

KIC 008761064

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})
008761064-01	OBS	No	0.806284	131.944849	86.6	4.828	12.1	8.8	0.92	5706	0.91	3179.60
008761064-02	OBS	No	119.791303	172.609694	2367.6	10.500	17.4	-1.0	0.92	5706	4.46	4.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008761064-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_UNRESOLVED_OFFSET
008761064-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

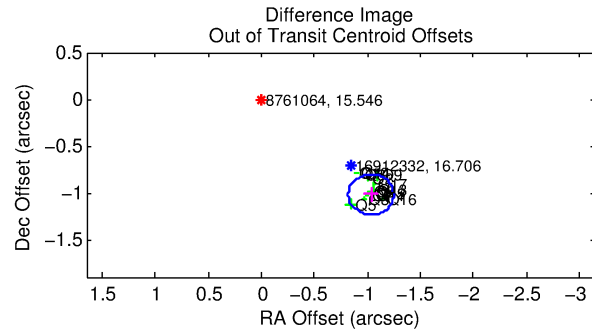
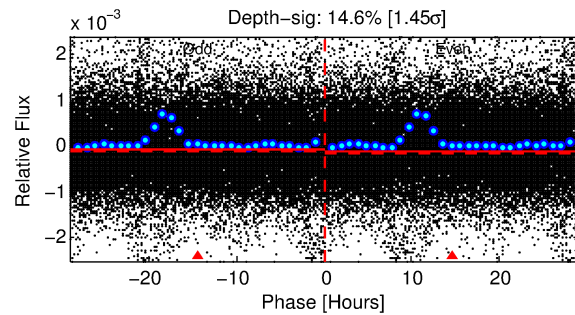
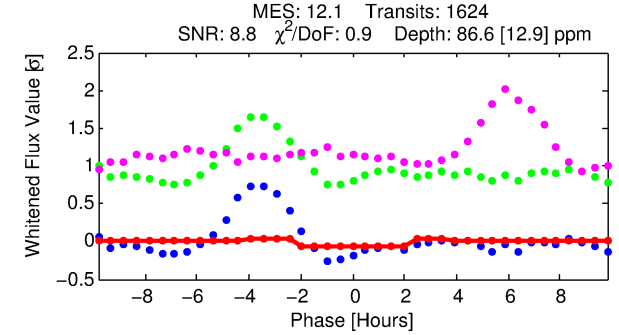
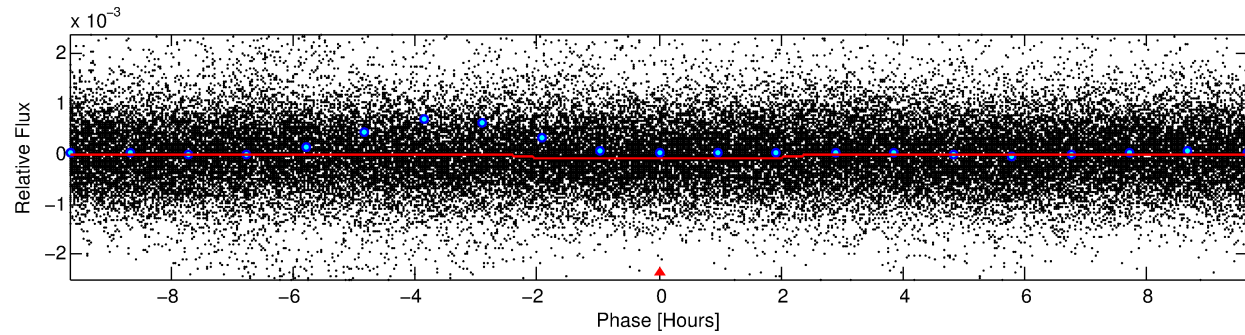
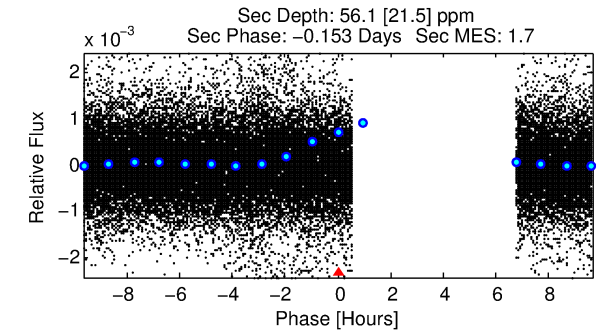
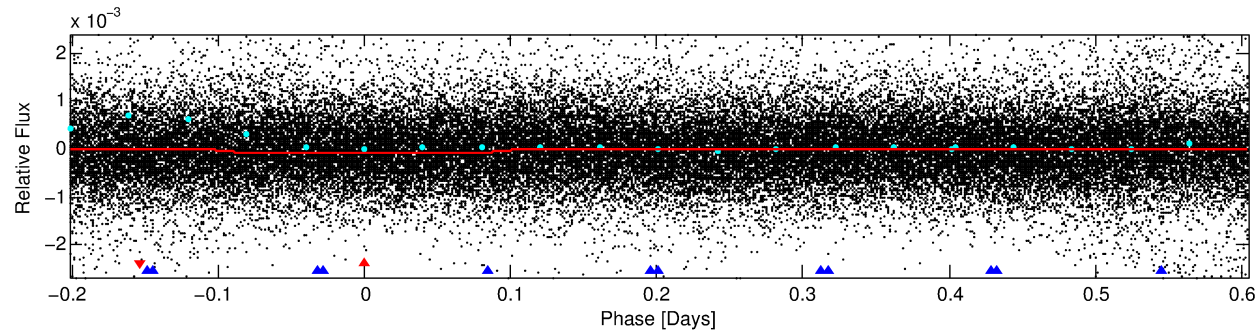
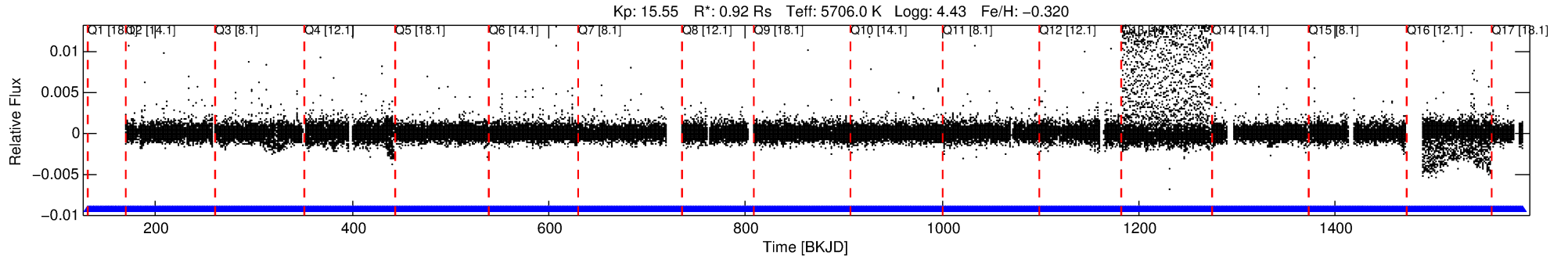
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008761064-01

No Significant Match Found

DV One-Page Summary

KIC: 8761064 Candidate: 1 of 2 Period: 0.806 d



DV Fit Results:

Period = 0.80628 [0.00001] d
Epoch = 131.9448 [0.0034] BKJD
Rp/R* = 0.0090 [0.0063]
a/R* = 1.26 [1.48]
b = 0.68 [2.61]
Seff = 3179.60 [1138.22]
Teq = 1915 [171] K
Rp = 0.91 [0.68] Re
a = 0.0160 [0.0037] AU
Ag = 9.45 [14.05] [0.60 σ]
Teffp = 5191 [1886] K [1.73 σ]

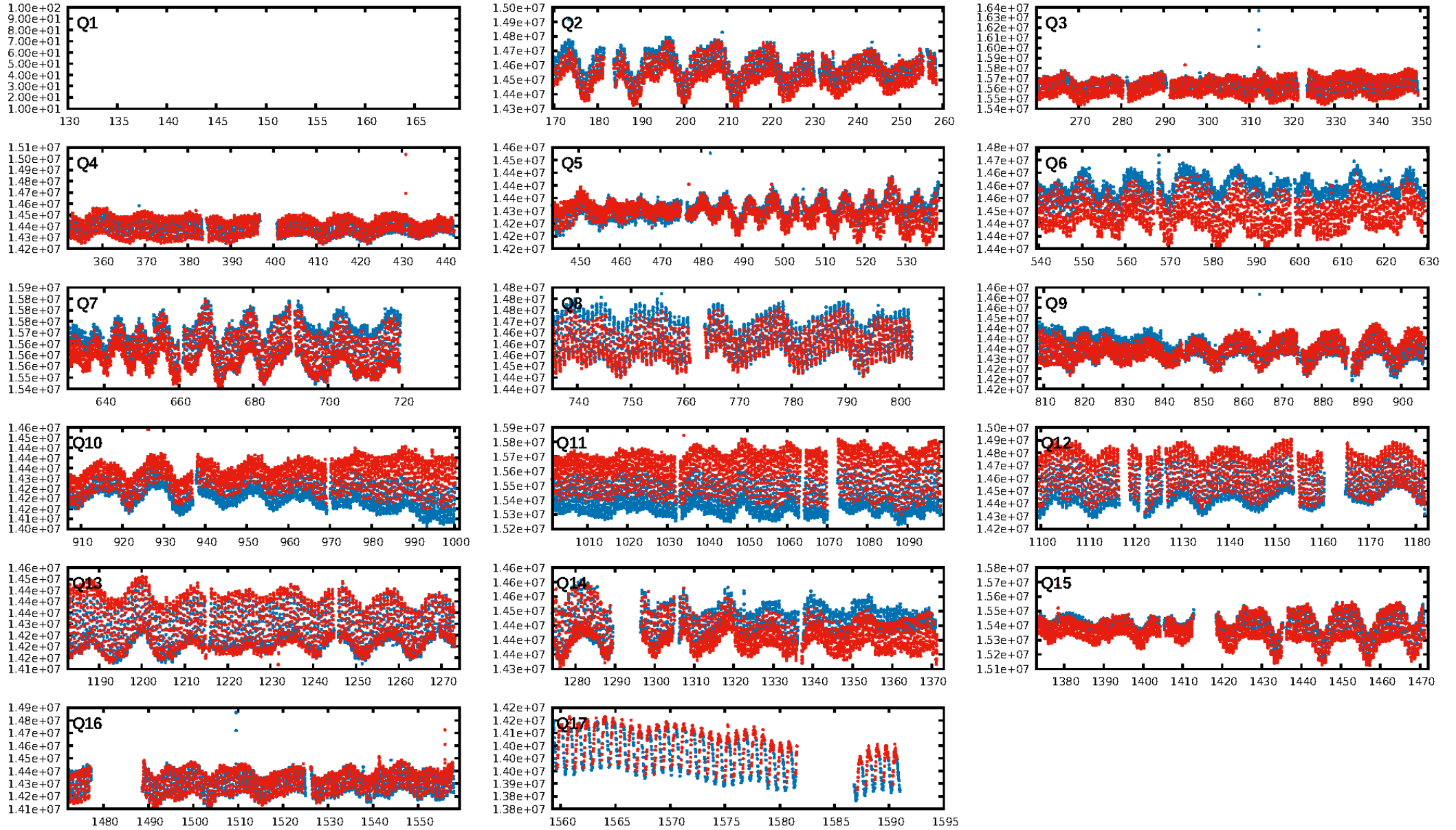
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [247.09 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1591/1591]
GhostDiagnostic-chr: -0.4943
Centroid-sig: 18.1%
Centroid-so: 1.065 arcsec [1.28 σ]
OotOffset-rm: 1.451 arcsec [20.35 σ]
KicOffset-rm: 1.248 arcsec [18.10 σ]
OotOffset-st: 4/4/4 [16]
KicOffset-st: 4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [16/16]

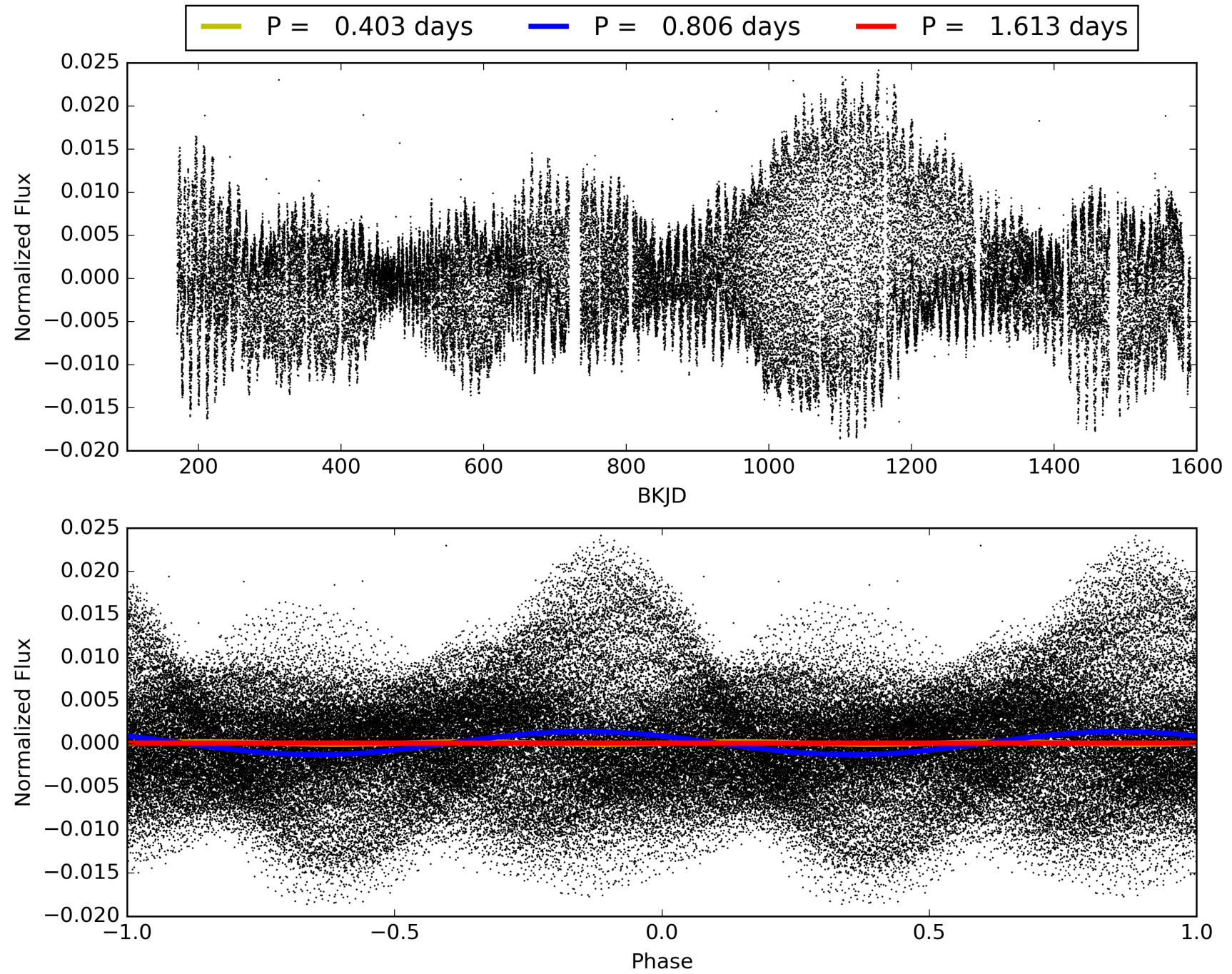
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:32:05 Z

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

TCE 008761064-01, PDC Light Curves

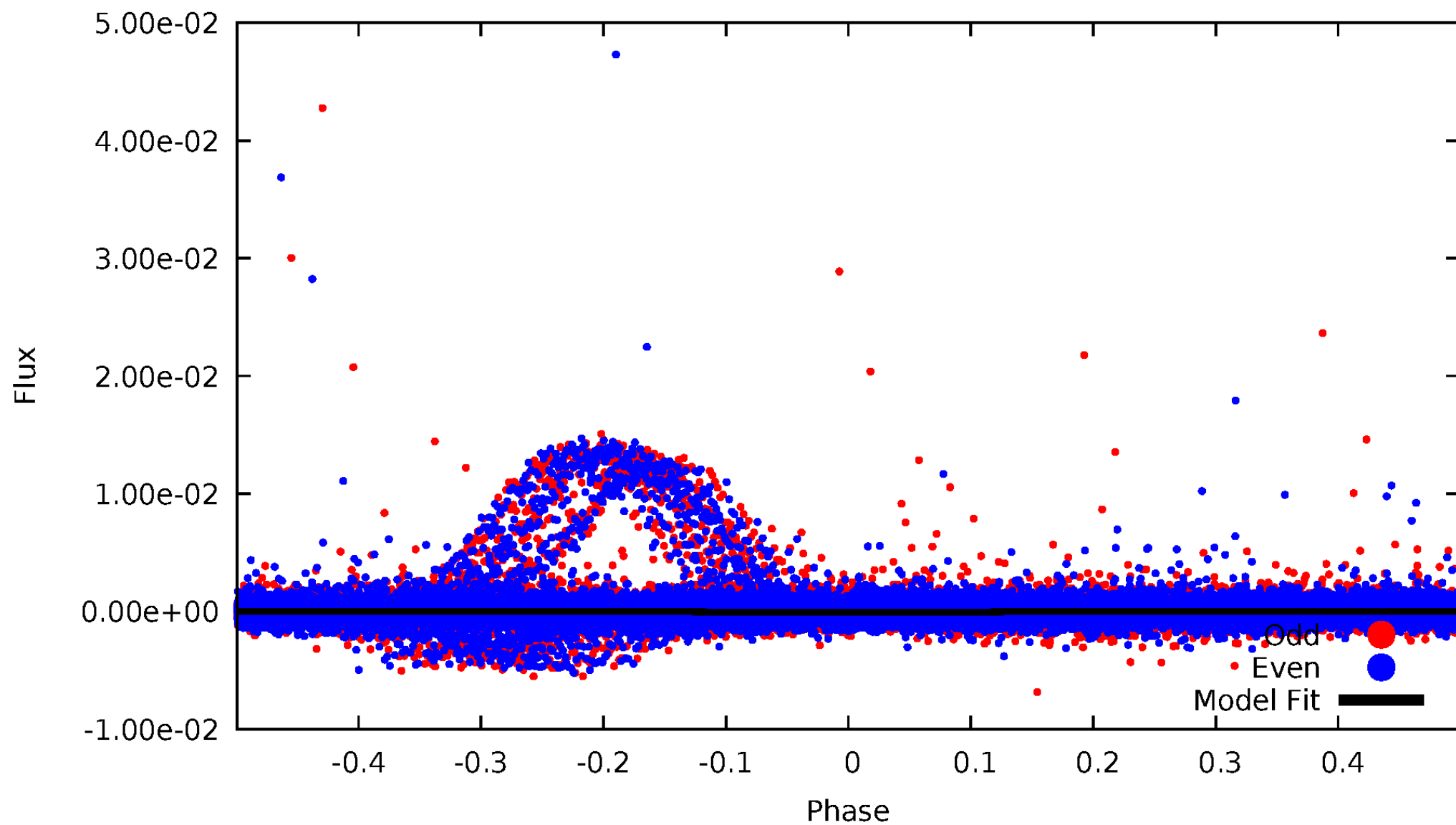


TCE 008761064-01



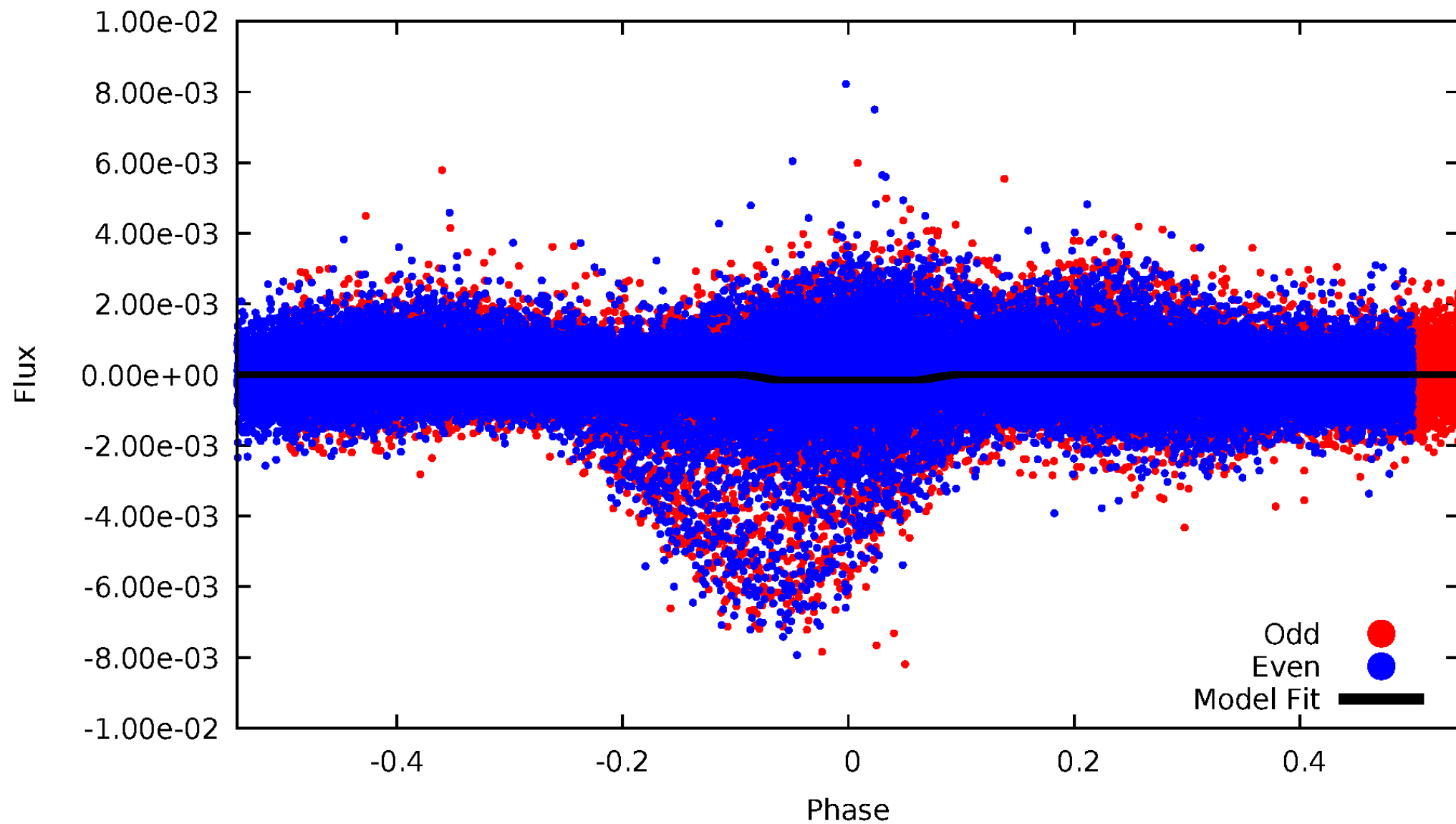
DV Odd/Even

TCE 008761064-01



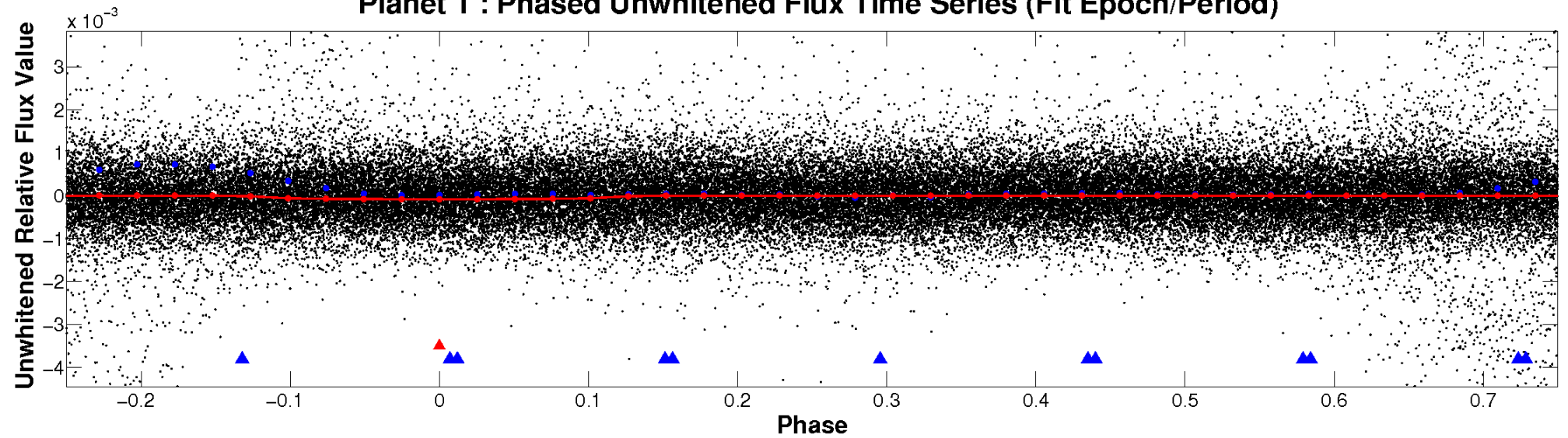
ALT Odd/Even

TCE 008761064-01

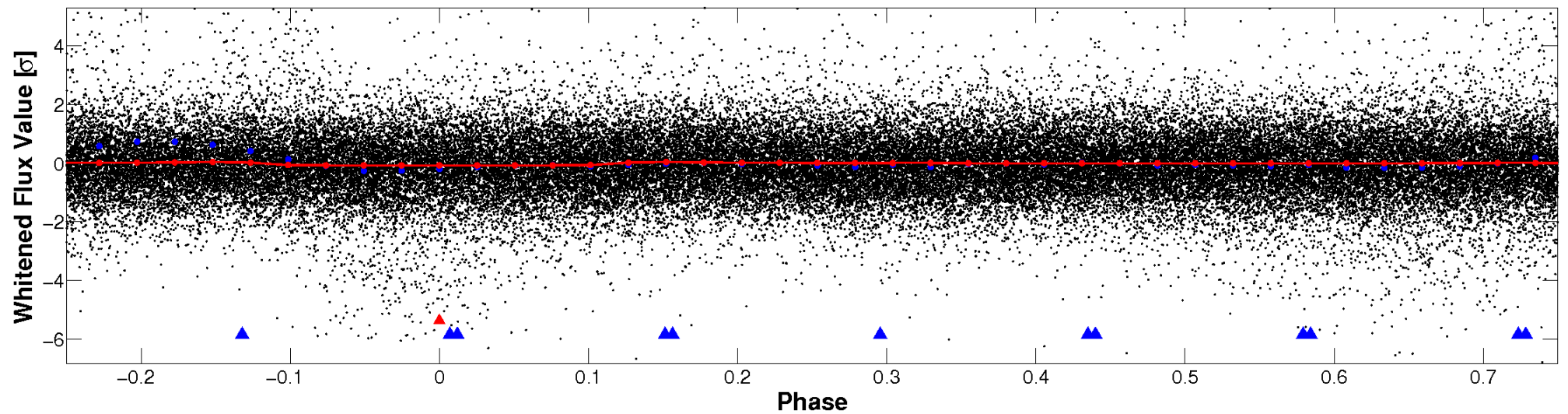


Non-Whitened Vs. Whitened Light Curve

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

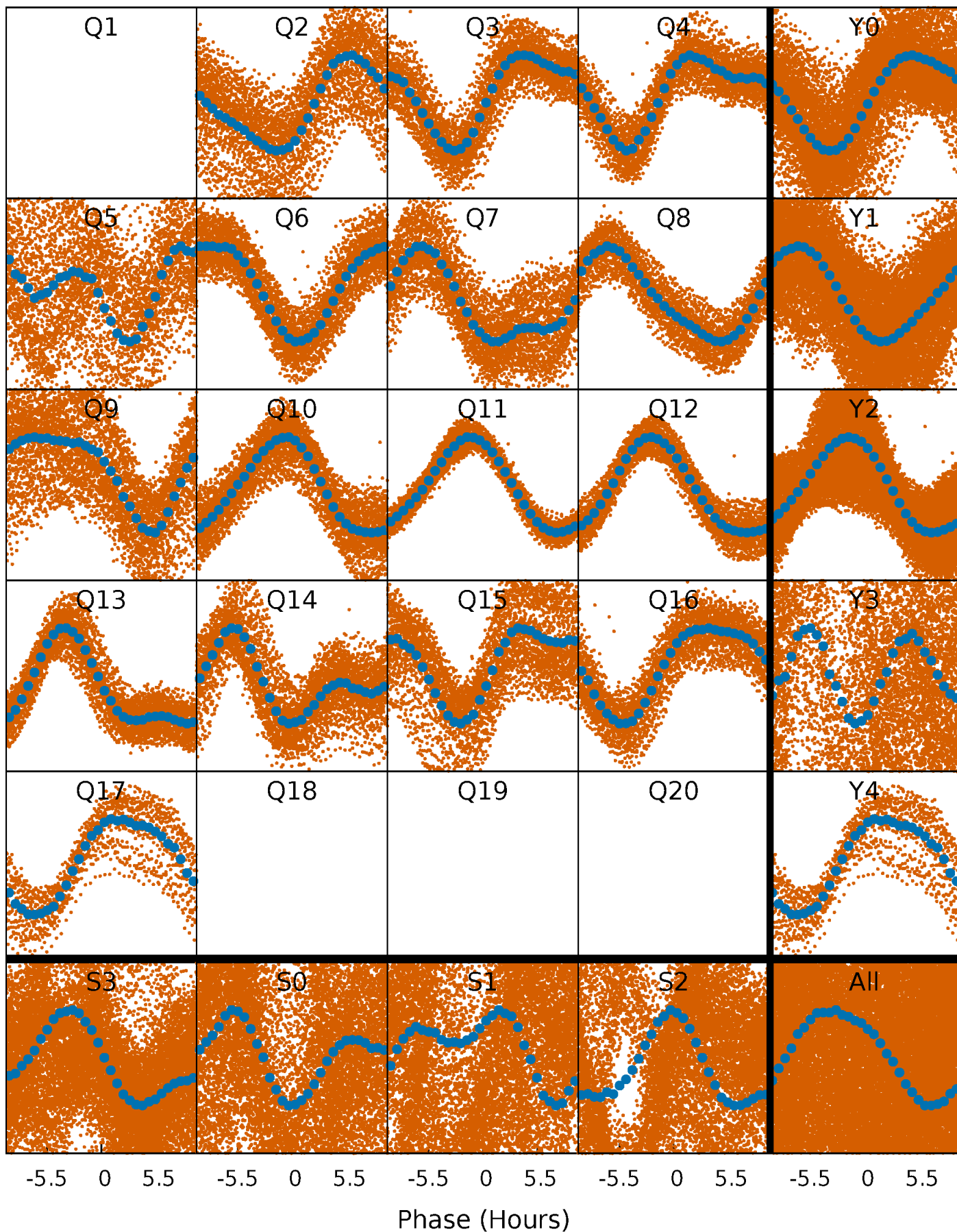


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



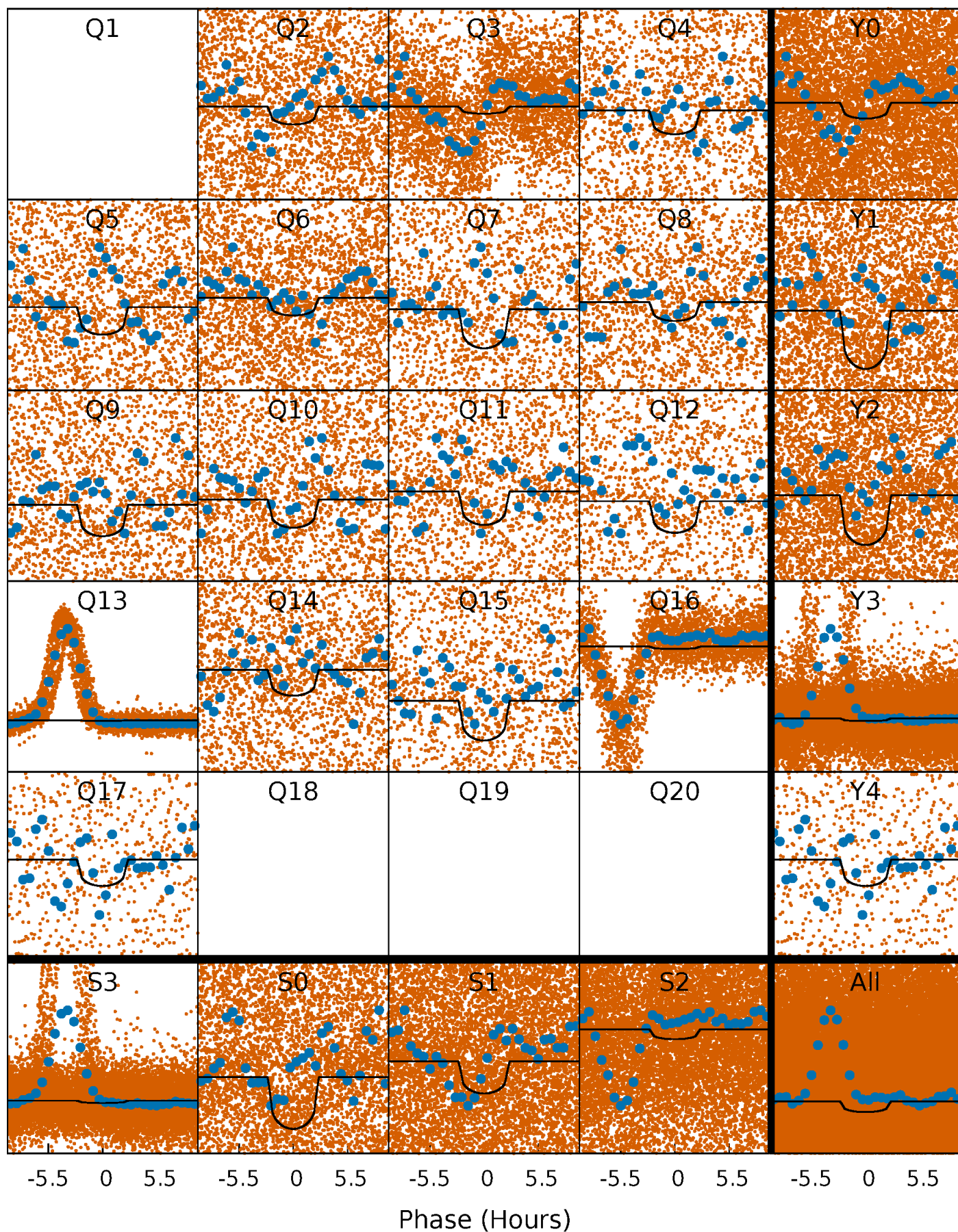
PDC Quarter-Phased Transit Curves

TCE 008761064-01 P= 0.806284 Days $T_0=131.944849$ (BKJD)



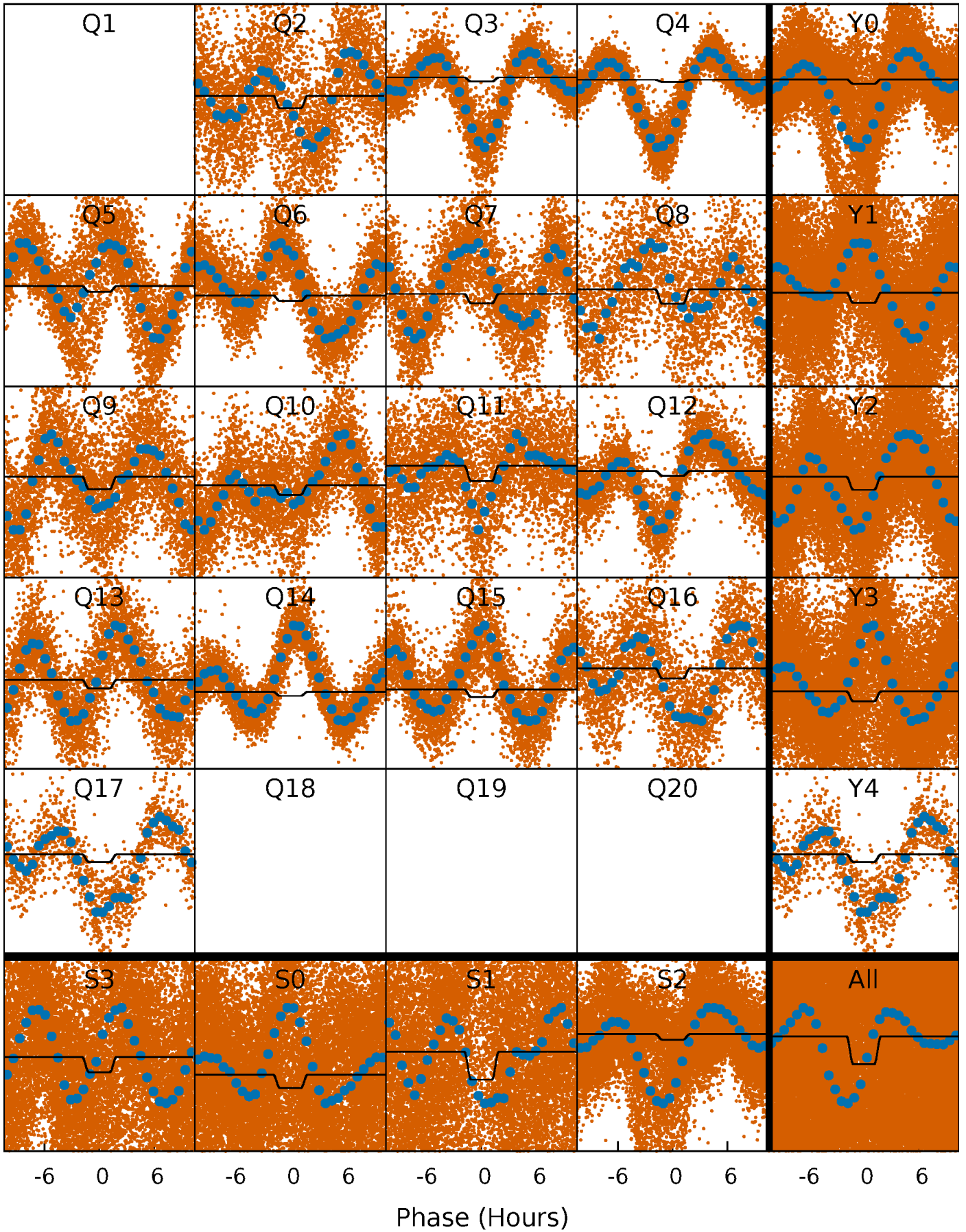
DV Quarter-Phased Transit Curves

TCE 008761064-01 P= 0.806284 Days $T_0=131.944849$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

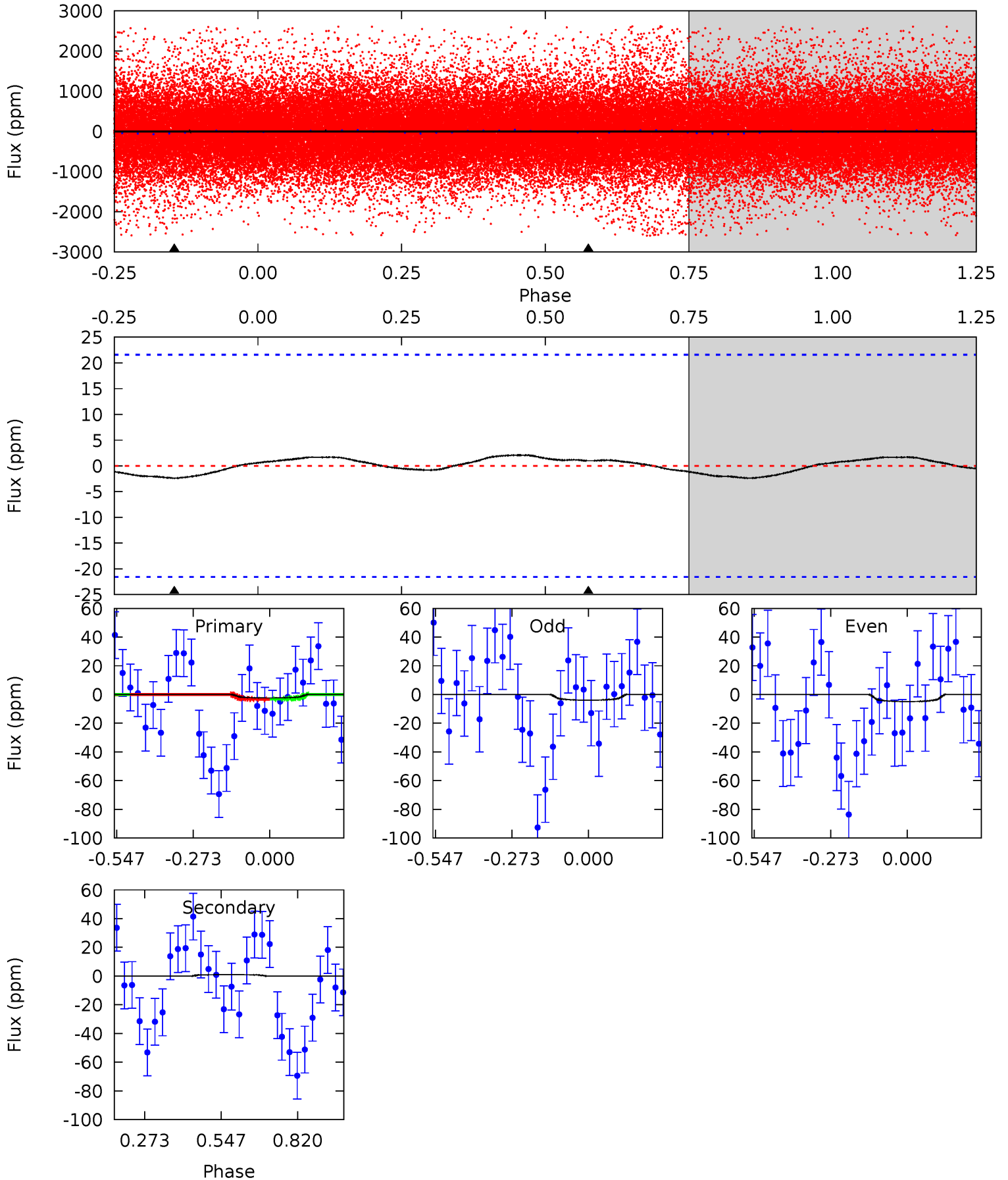
TCE 008761064-01 P= 0.806153 Days $T_0=131.861354$ (BKJD)



DV Model-Shift Uniqueness Test

008761064-01, P = 0.806284 Days, E = 131.944849 Days

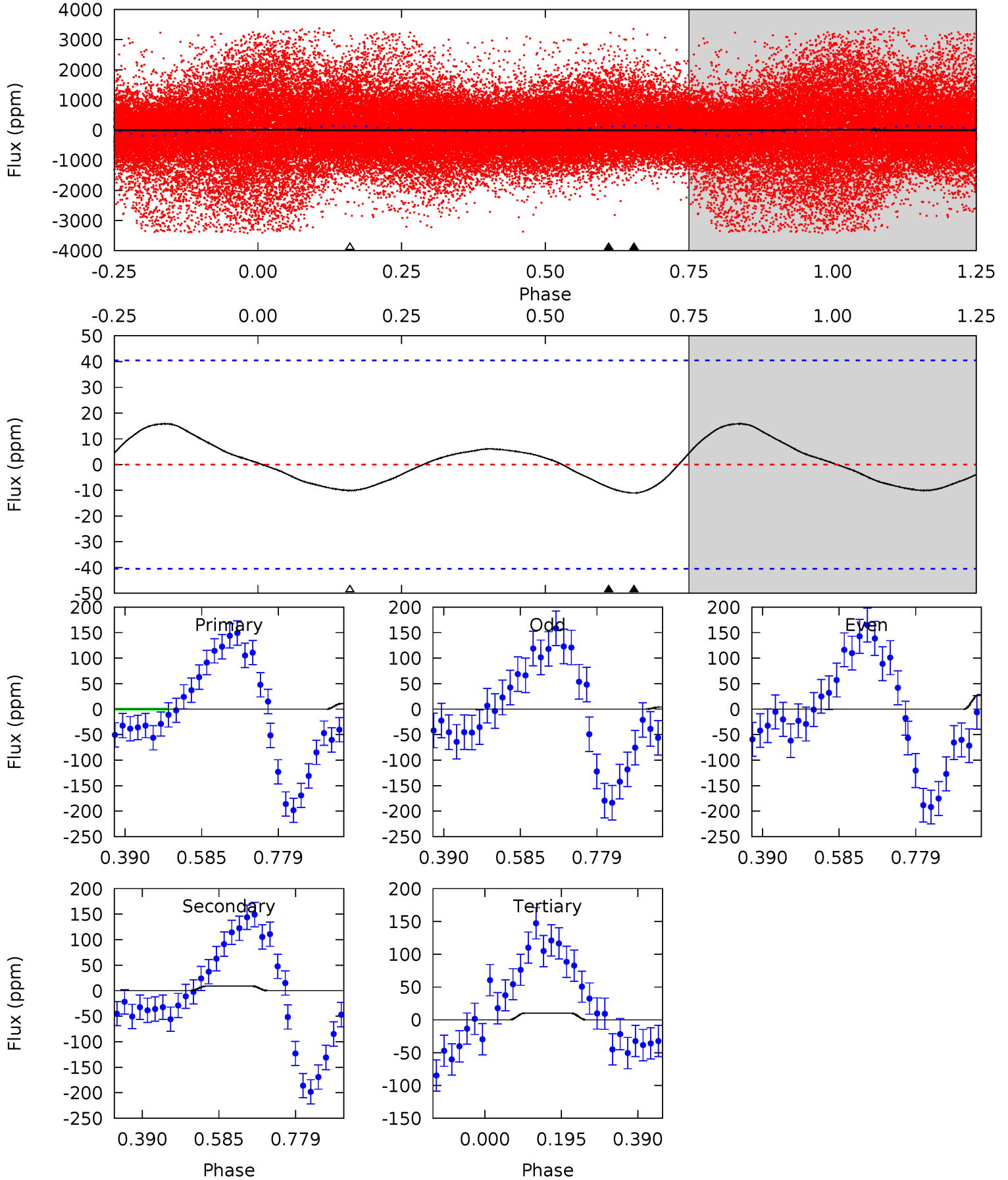
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.48	-0.20	0	0	4.35	1.10	0.17	0.48	0.48	-0.20	-0.20	0.10	2.45	0.47	0.03



Alt Model-Shift Uniqueness Test

008761064-01, P = 0.806153 Days, E = 131.861354 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.21	0.97	1.10	0	4.42	1.30	0.76	0.11	1.21	-0.14	0.97	1.35	2.68	0.59	0



Stellar Parameters For KIC 008761064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5706^{+172}_{-172}	$4.428^{+0.124}_{-0.186}$	$-0.320^{+0.300}_{-0.300}$	$0.923^{+0.248}_{-0.134}$	$0.833^{+0.120}_{-0.070}$	$1.490^{+0.820}_{-0.723}$
	+3%/-3%	+3%/-4%	+94%/-94%	+27%/-15%	+14%/-8%	+55%/-48%
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 008761064-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 5	$0.99^{+0.66}_{-0.58}$	2694^{+193}_{-148}	-3039^{+6061}_{-814}	$-0.101^{+0.810}_{-1.436}$
Alt.	-9 ± 9	$1.23^{+0.70}_{-0.61}$	2687^{+183}_{-146}	3111^{+988}_{-6038}	$0.738^{+2.323}_{-0.739}$

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

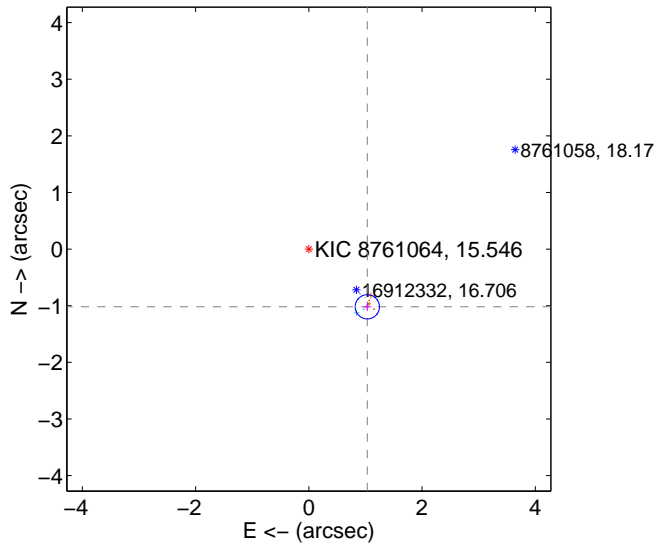
Supplemental centroid analysis for 008761064-01. Kepler magnitude: 15.55. Transit SNR 8.84

There are 8 quarters with good PRF difference image offsets

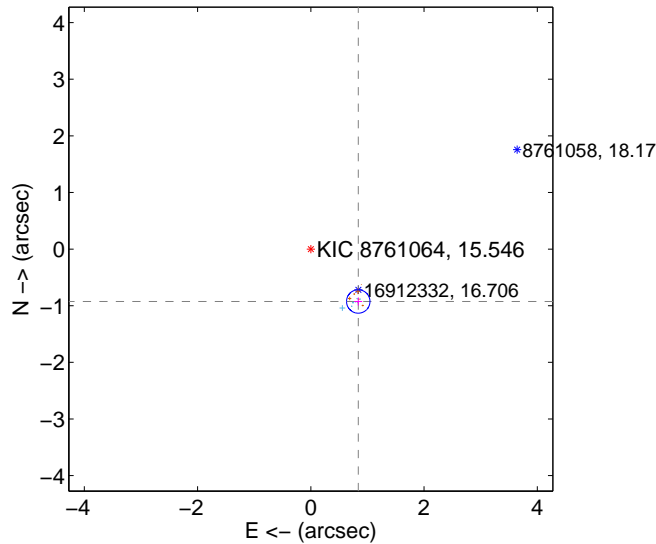
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.451 ± 0.071	20.35	-1.033 ± 0.069	-1.019 ± 0.072
PRF-fit source offset from KIC position	1.248 ± 0.069	18.10	-0.838 ± 0.070	-0.925 ± 0.071
photometric centroid source offset	1.06 ± 0.83	1.28	-1.05 ± 0.83	0.19 ± 0.78

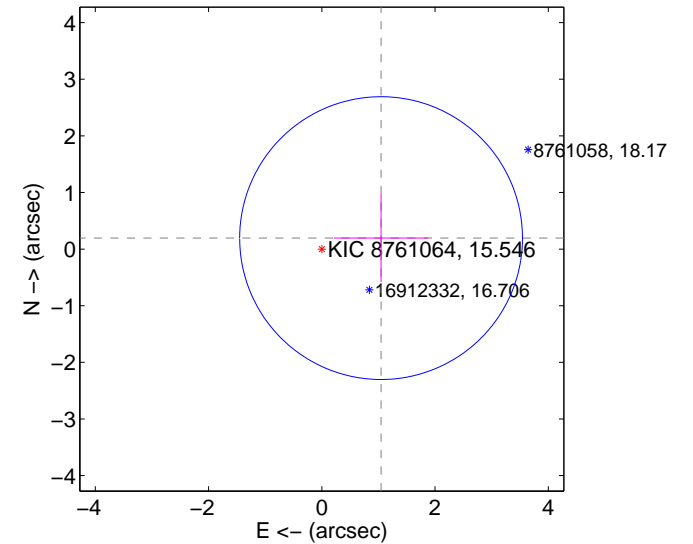
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

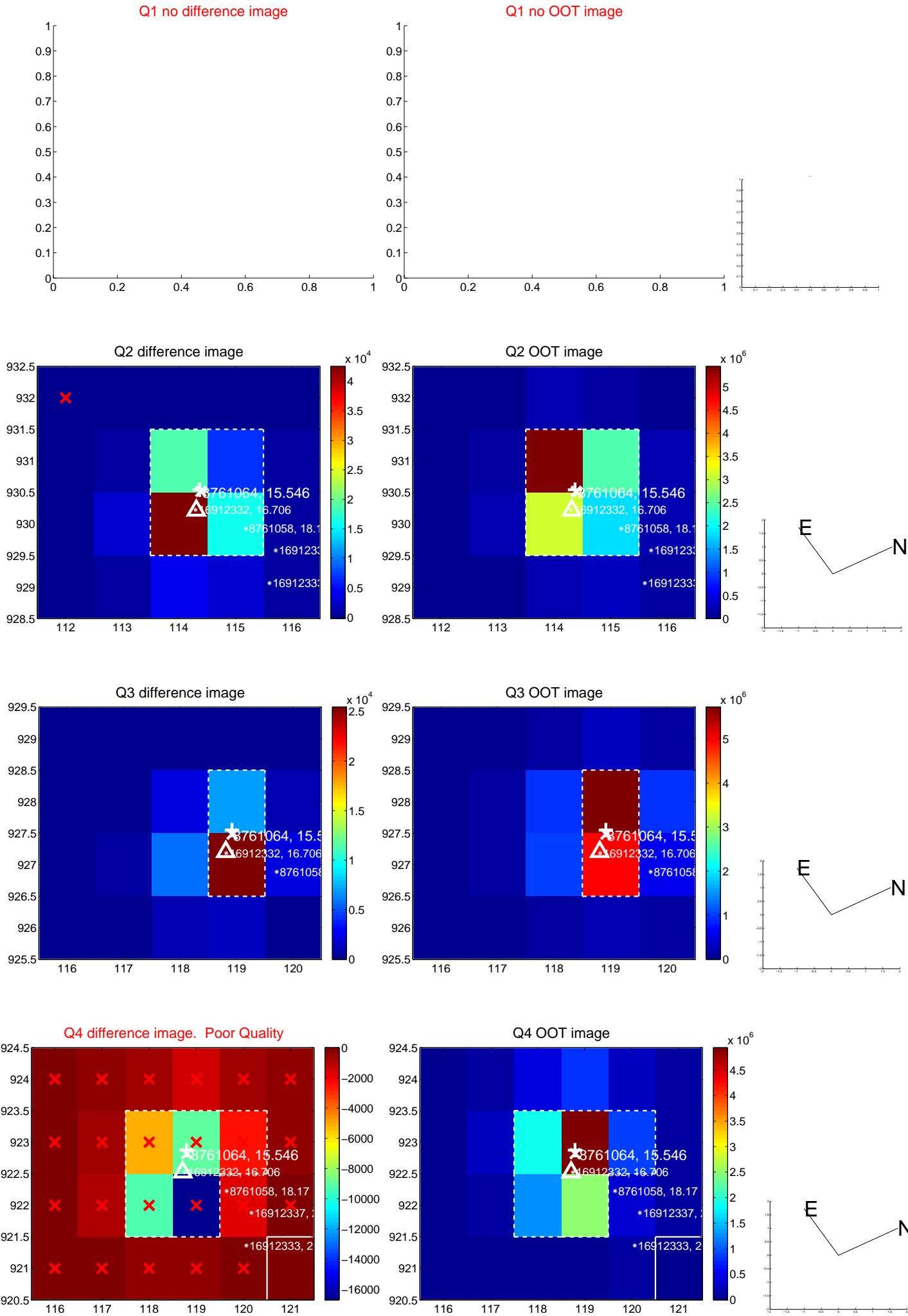


offset from photometric centroids

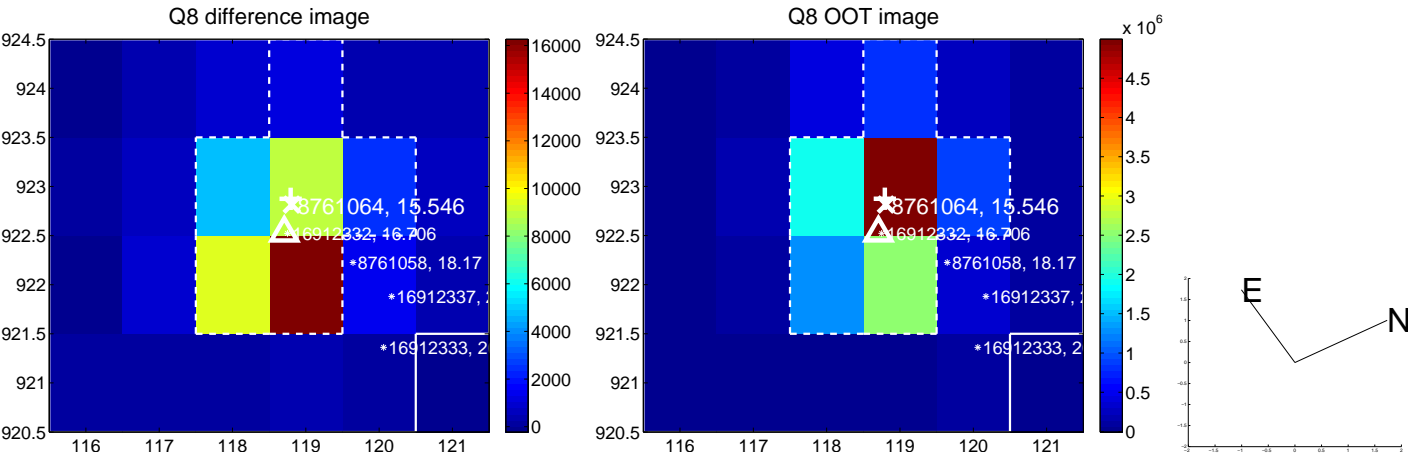
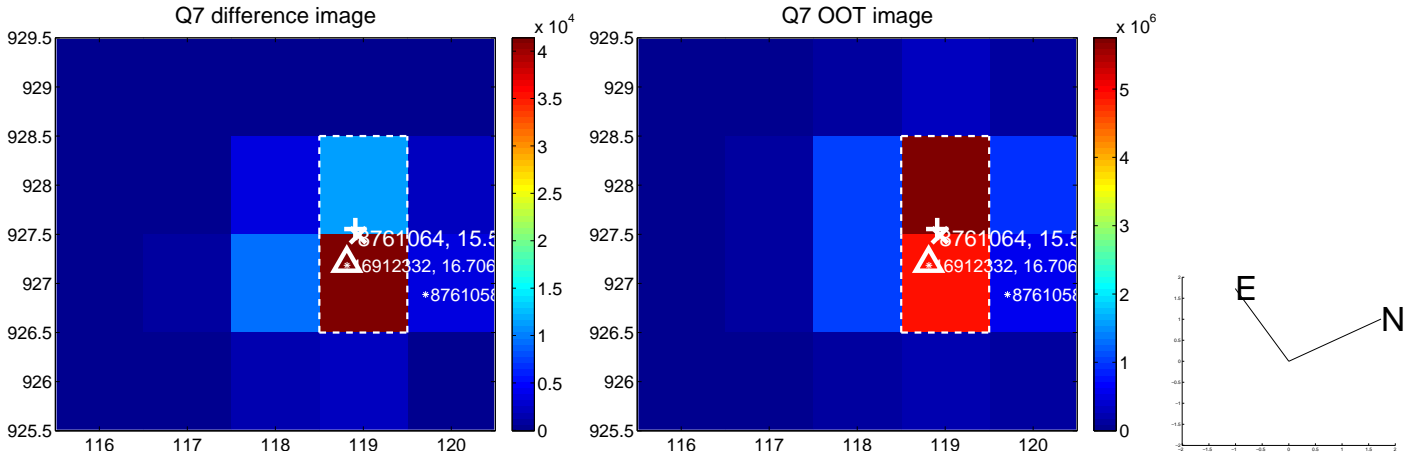
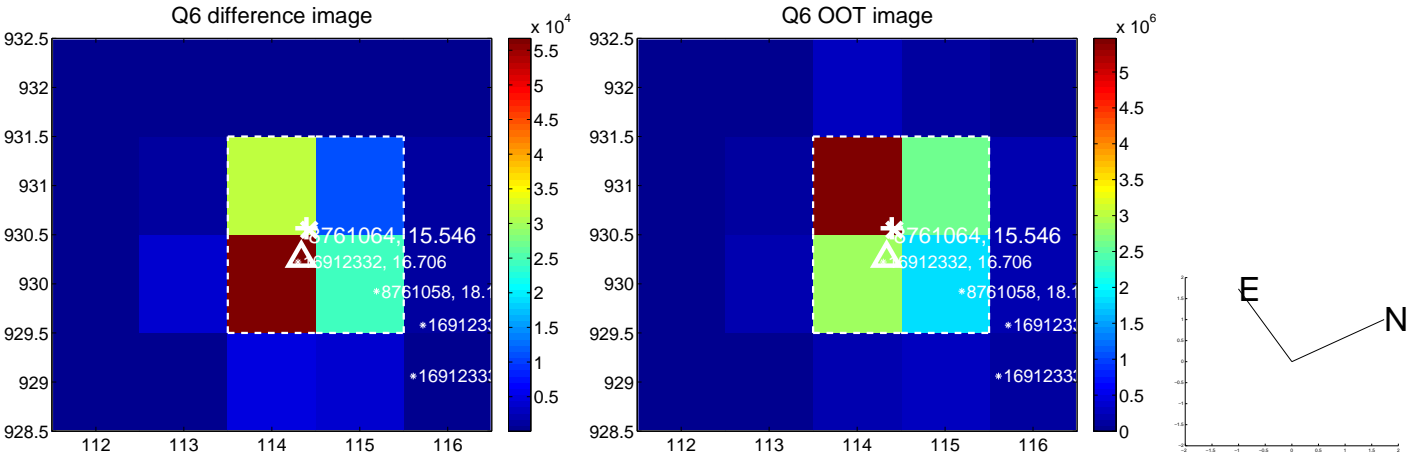
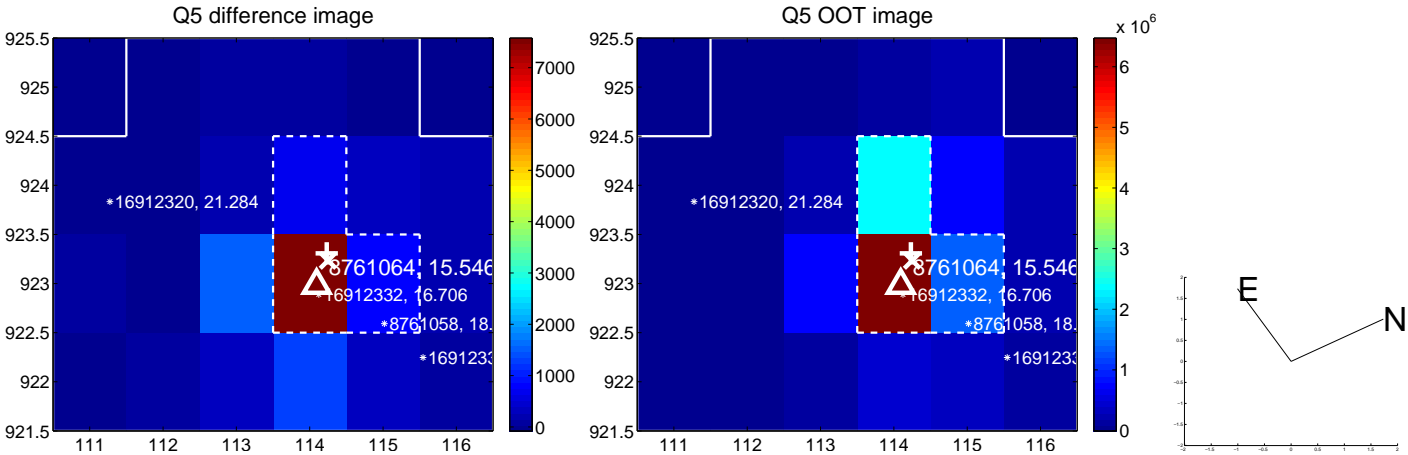


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

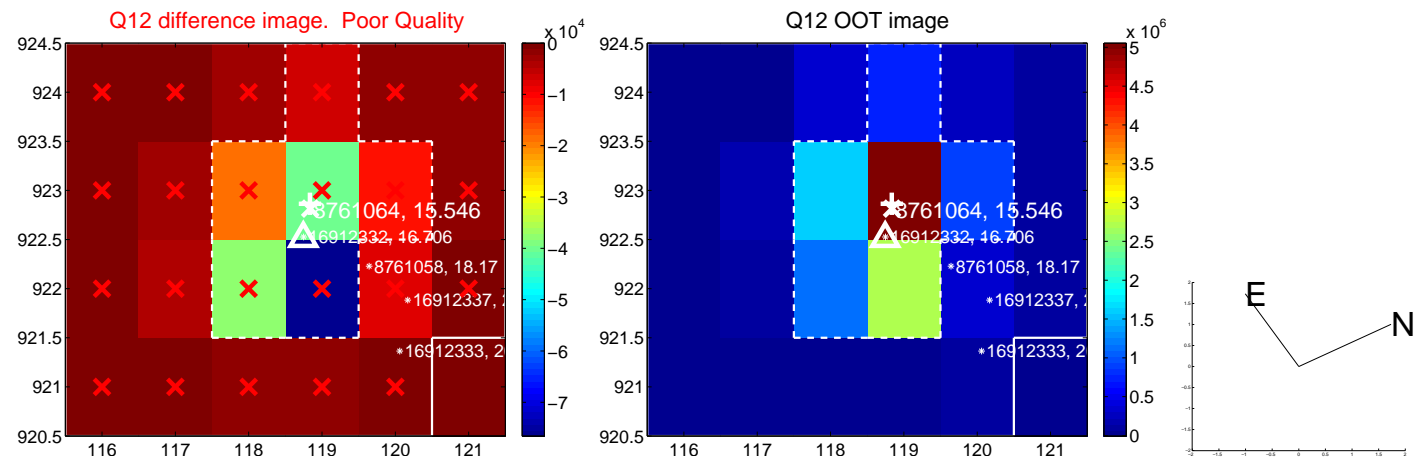
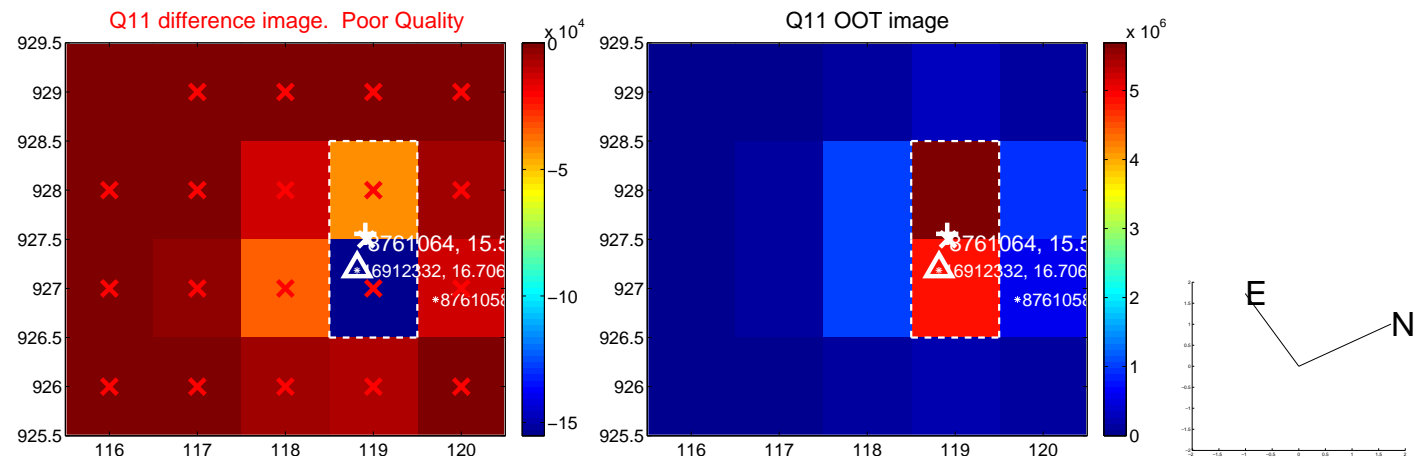
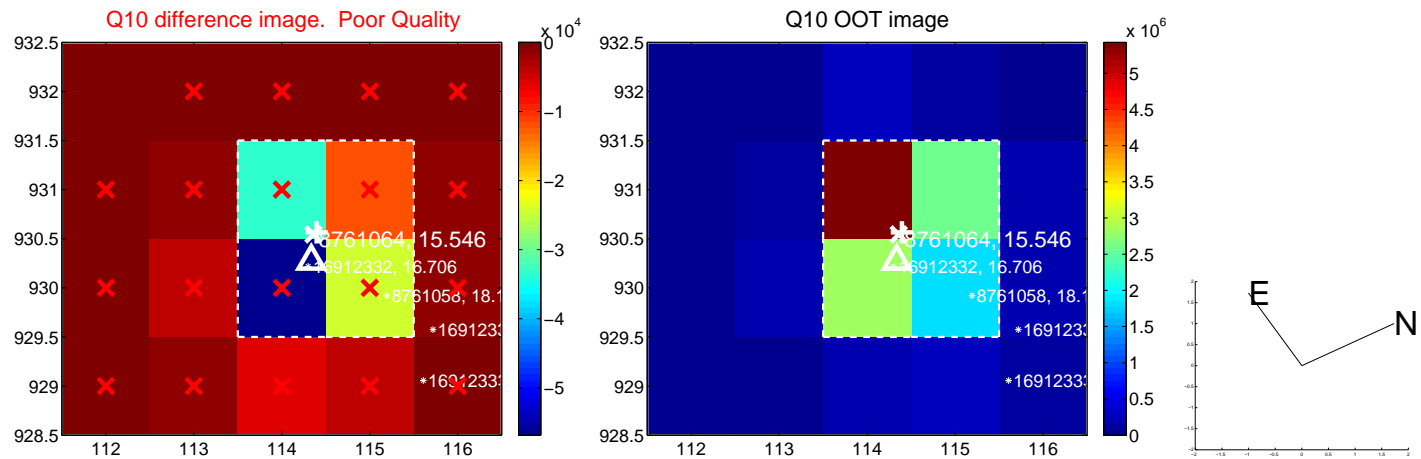
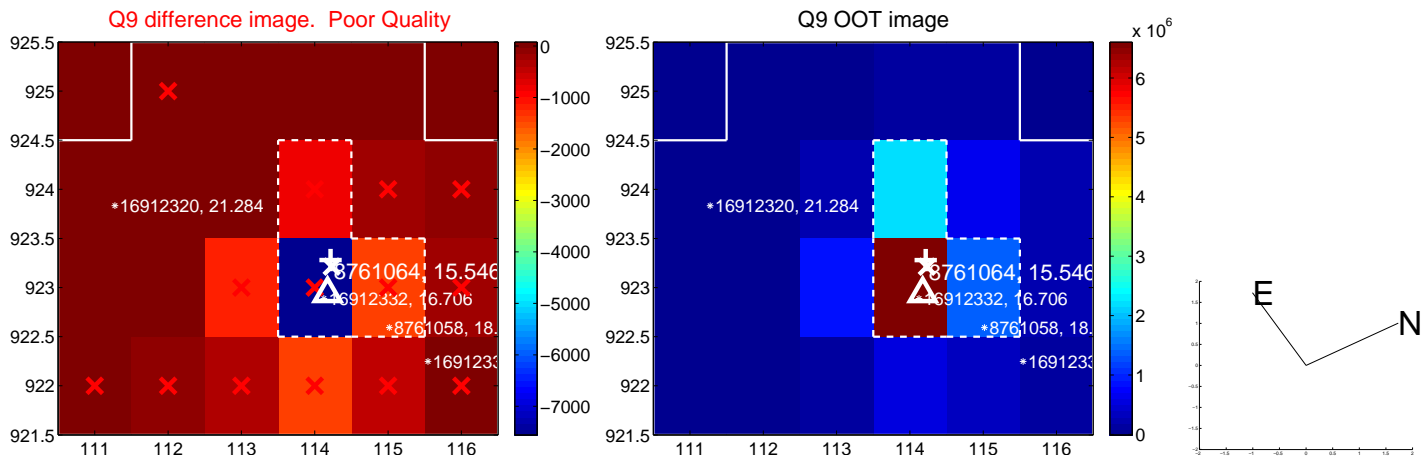
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



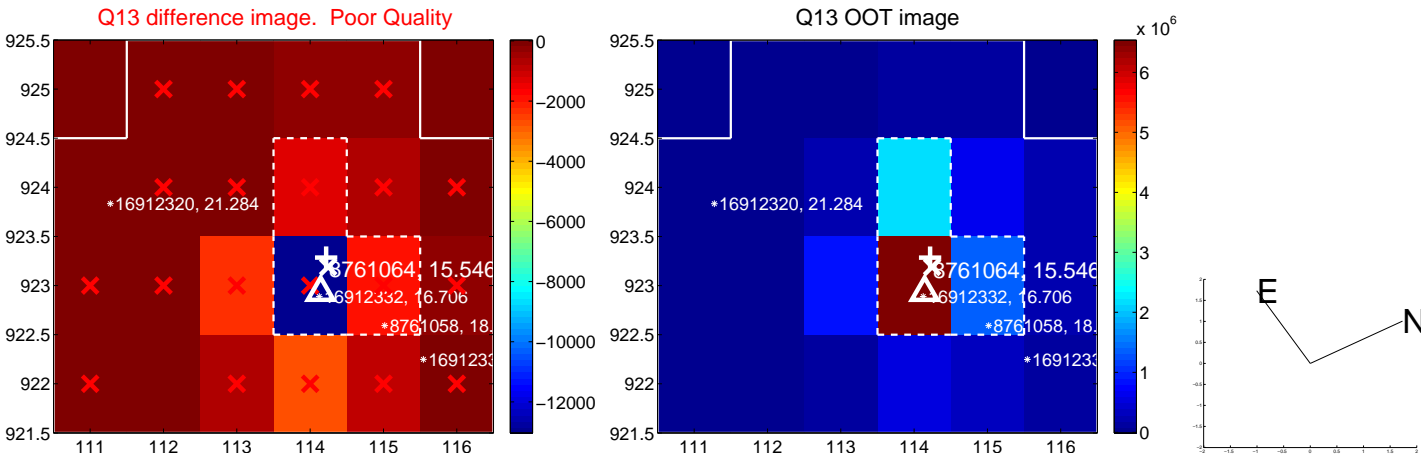
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



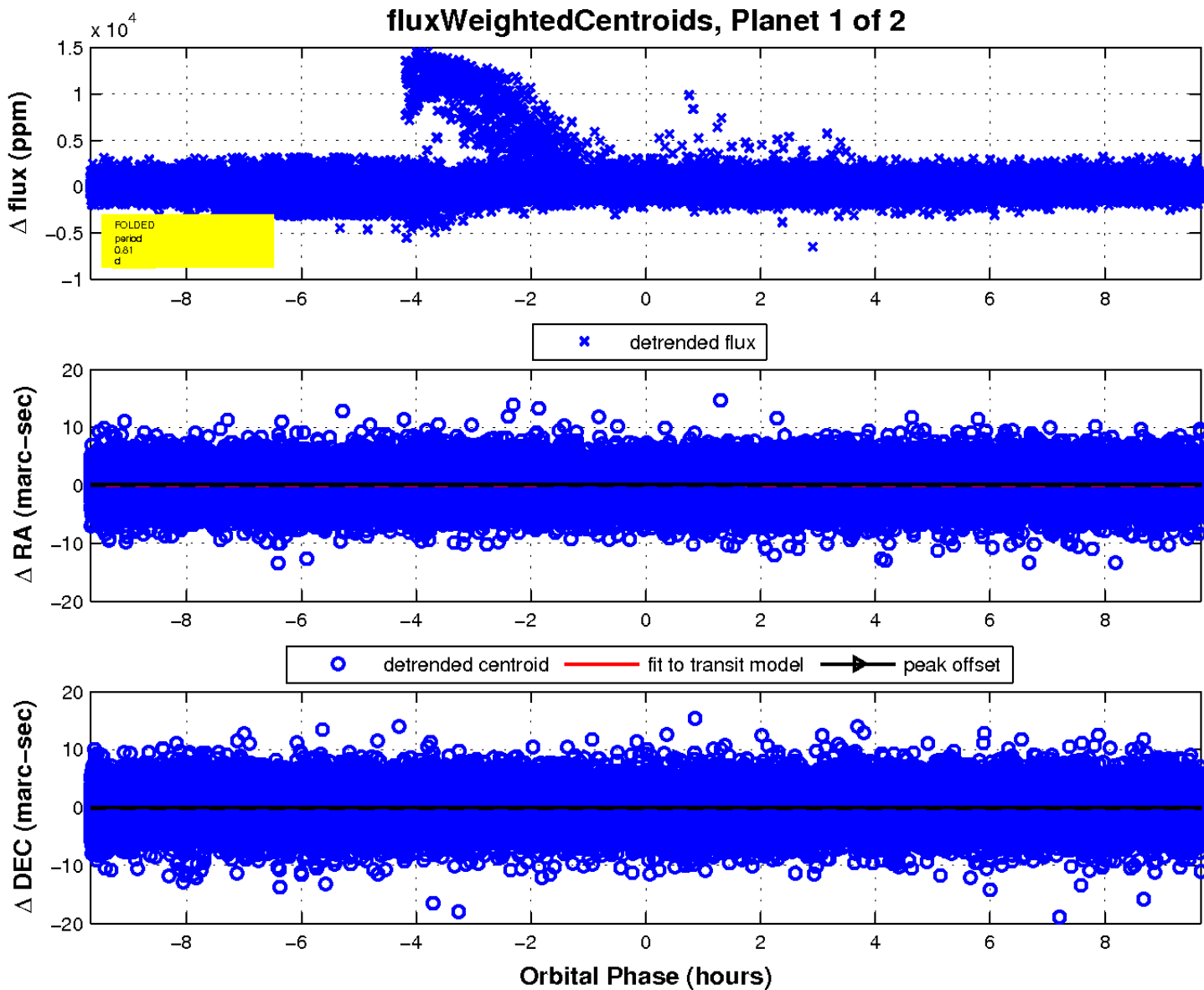
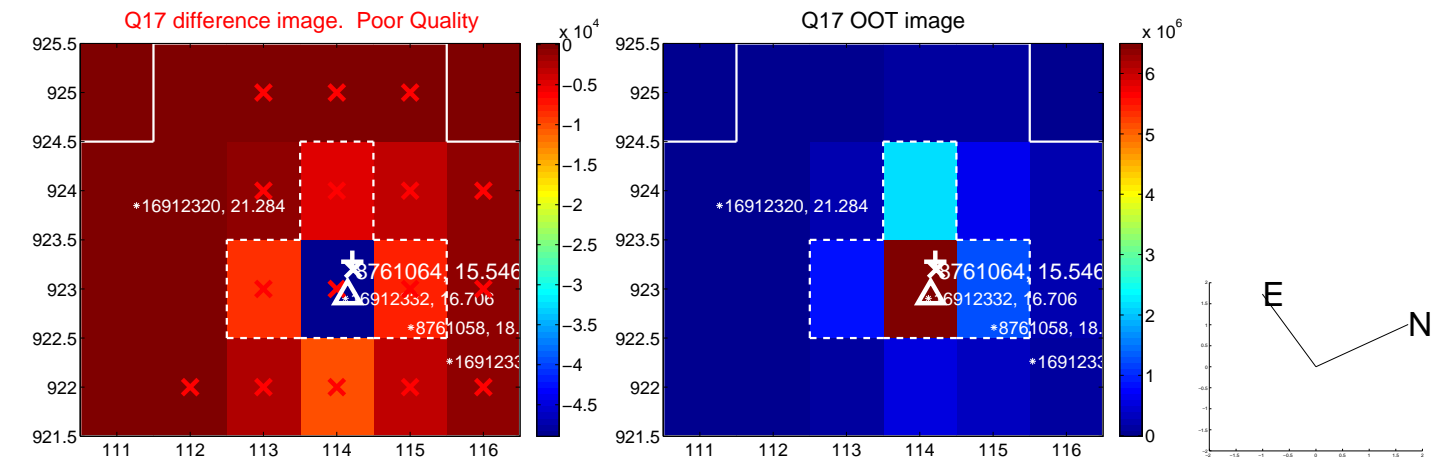
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

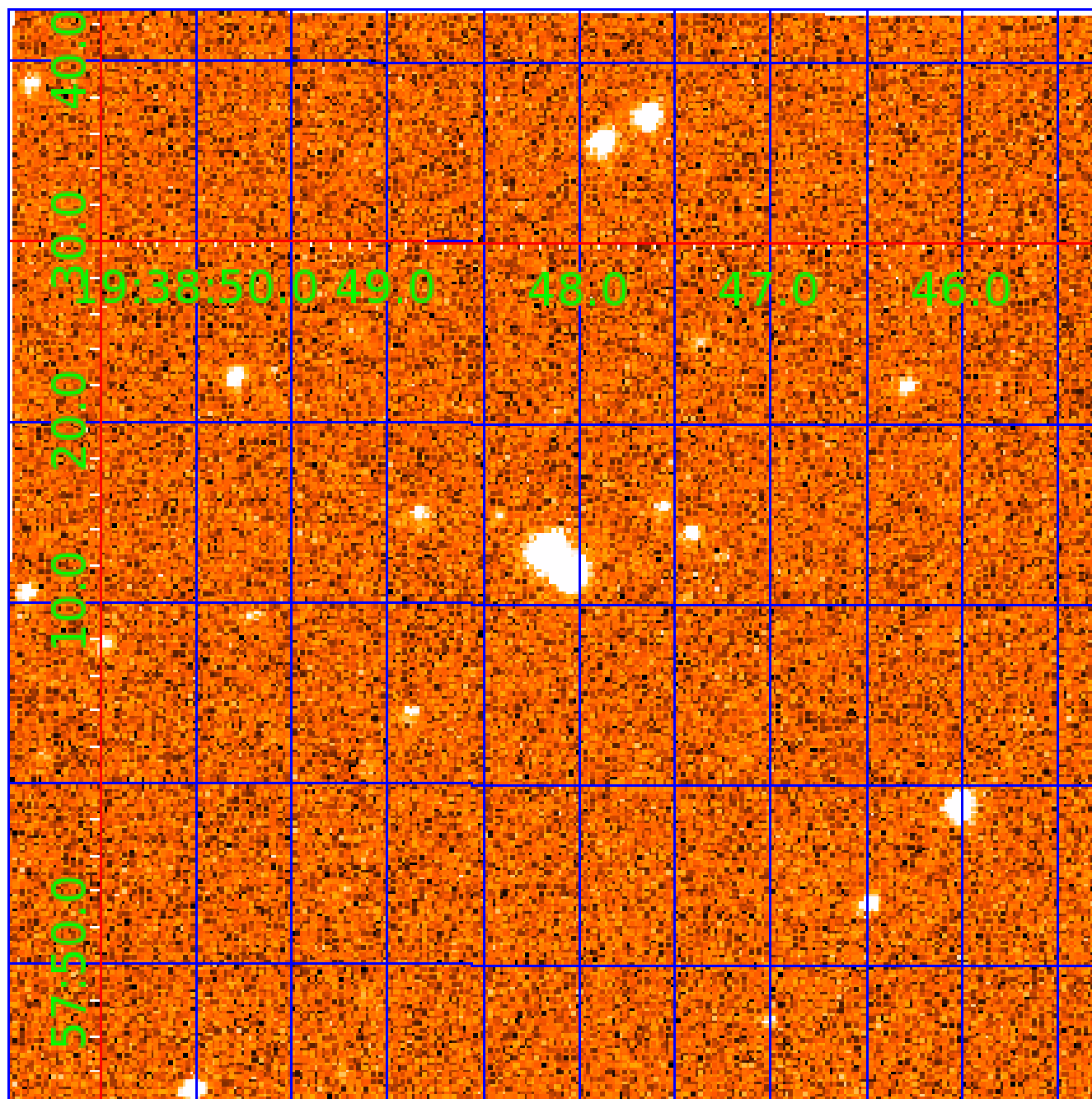


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008761064

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})
008761064-01	OBS	No	0.806284	131.944849	86.6	4.828	12.1	8.8	0.92	5706	0.91	3179.60
008761064-02	OBS	No	119.791303	172.609694	2367.6	10.500	17.4	-1.0	0.92	5706	4.46	4.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008761064-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_UNRESOLVED_OFFSET
008761064-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

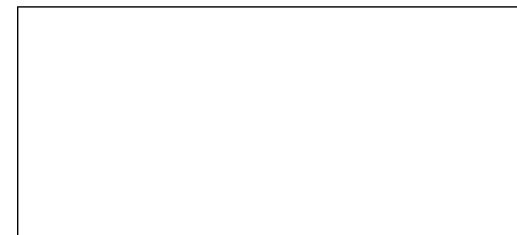
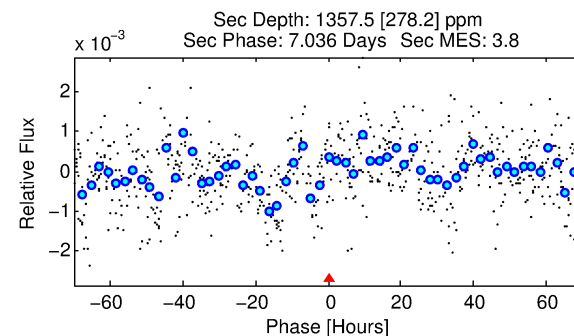
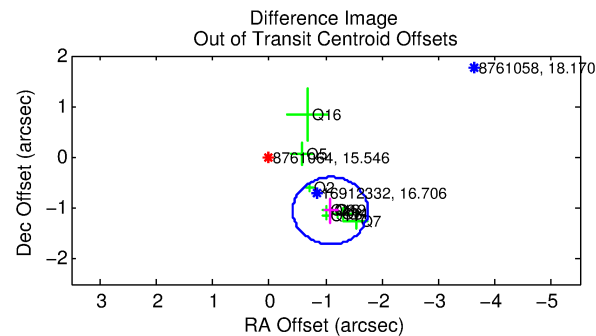
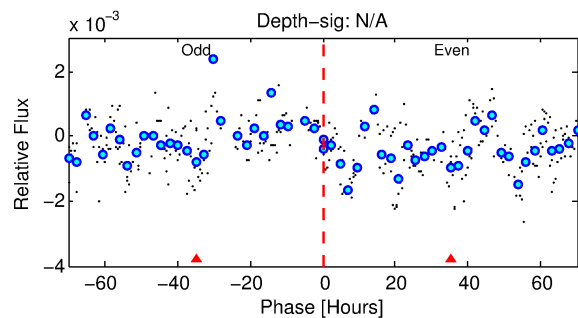
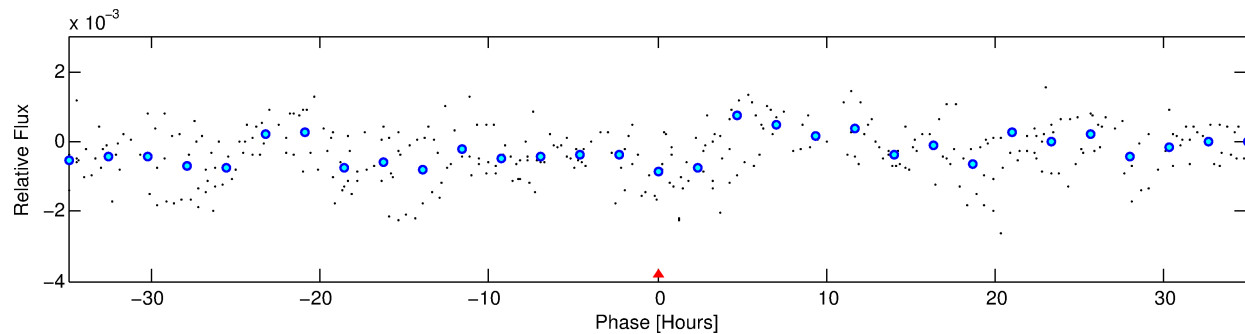
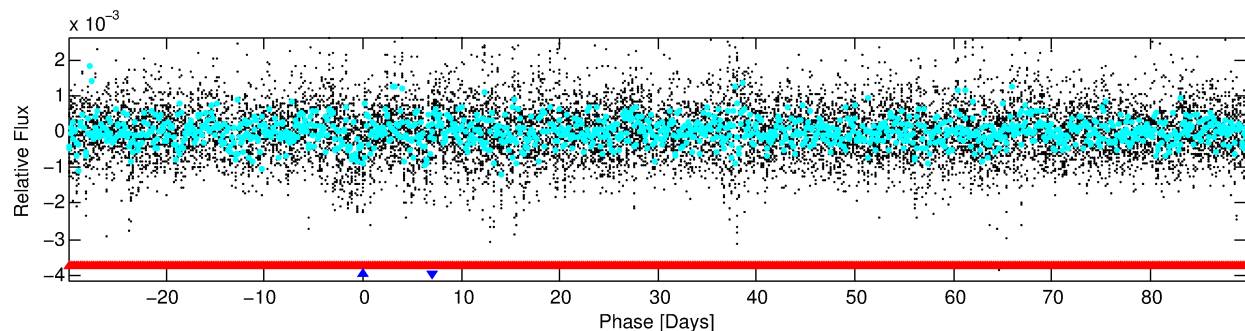
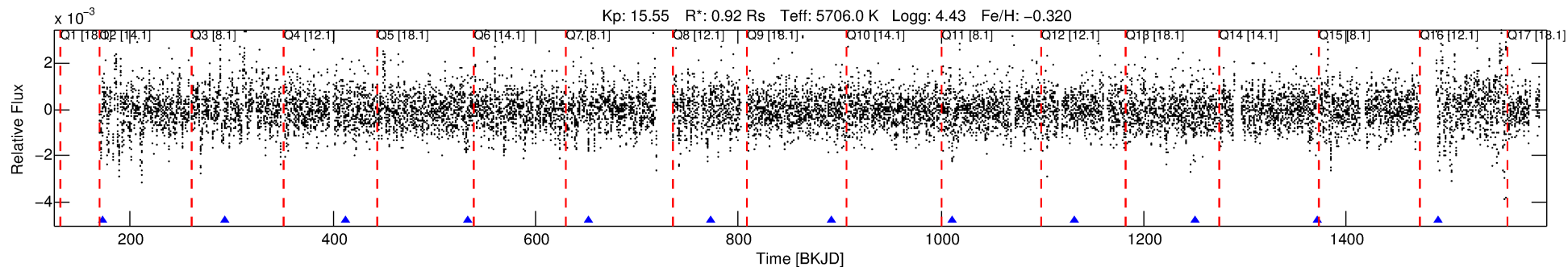
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008761064-02

No Significant Match Found

DV One-Page Summary

KIC: 8761064 Candidate: 2 of 2 Period: 119.791 d



TPS TCE Results:

Period = 119.79130 d
Epoch = 172.6097 BKJD

DV fit results are unavailable

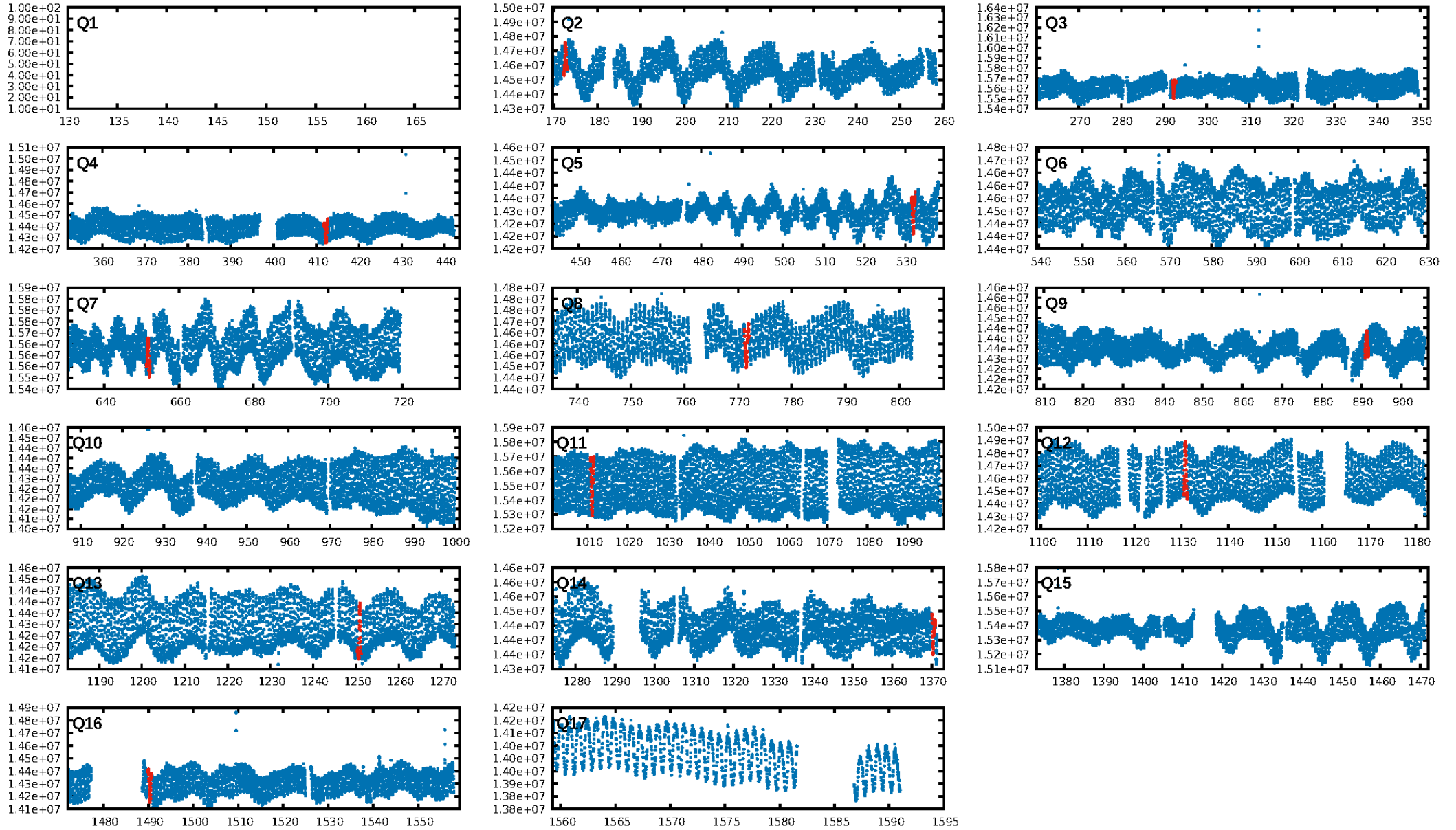
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [247.09σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -0.01063
Centroid-sig: 50.7%
Centroid-so: 0.471 arcsec [0.79σ]
OotOffset-rm: 1.515 arcsec [6.85σ]
KicOffset-rm: 1.252 arcsec [5.56σ]
OotOffset-st: 1/2/4/3 [10]
KicOffset-st: 1/2/4/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.00 [0/10]

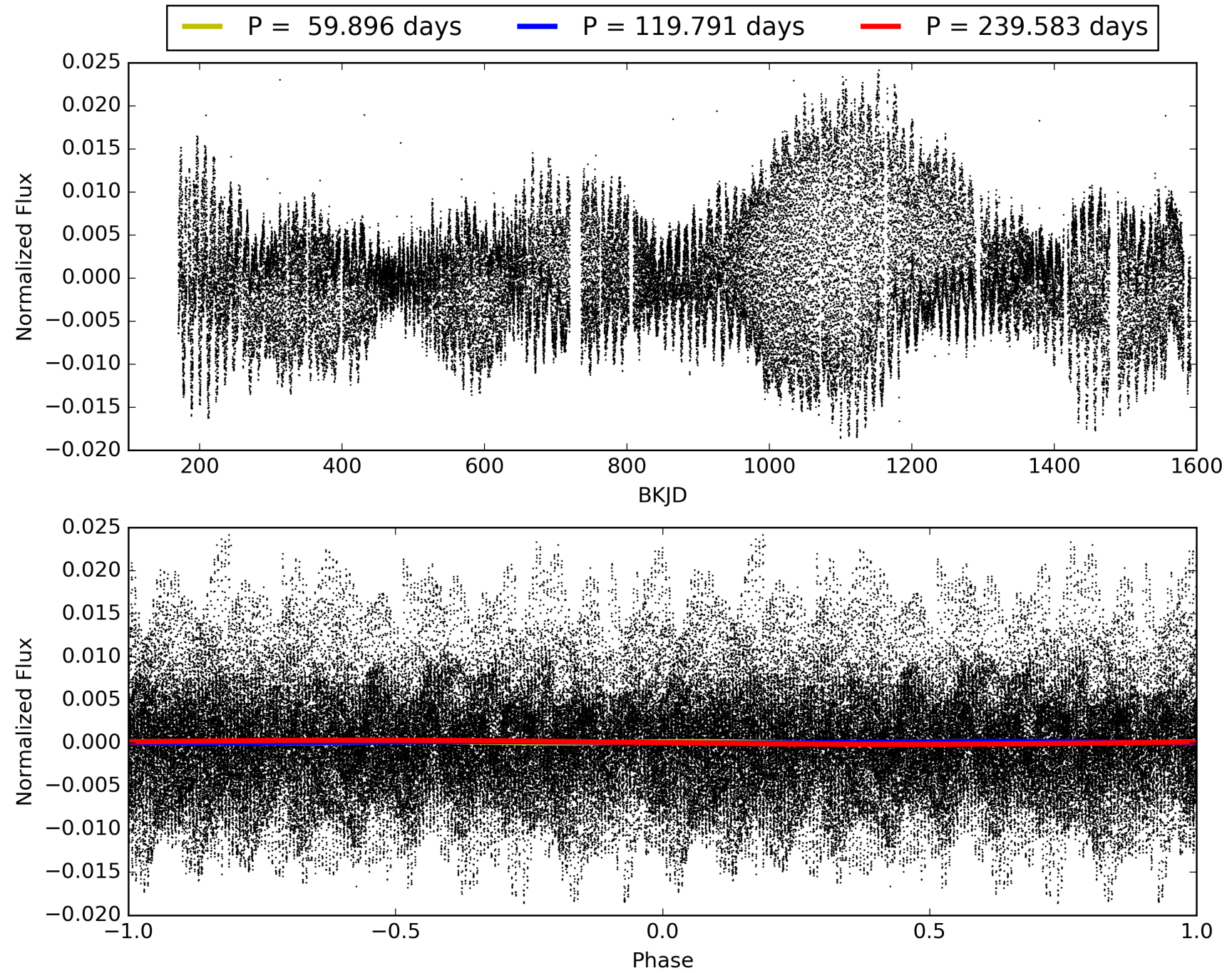
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:32:15 Z

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

TCE 008761064-02, PDC Light Curves

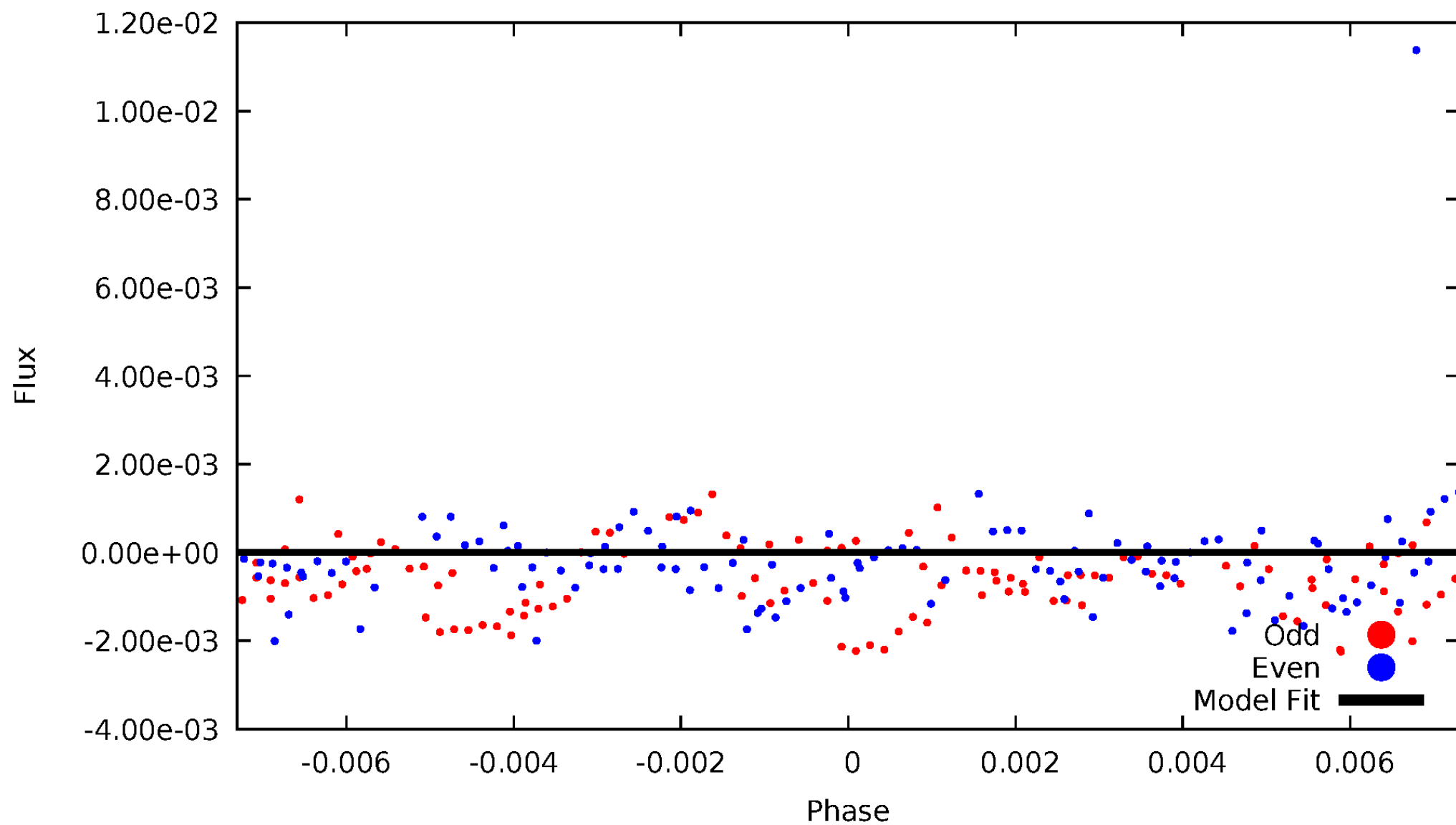


TCE 008761064-02



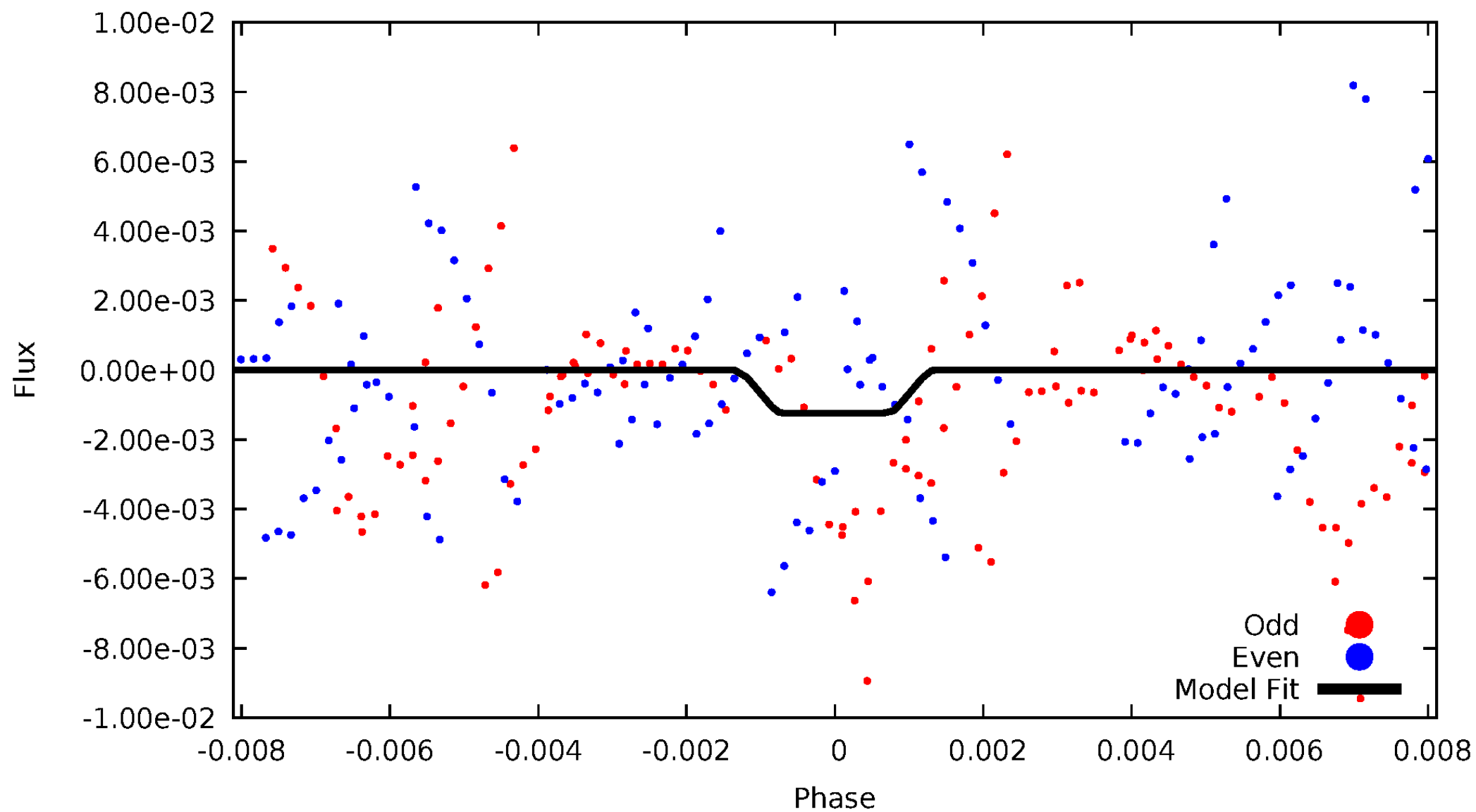
DV Odd/Even

TCE 008761064-02



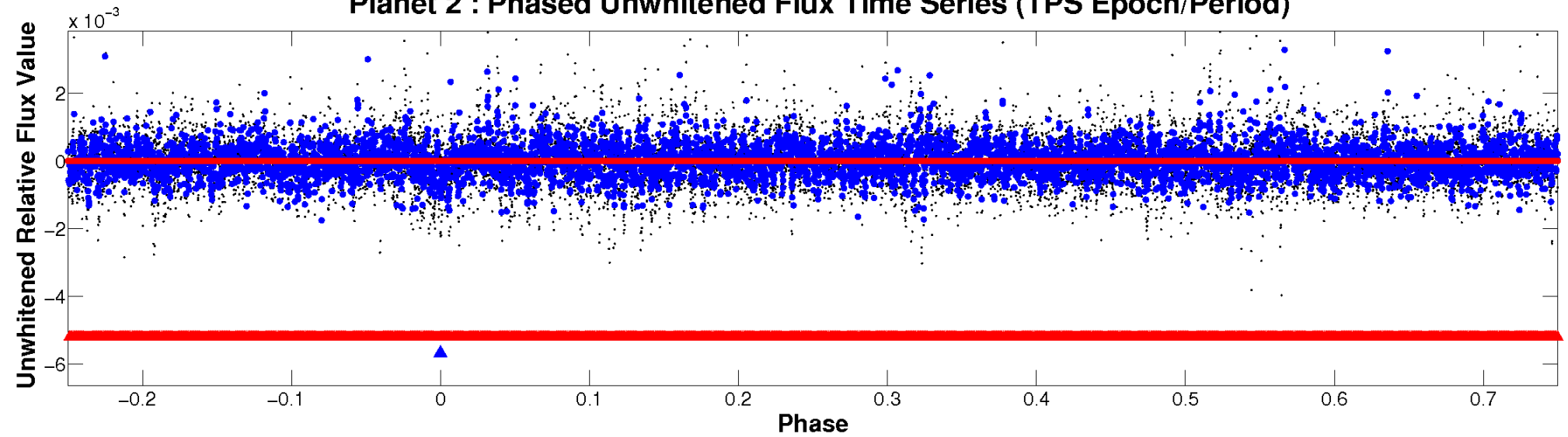
ALT Odd/Even

TCE 008761064-02



Non-Whitened Vs. Whitened Light Curve

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

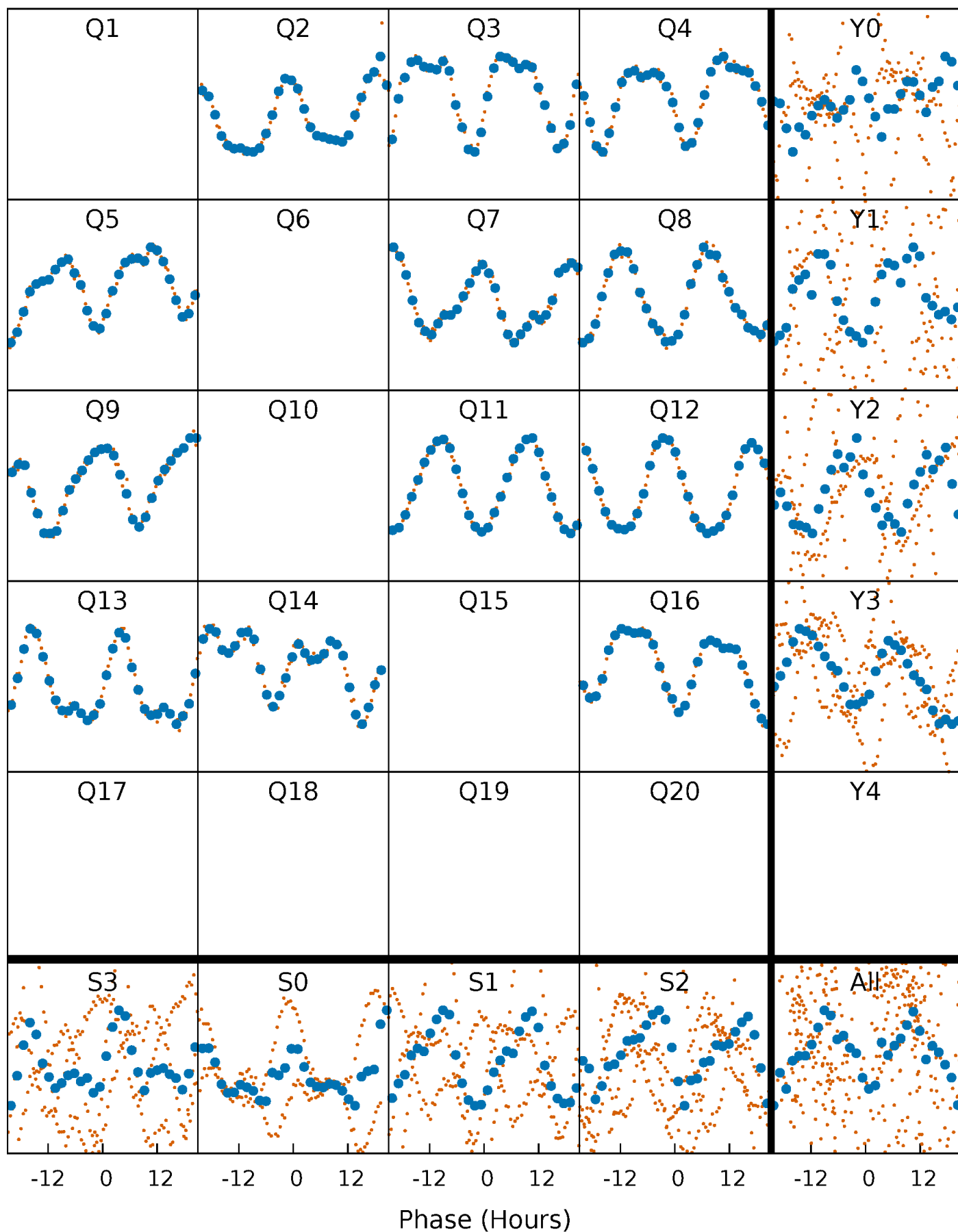


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



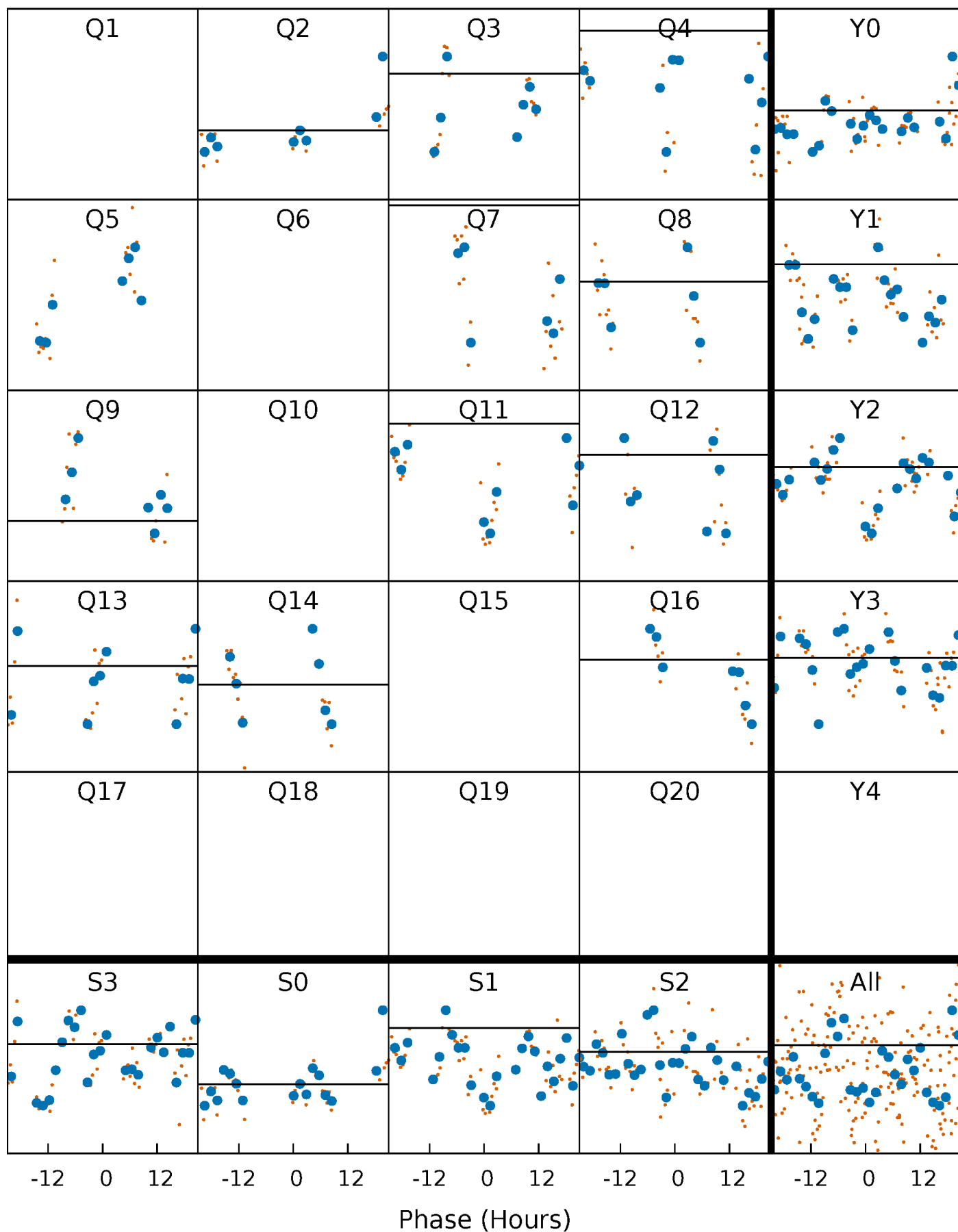
PDC Quarter-Phased Transit Curves

TCE 008761064-02 P=119.791303 Days $T_0=172.609694$ (BKJD)



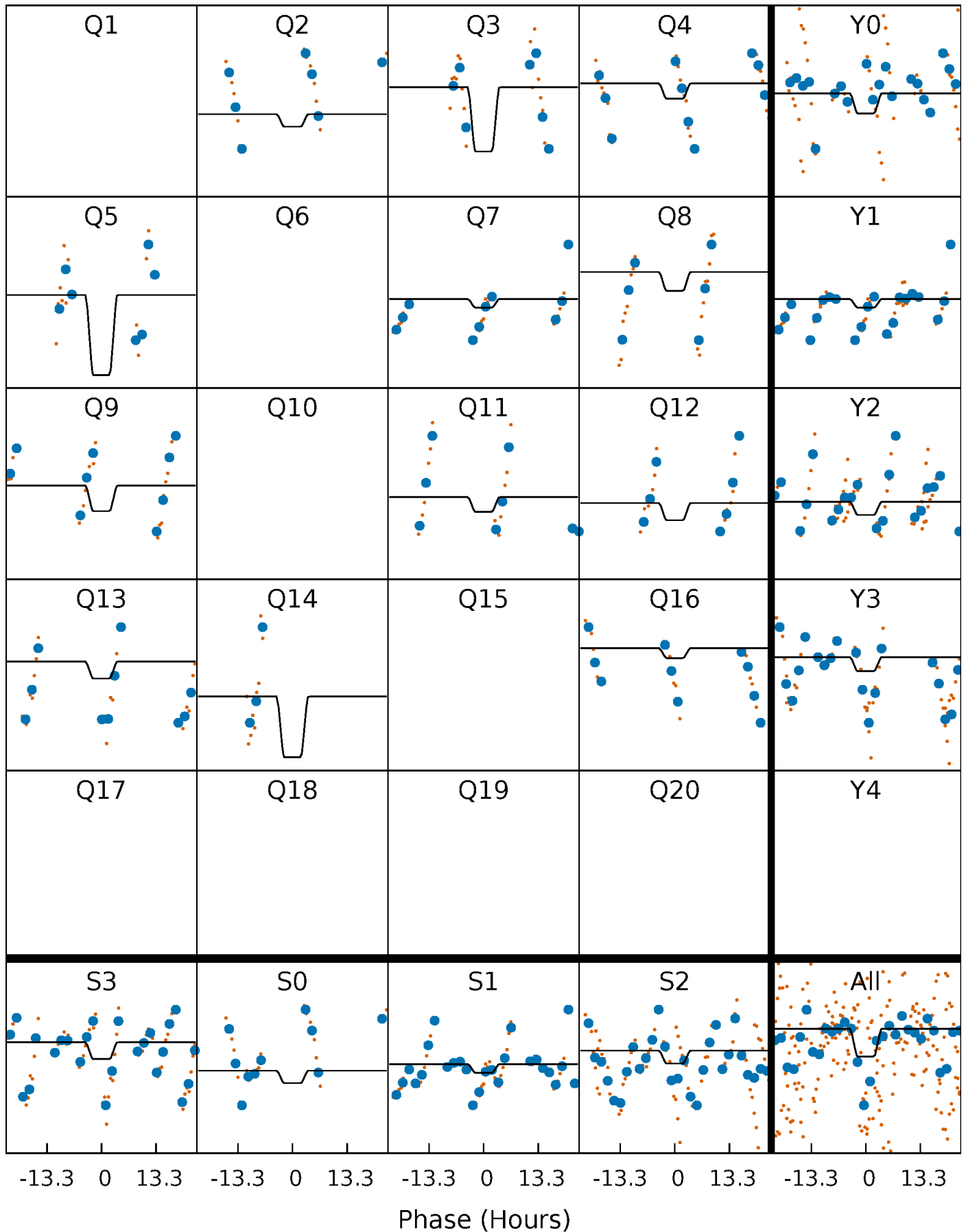
DV Quarter-Phased Transit Curves

TCE 008761064-02 $P=119.791303$ Days $T_0=172.609694$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

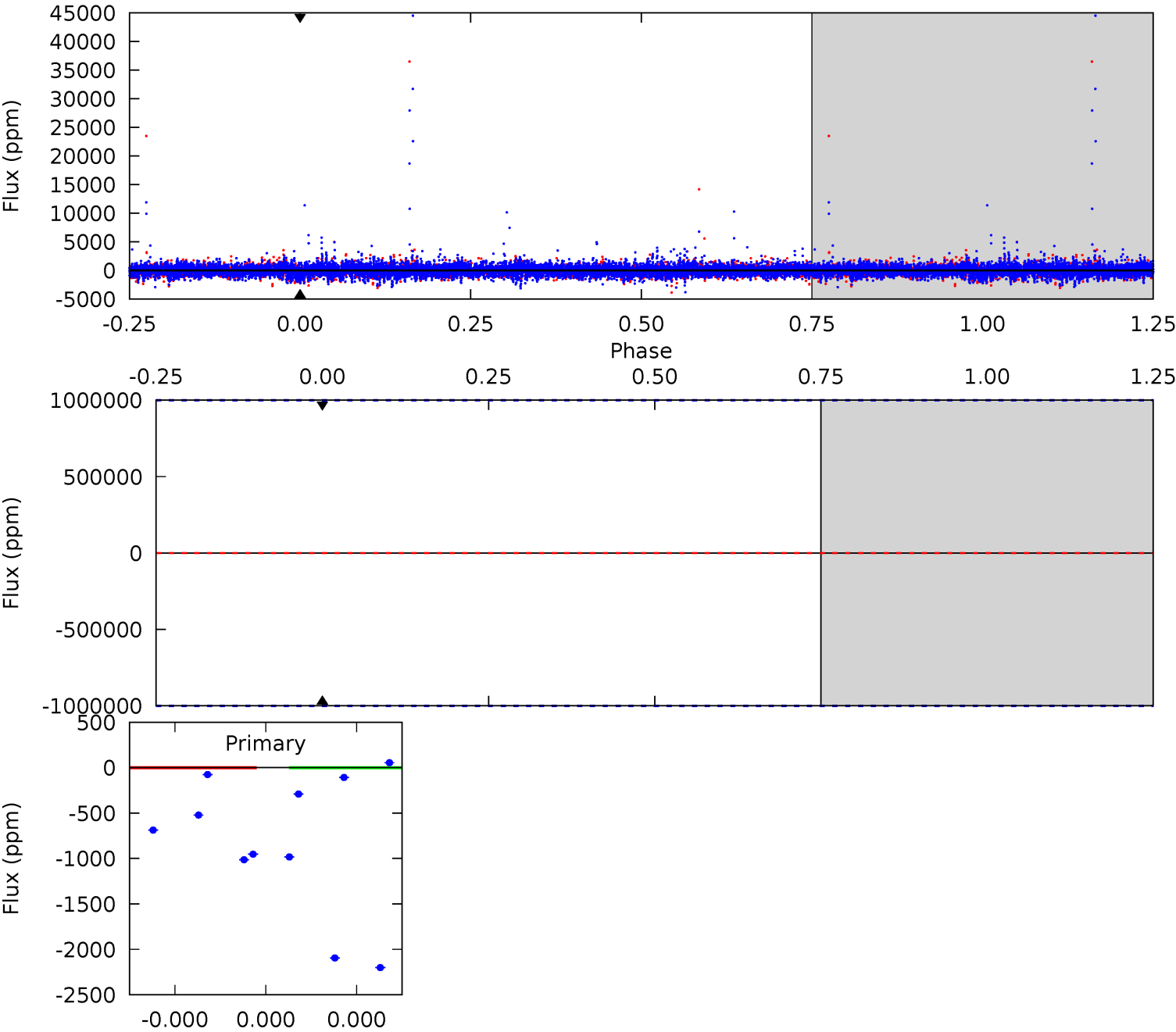
TCE 008761064-02 P=119.791303 Days $T_0=173.261723$ (BKJD)



DV Model-Shift Uniqueness Test

008761064-02, P = 119.791303 Days, E = 52.818391 Days

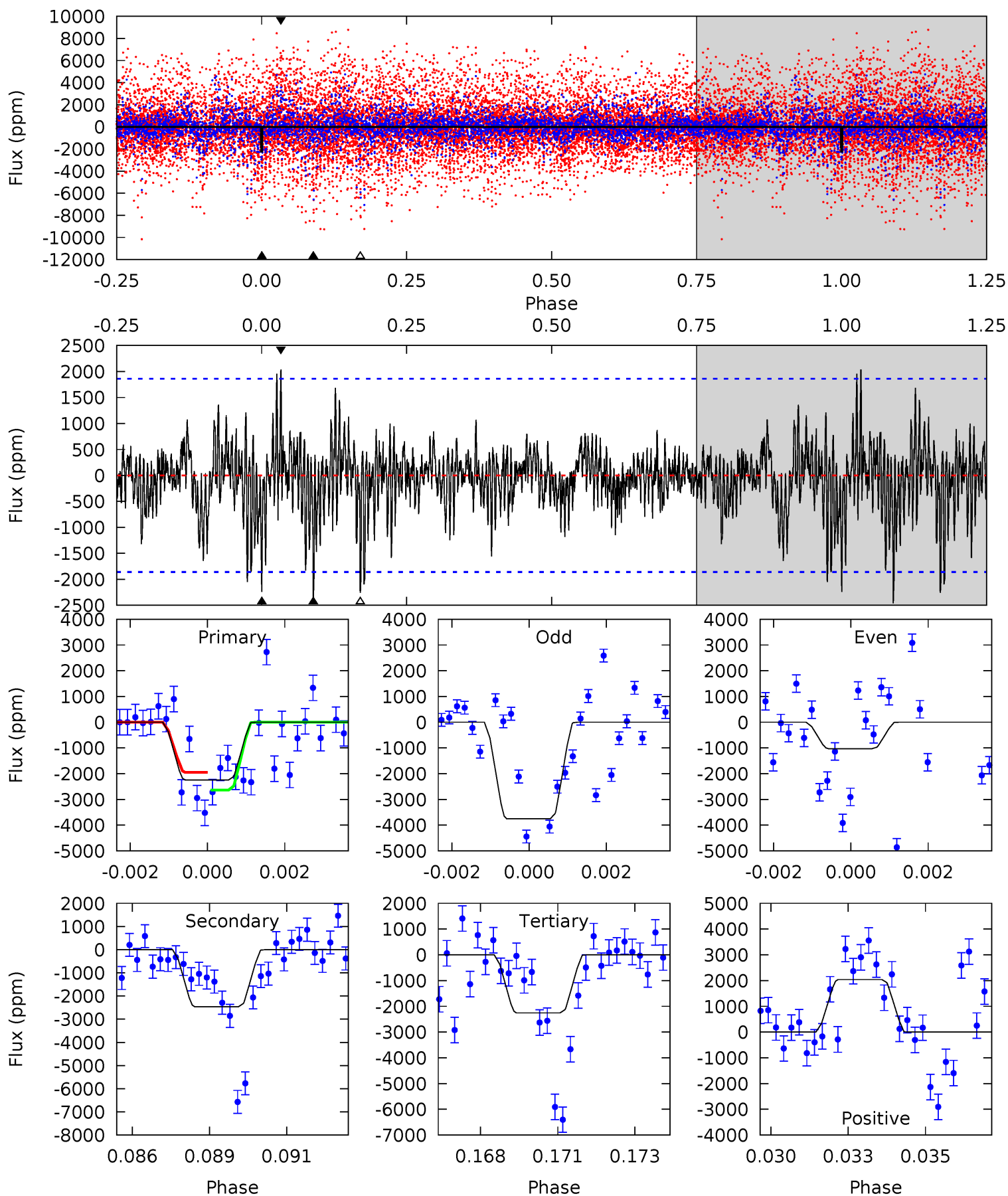
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008761064-02, P = 119.791303 Days, E = 53.470420 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.39	7.02	6.43	5.81	5.30	3.04	1.40	-0.04	0.58	0.59	1.21	3.77	-0.03	0.45	0.98



Stellar Parameters For KIC 008761064

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5706^{+172}_{-172}	$4.428^{+0.124}_{-0.186}$	$-0.320^{+0.300}_{-0.300}$	$0.923^{+0.248}_{-0.134}$	$0.833^{+0.120}_{-0.070}$	$1.490^{+0.820}_{-0.723}$
	+3%/-3%	+3%/-4%	+94%/-94%	+27%/-15%	+14%/-8%	+55%/-48%
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 008761064-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$8.93^{+8.60}_{-5.79}$	507^{+39}_{-29}	3555^{+13041}_{-18535}	$731^{+238829}_{-188637}$
Alt.	-2464 ± 351	$8.77^{+8.63}_{-5.82}$	509^{+35}_{-30}	4546^{+3085}_{-973}	3451^{+28291}_{-2548}

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 $A_{obs} \gg 1.0$

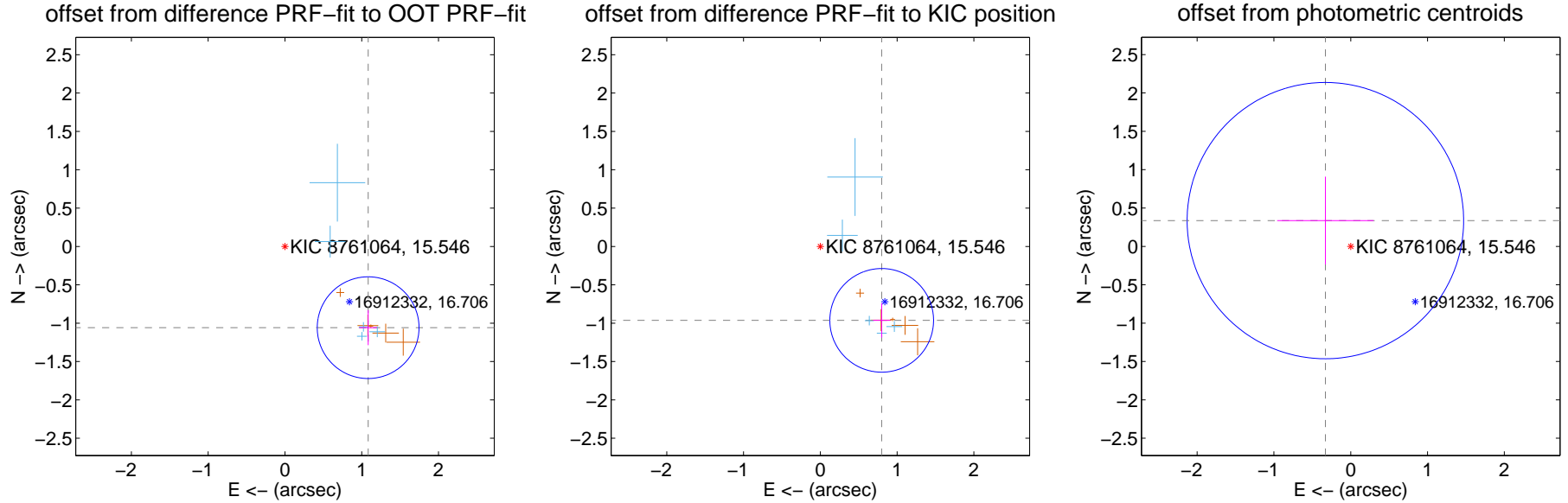
DV Centroid Data

Supplemental centroid analysis for 008761064-02. Kepler magnitude: 15.55. Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

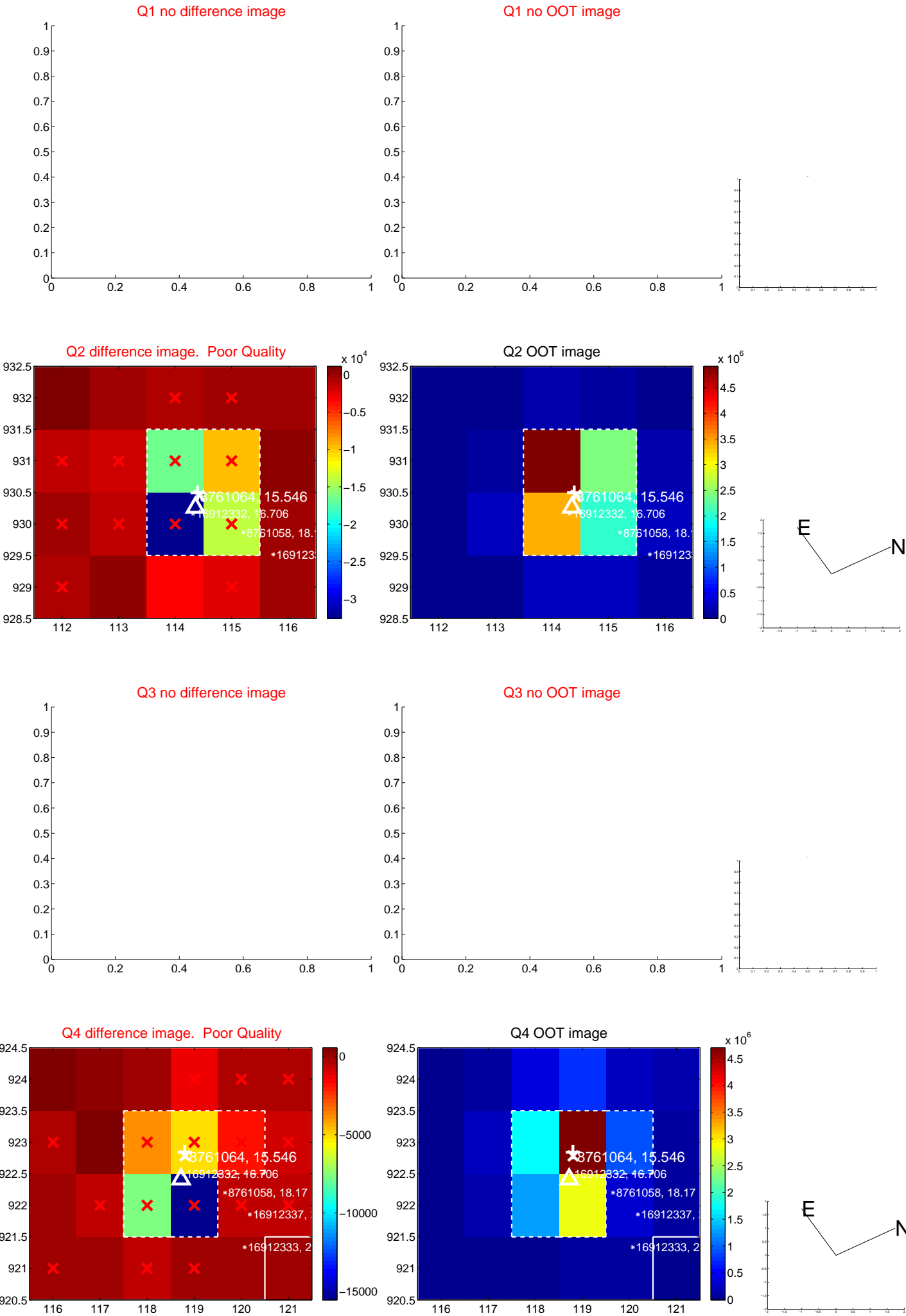
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.515 ± 0.221	6.85	-1.084 ± 0.115	-1.059 ± 0.228
PRF-fit source offset from KIC position	1.252 ± 0.225	5.56	-0.799 ± 0.113	-0.963 ± 0.225
photometric centroid source offset	0.47 ± 0.60	0.79	0.33 ± 0.63	0.34 ± 0.57

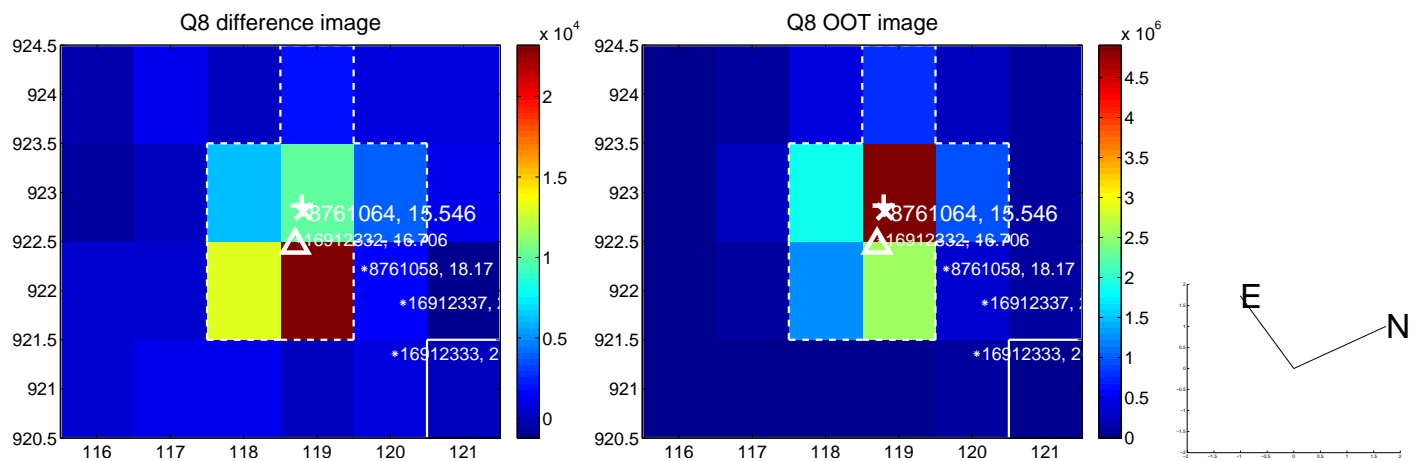
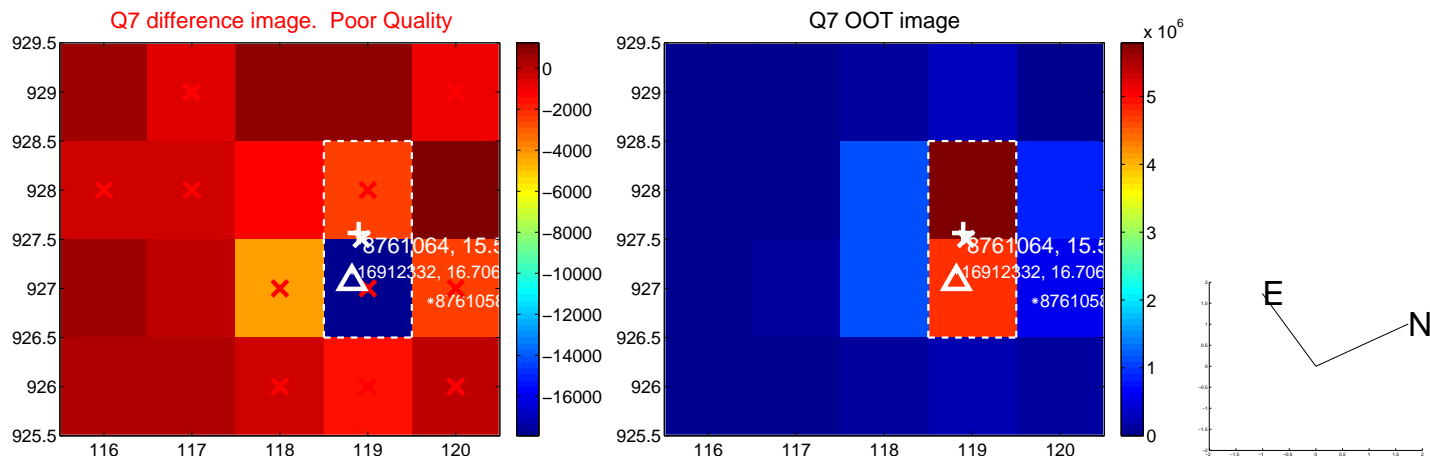
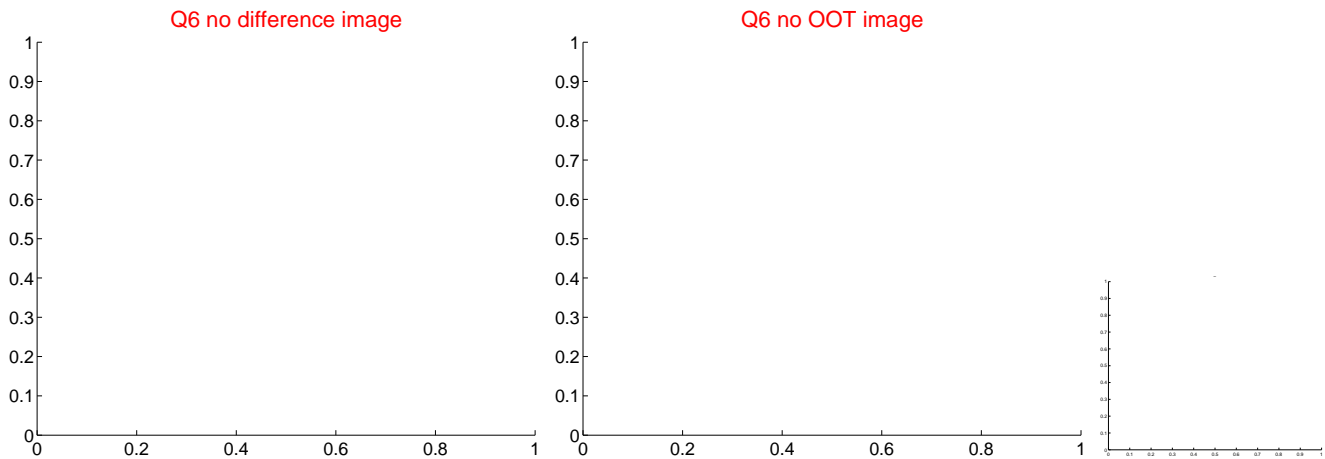
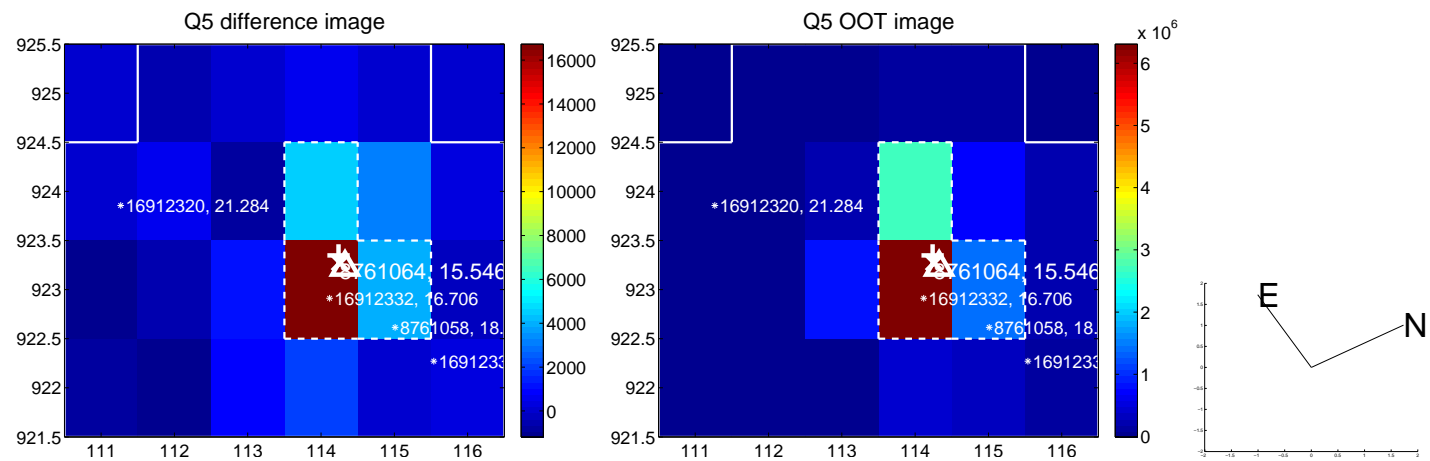


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

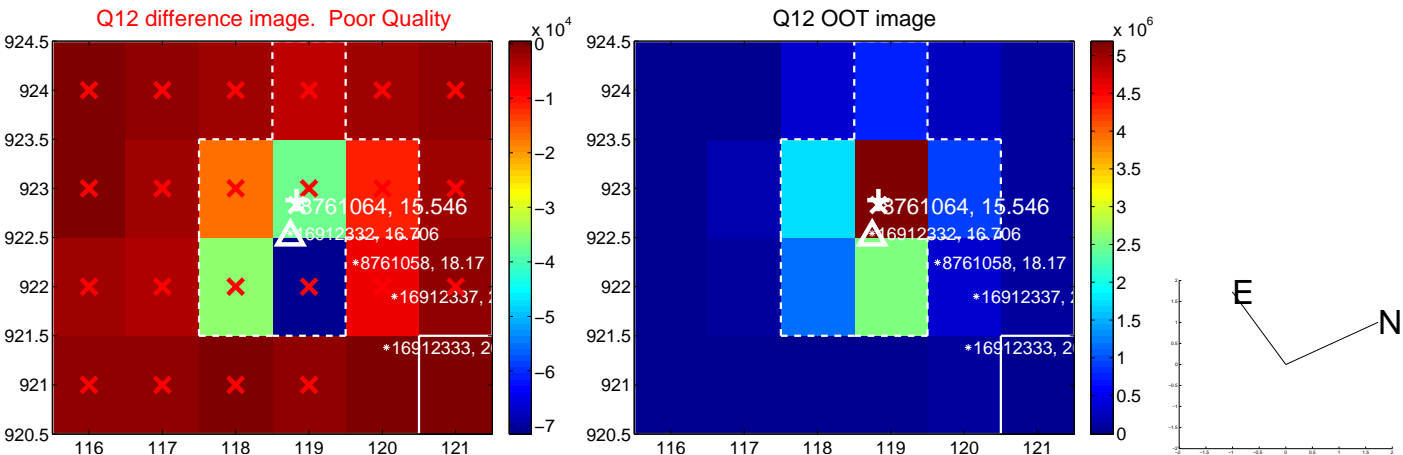
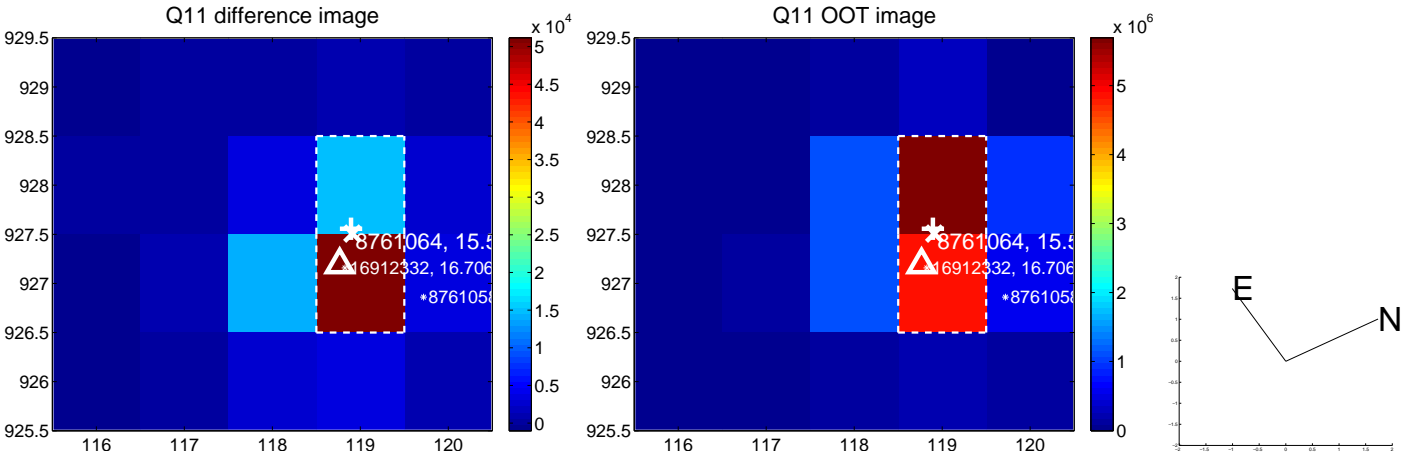
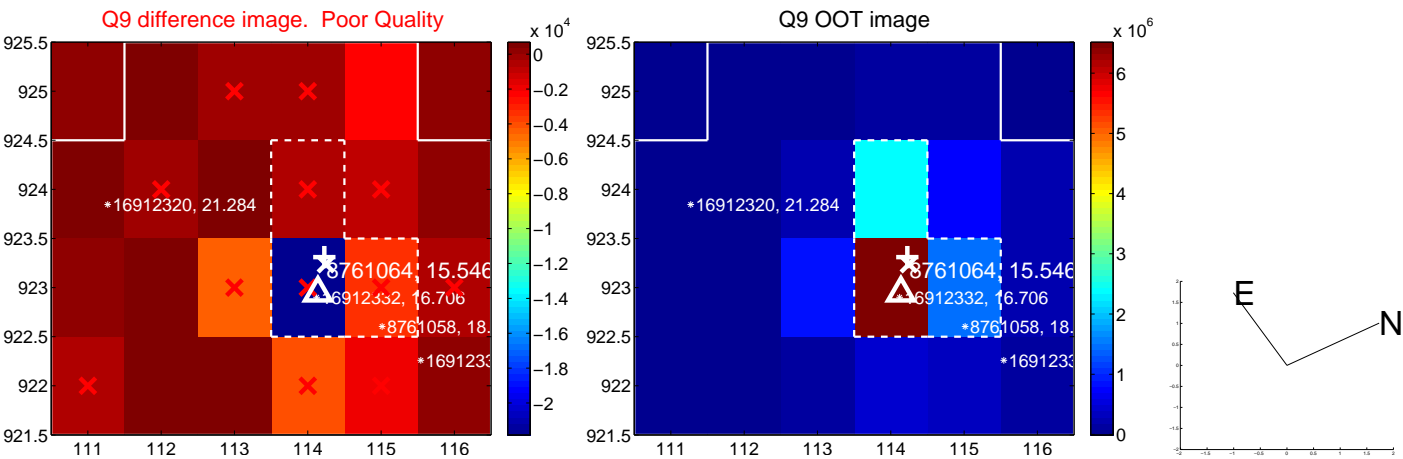
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



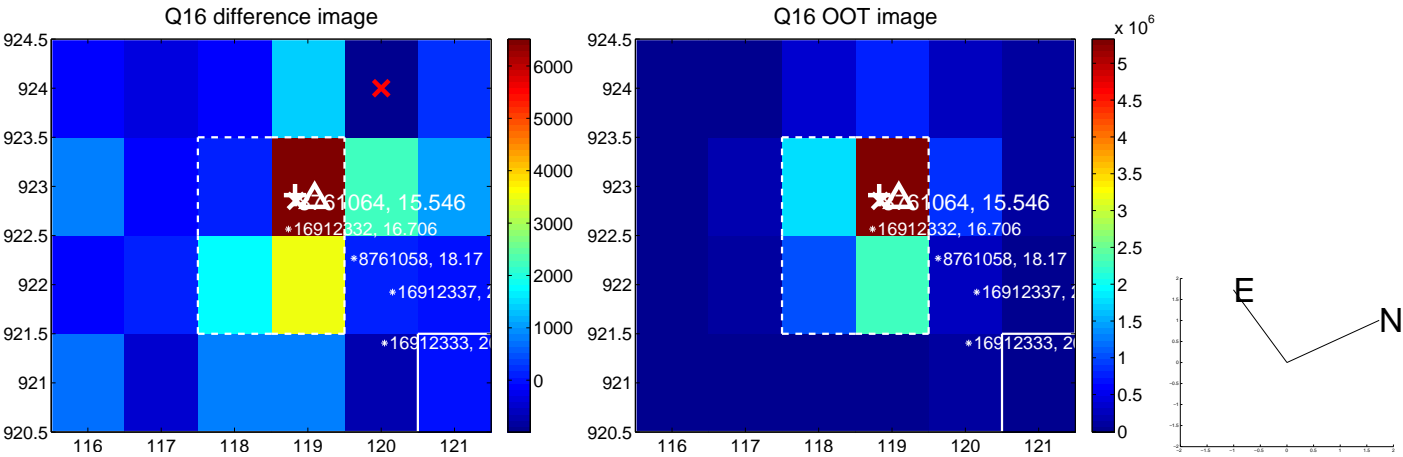
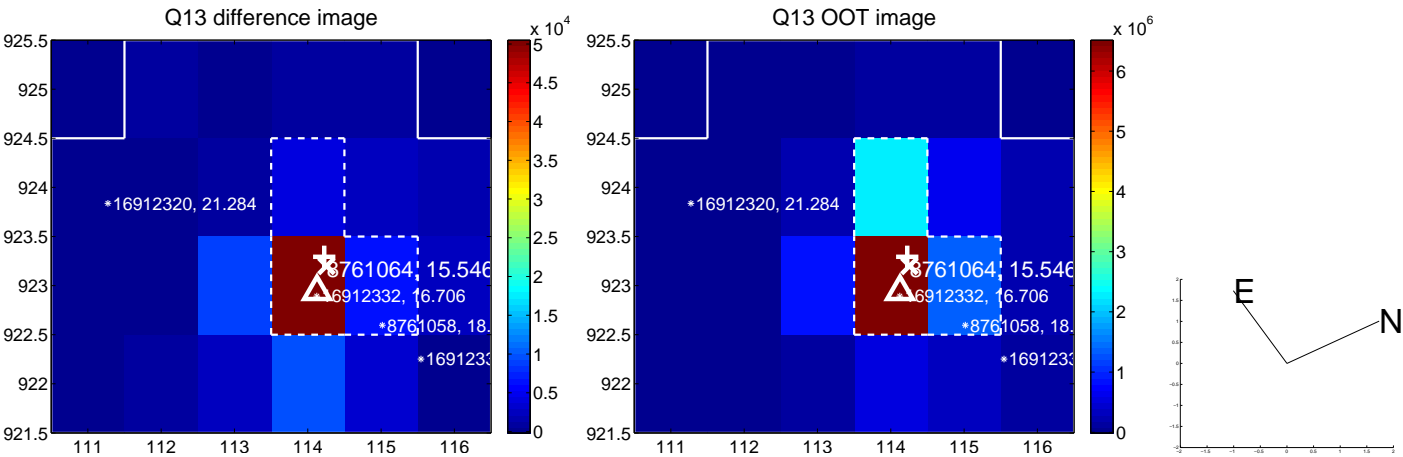
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



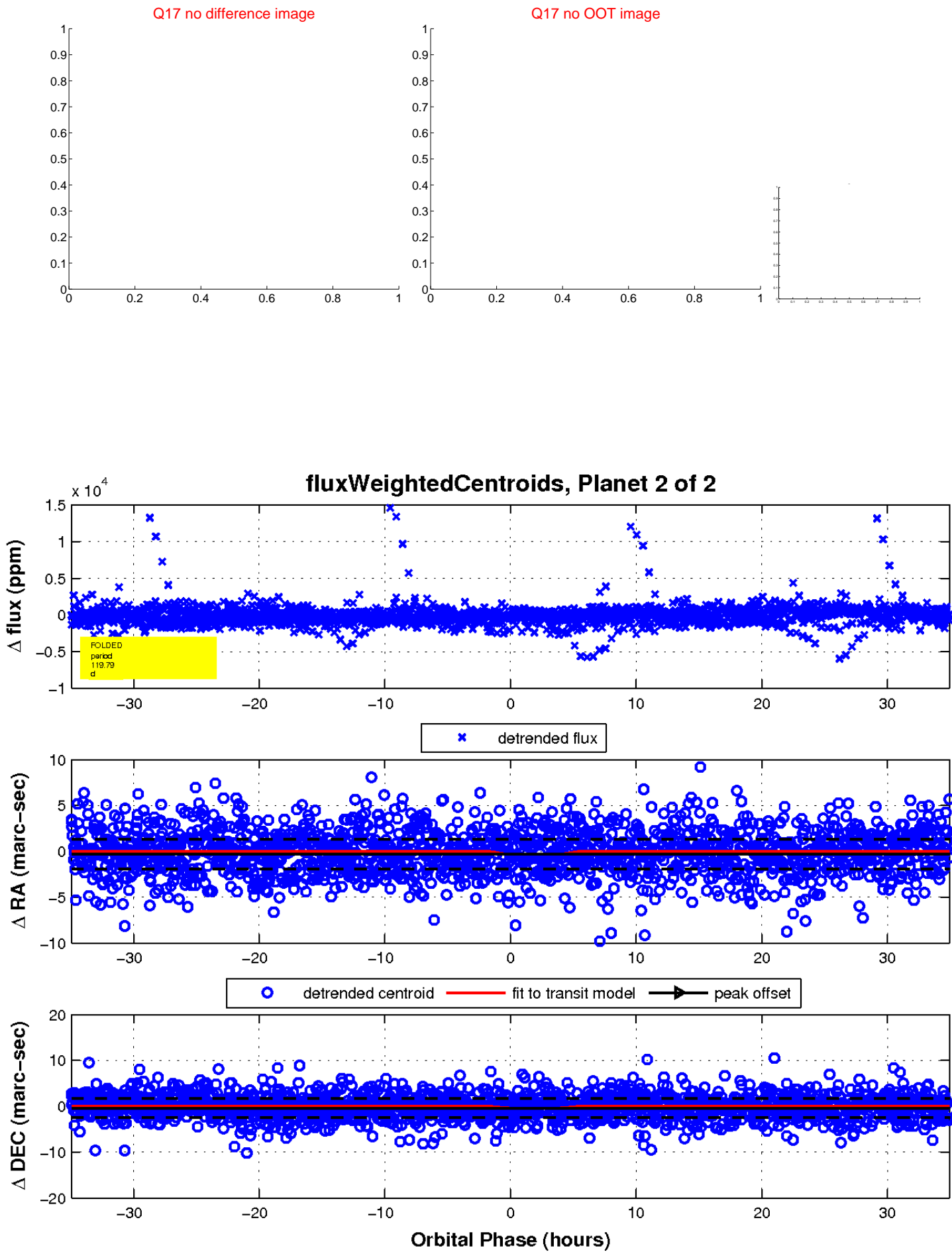
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

