

KIC 003541946

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})
003541946-01	OBS	0624.01	17.790040	146.855941	903.5	4.539	66.9	69.2	0.93	5569	2.96	43.57
003541946-02	OBS	0624.03	1.311839	131.800522	226.3	1.887	49.3	54.5	0.93	5569	1.67	1408.91
003541946-03	OBS	0624.02	49.567469	169.540867	684.3	3.849	26.8	29.2	0.93	5569	2.78	11.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003541946-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
003541946-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
003541946-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

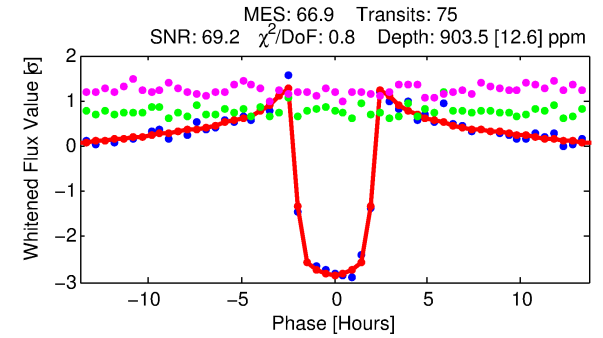
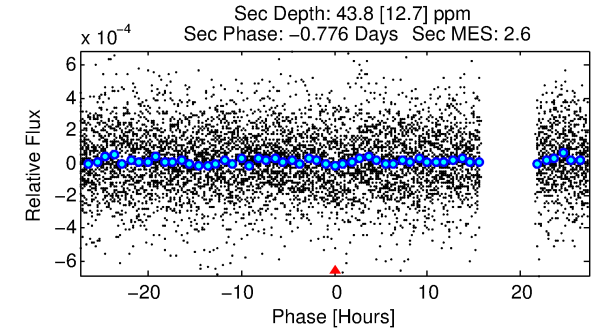
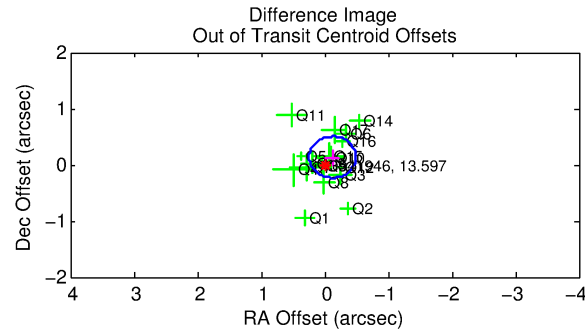
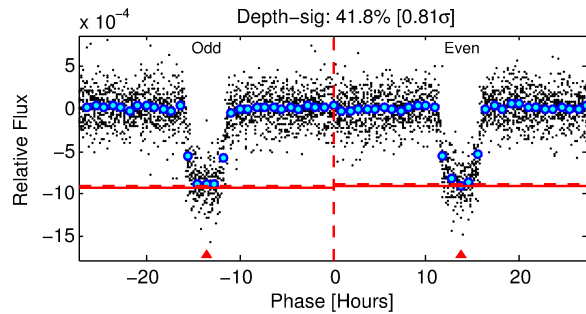
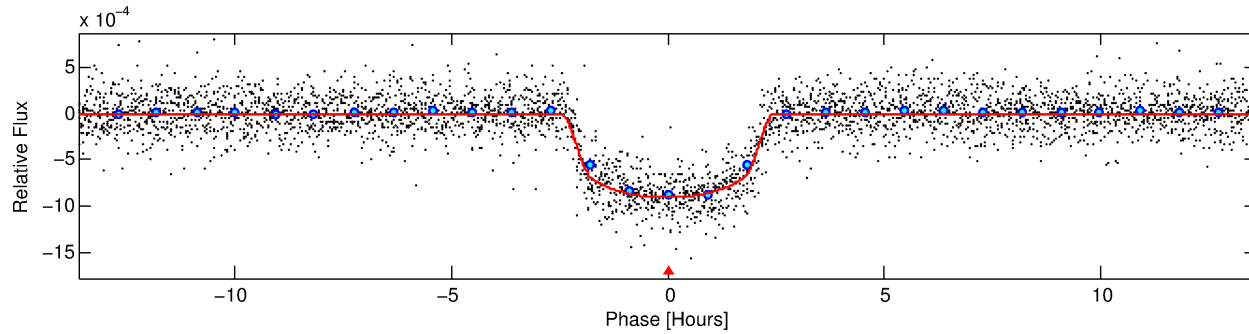
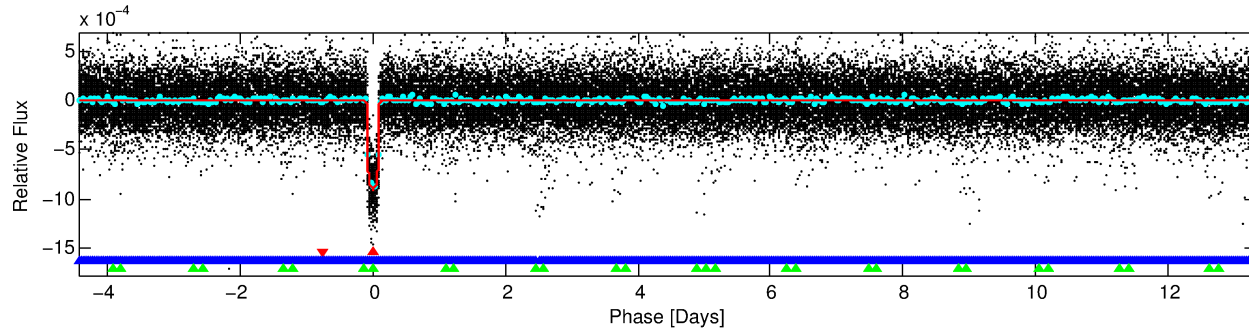
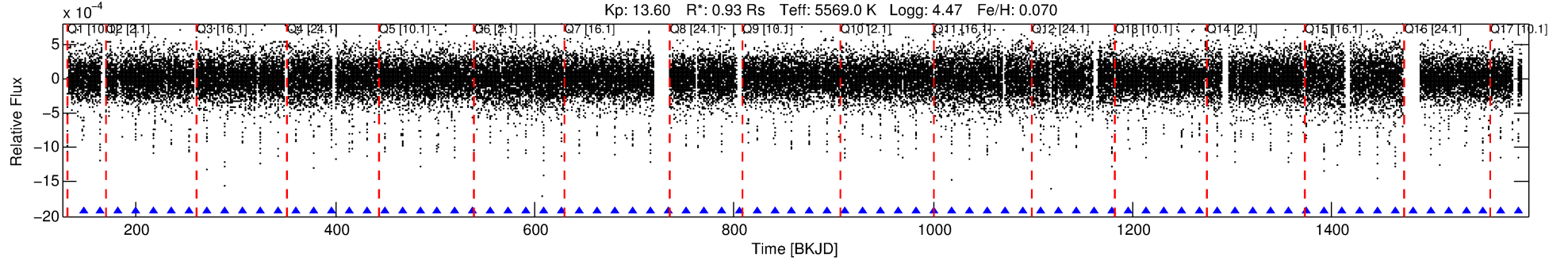
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003541946-01

No Significant Match Found

DV One-Page Summary

KIC: 3541946 Candidate: 1 of 3 Period: 17.790 d
KOI: K00624.01 Name: Kepler-198b Corr: 0.990



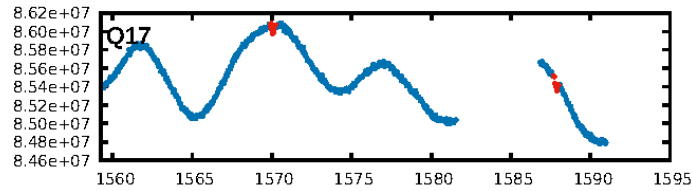
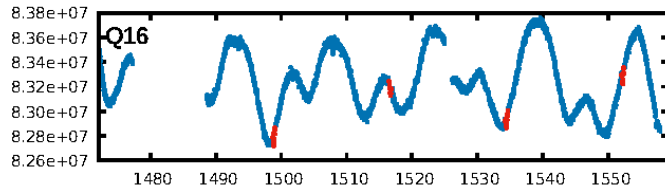
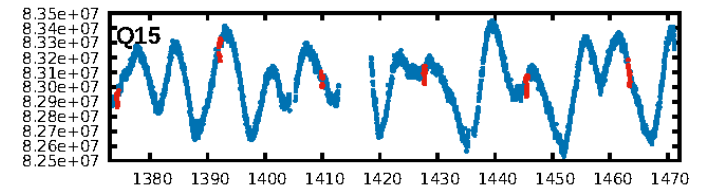
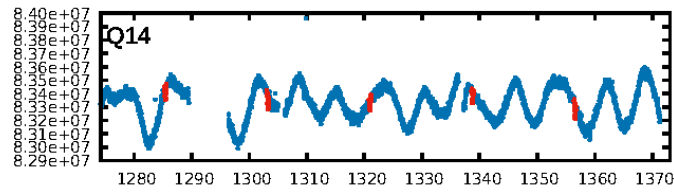
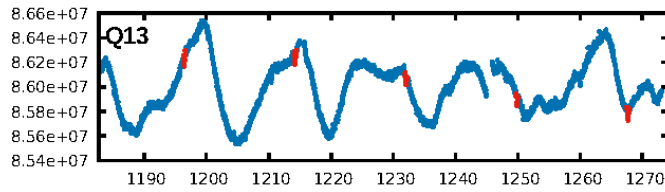
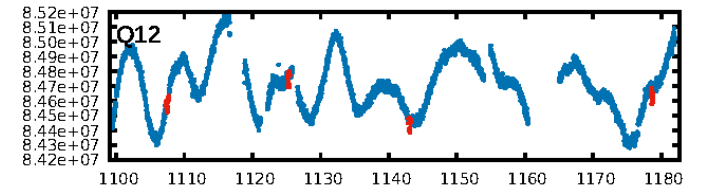
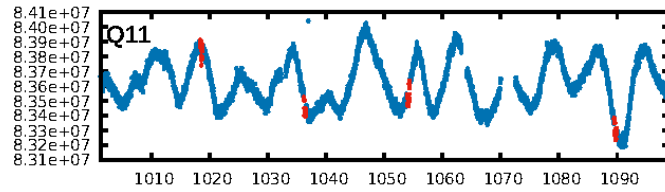
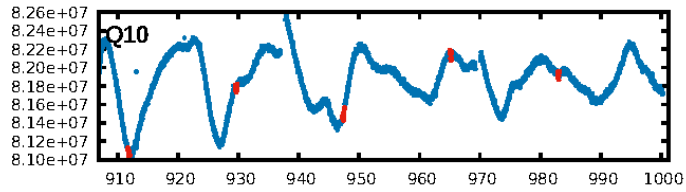
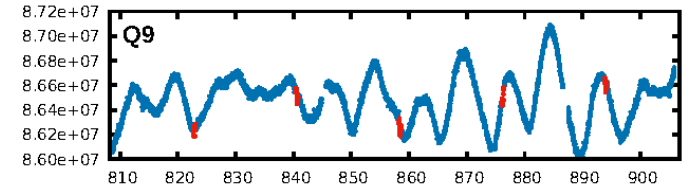
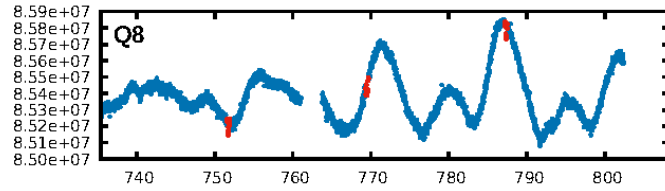
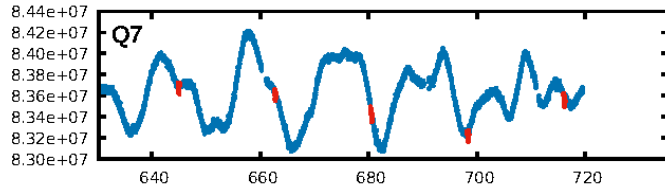
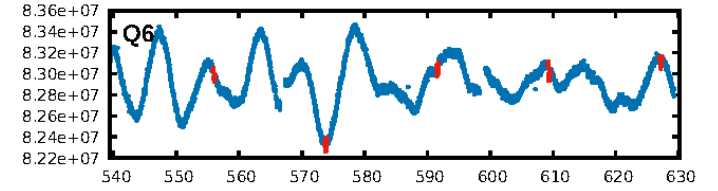
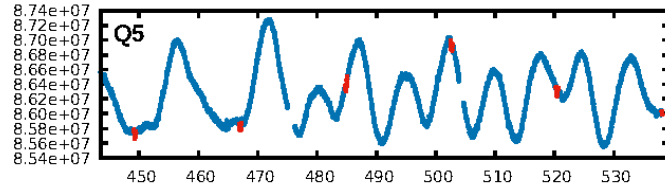
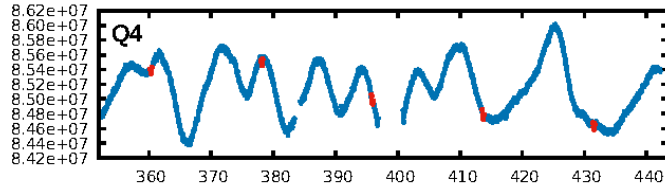
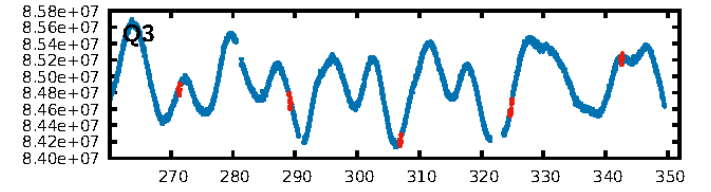
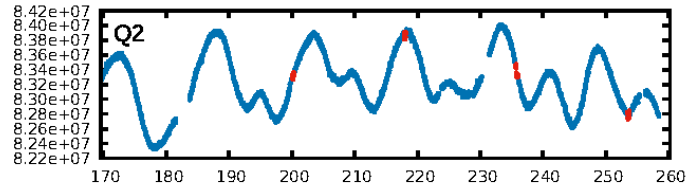
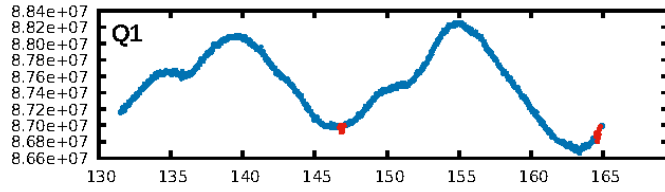
DV Fit Results:

Period = 17.79004 [0.00002] d
Epoch = 146.8559 [0.0009] BKJD
Rp/R* = 0.0293 [0.0027]
a/R* = 22.98 [8.59]
b = 0.69 [0.29]
Seff = 43.57 [8.99]
Teq = 655 [34] K
Rp = 2.96 [0.48] Re
a = 0.1304 [0.0159] AU
Ag = 46.74 [18.37] [2.49 σ]
Teffp = 2648 [234] K [8.44 σ]

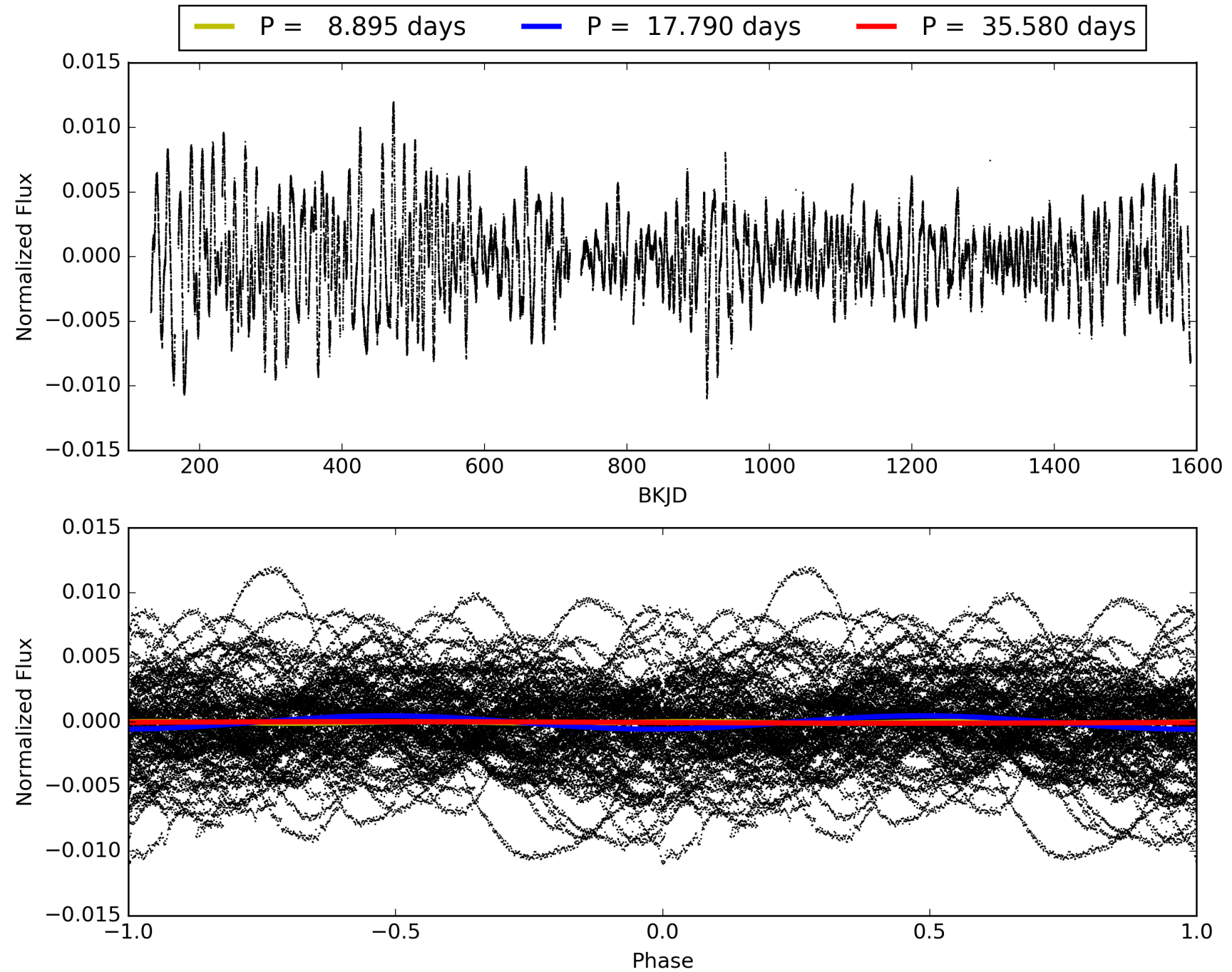
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.45 σ]
LongPeriod-sig: 100.0% [128.14 σ]
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [71/71]
GhostDiagnostic-chr: 2.863
Centroid-sig: 7.8%
Centroid-so: 0.263 arcsec [1.81 σ]
OotOffset-rm: 0.182 arcsec [1.48 σ]
KicOffset-rm: 0.226 arcsec [1.76 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.76 [13/17]

TCE 003541946-01, PDC Light Curves

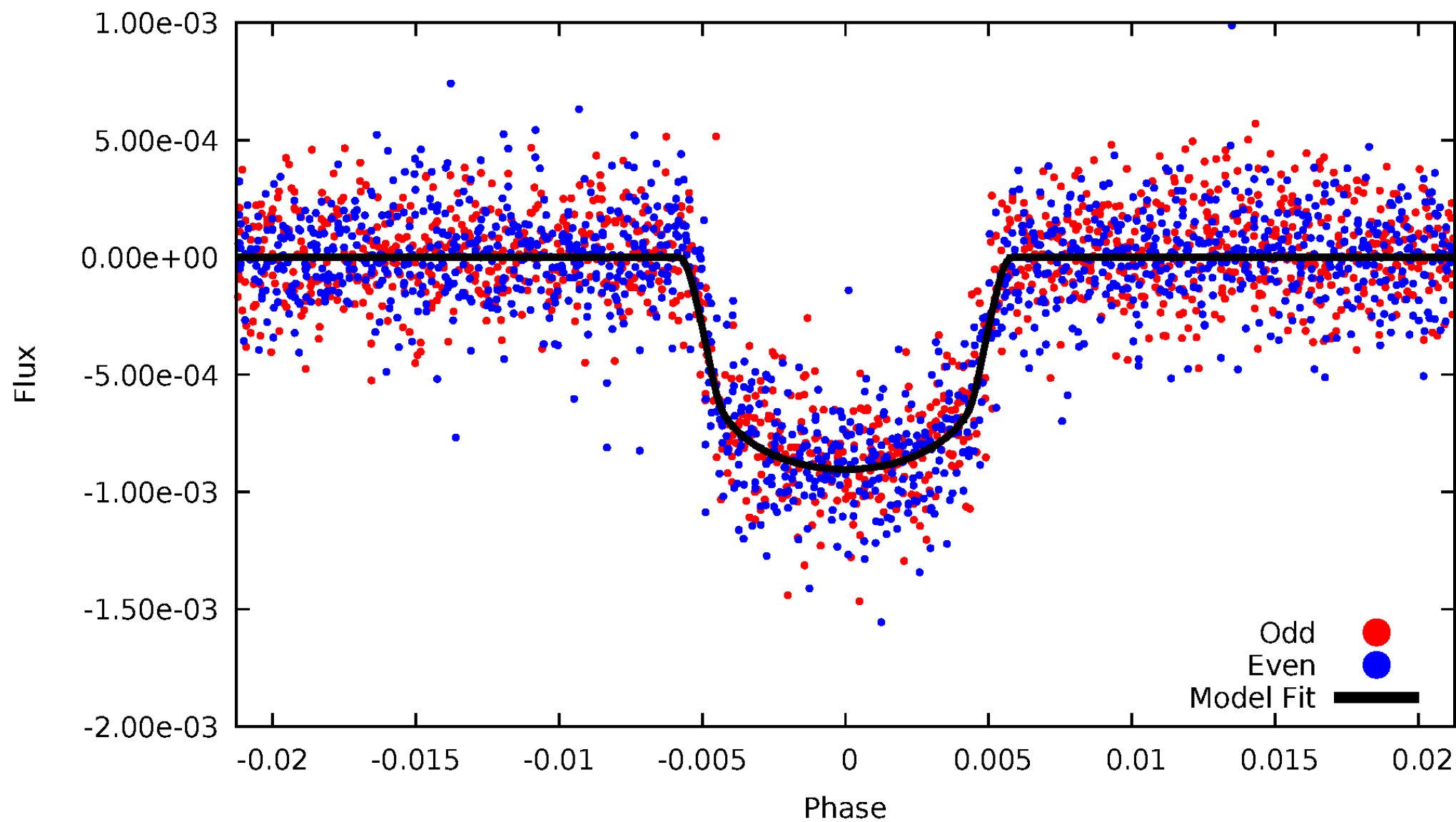


TCE 003541946-01



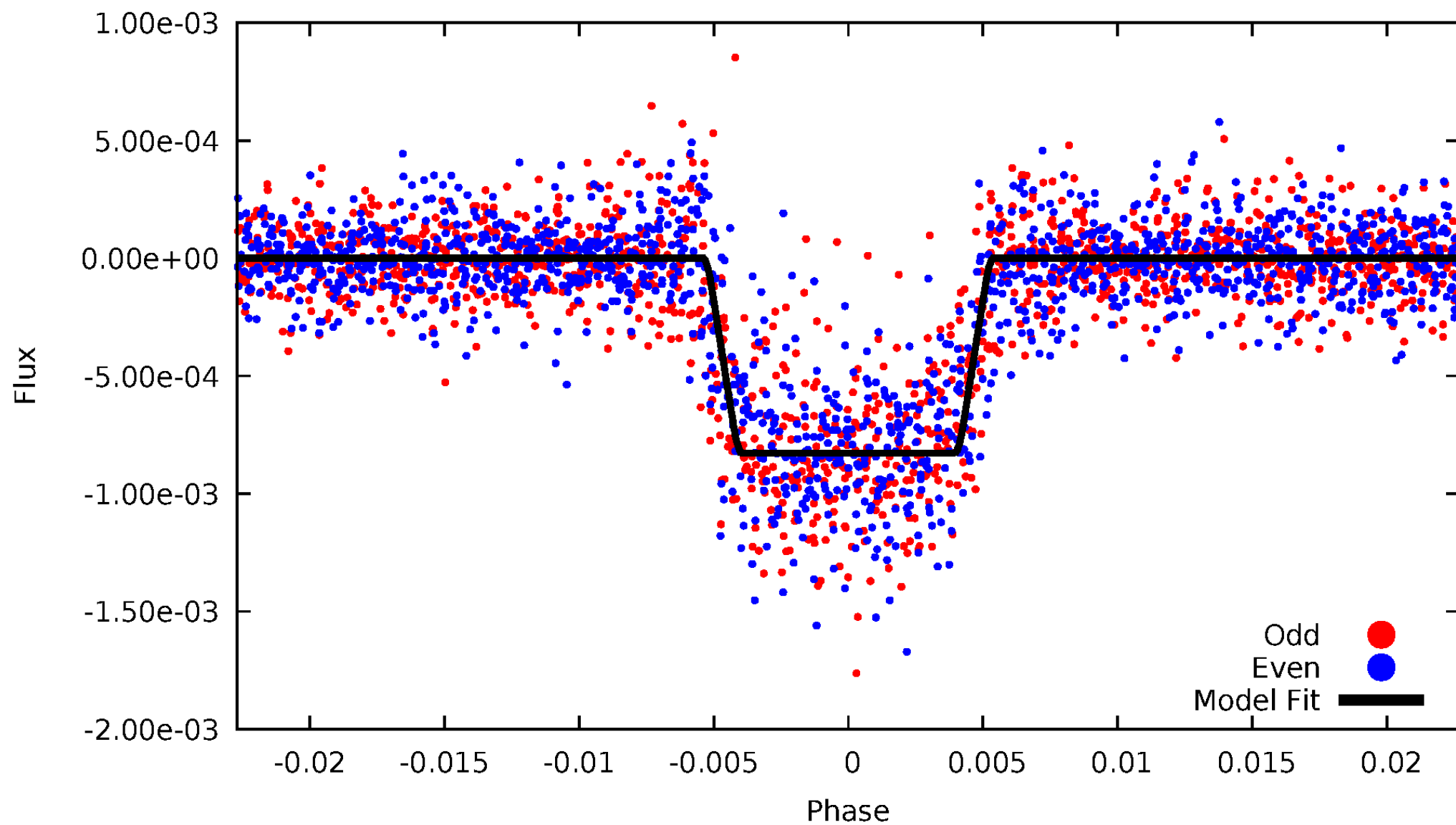
DV Odd/Even

TCE 003541946-01



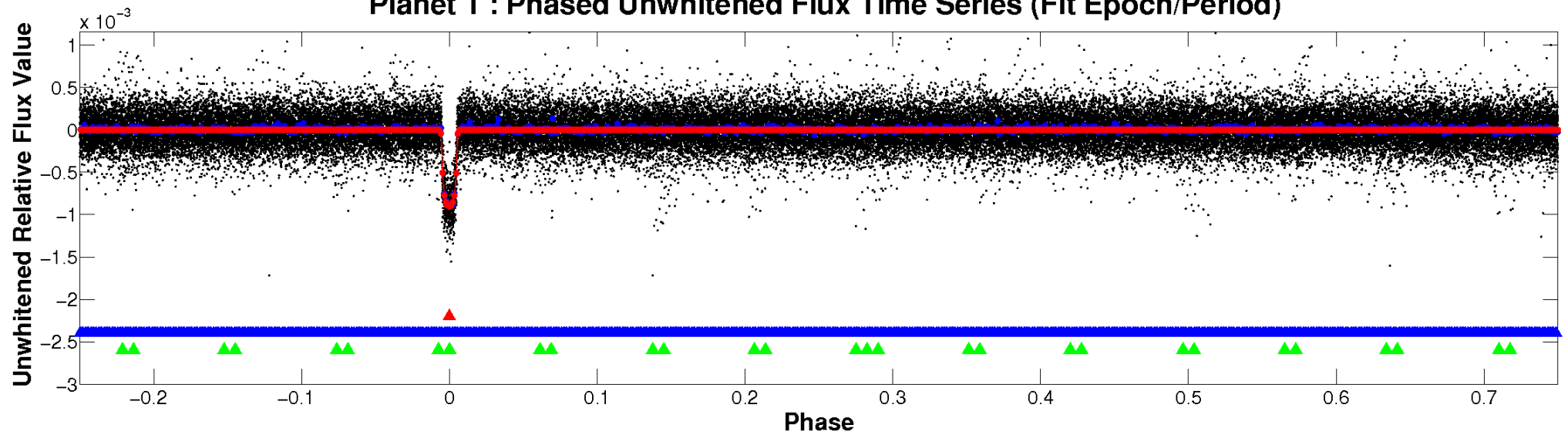
ALT Odd/Even

TCE 003541946-01

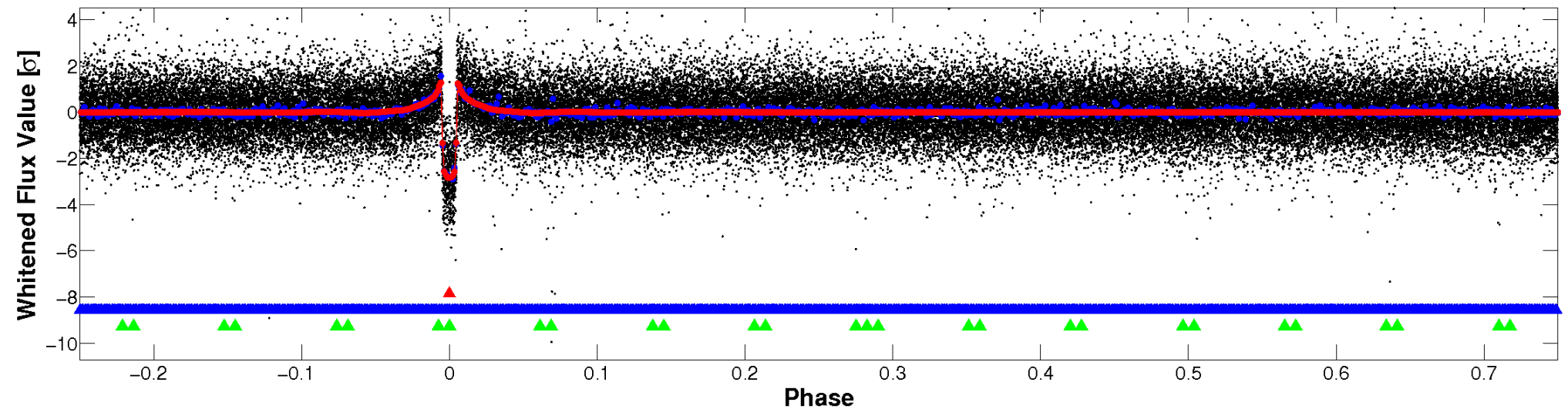


Non-Whitened Vs. Whitened Light Curve

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

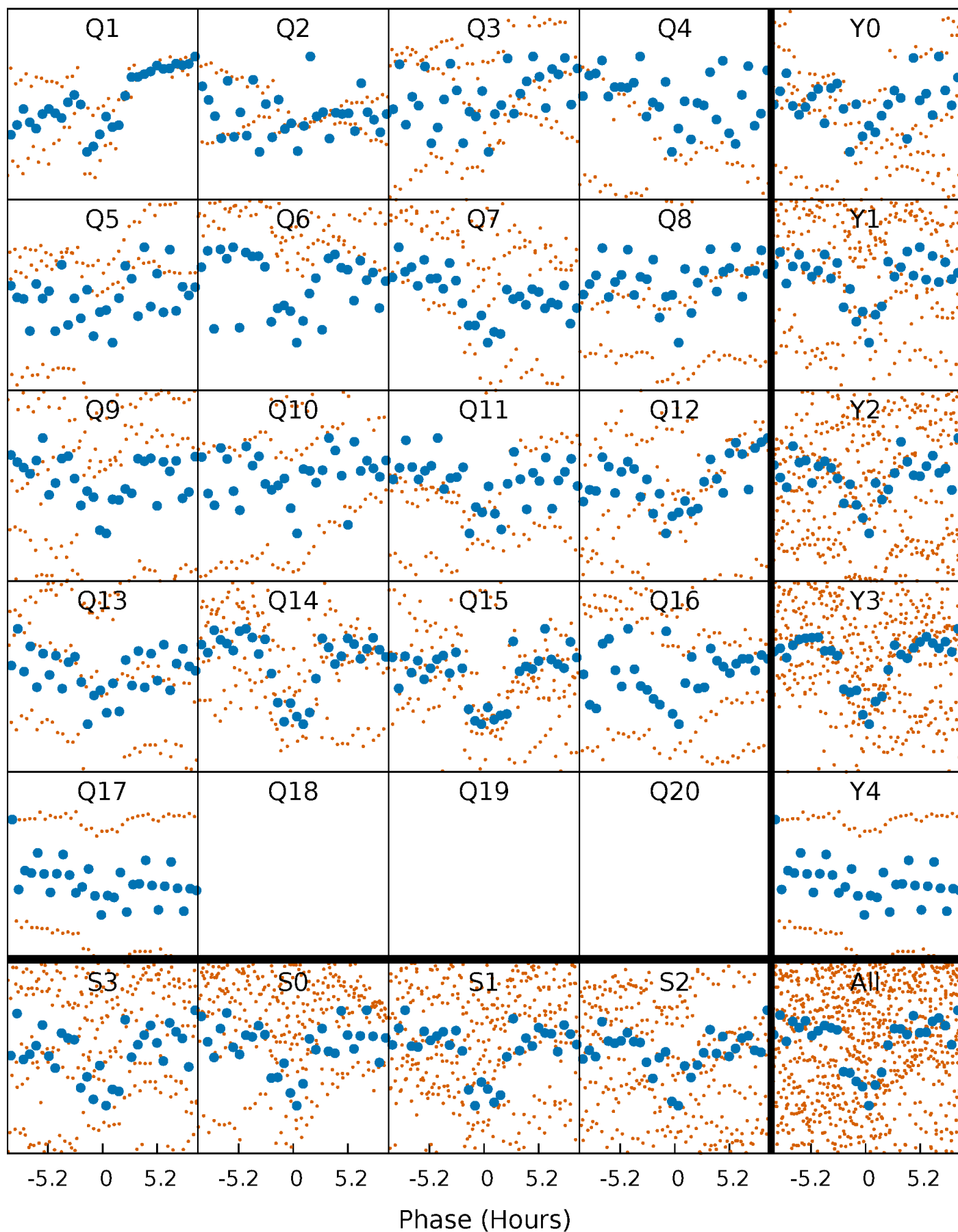


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



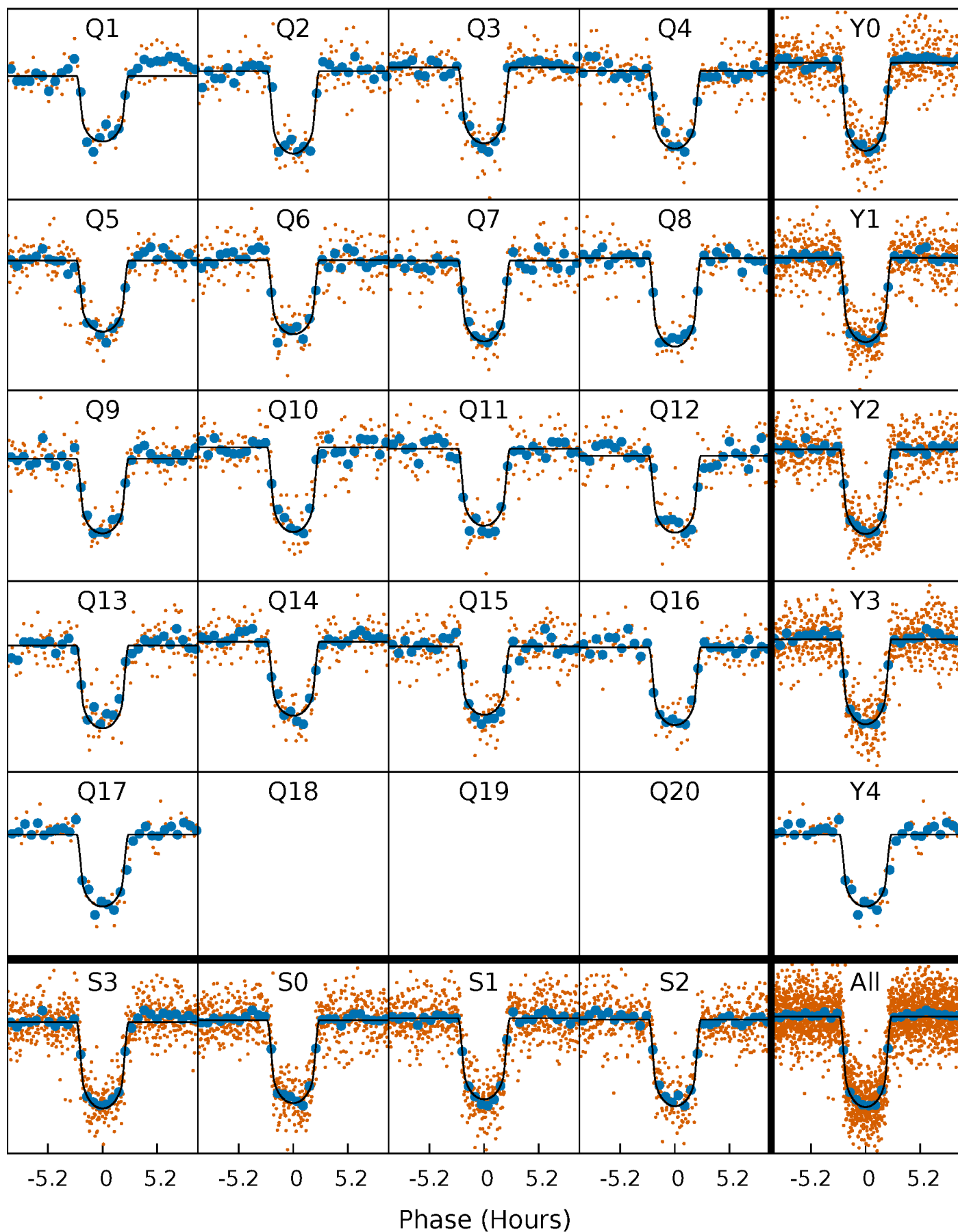
PDC Quarter-Phased Transit Curves

TCE 003541946-01 P= 17.790040 Days $T_0=146.855941$ (BKJD)



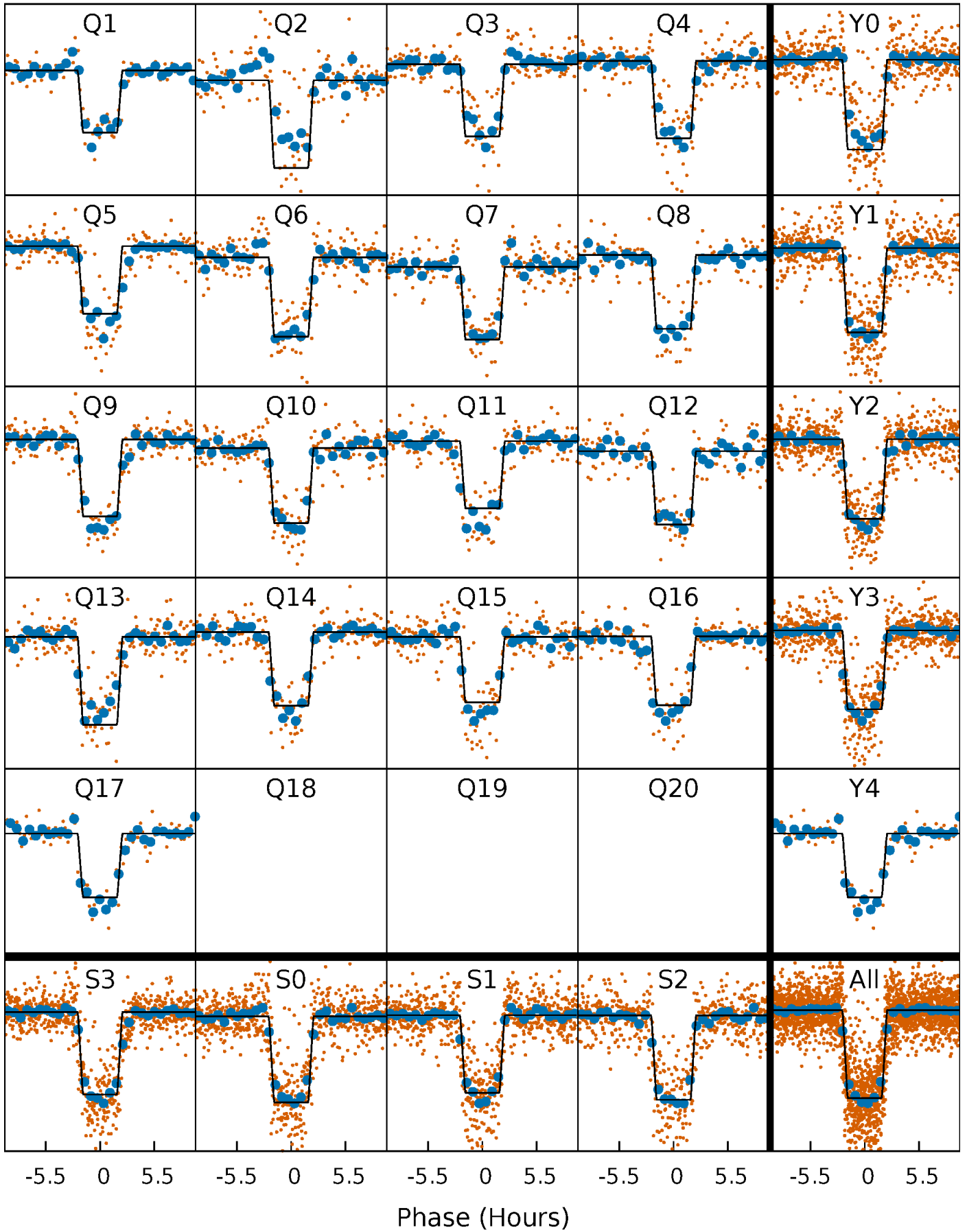
DV Quarter-Phased Transit Curves

TCE 003541946-01 P= 17.790040 Days $T_0=146.855941$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

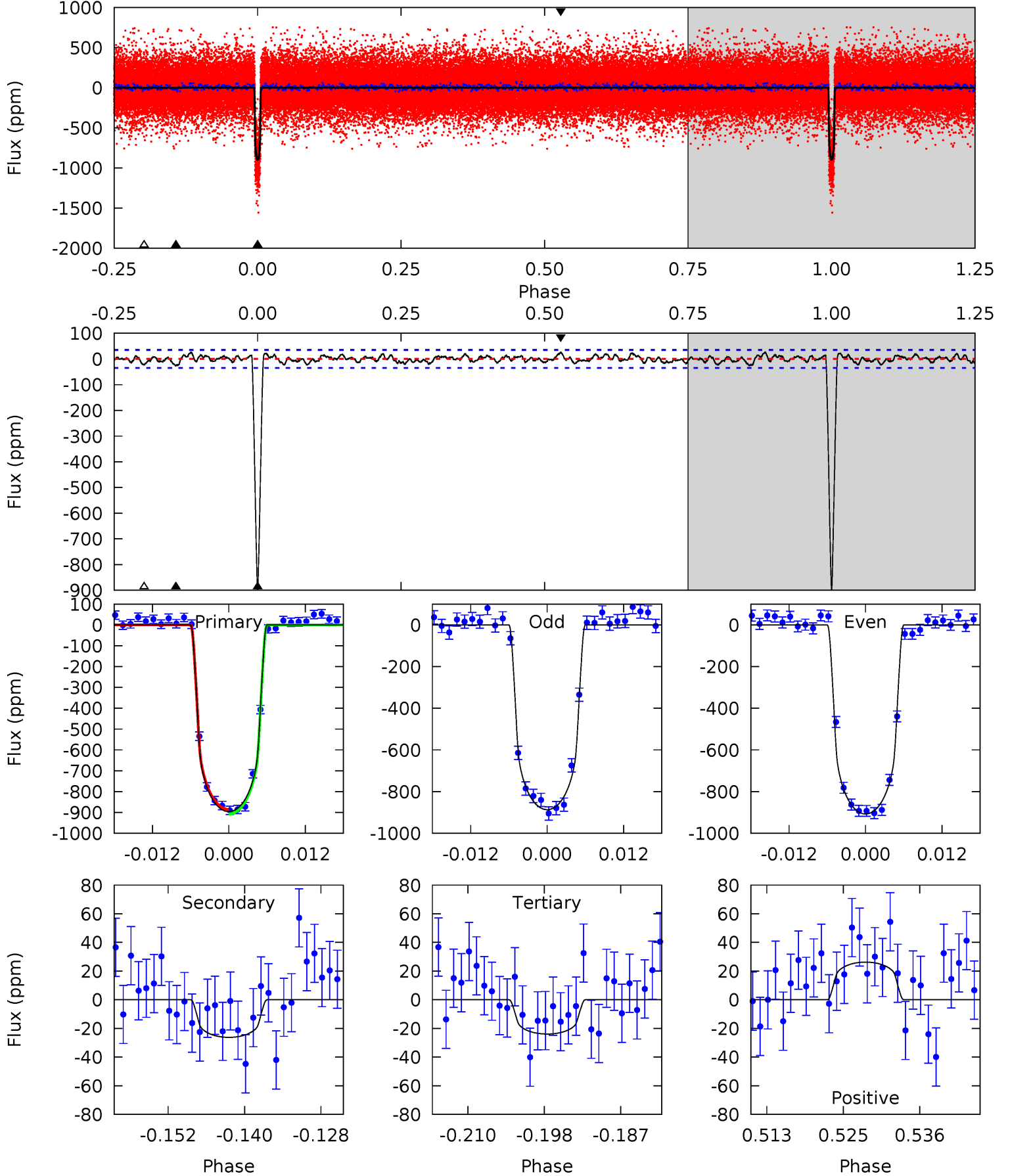
TCE 003541946-01 P= 17.790241 Days $T_0=146.849236$ (BKJD)



DV Model-Shift Uniqueness Test

003541946-01, P = 17.790040 Days, E = 129.065901 Days

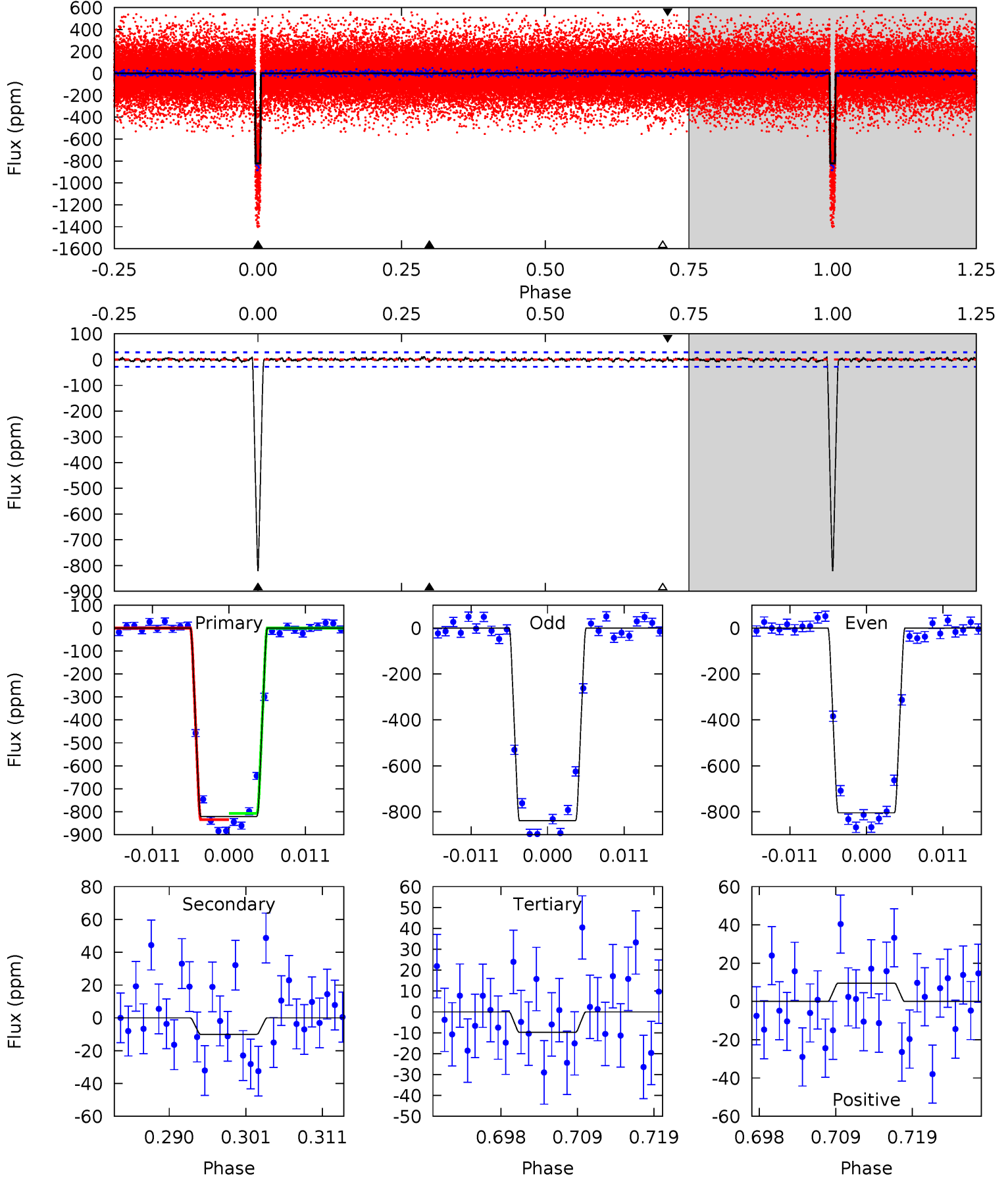
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
128.7	3.77	3.44	3.77	5.00	2.52	1.38	125.3	125.0	0.33	0.00	1.49	1.00	0.03	1.51



Alt Model-Shift Uniqueness Test

003541946-01, $P = 17.790241$ Days, $E = 129.058995$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
145.6	1.78	1.73	1.70	5.01	2.55	0.58	143.9	143.9	0.04	0.07	3.03	0.98	0.01	2.38



Stellar Parameters For KIC 003541946

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5569^{+111}_{-111}	$4.474^{+0.059}_{-0.110}$	$0.070^{+0.150}_{-0.150}$	$0.927^{+0.122}_{-0.066}$	$0.935^{+0.057}_{-0.057}$	$1.652^{+0.352}_{-0.498}$
	+2%/-2%	+1%/-2%	+214%/-214%	+13%/-7%	+6%/-6%	+21%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003541946-01 / KOI 0624.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-26 ± 7	$3.02^{+0.34}_{-0.34}$	922^{+34}_{-30}	2981^{+154}_{-145}	27^{+11}_{-9}
Alt.	-10 ± 6	$2.94^{+0.33}_{-0.29}$	920^{+37}_{-29}	2626^{+171}_{-288}	10^{+7}_{-6}

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 $A_{obs} \gg 1.0$

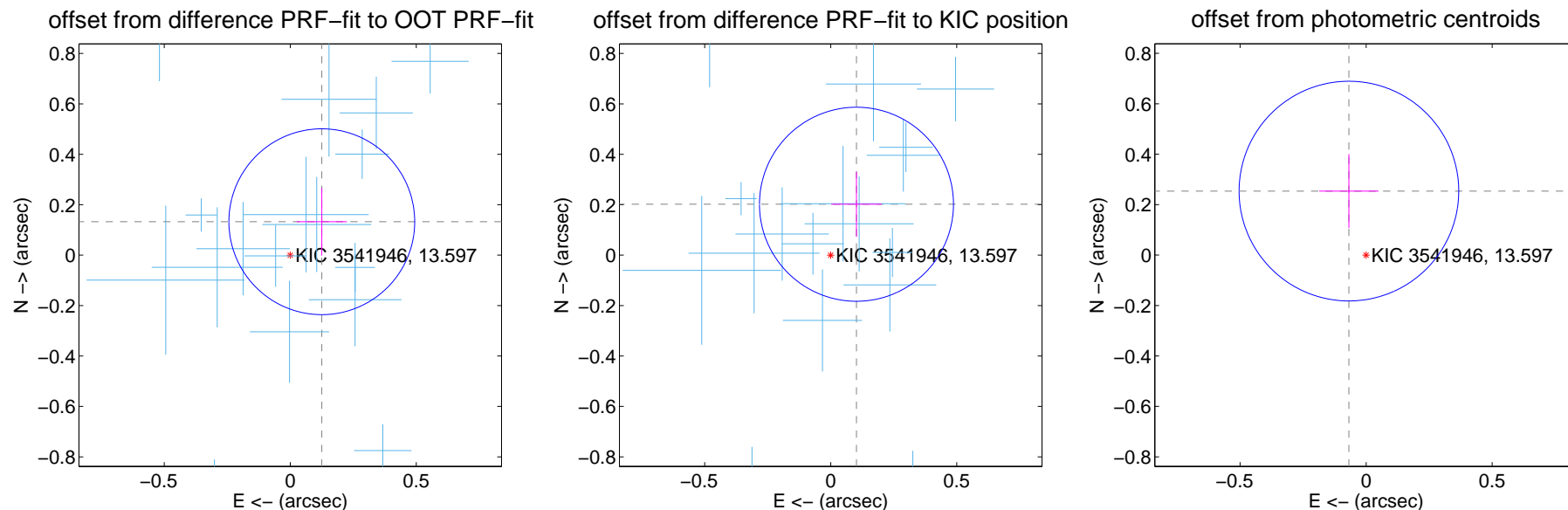
DV Centroid Data

Supplemental centroid analysis for 003541946-01. Kepler magnitude: 13.60. Transit SNR 69.19

There are 17 quarters with good PRF difference image offsets

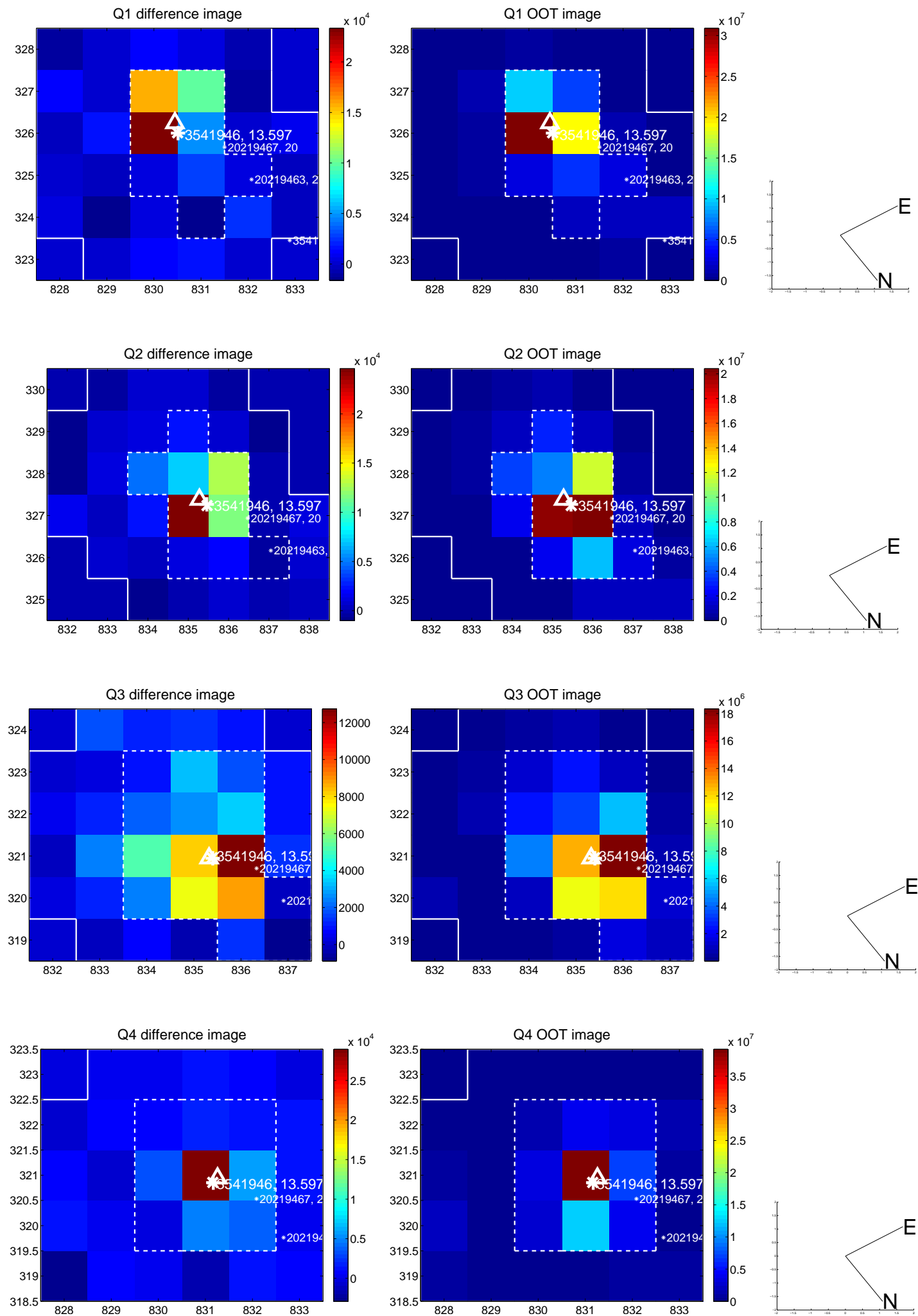
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.182 ± 0.123	1.48	-0.125 ± 0.099	0.133 ± 0.134
PRF-fit source offset from KIC position	0.226 ± 0.128	1.76	-0.102 ± 0.100	0.202 ± 0.129
photometric centroid source offset	0.26 ± 0.15	1.81	0.07 ± 0.12	0.25 ± 0.15

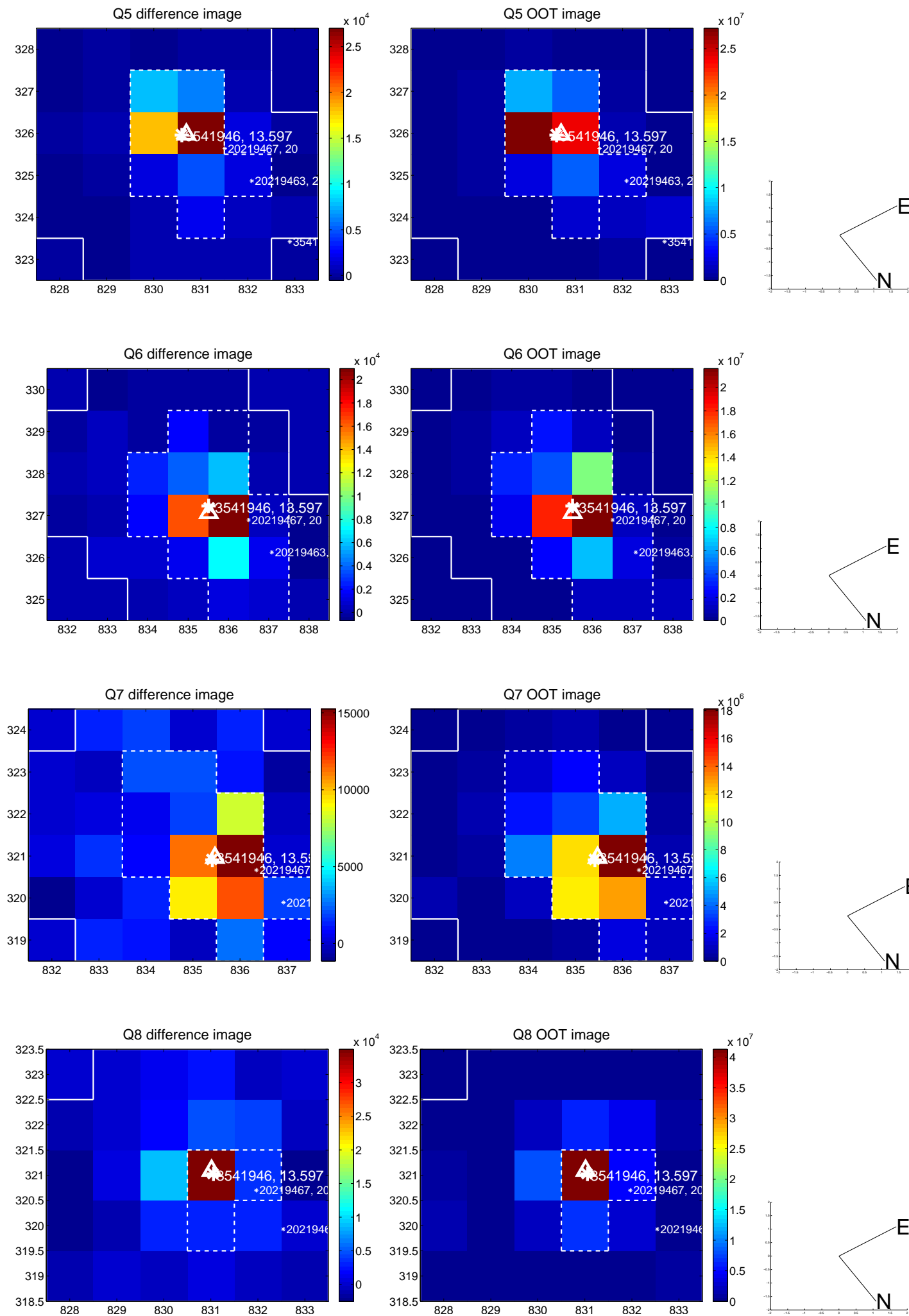


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

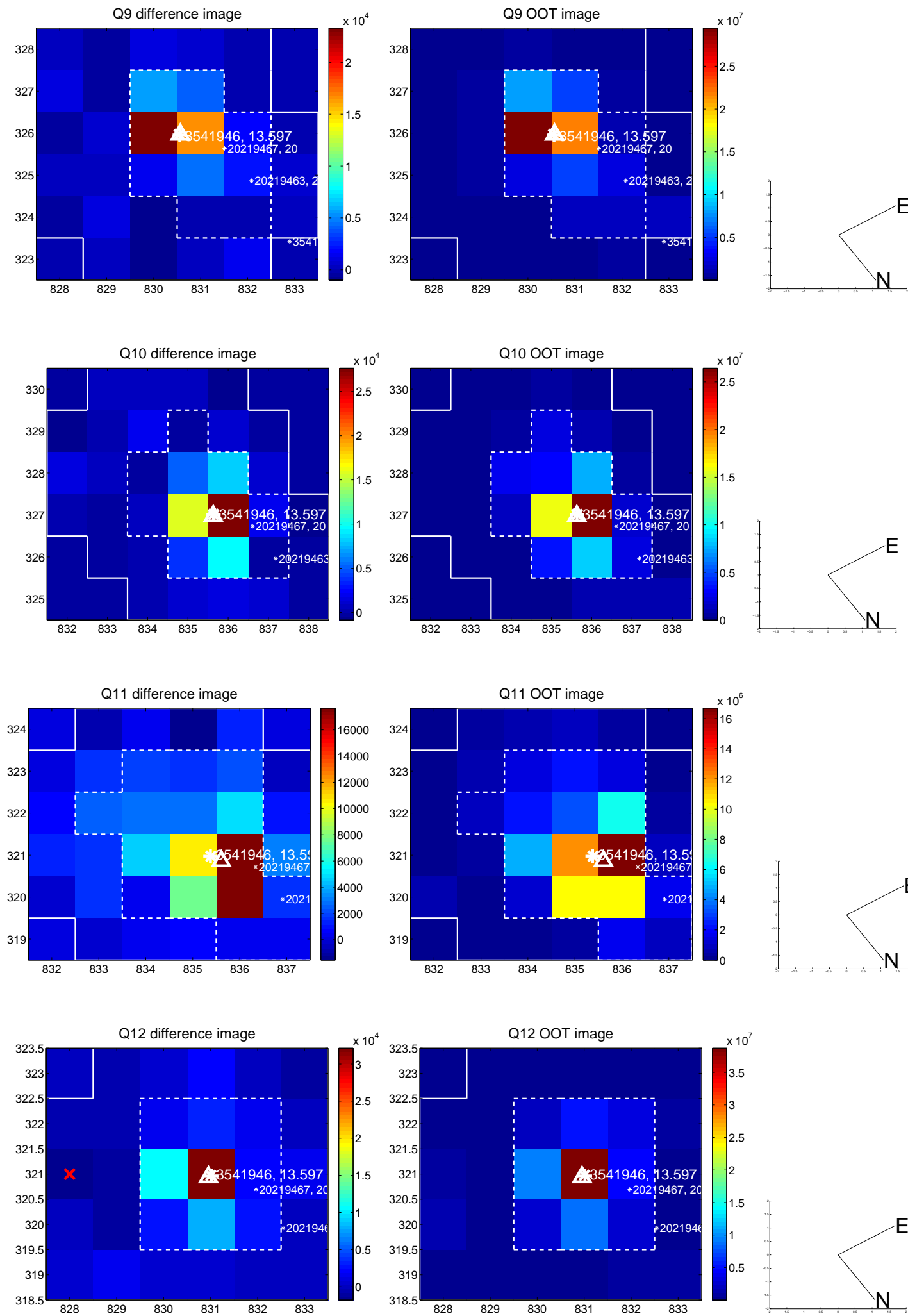
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



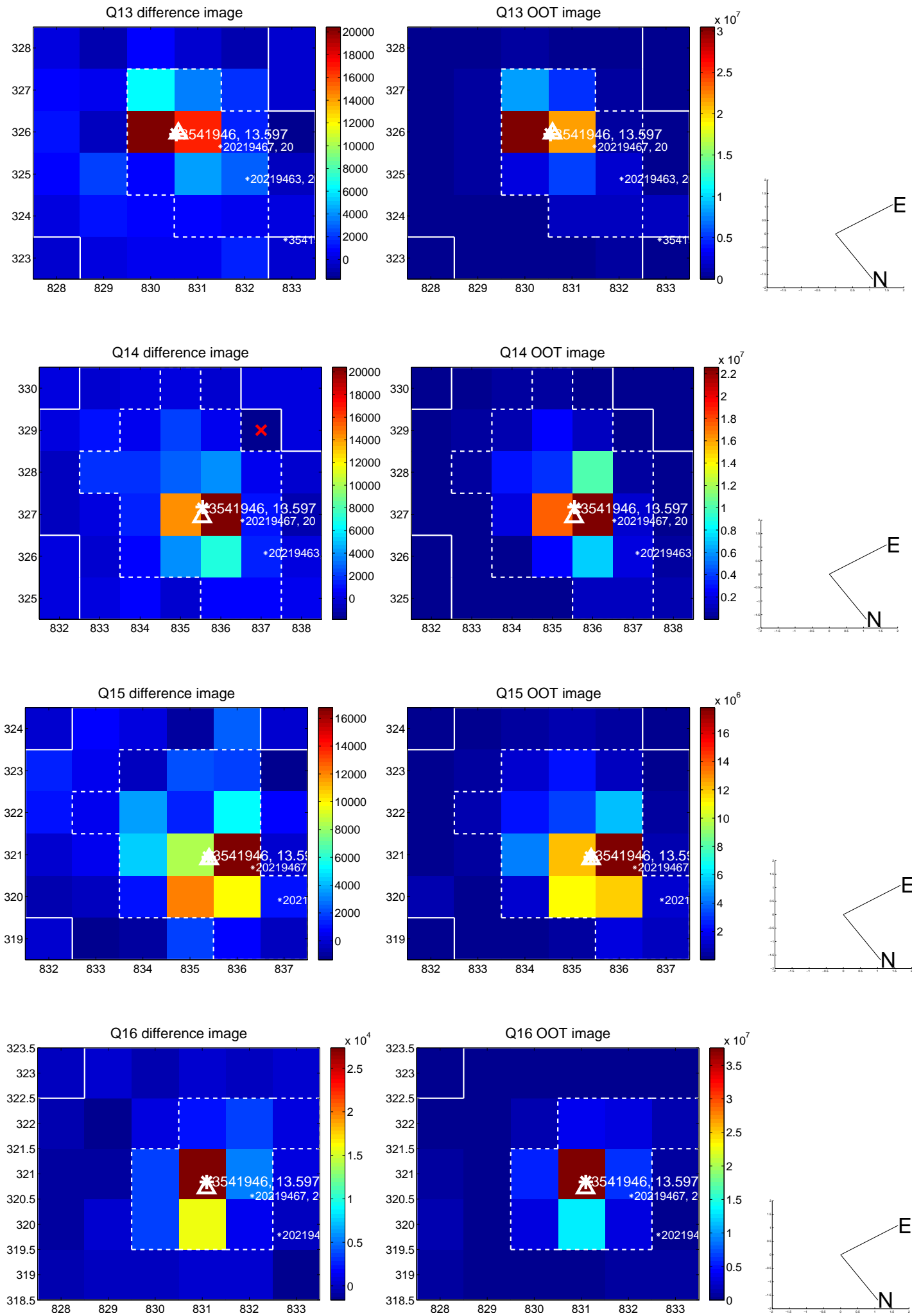
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



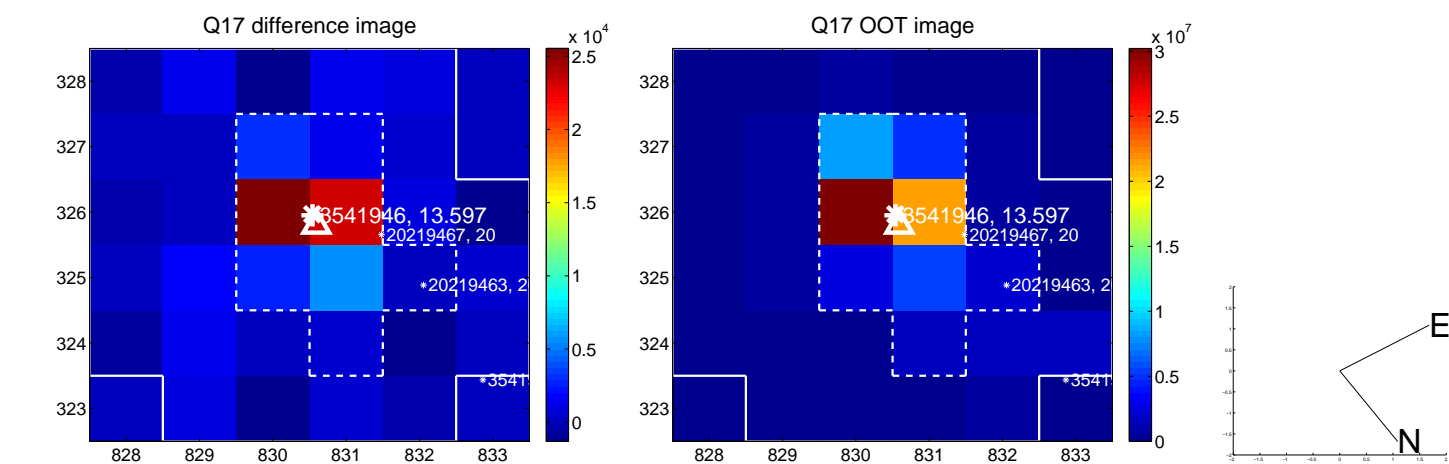
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



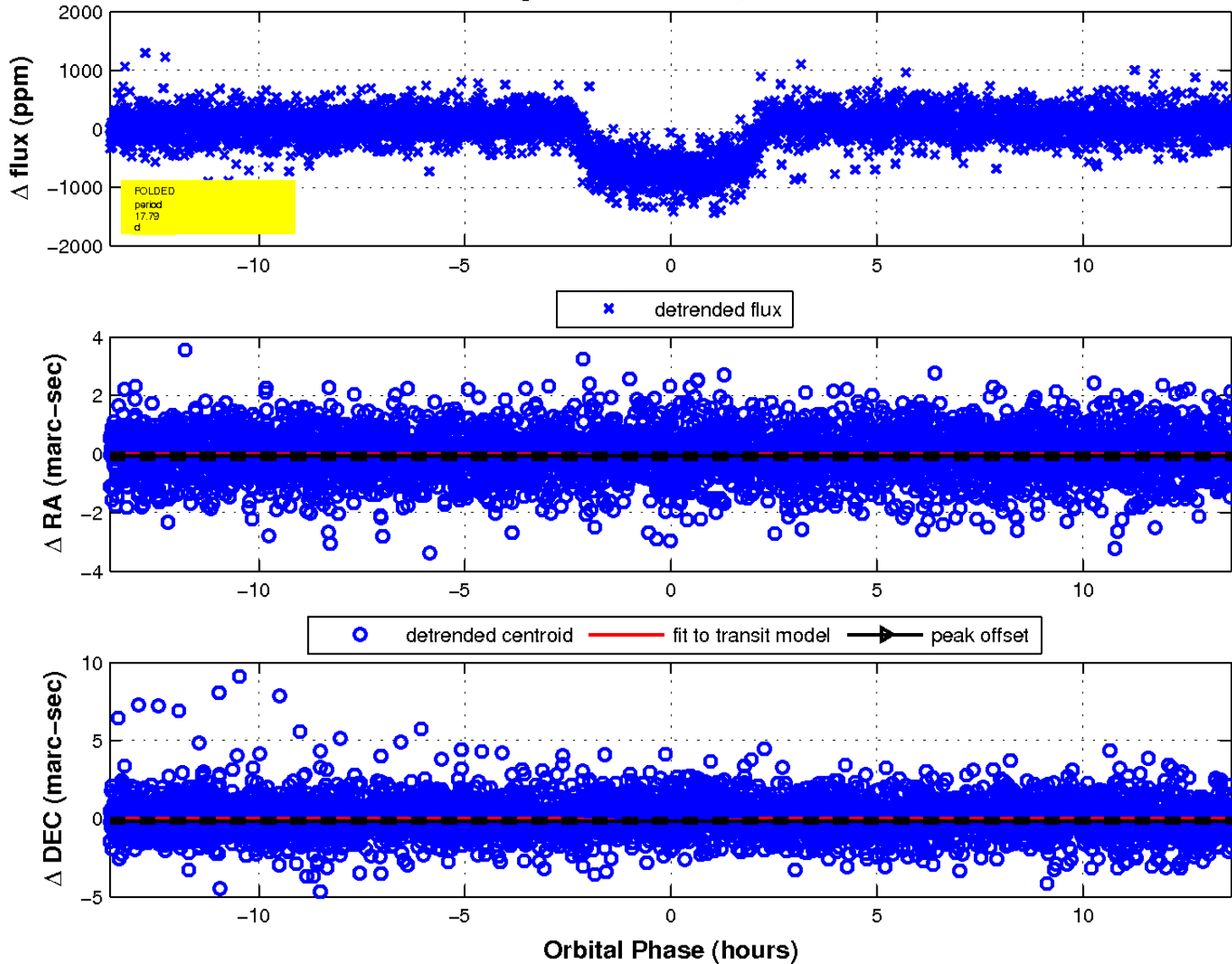
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



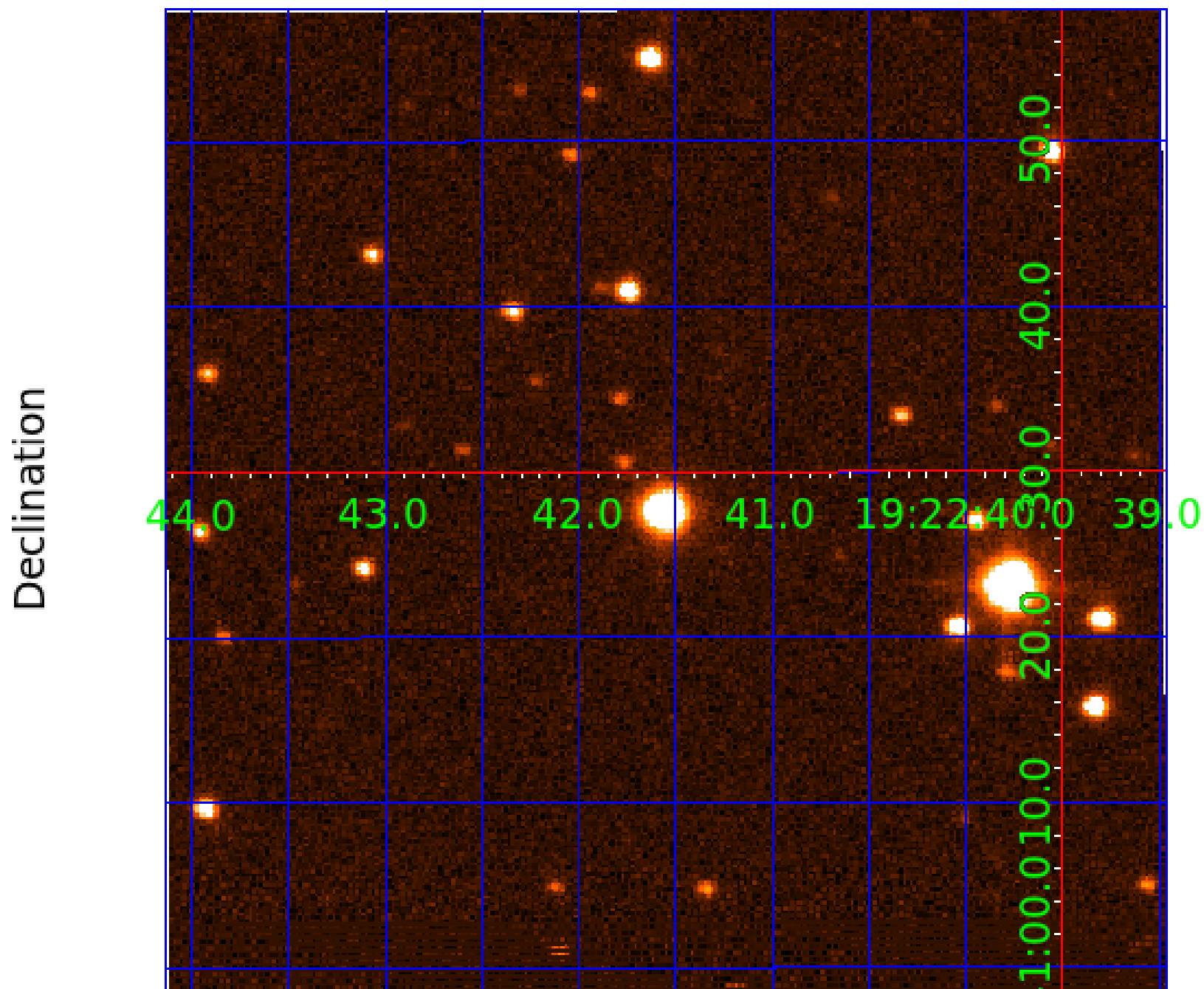
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 003541946

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

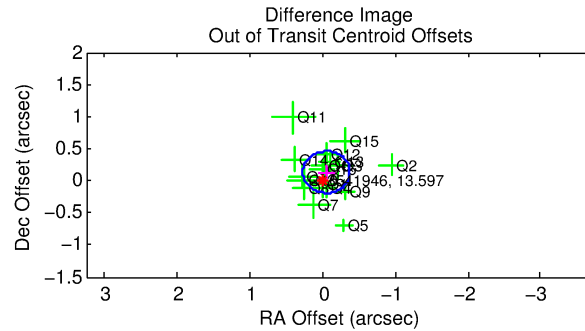
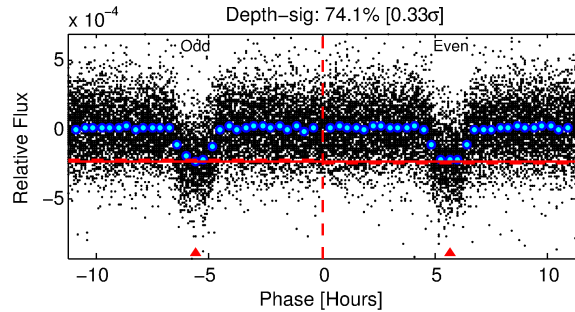
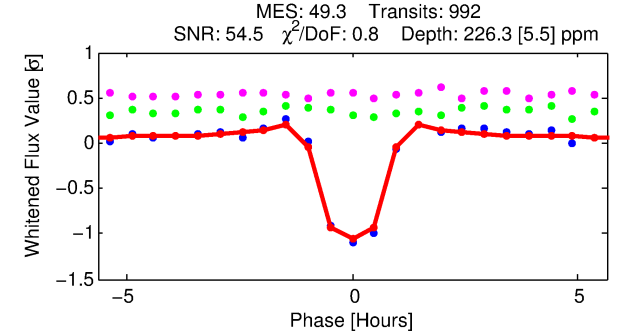
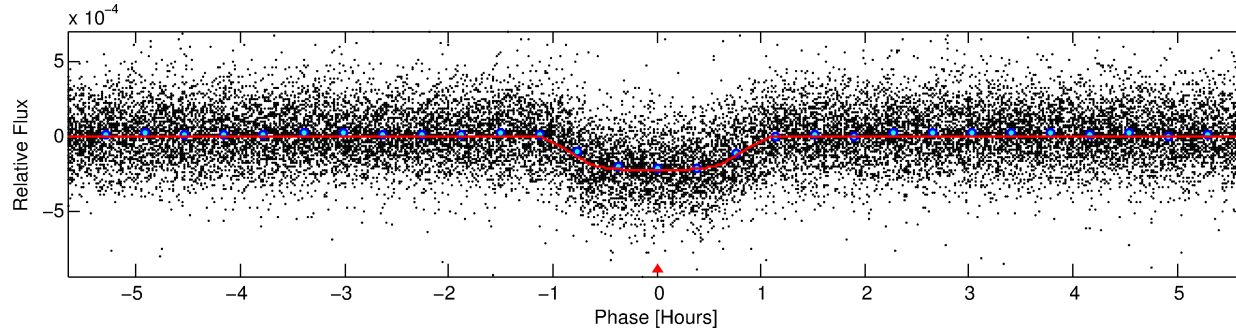
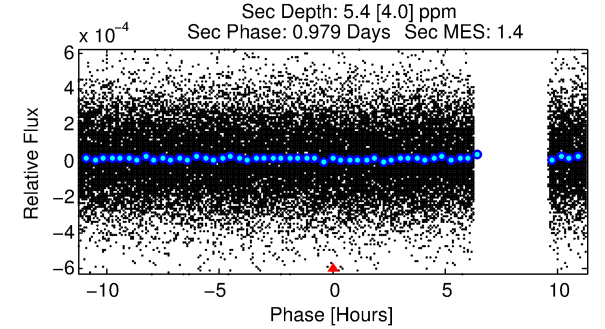
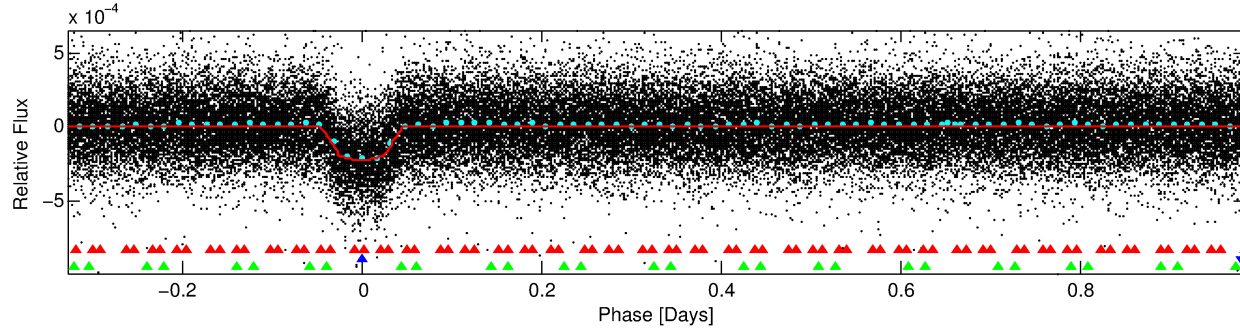
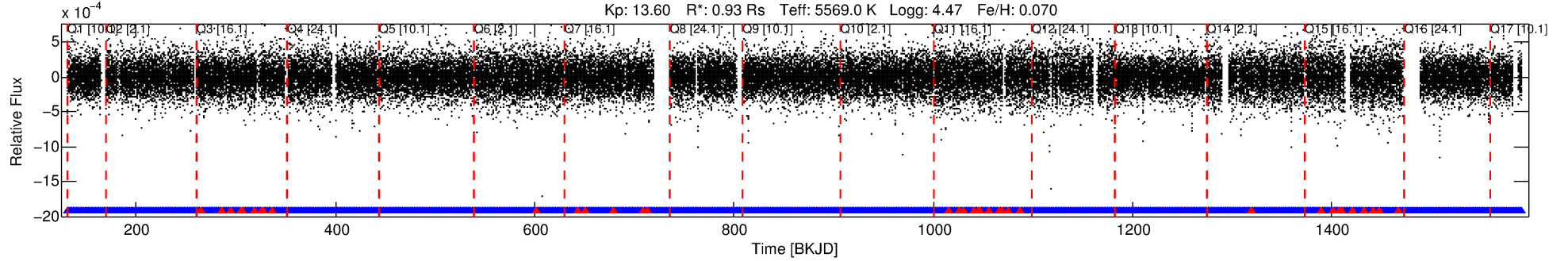
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003541946-02

No Significant Match Found

DV One-Page Summary

KIC: 3541946 Candidate: 2 of 3 Period: 1.312 d
KOI: K00624.03 Corr: 0.968



DV Fit Results:

Period = 1.31184 [0.00000] d
Epoch = 131.8005 [0.0004] BKJD
Rp/R* = 0.0165 [0.0021]
a/R* = 2.68 [1.30]
b = 0.90 [0.12]
Seff = 1408.91 [290.68]
Teff = 1562 [81] K
Rp = 1.67 [0.31] Re
a = 0.0229 [0.0028] AU
Ag = 0.56 [0.45] [-0.99σ]
Teffp = 2085 [412] K [1.24σ]

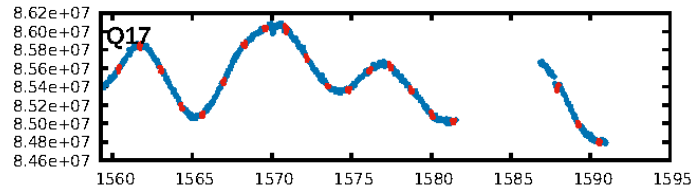
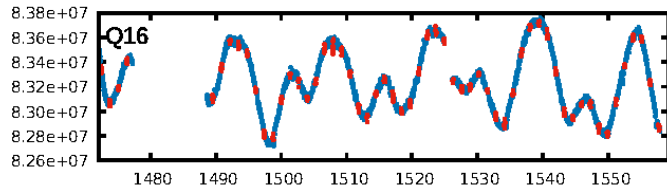
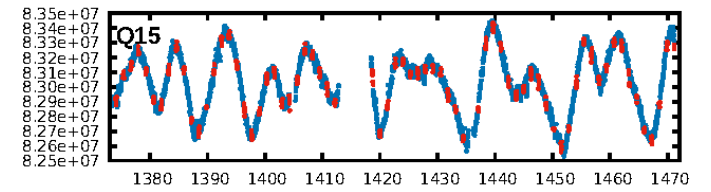
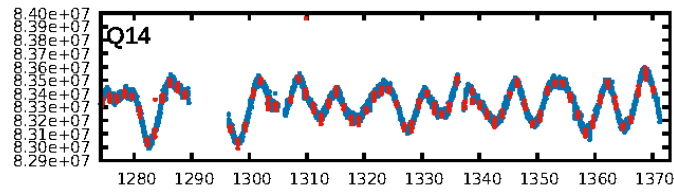
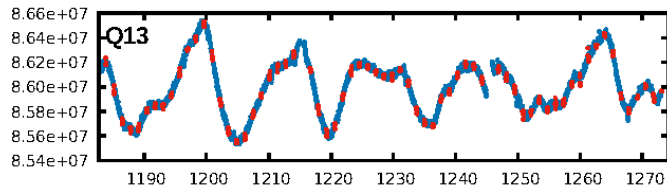
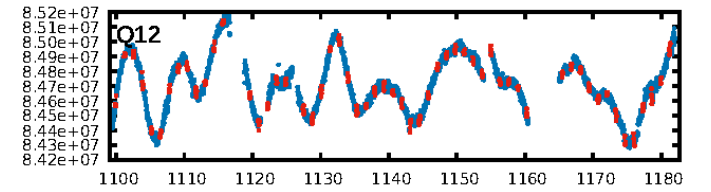
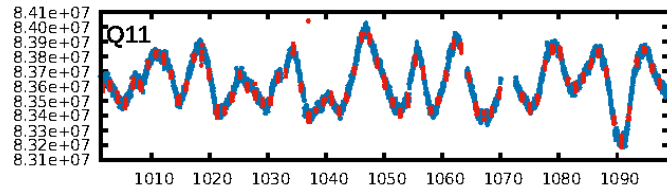
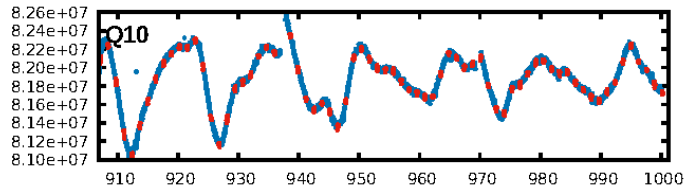
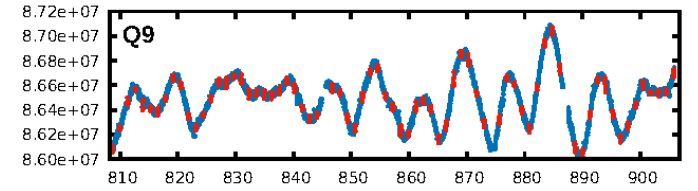
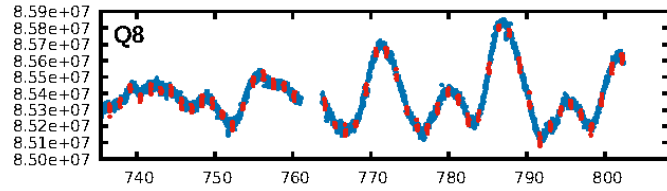
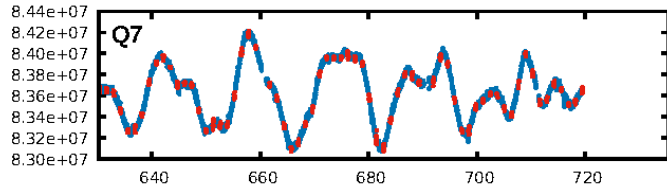
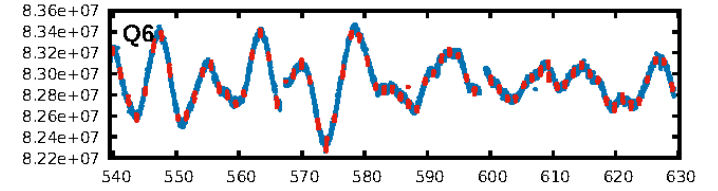
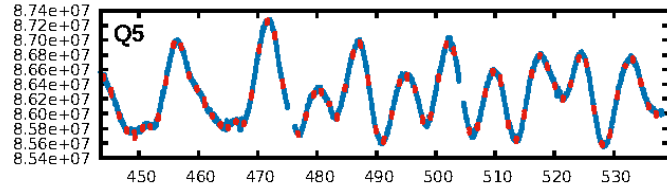
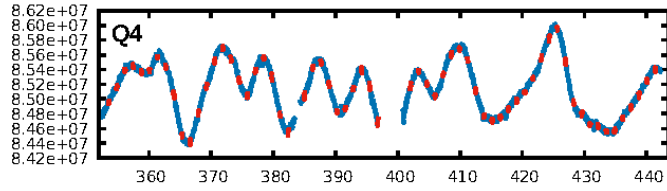
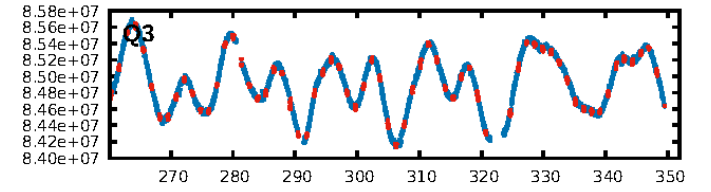
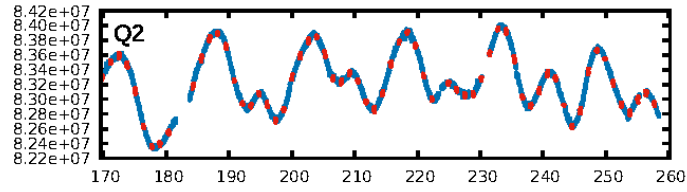
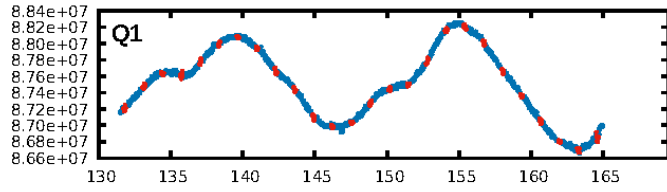
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [80.45σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.96 [912/948]
GhostDiagnostic-chr: 2.472
Centroid-sig: 46.0%
Centroid-so: 0.206 arcsec [0.98σ]
OotOffset-rm: 0.143 arcsec [1.32σ]
KicOffset-rm: 0.130 arcsec [1.22σ]
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]

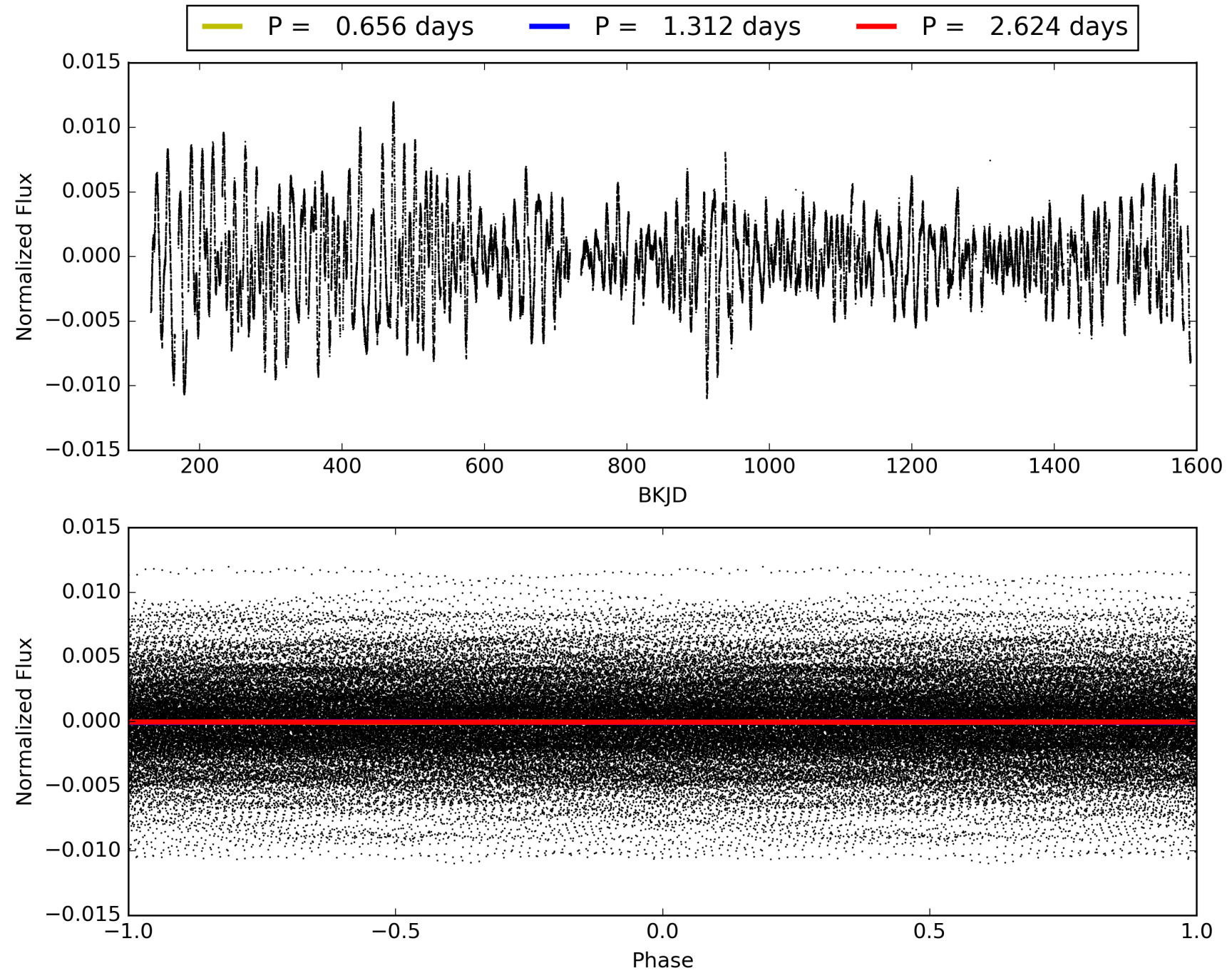
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:58:59 Z

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

TCE 003541946-02, PDC Light Curves

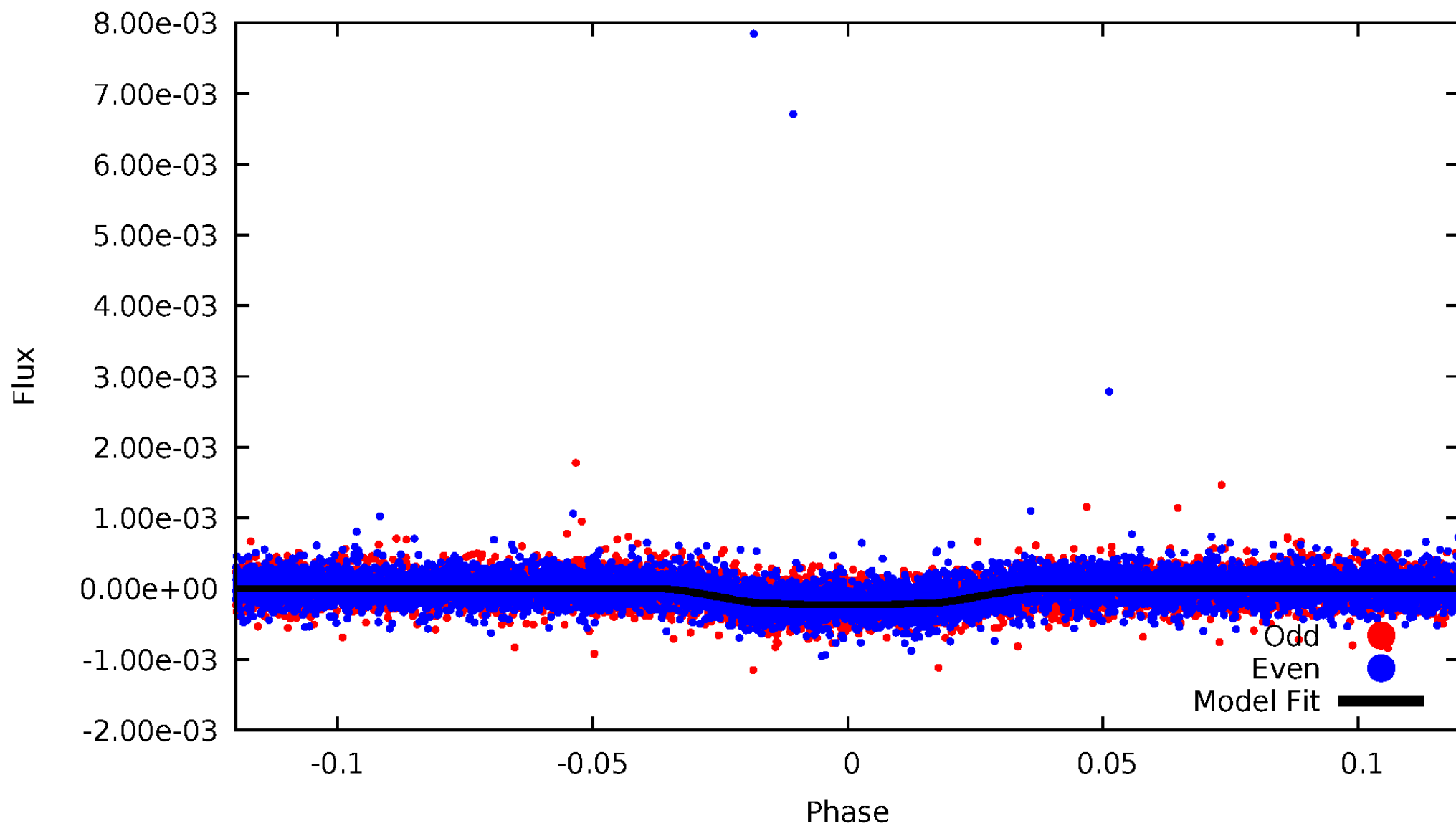


TCE 003541946-02



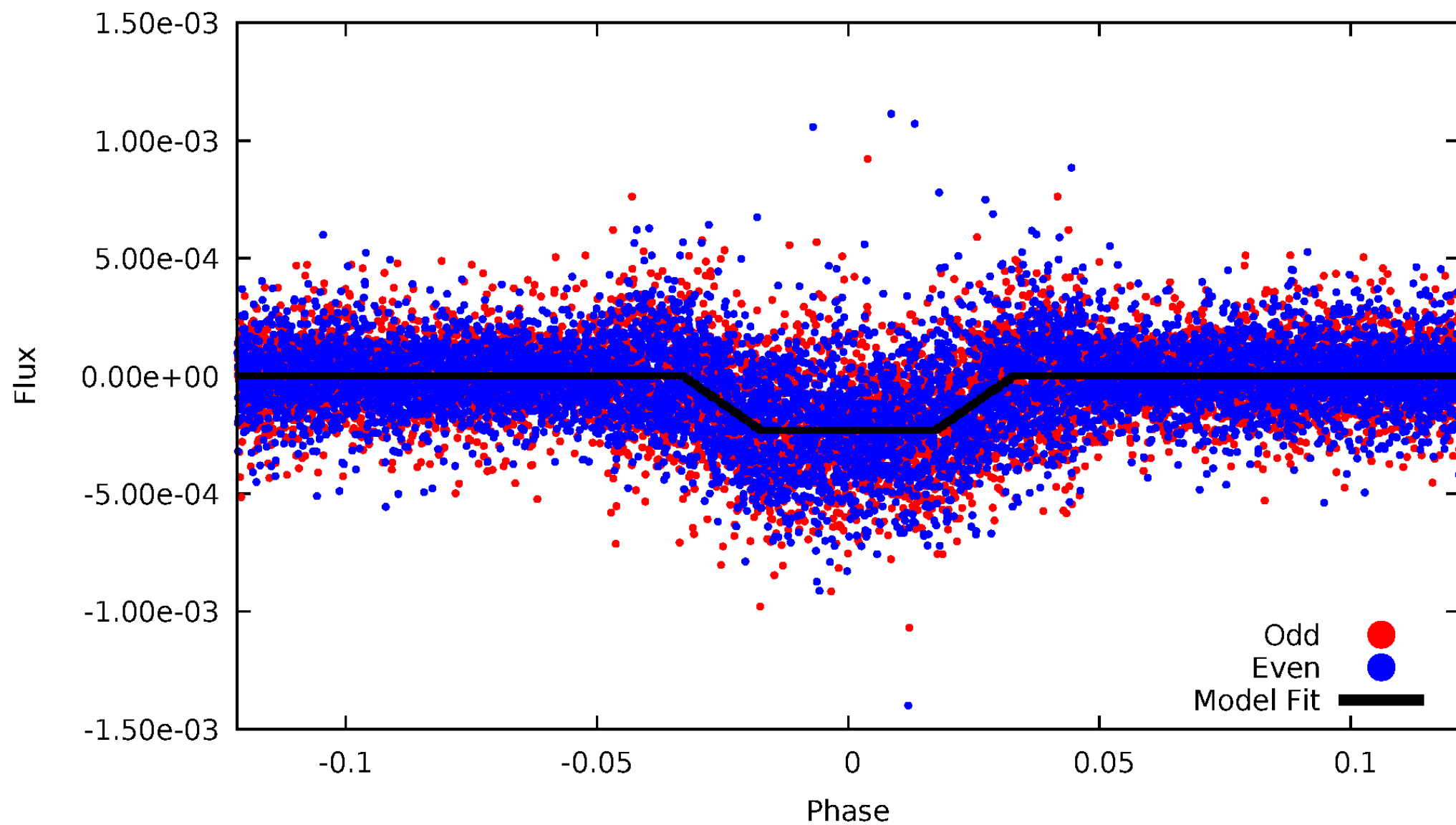
DV Odd/Even

TCE 003541946-02



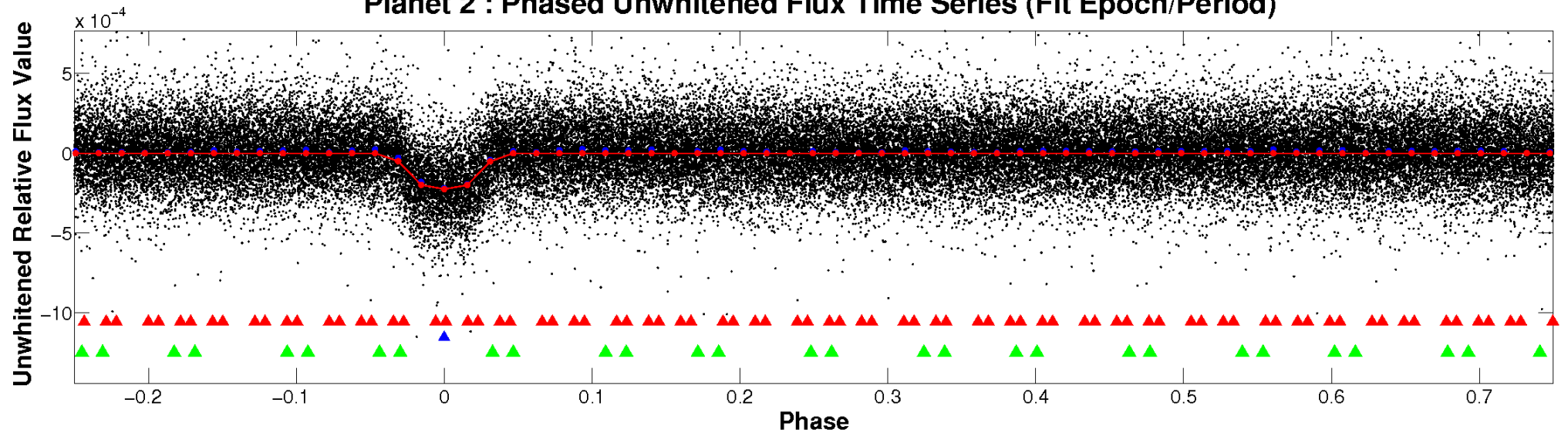
ALT Odd/Even

TCE 003541946-02

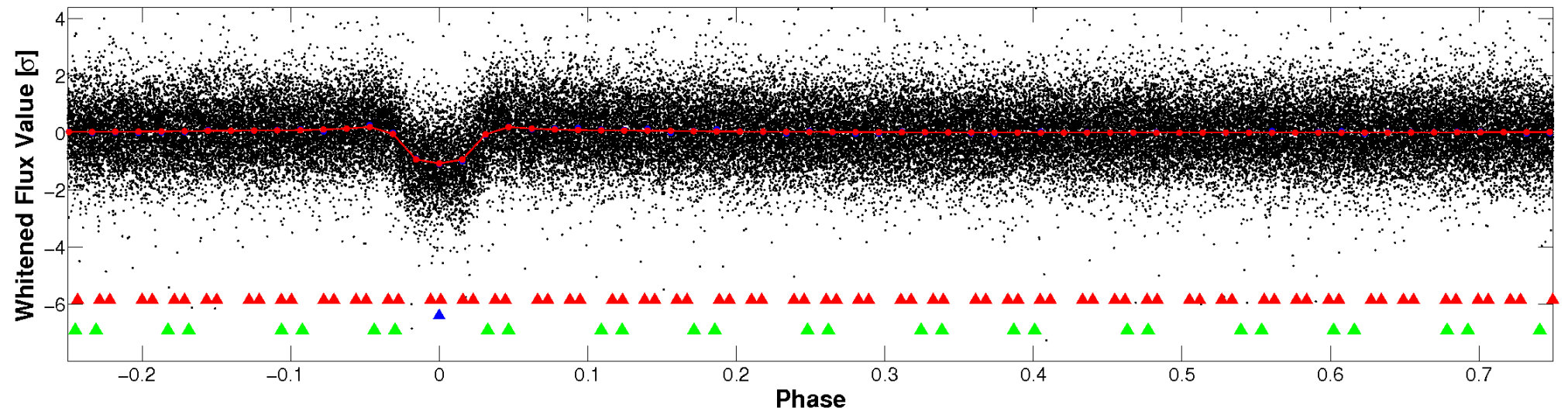


Non-Whitened Vs. Whitened Light Curve

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

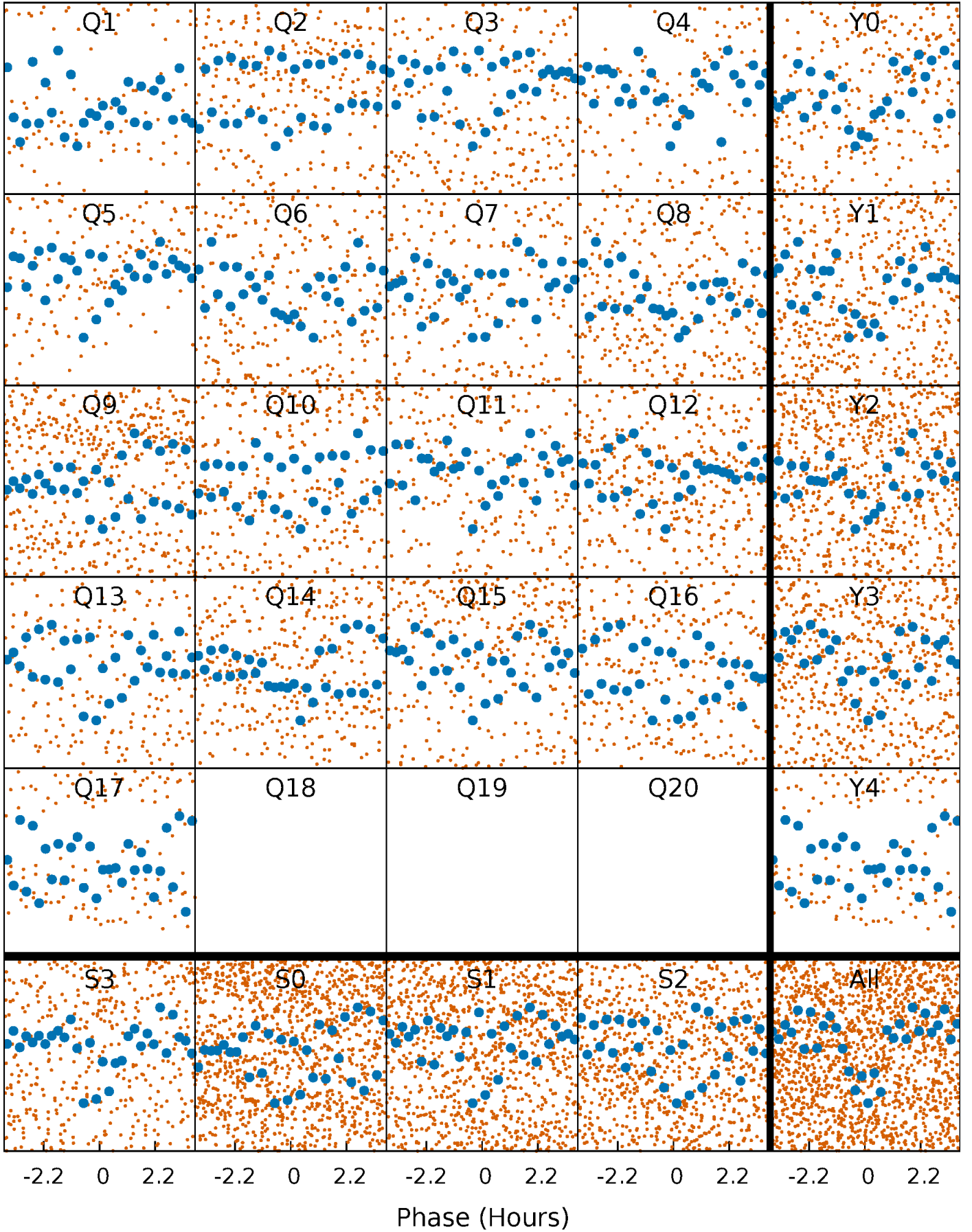


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



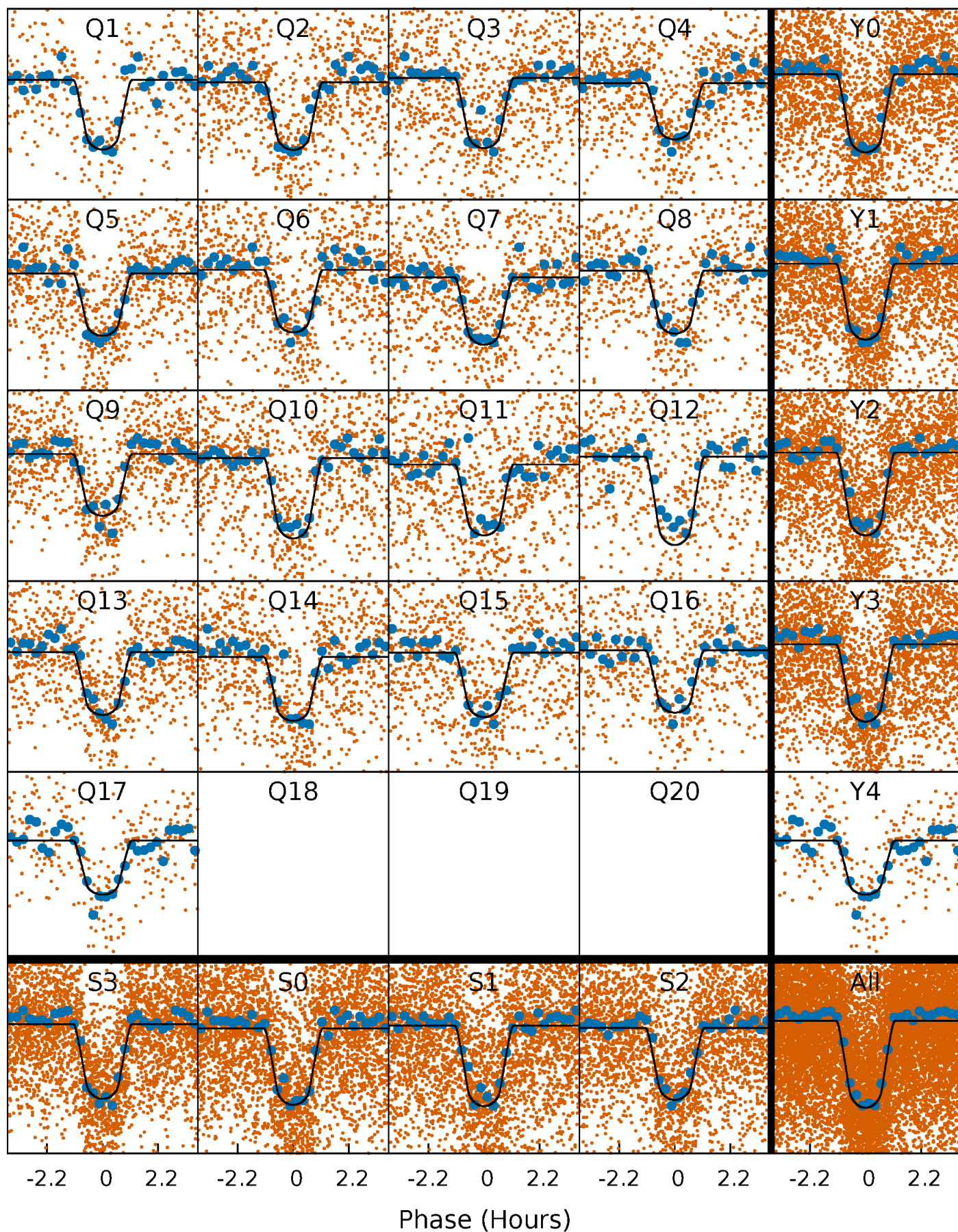
PDC Quarter-Phased Transit Curves

TCE 003541946-02 P= 1.311839 Days $T_0=131.800522$ (BKJD)



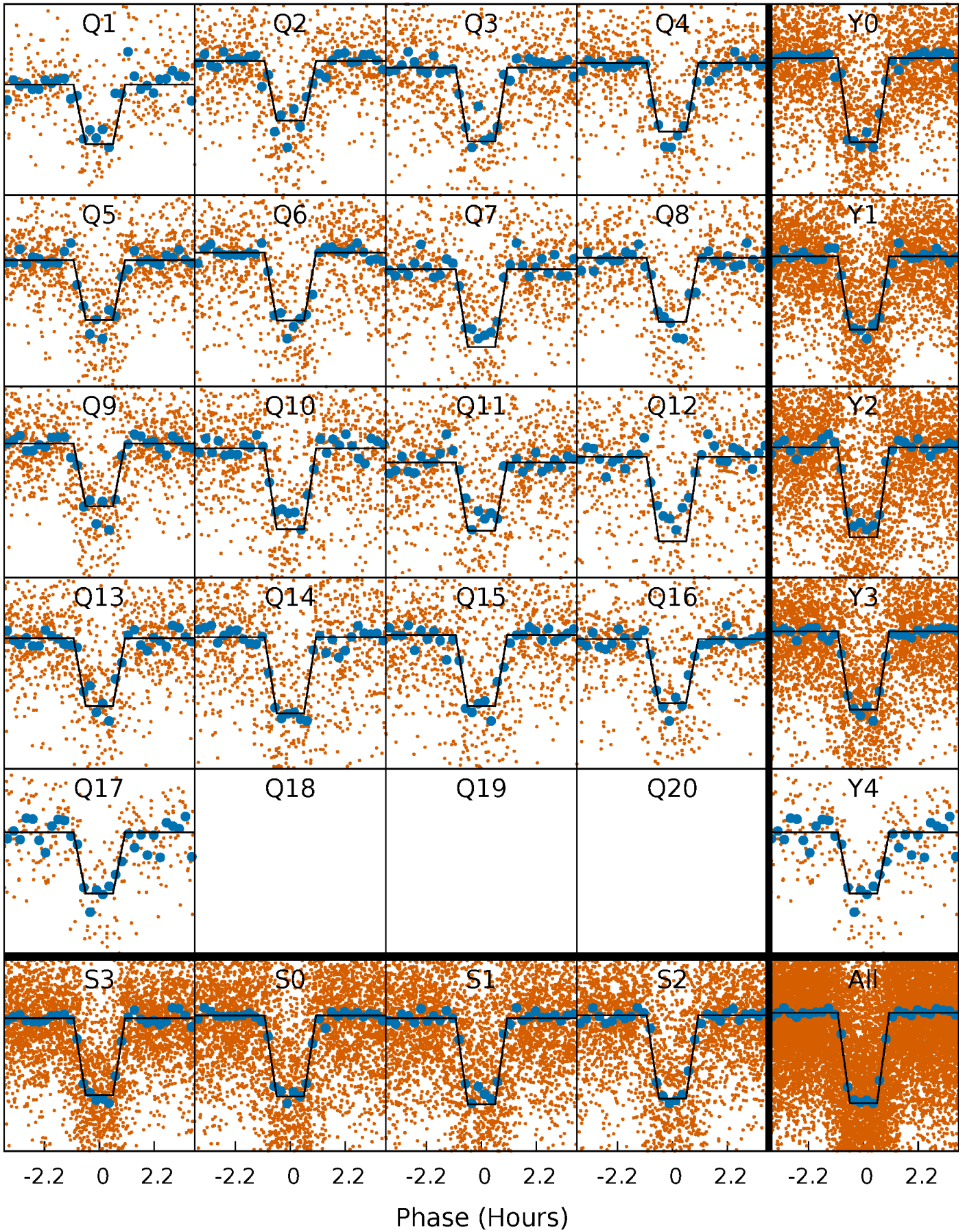
DV Quarter-Phased Transit Curves

TCE 003541946-02 P= 1.311839 Days $T_0=131.800522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

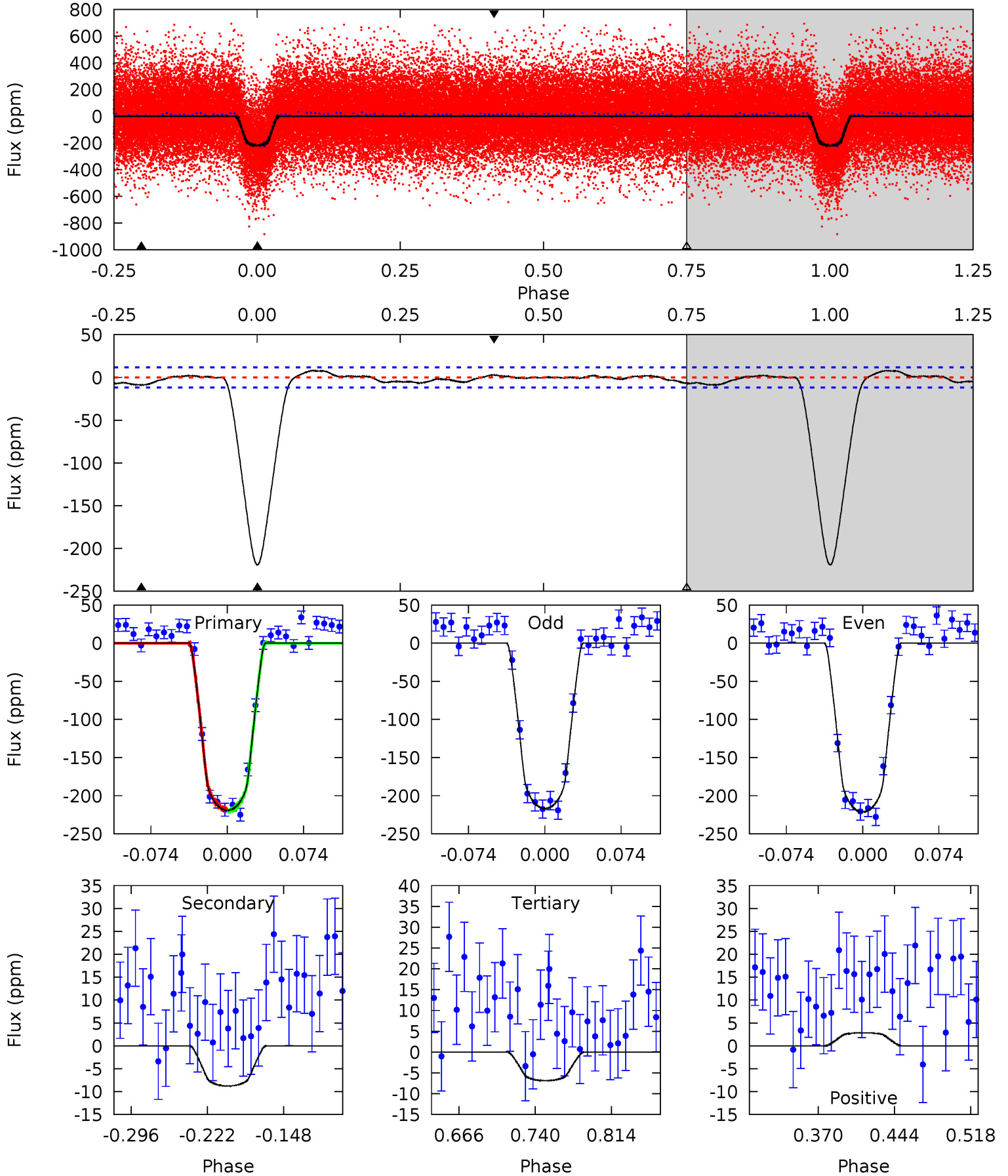
TCE 003541946-02 $P = 1.311841$ Days $T_0 = 131.799252$ (BKJD)



DV Model-Shift Uniqueness Test

003541946-02, P = 1.311839 Days, E = 130.488683 Days

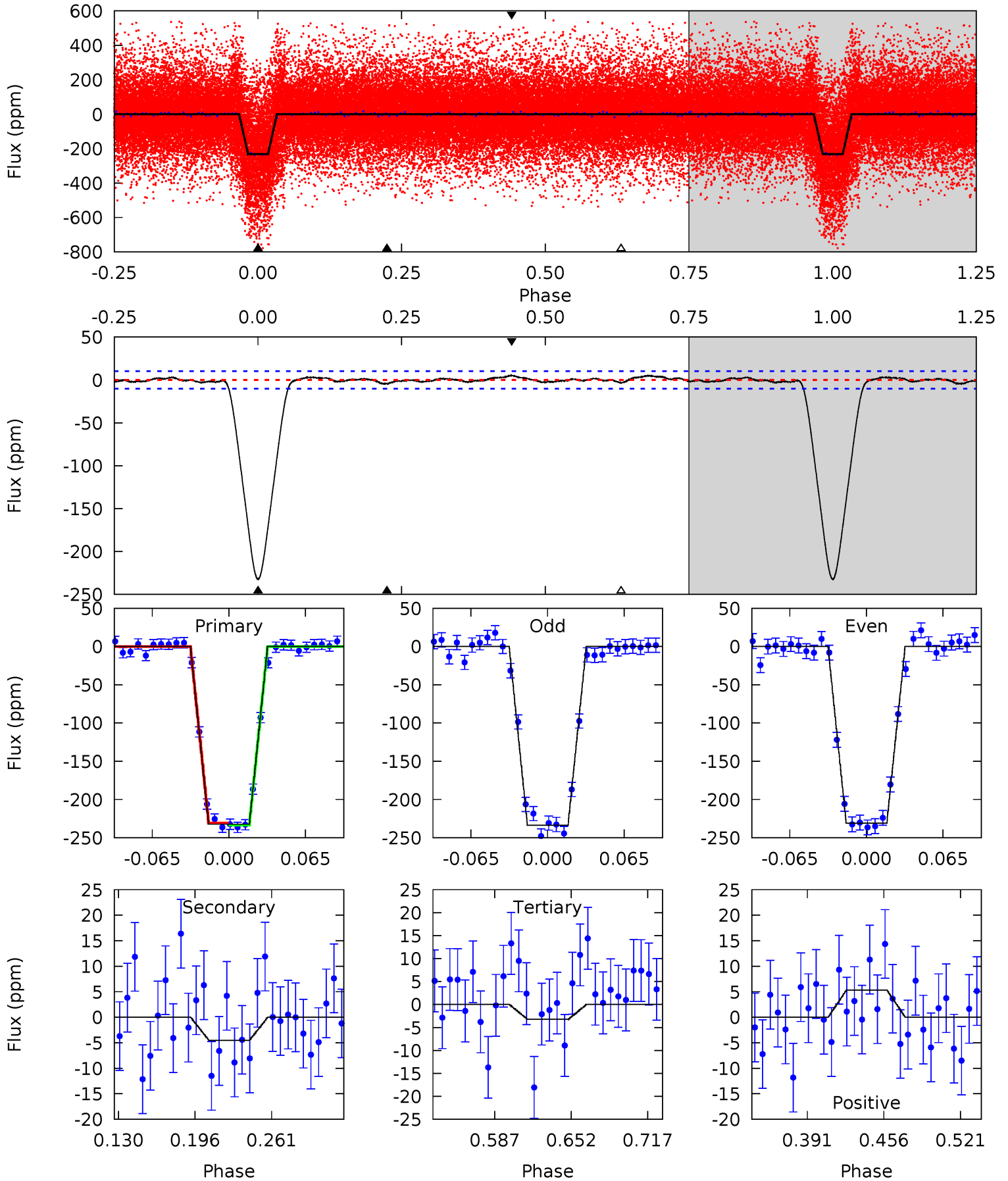
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.1	3.45	2.71	1.12	4.63	1.79	1.26	83.4	85.0	0.74	2.32	0.91	0.99	0.03	0.36



Alt Model-Shift Uniqueness Test

003541946-02, P = 1.311841 Days, E = 130.487411 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
105.9	2.06	1.48	2.42	4.65	1.84	0.92	104.4	103.5	0.58	-0.36	0.64	0.99	0.02	0.59



Stellar Parameters For KIC 003541946

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5569^{+111}_{-111}	$4.474^{+0.059}_{-0.110}$	$0.070^{+0.150}_{-0.150}$	$0.927^{+0.122}_{-0.066}$	$0.935^{+0.057}_{-0.057}$	$1.652^{+0.352}_{-0.498}$
	+2%/-2%	+1%/-2%	+214%/-214%	+13%/-7%	+6%/-6%	+21%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003541946-02 / KOI 0624.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 3	$1.71^{+0.25}_{-0.23}$	2201^{+88}_{-77}	2828^{+210}_{-274}	$0.845^{+0.393}_{-0.294}$
Alt.	-5 ± 2	$1.58^{+0.24}_{-0.24}$	2193^{+91}_{-70}	2509^{+300}_{-4644}	$0.515^{+0.315}_{-0.268}$

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

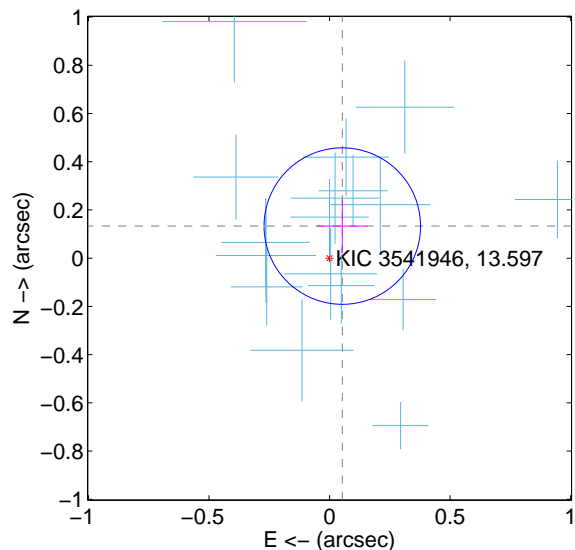
Supplemental centroid analysis for 003541946-02. Kepler magnitude: 13.60. Transit SNR 54.46

There are 17 quarters with good PRF difference image offsets

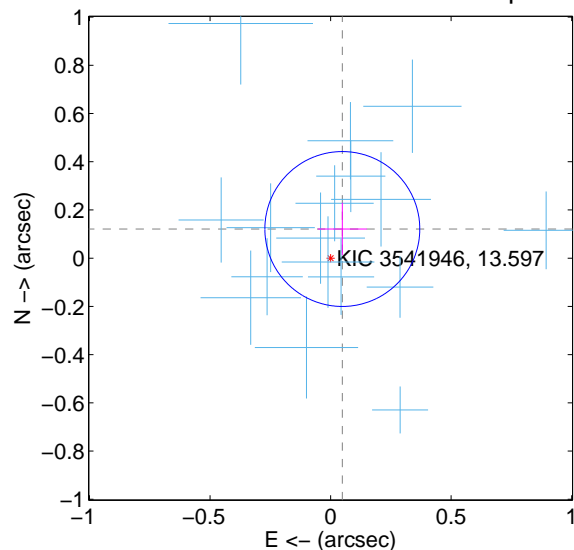
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.143 ± 0.108	1.32	-0.053 ± 0.105	0.133 ± 0.111
PRF-fit source offset from KIC position	0.130 ± 0.107	1.22	-0.049 ± 0.102	0.121 ± 0.109
photometric centroid source offset	0.21 ± 0.21	0.98	-0.16 ± 0.19	0.13 ± 0.23

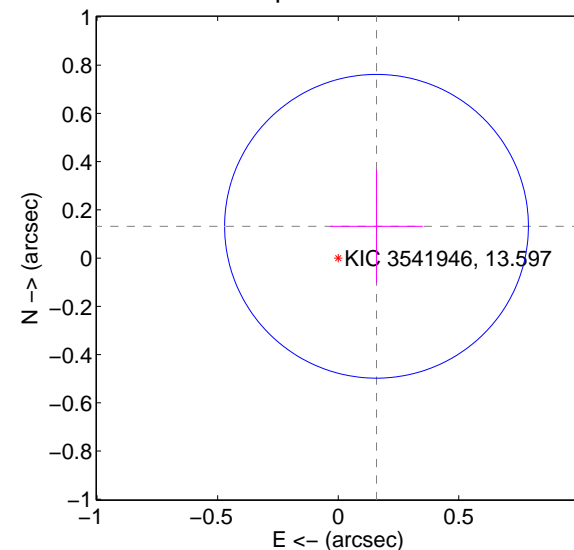
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

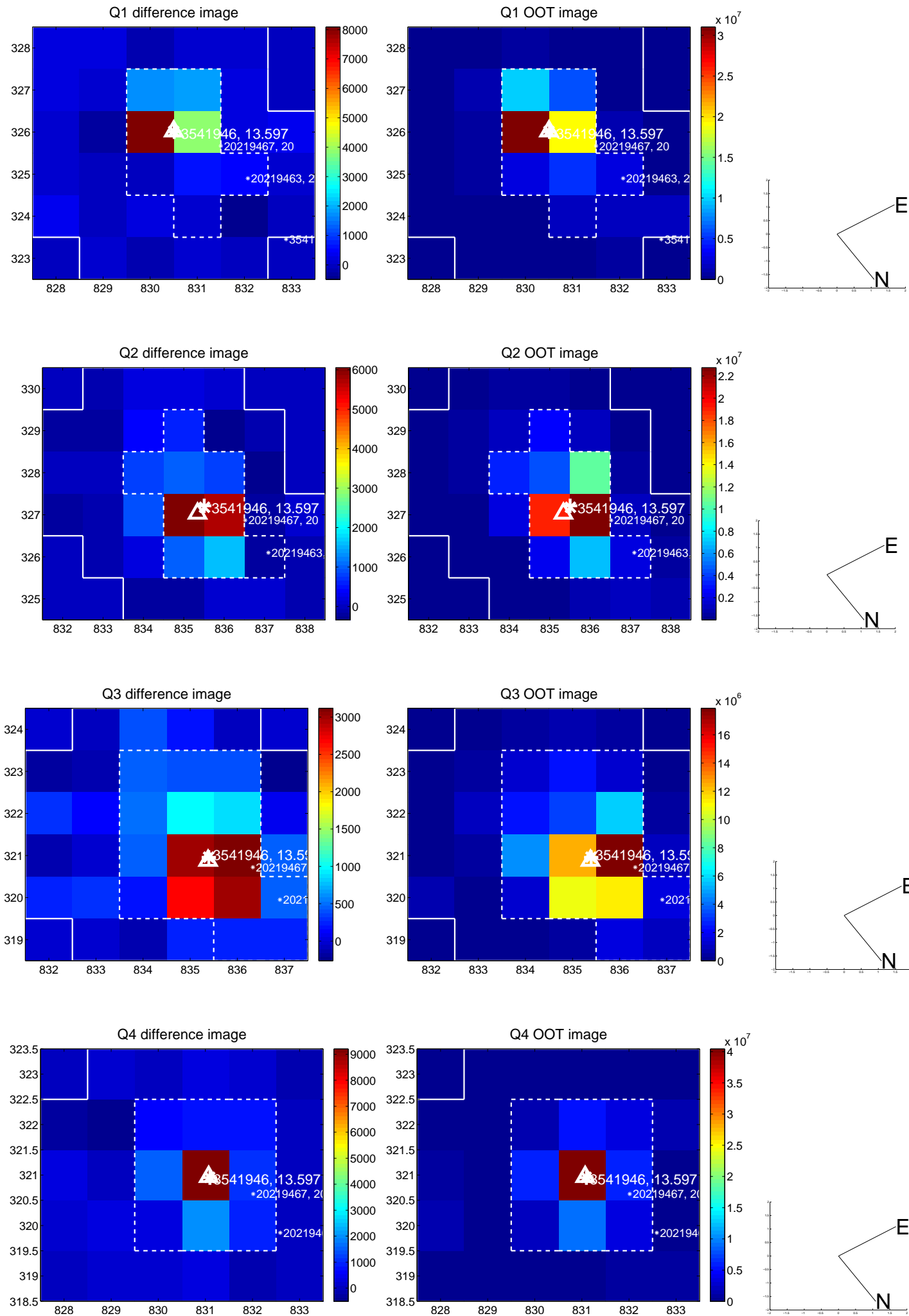


offset from photometric centroids

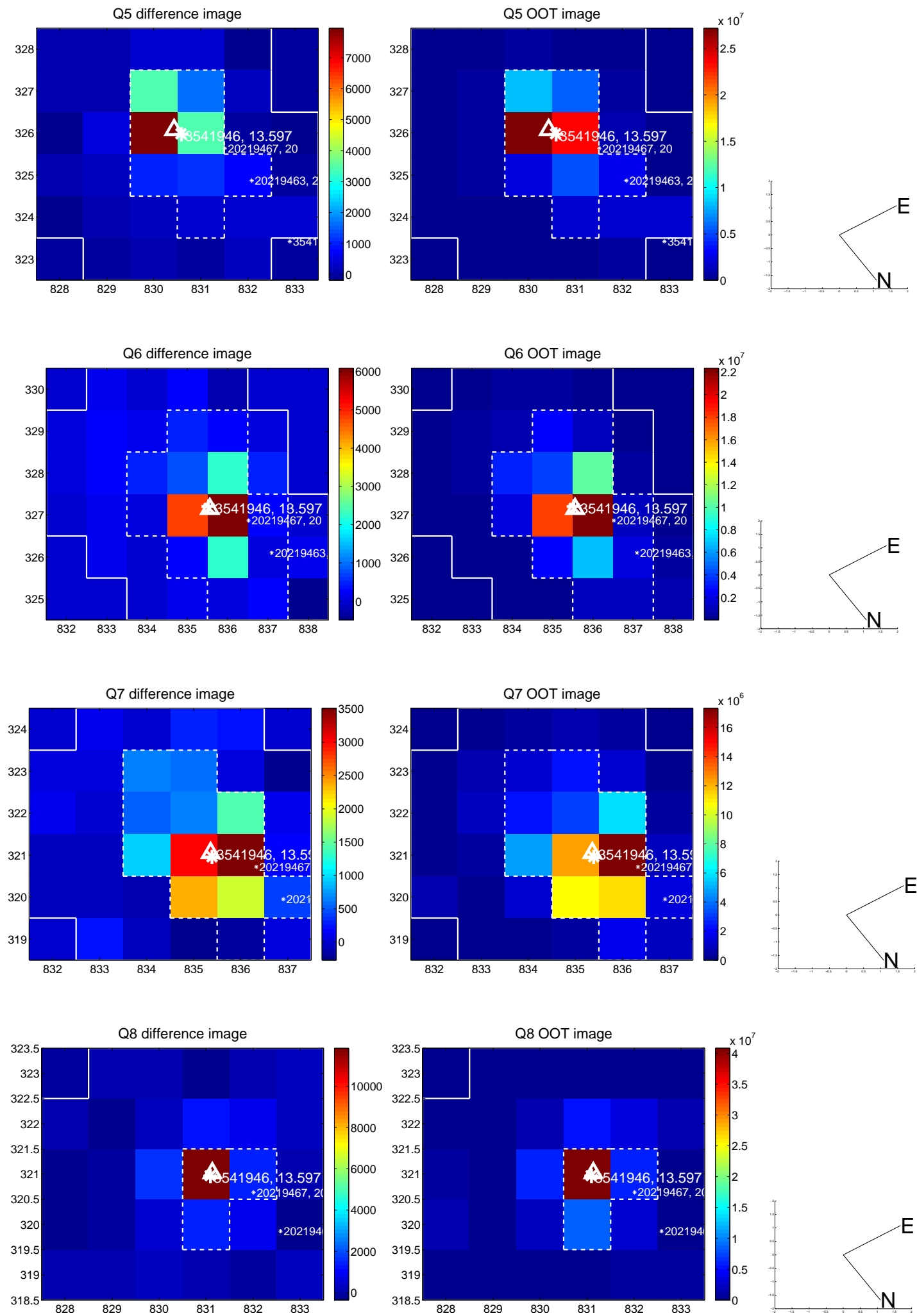


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

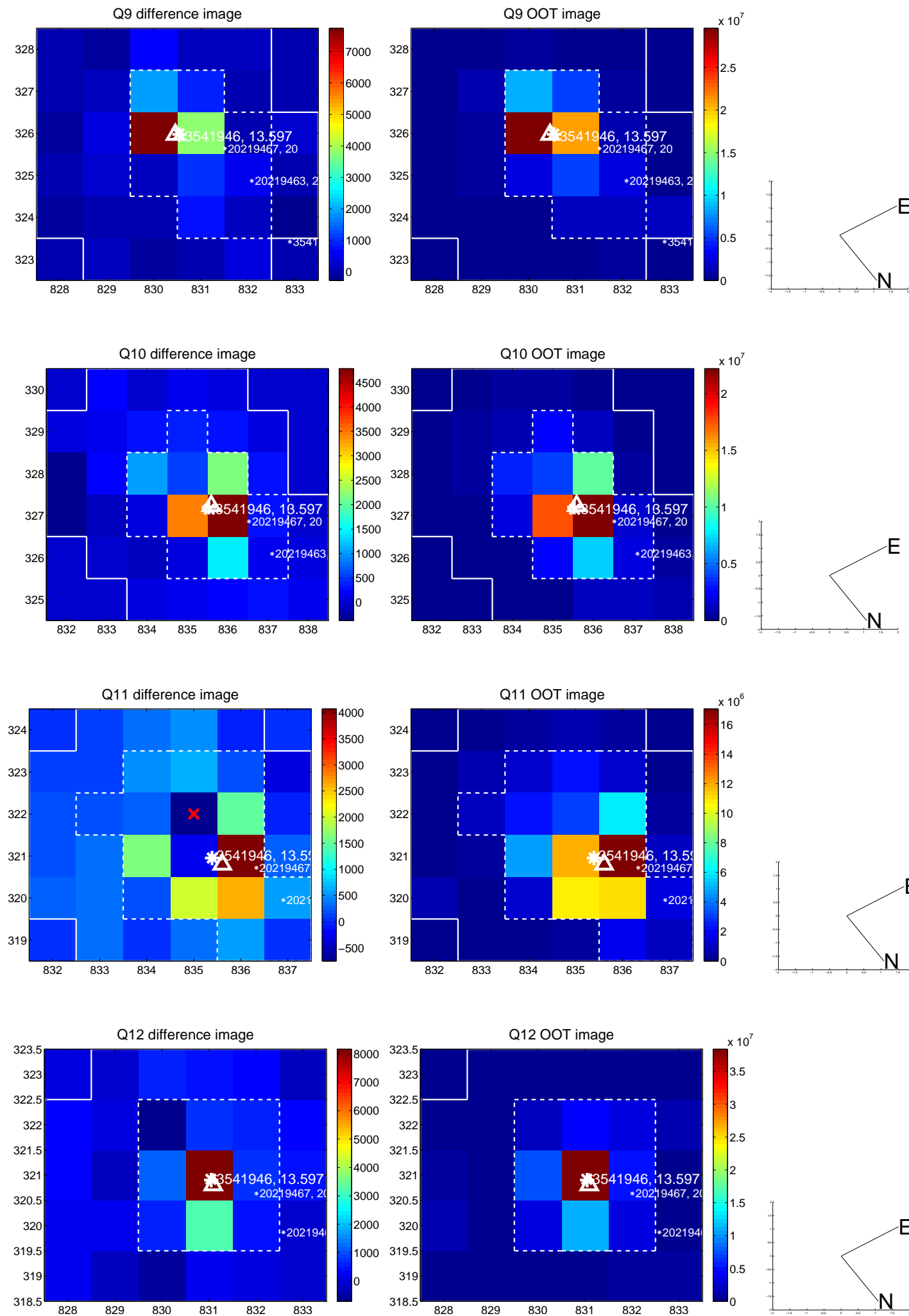
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



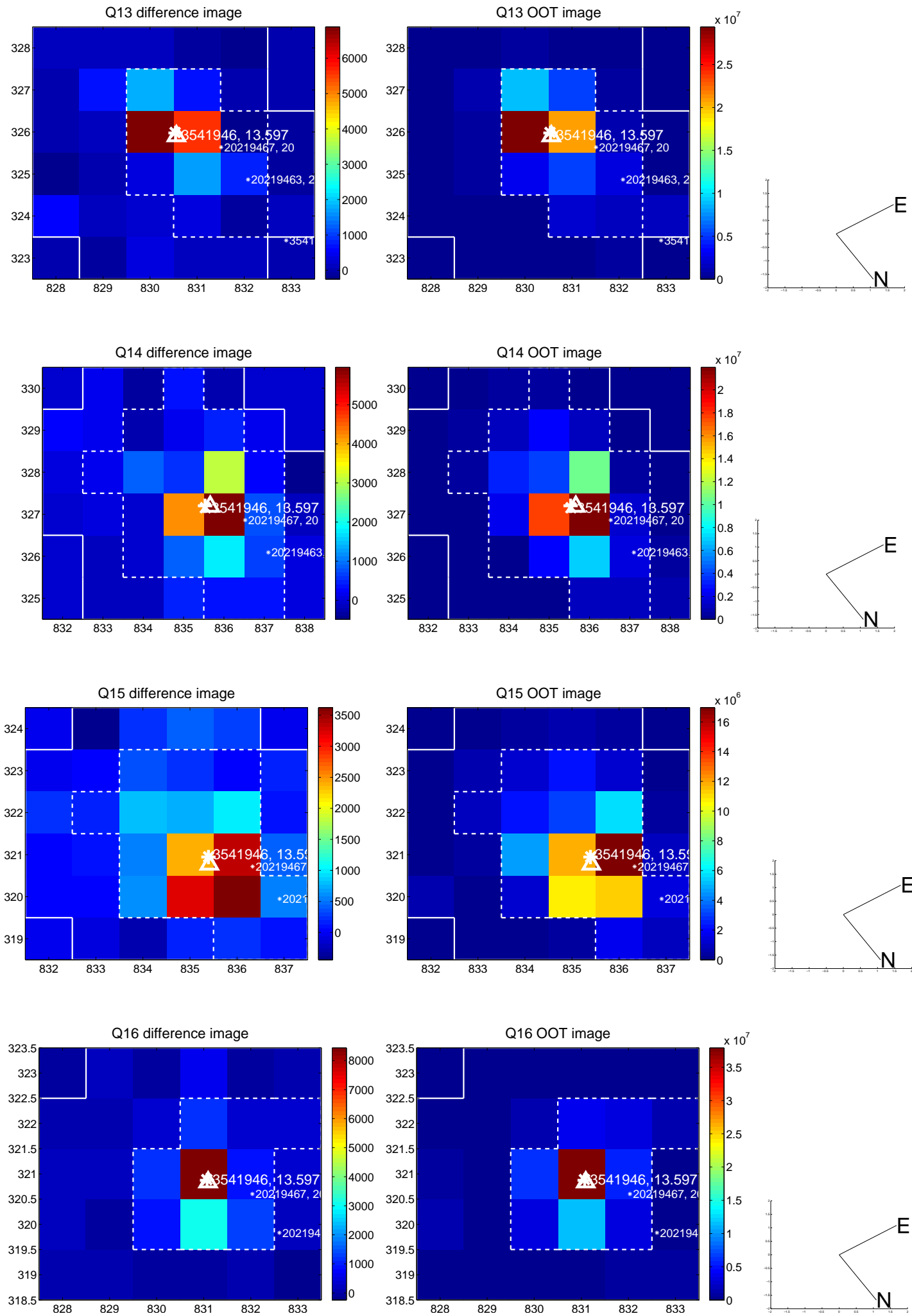
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



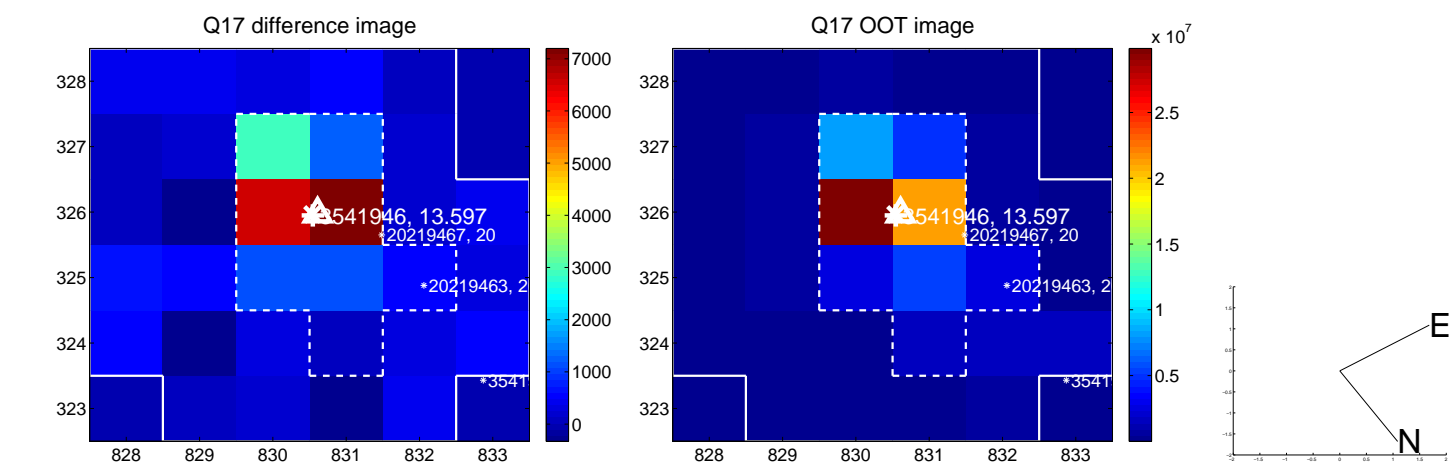
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



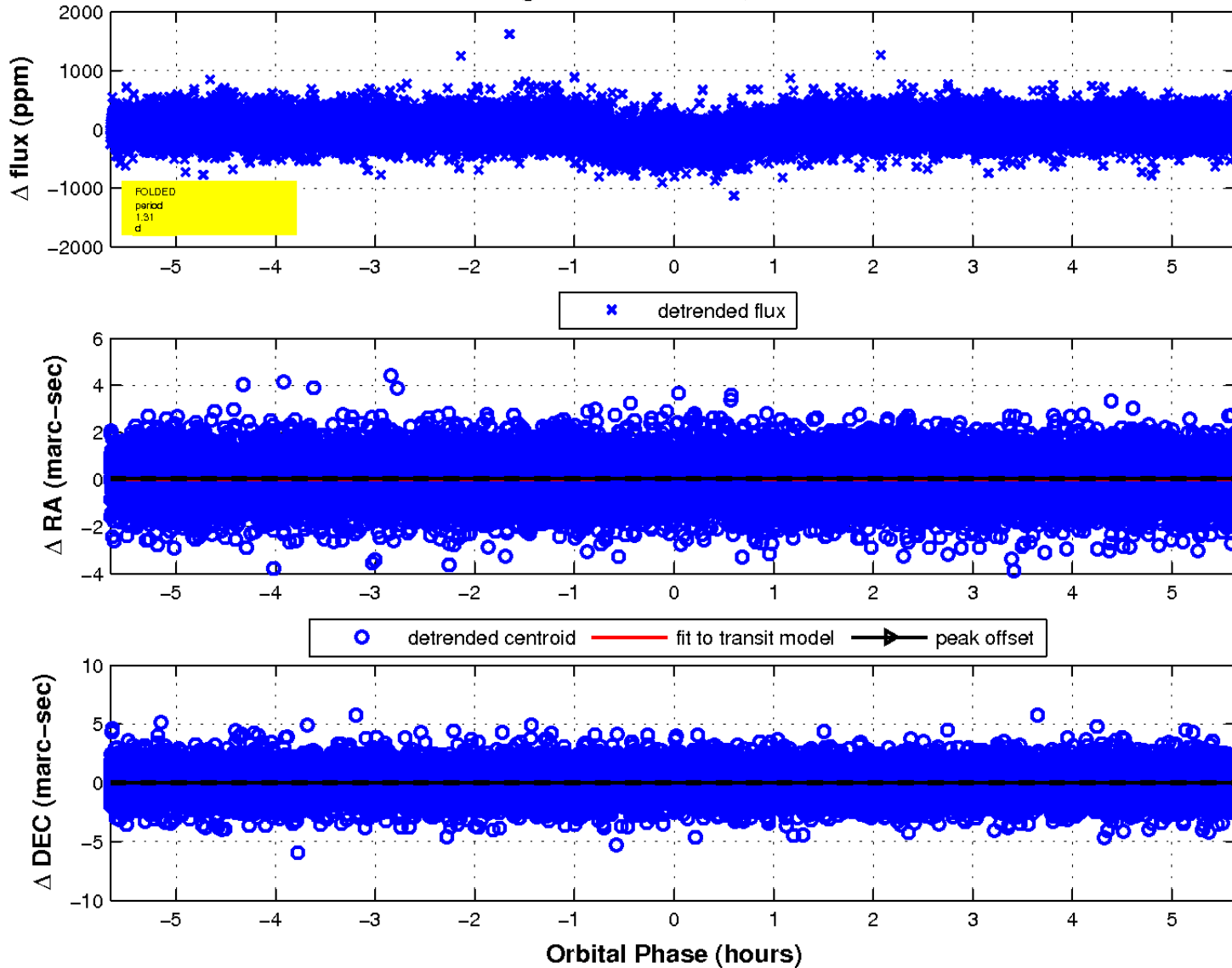
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



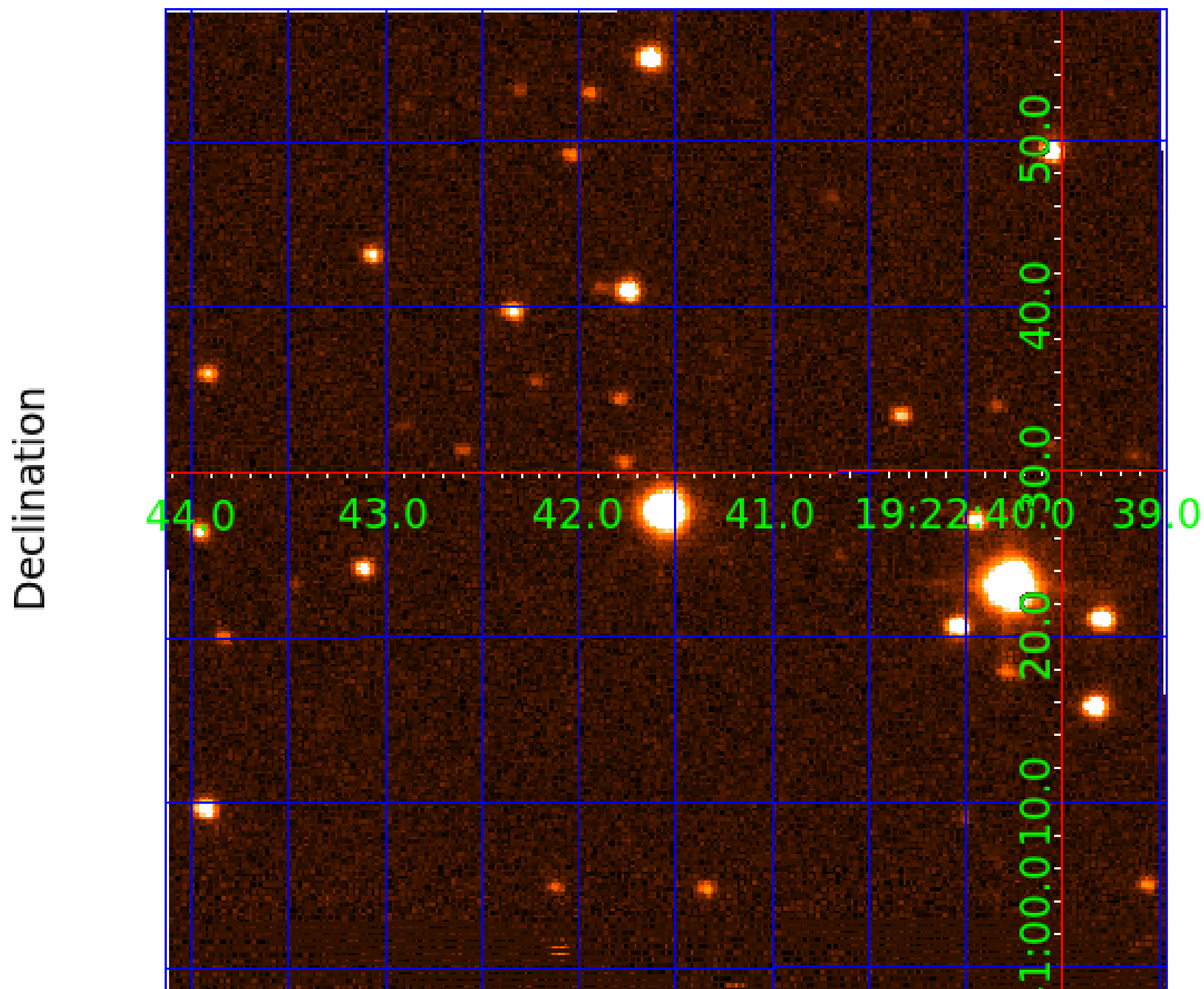
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 3



UKIRT Image



KIC 003541946

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})
003541946-01	OBS	0624.01	17.790040	146.855941	903.5	4.539	66.9	69.2	0.93	5569	2.96	43.57
003541946-02	OBS	0624.03	1.311839	131.800522	226.3	1.887	49.3	54.5	0.93	5569	1.67	1408.91
003541946-03	OBS	0624.02	49.567469	169.540867	684.3	3.849	26.8	29.2	0.93	5569	2.78	11.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003541946-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
003541946-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
003541946-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

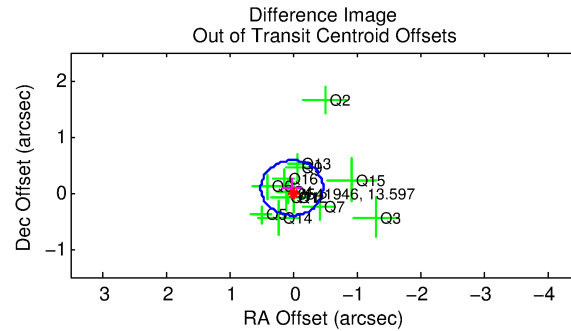
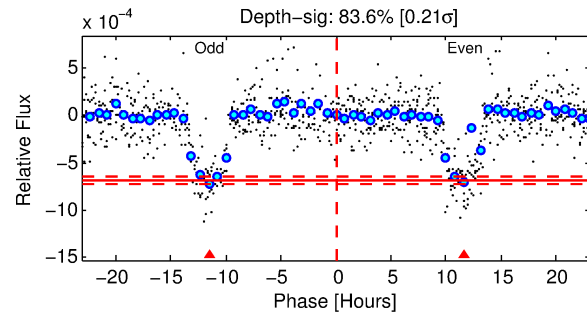
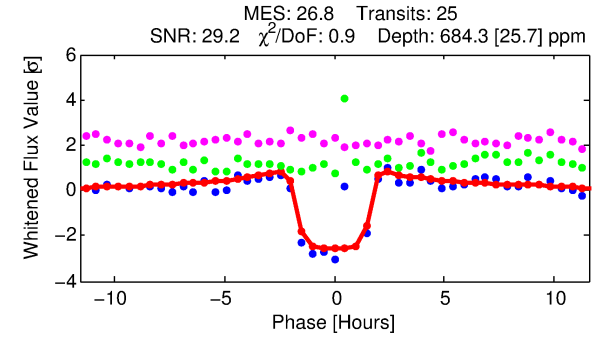
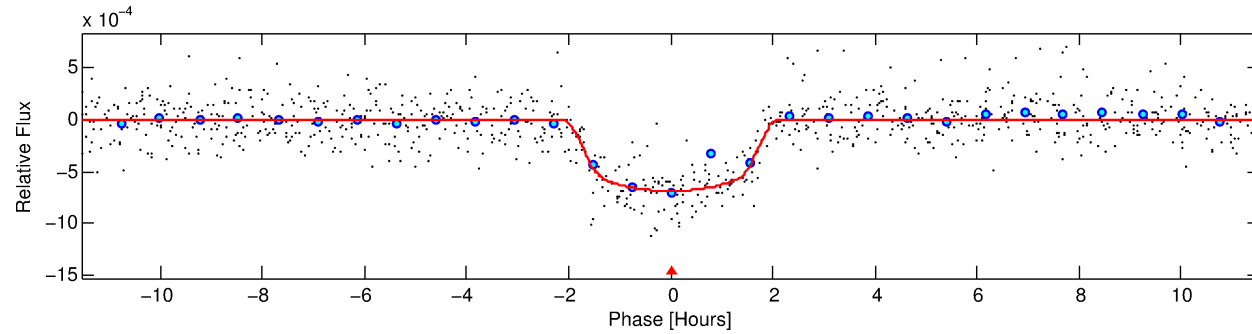
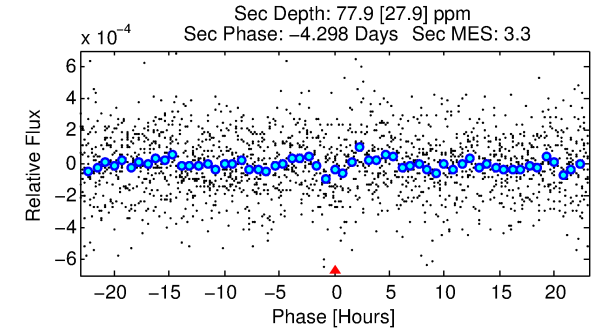
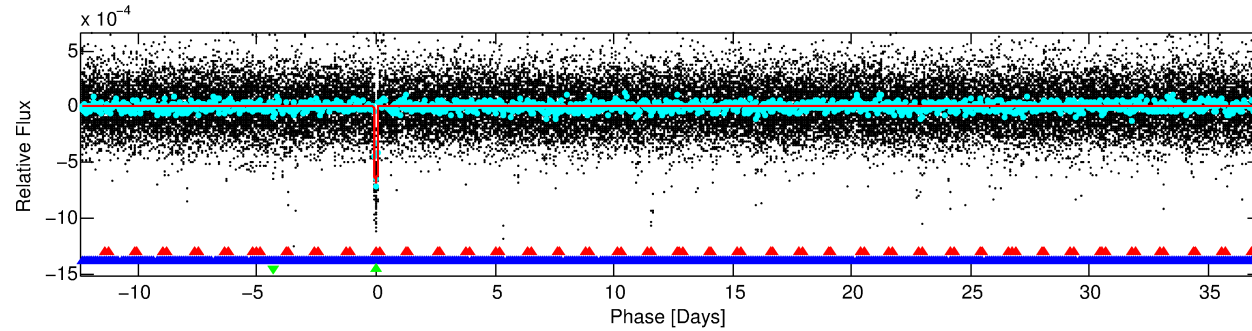
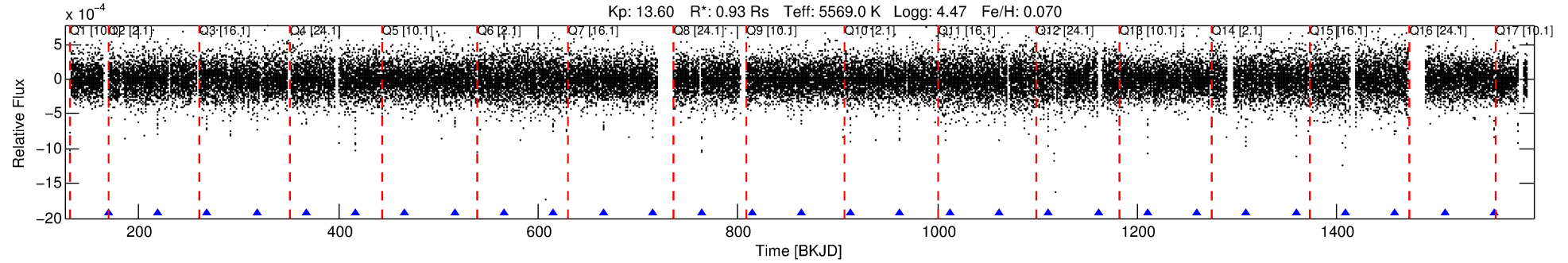
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003541946-03

No Significant Match Found

DV One-Page Summary

KIC: 3541946 Candidate: 3 of 3 Period: 49.567 d
KOI: K00624.02 Name: Kepler-198c Corr: 0.986



DV Fit Results:

Period = 49.56747 [0.00015] d
Epoch = 169.5409 [0.0025] BKJD
Rp/R* = 0.0275 [0.0034]
a/R* = 56.90 [29.28]
b = 0.85 [0.17]
Seff = 11.11 [2.29]
Teq = 466 [24] K
Rp = 2.78 [0.50] Re
a = 0.2582 [0.0314] AU
Ag = 369.10 [175.81] [2.09σ]
Teffp = 3155 [350] K [7.66σ]

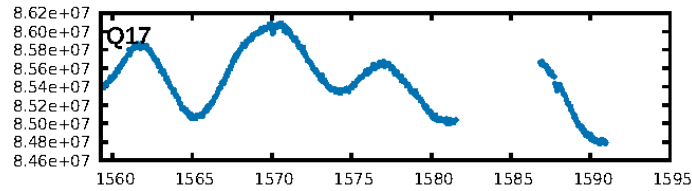
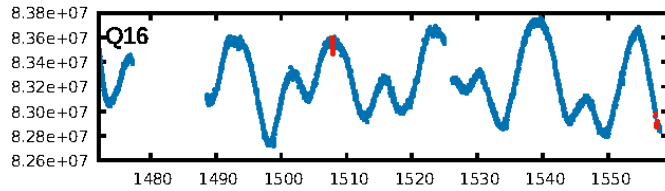
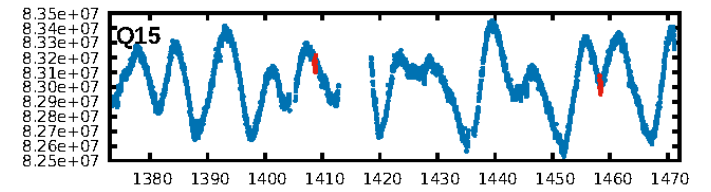
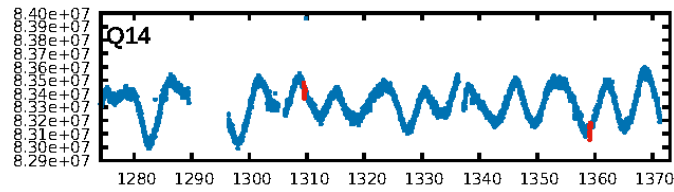
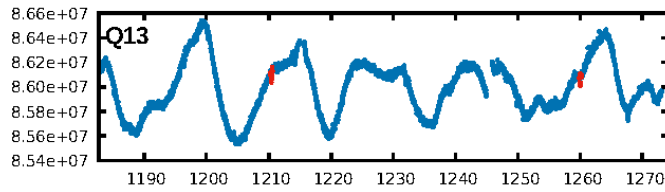
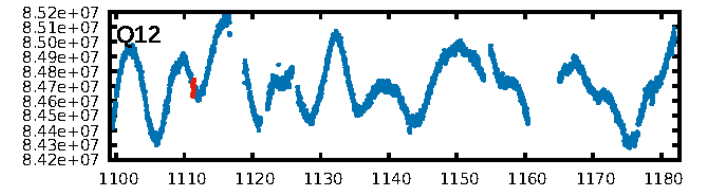
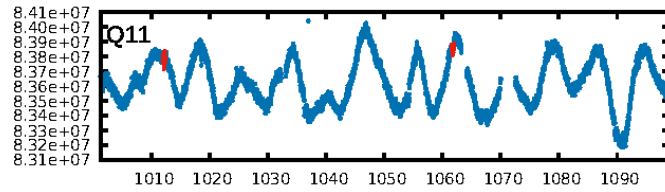
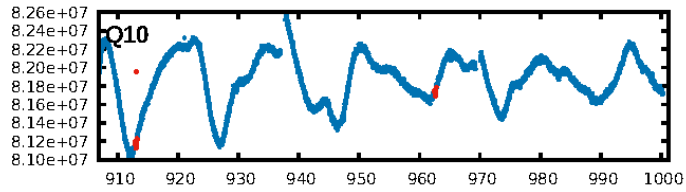
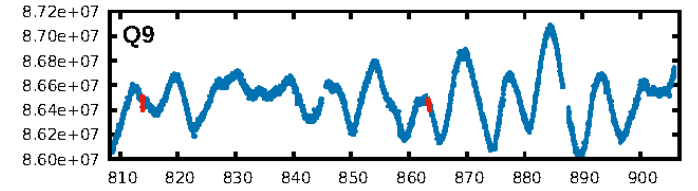
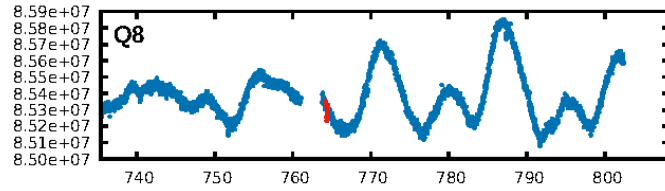
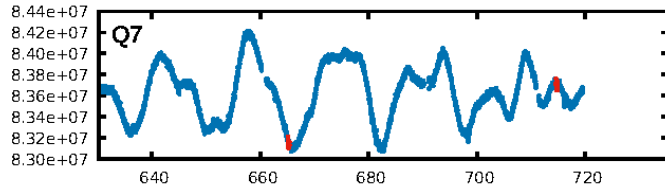
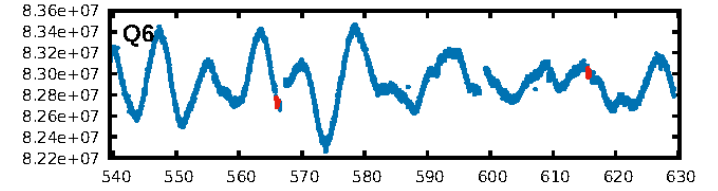
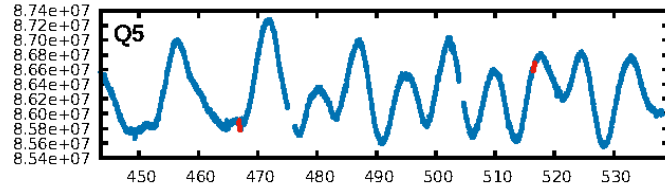
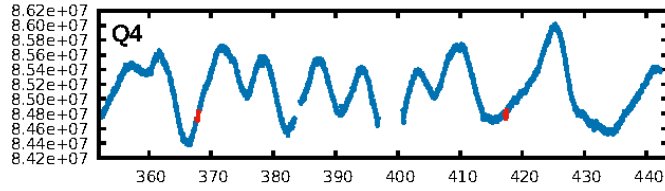
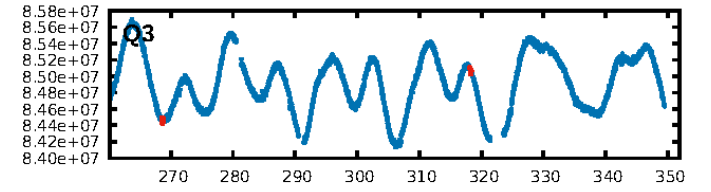
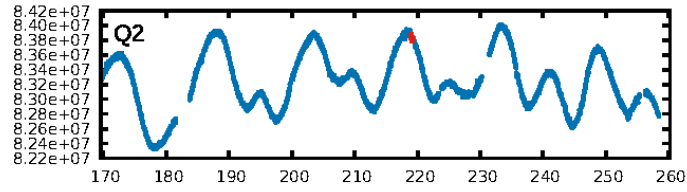
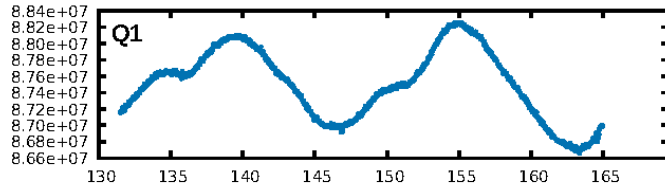
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [128.14σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 37.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.17e-118
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 4.605
Centroid-sig: 4.0%
Centroid-so: 0.577 arcsec [1.65σ]
OotOffset-rm: 0.086 arcsec [0.53σ]
KicOffset-rm: 0.111 arcsec [0.73σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.50 [7/14]

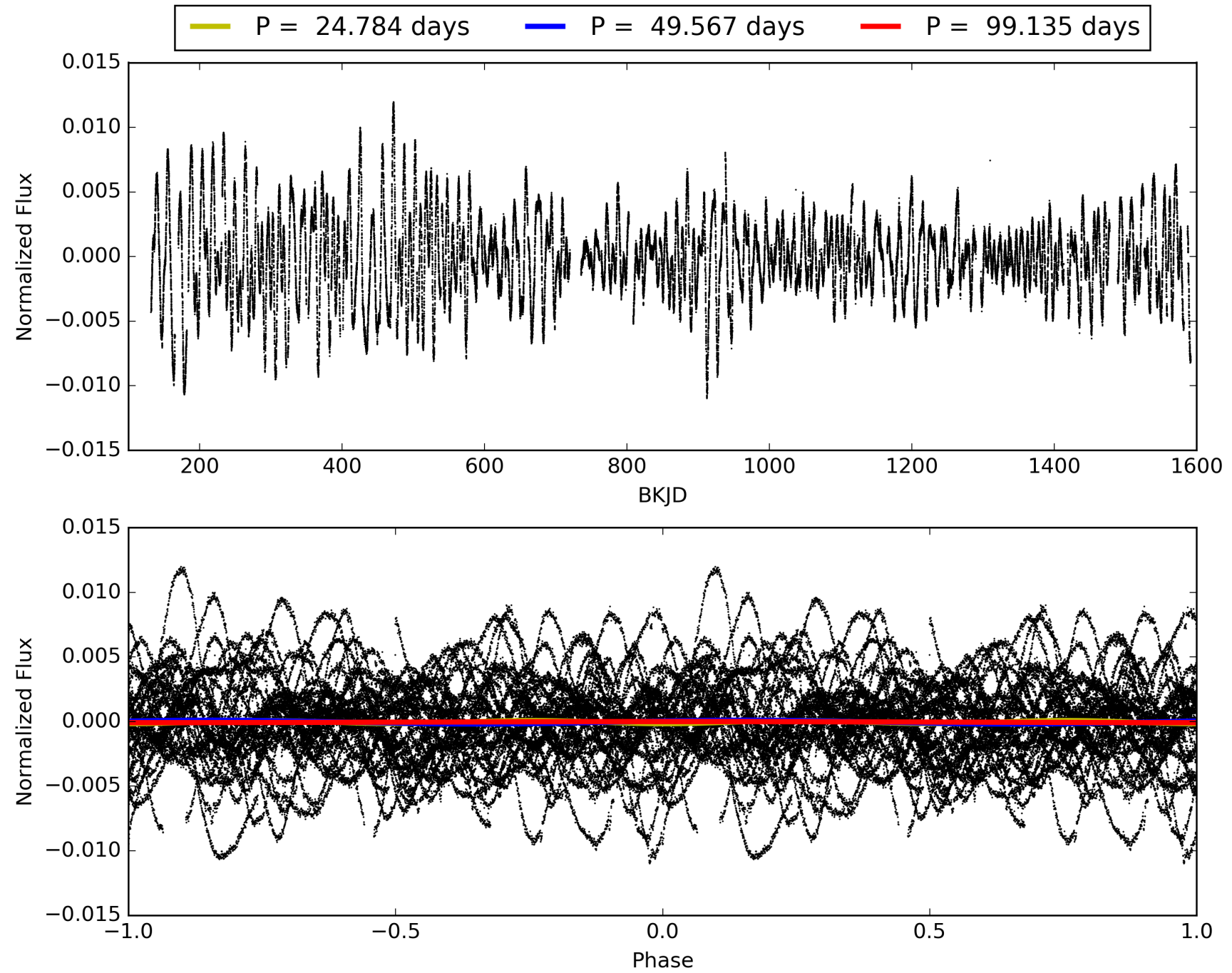
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:59:08 Z

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

TCE 003541946-03, PDC Light Curves

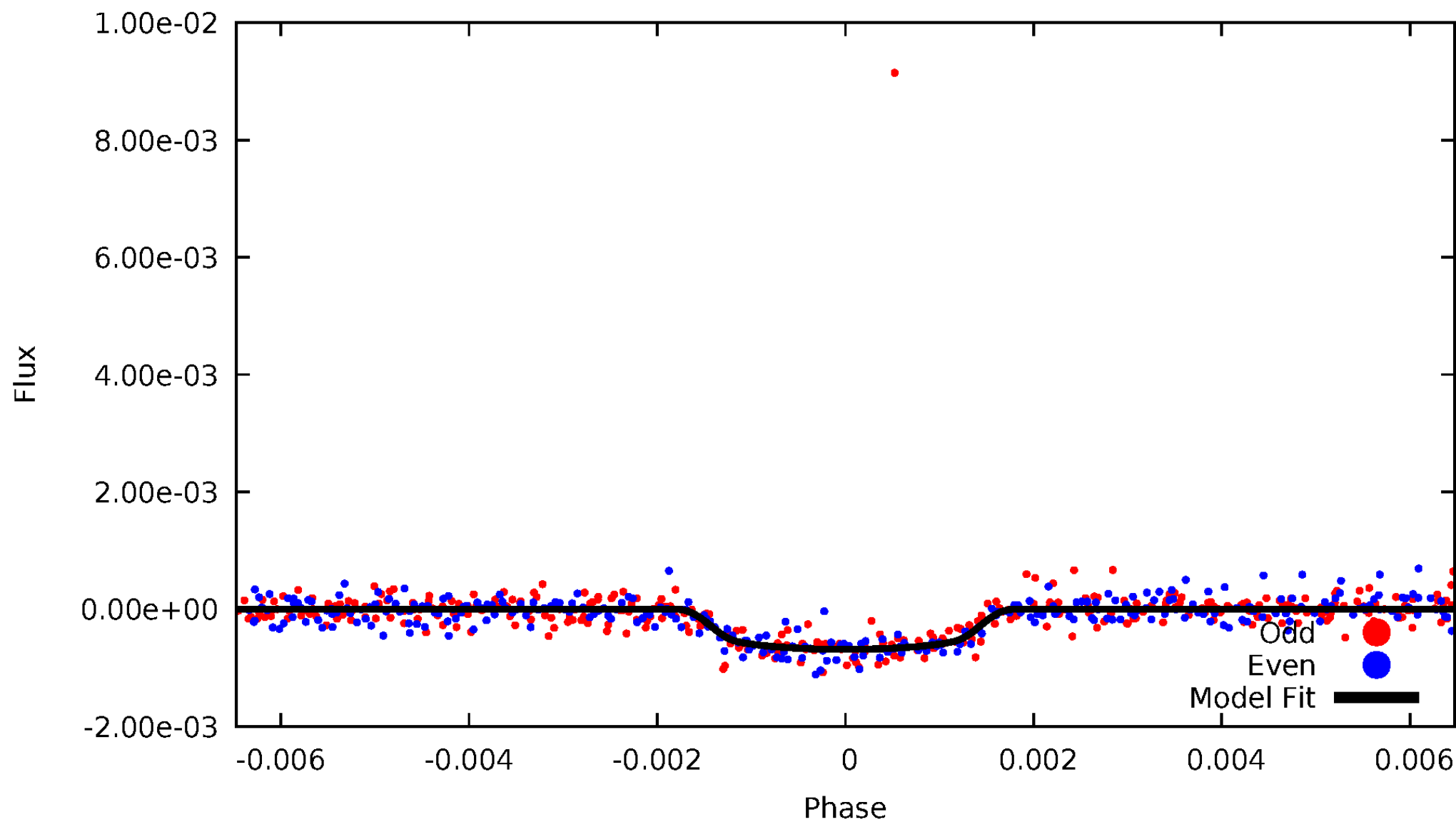


TCE 003541946-03



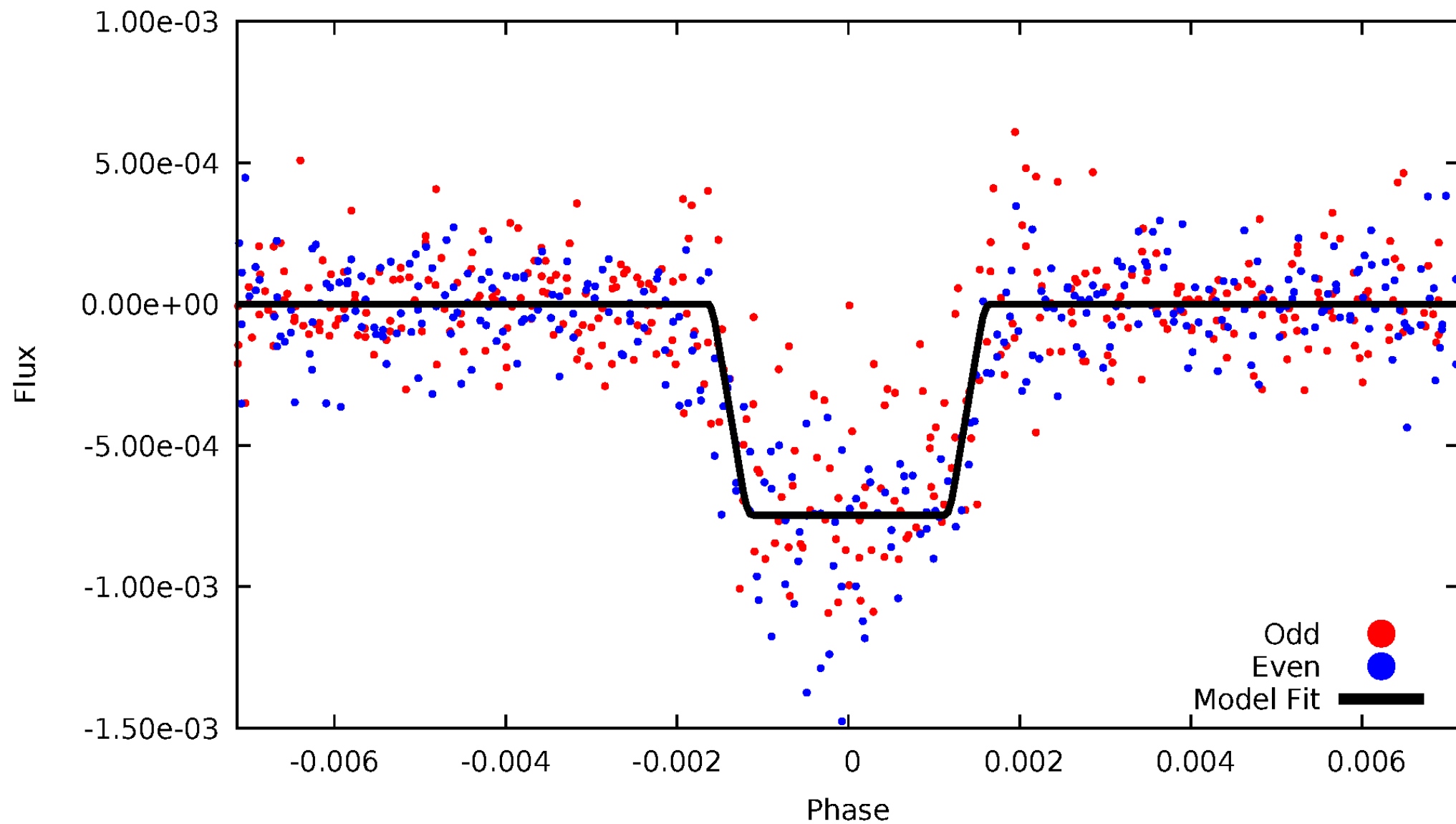
DV Odd/Even

TCE 003541946-03



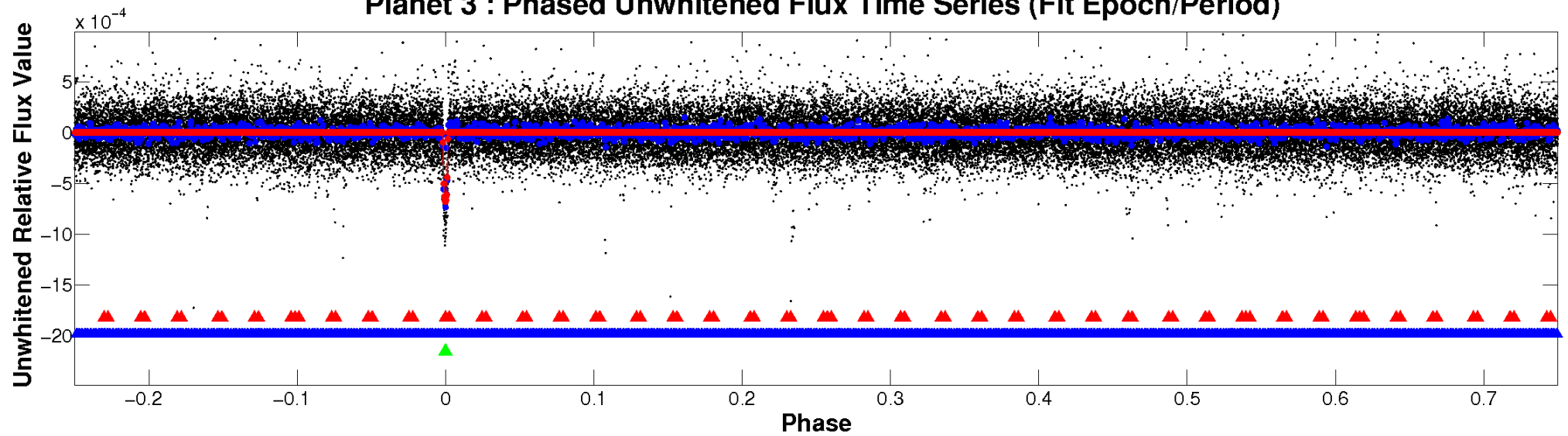
ALT Odd/Even

TCE 003541946-03

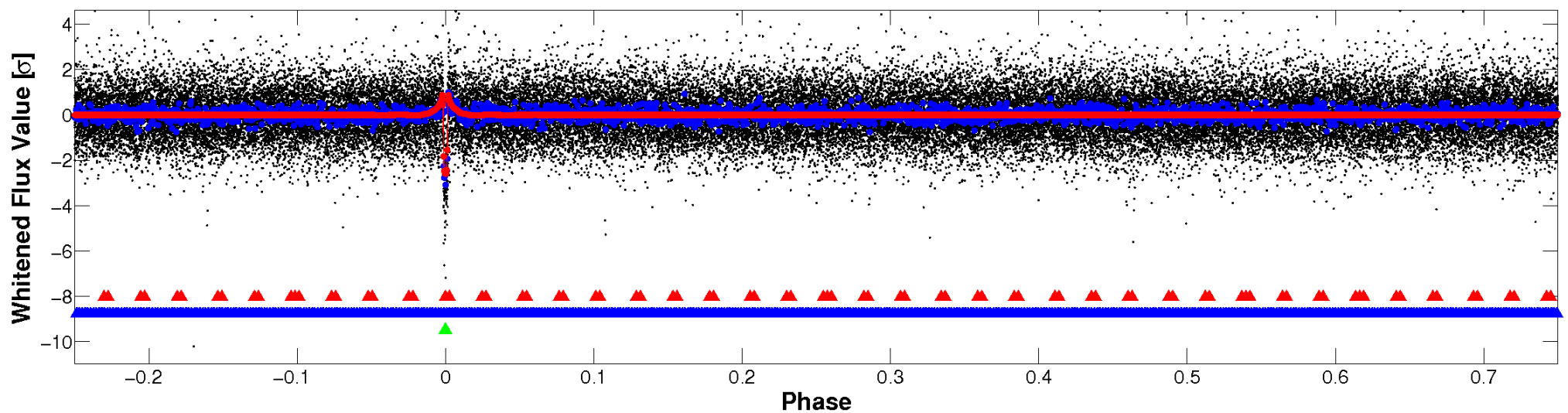


Non-Whitened Vs. Whitened Light Curve

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

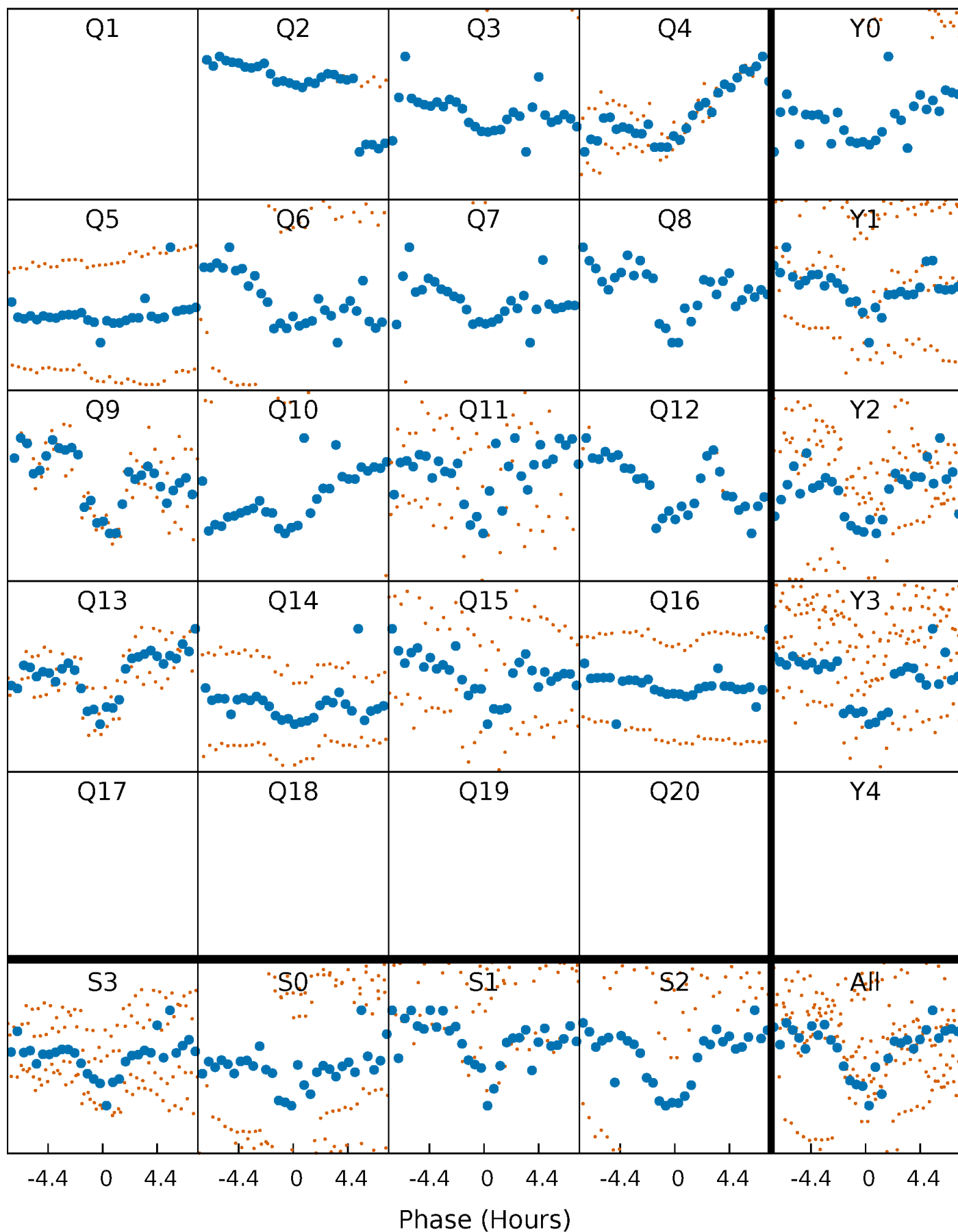


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



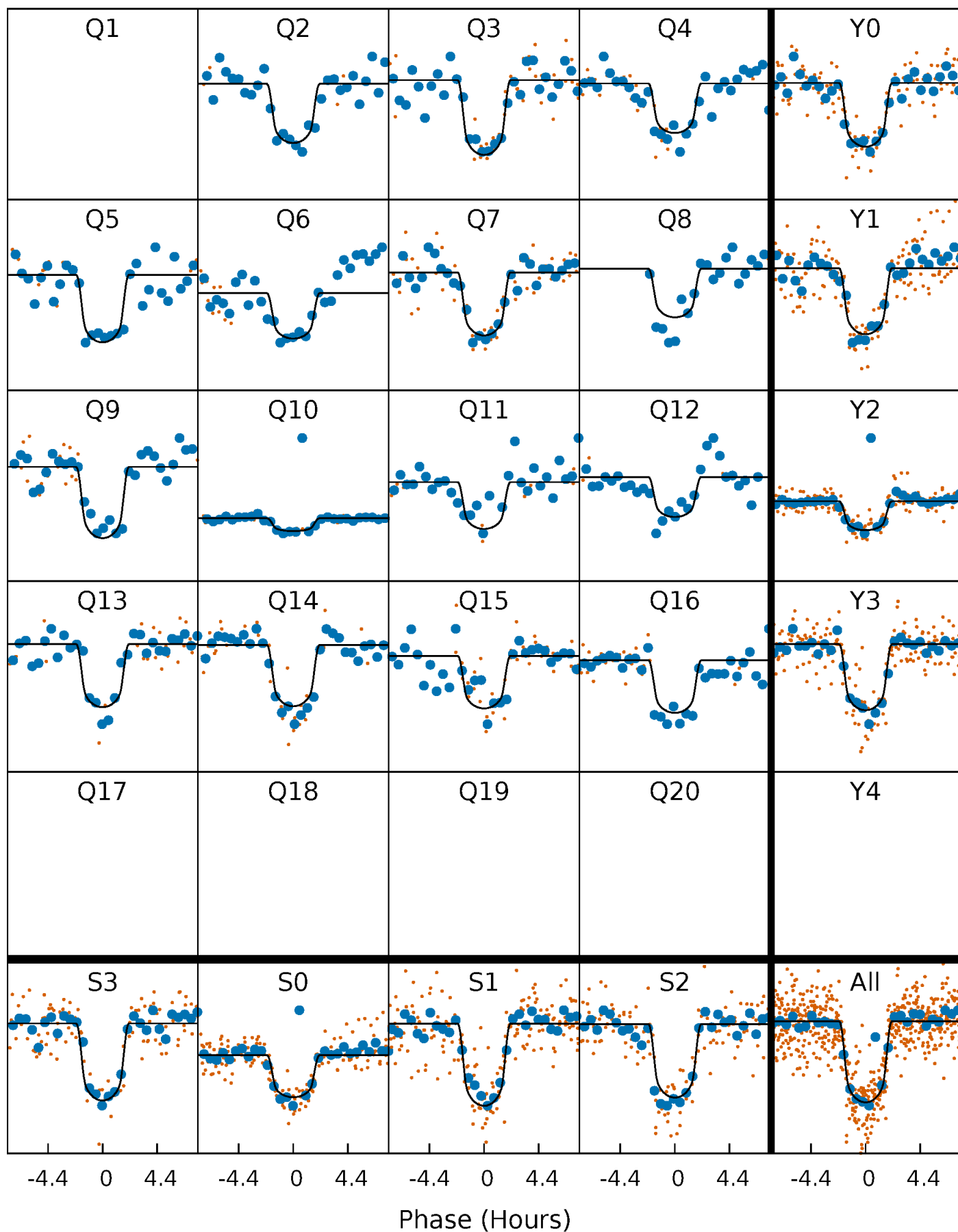
PDC Quarter-Phased Transit Curves

TCE 003541946-03 P= 49.567469 Days $T_0=169.540867$ (BKJD)



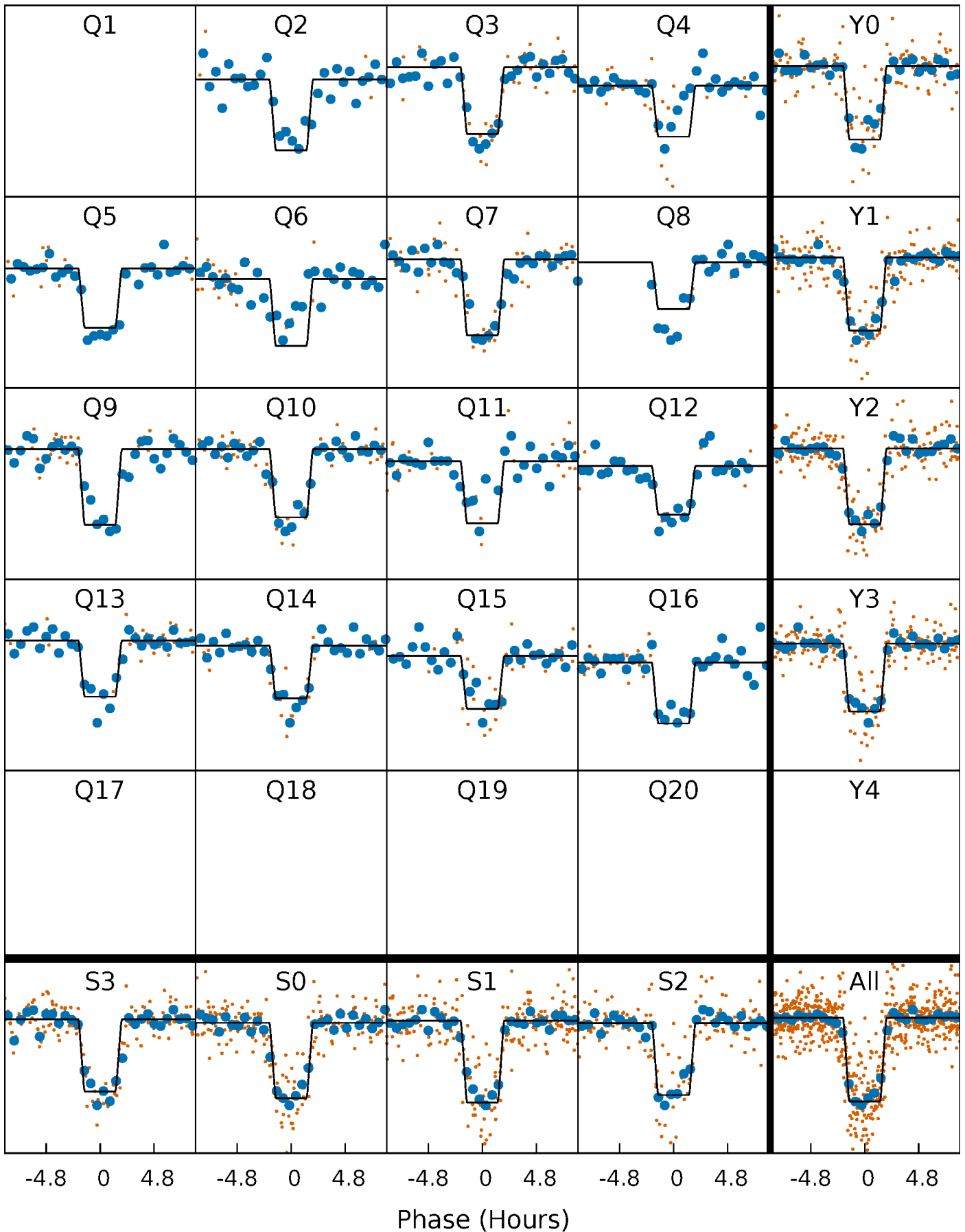
DV Quarter-Phased Transit Curves

TCE 003541946-03 P= 49.567469 Days $T_0=169.540867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

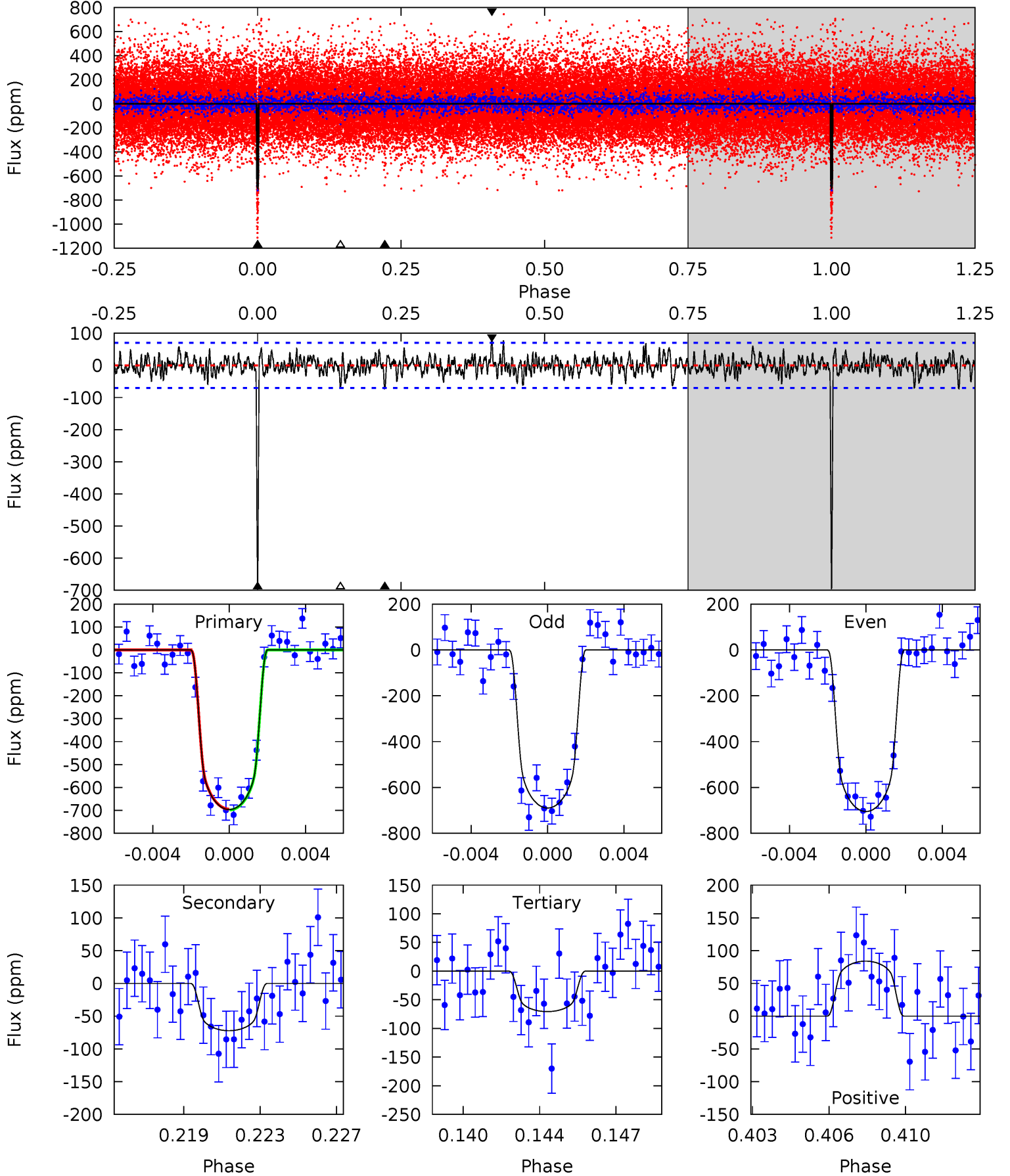
TCE 003541946-03 P= 49.567688 Days $T_0=169.536082$ (BKJD)



DV Model-Shift Uniqueness Test

003541946-03, P = 49.567469 Days, E = 119.973398 Days

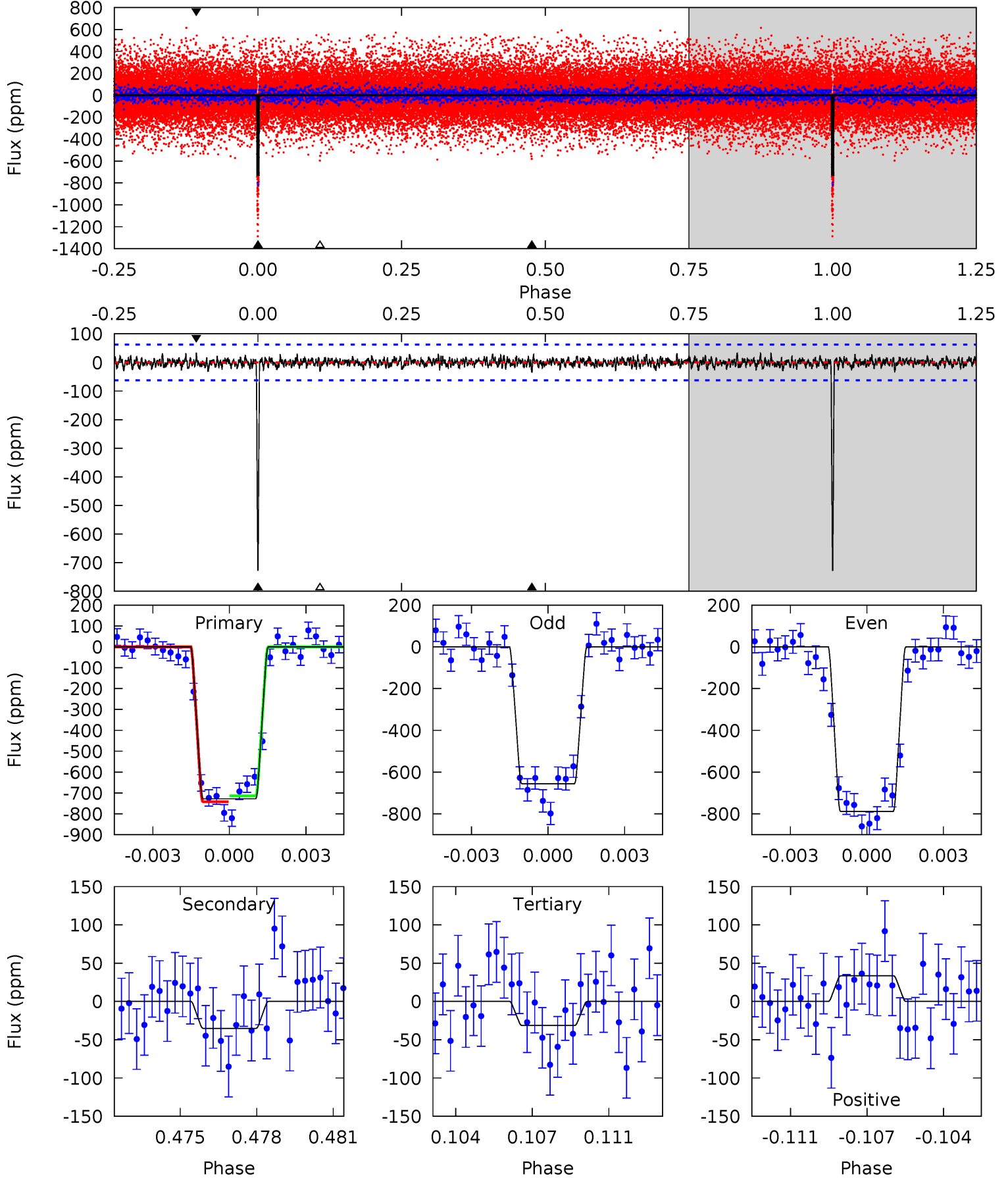
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.7	5.36	5.25	6.24	5.22	2.91	1.60	46.5	45.5	0.11	-0.87	0.57	0.91	0.11	0.14



Alt Model-Shift Uniqueness Test

003541946-03, P = 49.567688 Days, E = 119.968394 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.0	2.95	2.63	2.80	5.24	2.94	0.82	58.3	58.2	0.32	0.14	5.61	0.99	0.04	1.21



Stellar Parameters For KIC 003541946

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5569^{+111}_{-111}	$4.474^{+0.059}_{-0.110}$	$0.070^{+0.150}_{-0.150}$	$0.927^{+0.122}_{-0.066}$	$0.935^{+0.057}_{-0.057}$	$1.652^{+0.352}_{-0.498}$
	+2%/-2%	+1%/-2%	+214%/-214%	+13%/-7%	+6%/-6%	+21%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003541946-03 / KOI 0624.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-72 ± 13	$2.81^{+0.38}_{-0.39}$	654^{+26}_{-21}	3554^{+178}_{-166}	337^{+123}_{-96}
Alt.	-35 ± 12	$2.81^{+0.41}_{-0.38}$	656^{+26}_{-21}	3192^{+197}_{-200}	165^{+79}_{-61}

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 $A_{obs} \gg 1.0$

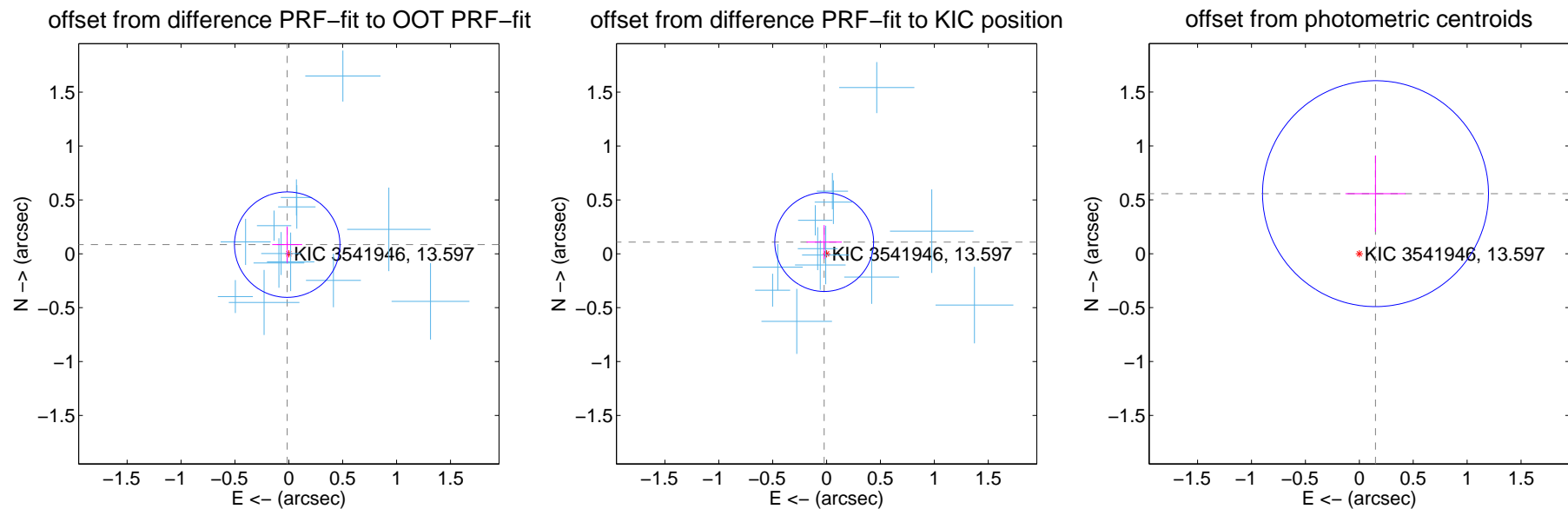
DV Centroid Data

Supplemental centroid analysis for 003541946-03. Kepler magnitude: 13.60. Transit SNR 29.19

There are 13 quarters with good PRF difference image offsets

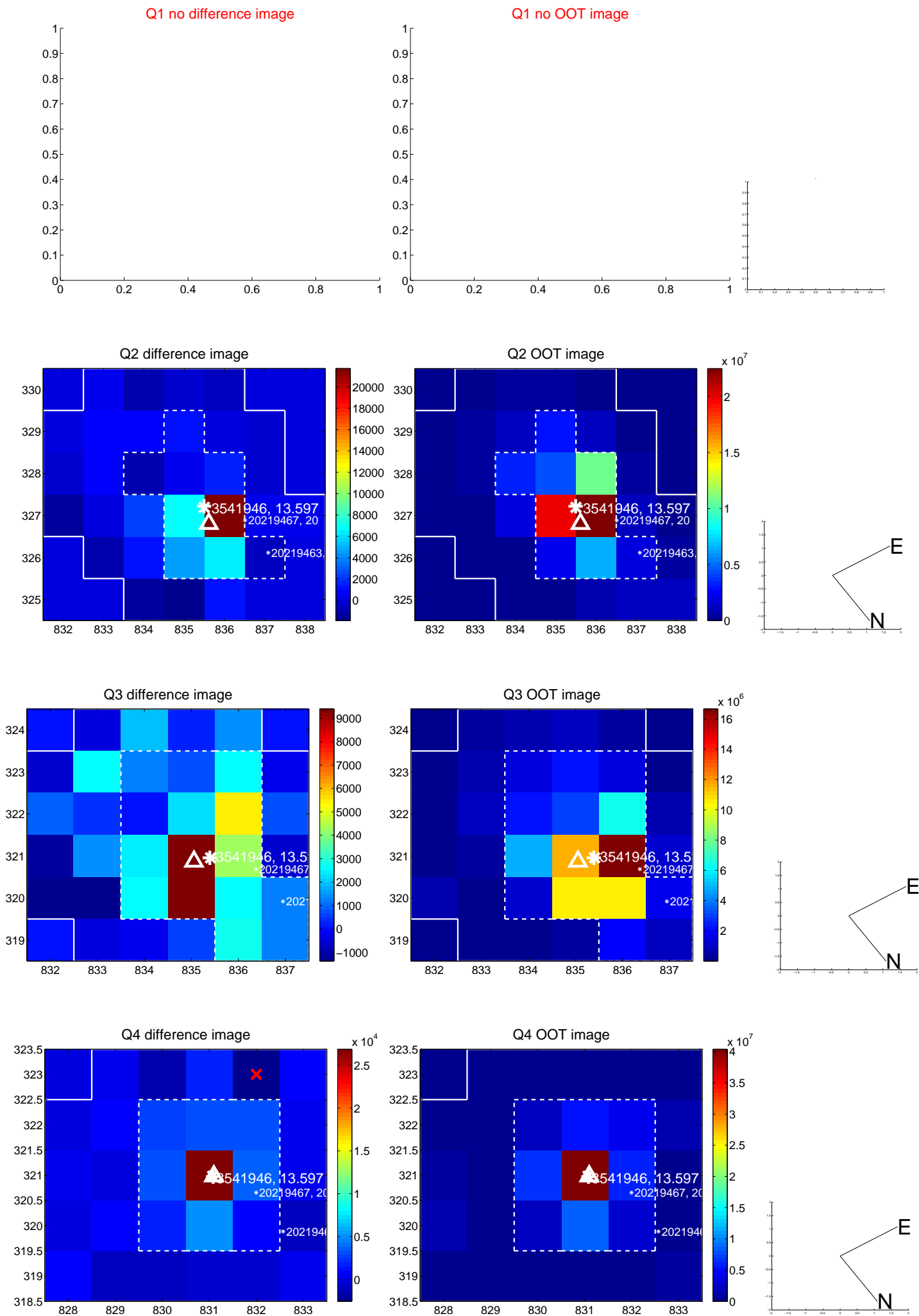
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.086 ± 0.163	0.53	0.015 ± 0.139	0.085 ± 0.168
PRF-fit source offset from KIC position	0.111 ± 0.153	0.73	0.022 ± 0.164	0.109 ± 0.157
photometric centroid source offset	0.58 ± 0.35	1.65	-0.15 ± 0.28	0.56 ± 0.35

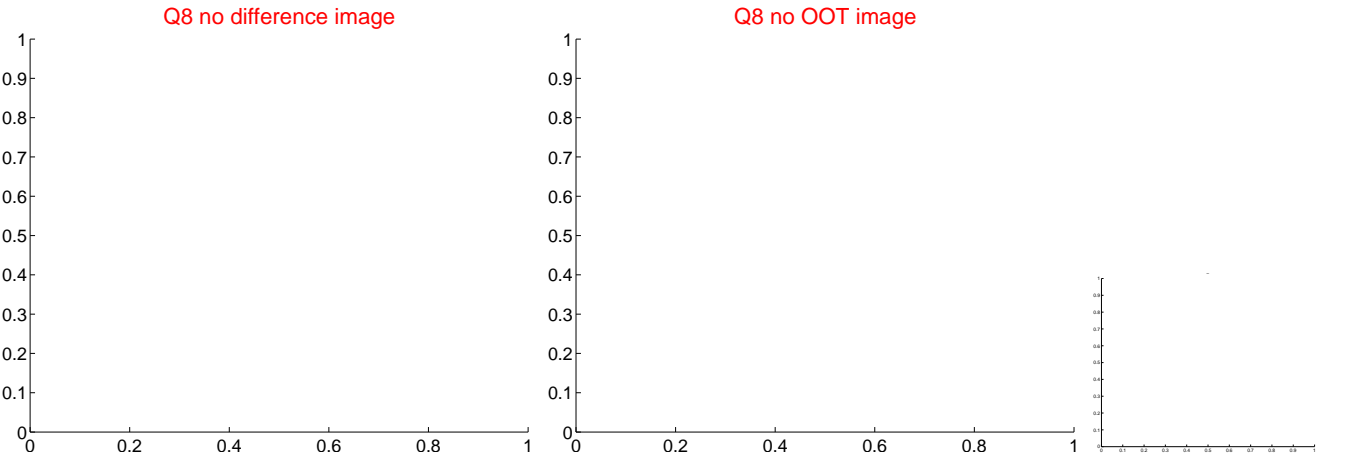
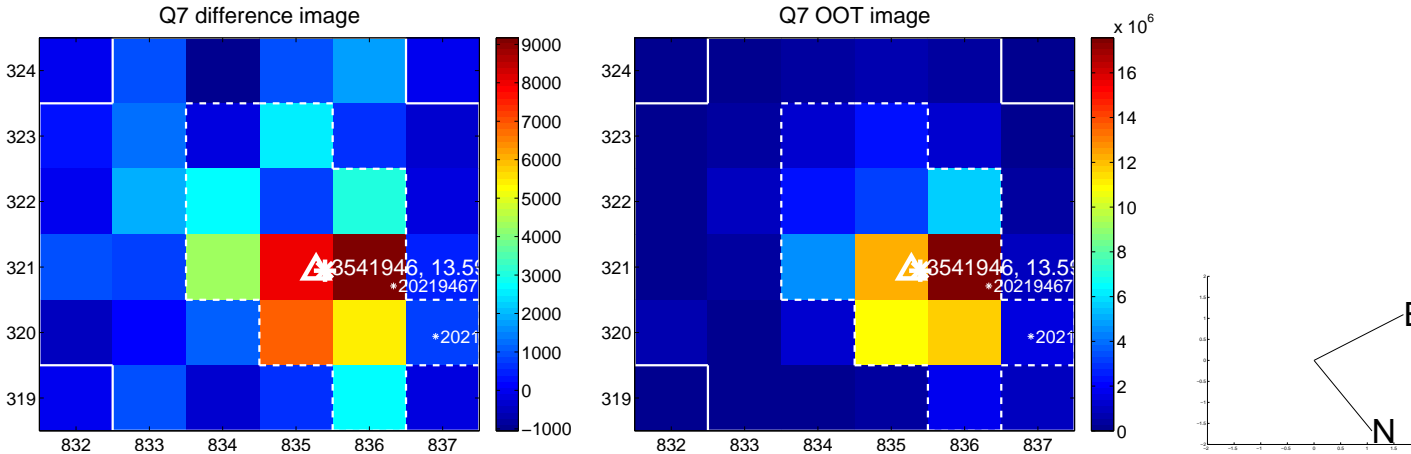
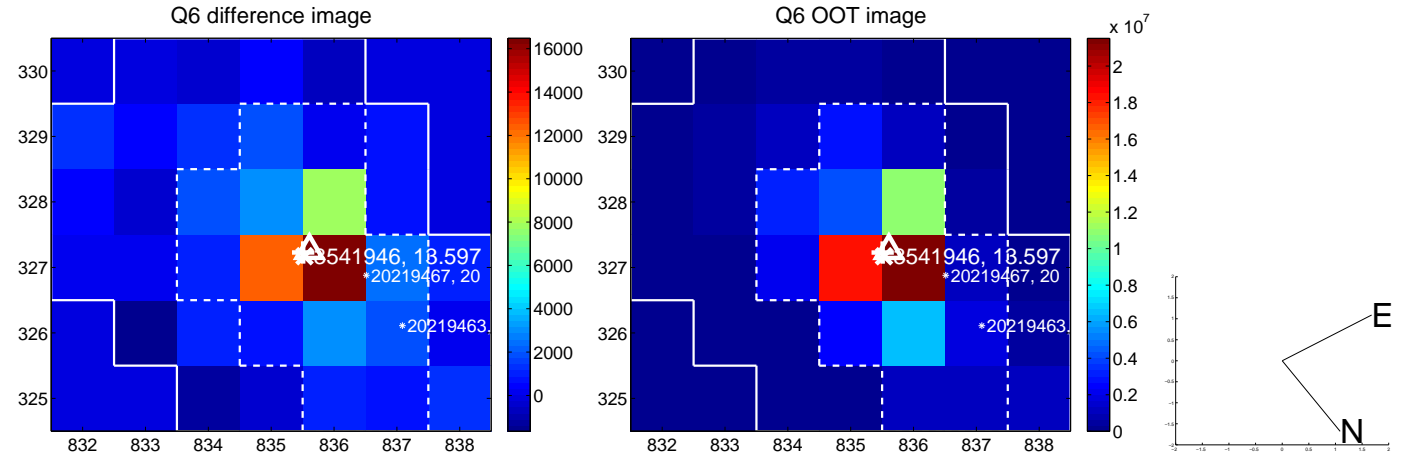
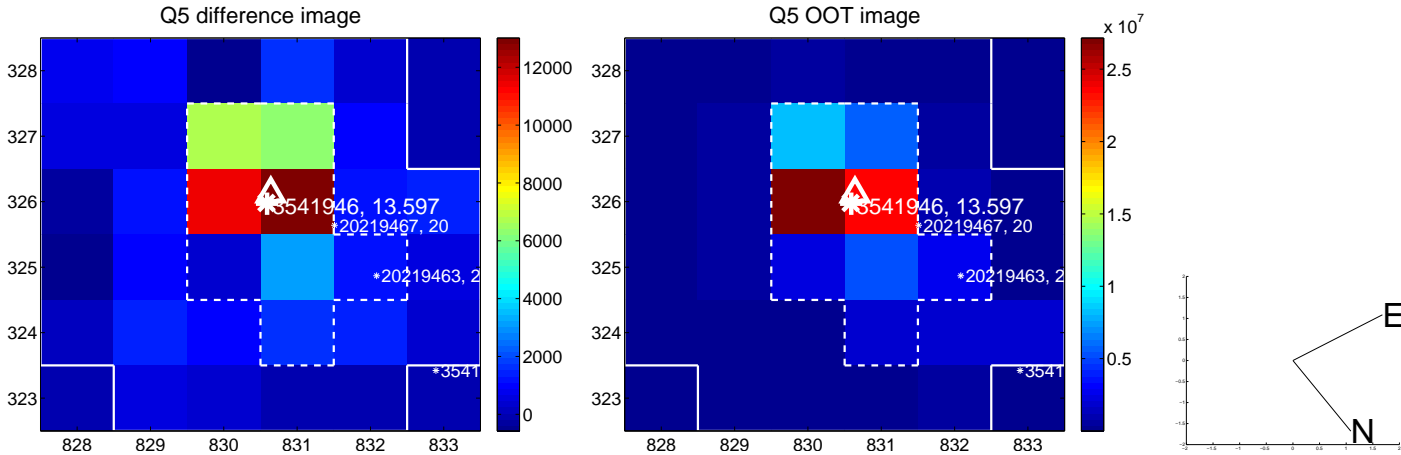


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

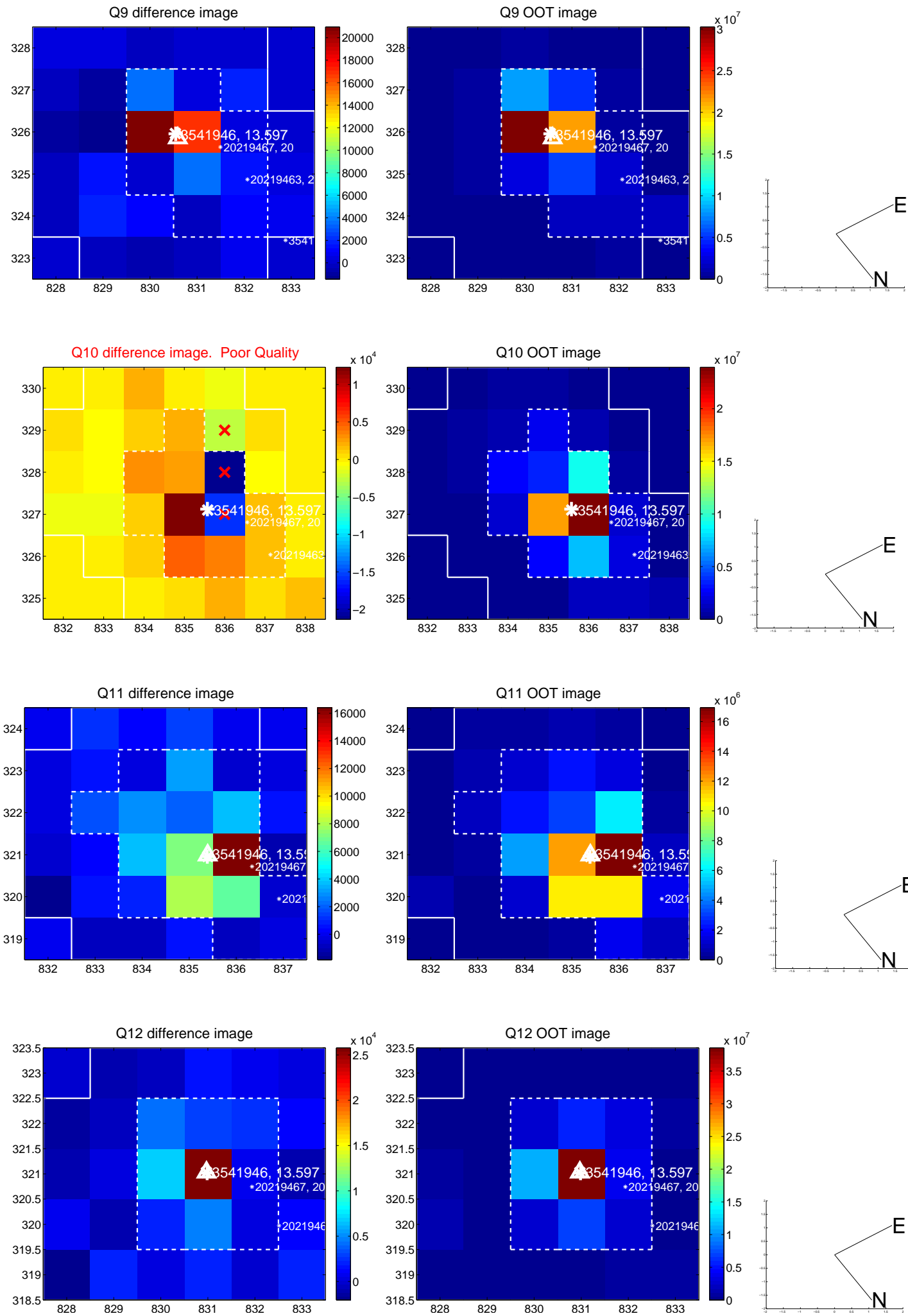
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



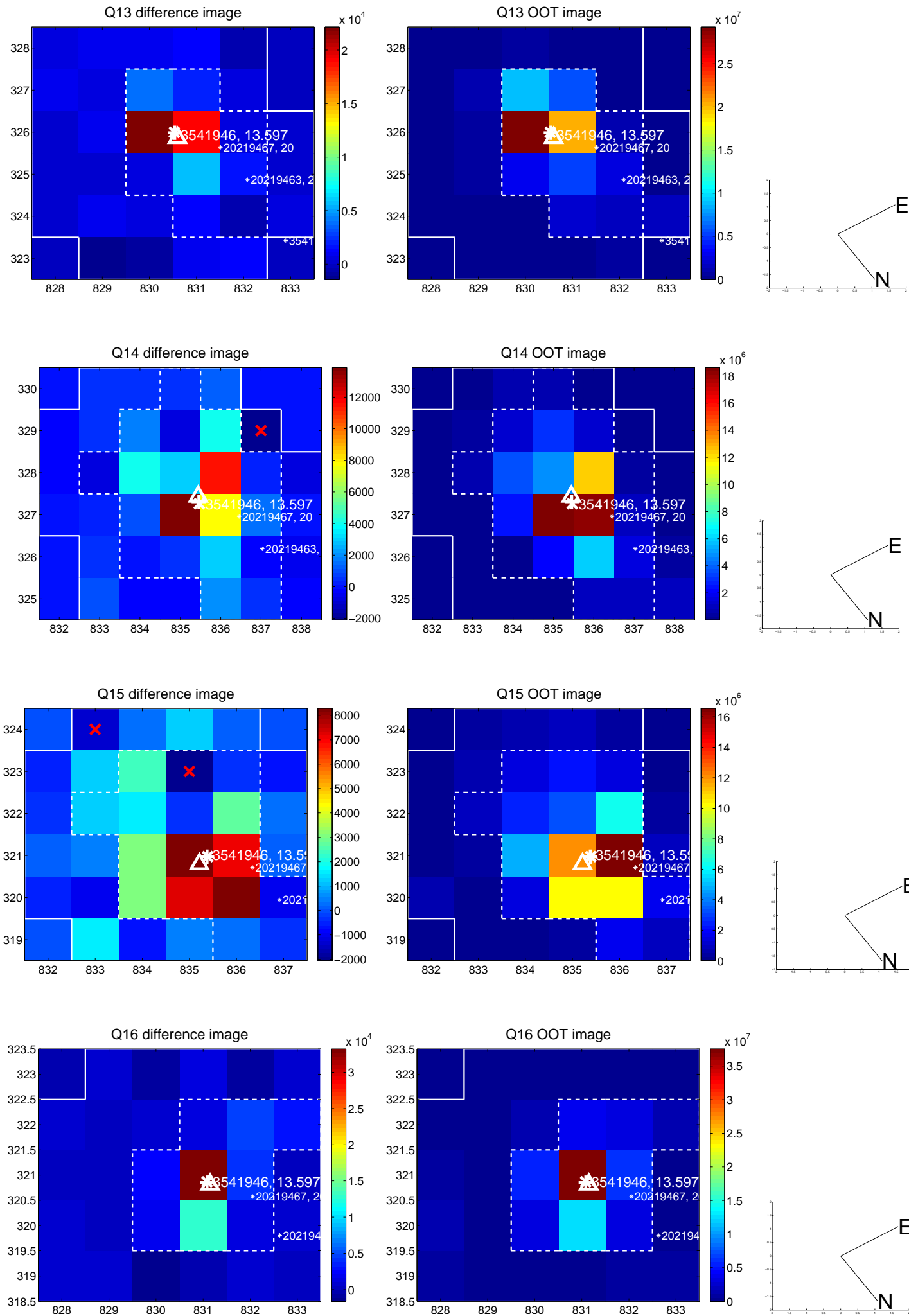
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



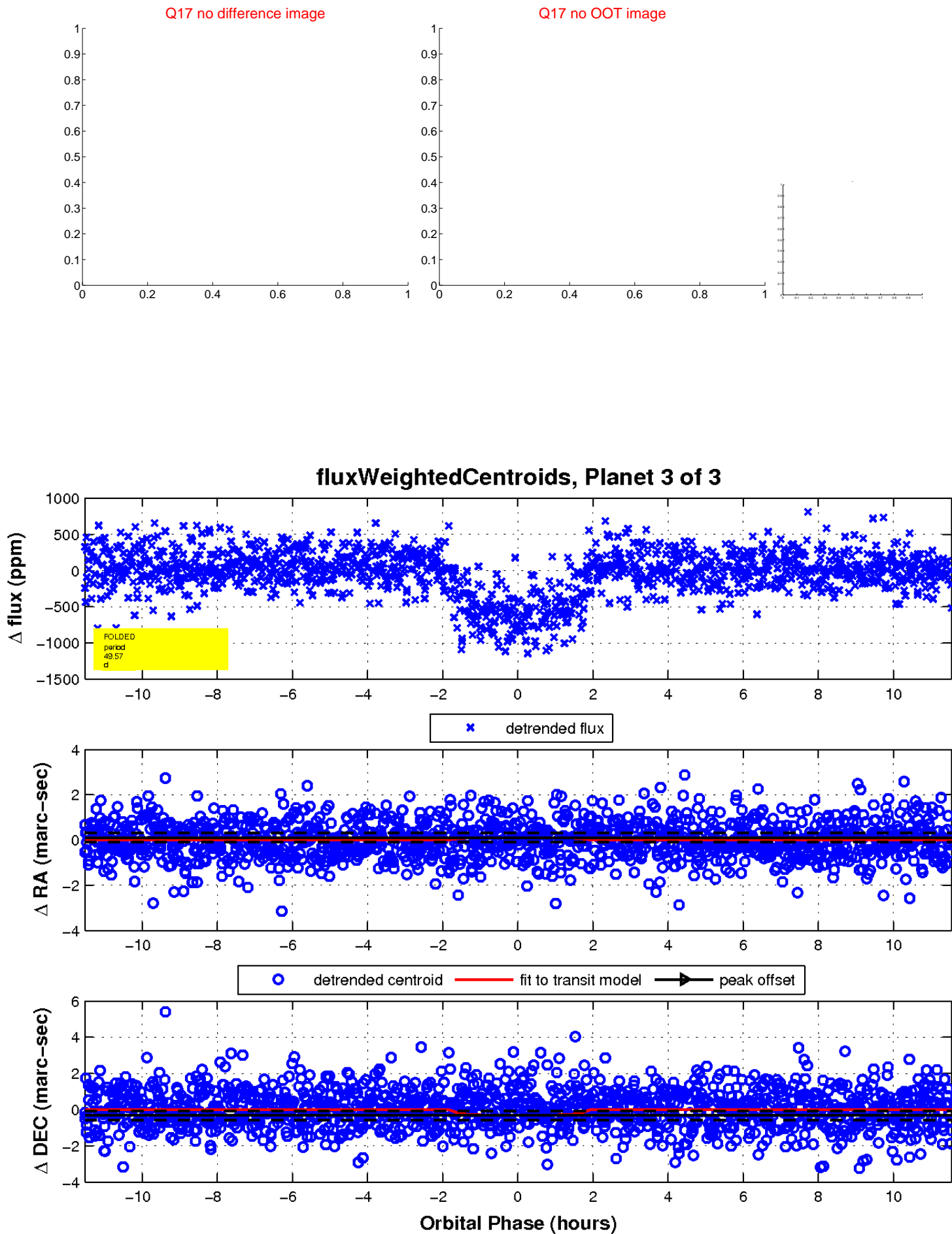
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

