

KIC 006290974

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})
006290974-01	OBS	No	644.940946	249.482437	1273.2	24.713	15.9	3.4	0.54	4681	2.06	0.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006290974-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—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.

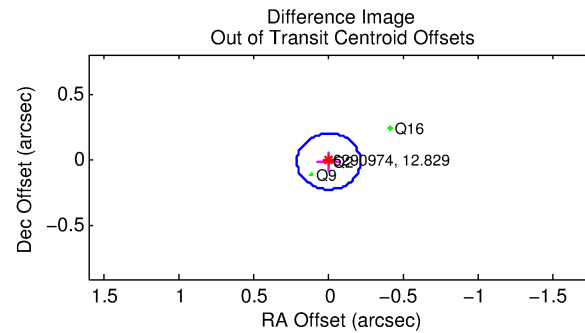
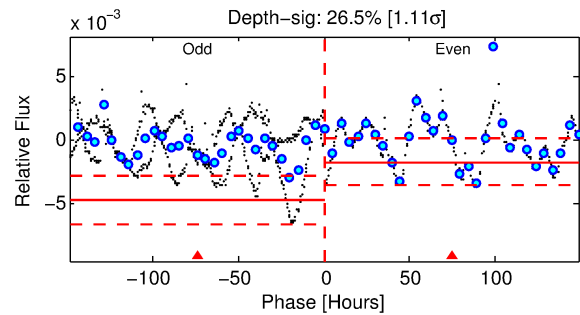
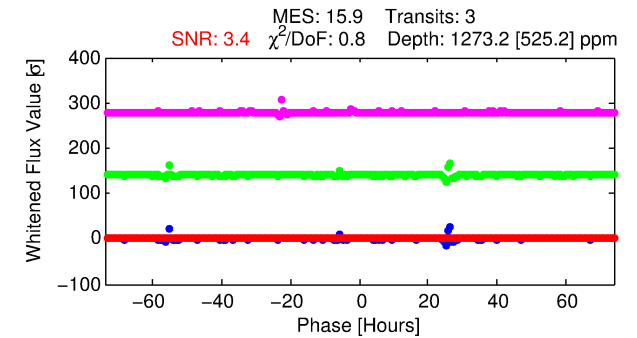
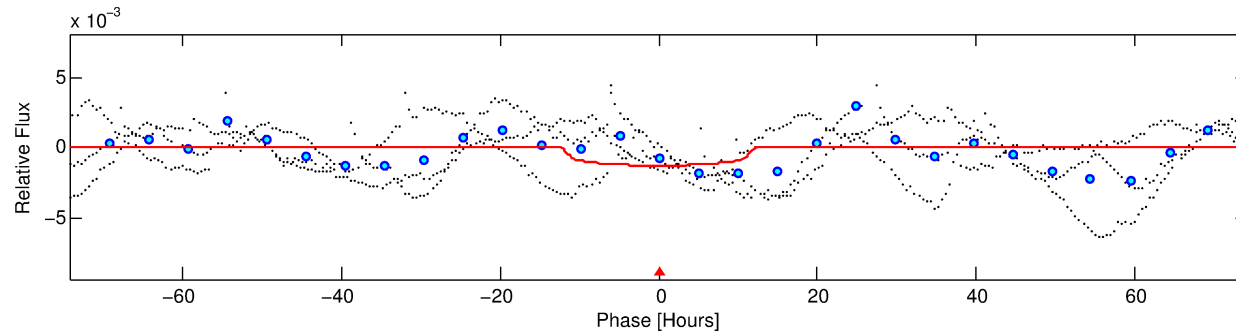
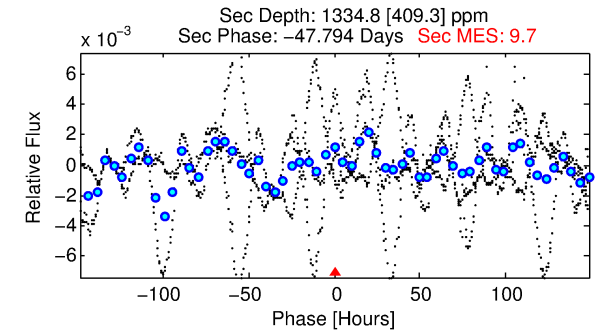
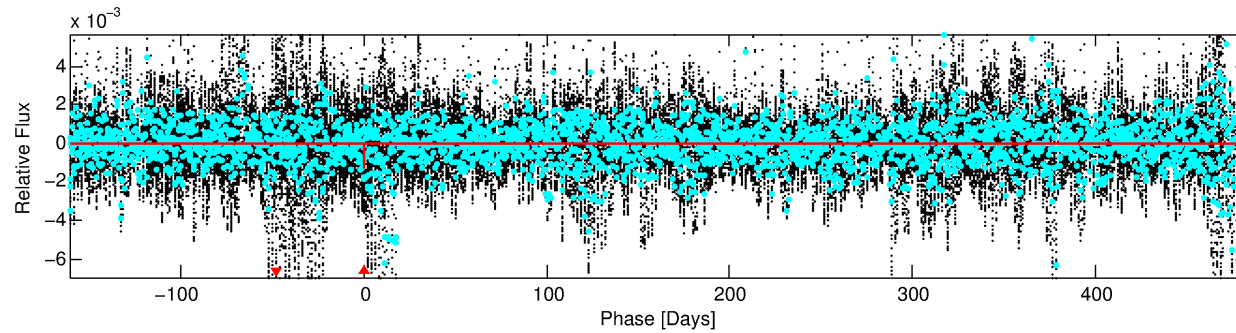
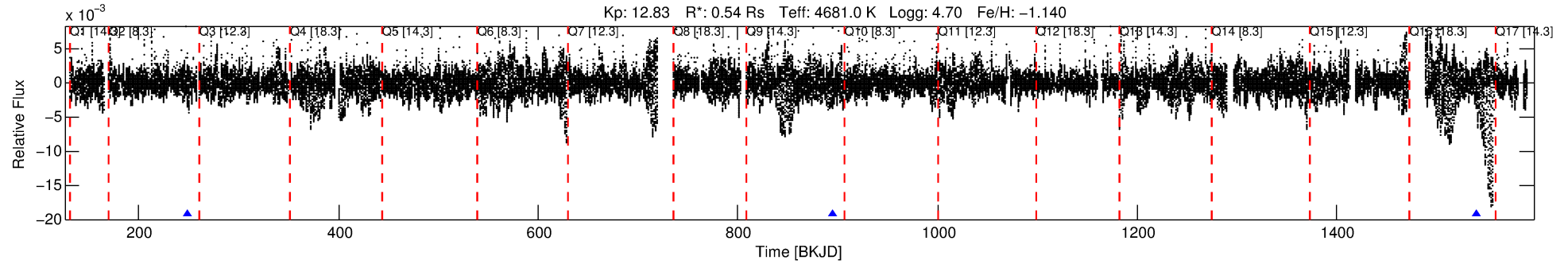
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006290974-01

No Significant Match Found

DV One-Page Summary

KIC: 6290974 Candidate: 1 of 1 Period: 644.941 d



DV Fit Results:

Period = 644.94095 [0.01381] d
Epoch = 249.4824 [0.0171] BKJD
Rp/R* = 0.0348 [0.0078]
a/R* = 152.16 [35.20]
b = 0.70 [0.17]
Seff = 0.09 [0.01]
Teq = 139 [5] K
Rp = 2.06 [0.48] Re
a = 1.1928 [0.0732] AU
Ag = 245413.27 [134608.61] [1.82σ]
Teffp = 4795 [664] K [7.02σ]

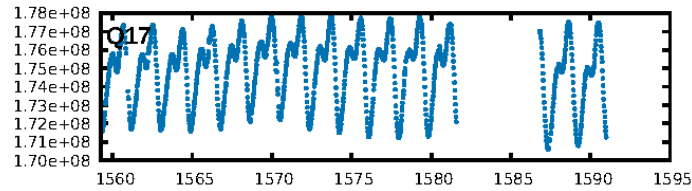
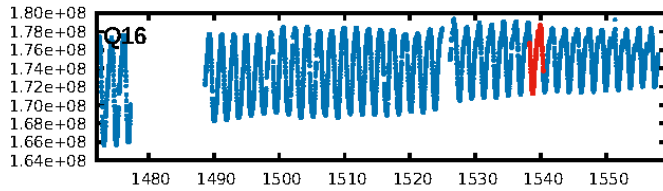
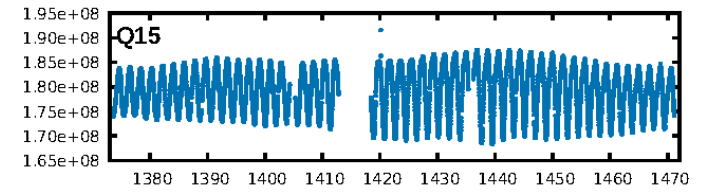
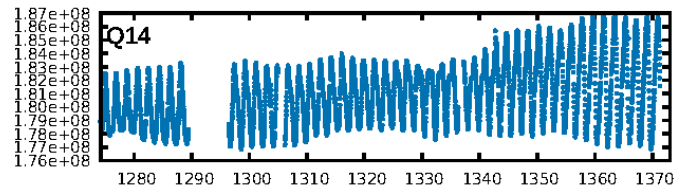
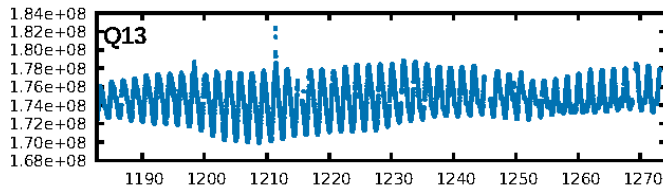
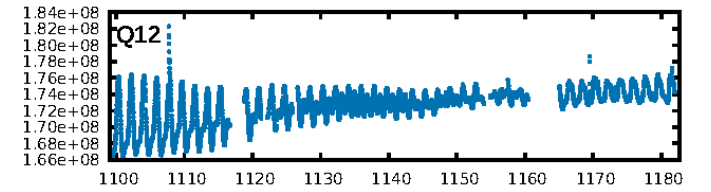
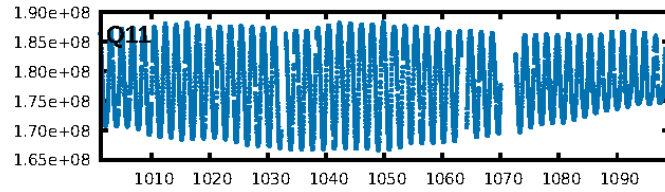
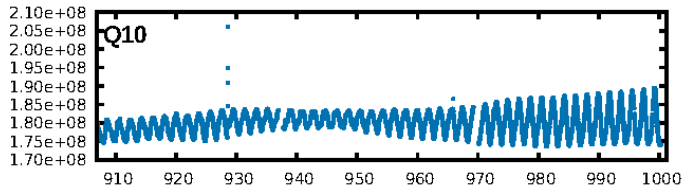
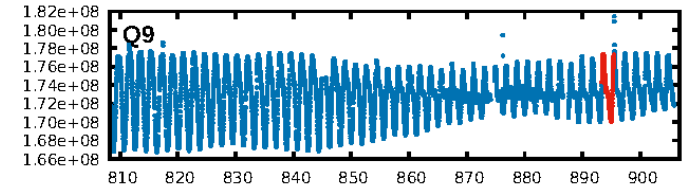
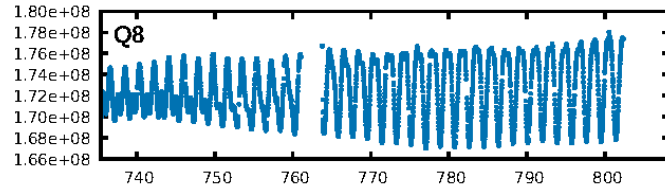
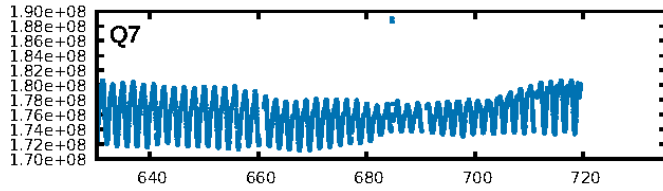
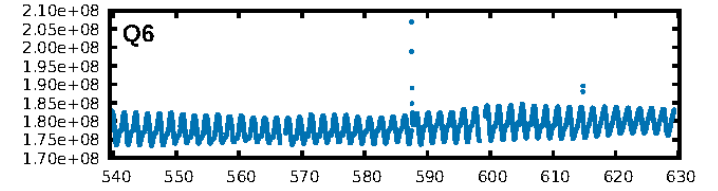
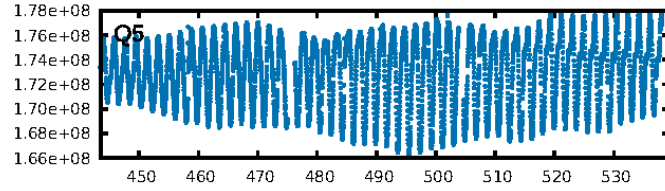
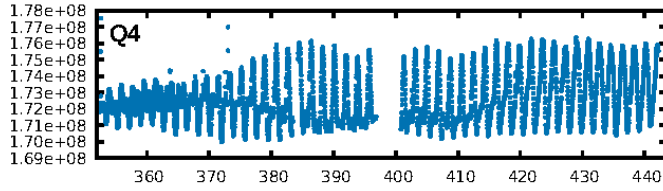
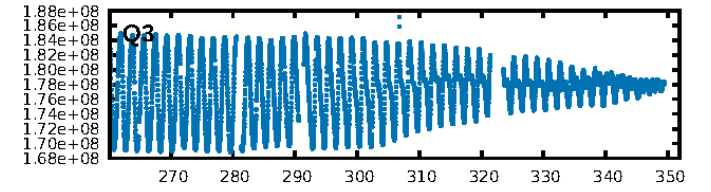
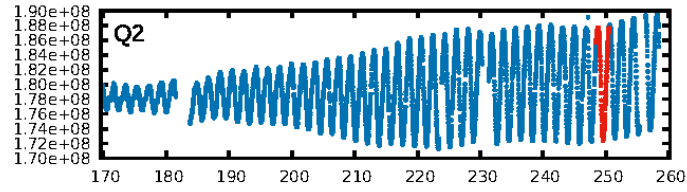
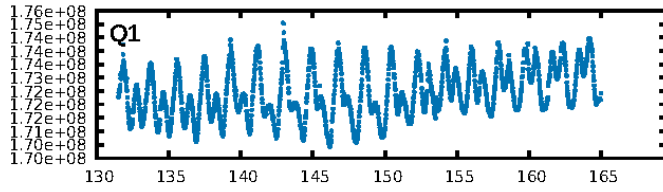
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.92e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 5.175
Centroid-sig: 36.7%
Centroid-so: 0.148 arcsec [0.89σ]
OotOffset-rm: 0.012 arcsec [0.17σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.204 arcsec [2.54σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

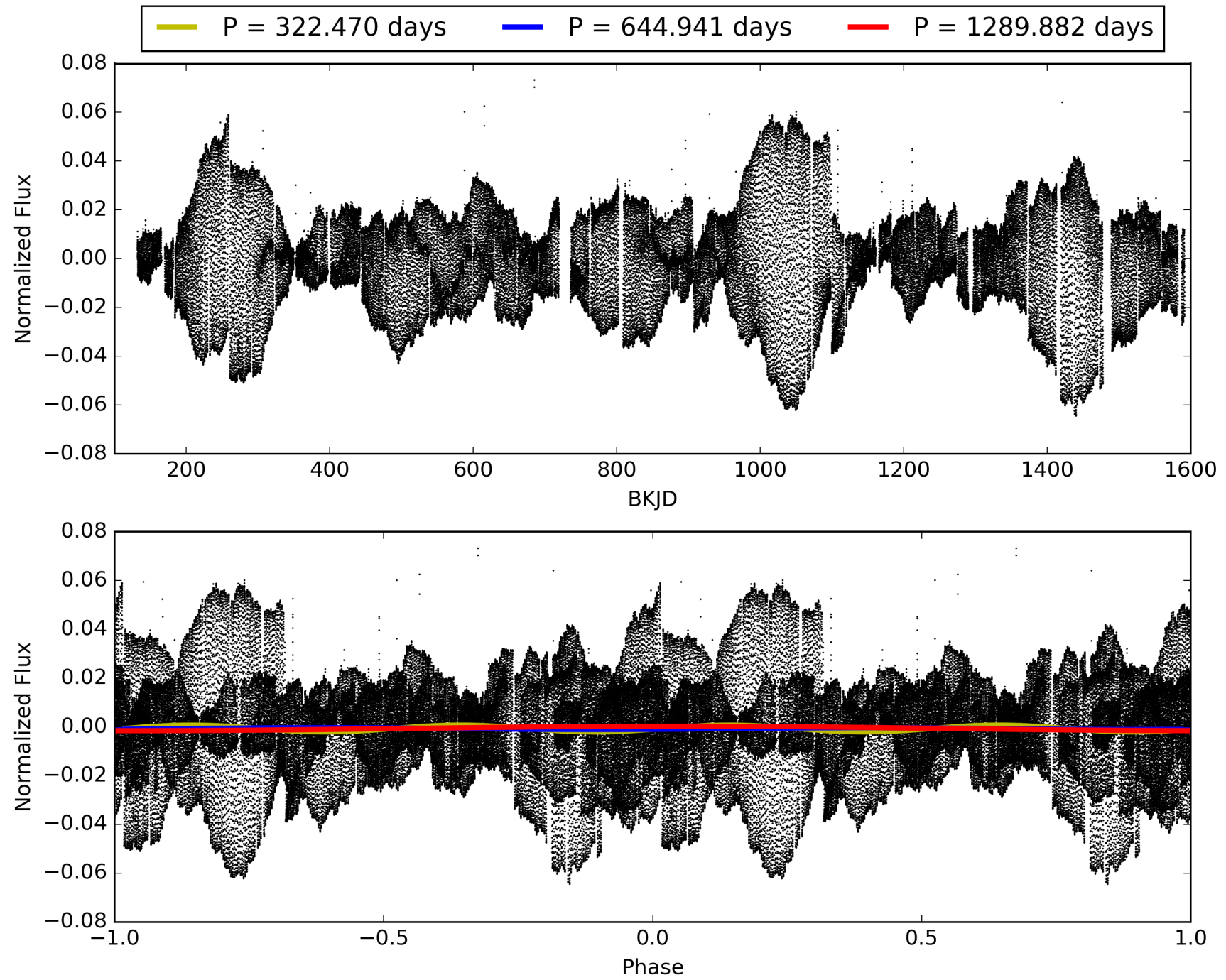
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 12:33:32 Z

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

TCE 006290974-01, PDC Light Curves

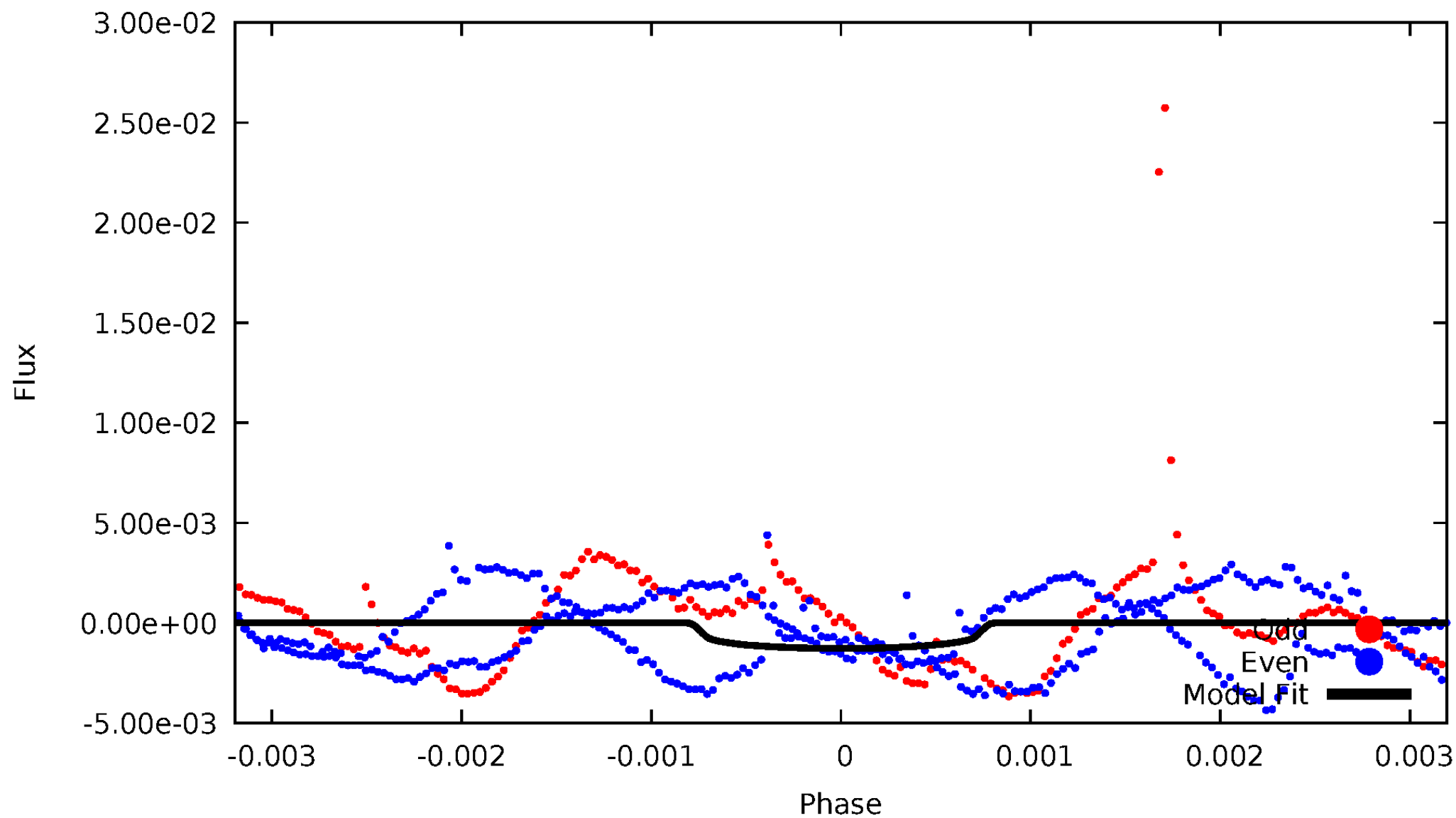


TCE 006290974-01



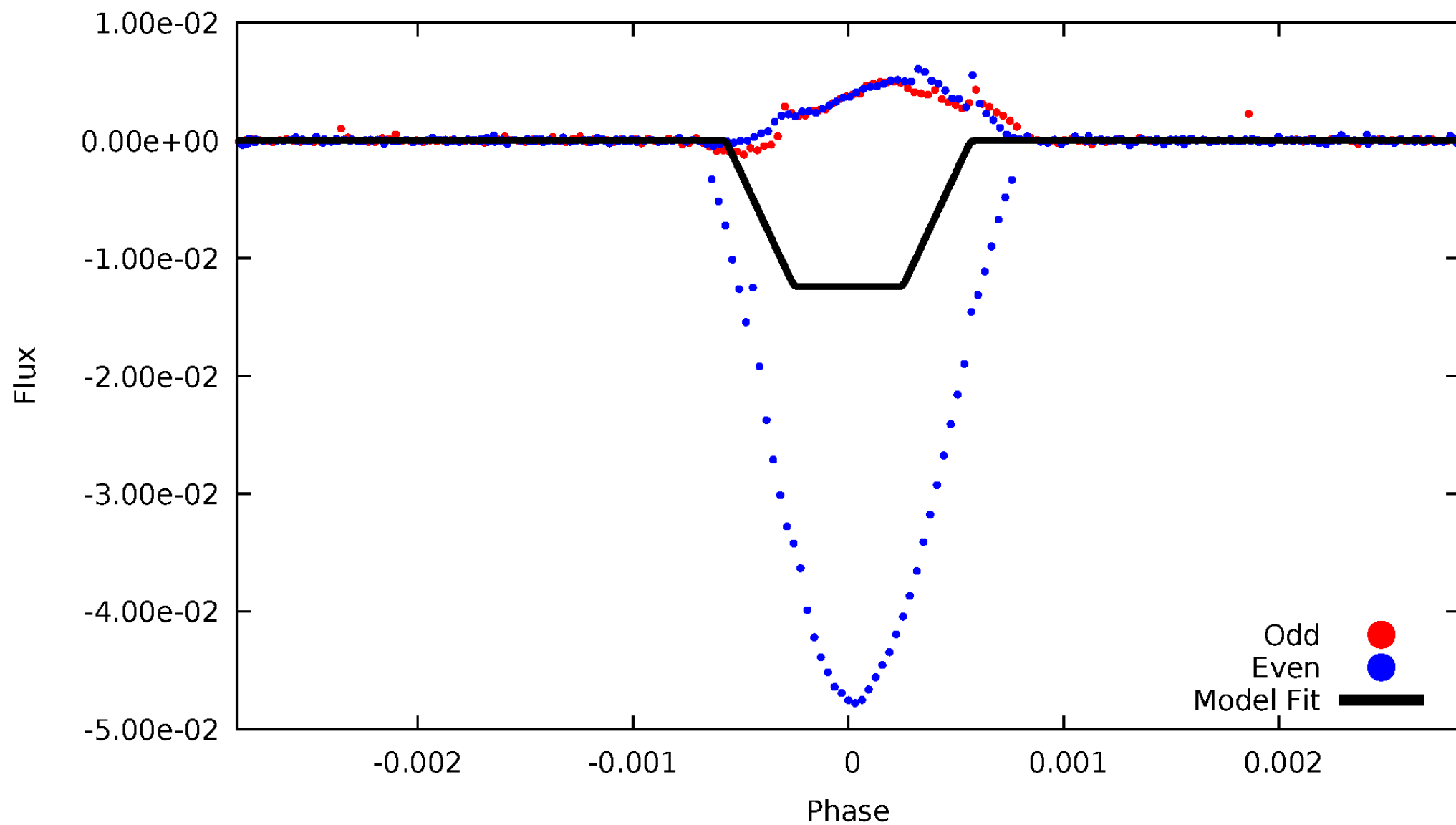
DV Odd/Even

TCE 006290974-01



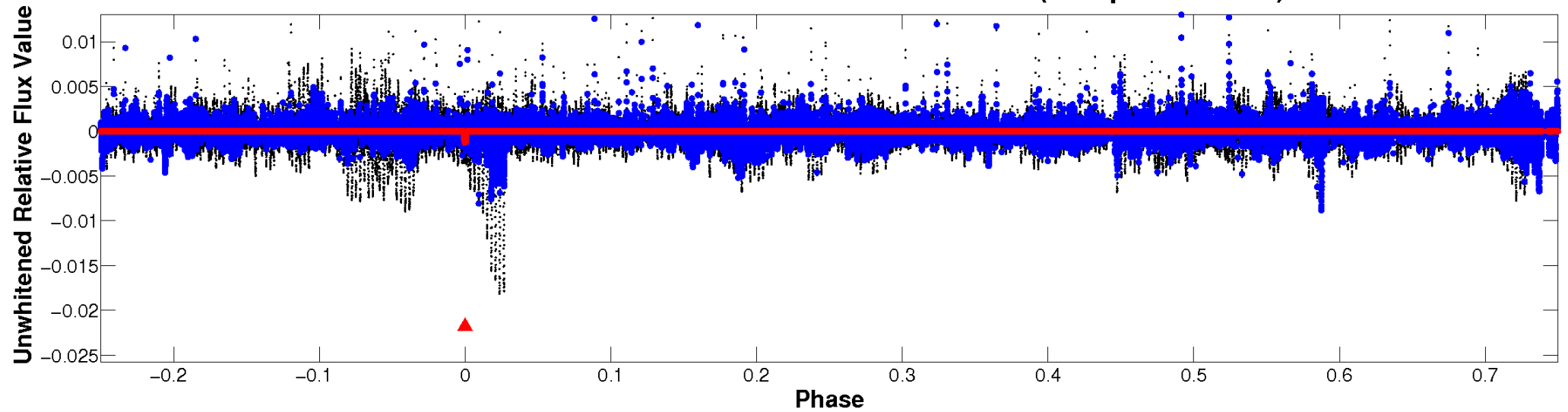
ALT Odd/Even

TCE 006290974-01

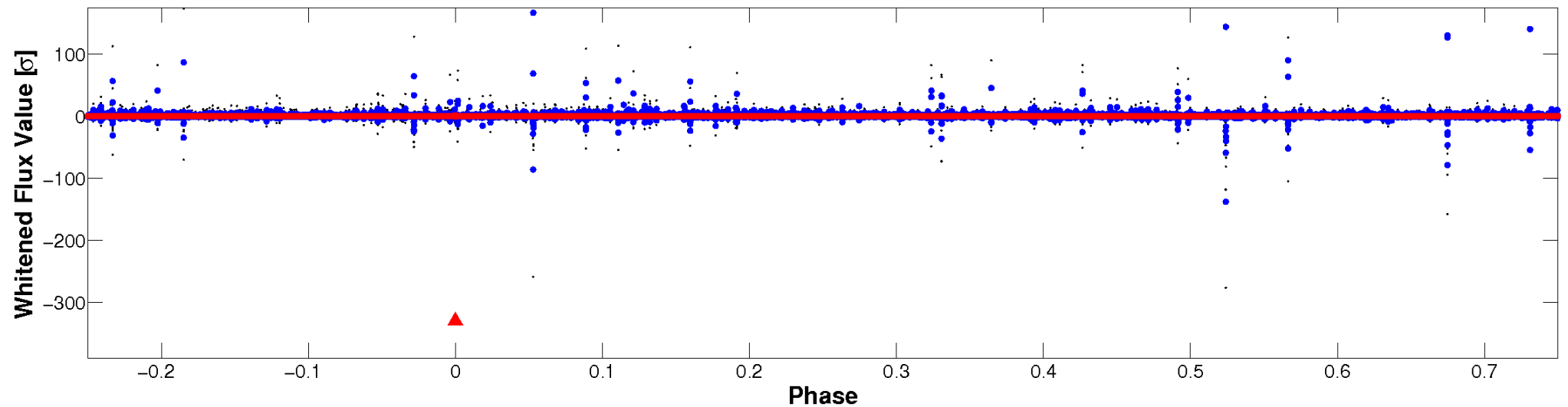


Non-Whitened Vs. Whitened Light Curve

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

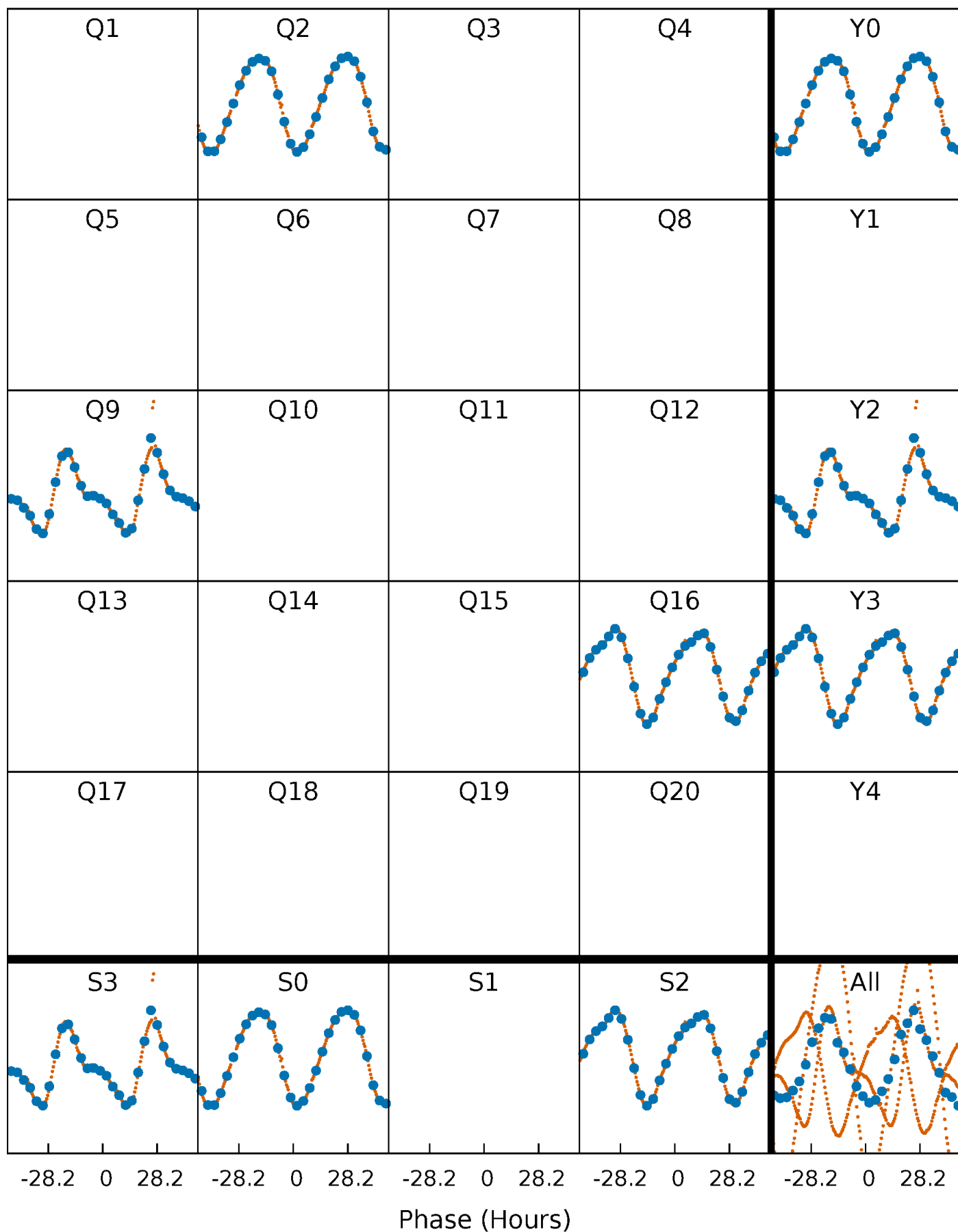


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



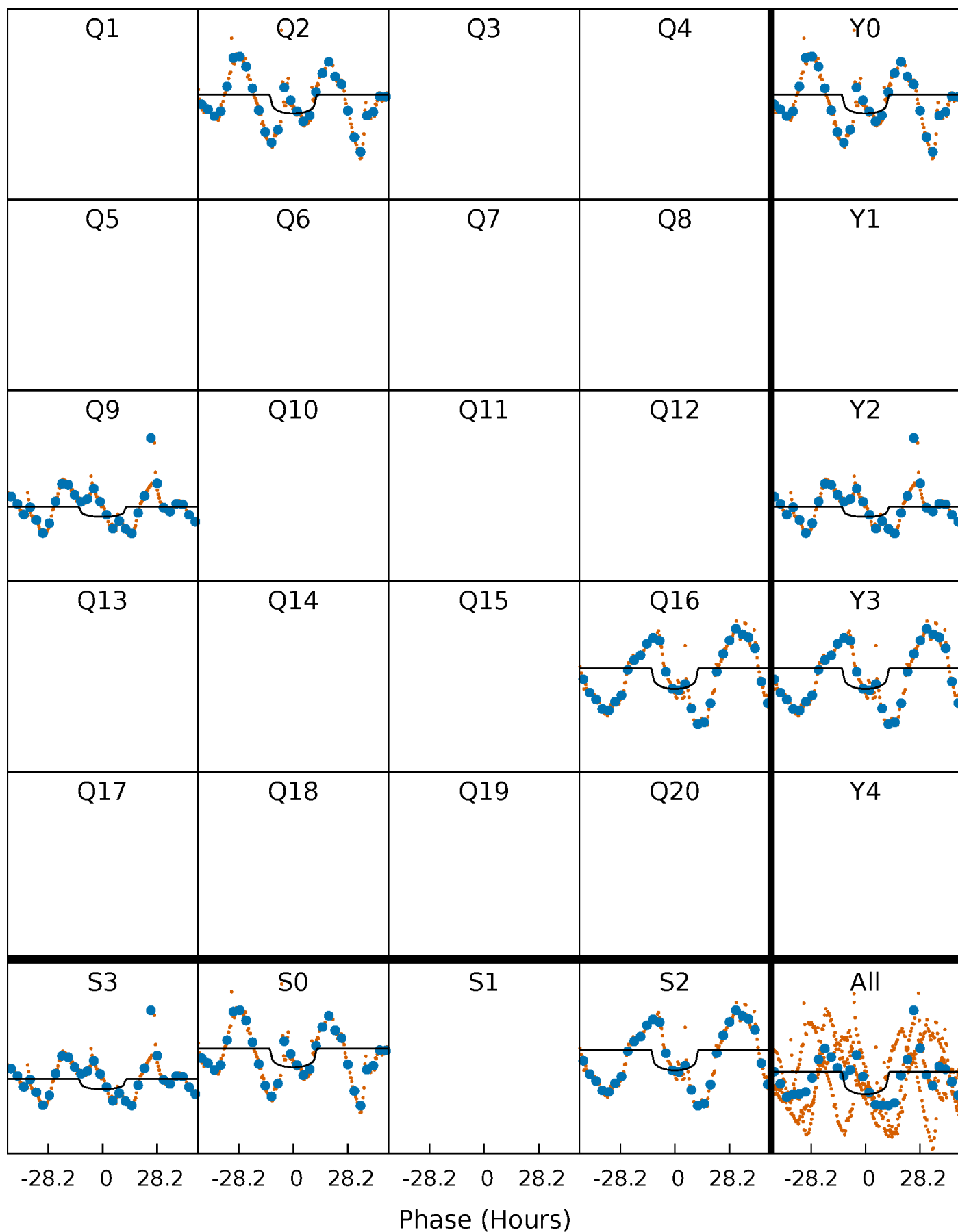
PDC Quarter-Phased Transit Curves

TCE 006290974-01 P=644.940946 Days $T_0=249.482437$ (BKJD)



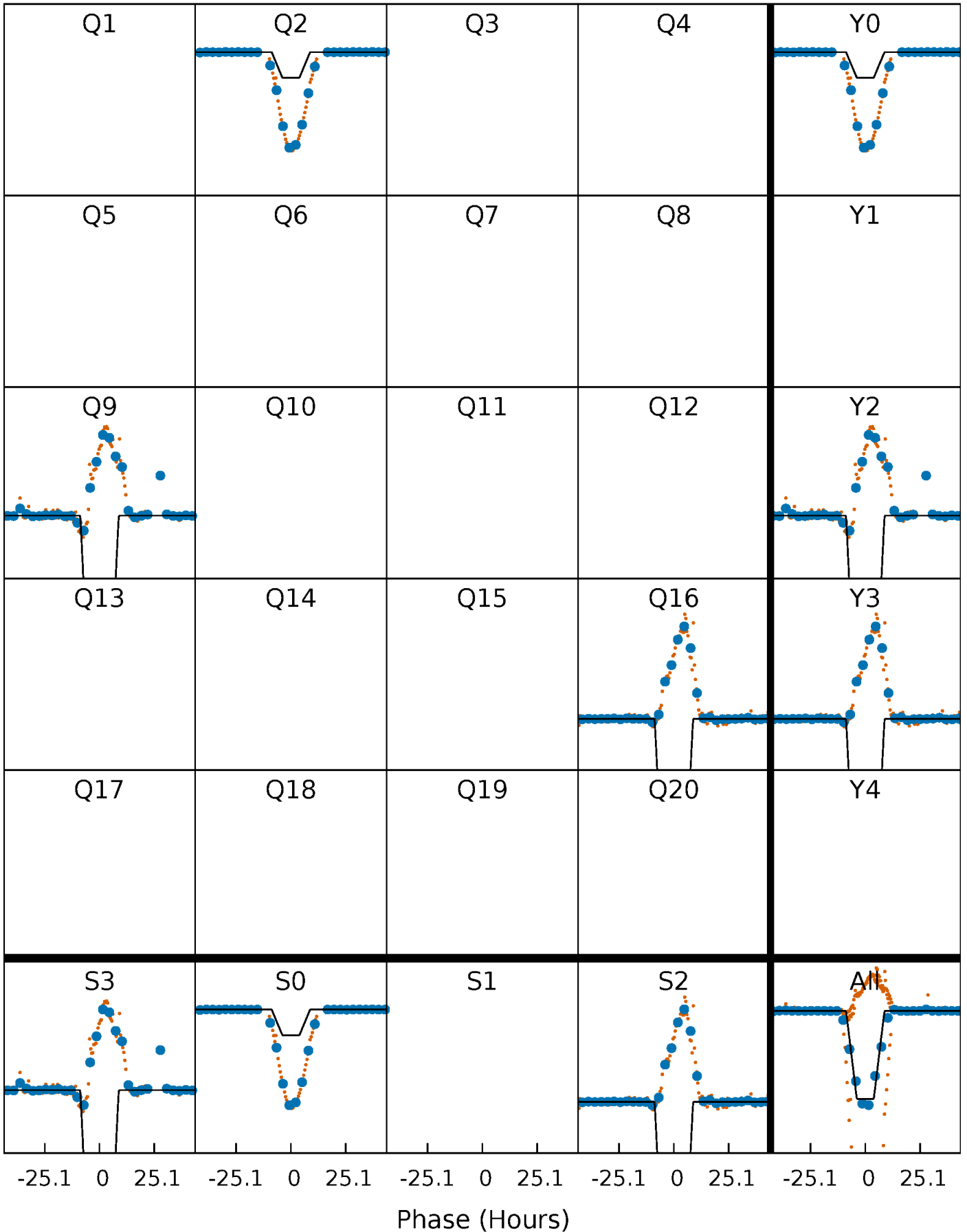
DV Quarter-Phased Transit Curves

TCE 006290974-01 $P=644.940946$ Days $T_0=249.482437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

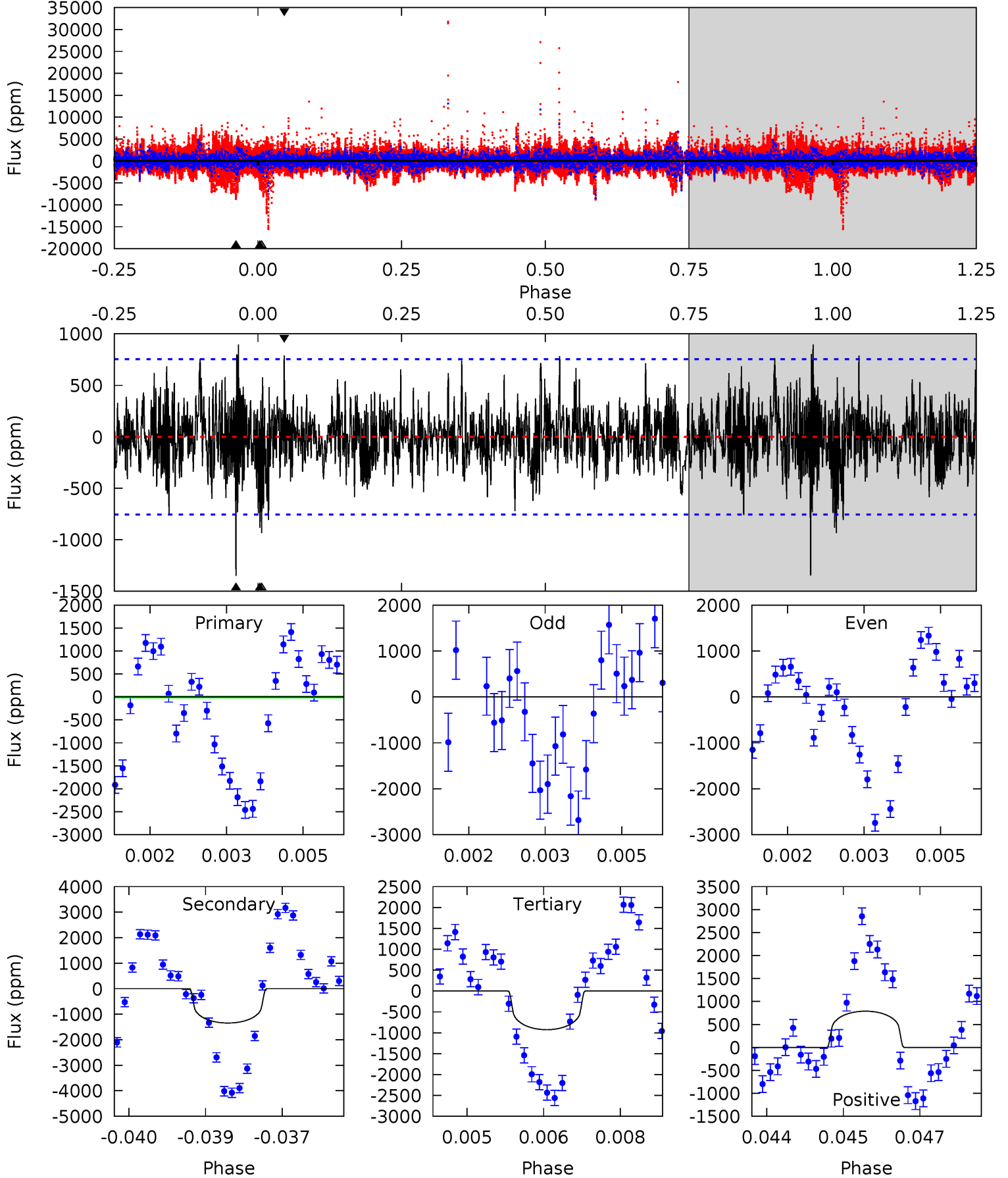
TCE 006290974-01 P=644.849098 Days $T_0=249.518133$ (BKJD)



DV Model-Shift Uniqueness Test

006290974-01, P = 644.940946 Days, E = 249.482437 Days

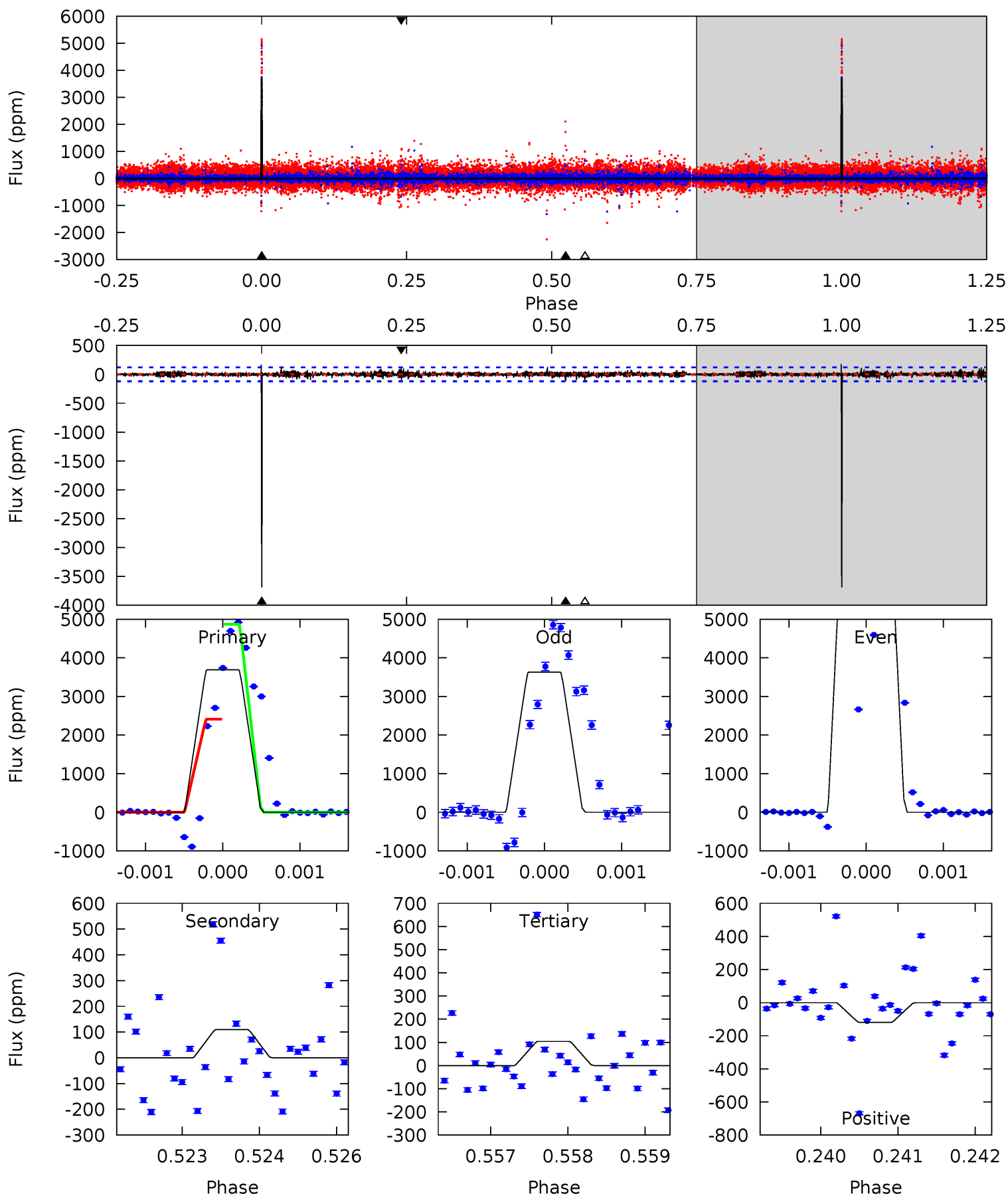
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.59	9.57	6.59	5.61	5.37	3.15	1.67	-1.00	-0.02	2.98	3.97	2.02	1.02	0.40	5.82



Alt Model-Shift Uniqueness Test

006290974-01, P = 644.849098 Days, E = 249.518133 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
164.4	4.89	4.63	5.32	5.43	3.25	0.87	159.8	159.1	0.26	-0.43	155.6	-3.35	0.04	54.5



Stellar Parameters For KIC 006290974

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4681^{+139}_{-139}	$4.704^{+0.052}_{-0.028}$	$-1.140^{+0.300}_{-0.300}$	$0.543^{+0.032}_{-0.038}$	$0.545^{+0.040}_{-0.024}$	$4.788^{+1.022}_{-0.537}$
	+3%/-3%	+1%/-1%	+26%/-26%	+6%/-7%	+7%/-4%	+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 006290974-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1346 ± 141	$2.07^{+0.48}_{-0.47}$	193^{+7}_{-7}	4753^{+592}_{-400}	$249699^{+170507}_{-88413}$
Alt.	-110 ± 22	$6.55^{+0.52}_{-0.51}$	193^{+6}_{-6}	2309^{+76}_{-84}	1998^{+571}_{-469}

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

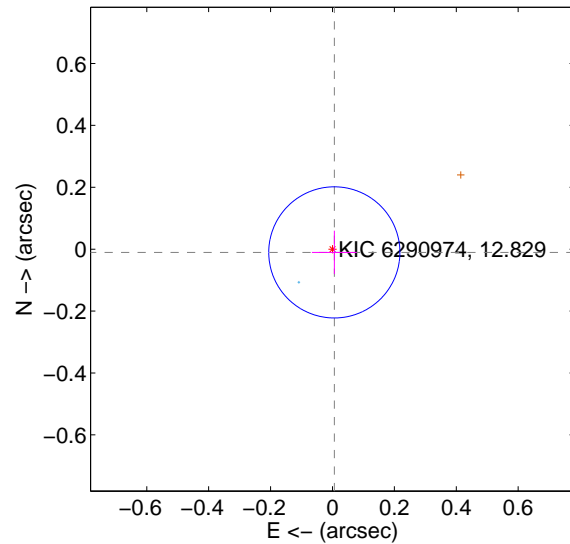
Supplemental centroid analysis for 006290974-01. Kepler magnitude: 12.83. Transit SNR 3.36

There are 2 quarters with good PRF difference image offsets

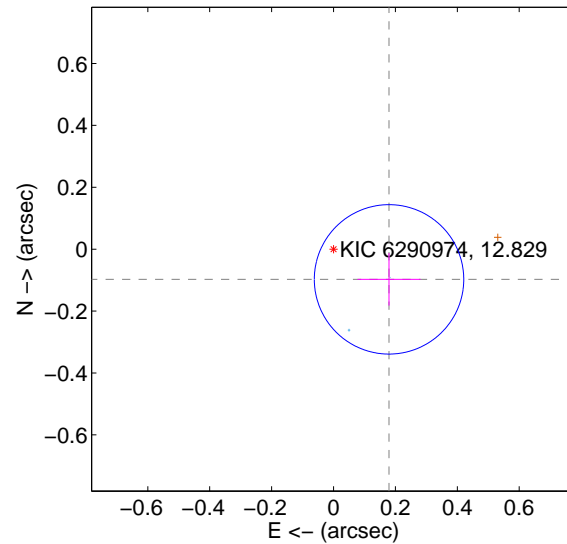
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.012 ± 0.071	0.17	-0.006 ± 0.072	-0.010 ± 0.070
PRF-fit source offset from KIC position	0.204 ± 0.080	2.54	-0.179 ± 0.102	-0.098 ± 0.085
photometric centroid source offset	0.15 ± 0.17	0.89	-0.14 ± 0.16	0.06 ± 0.18

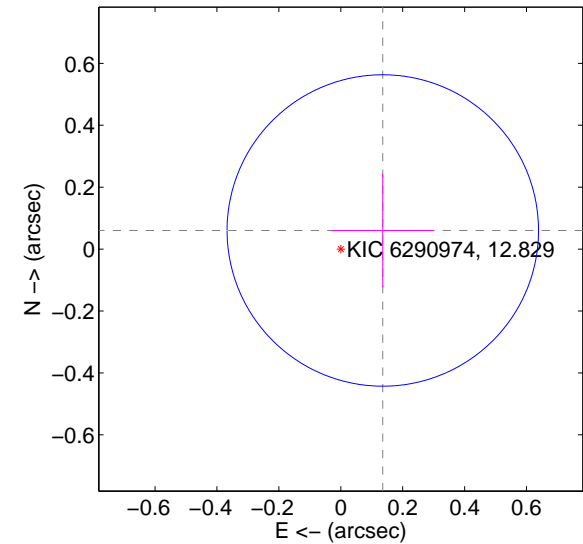
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



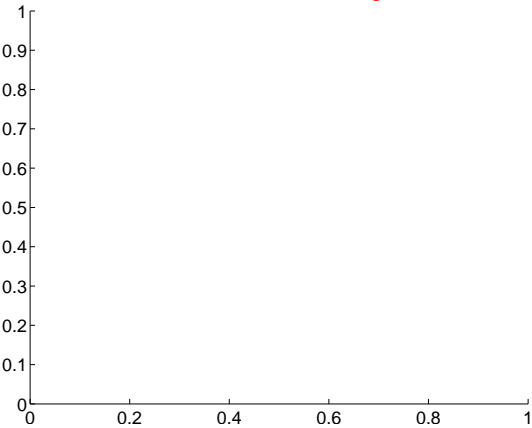
offset from photometric centroids



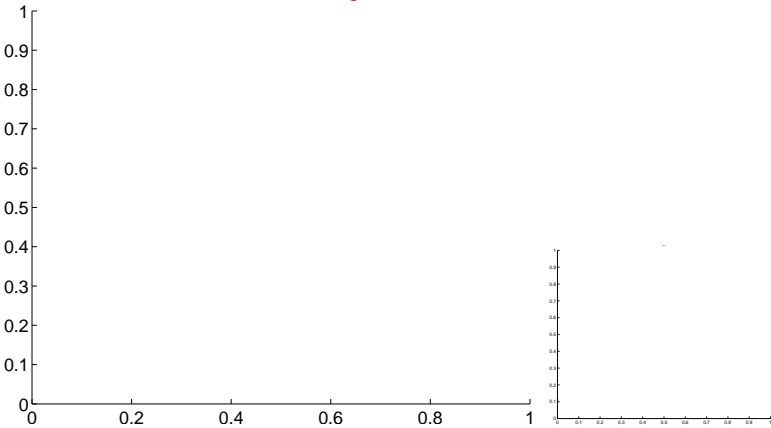
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

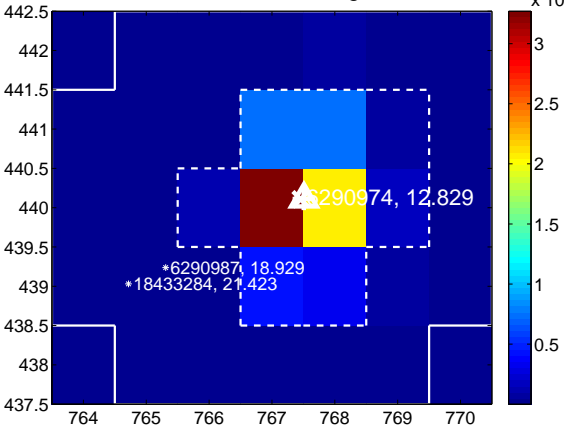
Q1 no difference image



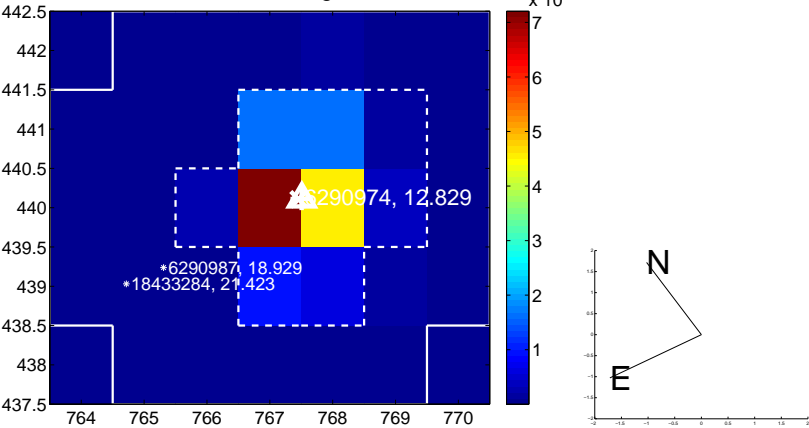
Q1 no OOT image



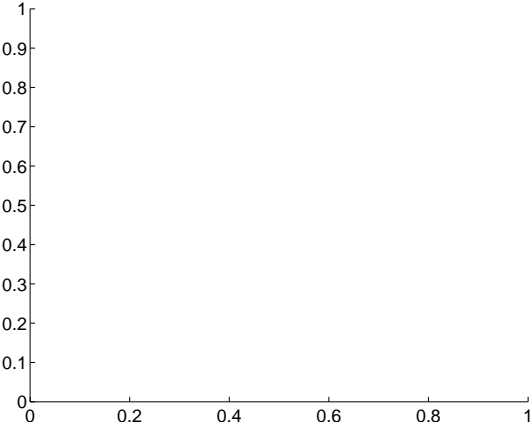
Q2 difference image



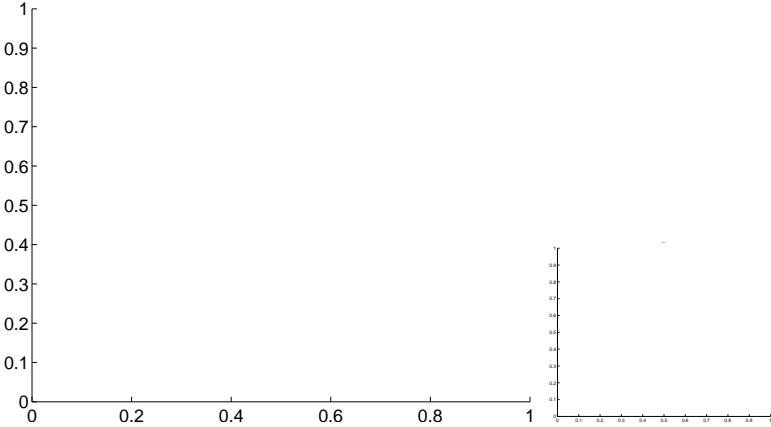
Q2 OOT image



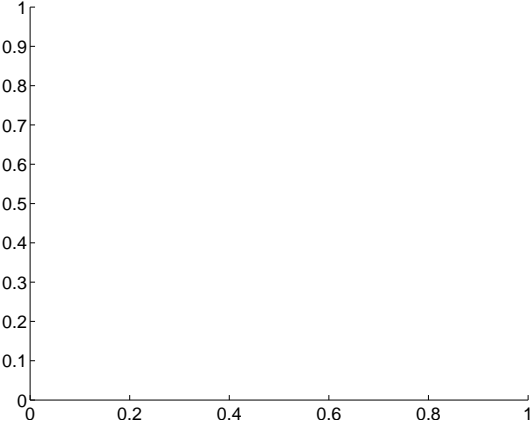
Q3 no difference image



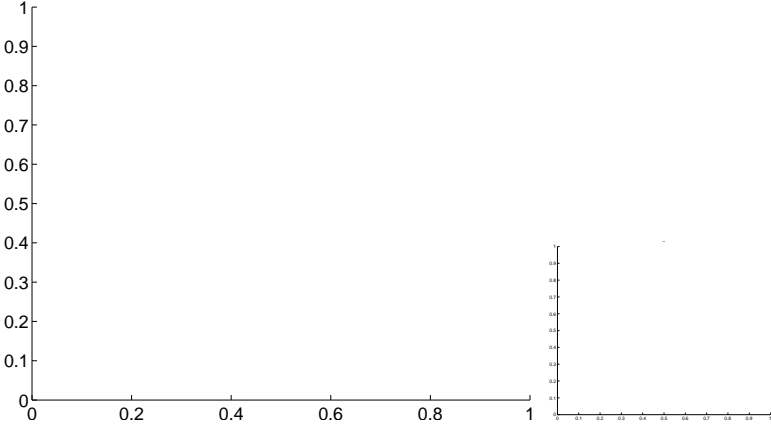
Q3 no OOT image



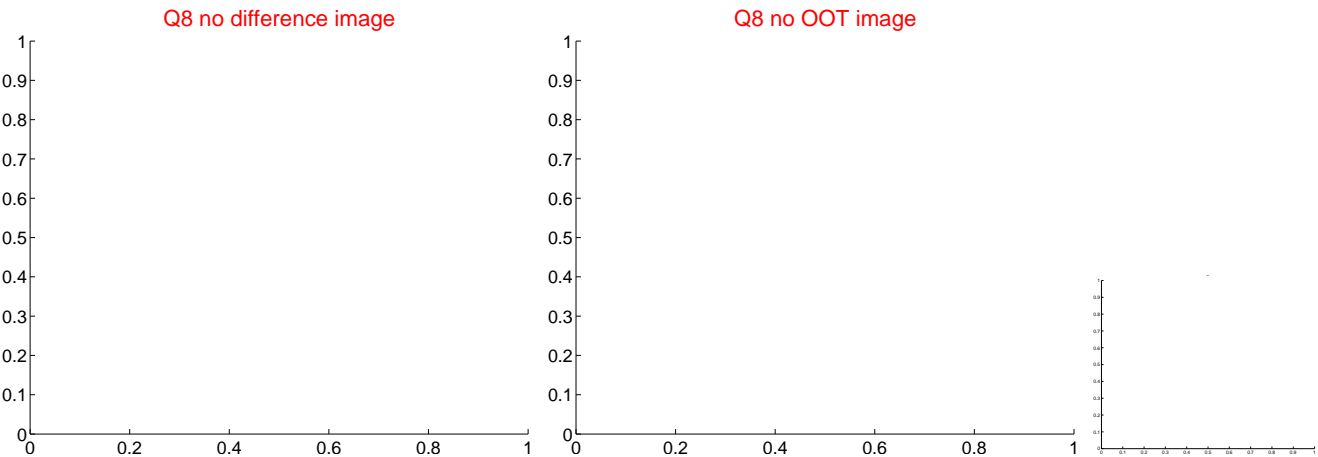
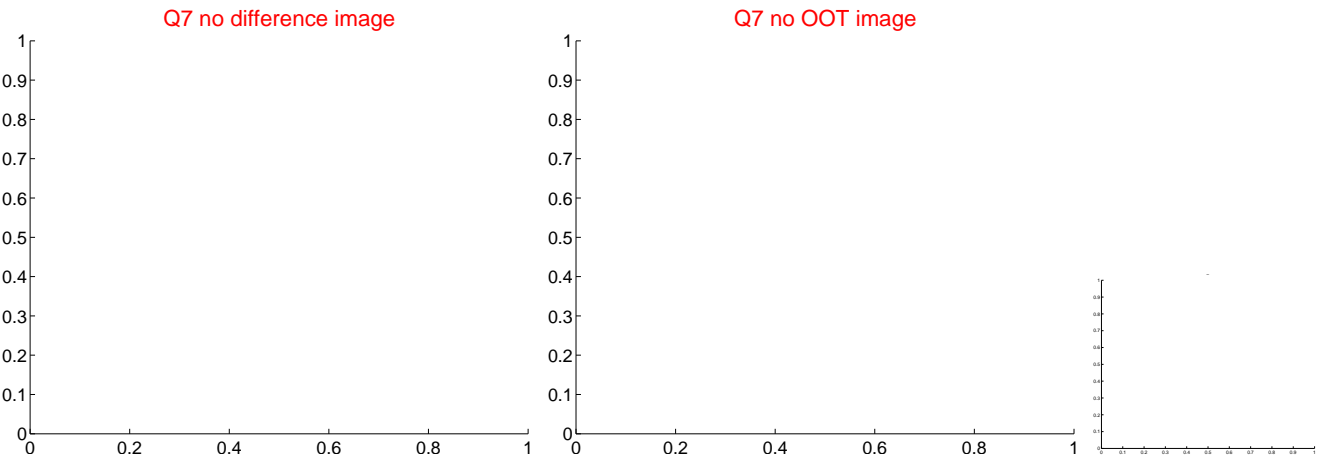
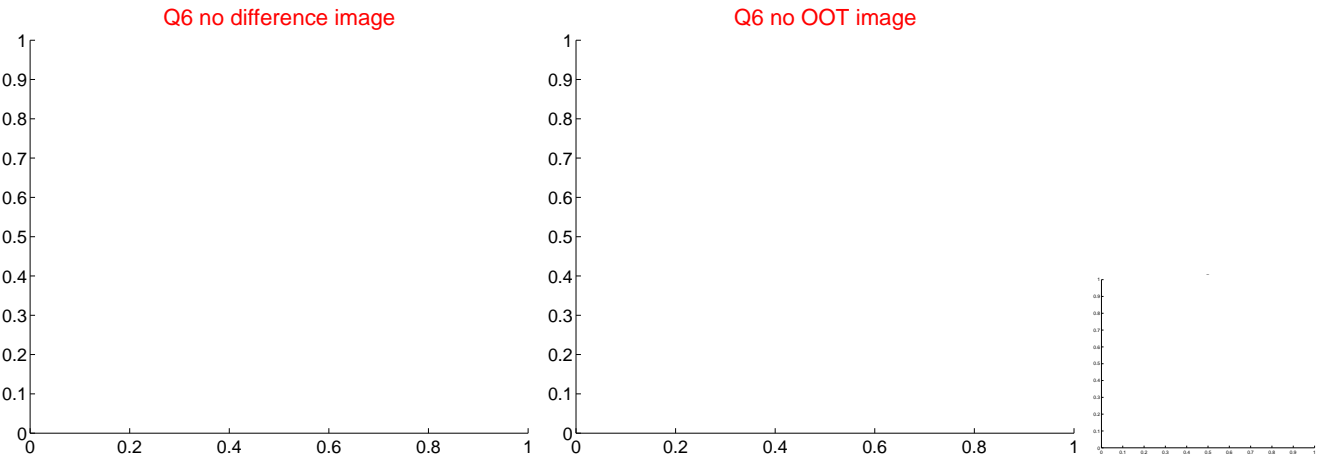
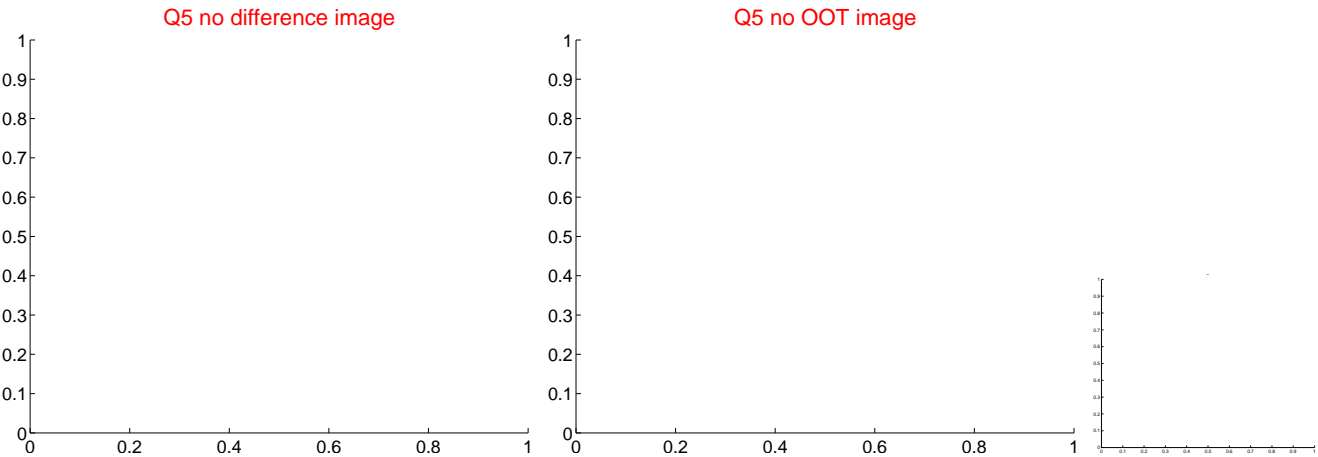
Q4 no difference image



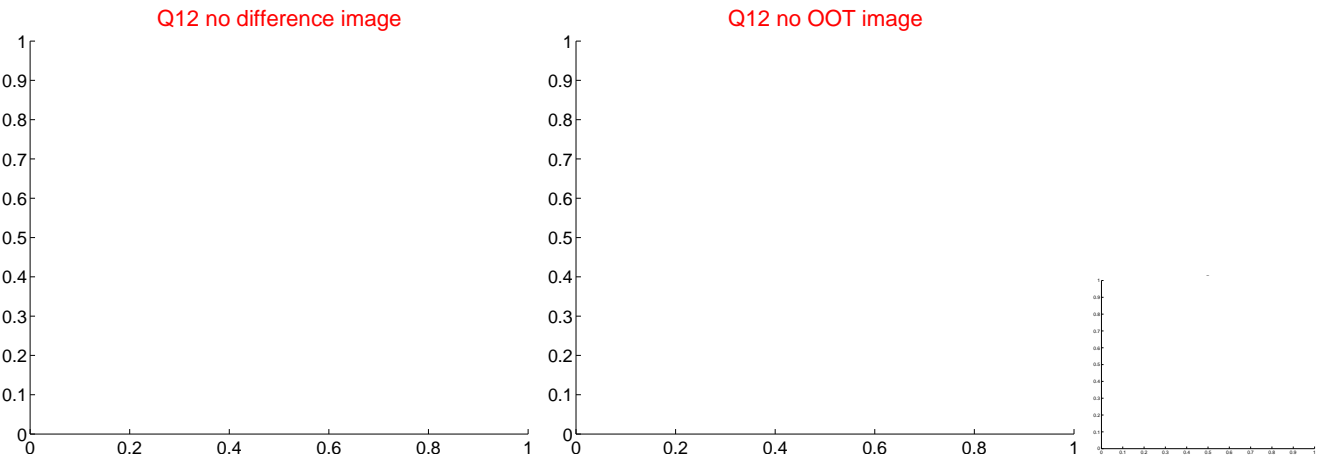
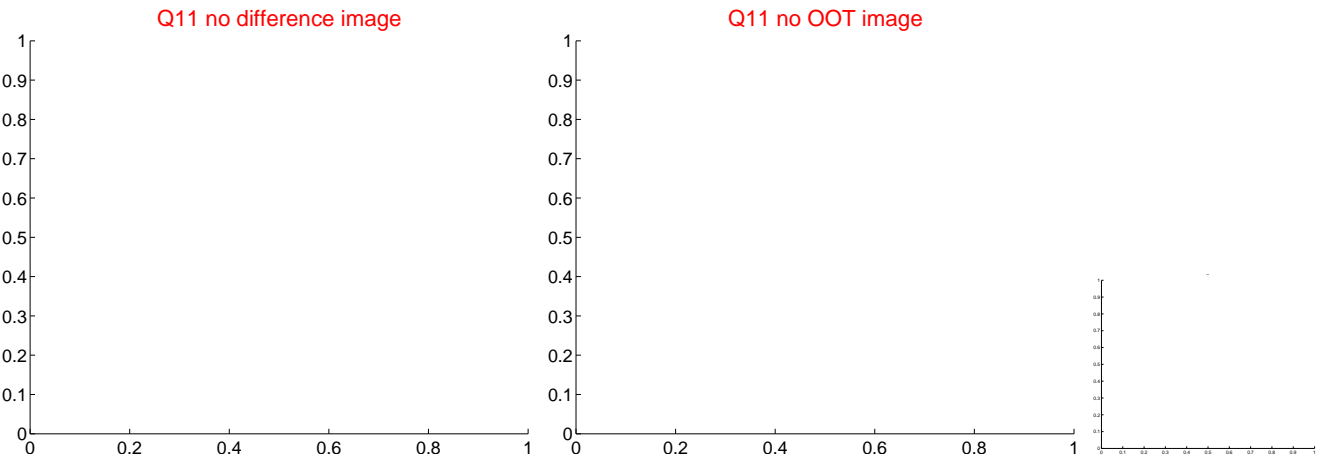
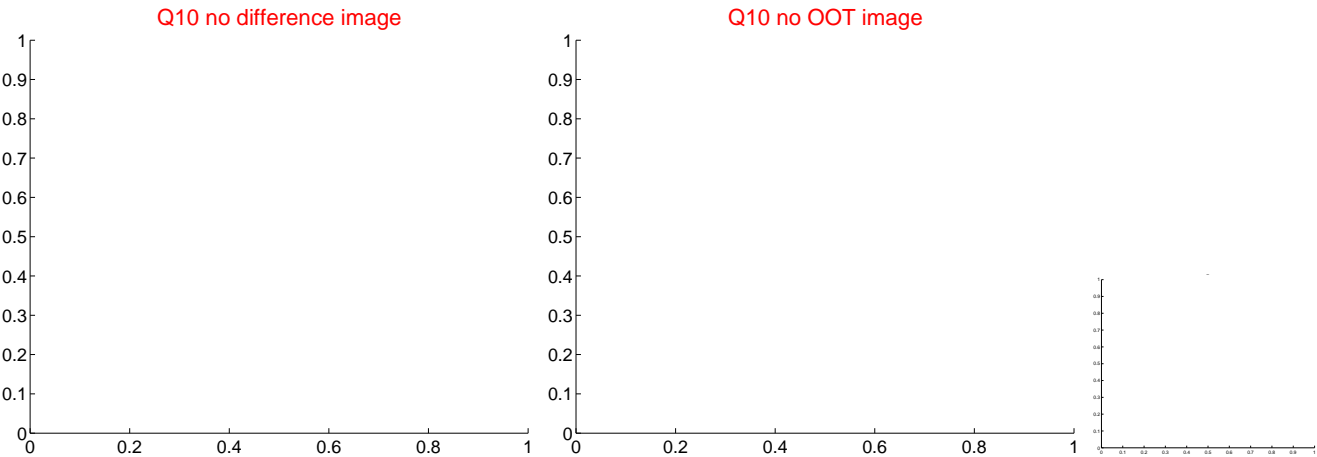
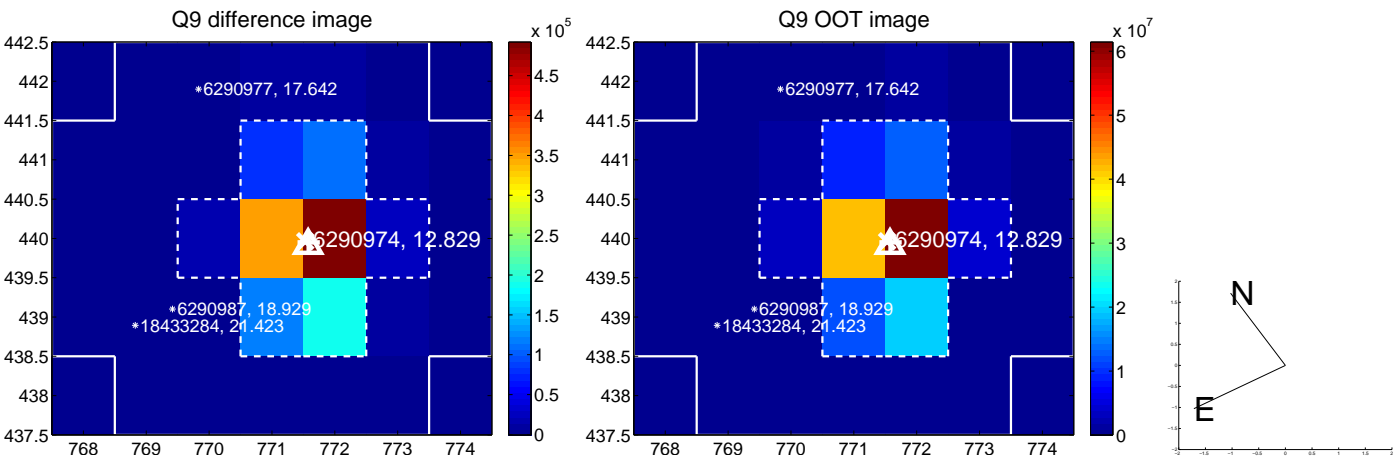
Q4 no OOT image



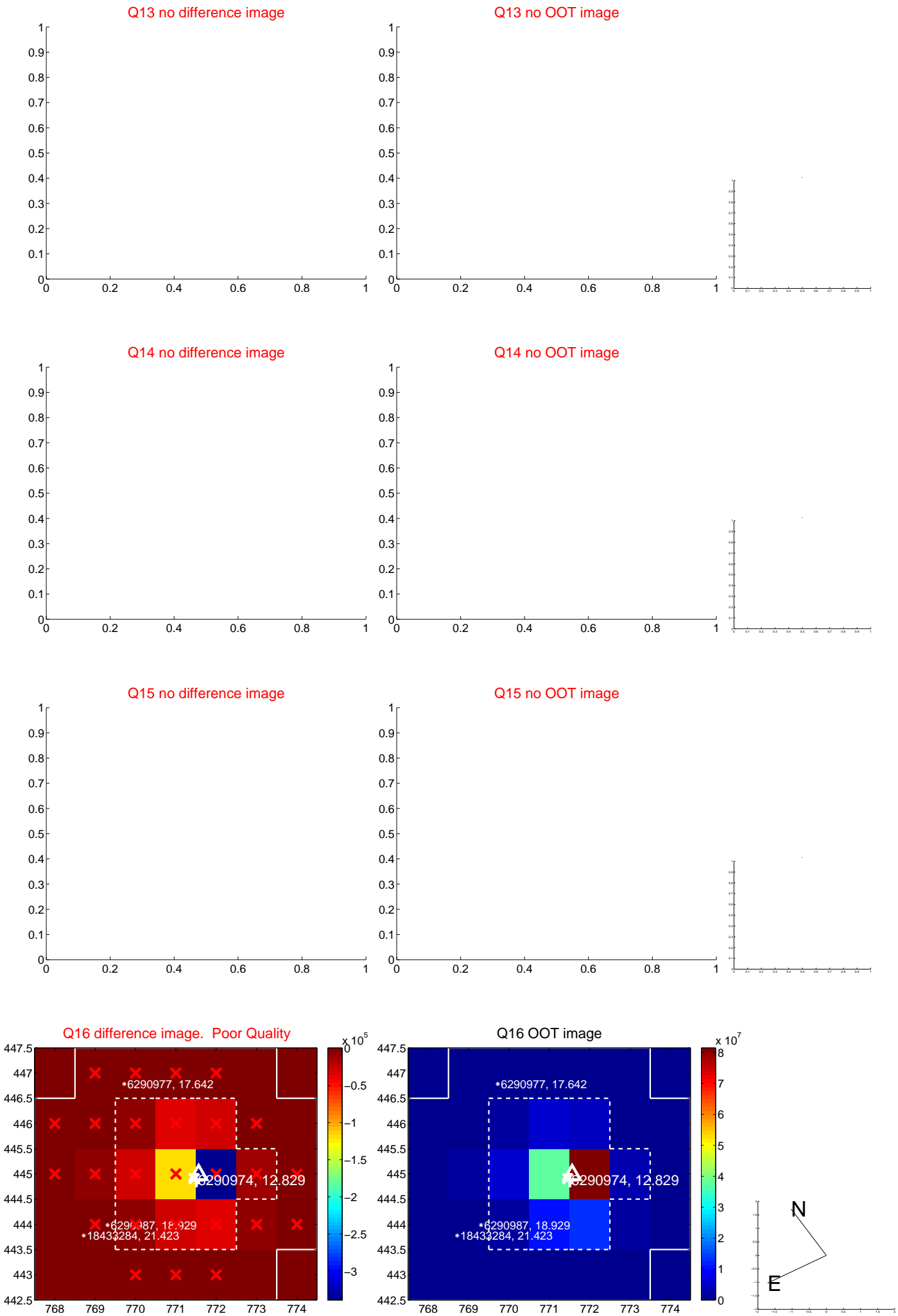
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



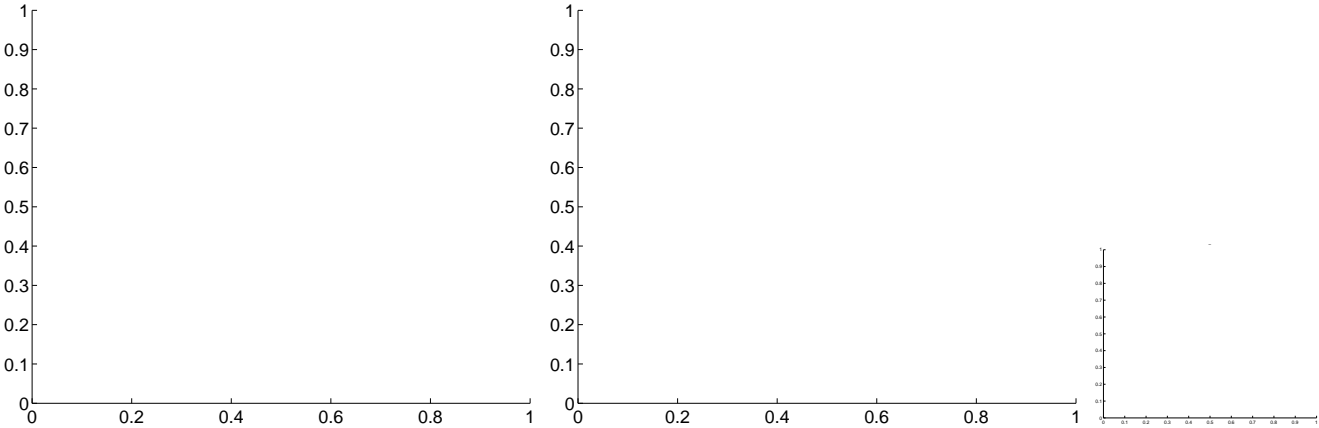
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



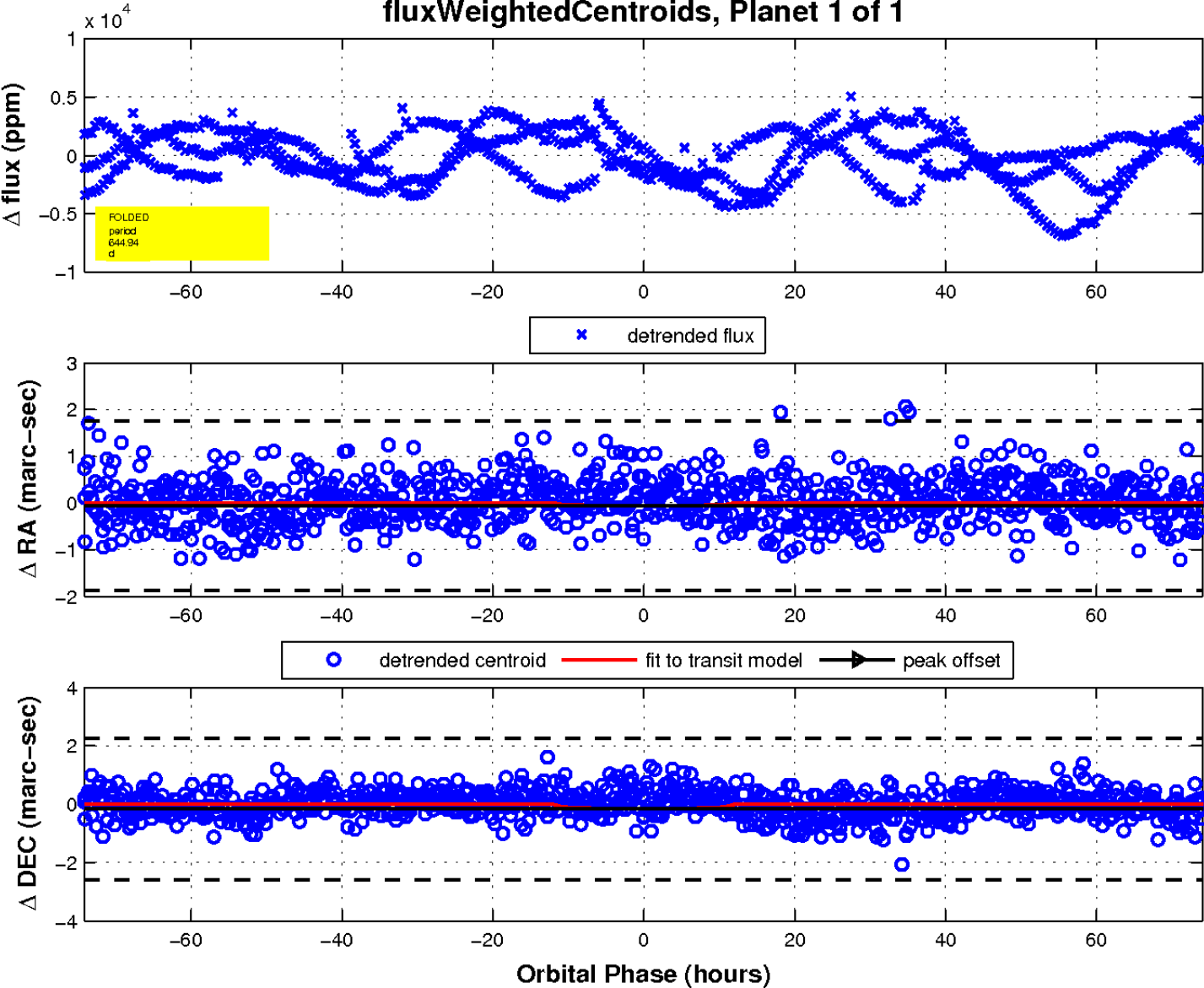
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

