

KIC 005385778

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})
005385778-01	OBS	6129.01	12.425825	141.757376	1301.7	9.298	21.2	26.0	6.95	4849	50.44	1356.67
005385778-02	OBS	No	12.425641	141.219763	2203.3	8.947	21.9	23.9	6.95	4849	65.21	1356.70
005385778-03	OBS	No	12.425391	133.986668	1136.9	29.055	18.6	23.7	6.95	4849	28.29	1356.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385778-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005385778-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
005385778-03	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 005385778-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
005385778-01	5385778	005385792-03	5385792	1:1	22.1	-4	-5	13.60	12.70	0.83	Direct-PRF	1	0.37	2.58

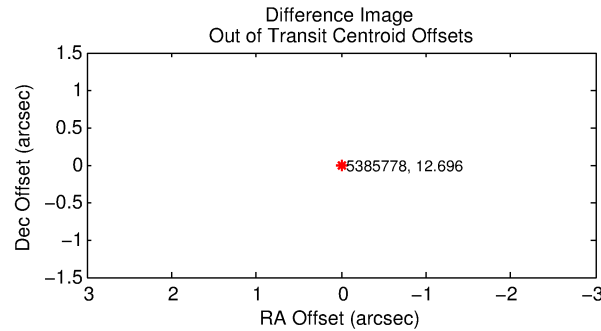
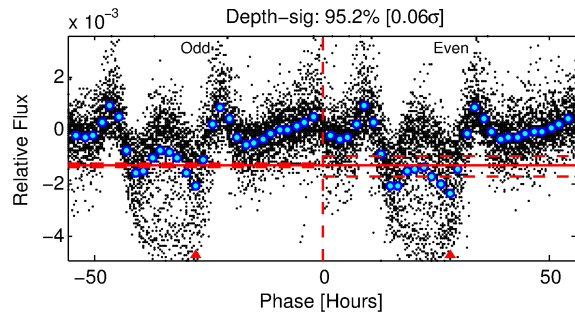
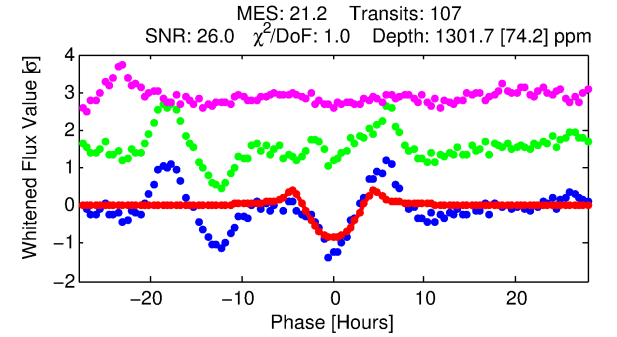
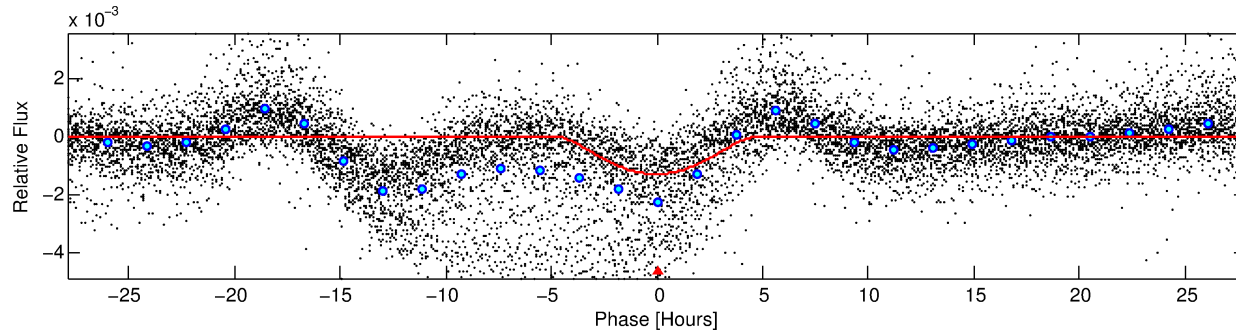
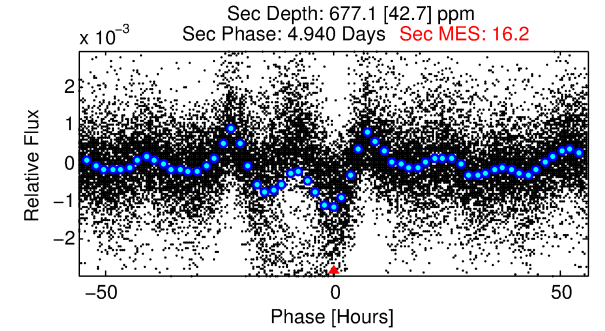
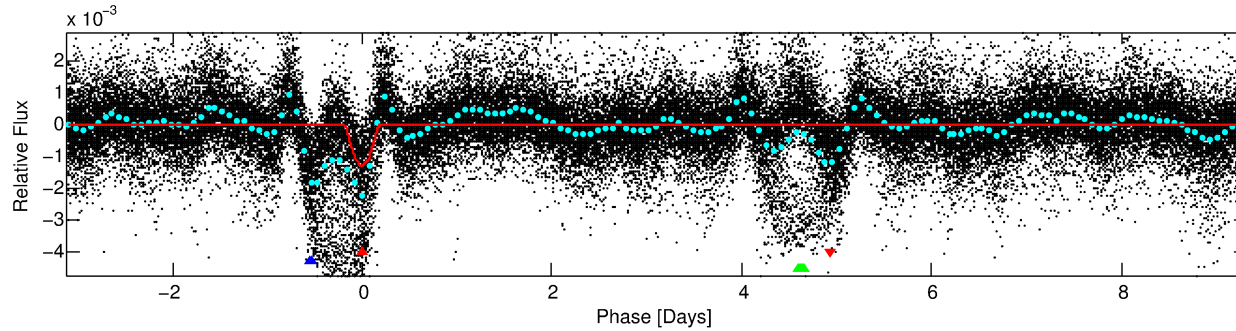
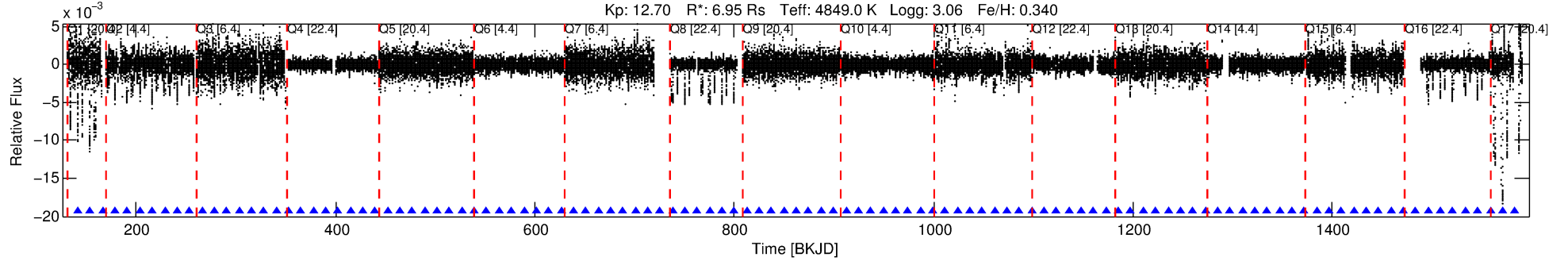
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5385778 Candidate: 1 of 3 Period: 12.426 d

KOI: K06129 Corr: No Ephemeris Match

Kp: 12.70 R*: 6.95 Rs Teff: 4849.0 K Logg: 3.06 Fe/H: 0.340



DV Fit Results:

Period = 12.42582 [0.00009] d
Epoch = 141.7574 [0.0061] BKJD
Rp/R* = 0.0665 [0.0424]
a/R* = 3.96 [0.50]
b = 1.00 [0.06]
Seff = 1356.68 [512.38]
Teff = 1548 [146] K
Rp = 50.44 [36.94] Re
a = 0.1328 [0.0367] AU
Ag = 2.58 [3.43] [0.46σ]
Teffp = 3033 [972] K [1.51σ]

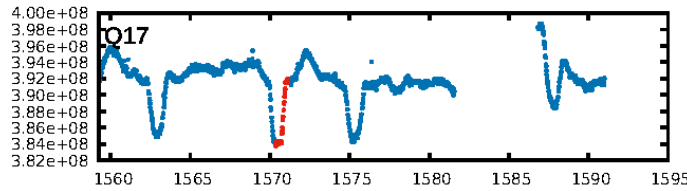
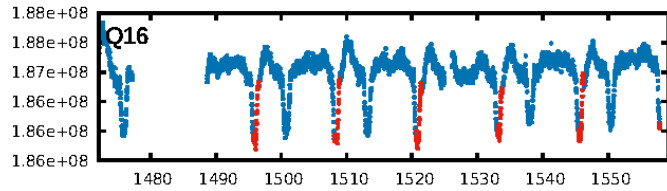
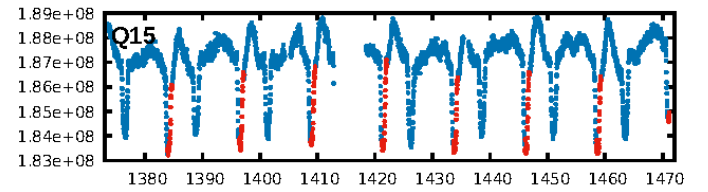
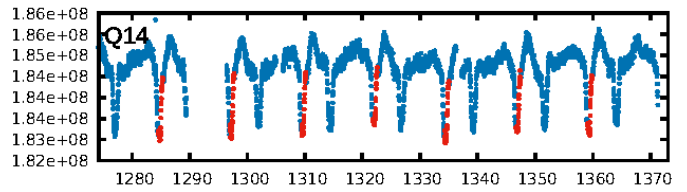
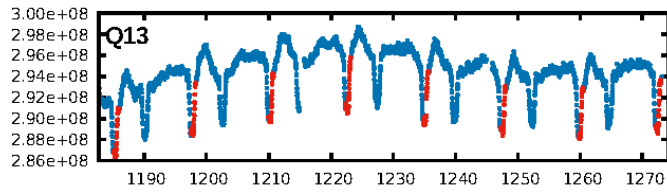
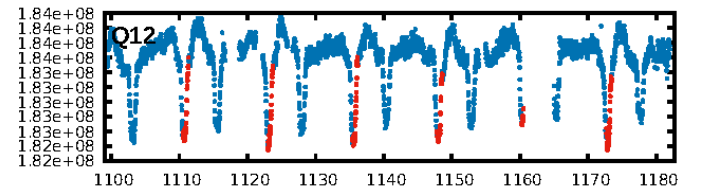
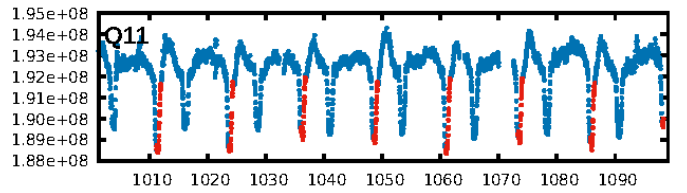
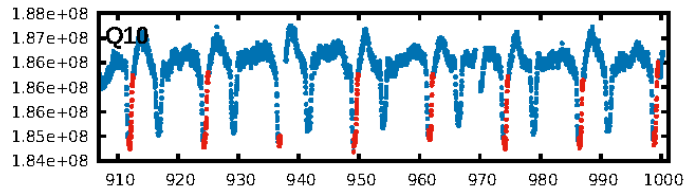
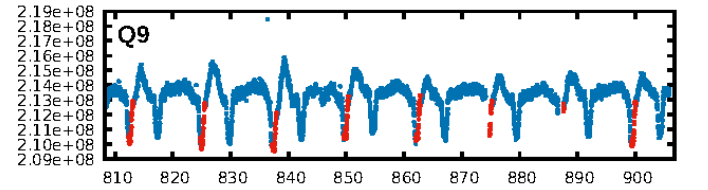
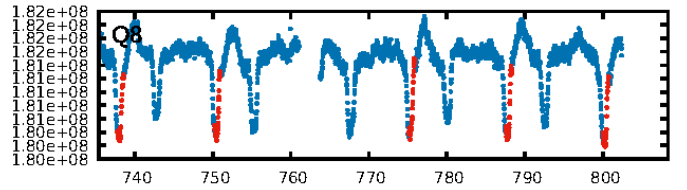
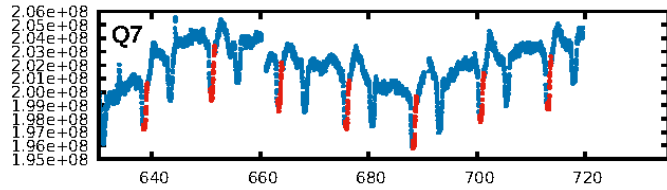
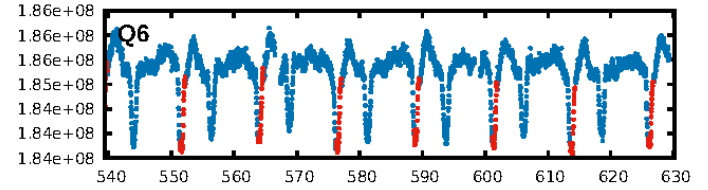
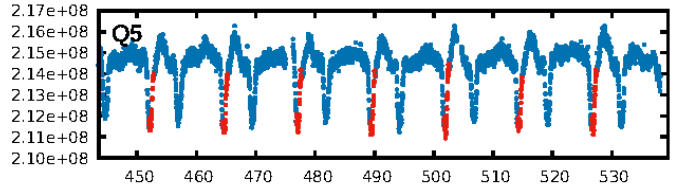
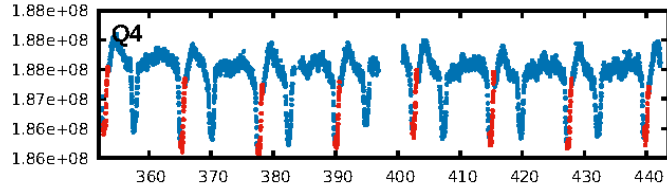
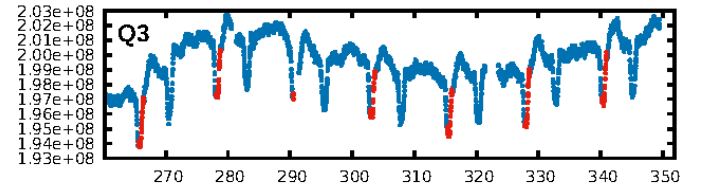
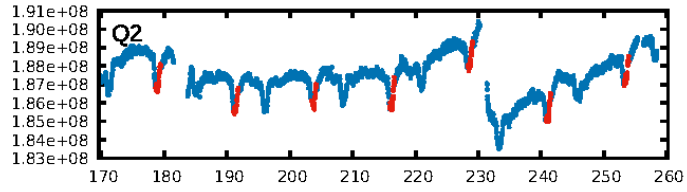
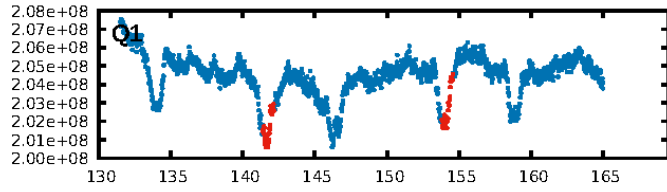
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.53e-89
RollingBand-fgt: 1.00 [104/104]
GhostDiagnostic-chr: -0.8089
Centroid-sig: N/A
Centroid-so: 0.468 arcsec [20.07σ]
OotOffset-rm: N/A
KicOffset-rm: 1.033 arcsec [4.49σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 4/4/0/2 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 0.00 [0/17]

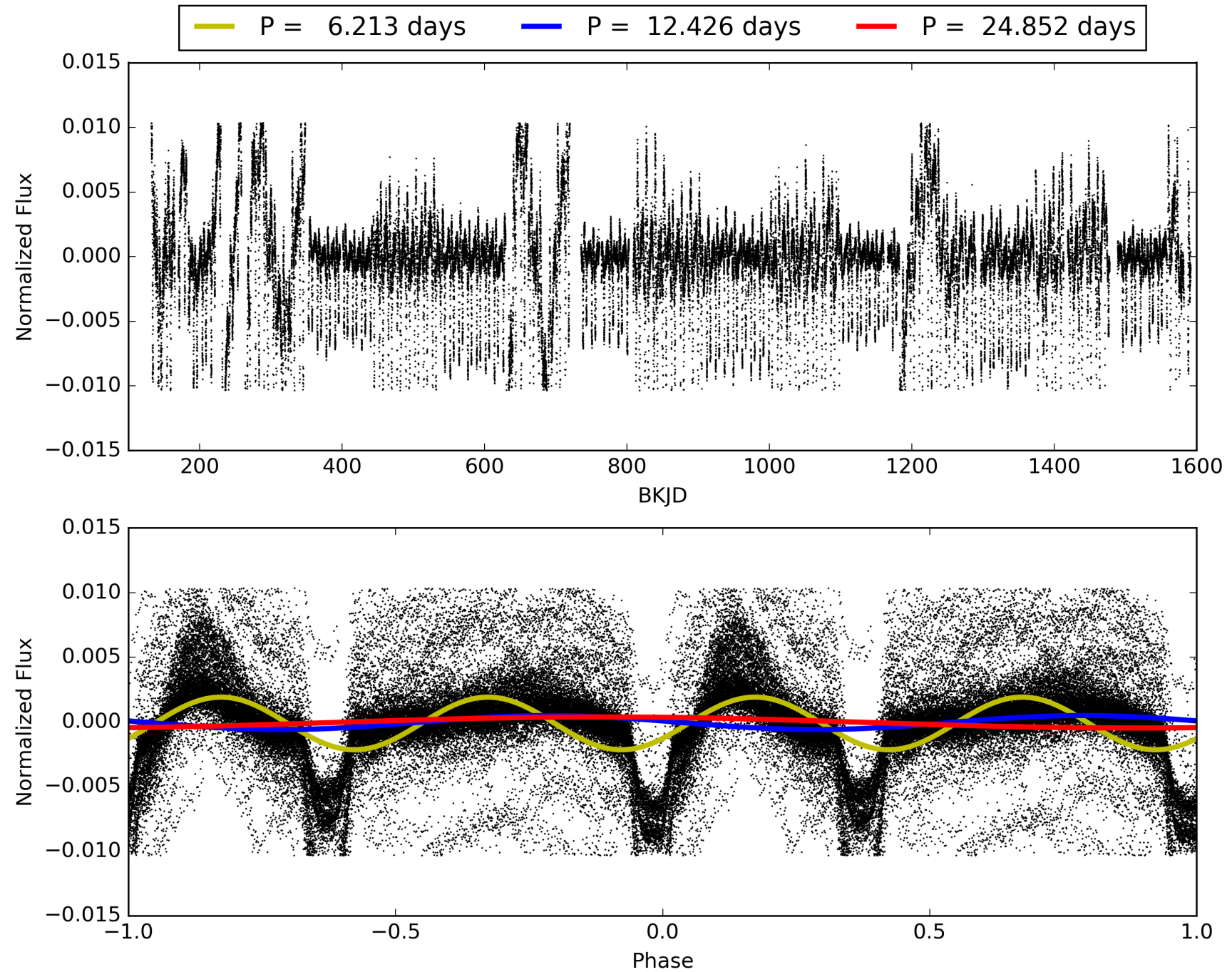
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005385778-01, PDC Light Curves

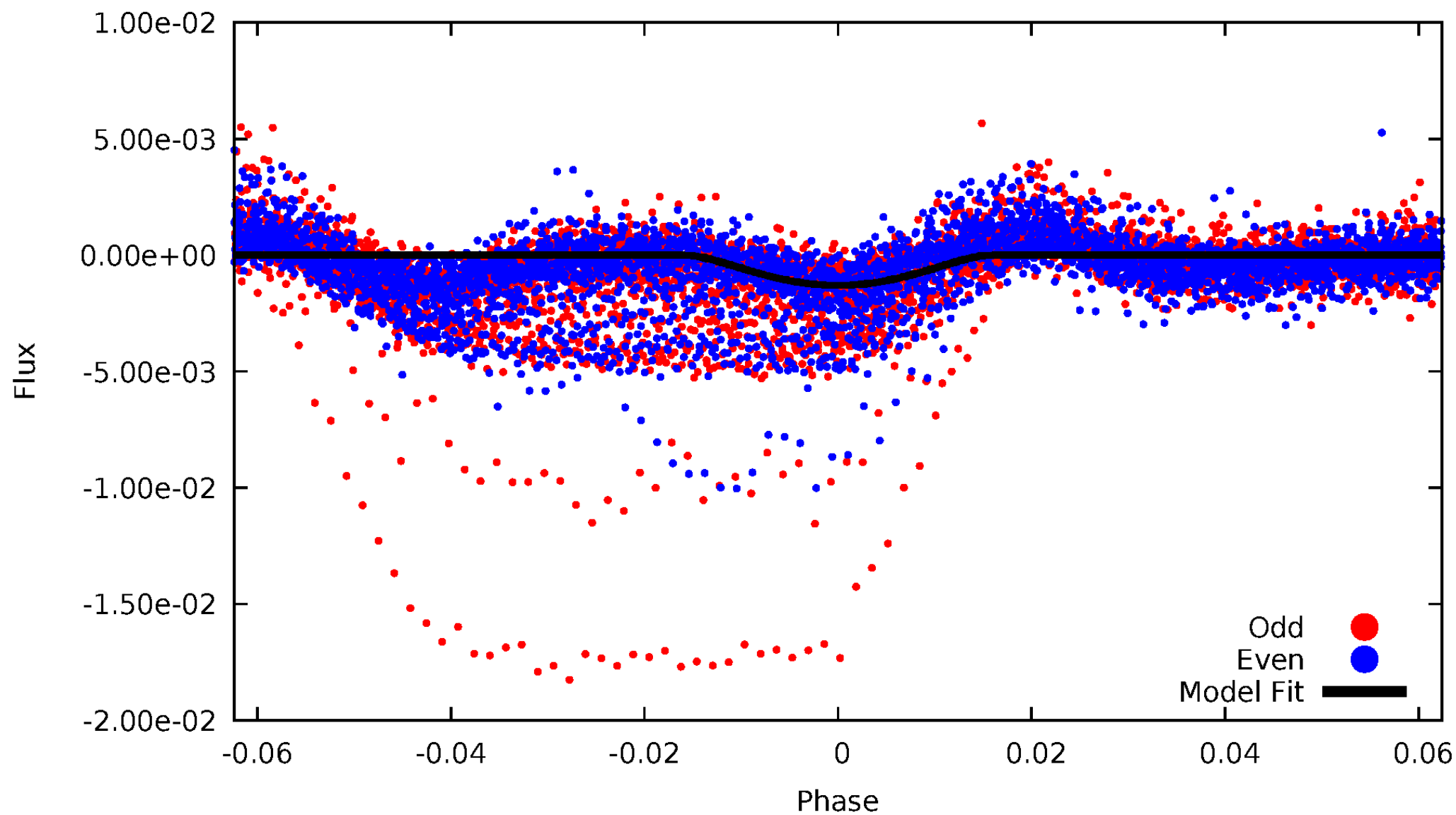


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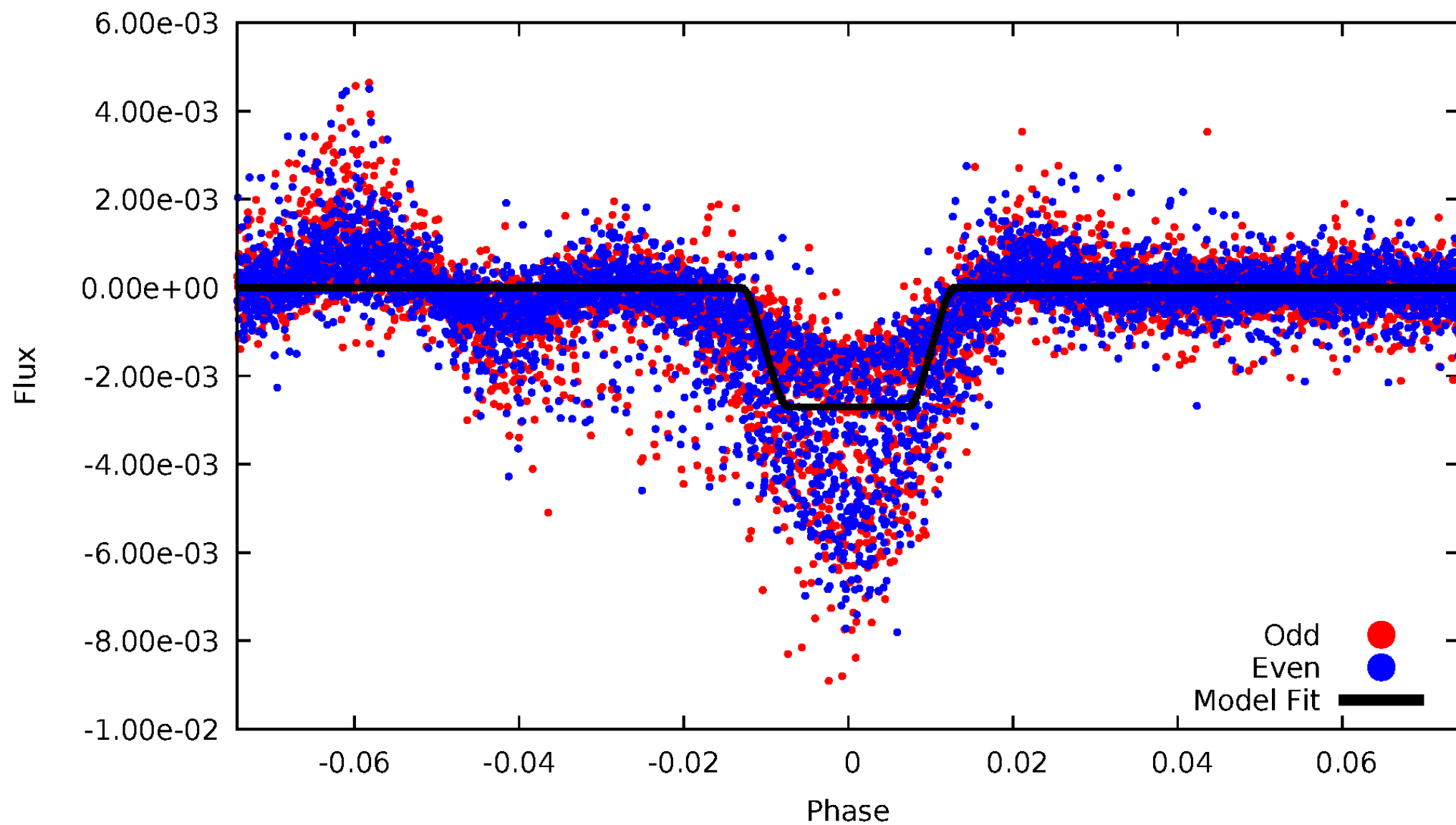
DV Odd/Even

TCE 005385778-01



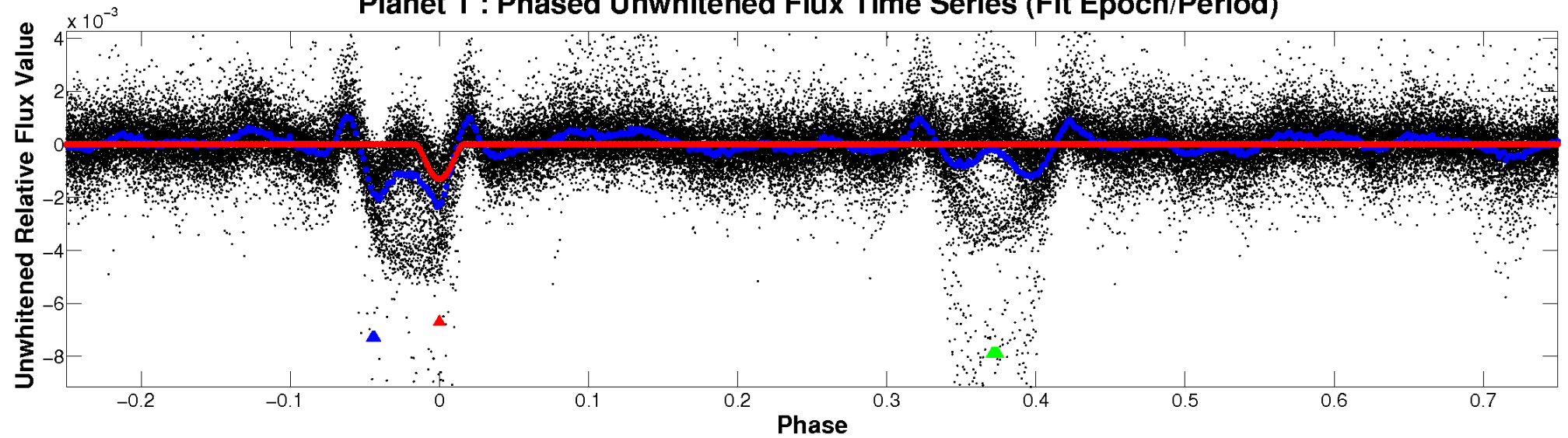
ALT Odd/Even

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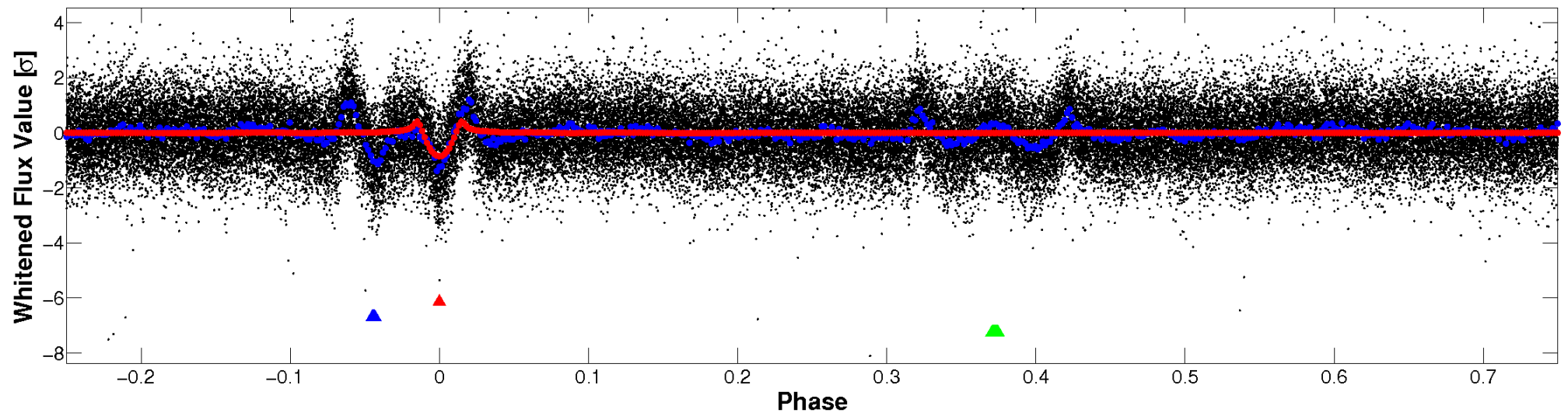


Non-Whitened Vs. Whitened Light Curve

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

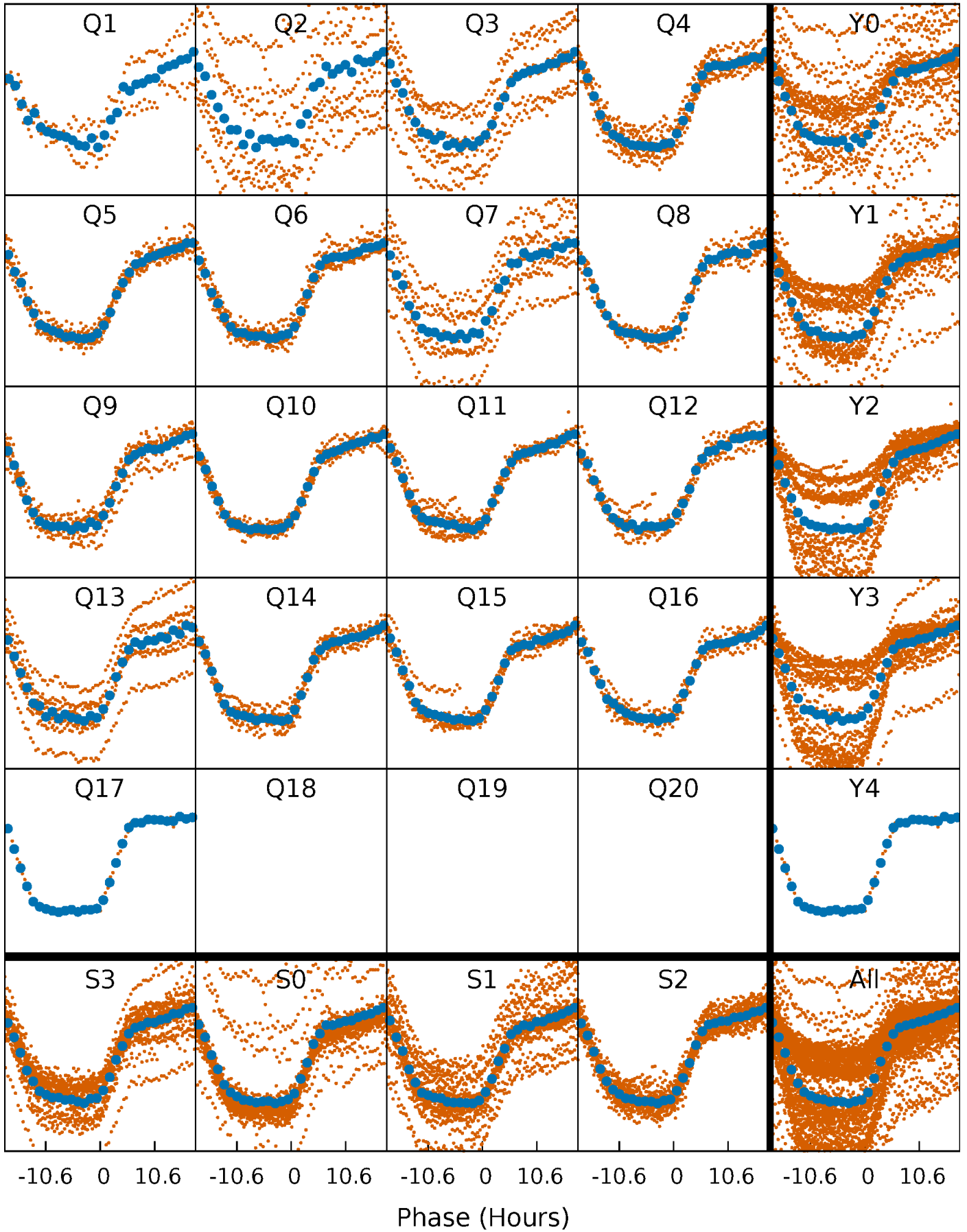


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



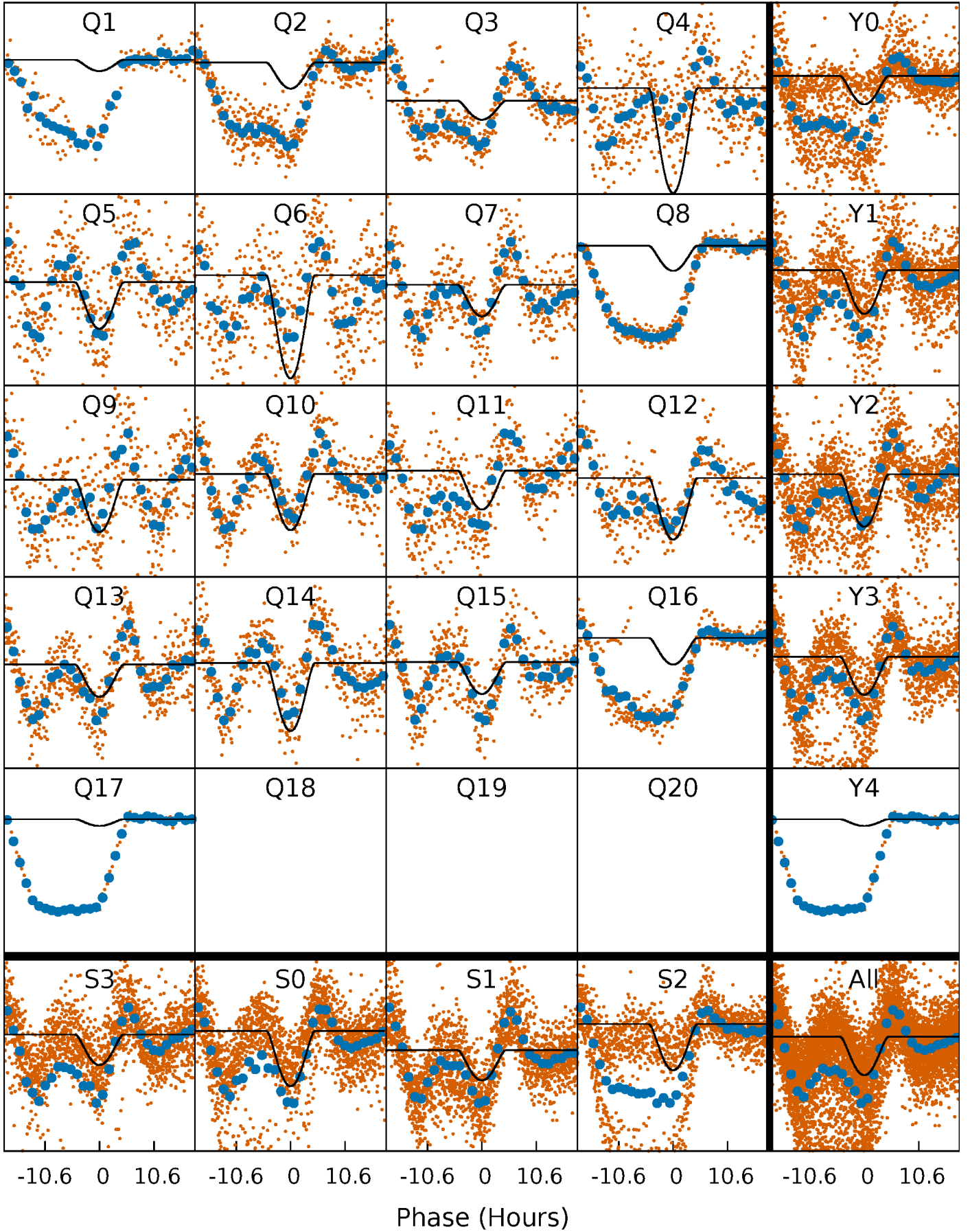
PDC Quarter-Phased Transit Curves

TCE 005385778-01 P= 12.425825 Days $T_0=141.757376$ (BKJD)



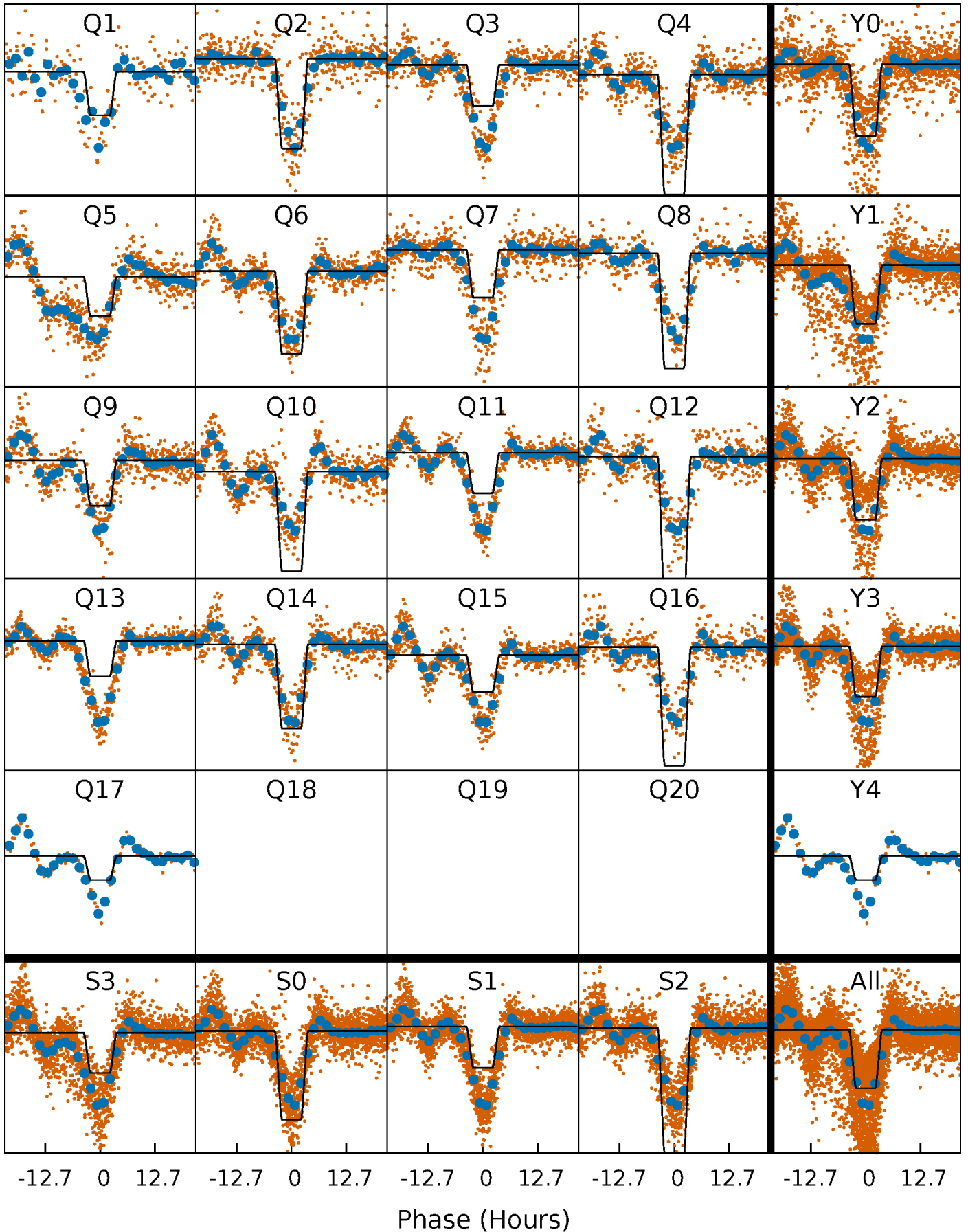
DV Quarter-Phased Transit Curves

TCE 005385778-01 P= 12.425825 Days $T_0=141.757376$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

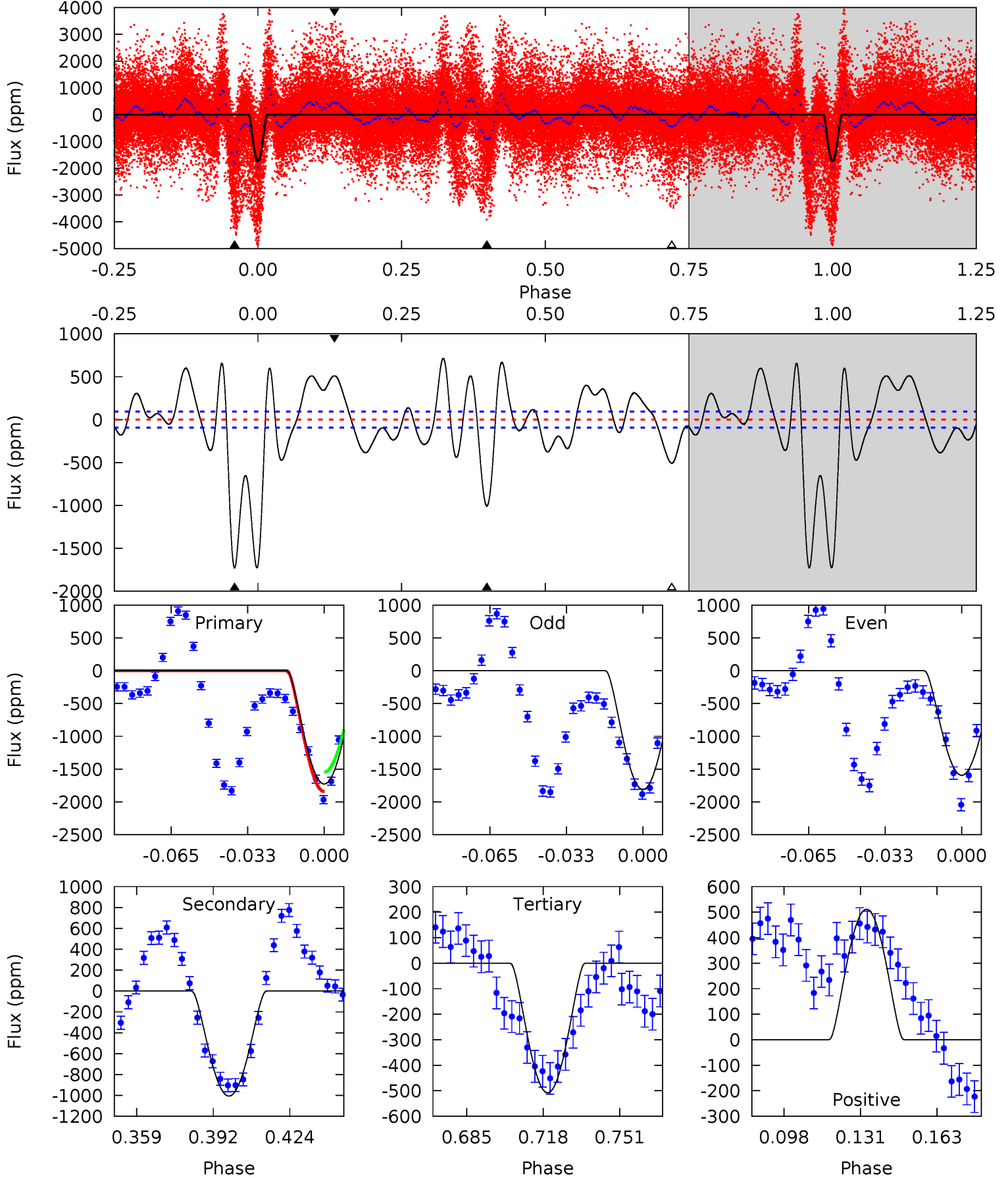
TCE 005385778-01 P= 12.425761 Days $T_0=141.755357$ (BKJD)



DV Model-Shift Uniqueness Test

005385778-01, P = 12.425825 Days, E = 129.331551 Days

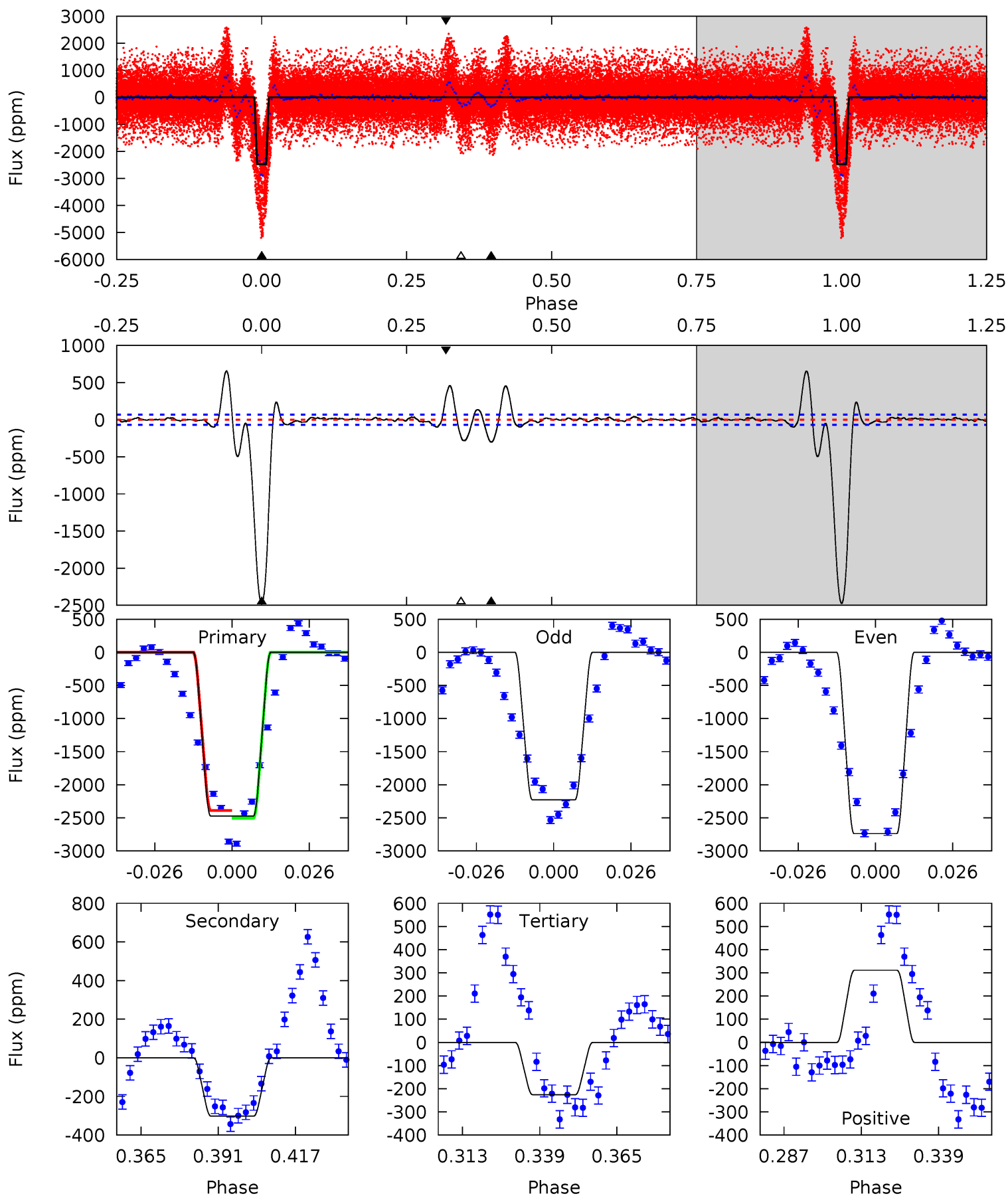
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
88.3	51.4	26.0	26.1	4.79	2.14	17.5	62.3	62.2	25.5	25.3	5.50	1.67	0.29	7.50



Alt Model-Shift Uniqueness Test

005385778-01, P = 12.425761 Days, E = 129.329596 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
172.6	21.1	15.8	21.7	4.84	2.23	8.29	156.9	150.9	5.31	-0.62	17.9	1.11	0.21	3.99



Stellar Parameters For KIC 005385778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4849^{+48}_{-115}	$3.060^{+0.180}_{-0.105}$	$0.340^{+0.100}_{-0.200}$	$6.952^{+1.248}_{-2.496}$	$2.025^{+0.584}_{-0.779}$	$0.008^{+0.011}_{-0.003}$
	+1%/-2%	+6%/-3%	+29%/-59%	+18%/-36%	+29%/-38%	+135%/-31%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 005385778-01 / KOI 6129.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1006 ± 20	$53.42^{+33.04}_{-29.53}$	2137^{+107}_{-138}	3521^{+1177}_{-505}	$3.526^{+13.452}_{-2.115}$
Alt.	-302 ± 14	$43.32^{+34.03}_{-25.19}$	2143^{+106}_{-136}	3070^{+1114}_{-611}	$1.555^{+7.410}_{-1.045}$

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

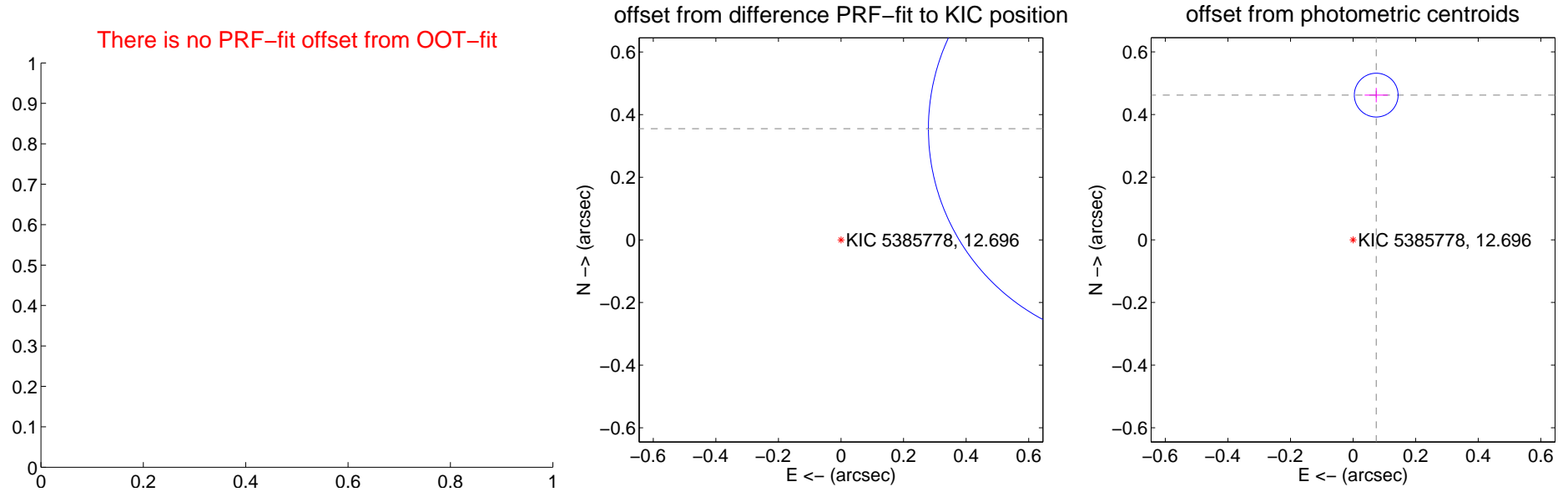
DV Centroid Data

Supplemental centroid analysis for 005385778-01. Kepler magnitude: 12.70. Transit SNR 26.01

There are 0 quarters with good PRF difference image offsets

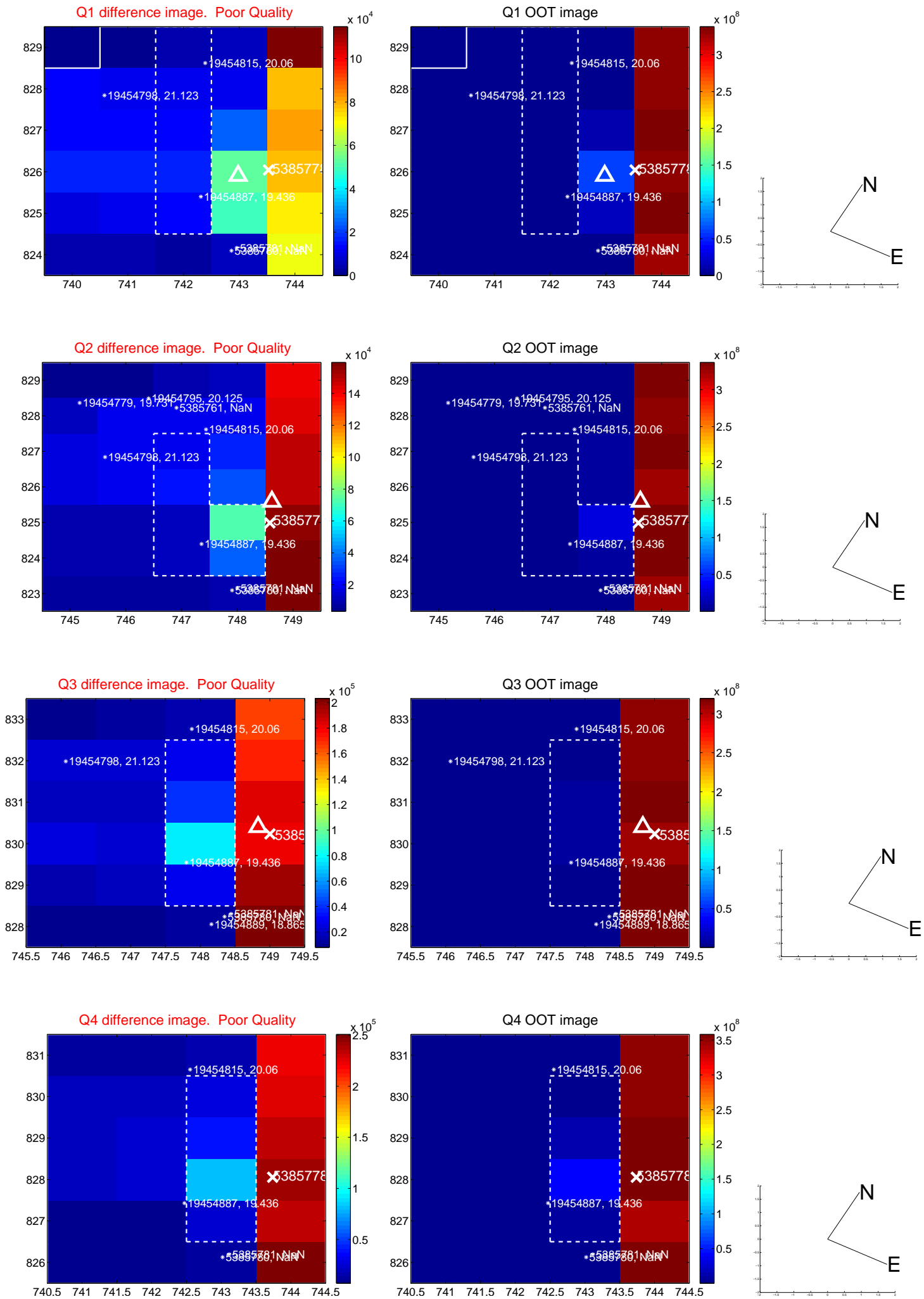
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	1.033 ± 0.230	4.49	-0.970 ± 0.226	0.355 ± 0.388
photometric centroid source offset	0.47 ± 0.02	20.07	-0.07 ± 0.04	0.46 ± 0.02

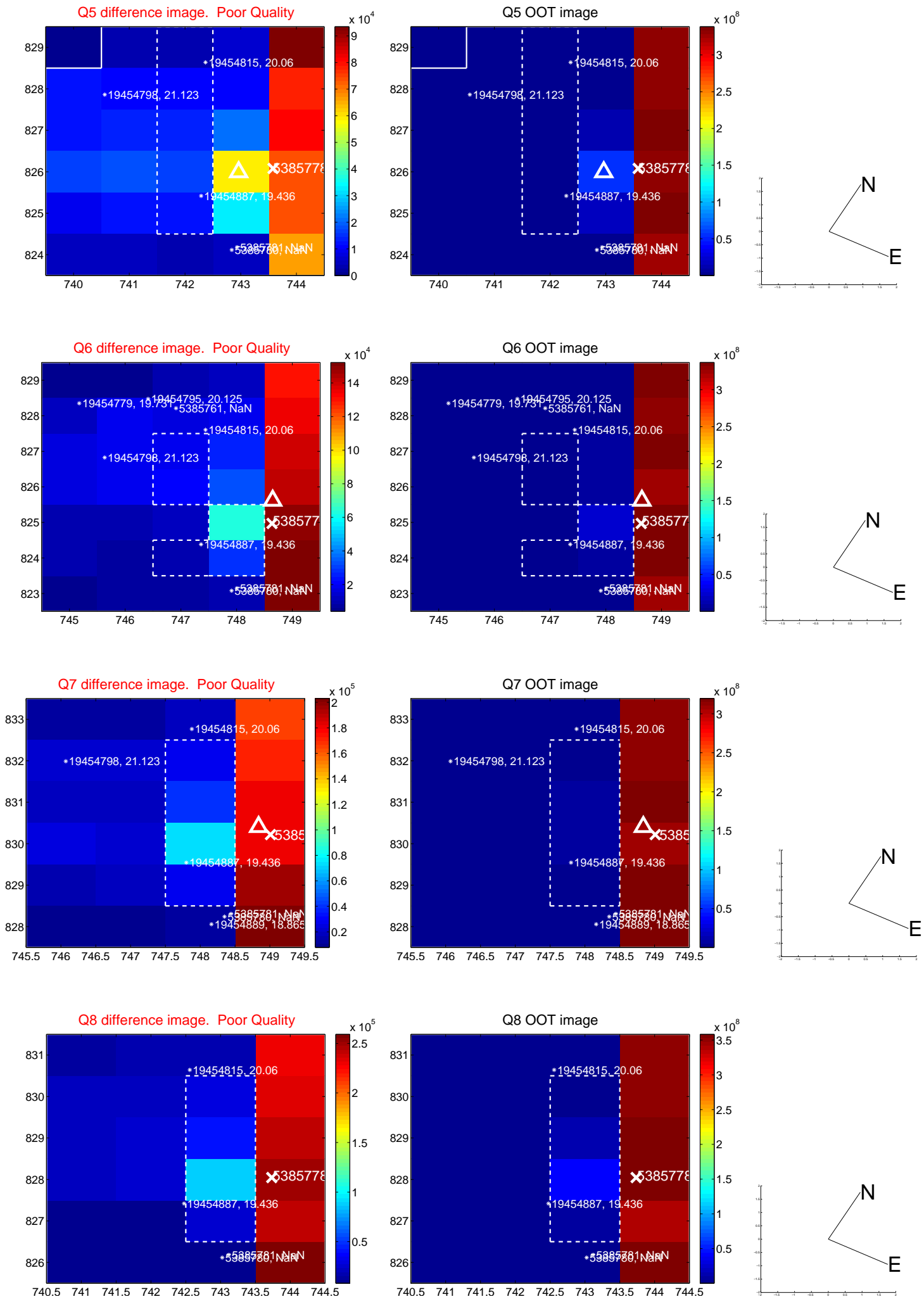


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

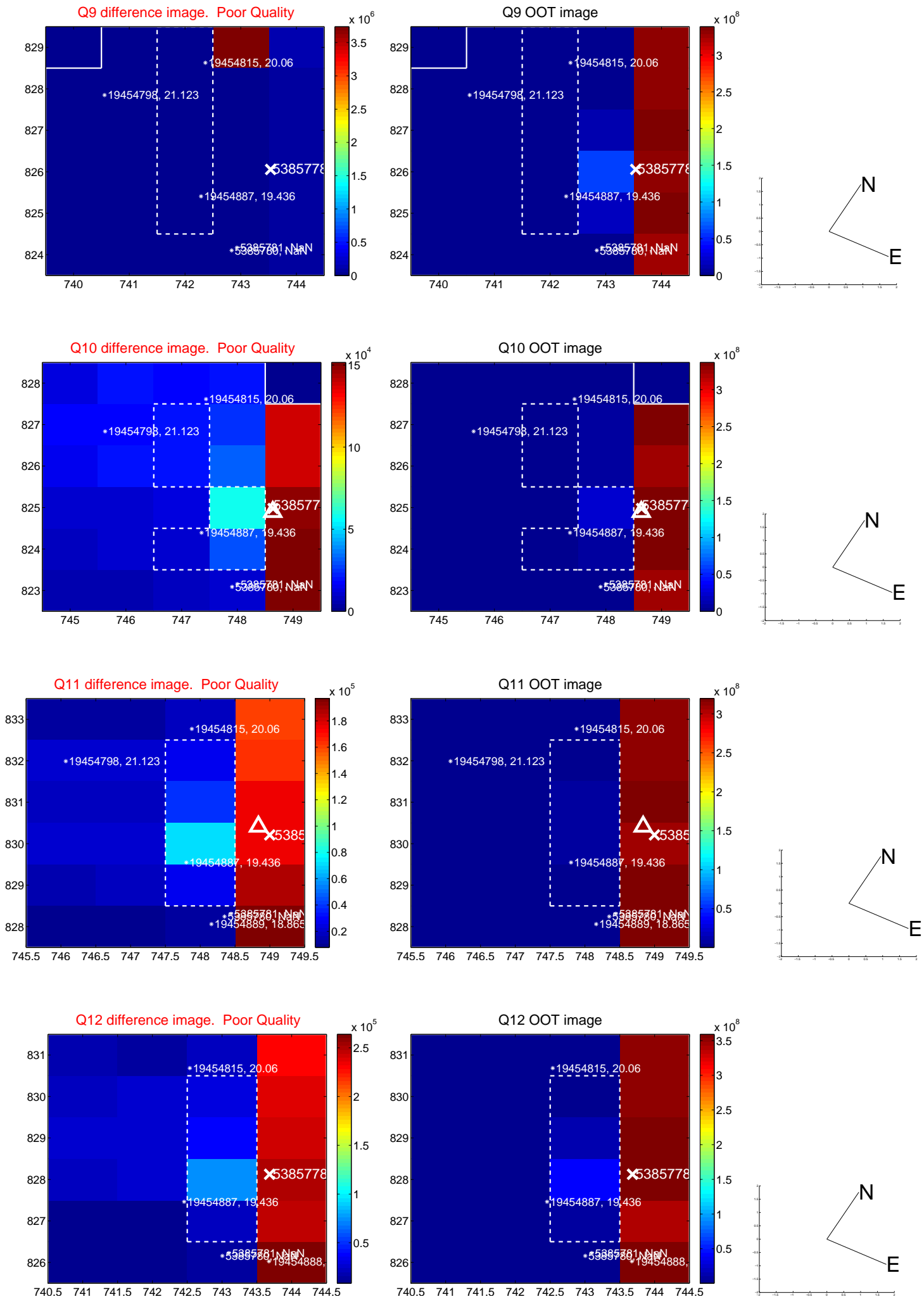
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



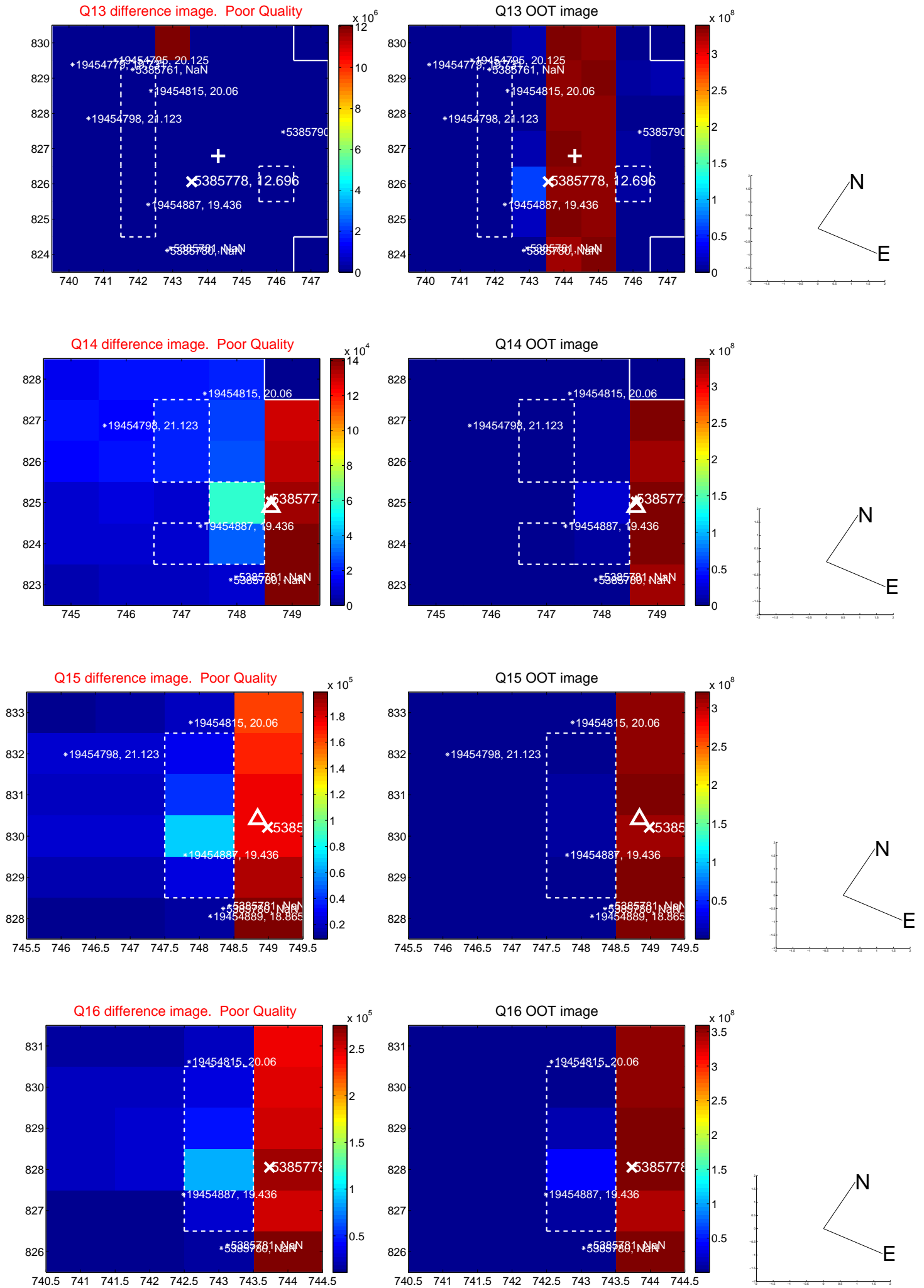
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



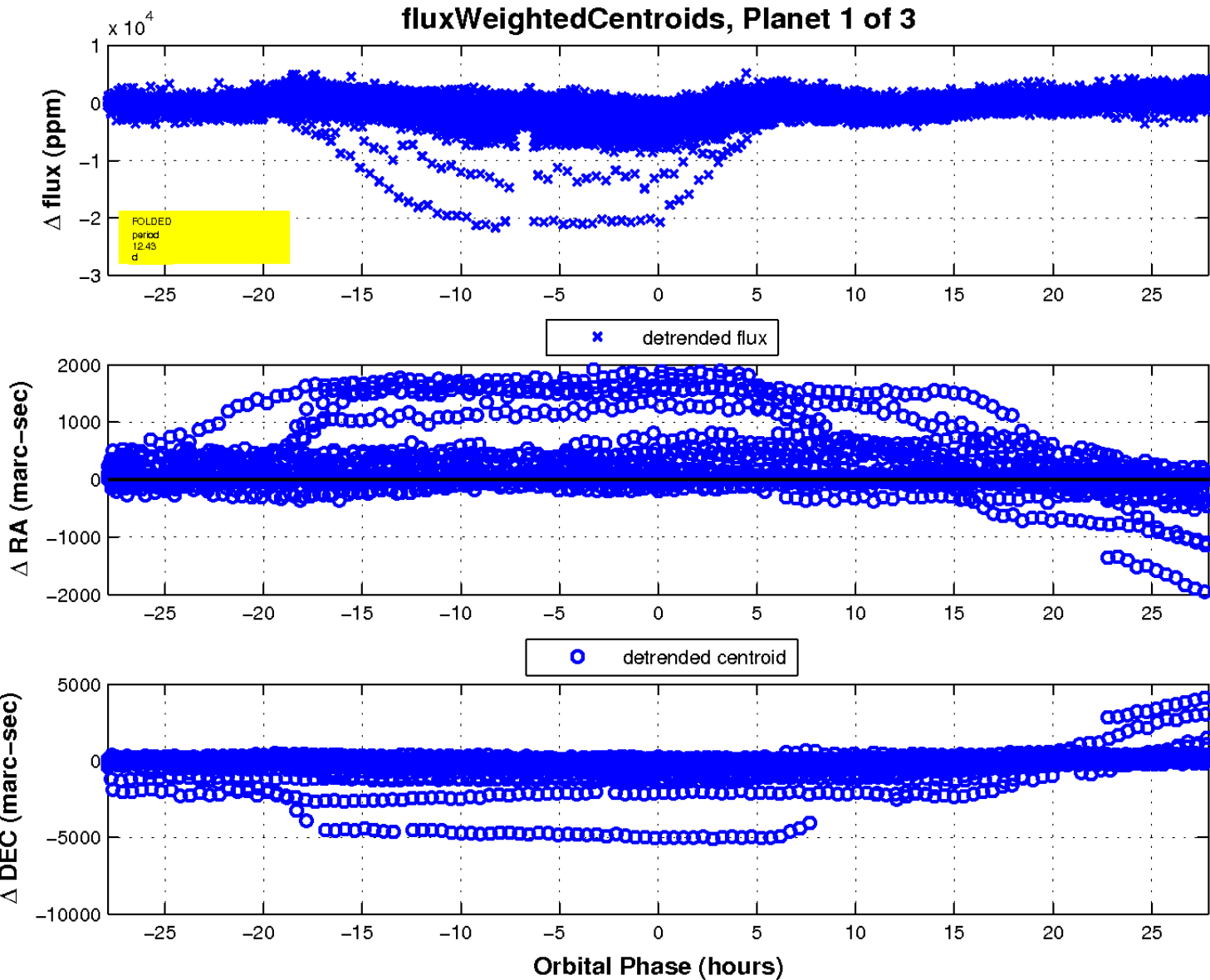
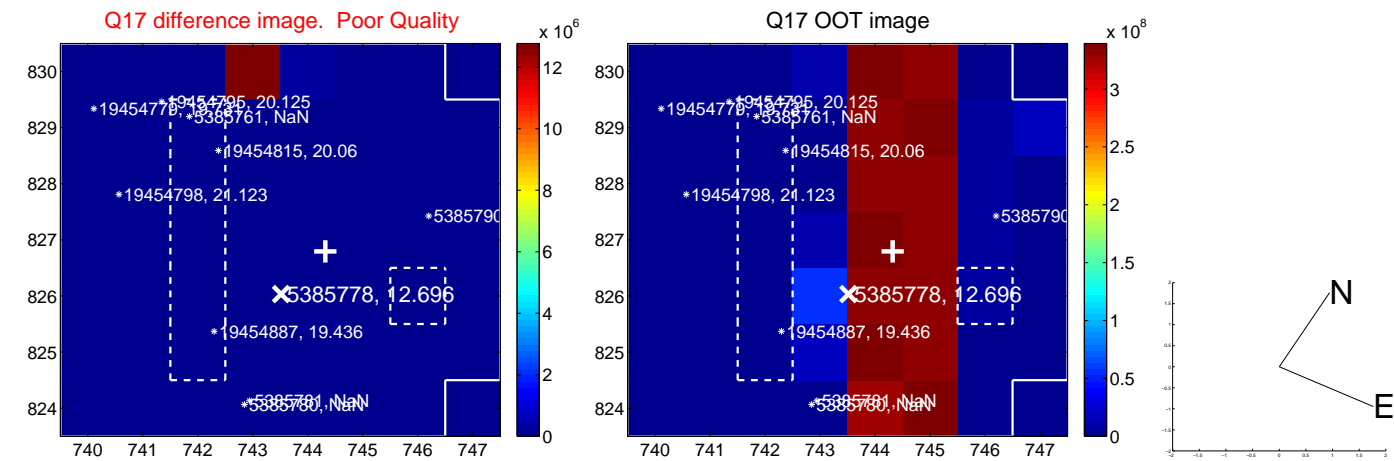
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

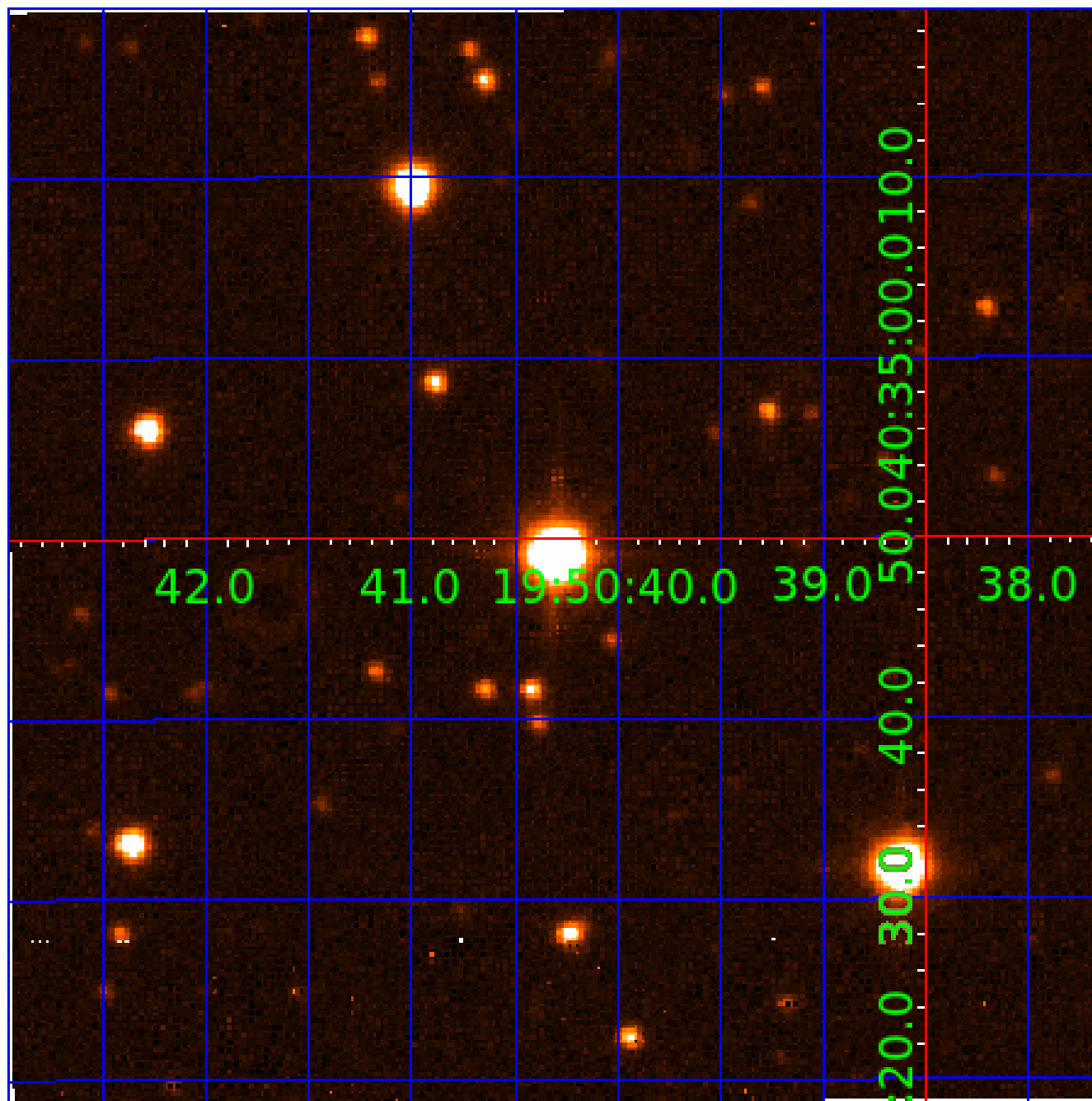


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005385778

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

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005385778-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
005385778-03	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

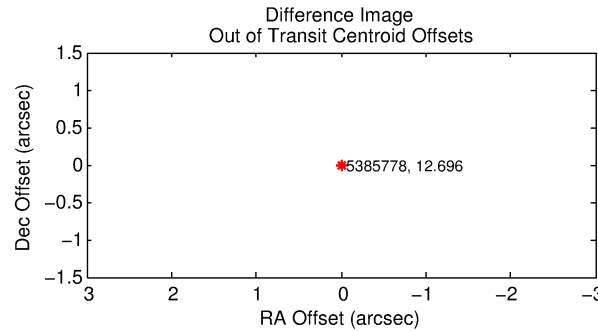
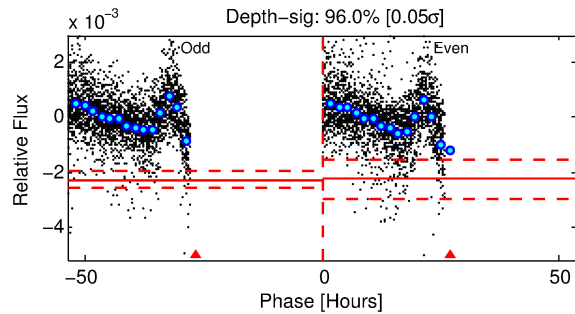
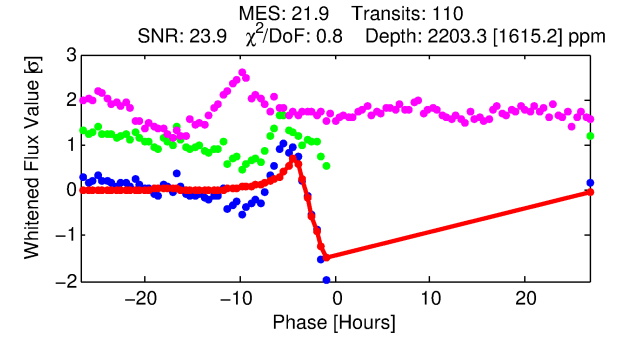
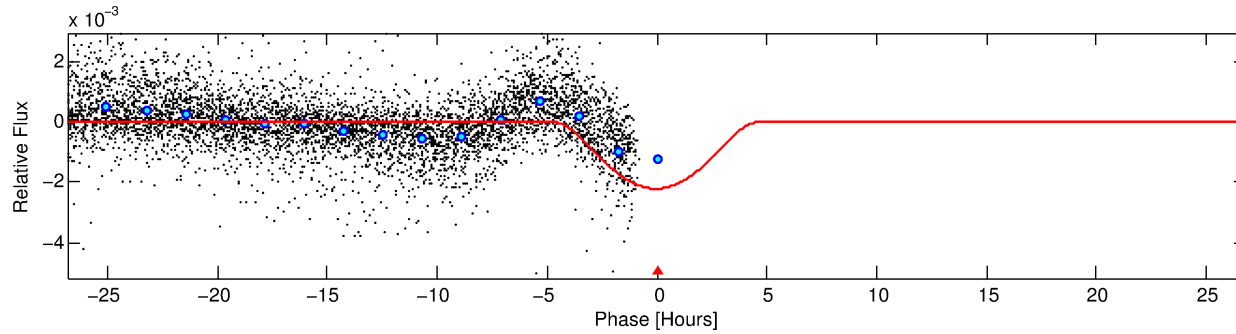
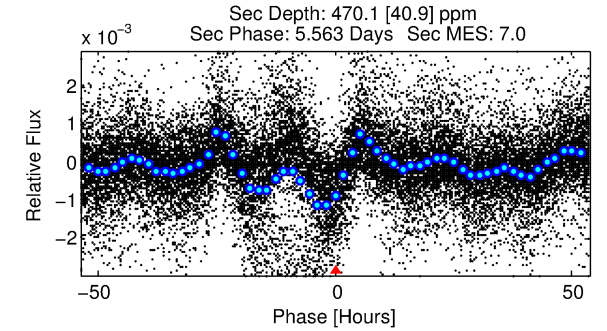
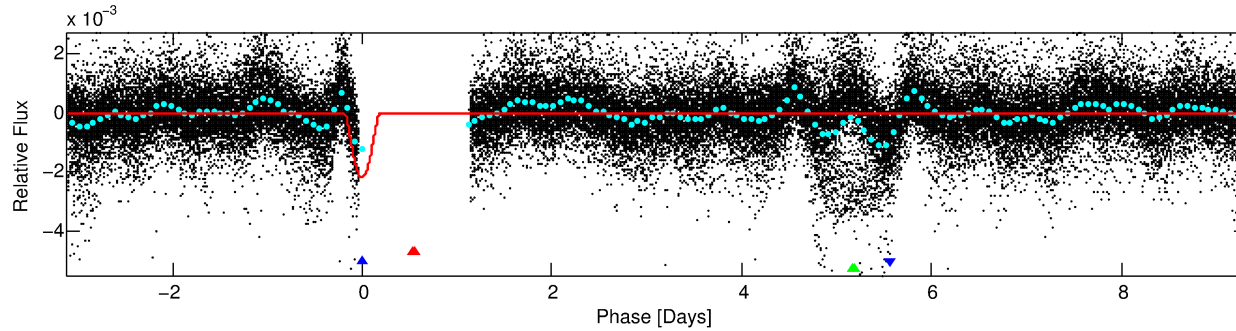
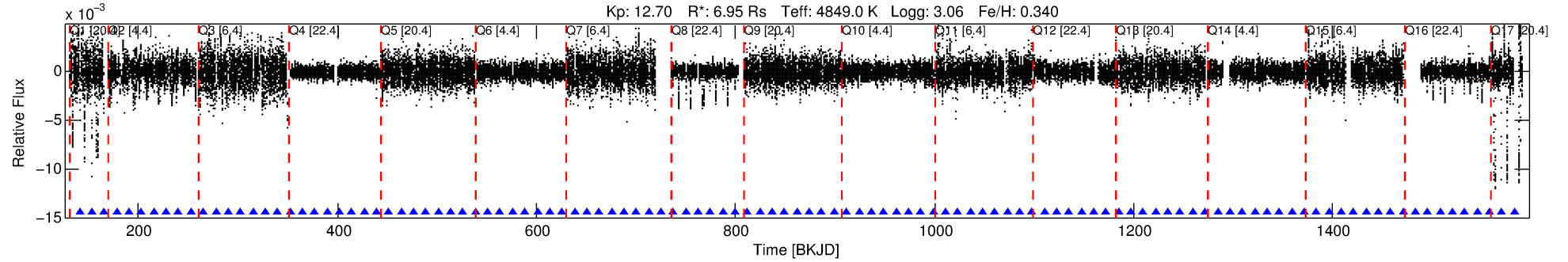
Ephemeris Match Information For 005385778-02

No Significant Match Found

DV One-Page Summary

KIC: 5385778 Candidate: 2 of 3 Period: 12.426 d

KOI: K06129 Corr: No Ephemeris Match



DV Fit Results:

Period = 12.42564 [0.00007] d
Epoch = 141.2198 [0.0094] BKJD
Rp/R* = 0.0860 [0.0837]
a/R* = 4.61 [0.69]
b = 1.00 [0.08]
Seff = 1356.70 [512.39]
Teff = 1548 [146] K
Rp = 65.21 [67.70] Re
a = 0.1328 [0.0367] AU
Ag = 1.07 [2.13] [0.03 σ]
Teffp = 2435 [1189] K [0.74 σ]

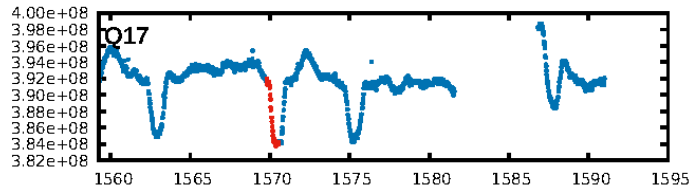
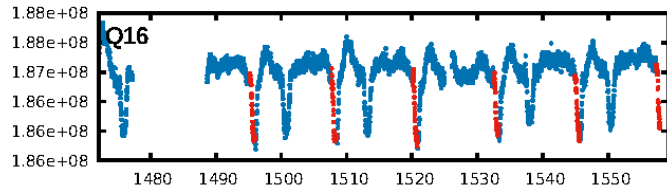
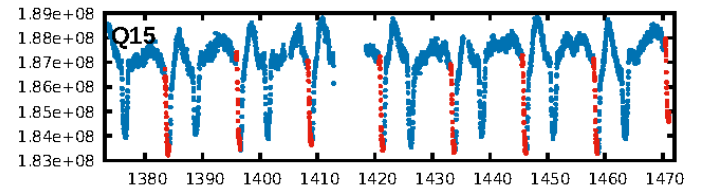
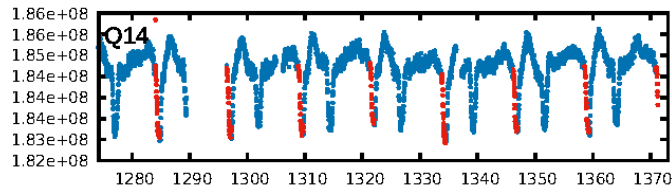
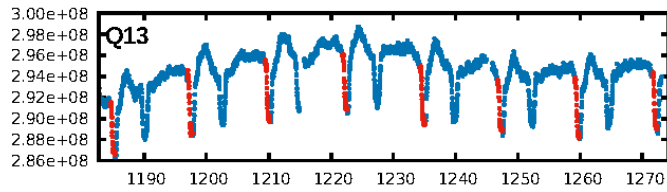
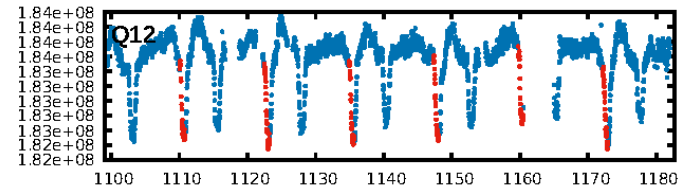
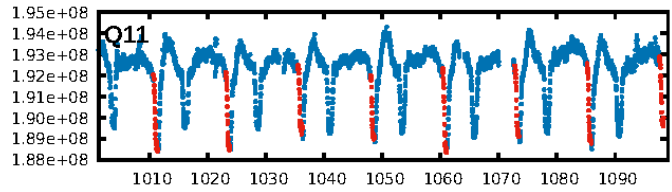
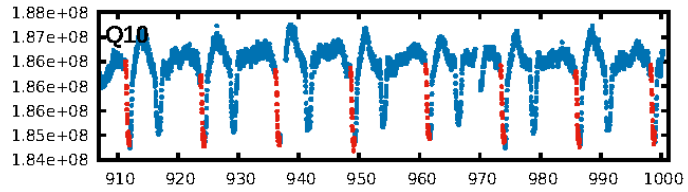
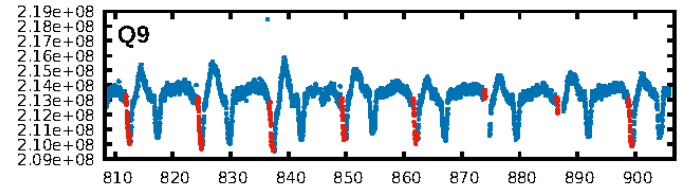
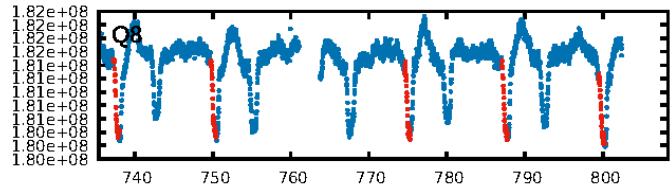
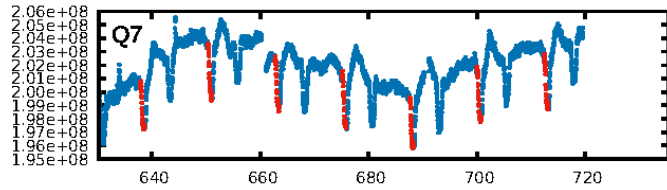
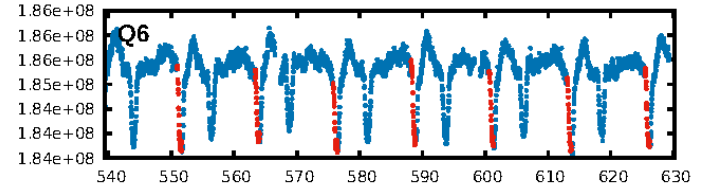
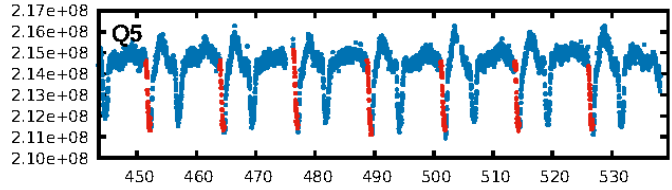
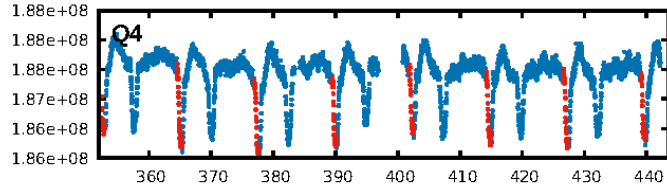
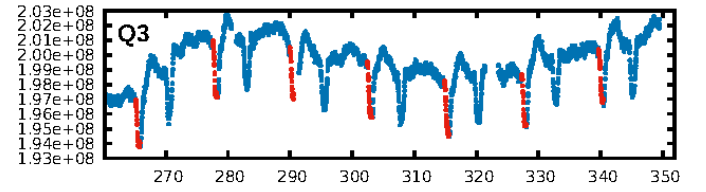
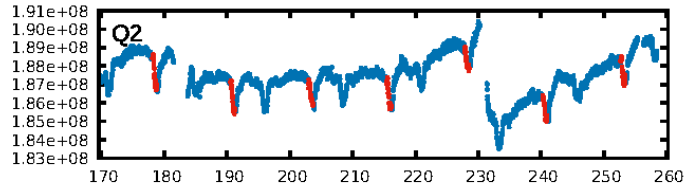
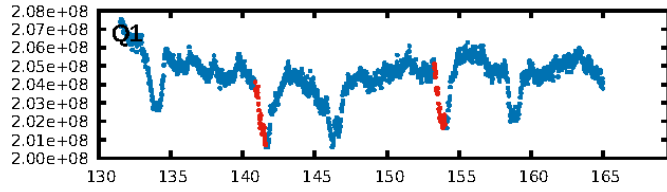
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: 2.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.98e-88
RollingBand-fgt: 1.00 [107/107]
GhostDiagnostic-chr: -0.5323
Centroid-sig: N/A
Centroid-so: 0.620 arcsec [46.09 σ]
OotOffset-rm: N/A
KicOffset-rm: 0.924 arcsec [2.36 σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 4/4/0/2 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 0.00 [0/17]

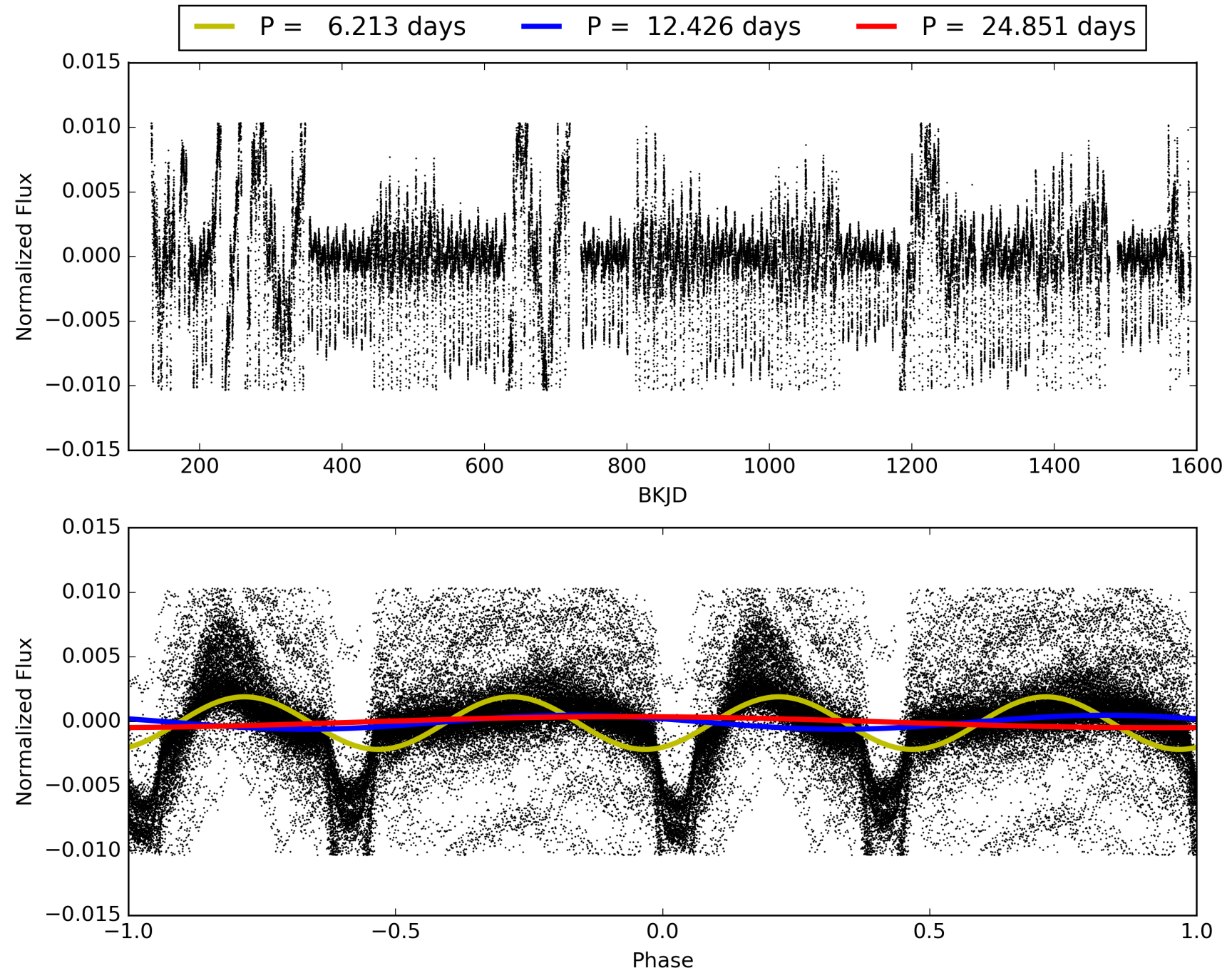
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:32:10 Z

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

TCE 005385778-02, PDC Light Curves

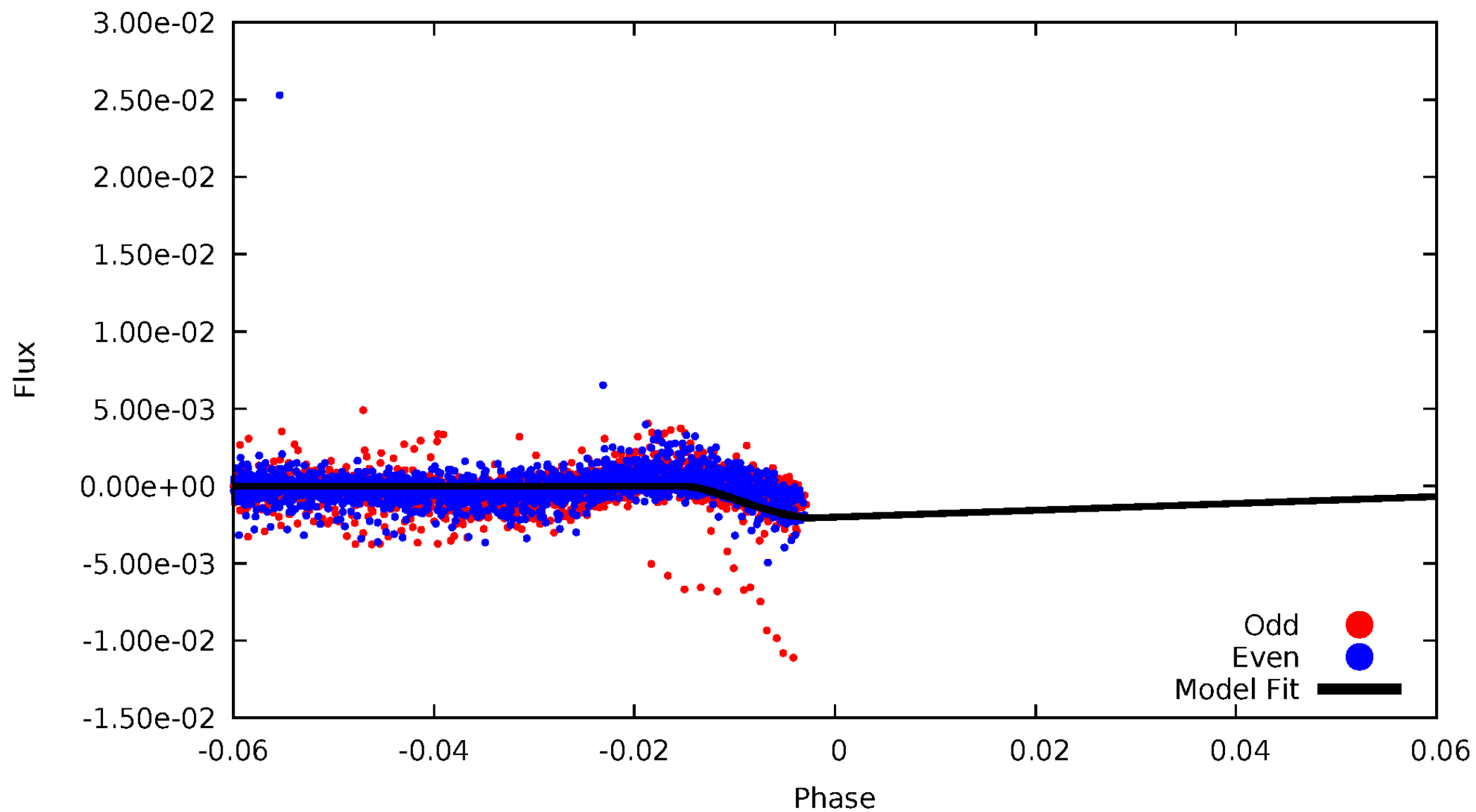


TCE 005385778-02



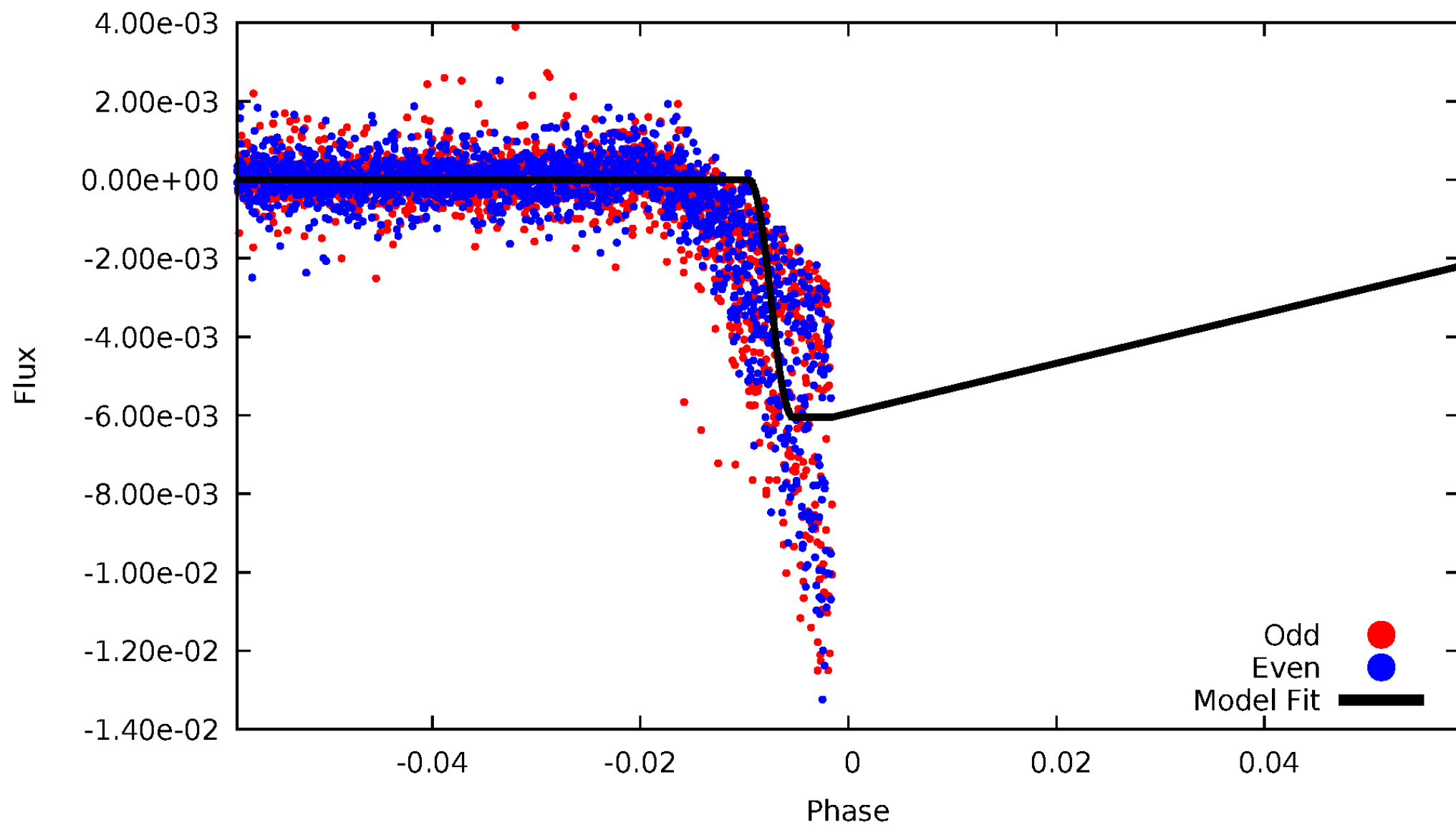
DV Odd/Even

TCE 005385778-02



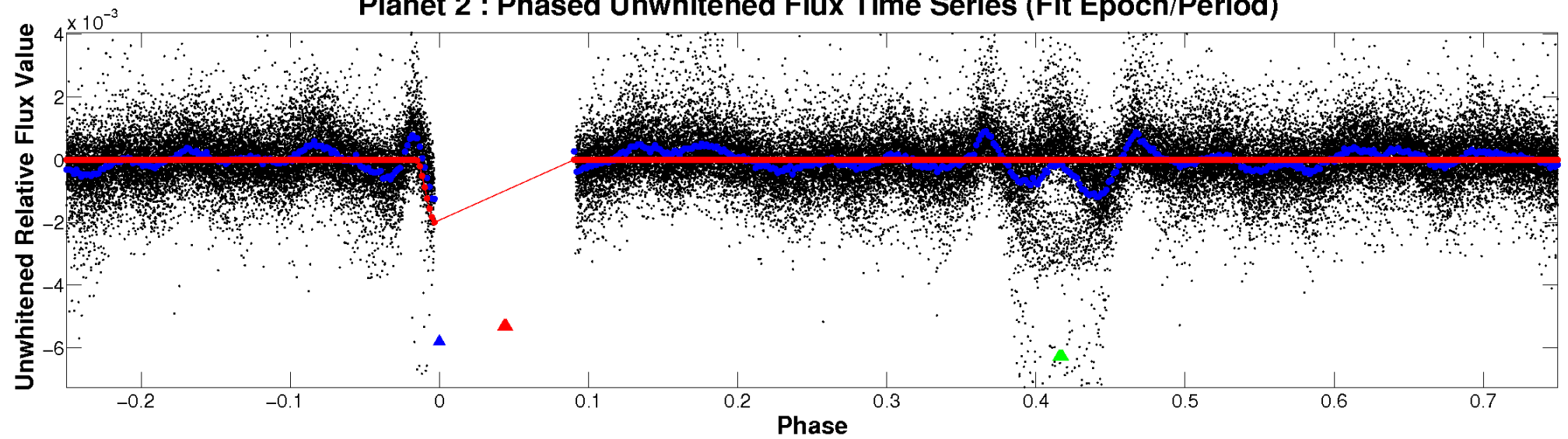
ALT Odd/Even

TCE 005385778-02

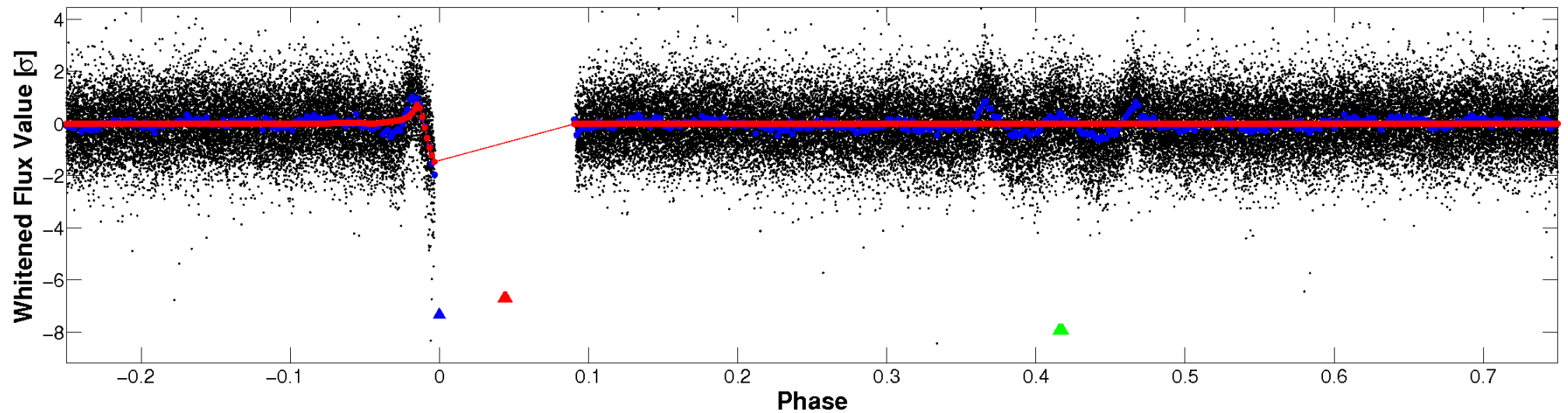


Non-Whitened Vs. Whitened Light Curve

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

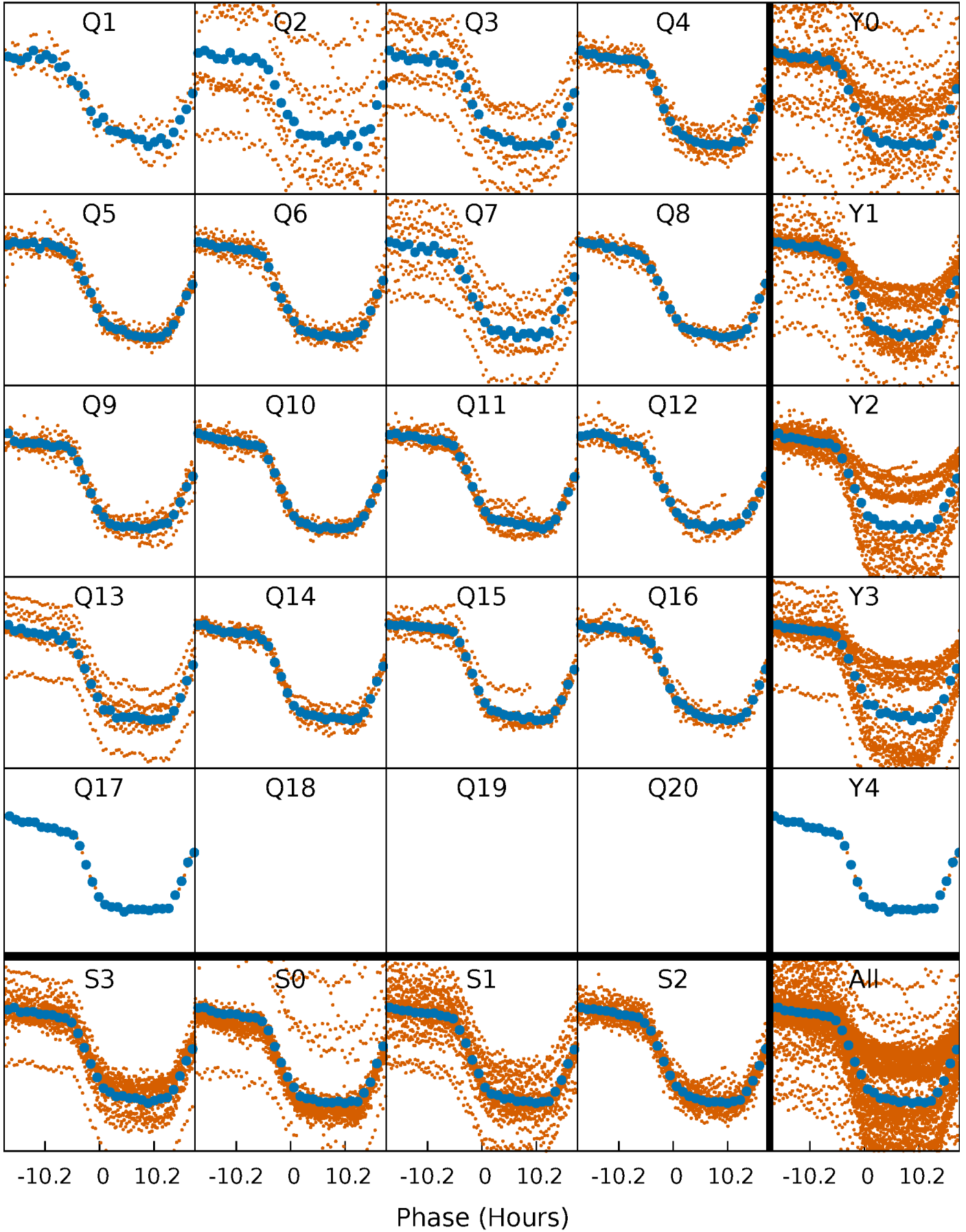


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



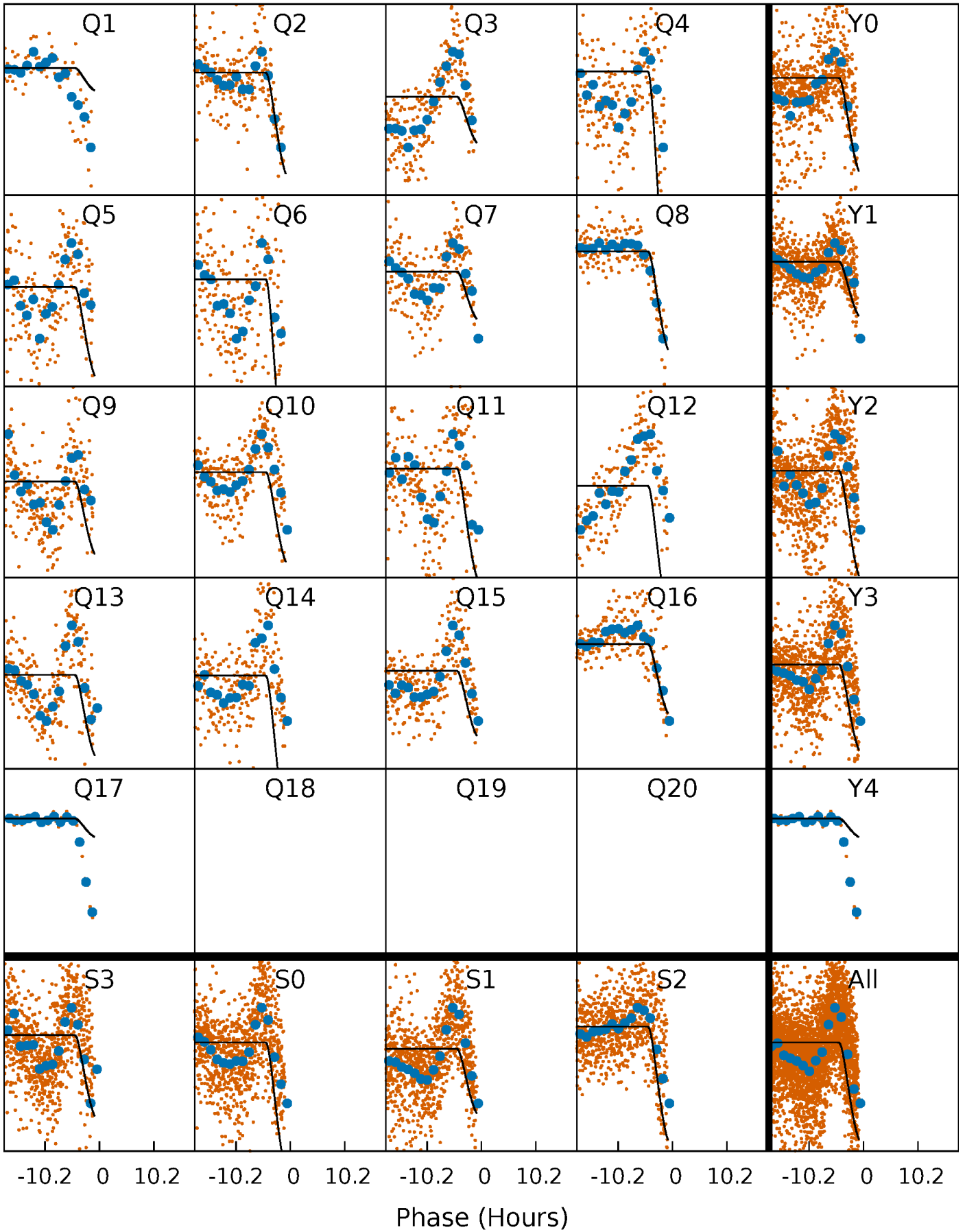
PDC Quarter-Phased Transit Curves

TCE 005385778-02 P= 12.425641 Days $T_0=141.219763$ (BKJD)



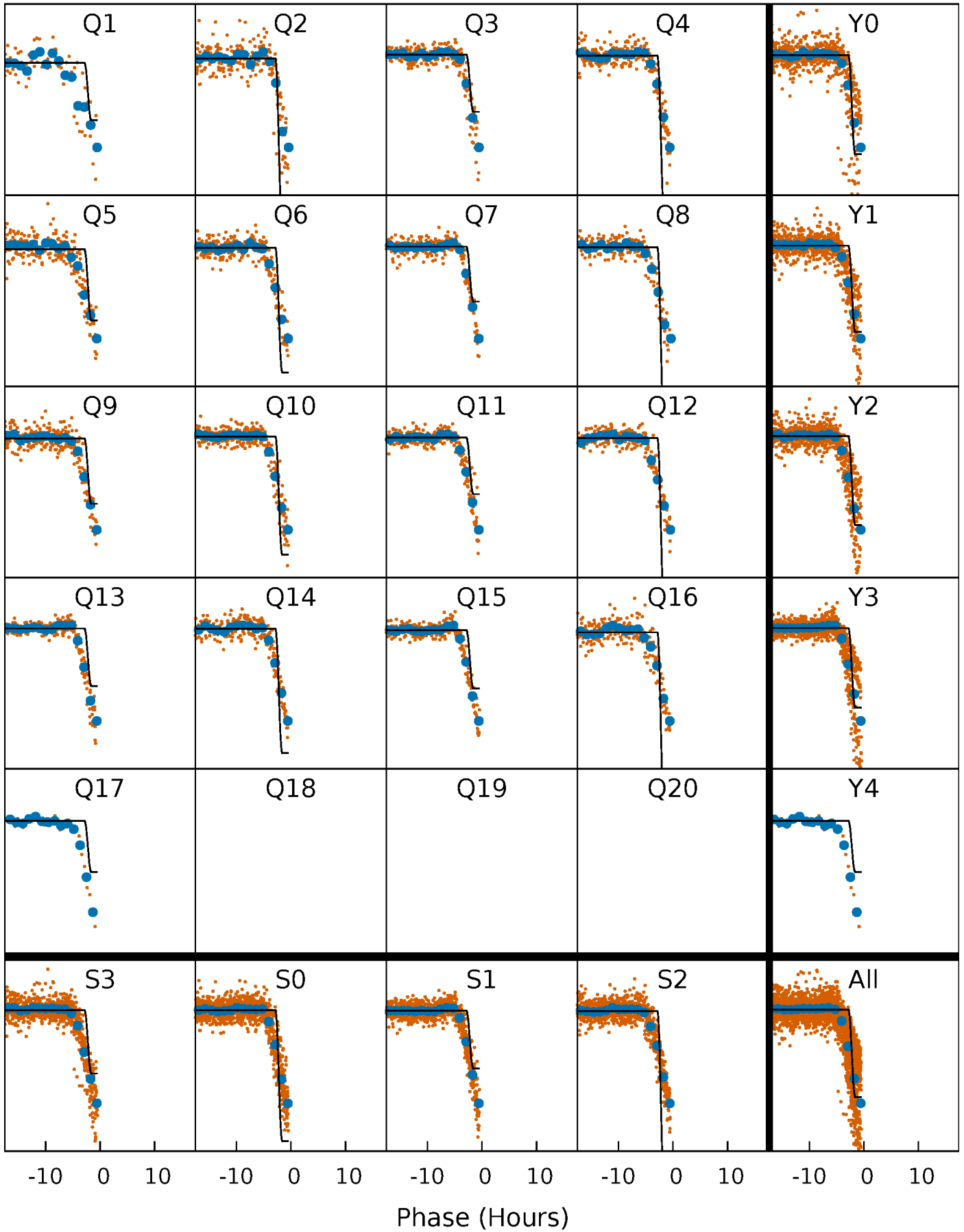
DV Quarter-Phased Transit Curves

TCE 005385778-02 P= 12.425641 Days $T_0=141.219763$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

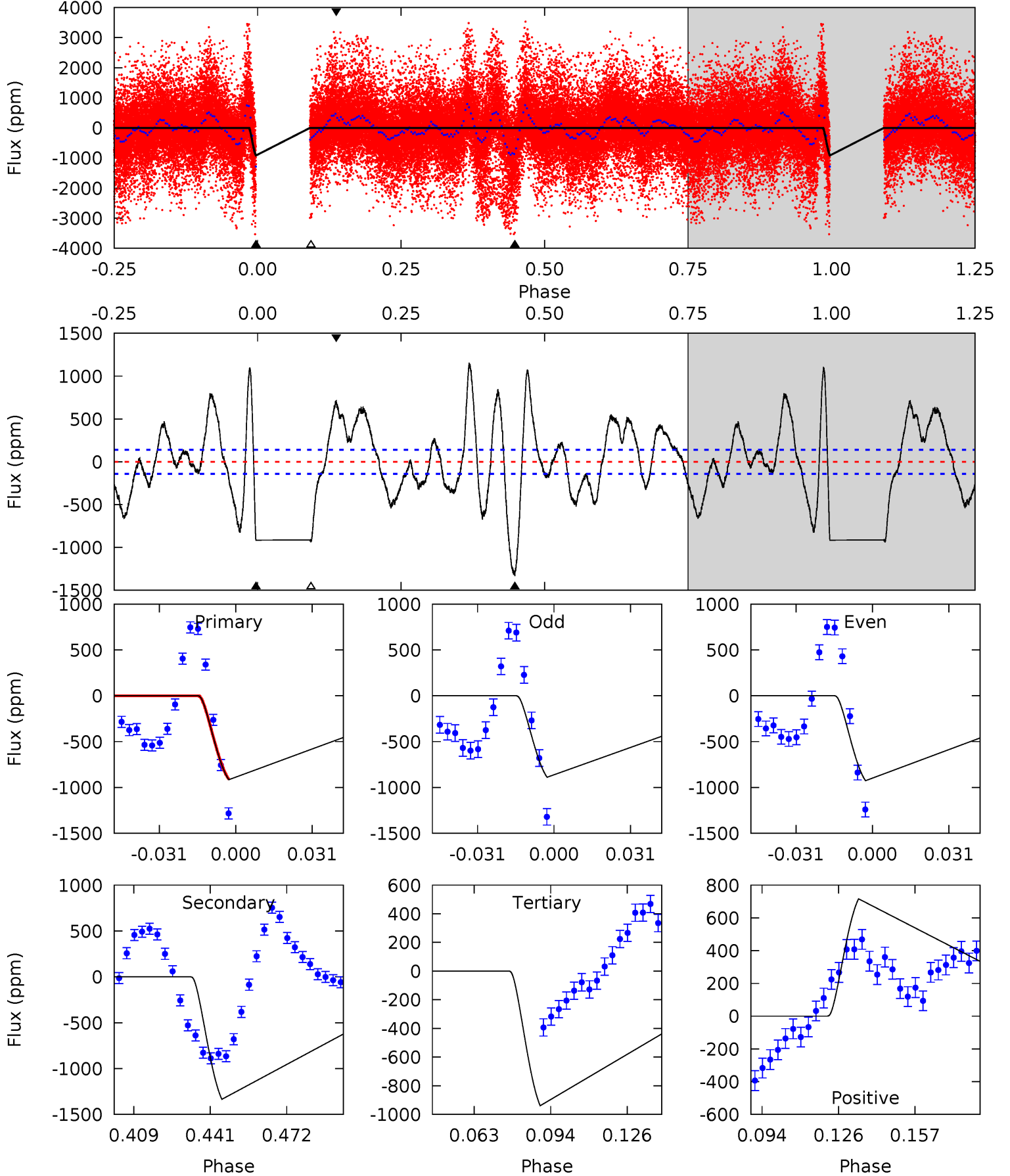
TCE 005385778-02 P= 12.425785 Days $T_0=141.188379$ (BKJD)



DV Model-Shift Uniqueness Test

005385778-02, P = 12.425641 Days, E = 128.794122 Days

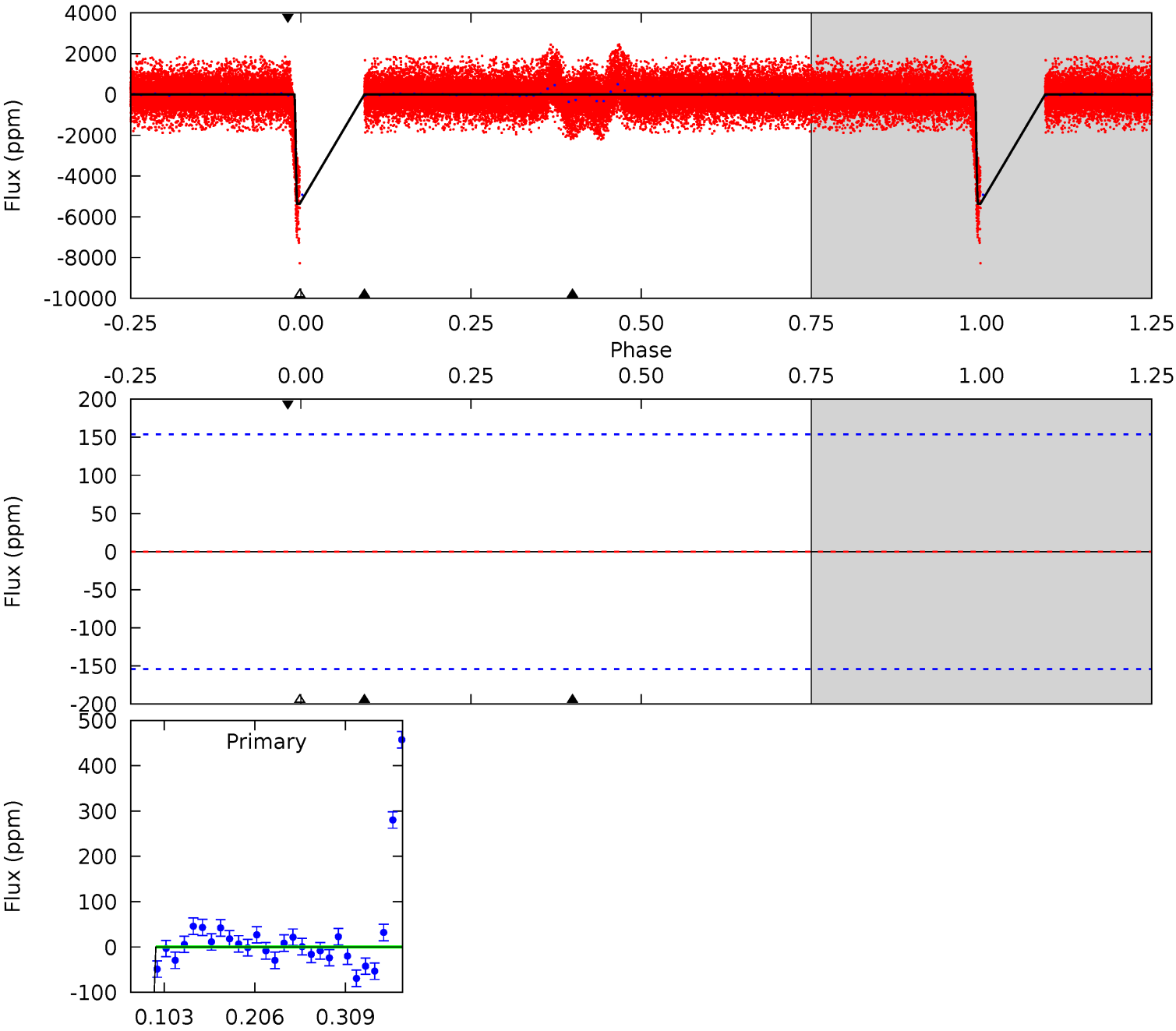
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.3	45.7	32.1	24.5	4.80	2.15	12.2	-0.82	6.81	13.5	21.2	0.64	0	0.46	0



Alt Model-Shift Uniqueness Test

005385778-02, P = 12.425785 Days, E = 128.762594 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	4.56	1.63	0	0	0	0	0	0	0	0	0



Stellar Parameters For KIC 005385778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4849^{+48}_{-115}	$3.060^{+0.180}_{-0.105}$	$0.340^{+0.100}_{-0.200}$	$6.952^{+1.248}_{-2.496}$	$2.025^{+0.584}_{-0.779}$	$0.008^{+0.011}_{-0.003}$
	+1%/-2%	+6%/-3%	+29%/-59%	+18%/-36%	+29%/-38%	+135%/-31%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 005385778-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1335 ± 29	$74.05^{+61.96}_{-40.35}$	2139^{+108}_{-150}	3286^{+1085}_{-614}	$2.329^{+8.856}_{-1.593}$
Alt.	-0 ± 34	$70.81^{+61.65}_{-45.51}$	2140^{+109}_{-138}	-2545^{+174}_{-127}	$0.003^{+0.098}_{-0.101}$

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 $A_{obs} \gg 1.0$

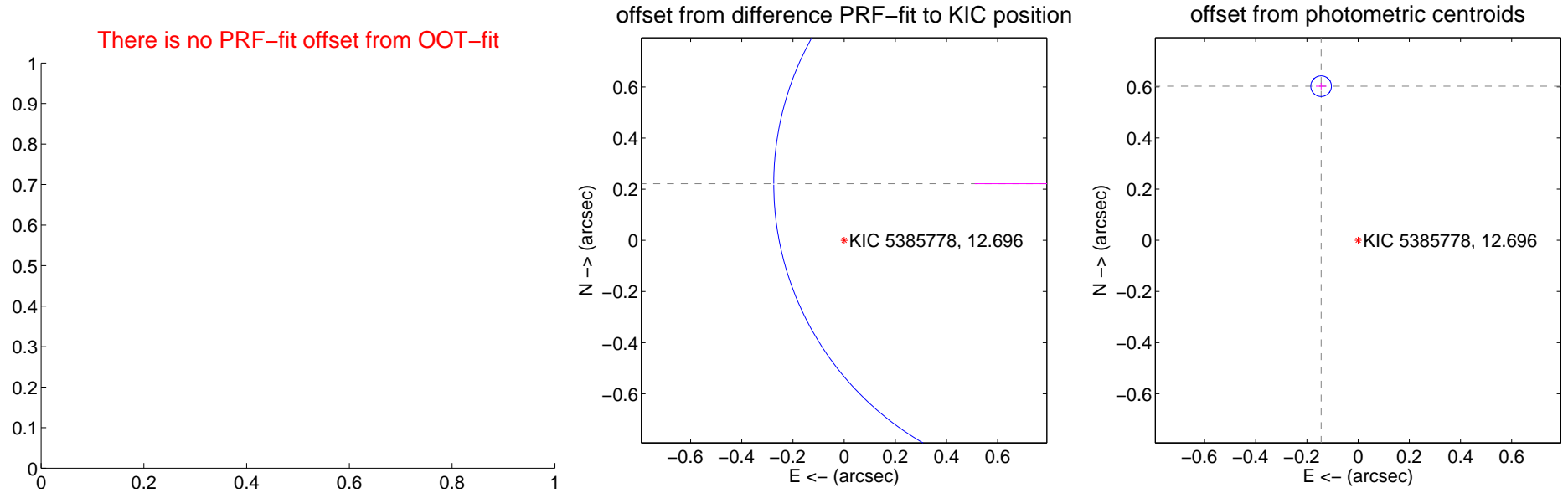
DV Centroid Data

Supplemental centroid analysis for 005385778-02. Kepler magnitude: 12.70. Transit SNR 23.86

There are 0 quarters with good PRF difference image offsets

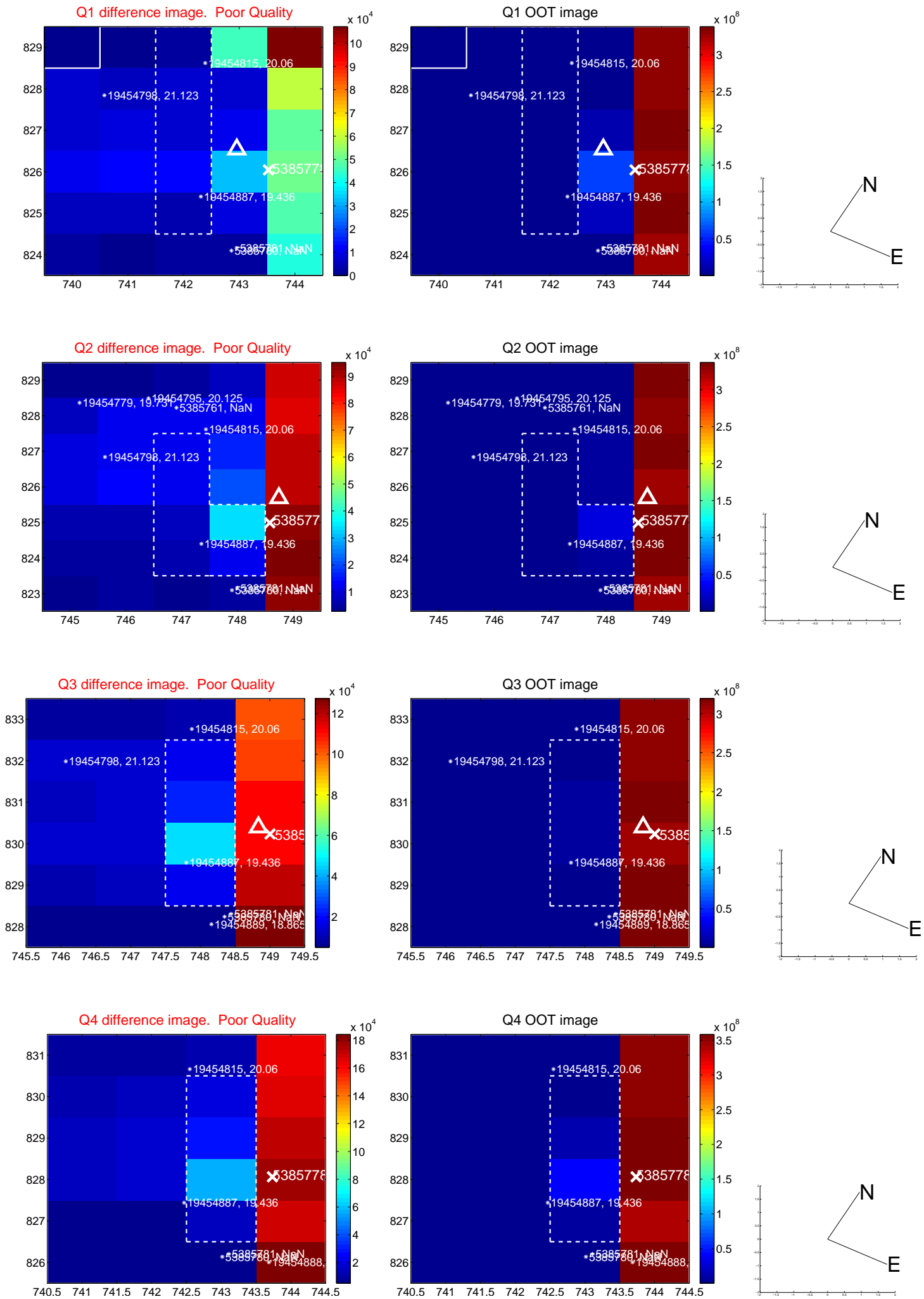
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.924 ± 0.391	2.36	-0.897 ± 0.386	0.221 ± 0.258
photometric centroid source offset	0.62 ± 0.01	46.09	0.14 ± 0.02	0.60 ± 0.01

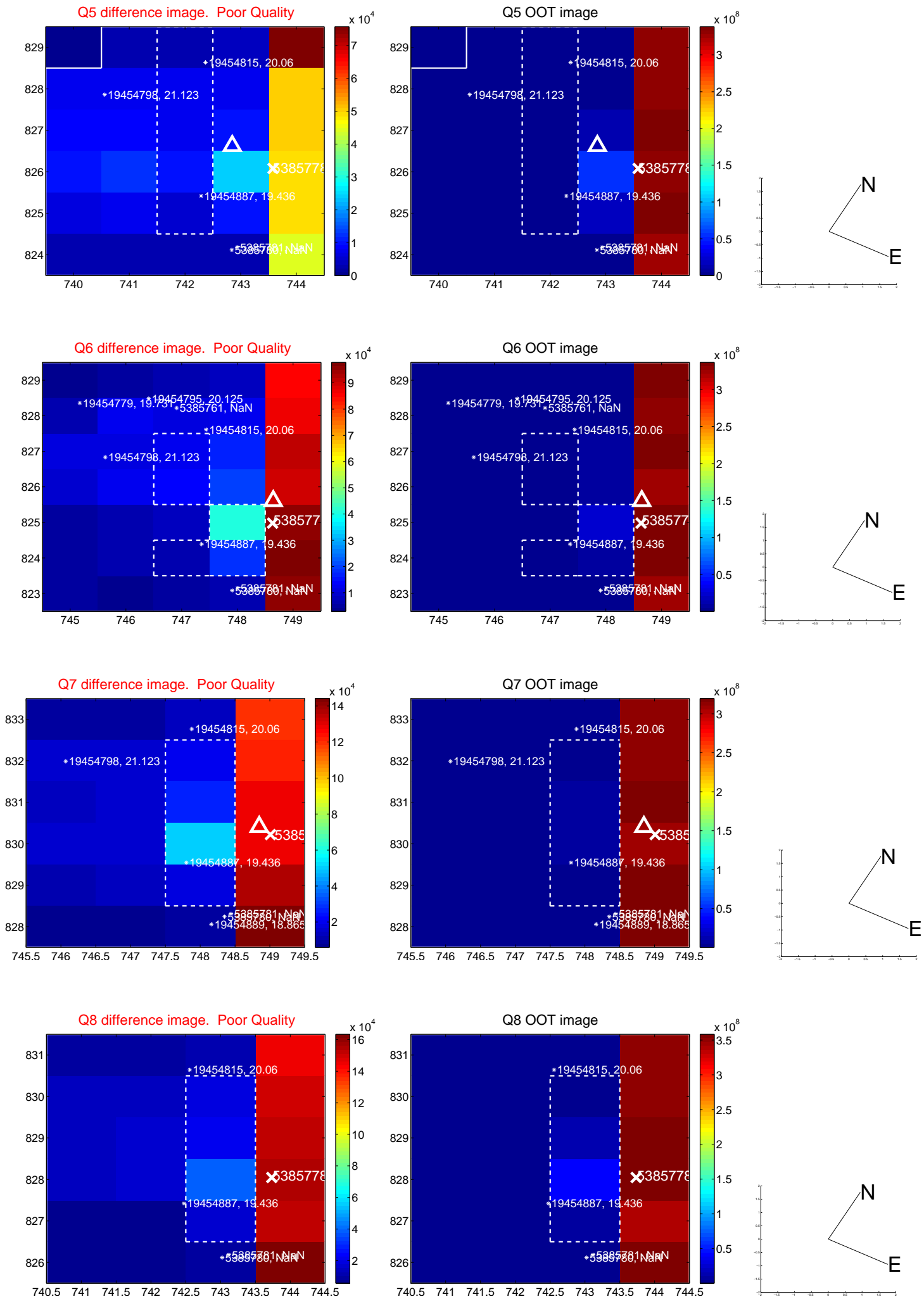


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

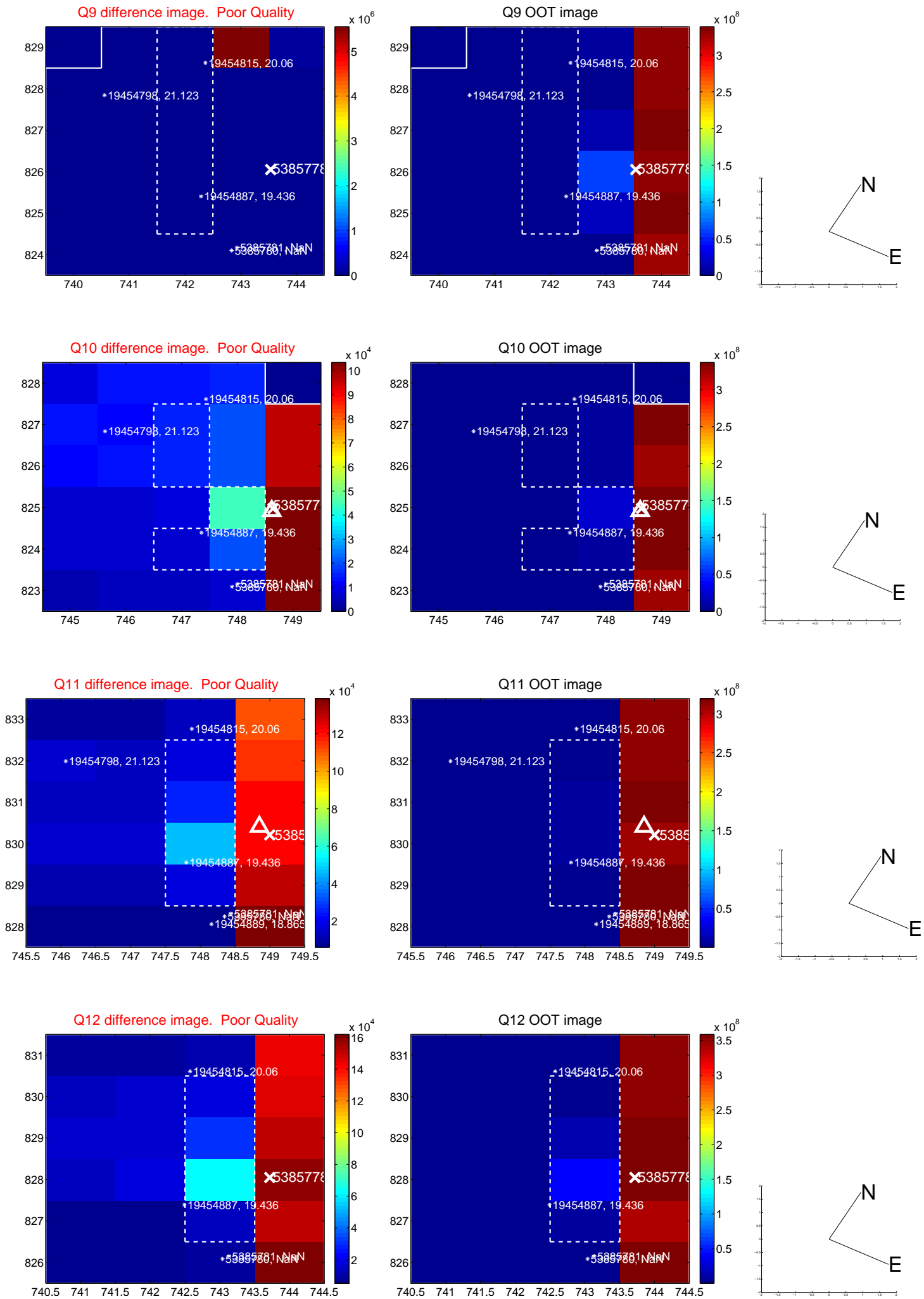
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



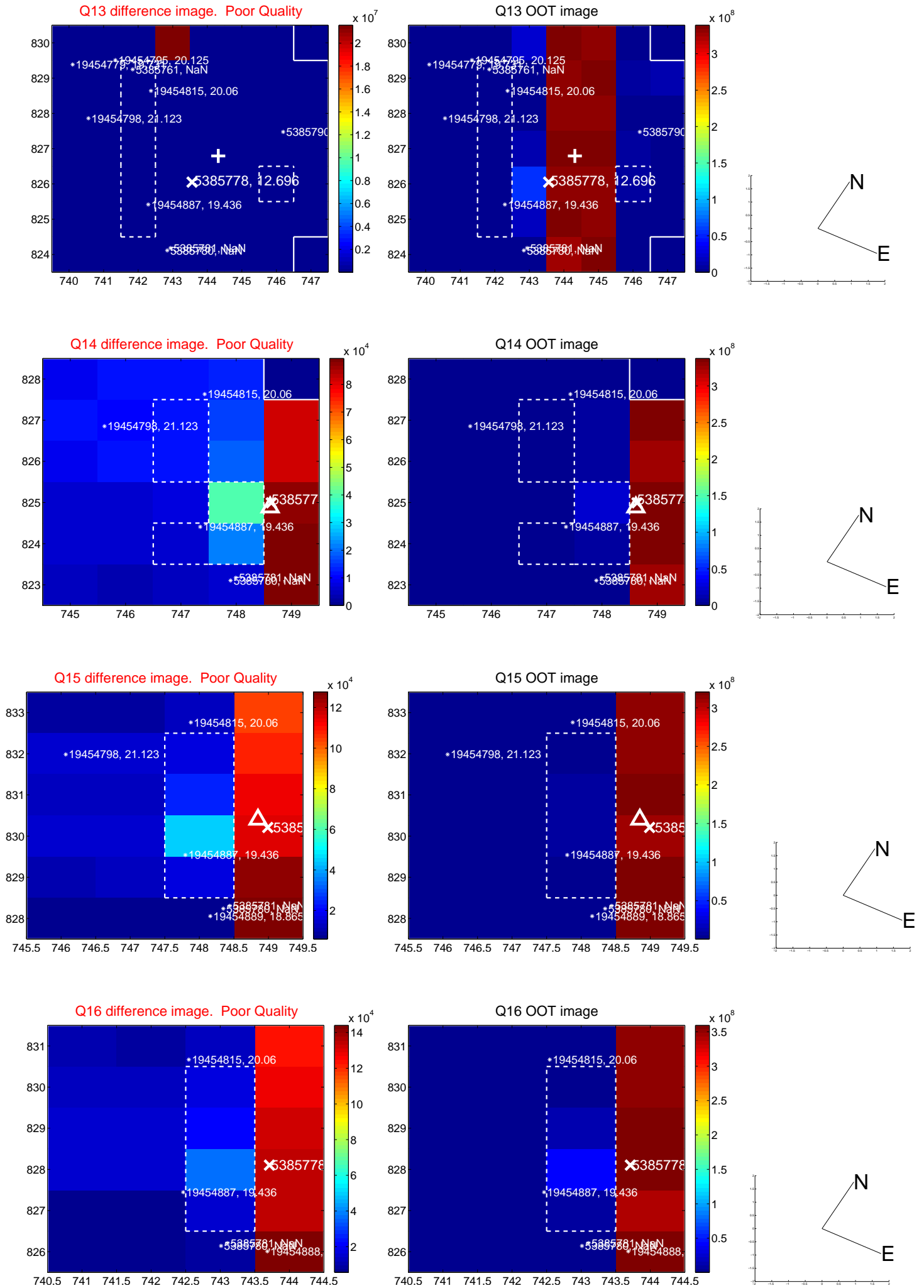
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



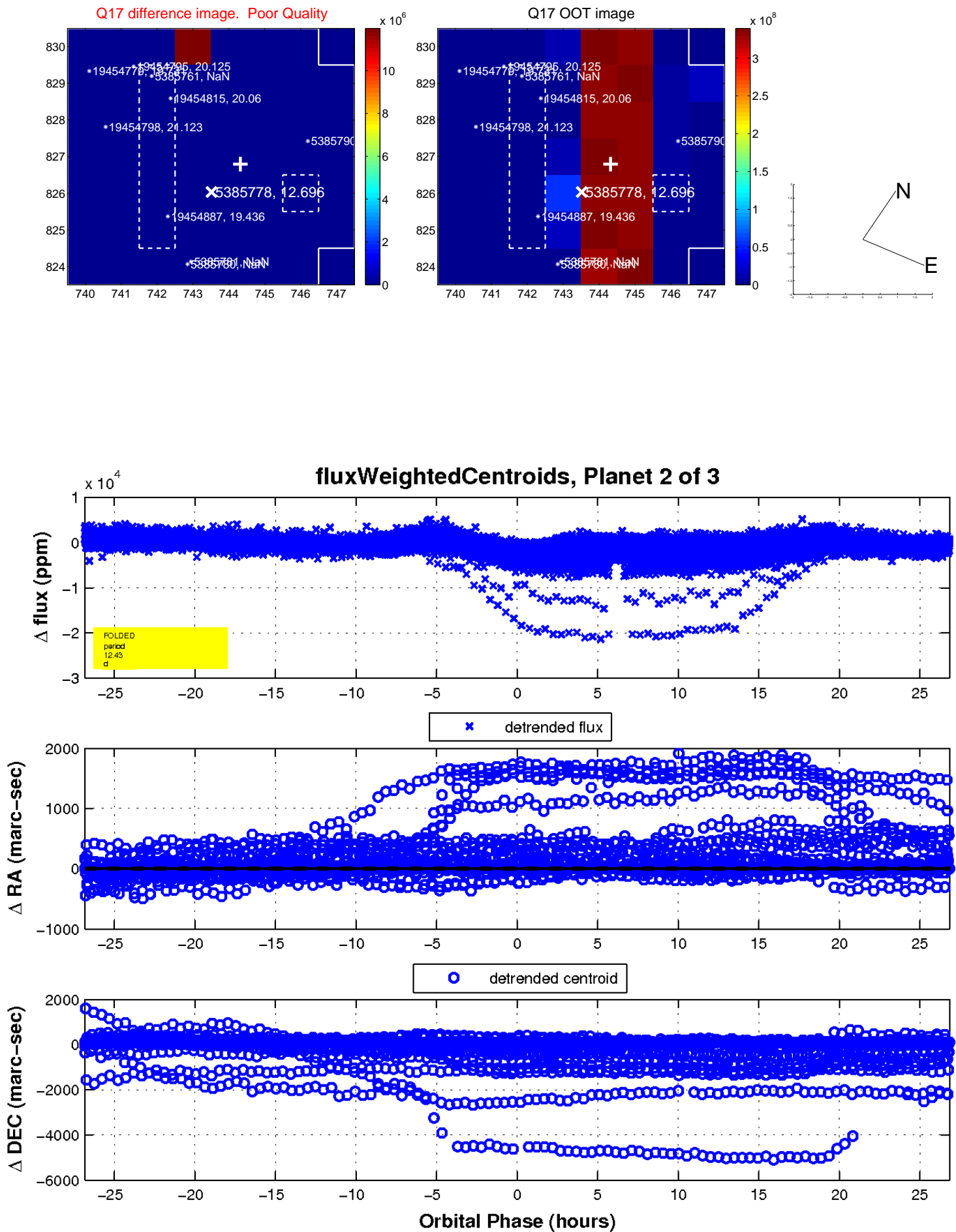
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

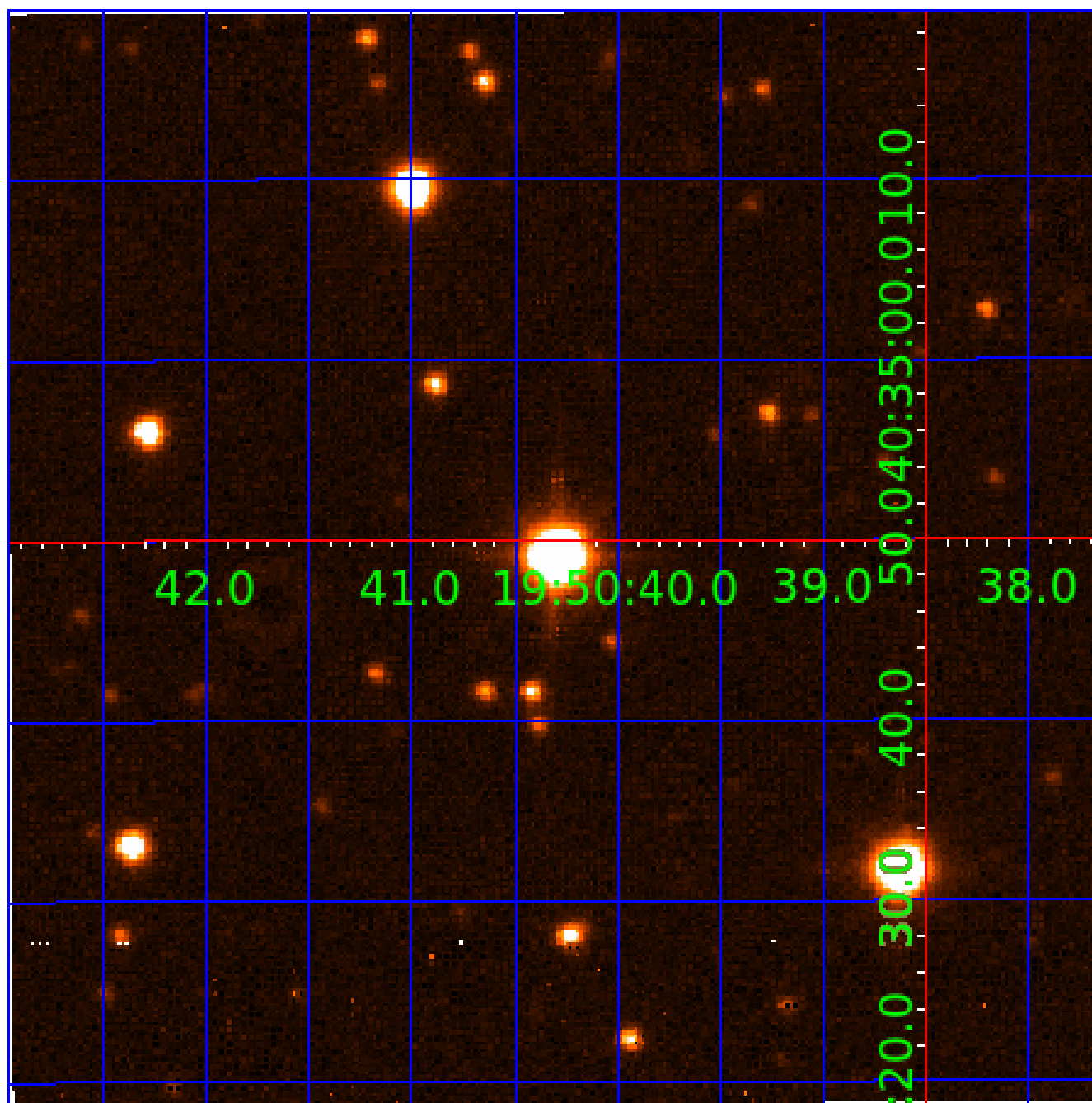


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005385778

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})
005385778-01	OBS	6129.01	12.425825	141.757376	1301.7	9.298	21.2	26.0	6.95	4849	50.44	1356.67
005385778-02	OBS	No	12.425641	141.219763	2203.3	8.947	21.9	23.9	6.95	4849	65.21	1356.70
005385778-03	OBS	No	12.425391	133.986668	1136.9	29.055	18.6	23.7	6.95	4849	28.29	1356.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005385778-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005385778-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
005385778-03	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 005385778-03

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005385778-03	5385778	V380-Cyg-sec	5385723	1:1	77.8	-20	-1	5.77	12.69	113.49	Direct-PRF	0	0.27	1.18

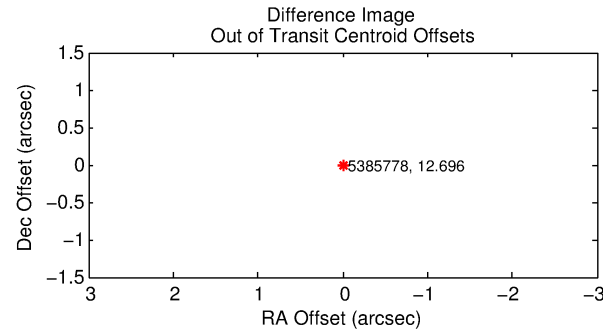
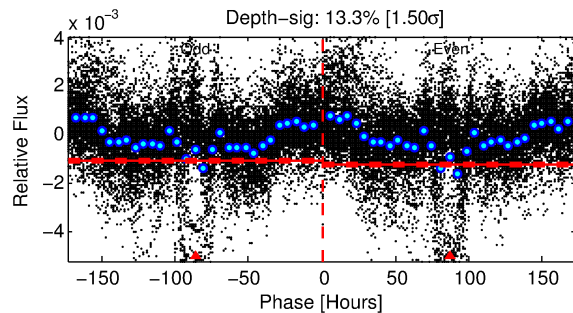
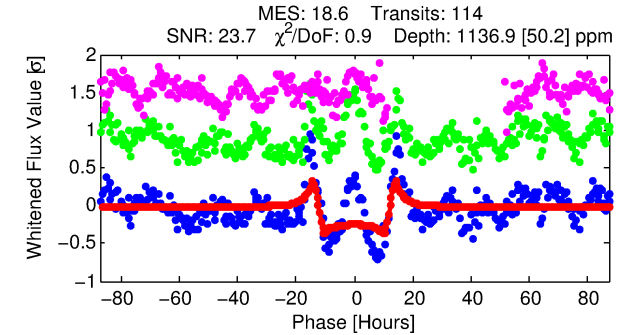
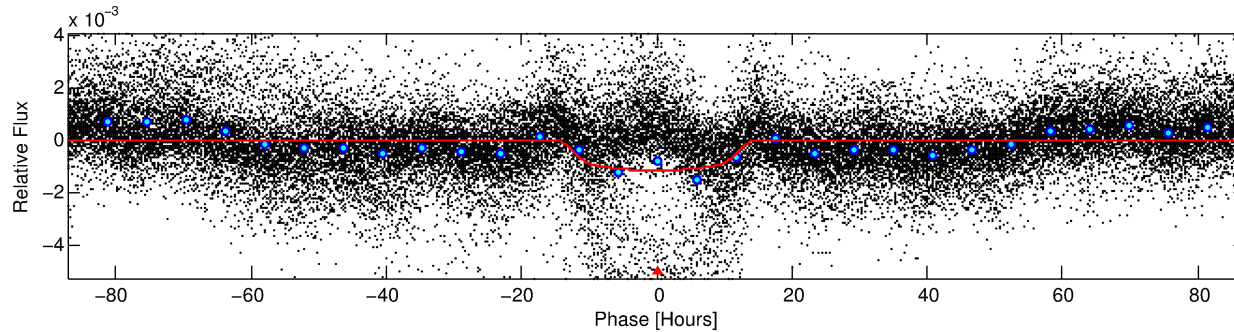
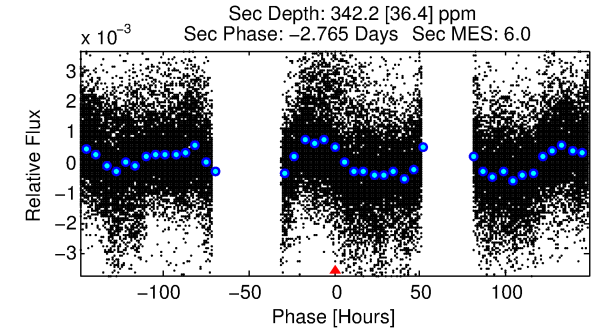
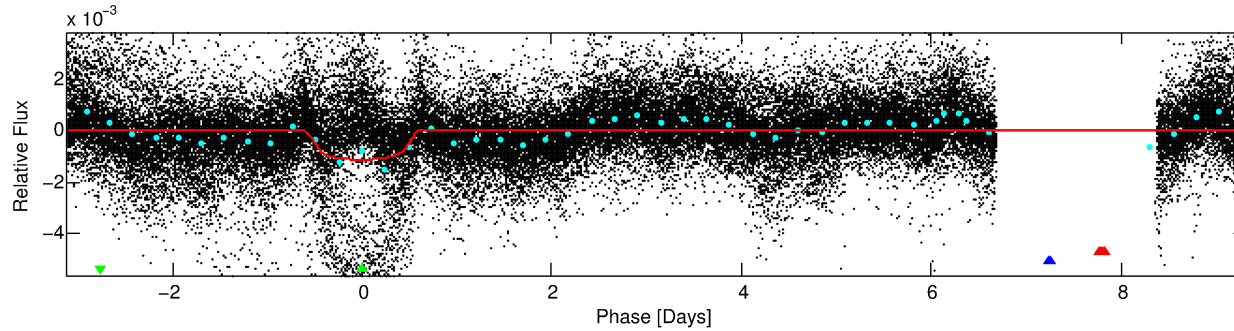
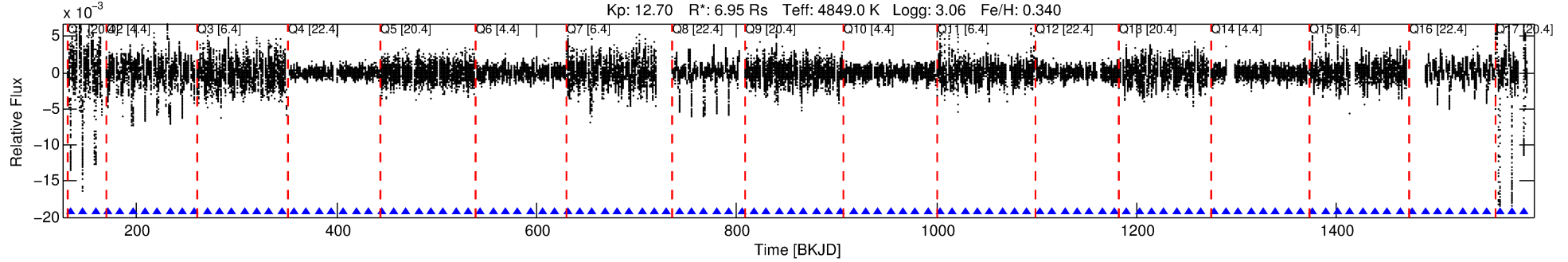
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5385778 Candidate: 3 of 3 Period: 12.425 d

KOI: K06129 Corr: No Ephemeris Match

Kp: 12.70 R*: 6.95 Rs Teff: 4849.0 K Logg: 3.06 Fe/H: 0.340



DV Fit Results:

Period = 12.42539 [0.00015] d
Epoch = 133.9867 [0.0105] BKJD
Rp/R* = 0.0373 [0.0009]
a/R* = 2.00 [0.06]
b = 0.89 [0.01]
Seff = 1356.74 [512.41]
Teff = 1548 [146] K
Rp = 28.29 [10.18] Re
a = 0.1328 [0.0367] AU
Ag = 4.15 [1.59] [1.98σ]
Teffp = 3416 [129] K [9.58σ]

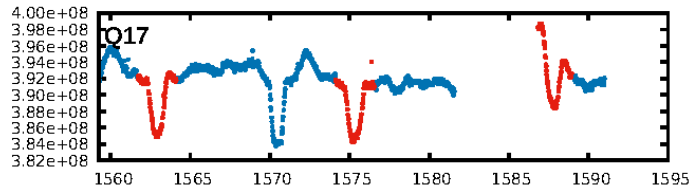
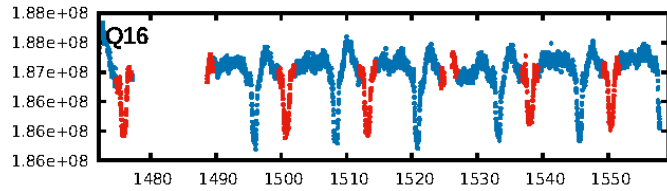
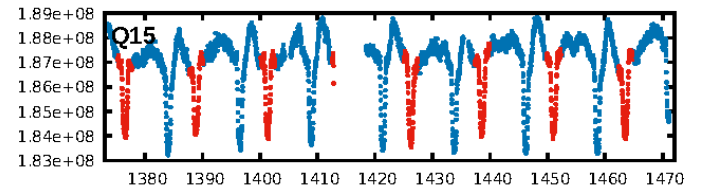
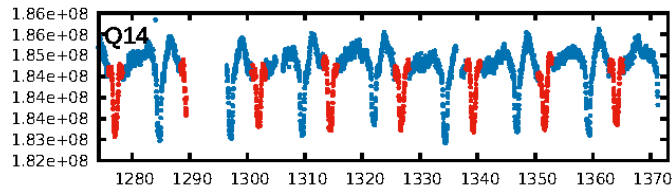
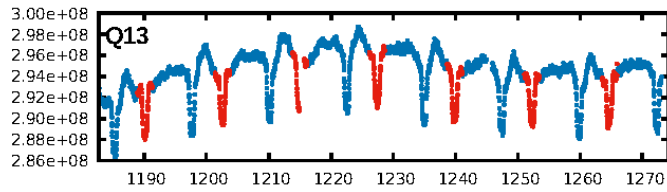
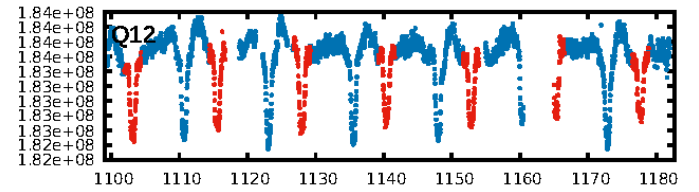
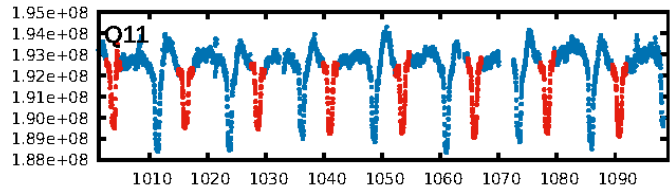
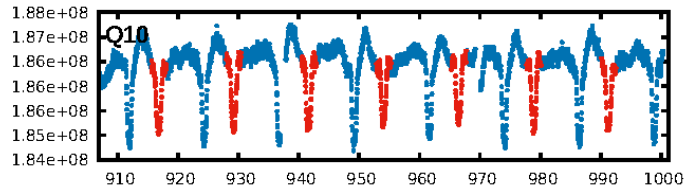
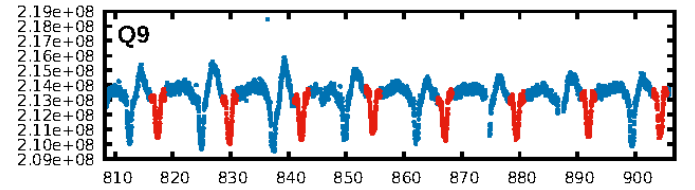
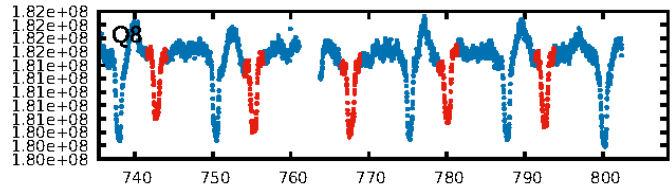
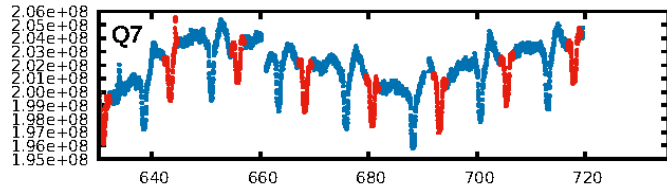
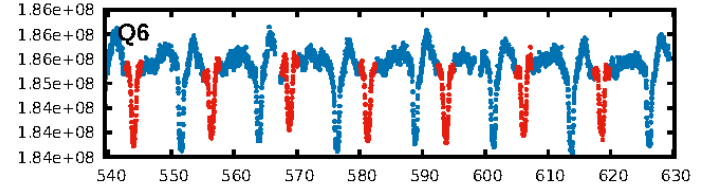
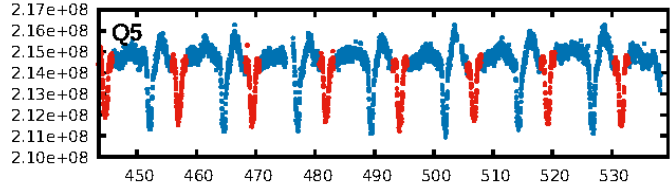
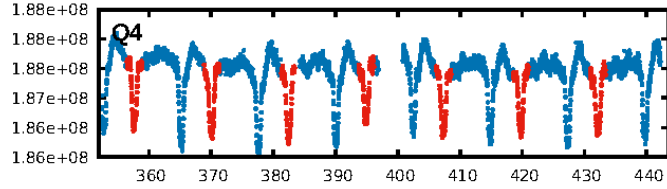
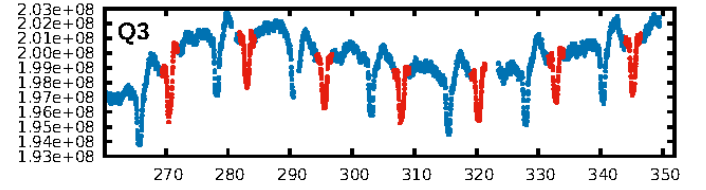
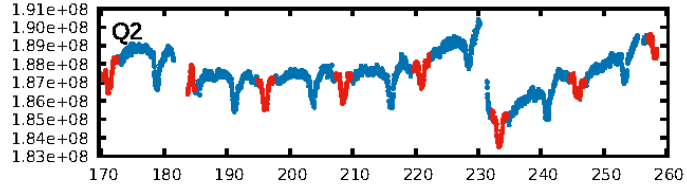
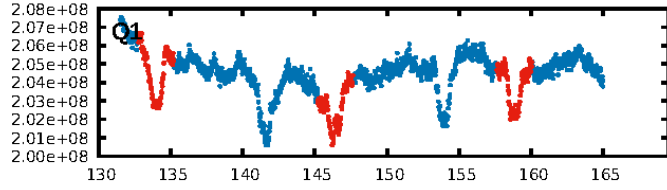
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.91e-69
RollingBand-fgt: 1.00 [108/108]
GhostDiagnostic-chr: -0.7356
Centroid-sig: N/A
Centroid-so: 0.705 arcsec [15.01σ]
OotOffset-rm: N/A
KicOffset-rm: 1.242 arcsec [4.55σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 4/4/0 [9]
DiffImageQuality-fgm: 0.00 [0/9]
DiffImageOverlap-fno: 1.00 [17/17]

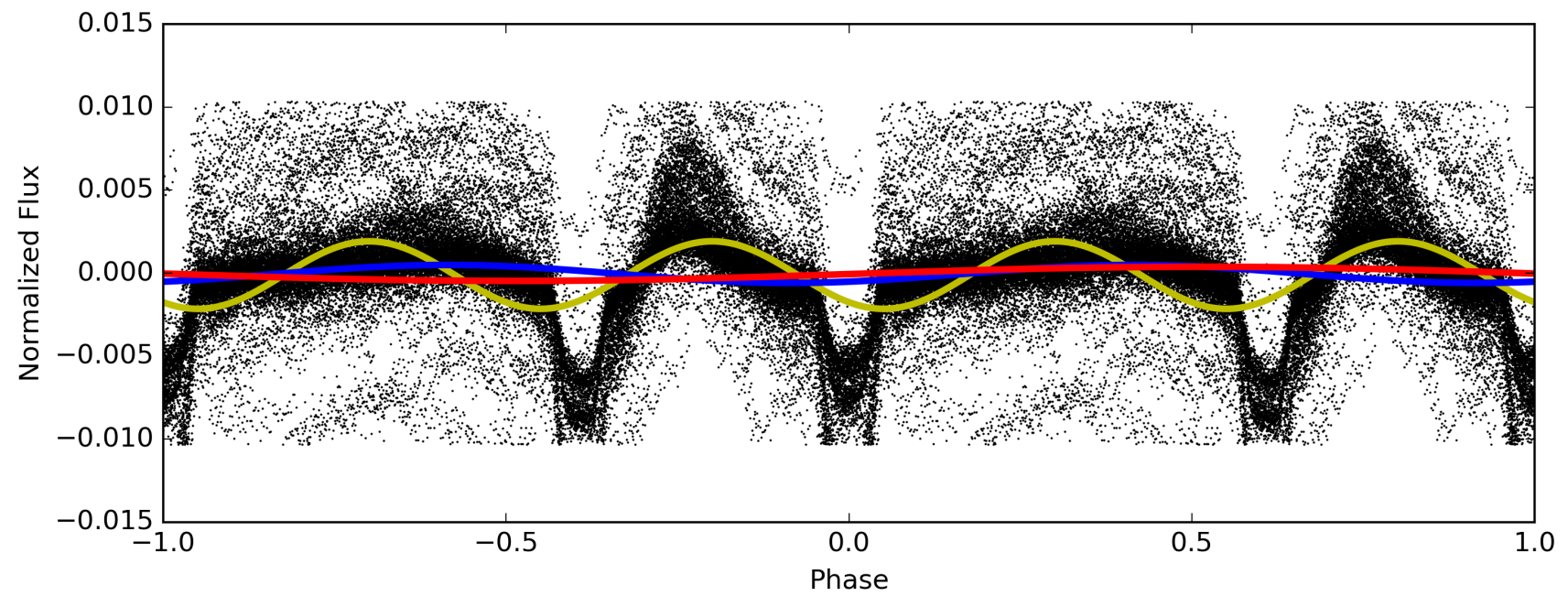
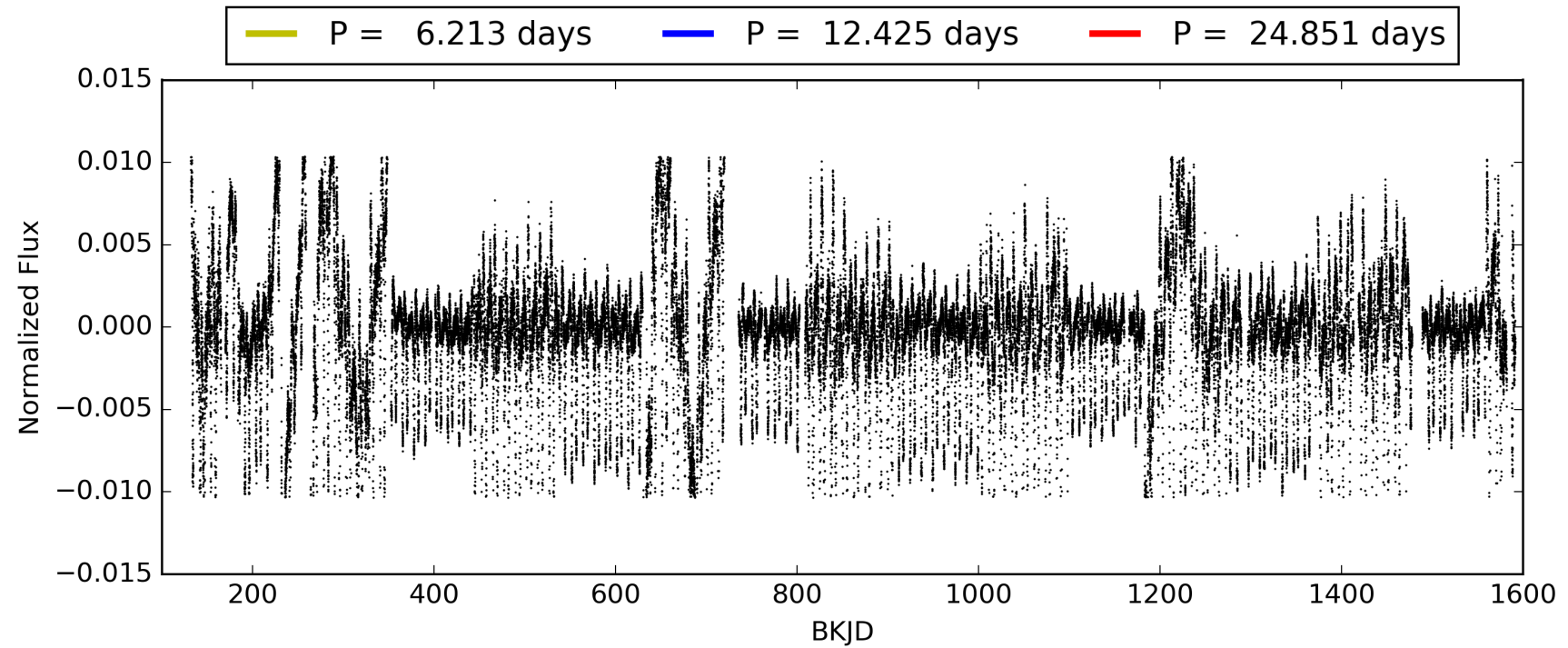
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:32:19 Z

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

TCE 005385778-03, PDC Light Curves

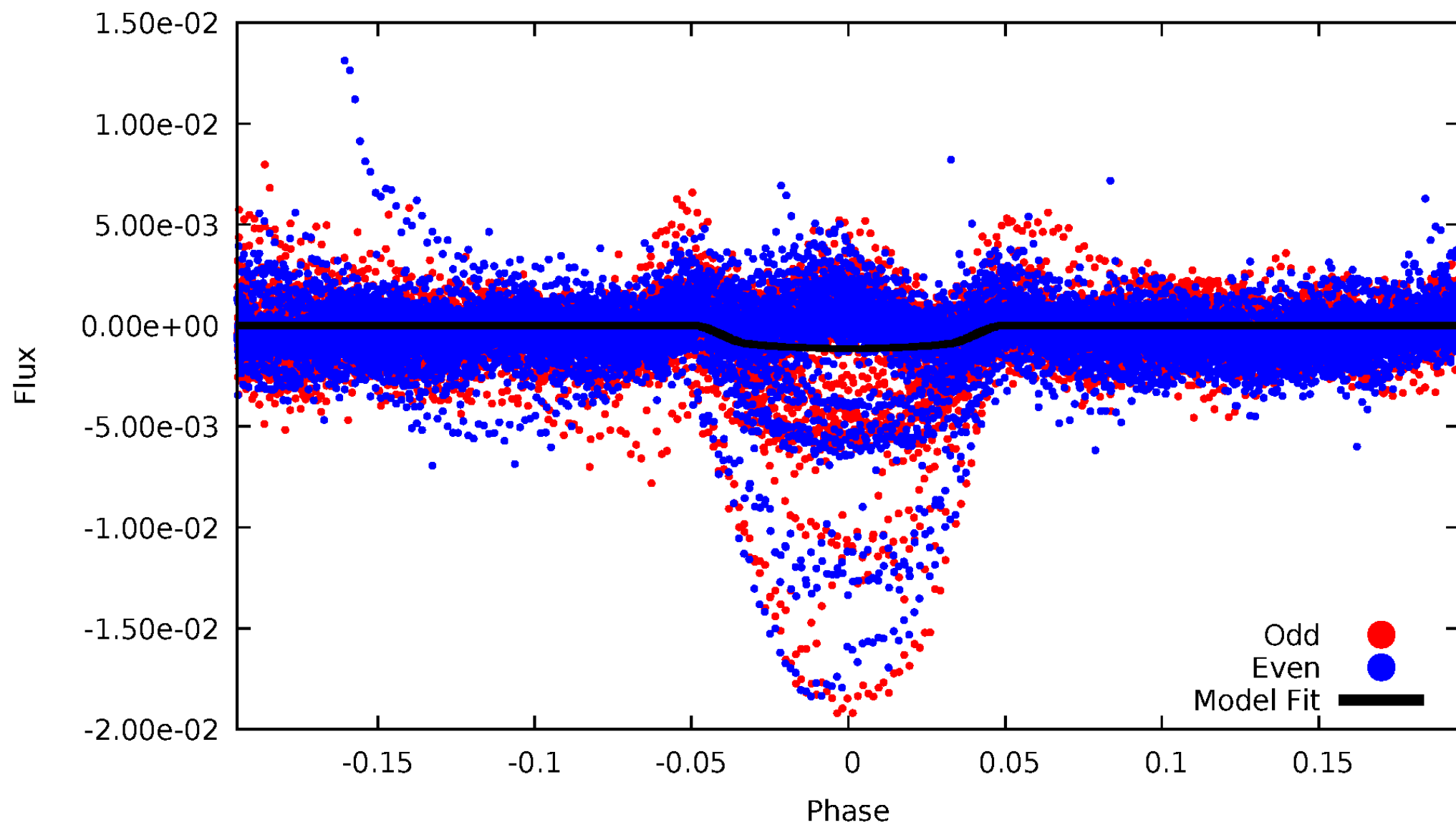


TCE 005385778-03



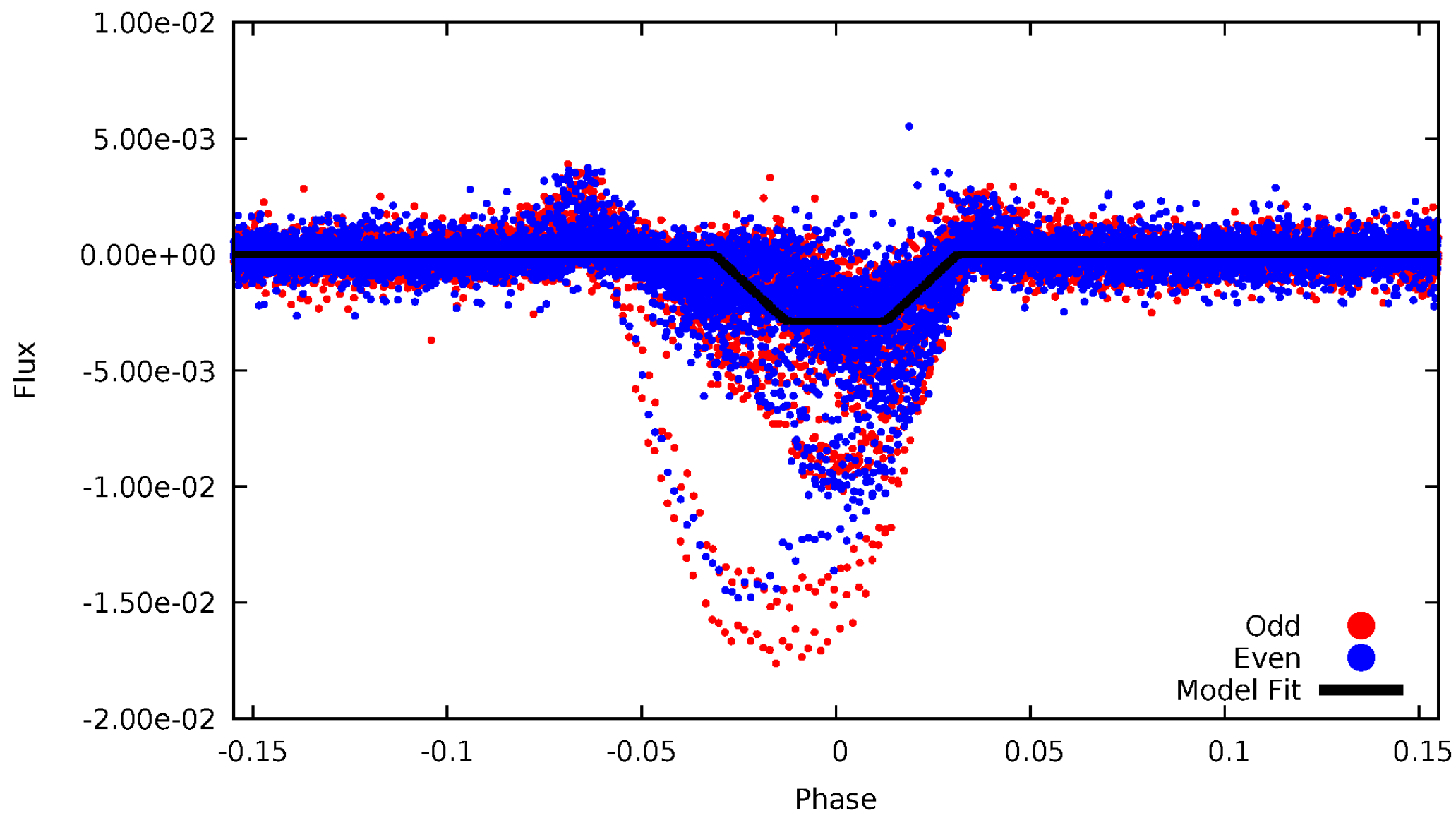
DV Odd/Even

TCE 005385778-03



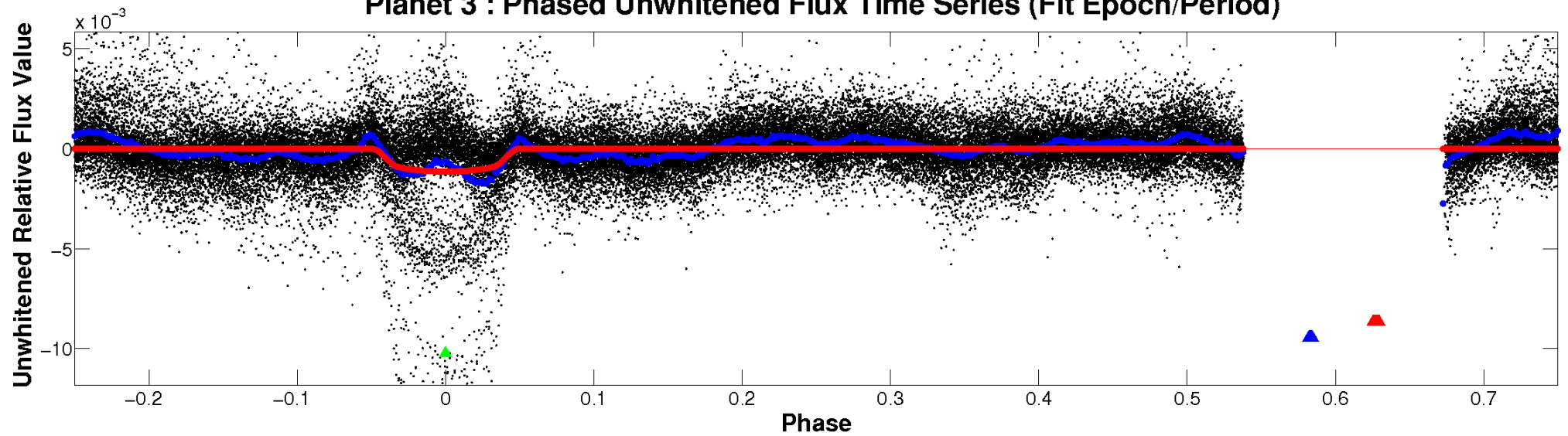
ALT Odd/Even

TCE 005385778-03

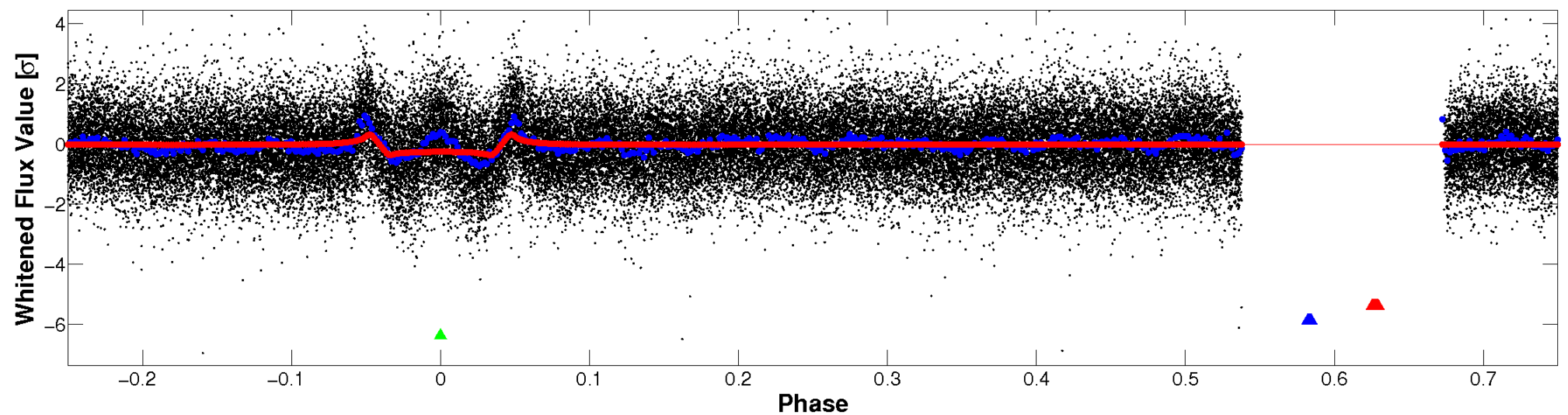


Non-Whitened Vs. Whitened Light Curve

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

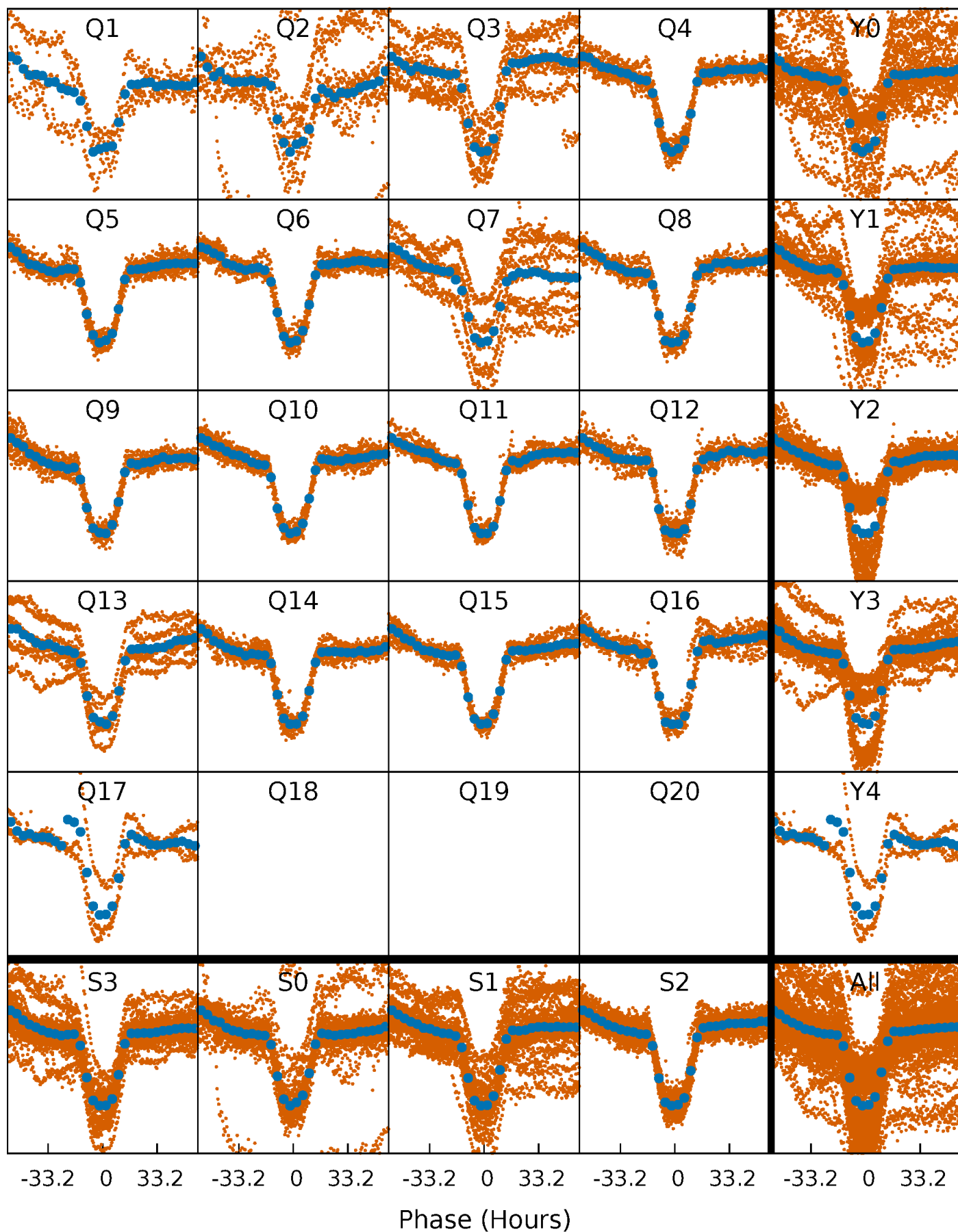


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



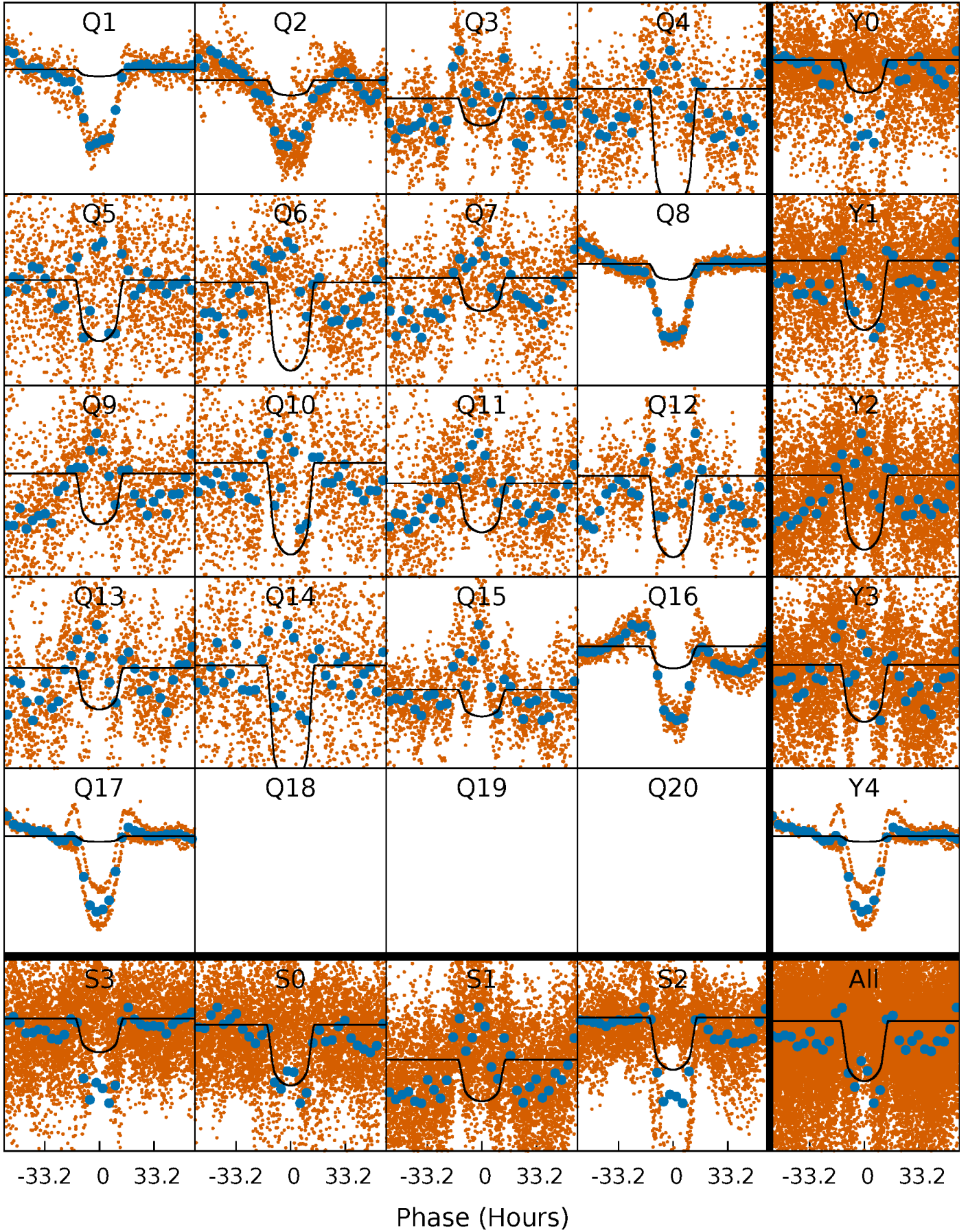
PDC Quarter-Phased Transit Curves

TCE 005385778-03 P= 12.425391 Days $T_0=133.986668$ (BKJD)



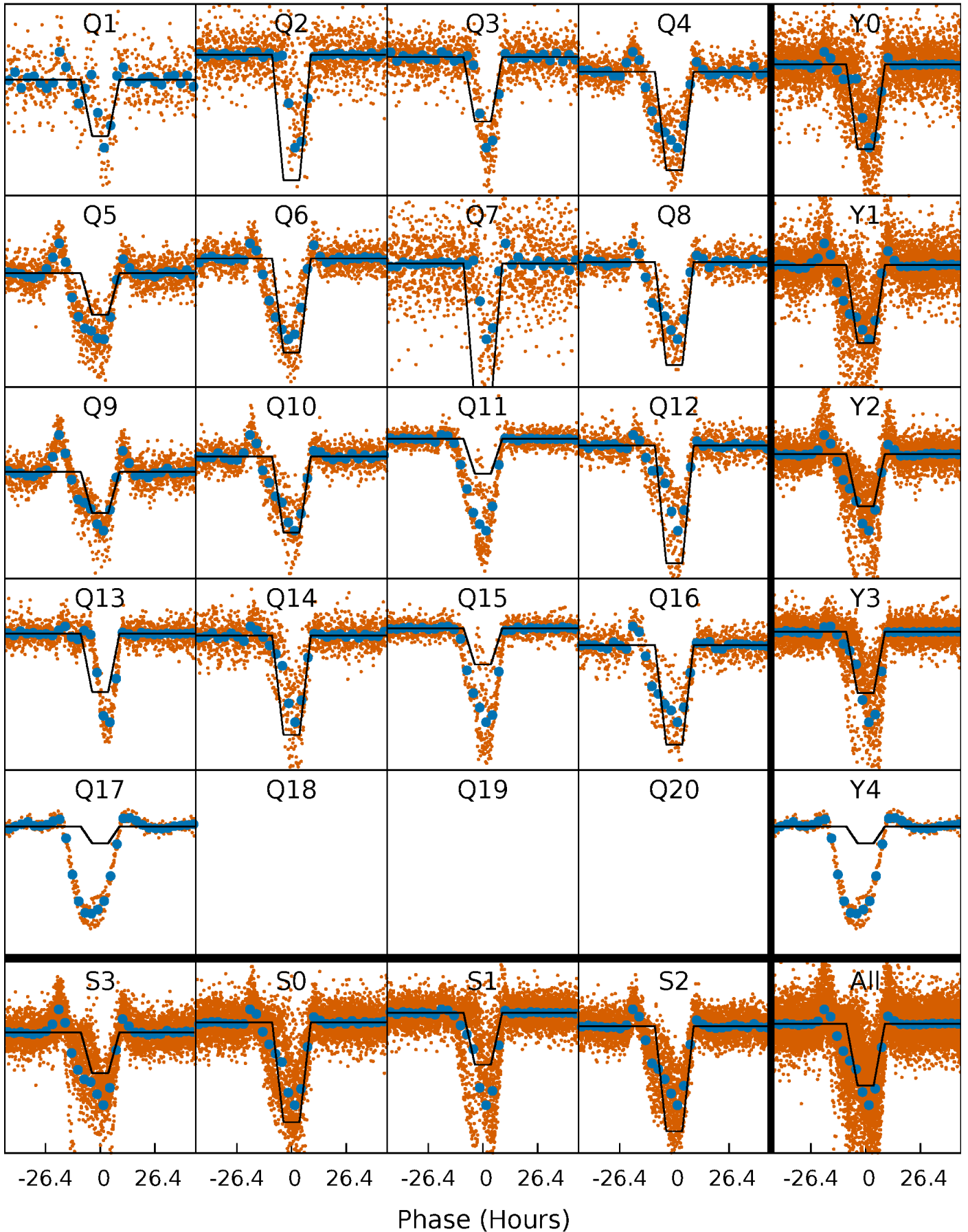
DV Quarter-Phased Transit Curves

TCE 005385778-03 P= 12.425391 Days $T_0=133.986668$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

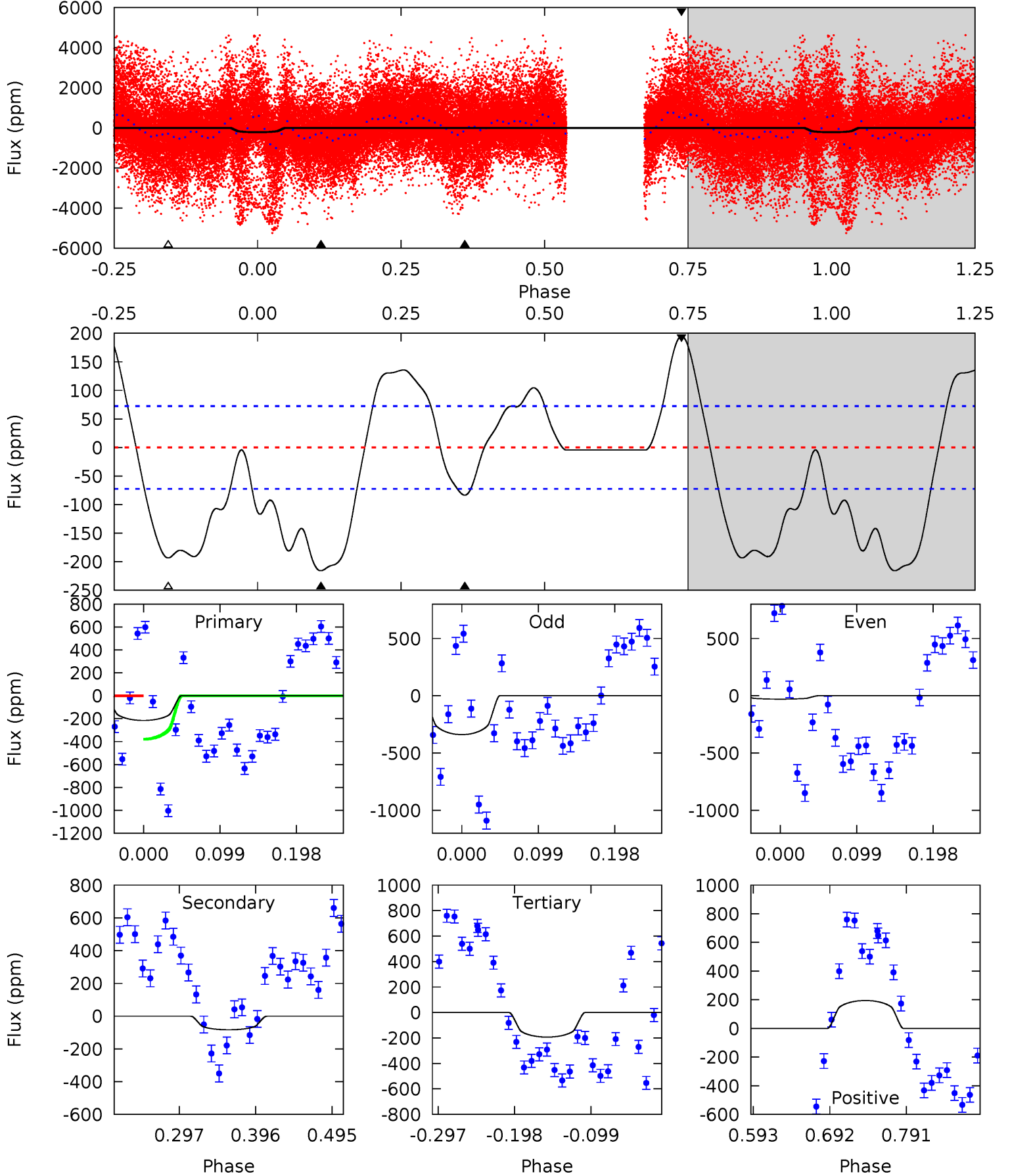
TCE 005385778-03 P= 12.425206 Days $T_0=134.173688$ (BKJD)



DV Model-Shift Uniqueness Test

005385778-03, P = 12.425391 Days, E = 121.561277 Days

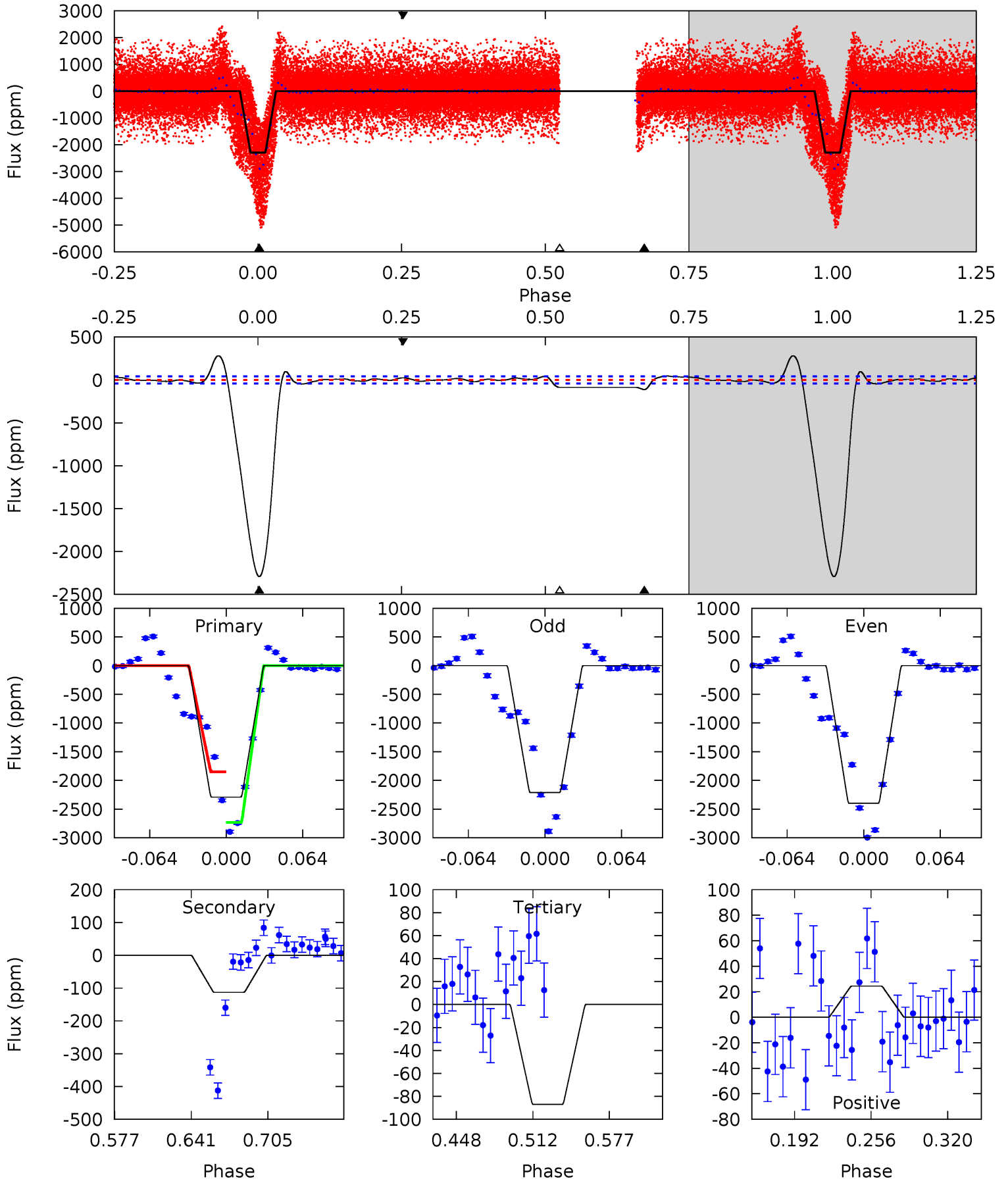
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	5.26	12.2	12.3	4.57	1.65	7.71	1.41	1.31	-6.93	-7.02	10.4	7.30	0.47	12.5



Alt Model-Shift Uniqueness Test

005385778-03, P = 12.425206 Days, E = 121.748482 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
256.8	12.7	9.75	2.74	4.66	1.85	5.16	247.1	254.1	2.91	9.92	10.6	1.27	0.11	49.3



Stellar Parameters For KIC 005385778

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4849^{+48}_{-115}	$3.060^{+0.180}_{-0.105}$	$0.340^{+0.100}_{-0.200}$	$6.952^{+1.248}_{-2.496}$	$2.025^{+0.584}_{-0.779}$	$0.008^{+0.011}_{-0.003}$
	+1%/-2%	+6%/-3%	+29%/-59%	+18%/-36%	+29%/-38%	+135%/-31%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 005385778-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-83 ± 16	$28.96^{+3.55}_{-5.18}$	2137^{+114}_{-135}	2864^{+110}_{-137}	$1.042^{+0.365}_{-0.259}$
Alt.	-113 ± 9	$41.45^{+4.33}_{-7.88}$	2139^{+99}_{-131}	2624^{+77}_{-88}	$0.685^{+0.203}_{-0.127}$

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 $A_{obs} \gg 1.0$

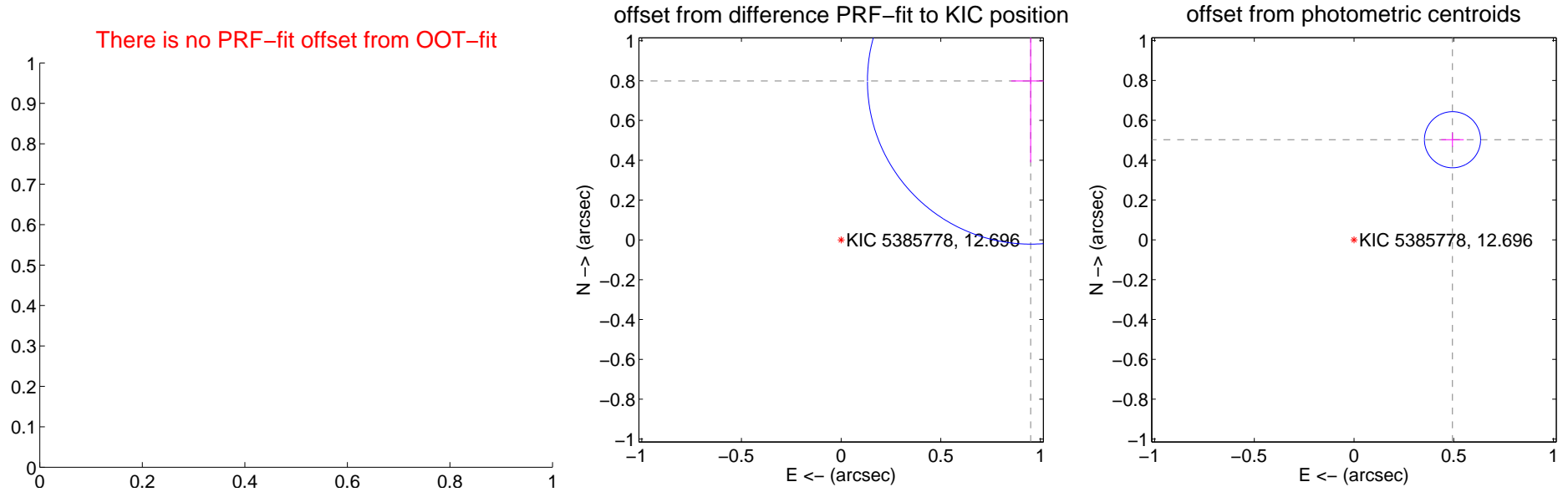
DV Centroid Data

Supplemental centroid analysis for 005385778-03. Kepler magnitude: 12.70. Transit SNR 23.67

There are 0 quarters with good PRF difference image offsets

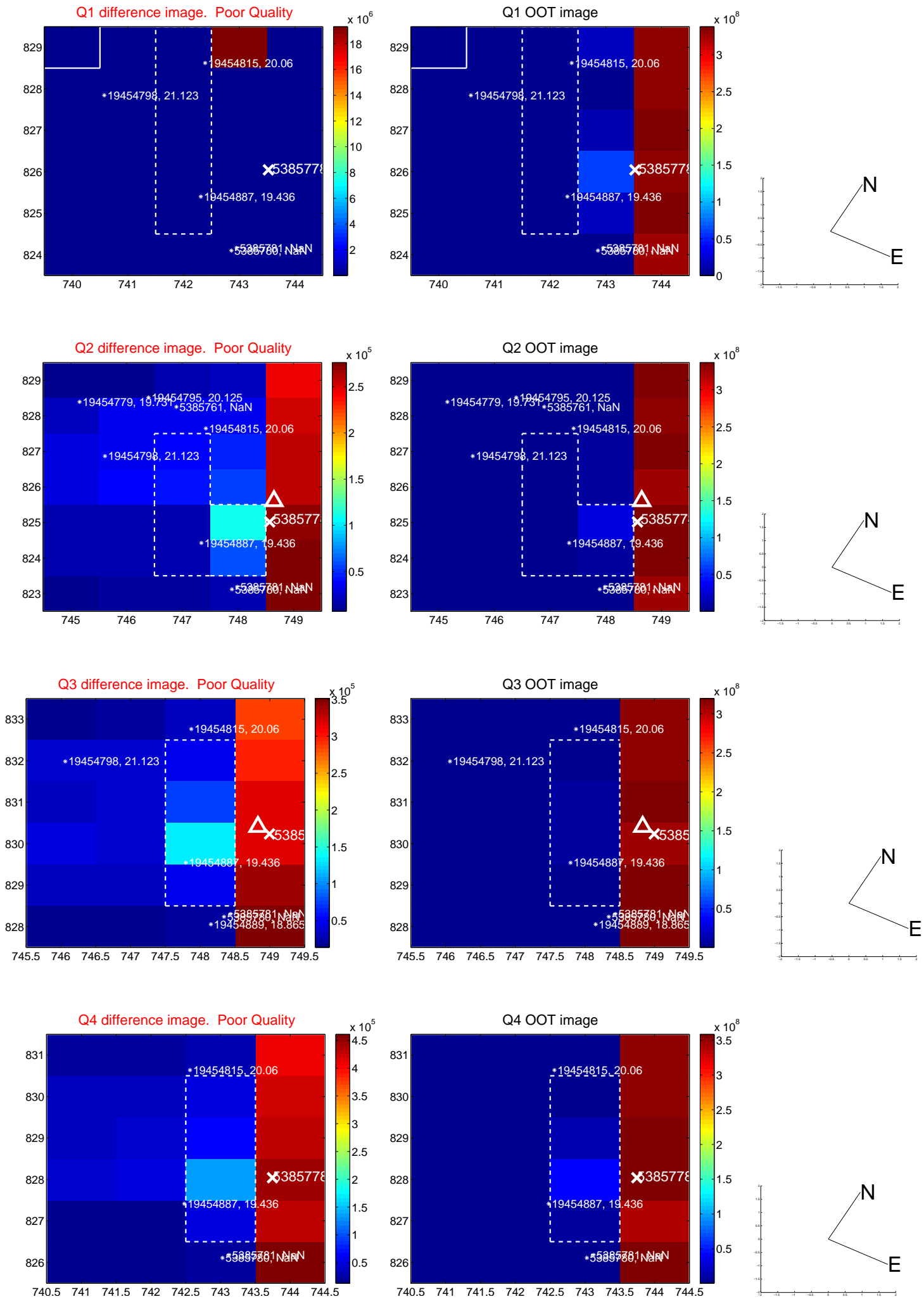
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	1.242 ± 0.273	4.55	-0.951 ± 0.098	0.798 ± 0.409
photometric centroid source offset	0.70 ± 0.05	15.01	-0.49 ± 0.06	0.50 ± 0.04

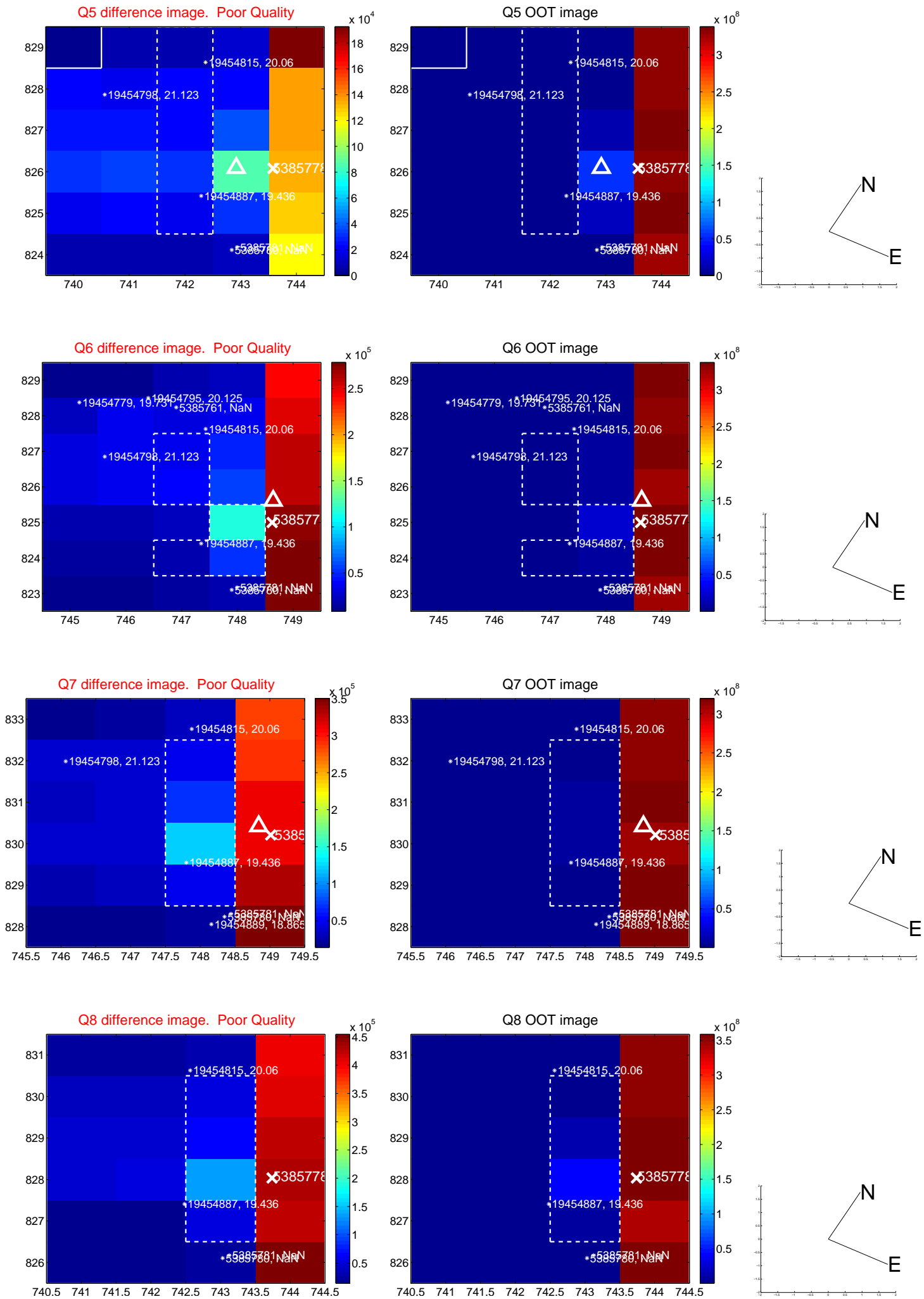


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

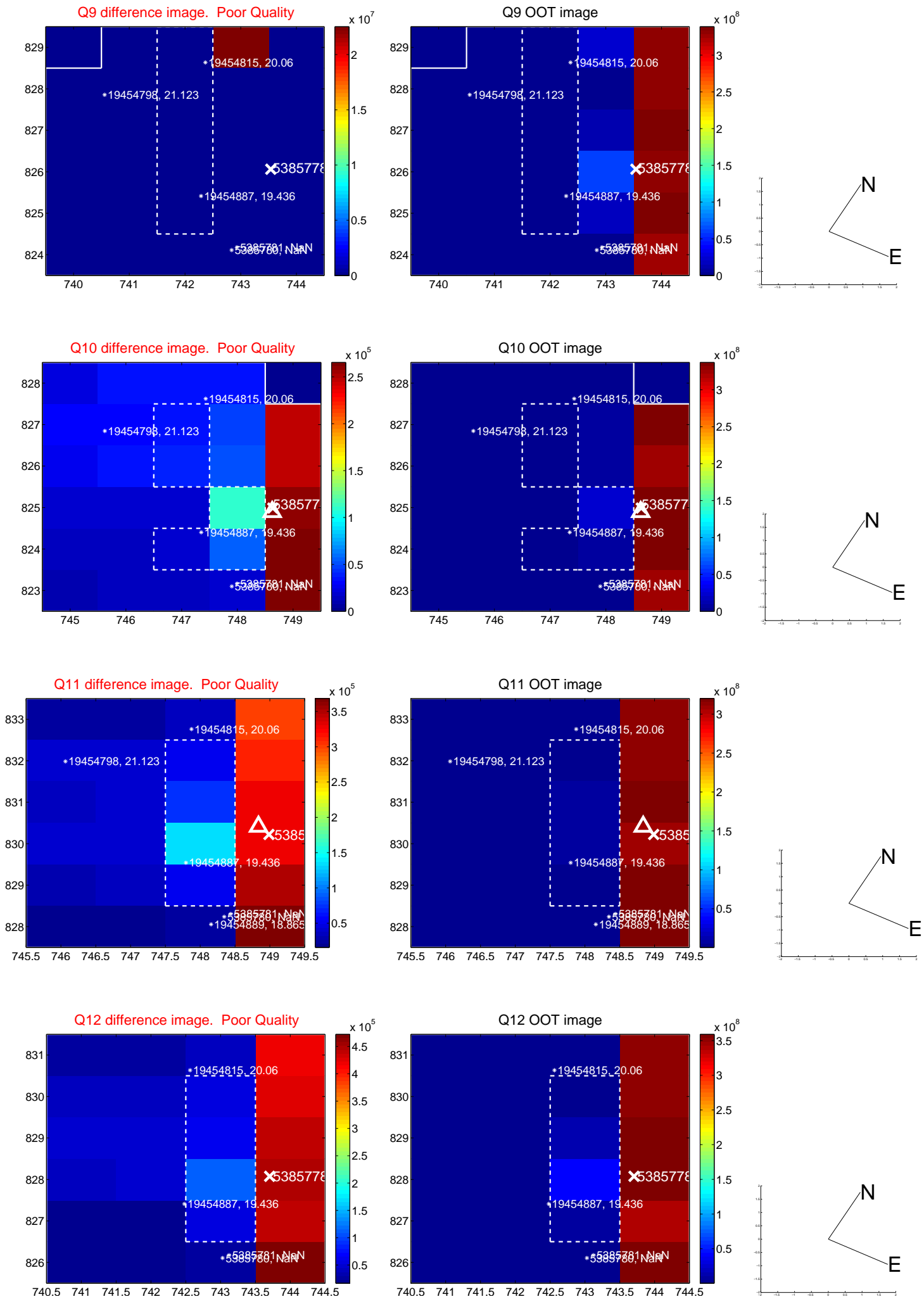
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



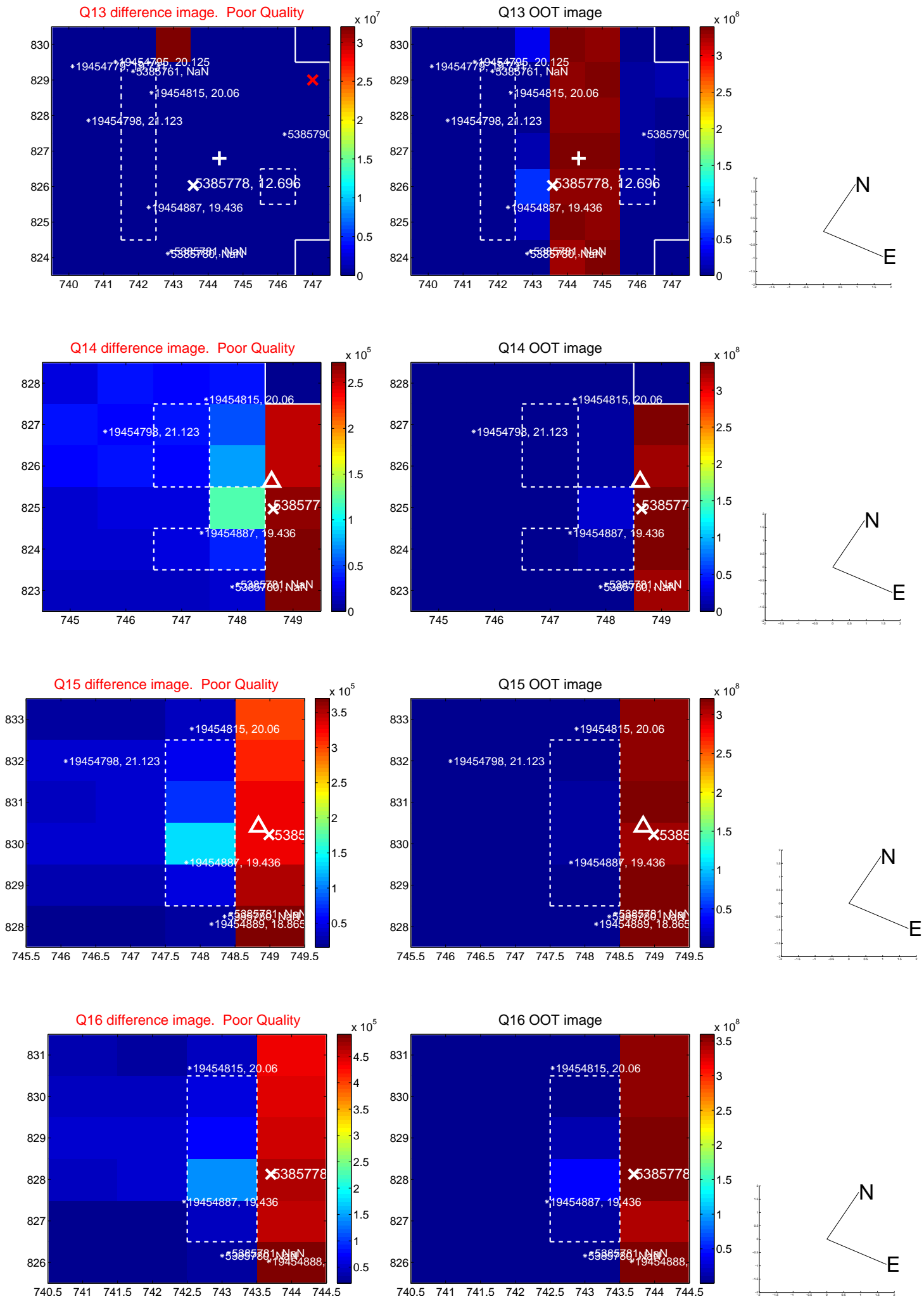
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



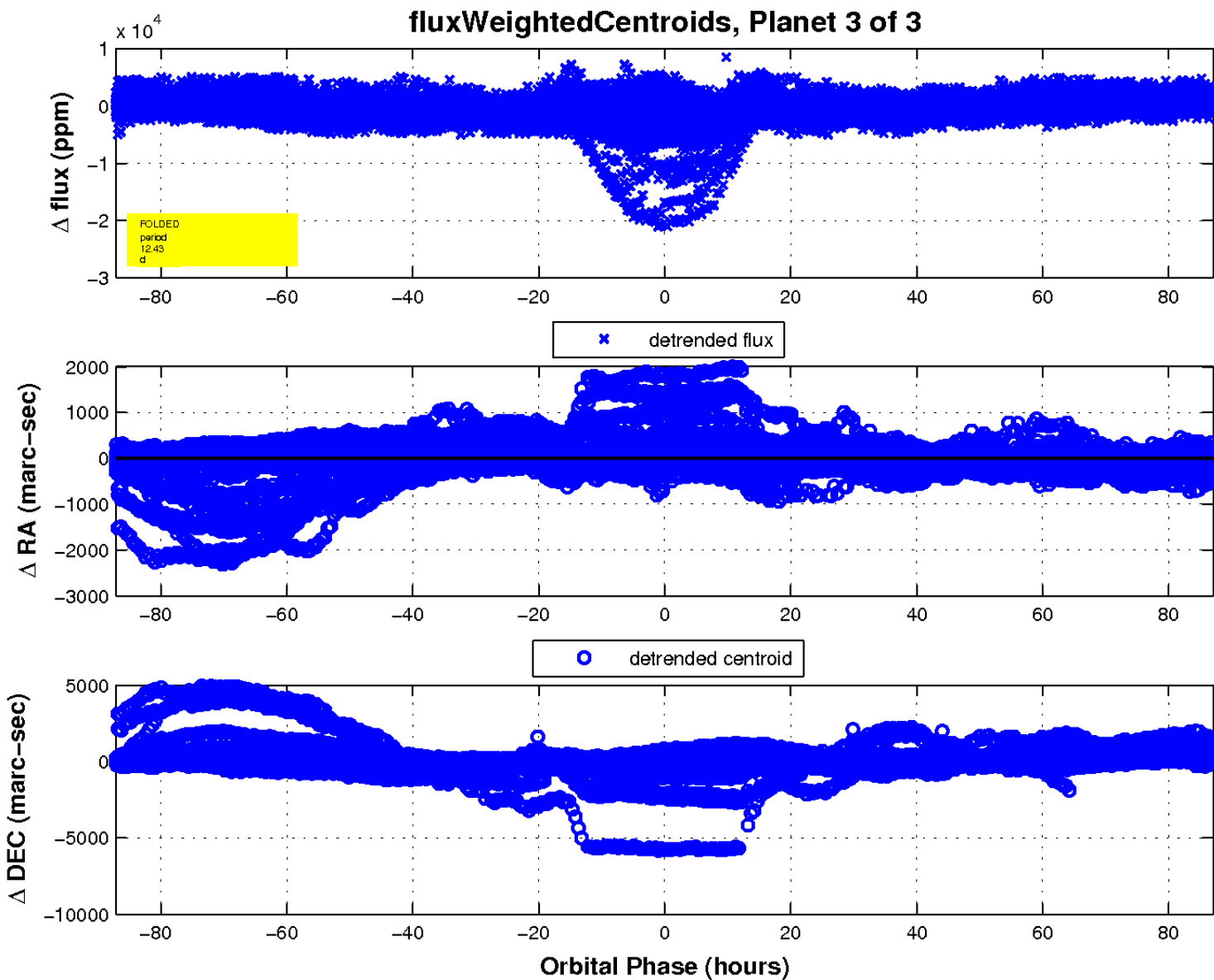
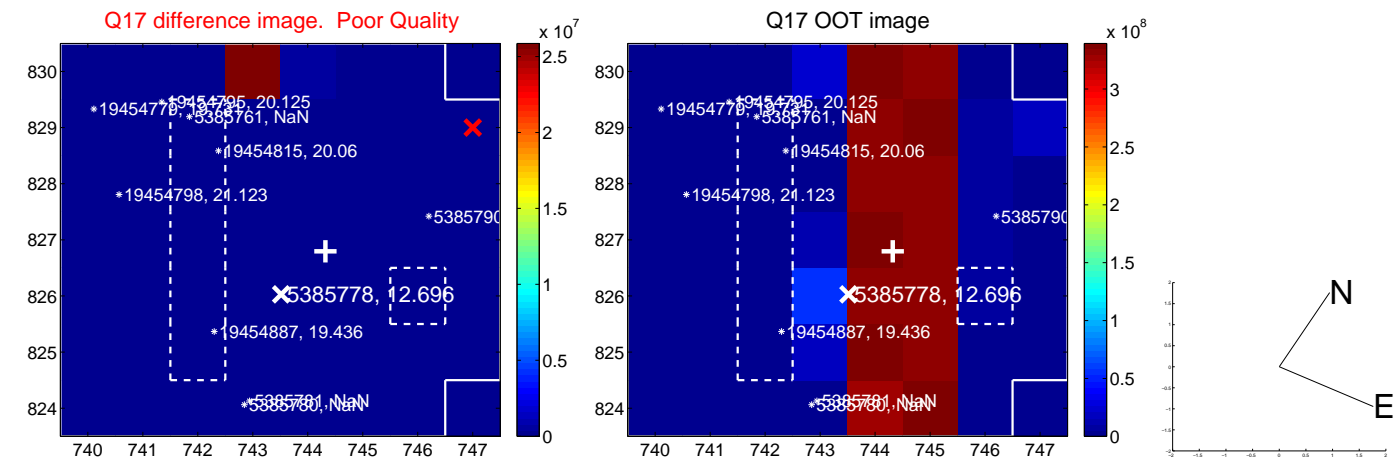
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

