

KIC 008605074

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})
008605074-01	OBS	0915.01	37.601657	157.111842	59180.5	8.307	1668.2	1536.7	1.10	6140	27.28	31.90
008605074-02	OBS	No	37.601725	135.123980	2710.9	9.716	78.4	82.8	1.10	6140	6.57	31.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008605074-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
008605074-02	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.

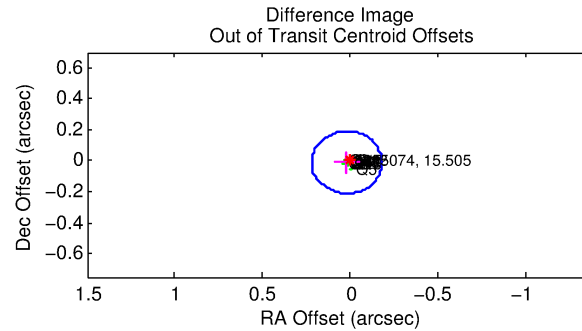
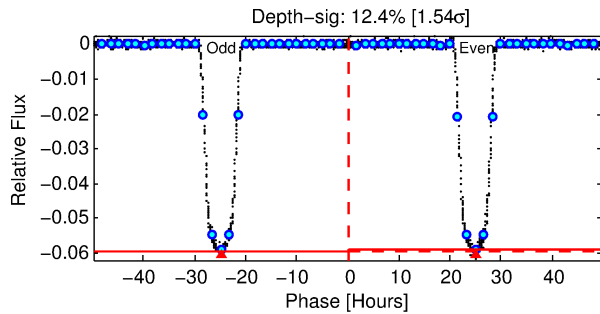
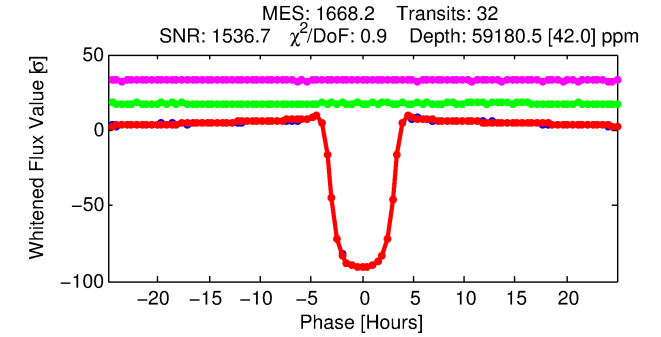
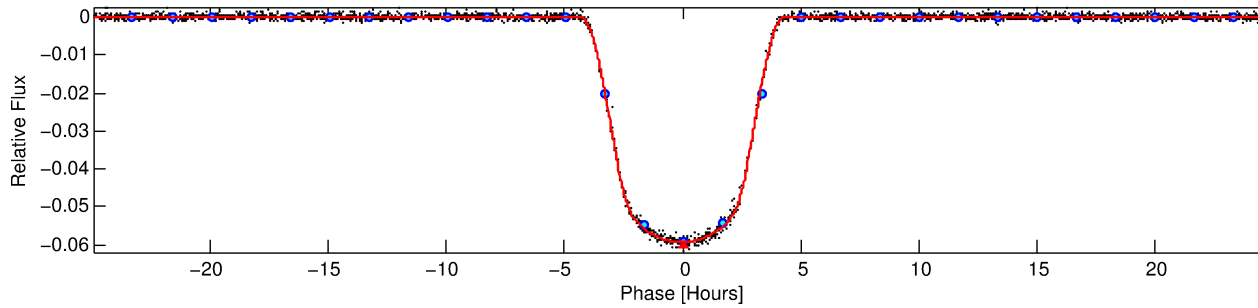
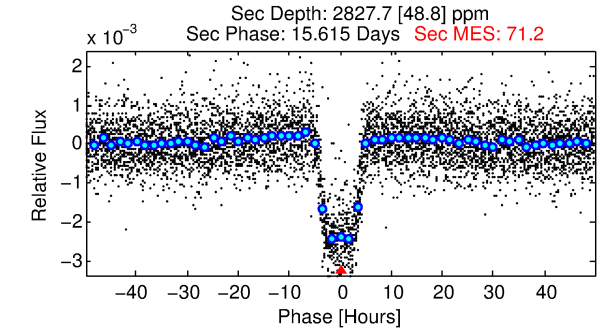
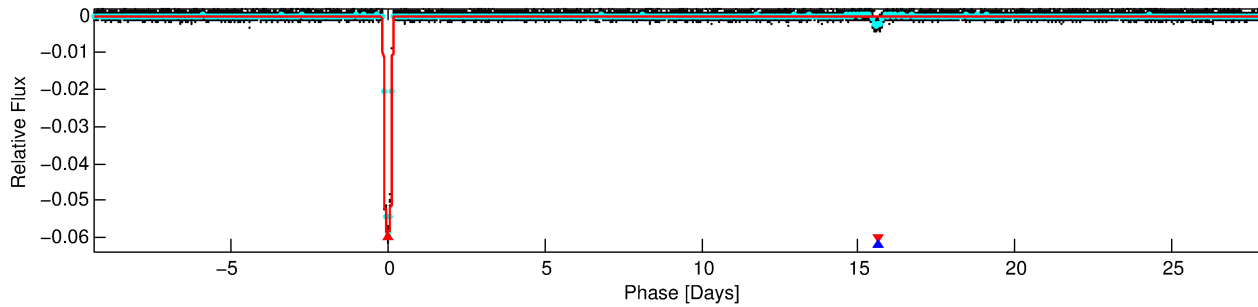
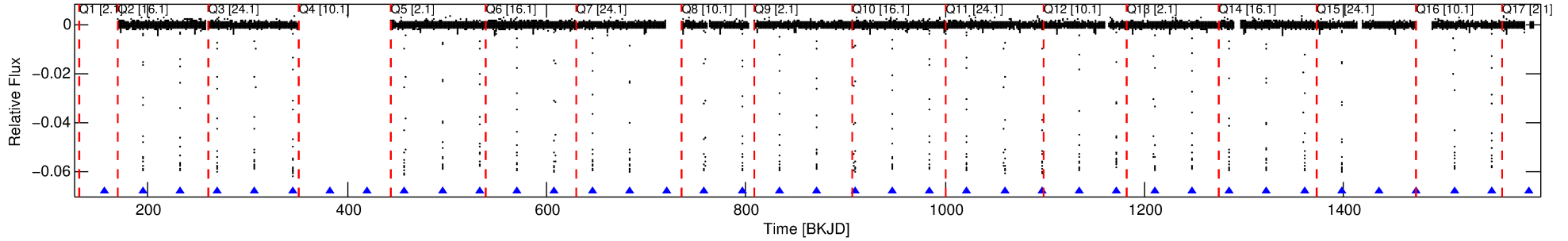
Ephemeris Match Information For 008605074-01

No Significant Match Found

DV One-Page Summary

KIC: 8605074 Candidate: 1 of 2 Period: 37.602 d
KOI: K00915.01 Corr: 0.937

Kp: 15.51 R*: 1.10 Rs Teff: 6140.0 K Logg: 4.35 Fe/H: -0.240



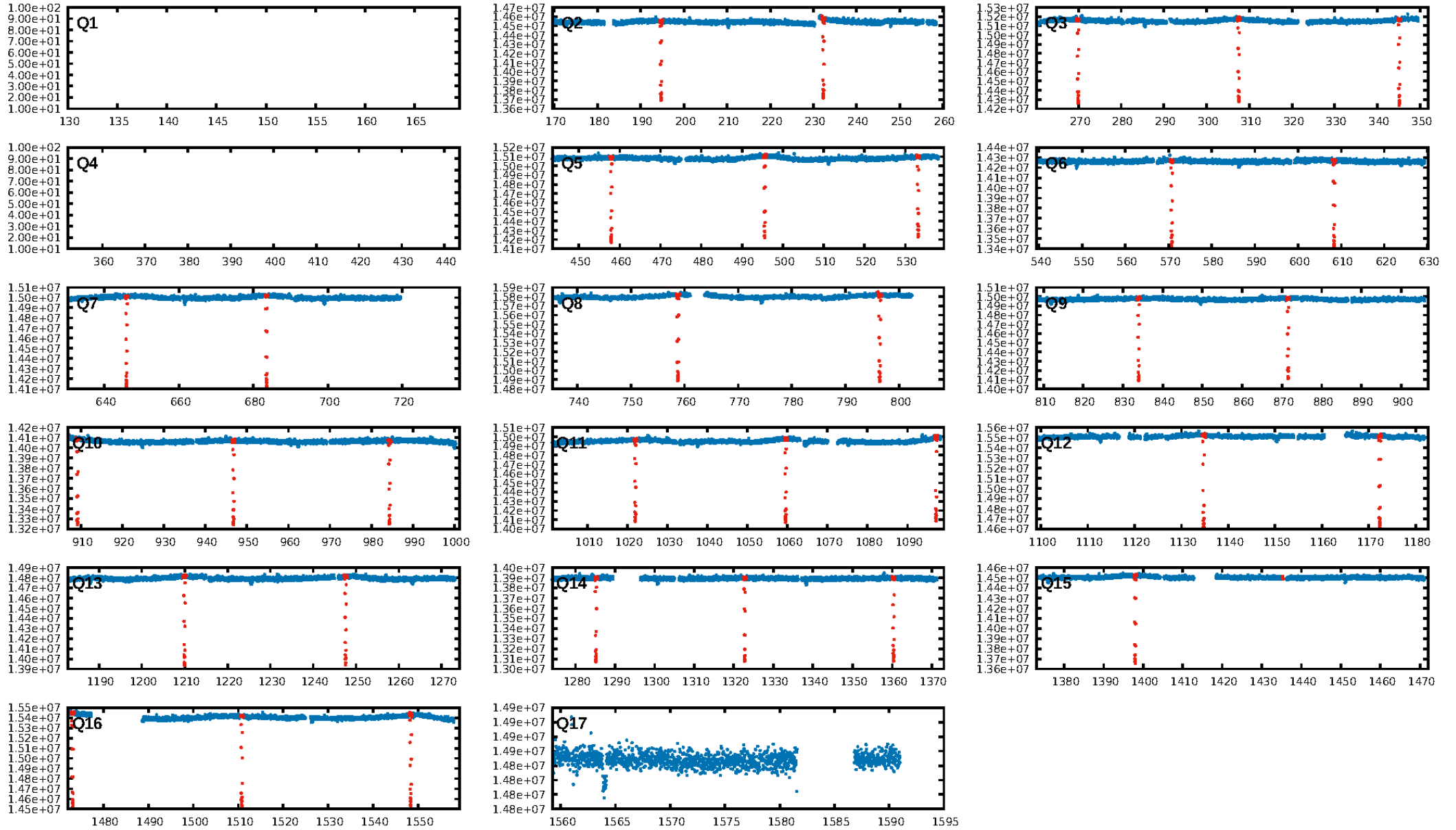
DV Fit Results:

Period = 37.60166 [0.00001] d
Epoch = 157.1118 [0.0001] BKJD
Rp/R* = 0.2281 [0.0001]
a/R* = 39.94 [0.08]
b = 0.42 [0.00]
Seff = 31.90 [12.47]
Teq = 606 [59] K
Rp = 27.28 [8.24] Re
a = 0.2190 [0.0555] AU
Ag = 100.24 [36.97] [2.68σ]
Teffp = 2965 [98] K [20.61σ]

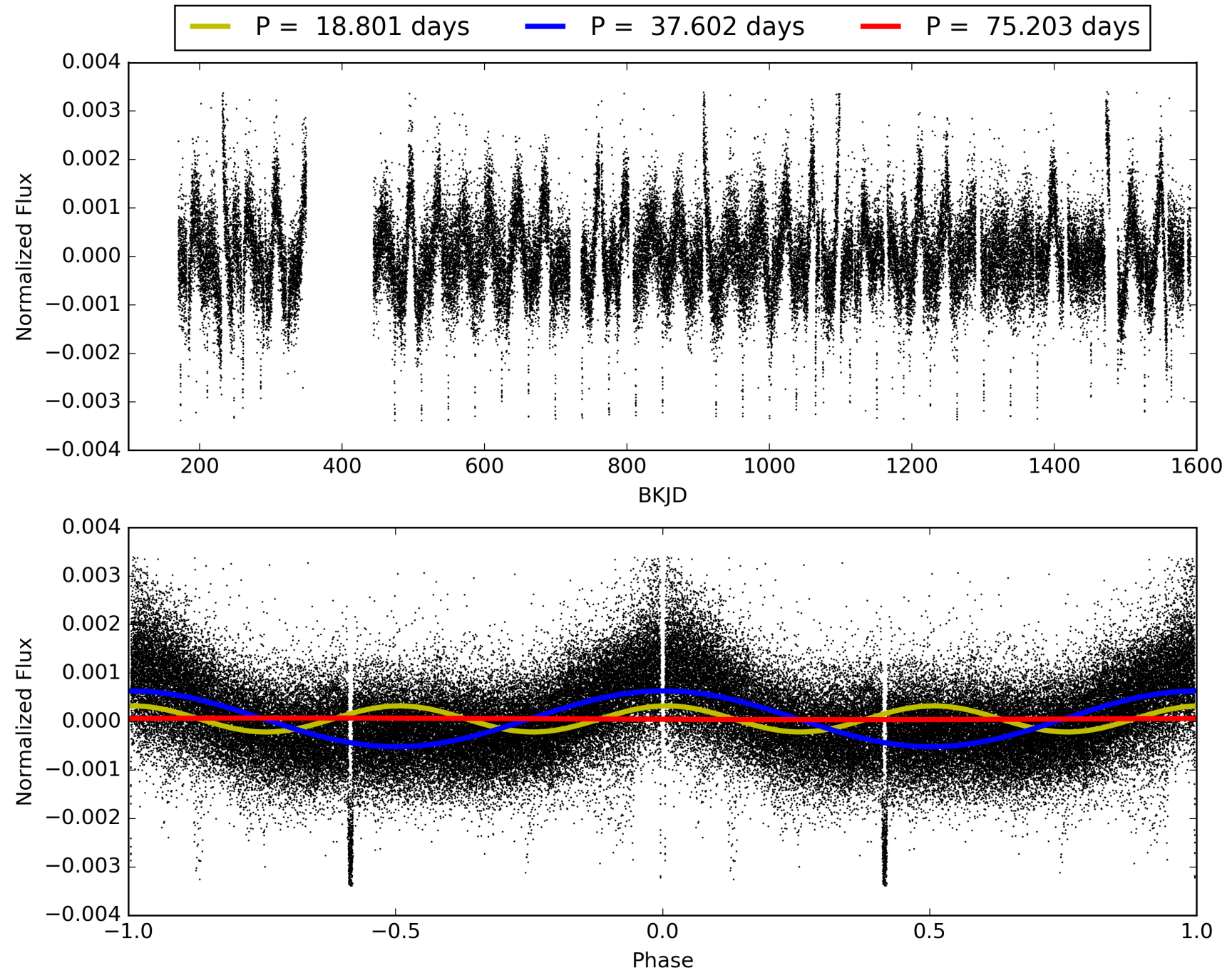
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 3.761
Centroid-sig: 0.0%
Centroid-so: 0.184 arcsec [21.48σ]
OotOffset-rm: 0.022 arcsec [0.34σ]
KicOffset-rm: 0.084 arcsec [1.22σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 008605074-01, PDC Light Curves

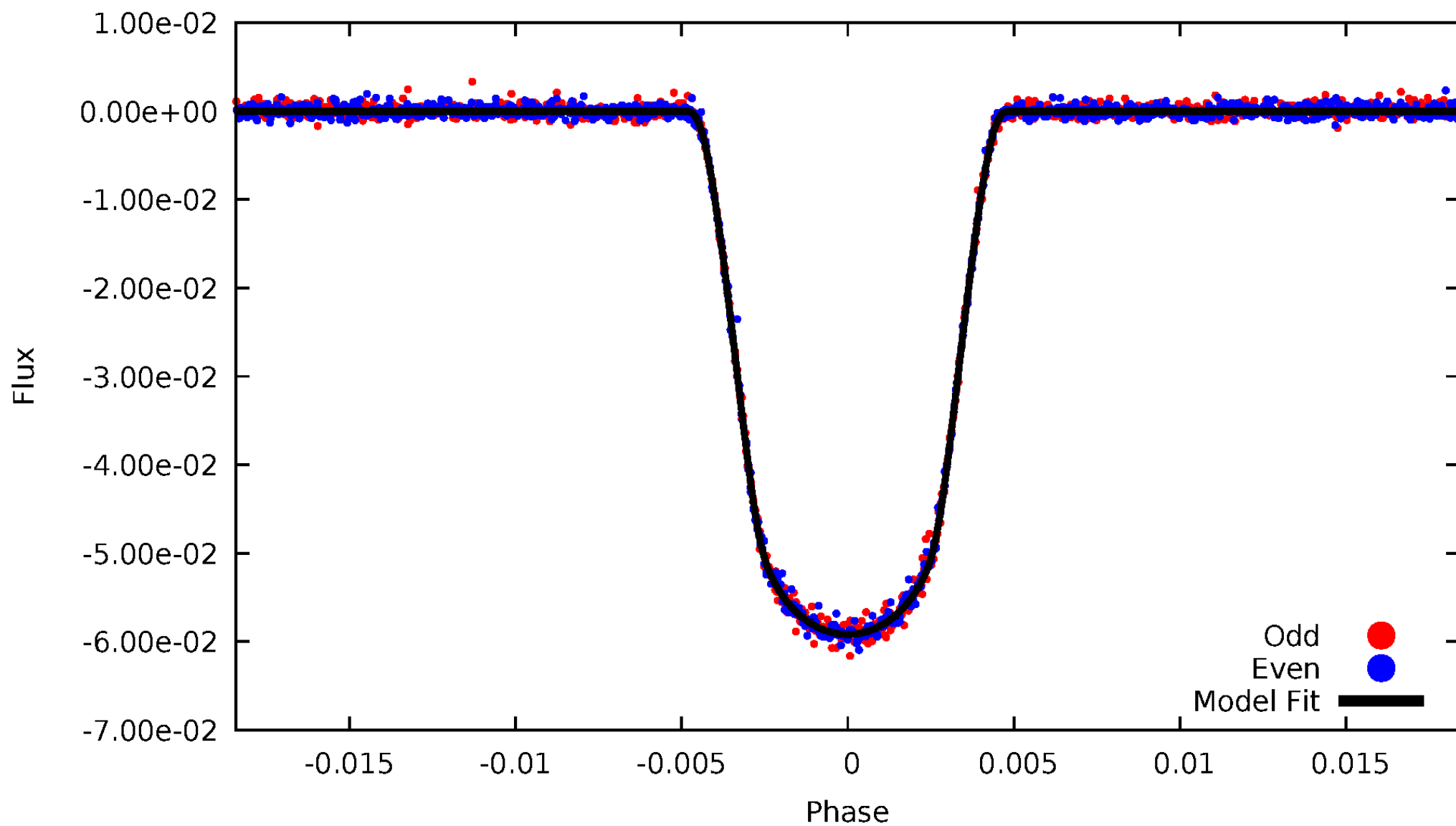


TCE 008605074-01



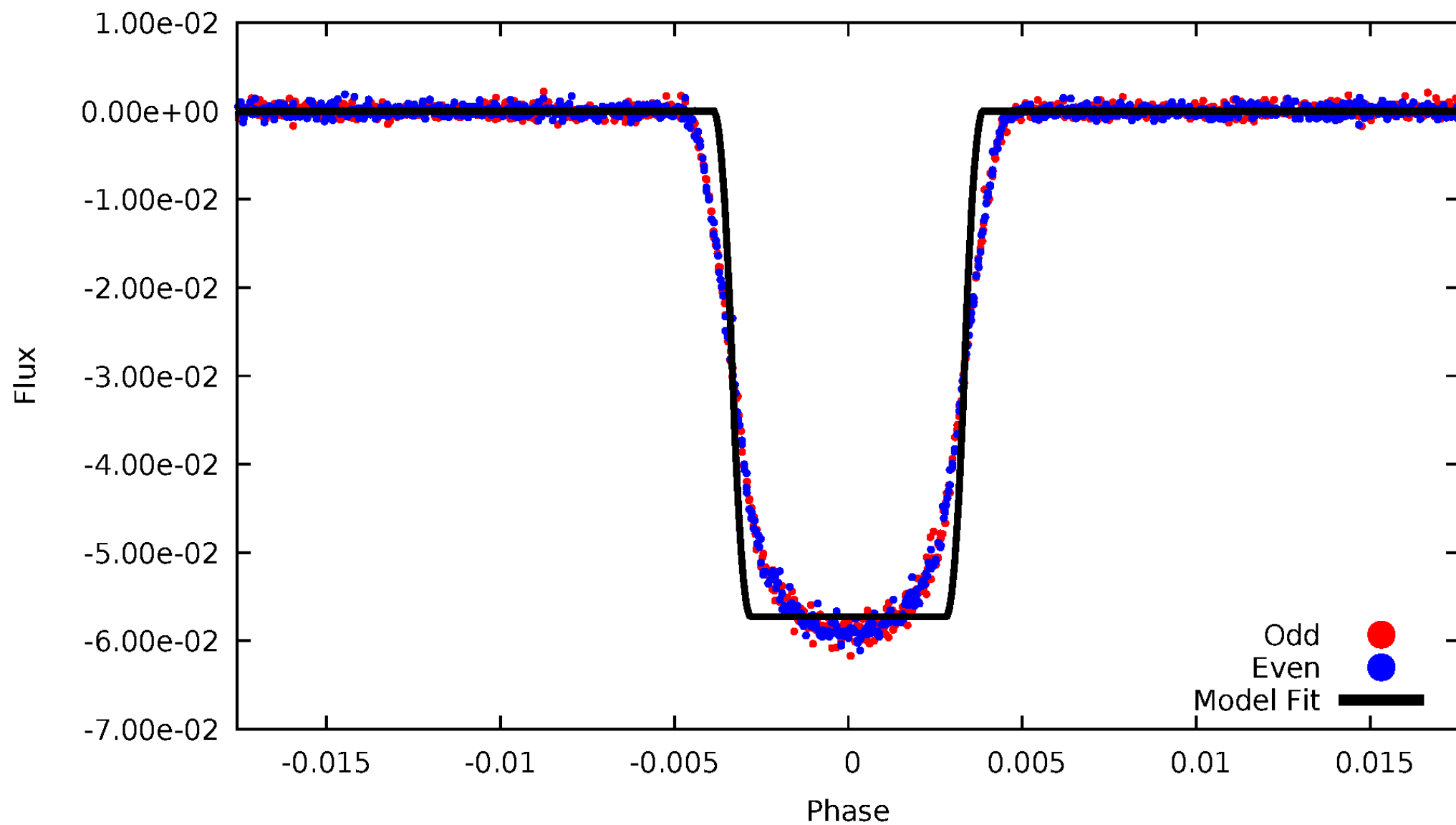
DV Odd/Even

TCE 008605074-01



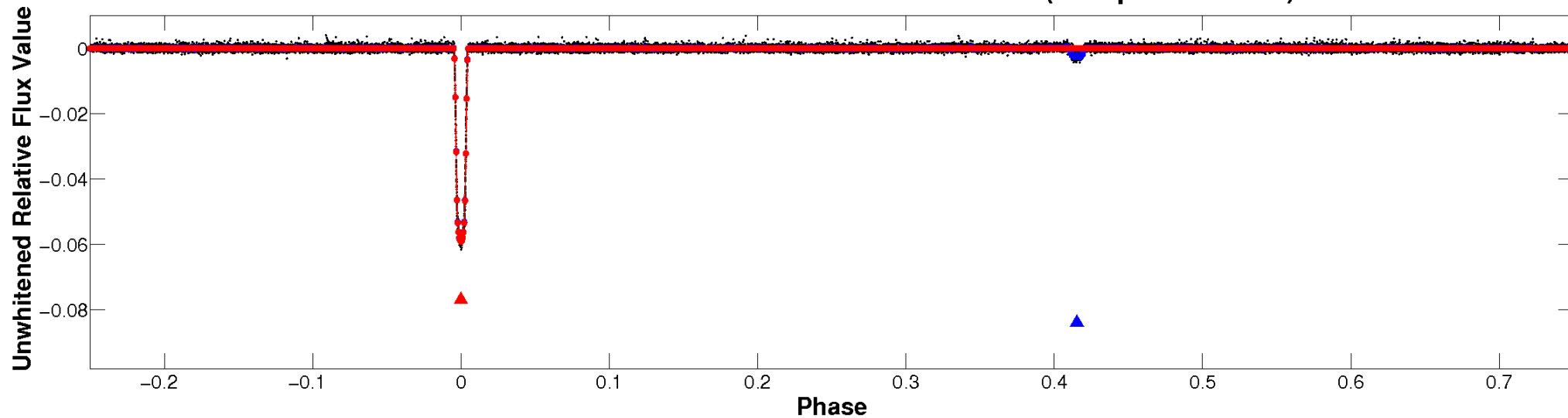
ALT Odd/Even

TCE 008605074-01

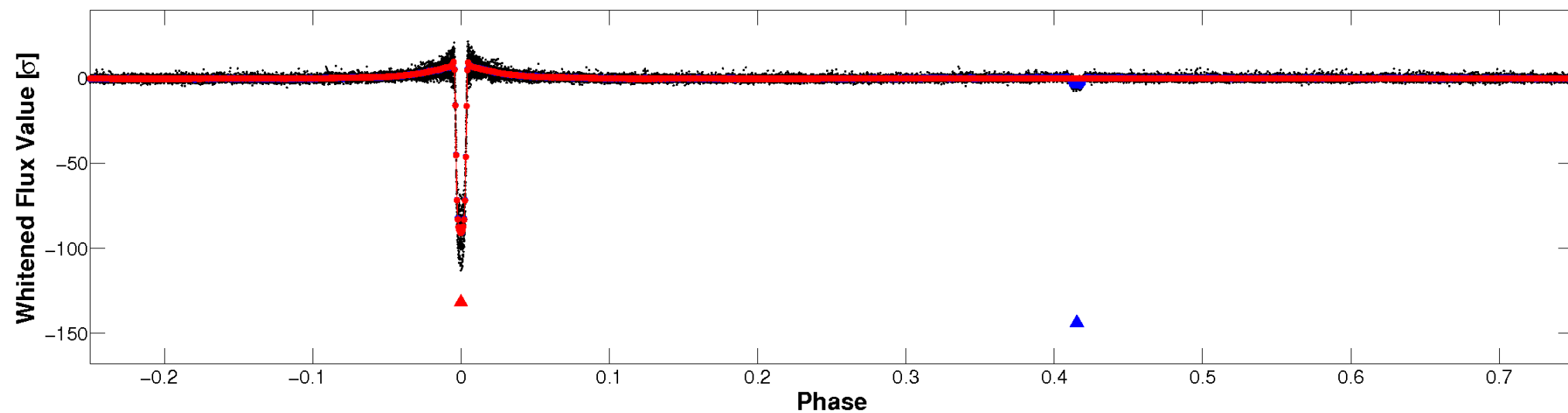


Non-Whitened Vs. Whitened Light Curve

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

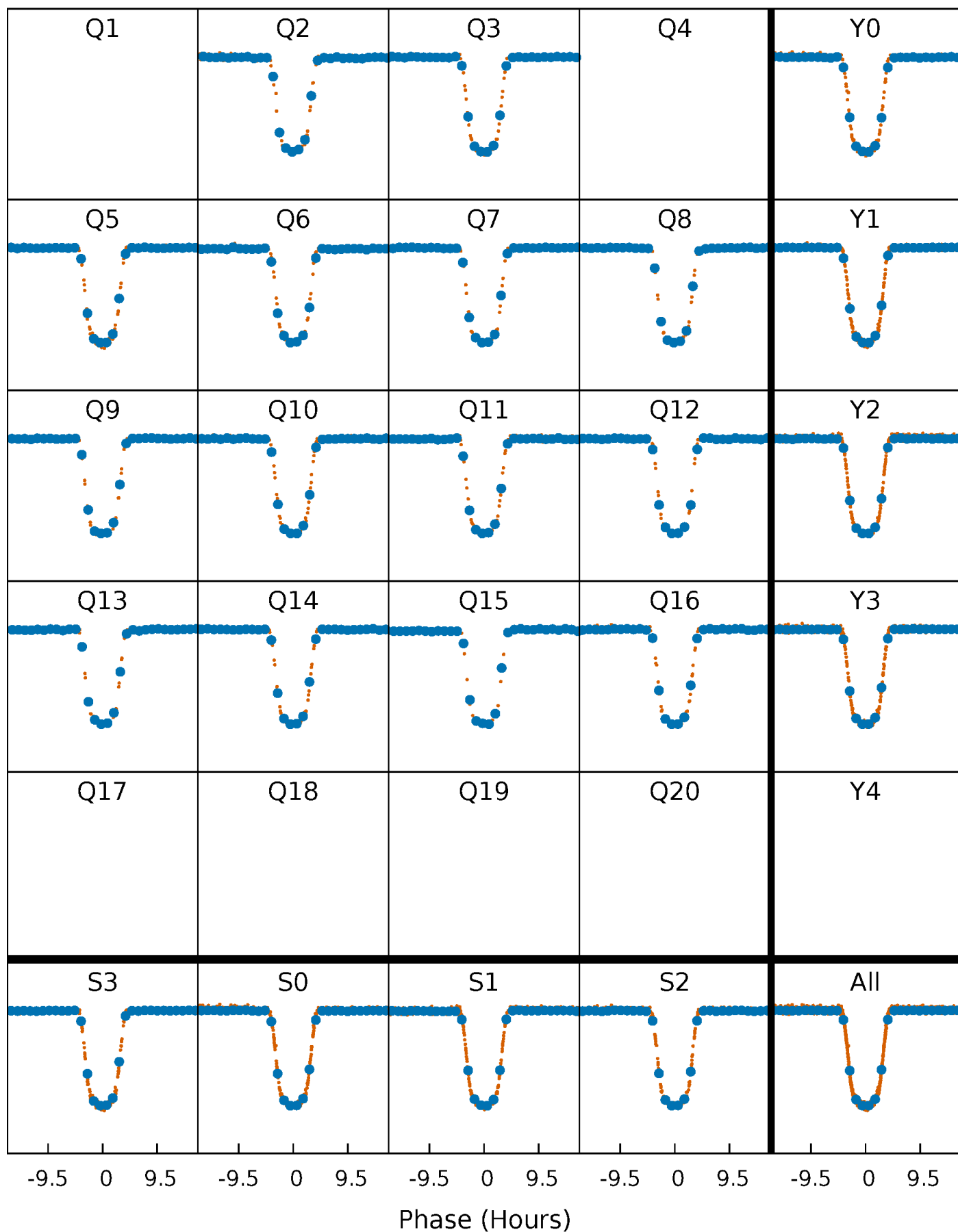


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



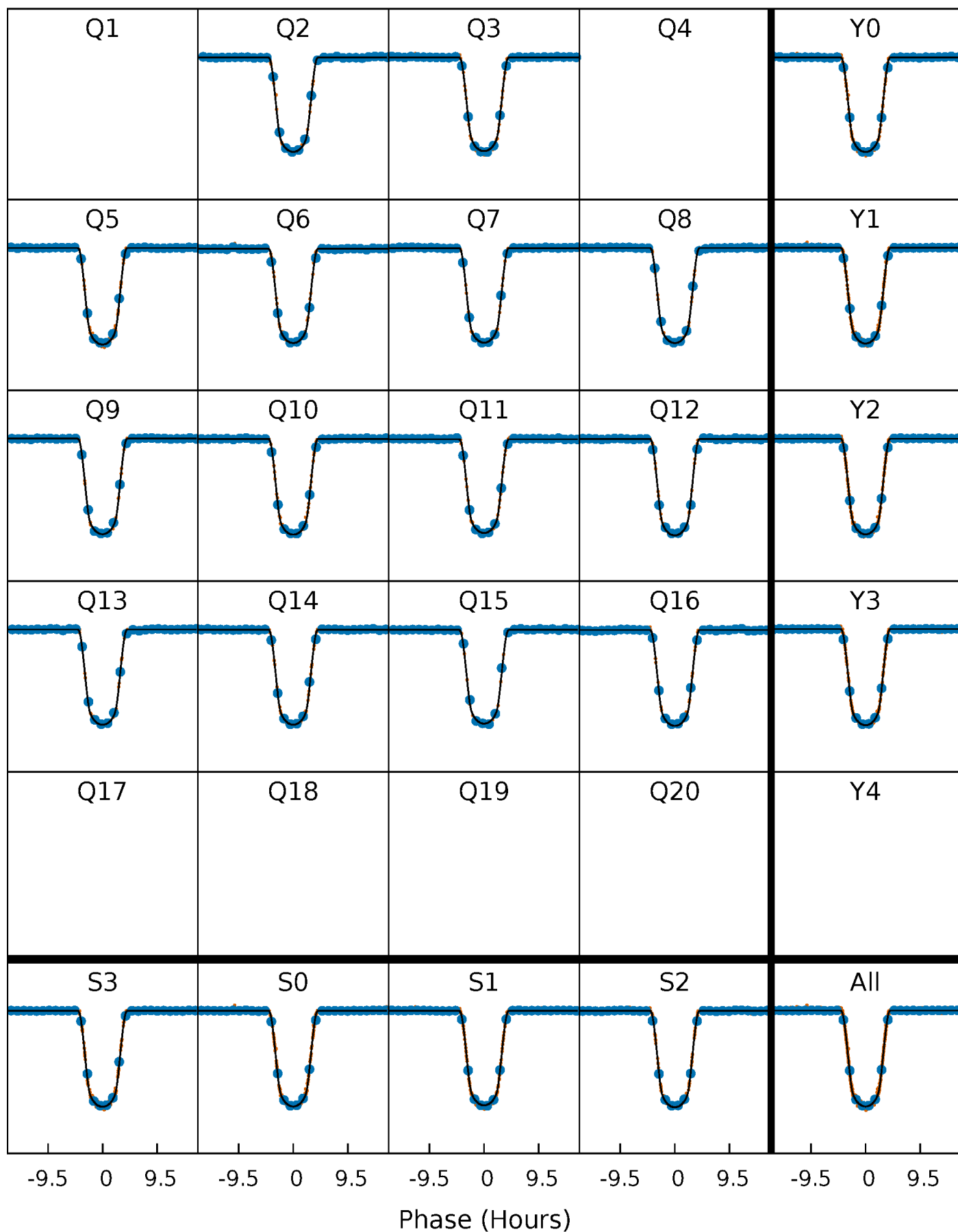
PDC Quarter-Phased Transit Curves

TCE 008605074-01 P= 37.601657 Days $T_0=157.111842$ (BKJD)



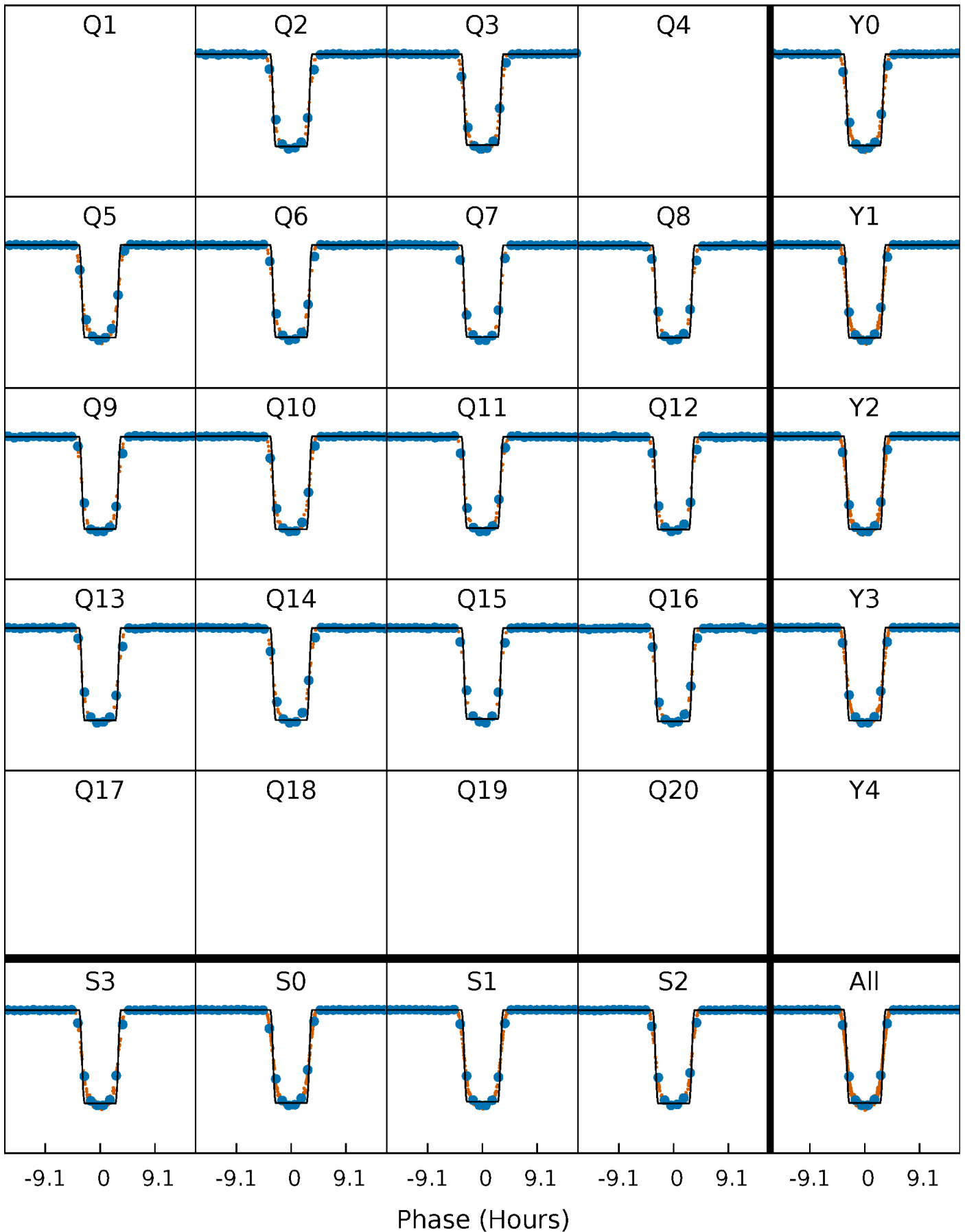
DV Quarter-Phased Transit Curves

TCE 008605074-01 P= 37.601657 Days $T_0=157.111842$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

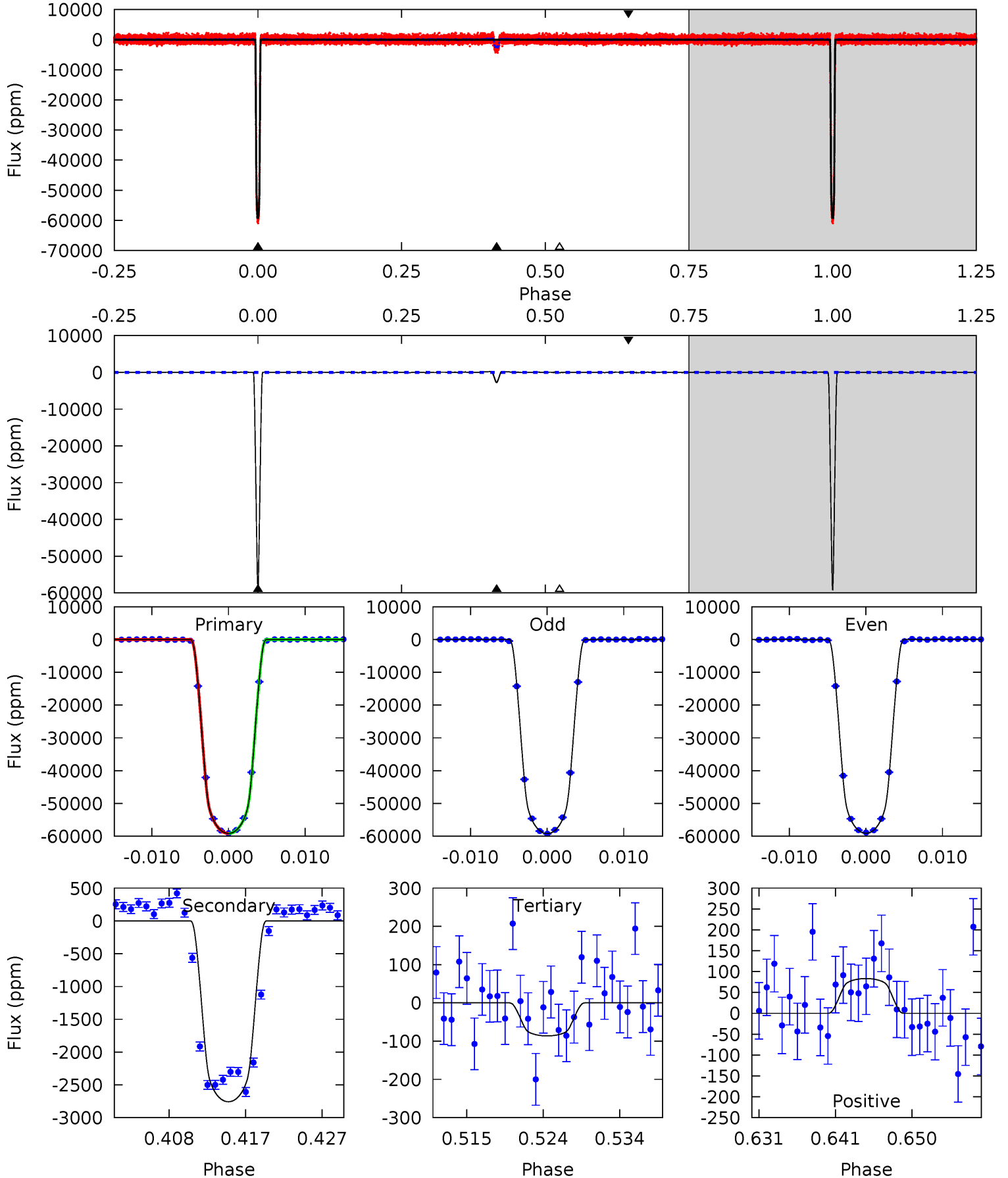
TCE 008605074-01 P= 37.601652 Days $T_0=157.111914$ (BKJD)



DV Model-Shift Uniqueness Test

008605074-01, P = 37.601657 Days, E = 157.111842 Days

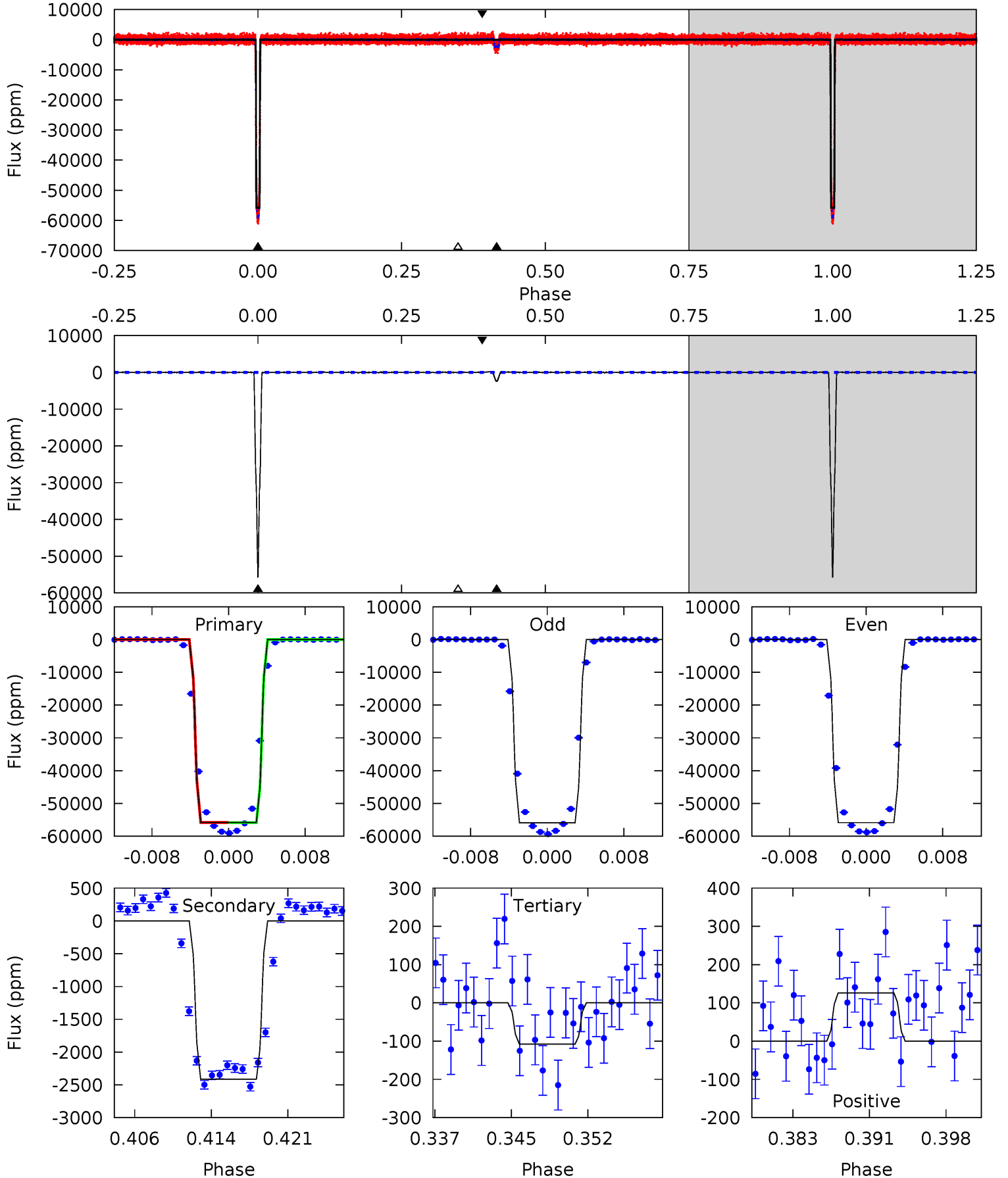
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2528	117.8	3.69	3.56	5.03	2.59	1.83	2524	2524	114.1	114.3	2.44	1.00	0.00	0.43



Alt Model-Shift Uniqueness Test

008605074-01, P = 37.601652 Days, E = 157.111914 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1934	83.7	3.73	4.37	5.08	2.67	1.34	1930	1930	80.0	79.3	0.14	1.00	0.00	1.11



Stellar Parameters For KIC 008605074

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6140^{+164}_{-201}	$4.354^{+0.124}_{-0.201}$	$-0.240^{+0.250}_{-0.300}$	$1.096^{+0.331}_{-0.178}$	$0.989^{+0.152}_{-0.110}$	$1.059^{+0.552}_{-0.550}$
	+3%/-3%	+3%/-5%	+104%/-125%	+30%/-16%	+15%/-11%	+52%/-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 008605074-01 / KOI 0915.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2758 ± 23	$27.36^{+4.53}_{-2.57}$	852^{+60}_{-50}	3449^{+56}_{-68}	97^{+21}_{-24}
Alt.	-2416 ± 29	$28.84^{+5.16}_{-2.70}$	855^{+63}_{-51}	3330^{+56}_{-68}	76^{+16}_{-19}

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

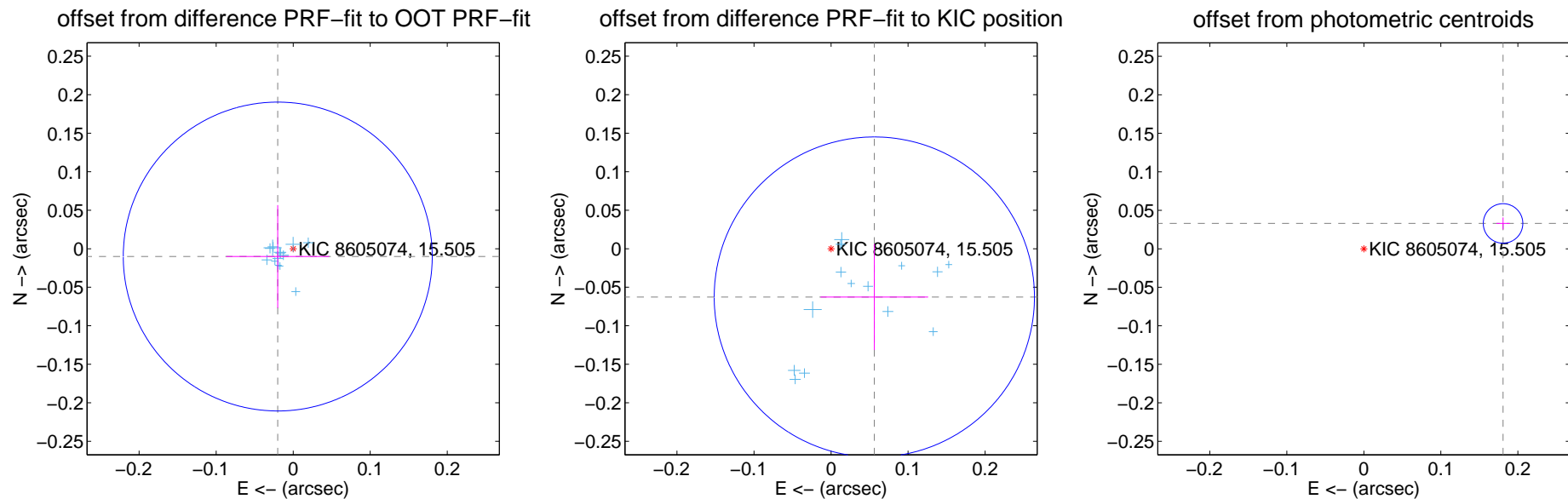
DV Centroid Data

Supplemental centroid analysis for 008605074-01. Kepler magnitude: 15.51. Transit SNR 1536.73

There are 14 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.067	0.34	0.020 ± 0.067	-0.010 ± 0.067
PRF-fit source offset from KIC position	0.084 ± 0.069	1.22	-0.056 ± 0.070	-0.063 ± 0.069
photometric centroid source offset	0.18 ± 0.01	21.48	-0.18 ± 0.01	0.03 ± 0.01



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.

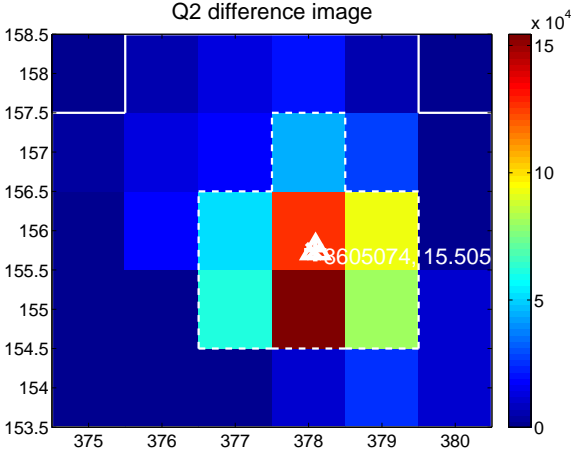
Q1 no difference image



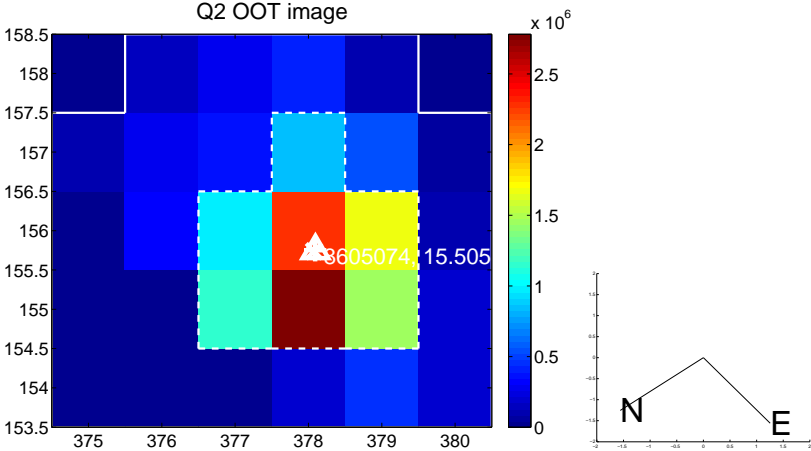
Q1 no OOT image



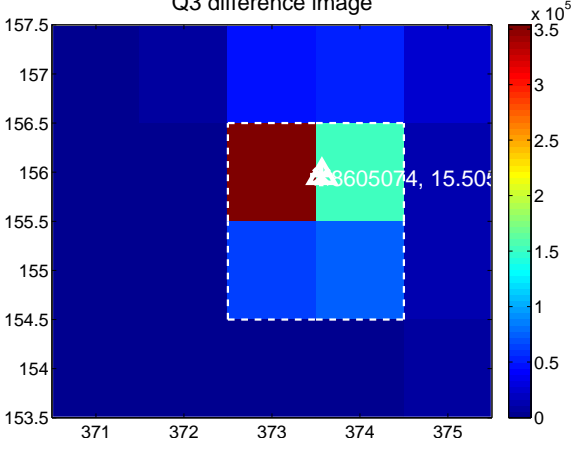
Q2 difference image



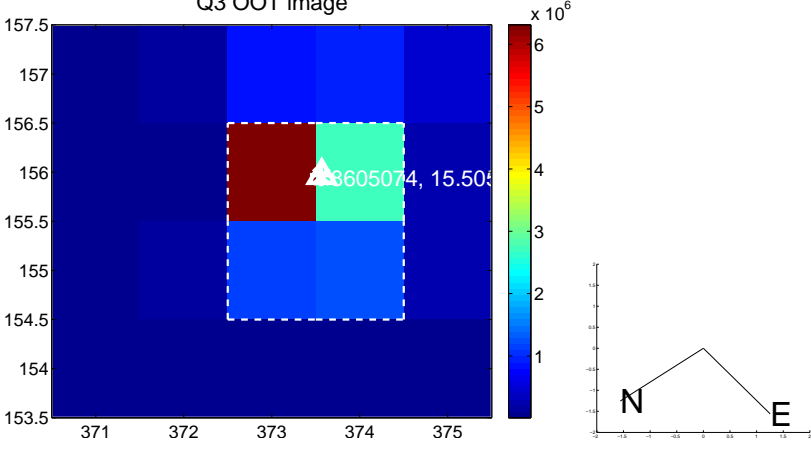
Q2 OOT image



Q3 difference image



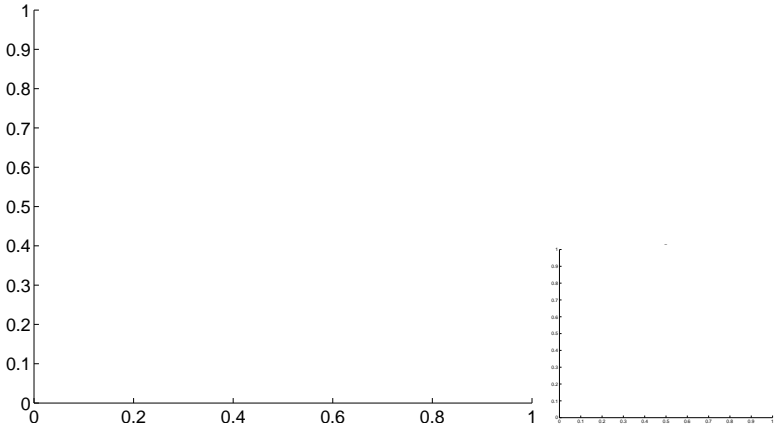
Q3 OOT image



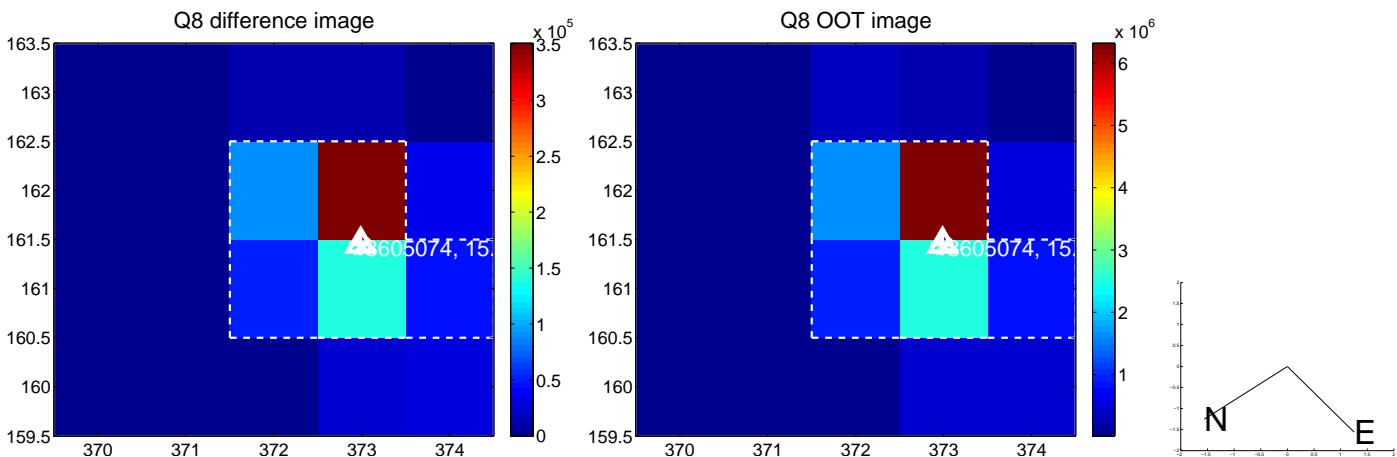
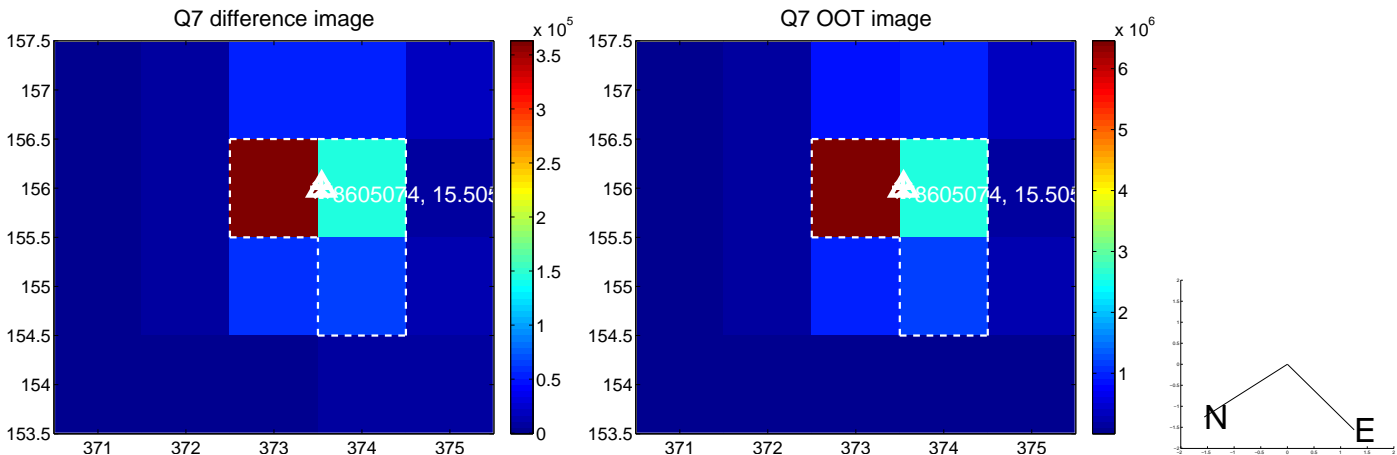
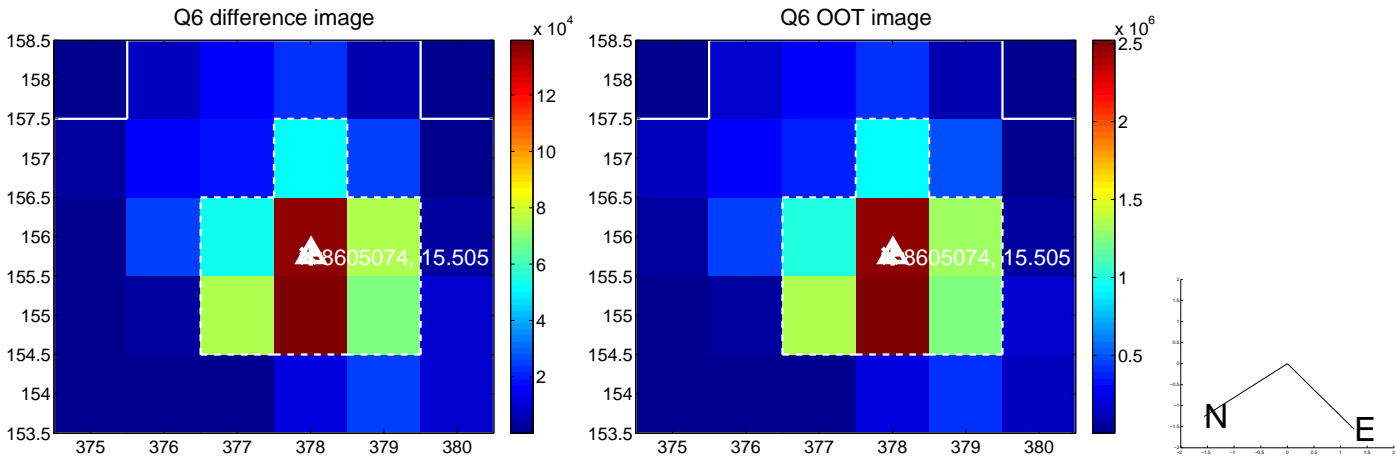
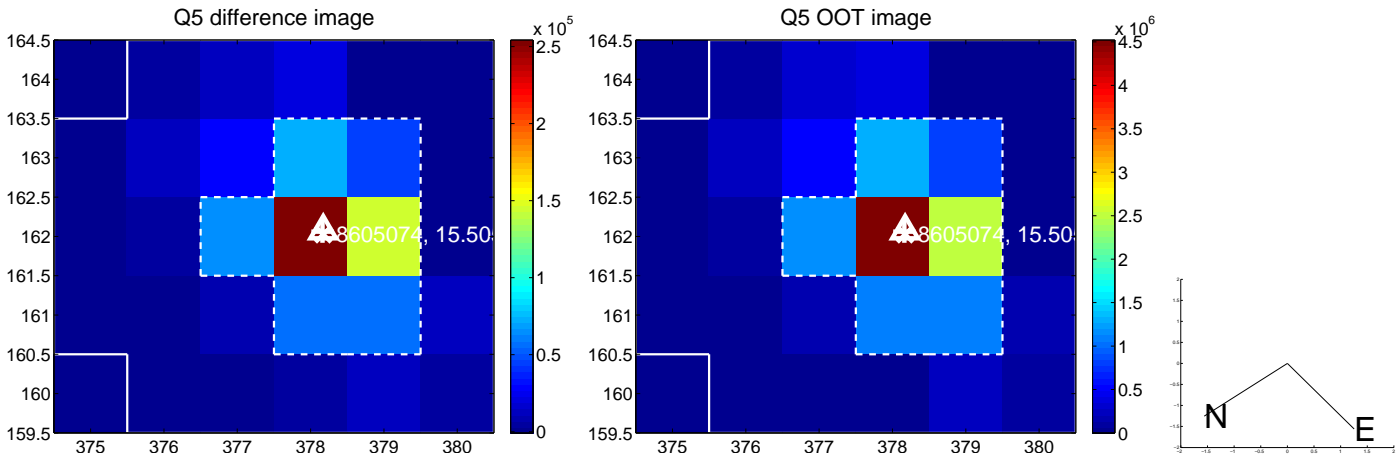
Q4 no difference image



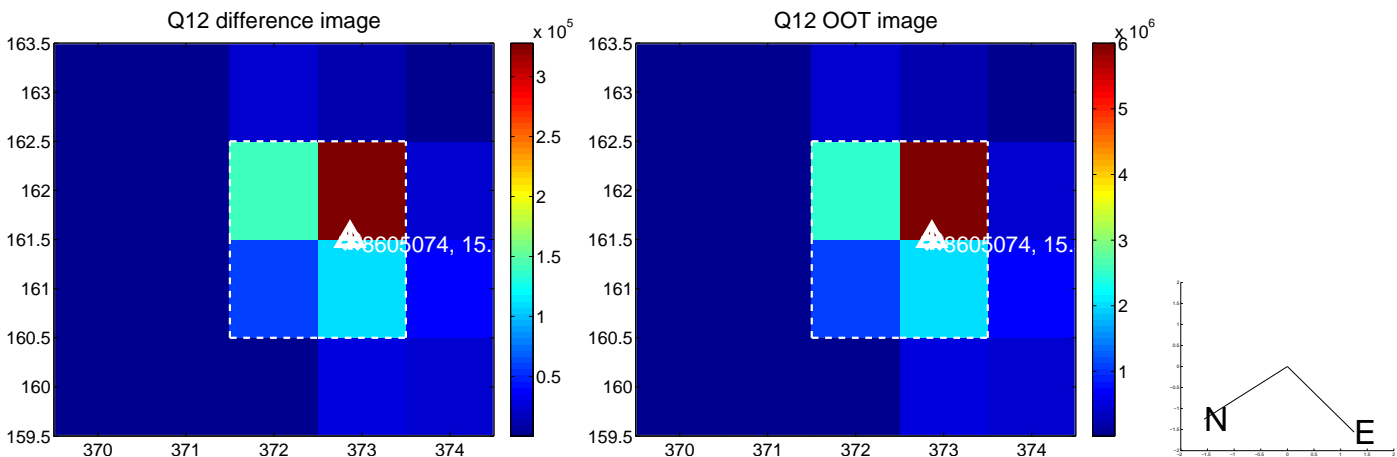
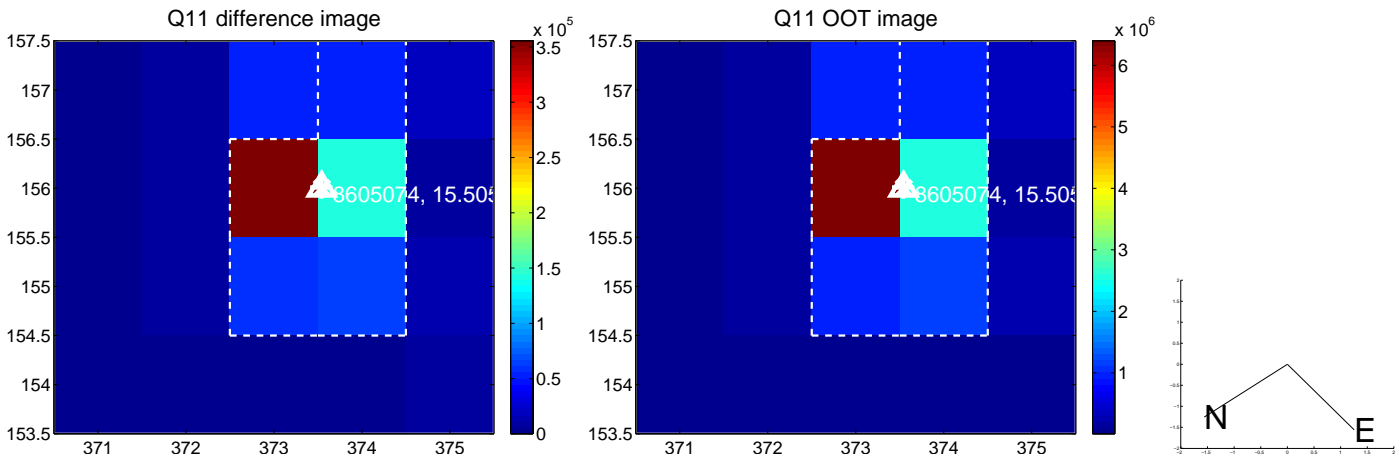
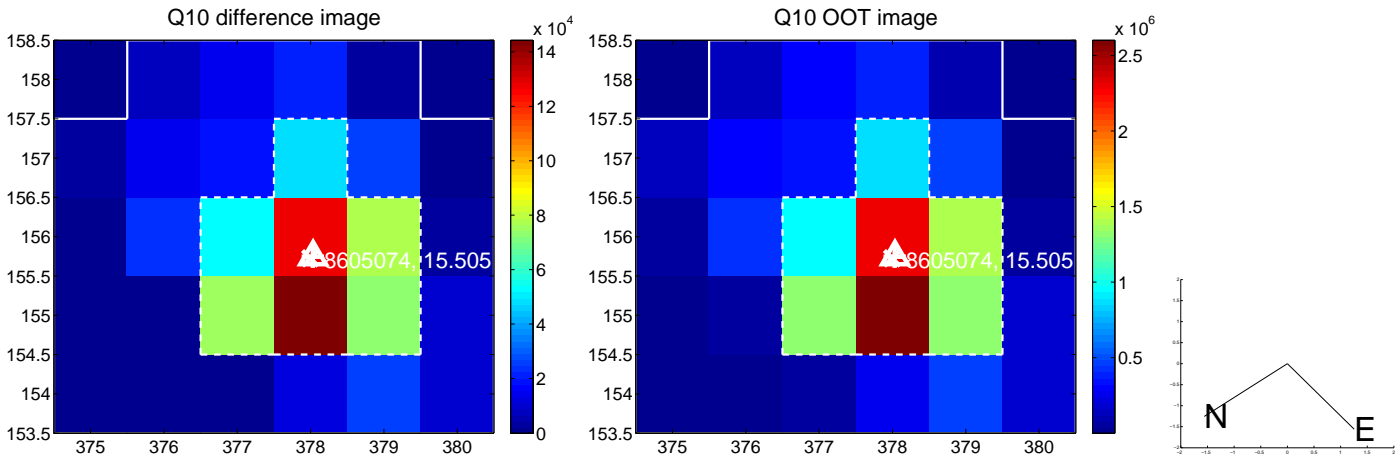
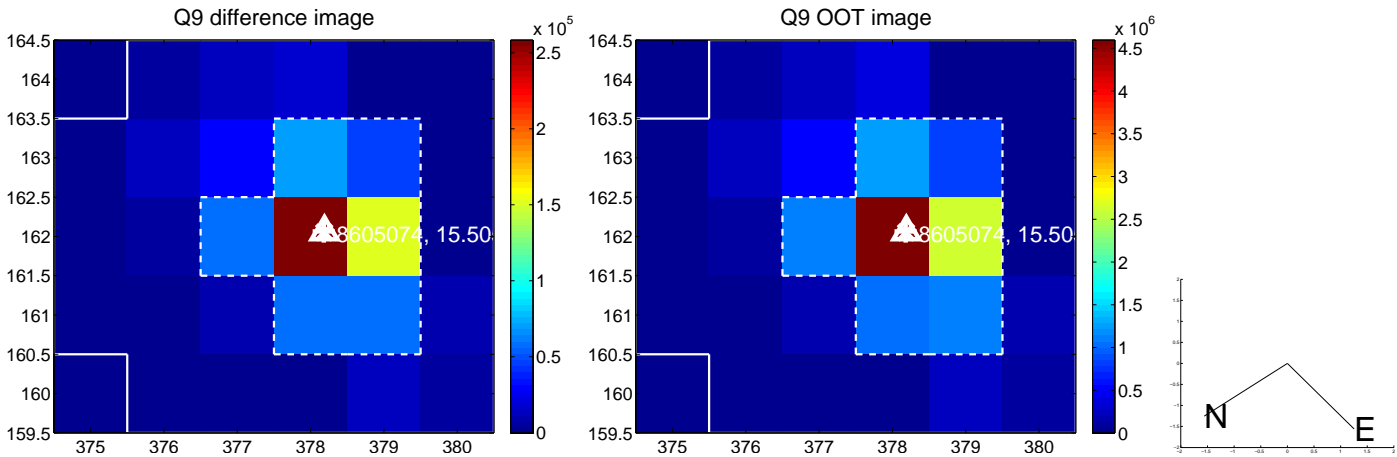
Q4 no OOT image



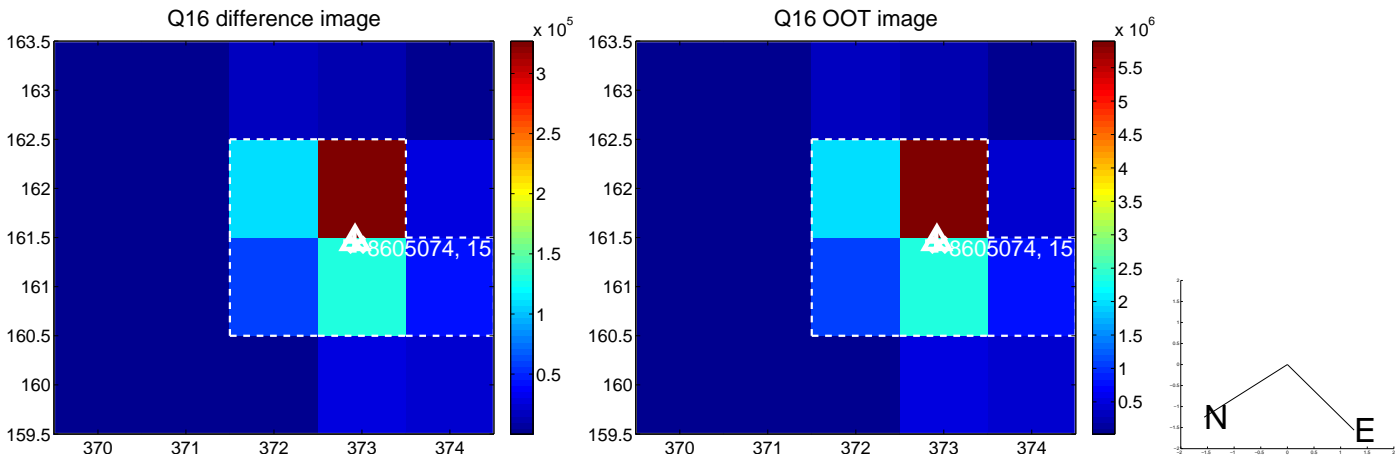
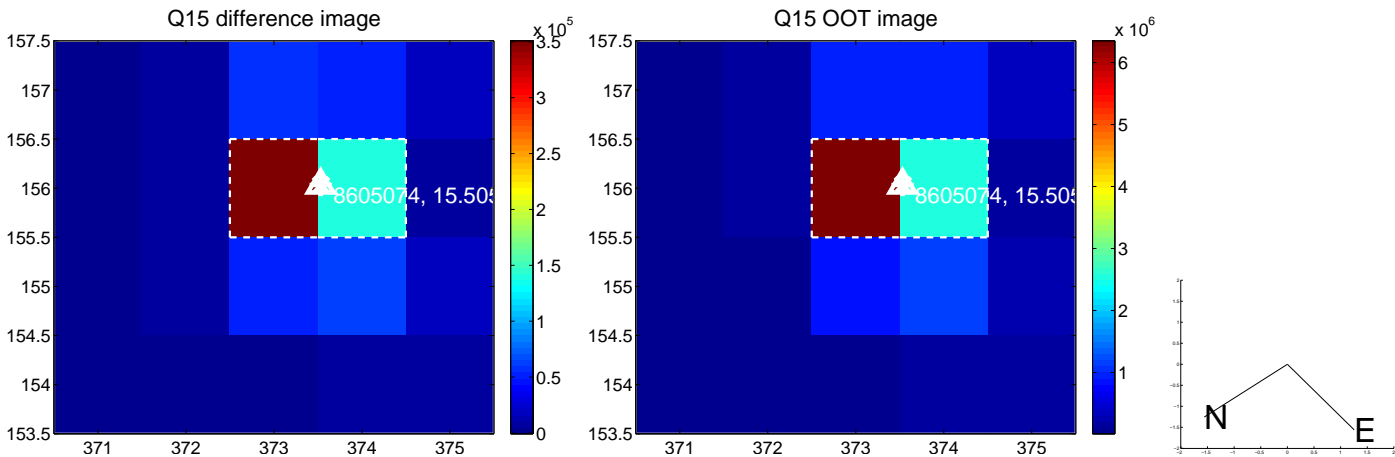
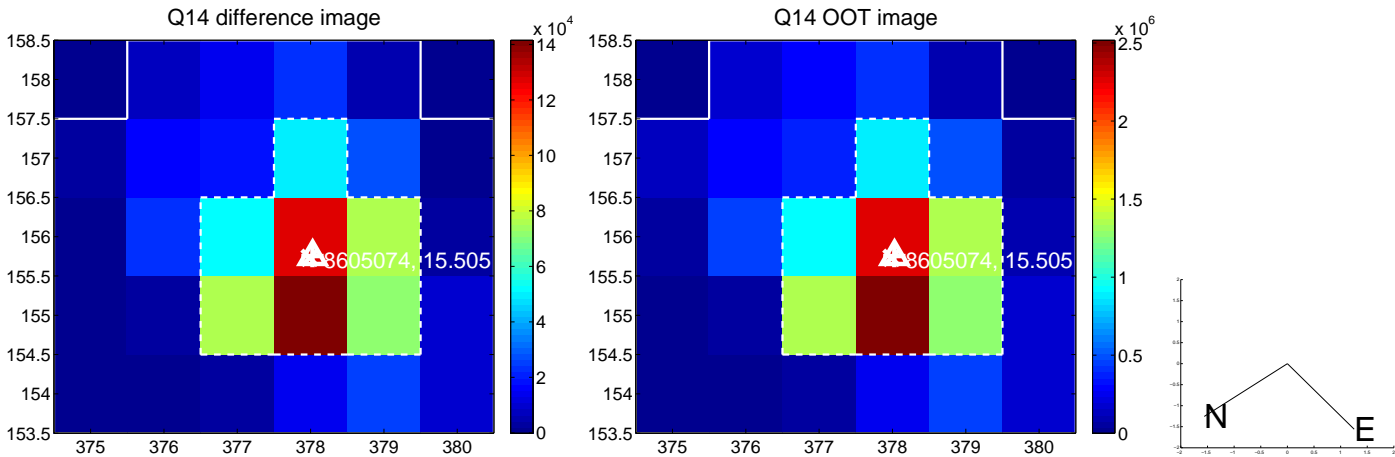
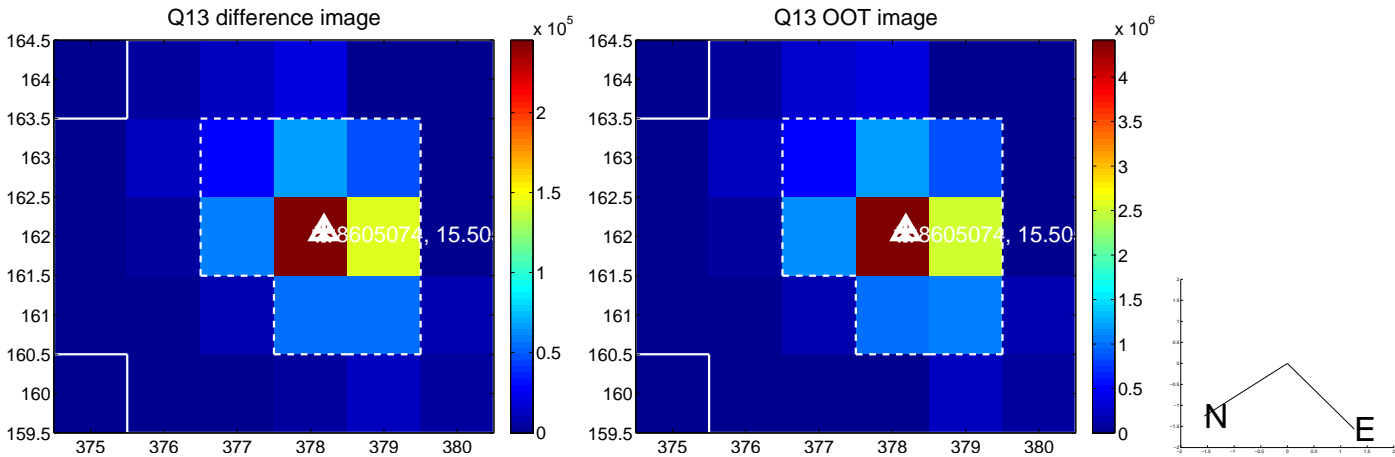
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



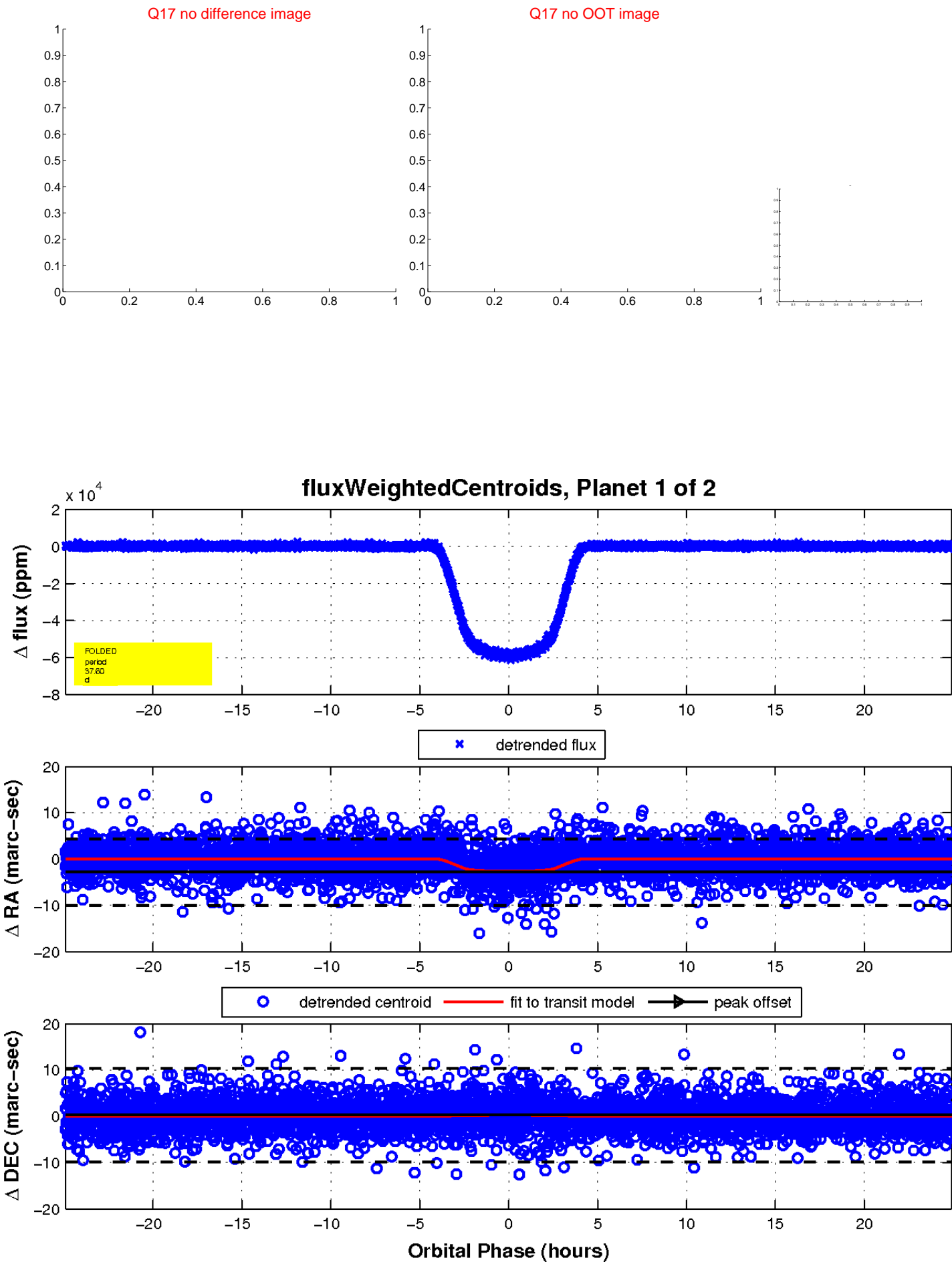
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

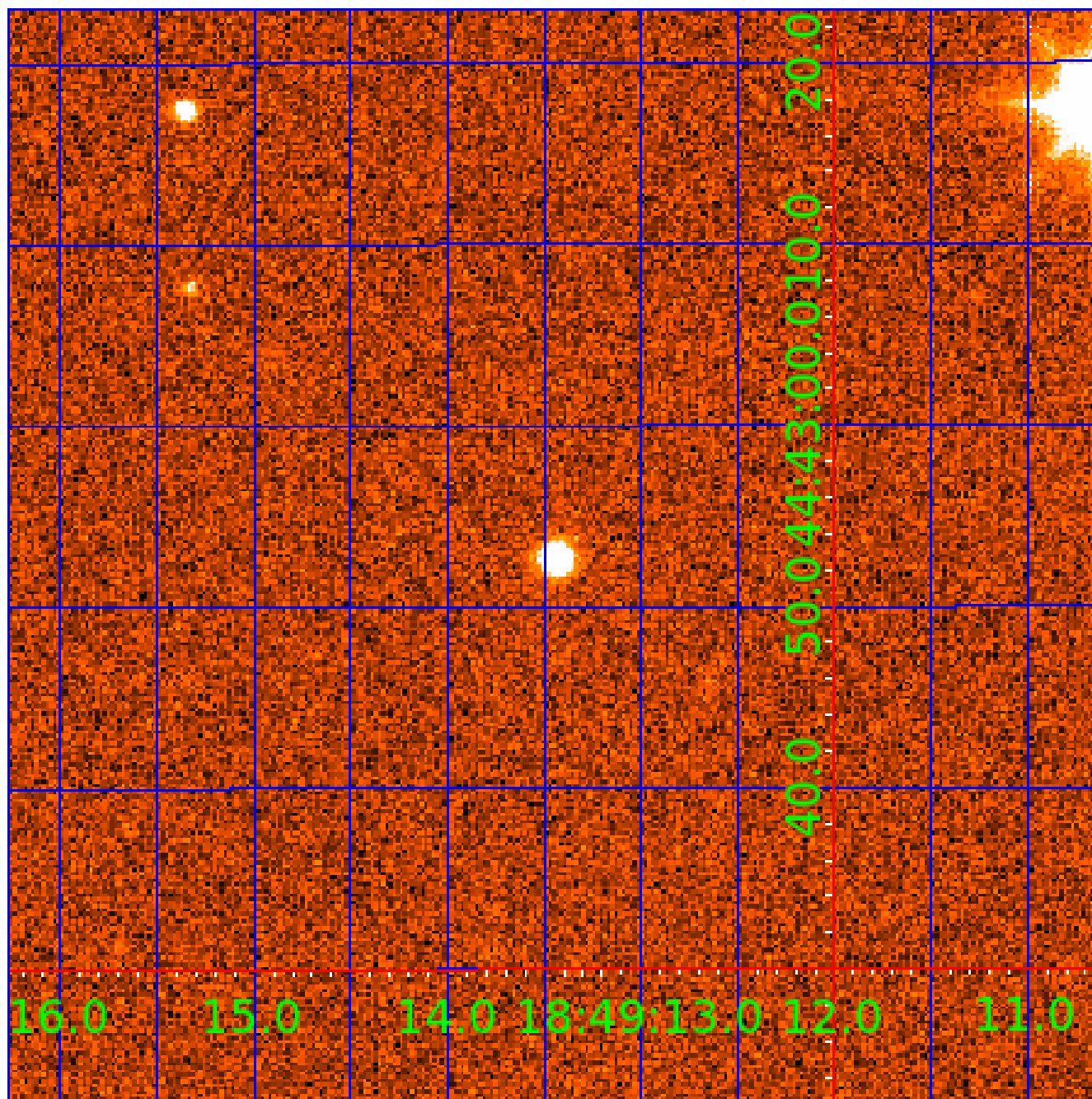


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008605074

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})
008605074-01	OBS	0915.01	37.601657	157.111842	59180.5	8.307	1668.2	1536.7	1.10	6140	27.28	31.90
008605074-02	OBS	No	37.601725	135.123980	2710.9	9.716	78.4	82.8	1.10	6140	6.57	31.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008605074-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
008605074-02	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 008605074-02

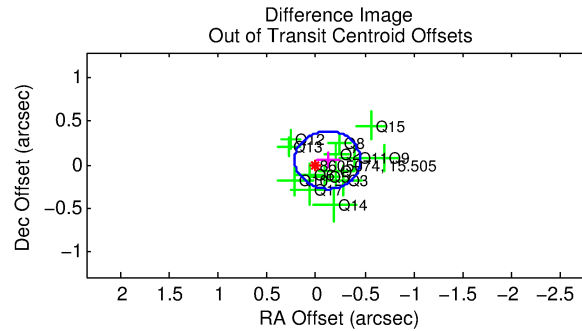
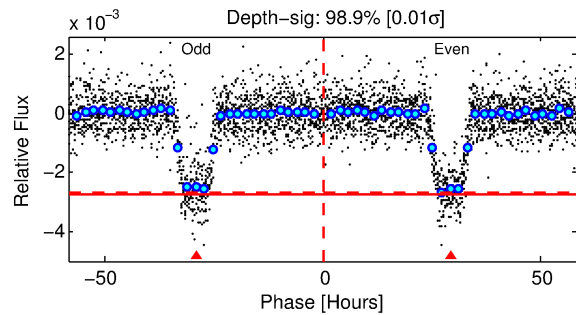
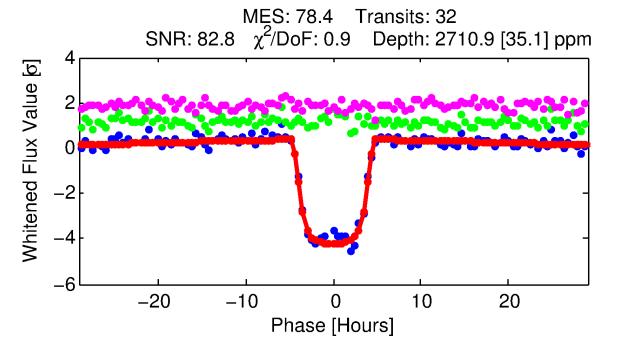
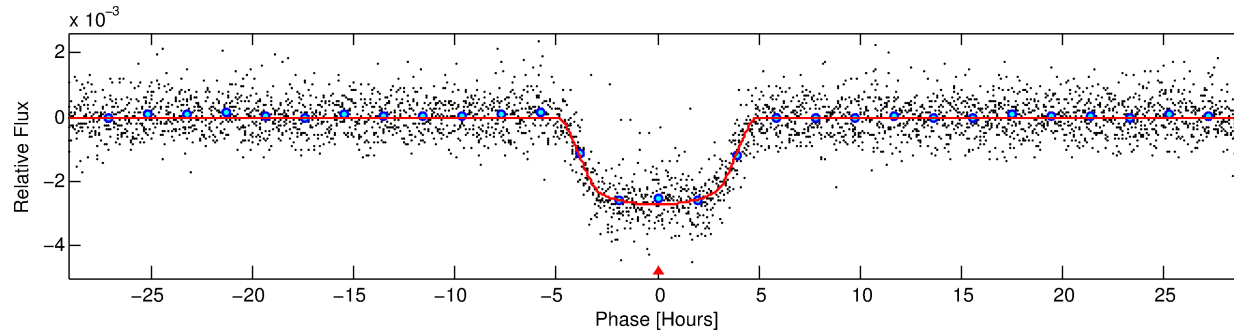
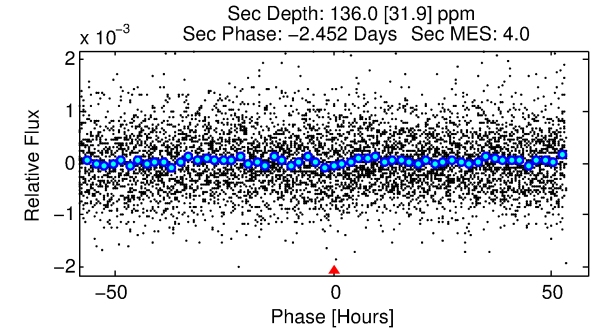
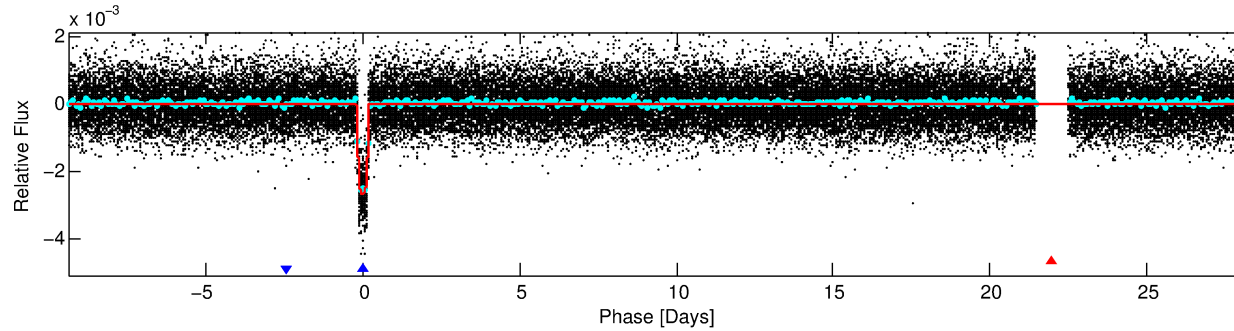
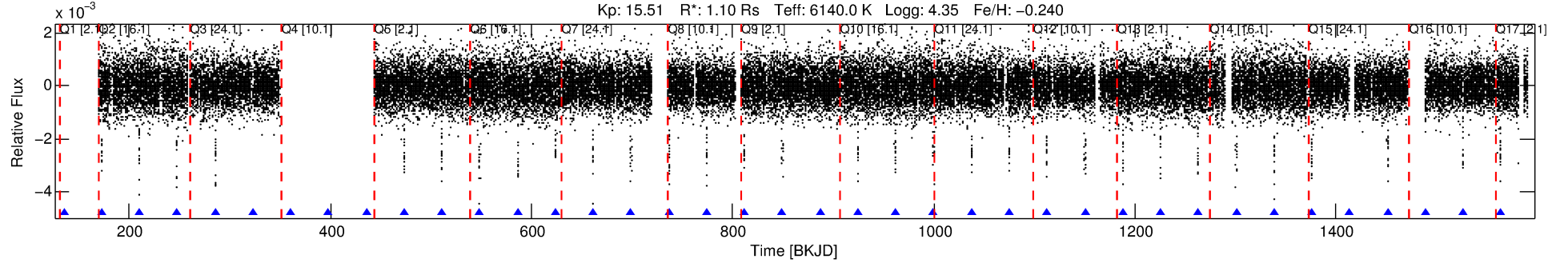
No Significant Match Found

DV One-Page Summary

KIC: 8605074 Candidate: 2 of 2 Period: 37.602 d

KOI: K00915 Corr: No Ephemeris Match

Kp: 15.51 R*: 1.10 Rs Teff: 6140.0 K Logg: 4.35 Fe/H: -0.240



DV Fit Results:

Period = 37.60173 [0.00012] d
Epoch = 135.1240 [0.0028] BKJD
Rp/R* = 0.0550 [0.0006]
a/R* = 17.55 [0.72]
b = 0.87 [0.01]
Seff = 31.90 [12.47]
Teq = 606 [59] K
Rp = 6.57 [1.99] Re
a = 0.2190 [0.0555] AU
Ag = 83.02 [36.31] [2.26σ]
Teffp = 2828 [191] K [11.13σ]

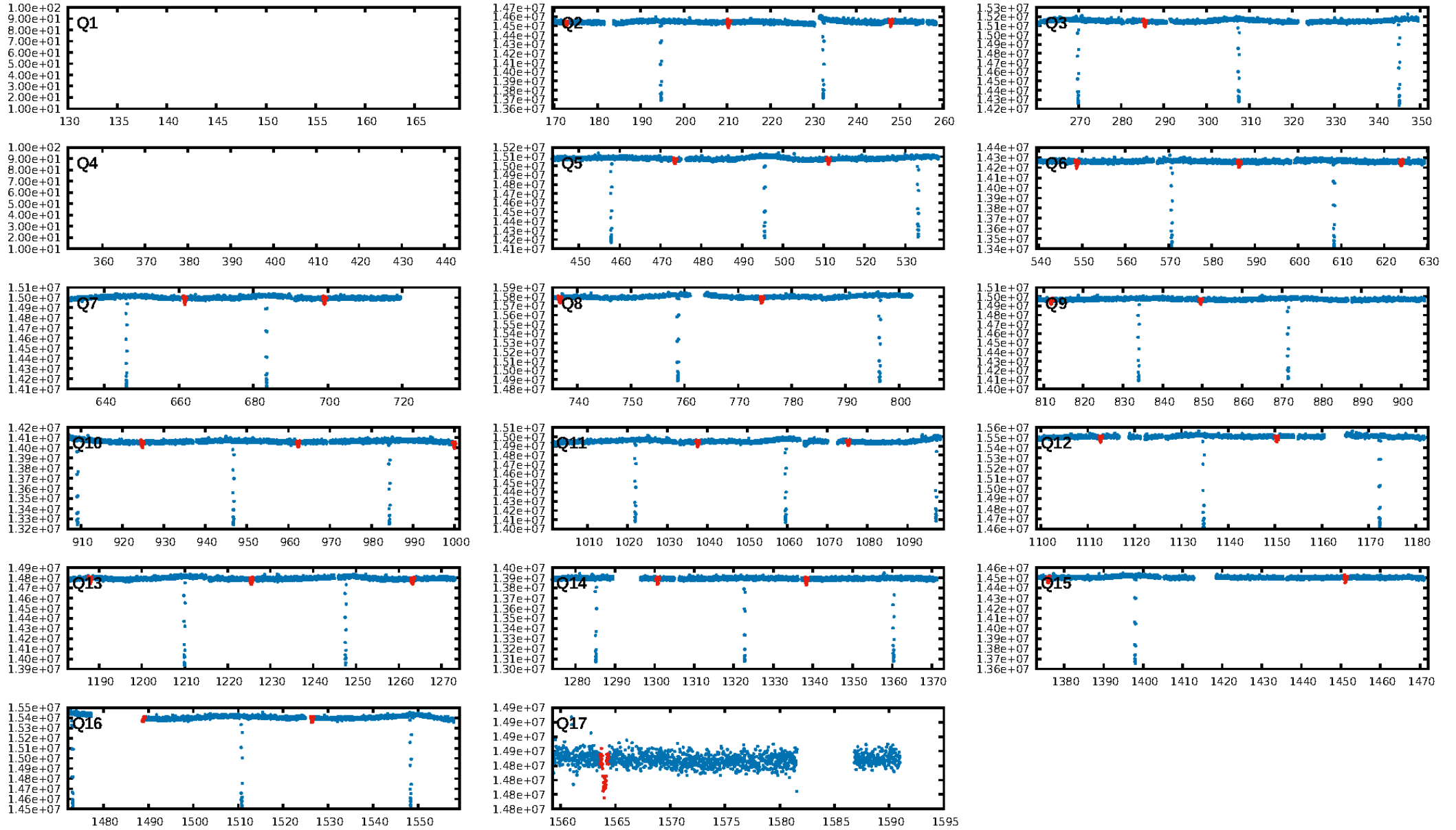
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [31/31]
GhostDiagnostic-chr: 3.936
Centroid-sig: 97.8%
Centroid-so: 0.203 arcsec [1.21σ]
OotOffset-rm: 0.129 arcsec [1.15σ]
KicOffset-rm: 0.175 arcsec [1.60σ]
OotOffset-st: 4/4/2/4 [14]
KicOffset-st: 4/4/2/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

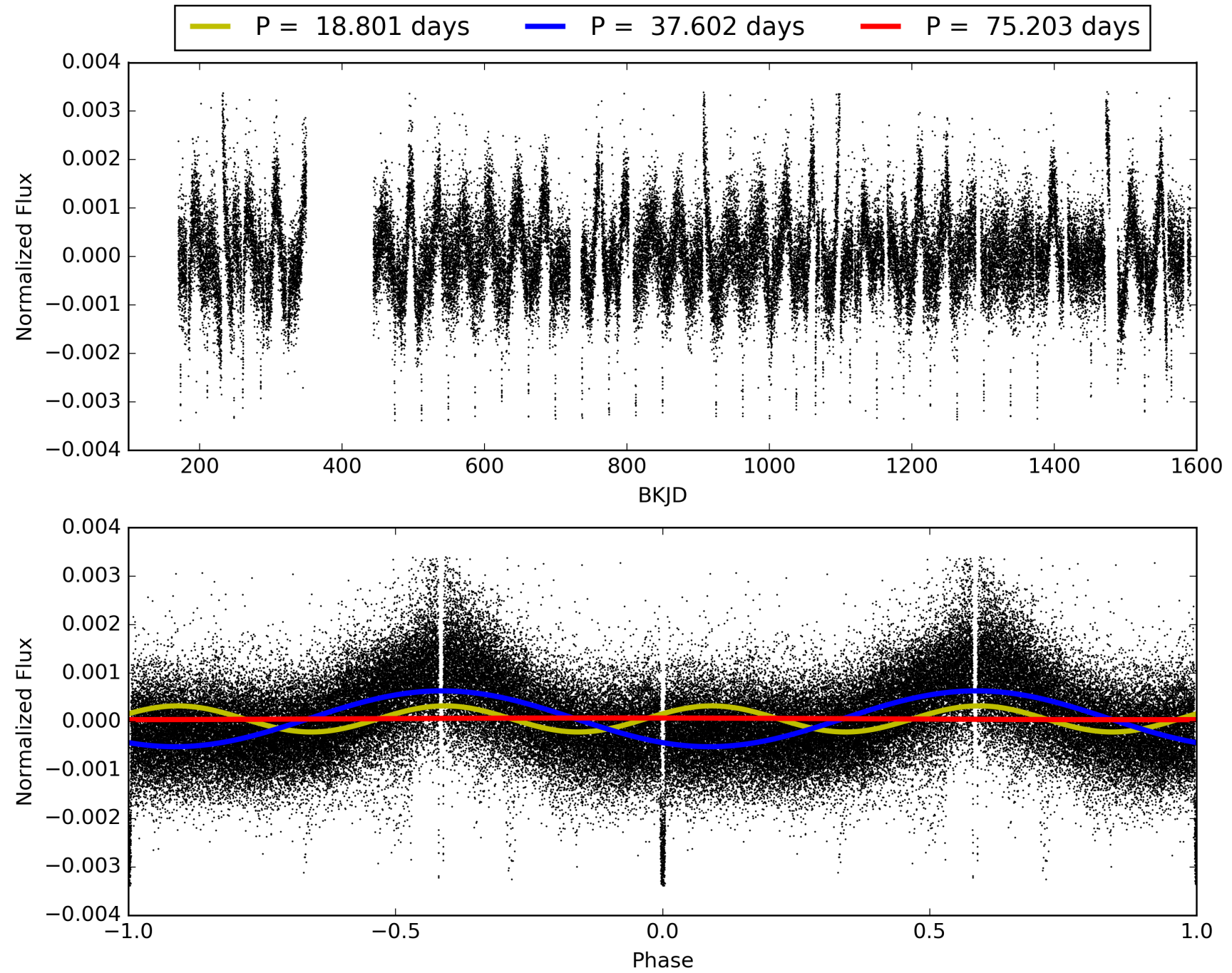
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:49:56 Z

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

TCE 008605074-02, PDC Light Curves

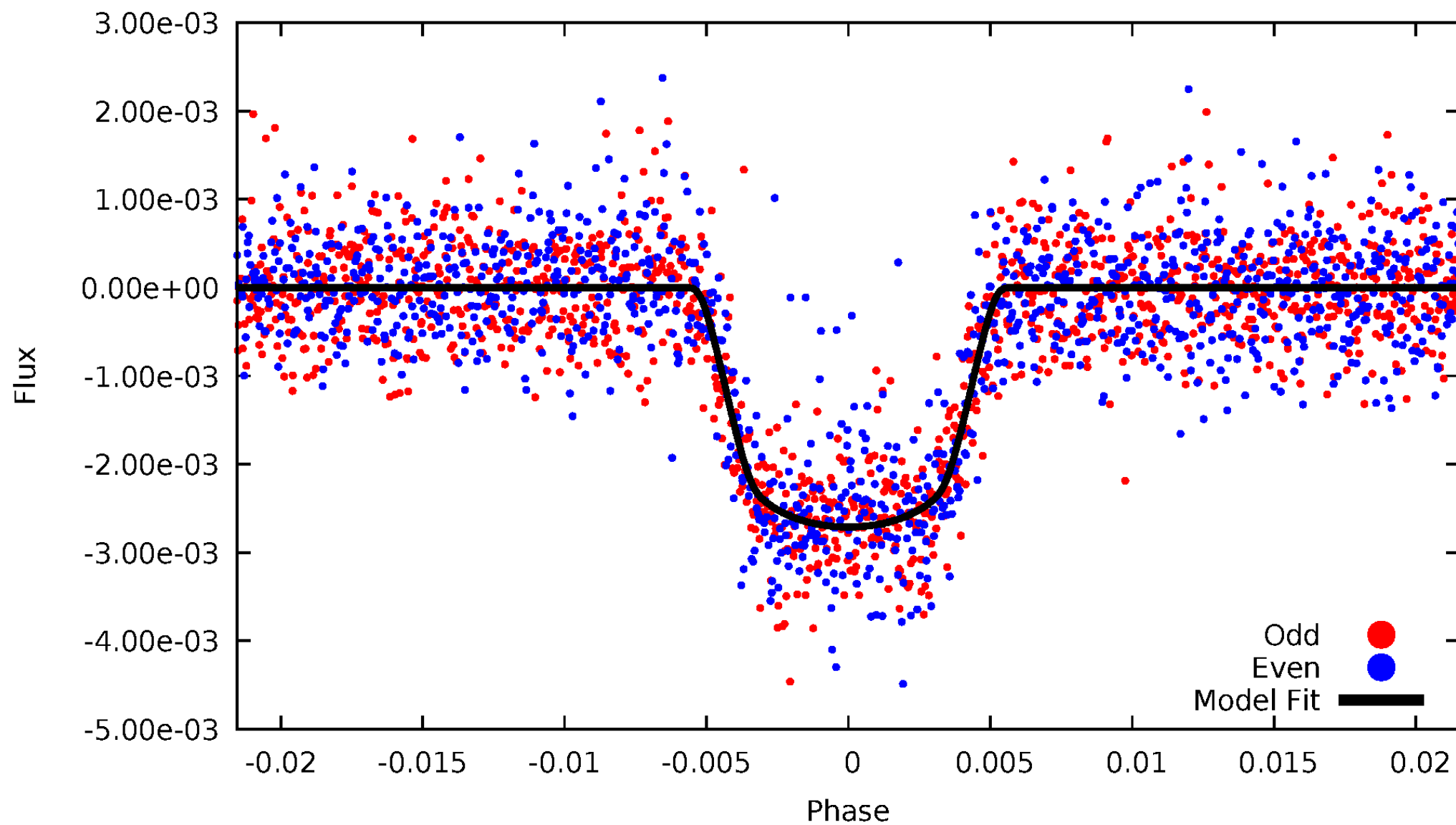


TCE 008605074-02



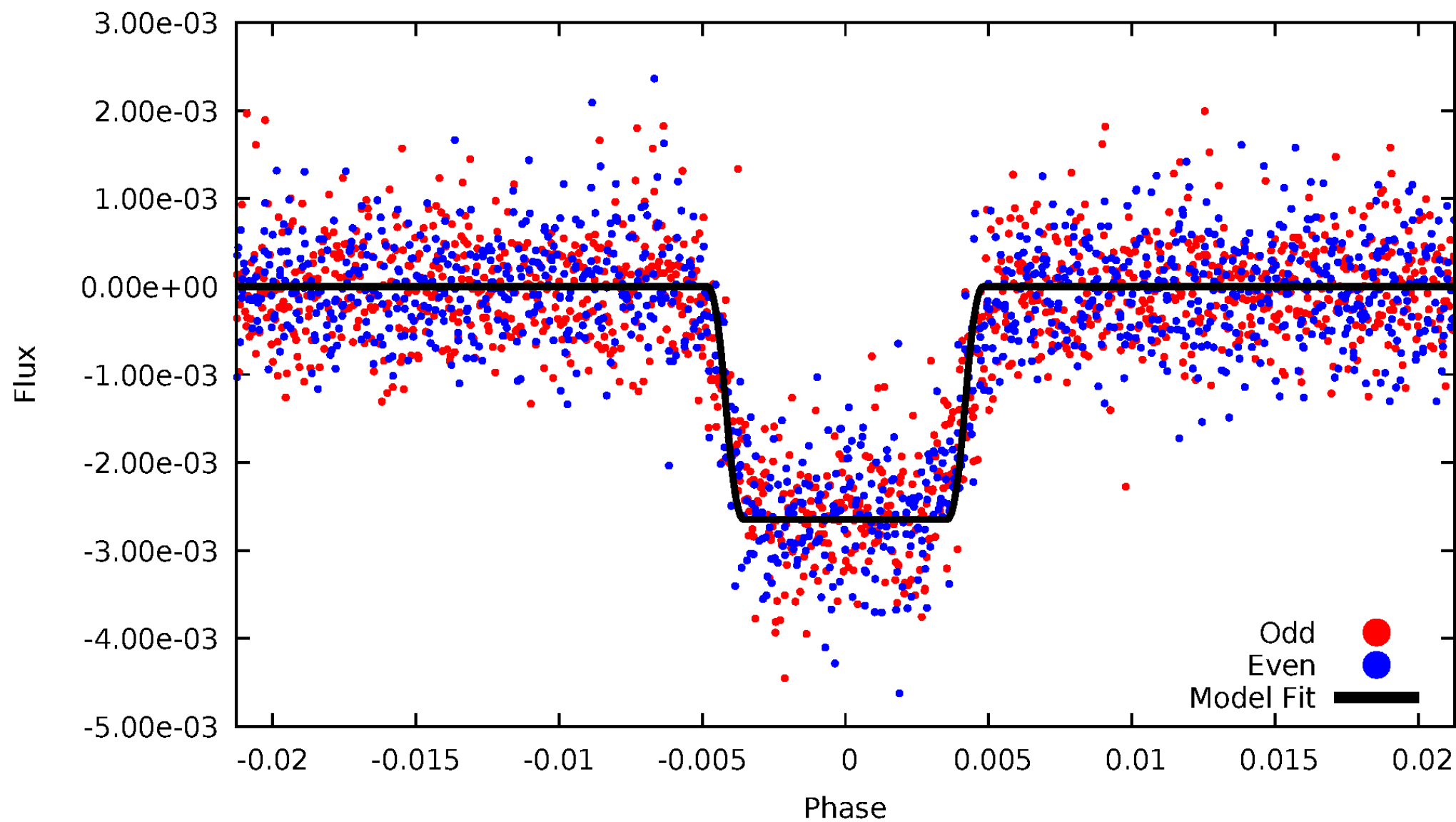
DV Odd/Even

TCE 008605074-02



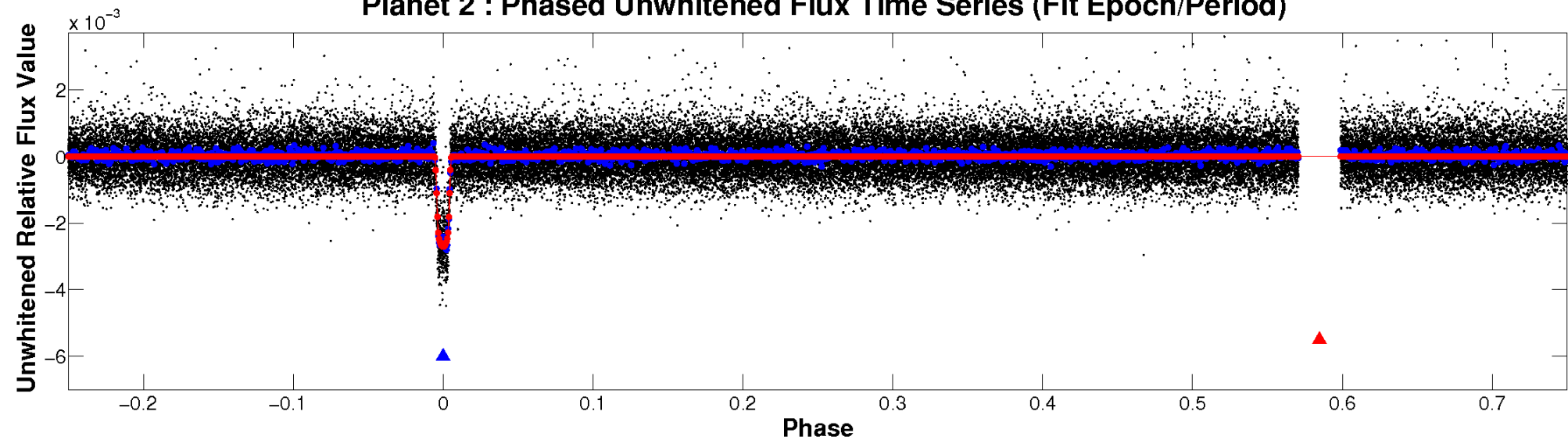
ALT Odd/Even

TCE 008605074-02

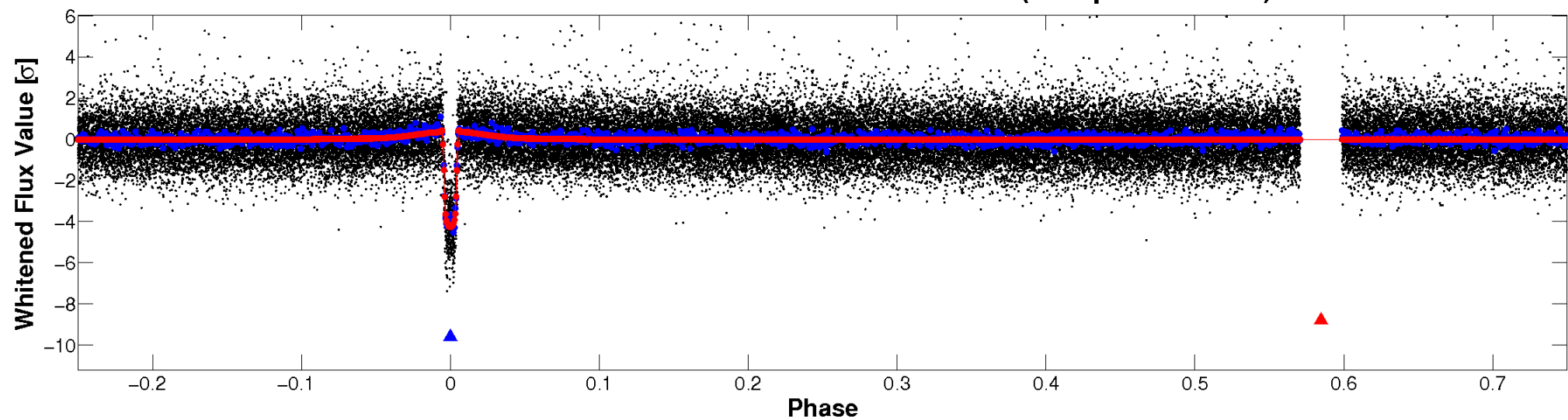


Non-Whitened Vs. Whitened Light Curve

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

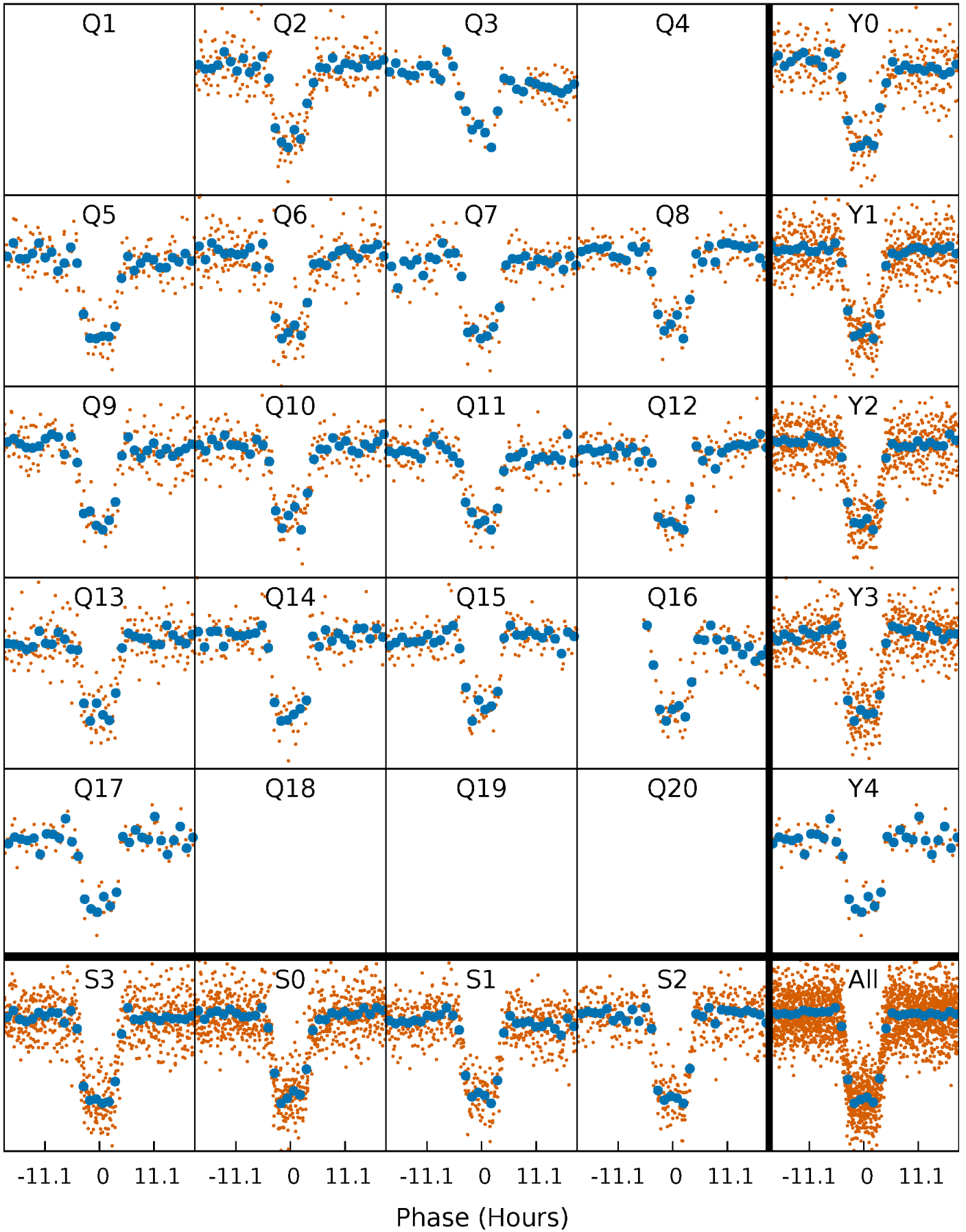


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



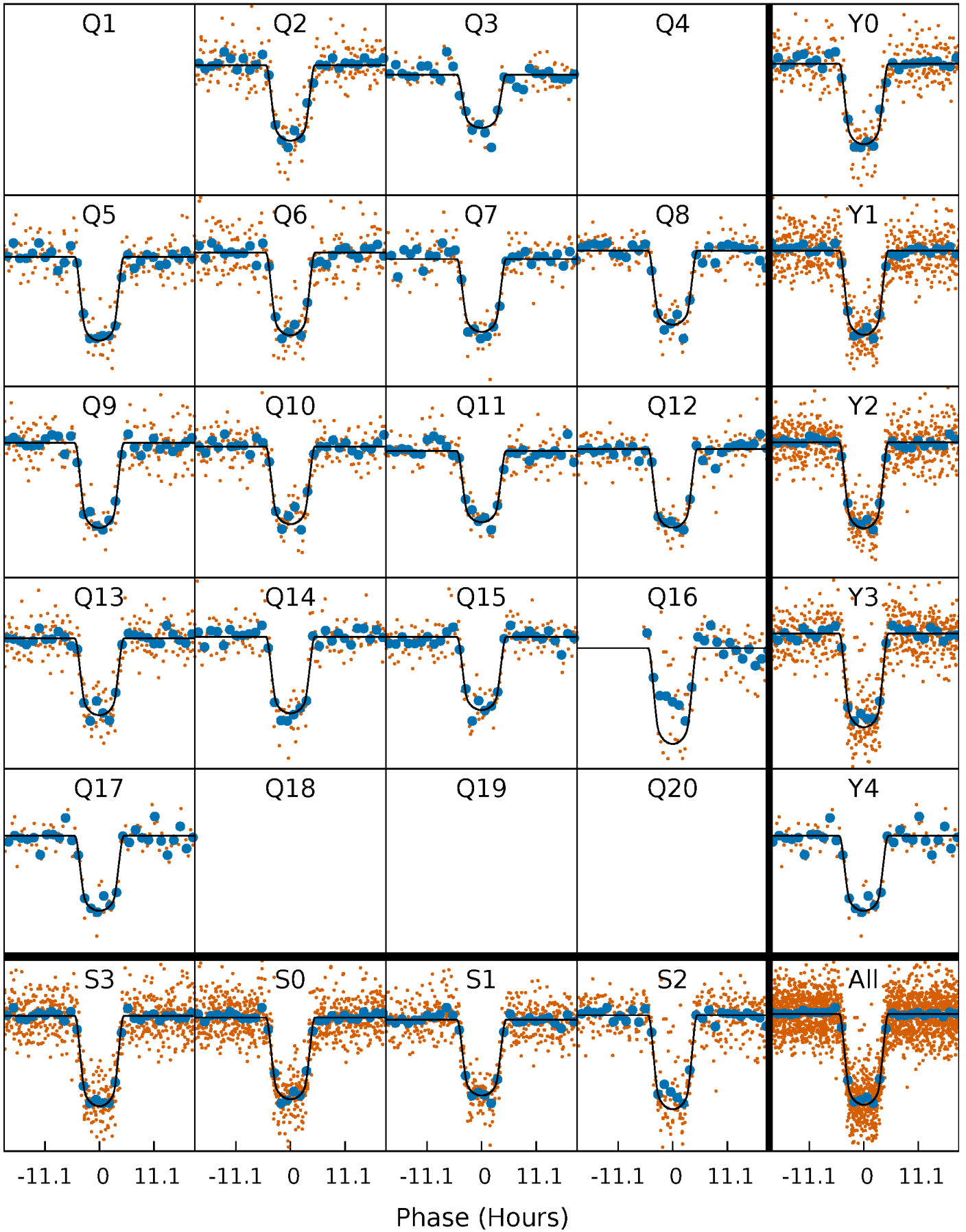
PDC Quarter-Phased Transit Curves

TCE 008605074-02 P= 37.601725 Days $T_0=135.123980$ (BKJD)



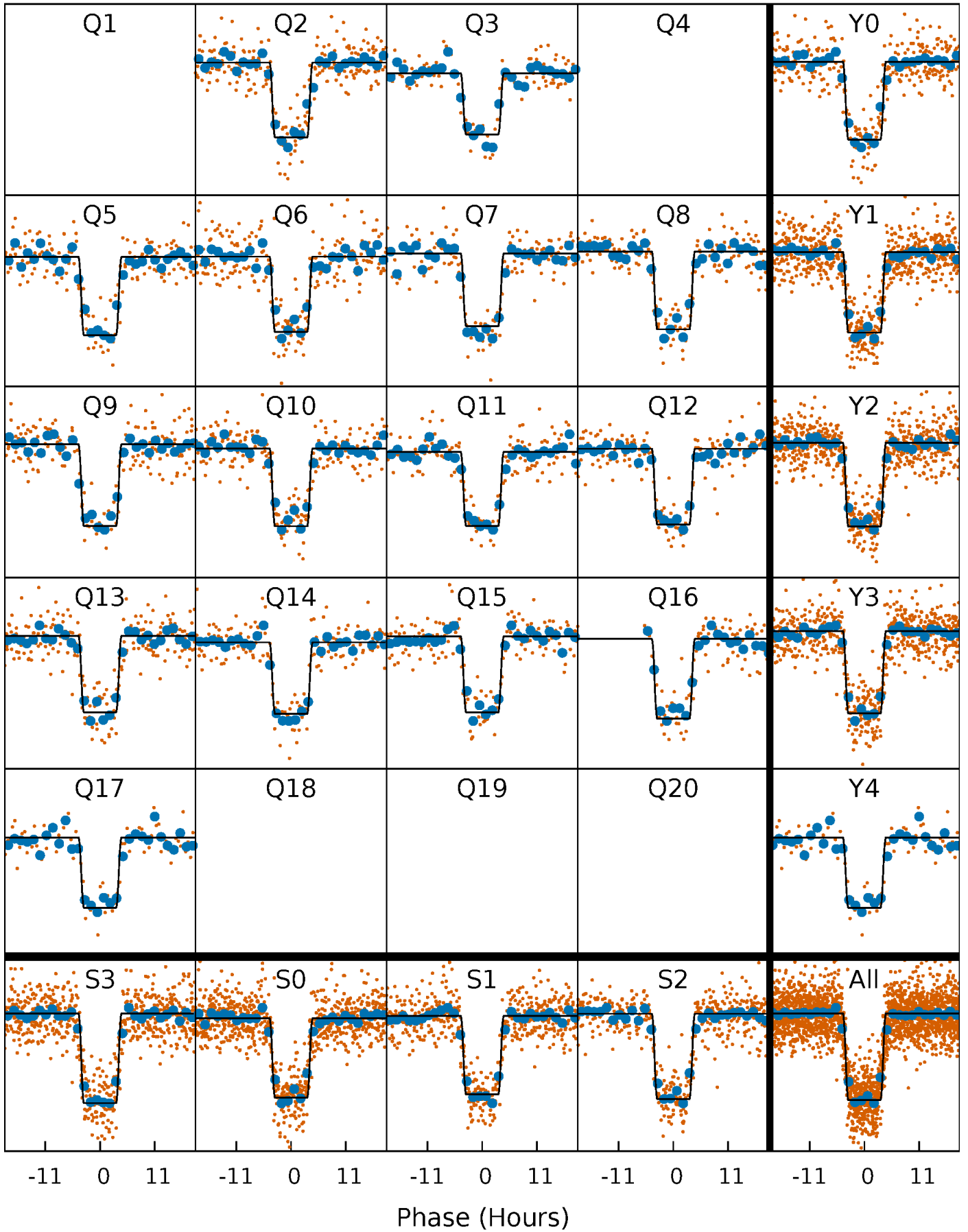
DV Quarter-Phased Transit Curves

TCE 008605074-02 P= 37.601725 Days $T_0=135.123980$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

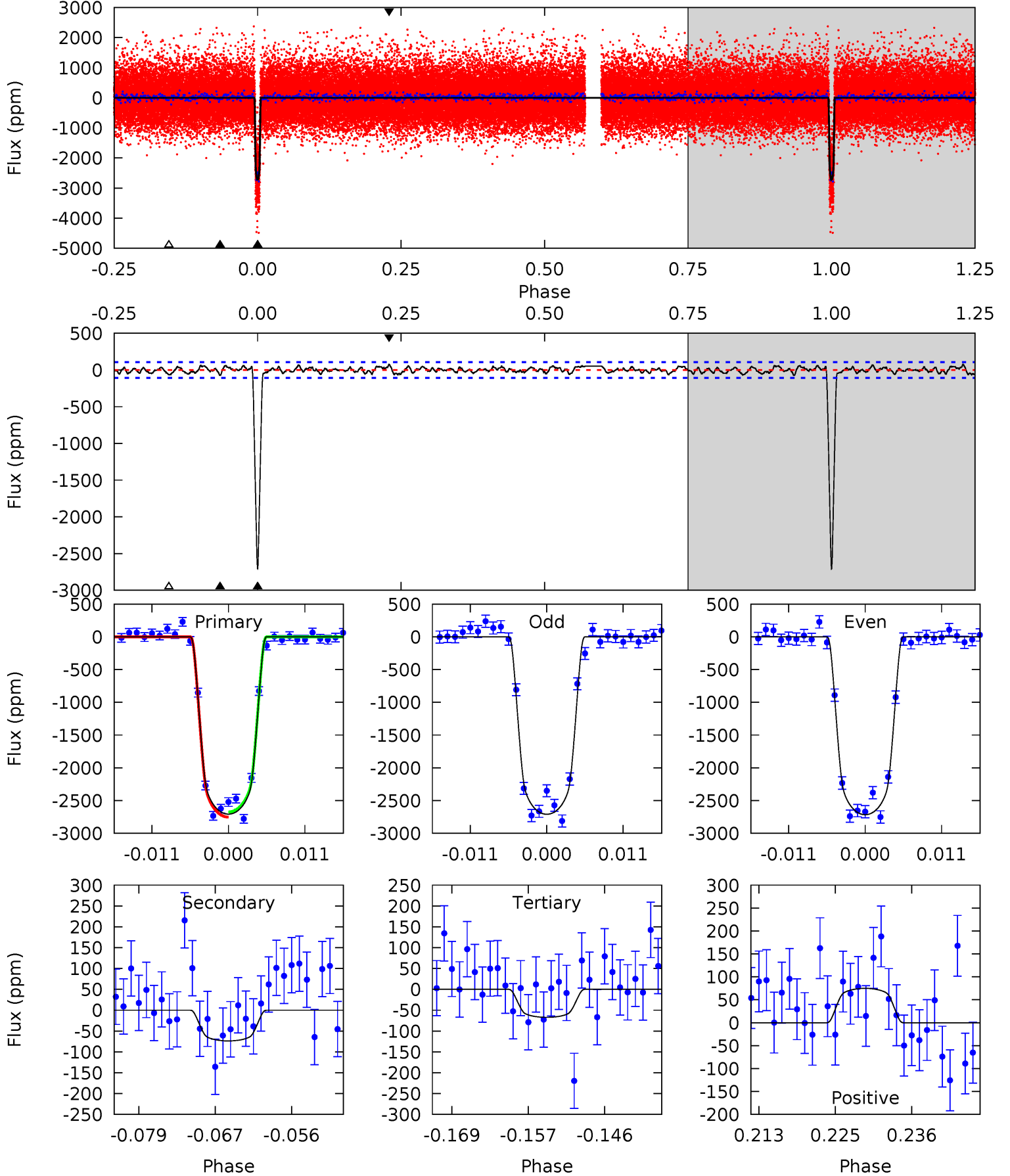
TCE 008605074-02 P= 37.601482 Days $T_0=135.129352$ (BKJD)



DV Model-Shift Uniqueness Test

008605074-02, $P = 37.601725$ Days, $E = 135.123980$ Days

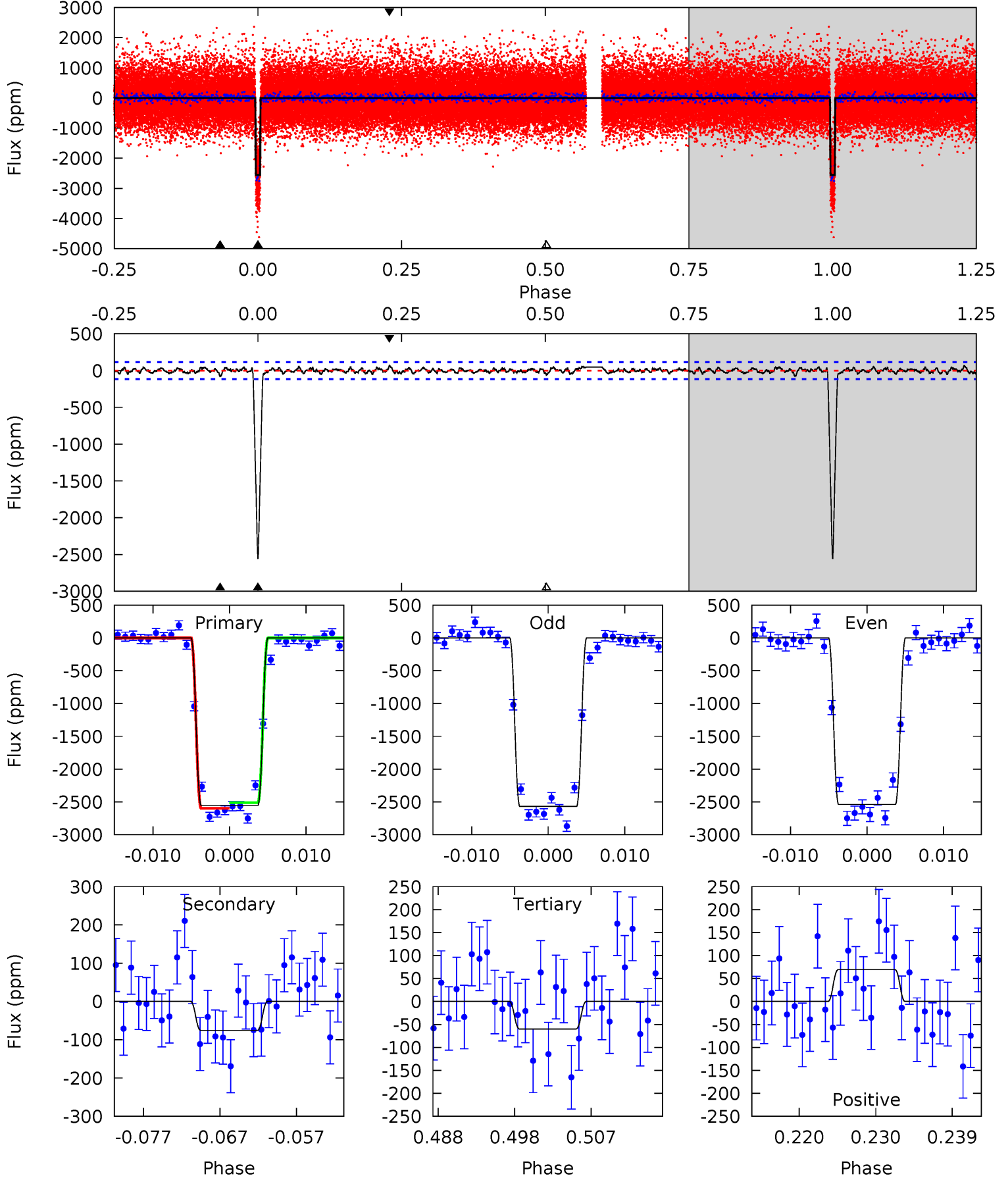
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
125.2	3.41	3.11	3.46	5.00	2.54	1.30	122.1	121.8	0.30	-0.05	0.15	0.99	0.03	1.82



Alt Model-Shift Uniqueness Test

008605074-02, $P = 37.601482$ Days, $E = 135.129352$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
111.1	3.29	2.60	3.02	5.03	2.59	0.94	108.5	108.1	0.69	0.27	0.65	1.00	0.03	1.87



Stellar Parameters For KIC 008605074

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6140^{+164}_{-201}	$4.354^{+0.124}_{-0.201}$	$-0.240^{+0.250}_{-0.300}$	$1.096^{+0.331}_{-0.178}$	$0.989^{+0.152}_{-0.110}$	$1.059^{+0.552}_{-0.550}$
	+3%/-3%	+3%/-5%	+104%/-125%	+30%/-16%	+15%/-11%	+52%/-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 008605074-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-74 ± 22	$6.65^{+1.13}_{-0.63}$	856^{+64}_{-56}	3060^{+138}_{-149}	42^{+18}_{-15}
Alt.	-76 ± 23	$6.19^{+1.03}_{-0.56}$	853^{+63}_{-51}	3141^{+126}_{-164}	50^{+21}_{-16}

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 $A_{obs} \gg 1.0$

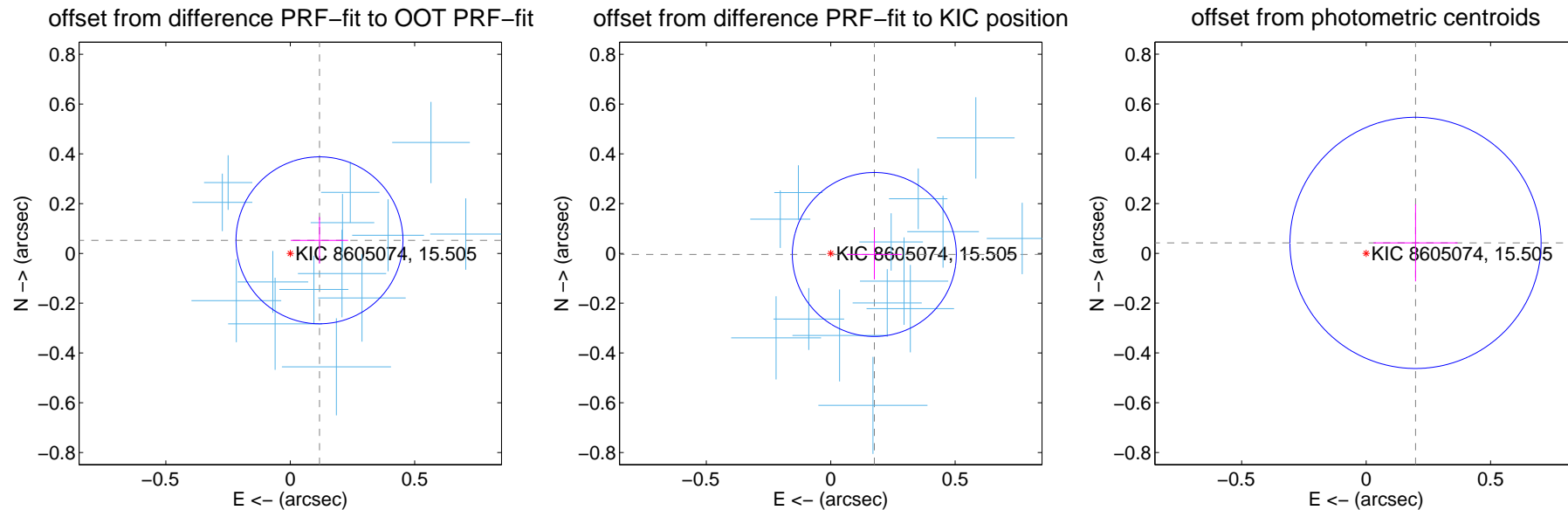
DV Centroid Data

Supplemental centroid analysis for 008605074-02. Kepler magnitude: 15.51. Transit SNR 82.79

There are 14 quarters with good PRF difference image offsets

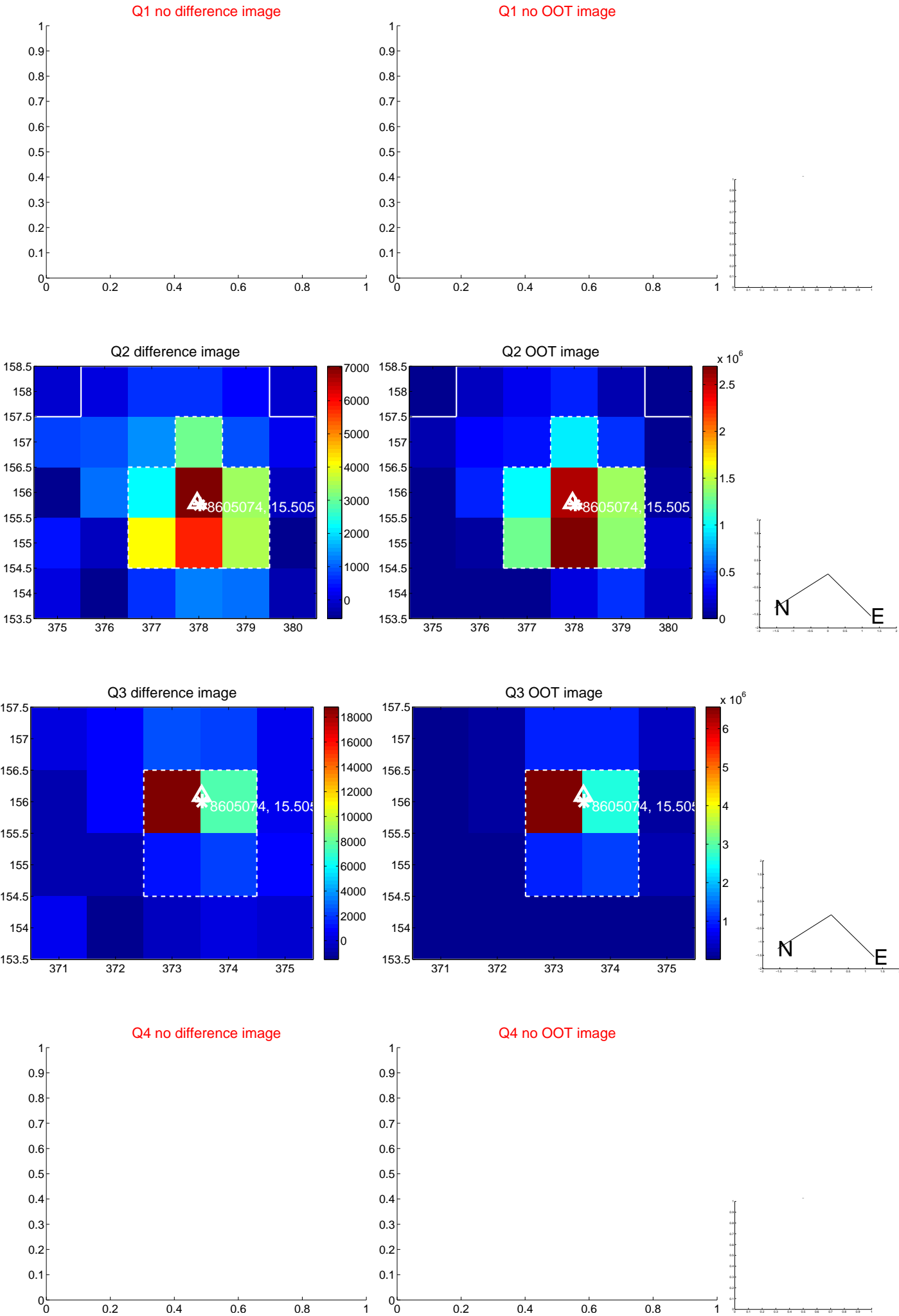
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.129 ± 0.112	1.15	-0.117 ± 0.115	0.053 ± 0.093
PRF-fit source offset from KIC position	0.175 ± 0.110	1.60	-0.175 ± 0.110	-0.004 ± 0.100
photometric centroid source offset	0.20 ± 0.17	1.21	-0.20 ± 0.17	0.04 ± 0.15

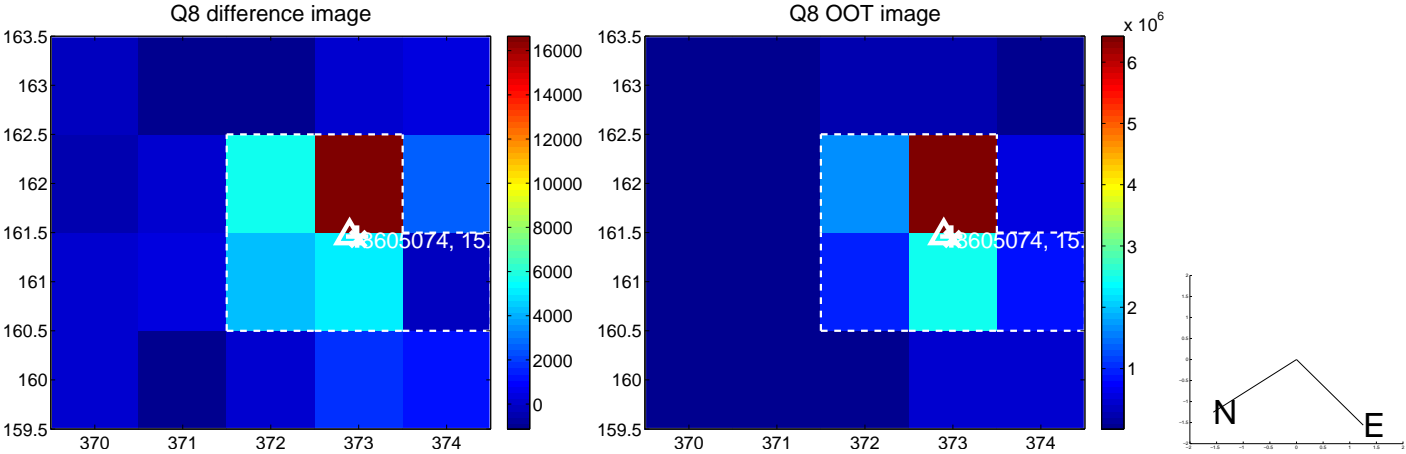
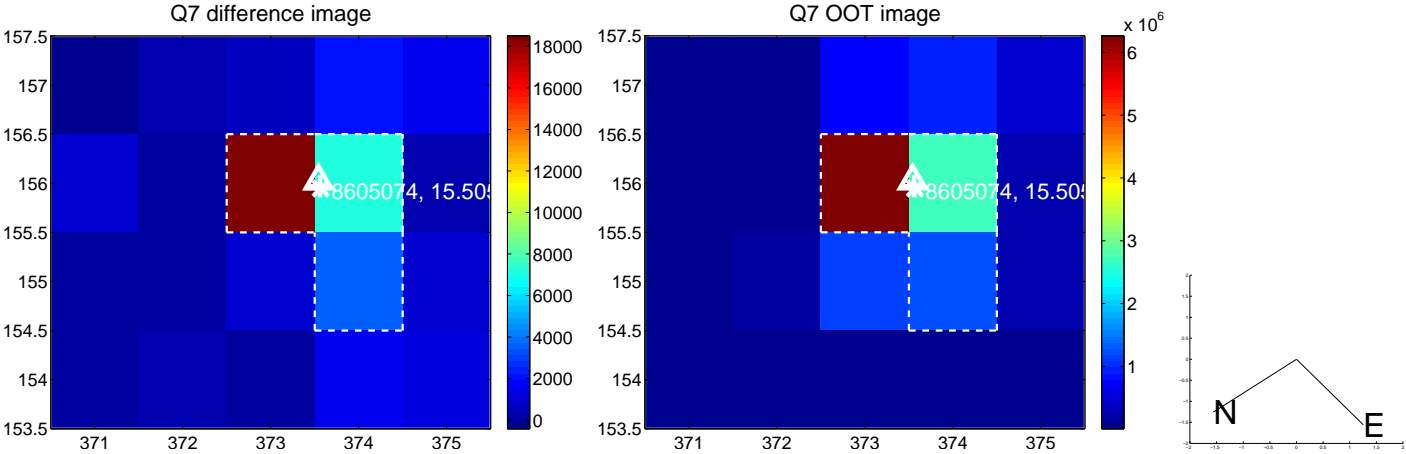
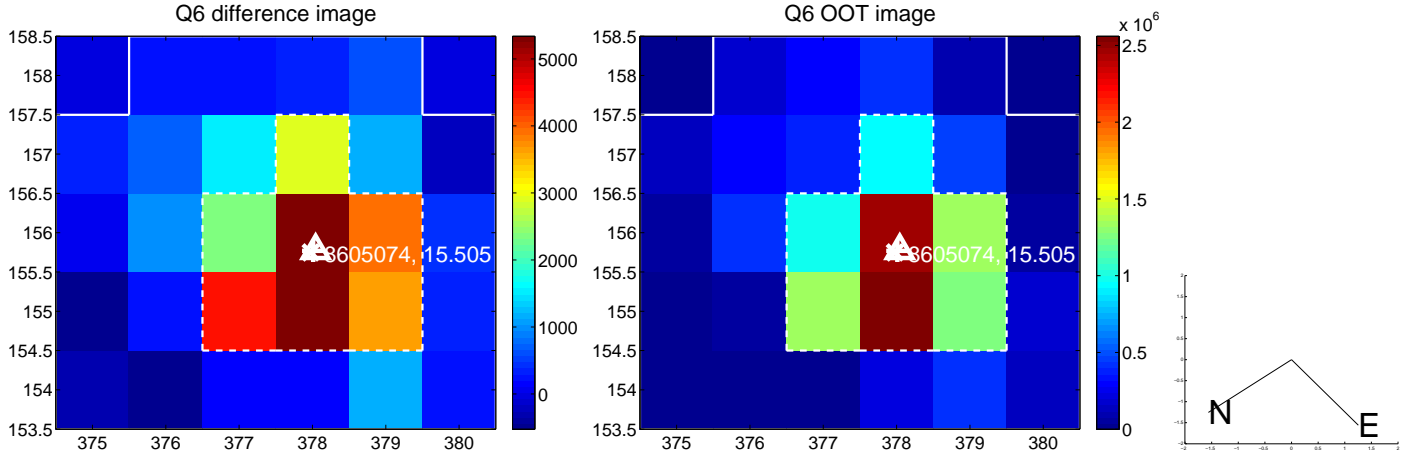
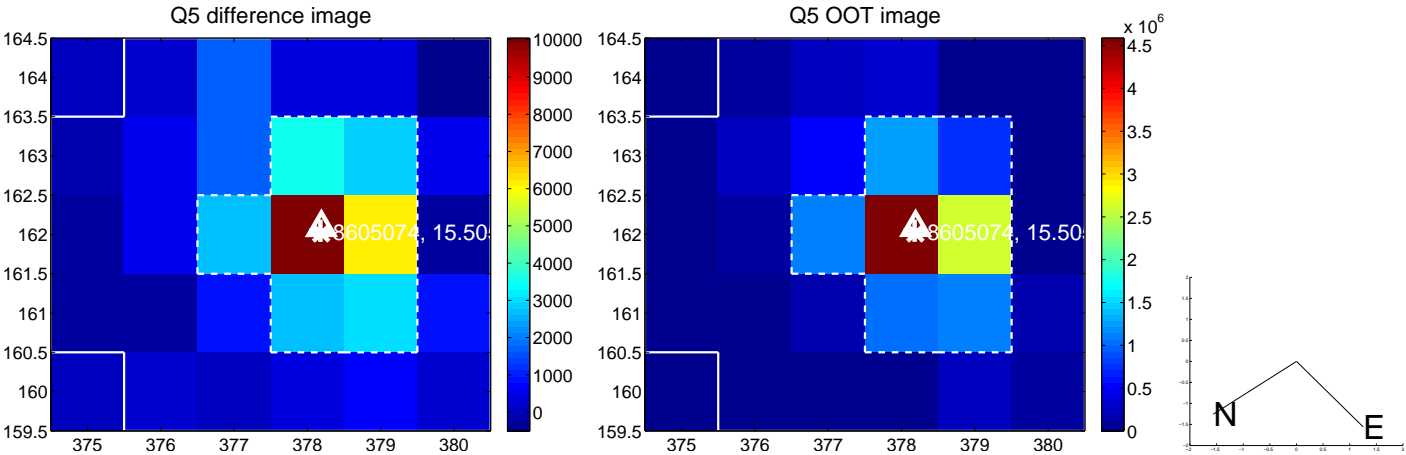


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

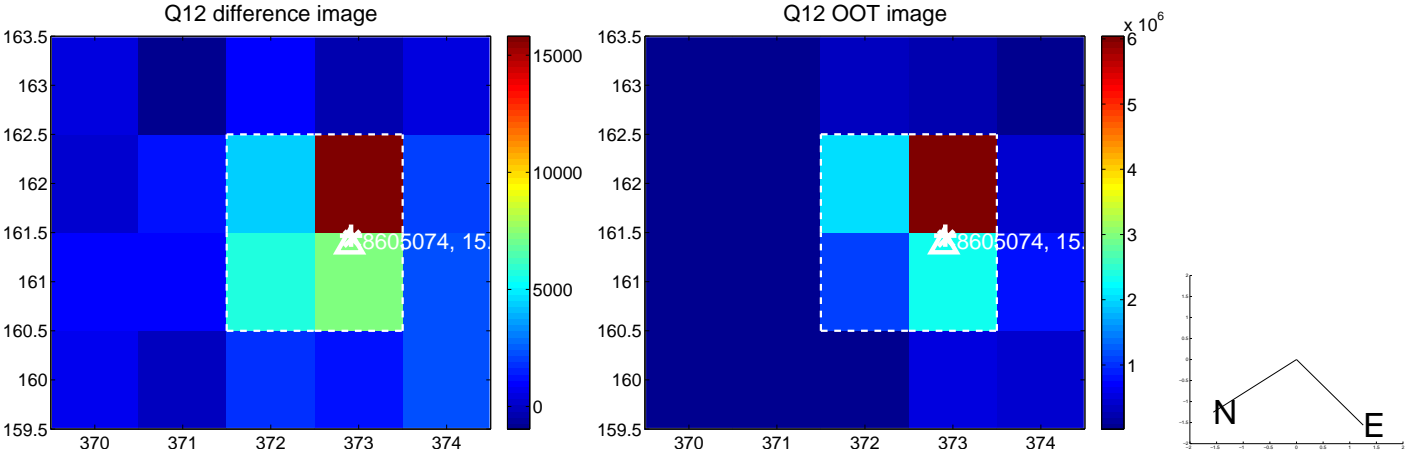
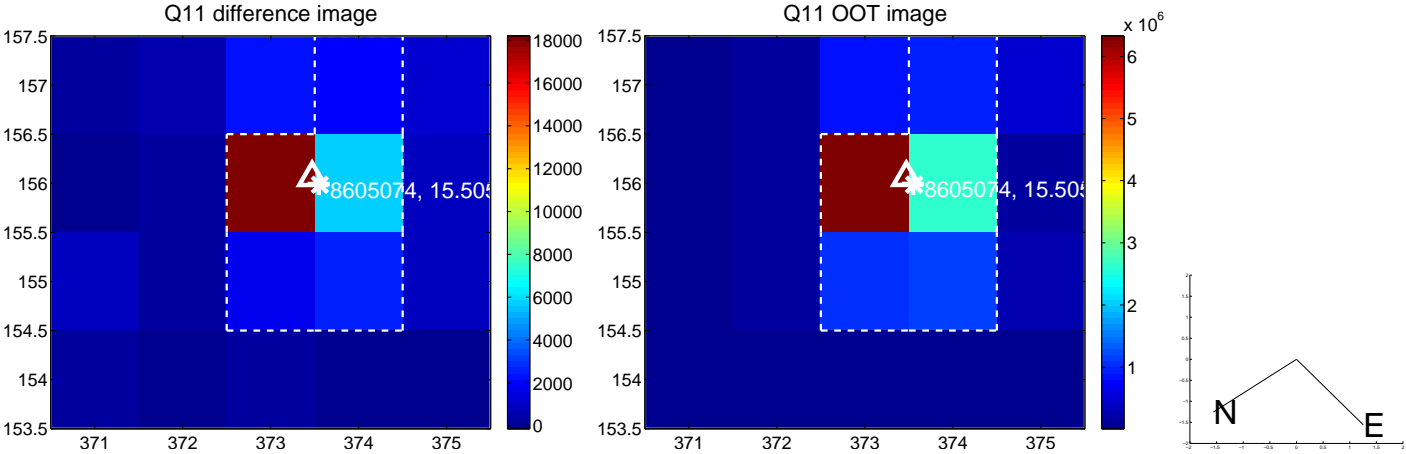
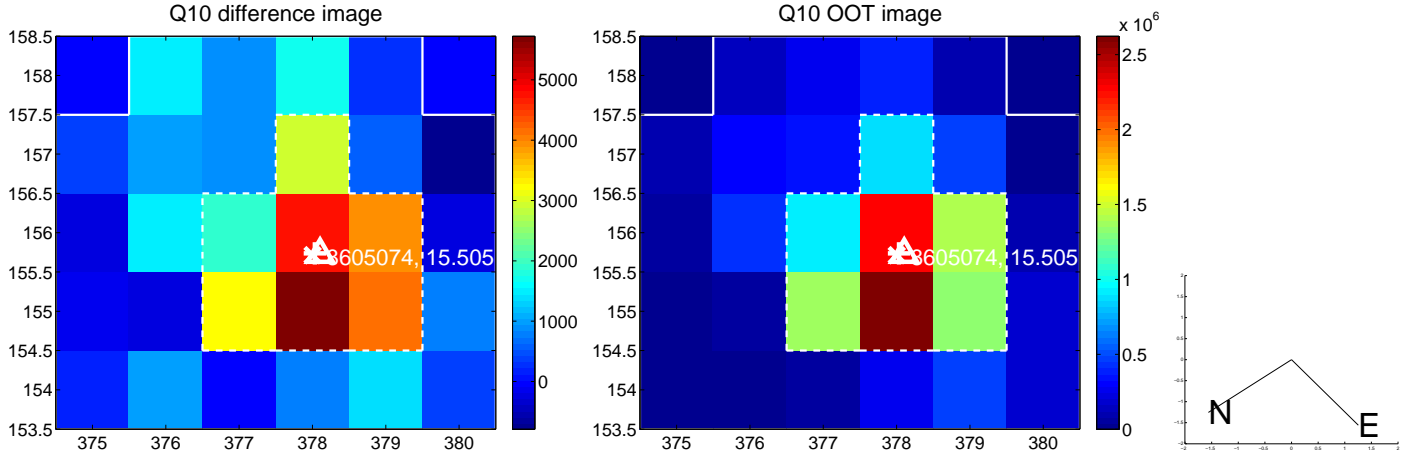
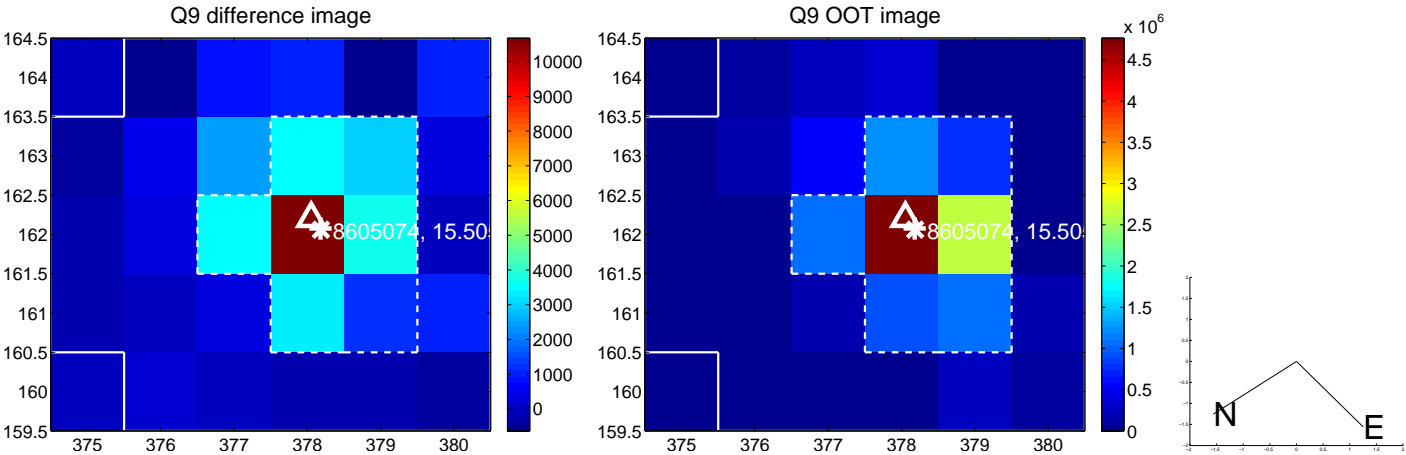
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



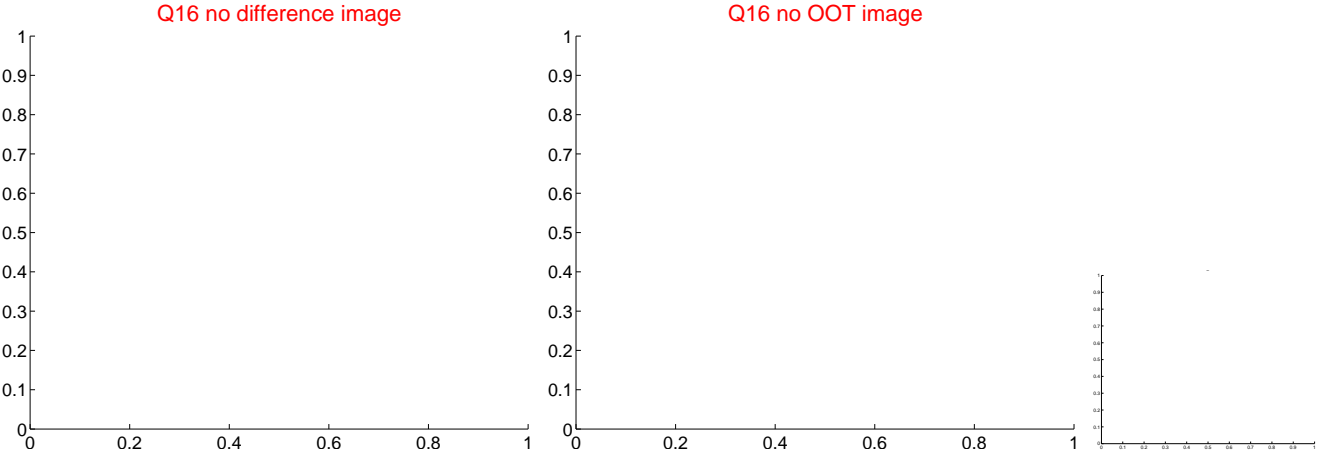
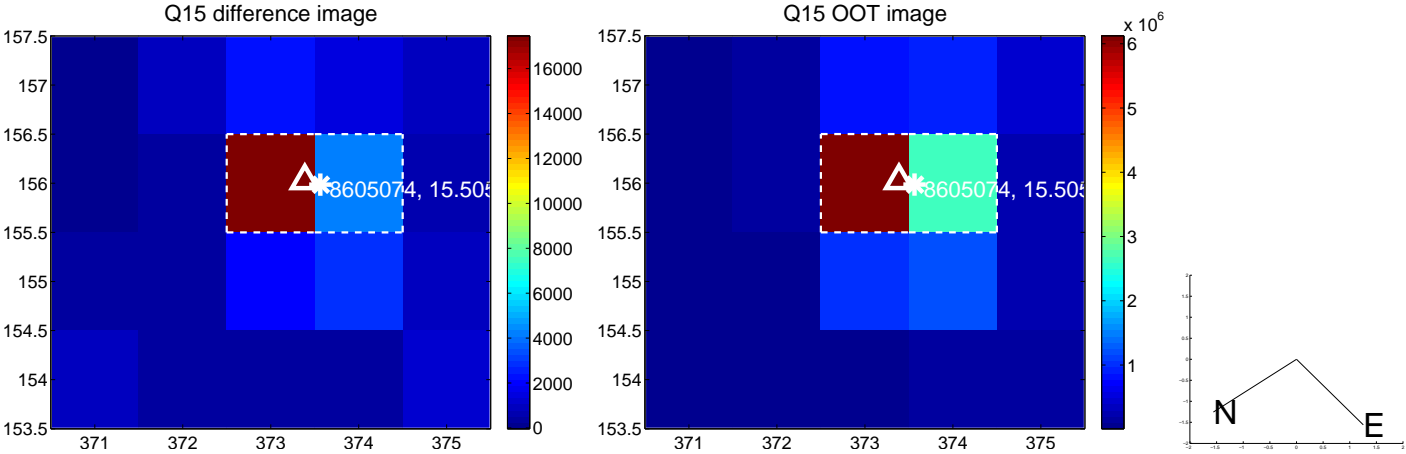
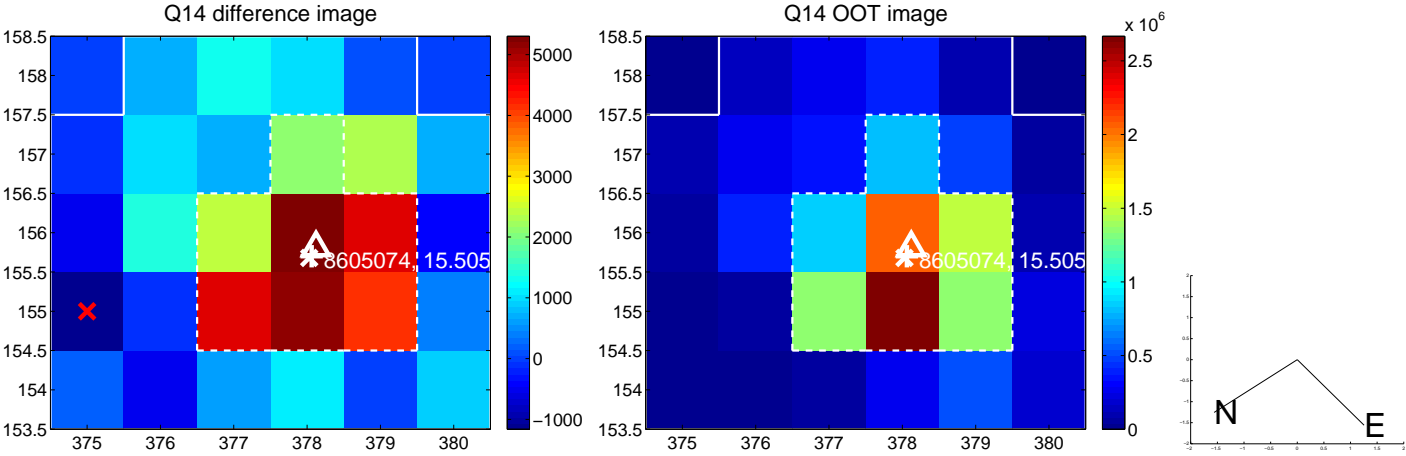
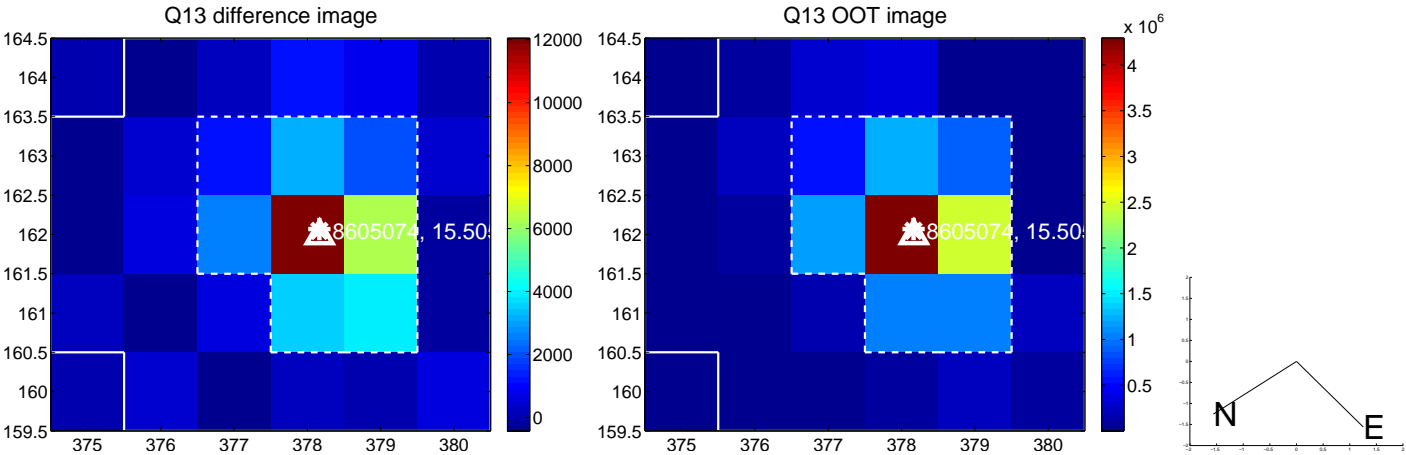
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



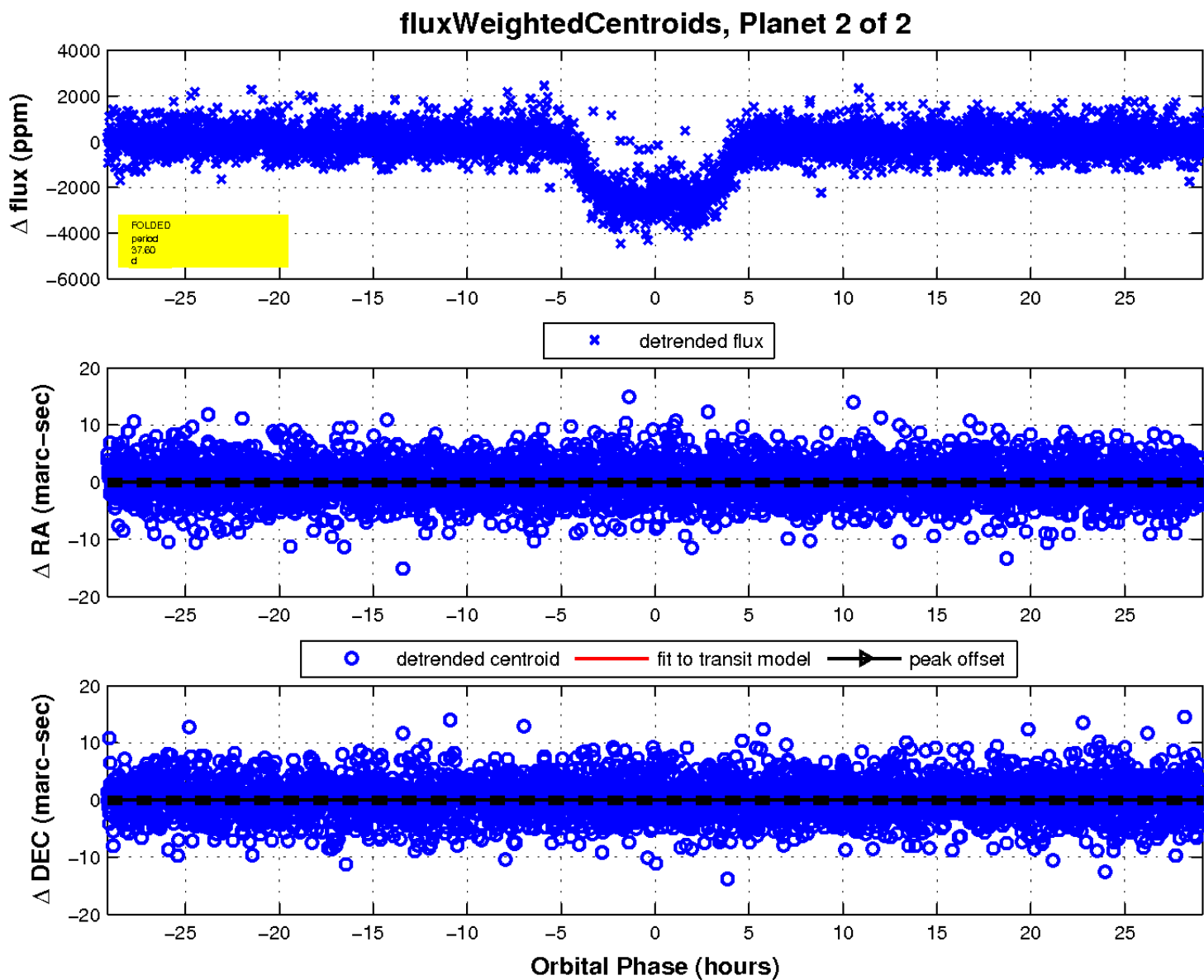
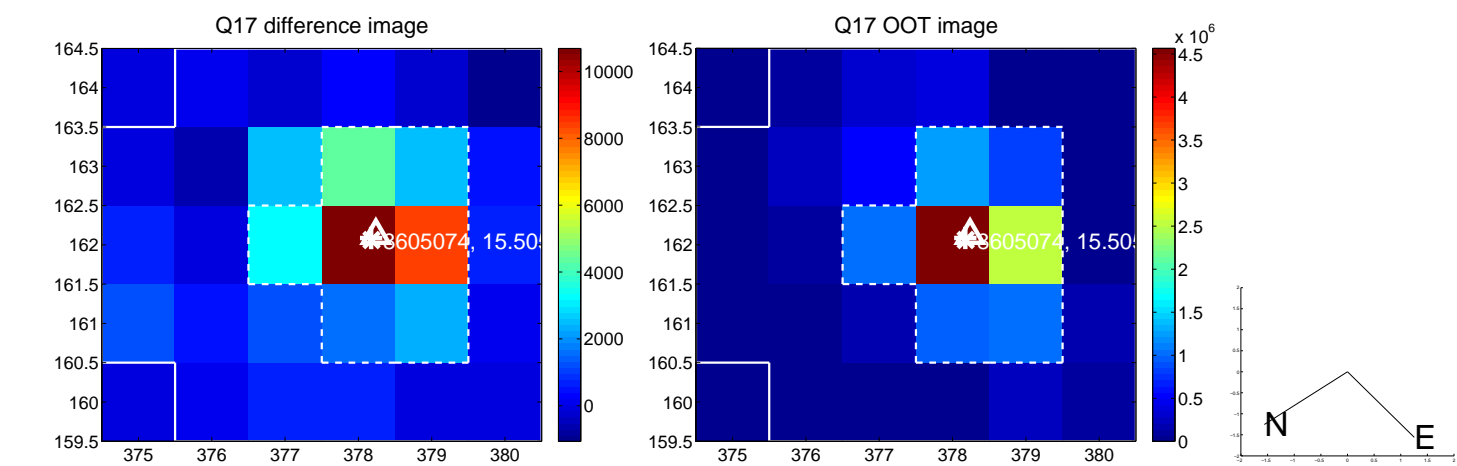
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

