

KIC 010599542

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})
010599542-01	OBS	No	248.210027	135.845962	680.3	16.934	7.6	6.6	0.67	4407	2.07	0.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010599542-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

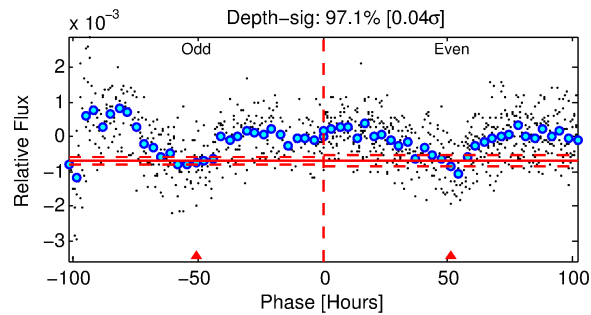
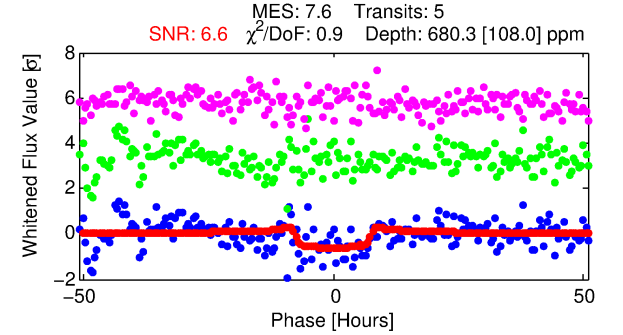
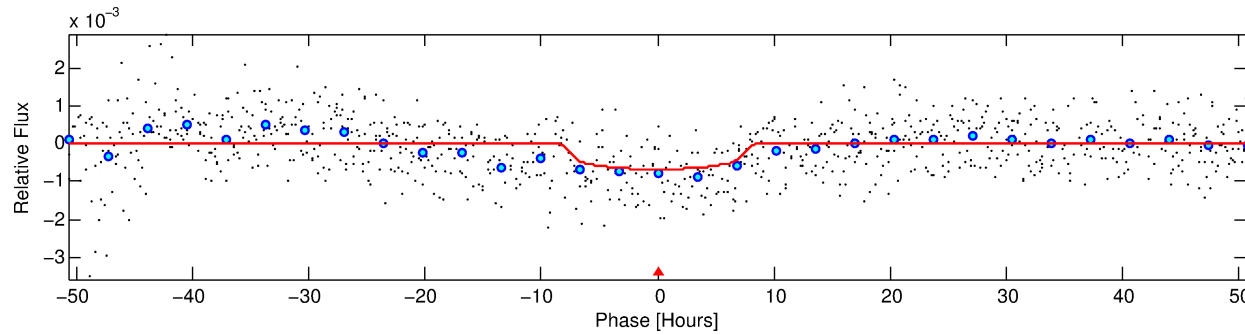
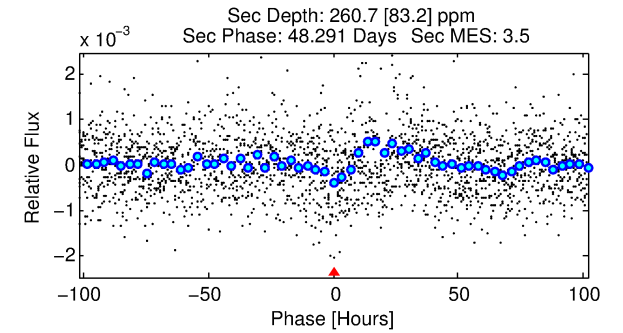
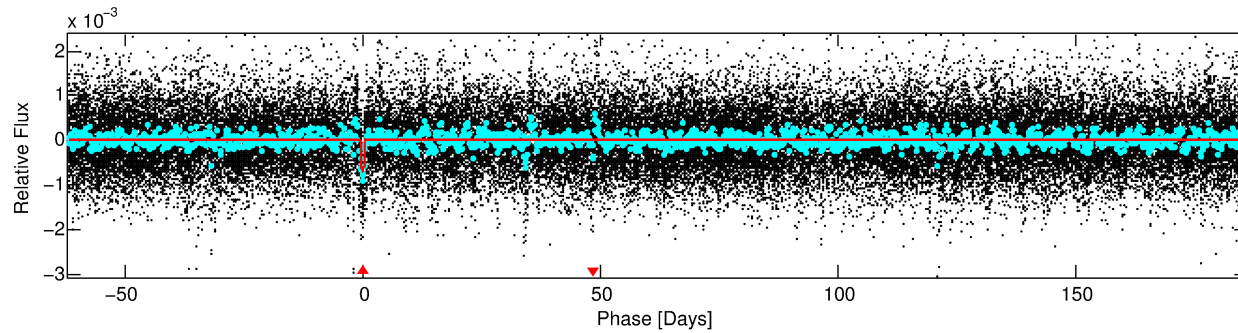
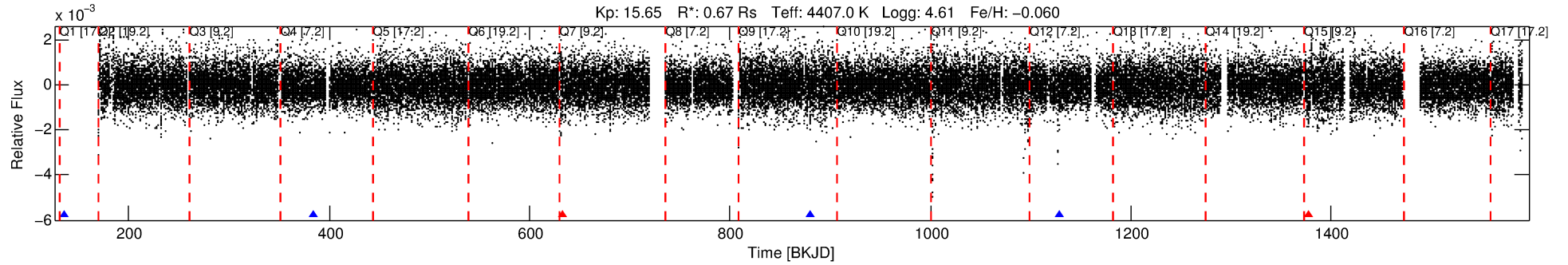
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010599542-01

No Significant Match Found

DV One-Page Summary

KIC: 10599542 Candidate: 1 of 1 Period: 248.210 d



DV Fit Results:

Period = 248.21003 [0.01373] d
Epoch = 135.8460 [0.0471] BKJD
Rp/R* = 0.0285 [0.0058]
a/R* = 61.57 [39.04]
b = 0.87 [0.18]
Seff = 0.33 [0.05]
Teq = 193 [7] K
Rp = 2.07 [0.46] Re
a = 0.6732 [0.0472] AU
Ag = 15209.58 [8017.33] [1.90σ]
Teffp = 3318 [441] K [7.08σ]

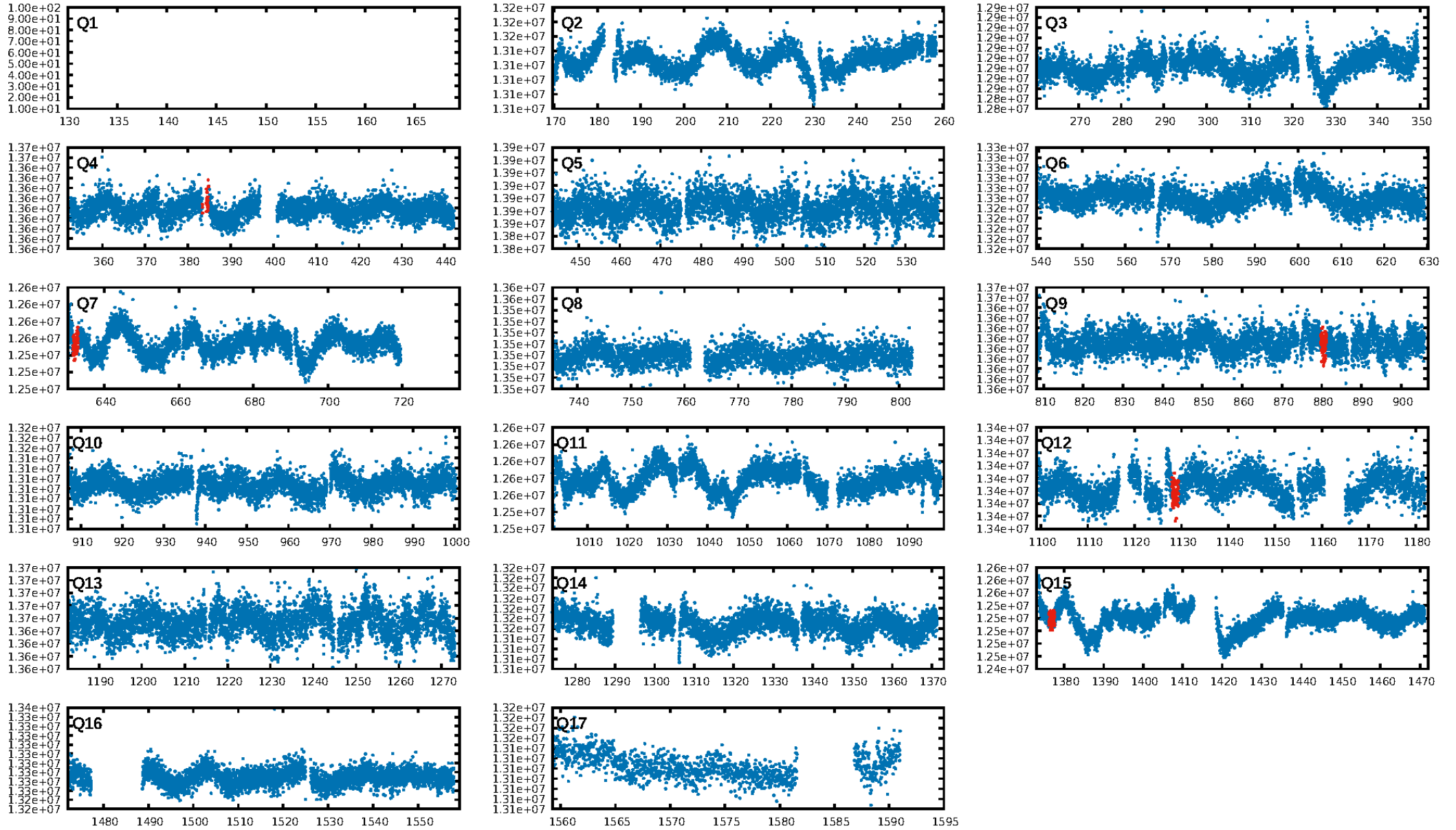
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.79e-09
RollingBand-fgt: 0.60 [3/5]
GhostDiagnostic-chr: -14.8
Centroid-sig: 1.4%
Centroid-so: 1.752 arcsec [1.71σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

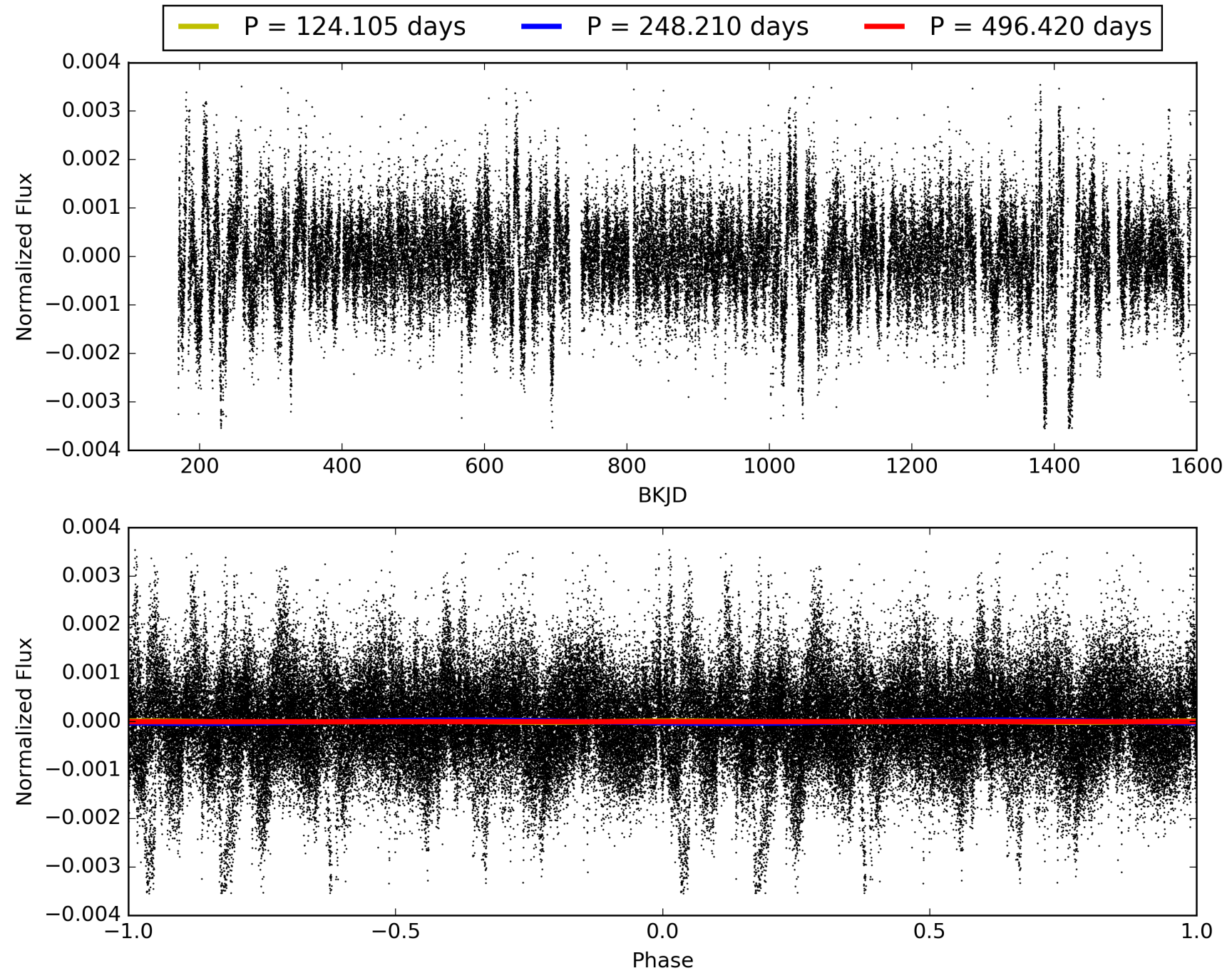
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:37:38 Z

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

TCE 010599542-01, PDC Light Curves

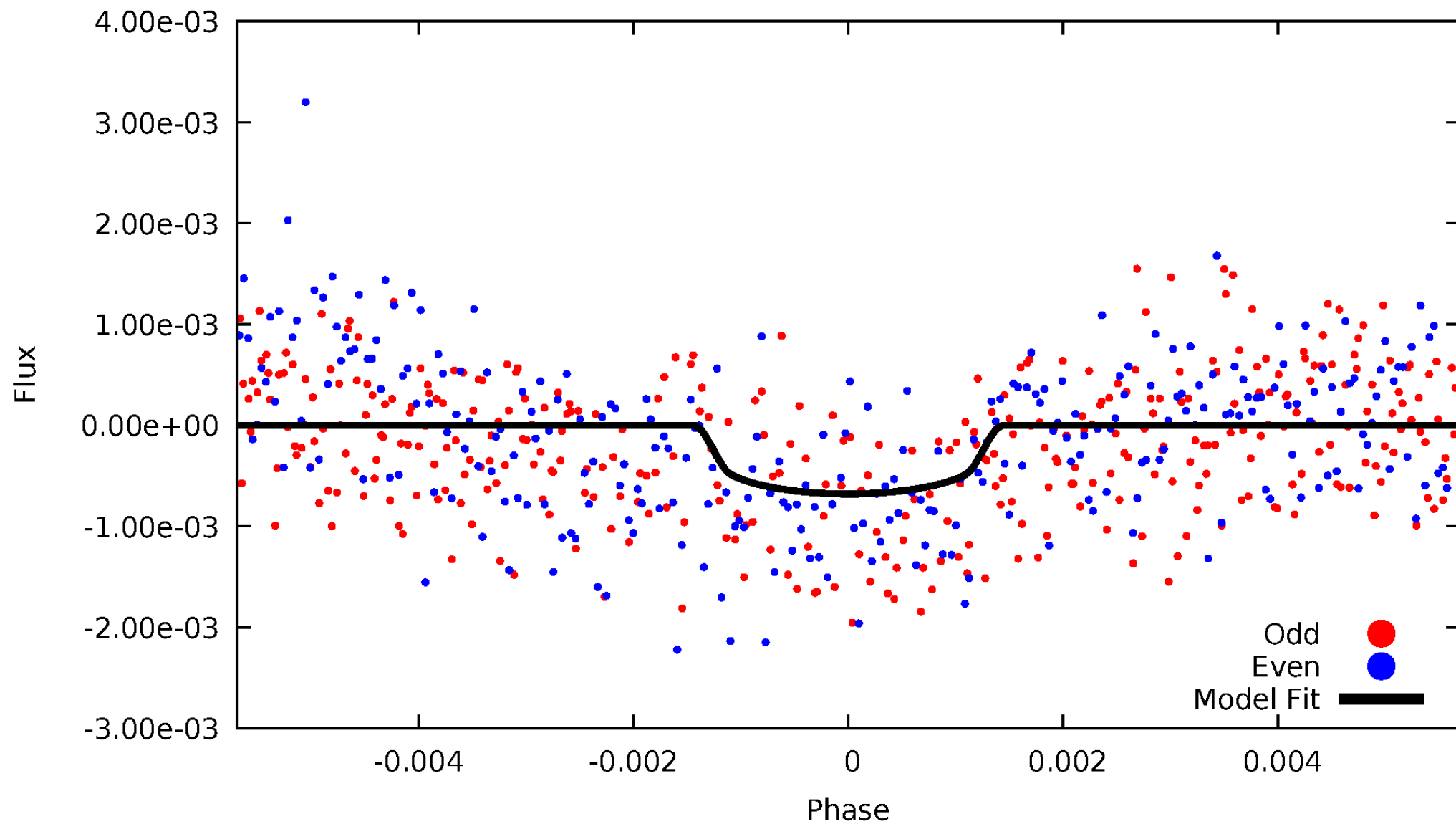


TCE 010599542-01



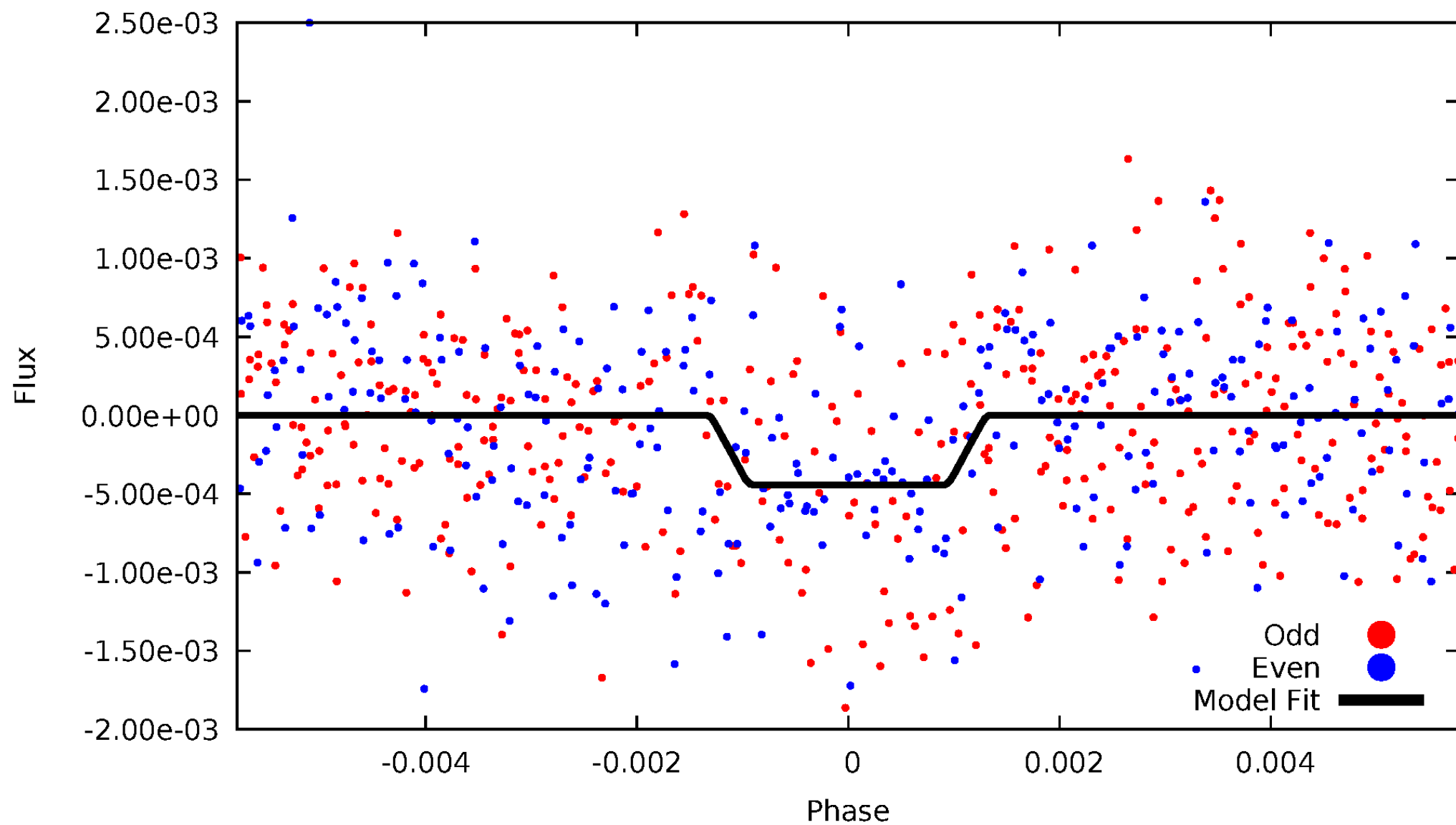
DV Odd/Even

TCE 010599542-01



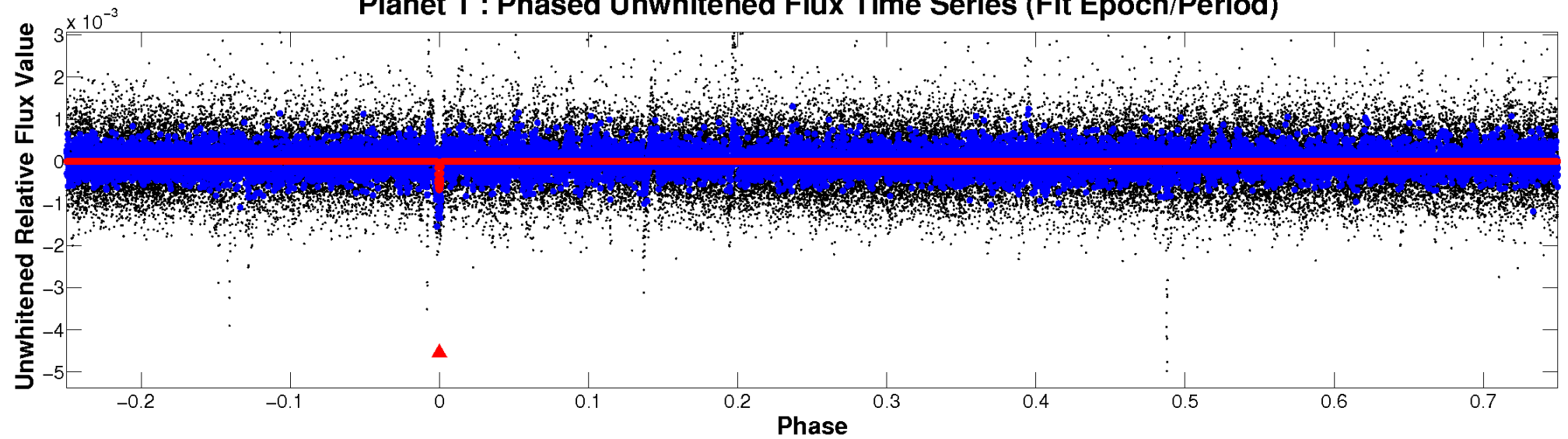
ALT Odd/Even

TCE 010599542-01

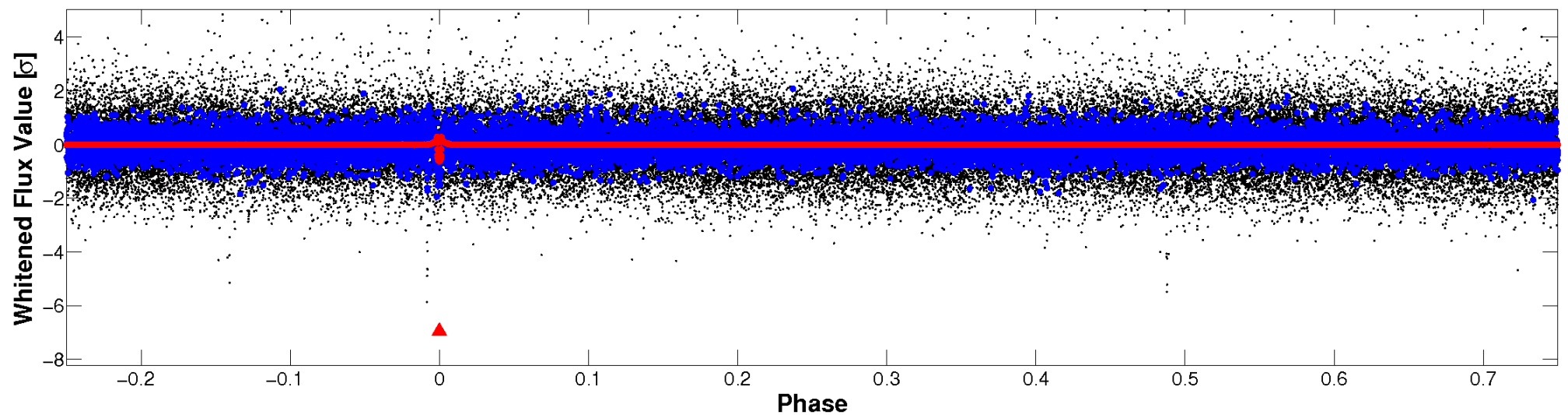


Non-Whitened Vs. Whitened Light Curve

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

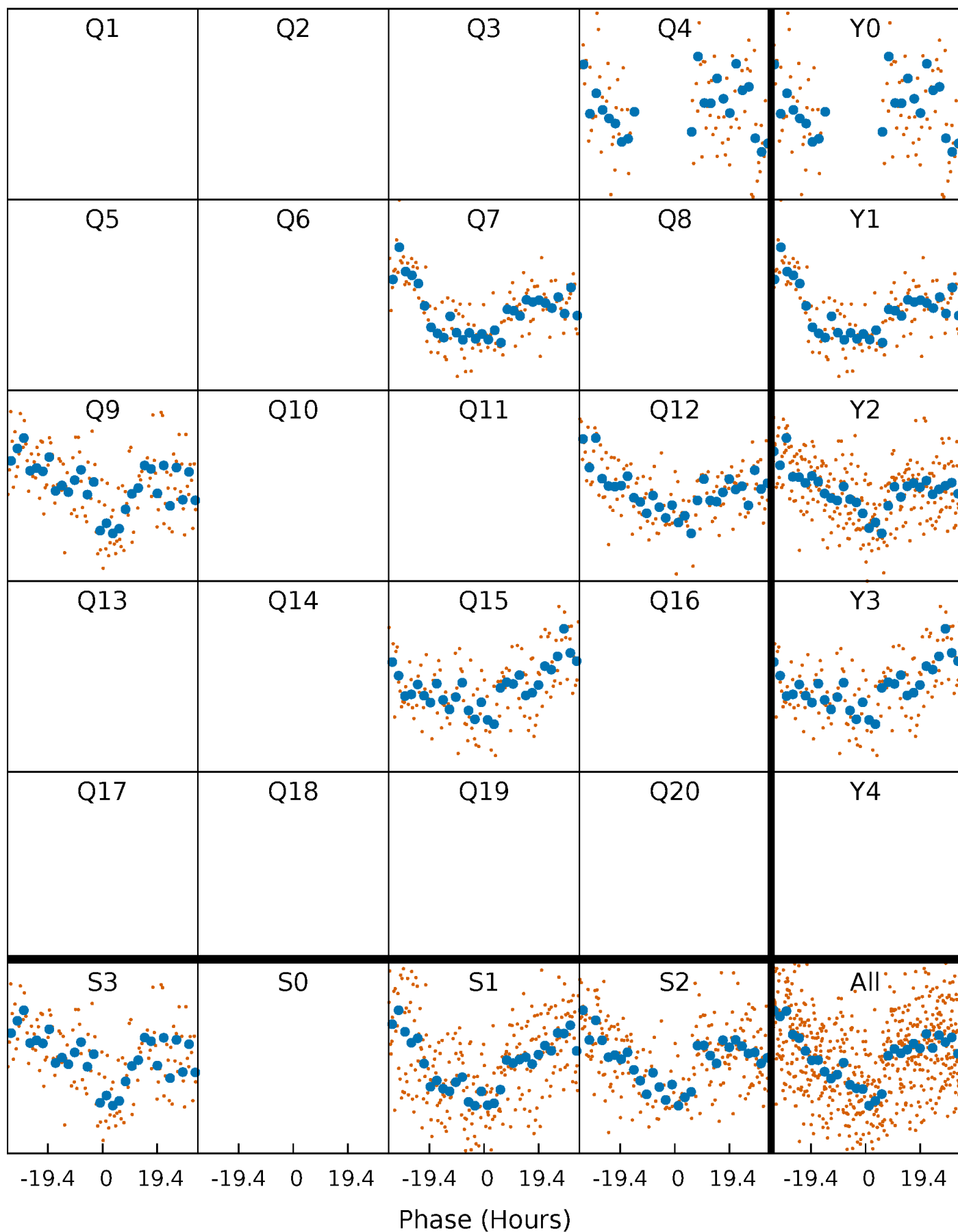


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010599542-01 P=248.210027 Days $T_0=135.845962$ (BKJD)



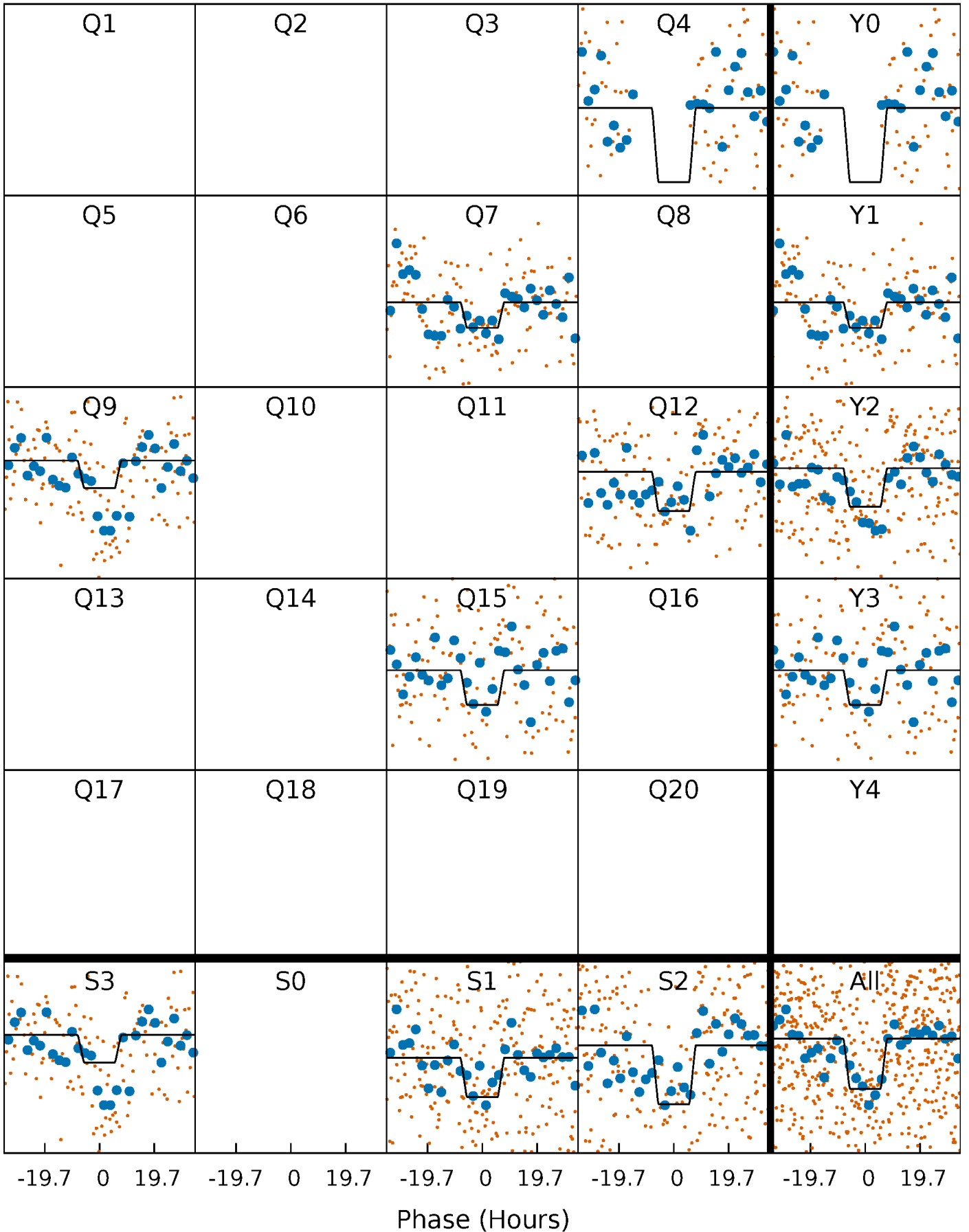
DV Quarter-Phased Transit Curves

TCE 010599542-01 $P=248.210027$ Days $T_0=135.845962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

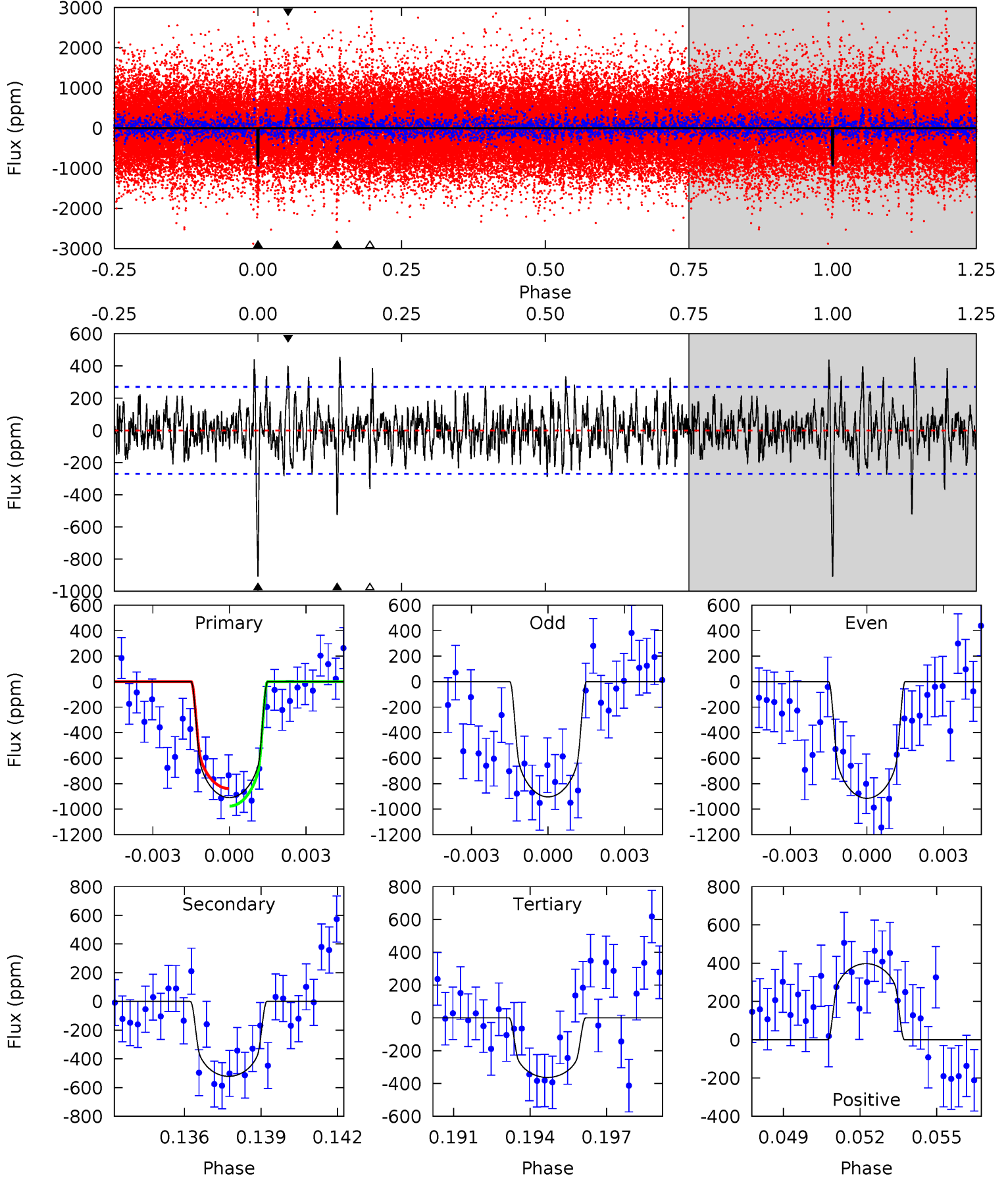
TCE 010599542-01 P=248.213265 Days $T_0=135.852388$ (BKJD)



DV Model-Shift Uniqueness Test

010599542-01, P = 248.210027 Days, E = 135.845962 Days

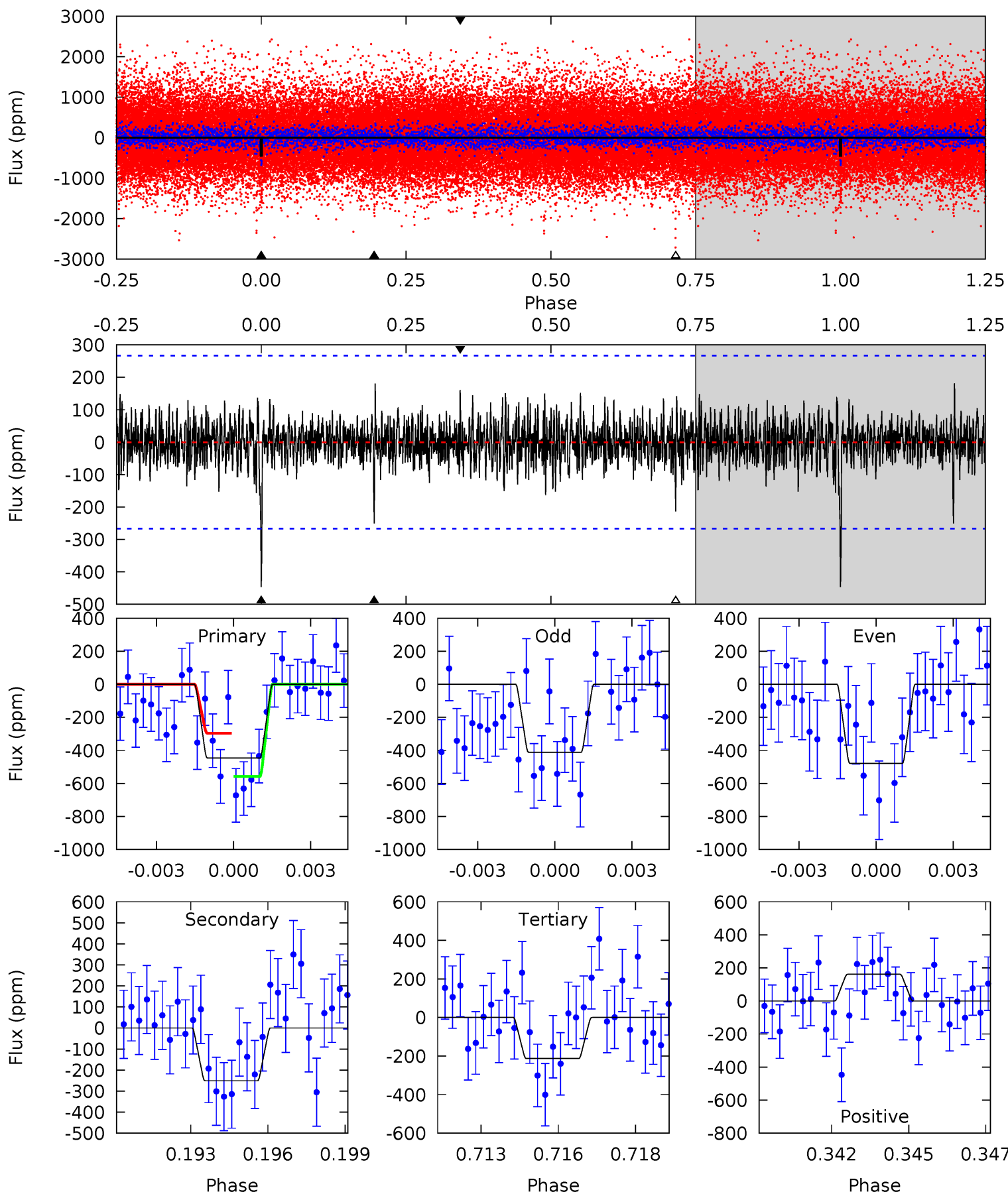
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	10.1	7.06	7.73	5.26	2.98	2.10	10.6	9.95	3.08	2.41	0.11	0.98	0.33	1.33



Alt Model-Shift Uniqueness Test

010599542-01, P = 248.213265 Days, E = 135.852388 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.83	4.96	4.21	3.19	5.28	3.01	0.98	4.61	5.63	0.75	1.77	0.66	1.08	0.29	0



Stellar Parameters For KIC 010599542

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4407^{+133}_{-133}	$4.612^{+0.049}_{-0.021}$	$-0.060^{+0.300}_{-0.300}$	$0.665^{+0.043}_{-0.059}$	$0.659^{+0.060}_{-0.053}$	$3.161^{+0.673}_{-0.337}$
	+3%/-3%	+1%/-0%	+500%/-500%	+6%/-9%	+9%/-8%	+21%/-11%
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 010599542-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-522 ± 51	$2.05^{+0.41}_{-0.43}$	268^{+10}_{-8}	4061^{+401}_{-290}	31366^{+17865}_{-9791}
Alt.	-251 ± 51	$1.52^{+0.39}_{-0.45}$	268^{+9}_{-9}	3972^{+565}_{-362}	27610^{+26637}_{-11247}

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

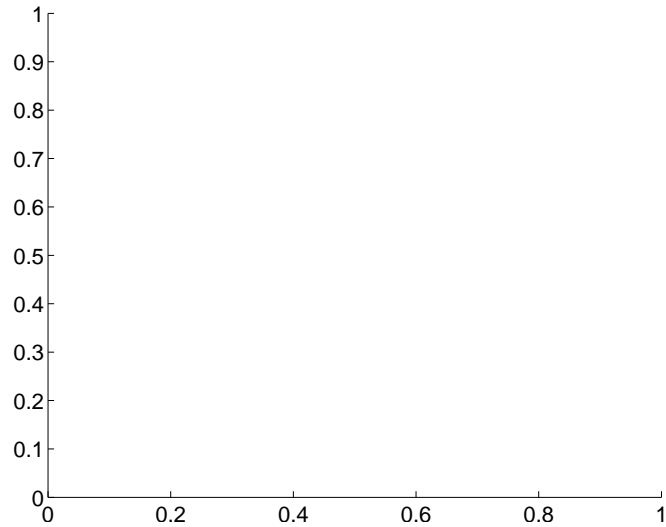
Supplemental centroid analysis for 010599542-01. Kepler magnitude: 15.65. Transit SNR 6.61

There are 0 quarters with good PRF difference image offsets

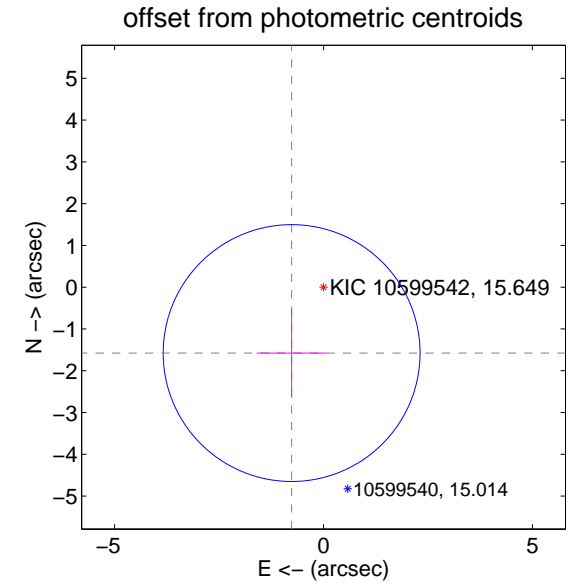
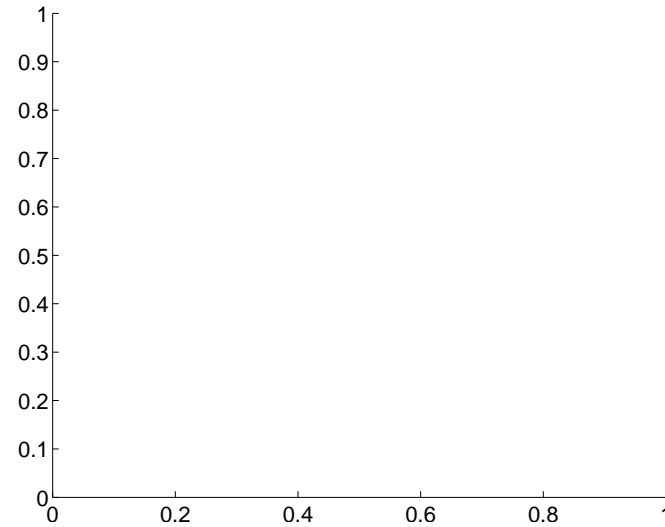
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.75 ± 1.02	1.71	0.76 ± 0.84	-1.58 ± 1.06

There is no PRF-fit offset from OOT-fit

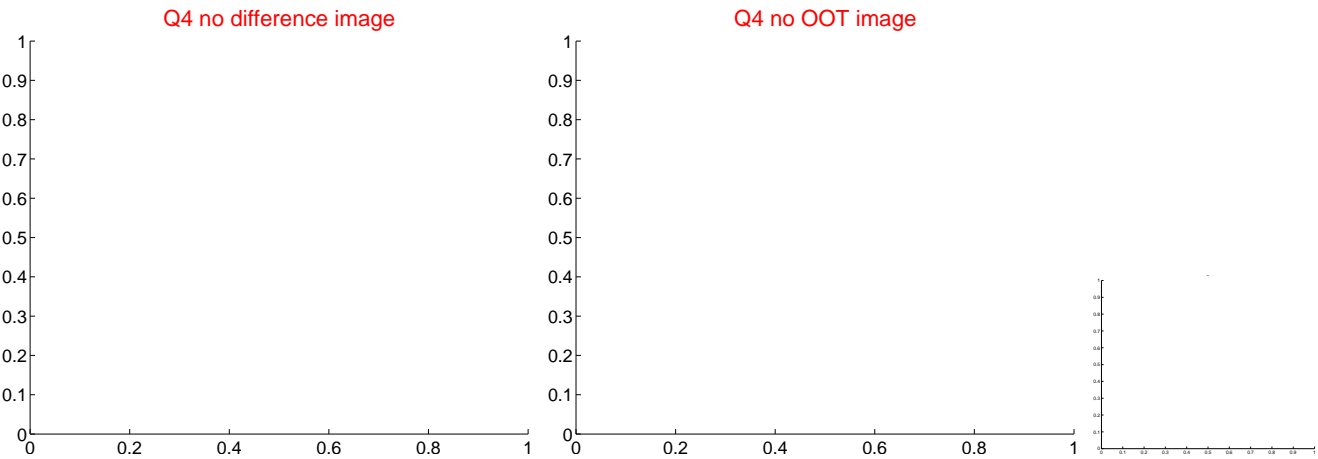
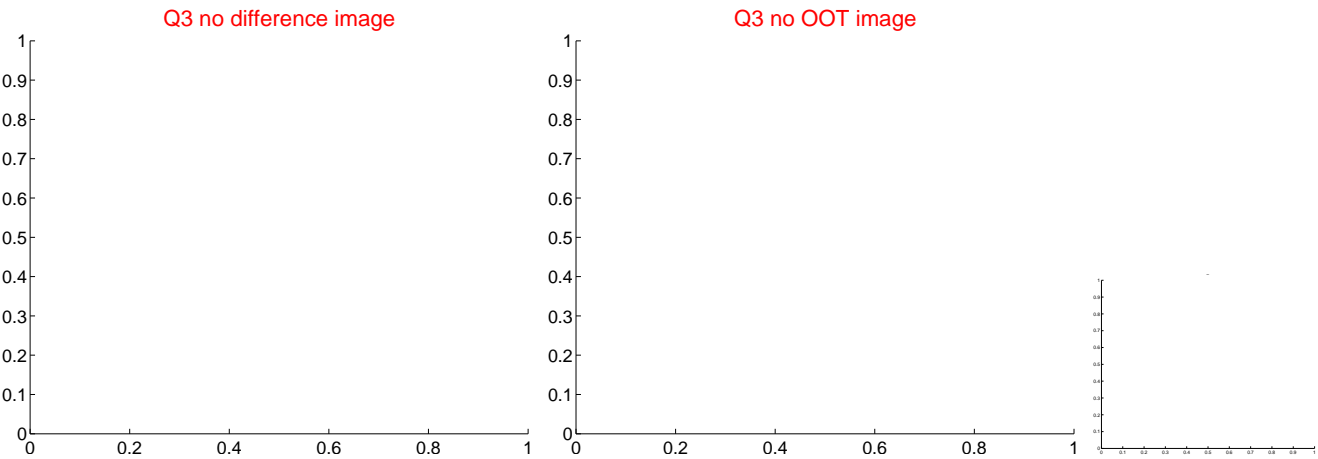
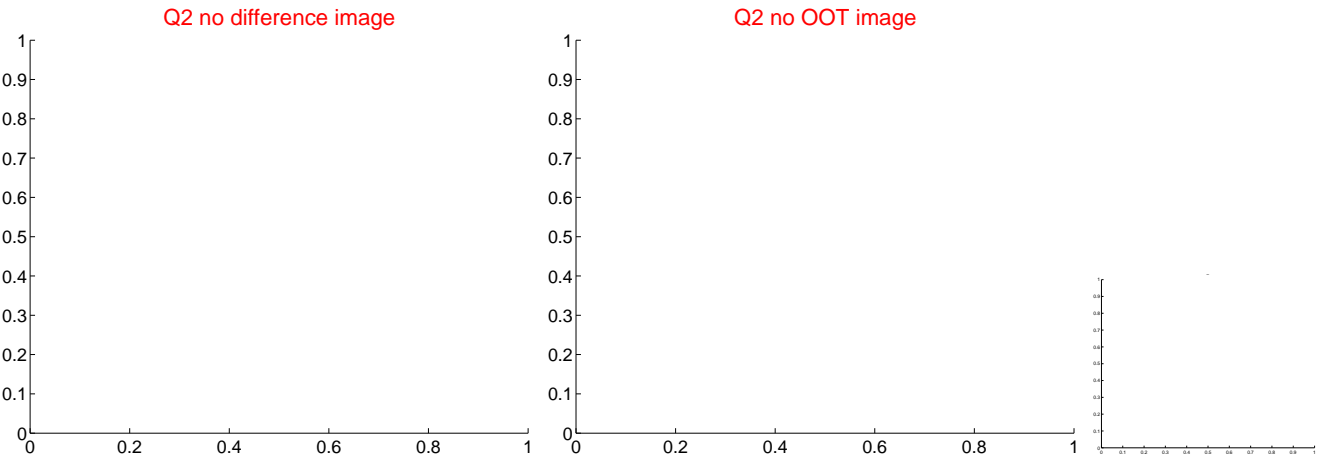
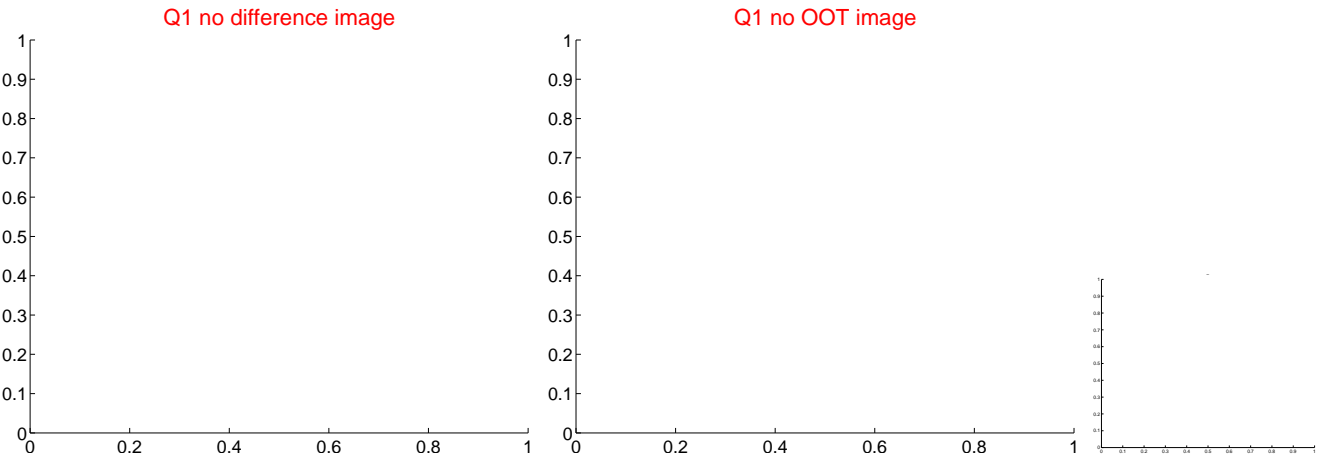


There is no PRF-fit offset from KIC

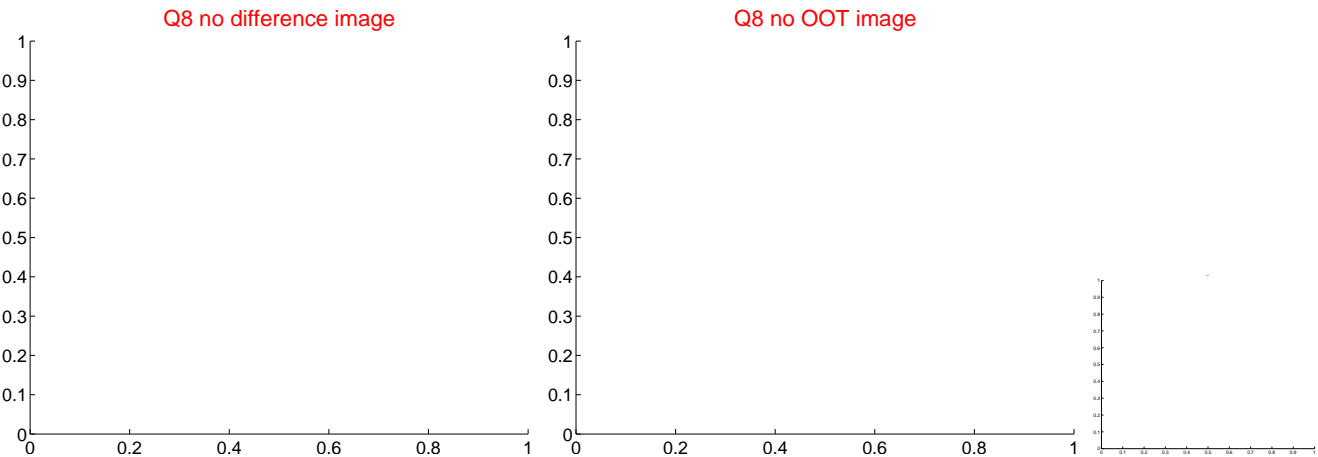
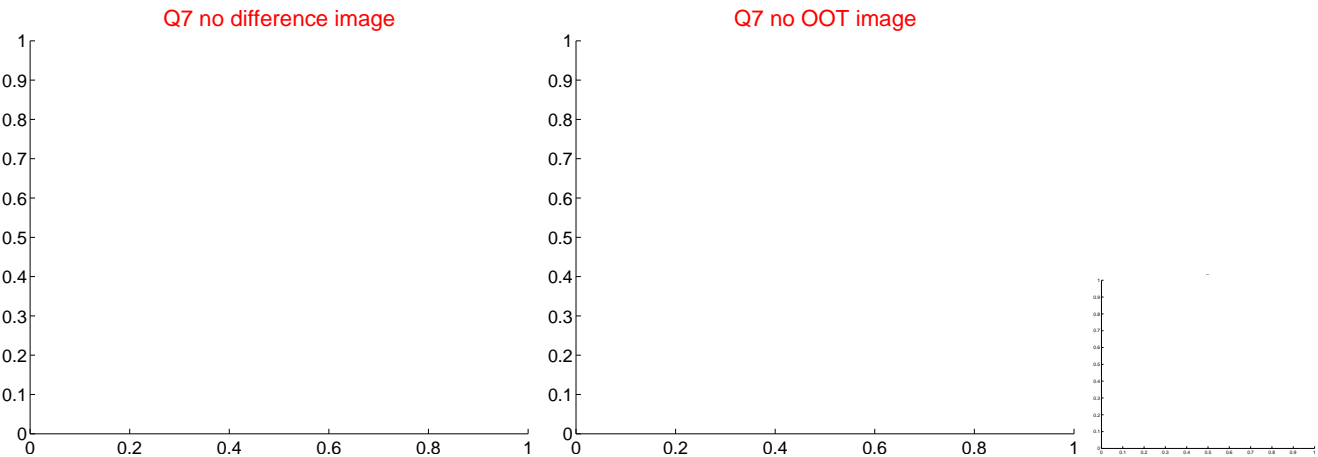
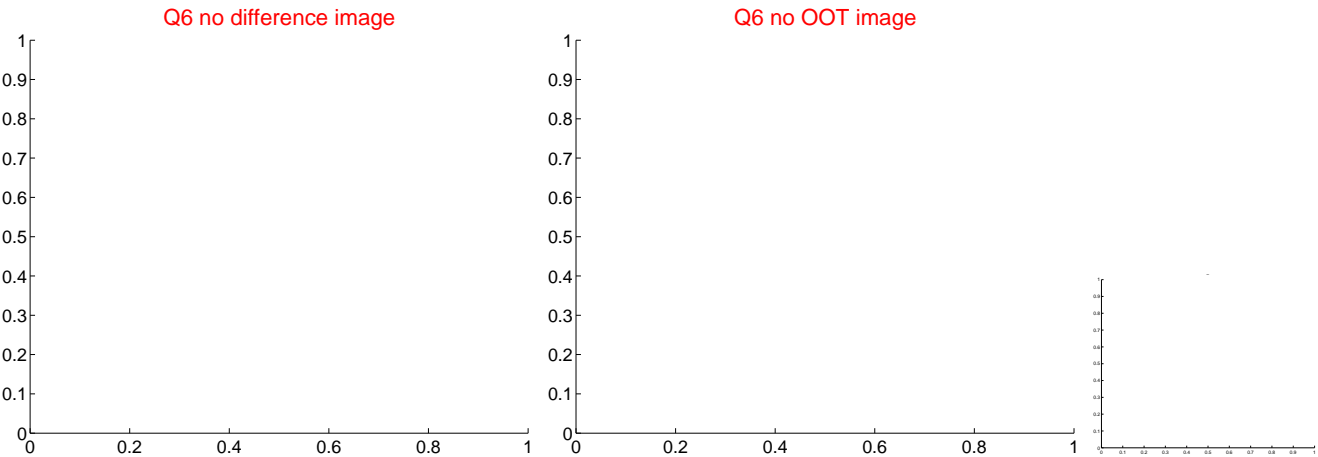
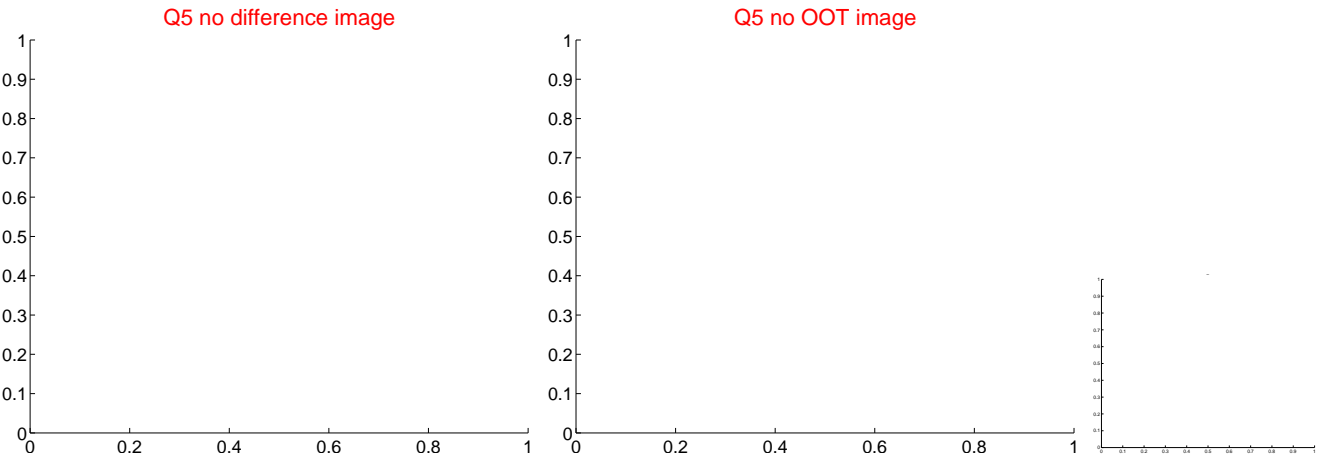


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

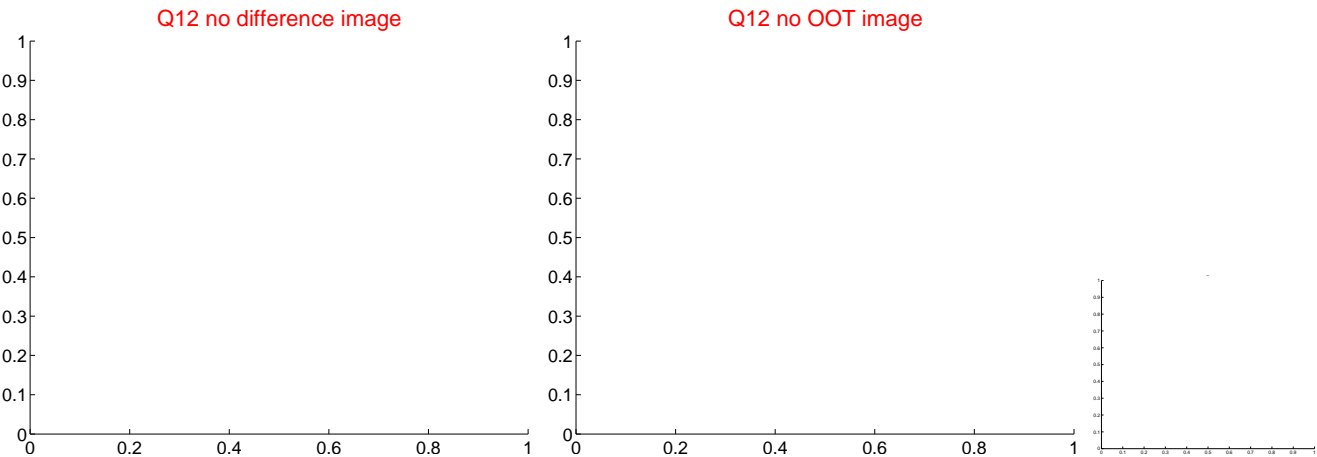
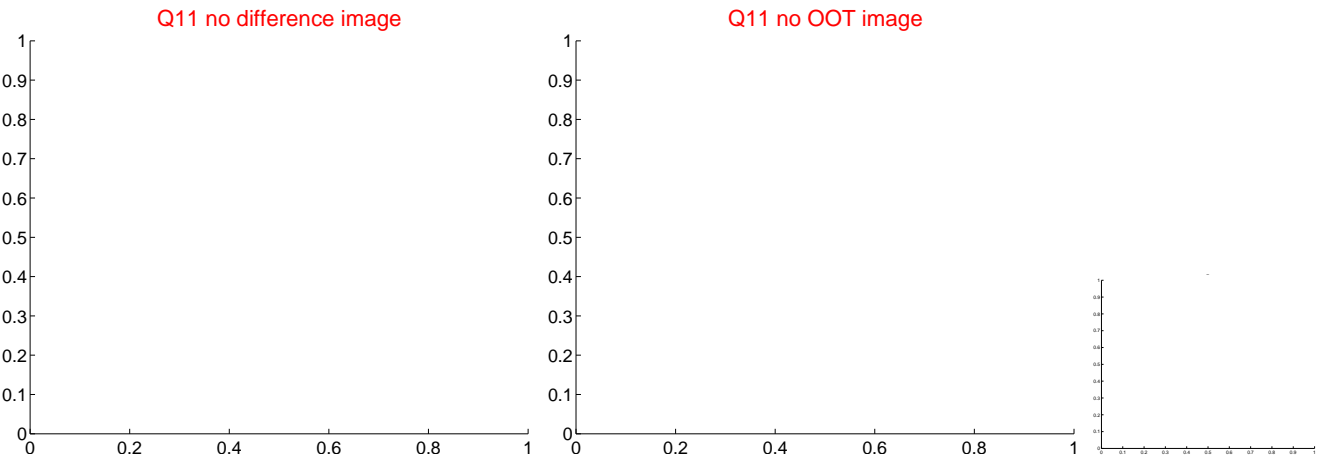
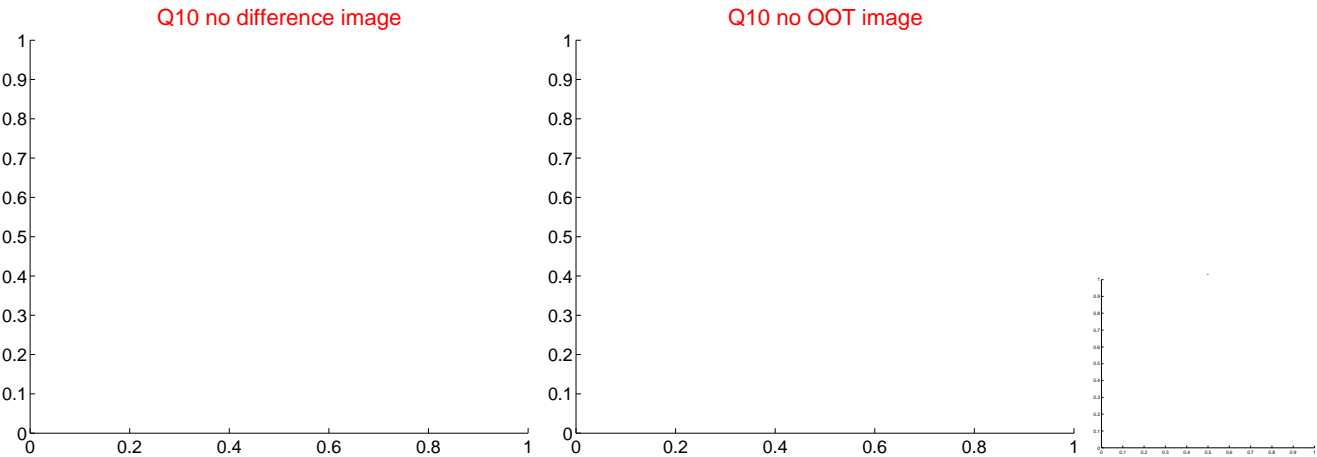
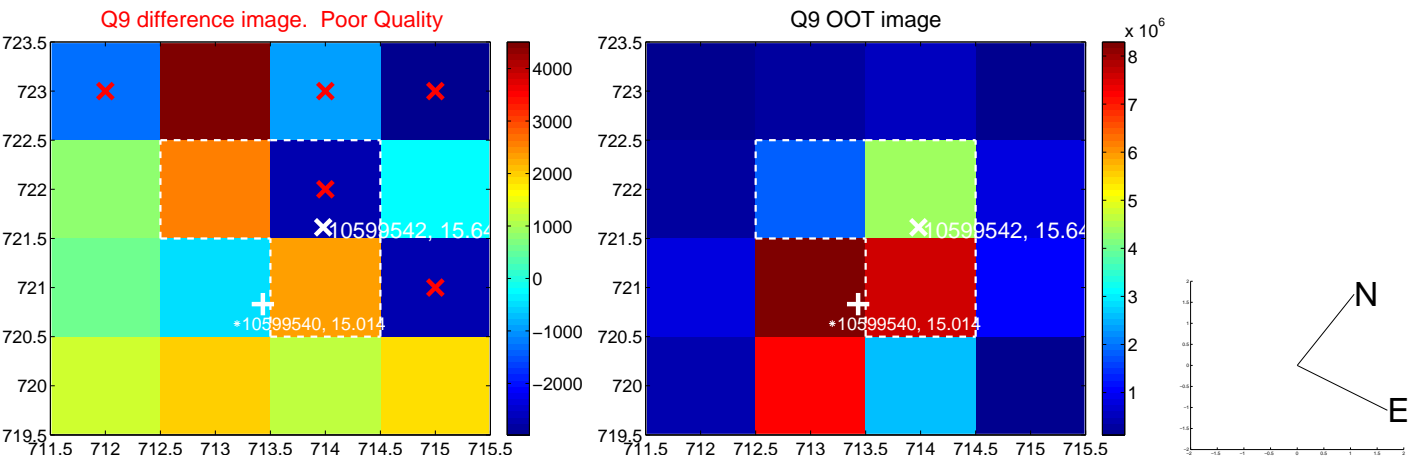
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



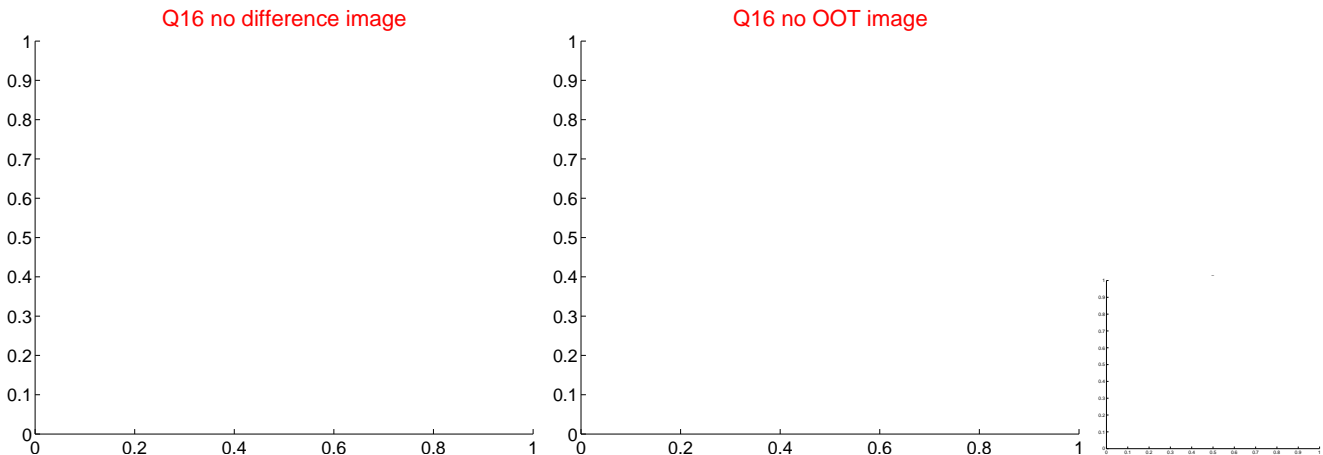
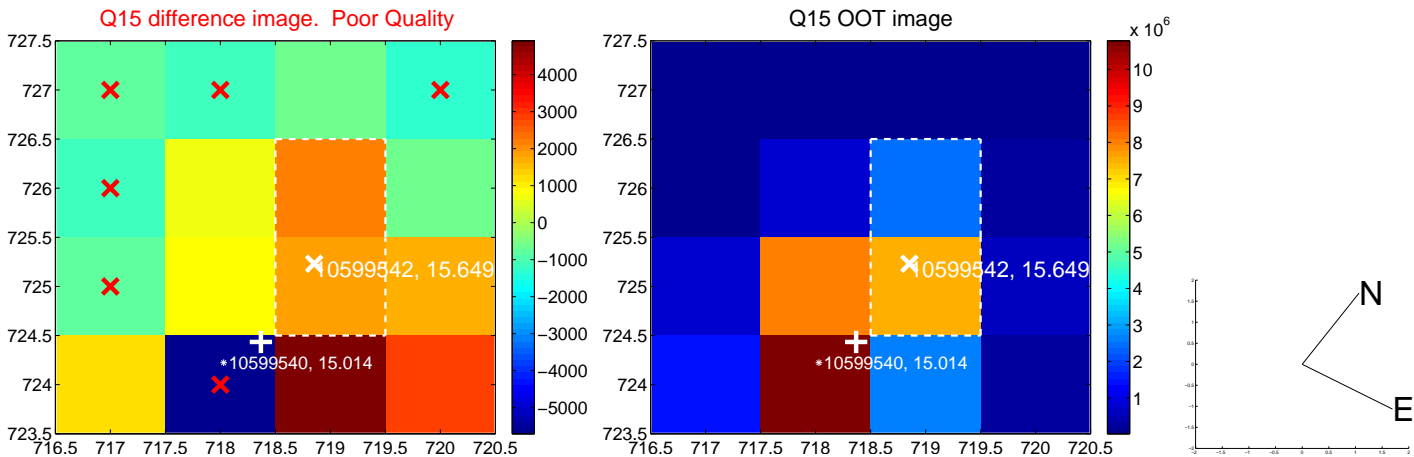
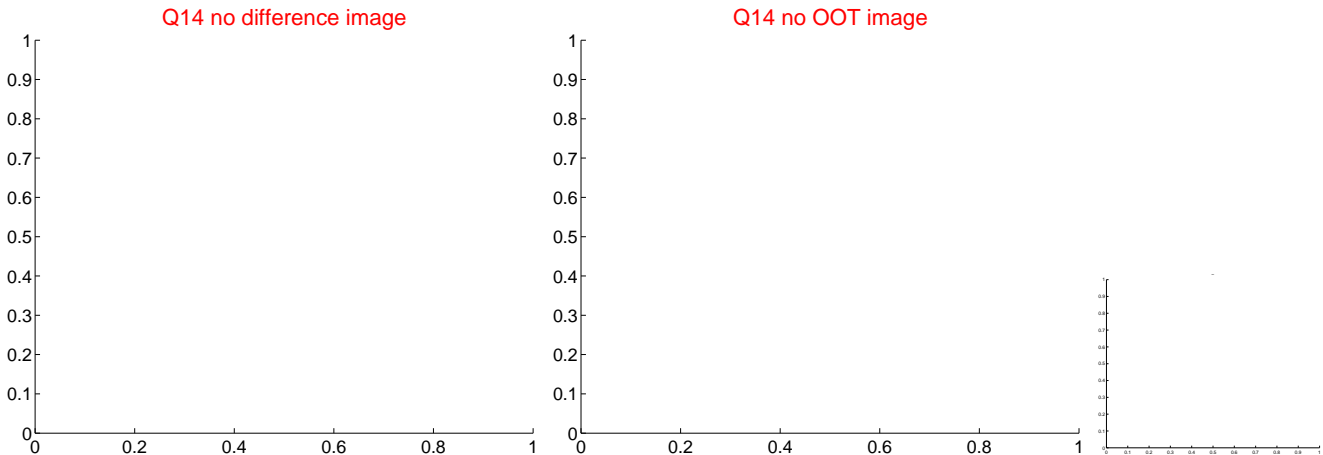
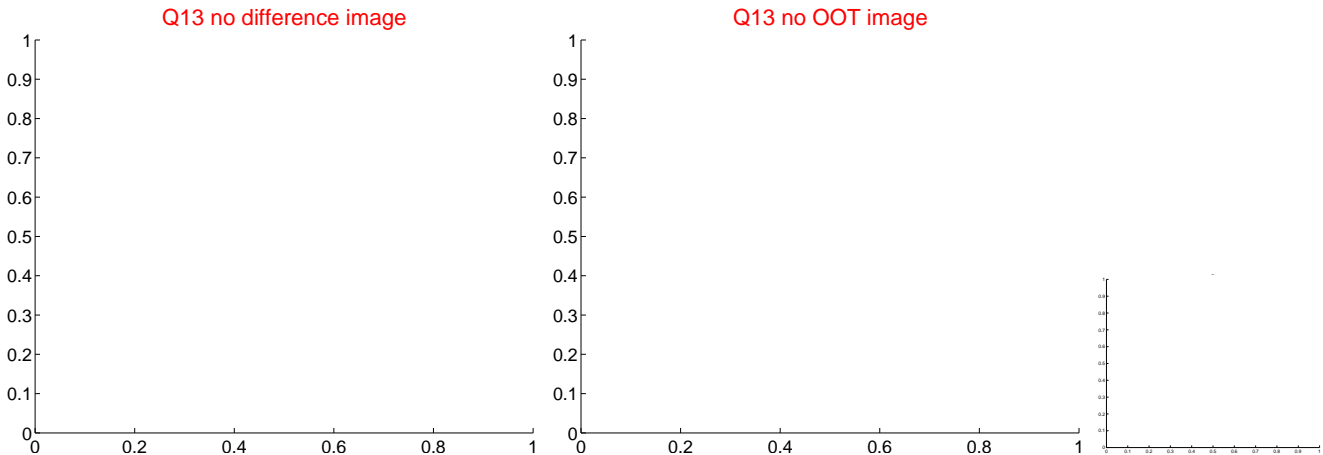
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



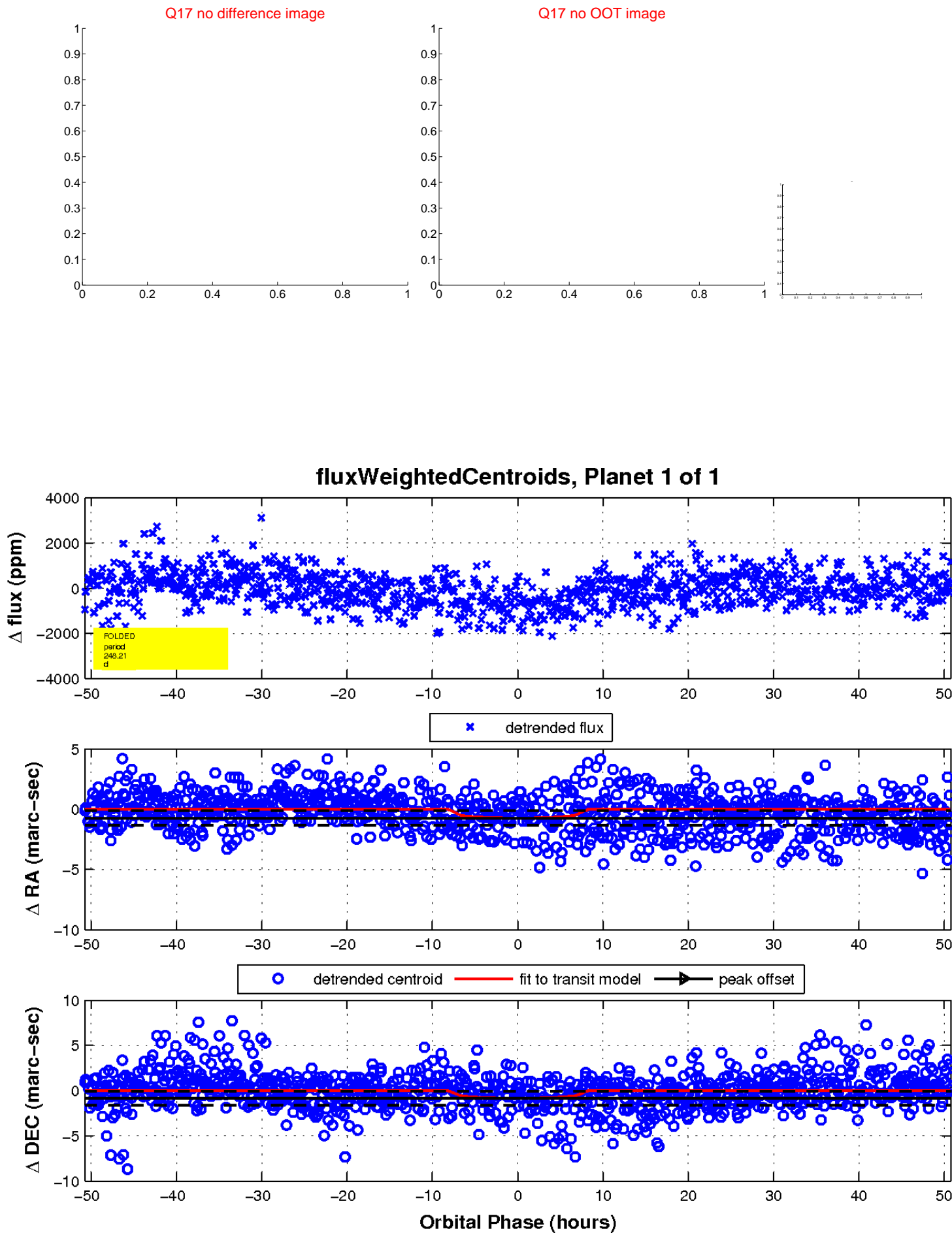
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

