

KIC 008896357

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})
008896357-01	OBS	No	2.466640	132.177371	14.7	5.568	11.7	12.7	3.46	7828	1.54	19393.59
008896357-02	OBS	No	2.466654	132.689333	12.7	6.877	10.5	10.8	3.46	7828	1.44	19393.44
008896357-03	OBS	No	2.466923	131.797230	12.9	20.880	10.0	8.5	3.46	7828	1.25	19390.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008896357-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008896357-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
008896357-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

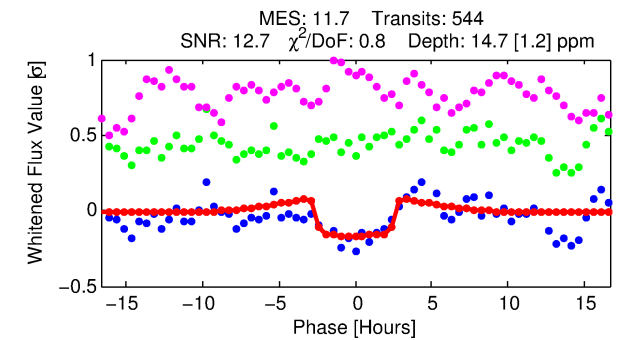
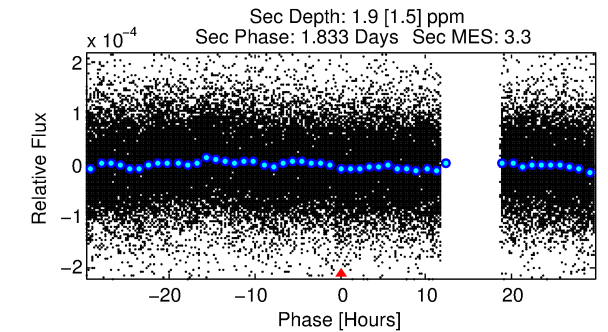
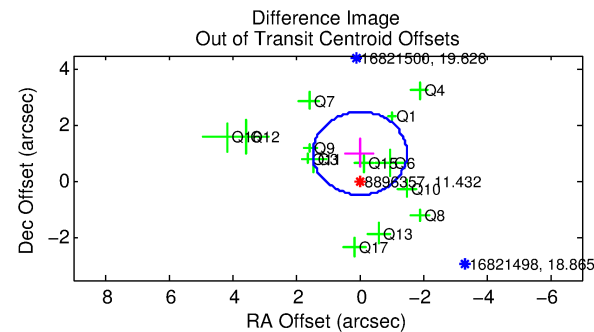
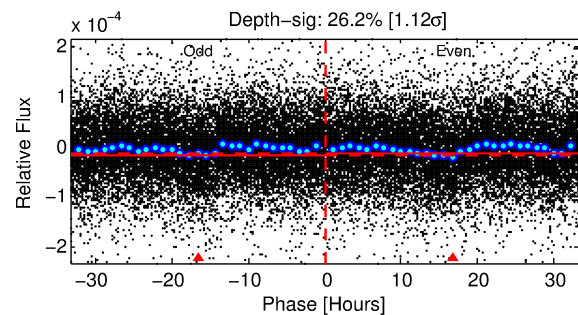
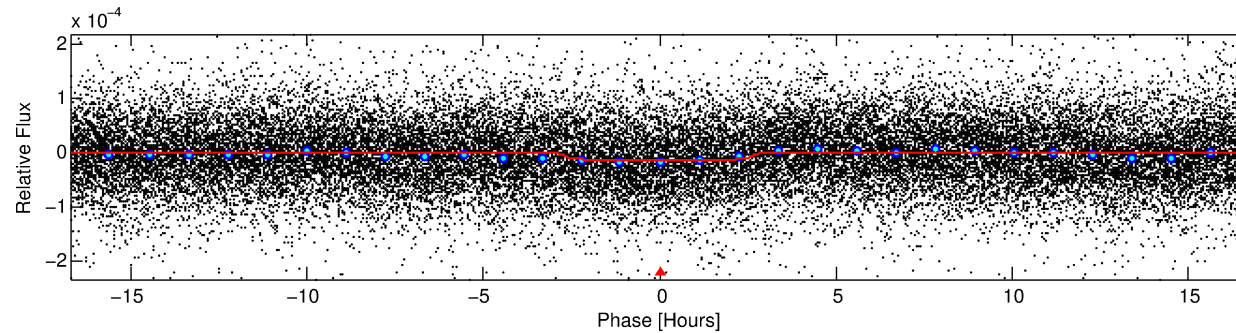
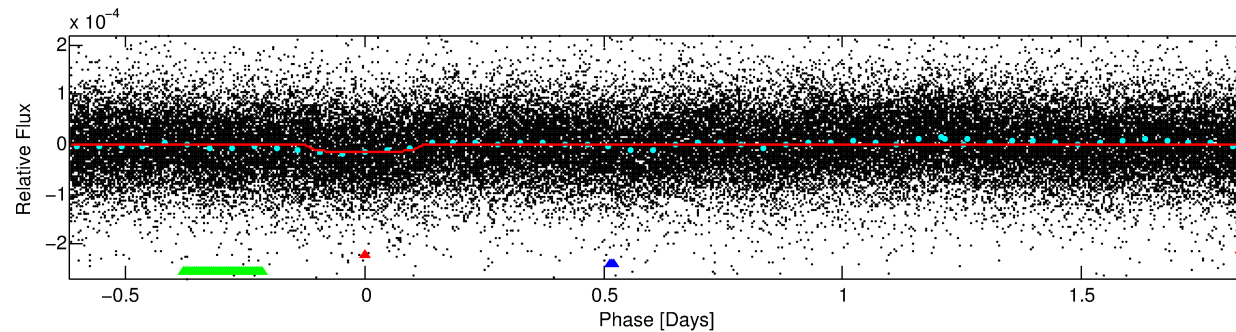
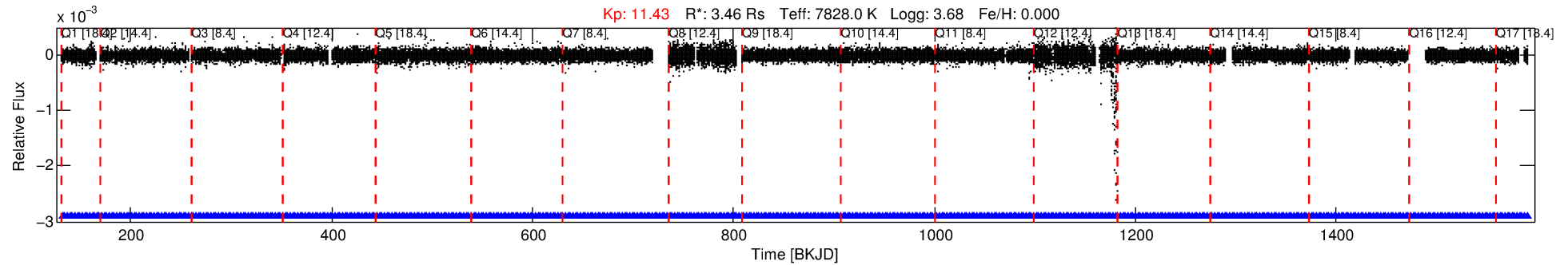
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008896357-01

No Significant Match Found

DV One-Page Summary

KIC: 8896357 Candidate: 1 of 3 Period: 2.467 d



DV Fit Results:

Period = 2.46664 [0.00002] d
Epoch = 132.1774 [0.0035] BKJD
Rp/R* = 0.0041 [0.0006]
a/R* = 1.78 [1.00]
b = 0.90 [0.18]
Seff = 19393.59 [14607.24]
Teq = 3009 [567] K
Rp = 1.55 [0.76] Re
a = 0.0456 [0.0209] AU
Ag = 0.91 [1.03] [-0.08 σ]
Teff = 4550 [993] K [1.35 σ]

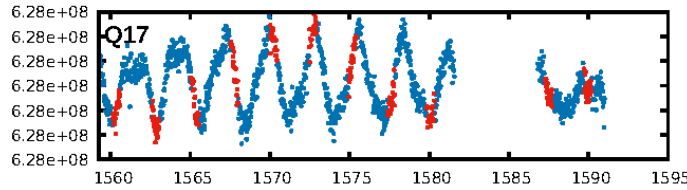
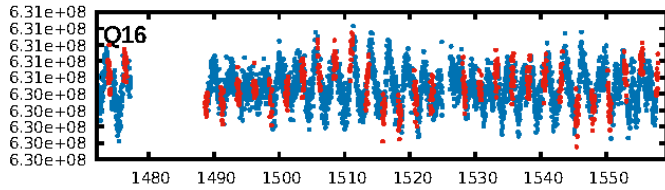
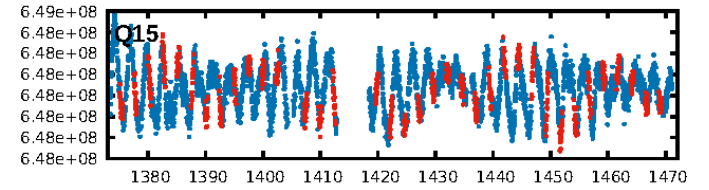
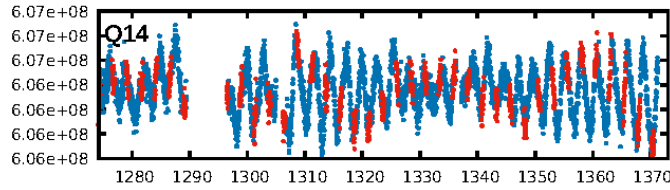
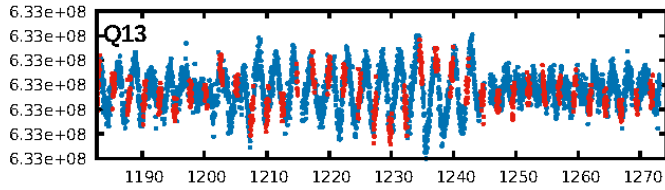
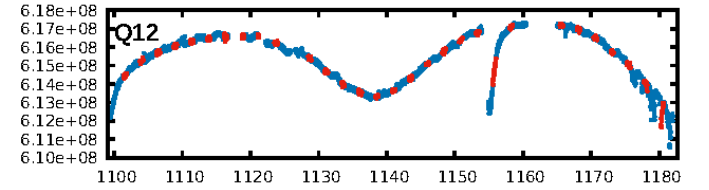
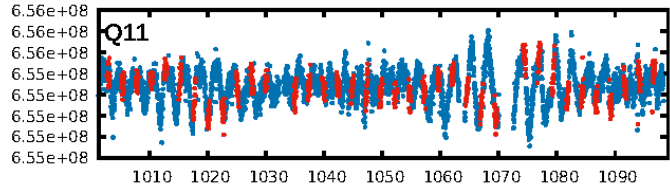
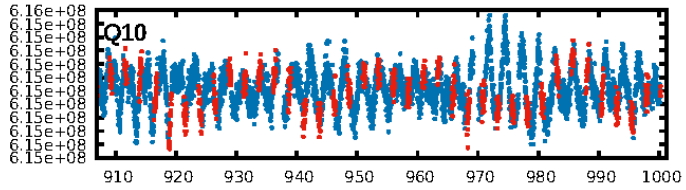
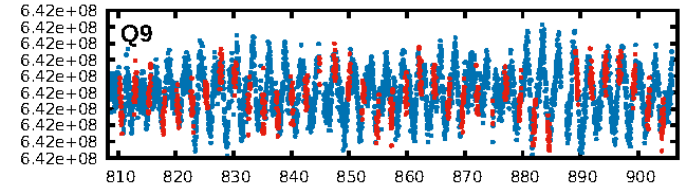
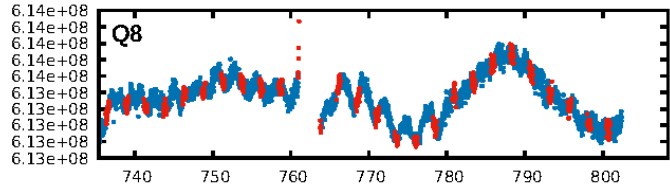
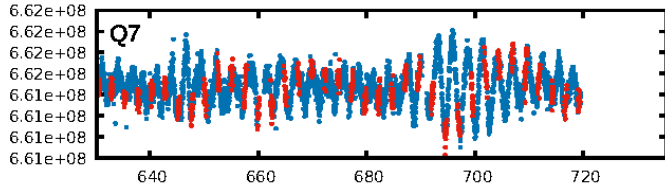
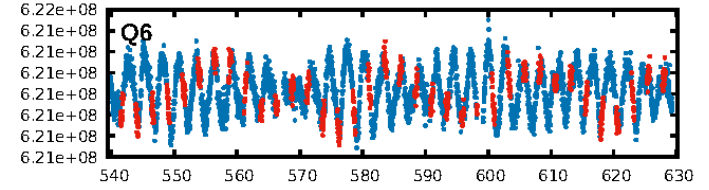
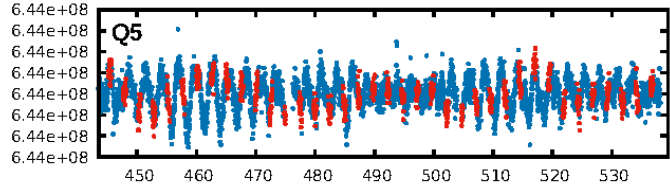
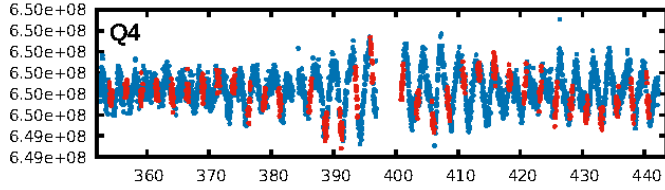
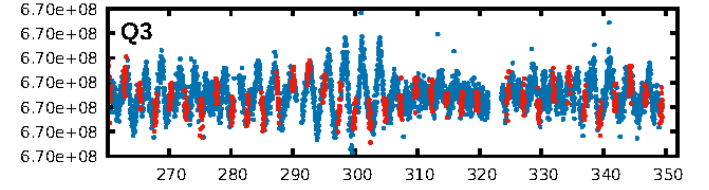
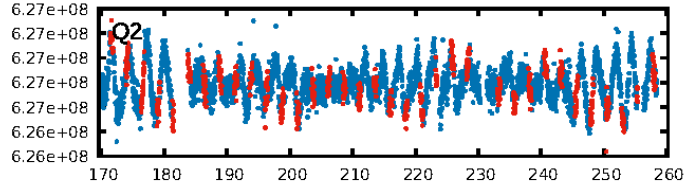
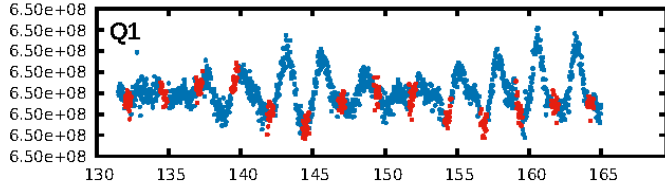
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [519/519]
GhostDiagnostic-chr: 1.078
Centroid-sig: 4.7%
Centroid-so: 1.115 arcsec [1.39 σ]
OotOffset-rm: 1.010 arcsec [2.05 σ]
KicOffset-rm: 0.888 arcsec [1.77 σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 0.00 [0/17]

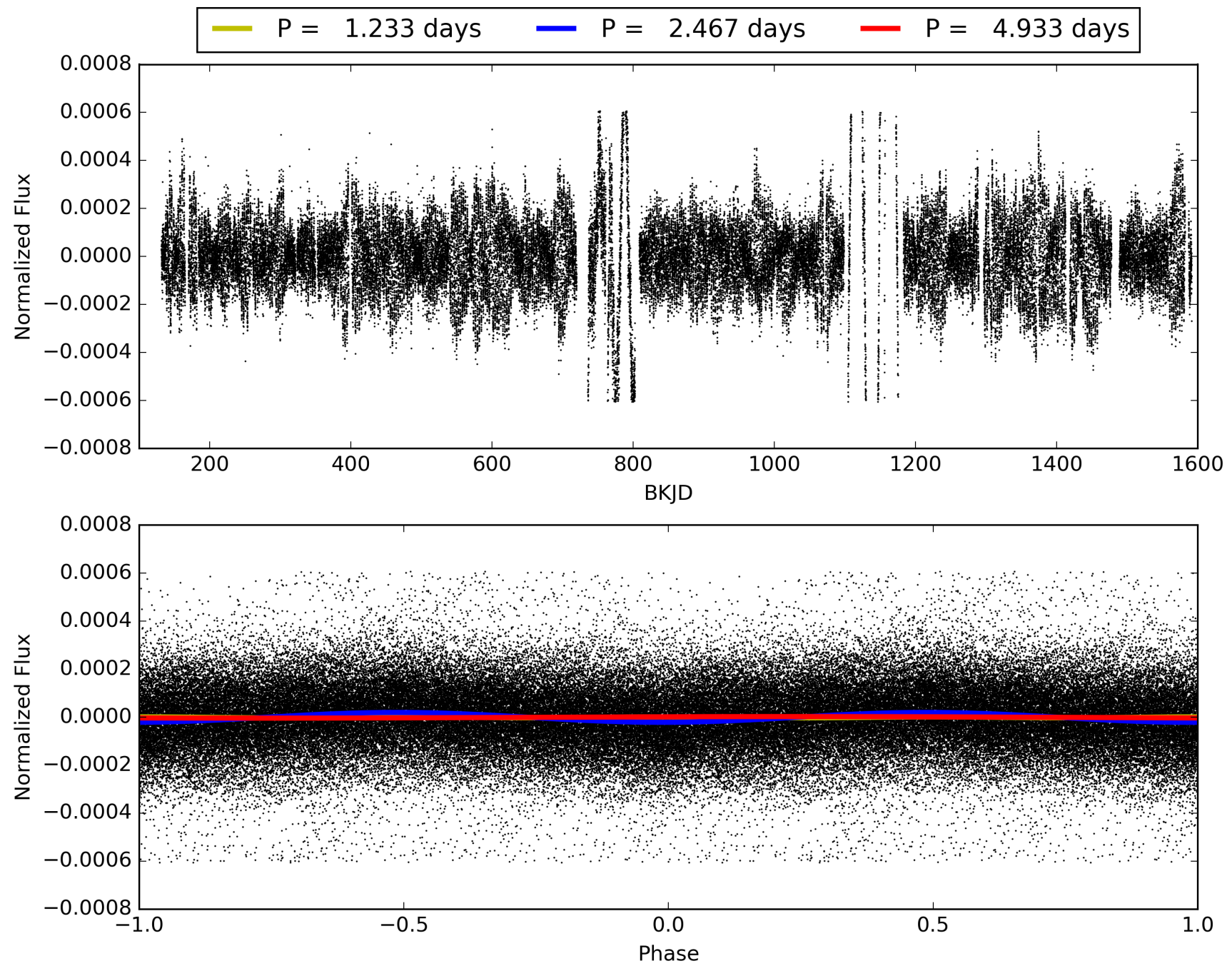
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008896357-01, PDC Light Curves

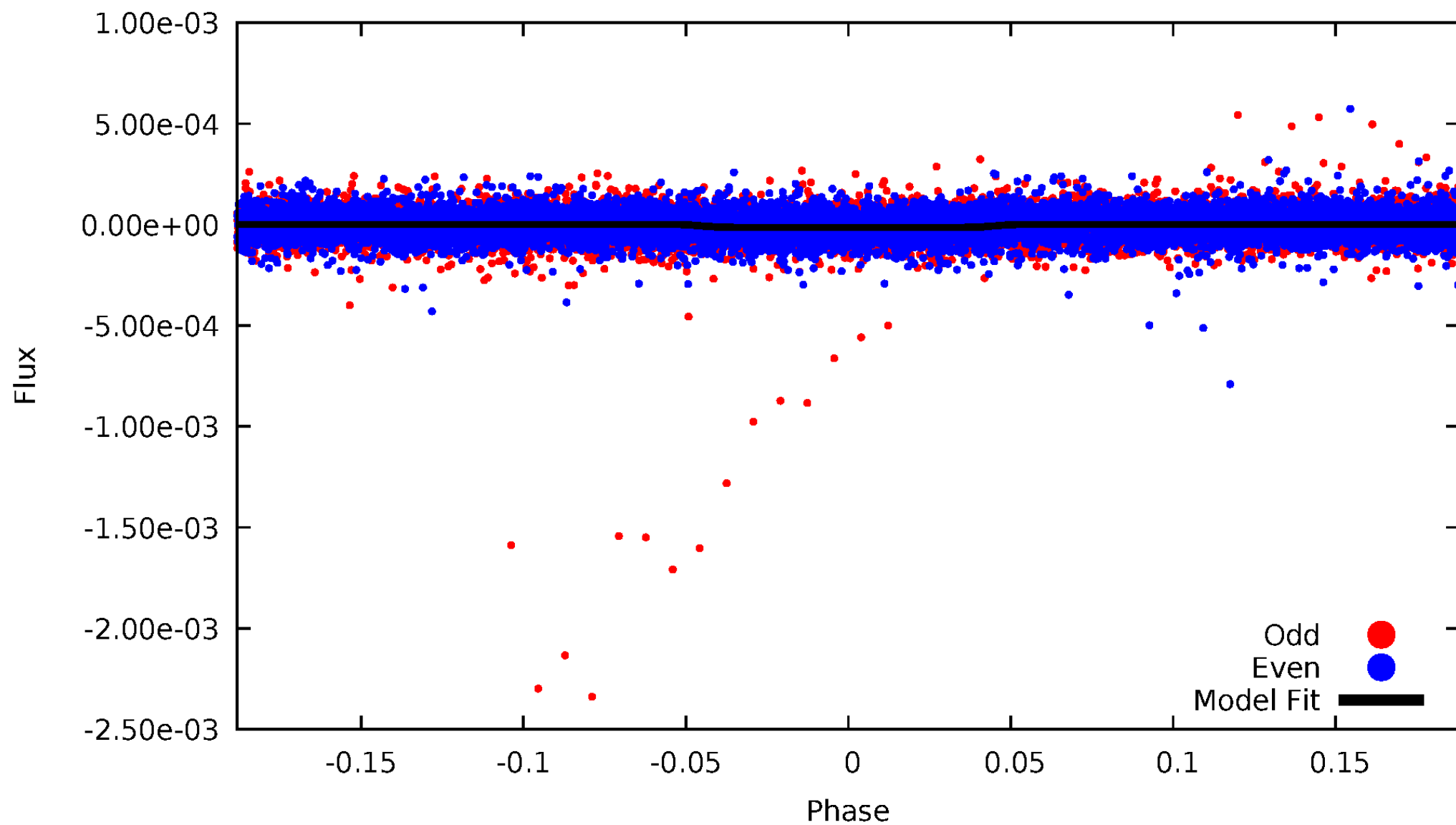


TCE 008896357-01



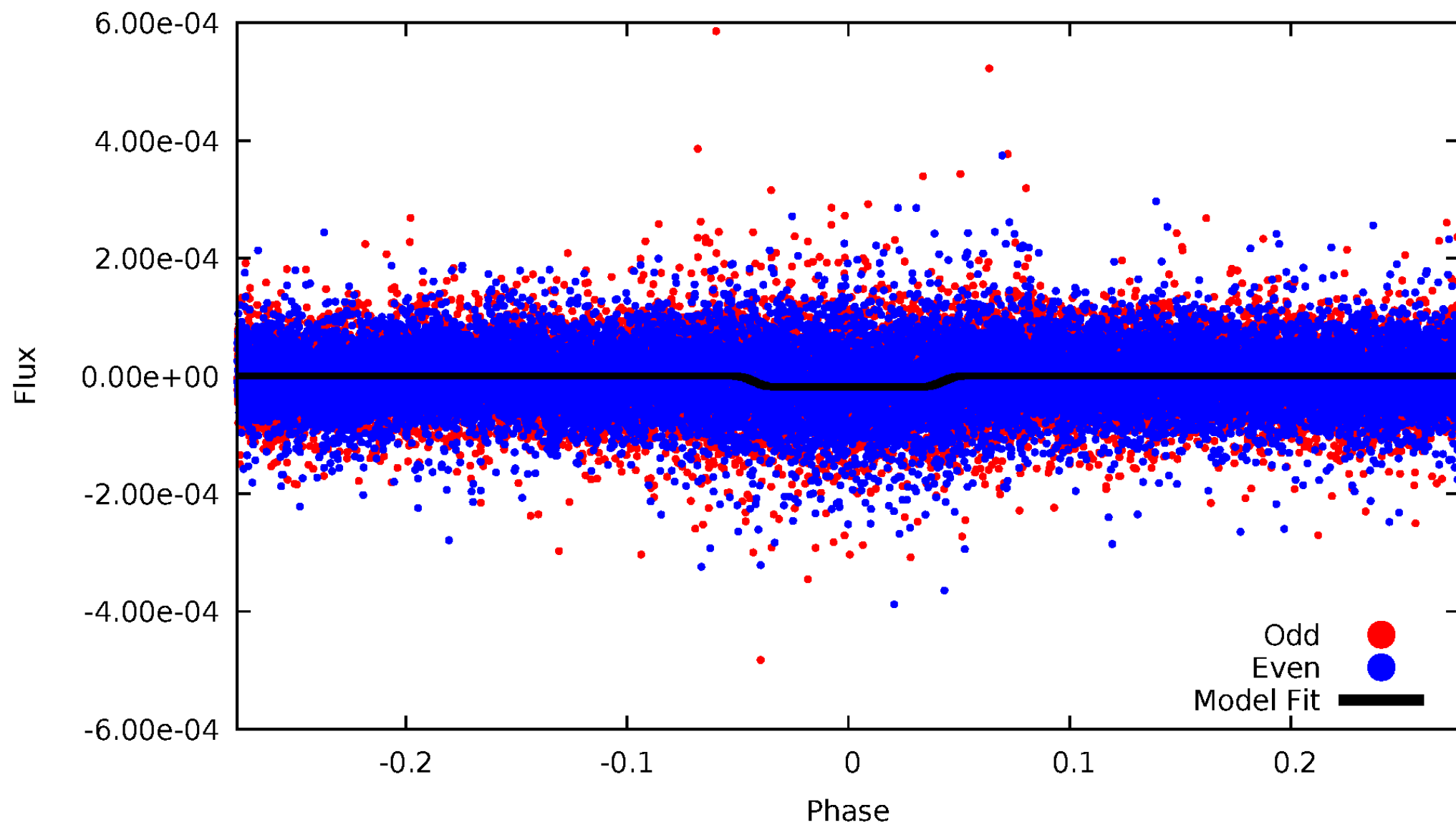
DV Odd/Even

TCE 008896357-01



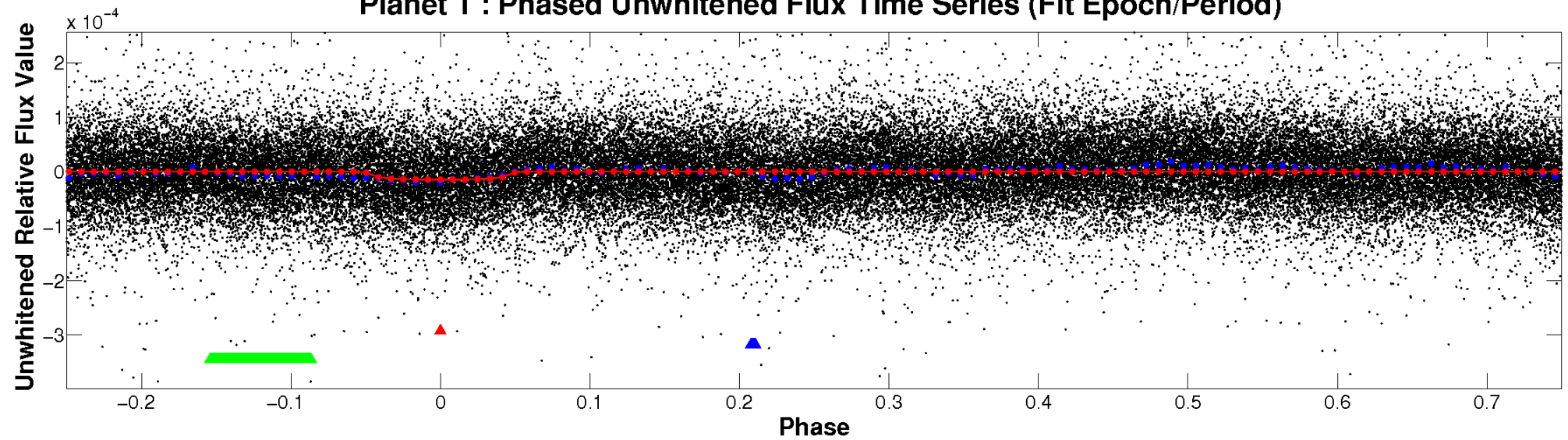
ALT Odd/Even

TCE 008896357-01

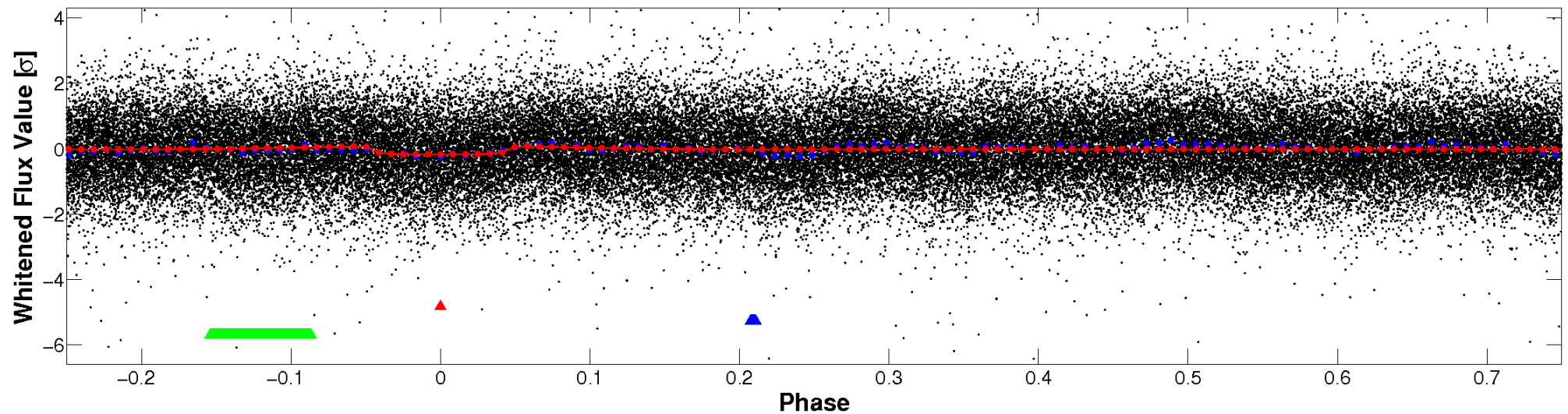


Non-Whitened Vs. Whitened Light Curve

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

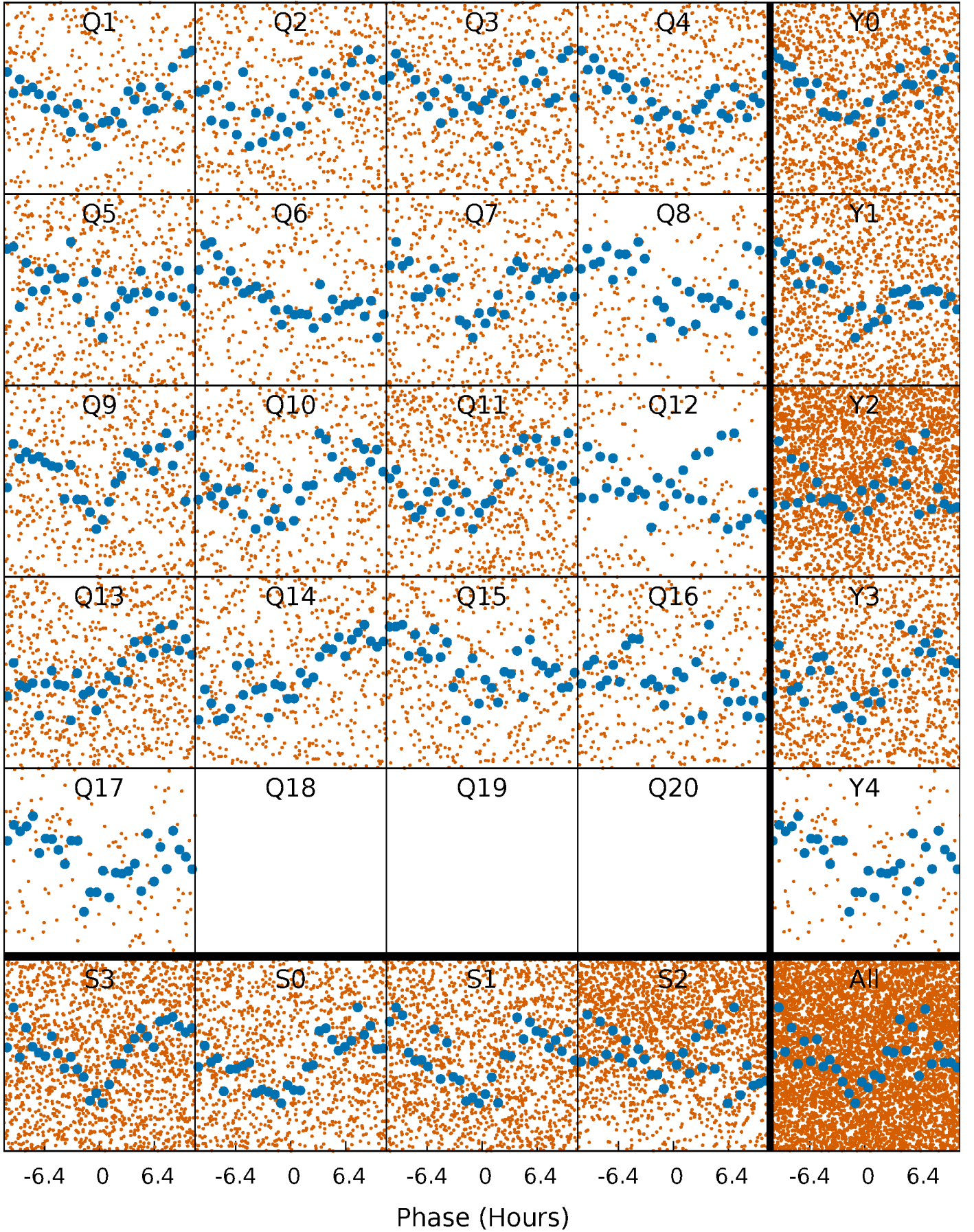


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



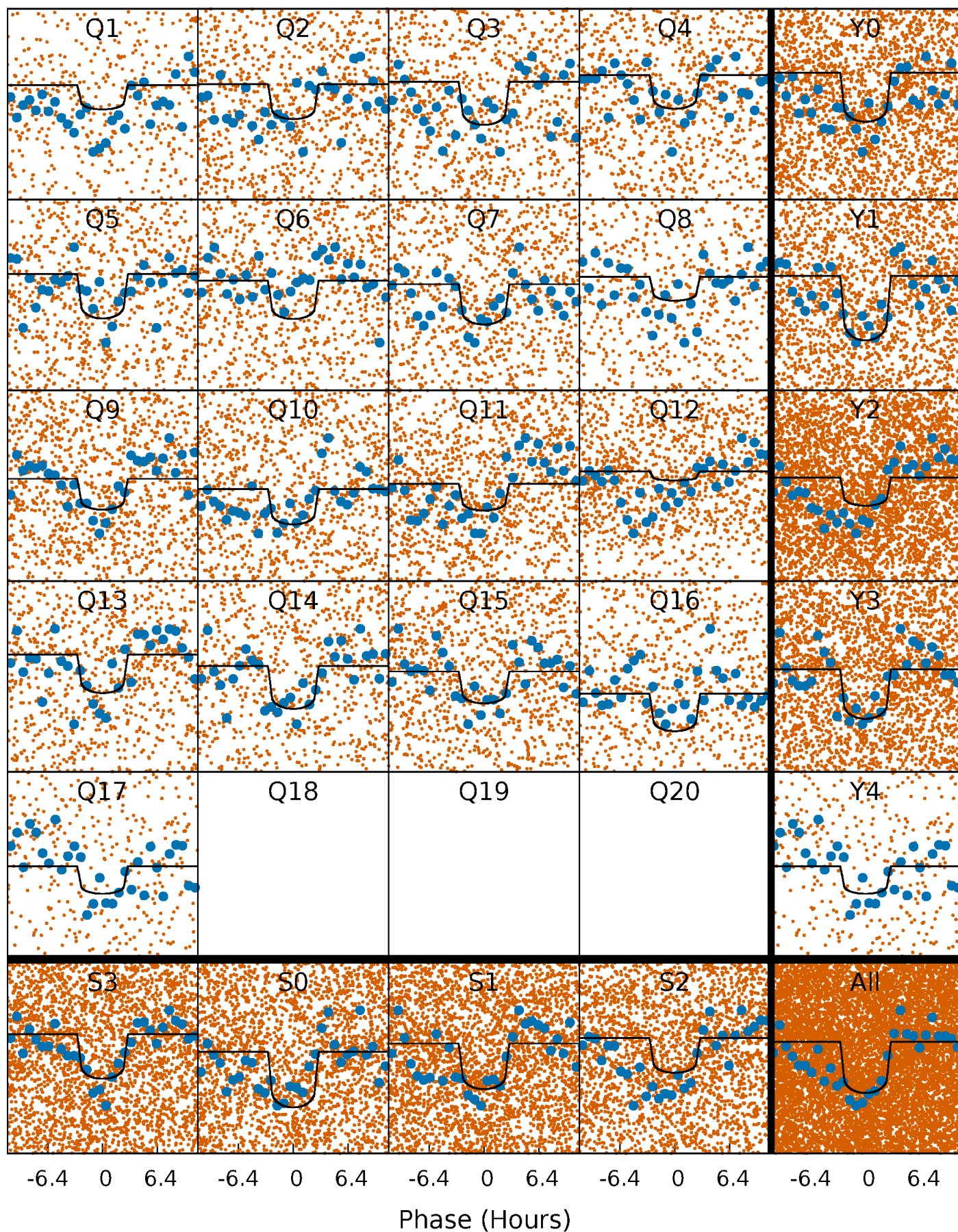
PDC Quarter-Phased Transit Curves

TCE 008896357-01 P= 2.466640 Days $T_0=132.177371$ (BKJD)



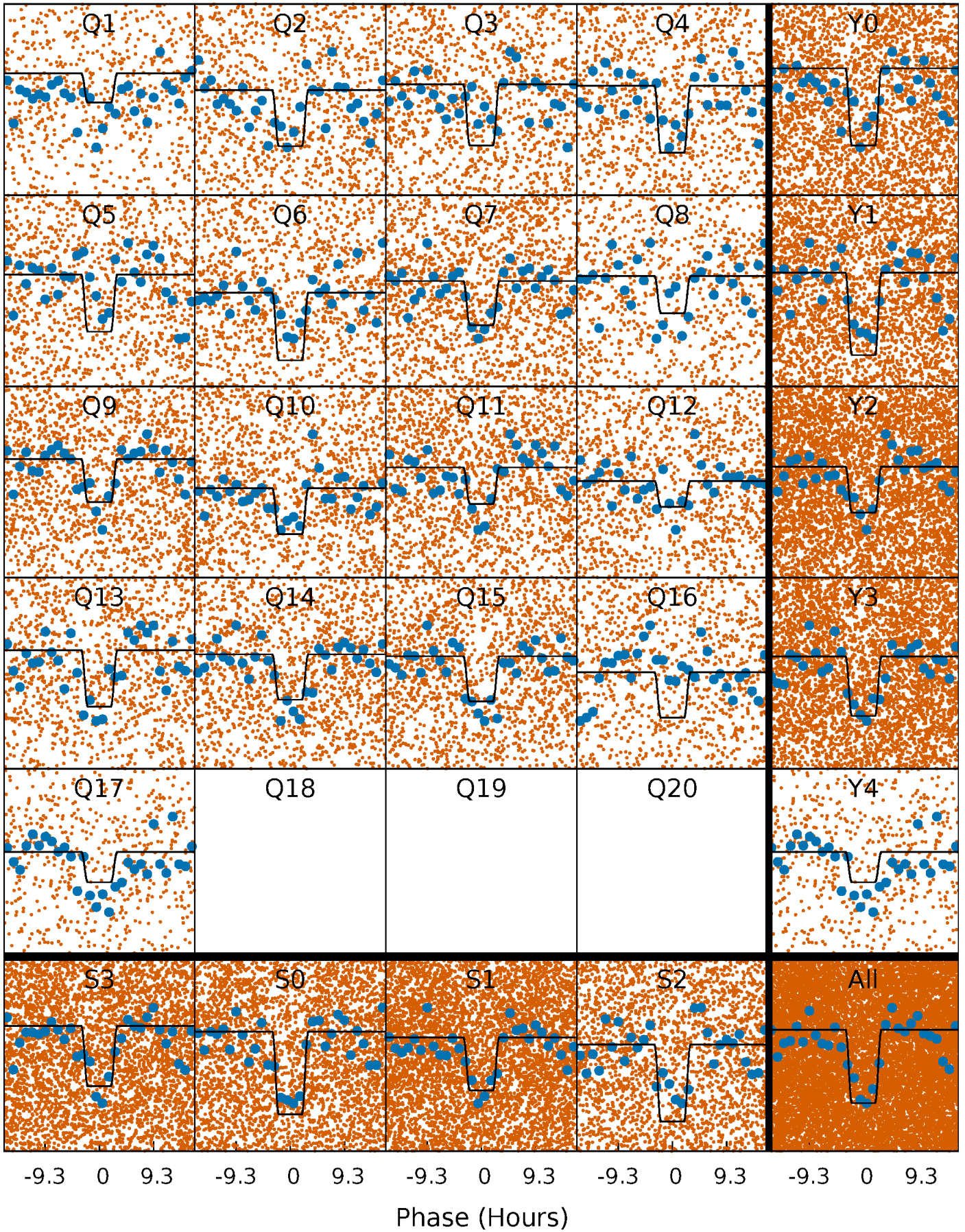
DV Quarter-Phased Transit Curves

TCE 008896357-01 P= 2.466640 Days $T_0=132.177371$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

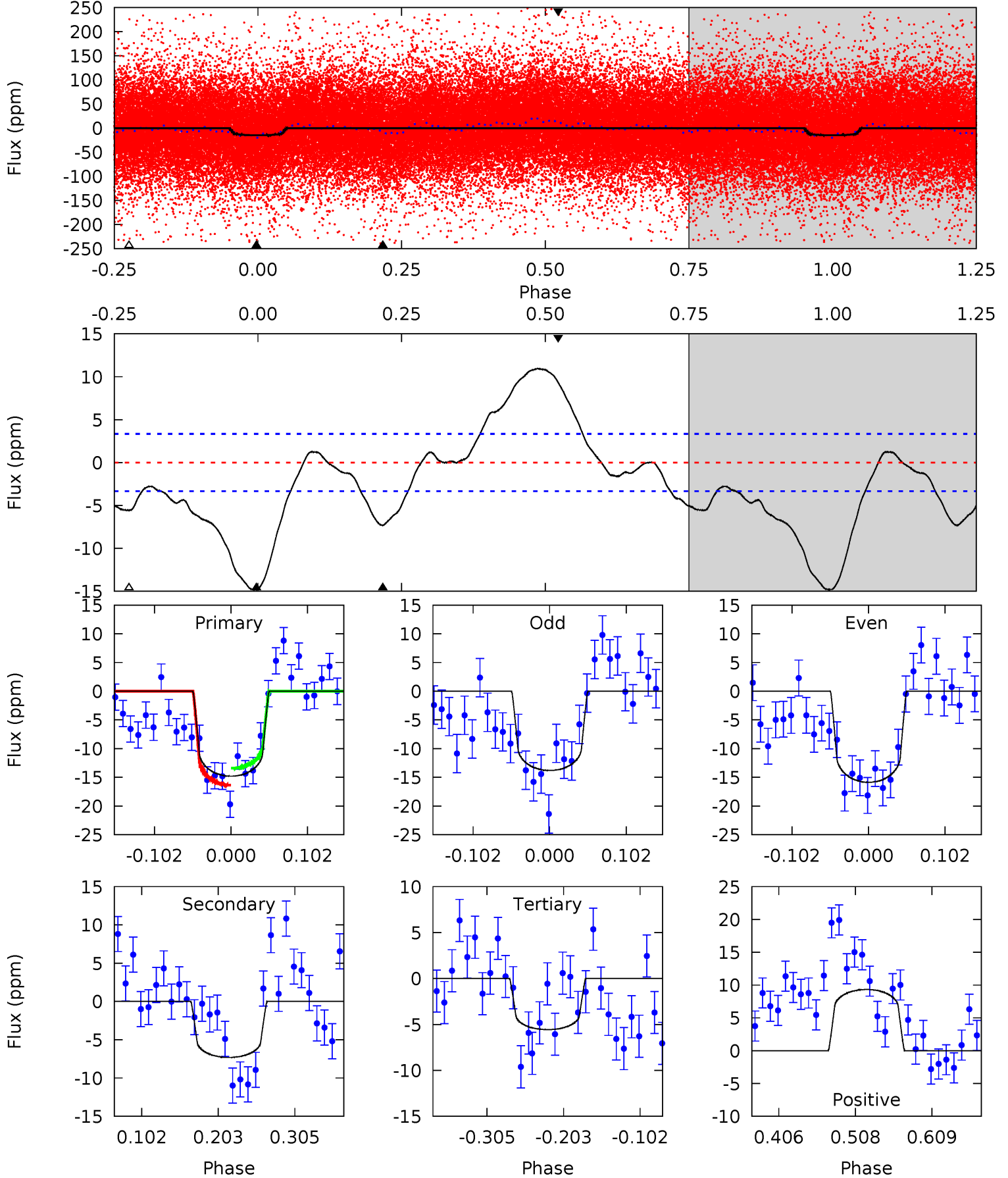
TCE 008896357-01 P= 2.466588 Days $T_0=132.174681$ (BKJD)



DV Model-Shift Uniqueness Test

008896357-01, P = 2.466640 Days, E = 129.710731 Days

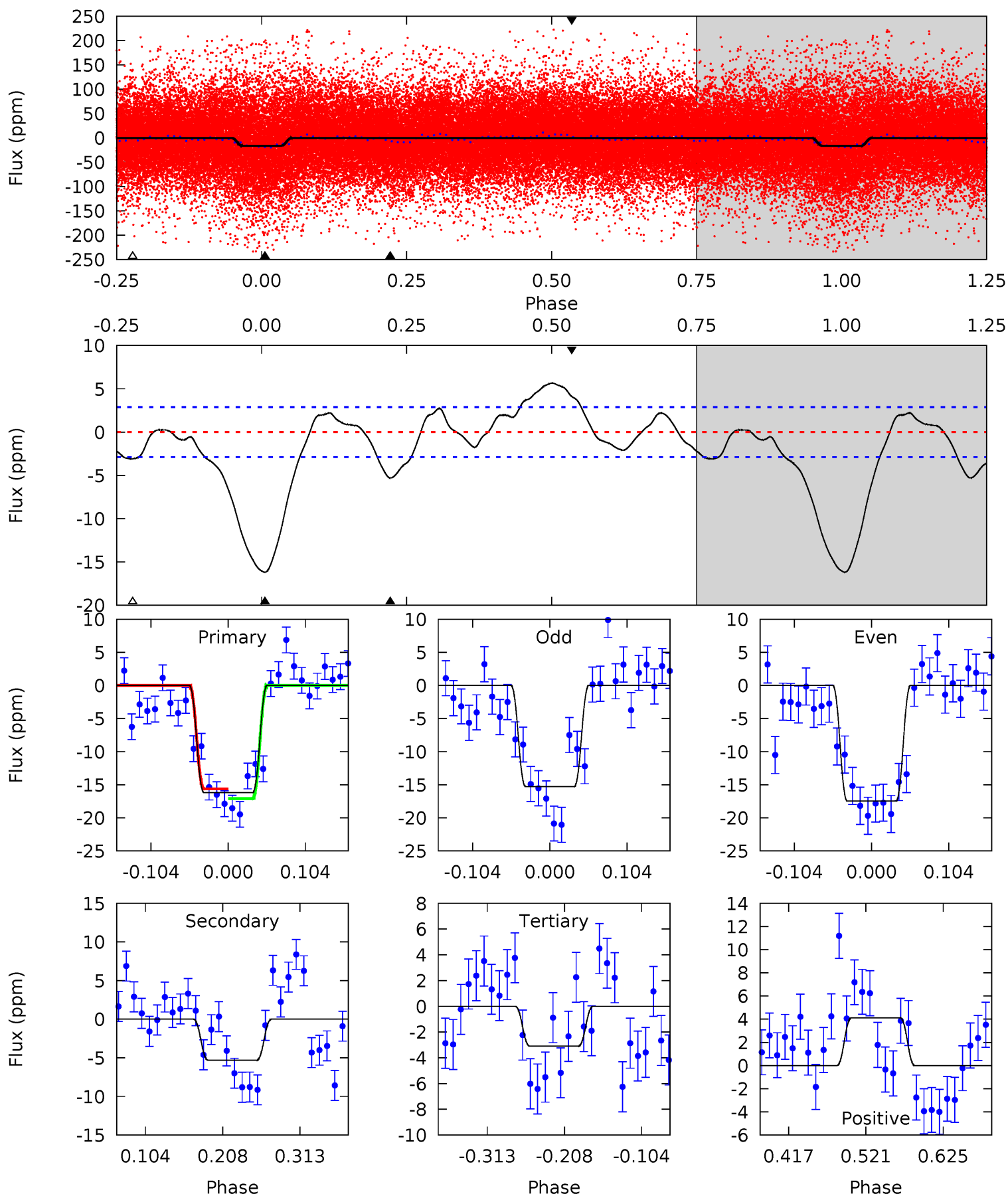
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	9.97	7.59	12.7	4.56	1.64	7.03	12.6	7.47	2.39	-2.75	1.41	1.08	0.43	2.02



Alt Model-Shift Uniqueness Test

008896357-01, P = 2.466588 Days, E = 129.708093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.5	8.37	4.88	6.50	4.56	1.62	3.74	20.7	19.0	3.49	1.87	1.74	1.05	0.26	1.18



Stellar Parameters For KIC 008896357

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7828^{+217}_{-326}	$3.677^{+0.432}_{-0.108}$	$0.000^{+0.200}_{-0.350}$	$3.463^{+0.821}_{-1.641}$	$2.081^{+0.343}_{-0.514}$	$0.071^{+0.285}_{-0.023}$
	+3%/-4%	+12%/-3%	+inf%/-inf%	+24%/-47%	+16%/-25%	+403%/-32%
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 008896357-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 1	$1.42^{+0.37}_{-0.37}$	4044^{+337}_{-512}	6085^{+617}_{-487}	$4.166^{+3.435}_{-1.511}$
Alt.	-5 ± 1	$1.53^{+0.35}_{-0.42}$	4071^{+310}_{-490}	5429^{+464}_{-393}	$2.649^{+1.946}_{-0.935}$

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

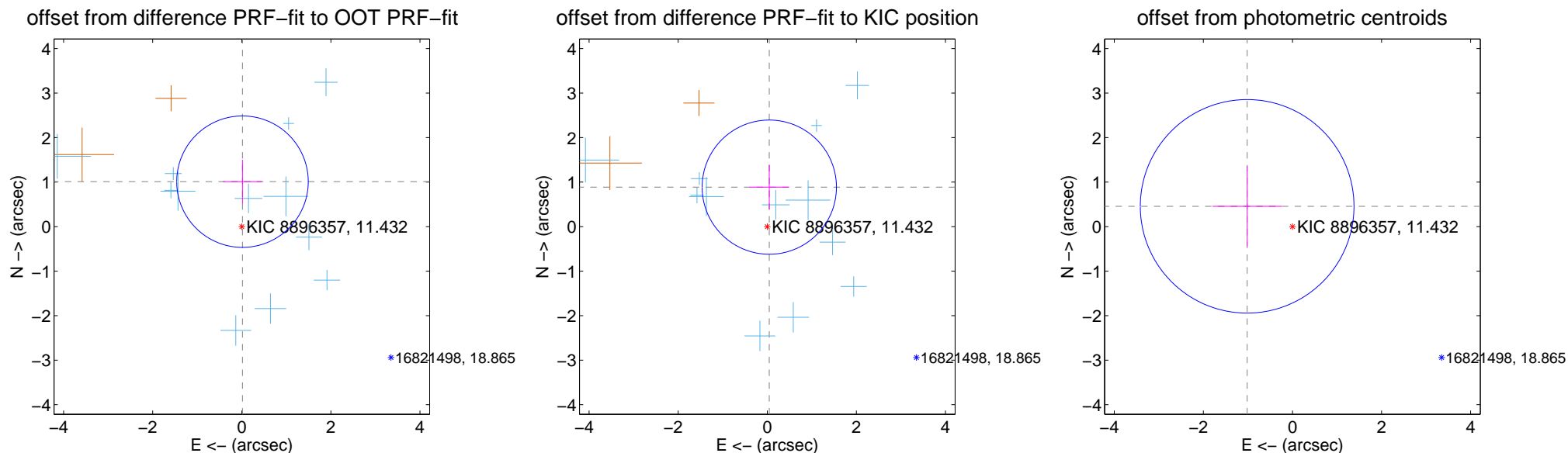
DV Centroid Data

Supplemental centroid analysis for 008896357-01. **Kepler magnitude: 11.43.** Transit SNR 12.71

There are 12 quarters with good PRF difference image offsets

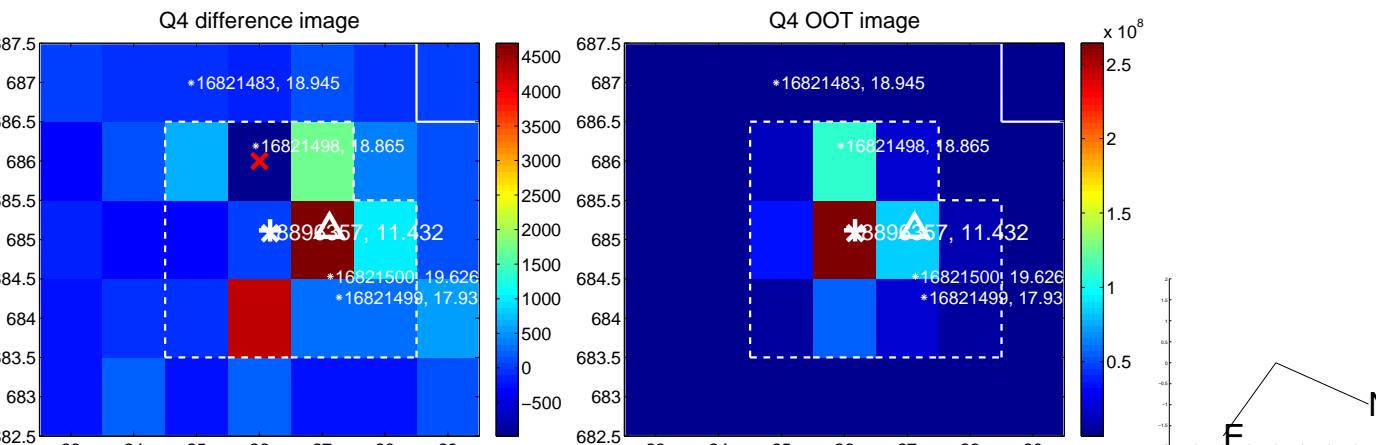
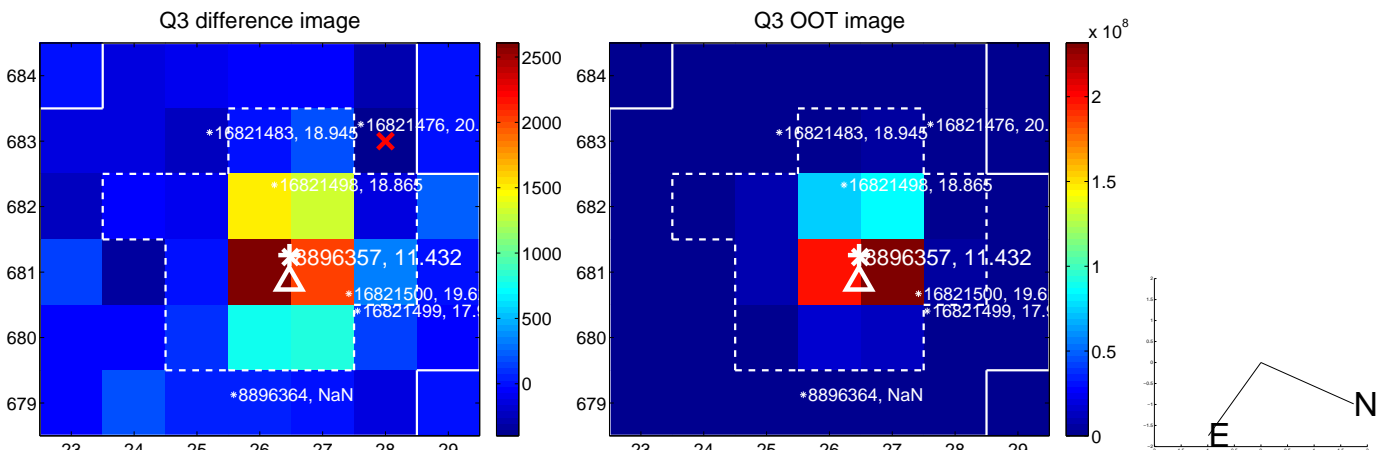
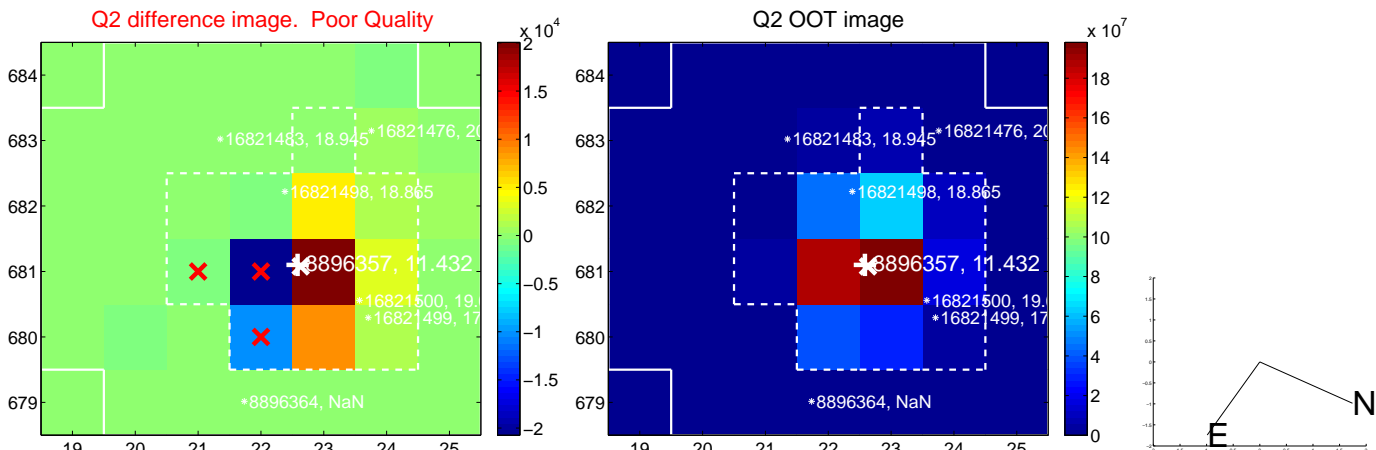
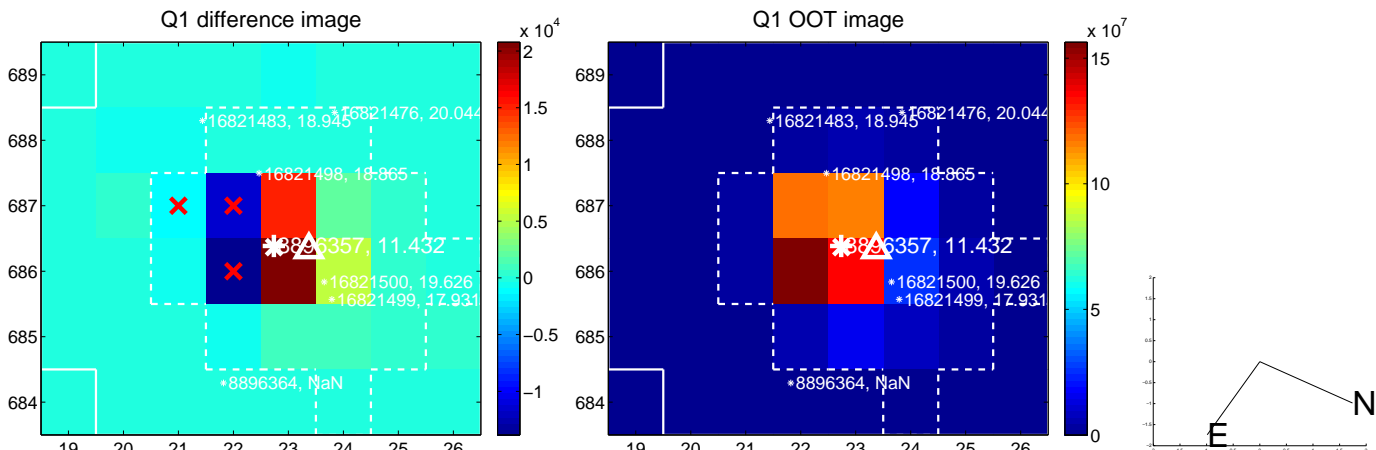
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.010 ± 0.492	2.05	-0.016 ± 0.439	1.010 ± 0.492
PRF-fit source offset from KIC position	0.888 ± 0.503	1.77	-0.045 ± 0.444	0.887 ± 0.503
photometric centroid source offset	1.12 ± 0.80	1.39	1.02 ± 0.78	0.46 ± 0.90

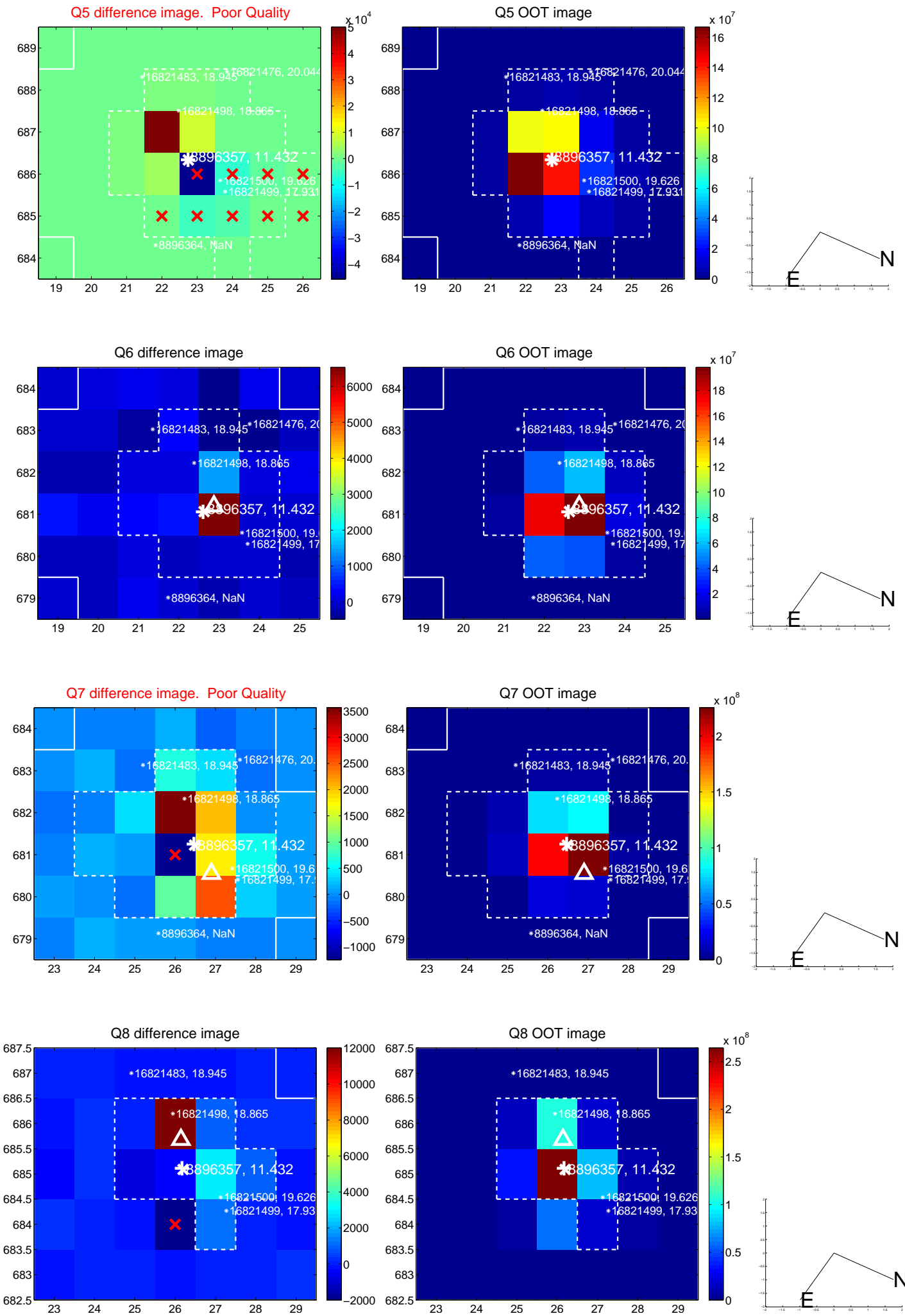


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

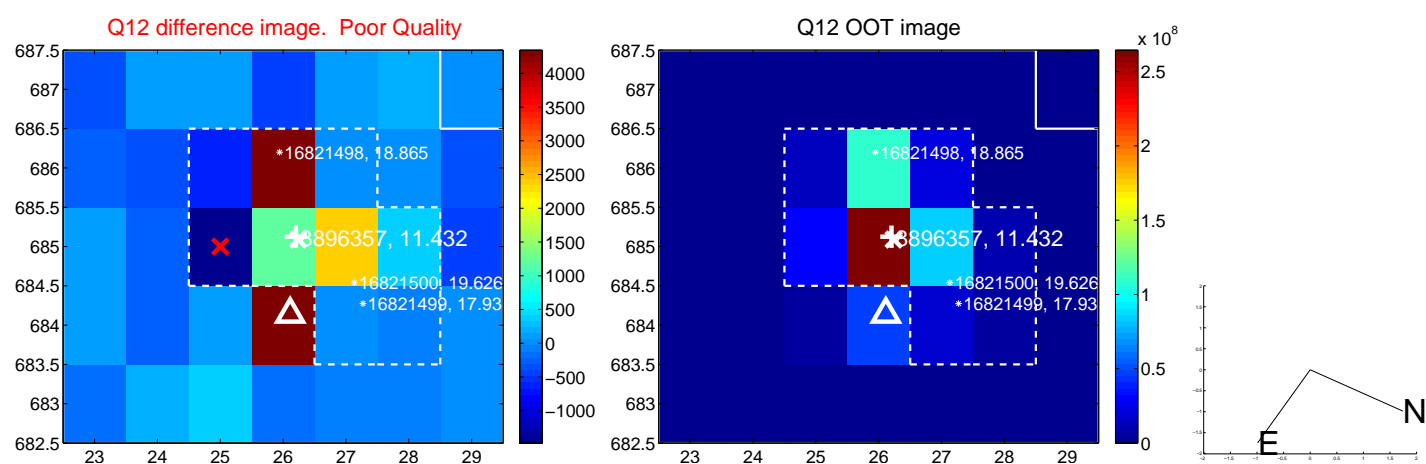
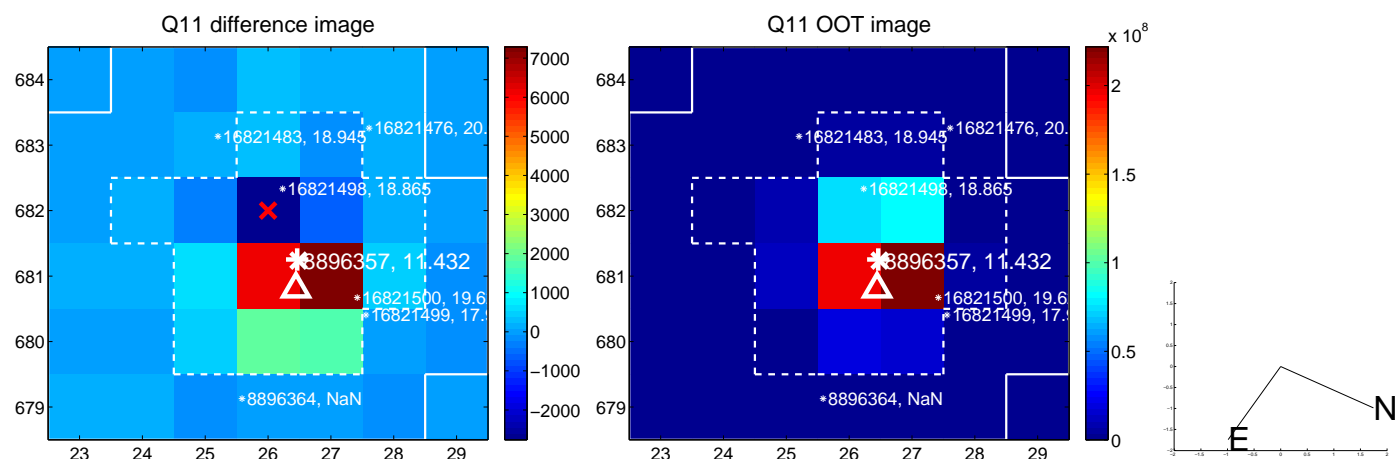
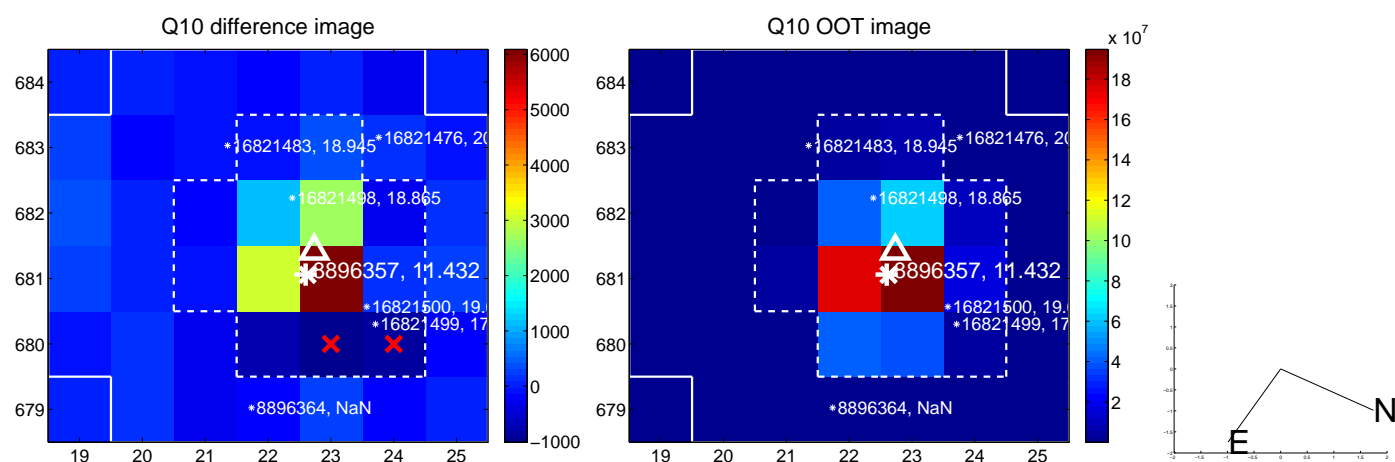
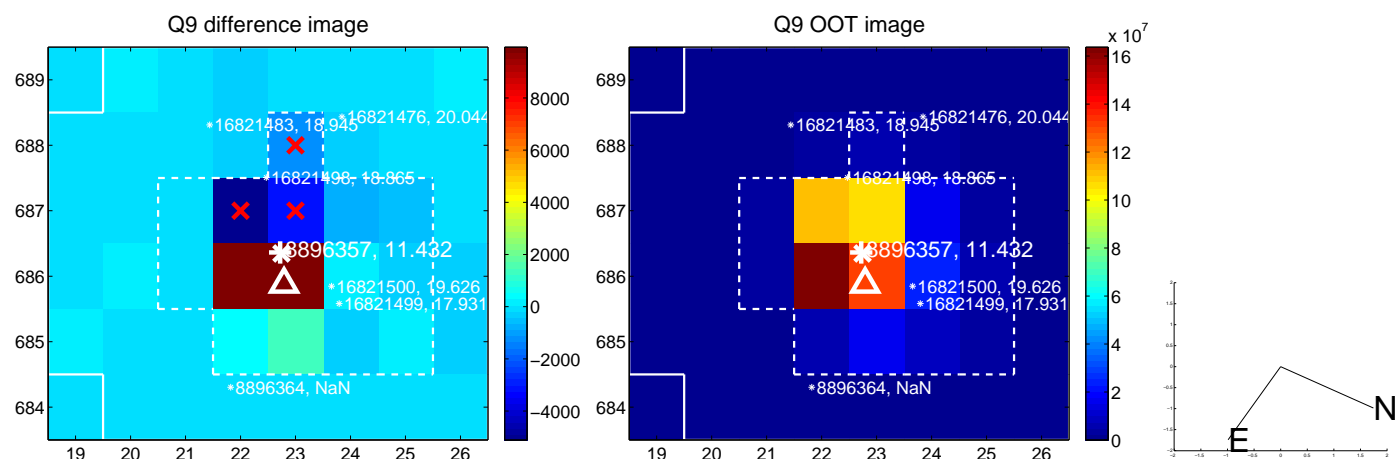
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



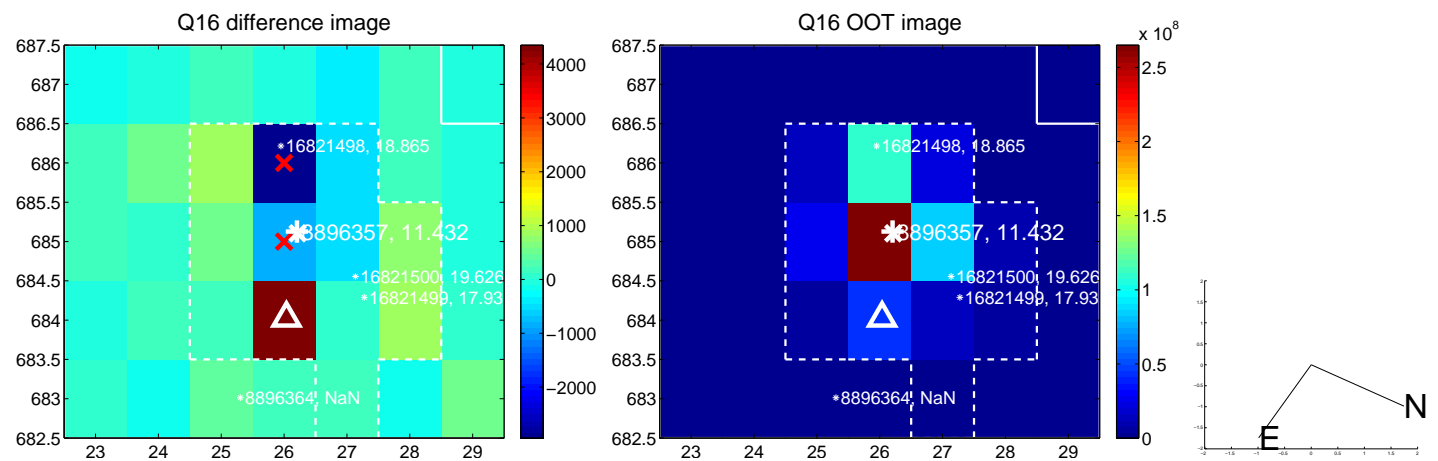
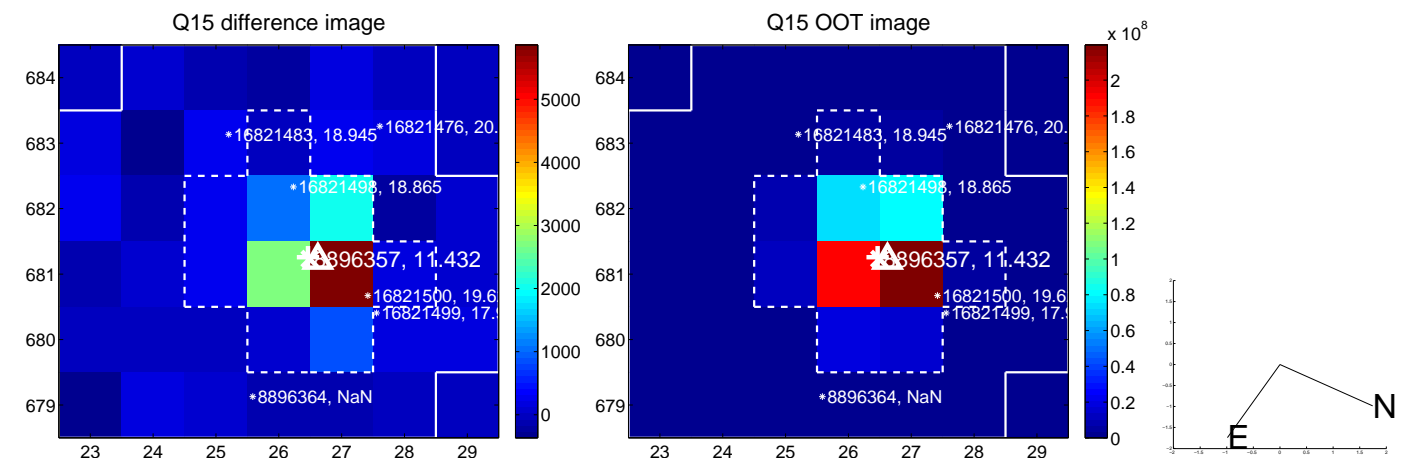
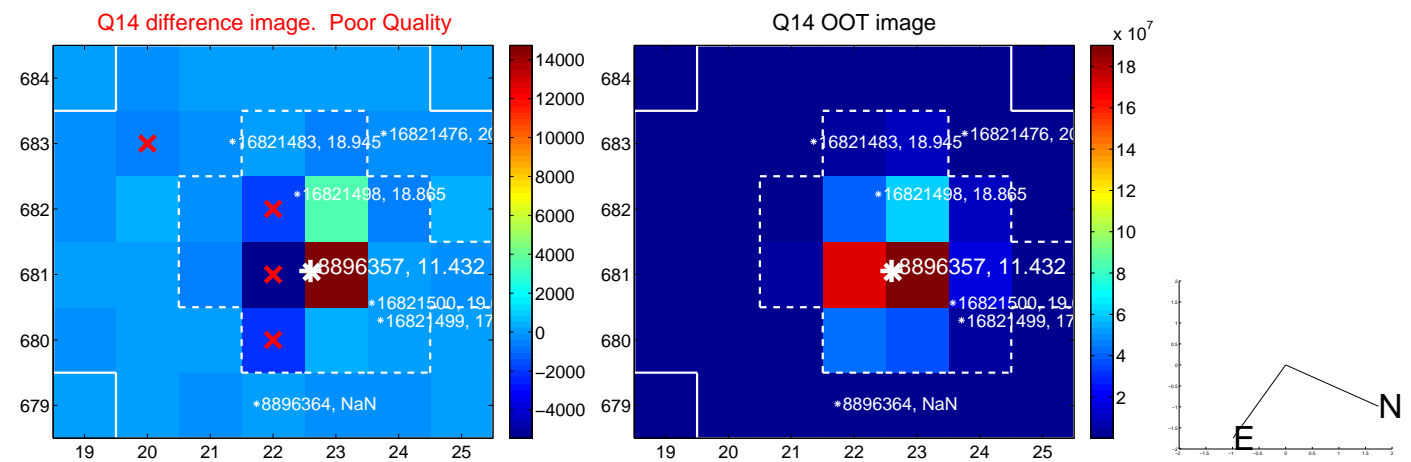
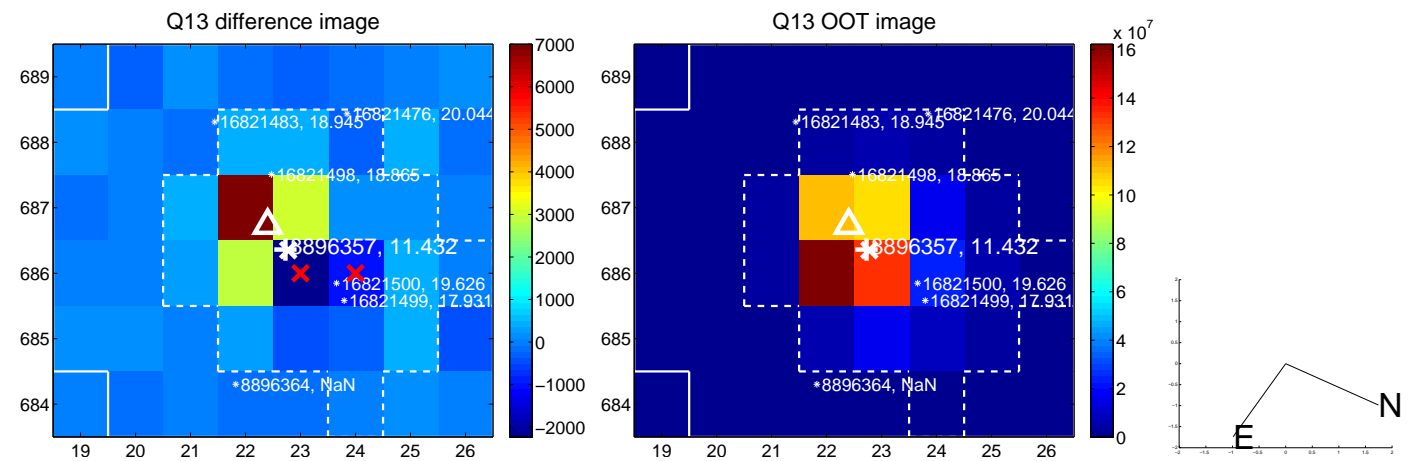
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



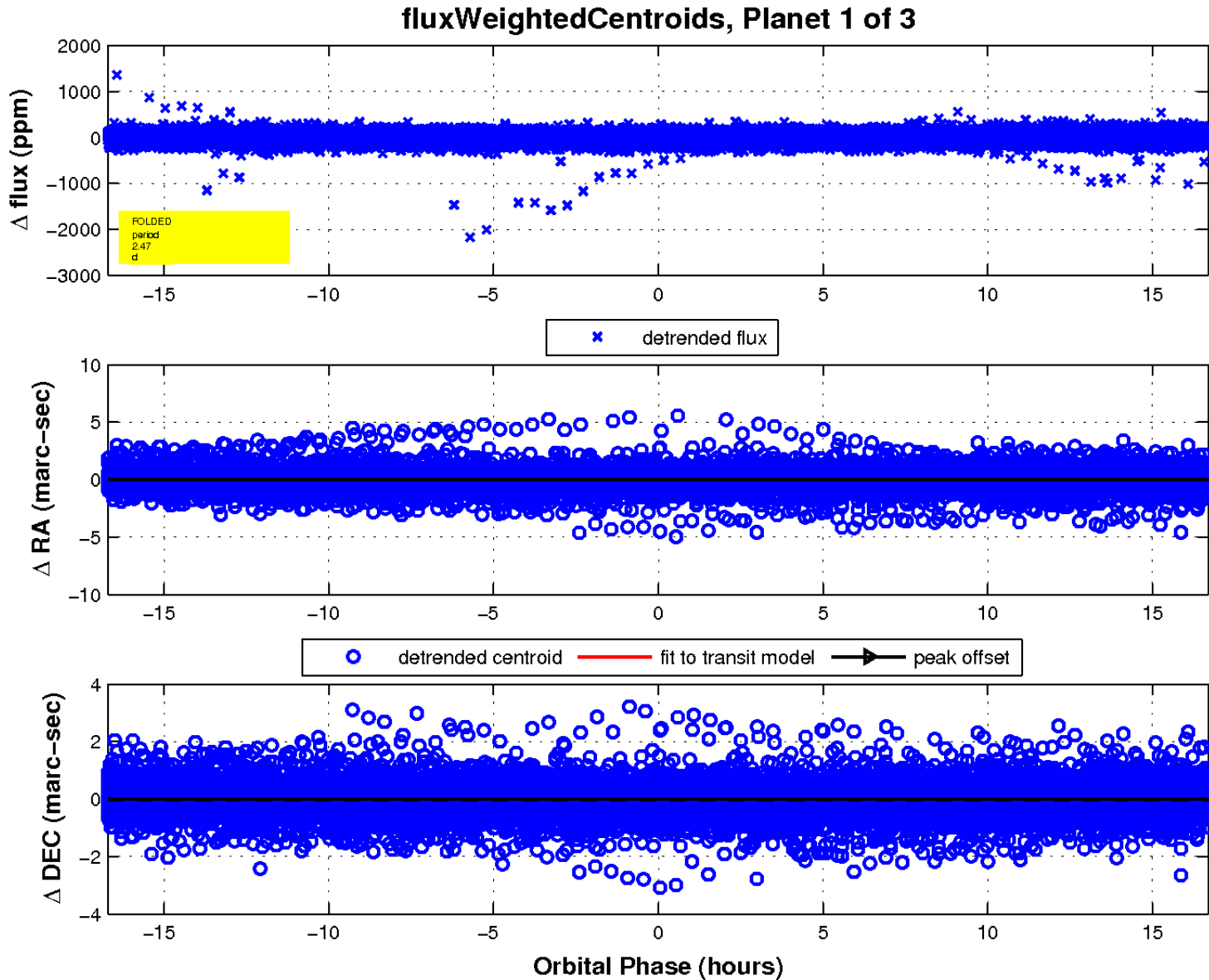
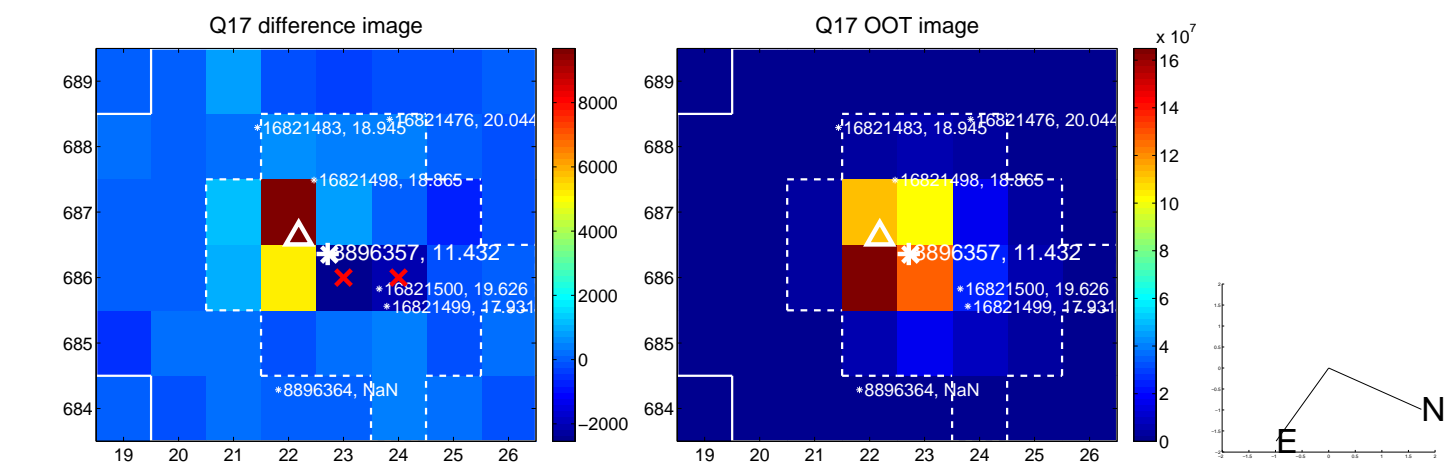
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

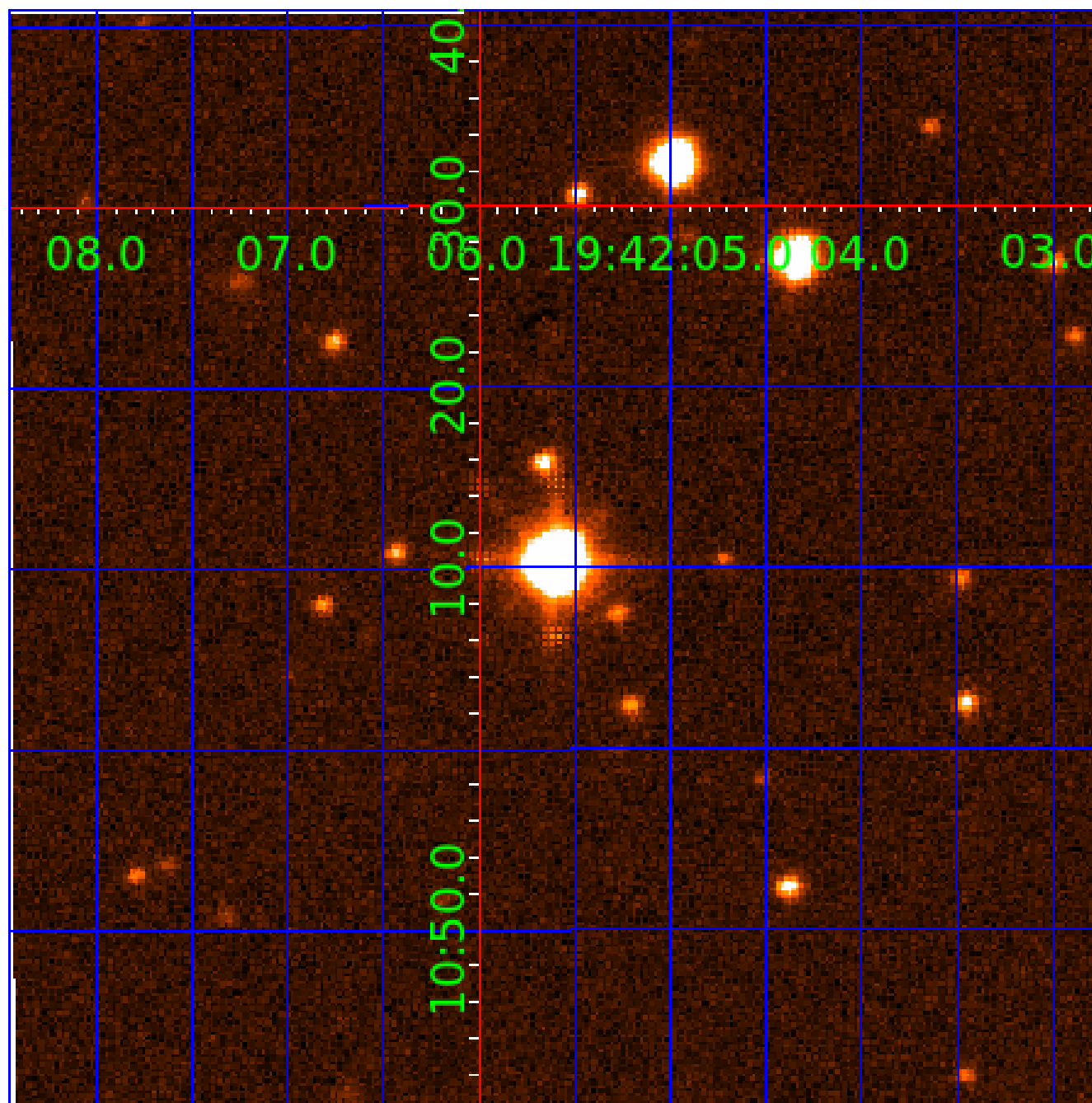


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008896357

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
008896357-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008896357-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
008896357-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

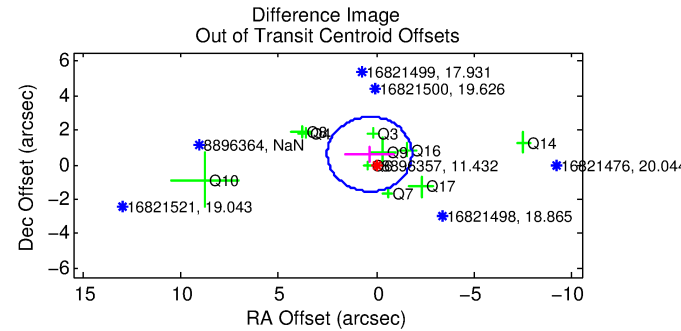
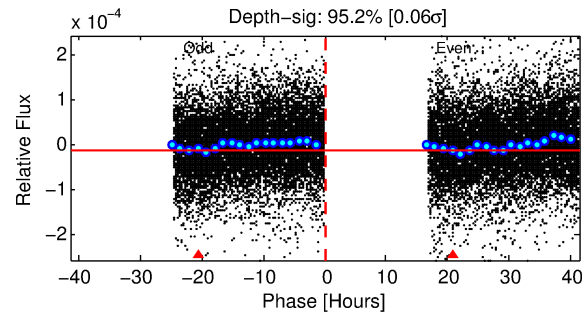
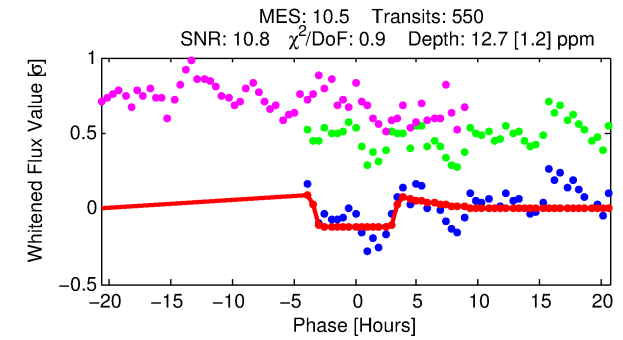
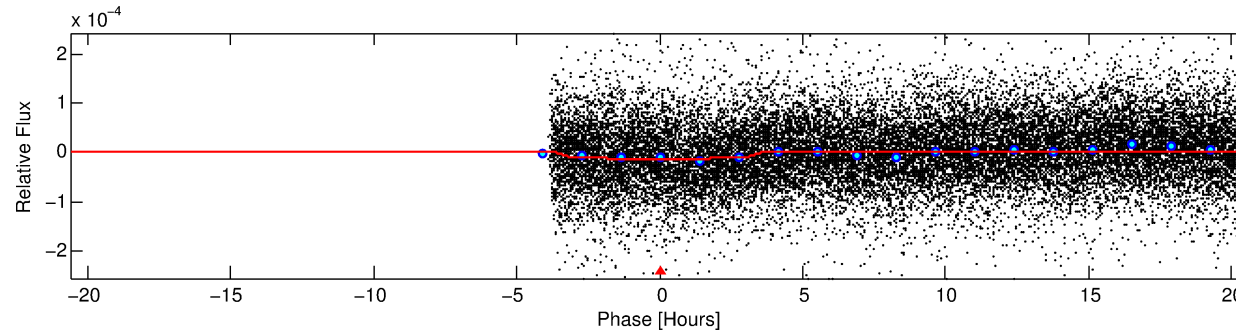
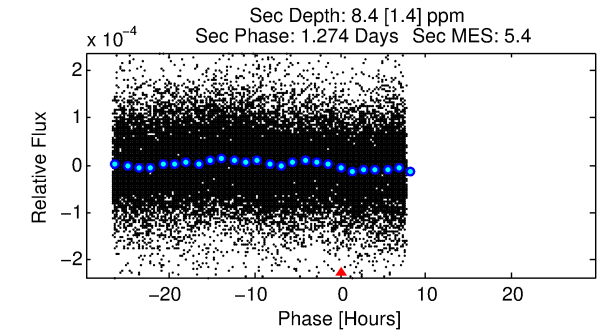
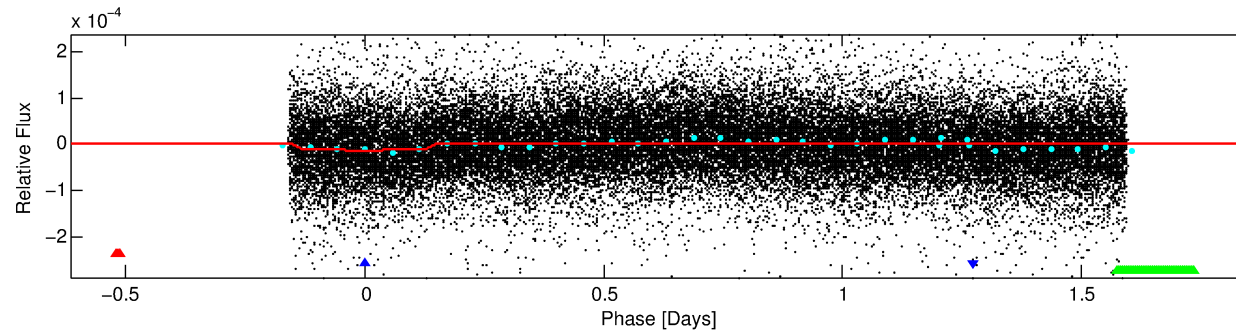
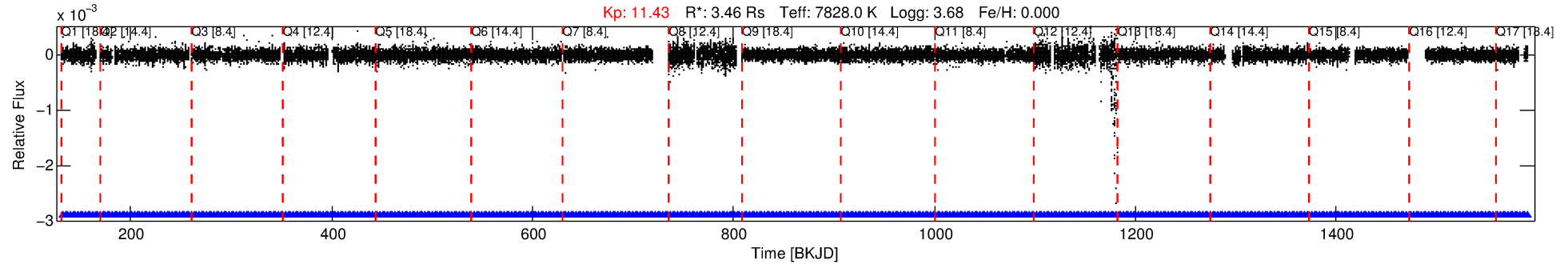
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008896357-02

No Significant Match Found

DV One-Page Summary

KIC: 8896357 Candidate: 2 of 3 Period: 2.467 d



DV Fit Results:

Period = 2.46665 [0.00002] d
Epoch = 132.6893 [0.0041] BKJD
Rp/R* = 0.0038 [0.0006]
a/R* = 1.53 [0.85]
b = 0.90 [0.20]
Seff = 19393.44 [14607.14]
Teq = 3009 [567] K
Rp = 1.44 [0.72] Re
a = 0.0456 [0.0209] AU
Ag = 4.61 [3.79] [0.95σ]
Teffp = 6817 [694] K [4.25σ]

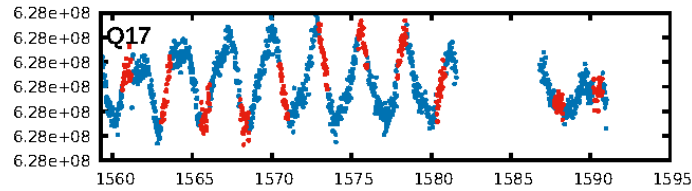
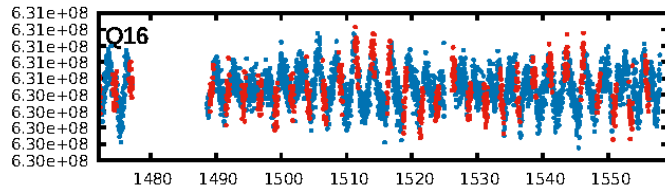
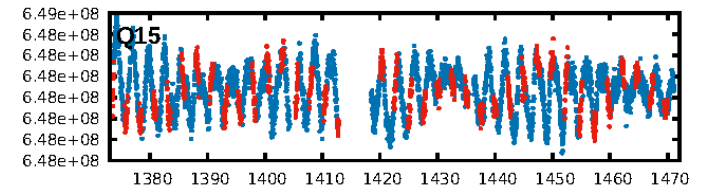
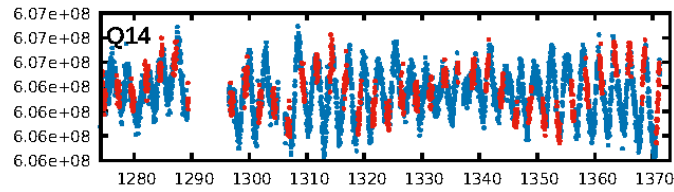
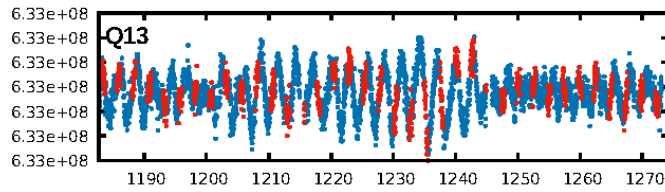
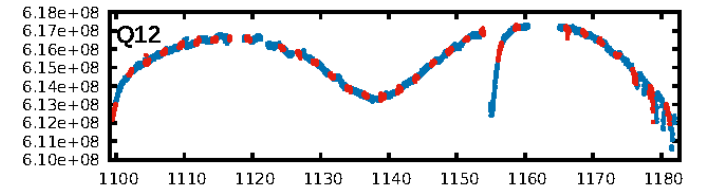
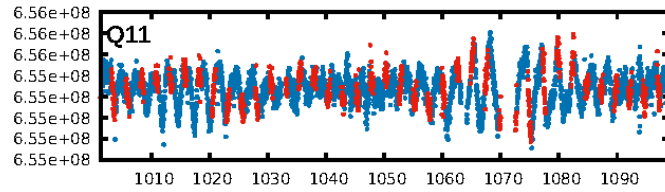
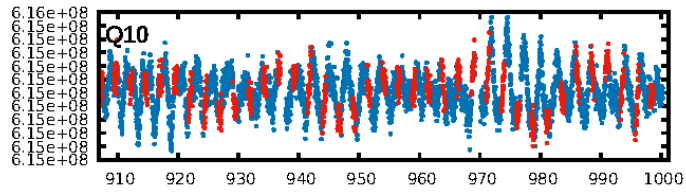
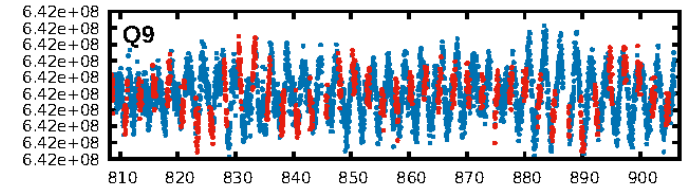
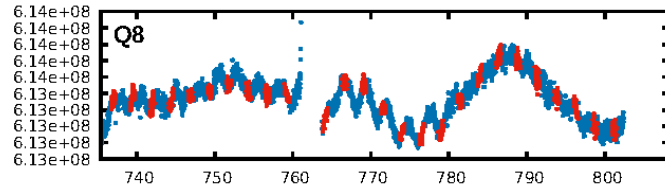
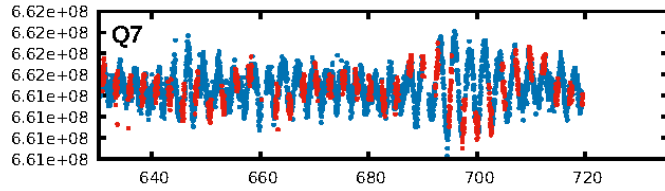
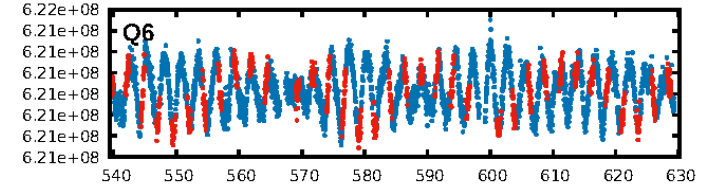
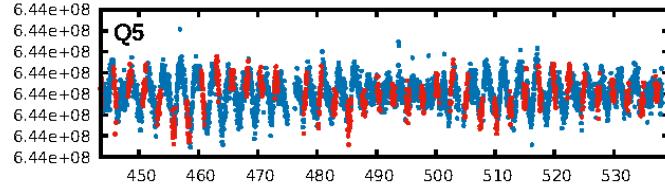
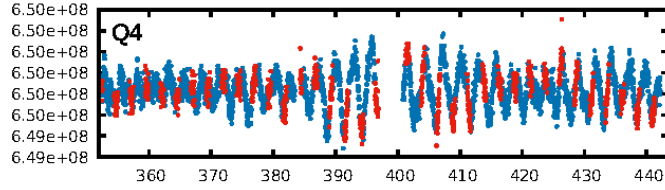
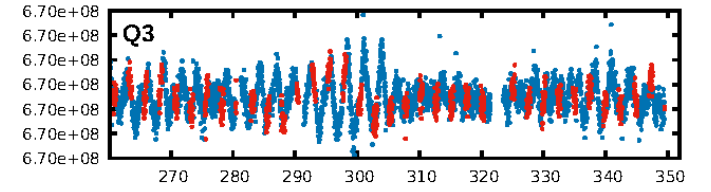
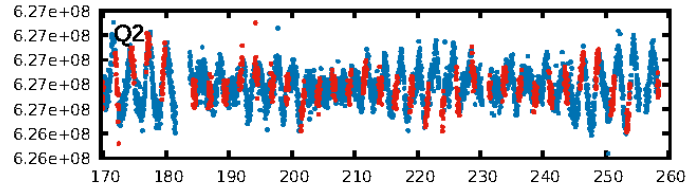
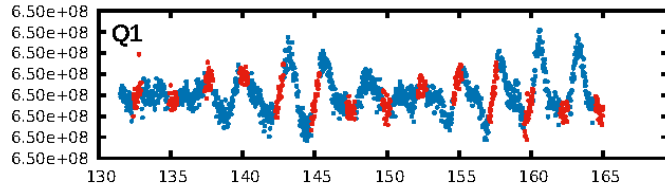
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [525/525]
GhostDiagnostic-chr: 1.009
Centroid-sig: 12.6%
Centroid-so: 0.738 arcsec [0.83σ]
OotOffset-rm: 0.702 arcsec [0.97σ]
KicOffset-rm: 0.617 arcsec [0.73σ]
OotOffset-st: 3/2/3/2 [10]
KicOffset-st: 3/2/3/2 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 0.00 [0/17]

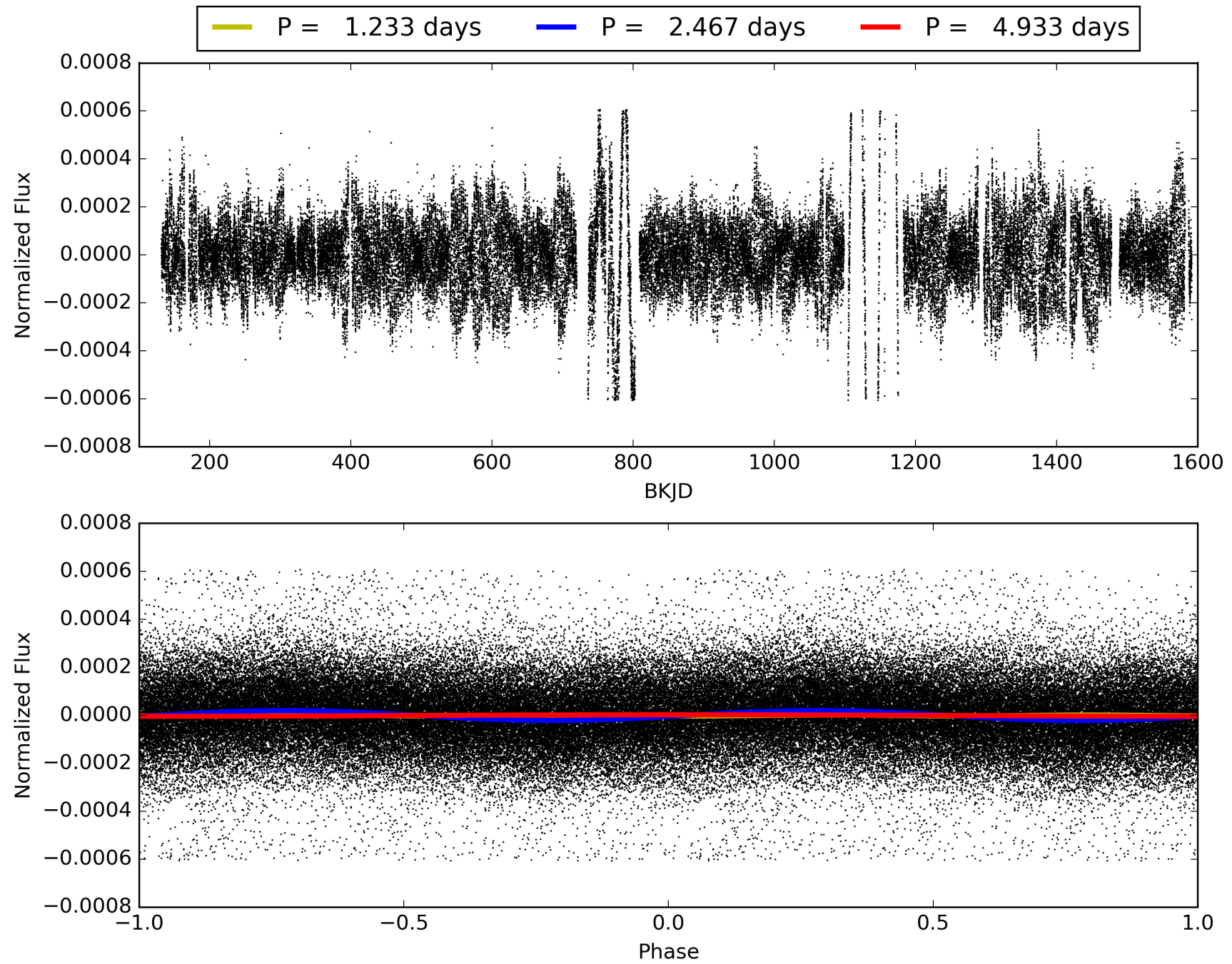
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 18:24:14 Z

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

TCE 008896357-02, PDC Light Curves

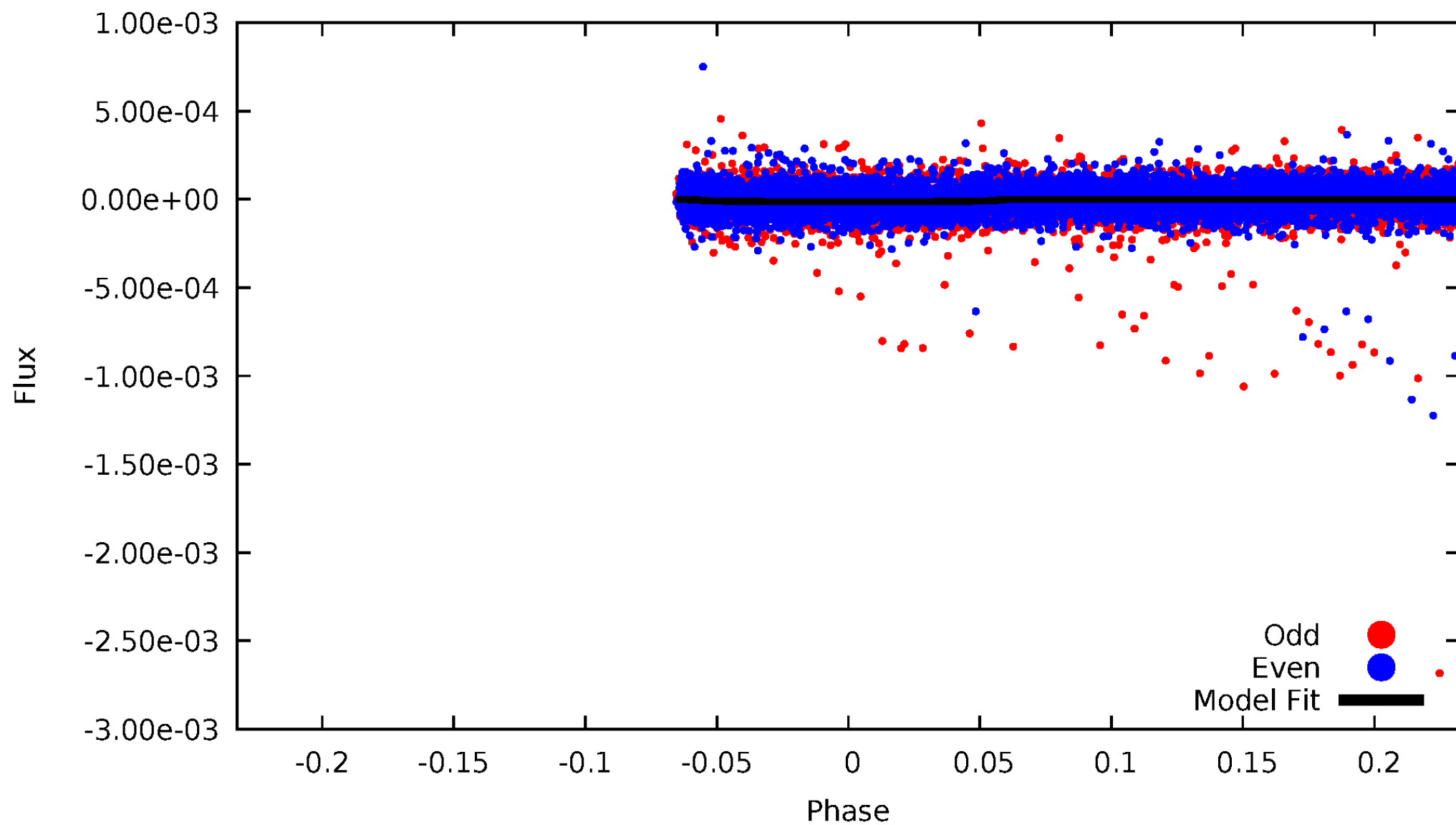


TCE 008896357-02



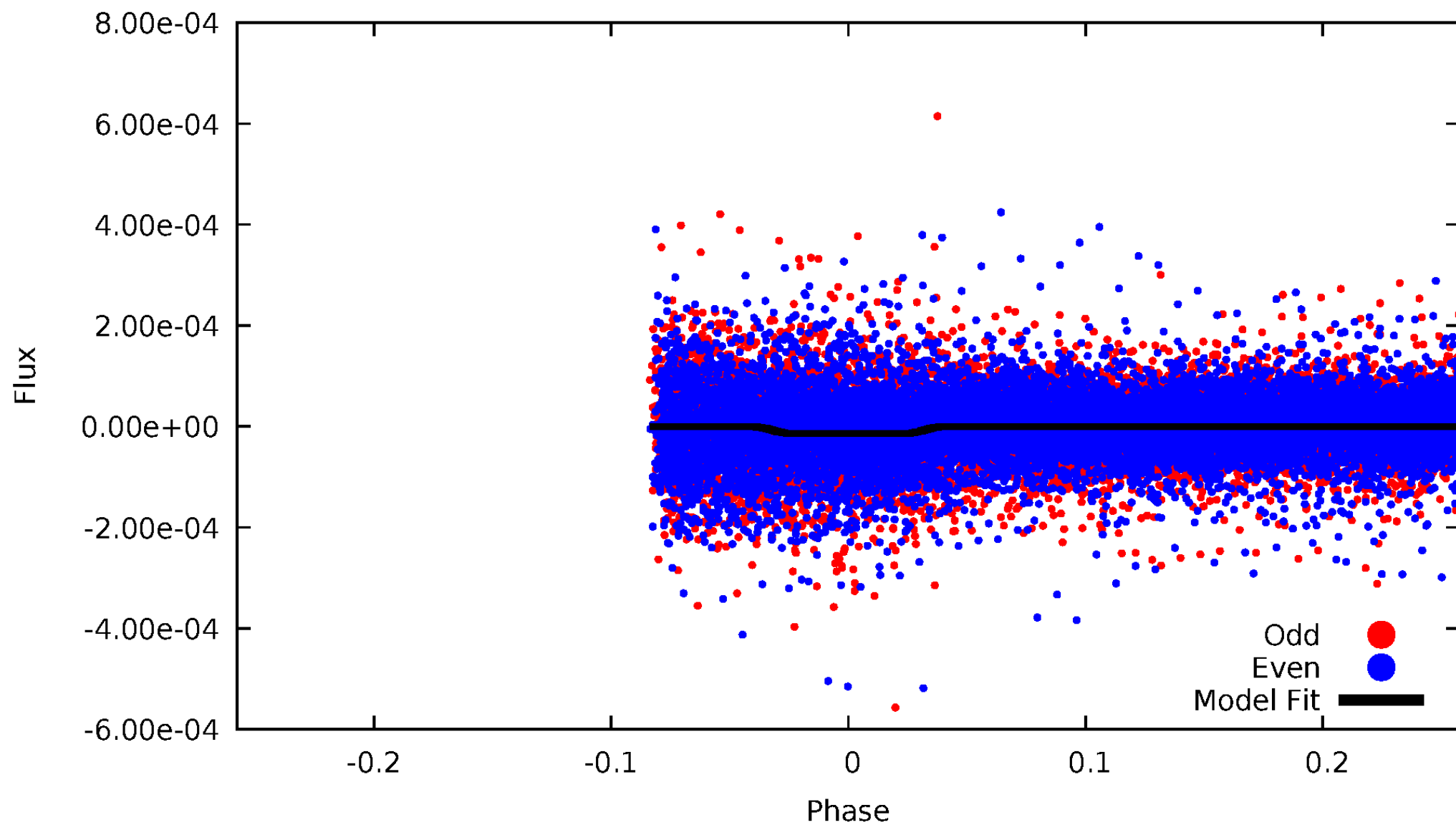
DV Odd/Even

TCE 008896357-02



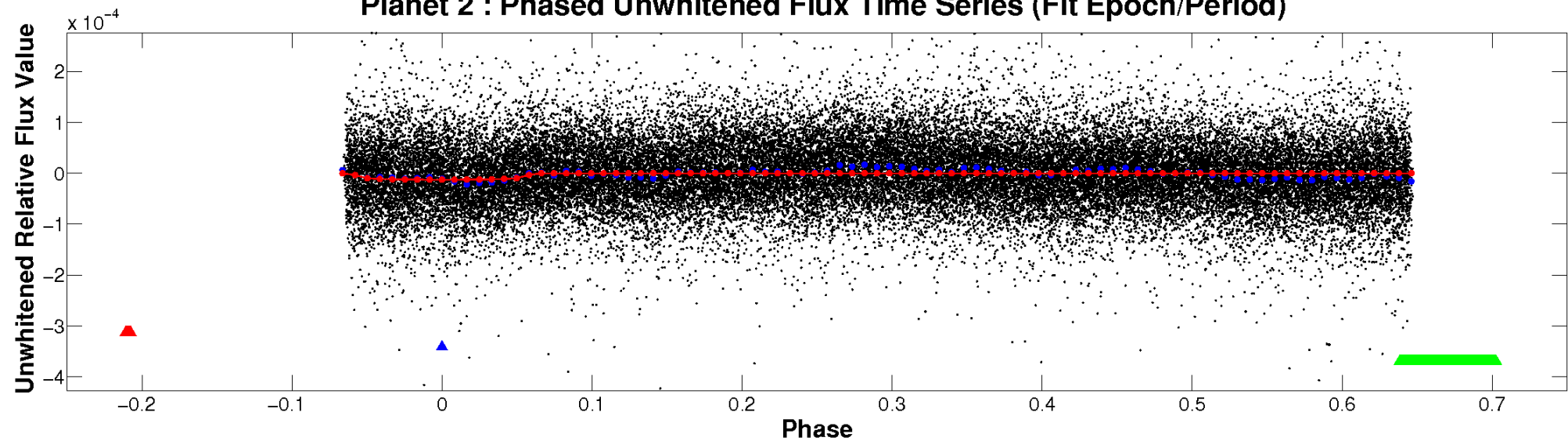
ALT Odd/Even

TCE 008896357-02

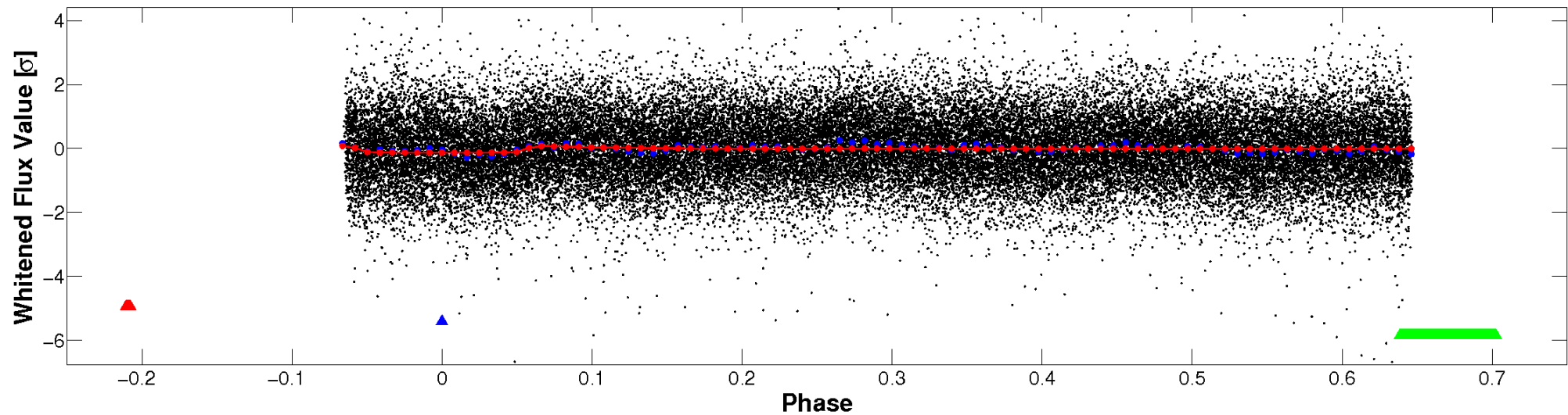


Non-Whitened Vs. Whitened Light Curve

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

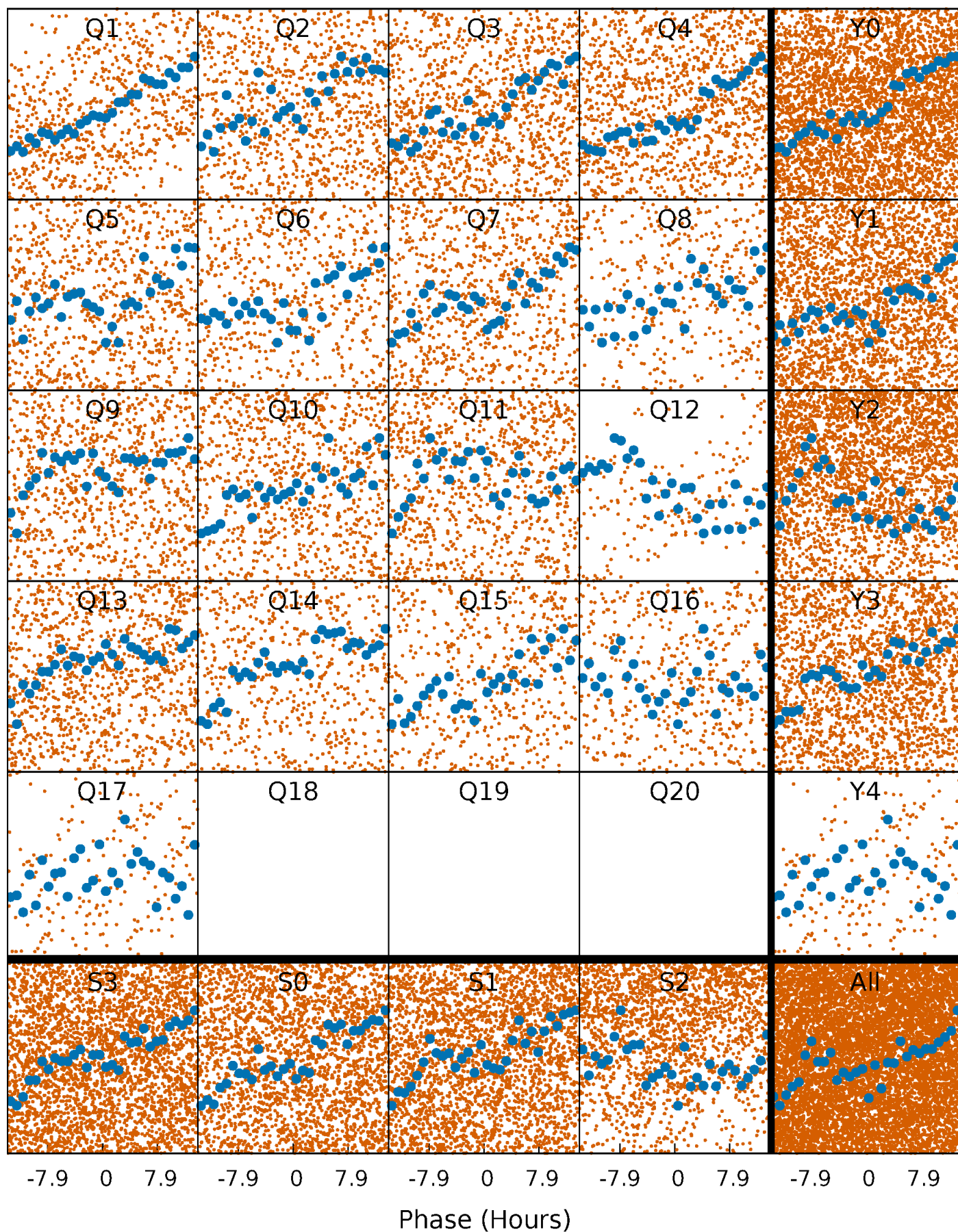


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



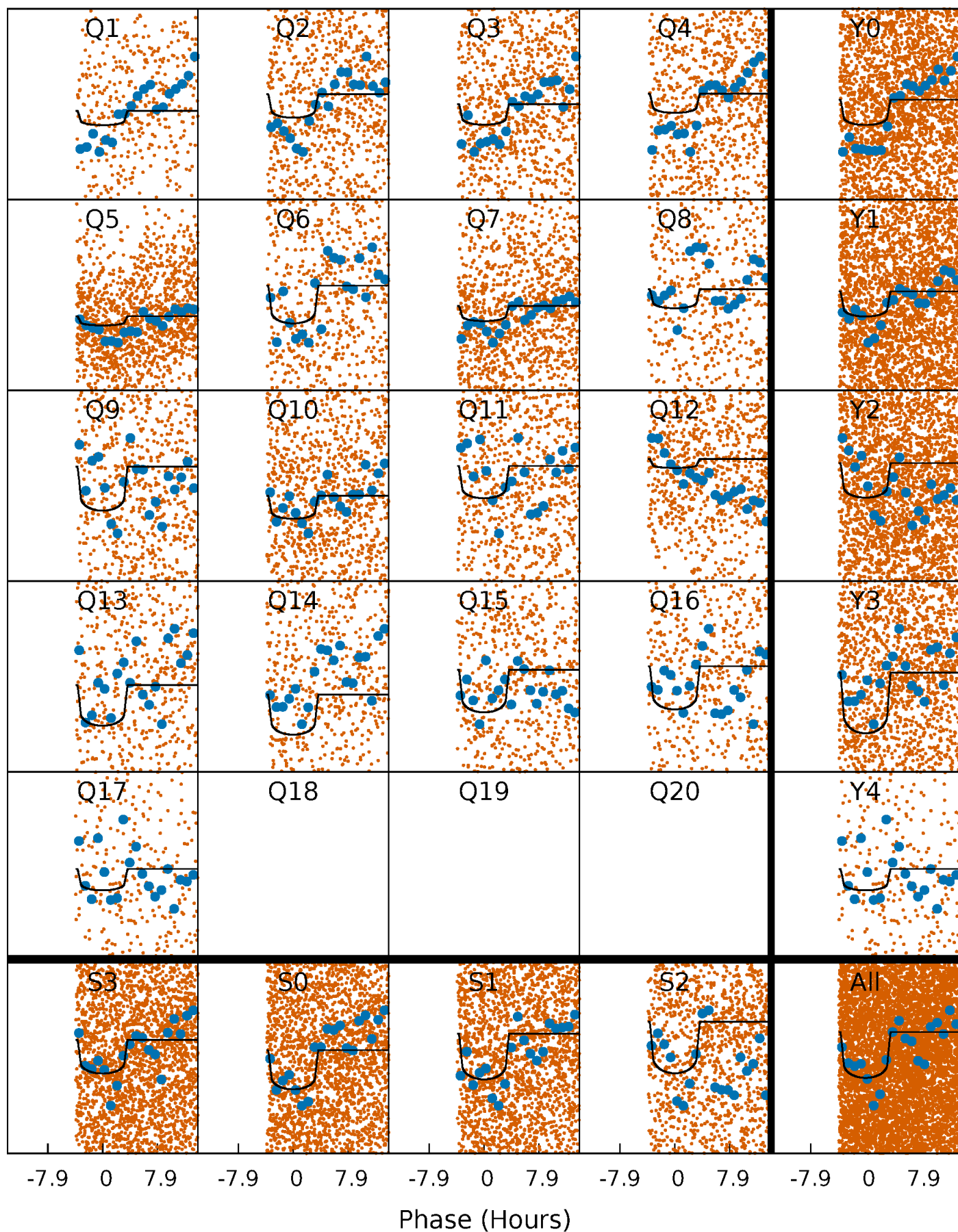
PDC Quarter-Phased Transit Curves

TCE 008896357-02 P= 2.466654 Days $T_0=132.689333$ (BKJD)



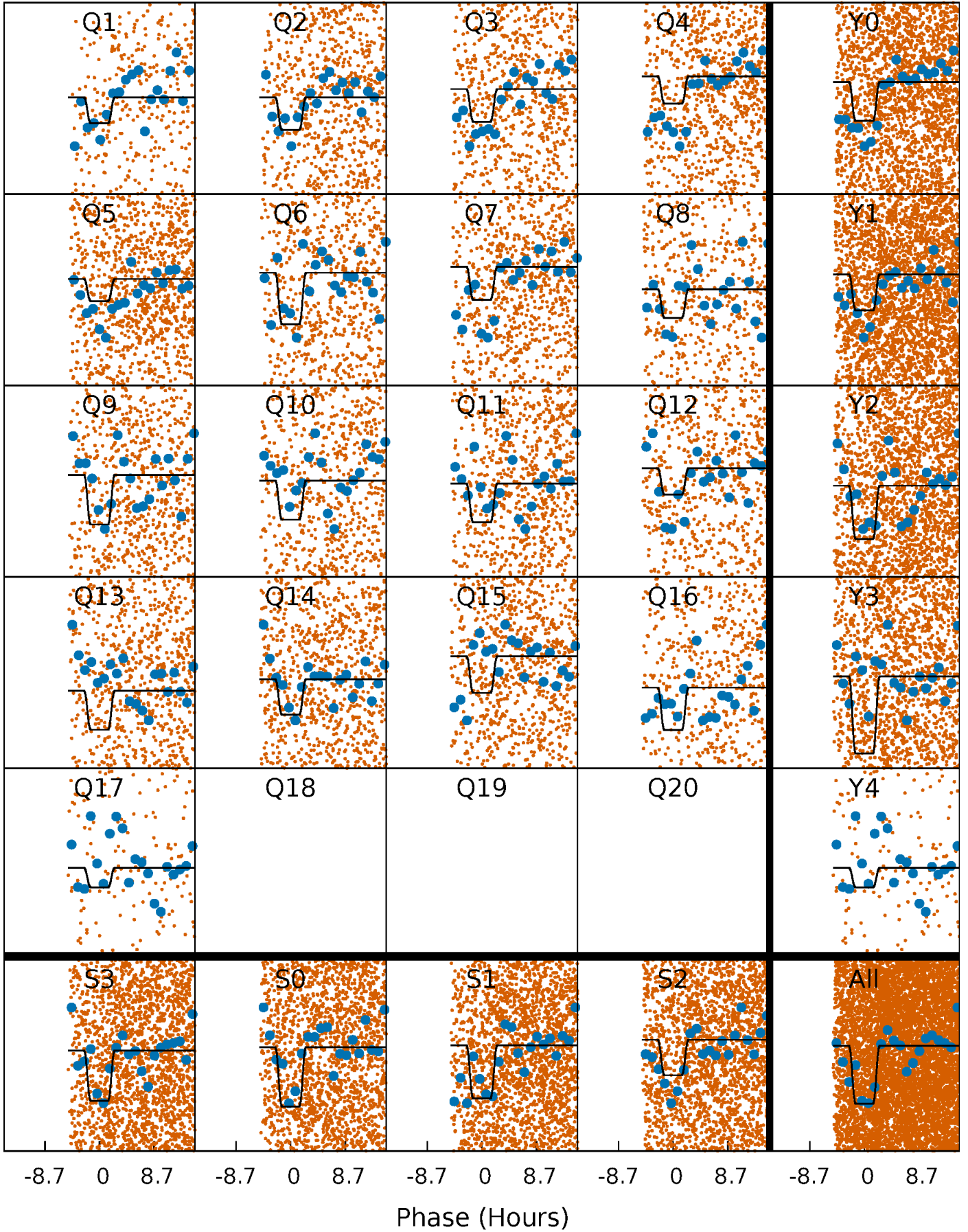
DV Quarter-Phased Transit Curves

TCE 008896357-02 P= 2.466654 Days $T_0=132.689333$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

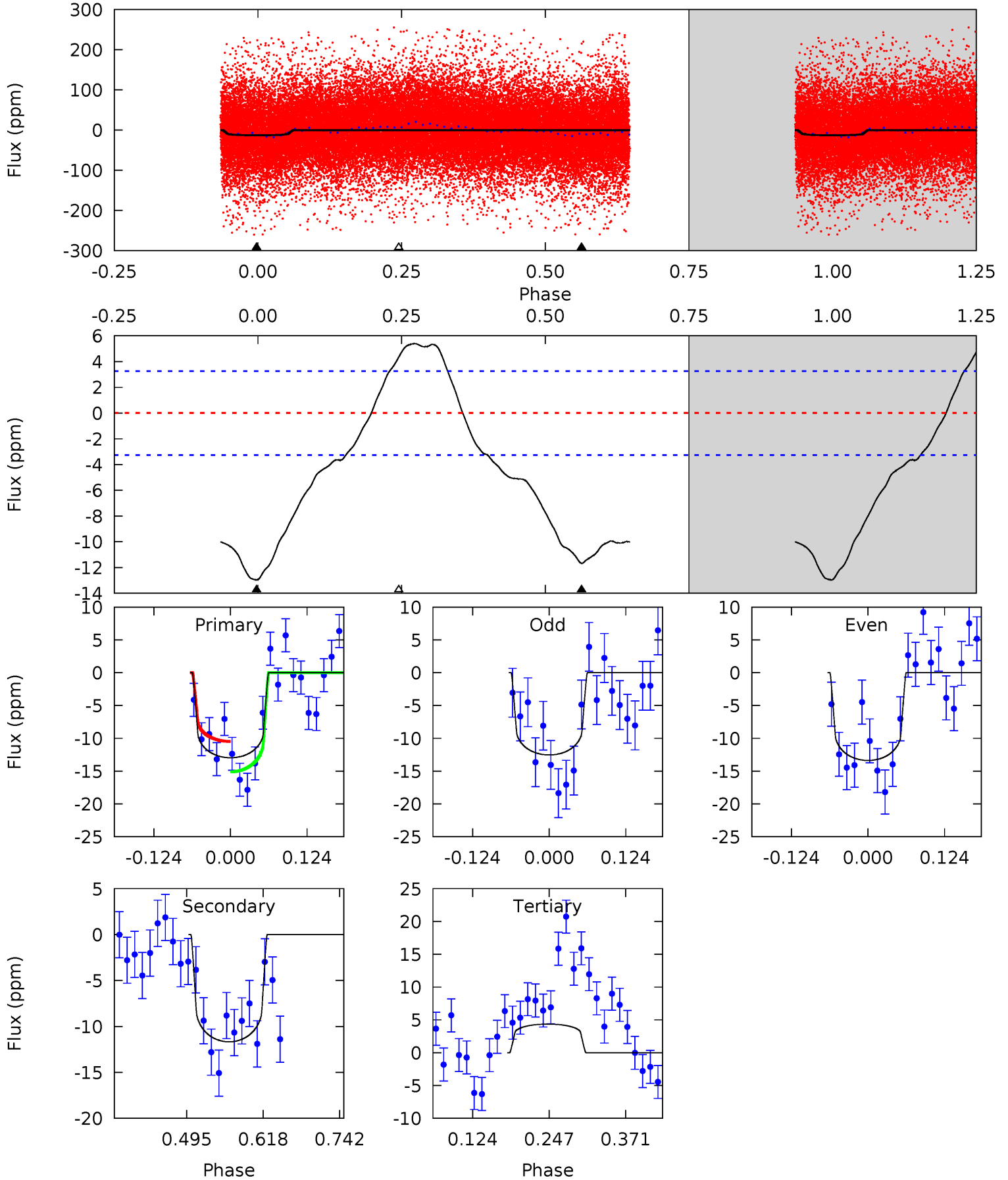
TCE 008896357-02 P= 2.466675 Days $T_0=132.721921$ (BKJD)



DV Model-Shift Uniqueness Test

008896357-02, P = 2.466654 Days, E = 130.222679 Days

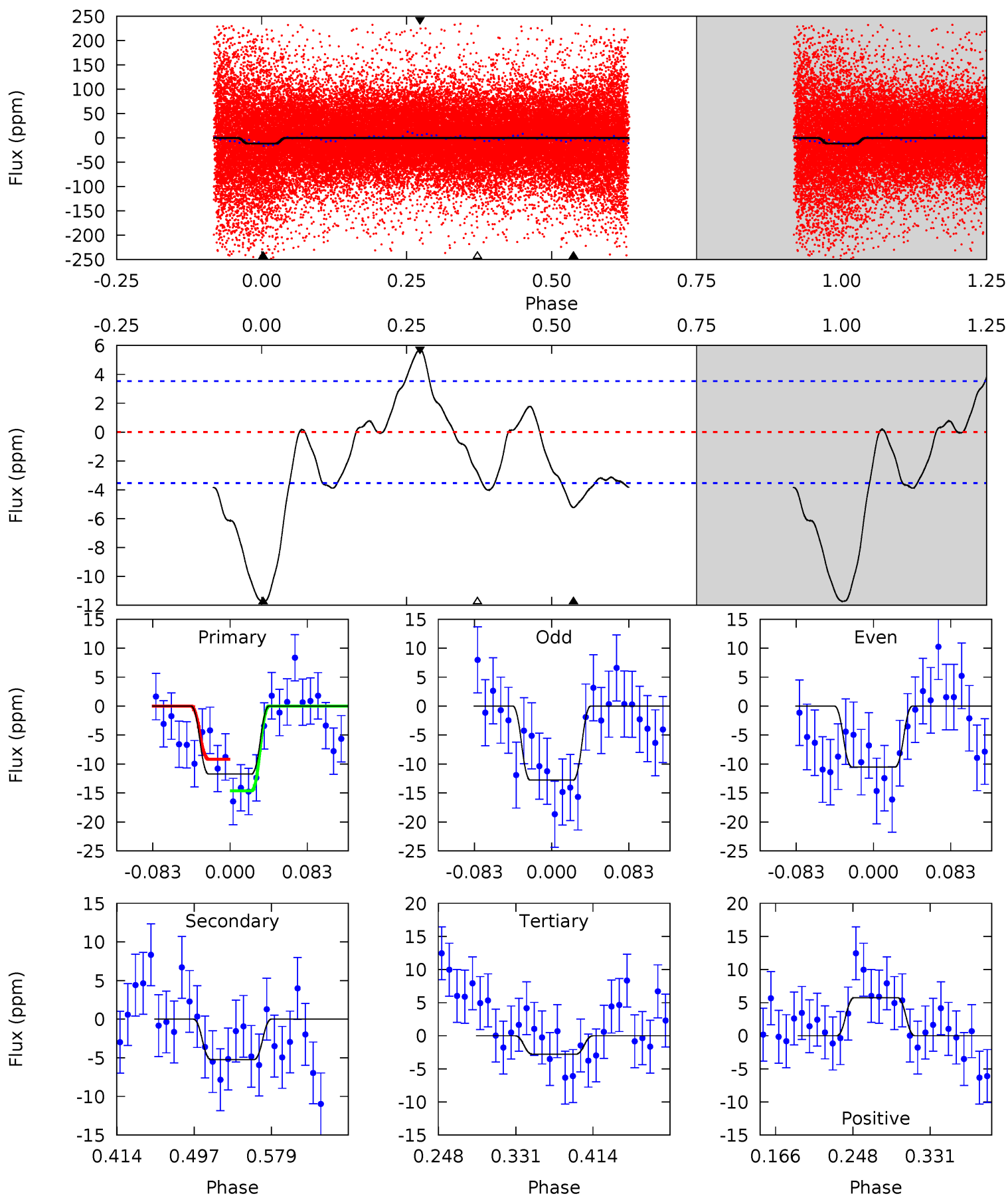
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	16.2	-6.04	0	4.52	1.54	4.98	24.0	18.0	22.2	16.2	0.58	1.17	0.29	3.33



Alt Model-Shift Uniqueness Test

008896357-02, P = 2.466675 Days, E = 130.255246 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	6.82	3.65	7.50	4.60	1.73	3.49	11.6	7.79	3.17	-0.67	1.47	1.25	0.33	2.94



Stellar Parameters For KIC 008896357

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7828^{+217}_{-326}	$3.677^{+0.432}_{-0.108}$	$0.000^{+0.200}_{-0.350}$	$3.463^{+0.821}_{-1.641}$	$2.081^{+0.343}_{-0.514}$	$0.071^{+0.285}_{-0.023}$
	+3%/-4%	+12%/-3%	+inf%/-inf%	+24%/-47%	+16%/-25%	+403%/-32%
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 008896357-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 1	$1.32^{+0.36}_{-0.38}$	4036^{+356}_{-535}	7156^{+1017}_{-671}	$7.606^{+6.929}_{-2.785}$
Alt.	-5 ± 1	$1.29^{+0.35}_{-0.37}$	4050^{+307}_{-539}	5840^{+705}_{-518}	$3.682^{+3.394}_{-1.484}$

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

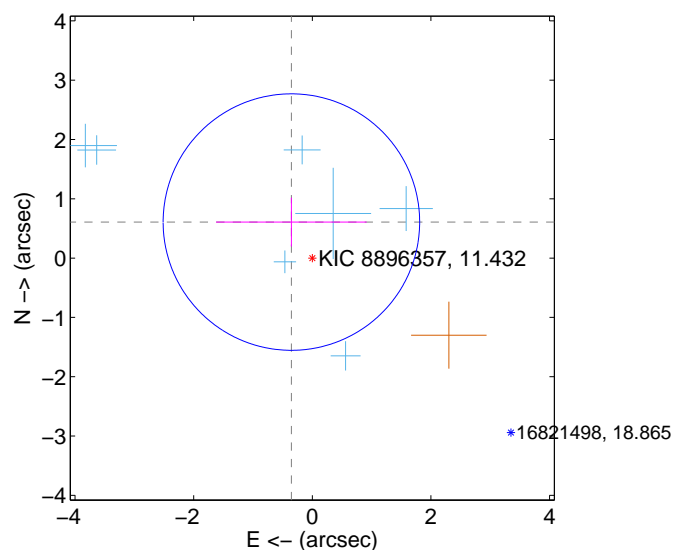
Supplemental centroid analysis for 008896357-02. **Kepler magnitude: 11.43.** Transit SNR 10.83

There are 7 quarters with good PRF difference image offsets

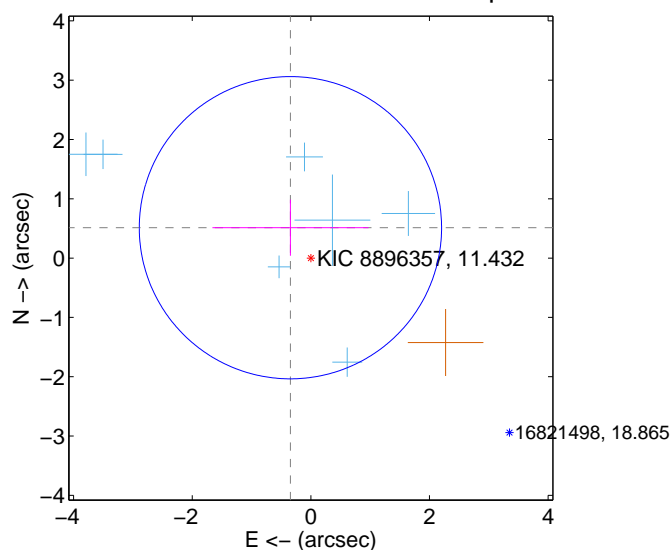
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.702 ± 0.721	0.97	0.352 ± 1.269	0.607 ± 0.411
PRF-fit source offset from KIC position	0.617 ± 0.849	0.73	0.344 ± 1.316	0.512 ± 0.473
photometric centroid source offset	0.74 ± 0.89	0.83	-0.18 ± 0.77	0.72 ± 0.89

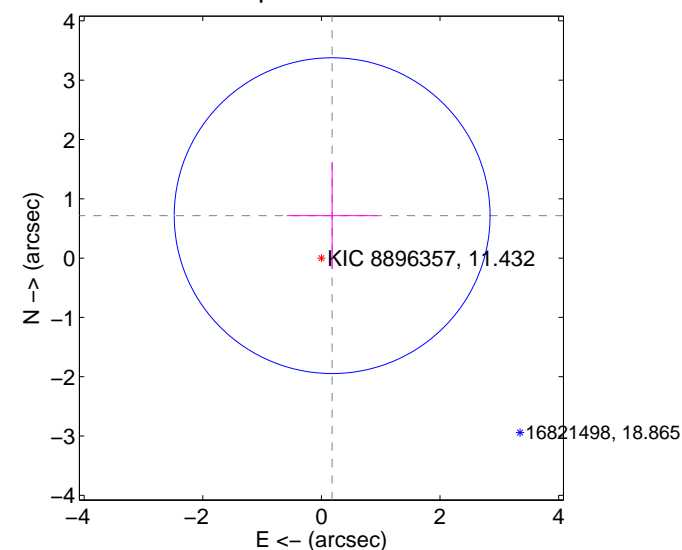
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

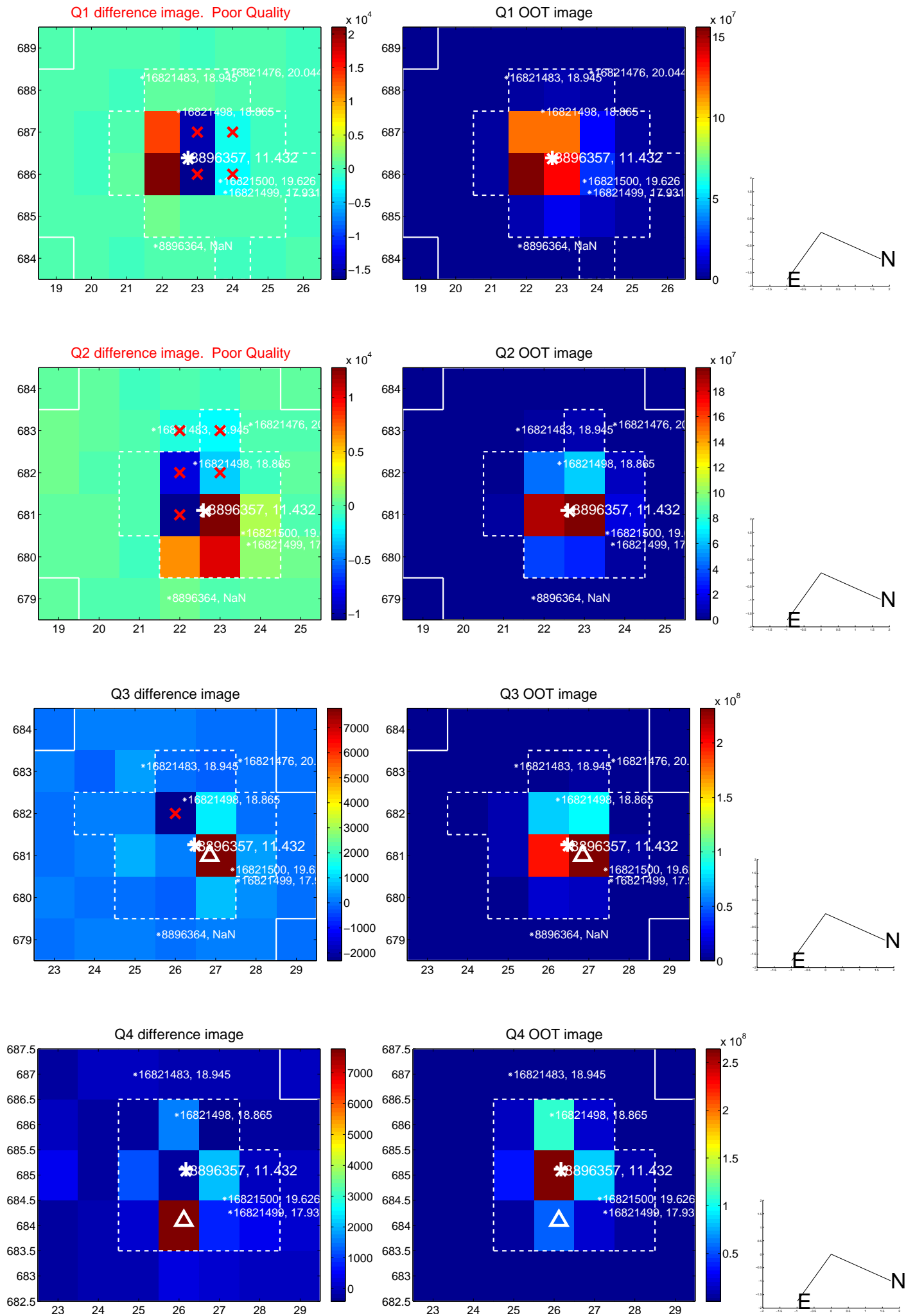


offset from photometric centroids

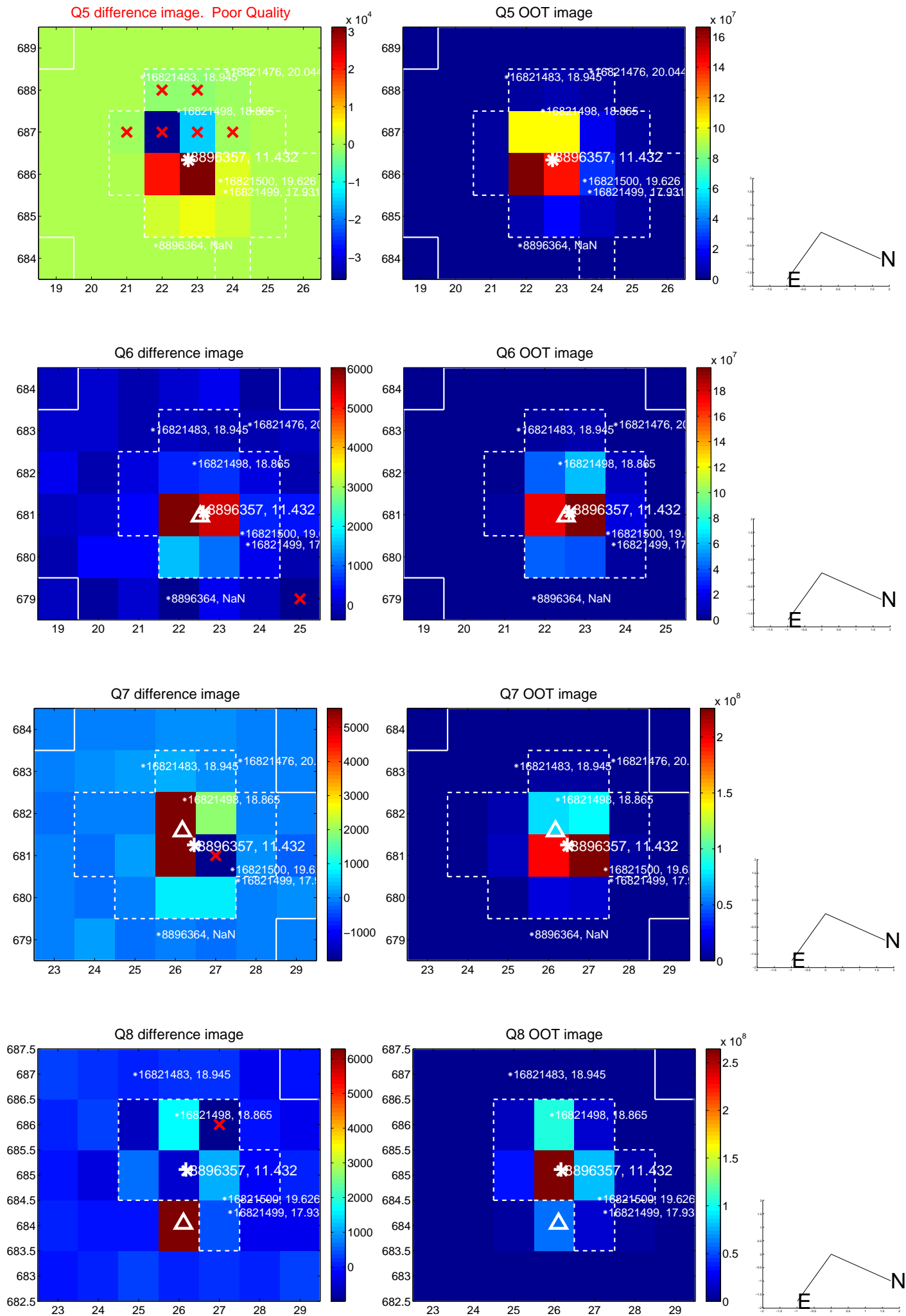


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

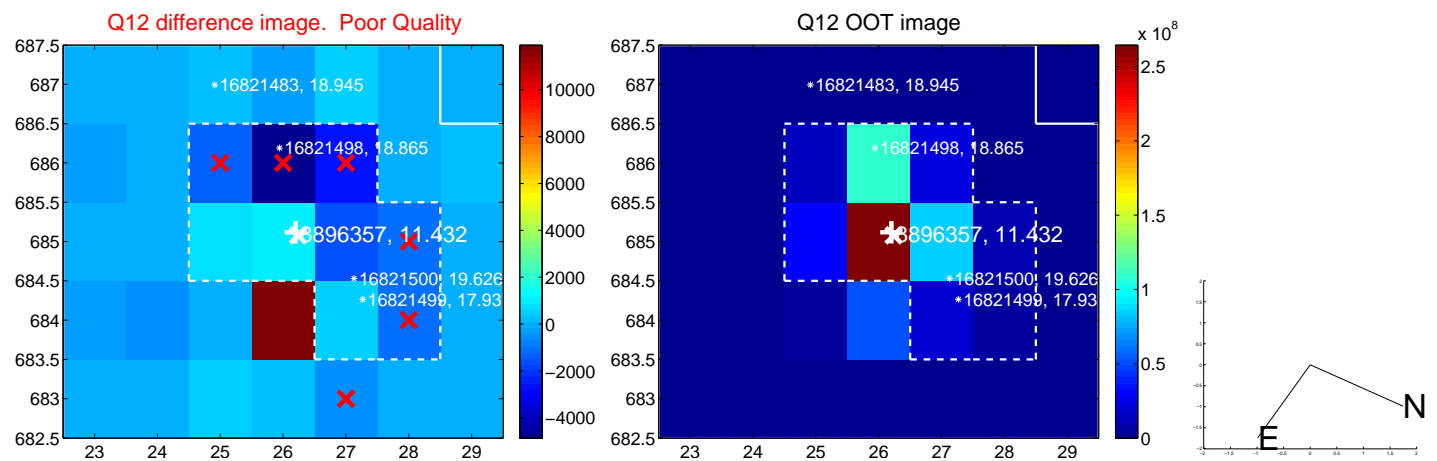
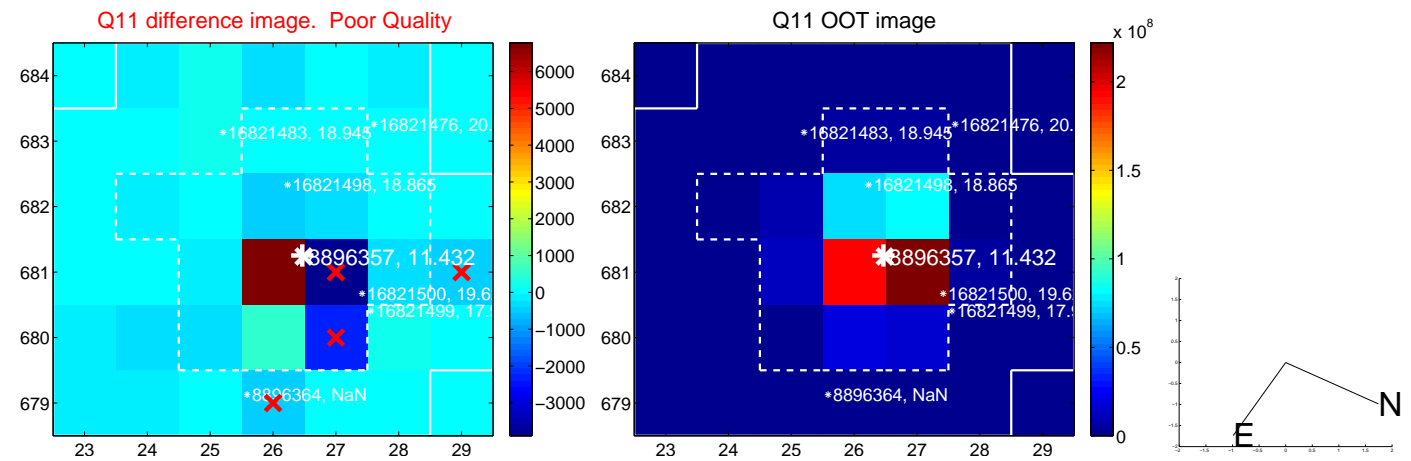
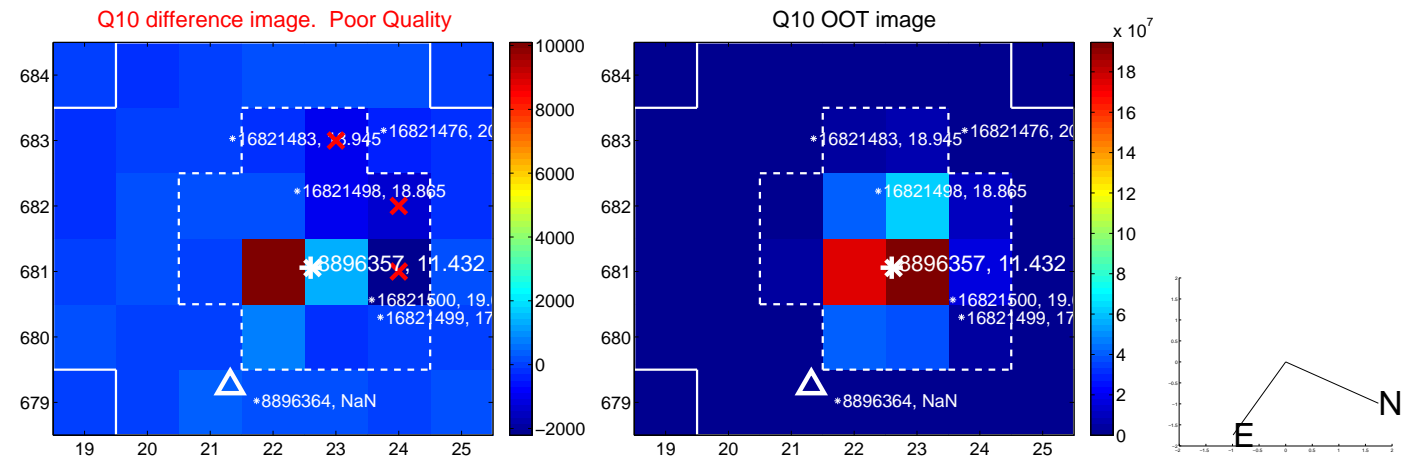
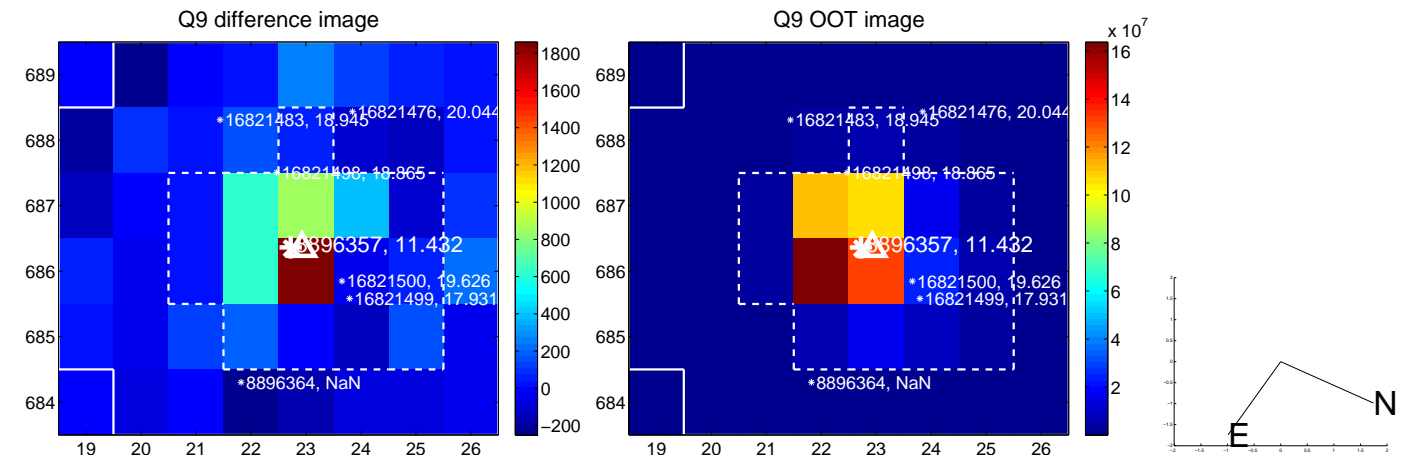
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



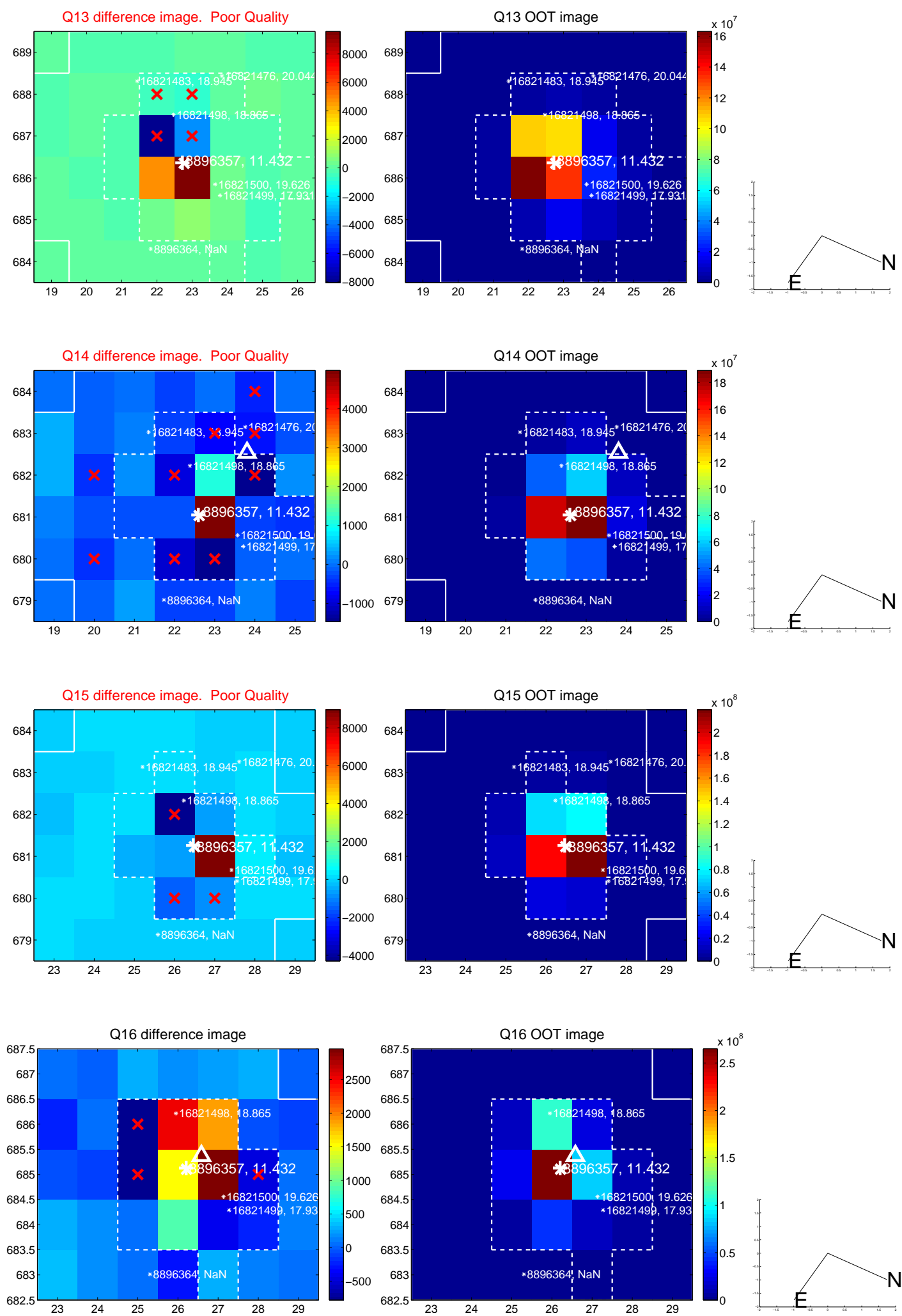
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



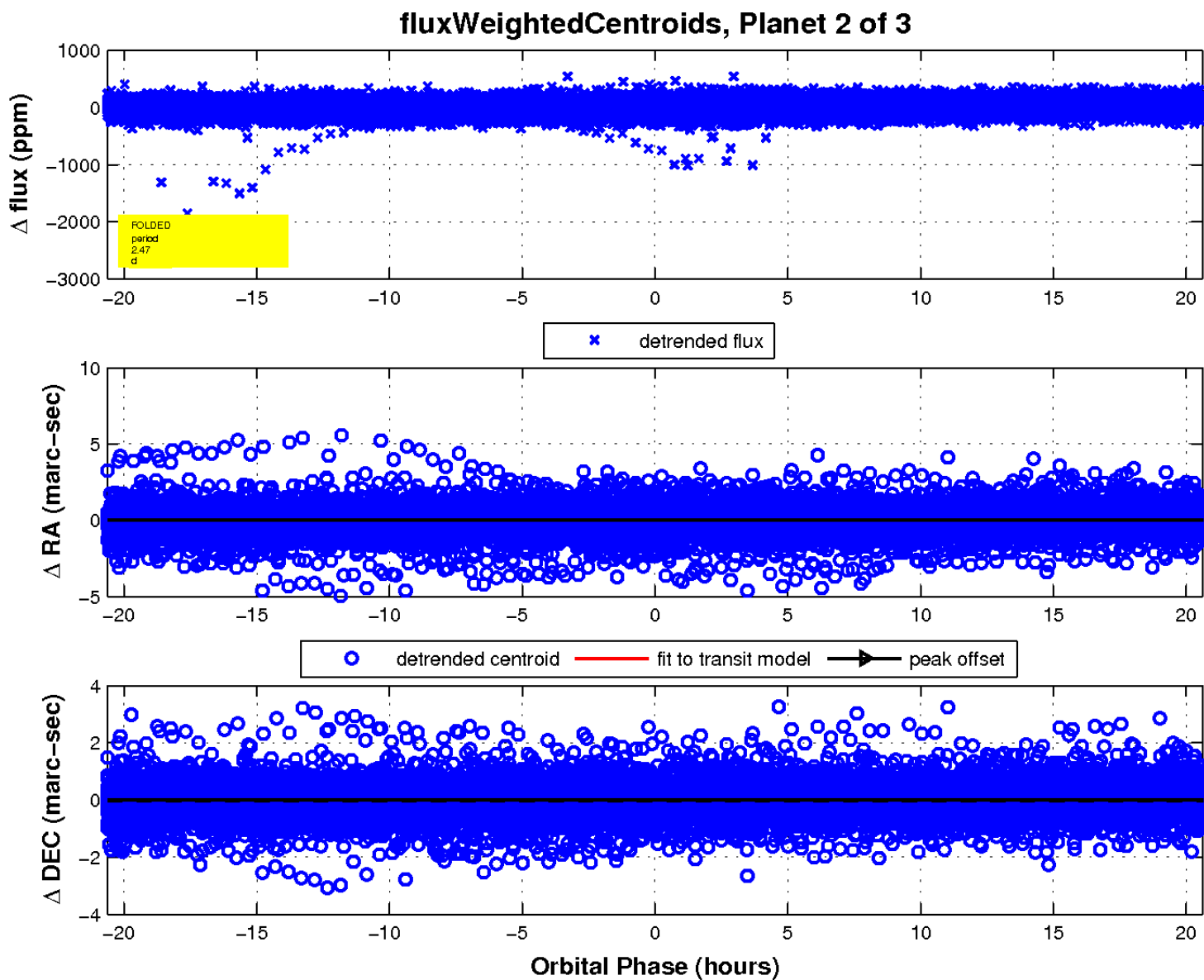
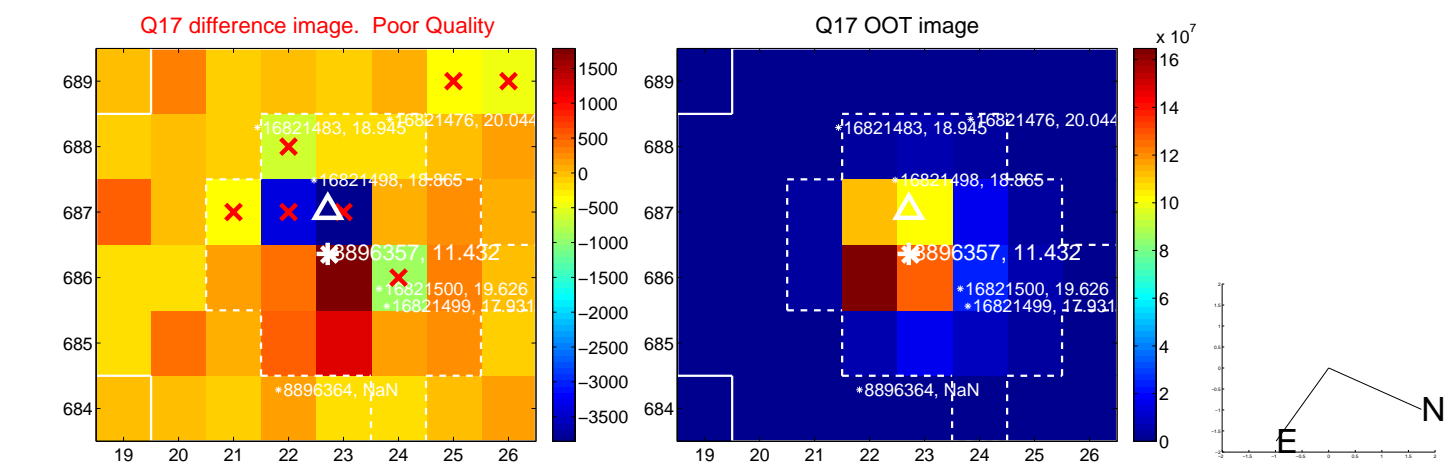
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

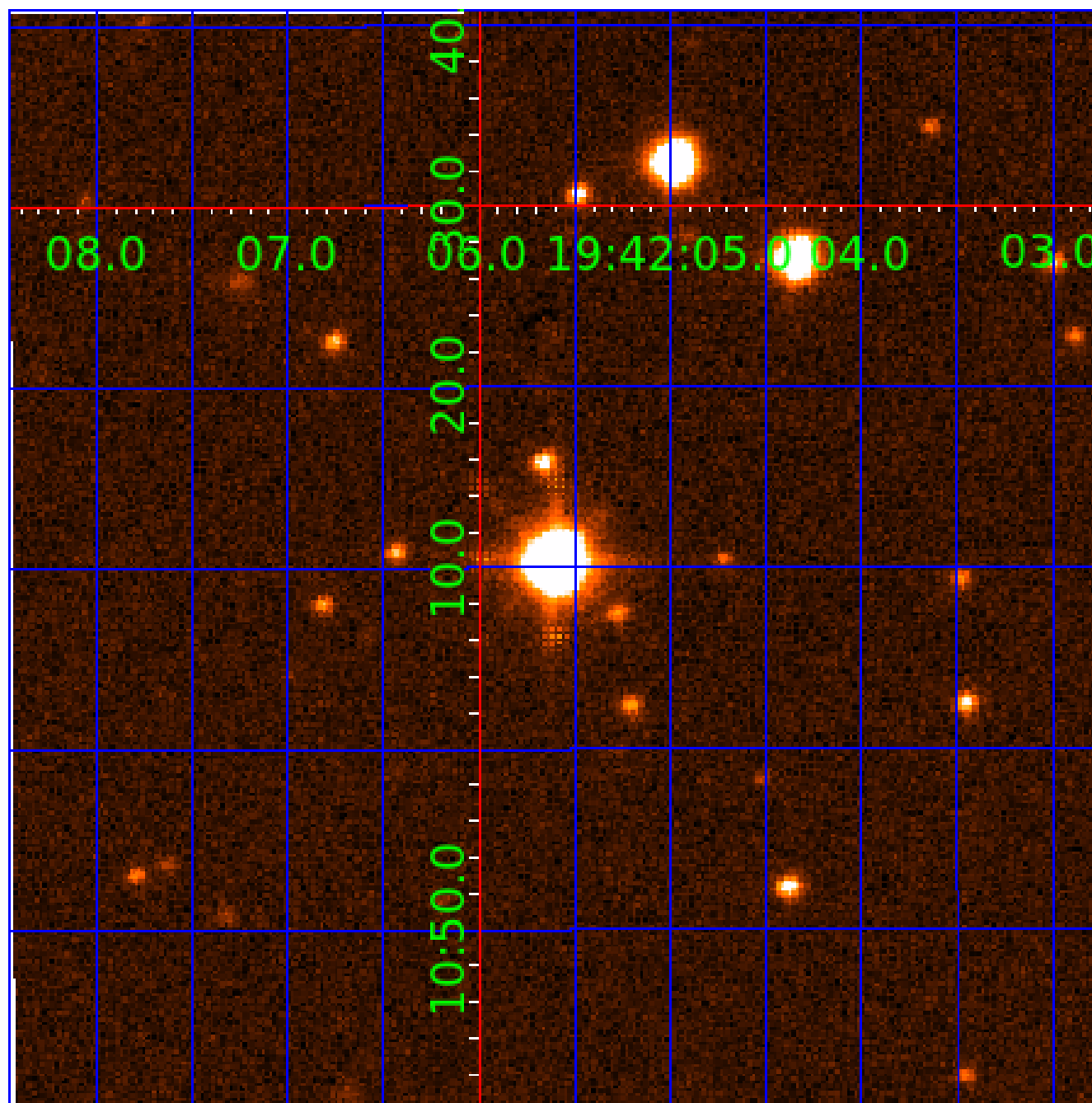


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008896357

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})
008896357-01	OBS	No	2.466640	132.177371	14.7	5.568	11.7	12.7	3.46	7828	1.54	19393.59
008896357-02	OBS	No	2.466654	132.689333	12.7	6.877	10.5	10.8	3.46	7828	1.44	19393.44
008896357-03	OBS	No	2.466923	131.797230	12.9	20.880	10.0	8.5	3.46	7828	1.25	19390.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008896357-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
008896357-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
008896357-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

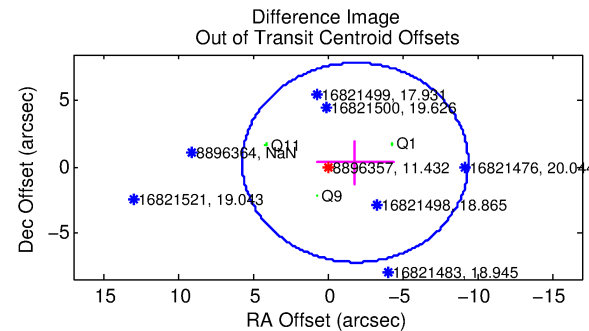
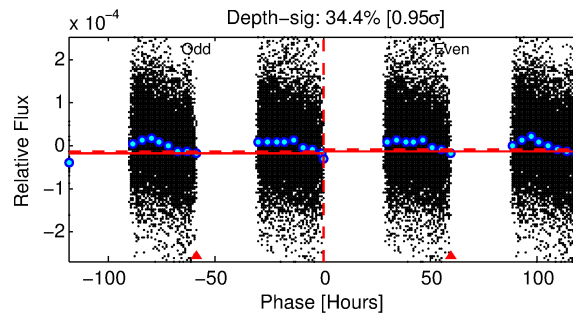
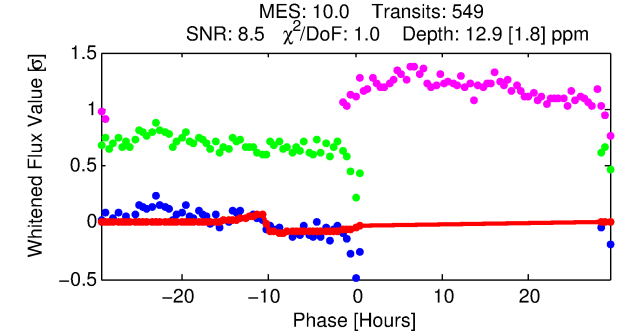
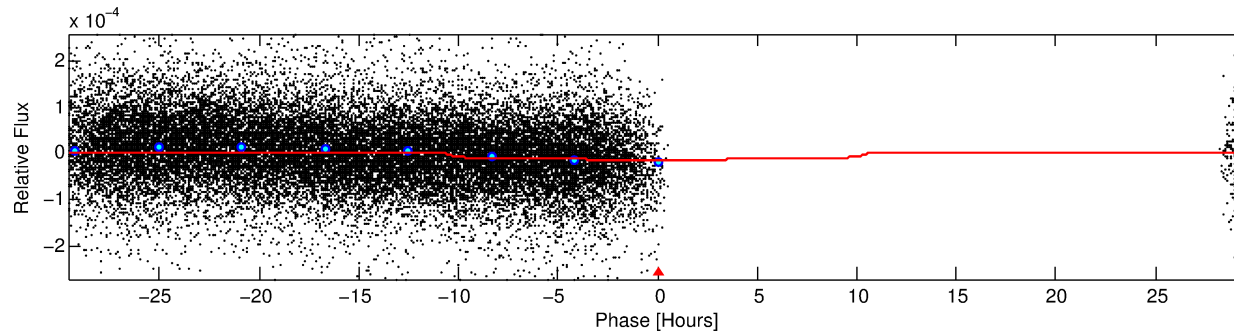
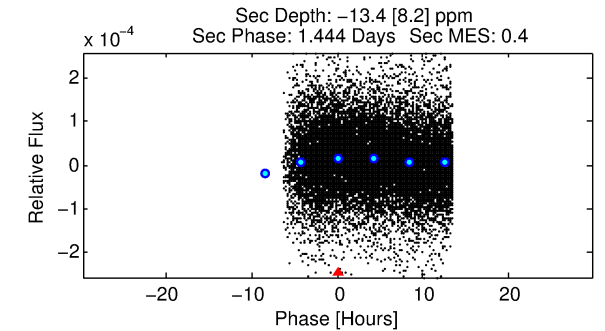
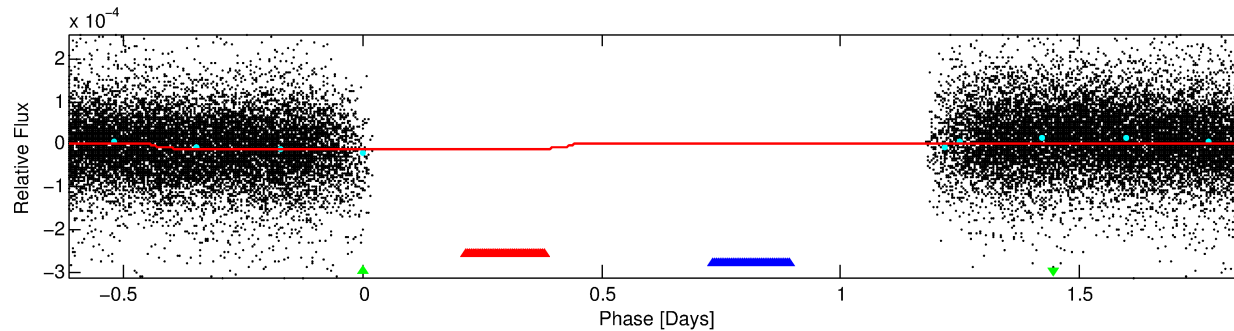
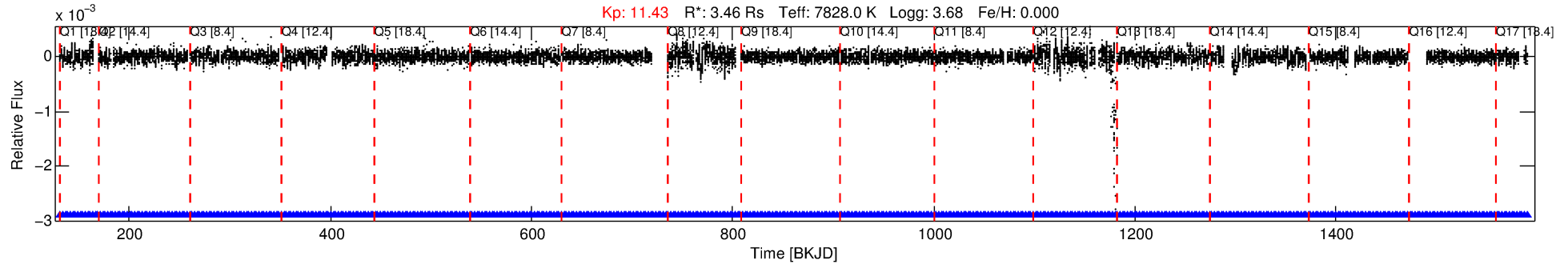
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008896357-03

No Significant Match Found

DV One-Page Summary

KIC: 8896357 Candidate: 3 of 3 Period: 2.467 d



DV Fit Results:

Period = 2.46692 [0.00005] d
Epoch = 131.7972 [0.0283] BKJD
 R_p/R^* = 0.0033 [0.0029]
 a/R^* = 1.12 [1.14]
 b = 0.04 [139.31]
 Seff = 19390.63 [14605.02]
 T_{eq} = 3009 [567] K
 R_p = 1.25 [1.24] R_e
 a = 0.0456 [0.0209] AU
 Ag = N/A
 T_{eff} = N/A

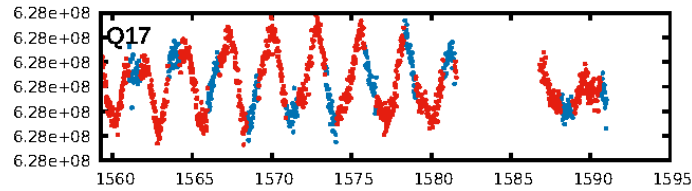
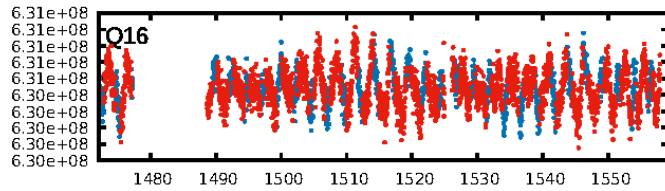
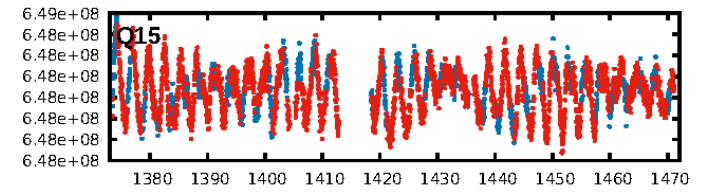
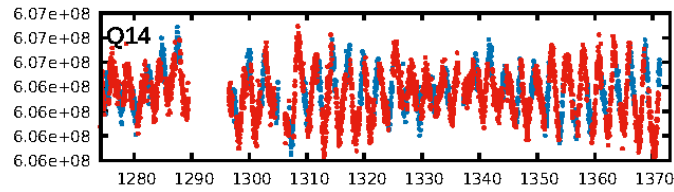
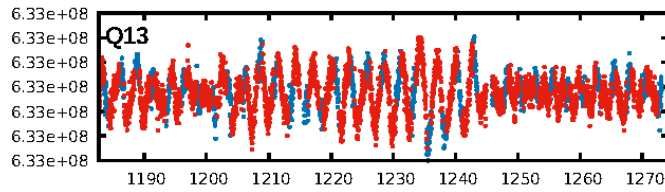
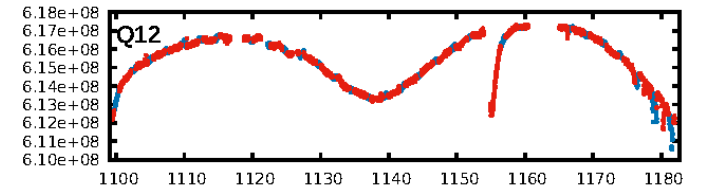
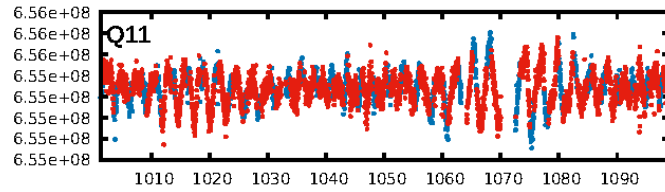
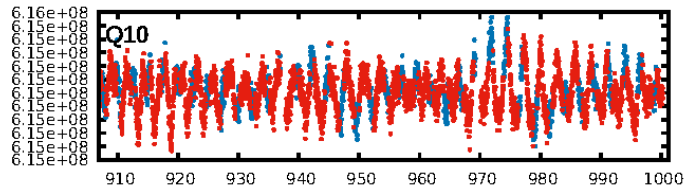
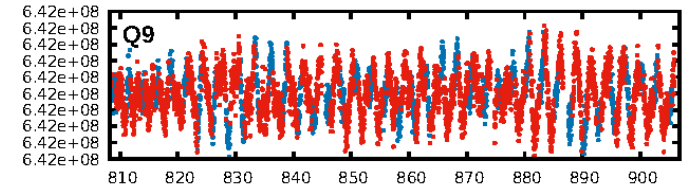
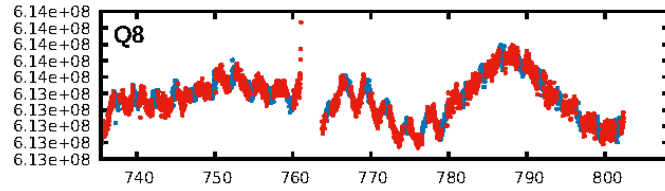
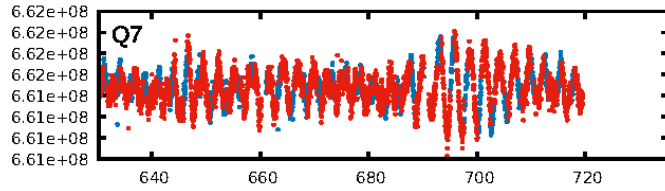
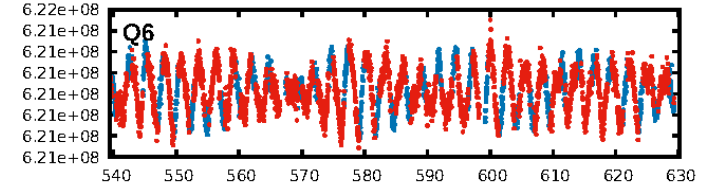
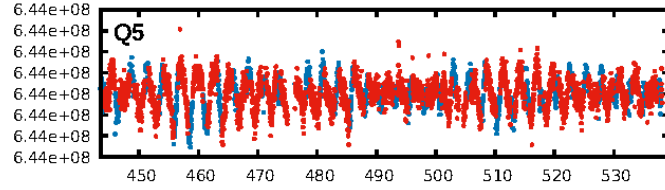
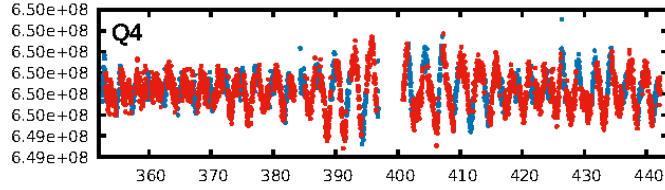
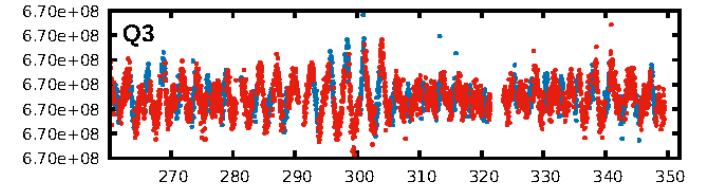
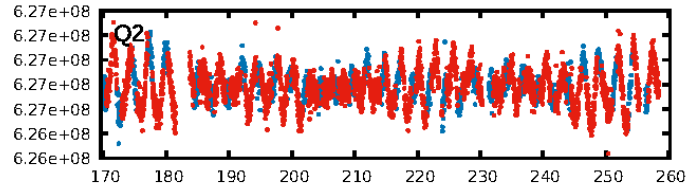
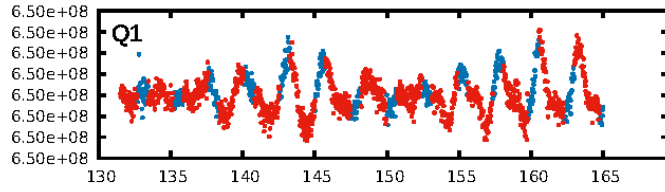
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [524/524]
GhostDiagnostic-chr: 3.568
Centroid-sig: 37.4%
Centroid-so: 0.352 arcsec [0.60σ]
OotOffset-rm: 1.881 arcsec [0.75σ]
KicOffset-rm: 1.905 arcsec [0.75σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/17]

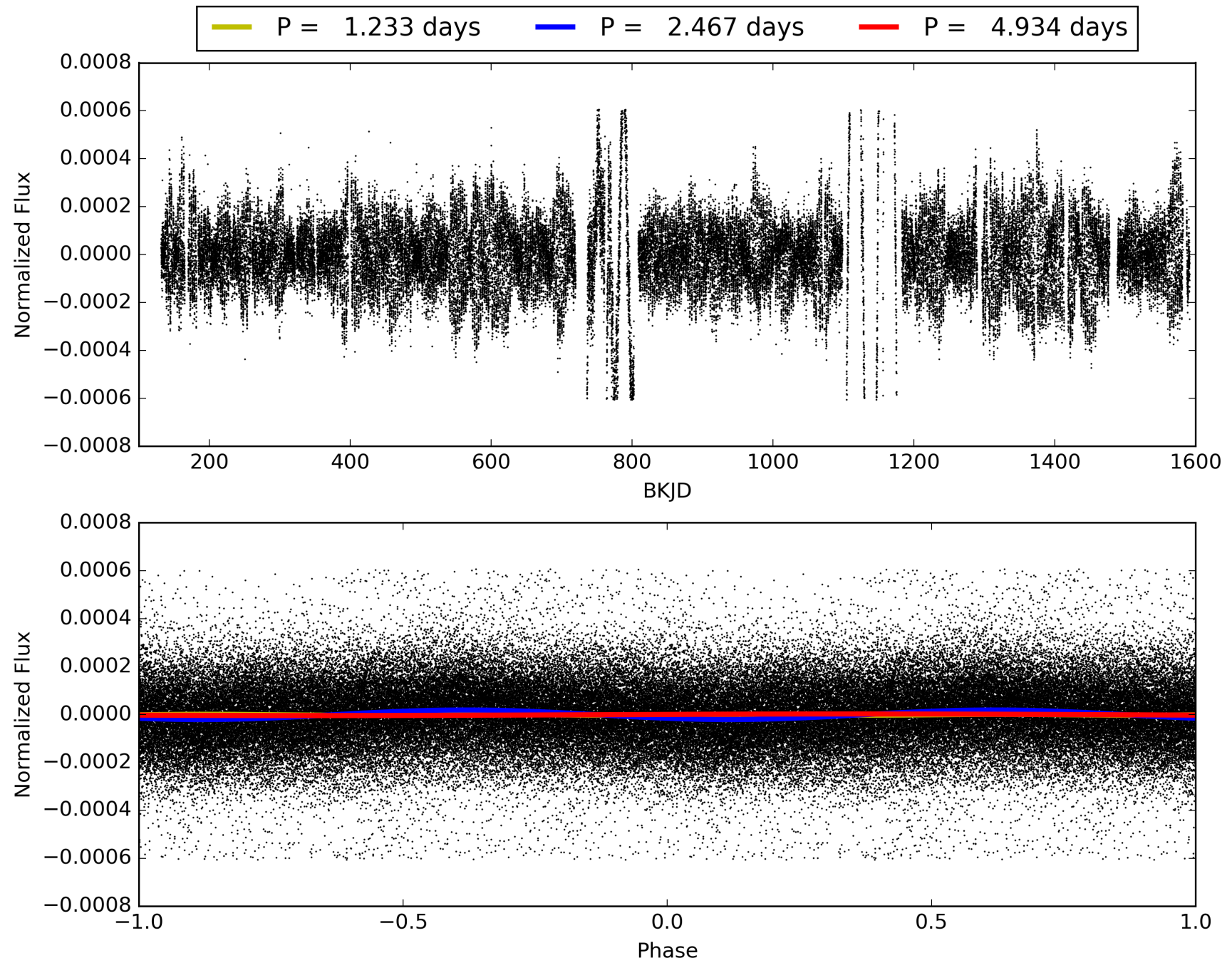
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 18:24:26 Z

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

TCE 008896357-03, PDC Light Curves

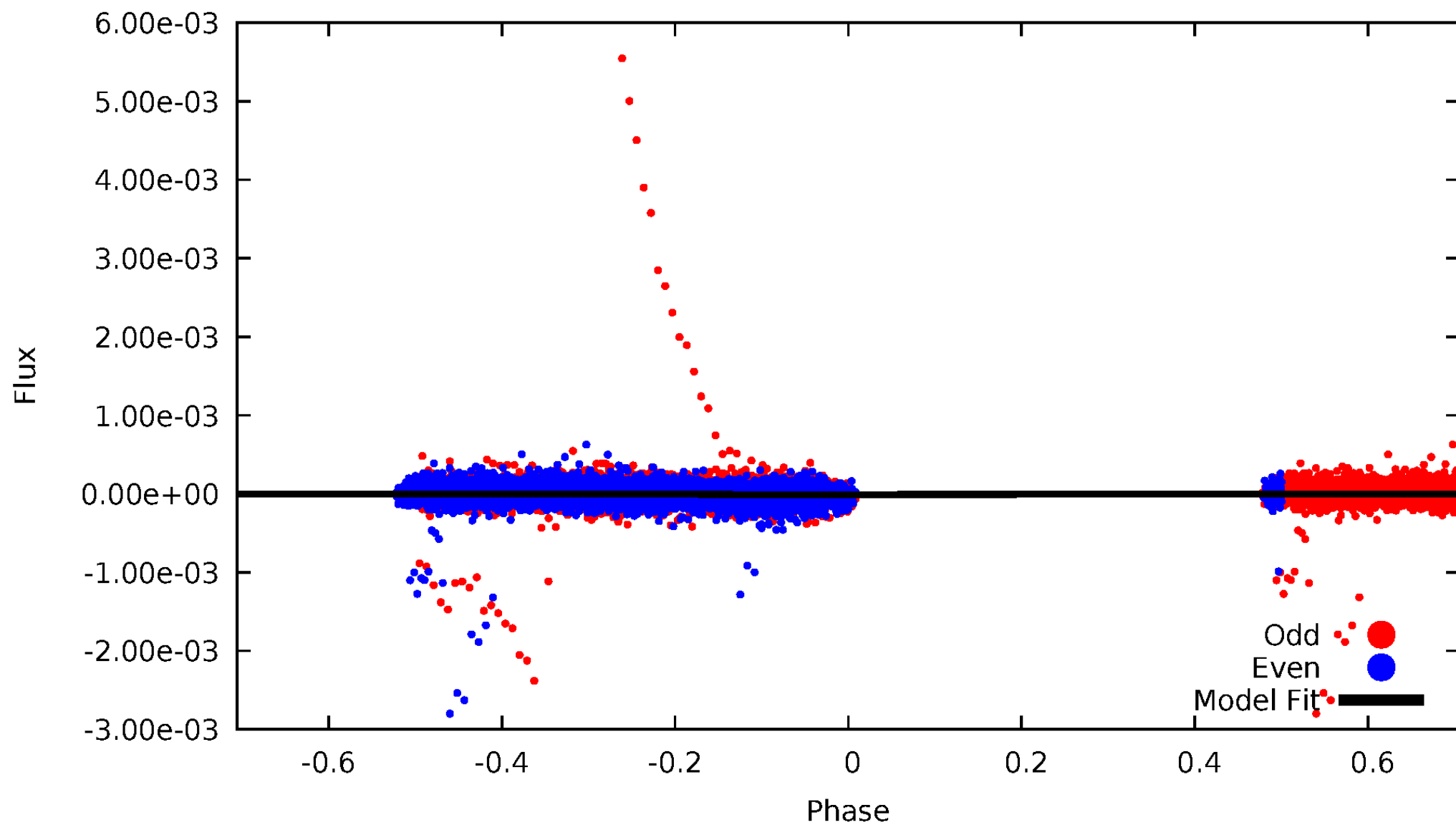


TCE 008896357-03



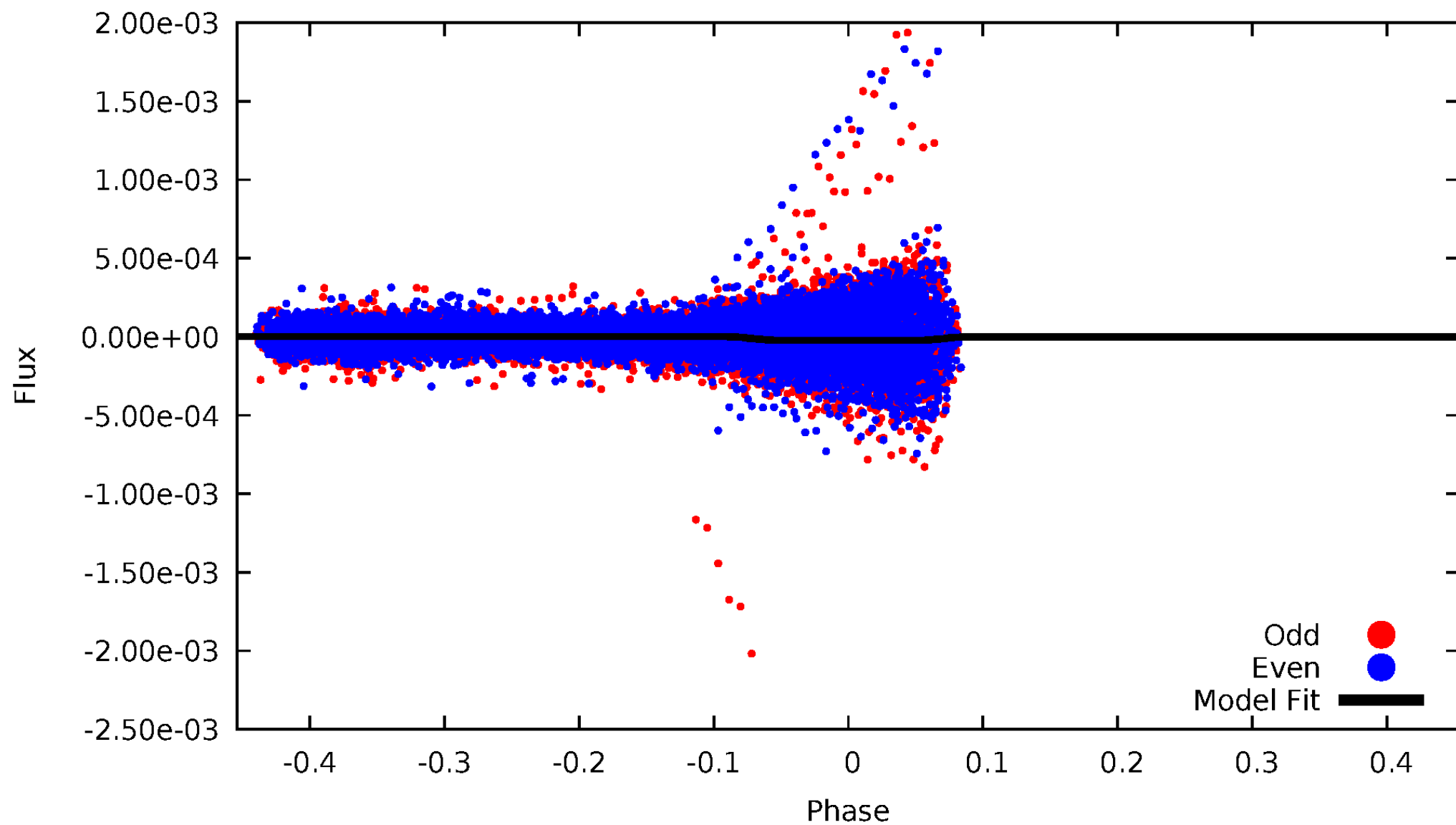
DV Odd/Even

TCE 008896357-03



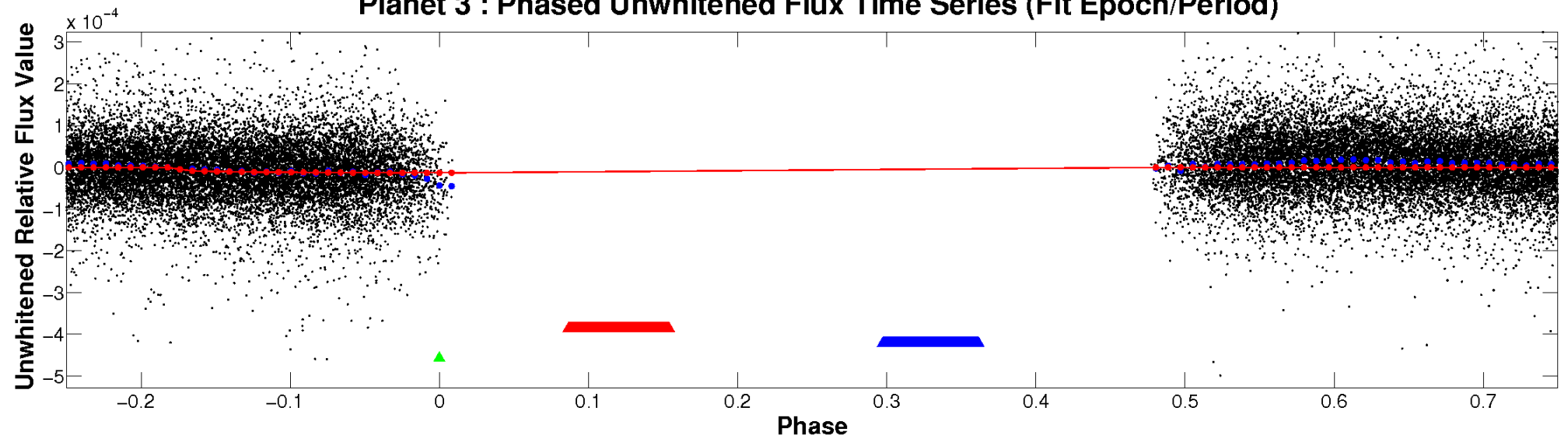
ALT Odd/Even

TCE 008896357-03

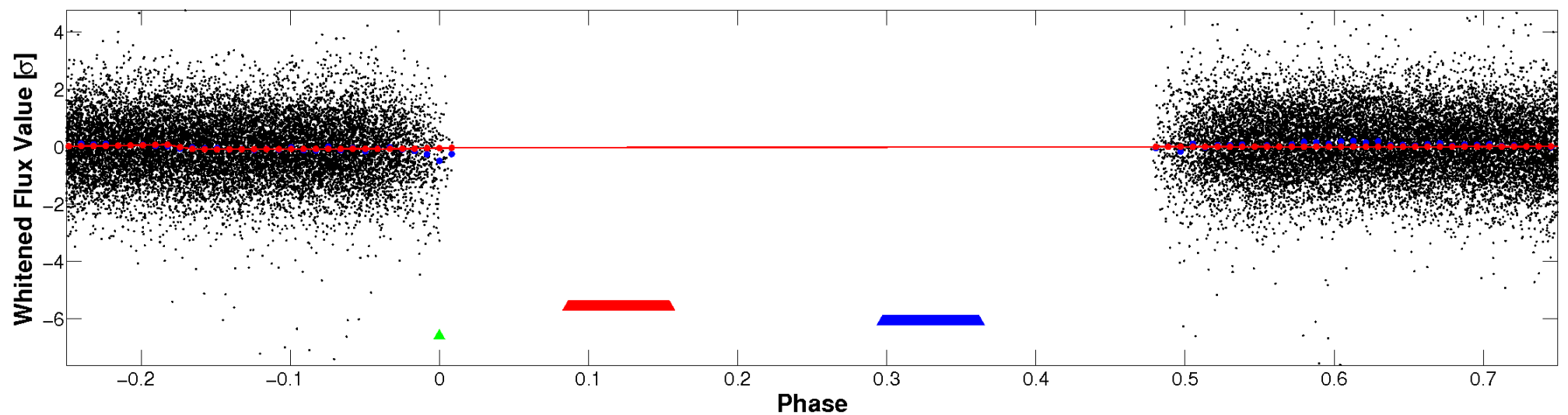


Non-Whitened Vs. Whitened Light Curve

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

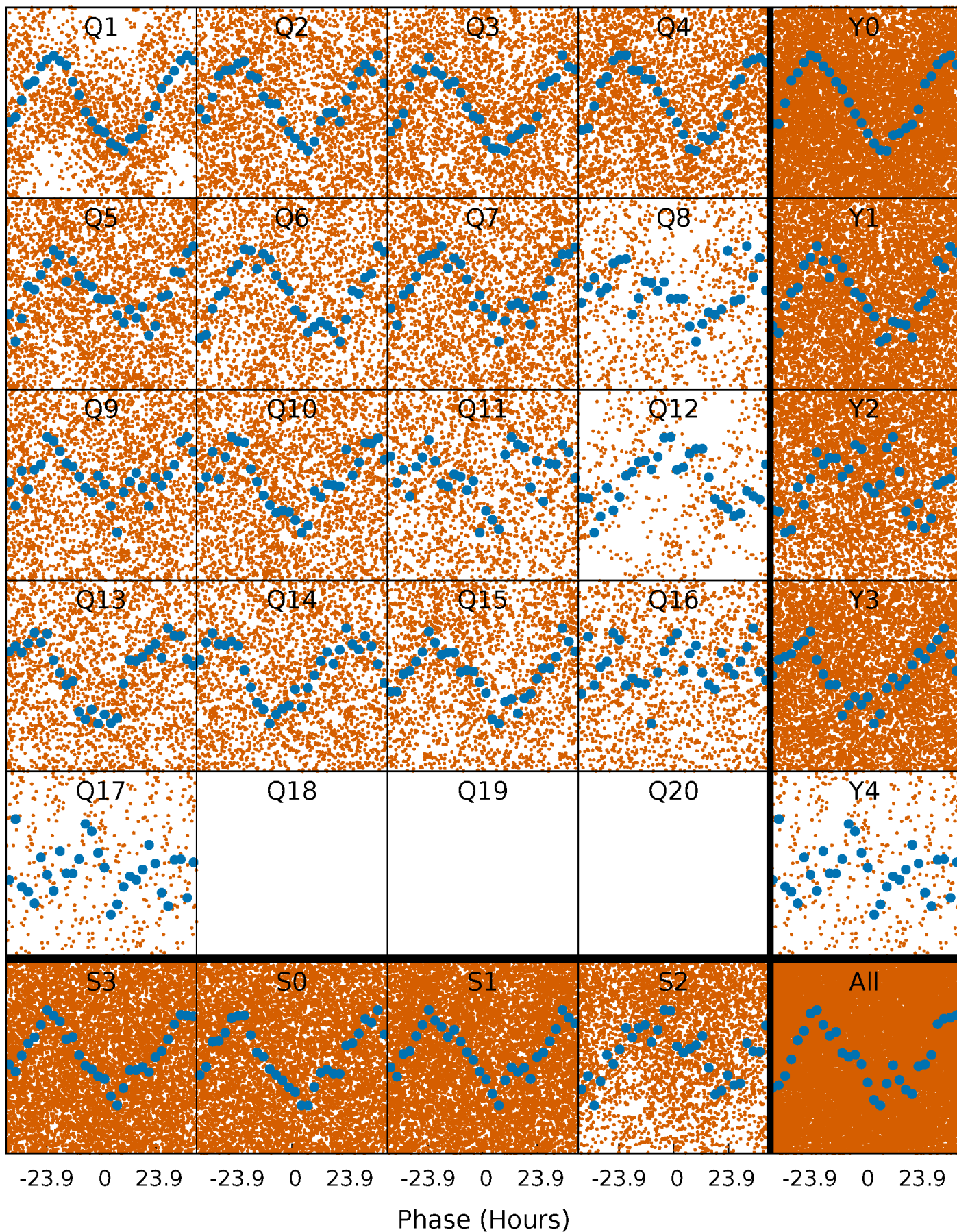


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



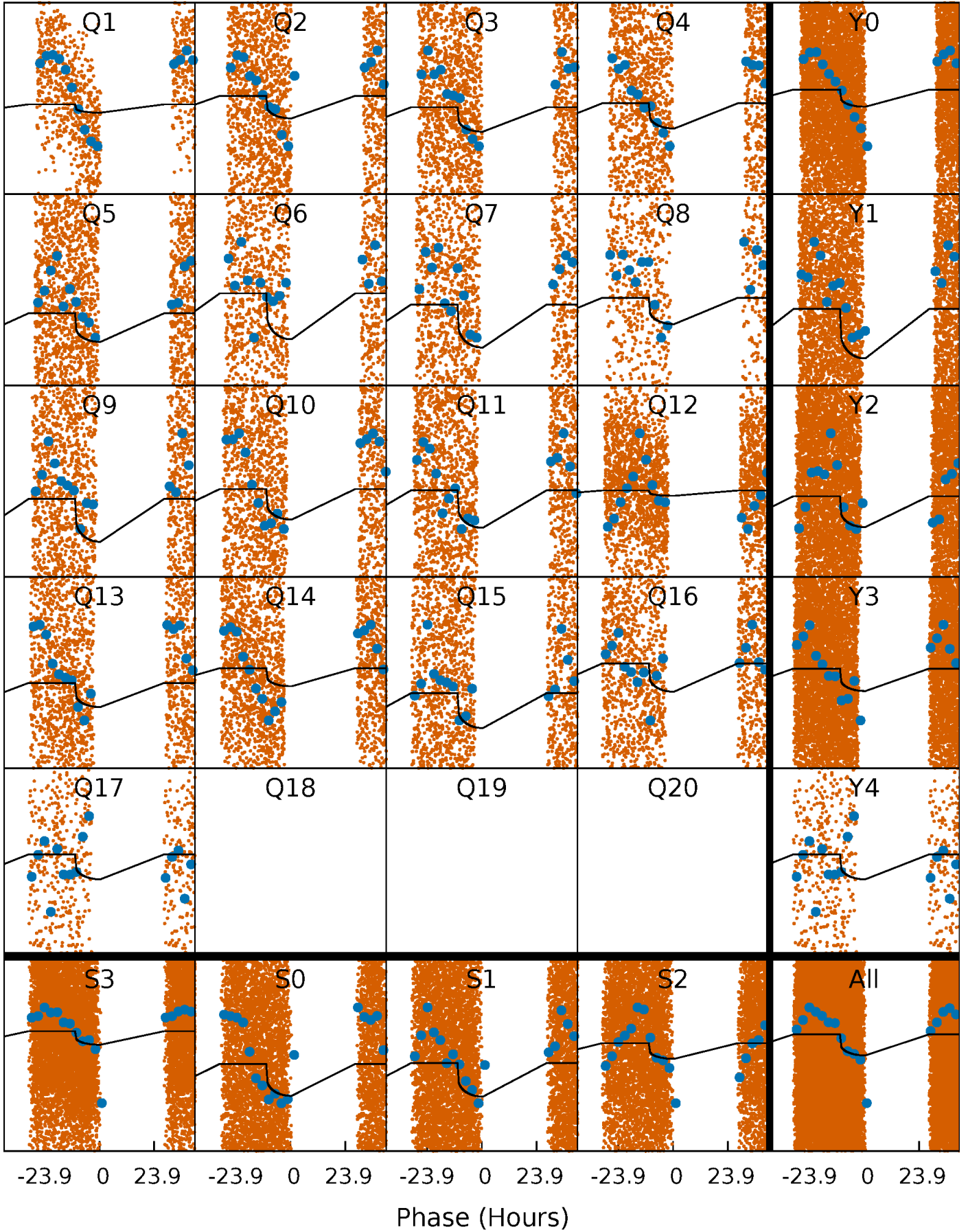
PDC Quarter-Phased Transit Curves

TCE 008896357-03 P= 2.466923 Days $T_0=131.797230$ (BKJD)



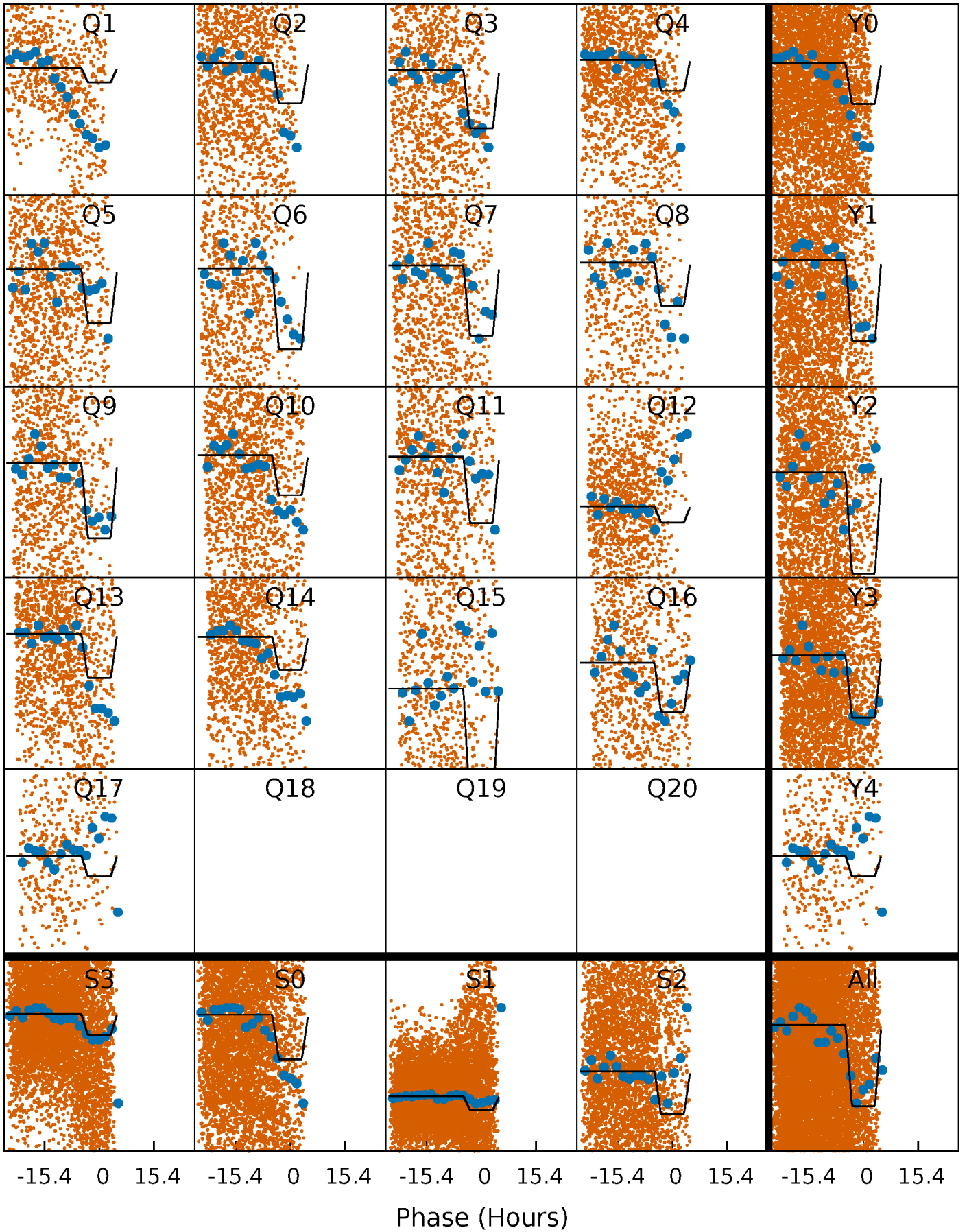
DV Quarter-Phased Transit Curves

TCE 008896357-03 P= 2.466923 Days $T_0=131.797230$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

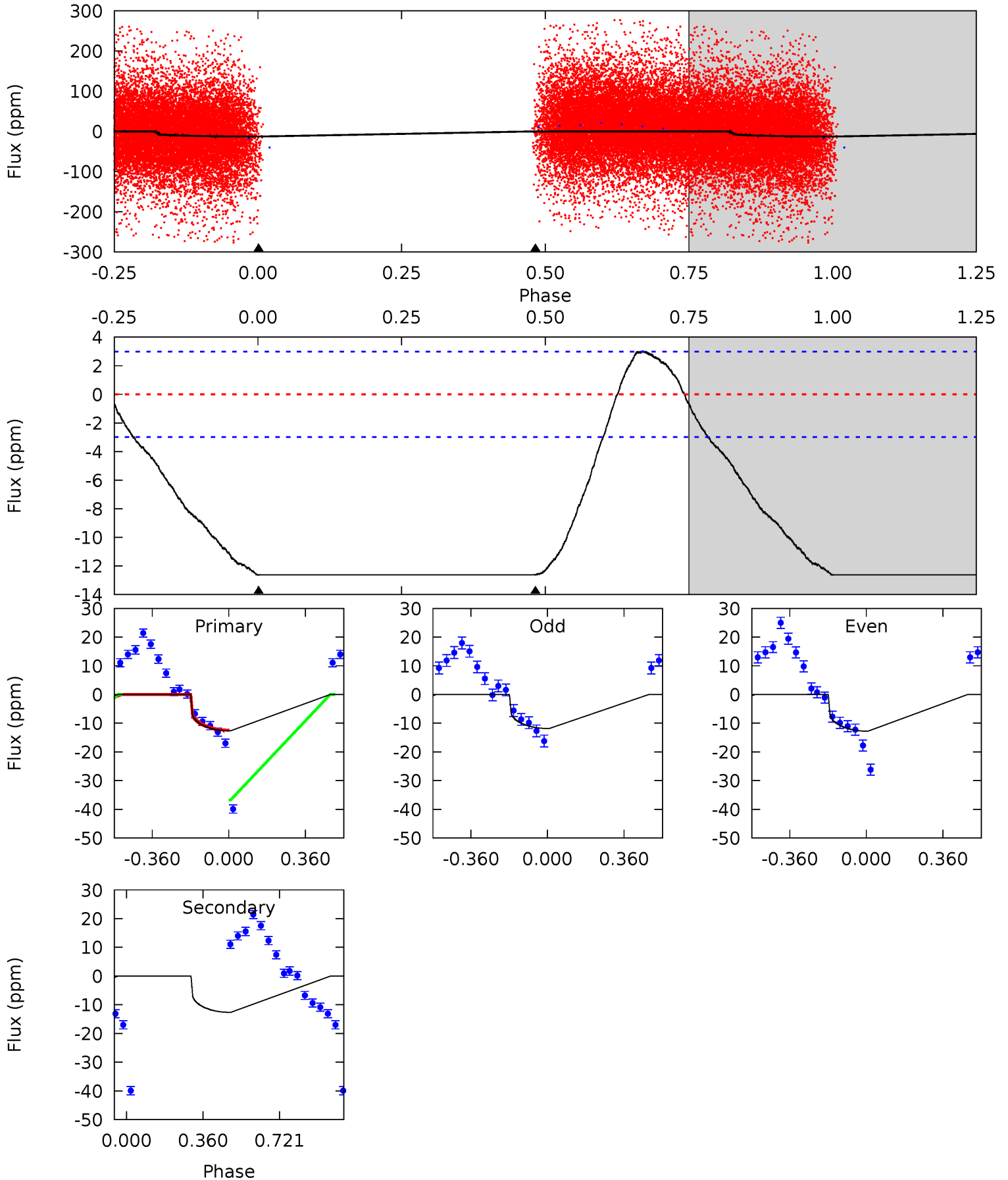
TCE 008896357-03 P= 2.466405 Days $T_0=131.749218$ (BKJD)



DV Model-Shift Uniqueness Test

008896357-03, P = 2.466923 Days, E = 129.330307 Days

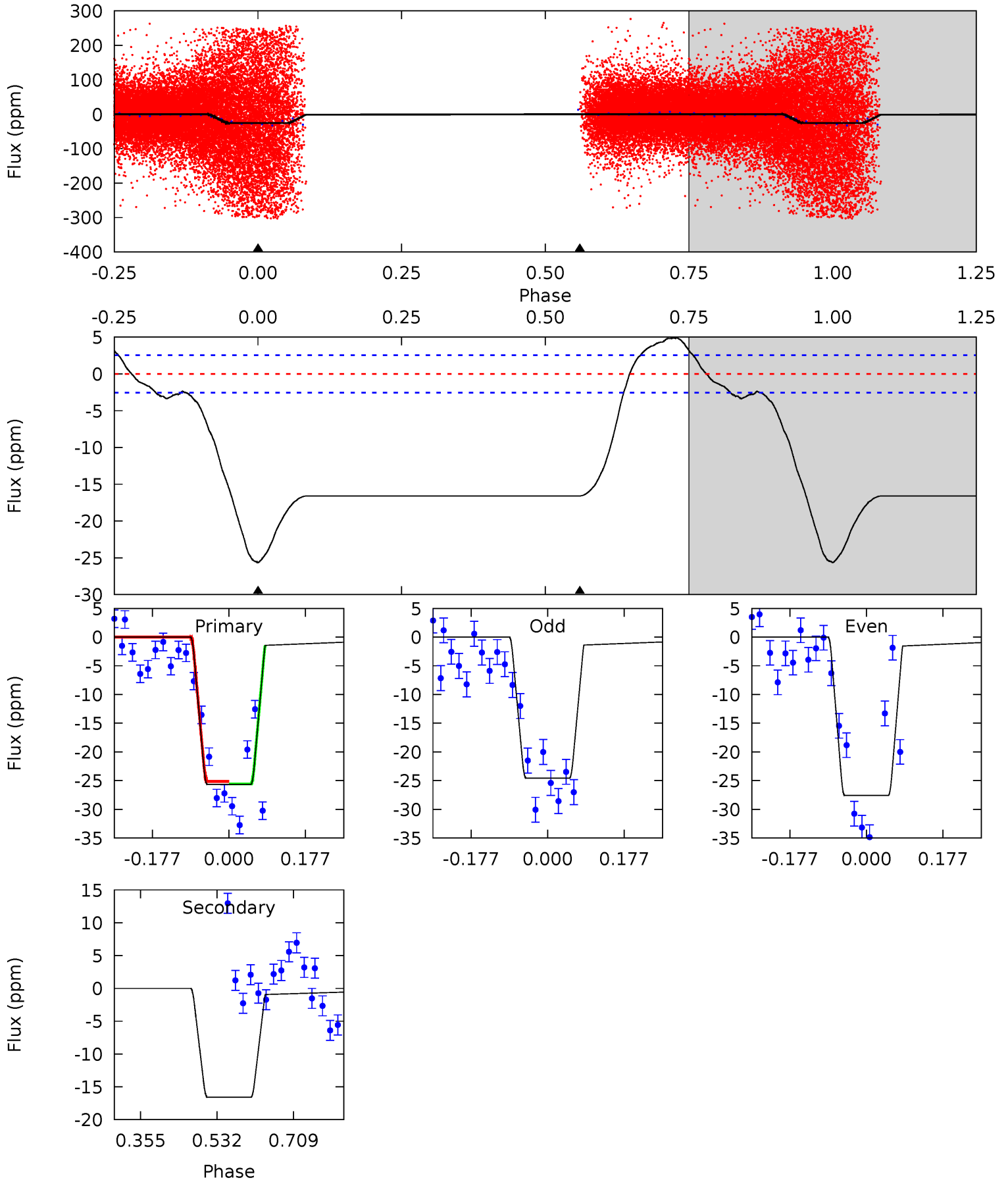
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	18.1	0	0	4.29	0.91	1.64	18.2	18.2	18.1	18.1	0.67	1.19	0.19	2.63



Alt Model-Shift Uniqueness Test

008896357-03, P = 2.466405 Days, E = 129.282813 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.6	28.9	0	0	4.44	1.35	3.64	44.6	44.6	28.9	28.9	2.64	1.10	0.16	0



Stellar Parameters For KIC 008896357

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7828^{+217}_{-326}	$3.677^{+0.432}_{-0.108}$	$0.000^{+0.200}_{-0.350}$	$3.463^{+0.821}_{-1.641}$	$2.081^{+0.343}_{-0.514}$	$0.071^{+0.285}_{-0.023}$
	+3%/-4%	+12%/-3%	+inf%/-inf%	+24%/-47%	+16%/-25%	+403%/-32%
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 008896357-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 1	$1.35^{+0.93}_{-0.83}$	4053^{+325}_{-501}	7142^{+7148}_{-1592}	$7.876^{+43.777}_{-5.117}$
Alt.	-17 ± 1	$1.74^{+1.04}_{-0.94}$	4041^{+341}_{-473}	6674^{+3952}_{-1253}	$6.298^{+21.409}_{-3.694}$

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

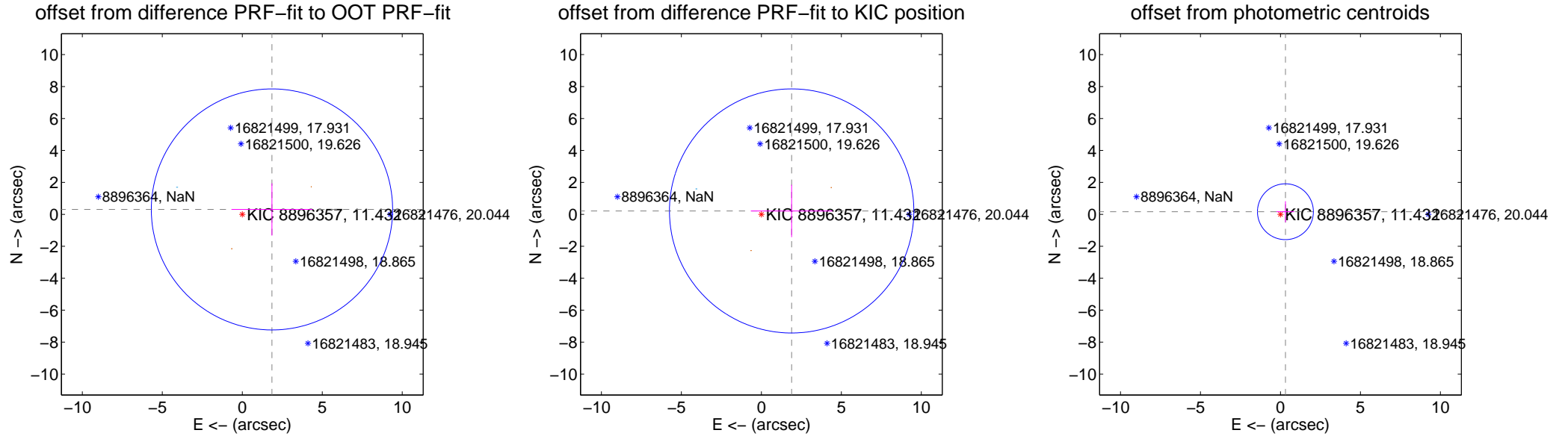
DV Centroid Data

Supplemental centroid analysis for 008896357-03. **Kepler magnitude: 11.43.** Transit SNR 8.48

There are 1 quarters with good PRF difference image offsets

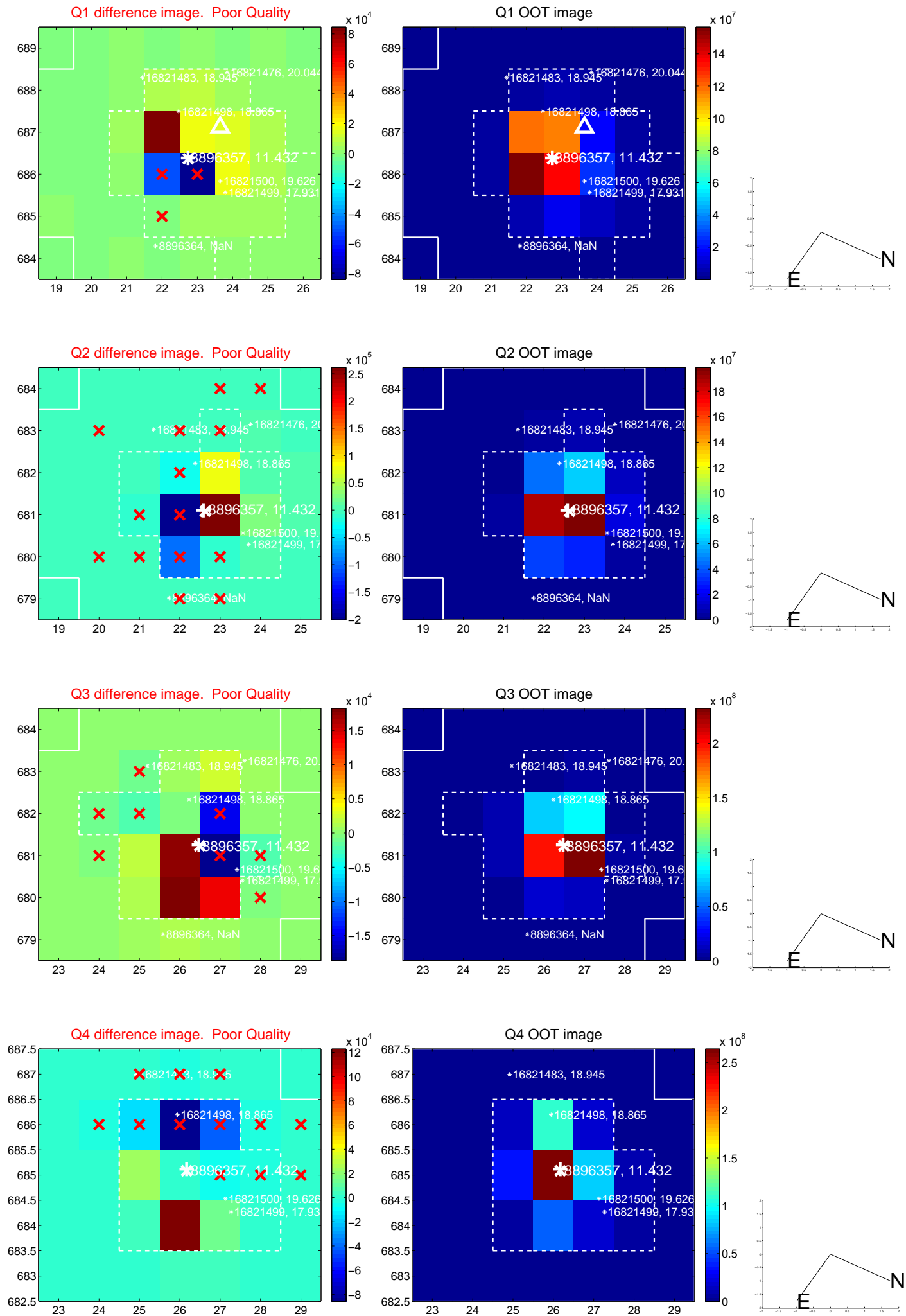
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.881 ± 2.515	0.75	-1.856 ± 2.535	0.307 ± 1.636
PRF-fit source offset from KIC position	1.905 ± 2.547	0.75	-1.893 ± 2.556	0.212 ± 1.637
photometric centroid source offset	0.35 ± 0.58	0.60	-0.31 ± 0.56	0.16 ± 0.66

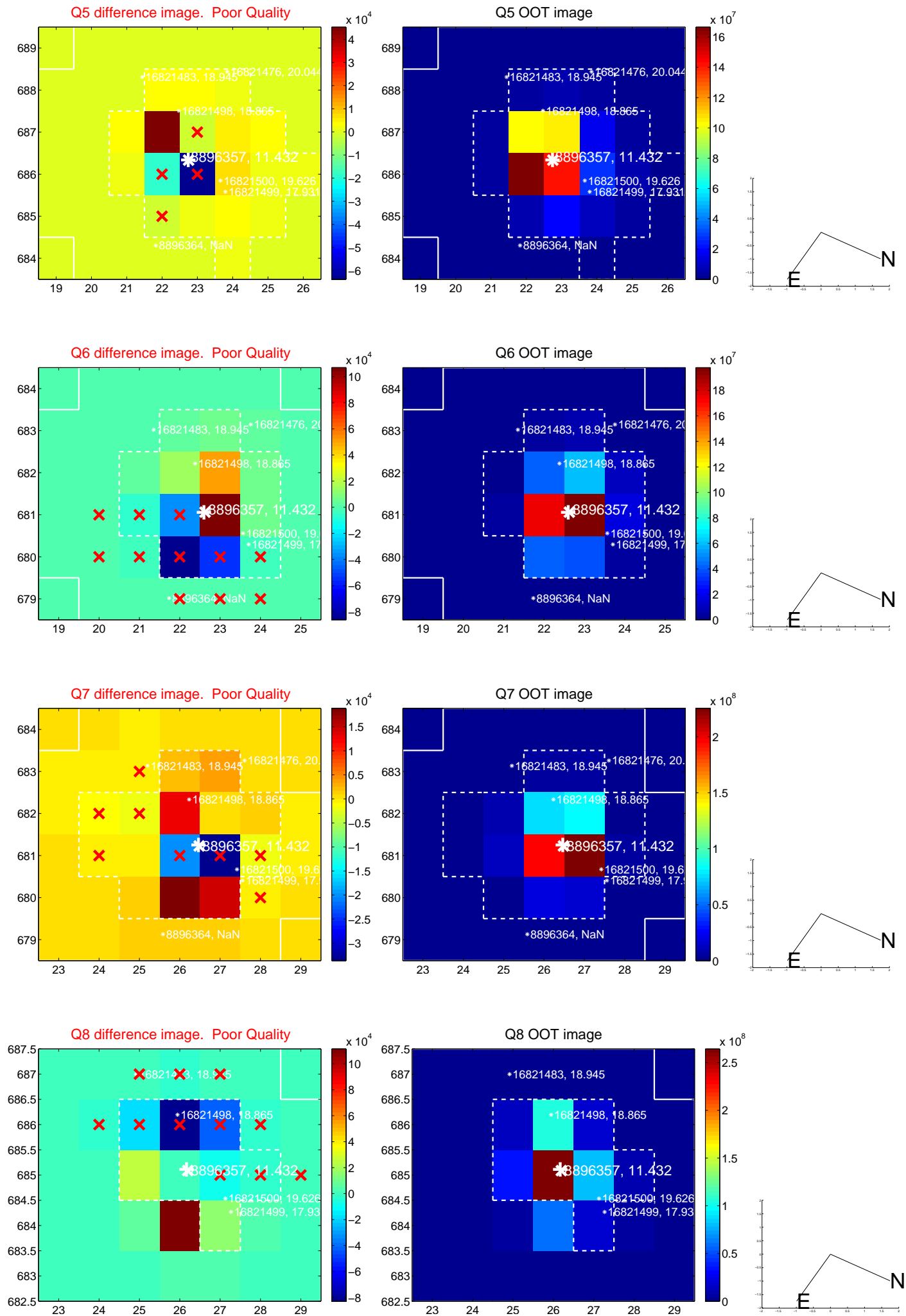


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

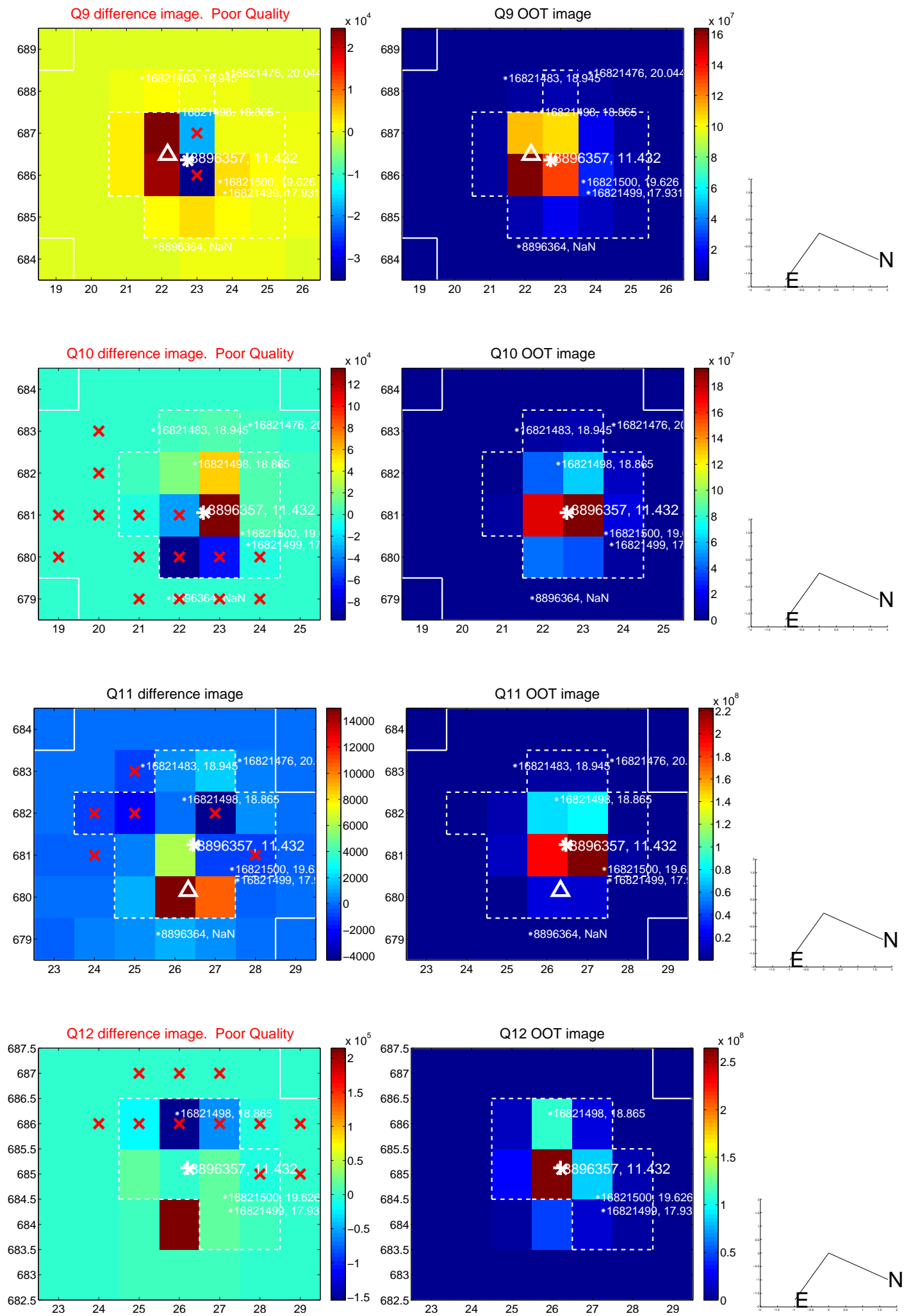
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



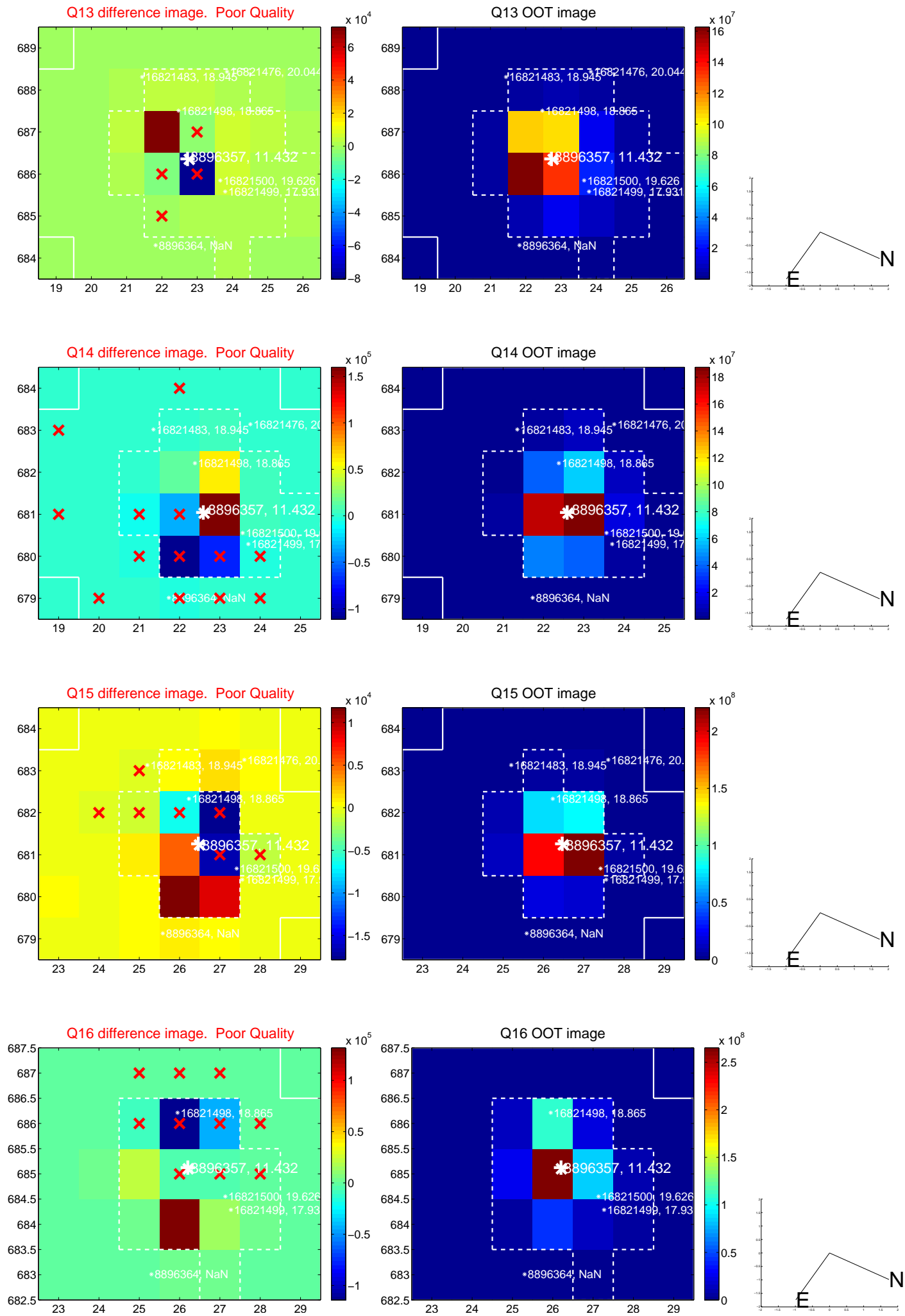
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



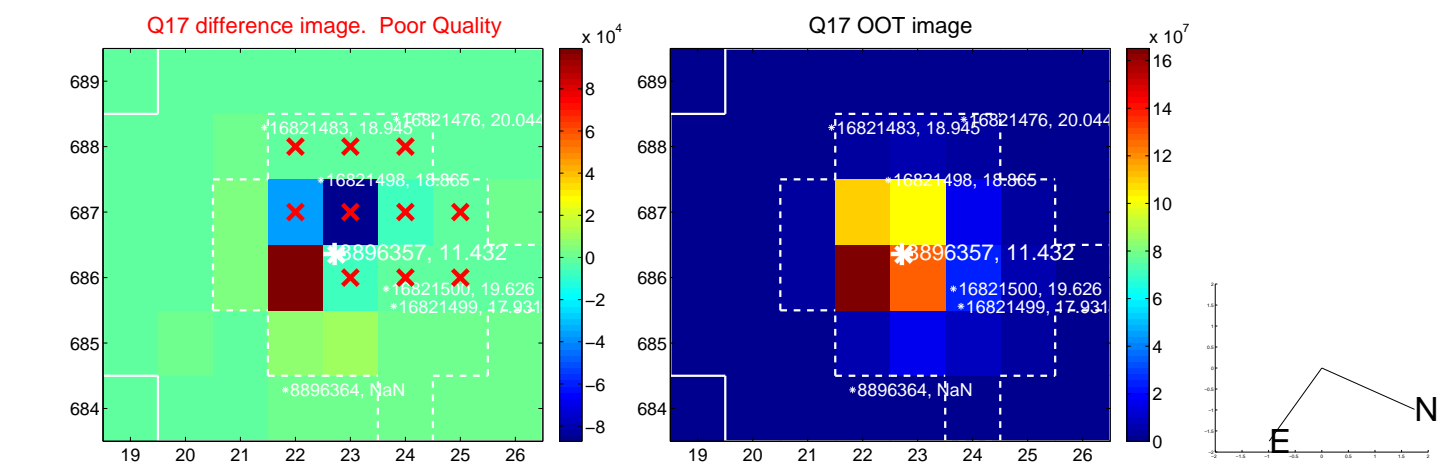
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



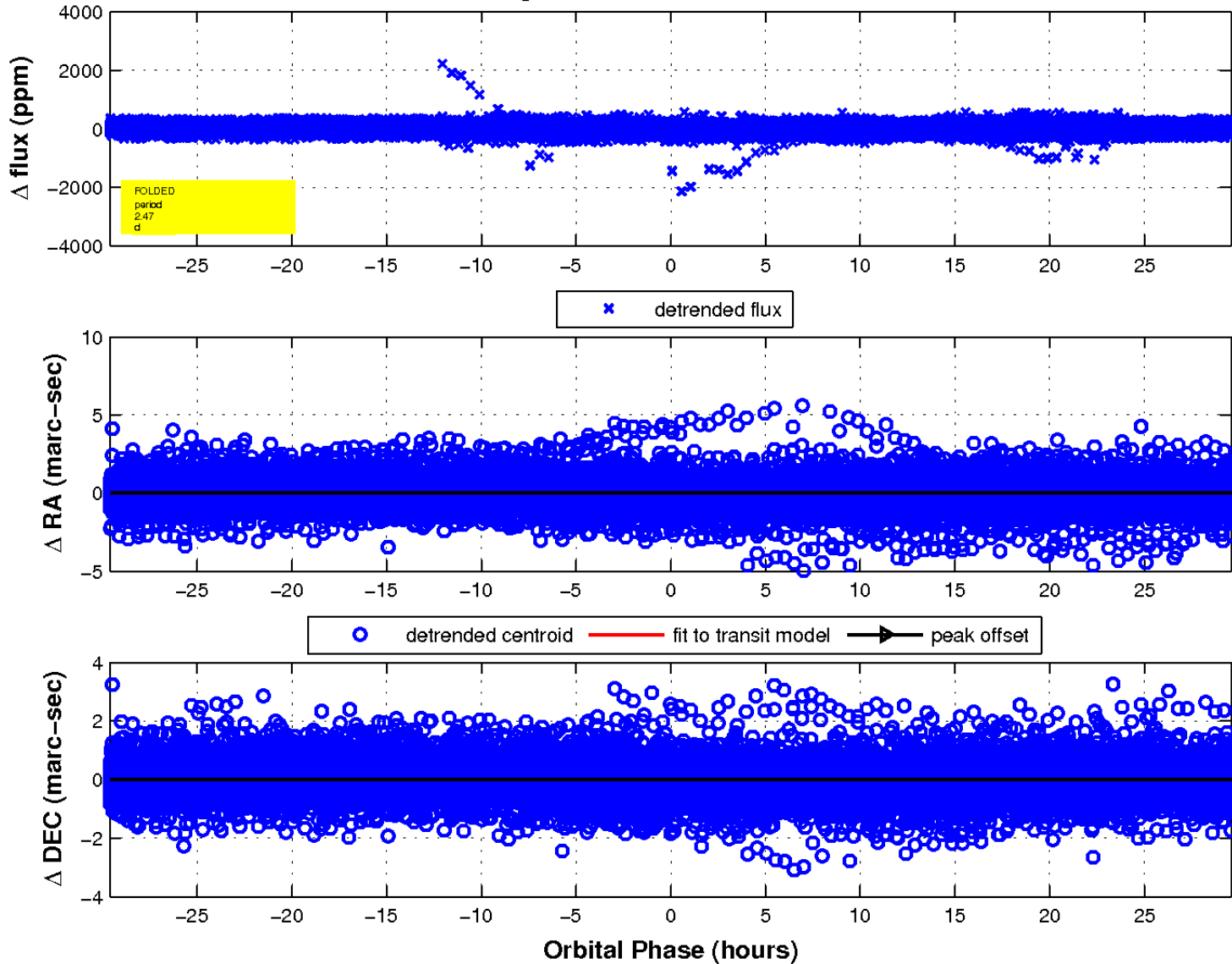
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

