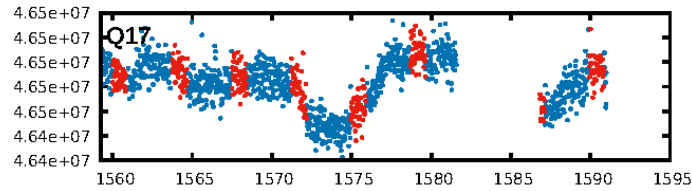
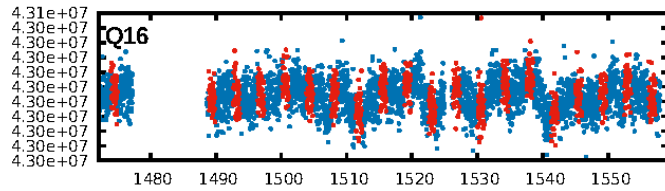
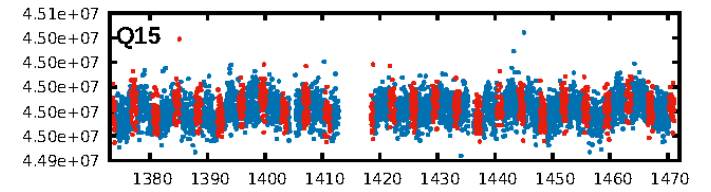
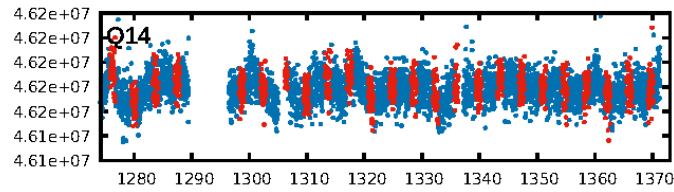
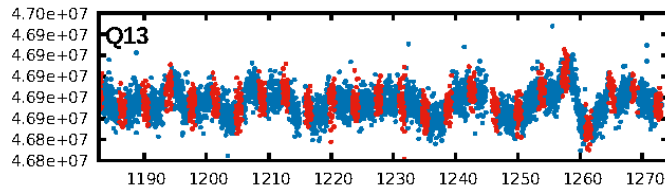
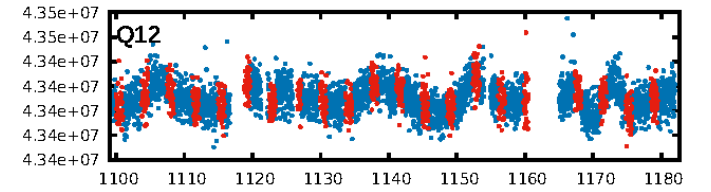
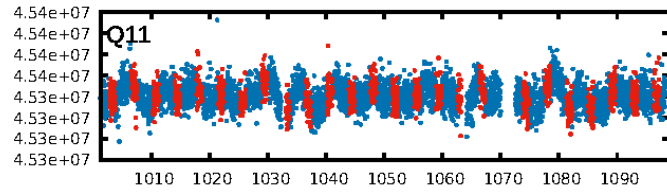
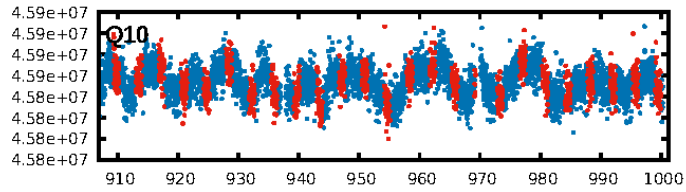
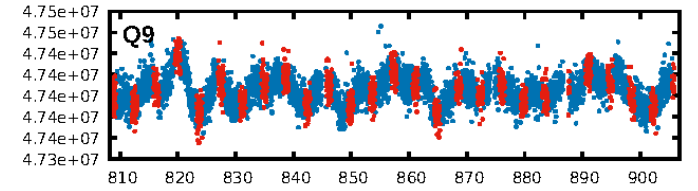
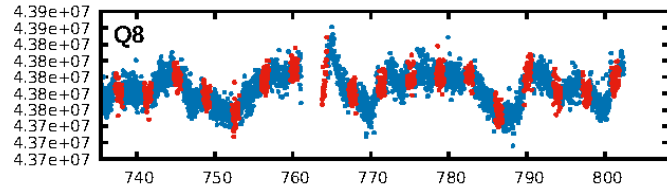
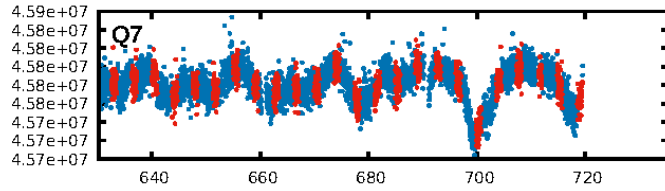
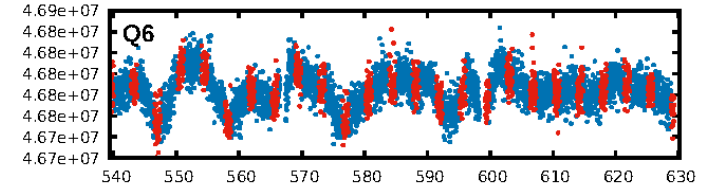
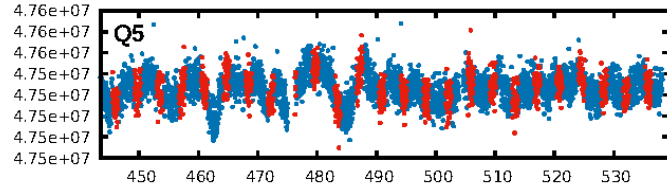
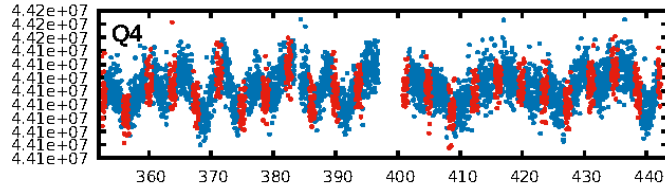
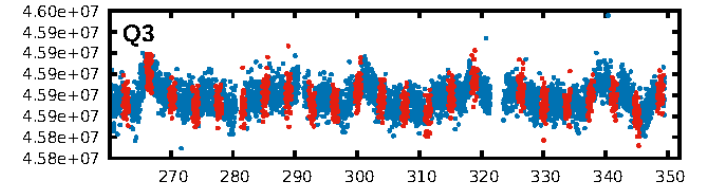
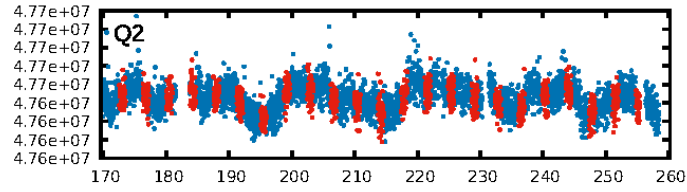
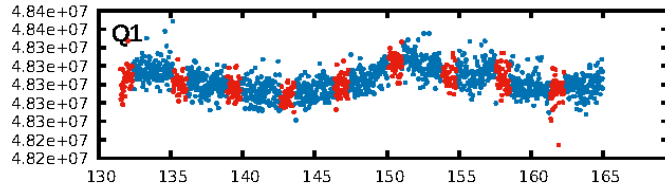
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.30e-14
RollingBand-fgt: 1.00 [351/351]
GhostDiagnostic-chr: 2.583
Centroid-sig: 95.0%
Centroid-so: 0.889 arcsec [0.77σ]
OotOffset-rm: 0.580 arcsec [1.01σ]
KicOffset-rm: 0.647 arcsec [1.13σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

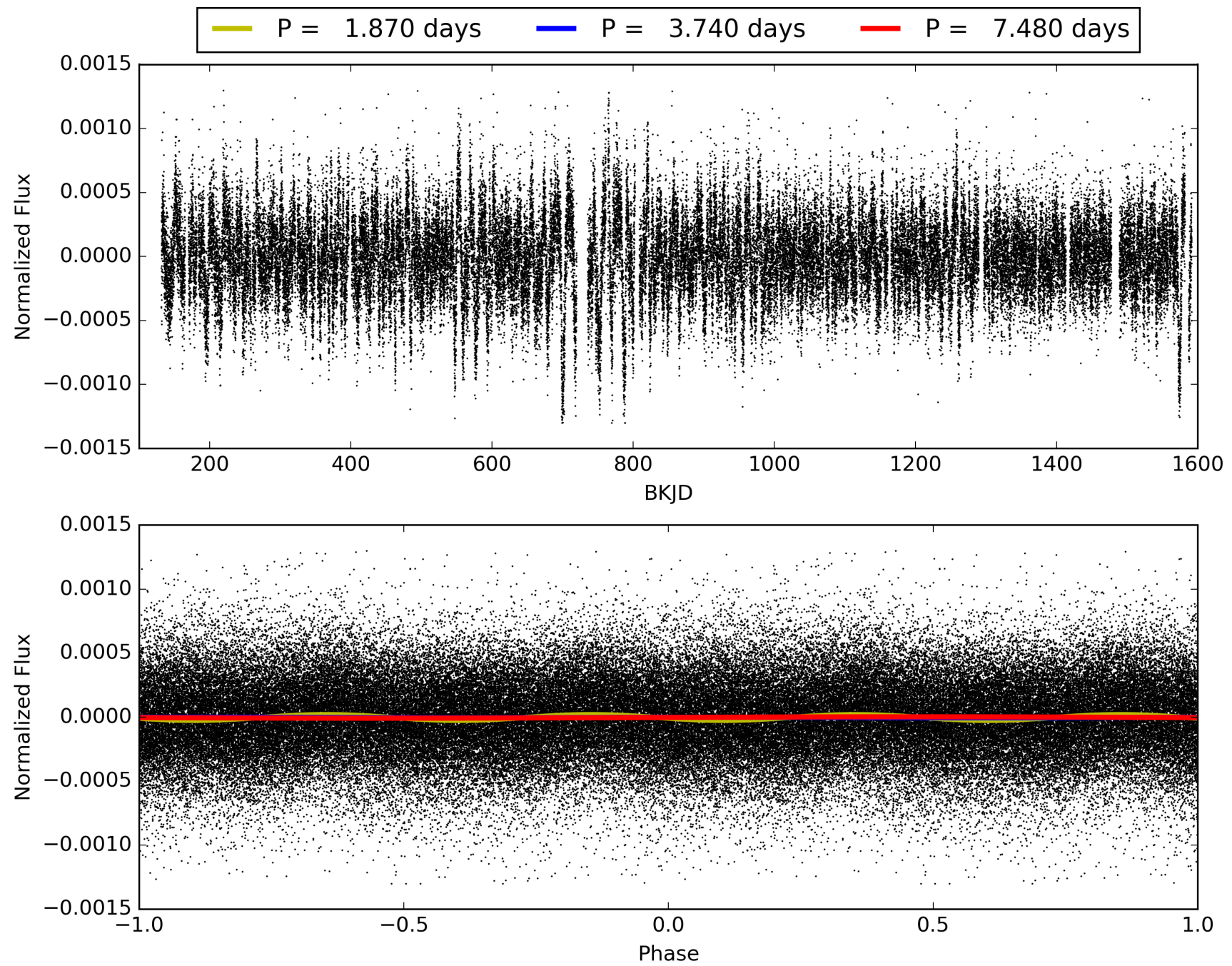
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:40:30 Z

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

TCE 007512130-01, PDC Light Curves

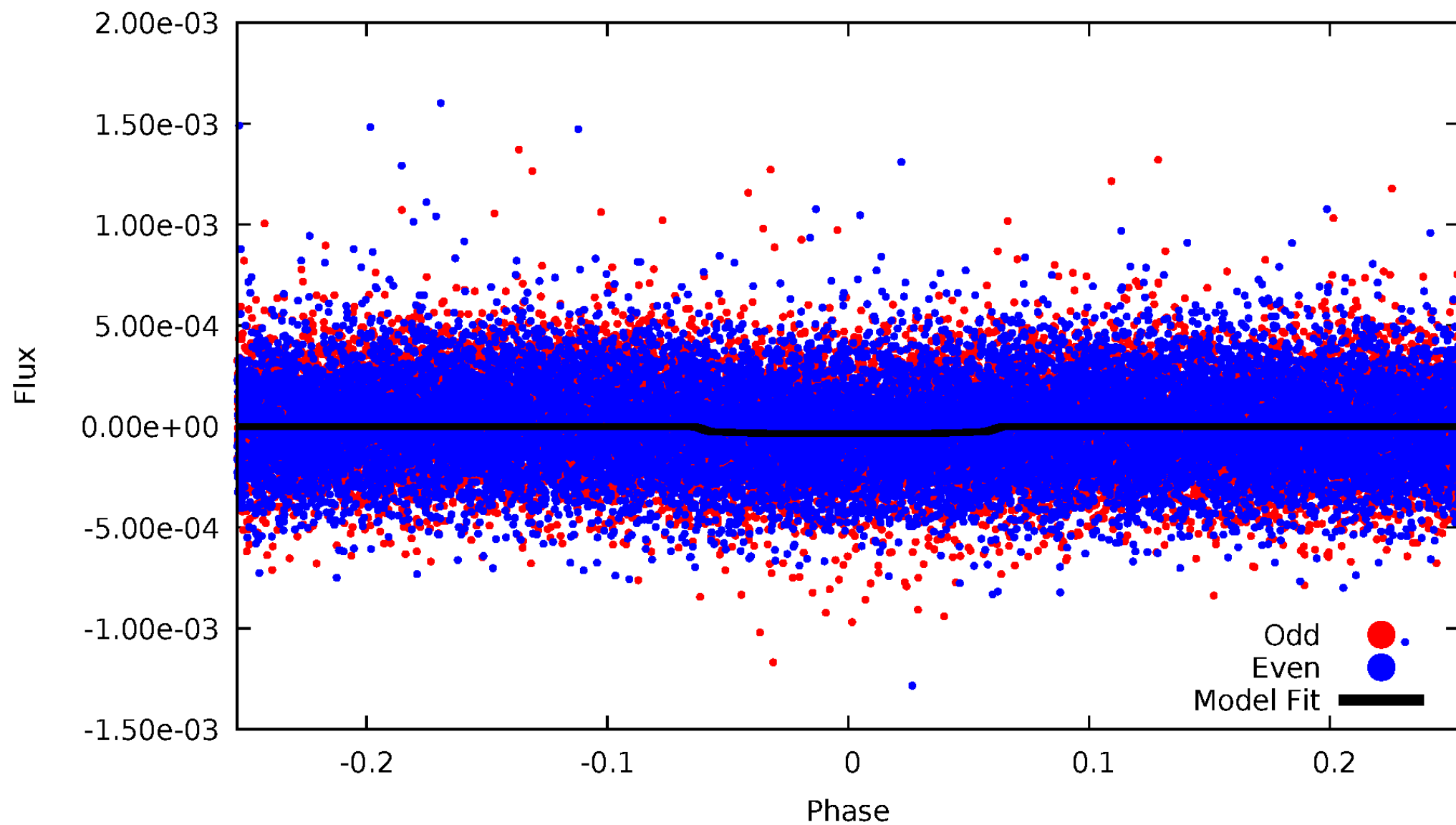


TCE 007512130-01



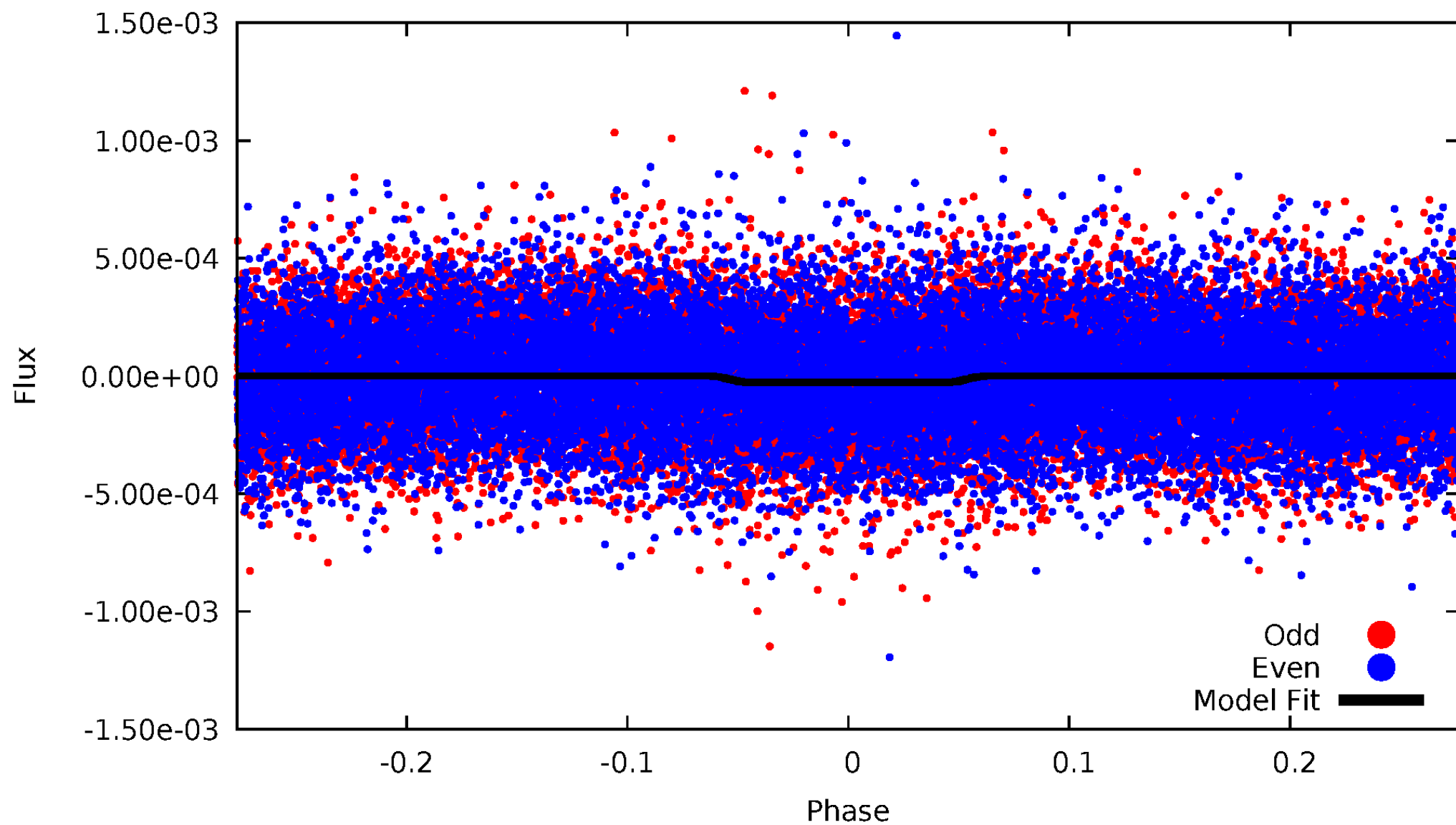
DV Odd/Even

TCE 007512130-01



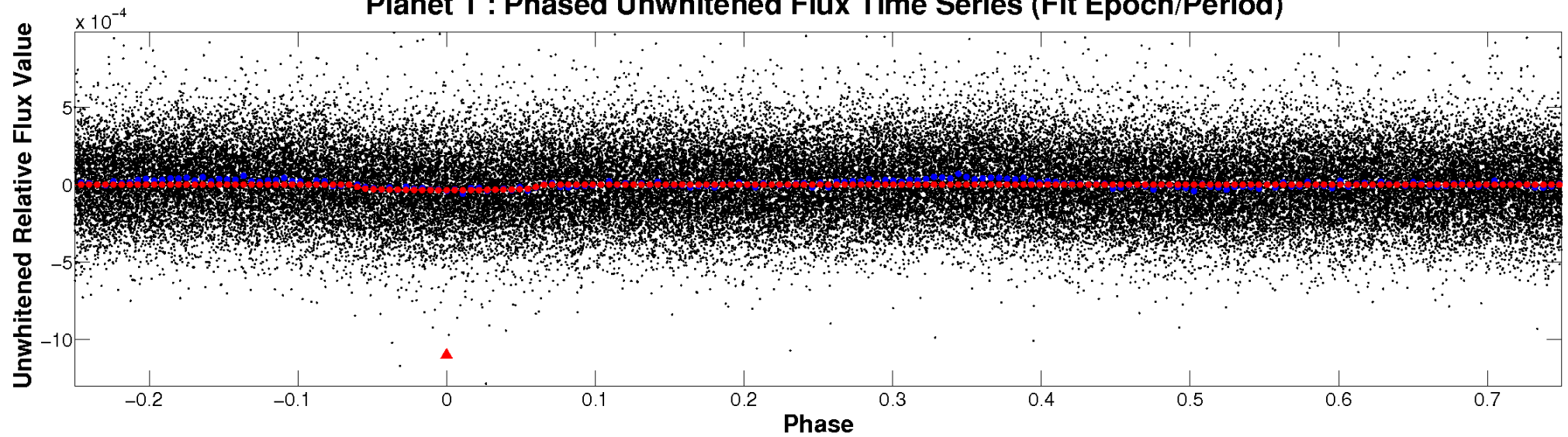
ALT Odd/Even

TCE 007512130-01

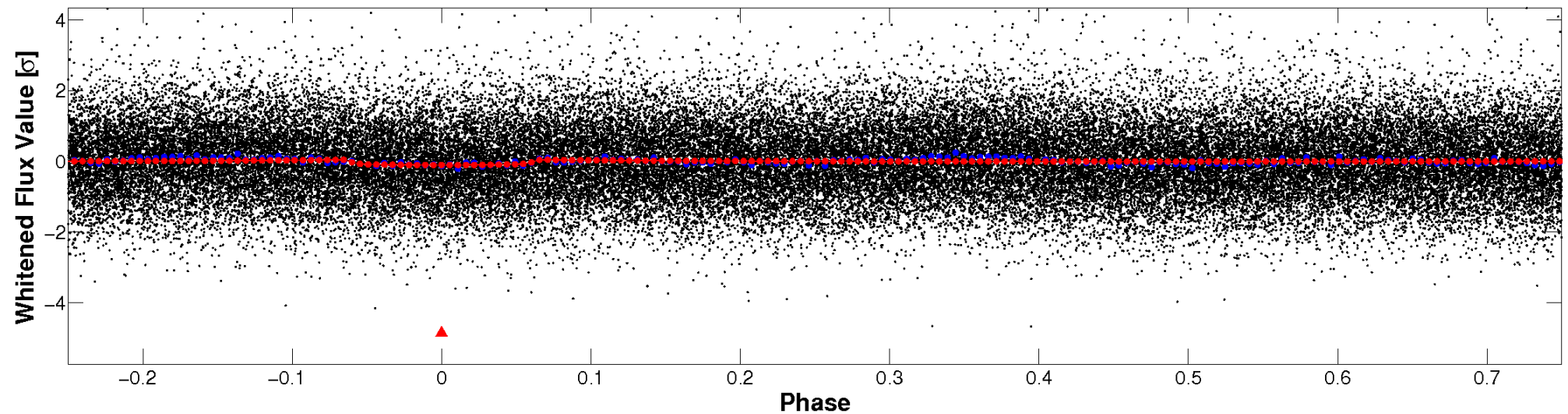


Non-Whitened Vs. Whitened Light Curve

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

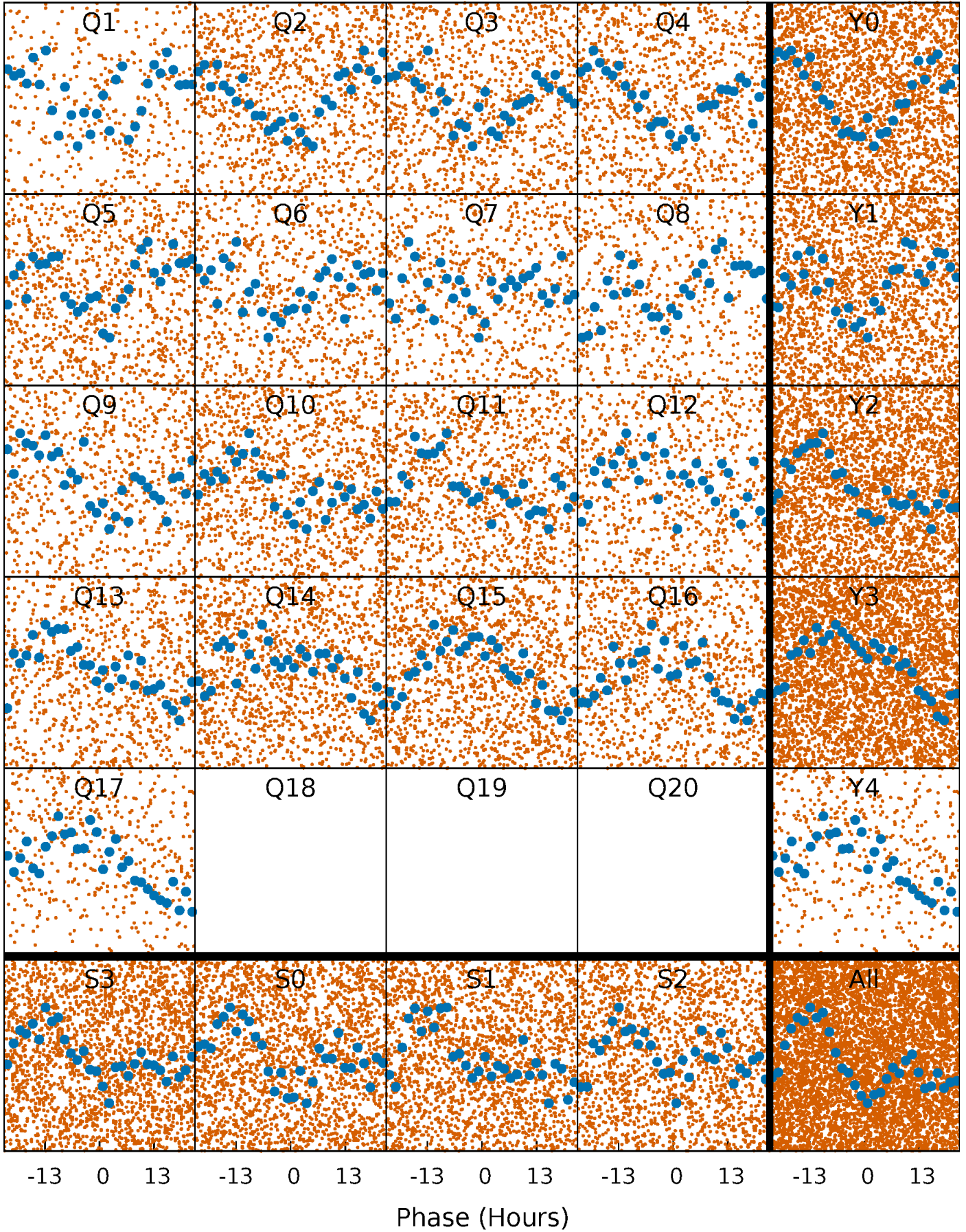


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



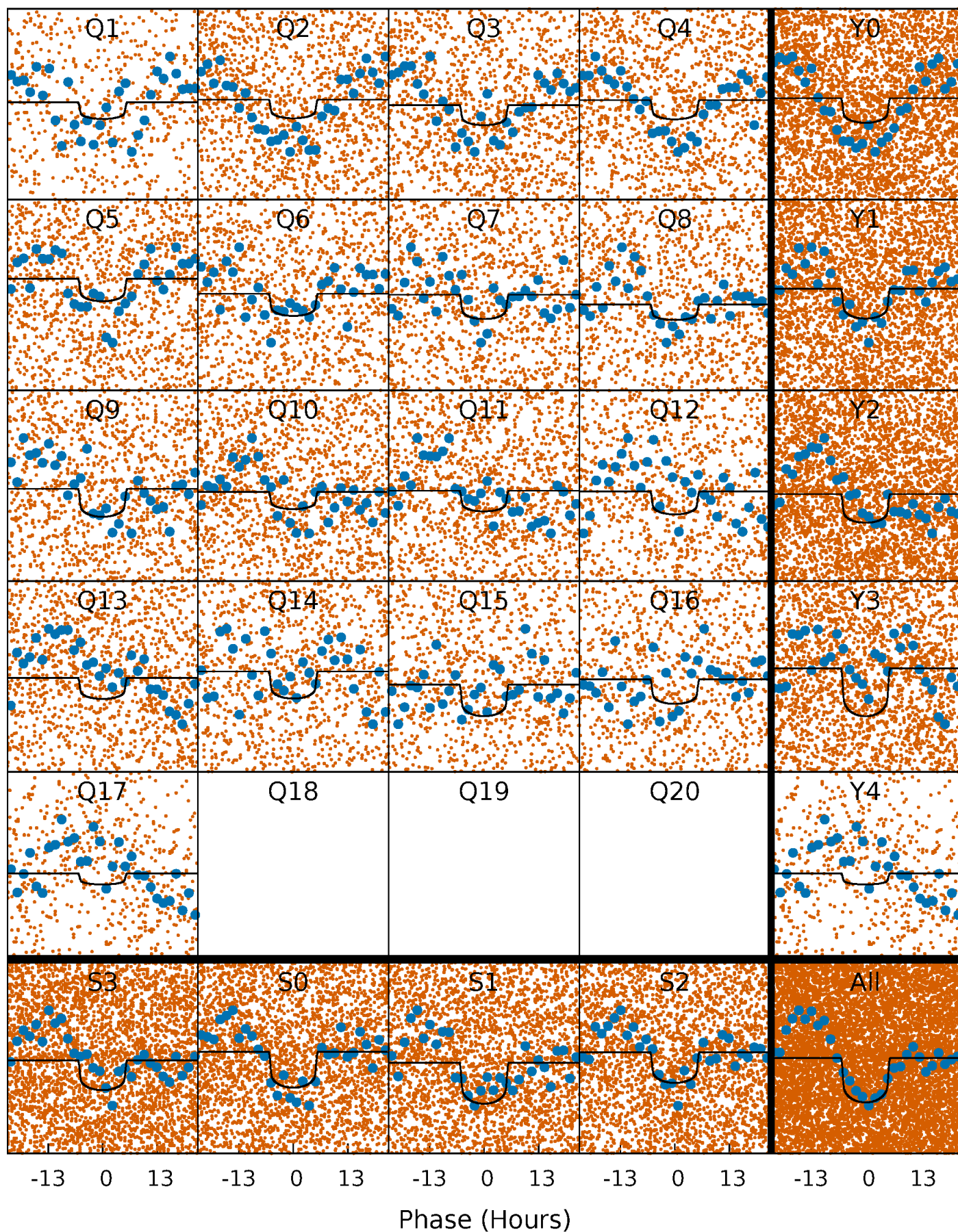
PDC Quarter-Phased Transit Curves

TCE 007512130-01 P= 3.739775 Days $T_0=131.880801$ (BKJD)



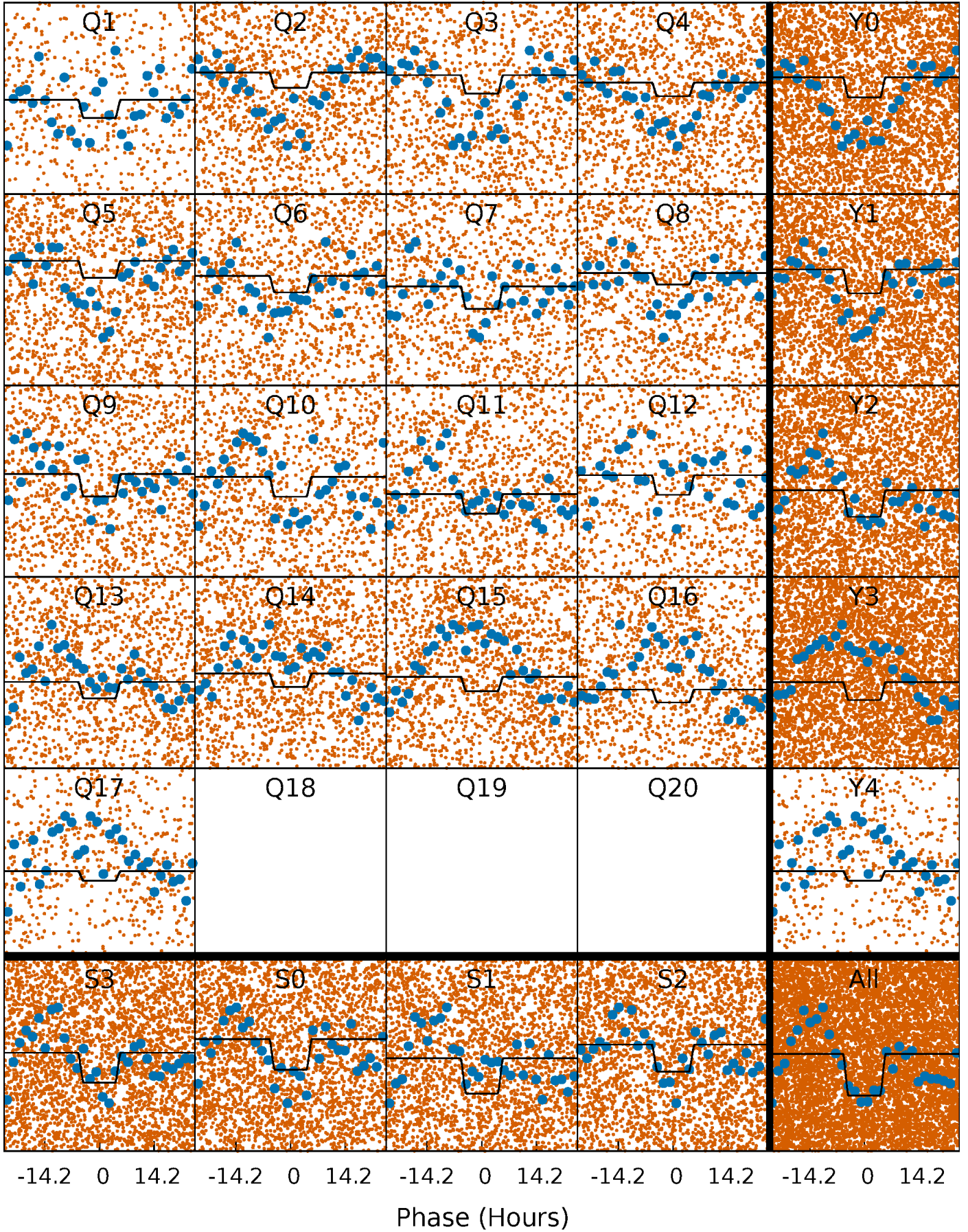
DV Quarter-Phased Transit Curves

TCE 007512130-01 P= 3.739775 Days $T_0=131.880801$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

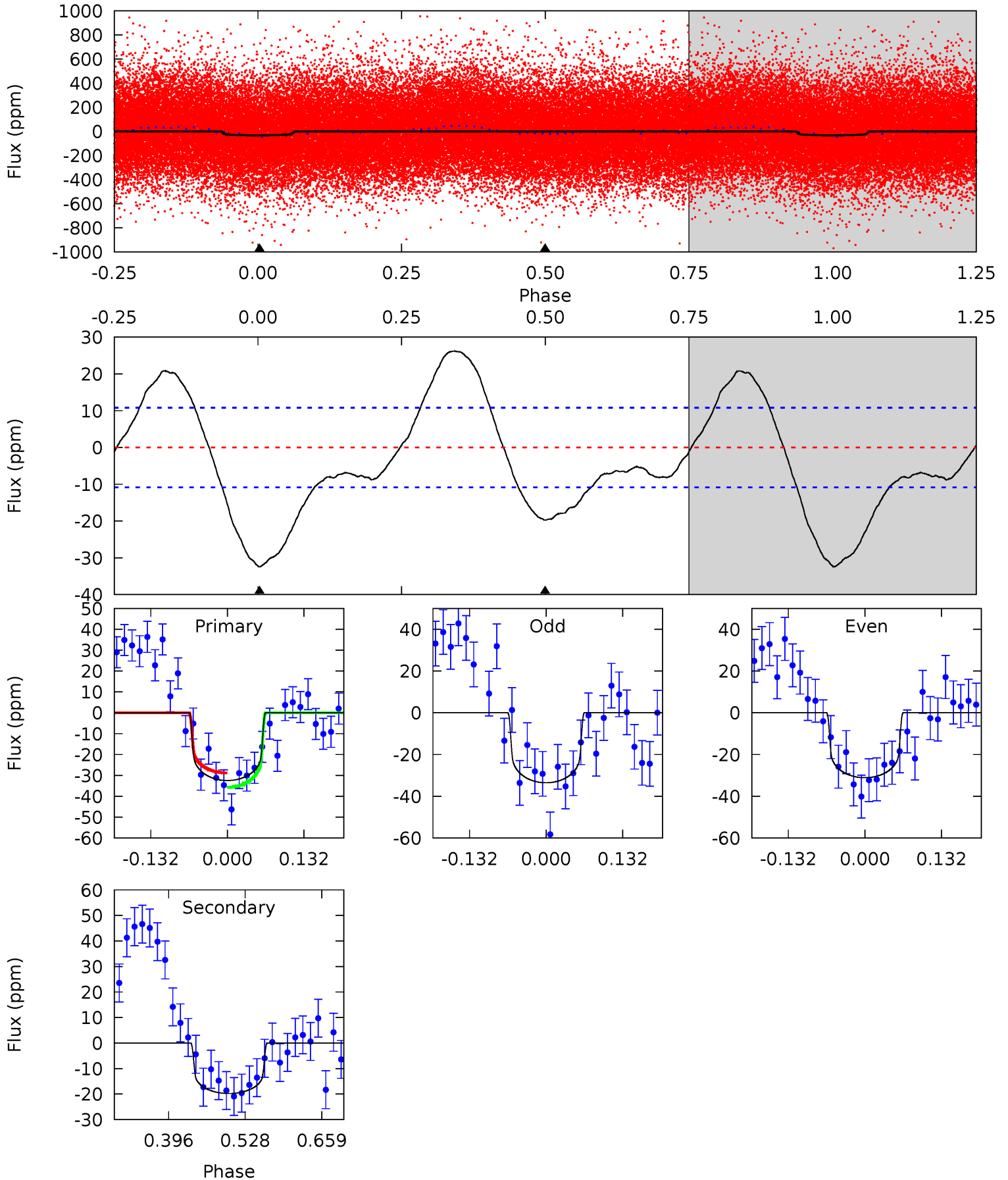
TCE 007512130-01 P= 3.739696 Days $T_0=131.910814$ (BKJD)



DV Model-Shift Uniqueness Test

007512130-01, P = 3.739775 Days, E = 128.141026 Days

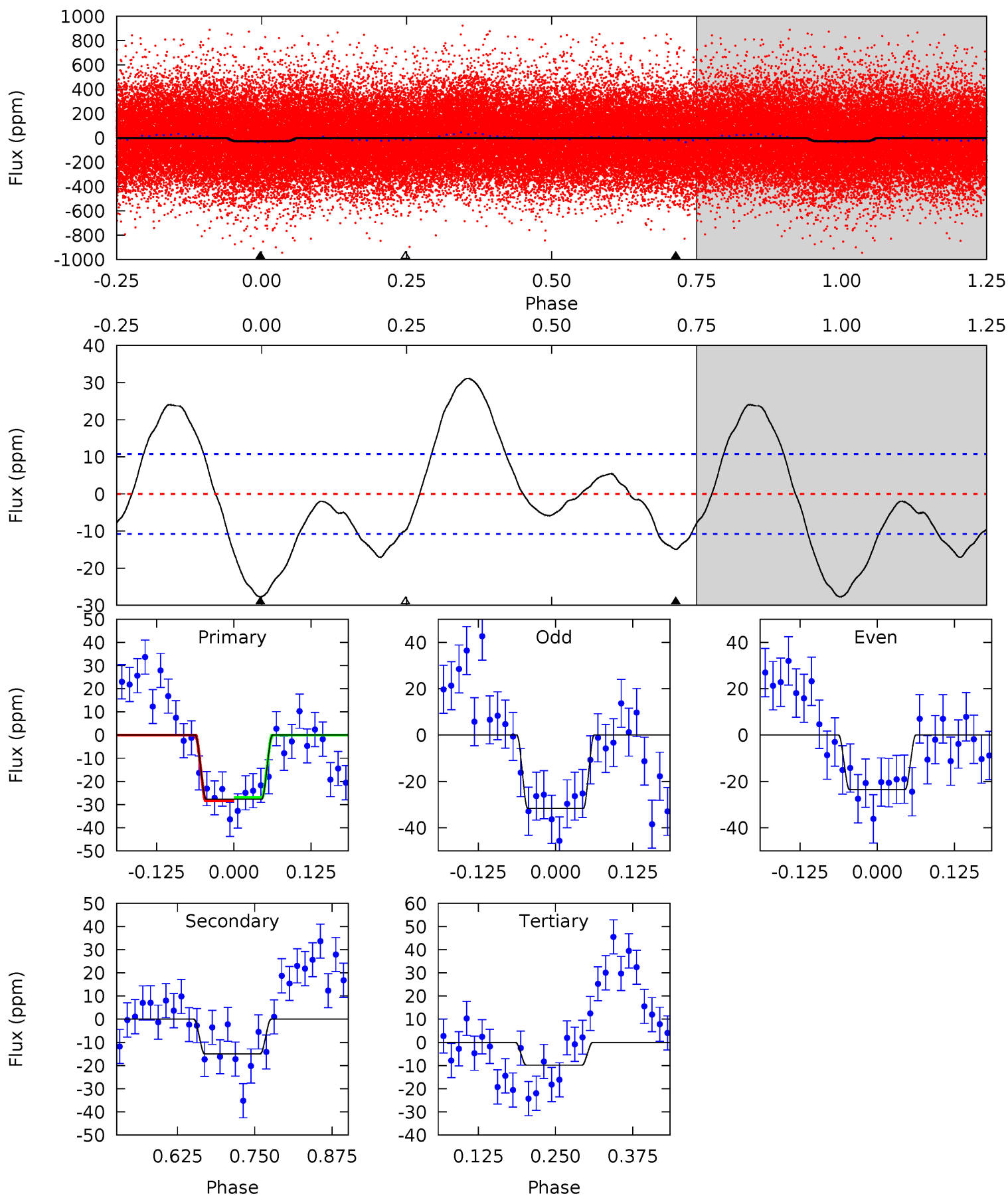
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	8.23	0	0	4.51	1.51	5.12	13.5	13.5	8.23	8.23	0.51	1.11	0.45	1.45



Alt Model-Shift Uniqueness Test

007512130-01, P = 3.739696 Days, E = 128.171118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	6.26	4.12	0	4.52	1.53	6.10	7.48	11.6	2.14	6.26	1.71	0.90	0.53	0.29



Stellar Parameters For KIC 007512130

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6108^{+171}_{-214}	$4.466^{+0.054}_{-0.216}$	$0.070^{+0.250}_{-0.300}$	$1.030^{+0.341}_{-0.114}$	$1.132^{+0.135}_{-0.151}$	$1.457^{+0.327}_{-0.816}$
	+3%/-4%	+1%/-5%	+357%/-429%	+33%/-11%	+12%/-13%	+22%/-56%
Source	PHO1	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 007512130-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 2	$0.75^{+0.23}_{-0.18}$	1760^{+138}_{-85}	5148^{+664}_{-465}	45^{+32}_{-18}
Alt.	-15 ± 2	$0.61^{+0.19}_{-0.19}$	1766^{+139}_{-92}	5348^{+1018}_{-620}	52^{+60}_{-23}

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 $A_{obs} \gg 1.0$

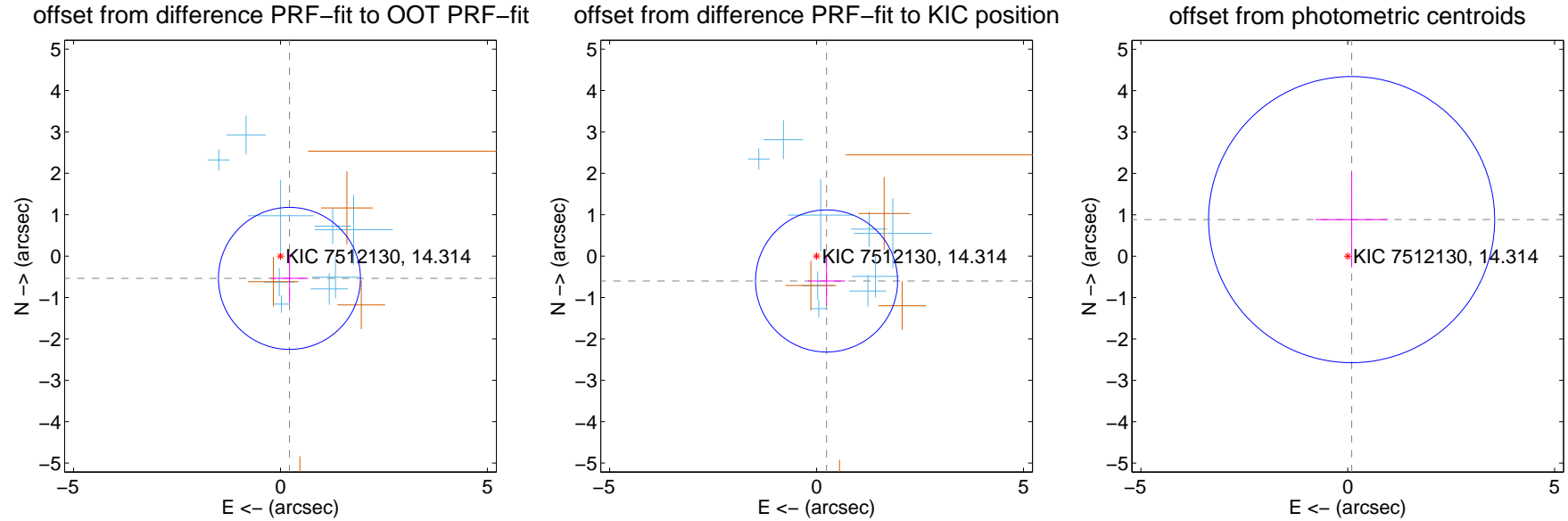
DV Centroid Data

Supplemental centroid analysis for 007512130-01. Kepler magnitude: 14.31. Transit SNR 8.85

There are 9 quarters with good PRF difference image offsets

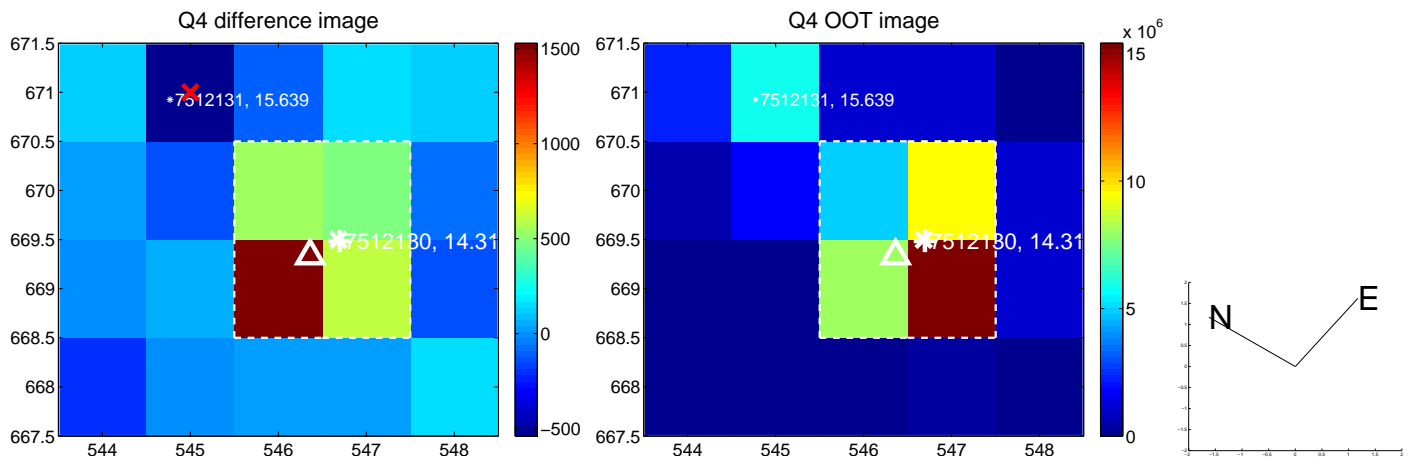
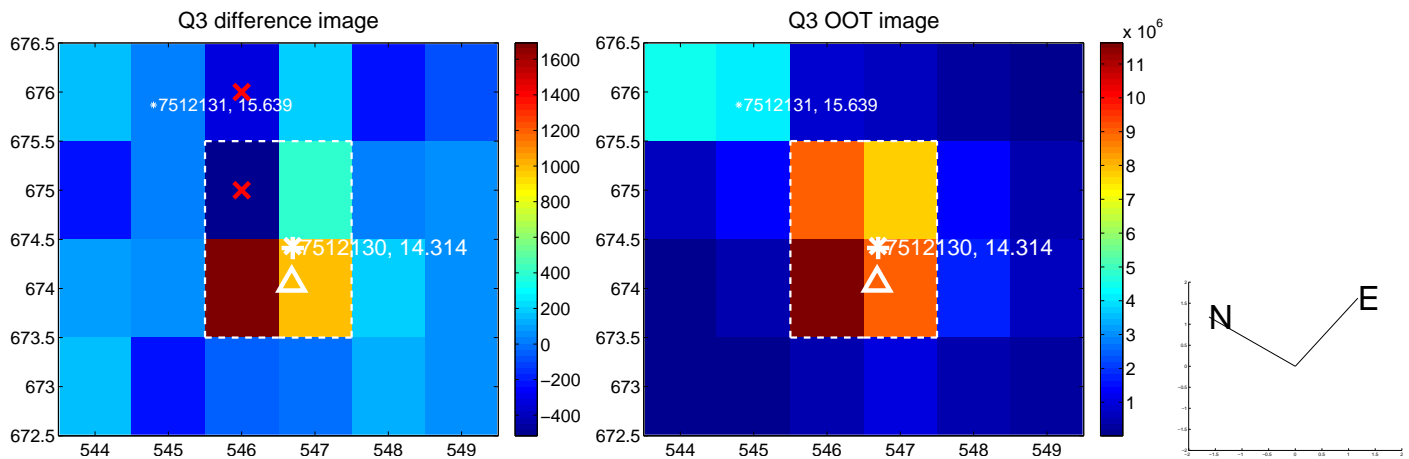
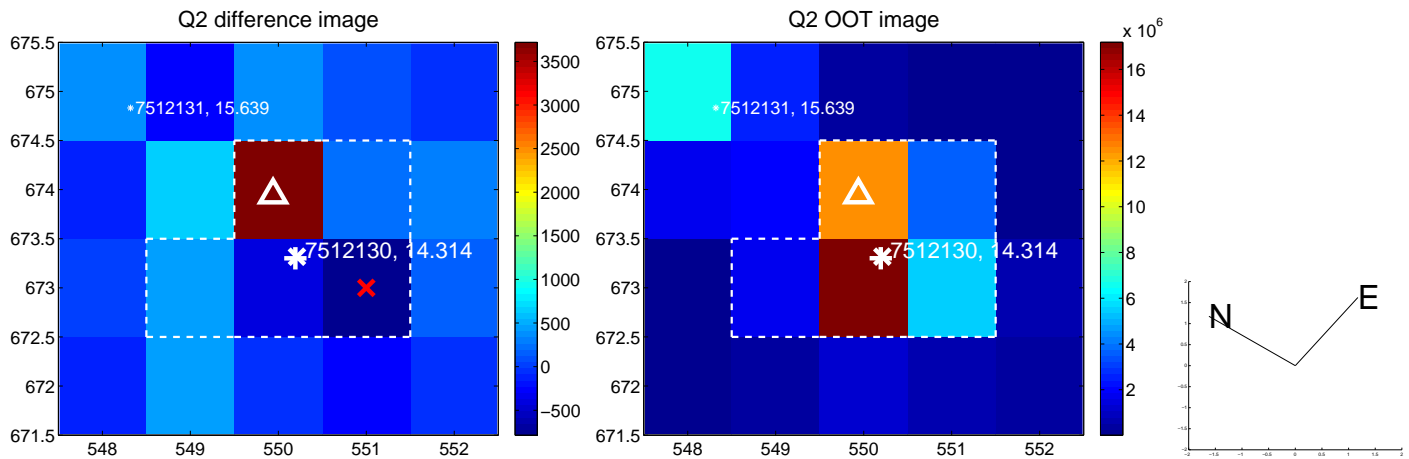
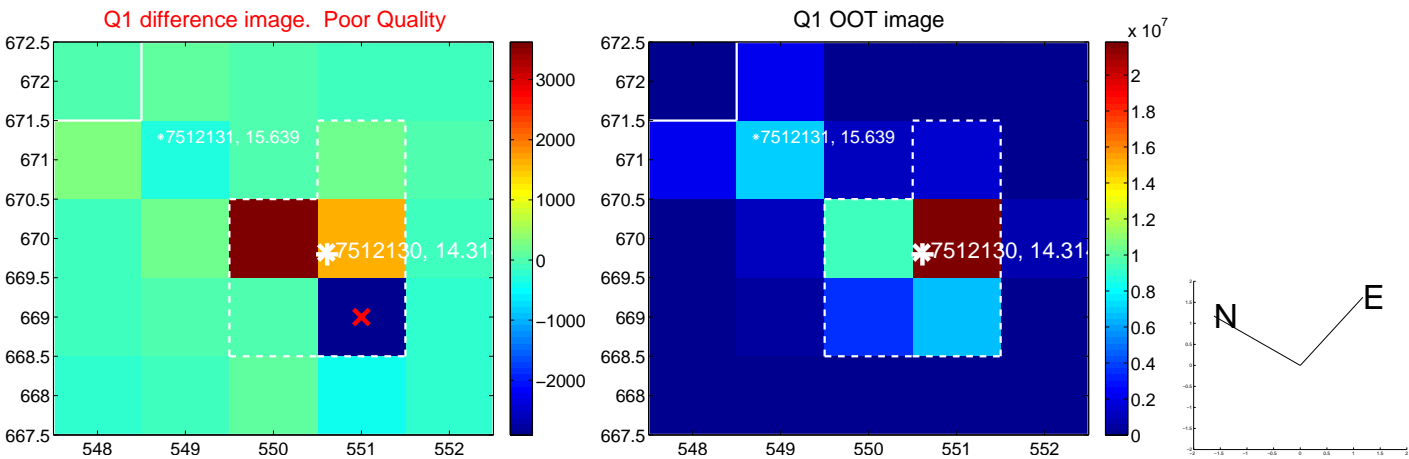
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.580 ± 0.572	1.01	-0.217 ± 0.453	-0.538 ± 0.589
PRF-fit source offset from KIC position	0.647 ± 0.572	1.13	-0.241 ± 0.453	-0.600 ± 0.589
photometric centroid source offset	0.89 ± 1.15	0.77	-0.09 ± 0.88	0.88 ± 1.16

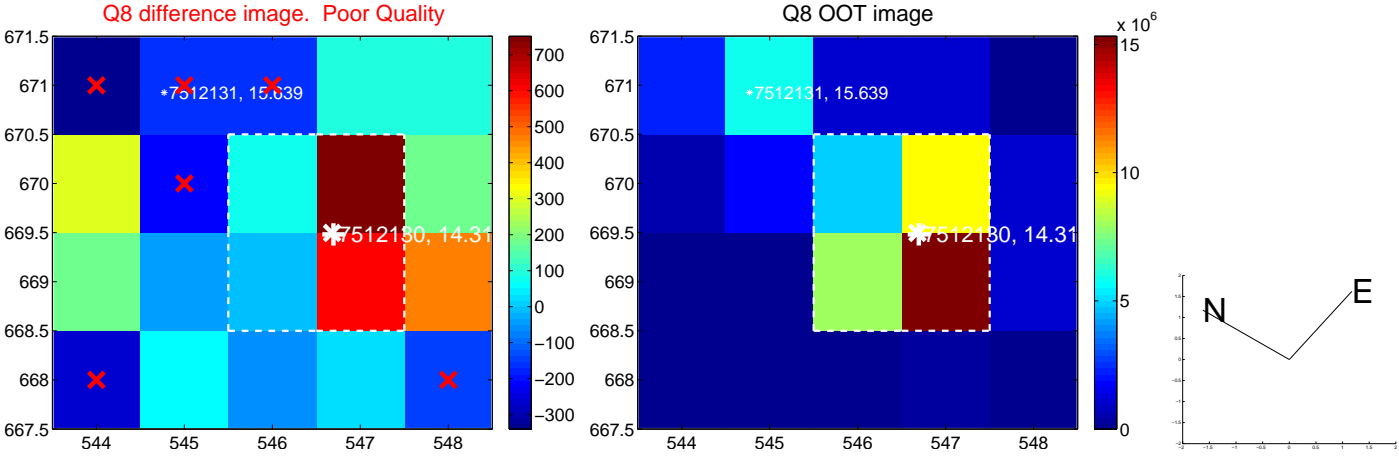
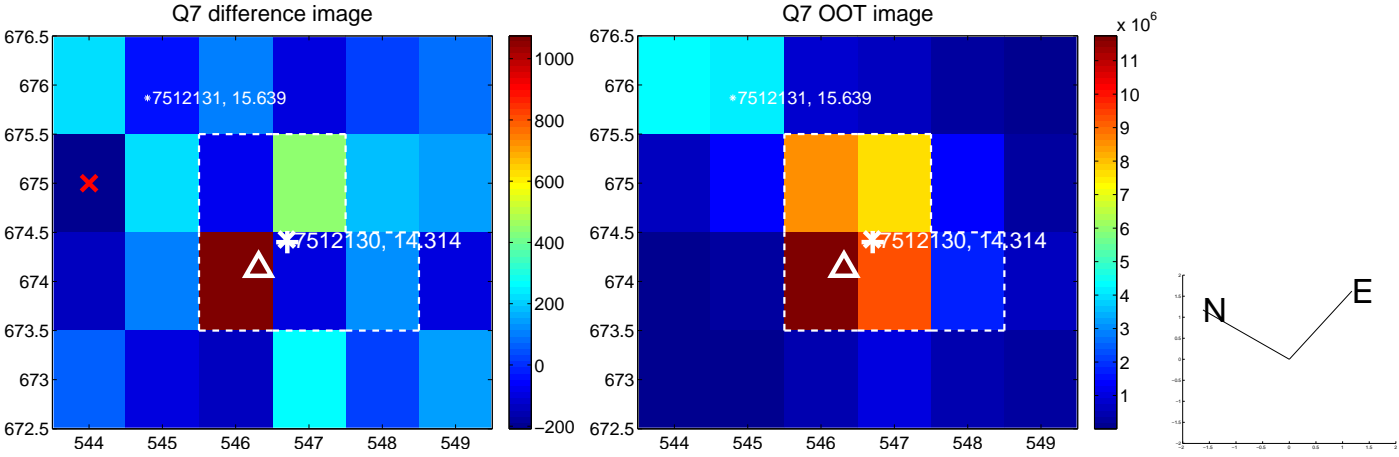
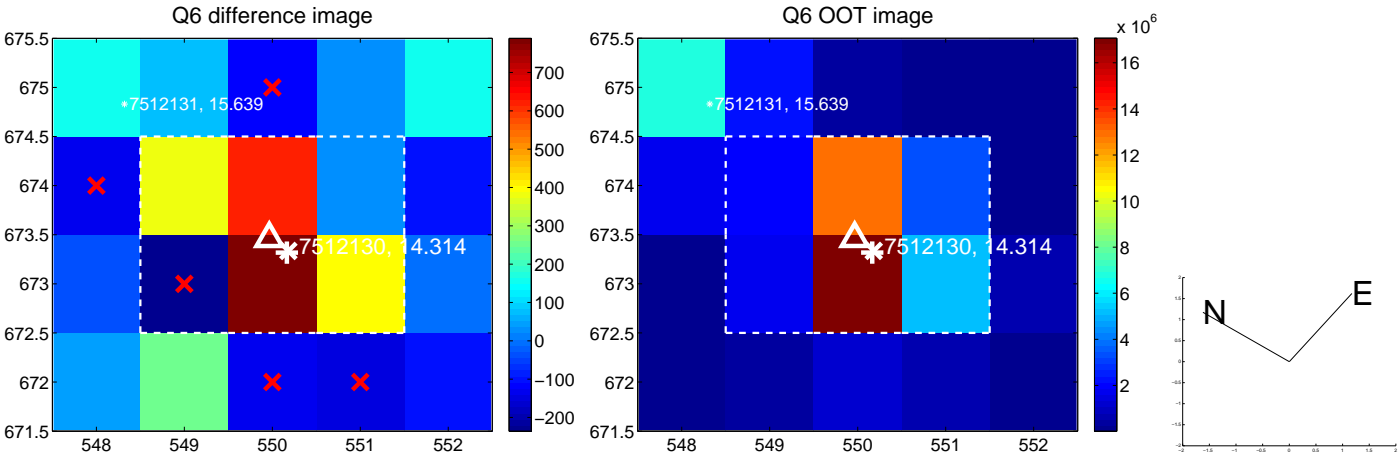
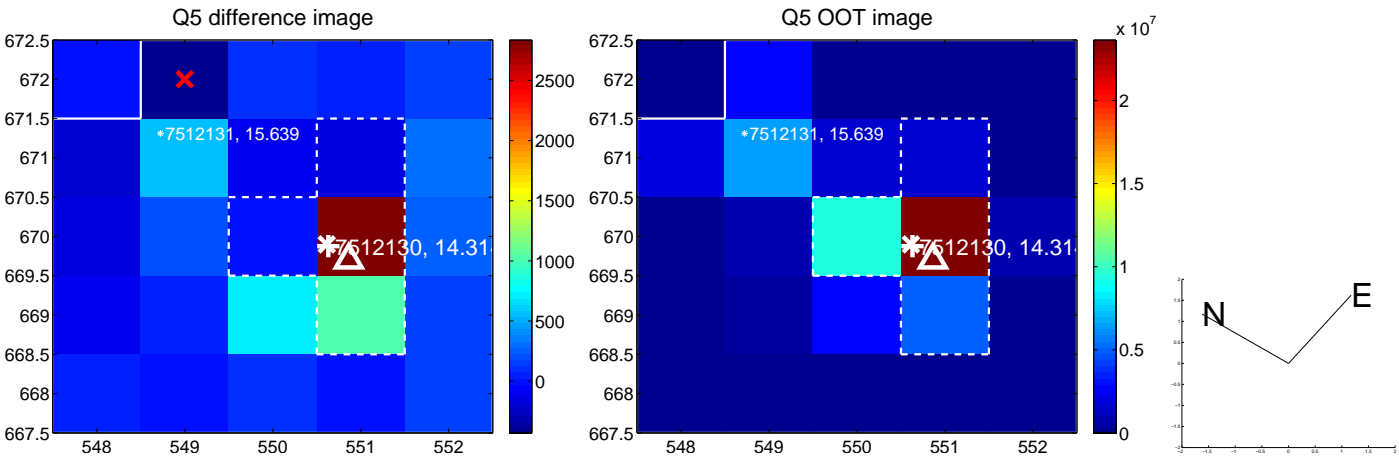


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

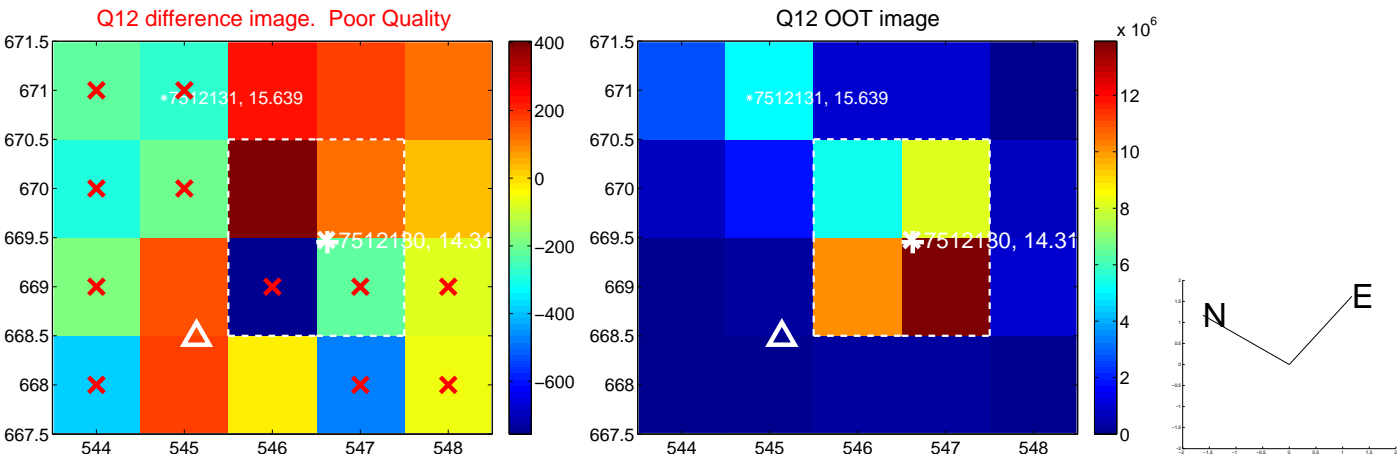
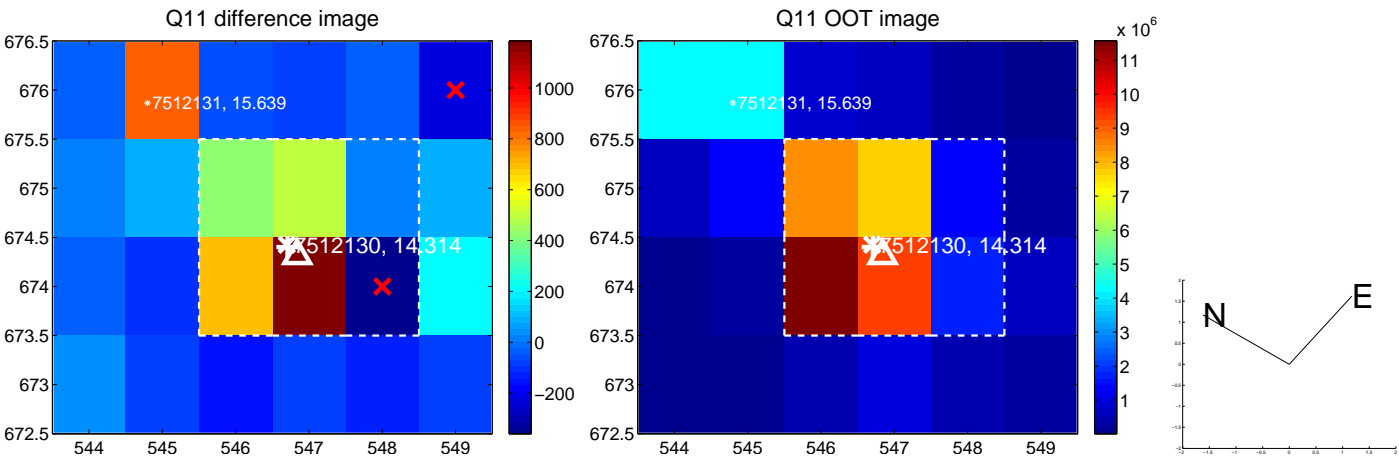
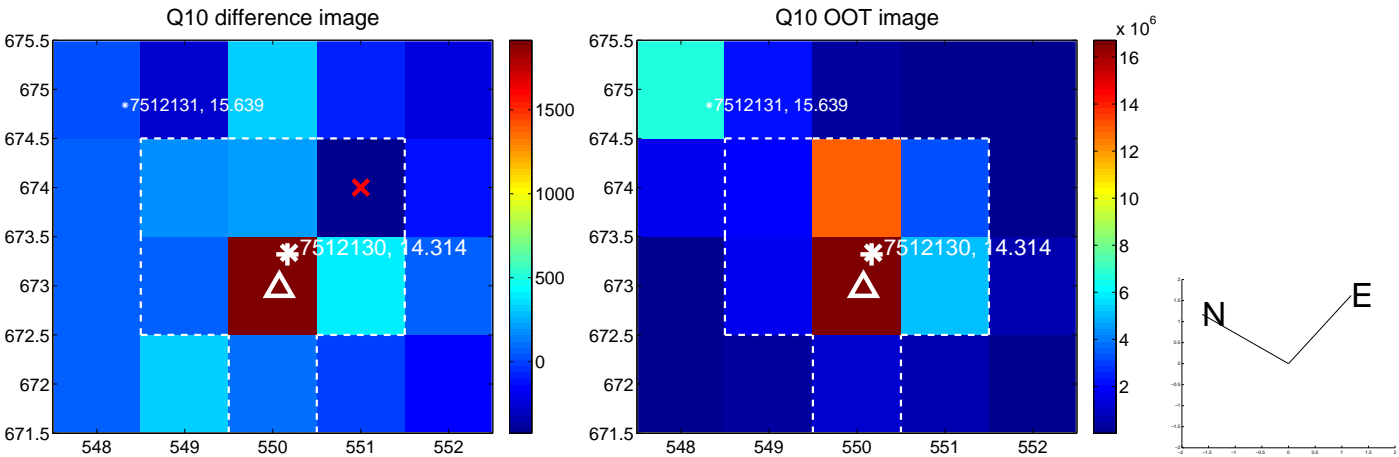
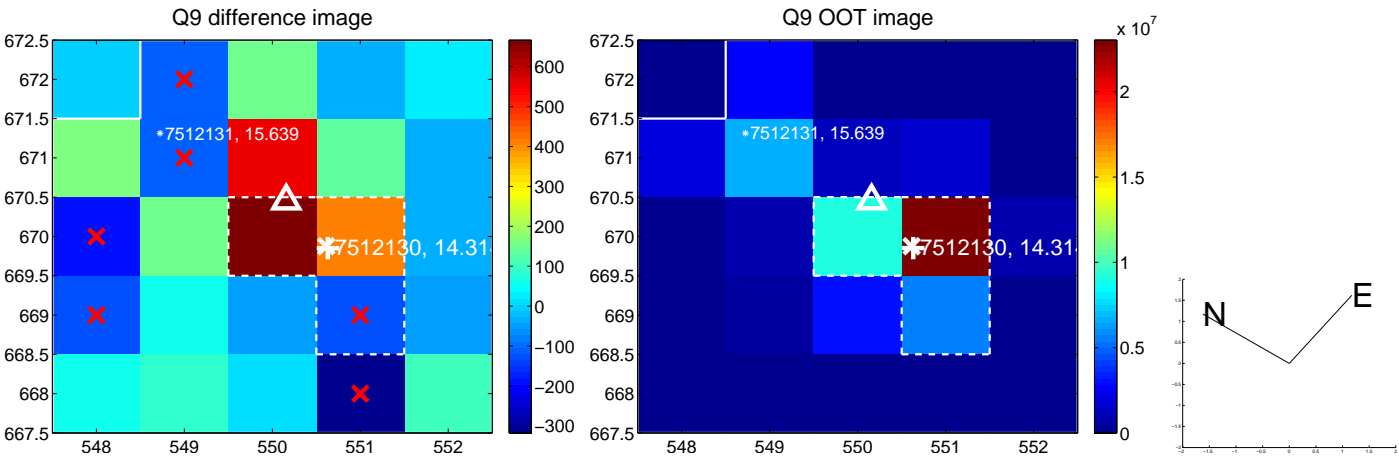
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



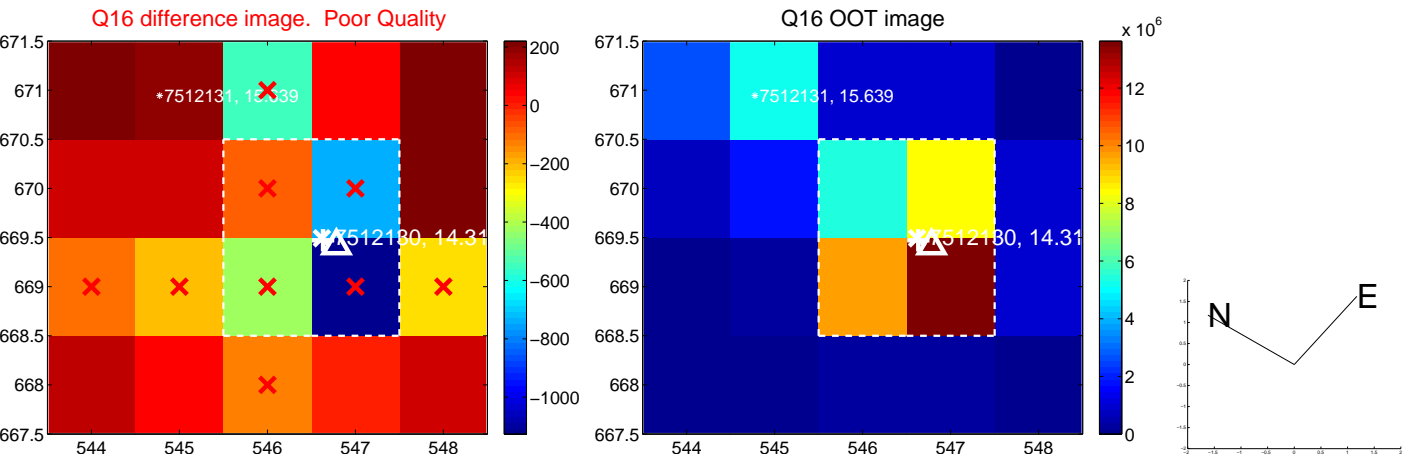
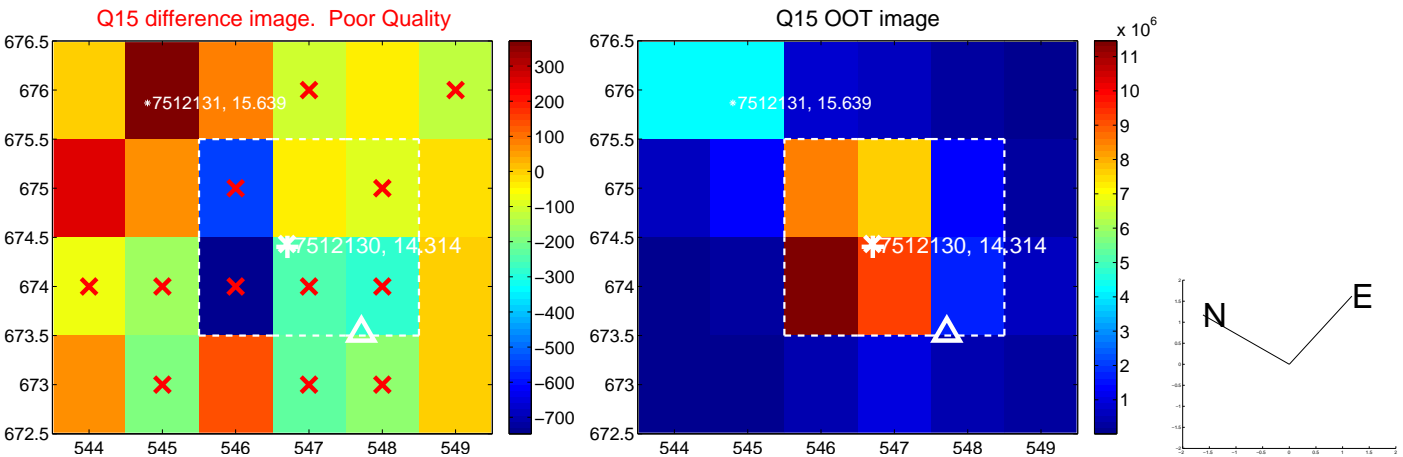
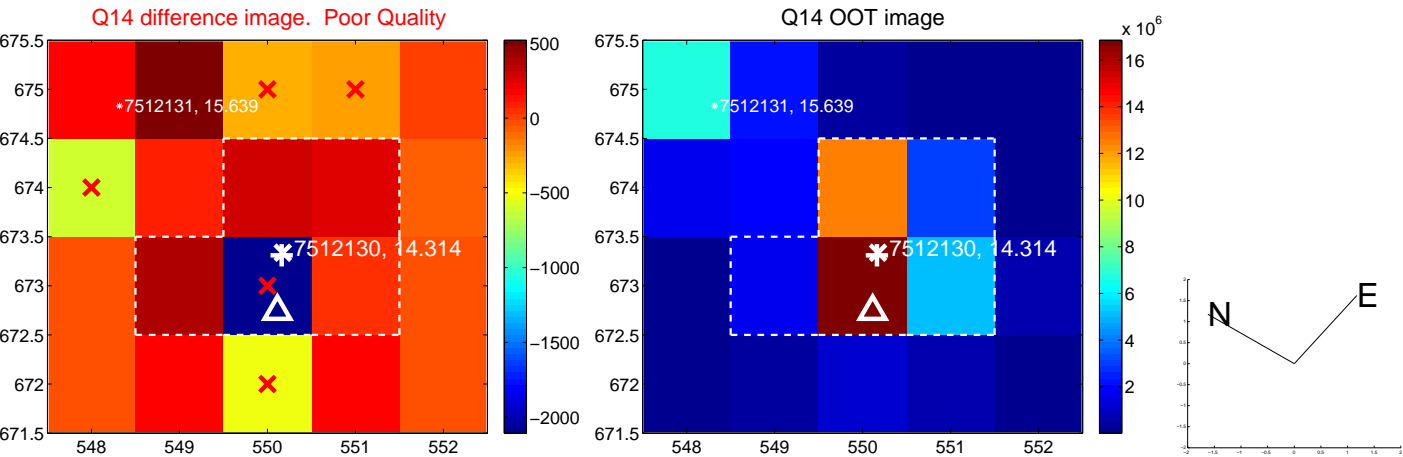
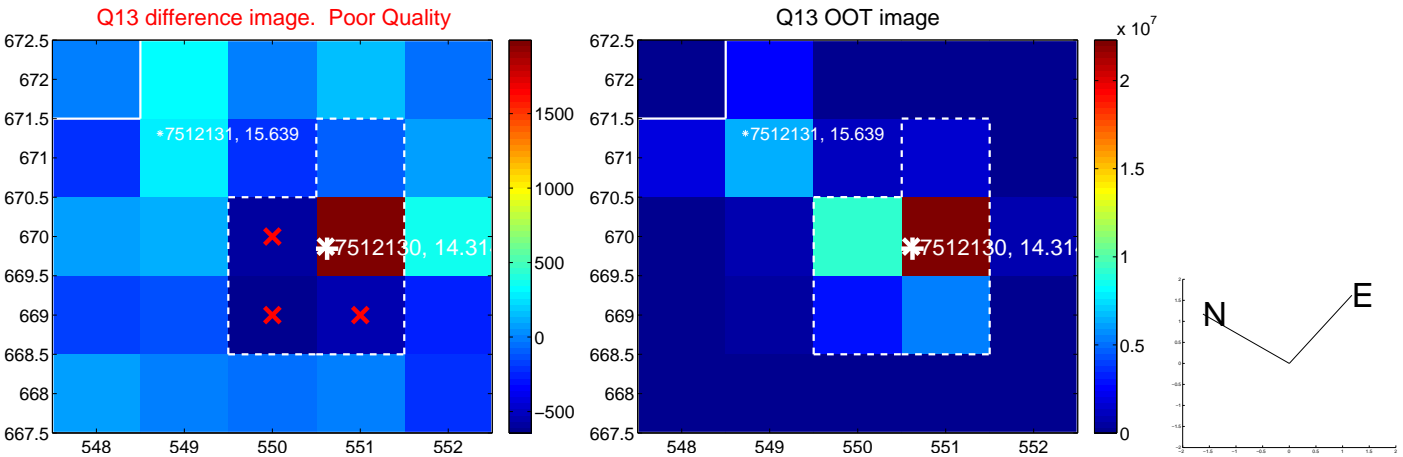
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



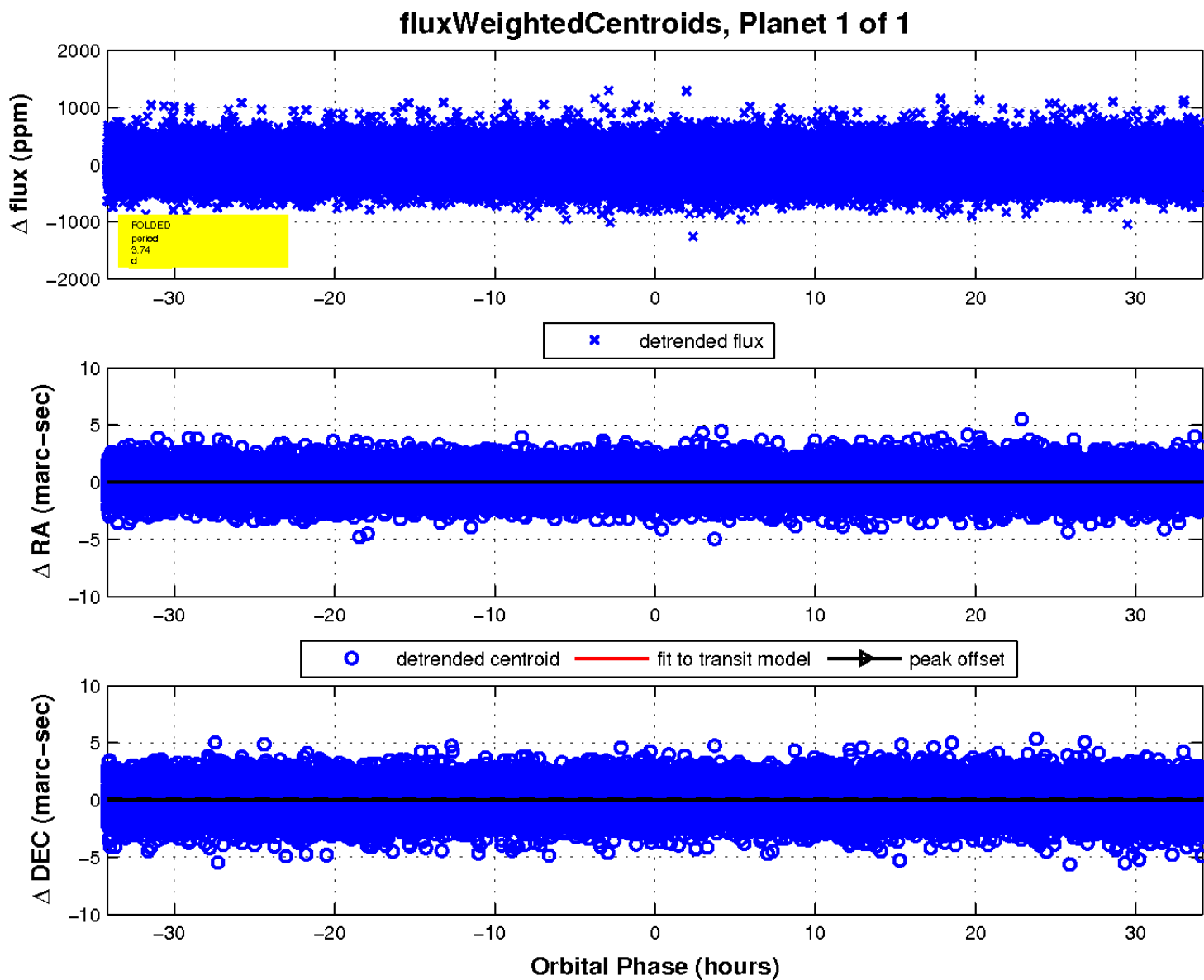
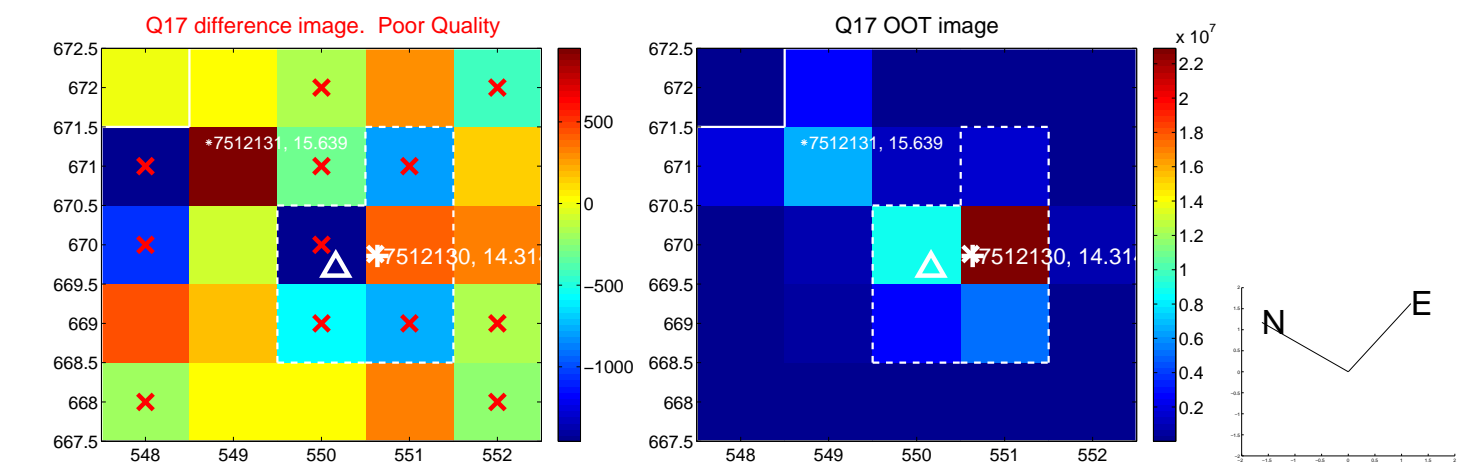
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

