

KIC 012306497

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})
012306497-01	OBS	No	361.381541	151.357056	59.4	9.628	9.4	7.9	2.12	8218	1.96	11.97
012306497-02	OBS	No	0.916814	131.980141	6.6	2.990	9.3	12.7	2.12	8218	0.55	34603.83
012306497-03	OBS	No	0.916856	132.447355	3.5	3.478	8.2	7.6	2.12	8218	0.40	34601.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012306497-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012306497-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
012306497-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—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.

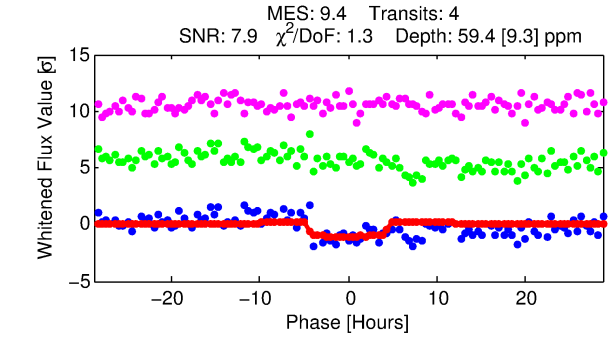
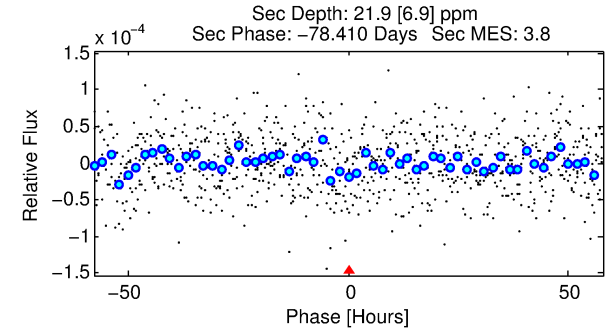
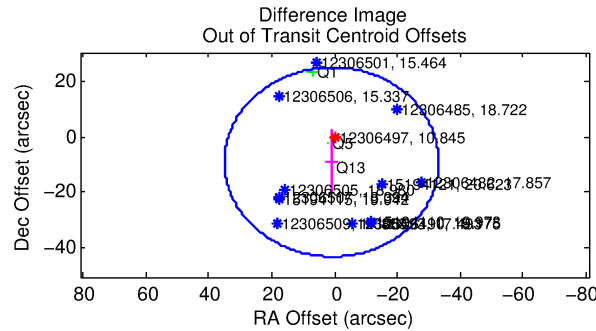
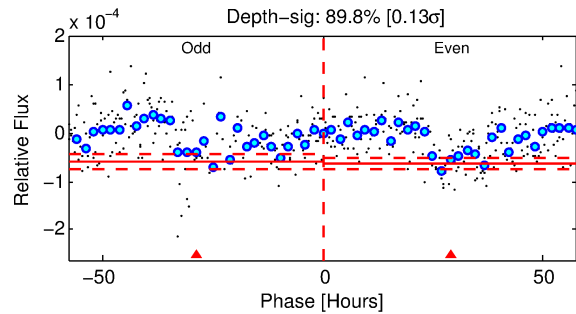
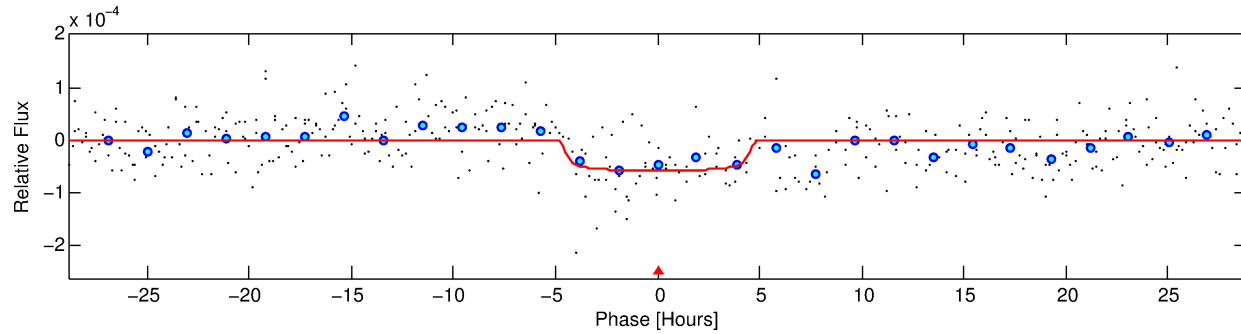
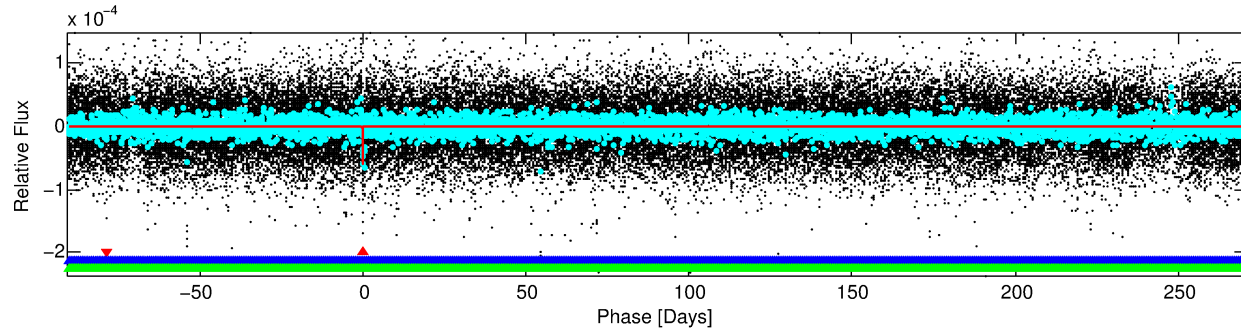
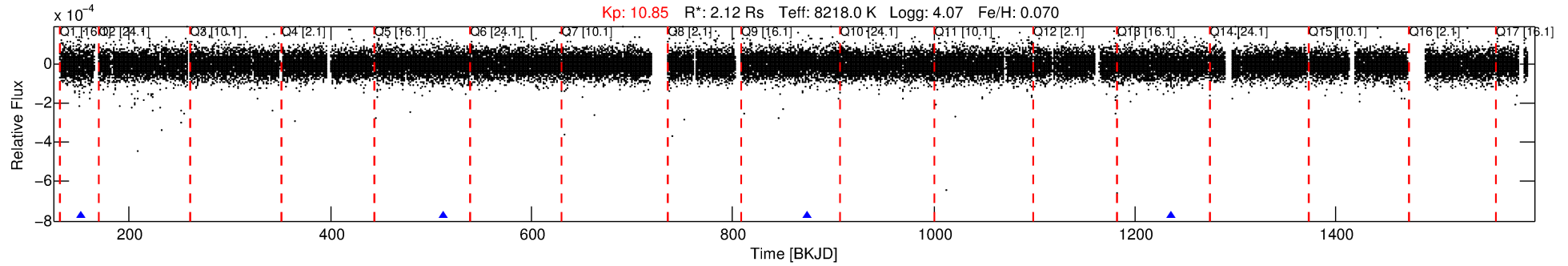
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012306497-01

No Significant Match Found

DV One-Page Summary

KIC: 12306497 Candidate: 1 of 3 Period: 361.382 d



DV Fit Results:

Period = 361.38154 [0.01199] d
Epoch = 151.3571 [0.0179] BKJD
Rp/R* = 0.0085 [0.0017]
a/R* = 106.81 [127.04]
b = 0.94 [0.15]
Seff = 11.97 [3.96]
Teq = 474 [39] K
Rp = 1.96 [0.60] Re
a = 1.2356 [0.2396] AU
Ag = 4803.80 [2777.51] [1.73 σ]
Teffp = 6105 [821] K [6.85 σ]

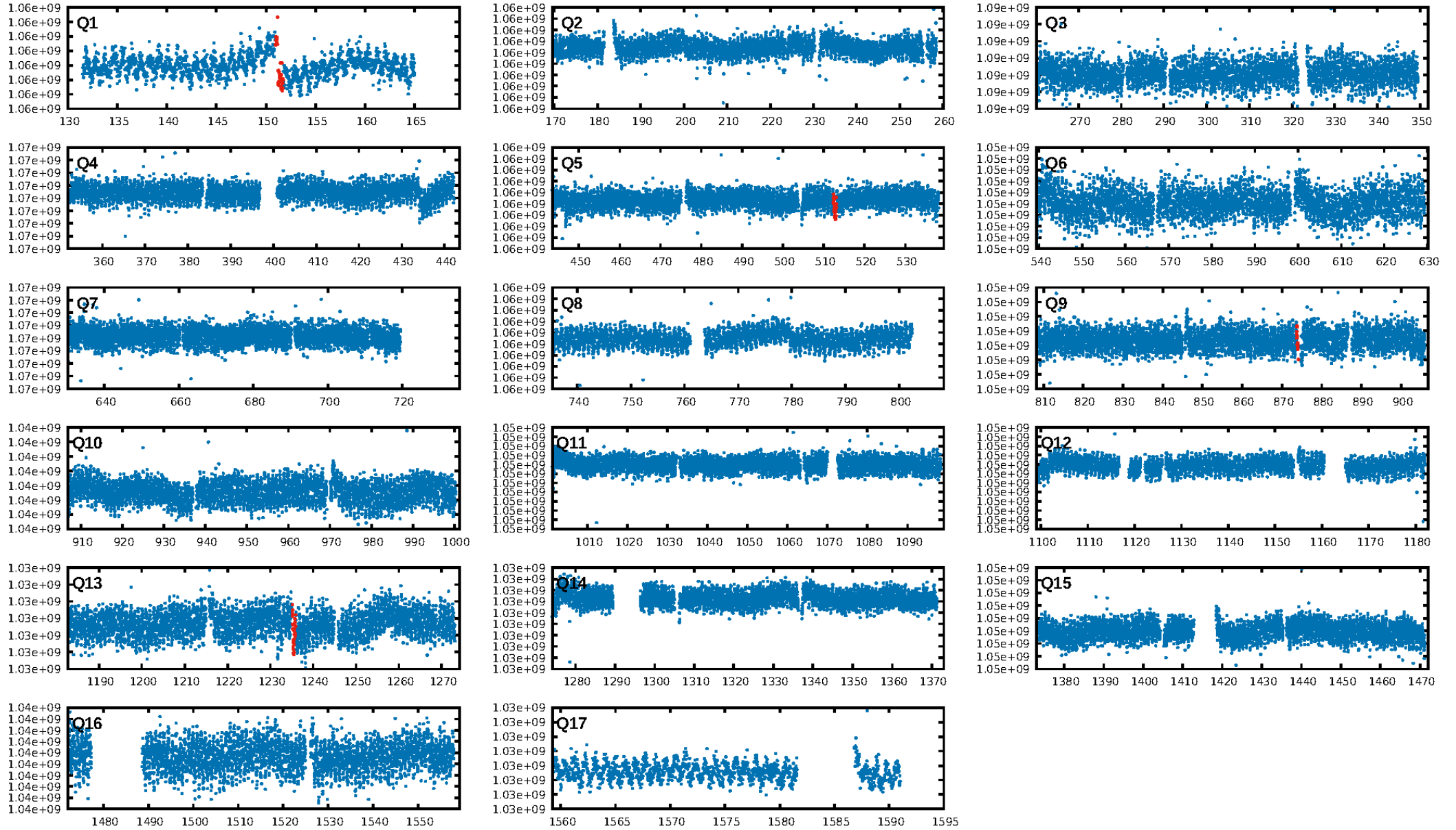
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [845.09 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.26e-21
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 9.190 arcsec [2.78 σ]
OotOffset-rm: 9.104 arcsec [0.80 σ]
KicOffset-rm: 9.211 arcsec [1.05 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/3]

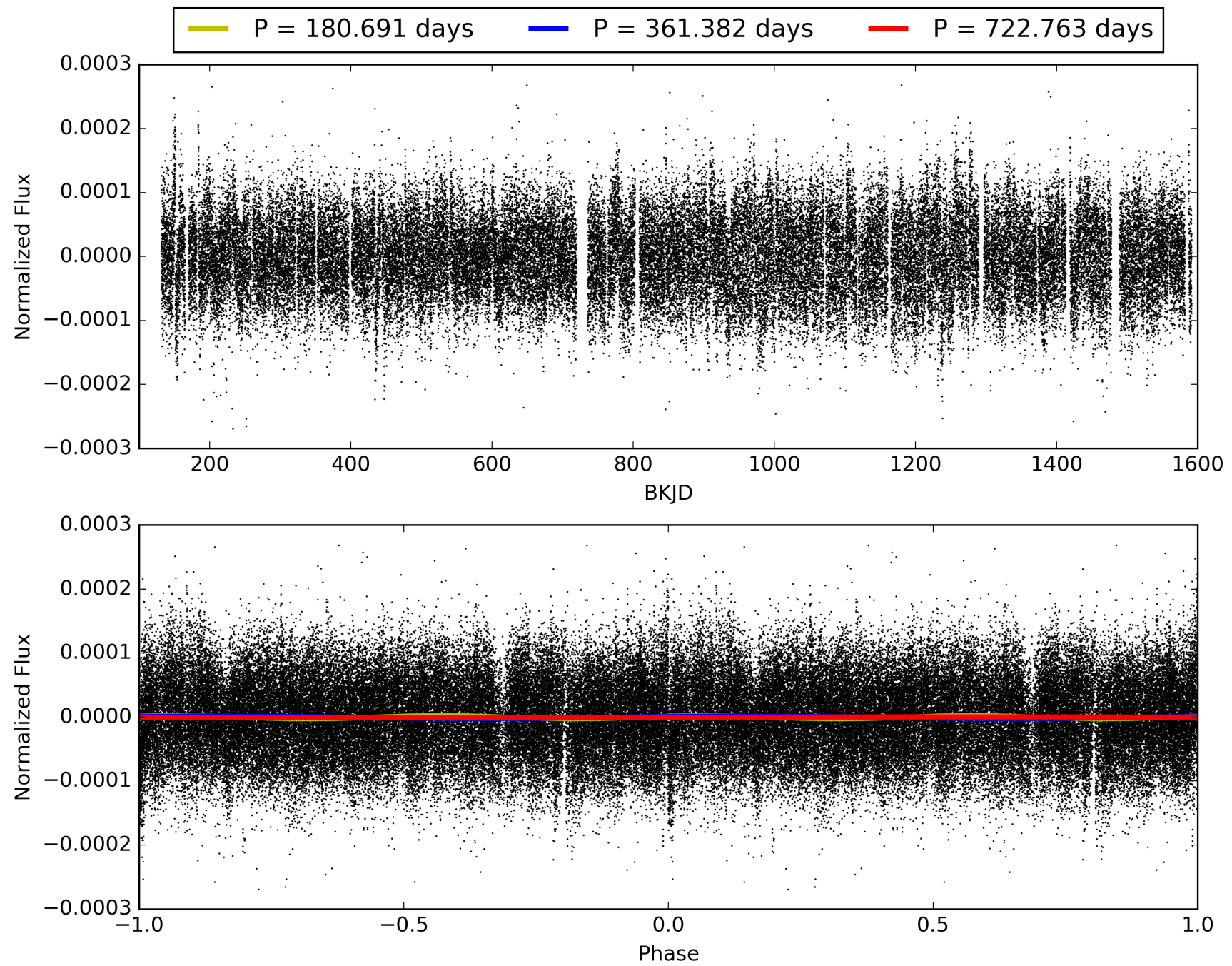
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:16:42 Z

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

TCE 012306497-01, PDC Light Curves

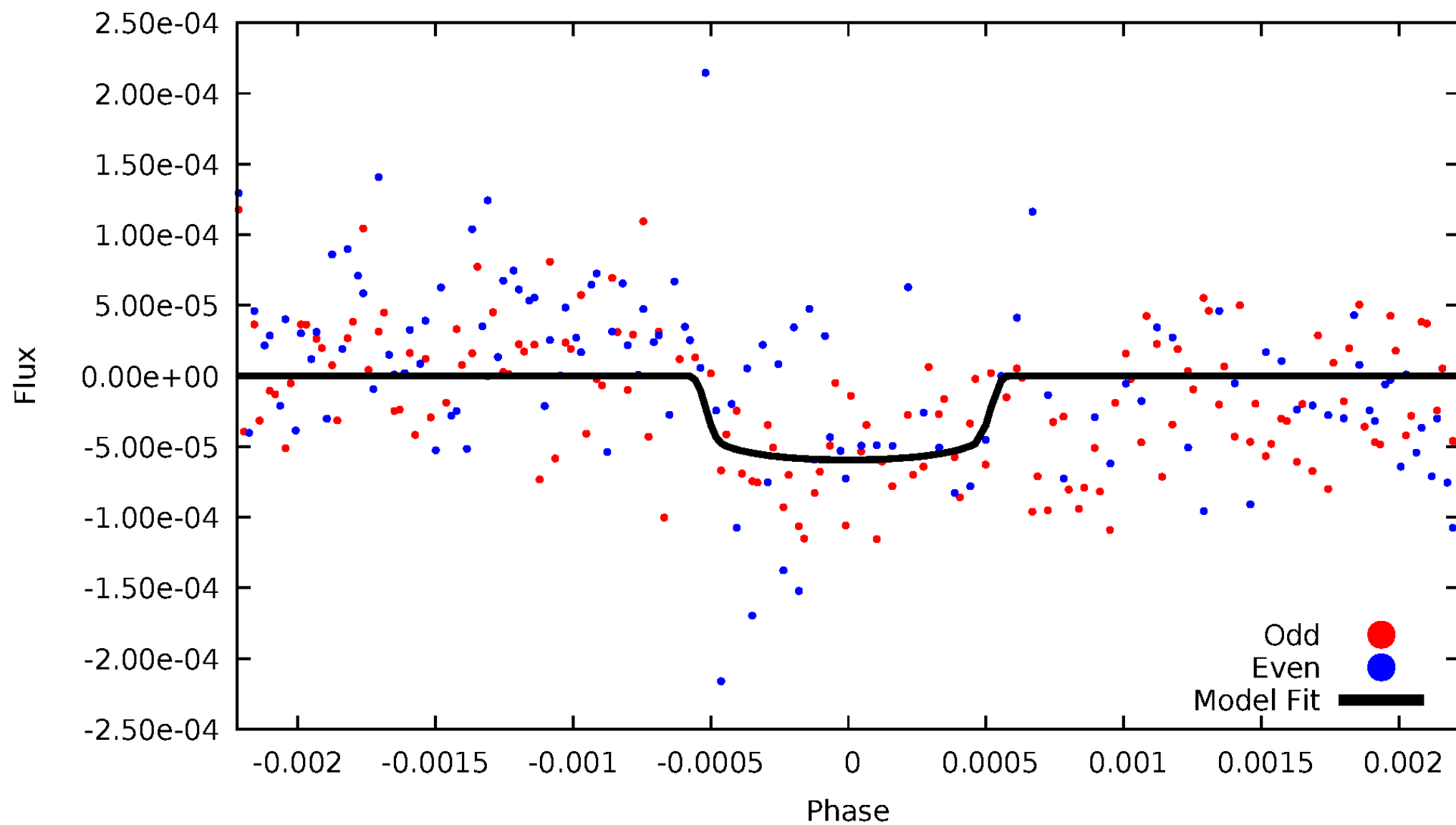


TCE 012306497-01



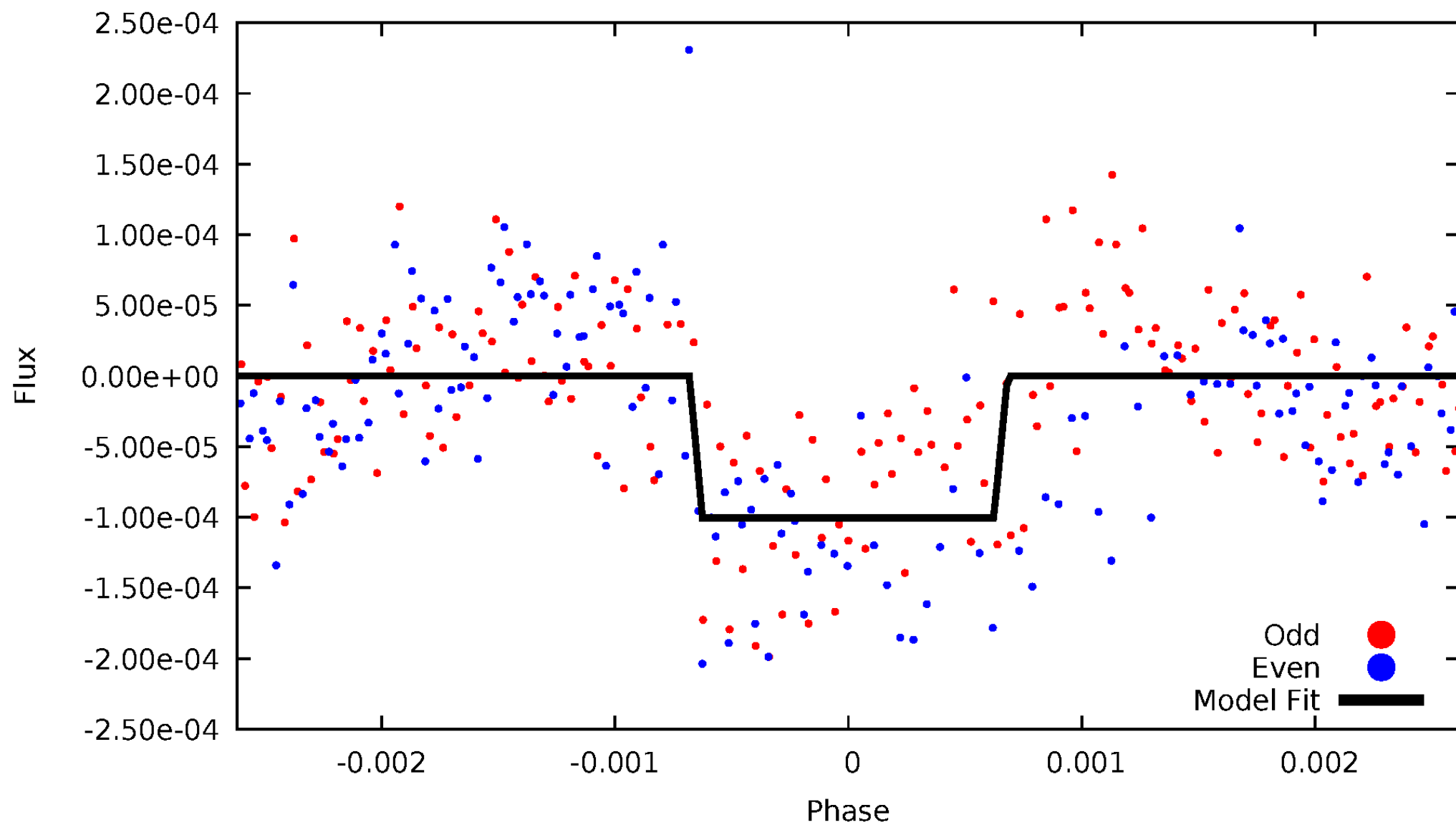
DV Odd/Even

TCE 012306497-01



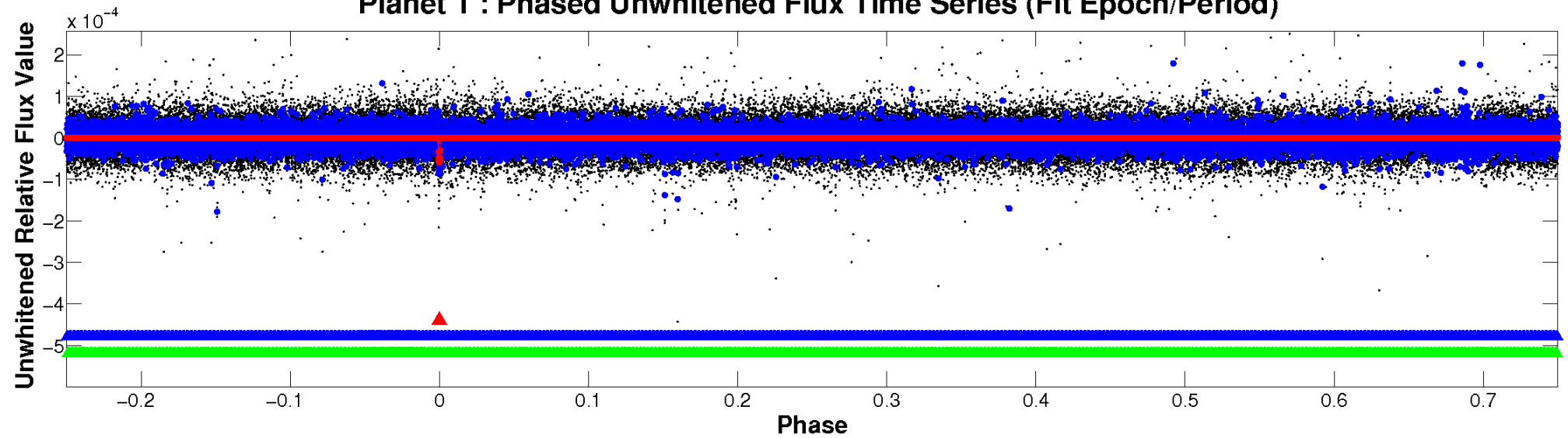
ALT Odd/Even

TCE 012306497-01

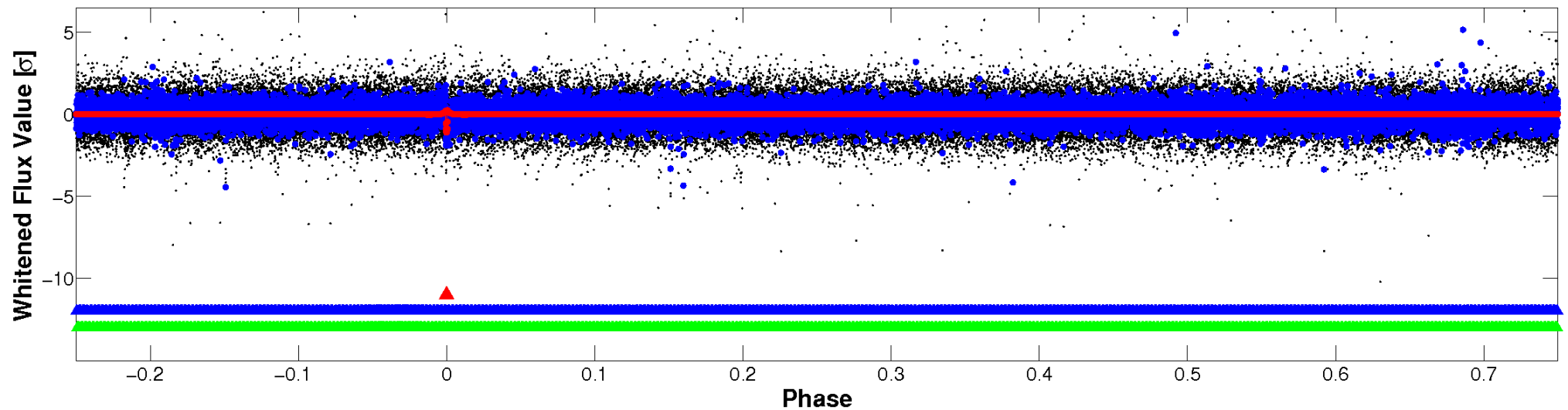


Non-Whitened Vs. Whitened Light Curve

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

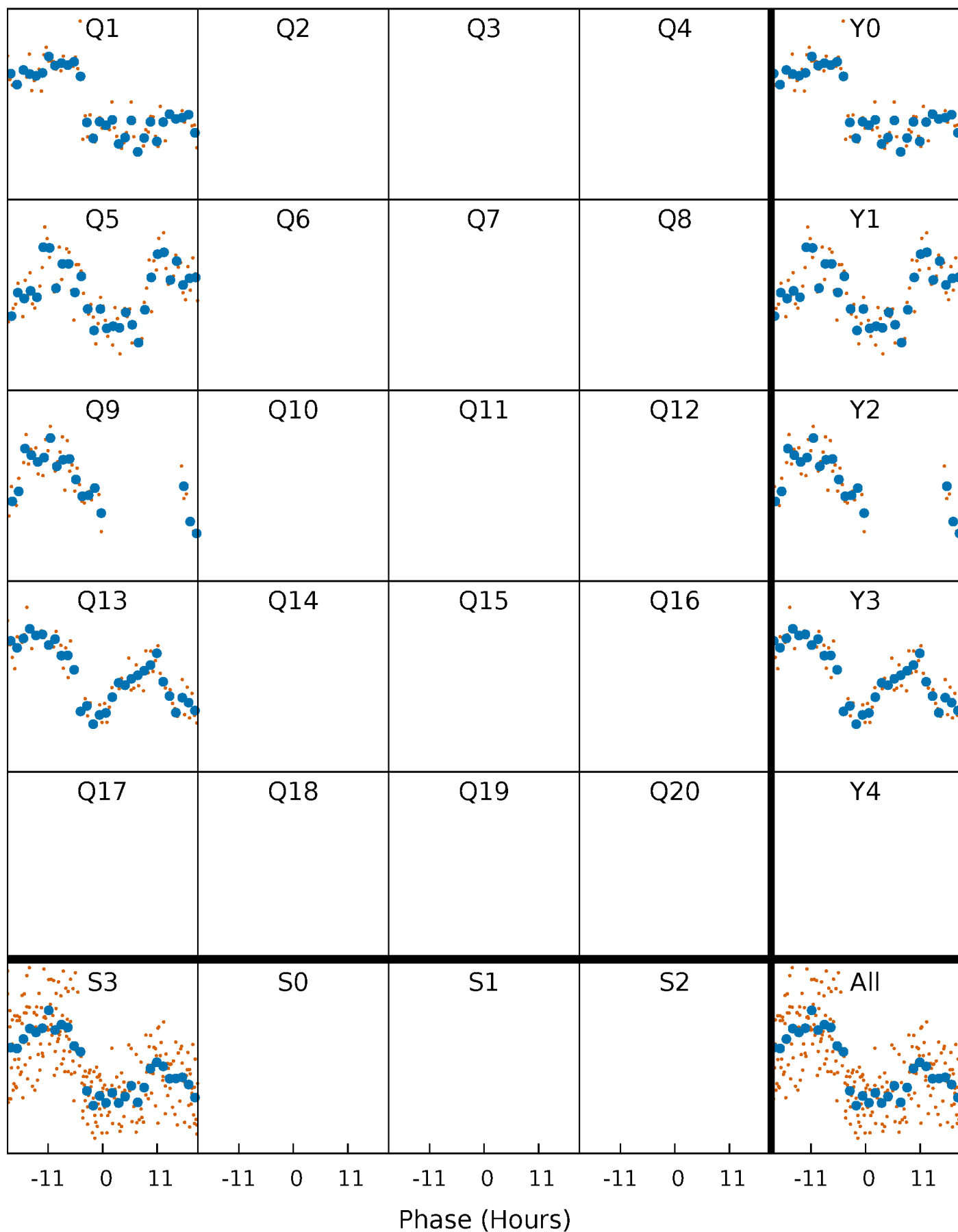


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



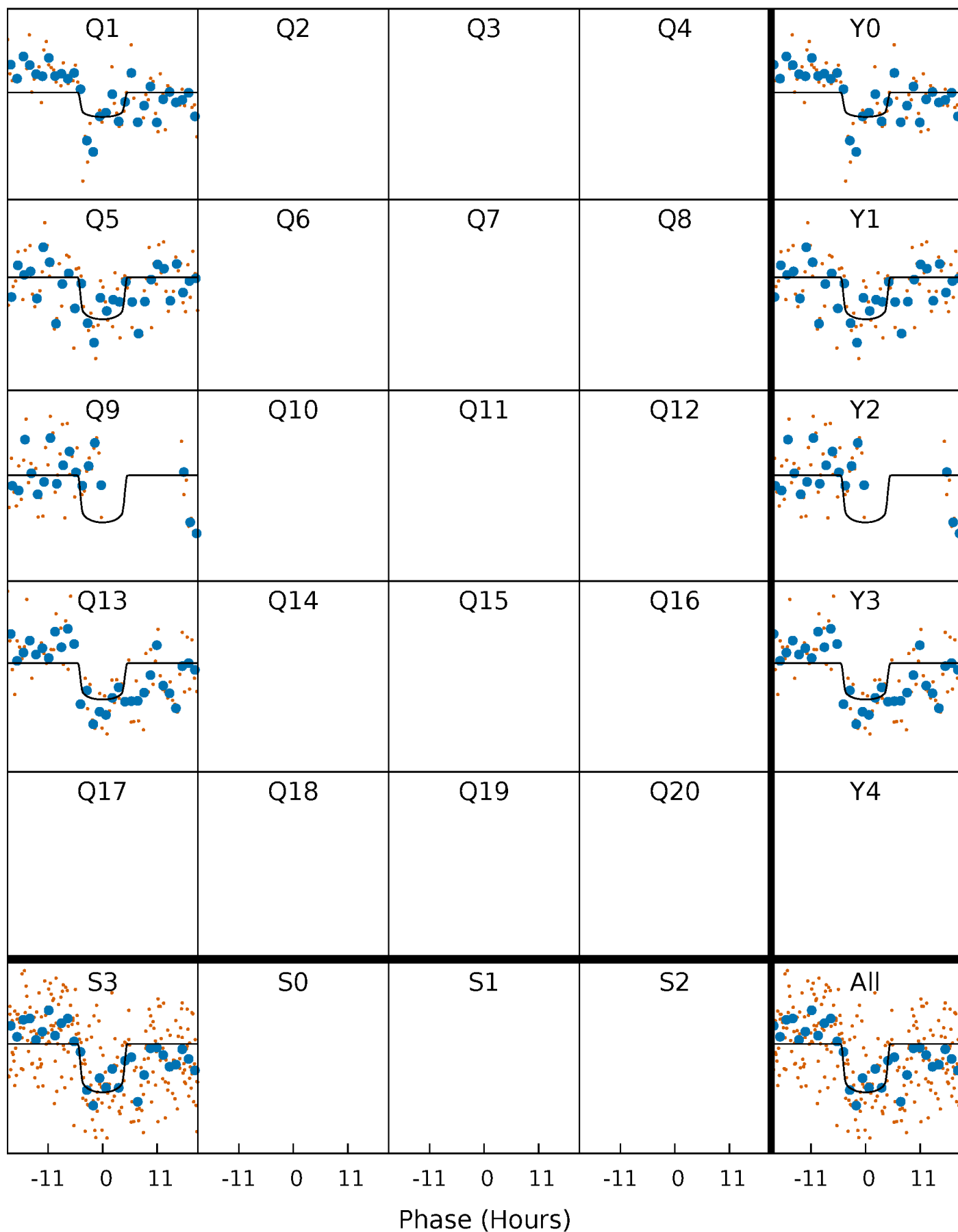
PDC Quarter-Phased Transit Curves

TCE 012306497-01 P=361.381541 Days $T_0=151.357056$ (BKJD)



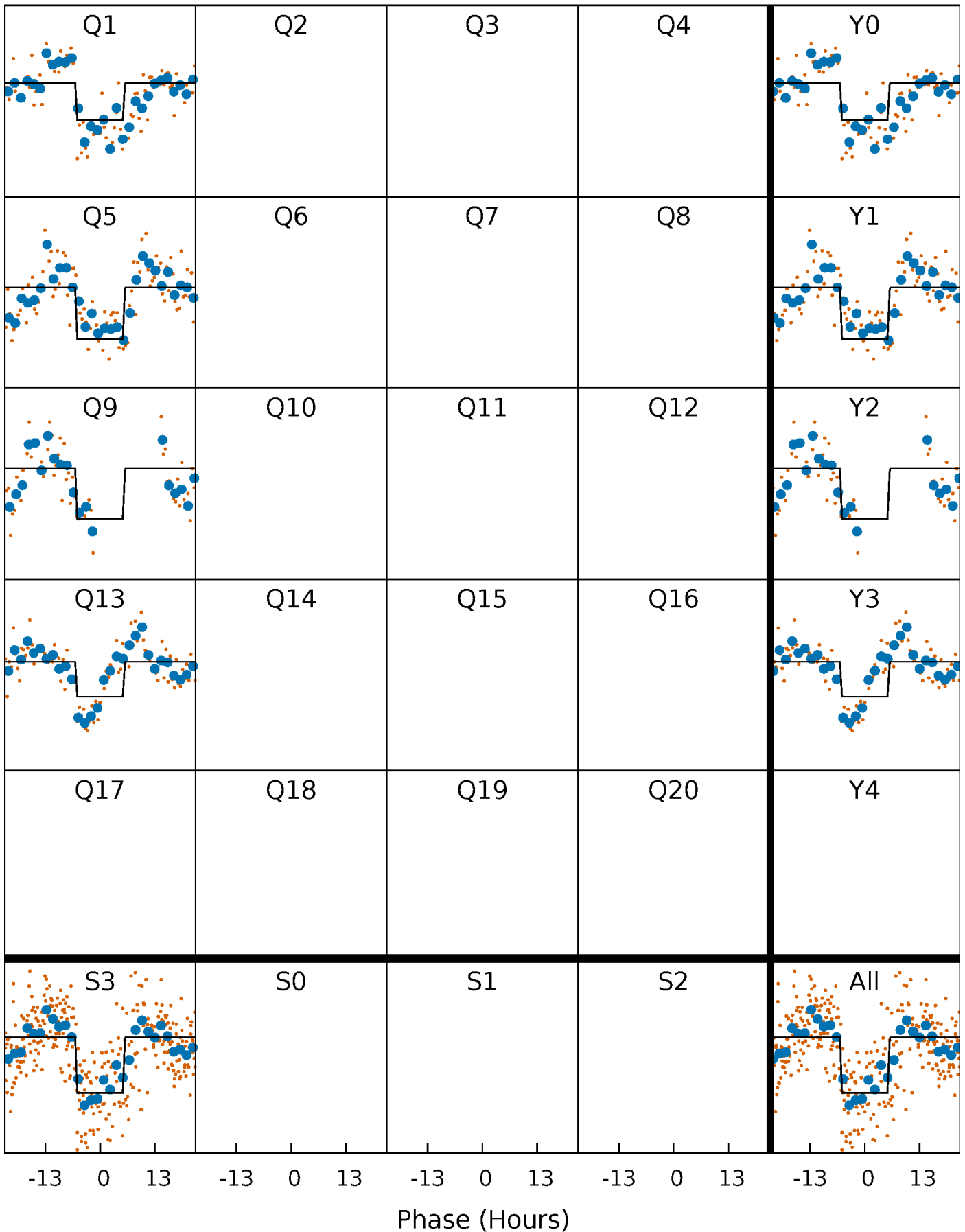
DV Quarter-Phased Transit Curves

TCE 012306497-01 $P=361.381541$ Days $T_0=151.357056$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

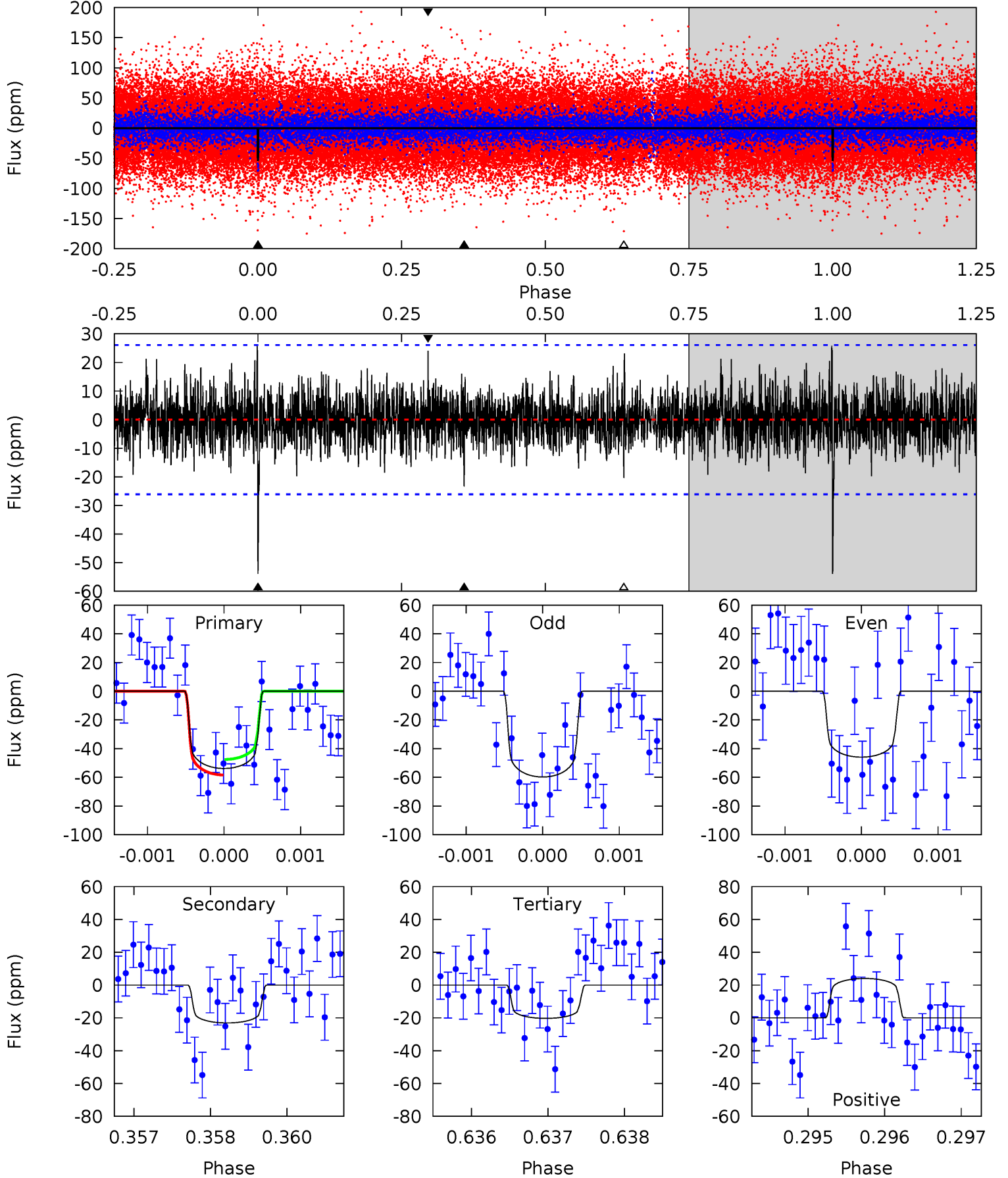
TCE 012306497-01 P=361.381131 Days $T_0=151.416139$ (BKJD)



DV Model-Shift Uniqueness Test

012306497-01, P = 361.381541 Days, E = 151.357056 Days

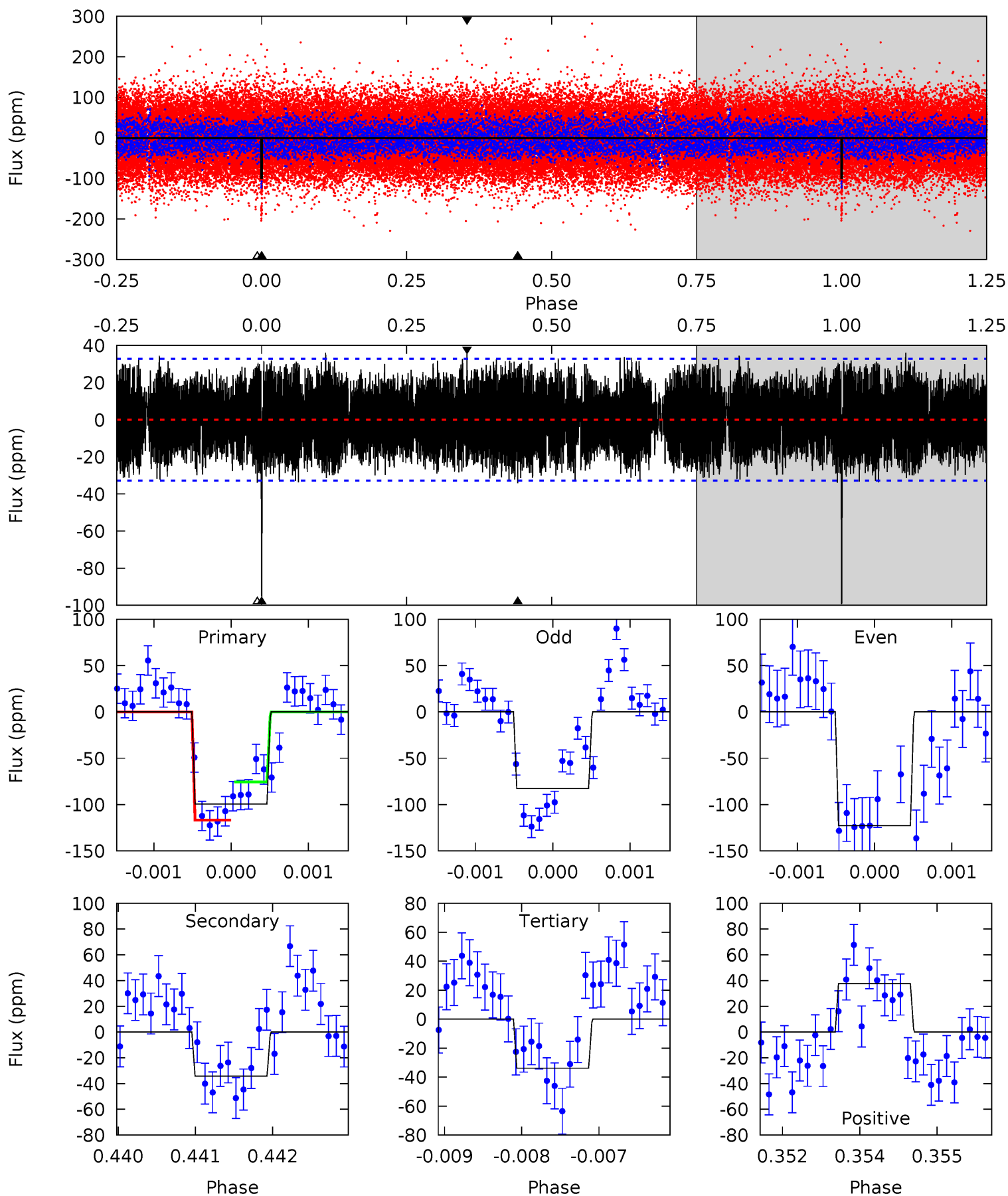
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.81	4.22	5.00	5.43	3.26	1.26	6.98	6.21	0.58	-0.19	1.43	0.79	0.32	1.12



Alt Model-Shift Uniqueness Test

012306497-01, P = 361.381131 Days, E = 151.416139 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	5.63	5.57	6.17	5.40	3.21	2.64	10.8	10.2	0.06	-0.54	3.24	1.04	0.27	3.35



Stellar Parameters For KIC 012306497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8218^{+226}_{-368}	$4.072^{+0.135}_{-0.150}$	$0.070^{+0.250}_{-0.450}$	$2.115^{+0.495}_{-0.495}$	$1.923^{+0.317}_{-0.352}$	$0.286^{+0.220}_{-0.125}$
	+3%/-4%	+3%/-4%	+357%/-643%	+23%/-23%	+16%/-18%	+77%/-44%
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 012306497-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 5	$1.94^{+0.51}_{-0.45}$	663^{+40}_{-41}	6055^{+793}_{-705}	5111^{+3797}_{-2078}
Alt.	-34 ± 6	$2.33^{+0.54}_{-0.50}$	663^{+44}_{-42}	6040^{+730}_{-499}	5272^{+3247}_{-1929}

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 $A_{obs} \gg 1.0$

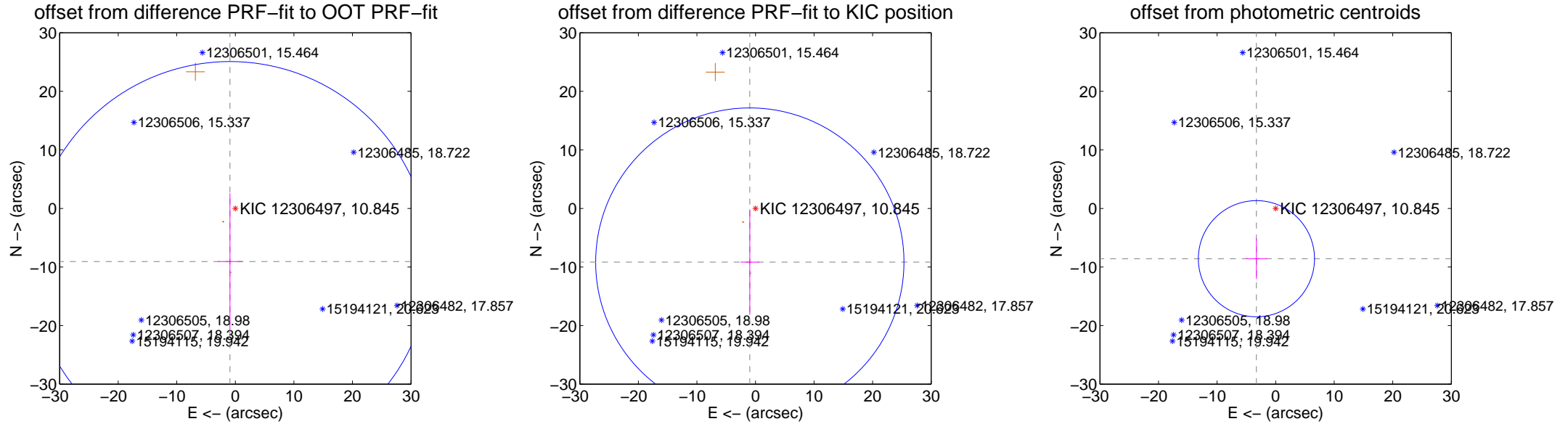
DV Centroid Data

Supplemental centroid analysis for 012306497-01. **Kepler magnitude: 10.85.** Transit SNR 7.92

There are 0 quarters with good PRF difference image offsets

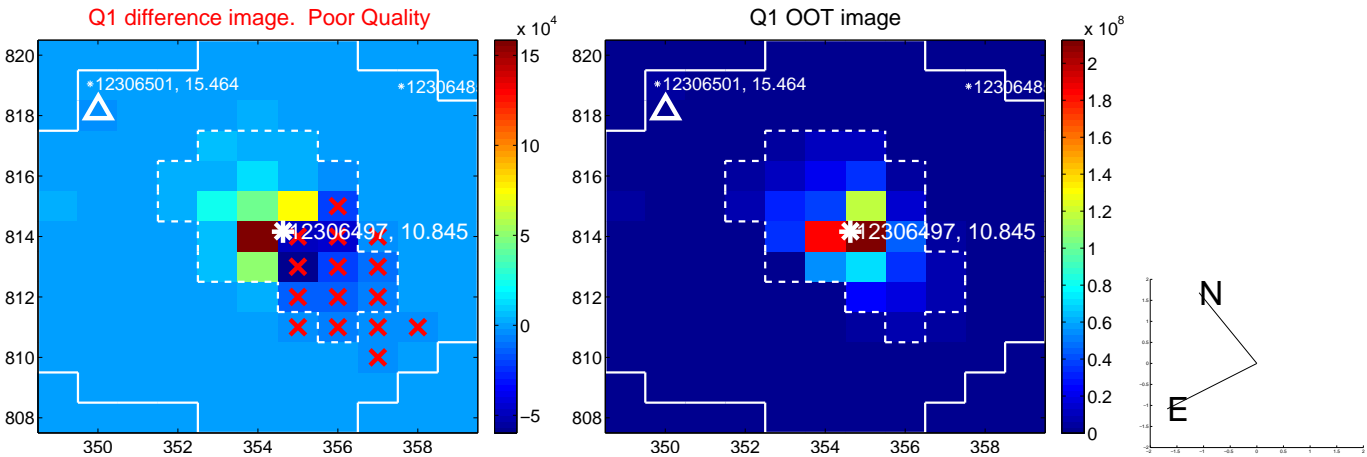
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.104 ± 11.378	0.80	0.909 ± 2.063	-9.059 ± 11.642
PRF-fit source offset from KIC position	9.211 ± 8.774	1.05	0.968 ± 1.584	-9.160 ± 8.990
photometric centroid source offset	9.19 ± 3.31	2.78	3.28 ± 1.84	-8.58 ± 3.47

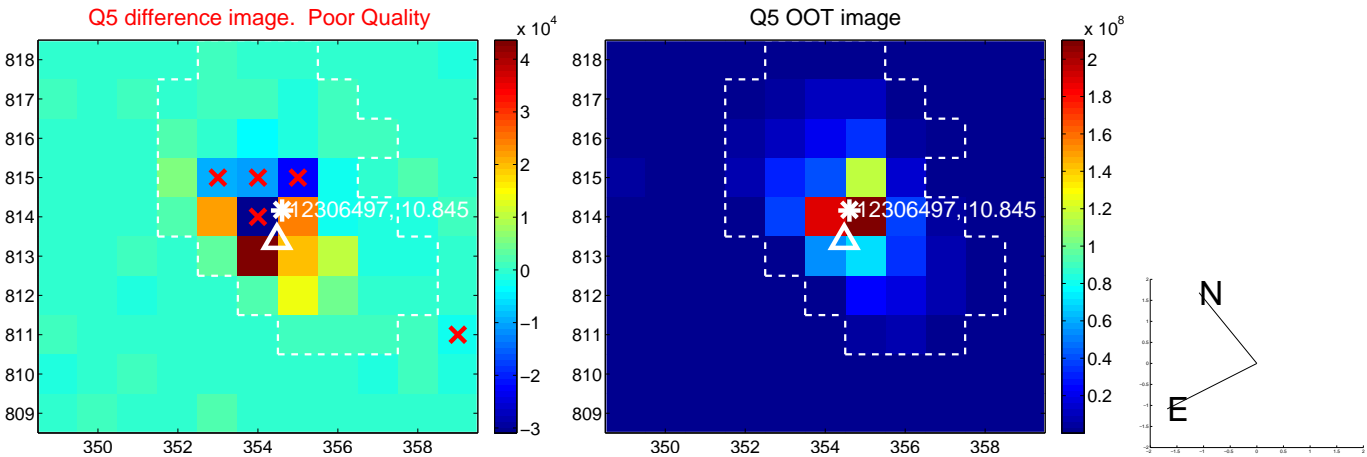


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



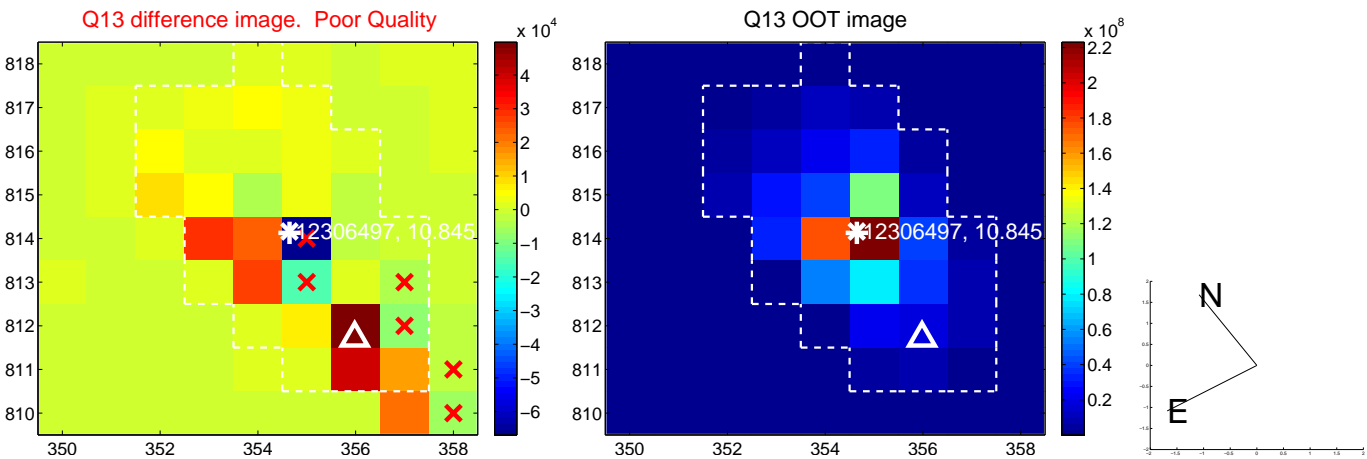
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



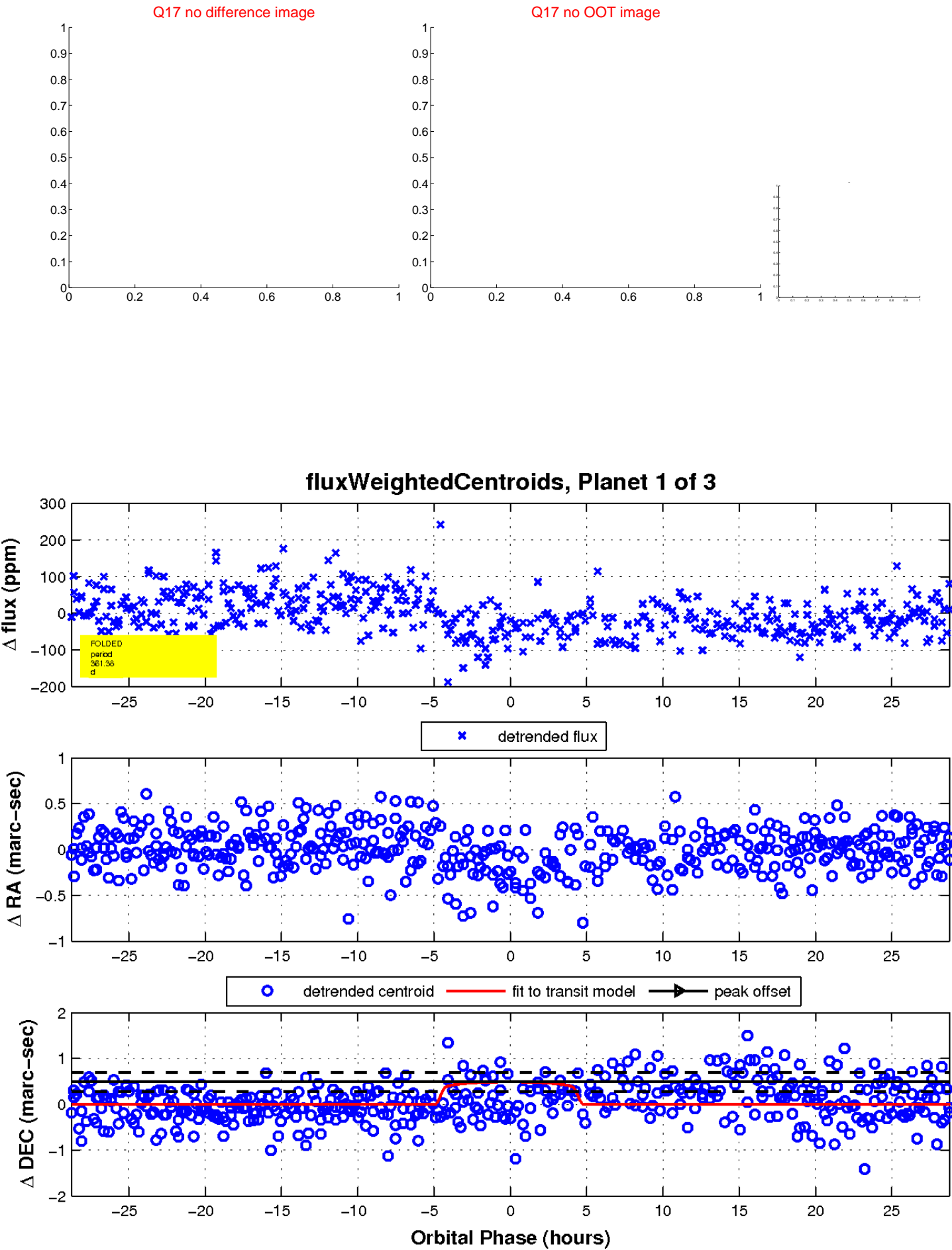
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

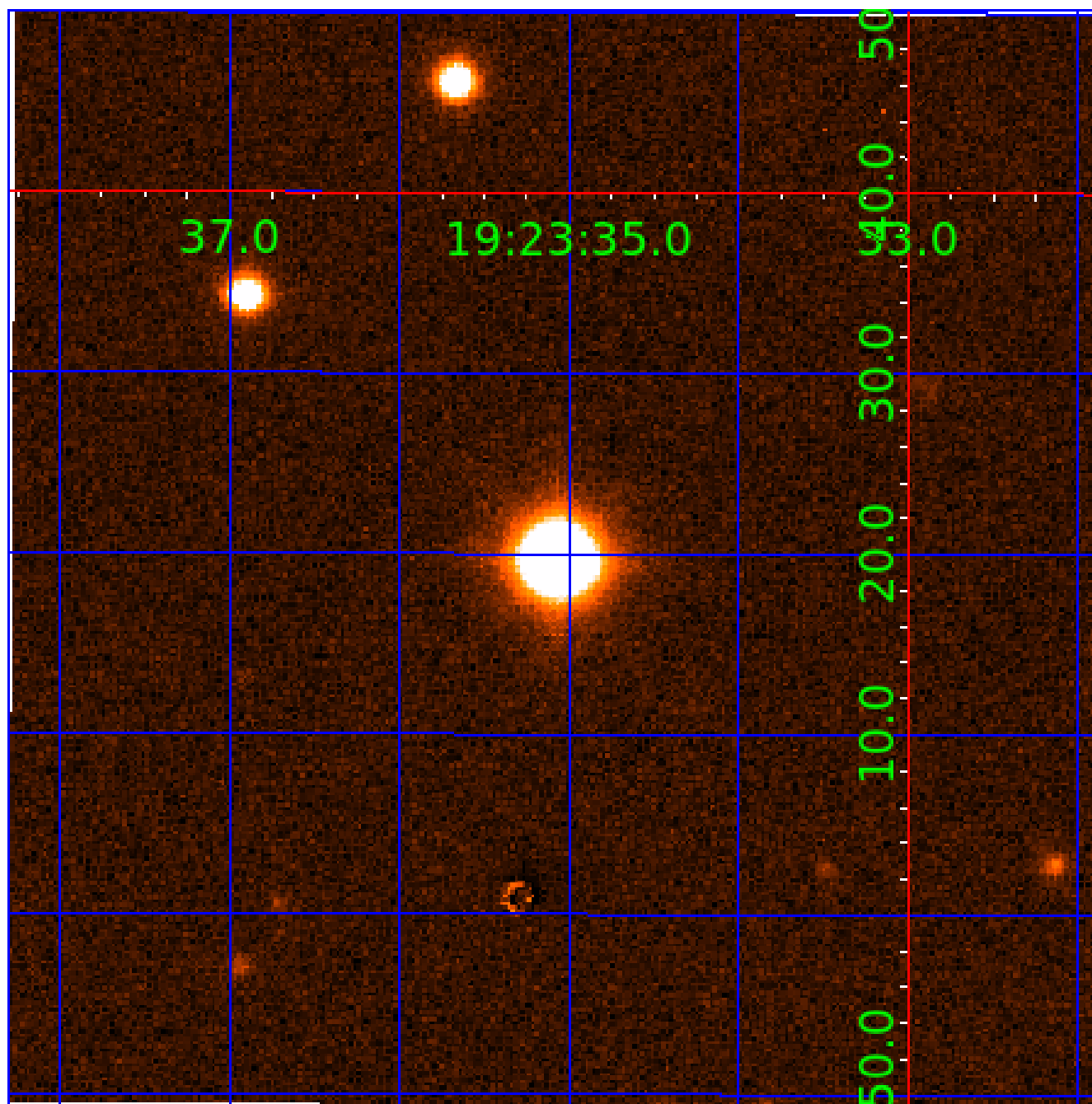


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012306497

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})
012306497-01	OBS	No	361.381541	151.357056	59.4	9.628	9.4	7.9	2.12	8218	1.96	11.97
012306497-02	OBS	No	0.916814	131.980141	6.6	2.990	9.3	12.7	2.12	8218	0.55	34603.83
012306497-03	OBS	No	0.916856	132.447355	3.5	3.478	8.2	7.6	2.12	8218	0.40	34601.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012306497-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012306497-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
012306497-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—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.

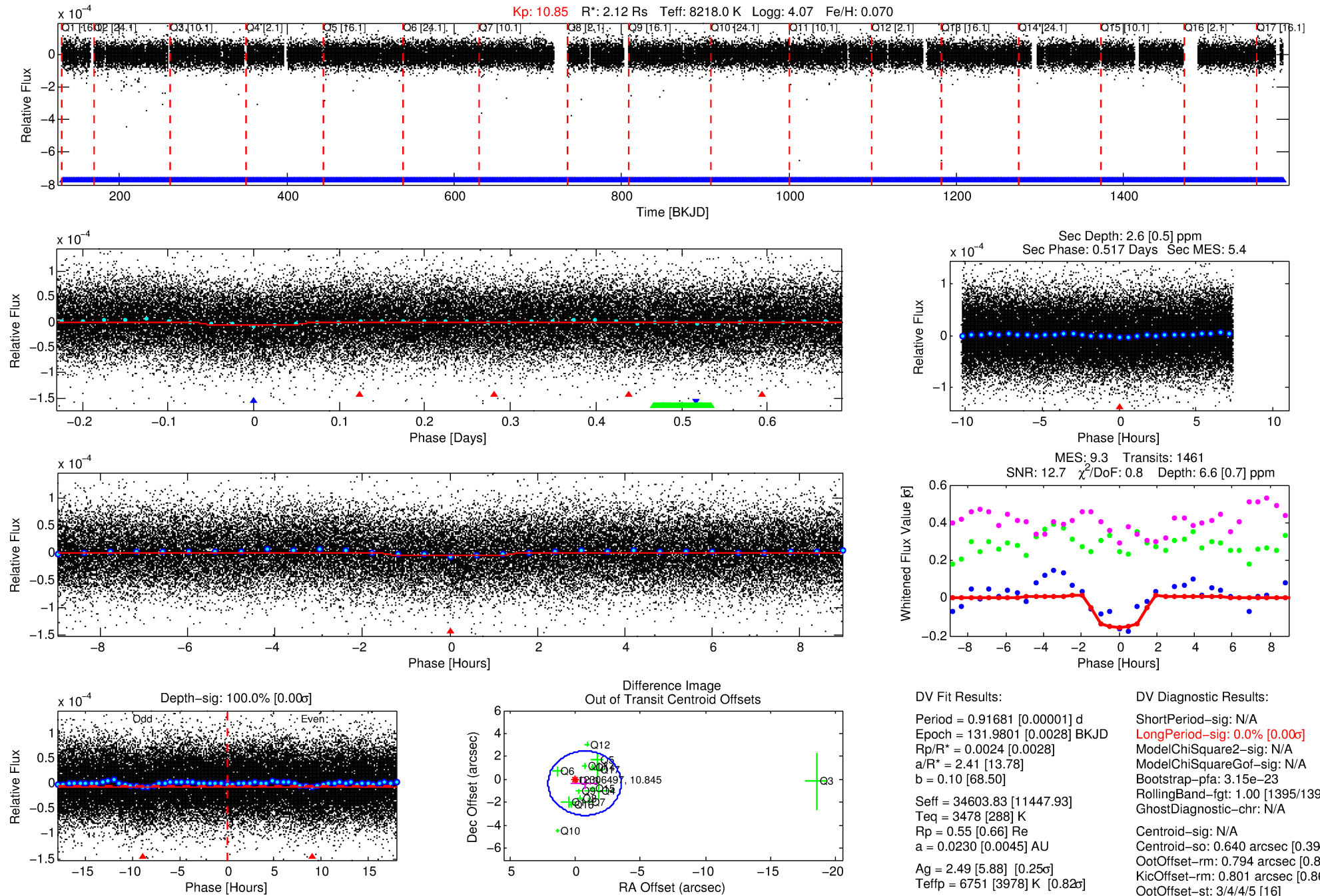
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012306497-02

No Significant Match Found

DV One-Page Summary

KIC: 12306497 Candidate: 2 of 3 Period: 0.917 d



DV Fit Results:

Period = 0.91681 [0.00001] d
Epoch = 131.9801 [0.0028] BKJD
Rp/R* = 0.0024 [0.0028]
a/R* = 2.41 [13.78]
b = 0.10 [68.50]
Seff = 34603.83 [11447.93]
Teff = 3478 [288] K
Rp = 0.55 [0.66] Re
a = 0.0230 [0.0045] AU
Ag = 2.49 [5.88] [0.25 σ]
Teffp = 6751 [3978] K [0.82 σ]

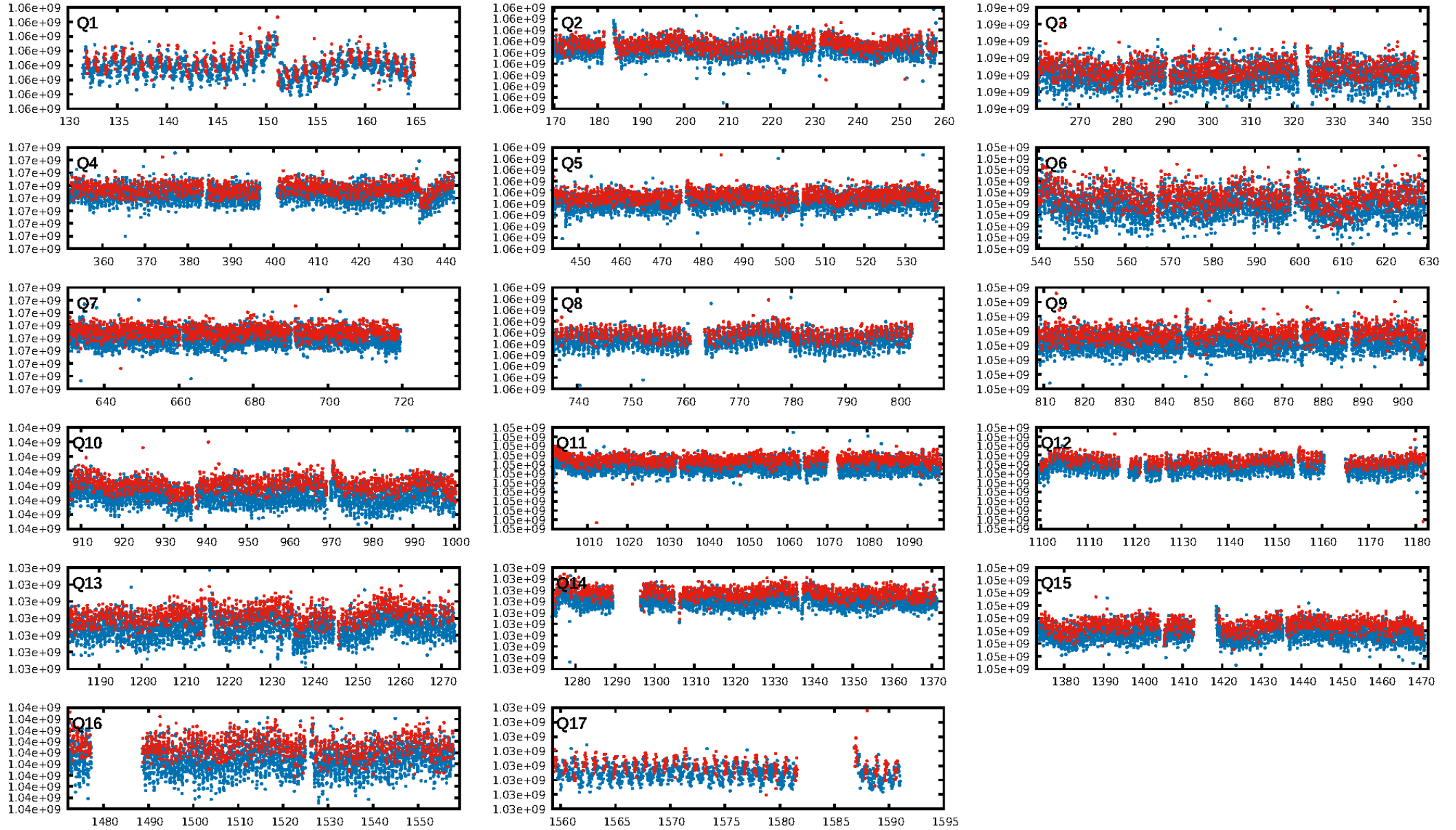
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.15e-23
RollingBand-fgt: 1.00 [1395/1395]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.640 arcsec [0.39 σ]
OotOffset-rm: 0.794 arcsec [0.85 σ]
KicOffset-rm: 0.801 arcsec [0.86 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

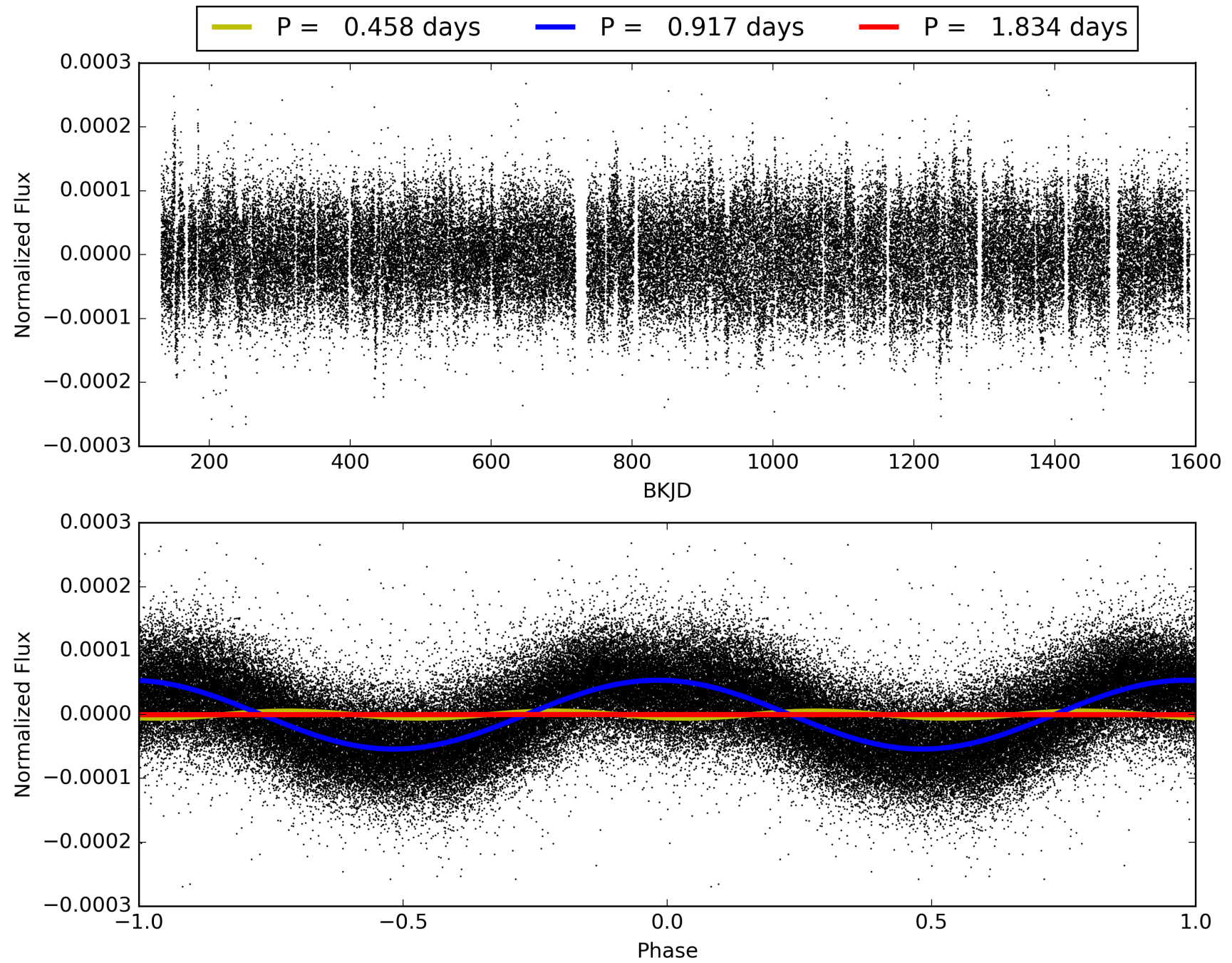
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:16:50 Z

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

TCE 012306497-02, PDC Light Curves

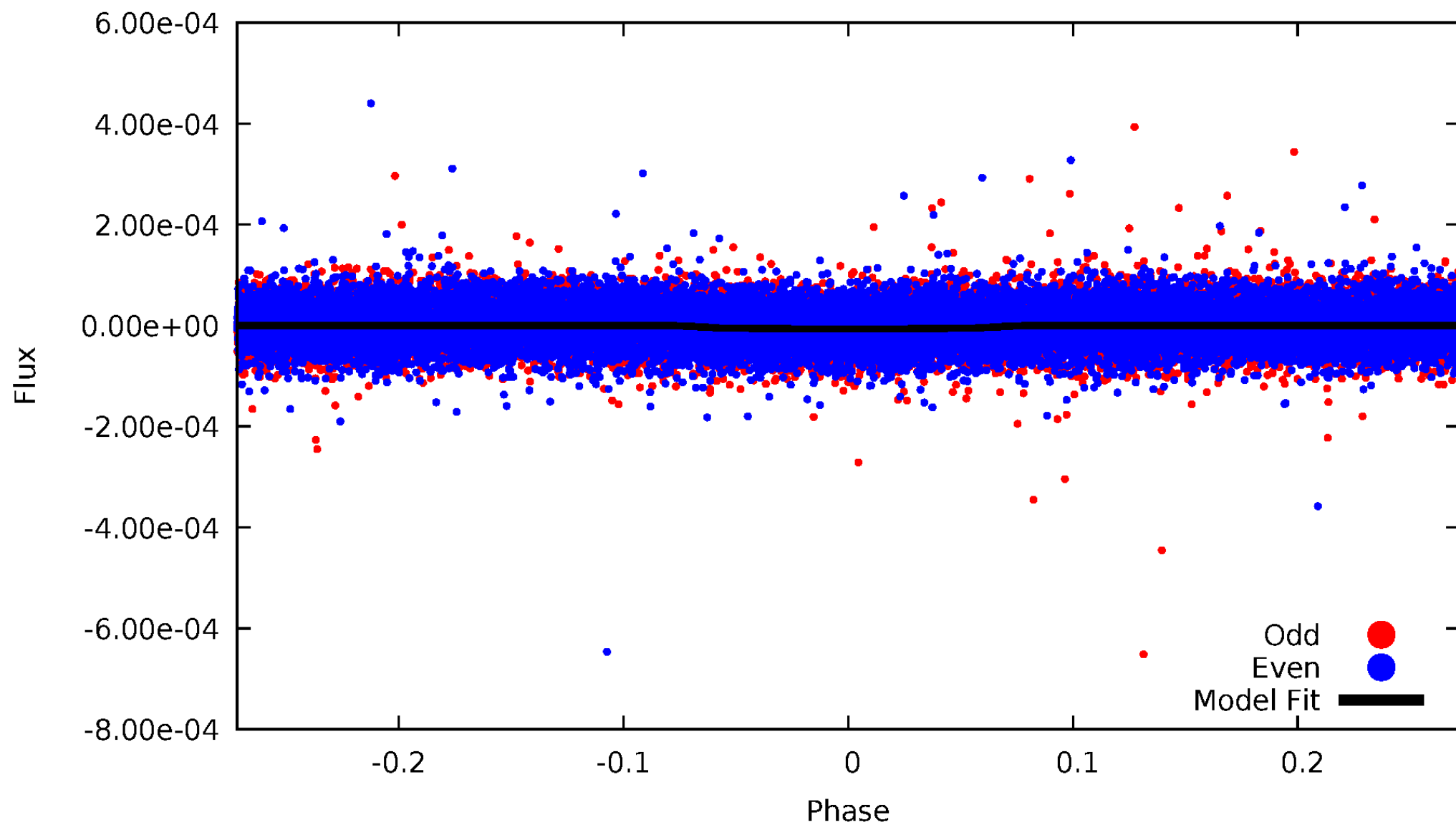


TCE 012306497-02



DV Odd/Even

TCE 012306497-02

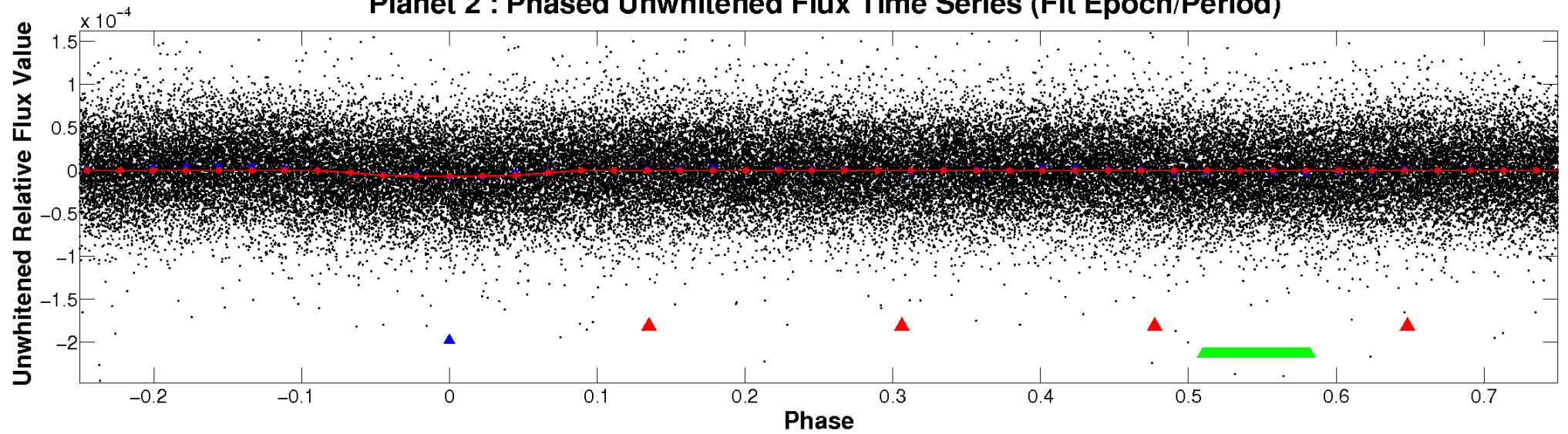


ALT Odd/Even

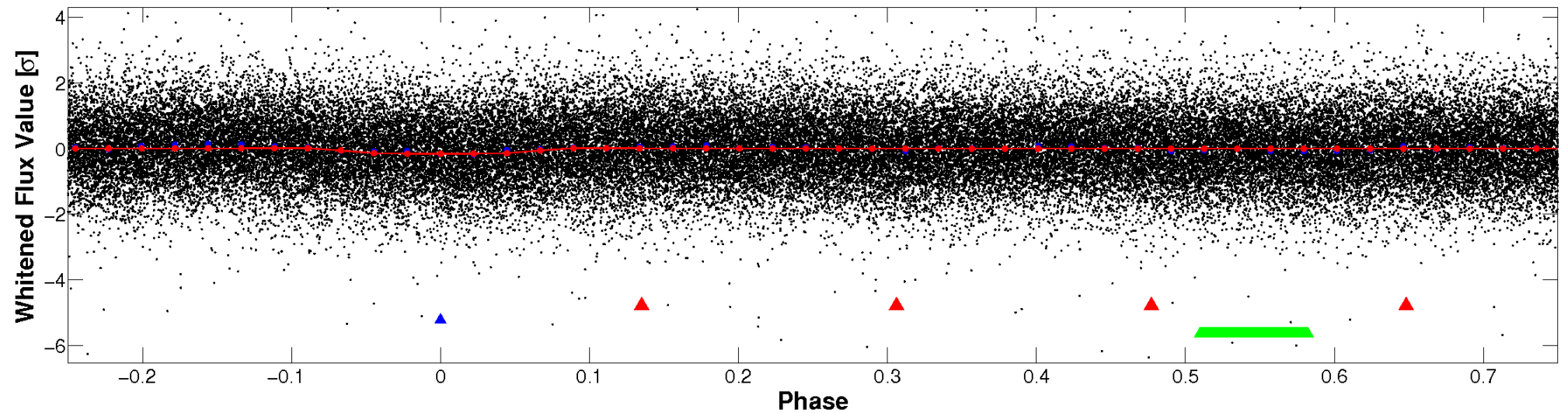
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

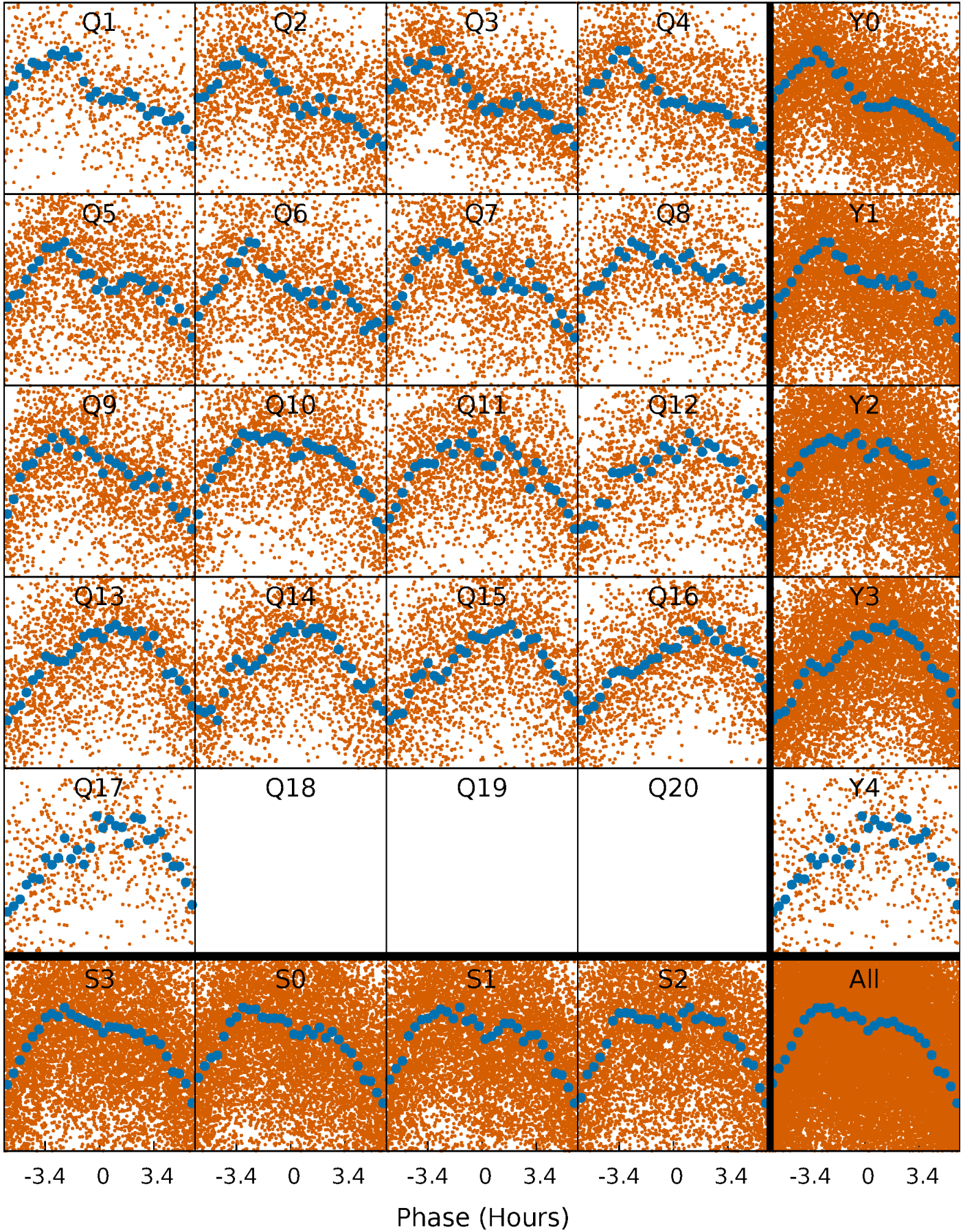


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



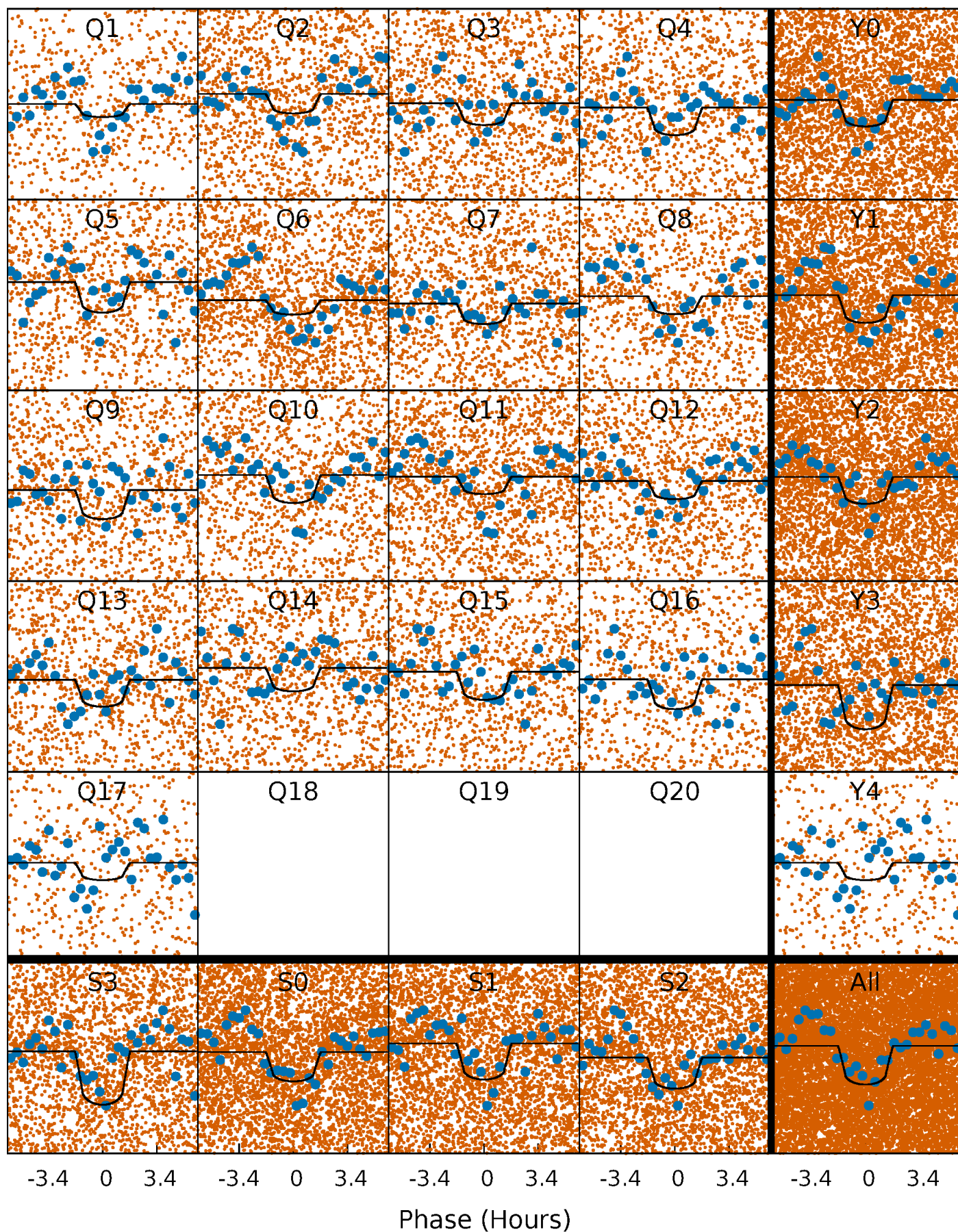
PDC Quarter-Phased Transit Curves

TCE 012306497-02 P= 0.916814 Days $T_0=131.980141$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 012306497-02 P= 0.916814 Days $T_0=131.980141$ (BKJD)

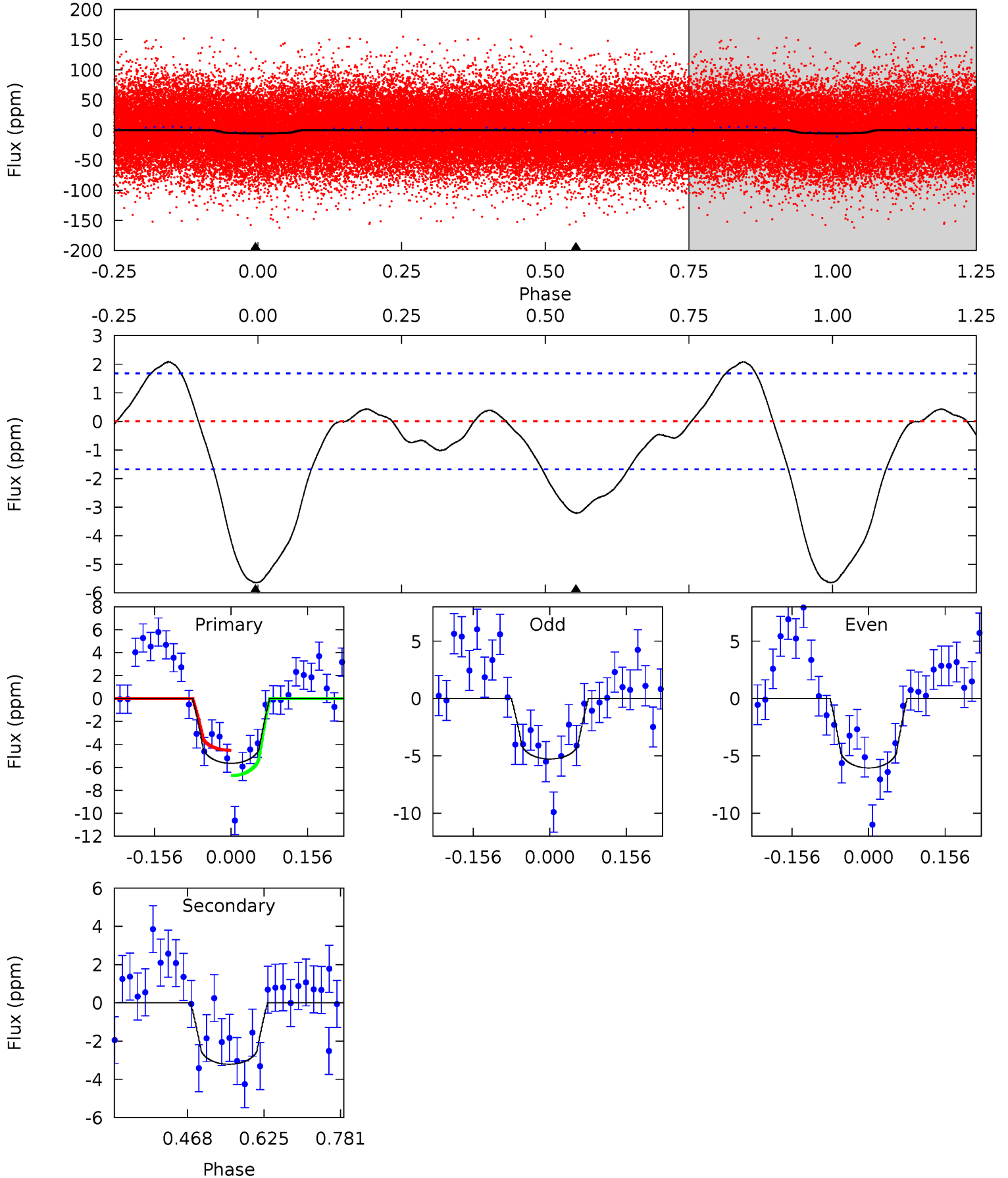


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

012306497-02, P = 0.916814 Days, E = 131.063327 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	8.55	0	0	4.47	1.42	2.10	15.0	15.0	8.55	8.55	1.04	0.99	0.27	2.96



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 012306497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8218^{+226}_{-368}	$4.072^{+0.135}_{-0.150}$	$0.070^{+0.250}_{-0.450}$	$2.115^{+0.495}_{-0.495}$	$1.923^{+0.317}_{-0.352}$	$0.286^{+0.220}_{-0.125}$
	+3%/-4%	+3%/-4%	+357%/-643%	+23%/-23%	+16%/-18%	+77%/-44%
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 012306497-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 0	$0.74^{+0.54}_{-0.49}$	4847^{+306}_{-313}	5626^{+6283}_{-1626}	$1.747^{+14.140}_{-1.197}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

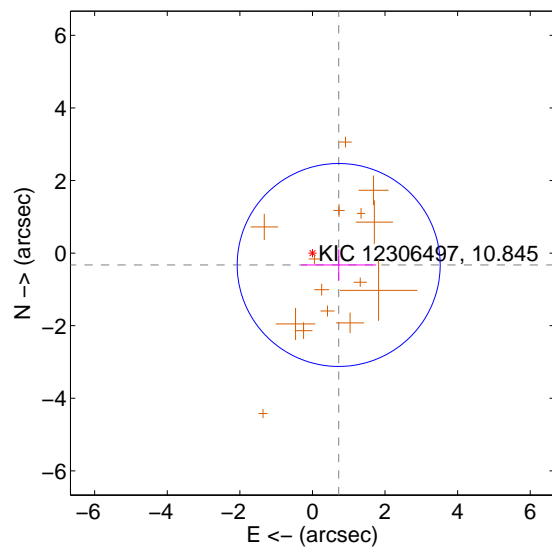
Supplemental centroid analysis for 012306497-02. **Kepler magnitude: 10.85.** Transit SNR 12.65

There are 0 quarters with good PRF difference image offsets

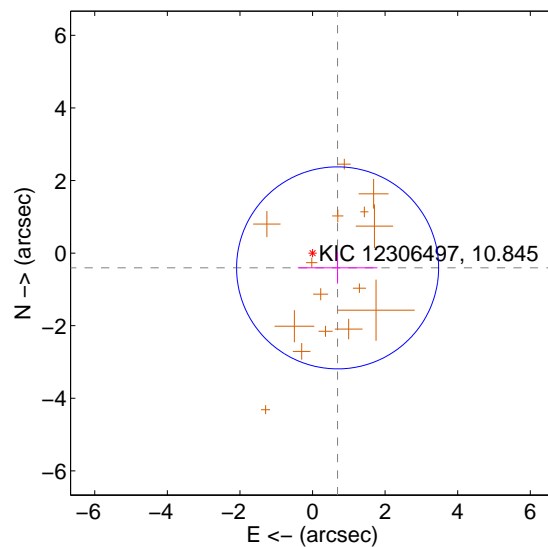
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.794 ± 0.932	0.85	-0.723 ± 1.032	-0.327 ± 0.430
PRF-fit source offset from KIC position	0.801 ± 0.927	0.86	-0.691 ± 1.096	-0.407 ± 0.433
photometric centroid source offset	0.64 ± 1.64	0.39	-0.35 ± 1.08	0.54 ± 1.82

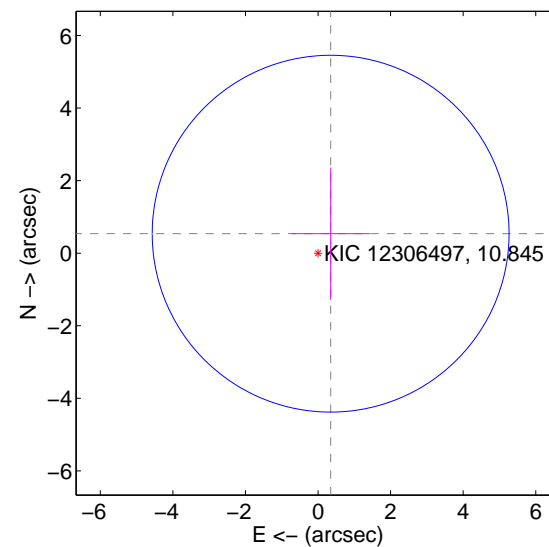
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

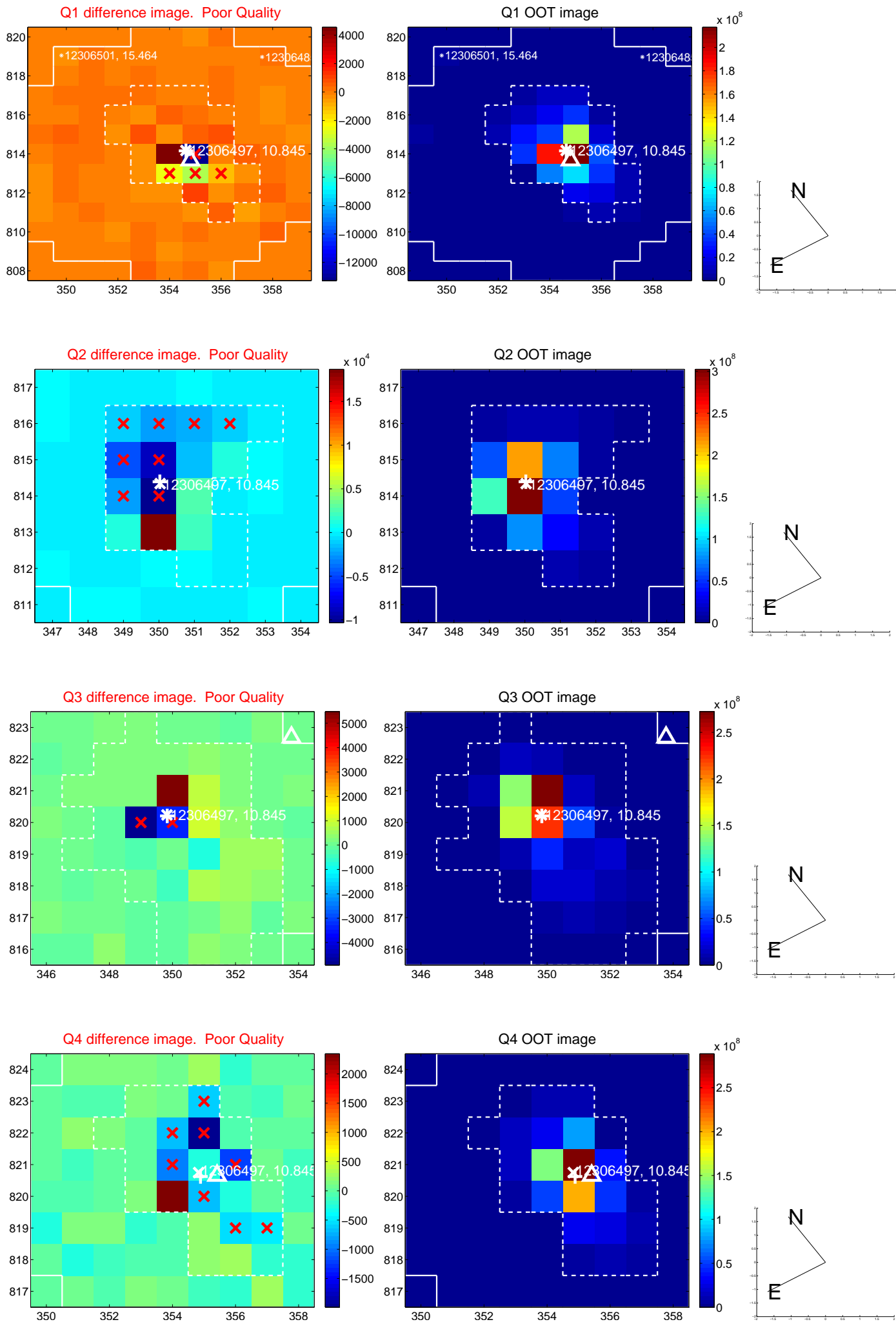


offset from photometric centroids

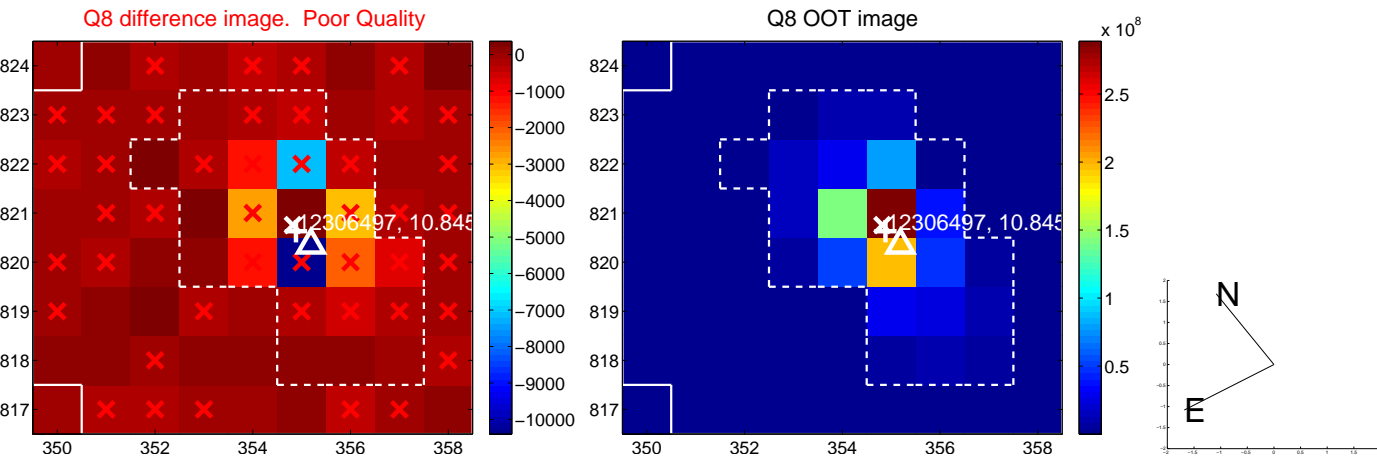
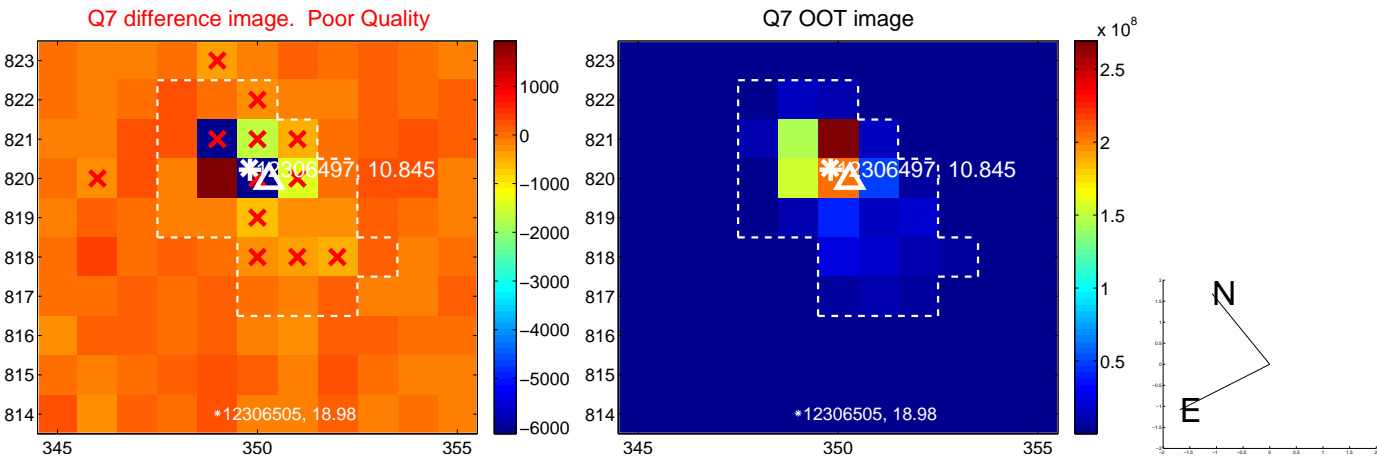
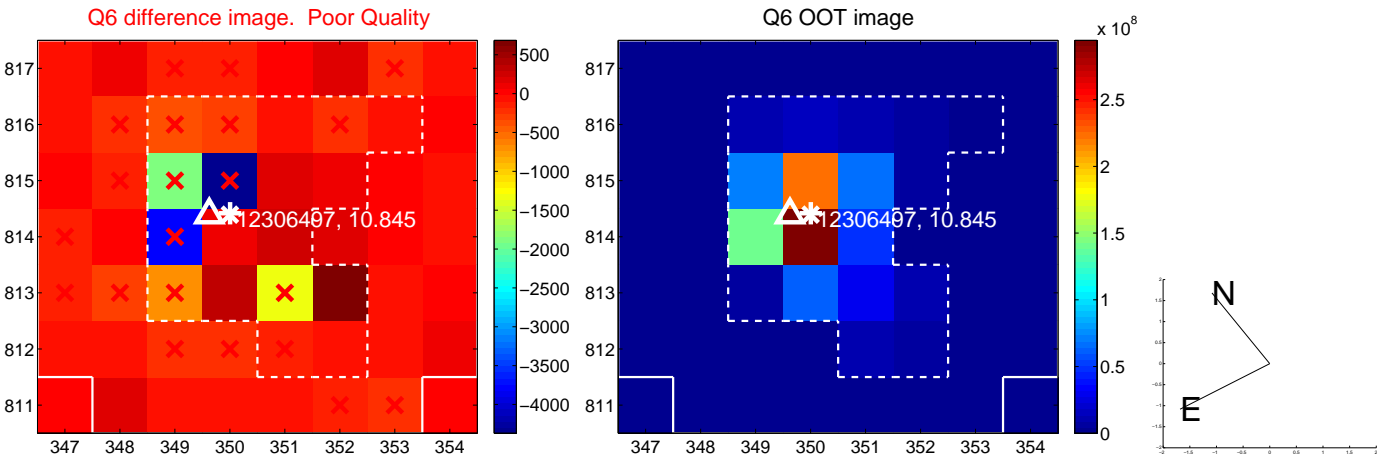
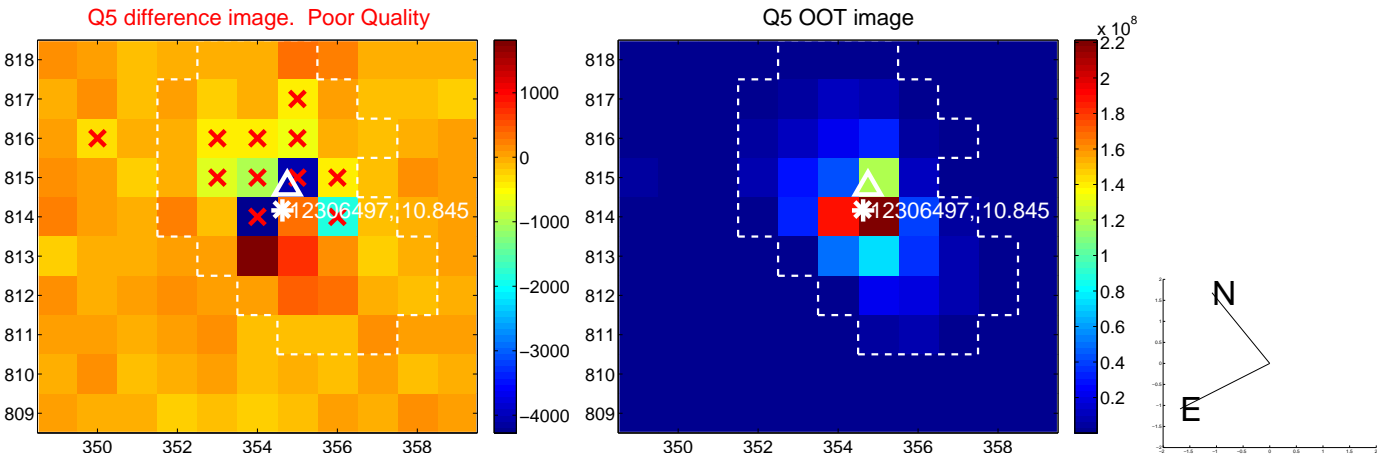


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

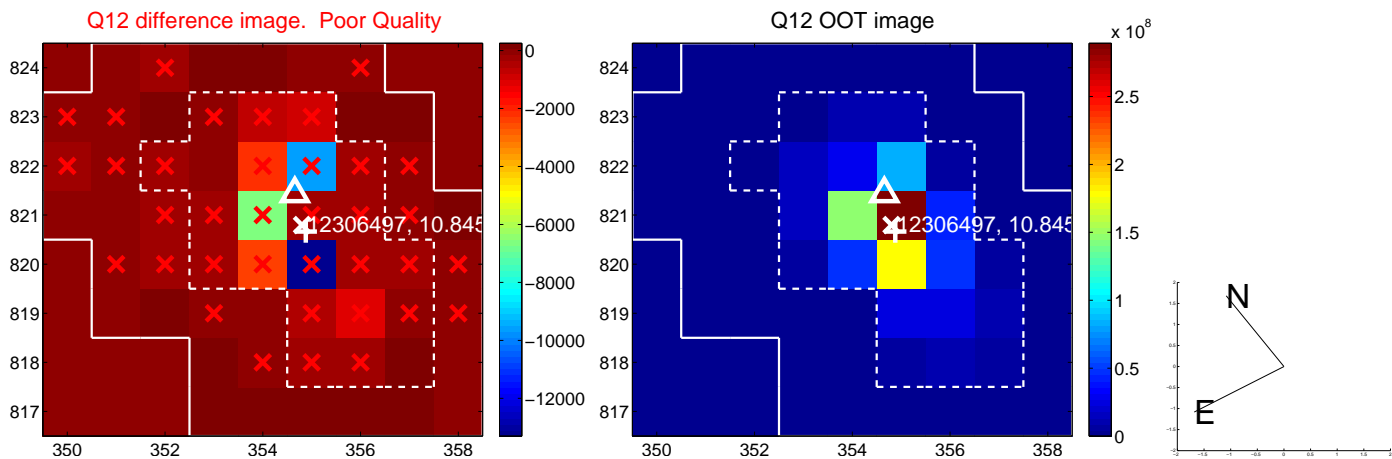
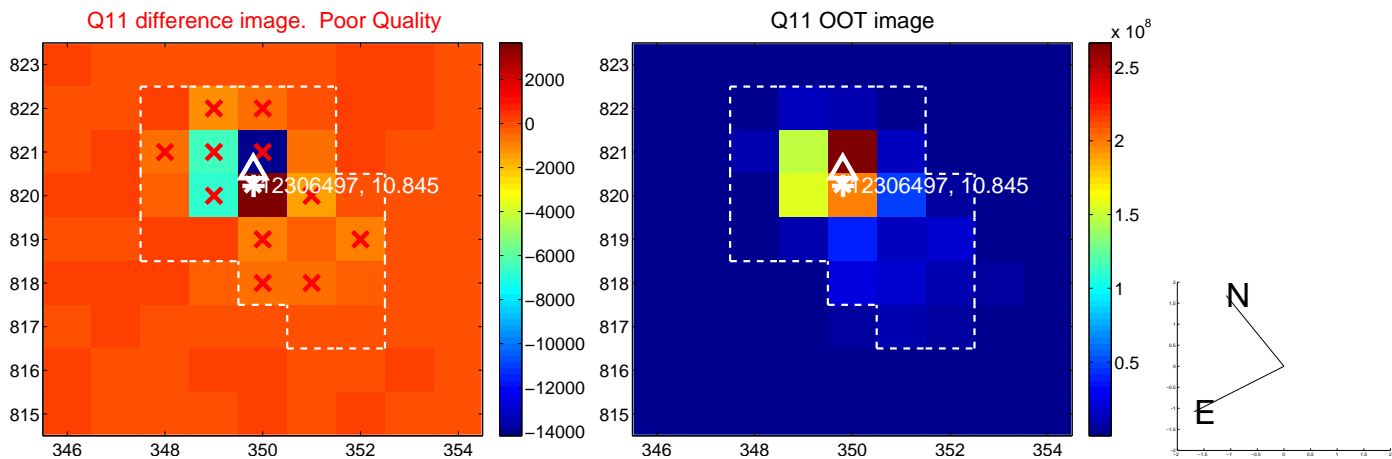
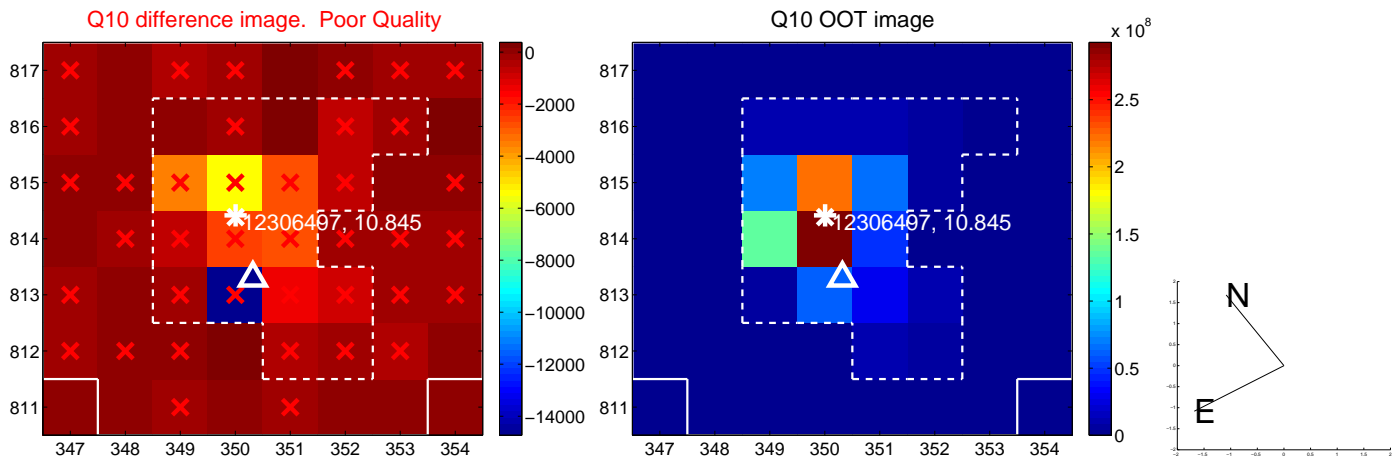
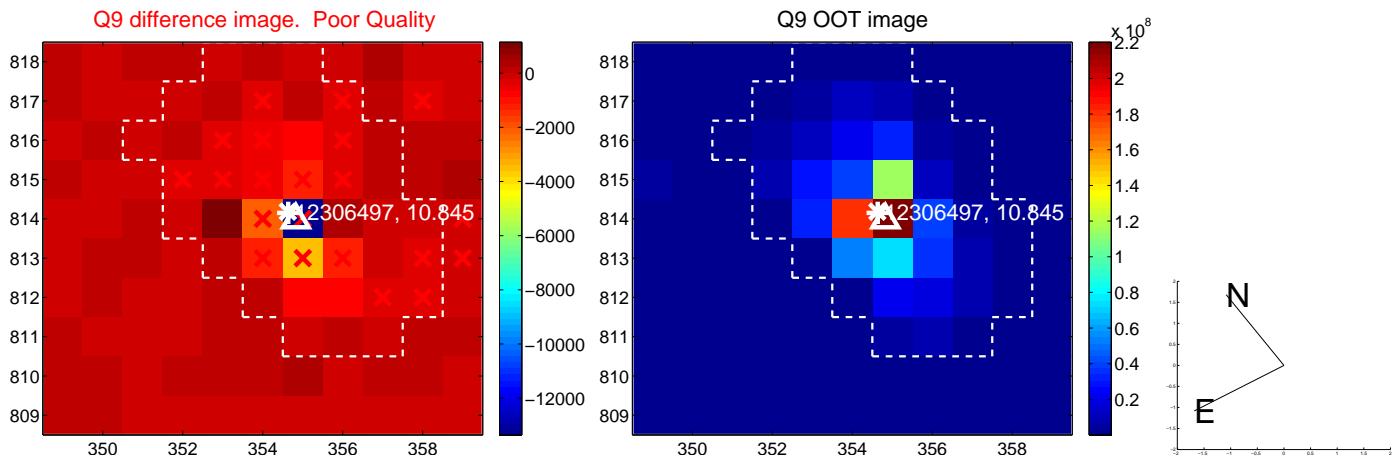
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



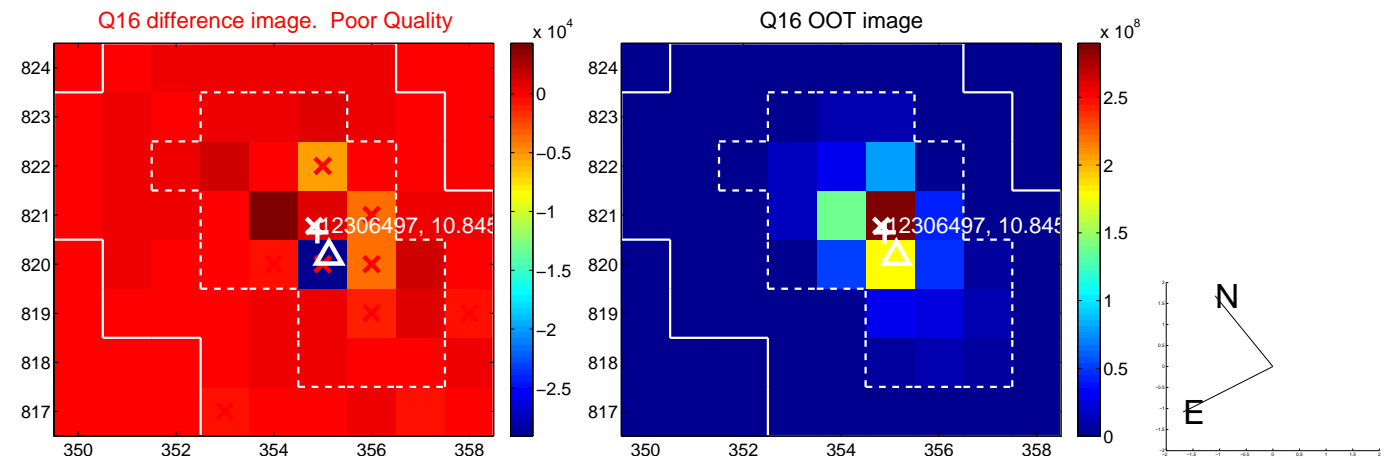
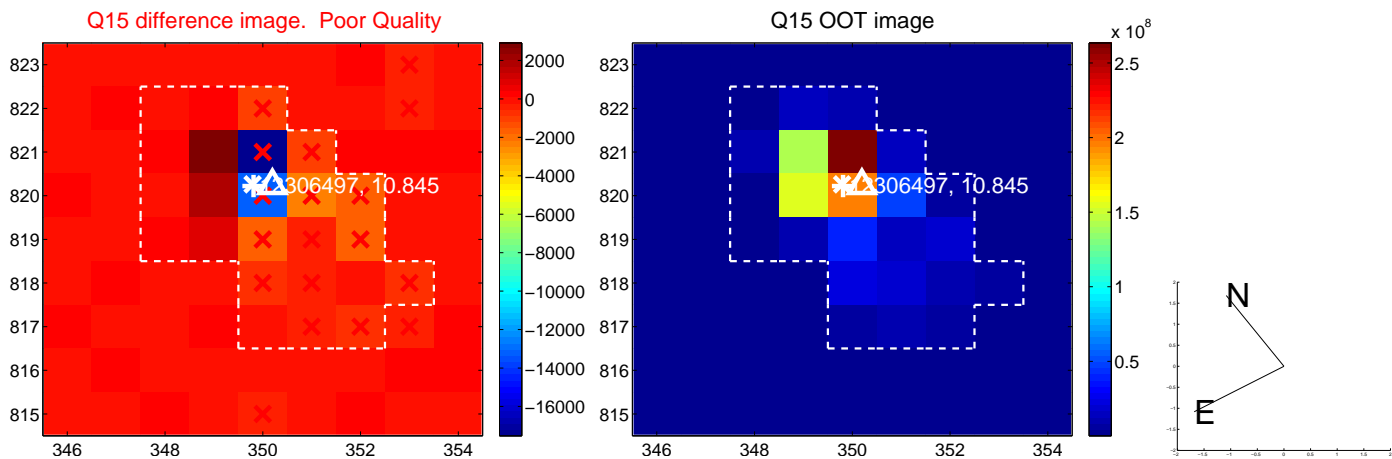
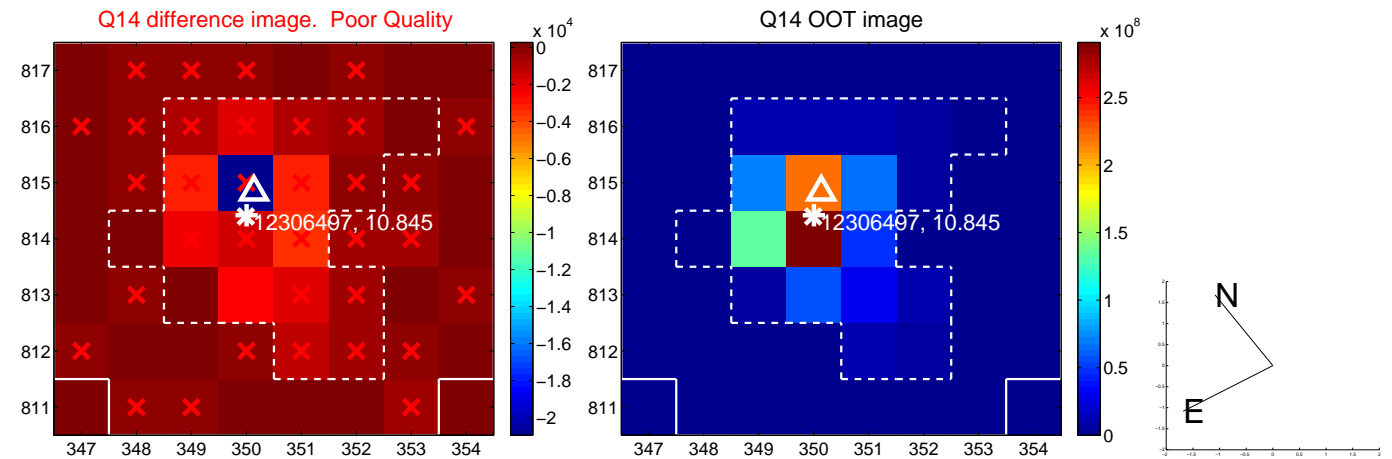
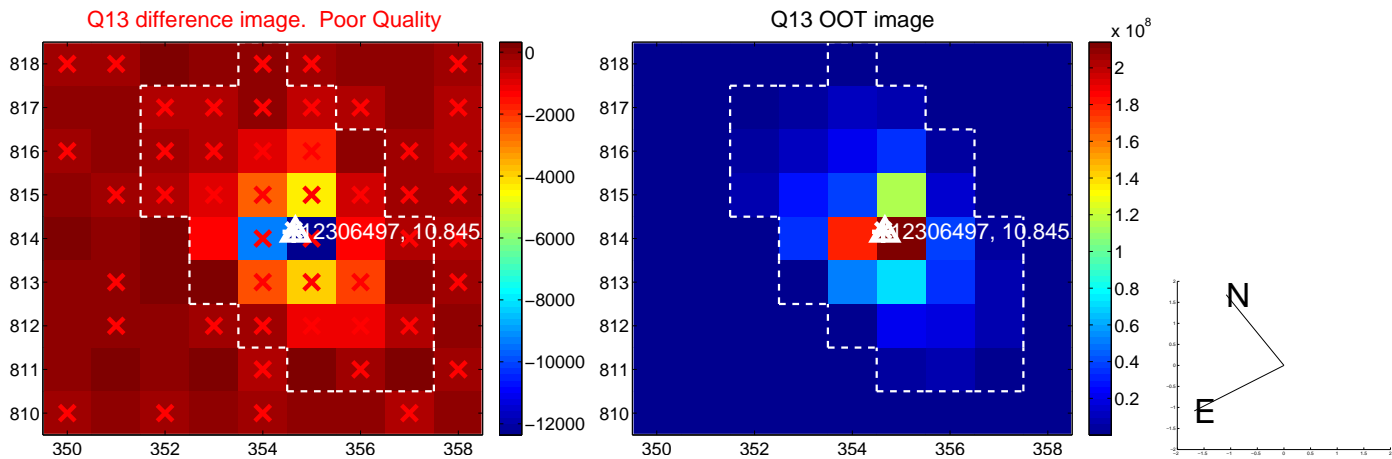
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



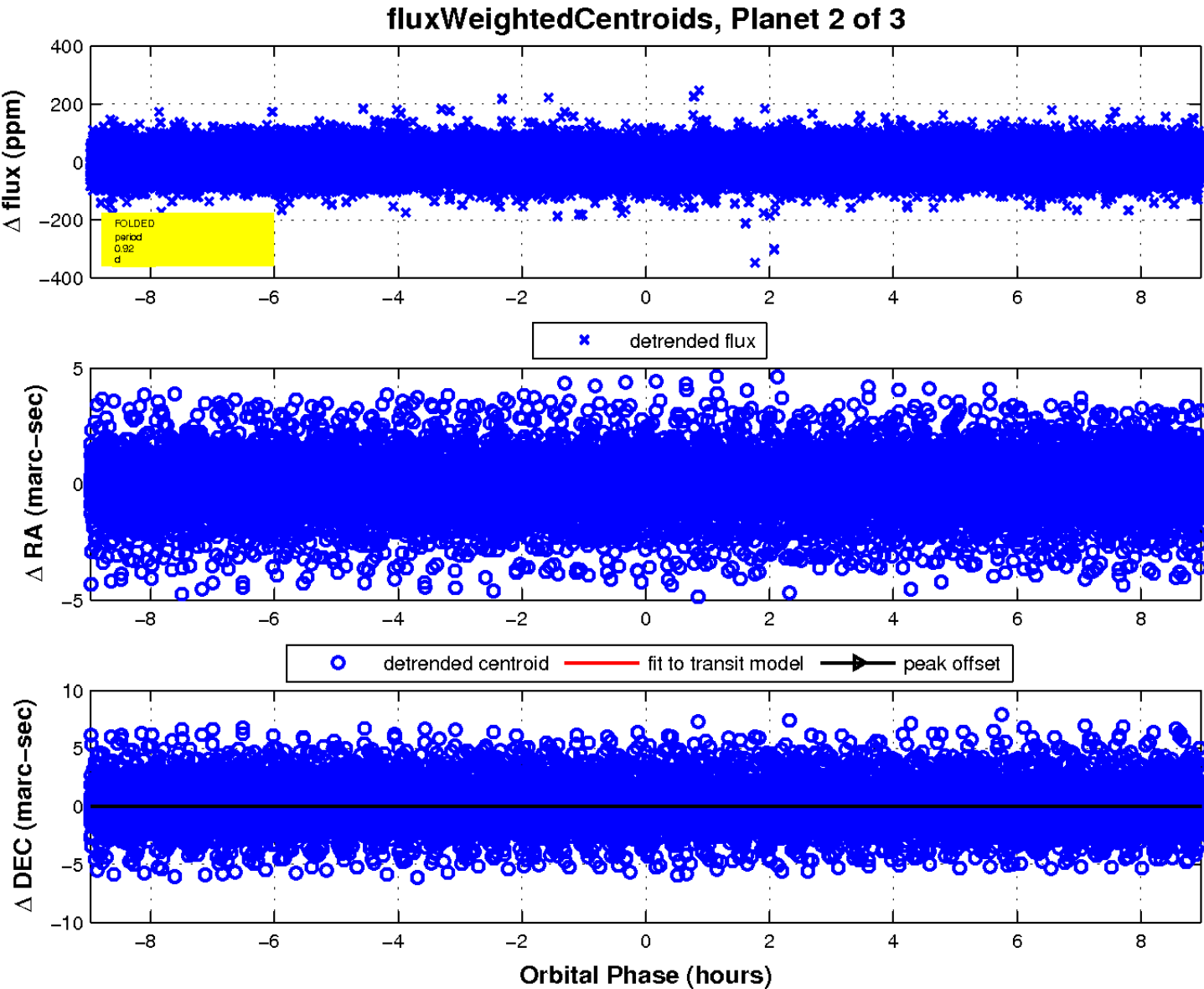
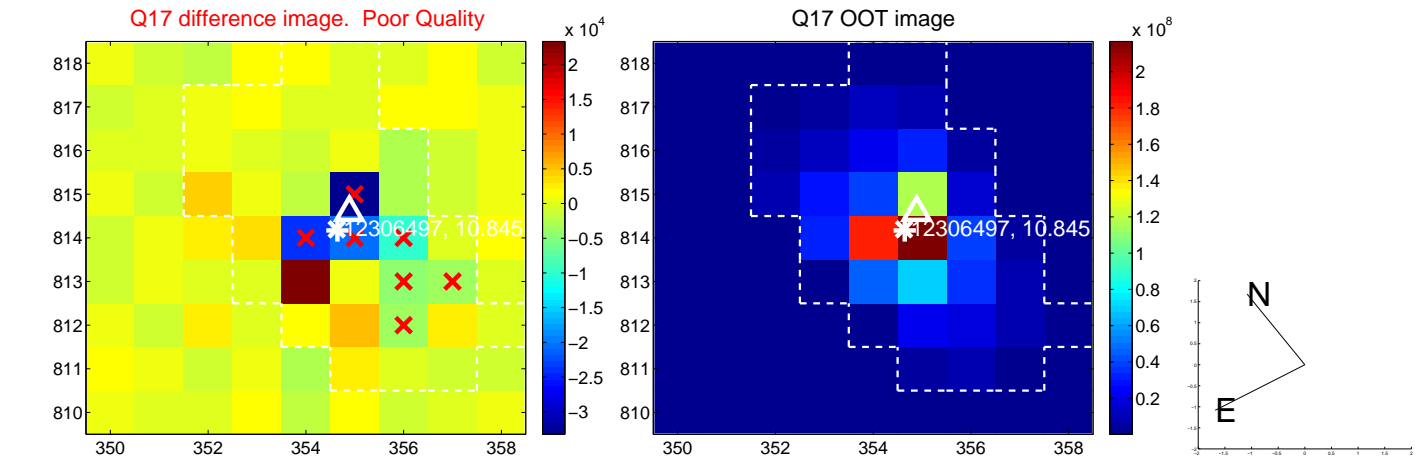
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

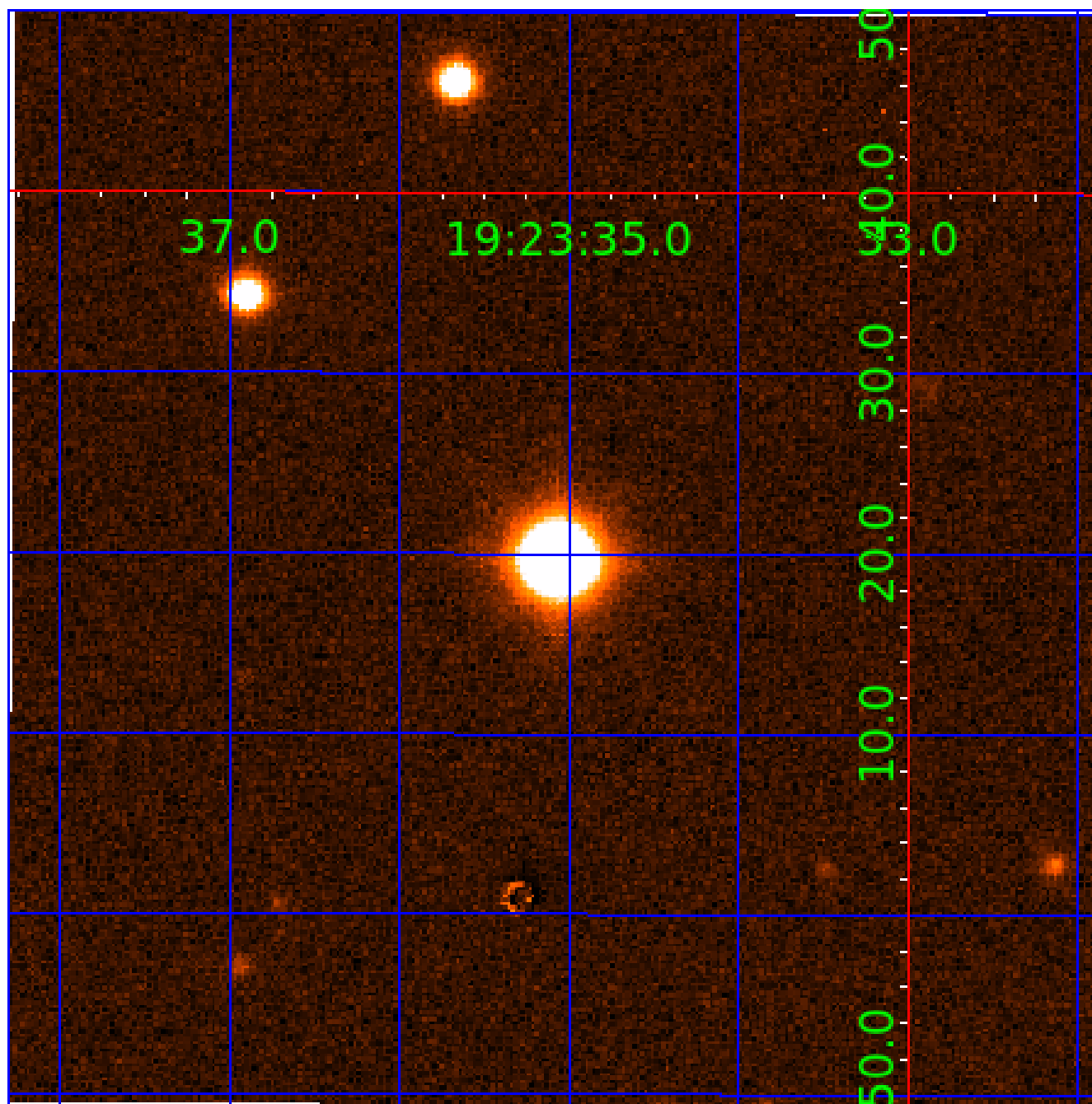


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012306497

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})
012306497-01	OBS	No	361.381541	151.357056	59.4	9.628	9.4	7.9	2.12	8218	1.96	11.97
012306497-02	OBS	No	0.916814	131.980141	6.6	2.990	9.3	12.7	2.12	8218	0.55	34603.83
012306497-03	OBS	No	0.916856	132.447355	3.5	3.478	8.2	7.6	2.12	8218	0.40	34601.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012306497-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
012306497-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
012306497-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—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.

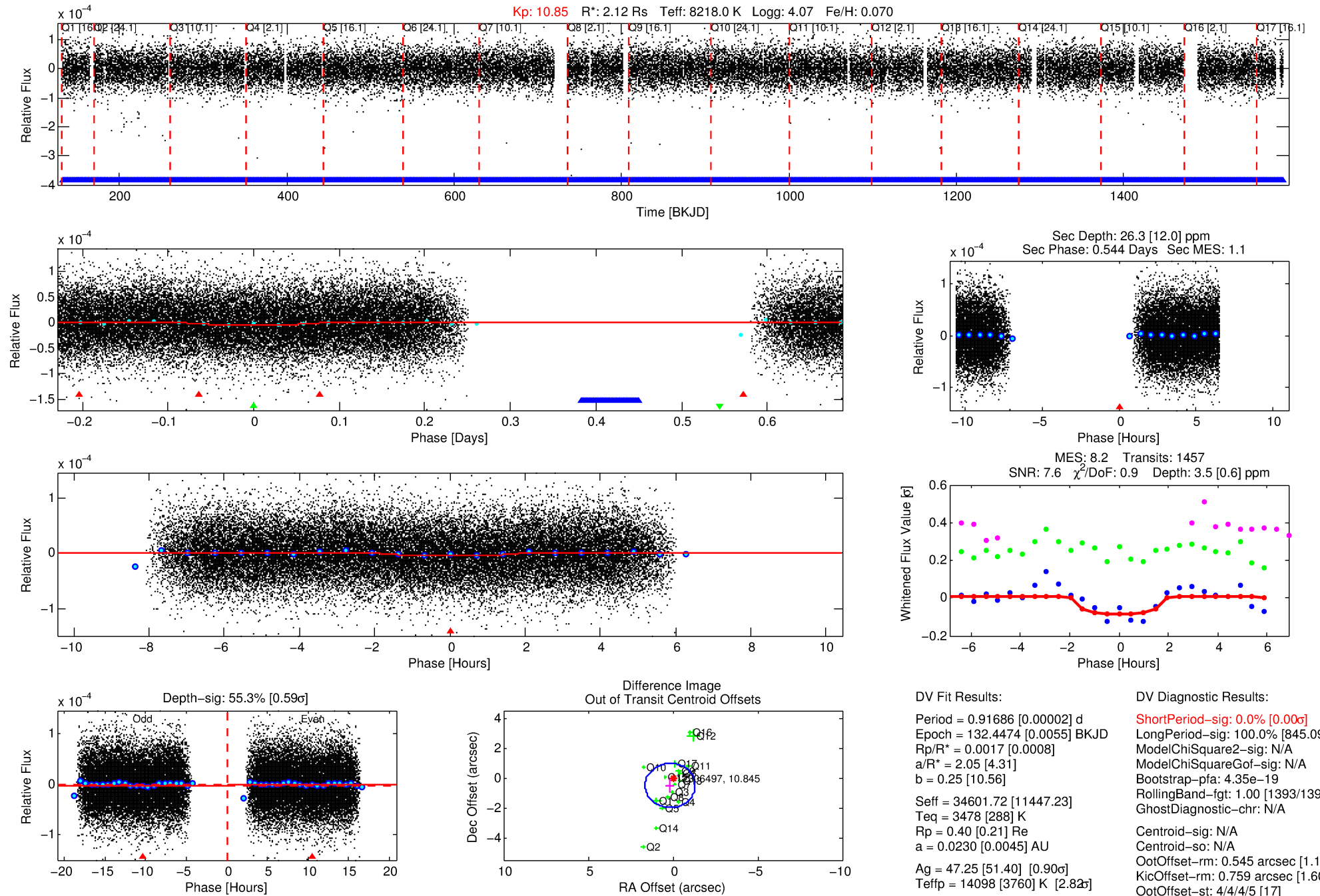
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012306497-03

No Significant Match Found

DV One-Page Summary

KIC: 12306497 Candidate: 3 of 3 Period: 0.917 d



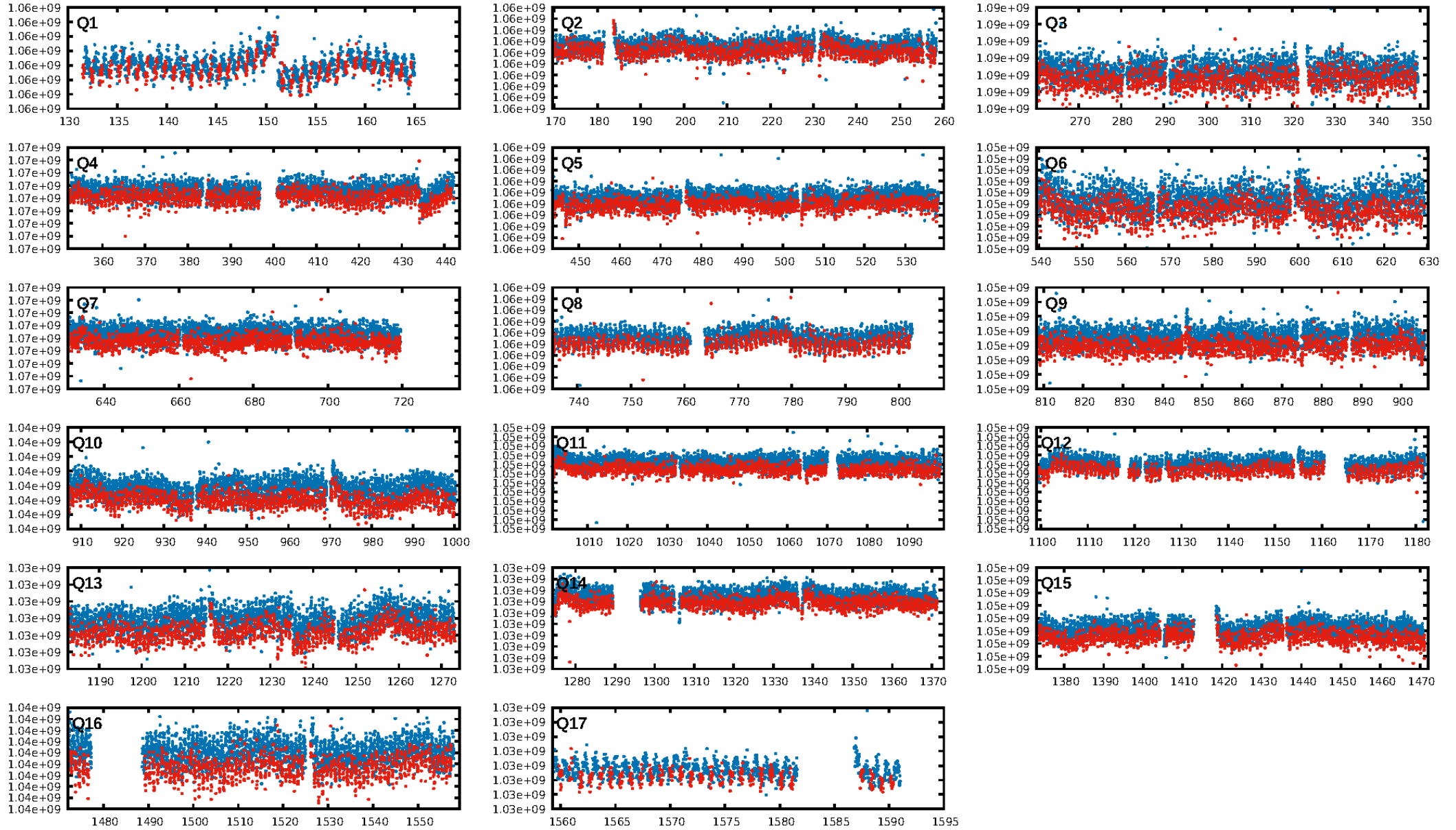
DV Fit Results:

Period = 0.91686 [0.00002] d
Epoch = 132.4474 [0.0055] BKJD
Rp/R* = 0.0017 [0.0008]
a/R* = 2.05 [4.31]
b = 0.25 [10.56]
Seff = 34601.72 [11447.23]
Teq = 3478 [288] K
Rp = 0.40 [0.21] Re
a = 0.0230 [0.0045] AU
Ag = 47.25 [51.40] [0.90σ]
Teffp = 14098 [3760] K [2.82σ]

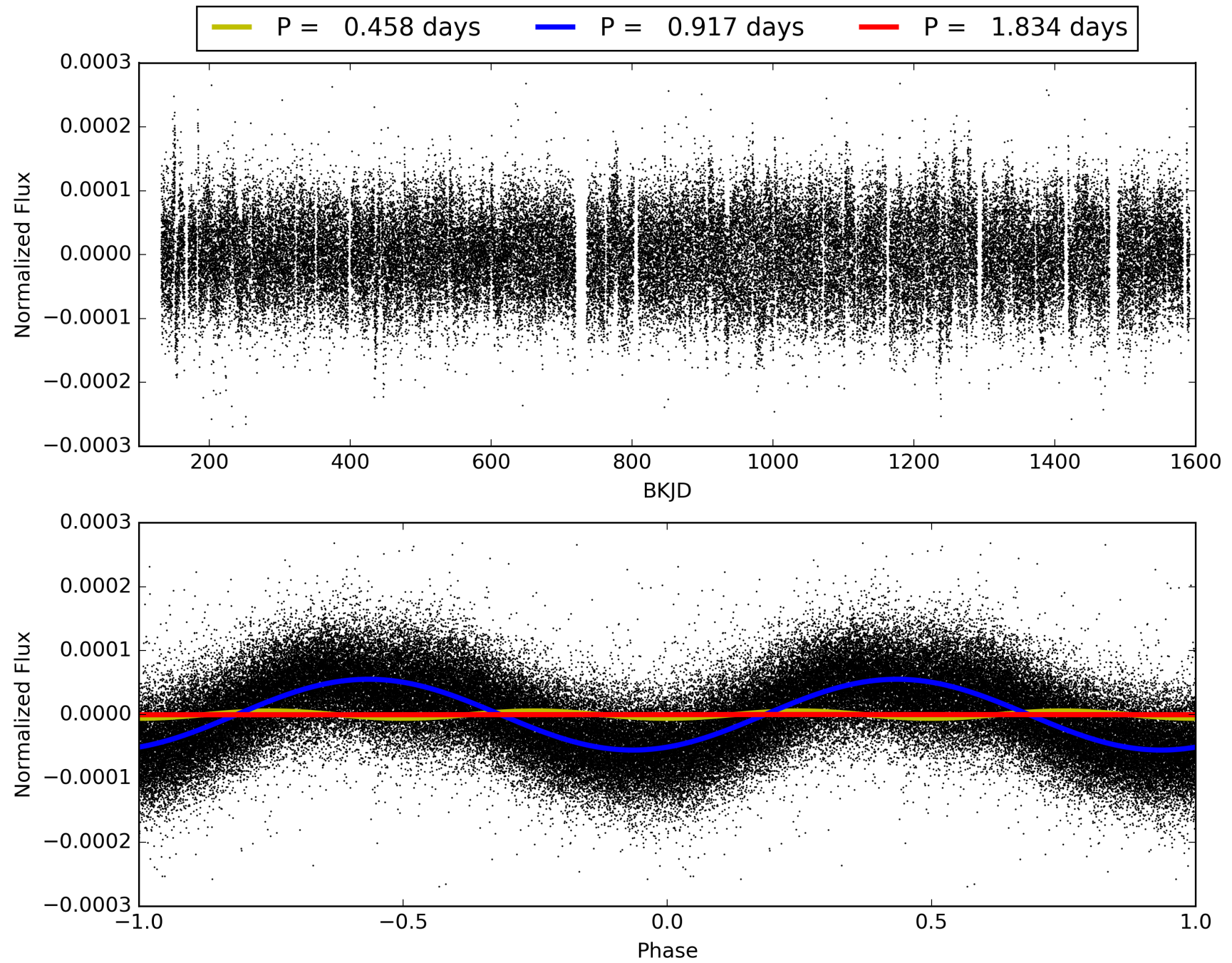
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [845.09σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.35e-19
RollingBand-fgt: 1.00 [1393/1393]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.545 arcsec [1.11σ]
KicOffset-rm: 0.759 arcsec [1.60σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 0.71 [12/17]

TCE 012306497-03, PDC Light Curves

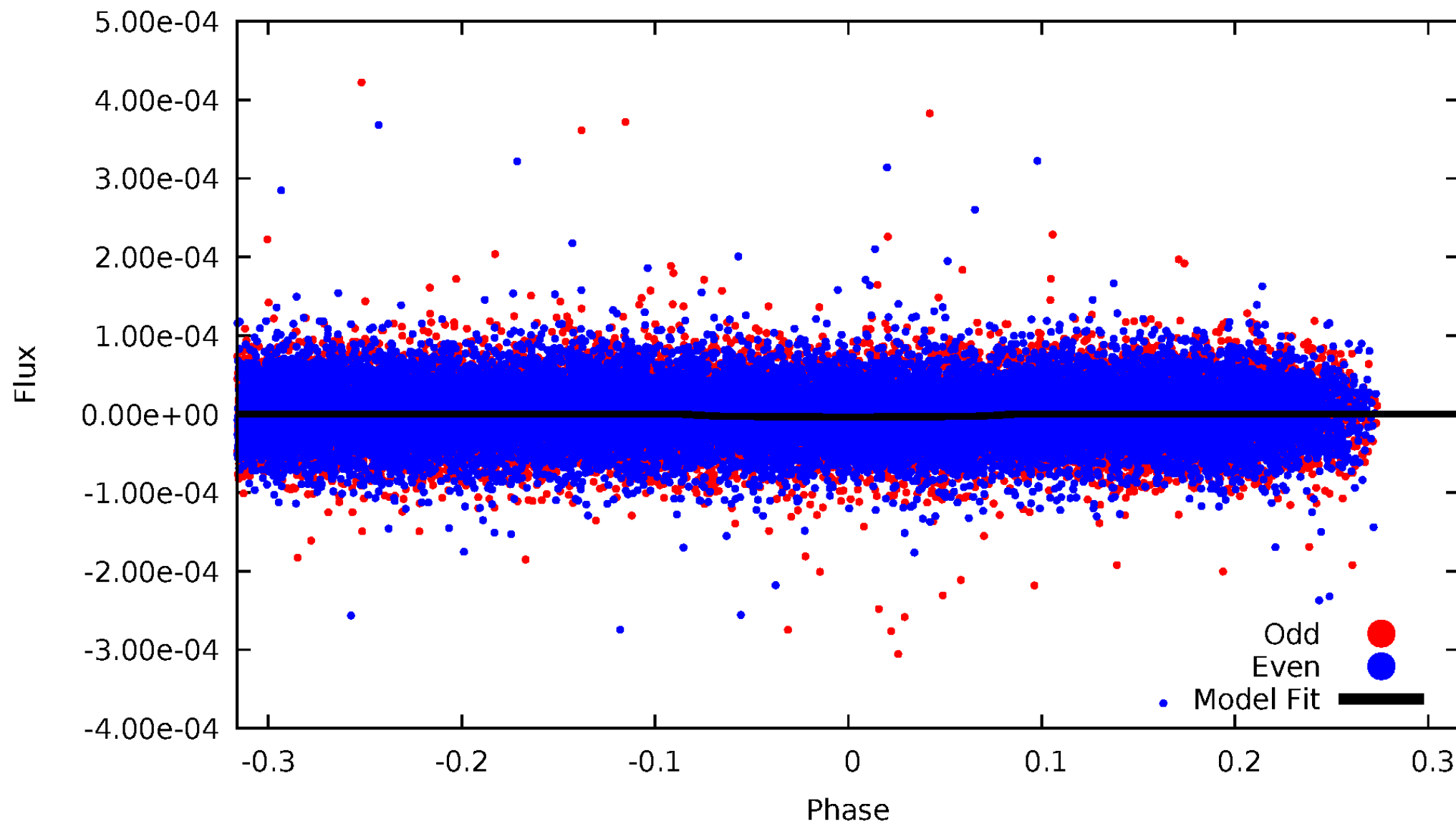


TCE 012306497-03



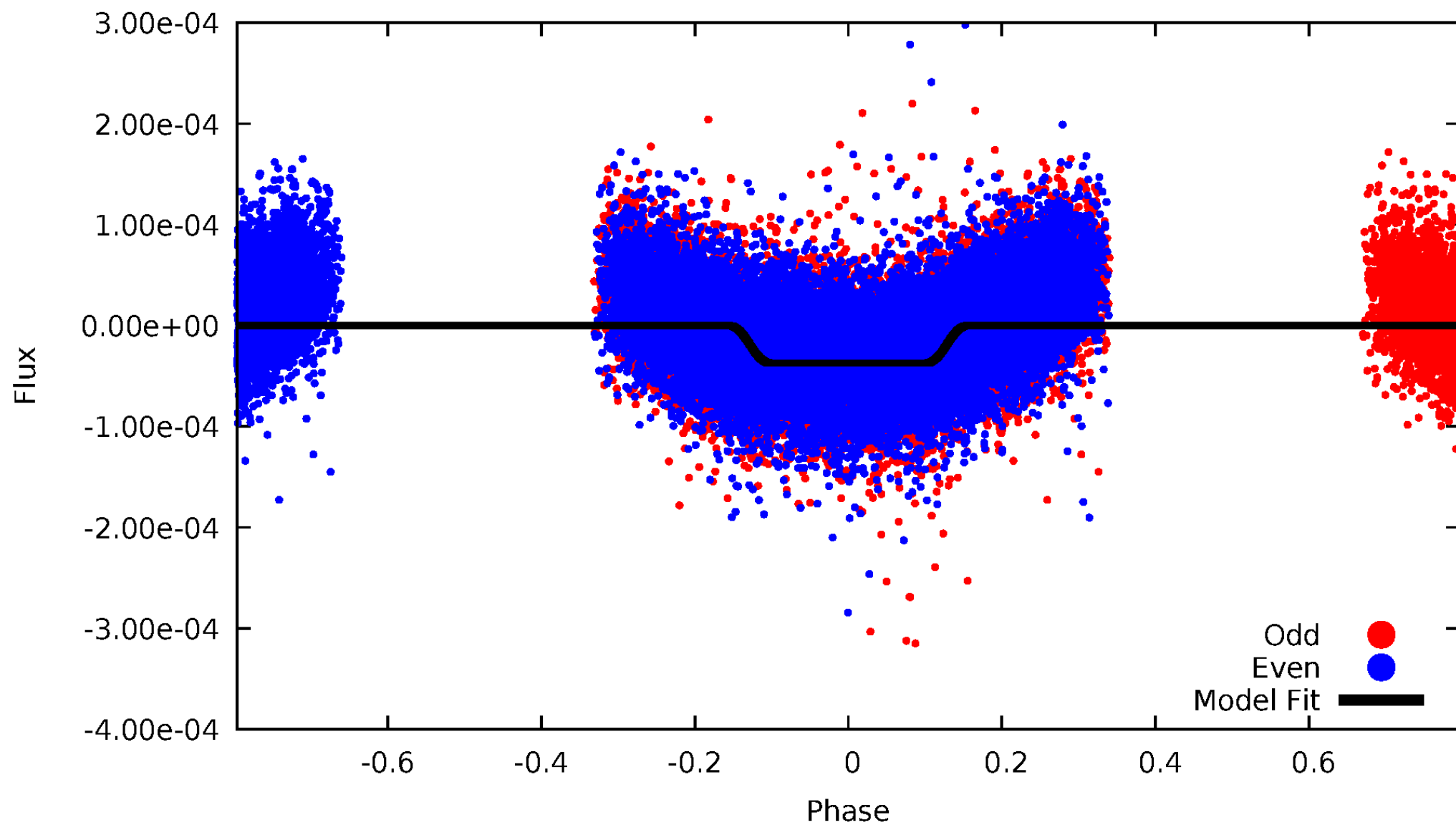
DV Odd/Even

TCE 012306497-03



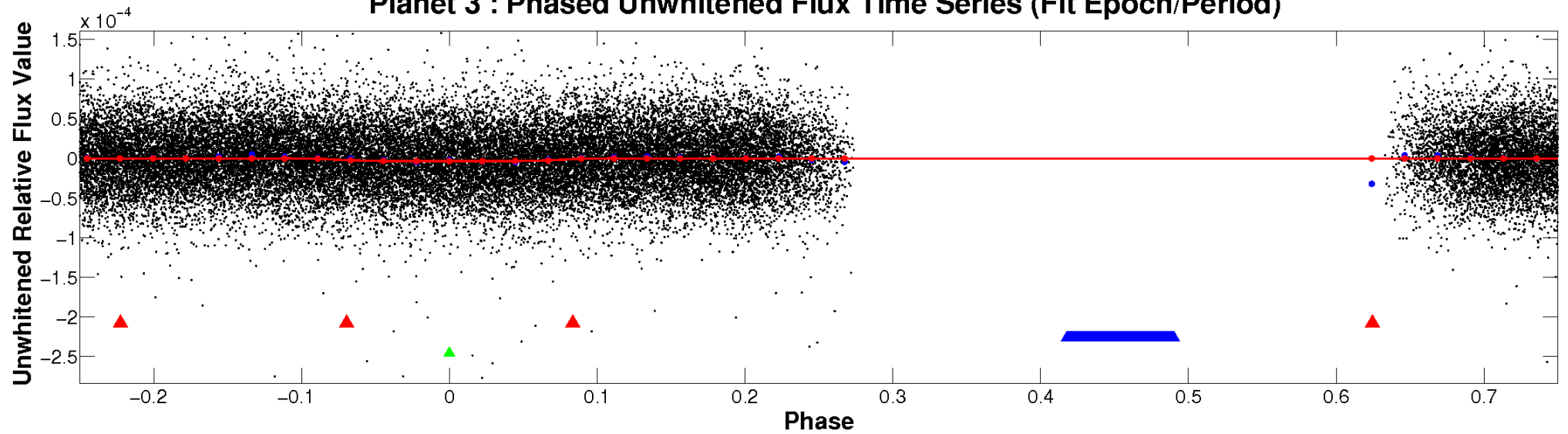
ALT Odd/Even

TCE 012306497-03

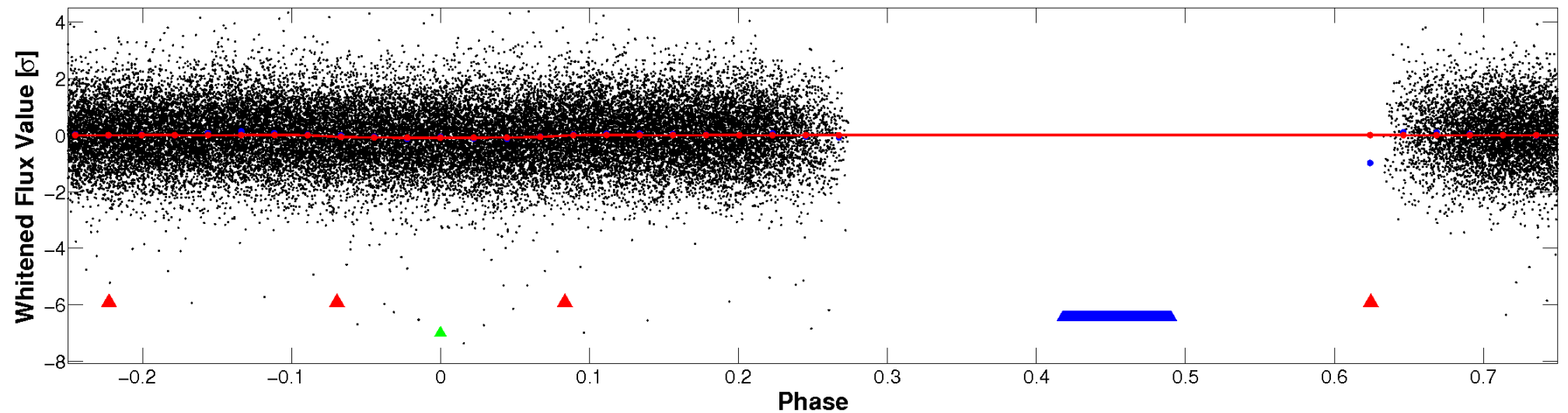


Non-Whitened Vs. Whitened Light Curve

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

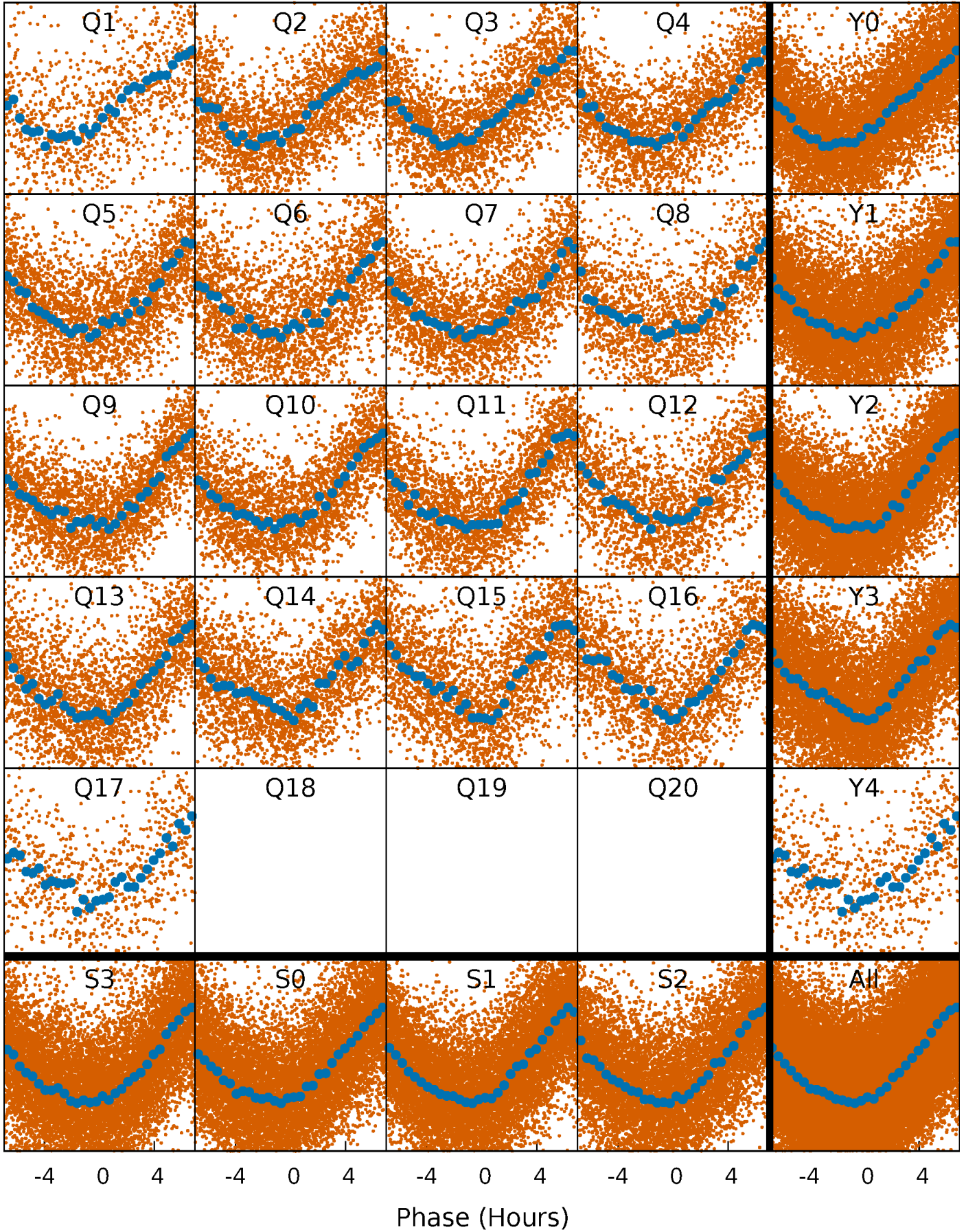


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



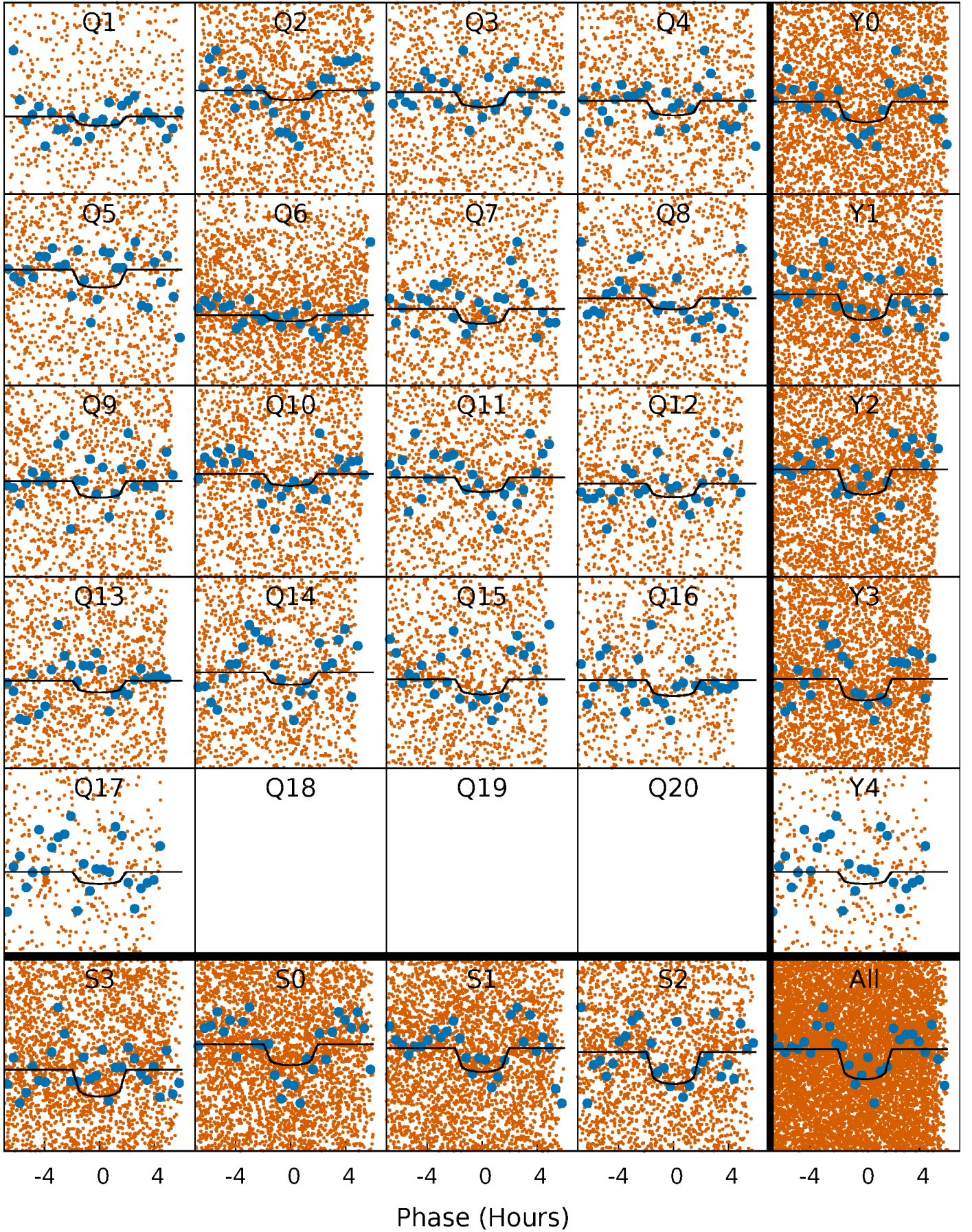
PDC Quarter-Phased Transit Curves

TCE 012306497-03 $P = 0.916856$ Days $T_0 = 132.447355$ (BKJD)



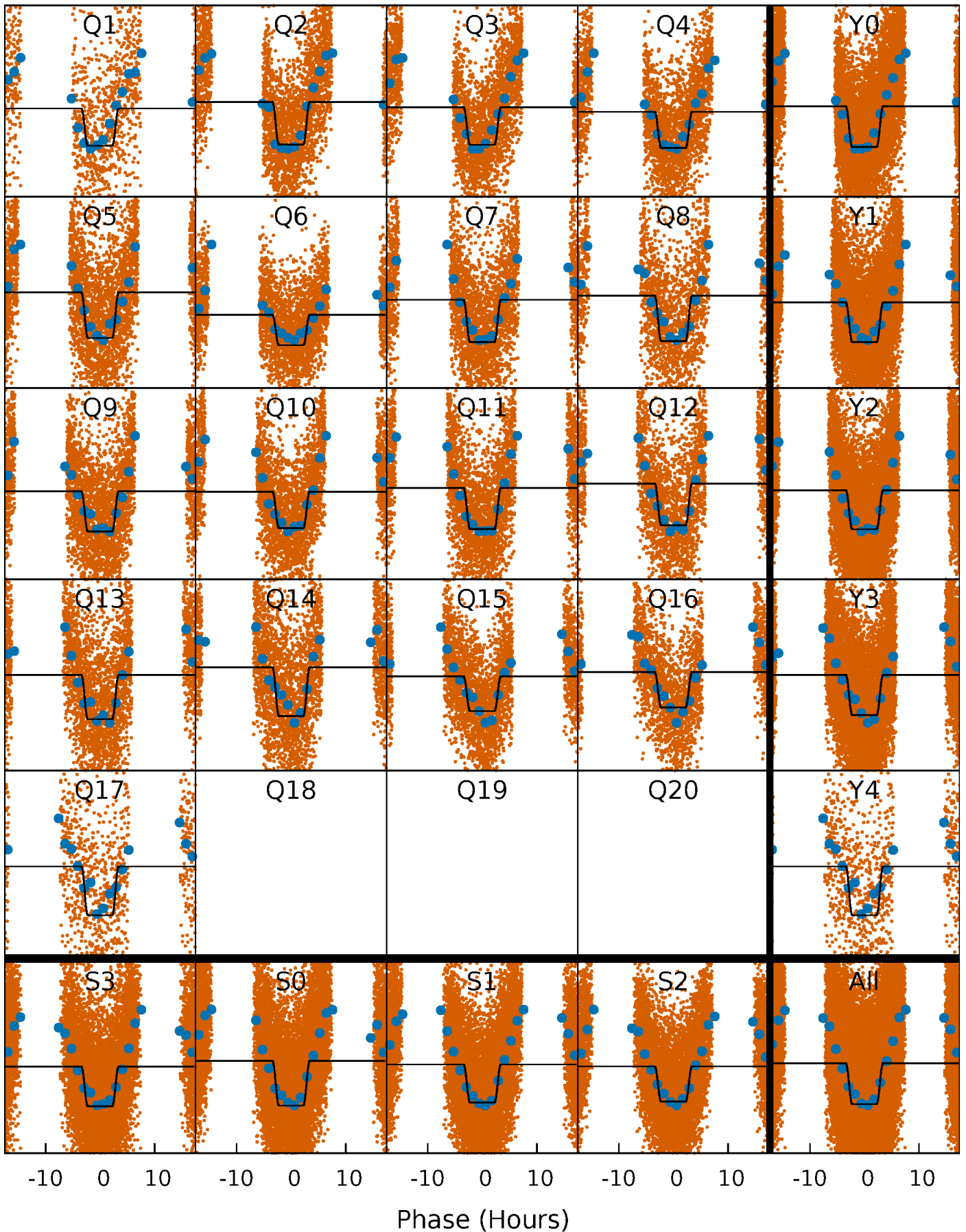
DV Quarter-Phased Transit Curves

TCE 012306497-03 $P = 0.916856$ Days $T_0 = 132.447355$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

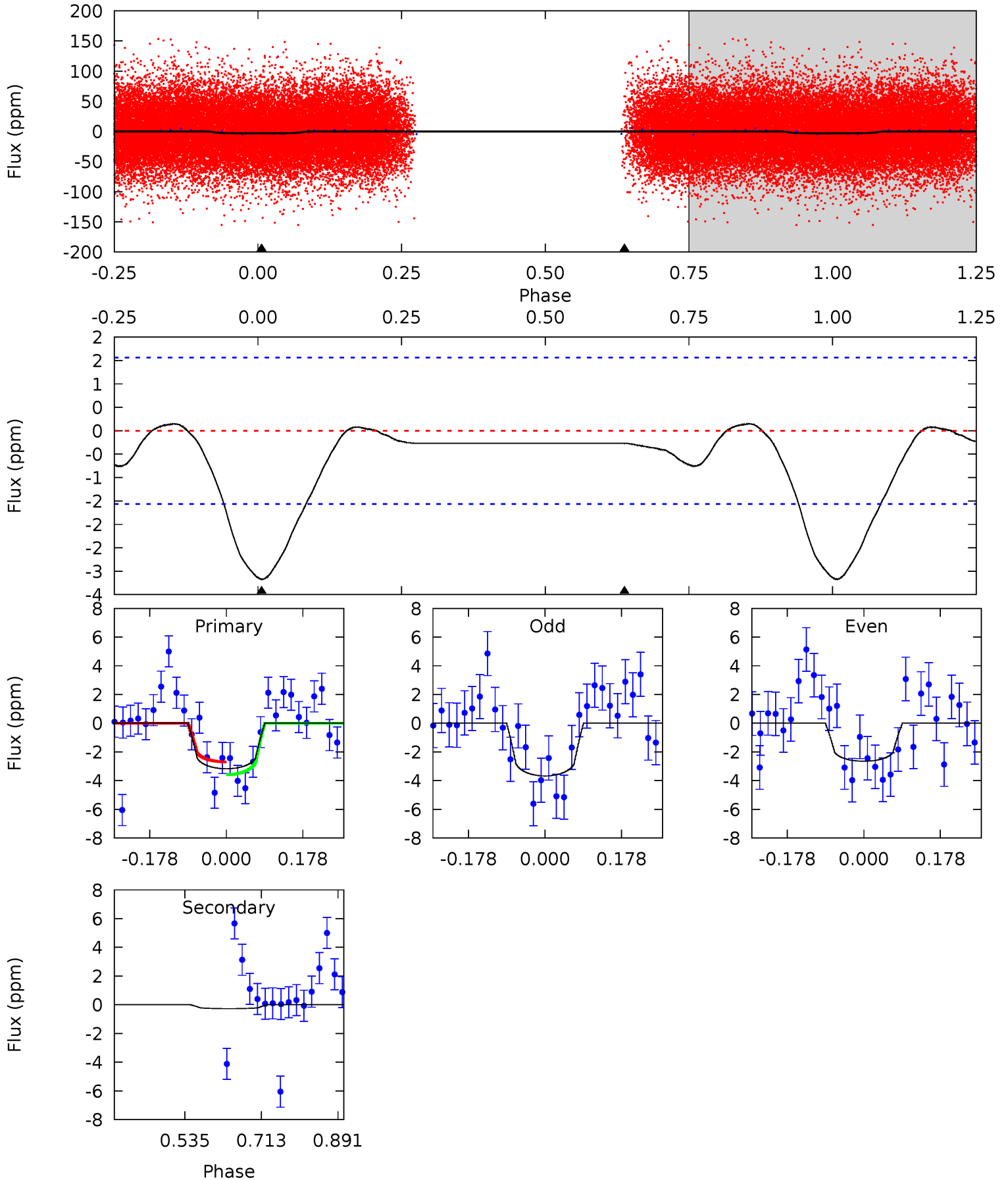
TCE 012306497-03 P= 0.916874 Days $T_0=132.386306$ (BKJD)



DV Model-Shift Uniqueness Test

012306497-03, P = 0.916856 Days, E = 130.613643 Days

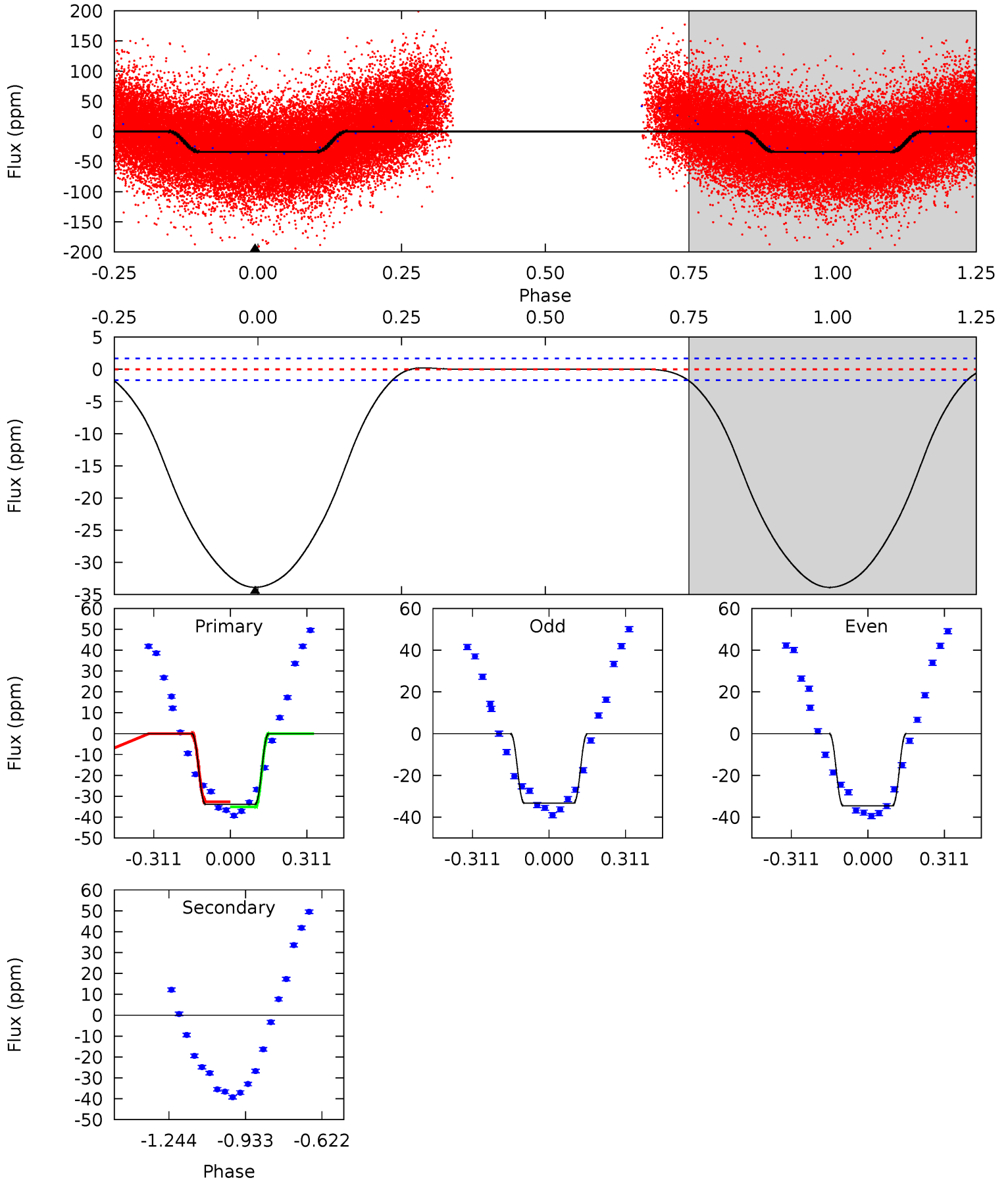
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.02	0.77	0	0	4.44	1.35	0.28	9.02	9.02	0.77	0.77	1.47	0.90	0.05	1.28



Alt Model-Shift Uniqueness Test

012306497-03, P = 0.916874 Days, E = 131.469432 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.6	0	0	0	4.32	1.01	0.83	86.6	86.6	0	0	1.64	1.01	0.01	3.19



Stellar Parameters For KIC 012306497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8218^{+226}_{-368}	$4.072^{+0.135}_{-0.150}$	$0.070^{+0.250}_{-0.450}$	$2.115^{+0.495}_{-0.495}$	$1.923^{+0.317}_{-0.352}$	$0.286^{+0.220}_{-0.125}$
	+3%/-4%	+3%/-4%	+357%/-643%	+23%/-23%	+16%/-18%	+77%/-44%
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 012306497-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-0 ± 0	$0.40^{+0.22}_{-0.18}$	4875^{+341}_{-341}	3579^{+2131}_{-7990}	$0.441^{+1.232}_{-0.554}$
Alt.	0 ± 0	$1.40^{+0.26}_{-0.25}$	4886^{+309}_{-345}	-4144^{+265}_{-242}	$0.002^{+0.058}_{-0.060}$

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 $A_{obs} \gg 1.0$

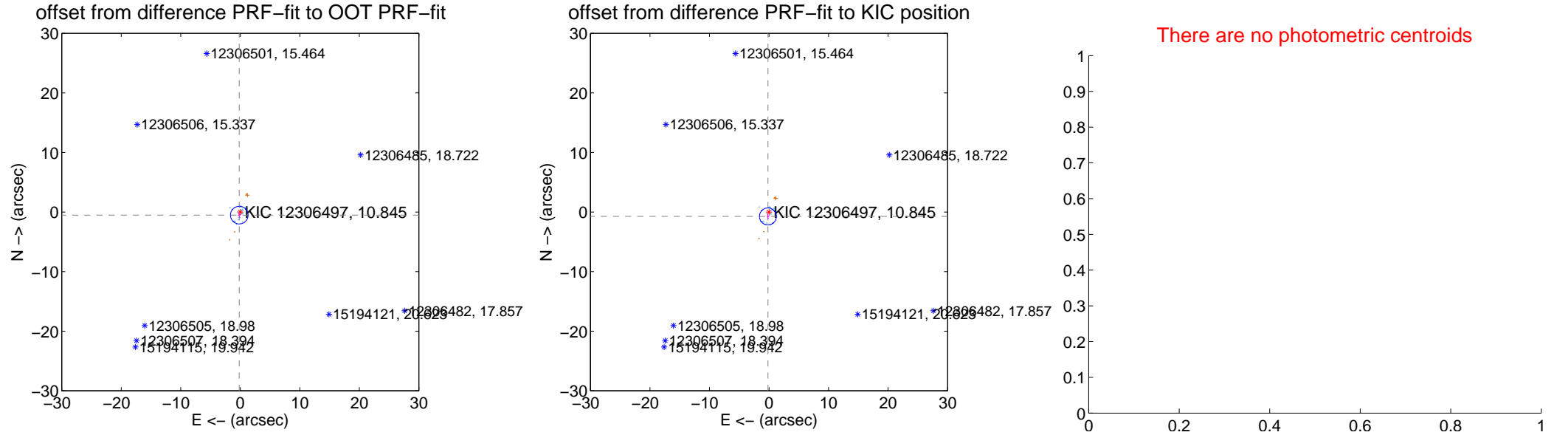
DV Centroid Data

Supplemental centroid analysis for 012306497-03. **Kepler magnitude: 10.85.** Transit SNR 7.58

There are 13 quarters with good PRF difference image offsets

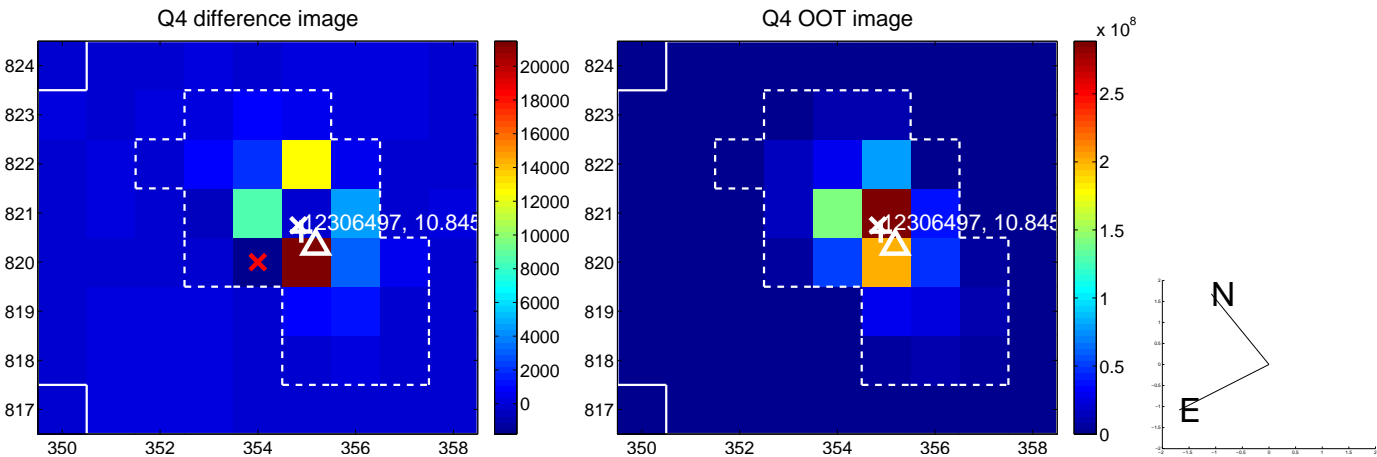
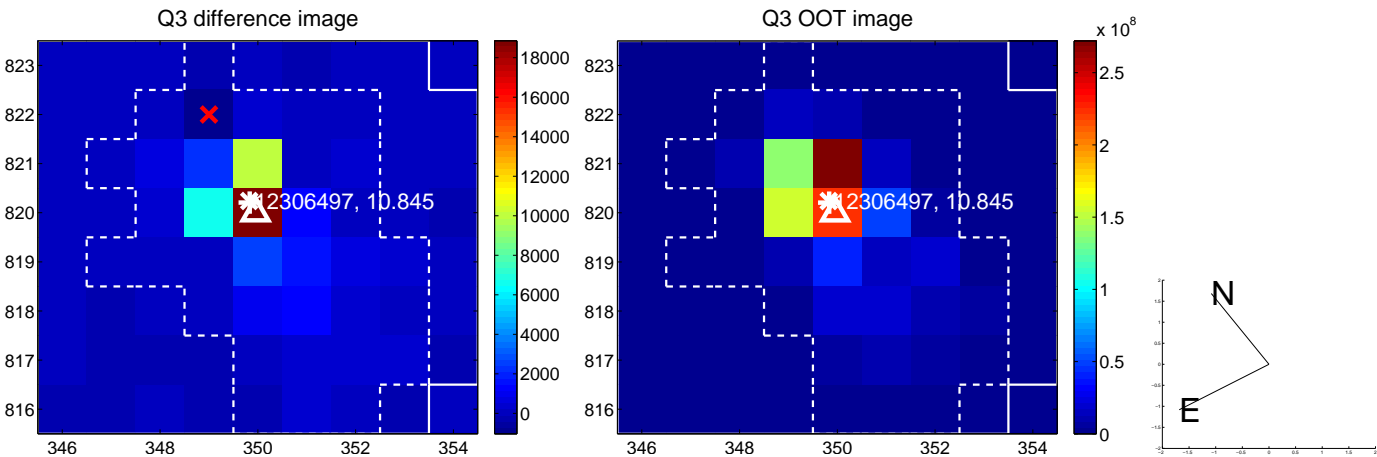
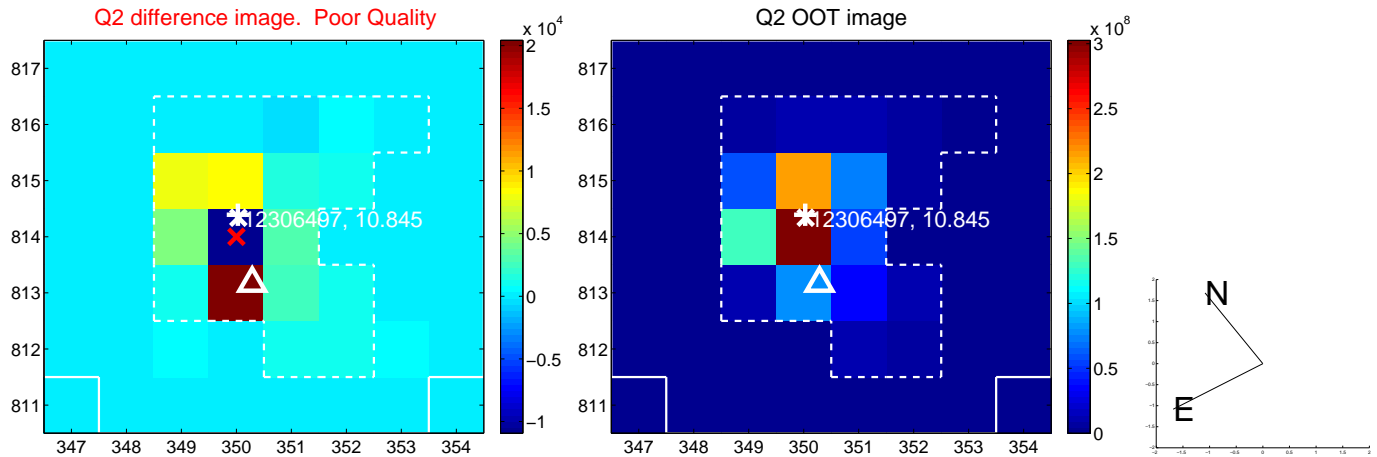
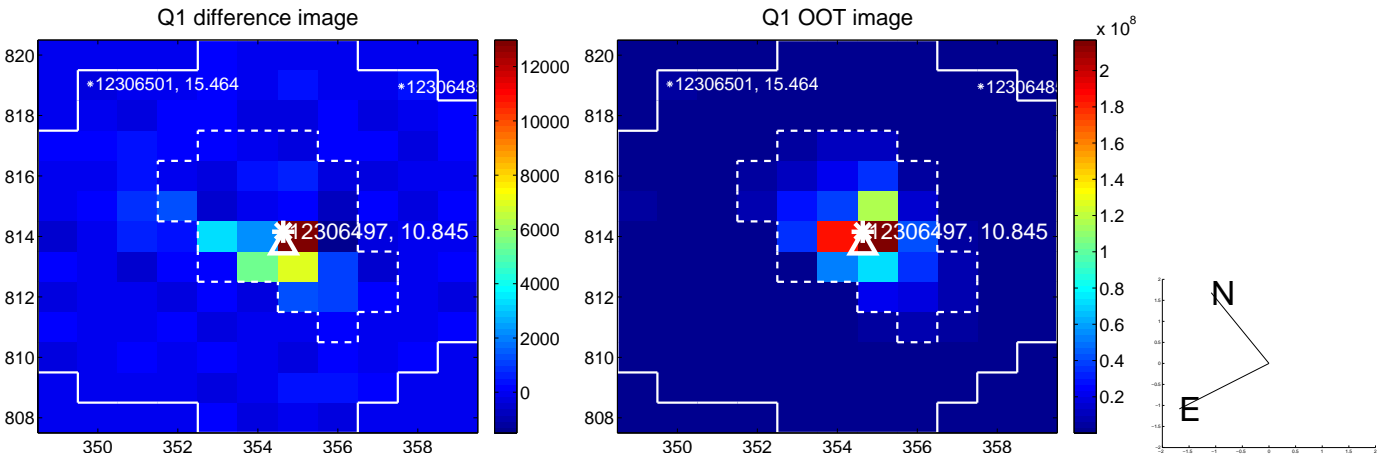
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.545 ± 0.493	1.11	0.171 ± 0.214	-0.518 ± 0.470
PRF-fit source offset from KIC position	0.759 ± 0.474	1.60	0.182 ± 0.210	-0.737 ± 0.453
photometric centroid source offset	—	—	—	—

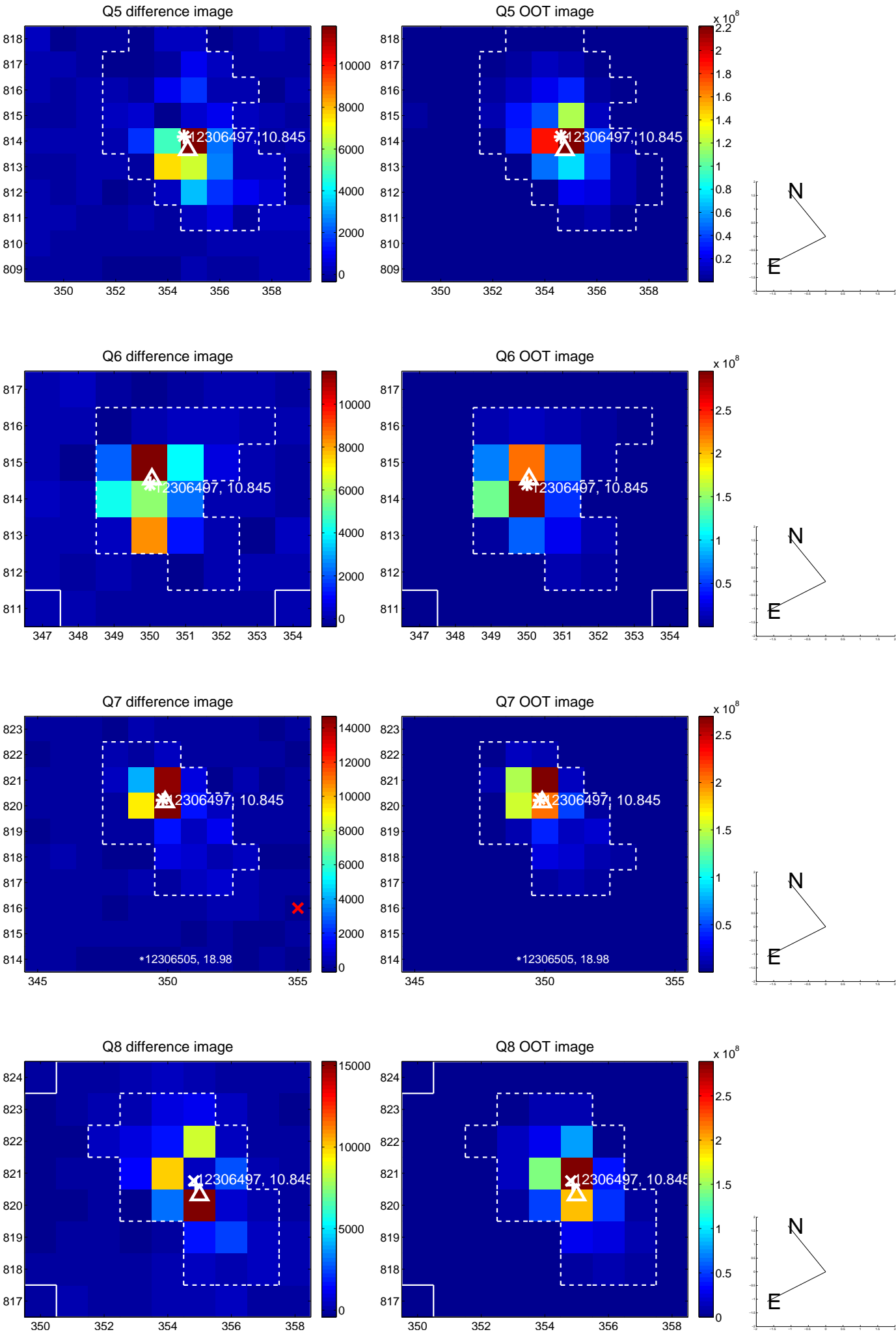


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

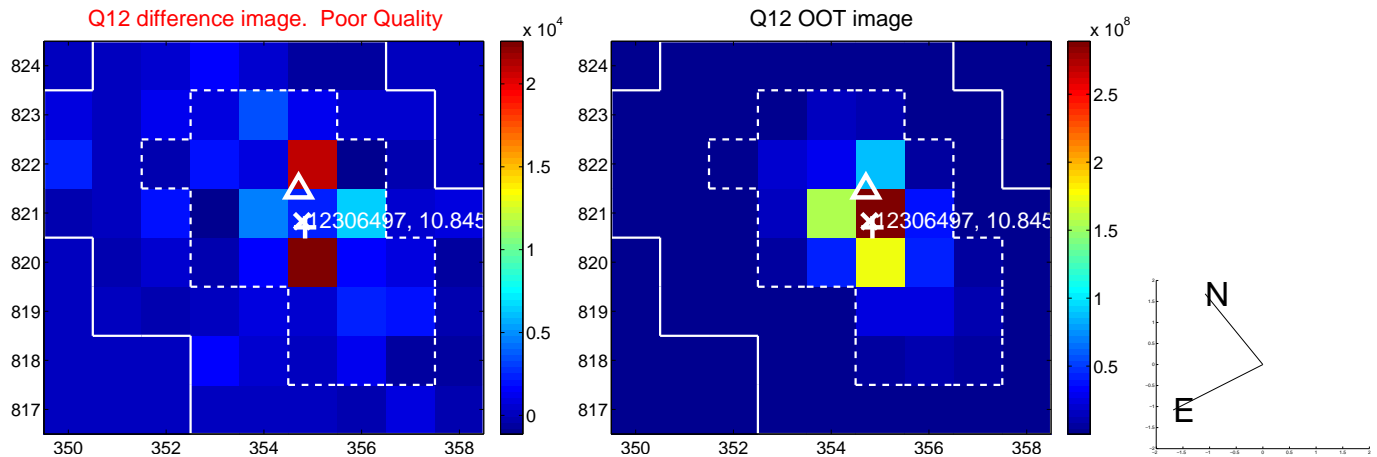
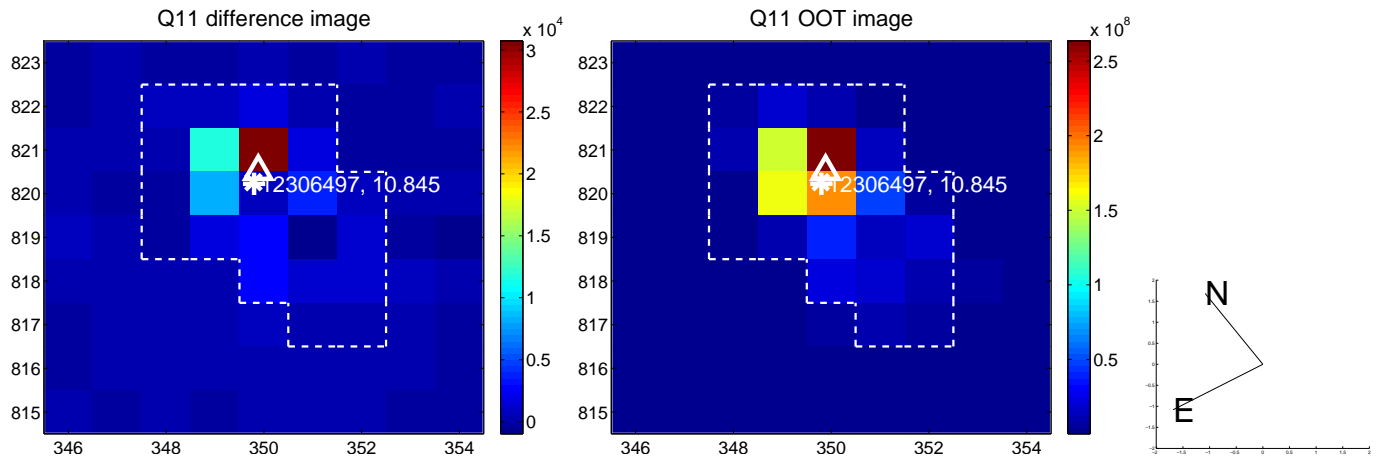
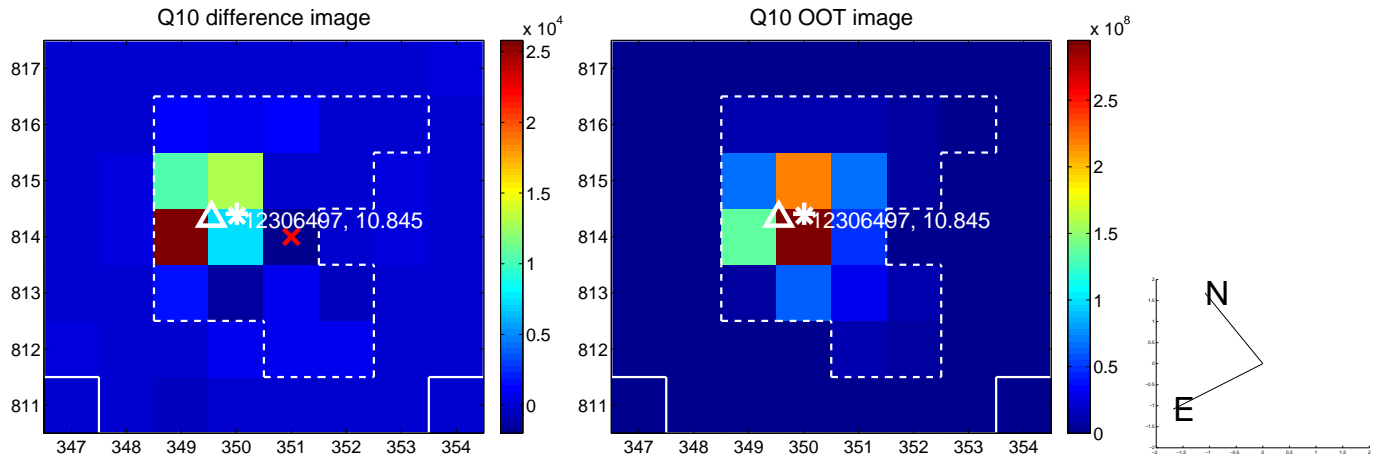
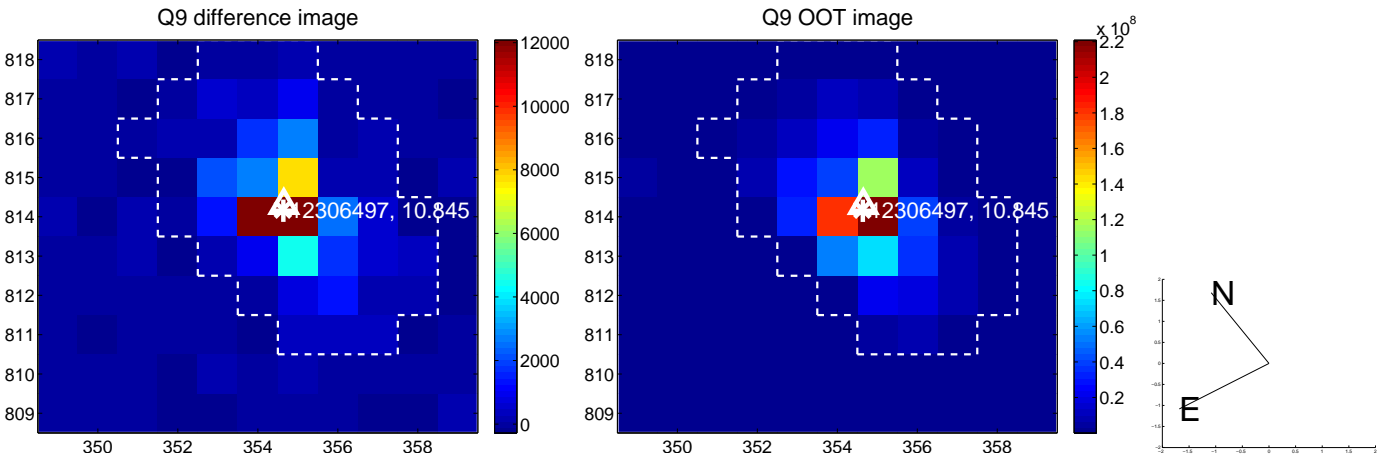
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



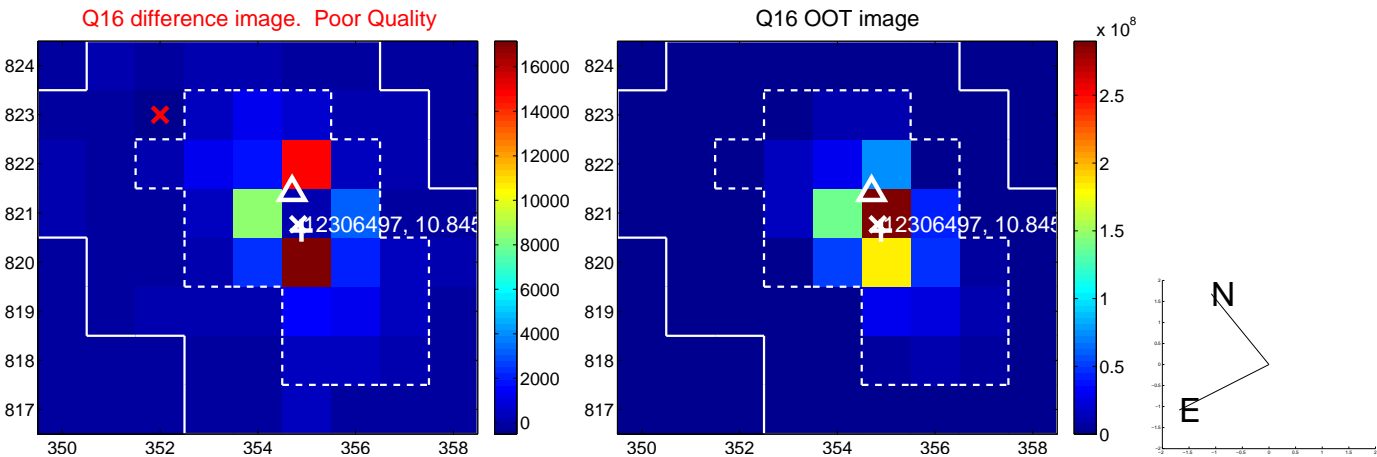
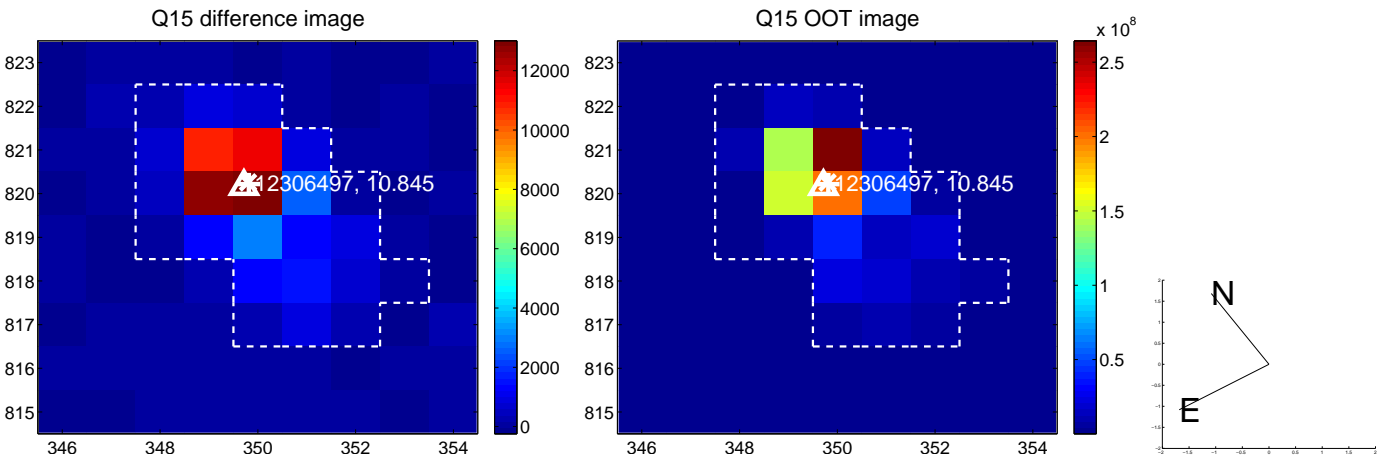
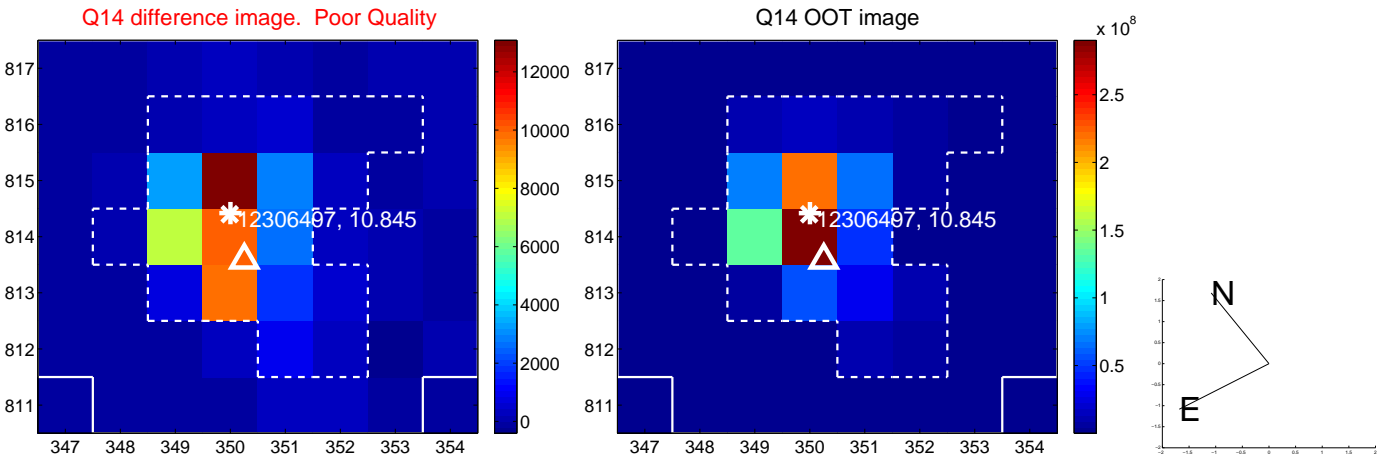
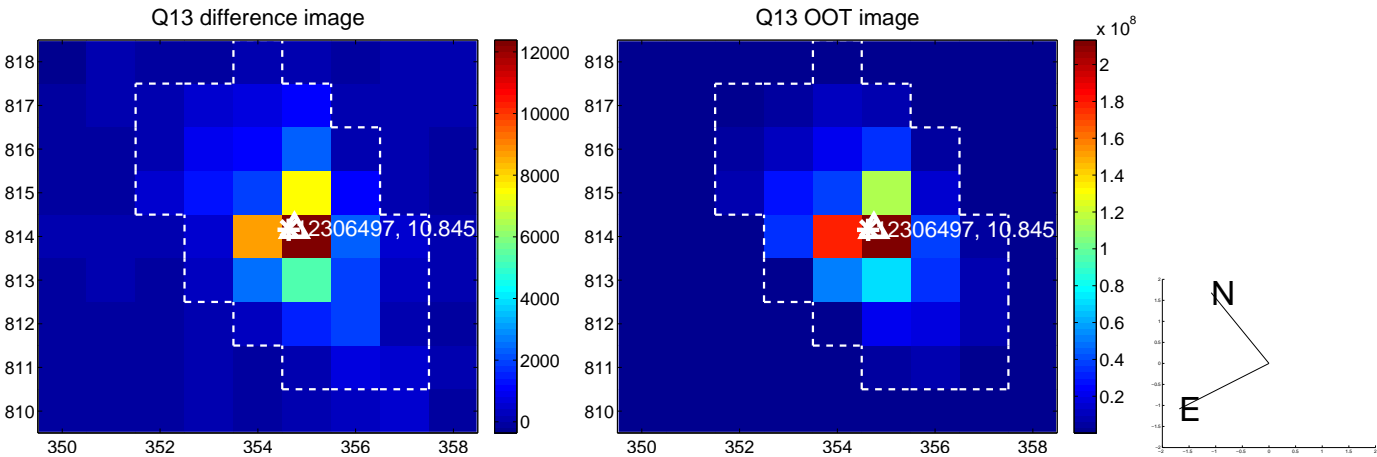
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



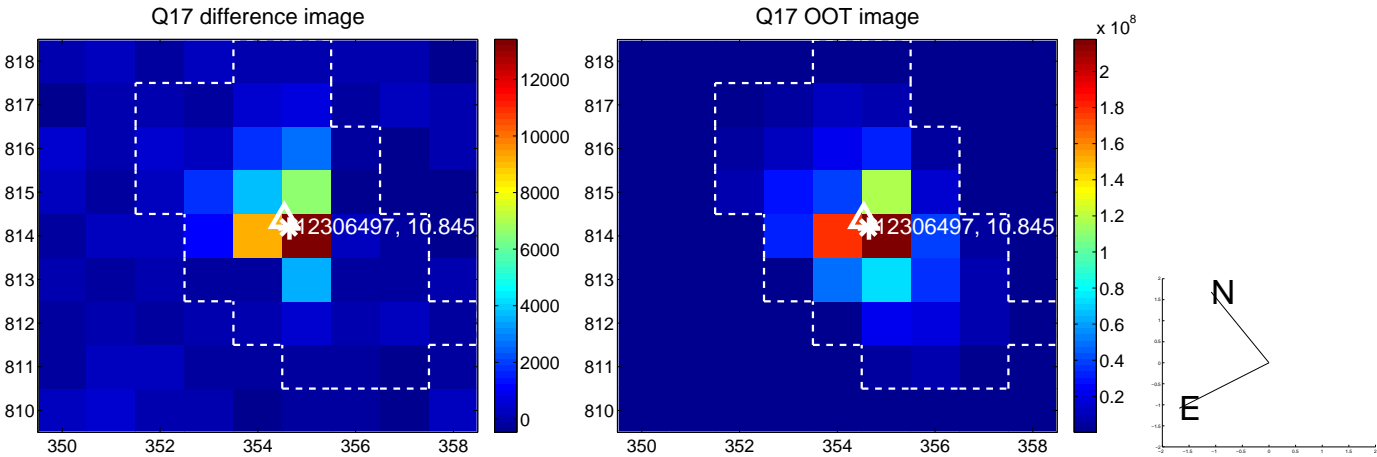
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

