

KIC 004819528

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})
004819528-01	OBS	No	366.878773	282.600634	298.9	9.324	8.9	7.6	0.99	5288	1.89	0.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004819528-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

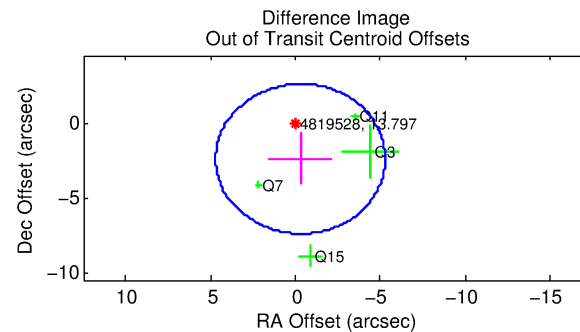
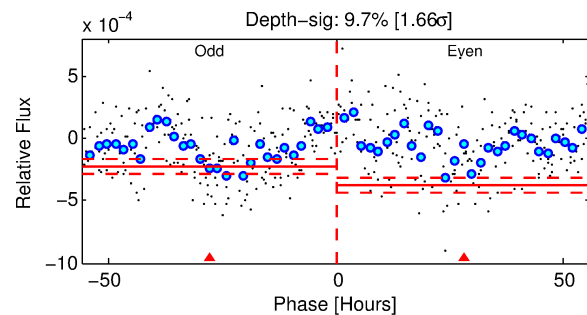
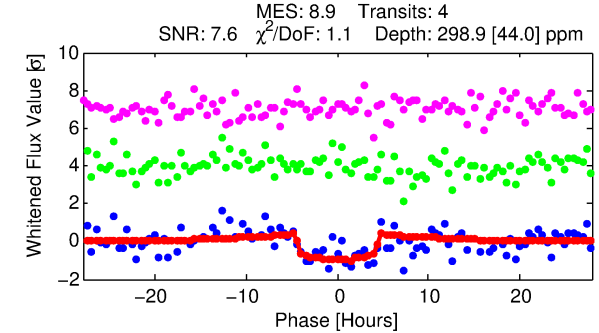
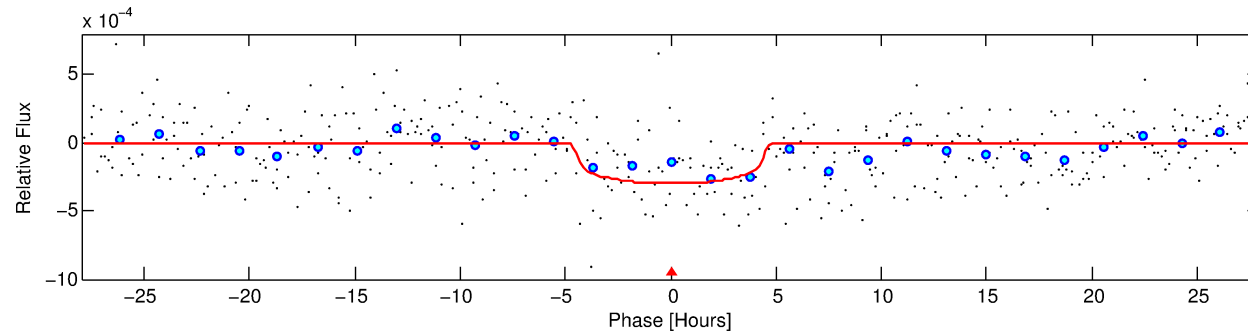
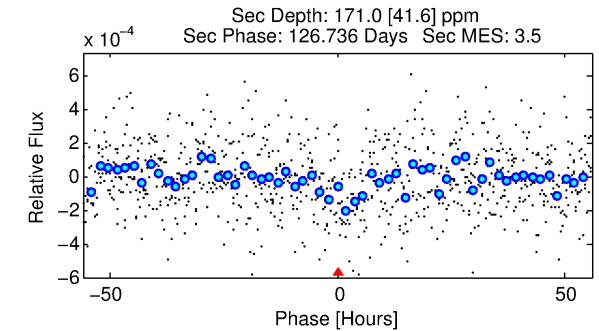
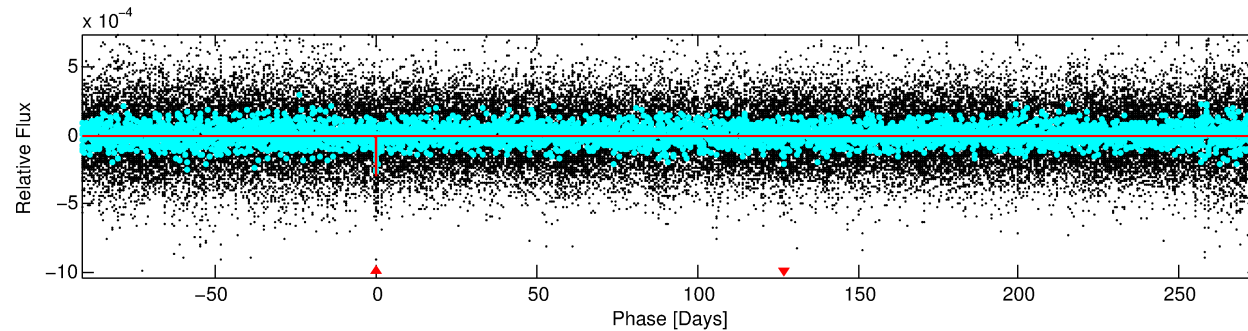
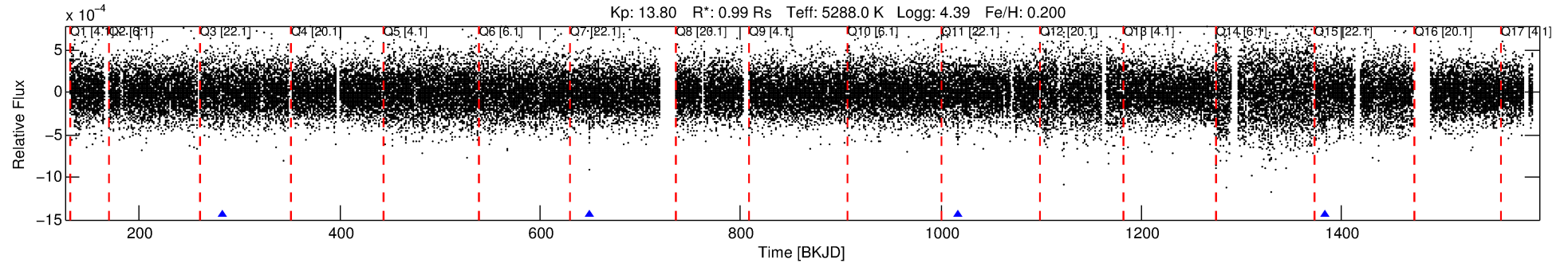
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004819528-01

No Significant Match Found

DV One-Page Summary

KIC: 4819528 Candidate: 1 of 1 Period: 366.879 d



DV Fit Results:

Period = 366.87877 [0.00767] d
Epoch = 282.6006 [0.0145] BKJD
Rp/R* = 0.0176 [0.0102]
a/R* = 192.86 [428.98]
b = 0.79 [1.07]
Seff = 0.75 [0.30]
Teq = 237 [24] K
Rp = 1.89 [1.22] Re
a = 0.9556 [0.2384] AU
Ag = 23941.72 [29864.87] [0.80σ]
Teffp = 4560 [1361] K [3.18σ]

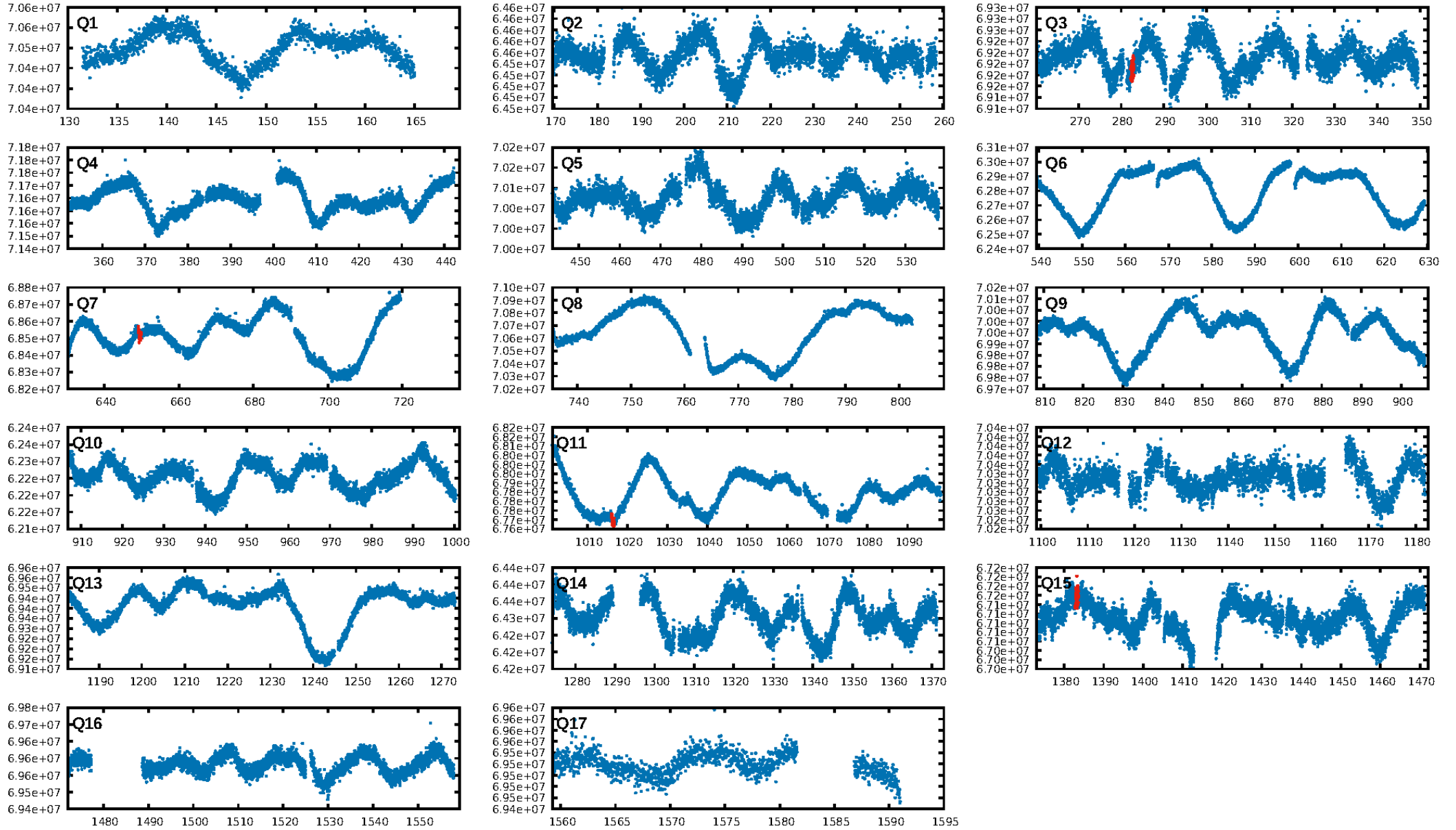
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 21.3%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 6.29e-20
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.1107
Centroid-sig: 42.9%
Centroid-so: 1.417 arcsec [1.22σ]
OotOffset-rm: 2.431 arcsec [1.46σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-rm: 2.605 arcsec [1.56σ]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

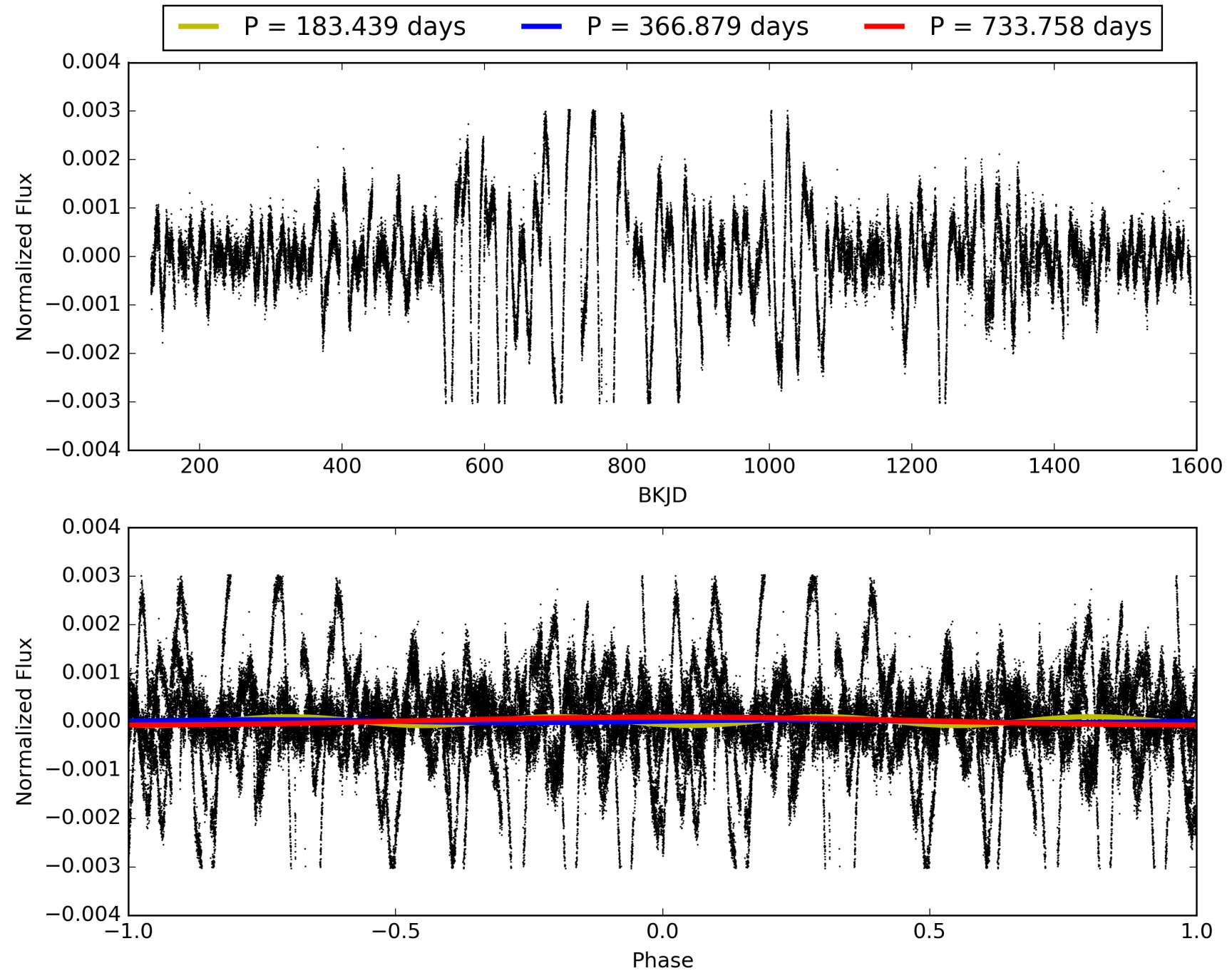
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:04:16 Z

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

TCE 004819528-01, PDC Light Curves

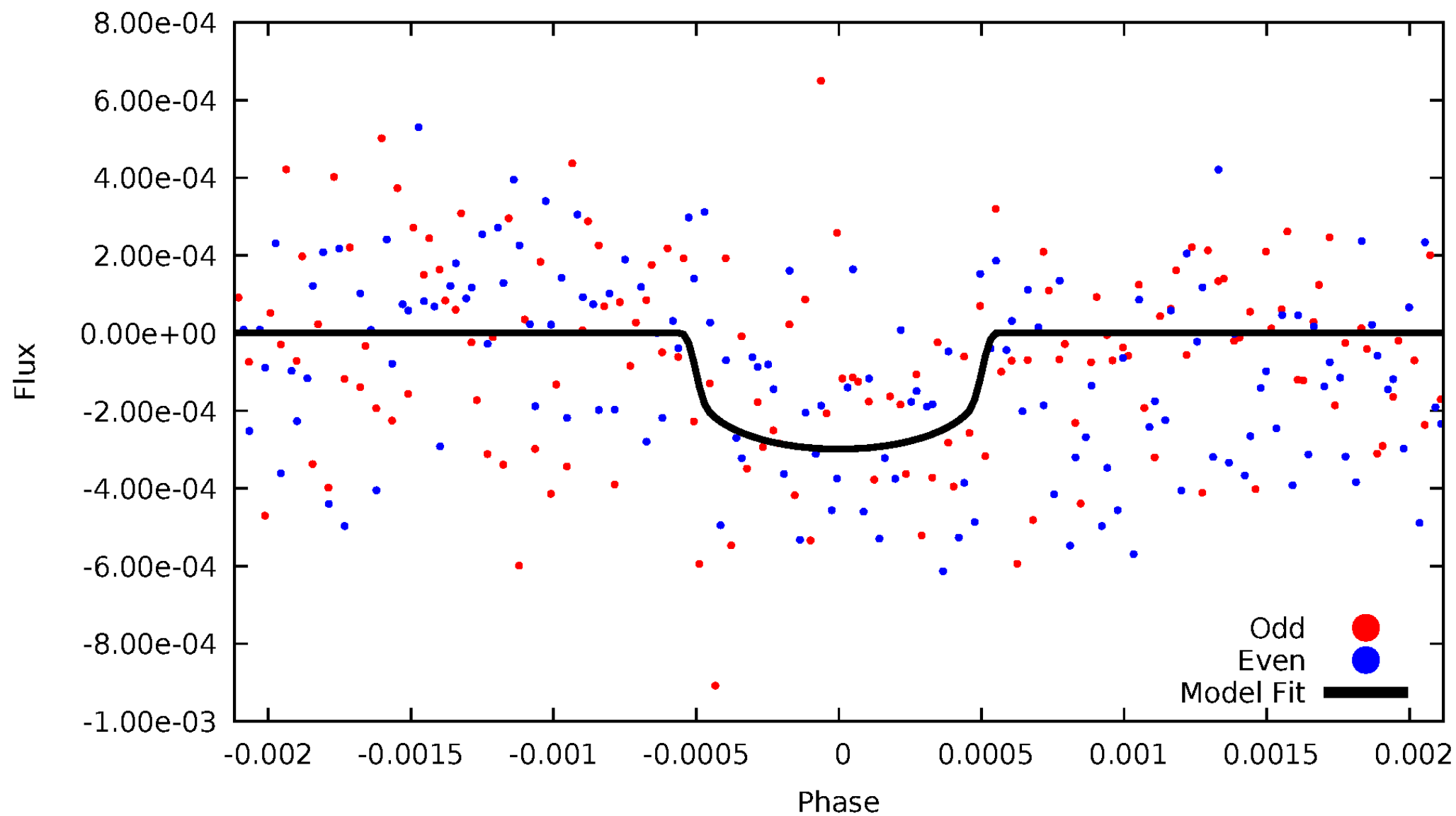


TCE 004819528-01



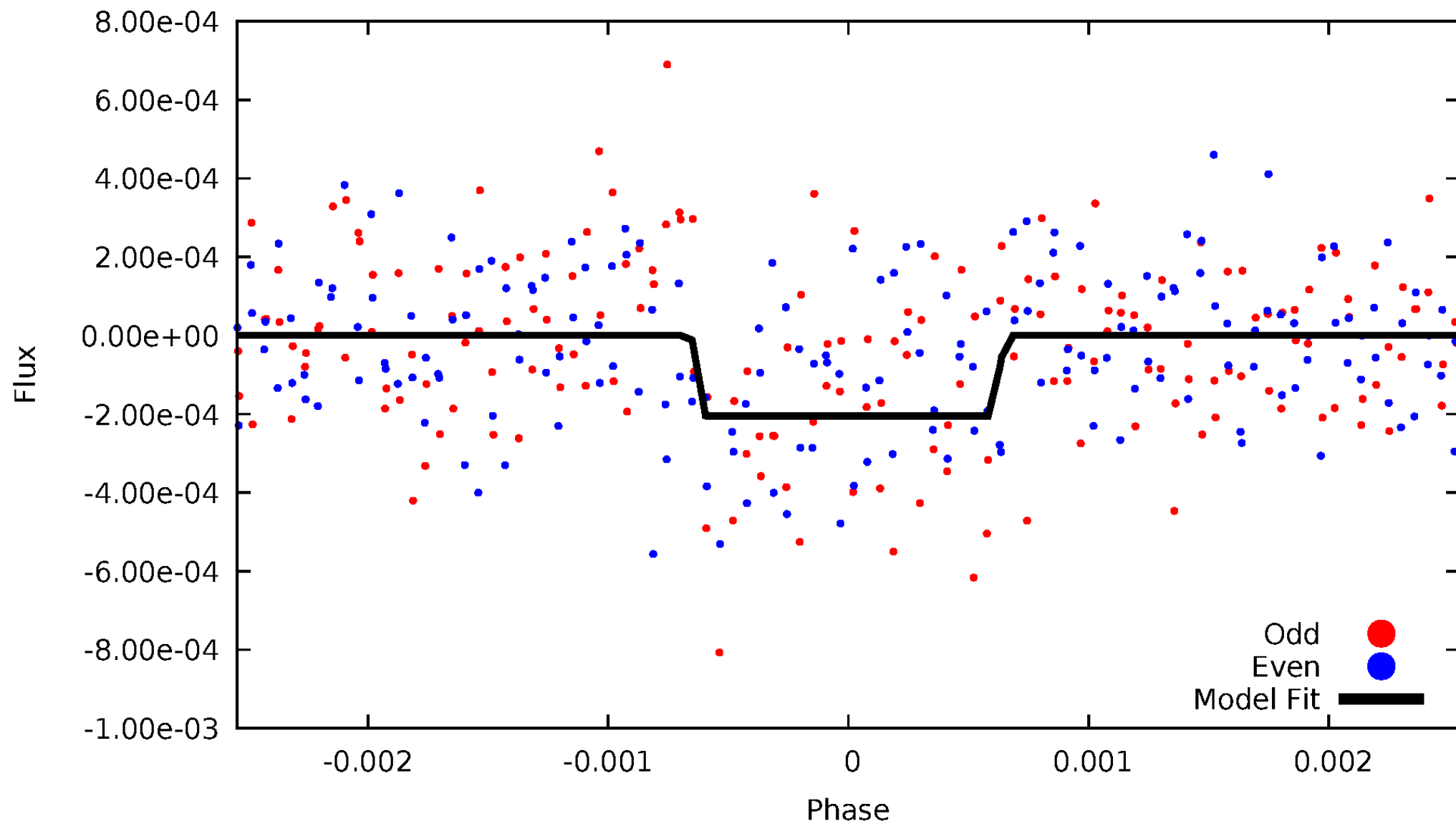
DV Odd/Even

TCE 004819528-01



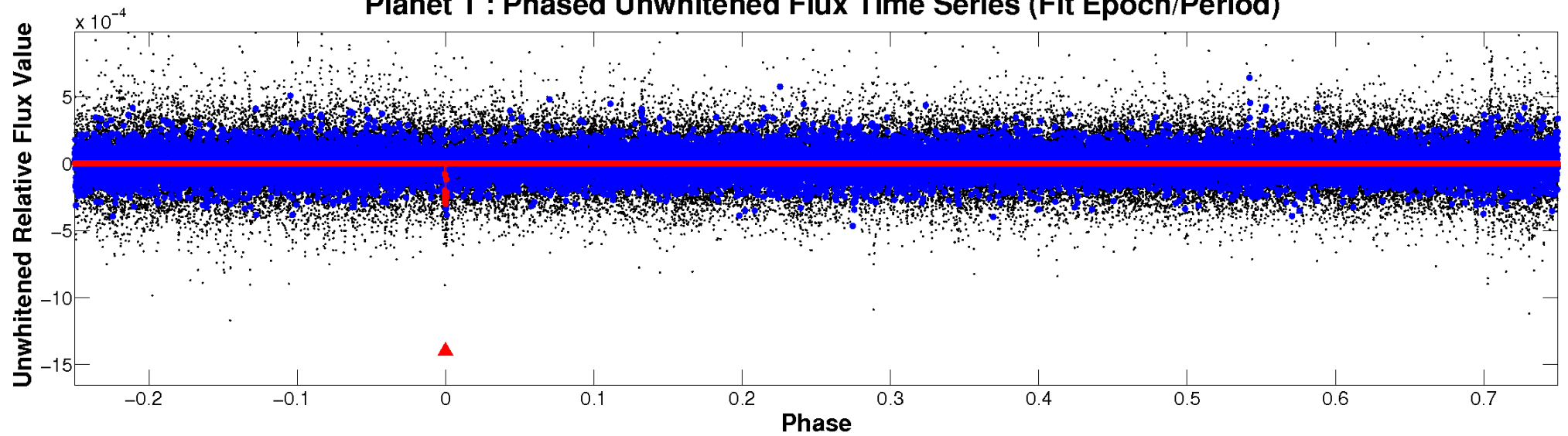
ALT Odd/Even

TCE 004819528-01

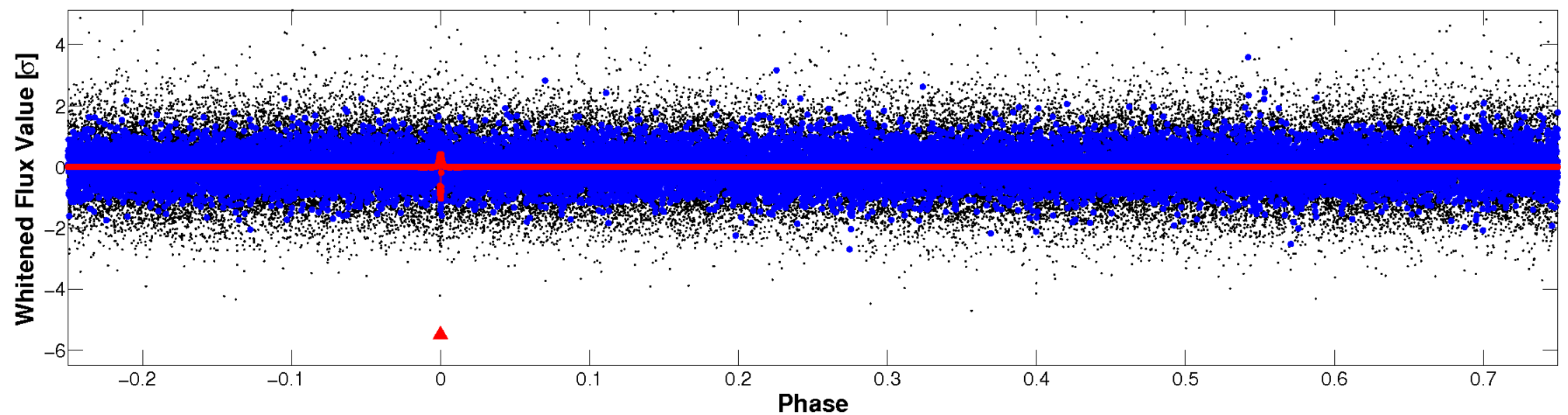


Non-Whitened Vs. Whitened Light Curve

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

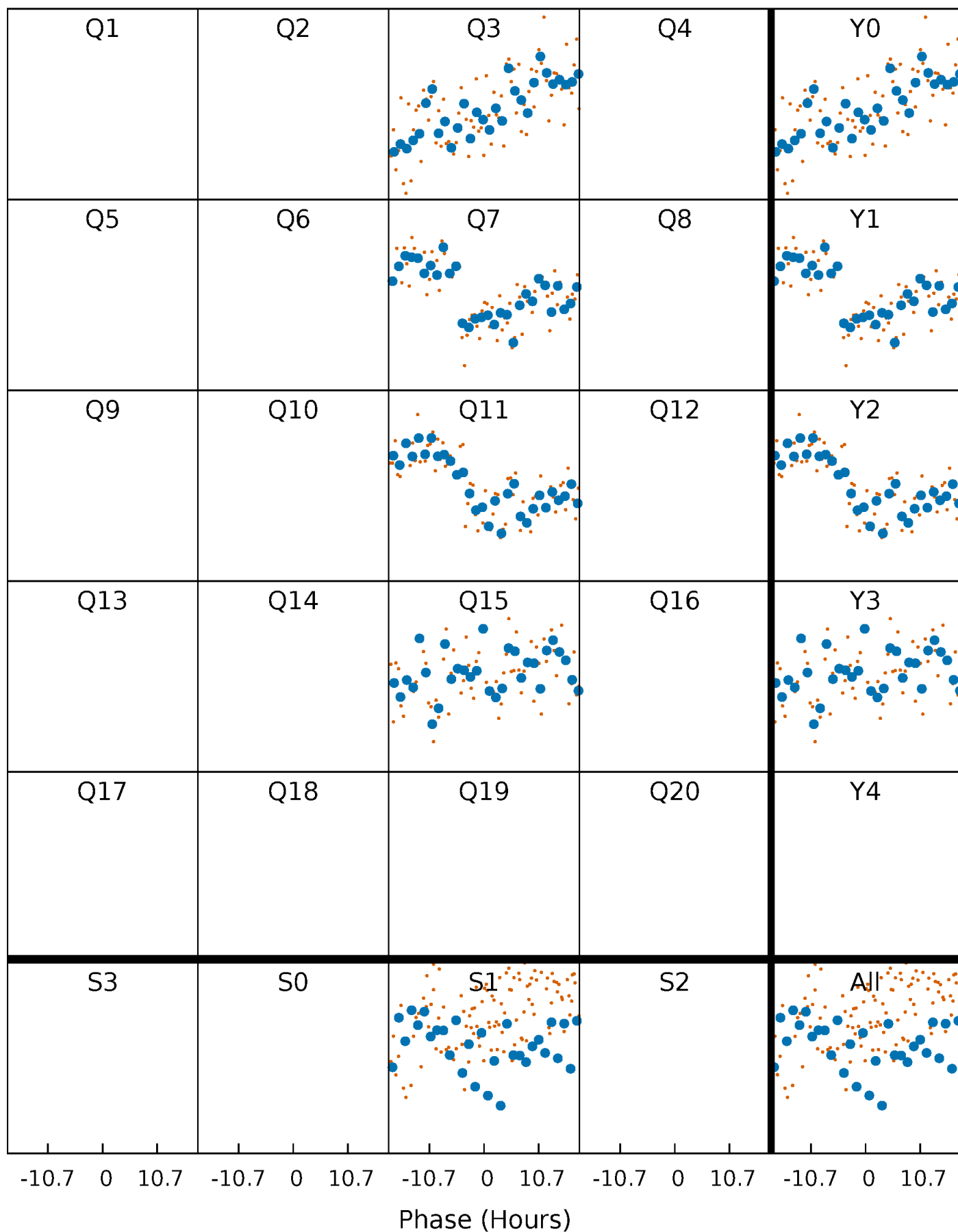


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



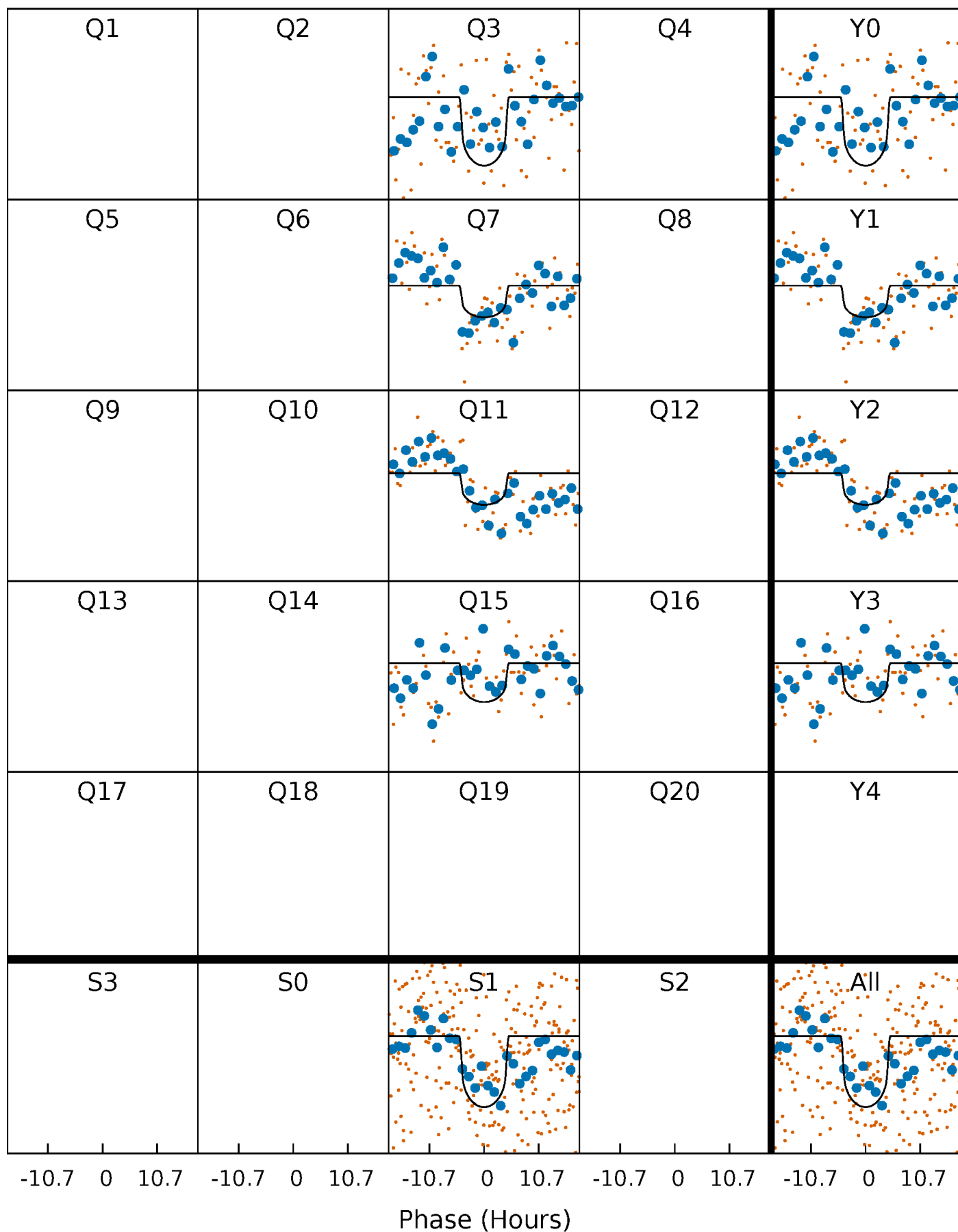
PDC Quarter-Phased Transit Curves

TCE 004819528-01 P=366.878773 Days $T_0=282.600634$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004819528-01 P=366.878773 Days $T_0=282.600634$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

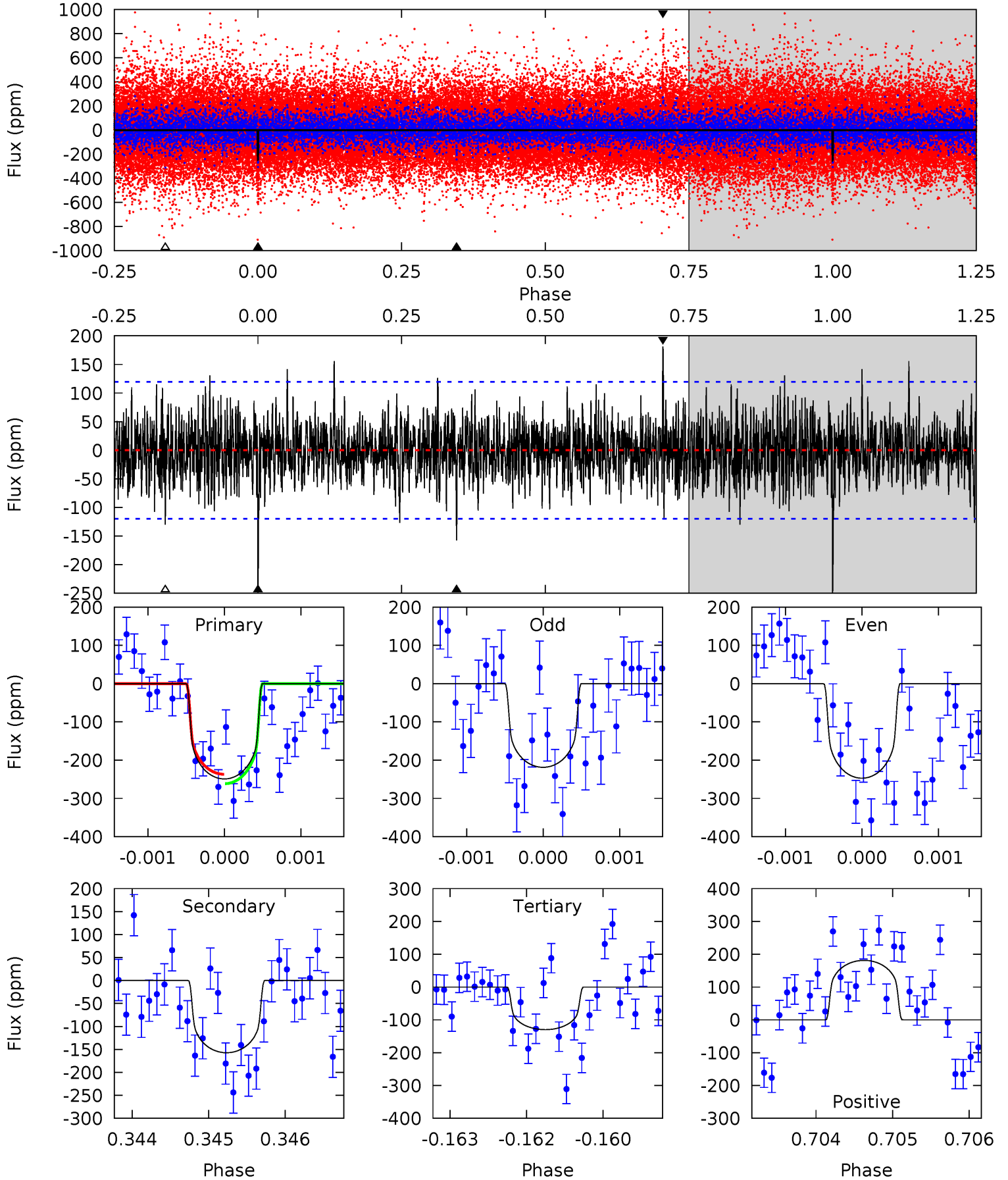
TCE 004819528-01 P=366.986738 Days $T_0=282.530529$ (BKJD)



DV Model-Shift Uniqueness Test

004819528-01, P = 366.878773 Days, E = 282.600634 Days

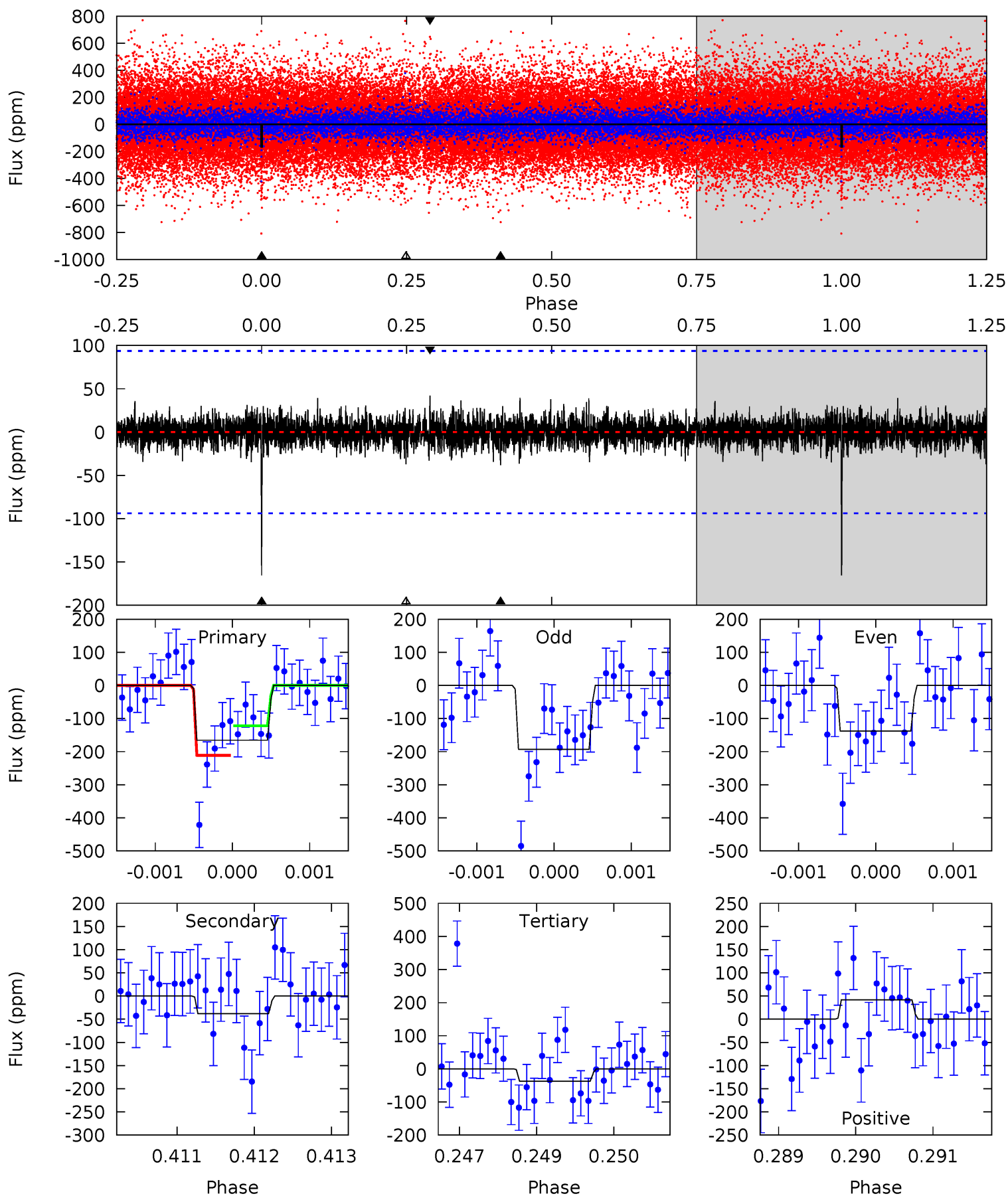
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.14	5.90	8.24	5.43	3.26	1.74	5.42	3.08	1.25	-1.09	0.65	0.93	0.42	0.56



Alt Model-Shift Uniqueness Test

004819528-01, P = 366.986738 Days, E = 282.530529 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.54	2.19	2.14	2.42	5.41	3.22	0.58	7.40	7.13	0.05	-0.22	1.59	1.19	0.20	2.58



Stellar Parameters For KIC 004819528

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5288^{+159}_{-143}	$4.386^{+0.144}_{-0.216}$	$0.200^{+0.200}_{-0.300}$	$0.987^{+0.276}_{-0.149}$	$0.863^{+0.089}_{-0.062}$	$1.266^{+0.861}_{-0.655}$
	+3%/-3%	+3%/-5%	+100%/-150%	+28%/-15%	+10%/-7%	+68%/-52%
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 004819528-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-157 ± 22	$2.02^{+1.13}_{-1.07}$	335^{+24}_{-19}	4543^{+1738}_{-695}	19856^{+71299}_{-12079}
Alt.	-38 ± 17	$1.62^{+1.13}_{-0.87}$	333^{+26}_{-19}	3733^{+1374}_{-622}	6492^{+27517}_{-4400}

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 $A_{obs} \gg 1.0$

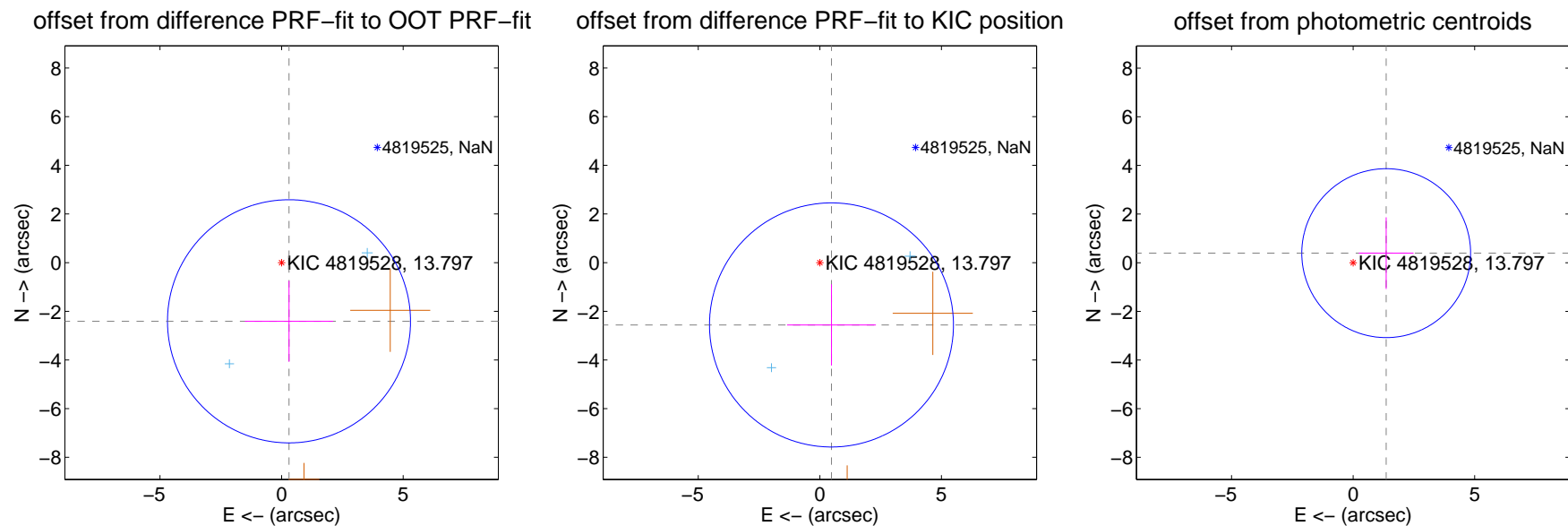
DV Centroid Data

Supplemental centroid analysis for 004819528-01. Kepler magnitude: 13.80. Transit SNR 7.64

There are 2 quarters with good PRF difference image offsets

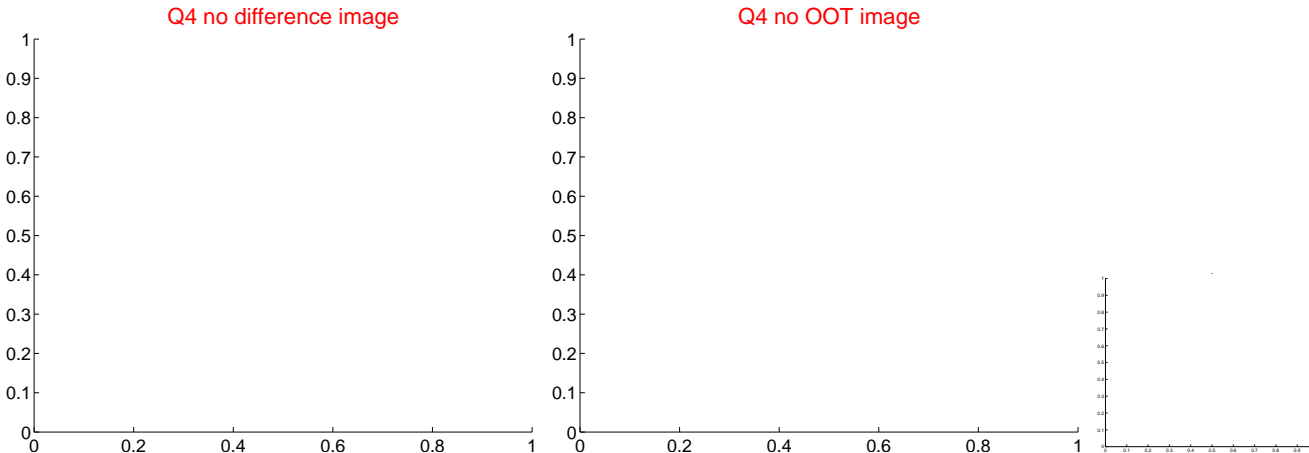
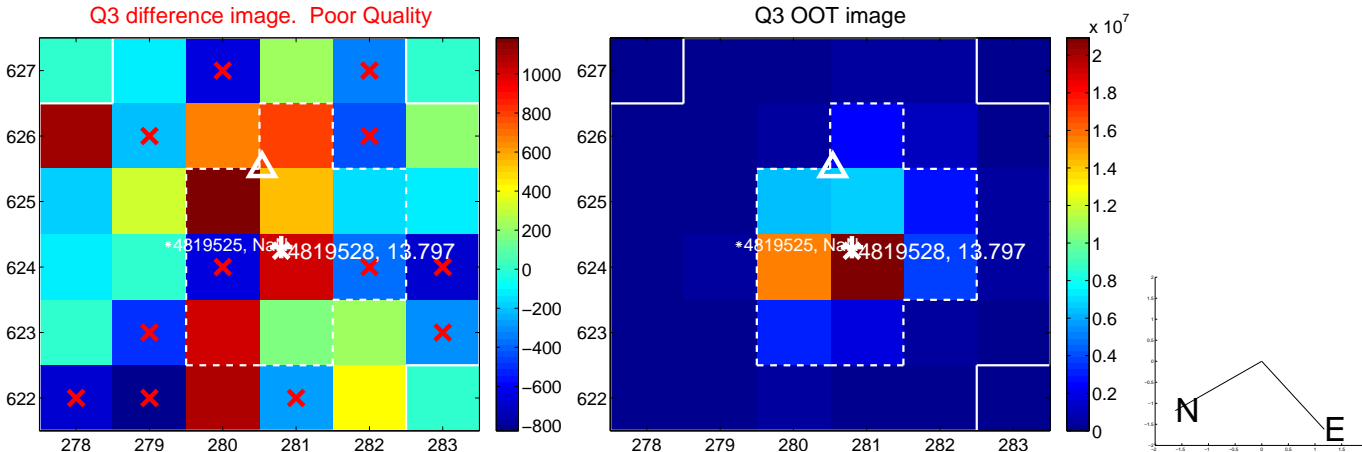
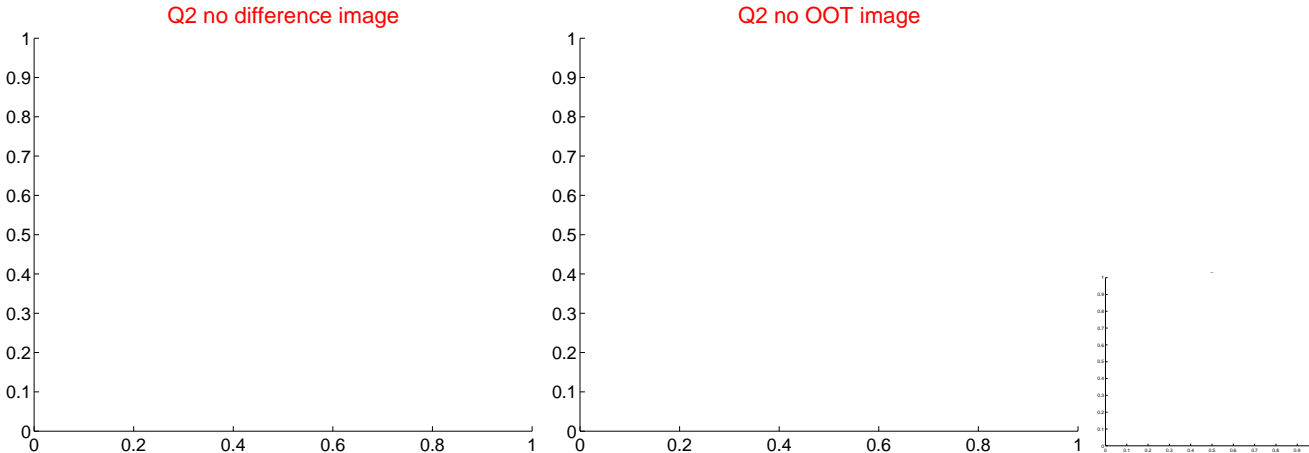
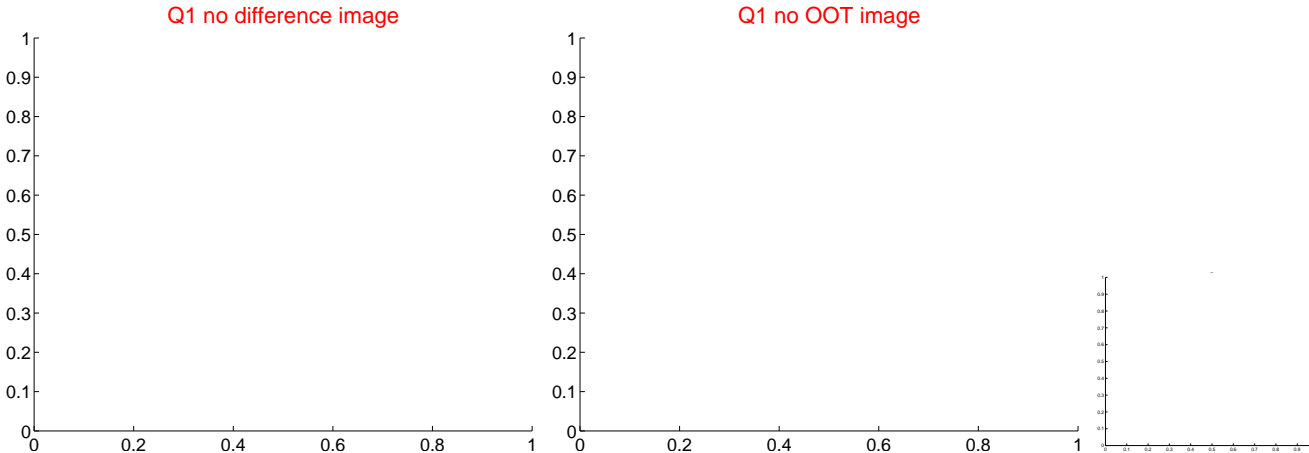
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.431 ± 1.666	1.46	-0.305 ± 1.815	-2.412 ± 1.663
PRF-fit source offset from KIC position	2.605 ± 1.672	1.56	-0.479 ± 1.826	-2.561 ± 1.667
photometric centroid source offset	1.42 ± 1.16	1.22	-1.36 ± 1.13	0.39 ± 1.47

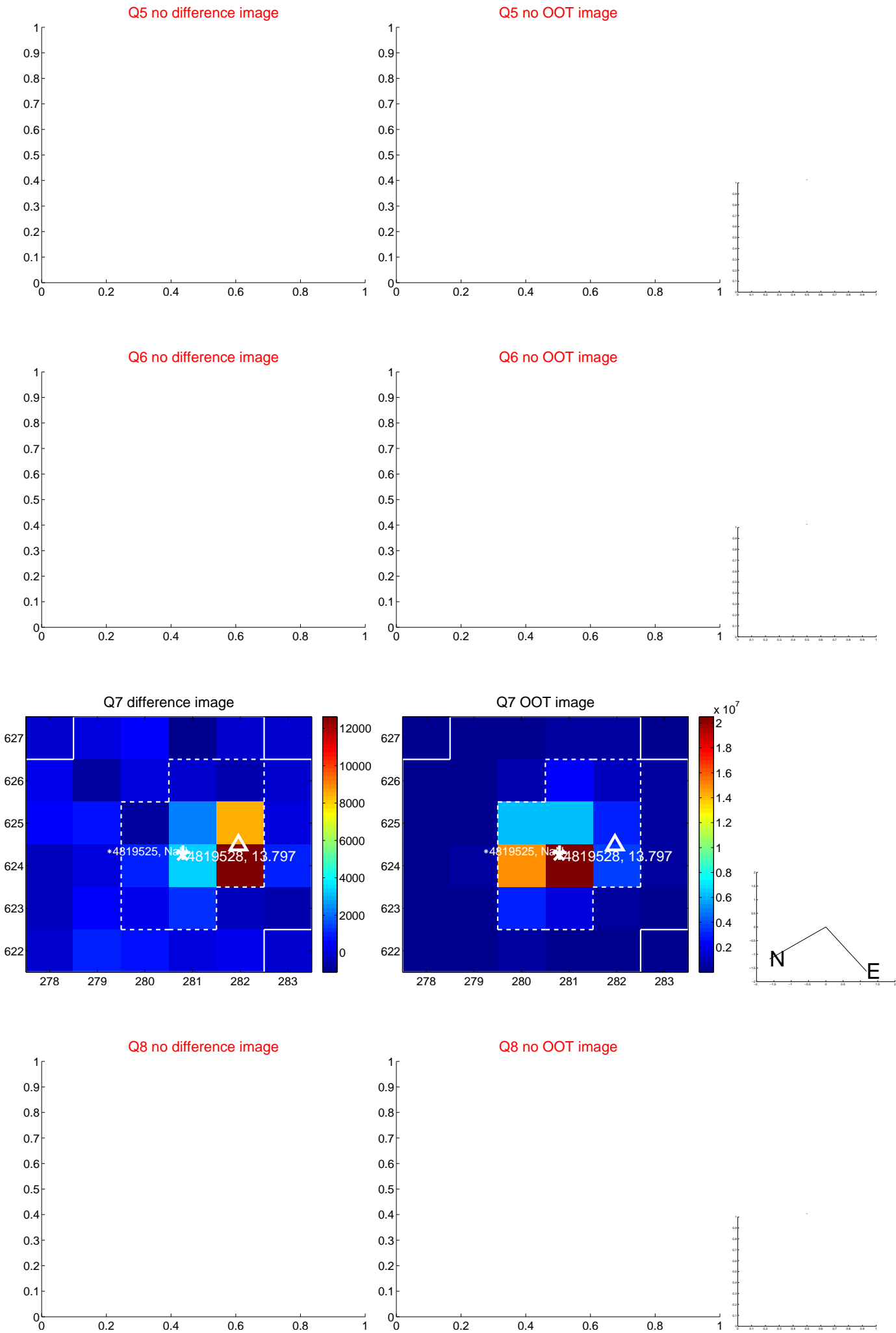


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

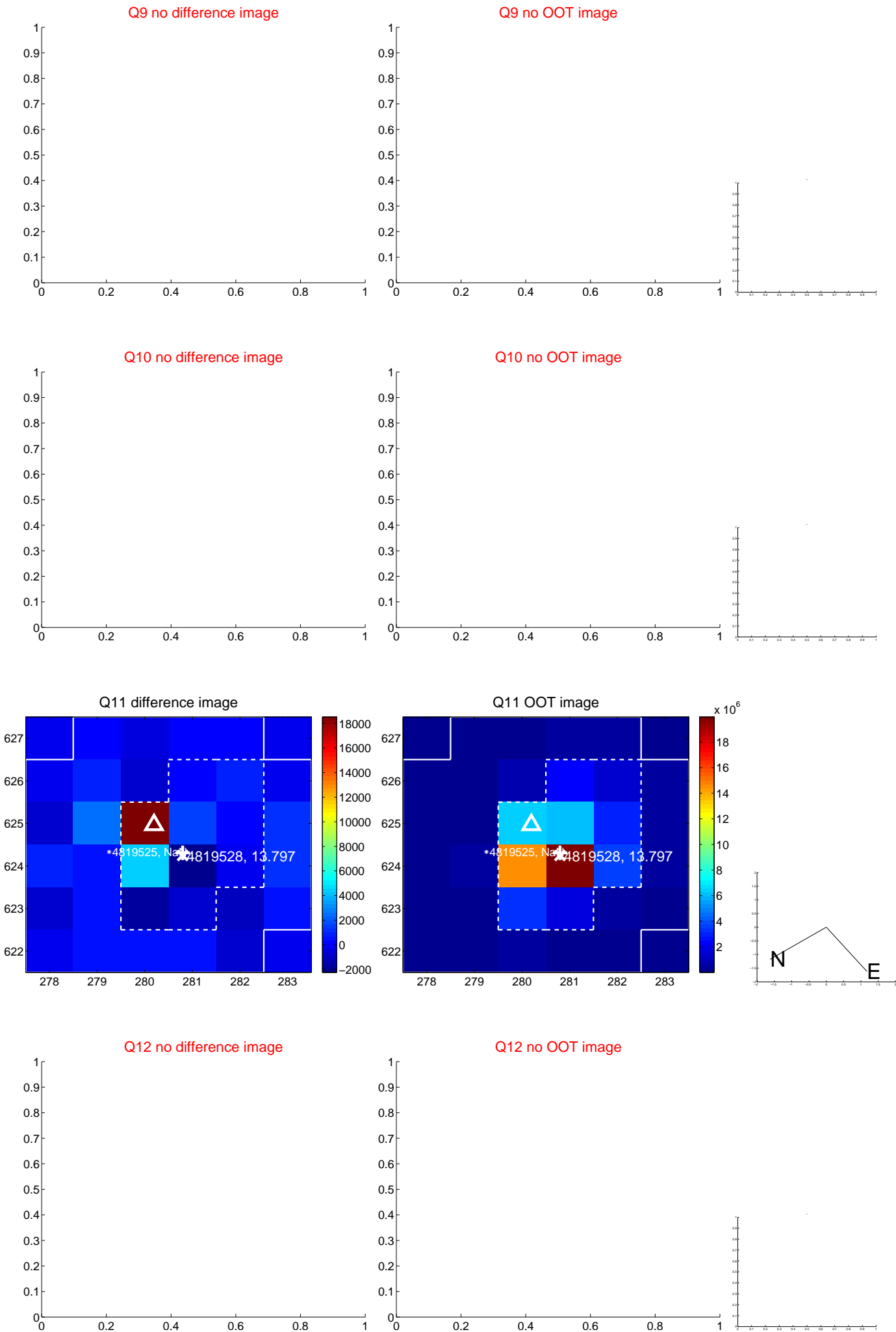
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

Q13 no difference image



Q13 no OOT image



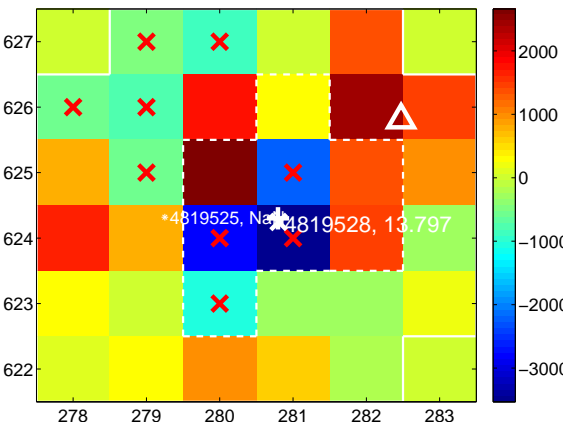
Q14 no difference image



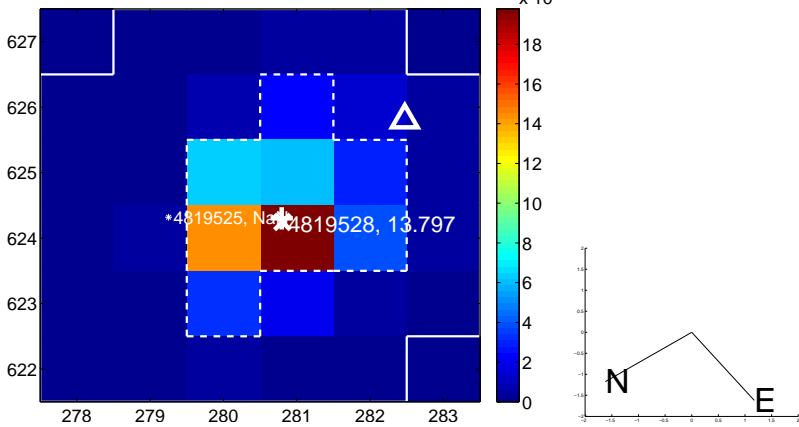
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



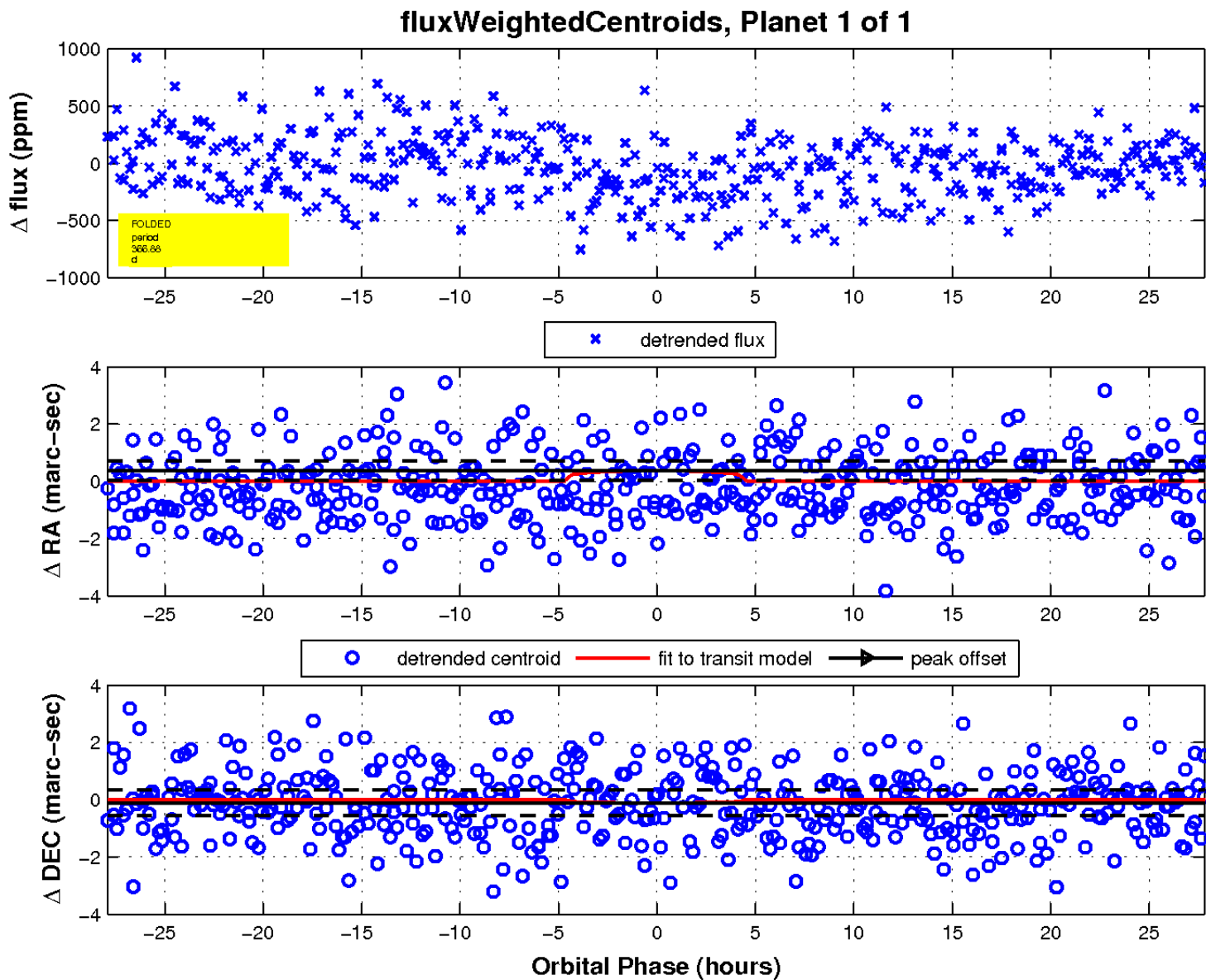
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

