

KIC 006614926

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})
006614926-01	OBS	6029.01	3.026765	133.327944	65934.0	4.295	5586.2	4339.6	1.01	6283	26.09	811.22
006614926-02	OBS	No	3.026736	131.821182	1701.6	4.219	147.6	146.9	1.01	6283	4.75	811.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614926-01	OBS	FP	0.02	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
006614926-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

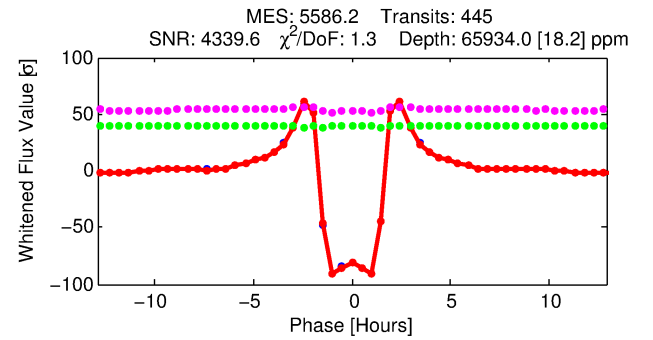
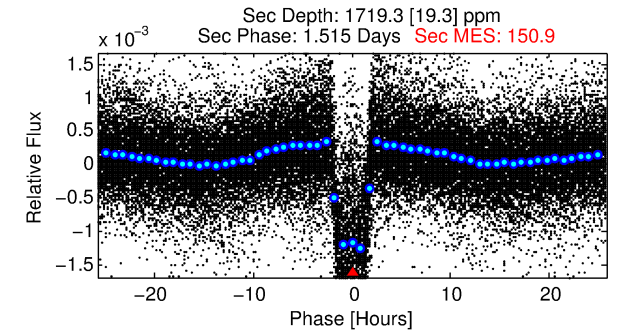
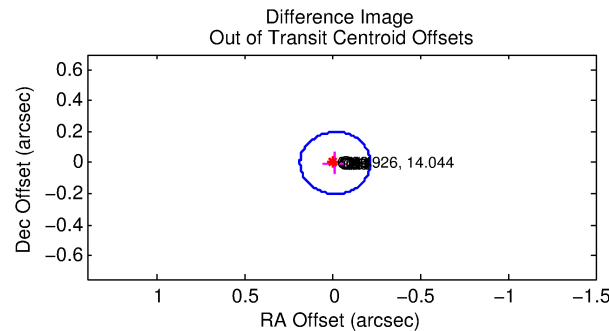
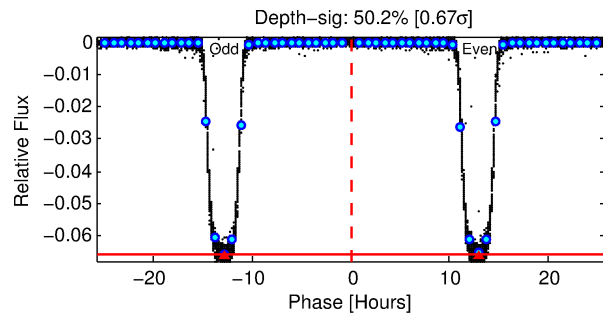
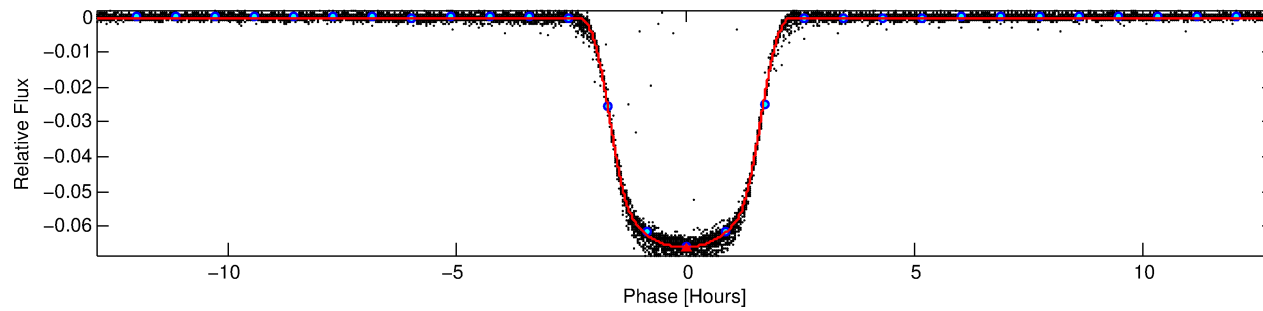
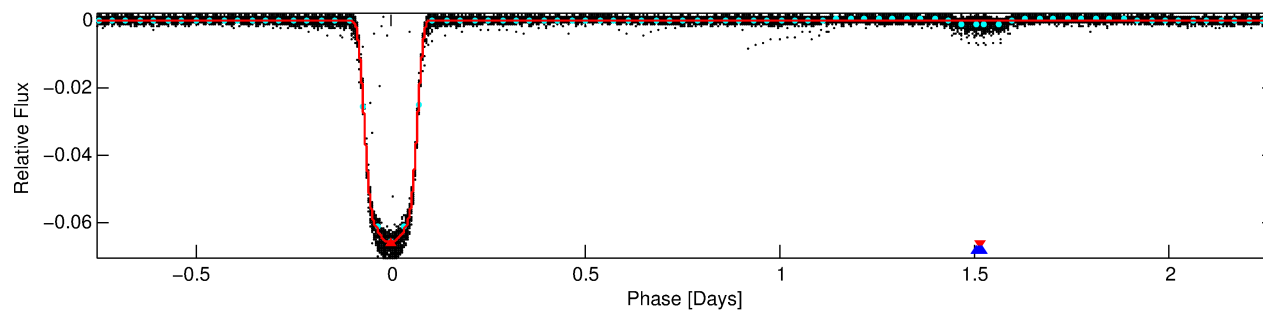
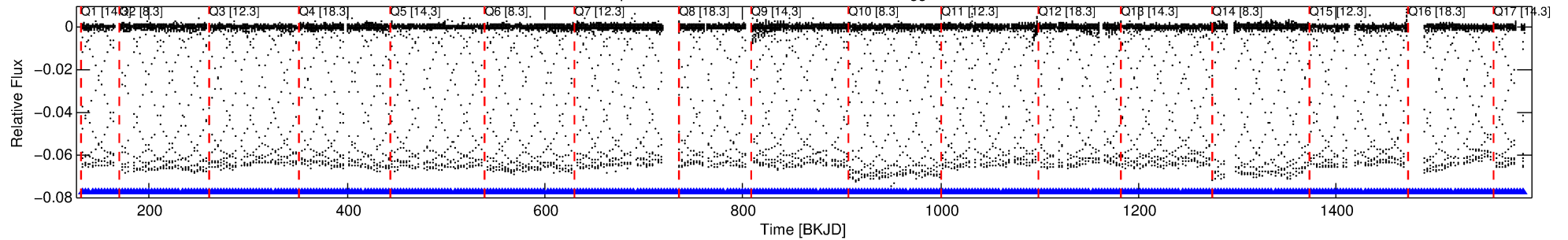
Ephemeris Match Information For 006614926-01

No Significant Match Found

DV One-Page Summary

KIC: 6614926 Candidate: 1 of 2 Period: 3.027 d
KOI: K06029.01 Corr: 0.996

Kp: 14.04 R*: 1.01 Rs Teff: 6283.0 K Logg: 4.46 Fe/H: -0.240



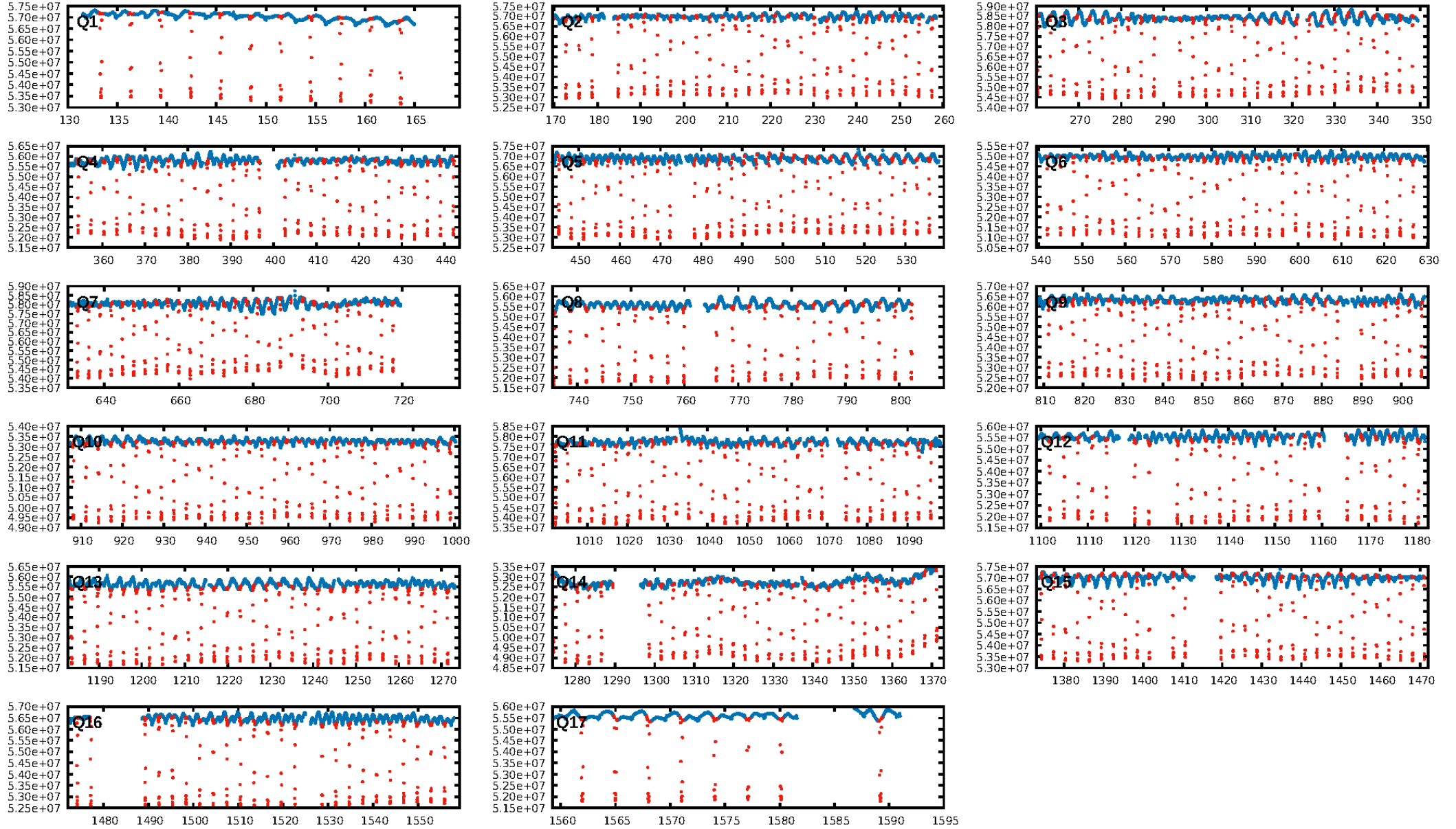
DV Fit Results:

Period = 3.02677 [0.00000] d
Epoch = 133.3279 [0.0000] BKJD
Rp/R* = 0.2367 [0.0000]
a/R* = 6.69 [0.00]
b = 0.06 [0.01]
Seff = 811.22 [322.55]
Teq = 1361 [135] K
Rp = 26.09 [7.72] Re
a = 0.0419 [0.0106] AU
Ag = 2.44 [0.92] [1.57σ]
Teffp = 2630 [87] K [7.90σ]

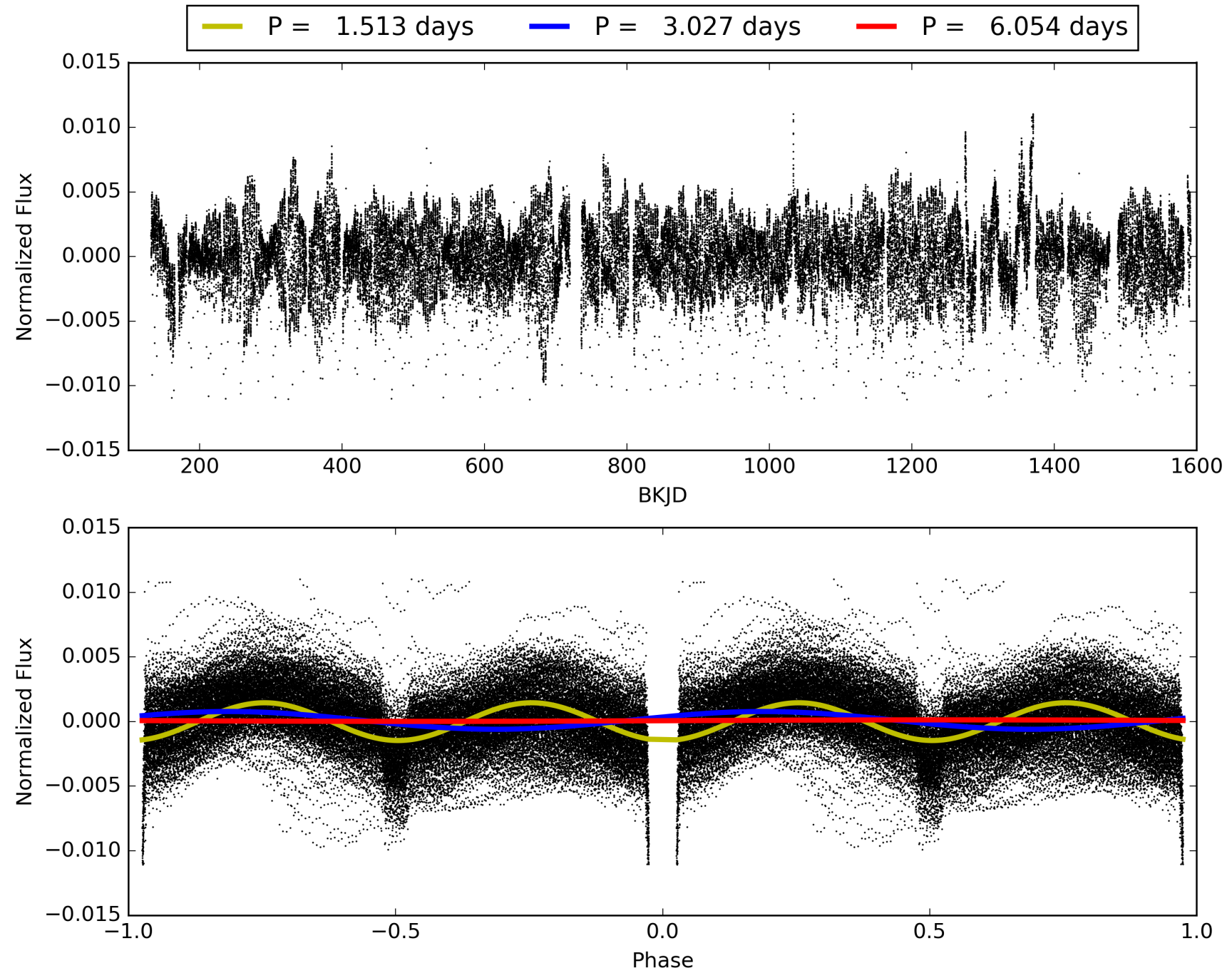
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [426/426]
GhostDiagnostic-chr: 2.143
Centroid-sig: 0.0%
Centroid-so: 0.192 arcsec [234.61σ]
OotOffset-rm: 0.015 arcsec [0.23σ]
KicOffset-rm: 0.146 arcsec [2.15σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006614926-01, PDC Light Curves

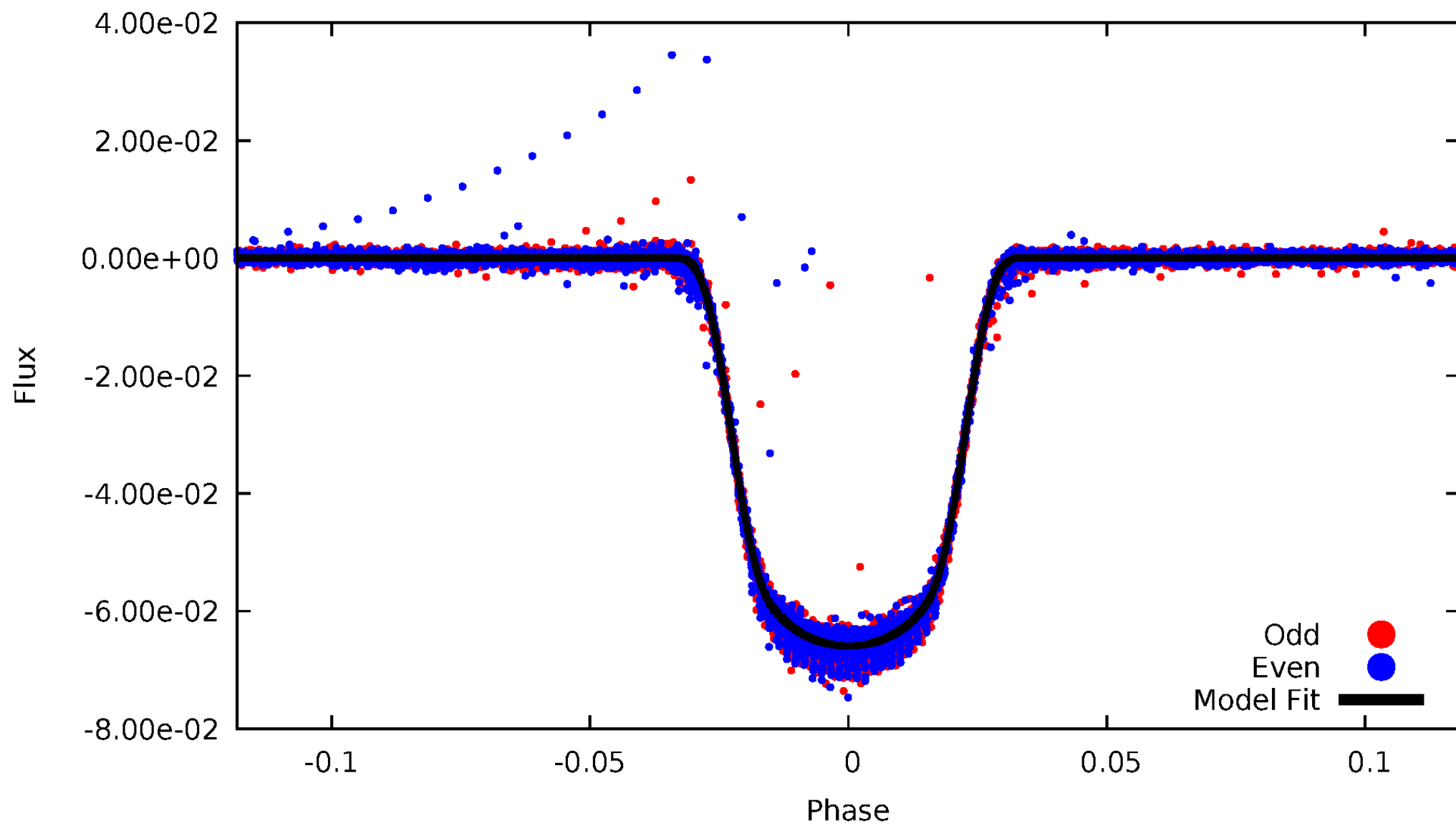


TCE 006614926-01



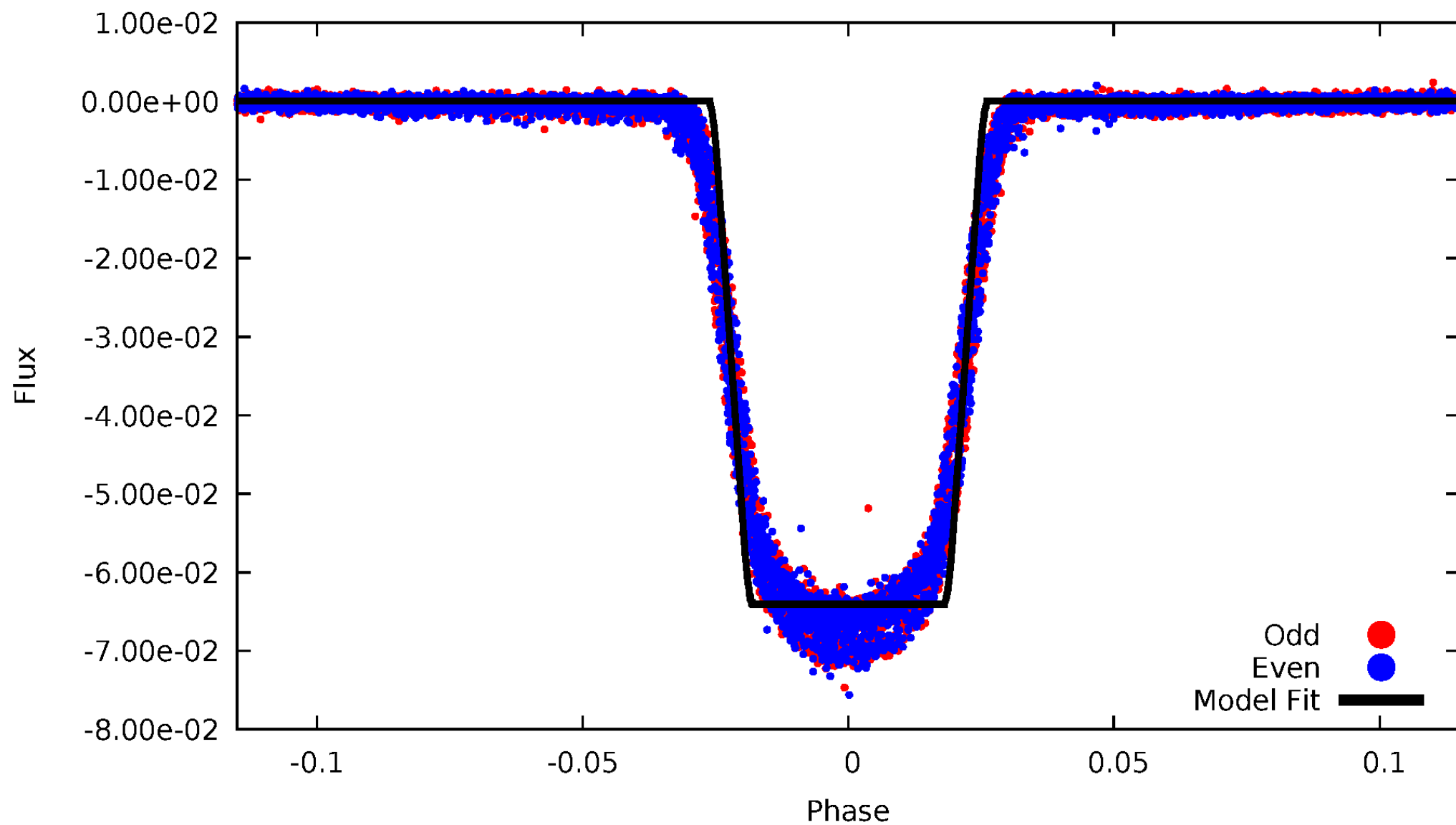
DV Odd/Even

TCE 006614926-01



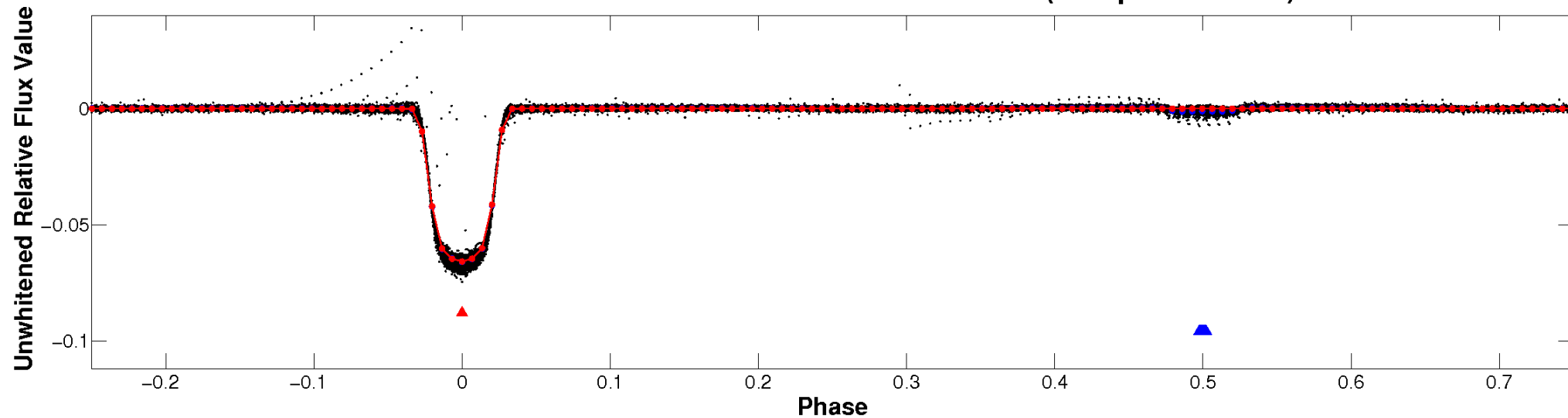
ALT Odd/Even

TCE 006614926-01

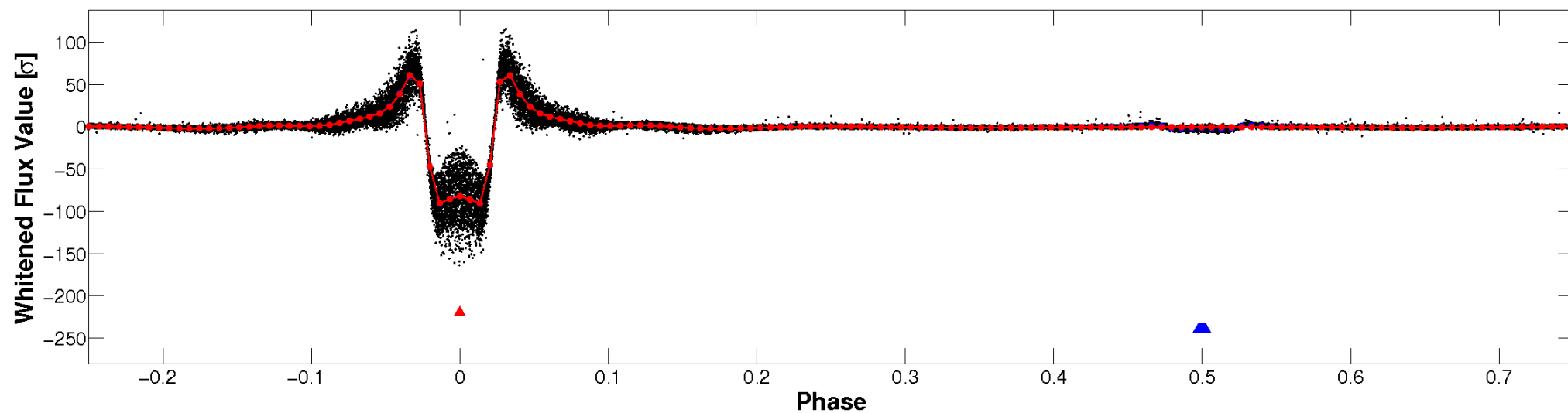


Non-Whitened Vs. Whitened Light Curve

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

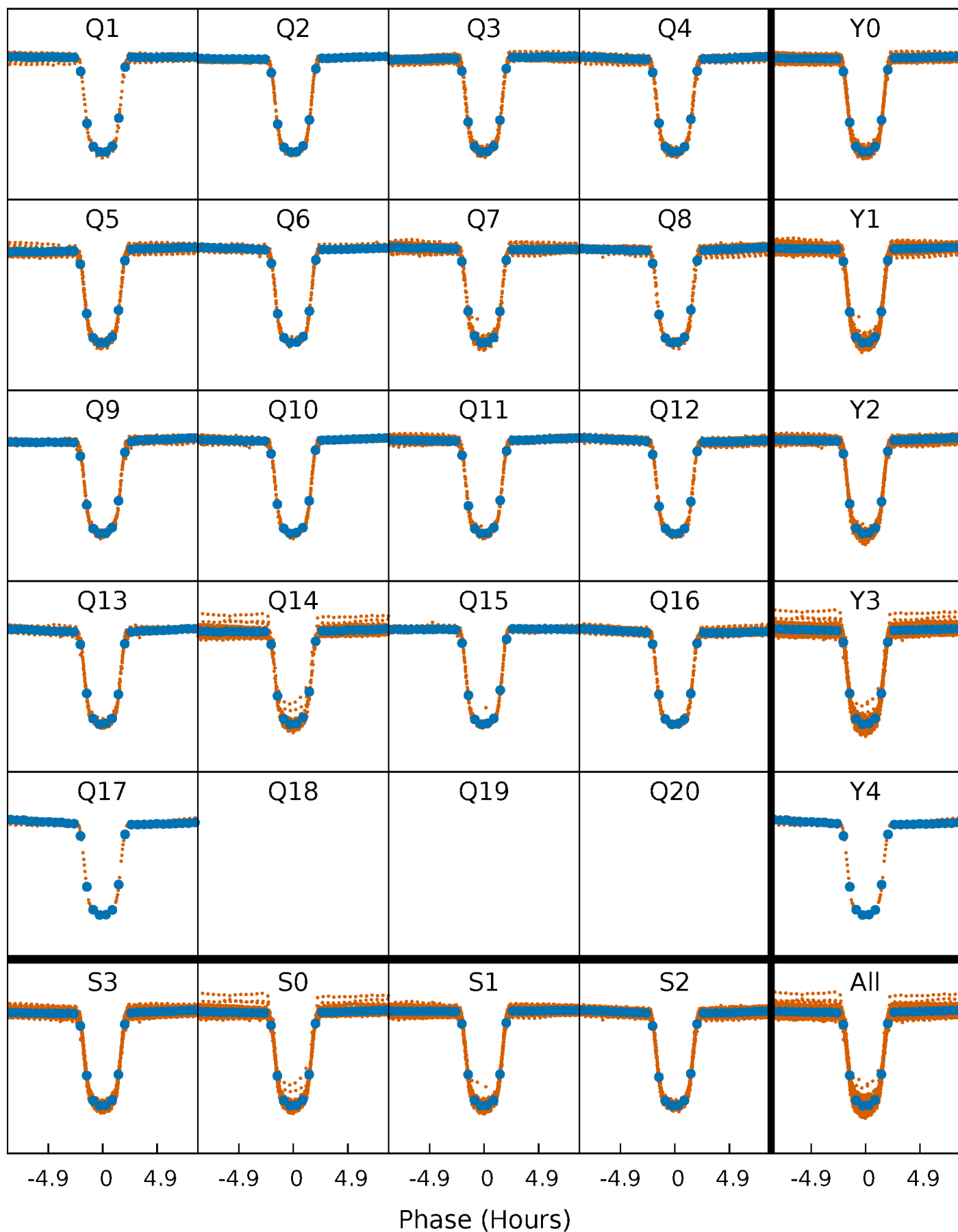


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



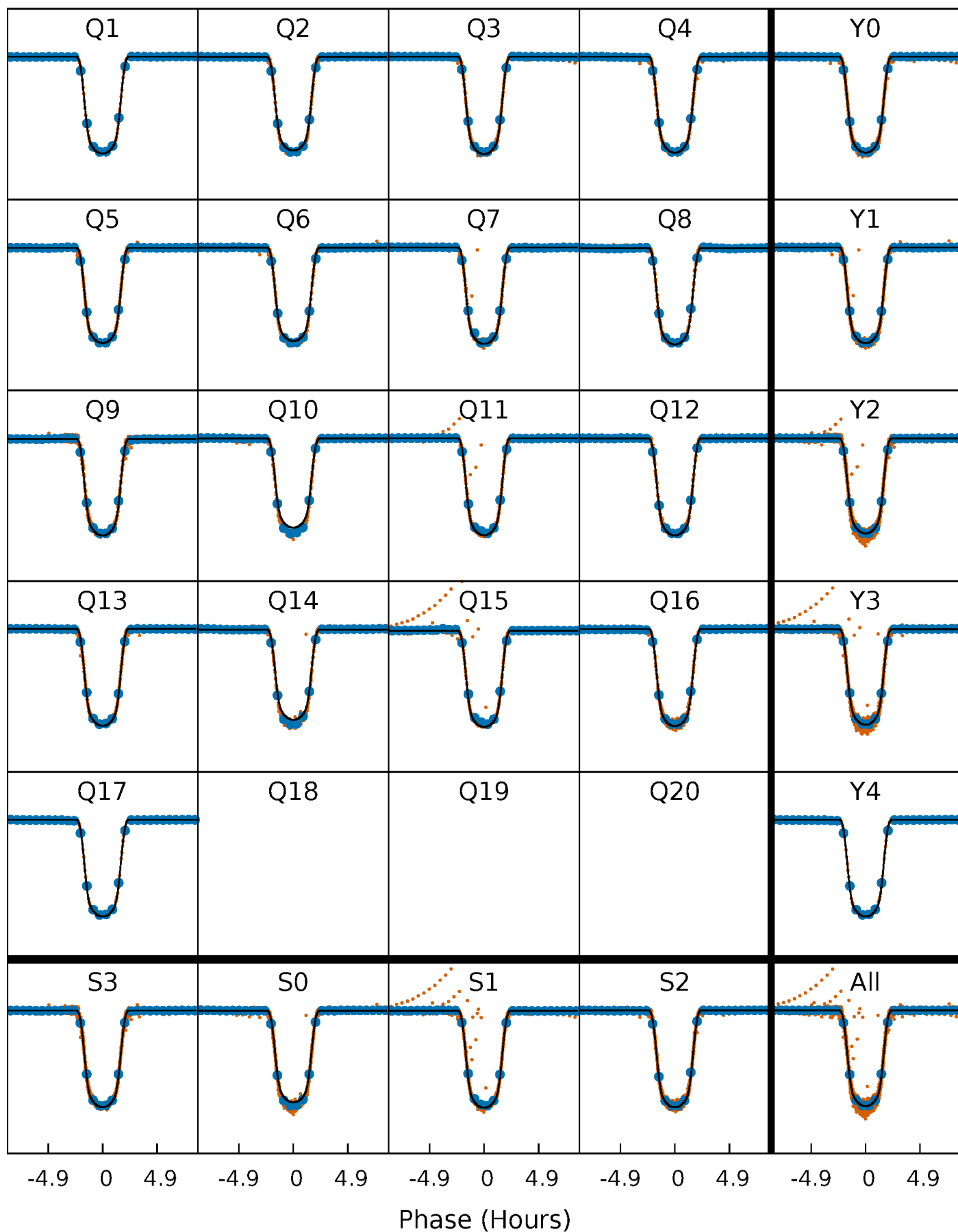
PDC Quarter-Phased Transit Curves

TCE 006614926-01 P= 3.026765 Days $T_0=133.327944$ (BKJD)



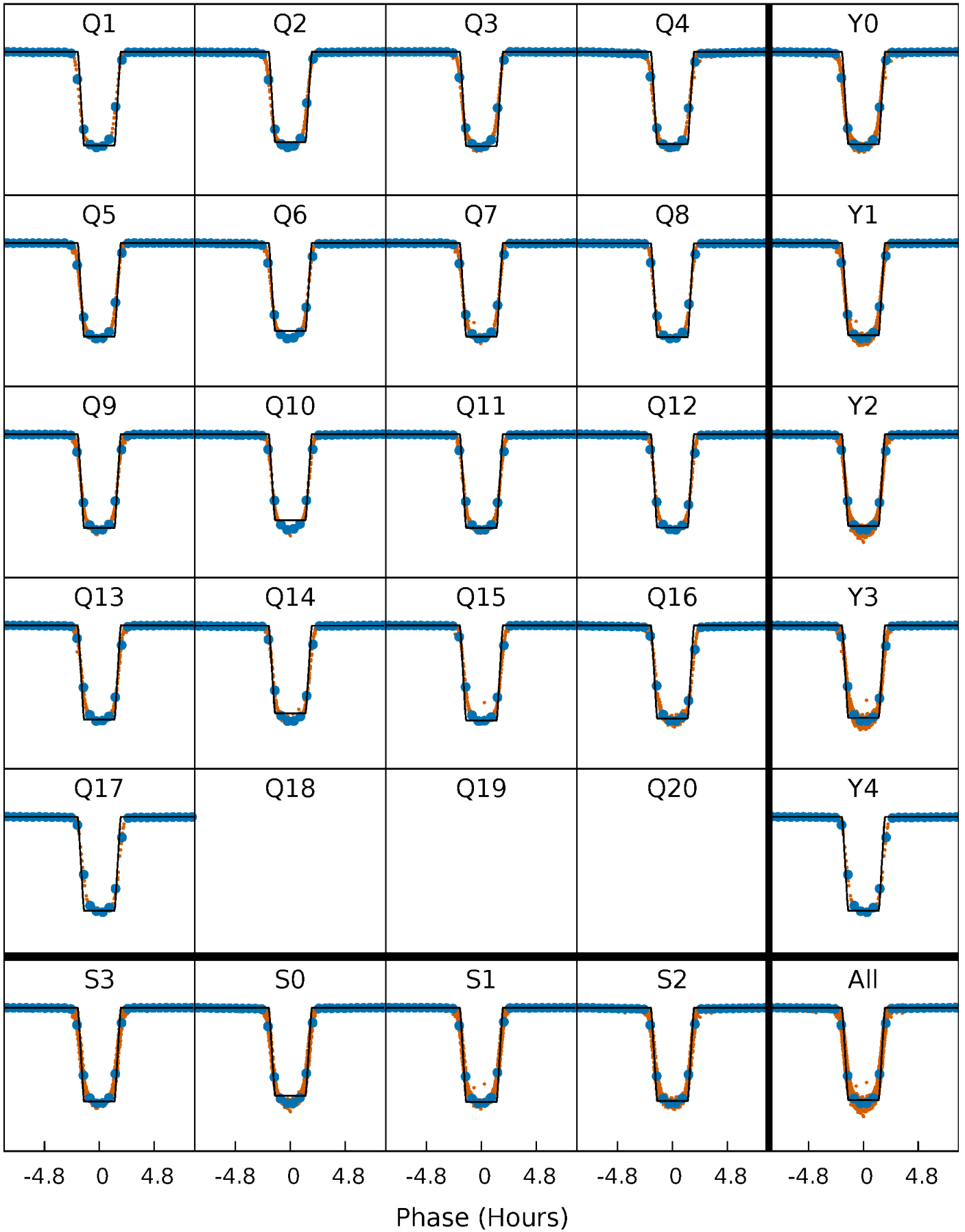
DV Quarter-Phased Transit Curves

TCE 006614926-01 P= 3.026765 Days $T_0=133.327944$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

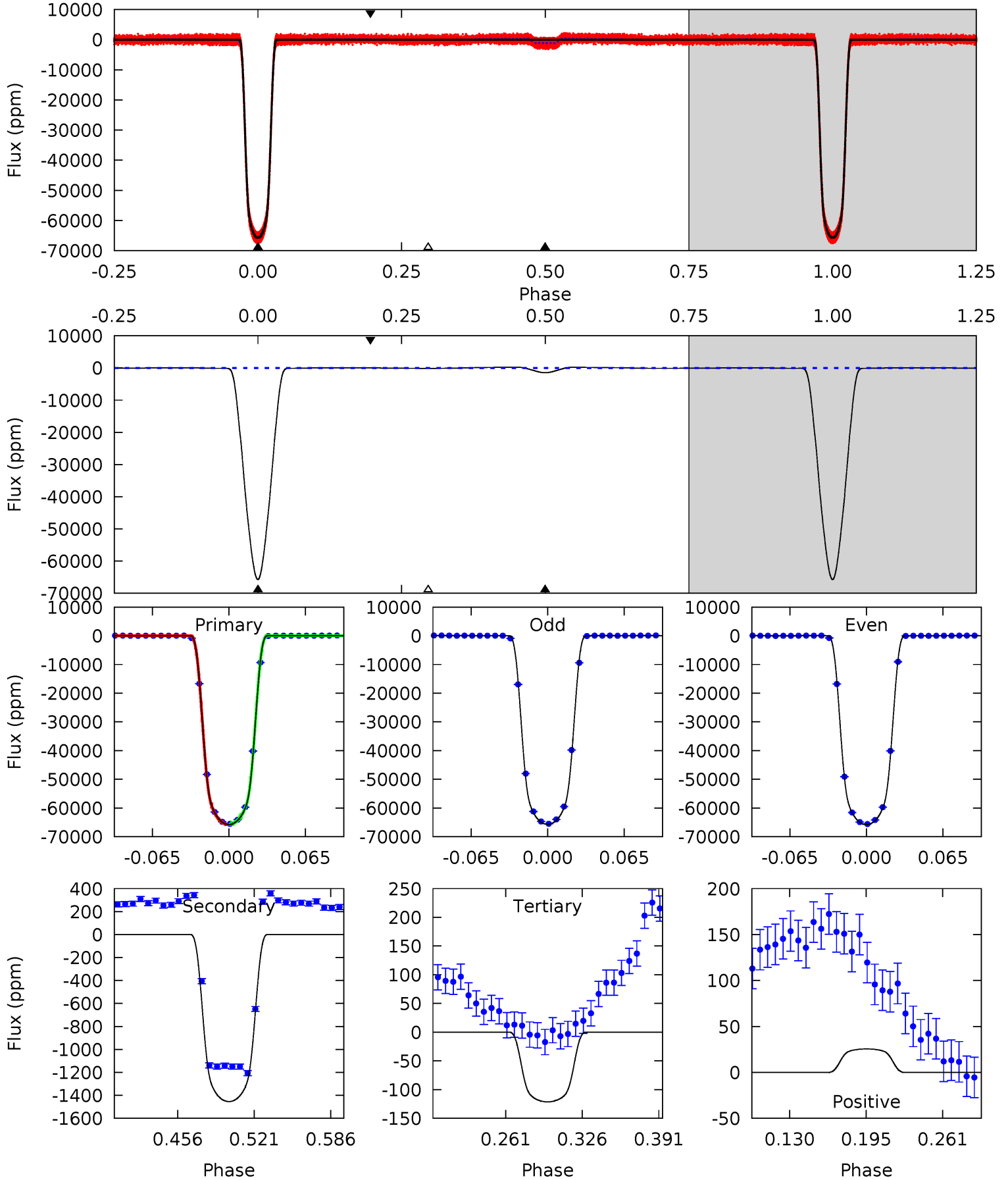
TCE 006614926-01 P= 3.026742 Days $T_0=133.333606$ (BKJD)



DV Model-Shift Uniqueness Test

006614926-01, P = 3.026765 Days, E = 130.301179 Days

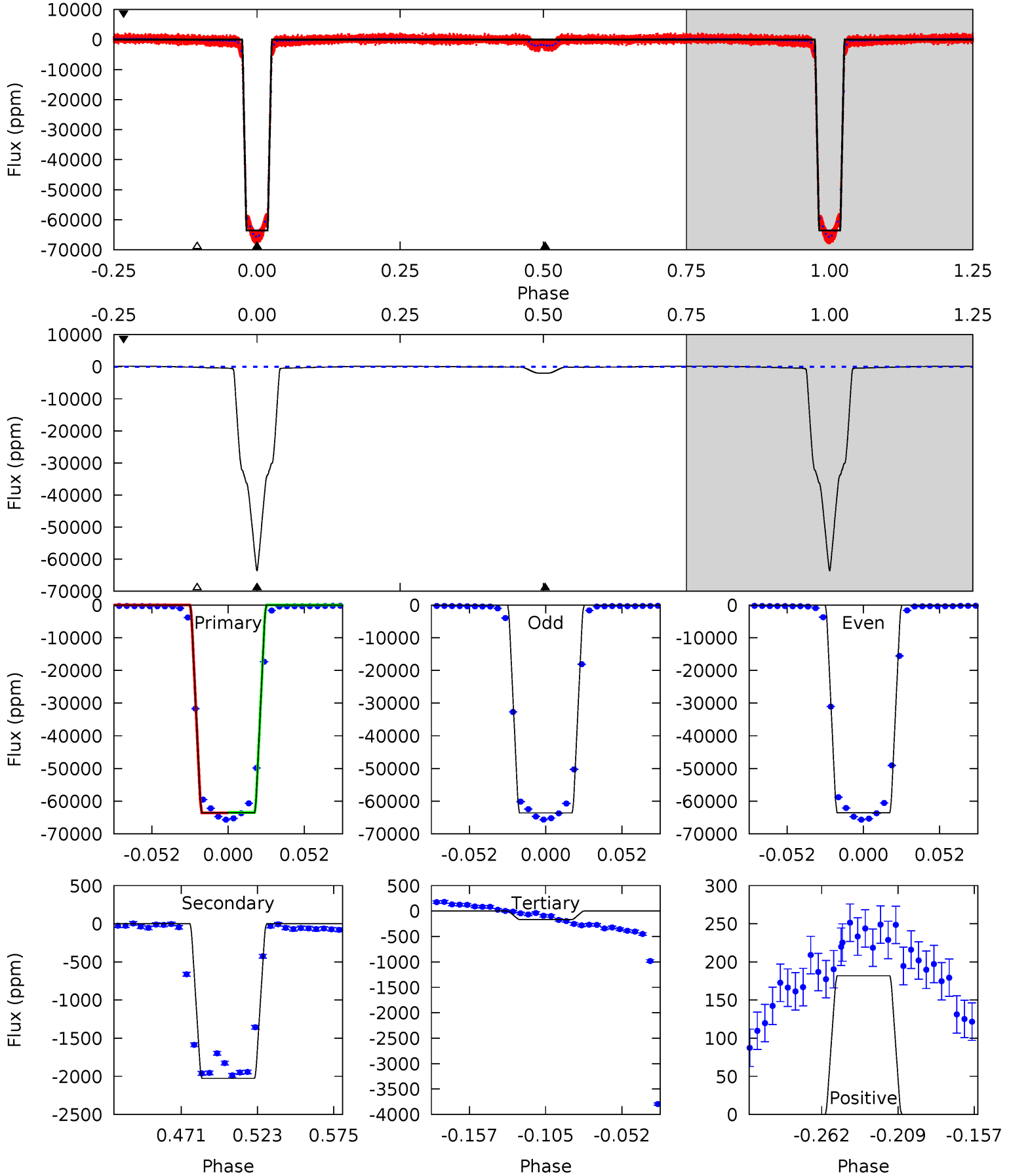
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8190	181.2	15.1	3.18	4.65	1.84	11.1	8175	8187	166.1	178.0	4.49	1.00	0.00	0



Alt Model-Shift Uniqueness Test

006614926-01, P = 3.026742 Days, E = 130.306864 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5585	178.1	14.6	16.0	4.70	1.94	13.1	5570	5569	163.6	162.2	2.31	1.01	0.00	6.92



Stellar Parameters For KIC 006614926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6283^{+150}_{-206}	$4.459^{+0.052}_{-0.208}$	$-0.240^{+0.250}_{-0.350}$	$1.010^{+0.299}_{-0.107}$	$1.067^{+0.144}_{-0.144}$	$1.458^{+0.402}_{-0.758}$
	+2%/-3%	+1%/-5%	+104%/-146%	+30%/-11%	+13%/-13%	+28%/-52%
Source	PHO1	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 006614926-01 / KOI 6029.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1454 ± 8	$26.91^{+4.63}_{-2.19}$	1943^{+145}_{-94}	3056^{+52}_{-59}	$1.891^{+0.298}_{-0.448}$
Alt.	-2027 ± 11	$28.59^{+4.70}_{-2.18}$	1937^{+138}_{-94}	3161^{+52}_{-65}	$2.340^{+0.359}_{-0.534}$

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 $A_{obs} \gg 1.0$

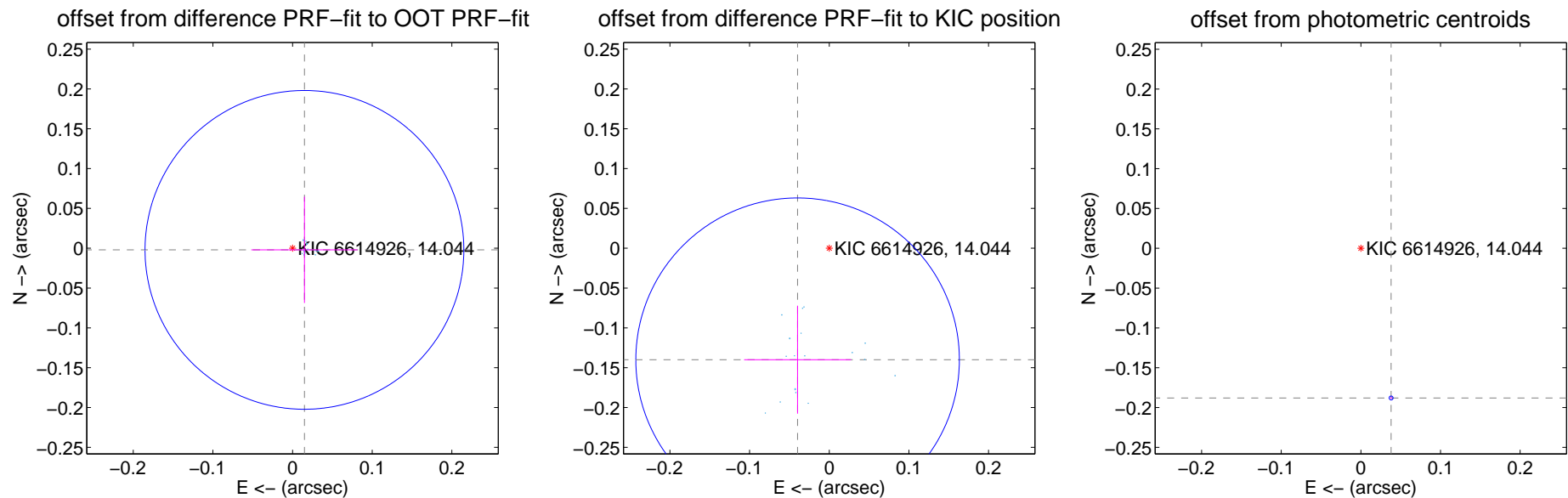
DV Centroid Data

Supplemental centroid analysis for 006614926-01. Kepler magnitude: 14.04. Transit SNR 4339.64

There are 17 quarters with good PRF difference image offsets

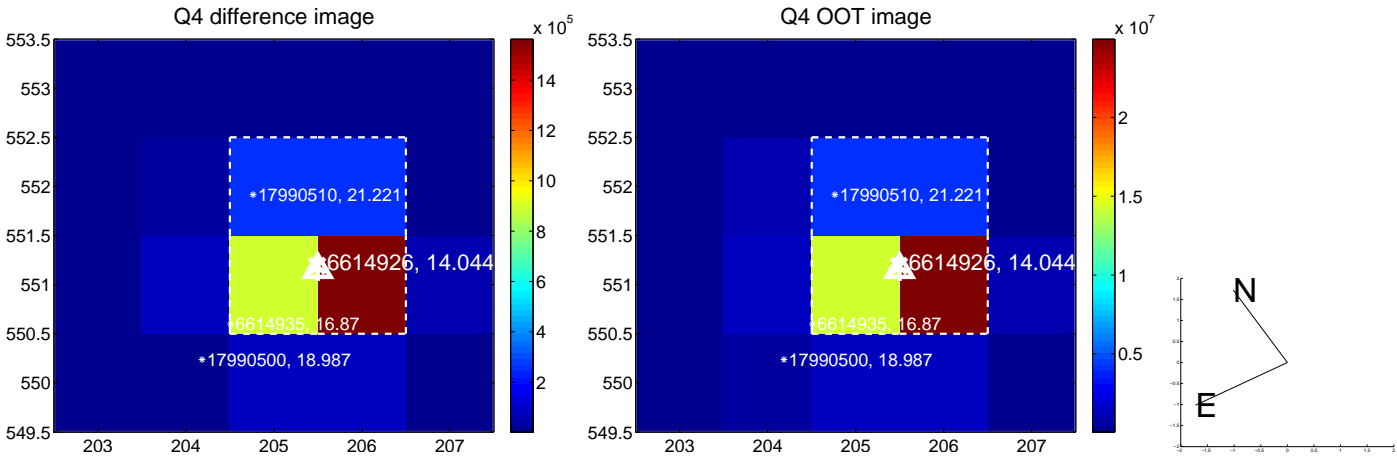
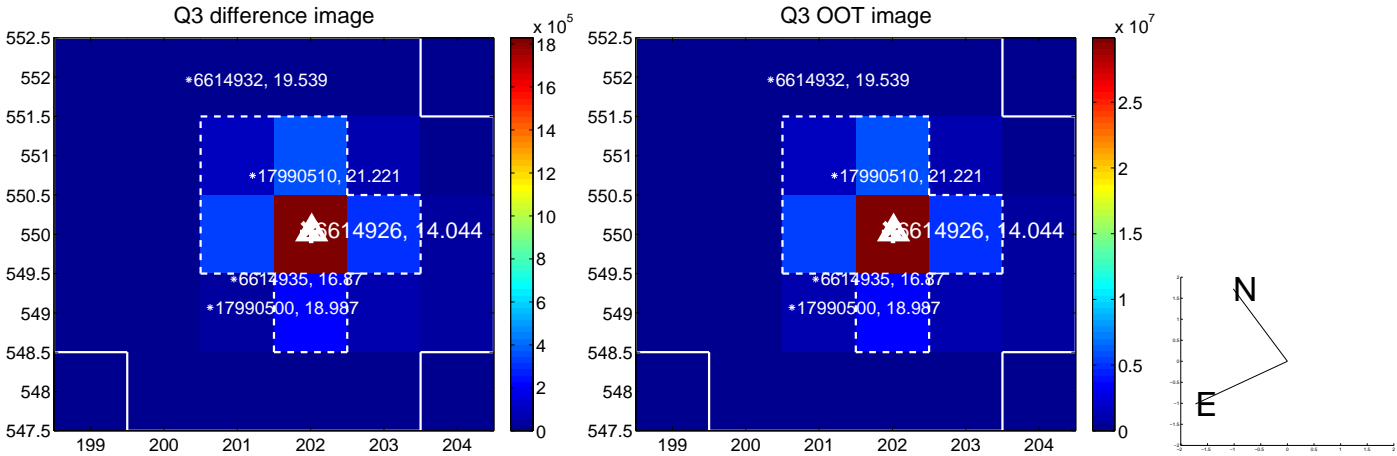
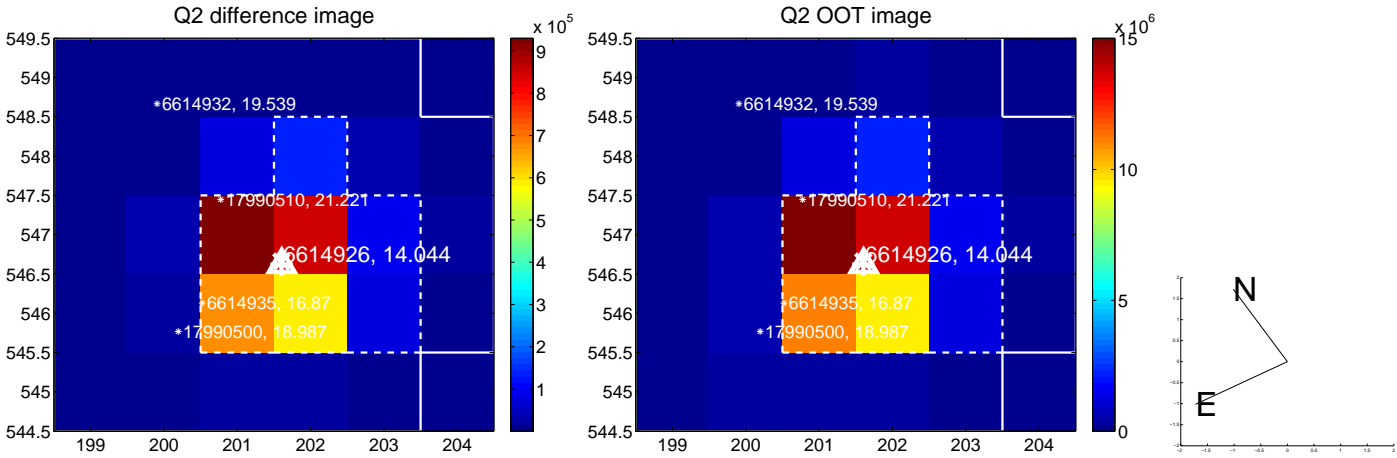
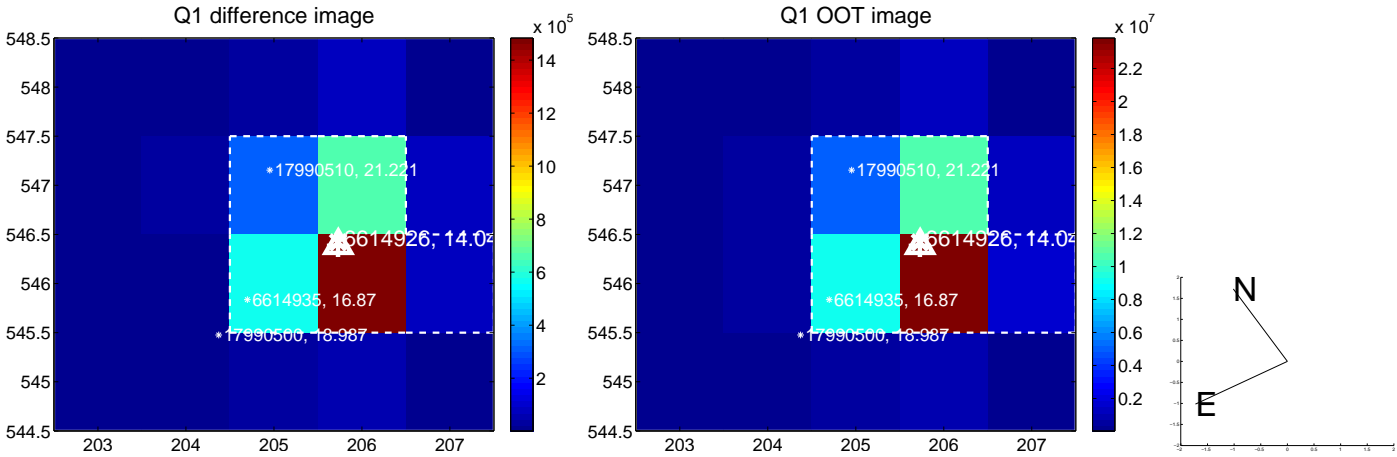
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.015 ± 0.067	0.23	-0.015 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.146 ± 0.068	2.15	0.040 ± 0.067	-0.140 ± 0.068
photometric centroid source offset	0.19 ± 0.00	234.61	-0.04 ± 0.00	-0.19 ± 0.00

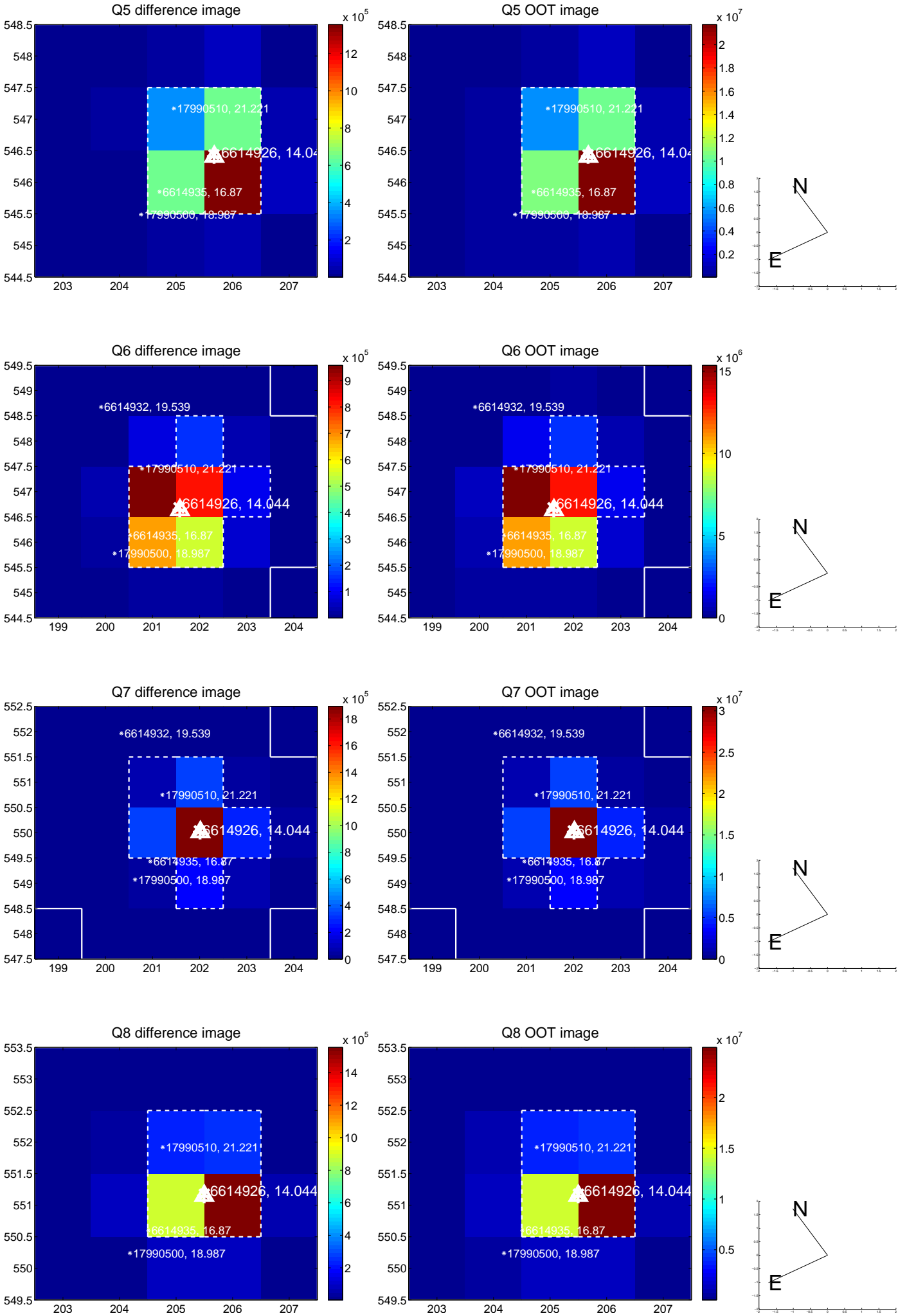


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

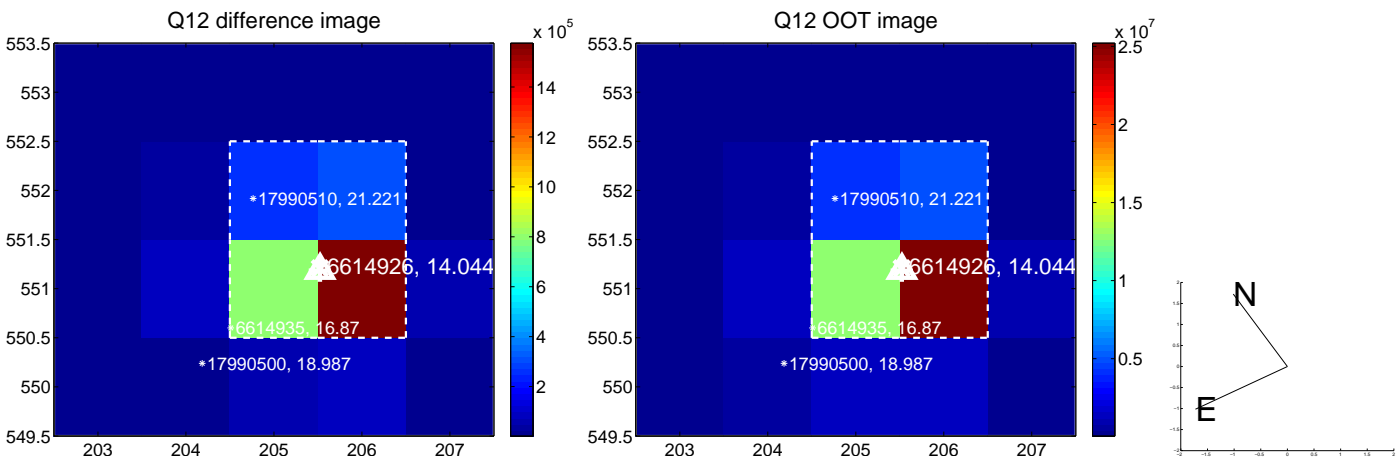
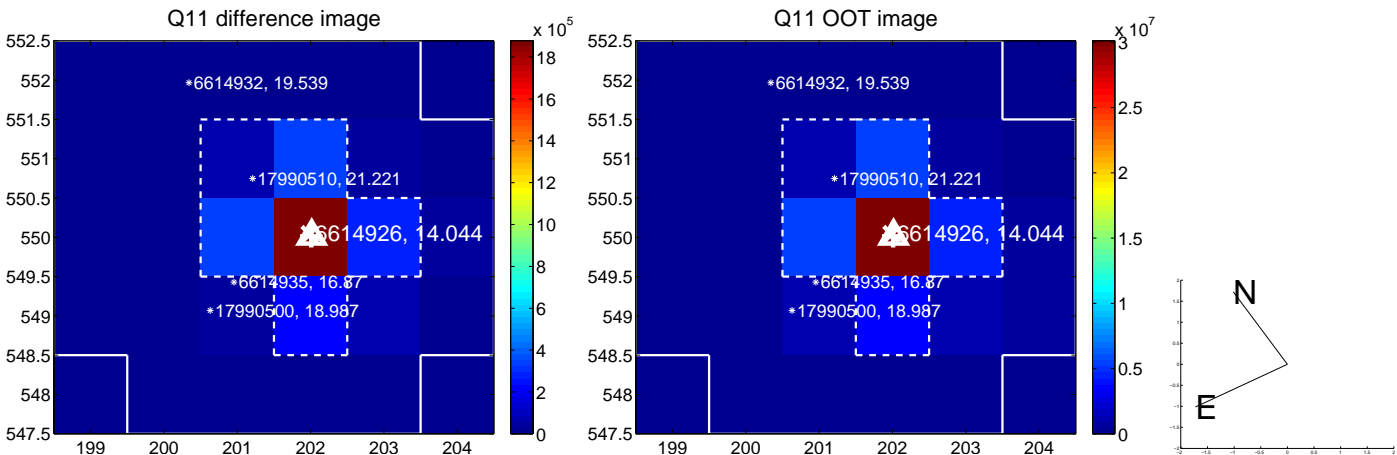
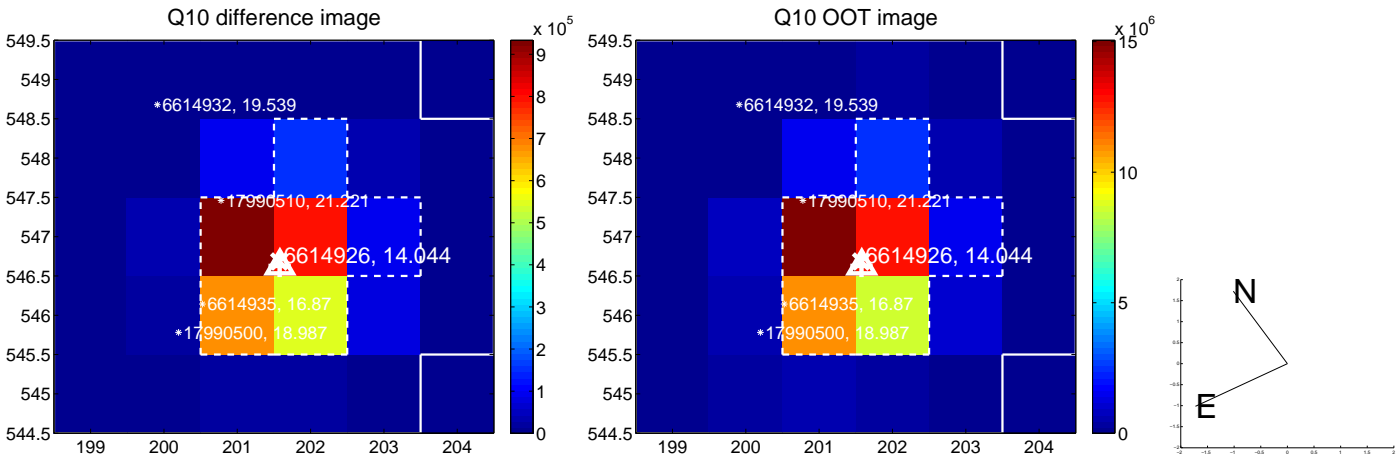
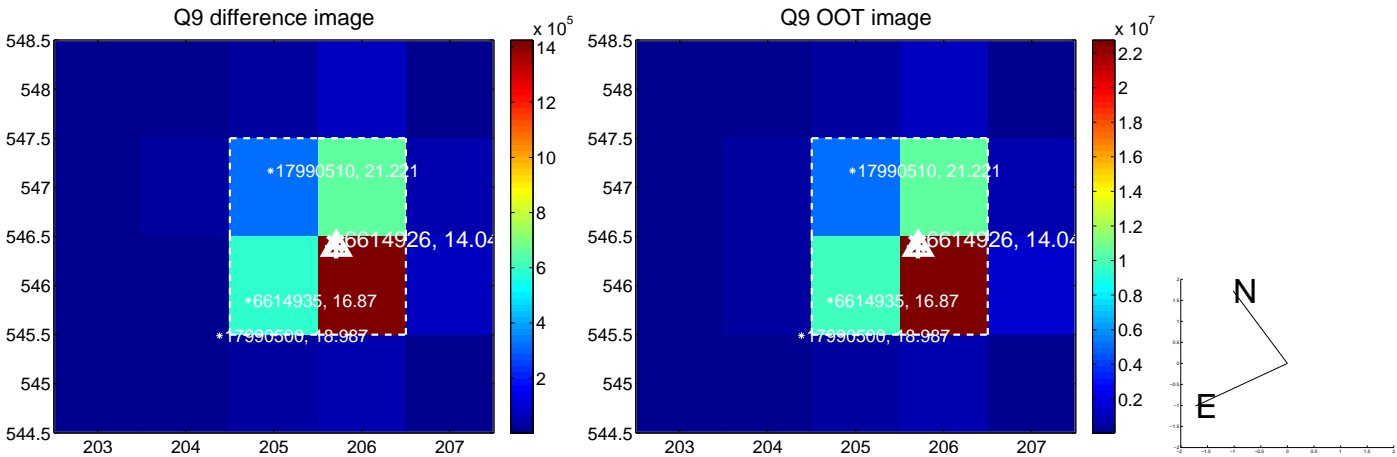
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



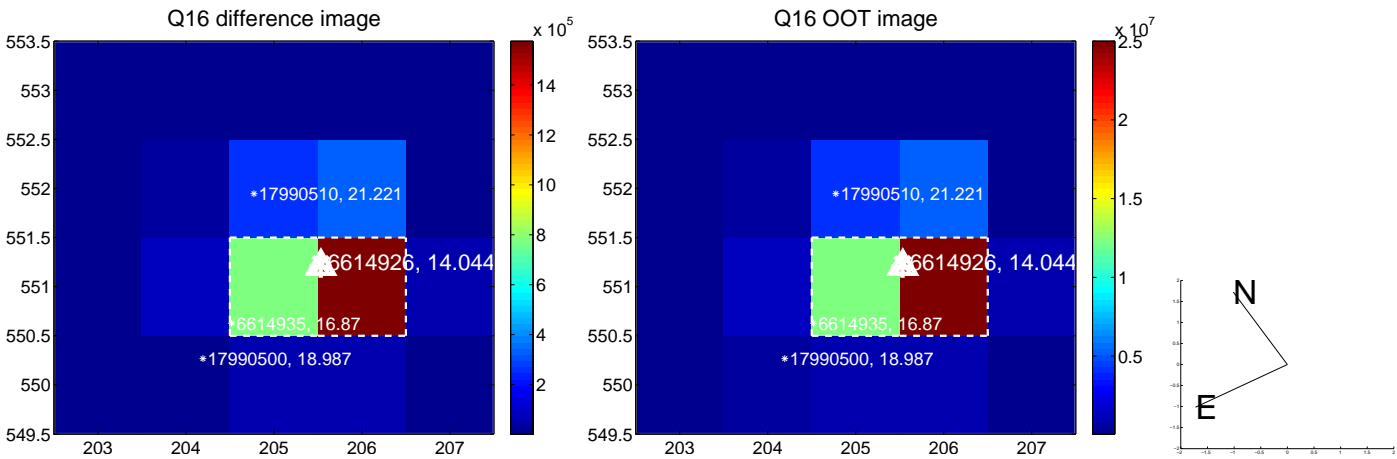
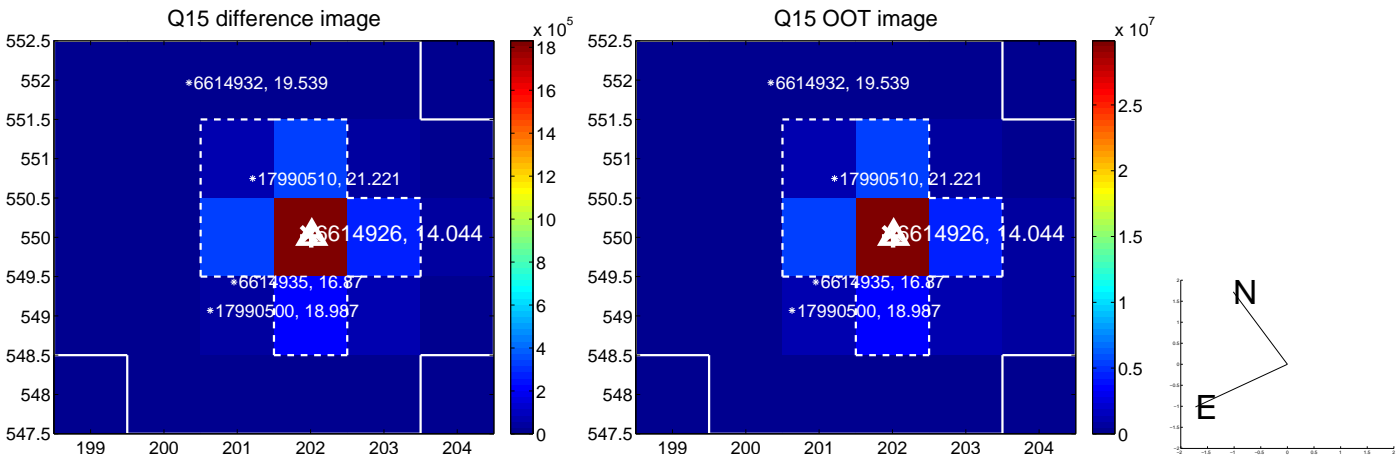
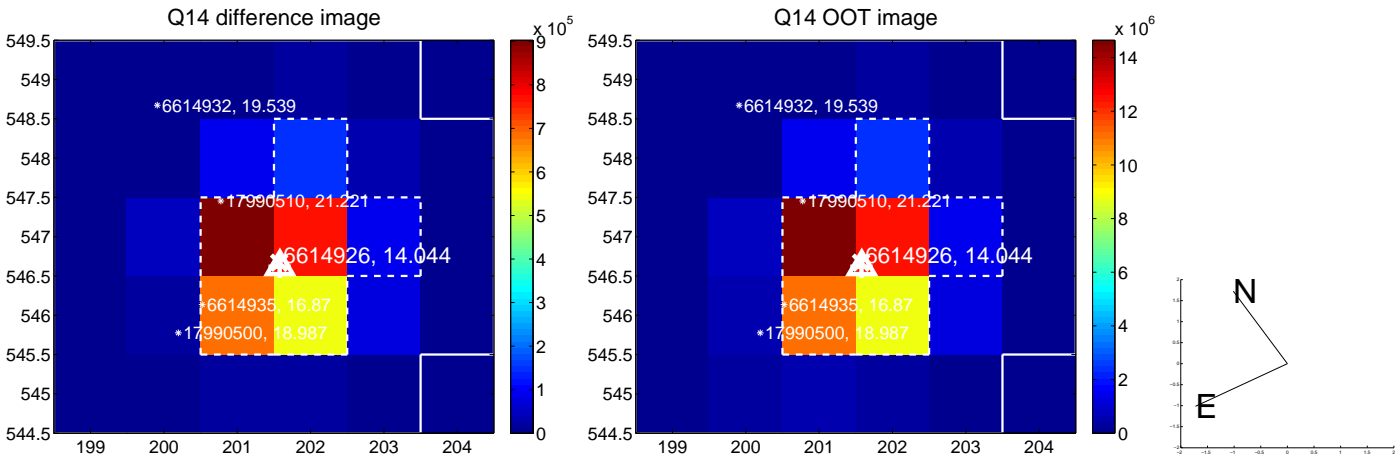
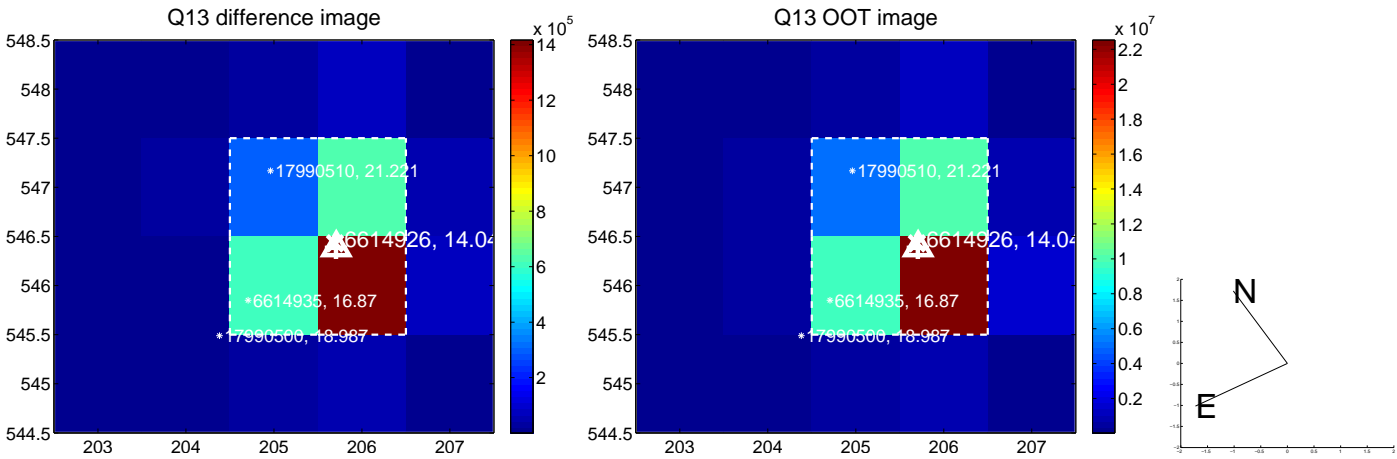
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



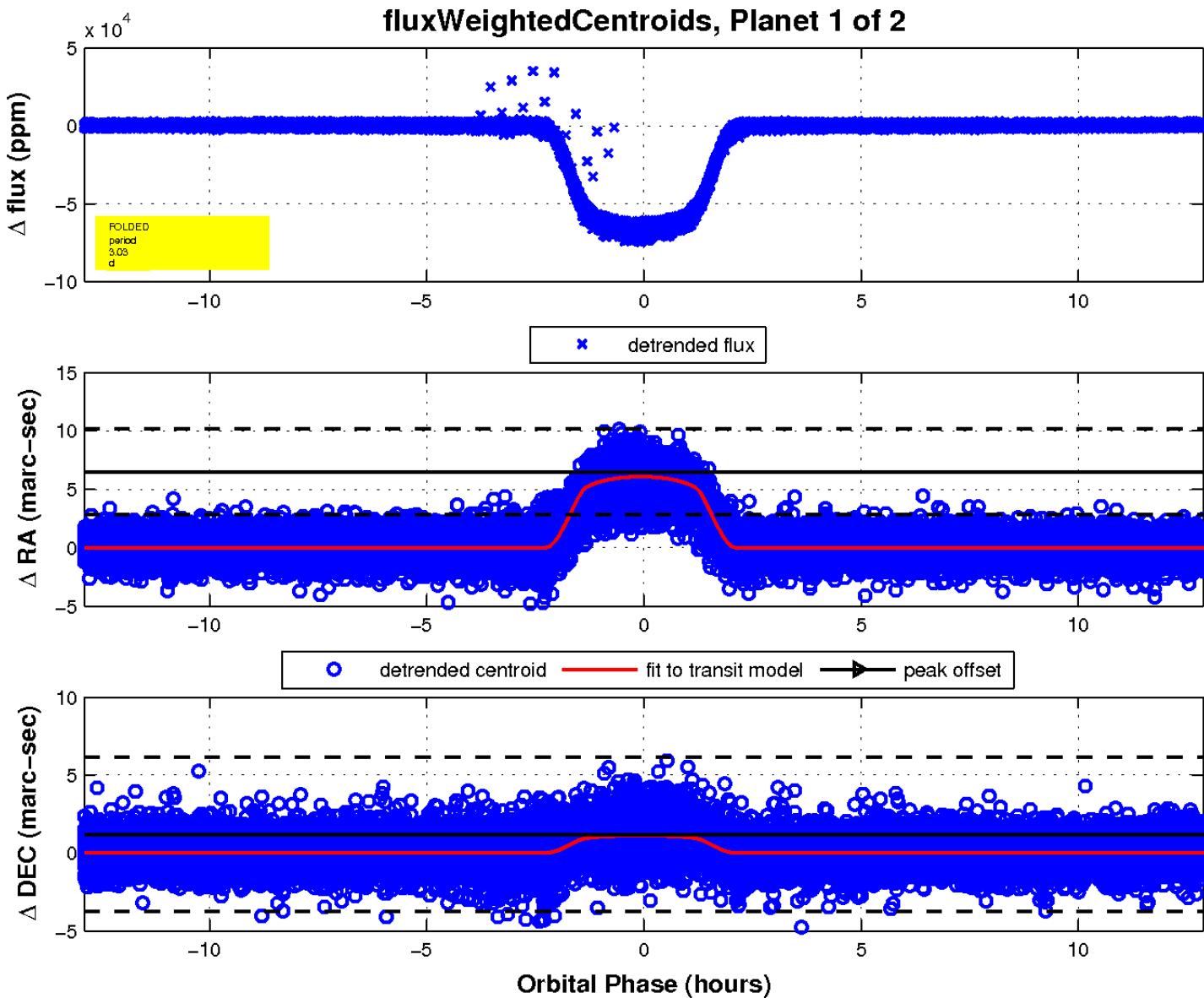
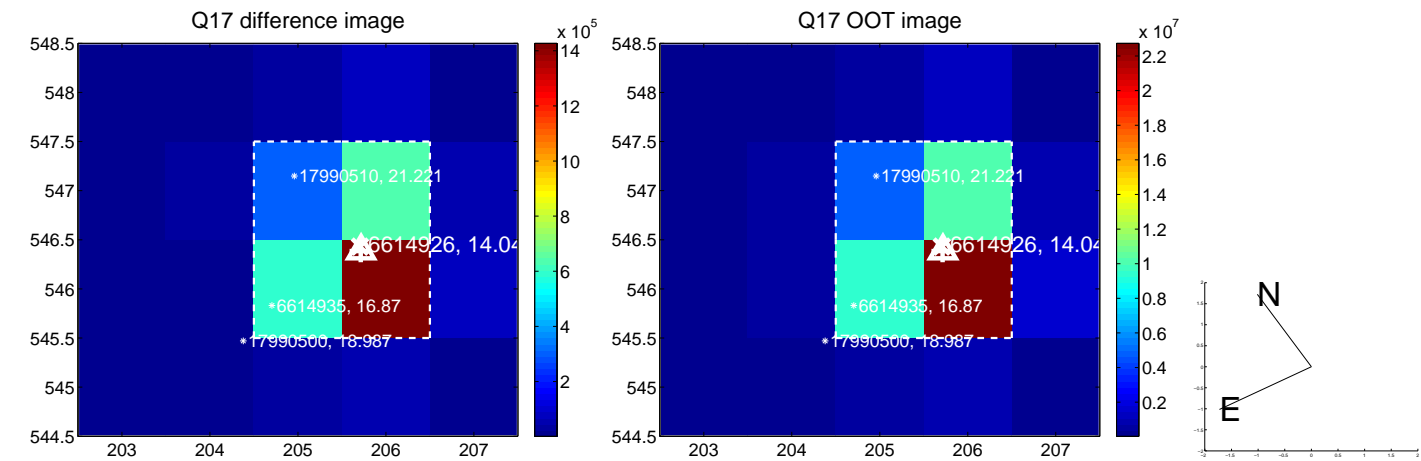
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

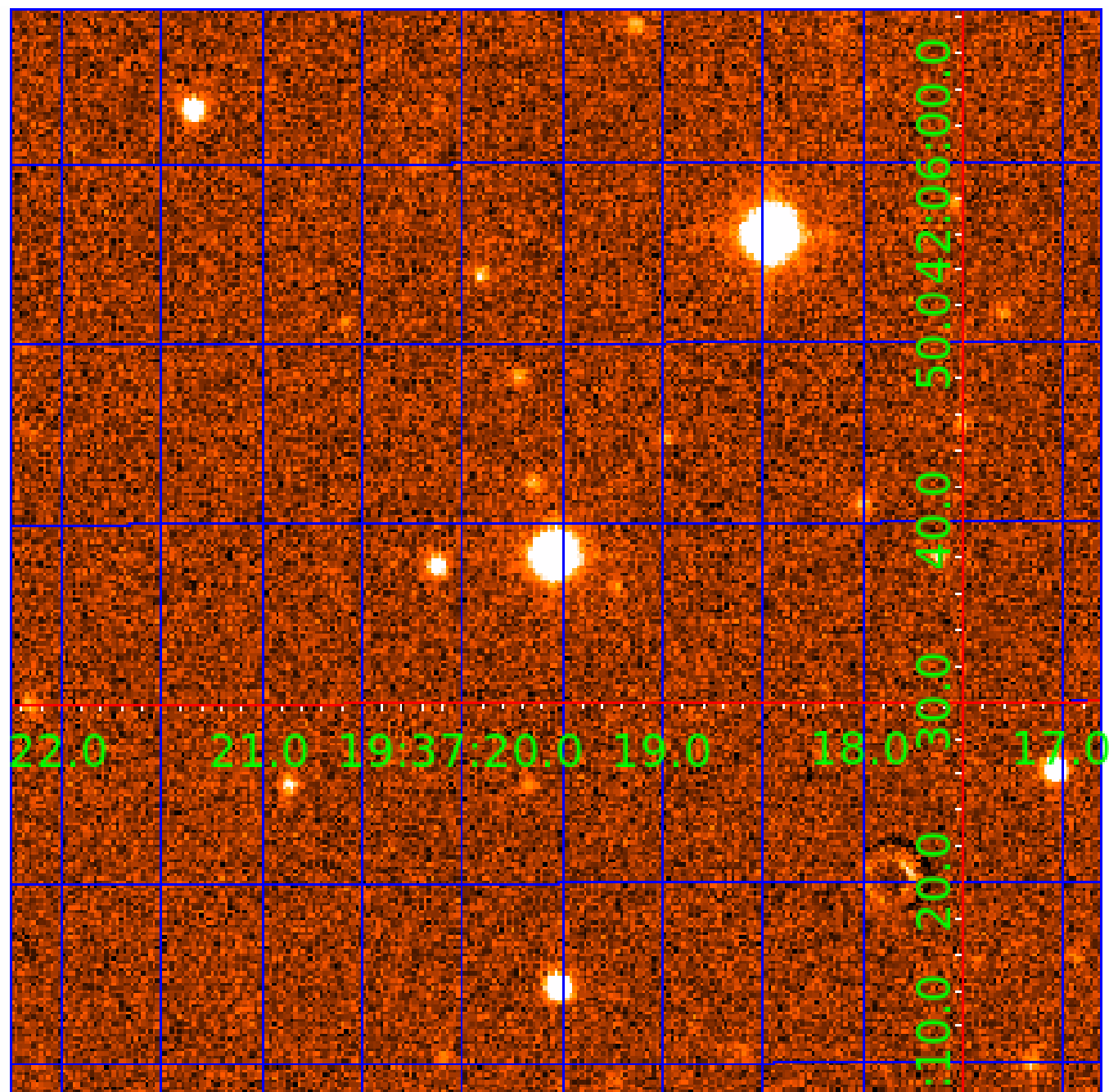


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006614926

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})
006614926-01	OBS	6029.01	3.026765	133.327944	65934.0	4.295	5586.2	4339.6	1.01	6283	26.09	811.22
006614926-02	OBS	No	3.026736	131.821182	1701.6	4.219	147.6	146.9	1.01	6283	4.75	811.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614926-01	OBS	FP	0.02	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
006614926-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

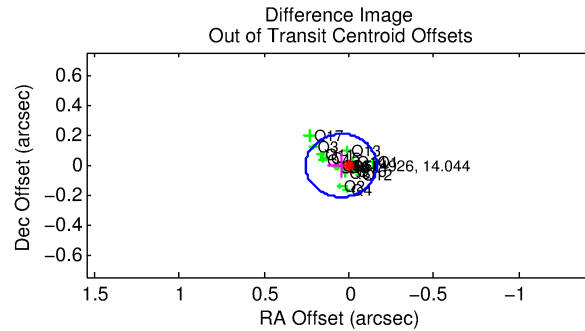
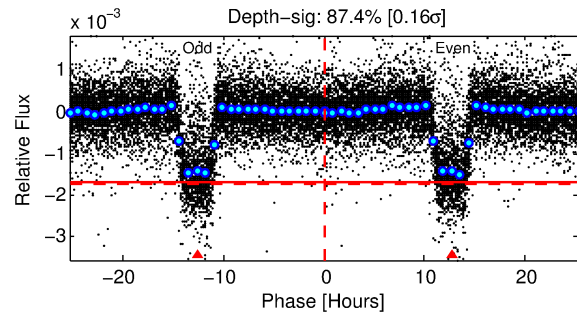
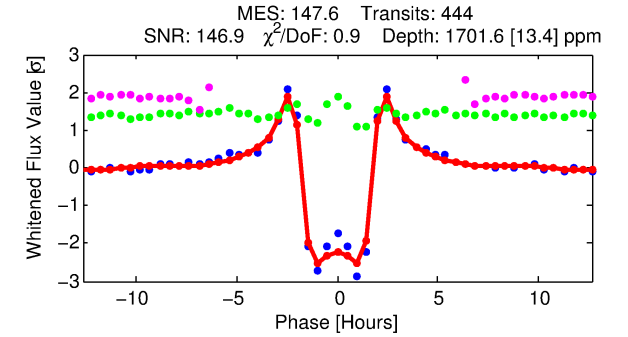
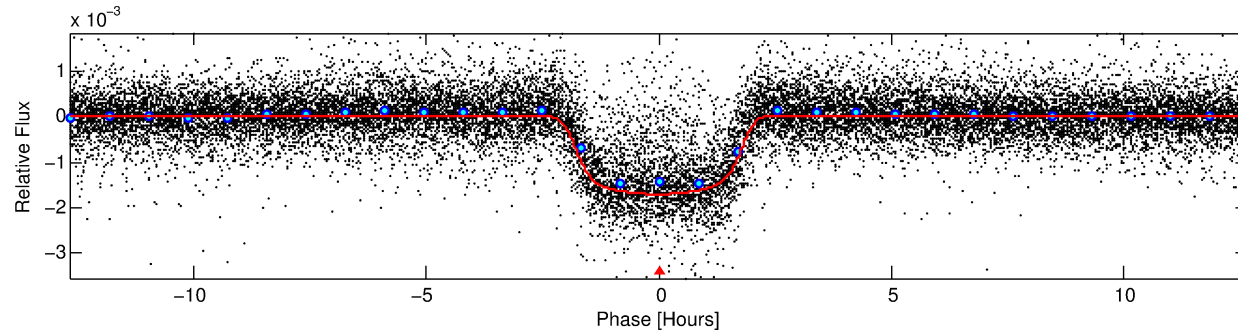
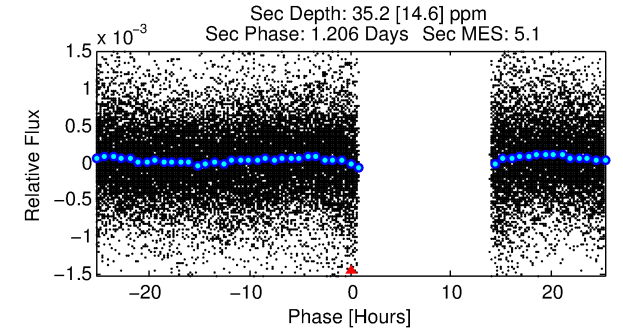
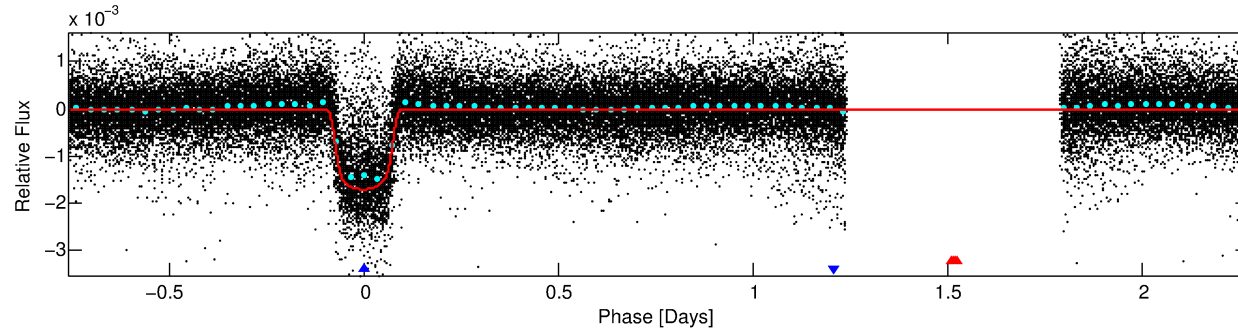
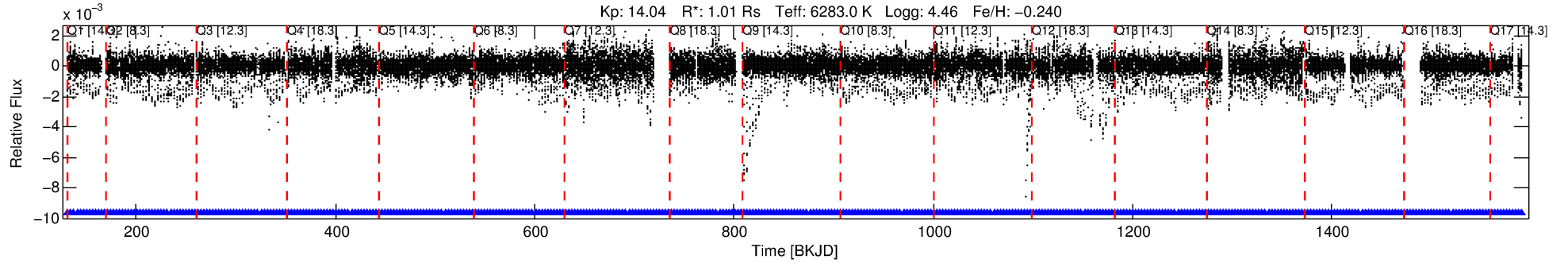
Ephemeris Match Information For 006614926-02

No Significant Match Found

DV One-Page Summary

KIC: 6614926 Candidate: 2 of 2 Period: 3.027 d

KOI: K06029 Corr: No Ephemeris Match



DV Fit Results:

Period = 3.02674 [0.00000] d
Epoch = 131.8212 [0.0002] BKJD
Rp/R* = 0.0431 [0.0003]
a/R* = 3.35 [0.08]
b = 0.86 [0.01]
Seff = 811.23 [322.56]
Teq = 1361 [135] K
Rp = 4.76 [1.41] Re
a = 0.0419 [0.0106] AU
Ag = 1.50 [0.84] [0.60σ]
Teffp = 2330 [254] K [3.37σ]

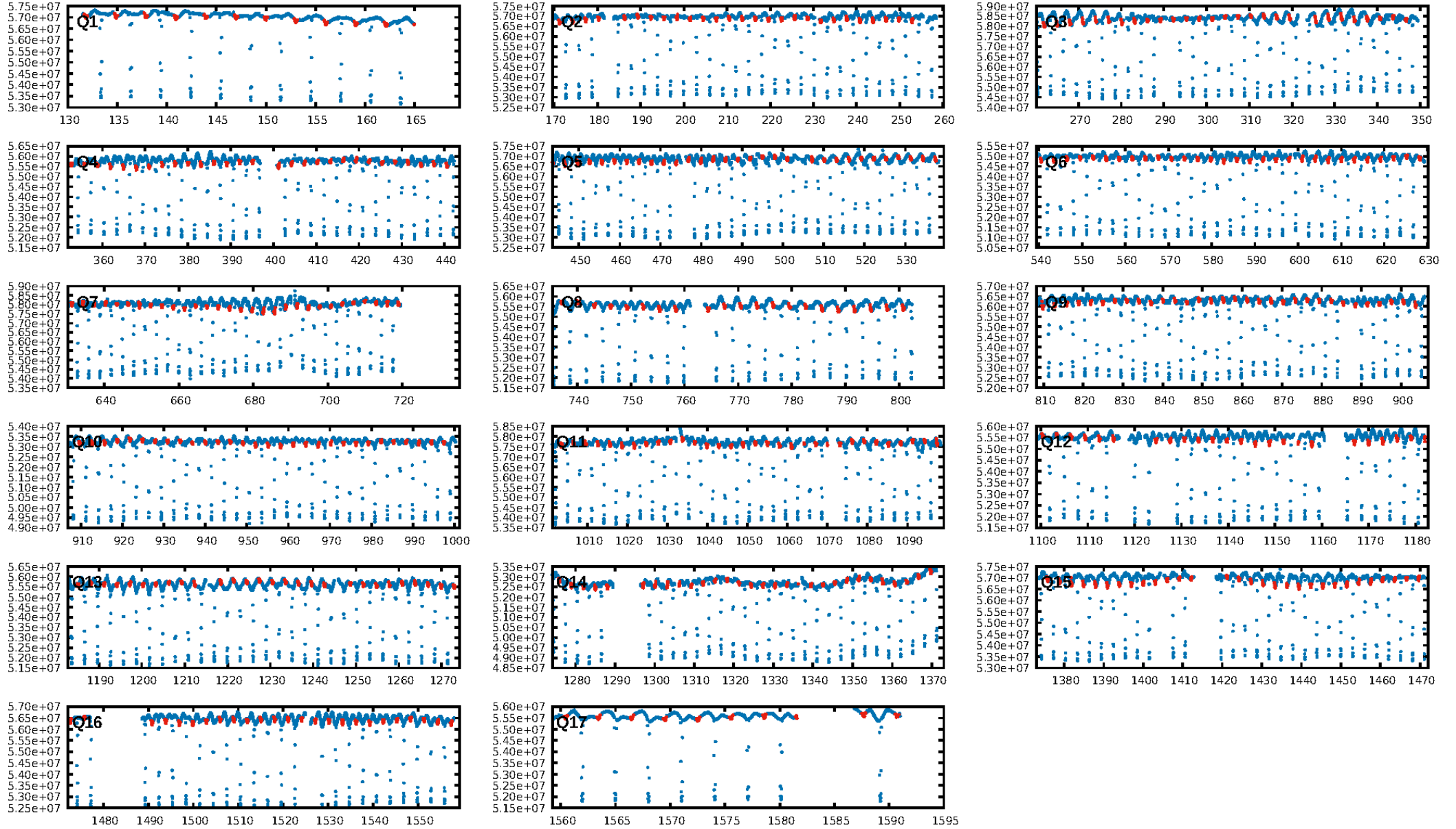
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [423/423]
GhostDiagnostic-chr: 1.065
Centroid-sig: 34.3%
Centroid-so: 0.156 arcsec [5.34σ]
OotOffset-rm: 0.049 arcsec [0.69σ]
KicOffset-rm: 0.172 arcsec [2.48σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

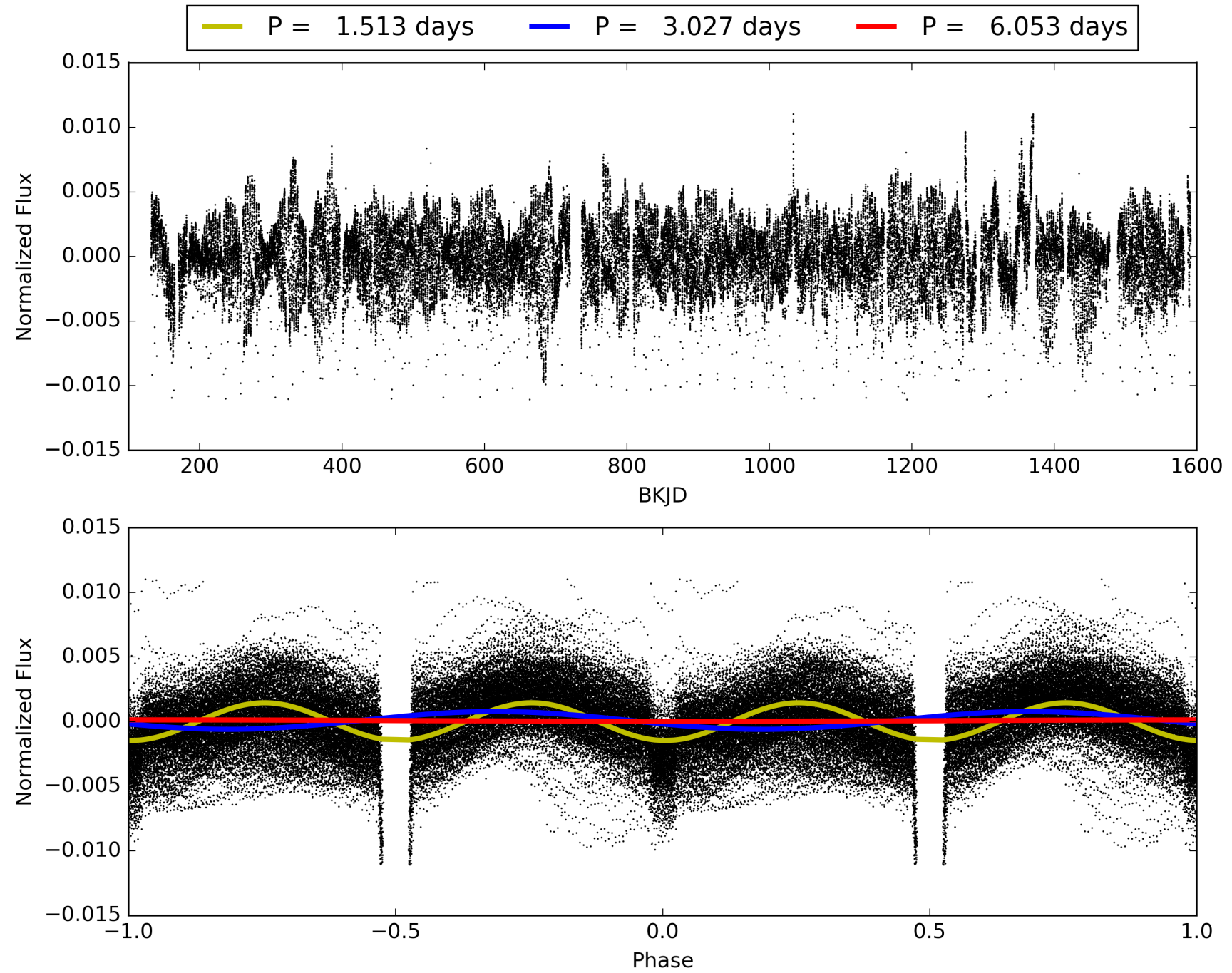
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:25:57 Z

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

TCE 006614926-02, PDC Light Curves

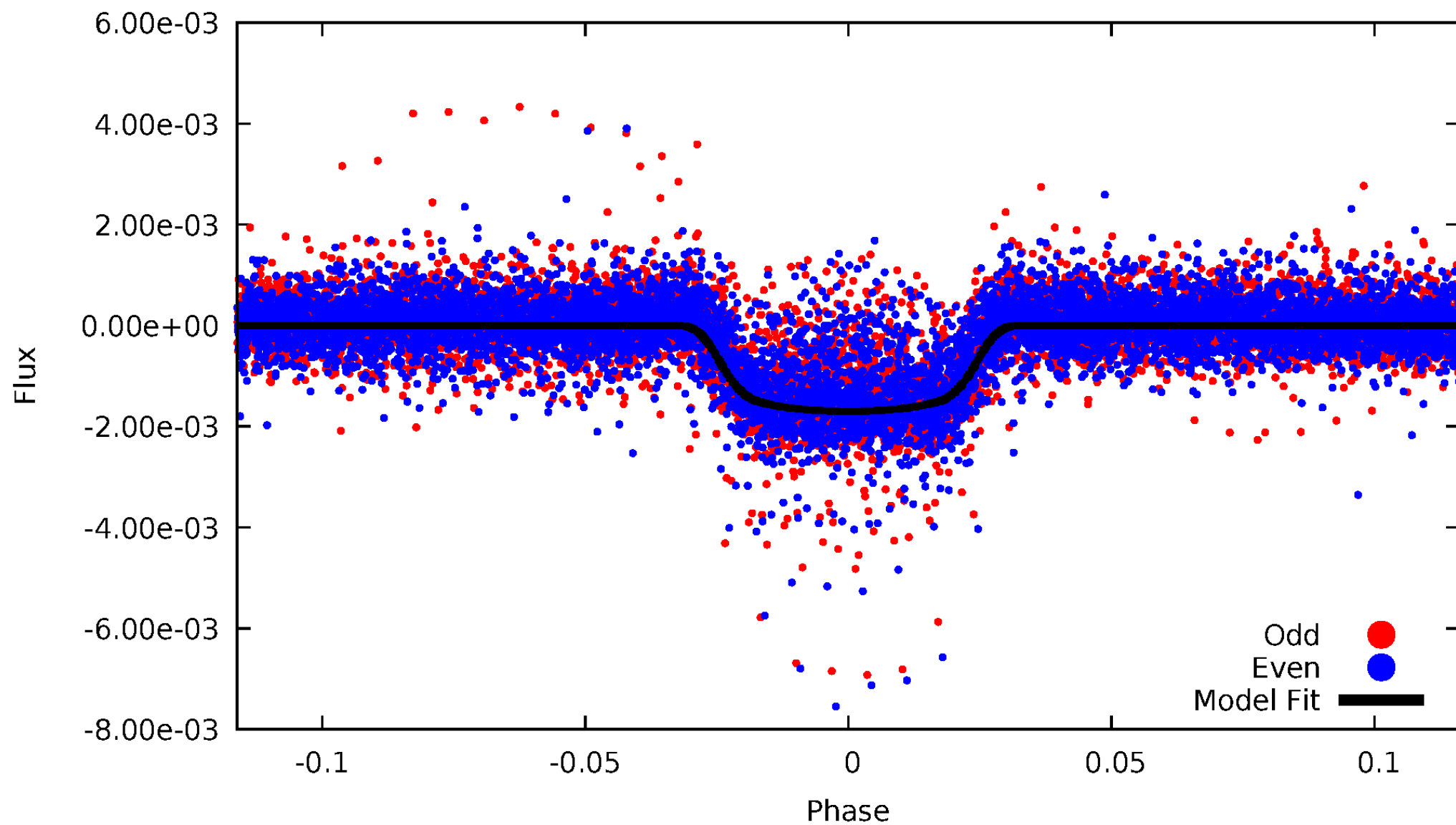


TCE 006614926-02



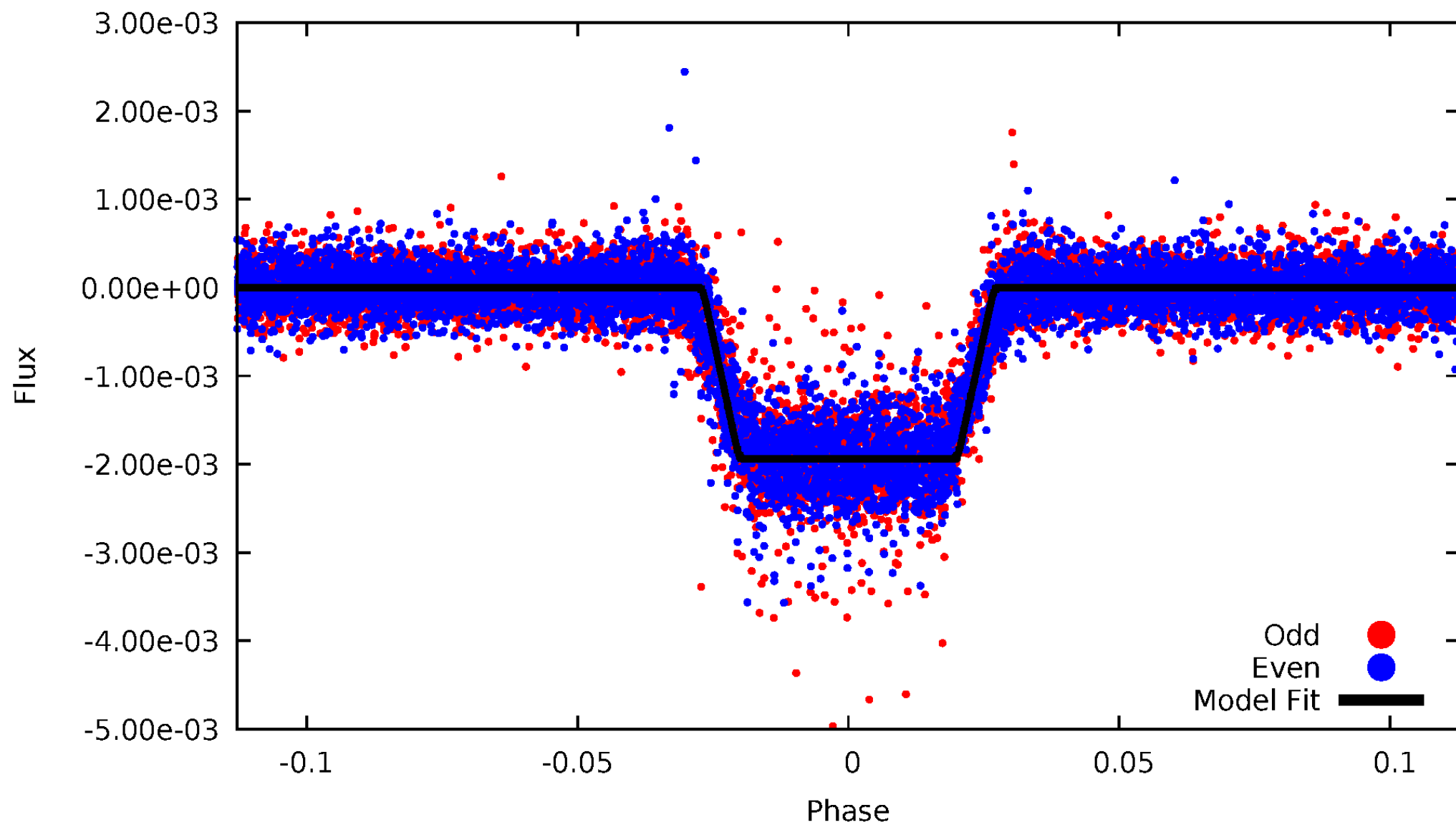
DV Odd/Even

TCE 006614926-02



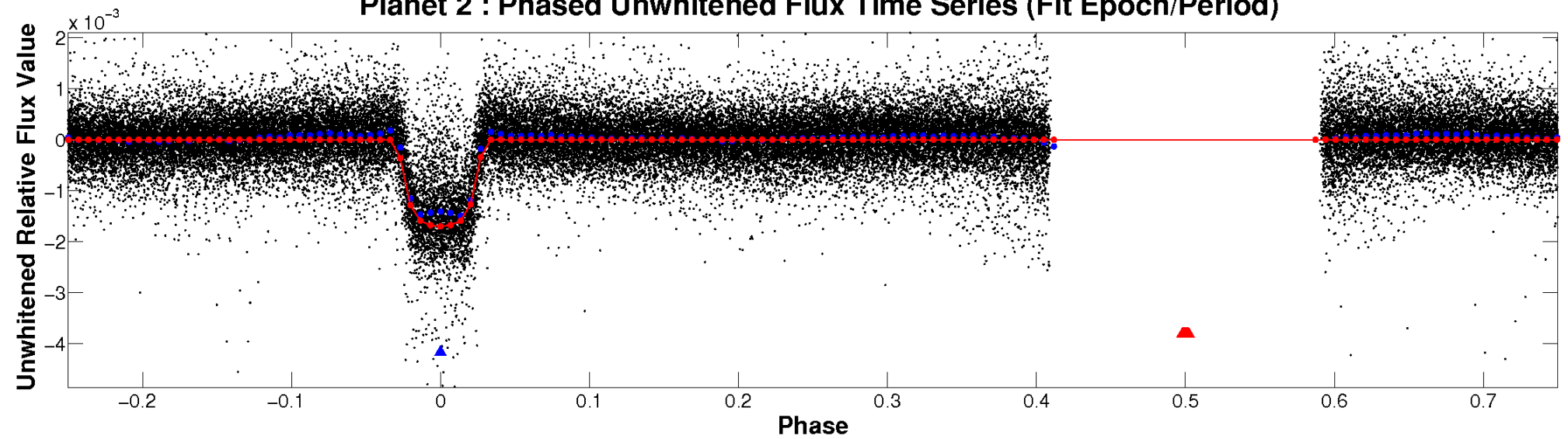
ALT Odd/Even

TCE 006614926-02

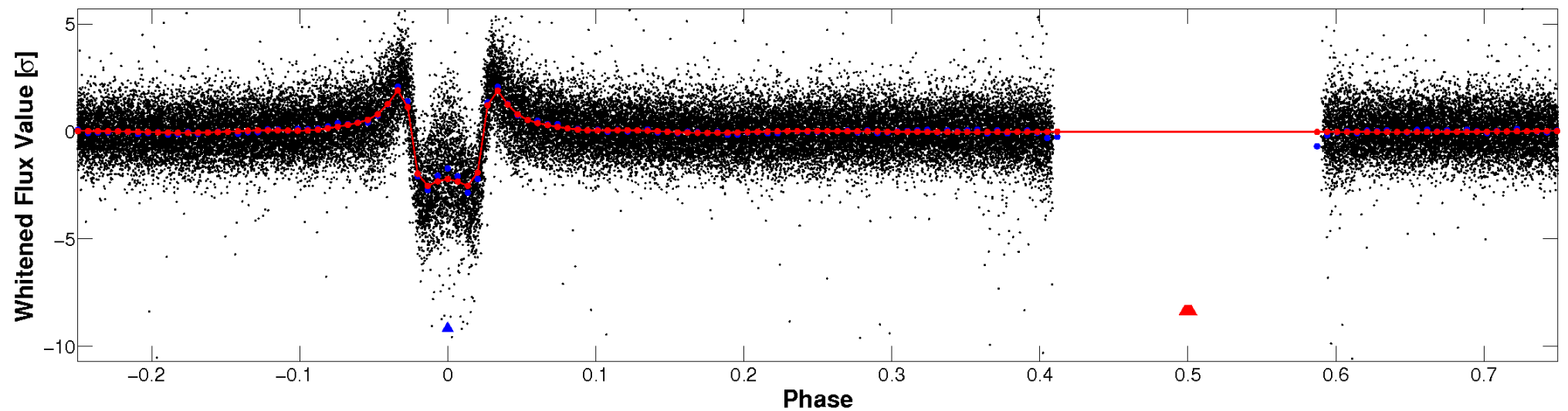


Non-Whitened Vs. Whitened Light Curve

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

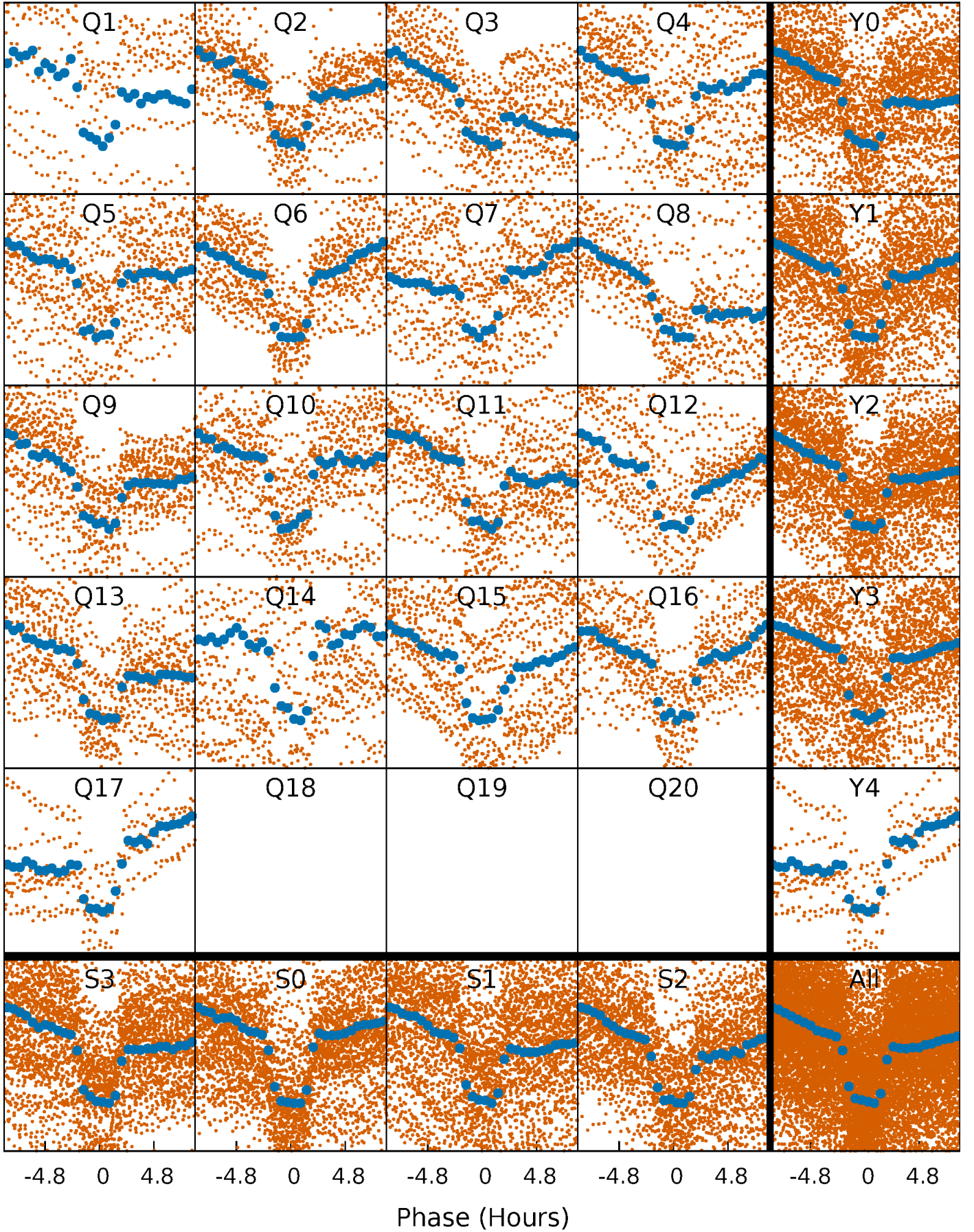


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



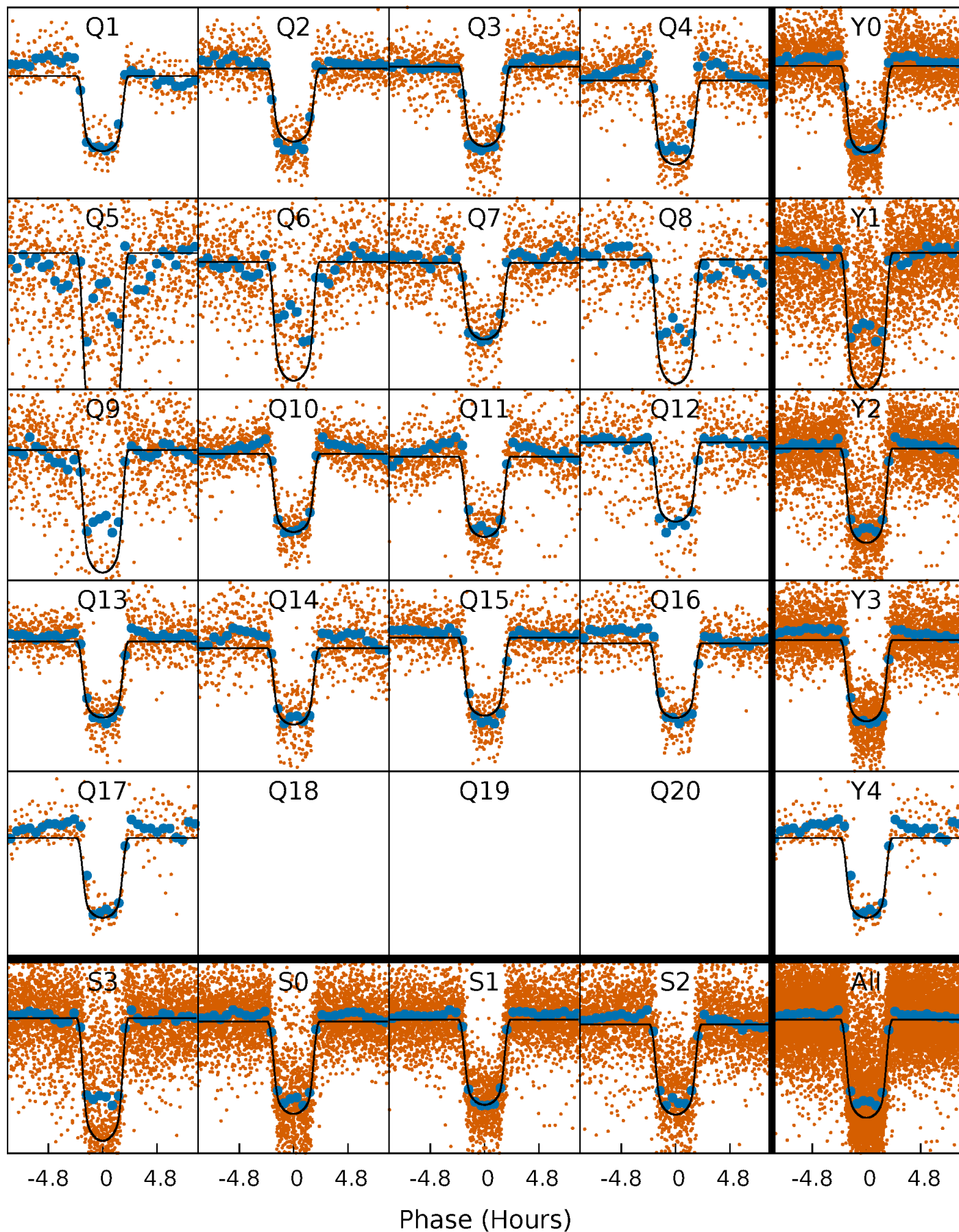
PDC Quarter-Phased Transit Curves

TCE 006614926-02 P= 3.026736 Days $T_0=131.821182$ (BKJD)



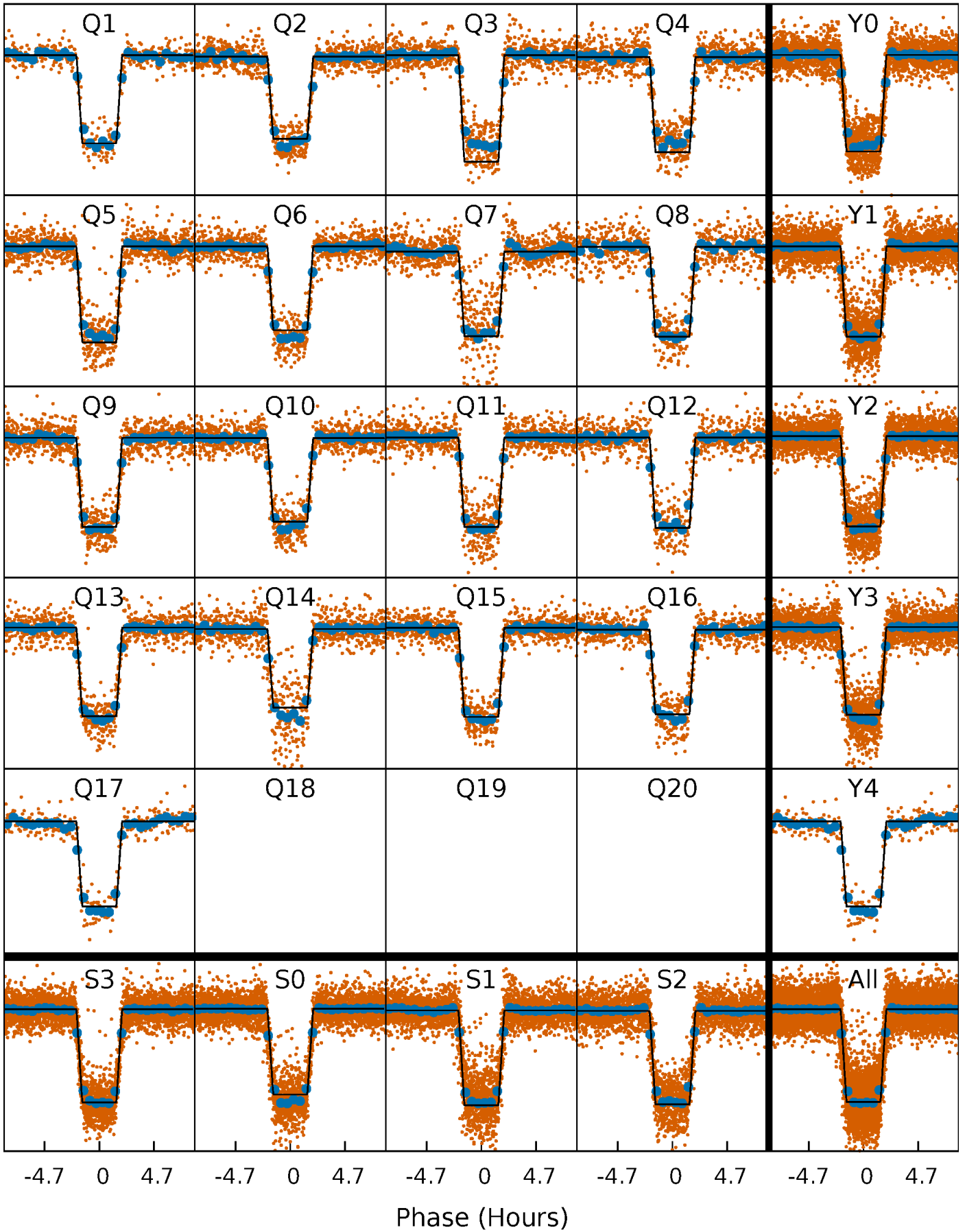
DV Quarter-Phased Transit Curves

TCE 006614926-02 P= 3.026736 Days $T_0=131.821182$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

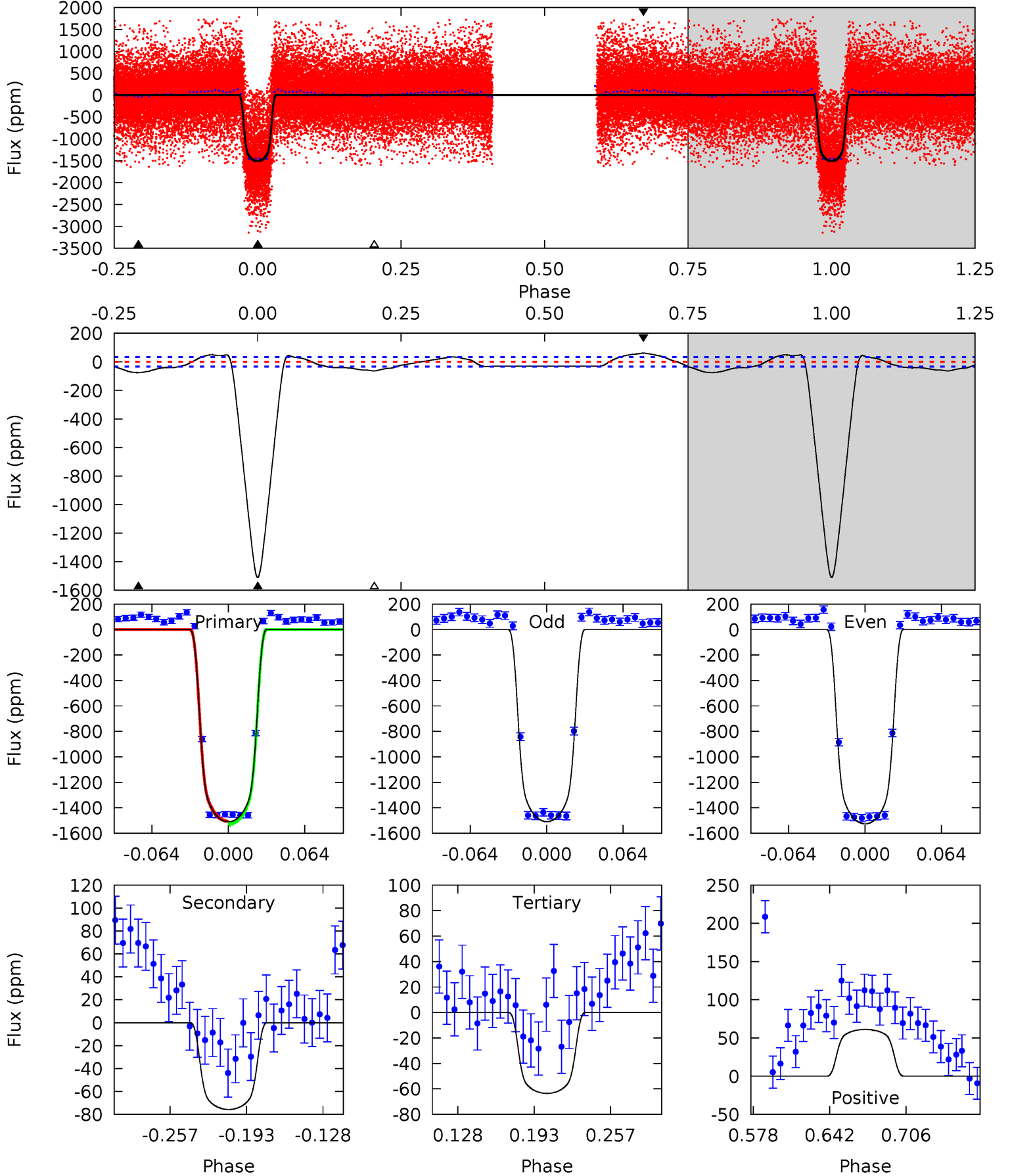
TCE 006614926-02 P= 3.026776 Days $T_0=131.812279$ (BKJD)



DV Model-Shift Uniqueness Test

006614926-02, P = 3.026736 Days, E = 128.794446 Days

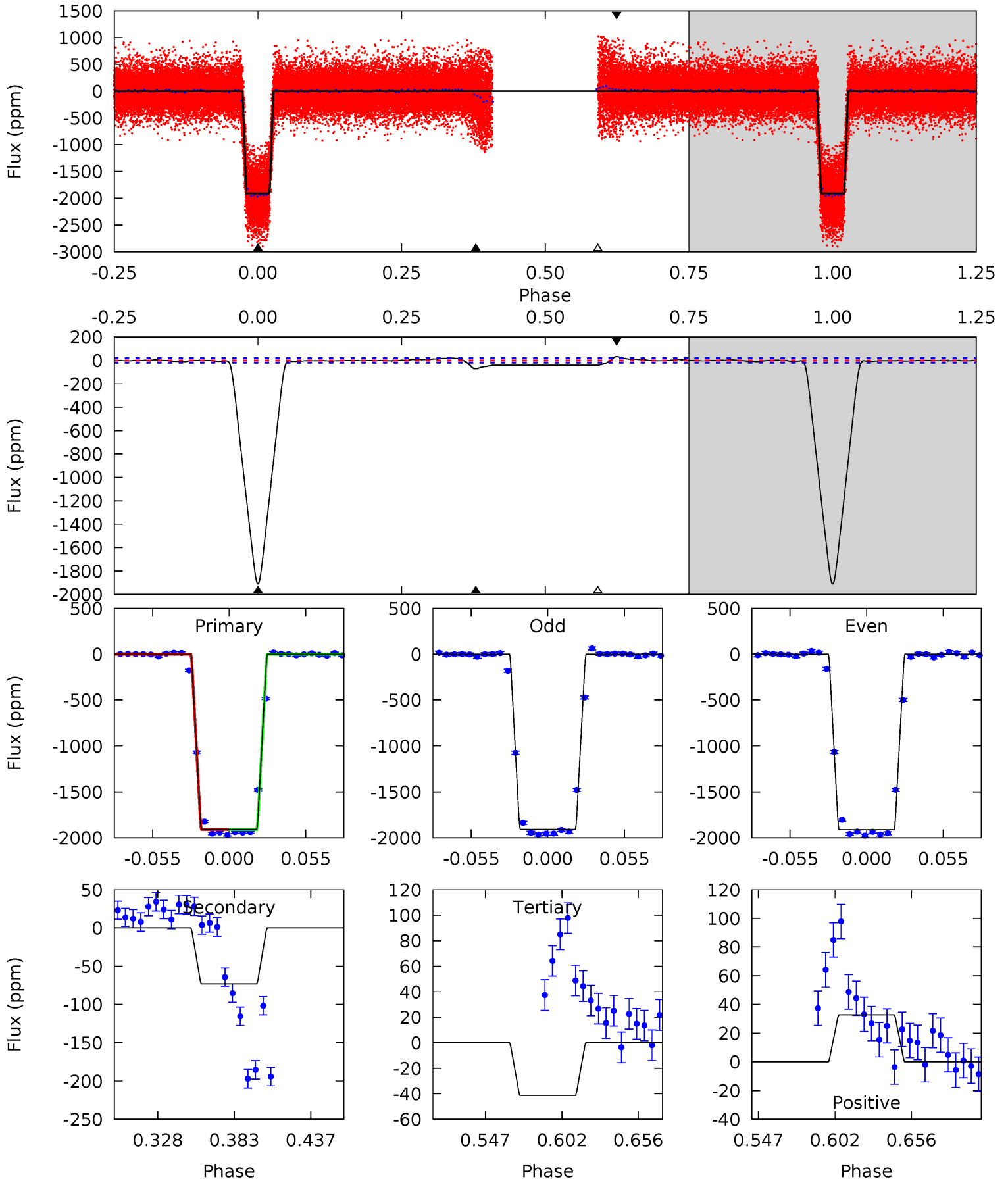
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
212.7	10.7	8.95	8.61	4.66	1.85	4.95	203.7	204.1	1.72	2.05	1.26	0.95	0.04	1.64



Alt Model-Shift Uniqueness Test

006614926-02, P = 3.026776 Days, E = 128.785503 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
476.1	18.2	10.3	8.18	4.69	1.92	2.04	465.8	467.9	7.87	10.0	0.58	0.99	0.02	0.03



Stellar Parameters For KIC 006614926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6283^{+150}_{-206}	$4.459^{+0.052}_{-0.208}$	$-0.240^{+0.250}_{-0.350}$	$1.010^{+0.299}_{-0.107}$	$1.067^{+0.144}_{-0.144}$	$1.458^{+0.402}_{-0.758}$
	+2%/-3%	+1%/-5%	+104%/-146%	+30%/-11%	+13%/-13%	+28%/-52%
Source	PHO1	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 006614926-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-76 ± 7	$4.89^{+0.76}_{-0.39}$	1942^{+128}_{-89}	3293^{+73}_{-84}	$2.920^{+0.620}_{-0.681}$
Alt.	-73 ± 4	$5.01^{+0.84}_{-0.42}$	1944^{+142}_{-92}	3253^{+64}_{-68}	$2.734^{+0.467}_{-0.646}$

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 $A_{obs} \gg 1.0$

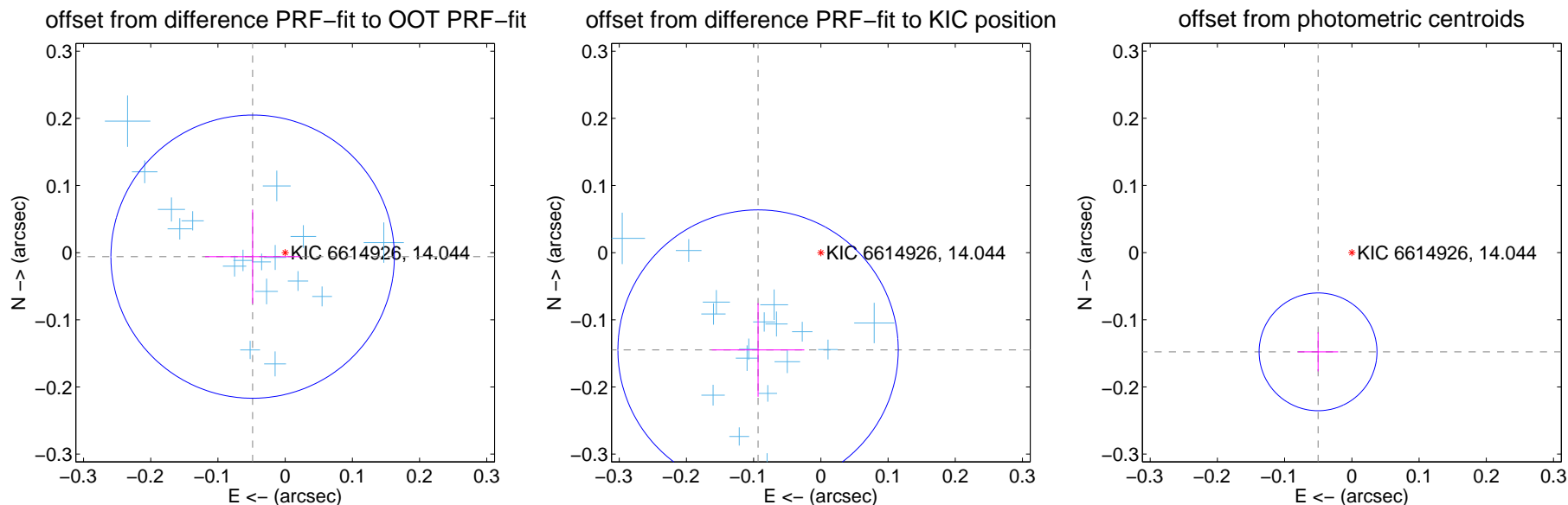
DV Centroid Data

Supplemental centroid analysis for 006614926-02. Kepler magnitude: 14.04. Transit SNR 146.90

There are 17 quarters with good PRF difference image offsets

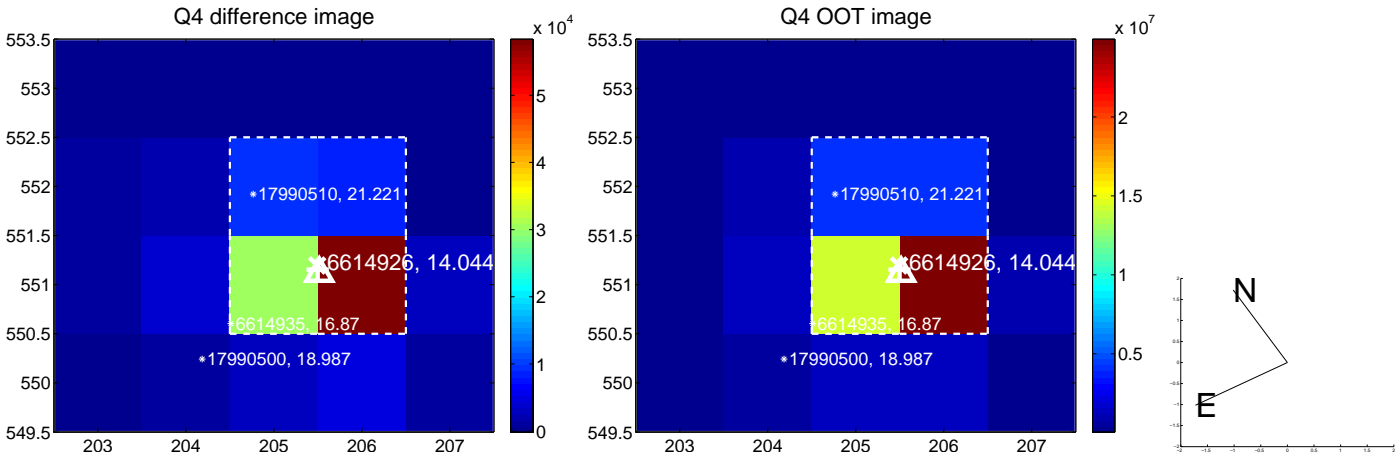
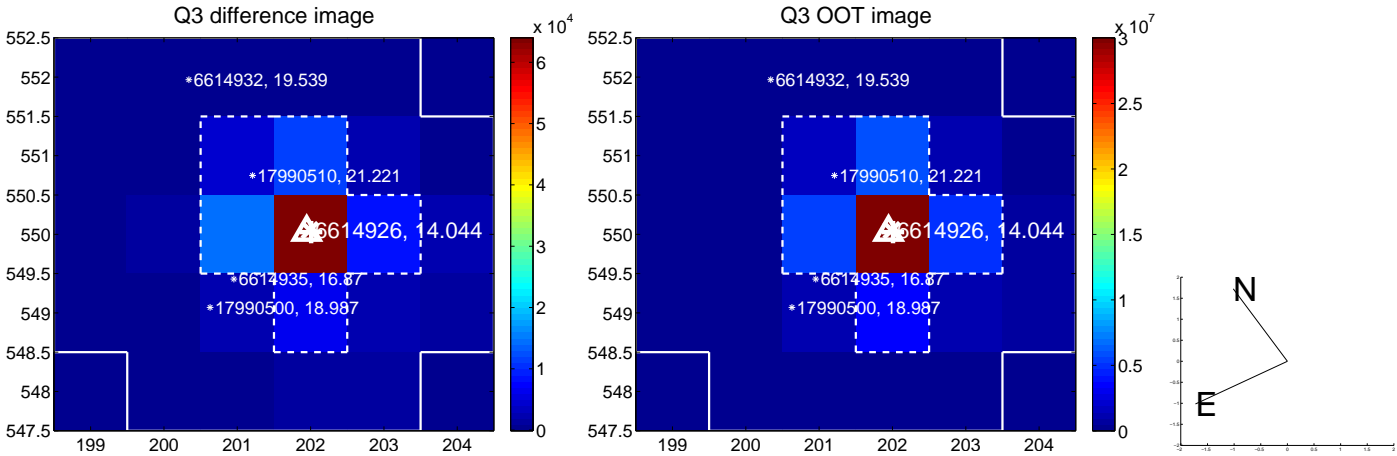
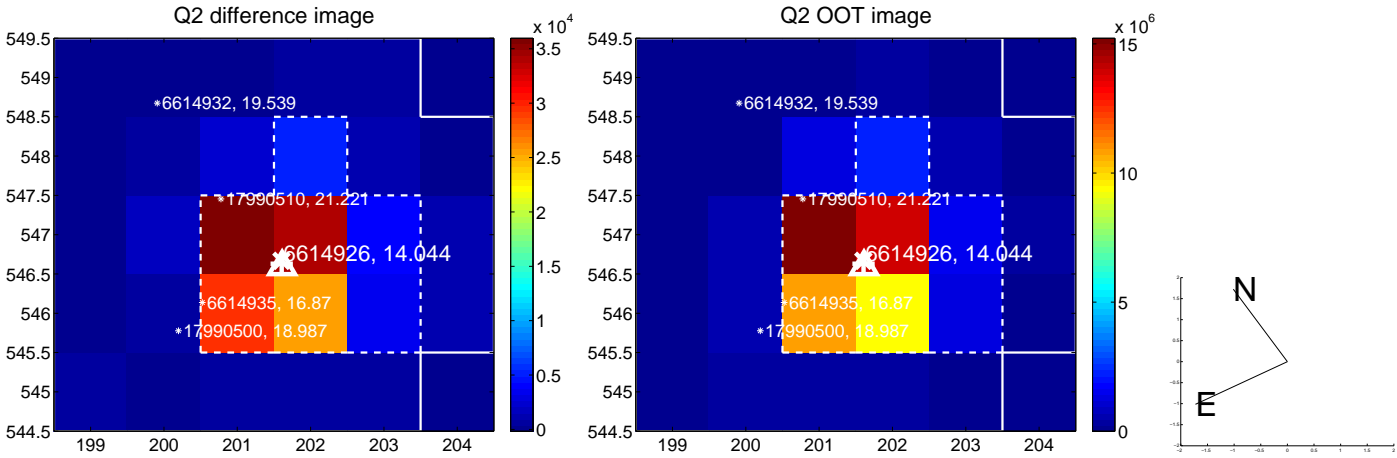
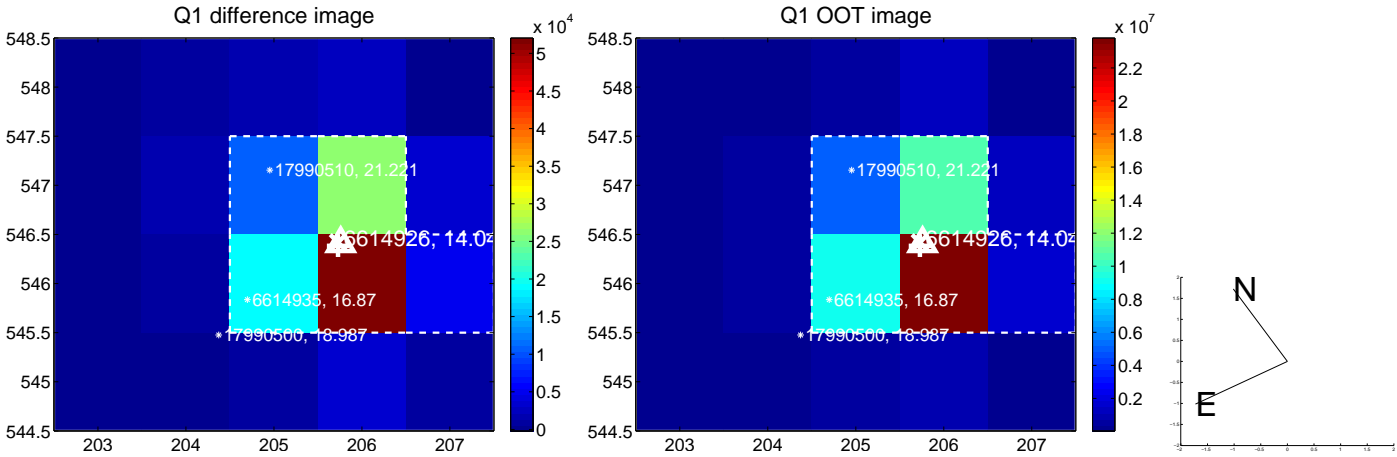
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.070	0.69	0.048 ± 0.071	-0.006 ± 0.070
PRF-fit source offset from KIC position	0.172 ± 0.070	2.48	0.093 ± 0.069	-0.145 ± 0.070
photometric centroid source offset	0.16 ± 0.03	5.34	0.05 ± 0.03	-0.15 ± 0.03

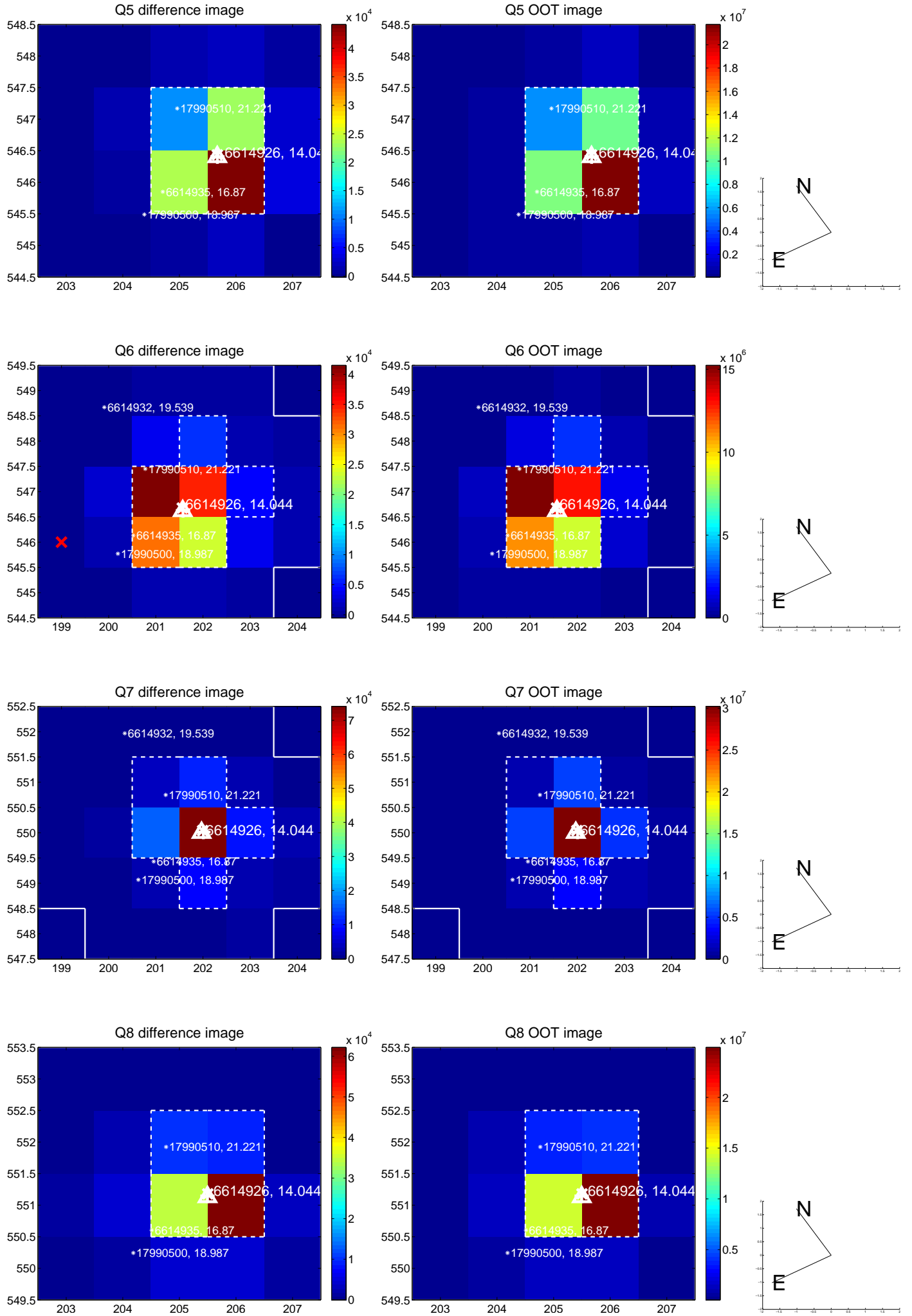


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

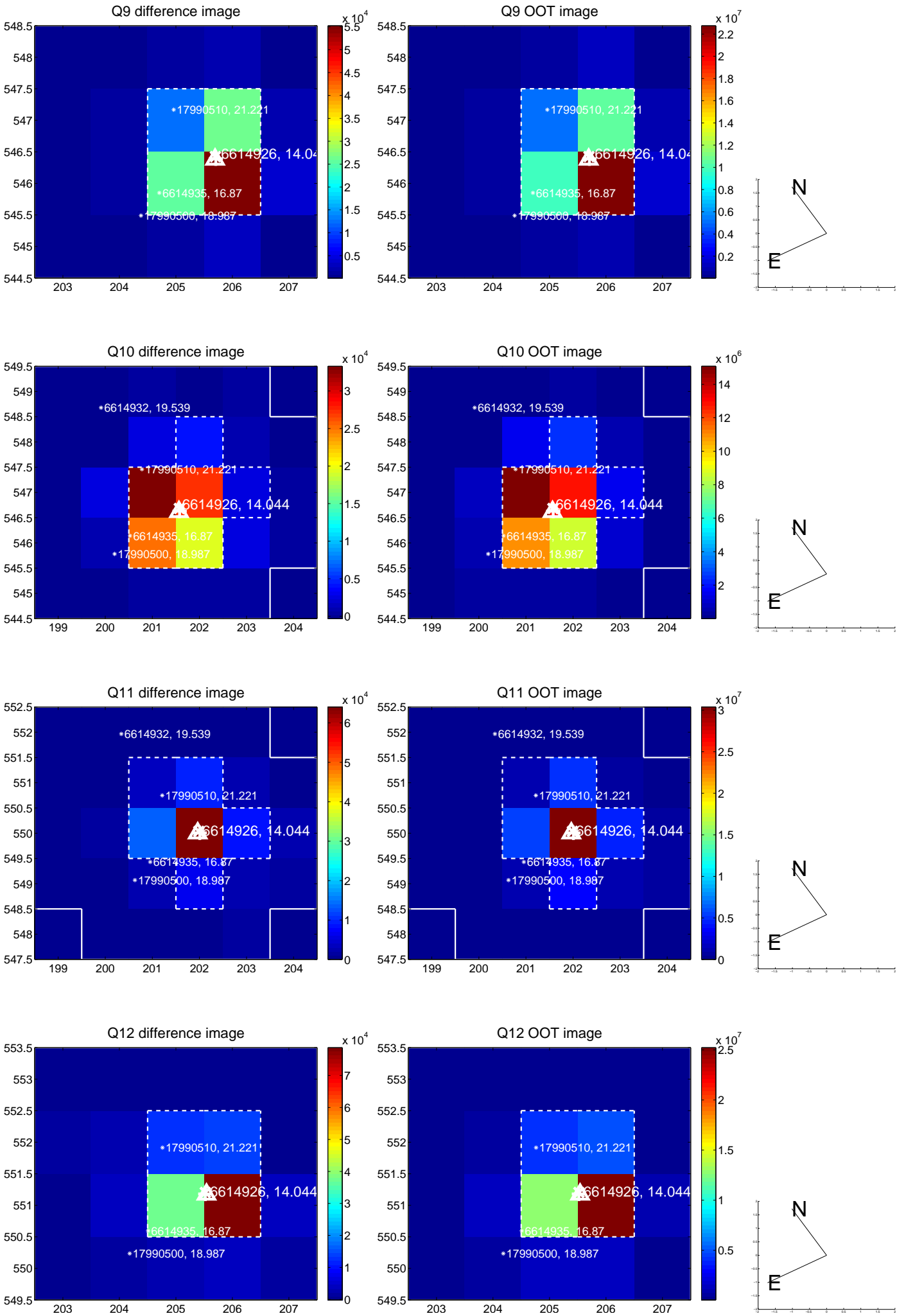
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



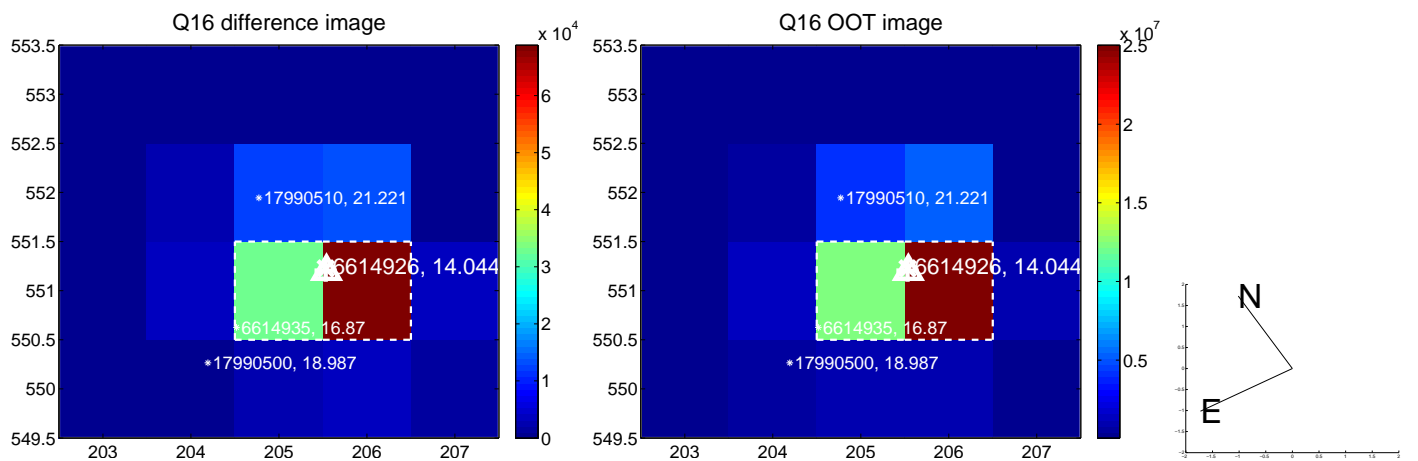
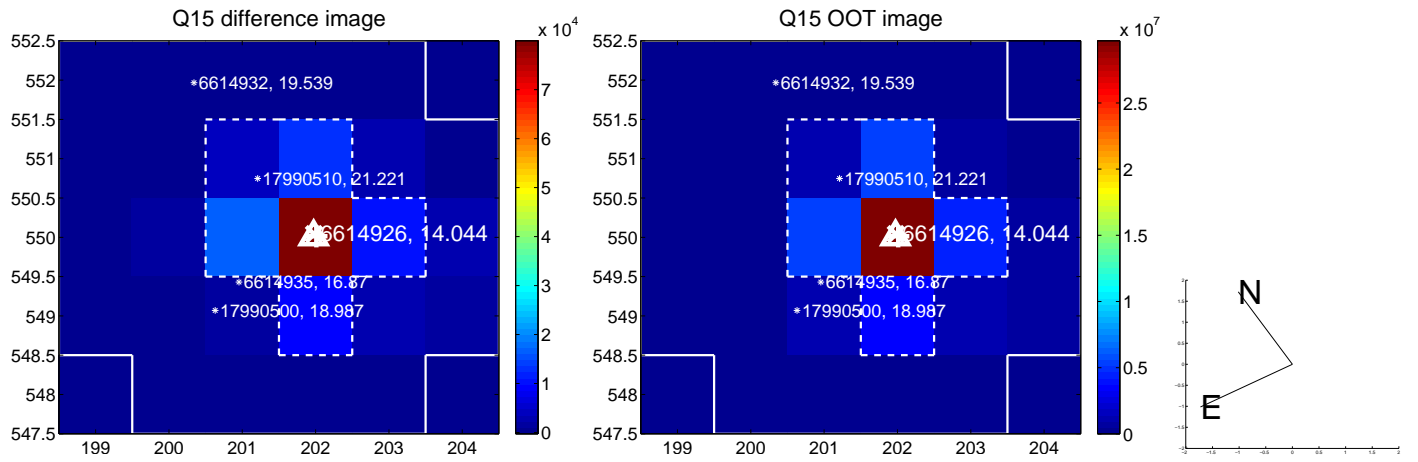
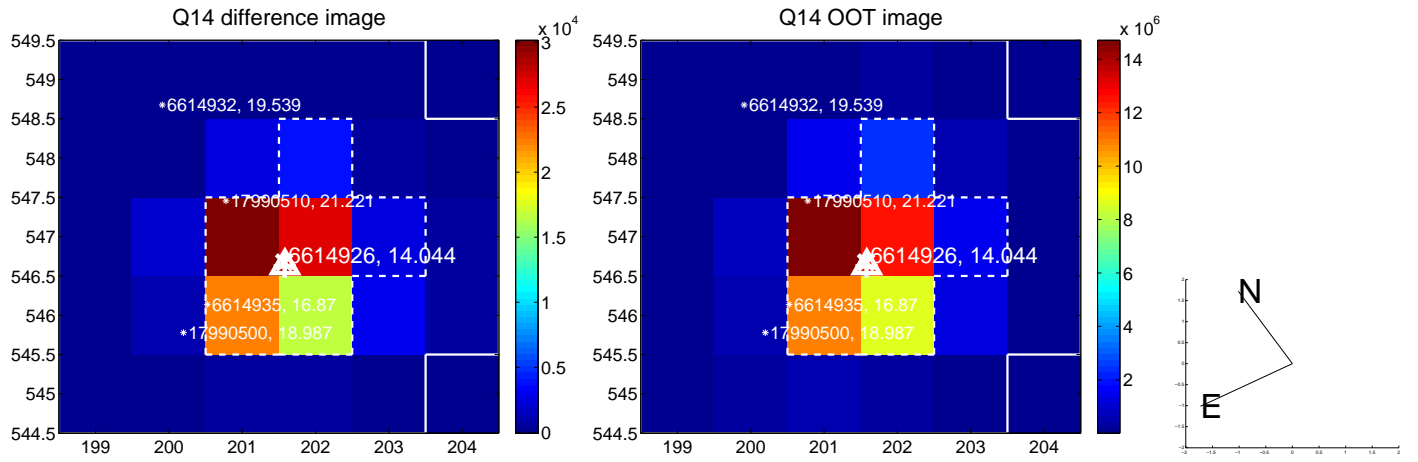
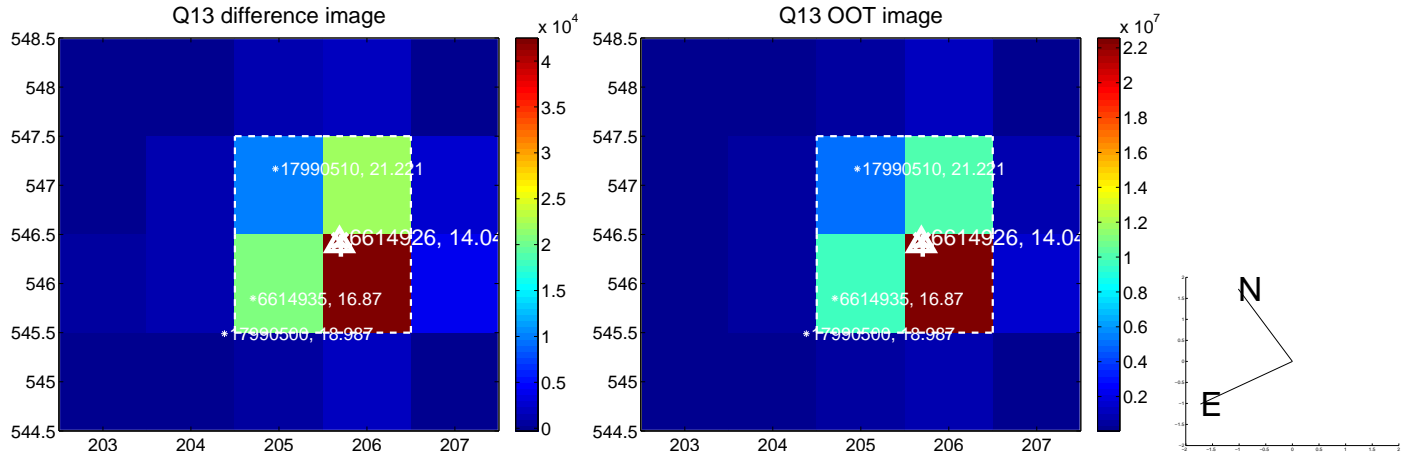
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



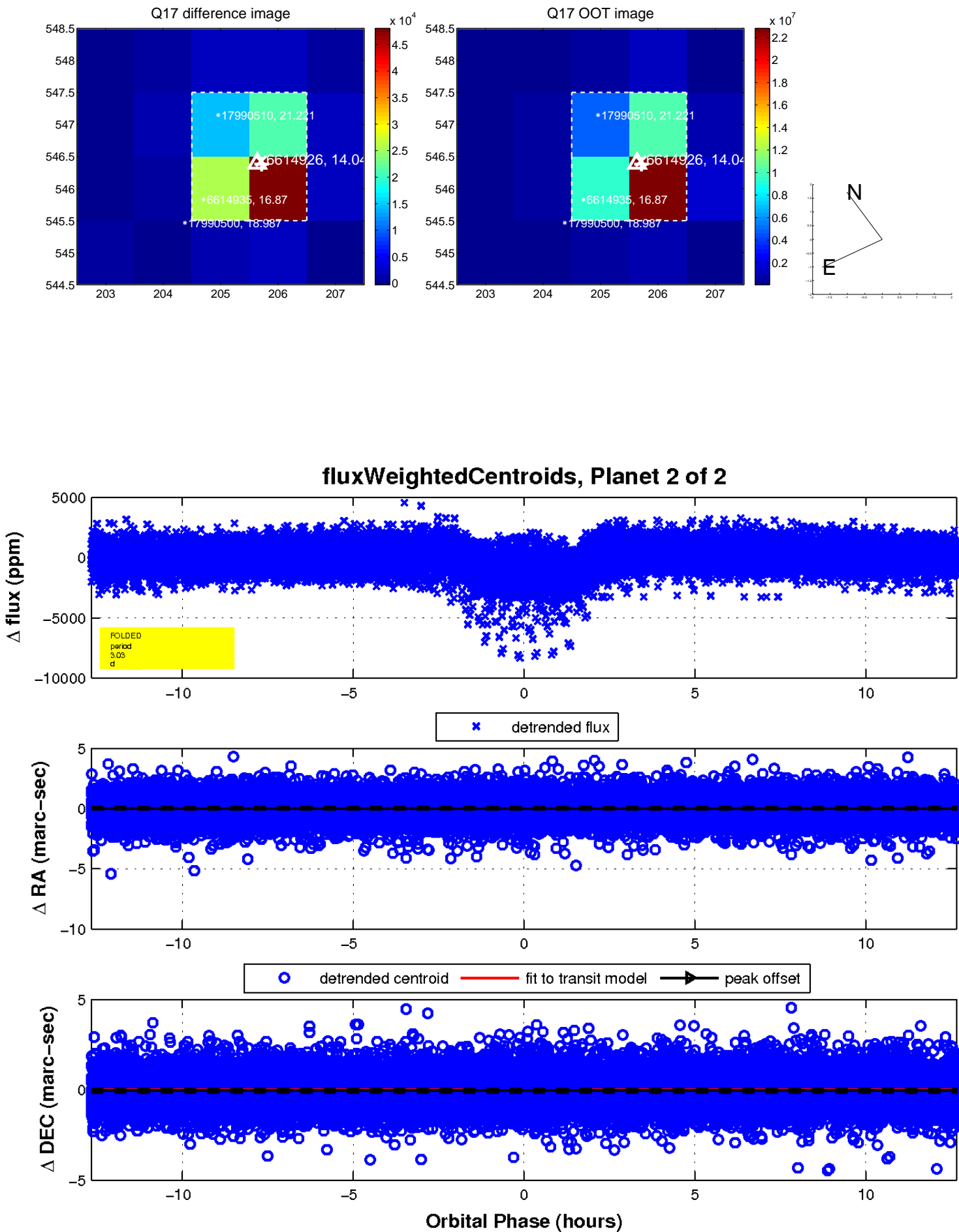
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

