

KIC 008247845

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})
008247845-01	OBS	No	0.649475	131.822220	120.4	6.077	9.7	8.9	1.53	5455	1.66	9513.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008247845-01	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.

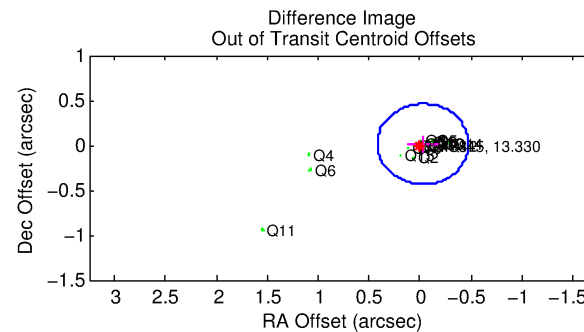
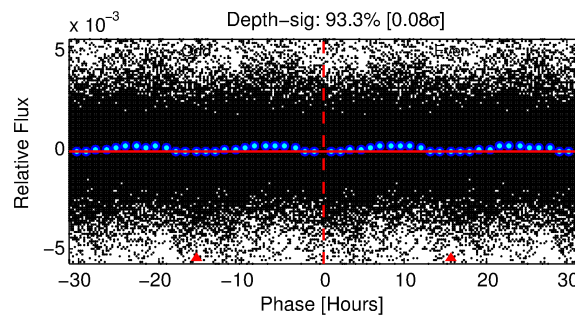
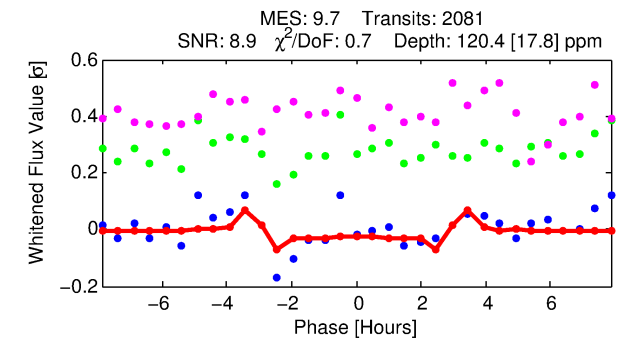
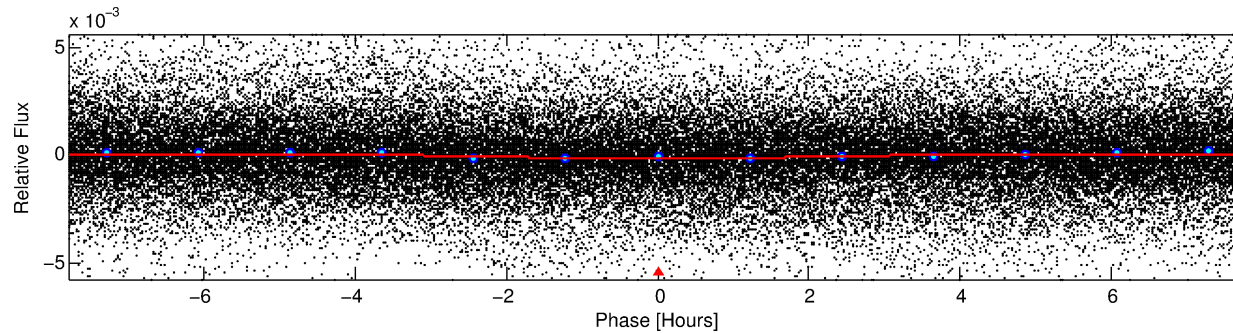
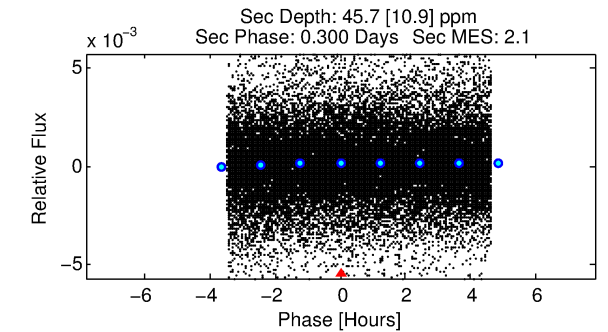
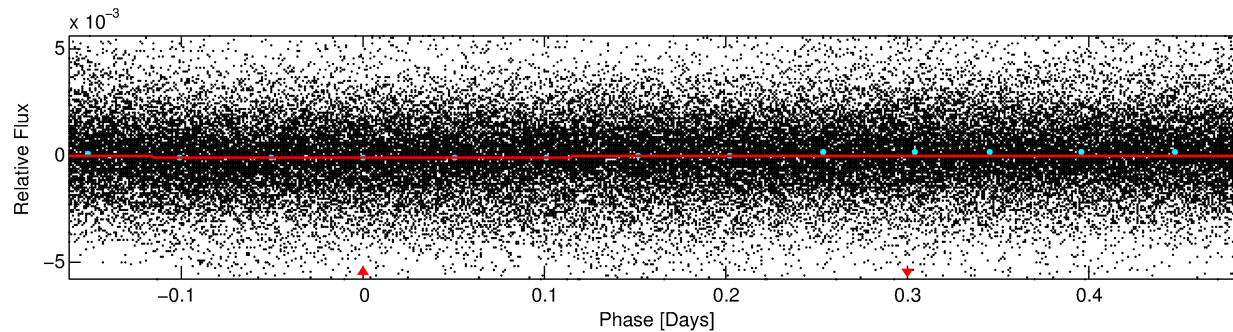
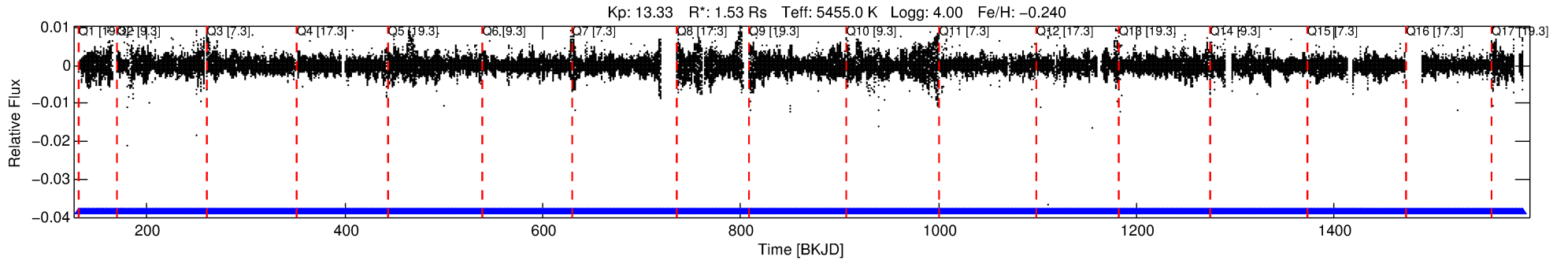
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008247845-01

No Significant Match Found

DV One-Page Summary

KIC: 8247845 Candidate: 1 of 1 Period: 0.649 d



DV Fit Results:

Period = 0.64948 [0.00001] d
Epoch = 131.8222 [0.0013] BKJD
Rp/R* = 0.0099 [0.0030]
a/R* = 1.07 [0.19]
b = 0.01 [128.12]
Seff = 9513.74 [8515.40]
Teff = 2518 [564] K
Rp = 1.66 [0.94] Re
a = 0.0140 [0.0073] AU
Ag = 1.80 [1.98] [0.40σ]
Teffp = 4507 [753] K [2.12σ]

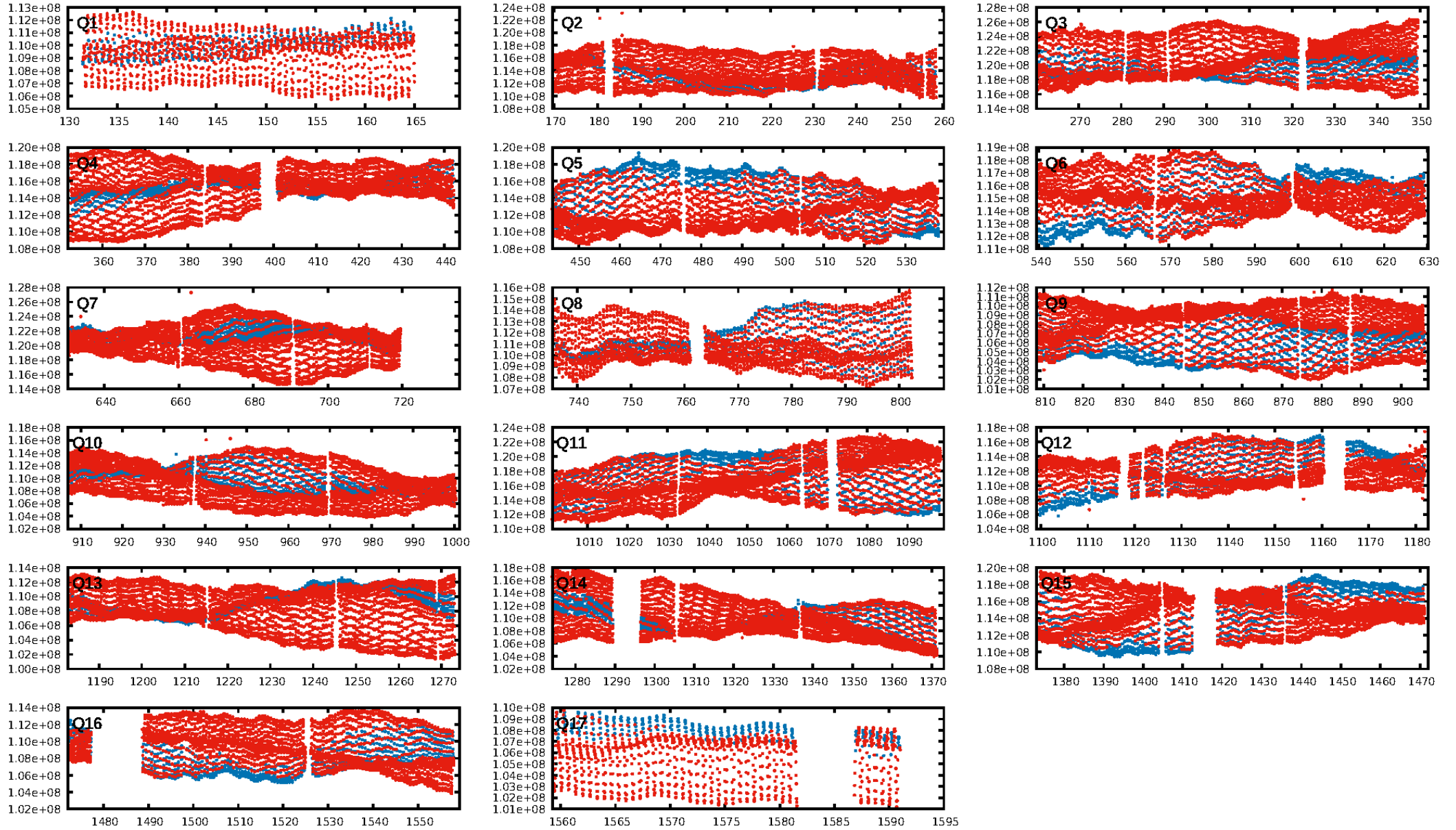
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1988/1988]
GhostDiagnostic-chr: 0.4059
Centroid-sig: 0.1%
Centroid-so: 0.234 arcsec [2.11σ]
OotOffset-rm: 0.032 arcsec [0.21σ]
KicOffset-rm: 0.128 arcsec [1.47σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

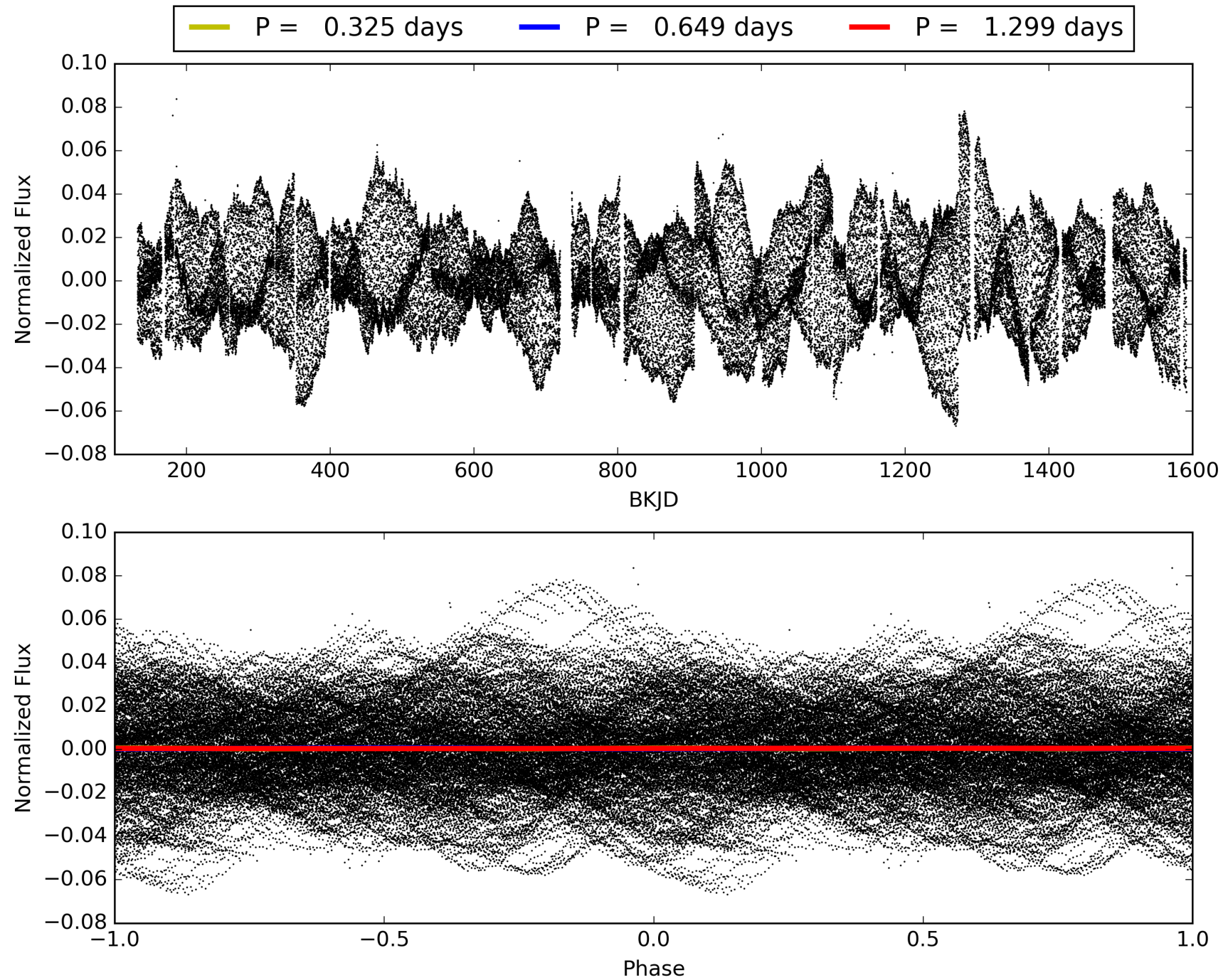
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:33:44 Z

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

TCE 008247845-01, PDC Light Curves

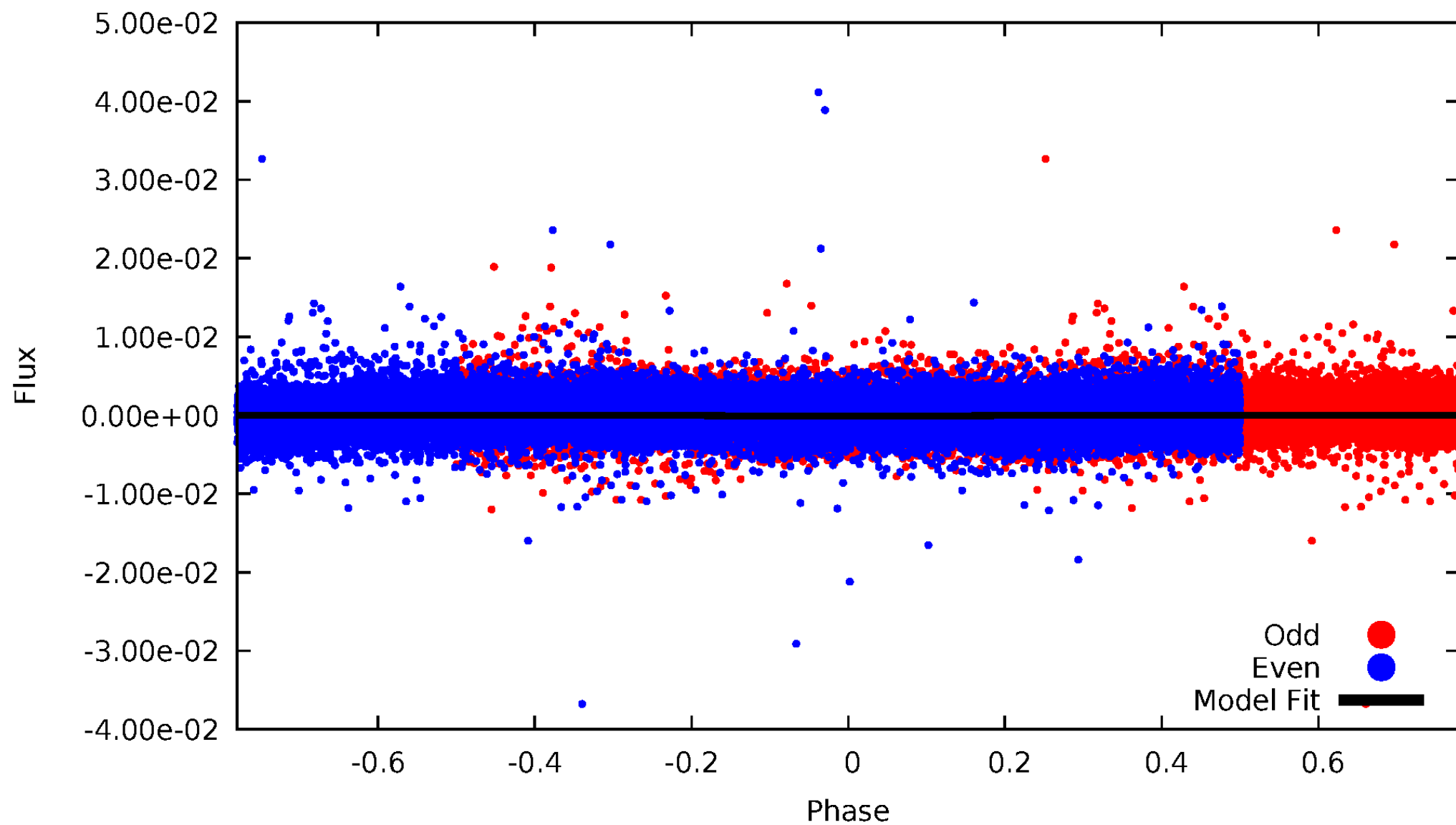


TCE 008247845-01



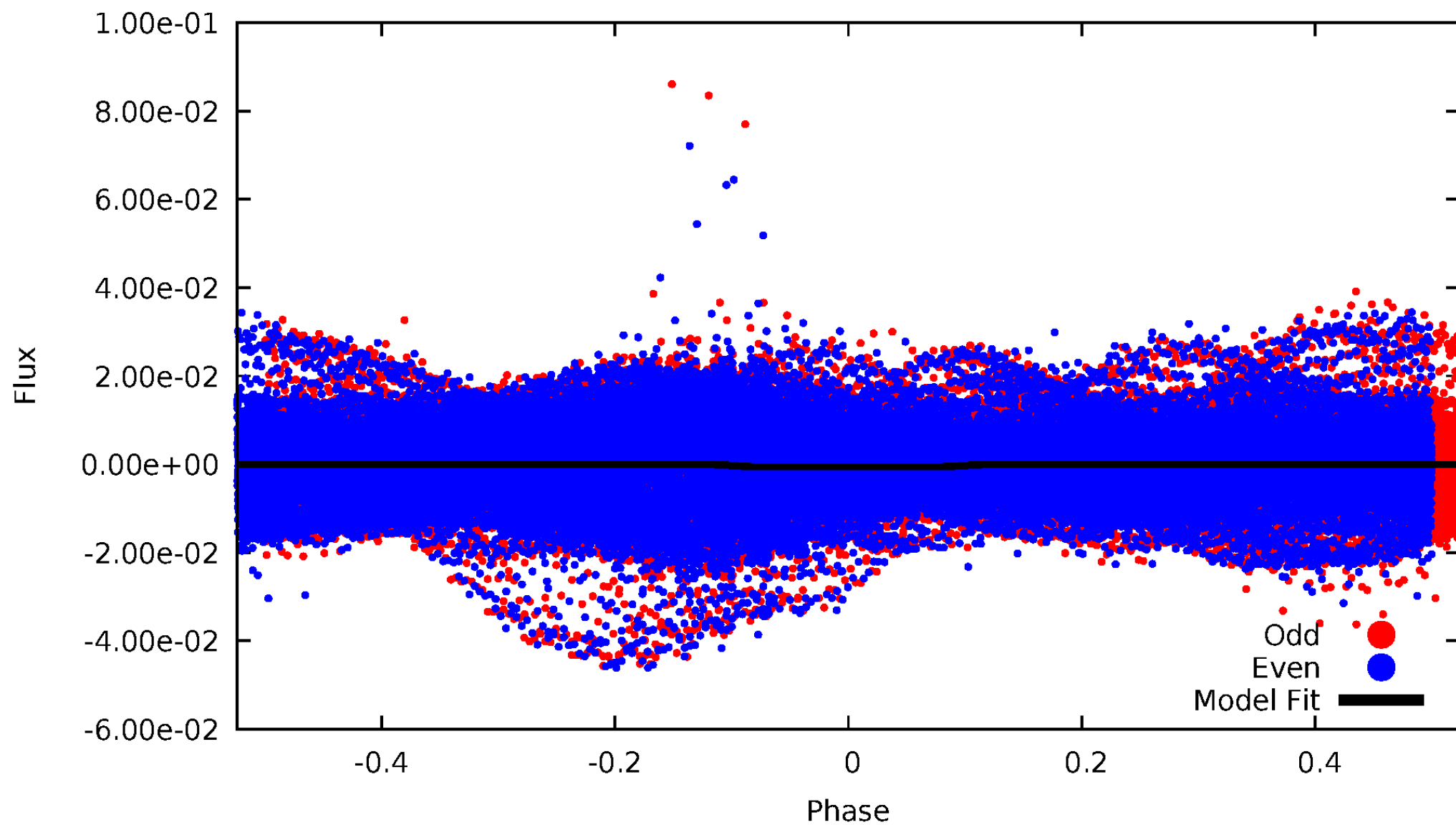
DV Odd/Even

TCE 008247845-01



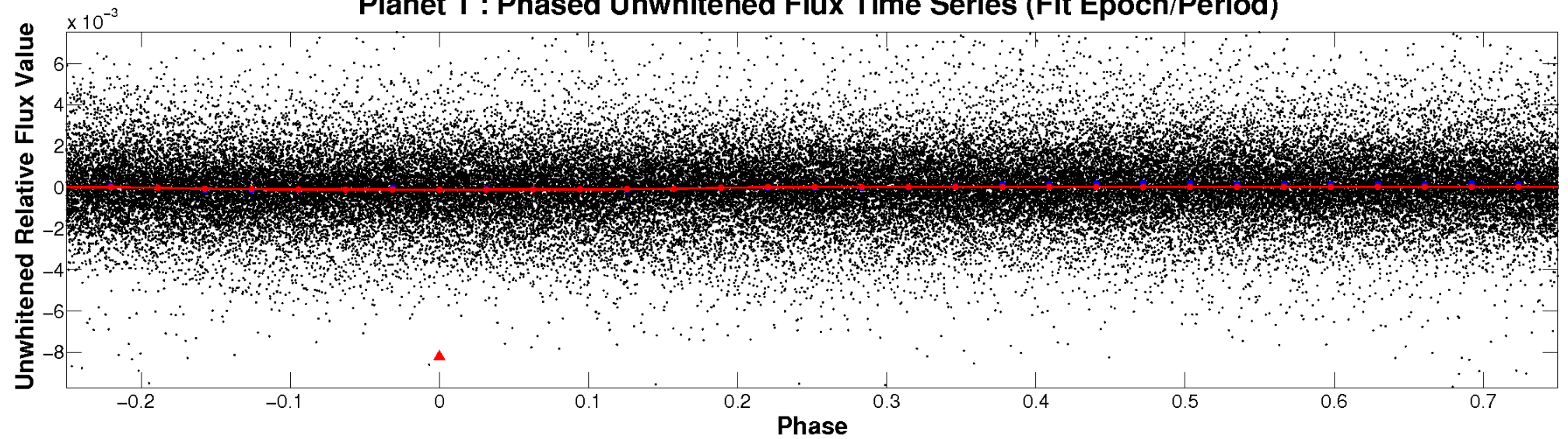
ALT Odd/Even

TCE 008247845-01

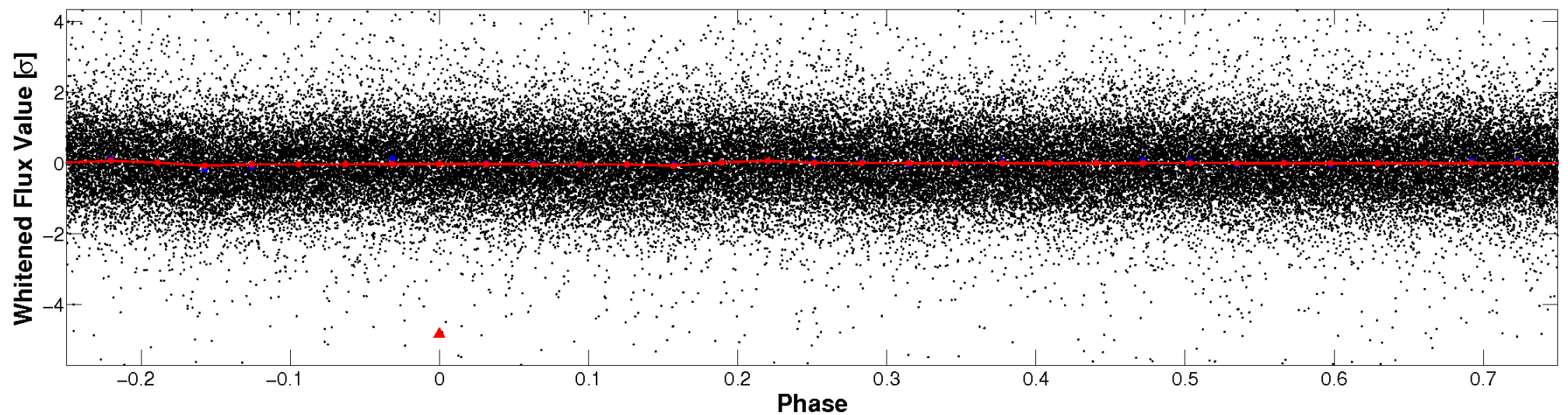


Non-Whitened Vs. Whitened Light Curve

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

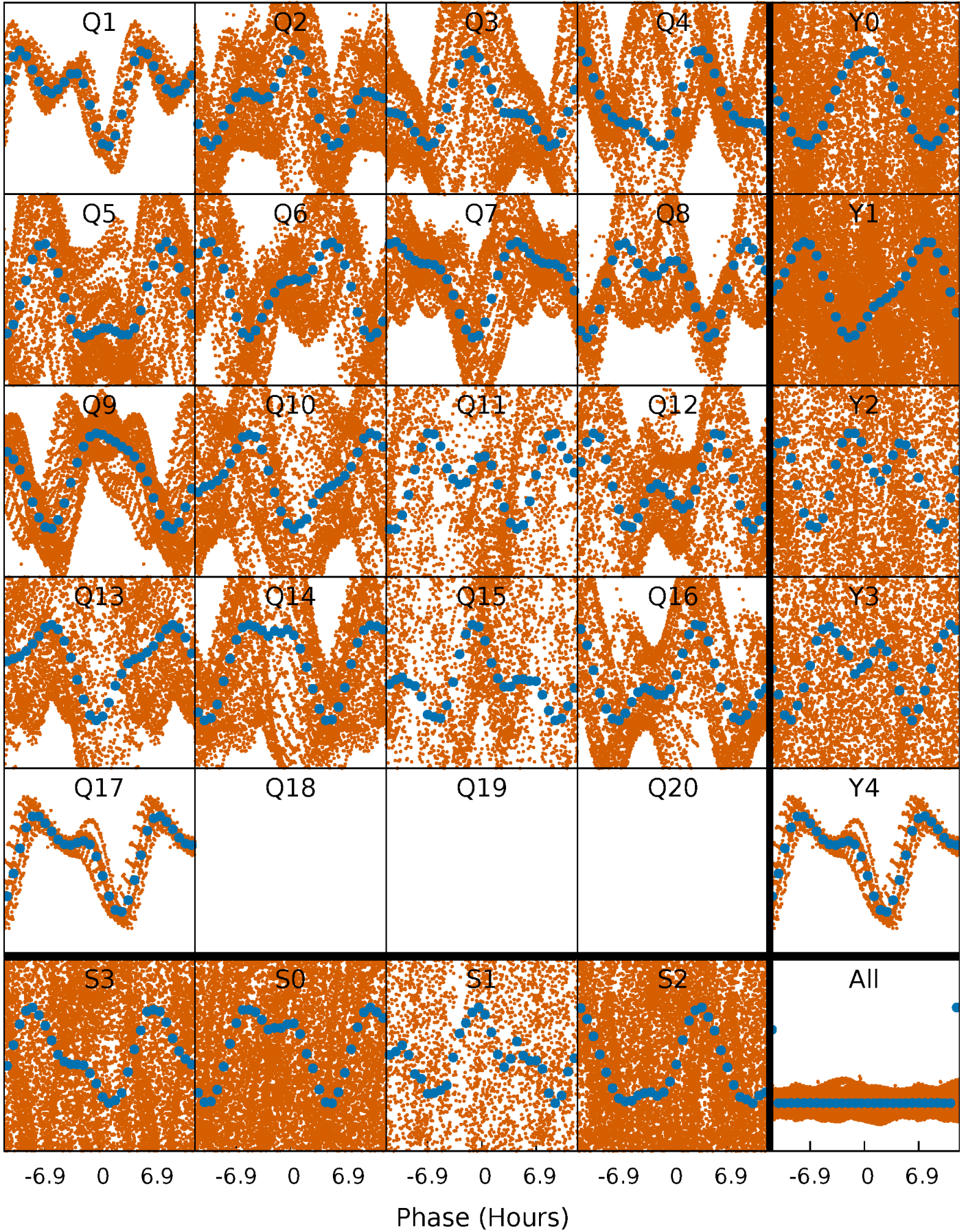


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



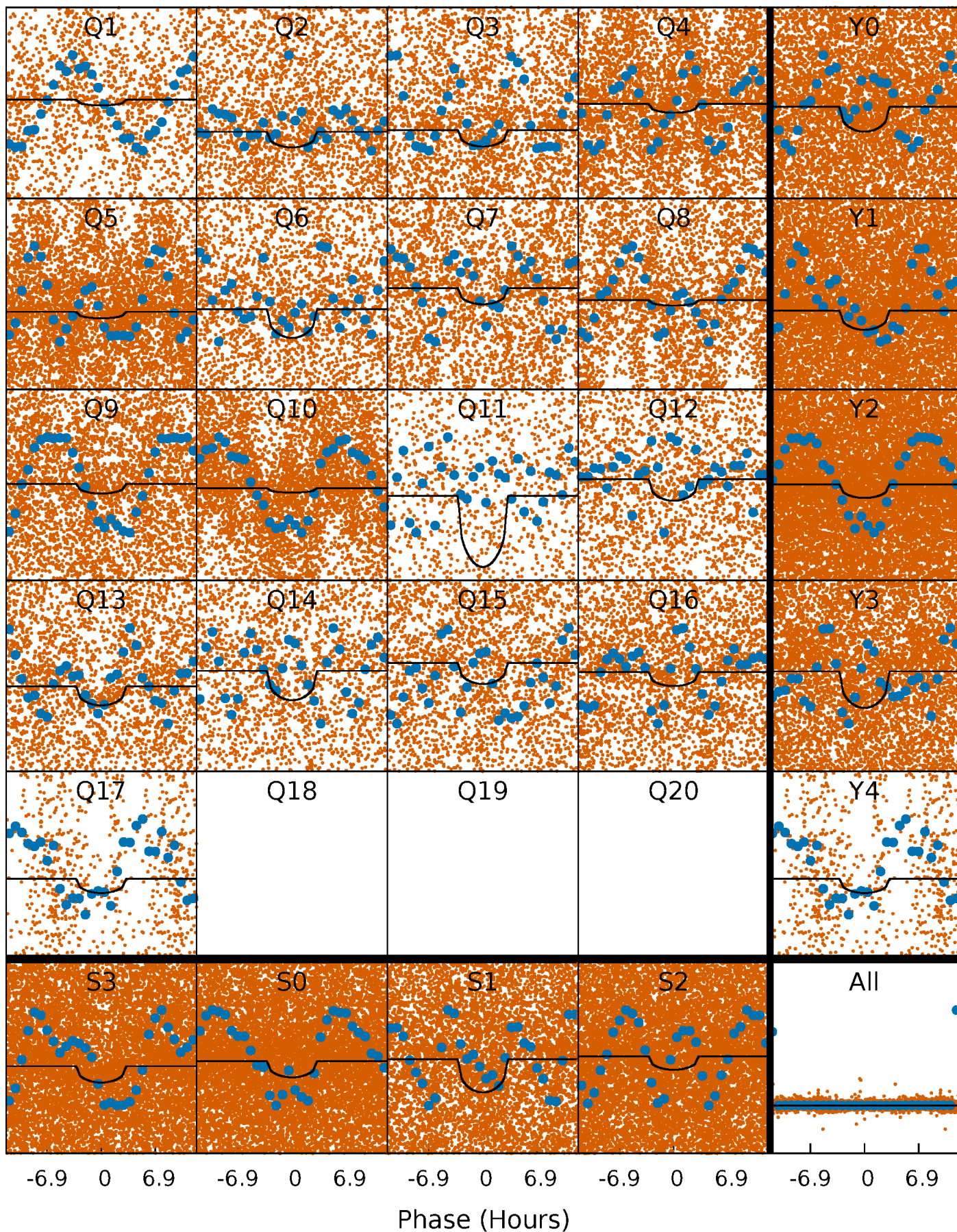
PDC Quarter-Phased Transit Curves

TCE 008247845-01 P= 0.649475 Days $T_0=131.822220$ (BKJD)



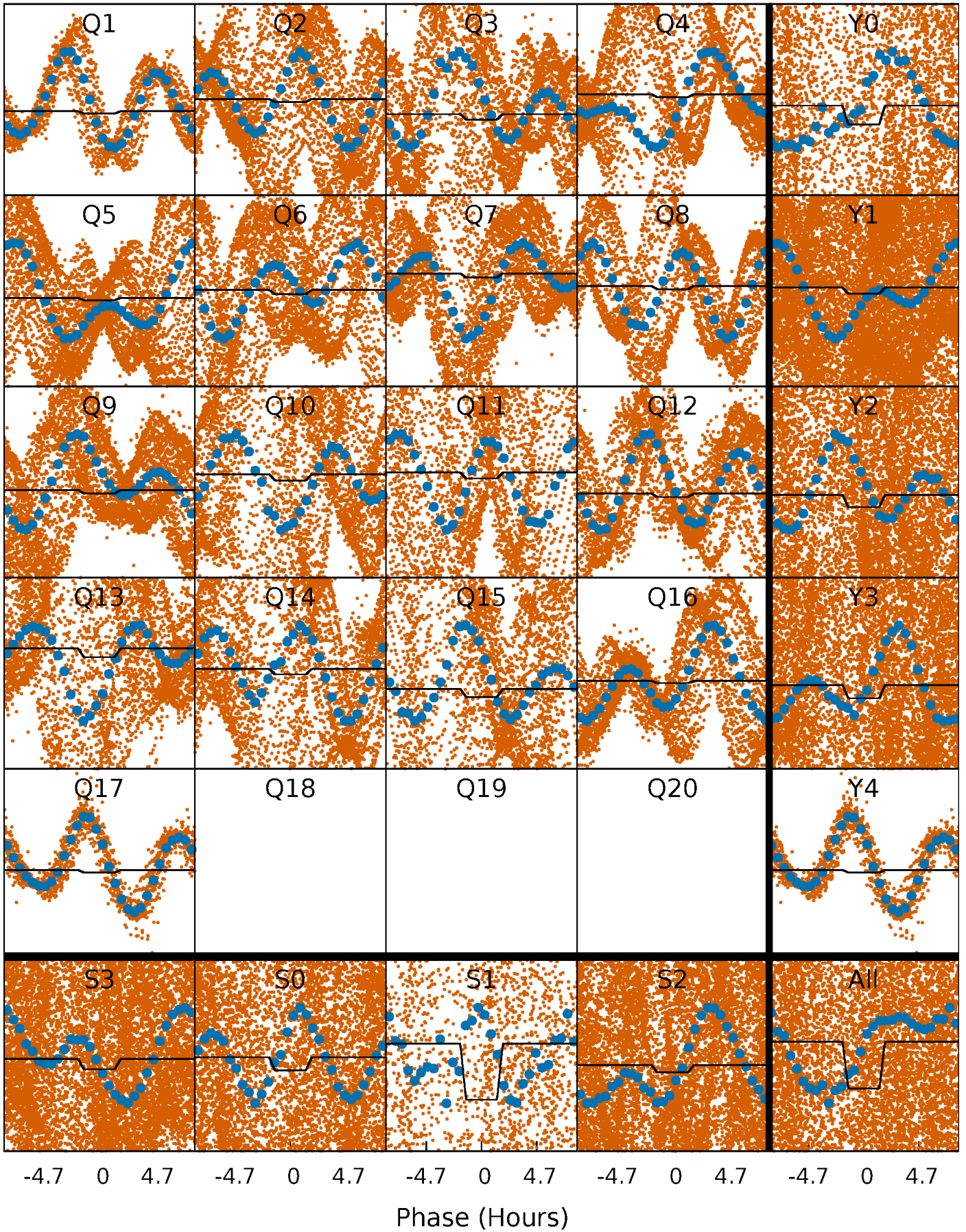
DV Quarter-Phased Transit Curves

TCE 008247845-01 P= 0.649475 Days $T_0=131.822220$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

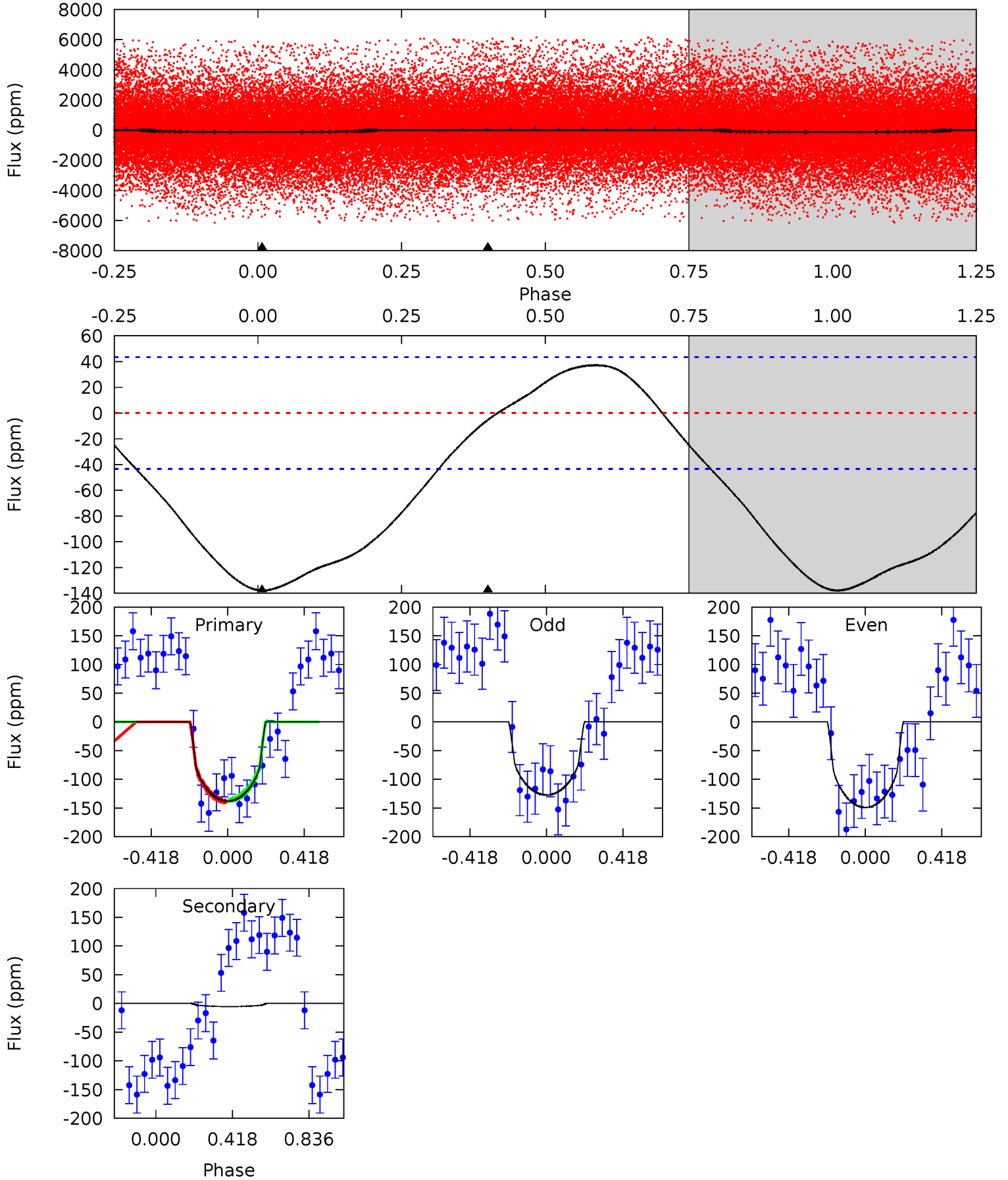
TCE 008247845-01 P= 0.649472 Days $T_0=131.827282$ (BKJD)



DV Model-Shift Uniqueness Test

008247845-01, $P = 0.649475$ Days, $E = 131.172745$ Days

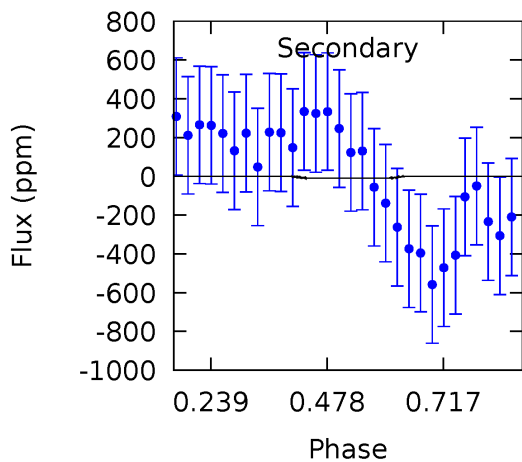
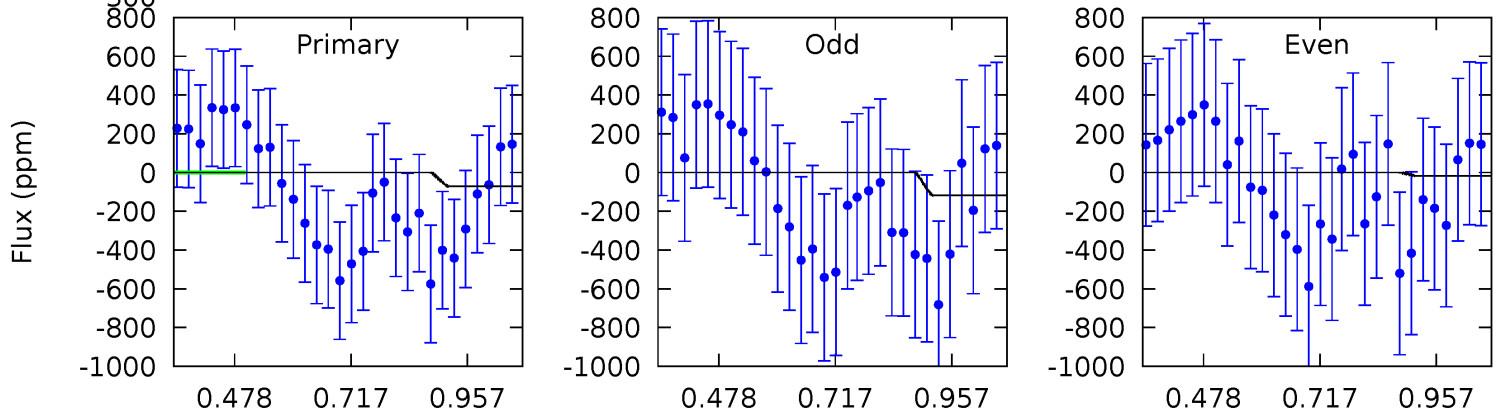
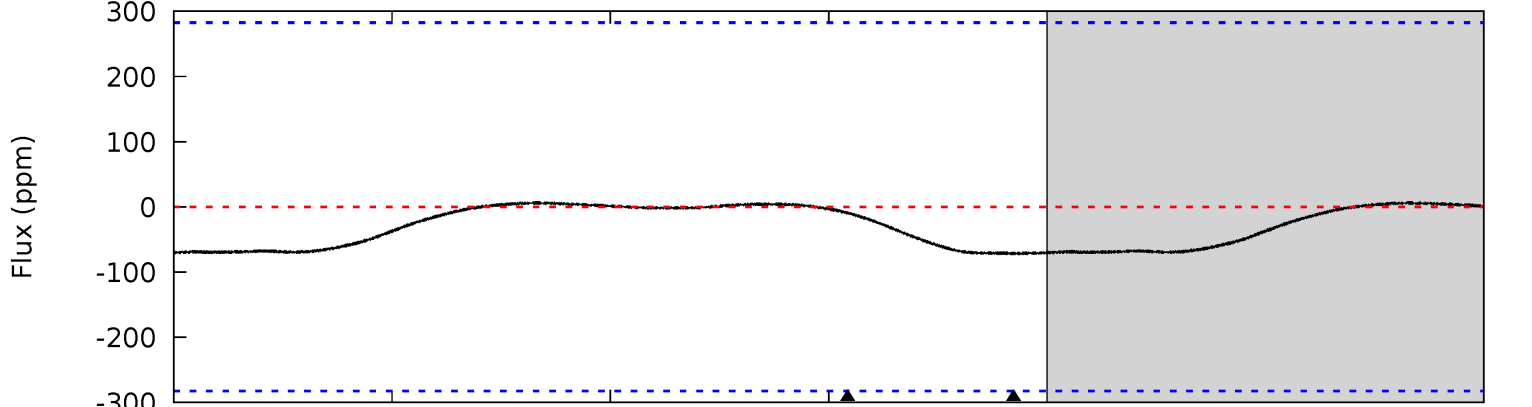
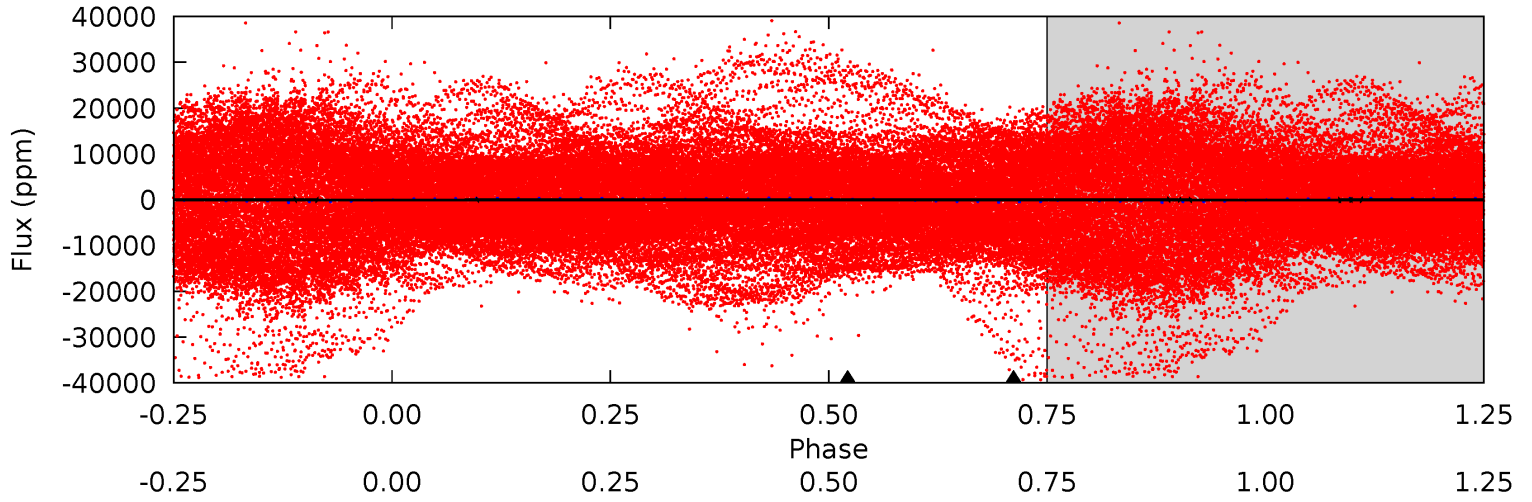
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	0.53	0	0	4.25	0.81	1.51	13.5	13.5	0.53	0.53	1.08	1.25	0.21	0.12



Alt Model-Shift Uniqueness Test

008247845-01, P = 0.649472 Days, E = 131.177810 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.11	0.15	0	0	4.38	1.18	0.30	1.11	1.11	0.15	0.15	0.76	-0.15	0.08	1.01



Stellar Parameters For KIC 008247845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5455^{+162}_{-146}	$4.005^{+0.539}_{-0.231}$	$-0.240^{+0.350}_{-0.250}$	$1.533^{+0.602}_{-0.736}$	$0.868^{+0.098}_{-0.098}$	$0.339^{+1.791}_{-0.201}$
	+3%/-3%	+13%/-6%	+146%/-104%	+39%/-48%	+11%/-11%	+528%/-59%
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 008247845-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 10	$1.55^{+0.67}_{-0.60}$	3472^{+372}_{-430}	-2826^{+6456}_{-909}	$0.207^{+0.669}_{-0.423}$
Alt.	-10 ± 65	$3.63^{+1.09}_{-1.04}$	3460^{+414}_{-505}	-3229^{+6625}_{-697}	$0.080^{+0.611}_{-0.545}$

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 $A_{\text{obs}} \gg 1.0$

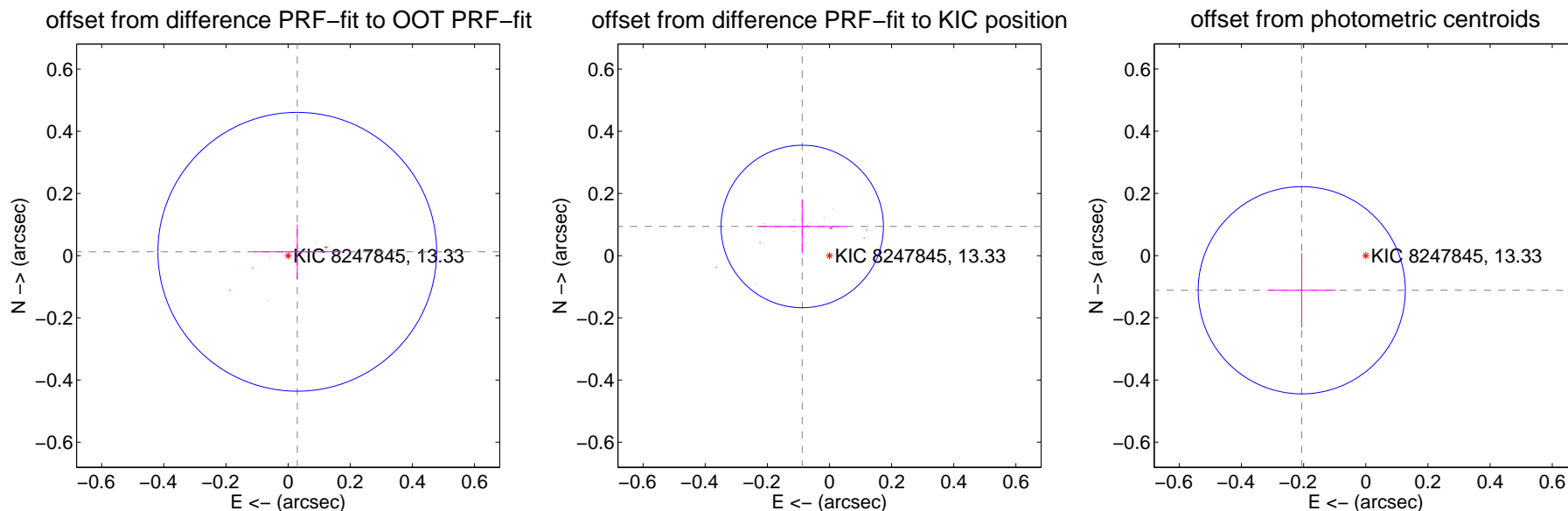
DV Centroid Data

Supplemental centroid analysis for 008247845-01. Kepler magnitude: 13.33. Transit SNR 8.90

There are 9 quarters with good PRF difference image offsets

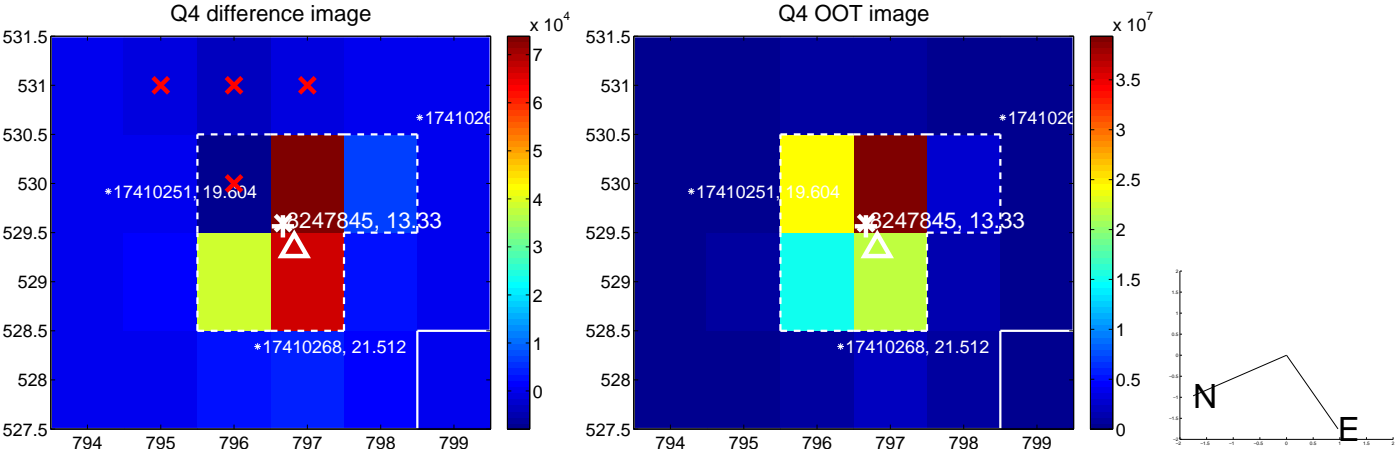
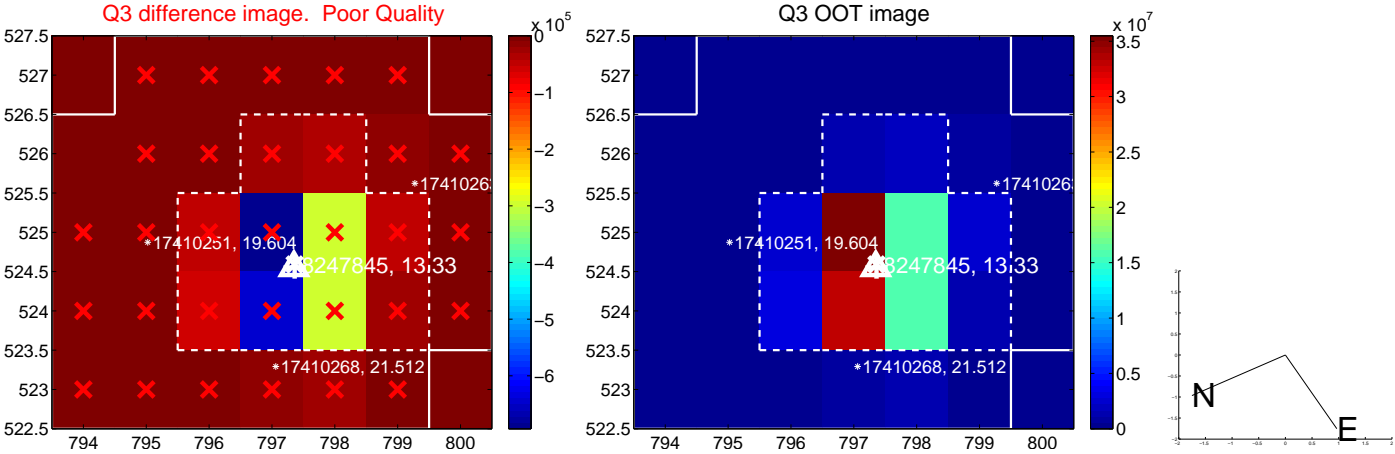
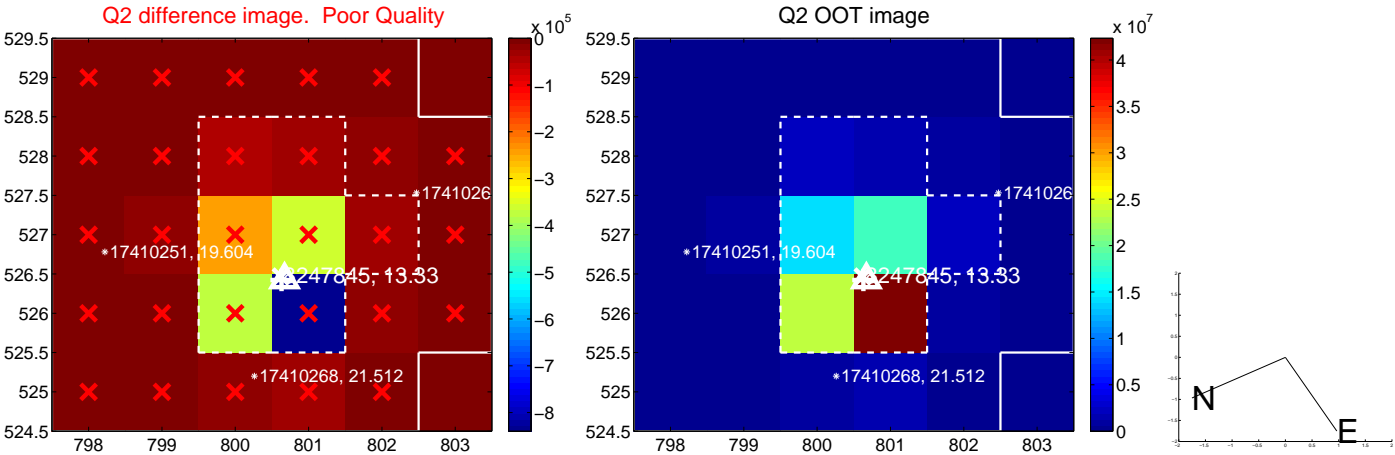
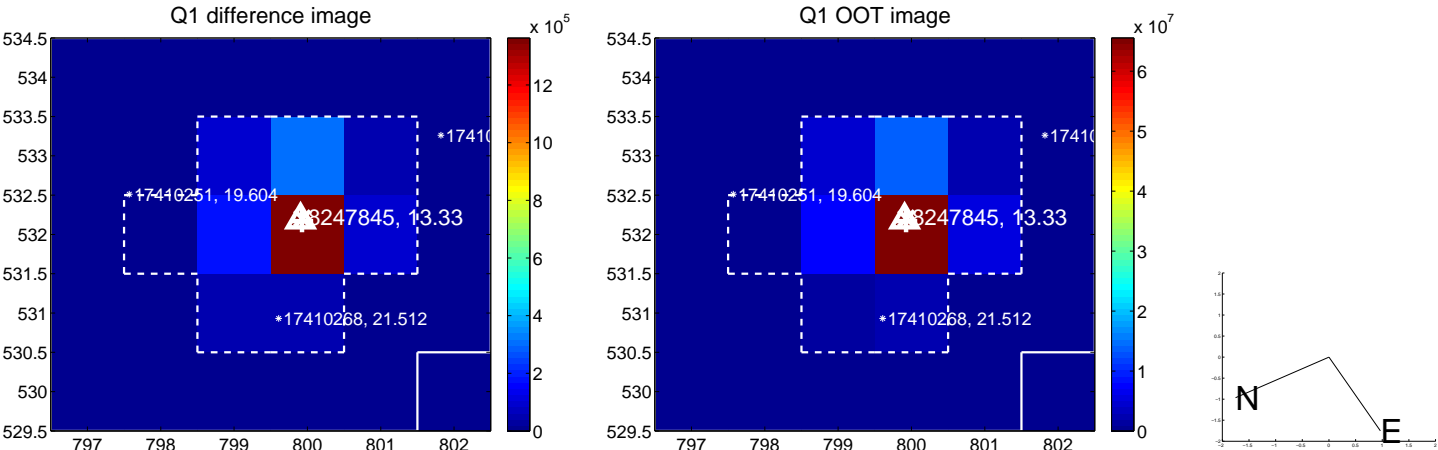
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.032 ± 0.149	0.21	-0.029 ± 0.141	0.012 ± 0.088
PRF-fit source offset from KIC position	0.128 ± 0.087	1.47	0.088 ± 0.145	0.094 ± 0.088
photometric centroid source offset	0.23 ± 0.11	2.11	0.21 ± 0.11	-0.11 ± 0.12

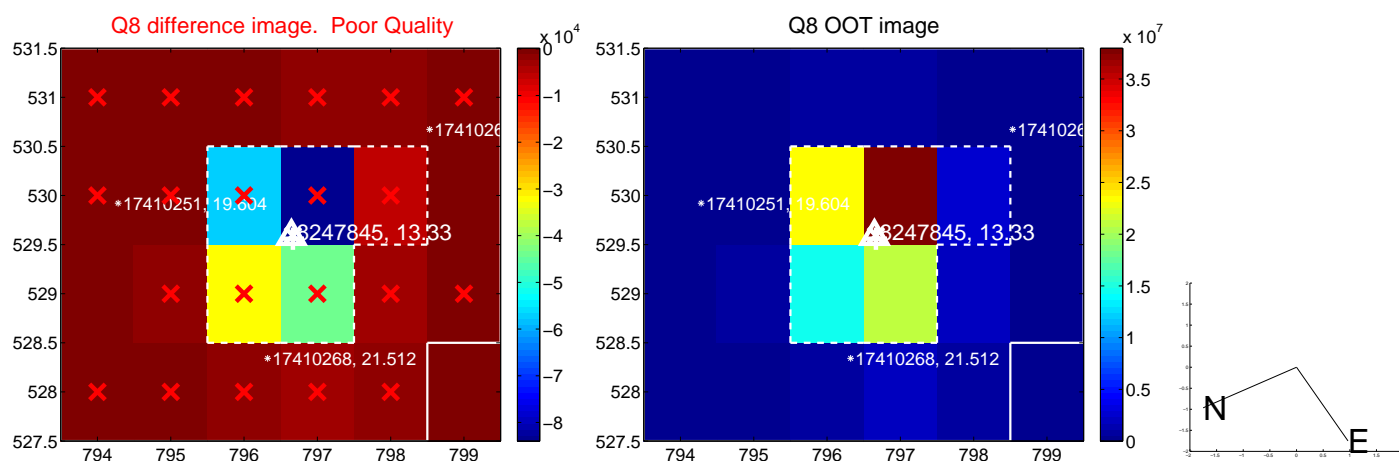
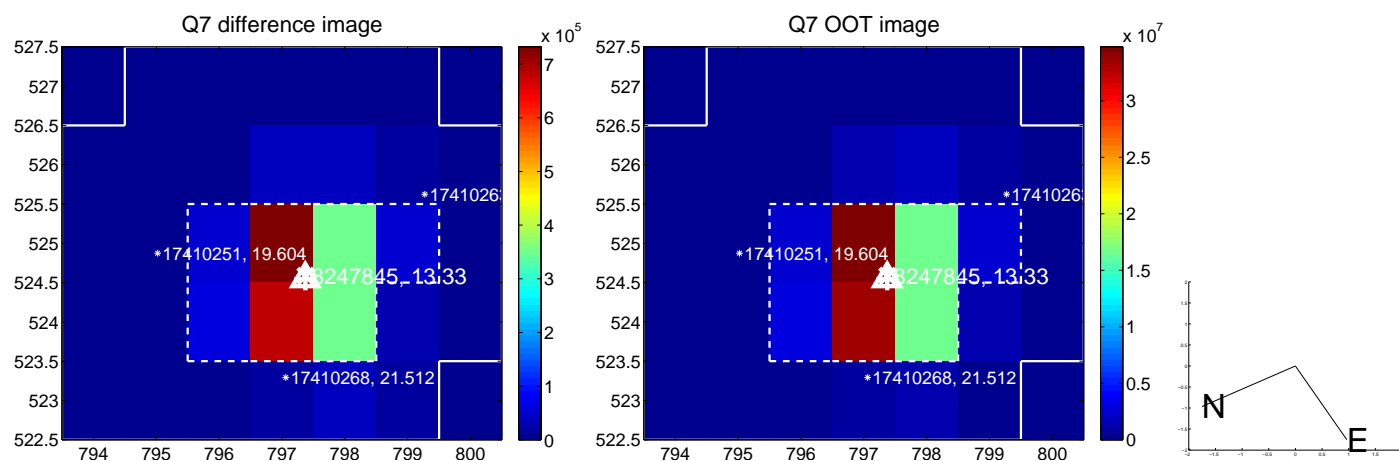
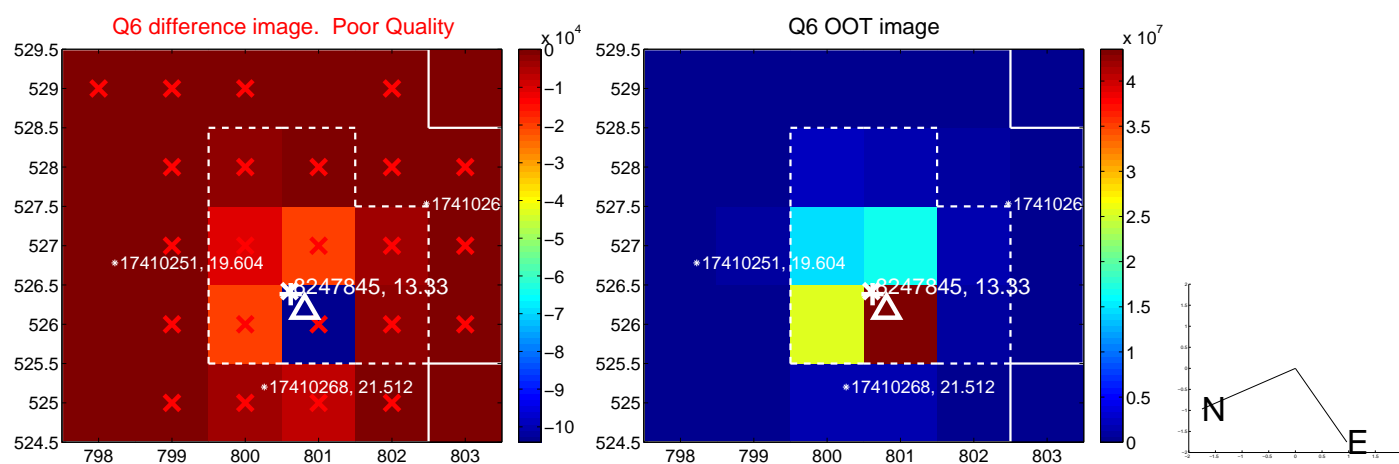
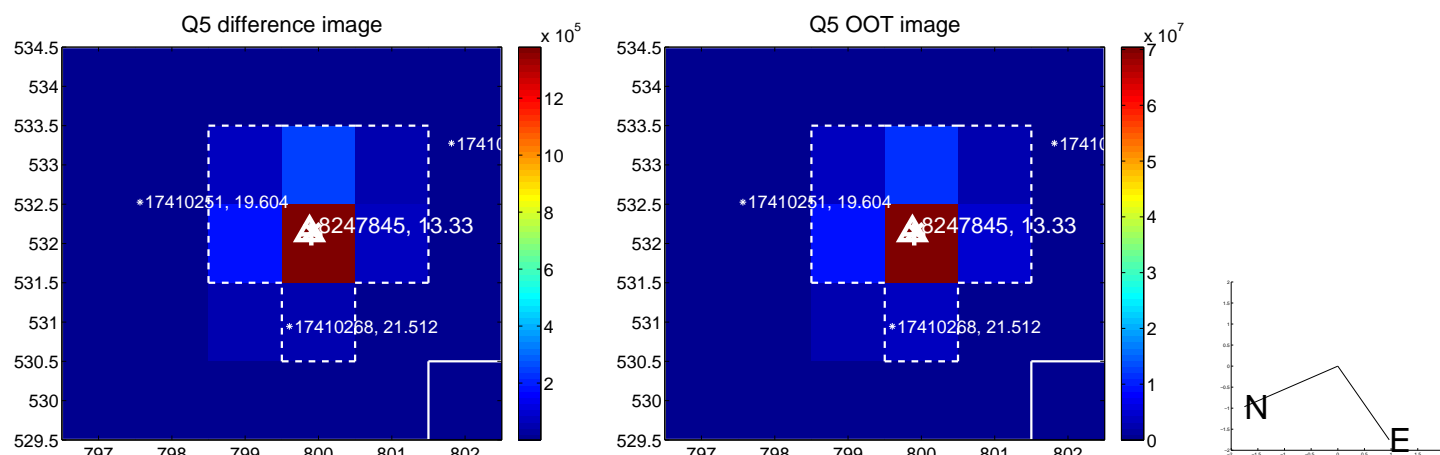


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

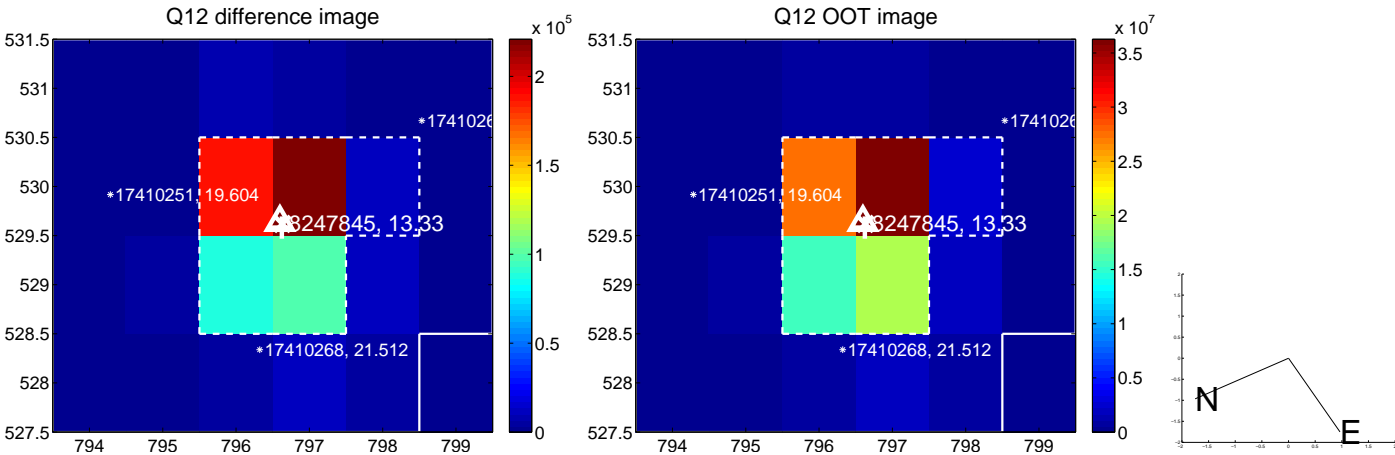
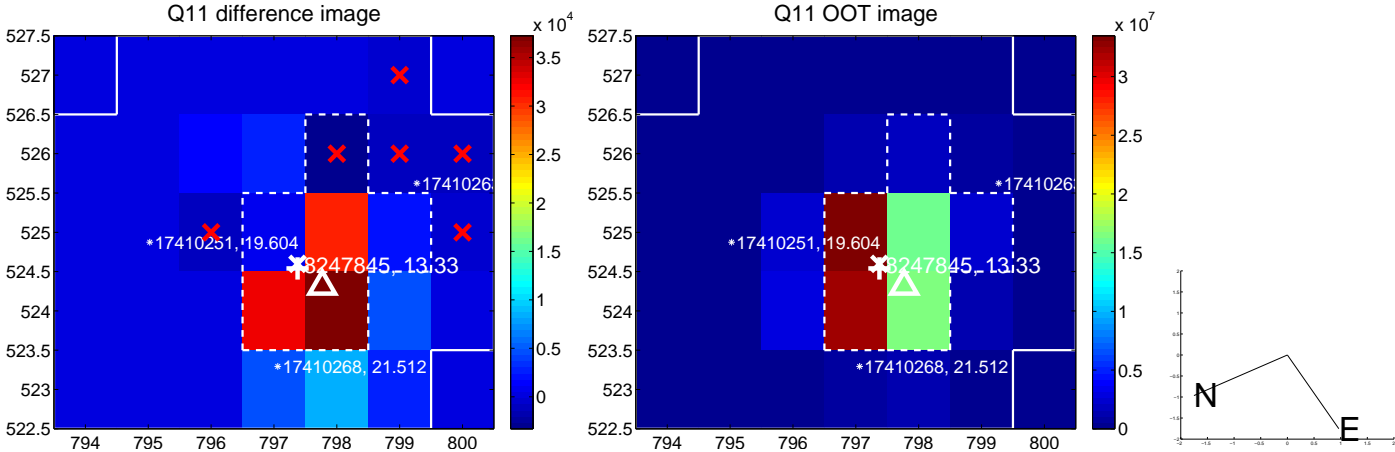
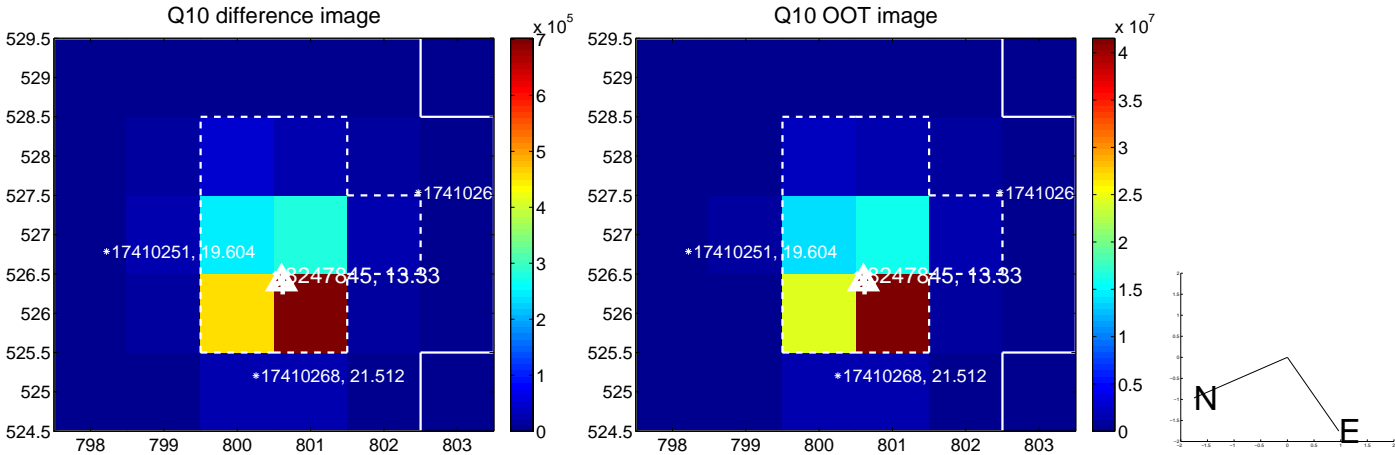
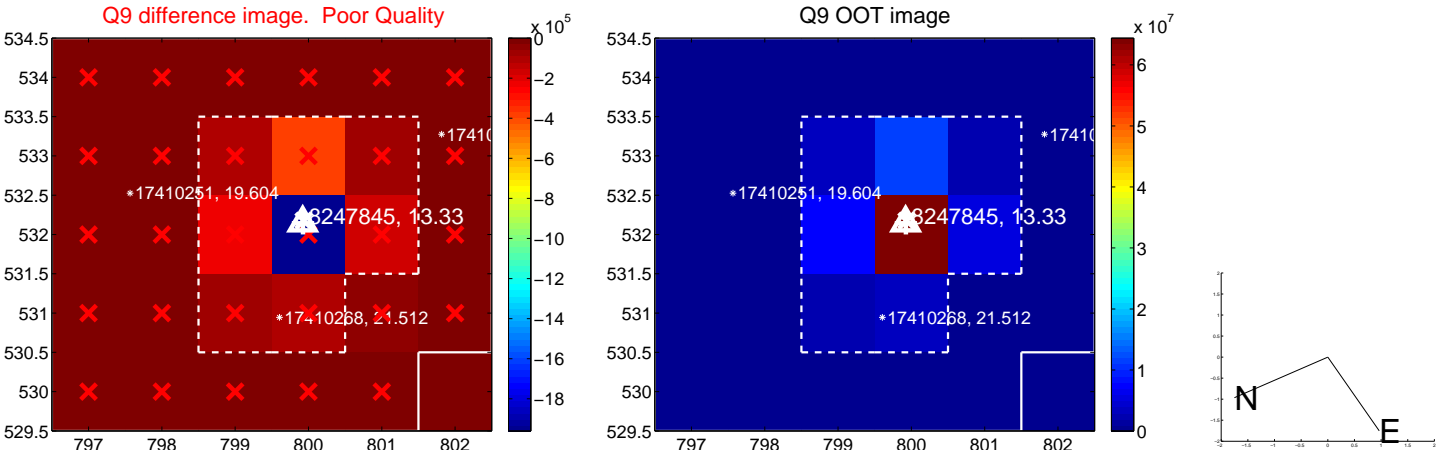
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



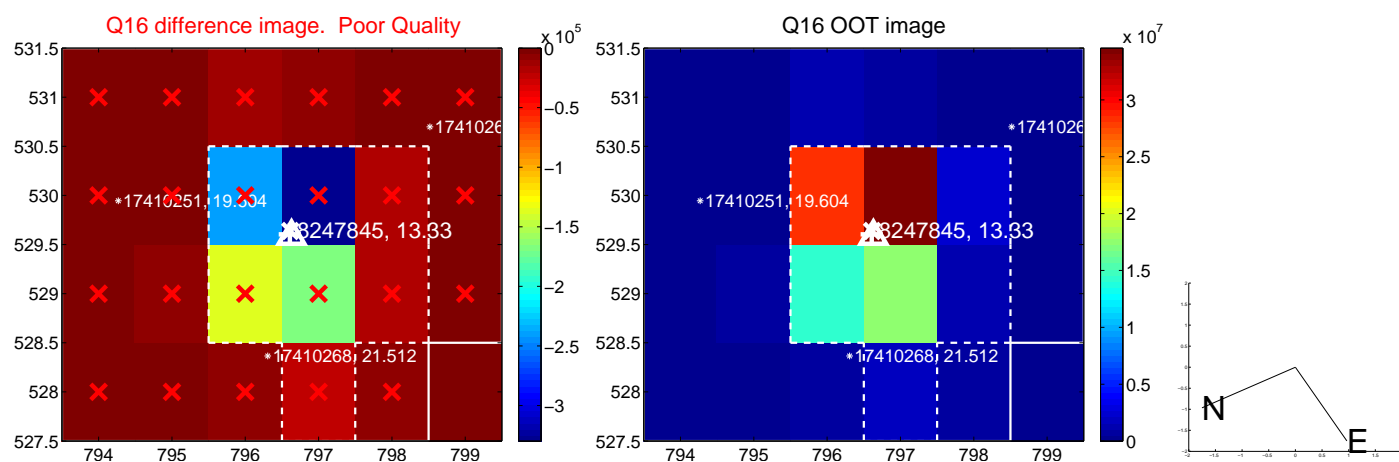
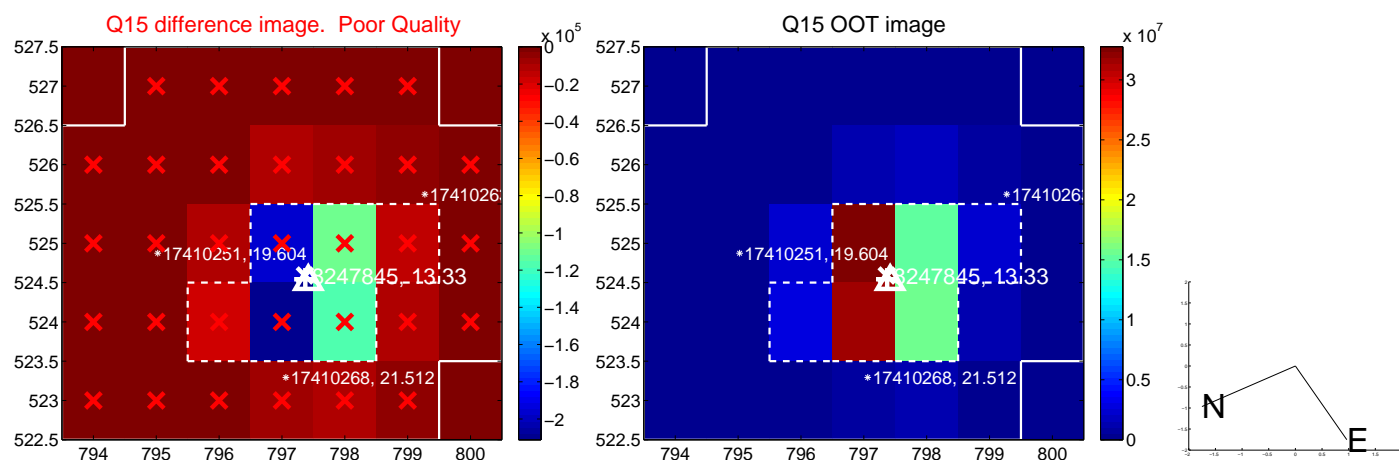
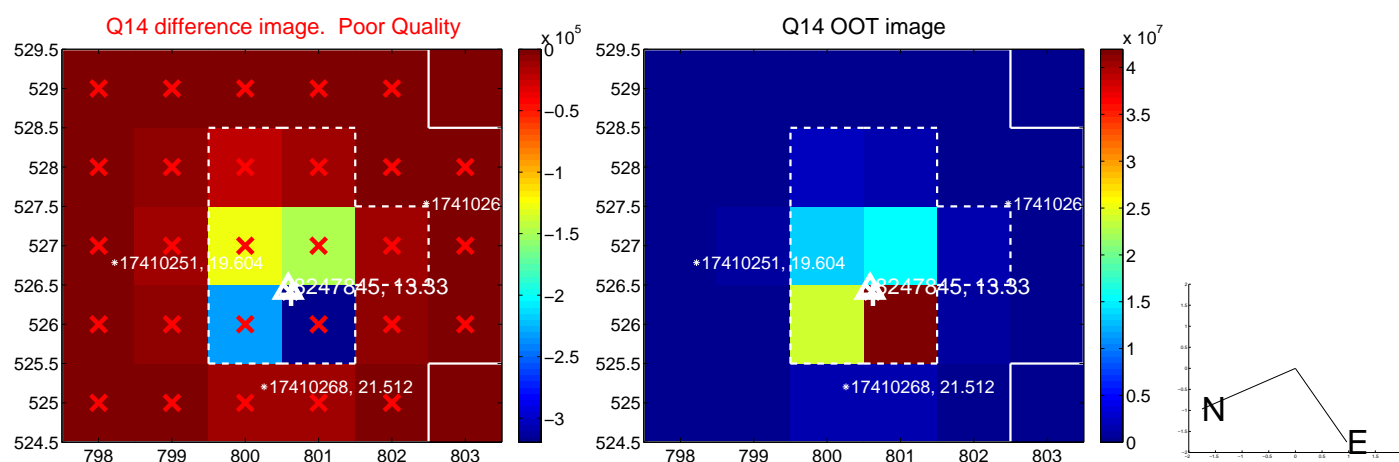
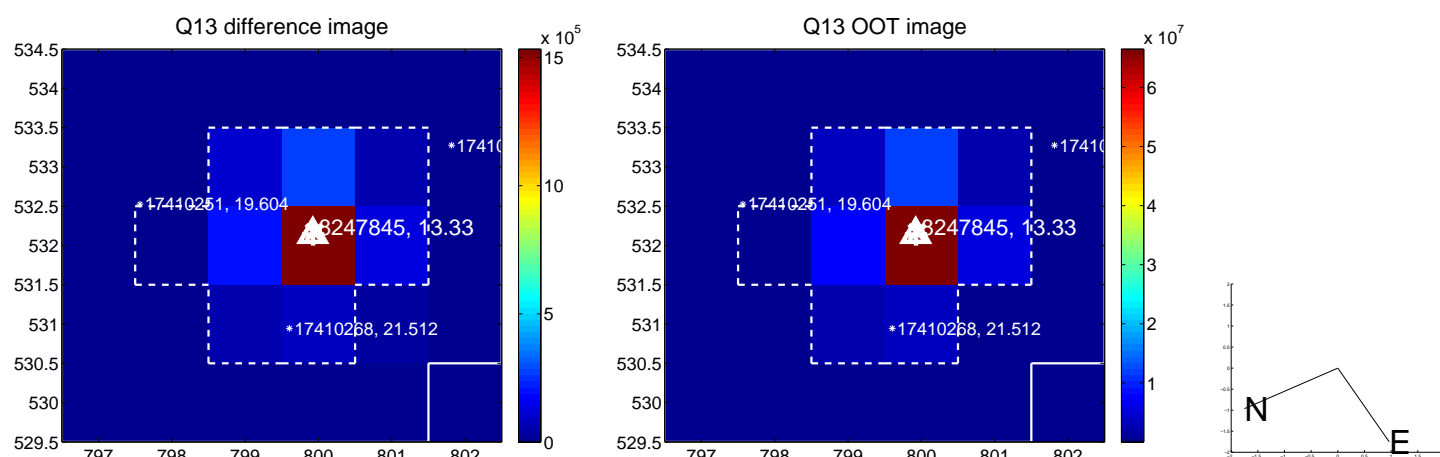
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



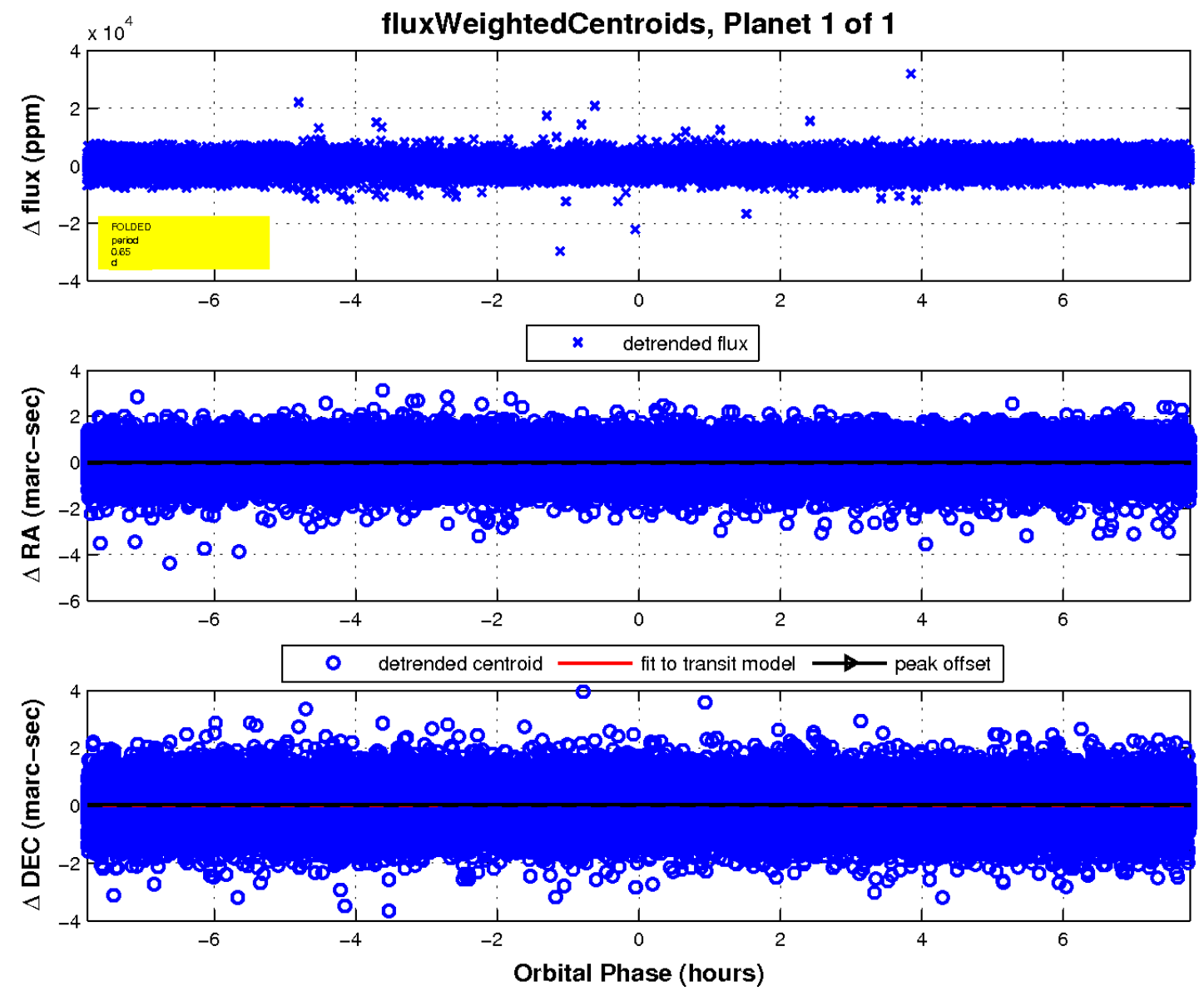
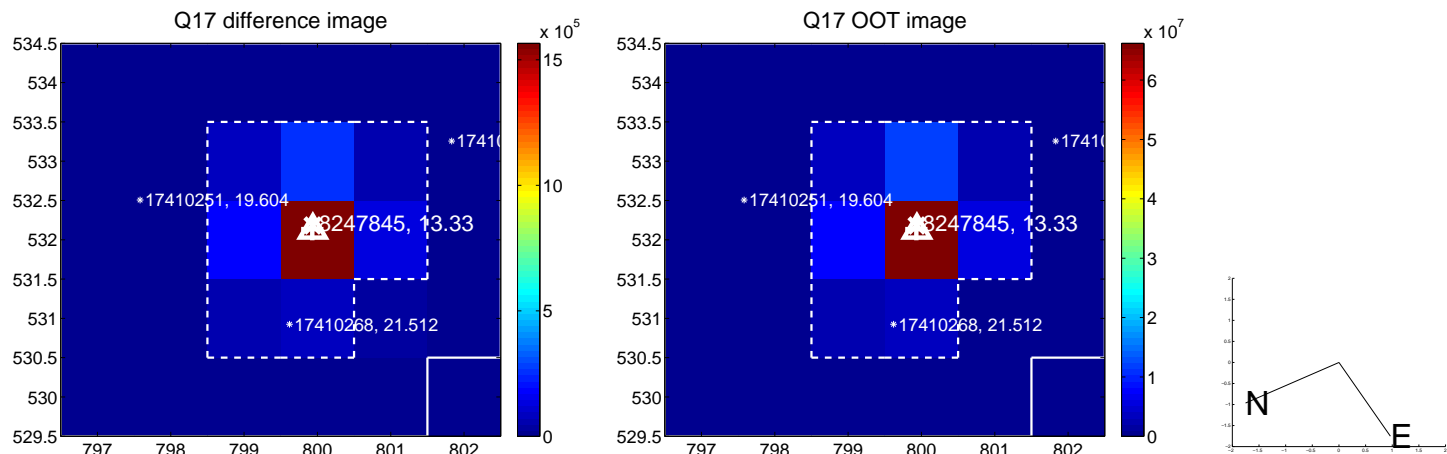
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UKIRT Image

Declination

