

KIC 009414717

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})
009414717-01	OBS	No	413.564990	364.340569	214.2	14.214	8.0	7.5	1.15	6598	2.00	1.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009414717-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—CENT_FEW_DIFFS

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

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

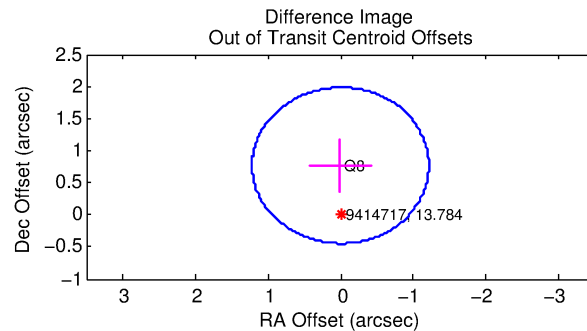
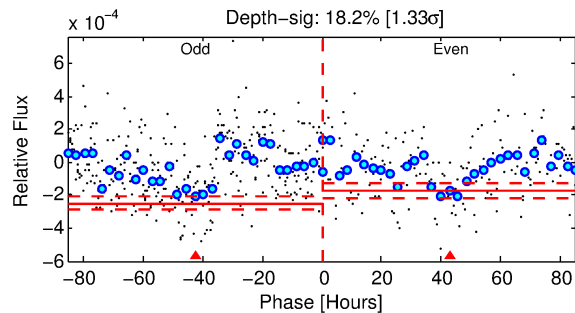
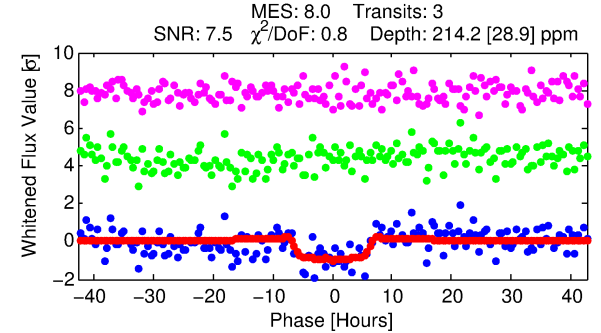
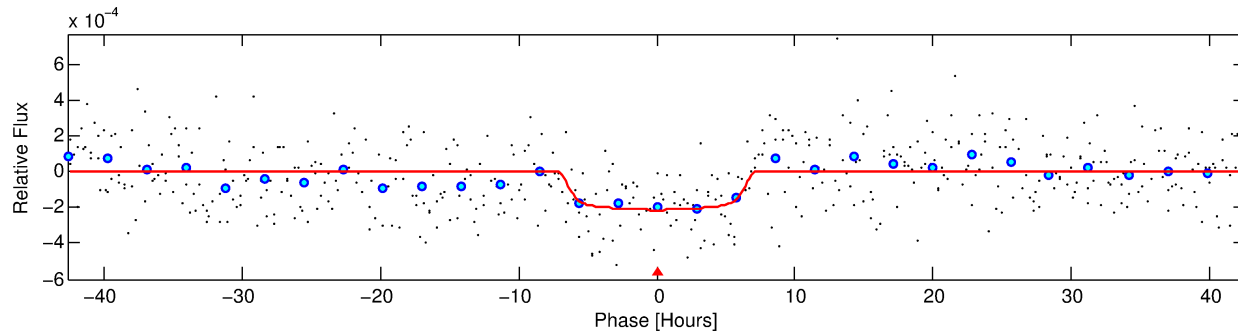
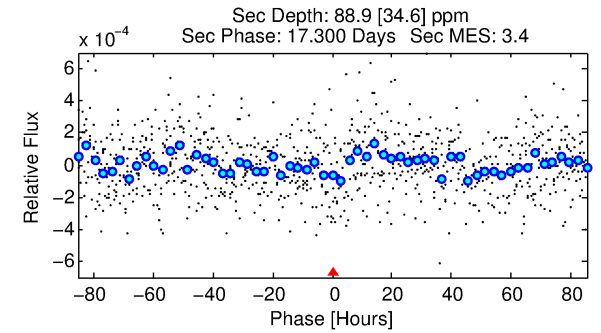
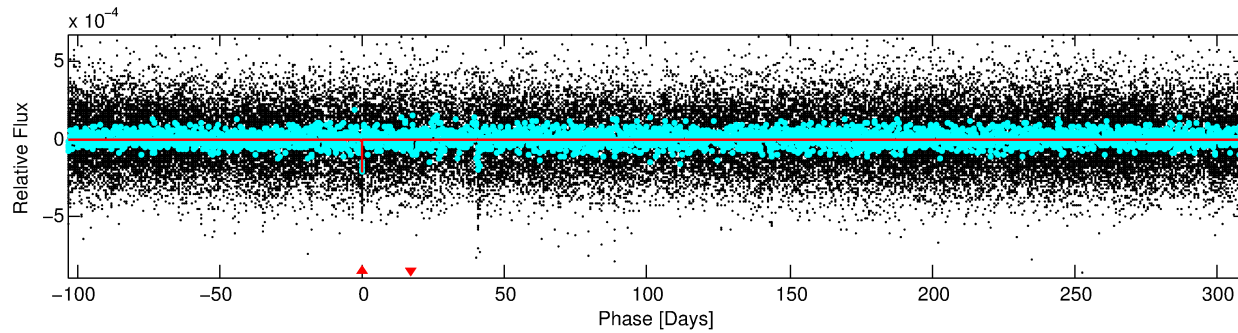
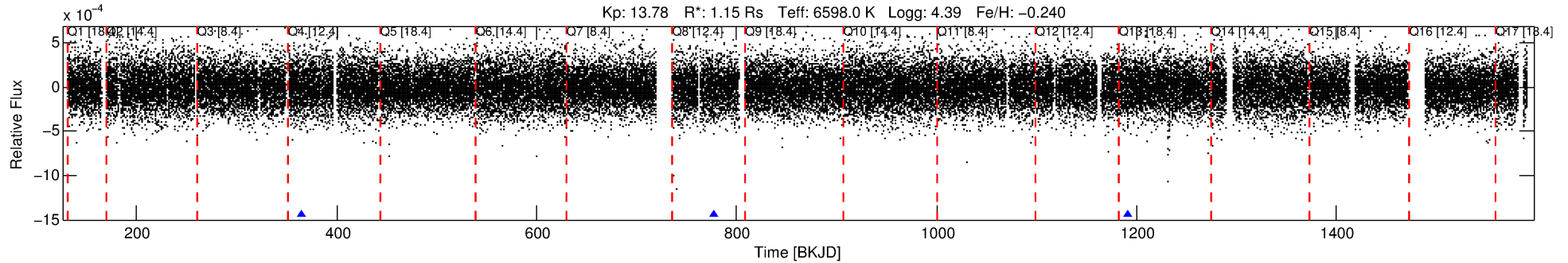
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009414717-01

No Significant Match Found

DV One-Page Summary

KIC: 9414717 Candidate: 1 of 1 Period: 413.565 d



DV Fit Results:

Period = 413.56499 [0.01904] d
Epoch = 364.3406 [0.0260] BKJD
Rp/R* = 0.0160 [0.0021]
a/R* = 93.82 [57.54]
b = 0.92 [0.10]
Seff = 1.70 [0.69]
Teq = 291 [29] K
Rp = 2.00 [0.68] Re
a = 1.1436 [0.3029] AU
Ag = 16023.83 [9677.56] [1.66σ]
Teffp = 5067 [614] K [7.77σ]

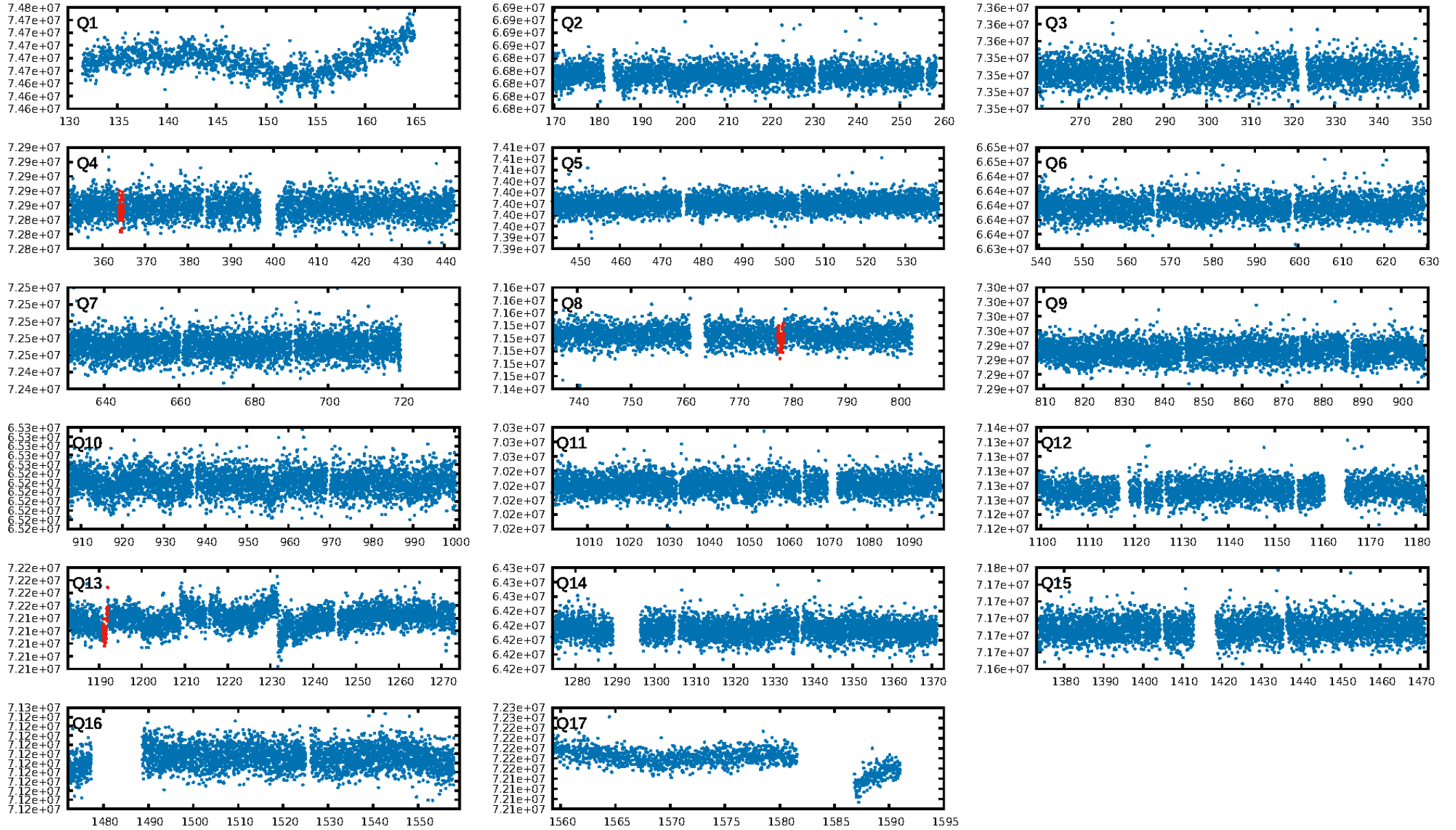
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.36e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.146
Centroid-sig: 56.8%
Centroid-so: 2.673 arcsec [2.10σ]
OotOffset-rm: 0.768 arcsec [1.90σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-rm: 0.650 arcsec [1.59σ]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

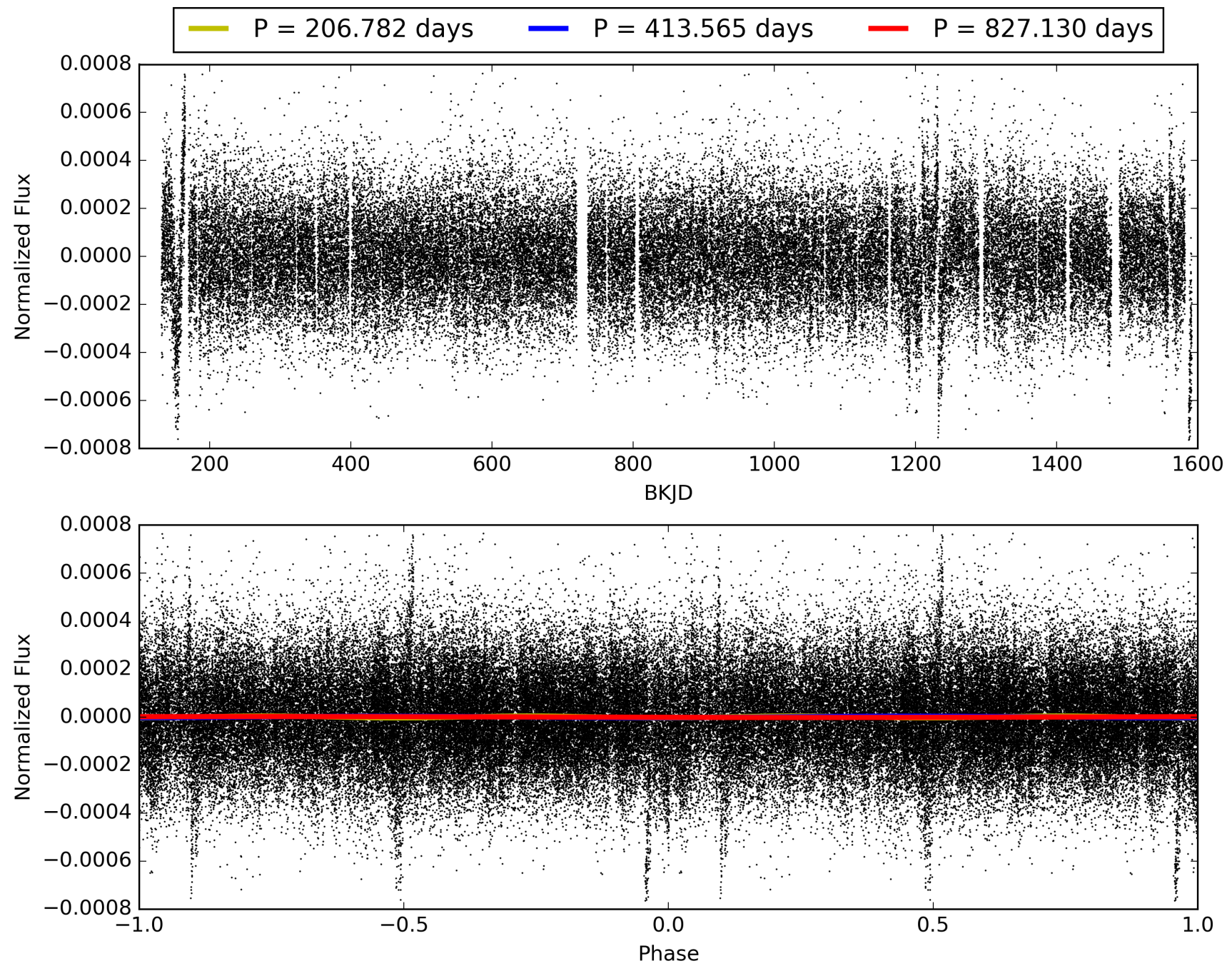
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:41:19 Z

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

TCE 009414717-01, PDC Light Curves

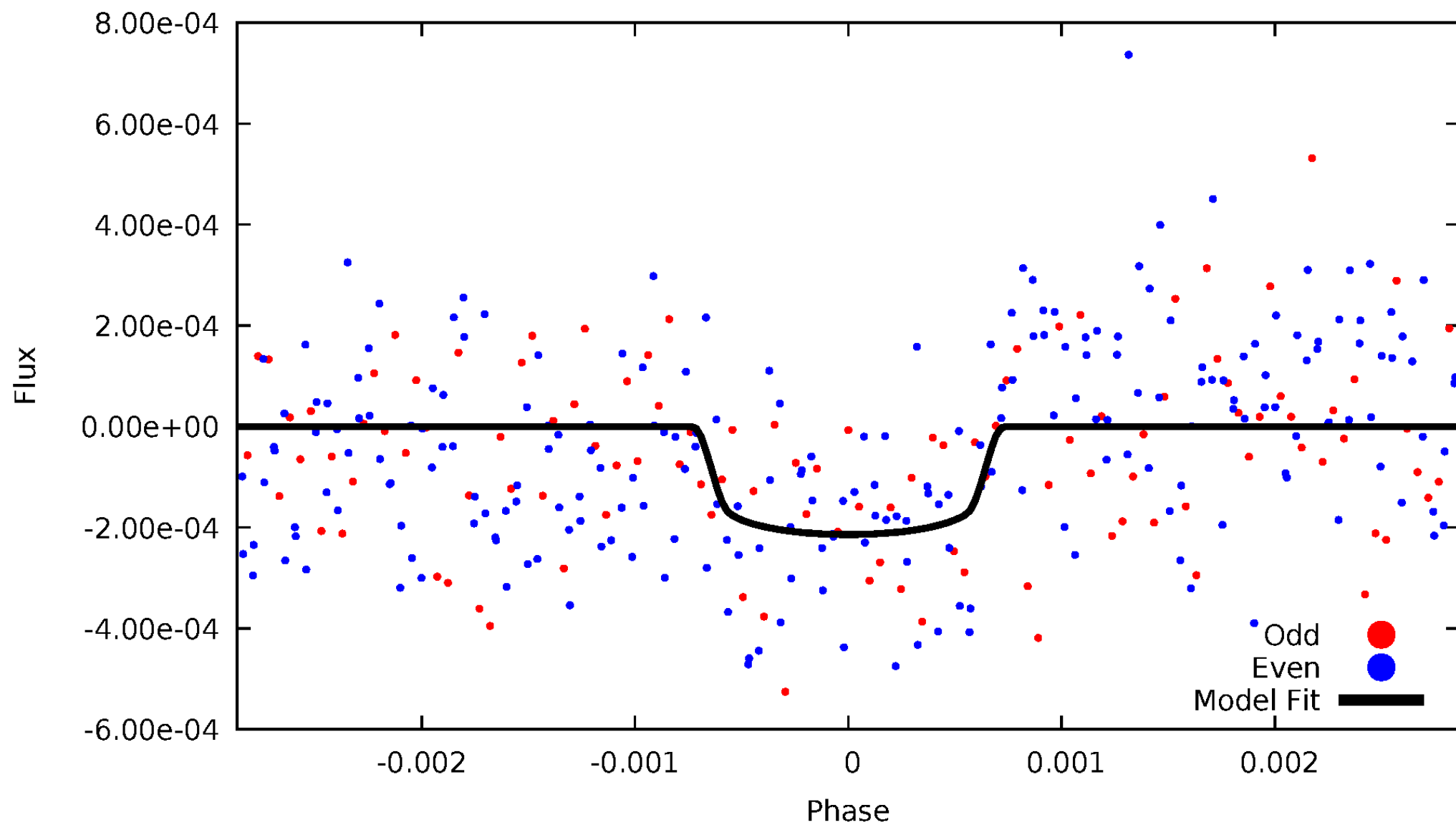


TCE 009414717-01



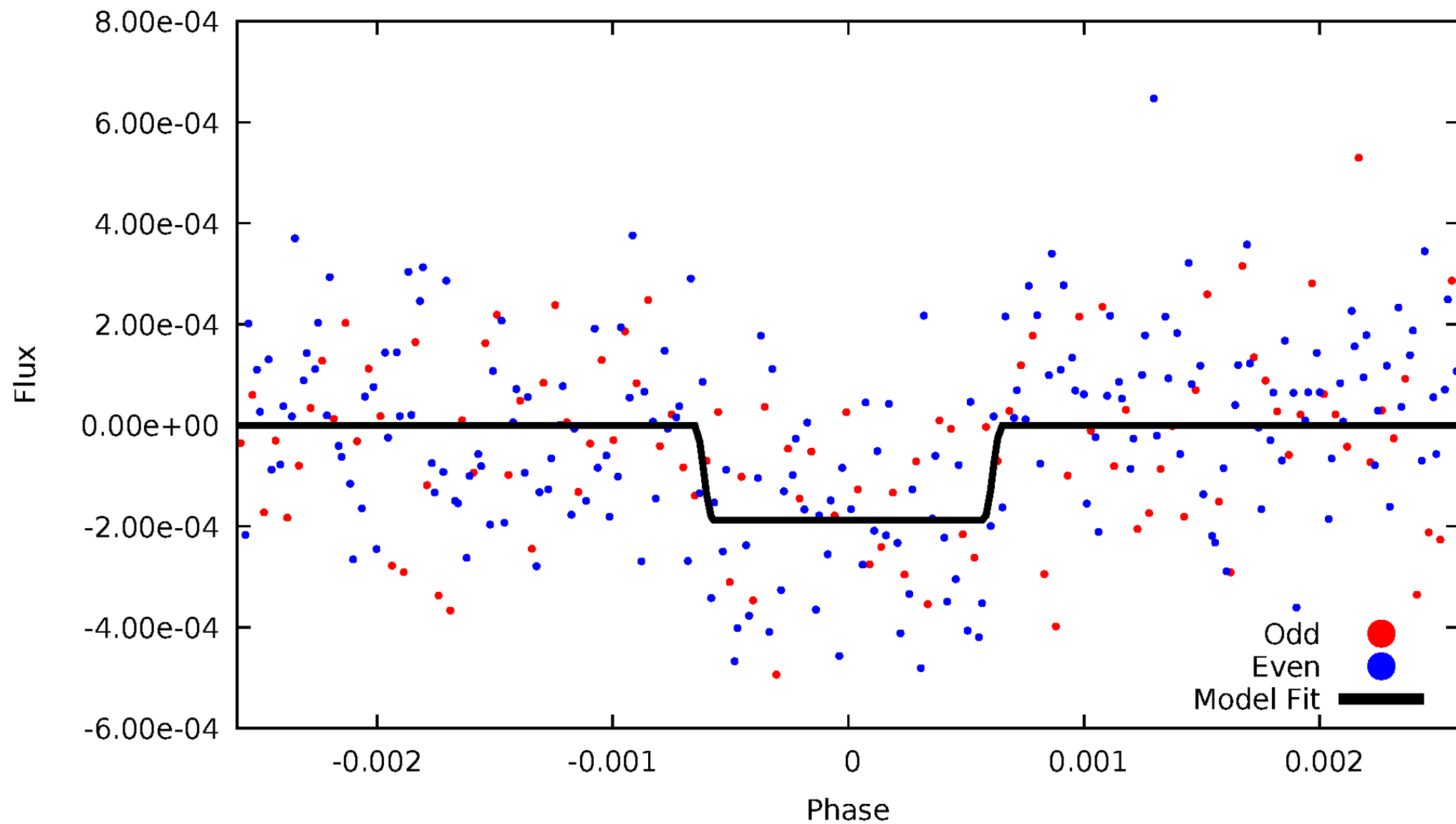
DV Odd/Even

TCE 009414717-01

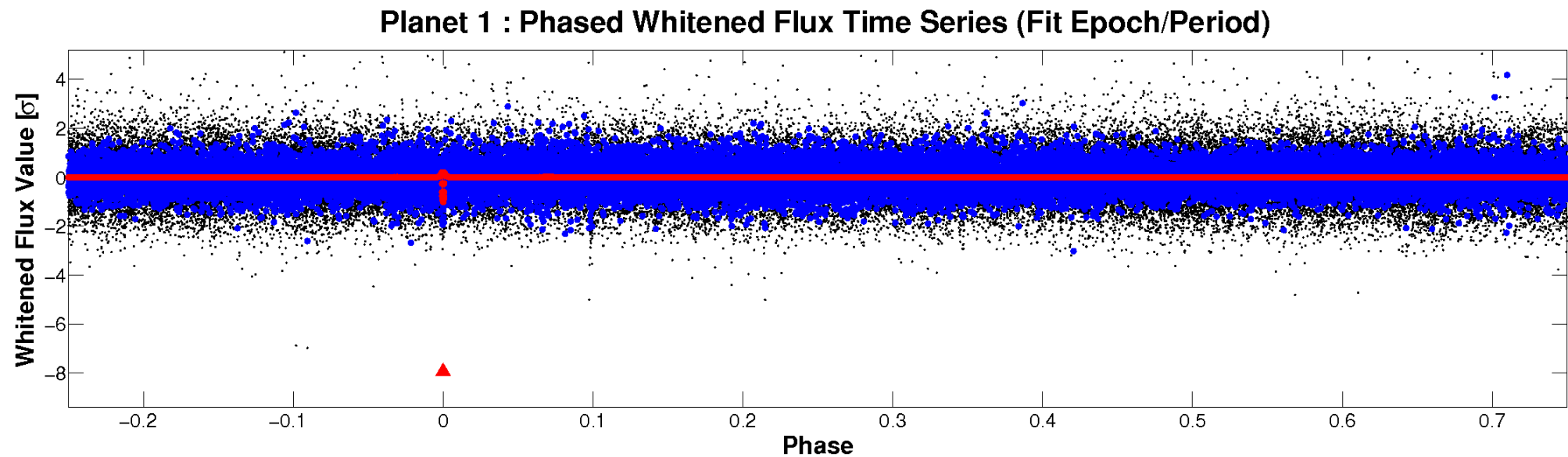
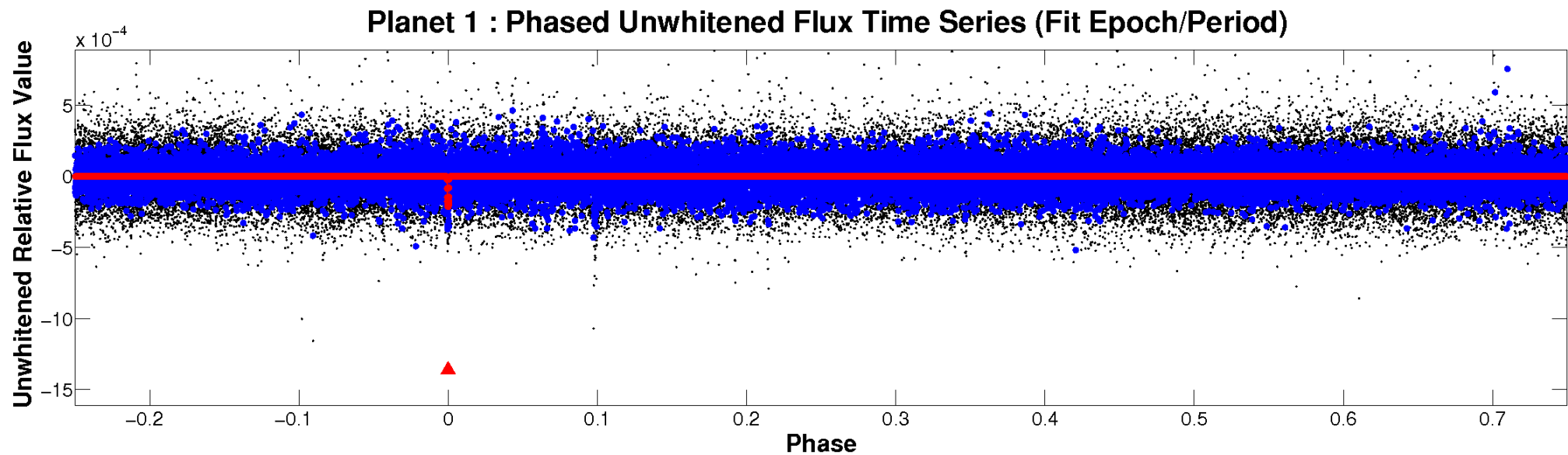


ALT Odd/Even

TCE 009414717-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 009414717-01 P=413.564990 Days $T_0=364.340569$ (BKJD)



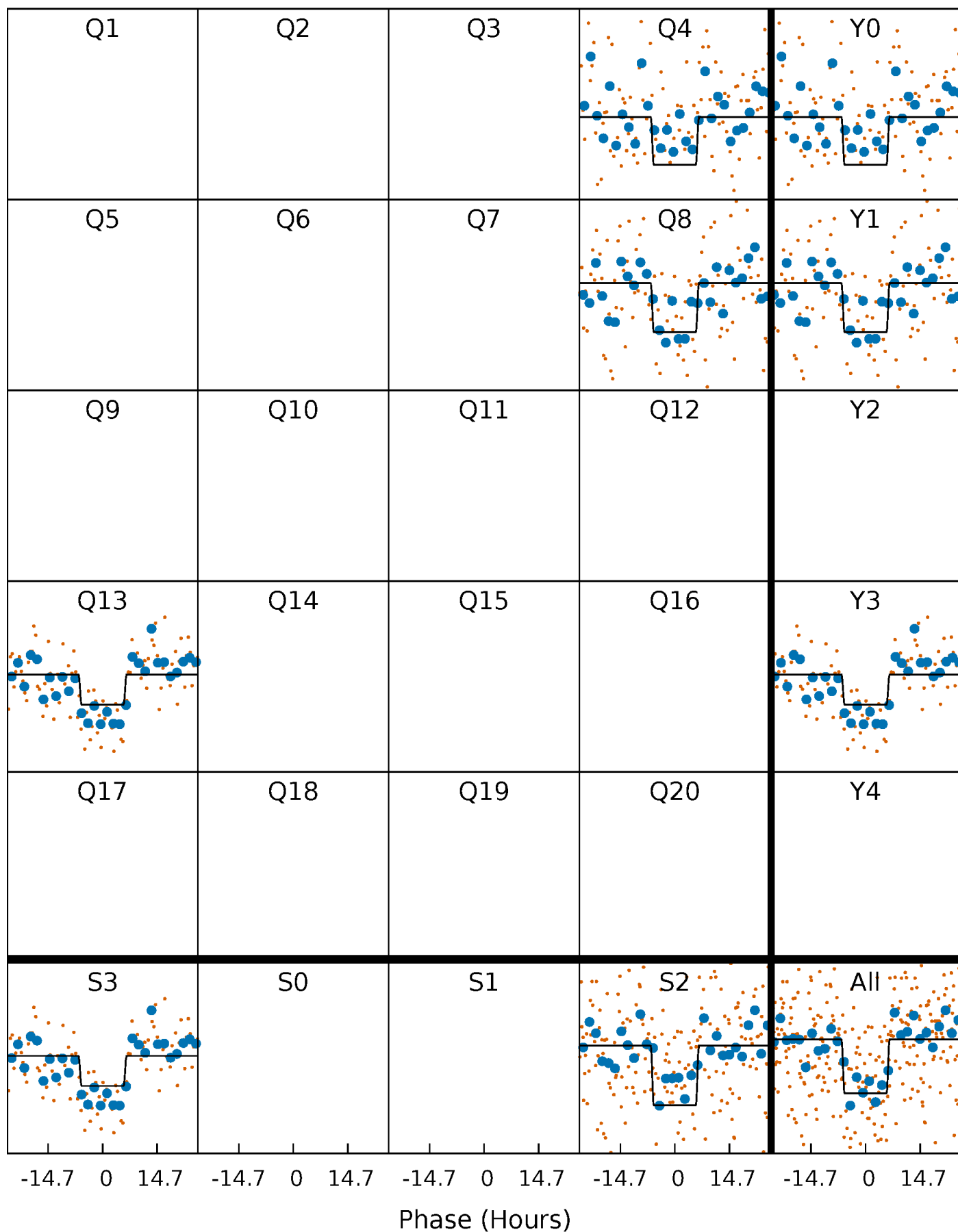
DV Quarter-Phased Transit Curves

TCE 009414717-01 P=413.564990 Days $T_0=364.340569$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

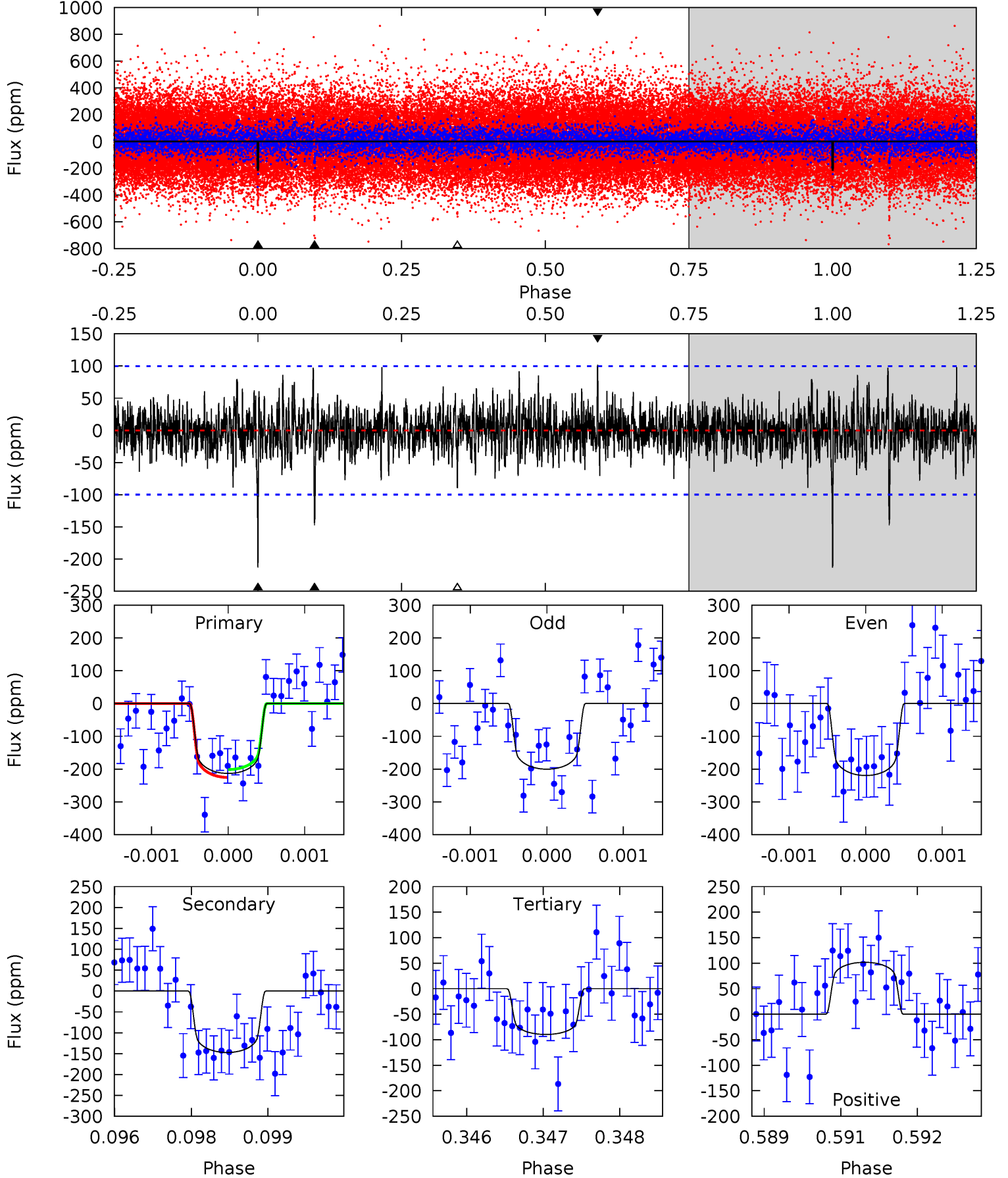
TCE 009414717-01 P=413.568443 Days $T_0=364.340884$ (BKJD)



DV Model-Shift Uniqueness Test

009414717-01, P = 413.564990 Days, E = 364.340569 Days

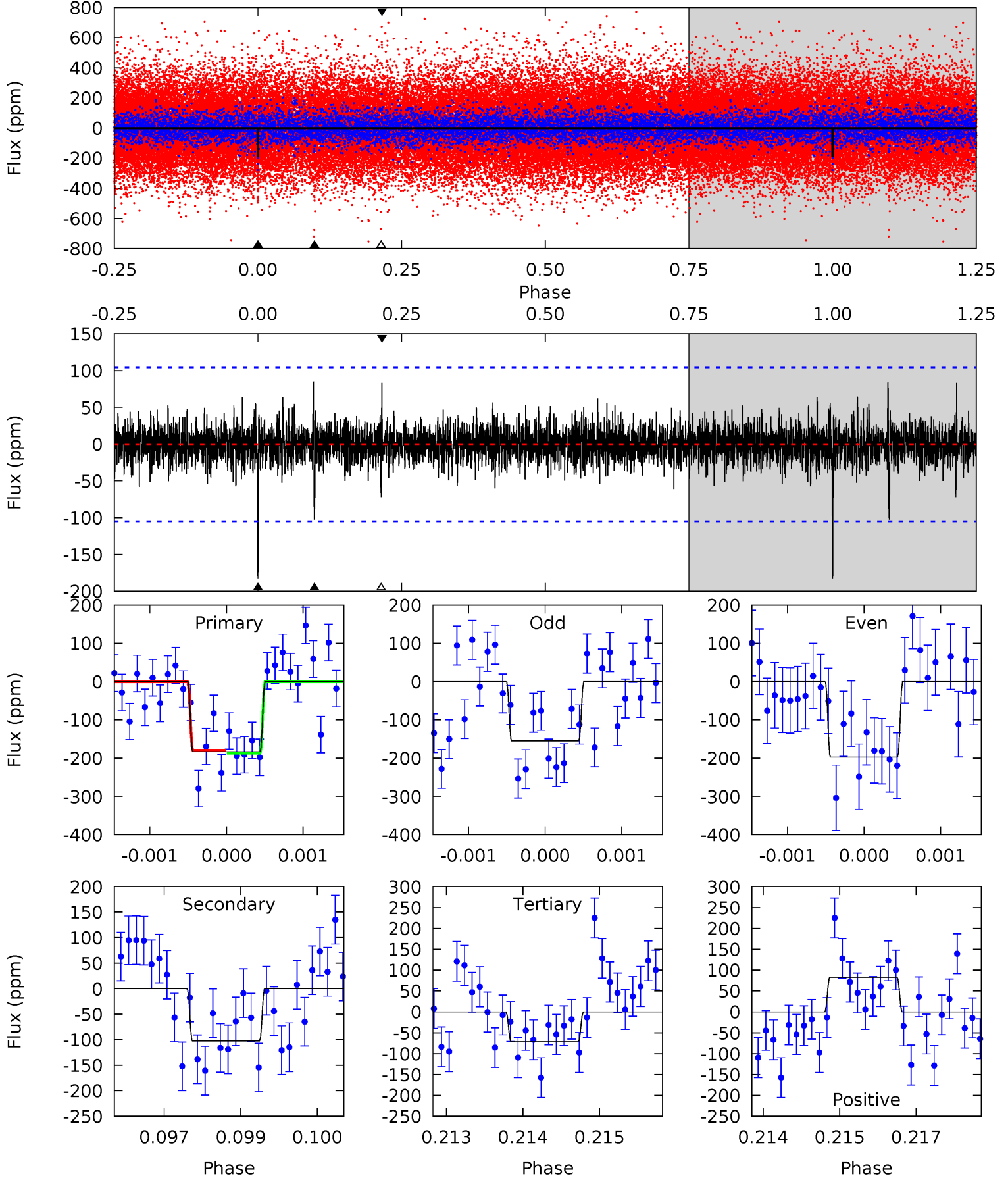
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	7.95	4.84	5.49	5.38	3.18	1.33	6.67	6.02	3.11	2.45	0.49	1.06	0.32	0.65



Alt Model-Shift Uniqueness Test

009414717-01, P = 413.568443 Days, E = 364.340884 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.46	5.29	3.70	4.29	5.40	3.22	0.90	5.76	5.18	1.59	1.01	1.04	1.17	0.31	0.20



Stellar Parameters For KIC 009414717

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6598^{+149}_{-215}	$4.387^{+0.065}_{-0.208}$	$-0.240^{+0.250}_{-0.300}$	$1.145^{+0.363}_{-0.121}$	$1.166^{+0.167}_{-0.152}$	$1.095^{+0.302}_{-0.564}$
	+2%/-3%	+1%/-5%	+104%/-125%	+32%/-11%	+14%/-13%	+28%/-51%
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 009414717-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-147 ± 19	$2.06^{+0.46}_{-0.30}$	413^{+31}_{-20}	5739^{+453}_{-423}	23974^{+10250}_{-7507}
Alt.	-102 ± 19	$1.77^{+0.38}_{-0.31}$	413^{+30}_{-20}	5629^{+540}_{-433}	22375^{+11416}_{-7609}

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 $A_{obs} \gg 1.0$

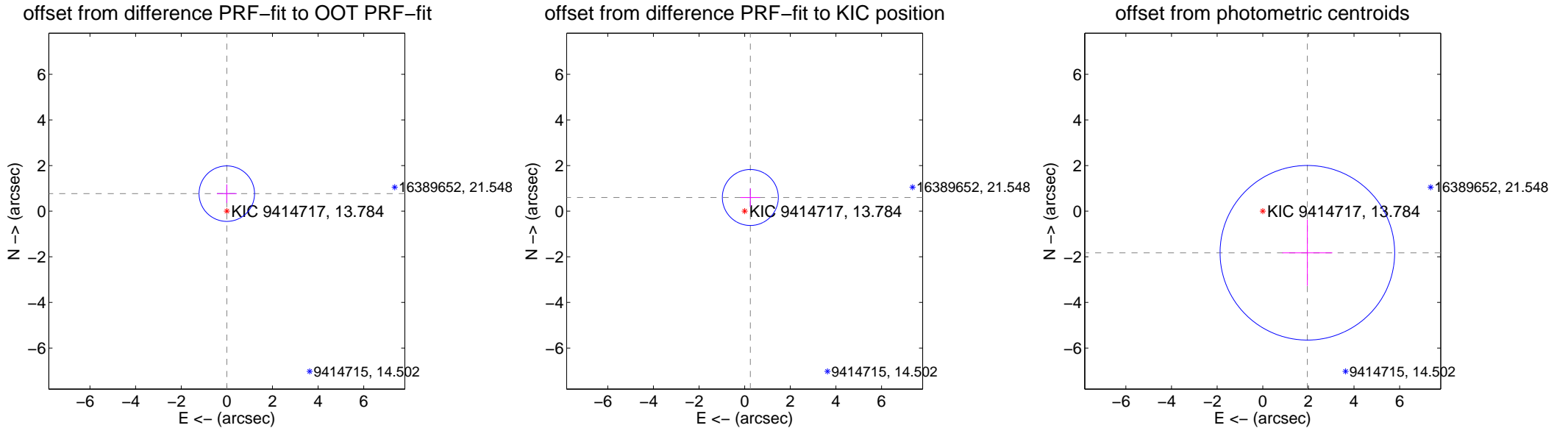
DV Centroid Data

Supplemental centroid analysis for 009414717-01. Kepler magnitude: 13.78. Transit SNR 7.53

There are 1 quarters with good PRF difference image offsets

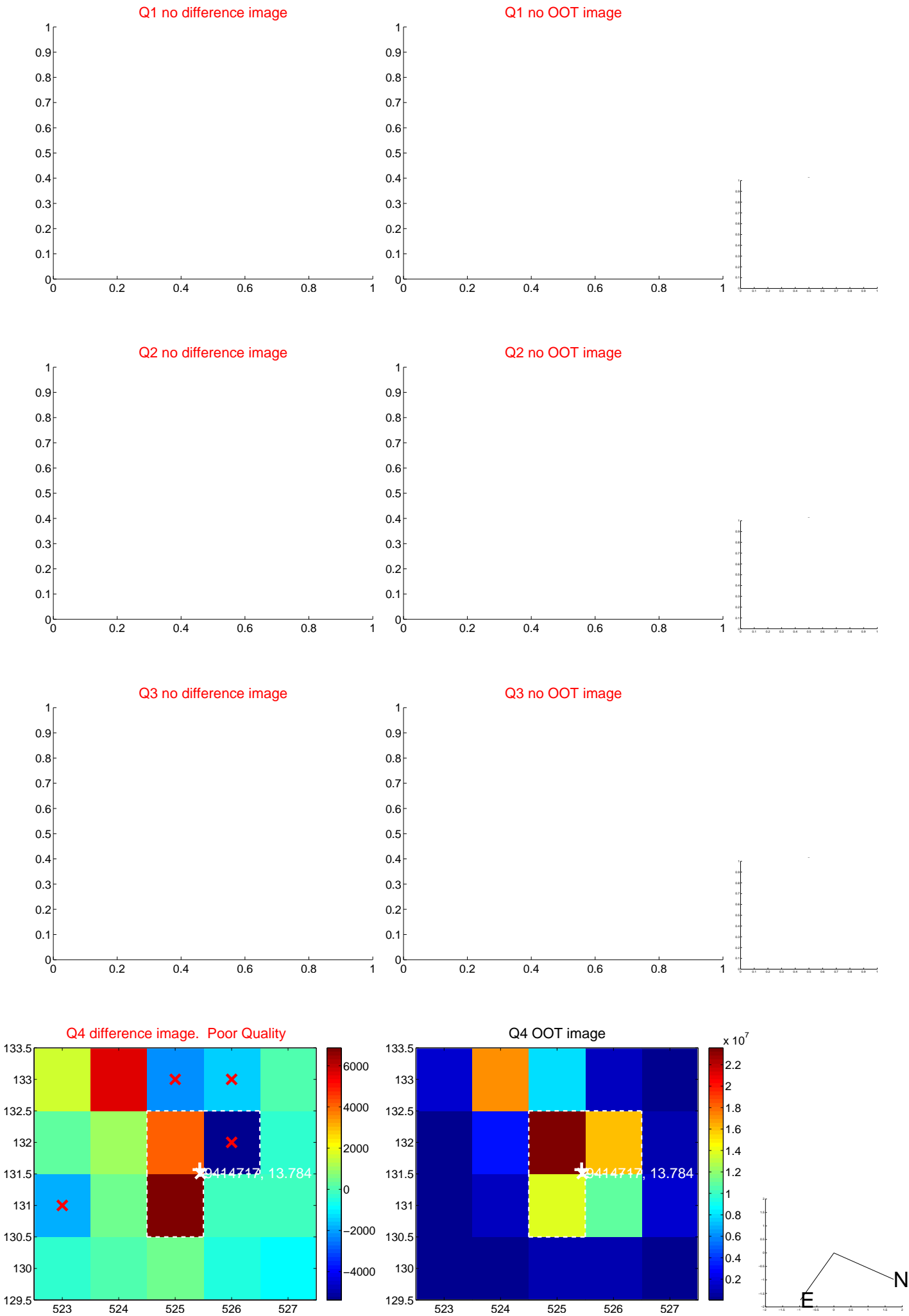
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.768 ± 0.405	1.90	0.002 ± 0.430	0.768 ± 0.405
PRF-fit source offset from KIC position	0.650 ± 0.409	1.59	-0.249 ± 0.430	0.600 ± 0.405
photometric centroid source offset	2.67 ± 1.28	2.10	-1.95 ± 1.10	-1.82 ± 1.45

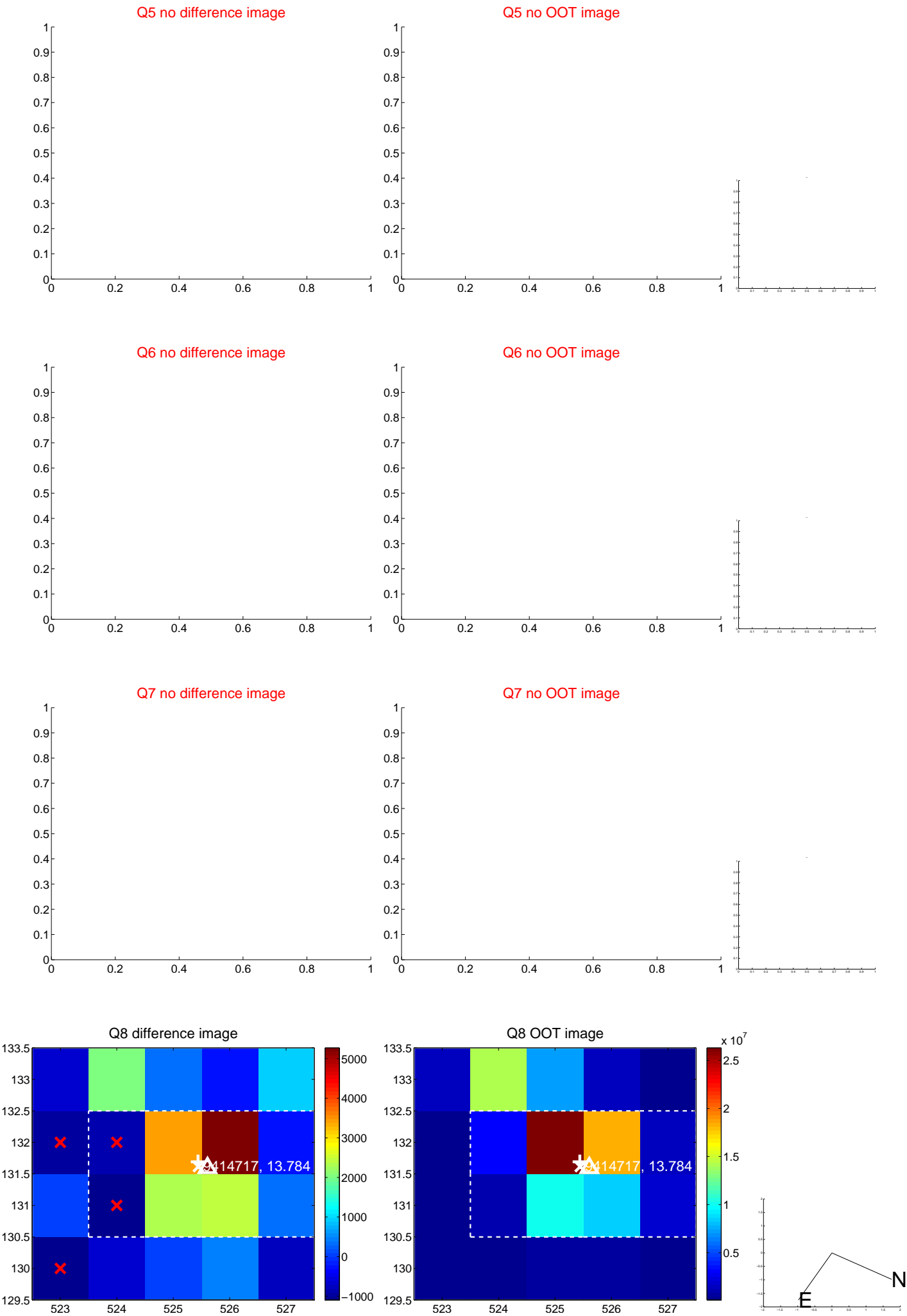


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



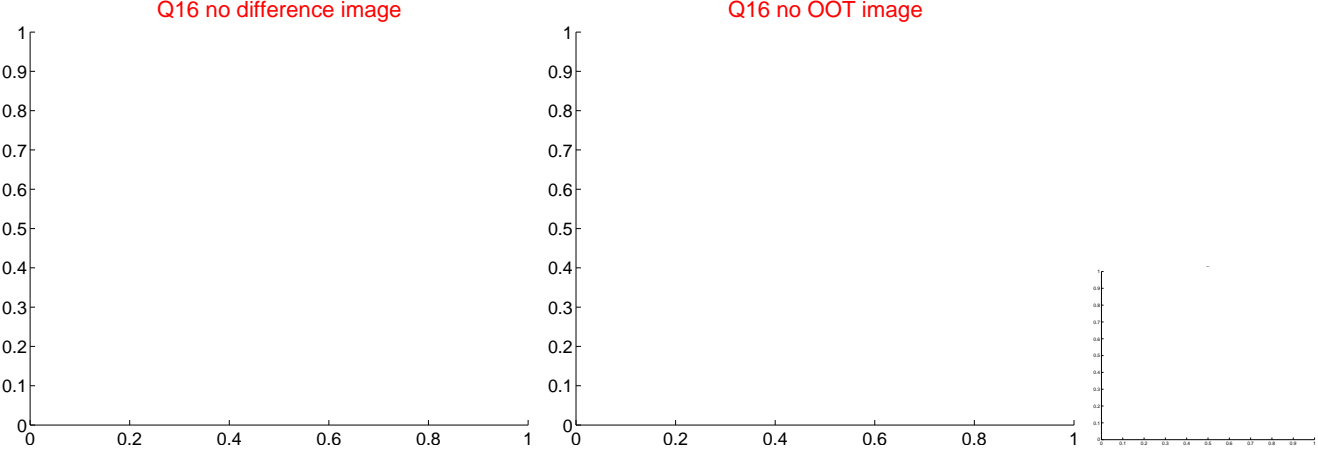
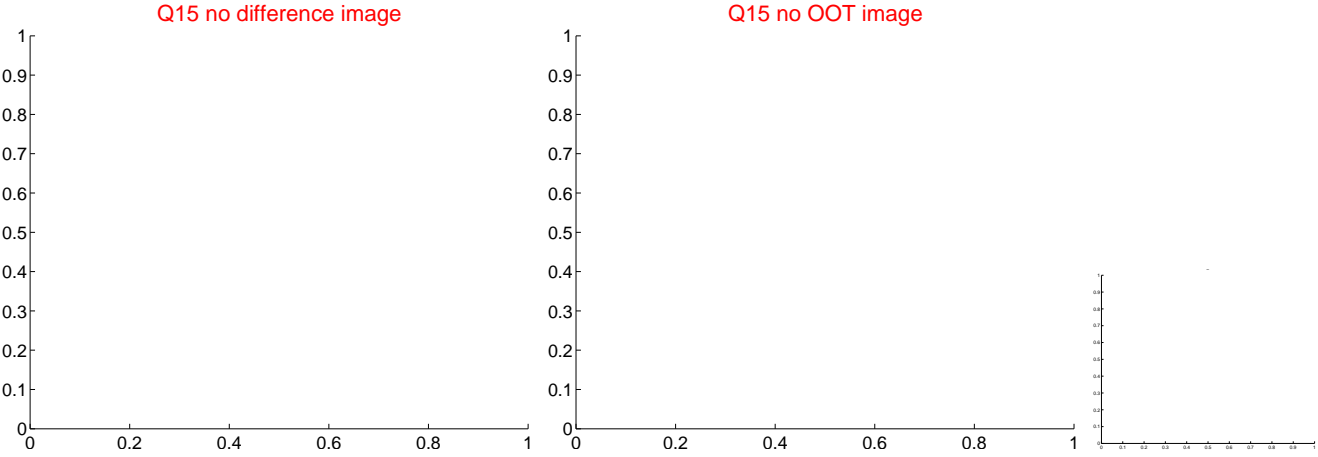
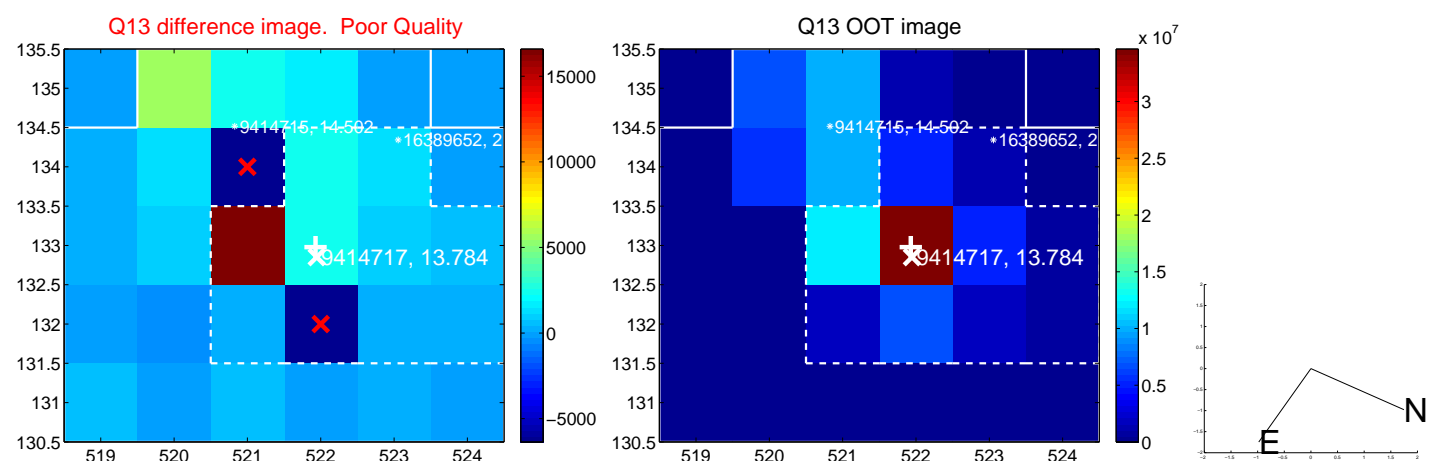
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



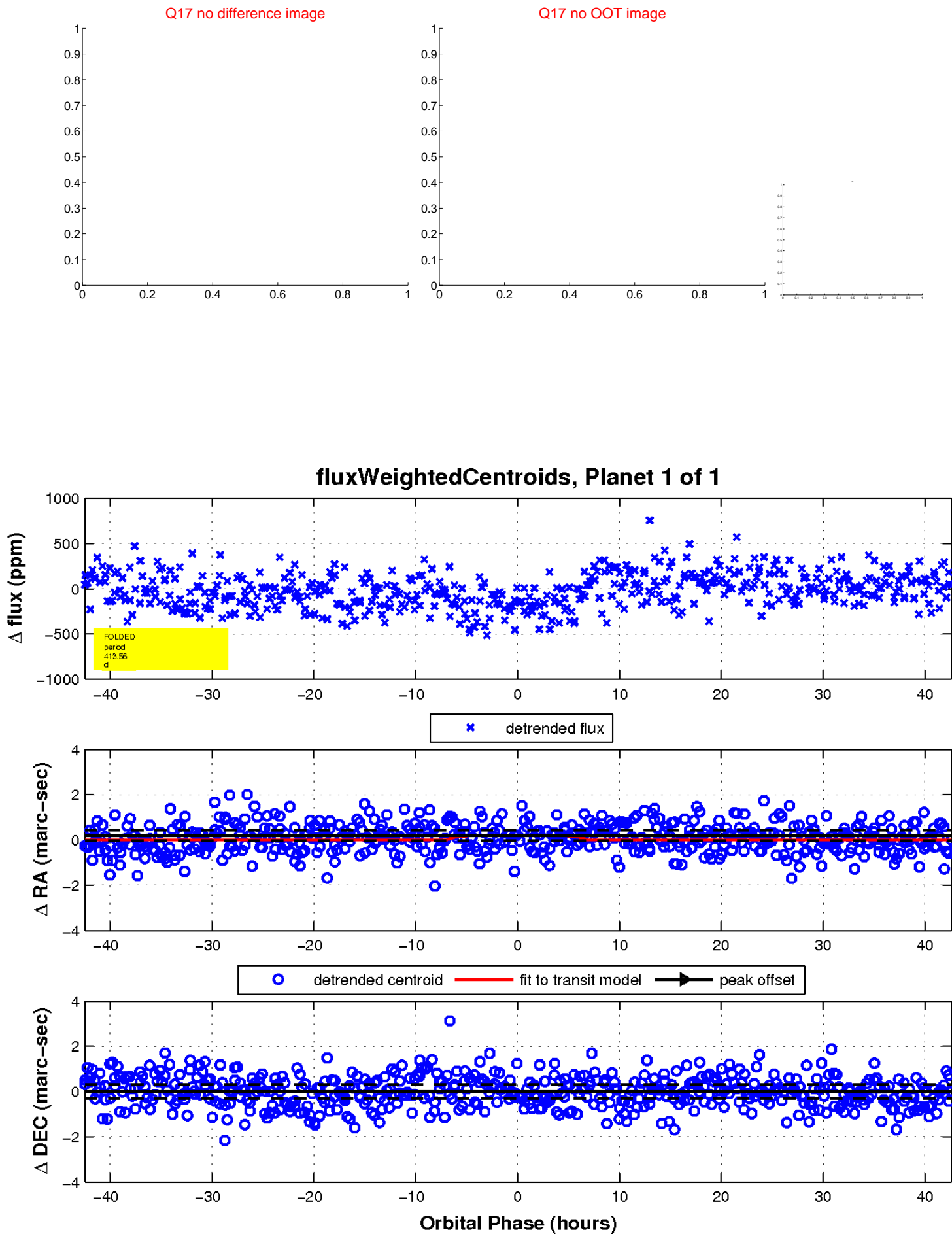
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UKIRT Image

Declination

