

KIC 008487748

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})
008487748-01	OBS	3905.01	1.061949	131.718765	274.9	1.809	21.4	27.9	0.57	4304	1.14	352.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008487748-01	OBS	FP	0.00	0	1	0	1	MOD_SEC_ALT—CENT_FEW_DIFFS—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.

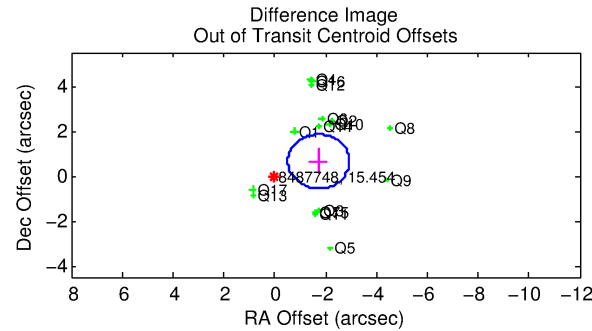
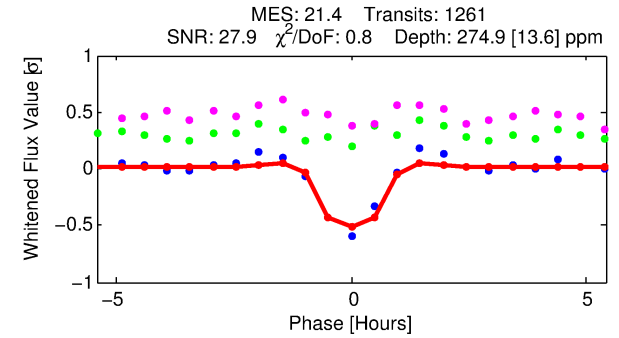
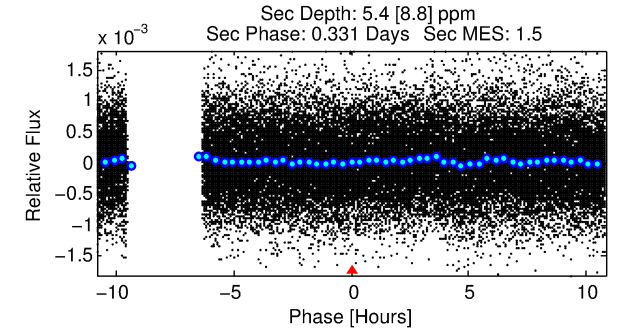
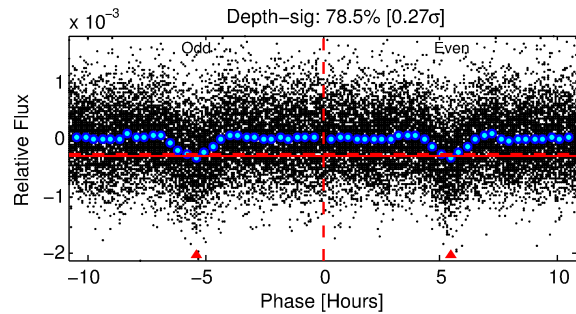
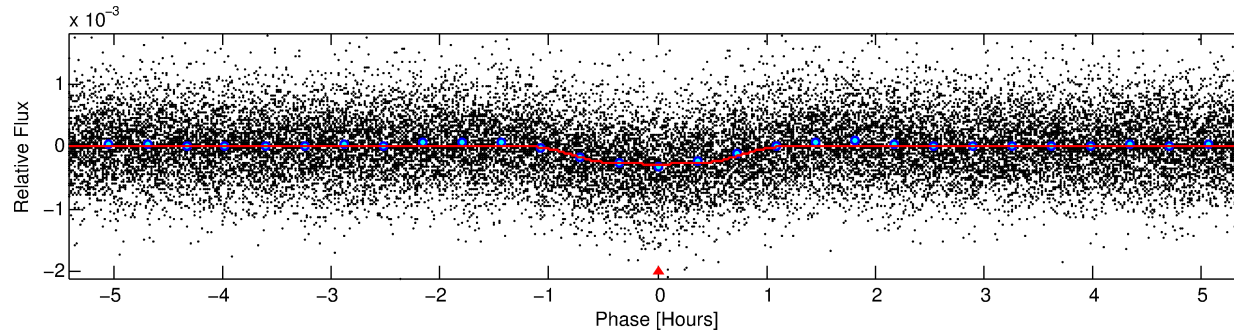
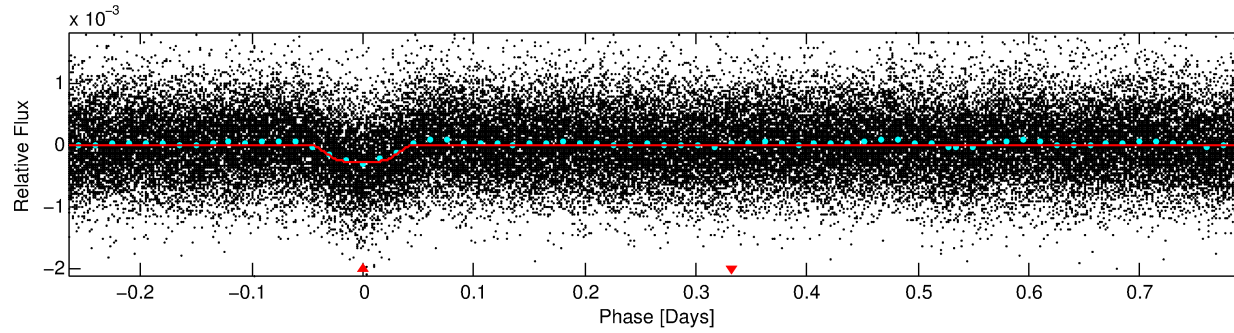
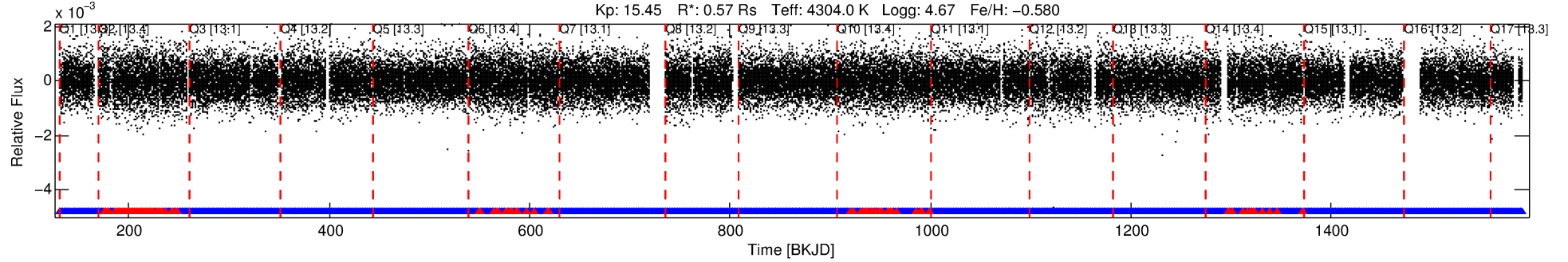
Ephemeris Match Information For 008487748-01

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
008487748-01	8487748	008552540-01	8552540	1:1	102.6	-3	25	10.29	15.45	1690.30	Direct-PRF	0	1.06	0.04

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: 8487748 Candidate: 1 of 1 Period: 1.062 d
KOI: K03905.01 Corr: 0.750



DV Fit Results:

Period = 1.06195 [0.00000] d
Epoch = 131.7188 [0.0009] BKJD
Rp/R* = 0.0184 [0.0053]
a/R* = 2.34 [2.34]
b = 0.90 [0.27]
Seff = 352.20 [63.20]
Teq = 1105 [50] K
Rp = 1.14 [0.35] Re
a = 0.0167 [0.0014] AU
Ag = 0.64 [1.11] [-0.33 σ]
Teffp = 1526 [665] K [0.63 σ]

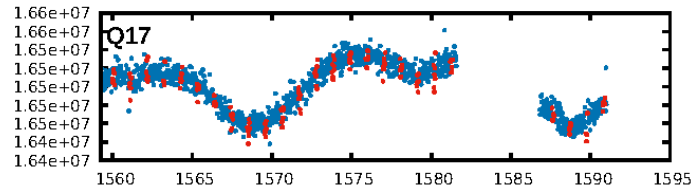
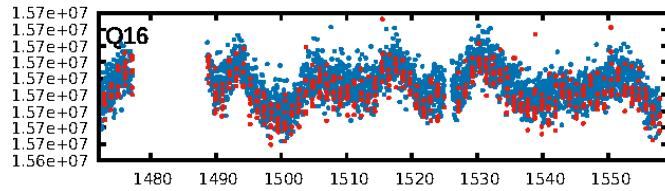
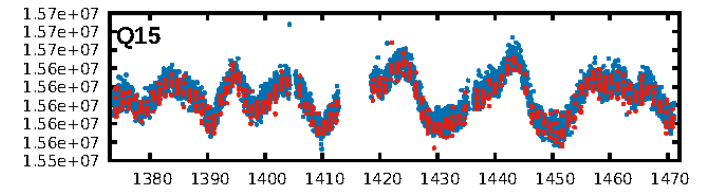
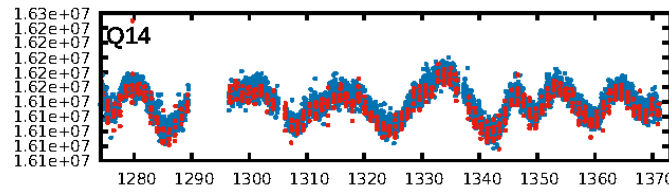
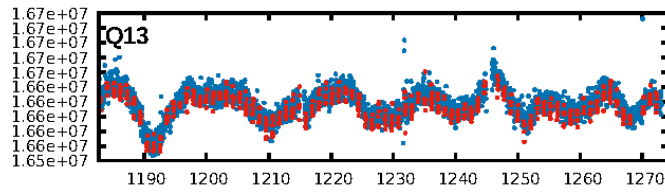
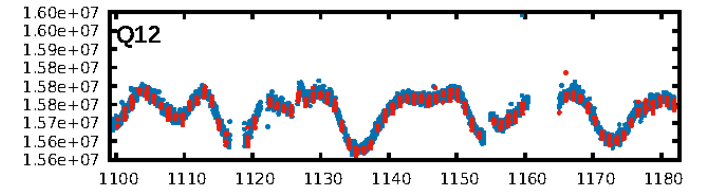
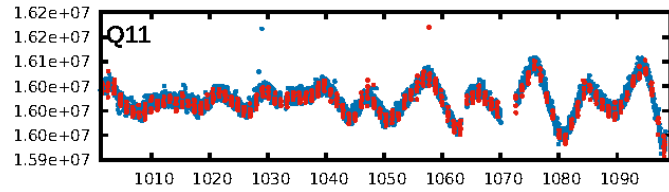
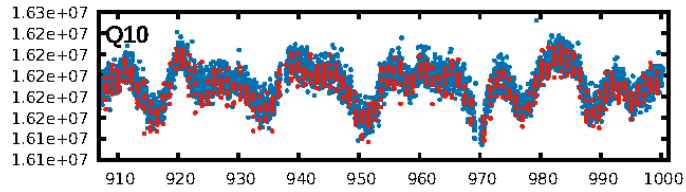
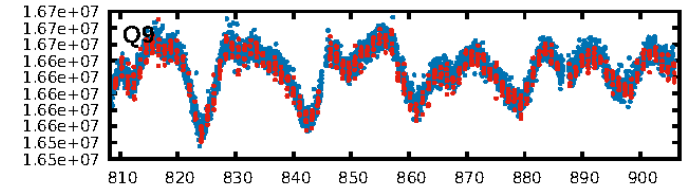
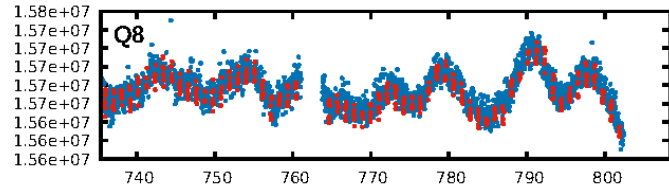
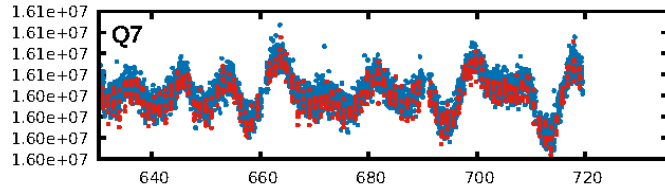
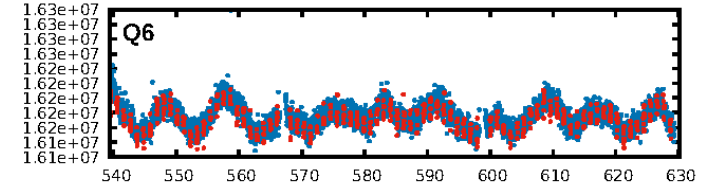
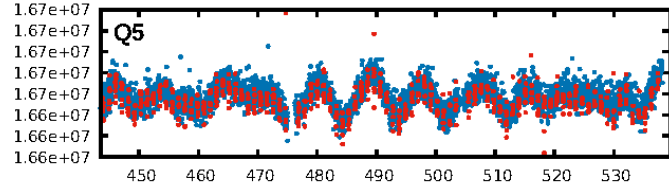
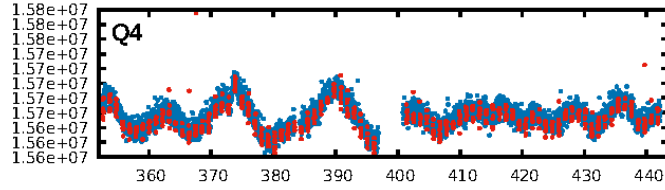
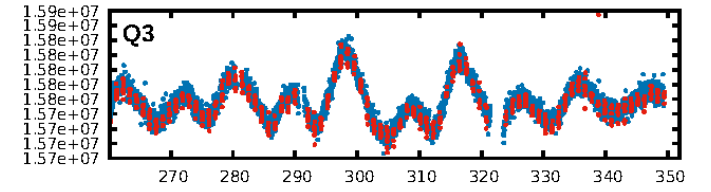
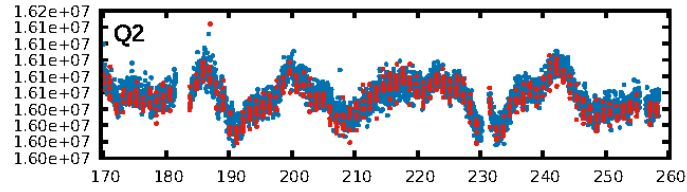
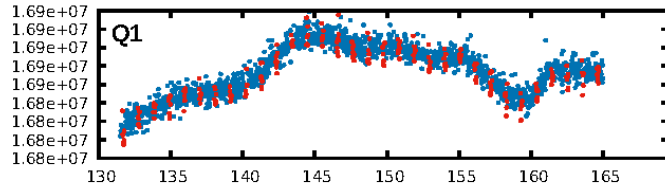
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.71e-95
RollingBand-fgt: 0.91 [1101/1204]
GhostDiagnostic-chr: 0.26
Centroid-sig: 0.0%
Centroid-so: 2.701 arcsec [6.21 σ]
OotOffset-rm: 1.839 arcsec [4.57 σ]
KicOffset-rm: 1.904 arcsec [4.67 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

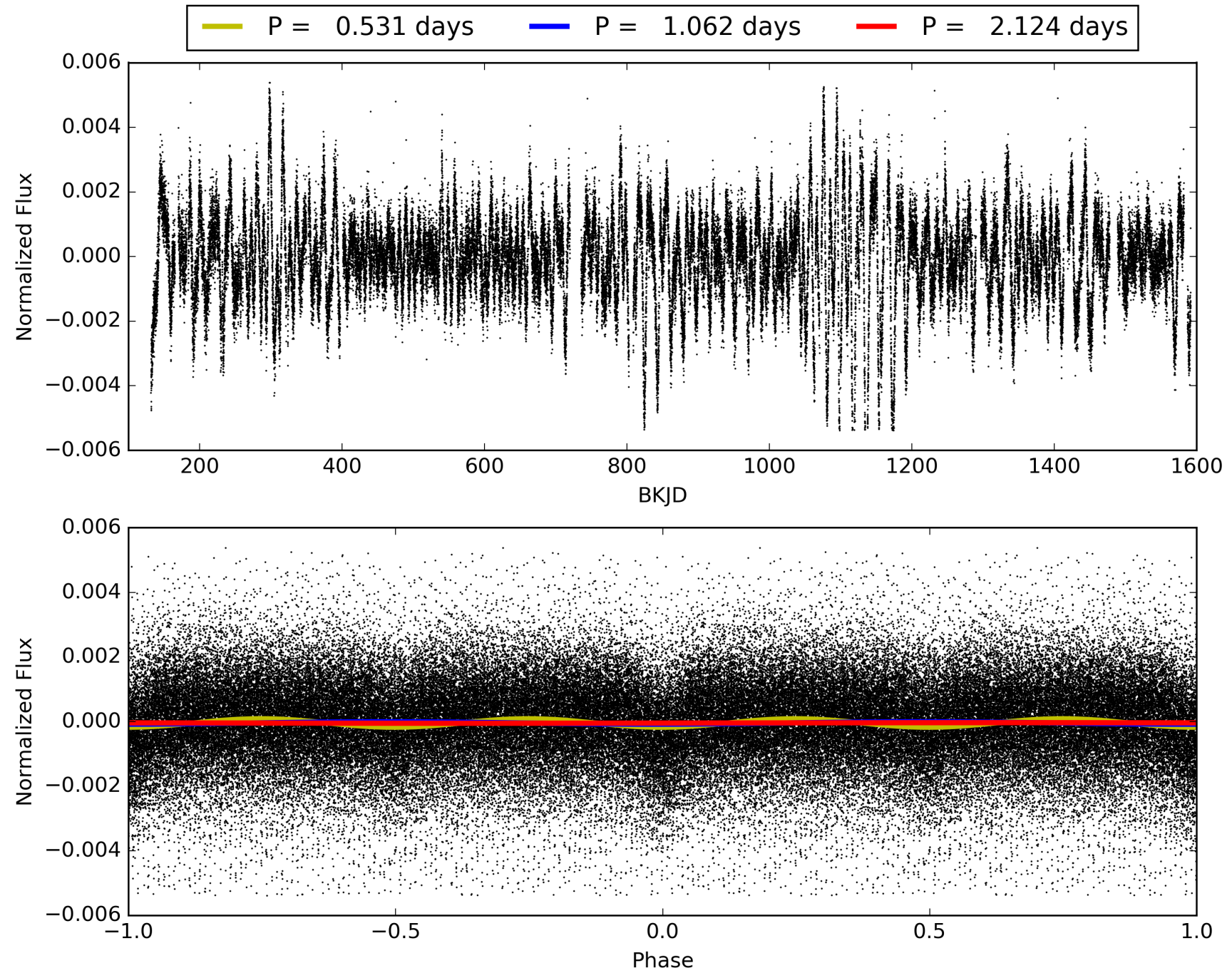
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:33:08 Z

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

TCE 008487748-01, PDC Light Curves

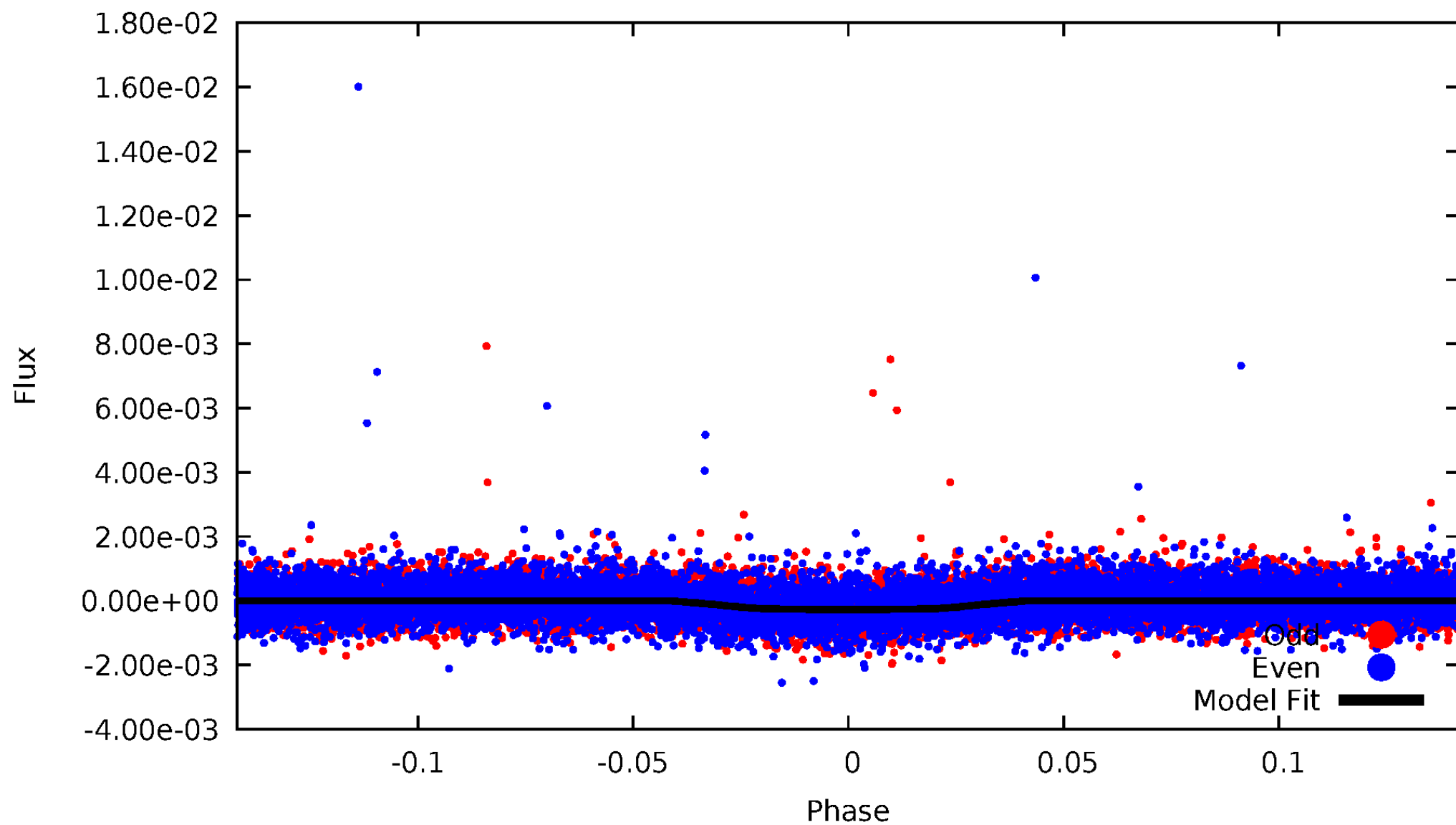


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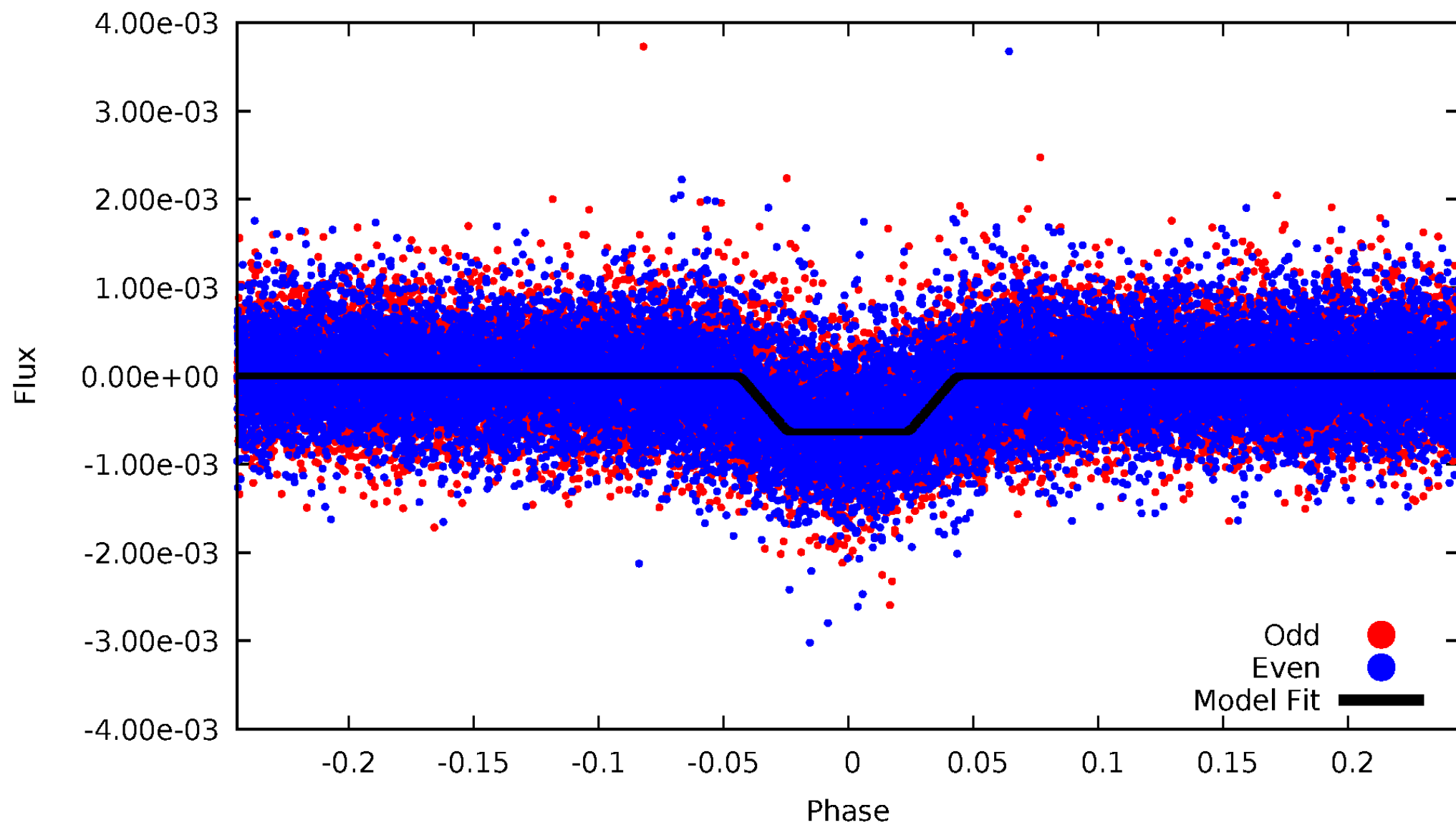
DV Odd/Even

TCE 008487748-01



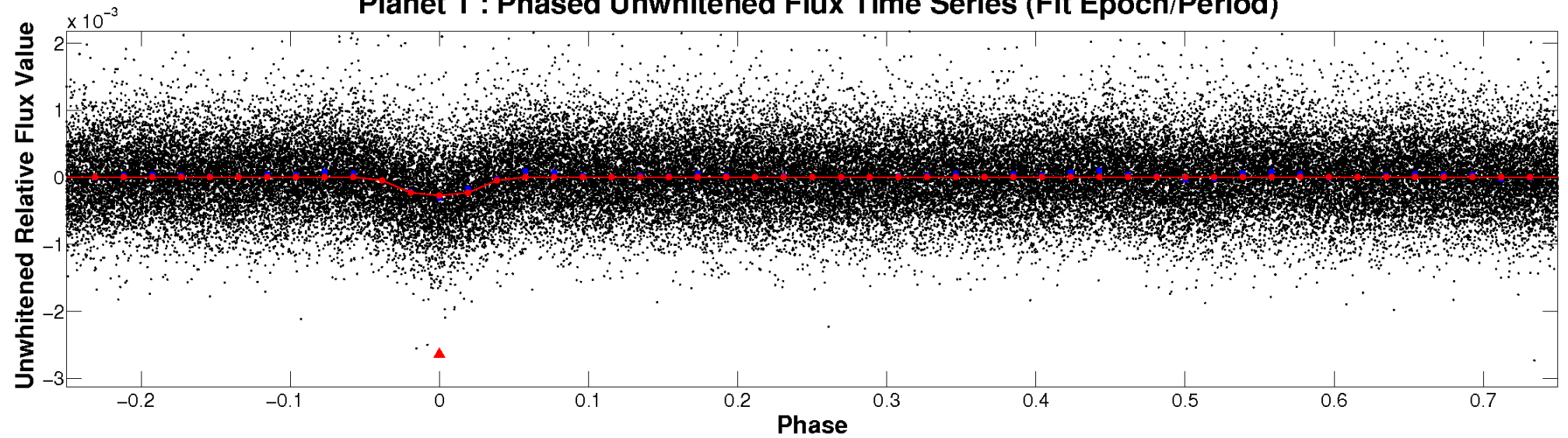
ALT Odd/Even

TCE 008487748-01

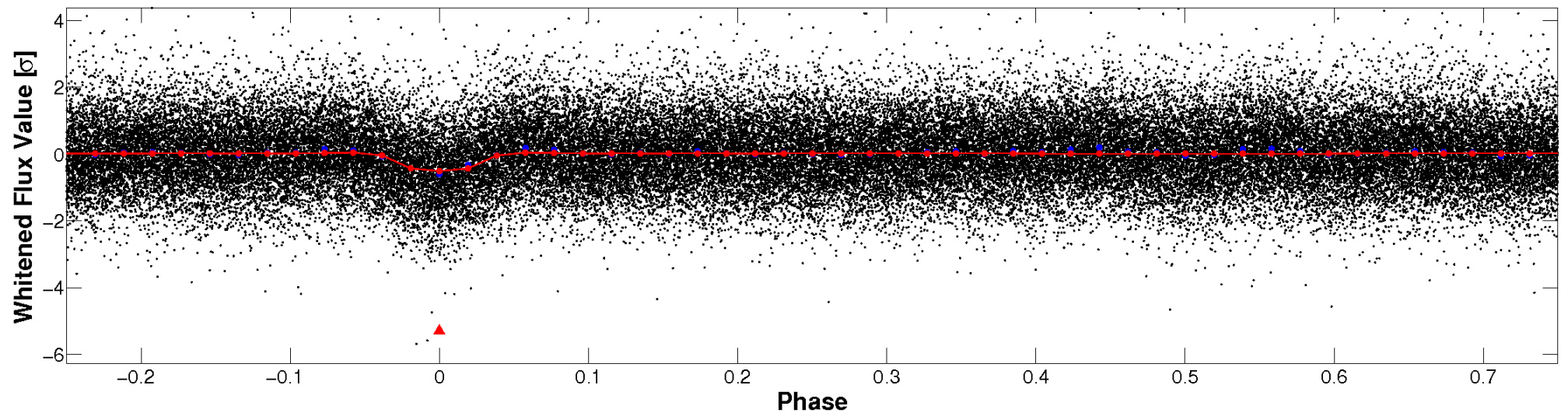


Non-Whitened Vs. Whitened Light Curve

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

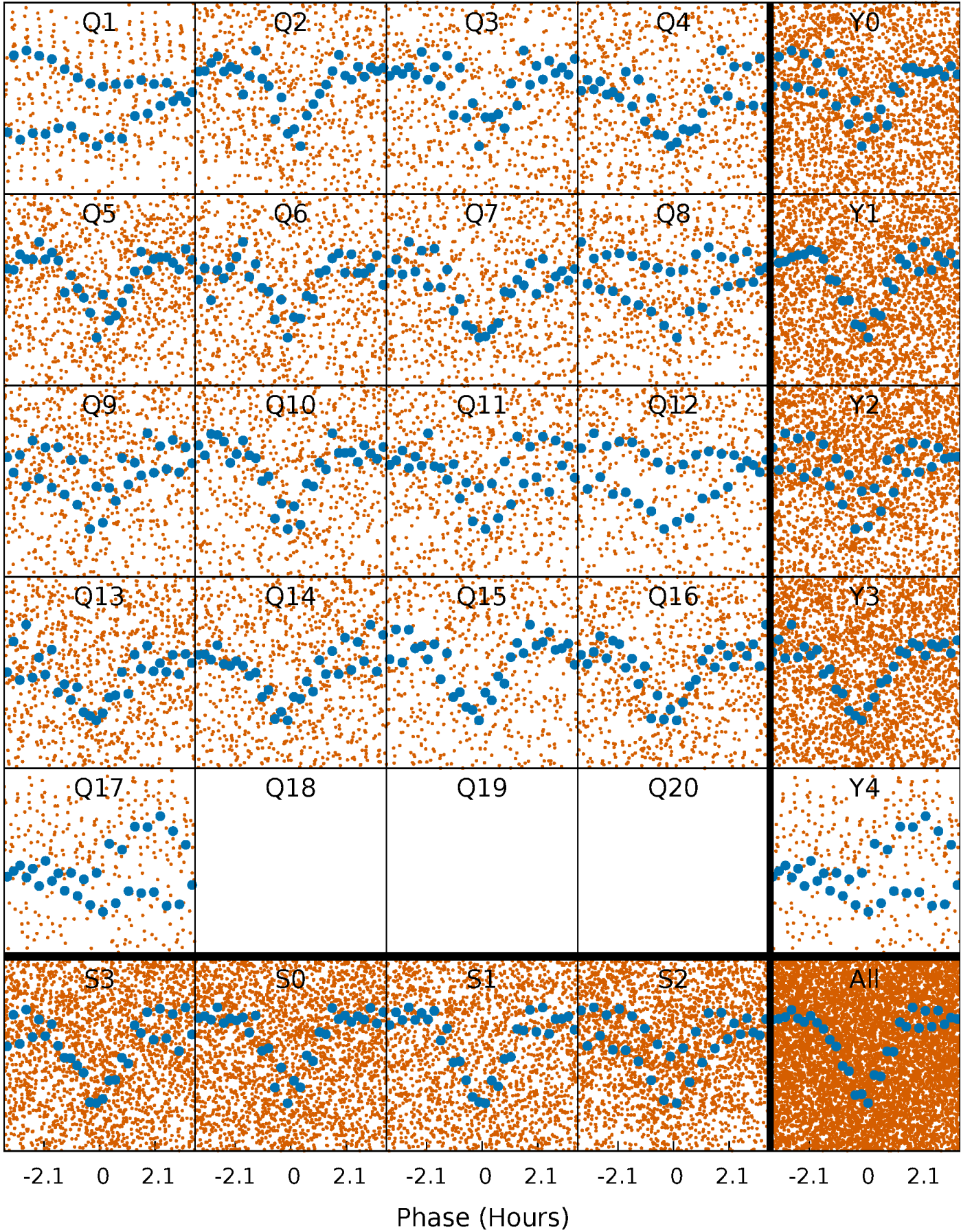


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



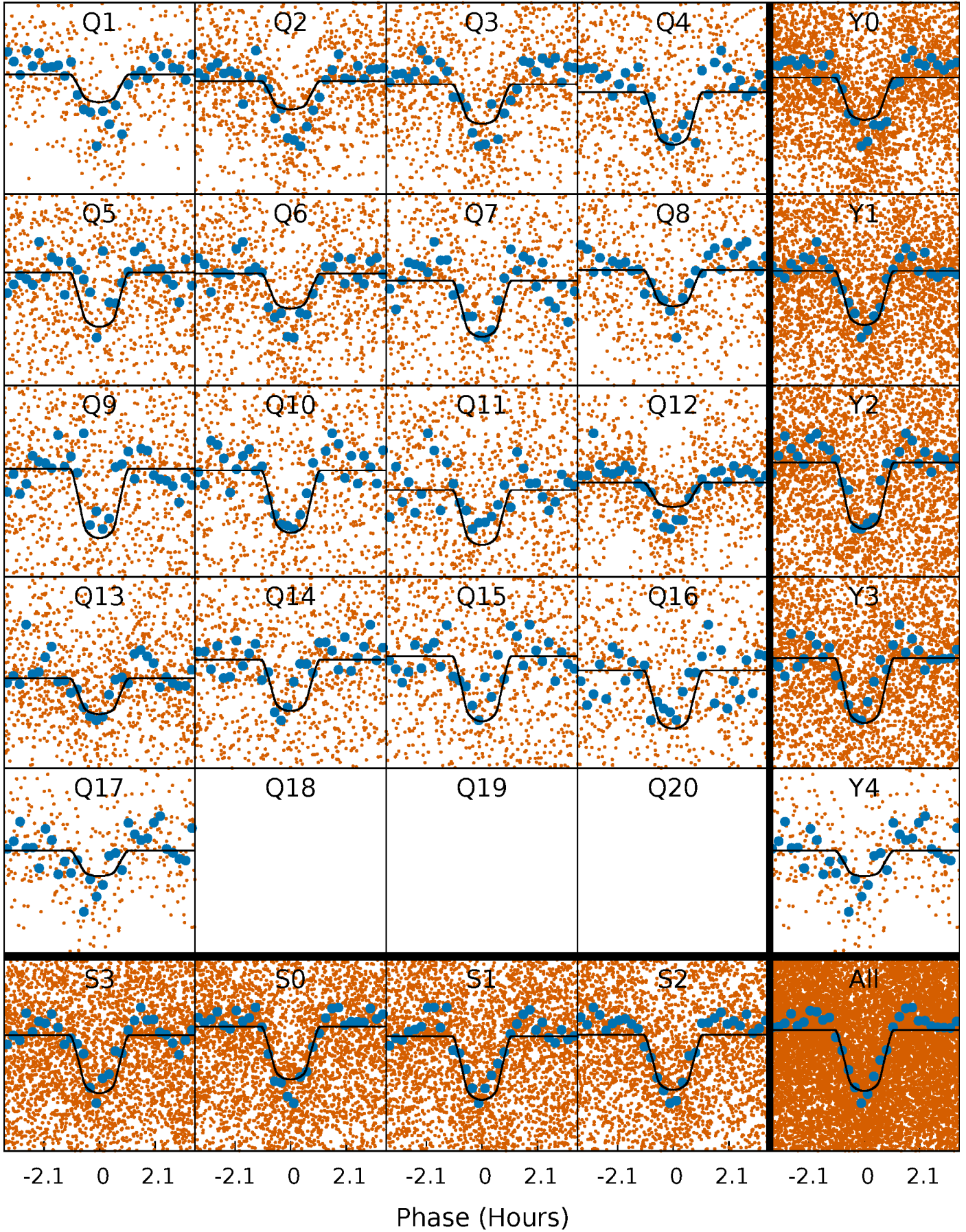
PDC Quarter-Phased Transit Curves

TCE 008487748-01 P= 1.061949 Days $T_0=131.718765$ (BKJD)



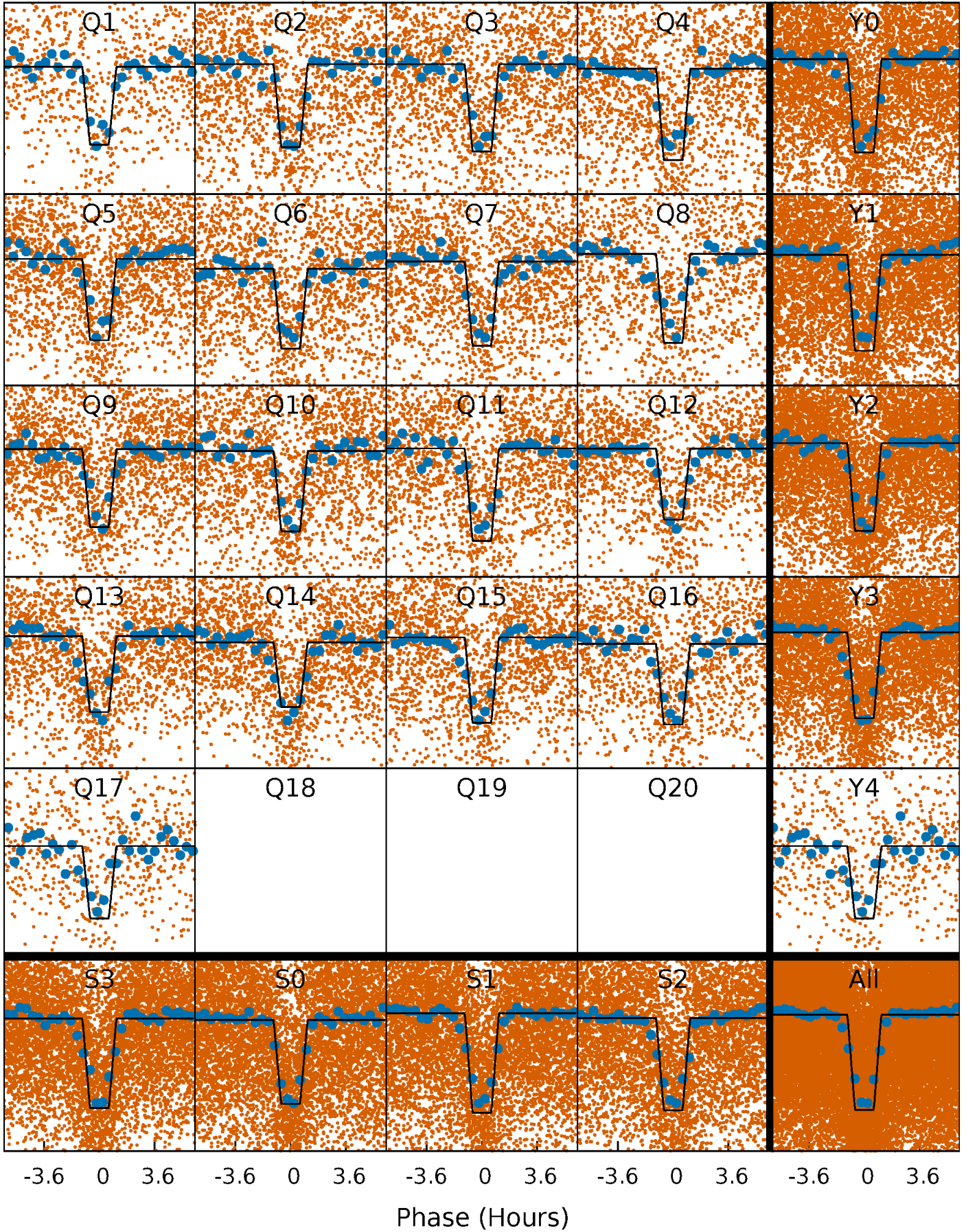
DV Quarter-Phased Transit Curves

TCE 008487748-01 P= 1.061949 Days $T_0=131.718765$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

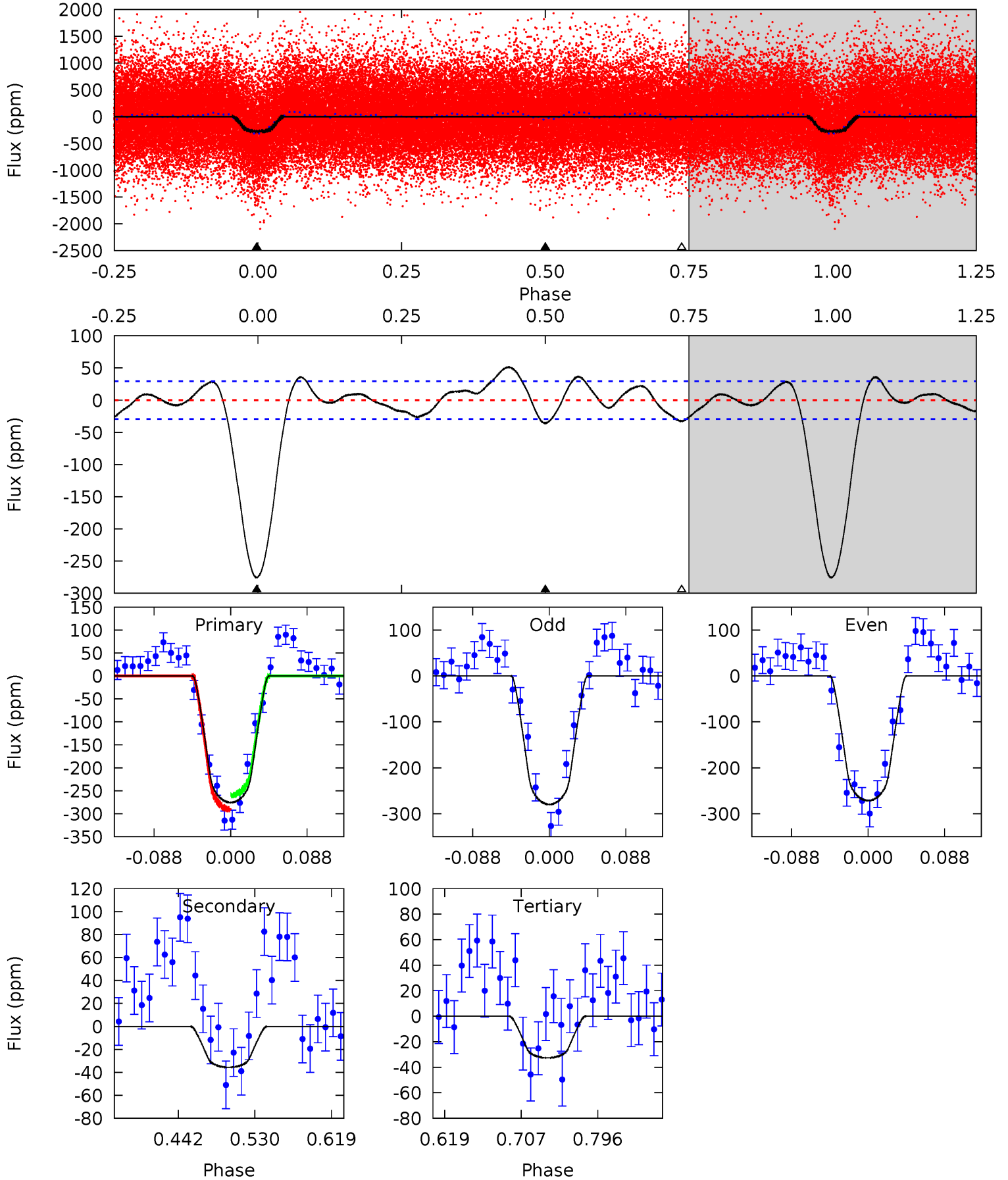
TCE 008487748-01 P= 1.061939 Days $T_0=131.722565$ (BKJD)



DV Model-Shift Uniqueness Test

008487748-01, P = 1.061949 Days, E = 130.656816 Days

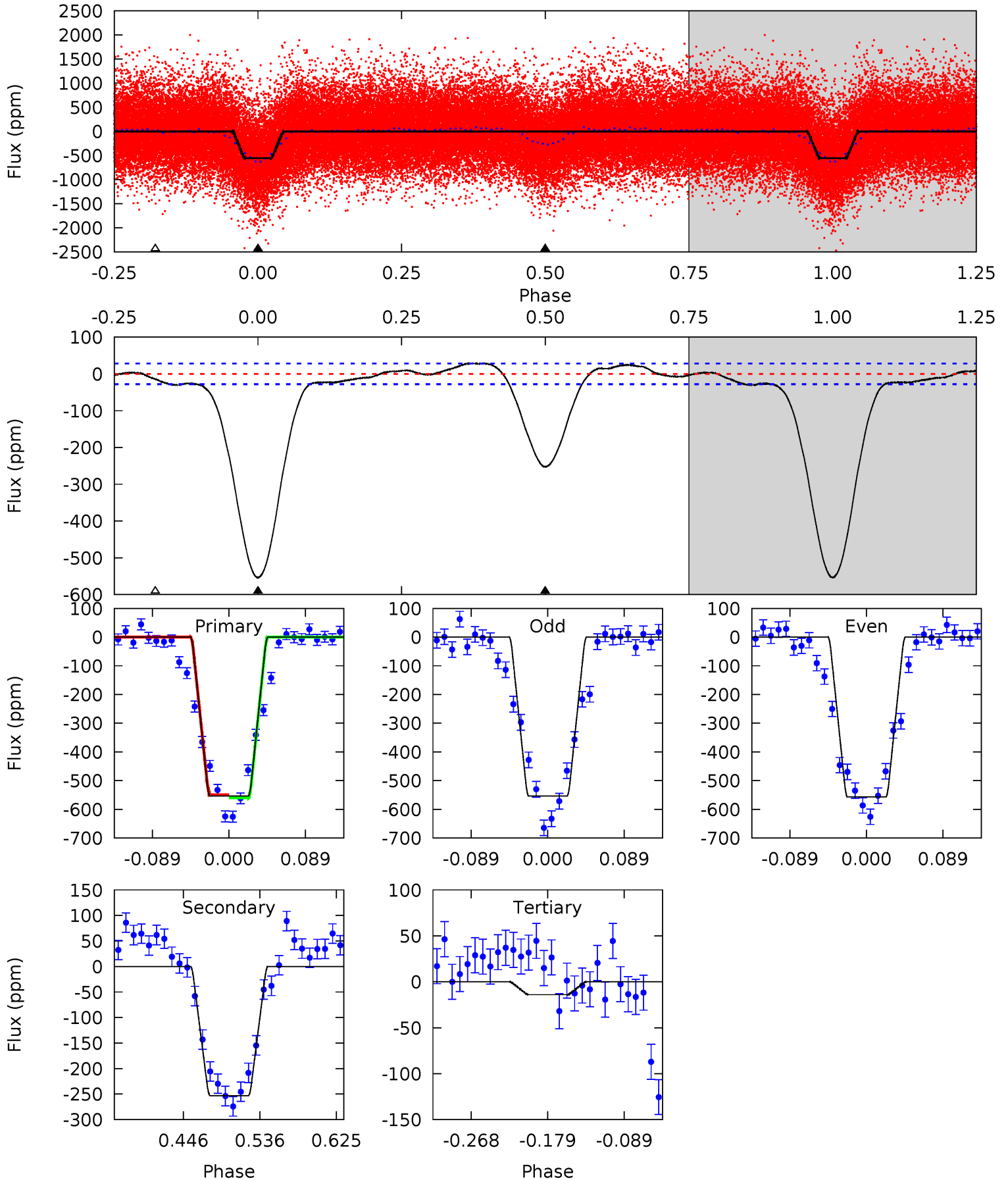
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	5.59	5.11	0	4.59	1.70	2.26	38.0	43.2	0.48	5.59	0.64	1.04	0.16	2.45



Alt Model-Shift Uniqueness Test

008487748-01, P = 1.061939 Days, E = 130.660626 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
90.3	41.2	2.29	0	4.59	1.70	2.88	88.0	90.3	39.0	41.2	0.30	1.00	0.05	0.85



Stellar Parameters For KIC 008487748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4304^{+116}_{-142}	$4.675^{+0.065}_{-0.025}$	$-0.580^{+0.300}_{-0.300}$	$0.566^{+0.044}_{-0.059}$	$0.552^{+0.056}_{-0.046}$	$4.289^{+1.245}_{-0.550}$
	+3%/-3%	+1%/-1%	+52%/-52%	+8%/-10%	+10%/-8%	+29%/-13%
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 008487748-01 / KOI 3905.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 6	$1.15^{+0.32}_{-0.34}$	1529^{+53}_{-58}	2934^{+354}_{-225}	$4.184^{+4.708}_{-1.715}$
Alt.	-253 ± 6	$1.54^{+0.34}_{-0.33}$	1529^{+49}_{-59}	3646^{+324}_{-243}	17^{+10}_{-5}

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 $A_{obs} \gg 1.0$

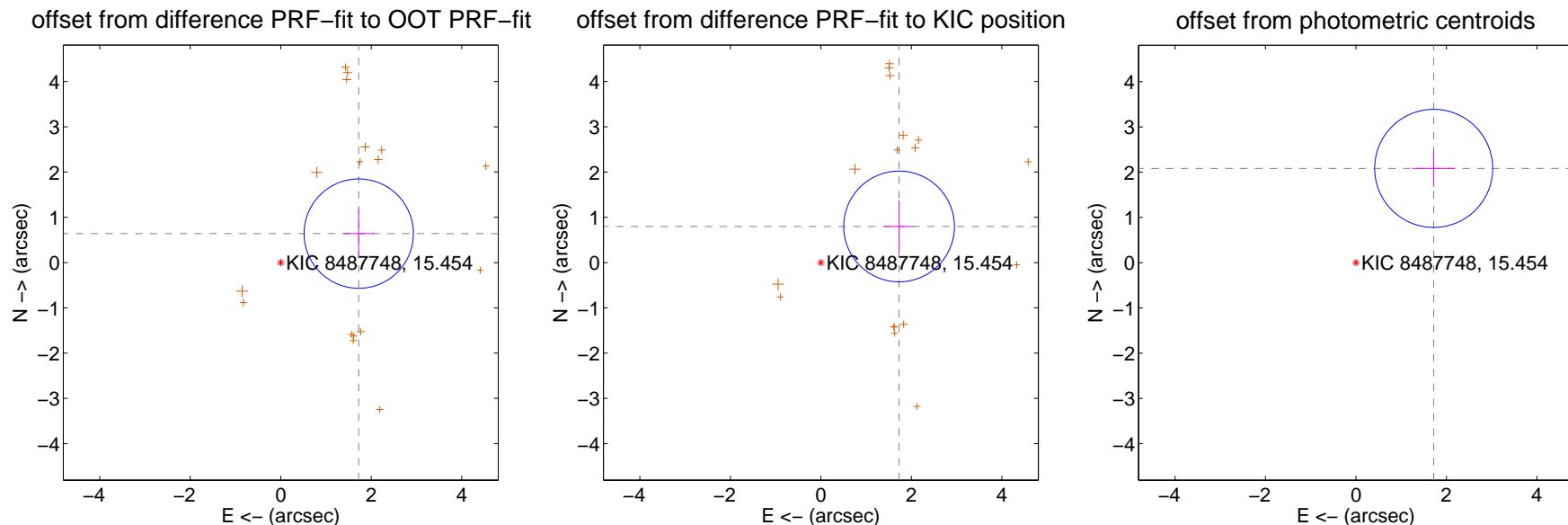
DV Centroid Data

Supplemental centroid analysis for 008487748-01. Kepler magnitude: 15.45. Transit SNR 27.89

There are 0 quarters with good PRF difference image offsets

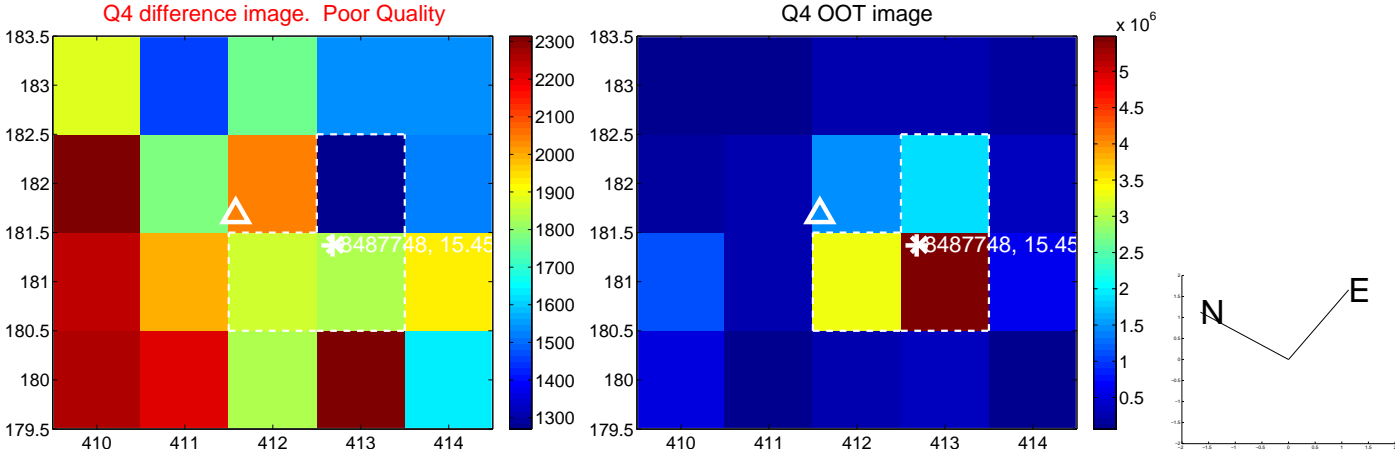
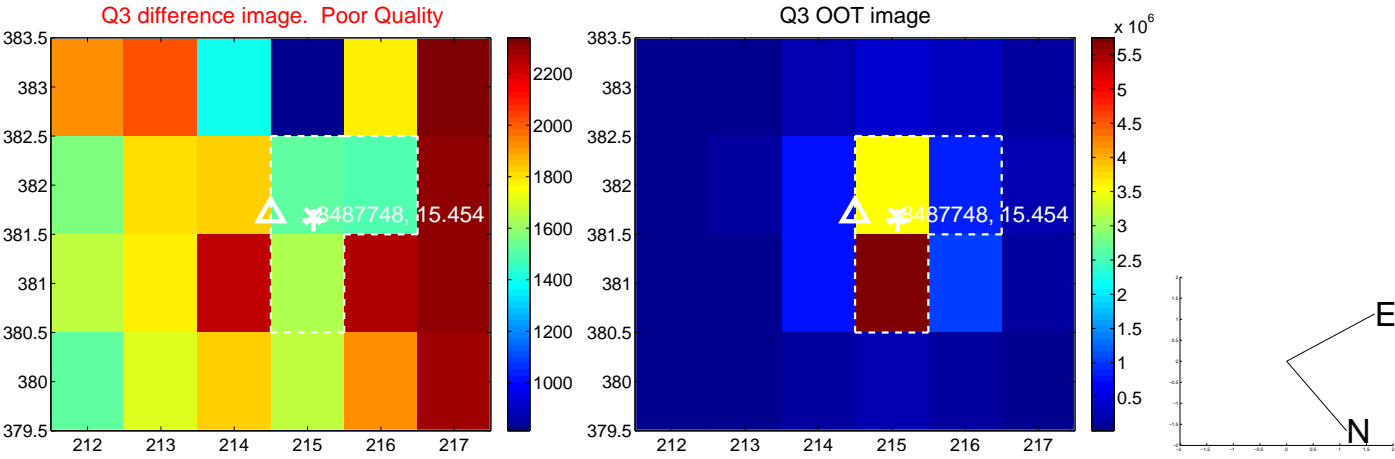
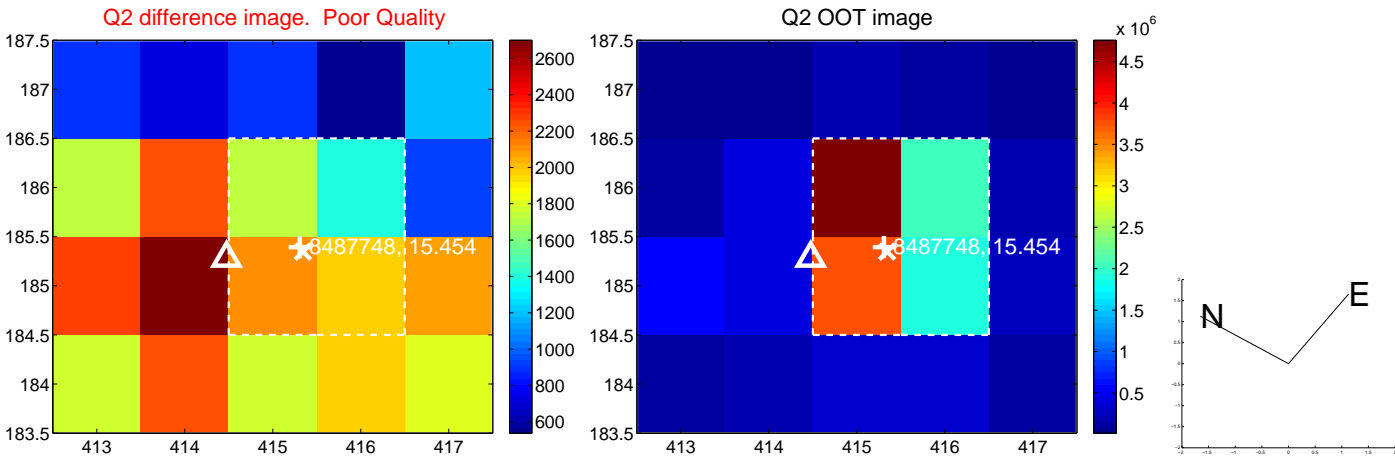
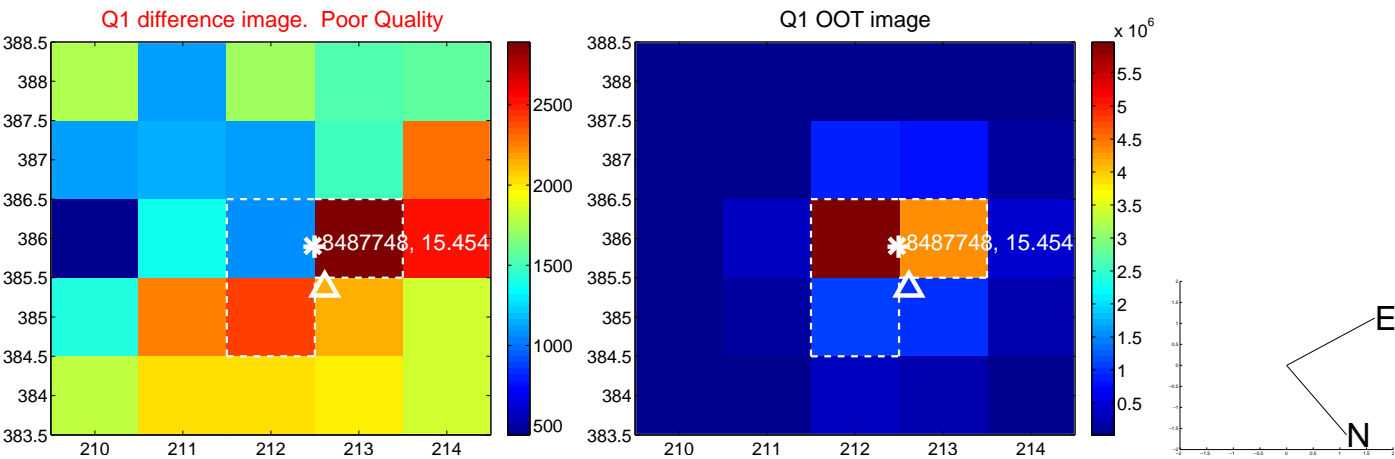
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.839 ± 0.403	4.57	-1.724 ± 0.345	0.640 ± 0.541
PRF-fit source offset from KIC position	1.904 ± 0.408	4.67	-1.729 ± 0.330	0.798 ± 0.580
photometric centroid source offset	2.70 ± 0.43	6.21	-1.72 ± 0.48	2.08 ± 0.40

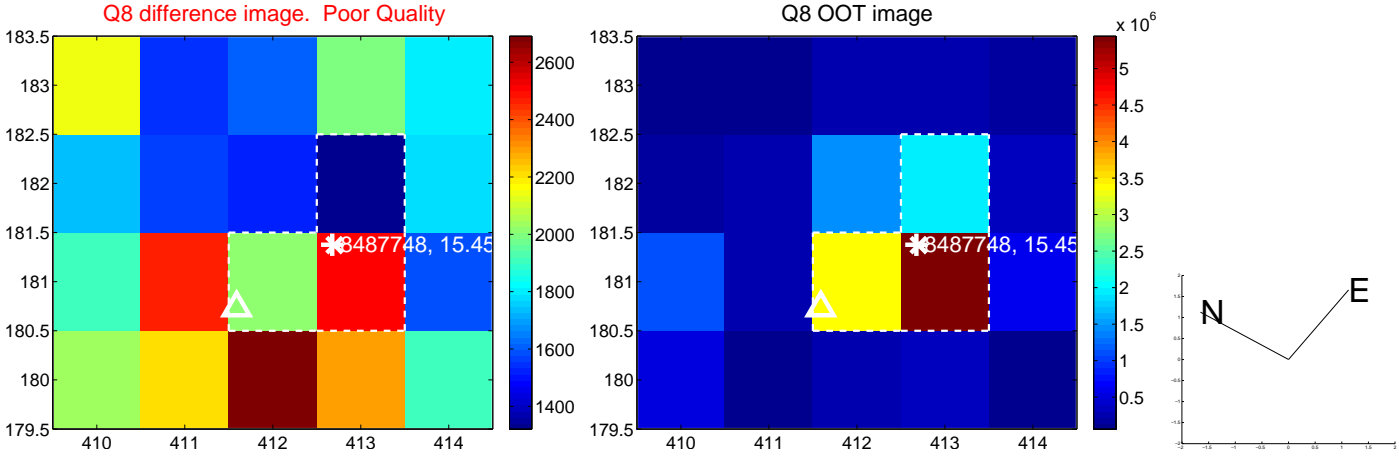
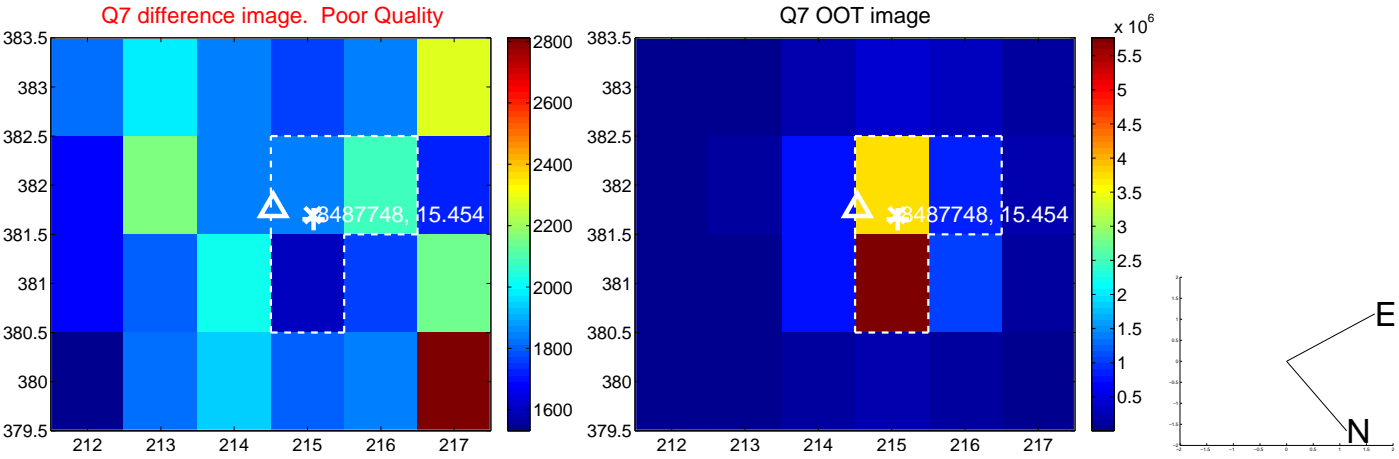
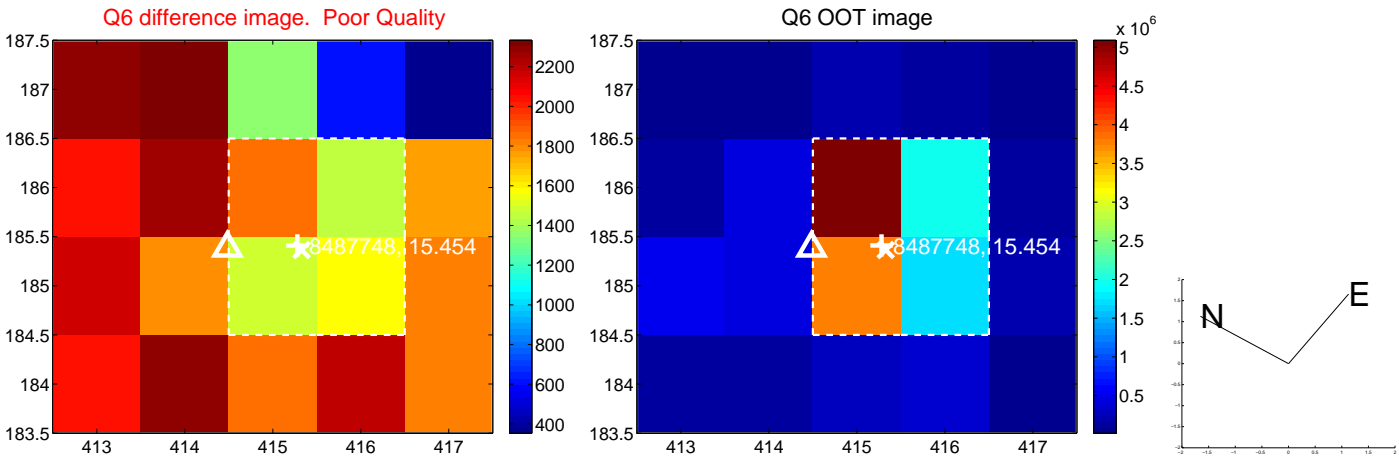
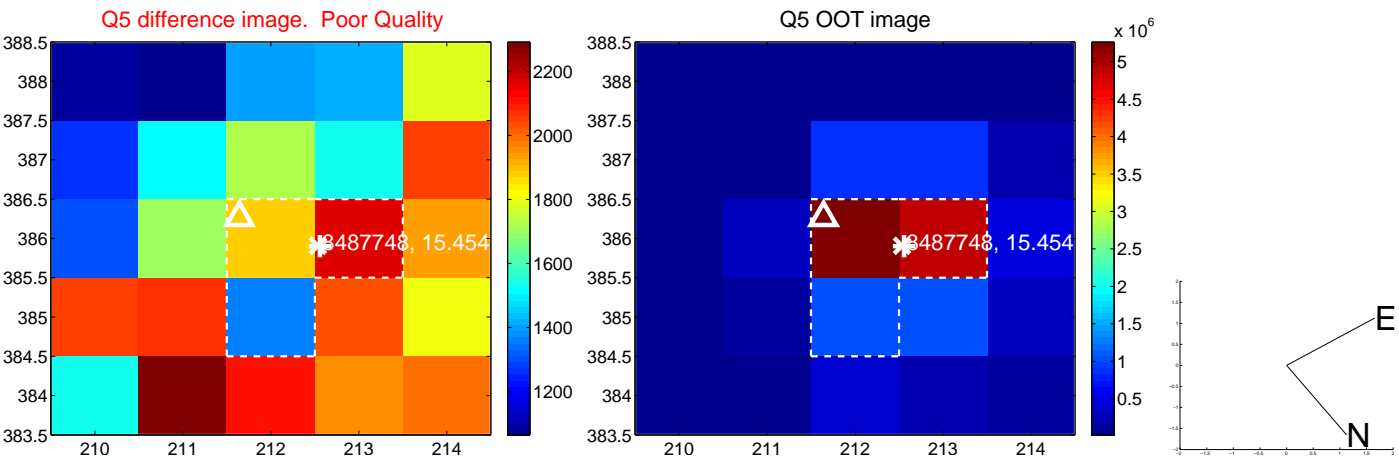


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

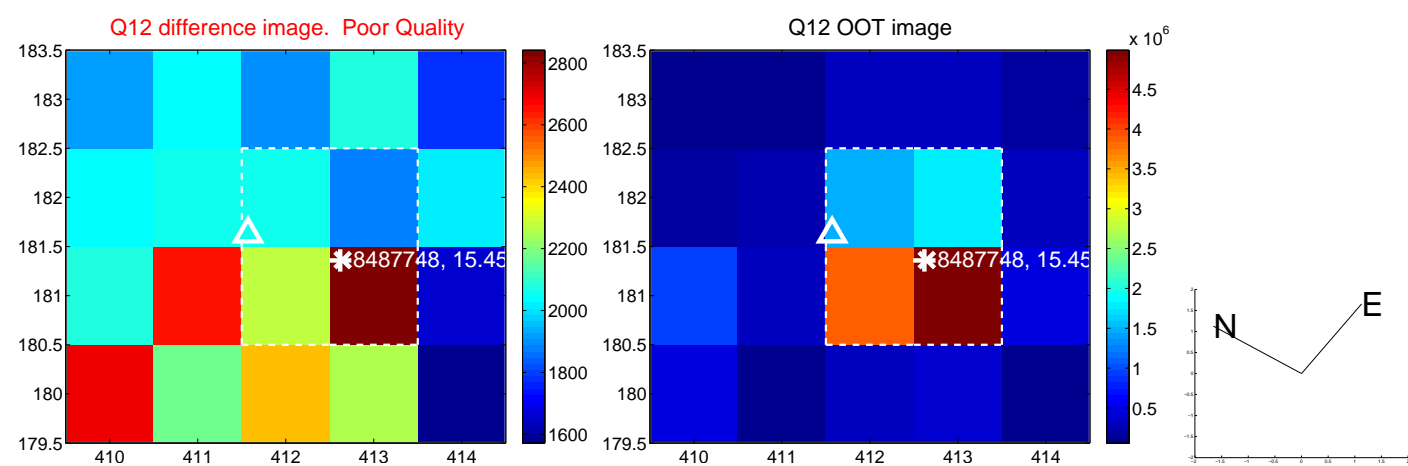
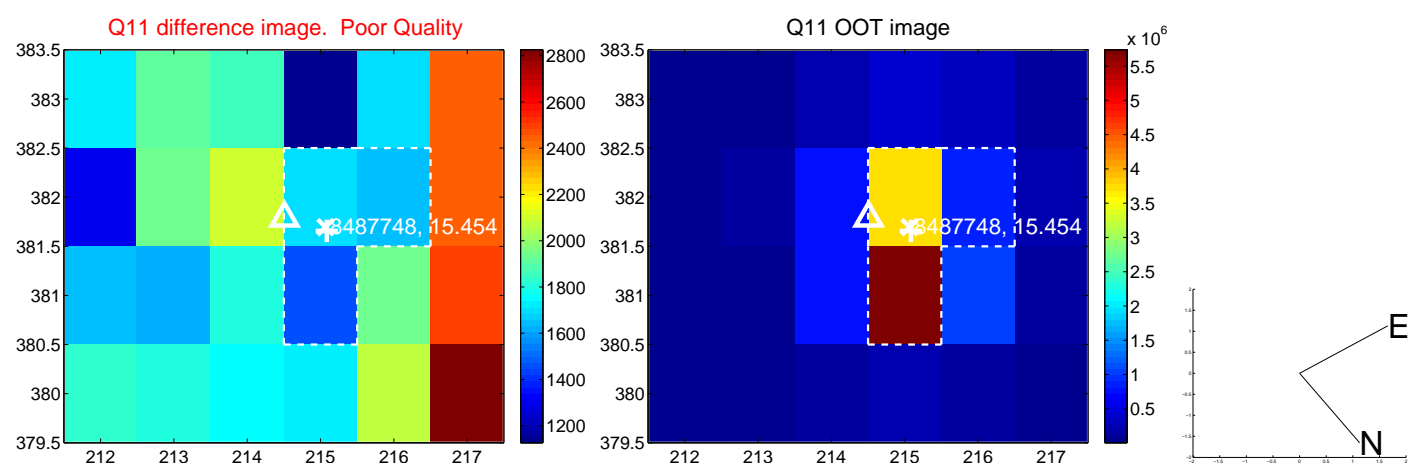
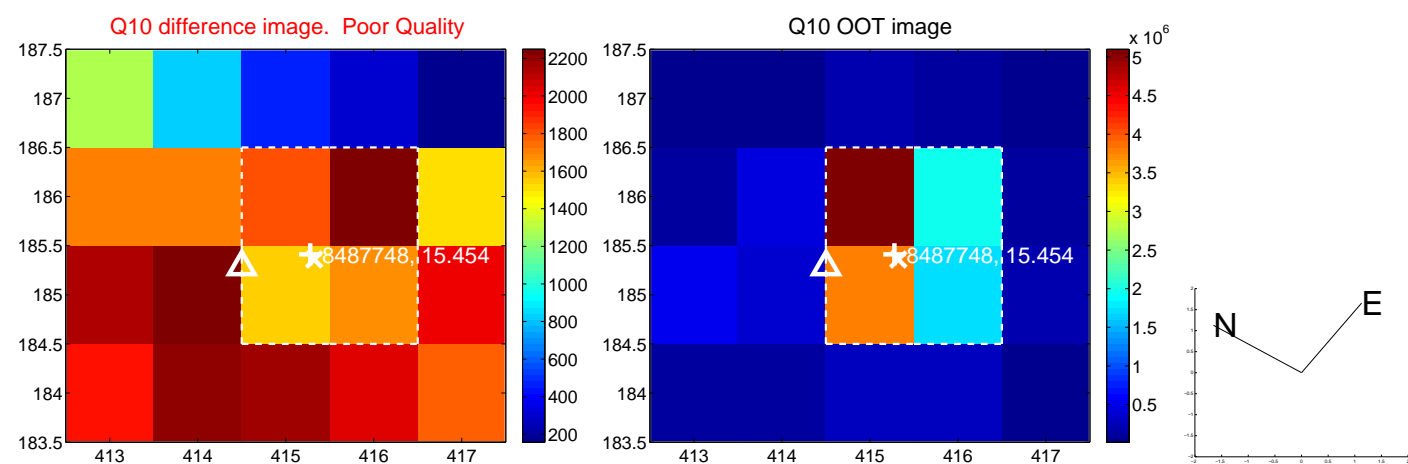
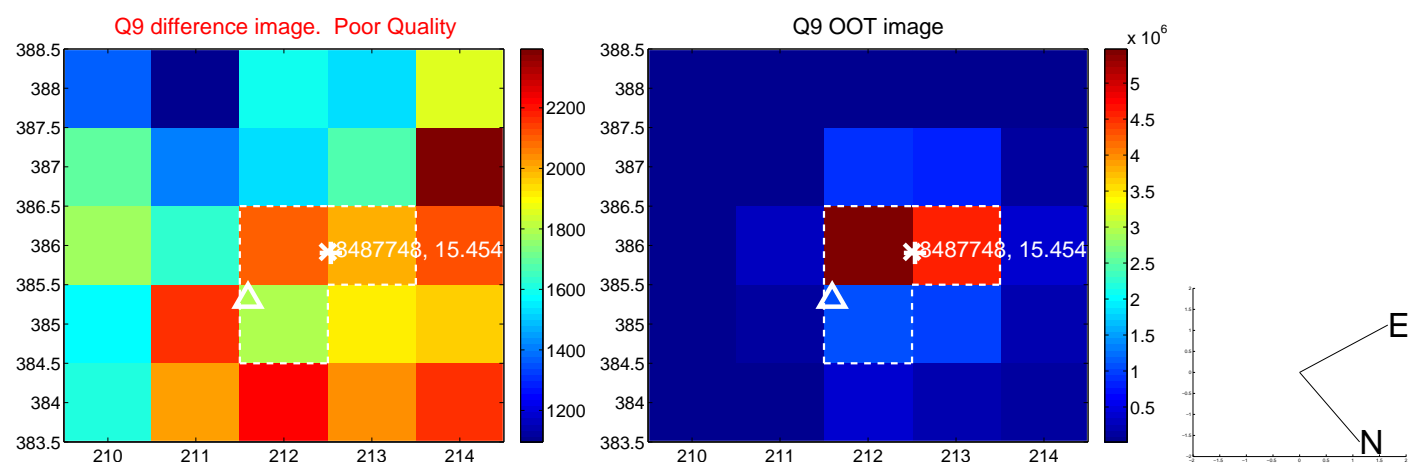
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



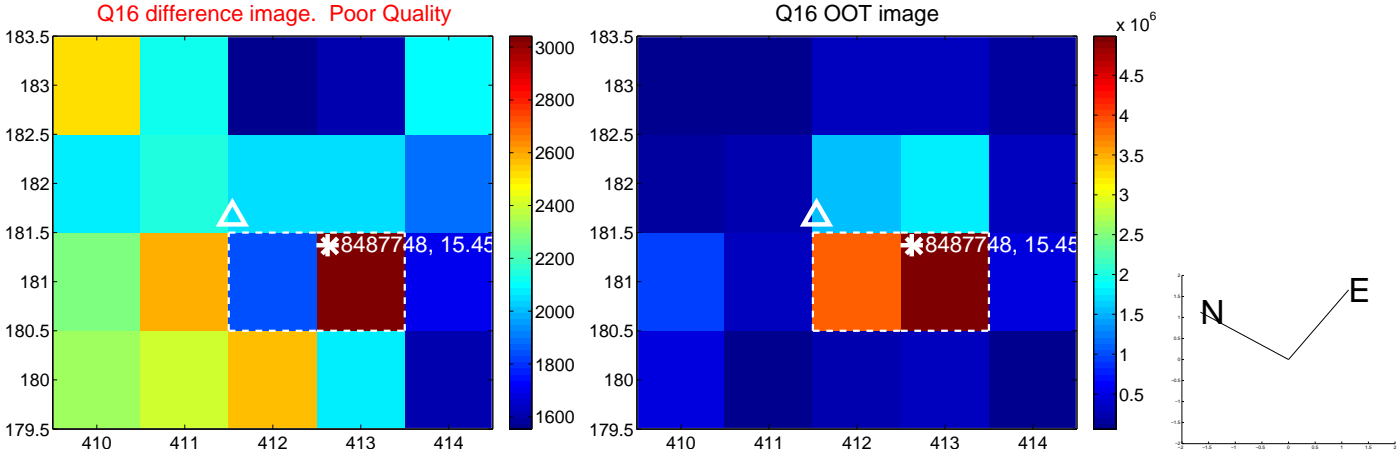
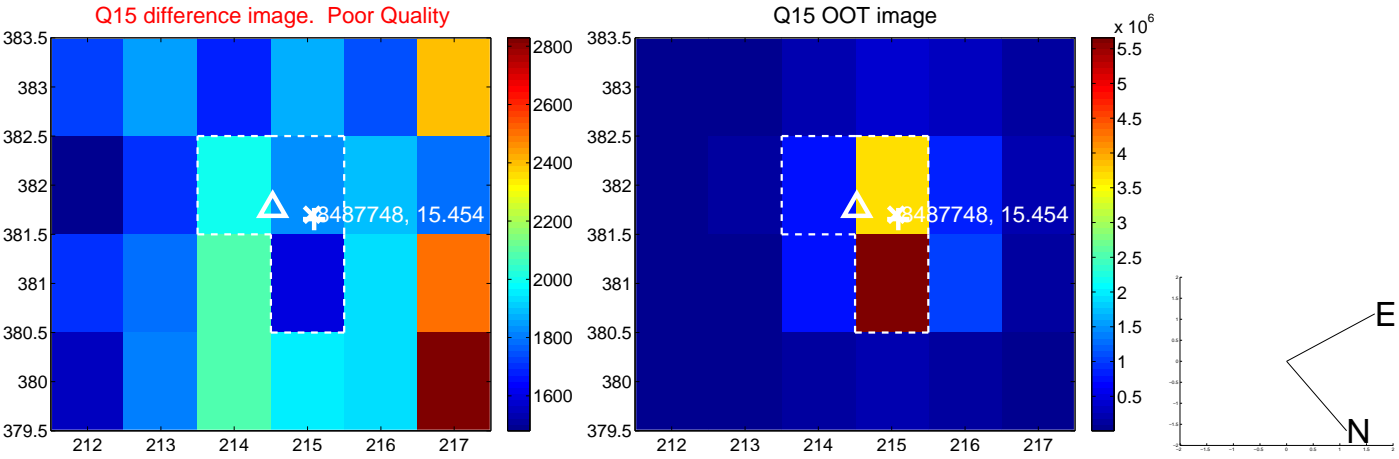
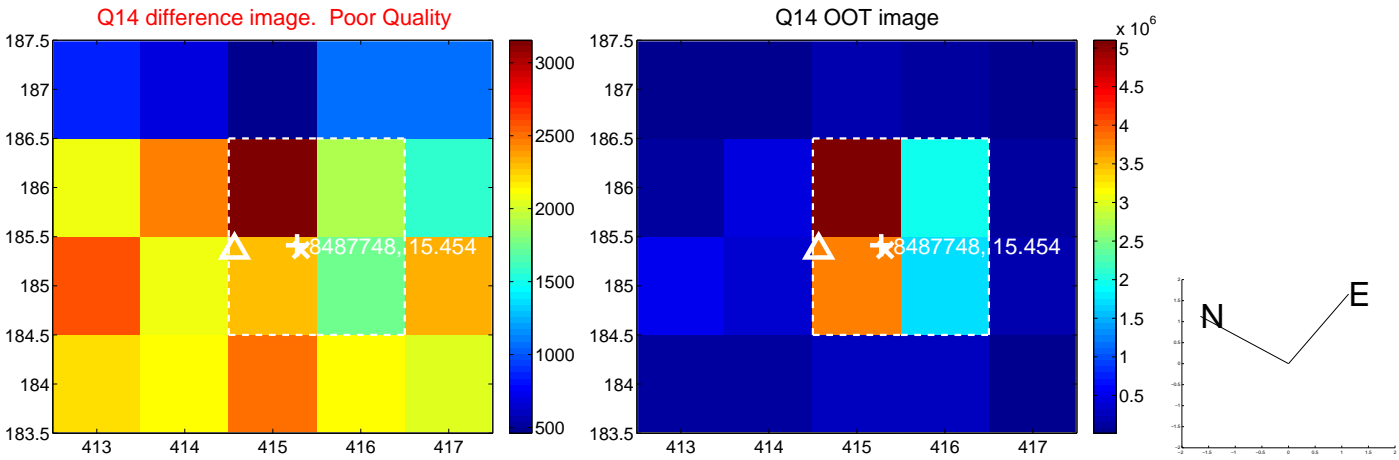
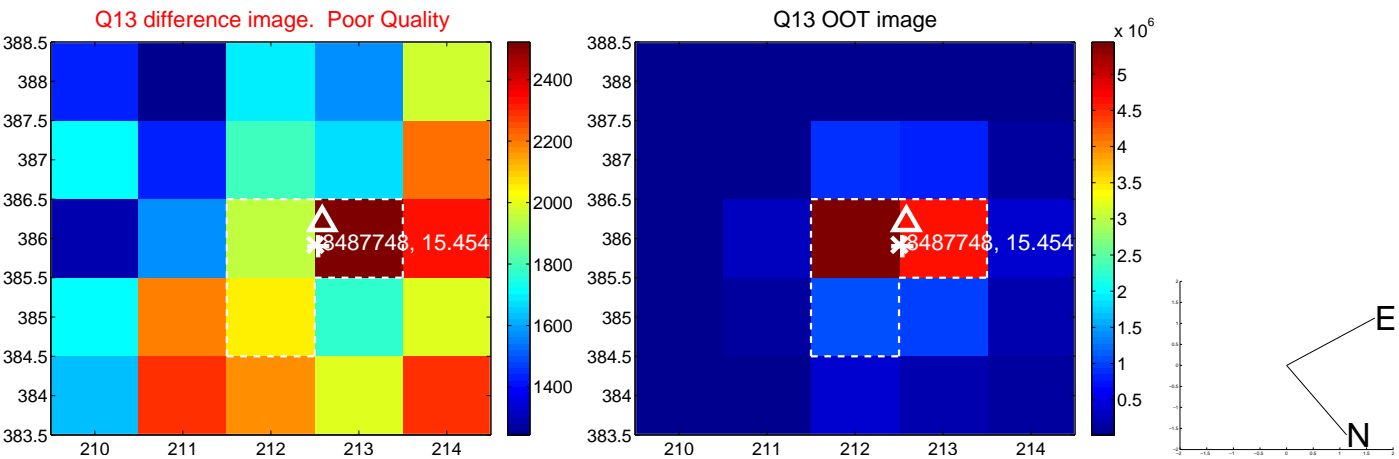
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

