

KIC 003241199

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})
003241199-01	OBS	No	0.596168	131.570081	527.9	1.385	12.8	14.7	1.96	8090	5.27	51145.83
003241199-02	OBS	No	0.596167	131.930619	444.5	1.039	11.7	11.7	1.96	8090	4.22	51145.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241199-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003241199-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

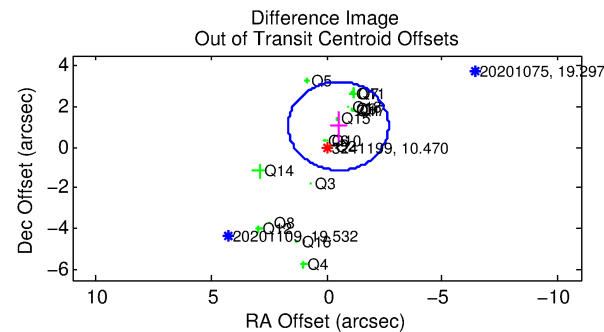
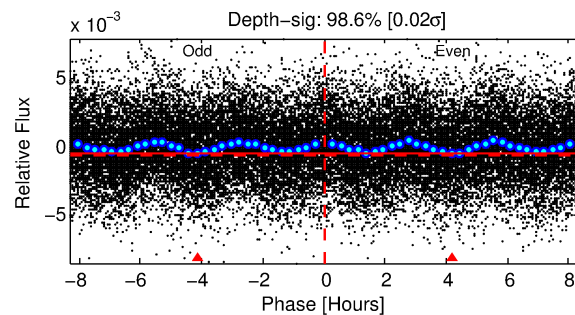
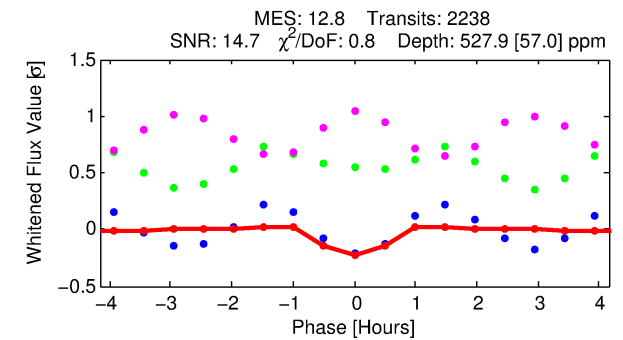
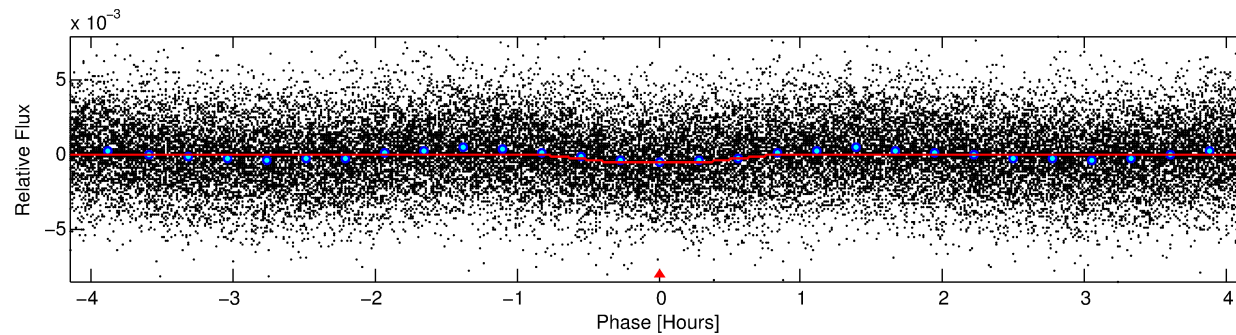
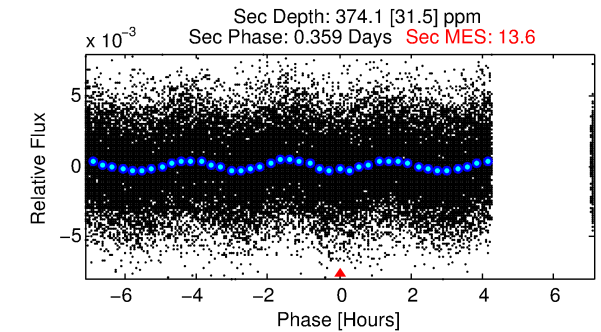
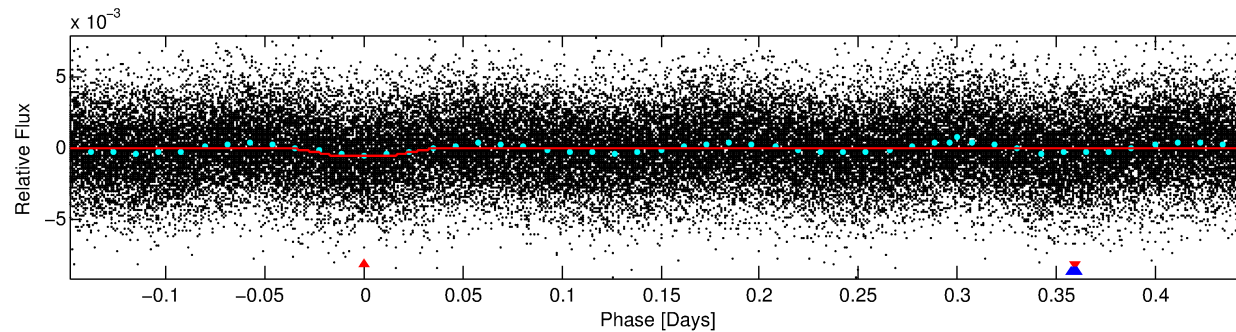
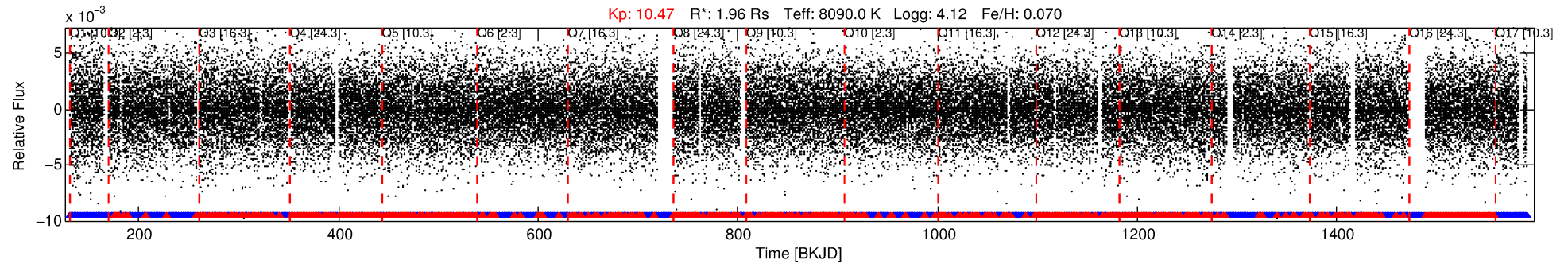
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003241199-01

No Significant Match Found

DV One-Page Summary

KIC: 3241199 Candidate: 1 of 2 Period: 0.596 d



DV Fit Results:

Period = 0.59617 [0.00001] d
Epoch = 131.5701 [0.0013] BKJD
Rp/R* = 0.0246 [0.0067]
a/R* = 1.85 [2.11]
b = 0.90 [0.34]
Seff = 51145.83 [17376.67]
Teq = 3835 [326] K
Rp = 5.27 [1.93] Re
a = 0.0170 [0.0034] AU
Ag = 2.14 [1.33] [0.86σ]
Teffp = 7174 [1041] K [3.06σ]

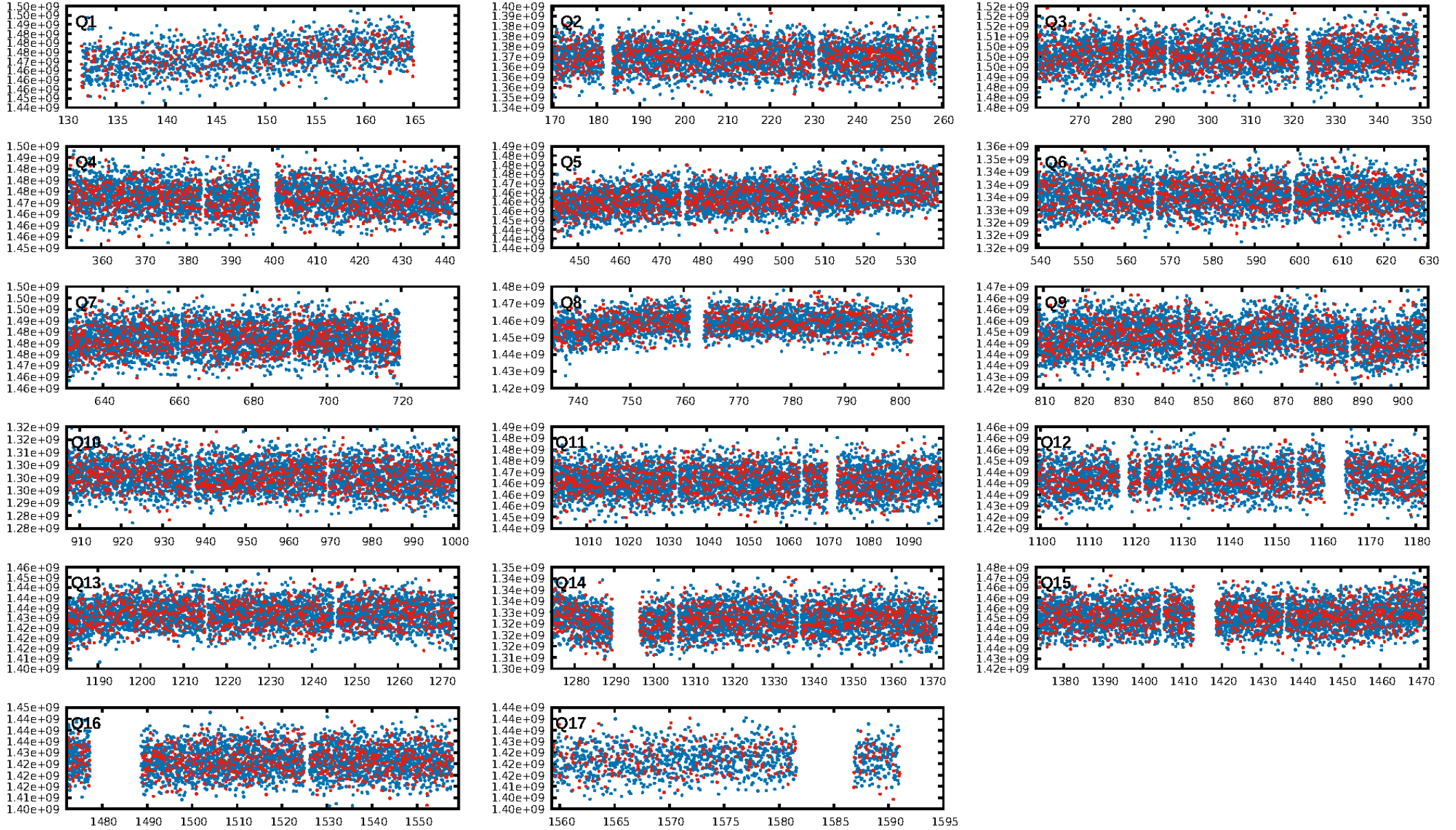
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.46e-31
RollingBand-fgt: 0.72 [1535/2135]
GhostDiagnostic-chr: N/A
Centroid-sig: 64.8%
Centroid-so: 0.145 arcsec [3.65σ]
OotOffset-rm: 1.160 arcsec [1.60σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 1.204 arcsec [1.60σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

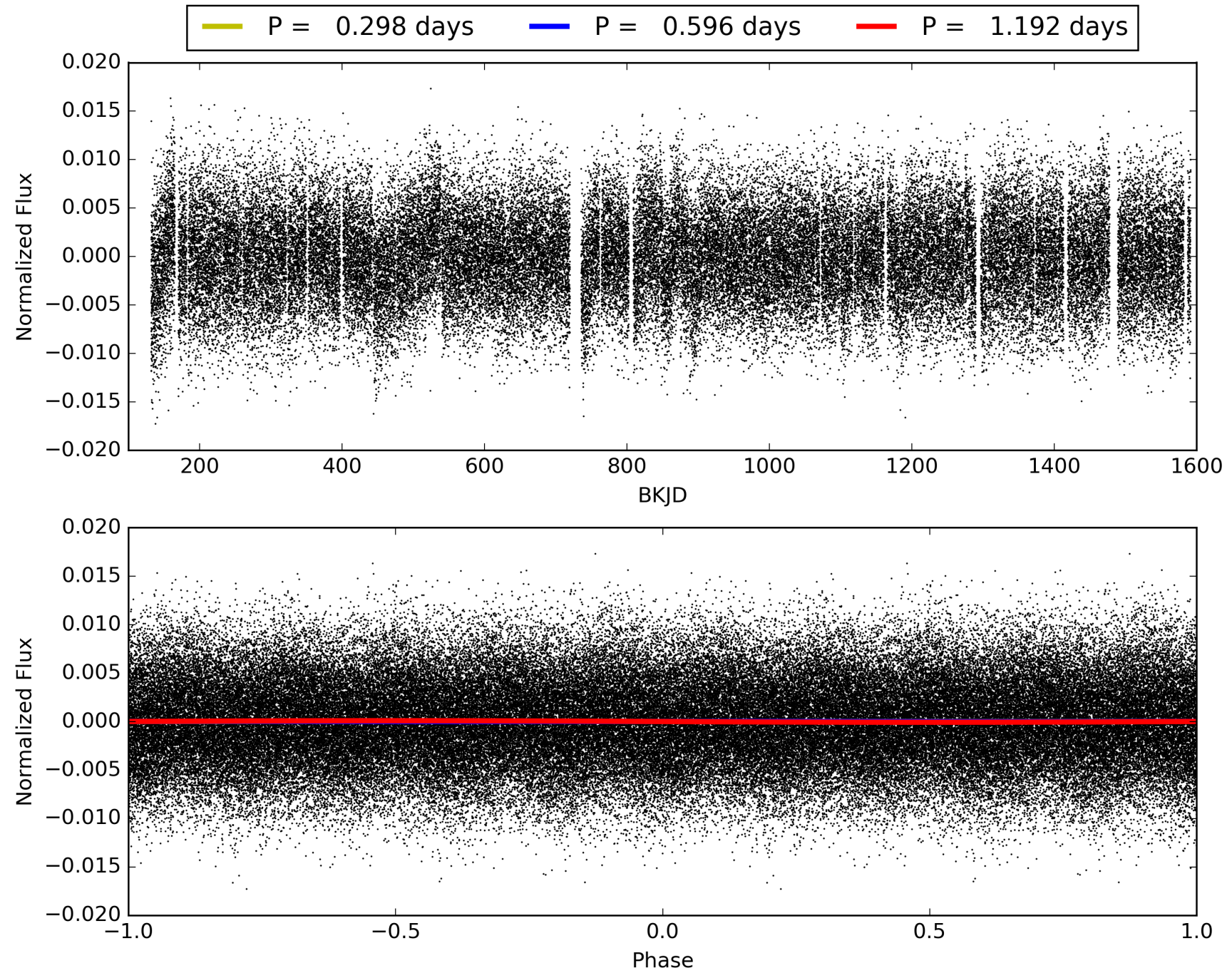
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:23:27 Z

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

TCE 003241199-01, PDC Light Curves

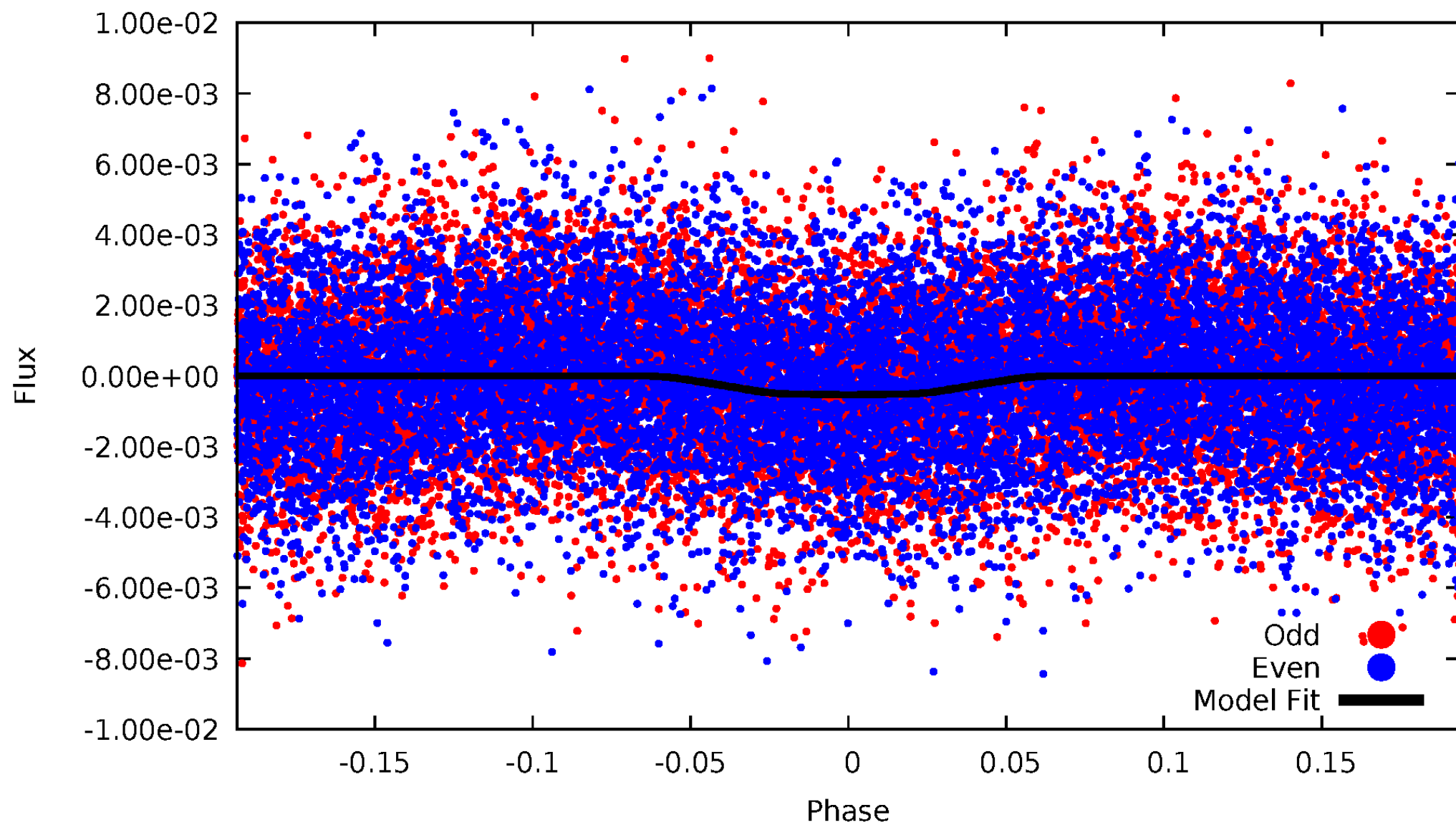


TCE 003241199-01



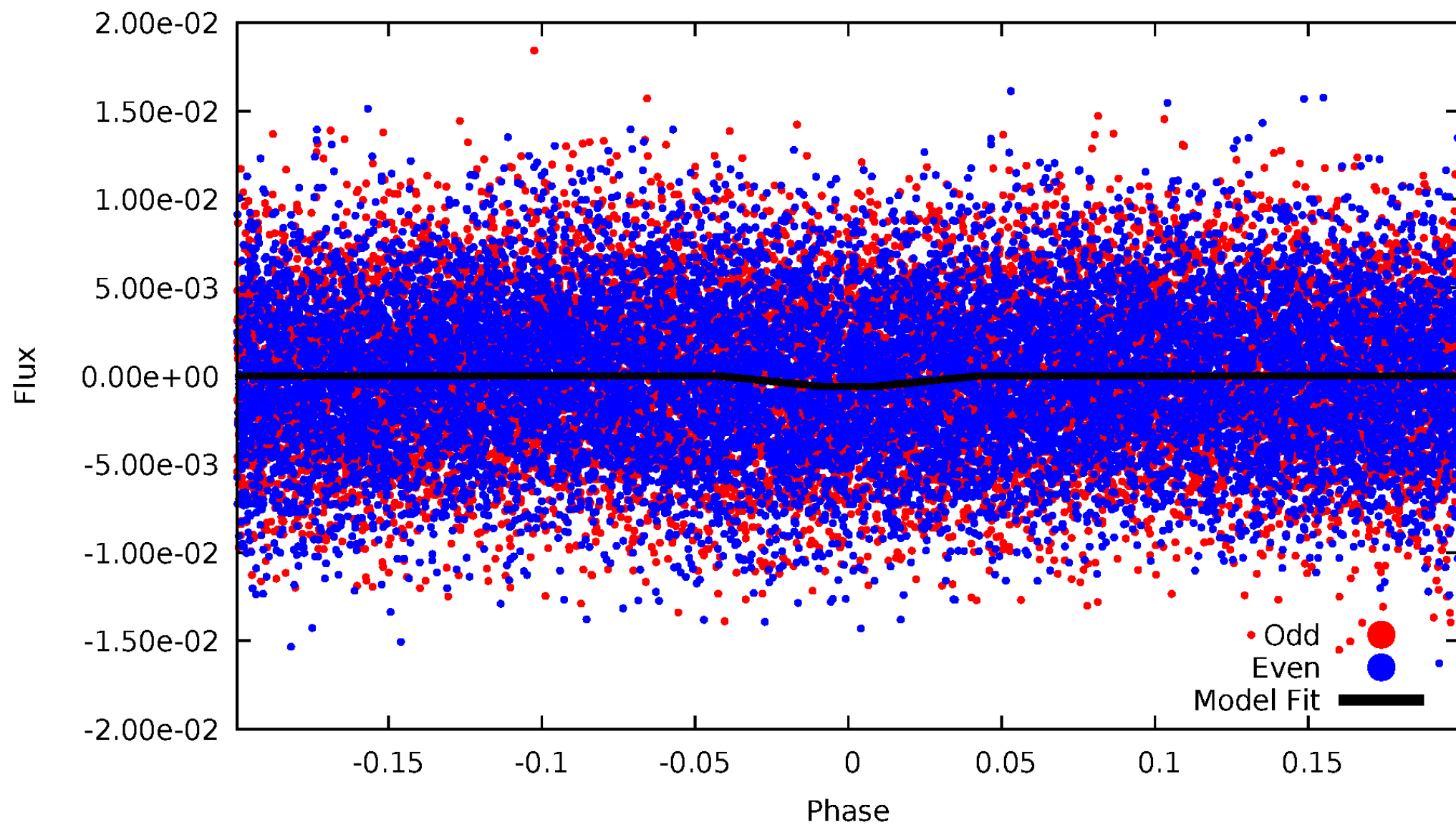
DV Odd/Even

TCE 003241199-01

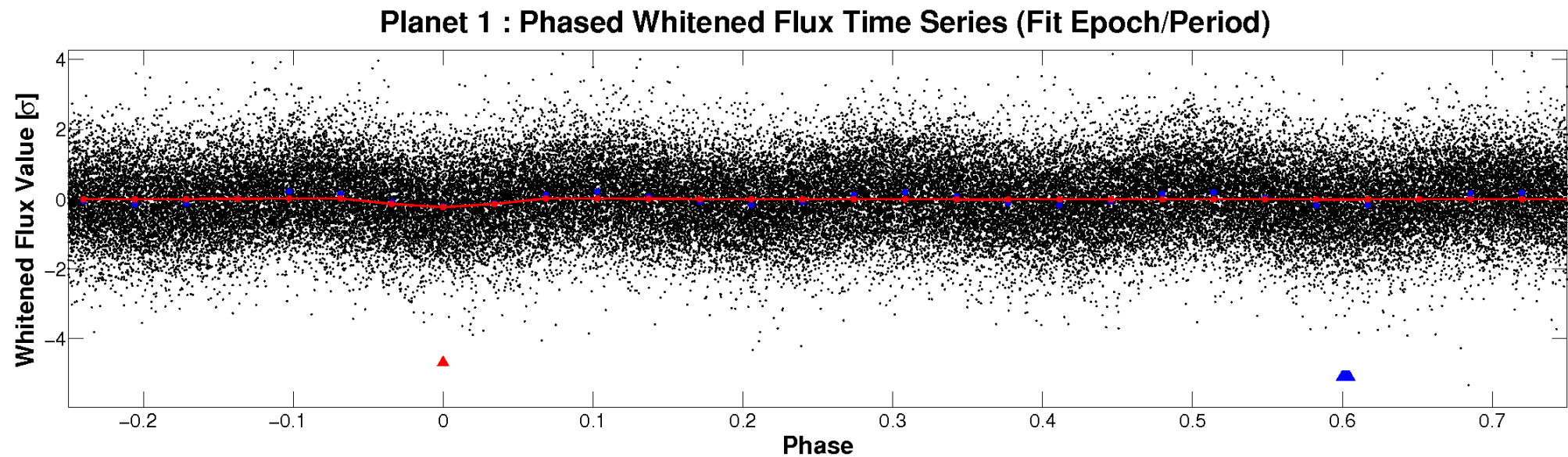
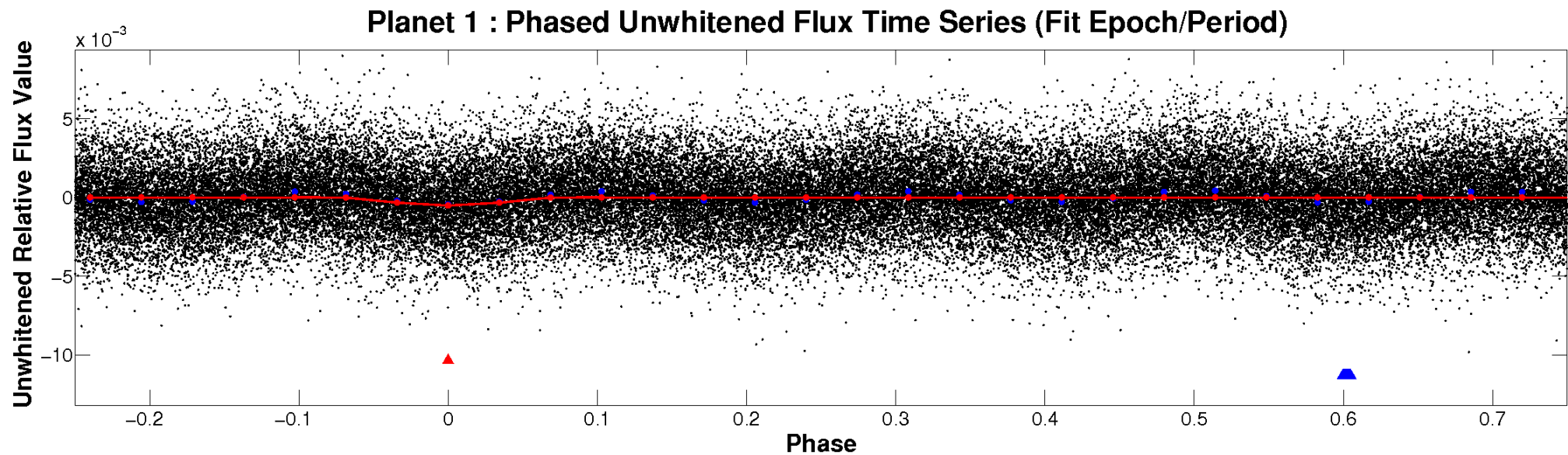


ALT Odd/Even

TCE 003241199-01

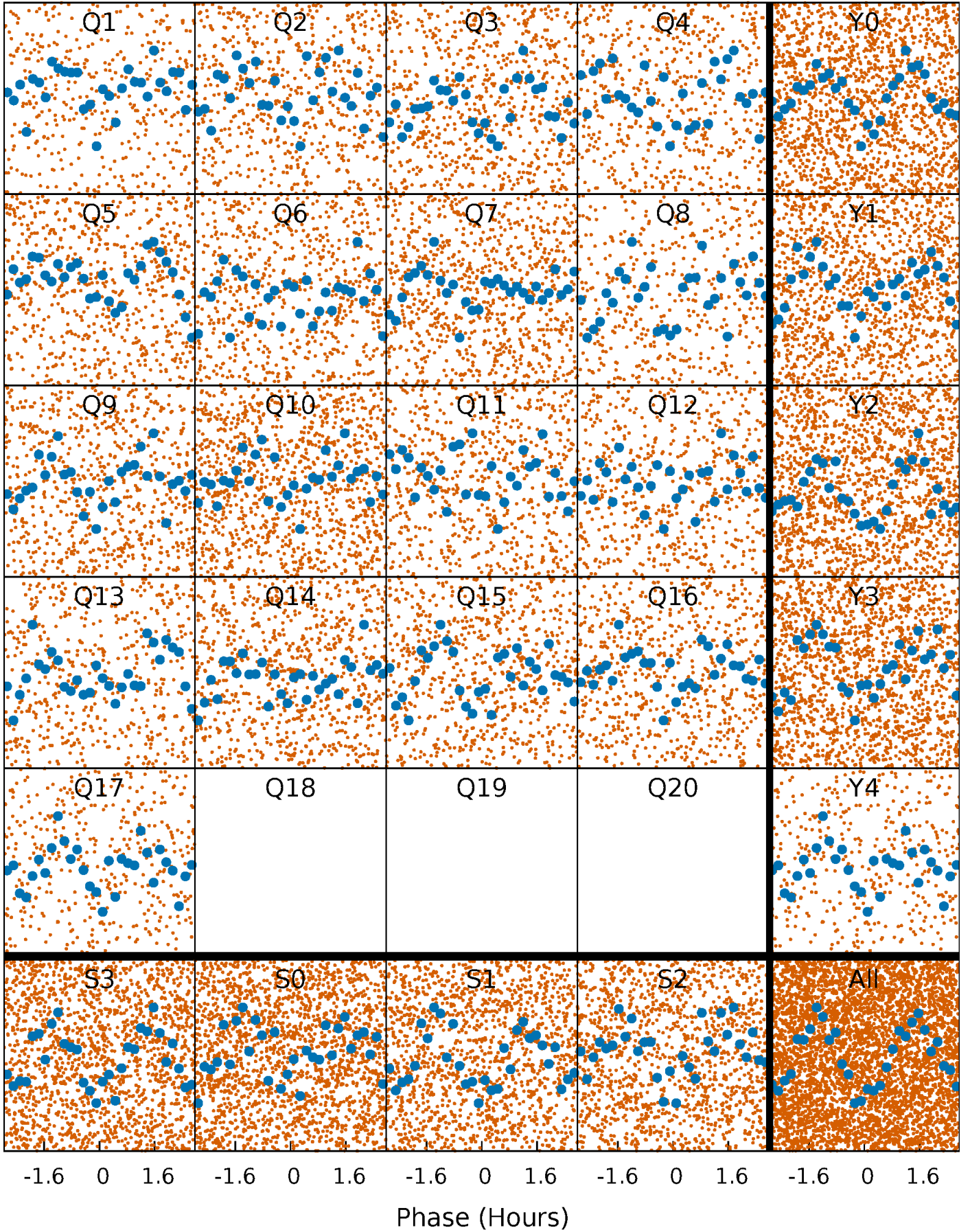


Non-Whitened Vs. Whitened Light Curve



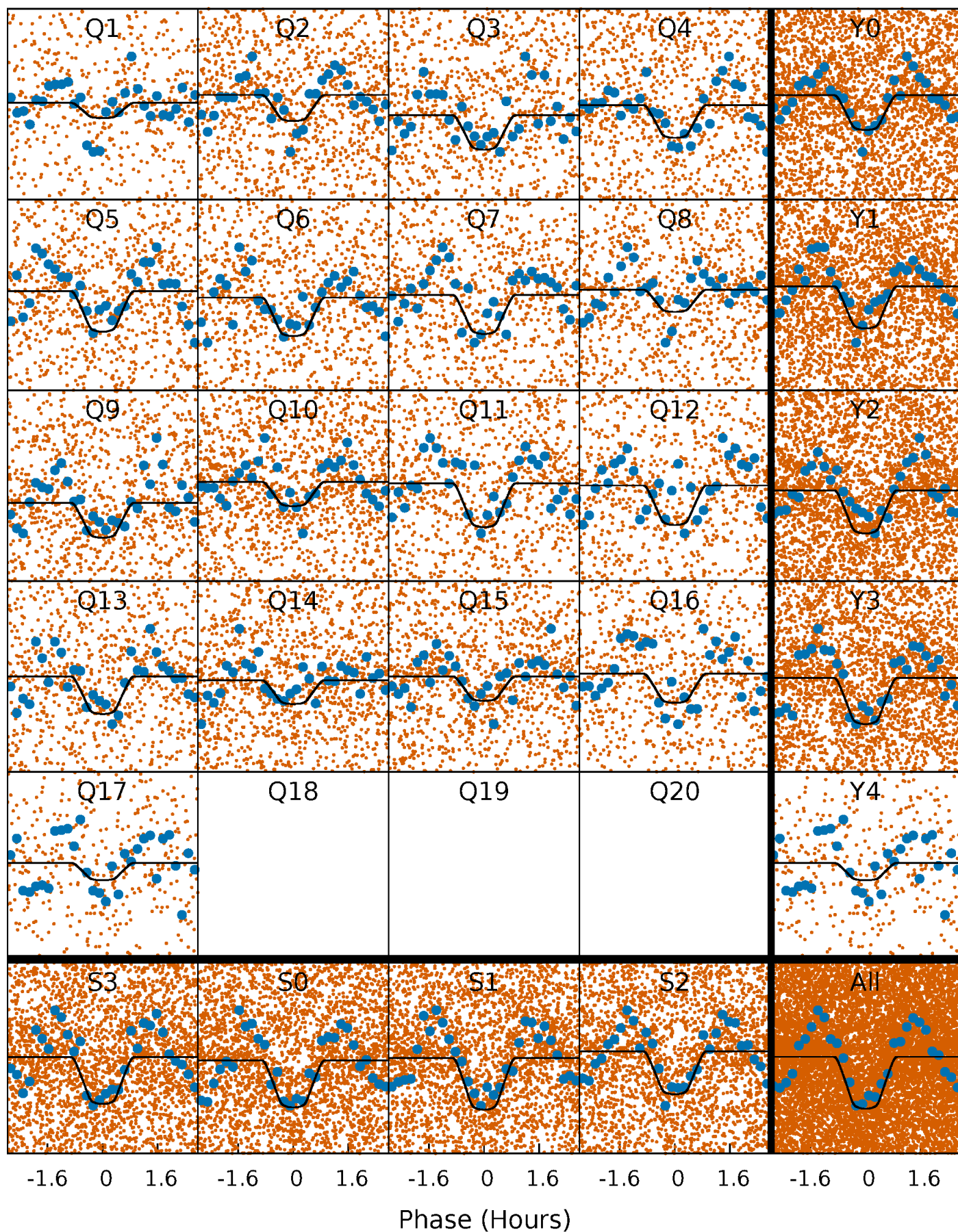
PDC Quarter-Phased Transit Curves

TCE 003241199-01 P= 0.596168 Days $T_0=131.570081$ (BKJD)



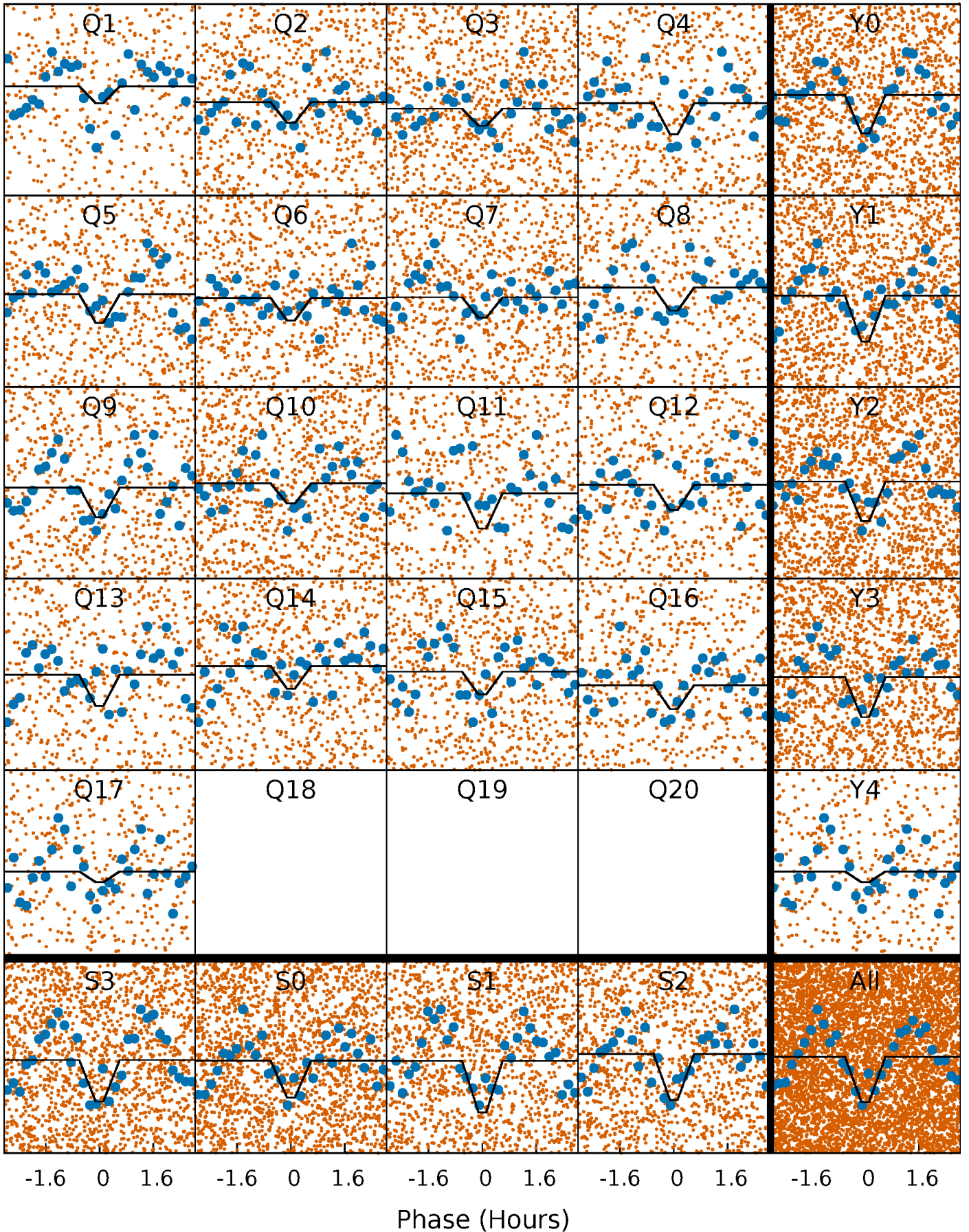
DV Quarter-Phased Transit Curves

TCE 003241199-01 P= 0.596168 Days $T_0=131.570081$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

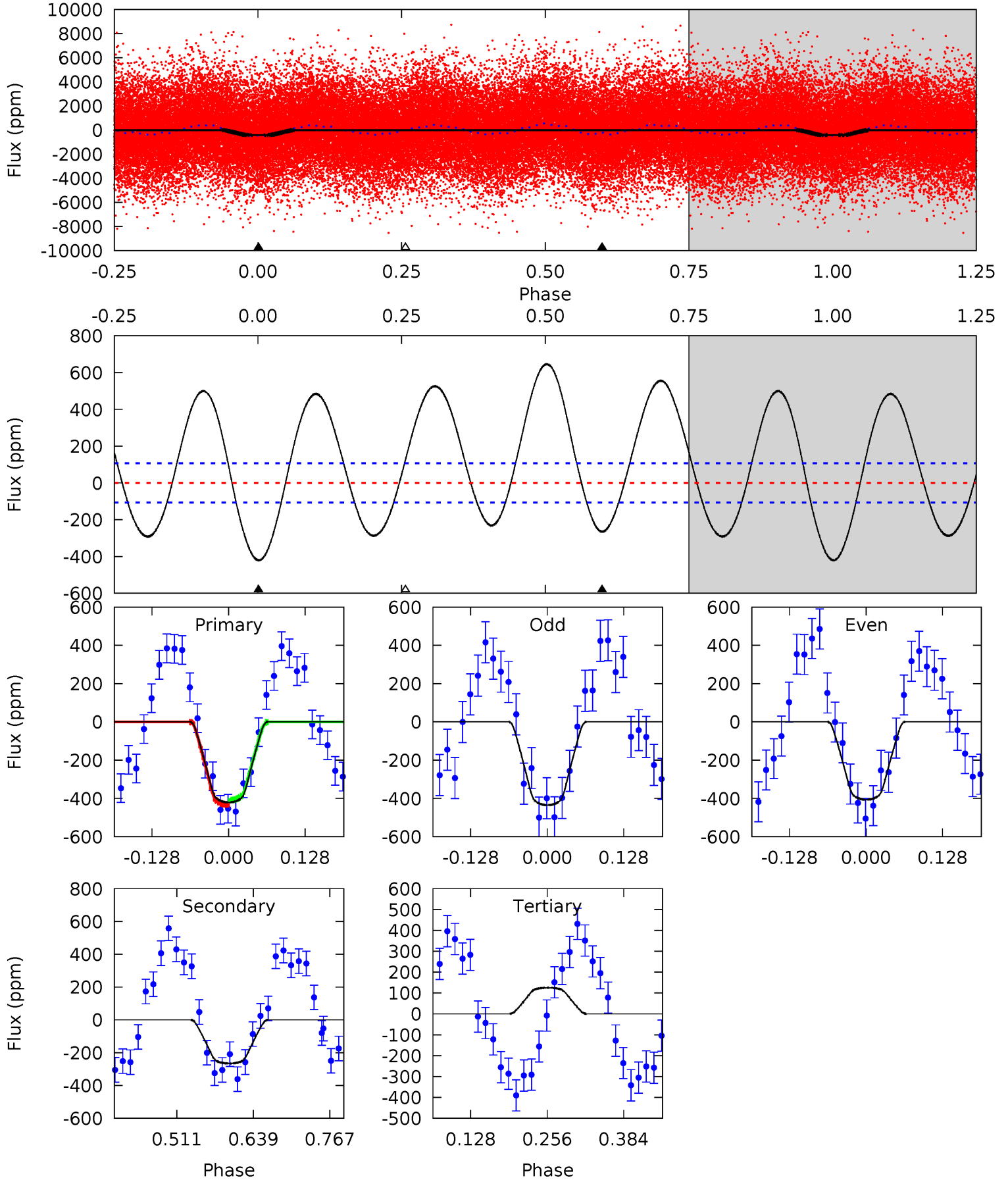
TCE 003241199-01 P= 0.596169 Days $T_0=131.570050$ (BKJD)



DV Model-Shift Uniqueness Test

003241199-01, P = 0.596168 Days, E = 130.973913 Days

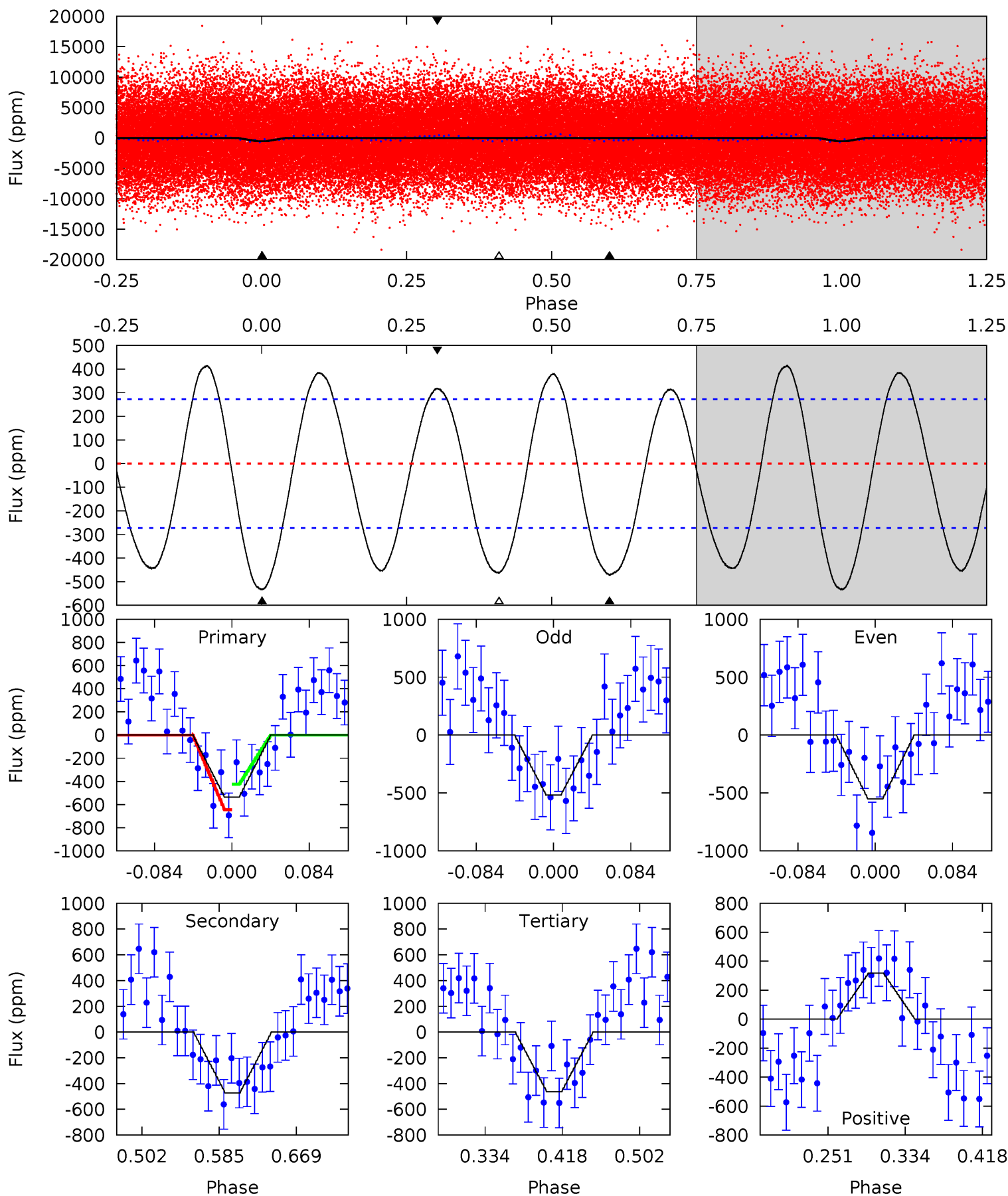
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	11.2	-5.29	0	4.51	1.52	10.7	23.1	17.8	16.5	11.2	0.60	1.04	0.61	0.49



Alt Model-Shift Uniqueness Test

003241199-01, P = 0.596169 Days, E = 130.973881 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.03	7.98	7.84	5.38	4.60	1.73	5.02	1.19	3.65	0.14	2.60	0.28	0.96	0.44	1.85



Stellar Parameters For KIC 003241199

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8090^{+225}_{-366}	$4.118^{+0.112}_{-0.154}$	$0.070^{+0.250}_{-0.450}$	$1.963^{+0.482}_{-0.351}$	$1.843^{+0.202}_{-0.329}$	$0.343^{+0.205}_{-0.148}$
	+3%/-5%	+3%/-4%	+357%/-643%	+25%/-18%	+11%/-18%	+60%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003241199-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-266 ± 24	$5.35^{+1.67}_{-1.53}$	5382^{+342}_{-326}	5937^{+1403}_{-822}	$1.432^{+1.366}_{-0.593}$
Alt.	-472 ± 59	$5.17^{+1.68}_{-1.59}$	5359^{+340}_{-345}	7275^{+1927}_{-1123}	$2.737^{+2.903}_{-1.185}$

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 $A_{obs} \gg 1.0$

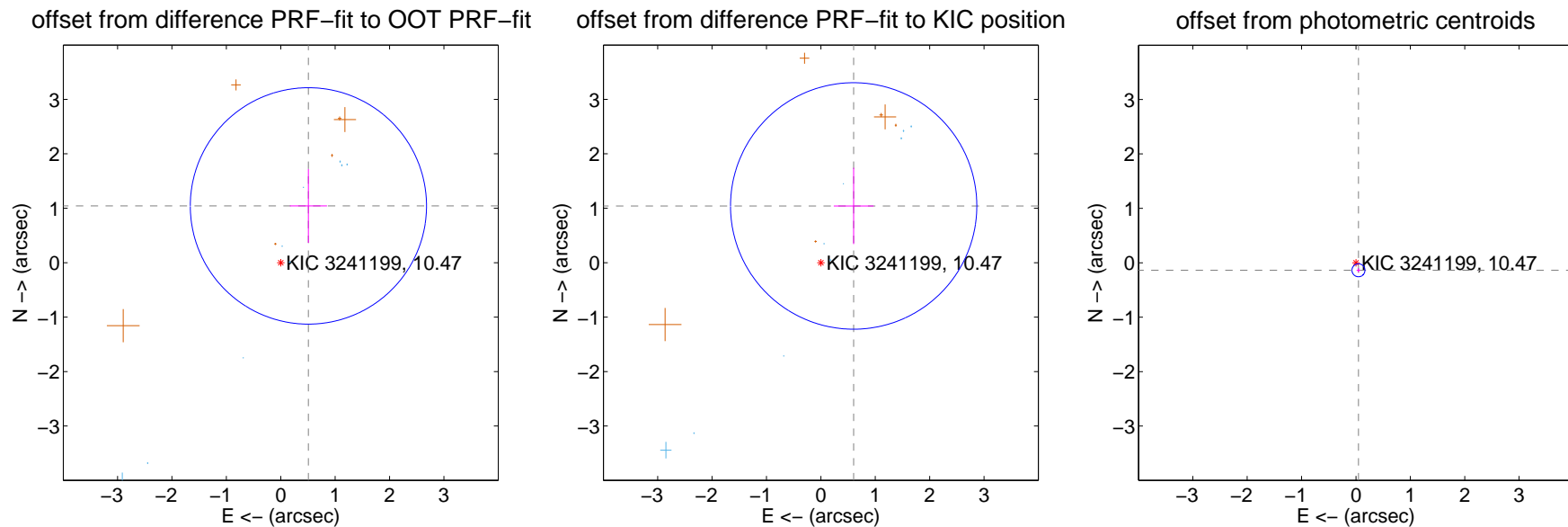
DV Centroid Data

Supplemental centroid analysis for 003241199-01. **Kepler magnitude: 10.47.** Transit SNR 14.67

There are 10 quarters with good PRF difference image offsets

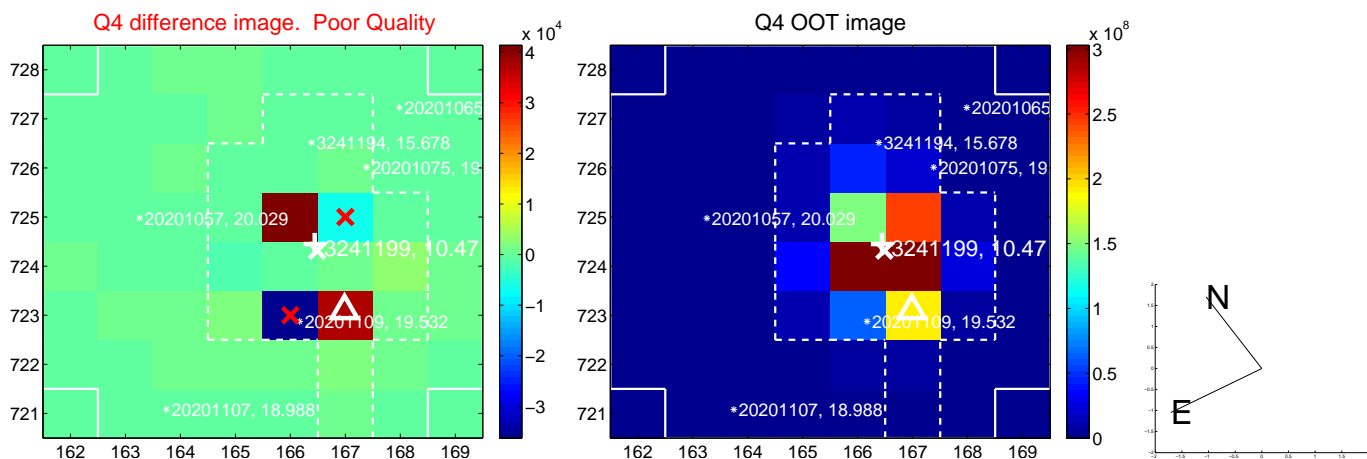
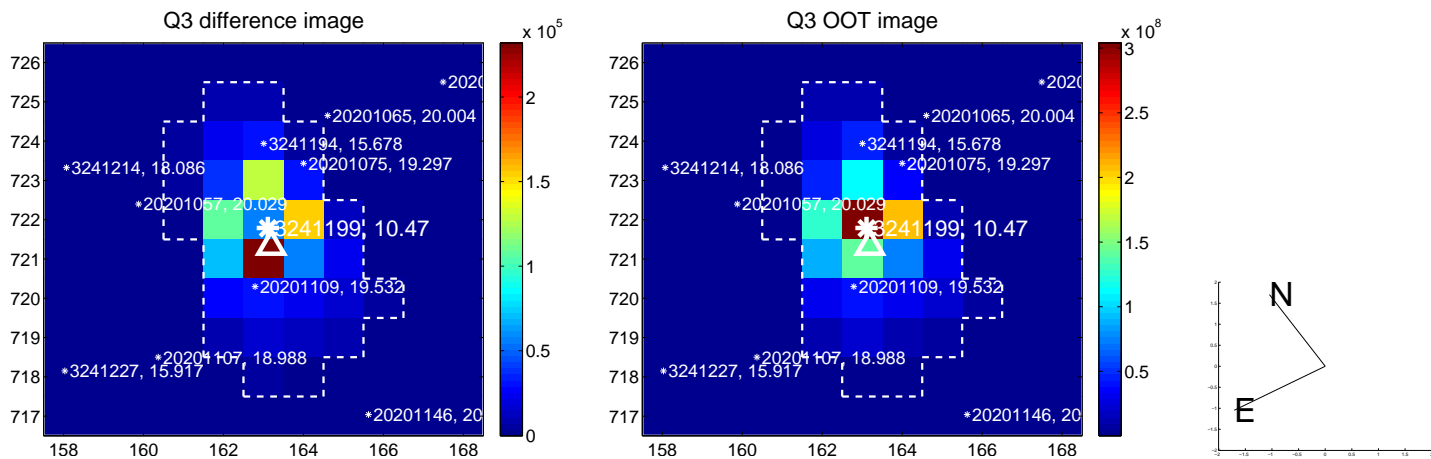
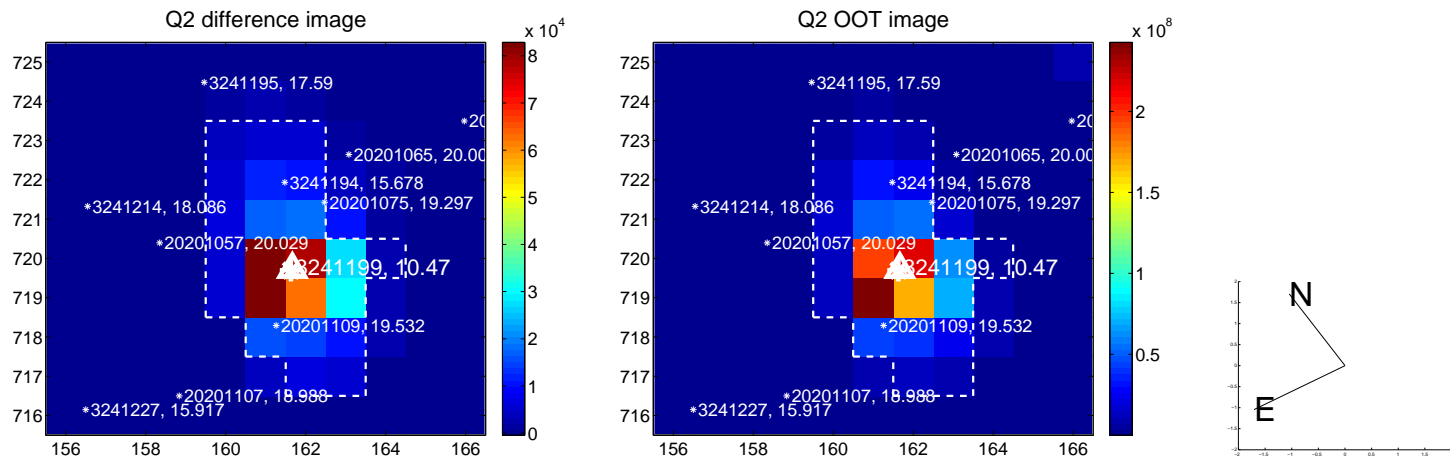
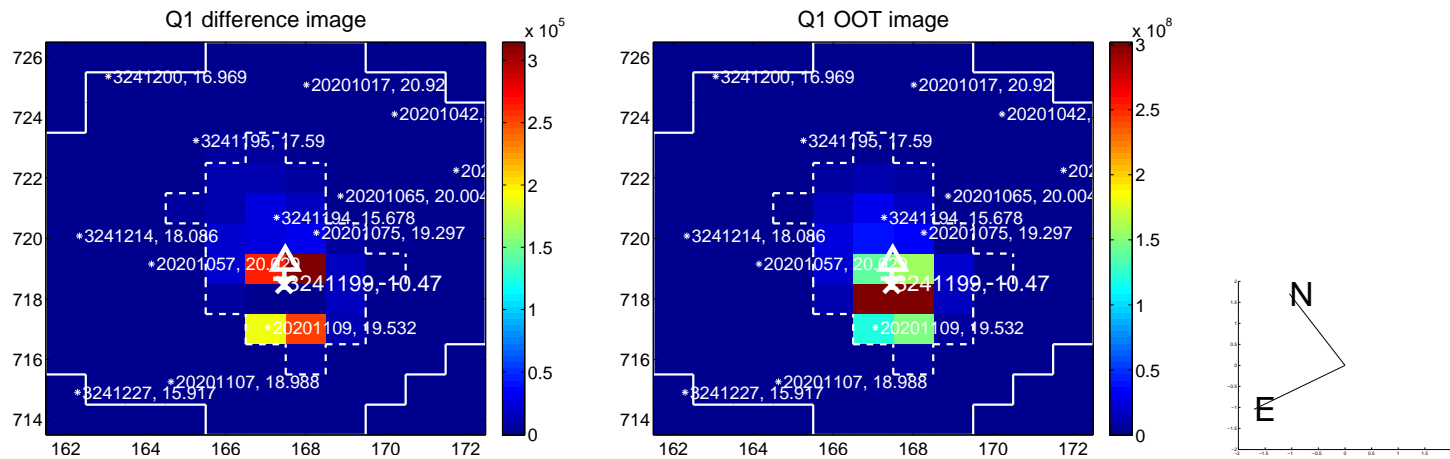
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.160 ± 0.724	1.60	-0.508 ± 0.342	1.043 ± 0.678
PRF-fit source offset from KIC position	1.204 ± 0.754	1.60	-0.603 ± 0.365	1.042 ± 0.700
photometric centroid source offset	0.15 ± 0.04	3.65	-0.05 ± 0.03	-0.14 ± 0.04

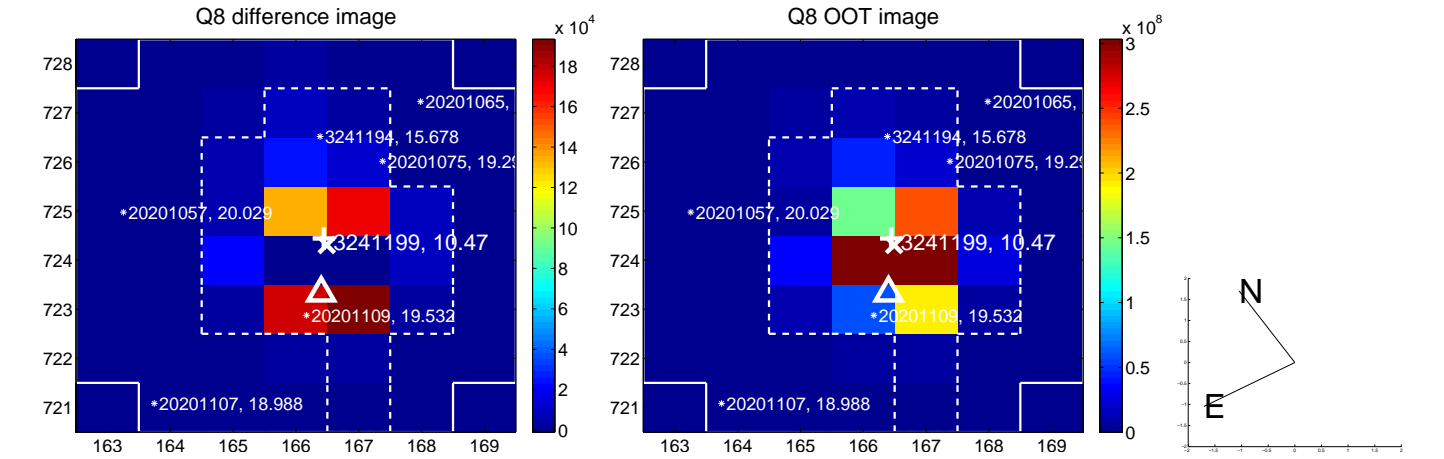
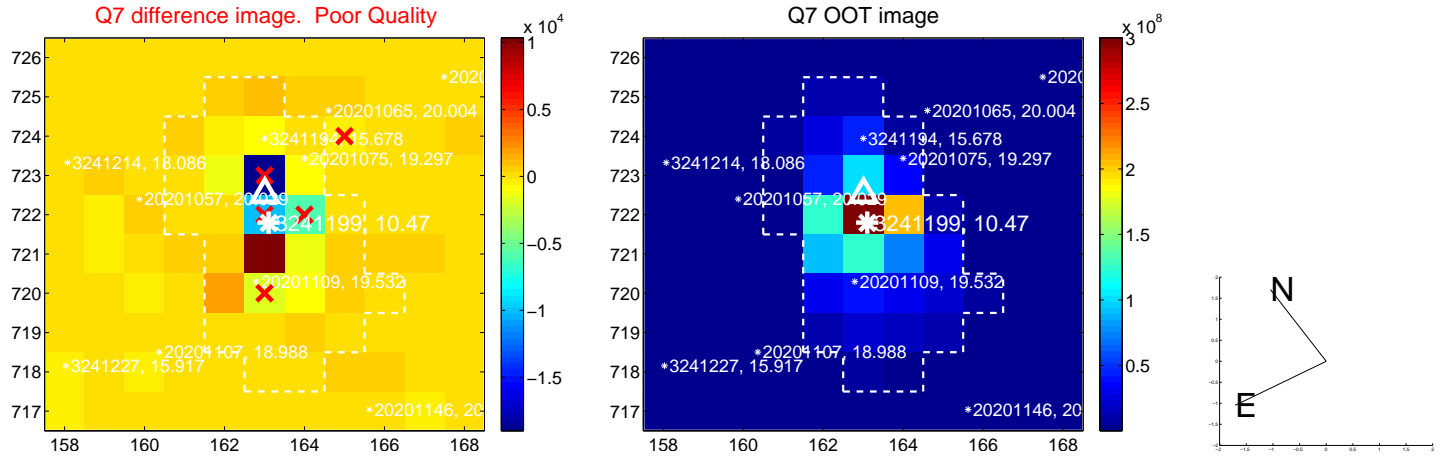
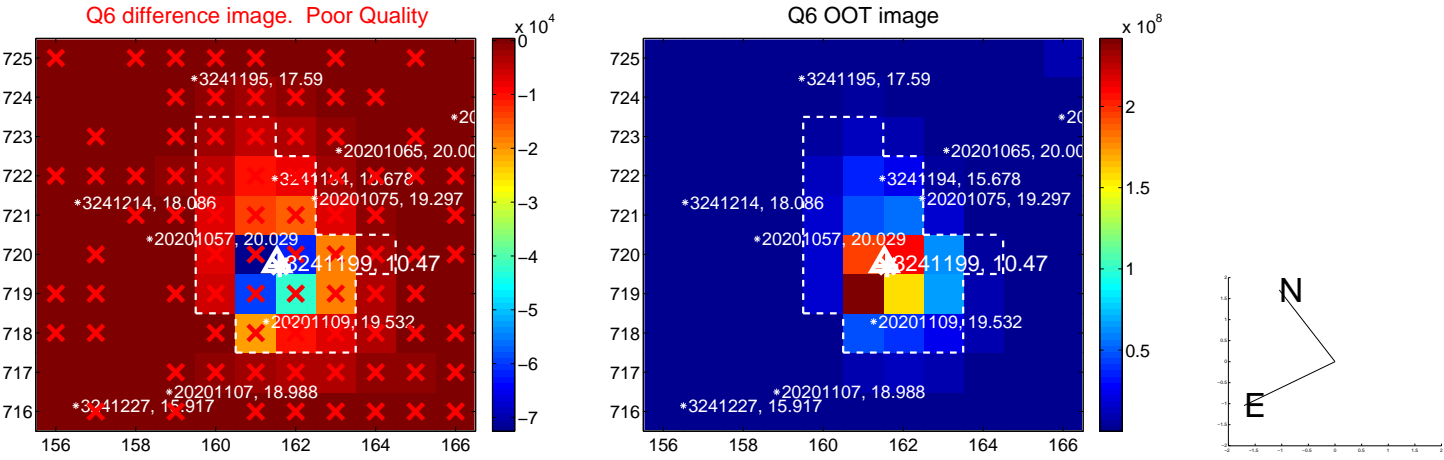
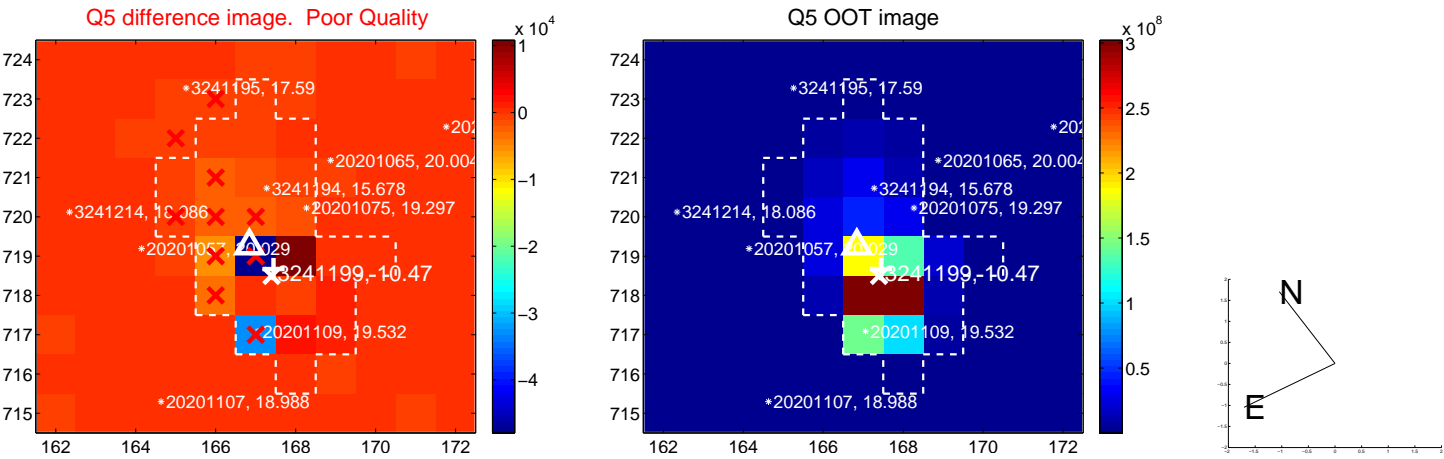


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

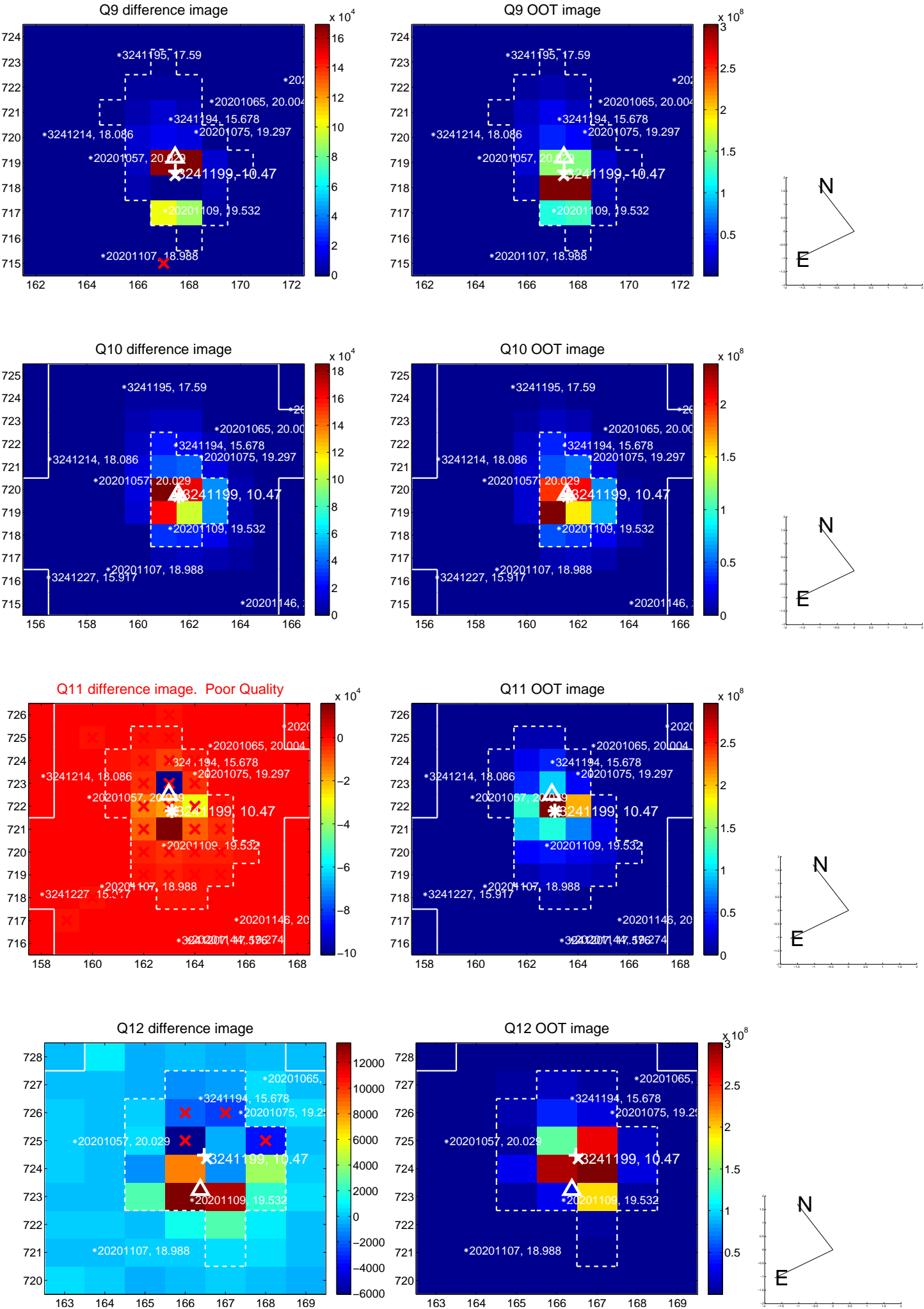
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



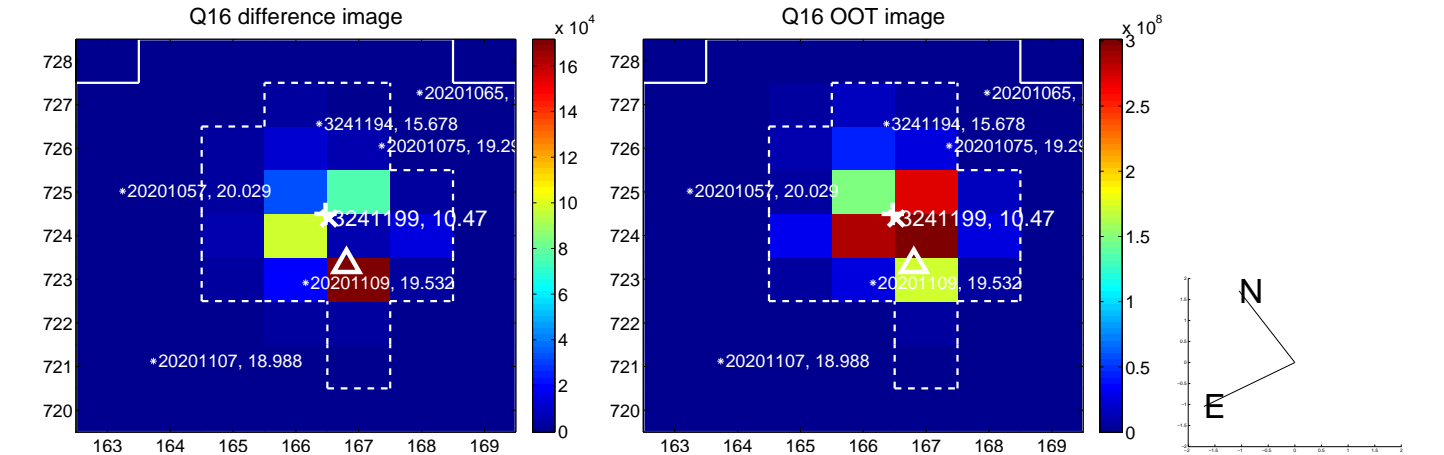
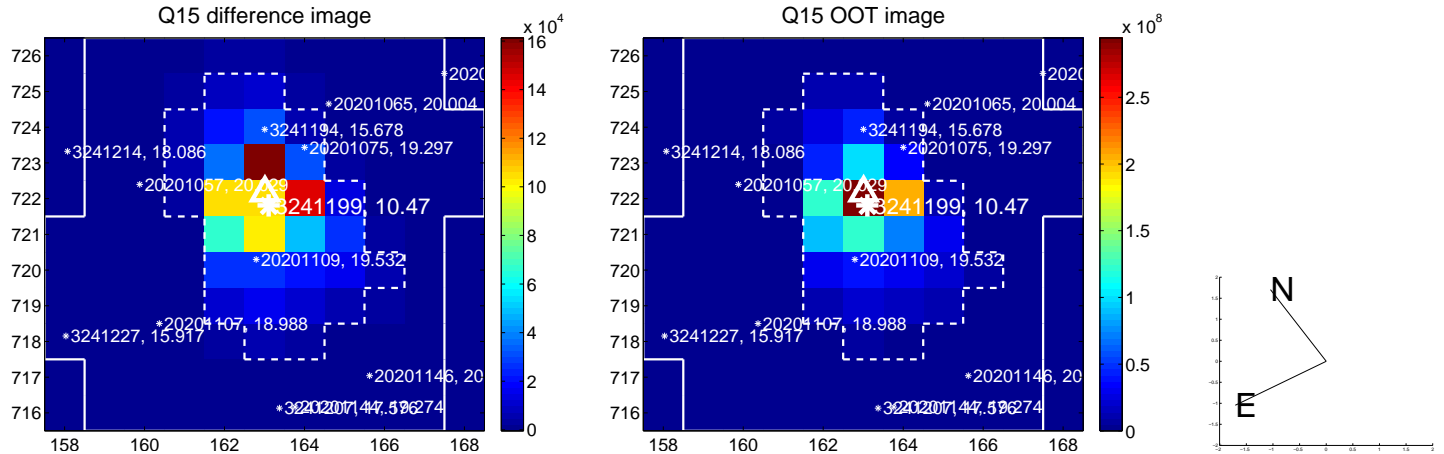
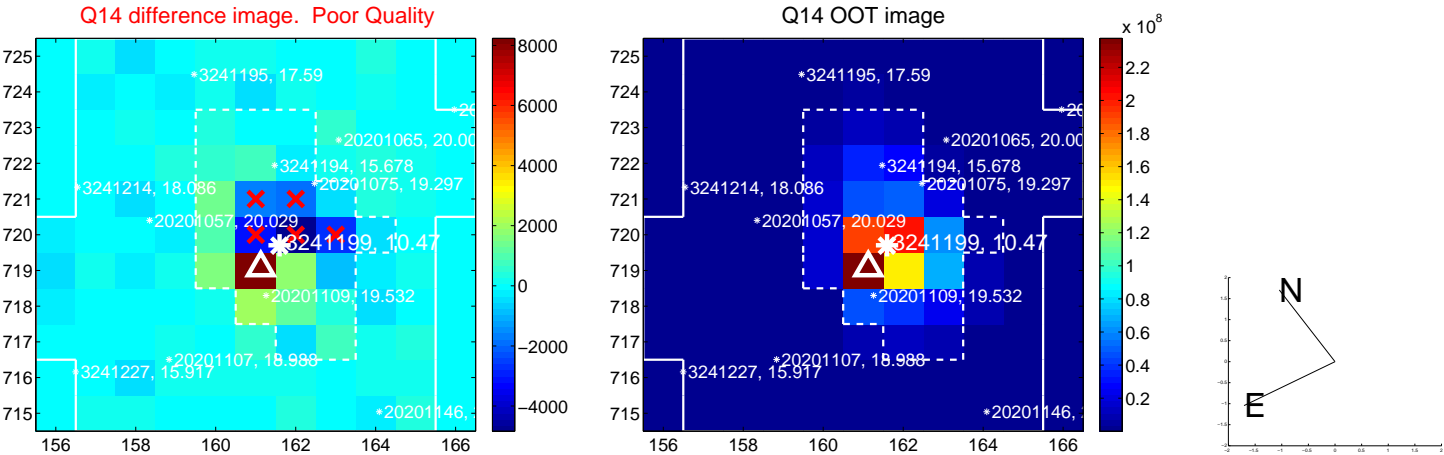
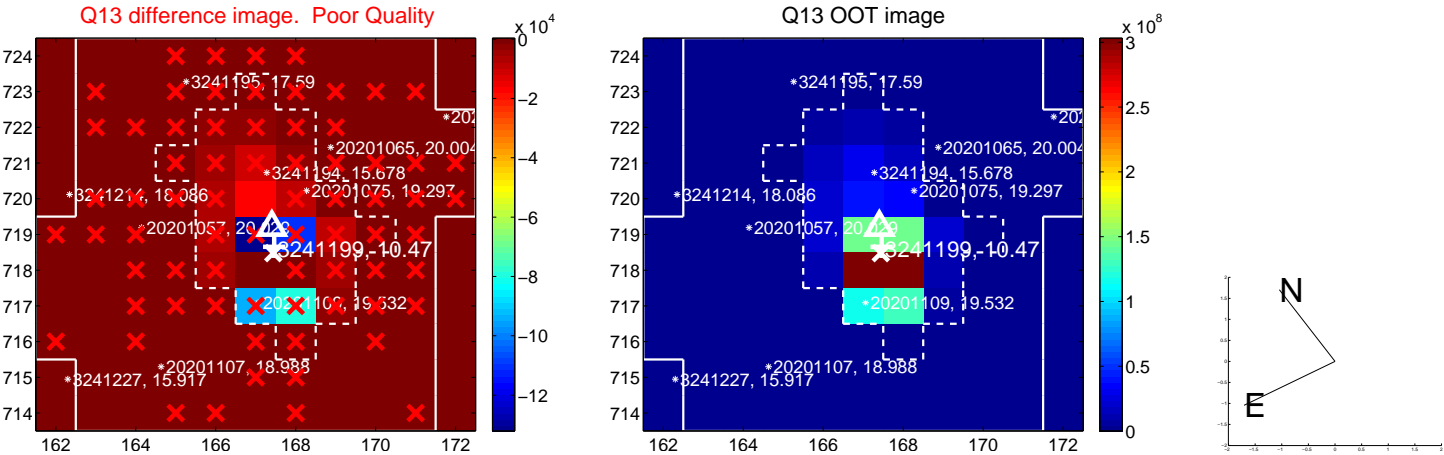
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



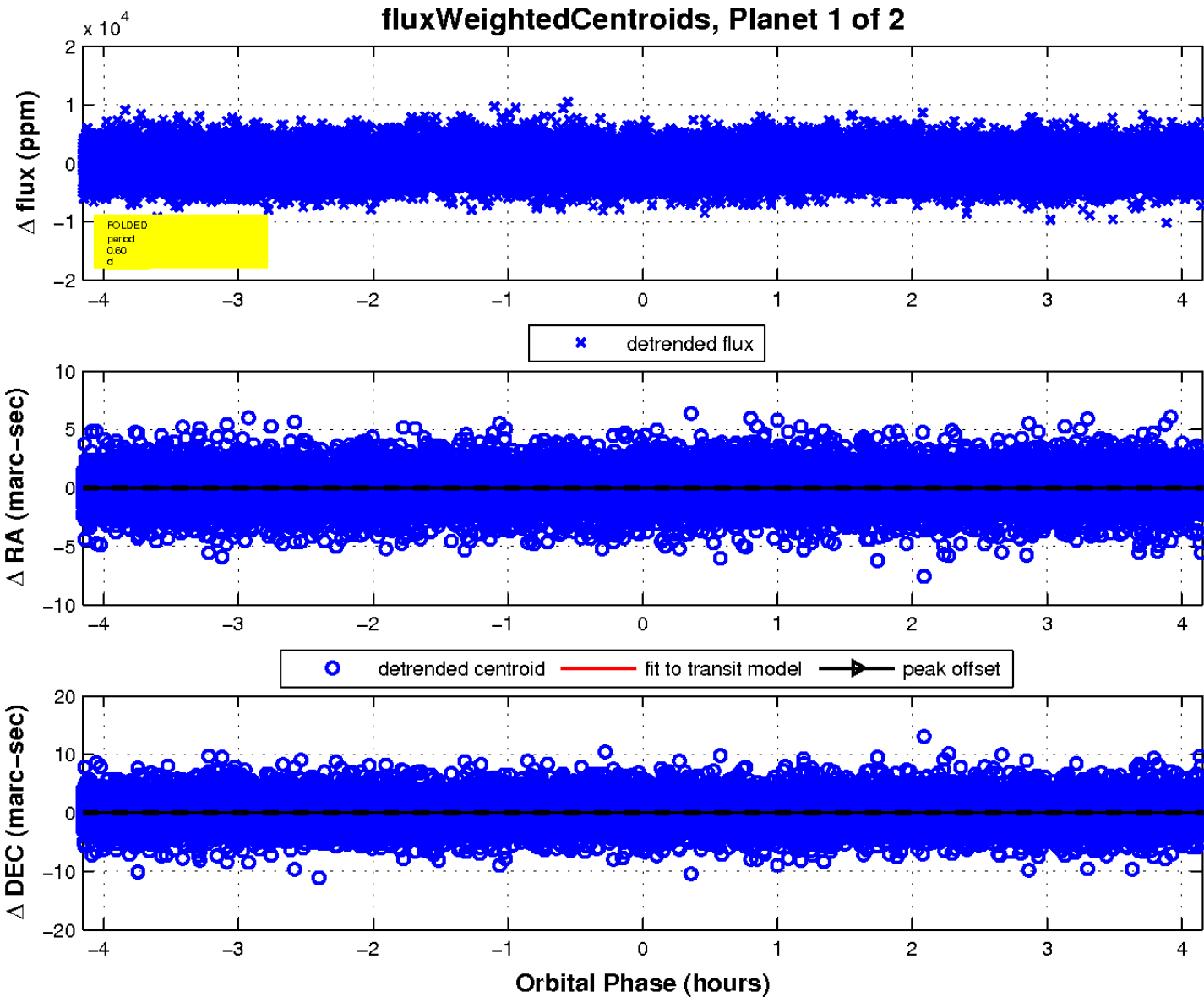
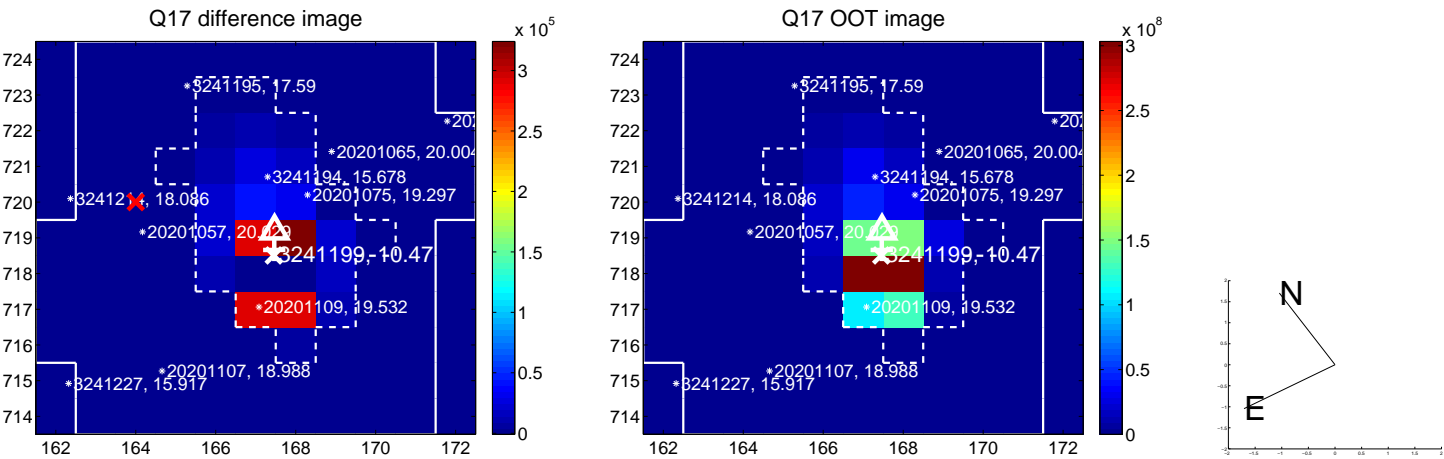
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

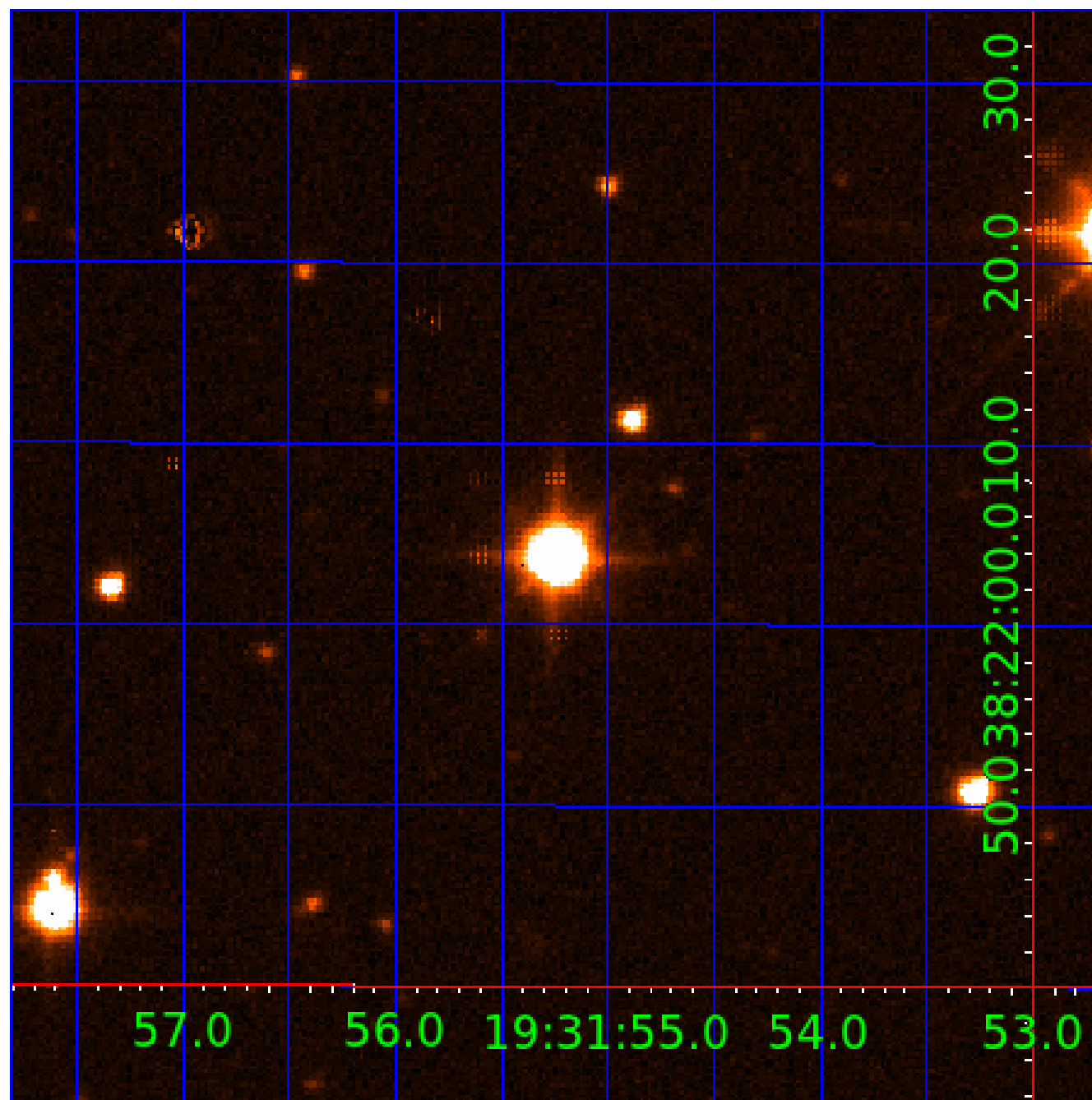


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003241199

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})
003241199-01	OBS	No	0.596168	131.570081	527.9	1.385	12.8	14.7	1.96	8090	5.27	51145.83
003241199-02	OBS	No	0.596167	131.930619	444.5	1.039	11.7	11.7	1.96	8090	4.22	51145.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241199-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003241199-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

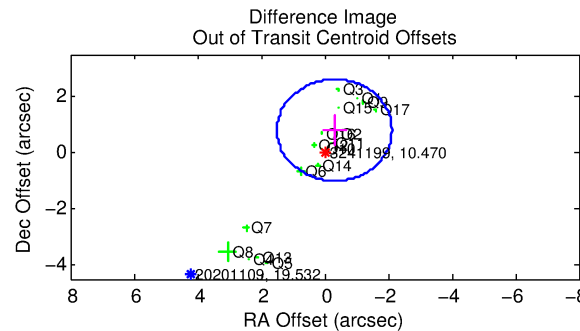
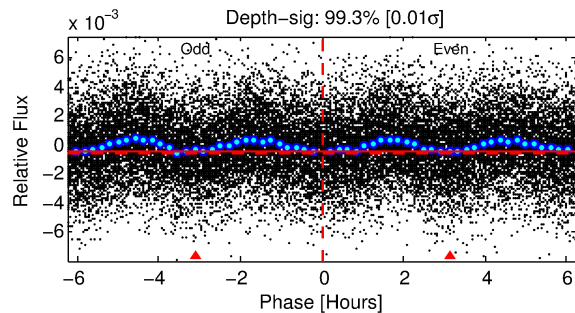
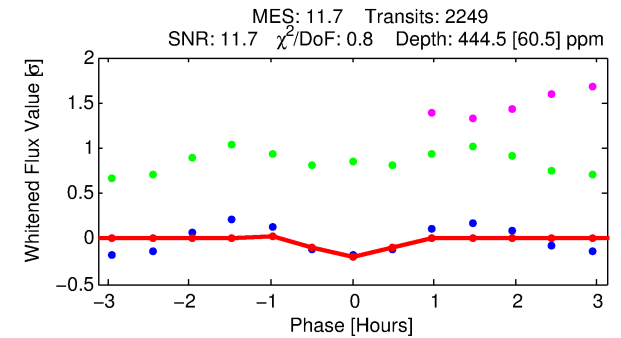
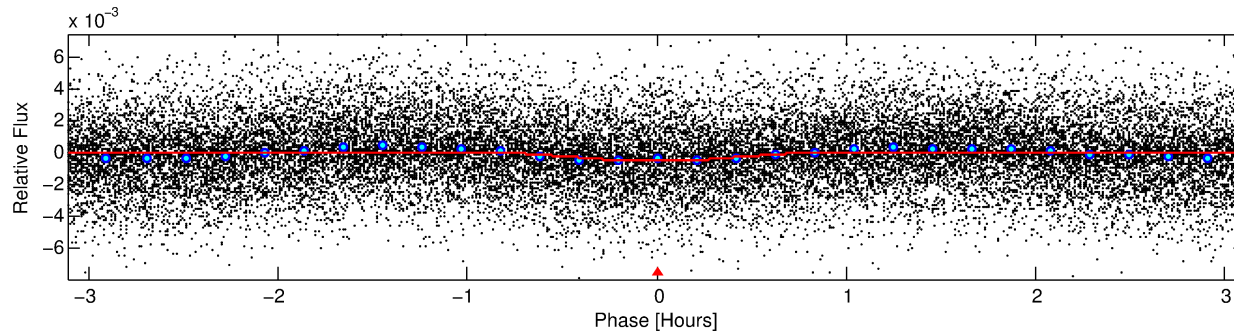
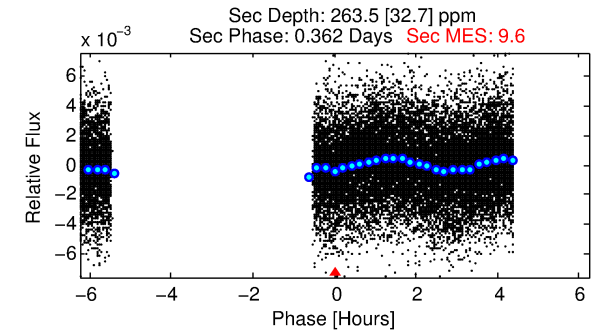
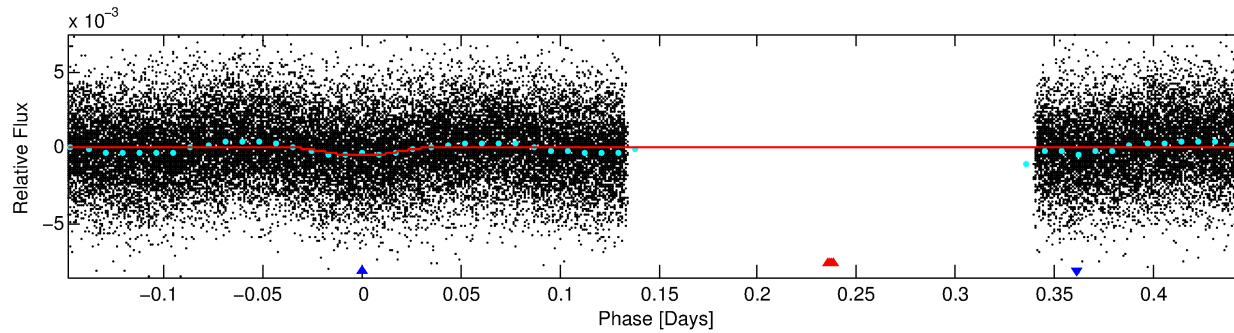
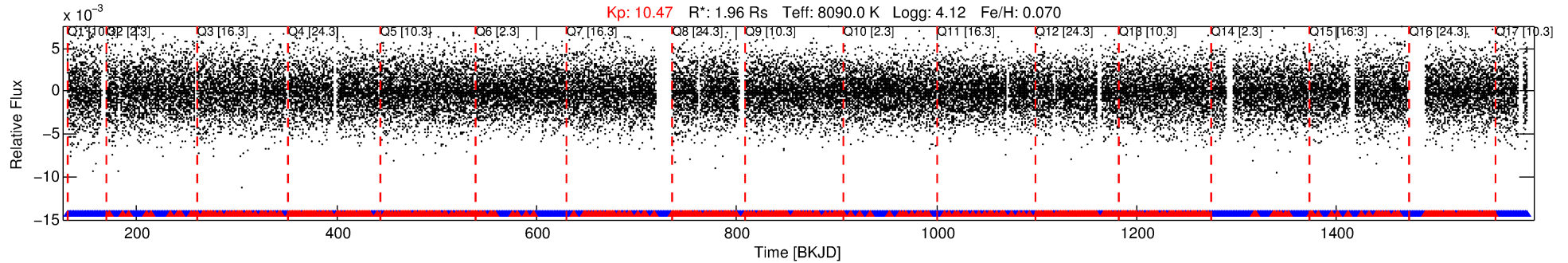
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003241199-02

No Significant Match Found

DV One-Page Summary

KIC: 3241199 Candidate: 2 of 2 Period: 0.596 d



DV Fit Results:

Period = 0.59617 [0.00001] d
Epoch = 131.9306 [0.0015] BKJD
Rp/R* = 0.0197 [0.0143]
a/R* = 4.49 [18.31]
b = 0.08 [51.27]
Seff = 51145.97 [17376.72]
Teq = 3835 [326] K
Rp = 4.22 [3.23] Re
a = 0.0170 [0.0034] AU
Ag = 2.35 [3.48] [0.39σ]
Teffp = 7342 [2688] K [1.30σ]

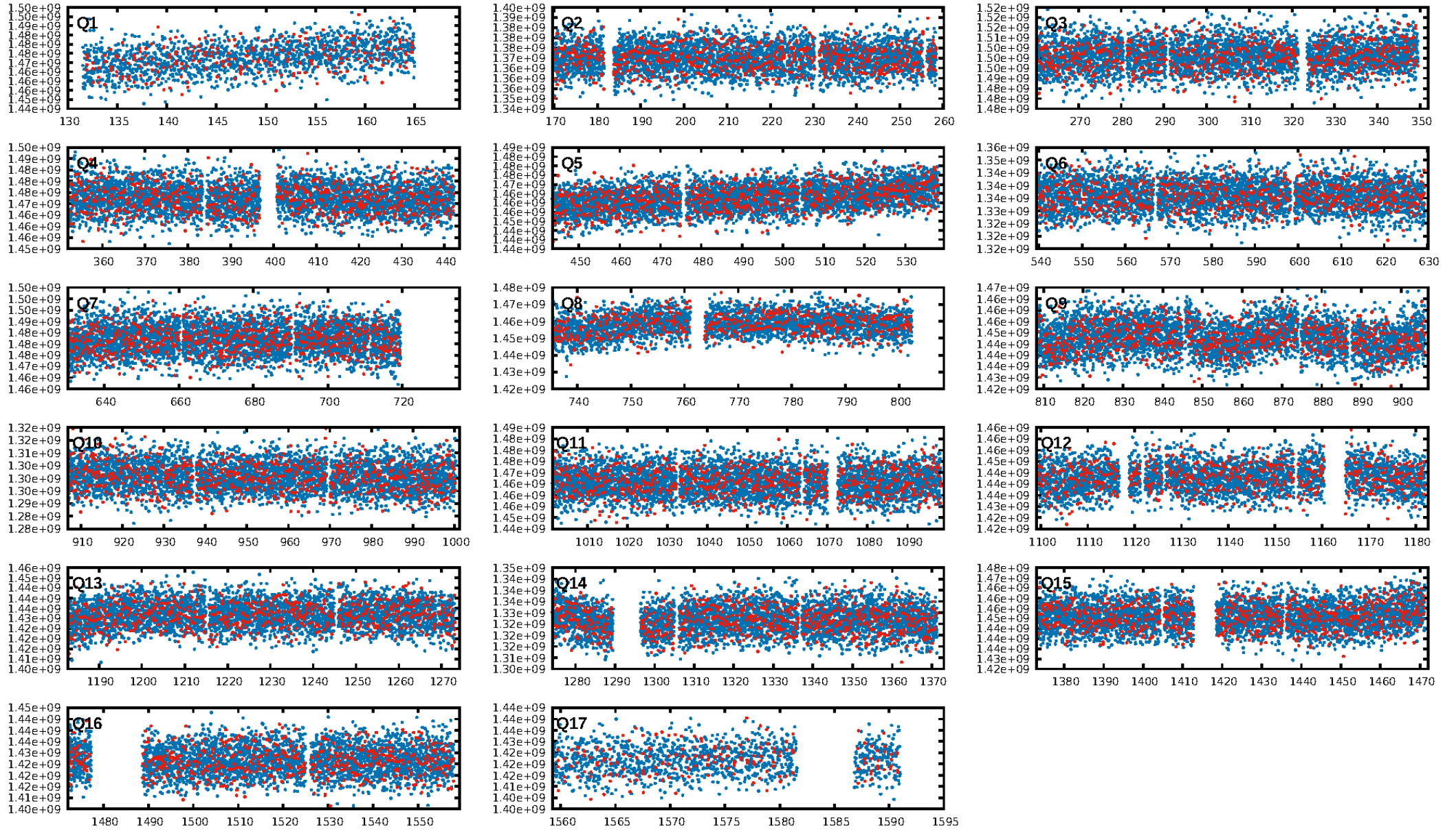
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.61e-26
RollingBand-fgt: 0.74 [1585/2149]
GhostDiagnostic-chr: N/A
Centroid-sig: 9.7%
Centroid-so: 0.099 arcsec [1.93σ]
OotOffset-rm: 0.859 arcsec [1.42σ]
KicOffset-rm: 0.949 arcsec [1.52σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 0.00 [0/17]

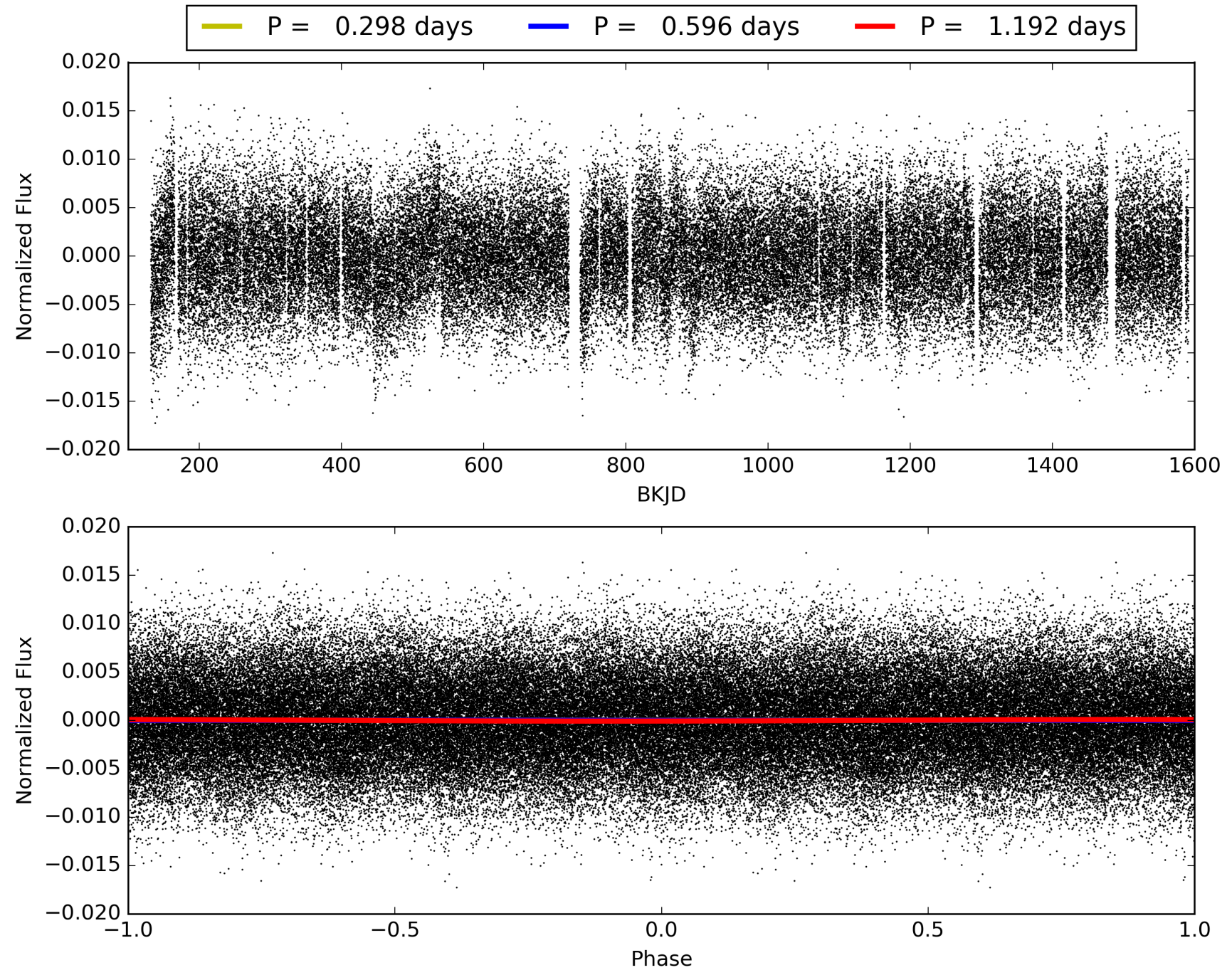
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:23:37 Z

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

TCE 003241199-02, PDC Light Curves

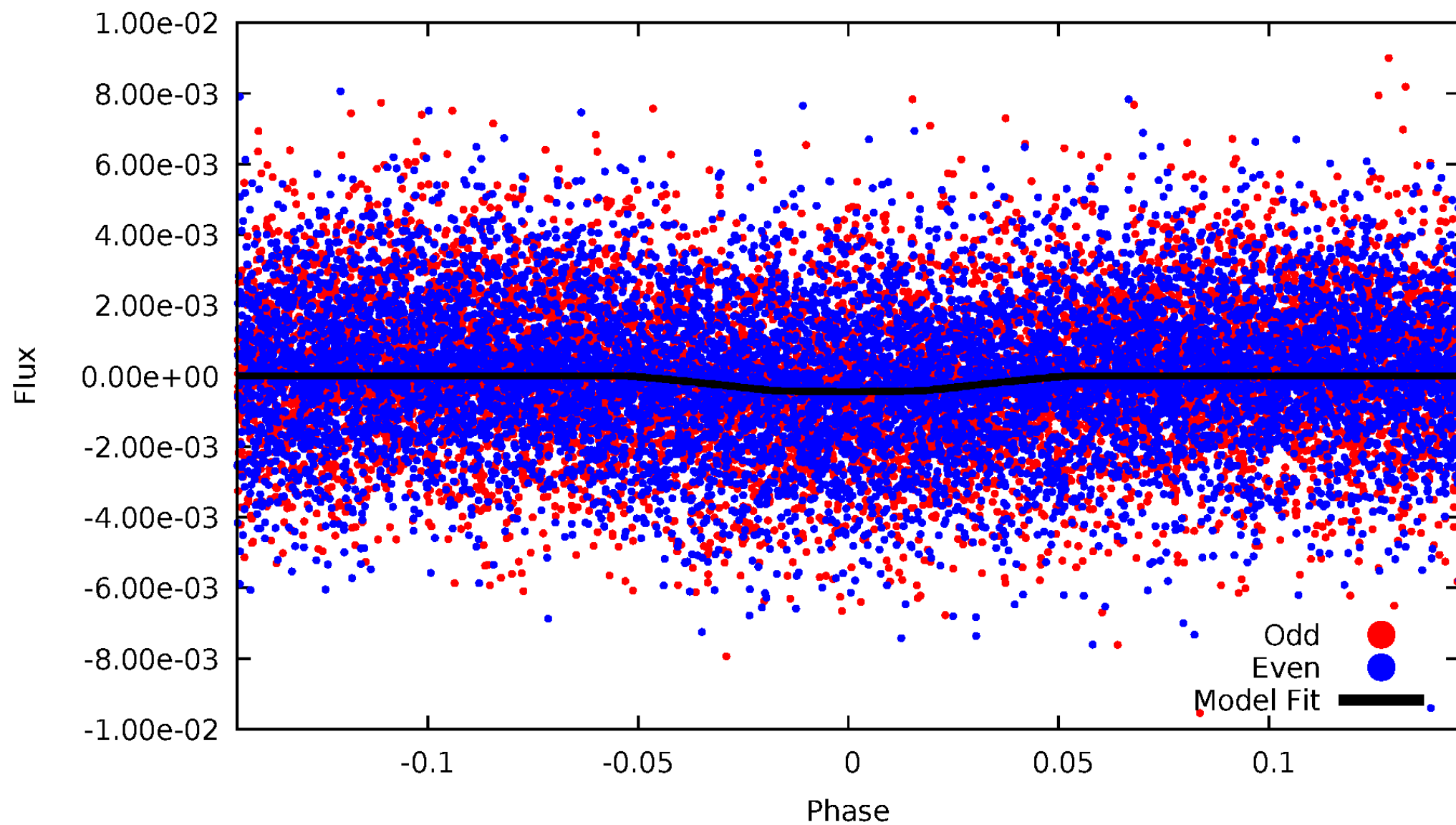


TCE 003241199-02



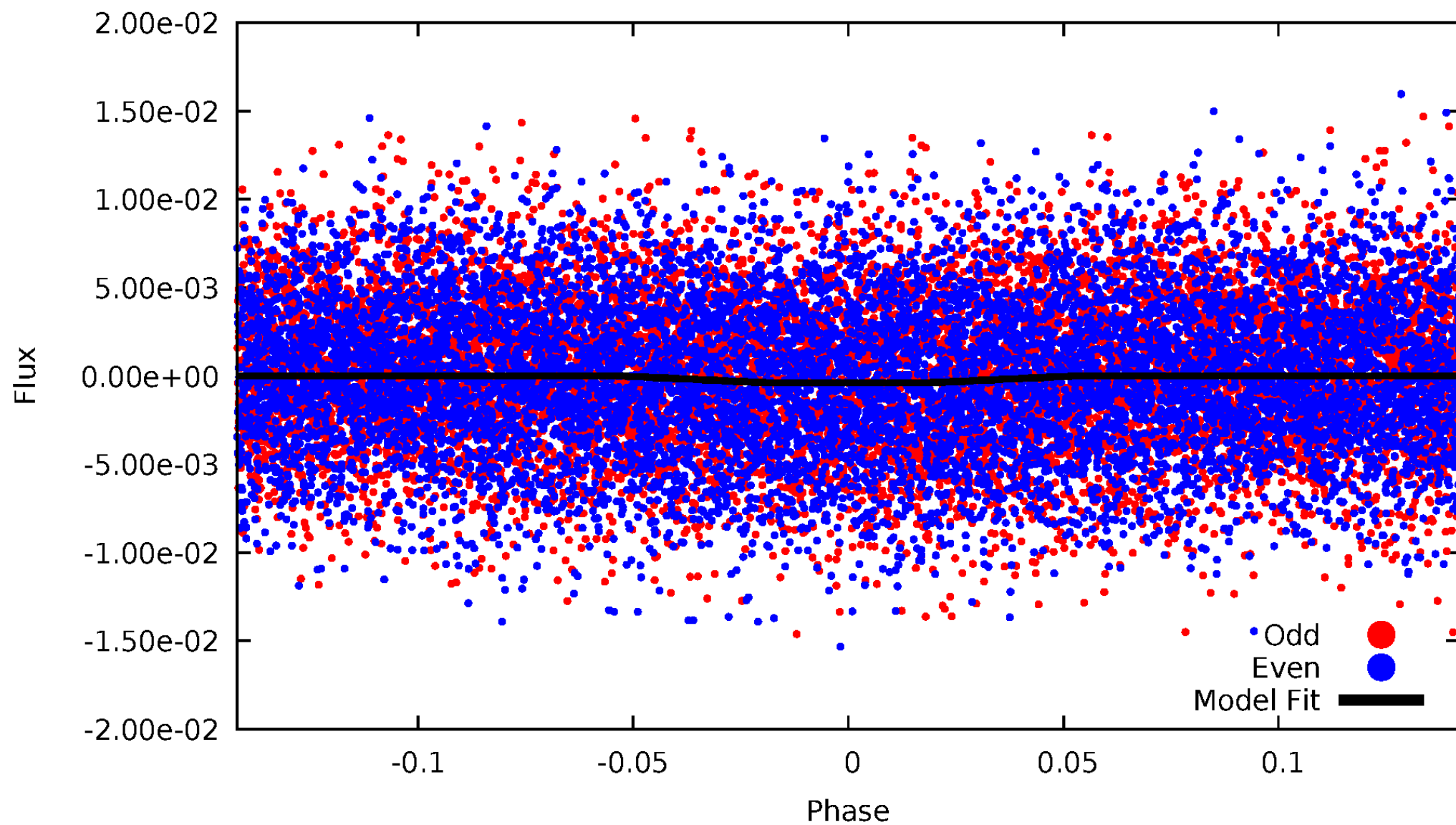
DV Odd/Even

TCE 003241199-02



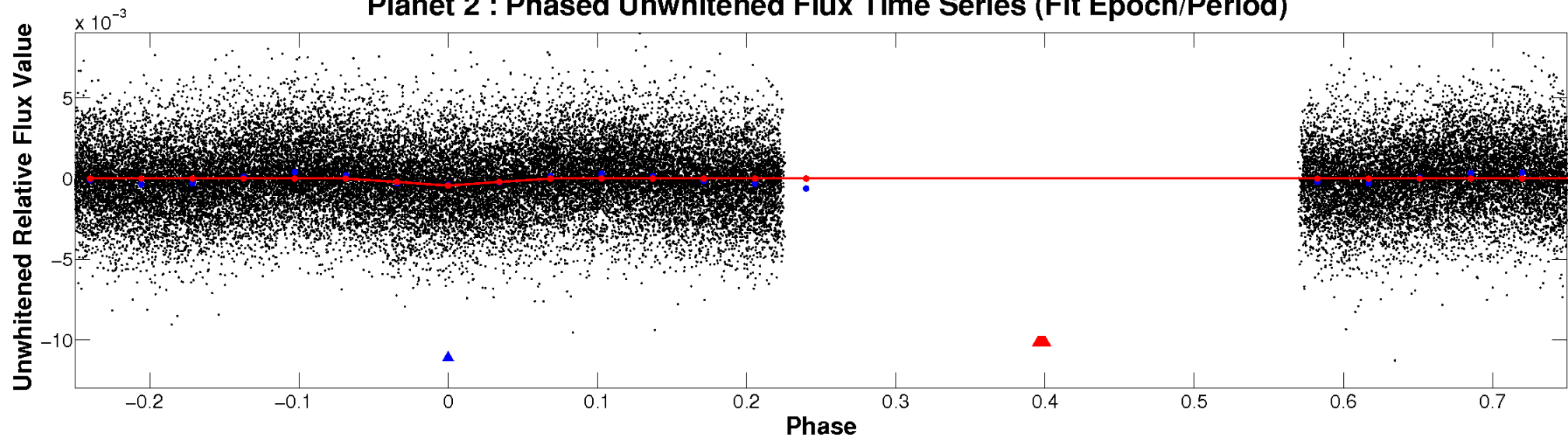
ALT Odd/Even

TCE 003241199-02

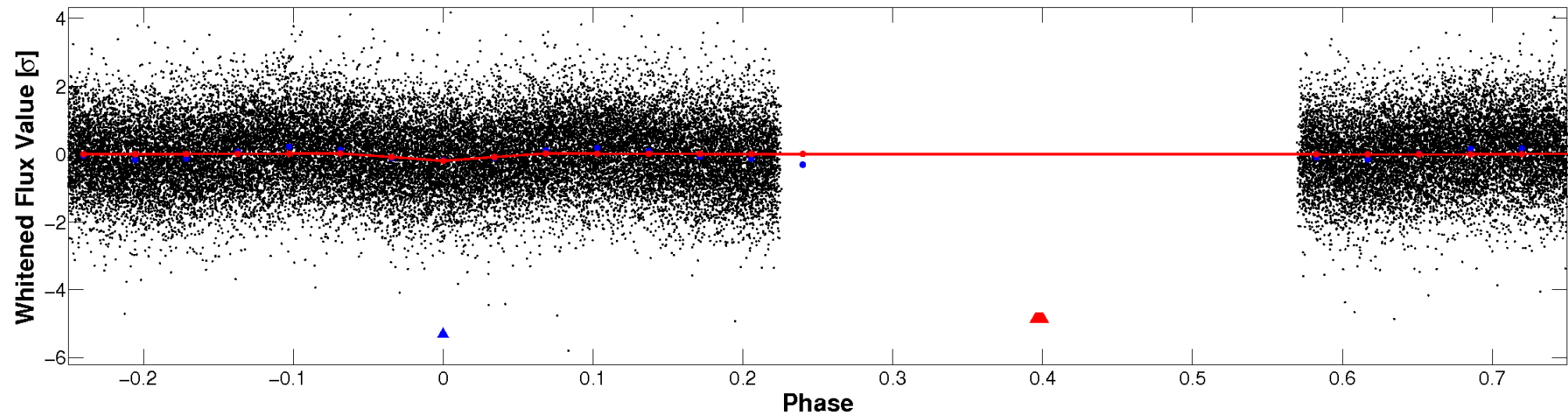


Non-Whitened Vs. Whitened Light Curve

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

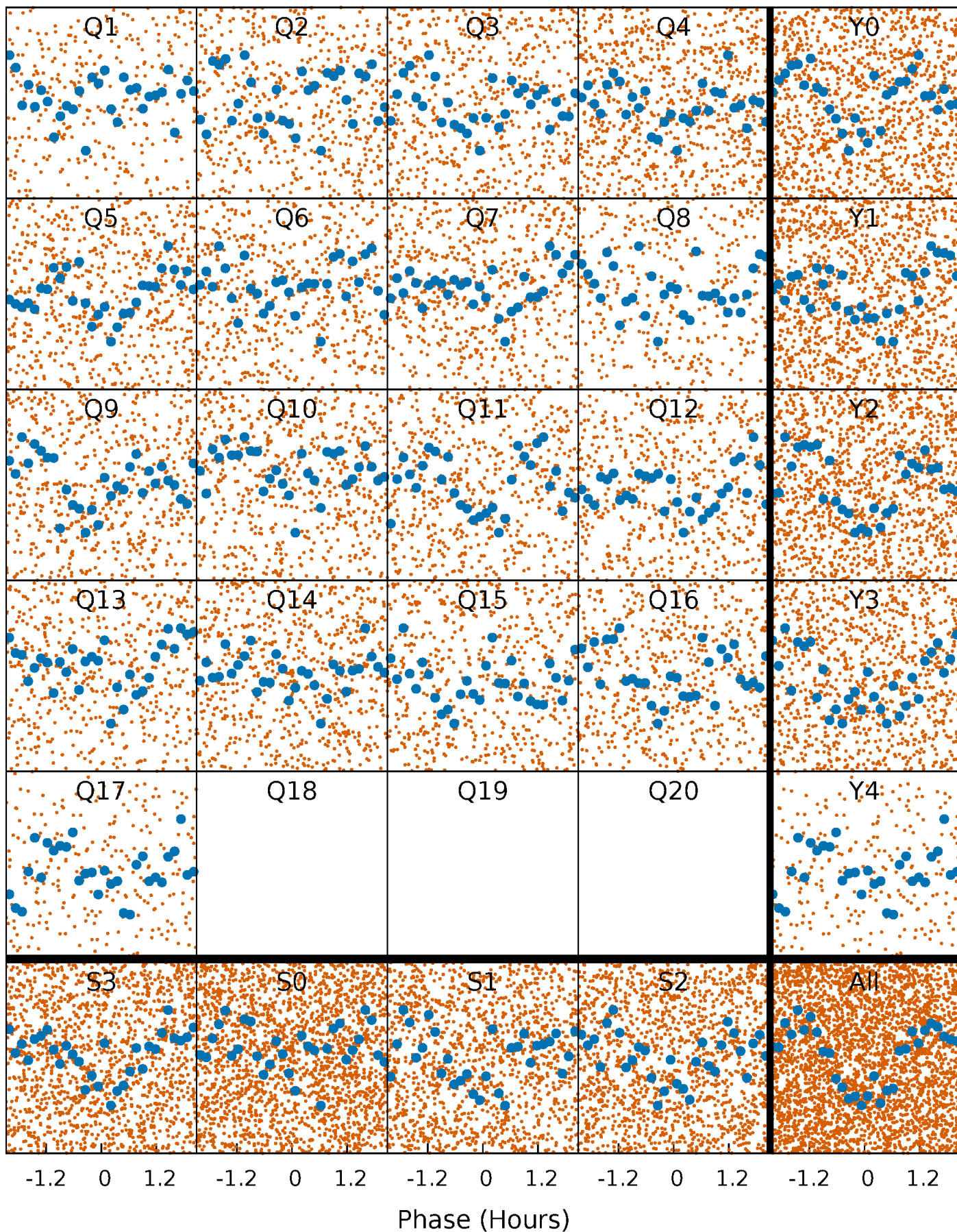


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



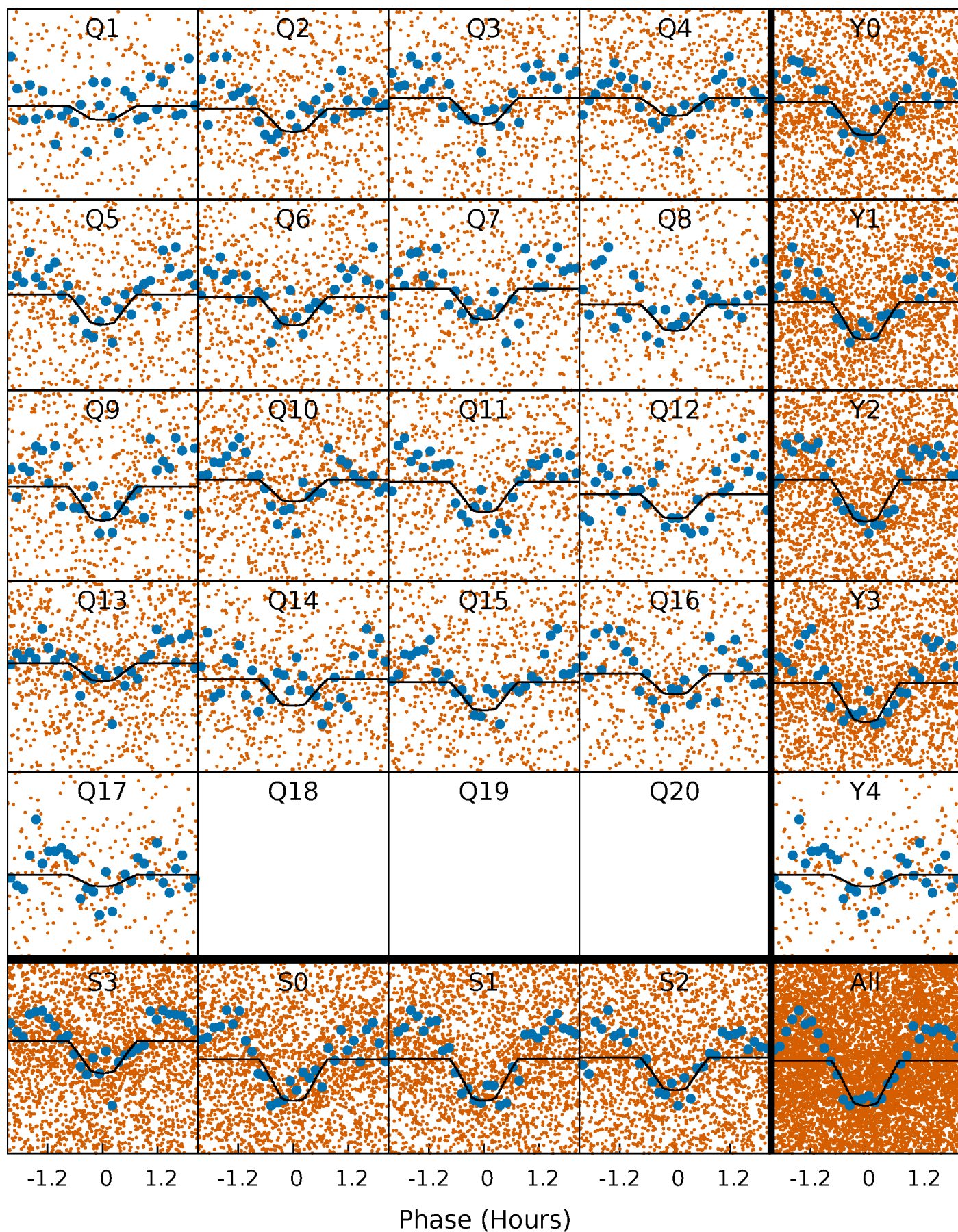
PDC Quarter-Phased Transit Curves

TCE 003241199-02 P= 0.596167 Days $T_0=131.930619$ (BKJD)



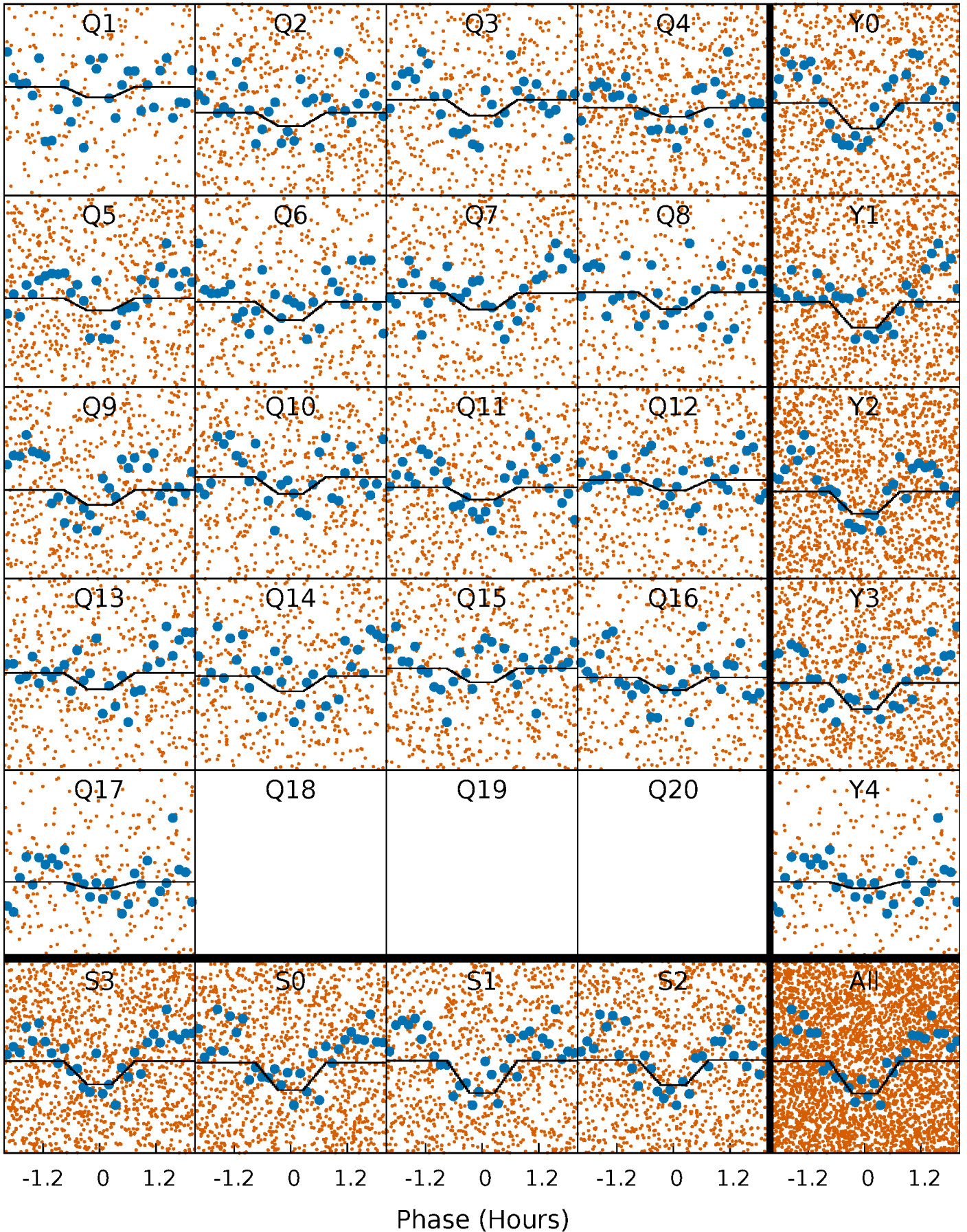
DV Quarter-Phased Transit Curves

TCE 003241199-02 P= 0.596167 Days $T_0=131.930619$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

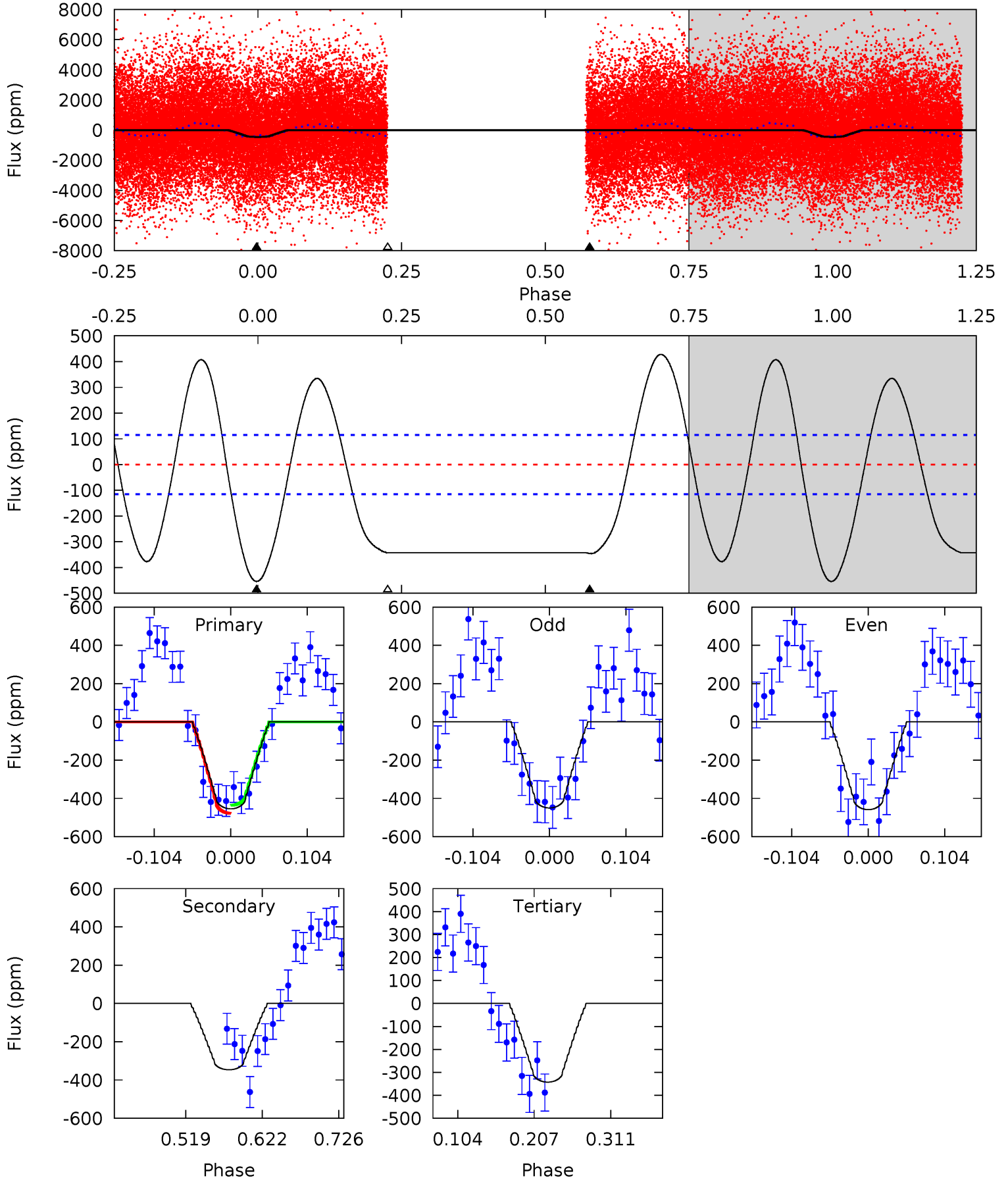
TCE 003241199-02 P= 0.596169 Days $T_0=131.930814$ (BKJD)



DV Model-Shift Uniqueness Test

003241199-02, P = 0.596167 Days, E = 131.334452 Days

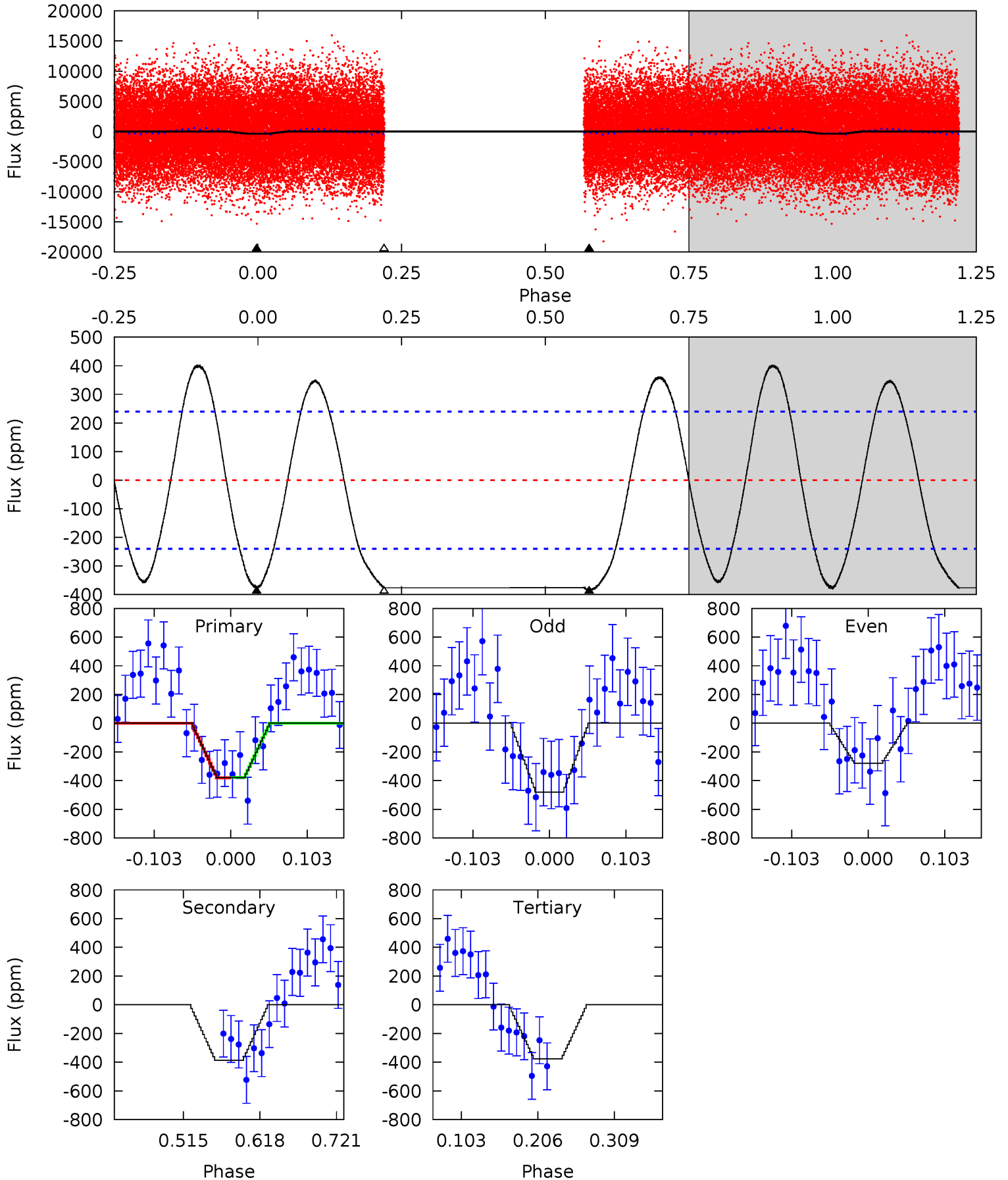
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	13.7	13.6	0	4.56	1.63	11.0	4.42	18.0	0.15	13.7	0.17	0.97	0.49	0.84



Alt Model-Shift Uniqueness Test

003241199-02, P = 0.596169 Days, E = 131.334645 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.21	7.37	7.17	0	4.56	1.63	4.98	0.04	7.21	0.19	7.37	1.89	0.98	0.51	0.02



Stellar Parameters For KIC 003241199

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8090^{+225}_{-366}	$4.118^{+0.112}_{-0.154}$	$0.070^{+0.250}_{-0.450}$	$1.963^{+0.482}_{-0.351}$	$1.843^{+0.202}_{-0.329}$	$0.343^{+0.205}_{-0.148}$
	+3%/-5%	+3%/-4%	+357%/-643%	+25%/-18%	+11%/-18%	+60%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003241199-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-347 ± 25	$4.63^{+3.17}_{-2.74}$	5374^{+373}_{-316}	7065^{+6981}_{-1881}	$2.481^{+12.359}_{-1.565}$
Alt.	-387 ± 53	$4.71^{+2.98}_{-2.53}$	5331^{+351}_{-290}	7244^{+5669}_{-1876}	$2.718^{+10.401}_{-1.705}$

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

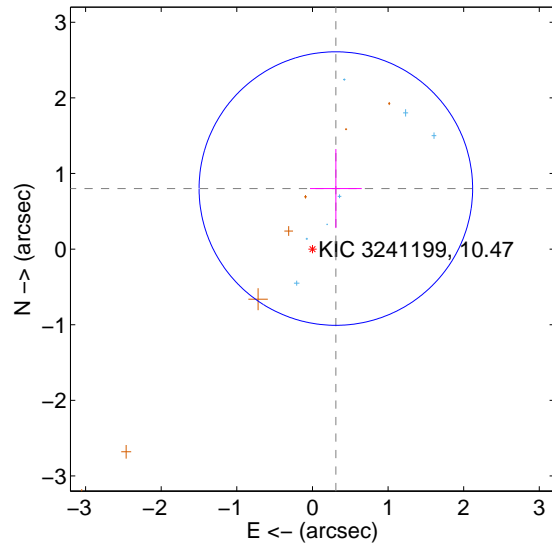
Supplemental centroid analysis for 003241199-02. **Kepler magnitude: 10.47.** Transit SNR 11.74

There are 9 quarters with good PRF difference image offsets

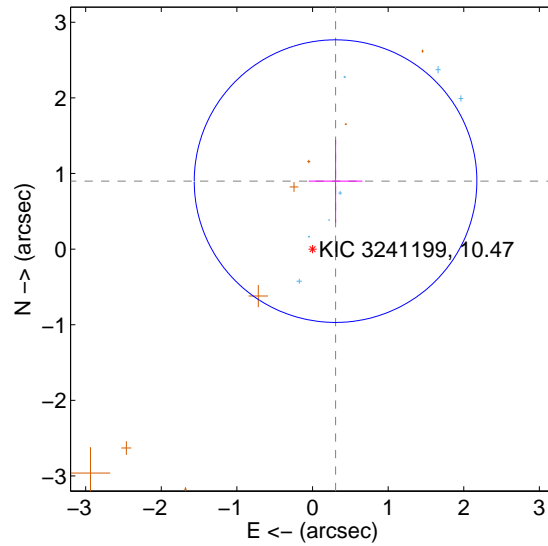
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.859 ± 0.603	1.42	-0.310 ± 0.342	0.801 ± 0.523
PRF-fit source offset from KIC position	0.949 ± 0.623	1.52	-0.305 ± 0.355	0.899 ± 0.547
photometric centroid source offset	0.10 ± 0.05	1.93	-0.02 ± 0.04	-0.10 ± 0.05

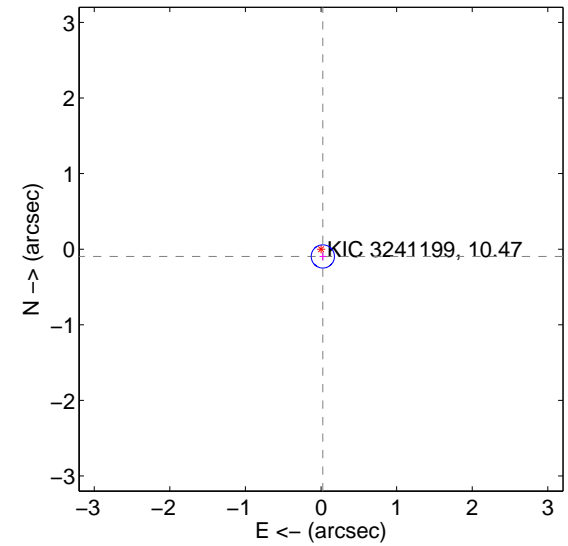
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

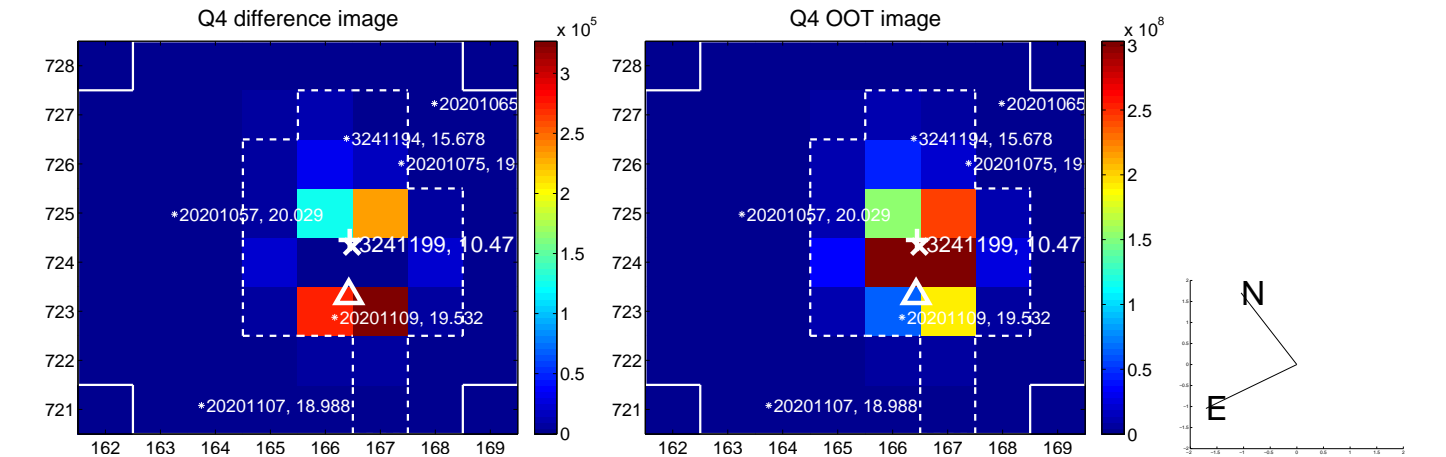
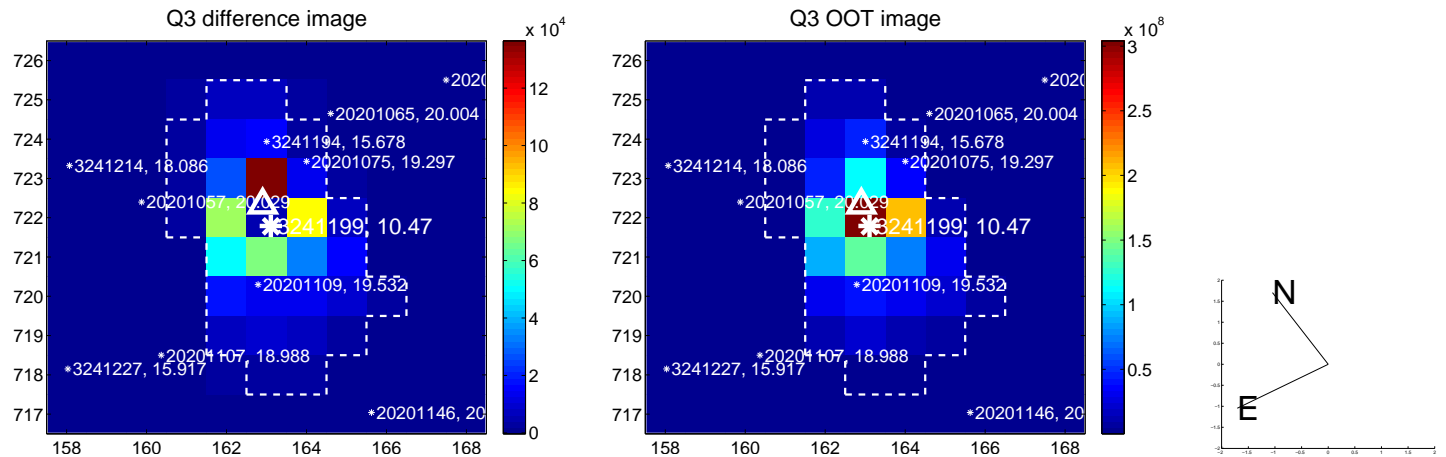
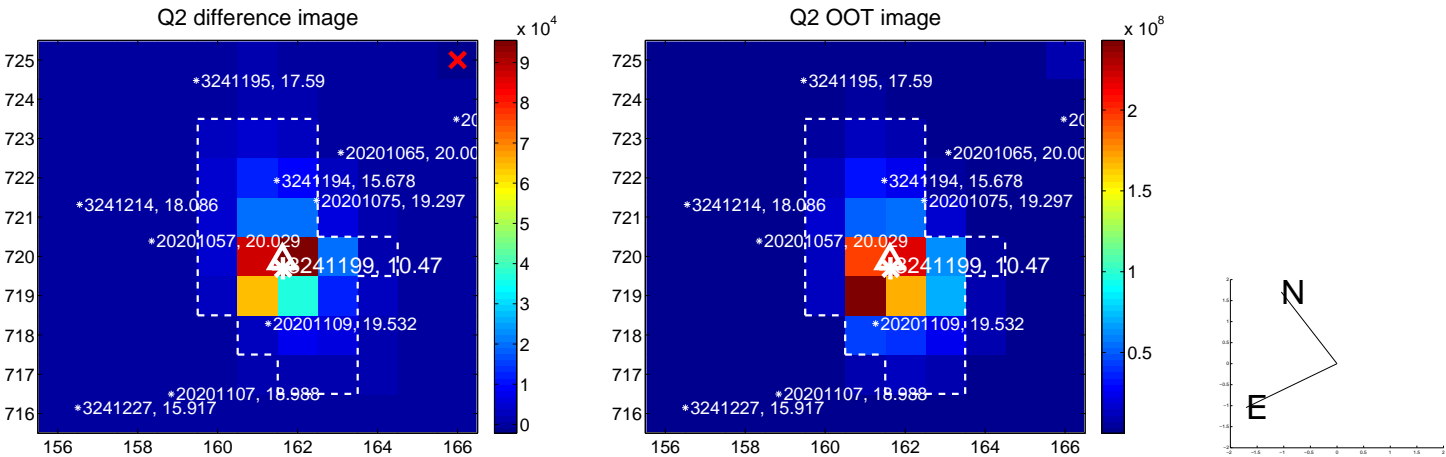
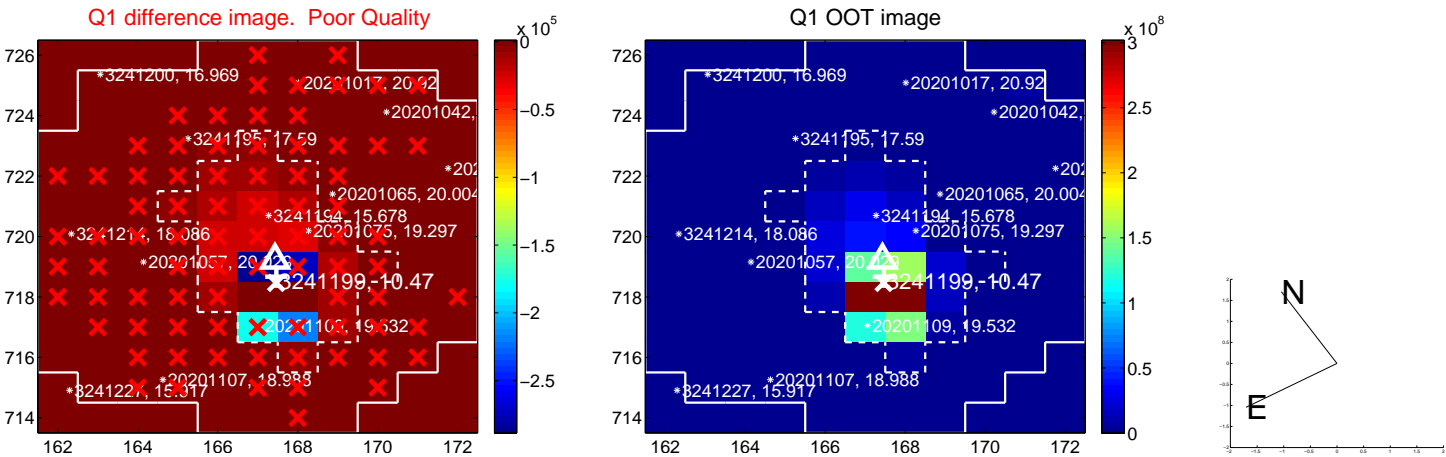


offset from photometric centroids

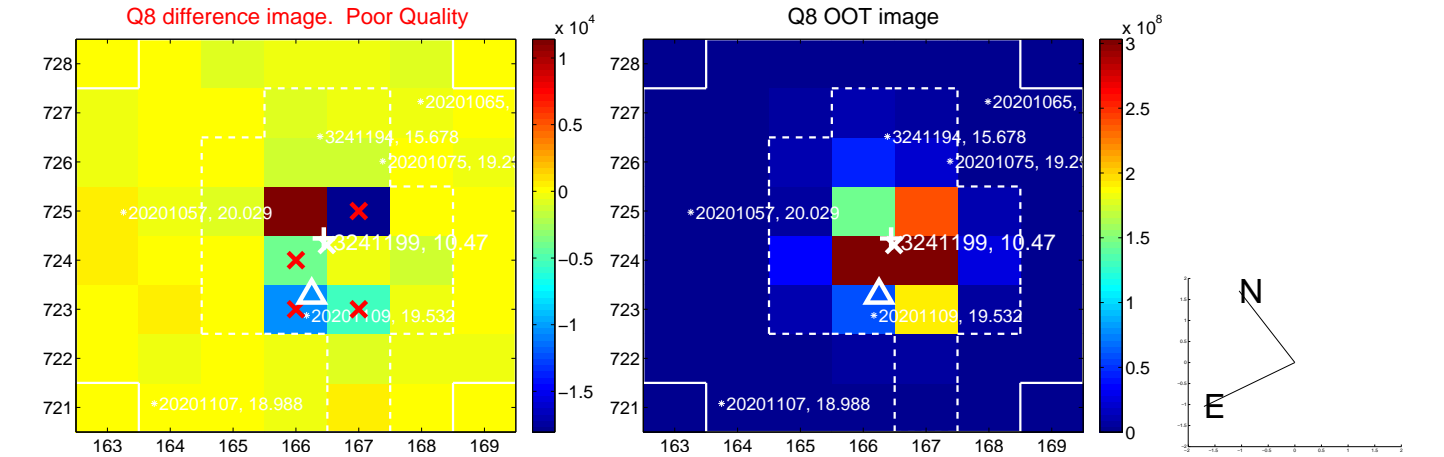
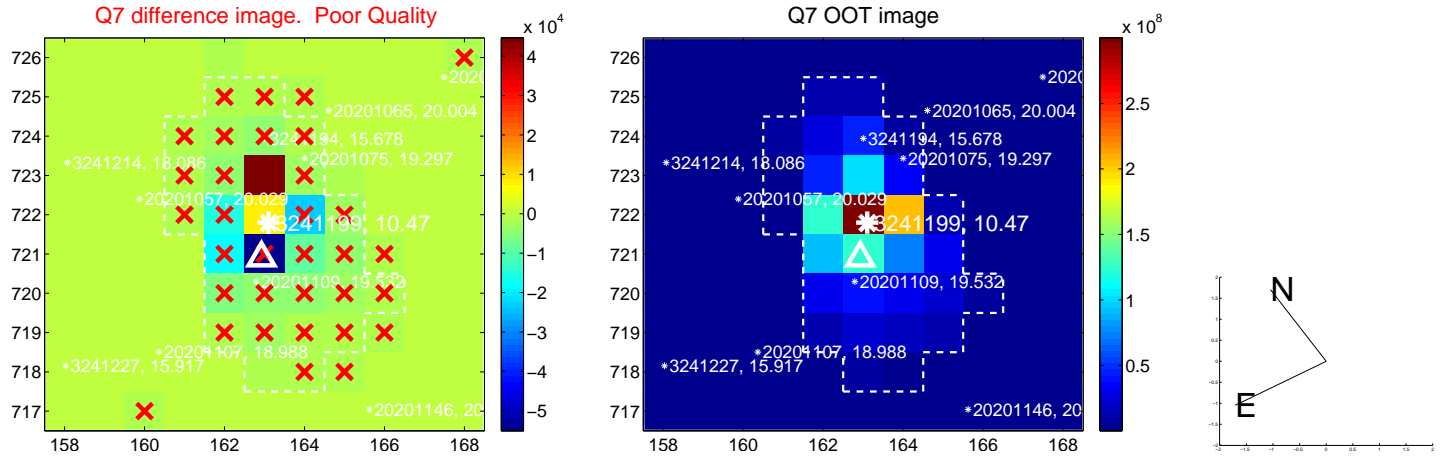
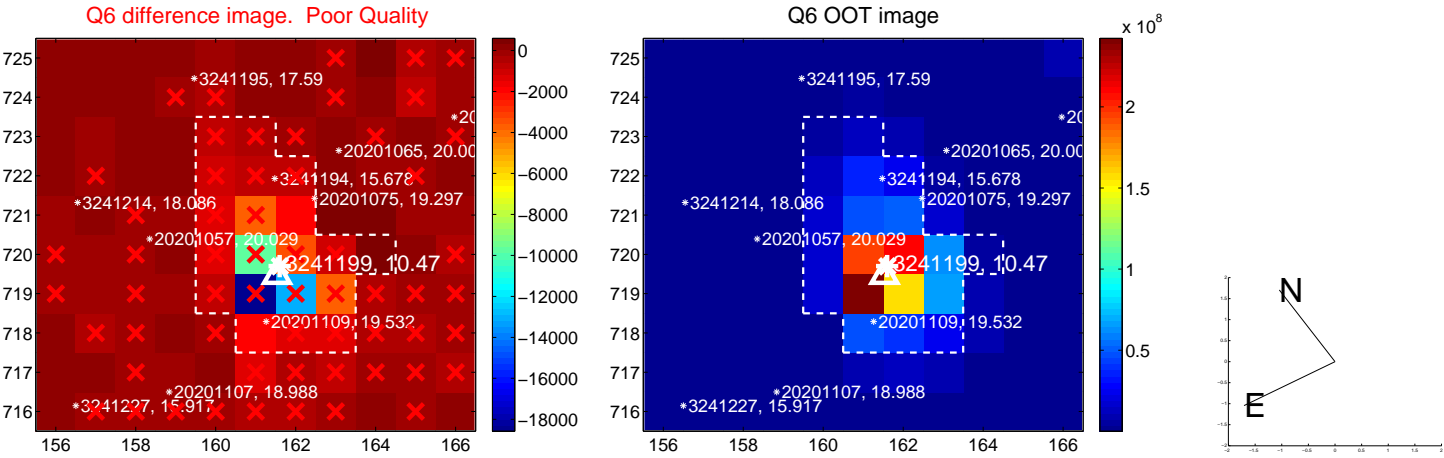
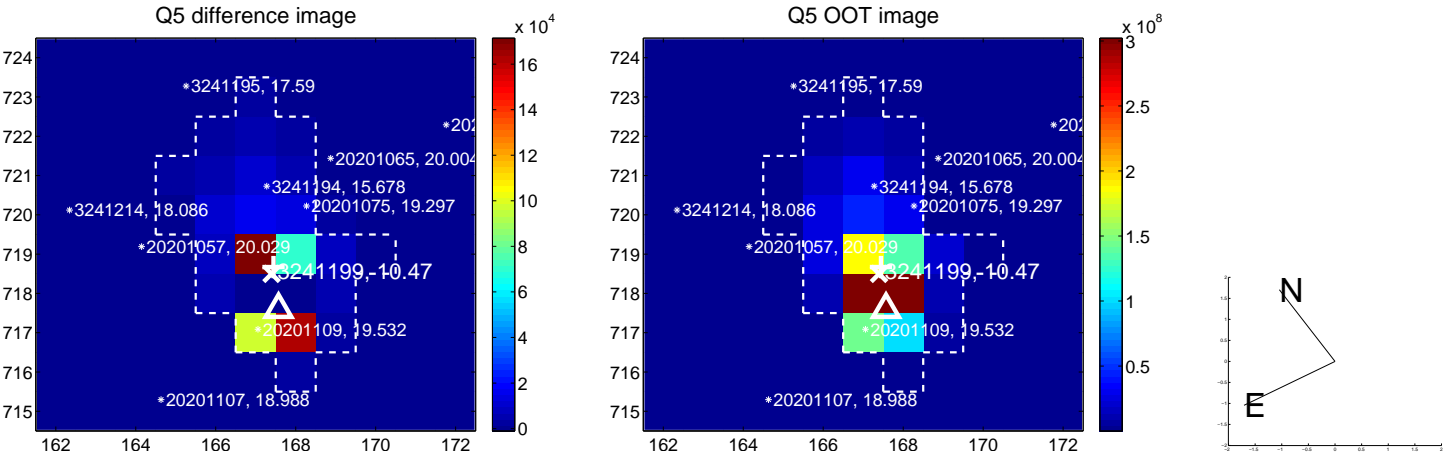


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

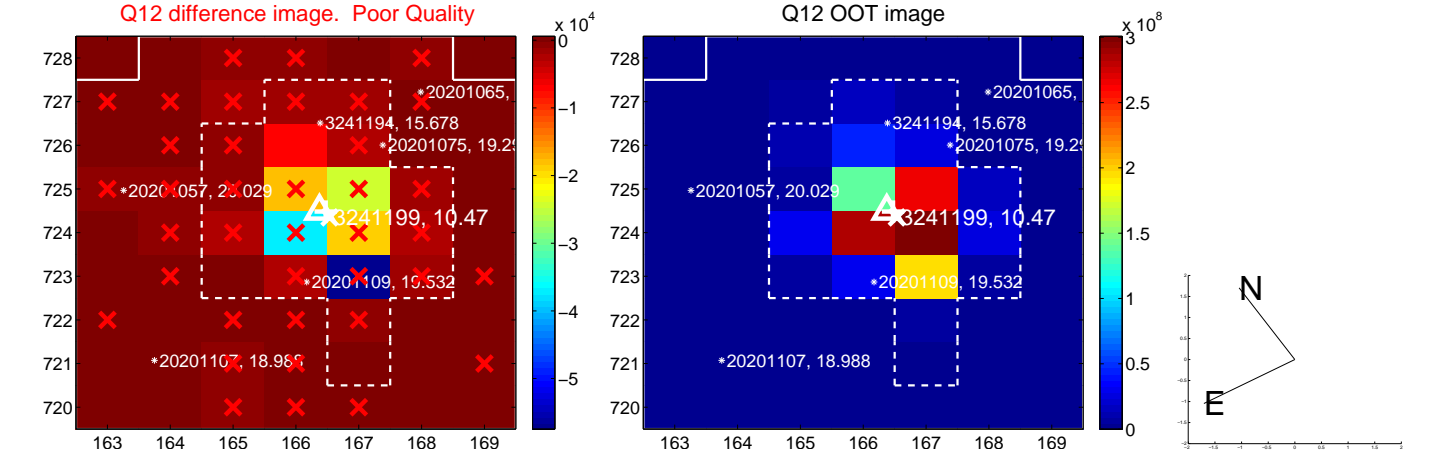
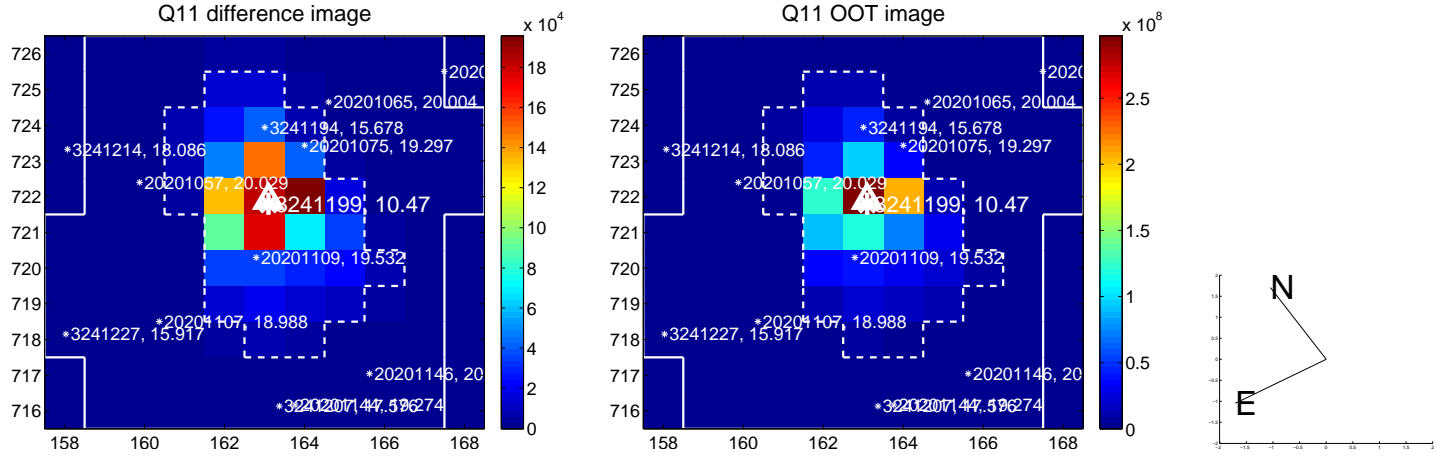
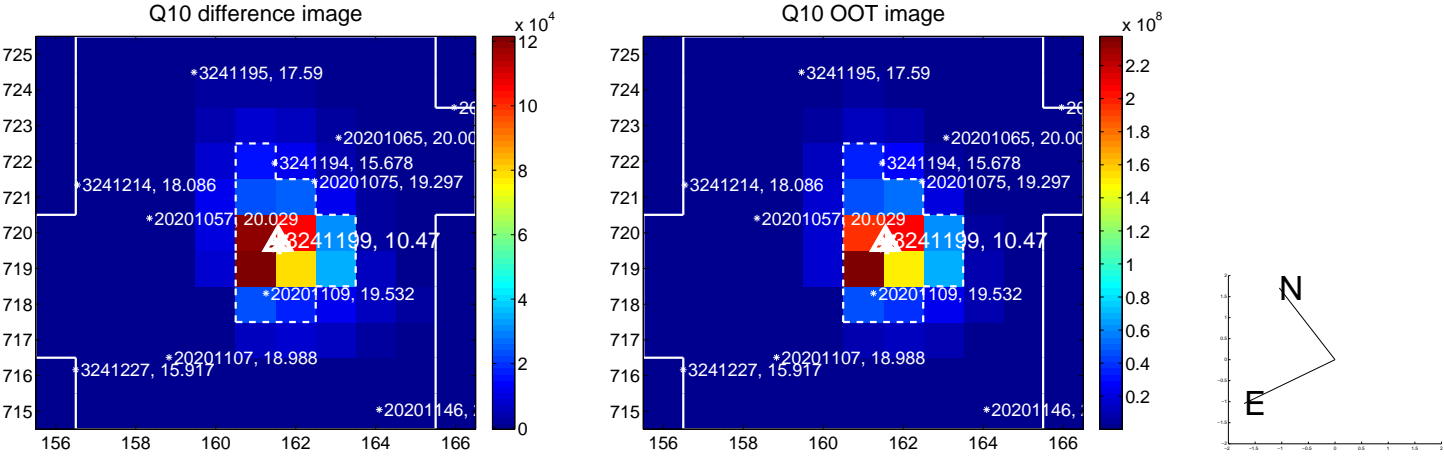
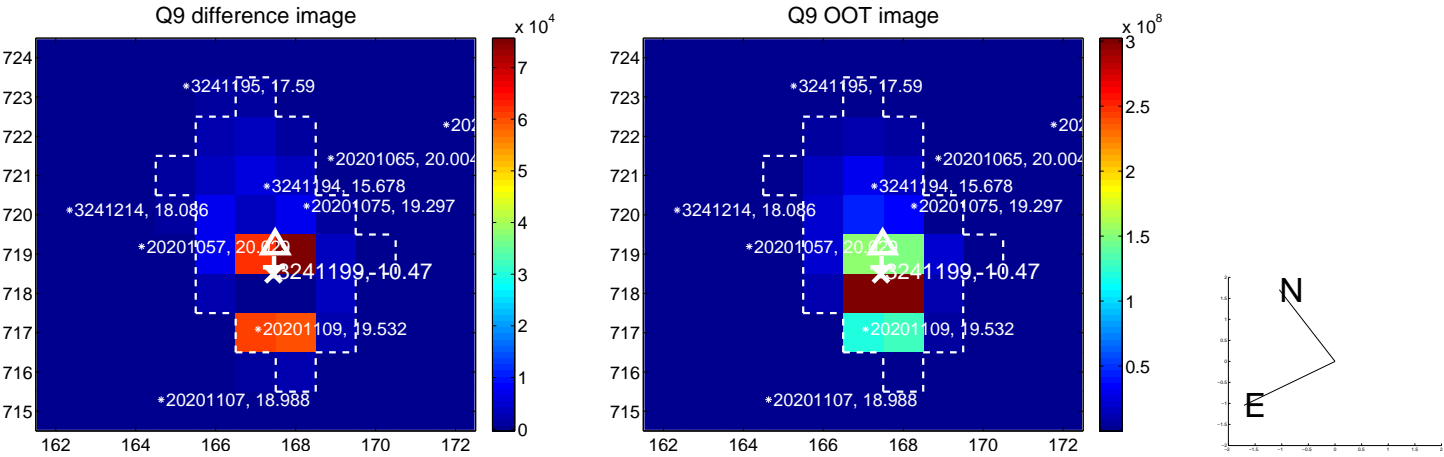
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



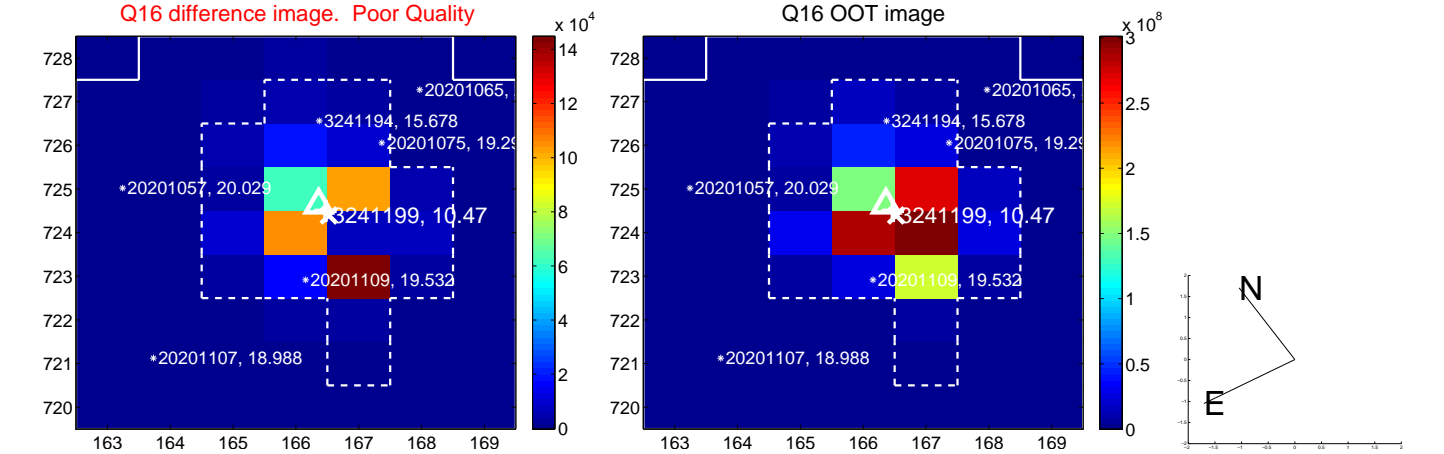
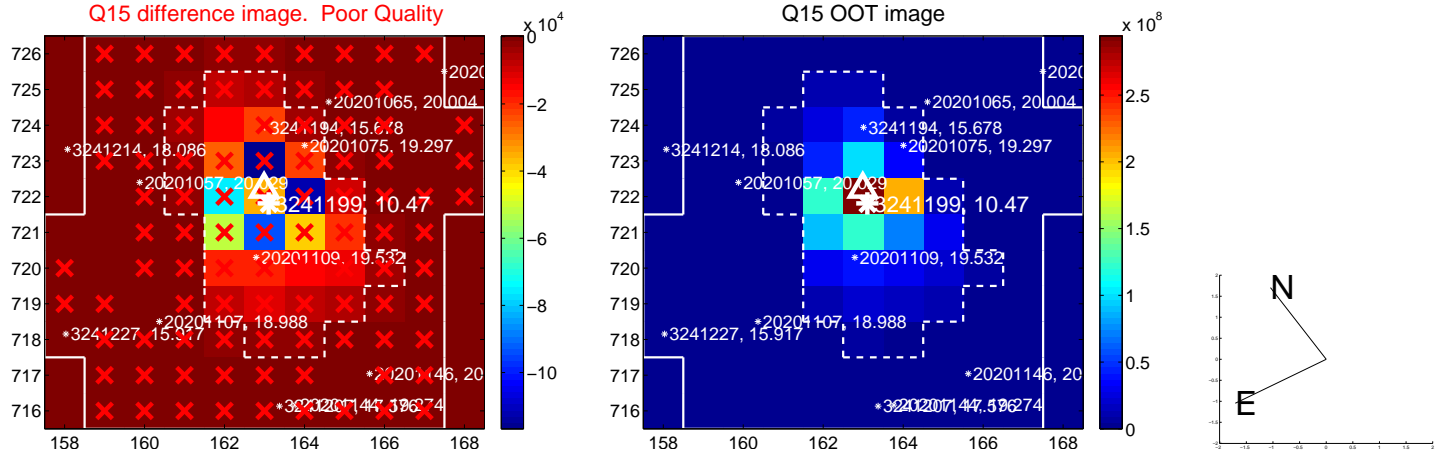
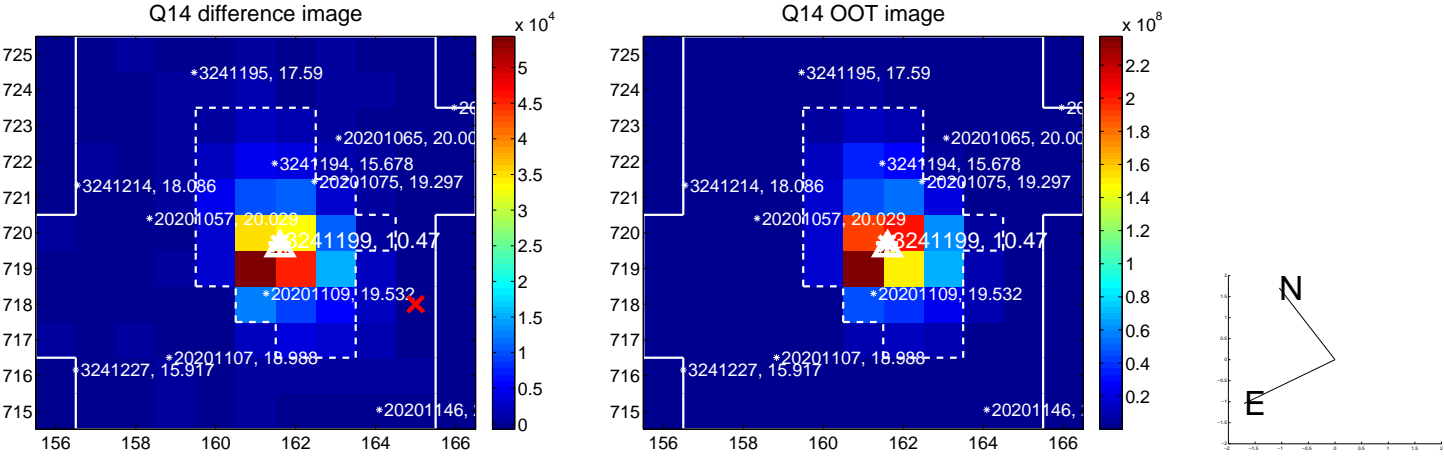
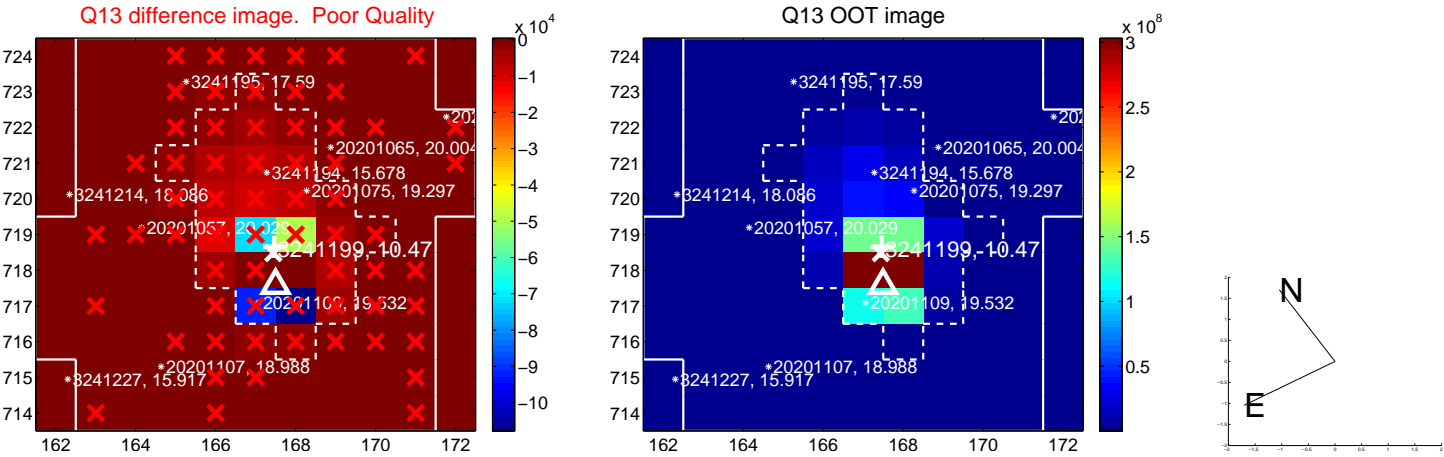
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



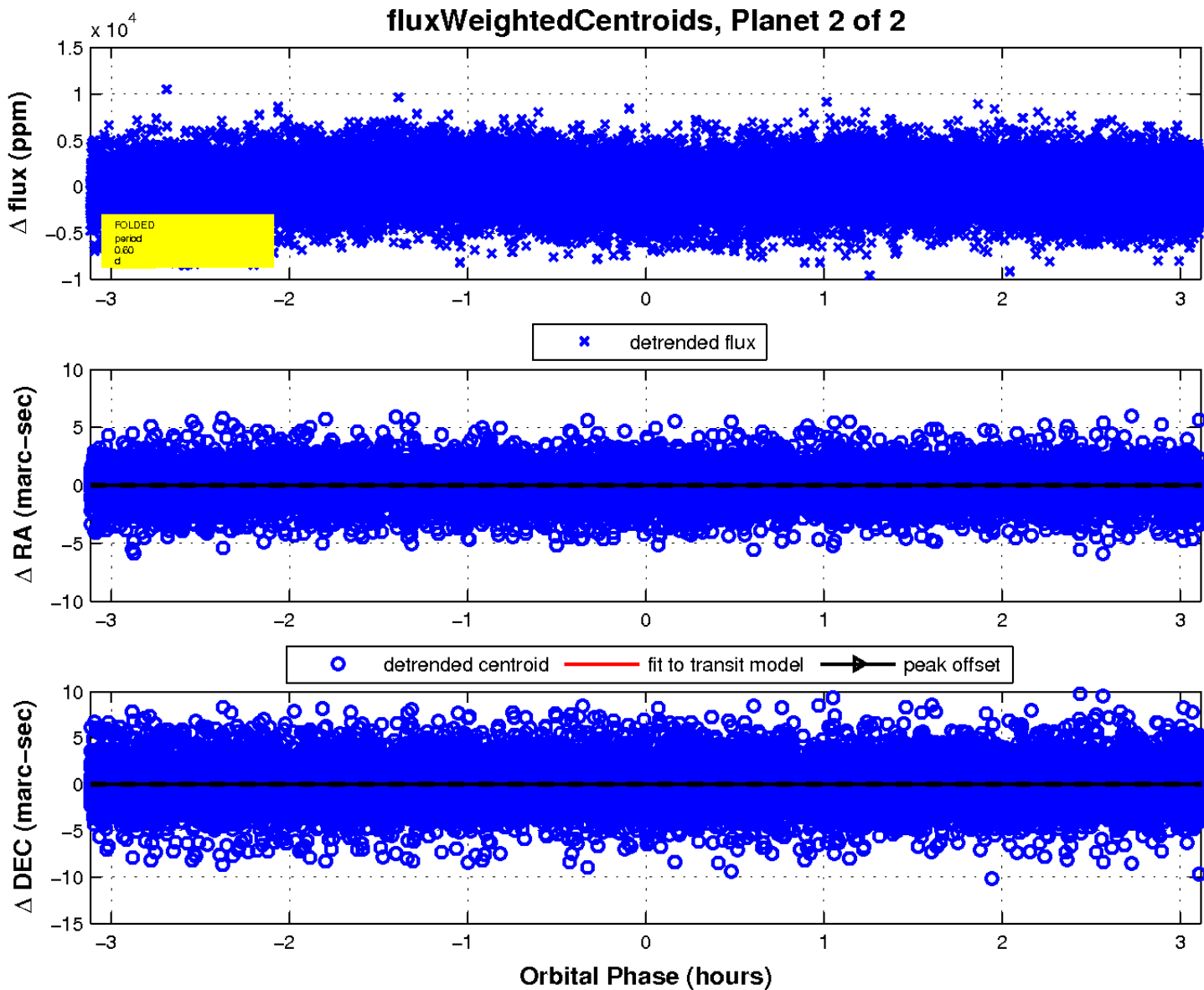
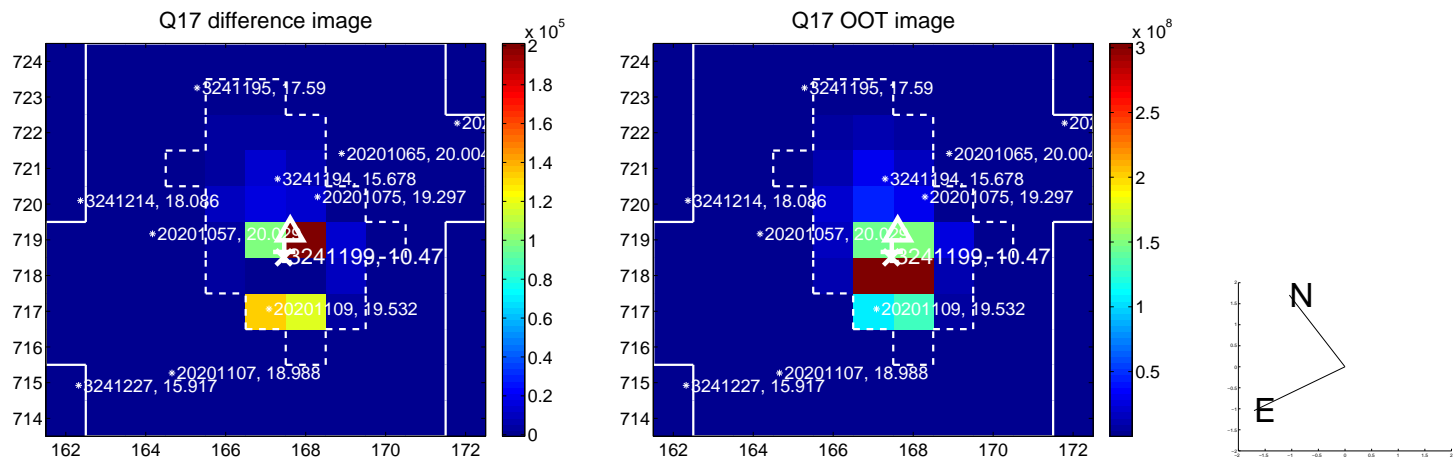
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

