

KIC 011243547

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})
011243547-01	OBS	4517.01	2.161297	131.909405	65.6	4.511	11.9	12.4	0.43	3754	0.42	52.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011243547-01	OBS	FP	0.00	0	1	0	1	MOD_SEC_ALT—EPHEM_MATCH

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 011243547-01

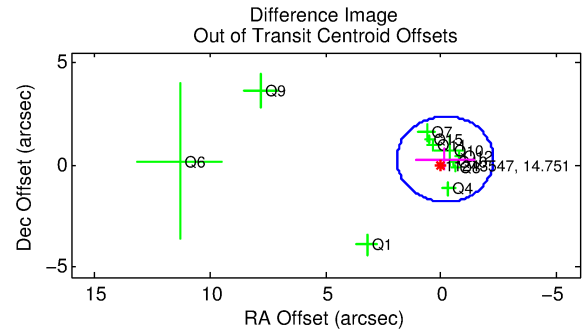
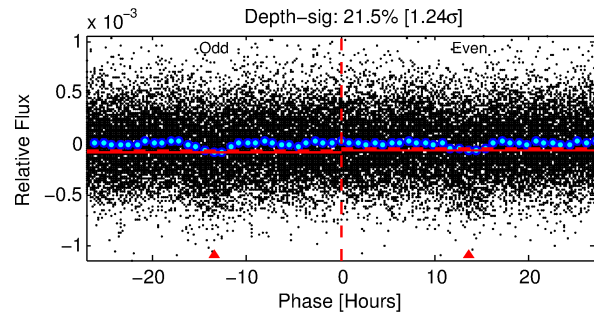
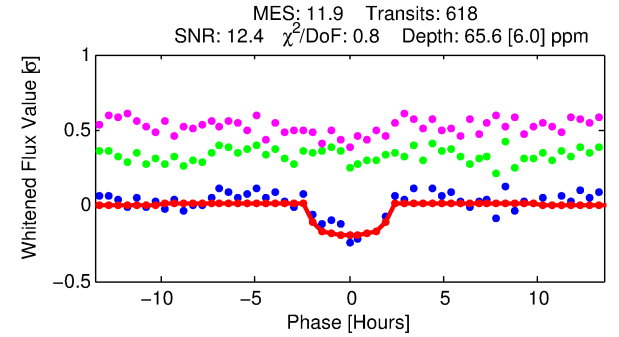
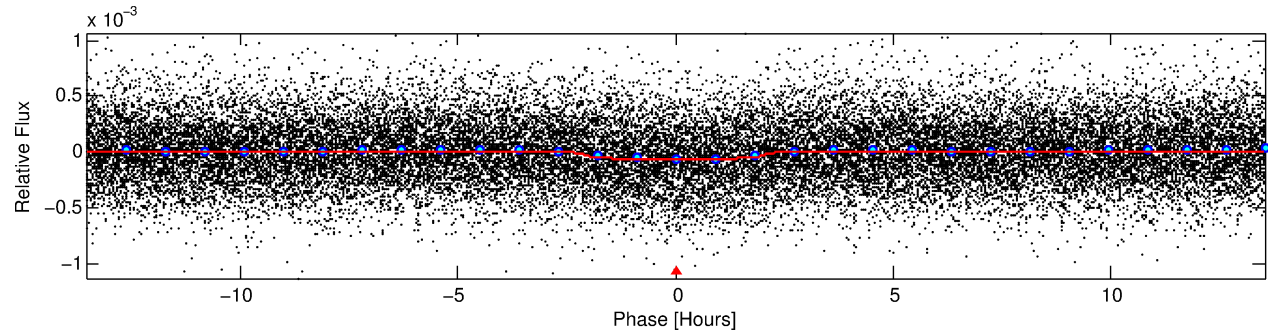
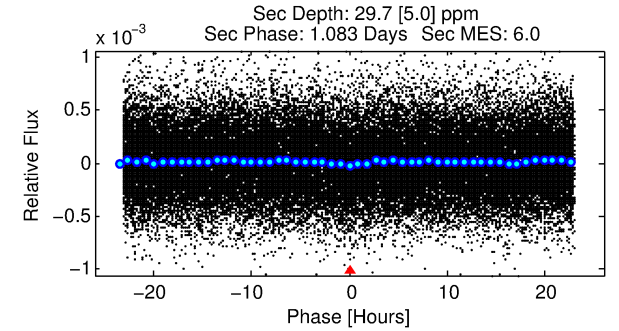
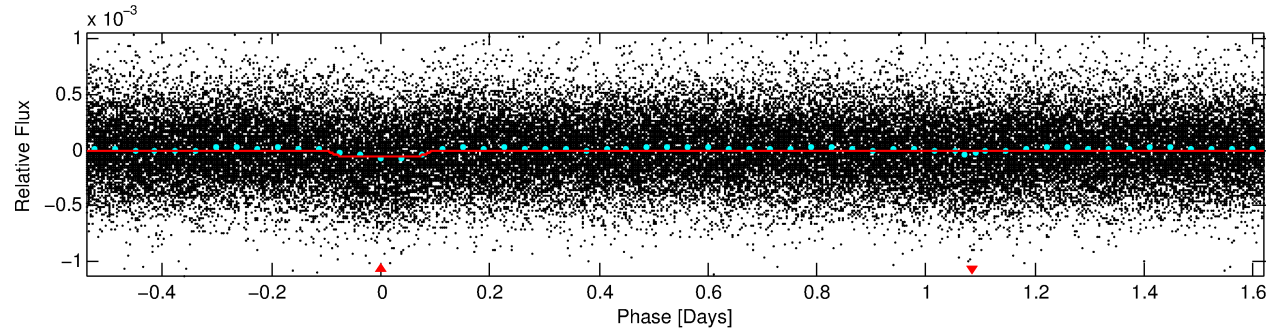
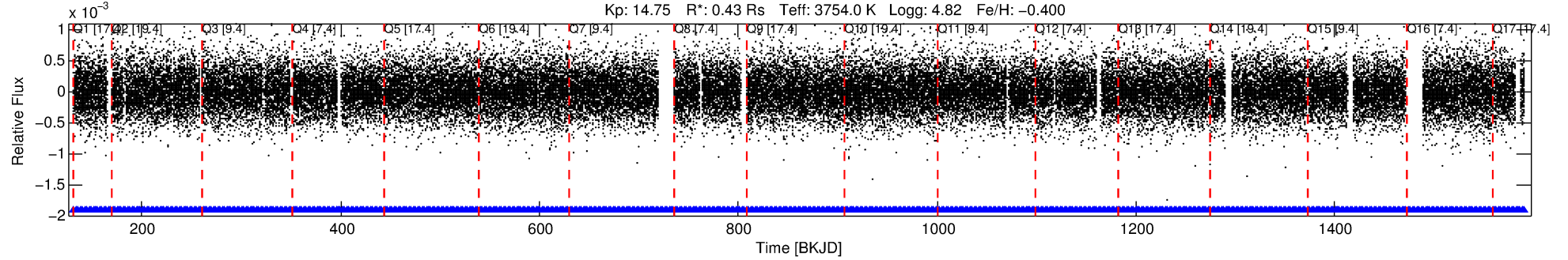
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
011243547-01	11243547	011401845-pri	11401845	1:1	1079.4	271	1	14.36	14.76	6218.20	Col-Anomaly	0	3.27	2.42

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 11243547 Candidate: 1 of 1 Period: 2.161 d

KOI: K04517.01 Corr: 0.977



DV Fit Results:

Period = 2.16130 [0.00002] d
Epoch = 131.9094 [0.0041] BKJD
Rp/R* = 0.0089 [0.0024]
a/R* = 1.77 [1.69]
b = 0.92 [0.23]
Seff = 52.83 [7.39]
Teff = 687 [24] K
Rp = 0.42 [0.12] Re
a = 0.0250 [0.0023] AU
Ag = 58.39 [34.28] [1.67σ]
Teffp = 2938 [425] K [5.28σ]

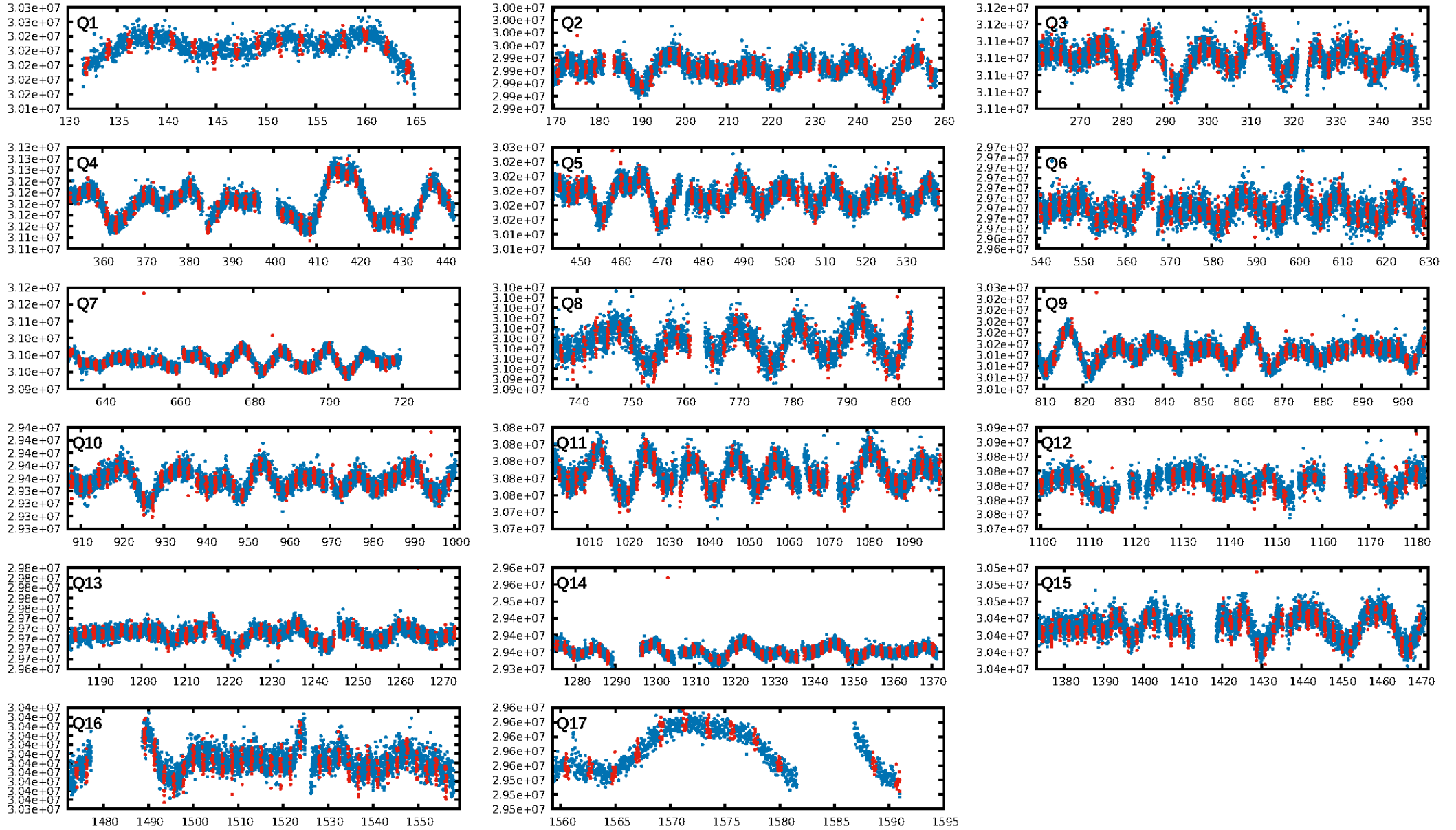
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.03e-31
RollingBand-fgt: 1.00 [590/590]
GhostDiagnostic-chr: 15.01
Centroid-sig: 0.0%
Centroid-so: 3.348 arcsec [3.77σ]
OotOffset-rm: 0.317 arcsec [0.45σ]
KicOffset-rm: 0.421 arcsec [0.40σ]
OotOffset-st: 2/3/4/2 [11]
KicOffset-st: 2/3/4/2 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [17/17]

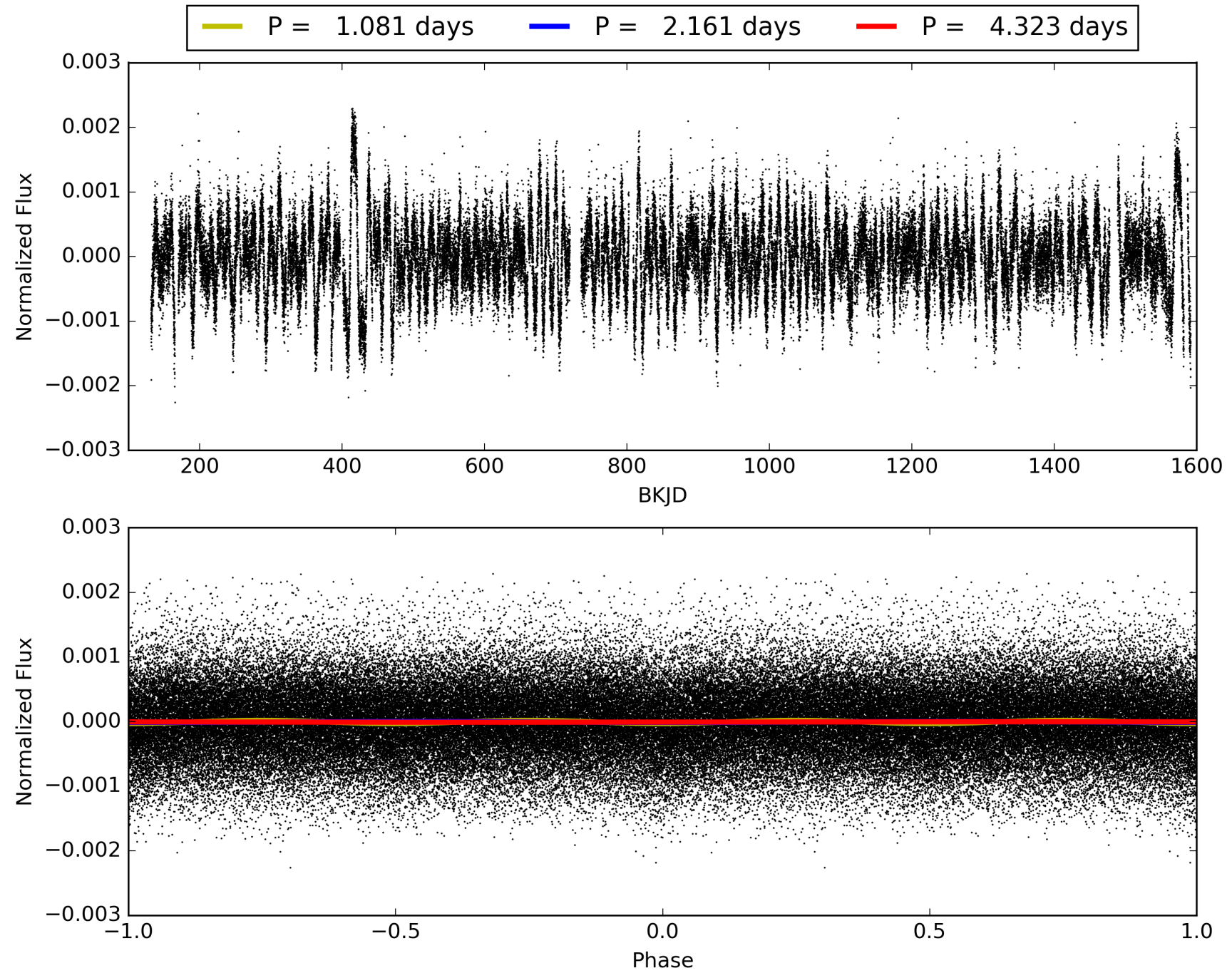
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:37:49 Z

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

TCE 011243547-01, PDC Light Curves

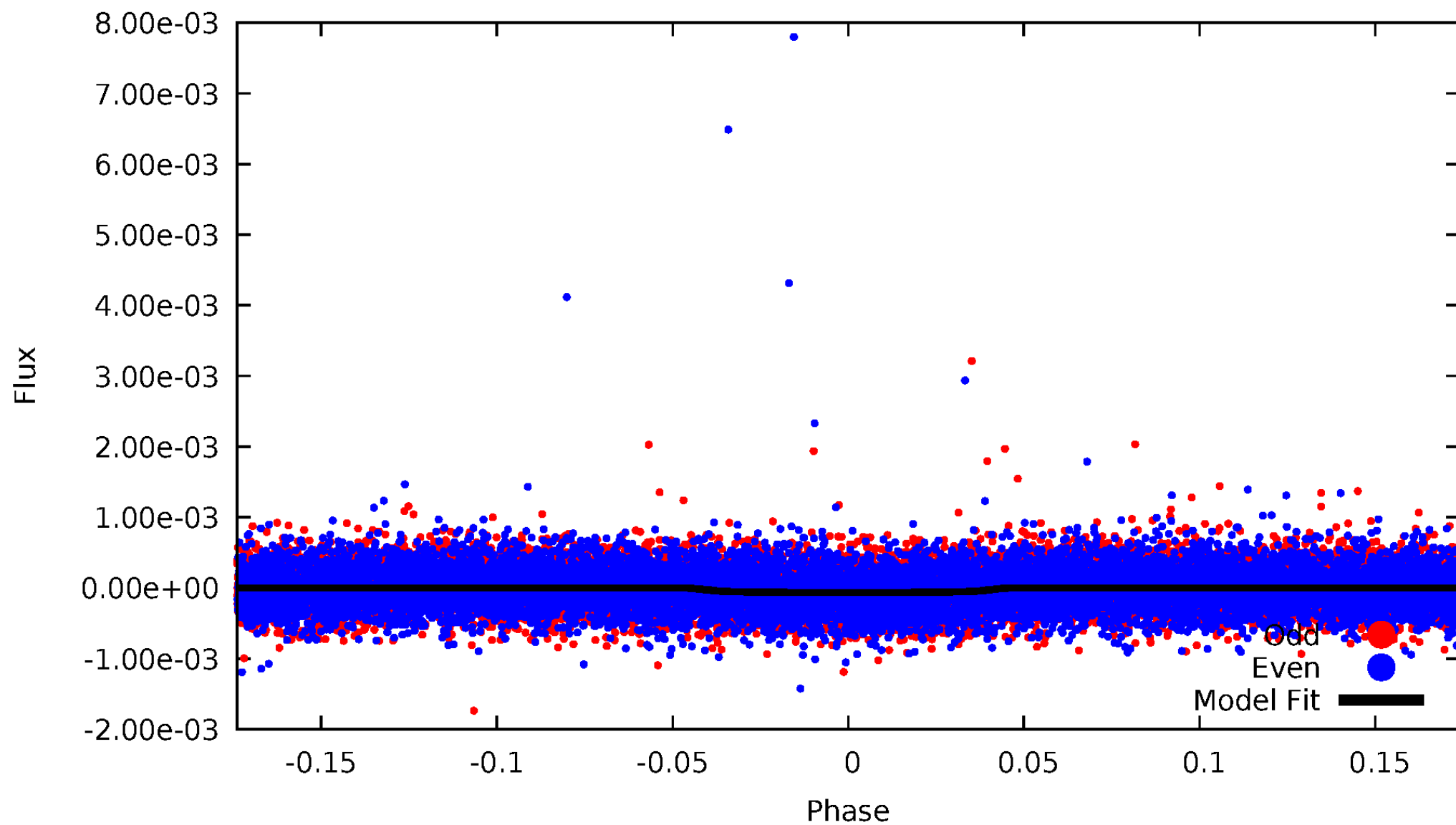


TCE 011243547-01



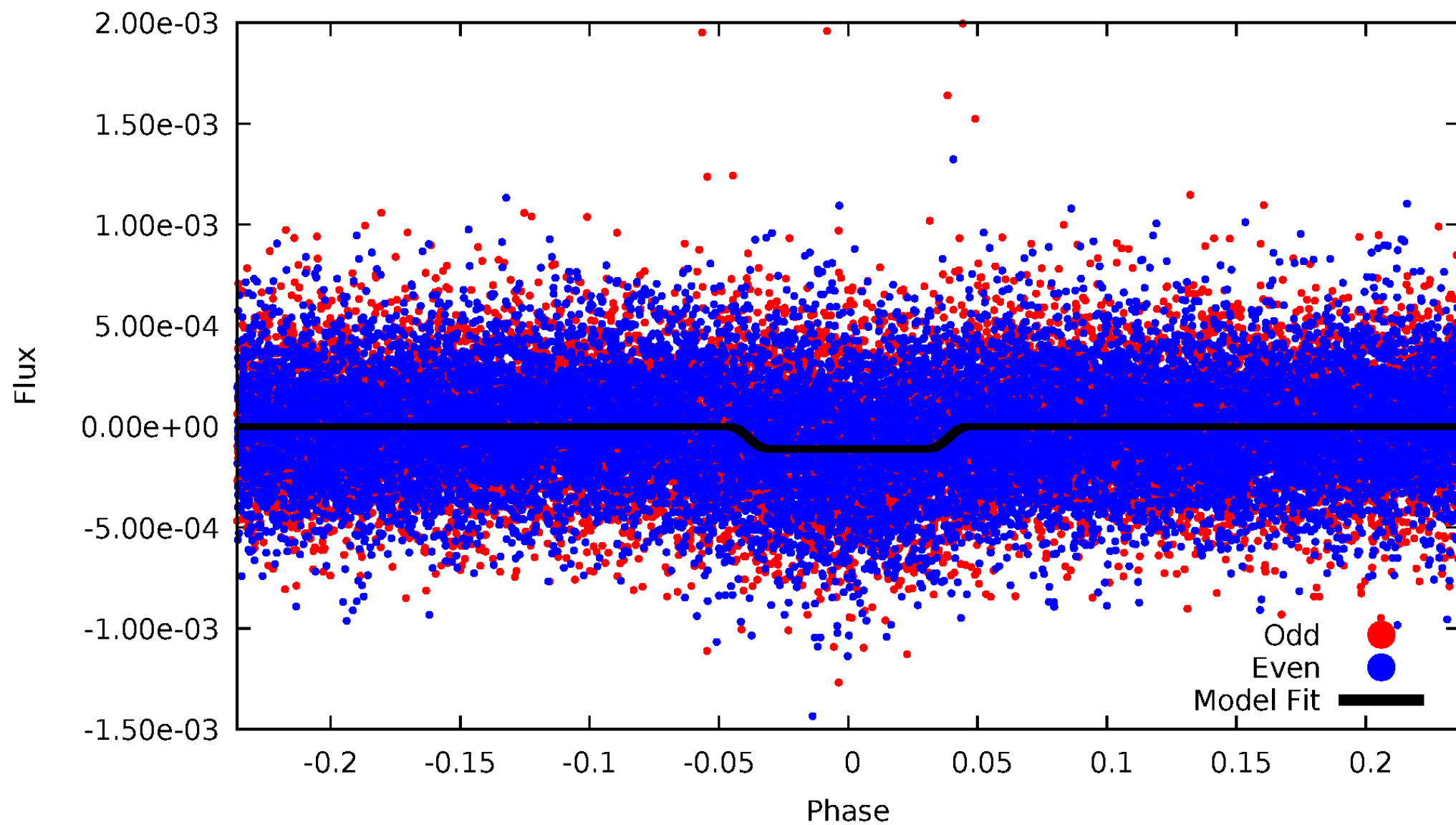
DV Odd/Even

TCE 011243547-01

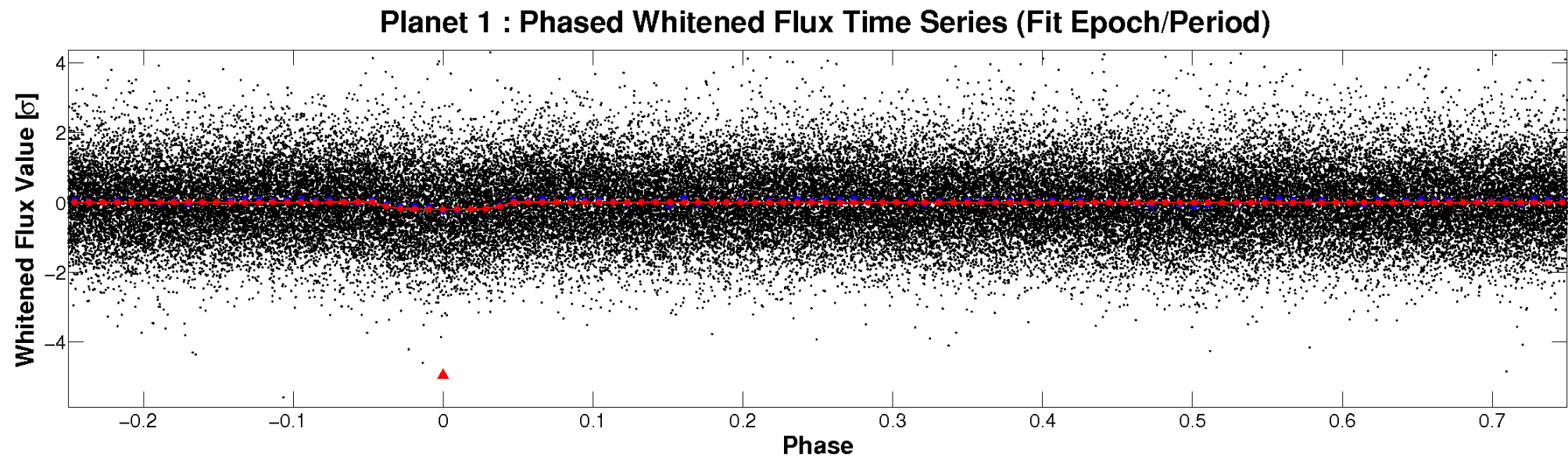
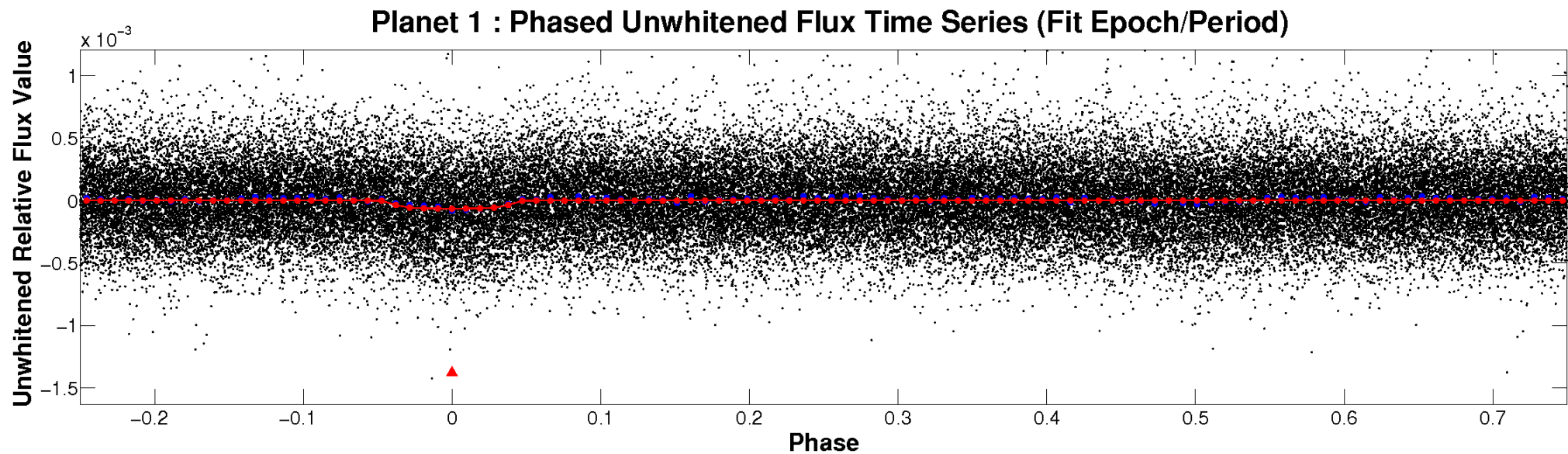


ALT Odd/Even

TCE 011243547-01

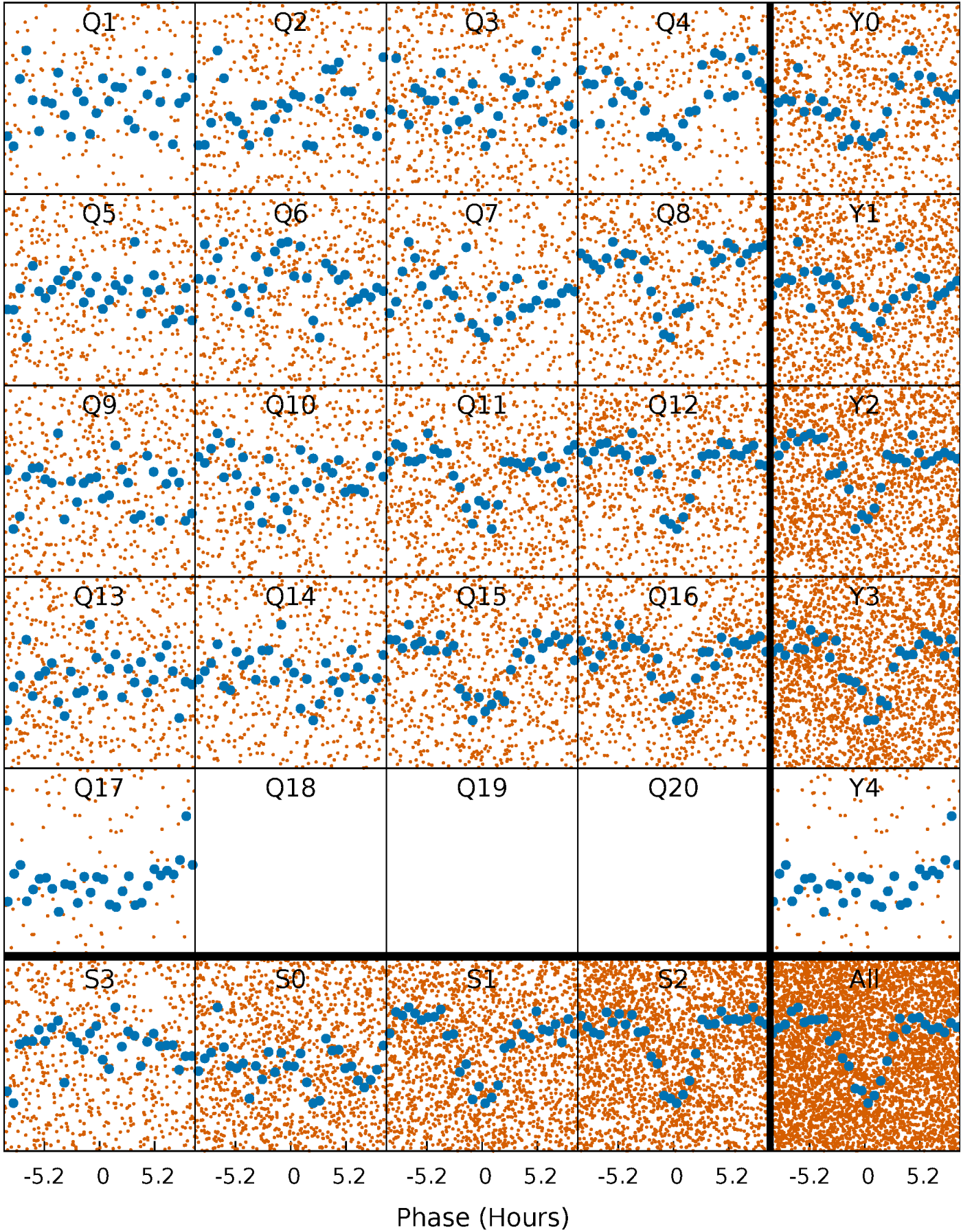


Non-Whitened Vs. Whitened Light Curve



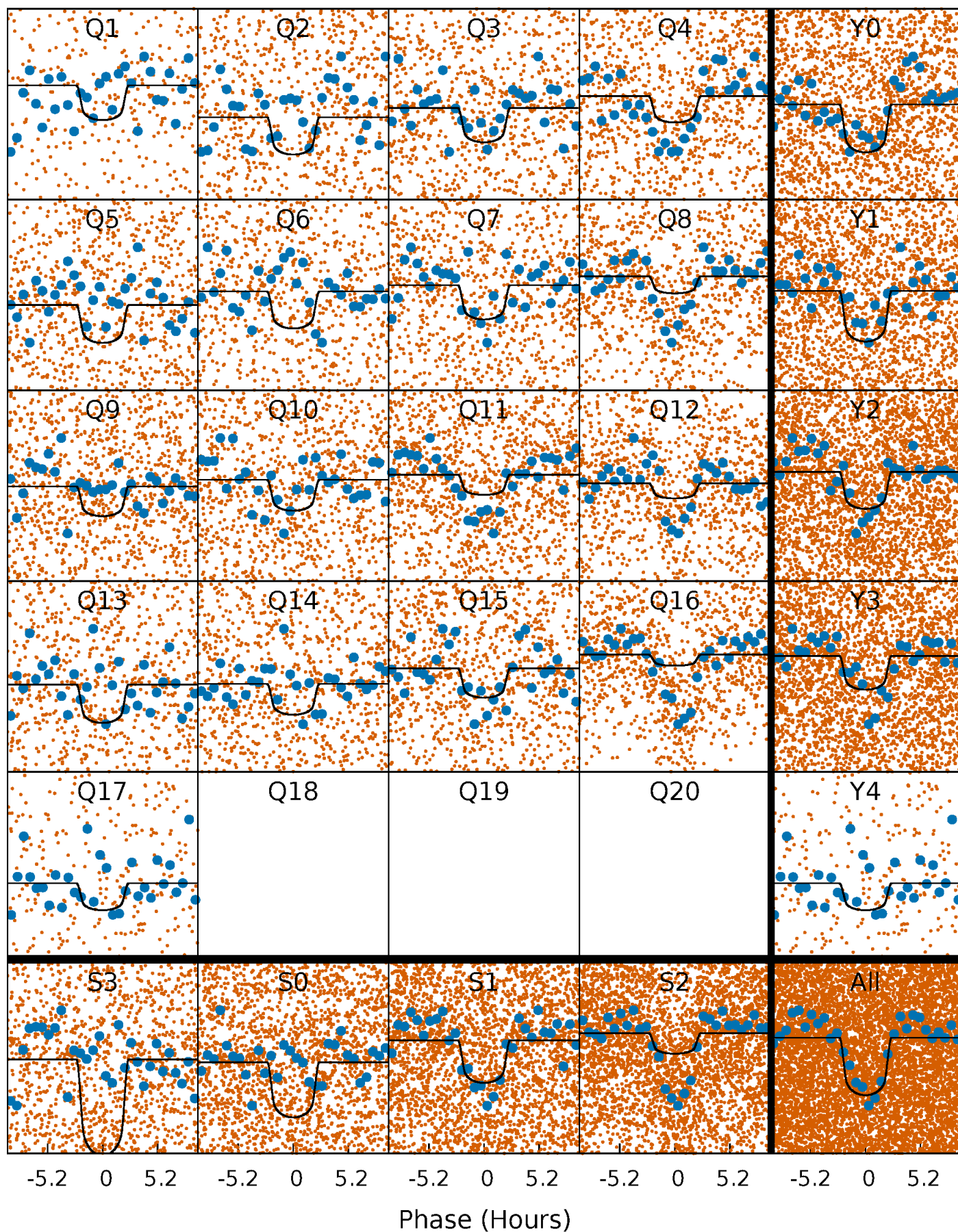
PDC Quarter-Phased Transit Curves

TCE 011243547-01 P= 2.161297 Days $T_0=131.909405$ (BKJD)



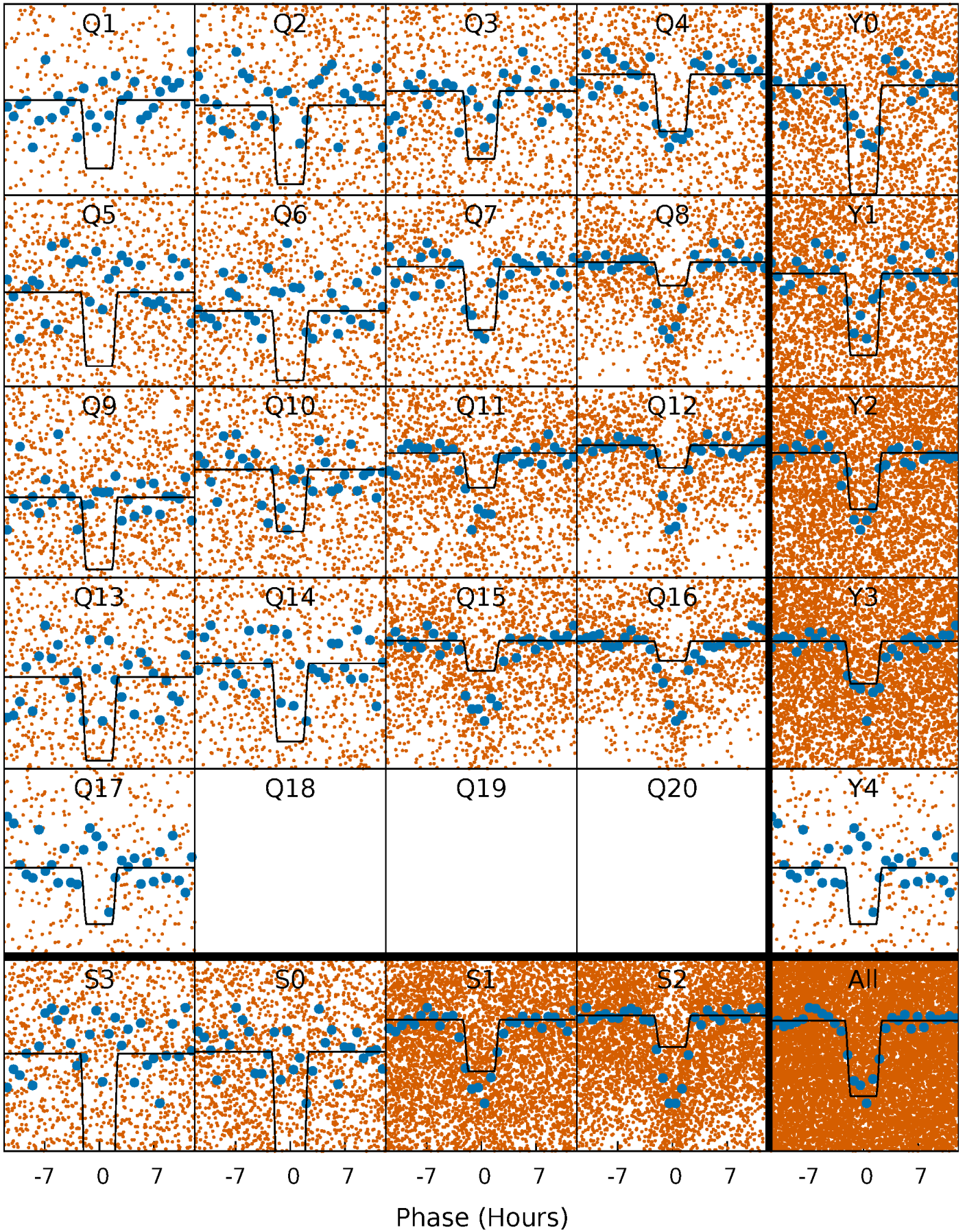
DV Quarter-Phased Transit Curves

TCE 011243547-01 P= 2.161297 Days $T_0=131.909405$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

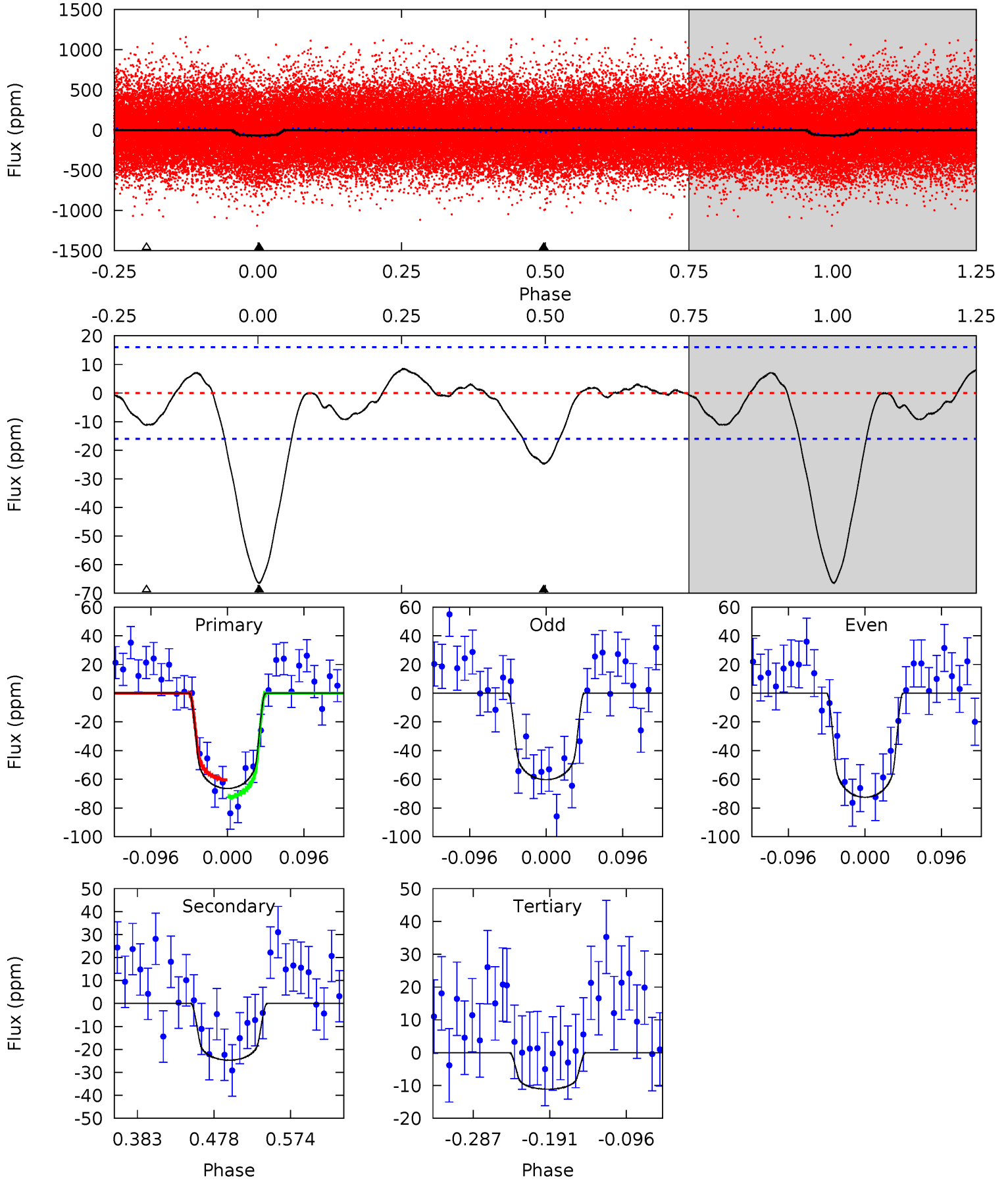
TCE 011243547-01 P= 2.161315 Days $T_0=131.902974$ (BKJD)



DV Model-Shift Uniqueness Test

011243547-01, P = 2.161297 Days, E = 129.748108 Days

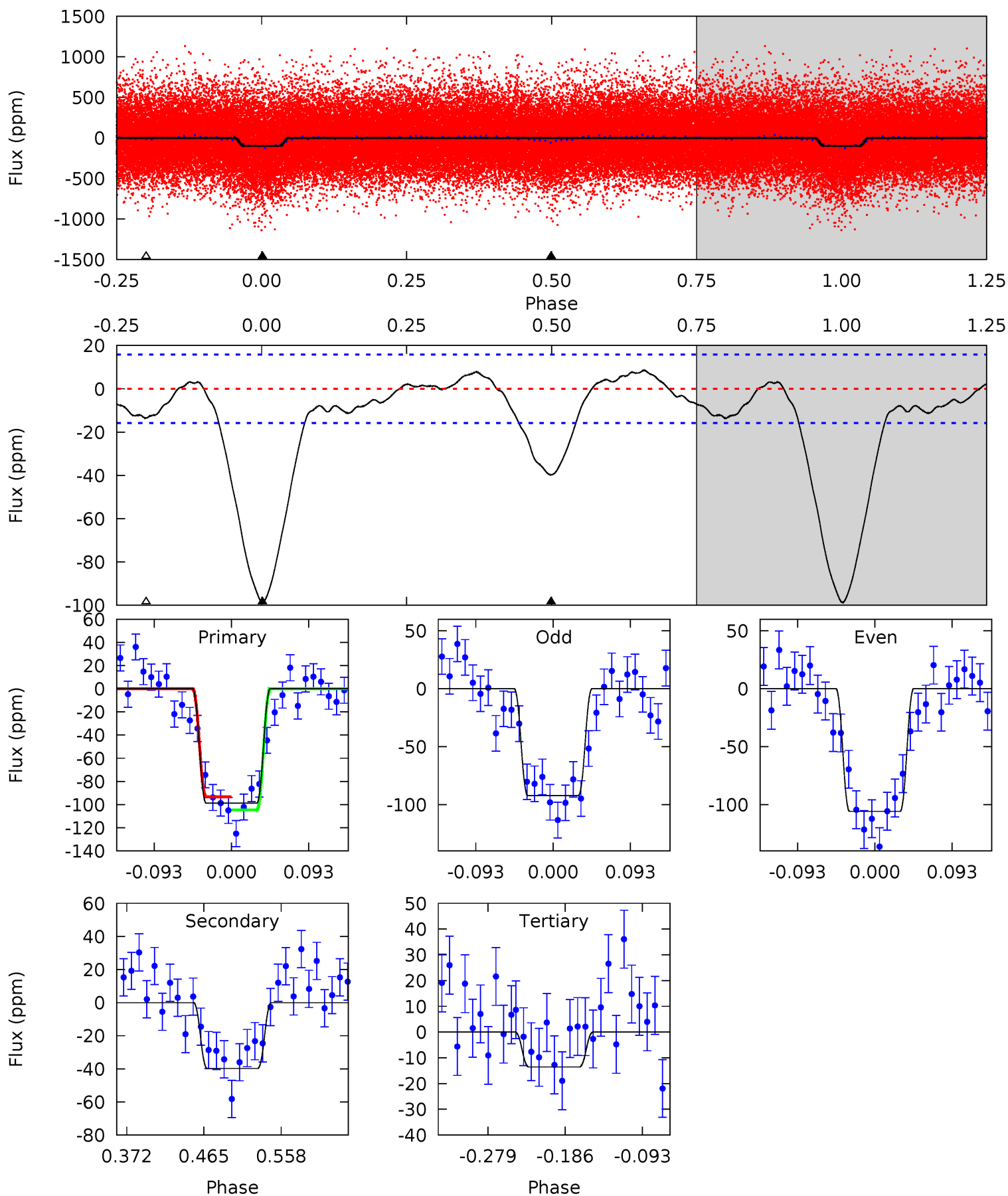
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	7.04	3.18	0	4.57	1.67	1.38	15.8	18.9	3.87	7.04	1.76	1.05	0.11	1.71



Alt Model-Shift Uniqueness Test

011243547-01, P = 2.161315 Days, E = 129.741659 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	11.5	3.92	0	4.58	1.68	1.82	24.6	28.6	7.58	11.5	1.98	1.11	0.08	1.64



Stellar Parameters For KIC 011243547

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3754^{+67}_{-67}	$4.818^{+0.060}_{-0.040}$	$-0.400^{+0.200}_{-0.200}$	$0.430^{+0.041}_{-0.050}$	$0.443^{+0.044}_{-0.044}$	$7.866^{+2.365}_{-1.408}$
	+2%/-2%	+1%/-1%	+50%/-50%	+10%/-12%	+10%/-10%	+30%/-18%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011243547-01 / KOI 4517.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 4	$0.41^{+0.13}_{-0.12}$	956^{+26}_{-26}	3119^{+358}_{-226}	49^{+51}_{-20}
Alt.	-40 ± 3	$0.49^{+0.11}_{-0.11}$	958^{+25}_{-27}	3198^{+268}_{-179}	57^{+39}_{-18}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

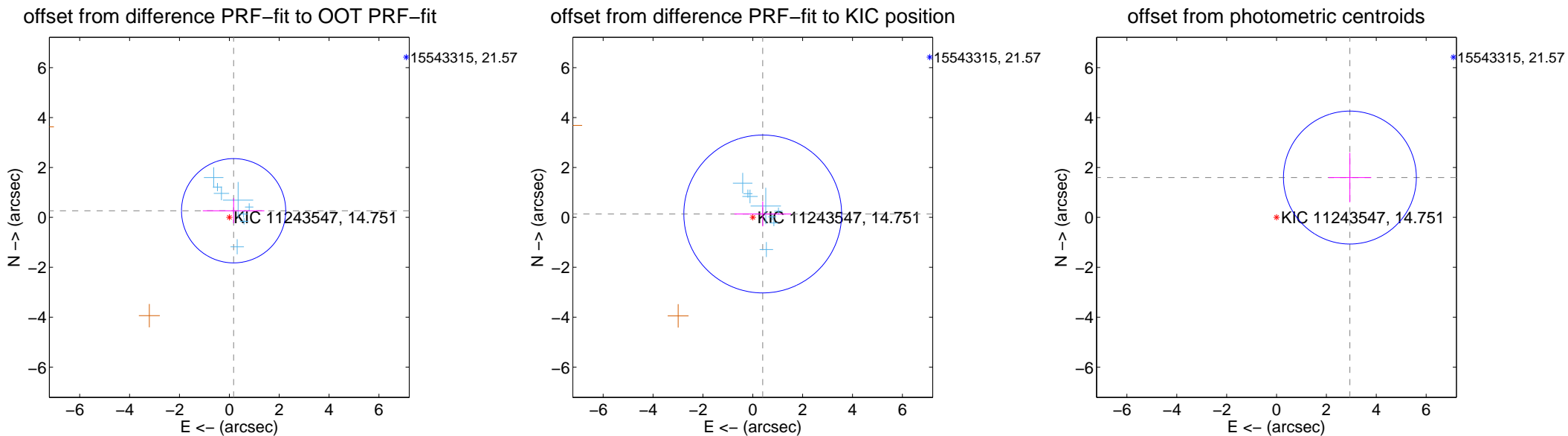
DV Centroid Data

Supplemental centroid analysis for 011243547-01. Kepler magnitude: 14.75. Transit SNR 12.41

There are 8 quarters with good PRF difference image offsets

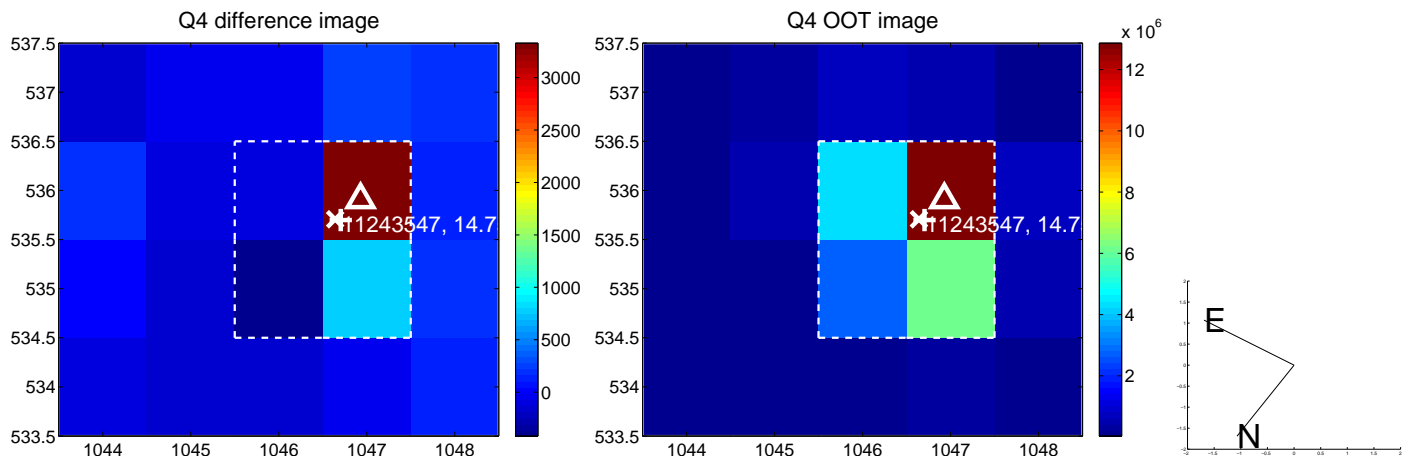
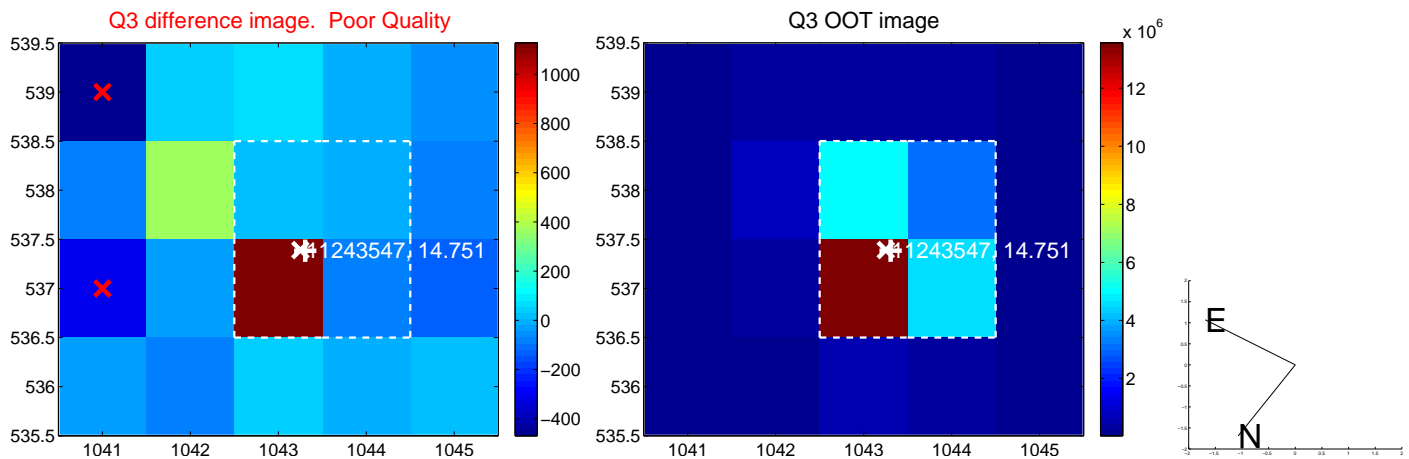
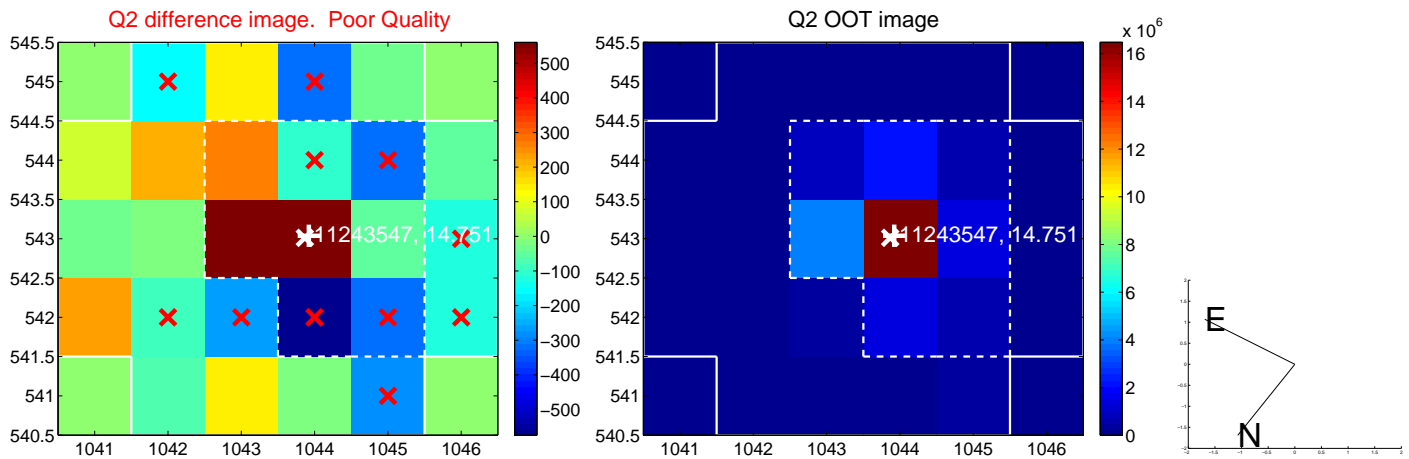
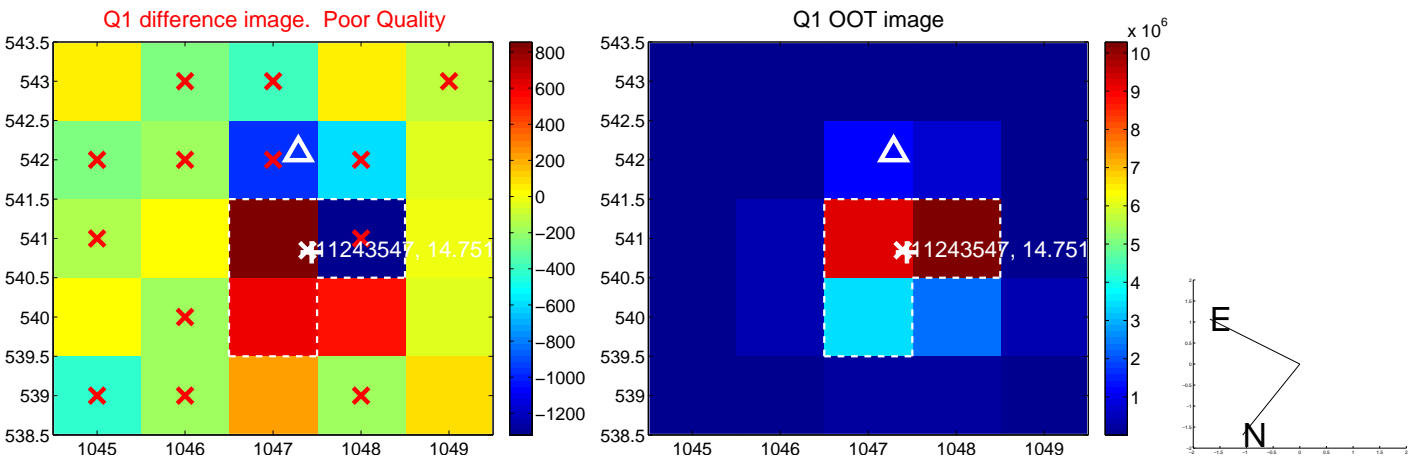
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.317 ± 0.697	0.45	-0.172 ± 1.234	0.266 ± 0.503
PRF-fit source offset from KIC position	0.421 ± 1.055	0.40	-0.398 ± 1.138	0.136 ± 0.496
photometric centroid source offset	3.35 ± 0.89	3.77	-2.94 ± 0.86	1.60 ± 0.99

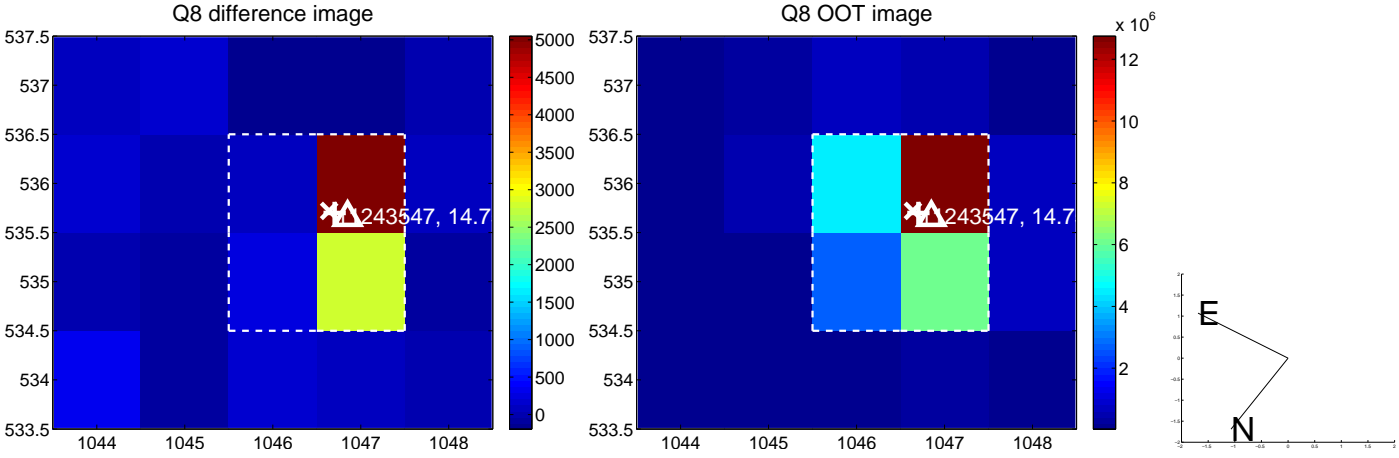
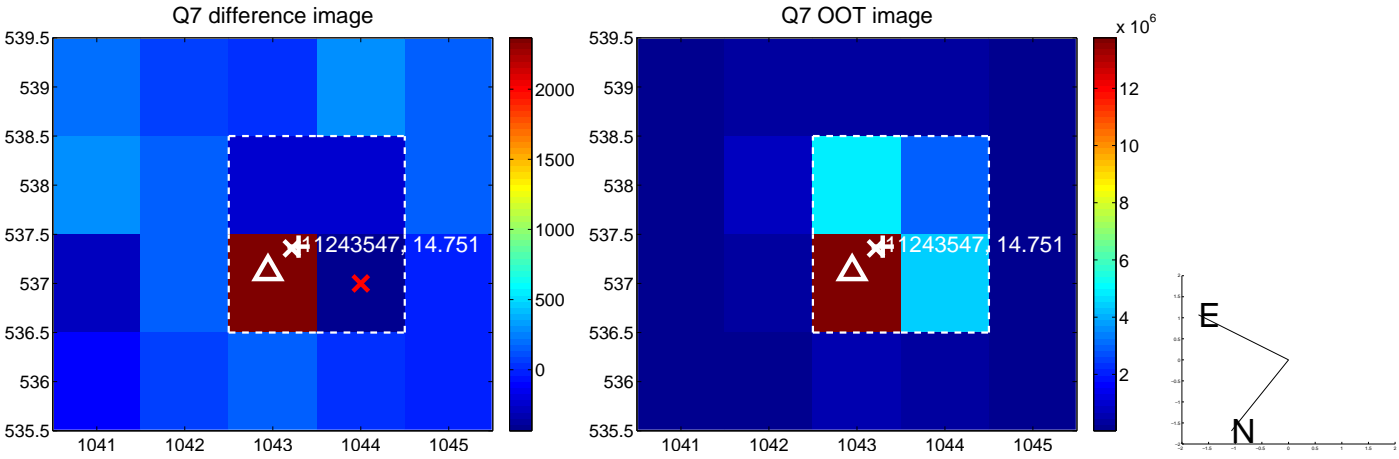
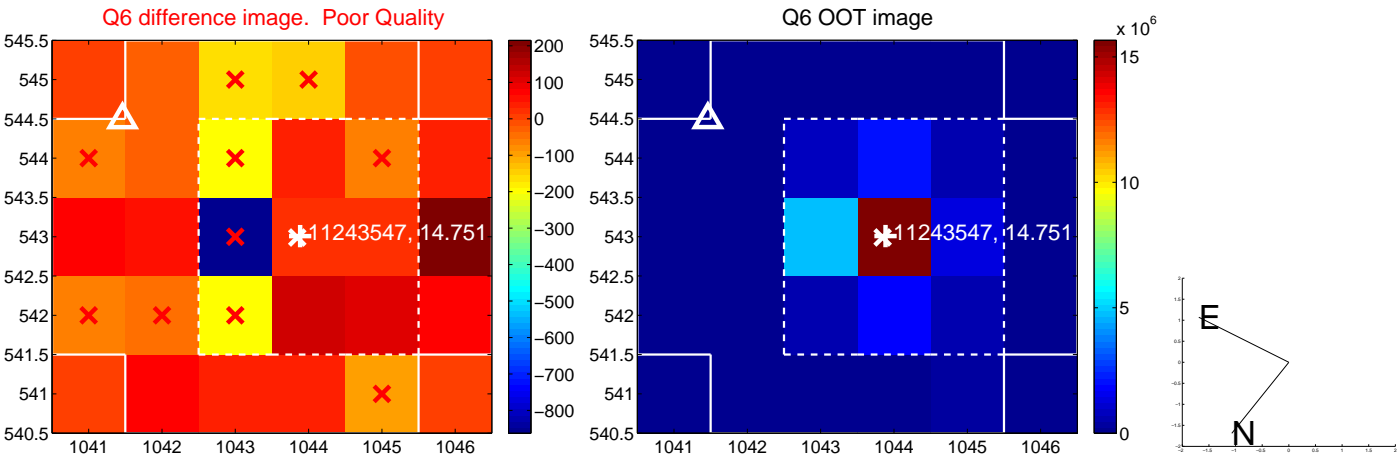
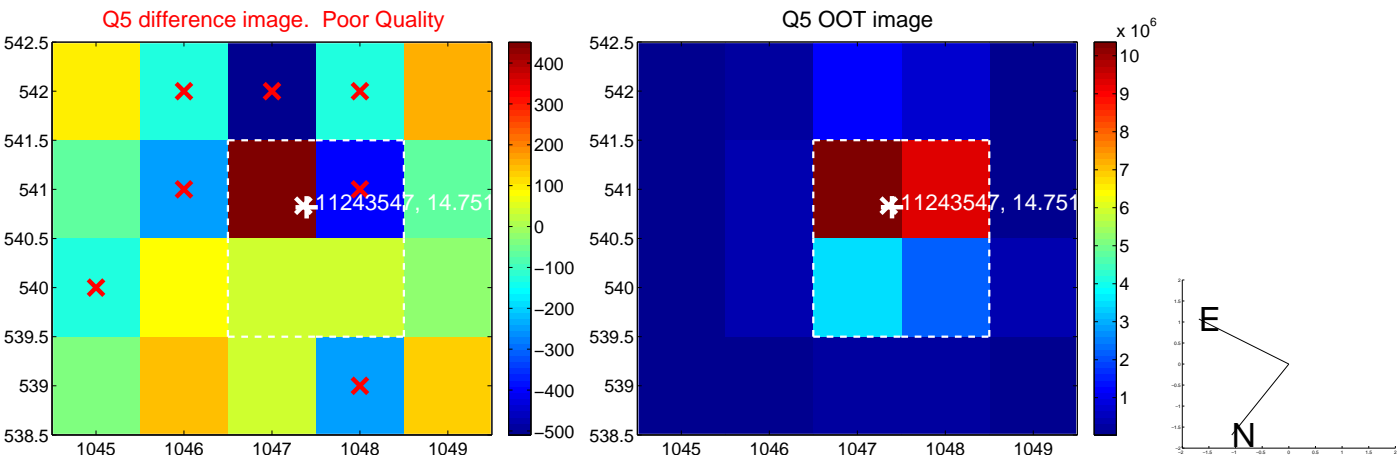


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

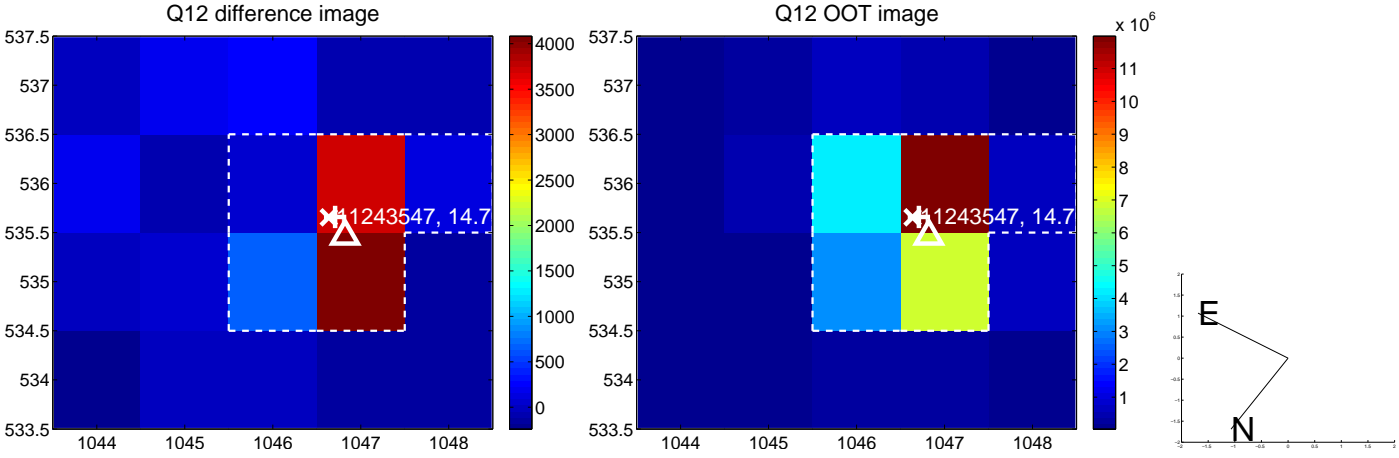
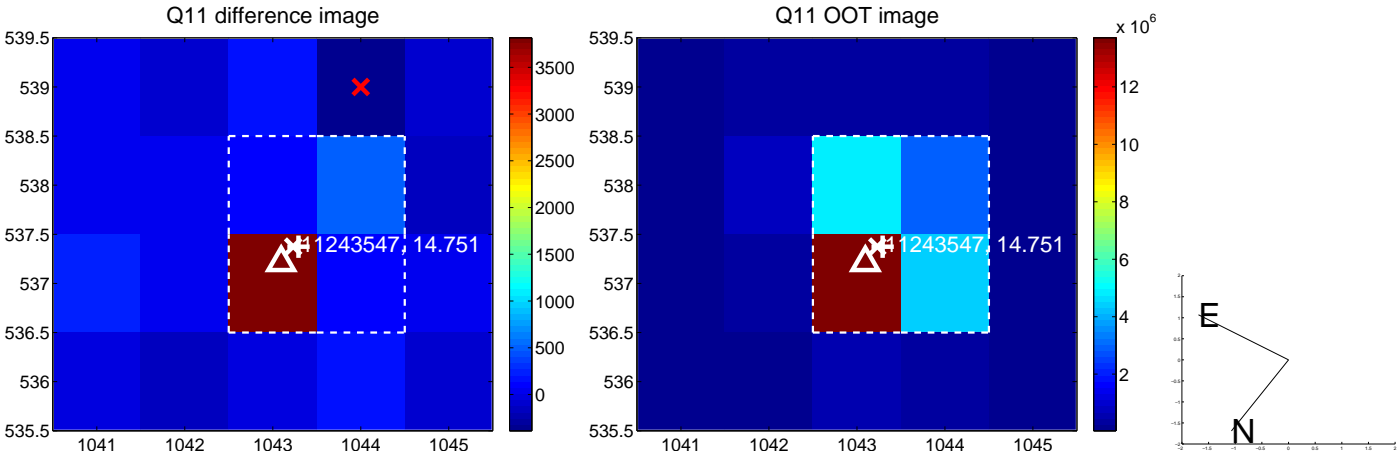
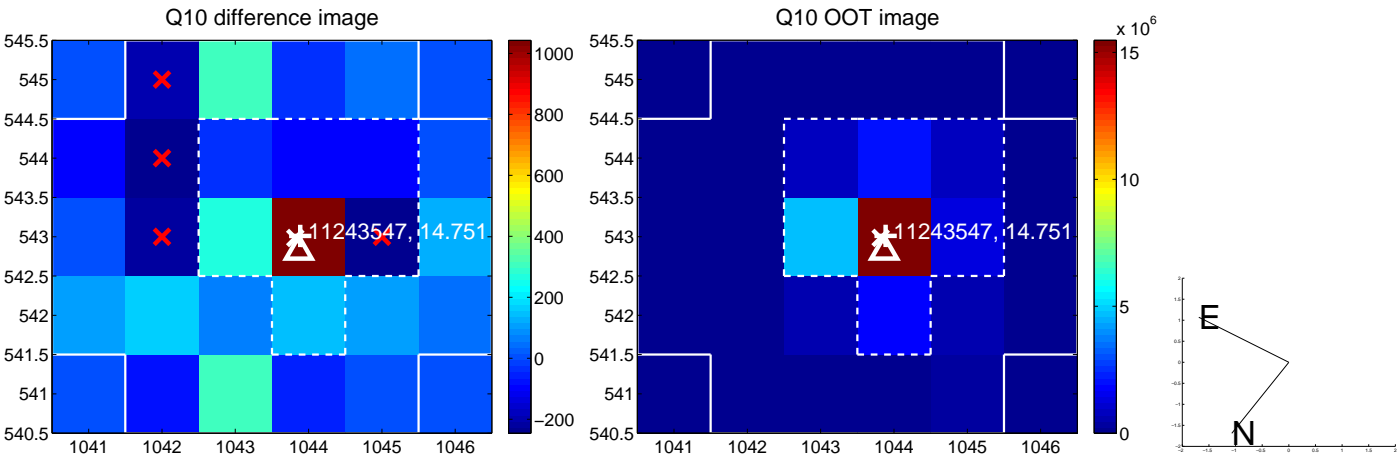
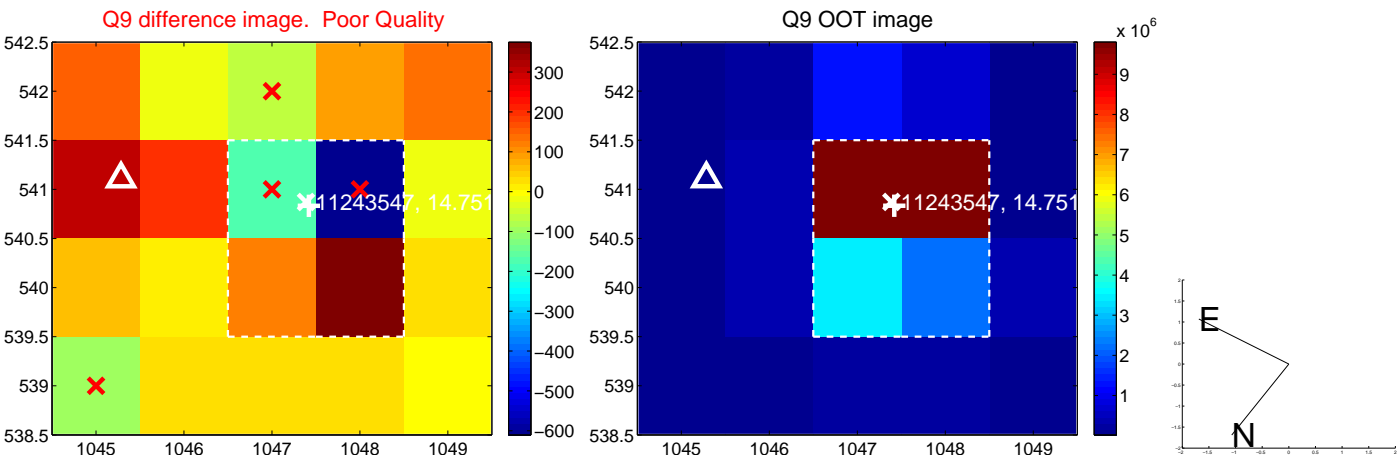
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



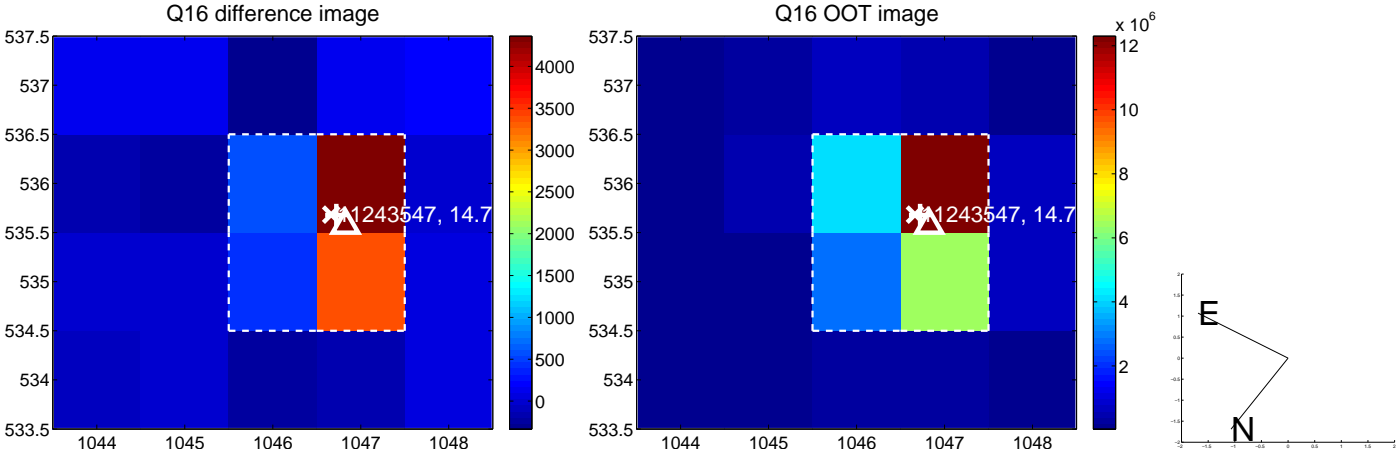
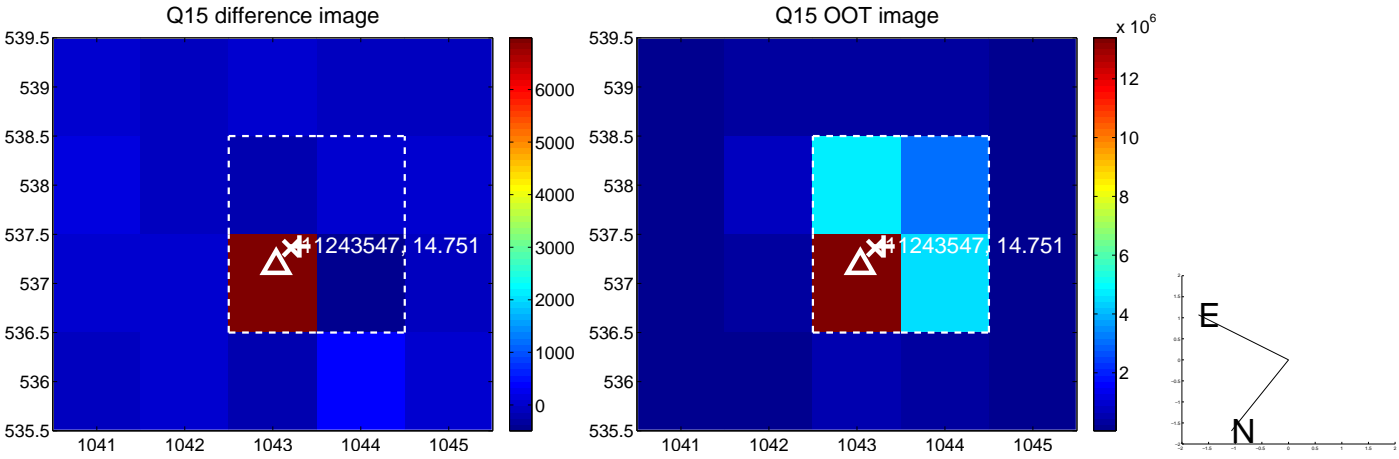
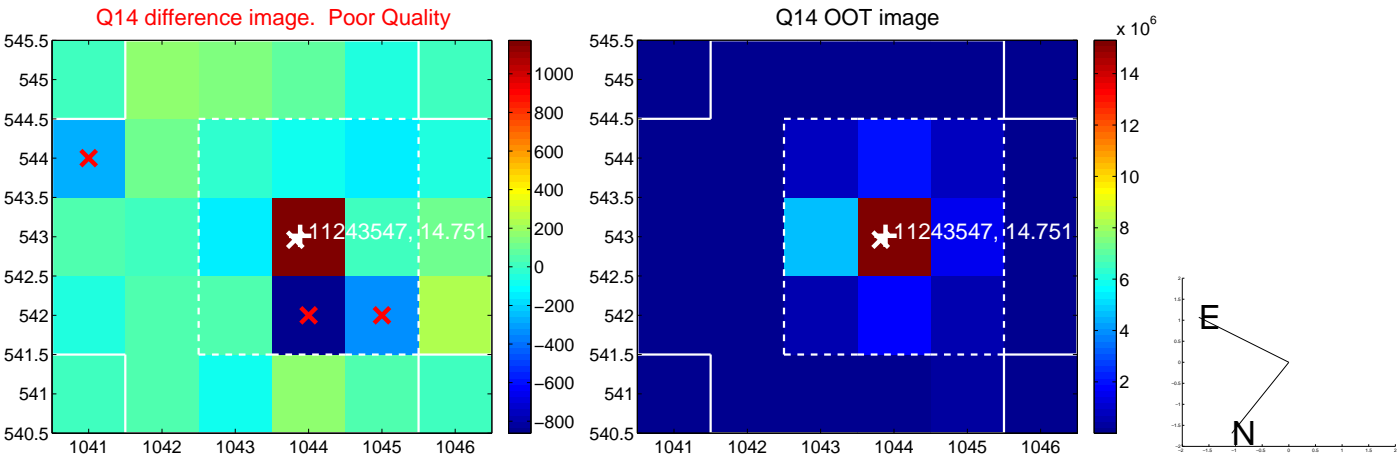
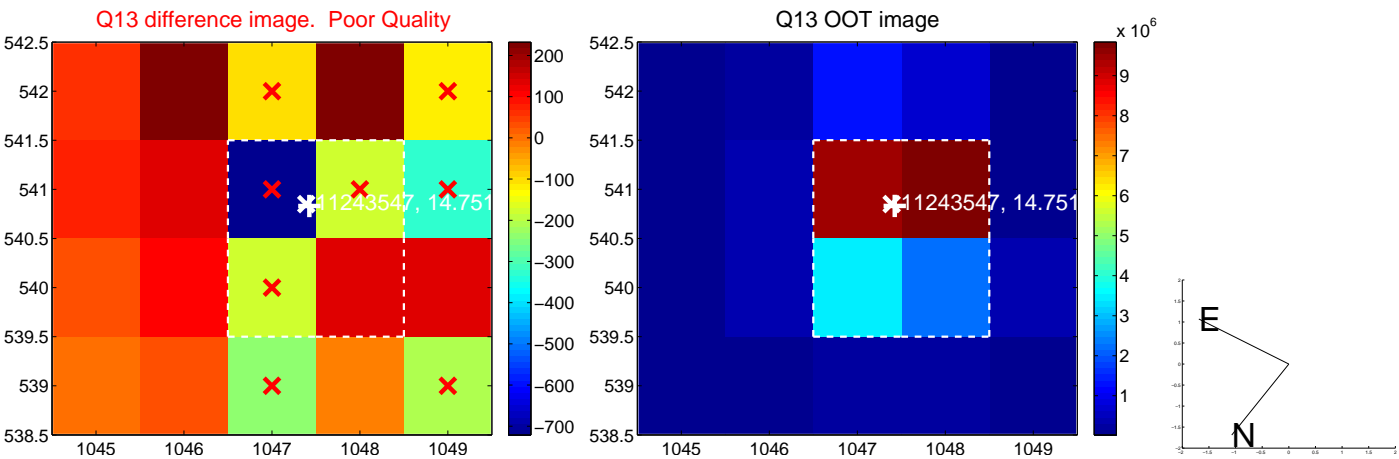
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



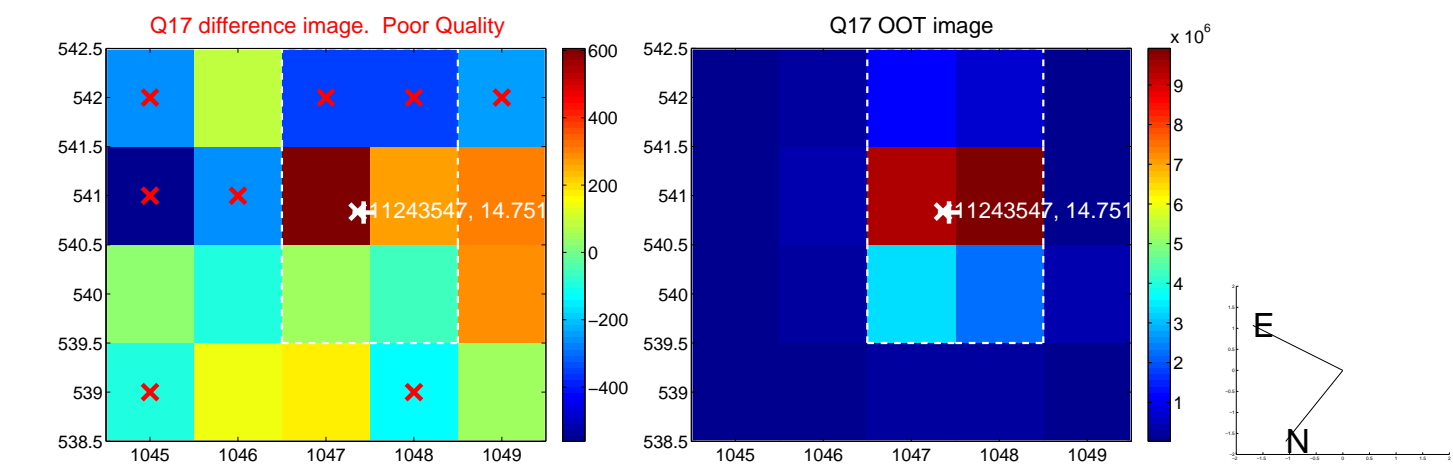
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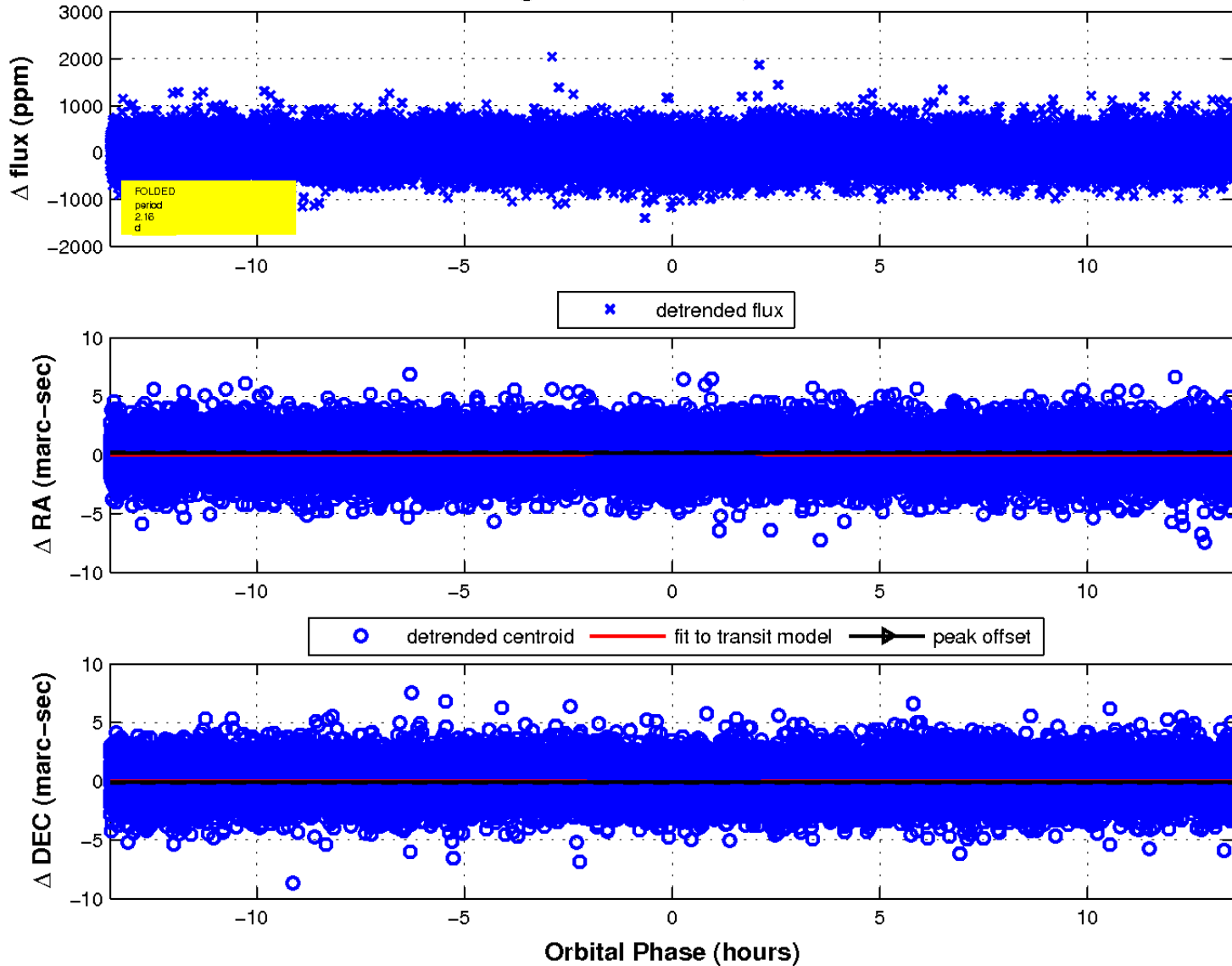
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

