

KIC 003246984

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})
003246984-01	OBS	0799.01	1.626620	132.408727	1033.8	1.610	45.9	65.9	0.97	5735	3.73	1355.36
003246984-02	OBS	No	3.254595	133.467691	11.2	34.580	7.5	1.6	0.97	5735	0.32	537.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003246984-01	OBS	PC	0.77	0	0	0	0	NO_COMMENT
003246984-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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 003246984-01

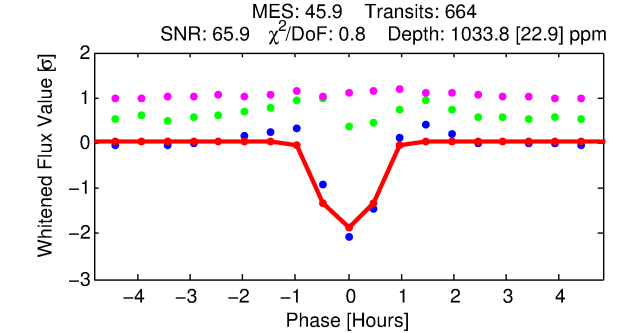
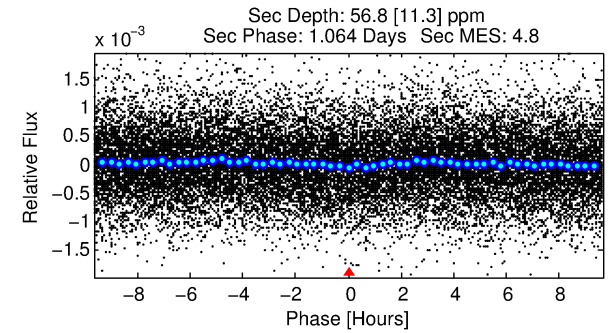
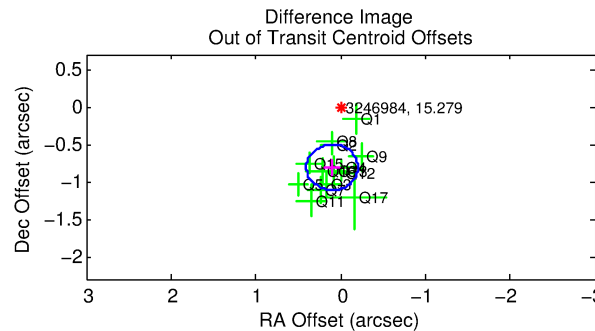
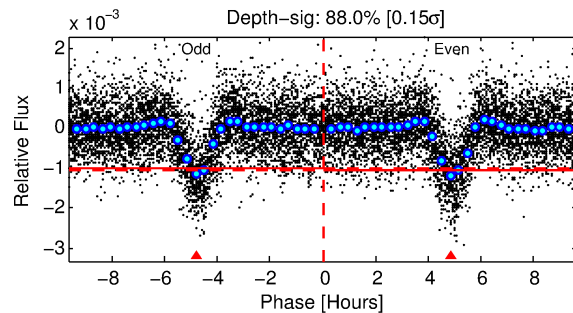
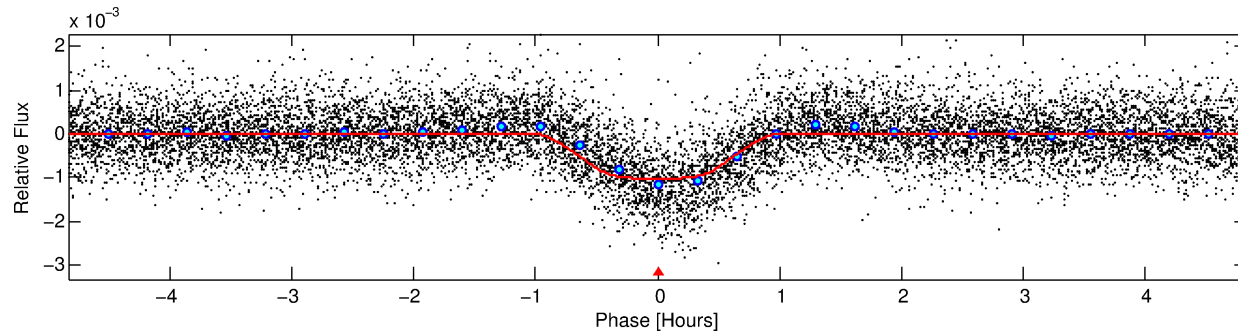
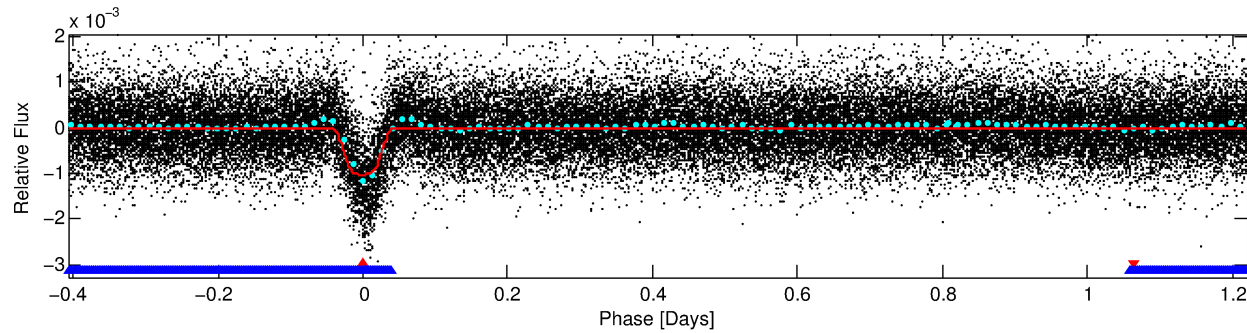
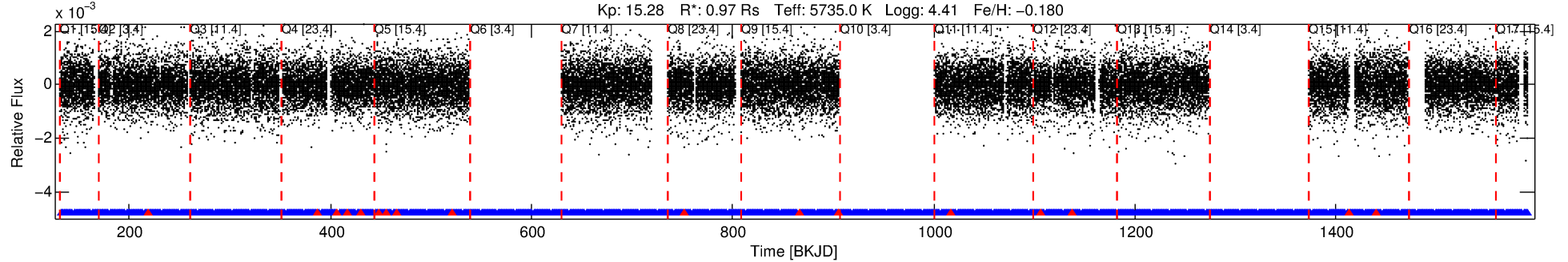
No Significant Match Found

DV One-Page Summary

KIC: 3246984 Candidate: 1 of 2 Period: 1.627 d

KOI: K00799.01 Corr: 0.892

Kp: 15.28 R*: 0.97 Rs Teff: 5735.0 K Logg: 4.41 Fe/H: -0.180



DV Fit Results:

Period = 1.62662 [0.00000] d
Epoch = 132.4087 [0.0004] BKJD
Rp/R* = 0.0352 [0.0020]
a/R* = 4.06 [0.96]
b = 0.90 [0.05]
Seff = 1355.36 [488.94]
Teq = 1547 [140] K
Rp = 3.73 [1.06] Re
a = 0.0260 [0.0061] AU
Ag = 1.52 [0.62] [0.83σ]
Teffp = 2655 [172] K [5.00σ]

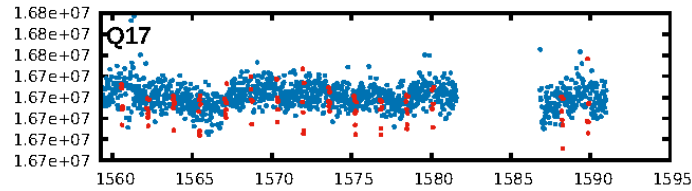
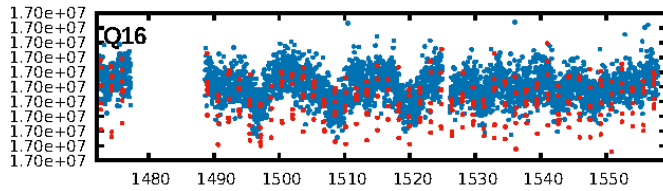
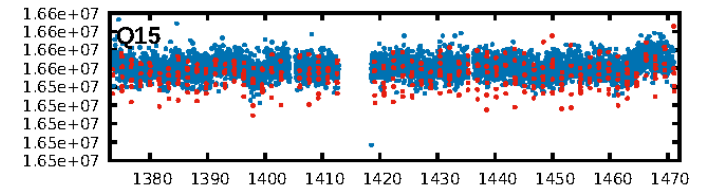
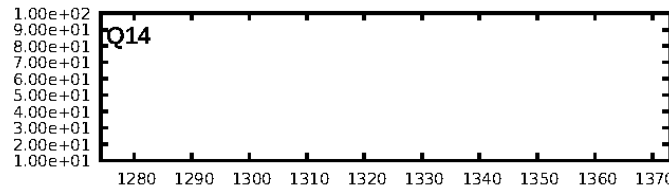
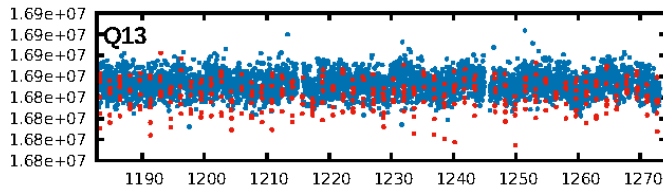
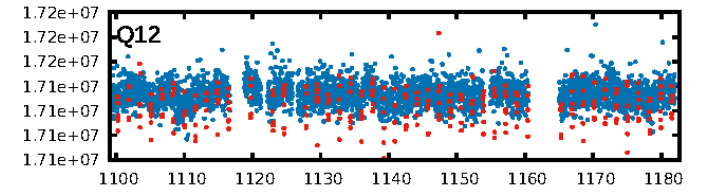
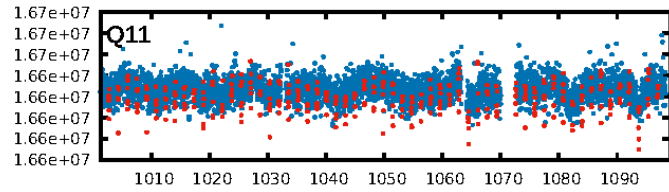
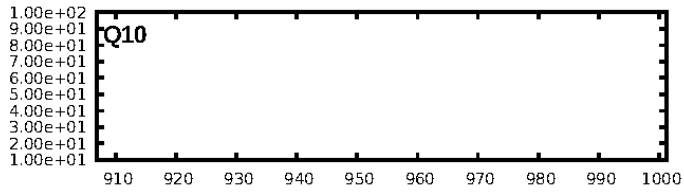
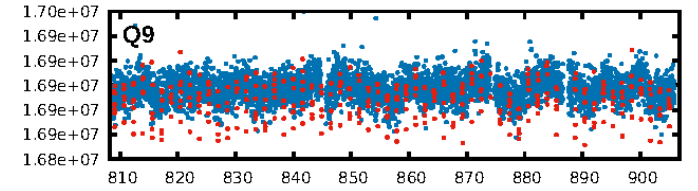
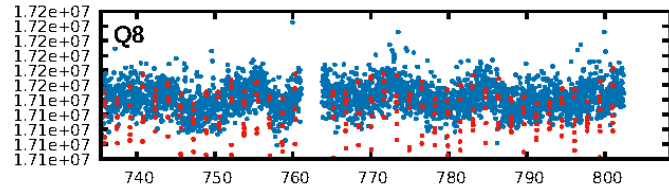
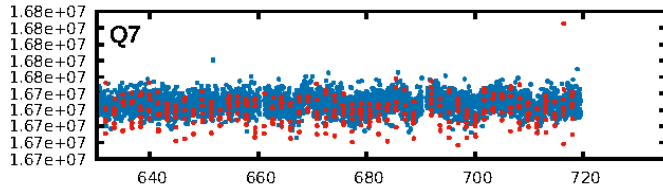
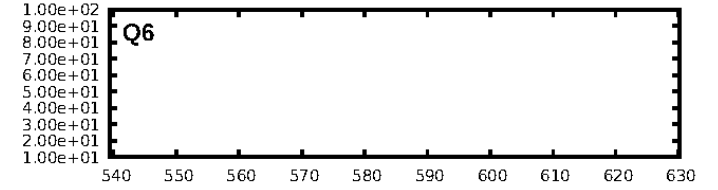
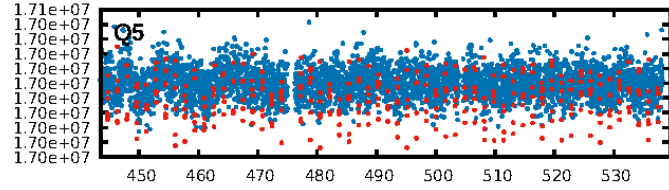
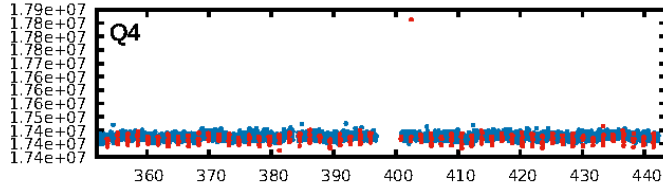
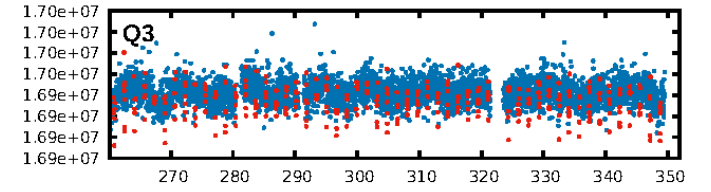
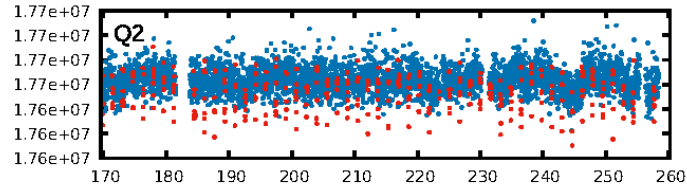
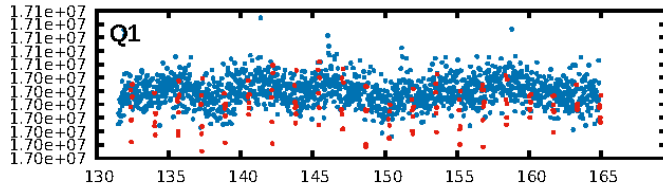
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 74.1% [1.13σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [611/628]
GhostDiagnostic-chr: 2.799
Centroid-sig: 0.0%
Centroid-so: 1.318 arcsec [5.75σ]
OotOffset-rm: 0.815 arcsec [8.08σ]
KicOffset-rm: 0.959 arcsec [8.90σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

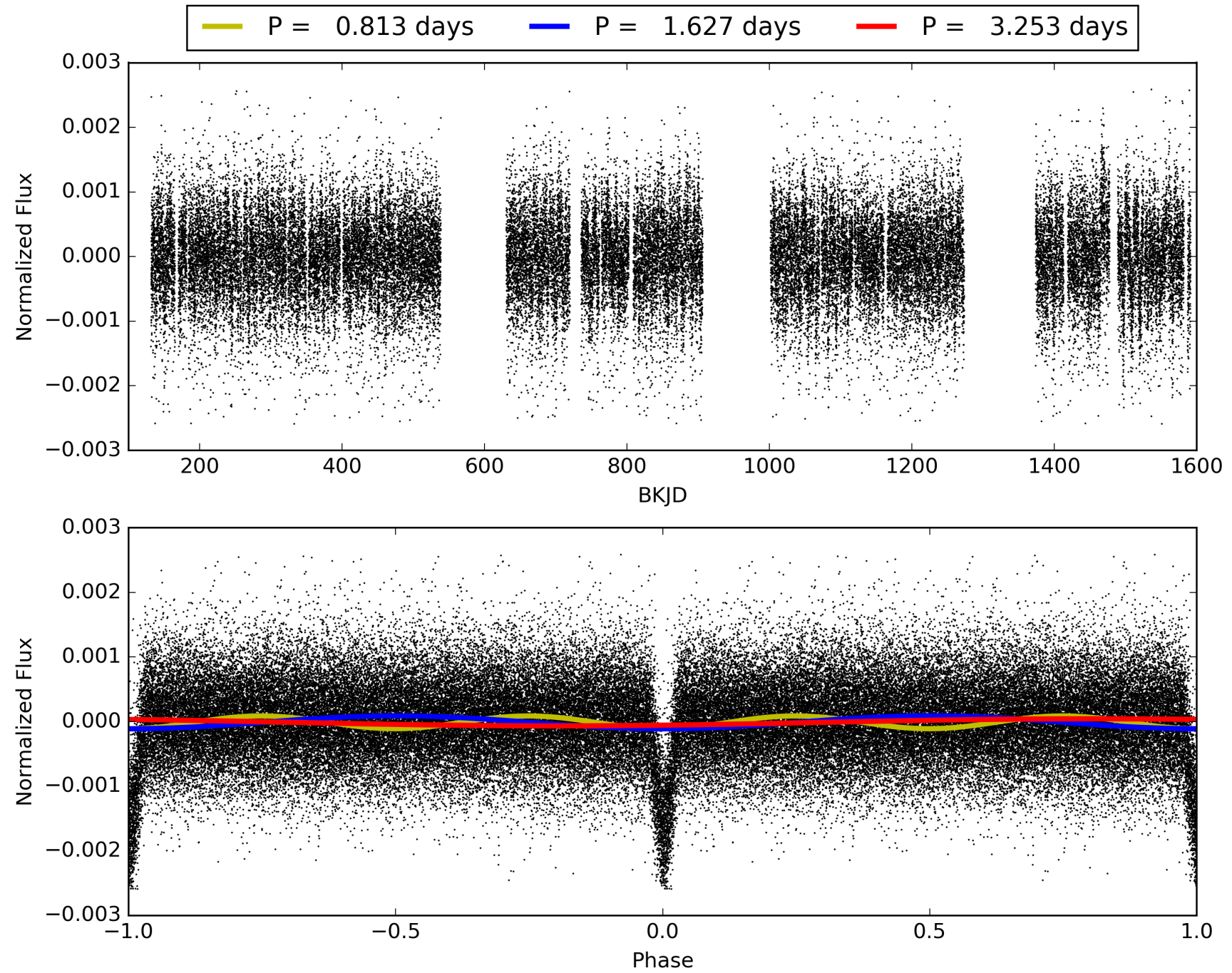
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003246984-01, PDC Light Curves

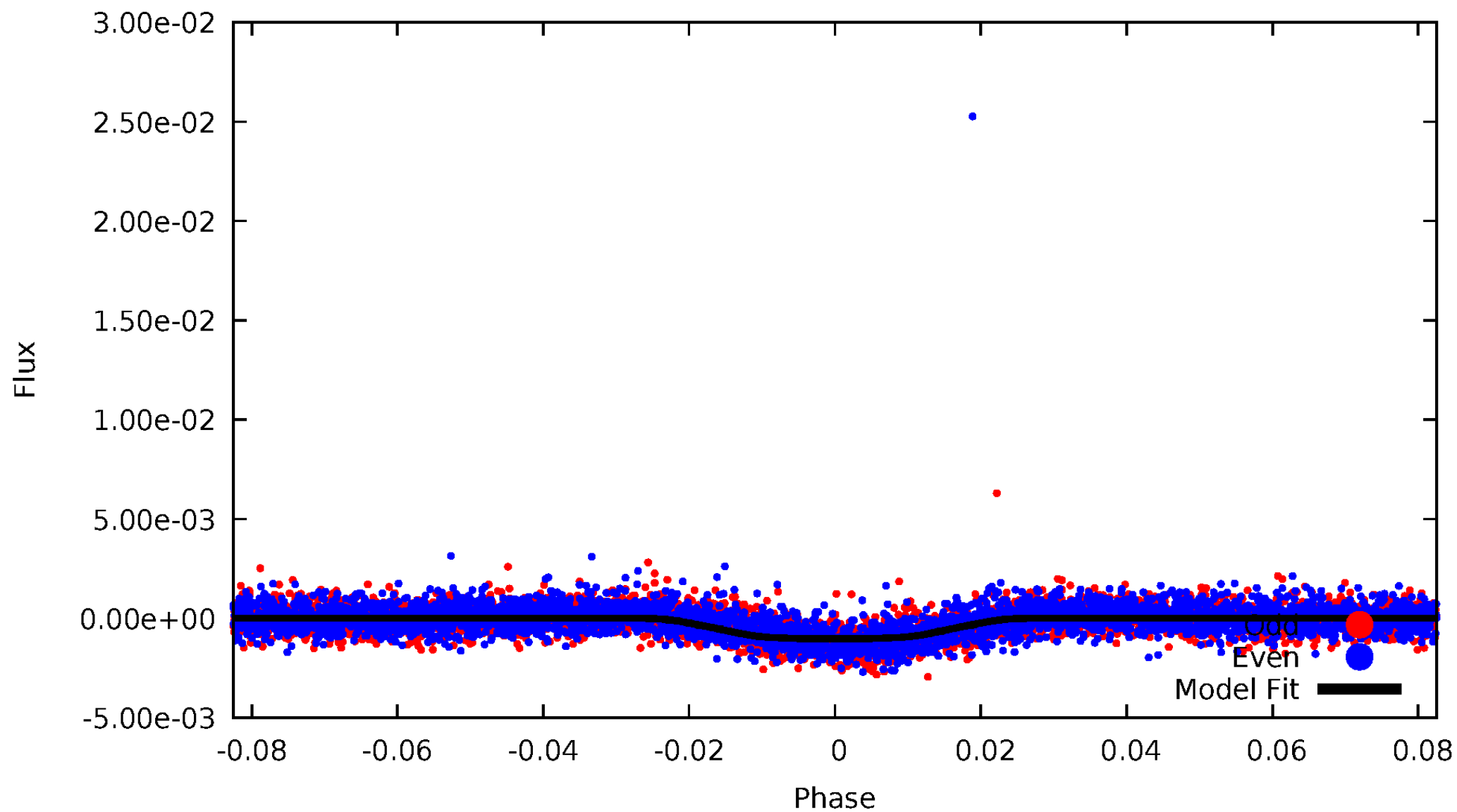


TCE 003246984-01



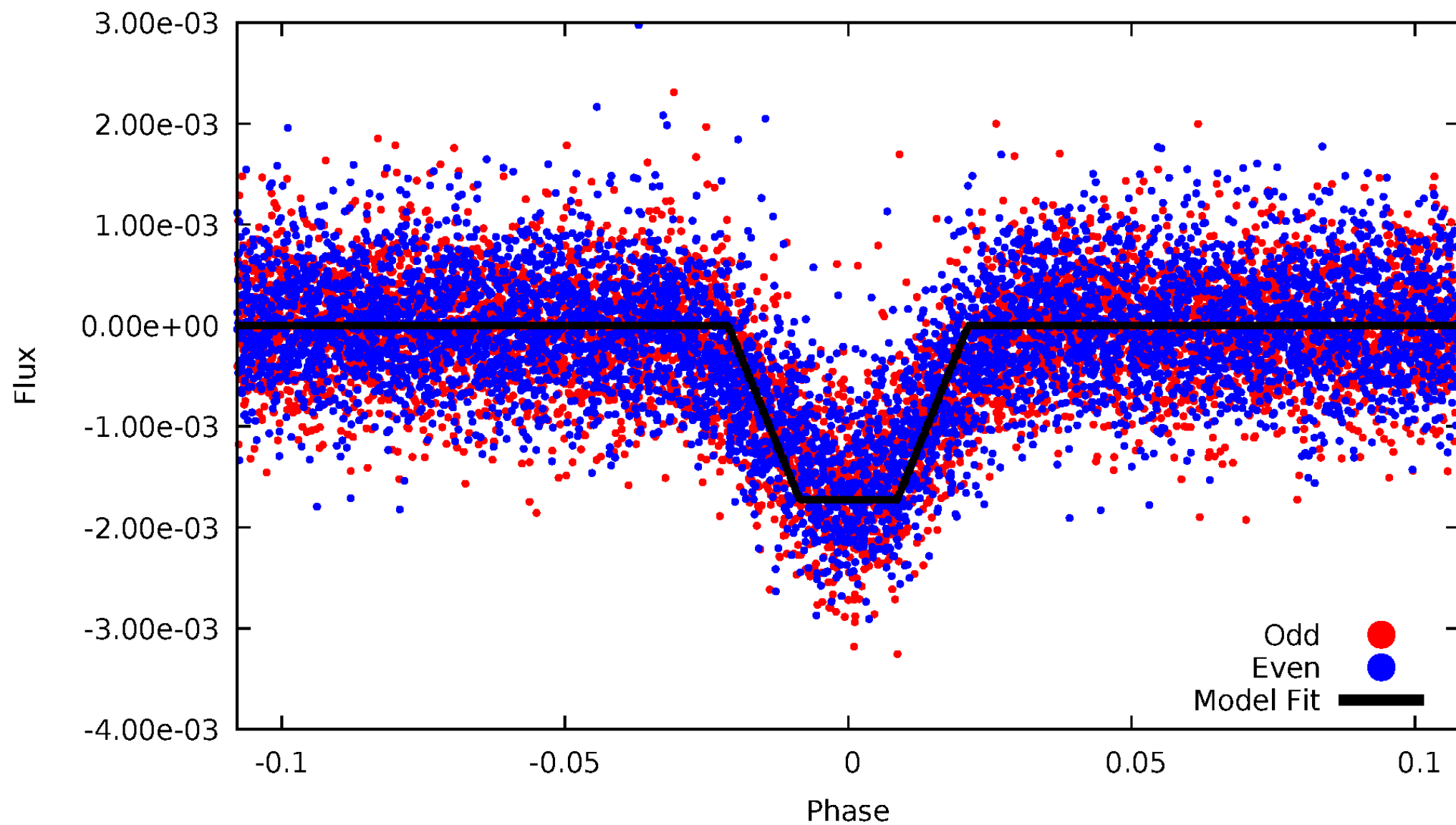
DV Odd/Even

TCE 003246984-01

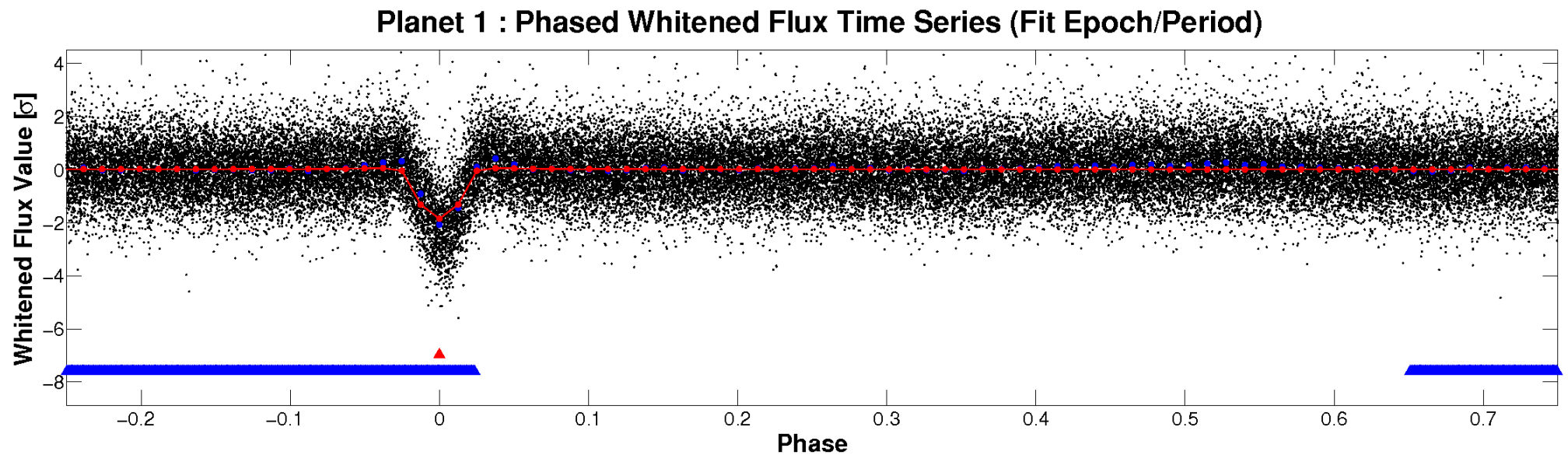
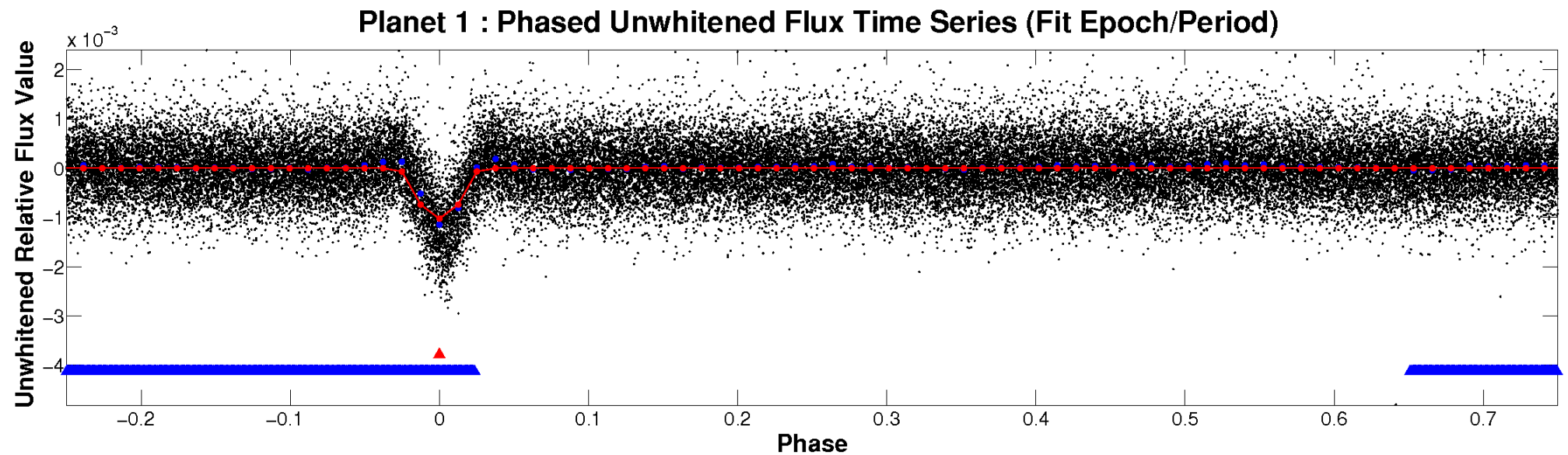


ALT Odd/Even

TCE 003246984-01

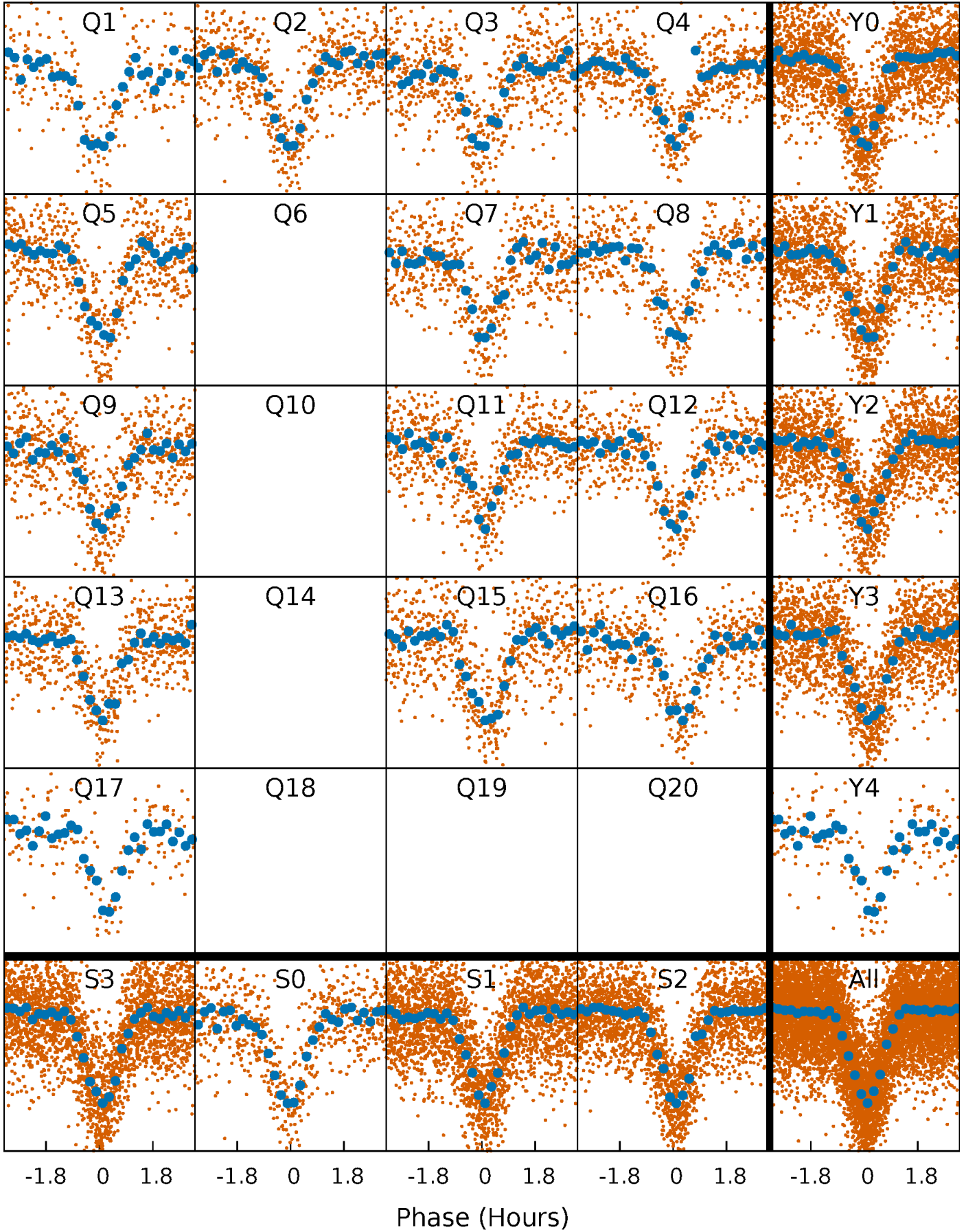


Non-Whitened Vs. Whitened Light Curve



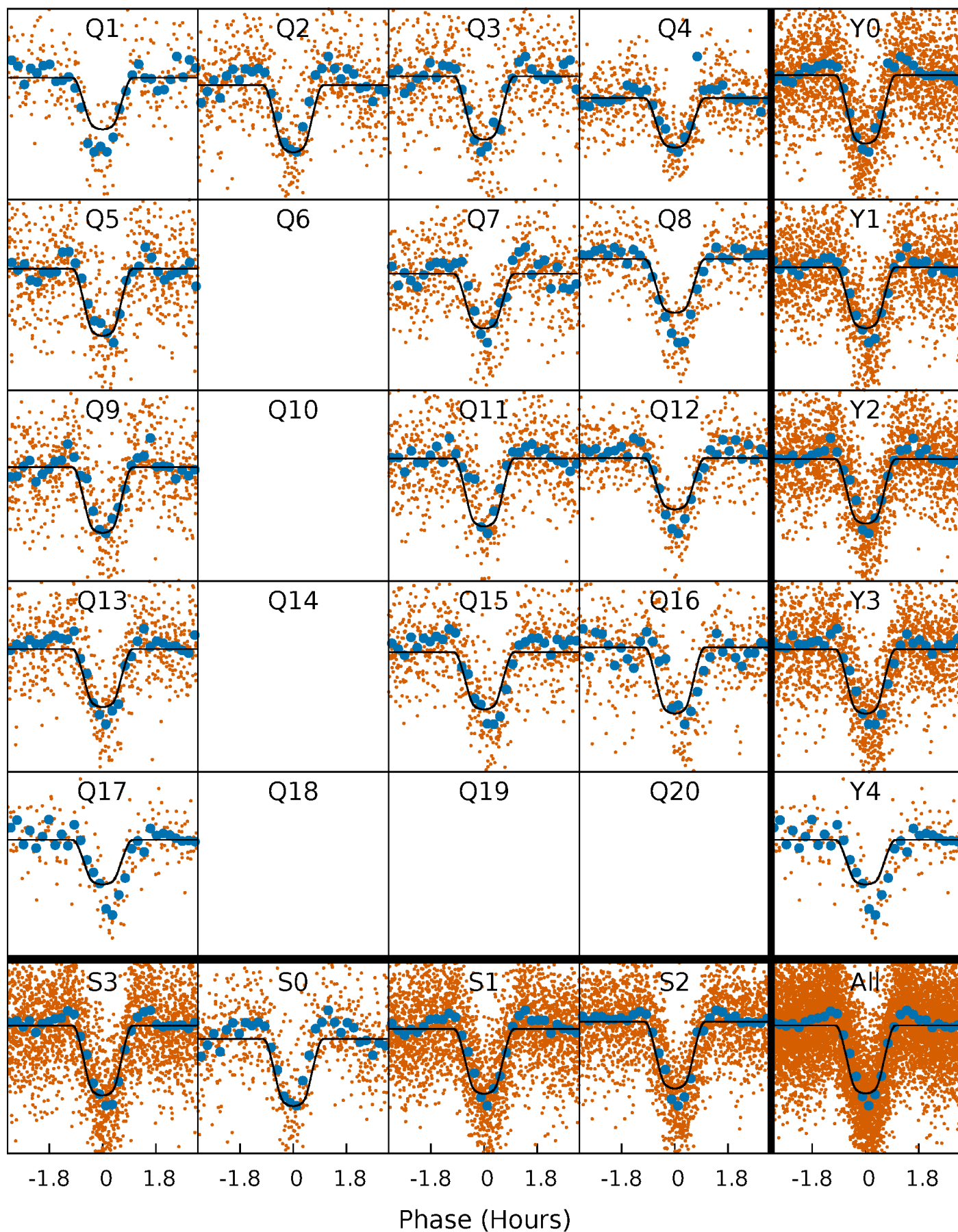
PDC Quarter-Phased Transit Curves

TCE 003246984-01 P= 1.626620 Days $T_0=132.408727$ (BKJD)



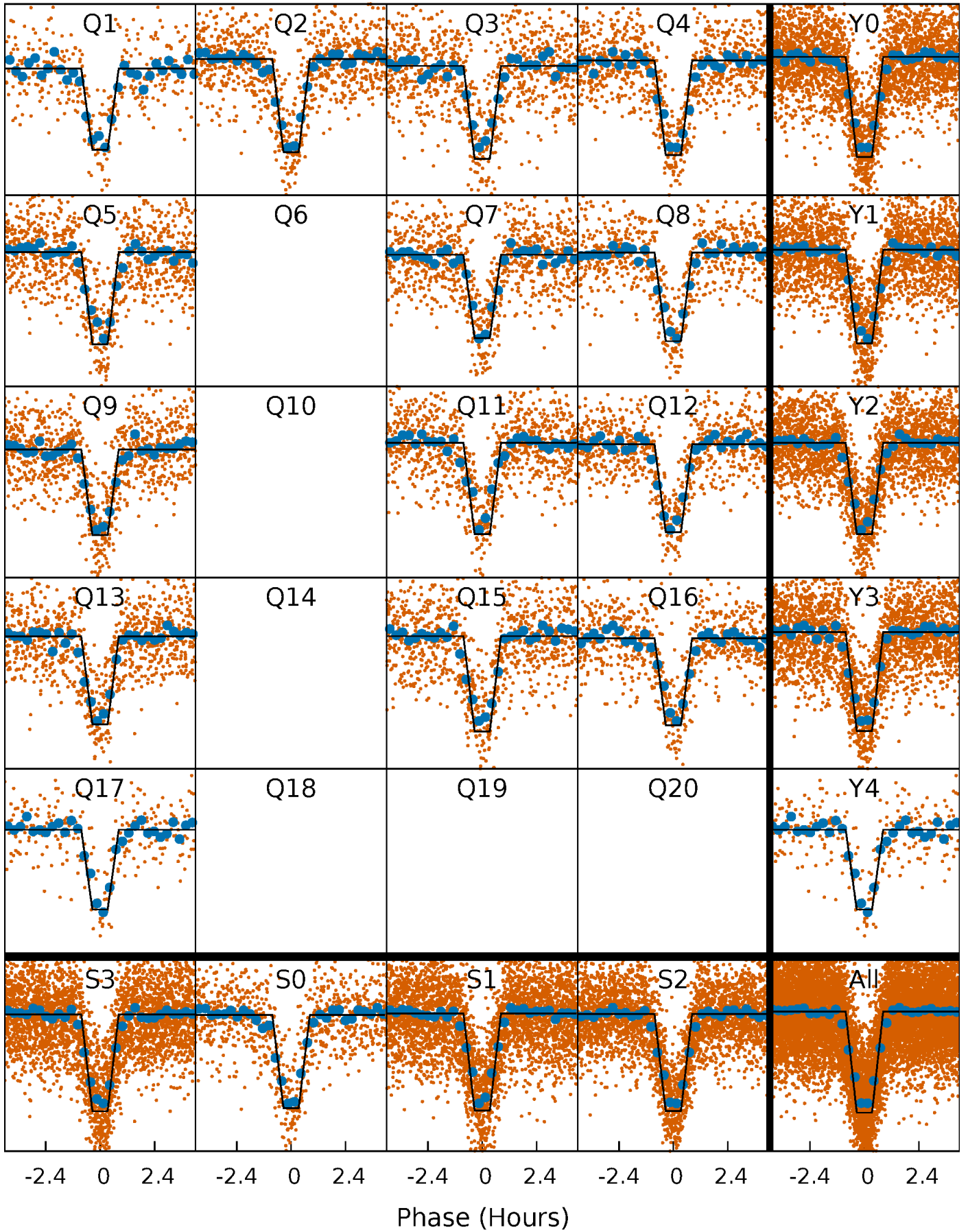
DV Quarter-Phased Transit Curves

TCE 003246984-01 P= 1.626620 Days $T_0=132.408727$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

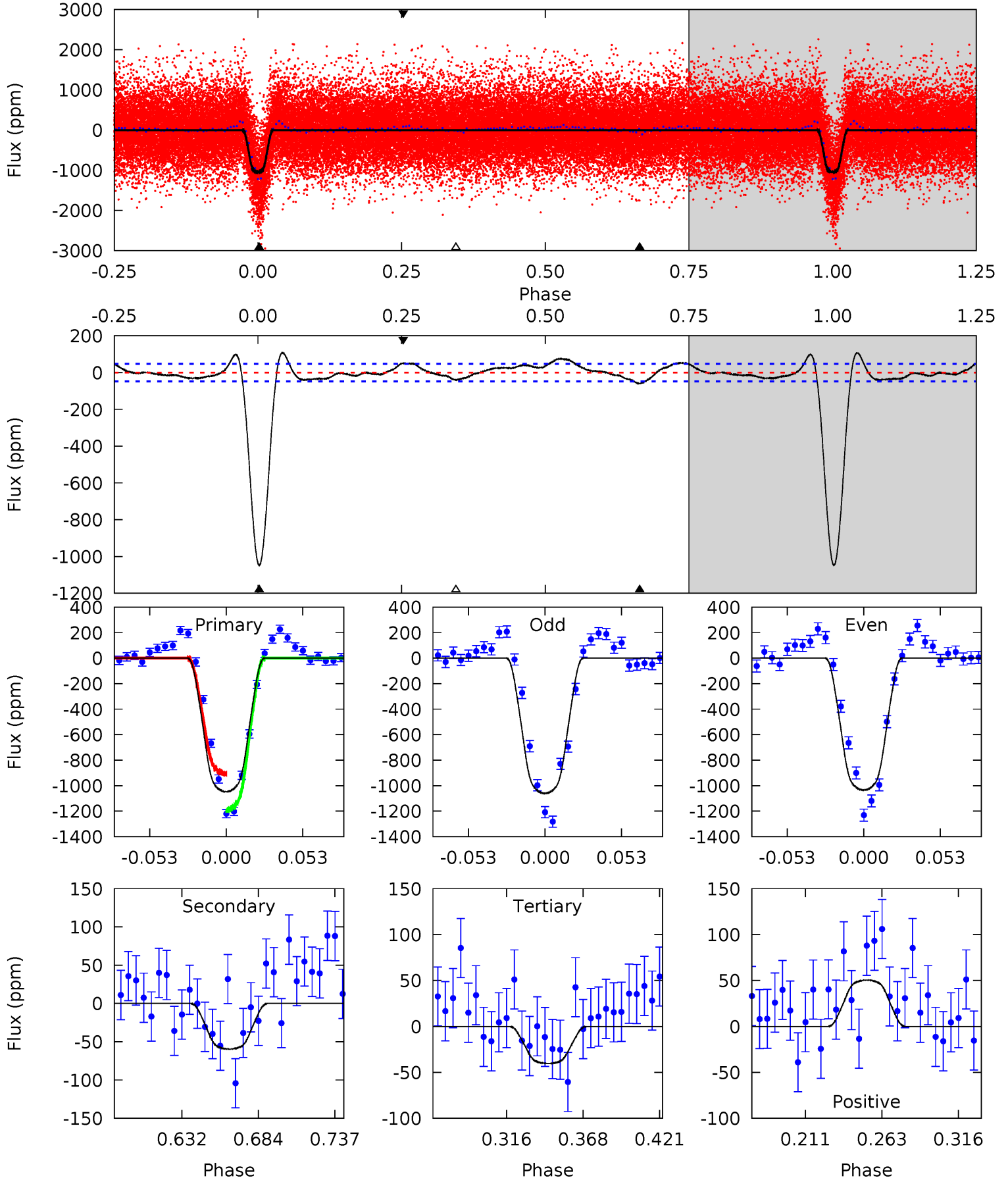
TCE 003246984-01 P= 1.626632 Days $T_0=132.407018$ (BKJD)



DV Model-Shift Uniqueness Test

003246984-01, P = 1.626620 Days, E = 130.782107 Days

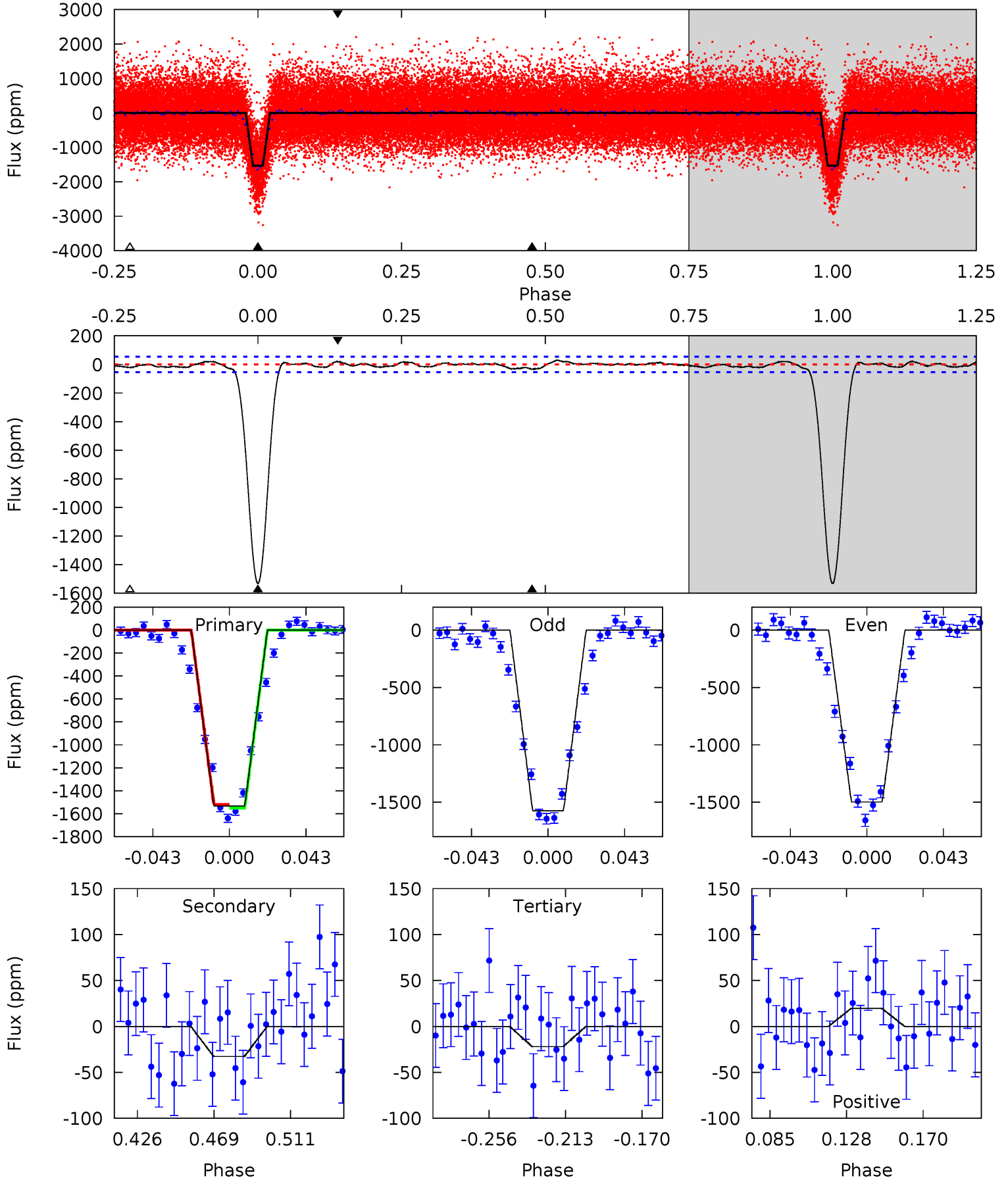
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
102.3	5.82	3.94	4.92	4.70	1.94	2.83	98.4	97.4	1.88	0.90	1.27	1.00	0.09	14.0



Alt Model-Shift Uniqueness Test

003246984-01, P = 1.626632 Days, E = 130.780386 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
134.7	2.87	1.94	1.72	4.74	2.03	0.99	132.8	133.0	0.94	1.15	3.39	0.99	0.02	1.42



Stellar Parameters For KIC 003246984

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5735^{+155}_{-172}	$4.410^{+0.124}_{-0.186}$	$-0.180^{+0.300}_{-0.300}$	$0.973^{+0.270}_{-0.145}$	$0.889^{+0.120}_{-0.090}$	$1.359^{+0.740}_{-0.645}$
	+3%/-3%	+3%/-4%	+167%/-167%	+28%/-15%	+13%/-10%	+54%/-47%
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 003246984-01 / KOI 0799.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-60 ± 10	$3.78^{+0.67}_{-0.39}$	2173^{+165}_{-109}	3135^{+133}_{-137}	$1.493^{+0.508}_{-0.410}$
Alt.	-33 ± 11	$4.50^{+0.65}_{-0.49}$	2178^{+160}_{-118}	2570^{+220}_{-545}	$0.562^{+0.292}_{-0.226}$

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

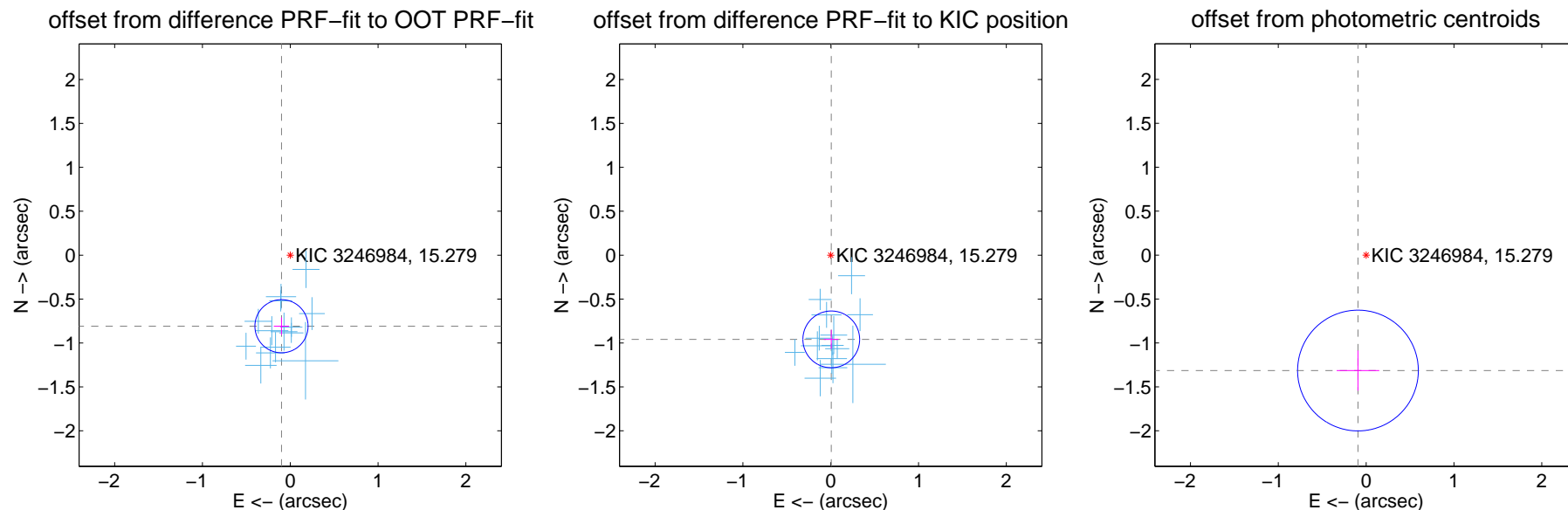
DV Centroid Data

Supplemental centroid analysis for 003246984-01. Kepler magnitude: 15.28. Transit SNR 65.93

There are 14 quarters with good PRF difference image offsets

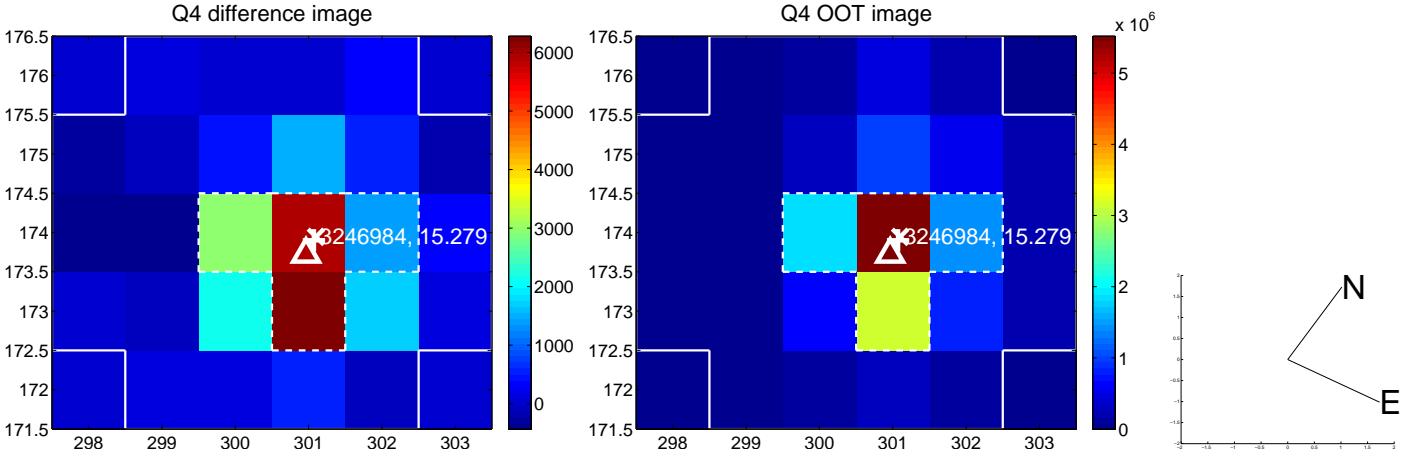
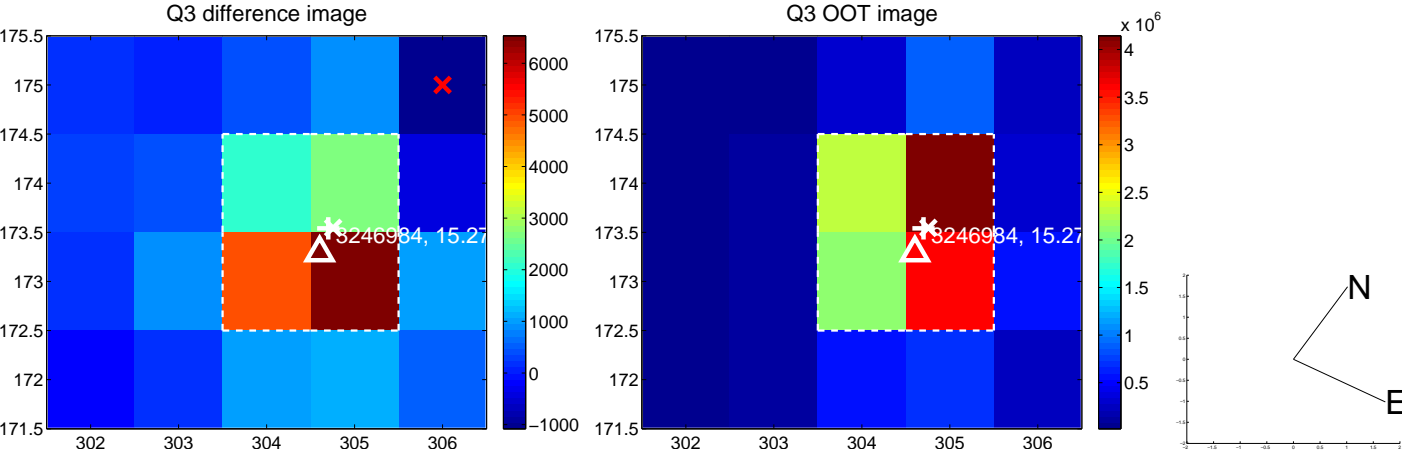
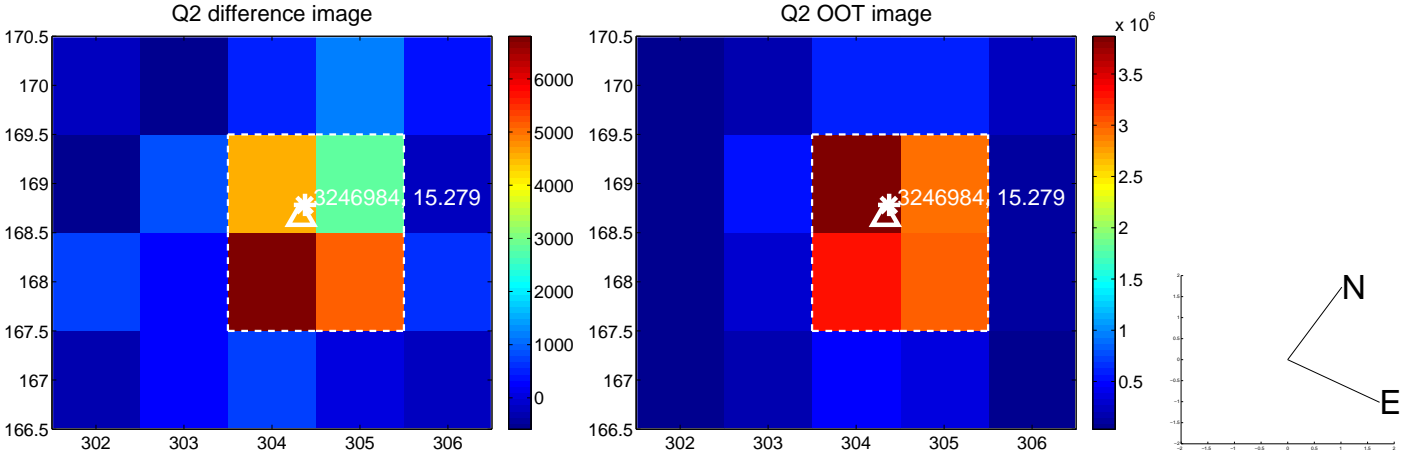
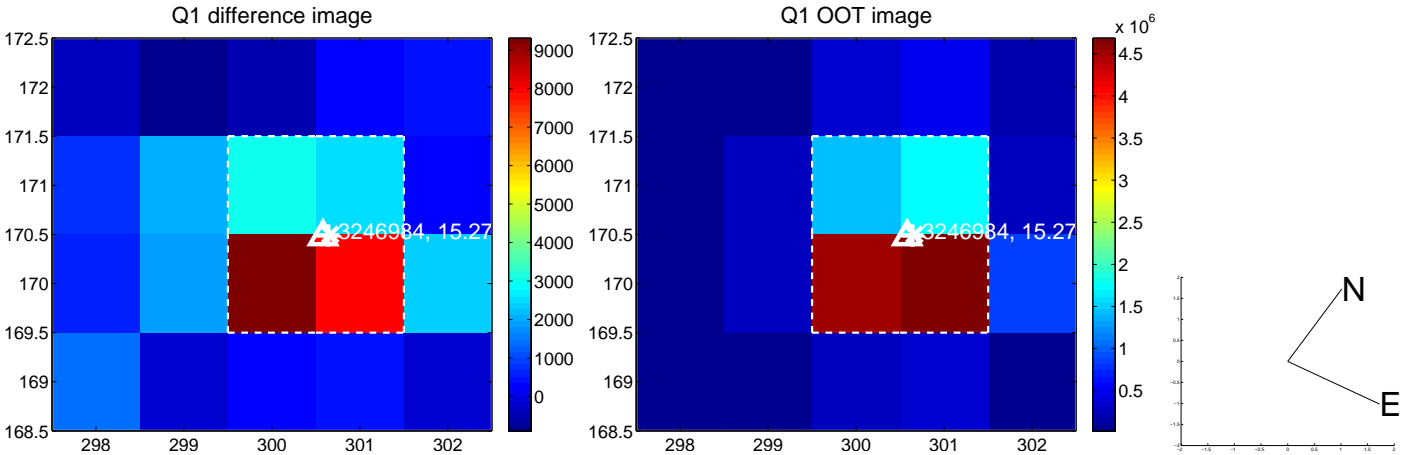
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.815 ± 0.101	8.08	0.100 ± 0.087	-0.809 ± 0.099
PRF-fit source offset from KIC position	0.959 ± 0.108	8.90	-0.006 ± 0.083	-0.959 ± 0.108
photometric centroid source offset	1.32 ± 0.23	5.75	0.09 ± 0.24	-1.31 ± 0.23

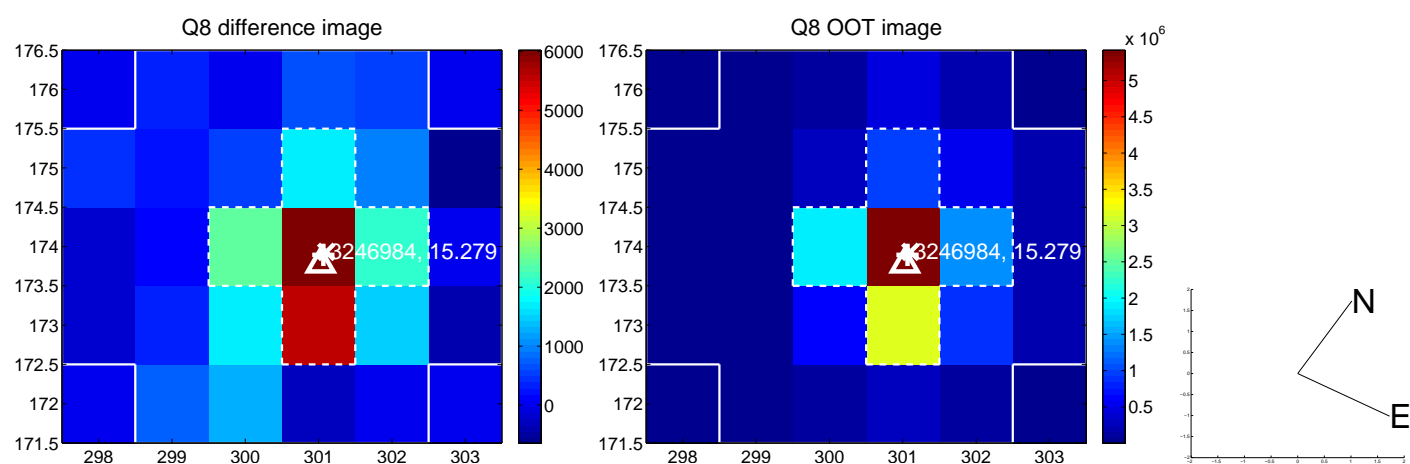
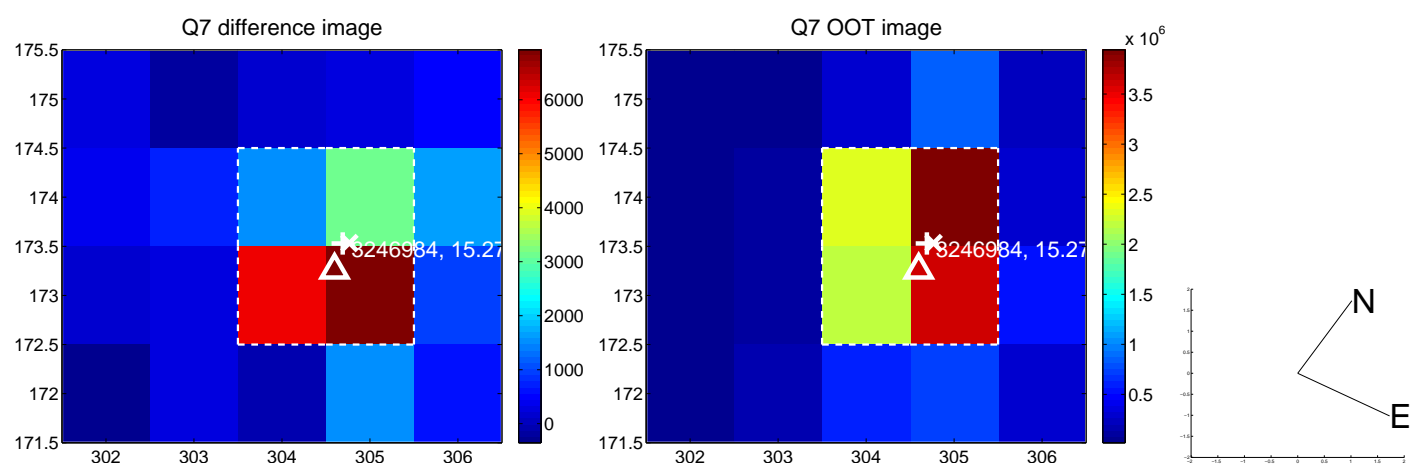
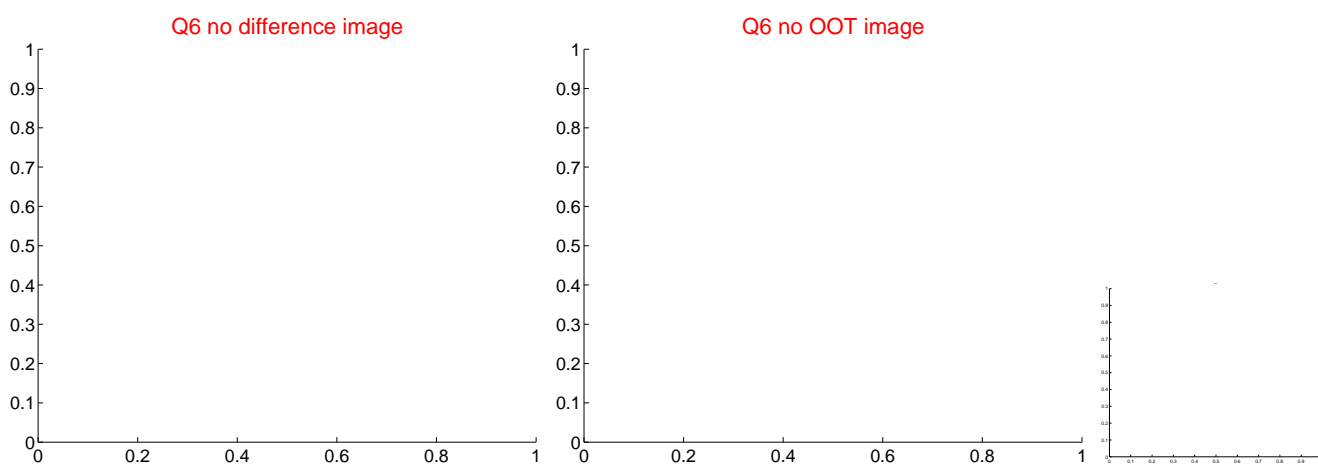
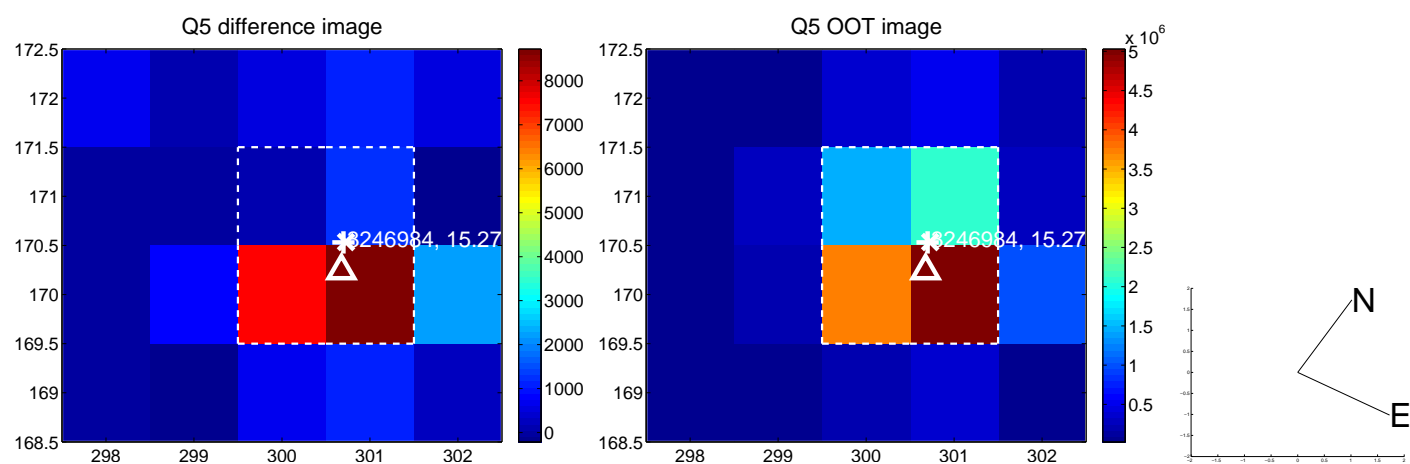


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

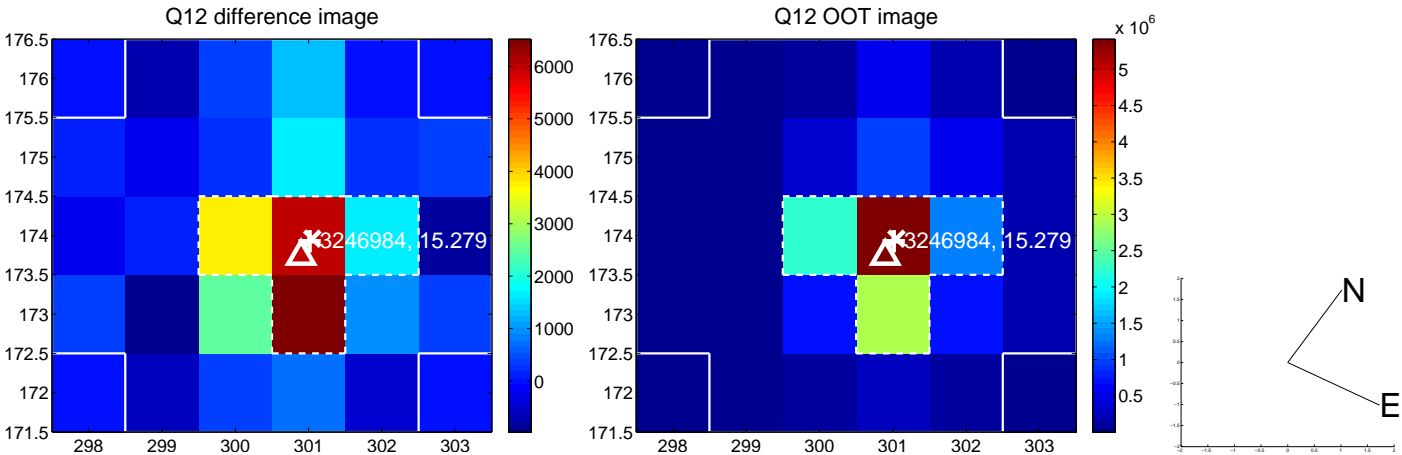
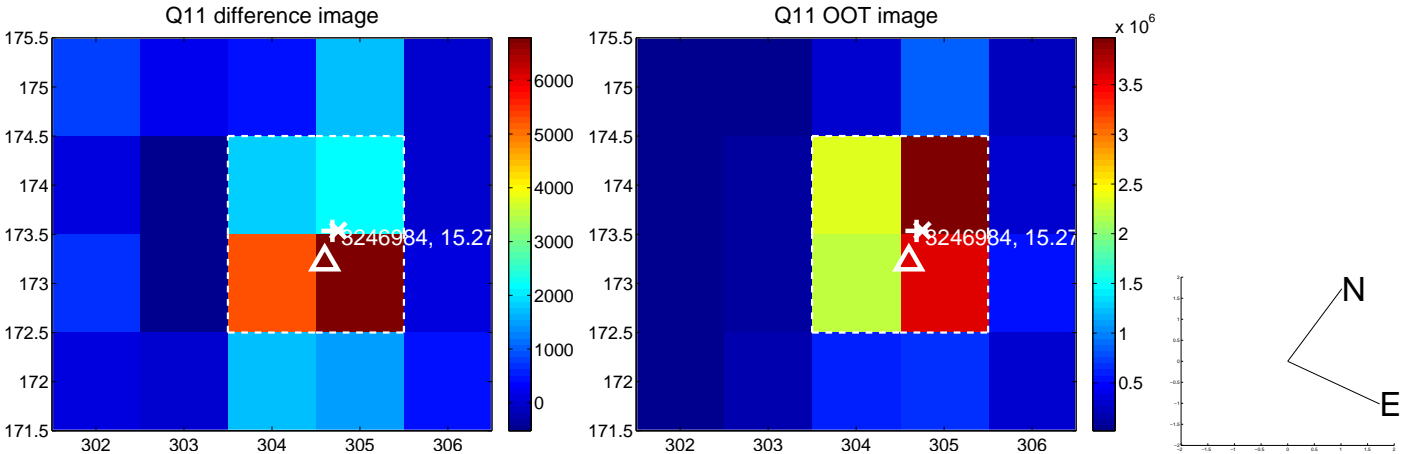
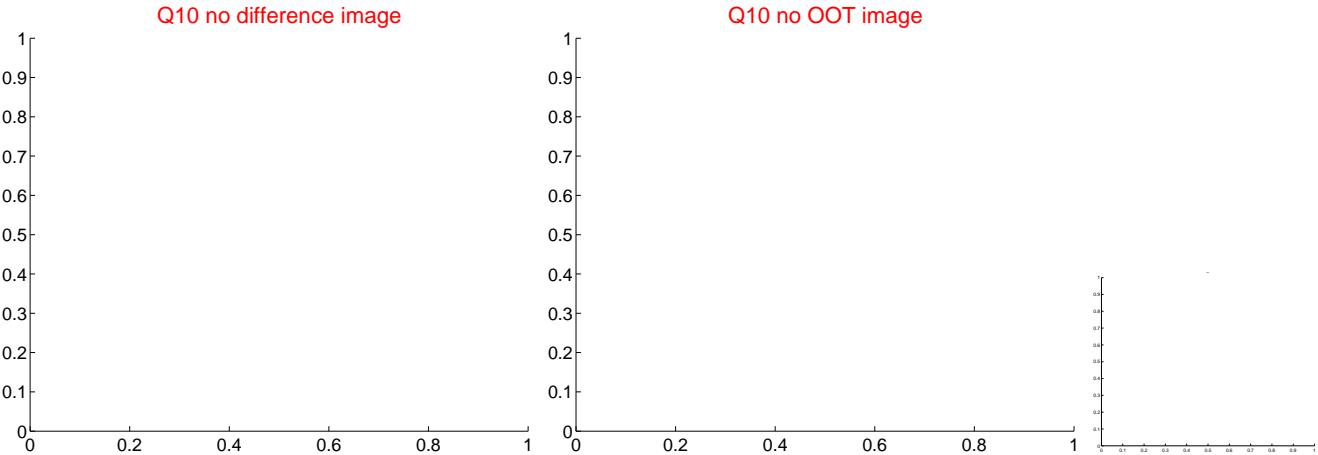
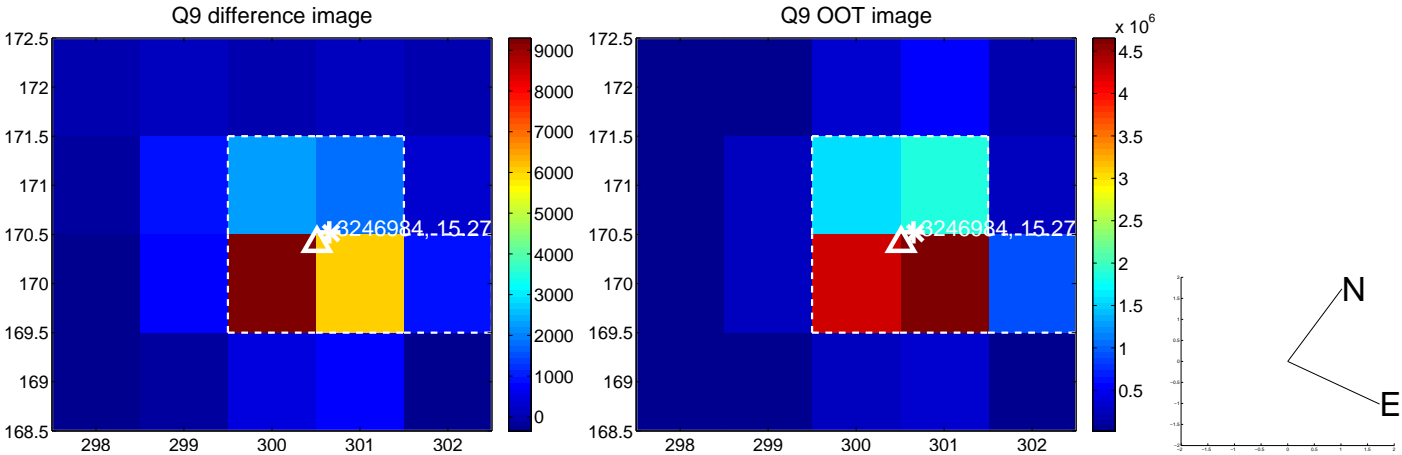
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



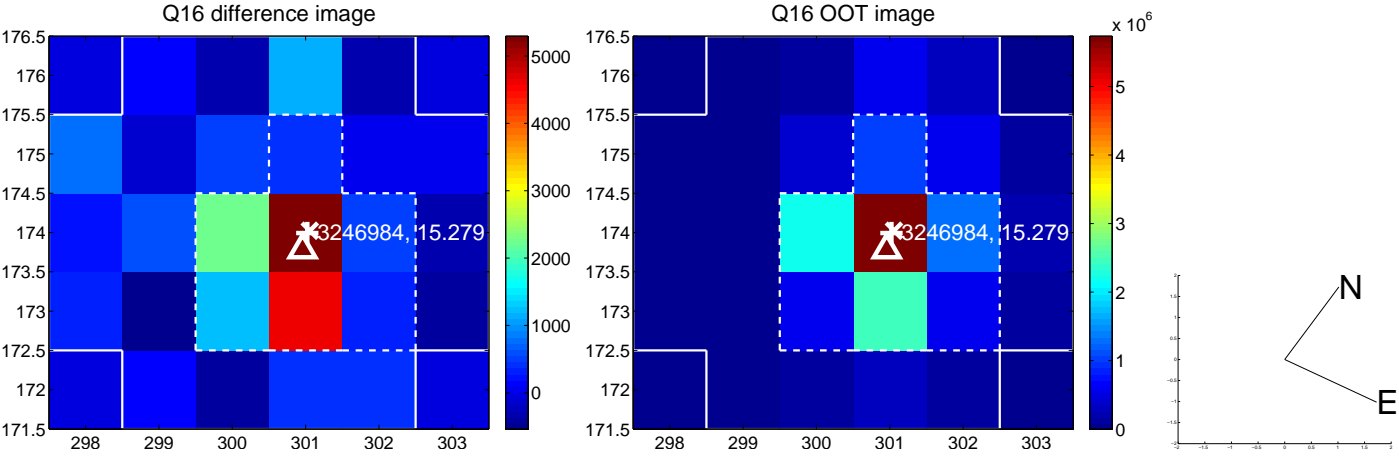
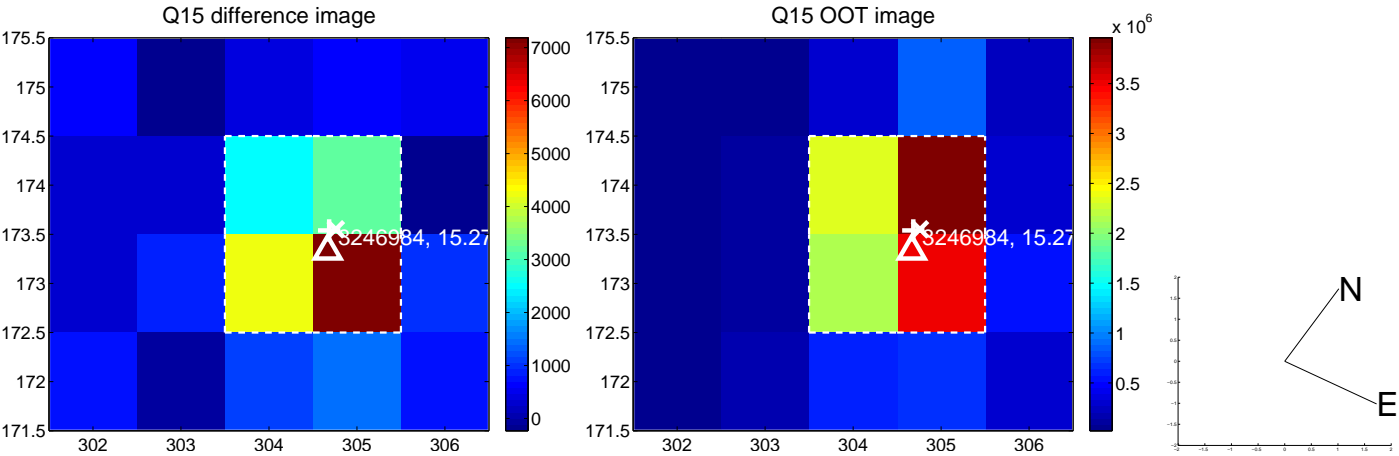
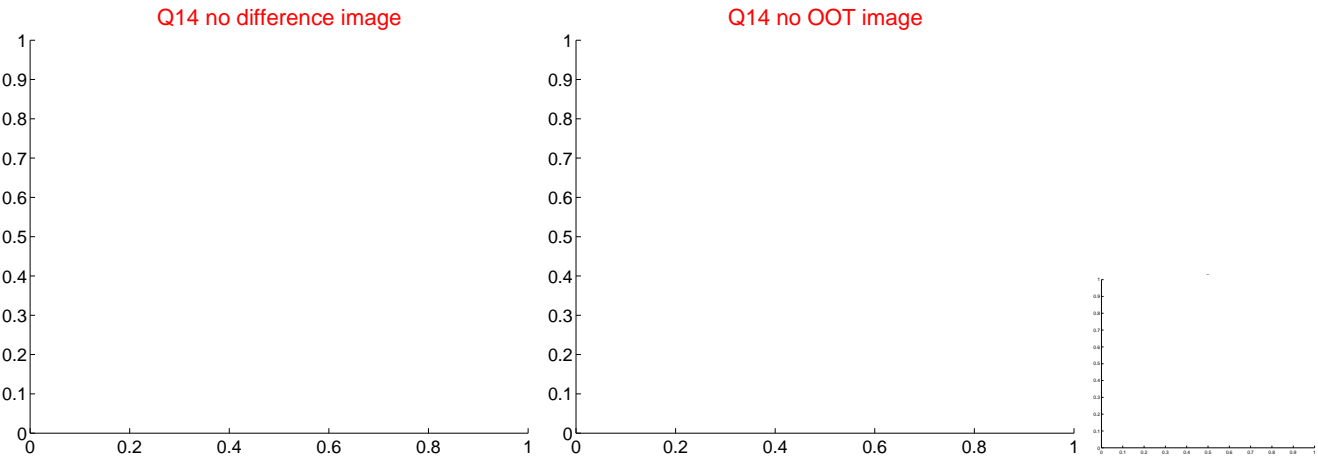
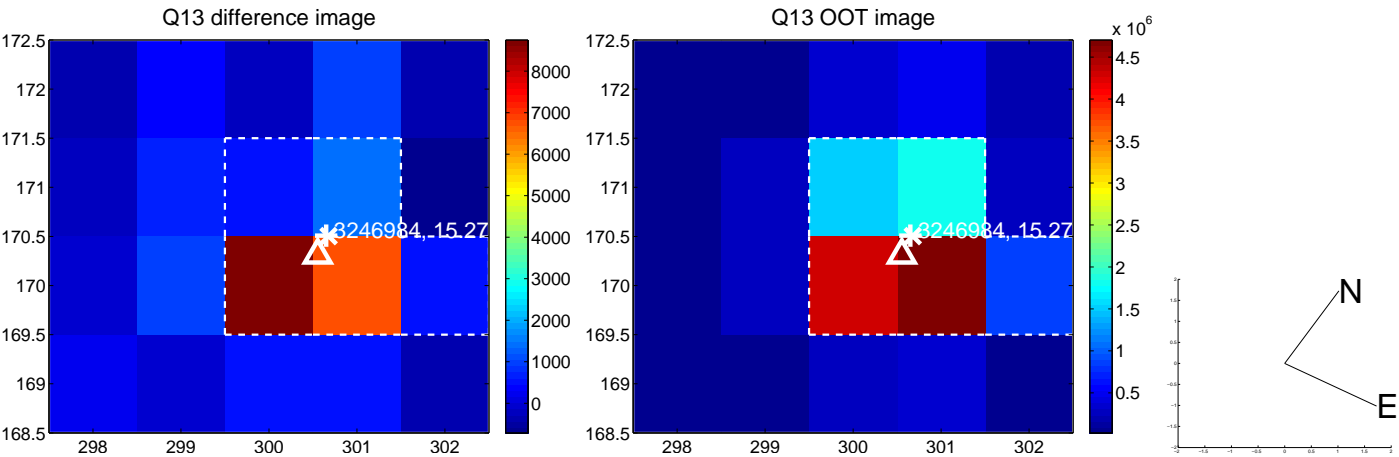
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



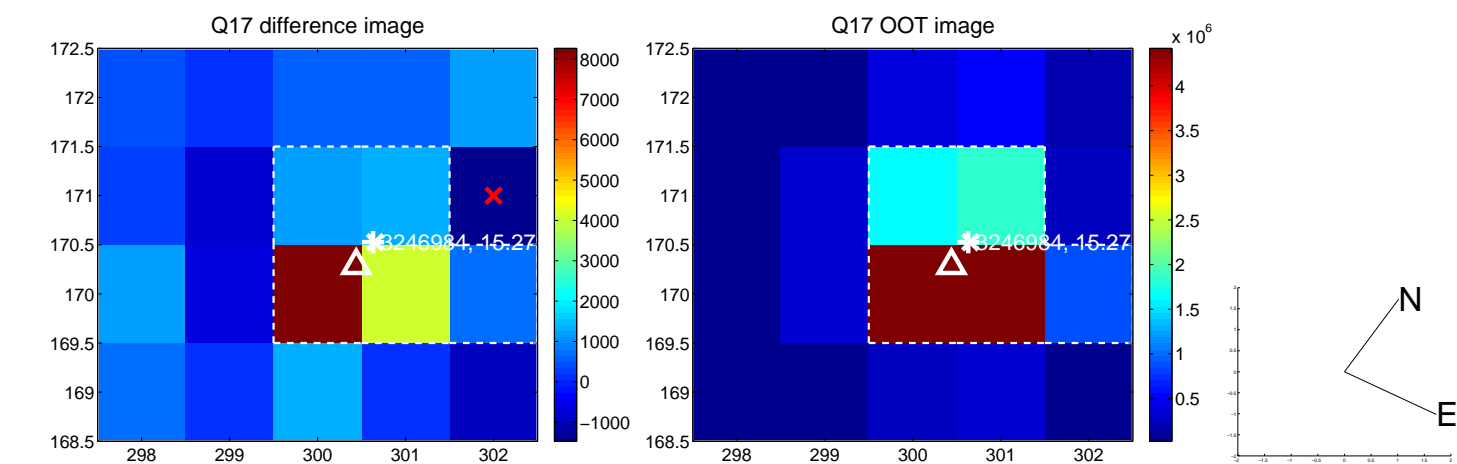
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



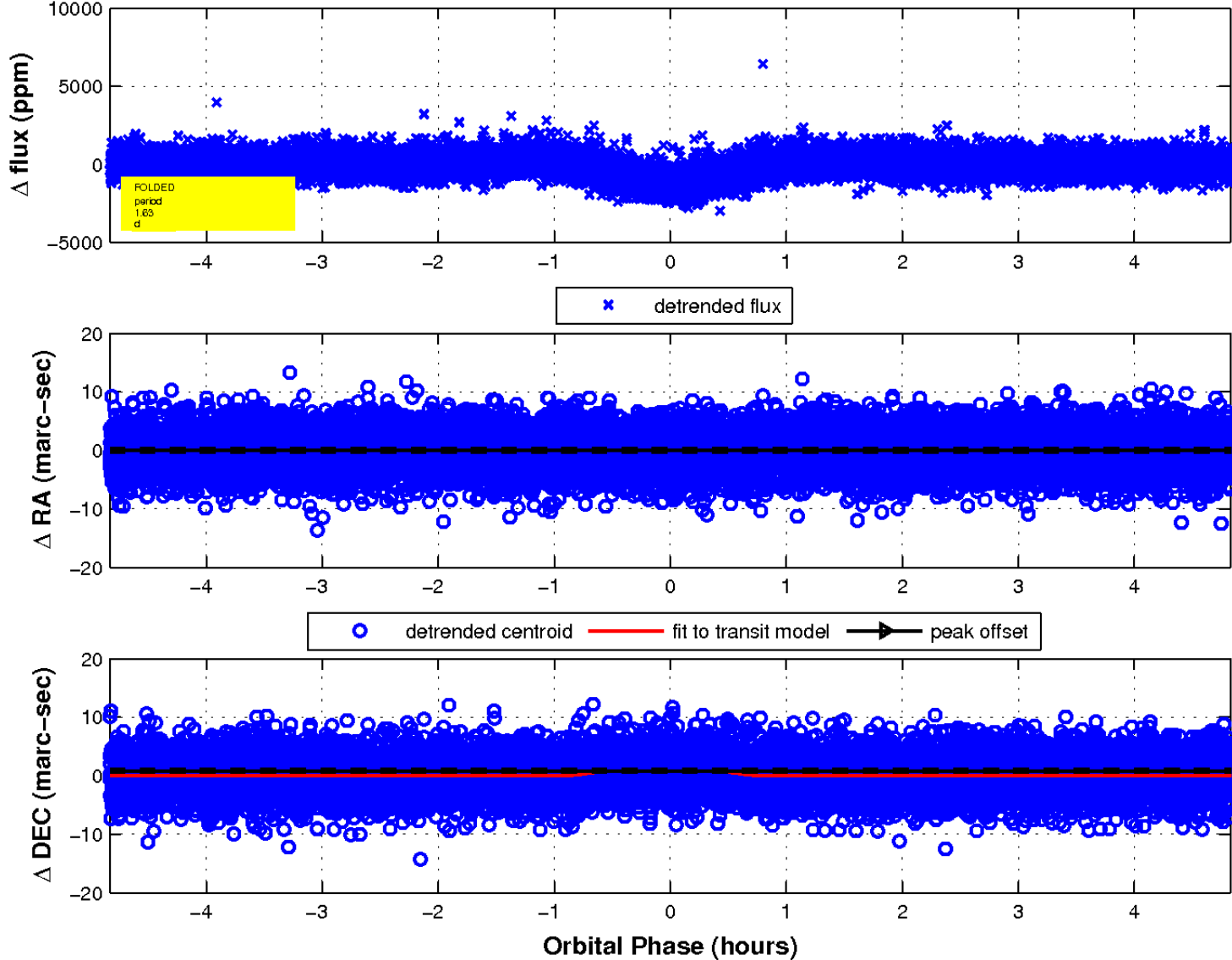
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



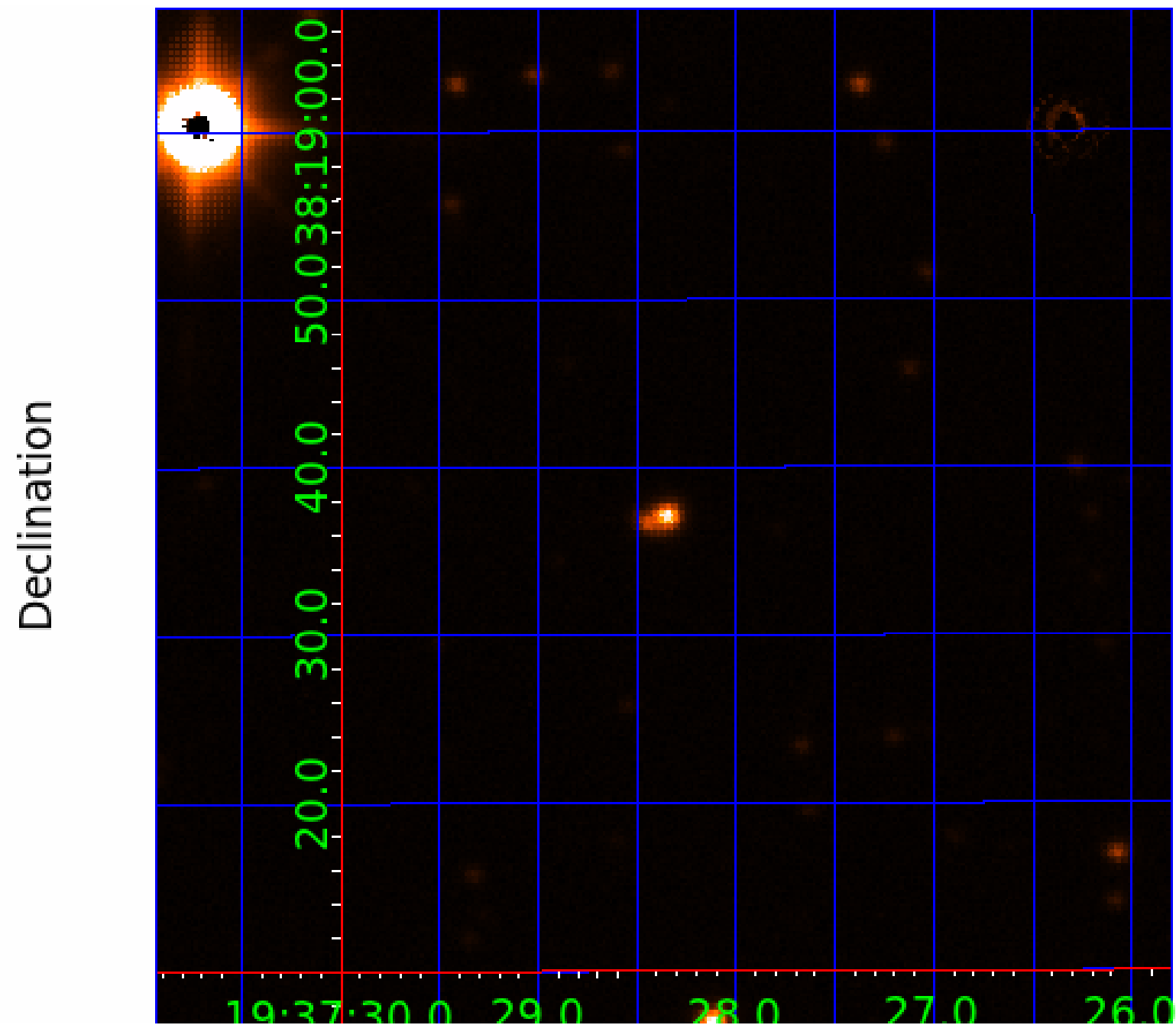
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 003246984

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})
003246984-01	OBS	0799.01	1.626620	132.408727	1033.8	1.610	45.9	65.9	0.97	5735	3.73	1355.36
003246984-02	OBS	No	3.254595	133.467691	11.2	34.580	7.5	1.6	0.97	5735	0.32	537.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003246984-01	OBS	PC	0.77	0	0	0	0	NO_COMMENT
003246984-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

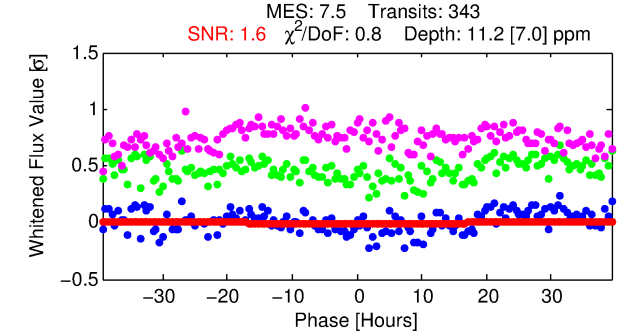
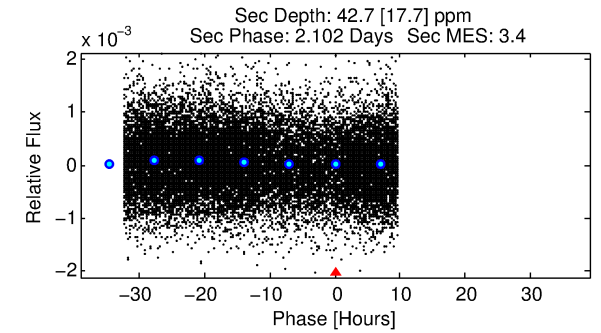
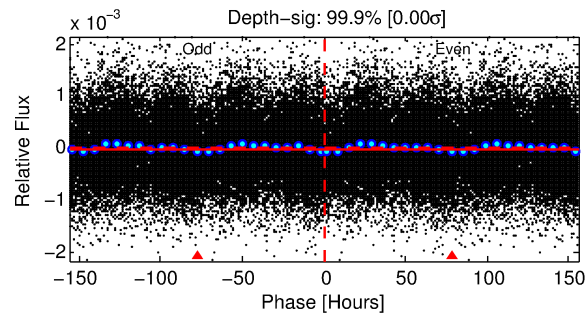
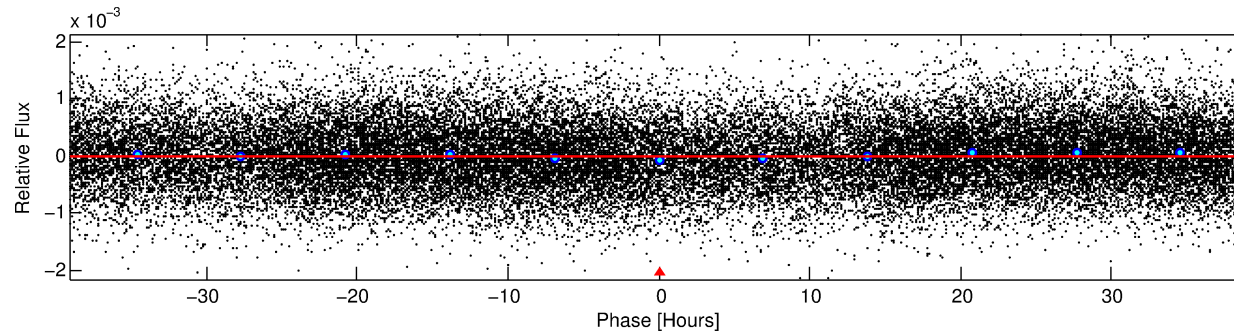
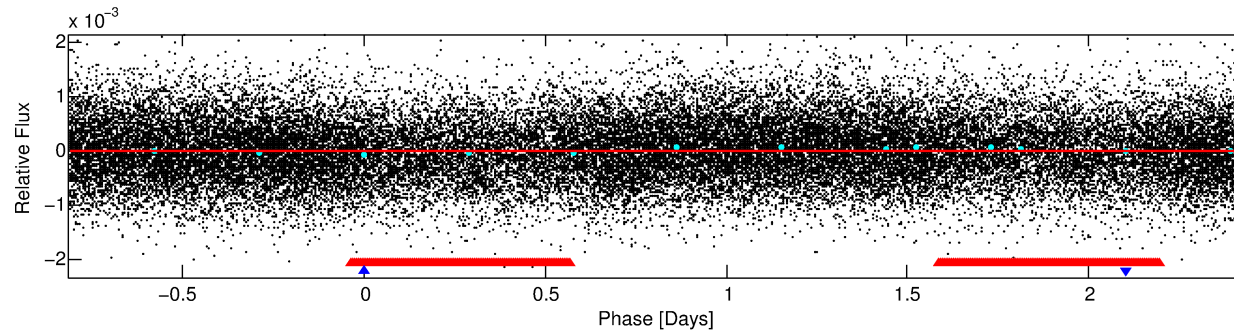
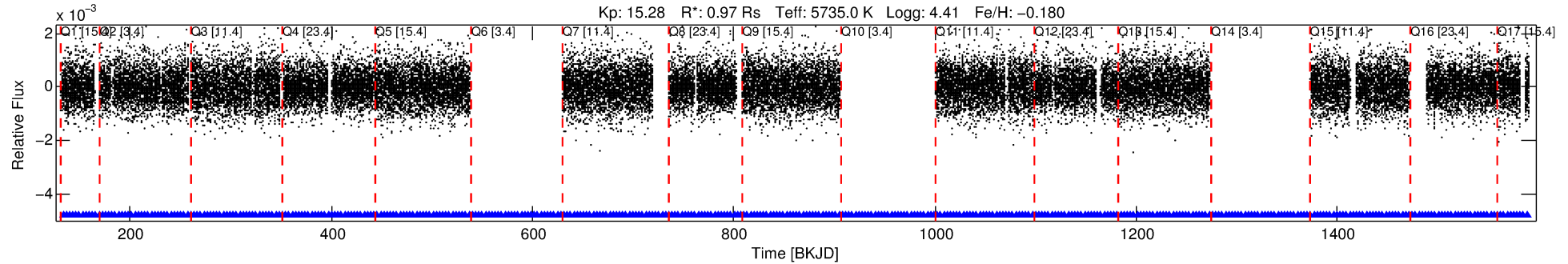
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003246984-02

No Significant Match Found

DV One-Page Summary

KIC: 3246984 Candidate: 2 of 2 Period: 3.255 d
KOI: K00799 Corr: No Ephemeris Match



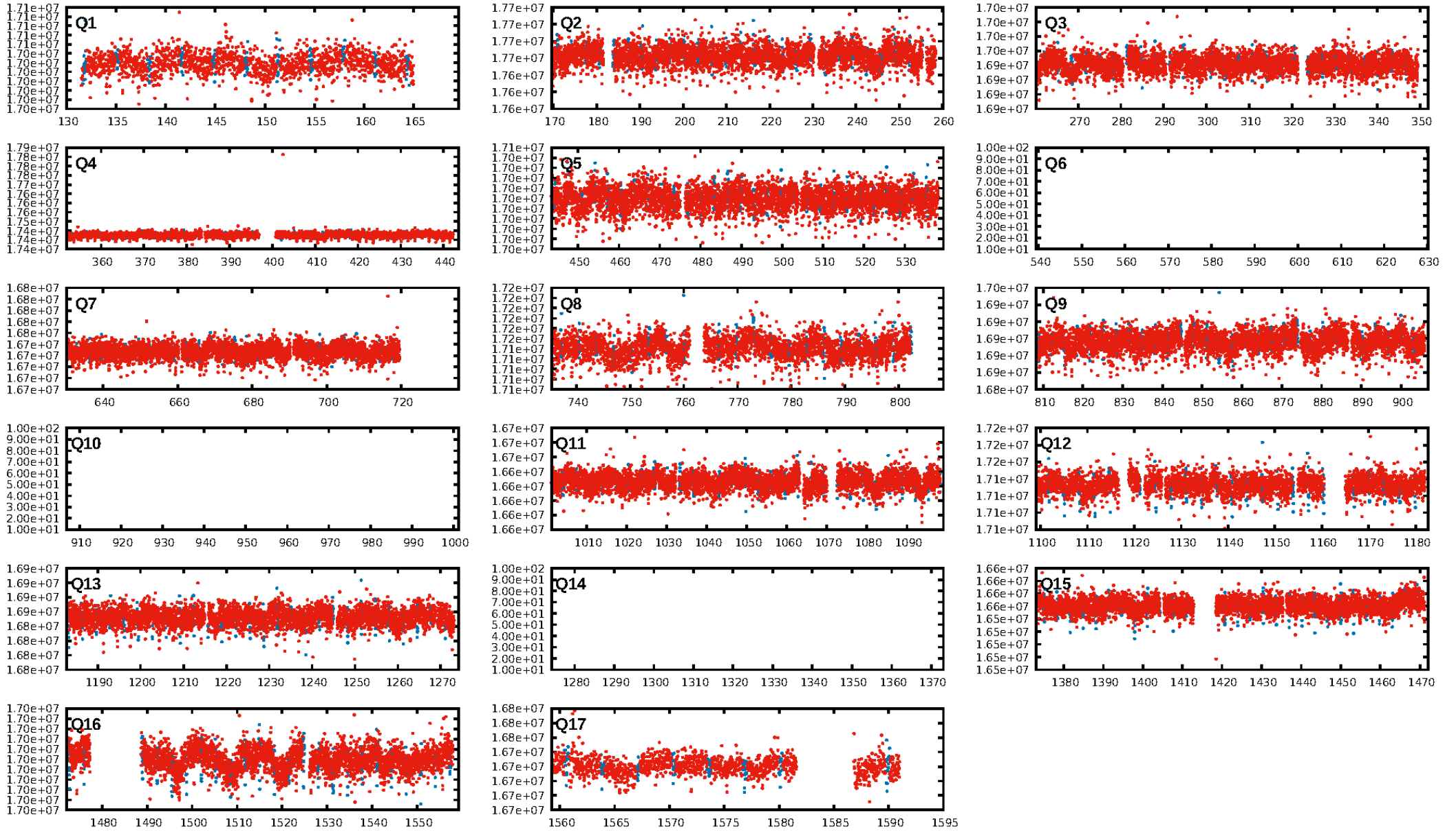
DV Fit Results:

Period = 3.25459 [0.00066] d
Epoch = 133.4677 [0.1328] BKJD
Rp/R* = 0.0030 [0.0111]
a/R* = 1.02 [0.62]
b = 0.00 [5626.65]
Seff = 537.58 [193.93]
Teq = 1228 [111] K
Rp = 0.32 [1.18] Re
a = 0.0413 [0.0097] AU
Ag = 385.99 [2818.52] [0.14σ]
Teffp = 8414 [15346] K [0.47σ]

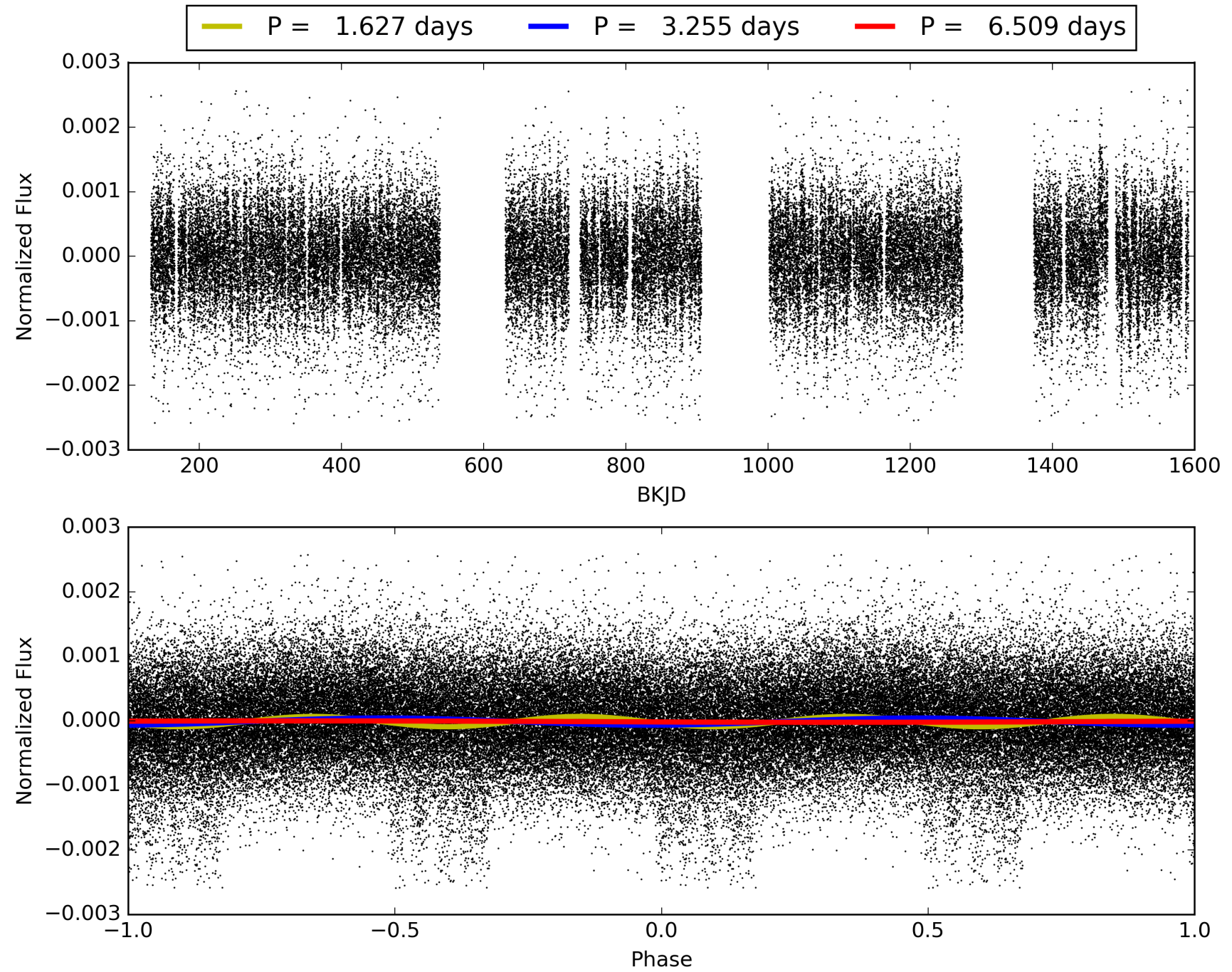
DV Diagnostic Results:

ShortPeriod-sig: 74.1% [1.13σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [323/323]
GhostDiagnostic-chr: -16.08
Centroid-sig: 0.2%
Centroid-so: 12.897 arcsec [2.00σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/14]

TCE 003246984-02, PDC Light Curves

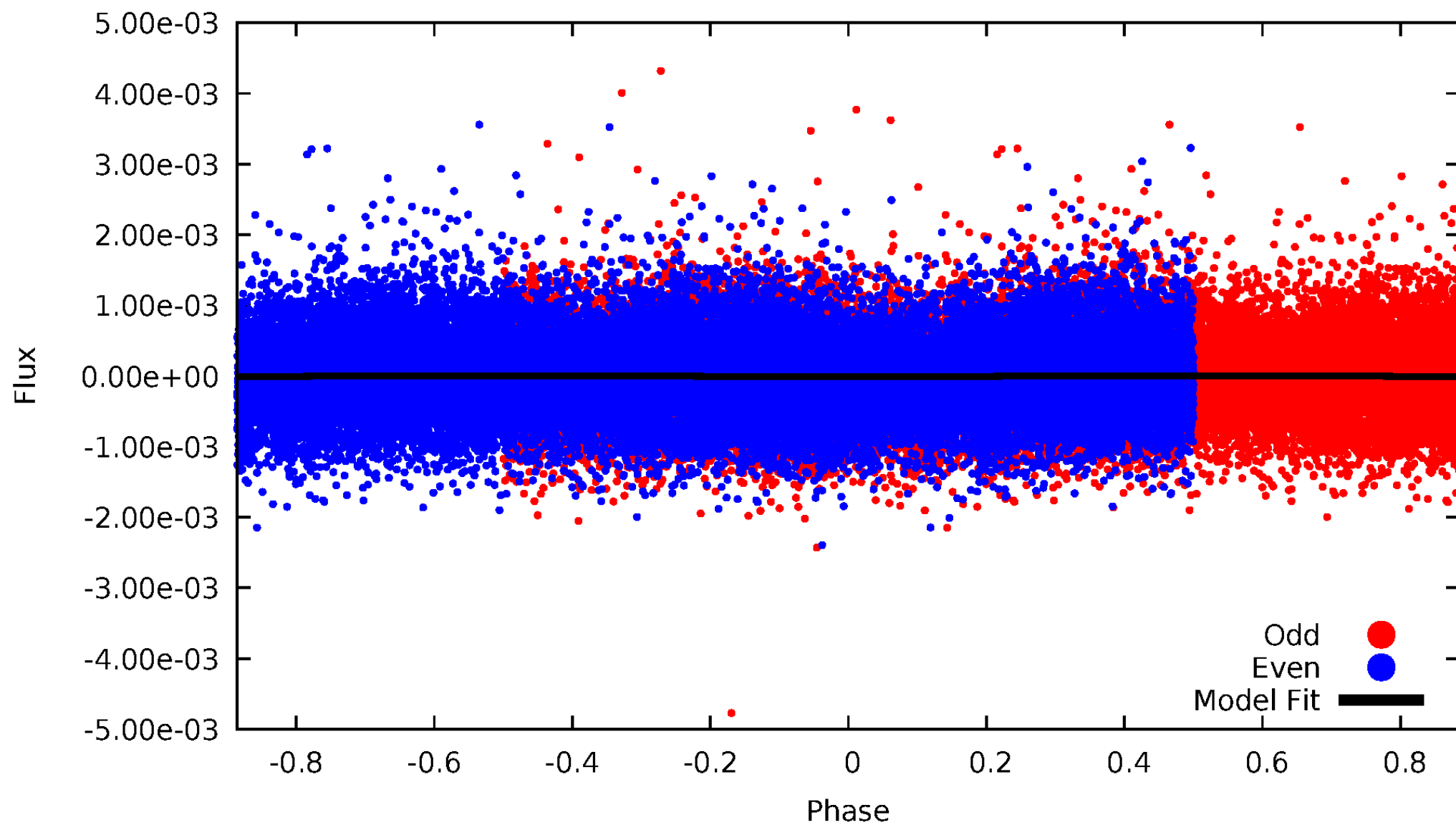


TCE 003246984-02



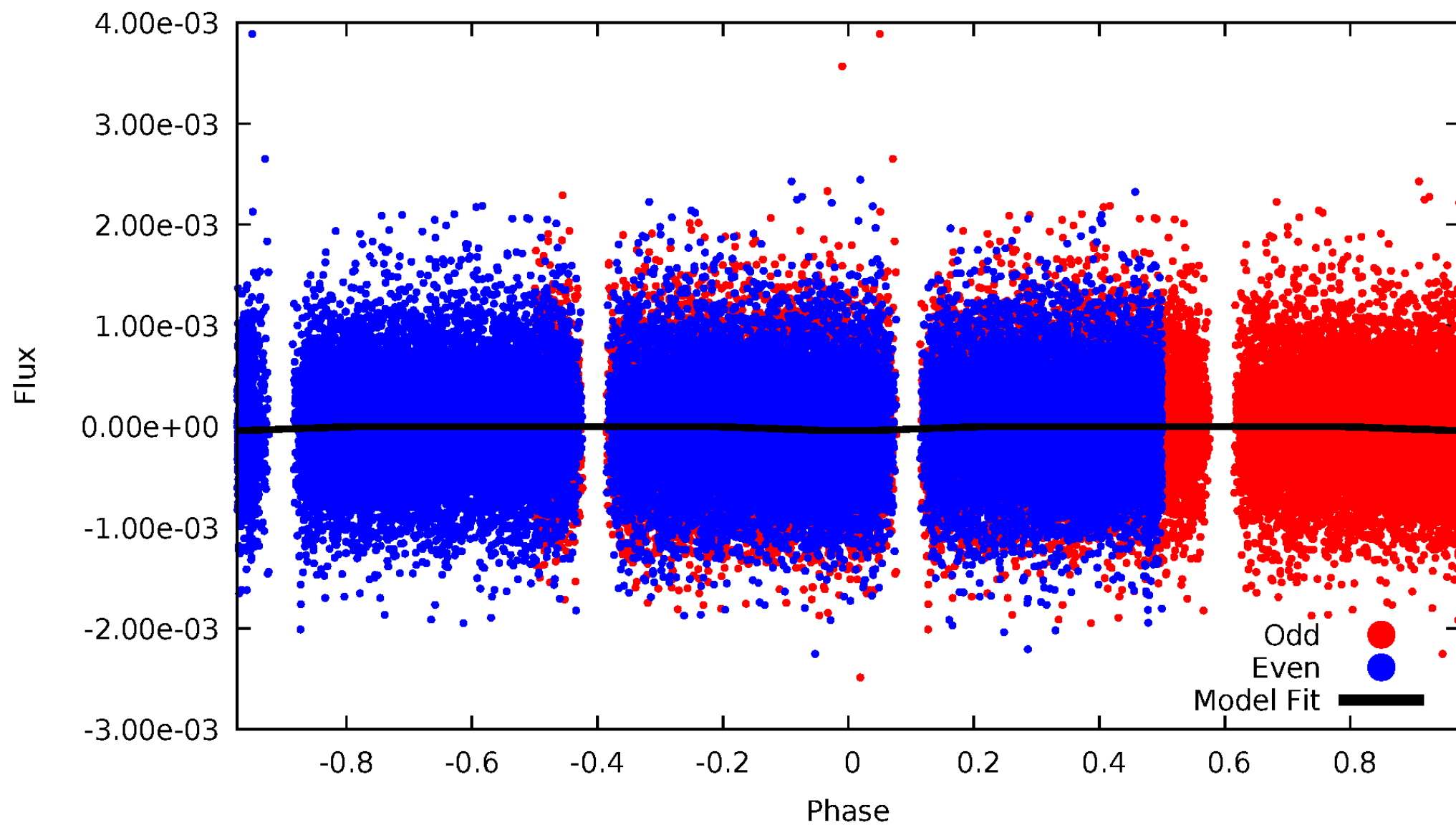
DV Odd/Even

TCE 003246984-02



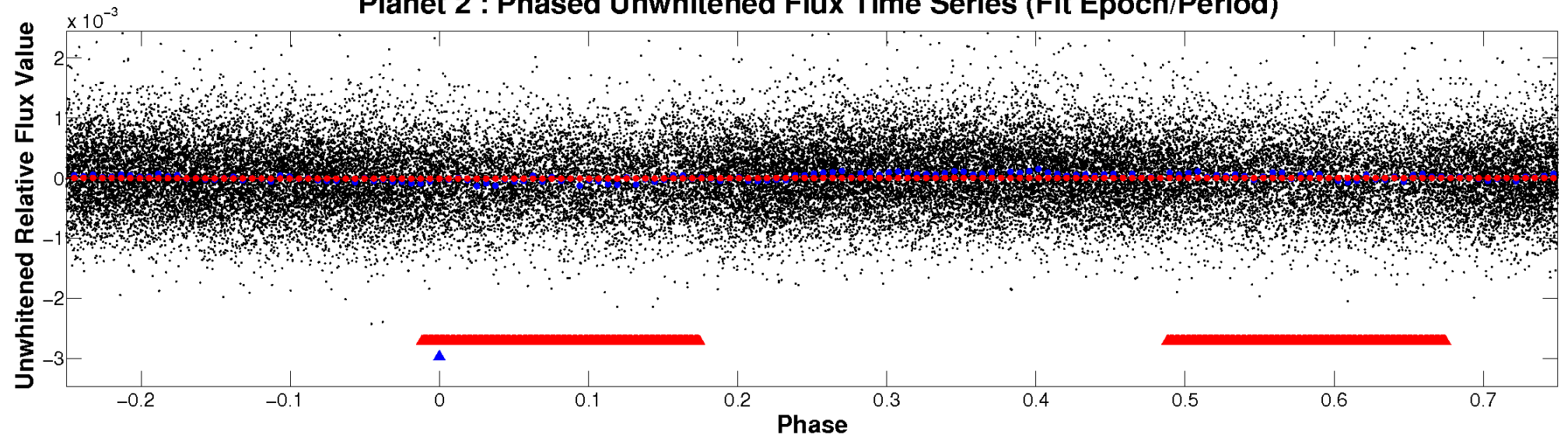
ALT Odd/Even

TCE 003246984-02

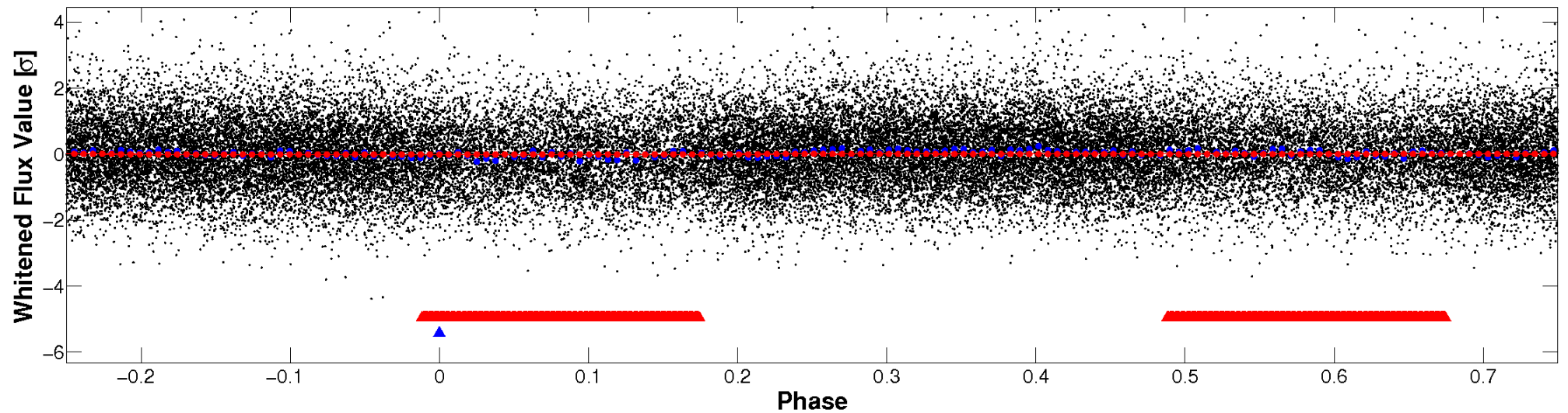


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

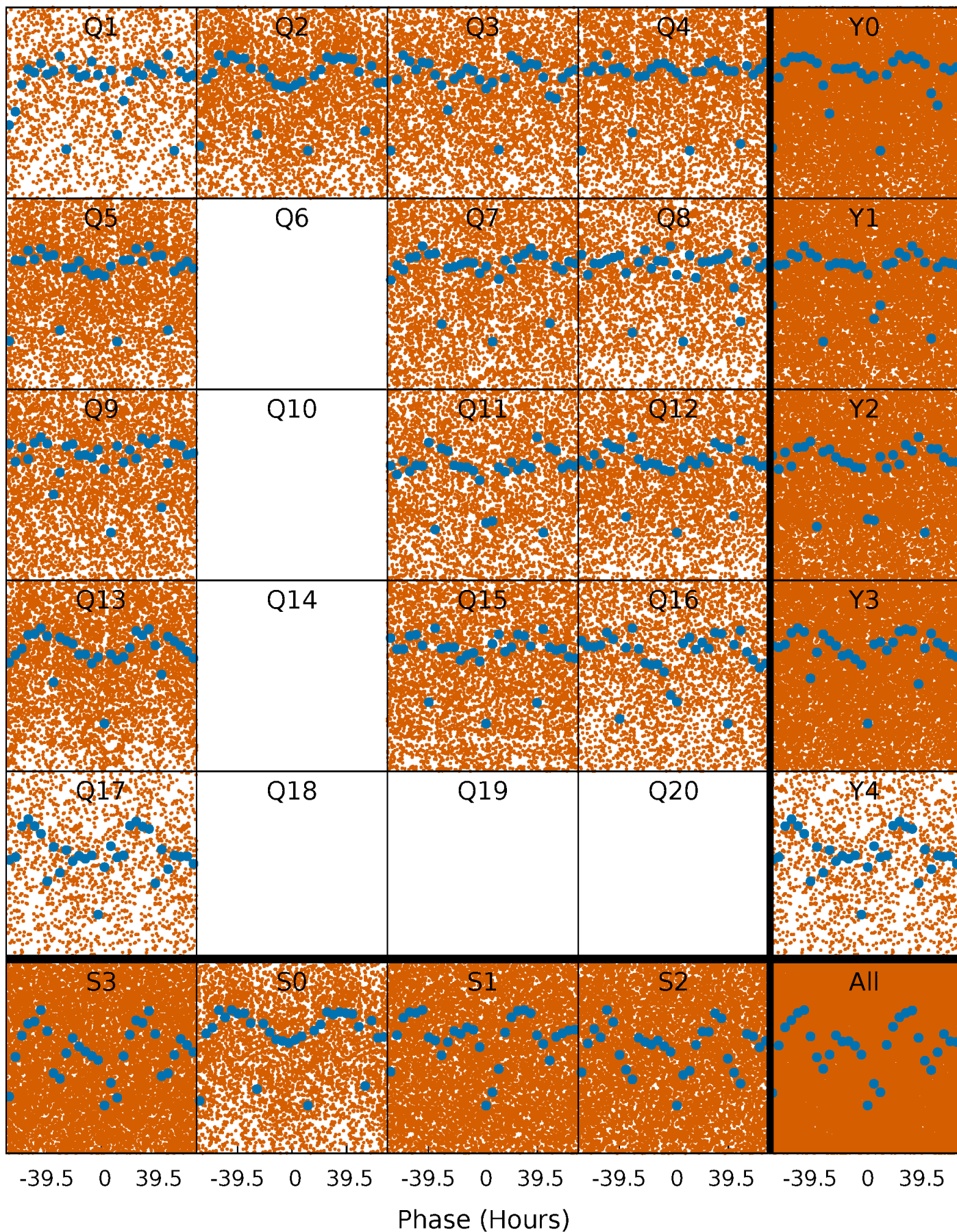


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



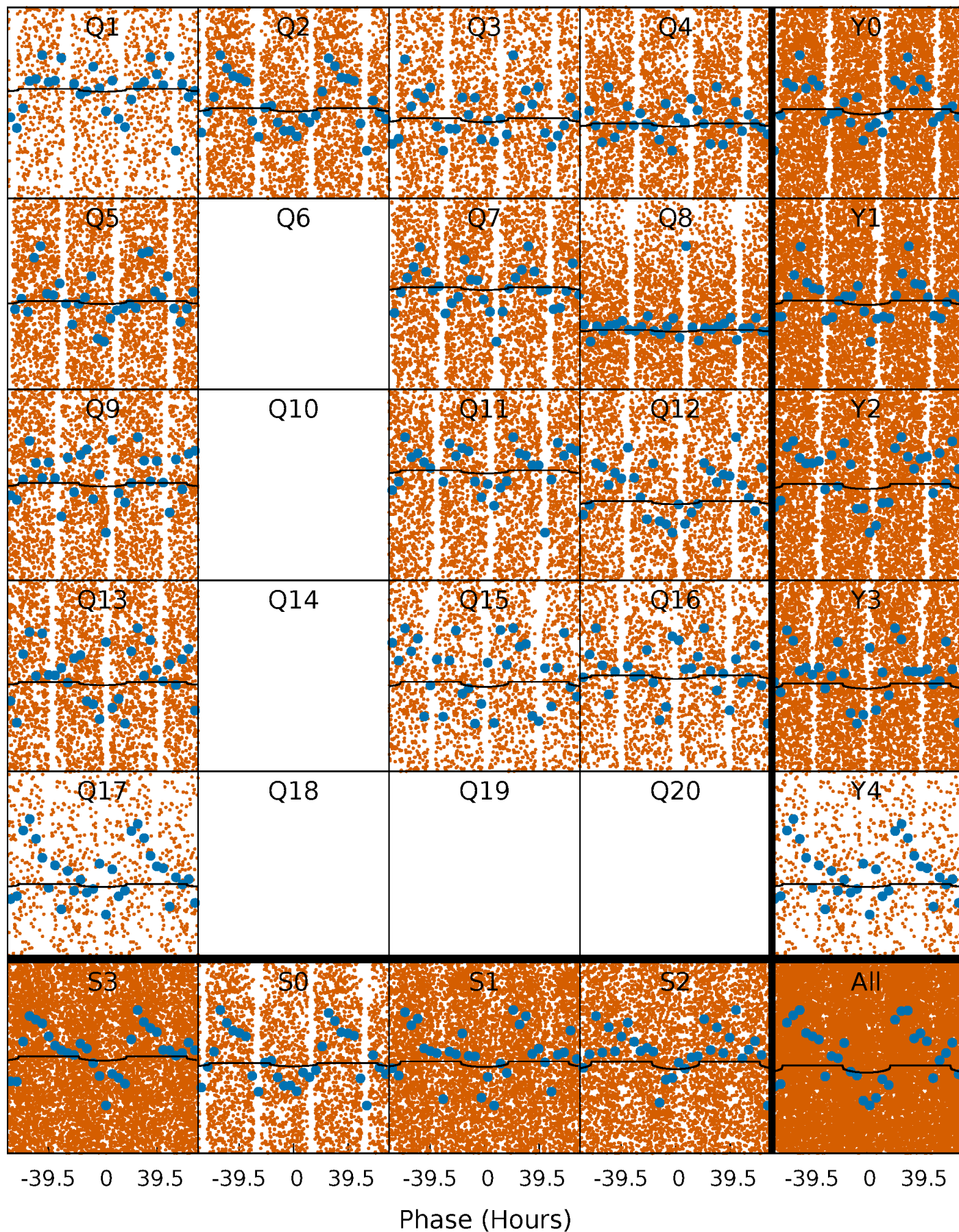
PDC Quarter-Phased Transit Curves

TCE 003246984-02 P= 3.254595 Days $T_0=133.467692$ (BKJD)



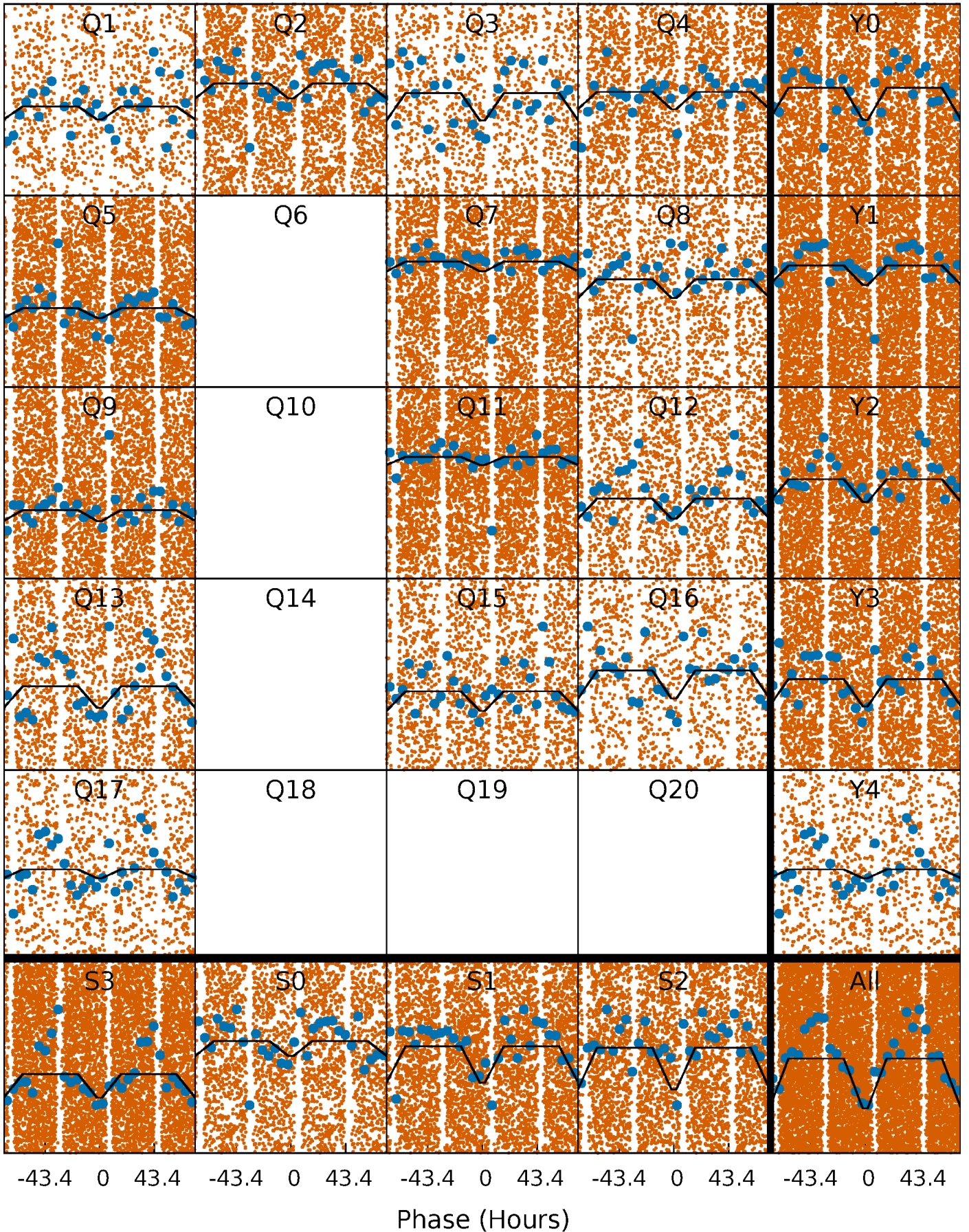
DV Quarter-Phased Transit Curves

TCE 003246984-02 P= 3.254595 Days $T_0=133.467692$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

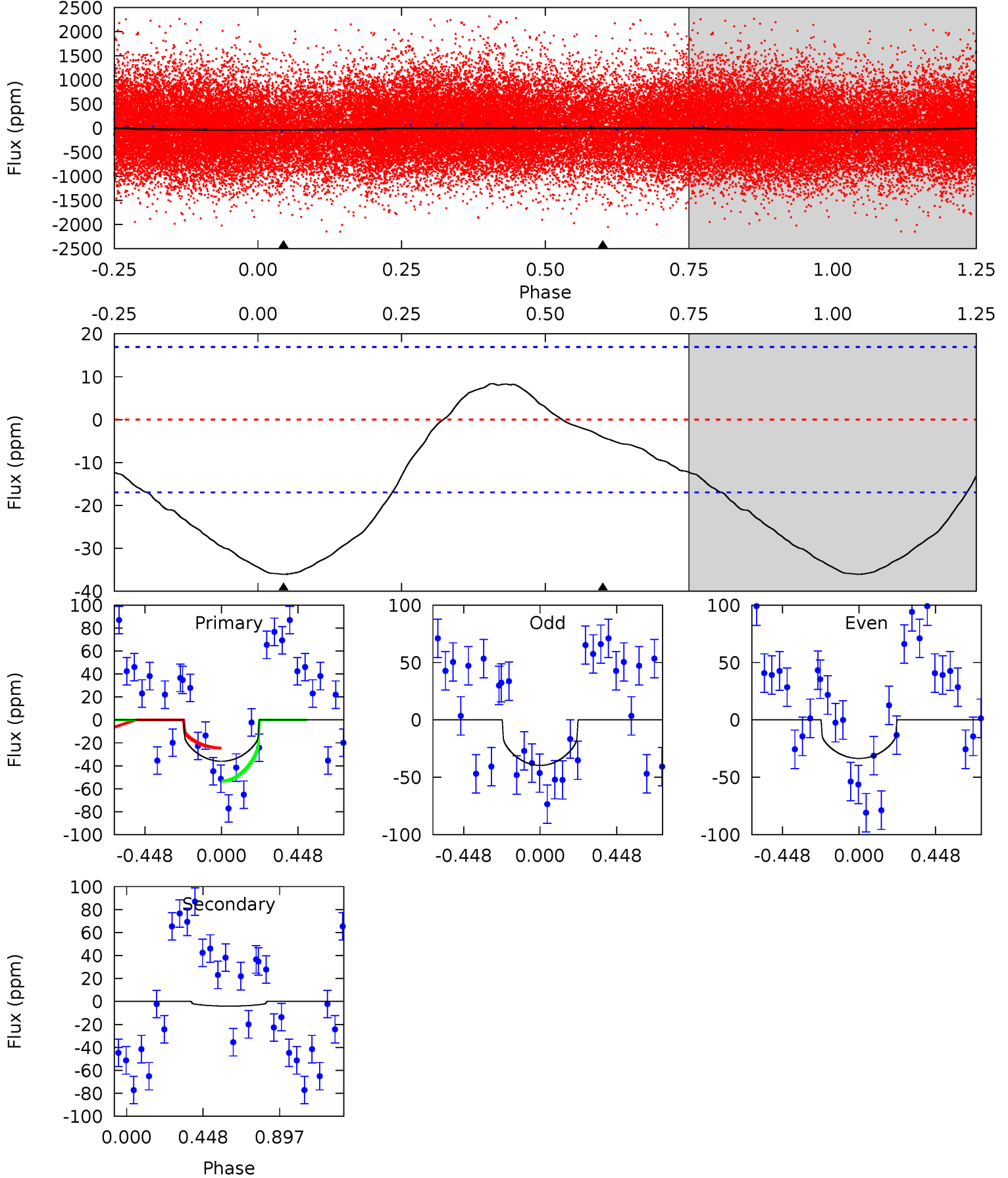
TCE 003246984-02 P= 3.253008 Days $T_0=133.776157$ (BKJD)



DV Model-Shift Uniqueness Test

003246984-02, P = 3.254595 Days, E = 130.213097 Days

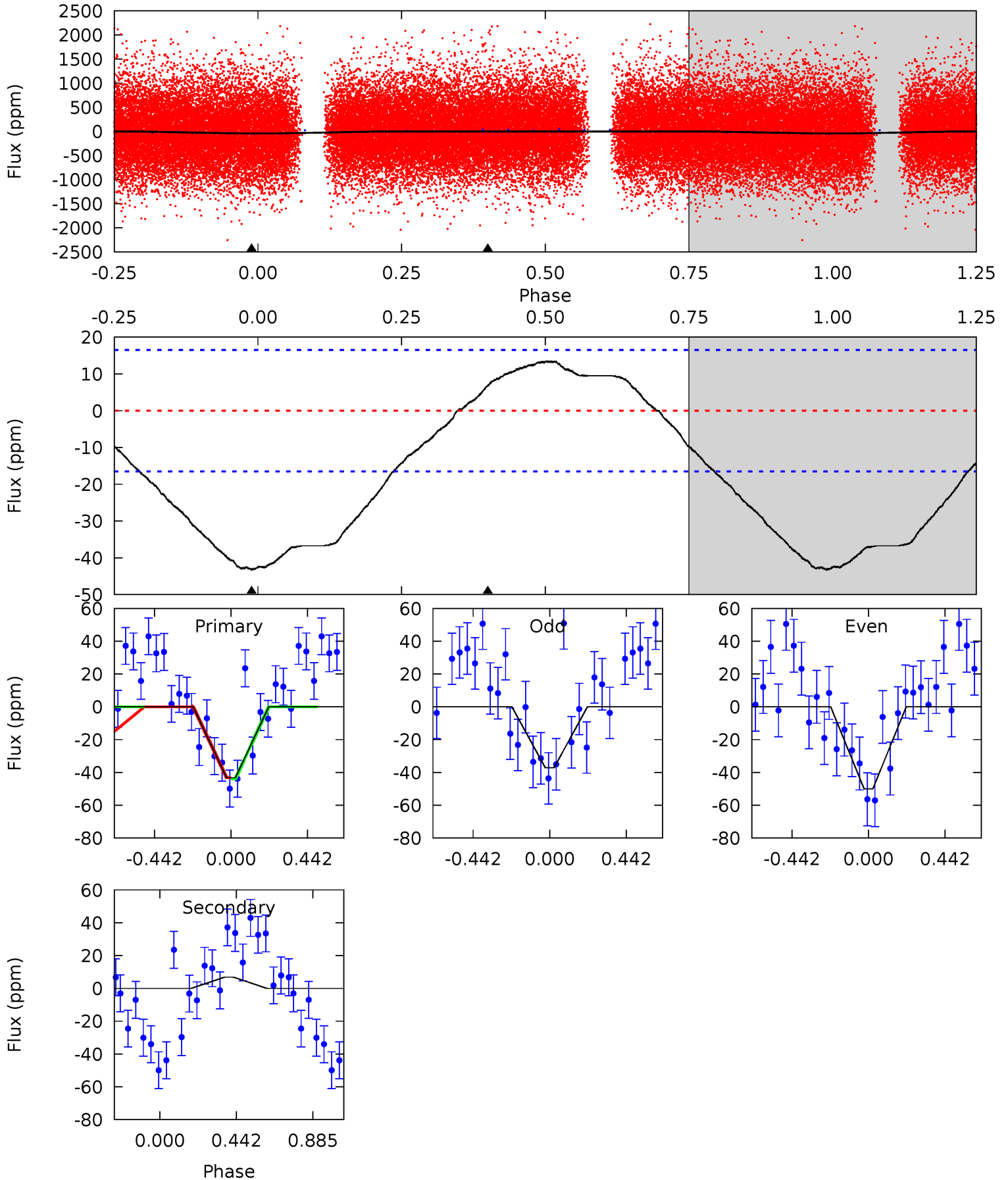
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.02	1.02	0	0	4.24	0.76	0.96	9.02	9.02	1.02	1.02	0.76	1.38	0.19	3.51



Alt Model-Shift Uniqueness Test

003246984-02, P = 3.253008 Days, E = 130.523149 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	-1.76	0	0	4.24	0.77	1.02	11.1	11.1	-1.76	-1.76	1.64	0.80	0.24	0.10



Stellar Parameters For KIC 003246984

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5735^{+155}_{-172}	$4.410^{+0.124}_{-0.186}$	$-0.180^{+0.300}_{-0.300}$	$0.973^{+0.270}_{-0.145}$	$0.889^{+0.120}_{-0.090}$	$1.359^{+0.740}_{-0.645}$
	+3%/-3%	+3%/-4%	+167%/-167%	+28%/-15%	+13%/-10%	+54%/-47%
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 003246984-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 4	$0.97^{+0.93}_{-0.67}$	1721^{+131}_{-95}	3144^{+1746}_{-5352}	$3.398^{+33.840}_{-3.272}$
Alt.	7 ± 4	$1.14^{+1.09}_{-0.78}$	1722^{+138}_{-94}	-3327^{+569}_{-1611}	$-3.956^{+3.077}_{-38.159}$

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

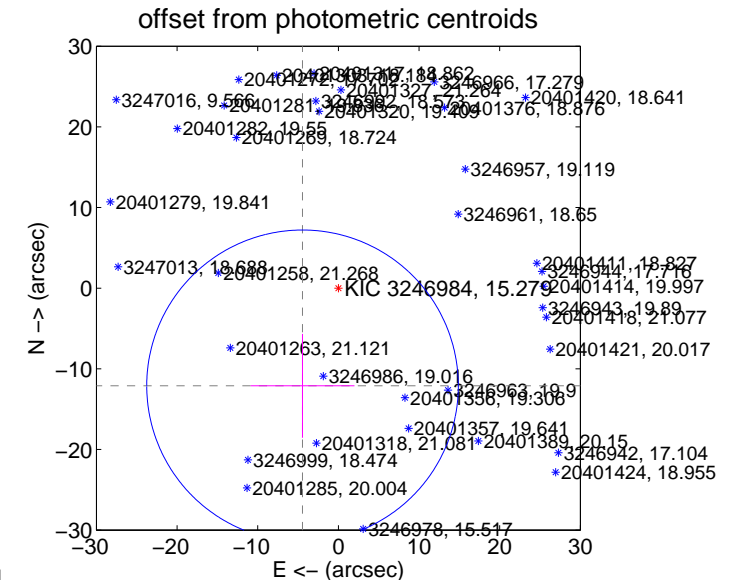
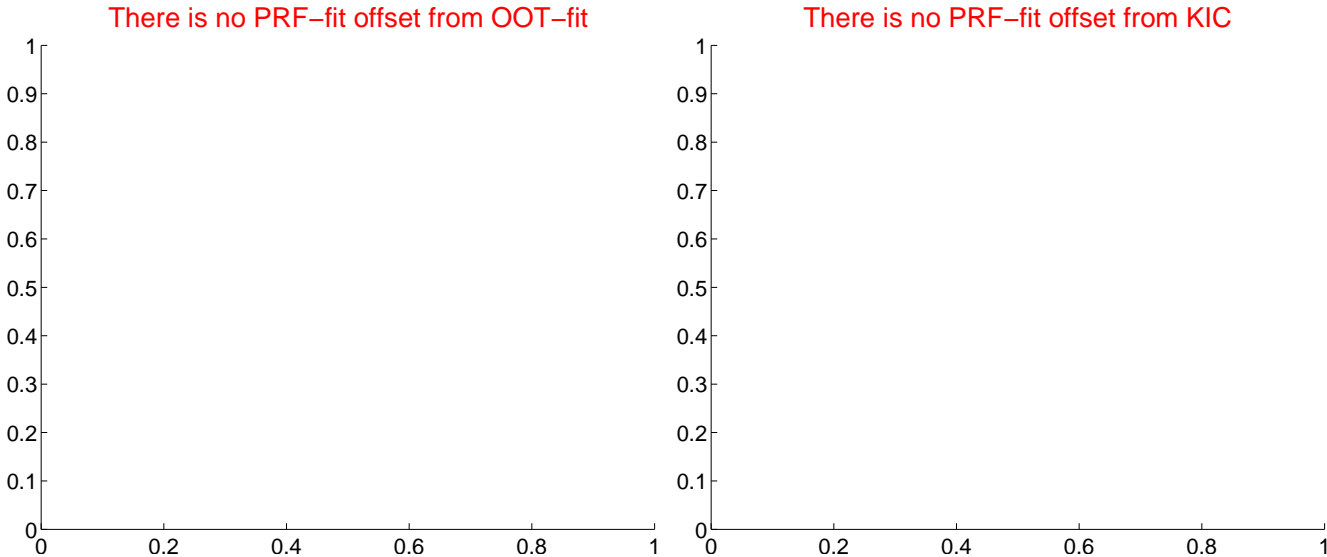
DV Centroid Data

Supplemental centroid analysis for 003246984-02. Kepler magnitude: 15.28. Transit SNR 1.62

There are 0 quarters with good PRF difference image offsets

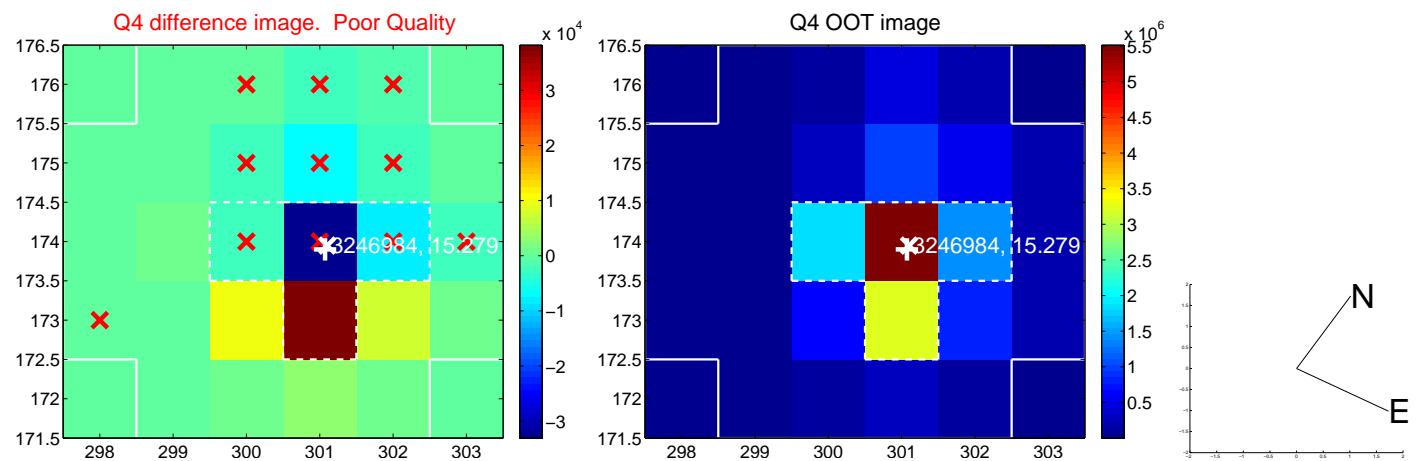
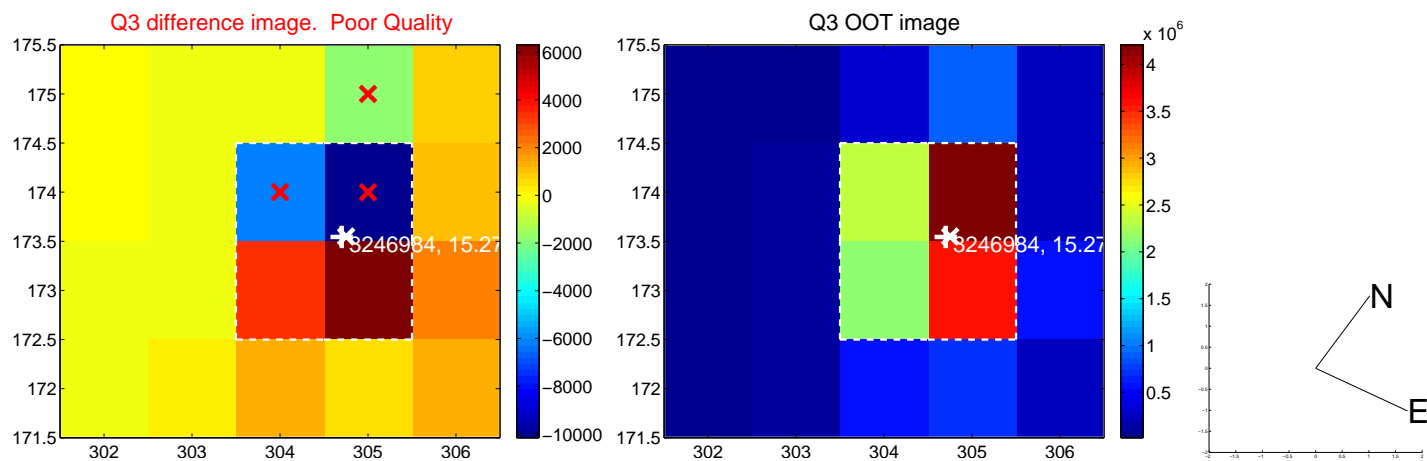
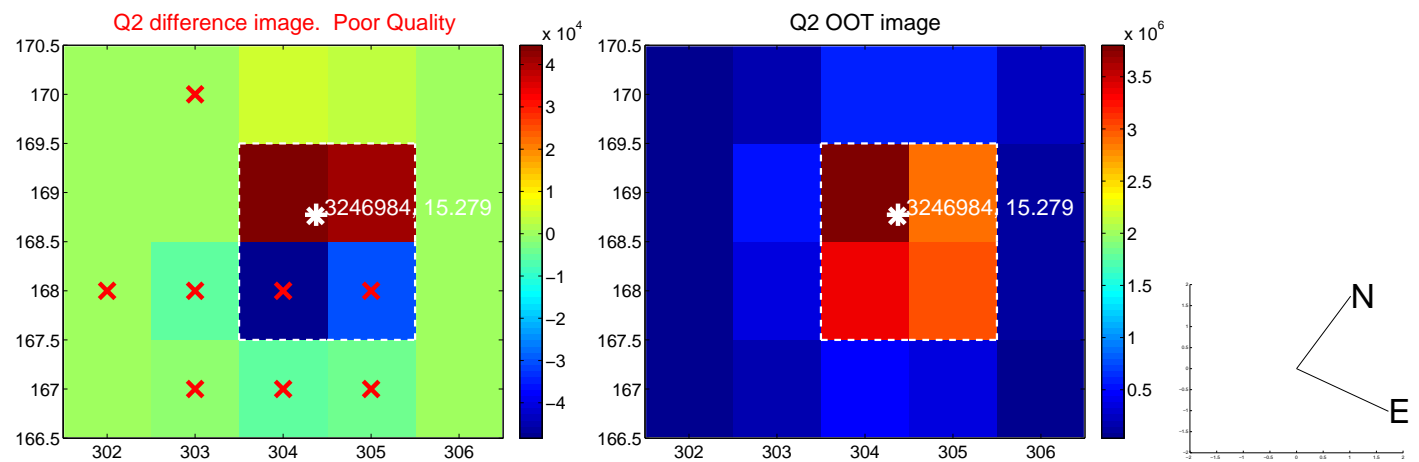
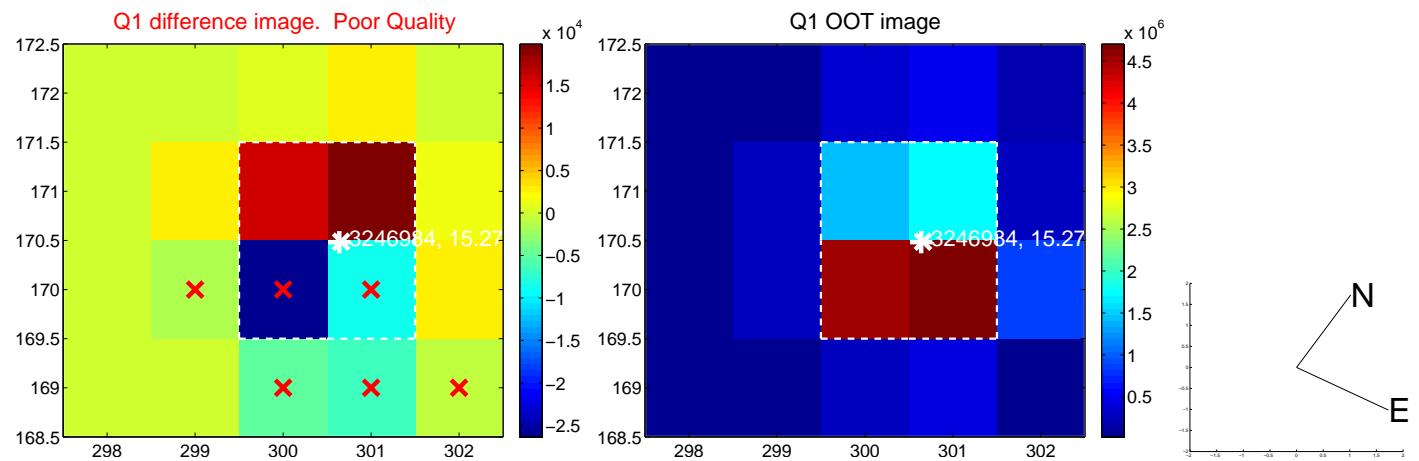
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	12.90 ± 6.44	2.00	4.45 ± 6.44	-12.11 ± 6.44

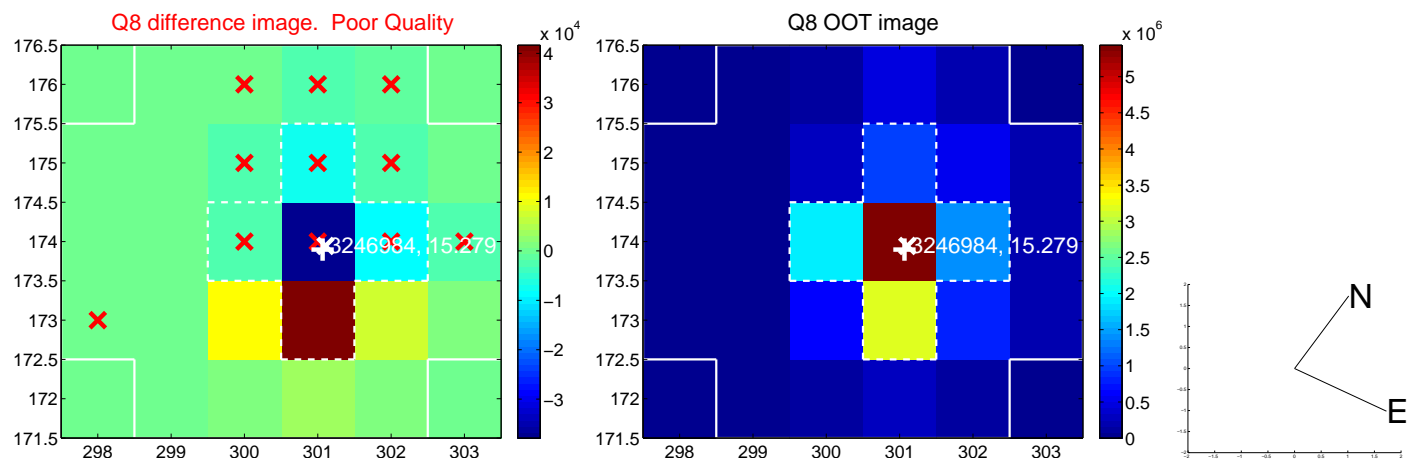
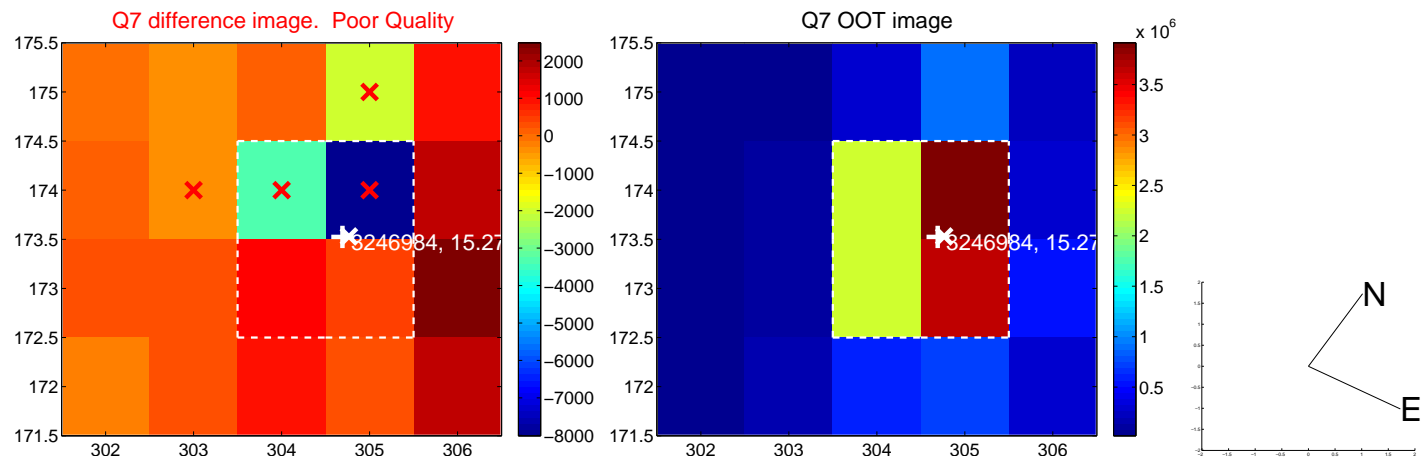
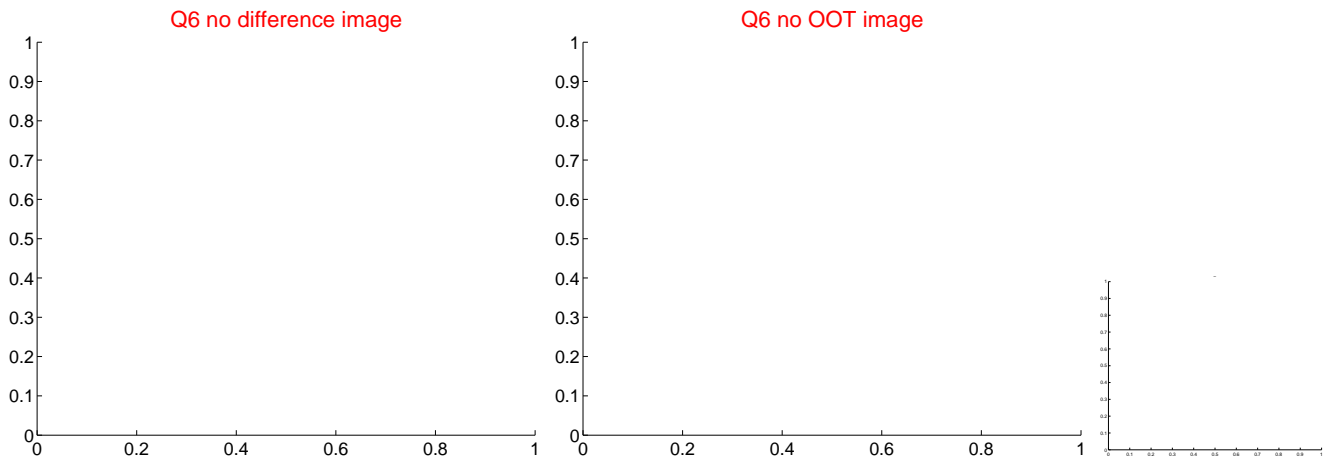
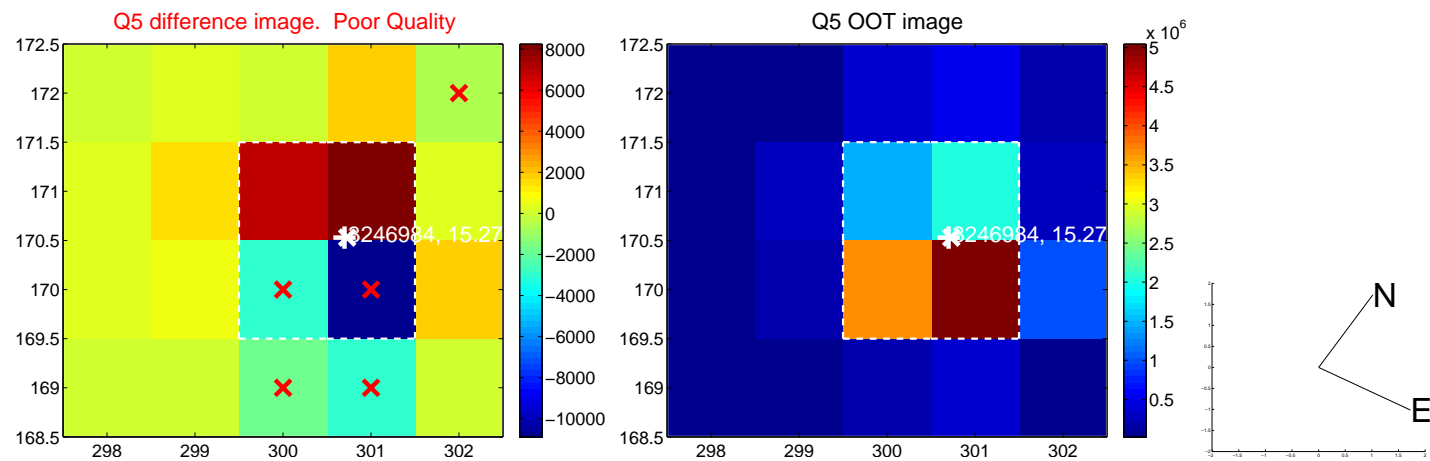


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

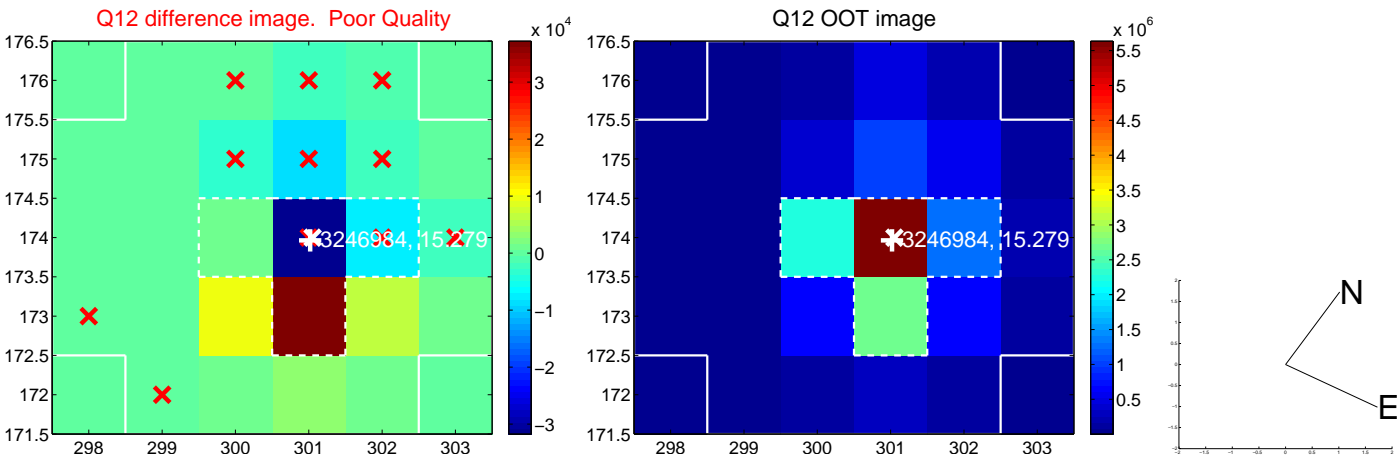
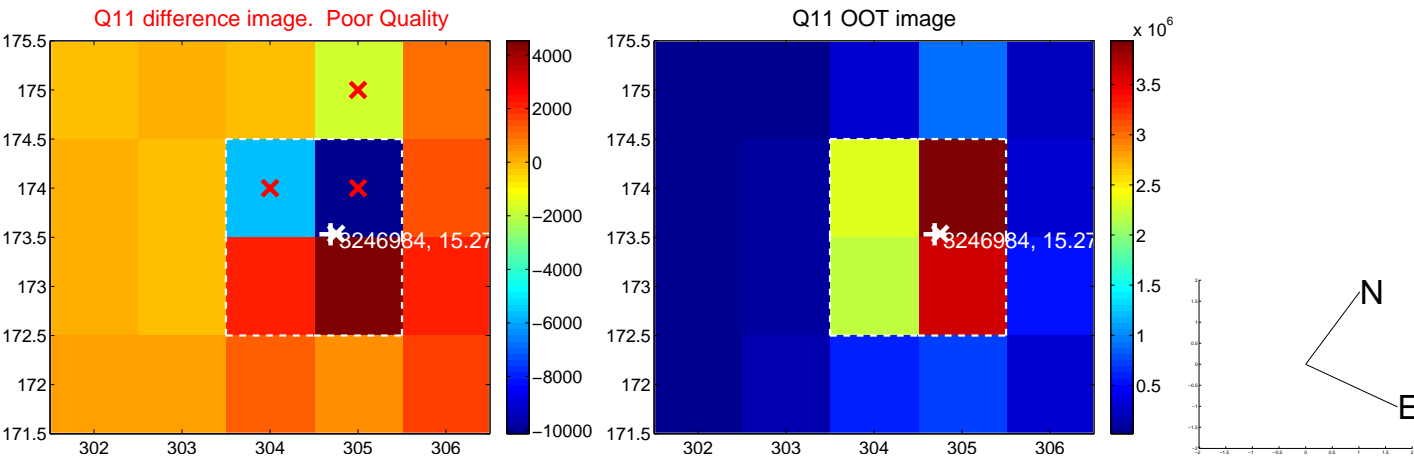
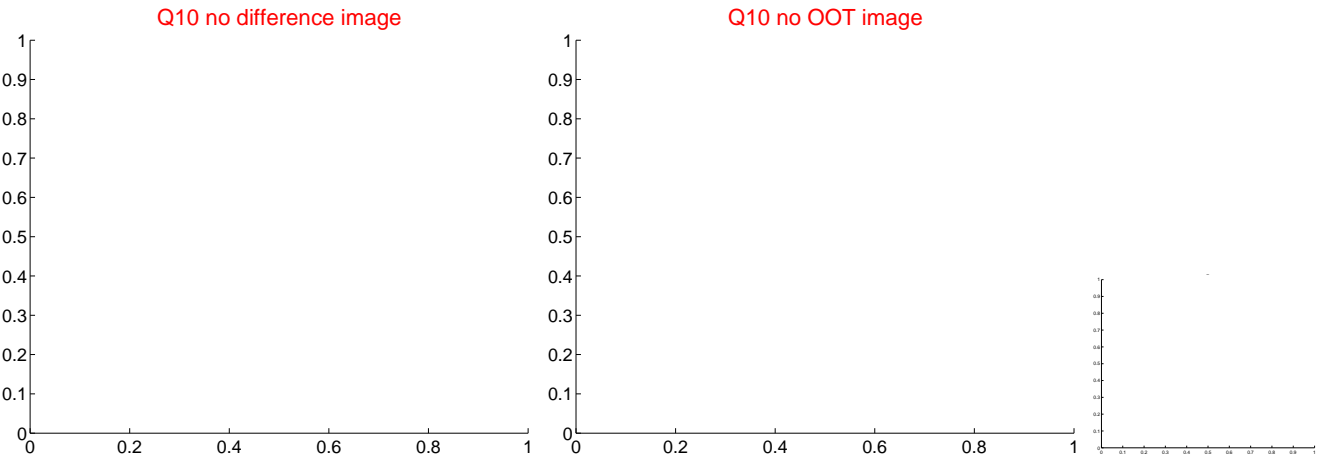
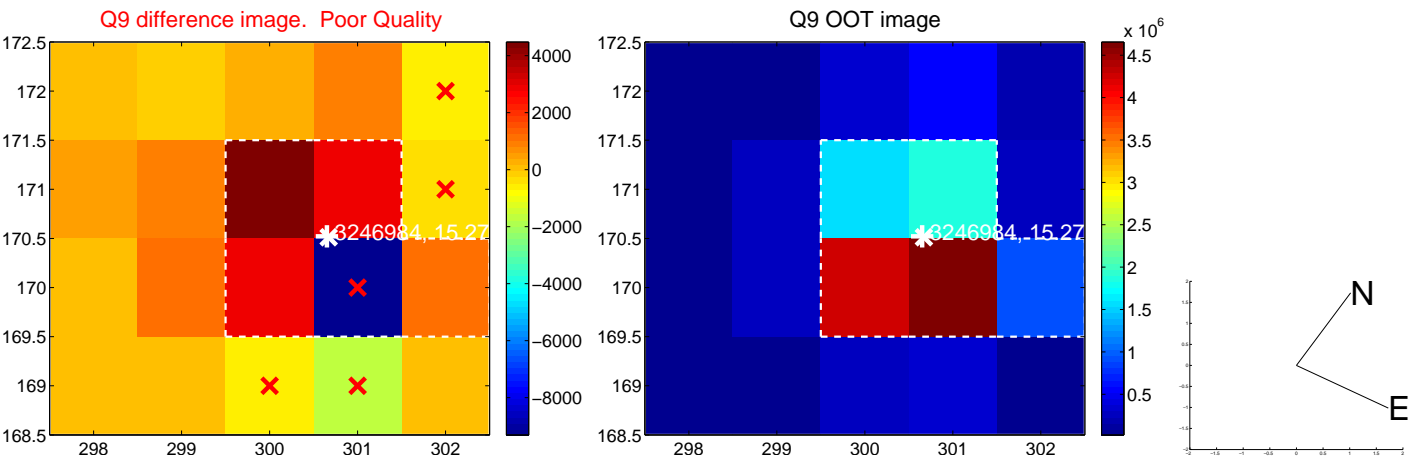
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



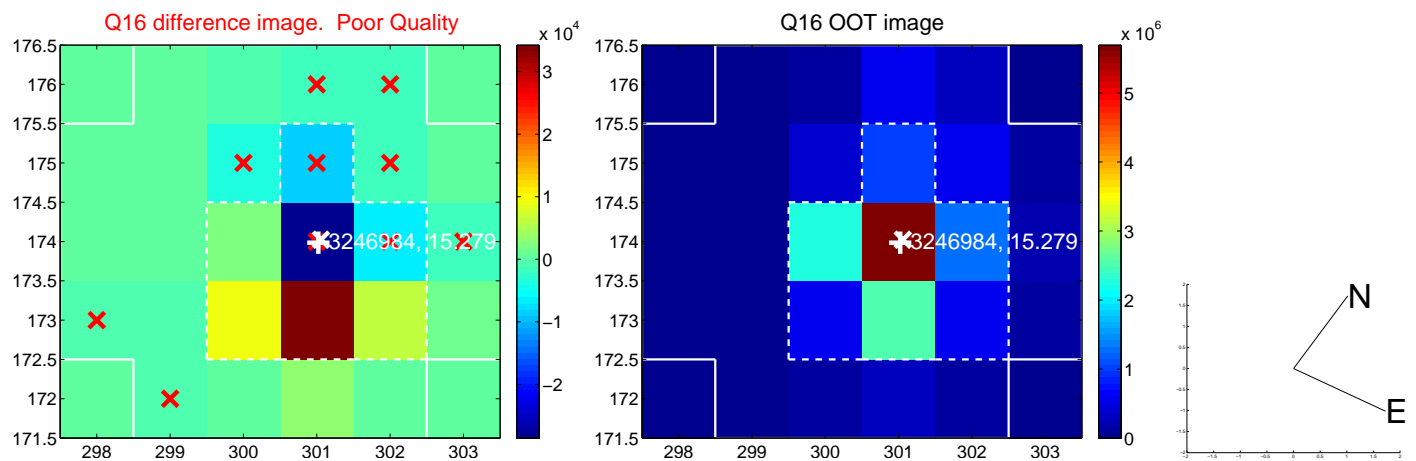
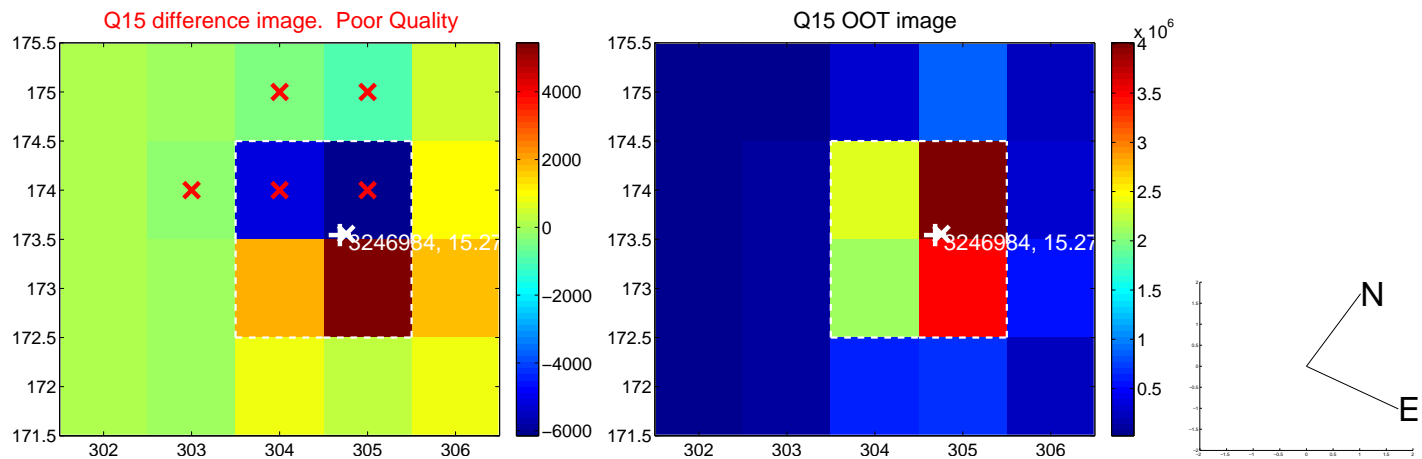
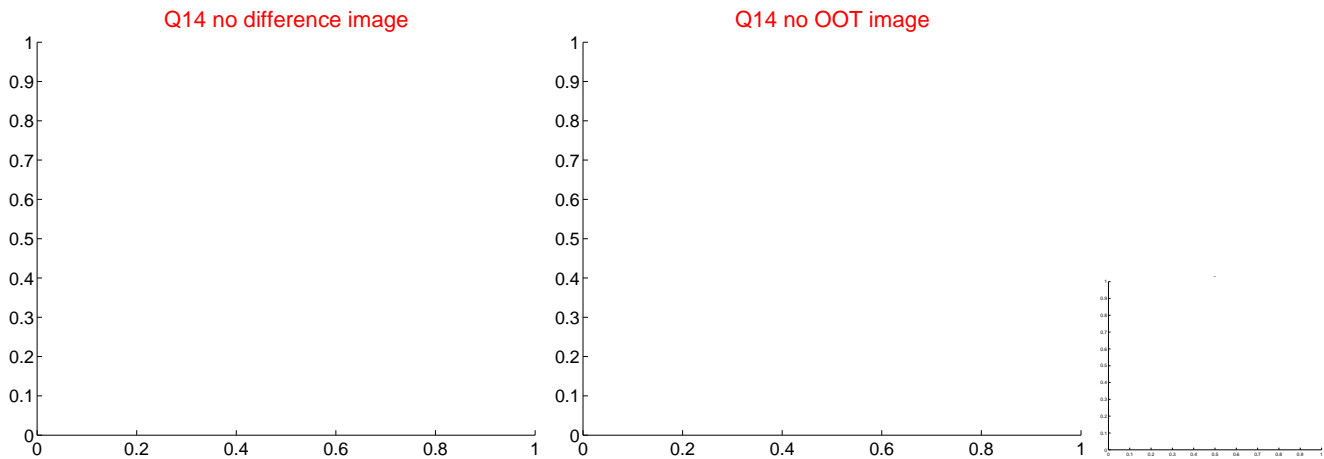
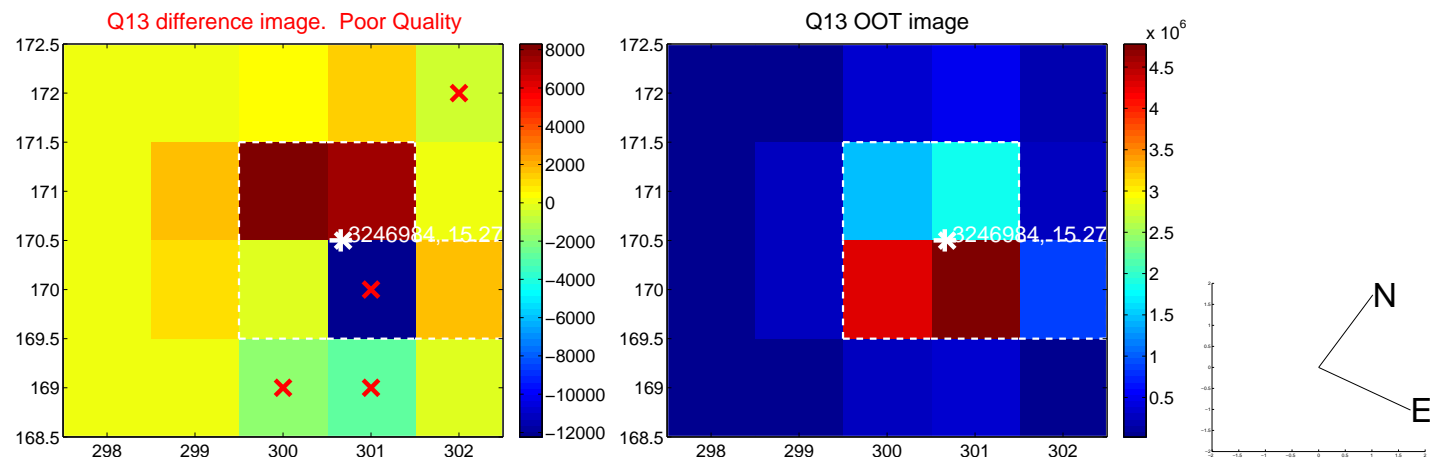
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



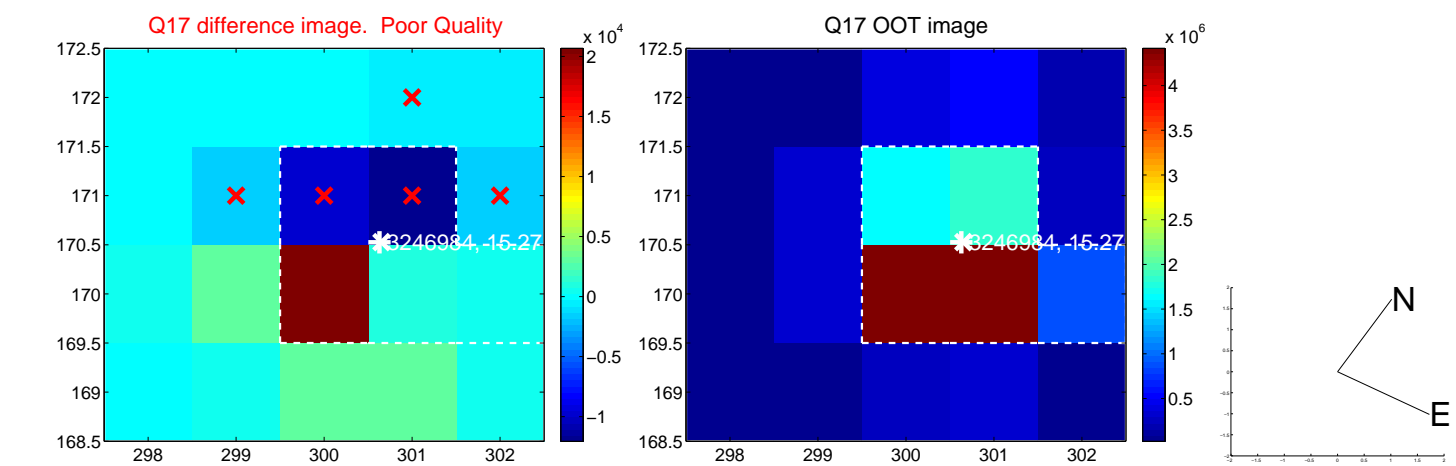
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



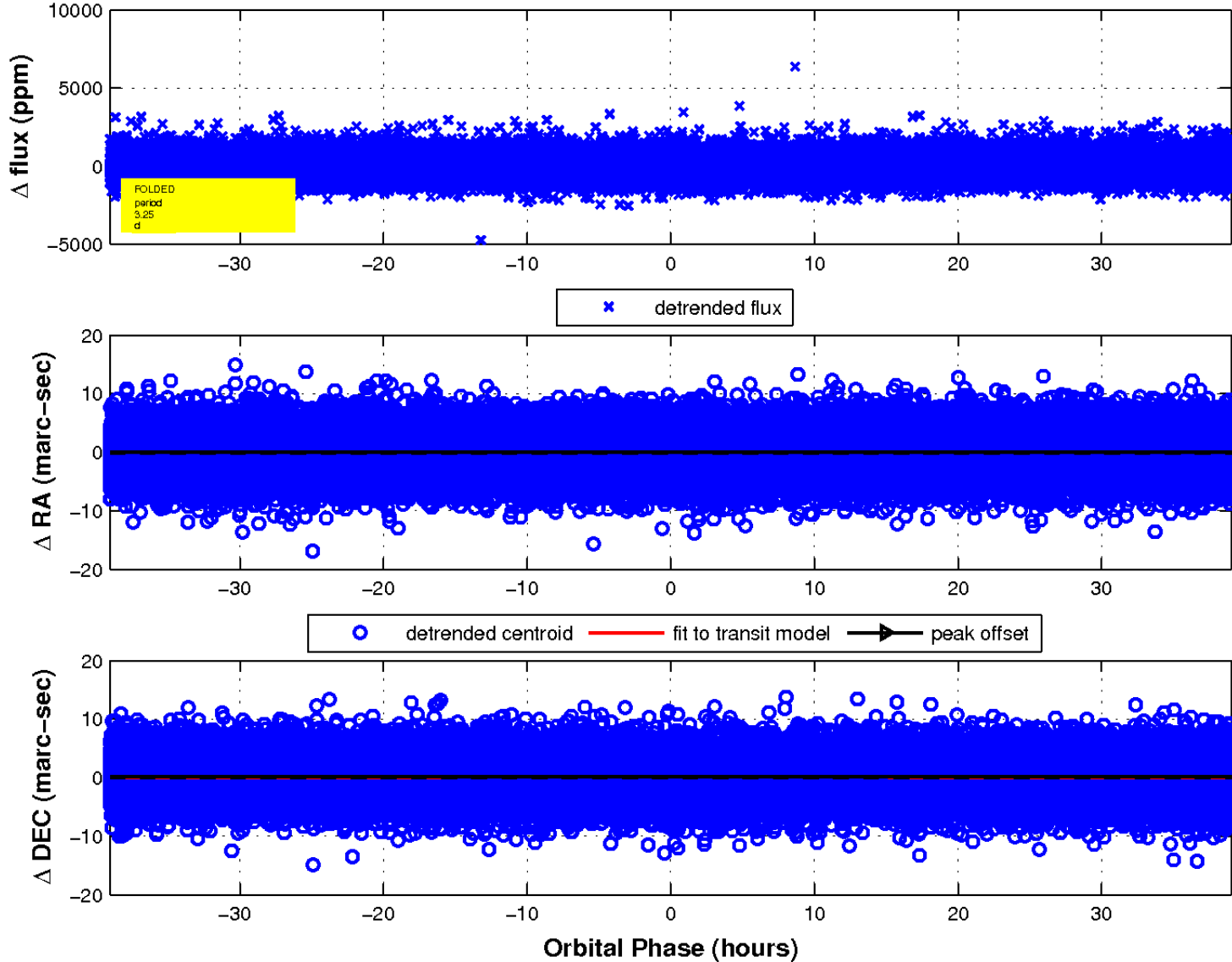
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

