

KIC 006614892

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})
006614892-01	OBS	No	2.652546	133.835009	13.7	14.838	14.9	7.7	2.33	7888	0.93	8865.37
006614892-02	OBS	No	74.298419	164.116454	79.3	0.630	15.6	4.8	2.33	7888	2.20	104.22
006614892-03	OBS	No	74.299837	163.516585	104.1	11.139	15.5	6.9	2.33	7888	2.51	104.22
006614892-04	OBS	No	121.179778	218.428063	187.8	2.479	9.4	9.0	2.33	7888	3.68	54.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614892-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006614892-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006614892-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006614892-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

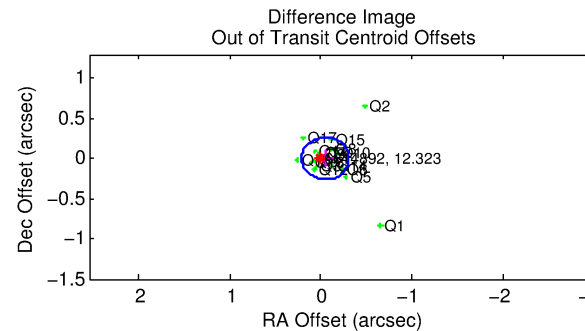
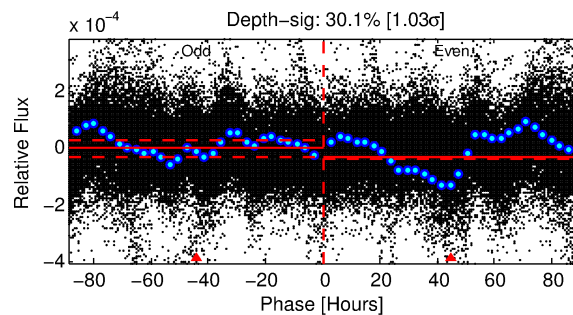
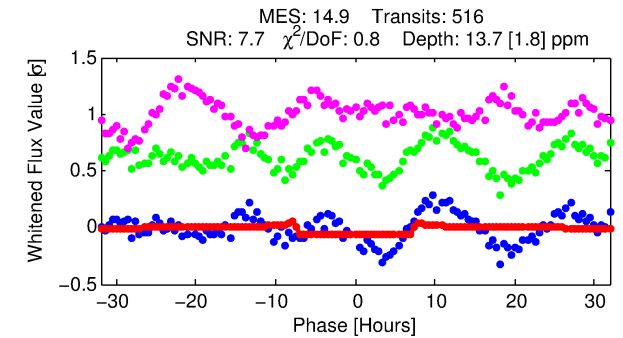
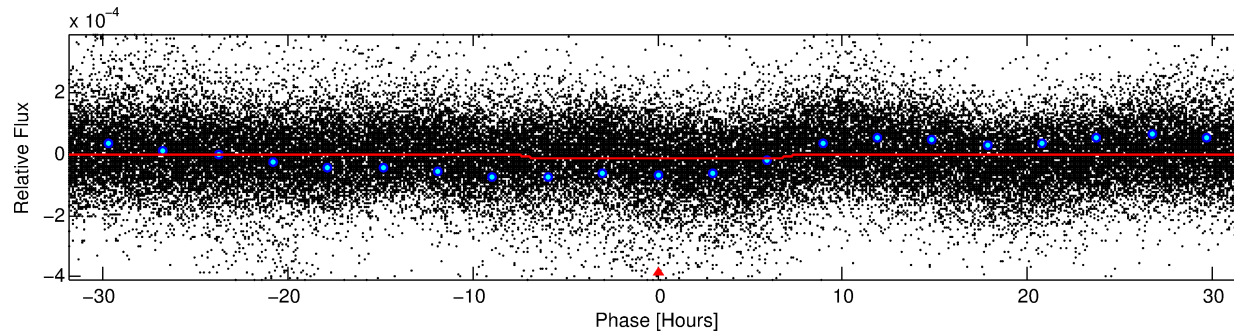
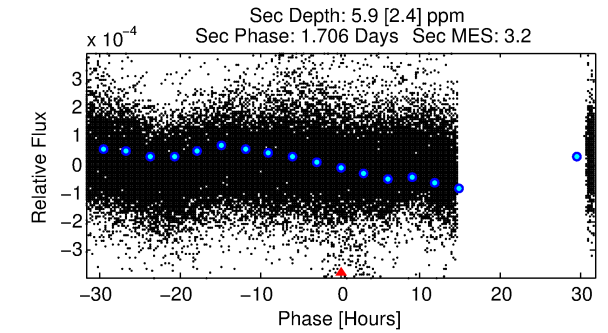
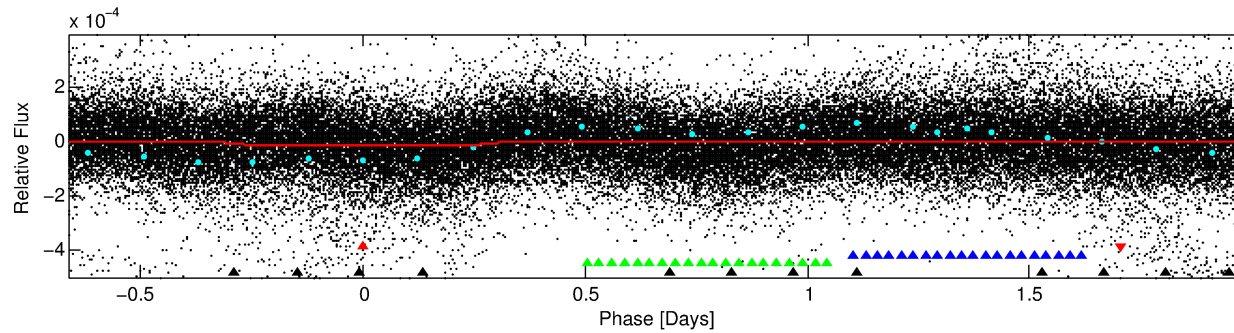
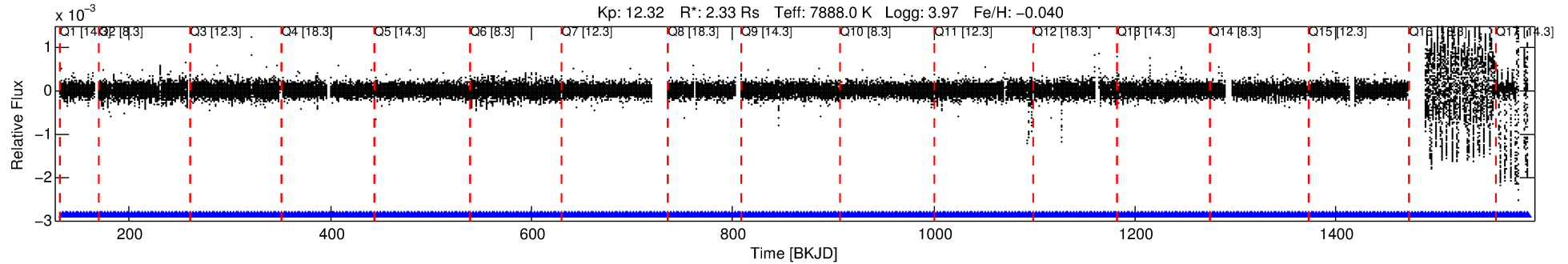
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006614892-01

No Significant Match Found

DV One-Page Summary

KIC: 6614892 Candidate: 1 of 4 Period: 2.653 d



DV Fit Results:

Period = 2.65255 [0.00003] d
Epoch = 133.8350 [0.0073] BKJD
Rp/R* = 0.0037 [0.0010]
a/R* = 1.27 [0.77]
b = 0.72 [1.07]
Seff = 8865.37 [3638.91]
Teq = 2474 [254] K
Rp = 0.93 [0.37] Re
a = 0.0461 [0.0116] AU
Ag = 8.04 [6.17] [1.14σ]
Teffp = 6442 [1109] K [3.49σ]

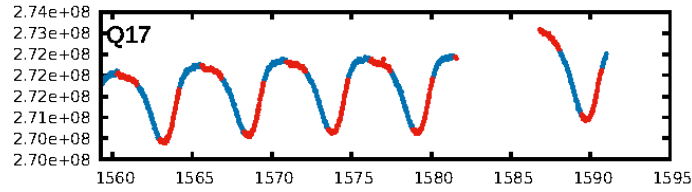
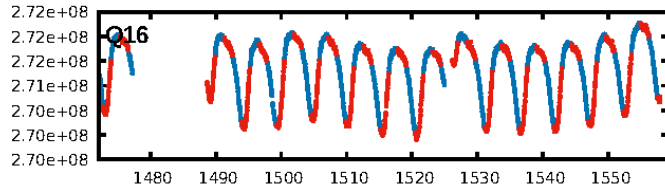
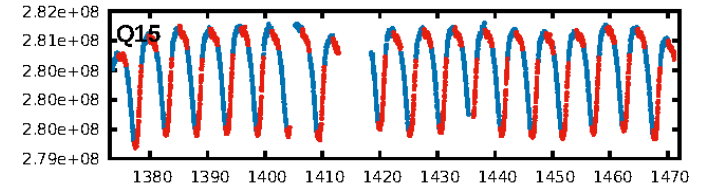
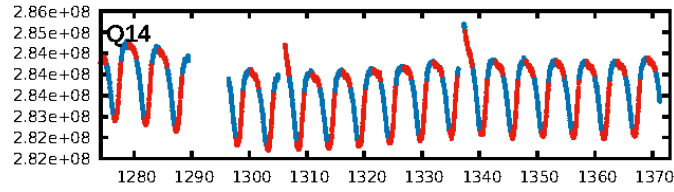
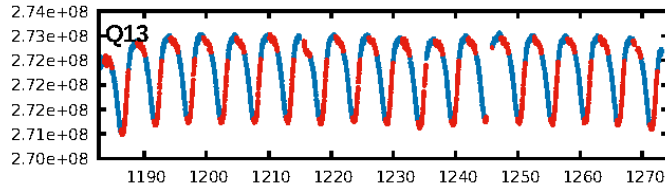
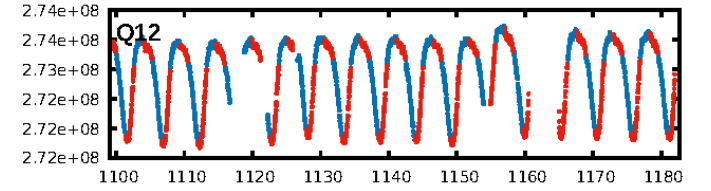
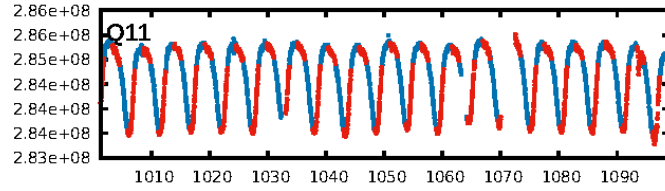
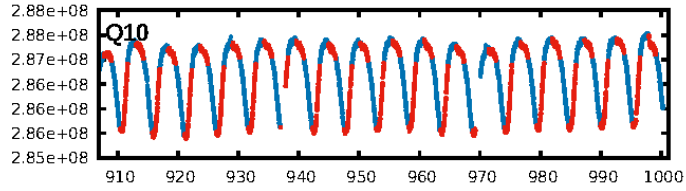
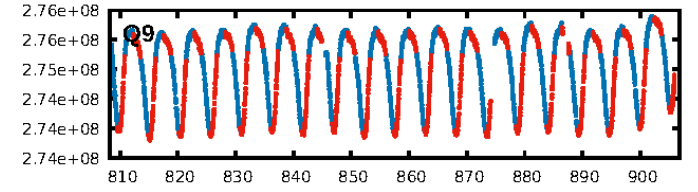
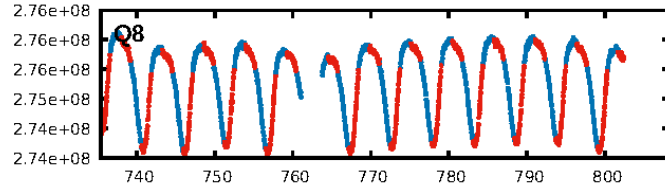
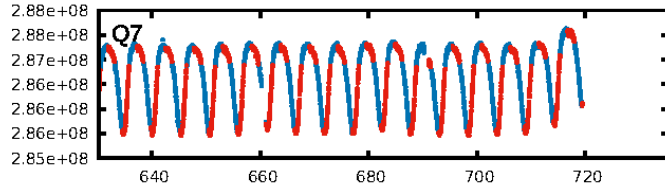
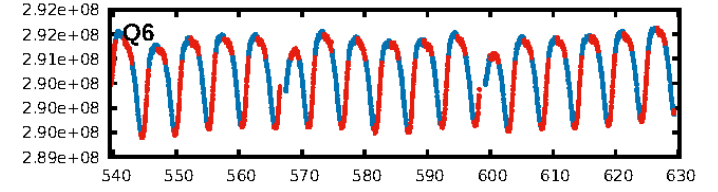
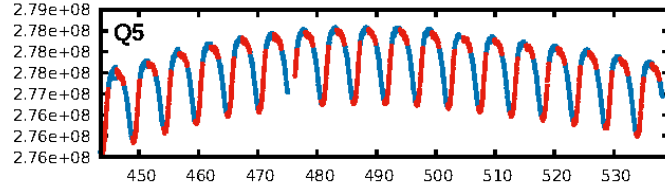
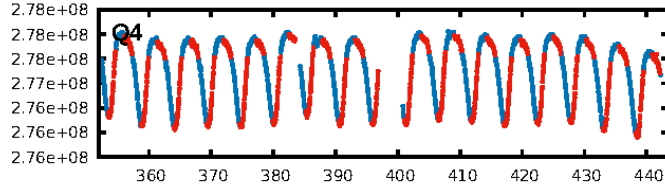
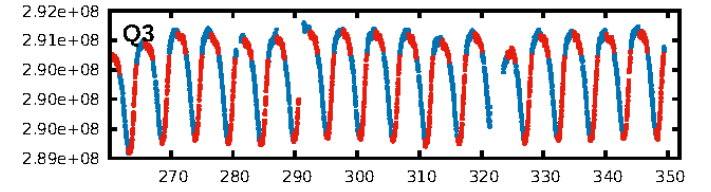
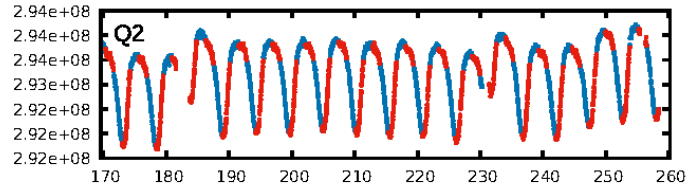
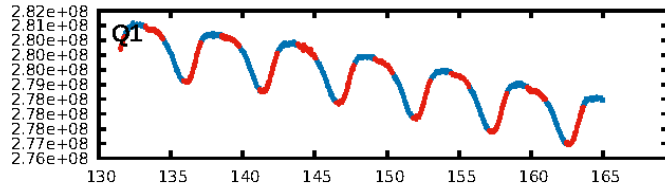
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [115.78σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.55e-32
RollingBand-fgt: 1.00 [494/494]
GhostDiagnostic-chr: 0.5972
Centroid-sig: 0.0%
Centroid-so: 7.537 arcsec [7.09σ]
OotOffset-rm: 0.048 arcsec [0.55σ]
KicOffset-rm: 0.205 arcsec [2.06σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

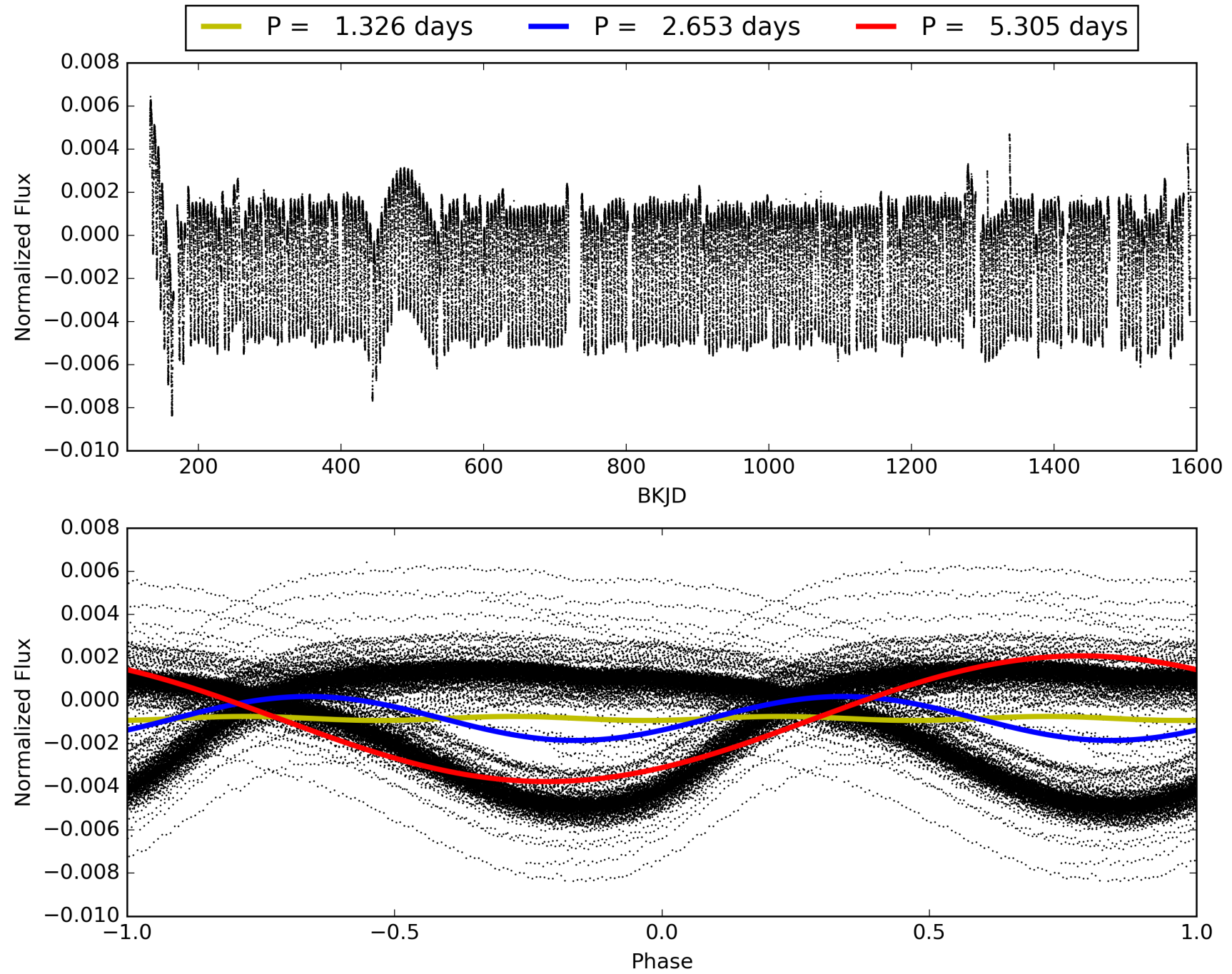
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006614892-01, PDC Light Curves

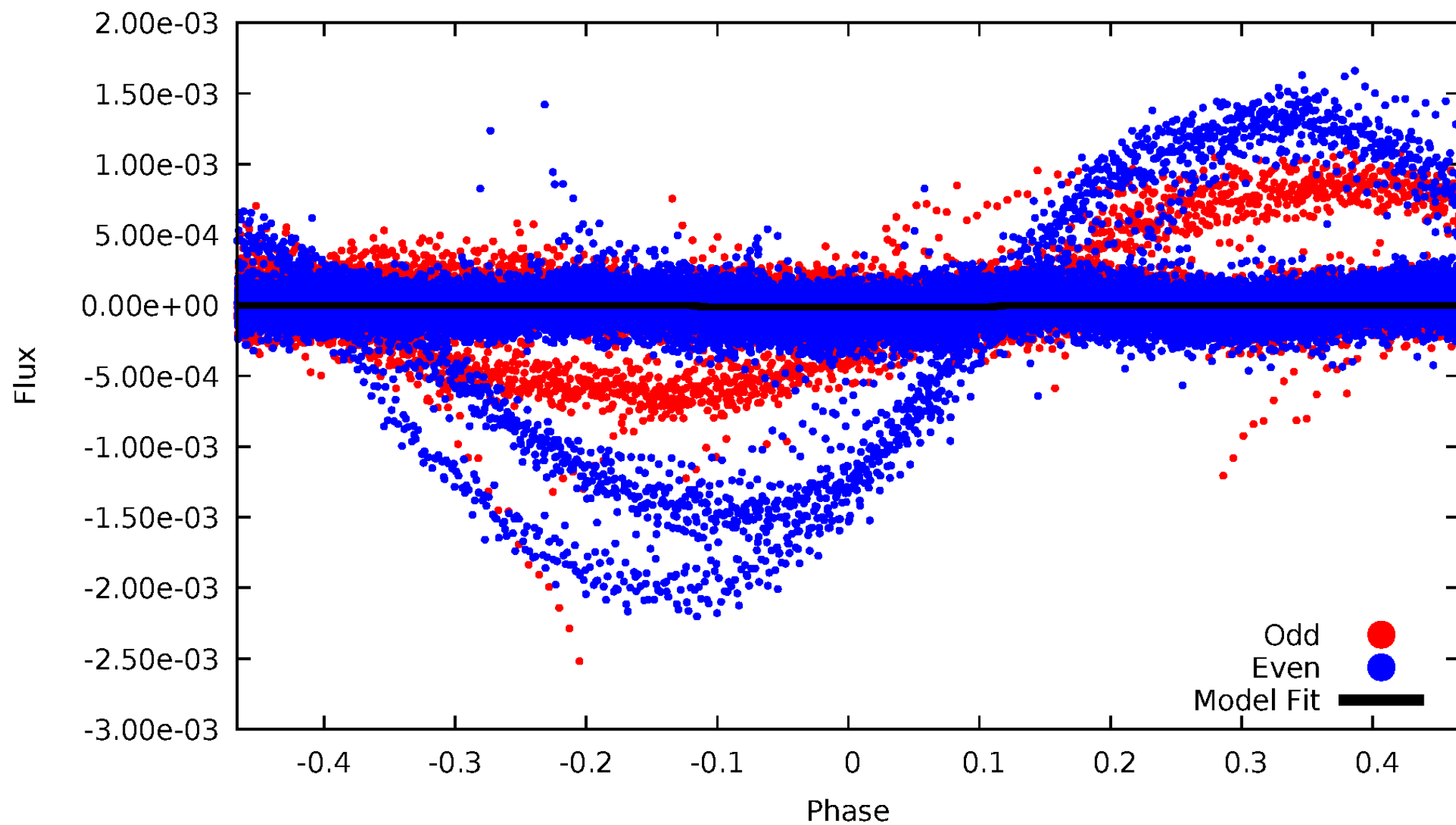


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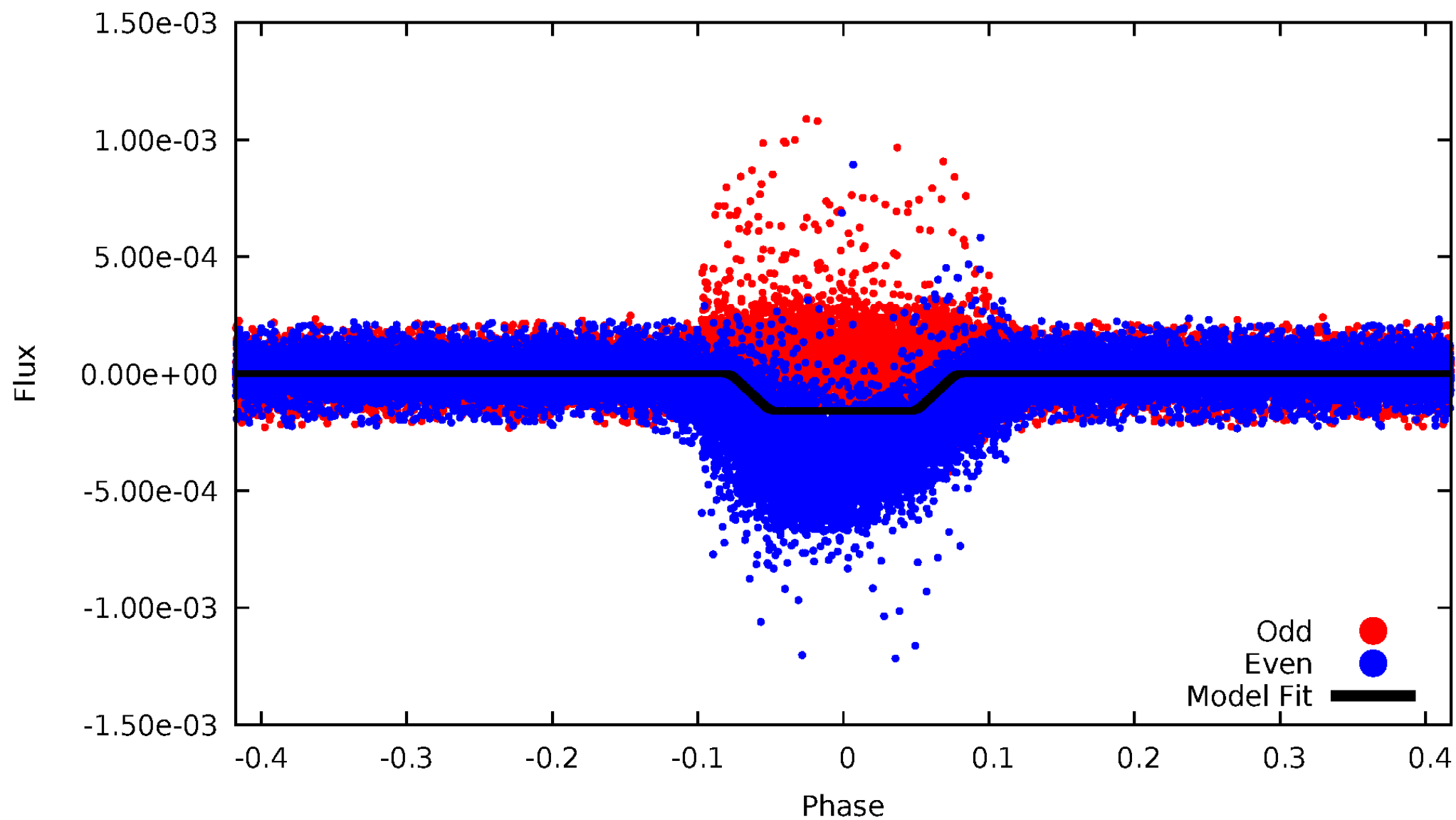
DV Odd/Even

TCE 006614892-01

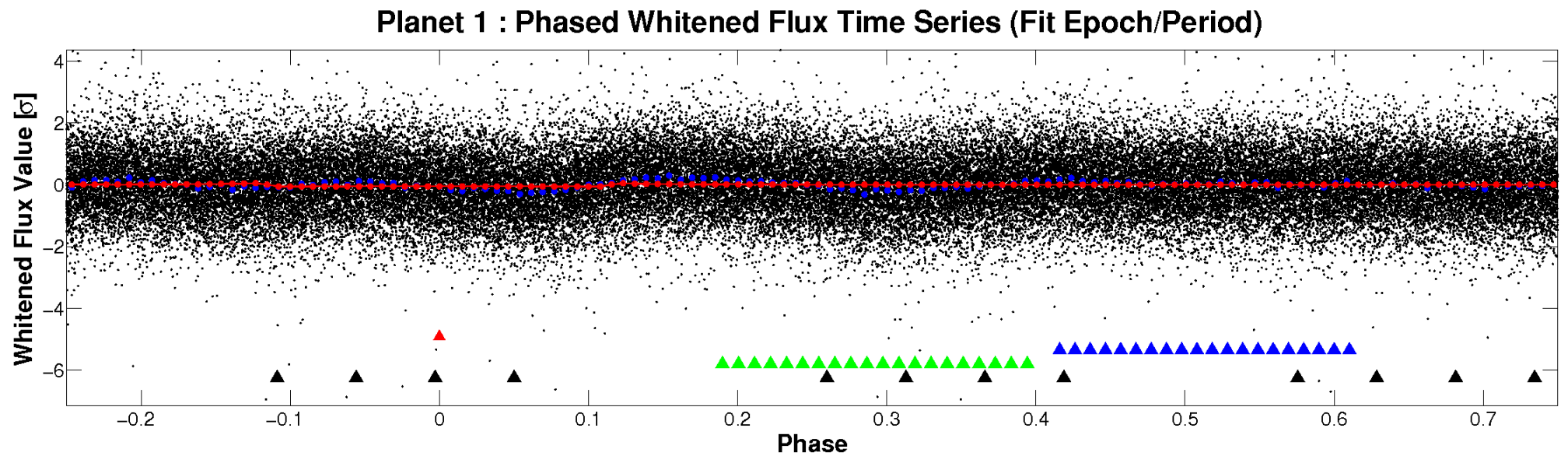
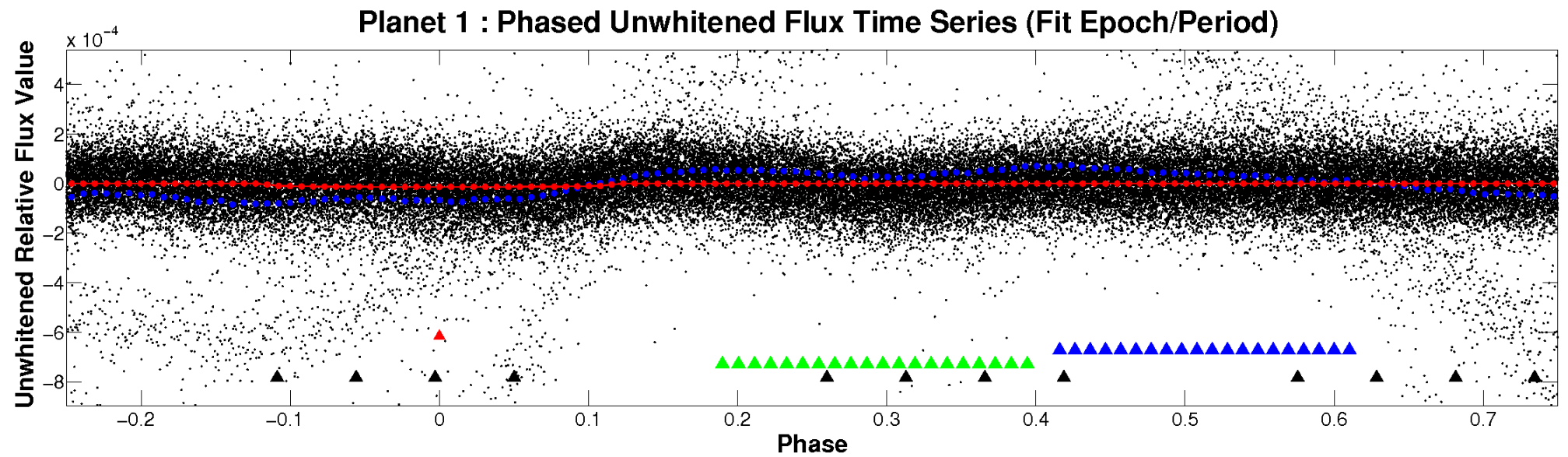


ALT Odd/Even

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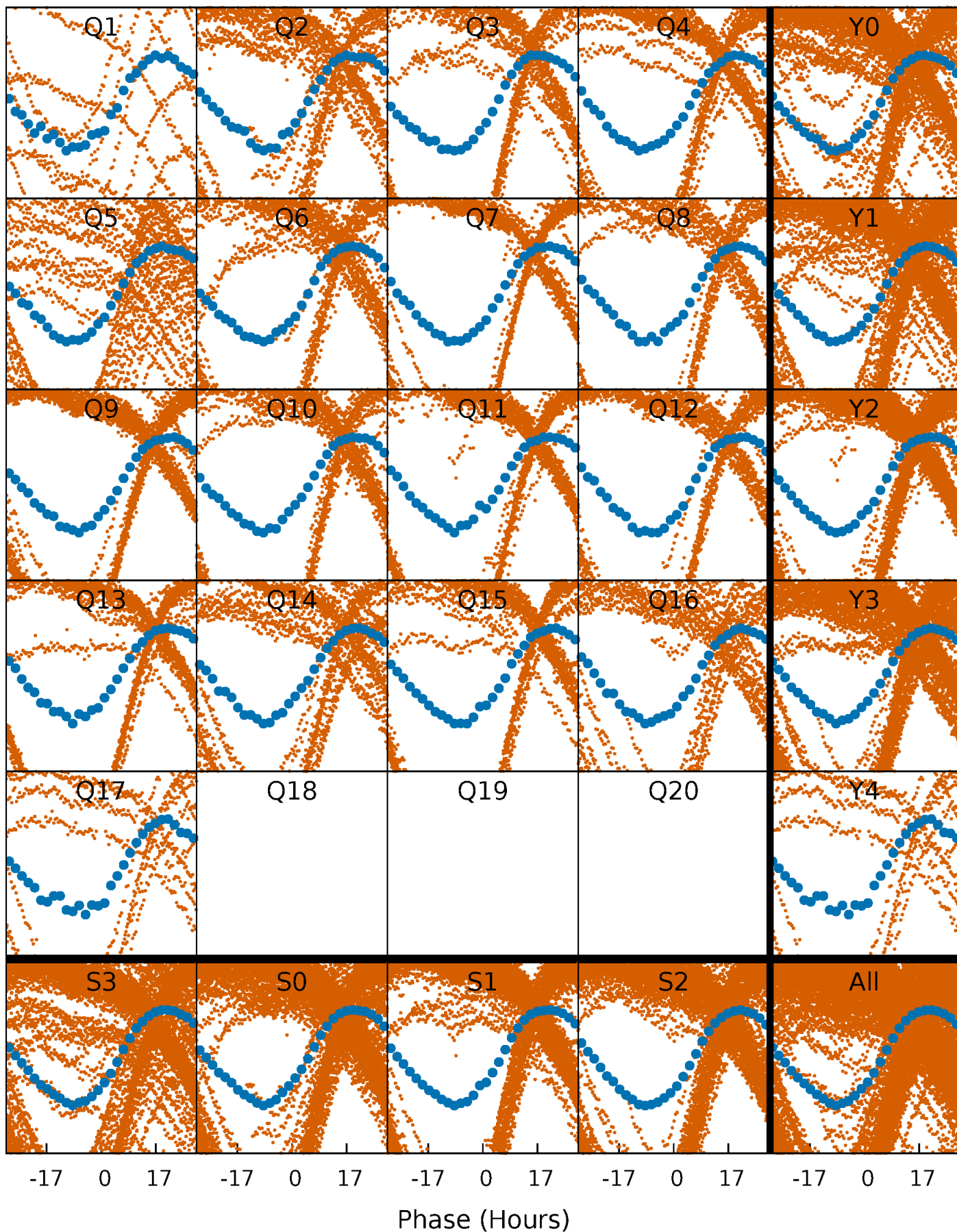


Non-Whitened Vs. Whitened Light Curve



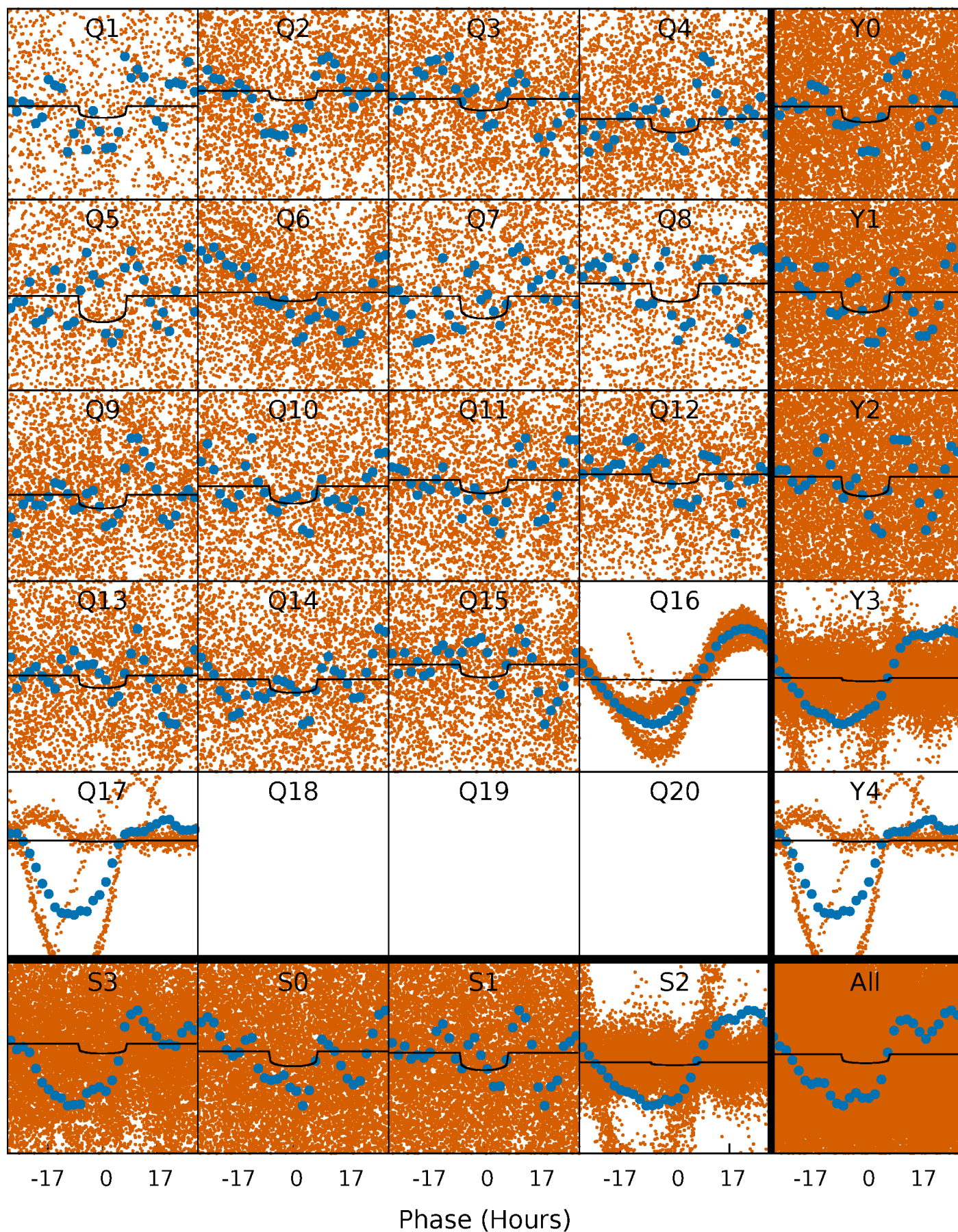
PDC Quarter-Phased Transit Curves

TCE 006614892-01 P= 2.652546 Days $T_0=133.835009$ (BKJD)



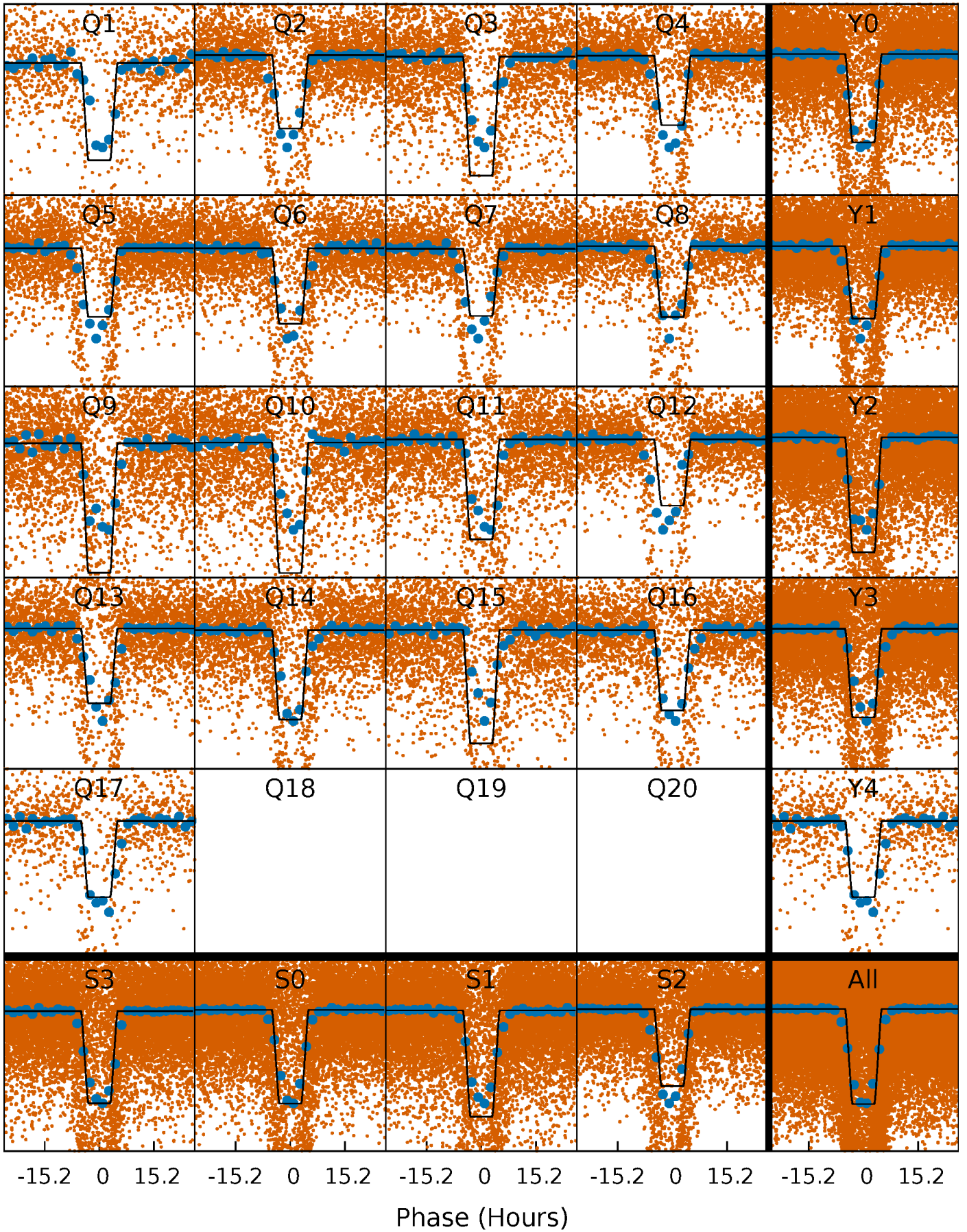
DV Quarter-Phased Transit Curves

TCE 006614892-01 P= 2.652546 Days $T_0=133.835009$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

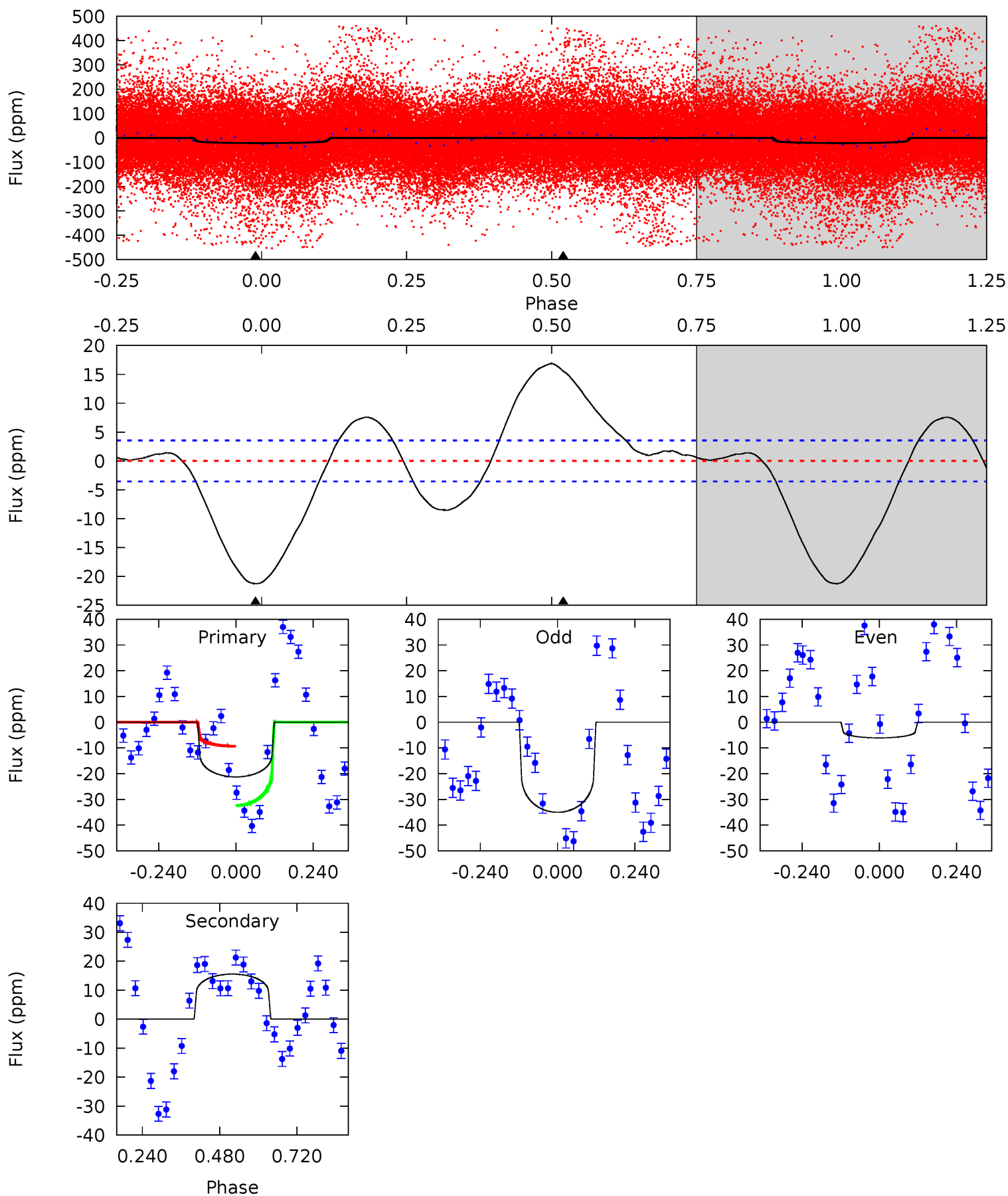
TCE 006614892-01 P= 2.652729 Days $T_0=133.880289$ (BKJD)



DV Model-Shift Uniqueness Test

006614892-01, P = 2.652546 Days, E = 131.182463 Days

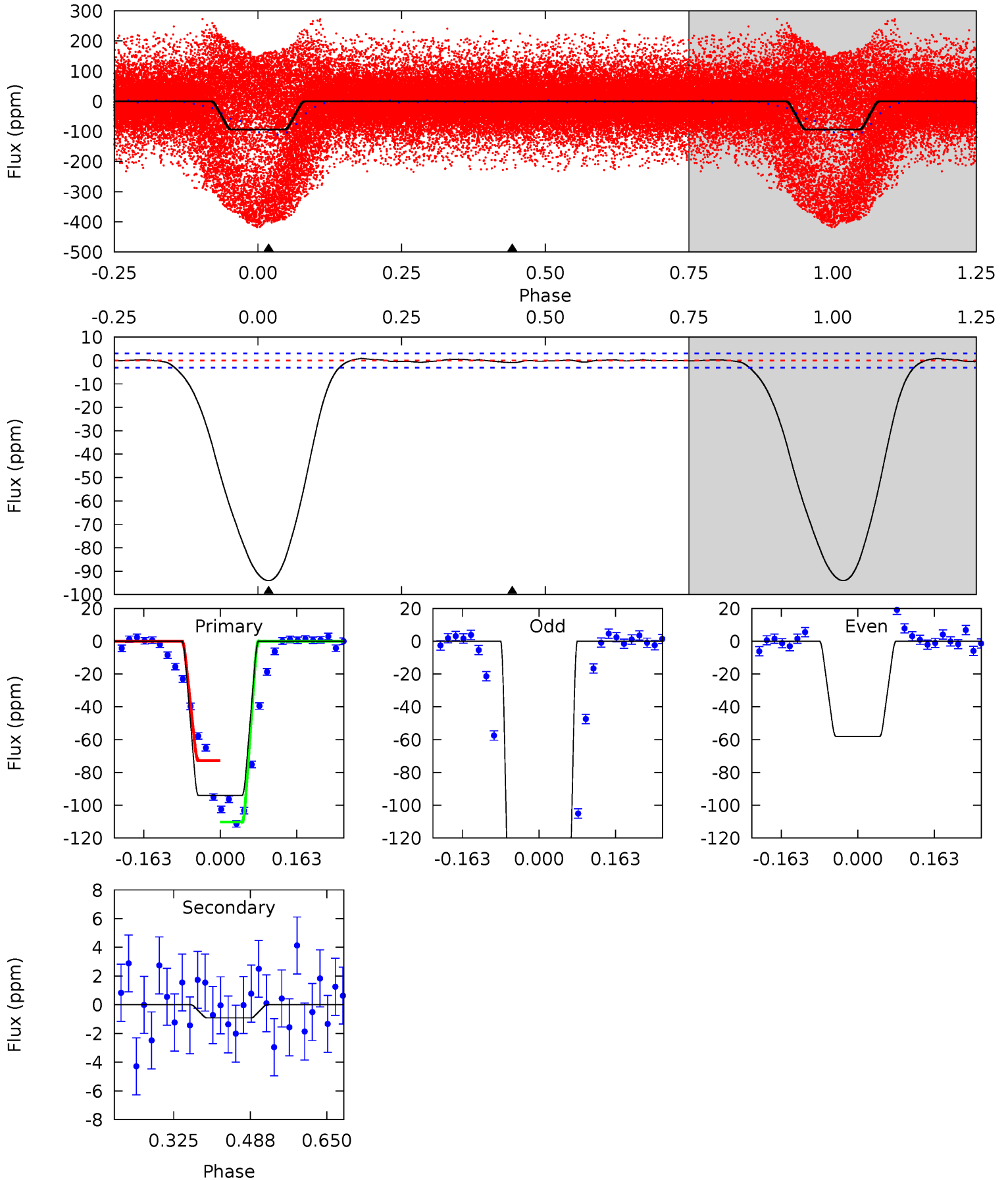
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.3	-19.3	0	0	4.38	1.17	4.83	26.3	26.3	-19.3	-19.3	17.6	5.02	0.44	14.3



Alt Model-Shift Uniqueness Test

006614892-01, P = 2.652729 Days, E = 131.227560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
137.3	1.34	0	0	4.46	1.40	0.73	137.3	137.3	1.34	1.34	245.9	1.67	0.01	26.9



Stellar Parameters For KIC 006614892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7888^{+216}_{-324}	$3.972^{+0.210}_{-0.140}$	$-0.040^{+0.200}_{-0.350}$	$2.332^{+0.452}_{-0.678}$	$1.859^{+0.123}_{-0.368}$	$0.206^{+0.284}_{-0.077}$
	+3%/-4%	+5%/-4%	+500%/-875%	+19%/-29%	+7%/-20%	+138%/-37%
Source	KIC0	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 006614892-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	16 ± 1	$0.89^{+0.27}_{-0.23}$	3437^{+225}_{-253}	-8283^{+1118}_{-1884}	$-22.356^{+9.318}_{-18.331}$
Alt.	-1 ± 1	$3.13^{+0.48}_{-0.47}$	3424^{+234}_{-278}	-3107^{+322}_{-214}	$0.101^{+0.101}_{-0.081}$

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

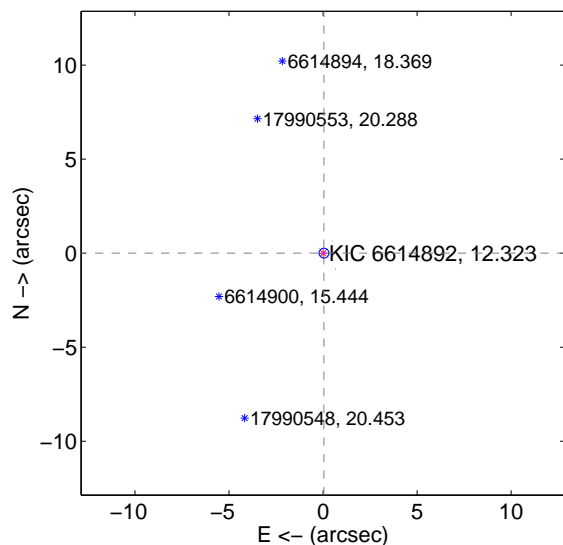
Supplemental centroid analysis for 006614892-01. Kepler magnitude: 12.32. Transit SNR 7.71

There are 17 quarters with good PRF difference image offsets

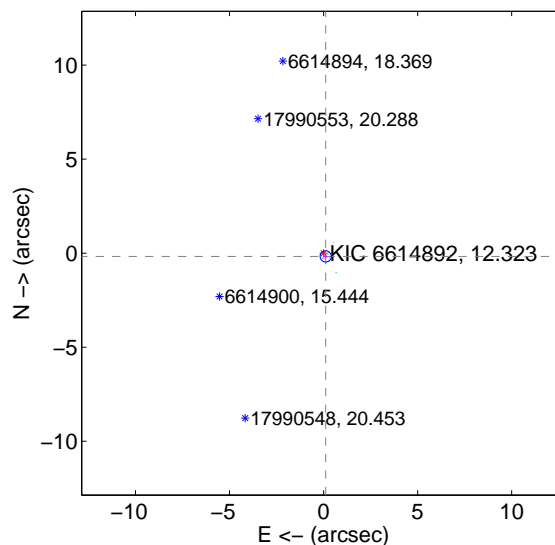
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.087	0.55	-0.048 ± 0.088	0.002 ± 0.098
PRF-fit source offset from KIC position	0.205 ± 0.099	2.06	-0.113 ± 0.086	-0.171 ± 0.098
photometric centroid source offset	7.54 ± 1.06	7.09	-7.44 ± 1.07	1.20 ± 0.76

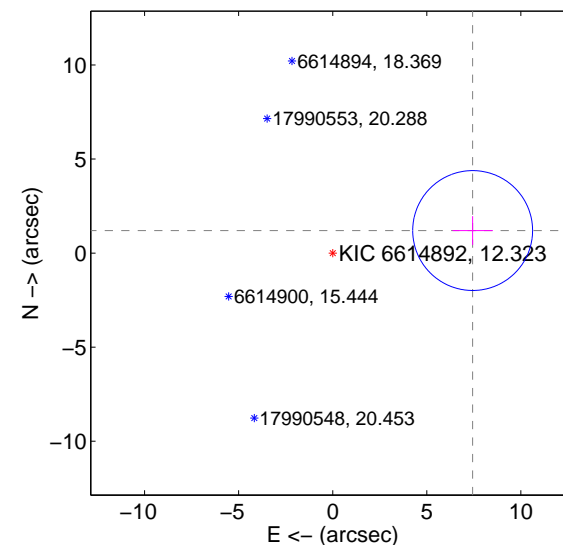
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

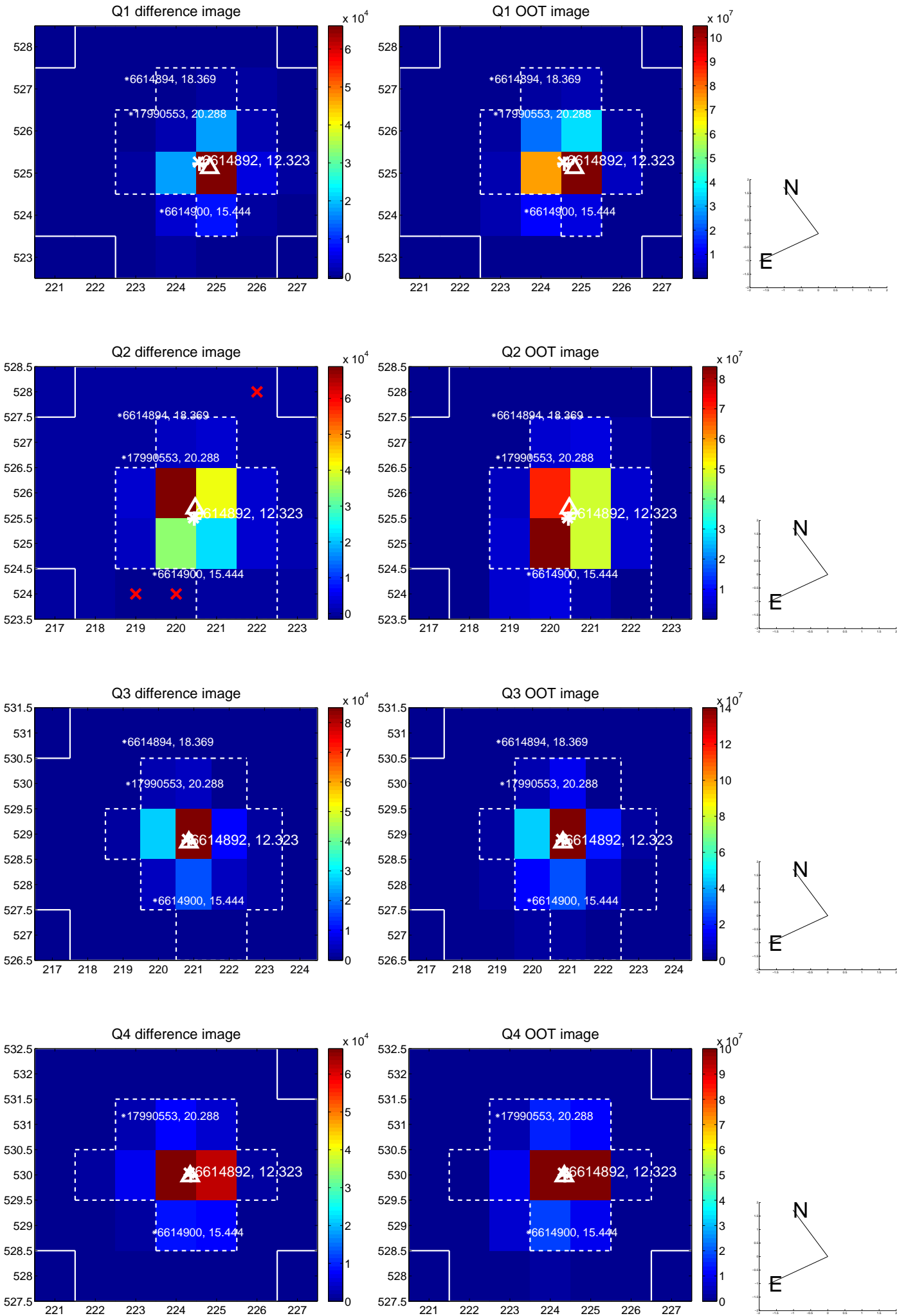


offset from photometric centroids

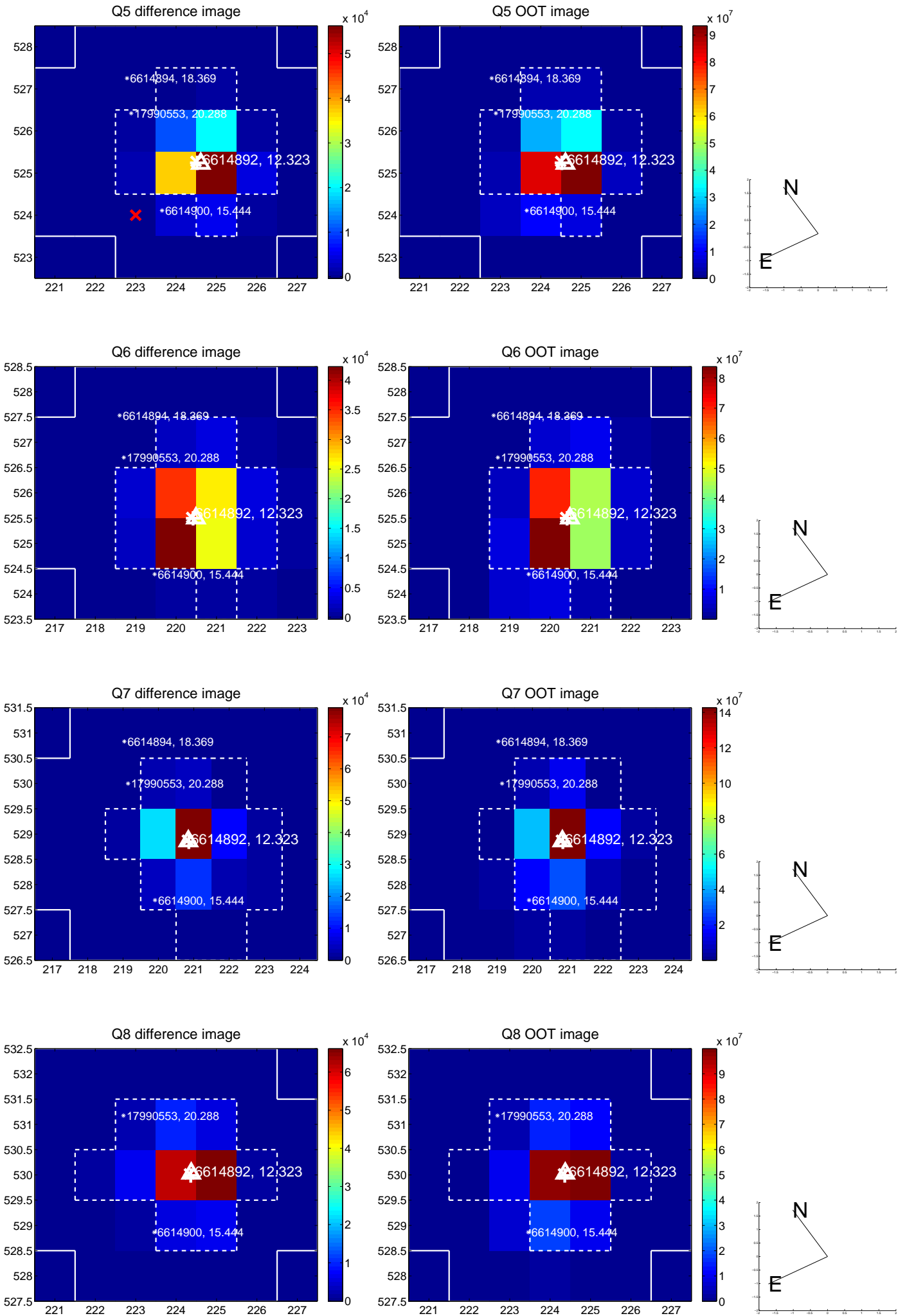


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

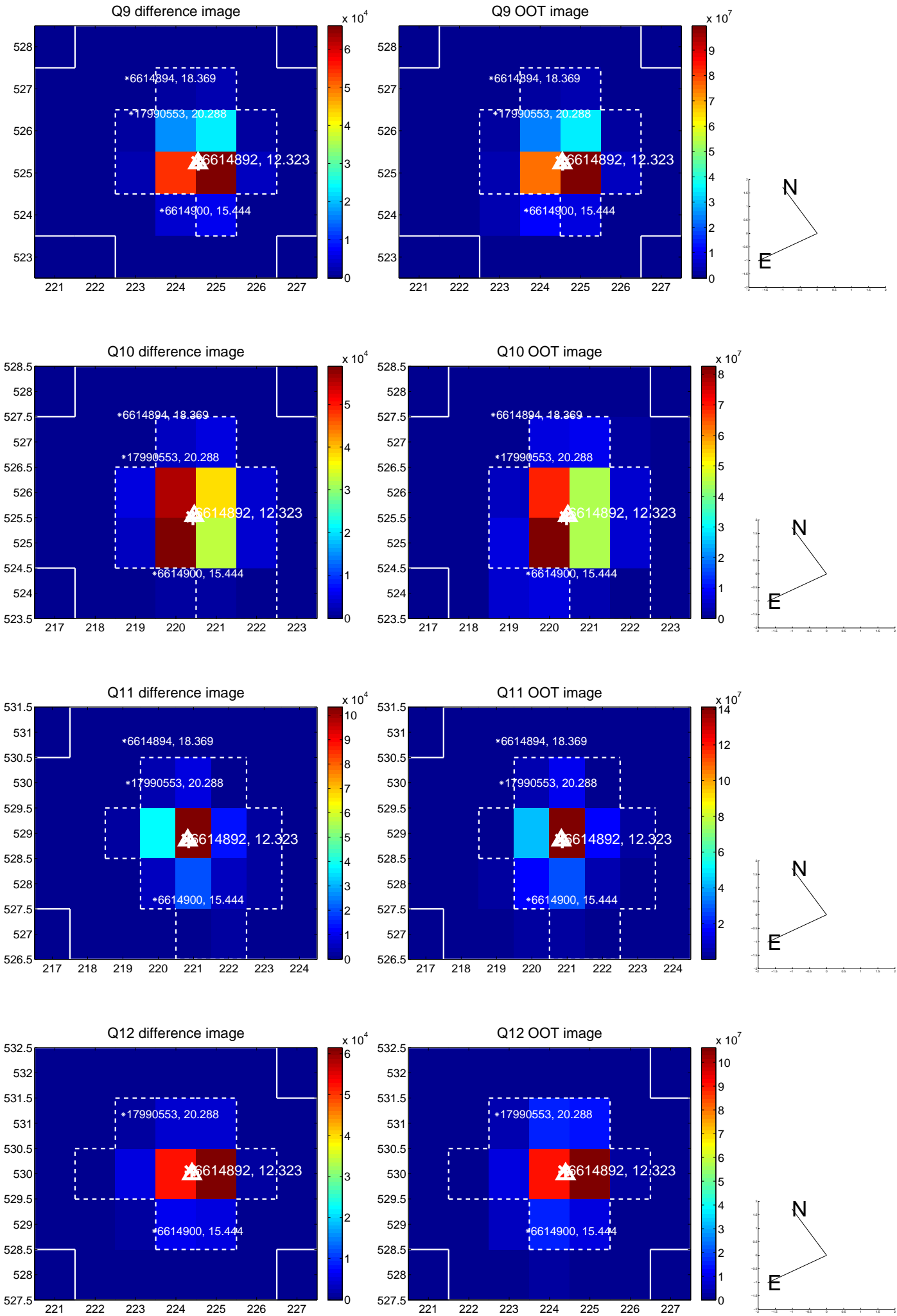
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



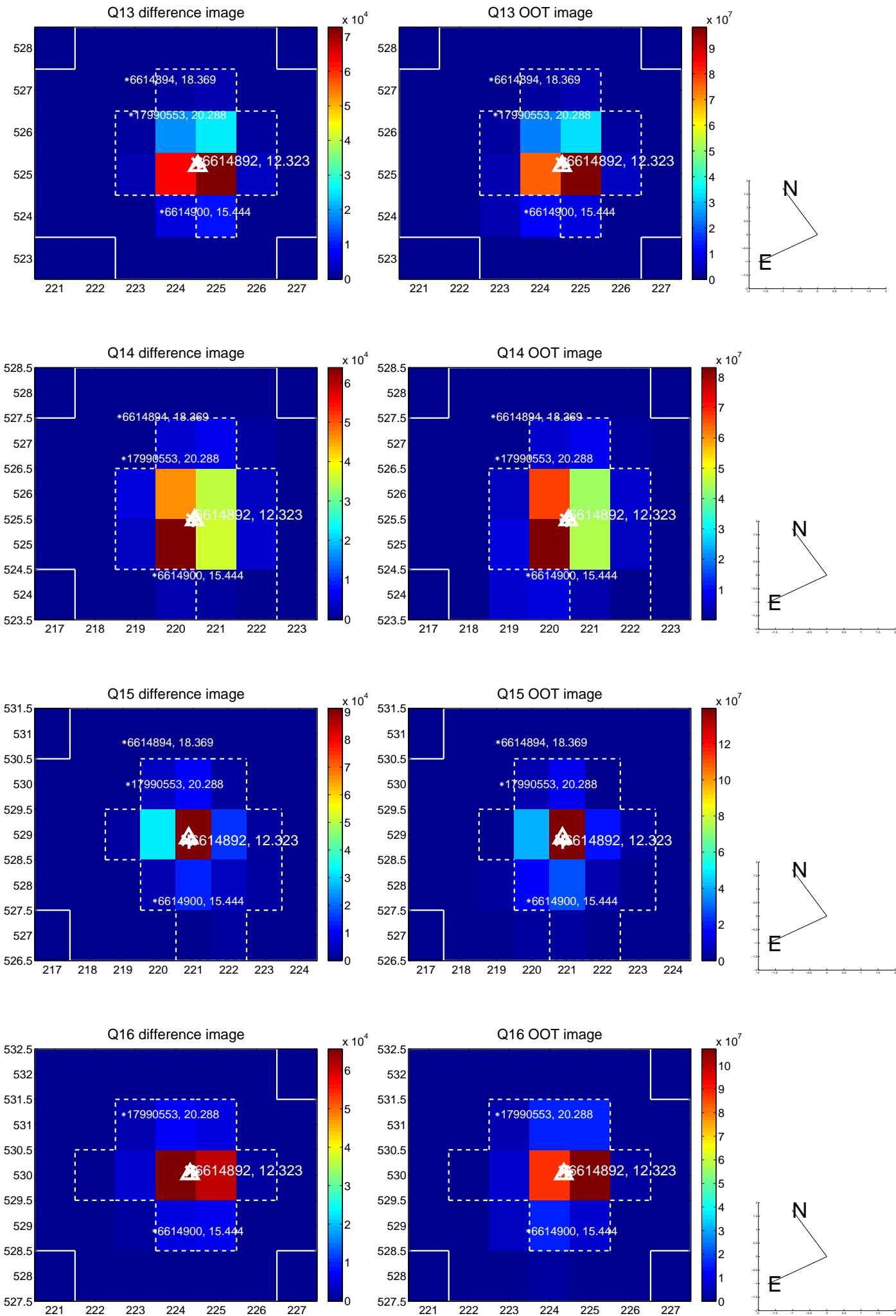
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



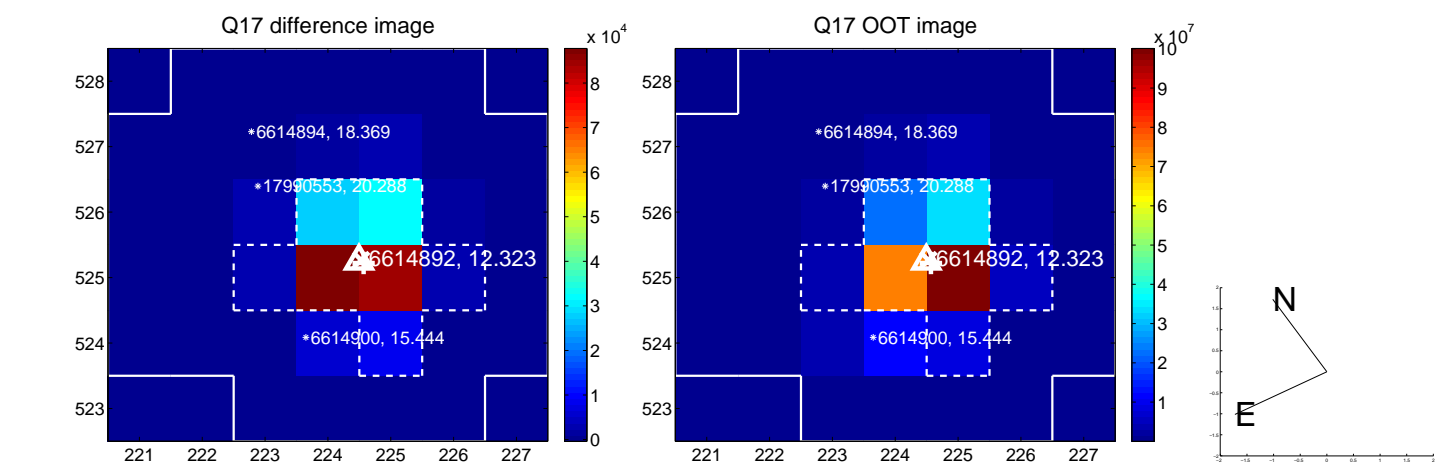
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



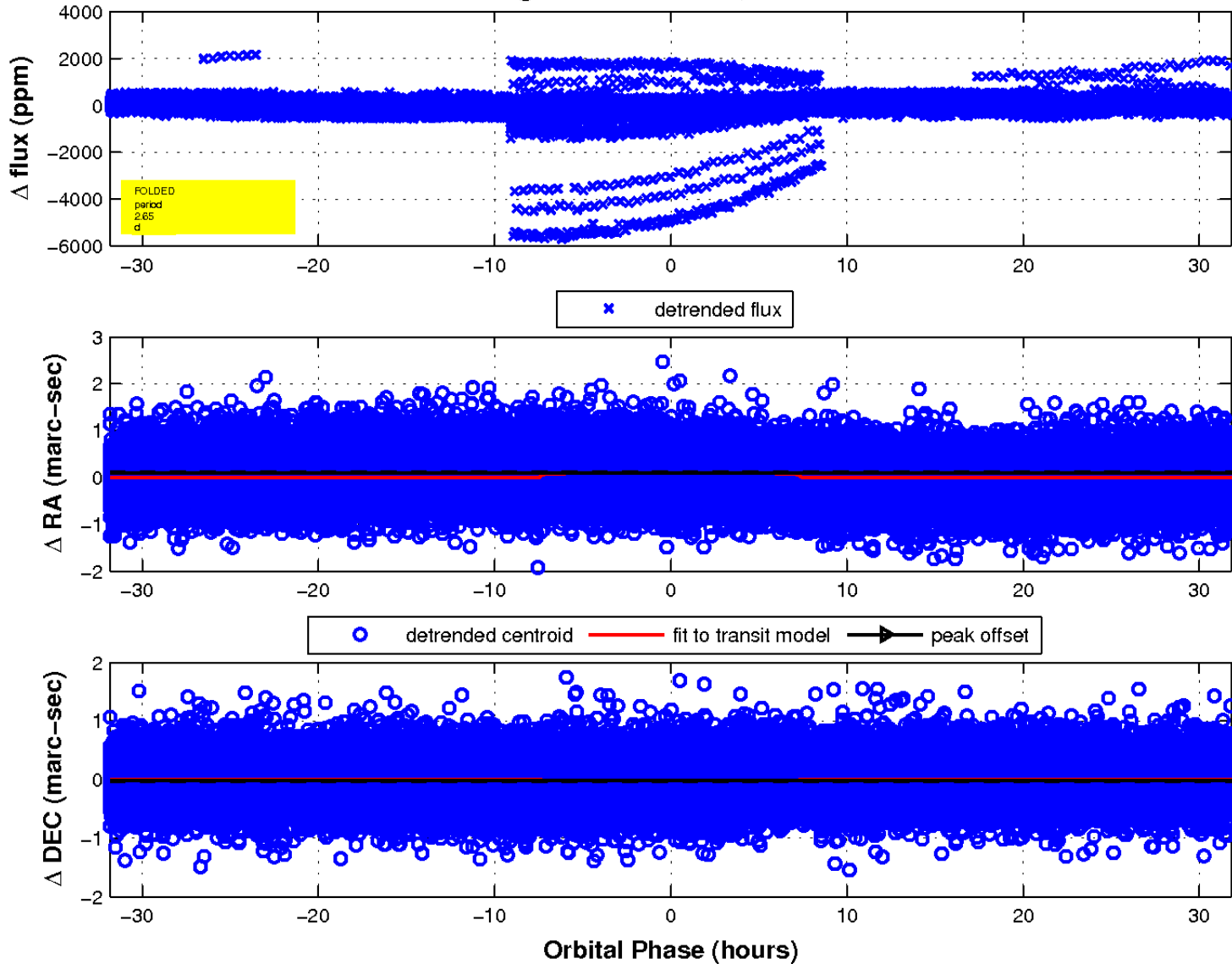
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

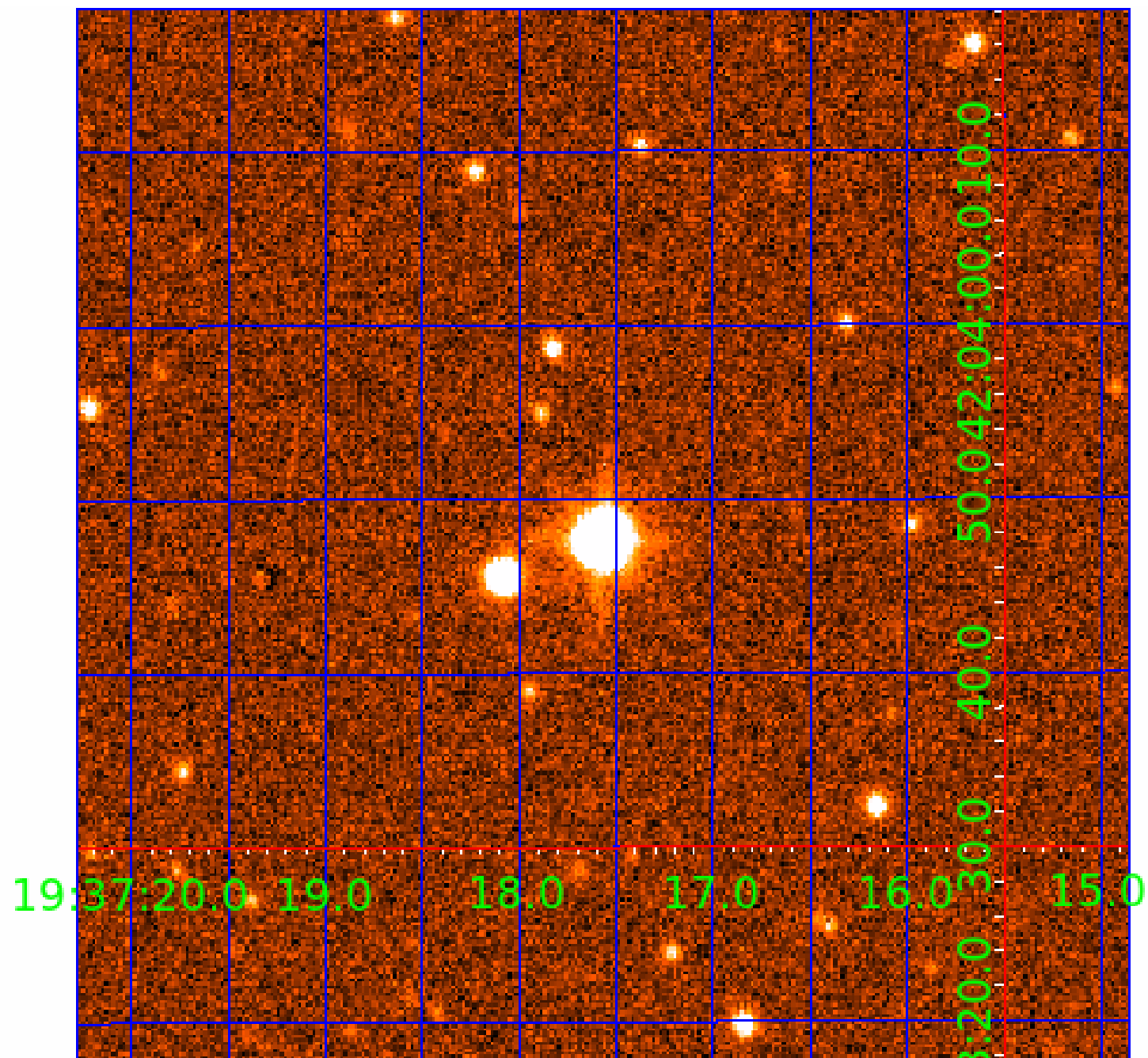


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 006614892

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})
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006614892-03	OBS	No	74.299837	163.516585	104.1	11.139	15.5	6.9	2.33	7888	2.51	104.22
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614892-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006614892-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006614892-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006614892-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

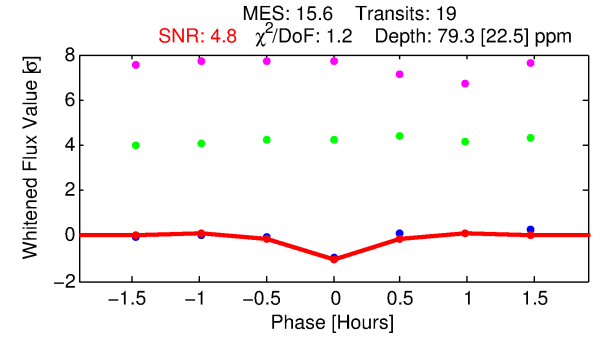
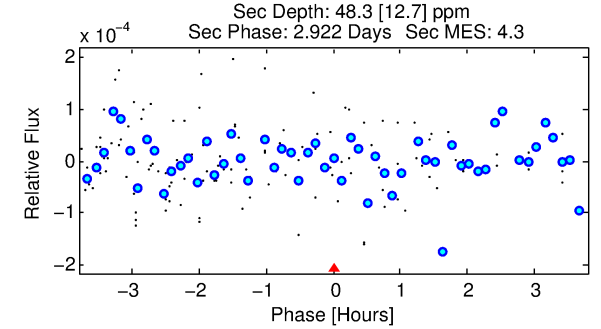
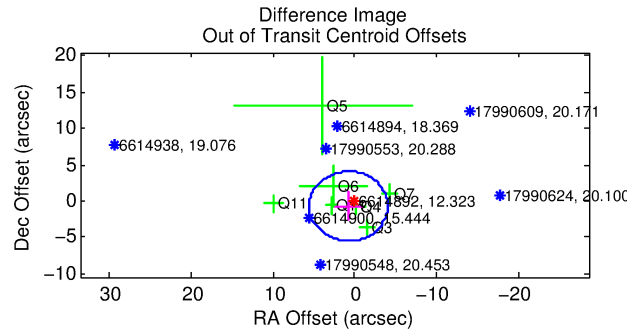
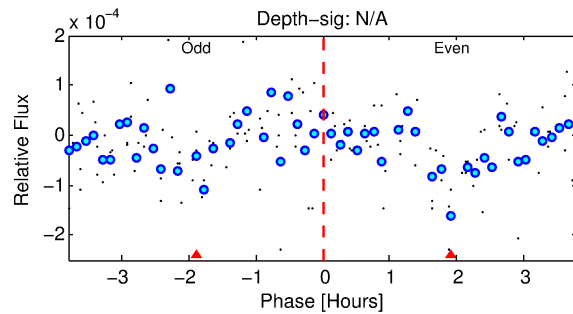
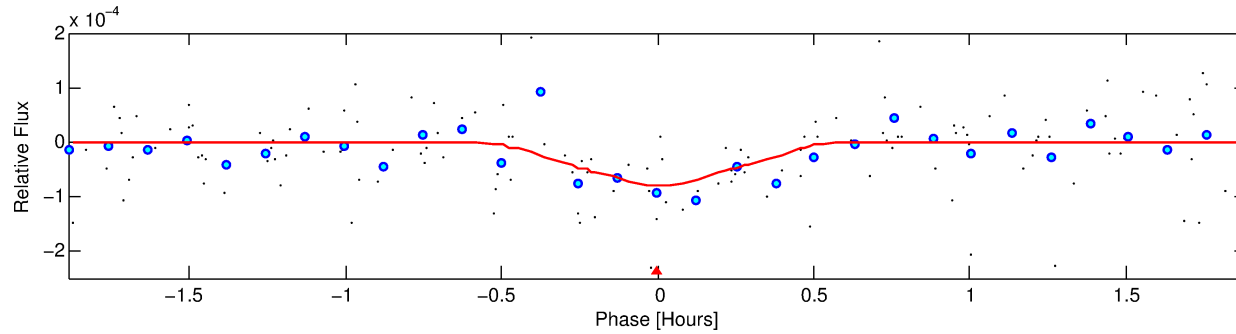
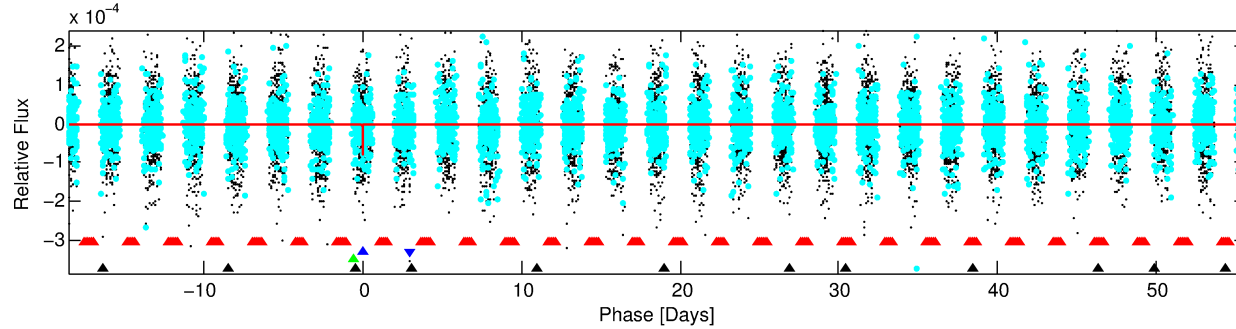
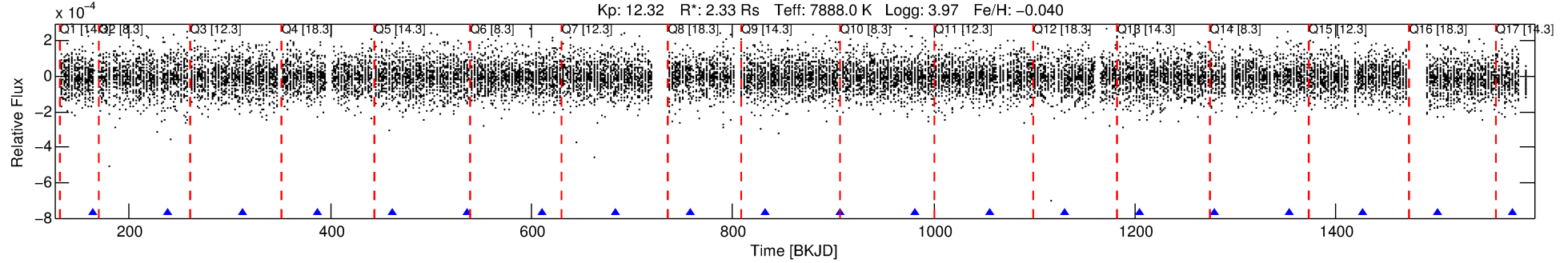
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006614892-02

No Significant Match Found

DV One-Page Summary

KIC: 6614892 Candidate: 2 of 4 Period: 74.298 d



DV Fit Results:

Period = 74.29842 [0.00047] d
Epoch = 164.1165 [0.0057] BKJD
Rp/R* = 0.0086 [0.0083]
a/R* = 791.64 [4609.17]
b = 0.50 [8.76]
Seff = 104.22 [42.78]
Teq = 815 [84] K
Rp = 2.20 [2.21] Re
a = 0.4254 [0.1072] AU
Ag = 994.26 [1962.41] [0.51σ]
Teffp = 7073 [3439] K [1.82σ]

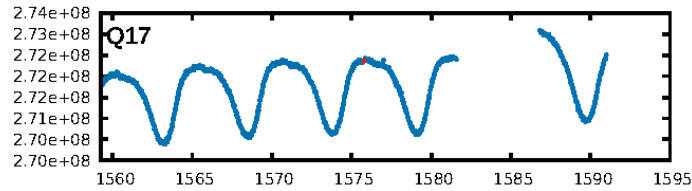
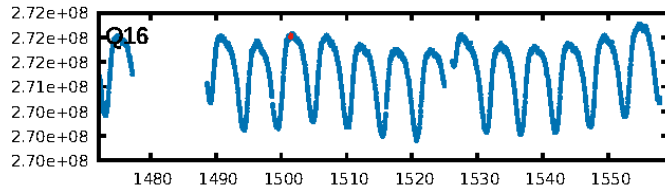
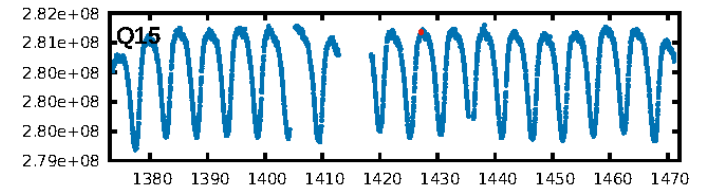
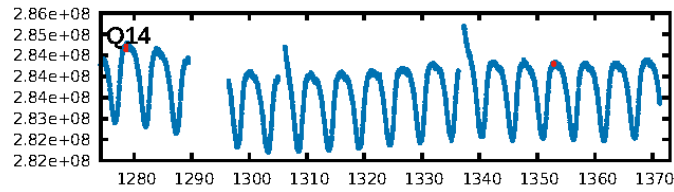
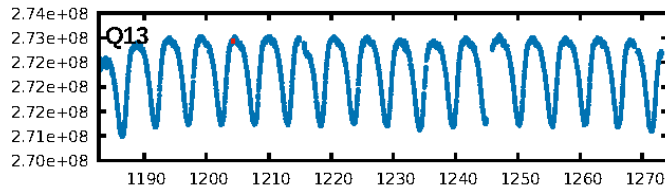
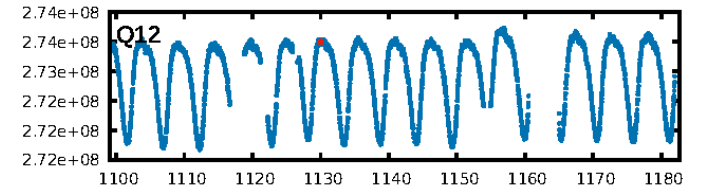
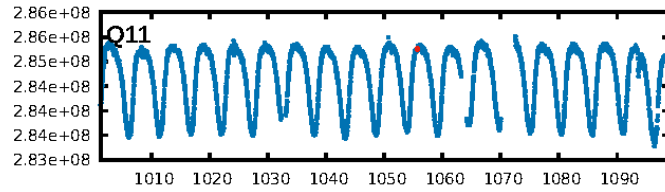
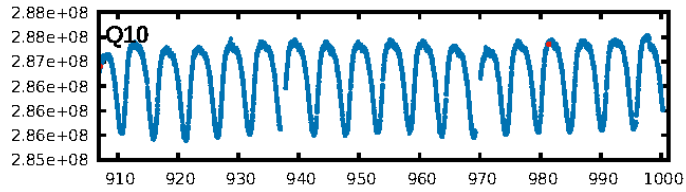
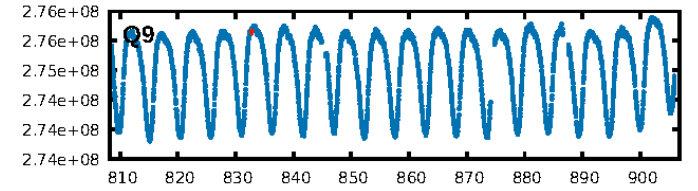
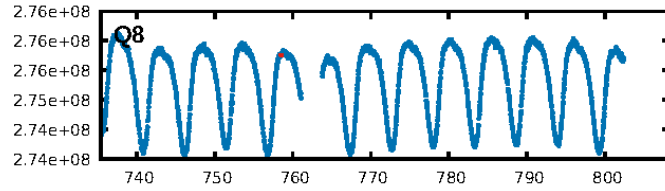
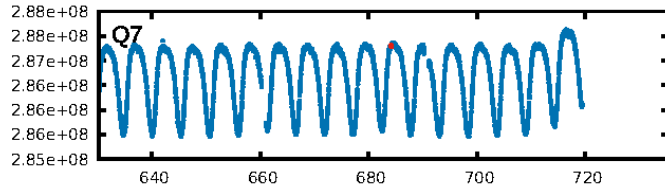
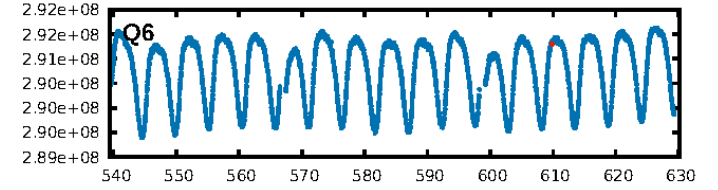
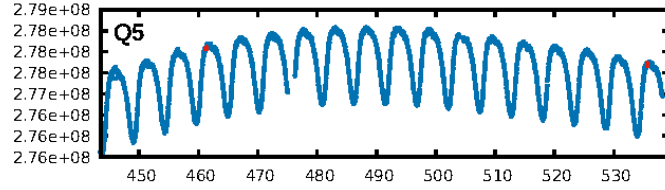
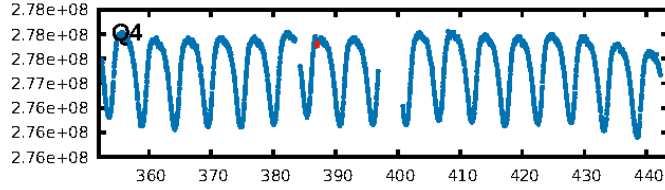
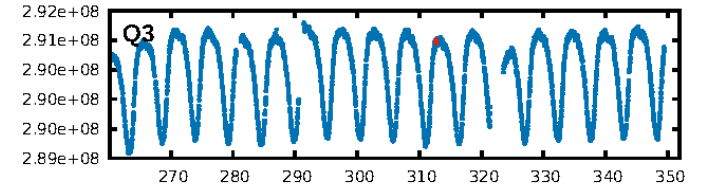
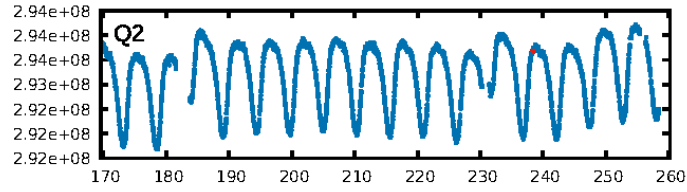
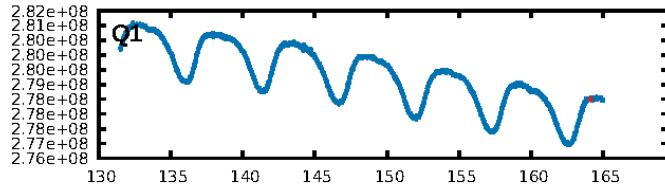
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [115.78σ]
LongPeriod-sig: 0.2% [0.00σ]
ModelChiSquare2-sig: 69.7%
ModelChiSquareGof-sig: 97.3%
Bootstrap-pfa: 2.58e-24
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 1.665
Centroid-sig: 47.1%
Centroid-so: 1.973 arcsec [0.70σ]
OotOffset-rm: 1.112 arcsec [0.70σ]
OotOffset-st: 2/3/1/1 [7]
KicOffset-rm: 1.213 arcsec [0.76σ]
KicOffset-st: 2/3/1/1 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [9/9]

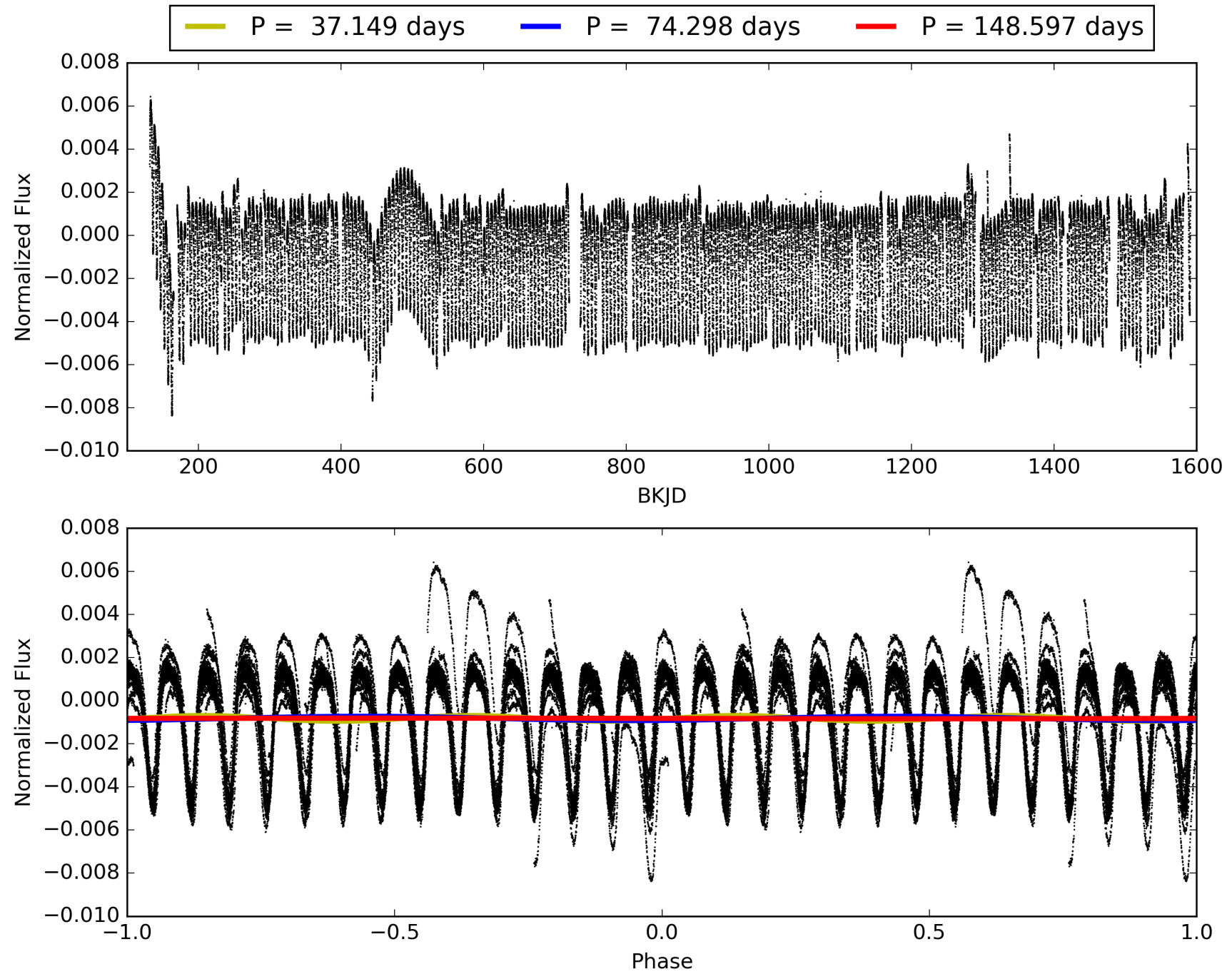
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:25:42 Z

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

TCE 006614892-02, PDC Light Curves

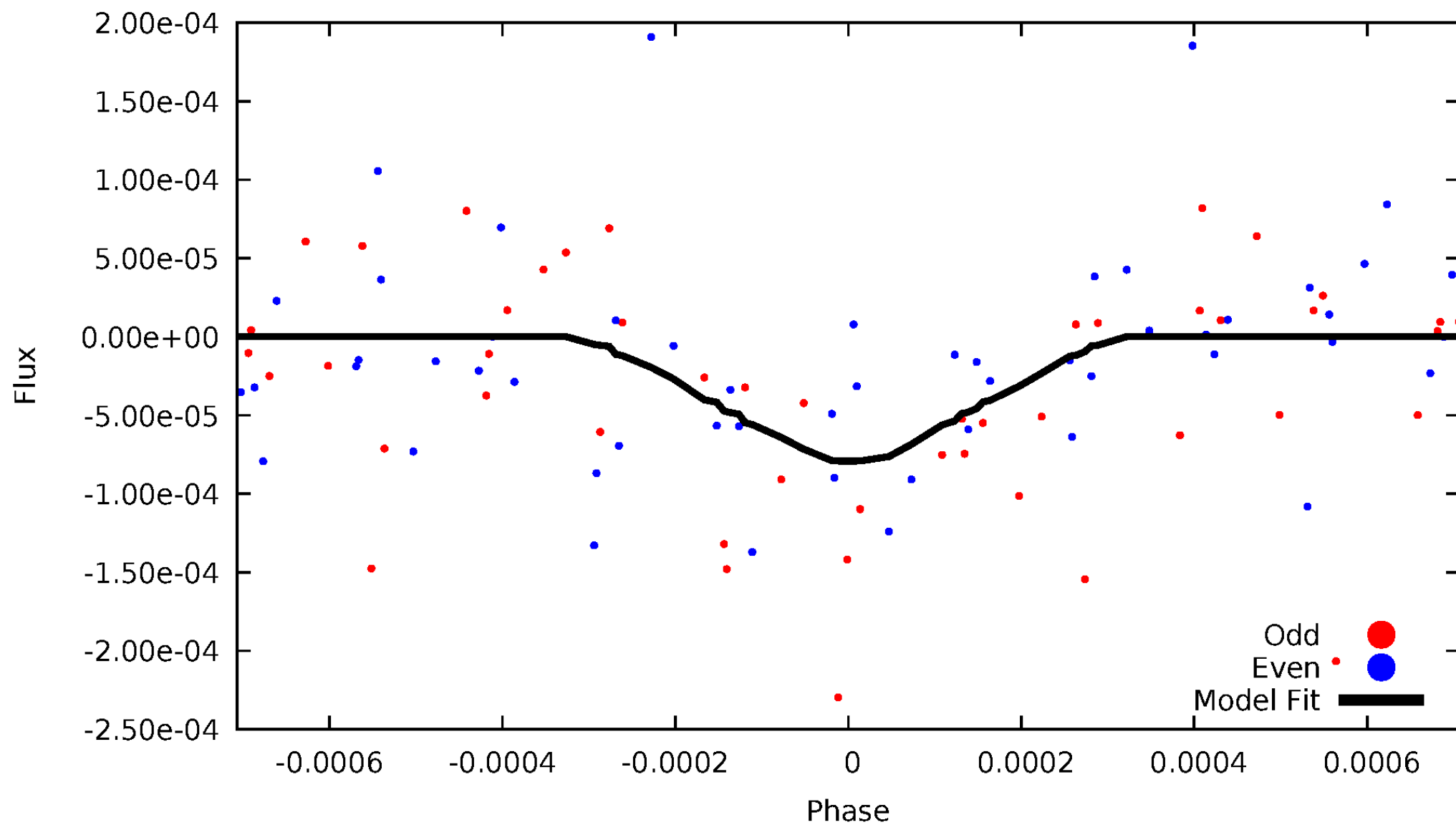


TCE 006614892-02



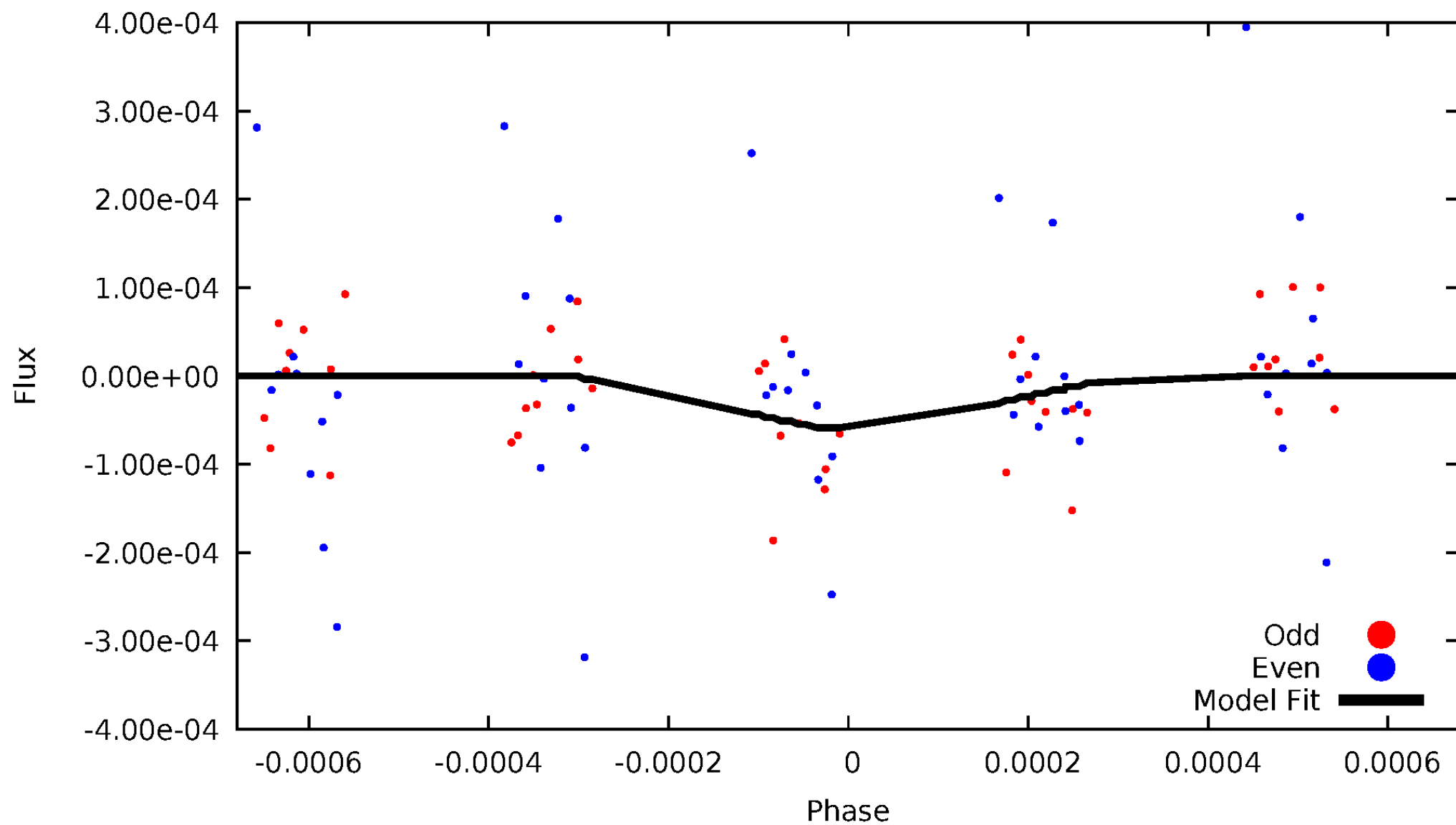
DV Odd/Even

TCE 006614892-02



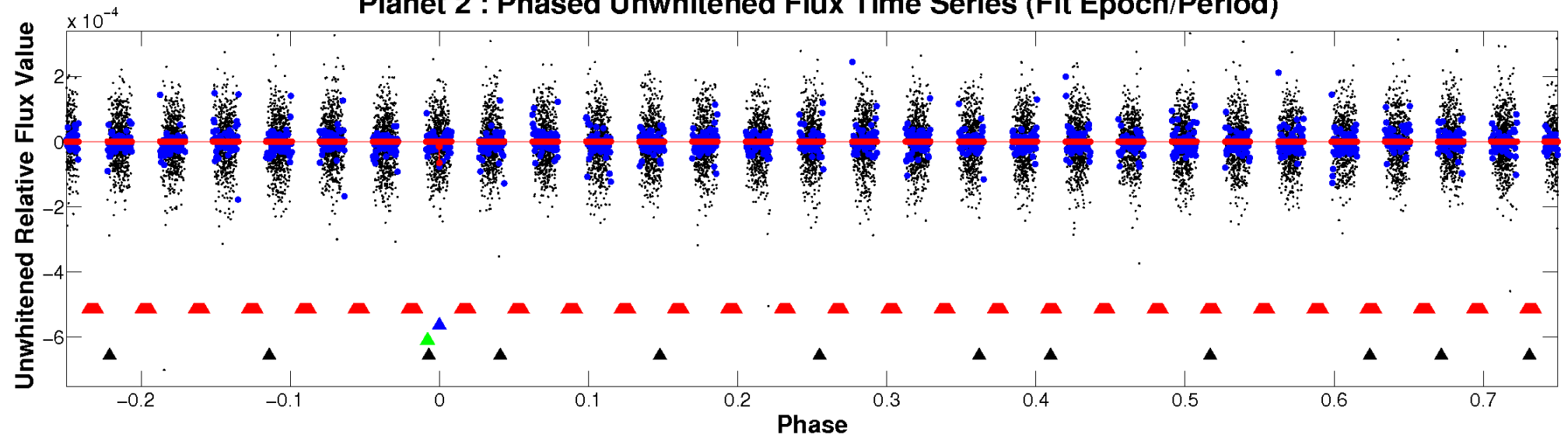
ALT Odd/Even

TCE 006614892-02

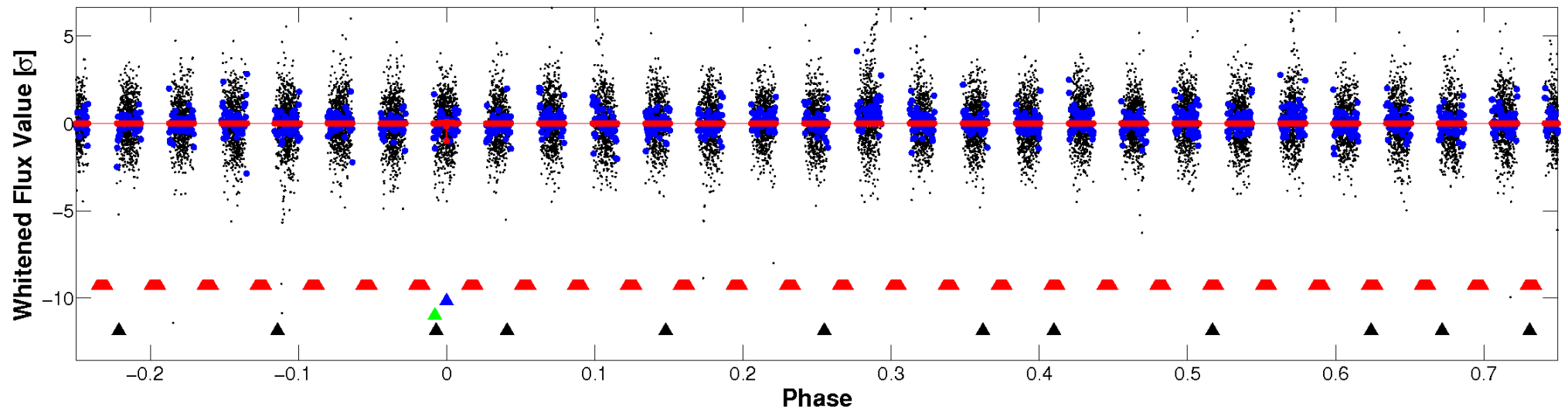


Non-Whitened Vs. Whitened Light Curve

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

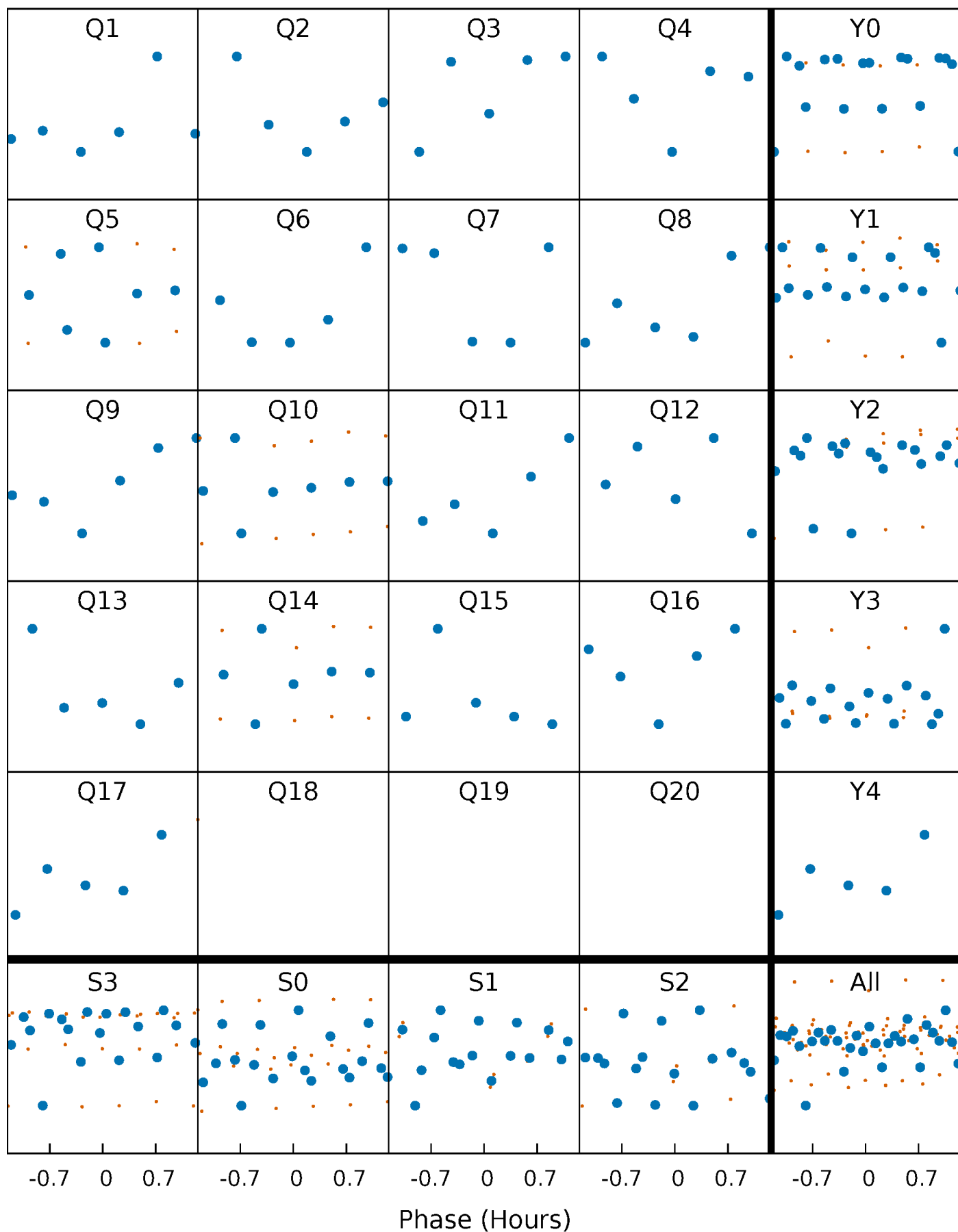


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



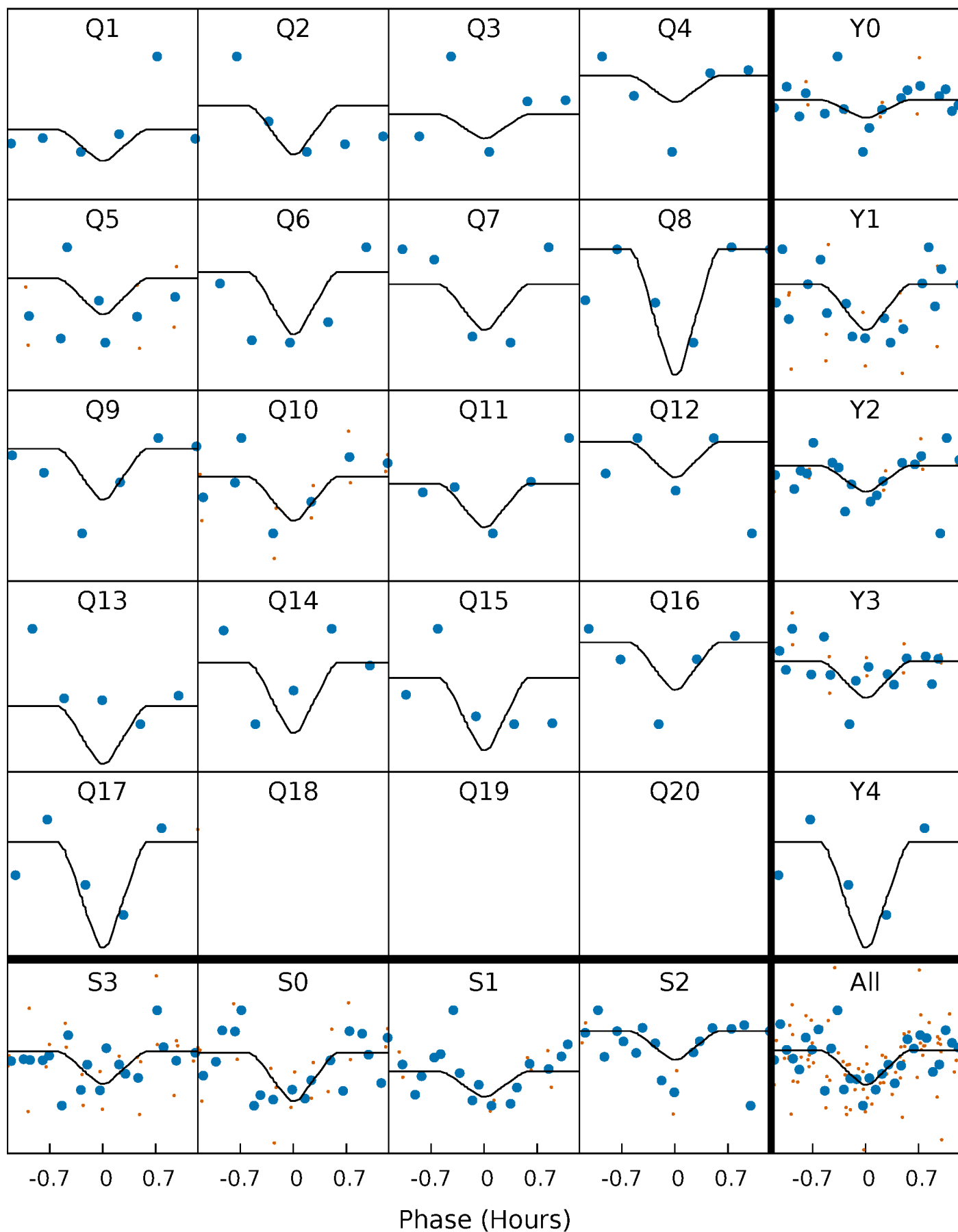
PDC Quarter-Phased Transit Curves

TCE 006614892-02 P= 74.298419 Days $T_0=164.116454$ (BKJD)



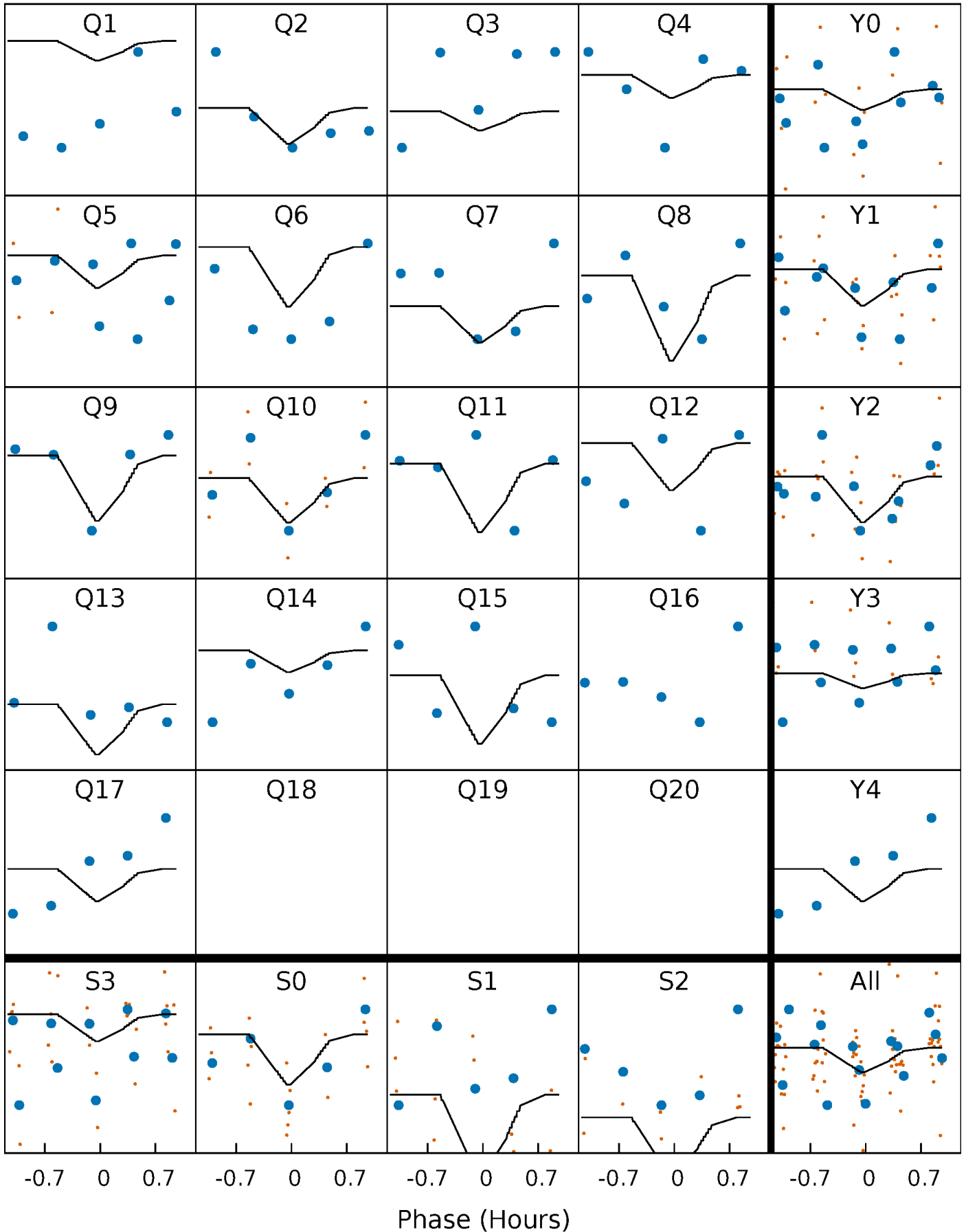
DV Quarter-Phased Transit Curves

TCE 006614892-02 P= 74.298419 Days $T_0=164.116454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

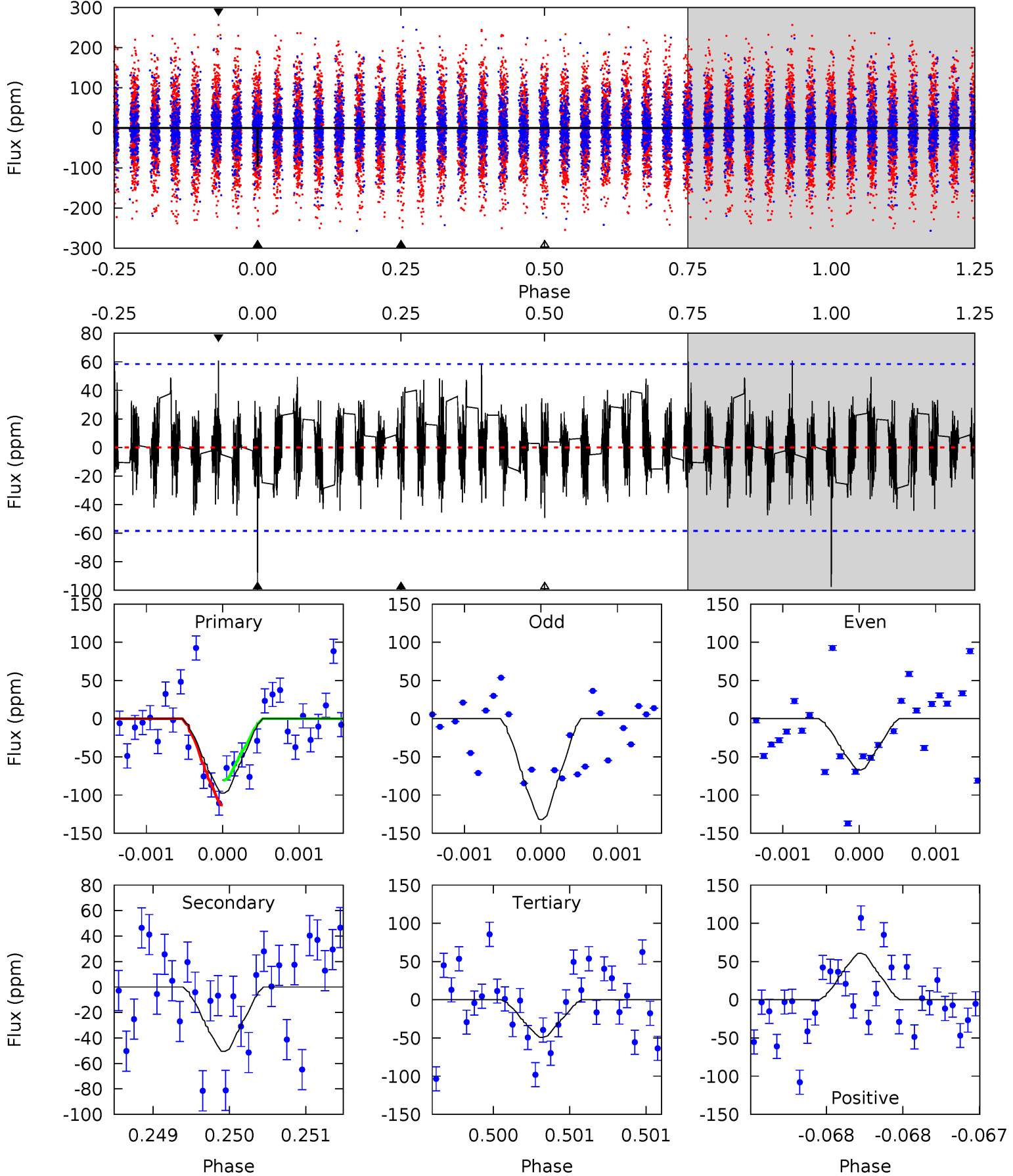
TCE 006614892-02 P= 74.296686 Days $T_0=164.126959$ (BKJD)



DV Model-Shift Uniqueness Test

006614892-02, P = 74.298419 Days, E = 89.818035 Days

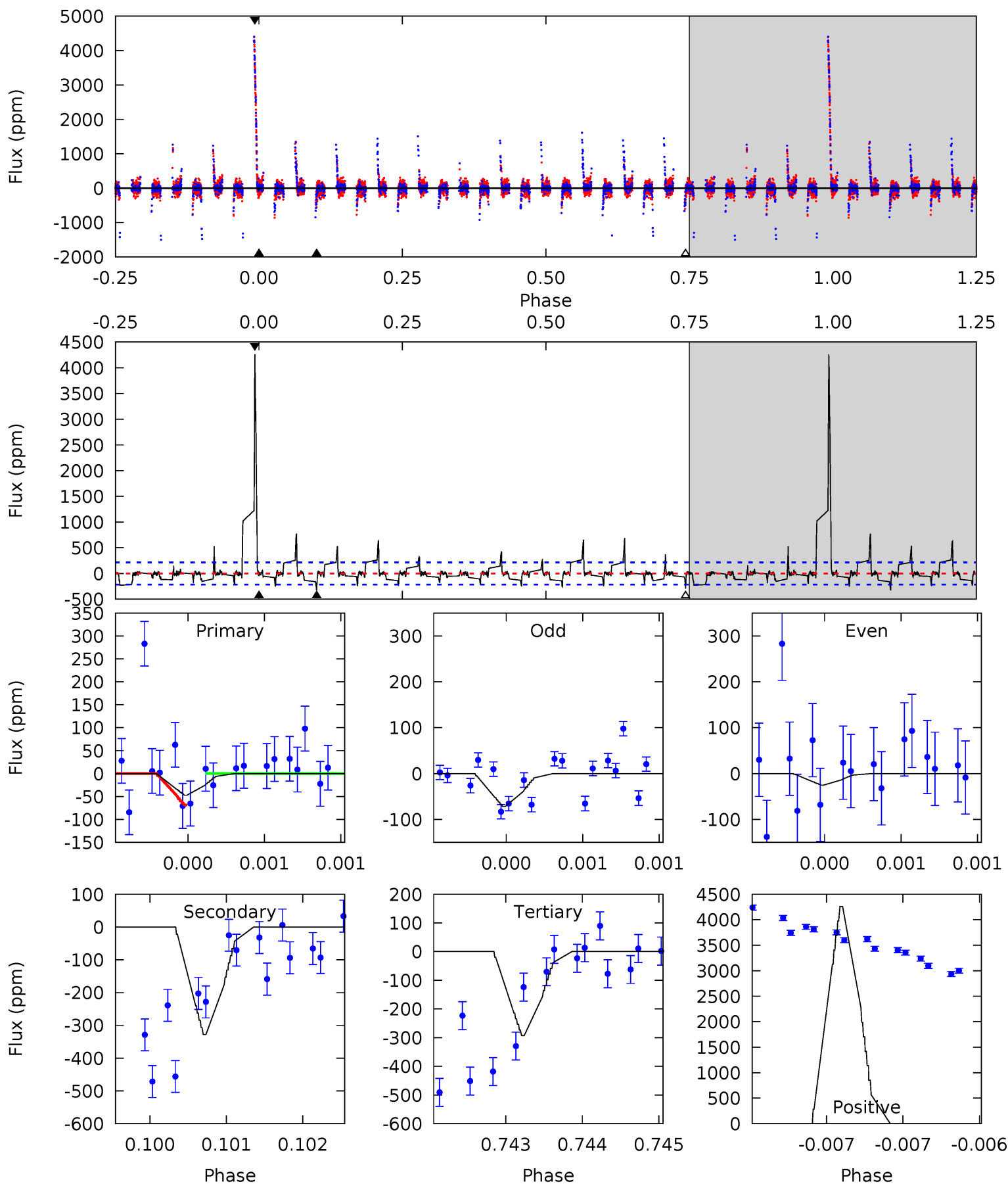
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.24	4.79	4.66	5.76	5.54	3.42	1.56	4.58	3.48	0.13	-0.96	3.08	1.12	0.38	1.54



Alt Model-Shift Uniqueness Test

006614892-02, P = 74.296686 Days, E = 89.830273 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.21	8.41	7.51	109.2	5.51	3.38	5.76	-6.30	-108.0	0.91	-100.8	0.57	0.69	0.93	0.88



Stellar Parameters For KIC 006614892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7888^{+216}_{-324}	$3.972^{+0.210}_{-0.140}$	$-0.040^{+0.200}_{-0.350}$	$2.332^{+0.452}_{-0.678}$	$1.859^{+0.123}_{-0.368}$	$0.206^{+0.284}_{-0.077}$
	+3%/-4%	+5%/-4%	+500%/-875%	+19%/-29%	+7%/-20%	+138%/-37%
Source	KIC0	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 006614892-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-51 ± 11	$2.61^{+1.88}_{-1.65}$	1130^{+82}_{-80}	6317^{+5287}_{-1409}	710^{+4256}_{-474}
Alt.	-328 ± 39	$2.35^{+1.89}_{-1.45}$	1134^{+76}_{-91}	12556^{+22193}_{-4394}	5646^{+31812}_{-3882}

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

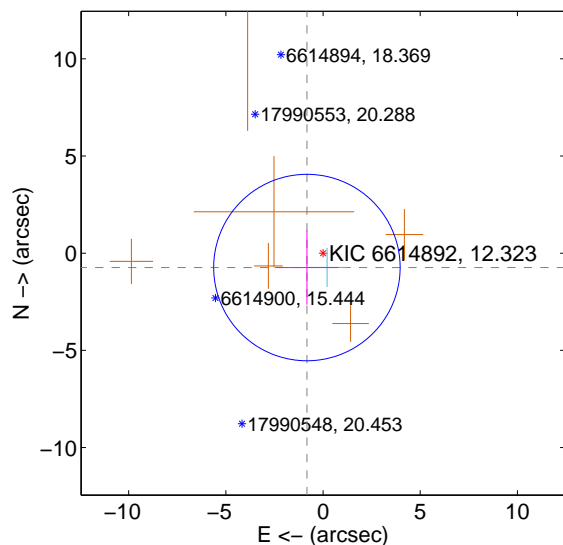
Supplemental centroid analysis for 006614892-02. Kepler magnitude: 12.32. Transit SNR 4.79

There are 1 quarters with good PRF difference image offsets

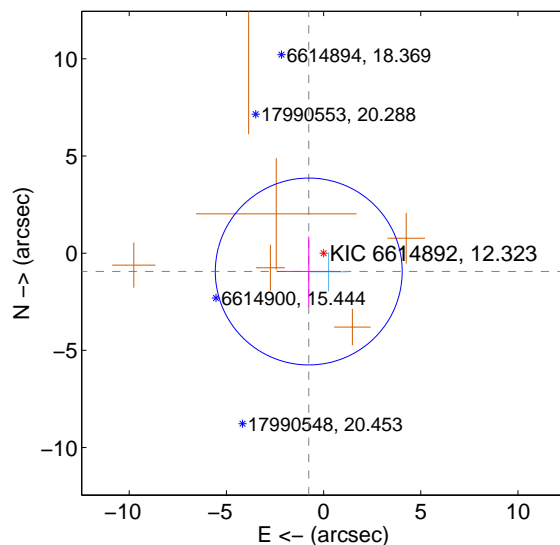
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.112 ± 1.599	0.70	0.830 ± 1.634	-0.739 ± 1.909
PRF-fit source offset from KIC position	1.213 ± 1.602	0.76	0.763 ± 1.662	-0.942 ± 1.800
photometric centroid source offset	1.97 ± 2.80	0.70	-1.87 ± 2.82	0.62 ± 2.65

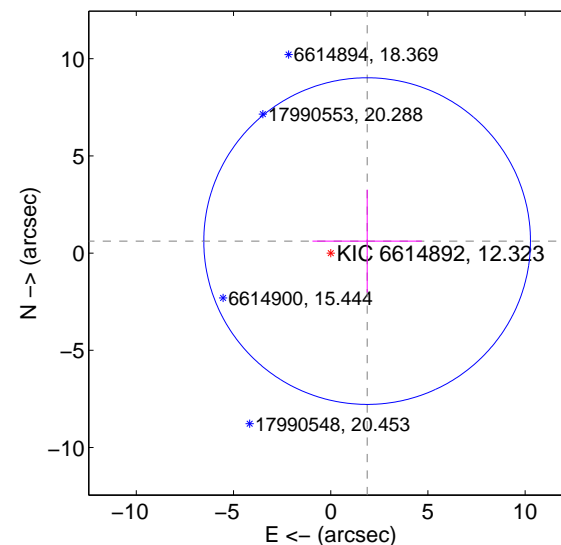
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

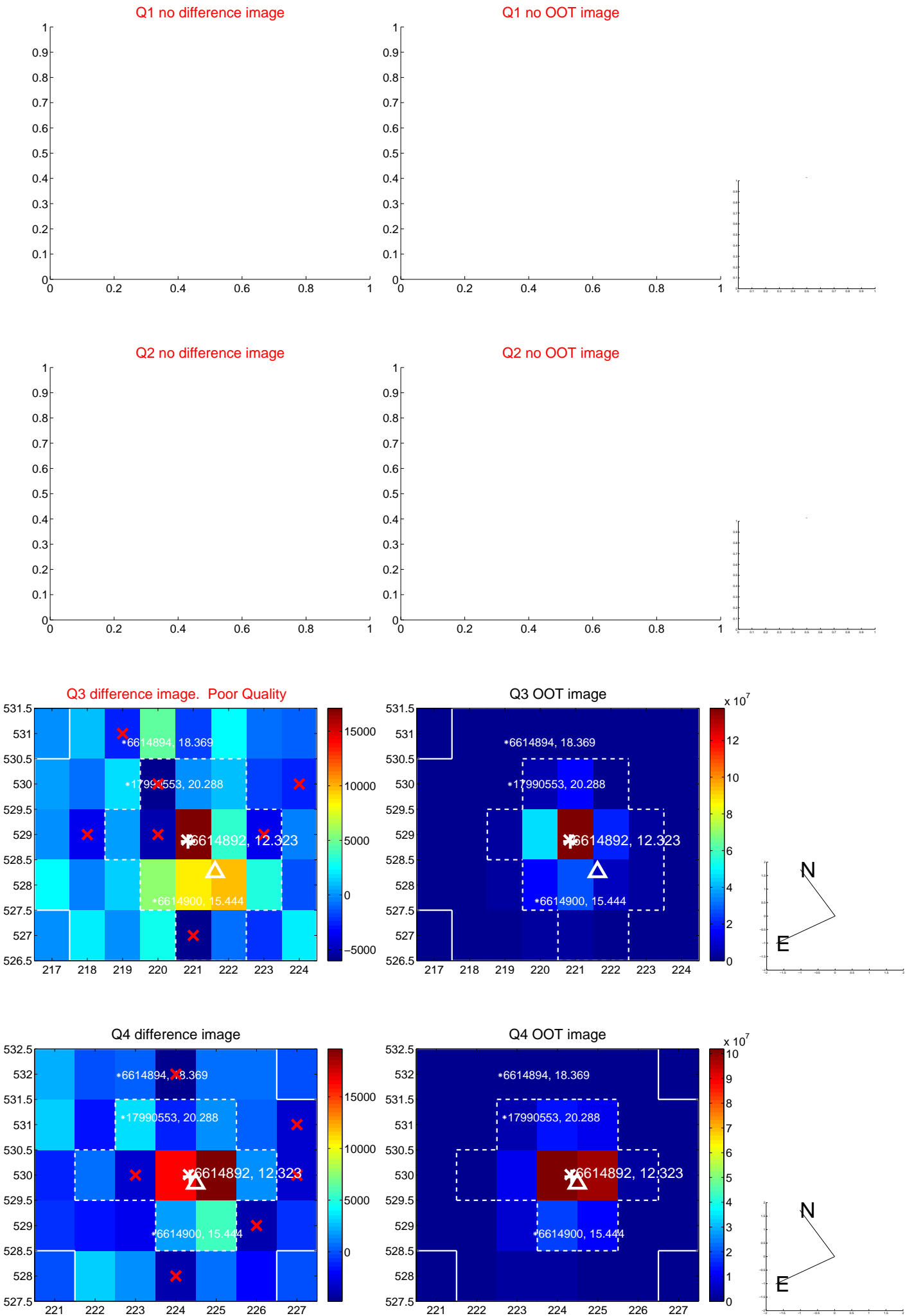


offset from photometric centroids

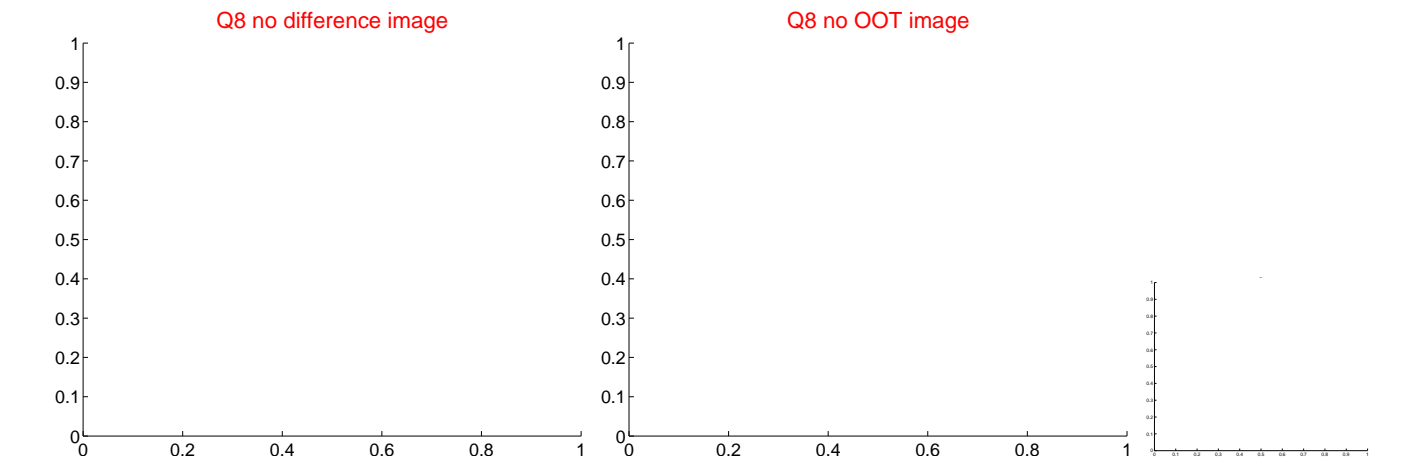
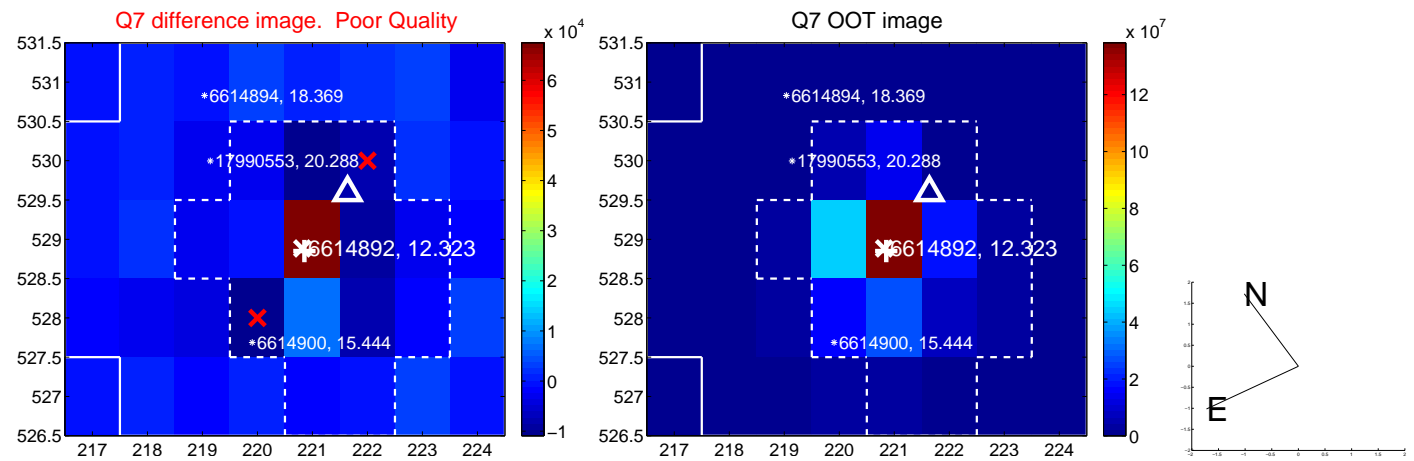
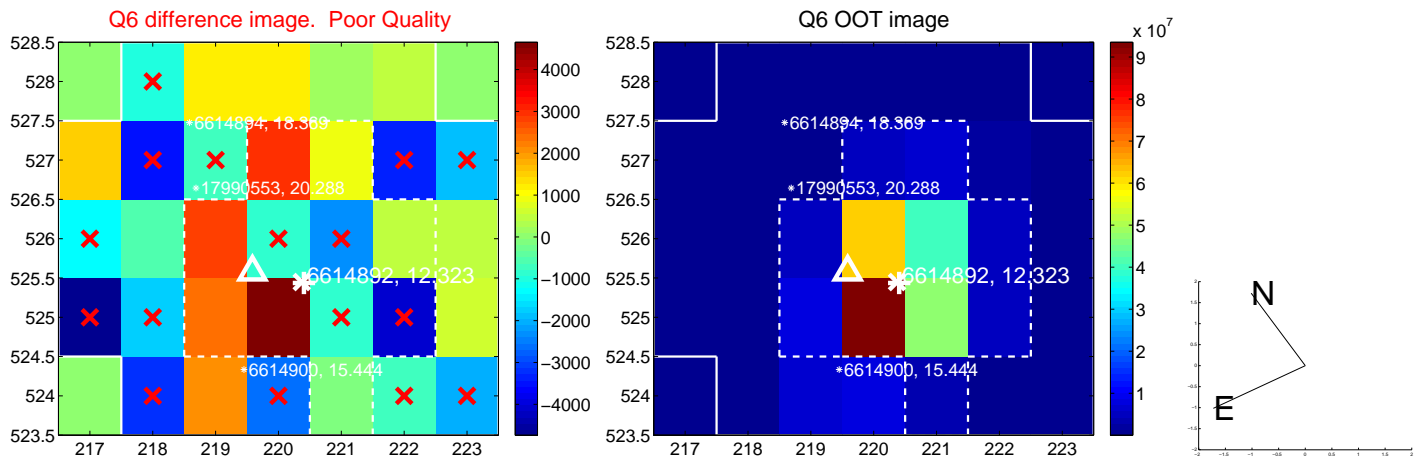
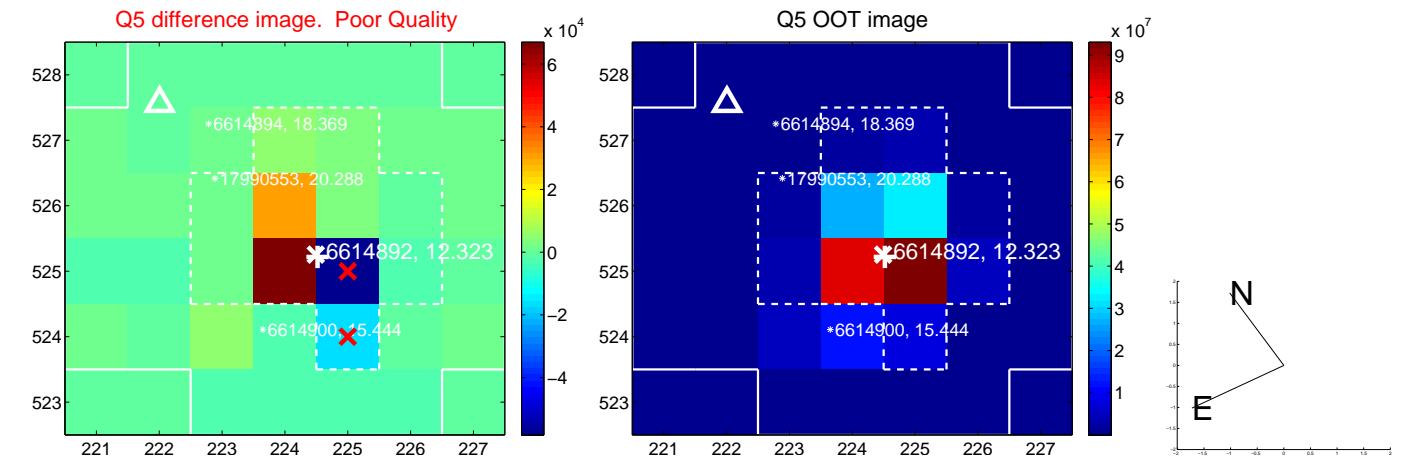


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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.

Q9 no difference image



Q9 no OOT image



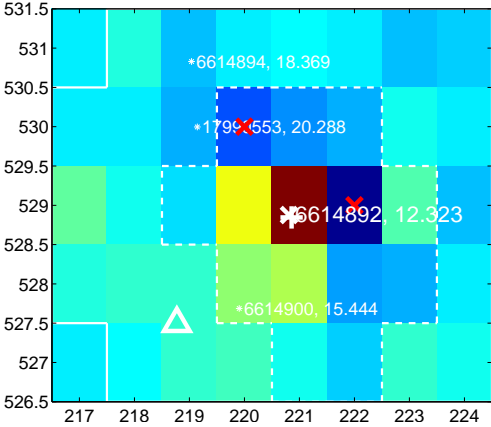
Q10 no difference image



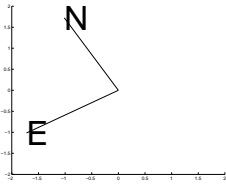
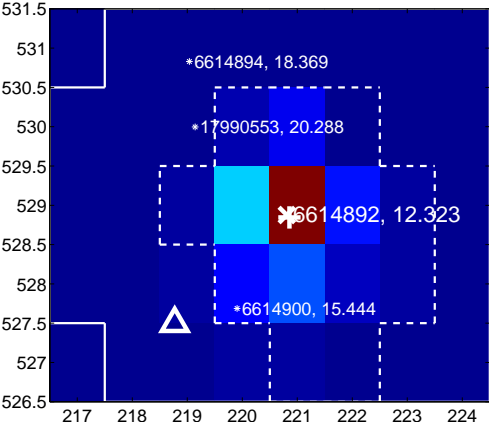
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



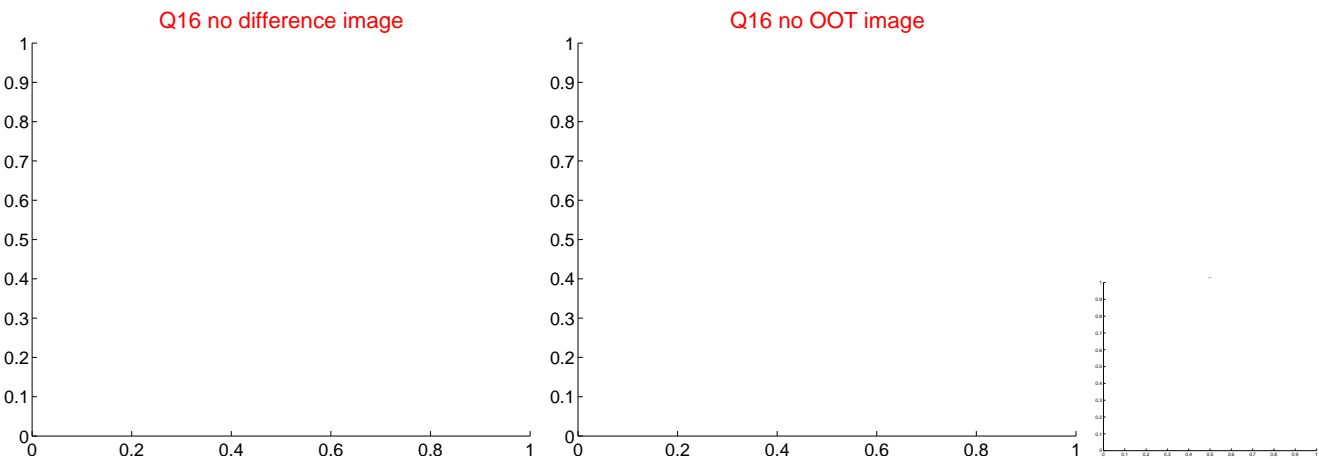
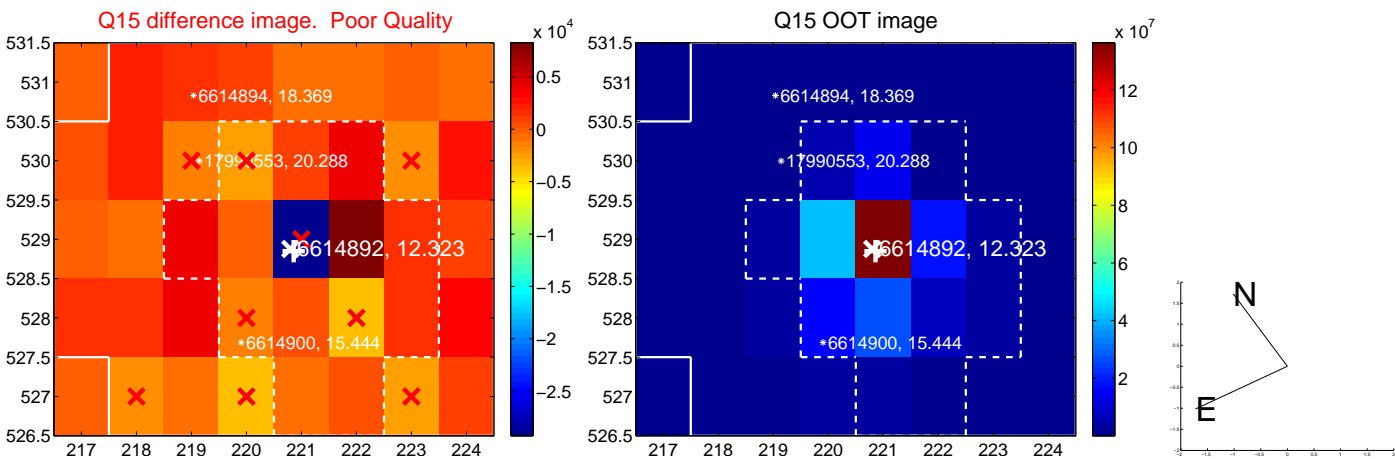
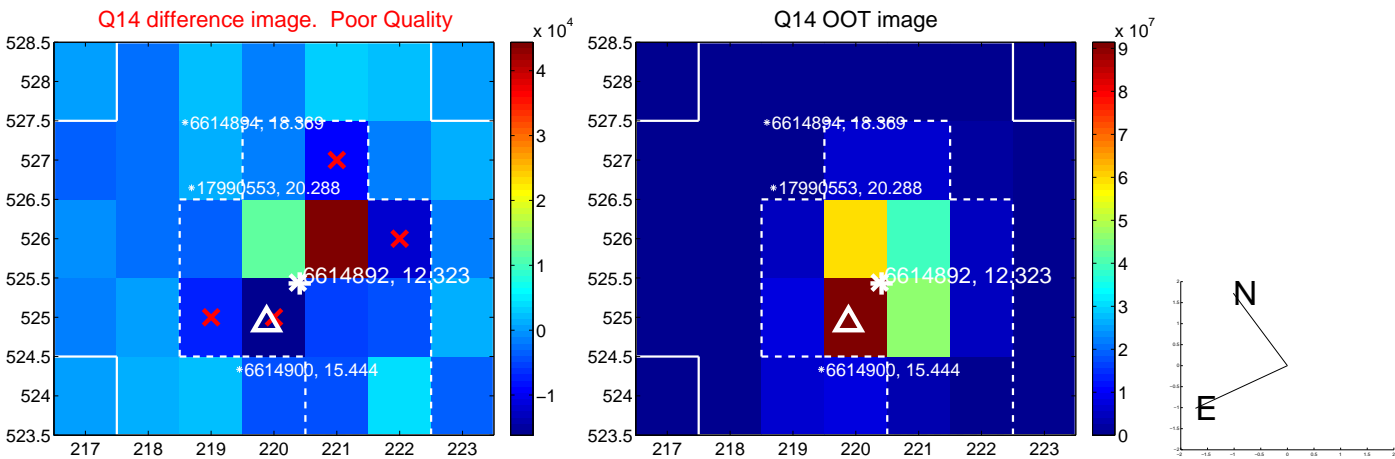
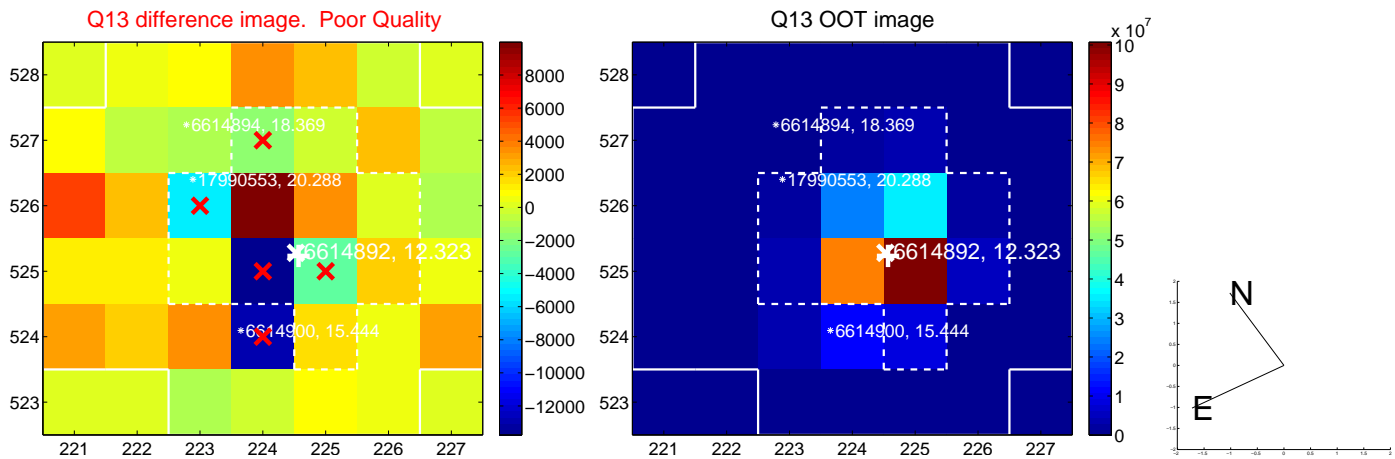
Q12 no difference image



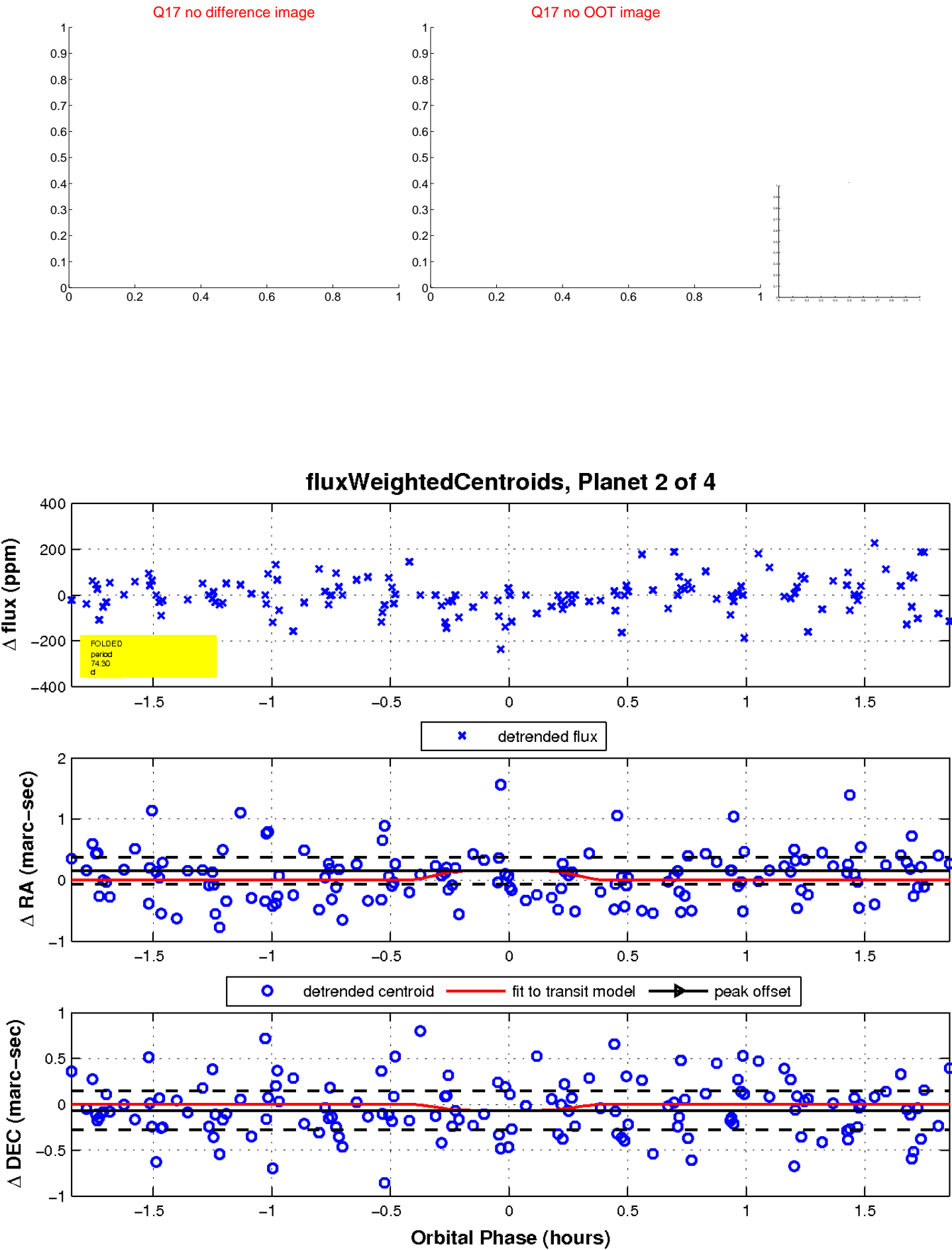
Q12 no OOT image



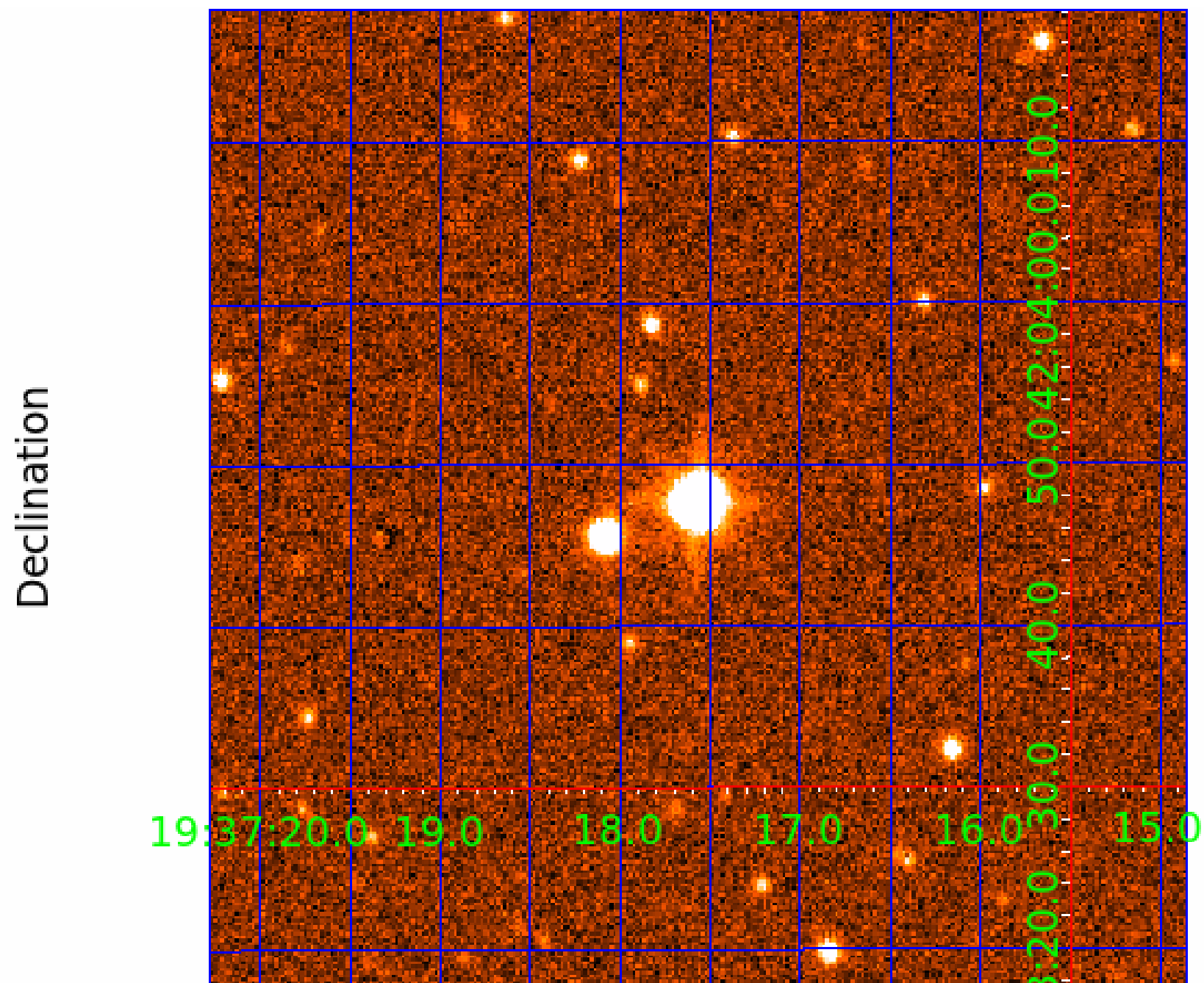
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006614892

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})
006614892-01	OBS	No	2.652546	133.835009	13.7	14.838	14.9	7.7	2.33	7888	0.93	8865.37
006614892-02	OBS	No	74.298419	164.116454	79.3	0.630	15.6	4.8	2.33	7888	2.20	104.22
006614892-03	OBS	No	74.299837	163.516585	104.1	11.139	15.5	6.9	2.33	7888	2.51	104.22
006614892-04	OBS	No	121.179778	218.428063	187.8	2.479	9.4	9.0	2.33	7888	3.68	54.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614892-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006614892-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006614892-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006614892-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

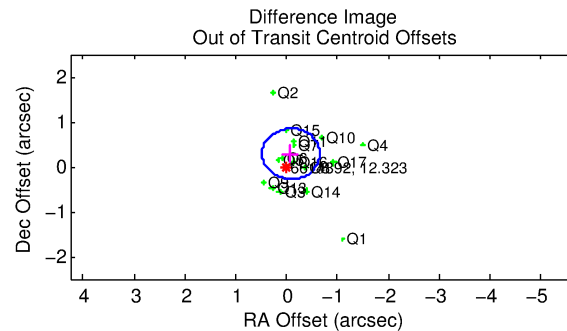
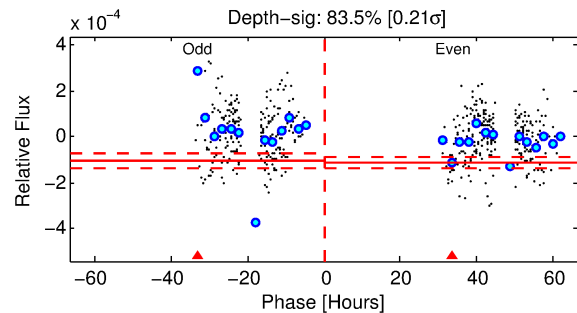
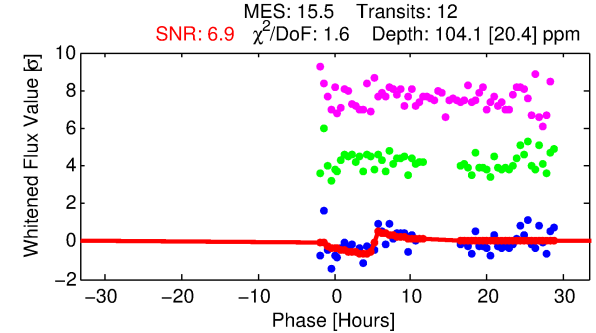
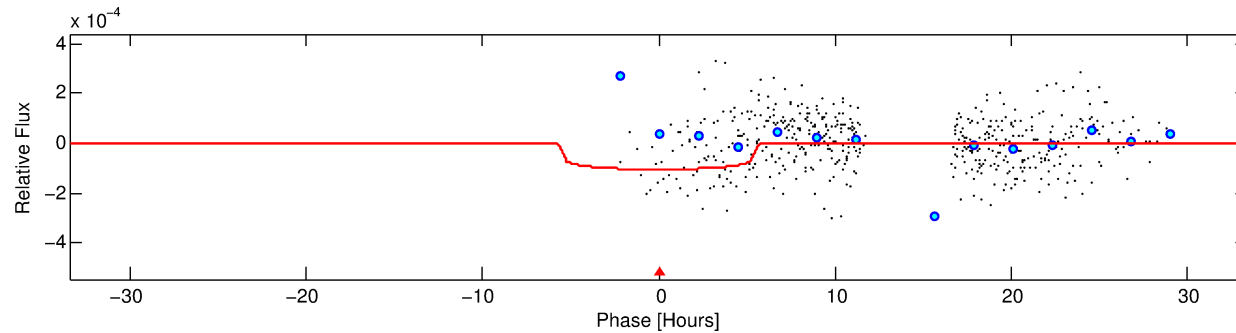
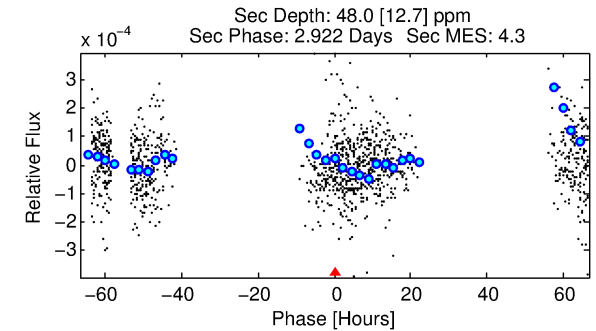
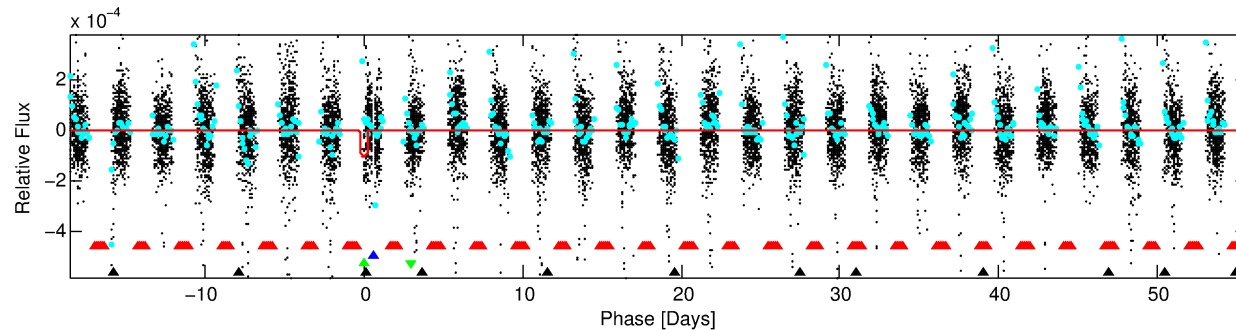
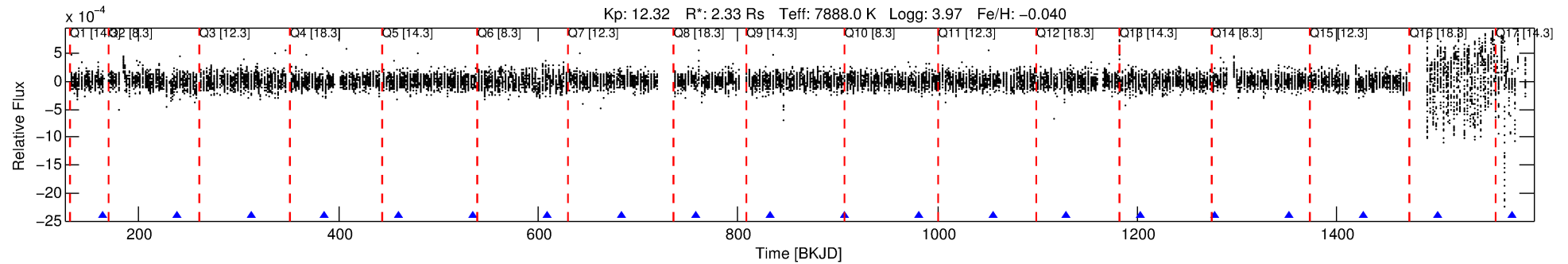
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006614892-03

No Significant Match Found

DV One-Page Summary

KIC: 6614892 Candidate: 3 of 4 Period: 74.300 d



DV Fit Results:

Period = 74.29984 [0.00203] d
Epoch = 163.5166 [0.0446] BKJD
Rp/R* = 0.0099 [0.0050]
a/R* = 40.89 [126.32]
b = 0.61 [3.04]
Seff = 104.22 [42.78]
Teq = 815 [84] K
Rp = 2.51 [1.47] Re
a = 0.4254 [0.1072] AU
Ag = 759.65 [846.14] [0.90σ]
Teffp = 6613 [1754] K [3.30σ]

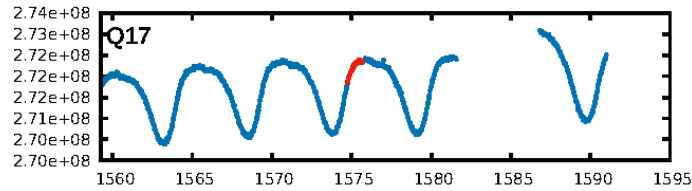
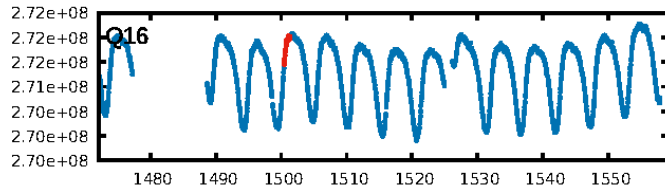
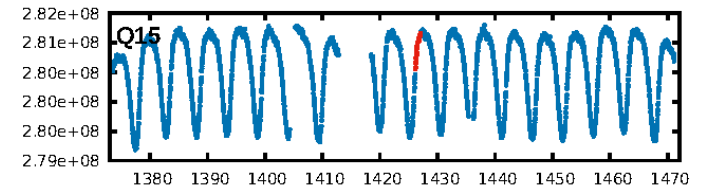
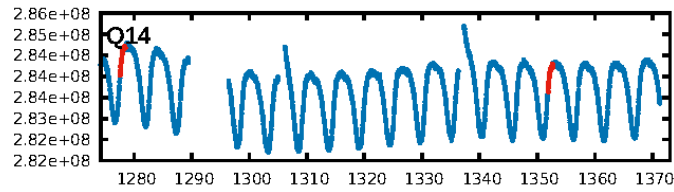
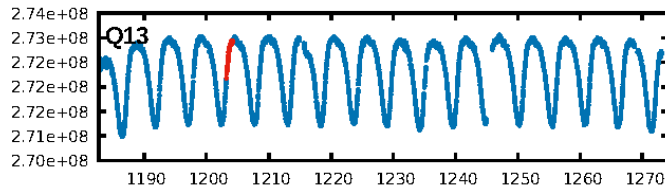
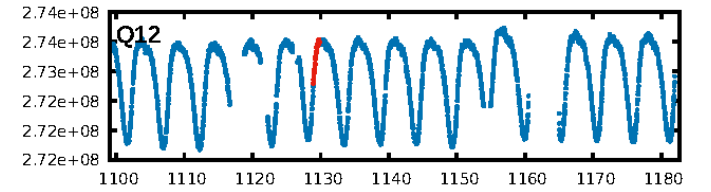
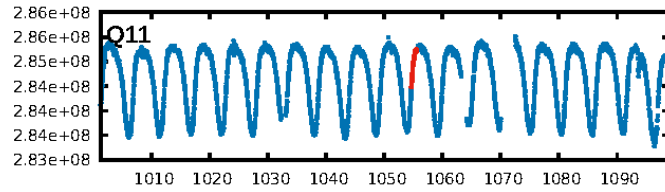
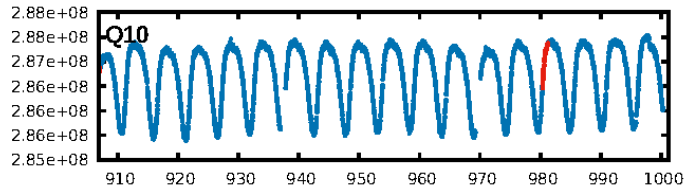
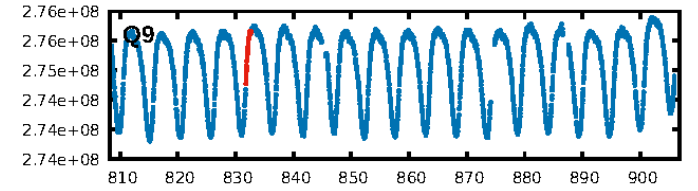
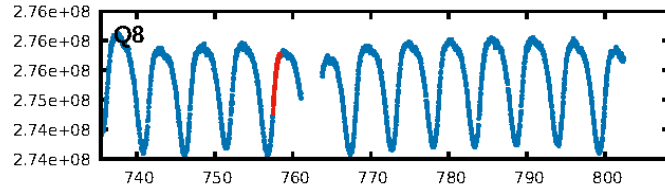
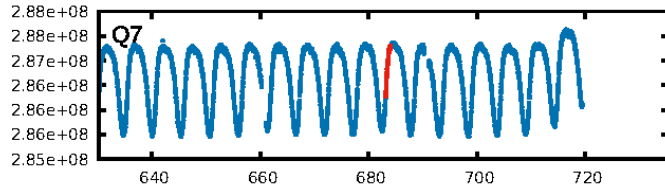
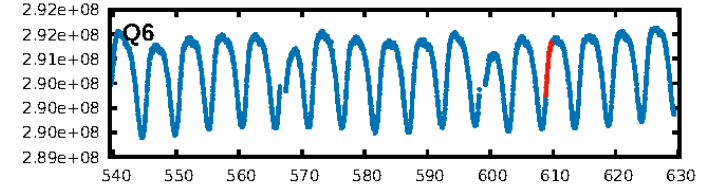
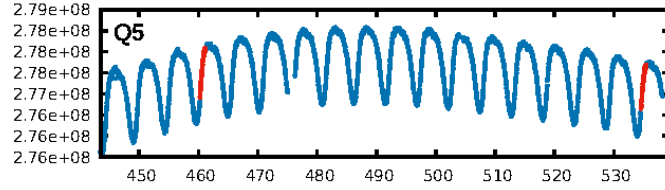
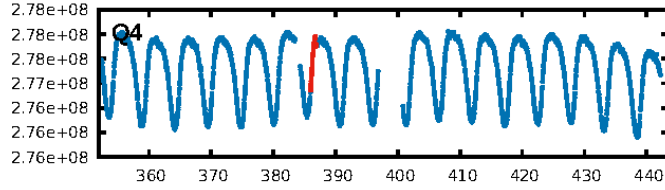
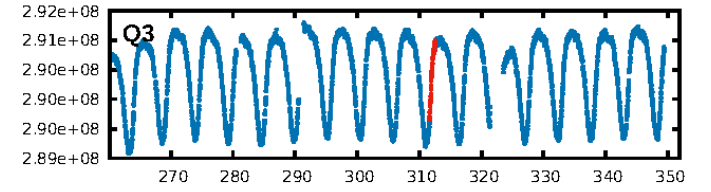
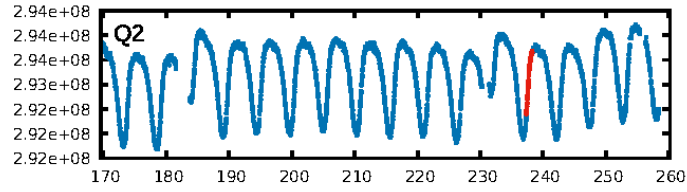
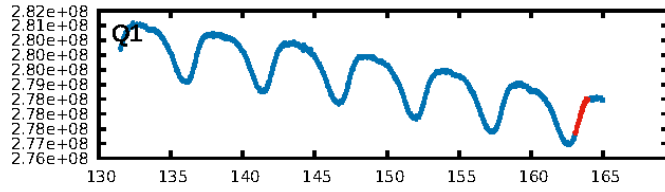
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: 100.0% [98.59σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.09e-24
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 1.664
Centroid-sig: 19.2%
Centroid-so: 1.096 arcsec [1.43σ]
OotOffset-rm: 0.299 arcsec [1.59σ]
KicOffset-rm: 0.292 arcsec [1.90σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 0.00 [0/16]

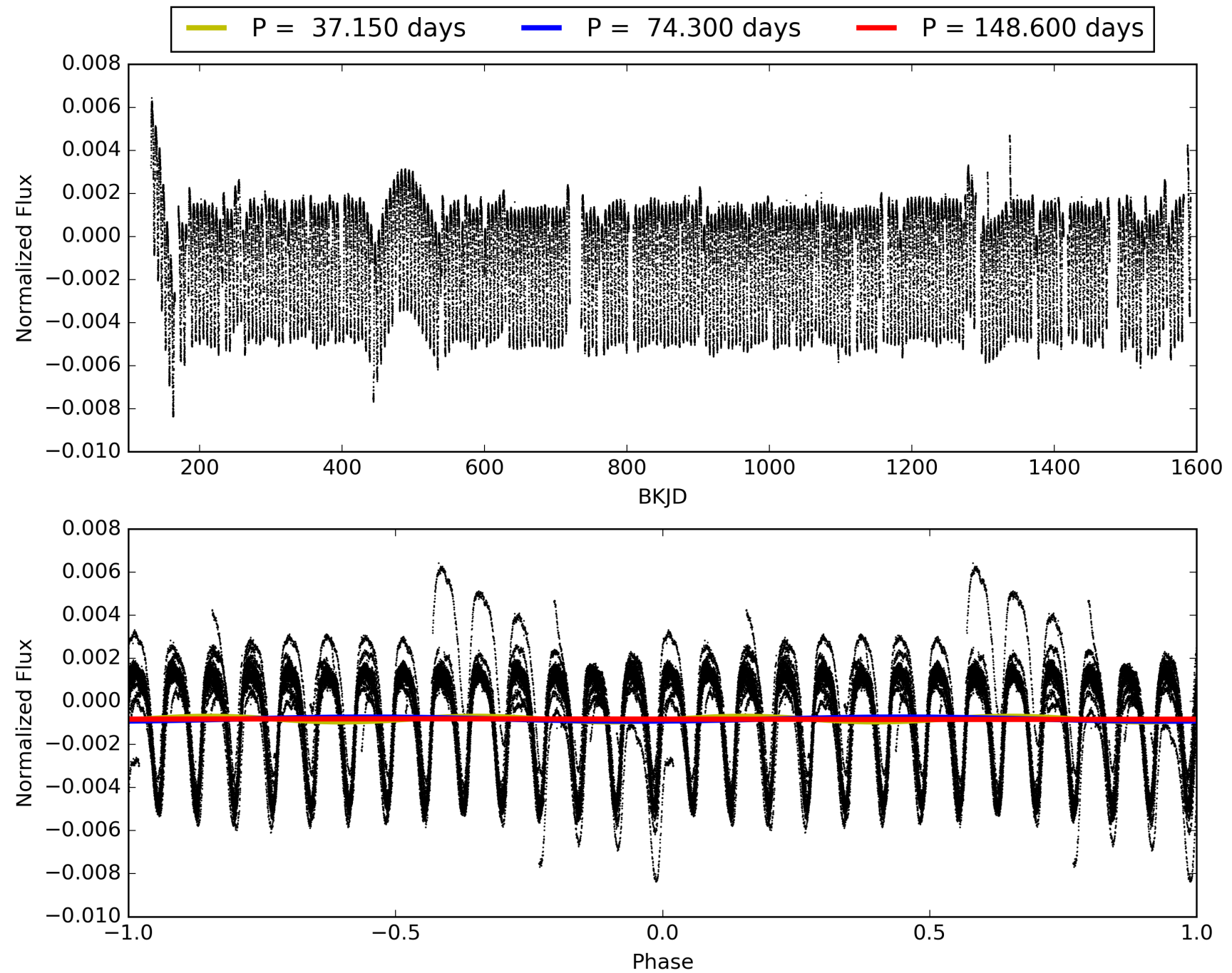
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:25:46 Z

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

TCE 006614892-03, PDC Light Curves

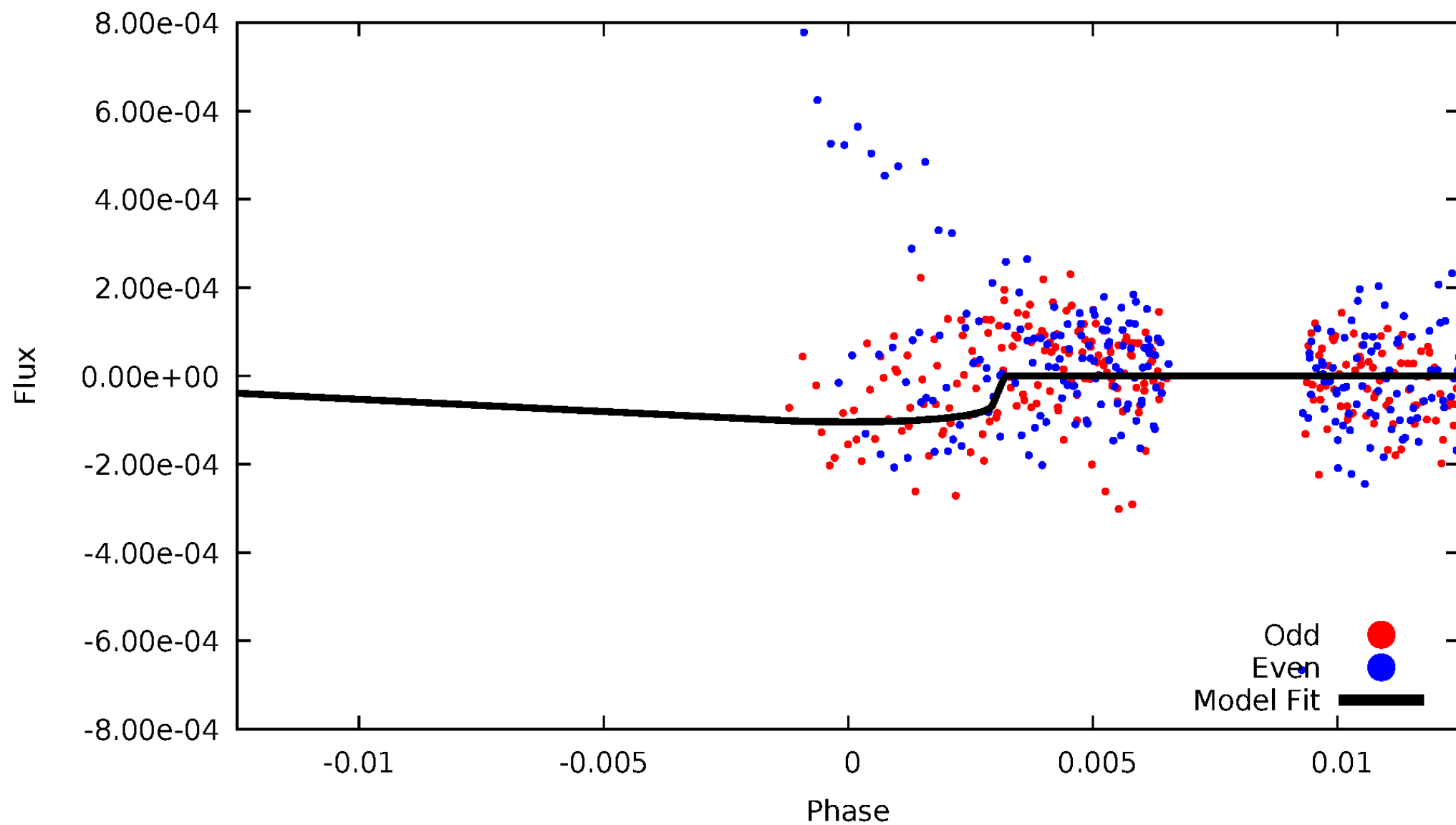


TCE 006614892-03



DV Odd/Even

TCE 006614892-03

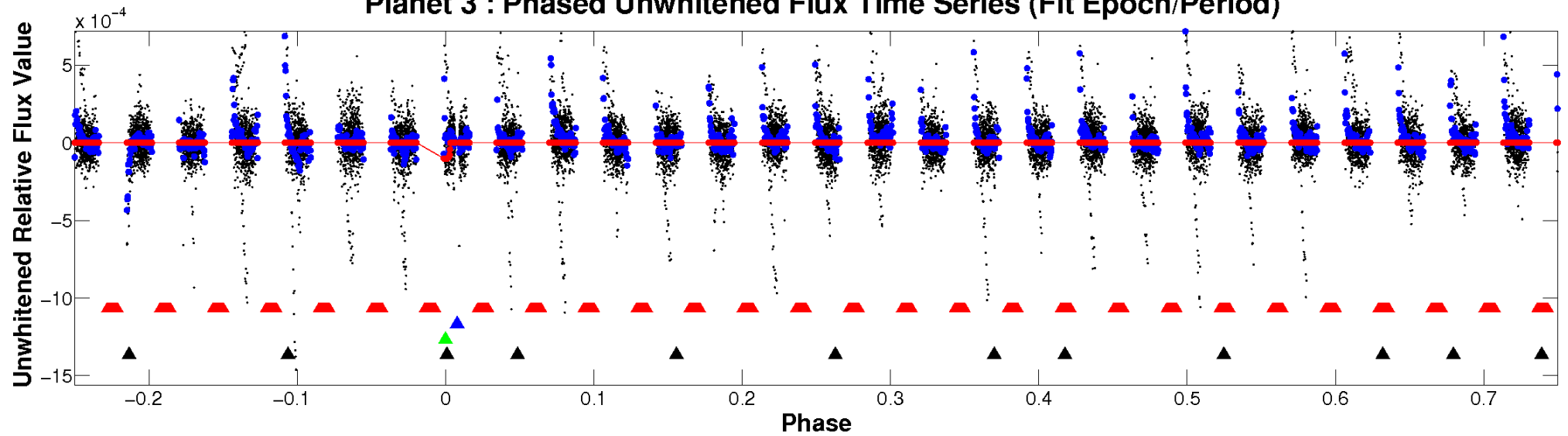


ALT Odd/Even

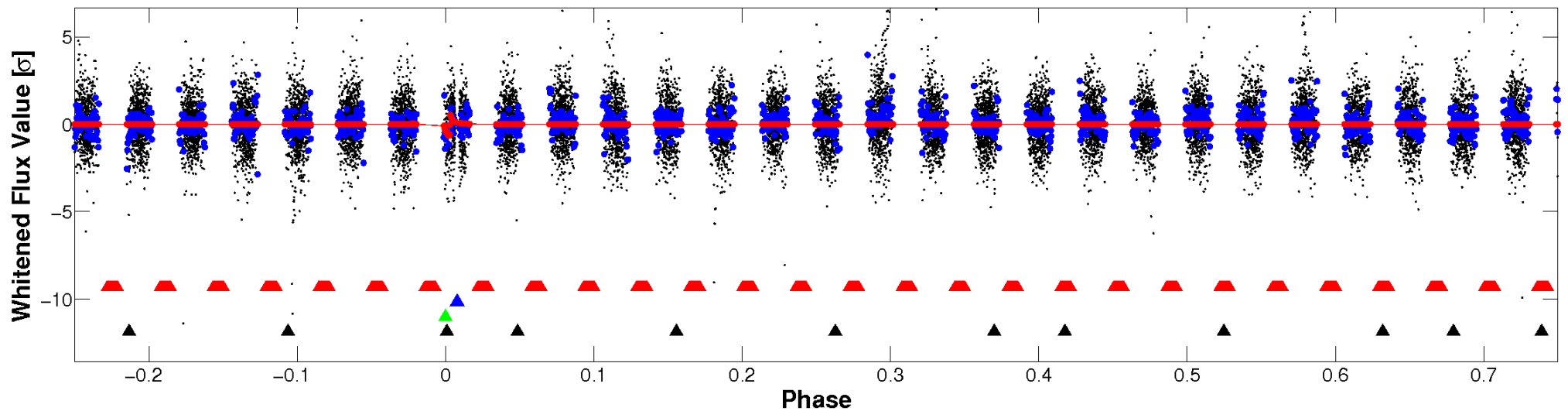
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

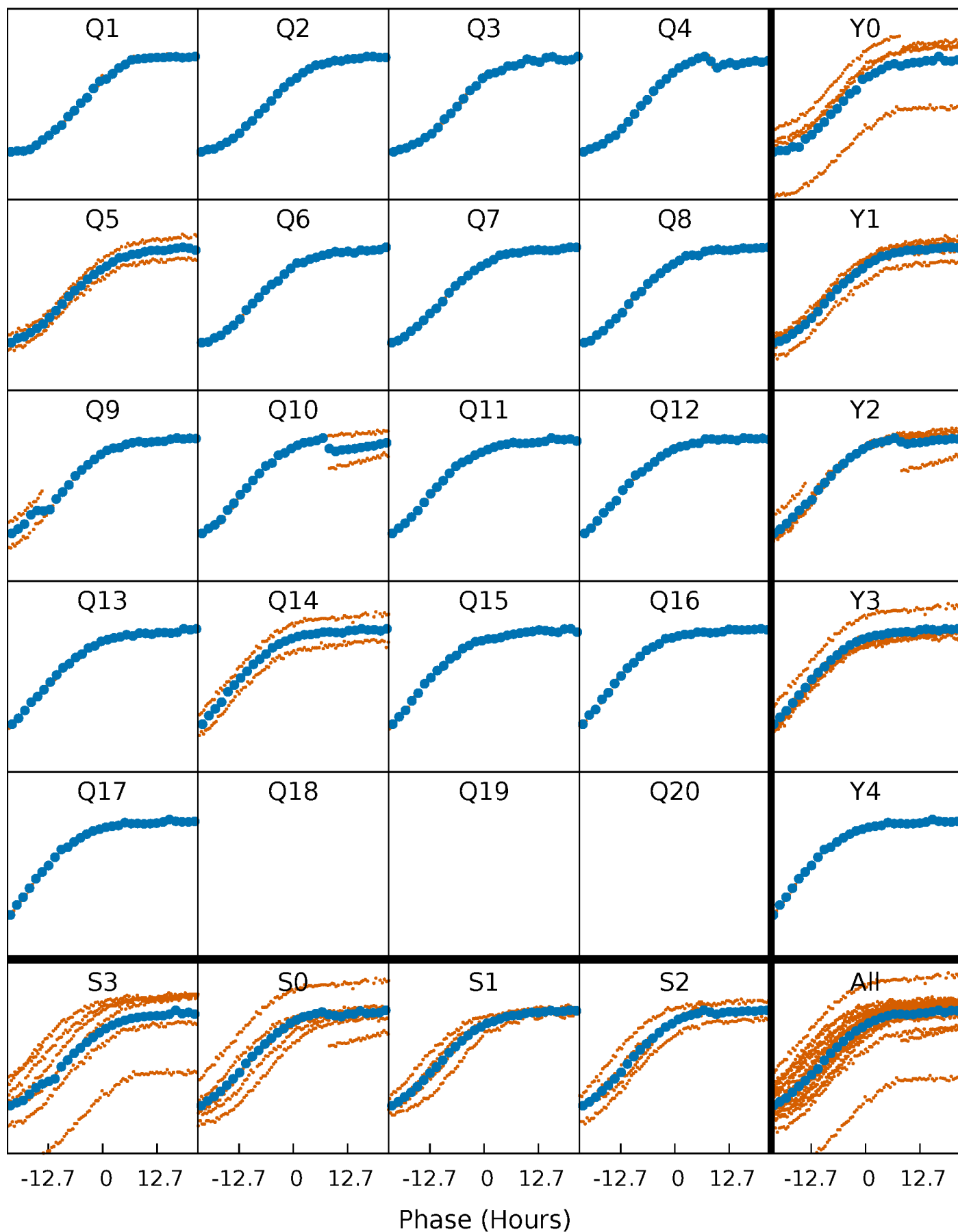


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



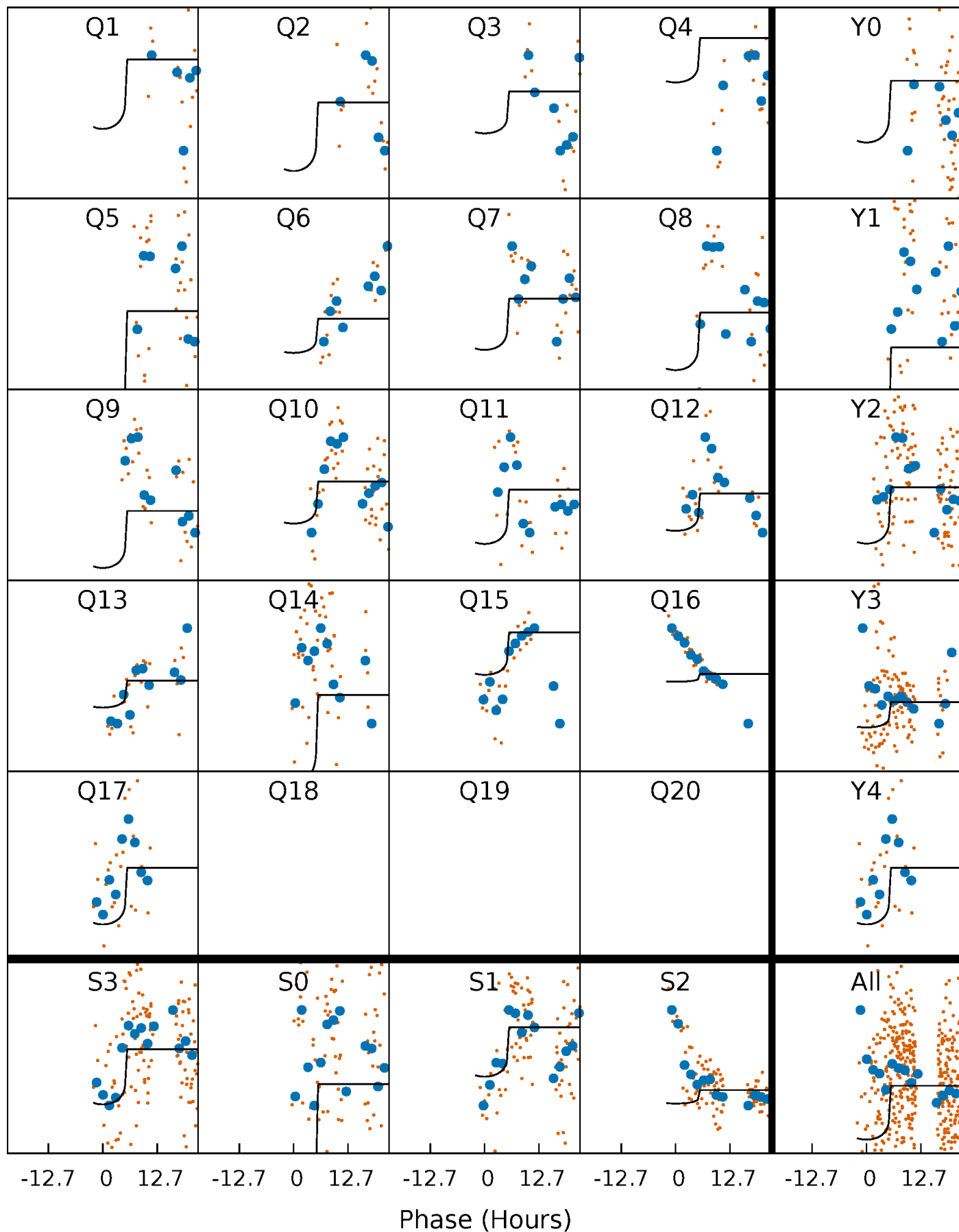
PDC Quarter-Phased Transit Curves

TCE 006614892-03 P= 74.299837 Days $T_0=163.516585$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006614892-03 P= 74.299837 Days $T_0=163.516585$ (BKJD)

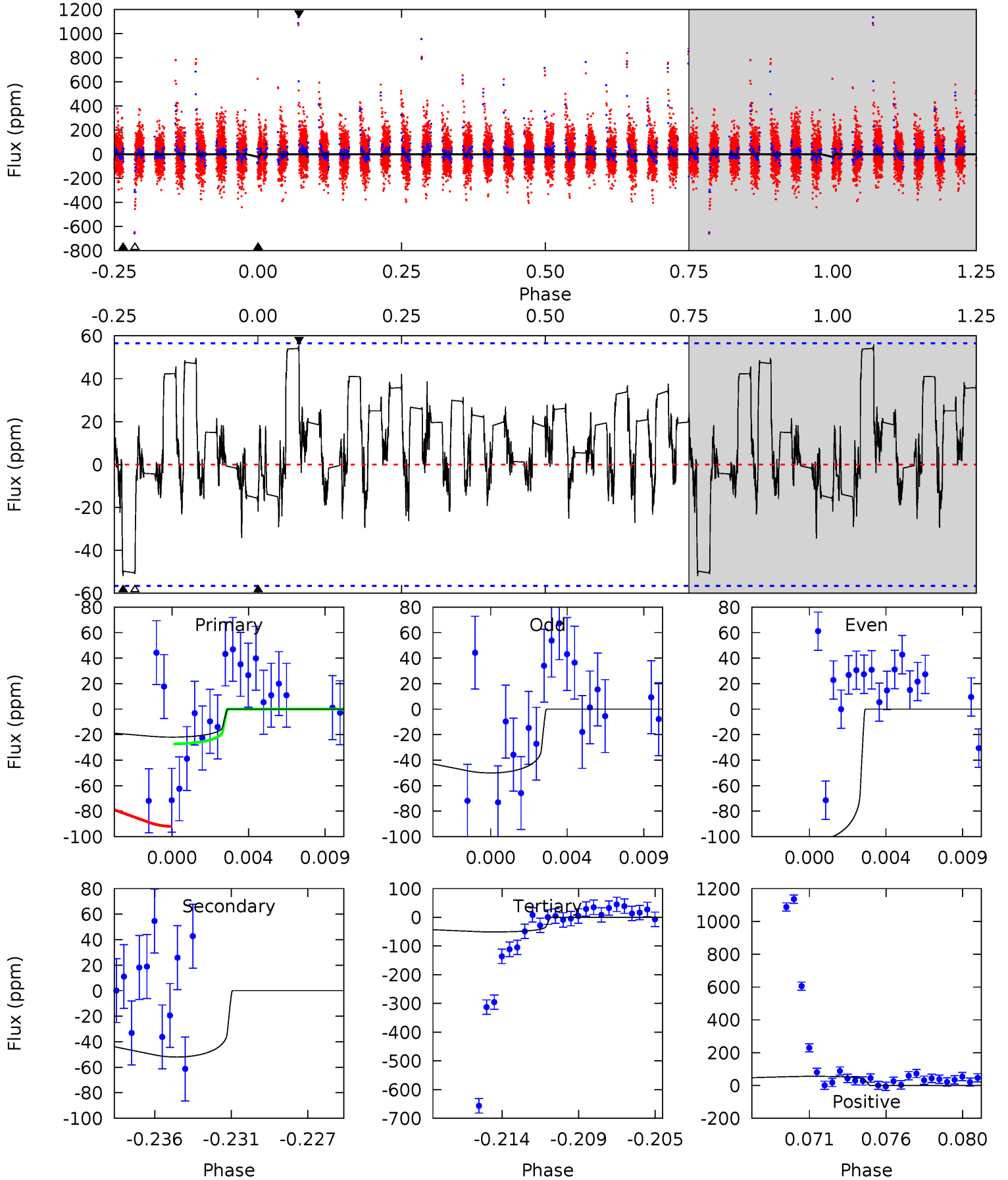


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006614892-03, P = 74.299837 Days, E = 89.216748 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.01	4.76	4.67	5.14	5.18	2.84	1.12	-2.66	-3.13	0.09	-0.38	2.44	-0.18	0.52	1.63



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006614892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7888^{+216}_{-324}	$3.972^{+0.210}_{-0.140}$	$-0.040^{+0.200}_{-0.350}$	$2.332^{+0.452}_{-0.678}$	$1.859^{+0.123}_{-0.368}$	$0.206^{+0.284}_{-0.077}$
	+3%/-4%	+5%/-4%	+500%/-875%	+19%/-29%	+7%/-20%	+138%/-37%
Source	KIC0	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 006614892-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 11	$2.40^{+1.33}_{-1.16}$	1129^{+77}_{-90}	6585^{+3303}_{-1181}	871^{+2308}_{-513}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

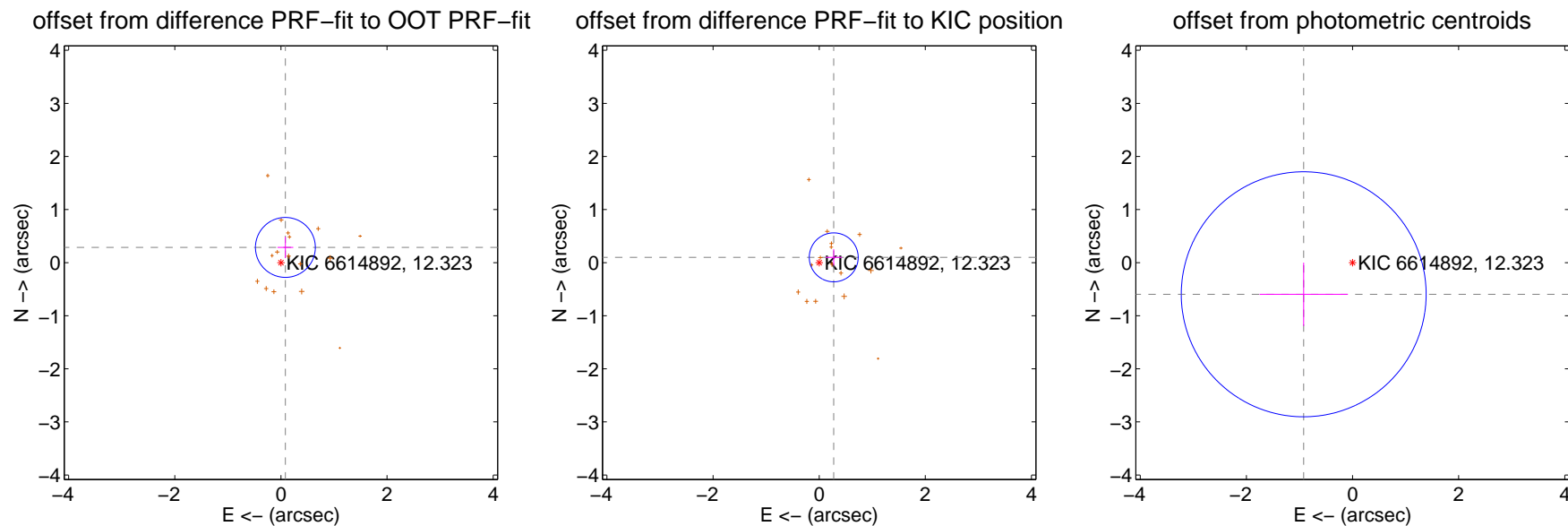
DV Centroid Data

Supplemental centroid analysis for 006614892-03. Kepler magnitude: 12.32. Transit SNR 6.85

There are 0 quarters with good PRF difference image offsets

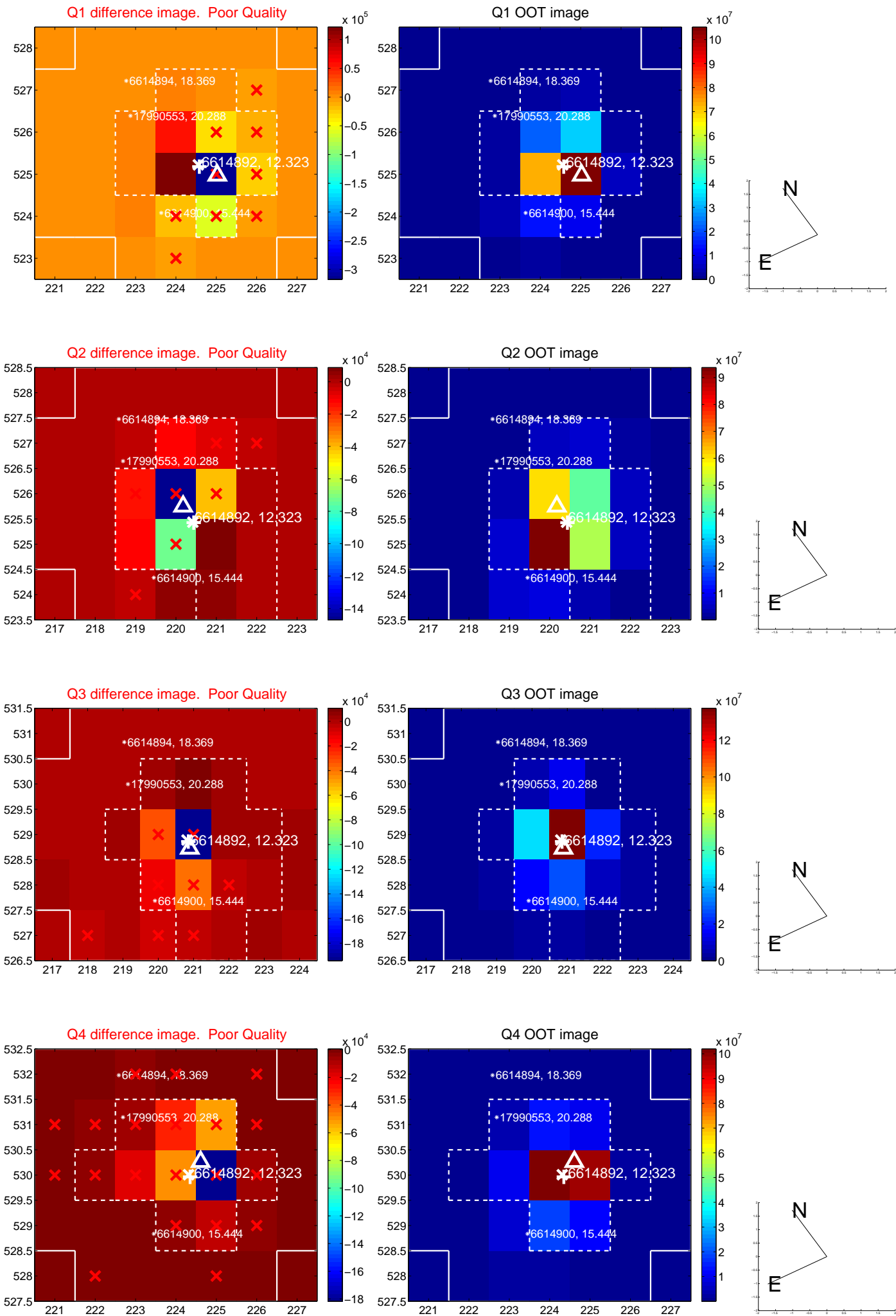
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.299 ± 0.188	1.59	-0.084 ± 0.148	0.287 ± 0.198
PRF-fit source offset from KIC position	0.292 ± 0.154	1.90	-0.274 ± 0.154	0.100 ± 0.153
photometric centroid source offset	1.10 ± 0.77	1.43	0.92 ± 0.83	-0.60 ± 0.60

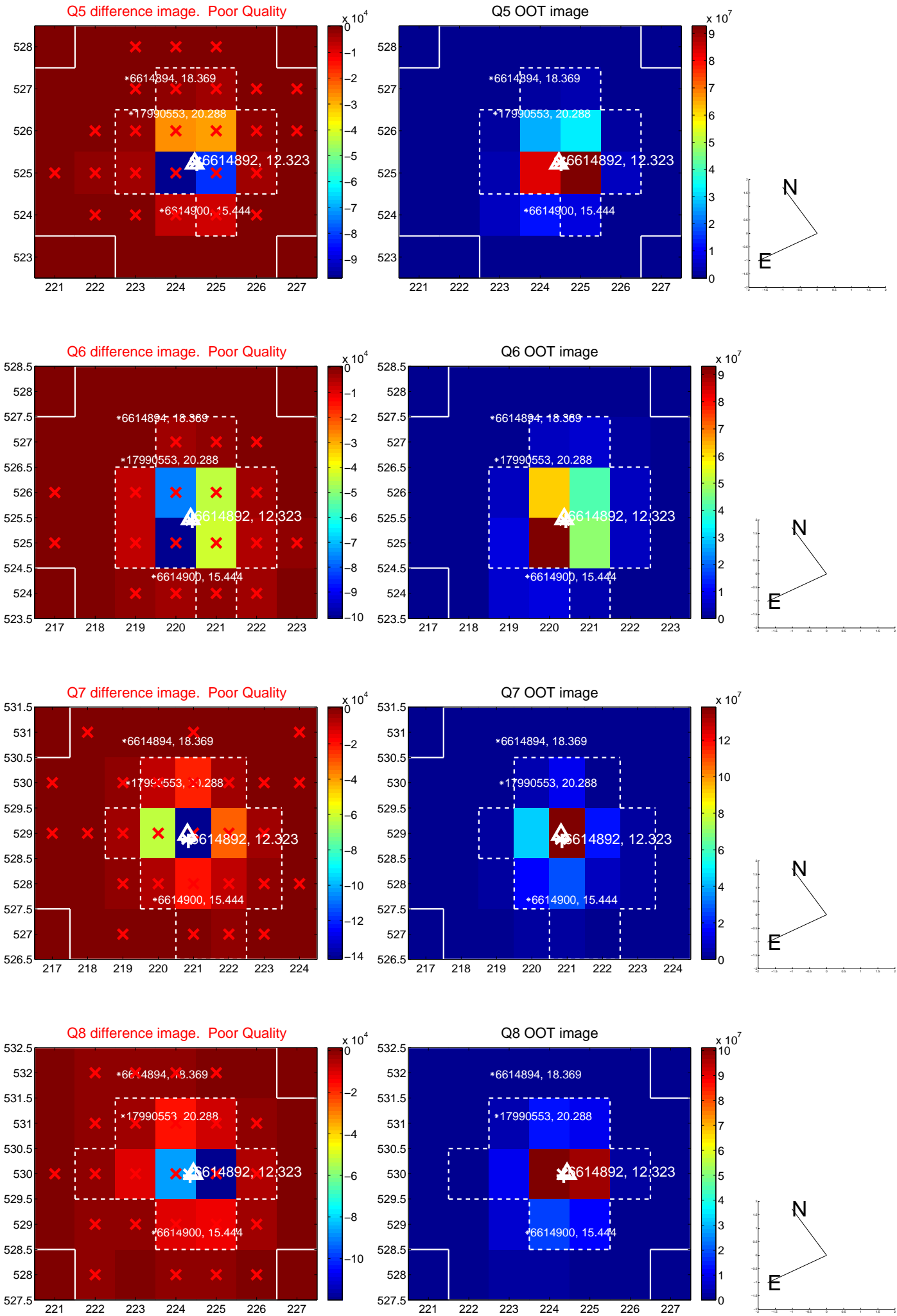


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

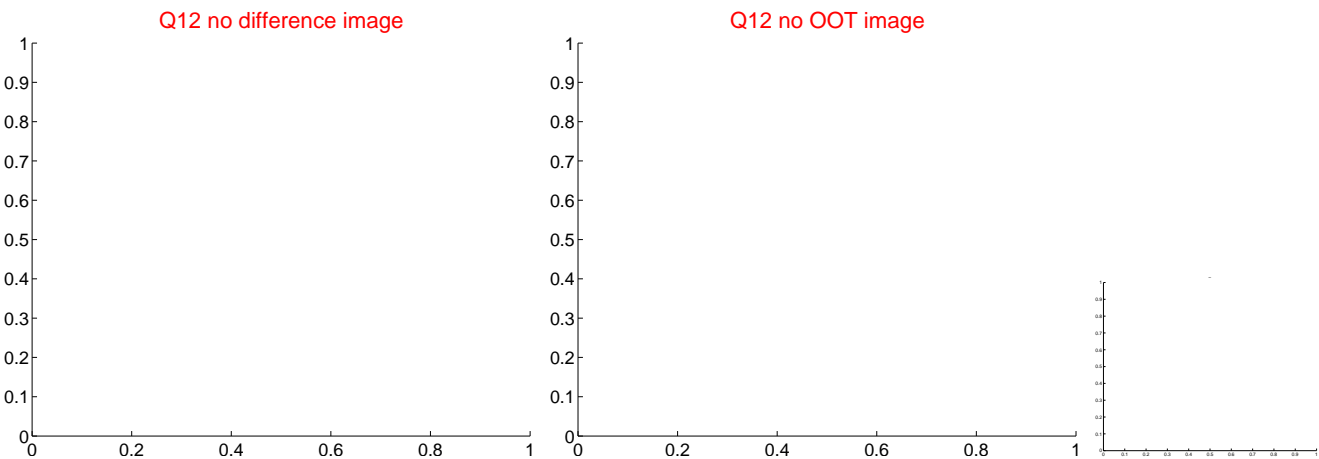
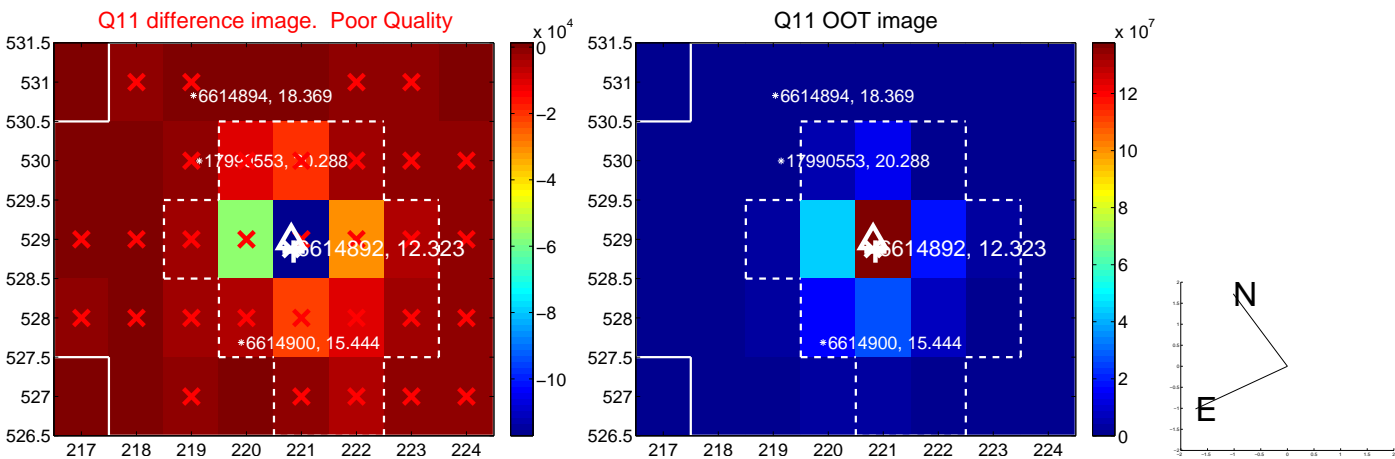
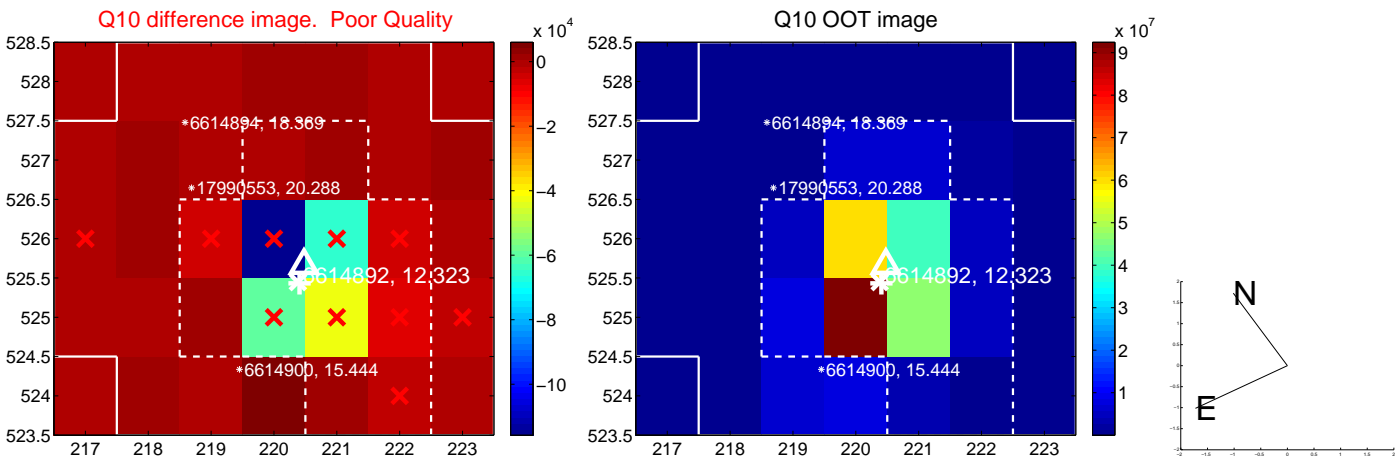
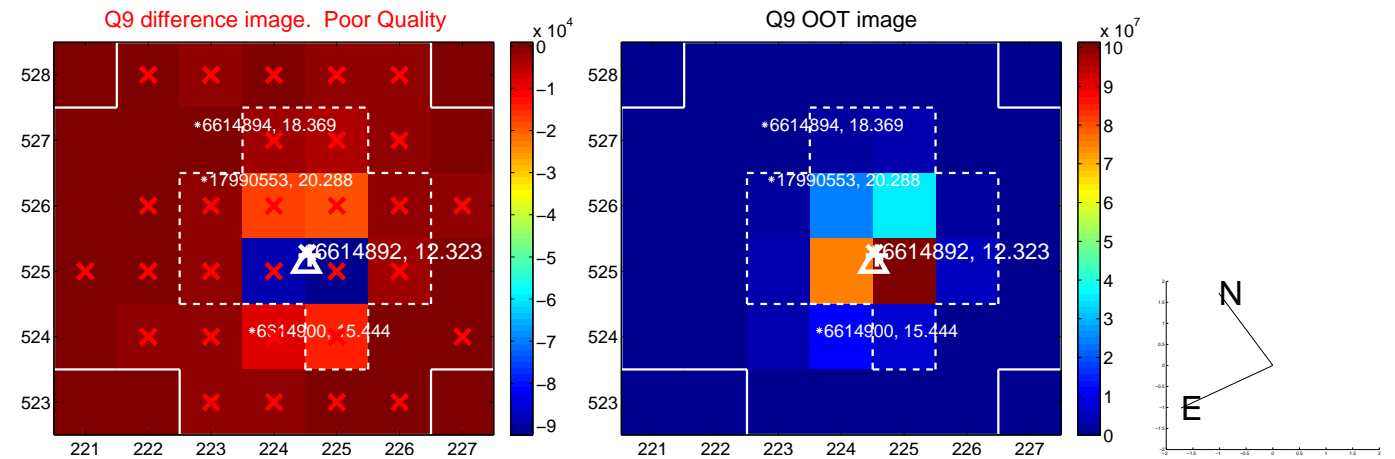
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



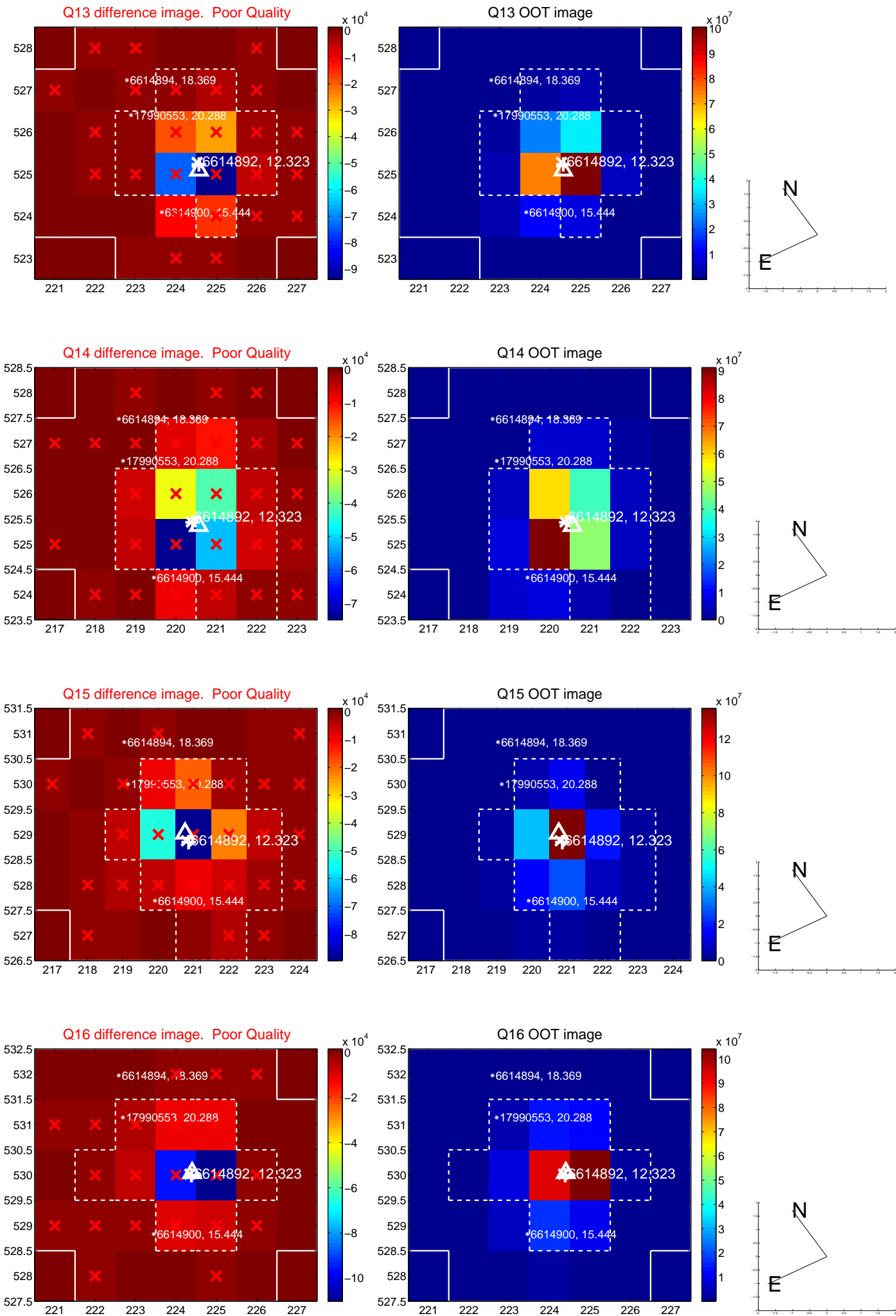
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



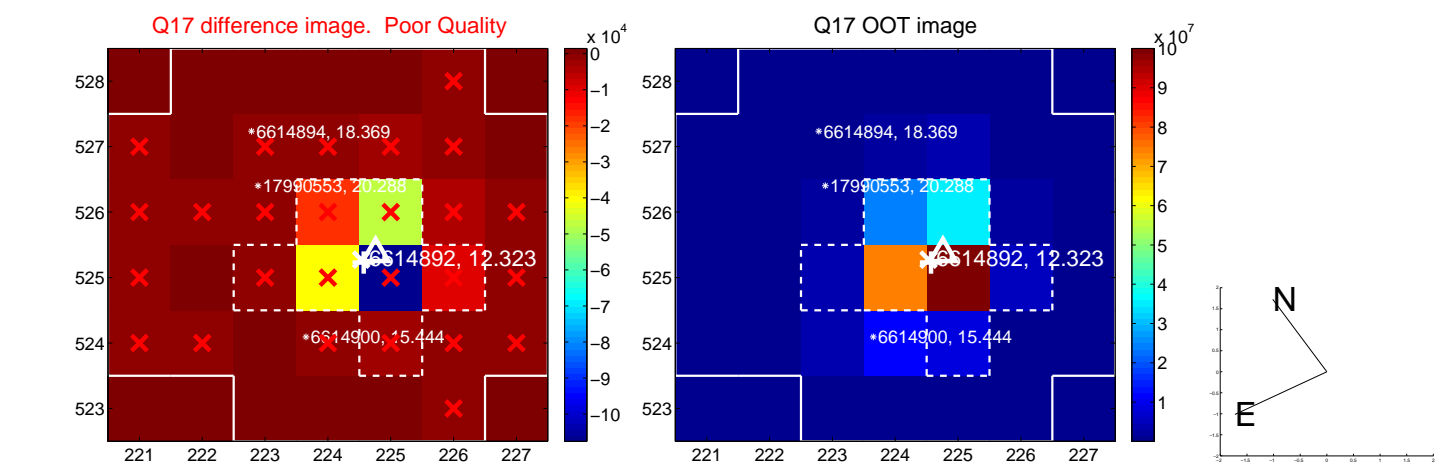
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



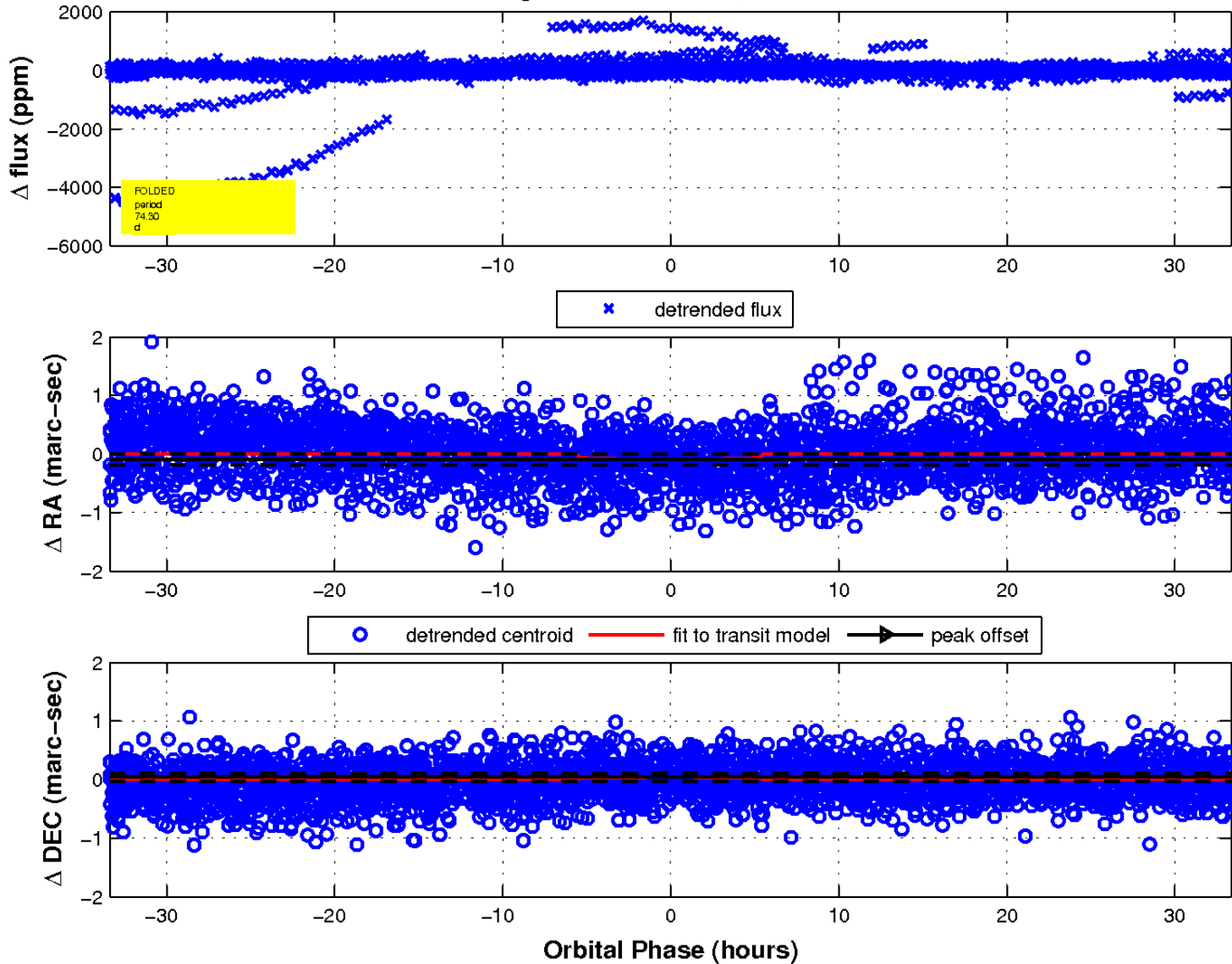
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



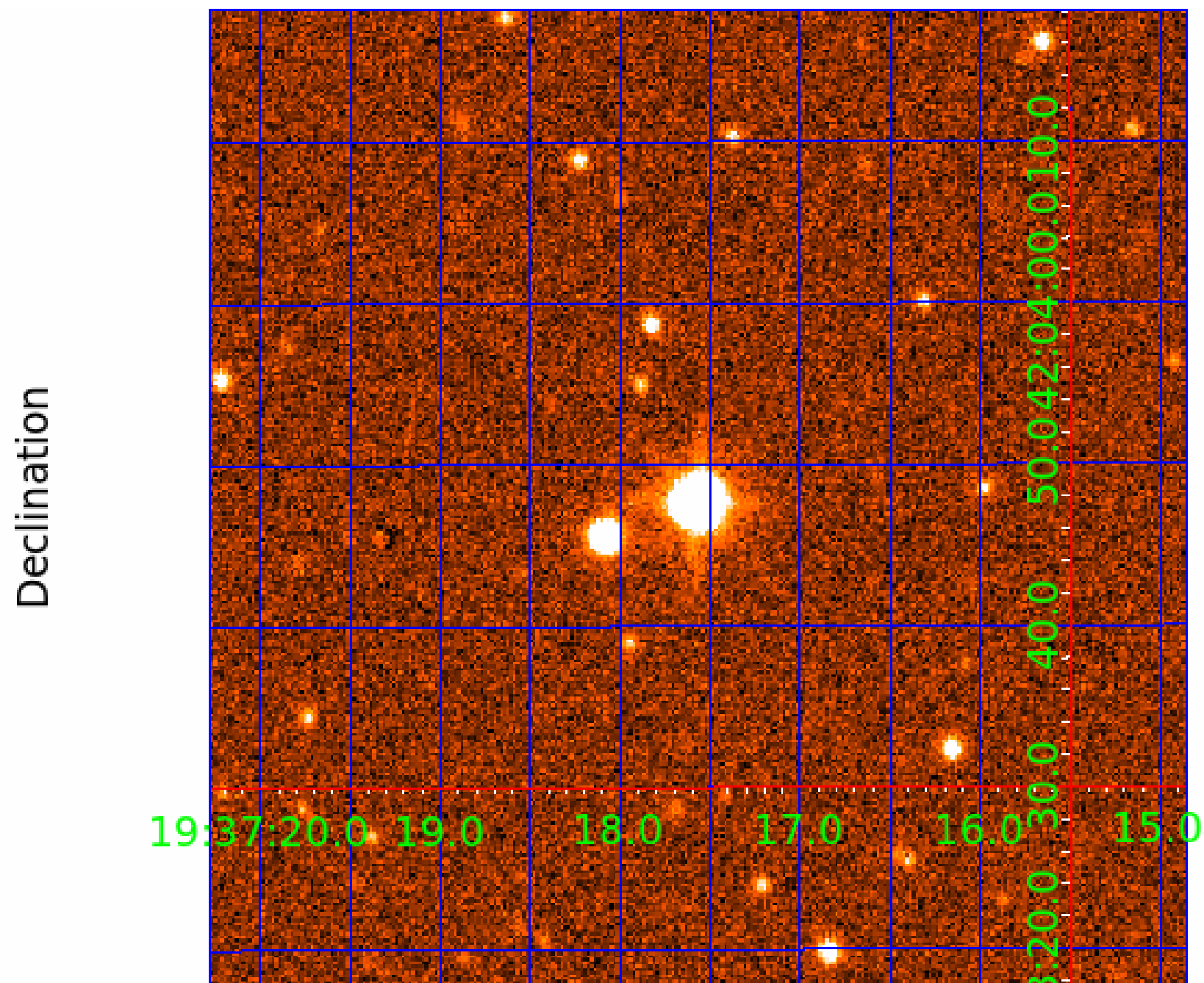
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 4



UKIRT Image



KIC 006614892

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})
006614892-01	OBS	No	2.652546	133.835009	13.7	14.838	14.9	7.7	2.33	7888	0.93	8865.37
006614892-02	OBS	No	74.298419	164.116454	79.3	0.630	15.6	4.8	2.33	7888	2.20	104.22
006614892-03	OBS	No	74.299837	163.516585	104.1	11.139	15.5	6.9	2.33	7888	2.51	104.22
006614892-04	OBS	No	121.179778	218.428063	187.8	2.479	9.4	9.0	2.33	7888	3.68	54.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614892-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
006614892-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006614892-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006614892-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

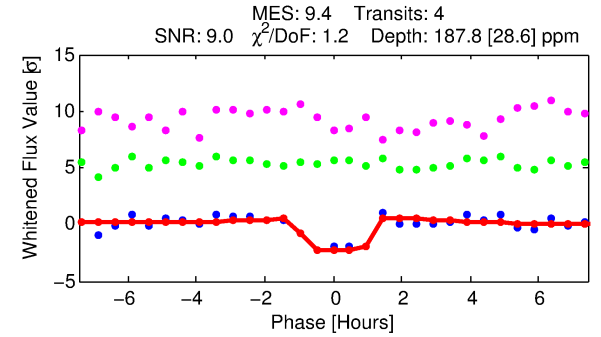
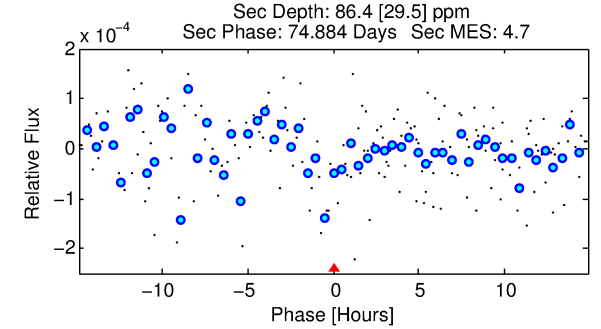
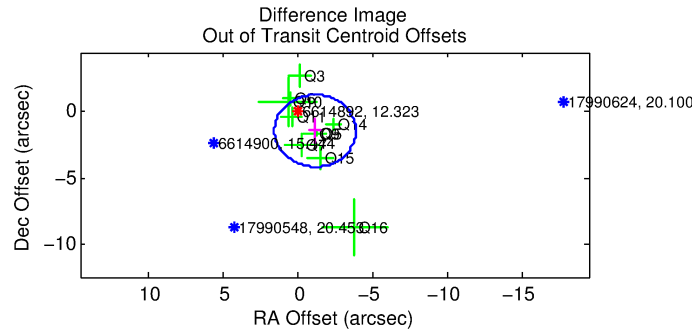
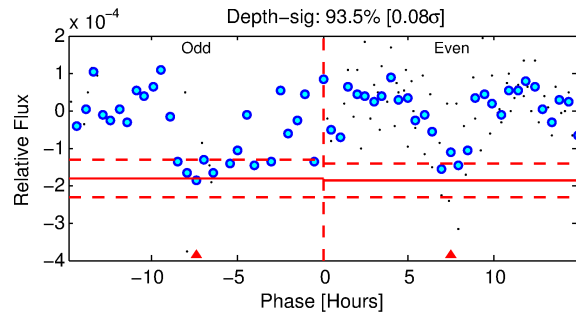
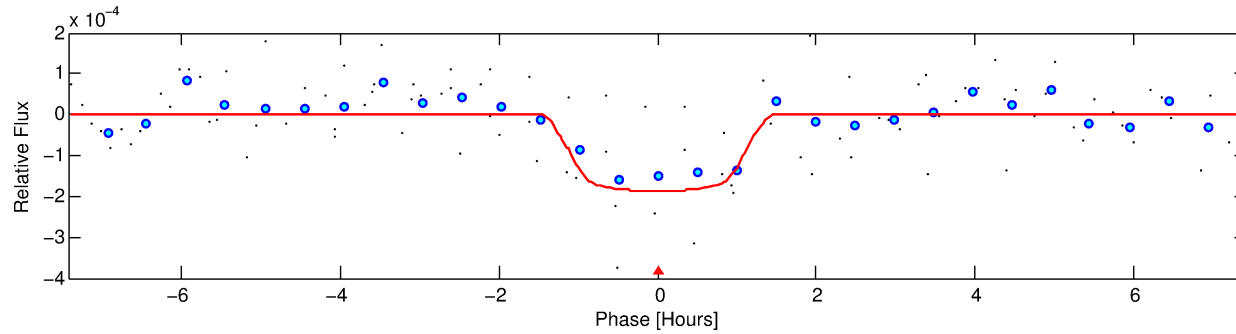
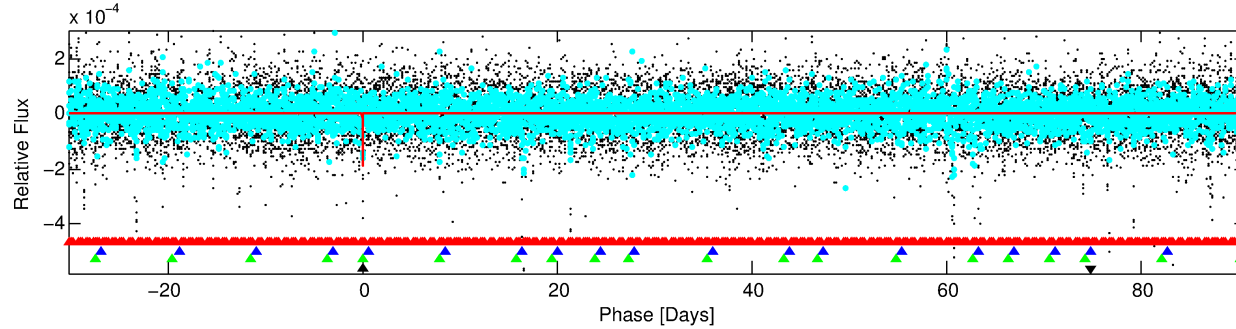
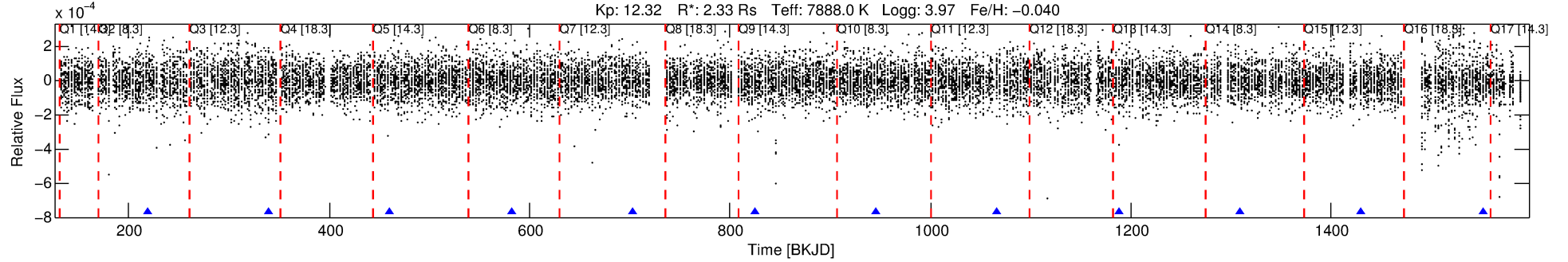
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006614892-04

No Significant Match Found

DV One-Page Summary

KIC: 6614892 Candidate: 4 of 4 Period: 121.180 d



DV Fit Results:

Period = 121.17978 [0.00103] d
Epoch = 218.4281 [0.0085] BKJD
Rp/R* = 0.0145 [0.0166]
a/R* = 182.85 [1324.08]
b = 0.89 [1.73]
Seff = 54.28 [22.28]
Teq = 692 [71] K
Rp = 3.68 [4.36] Re
a = 0.5895 [0.1486] AU
Ag = 1219.15 [2868.13] [0.42 σ]
Teffp = 6323 [3680] K [1.53 σ]

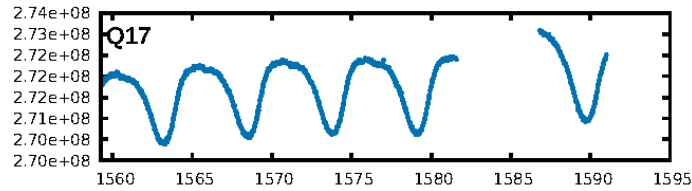
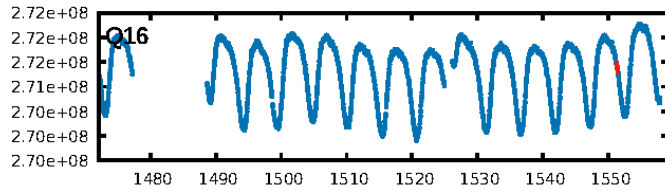
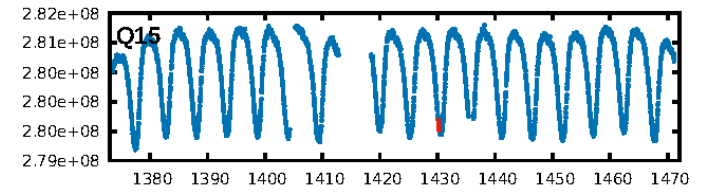
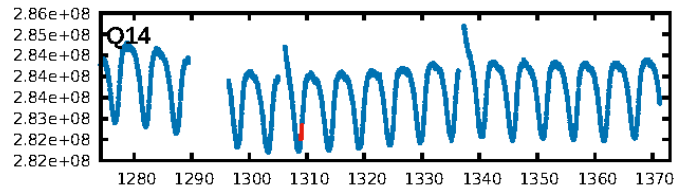
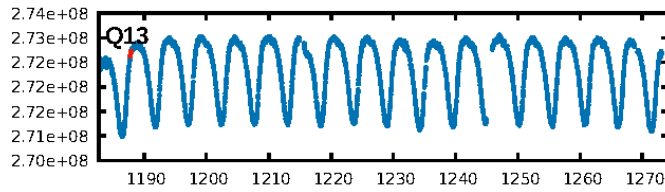
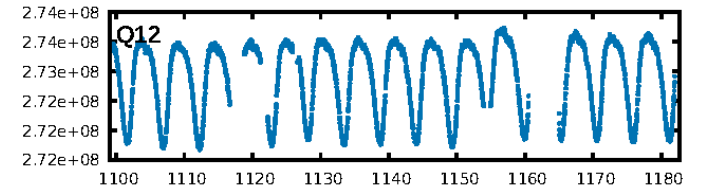
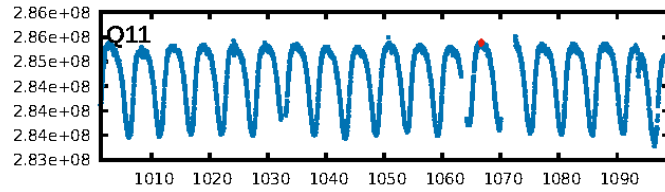
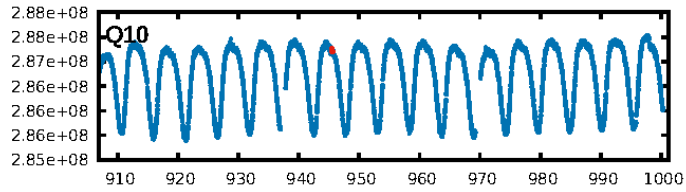
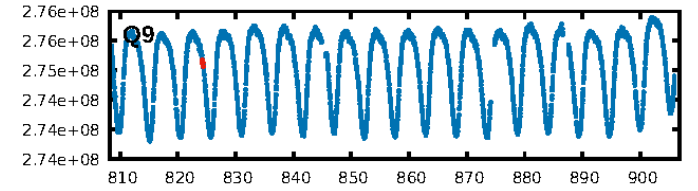
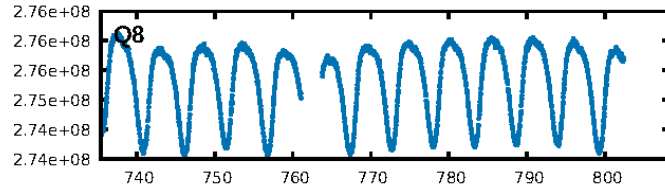
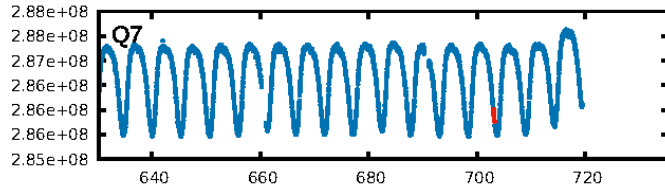
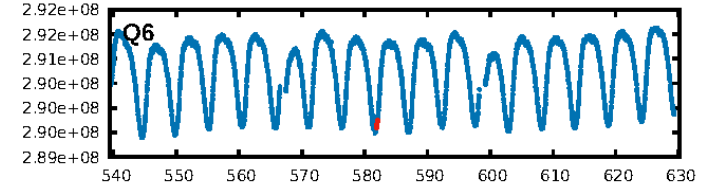
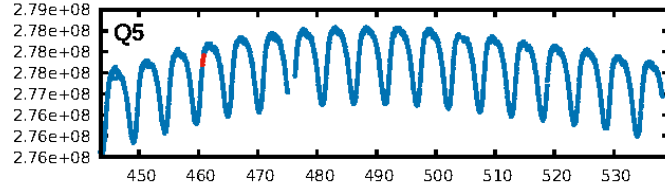
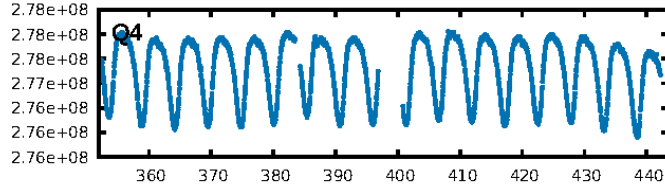
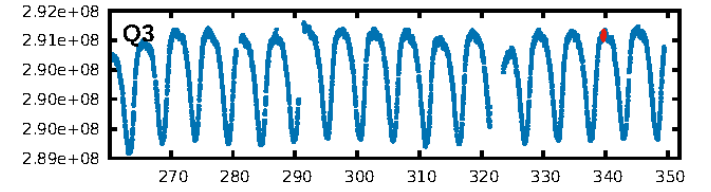
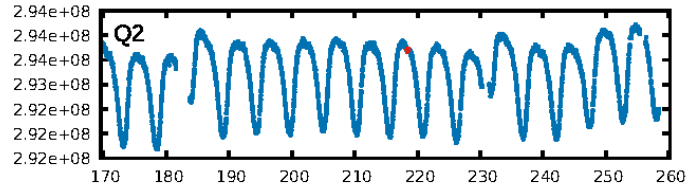
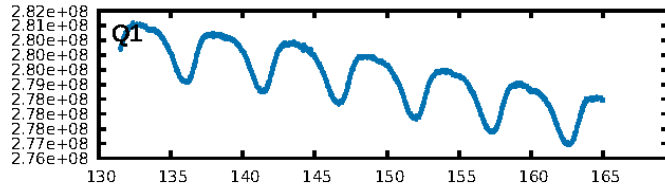
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [98.59 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.3%
ModelChiSquareGof-sig: 77.3%
Bootstrap-pfa: 2.19e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.726
Centroid-sig: 36.8%
Centroid-so: 0.924 arcsec [1.20 σ]
OotOffset-rm: 1.882 arcsec [2.07 σ]
OotOffset-st: 3/4/1/2 [10]
KicOffset-rm: 2.036 arcsec [2.04 σ]
KicOffset-st: 3/4/1/2 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.55 [6/11]

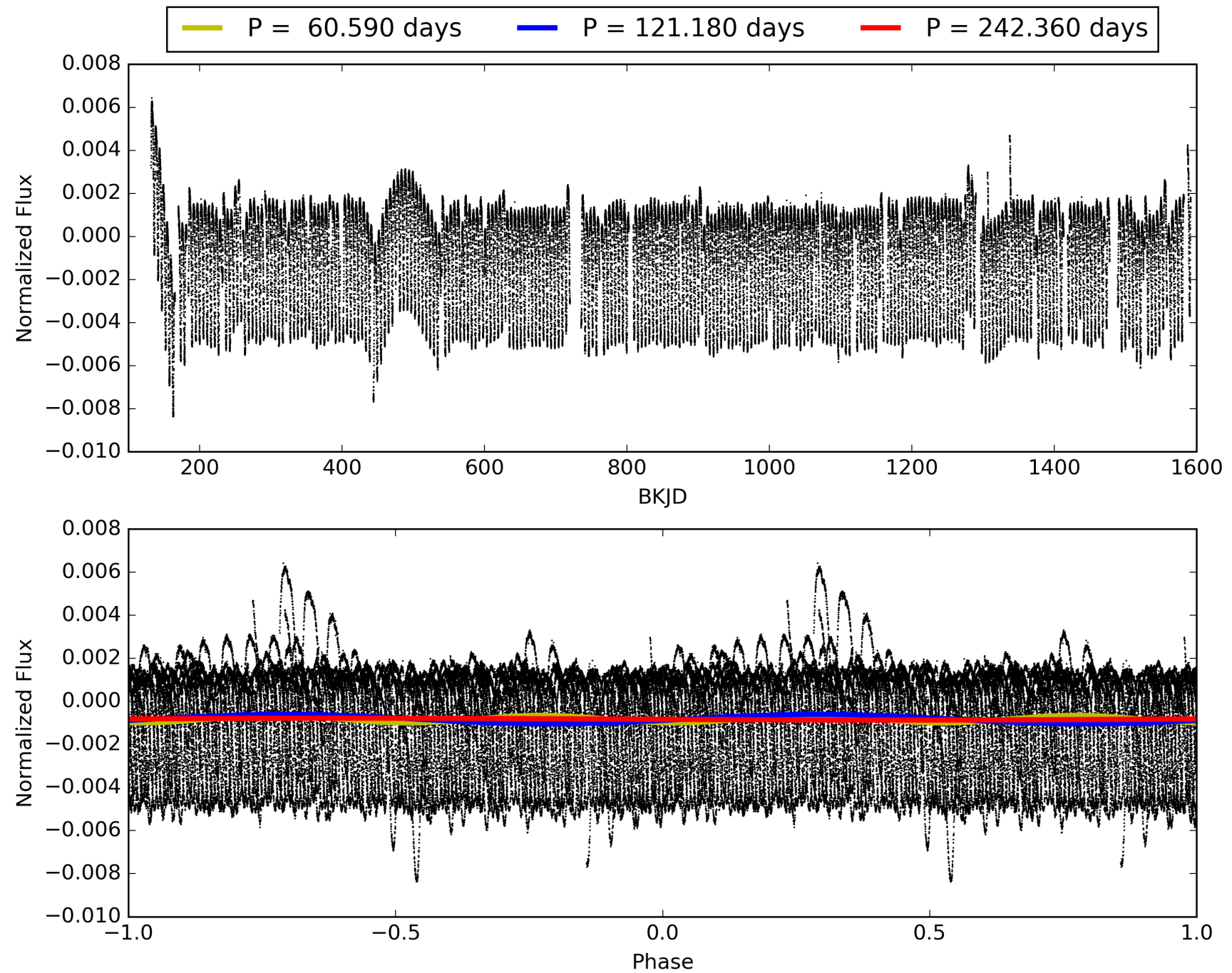
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:25:51 Z

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

TCE 006614892-04, PDC Light Curves

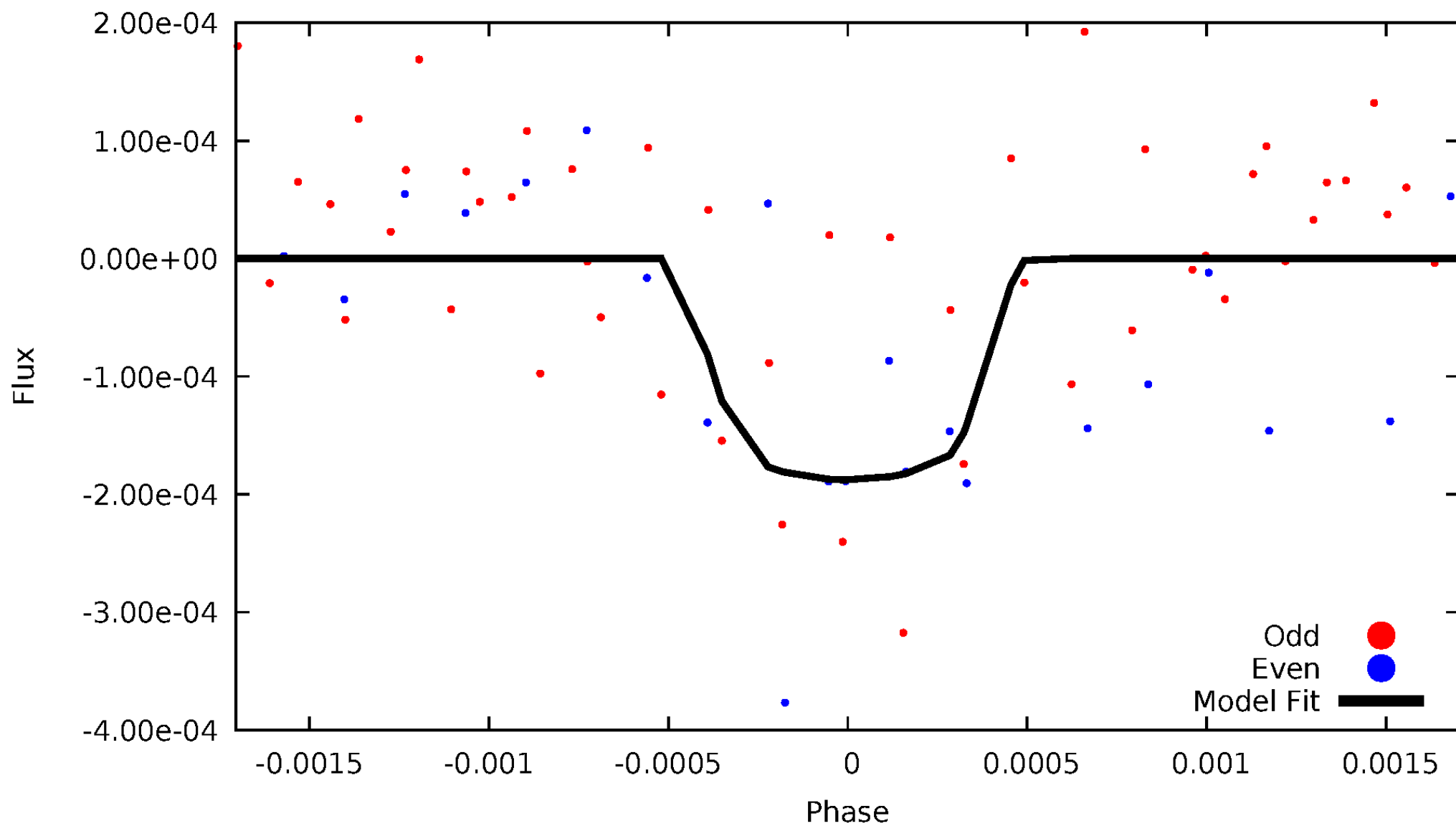


TCE 006614892-04



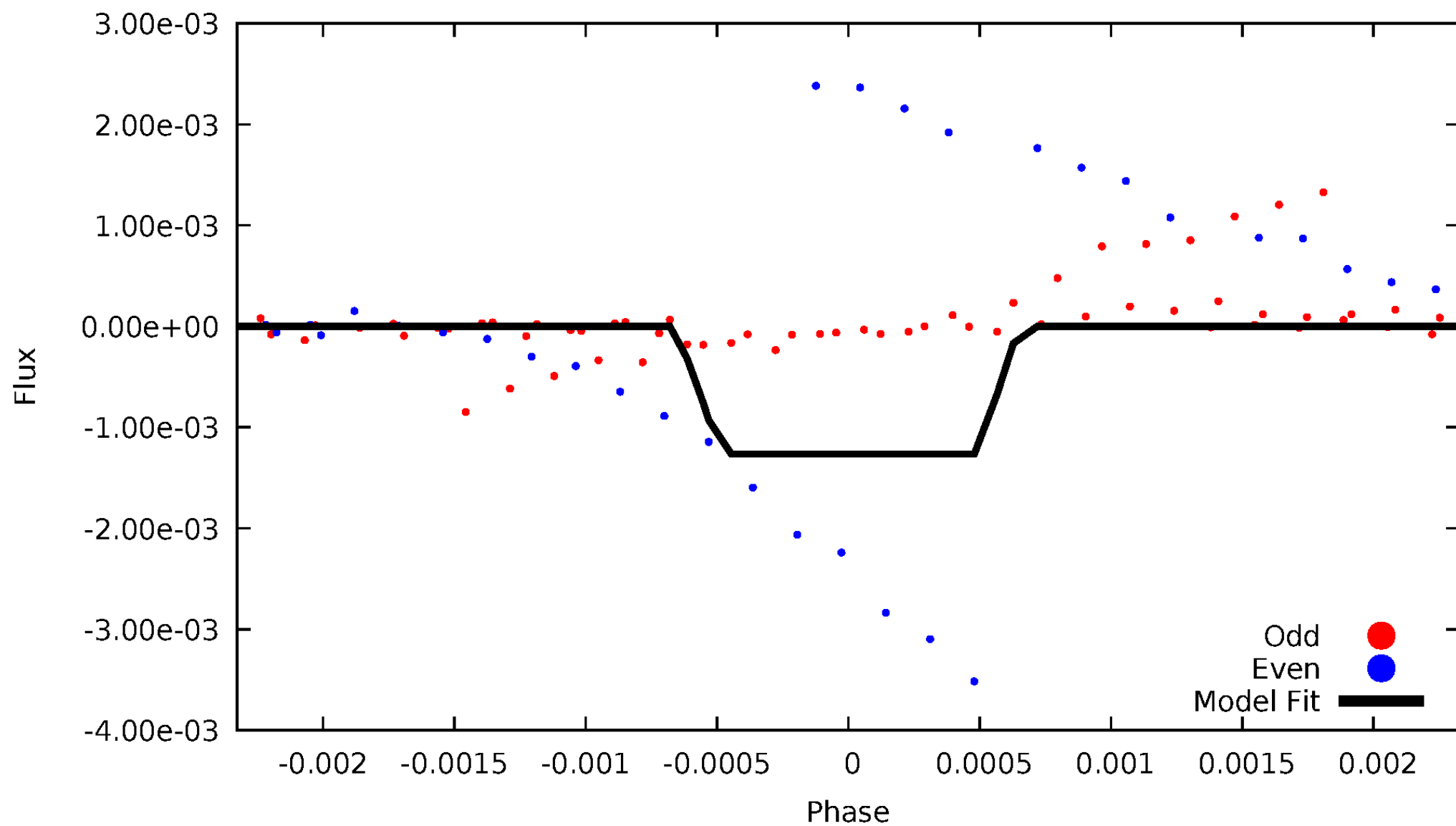
DV Odd/Even

TCE 006614892-04



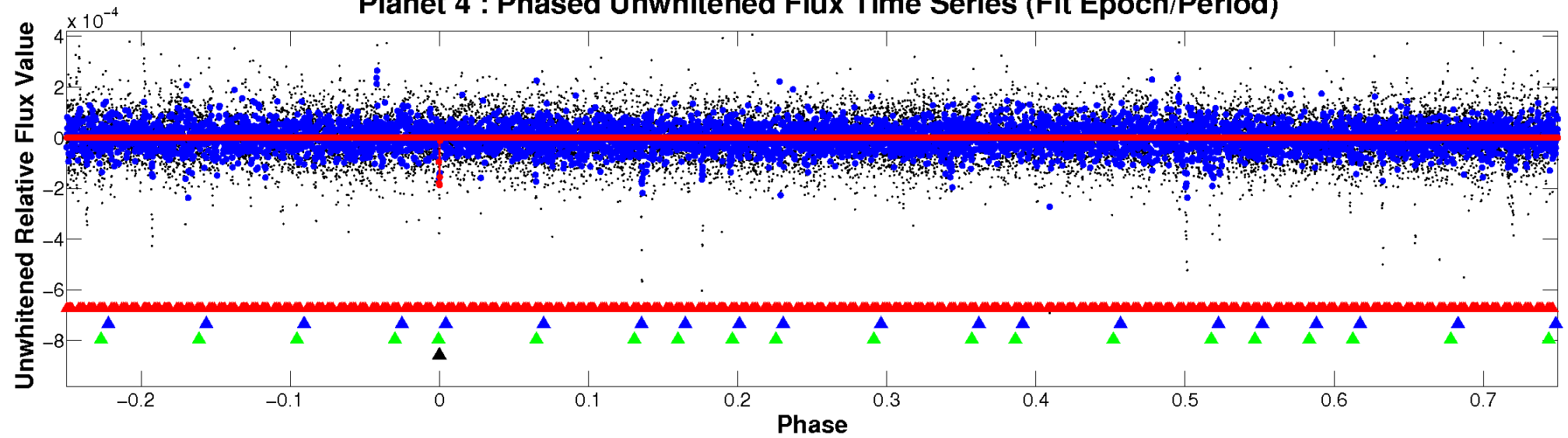
ALT Odd/Even

TCE 006614892-04

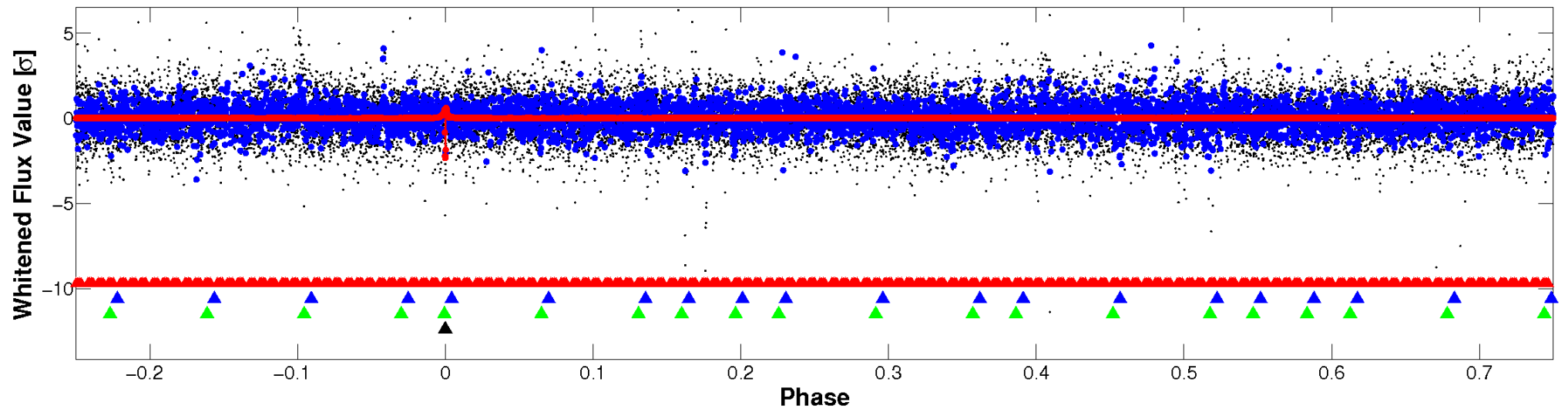


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

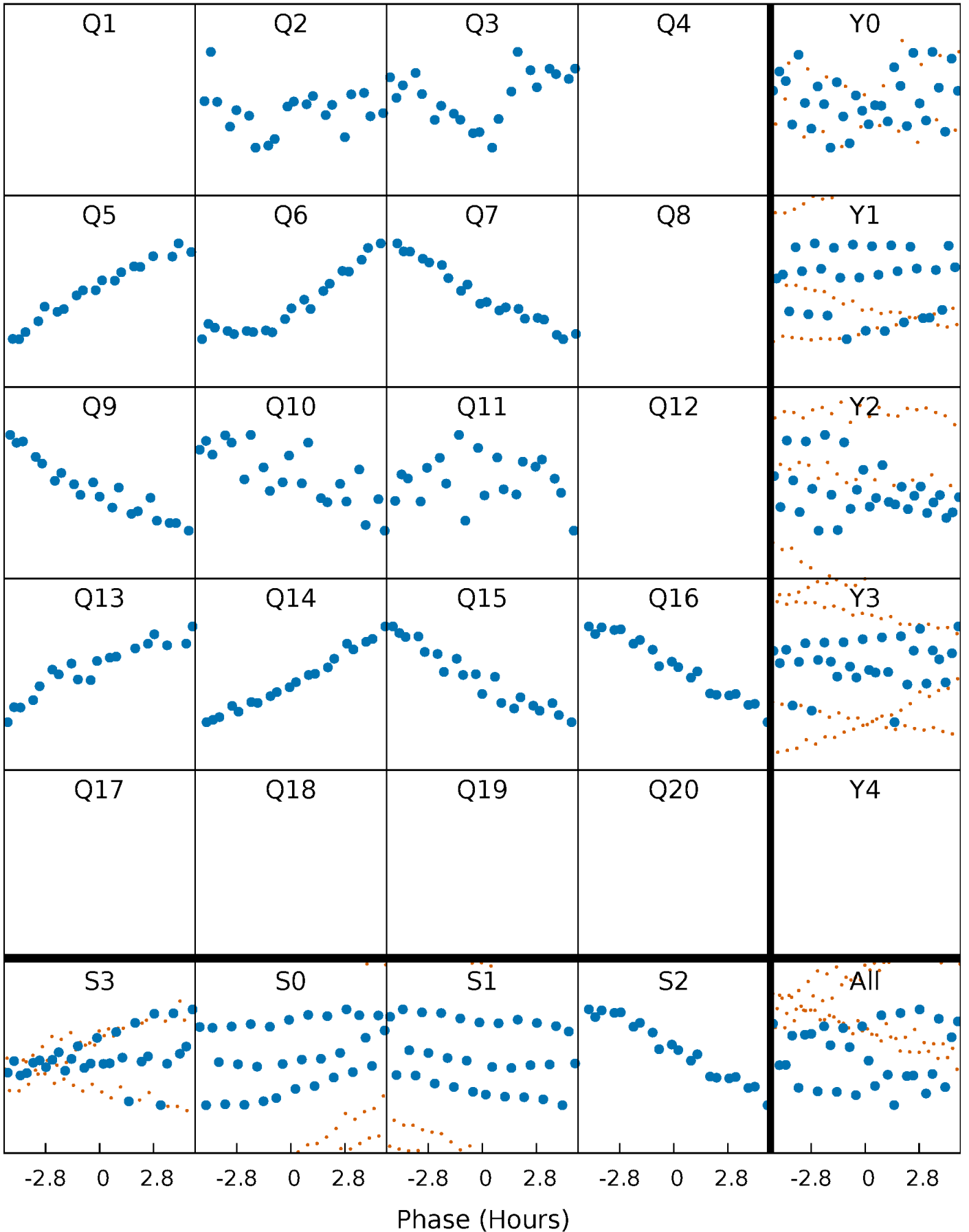


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



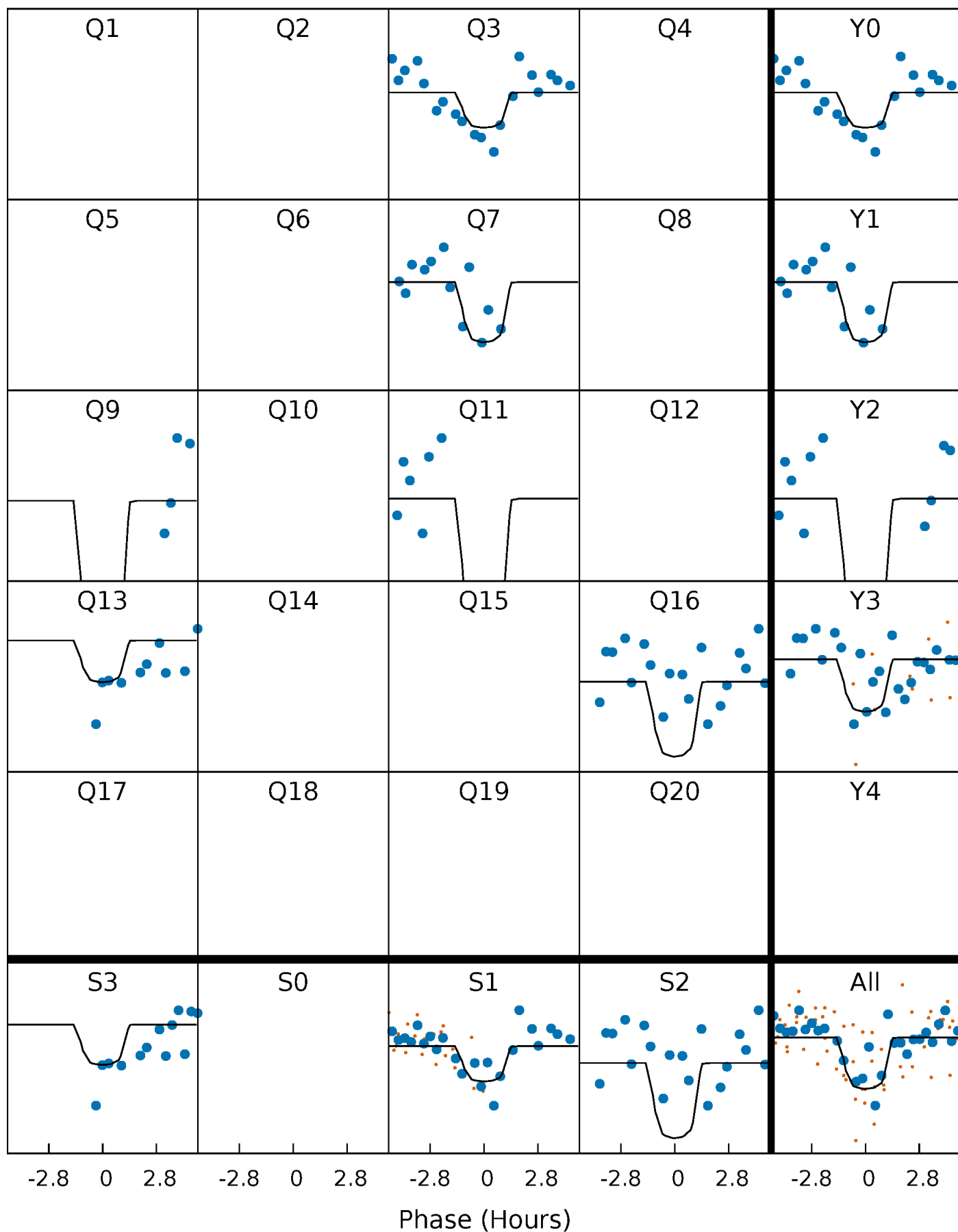
PDC Quarter-Phased Transit Curves

TCE 006614892-04 P=121.179778 Days $T_0=218.428063$ (BKJD)



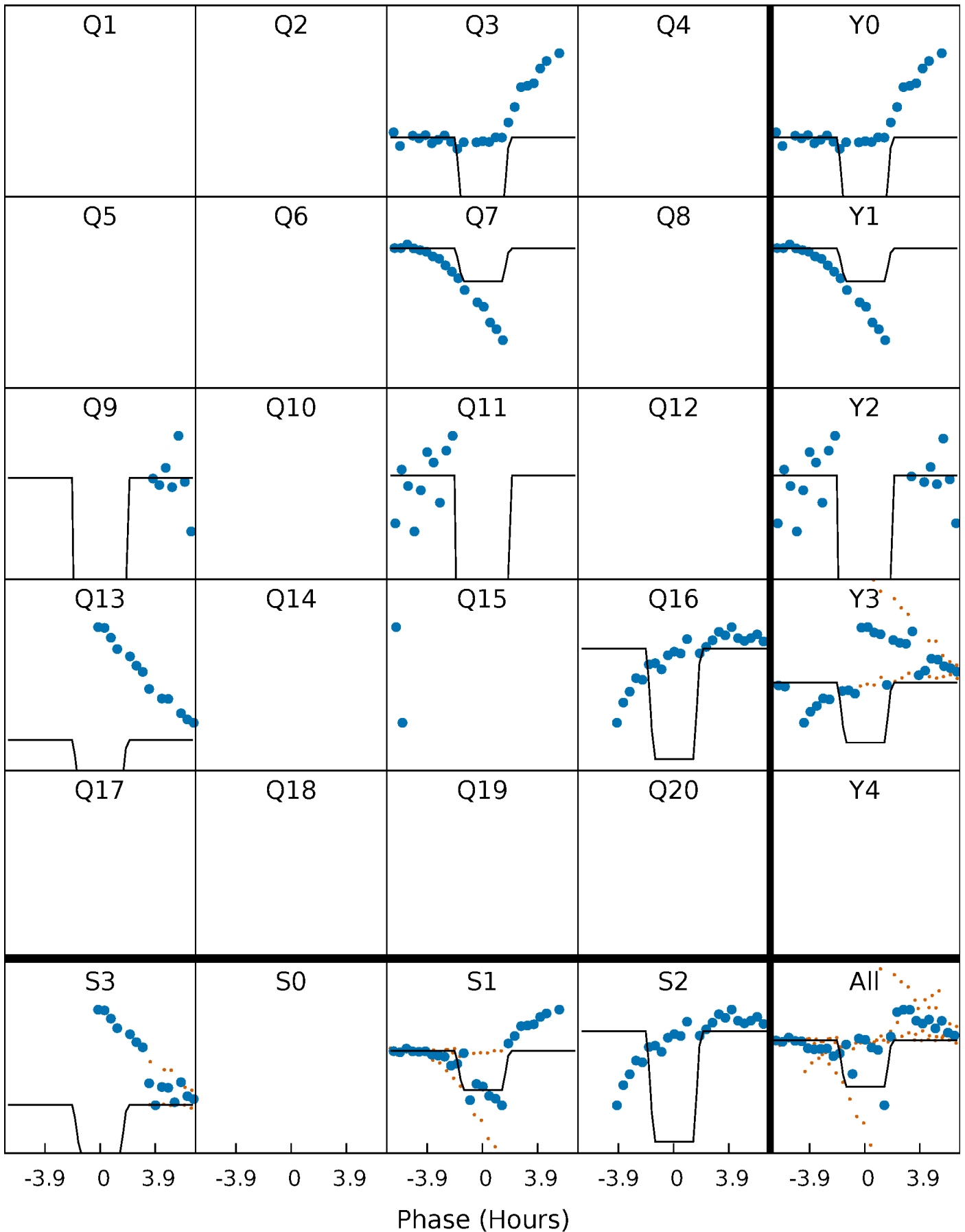
DV Quarter-Phased Transit Curves

TCE 006614892-04 $P=121.179778$ Days $T_0=218.428063$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

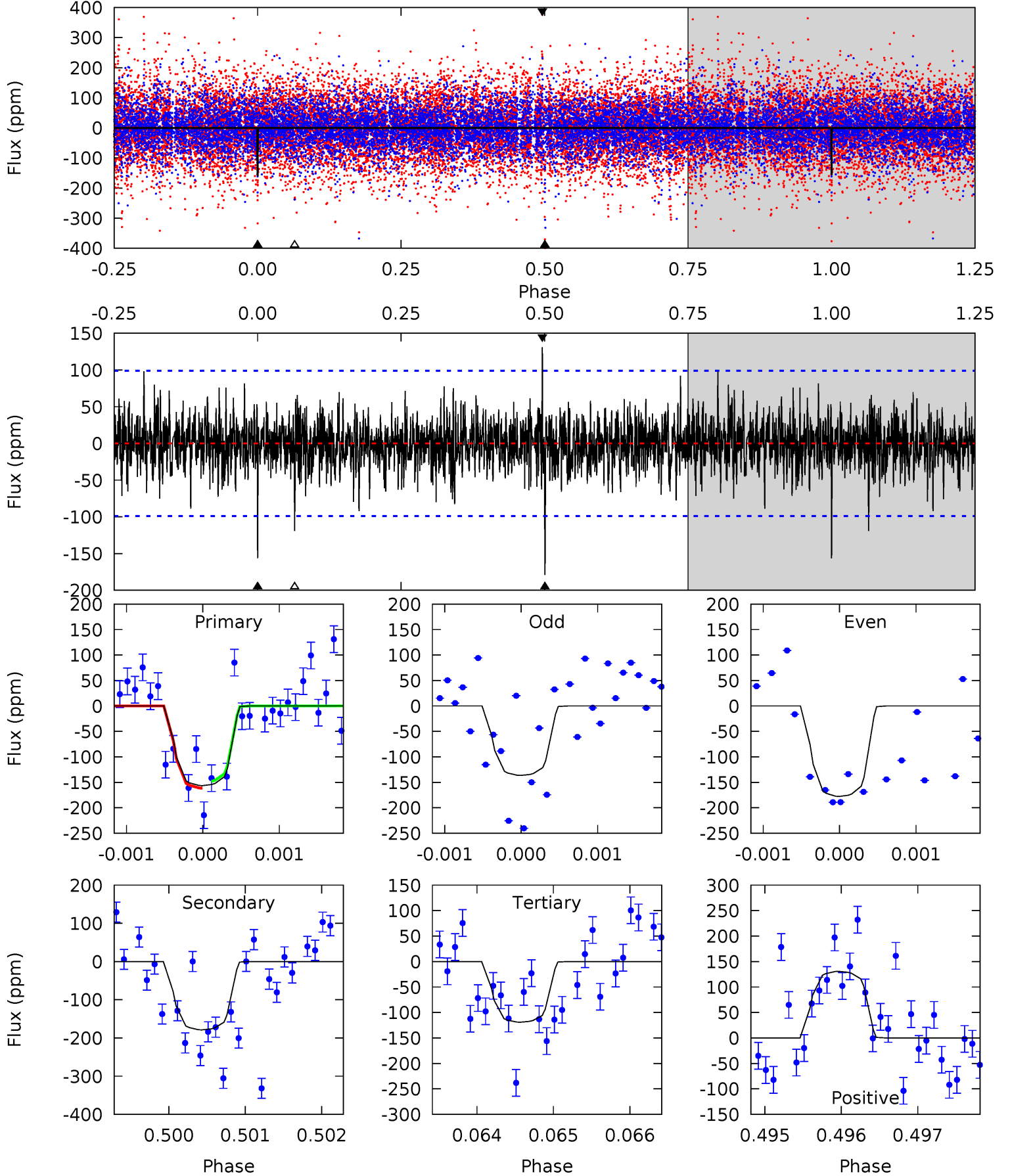
TCE 006614892-04 P=121.184167 Days $T_0=218.386744$ (BKJD)



DV Model-Shift Uniqueness Test

006614892-04, P = 121.179778 Days, E = 97.248285 Days

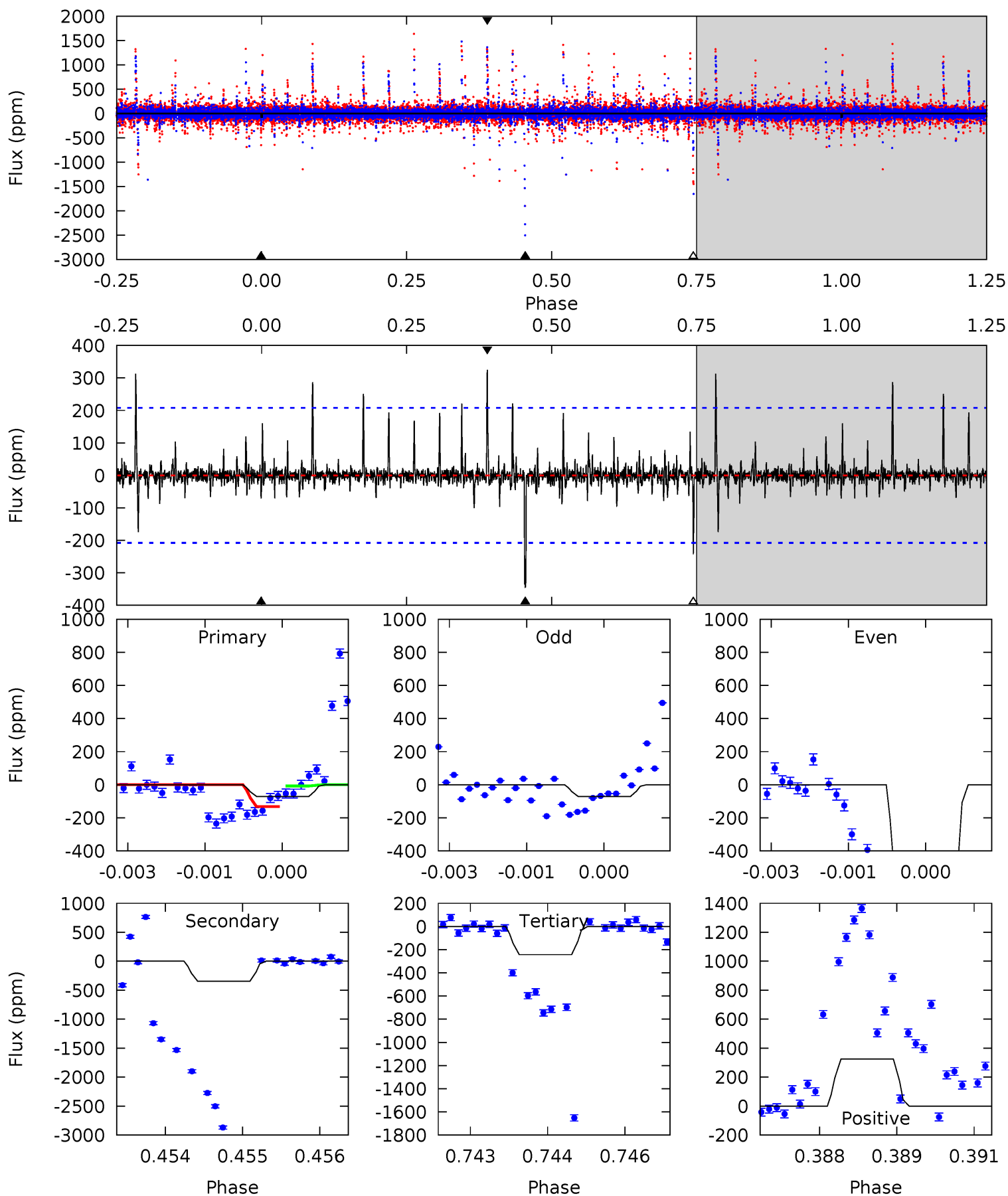
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.62	9.86	6.56	7.21	5.45	3.29	1.40	2.06	1.42	3.29	2.65	1.10	0.87	0.42	0.37



Alt Model-Shift Uniqueness Test

006614892-04, P = 121.184167 Days, E = 97.202577 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.84	8.93	6.30	8.43	5.40	3.21	0.75	-4.46	-6.59	2.63	0.50	6.02	1.45	0.49	0



Stellar Parameters For KIC 006614892

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7888^{+216}_{-324}	$3.972^{+0.210}_{-0.140}$	$-0.040^{+0.200}_{-0.350}$	$2.332^{+0.452}_{-0.678}$	$1.859^{+0.123}_{-0.368}$	$0.206^{+0.284}_{-0.077}$
	+3%/-4%	+5%/-4%	+500%/-875%	+19%/-29%	+7%/-20%	+138%/-37%
Source	KIC0	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 006614892-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-179 ± 18	$4.55^{+3.80}_{-2.93}$	964^{+62}_{-79}	6614^{+6114}_{-1654}	1615^{+10925}_{-1132}
Alt.	-344 ± 39	$9.02^{+4.39}_{-4.20}$	963^{+61}_{-68}	5539^{+2145}_{-886}	819^{+2091}_{-475}

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 $A_{obs} \gg 1.0$

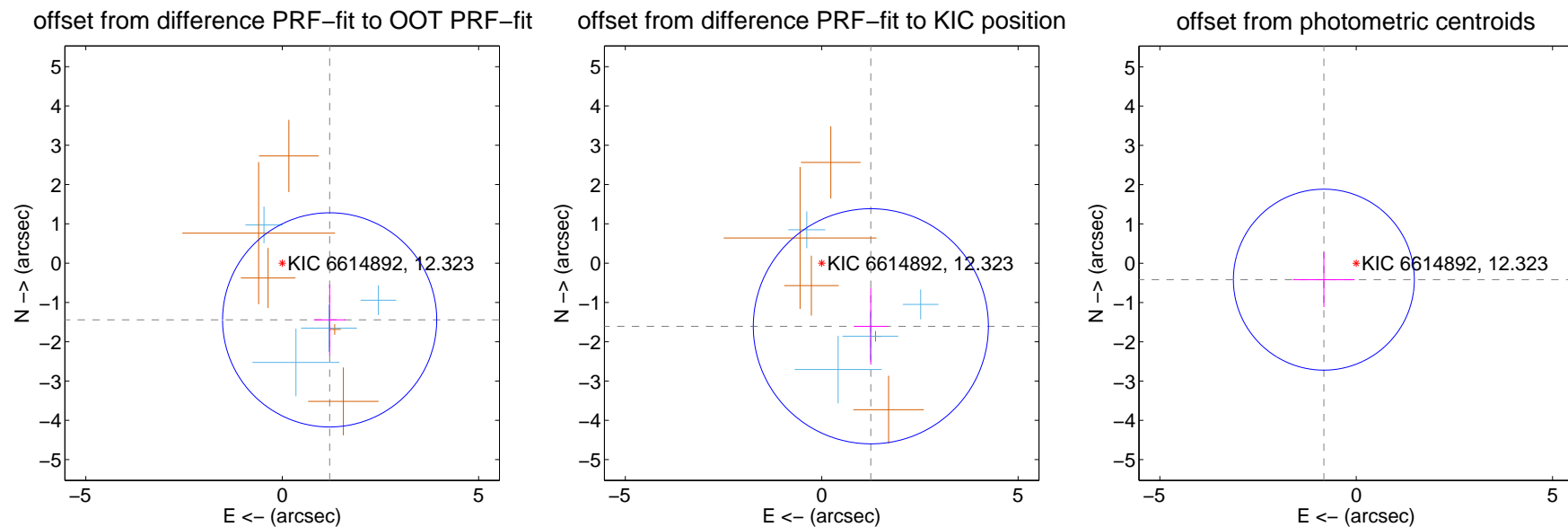
DV Centroid Data

Supplemental centroid analysis for 006614892-04. Kepler magnitude: 12.32. Transit SNR 8.96

There are 4 quarters with good PRF difference image offsets

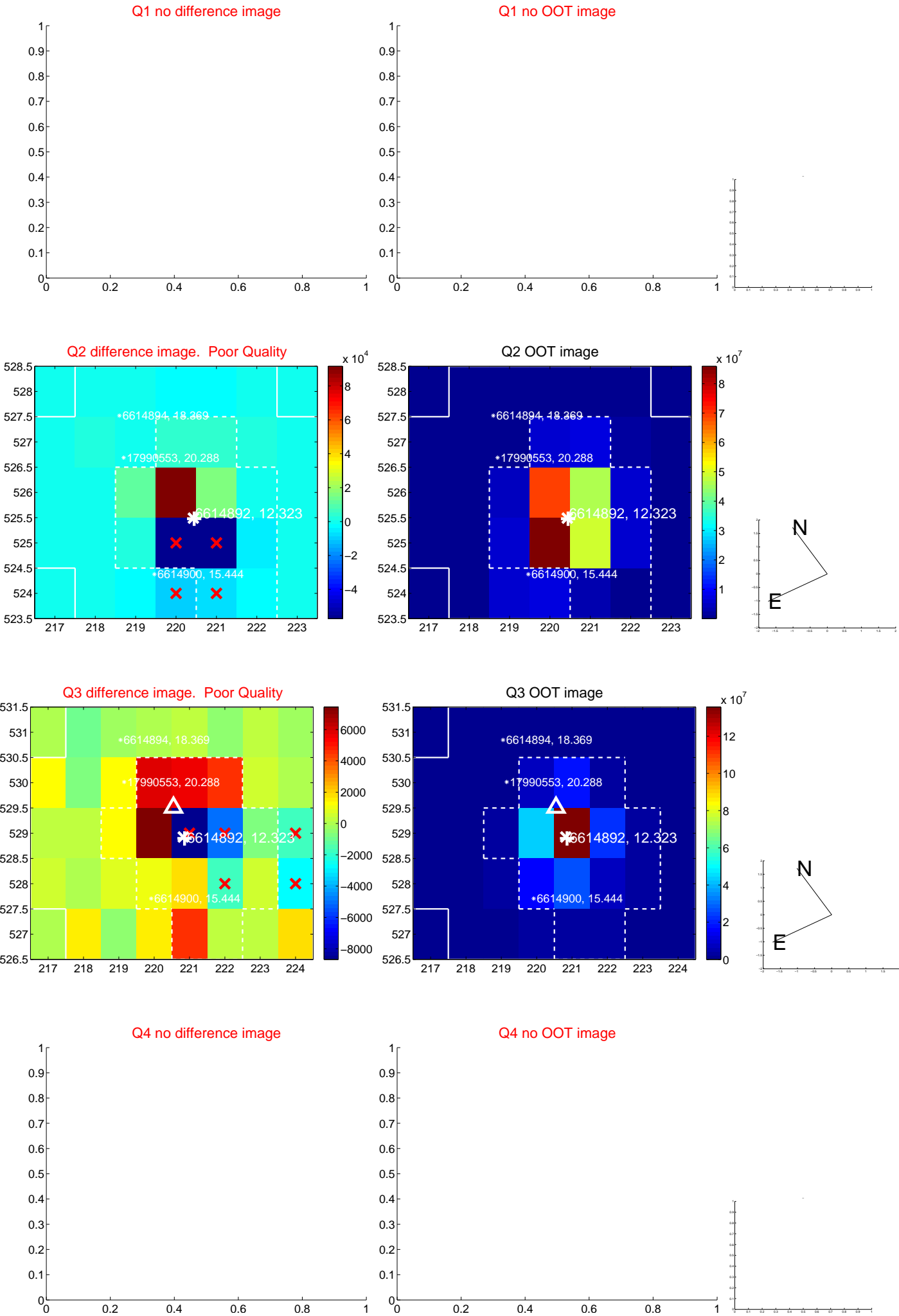
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.882 ± 0.909	2.07	-1.208 ± 0.400	-1.444 ± 0.898
PRF-fit source offset from KIC position	2.036 ± 0.997	2.04	-1.251 ± 0.430	-1.607 ± 0.975
photometric centroid source offset	0.92 ± 0.77	1.20	0.82 ± 0.78	-0.42 ± 0.70

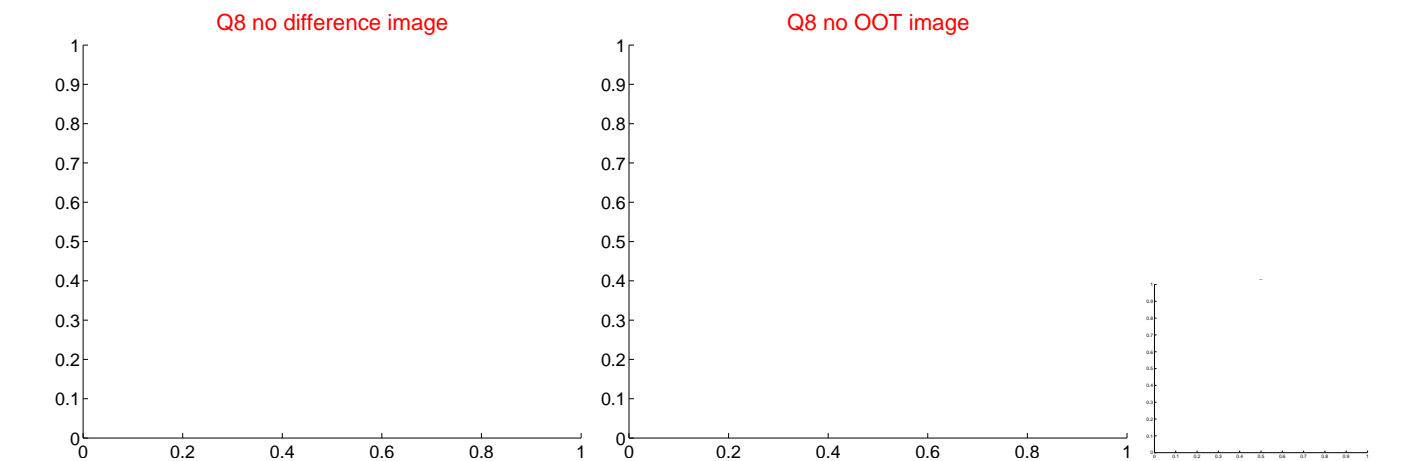
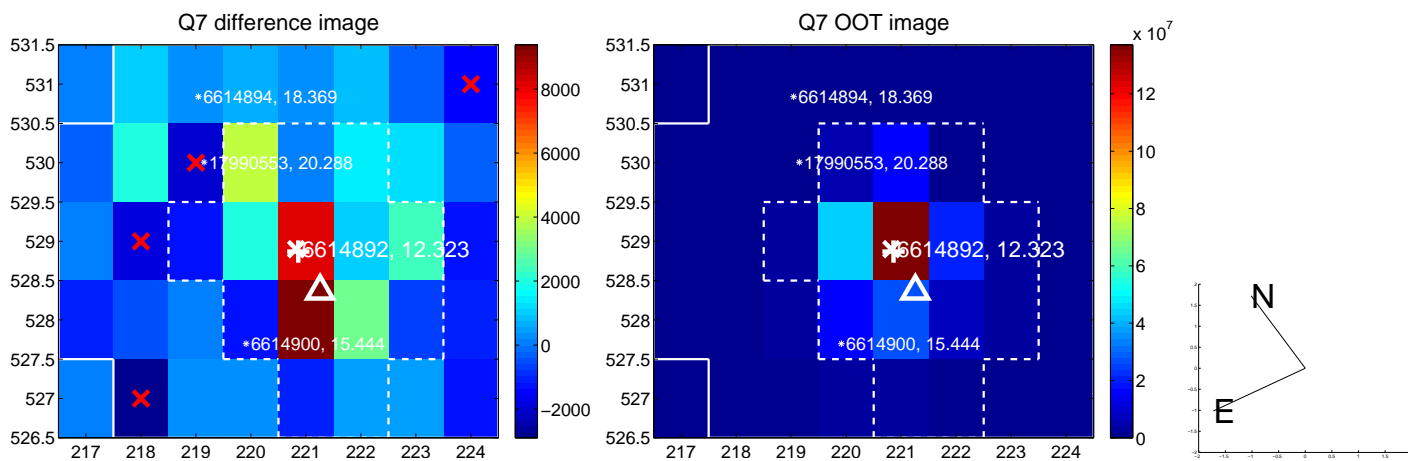
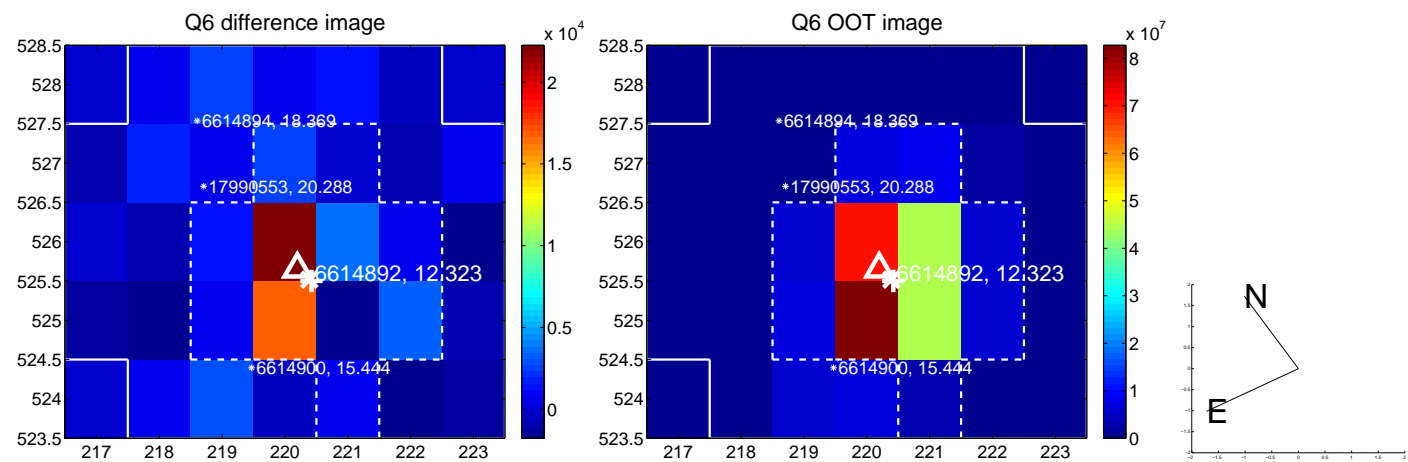
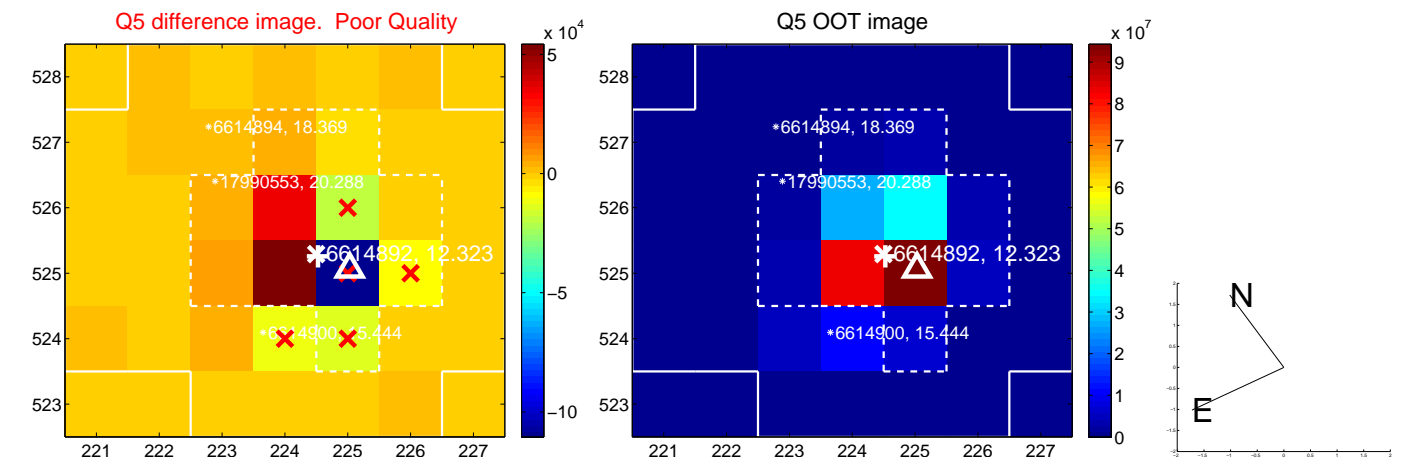


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

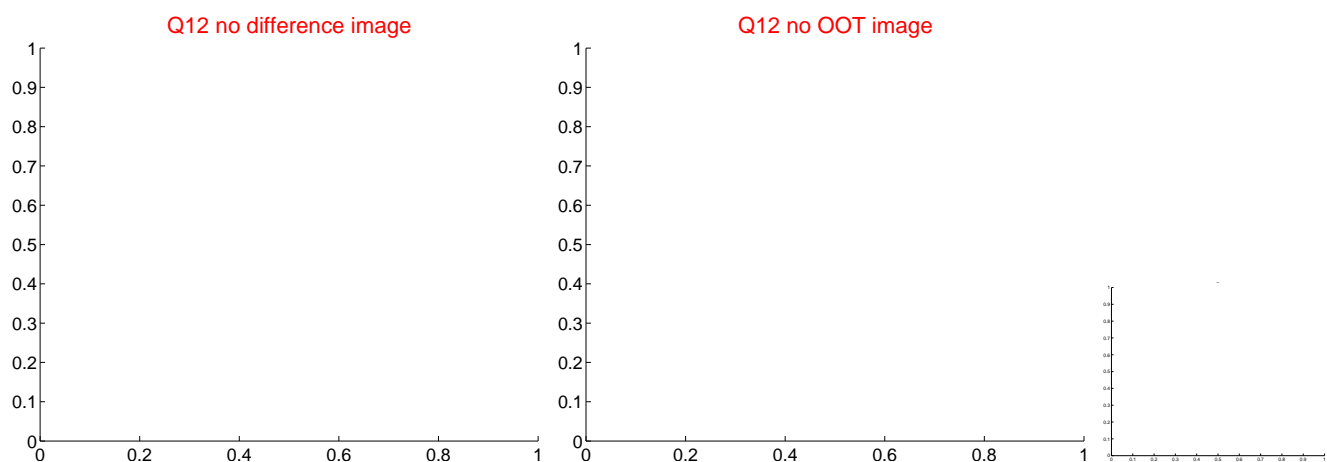
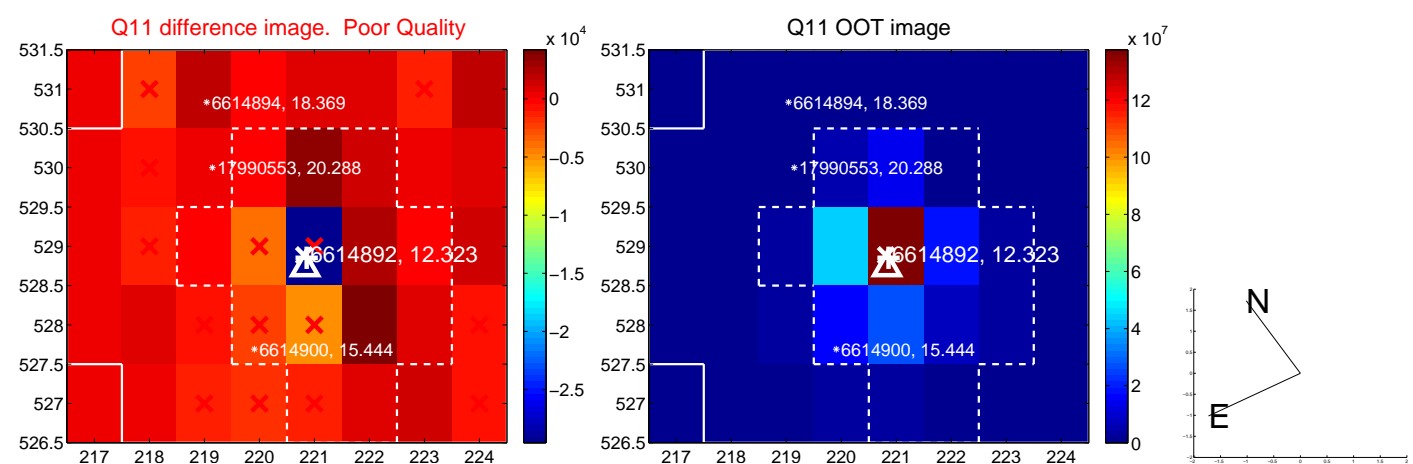
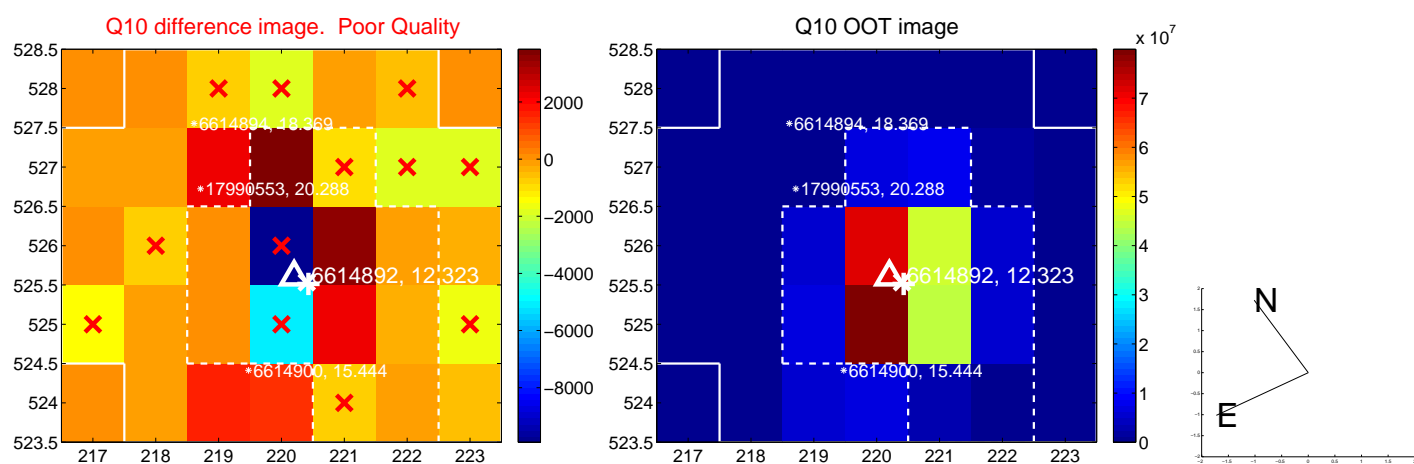
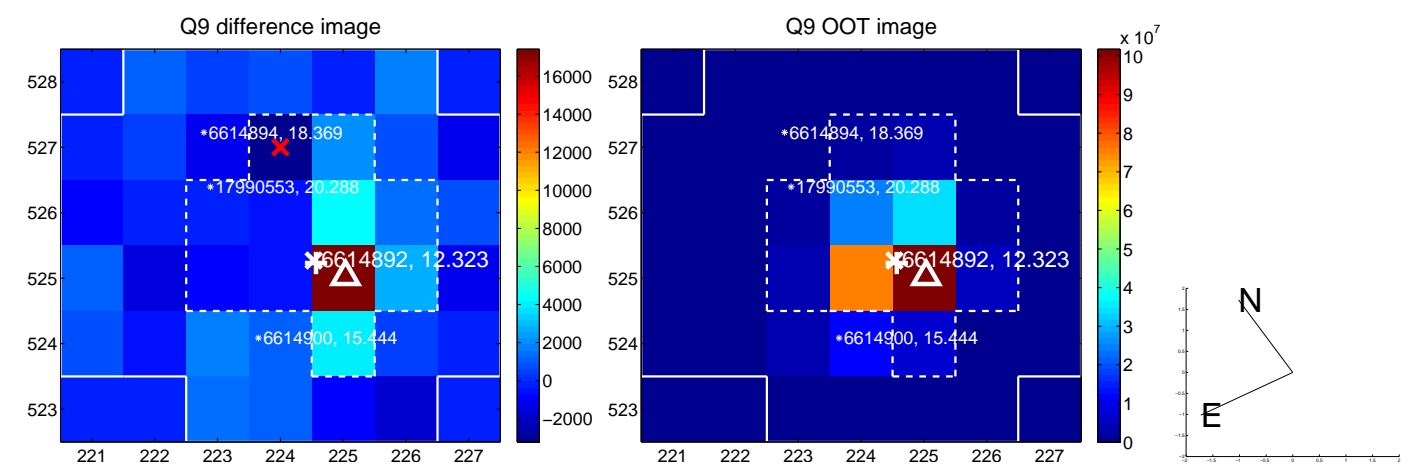
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



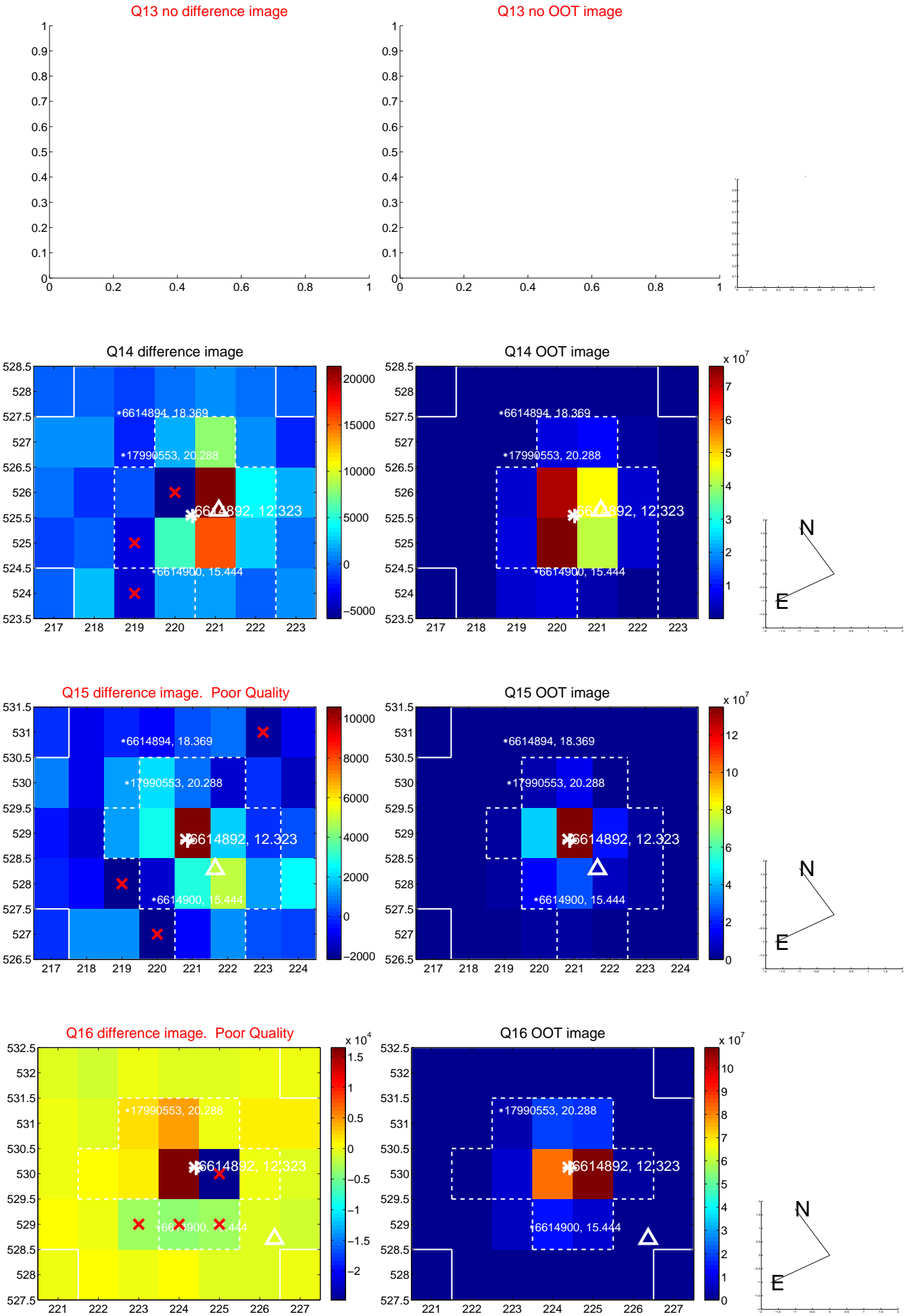
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



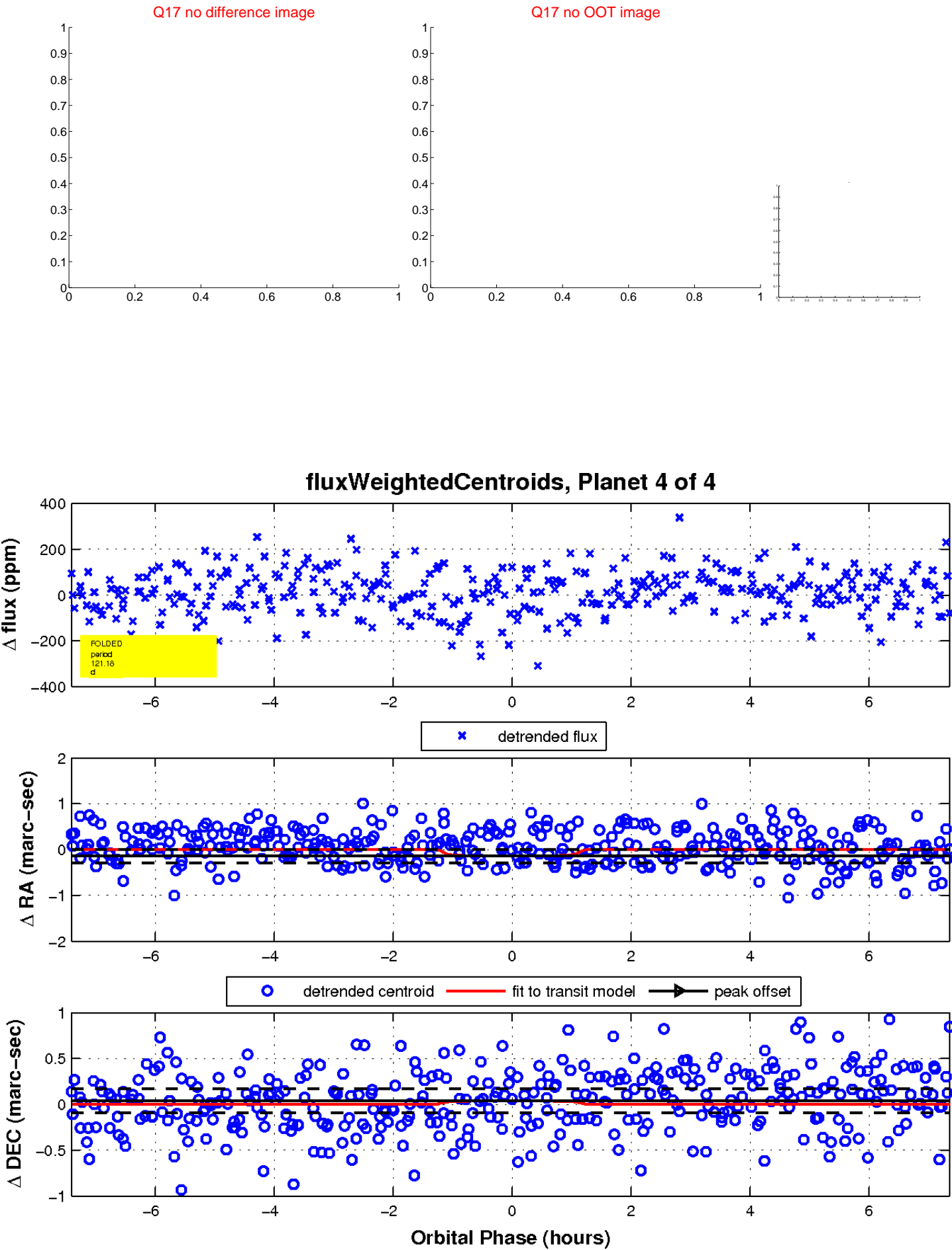
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

