

KIC 006196457

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})
006196457-01	OBS	0285.01	13.748823	138.033078	419.8	6.141	114.9	114.5	1.67	5862	3.73	214.06
006196457-02	OBS	0285.02	26.723098	147.938448	198.8	8.845	39.6	43.4	1.67	5862	2.66	88.25
006196457-03	OBS	0285.03	49.356980	134.289539	136.8	11.106	20.6	21.9	1.67	5862	2.21	38.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006196457-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006196457-02	OBS	PC	0.98	0	0	0	0	NO_COMMENT
006196457-03	OBS	FP	0.48	1	0	0	0	LPP_DV

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

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

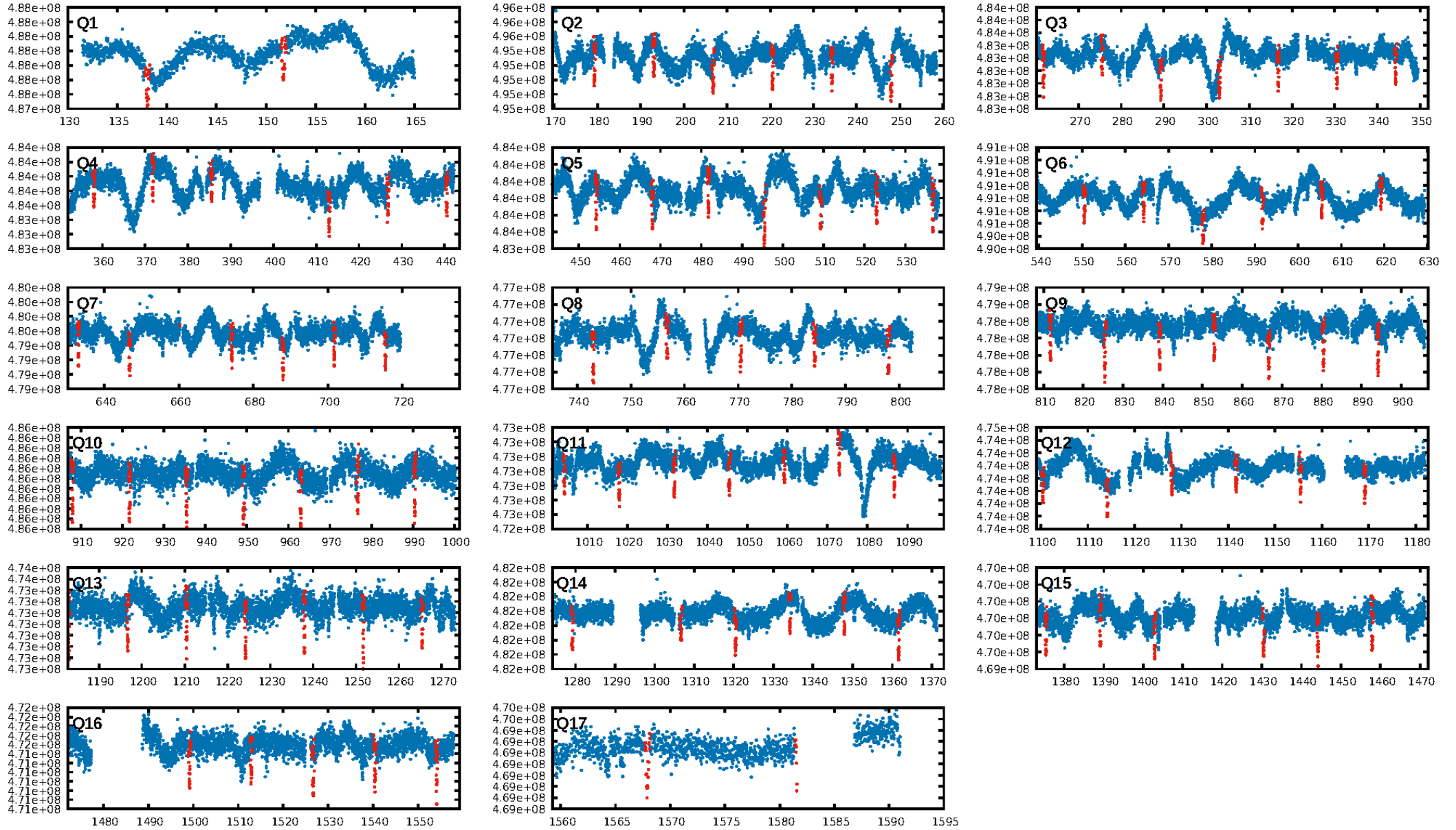
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006196457-01

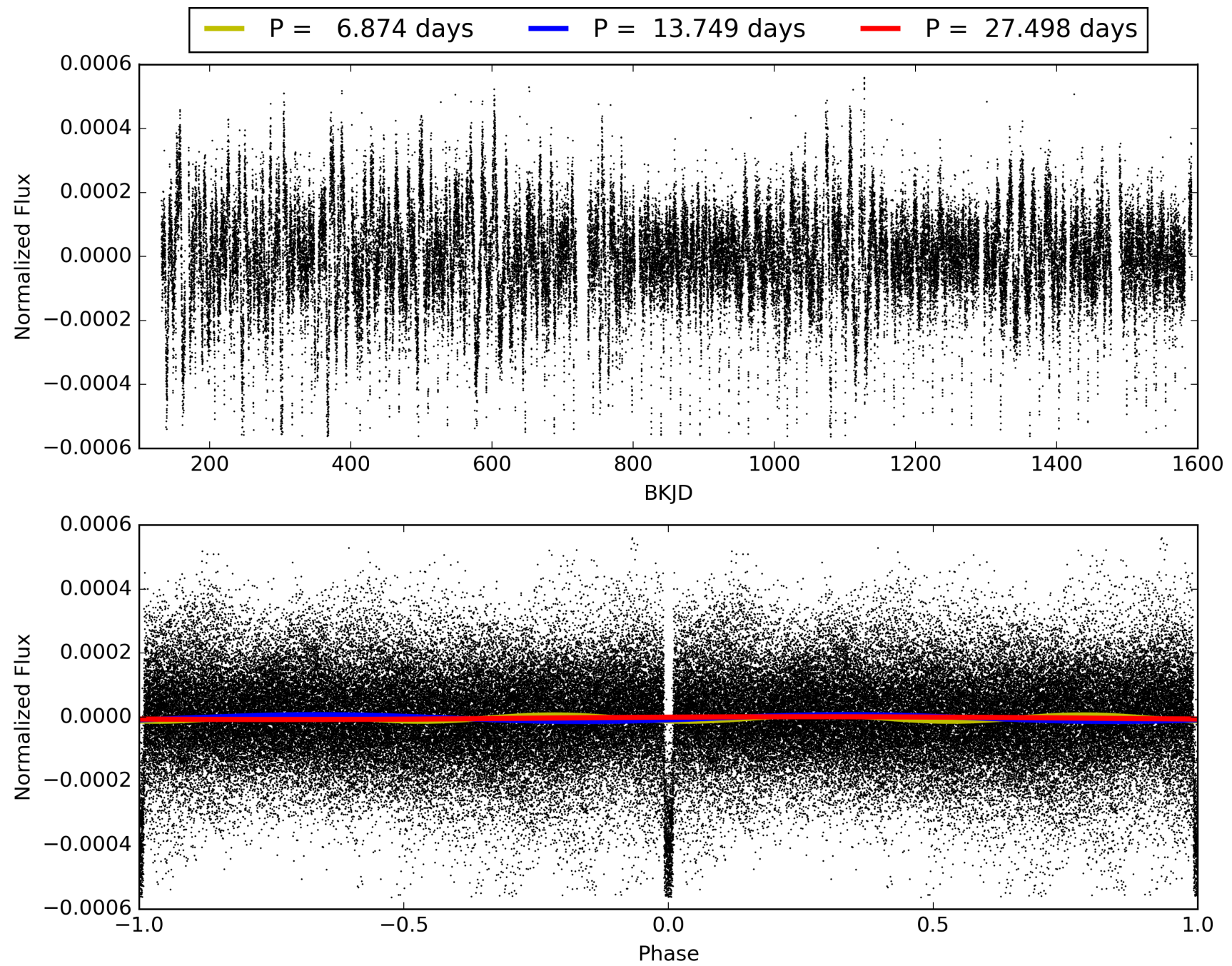
No Significant Match Found

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

TCE 006196457-01, PDC Light Curves

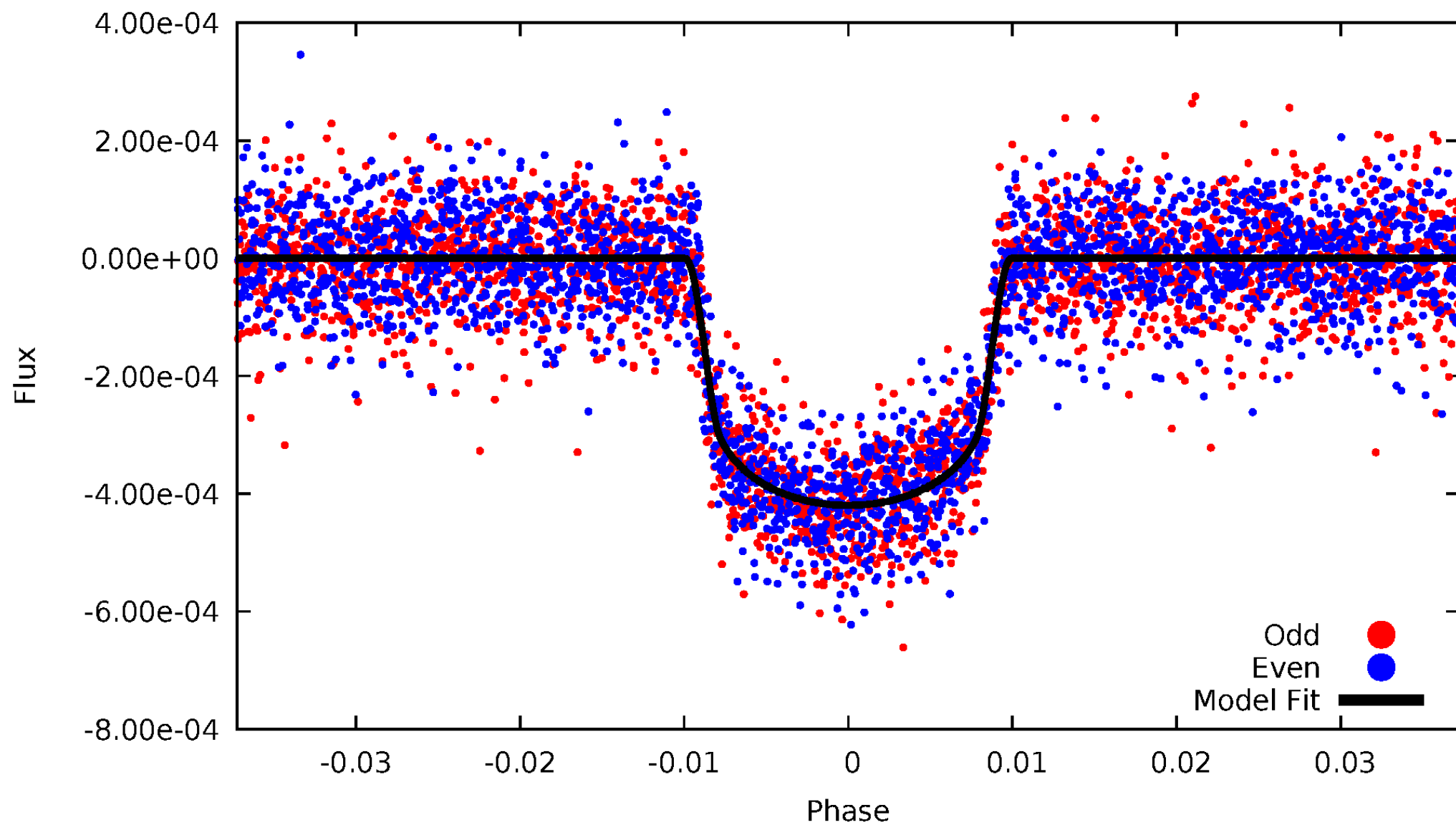


TCE 006196457-01



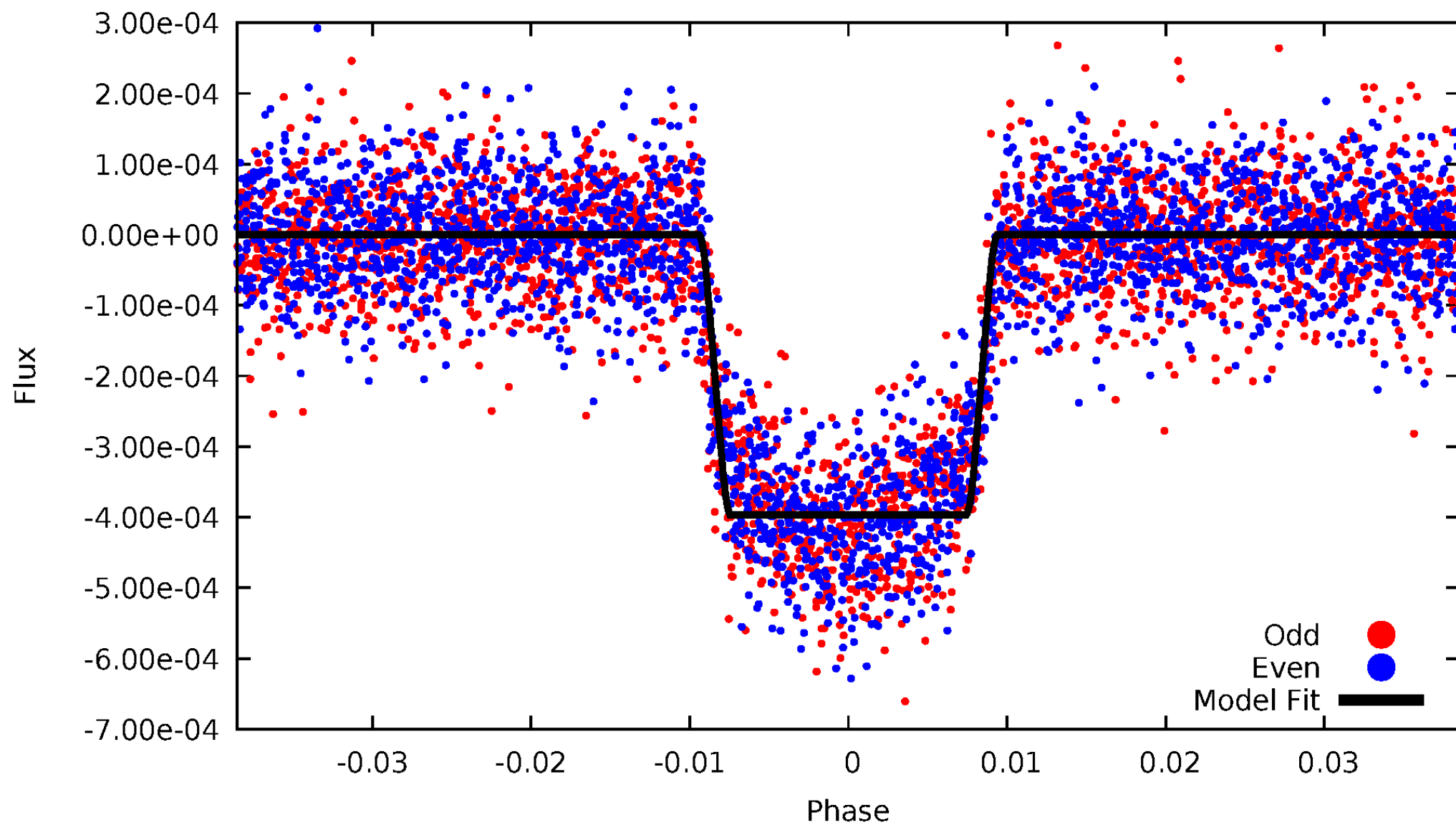
DV Odd/Even

TCE 006196457-01



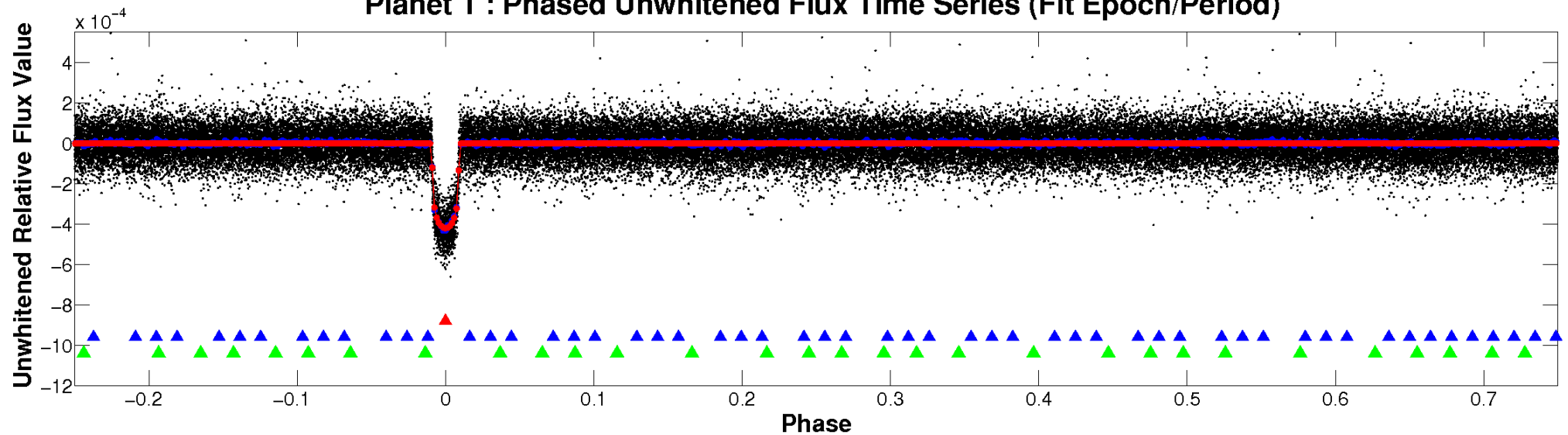
ALT Odd/Even

TCE 006196457-01

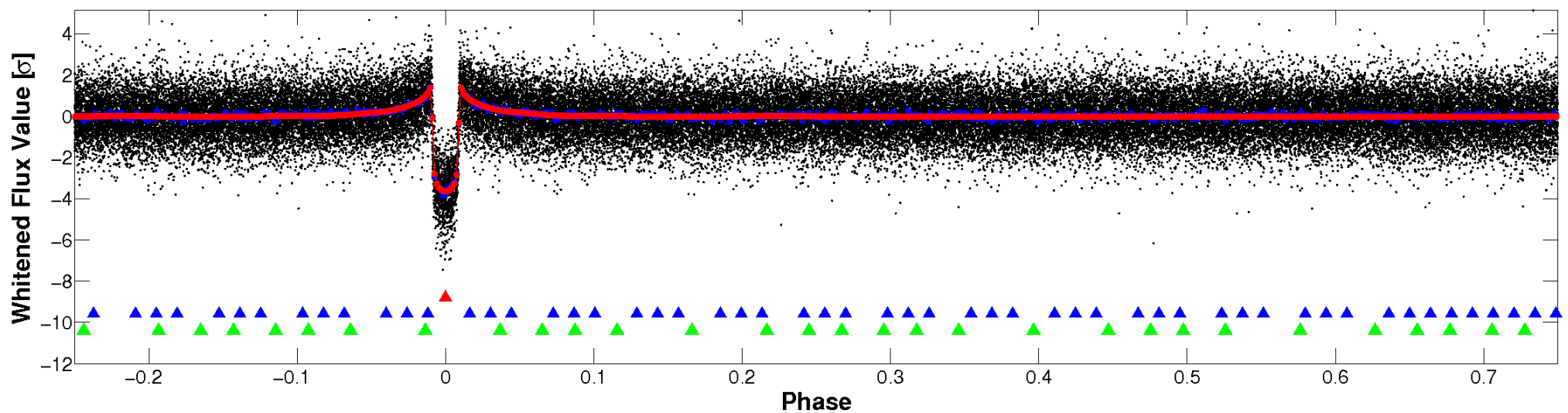


Non-Whitened Vs. Whitened Light Curve

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

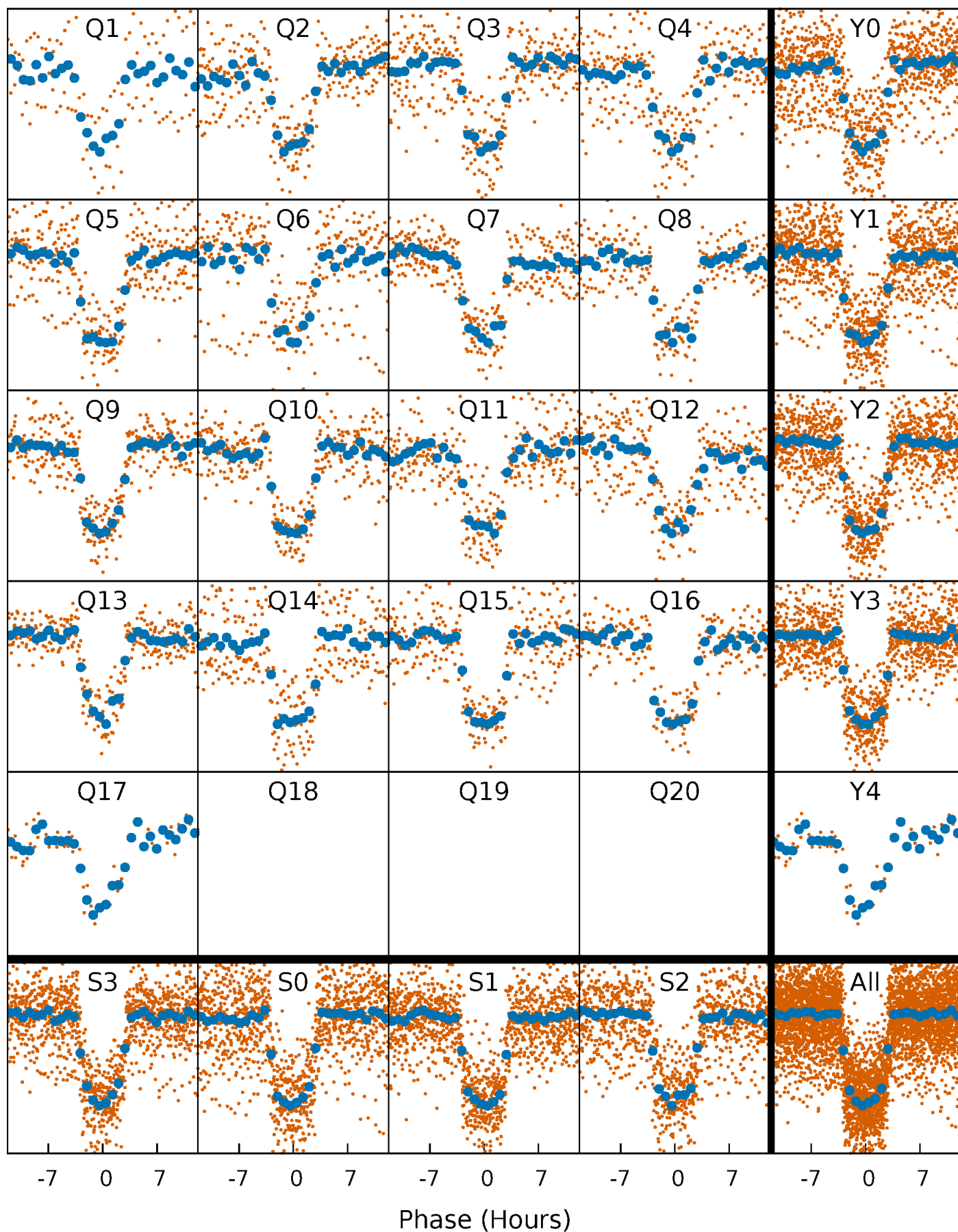


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



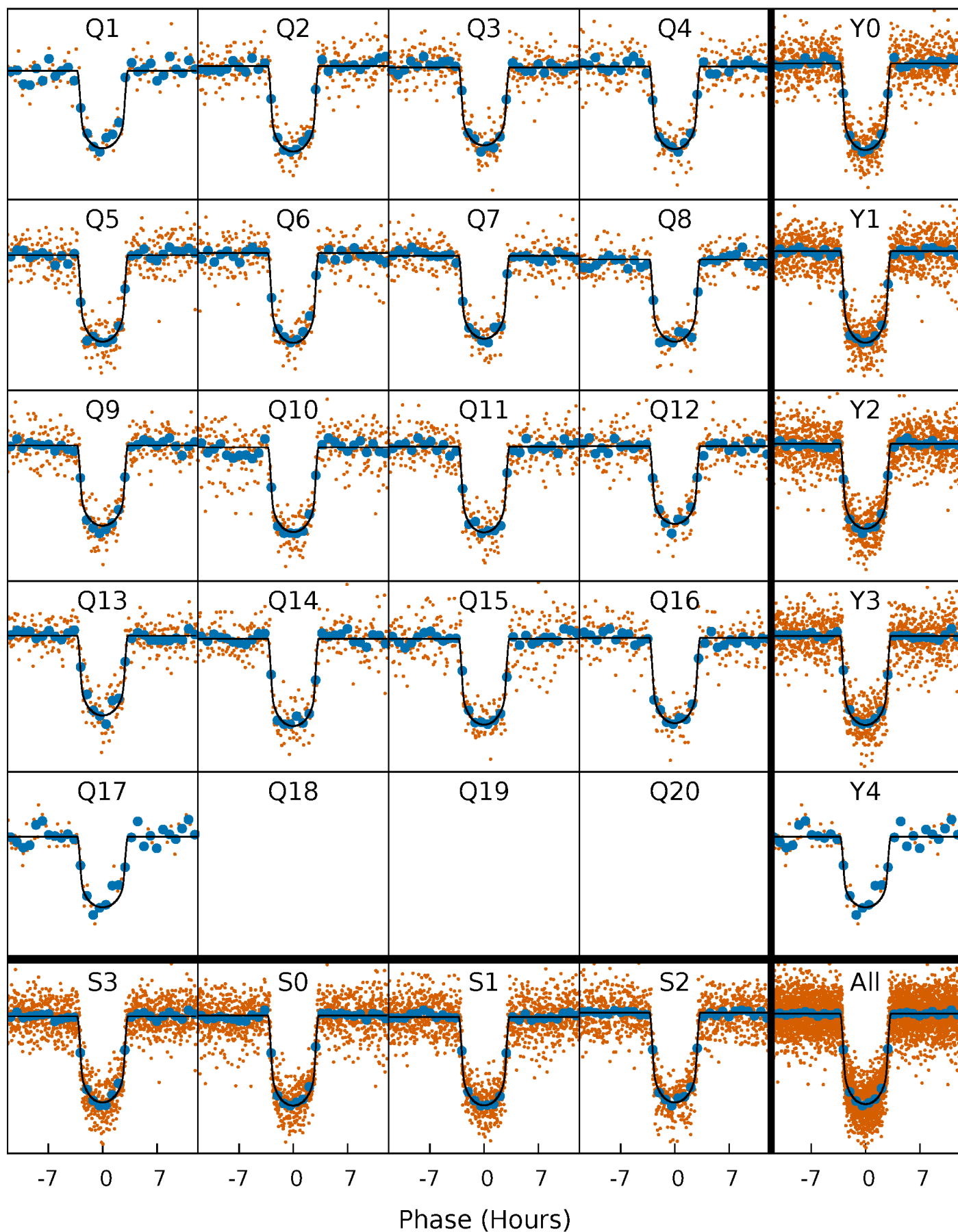
PDC Quarter-Phased Transit Curves

TCE 006196457-01 P= 13.748823 Days $T_0=138.033078$ (BKJD)



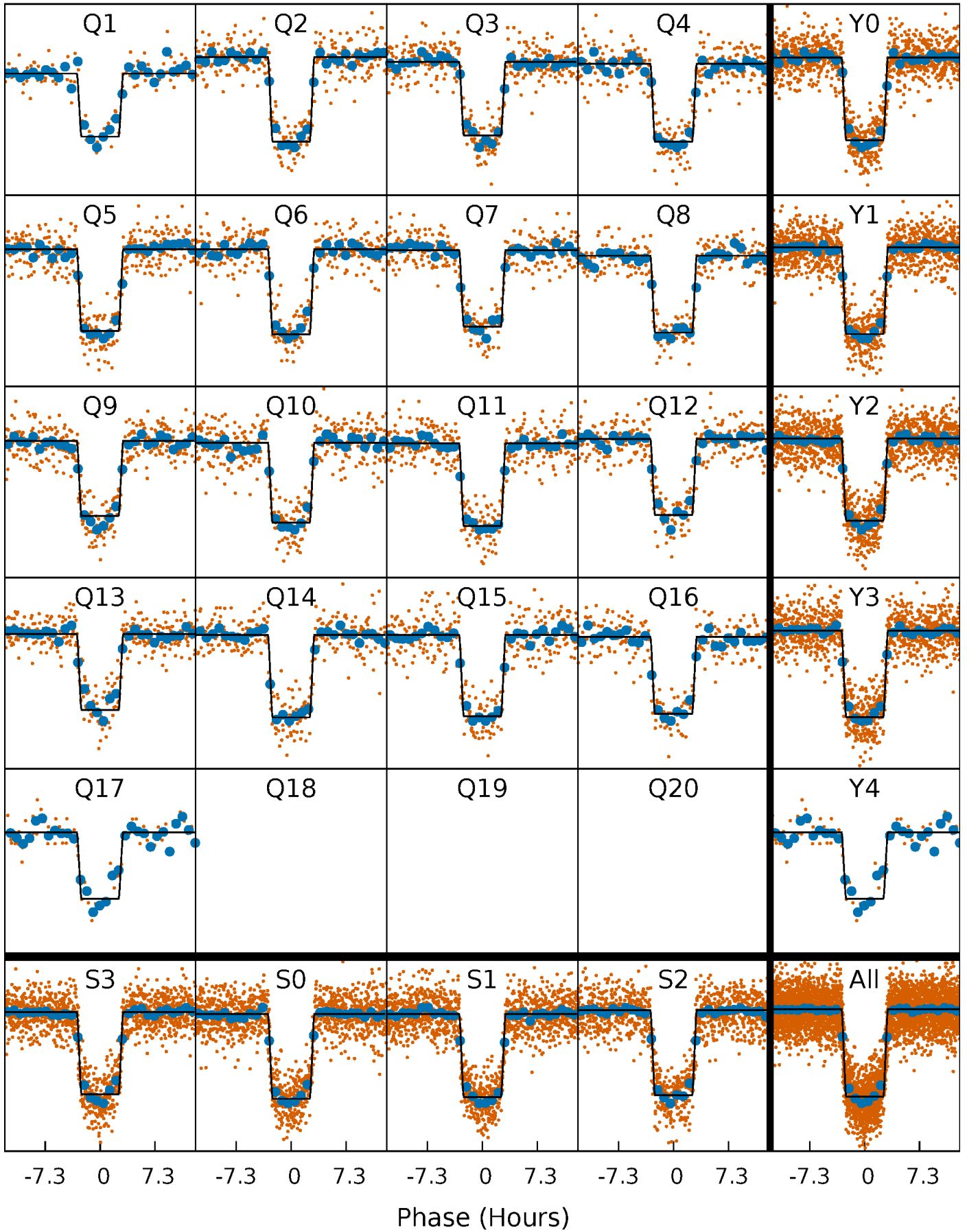
DV Quarter-Phased Transit Curves

TCE 006196457-01 P= 13.748823 Days $T_0=138.033078$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

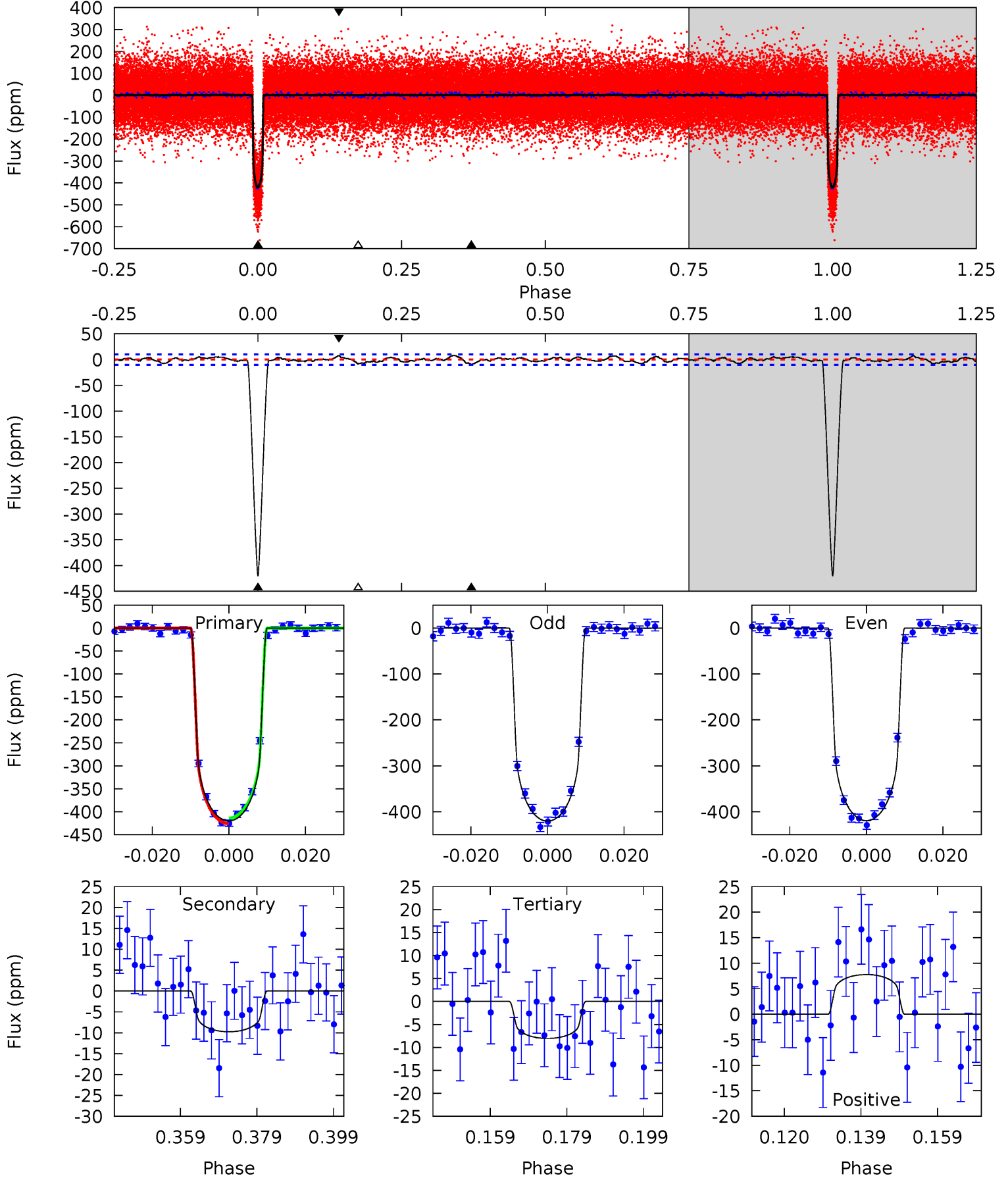
TCE 006196457-01 P= 13.748895 Days $T_0=138.029242$ (BKJD)



DV Model-Shift Uniqueness Test

006196457-01, P = 13.748823 Days, E = 124.284255 Days

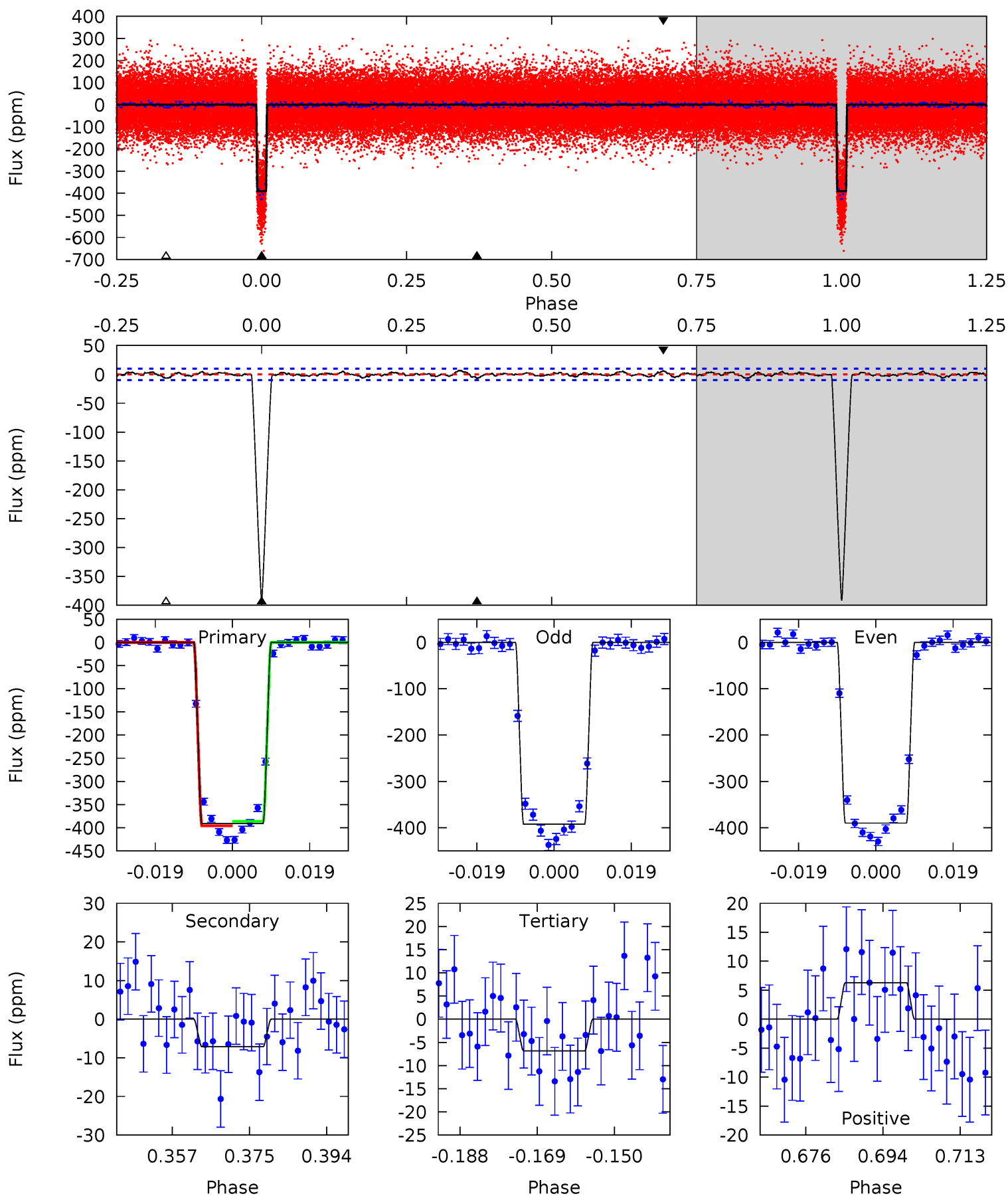
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
201.4	4.68	3.86	3.73	4.89	2.33	1.56	197.5	197.7	0.82	0.96	0.22	1.00	0.02	2.92



Alt Model-Shift Uniqueness Test

006196457-01, P = 13.748895 Days, E = 124.280347 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
191.8	3.50	3.34	3.09	4.90	2.35	1.15	188.4	188.7	0.16	0.42	0.45	0.99	0.02	2.39



Stellar Parameters For KIC 006196457

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5862^{+97}_{-80}	$4.050^{+0.033}_{-0.027}$	$0.160^{+0.150}_{-0.100}$	$1.670^{+0.118}_{-0.082}$	$1.142^{+0.160}_{-0.053}$	$0.345^{+0.042}_{-0.041}$
	+2%/-1%	+1%/-1%	+94%/-62%	+7%/-5%	+14%/-5%	+12%/-12%
Source	SPE8	AST69	SPE69	DSEP		

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

Secondary Eclipse Parameters for KIC 006196457-01 / KOI 0285.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 2	$3.74^{+0.22}_{-0.20}$	1363^{+28}_{-26}	2947^{+92}_{-110}	$5.273^{+1.296}_{-1.222}$
Alt.	-7 ± 2	$3.64^{+0.22}_{-0.19}$	1362^{+27}_{-27}	2842^{+111}_{-131}	$4.176^{+1.224}_{-1.206}$

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 $A_{obs} \gg 1.0$

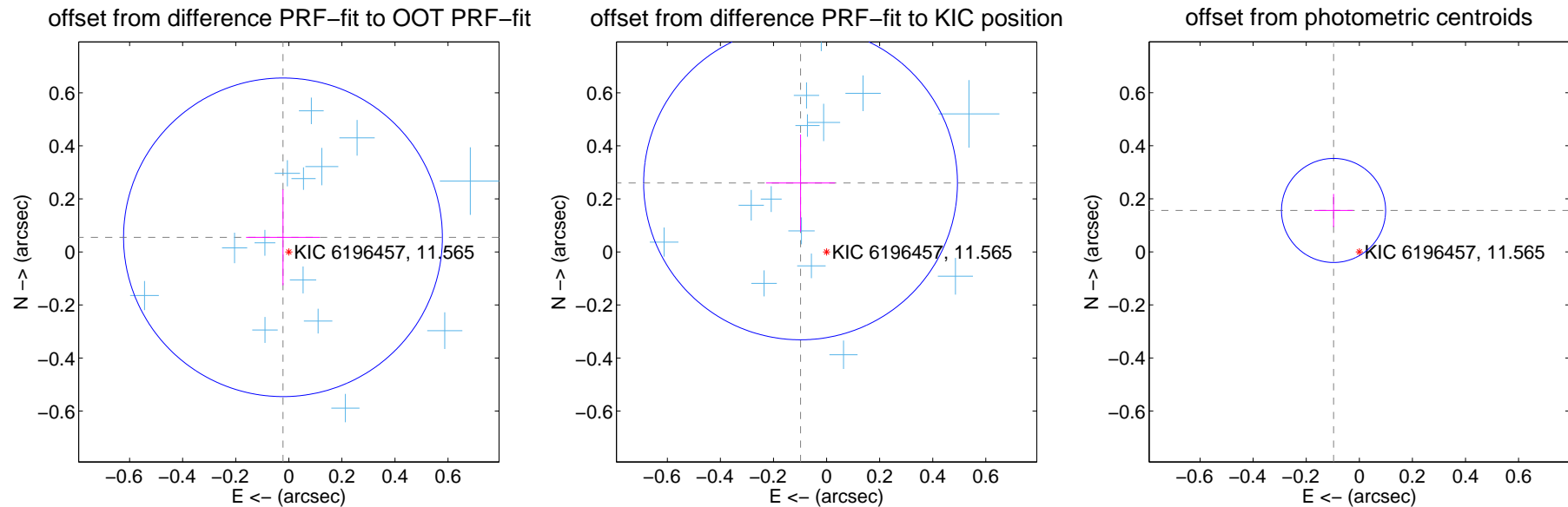
DV Centroid Data

Supplemental centroid analysis for 006196457-01. **Kepler magnitude: 11.56.** Transit SNR 114.49

There are 17 quarters with good PRF difference image offsets

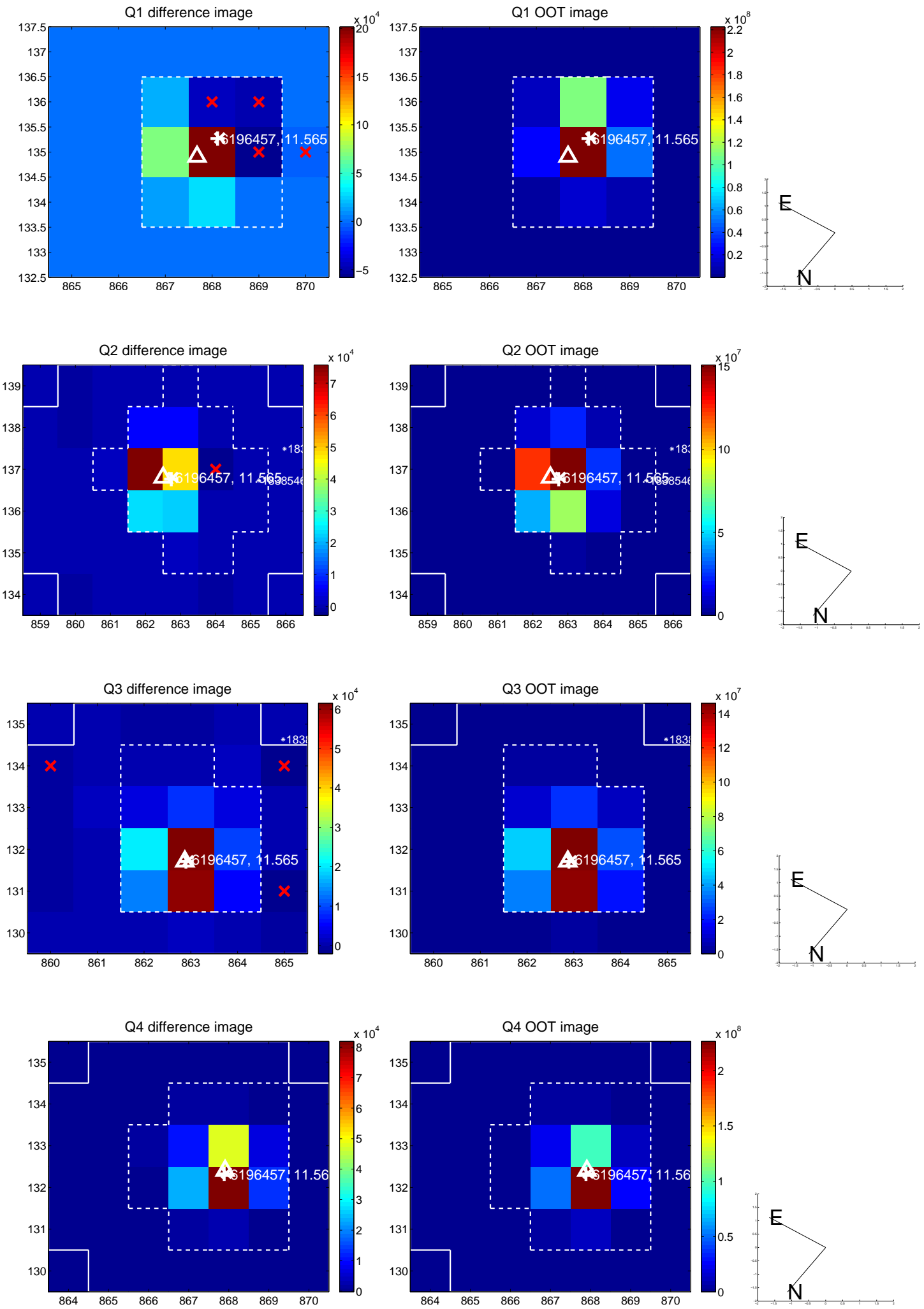
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.059 ± 0.200	0.30	0.022 ± 0.139	0.055 ± 0.181
PRF-fit source offset from KIC position	0.278 ± 0.197	1.41	0.098 ± 0.130	0.260 ± 0.183
photometric centroid source offset	0.18 ± 0.07	2.81	0.10 ± 0.07	0.16 ± 0.06

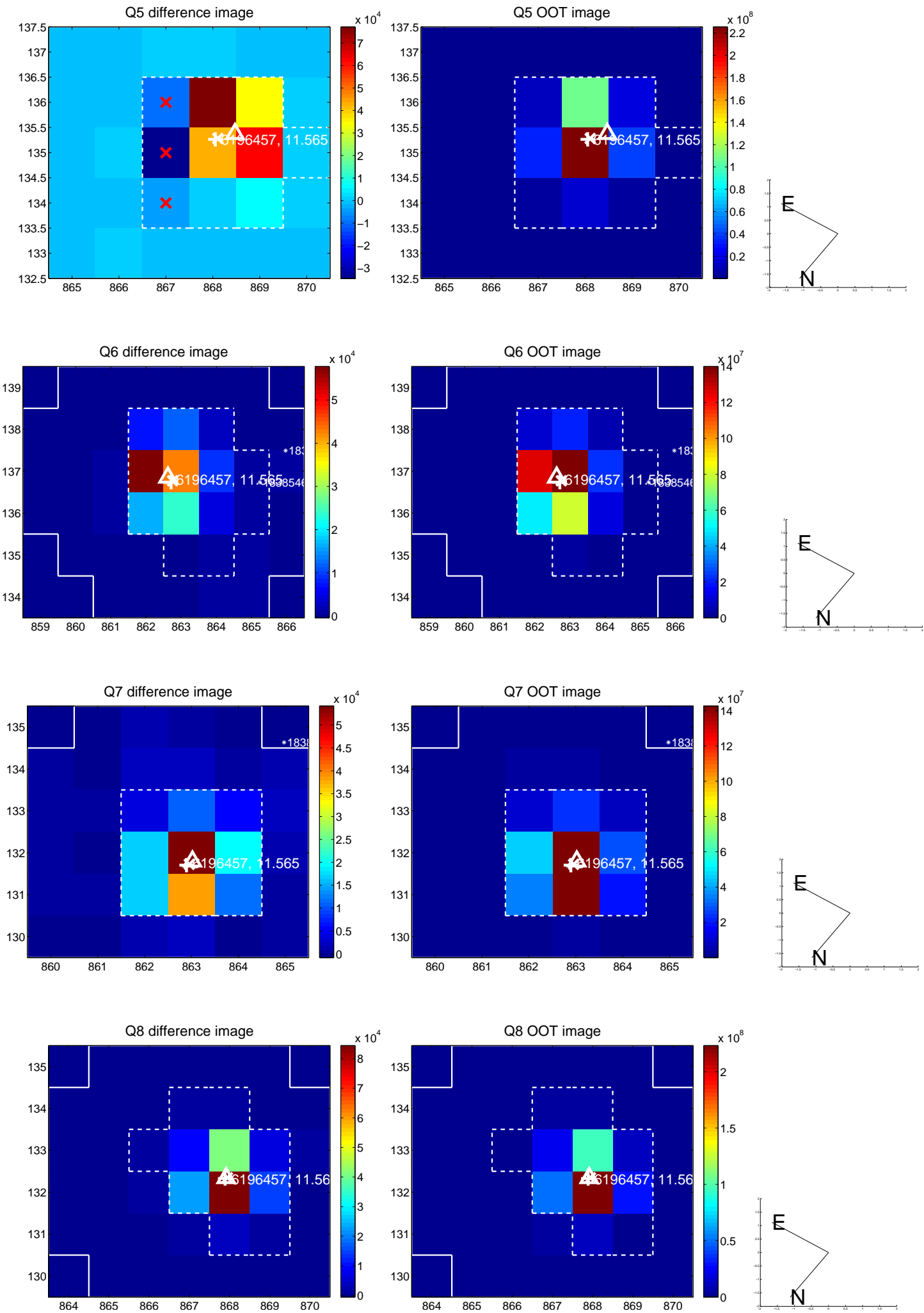


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

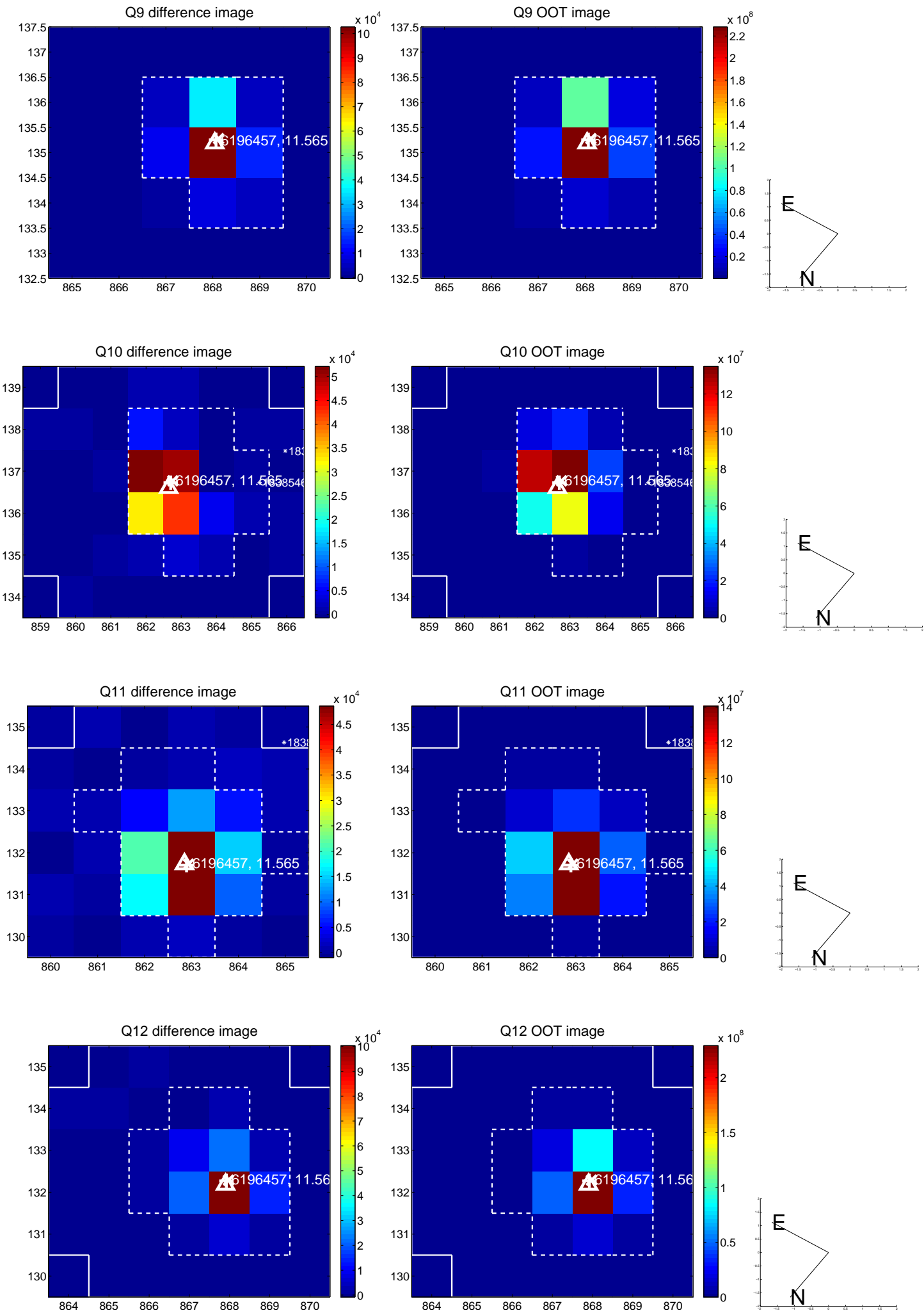
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



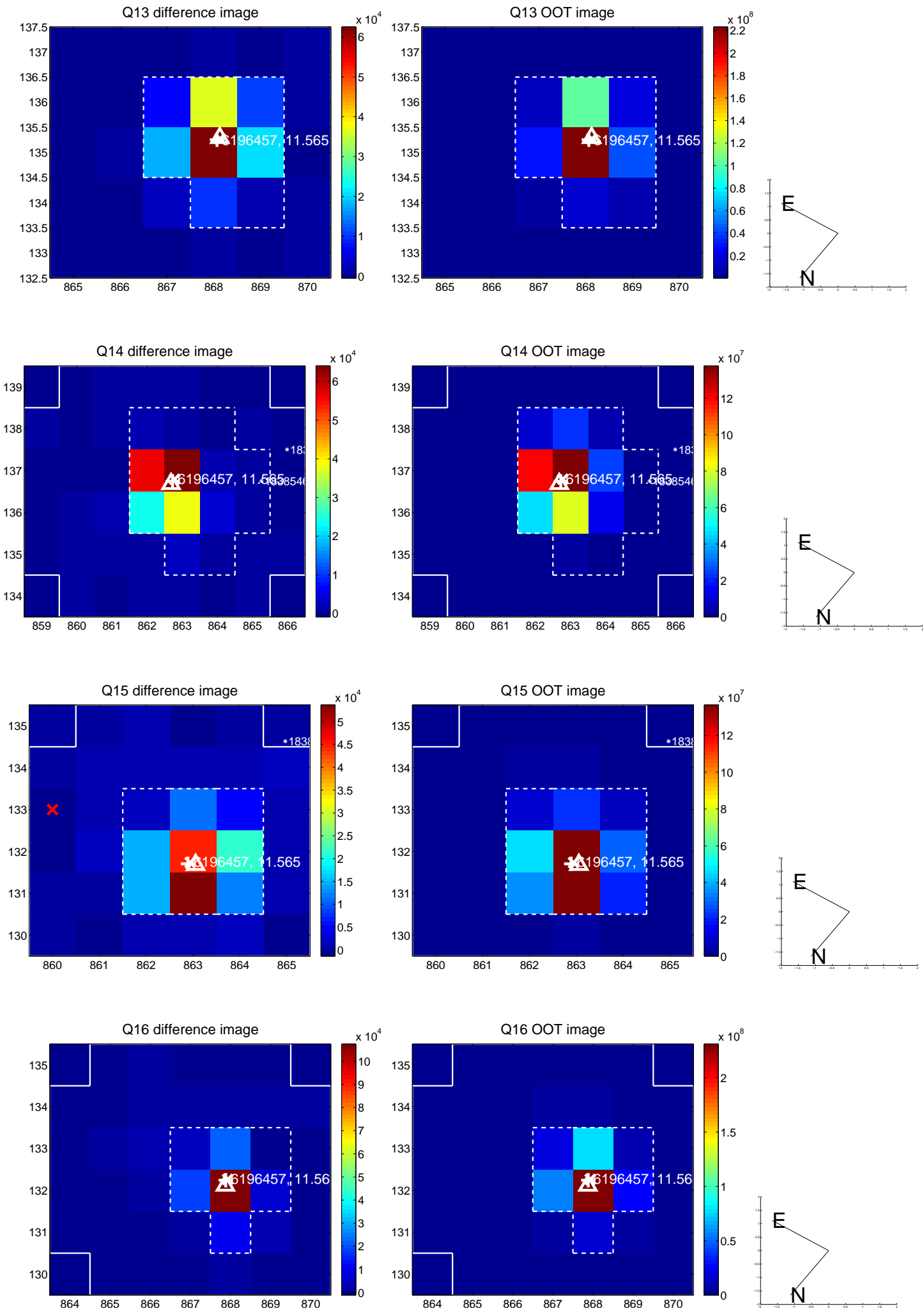
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



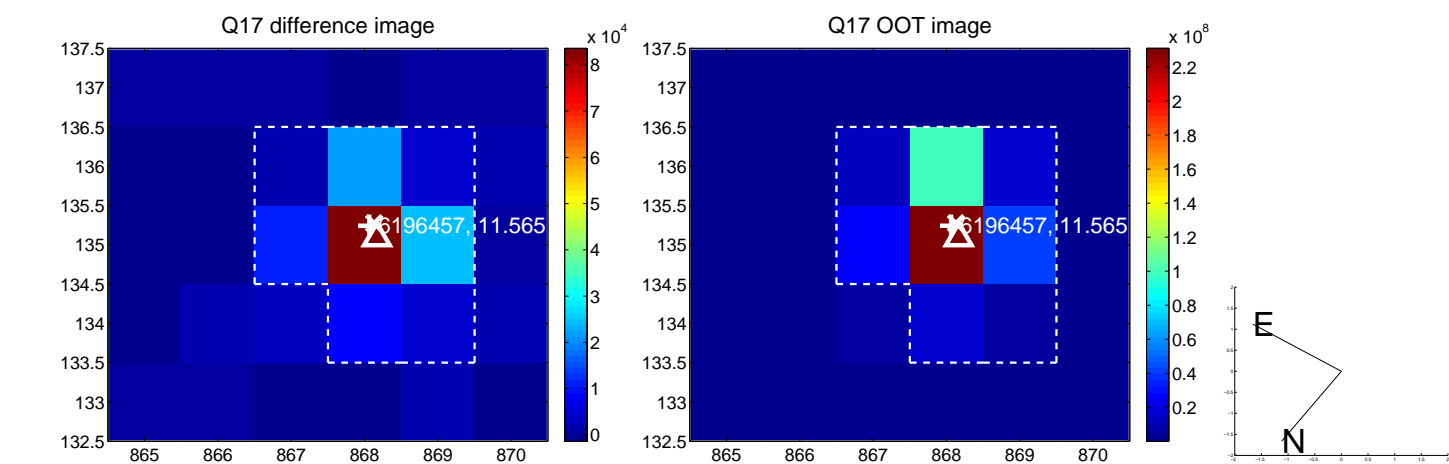
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



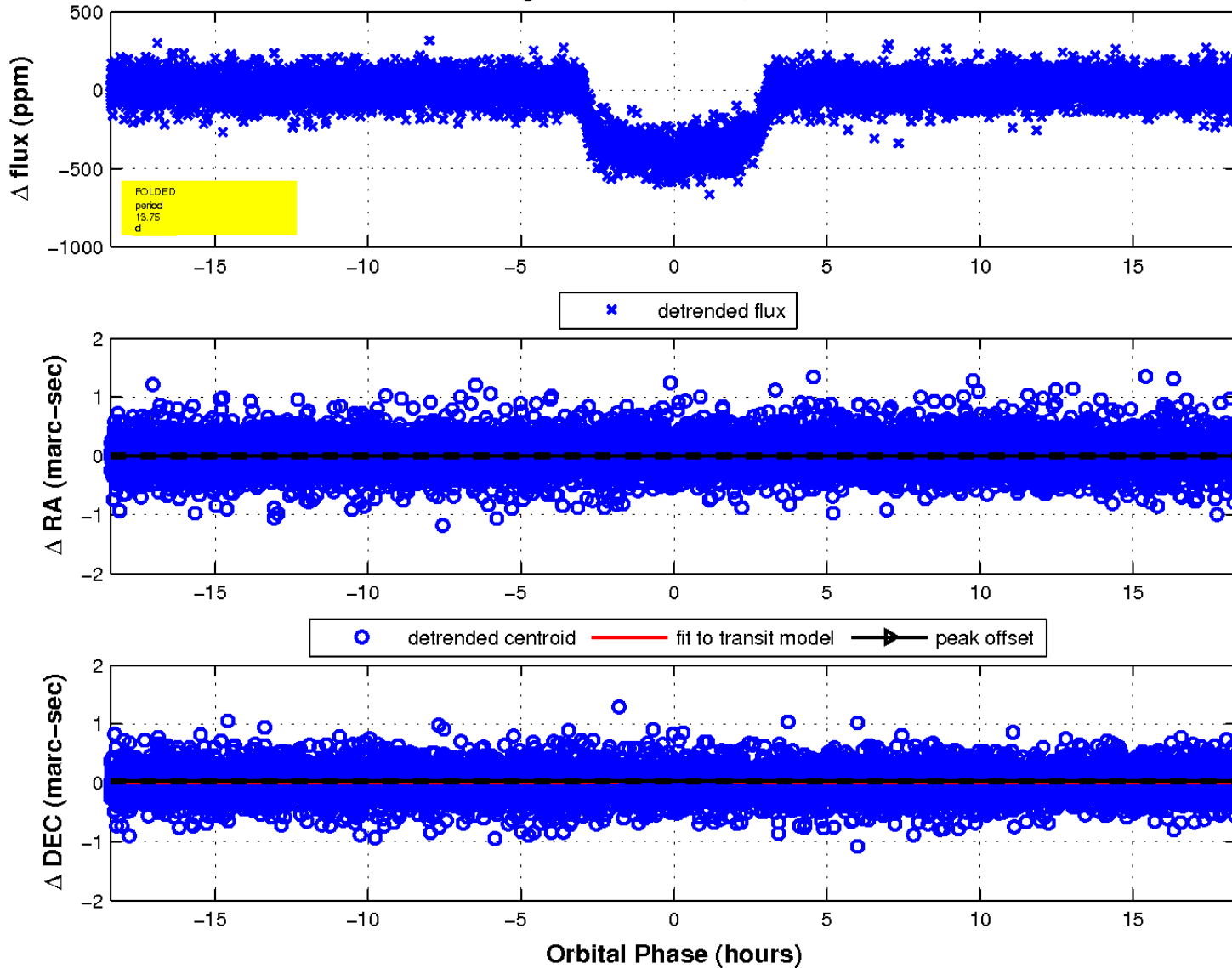
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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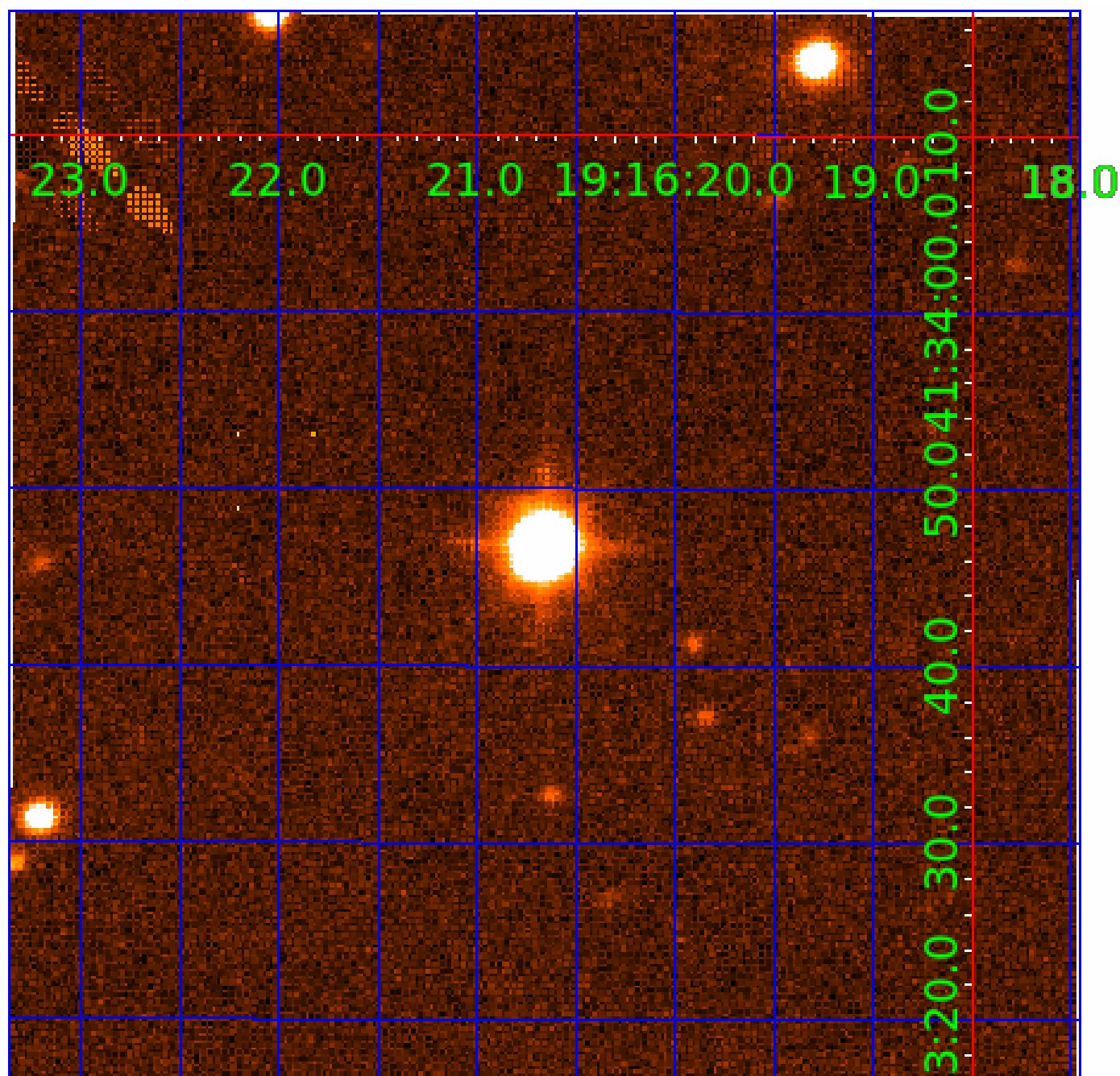


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 006196457

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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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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006196457-02	OBS	PC	0.98	0	0	0	0	NO_COMMENT
006196457-03	OBS	FP	0.48	1	0	0	0	LPP_DV

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.

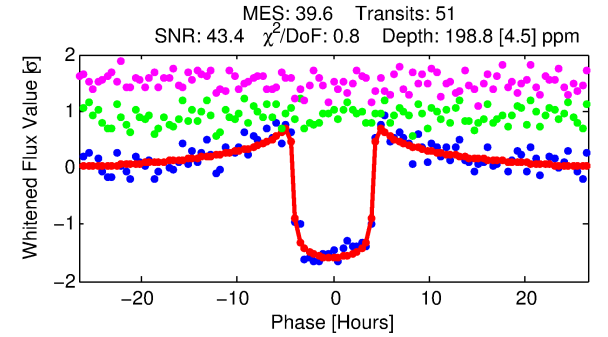
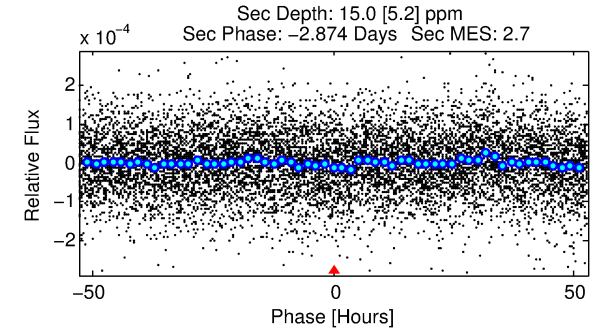
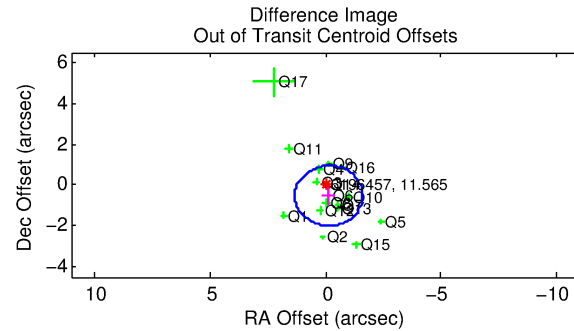
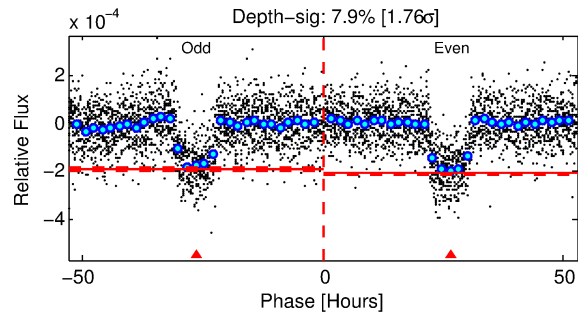
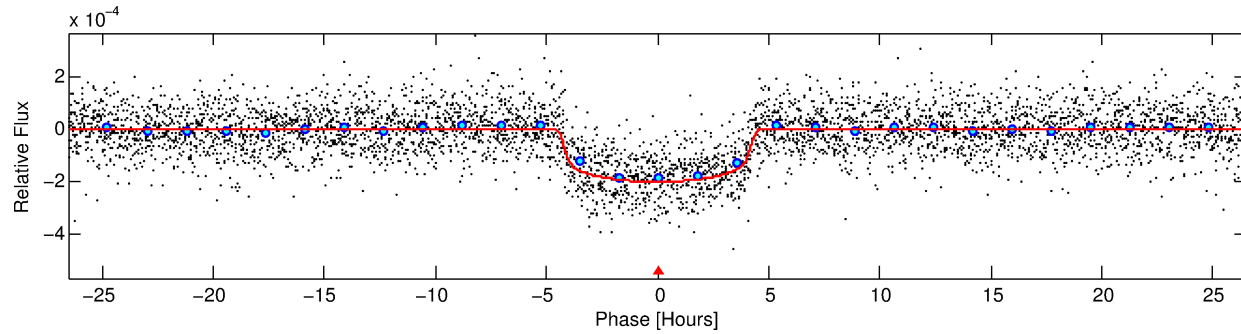
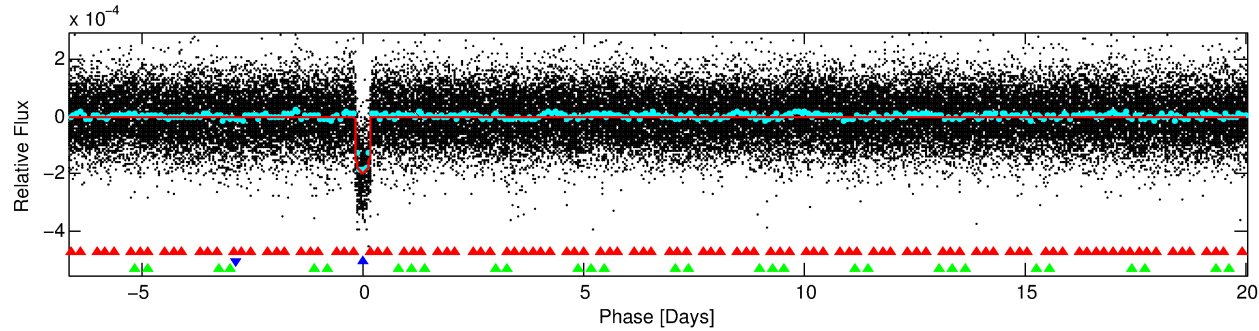
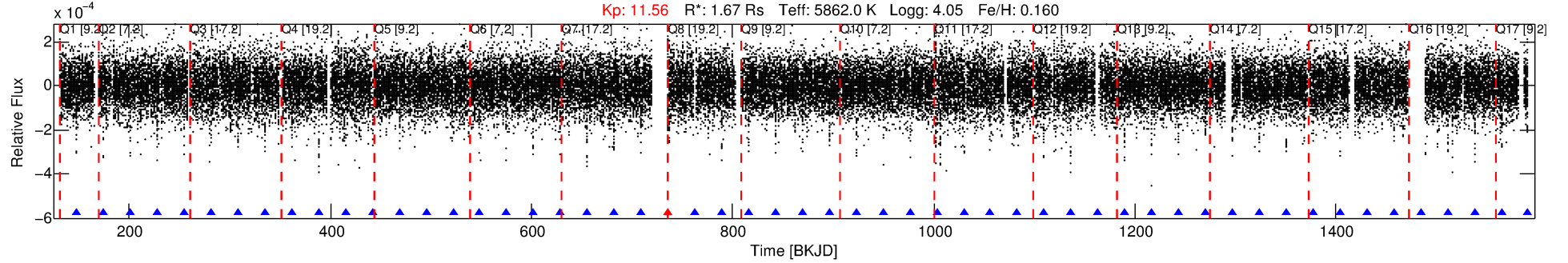
Ephemeris Match Information For 006196457-02

No Significant Match Found

DV One-Page Summary

KIC: 6196457 Candidate: 2 of 3 Period: 26.723 d
KOI: K00285.02 Name: Kepler-92c Corr: 0.981

Kp: 11.56 R*: 1.67 Rs Teff: 5862.0 K Logg: 4.05 Fe/H: 0.160



DV Fit Results:

Period = 26.72310 [0.00008] d
Epoch = 147.9384 [0.0025] BKJD
Rp/R* = 0.0146 [0.0008]
a/R* = 13.31 [3.37]
b = 0.84 [0.09]
Seff = 88.25 [8.45]
Teq = 782 [19] K
Rp = 2.66 [0.24] Re
a = 0.1829 [0.0098] AU
Ag = 39.00 [14.34] [2.65σ]
Teffp = 3020 [277] K [8.06σ]

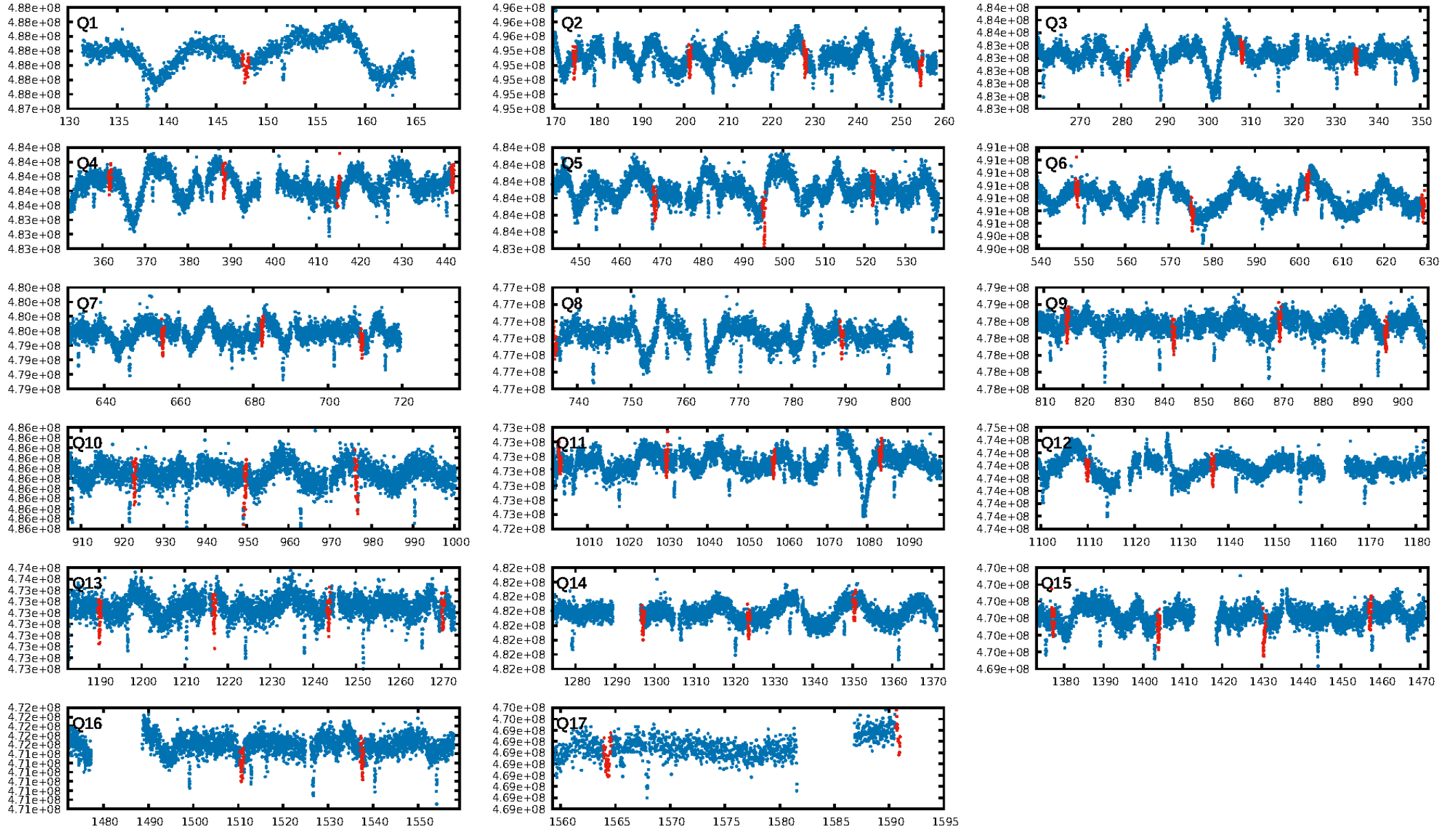
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [28.92σ]
LongPeriod-sig: 100.0% [38.26σ]
ModelChiSquare2-sig: 94.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.52e-308
RollingBand-fgt: 0.98 [47/48]
GhostDiagnostic-chr: 18.21
Centroid-sig: 1.1%
Centroid-so: 0.549 arcsec [3.05σ]
OotOffset-rm: 0.543 arcsec [1.11σ]
KicOffset-rm: 0.438 arcsec [0.89σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

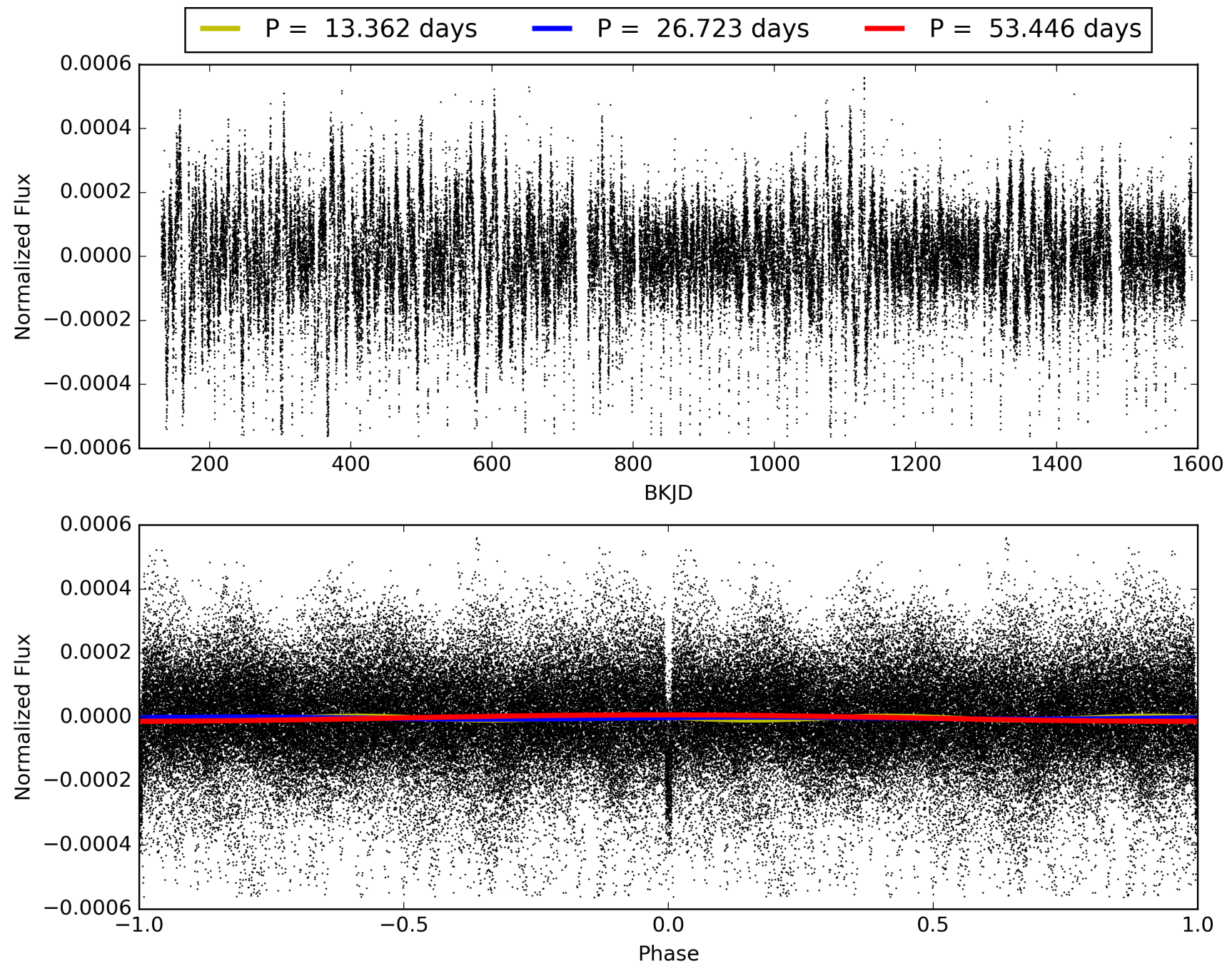
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:38 Z

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

TCE 006196457-02, PDC Light Curves

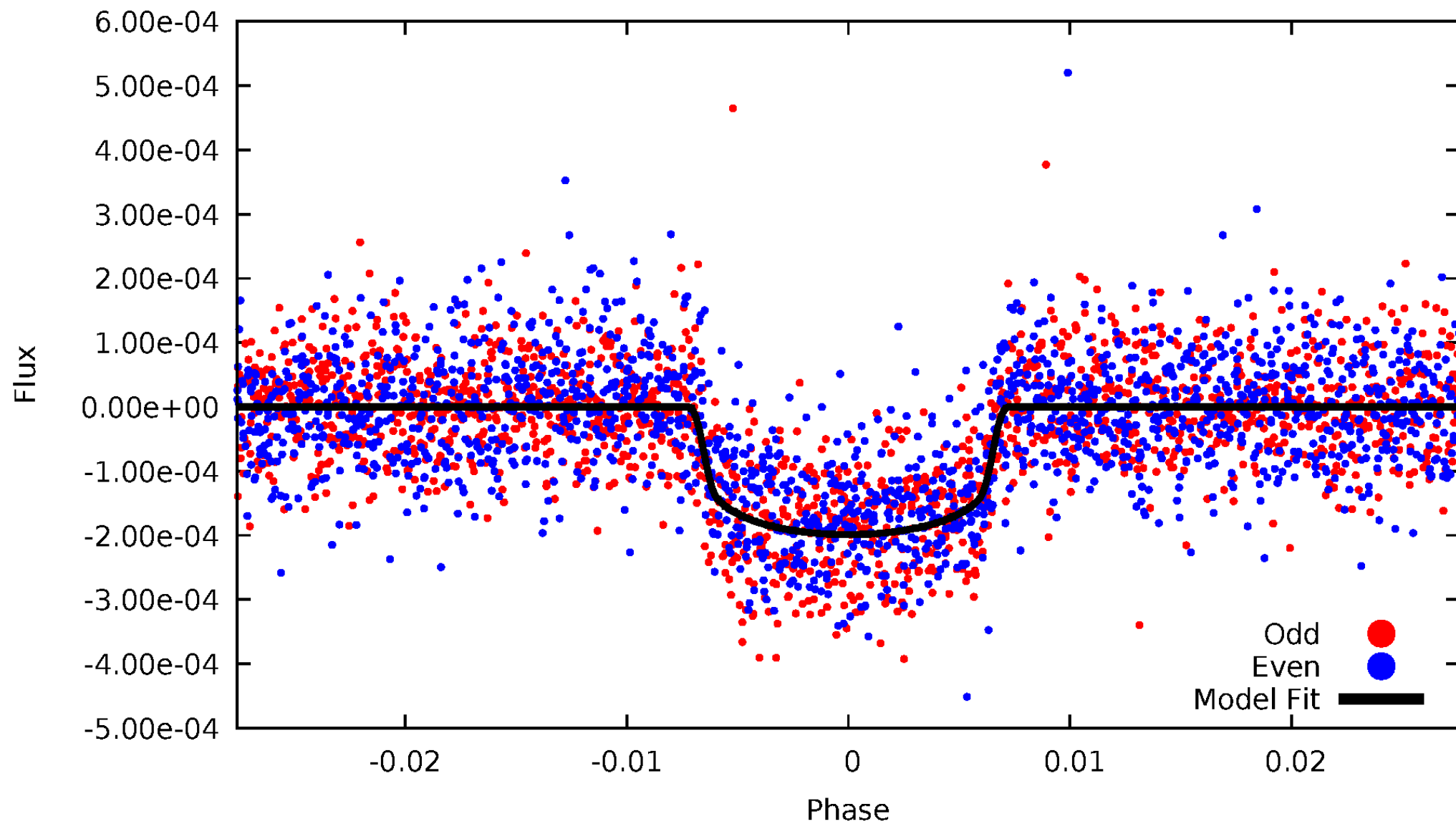


TCE 006196457-02



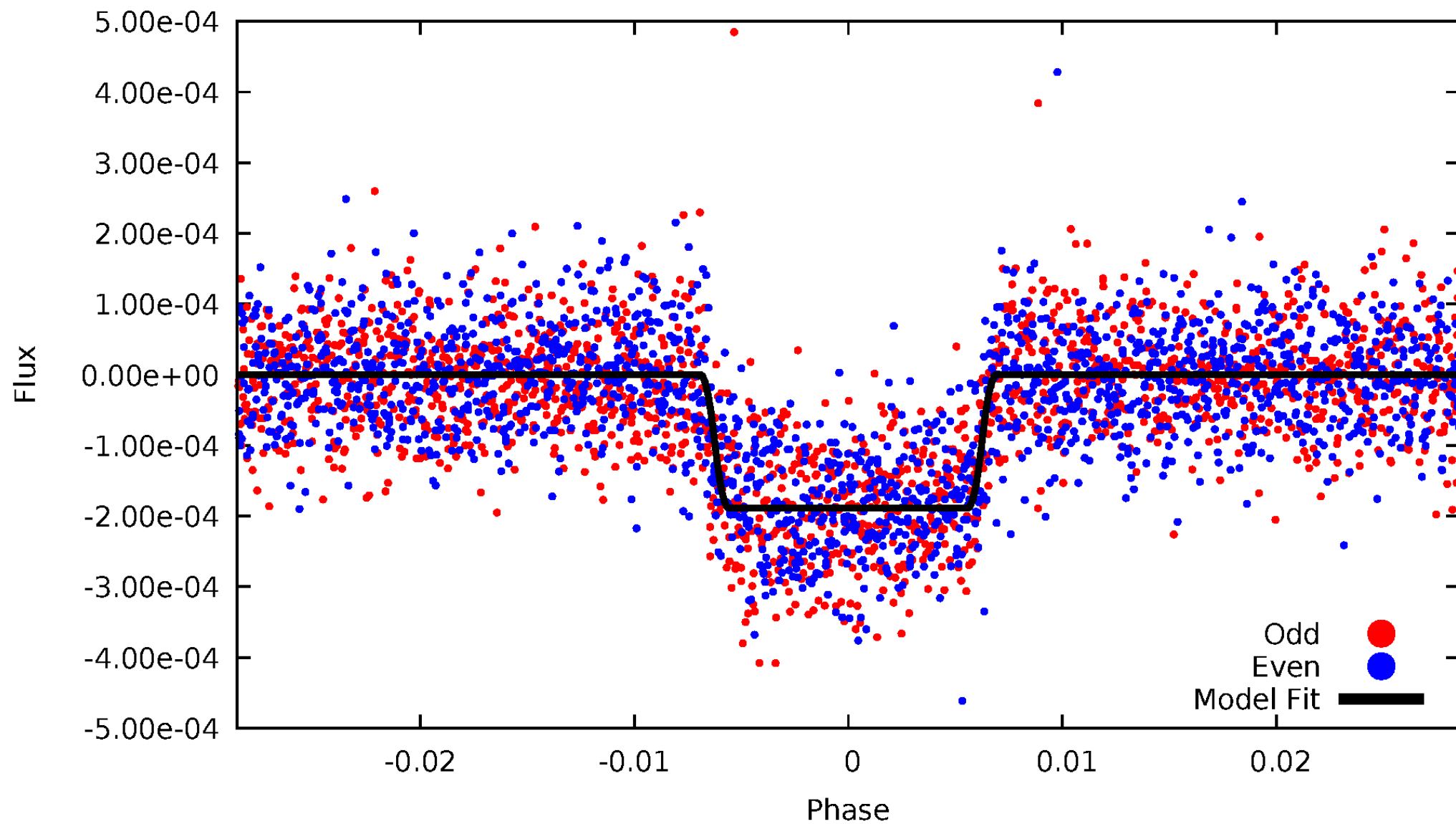
DV Odd/Even

TCE 006196457-02



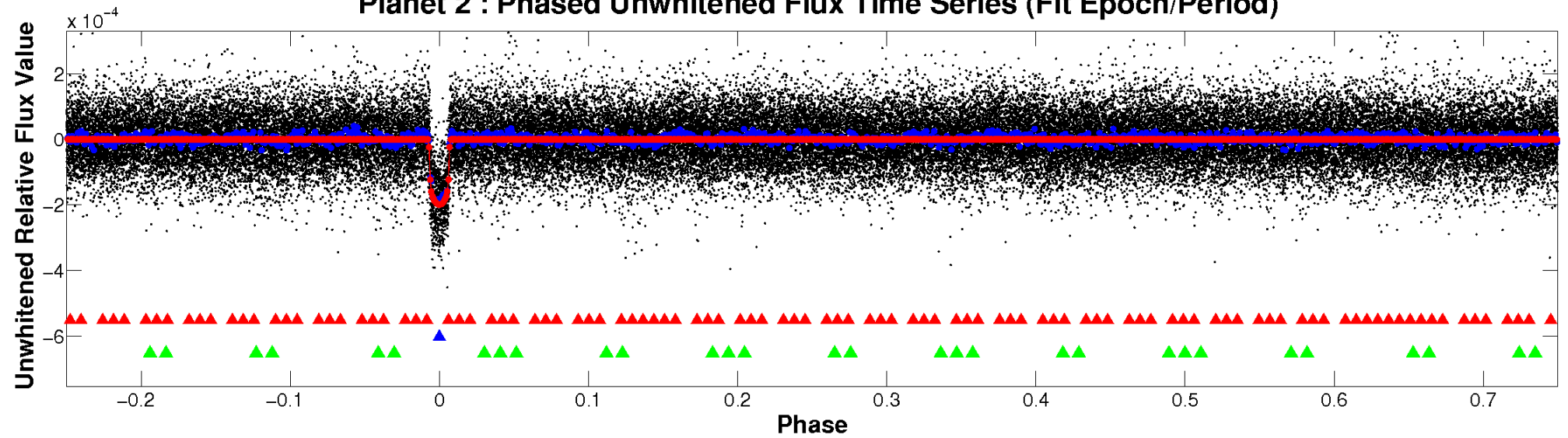
ALT Odd/Even

TCE 006196457-02

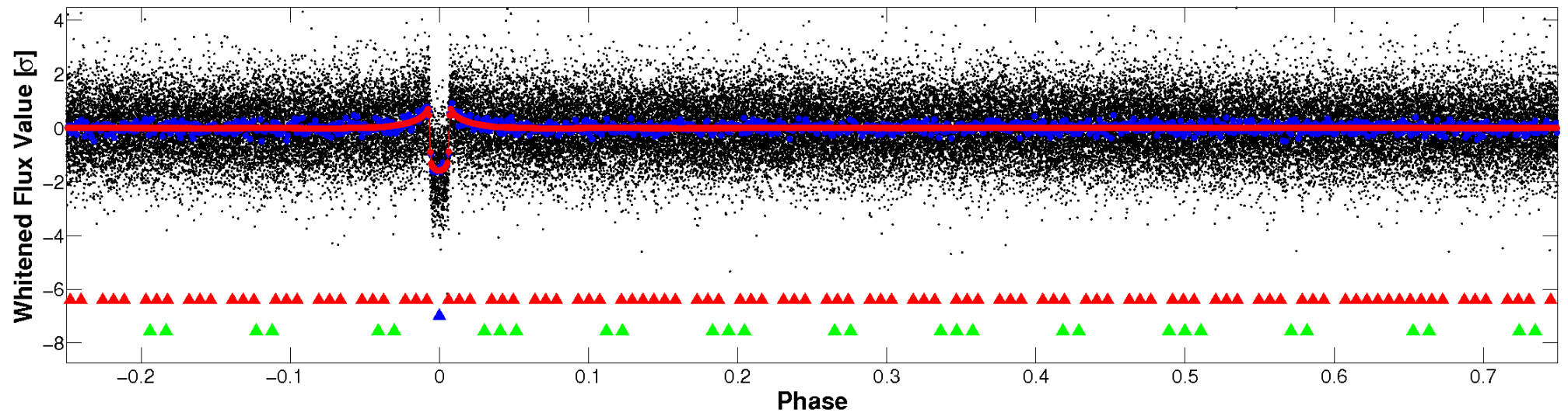


Non-Whitened Vs. Whitened Light Curve

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

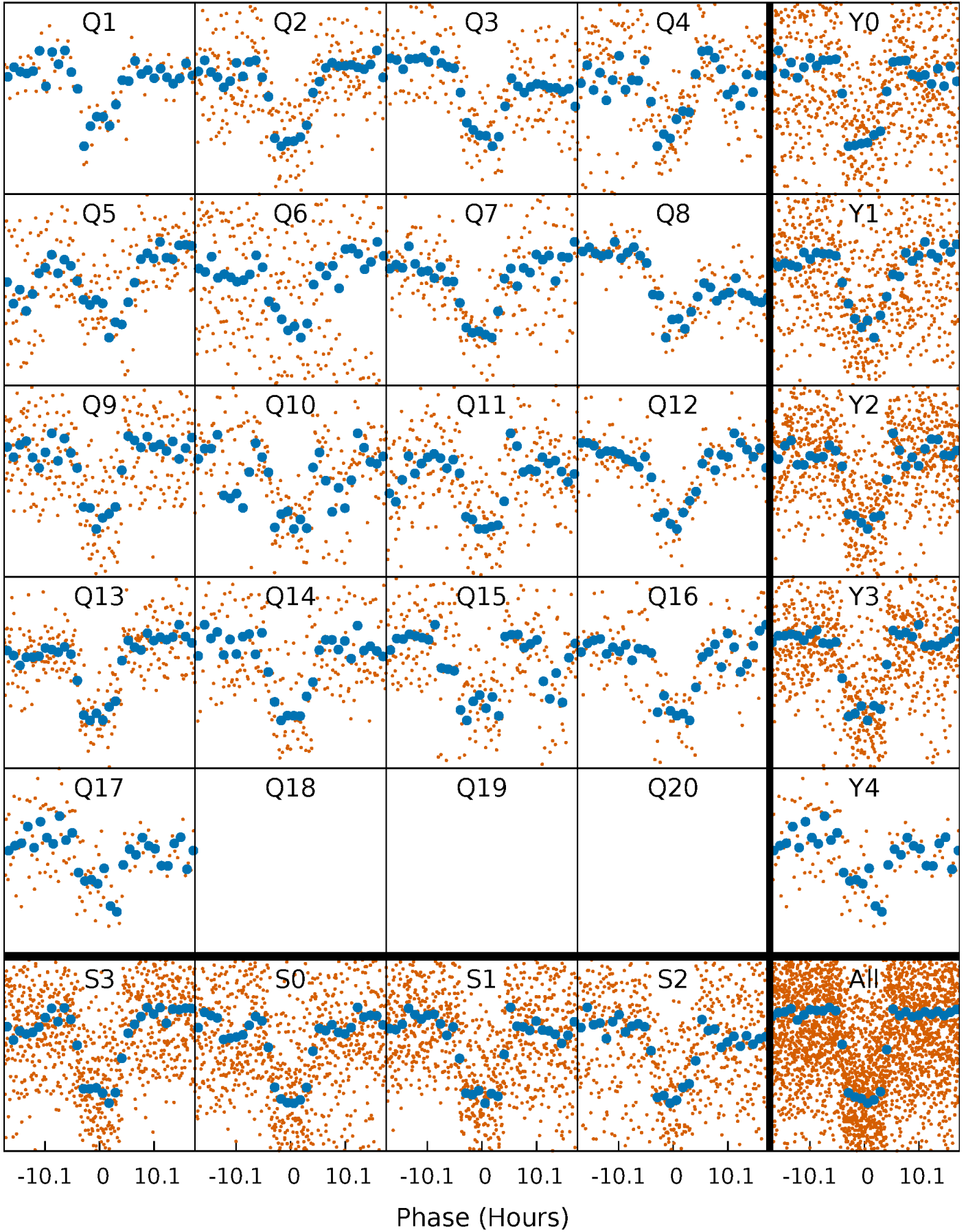


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



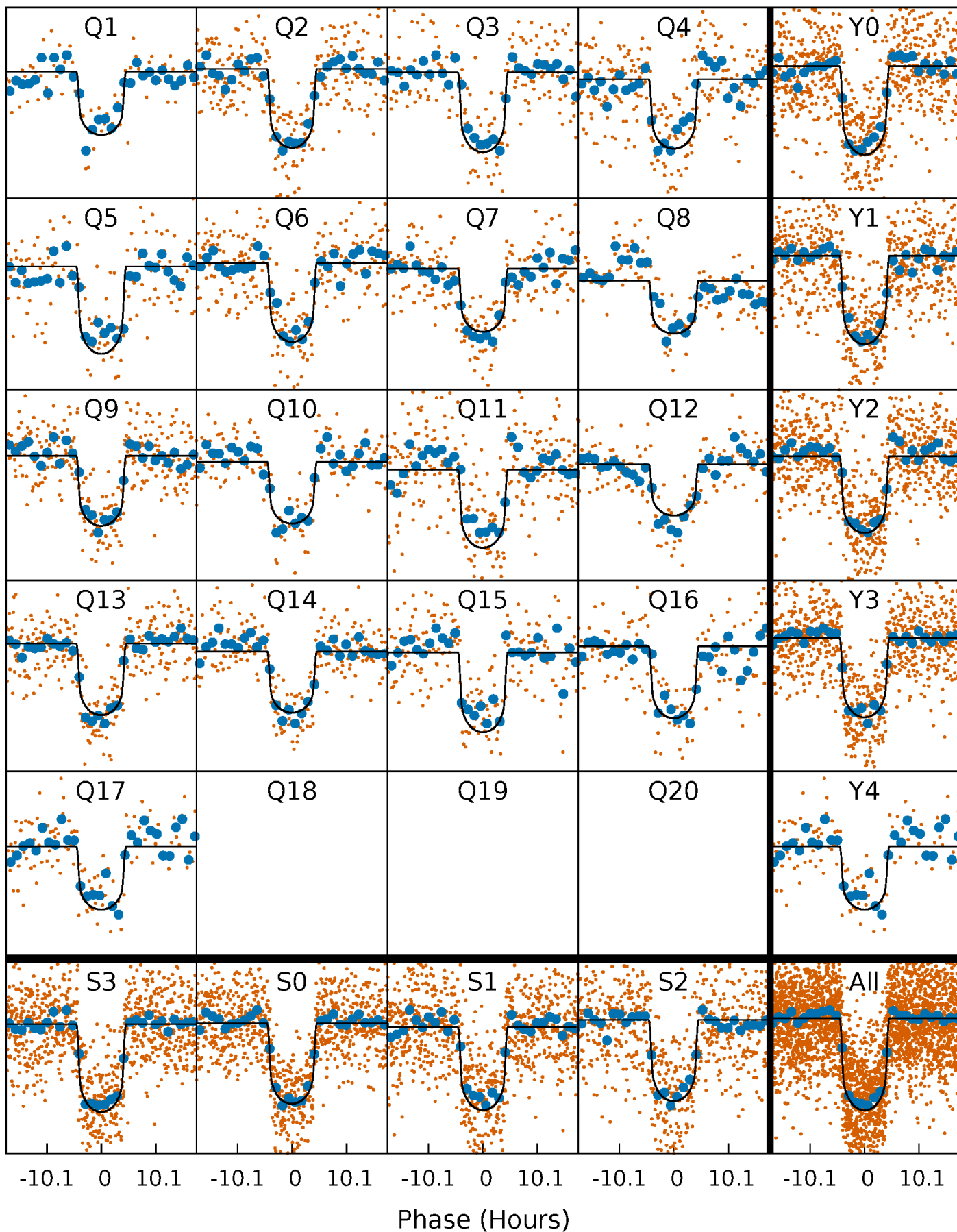
PDC Quarter-Phased Transit Curves

TCE 006196457-02 P= 26.723098 Days $T_0=147.938448$ (BKJD)



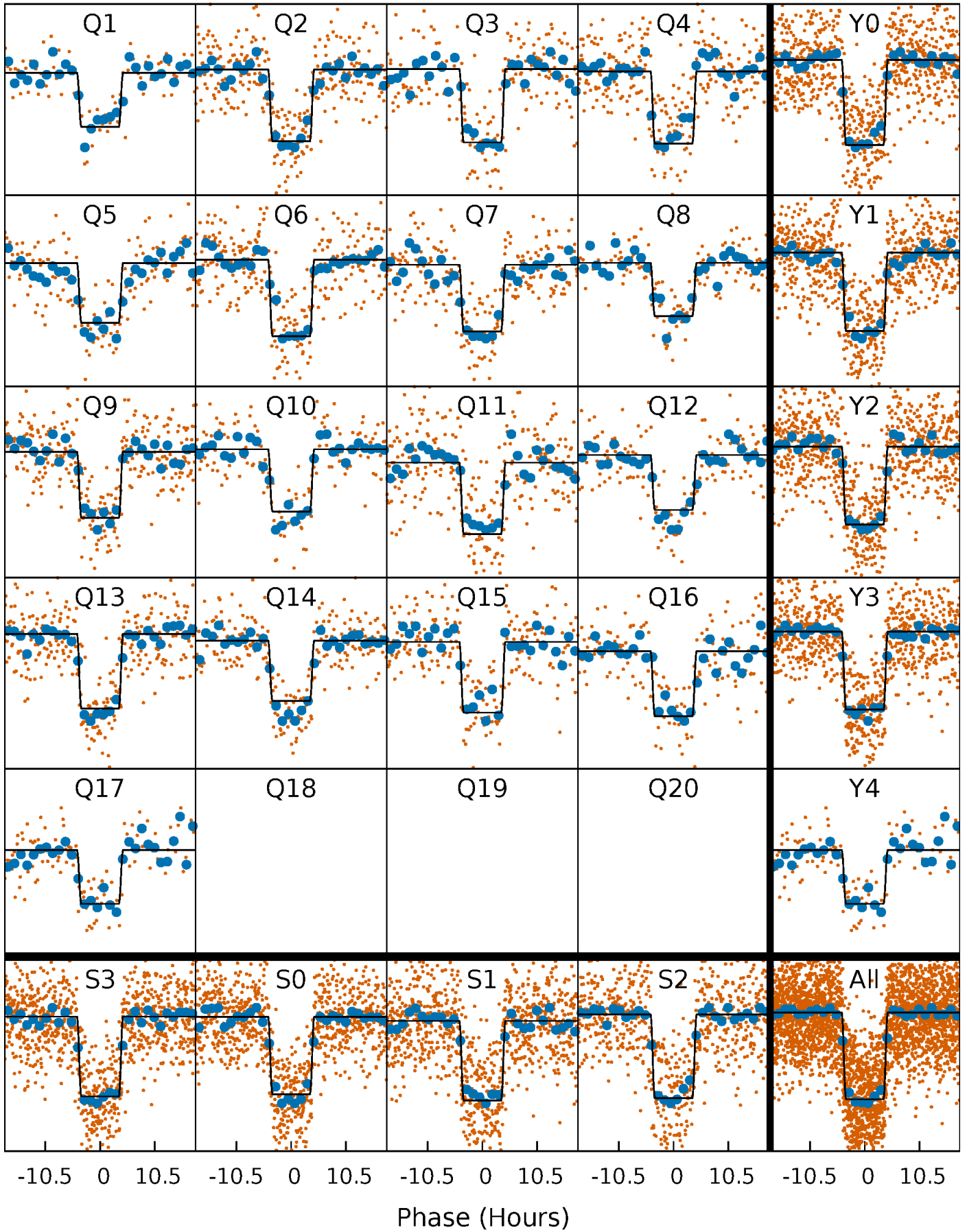
DV Quarter-Phased Transit Curves

TCE 006196457-02 P= 26.723098 Days $T_0=147.938448$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

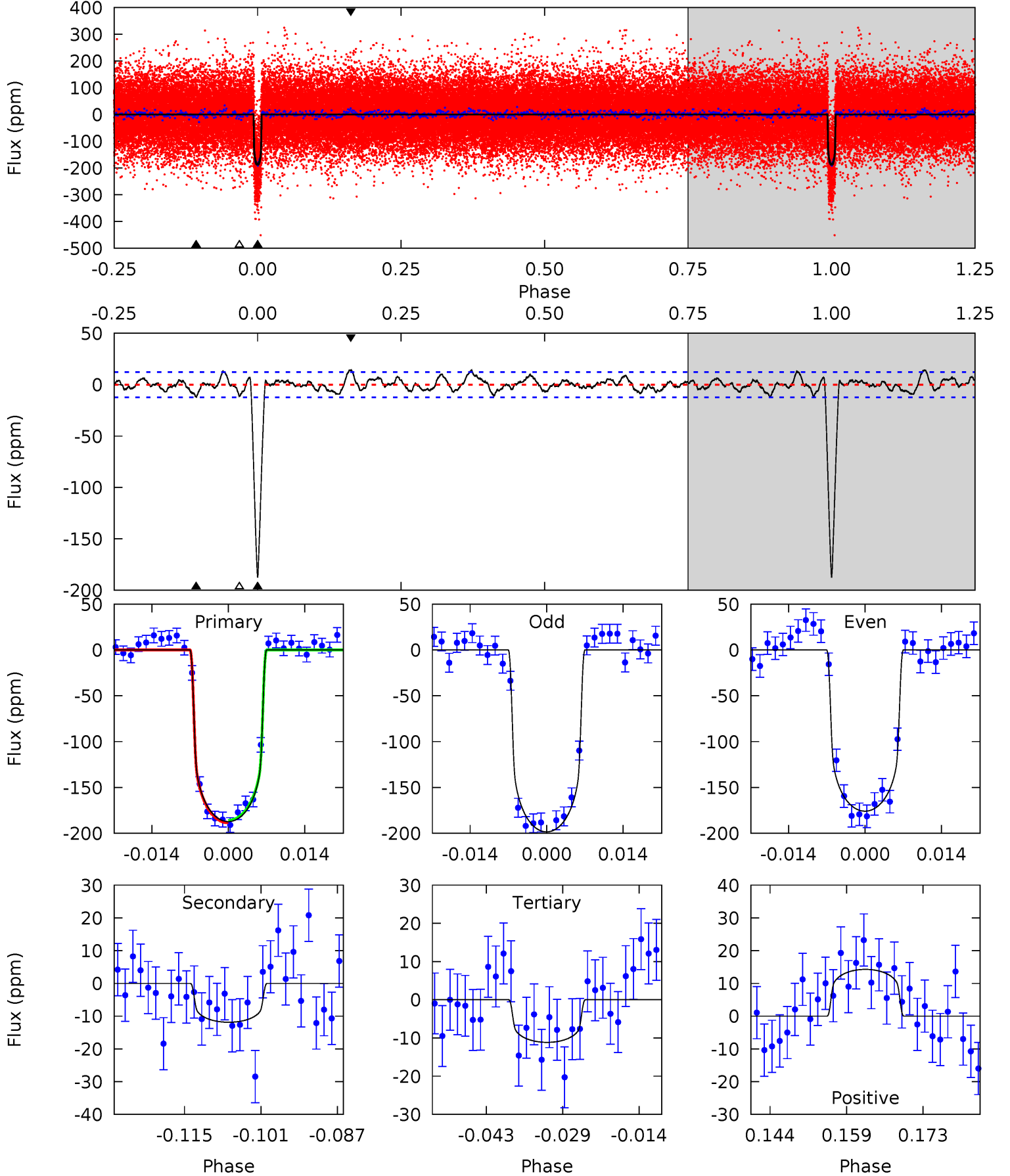
TCE 006196457-02 P= 26.722993 Days $T_0=147.943253$ (BKJD)



DV Model-Shift Uniqueness Test

006196457-02, P = 26.723098 Days, E = 121.215350 Days

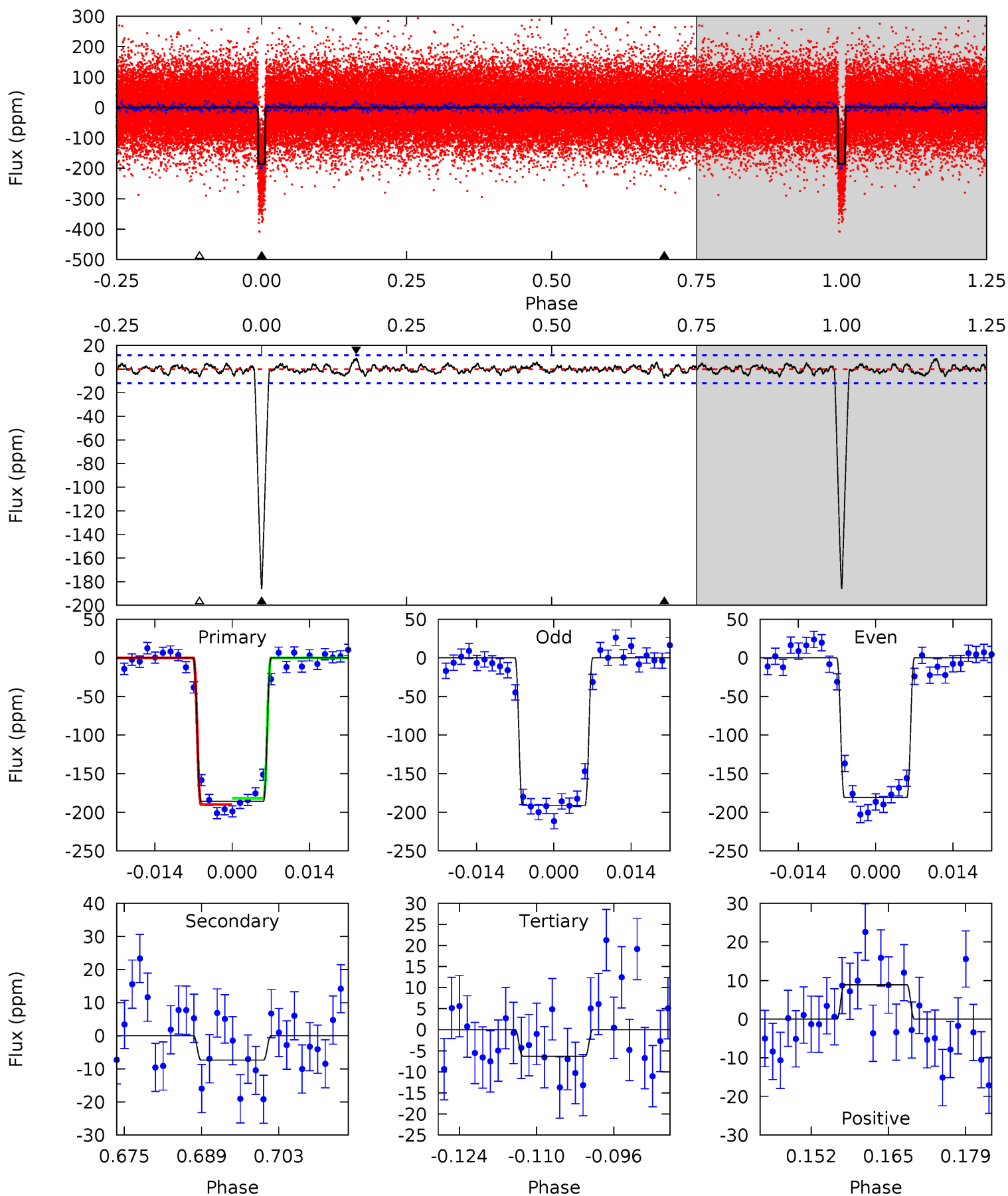
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.7	4.80	4.50	5.77	4.96	2.45	1.90	71.1	69.9	0.29	-0.97	4.58	1.00	0.07	0.54



Alt Model-Shift Uniqueness Test

006196457-02, $P = 26.722993$ Days, $E = 121.220260$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.3	3.09	2.65	3.75	4.96	2.46	1.02	75.6	74.5	0.44	-0.66	2.16	0.98	0.05	1.66



Stellar Parameters For KIC 006196457

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5862^{+97}_{-80}	$4.050^{+0.033}_{-0.027}$	$0.160^{+0.150}_{-0.100}$	$1.670^{+0.118}_{-0.082}$	$1.142^{+0.160}_{-0.053}$	$0.345^{+0.042}_{-0.041}$
	+2%/-1%	+1%/-1%	+94%/-62%	+7%/-5%	+14%/-5%	+12%/-12%
Source	SPE8	AST69	SPE69	DSEP		

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

Secondary Eclipse Parameters for KIC 006196457-02 / KOI 0285.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-12 ± 2	$2.68^{+0.17}_{-0.18}$	1091^{+22}_{-21}	3370^{+117}_{-129}	31^{+8}_{-7}
Alt.	-7 ± 2	$2.52^{+0.18}_{-0.18}$	1092^{+21}_{-21}	3182^{+170}_{-186}	21^{+9}_{-7}

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

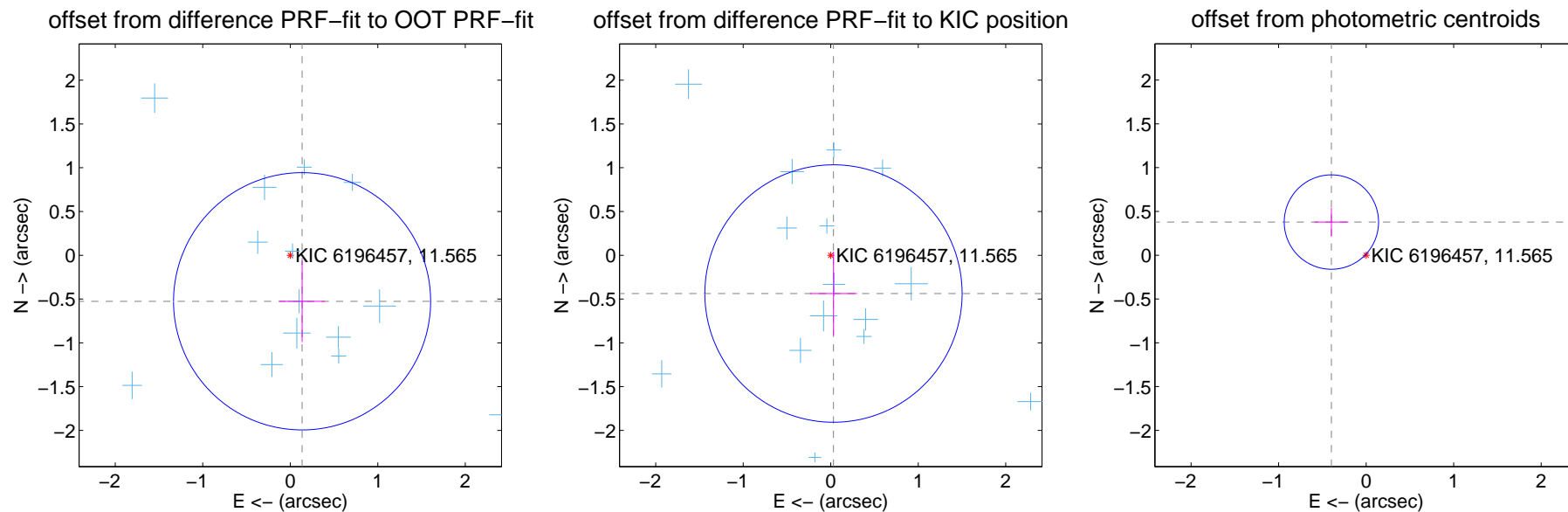
DV Centroid Data

Supplemental centroid analysis for 006196457-02. **Kepler magnitude: 11.56**. Transit SNR 43.41

There are 16 quarters with good PRF difference image offsets

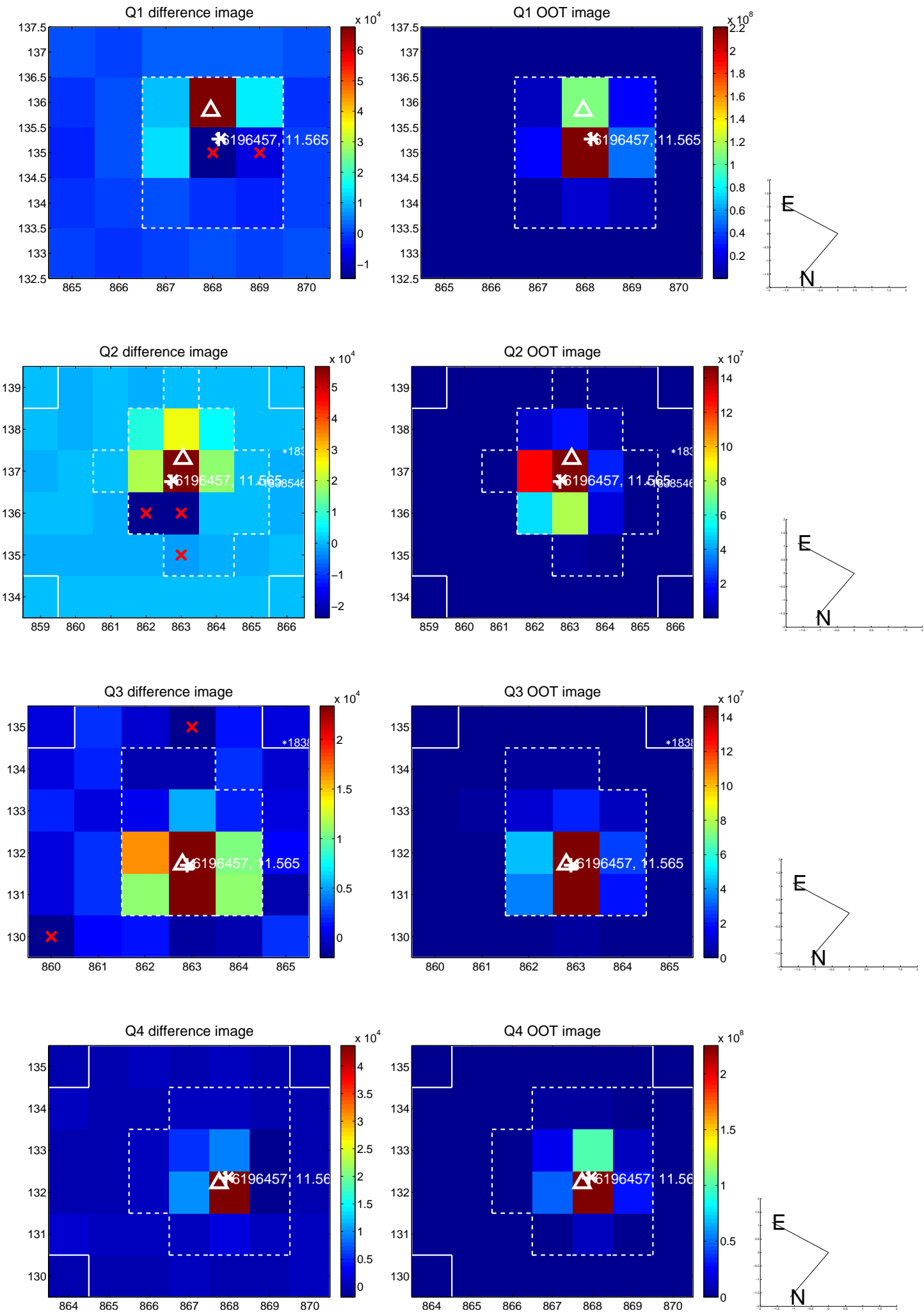
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.543 ± 0.490	1.11	-0.135 ± 0.261	-0.526 ± 0.464
PRF-fit source offset from KIC position	0.438 ± 0.490	0.89	-0.032 ± 0.270	-0.437 ± 0.479
photometric centroid source offset	0.55 ± 0.18	3.05	0.40 ± 0.19	0.38 ± 0.16

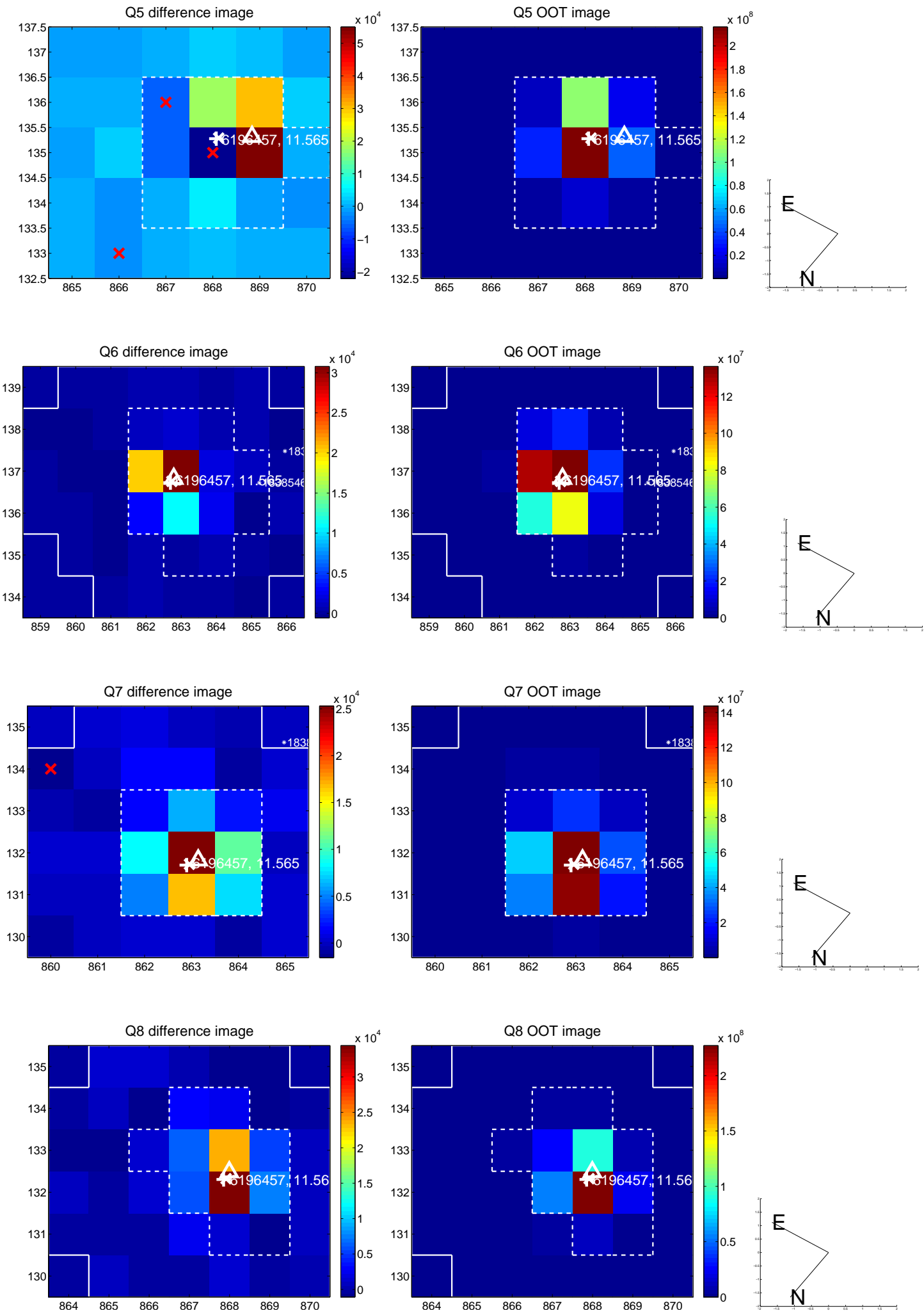


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

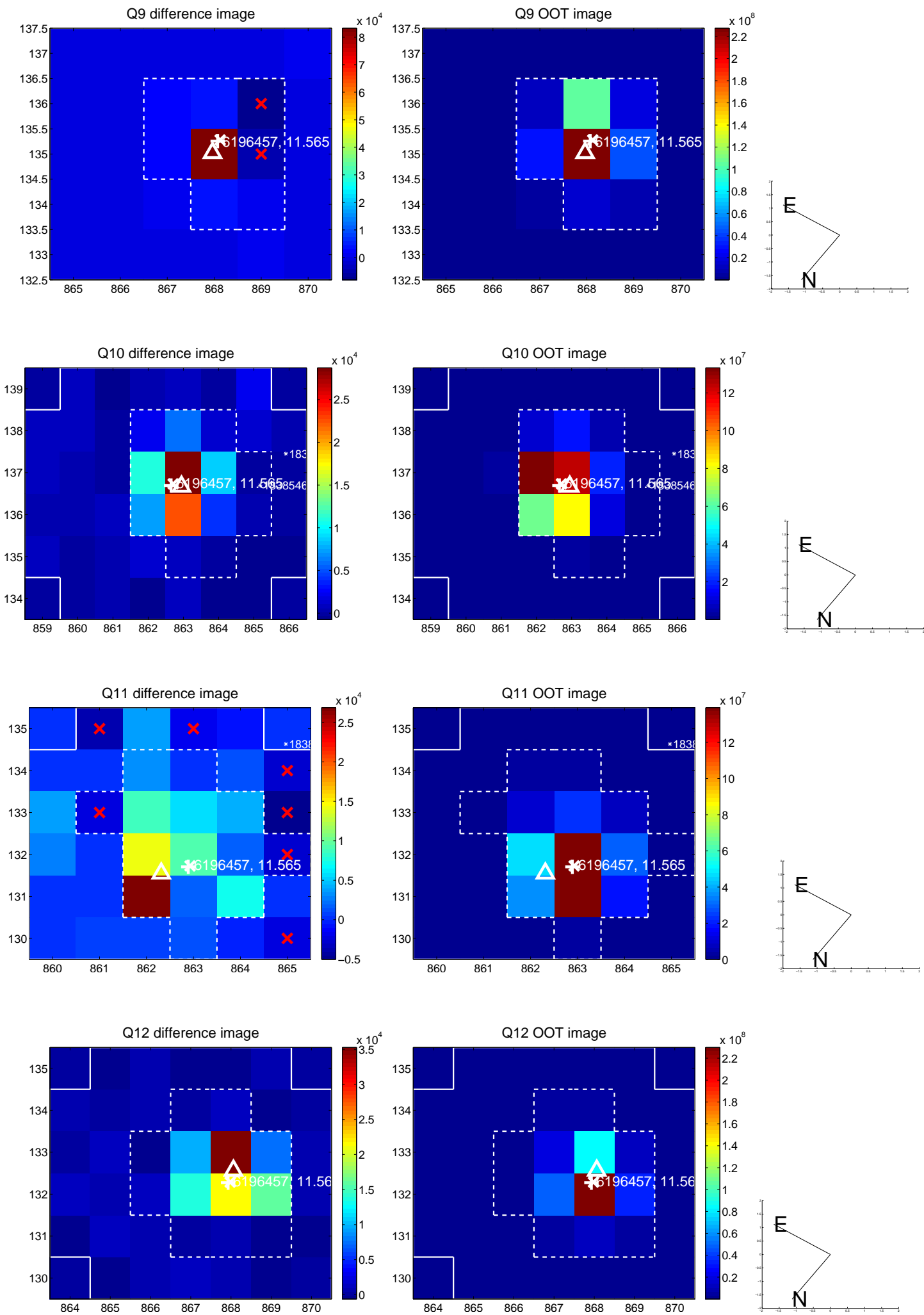
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



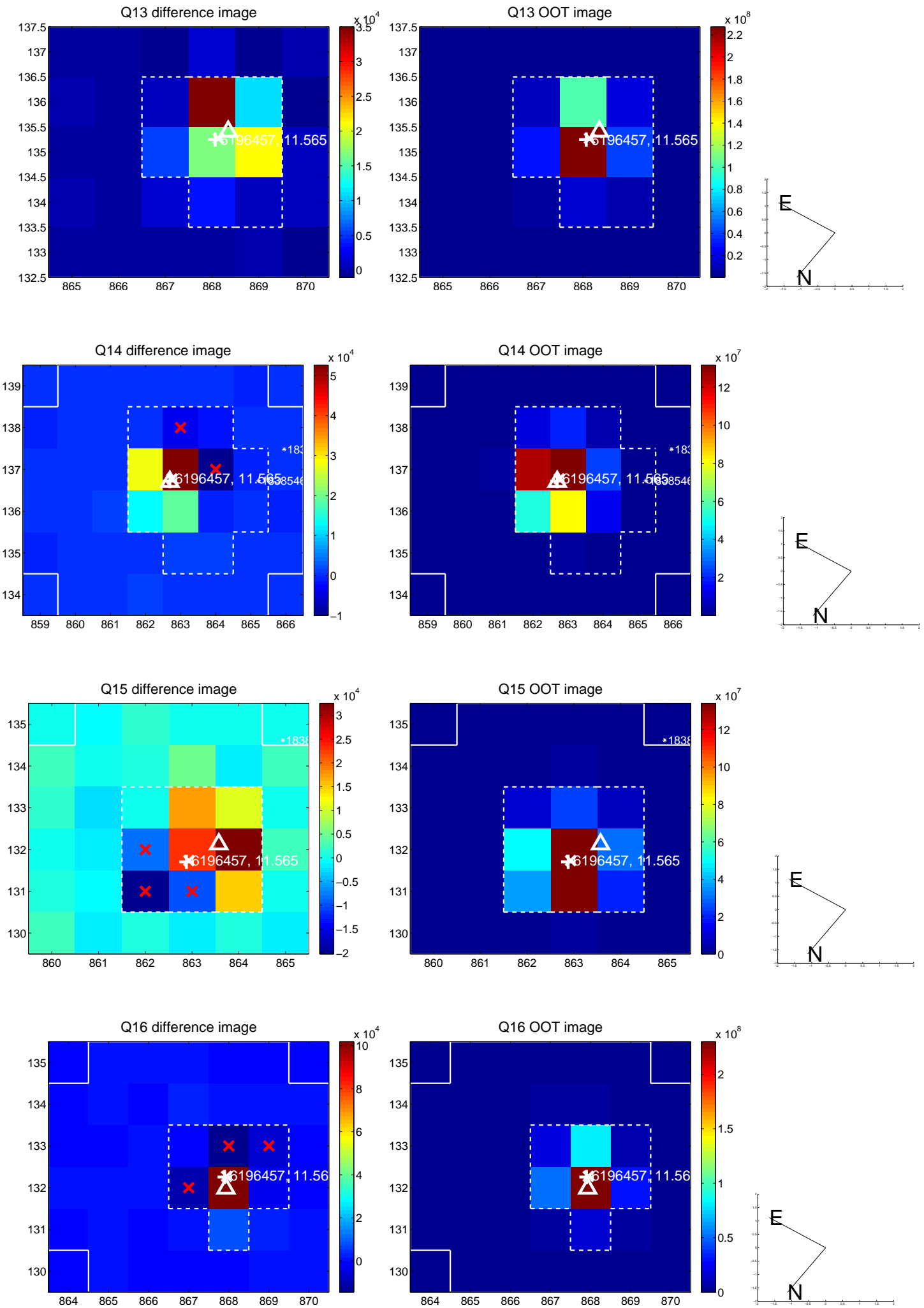
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



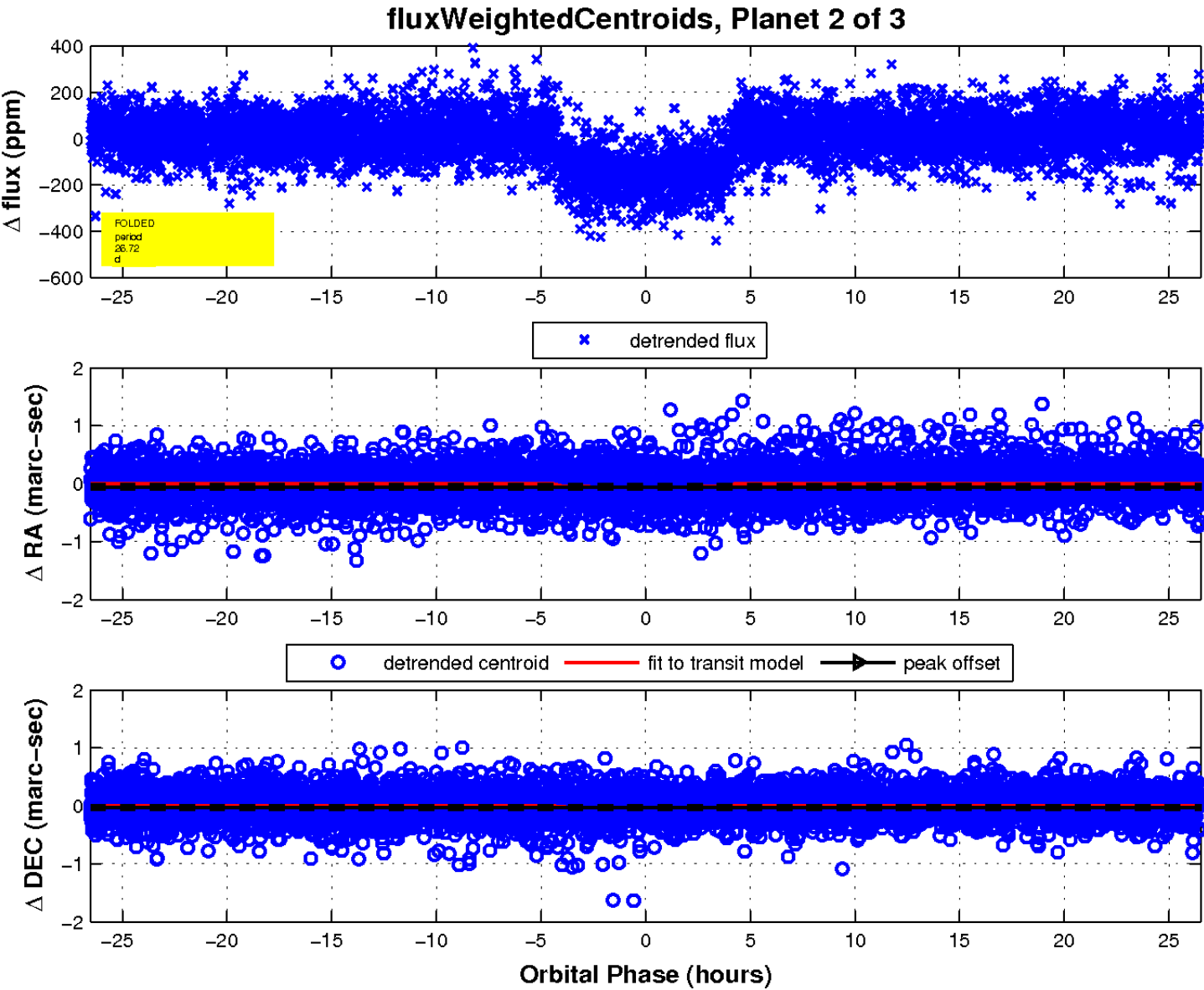
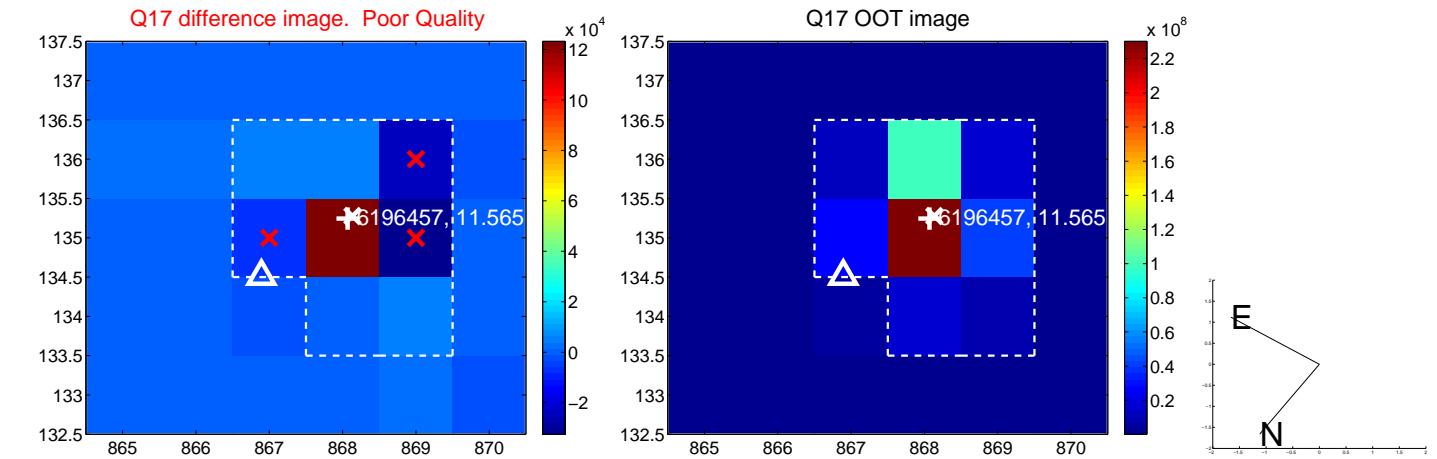
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

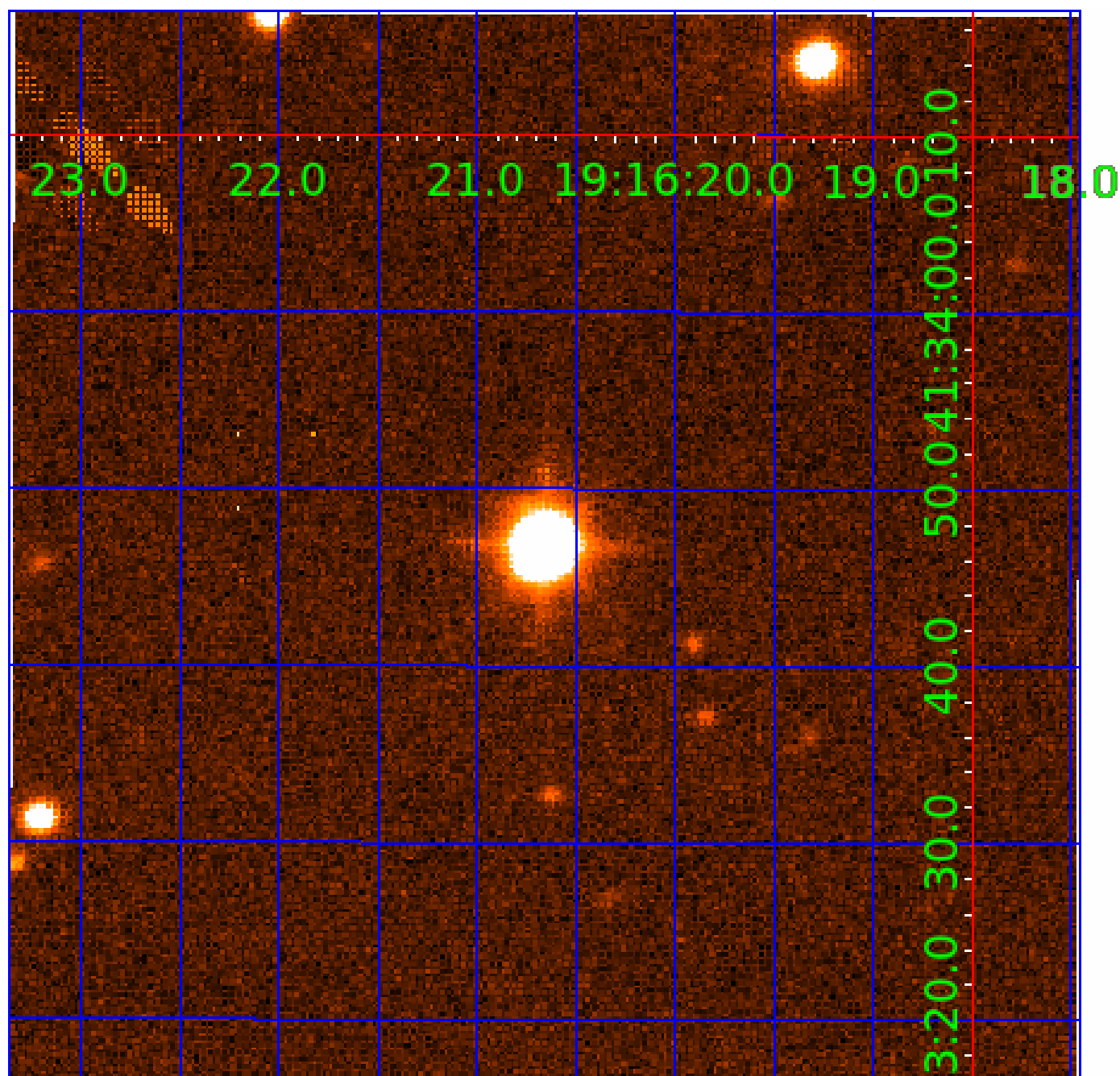


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006196457

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})
006196457-01	OBS	0285.01	13.748823	138.033078	419.8	6.141	114.9	114.5	1.67	5862	3.73	214.06
006196457-02	OBS	0285.02	26.723098	147.938448	198.8	8.845	39.6	43.4	1.67	5862	2.66	88.25
006196457-03	OBS	0285.03	49.356980	134.289539	136.8	11.106	20.6	21.9	1.67	5862	2.21	38.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006196457-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006196457-02	OBS	PC	0.98	0	0	0	0	NO_COMMENT
006196457-03	OBS	FP	0.48	1	0	0	0	LPP_DV

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.

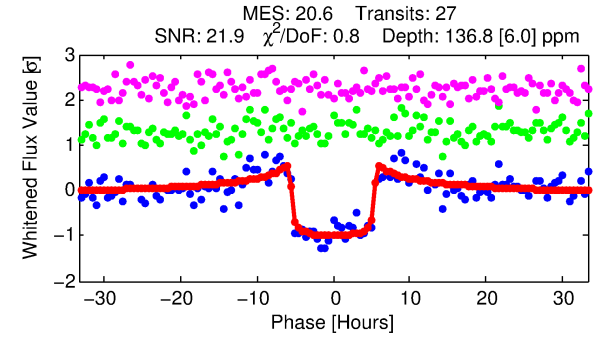
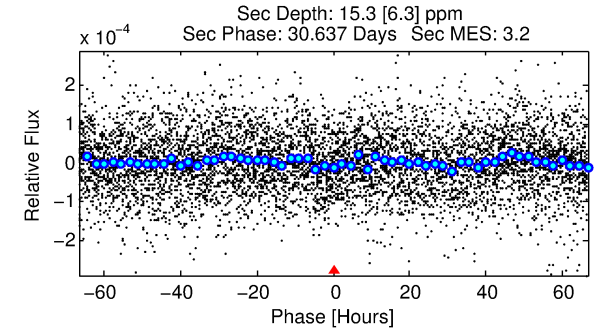
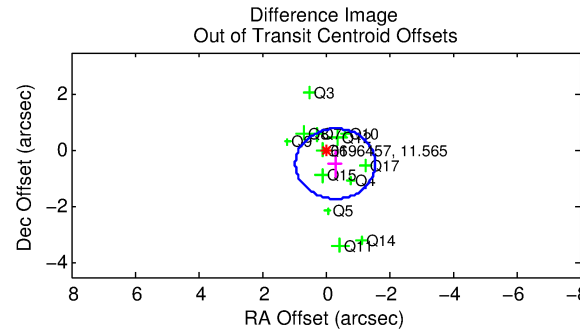
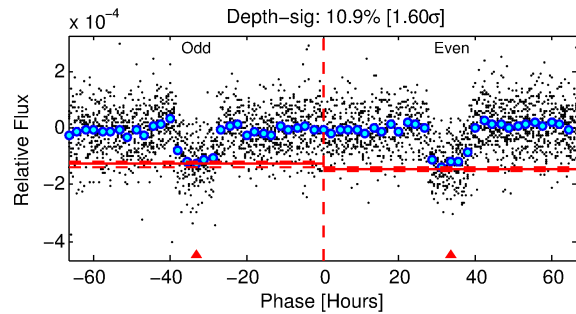
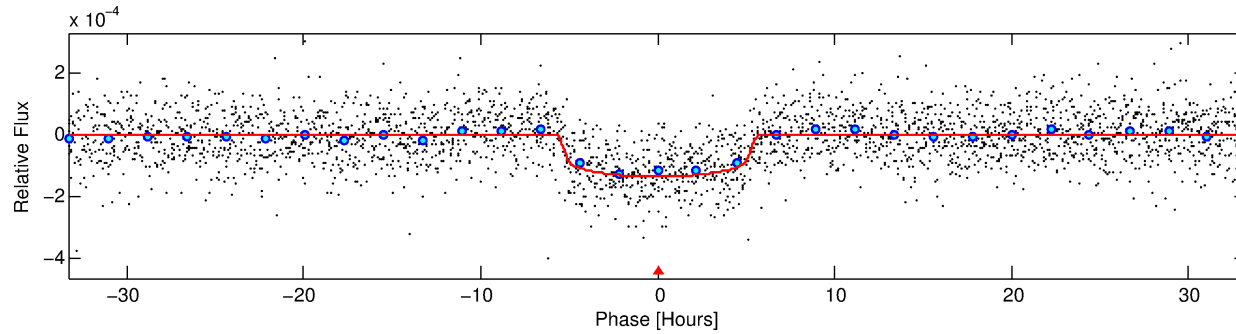
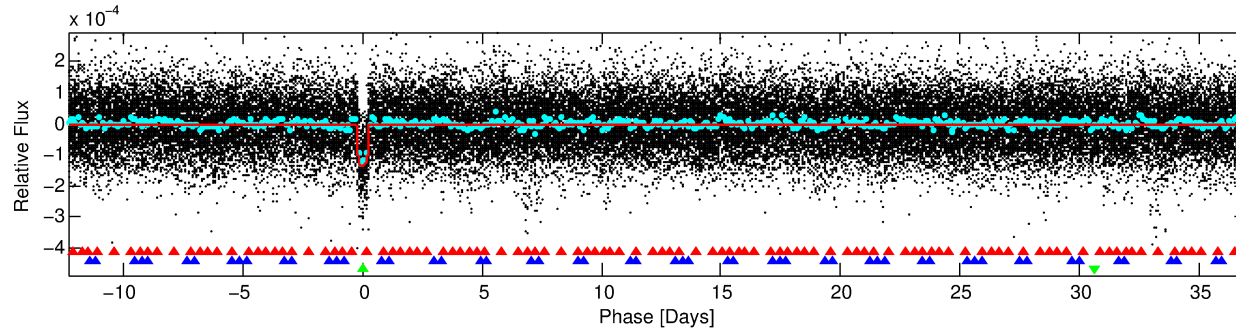
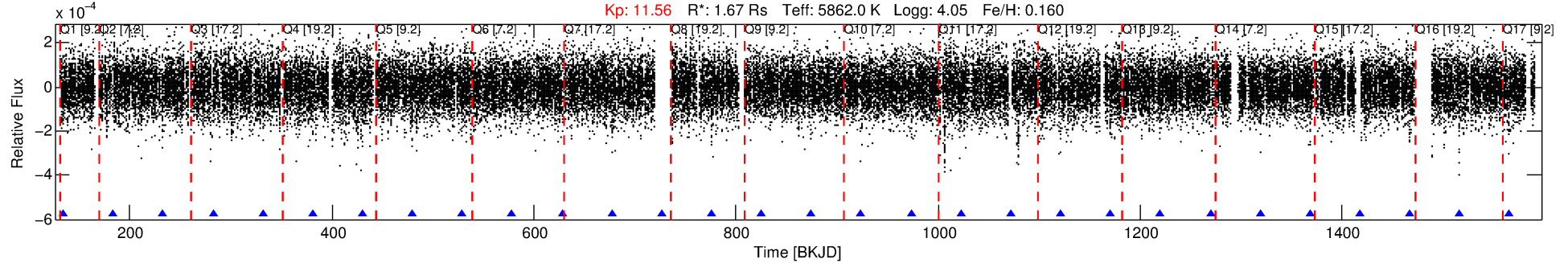
Ephemeris Match Information For 006196457-03

No Significant Match Found

DV One-Page Summary

KIC: 6196457 Candidate: 3 of 3 Period: 49.357 d
KOI: K00285.03 Name: Kepler-92d Corr: 0.992

Kp: 11.56 R*: 1.67 Rs Teff: 5862.0 K Logg: 4.05 Fe/H: 0.160



DV Fit Results:

Period = 49.35698 [0.00030] d
Epoch = 134.2895 [0.0053] BKJD
Rp/R* = 0.0121 [0.0012]
a/R* = 19.22 [8.48]
b = 0.84 [0.16]
Seff = 38.94 [3.73]
Teq = 637 [15] K
Rp = 2.21 [0.27] Re
a = 0.2753 [0.0147] AU
Ag = 130.08 [59.92] [2.15σ]
Teff = 3326 [383] K [7.02σ]

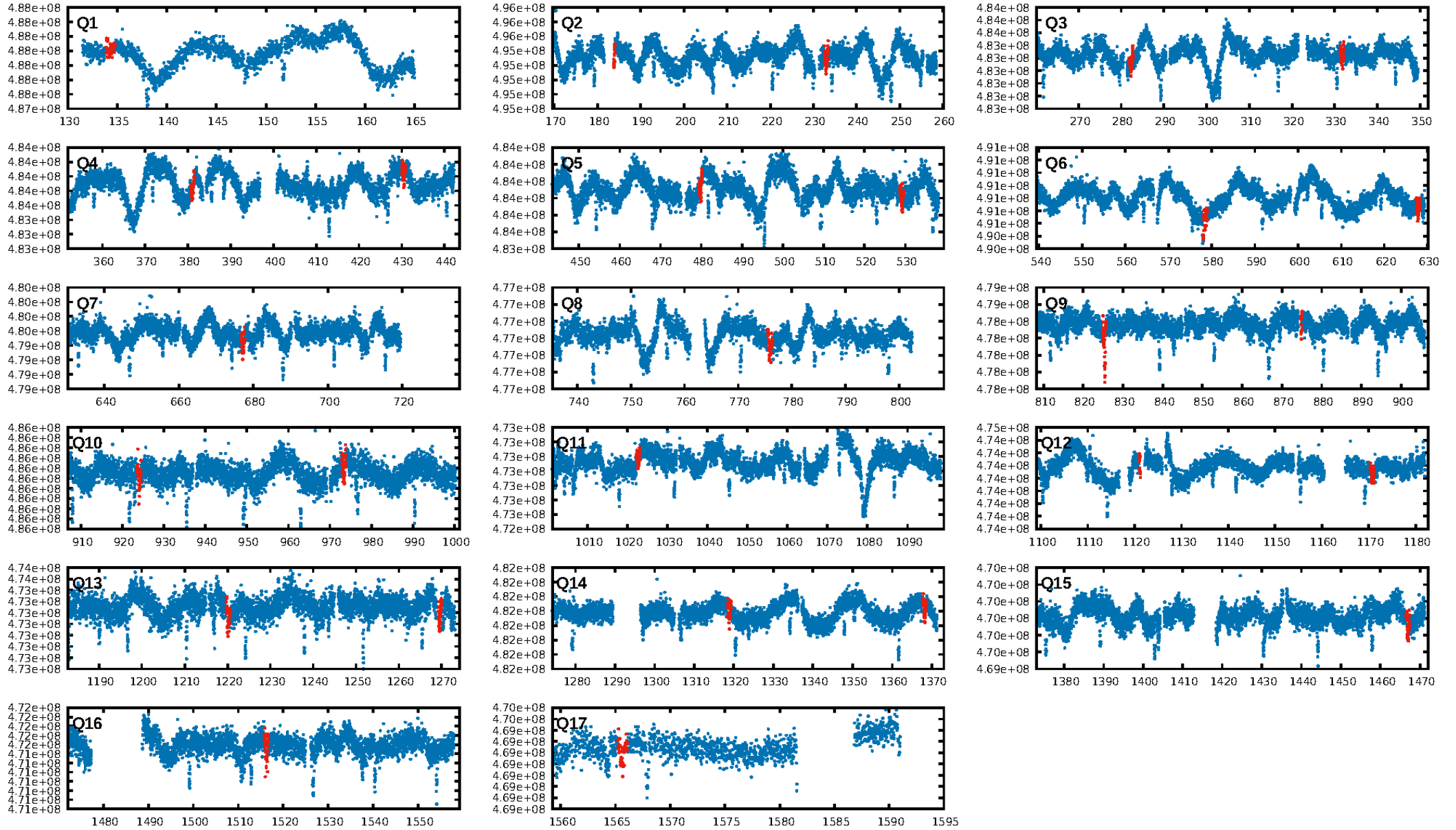
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.26σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.22e-80
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: -23.65
Centroid-sig: 77.9%
Centroid-so: 0.372 arcsec [1.11σ]
OotOffset-rm: 0.559 arcsec [1.34σ]
KicOffset-rm: 0.325 arcsec [0.76σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 0.93 [13/14]

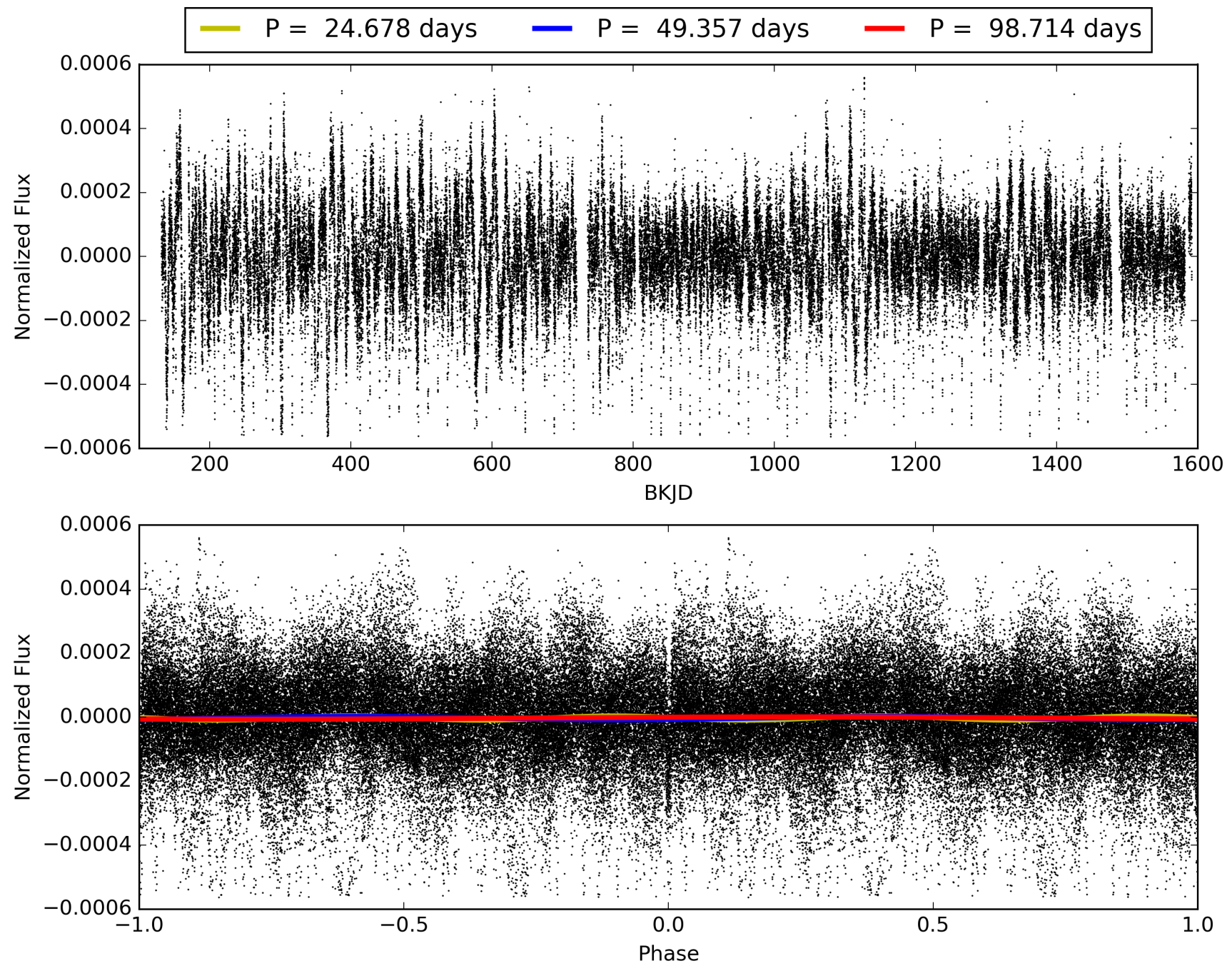
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:45 Z

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

TCE 006196457-03, PDC Light Curves

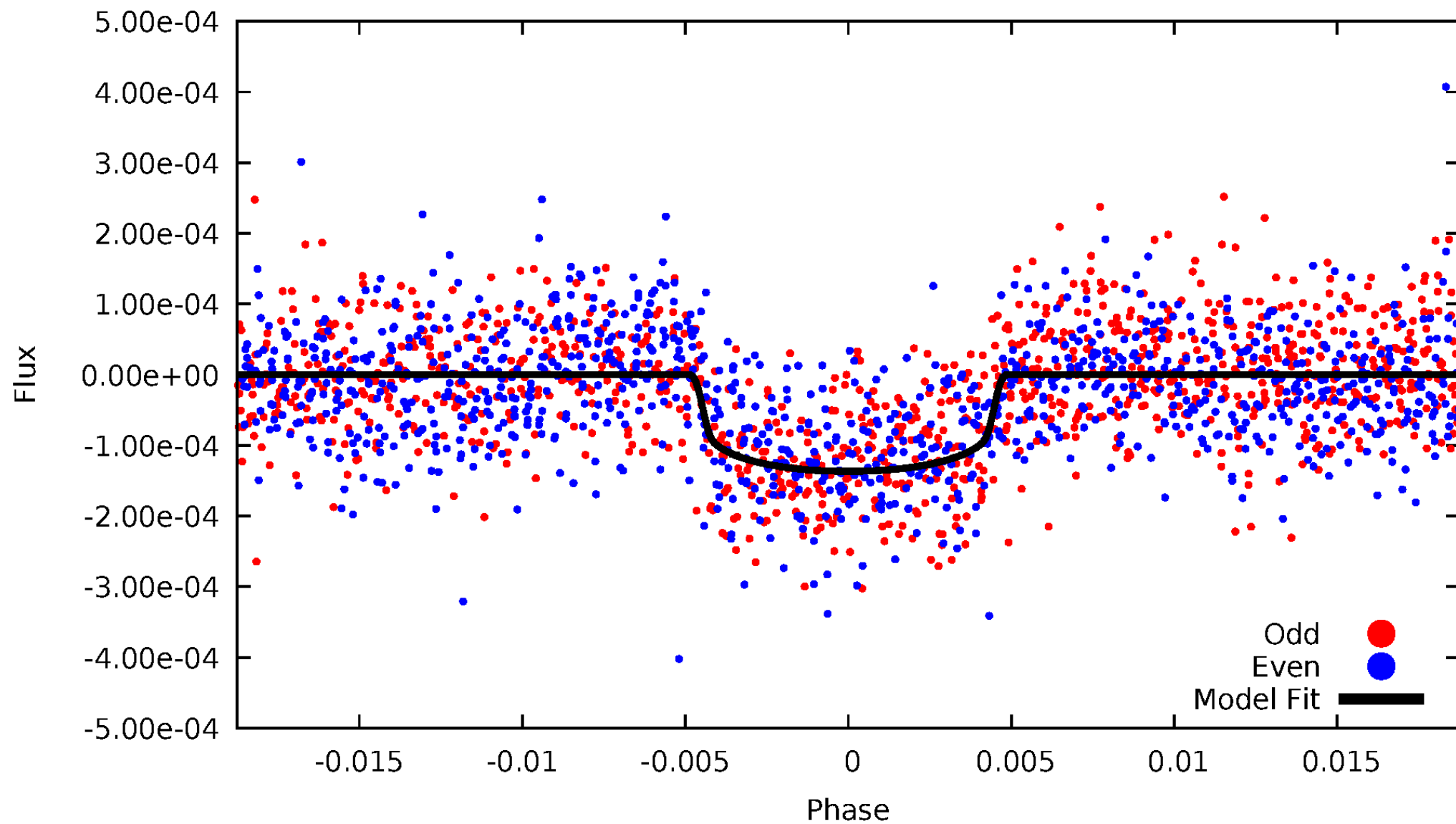


TCE 006196457-03



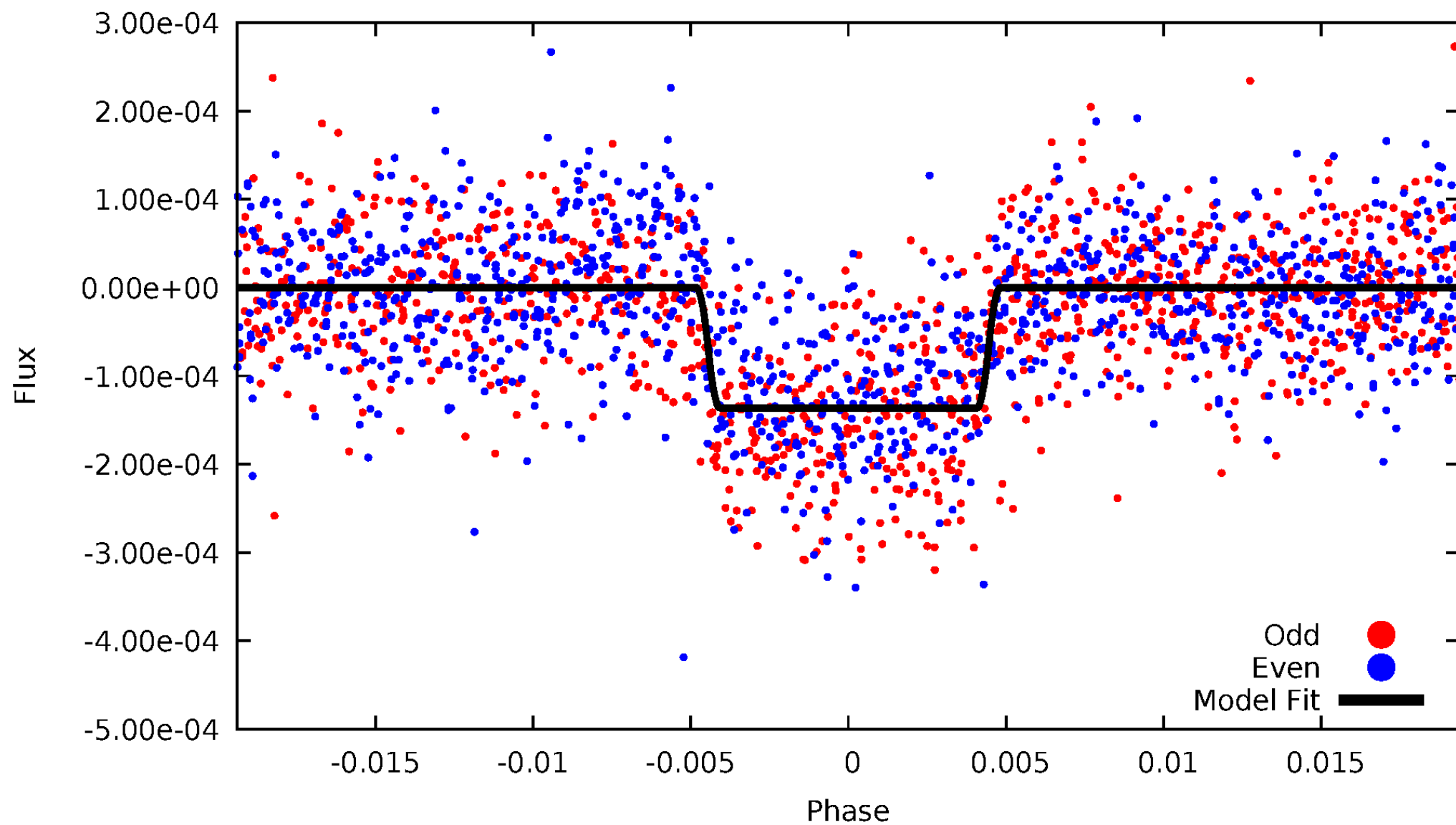
DV Odd/Even

TCE 006196457-03

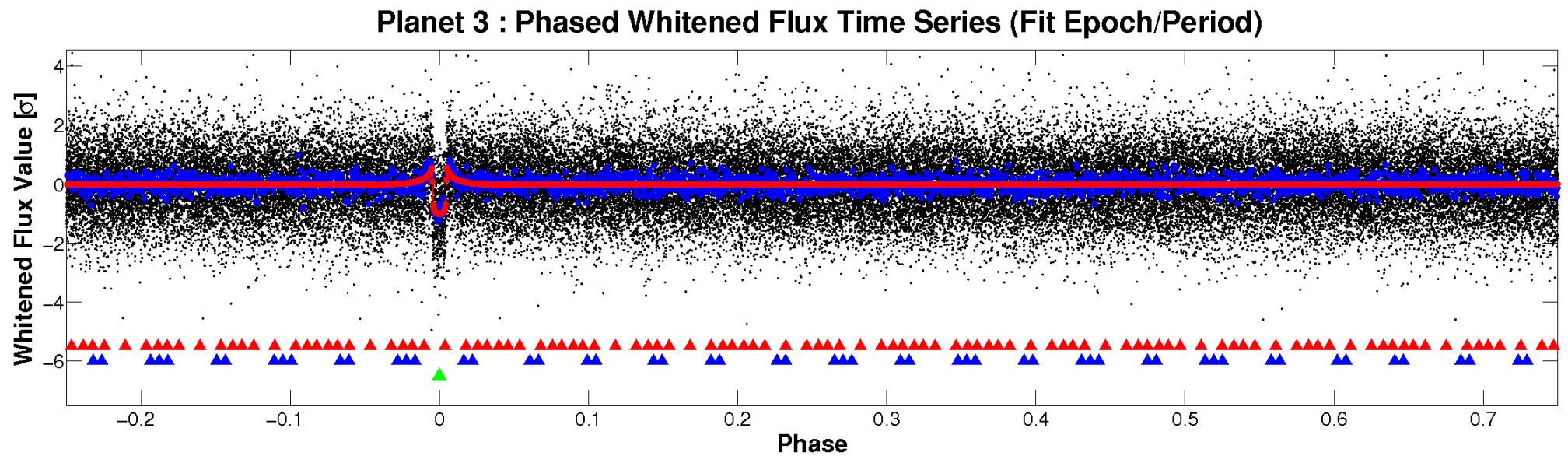
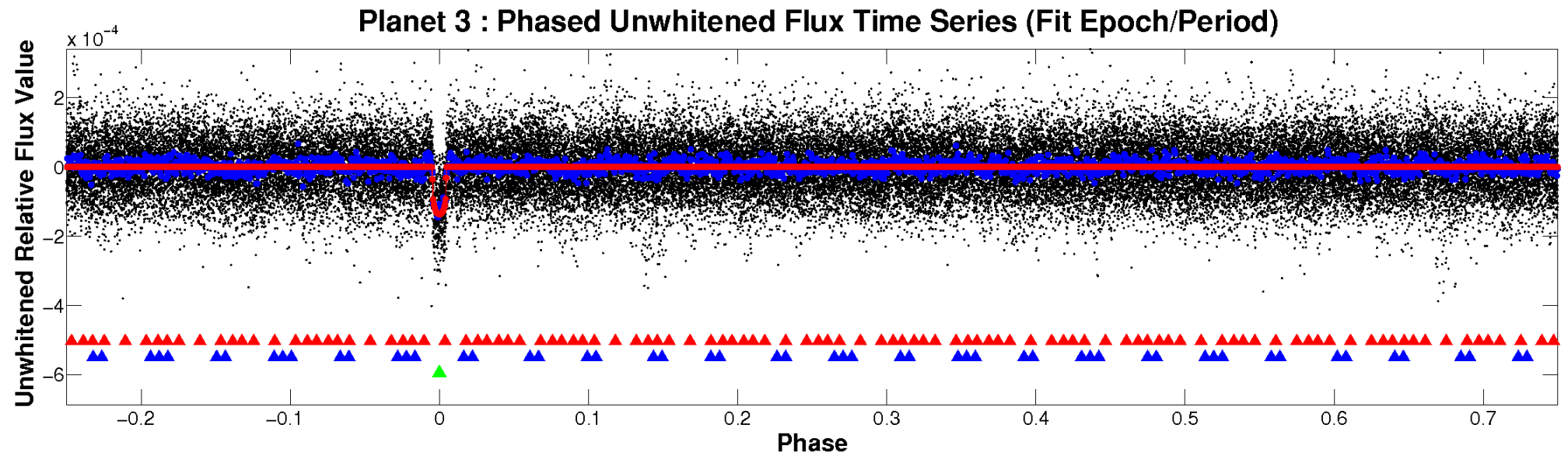


ALT Odd/Even

TCE 006196457-03

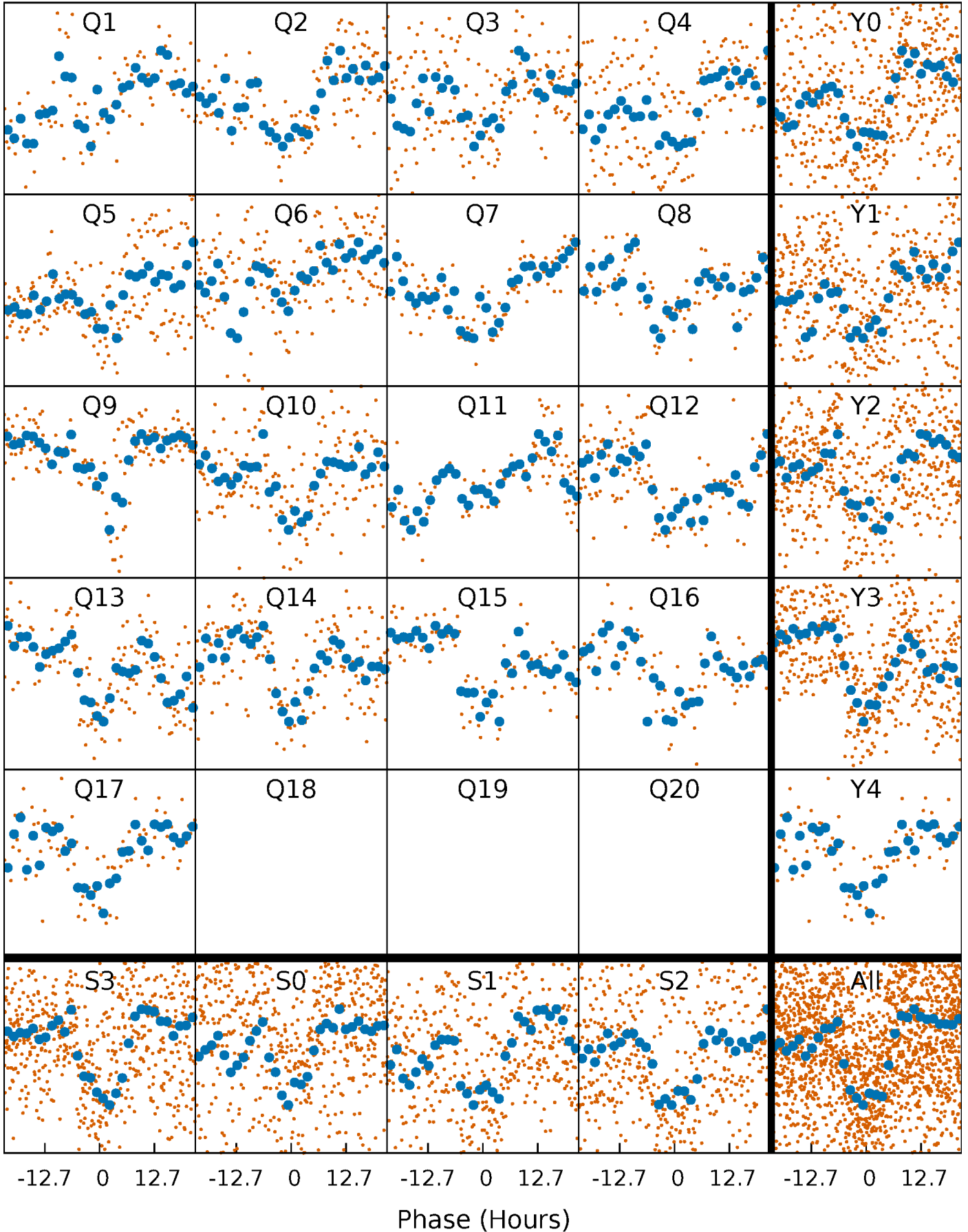


Non-Whitened Vs. Whitened Light Curve



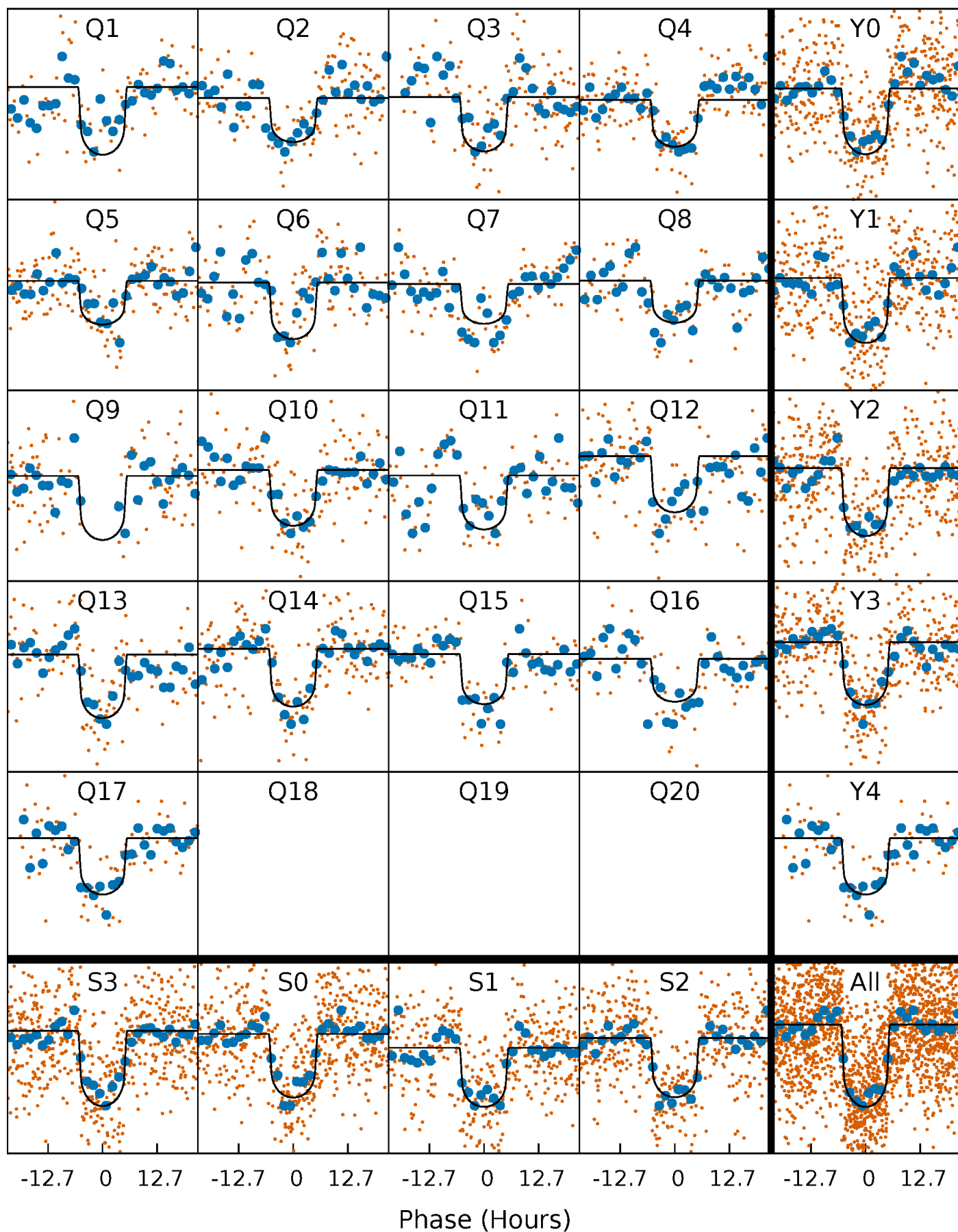
PDC Quarter-Phased Transit Curves

TCE 006196457-03 P= 49.356980 Days $T_0=134.289539$ (BKJD)



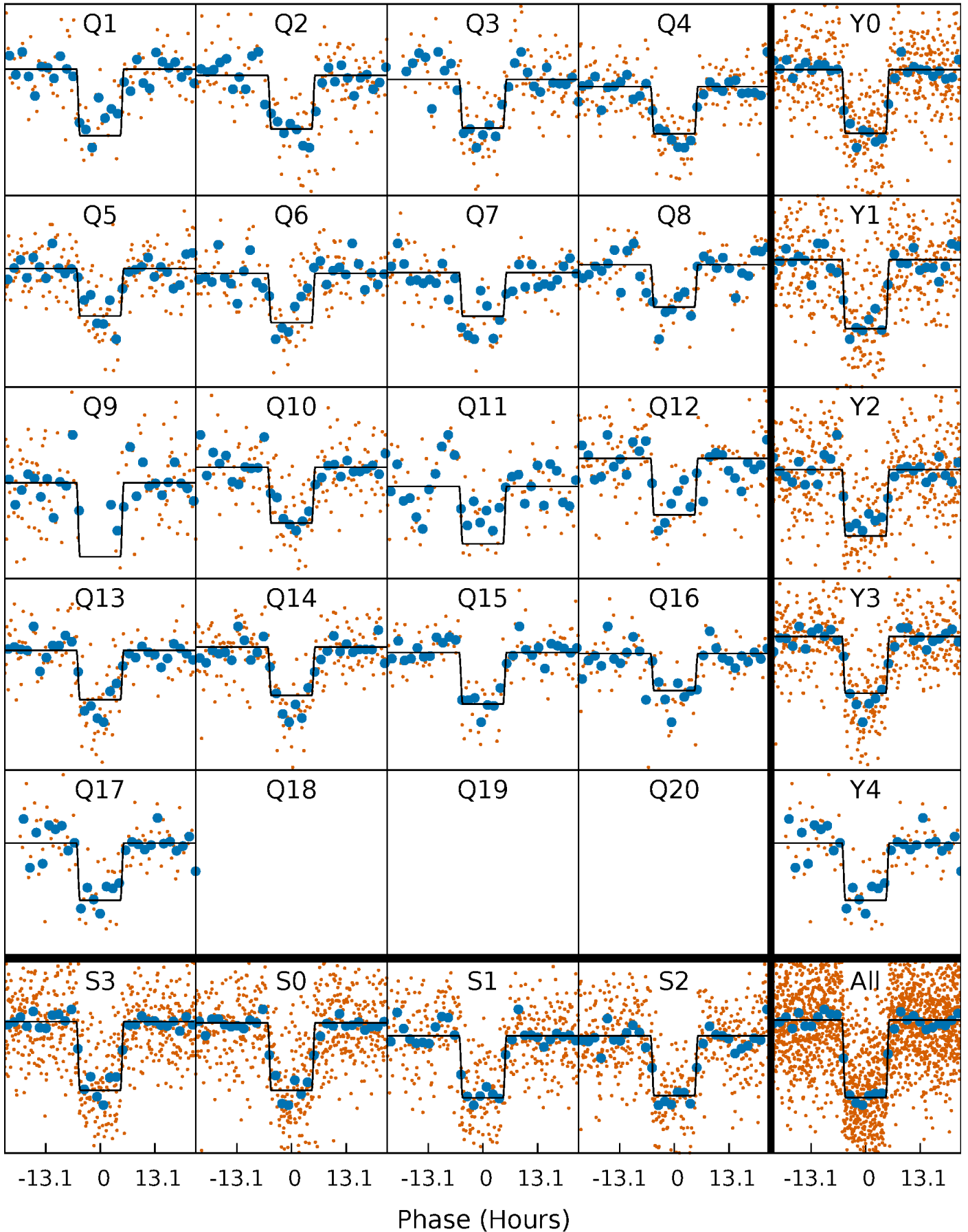
DV Quarter-Phased Transit Curves

TCE 006196457-03 P= 49.356980 Days $T_0=134.289539$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

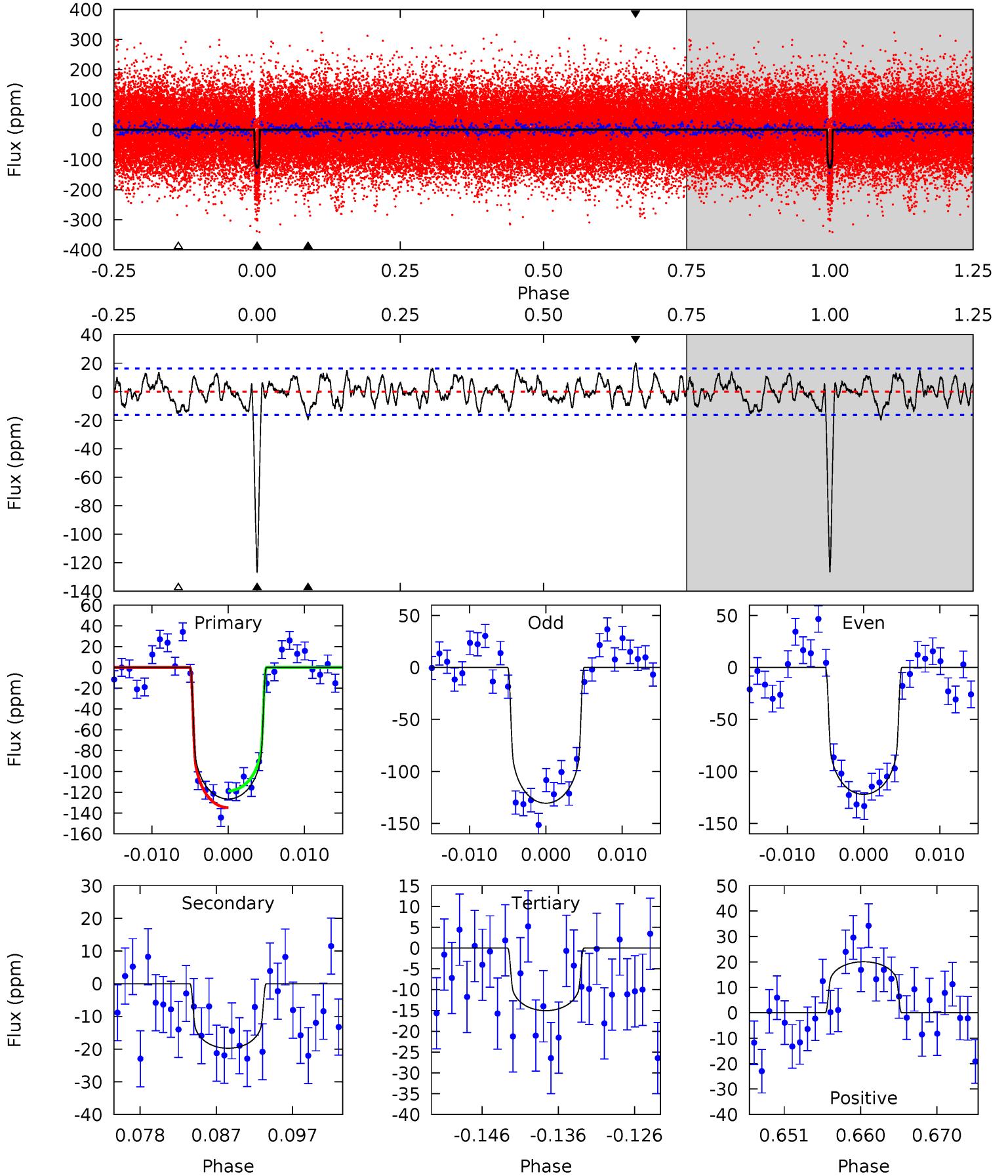
TCE 006196457-03 P= 49.356972 Days $T_0=134.291252$ (BKJD)



DV Model-Shift Uniqueness Test

006196457-03, P = 49.356980 Days, E = 84.932559 Days

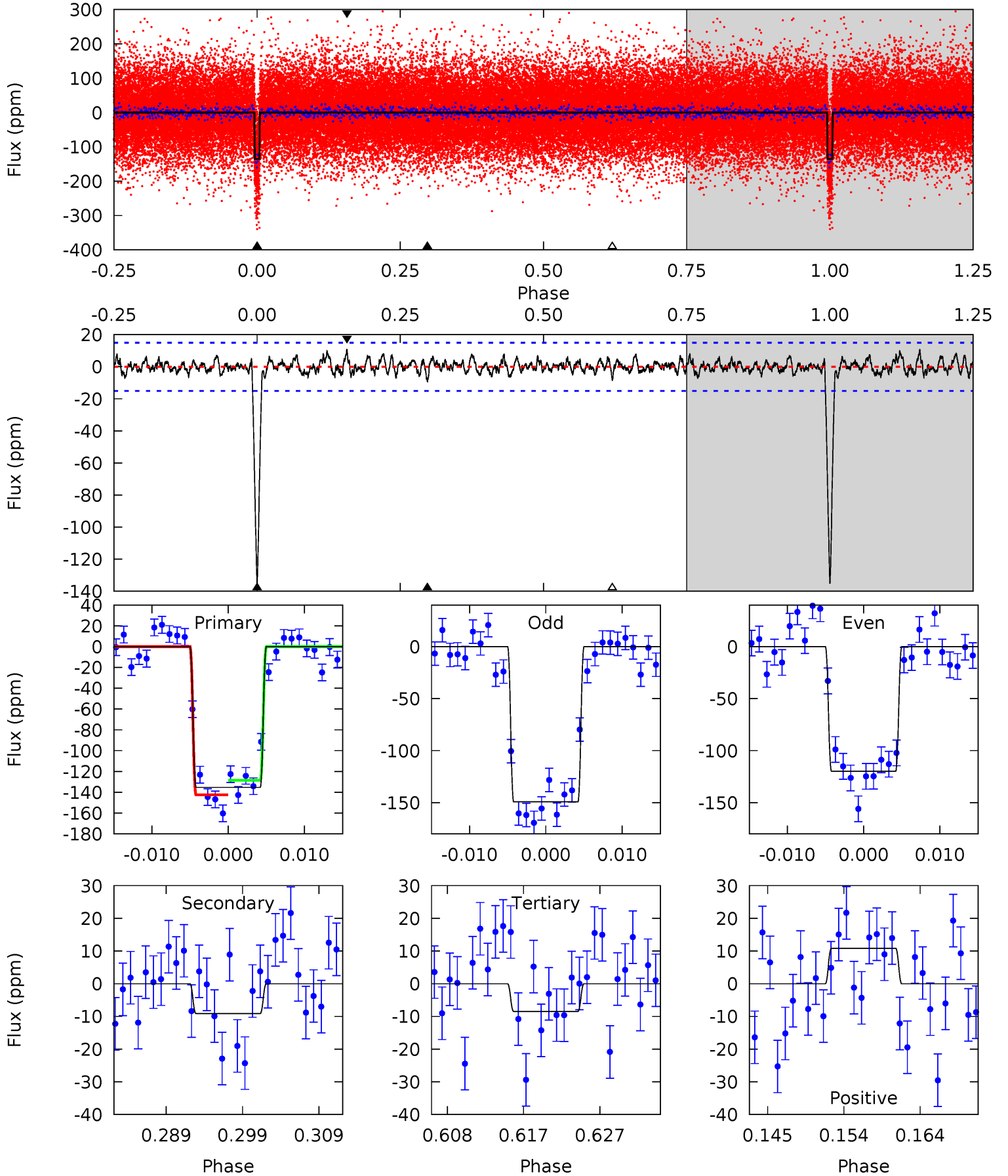
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.1	6.11	4.66	6.21	5.03	2.59	2.06	34.5	32.9	1.45	-0.10	1.31	1.03	0.14	2.50



Alt Model-Shift Uniqueness Test

006196457-03, P = 49.356972 Days, E = 84.934280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.3	3.05	2.84	3.63	5.03	2.59	1.01	42.4	41.7	0.21	-0.58	4.94	0.99	0.07	2.34



Stellar Parameters For KIC 006196457

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5862^{+97}_{-80}	$4.050^{+0.033}_{-0.027}$	$0.160^{+0.150}_{-0.100}$	$1.670^{+0.118}_{-0.082}$	$1.142^{+0.160}_{-0.053}$	$0.345^{+0.042}_{-0.041}$
	+2%/-1%	+1%/-1%	+94%/-62%	+7%/-5%	+14%/-5%	+12%/-12%
Source	SPE8	AST69	SPE69	DSEP		

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

Secondary Eclipse Parameters for KIC 006196457-03 / KOI 0285.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 3	$2.22^{+0.25}_{-0.24}$	890^{+18}_{-17}	3890^{+192}_{-165}	166^{+52}_{-37}
Alt.	-9 ± 3	$2.13^{+0.25}_{-0.23}$	890^{+18}_{-18}	3481^{+202}_{-234}	85^{+34}_{-30}

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

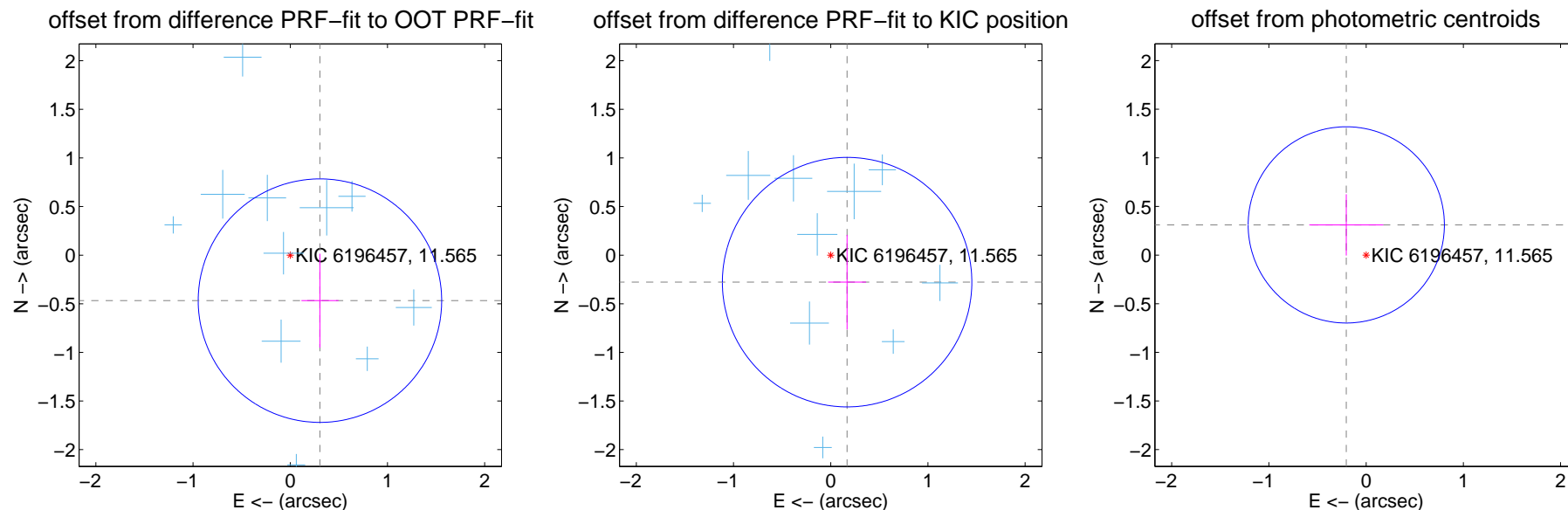
DV Centroid Data

Supplemental centroid analysis for 006196457-03. **Kepler magnitude: 11.56.** Transit SNR 21.93

There are 12 quarters with good PRF difference image offsets

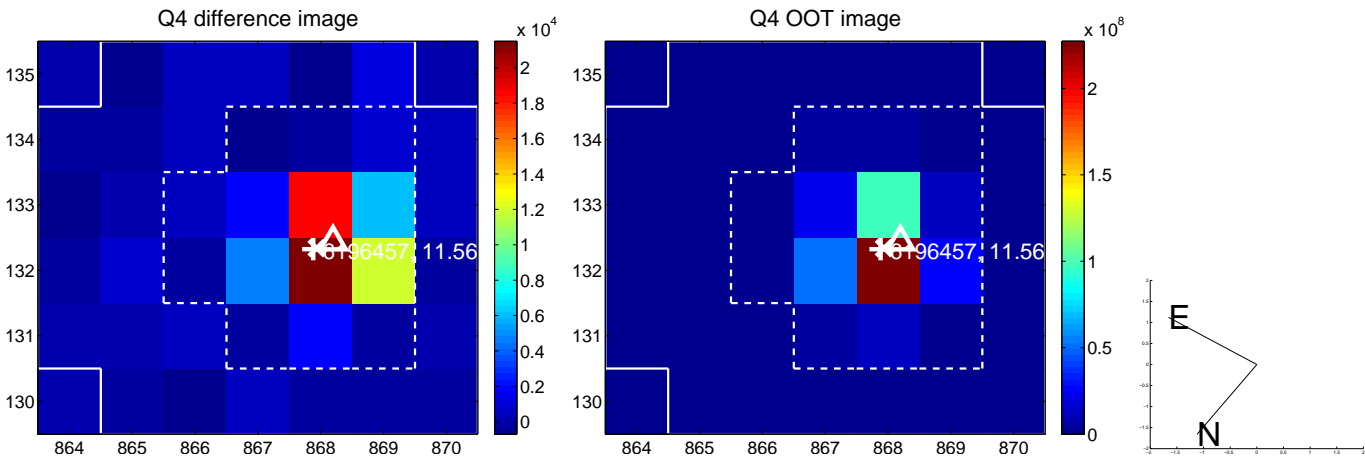
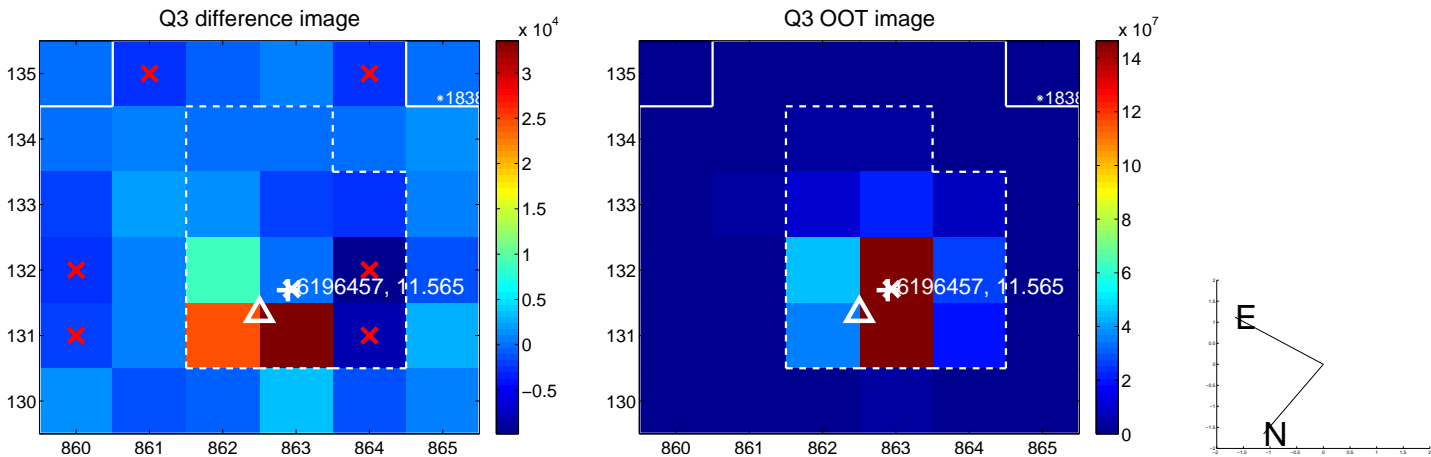
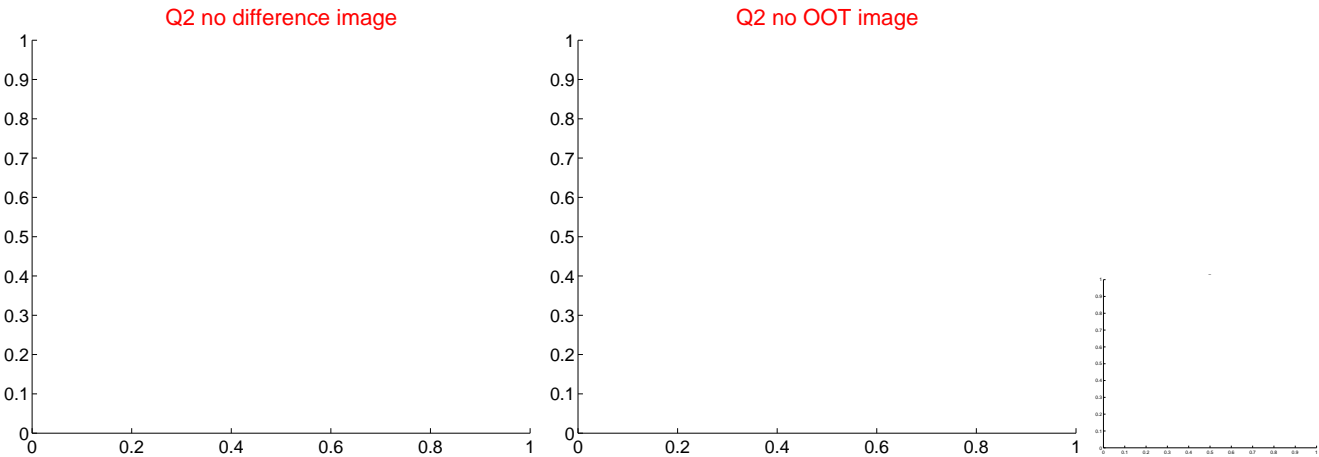
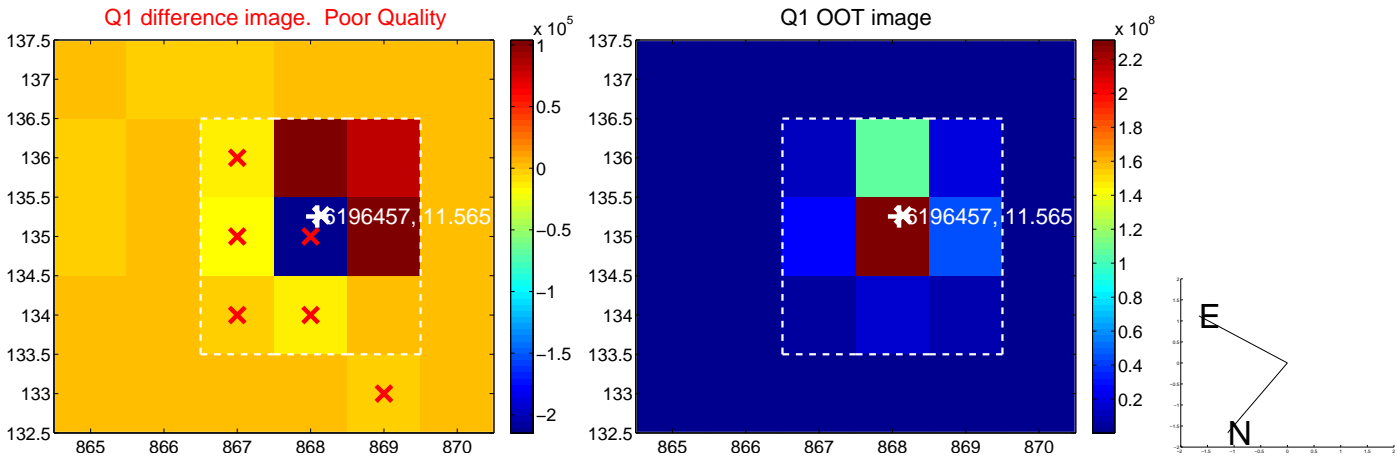
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.559 ± 0.418	1.34	-0.305 ± 0.191	-0.468 ± 0.483
PRF-fit source offset from KIC position	0.325 ± 0.428	0.76	-0.169 ± 0.195	-0.278 ± 0.486
photometric centroid source offset	0.37 ± 0.34	1.11	0.20 ± 0.38	0.31 ± 0.32

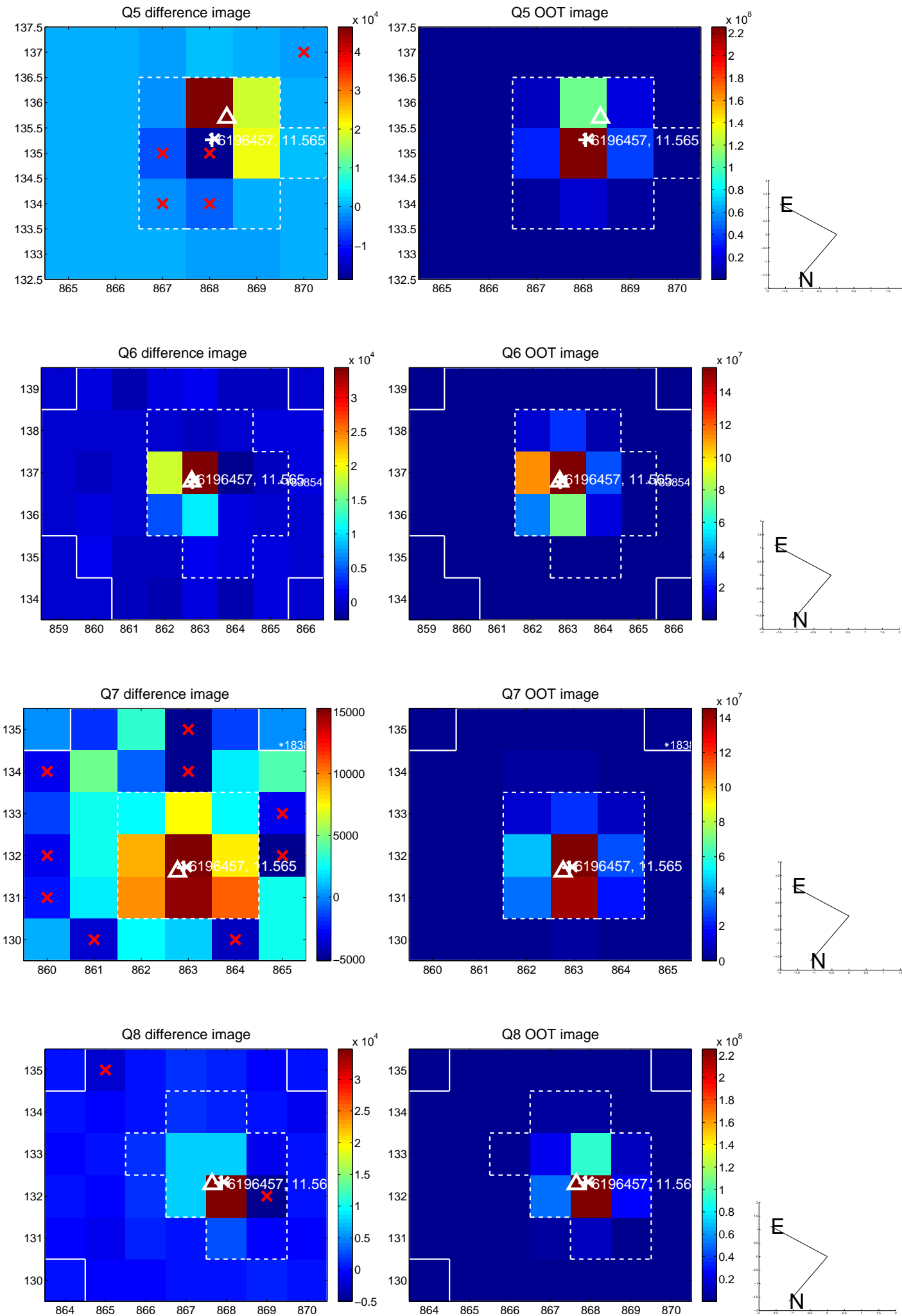


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

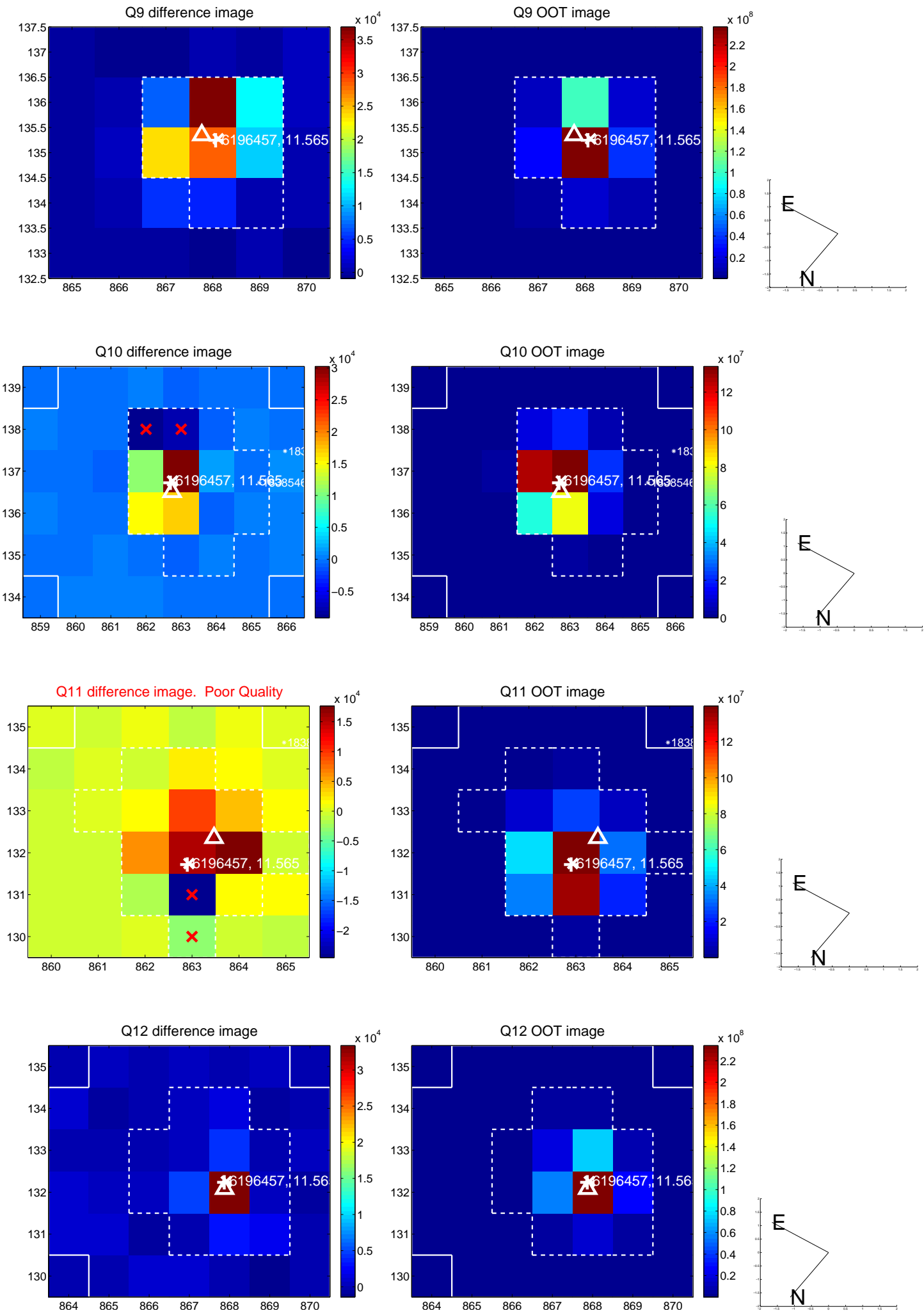
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

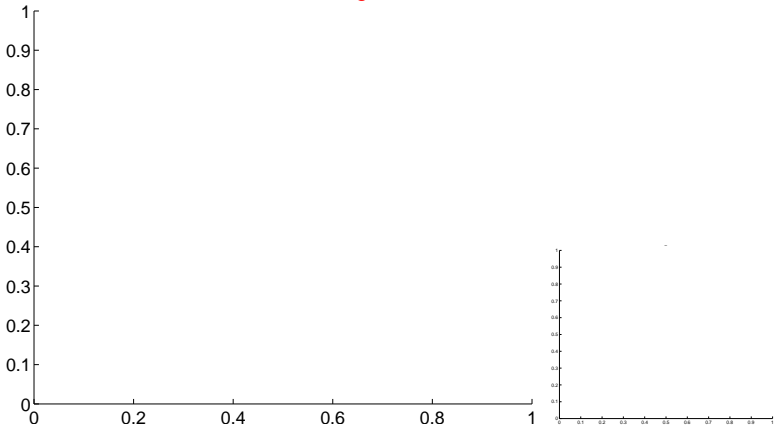


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

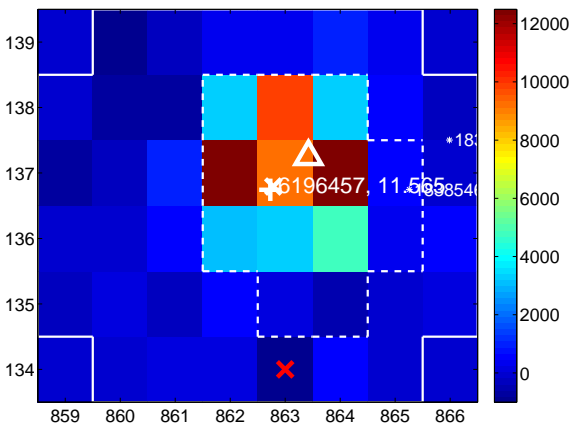
Q13 no difference image



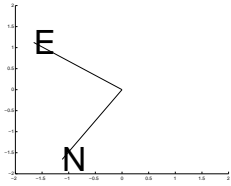
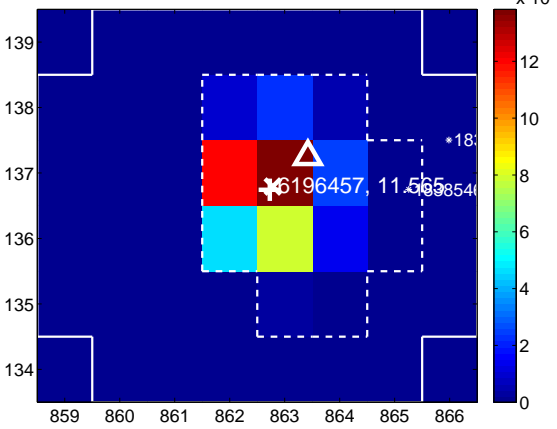
Q13 no OOT image



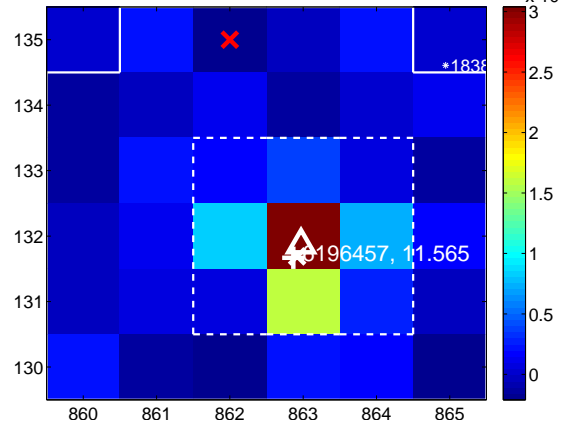
Q14 difference image



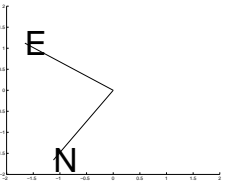
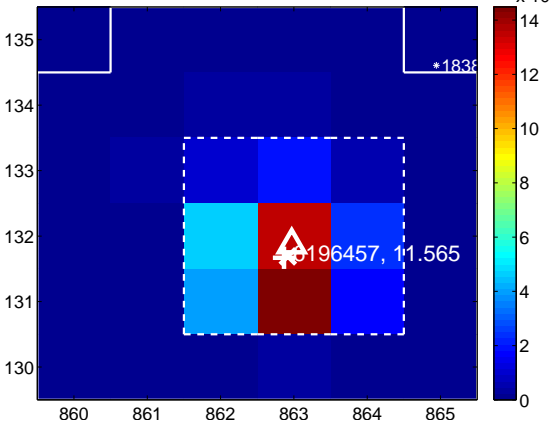
Q14 OOT image



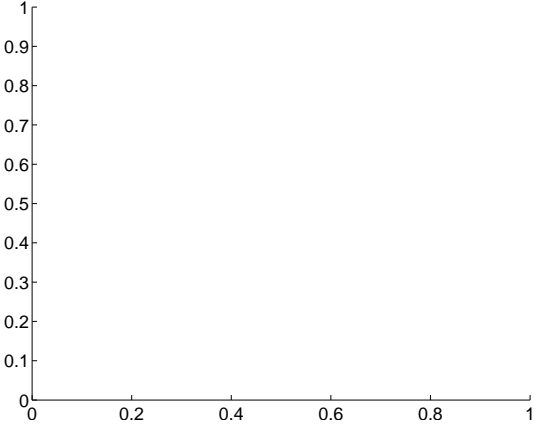
Q15 difference image



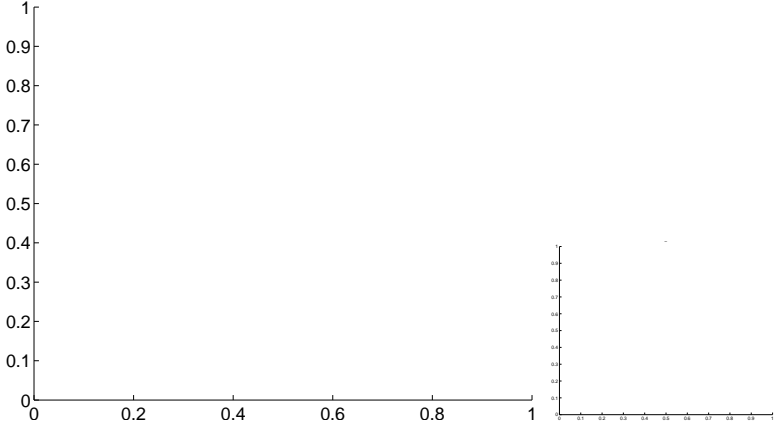
Q15 OOT image



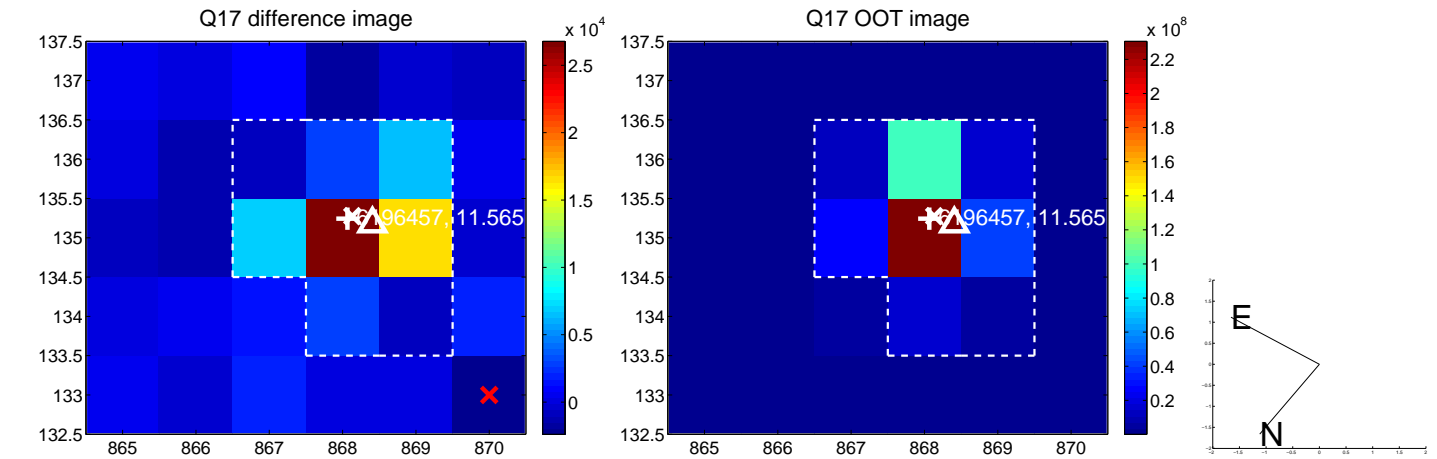
Q16 no difference image



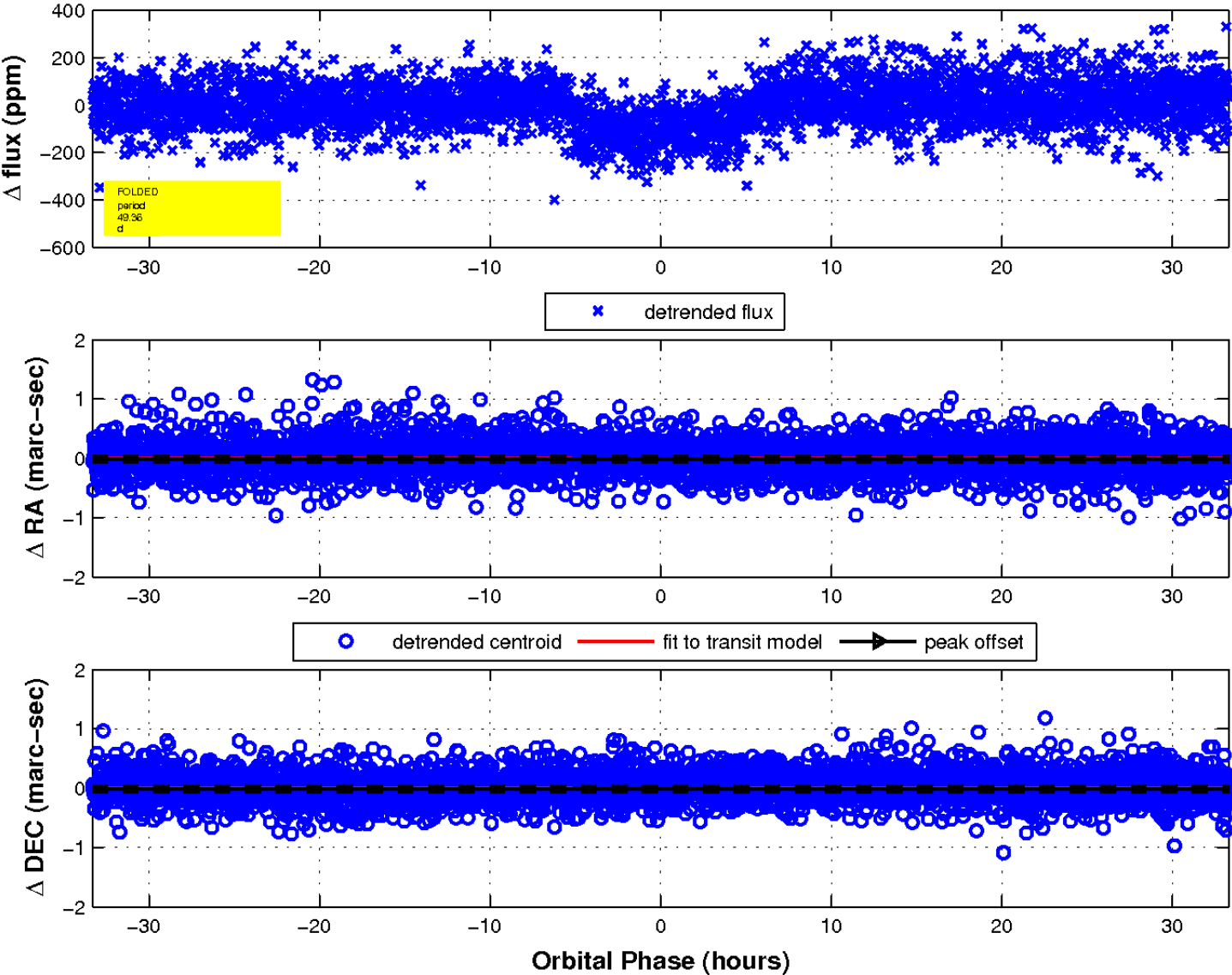
Q16 no OOT image



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

