

KIC 012353648

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})
012353648-01	OBS	No	1.212965	131.866887	489.8	4.661	13.0	14.6	3.27	7201	11.05	36757.45
012353648-02	OBS	No	0.504573	131.868510	658.7	1.329	16.7	17.9	3.27	7201	8.71	0.00
012353648-03	OBS	No	0.504572	131.992244	51.3	1.500	17.8	-1.0	3.27	7201	2.36	118371.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012353648-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012353648-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012353648-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

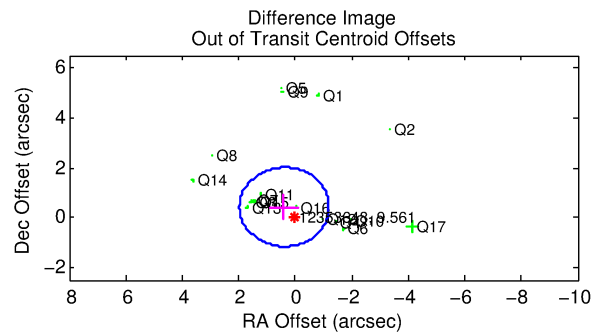
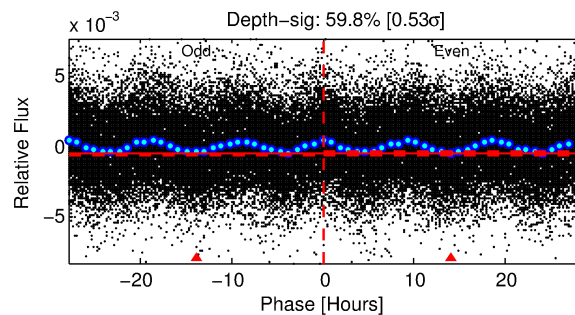
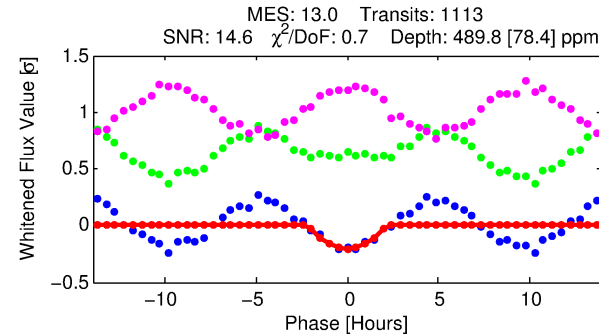
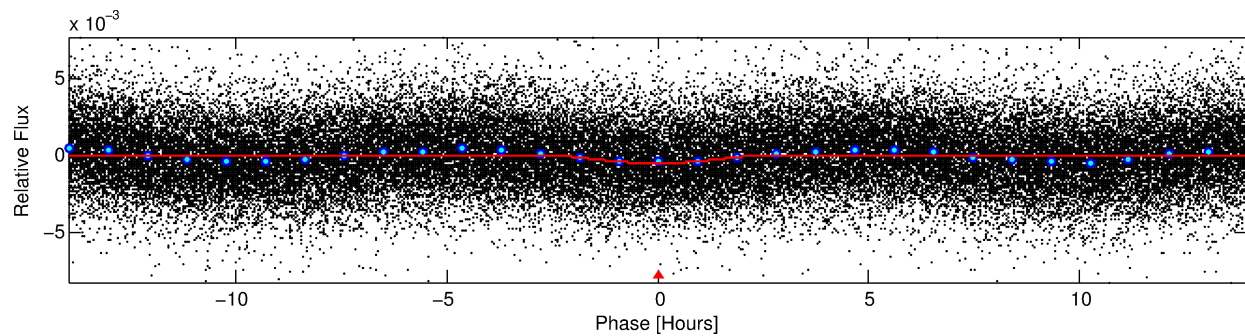
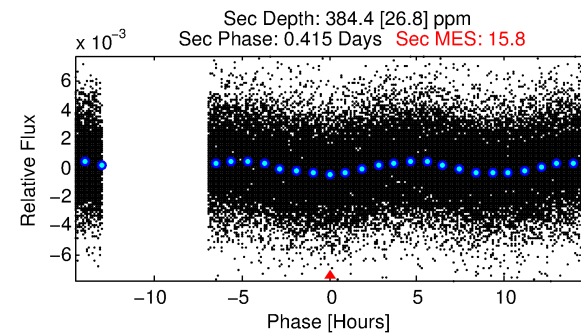
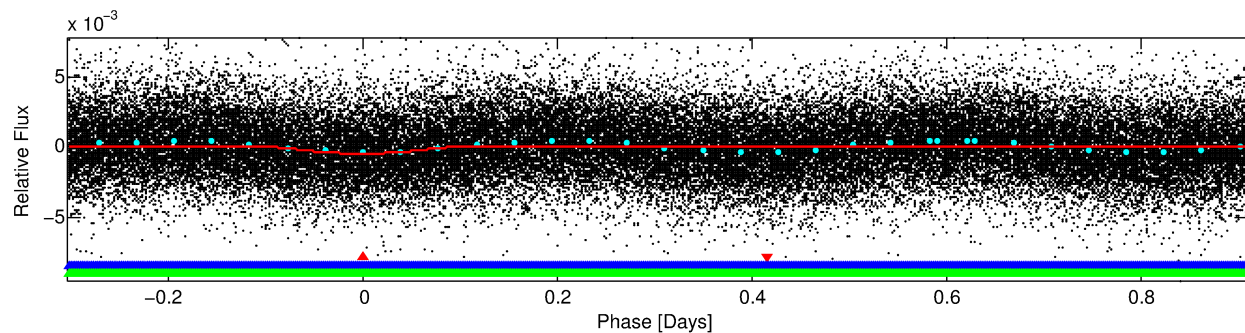
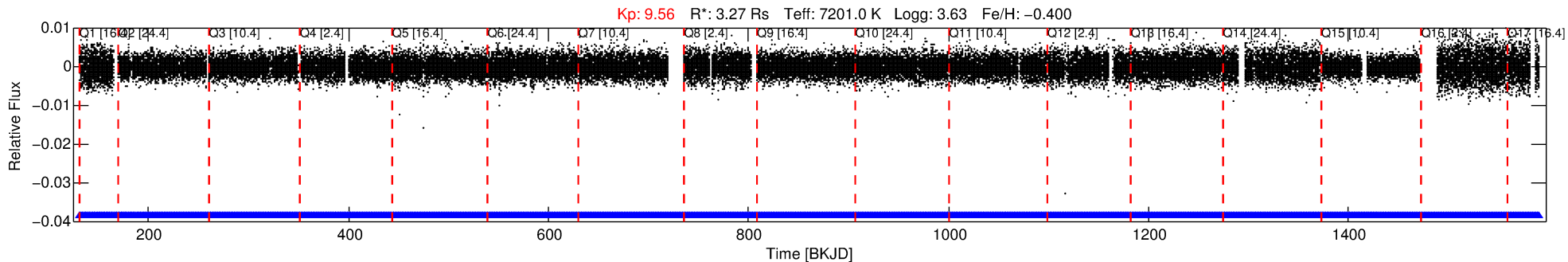
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012353648-01

No Significant Match Found

DV One-Page Summary

KIC: 12353648 Candidate: 1 of 3 Period: 1.213 d



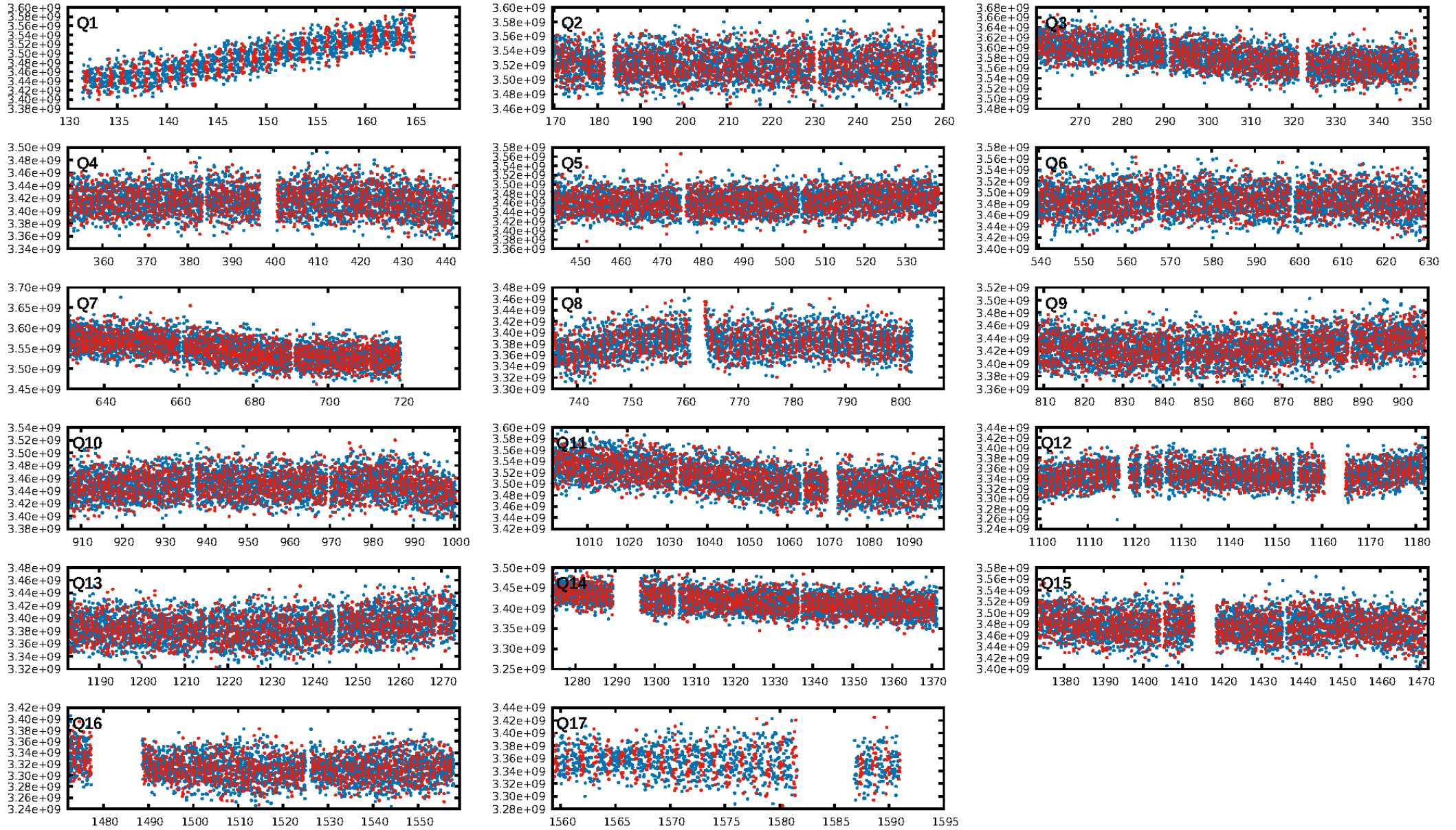
DV Fit Results:

Period = 1.21296 [0.00001] d
Epoch = 131.8669 [0.0045] BKJD
Rp/R* = 0.0310 [0.0235]
a/R* = 1.17 [0.06]
b = 0.99 [0.05]
Seff = 36757.45 [13750.41]
Teq = 3531 [330] K
Rp = 11.05 [8.83] Re
a = 0.0264 [0.0062] AU
Ag = 1.21 [1.89] [0.11 σ]
Teffp = 5725 [2176] K [1.00 σ]

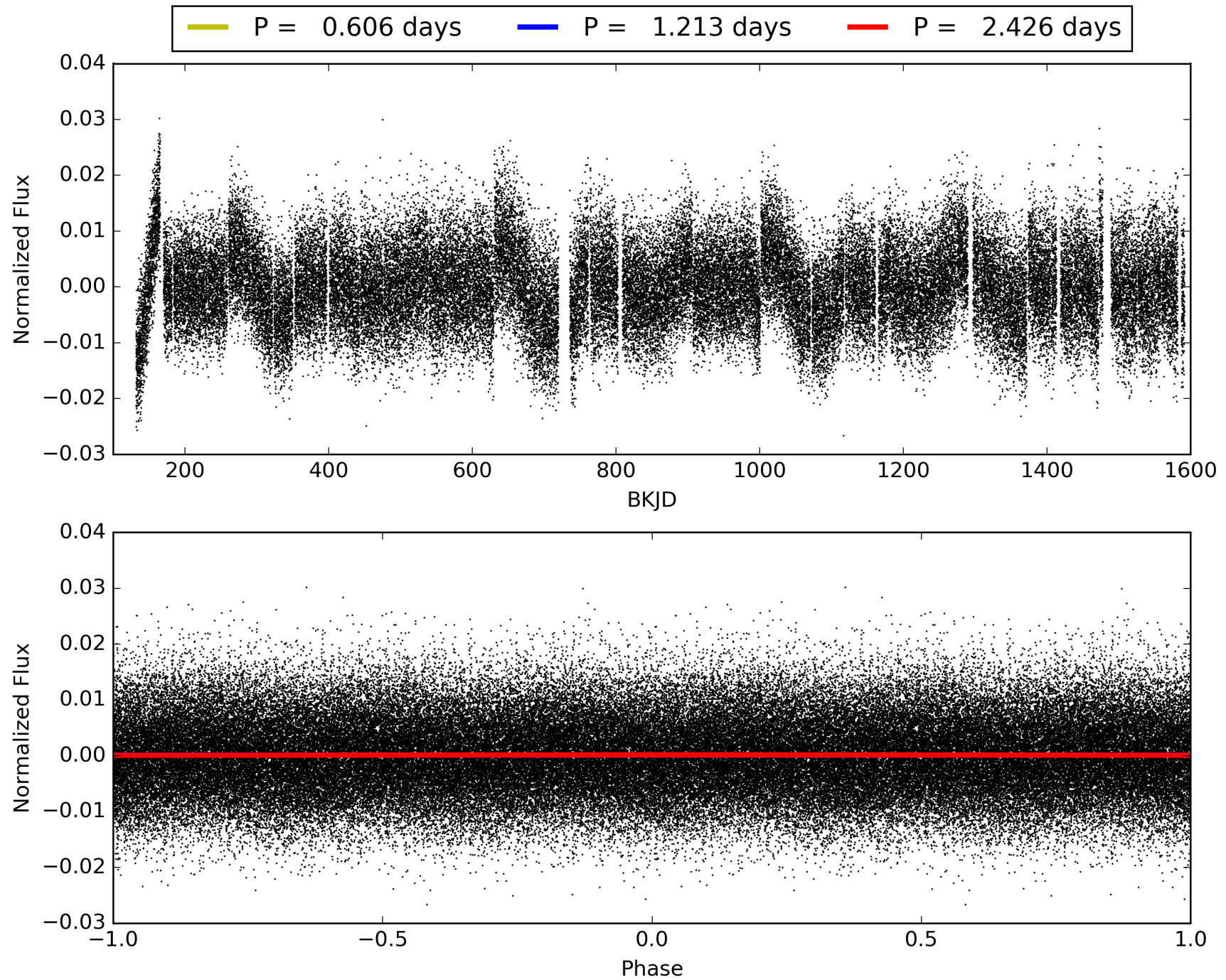
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.51 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1062/1062]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.312 arcsec [7.04 σ]
OotOffset-rm: 0.579 arcsec [1.10 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 2.439 arcsec [5.51 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 012353648-01, PDC Light Curves

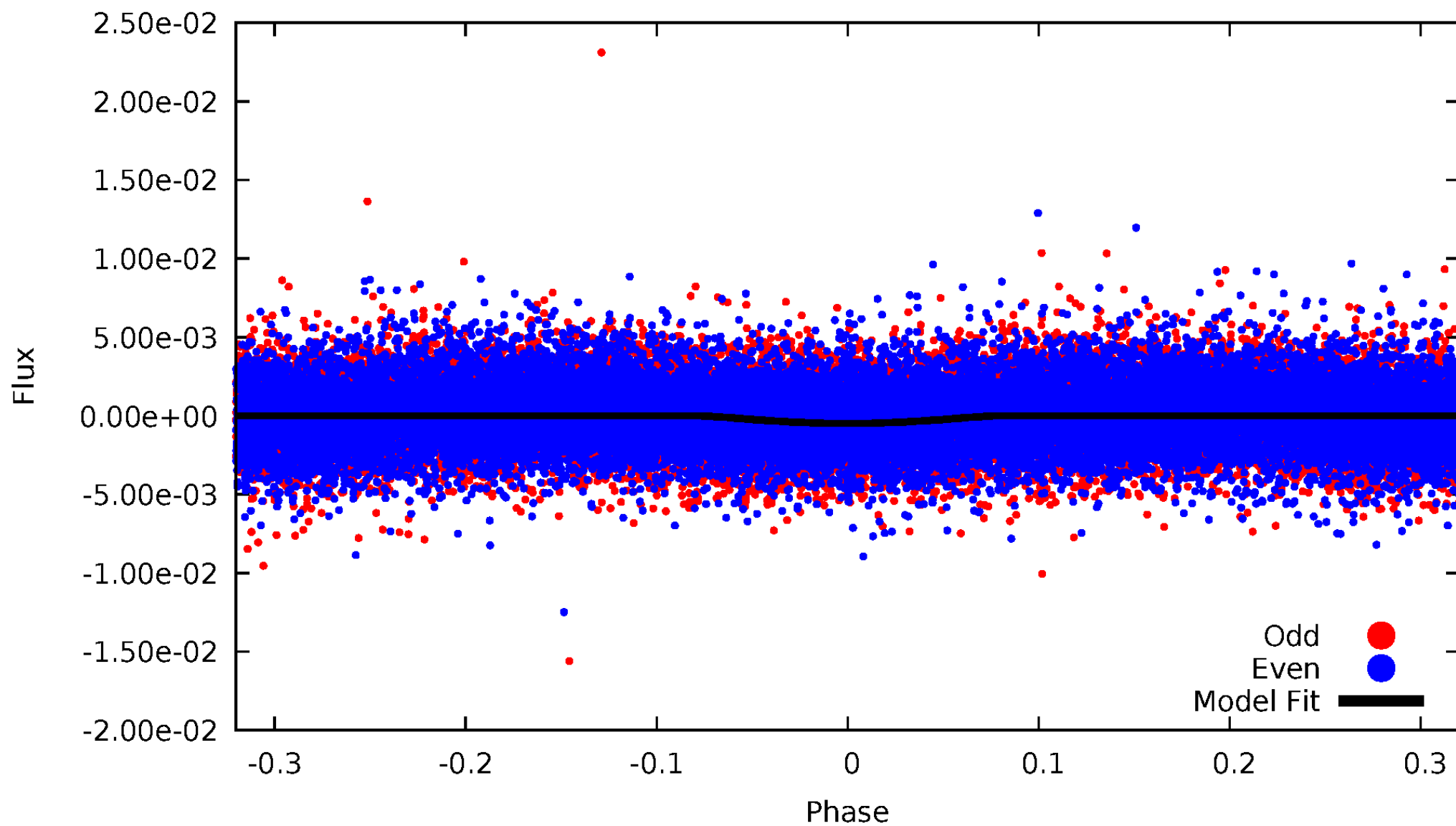


TCE 012353648-01



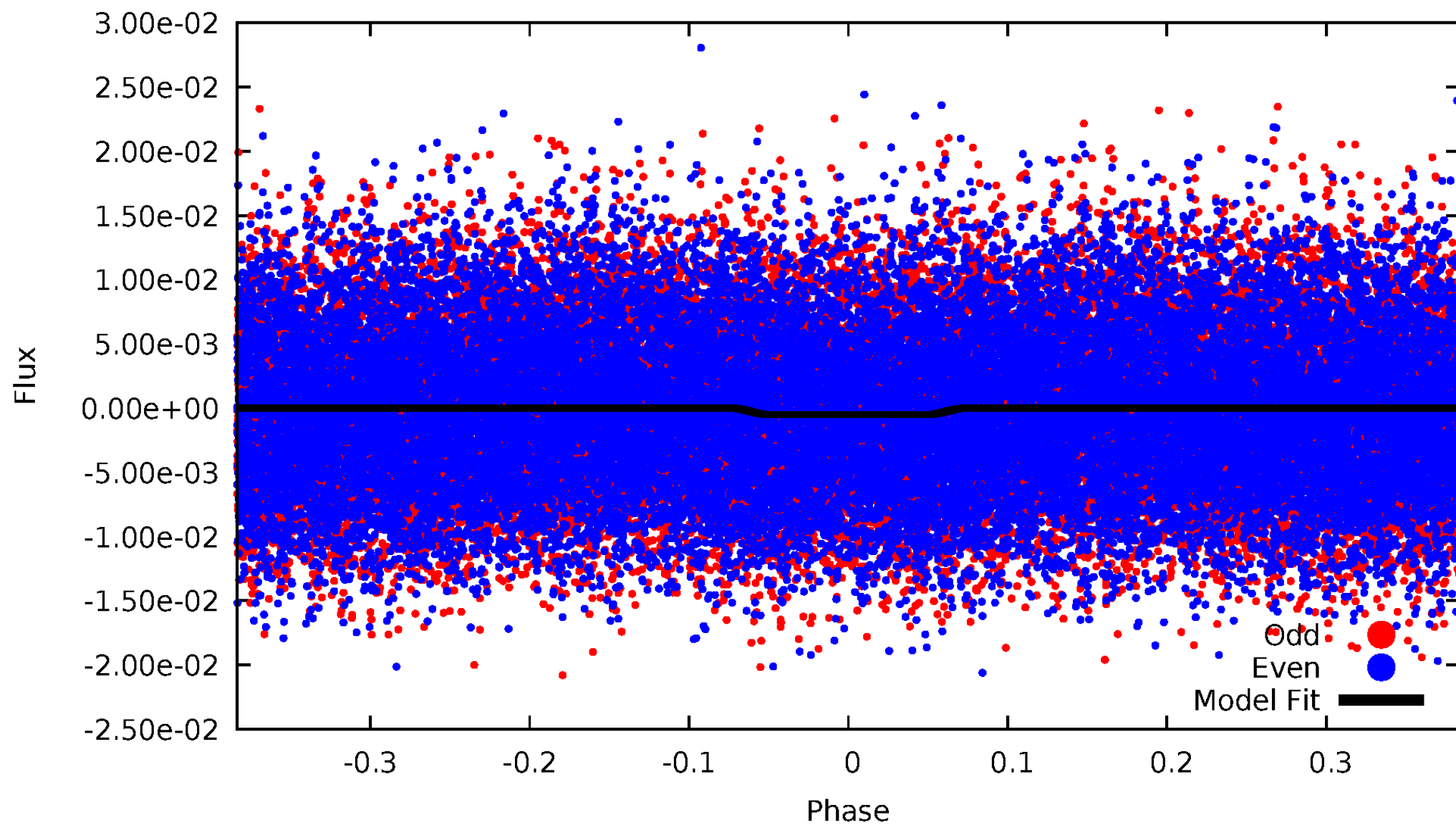
DV Odd/Even

TCE 012353648-01

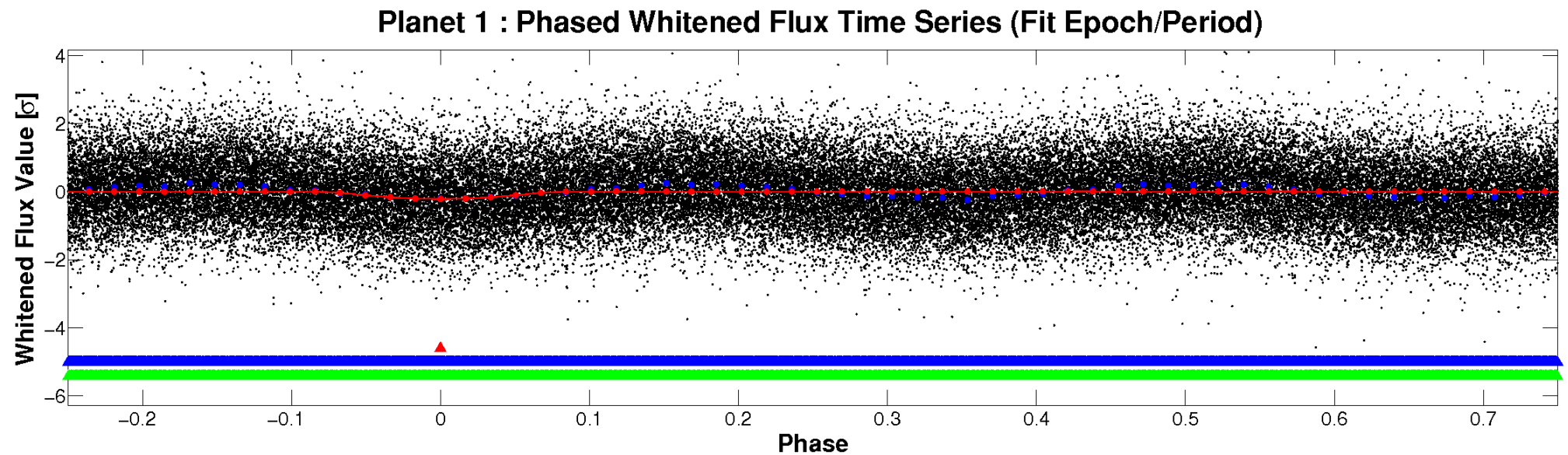
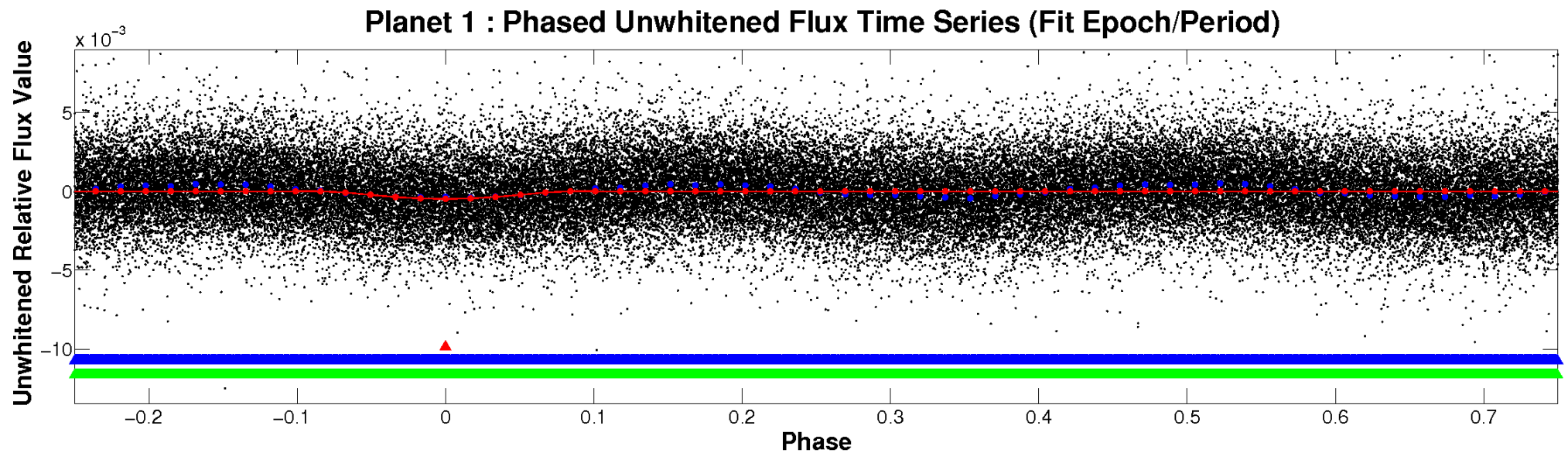


ALT Odd/Even

TCE 012353648-01

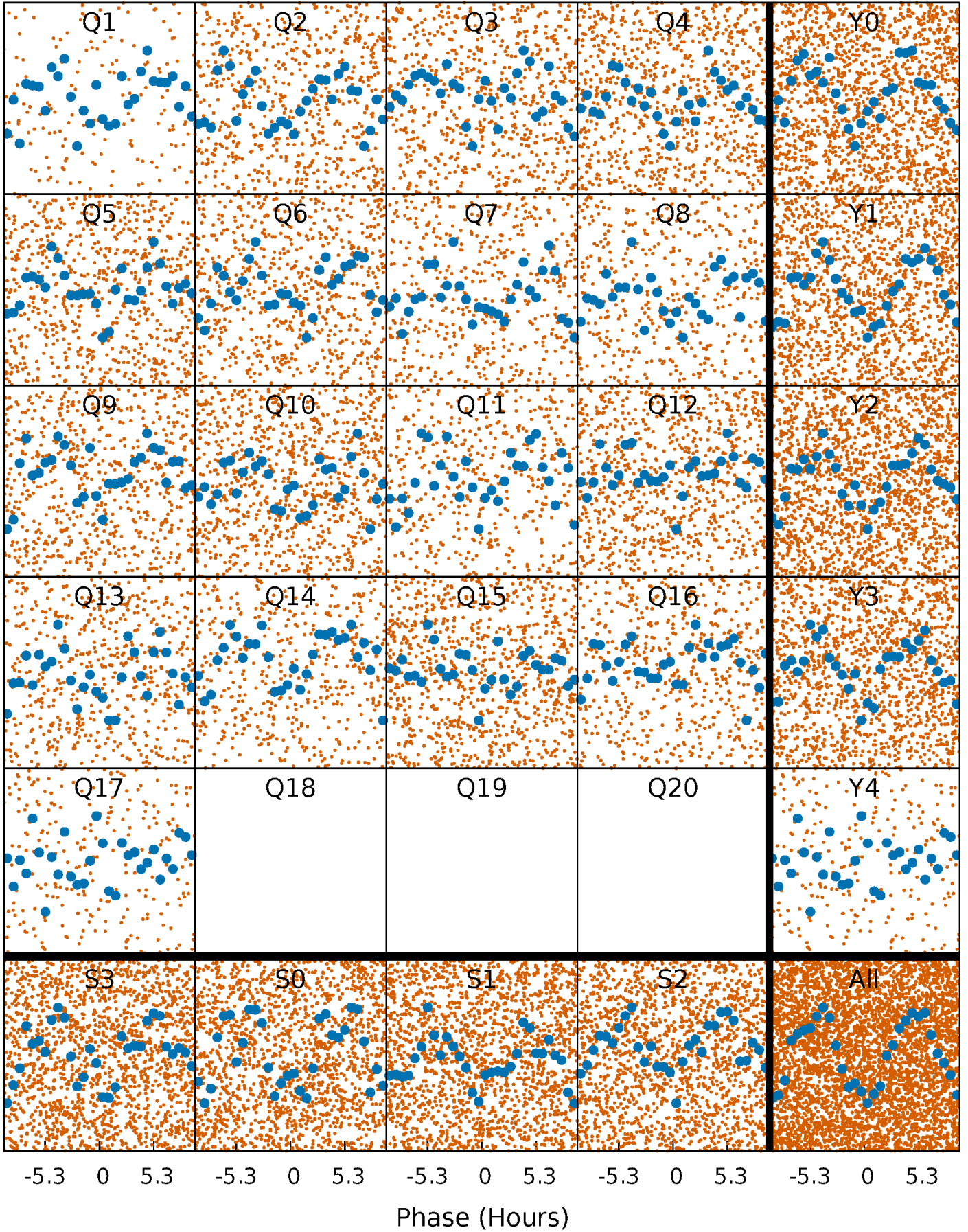


Non-Whitened Vs. Whitened Light Curve



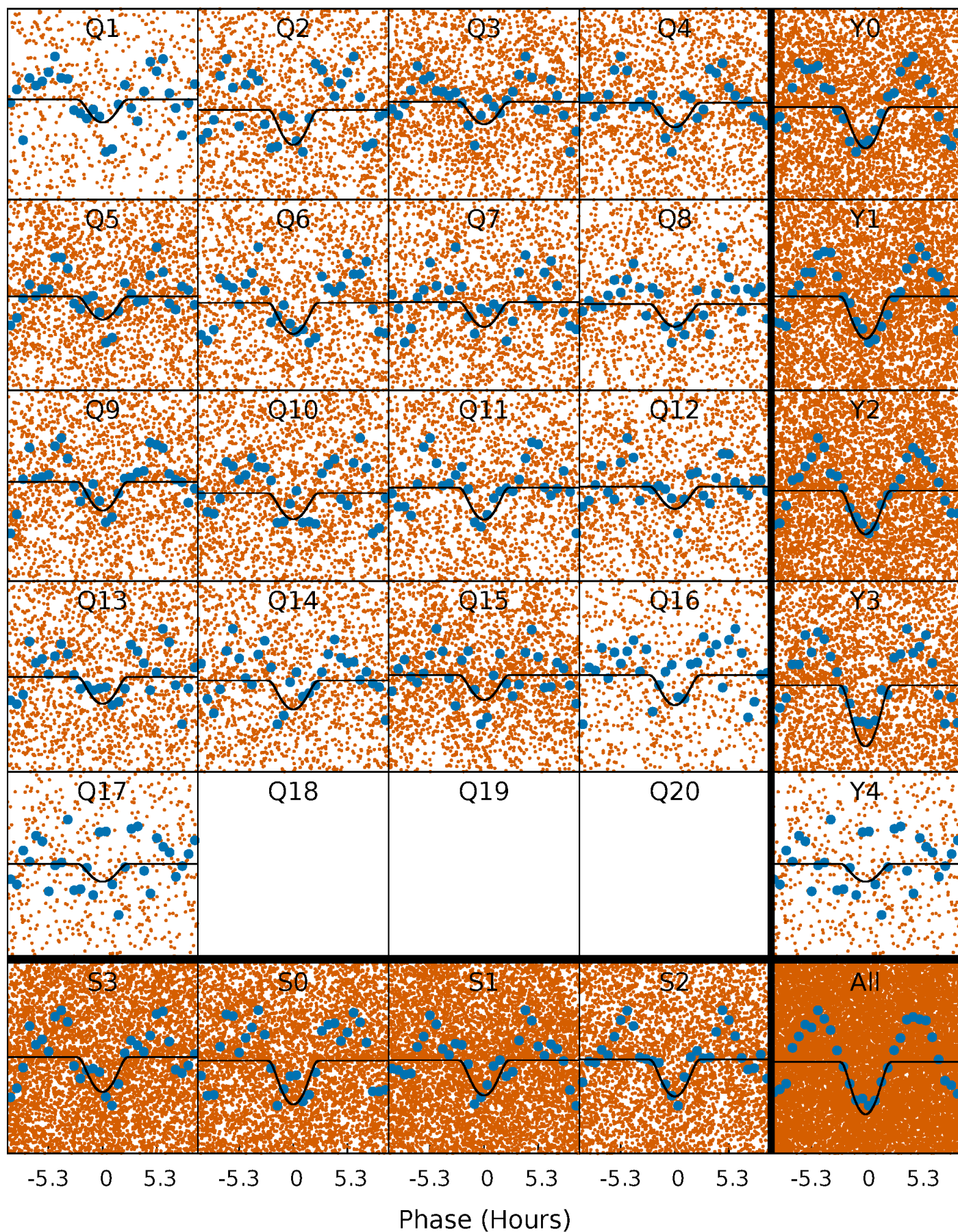
PDC Quarter-Phased Transit Curves

TCE 012353648-01 P= 1.212965 Days $T_0=131.866887$ (BKJD)



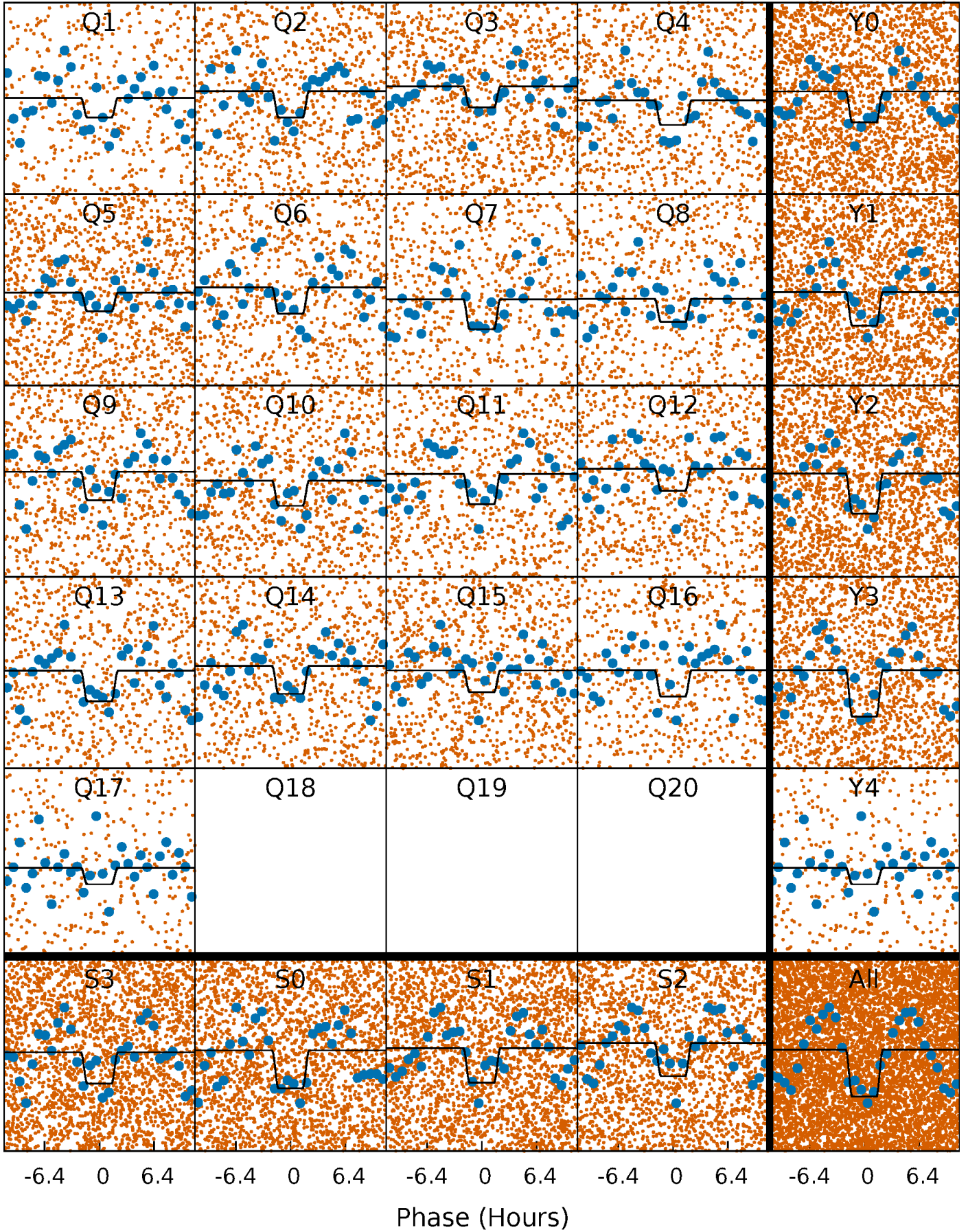
DV Quarter-Phased Transit Curves

TCE 012353648-01 P= 1.212965 Days $T_0=131.866887$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

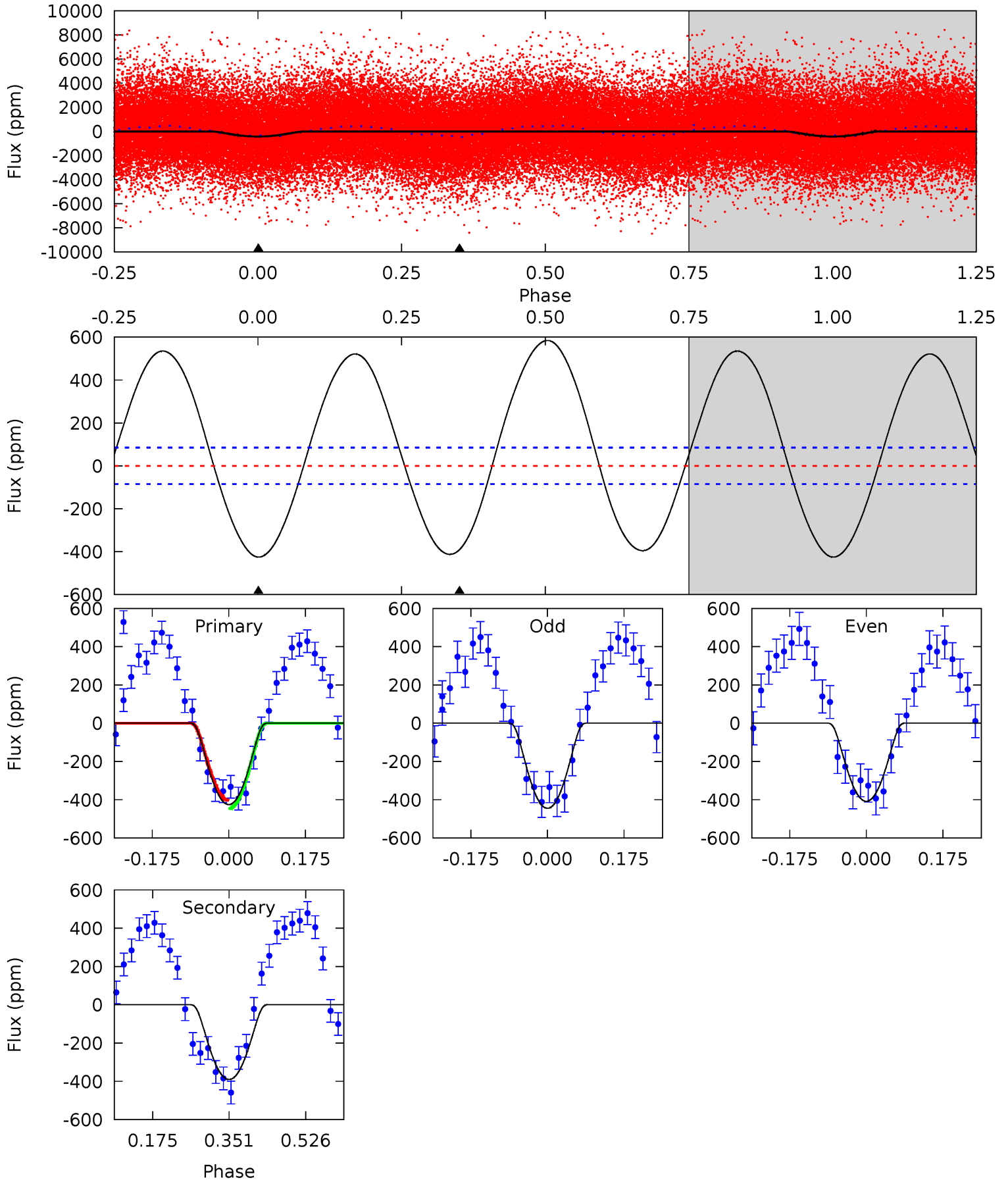
TCE 012353648-01 P= 1.212973 Days $T_0=131.861219$ (BKJD)



DV Model-Shift Uniqueness Test

012353648-01, P = 1.212965 Days, E = 130.653922 Days

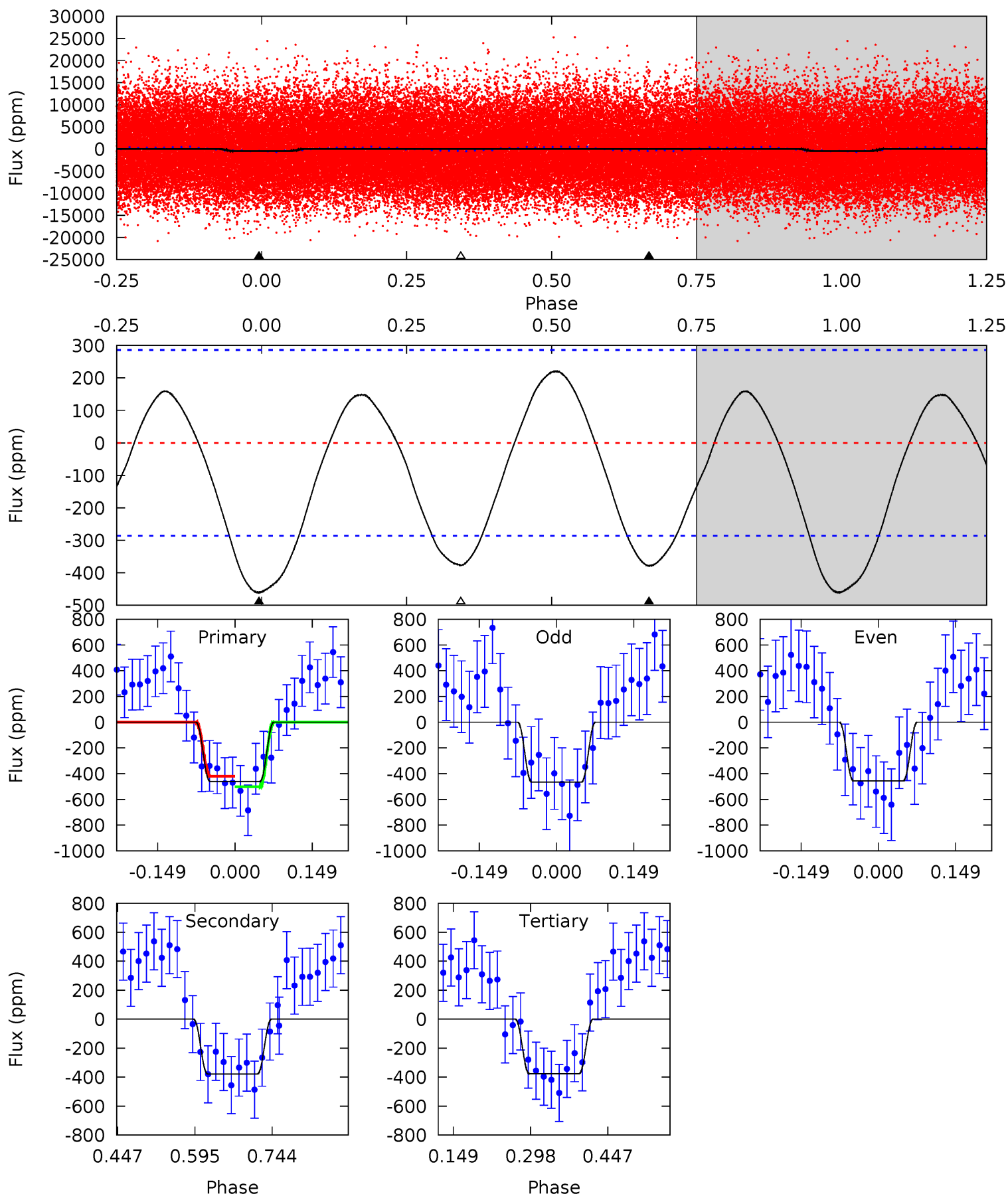
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	20.4	0	0	4.45	1.35	16.6	22.3	22.3	20.4	20.4	0.97	1.04	0.58	1.16



Alt Model-Shift Uniqueness Test

012353648-01, P = 1.212973 Days, E = 130.648246 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.22	5.93	5.90	0	4.48	1.44	3.18	1.31	7.22	0.03	5.93	0.08	0.89	0.32	0.64



Stellar Parameters For KIC 012353648

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7201^{+130}_{-159}	$3.634^{+0.210}_{-0.090}$	$-0.400^{+0.150}_{-0.150}$	$3.266^{+0.411}_{-0.823}$	$1.676^{+0.146}_{-0.195}$	$0.068^{+0.077}_{-0.019}$
	+2%/-2%	+6%/-2%	+37%/-37%	+13%/-25%	+9%/-12%	+113%/-28%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 012353648-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-391 ± 19	$11.36^{+8.22}_{-6.63}$	4881^{+226}_{-342}	5125^{+3482}_{-1625}	$1.157^{+5.516}_{-0.765}$
Alt.	-378 ± 64	$9.46^{+7.71}_{-5.87}$	4900^{+218}_{-313}	5714^{+4576}_{-1841}	$1.619^{+9.152}_{-1.124}$

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

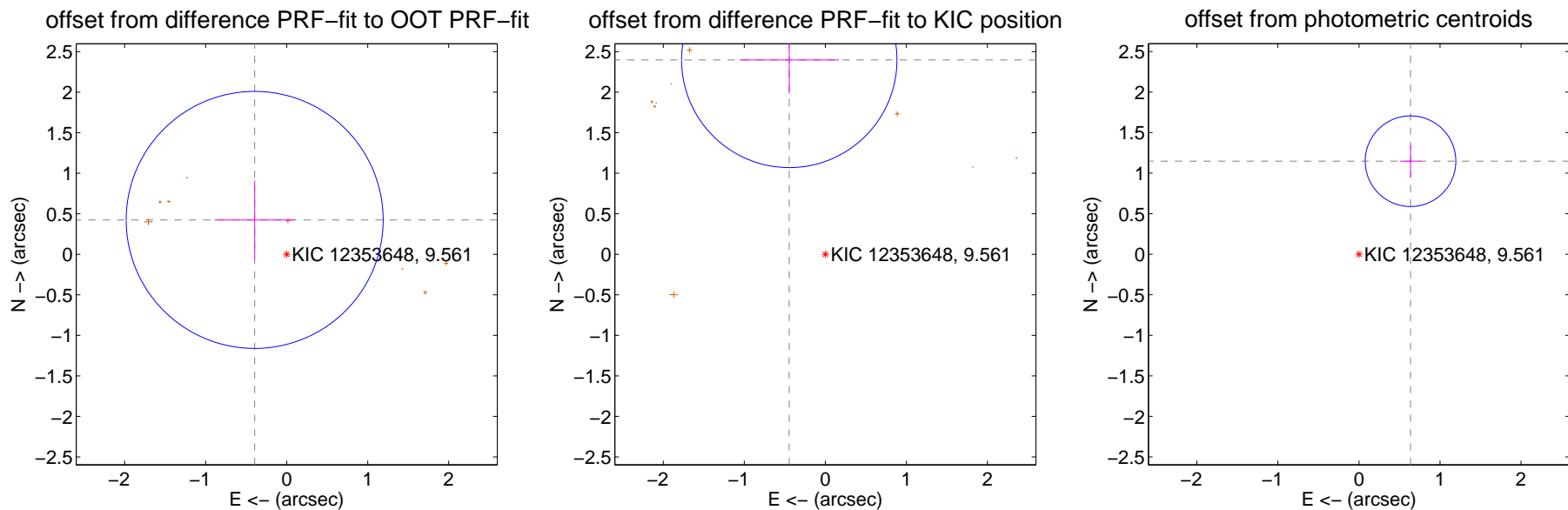
DV Centroid Data

Supplemental centroid analysis for 012353648-01. **Kepler magnitude: 9.56.** Transit SNR 14.61

There are 0 quarters with good PRF difference image offsets

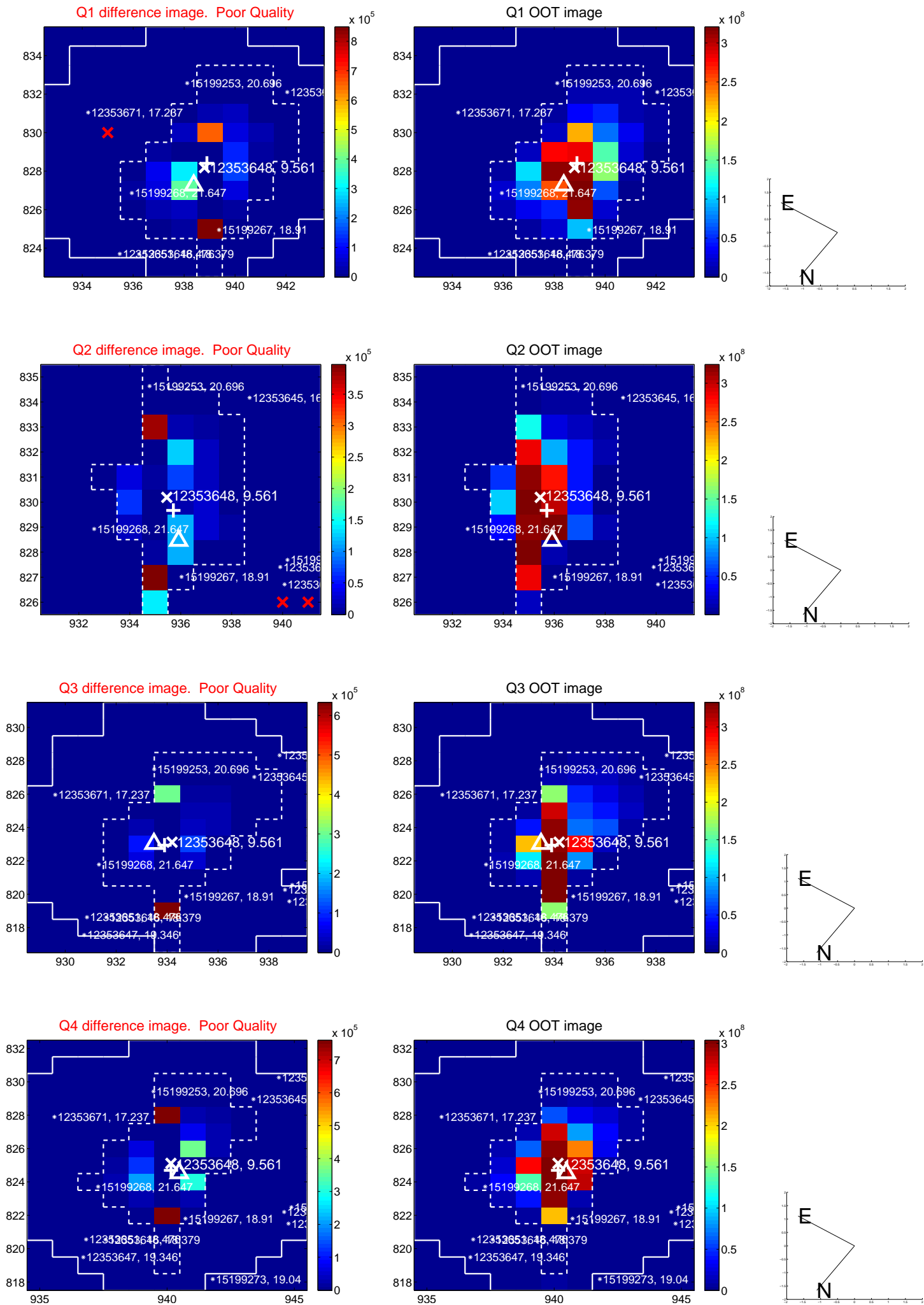
The direct PRF centroid is offset from the target star catalog position by about 1.00 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.579 ± 0.528	1.10	0.395 ± 0.492	0.424 ± 0.481
PRF-fit source offset from KIC position	2.439 ± 0.443	5.51	0.445 ± 0.611	2.398 ± 0.414
photometric centroid source offset	1.31 ± 0.19	7.04	-0.64 ± 0.13	1.15 ± 0.20

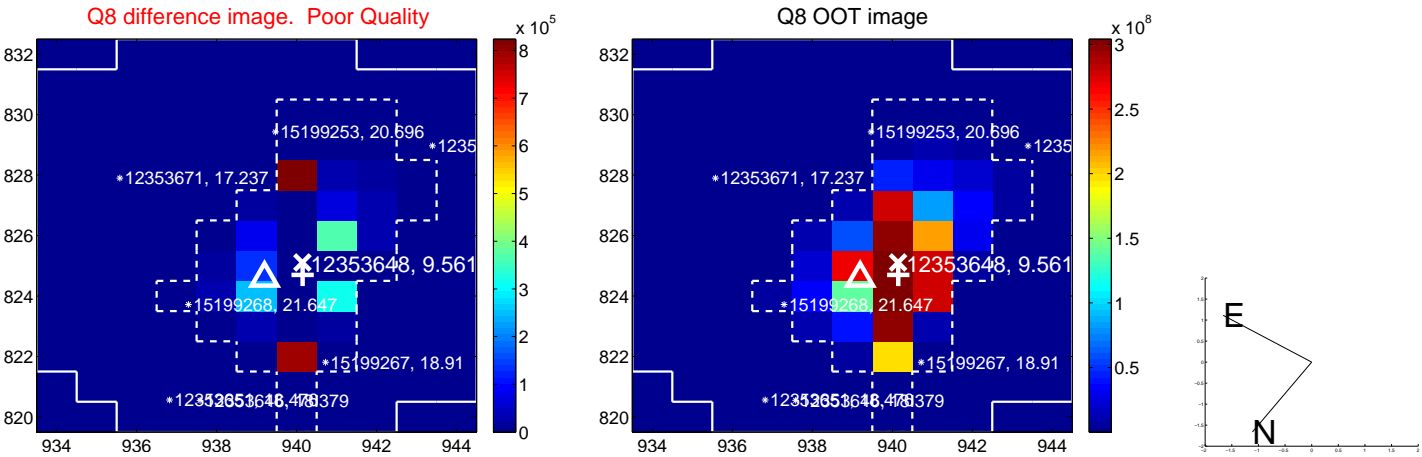
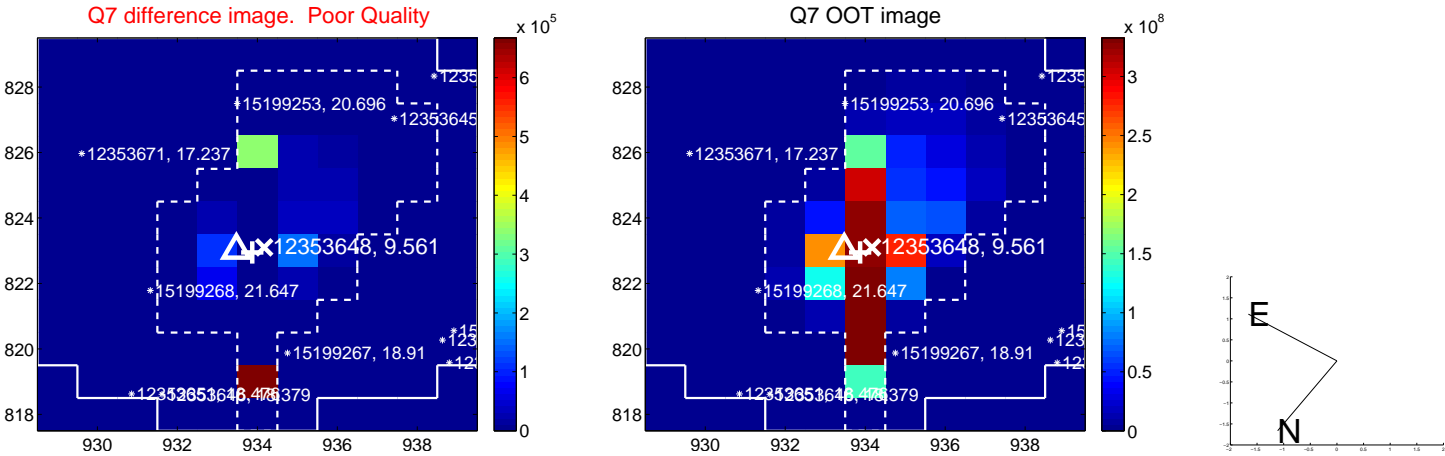
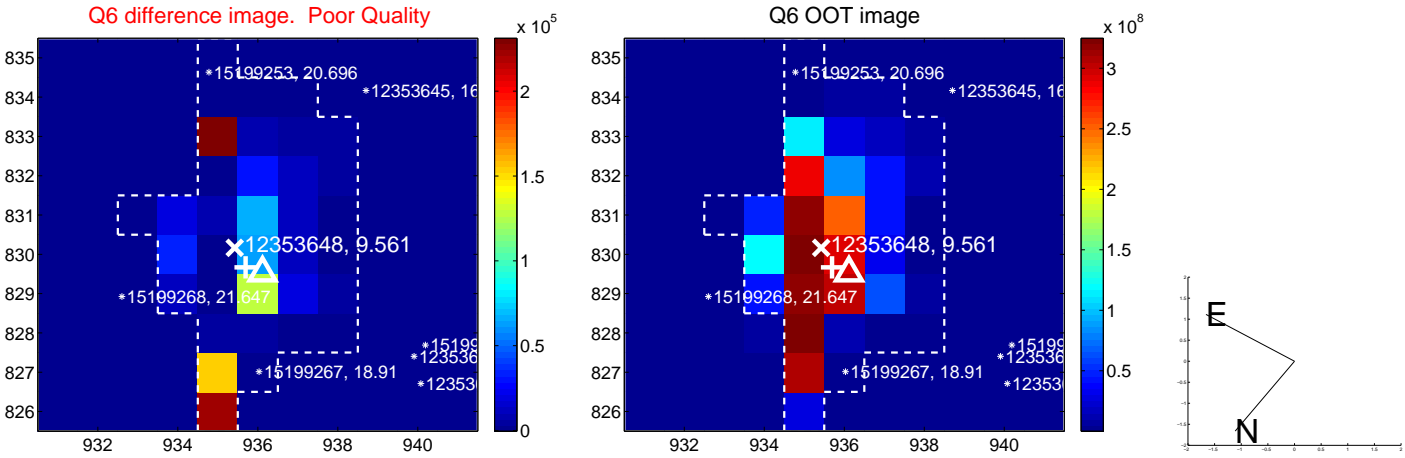
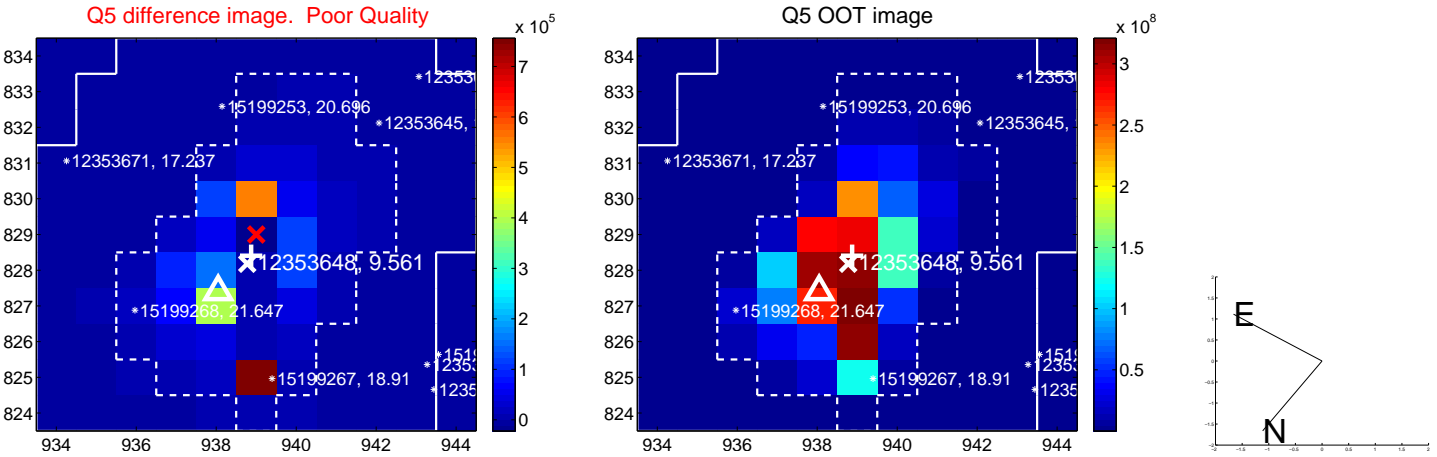


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

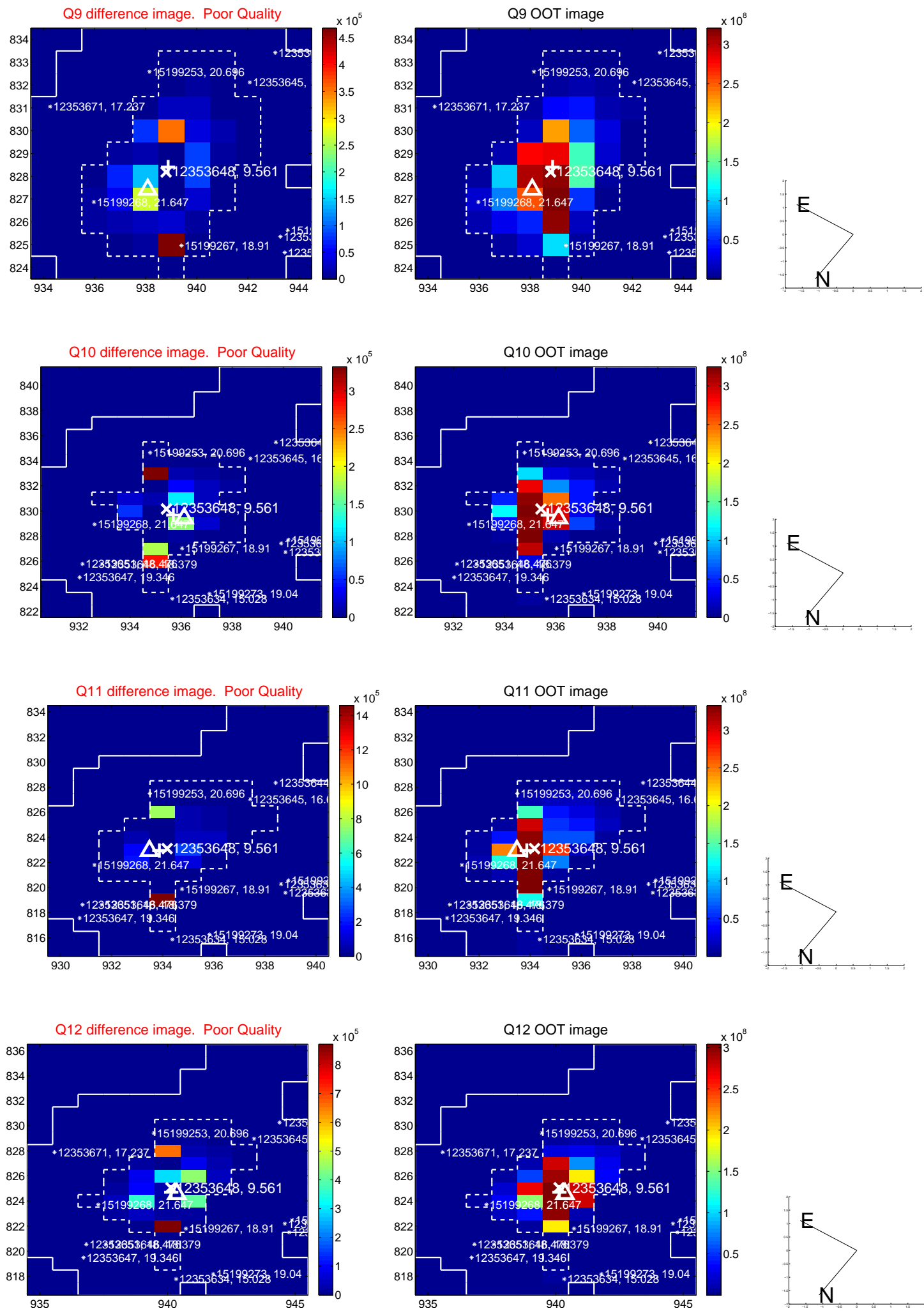
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



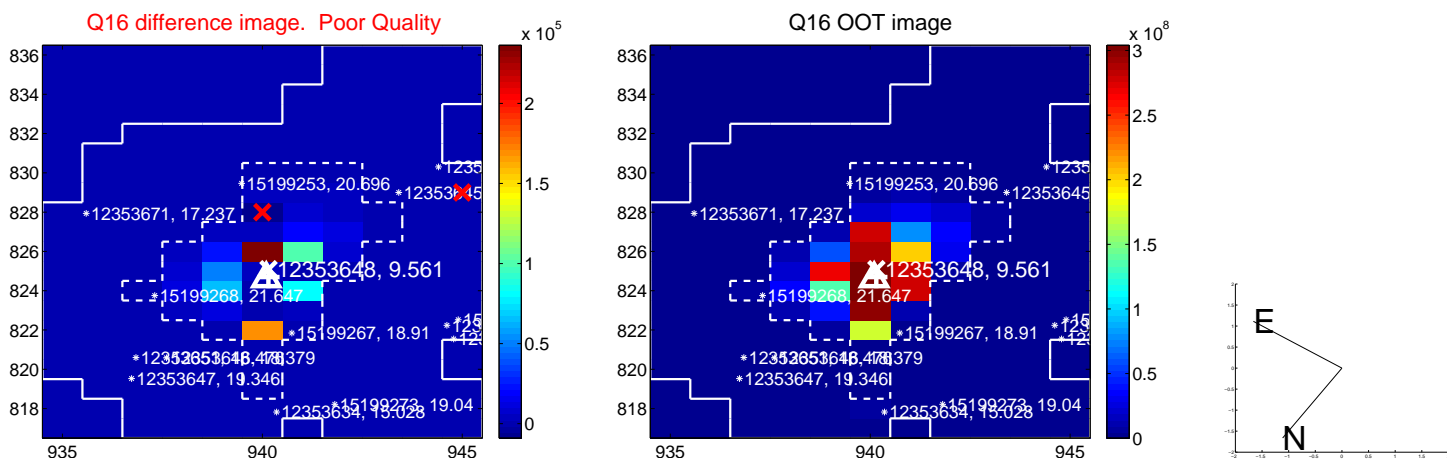
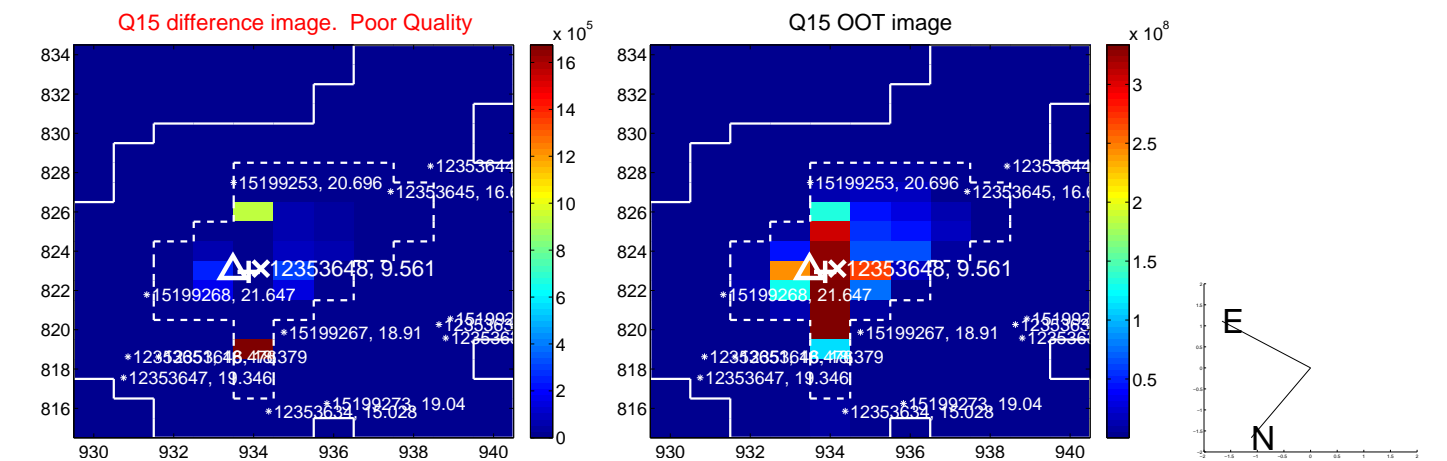
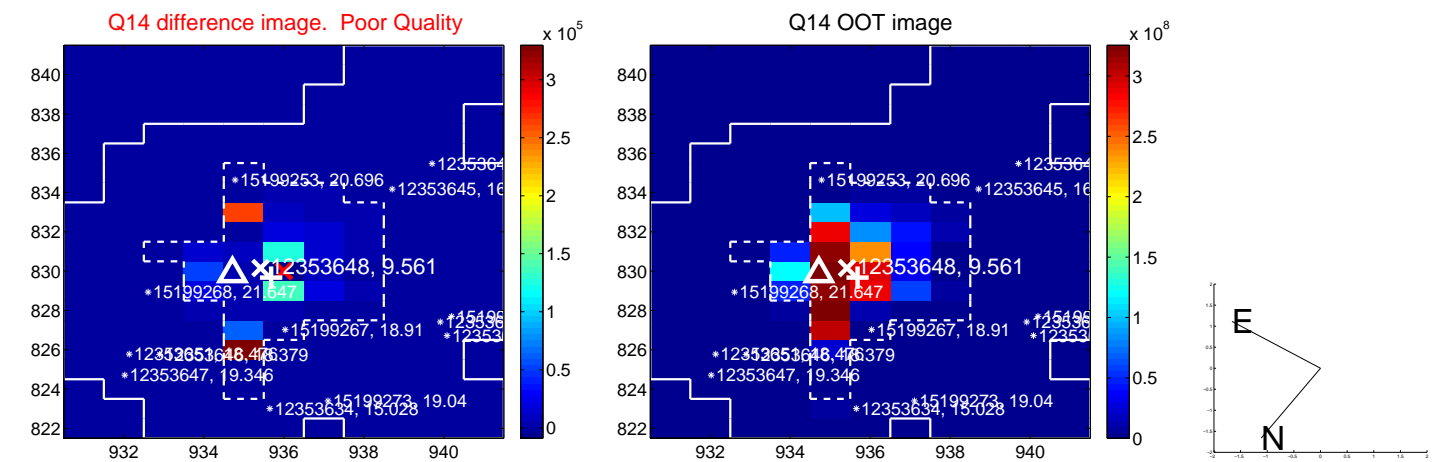
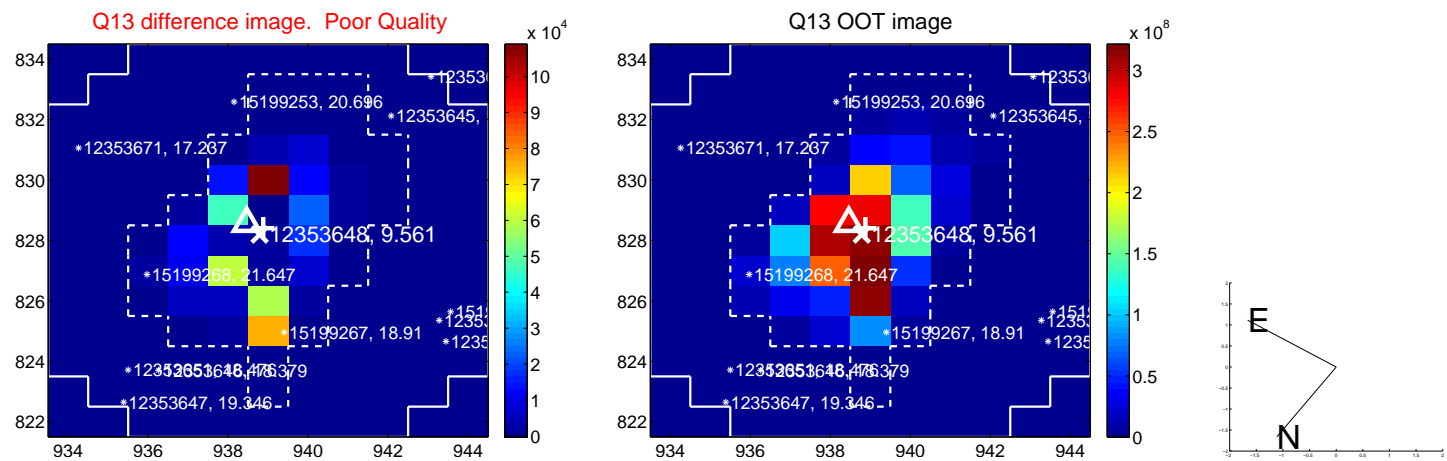
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



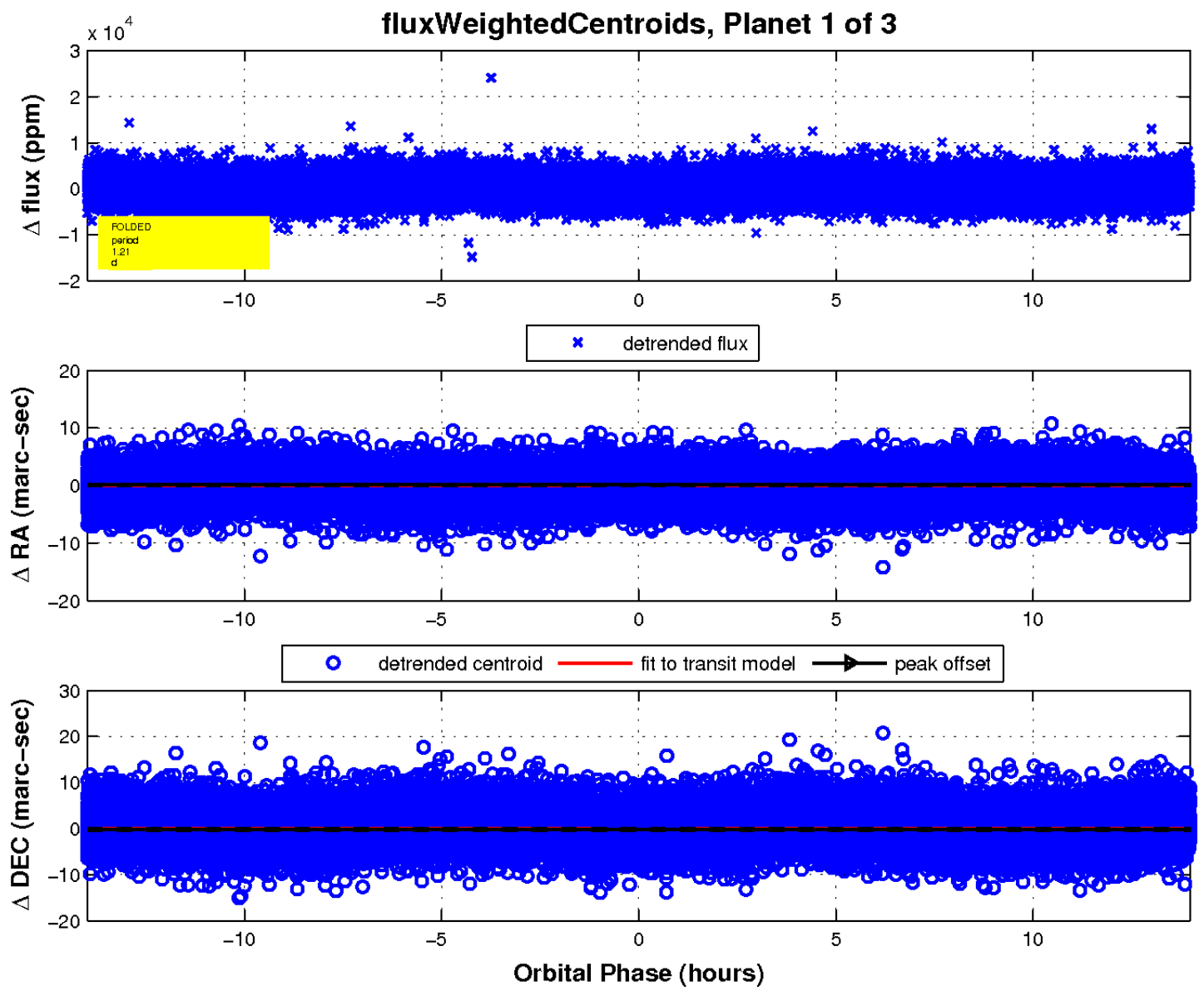
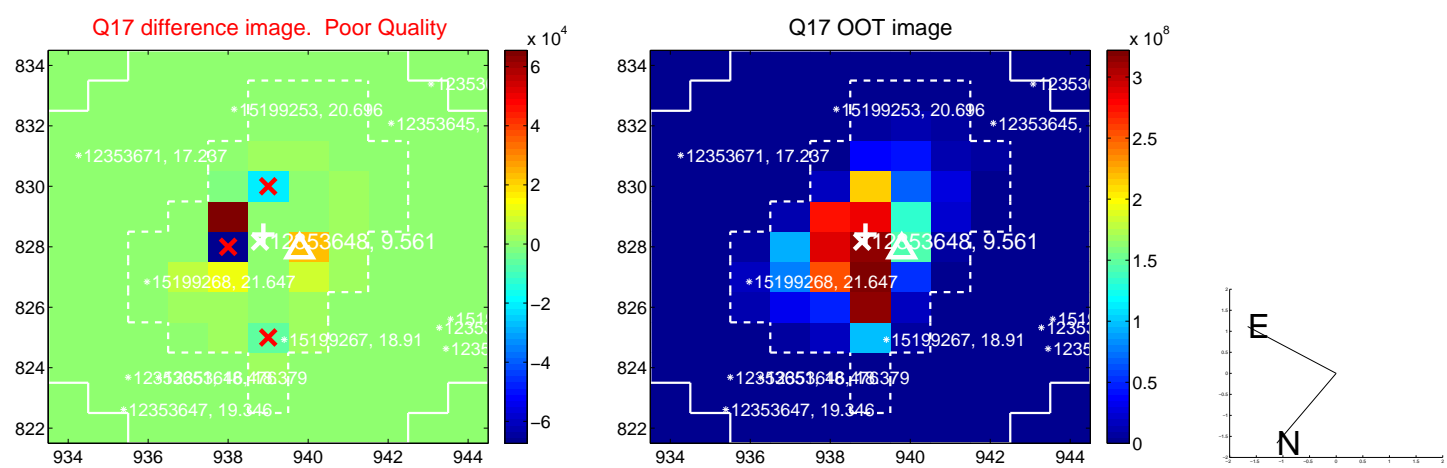
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

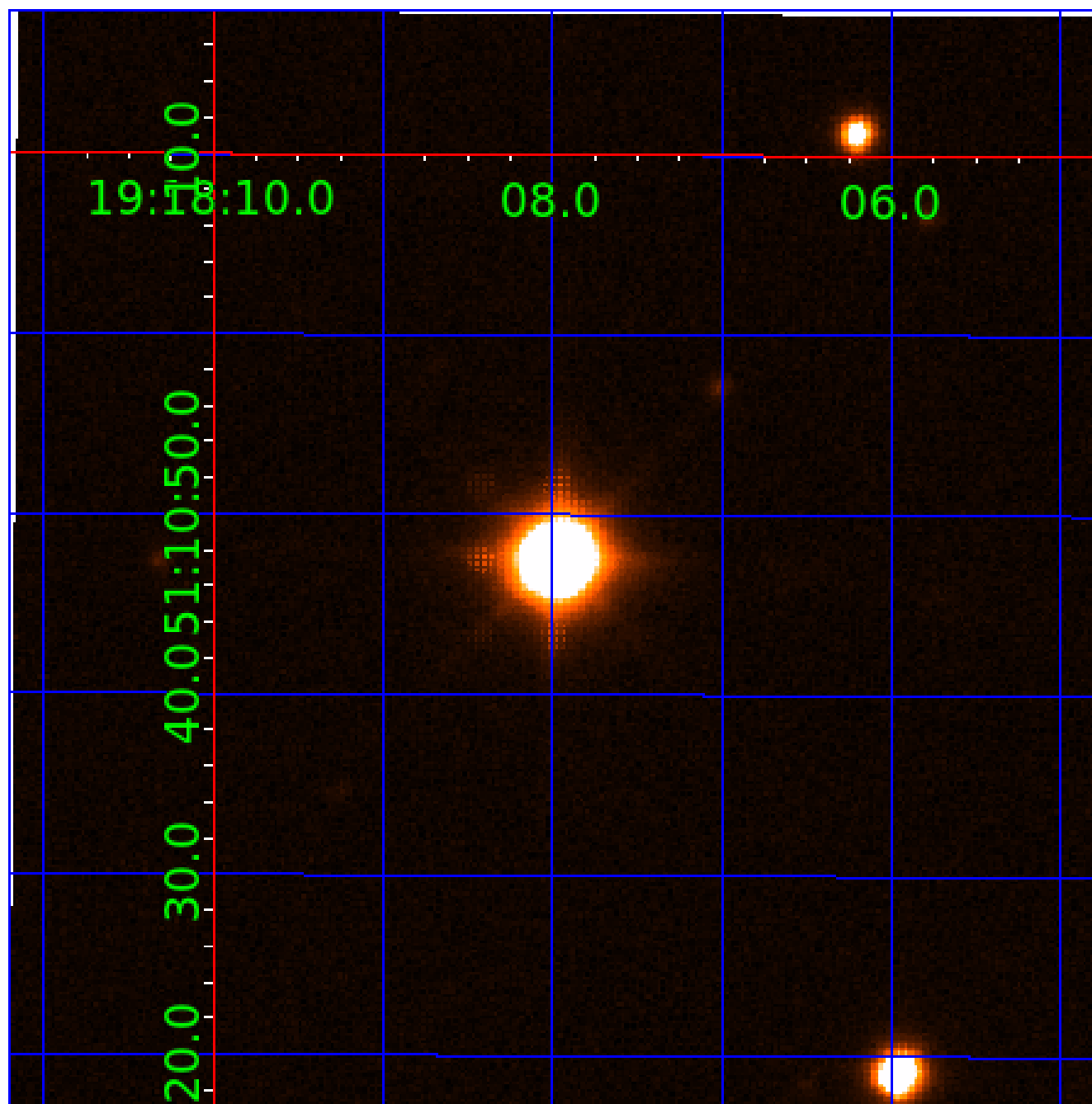


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012353648

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})
012353648-01	OBS	No	1.212965	131.866887	489.8	4.661	13.0	14.6	3.27	7201	11.05	36757.45
012353648-02	OBS	No	0.504573	131.868510	658.7	1.329	16.7	17.9	3.27	7201	8.71	0.00
012353648-03	OBS	No	0.504572	131.992244	51.3	1.500	17.8	-1.0	3.27	7201	2.36	118371.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012353648-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012353648-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012353648-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

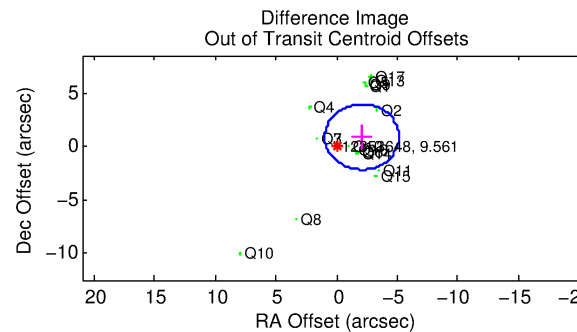
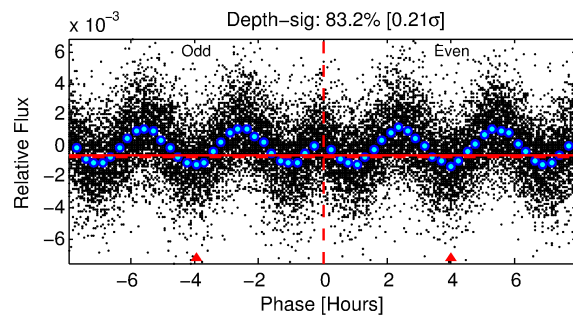
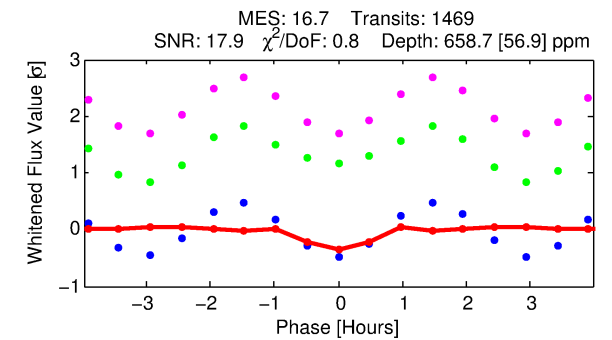
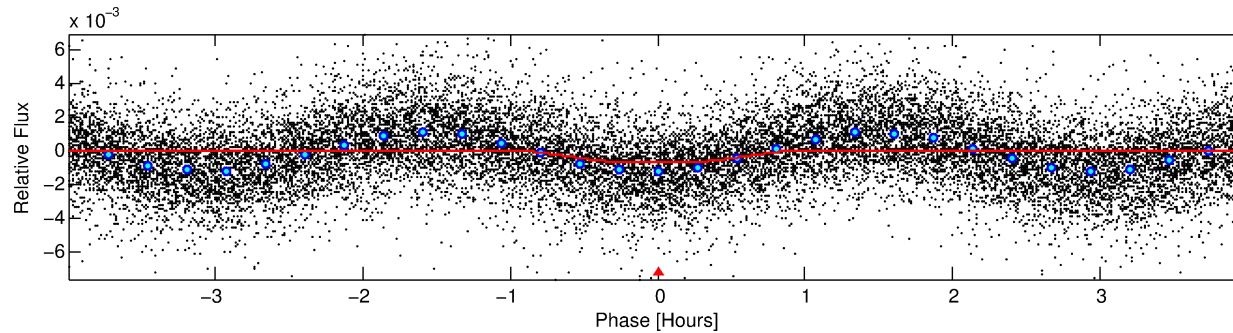
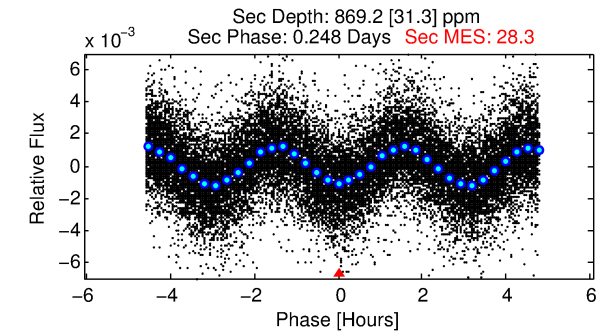
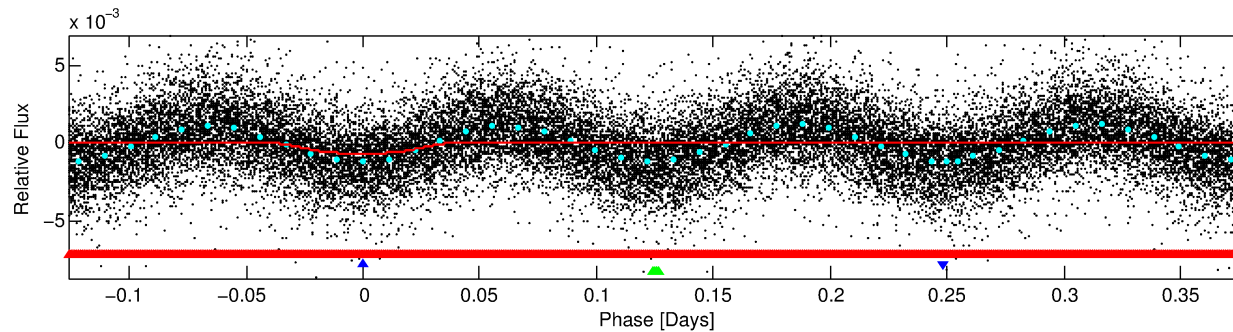
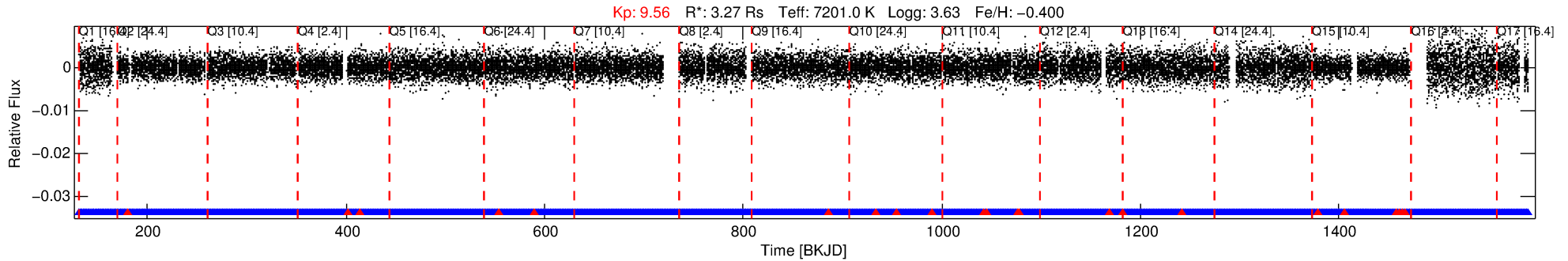
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012353648-02

No Significant Match Found

DV One-Page Summary

KIC: 12353648 Candidate: 2 of 3 Period: 0.505 d



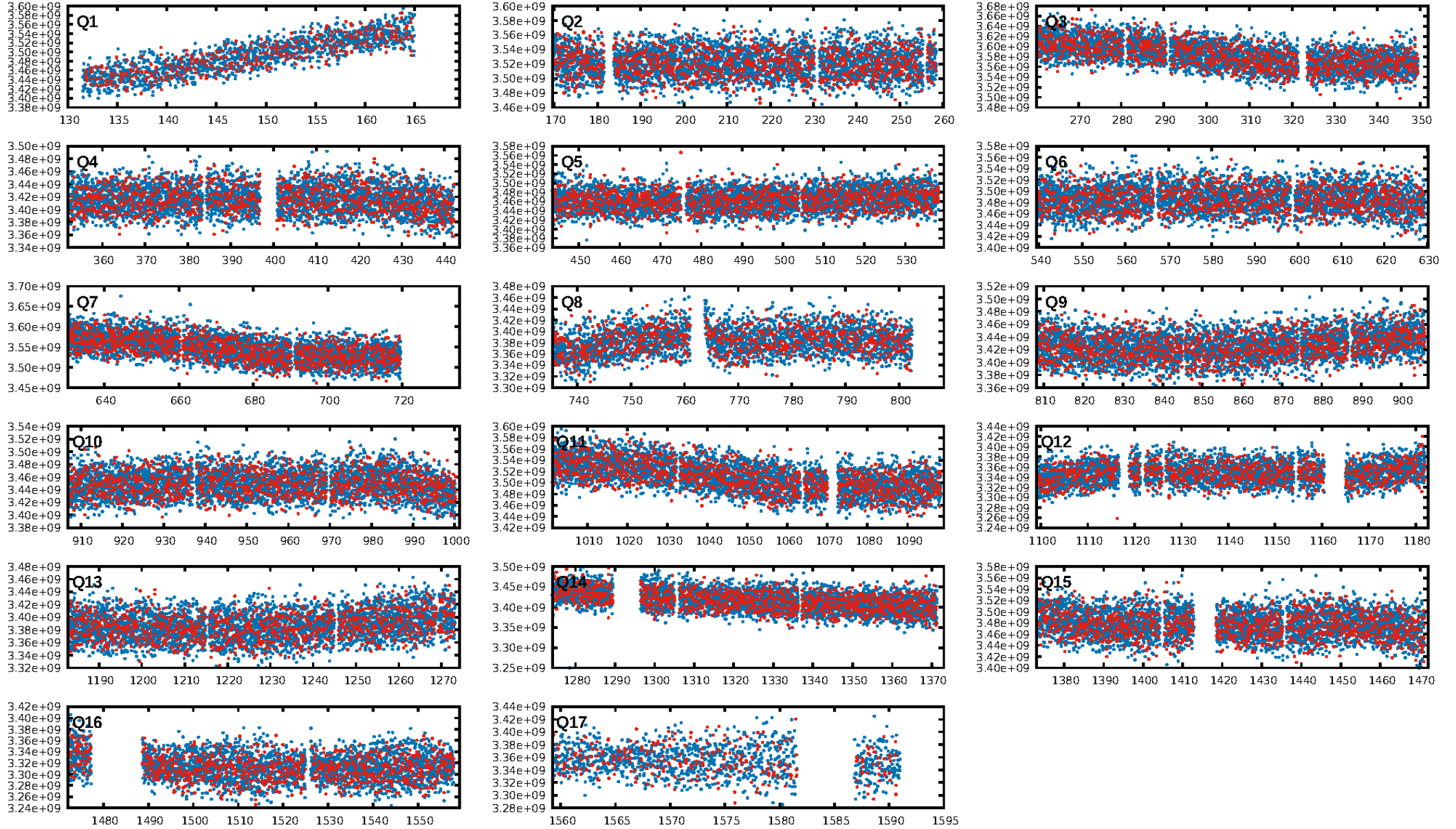
DV Fit Results:

Period = 0.50457 [0.00001] d
Epoch = 131.8685 [0.0010] BKJD
Rp/R* = 0.0244 [0.0065]
a/R* = 2.67 [3.18]
b = 0.52 [2.00]
Seff = N/A
Teq = N/A
Rp = 8.71 [3.19] Re
a = N/A
Ag = N/A
Teffp = N/A

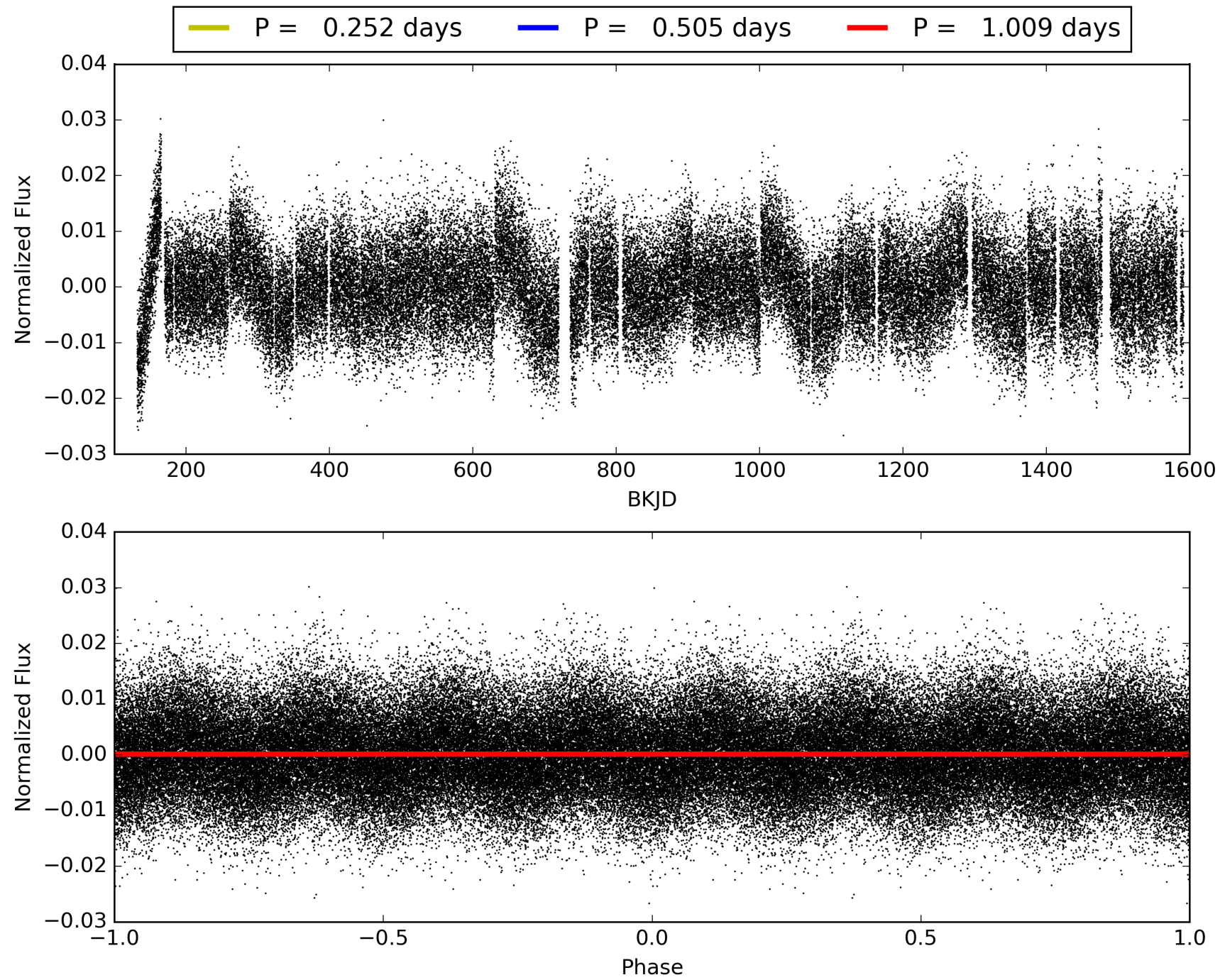
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [3.51σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1384/1406]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.2%
Centroid-so: 1.134 arcsec [9.05σ]
OotOffset-rm: 2.255 arcsec [2.21σ]
KicOffset-rm: 3.172 arcsec [3.13σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 012353648-02, PDC Light Curves

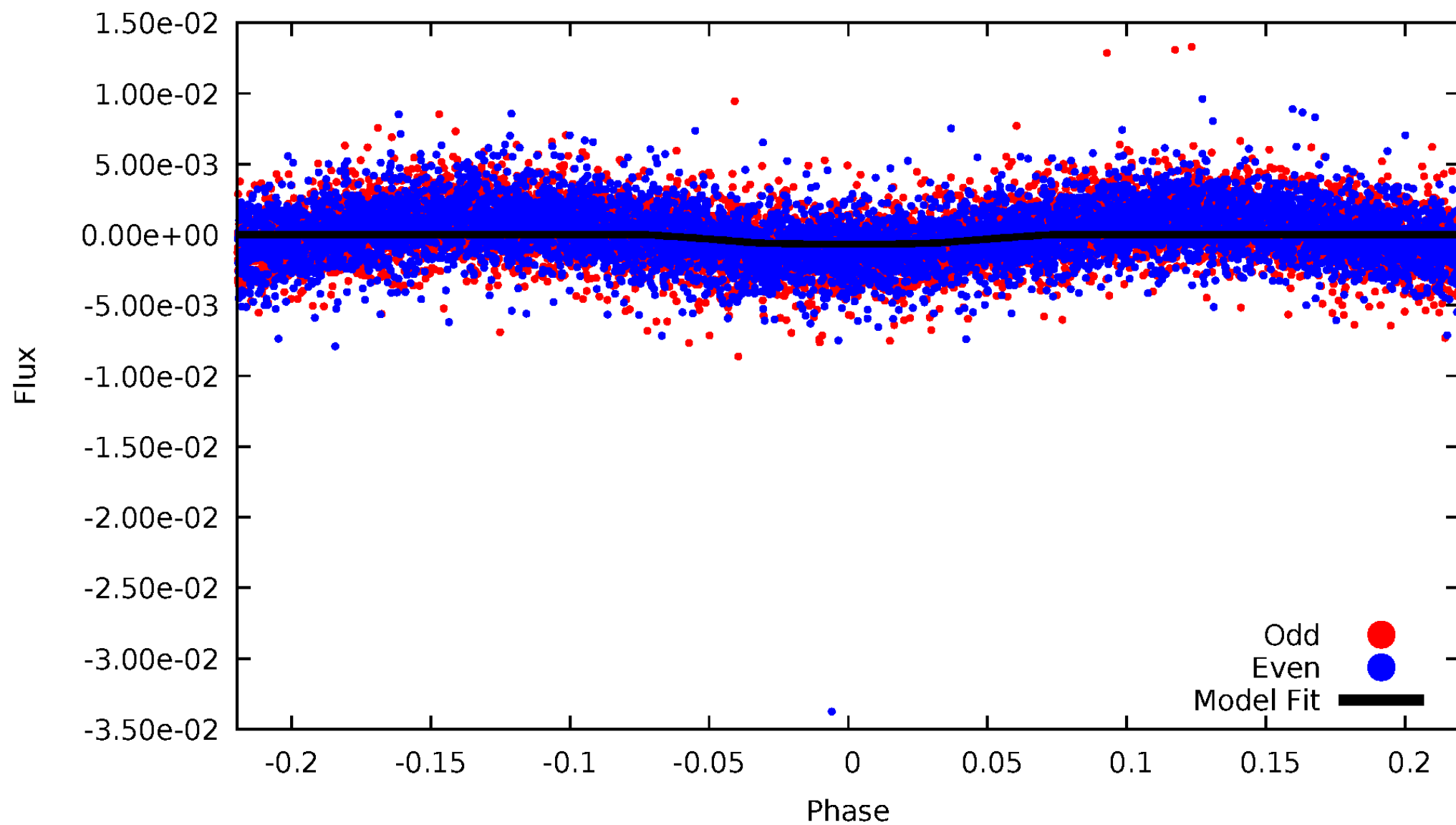


TCE 012353648-02



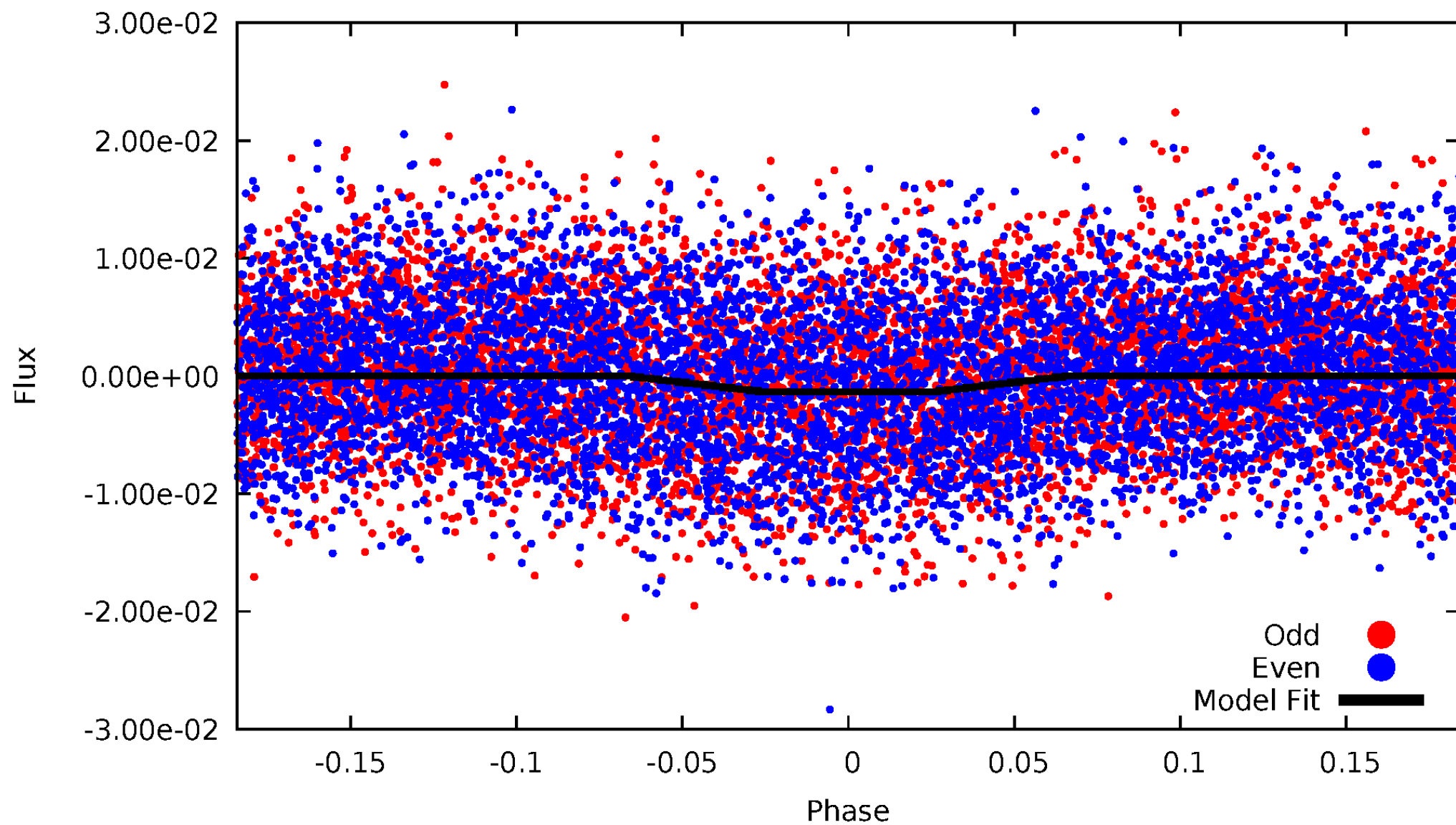
DV Odd/Even

TCE 012353648-02



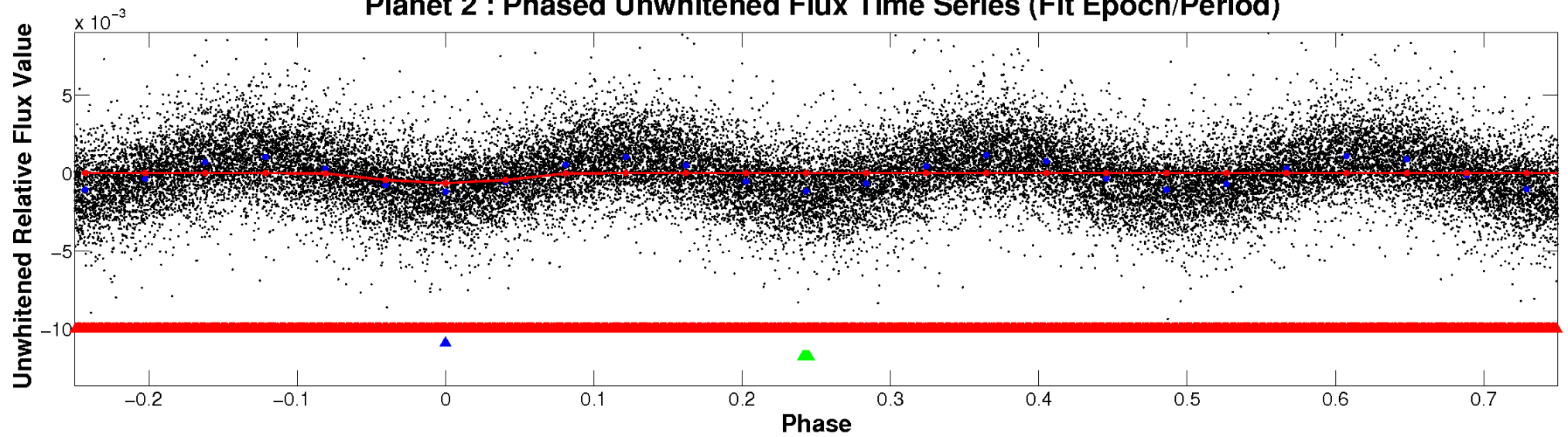
ALT Odd/Even

TCE 012353648-02

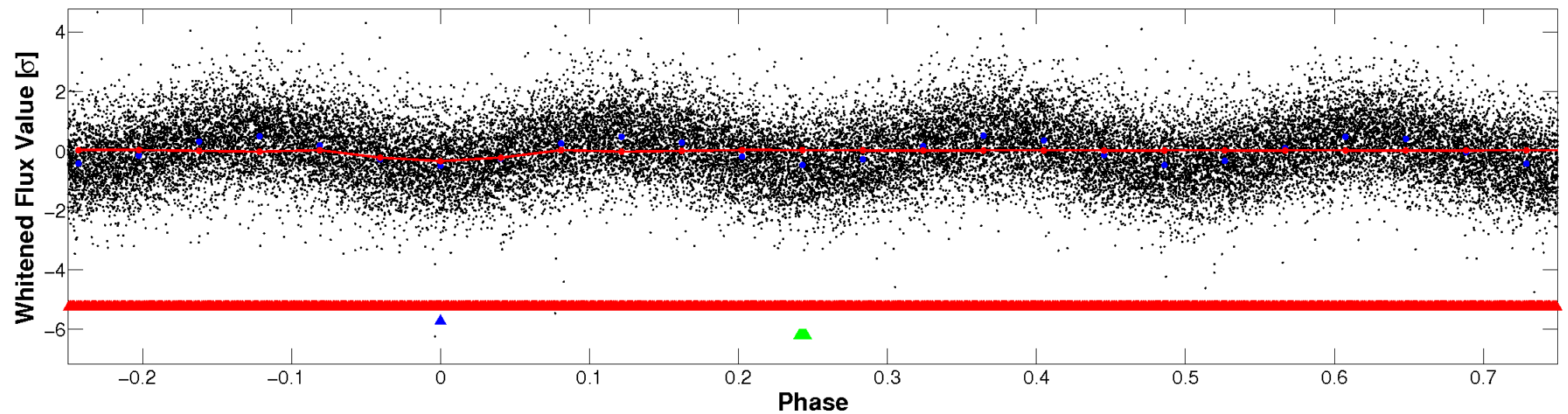


Non-Whitened Vs. Whitened Light Curve

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

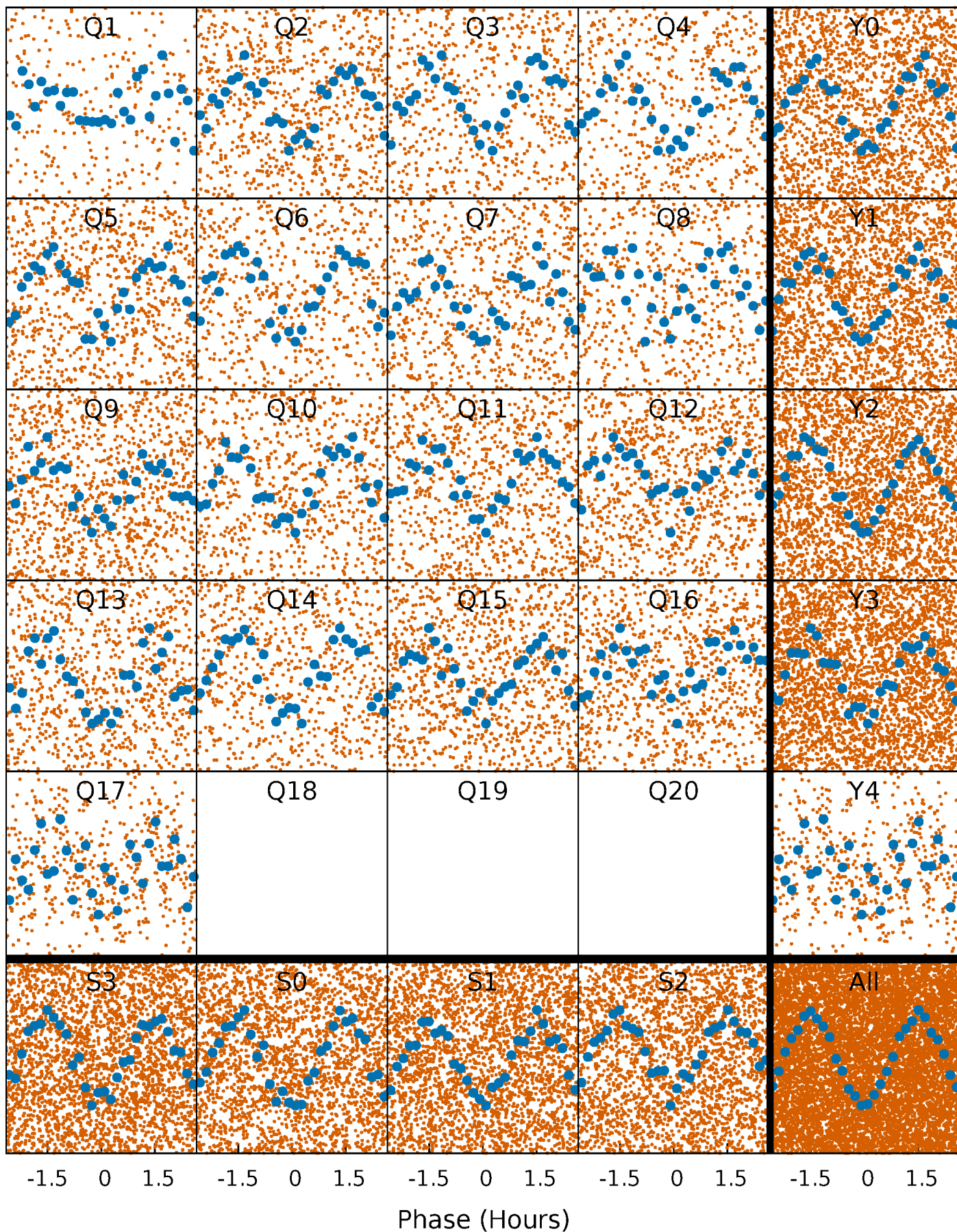


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



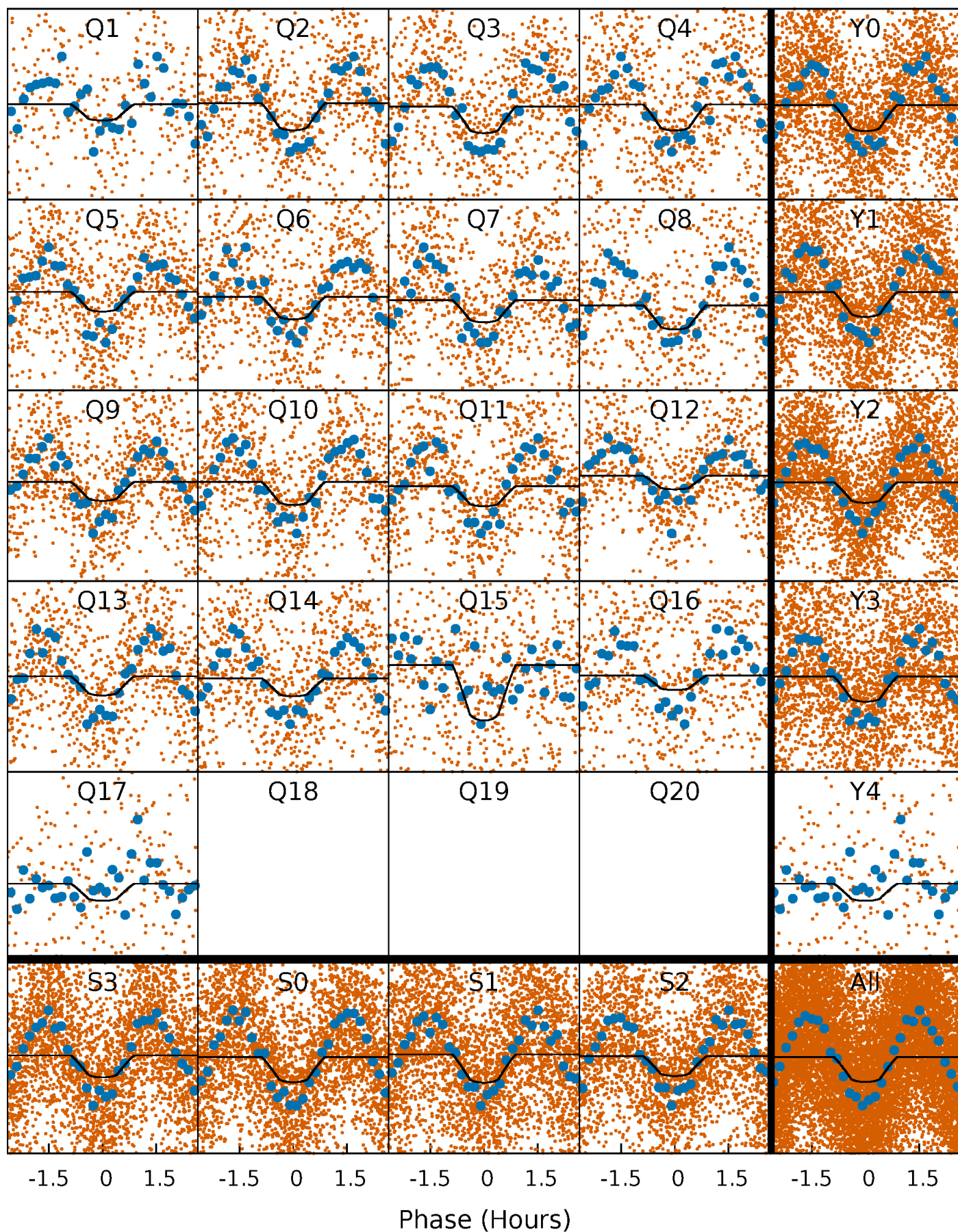
PDC Quarter-Phased Transit Curves

TCE 012353648-02 P= 0.504573 Days $T_0=131.868510$ (BKJD)



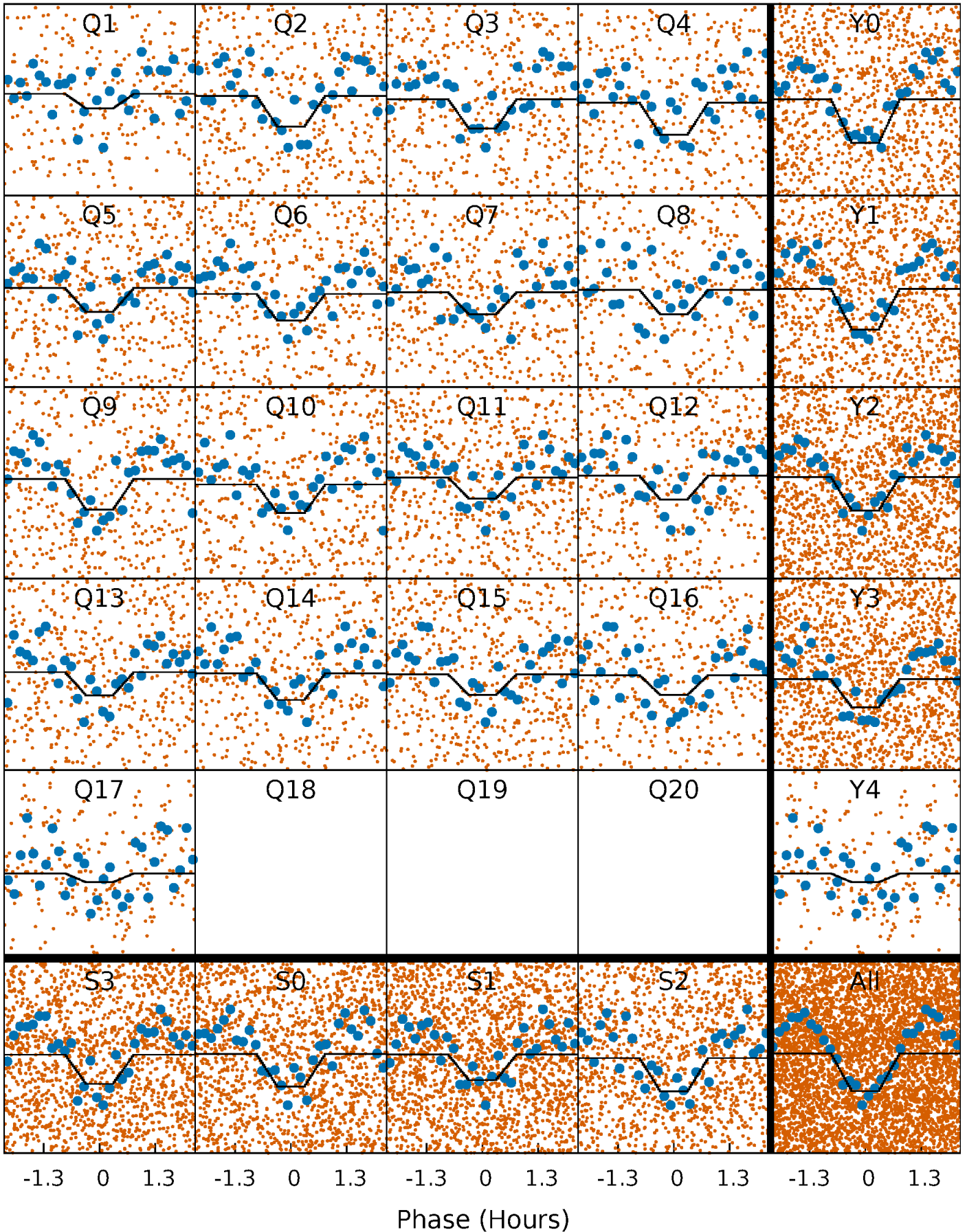
DV Quarter-Phased Transit Curves

TCE 012353648-02 P= 0.504573 Days $T_0=131.868510$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

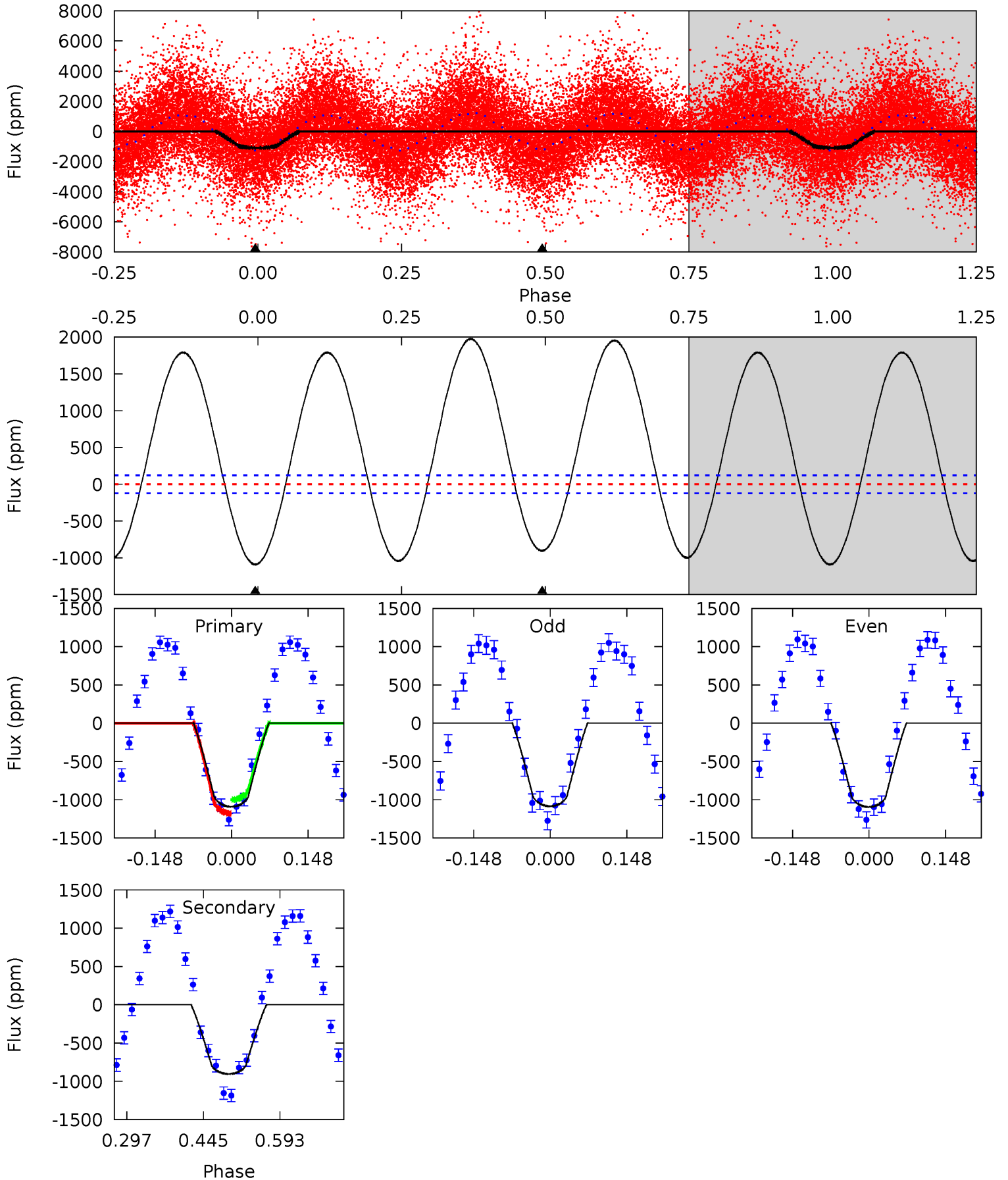
TCE 012353648-02 $P = 0.504572$ Days $T_0 = 131.869740$ (BKJD)



DV Model-Shift Uniqueness Test

012353648-02, P = 0.504573 Days, E = 131.363937 Days

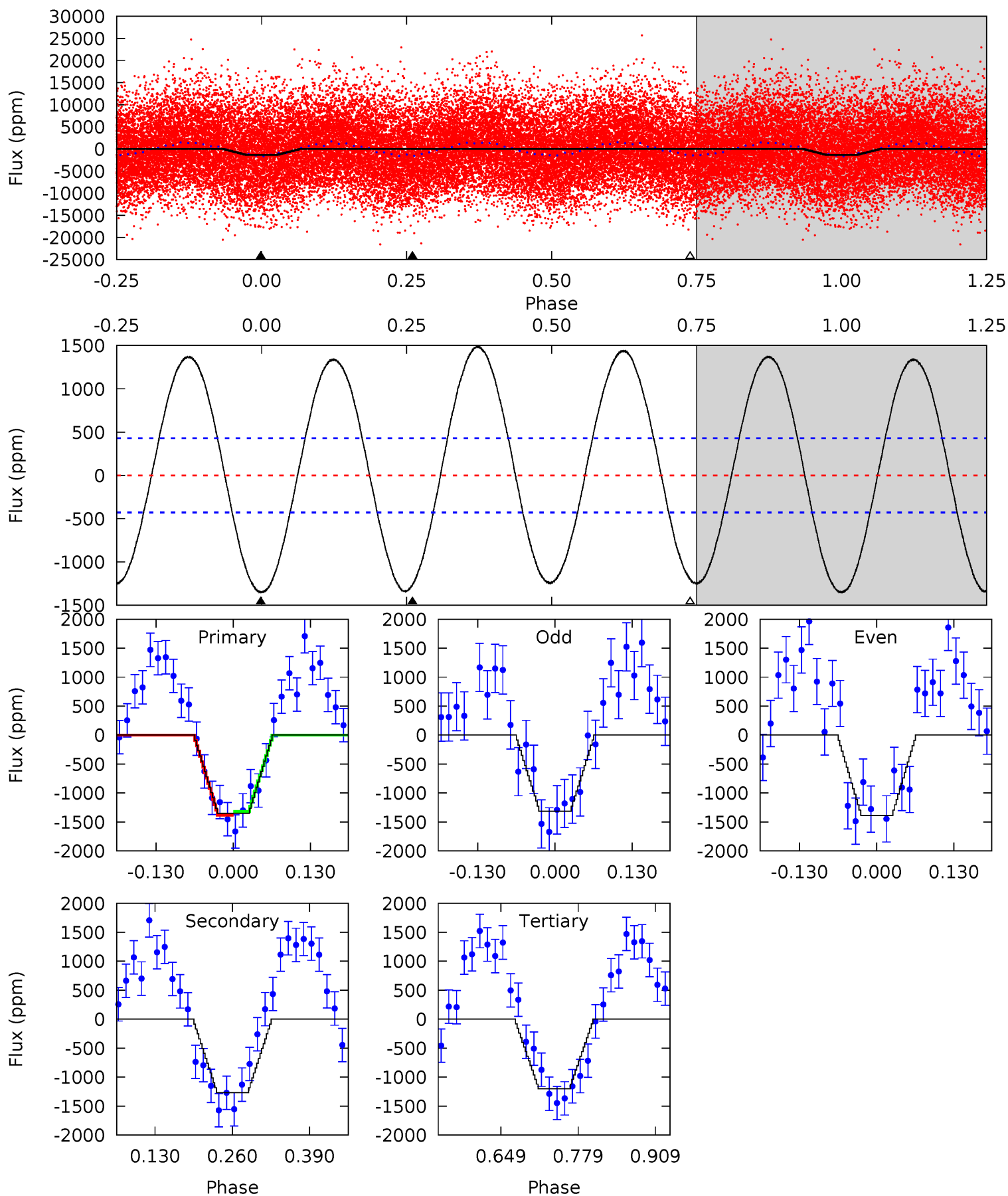
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.2	33.3	0	0	4.48	1.45	32.2	40.2	40.2	33.3	33.3	0.18	1.04	0.64	3.67



Alt Model-Shift Uniqueness Test

012353648-02, P = 0.504572 Days, E = 131.365168 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	13.3	12.6	0	4.51	1.51	9.71	1.60	14.2	0.70	13.3	0.38	0.97	0.52	0.35



Stellar Parameters For KIC 012353648

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7201^{+130}_{-159}	$3.634^{+0.210}_{-0.090}$	$-0.400^{+0.150}_{-0.150}$	$3.266^{+0.411}_{-0.823}$	$1.676^{+0.146}_{-0.195}$	$0.068^{+0.077}_{-0.019}$
	+2%/-2%	+6%/-2%	+37%/-37%	+13%/-25%	+9%/-12%	+113%/-28%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 012353648-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-904 ± 27	$8.43^{+2.47}_{-2.57}$	6544^{+262}_{-407}	7554^{+2337}_{-1204}	$1.547^{+1.697}_{-0.642}$
Alt.	-1266 ± 95	$12.72^{+2.62}_{-2.65}$	6539^{+299}_{-417}	6356^{+1003}_{-827}	$0.933^{+0.551}_{-0.294}$

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

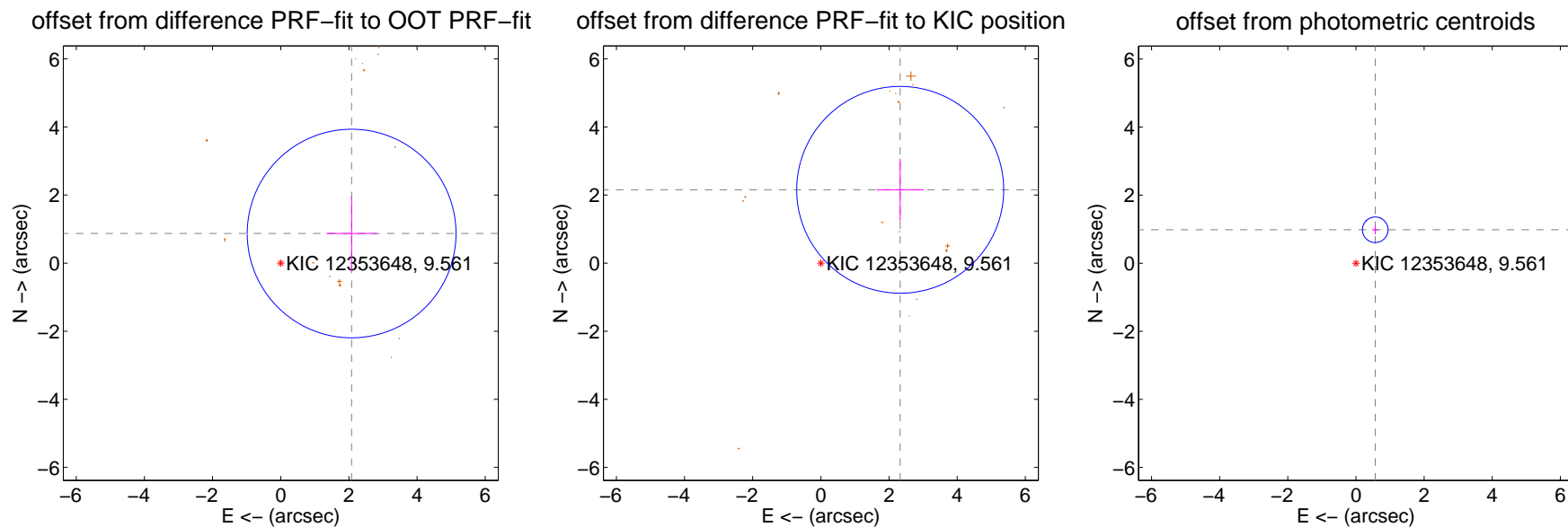
DV Centroid Data

Supplemental centroid analysis for 012353648-02. **Kepler magnitude: 9.56.** Transit SNR 17.87

There are 0 quarters with good PRF difference image offsets

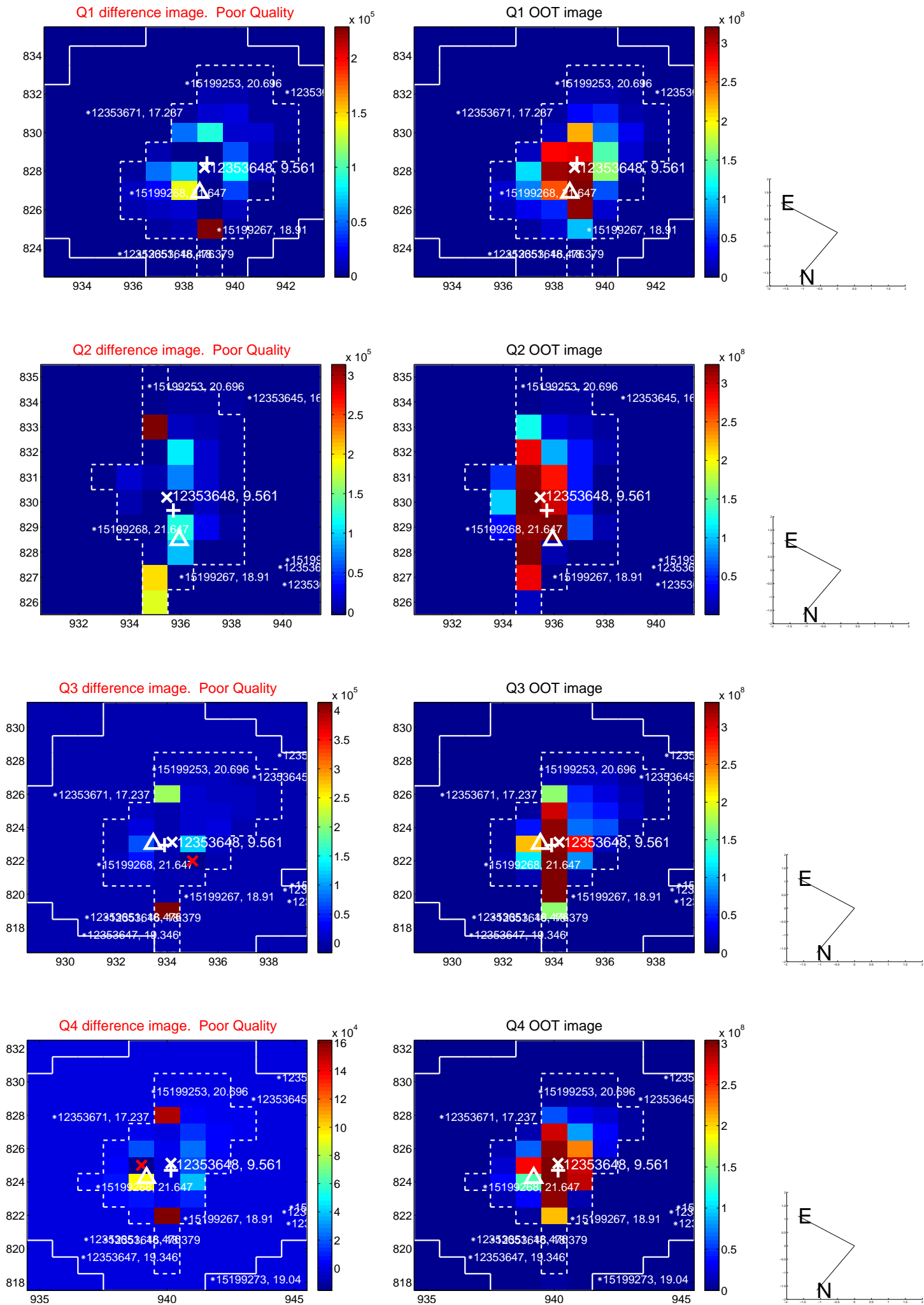
The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.255 ± 1.021	2.21	-2.081 ± 0.743	0.870 ± 1.101
PRF-fit source offset from KIC position	3.172 ± 1.013	3.13	-2.329 ± 0.695	2.154 ± 0.914
photometric centroid source offset	1.13 ± 0.13	9.05	-0.57 ± 0.09	0.98 ± 0.14

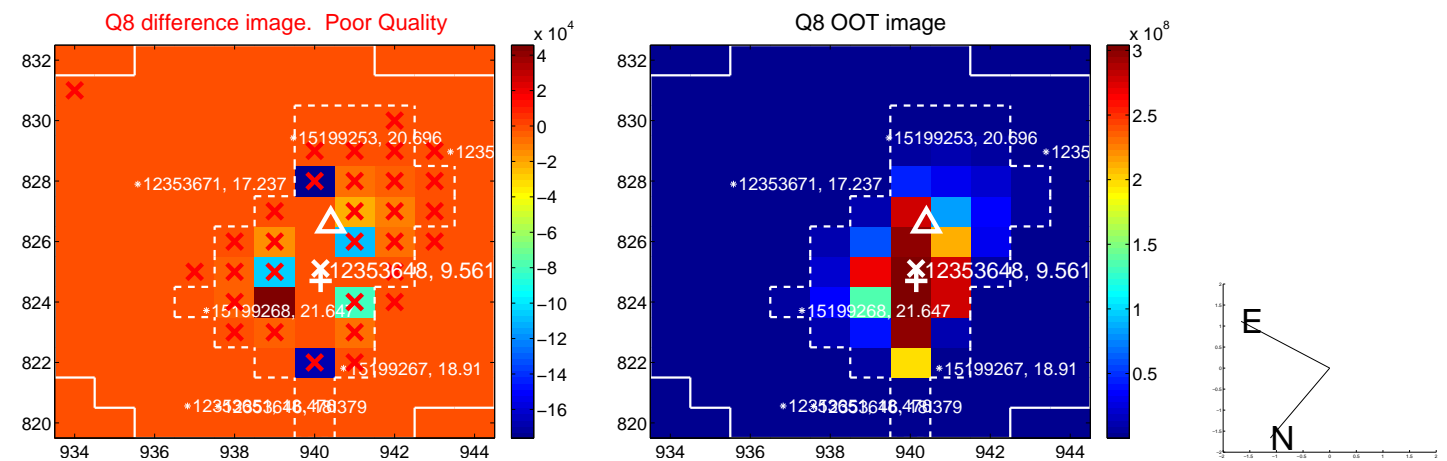
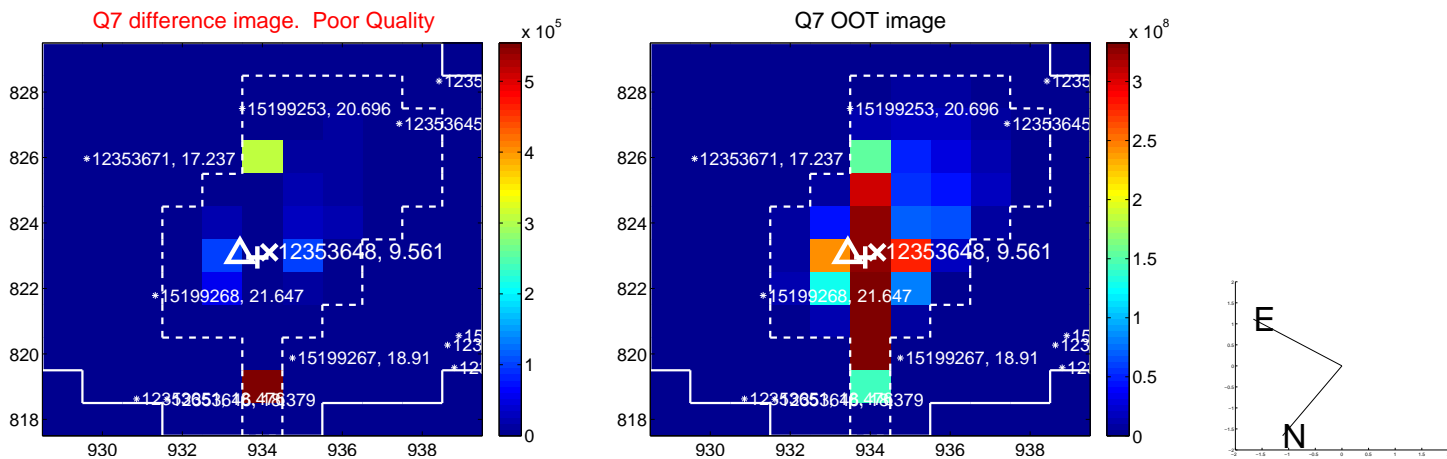
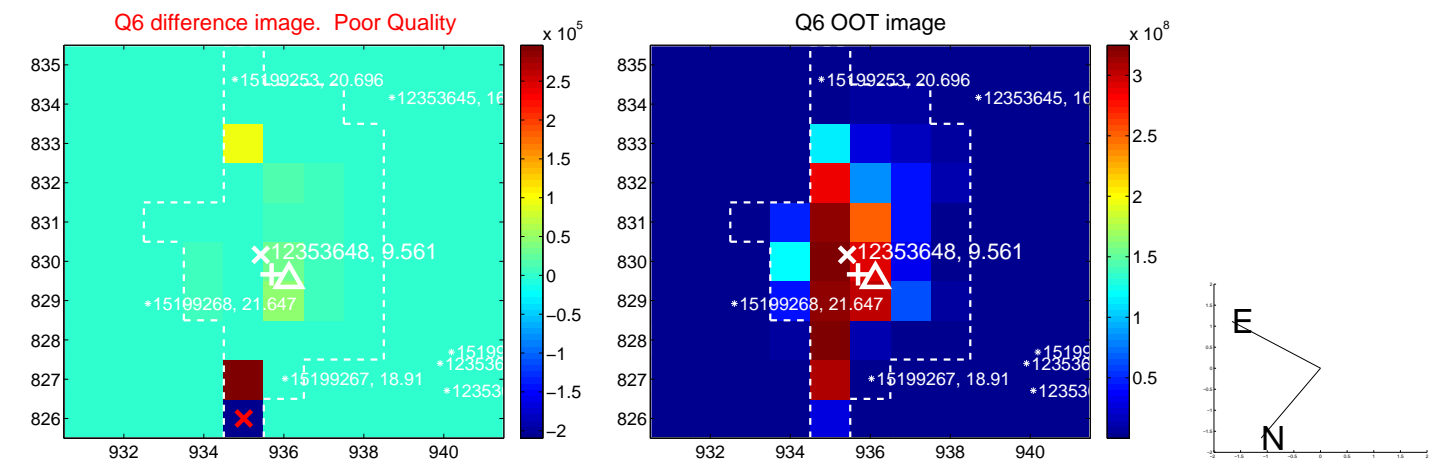
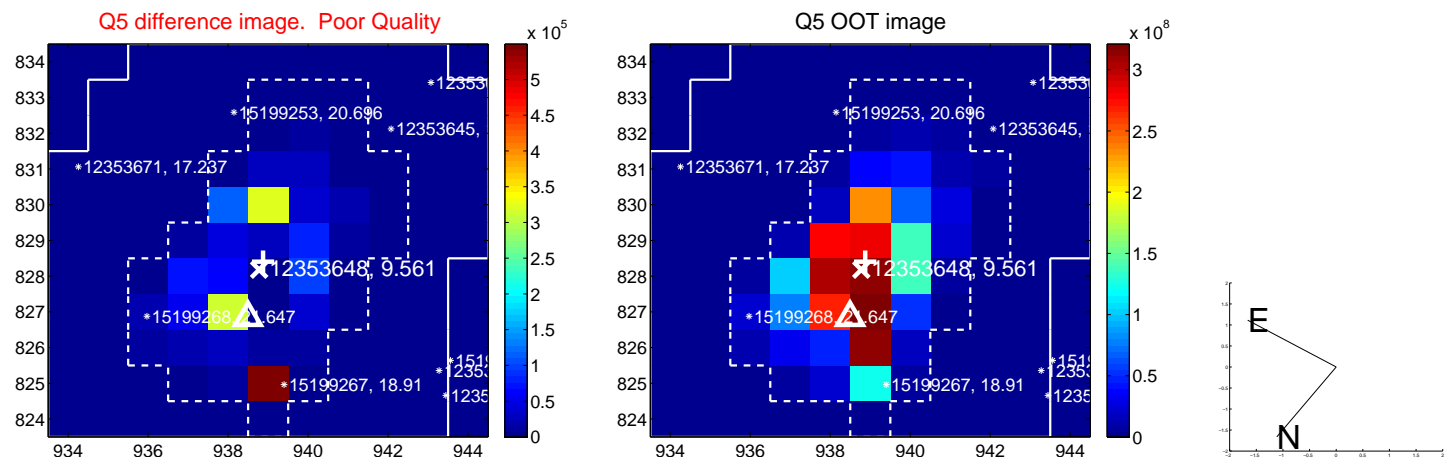


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

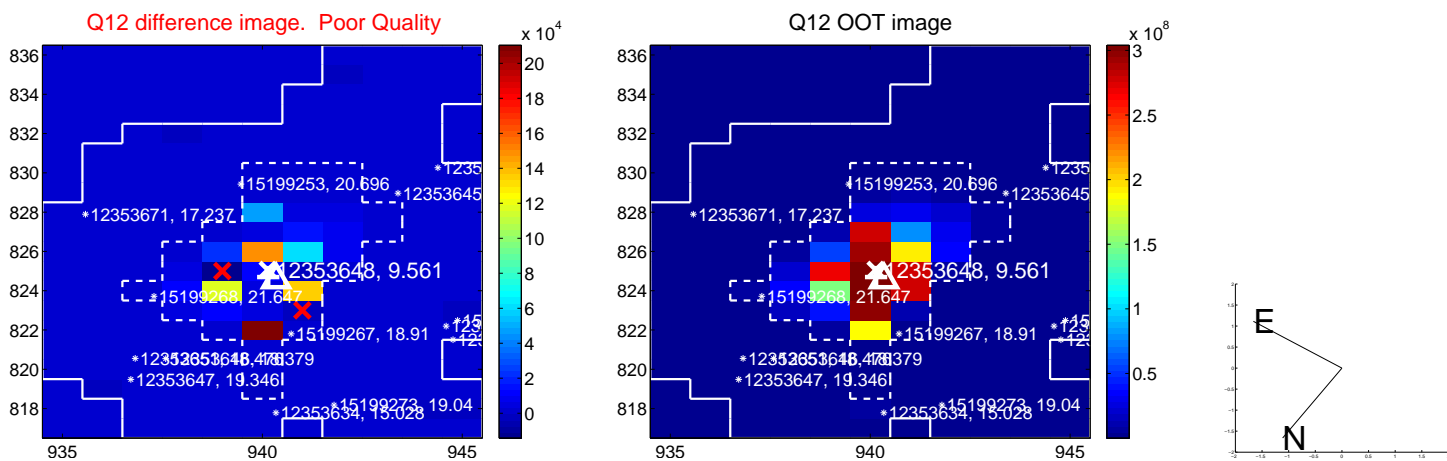
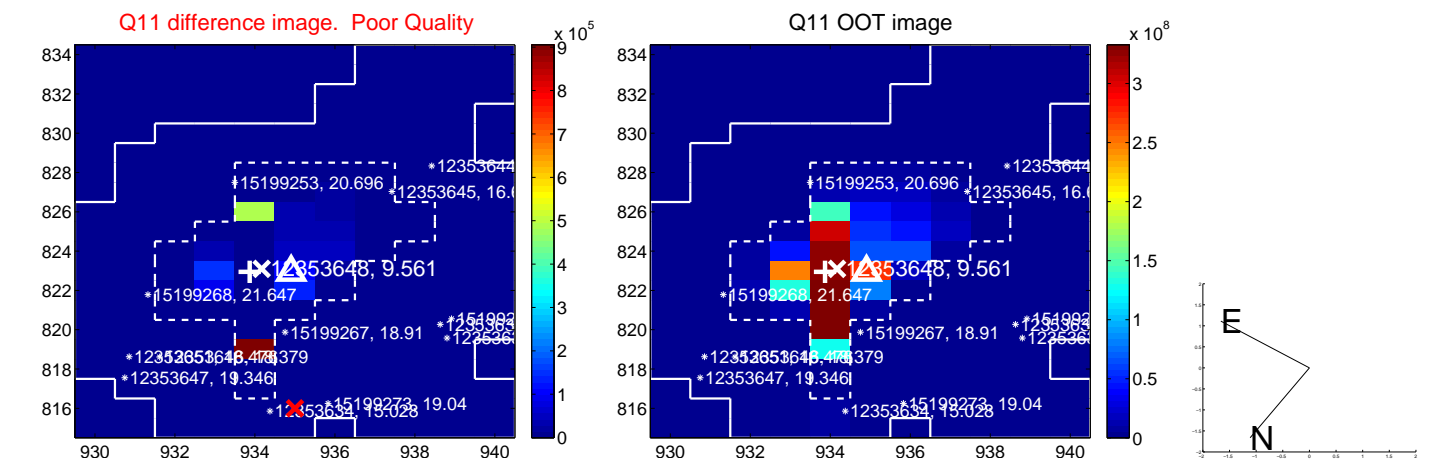
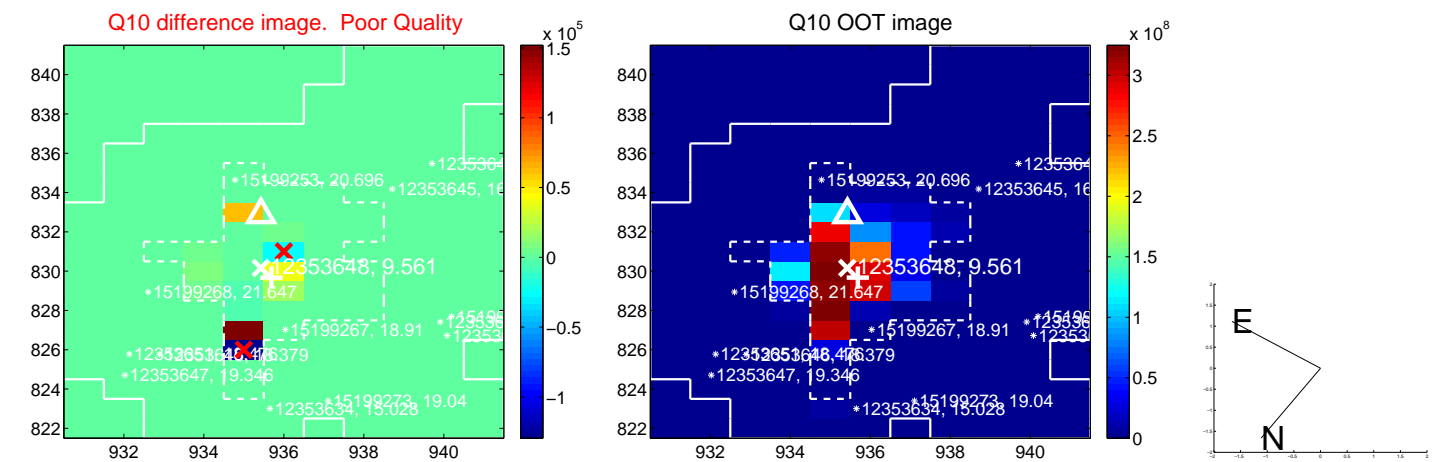
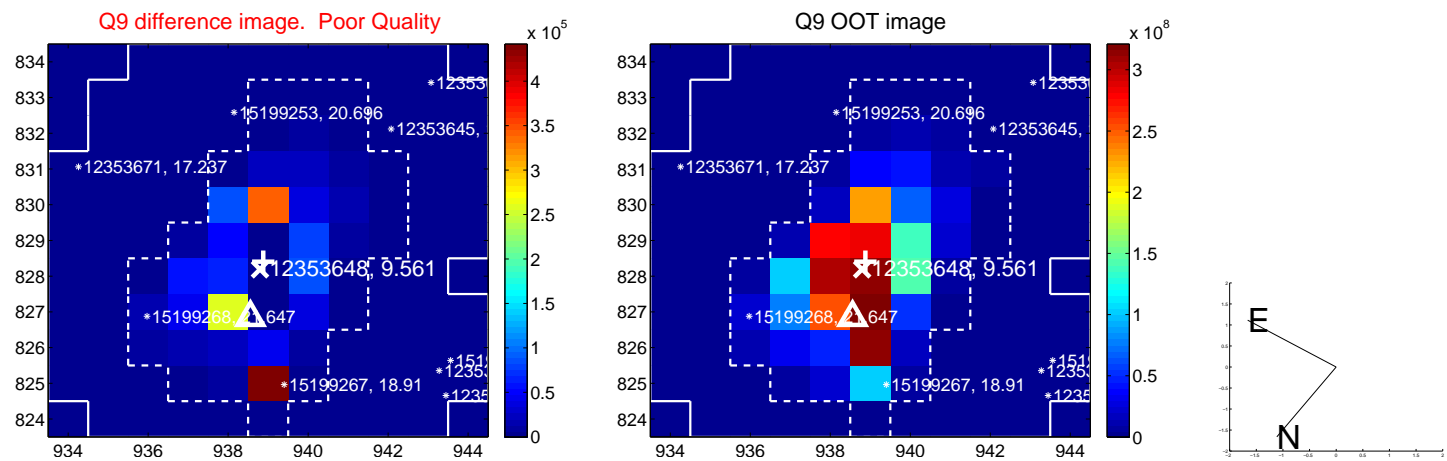
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



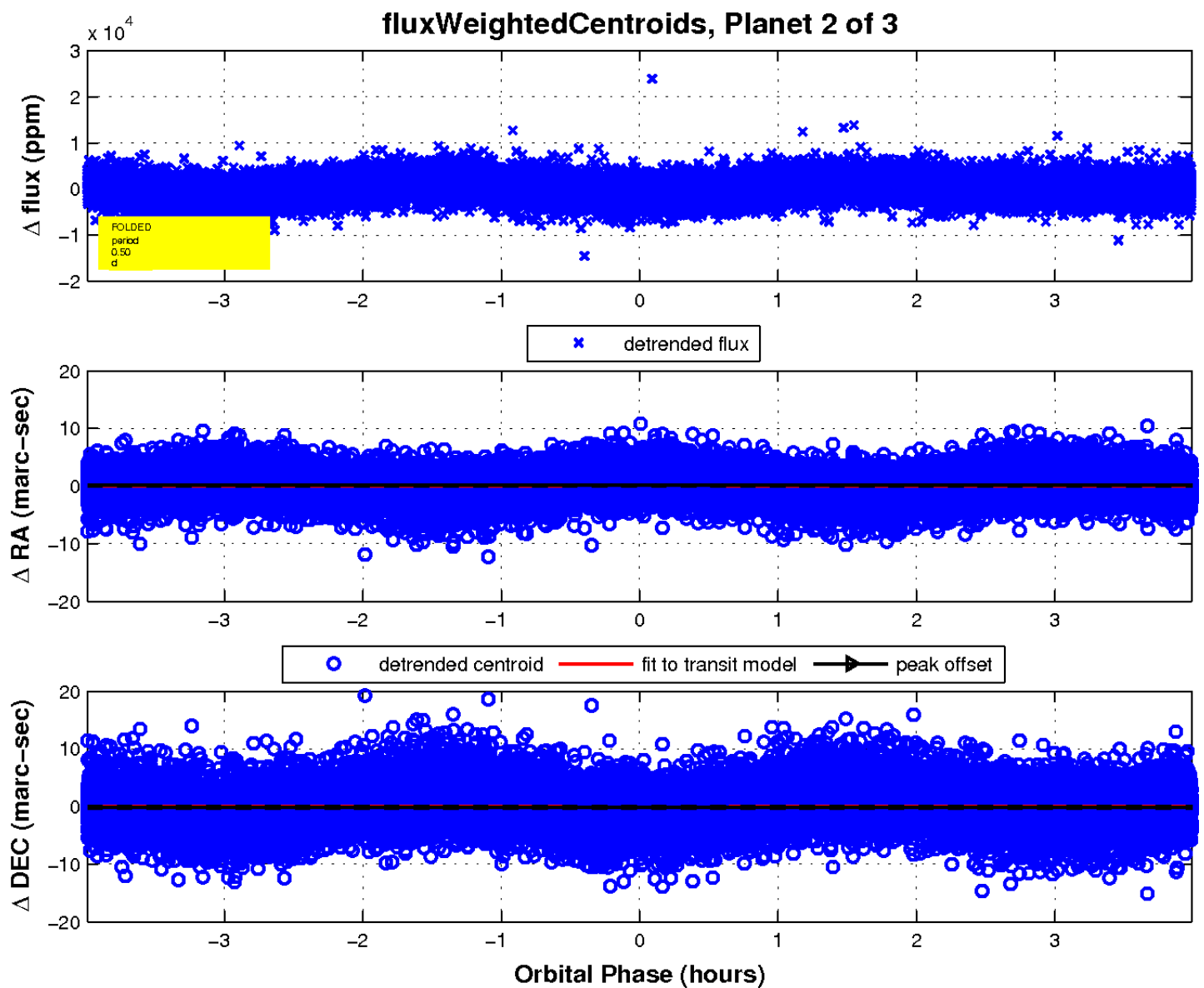
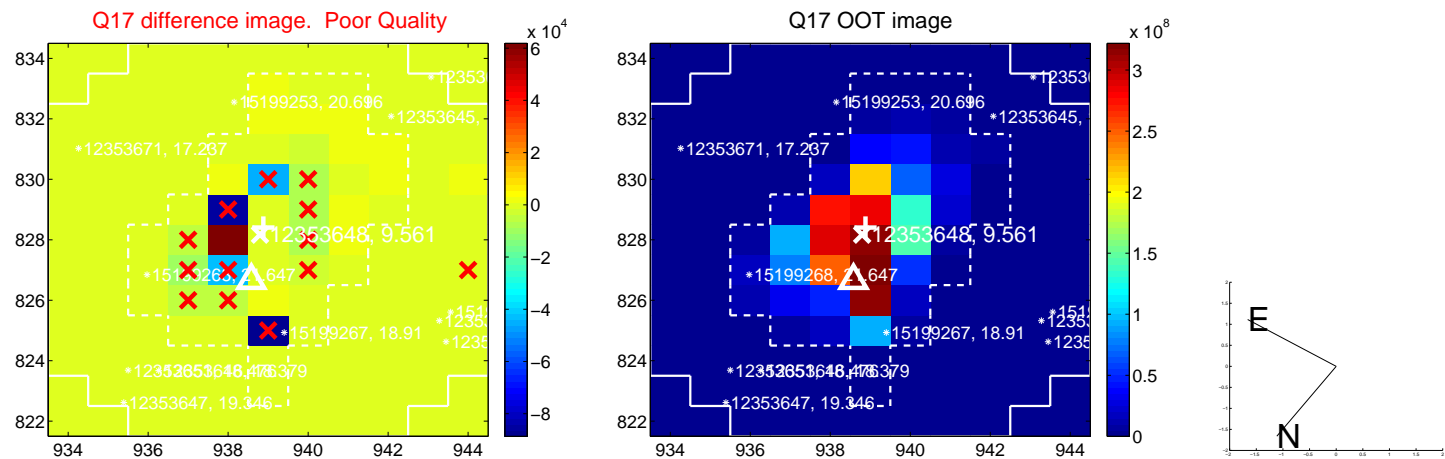
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

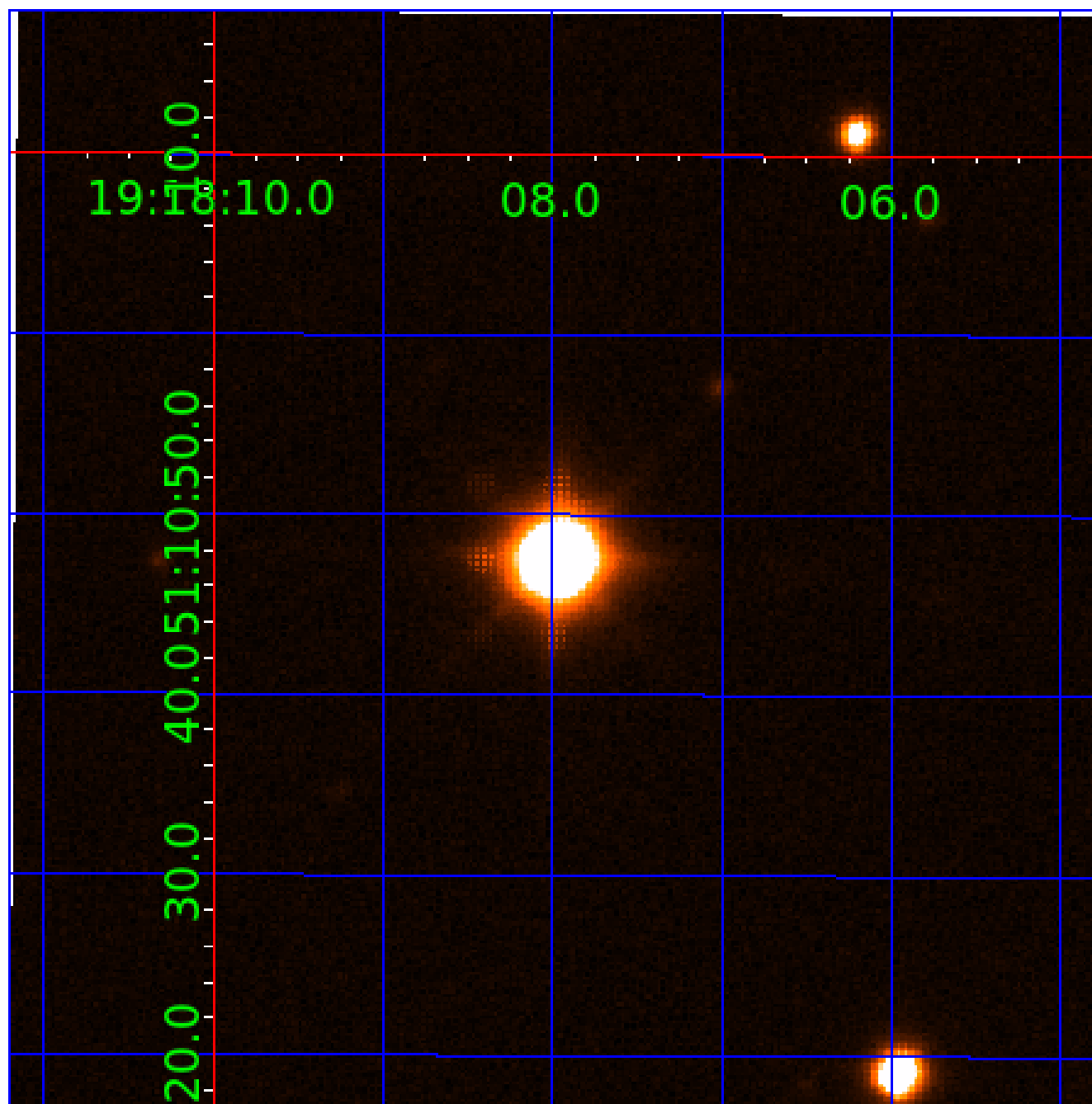


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012353648

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})
012353648-01	OBS	No	1.212965	131.866887	489.8	4.661	13.0	14.6	3.27	7201	11.05	36757.45
012353648-02	OBS	No	0.504573	131.868510	658.7	1.329	16.7	17.9	3.27	7201	8.71	0.00
012353648-03	OBS	No	0.504572	131.992244	51.3	1.500	17.8	-1.0	3.27	7201	2.36	118371.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012353648-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012353648-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012353648-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

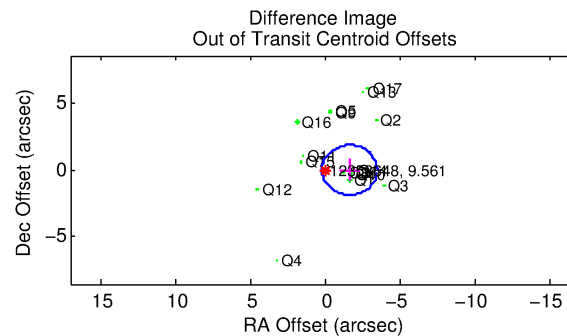
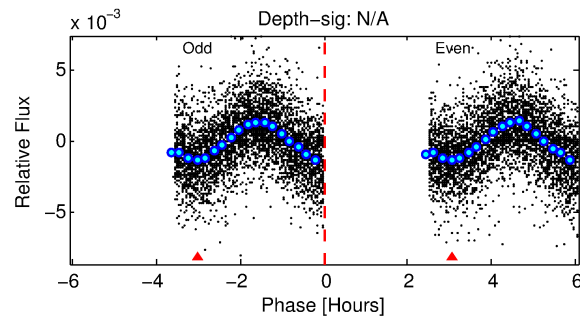
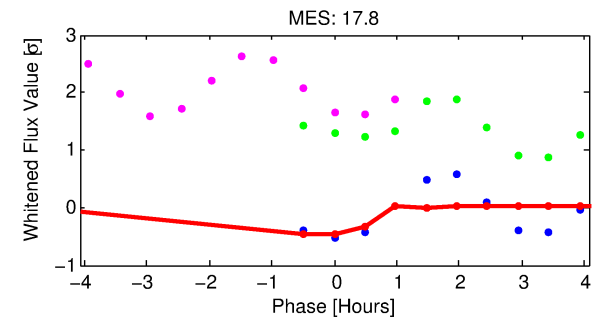
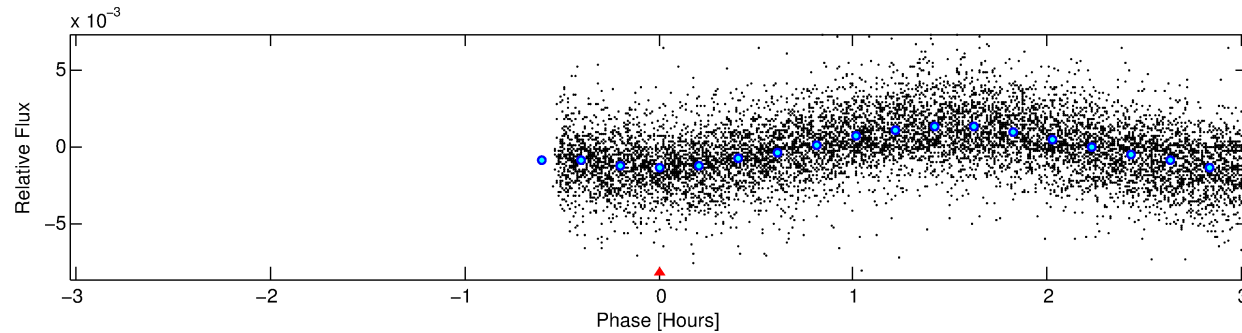
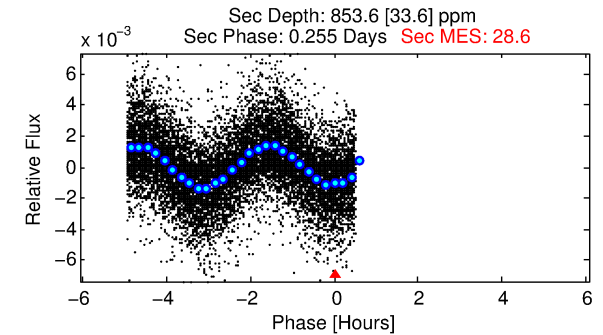
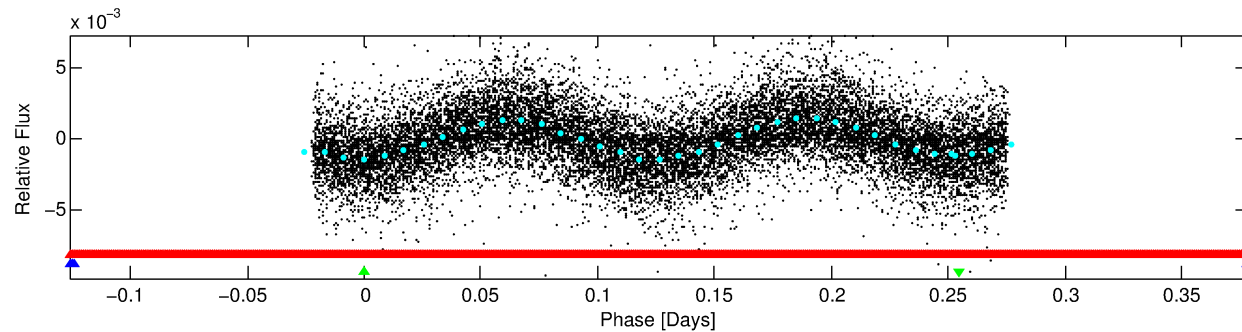
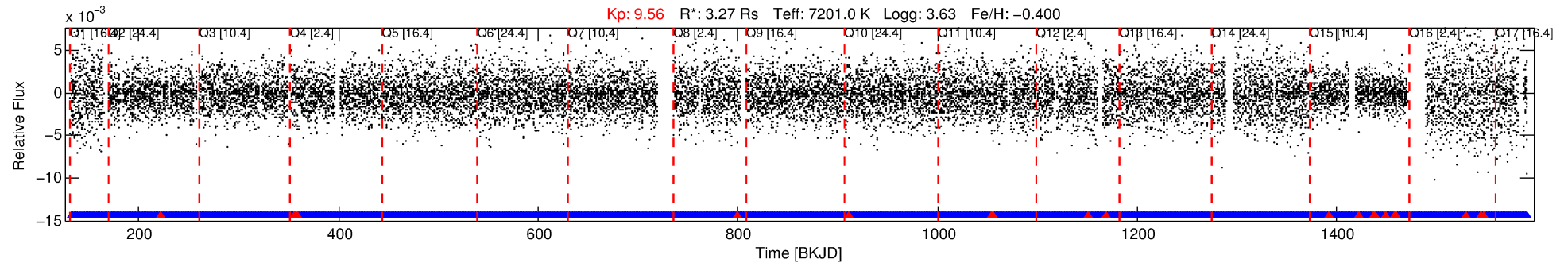
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012353648-03

No Significant Match Found

DV One-Page Summary

KIC: 12353648 Candidate: 3 of 3 Period: 0.505 d



TPS TCE Results:

Period = 0.50457 d
Epoch = 131.9922 BKJD

DV fit results are unavailable

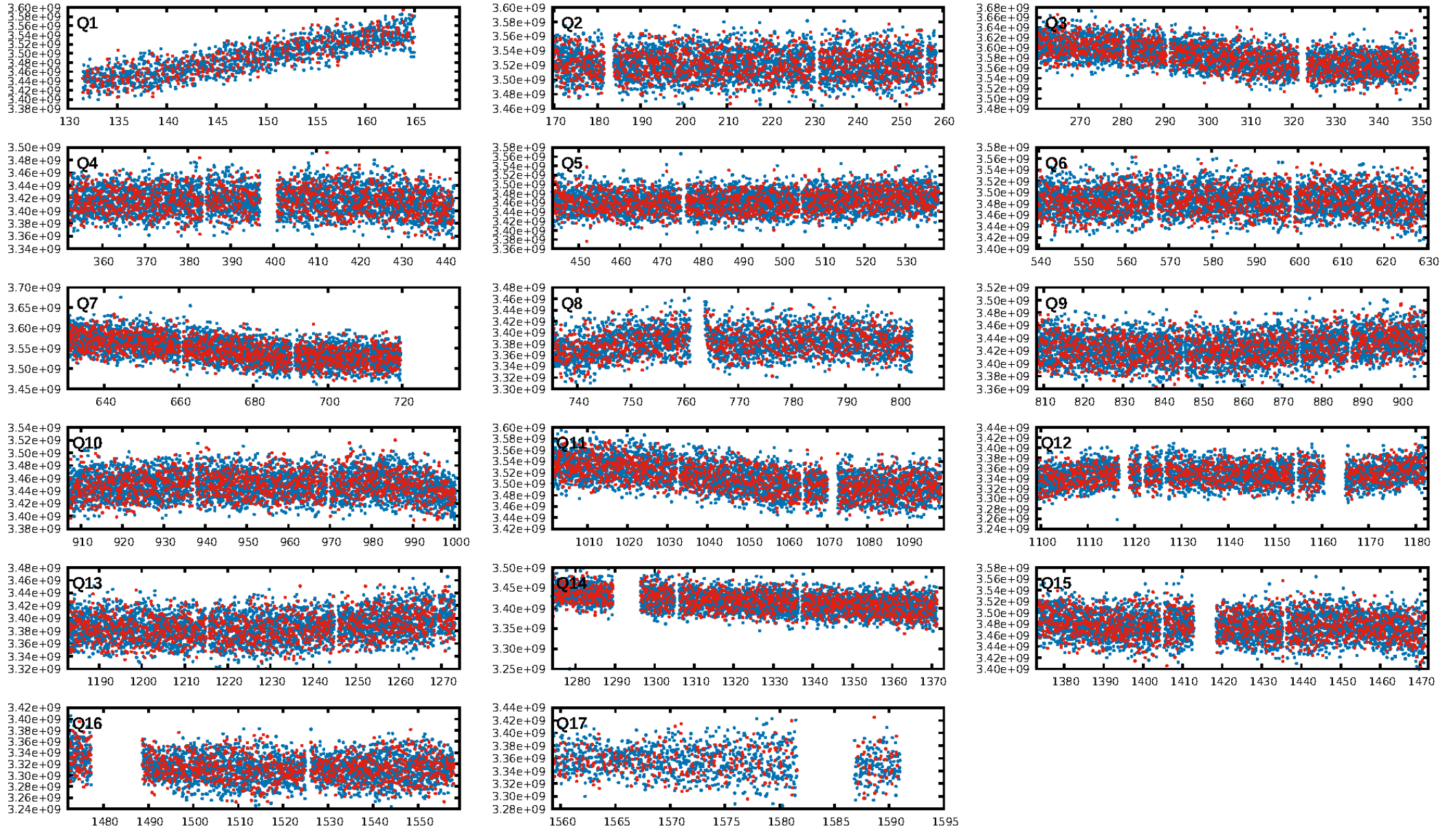
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1343/1362]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.3%
Centroid-so: 0.990 arcsec [13.82σ]
OotOffset-rm: 1.656 arcsec [2.68σ]
KicOffset-rm: 2.786 arcsec [3.66σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

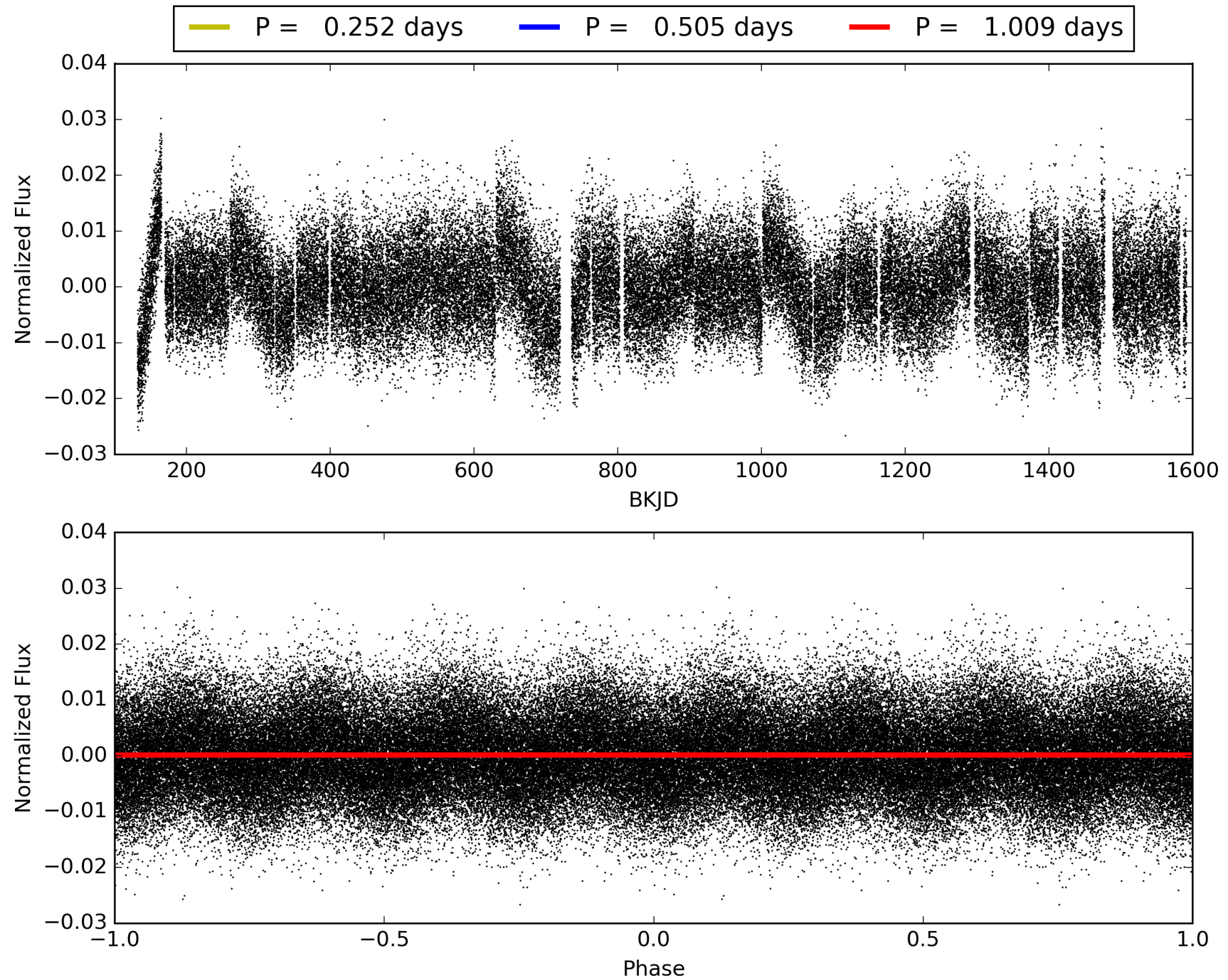
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:50:49 Z

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

TCE 012353648-03, PDC Light Curves

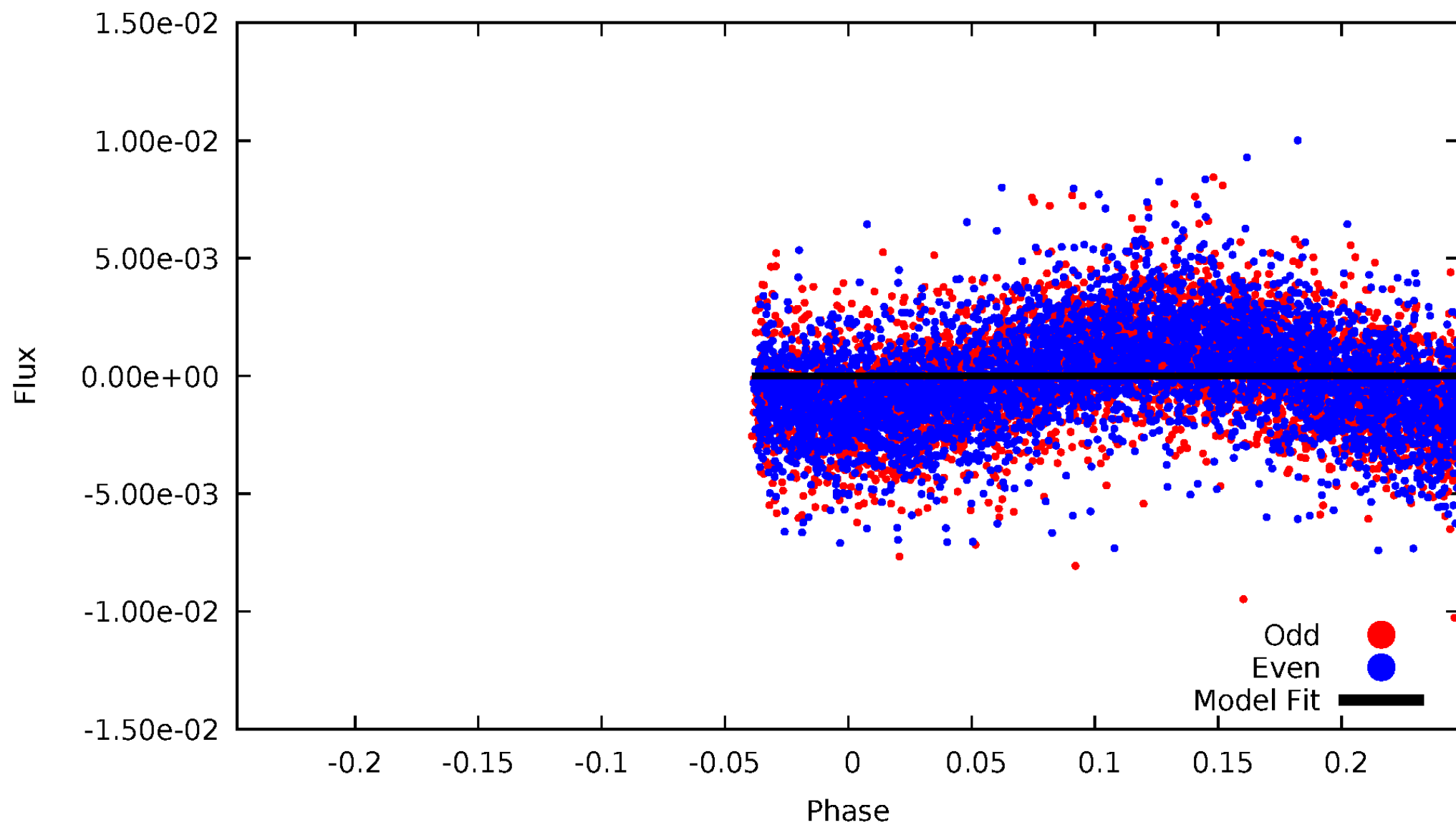


TCE 012353648-03



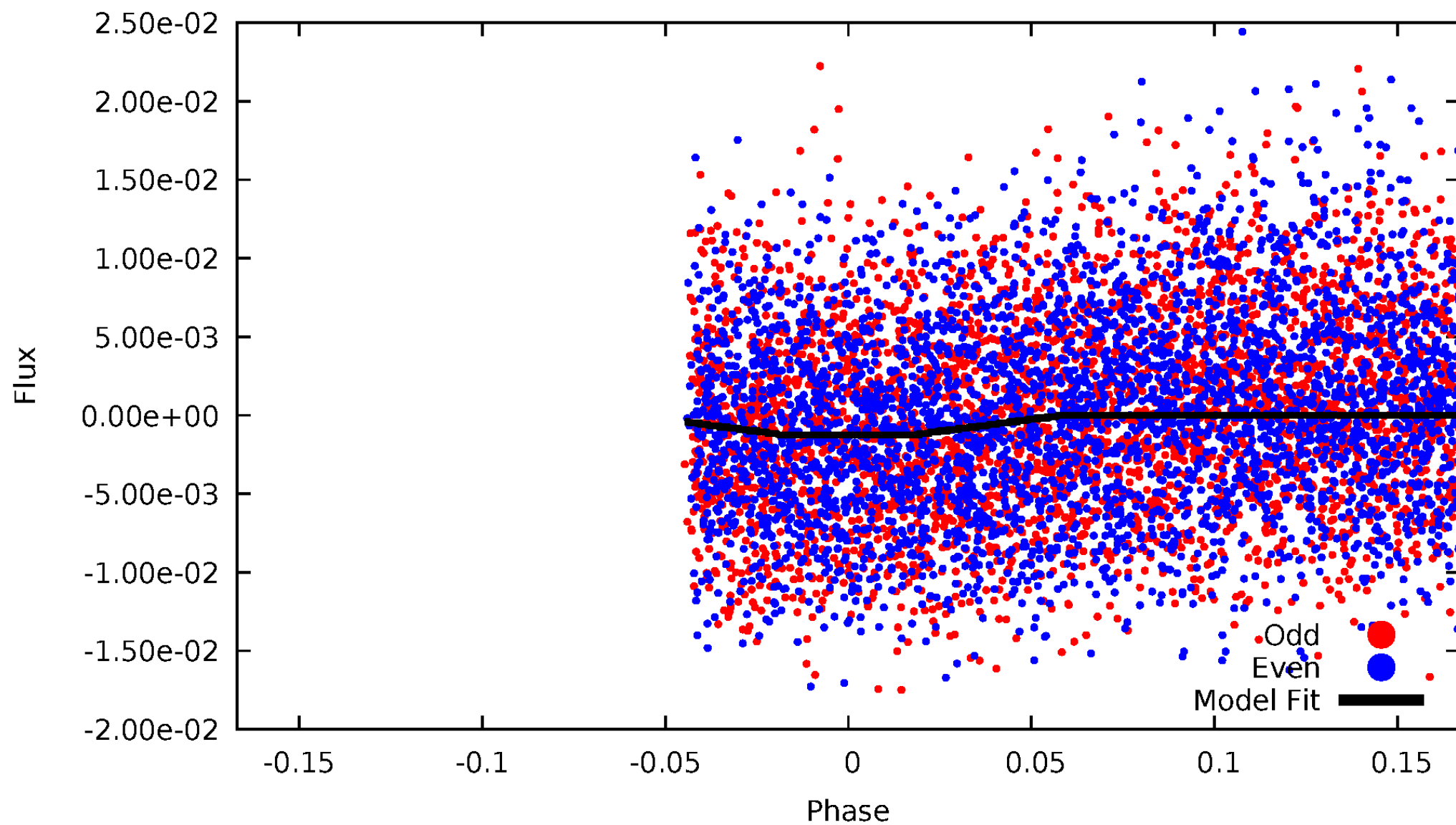
DV Odd/Even

TCE 012353648-03



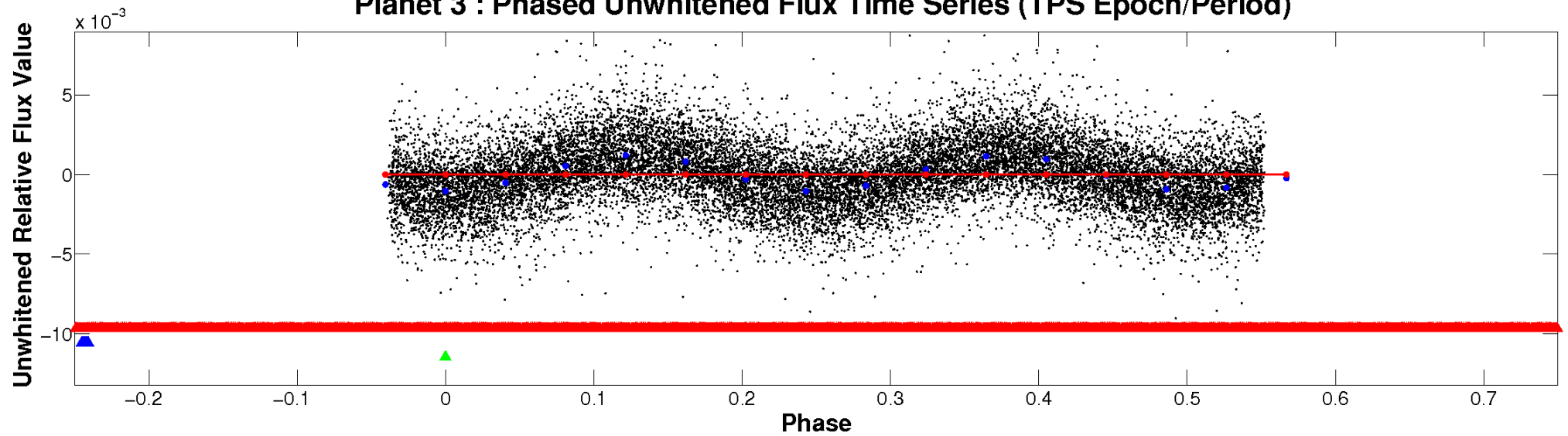
ALT Odd/Even

TCE 012353648-03

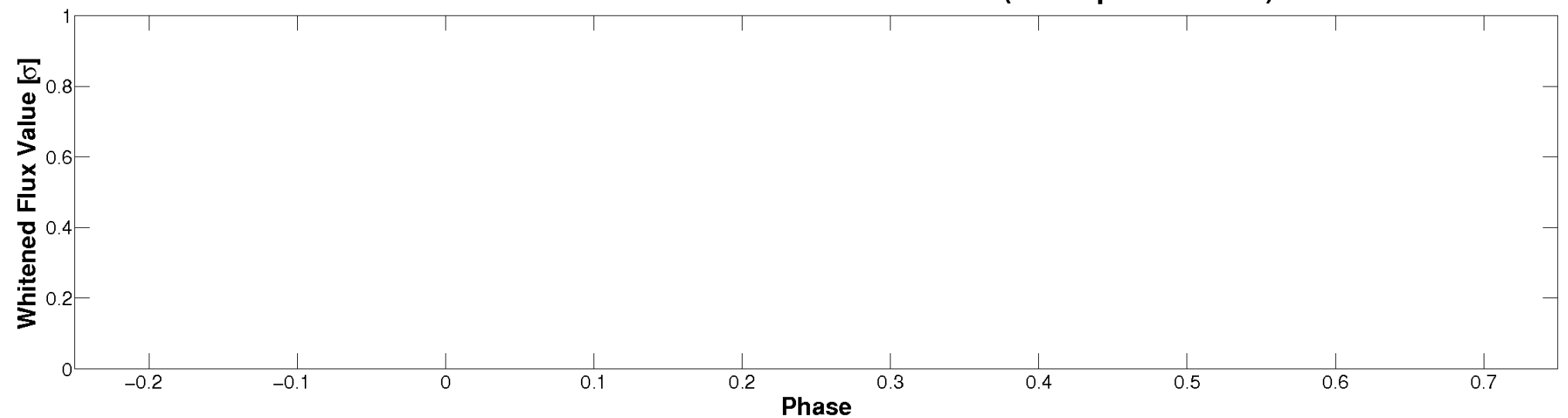


Non-Whitened Vs. Whitened Light Curve

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

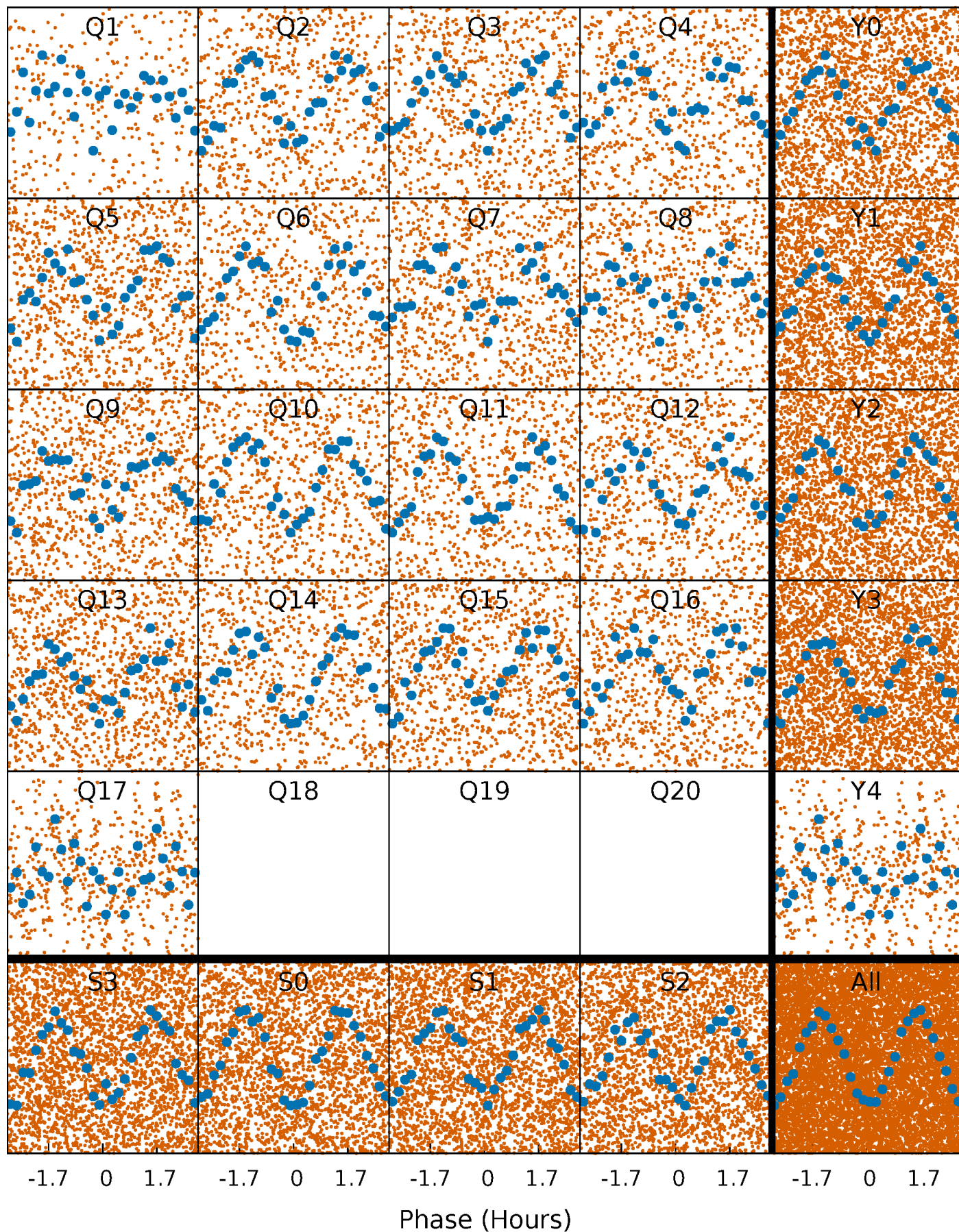


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



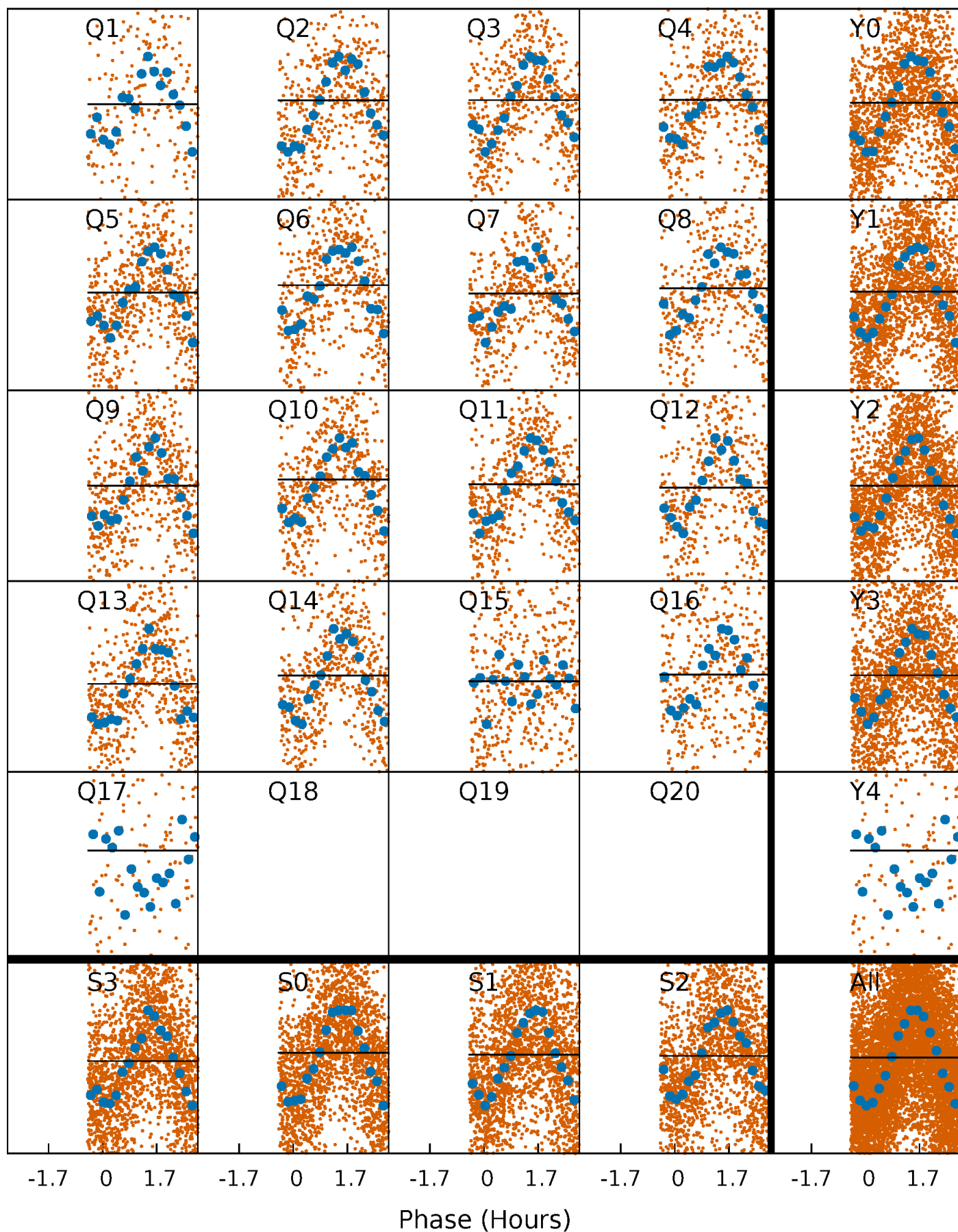
PDC Quarter-Phased Transit Curves

TCE 012353648-03 P= 0.504572 Days $T_0=131.992244$ (BKJD)



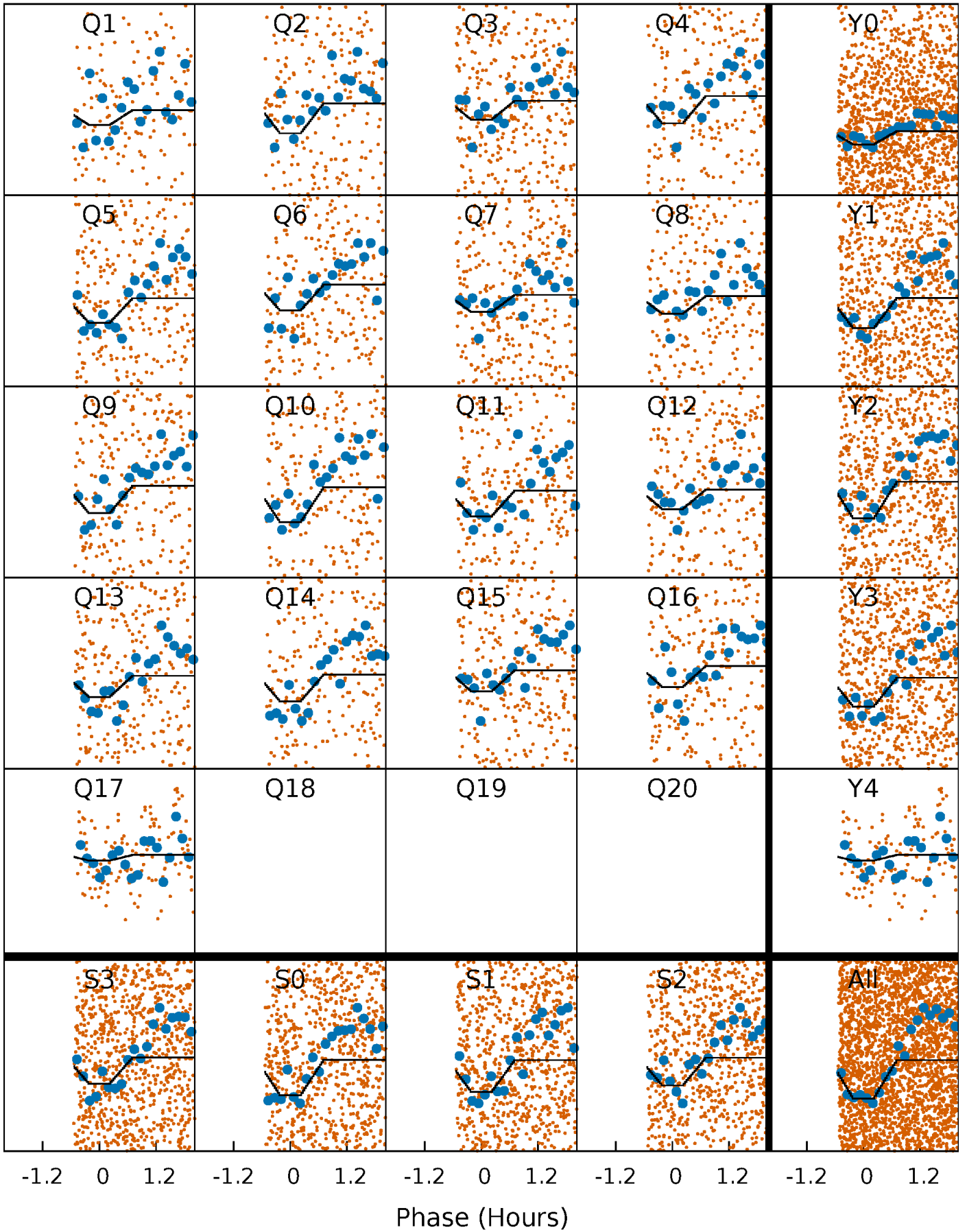
DV Quarter-Phased Transit Curves

TCE 012353648-03 $P = 0.504572$ Days $T_0 = 131.992244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

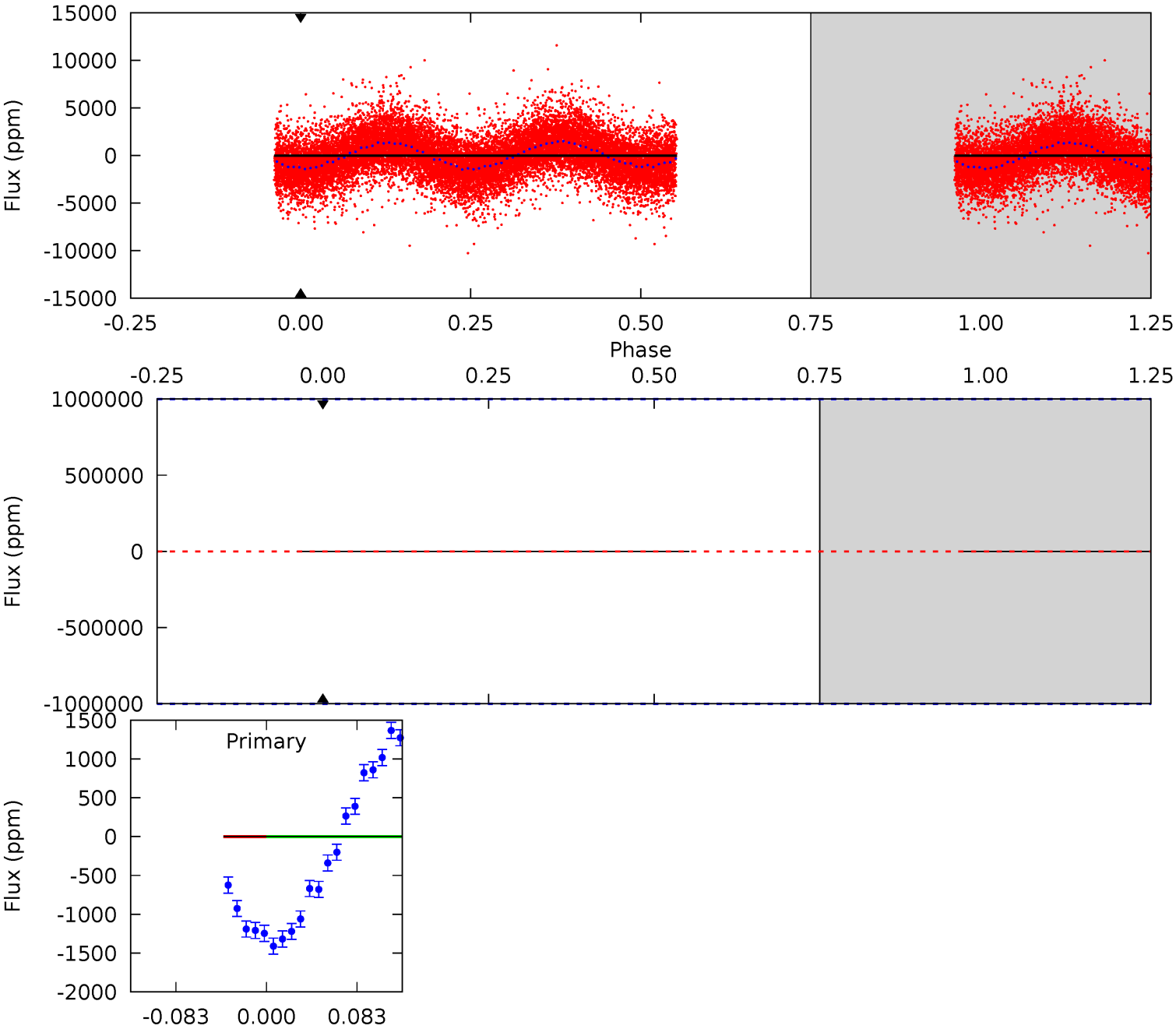
TCE 012353648-03 P= 0.504572 Days $T_0=131.995078$ (BKJD)



DV Model-Shift Uniqueness Test

012353648-03, P = 0.504572 Days, E = 131.487672 Days

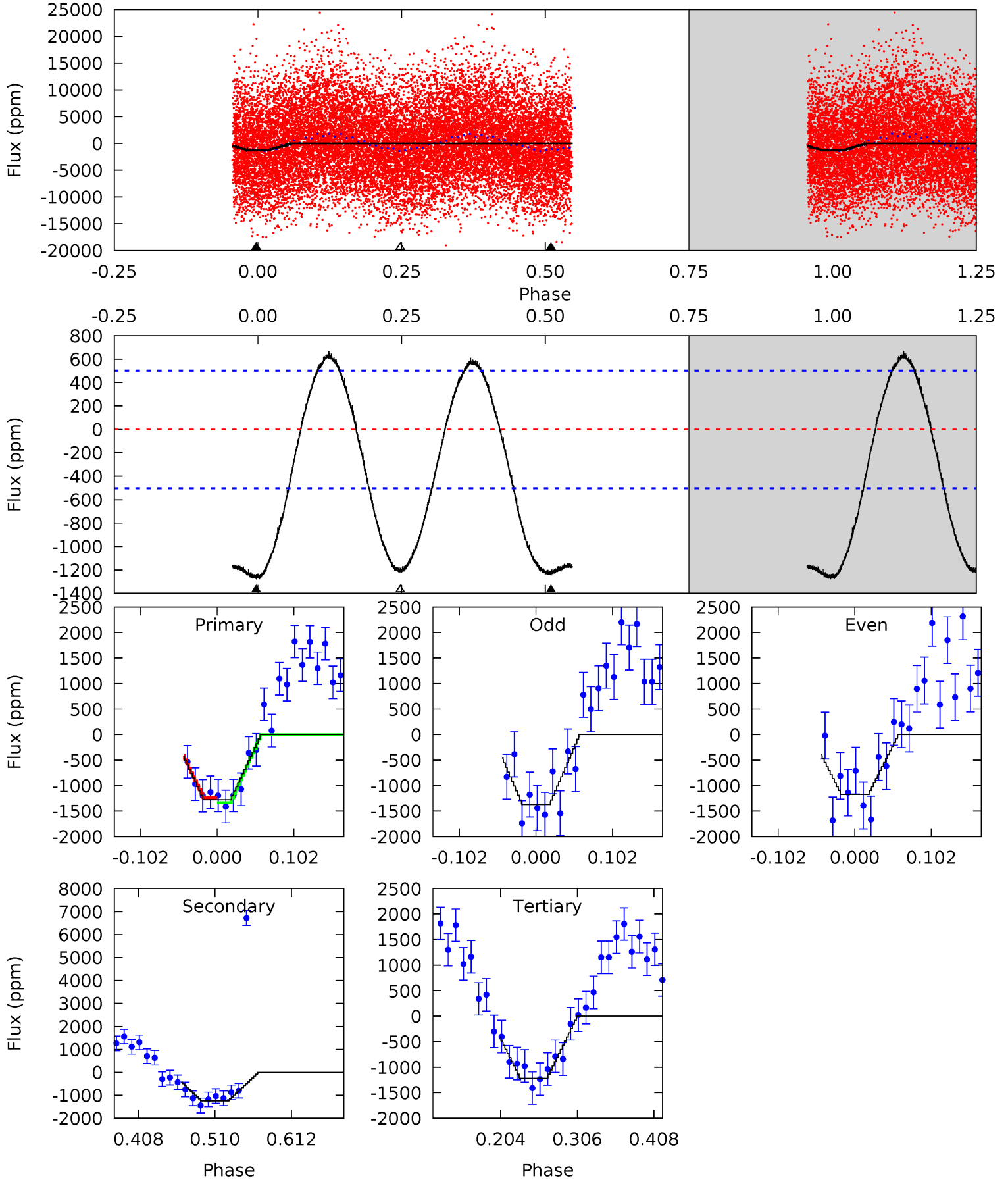
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012353648-03, P = 0.504572 Days, E = 131.490506 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	11.3	11.0	0	4.56	1.64	5.84	0.51	11.6	0.21	11.3	0.90	0.96	0.34	0.45



Stellar Parameters For KIC 012353648

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7201^{+130}_{-159}	$3.634^{+0.210}_{-0.090}$	$-0.400^{+0.150}_{-0.150}$	$3.266^{+0.411}_{-0.823}$	$1.676^{+0.146}_{-0.195}$	$0.068^{+0.077}_{-0.019}$
	+2%/-2%	+6%/-2%	+37%/-37%	+13%/-25%	+9%/-12%	+113%/-28%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 012353648-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$23.99^{+24.38}_{-16.87}$	6544^{+340}_{-405}	-6257^{+43225}_{-34217}	$-0.194^{+34.543}_{-36.227}$
Alt.	-1241 ± 110	$27.70^{+28.55}_{-19.15}$	6565^{+275}_{-399}	-4266^{+12698}_{-944}	$0.191^{+1.788}_{-0.143}$

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

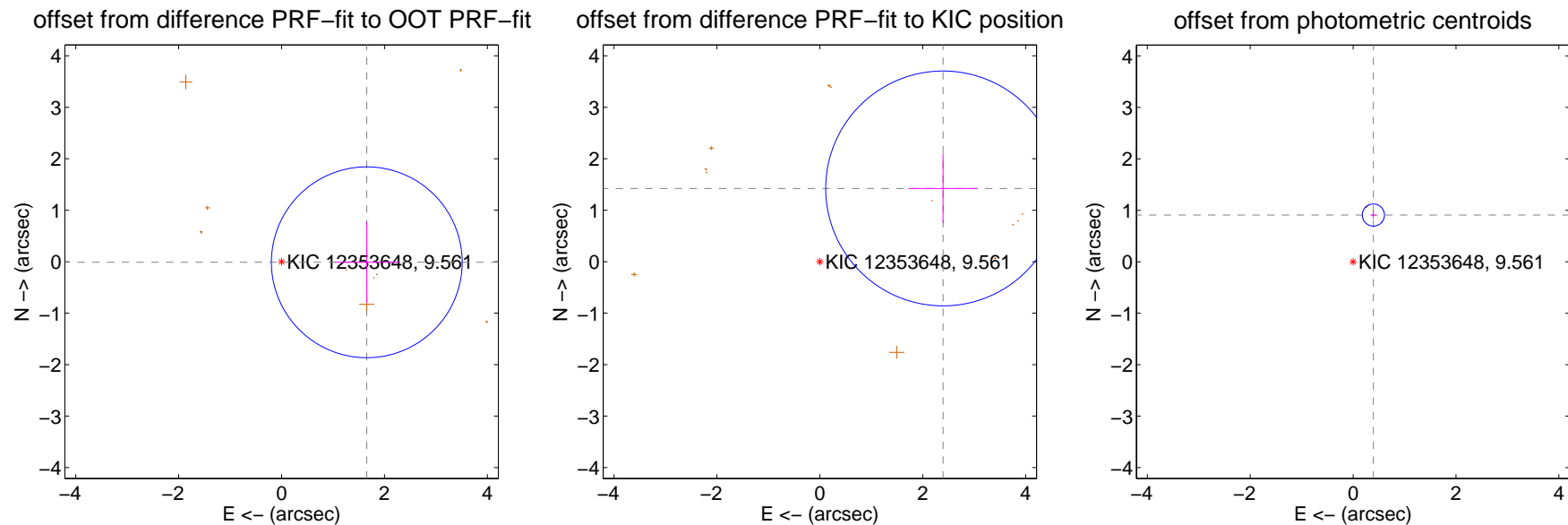
DV Centroid Data

Supplemental centroid analysis for 012353648-03. **Kepler magnitude: 9.56.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

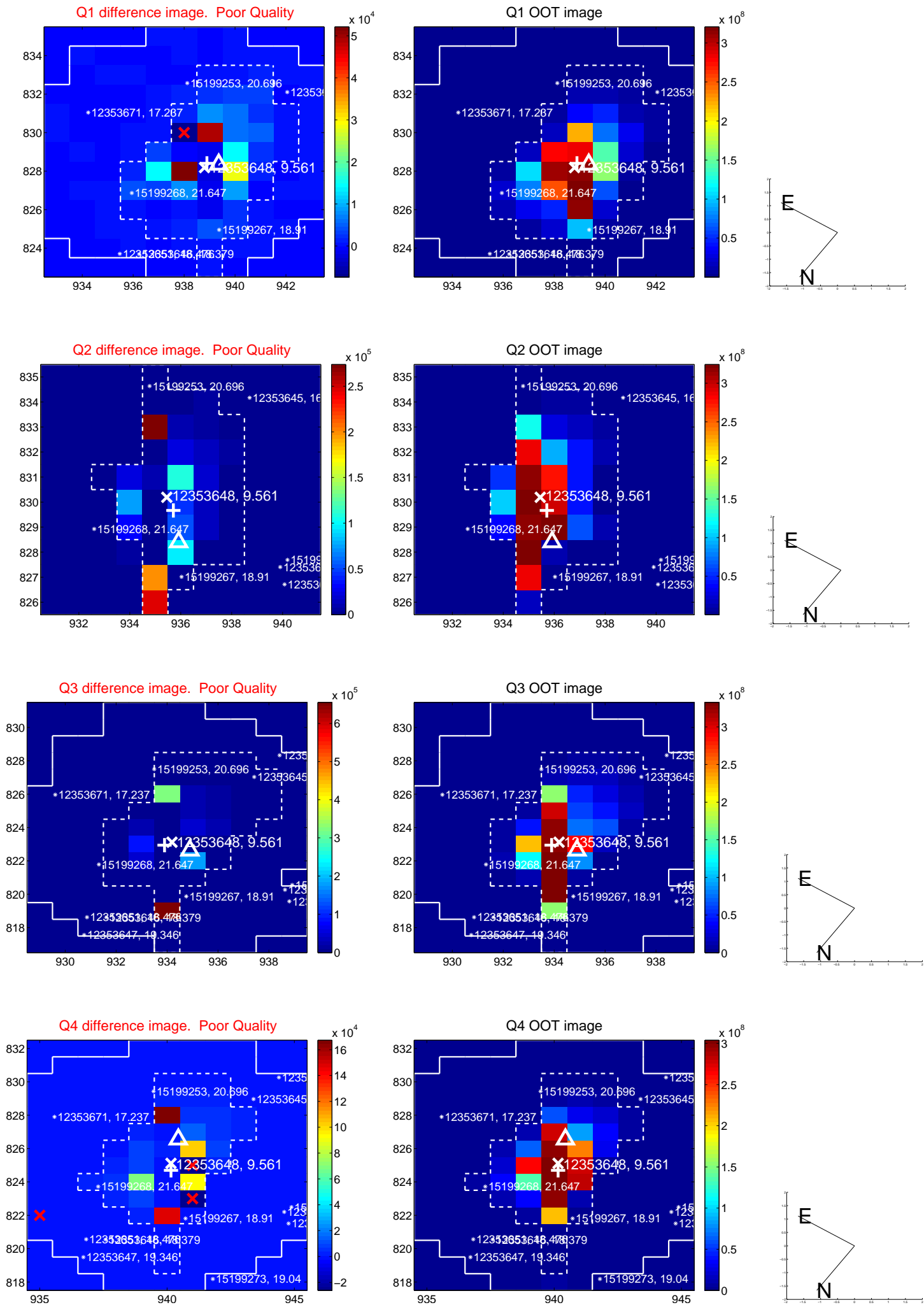
The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.656 ± 0.618	2.68	-1.656 ± 0.620	-0.012 ± 0.786
PRF-fit source offset from KIC position	2.786 ± 0.760	3.66	-2.396 ± 0.670	1.423 ± 0.673
photometric centroid source offset	0.99 ± 0.07	13.82	-0.39 ± 0.05	0.91 ± 0.08

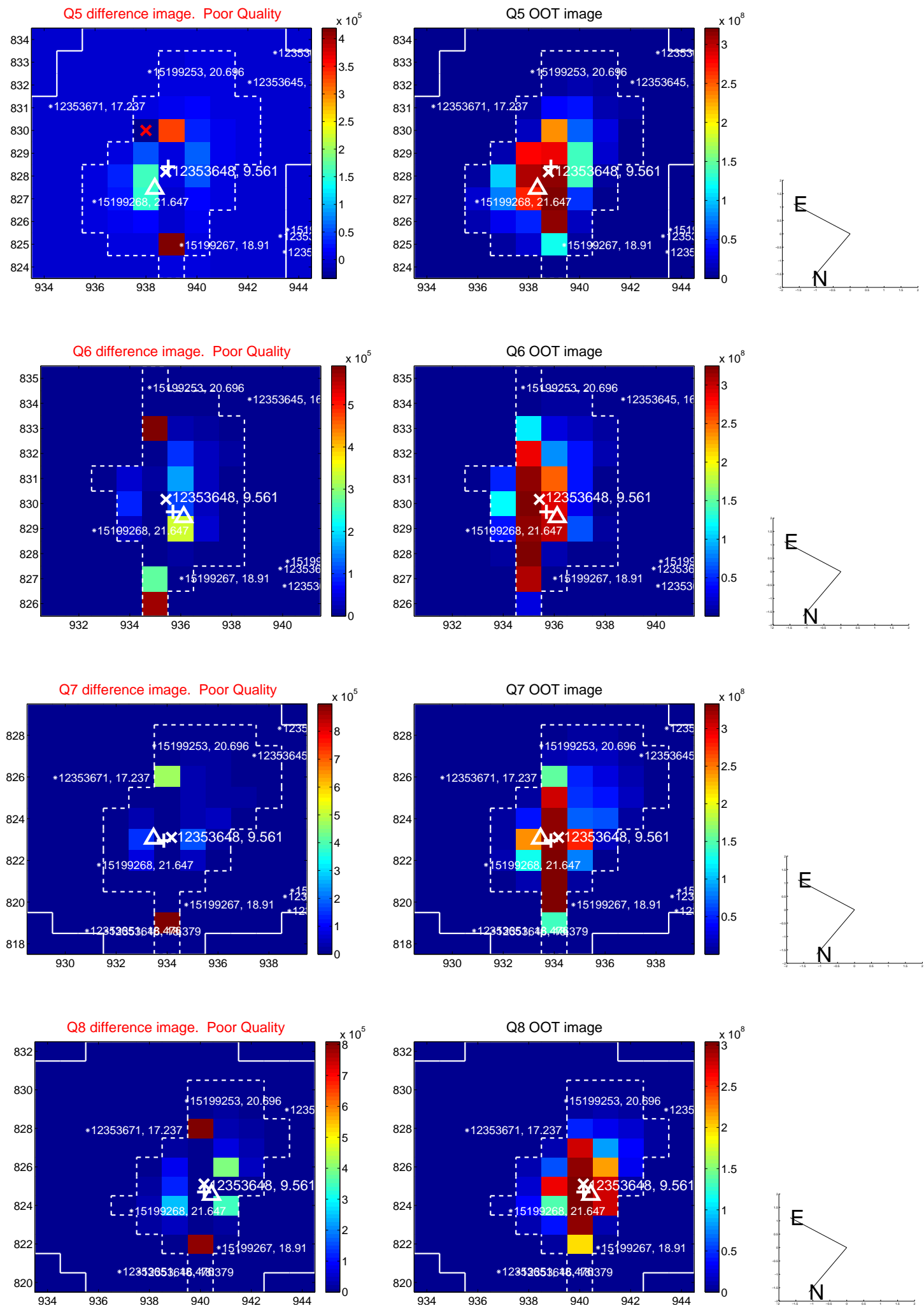


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

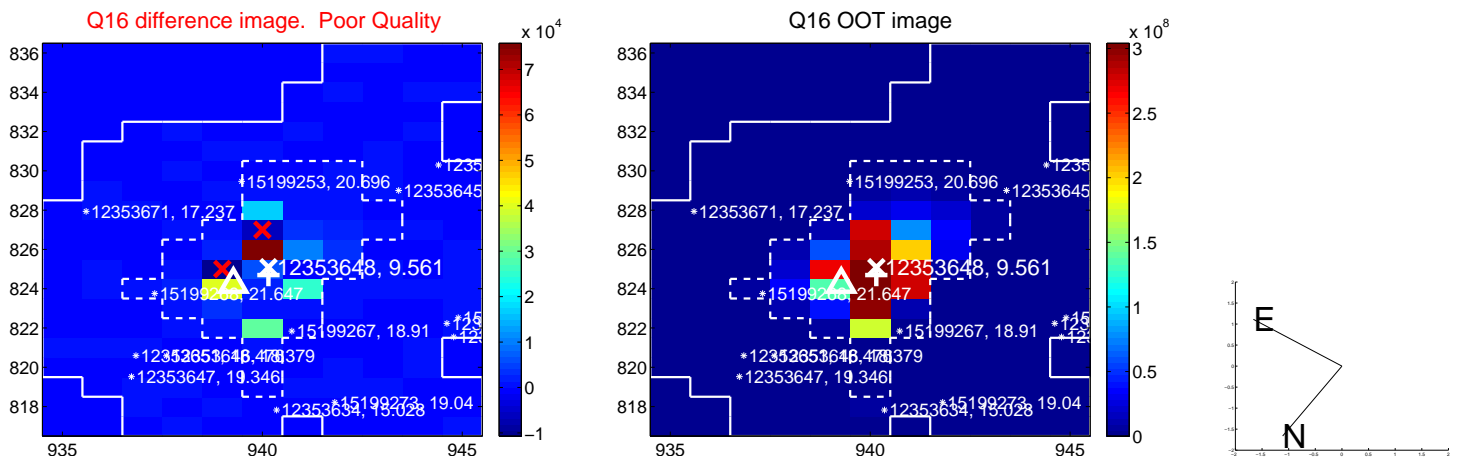
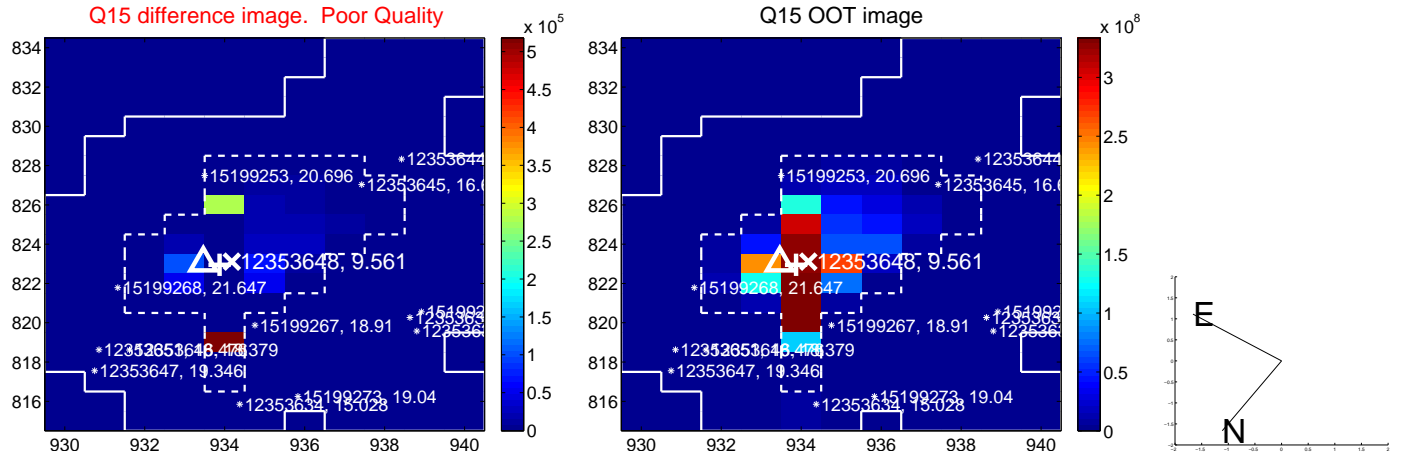
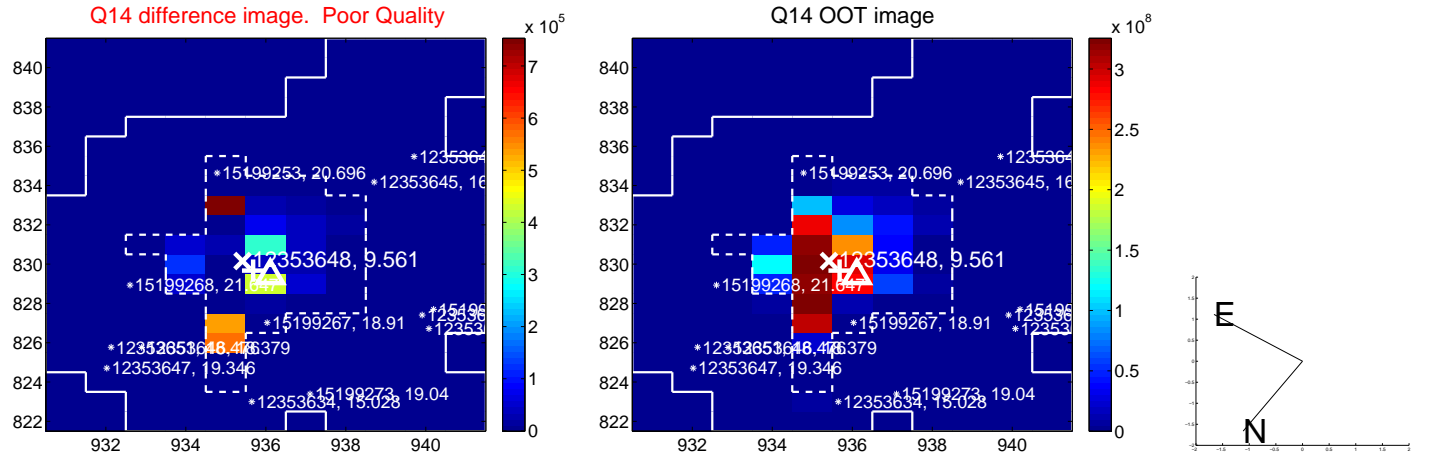
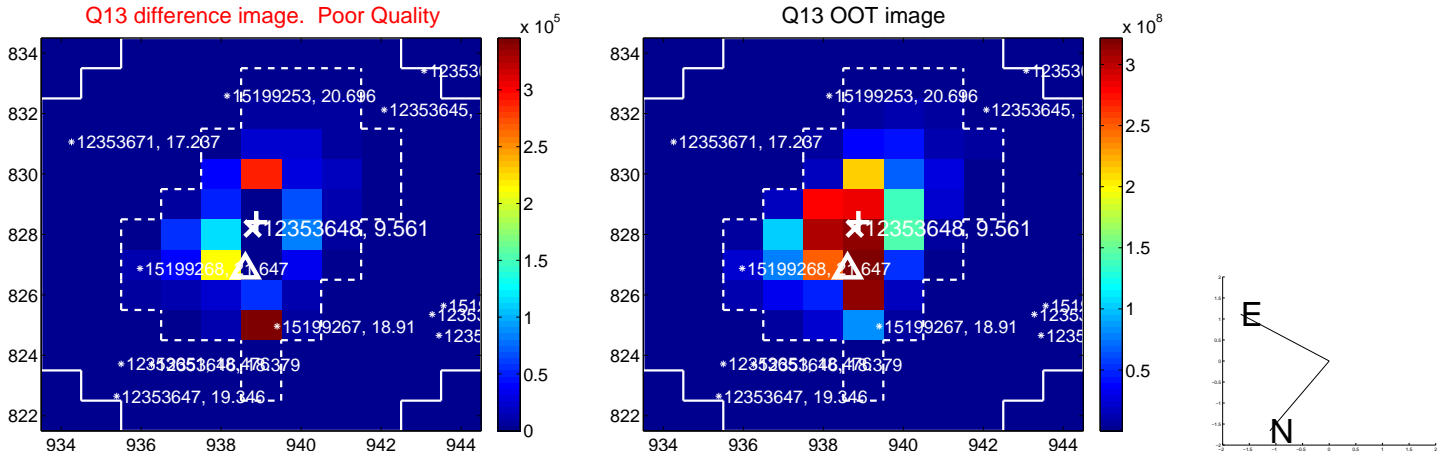
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



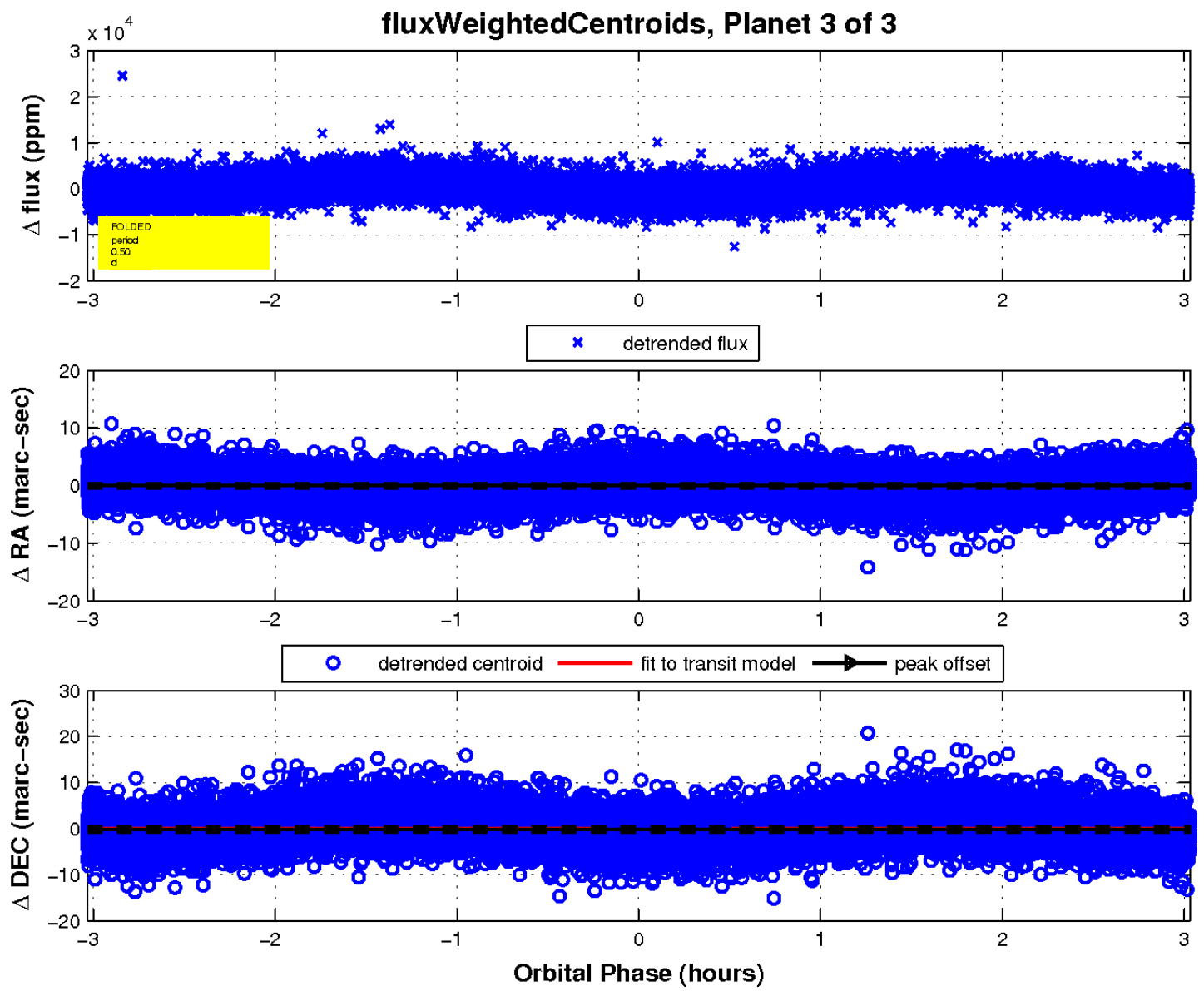
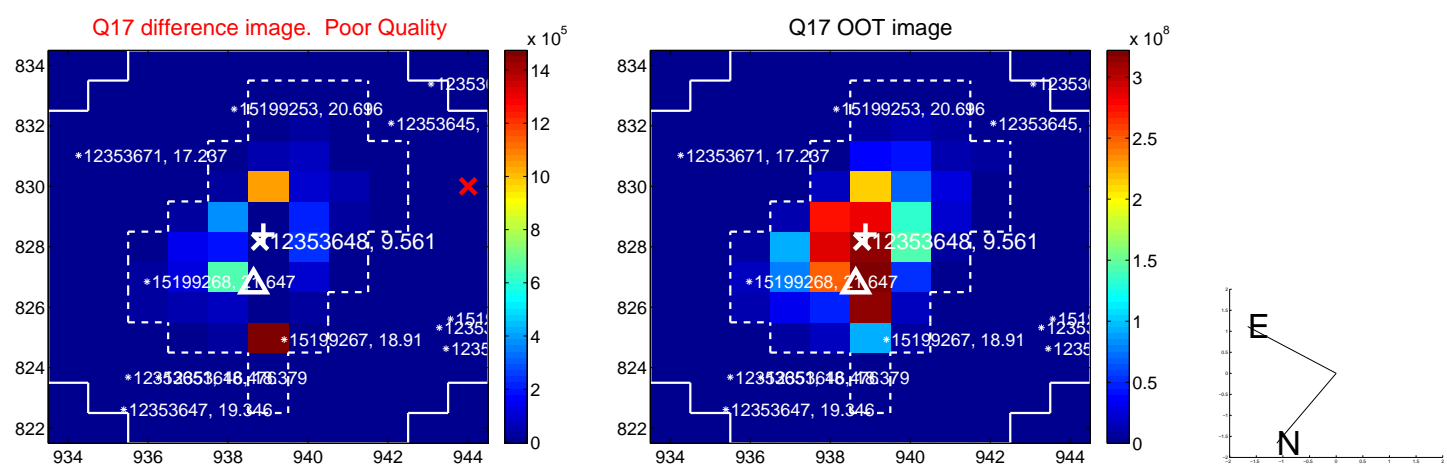
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

