

KIC 011854061

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})
011854061-01	OBS	No	413.568315	534.497752	1079.9	0.828	10.3	1.7	0.66	4559	2.16	0.19
011854061-02	OBS	No	503.942846	556.203448	3772.0	5.359	12.1	7.6	0.66	4559	3.98	0.14
011854061-03	OBS	No	124.242768	190.199399	1689.6	5.435	10.8	6.3	0.66	4559	2.79	0.94
011854061-04	OBS	8230.01	505.066293	357.598196	4479.4	21.892	8.7	7.6	0.66	4559	5.09	0.14
011854061-05	OBS	No	311.917609	385.348689	3341.6	2.545	11.4	7.3	0.66	4559	3.64	0.28
011854061-06	OBS	No	330.959108	227.924538	3016.2	3.550	10.8	6.9	0.66	4559	4.74	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011854061-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011854061-03	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
011854061-04	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
011854061-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

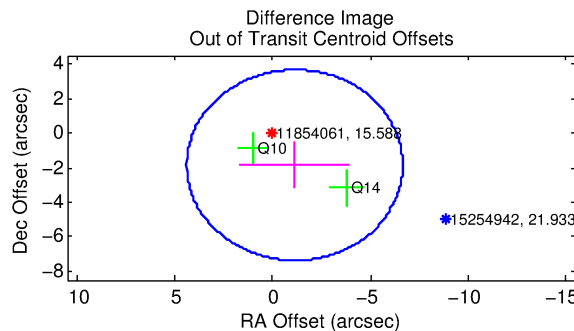
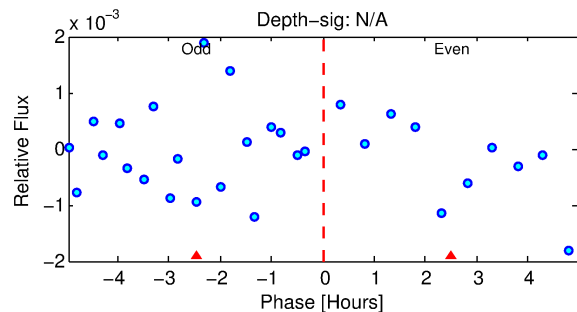
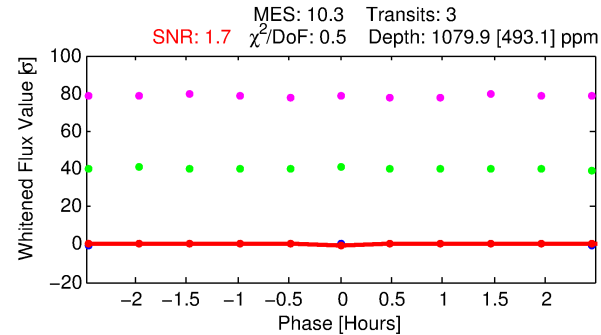
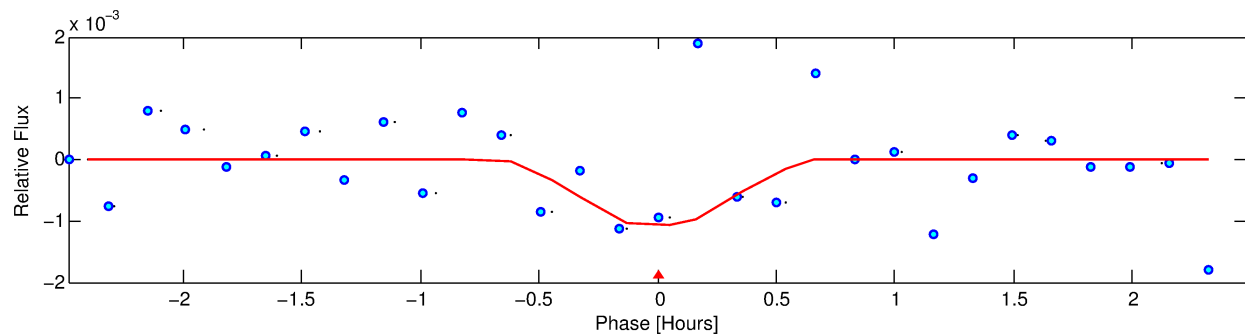
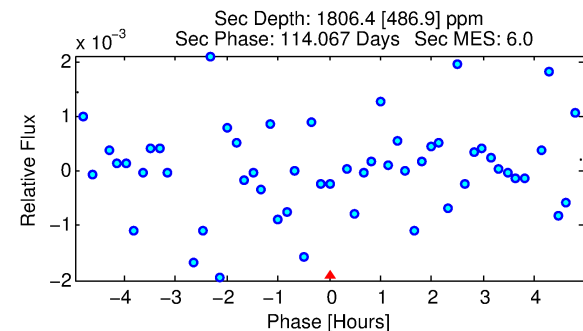
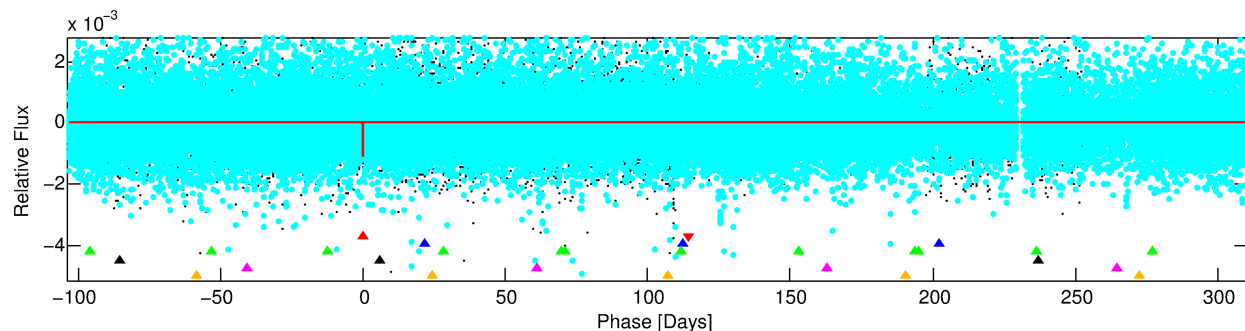
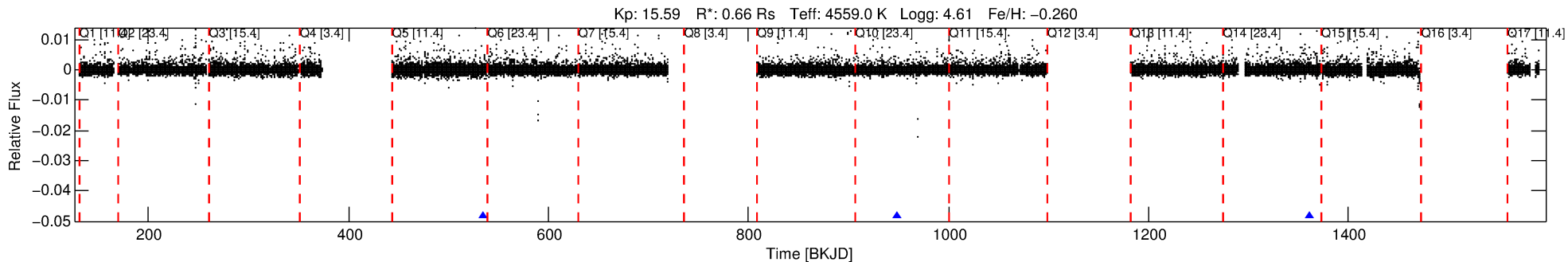
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854061-01

No Significant Match Found

DV One-Page Summary

KIC: 11854061 Candidate: 1 of 6 Period: 413.568 d



DV Fit Results:

Period = 413.56831 [0.00715] d
Epoch = 534.4978 [0.0108] BKJD
Rp/R* = 0.0303 [0.2284]
a/R* = 3676.21 [82661.56]
b = 0.37 [54.79]
Seff = 0.19 [0.03]
Teq = 168 [7] K
Rp = 2.16 [16.33] Re
a = 0.9366 [0.0684] AU
Ag = 186376.33 [2814526.09] [0.07σ]
Teffp = 5403 [20399] K [0.26σ]

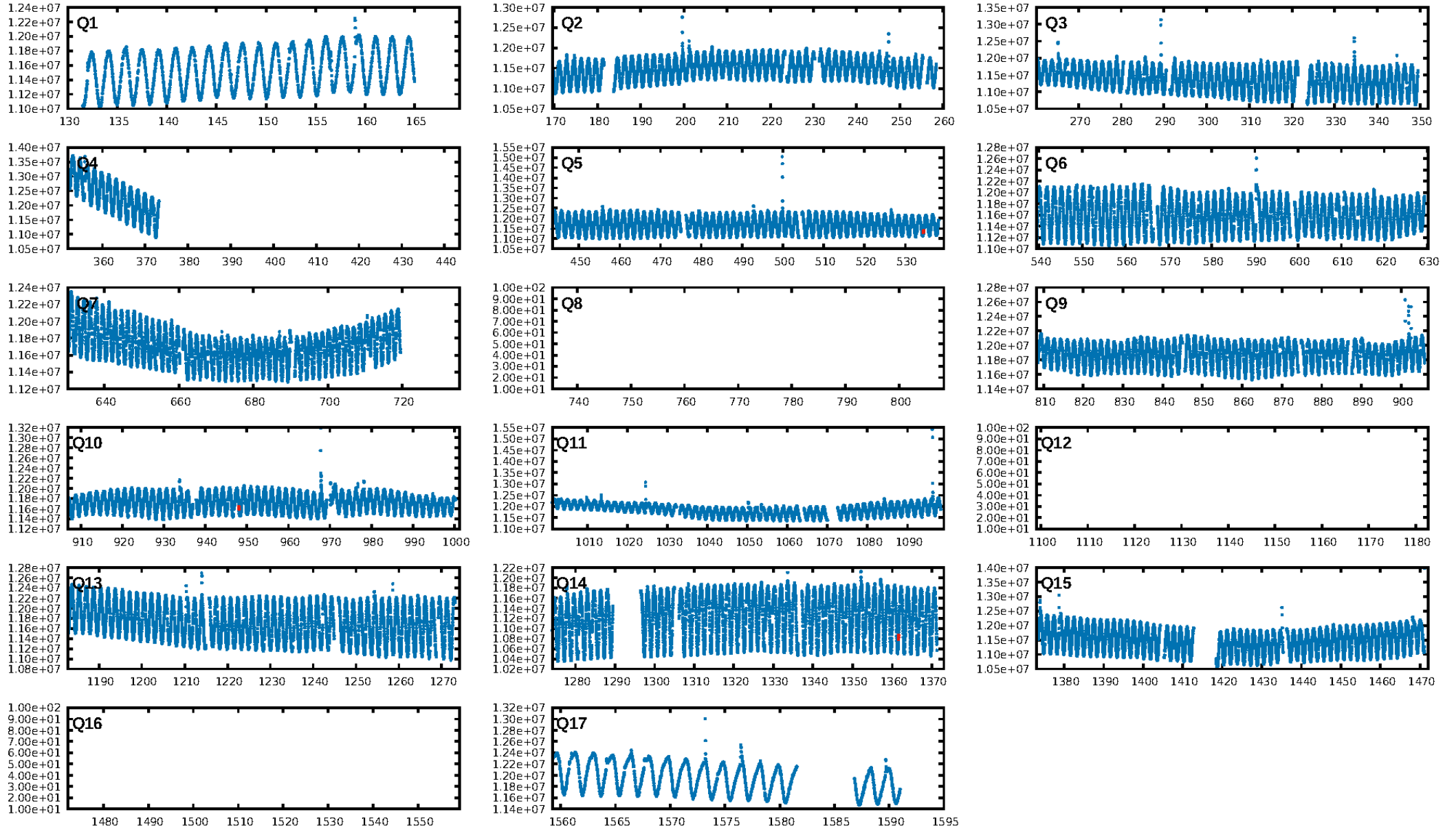
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [543.88σ]
LongPeriod-sig: 100.0% [400.02σ]
ModelChiSquare2-sig: 47.5%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 4.84e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.8284
Centroid-sig: 82.8%
Centroid-so: 2.032 arcsec [0.39σ]
OotOffset-rm: 2.170 arcsec [1.18σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 2.002 arcsec [1.12σ]
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DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

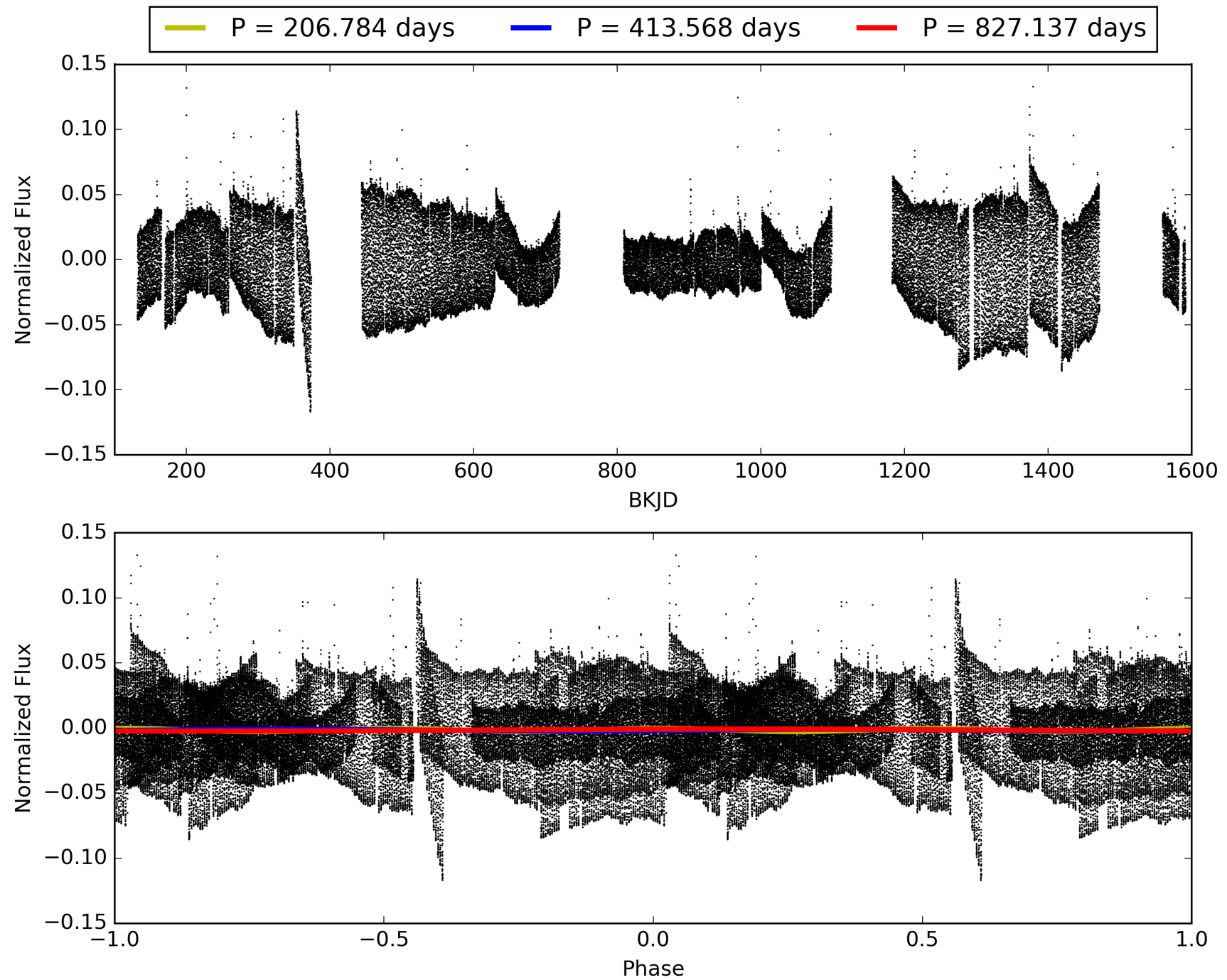
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011854061-01, PDC Light Curves

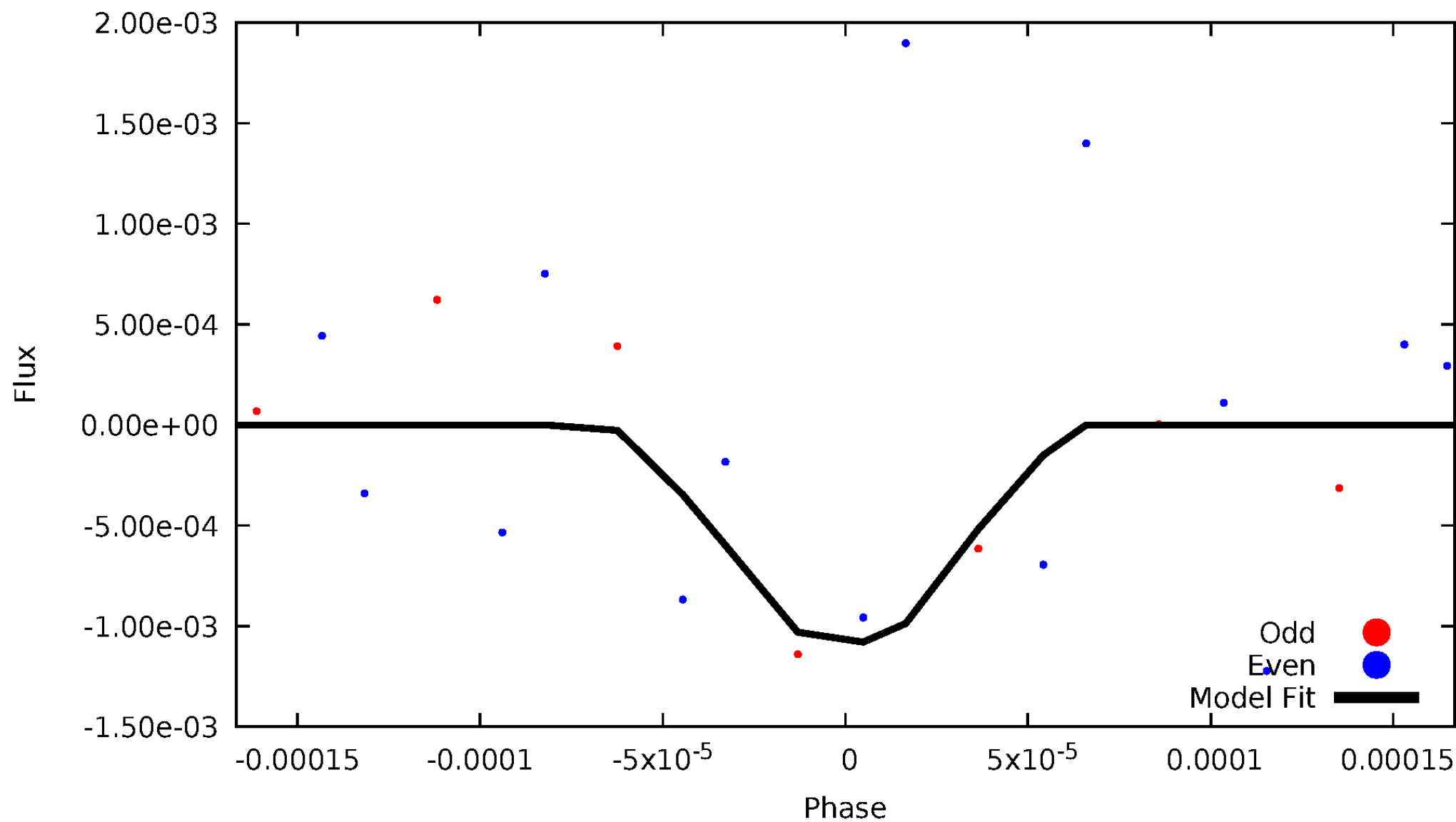


TCE 011854061-01



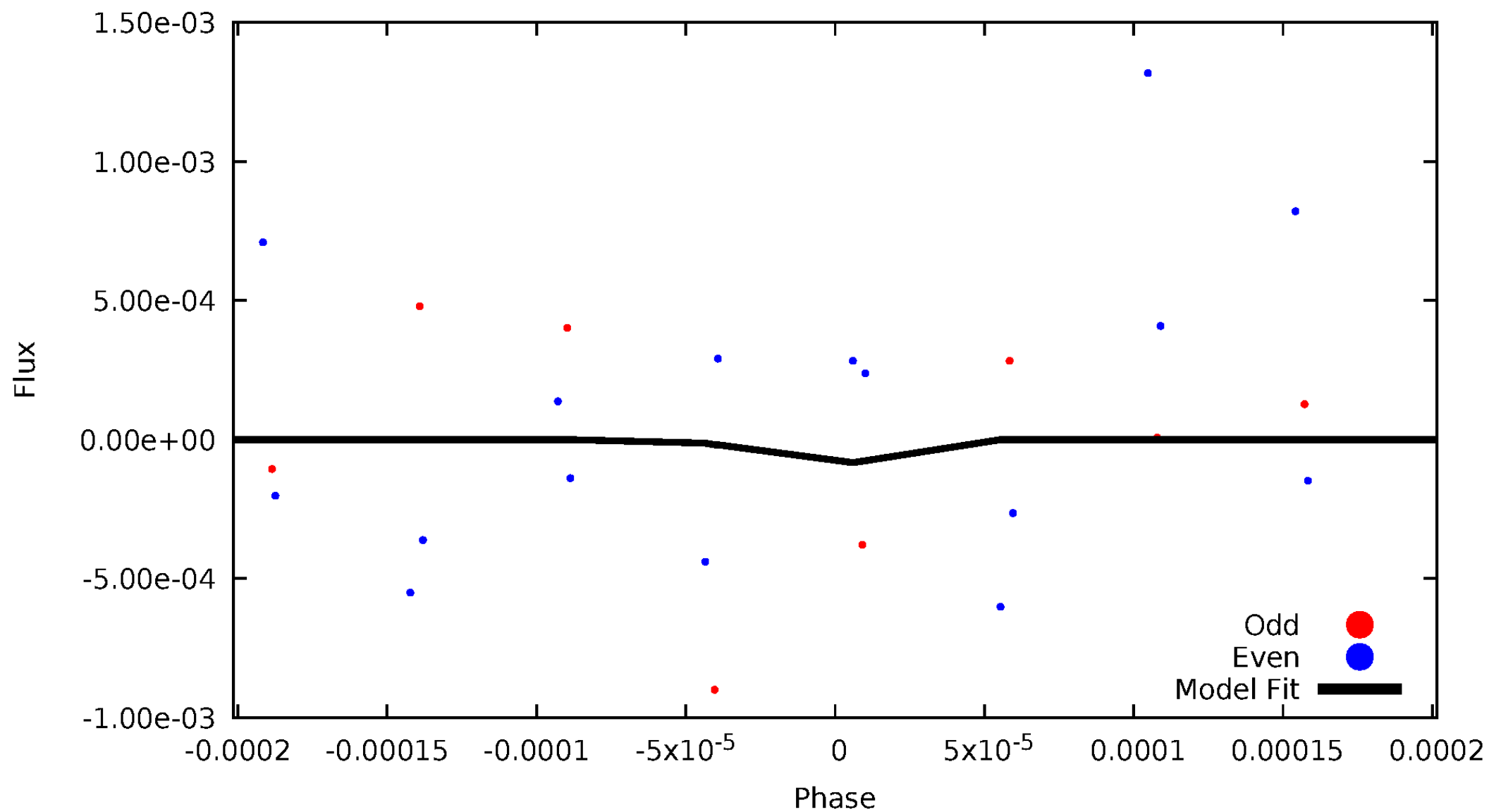
DV Odd/Even

TCE 011854061-01



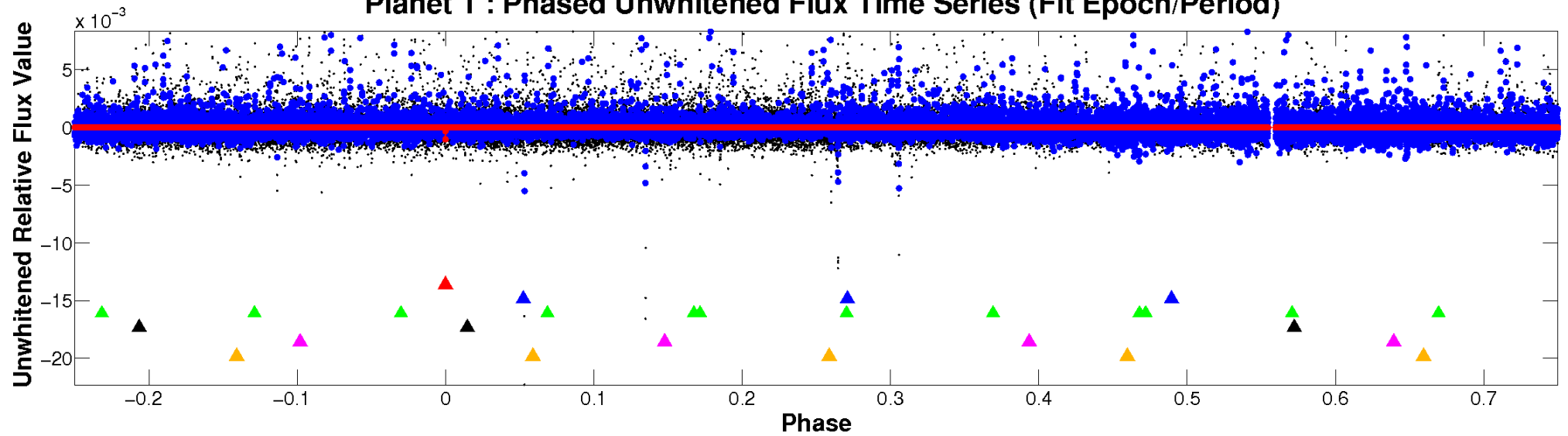
ALT Odd/Even

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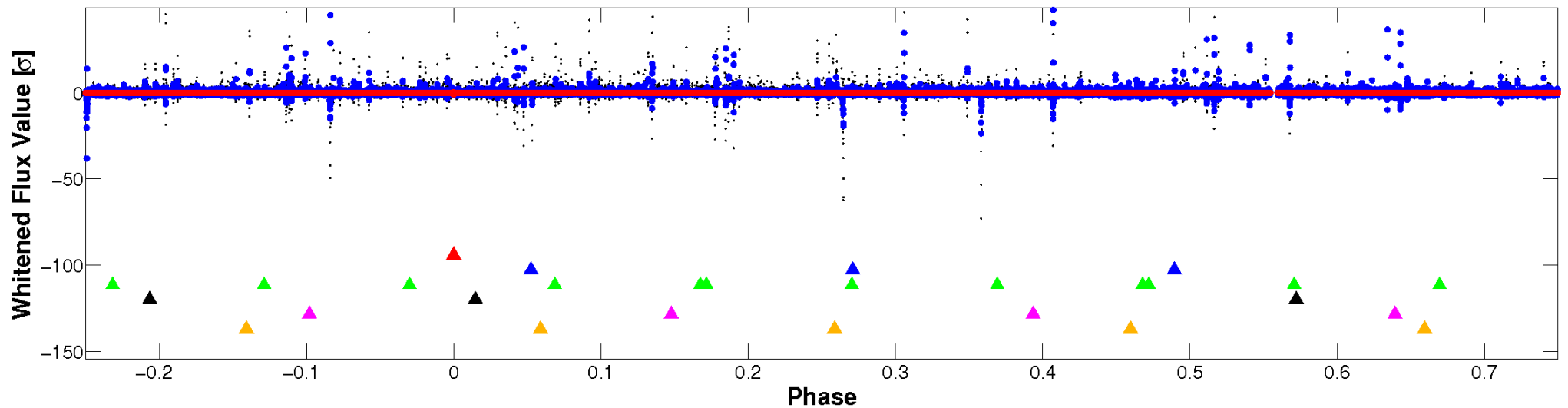


Non-Whitened Vs. Whitened Light Curve

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

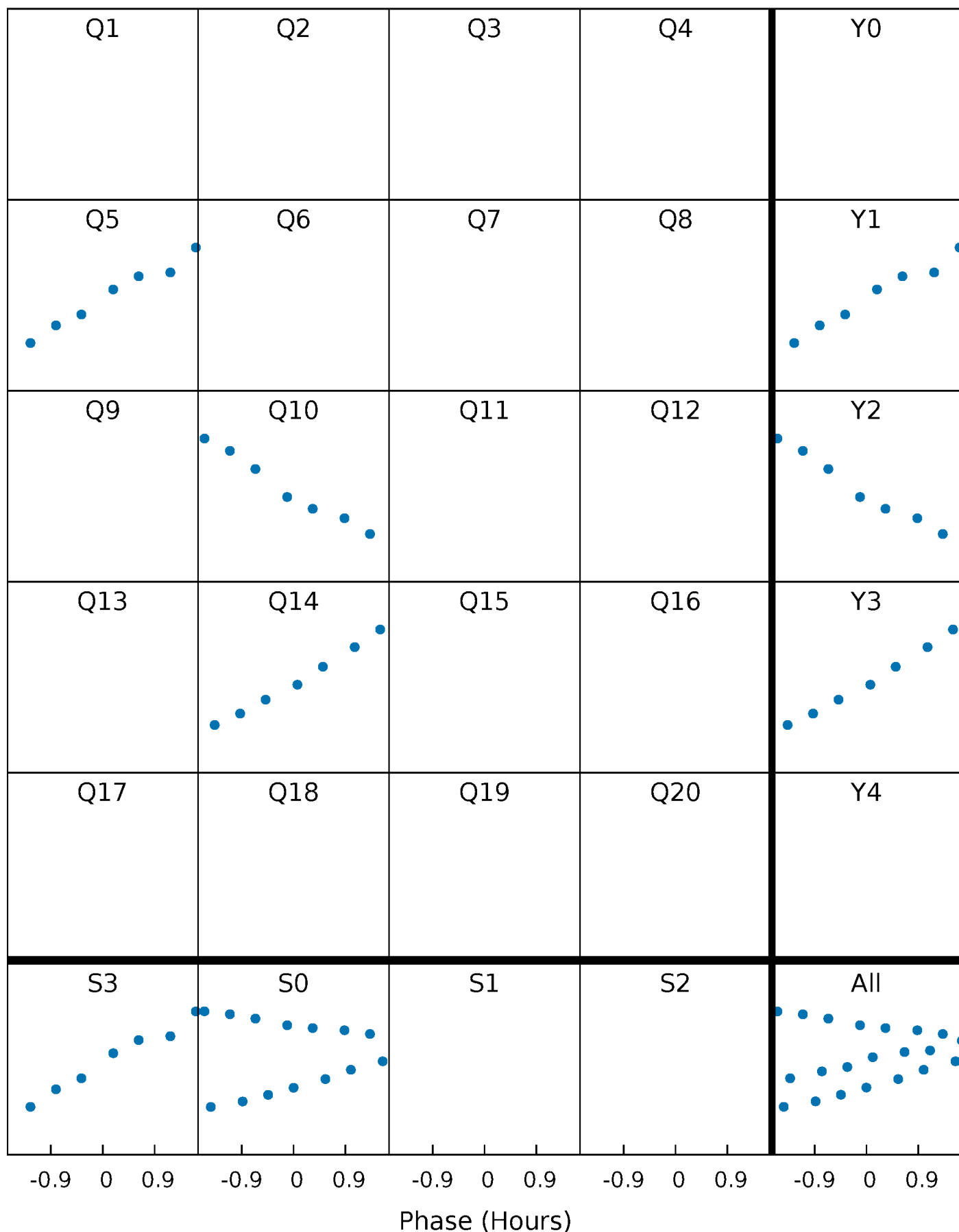


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



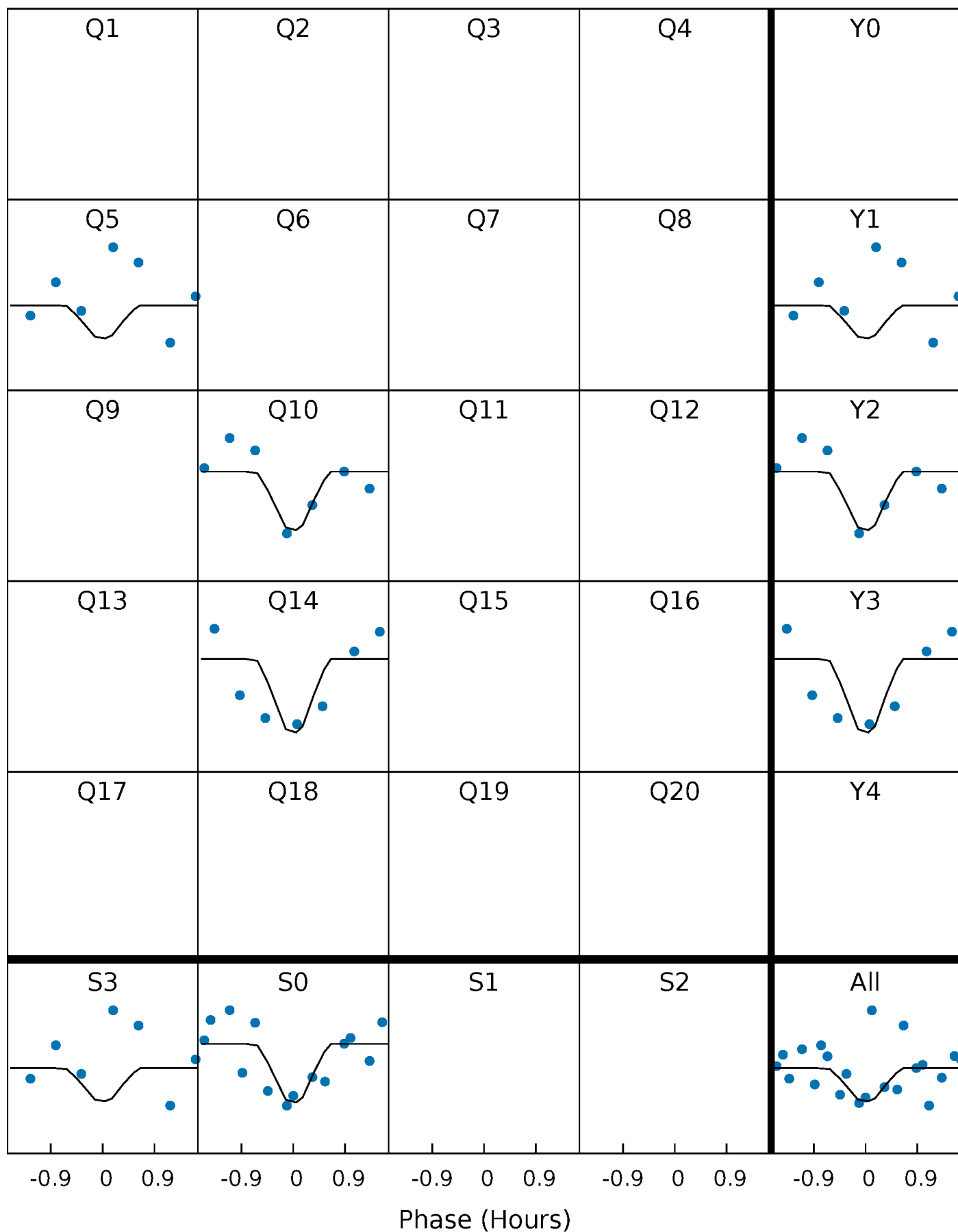
PDC Quarter-Phased Transit Curves

TCE 011854061-01 P=413.568315 Days $T_0=534.497752$ (BKJD)



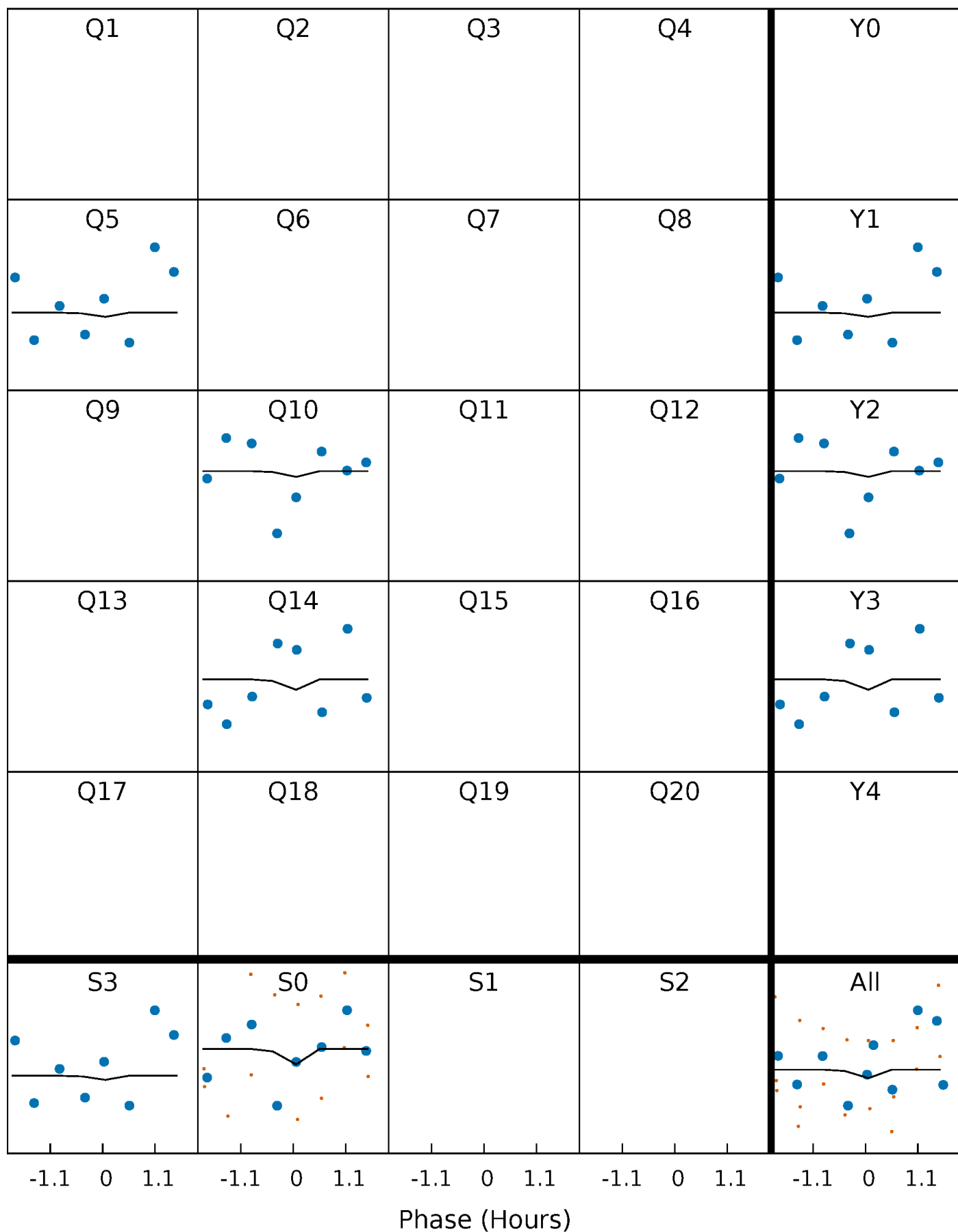
DV Quarter-Phased Transit Curves

TCE 011854061-01 P=413.568315 Days $T_0=534.497752$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

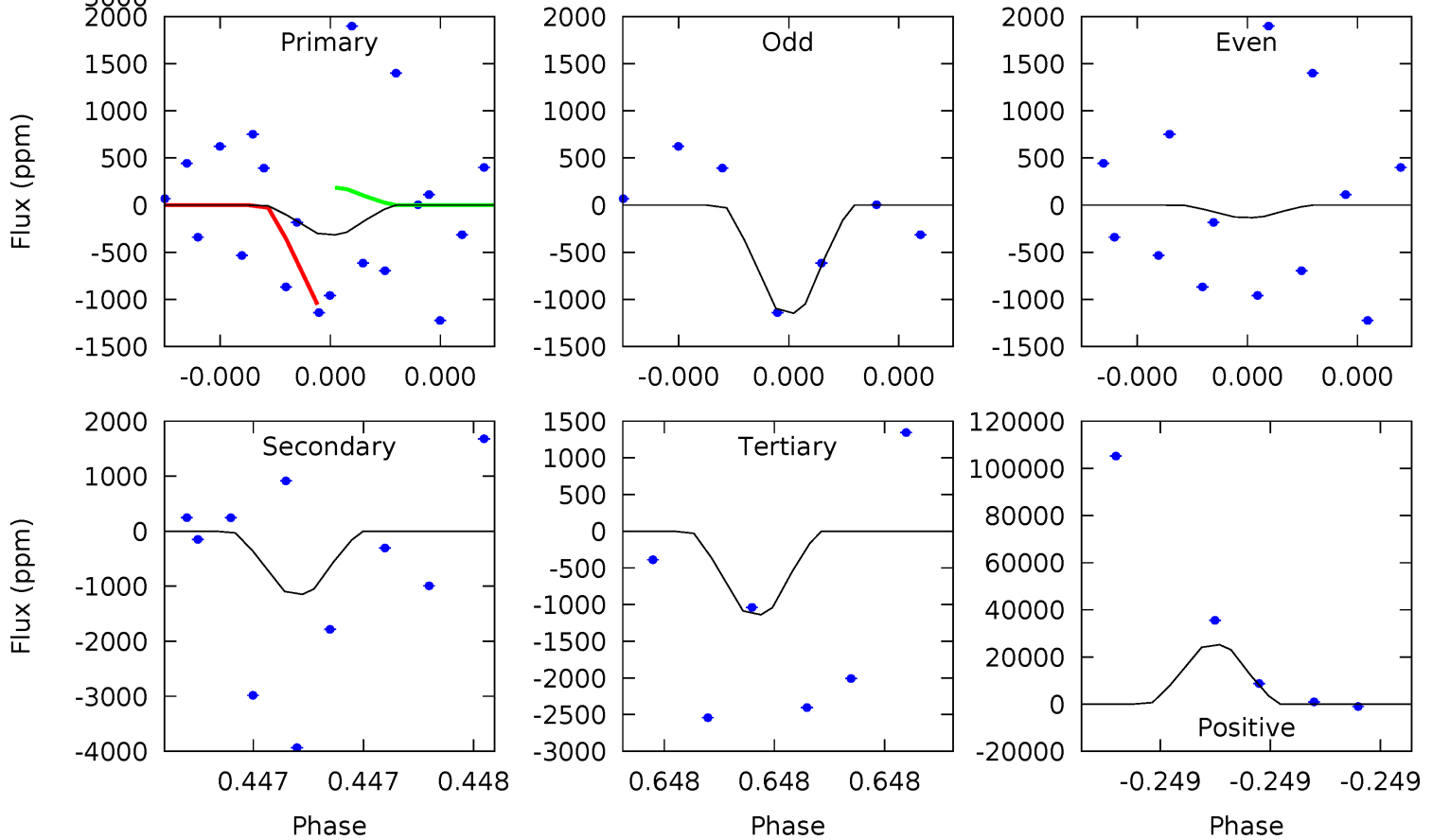
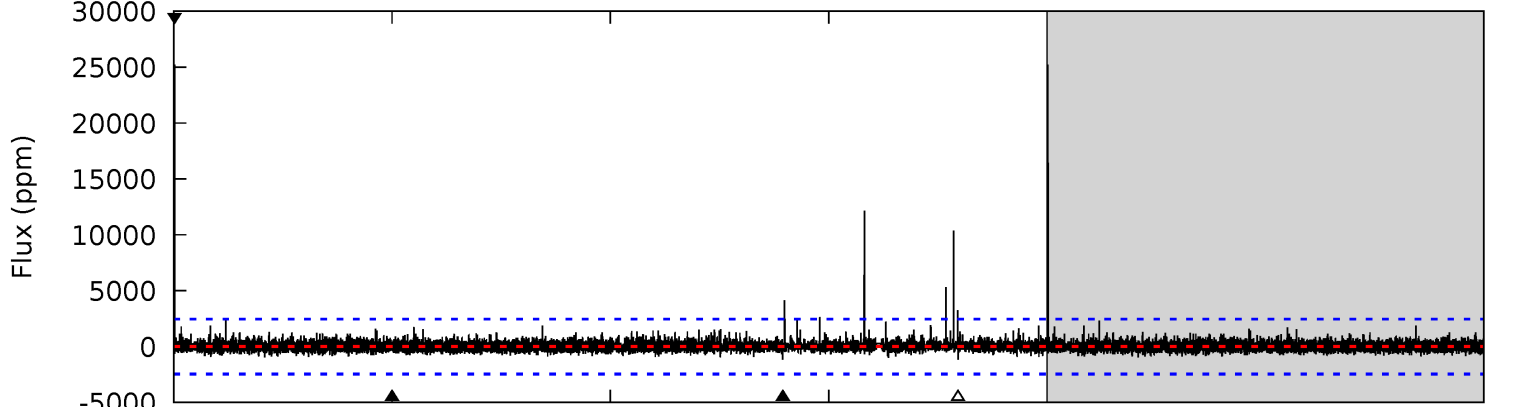
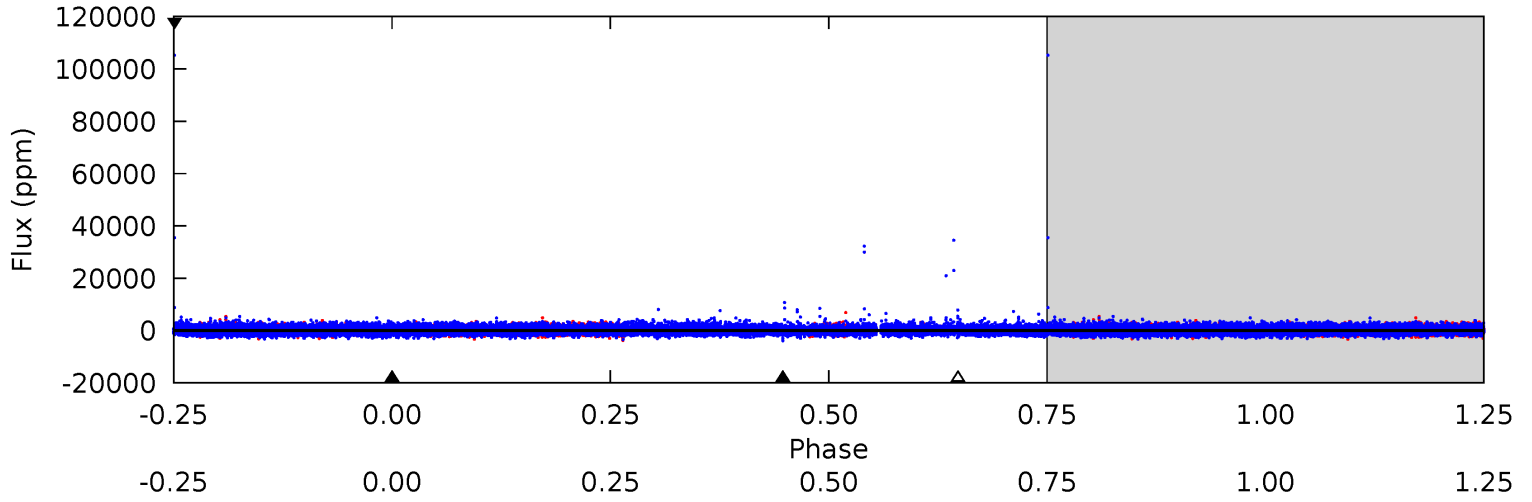
TCE 011854061-01 P=413.616122 Days $T_0=534.461245$ (BKJD)



DV Model-Shift Uniqueness Test

011854061-01, P = 413.568315 Days, E = 120.929437 Days

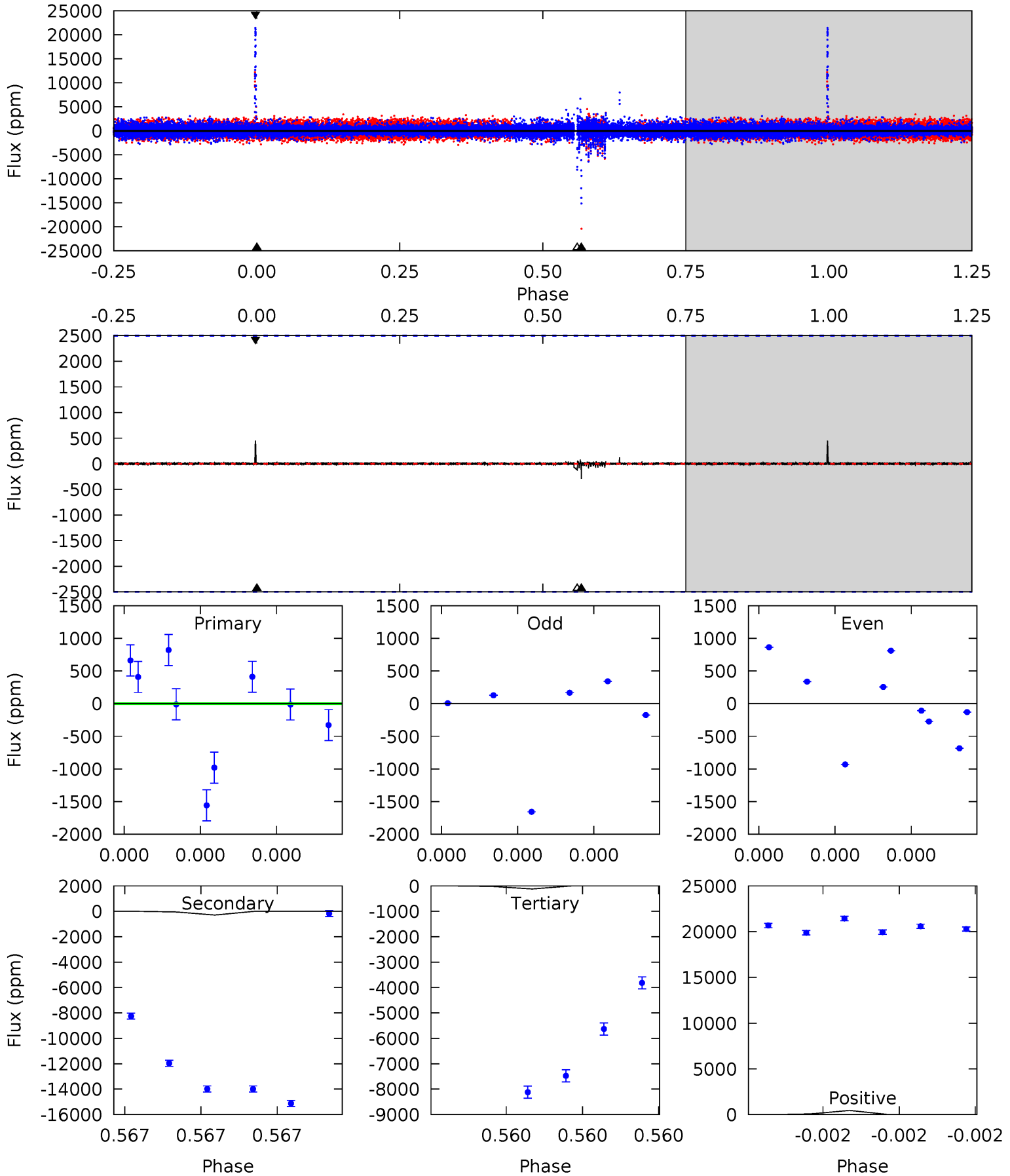
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.75	2.72	2.70	59.7	5.83	3.87	0.91	-1.95	-59.0	0.02	-57.0	0.90	0.27	0.96	0.89



Alt Model-Shift Uniqueness Test

011854061-01, P = 413.616122 Days, E = 120.845123 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.05	0.68	0.28	1.05	5.85	3.90	0.03	-0.23	-1.00	0.40	-0.37	0.30	-0.12	0.61	0.28



Stellar Parameters For KIC 011854061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4559^{+143}_{-143}	$4.612^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.655^{+0.052}_{-0.058}$	$0.641^{+0.077}_{-0.051}$	$3.209^{+0.811}_{-0.367}$
	+3%/-3%	+1%/-1%	+115%/-115%	+8%/-9%	+12%/-8%	+25%/-11%
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 011854061-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1148 ± 422	$12.94^{+11.74}_{-8.77}$	234^{+8}_{-9}	2673^{+1021}_{-410}	3166^{+28784}_{-2344}
Alt.	-292 ± 427	$11.06^{+12.69}_{-8.20}$	233^{+8}_{-9}	2199^{+1056}_{-4258}	604^{+12385}_{-970}

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 $A_{obs} \gg 1.0$

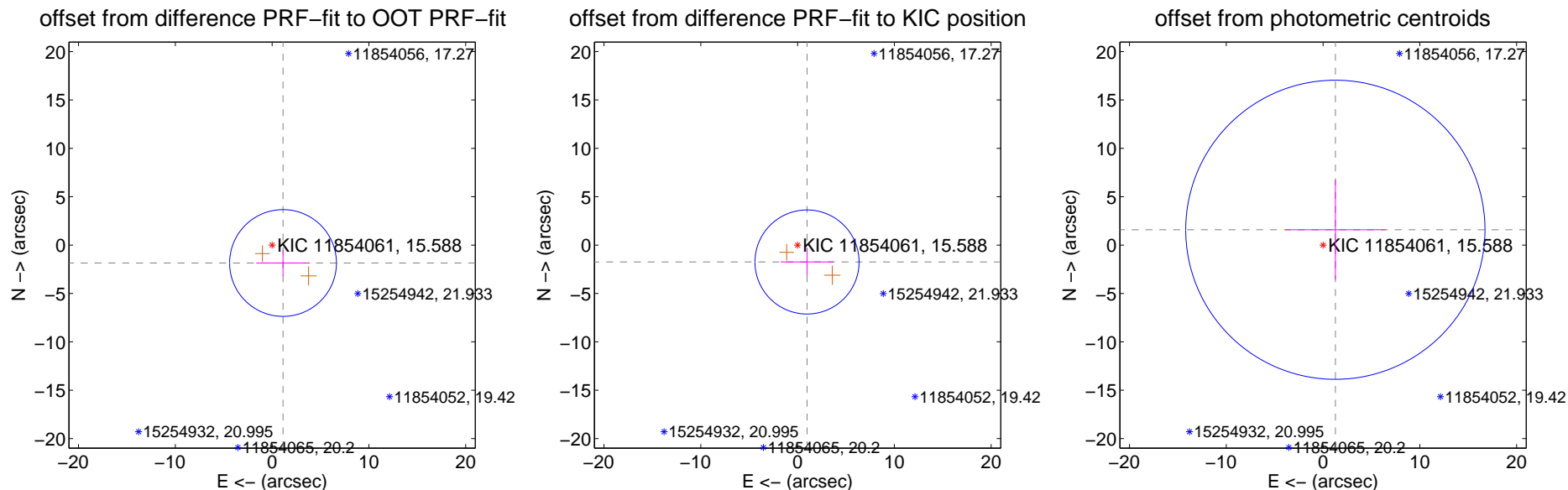
DV Centroid Data

Supplemental centroid analysis for 011854061-01. Kepler magnitude: 15.59. Transit SNR 1.74

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.170 ± 1.839	1.18	-1.129 ± 2.774	-1.853 ± 1.336
PRF-fit source offset from KIC position	2.002 ± 1.793	1.12	-0.976 ± 2.741	-1.748 ± 1.369
photometric centroid source offset	2.03 ± 5.15	0.39	-1.27 ± 5.18	1.58 ± 5.13

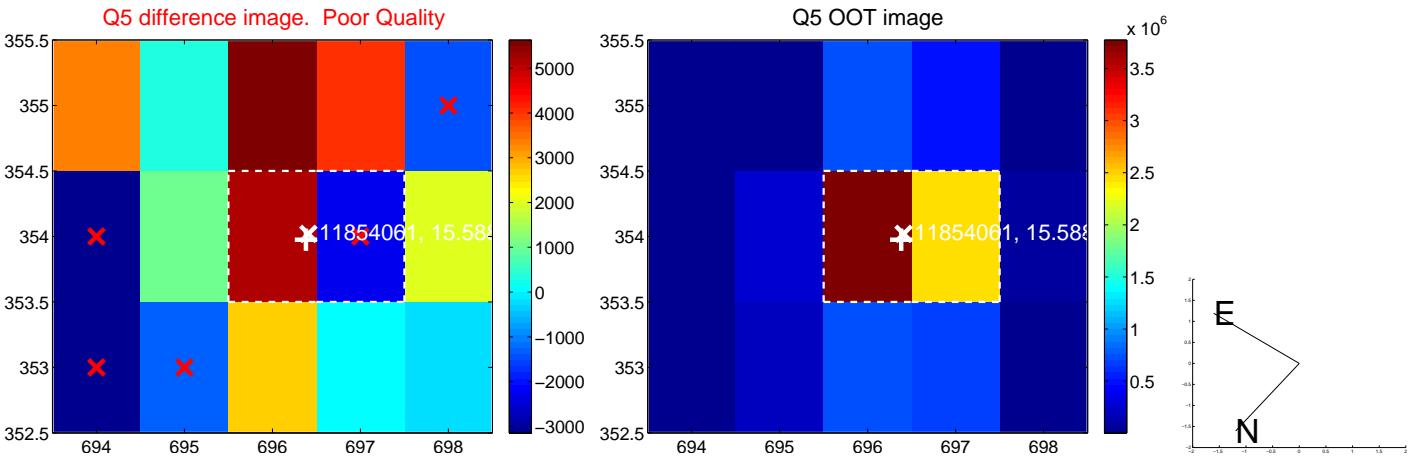


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

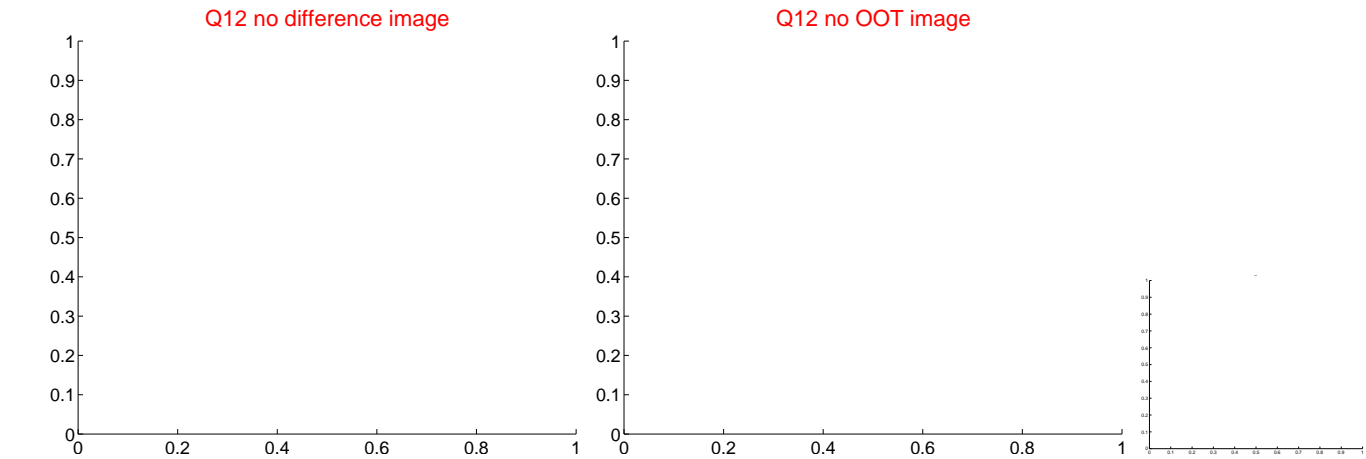
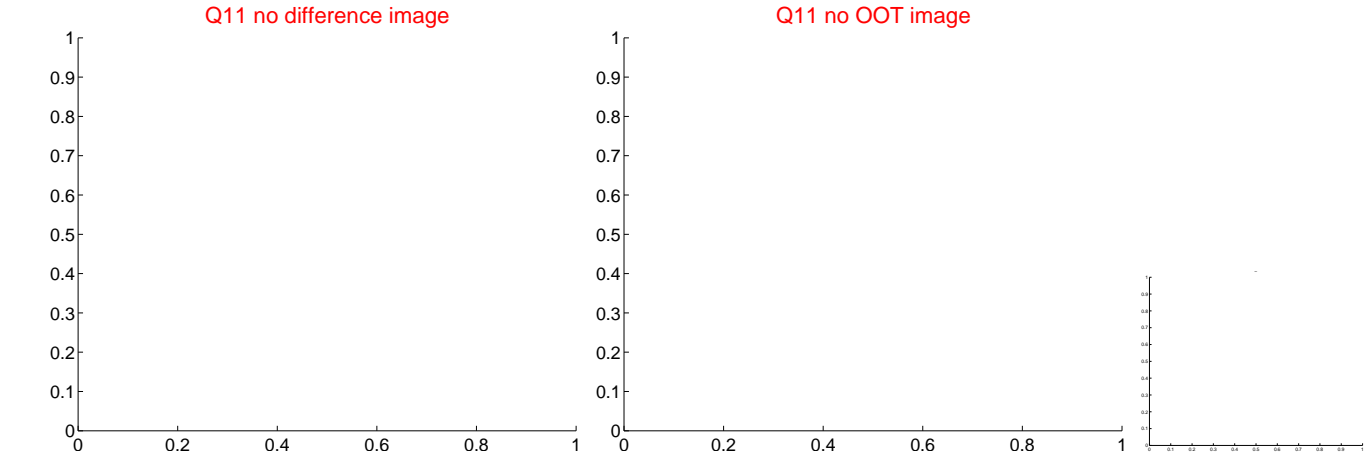
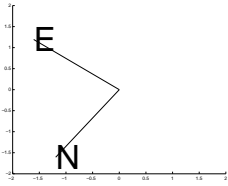
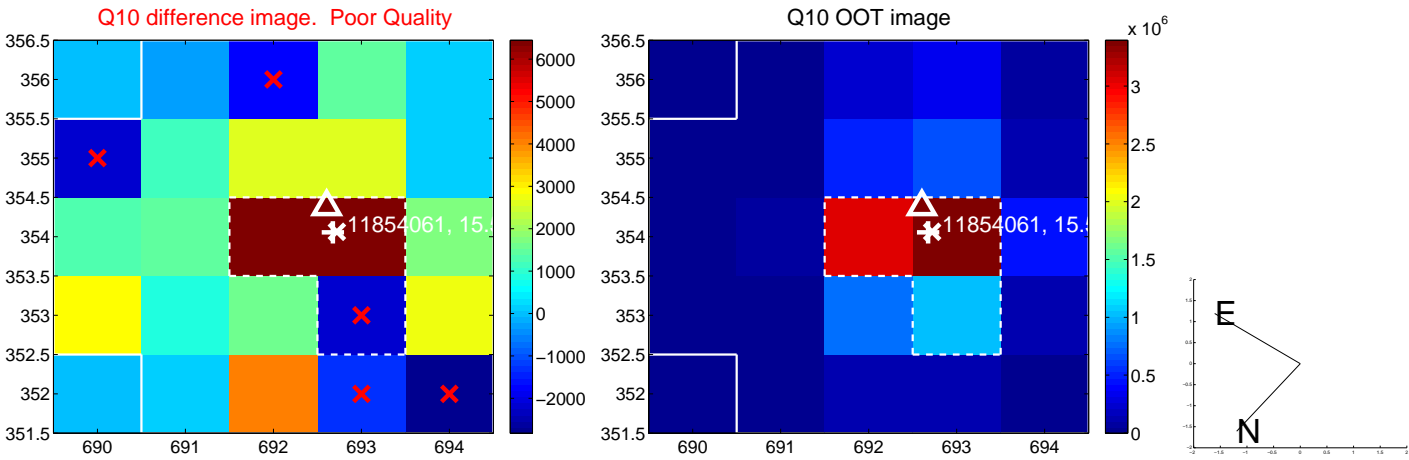
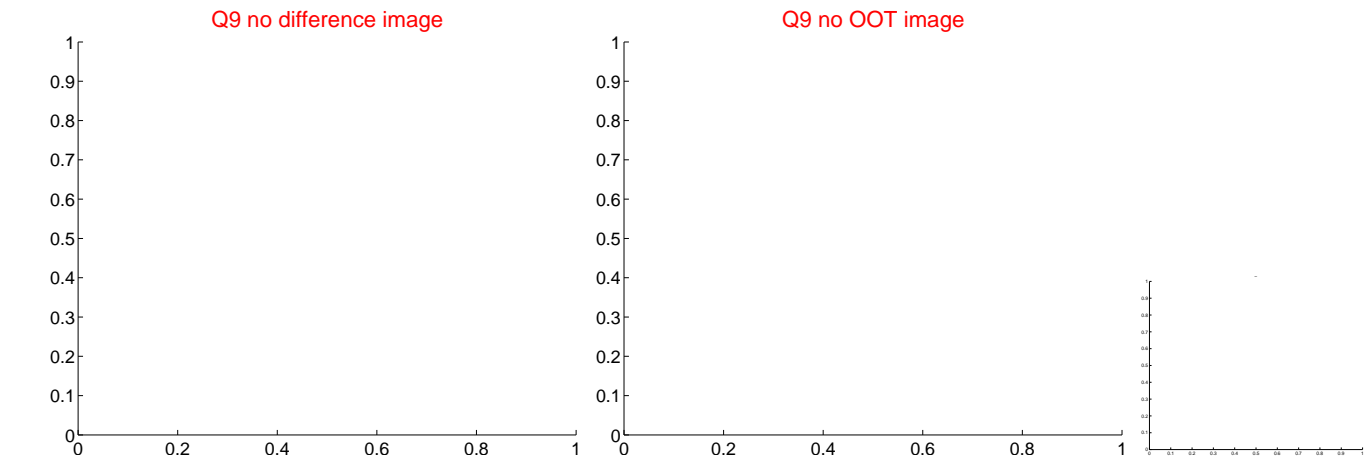
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



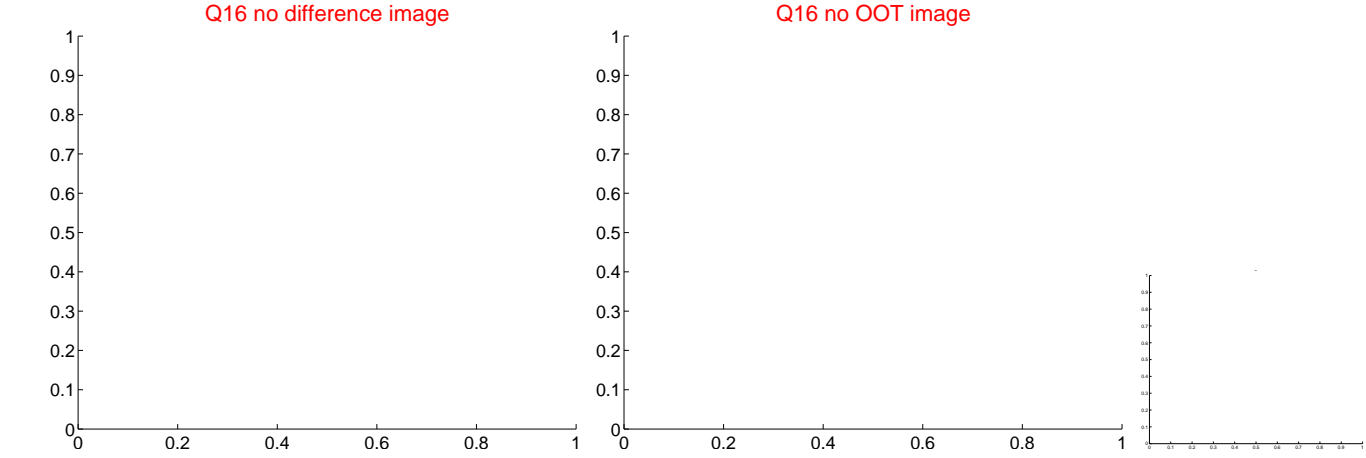
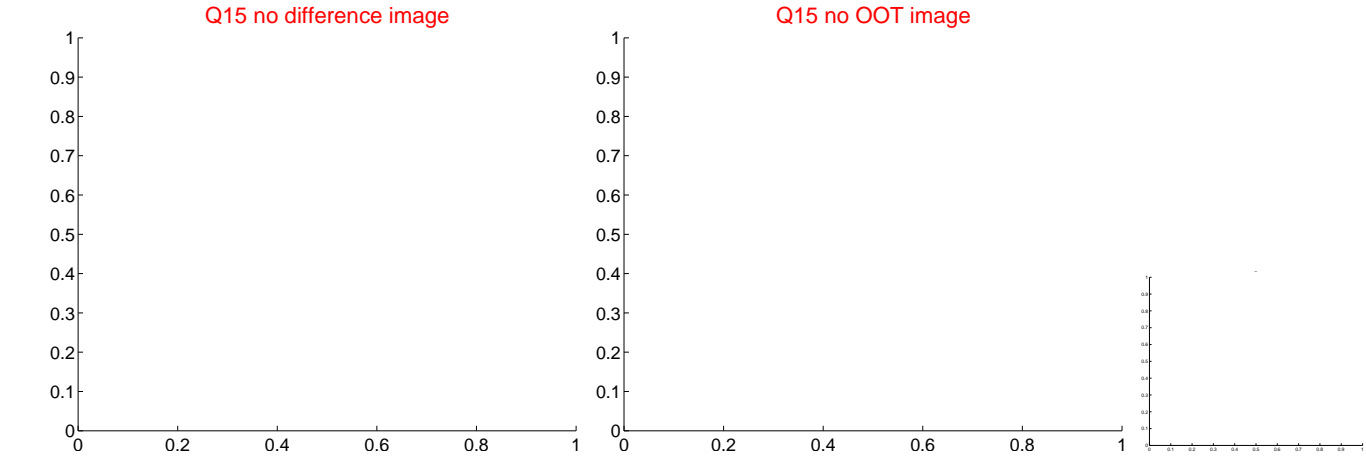
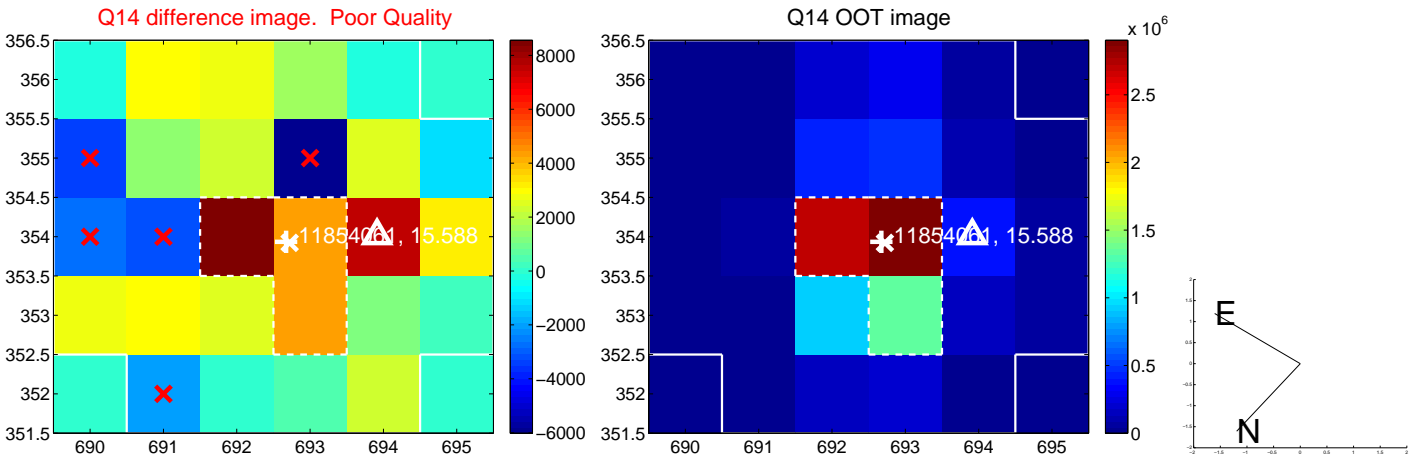
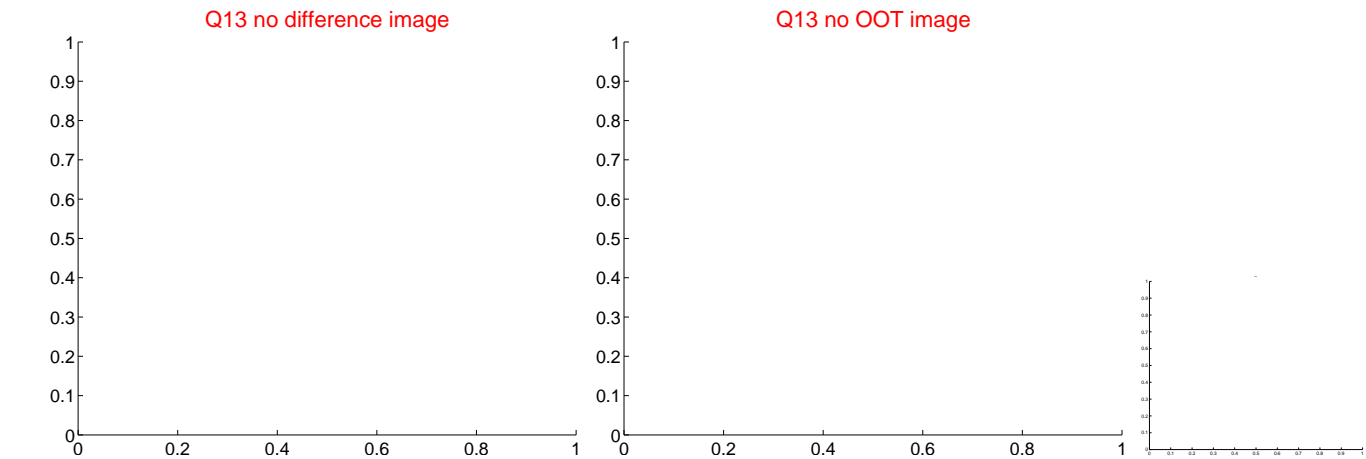
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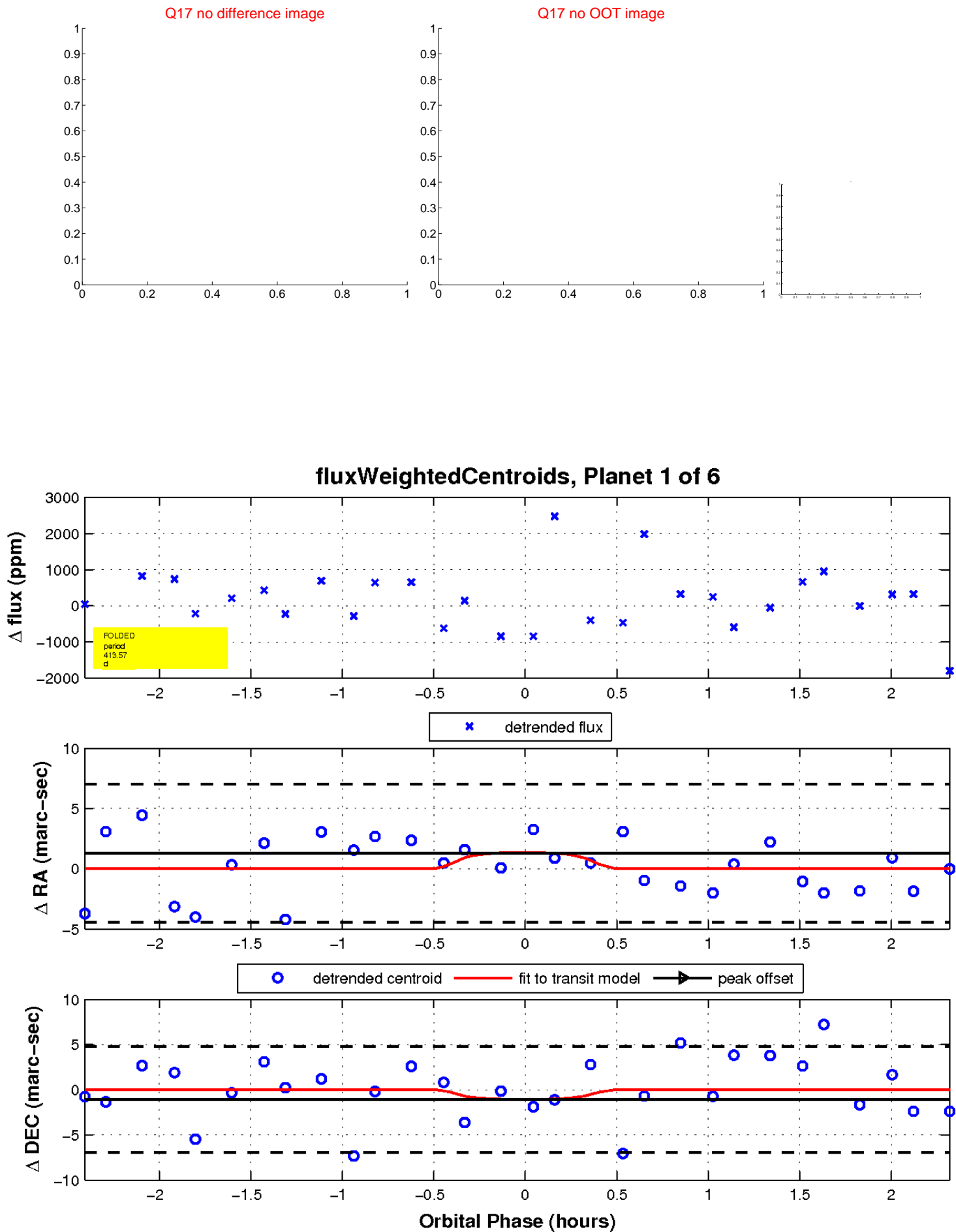
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

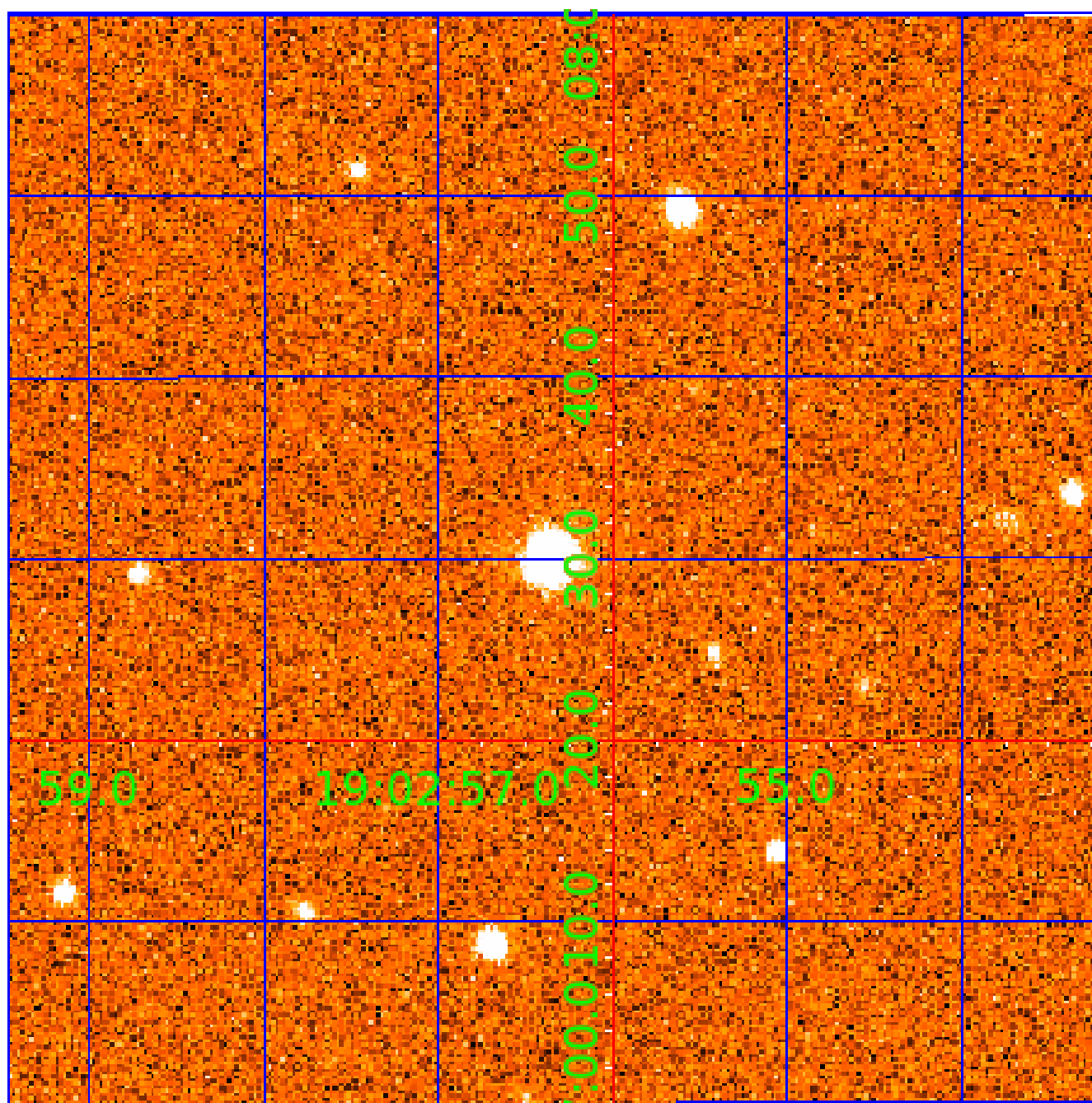


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011854061

Q1-17 DR25 TCE Parameters

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Robovetter Results

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011854061-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011854061-03	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
011854061-04	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
011854061-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

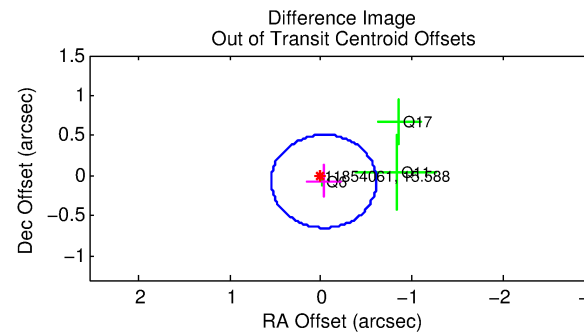
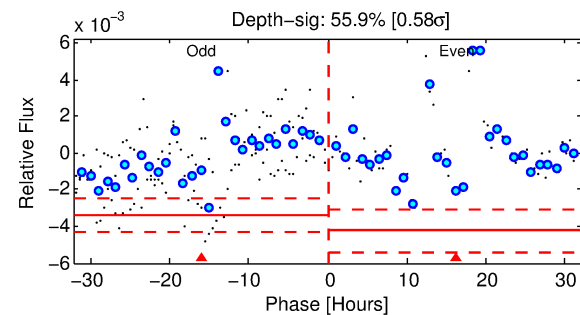
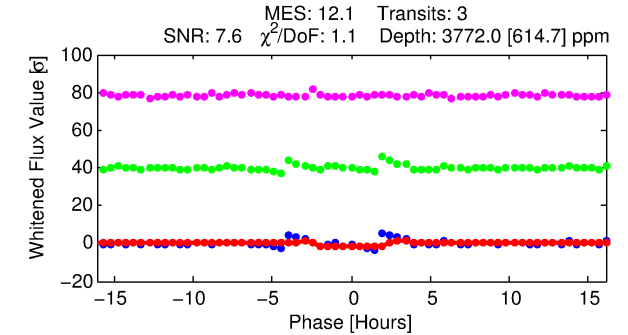
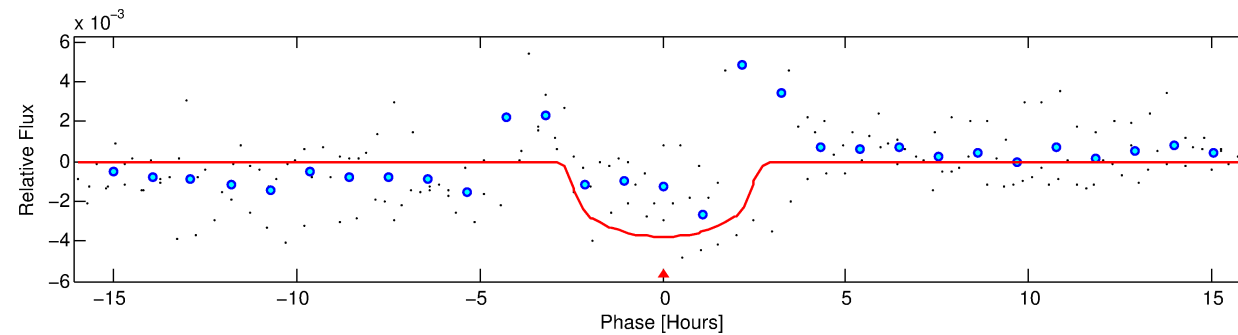
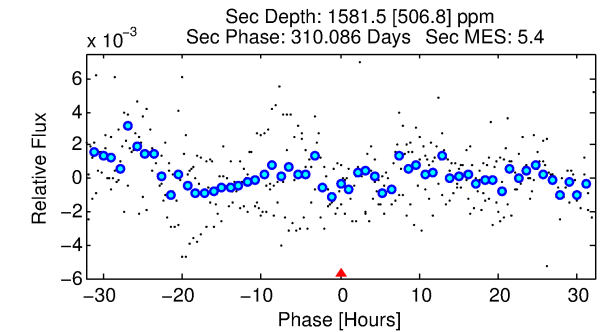
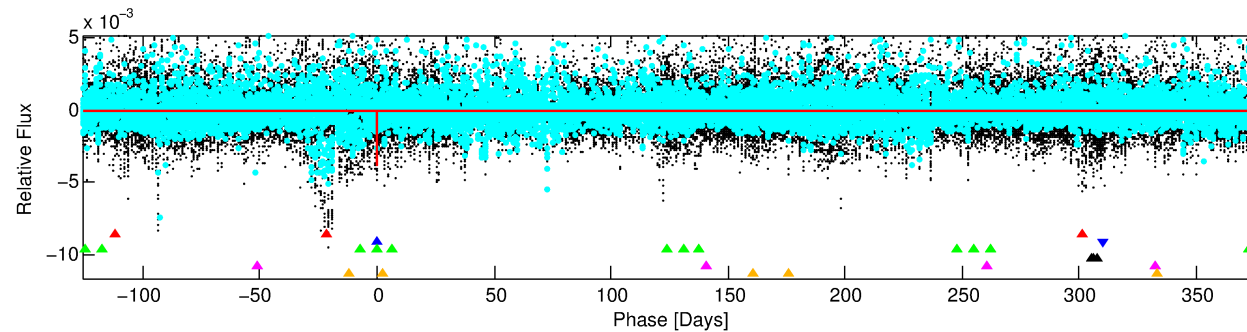
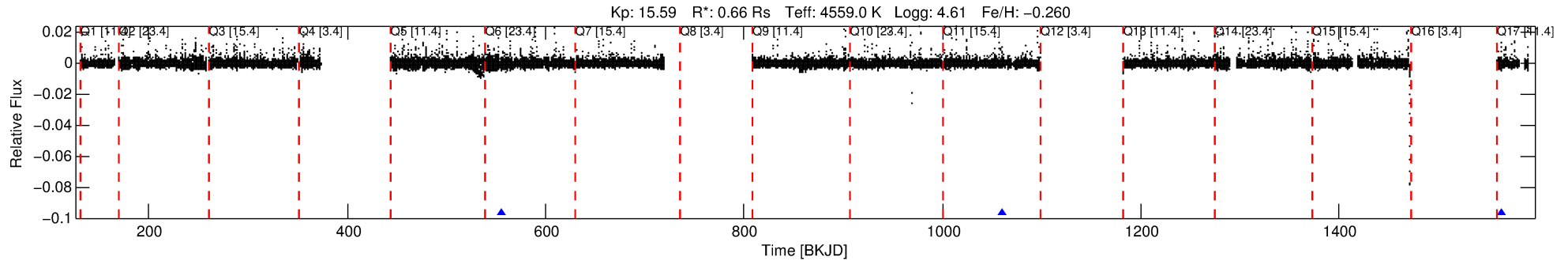
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854061-02

No Significant Match Found

DV One-Page Summary

KIC: 11854061 Candidate: 2 of 6 Period: 503.943 d



DV Fit Results:

Period = 503.94285 [0.00493] d
Epoch = 556.2034 [0.0064] BKJD
Rp/R* = 0.0557 [0.0503]
a/R* = 692.57 [1853.69]
b = 0.43 [5.19]
Seff = 0.15 [0.02]
Teq = 157 [6] K
Rp = 3.98 [3.61] Re
a = 1.0685 [0.0780] AU
Ag = 62656.34 [115073.06] [0.54 σ]
Teffp = 3852 [1770] K [2.09 σ]

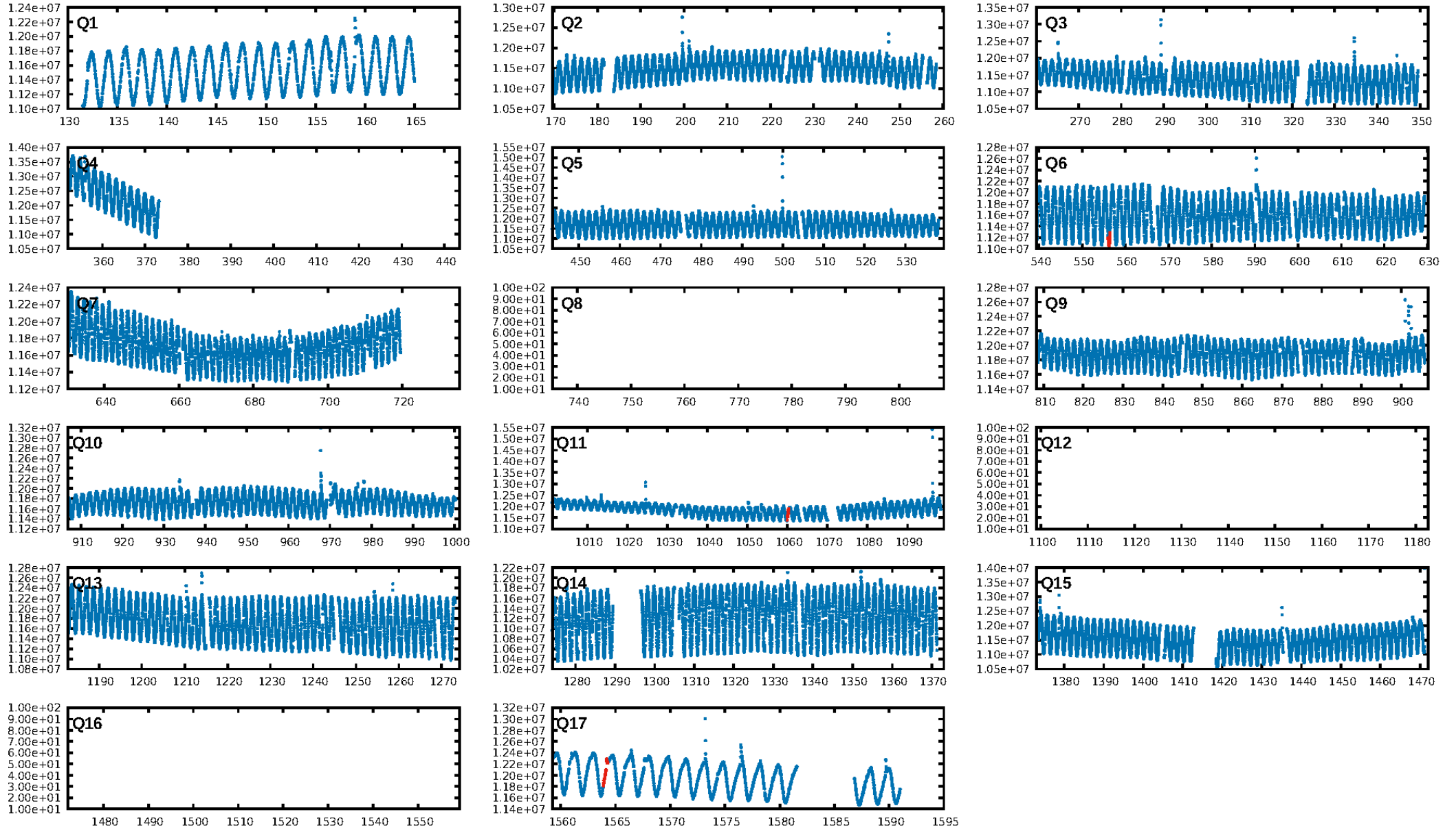
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [400.02 σ]
LongPeriod-sig: 76.8% [1.20 σ]
ModelChiSquare2-sig: 62.1%
ModelChiSquareGof-sig: 95.3%
Bootstrap-pfa: 9.22e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 2.953
Centroid-sig: 77.9%
Centroid-so: 0.572 arcsec [0.96 σ]
OotOffset-rm: 0.079 arcsec [0.41 σ]
KicOffset-rm: 0.157 arcsec [0.82 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
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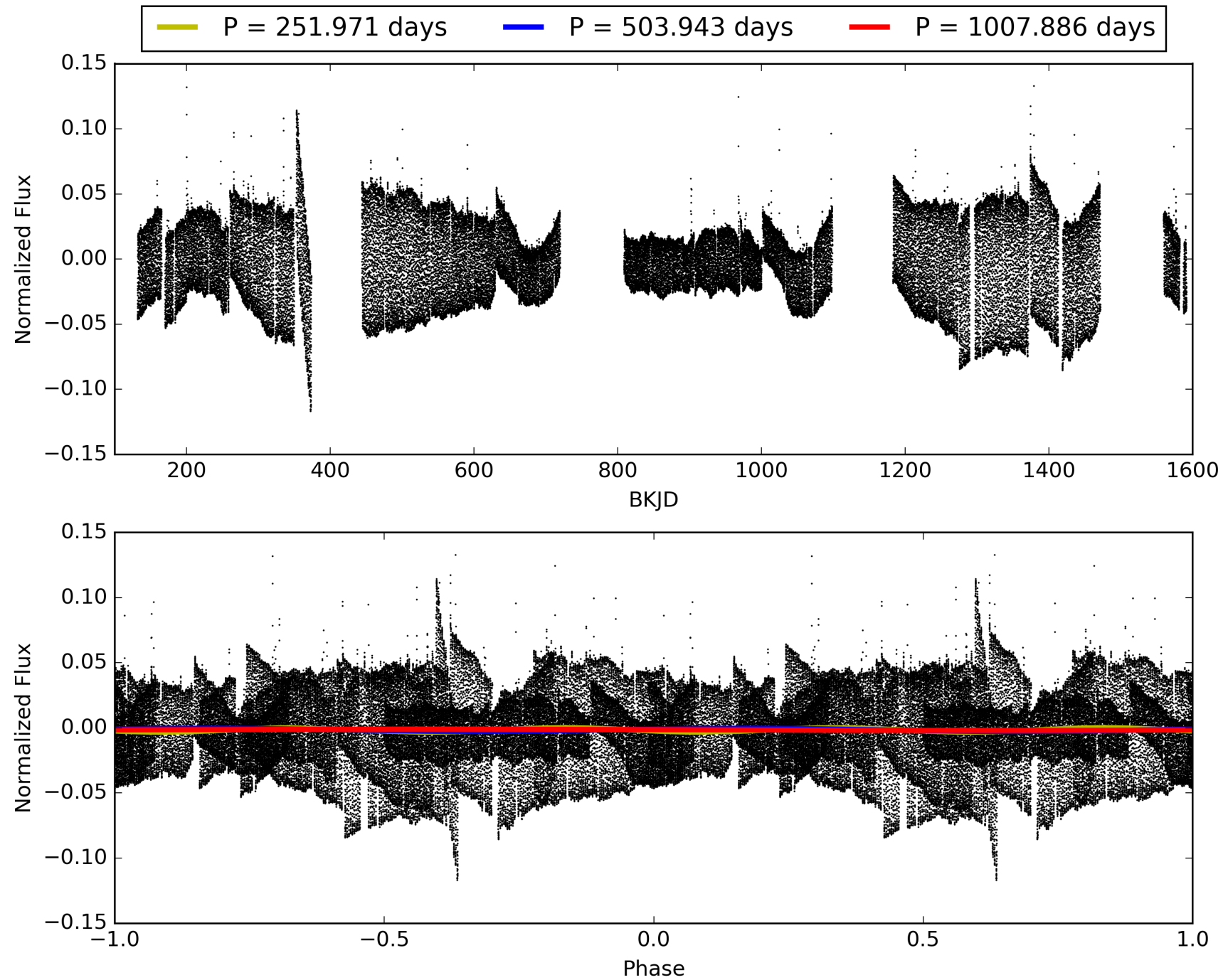
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011854061-02, PDC Light Curves

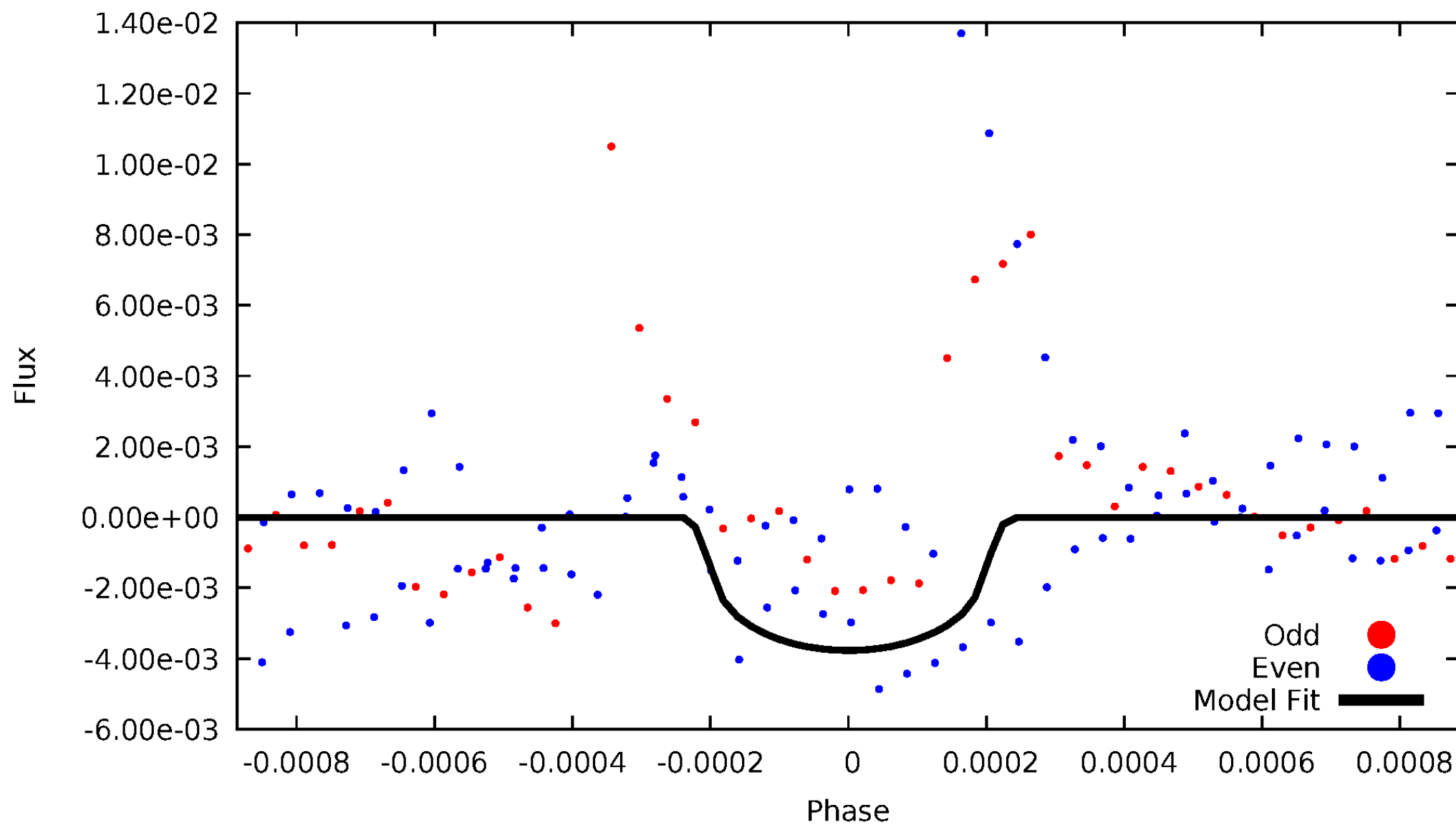


TCE 011854061-02



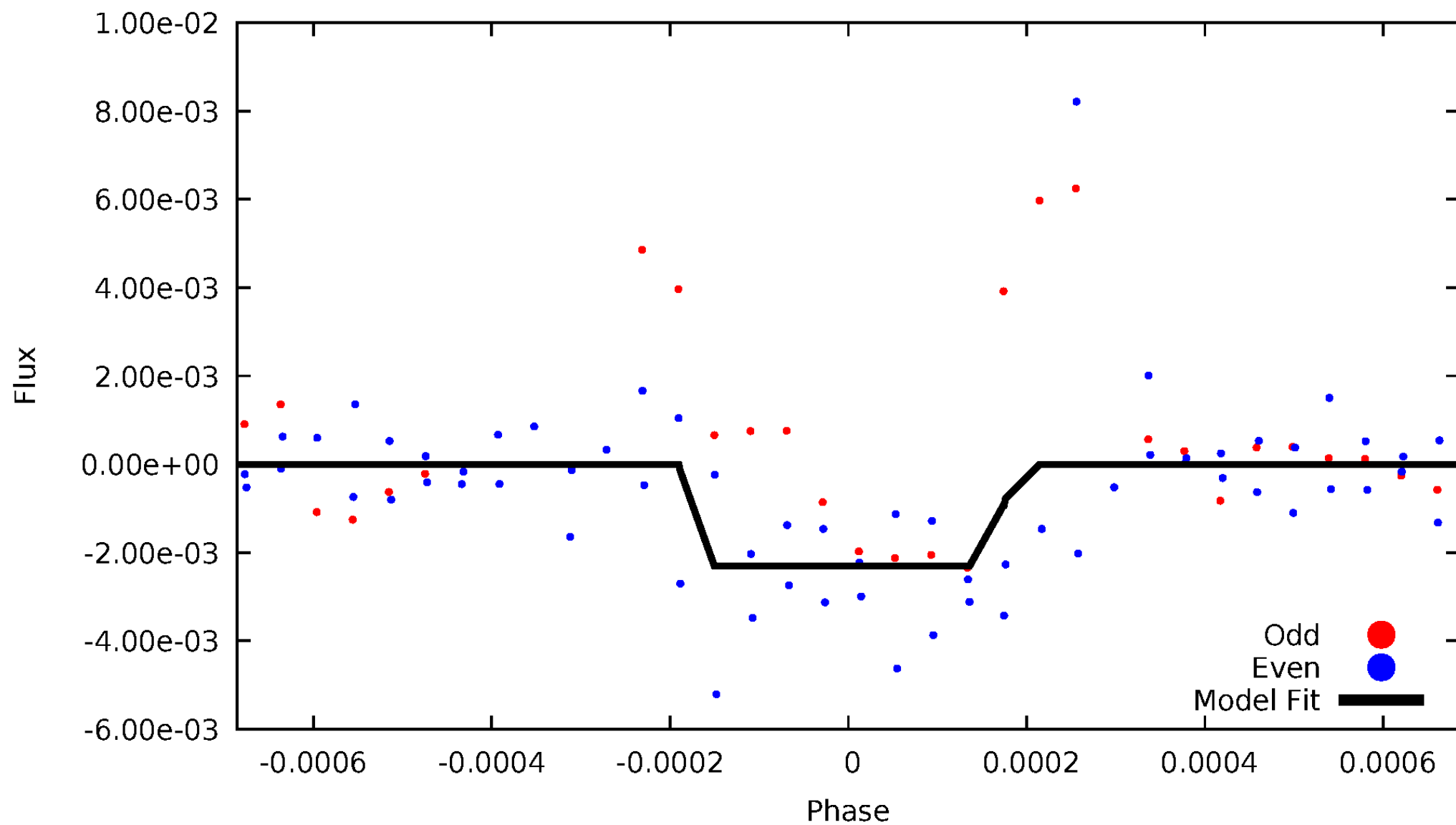
DV Odd/Even

TCE 011854061-02



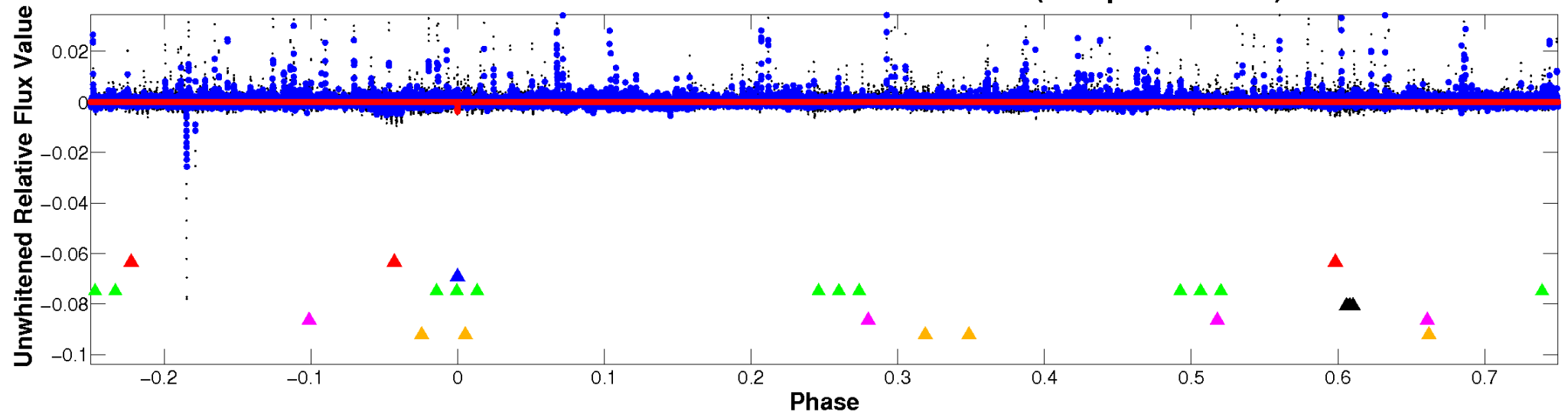
ALT Odd/Even

TCE 011854061-02

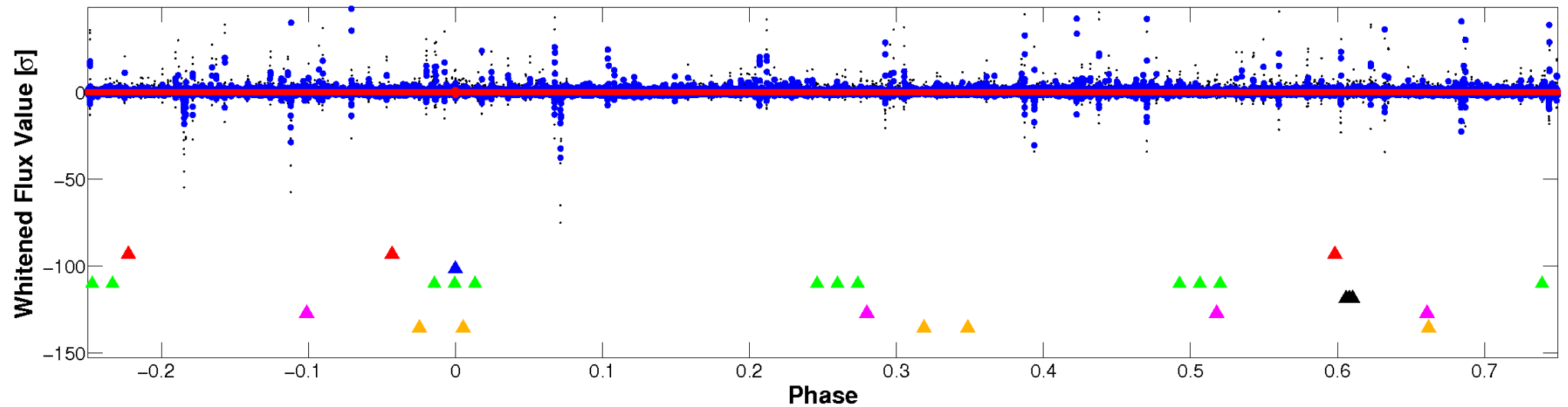


Non-Whitened Vs. Whitened Light Curve

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

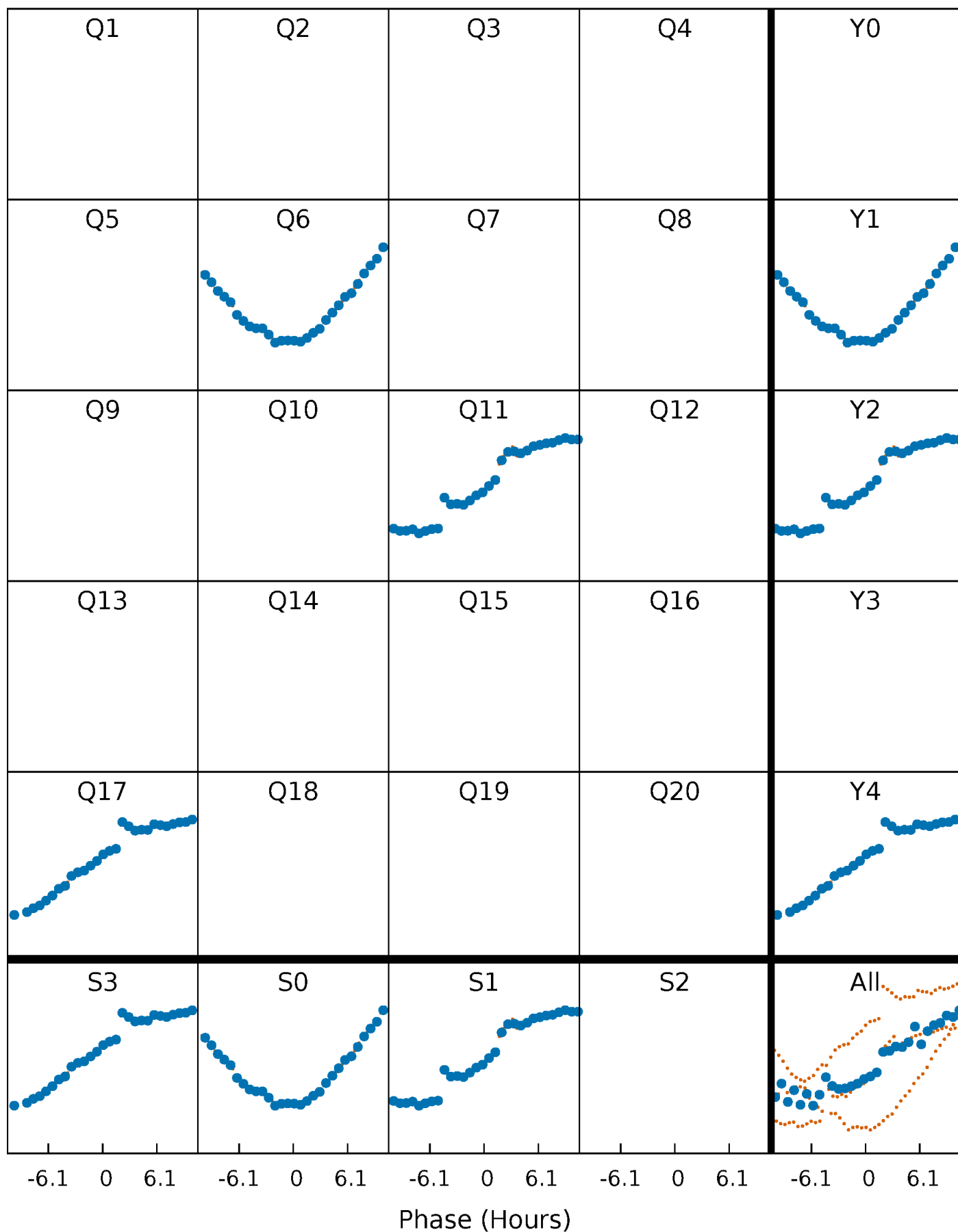


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



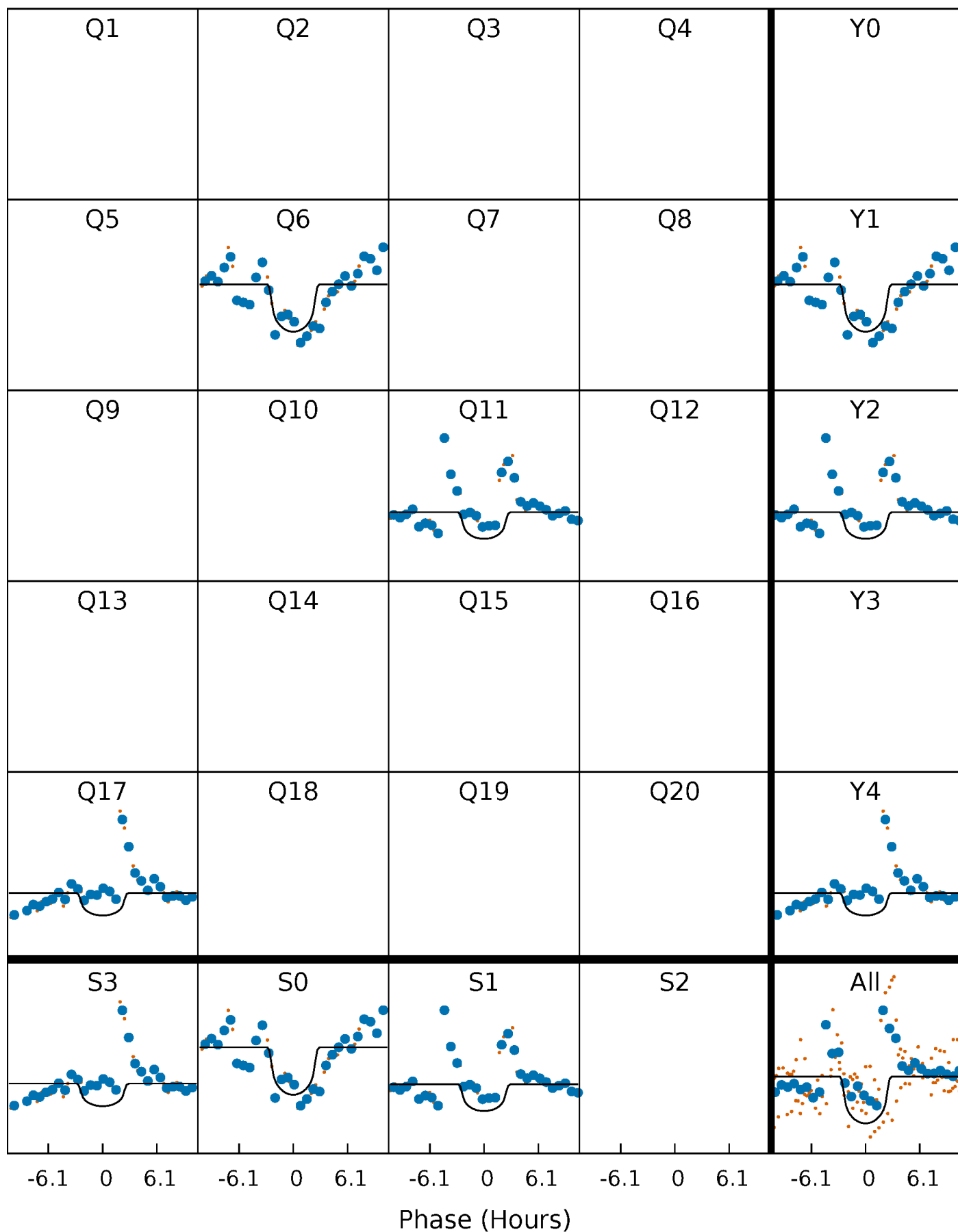
PDC Quarter-Phased Transit Curves

TCE 011854061-02 P=503.942846 Days $T_0=556.203448$ (BKJD)



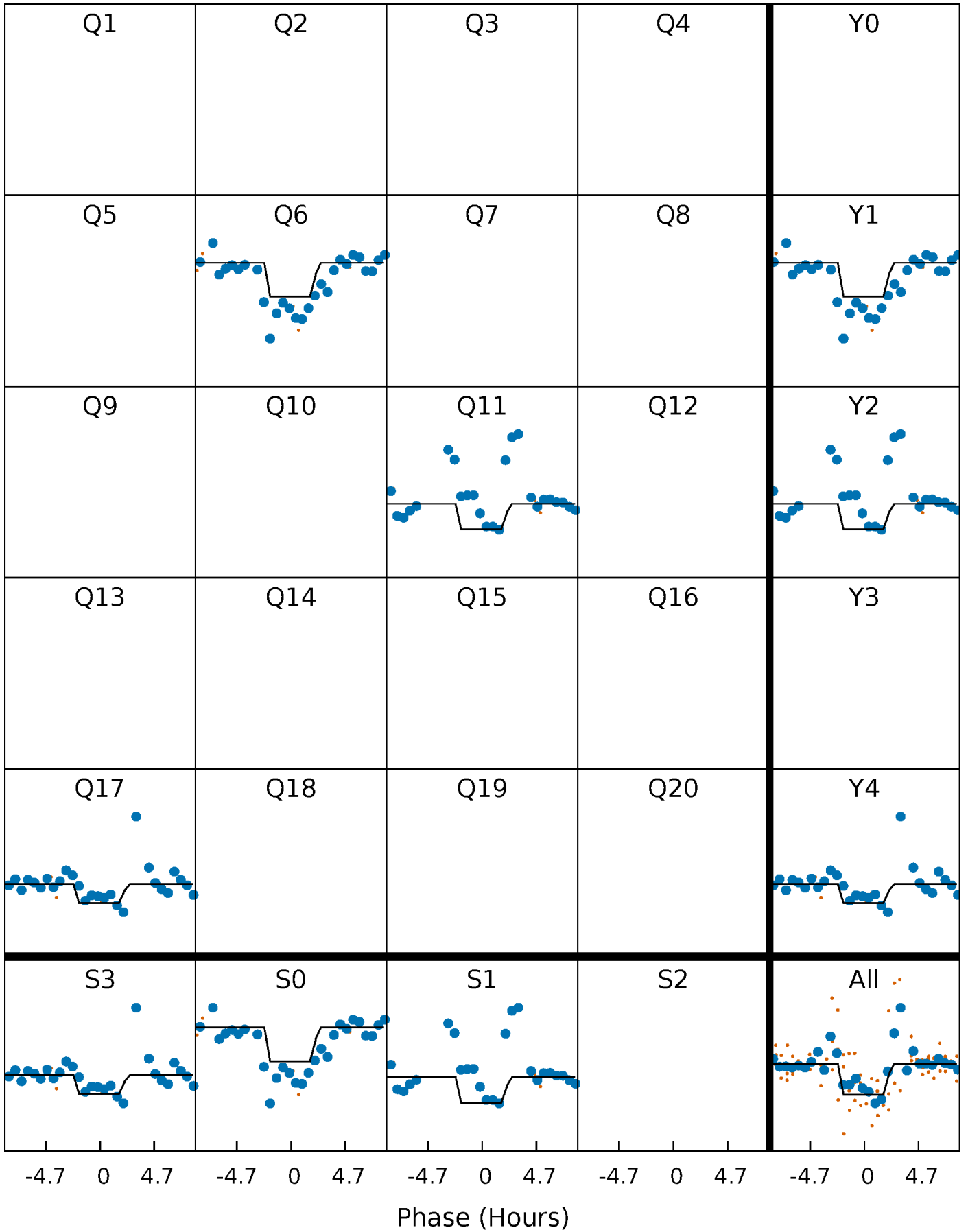
DV Quarter-Phased Transit Curves

TCE 011854061-02 $P=503.942846$ Days $T_0=556.203448$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

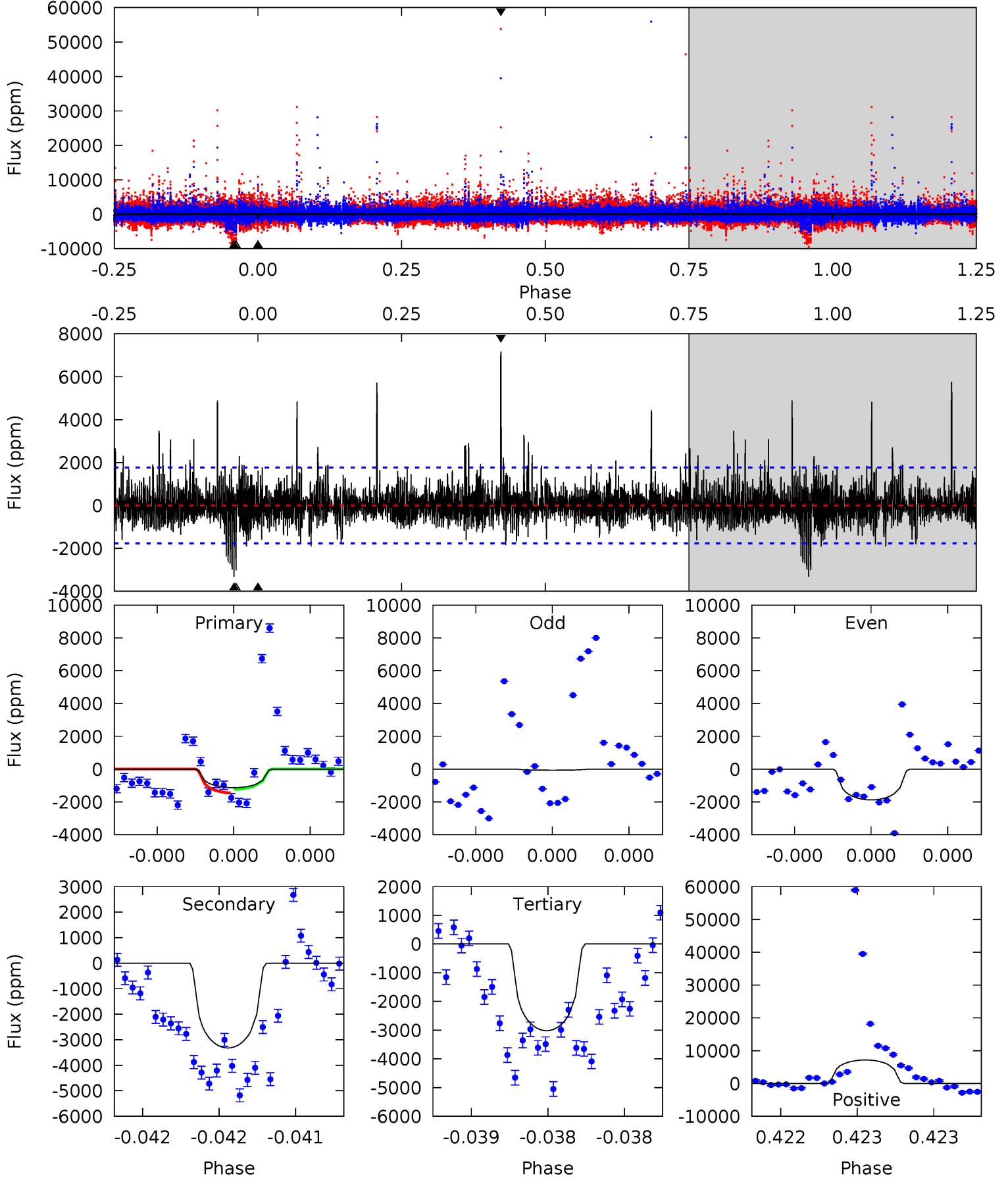
TCE 011854061-02 P=503.932457 Days $T_0=556.198208$ (BKJD)



DV Model-Shift Uniqueness Test

011854061-02, P = 503.942846 Days, E = 52.260602 Days

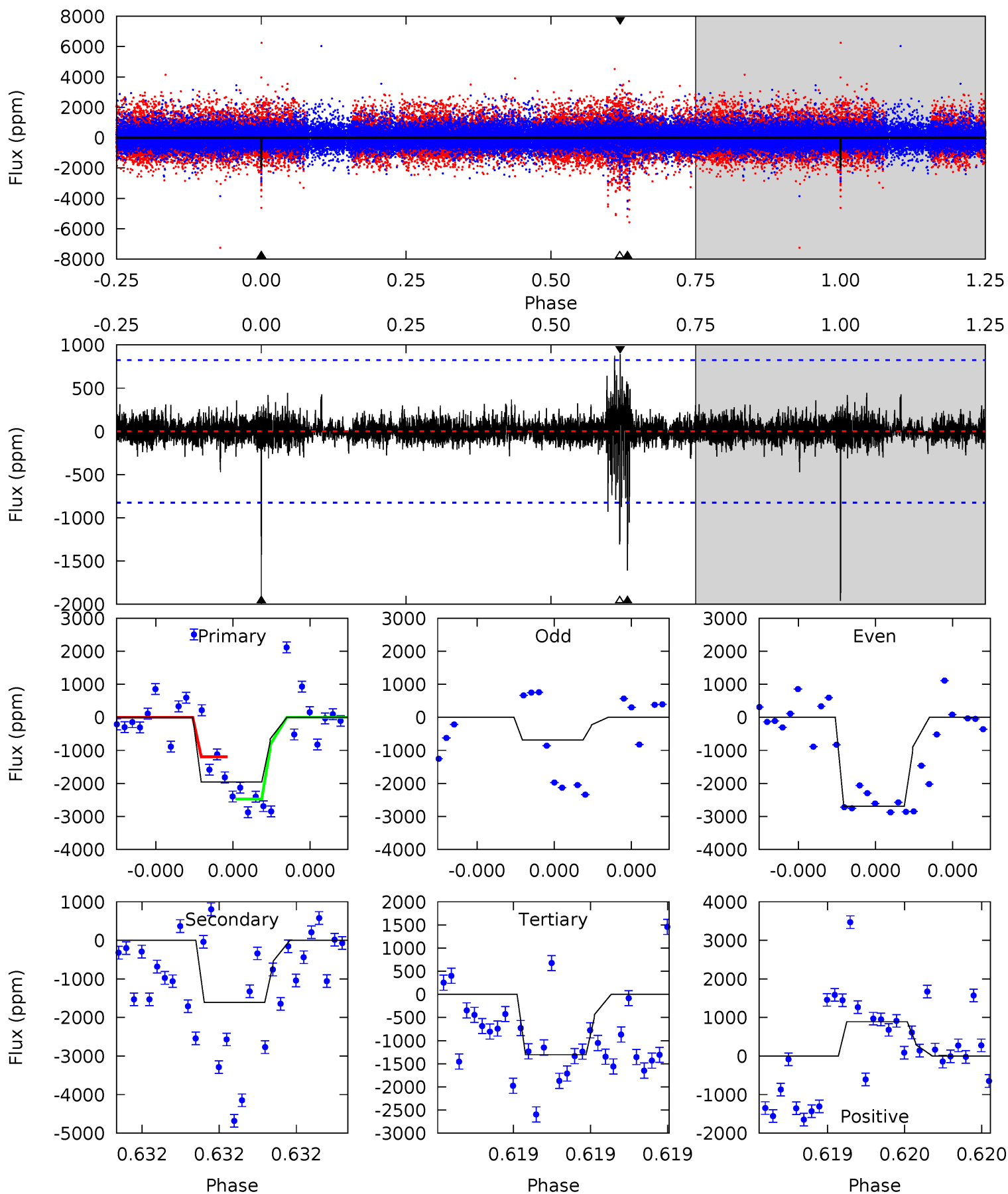
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.57	10.5	9.52	22.6	5.58	3.49	2.06	-5.95	-19.0	0.97	-12.1	1.83	12.0	0.68	0.36



Alt Model-Shift Uniqueness Test

011854061-02, P = 503.932457 Days, E = 52.265751 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	11.0	8.91	6.08	5.63	3.56	0.75	4.47	7.30	2.07	4.90	6.07	1.20	0.31	4.28



Stellar Parameters For KIC 011854061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4559^{+143}_{-143}	$4.612^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.655^{+0.052}_{-0.058}$	$0.641^{+0.077}_{-0.051}$	$3.209^{+0.811}_{-0.367}$
	+3%/-3%	+1%/-1%	+115%/-115%	+8%/-9%	+12%/-8%	+25%/-11%
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 011854061-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3324 ± 317	$4.80^{+3.12}_{-3.02}$	219^{+7}_{-7}	4297^{+2343}_{-702}	$93786^{+582329}_{-60474}$
Alt.	-1609 ± 146	$4.08^{+3.25}_{-2.52}$	218^{+7}_{-7}	3992^{+2049}_{-713}	$61540^{+367088}_{-43092}$

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

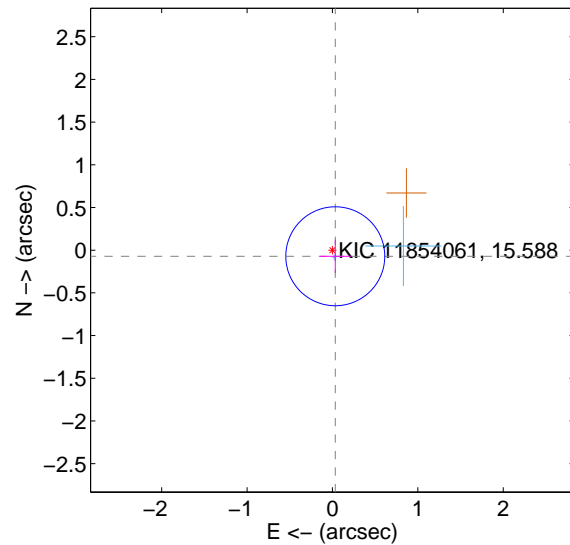
Supplemental centroid analysis for 011854061-02. Kepler magnitude: 15.59. Transit SNR 7.55

There are 2 quarters with good PRF difference image offsets

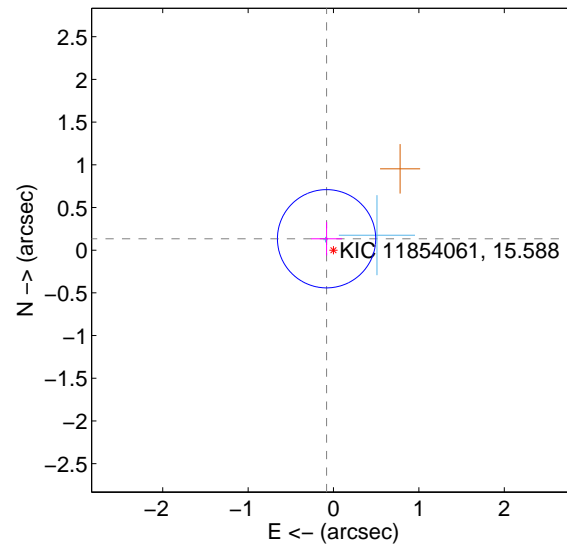
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 0.193	0.41	-0.033 ± 0.181	-0.071 ± 0.196
PRF-fit source offset from KIC position	0.157 ± 0.192	0.82	0.081 ± 0.181	0.134 ± 0.196
photometric centroid source offset	0.57 ± 0.60	0.96	0.28 ± 0.65	0.50 ± 0.58

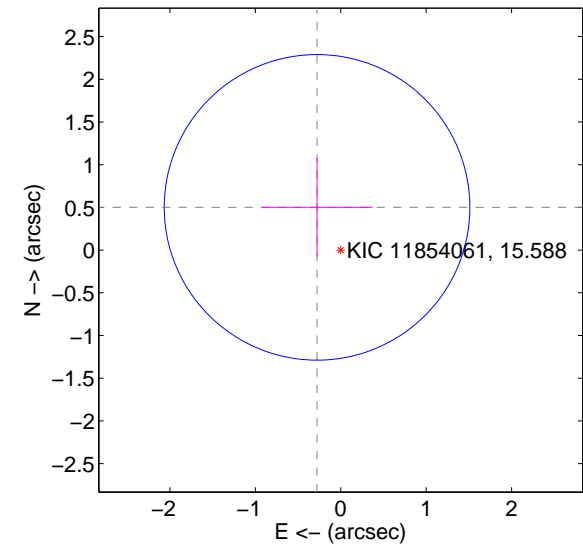
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

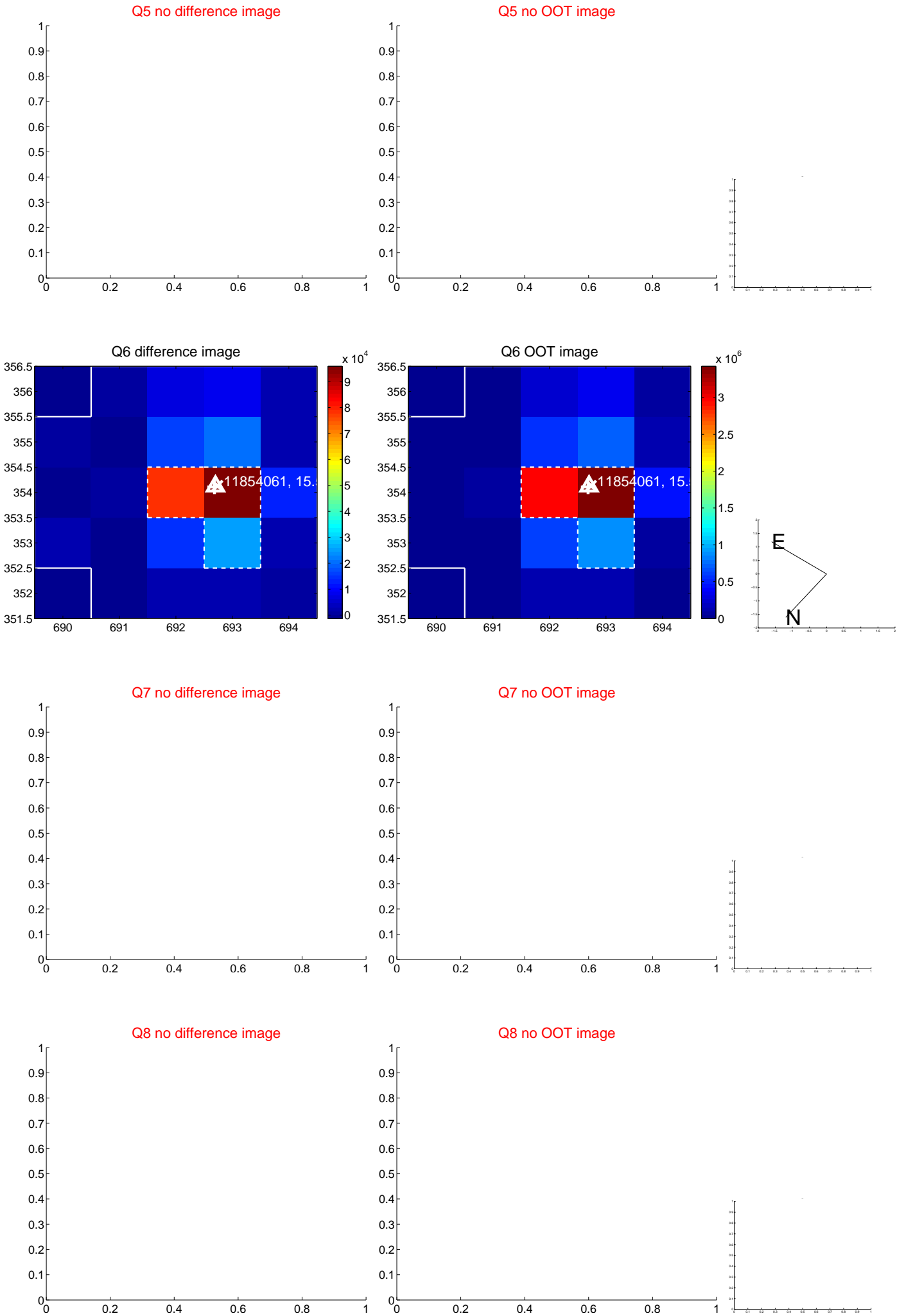


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

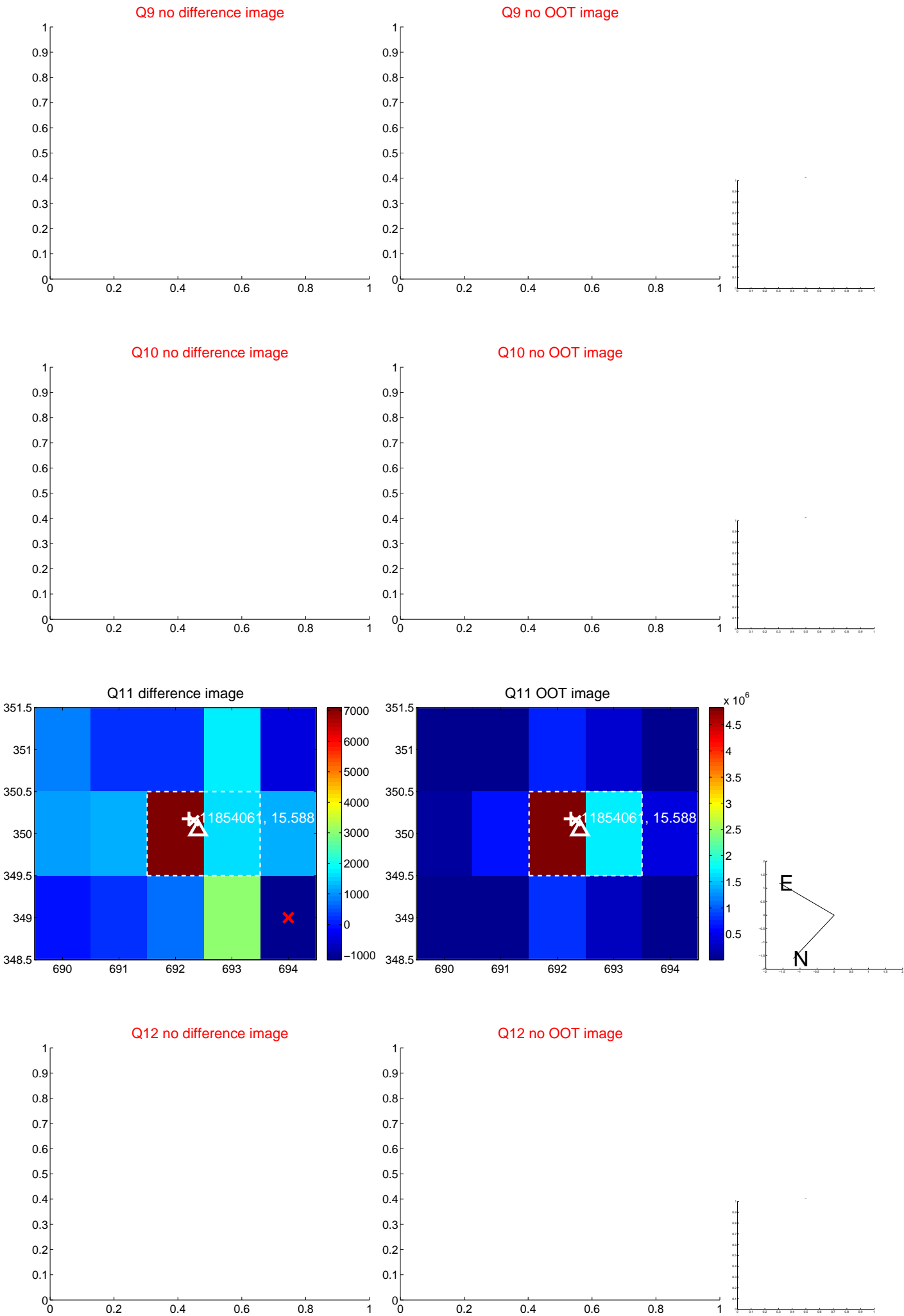
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



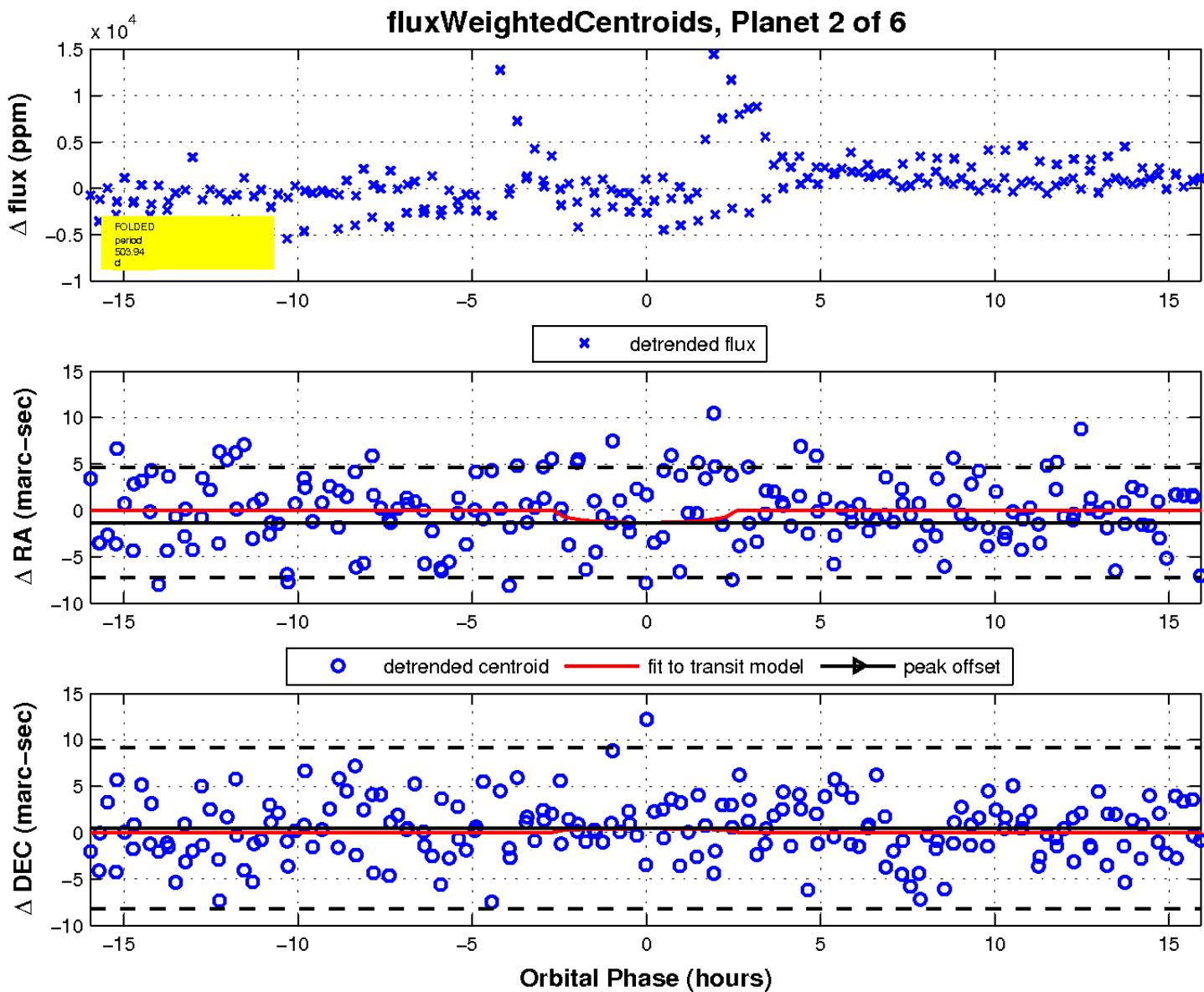
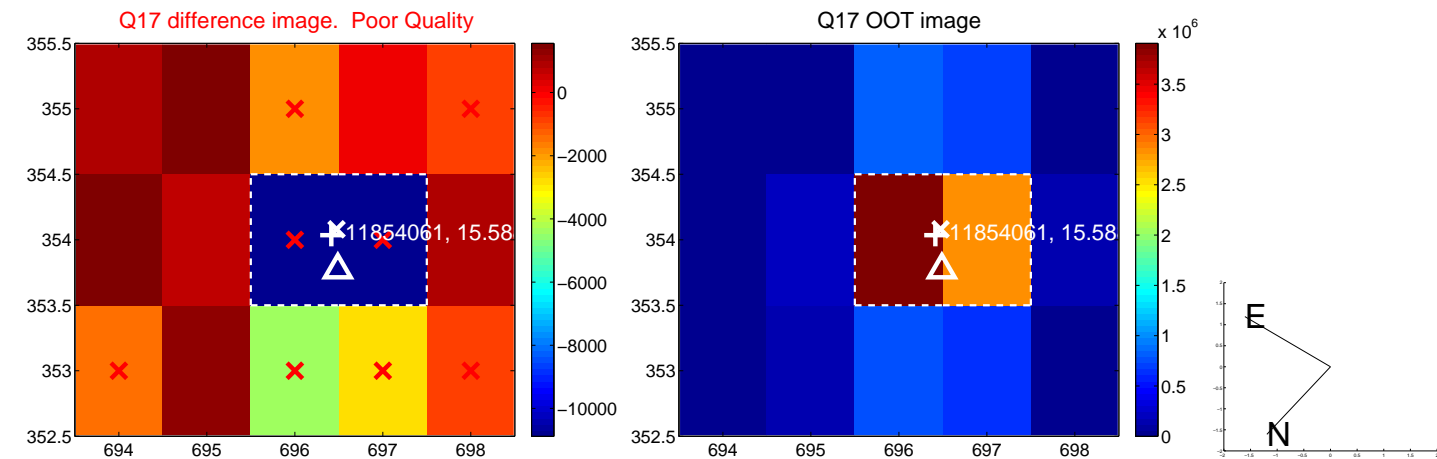
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

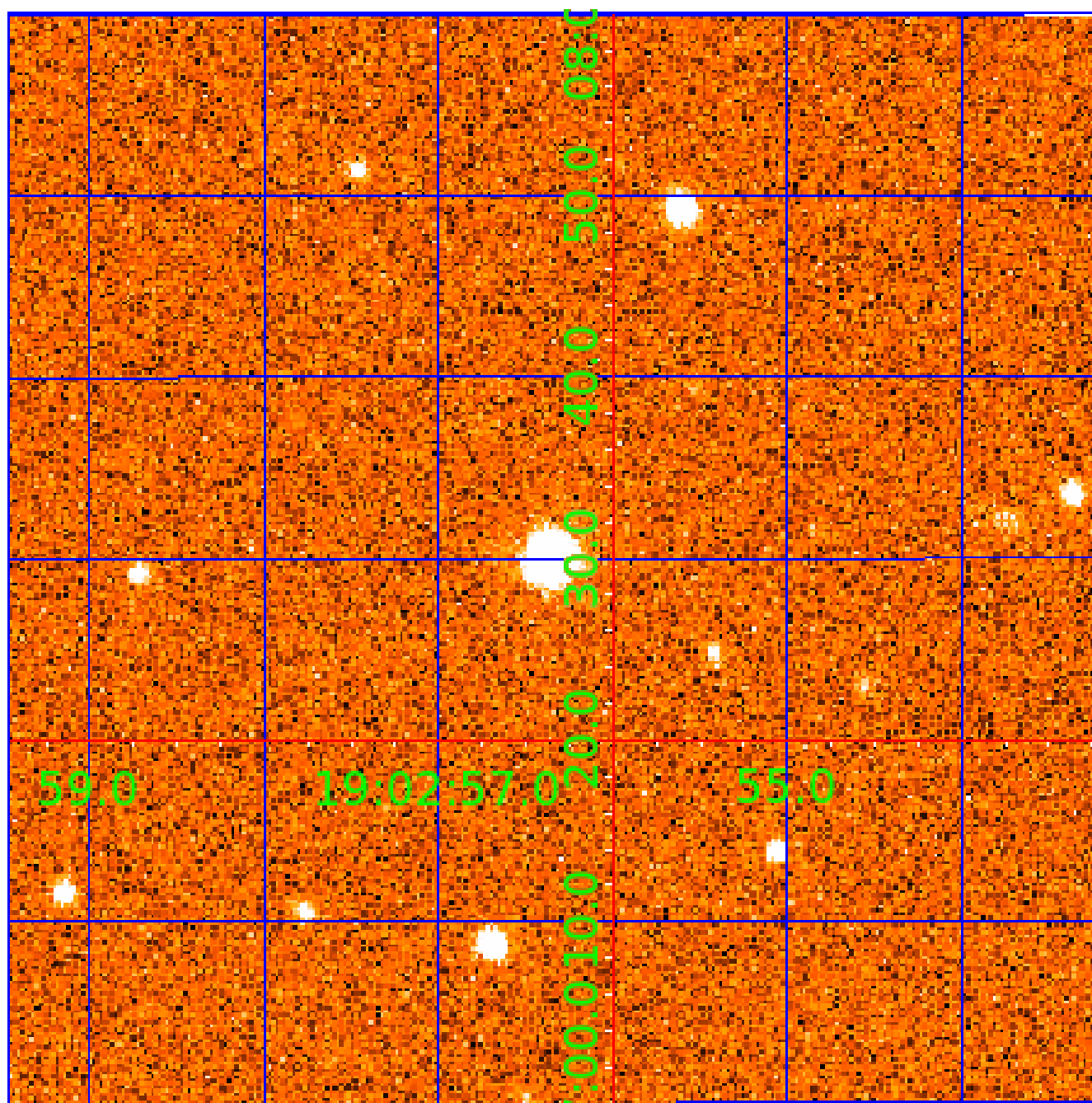


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011854061

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})
011854061-01	OBS	No	413.568315	534.497752	1079.9	0.828	10.3	1.7	0.66	4559	2.16	0.19
011854061-02	OBS	No	503.942846	556.203448	3772.0	5.359	12.1	7.6	0.66	4559	3.98	0.14
011854061-03	OBS	No	124.242768	190.199399	1689.6	5.435	10.8	6.3	0.66	4559	2.79	0.94
011854061-04	OBS	8230.01	505.066293	357.598196	4479.4	21.892	8.7	7.6	0.66	4559	5.09	0.14
011854061-05	OBS	No	311.917609	385.348689	3341.6	2.545	11.4	7.3	0.66	4559	3.64	0.28
011854061-06	OBS	No	330.959108	227.924538	3016.2	3.550	10.8	6.9	0.66	4559	4.74	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011854061-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011854061-03	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
011854061-04	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
011854061-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

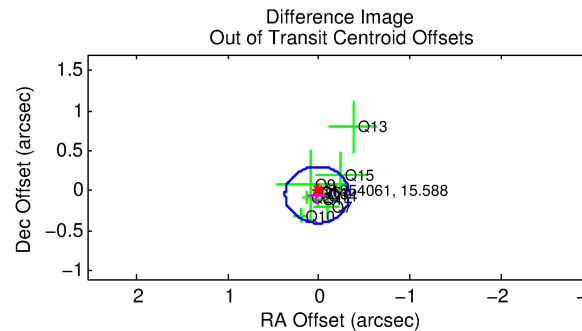
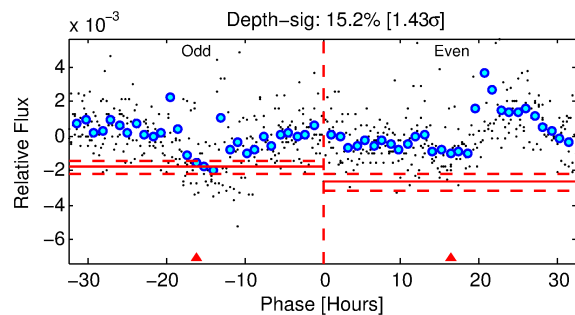
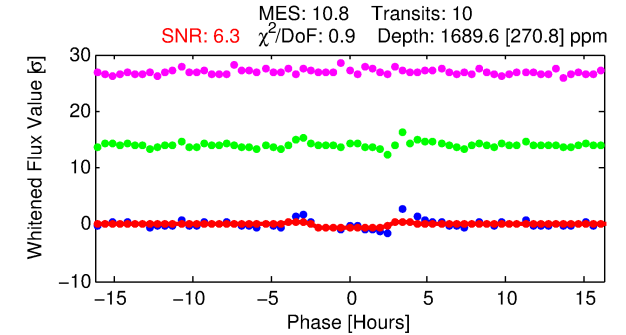
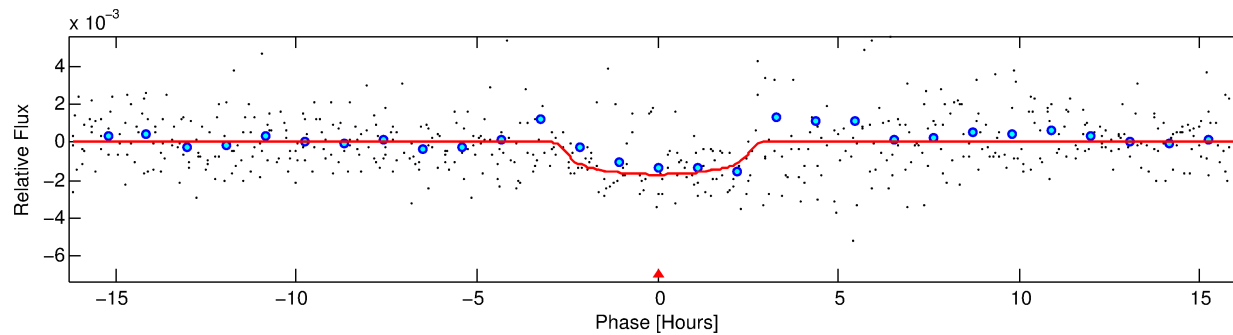
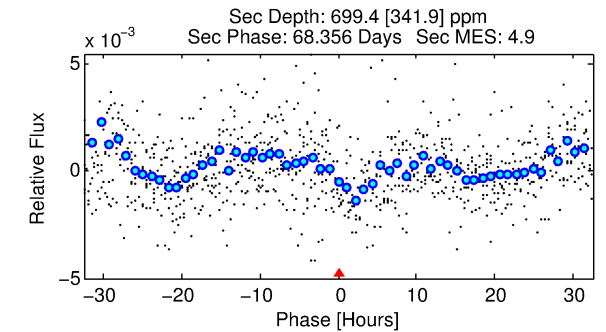
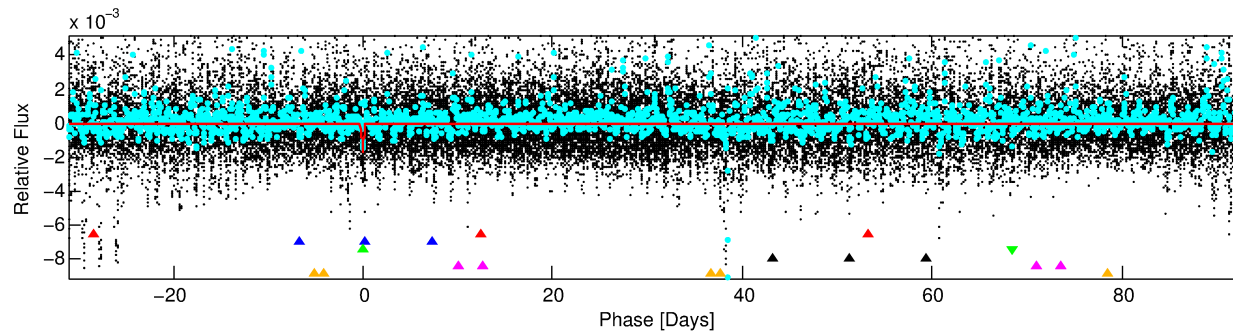
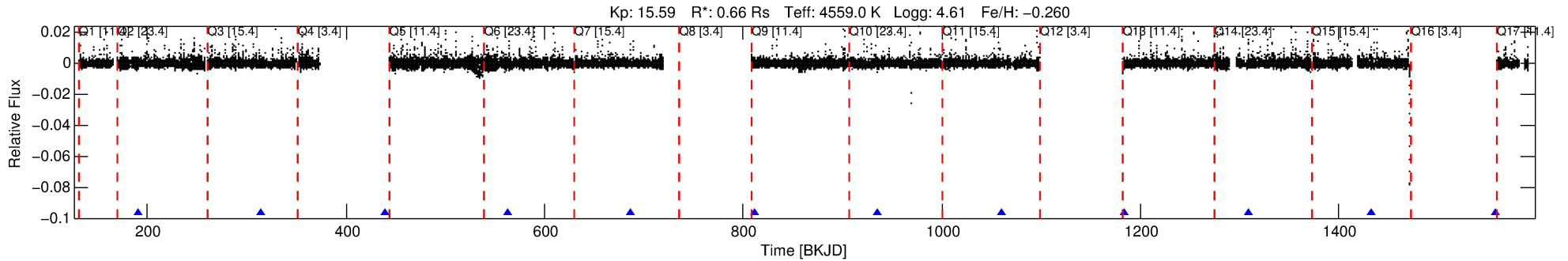
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854061-03

No Significant Match Found

DV One-Page Summary

KIC: 11854061 Candidate: 3 of 6 Period: 124.243 d



DV Fit Results:

Period = 124.24277 [0.00153] d
Epoch = 190.1994 [0.0098] BKJD
Rp/R* = 0.0390 [0.0307]
a/R* = 145.86 [351.66]
b = 0.62 [2.47]
Seff = 0.94 [0.15]
Teq = 251 [10] K
Rp = 2.79 [2.21] Re
a = 0.4201 [0.0307] AU
Ag = 8749.26 [14445.56] [0.61σ]
Teffp = 3755 [1551] K [2.26σ]

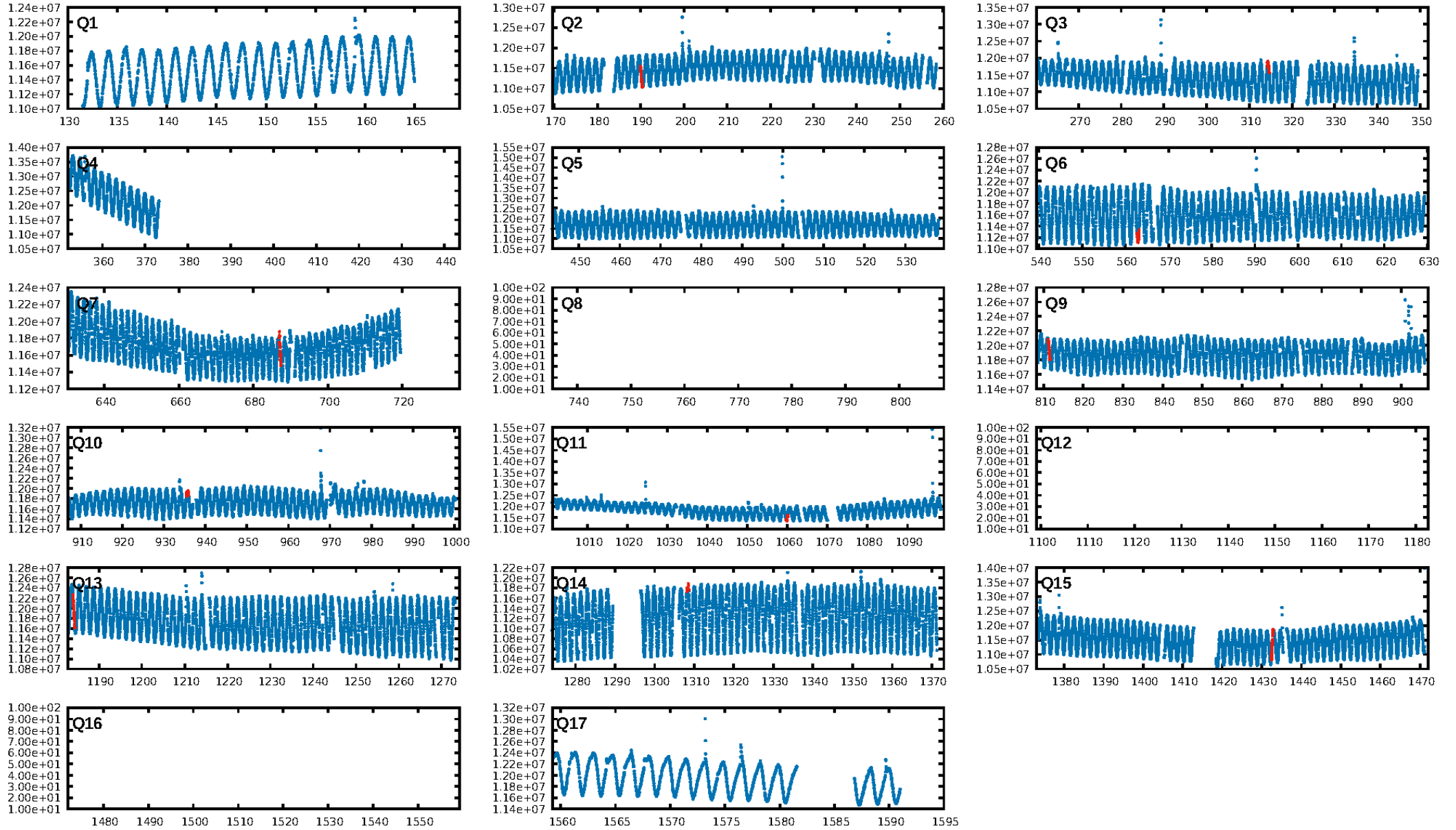
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [750.55σ]
ModelChiSquare2-sig: 62.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.38e-12
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 2.153
Centroid-sig: 17.9%
Centroid-so: 1.447 arcsec [1.99σ]
OotOffset-rm: 0.055 arcsec [0.47σ]
KicOffset-rm: 0.215 arcsec [2.43σ]
OotOffset-st: 4/4/0/2 [10]
KicOffset-st: 4/4/0/2 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.90 [9/10]

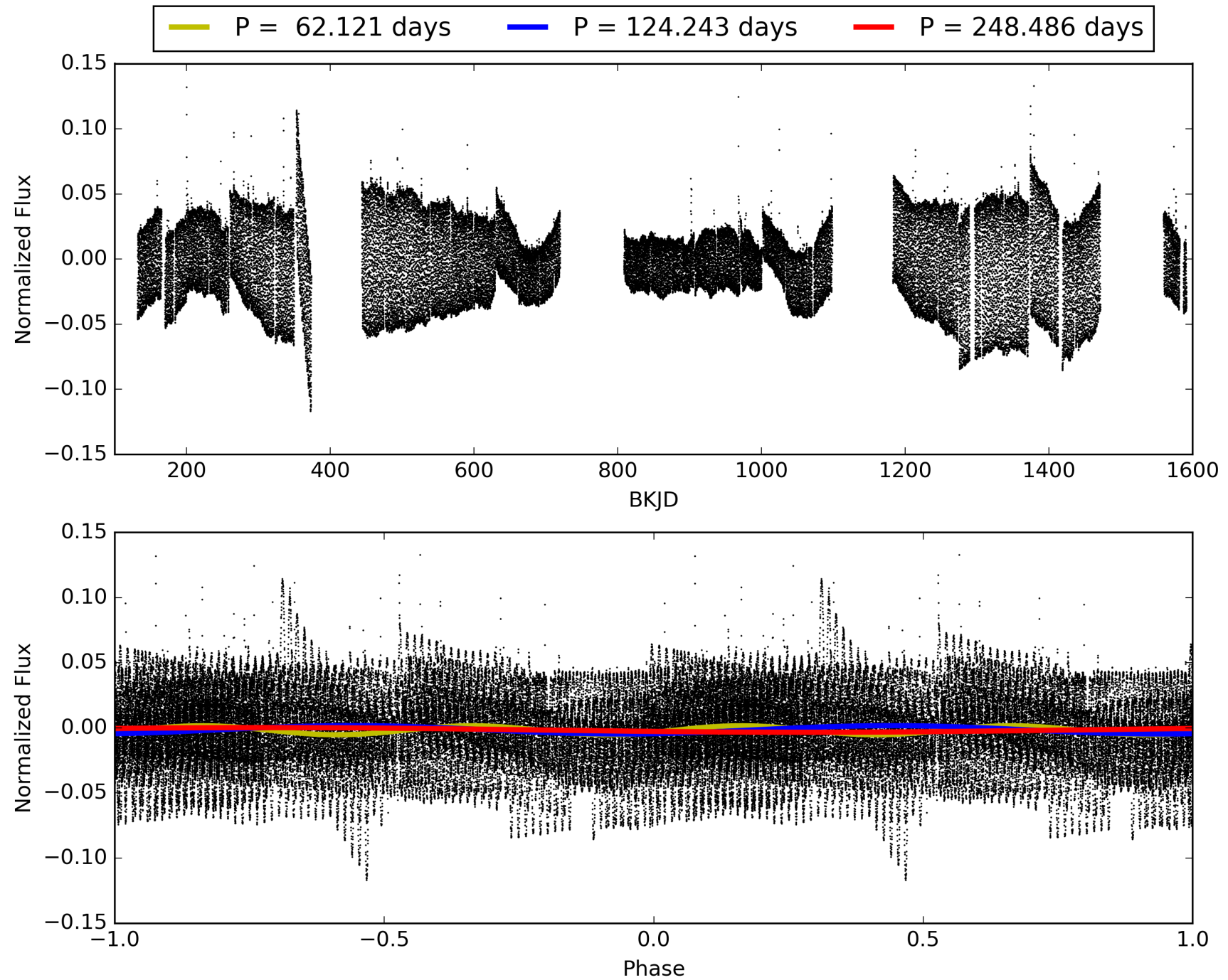
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:29:13 Z

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

TCE 011854061-03, PDC Light Curves

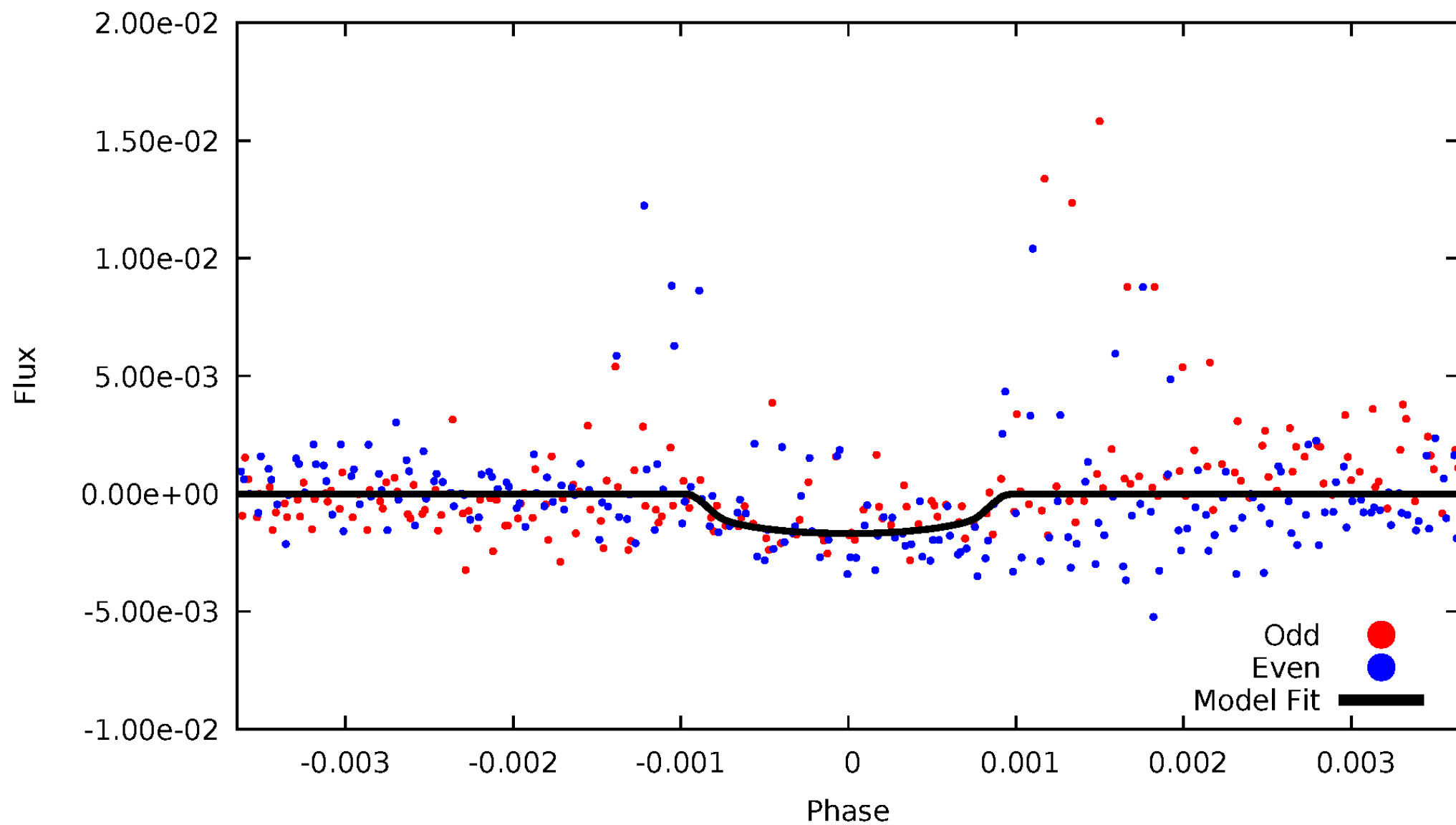


TCE 011854061-03



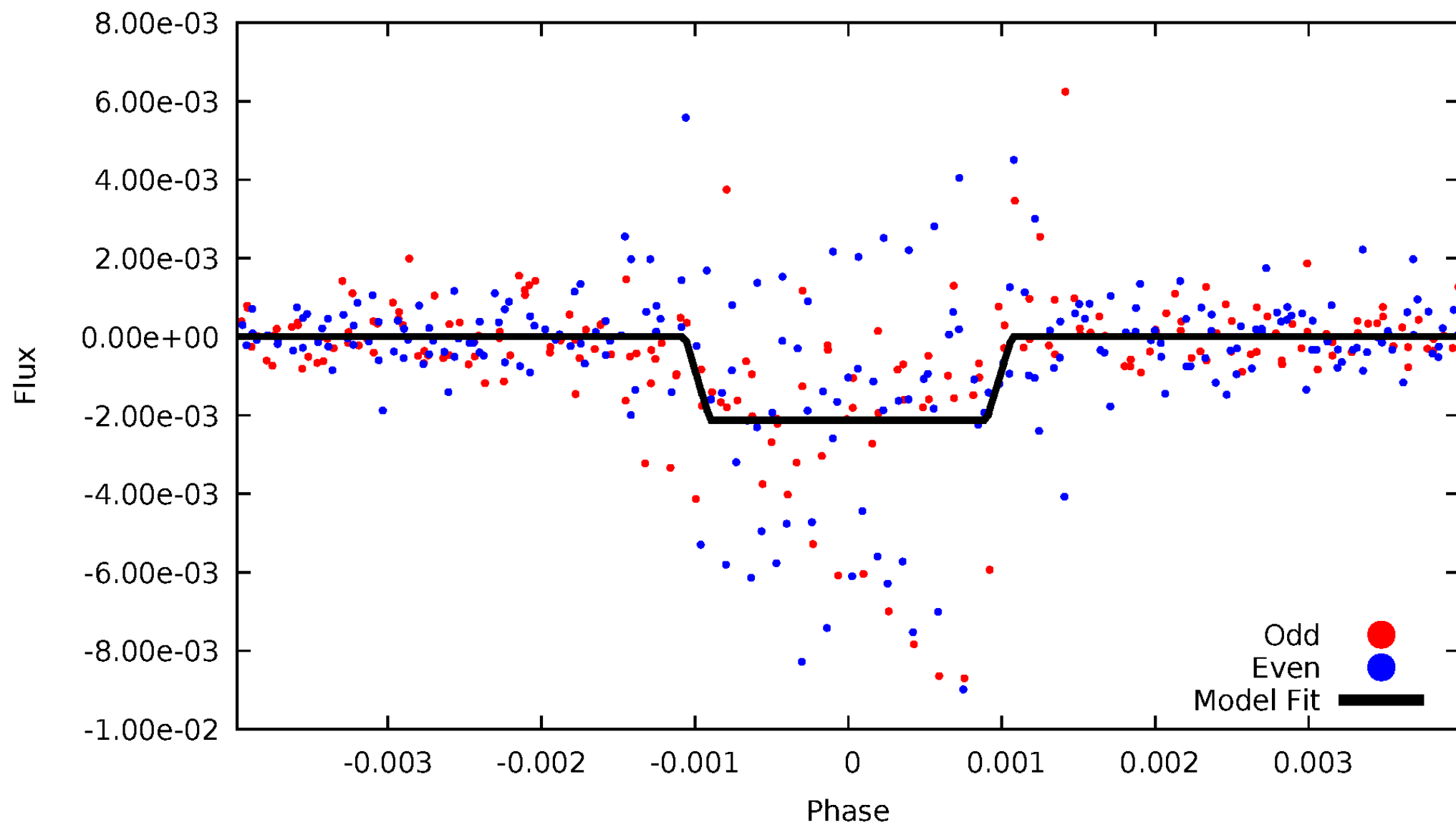
DV Odd/Even

TCE 011854061-03



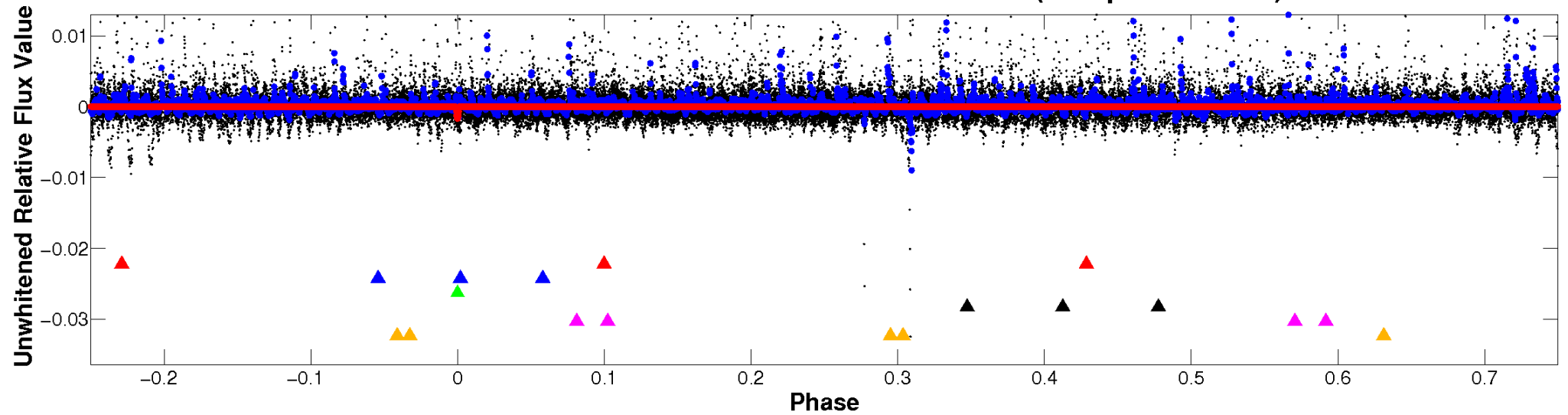
ALT Odd/Even

TCE 011854061-03

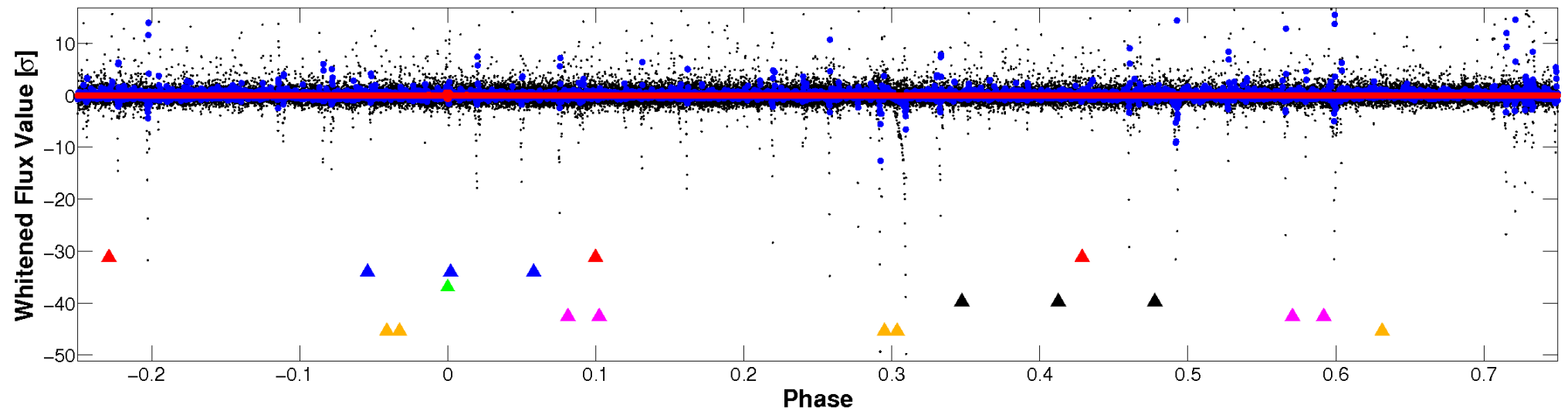


Non-Whitened Vs. Whitened Light Curve

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

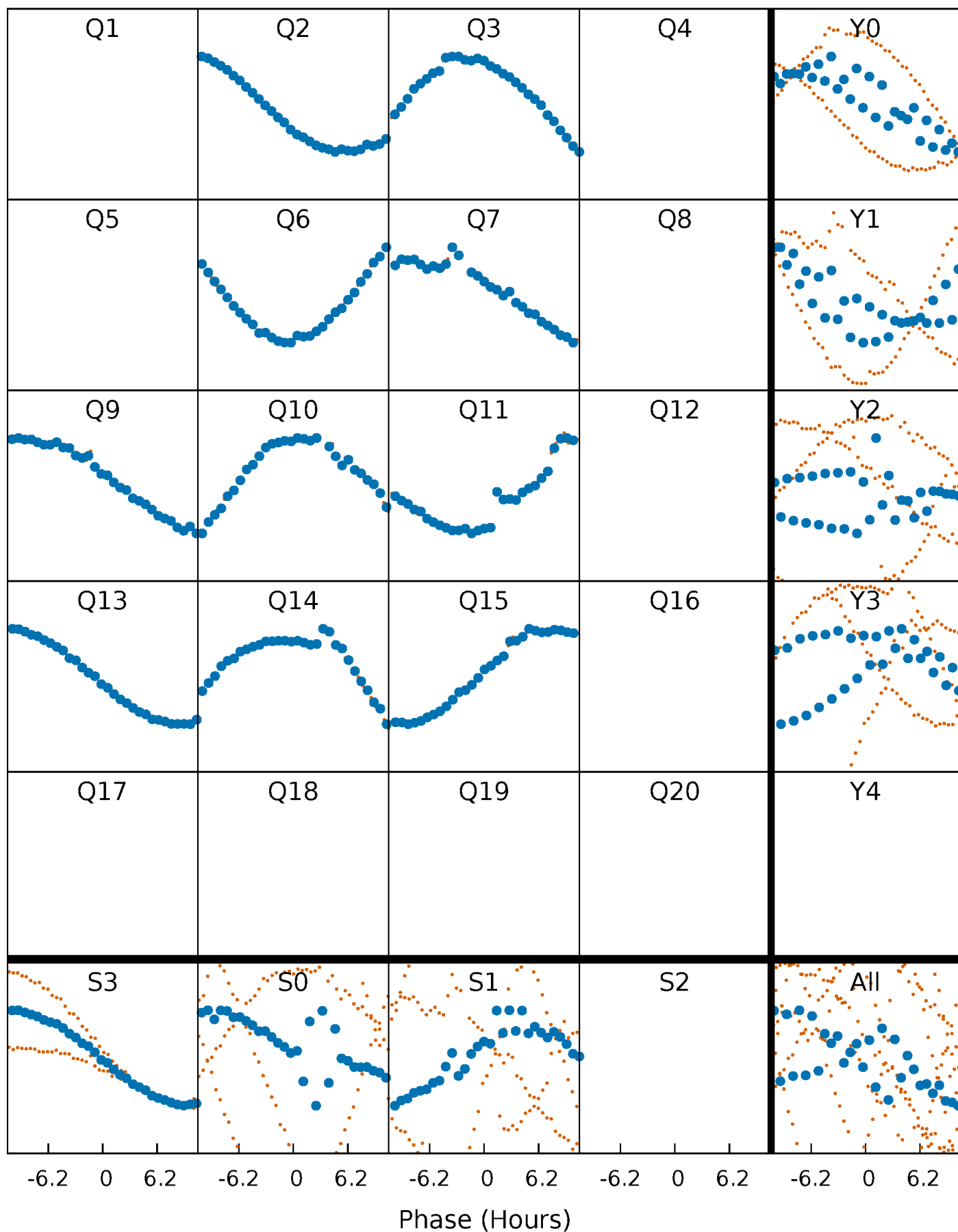


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



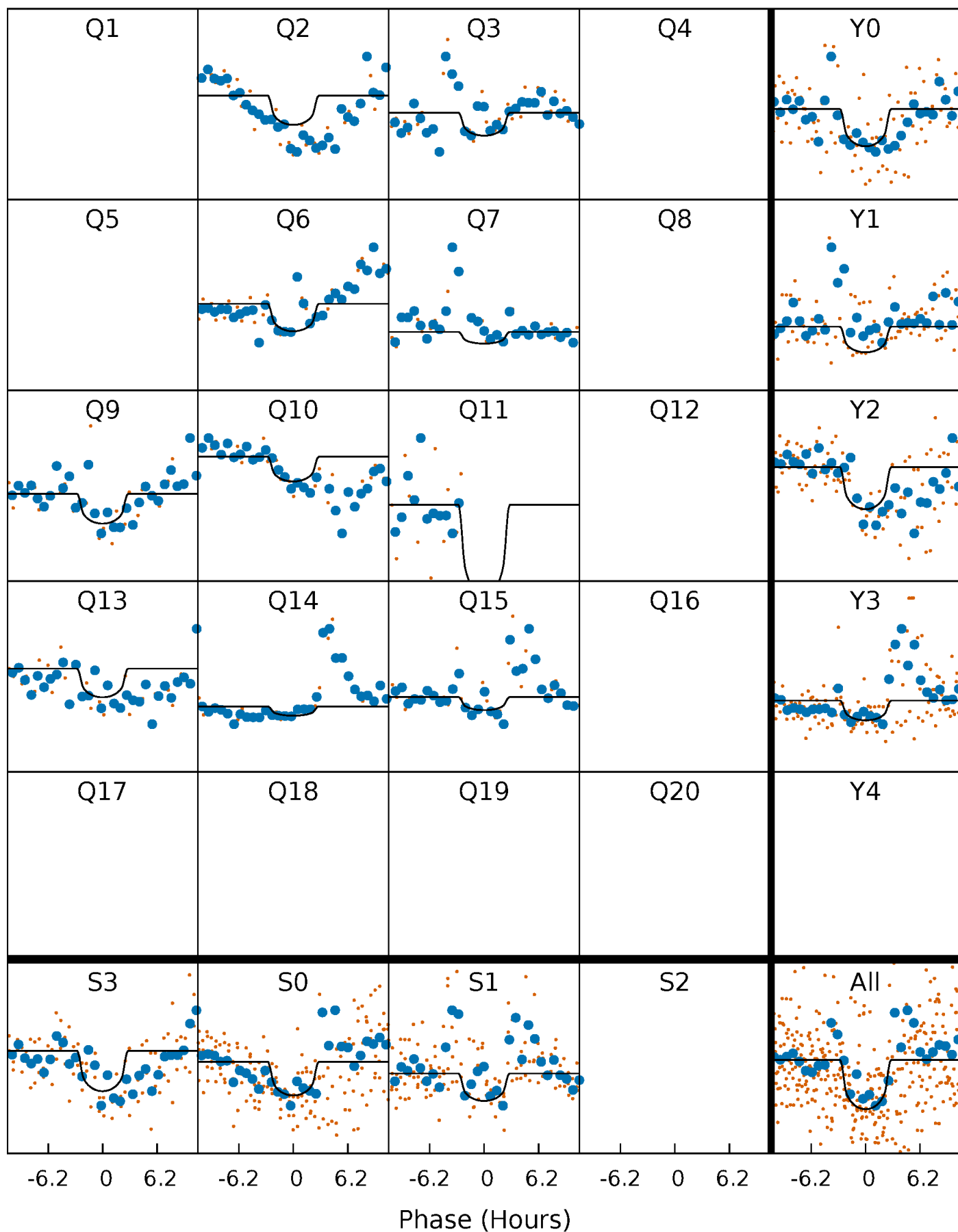
PDC Quarter-Phased Transit Curves

TCE 011854061-03 P=124.242768 Days $T_0=190.199399$ (BKJD)



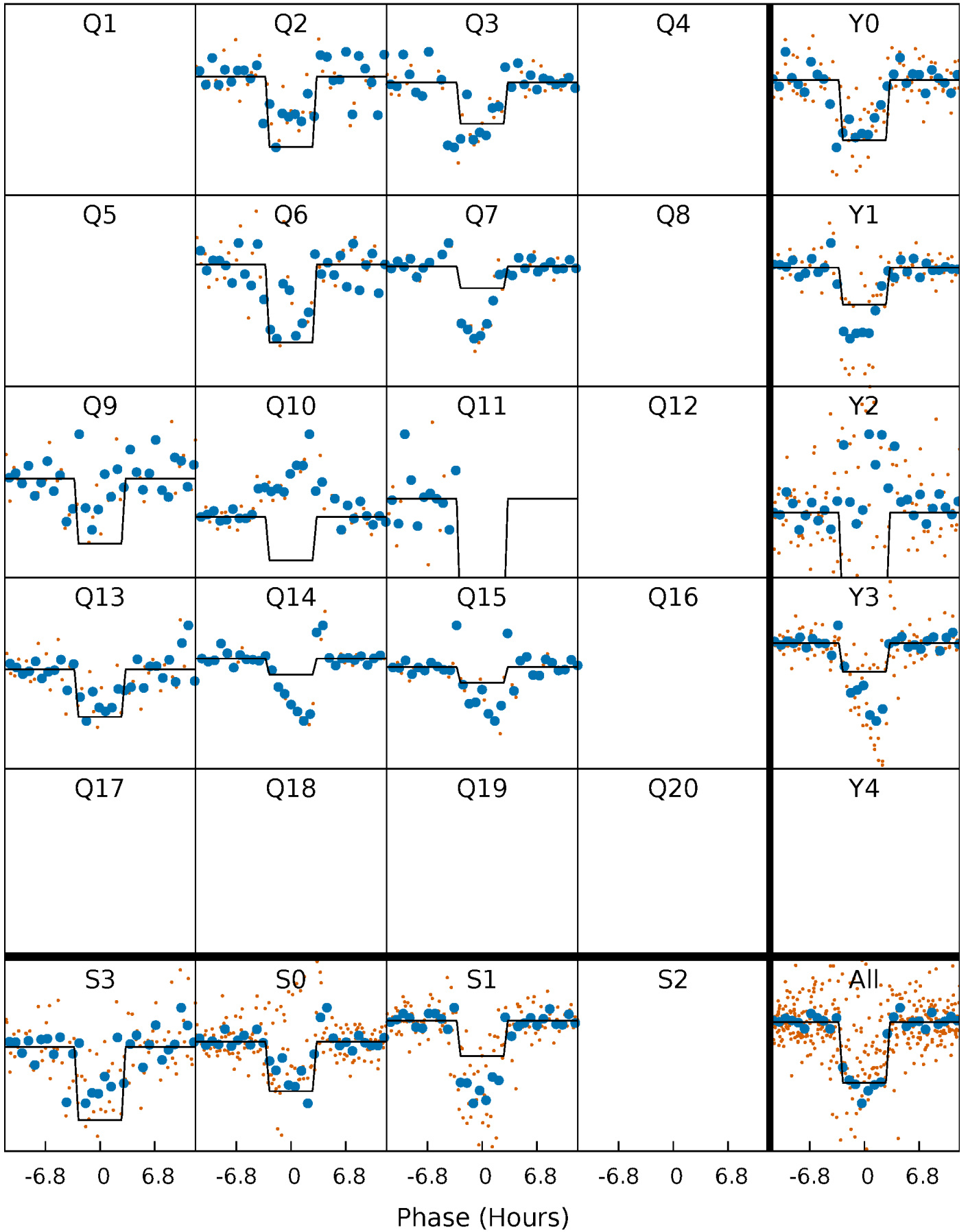
DV Quarter-Phased Transit Curves

TCE 011854061-03 P=124.242768 Days $T_0=190.199399$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

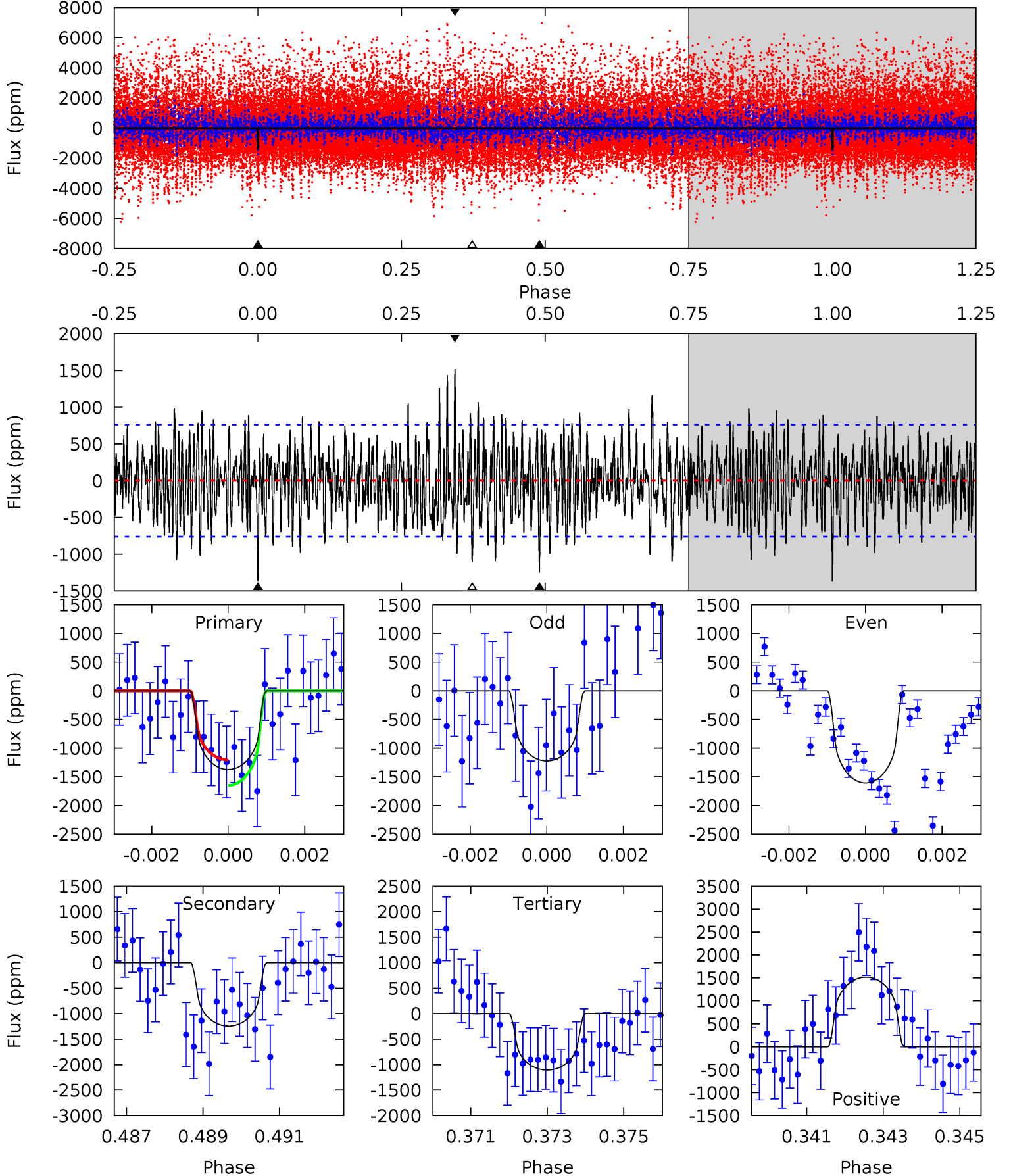
TCE 011854061-03 P=124.234899 Days $T_0=190.280803$ (BKJD)



DV Model-Shift Uniqueness Test

011854061-03, $P = 124.242768$ Days, $E = 65.956631$ Days

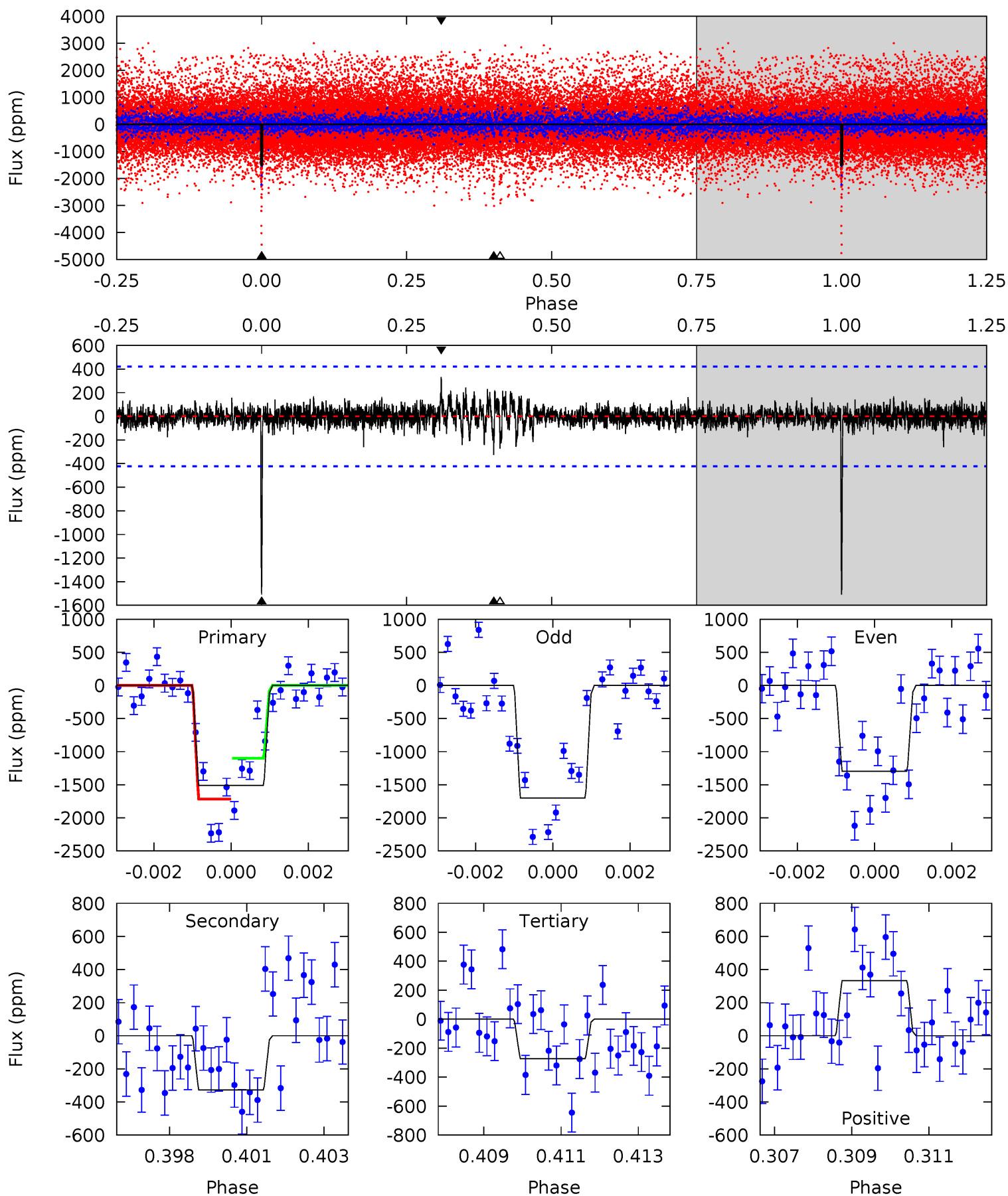
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	8.71	7.73	10.6	5.33	3.09	2.77	1.86	-1.01	0.98	-1.88	1.31	0.97	0.52	1.55



Alt Model-Shift Uniqueness Test

011854061-03, P = 124.234899 Days, E = 66.045904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	4.12	3.44	4.18	5.32	3.07	0.76	15.6	14.8	0.67	-0.07	2.49	1.49	0.18	3.88



Stellar Parameters For KIC 011854061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4559^{+143}_{-143}	$4.612^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.655^{+0.052}_{-0.058}$	$0.641^{+0.077}_{-0.051}$	$3.209^{+0.811}_{-0.367}$
	+3%/-3%	+1%/-1%	+115%/-115%	+8%/-9%	+12%/-8%	+25%/-11%
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 011854061-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1246 ± 143	$2.95^{+2.06}_{-1.80}$	348^{+13}_{-12}	4281^{+2145}_{-756}	14109^{+77669}_{-9296}
Alt.	-327 ± 79	$3.35^{+2.29}_{-1.89}$	349^{+12}_{-13}	3300^{+1036}_{-479}	2984^{+11960}_{-2012}

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 $A_{obs} \gg 1.0$

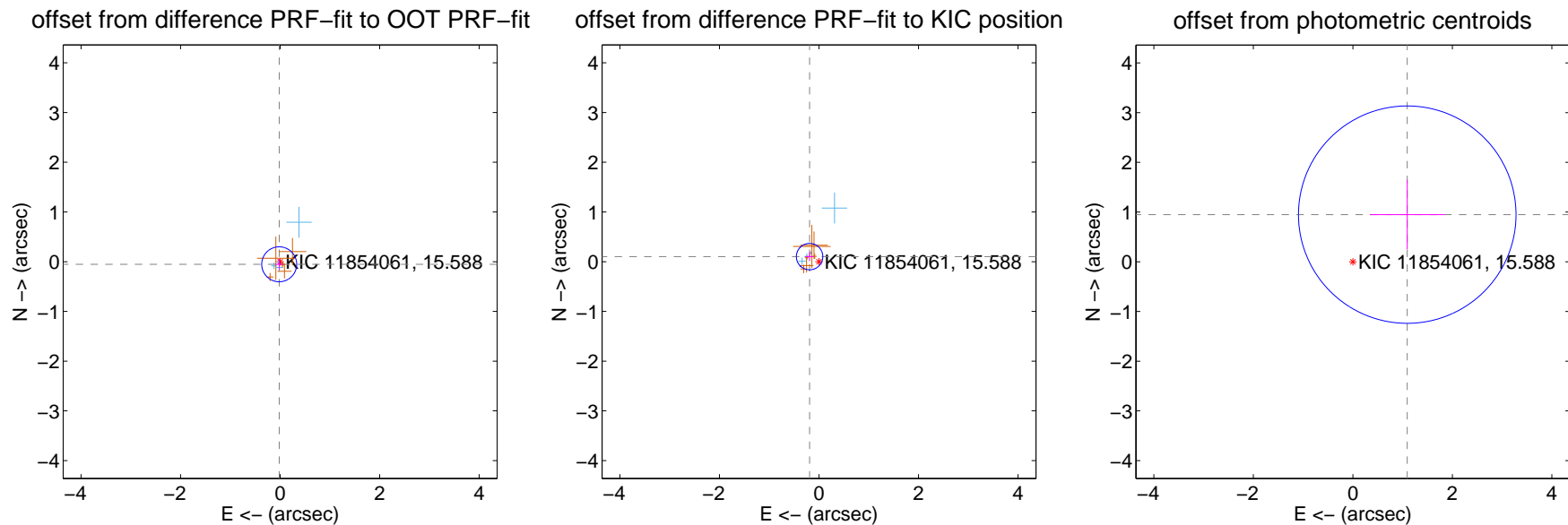
DV Centroid Data

Supplemental centroid analysis for 011854061-03. Kepler magnitude: 15.59. Transit SNR 6.27

There are 4 quarters with good PRF difference image offsets

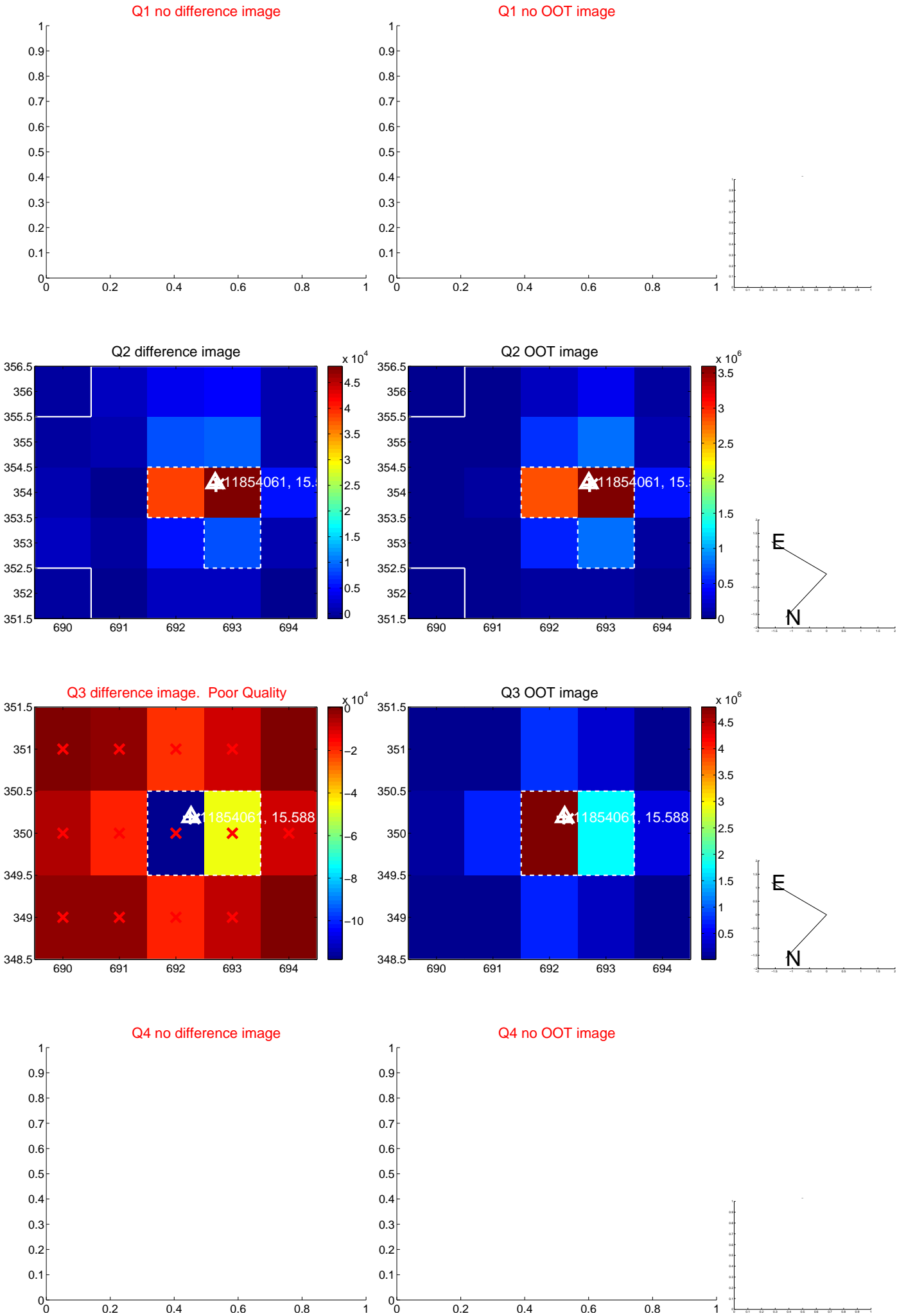
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 0.117	0.47	0.018 ± 0.083	-0.052 ± 0.110
PRF-fit source offset from KIC position	0.215 ± 0.089	2.43	0.189 ± 0.087	0.102 ± 0.092
photometric centroid source offset	1.45 ± 0.73	1.99	-1.09 ± 0.75	0.95 ± 0.70

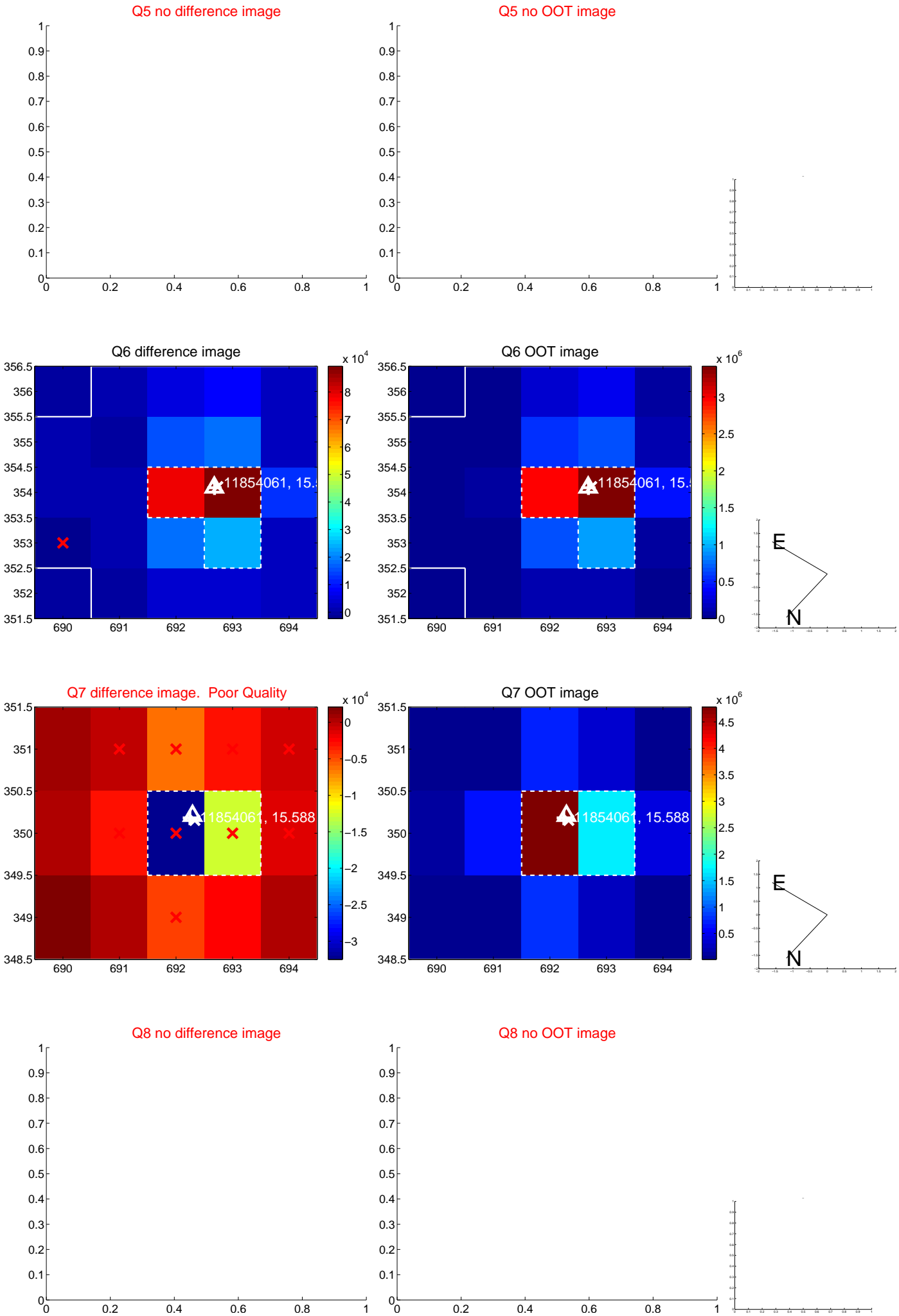


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

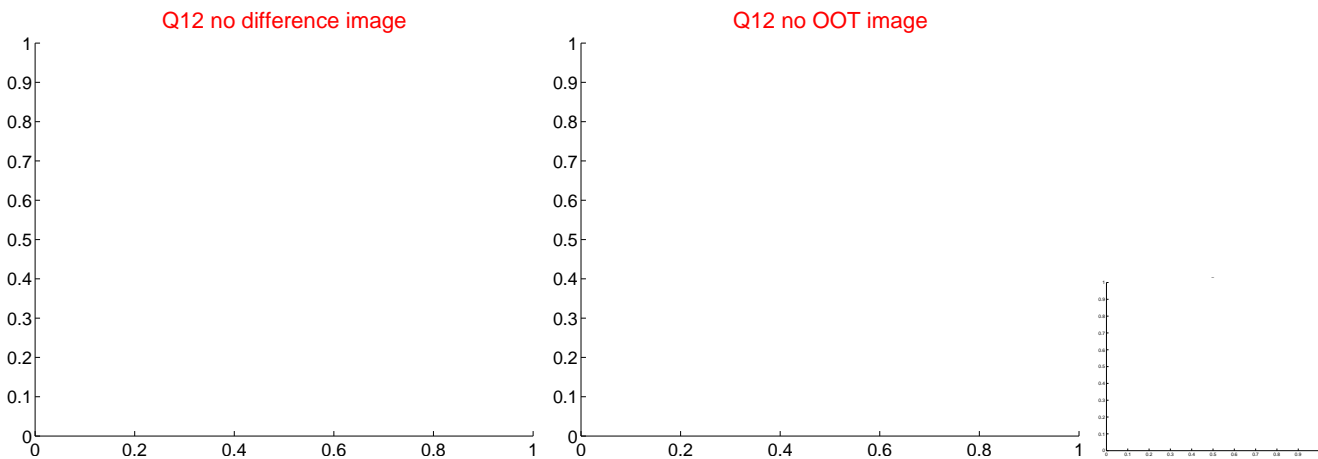
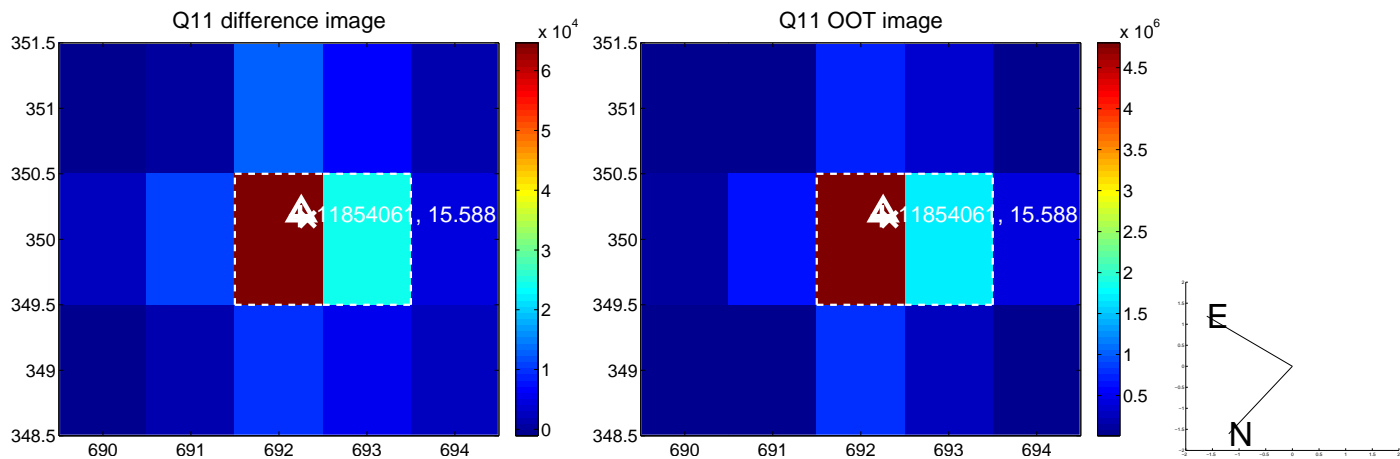
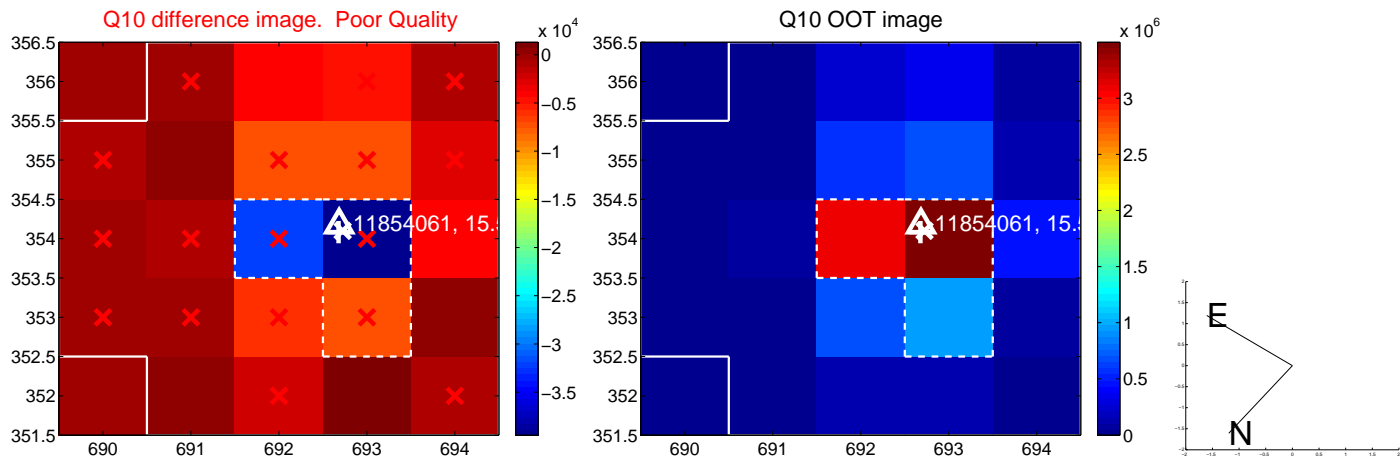
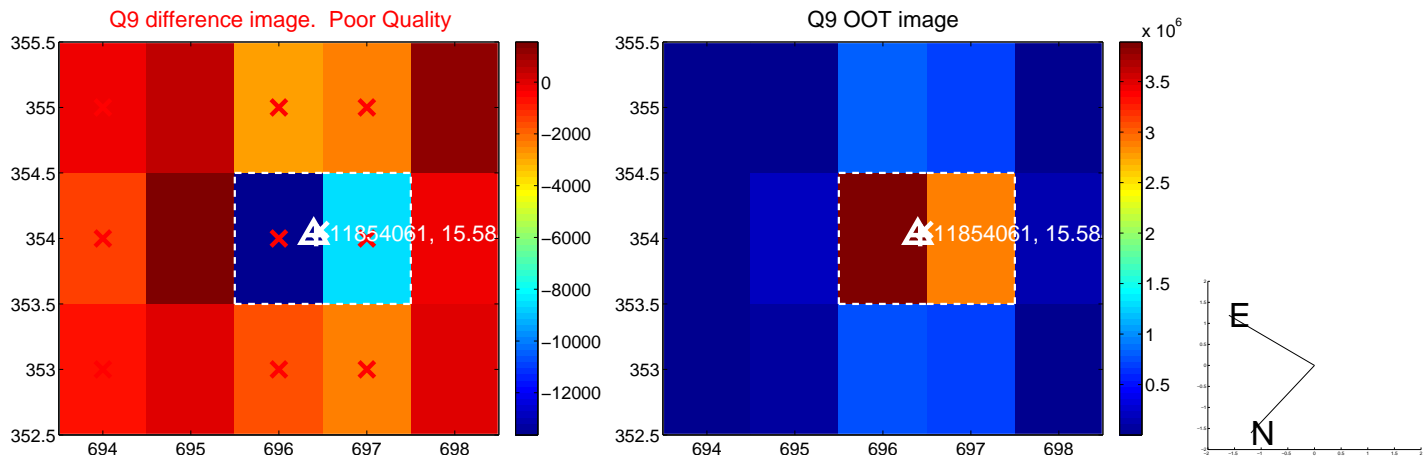
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



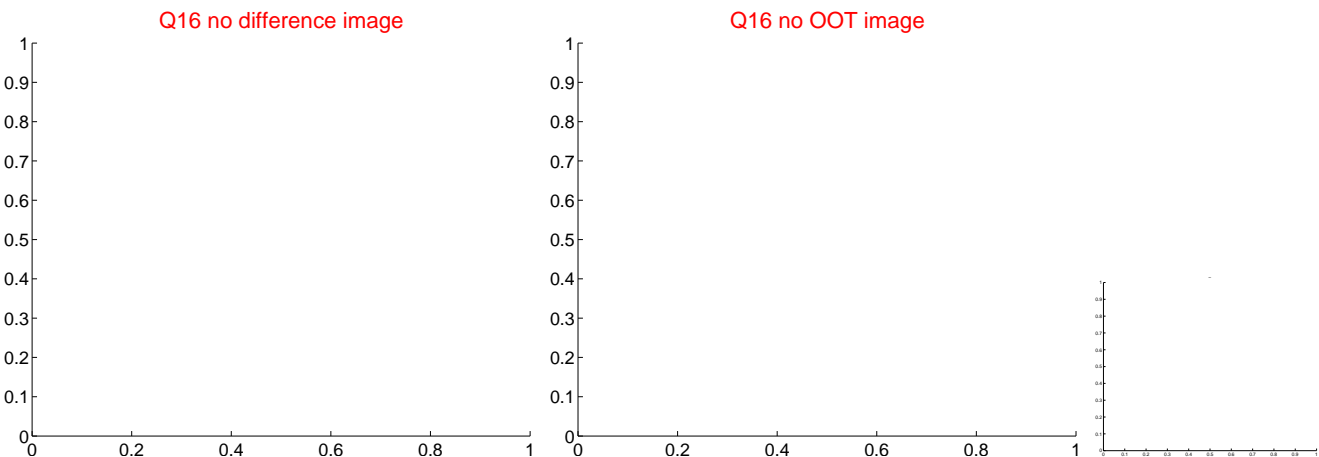
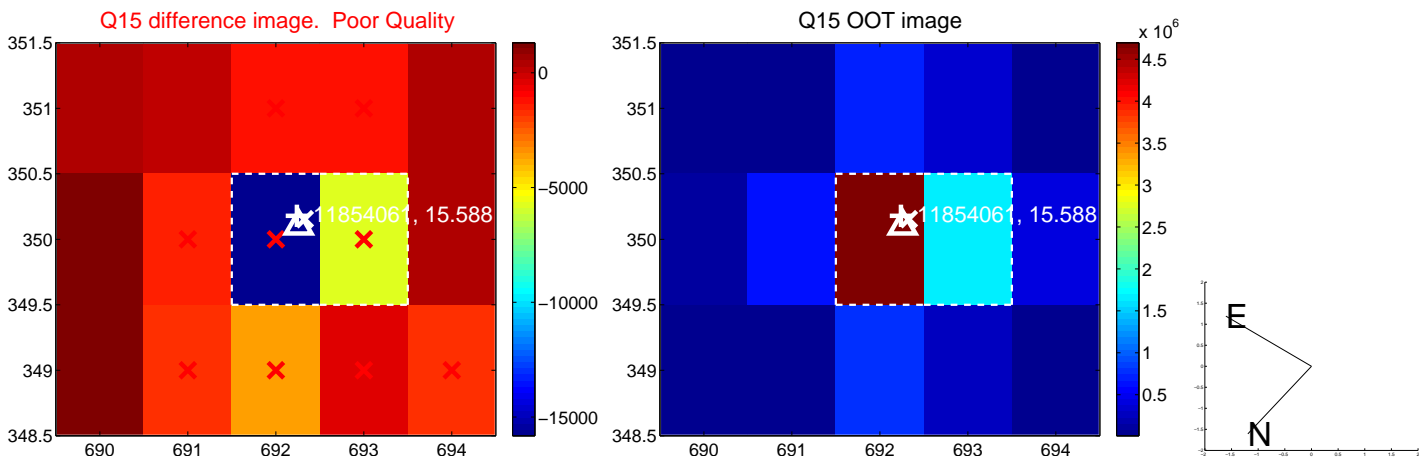
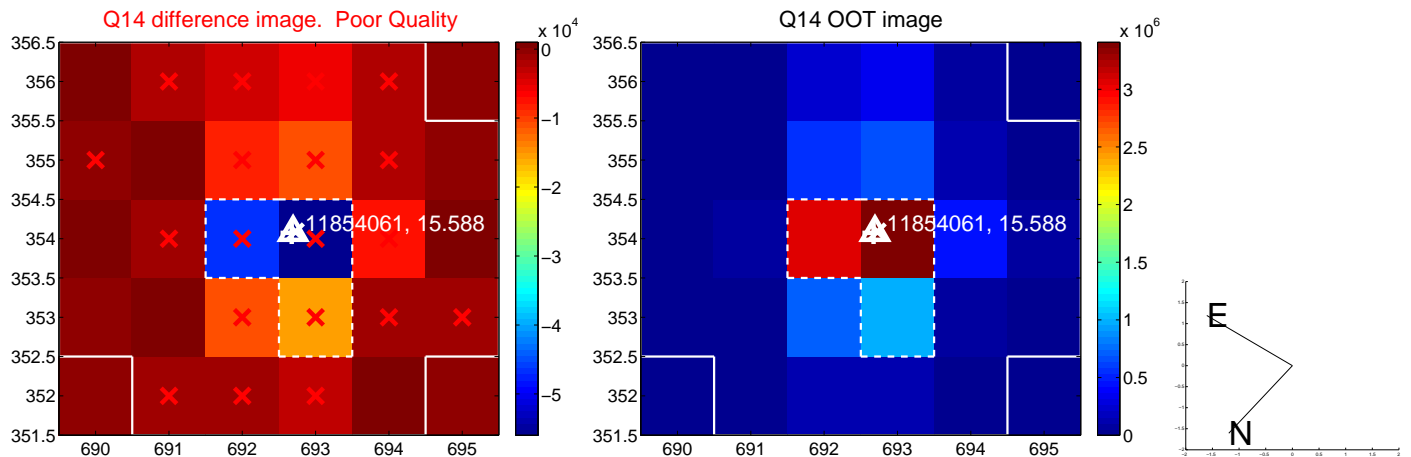
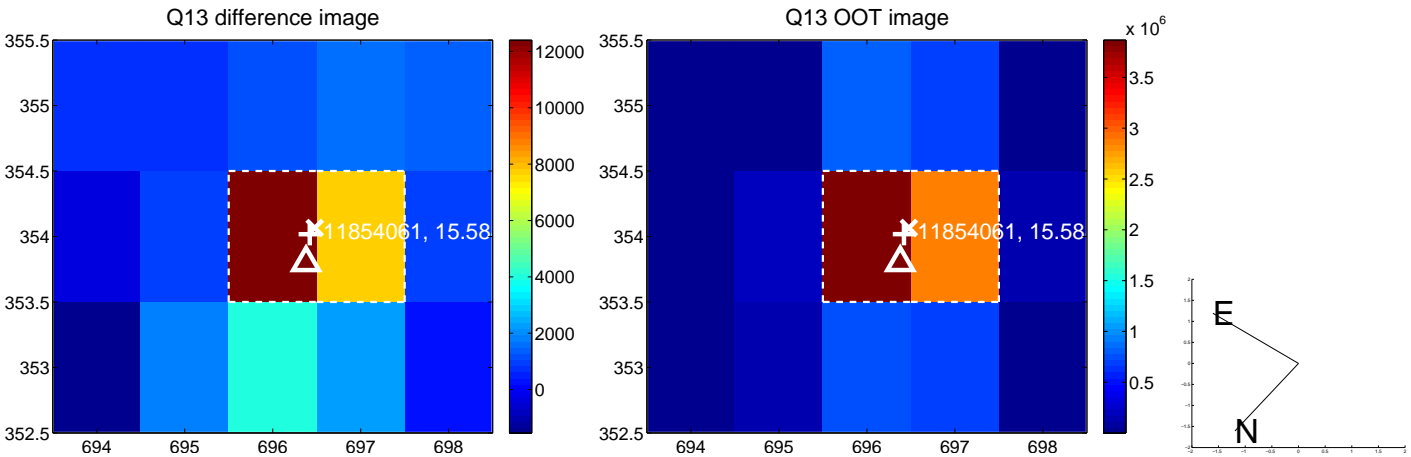
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



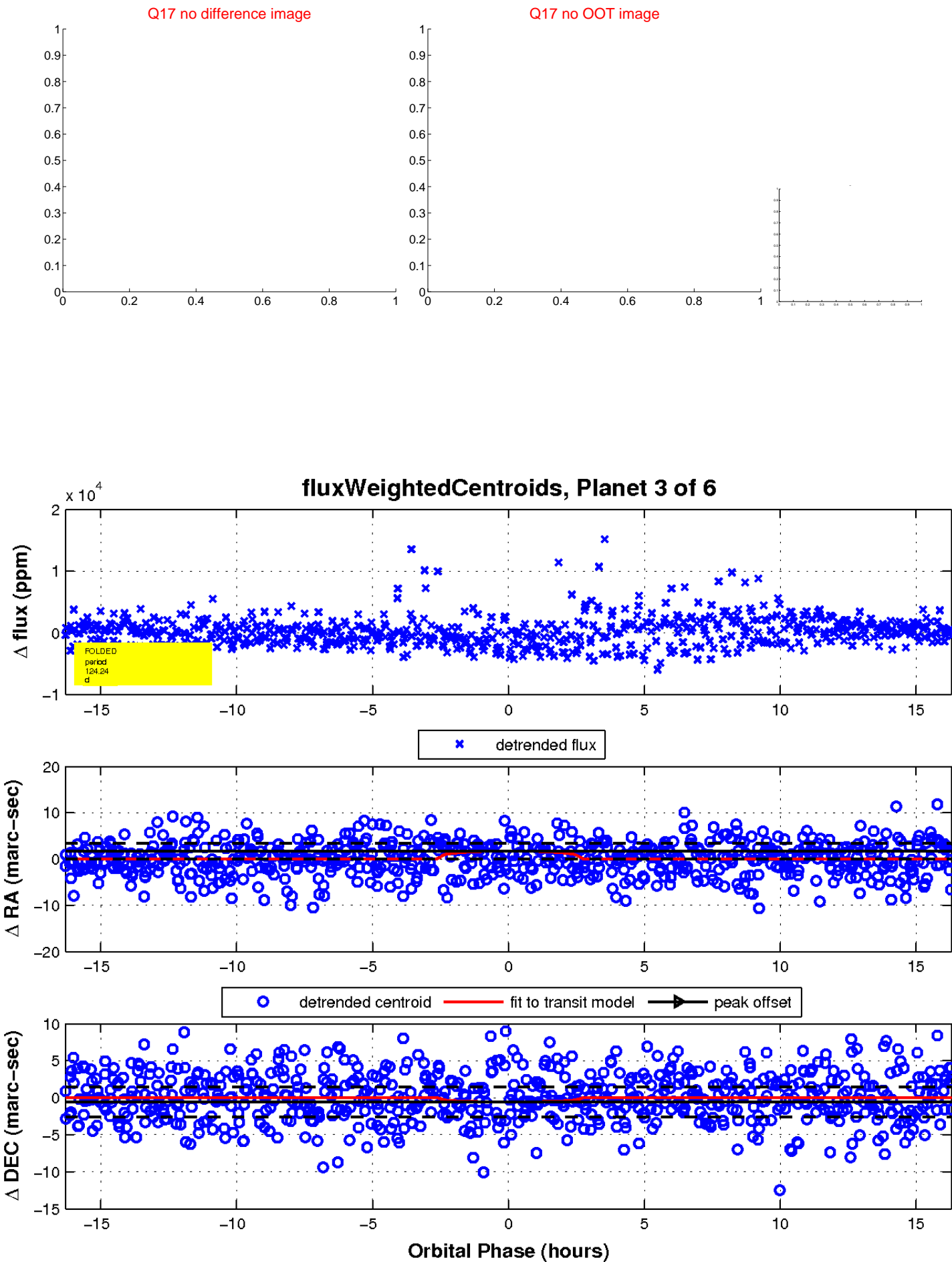
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

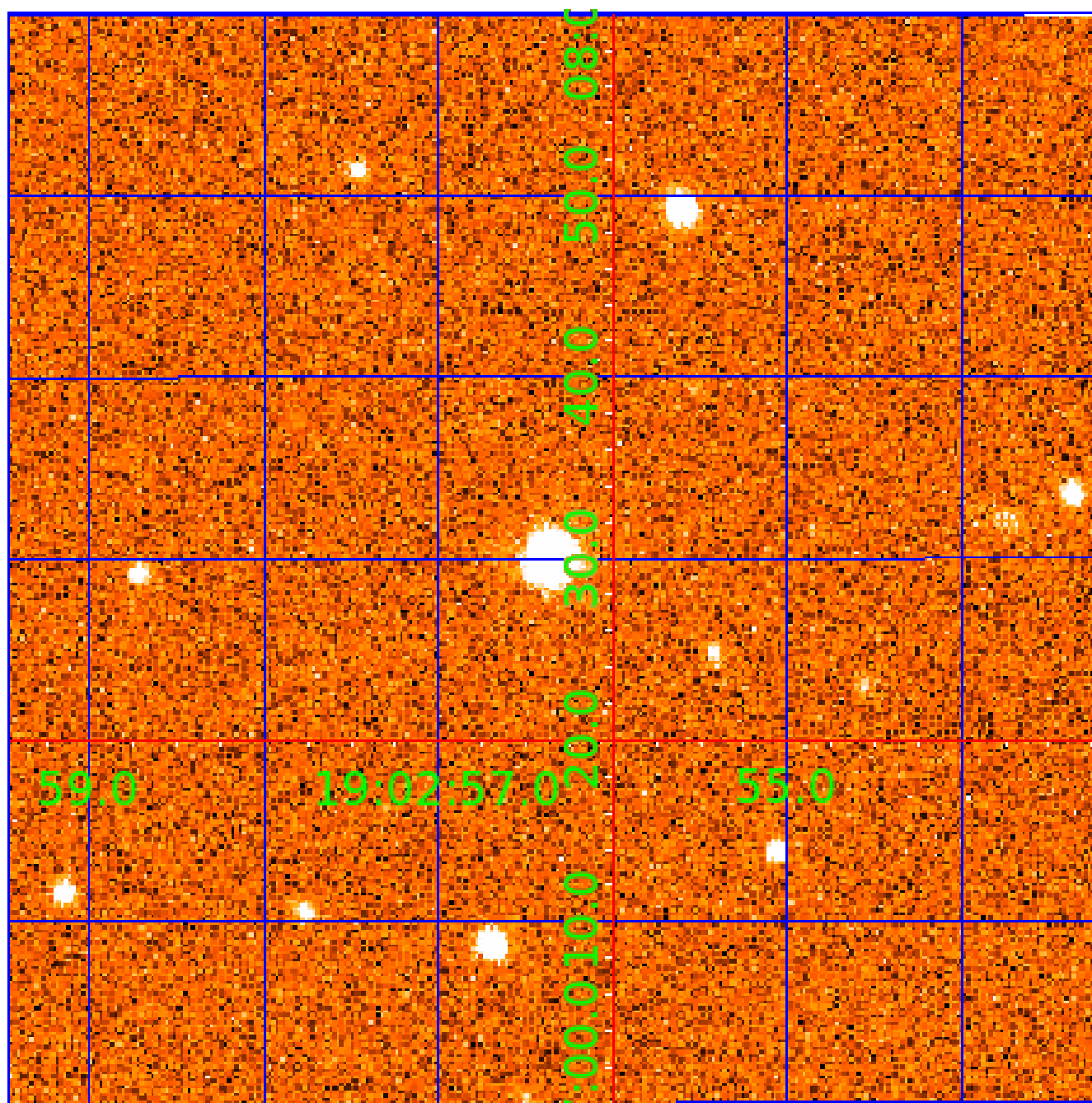


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011854061

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})
011854061-01	OBS	No	413.568315	534.497752	1079.9	0.828	10.3	1.7	0.66	4559	2.16	0.19
011854061-02	OBS	No	503.942846	556.203448	3772.0	5.359	12.1	7.6	0.66	4559	3.98	0.14
011854061-03	OBS	No	124.242768	190.199399	1689.6	5.435	10.8	6.3	0.66	4559	2.79	0.94
011854061-04	OBS	8230.01	505.066293	357.598196	4479.4	21.892	8.7	7.6	0.66	4559	5.09	0.14
011854061-05	OBS	No	311.917609	385.348689	3341.6	2.545	11.4	7.3	0.66	4559	3.64	0.28
011854061-06	OBS	No	330.959108	227.924538	3016.2	3.550	10.8	6.9	0.66	4559	4.74	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011854061-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011854061-03	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
011854061-04	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
011854061-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

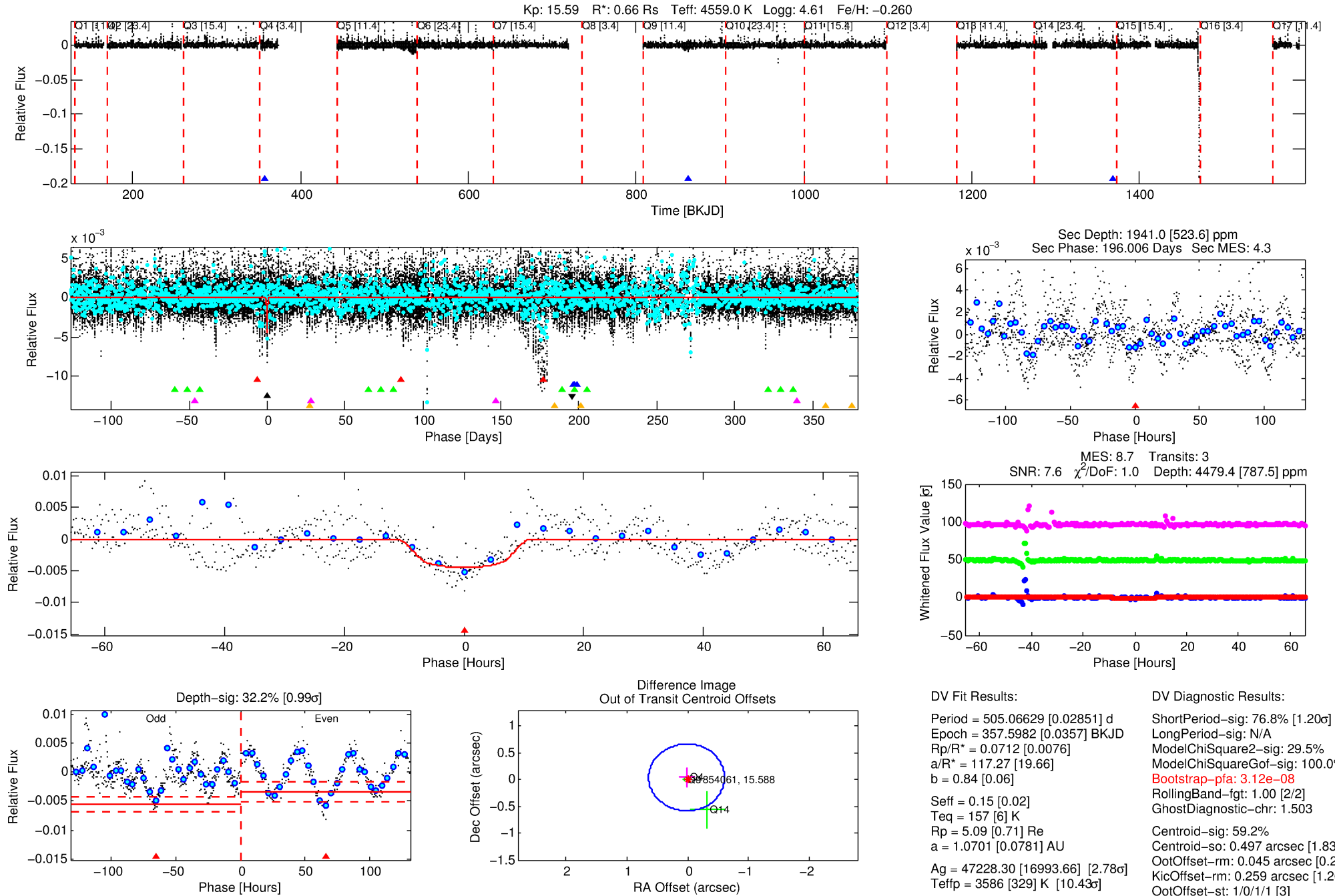
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854061-04

No Significant Match Found

DV One-Page Summary

KIC: 11854061 Candidate: 4 of 6 Period: 505.066 d



DV Fit Results:

Period = 505.06629 [0.02851] d
Epoch = 357.5982 [0.0357] BKJD
Rp/R* = 0.0712 [0.0076]
a/R* = 117.27 [19.66]
b = 0.84 [0.06]
Seff = 0.15 [0.02]
Teq = 157 [6] K
Rp = 5.09 [0.71] Re
a = 1.0701 [0.0781] AU
Ag = 47228.30 [16993.66] [2.78σ]
Teffp = 3586 [329] K [10.43σ]

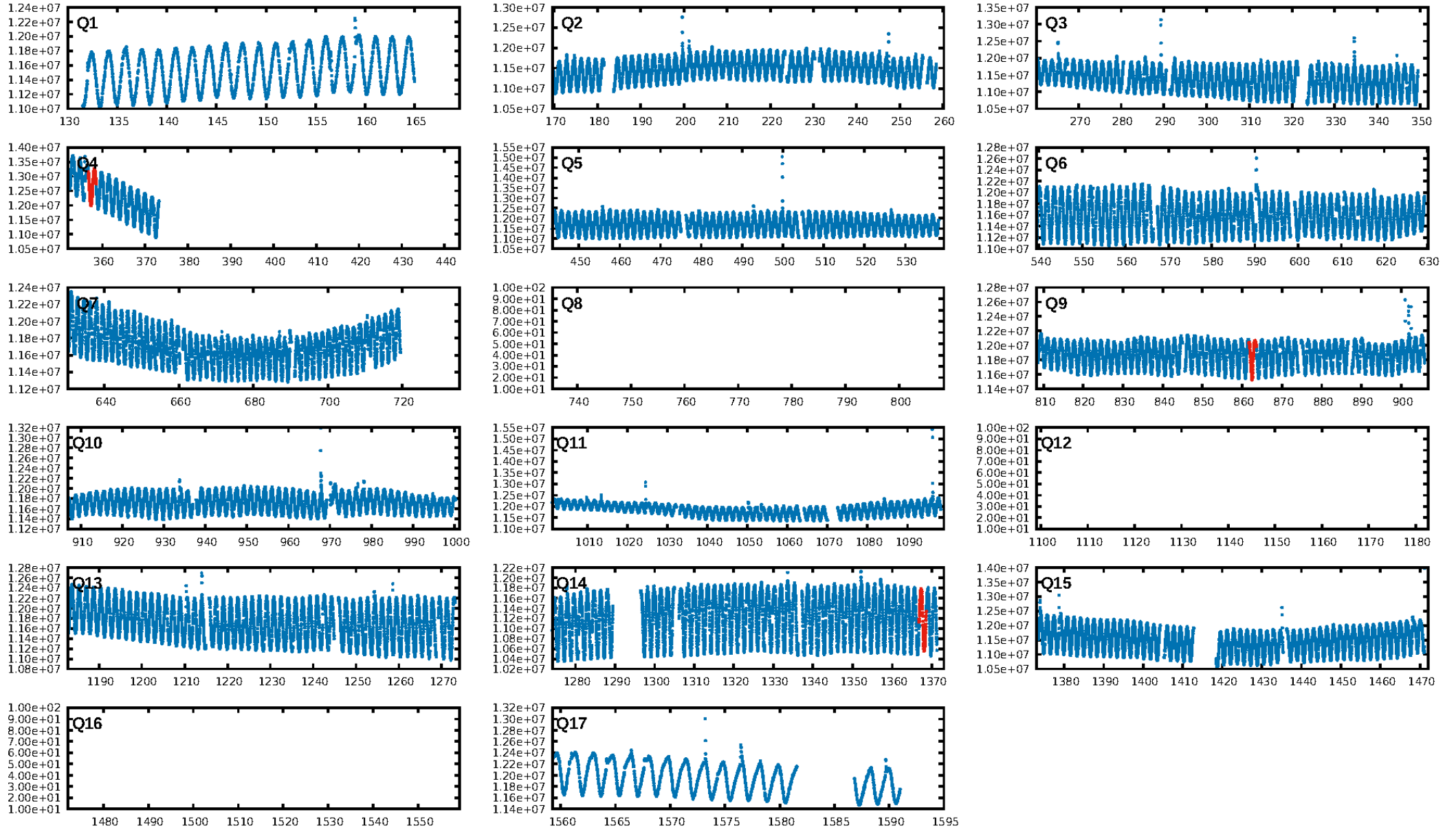
DV Diagnostic Results:

ShortPeriod-sig: 76.8% [1.20σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 29.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.12e-08
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.503
Centroid-sig: 59.2%
Centroid-so: 0.497 arcsec [1.83σ]
OotOffset-rm: 0.045 arcsec [0.22σ]
KicOffset-rm: 0.259 arcsec [1.26σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

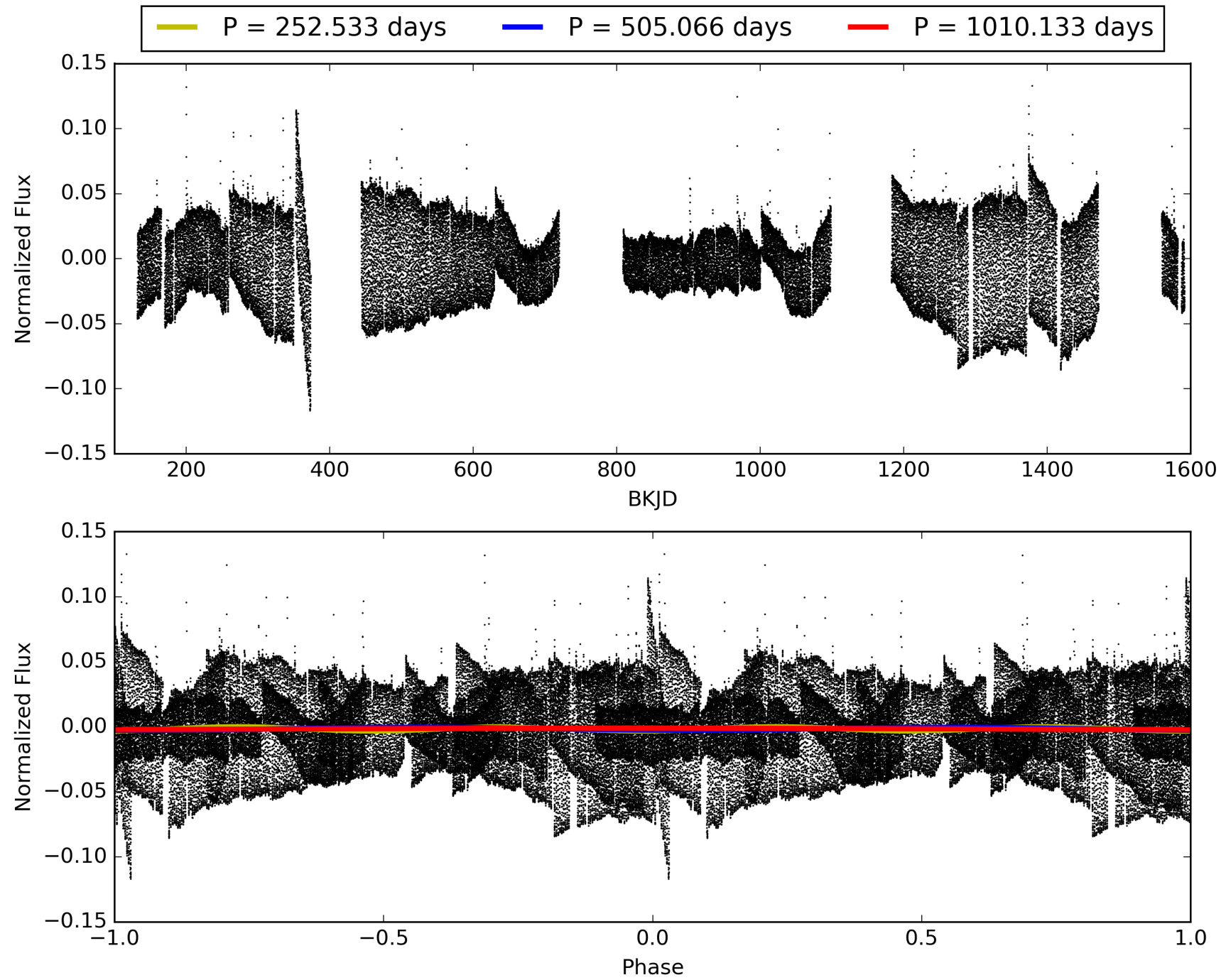
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:29:26 Z

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

TCE 011854061-04, PDC Light Curves

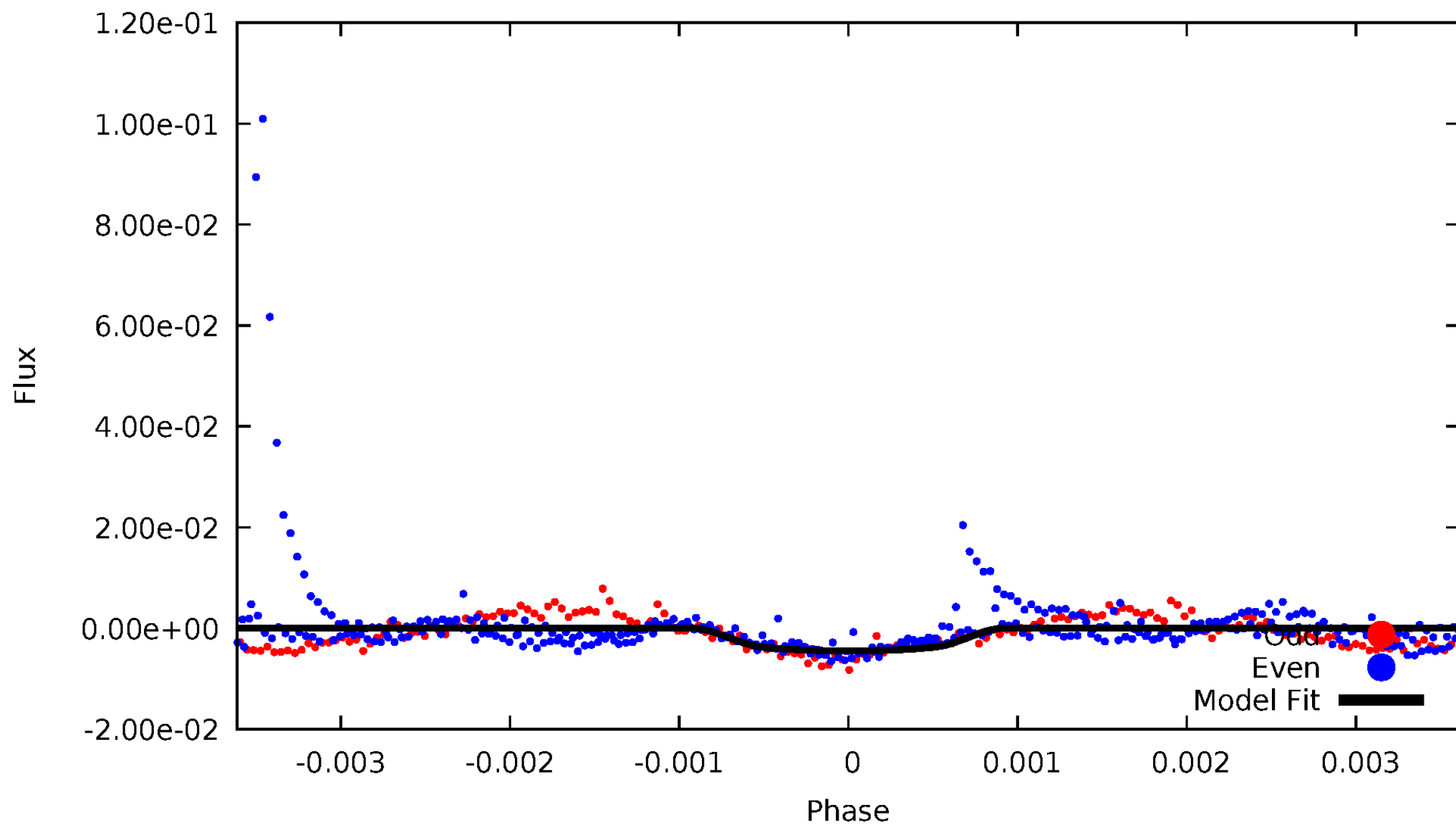


TCE 011854061-04



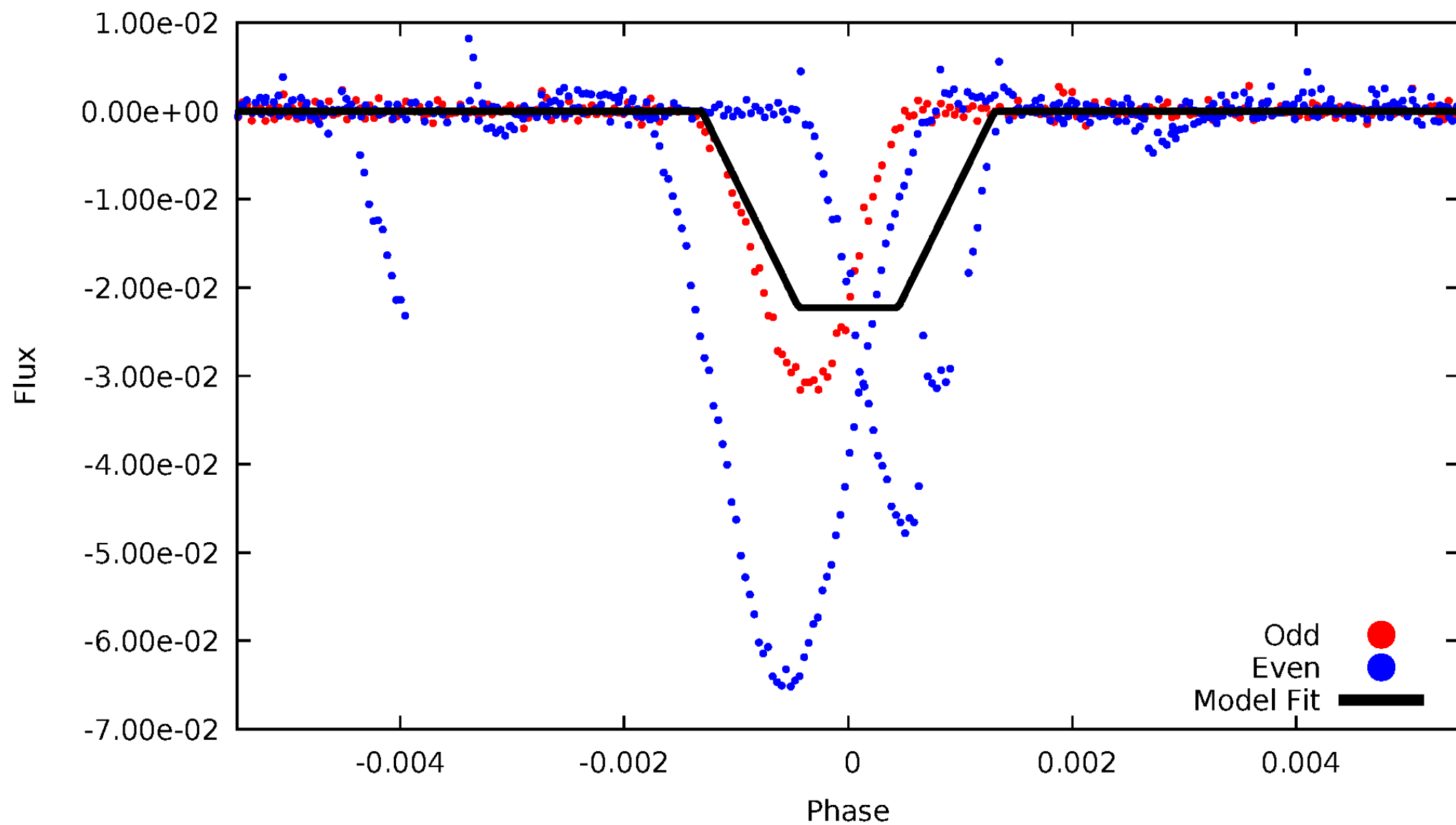
DV Odd/Even

TCE 011854061-04



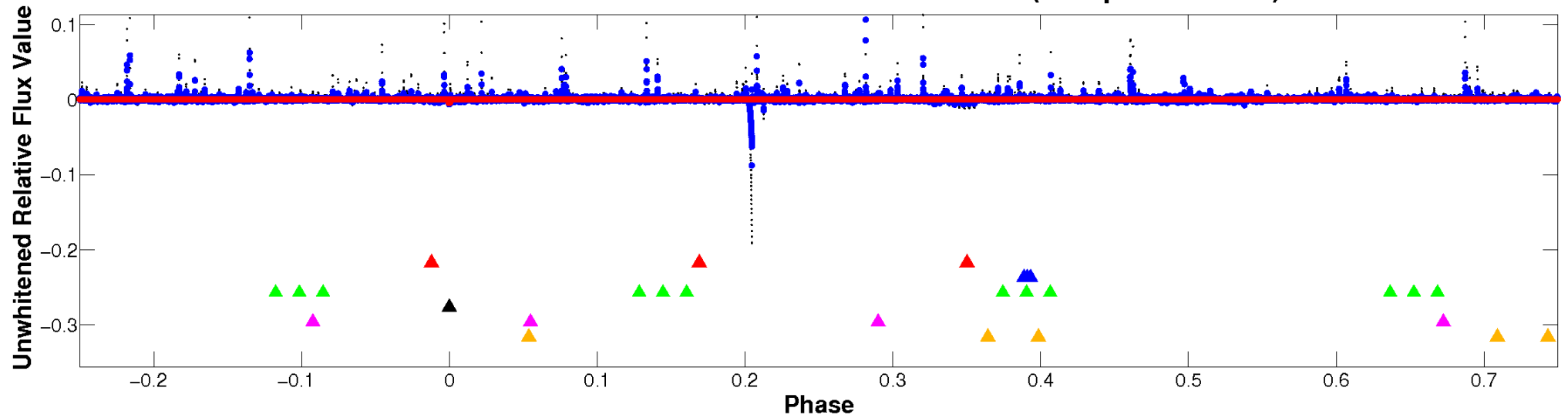
ALT Odd/Even

TCE 011854061-04

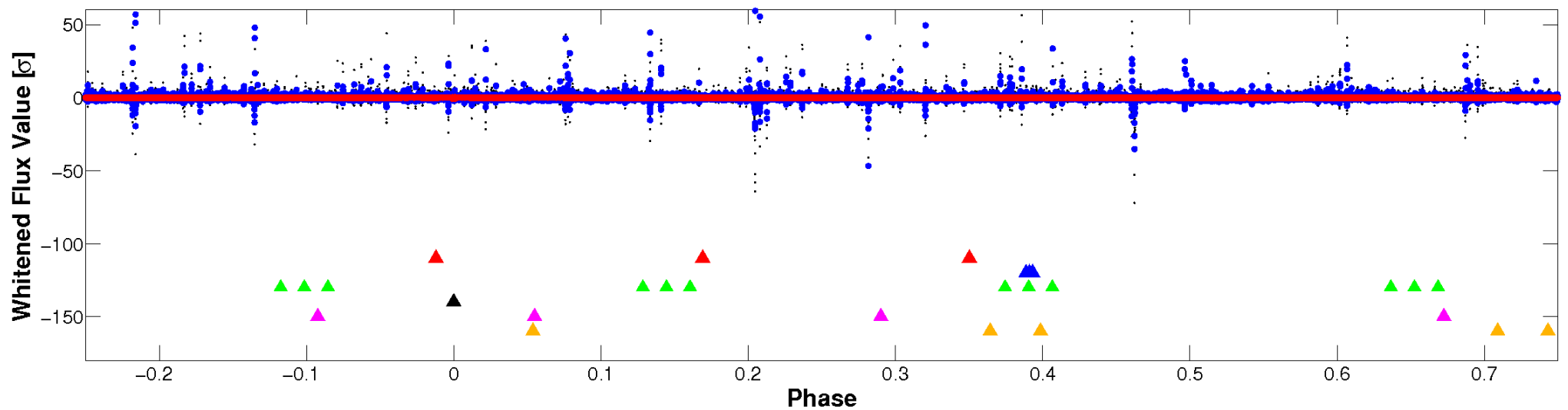


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

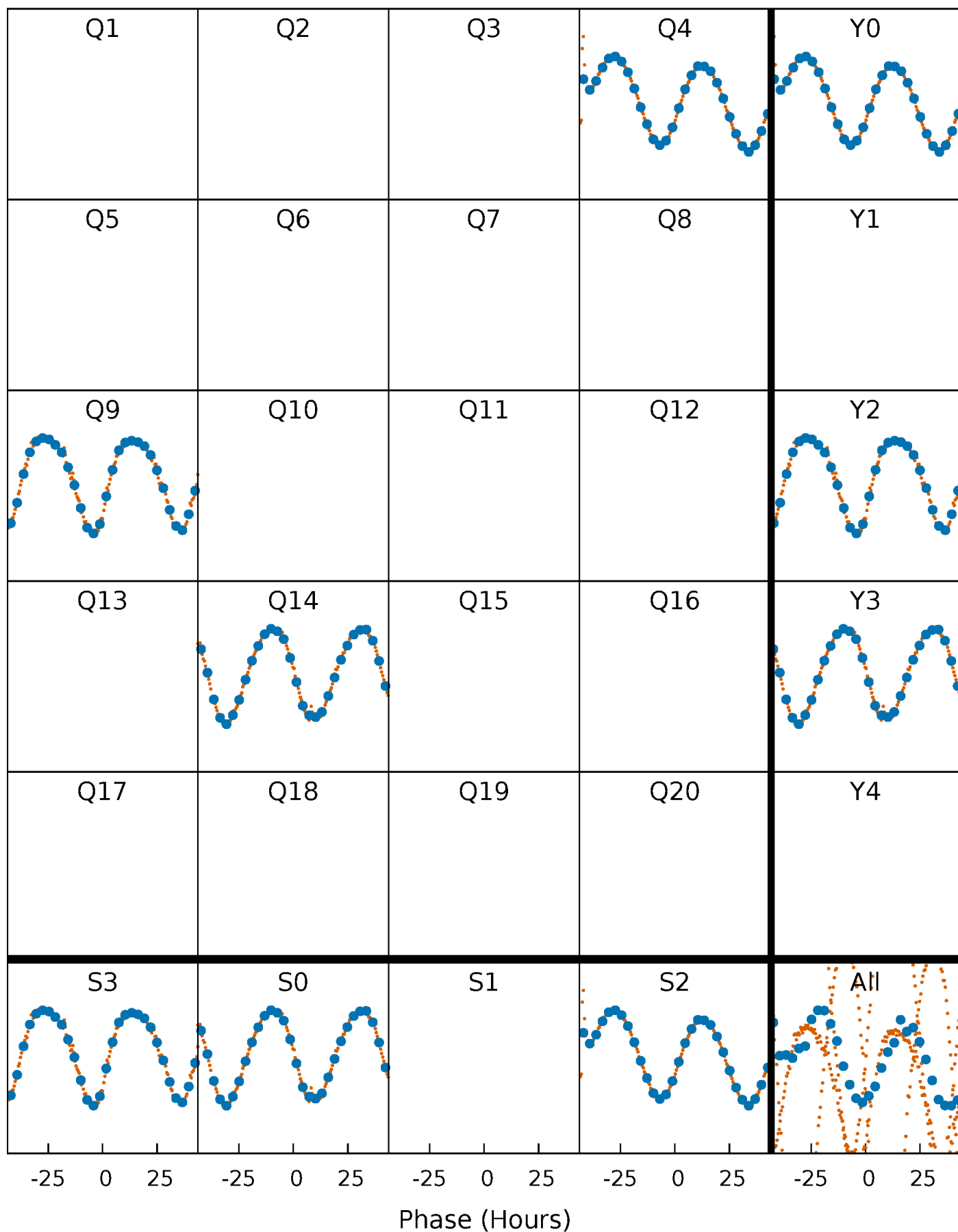


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



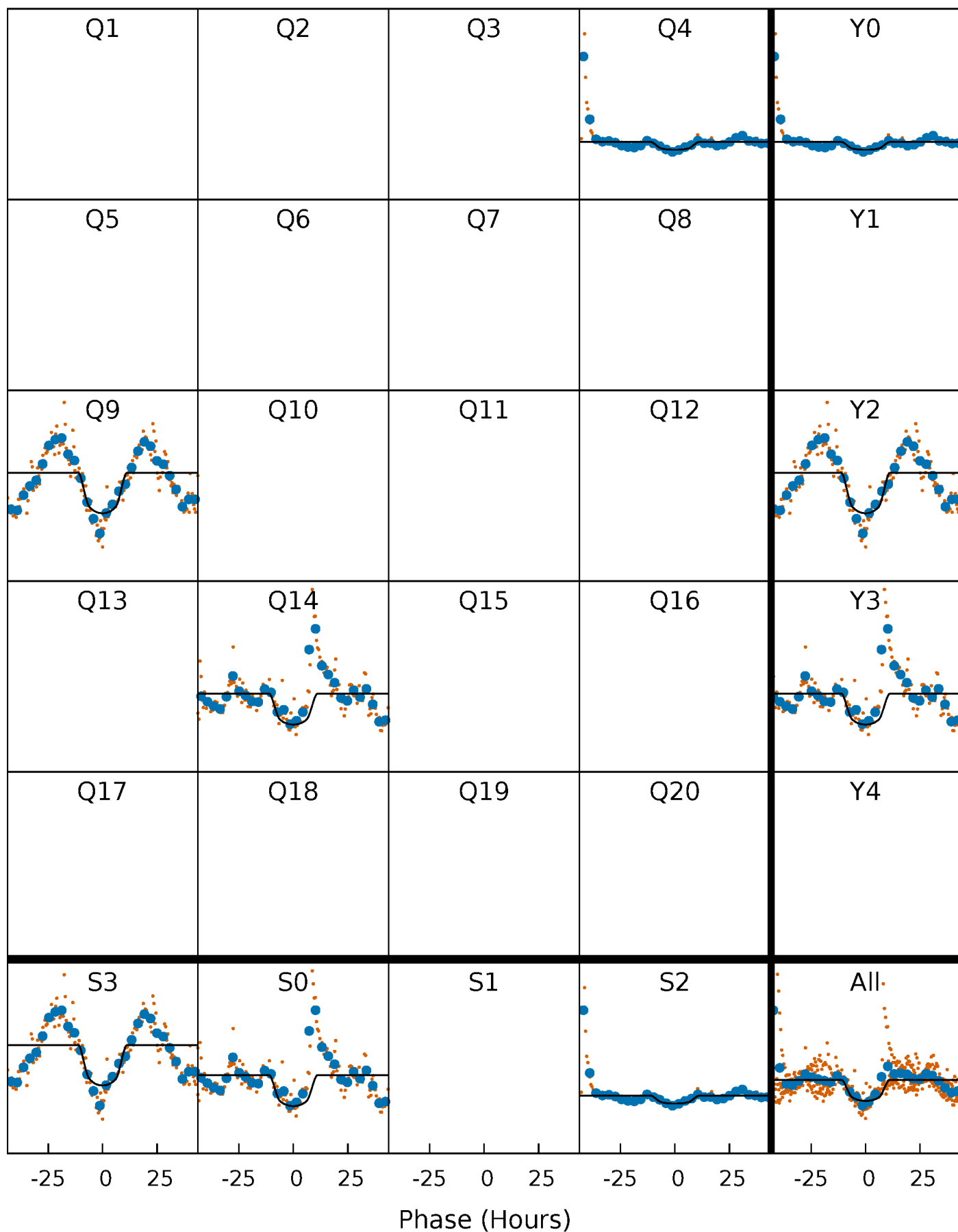
PDC Quarter-Phased Transit Curves

TCE 011854061-04 P=505.066293 Days $T_0=357.598196$ (BKJD)



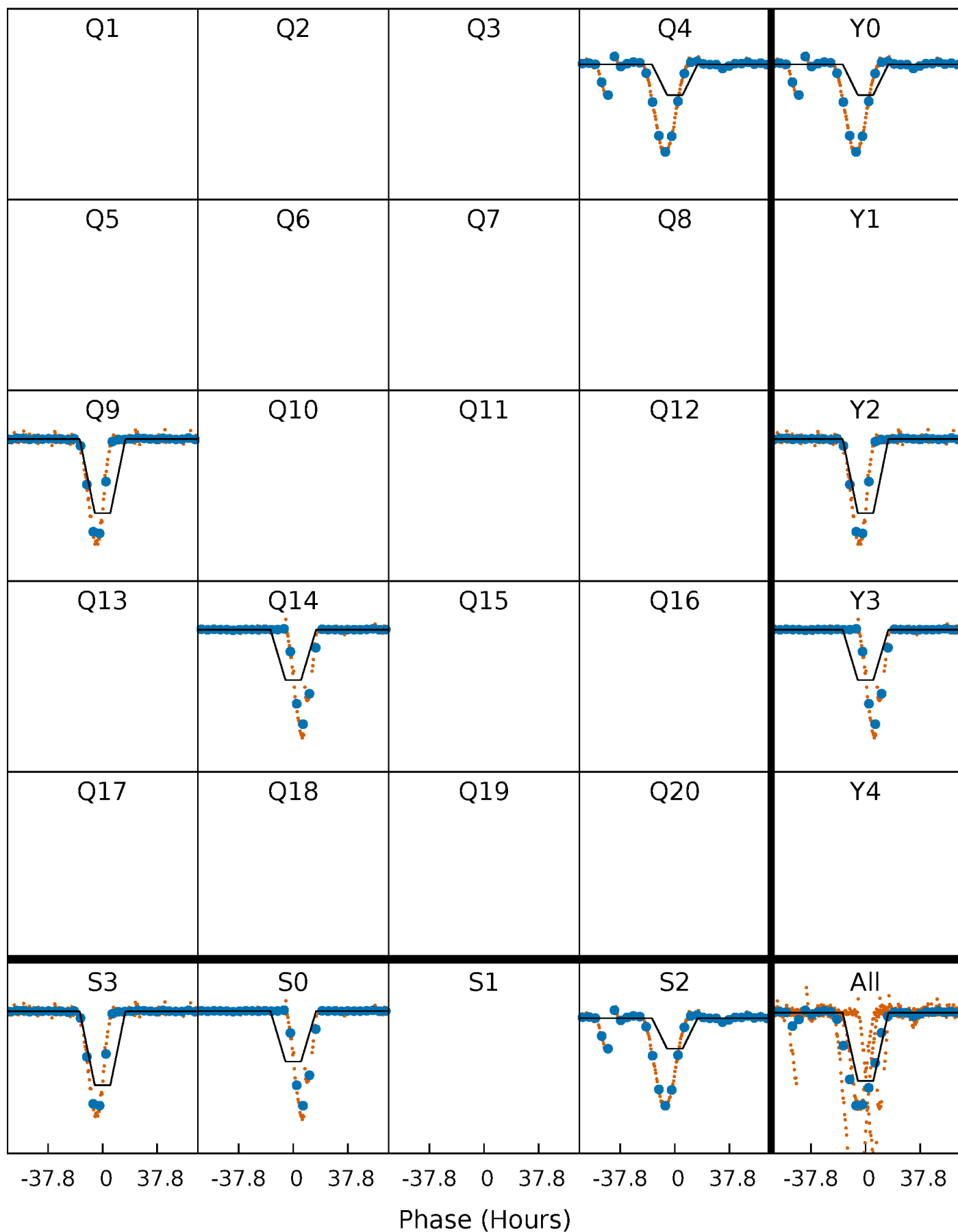
DV Quarter-Phased Transit Curves

TCE 011854061-04 P=505.066293 Days $T_0=357.598196$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

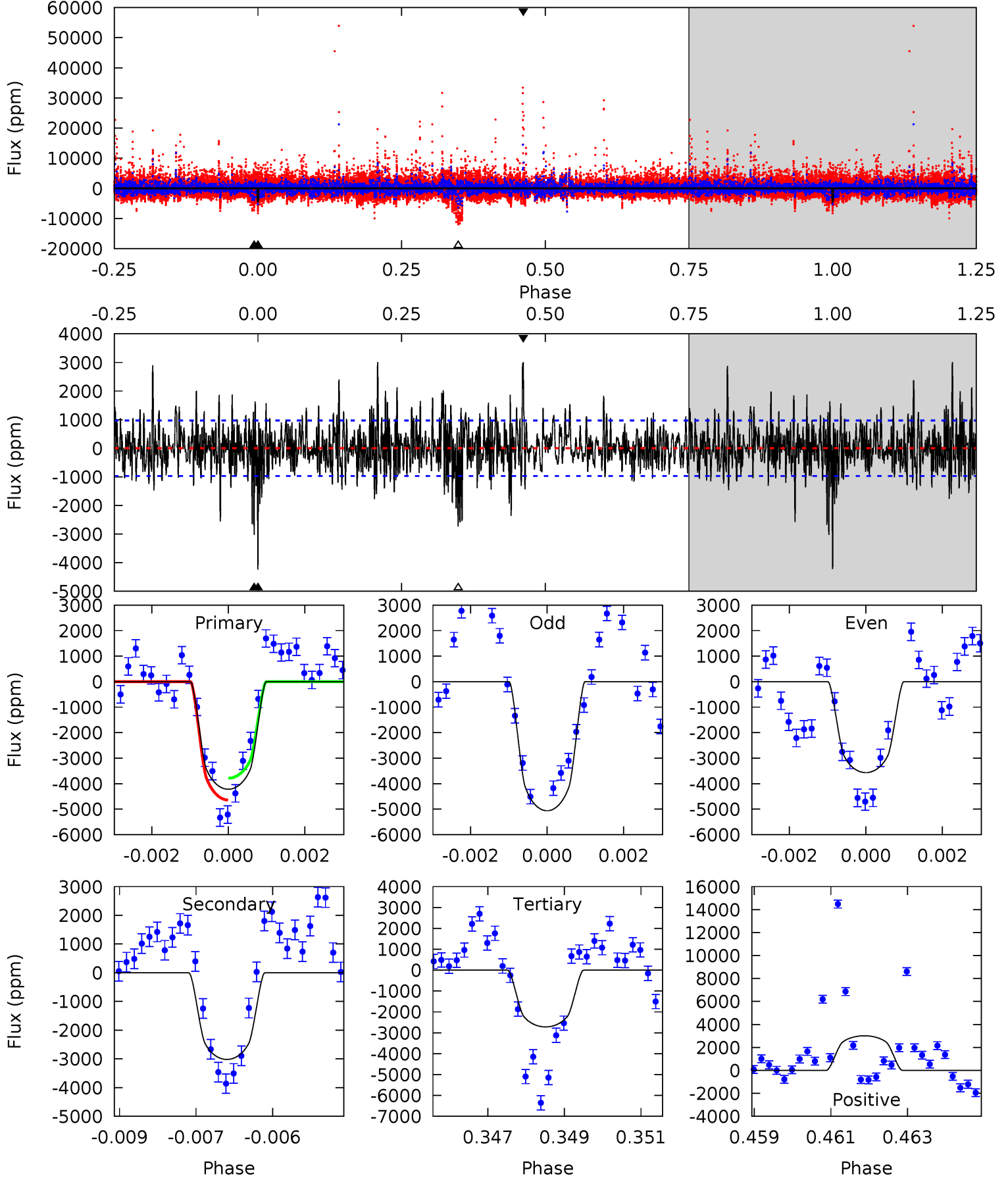
TCE 011854061-04 P=505.056303 Days $T_0=357.622723$ (BKJD)



DV Model-Shift Uniqueness Test

011854061-04, P = 505.066293 Days, E = 357.598196 Days

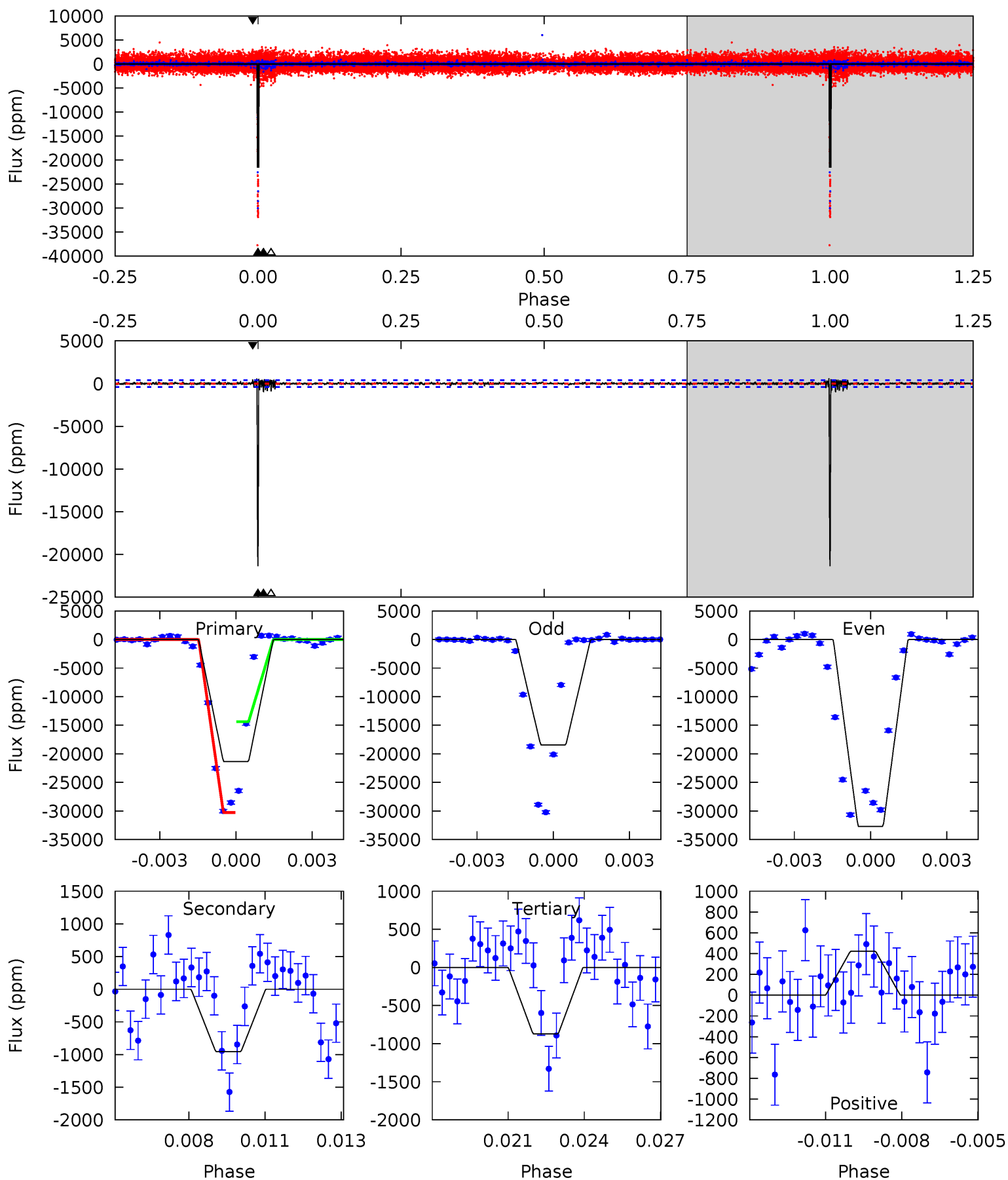
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	16.7	15.0	16.6	5.34	3.12	3.69	8.29	6.66	1.66	0.04	2.70	0.90	0.42	2.37



Alt Model-Shift Uniqueness Test

011854061-04, P = 505.056303 Days, E = 357.622723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
278.7	12.5	11.4	5.51	5.27	3.00	1.04	267.4	273.2	1.09	6.95	119.5	1.22	0.03	0



Stellar Parameters For KIC 011854061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} \text{ (g}\cdot\text{cm}^{-3}\text{)}$
	4559^{+143}_{-143}	$4.612^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.655^{+0.052}_{-0.058}$	$0.641^{+0.077}_{-0.051}$	$3.209^{+0.811}_{-0.367}$
	+3%/-3%	+1%/-1%	+115%/-115%	+8%/-9%	+12%/-8%	+25%/-11%
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 011854061-04 / KOI 8230.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} \text{ (K)}$	$T_{obs} \text{ (K)}$	A_{obs}
DV	-3019 ± 181	$5.07^{+0.60}_{-0.60}$	218^{+8}_{-8}	4135^{+235}_{-197}	75910^{+20328}_{-15591}
Alt.	-955 ± 77	$10.61^{+0.79}_{-0.71}$	218^{+8}_{-7}	2759^{+79}_{-78}	5396^{+859}_{-649}

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 $A_{obs} \gg 1.0$

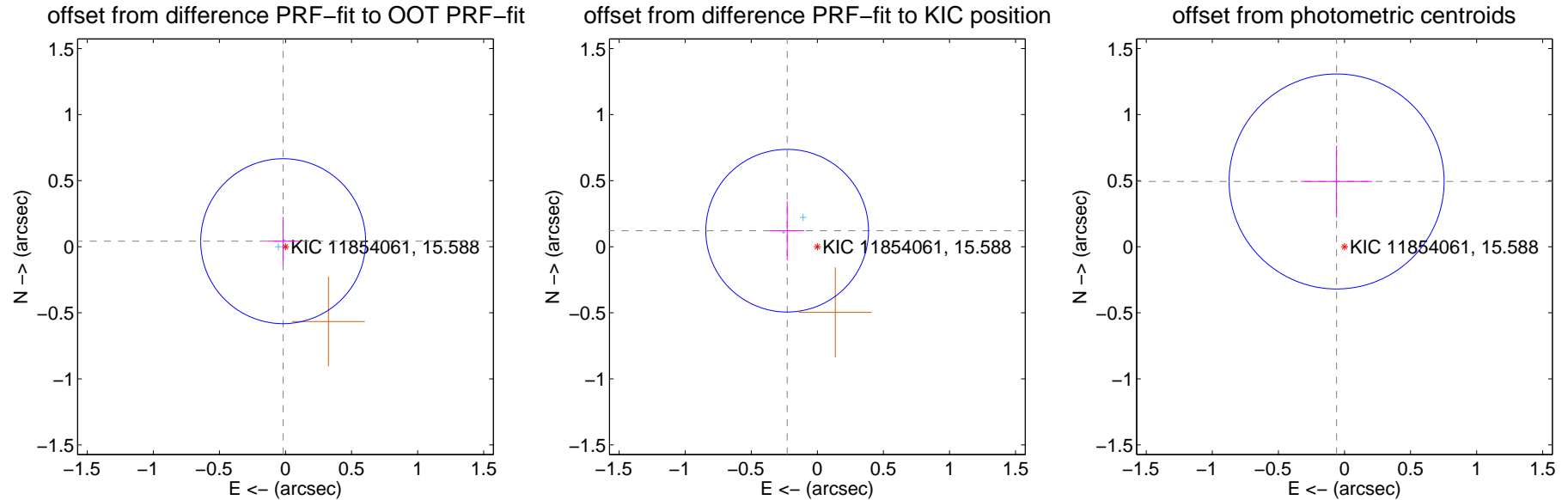
DV Centroid Data

Supplemental centroid analysis for 011854061-04. Kepler magnitude: 15.59. Transit SNR 7.60

There are 2 quarters with good PRF difference image offsets

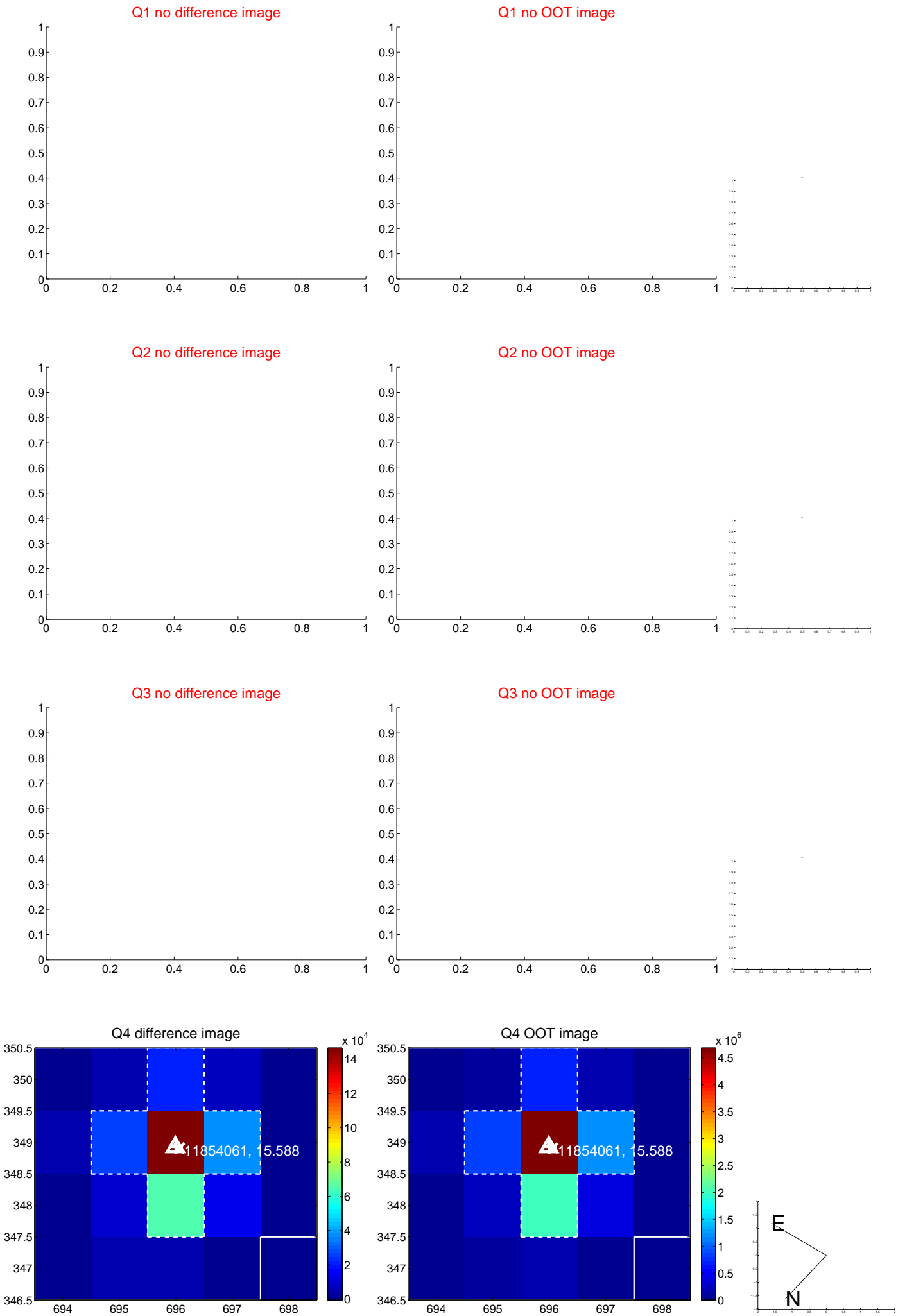
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.208	0.22	0.018 ± 0.123	0.042 ± 0.183
PRF-fit source offset from KIC position	0.259 ± 0.205	1.26	0.228 ± 0.130	0.121 ± 0.223
photometric centroid source offset	0.50 ± 0.27	1.83	0.06 ± 0.27	0.49 ± 0.27



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.

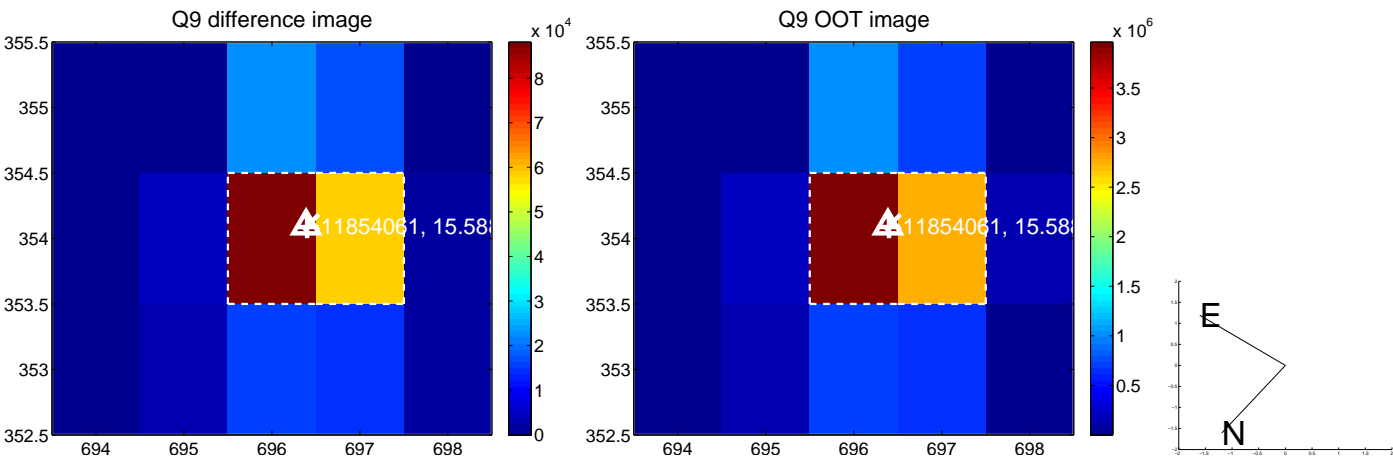
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



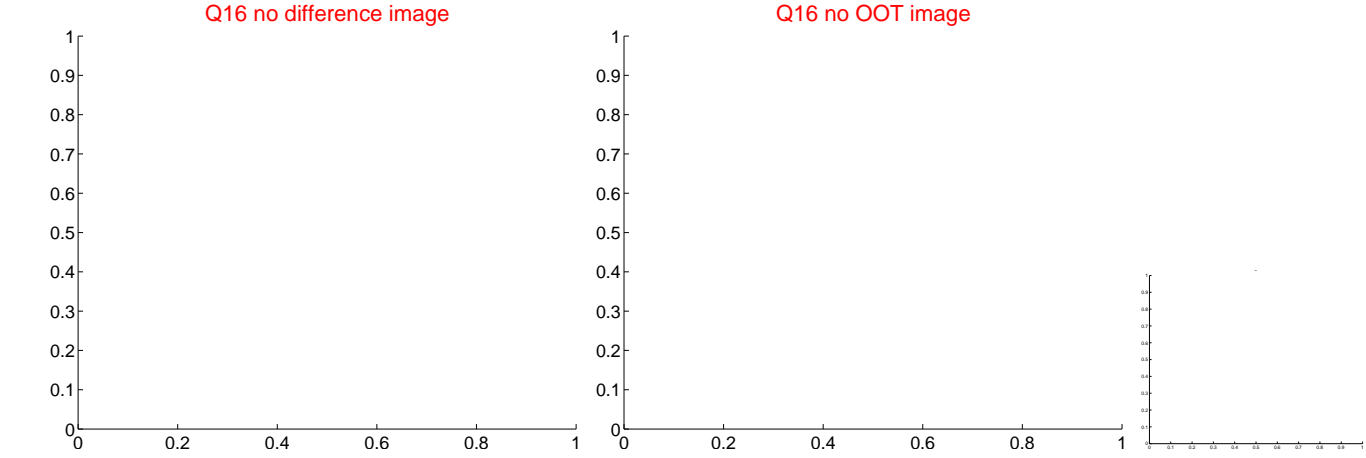
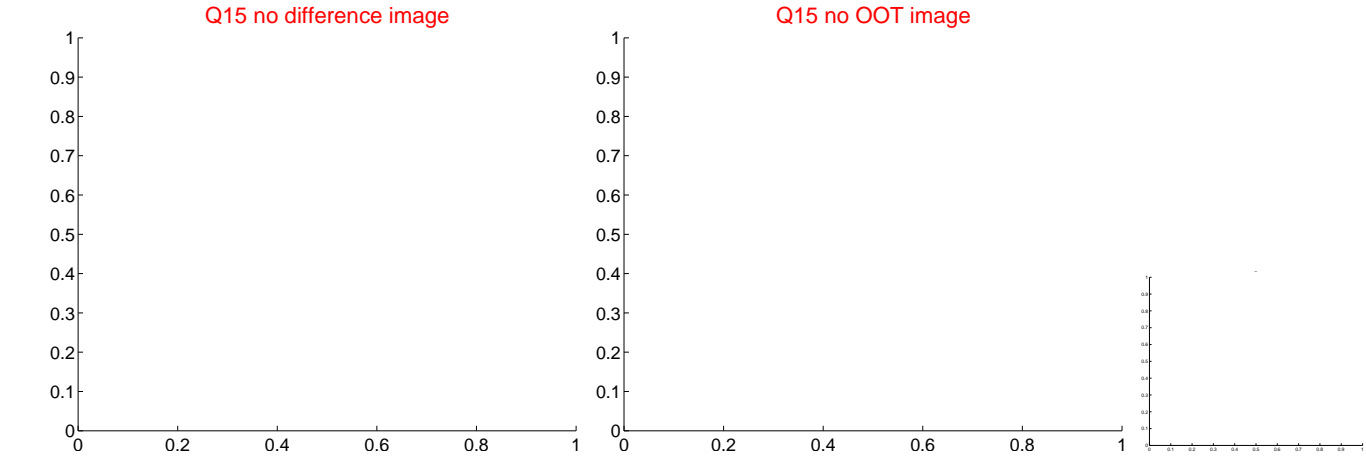
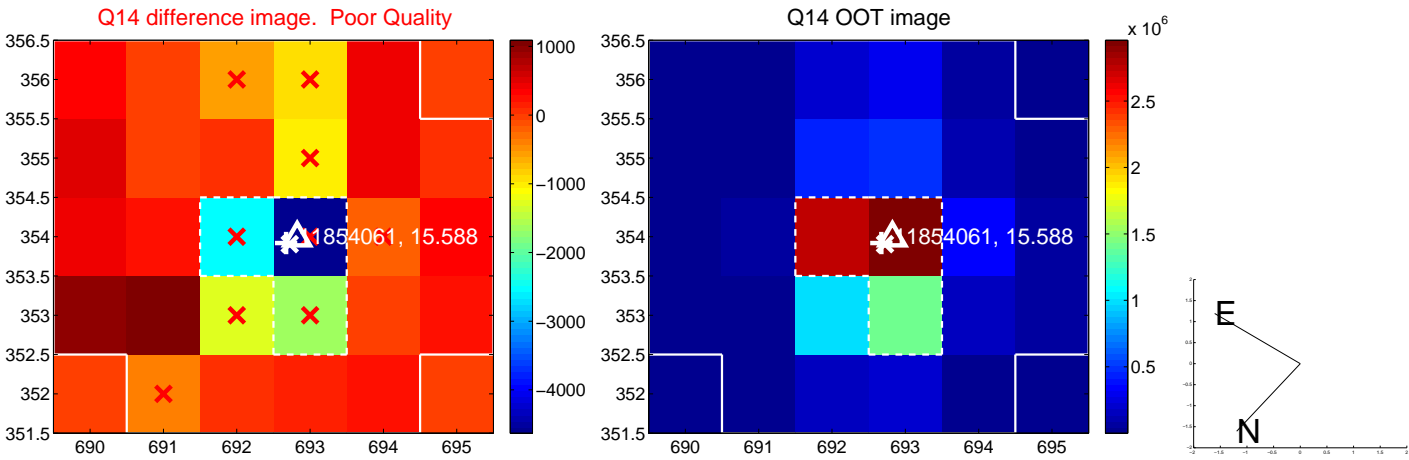
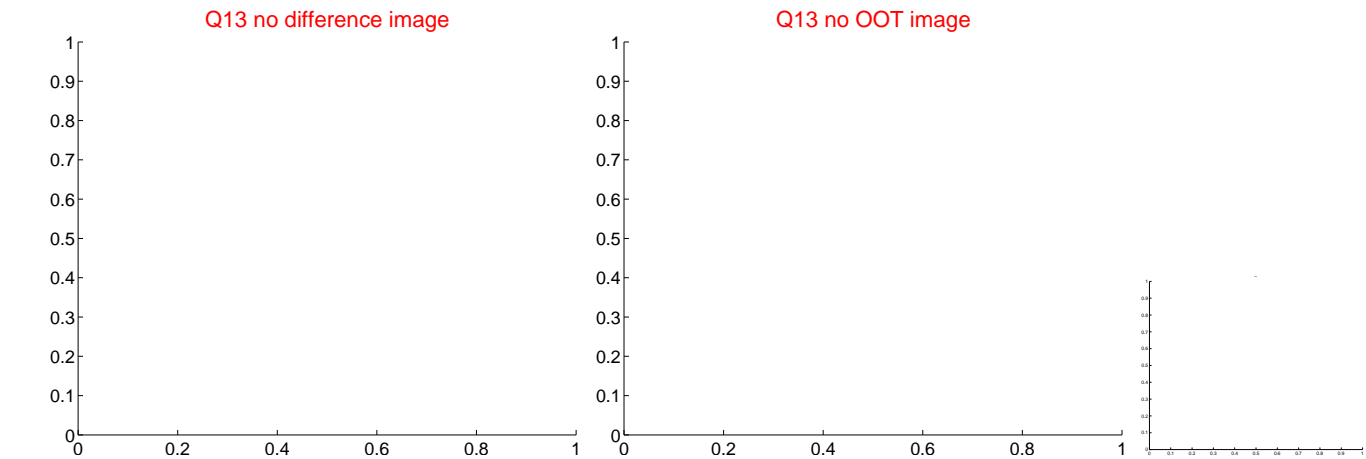
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



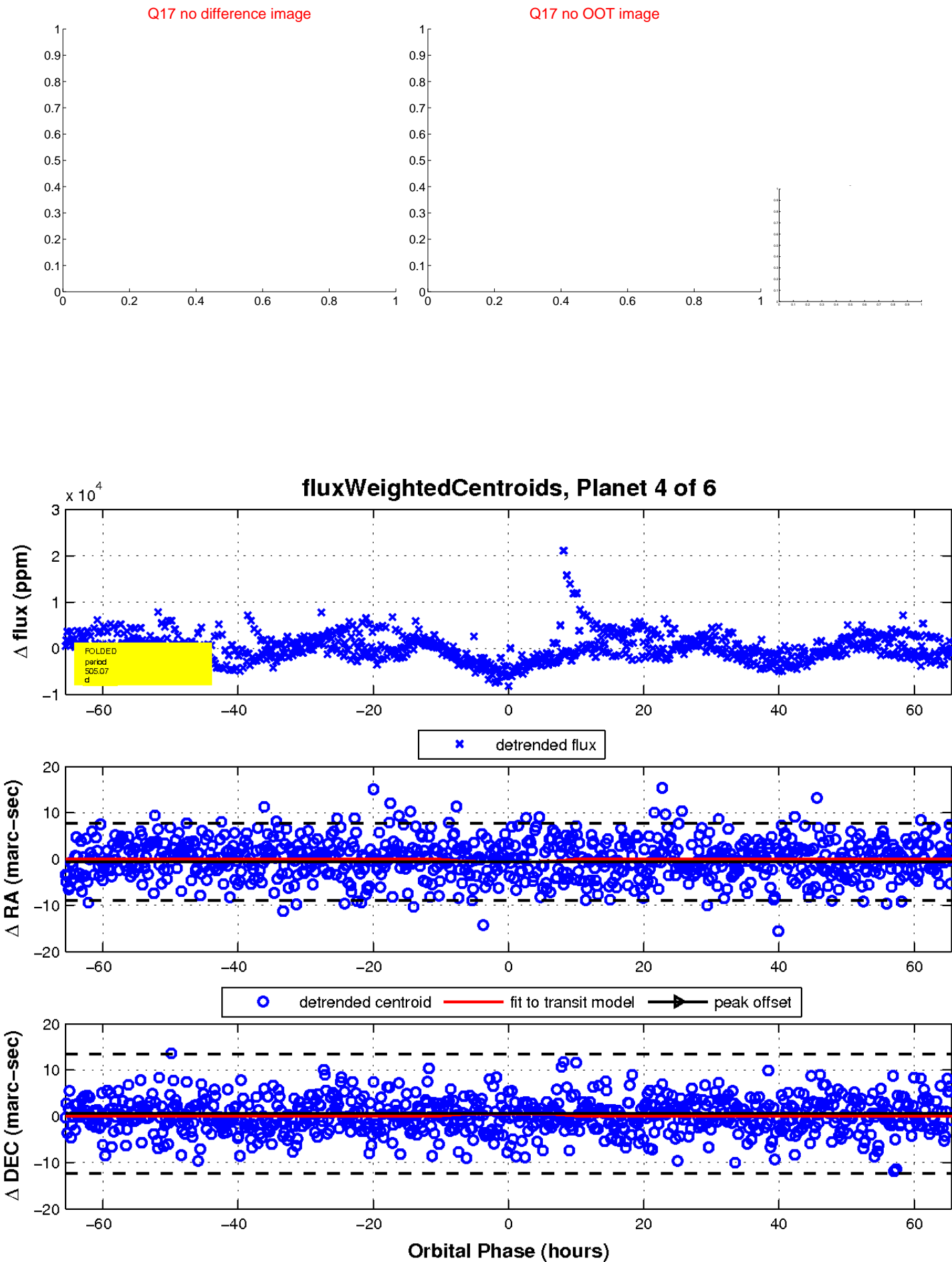
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

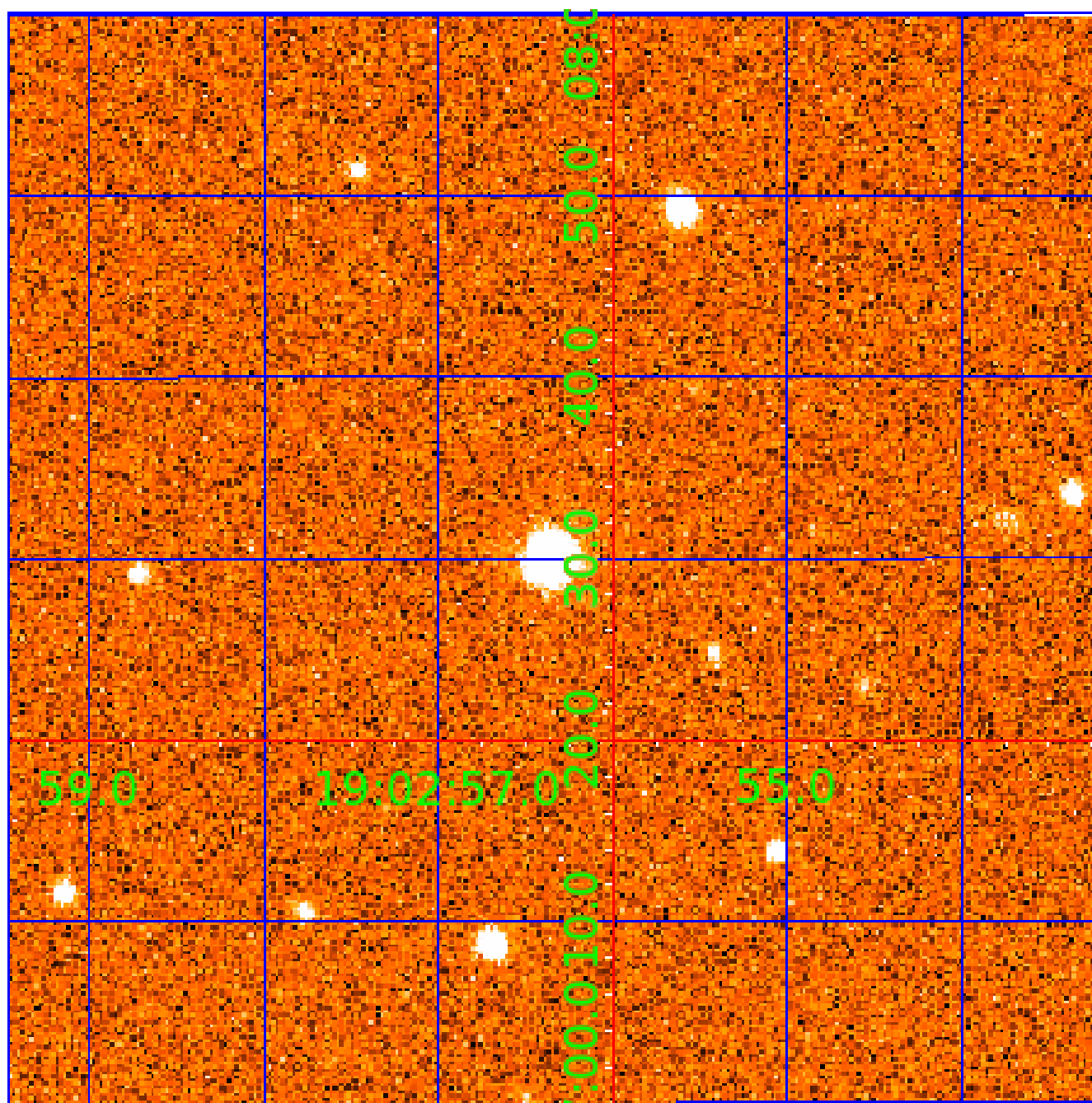


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011854061

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})
011854061-01	OBS	No	413.568315	534.497752	1079.9	0.828	10.3	1.7	0.66	4559	2.16	0.19
011854061-02	OBS	No	503.942846	556.203448	3772.0	5.359	12.1	7.6	0.66	4559	3.98	0.14
011854061-03	OBS	No	124.242768	190.199399	1689.6	5.435	10.8	6.3	0.66	4559	2.79	0.94
011854061-04	OBS	8230.01	505.066293	357.598196	4479.4	21.892	8.7	7.6	0.66	4559	5.09	0.14
011854061-05	OBS	No	311.917609	385.348689	3341.6	2.545	11.4	7.3	0.66	4559	3.64	0.28
011854061-06	OBS	No	330.959108	227.924538	3016.2	3.550	10.8	6.9	0.66	4559	4.74	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011854061-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011854061-03	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
011854061-04	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
011854061-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

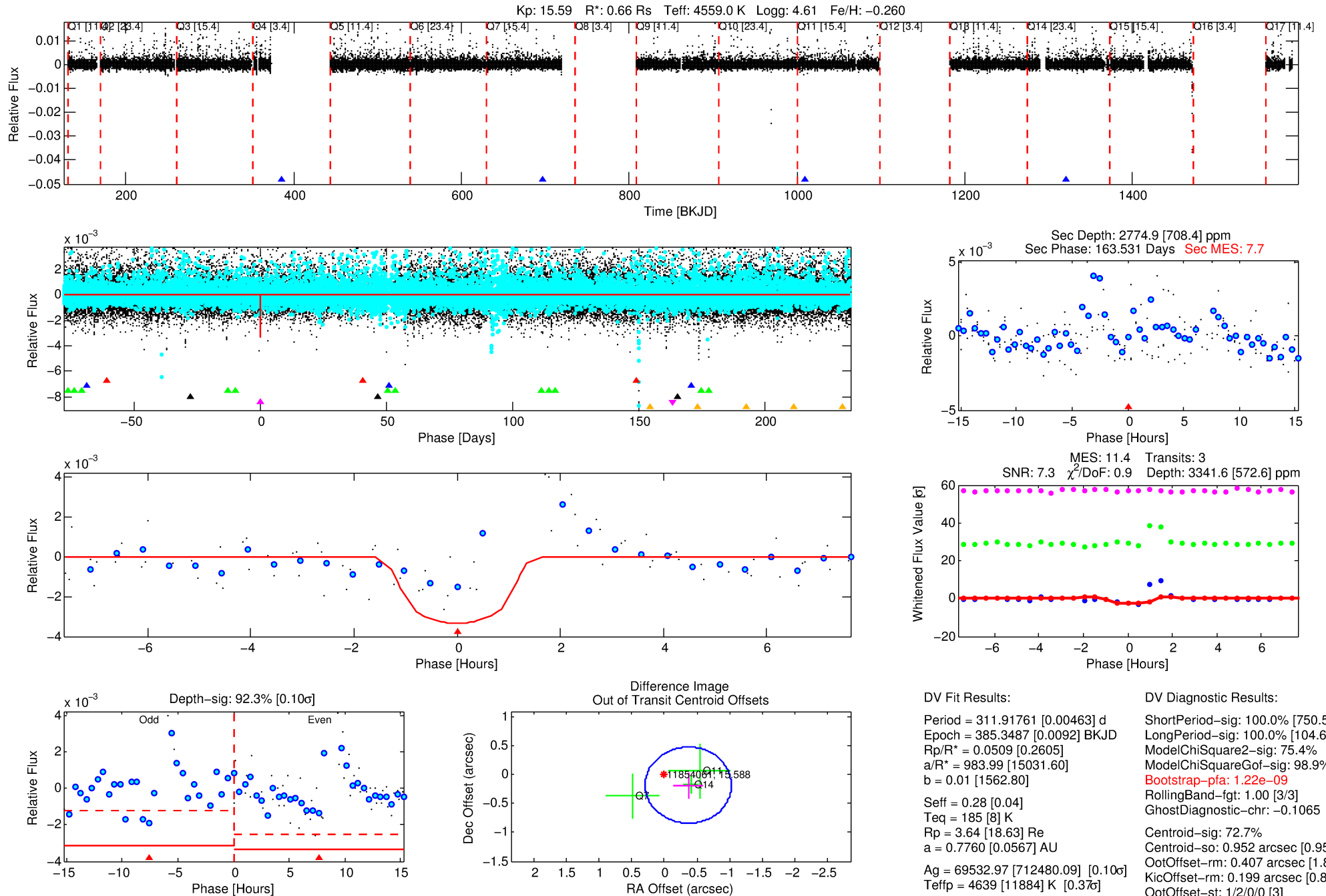
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854061-05

No Significant Match Found

DV One-Page Summary

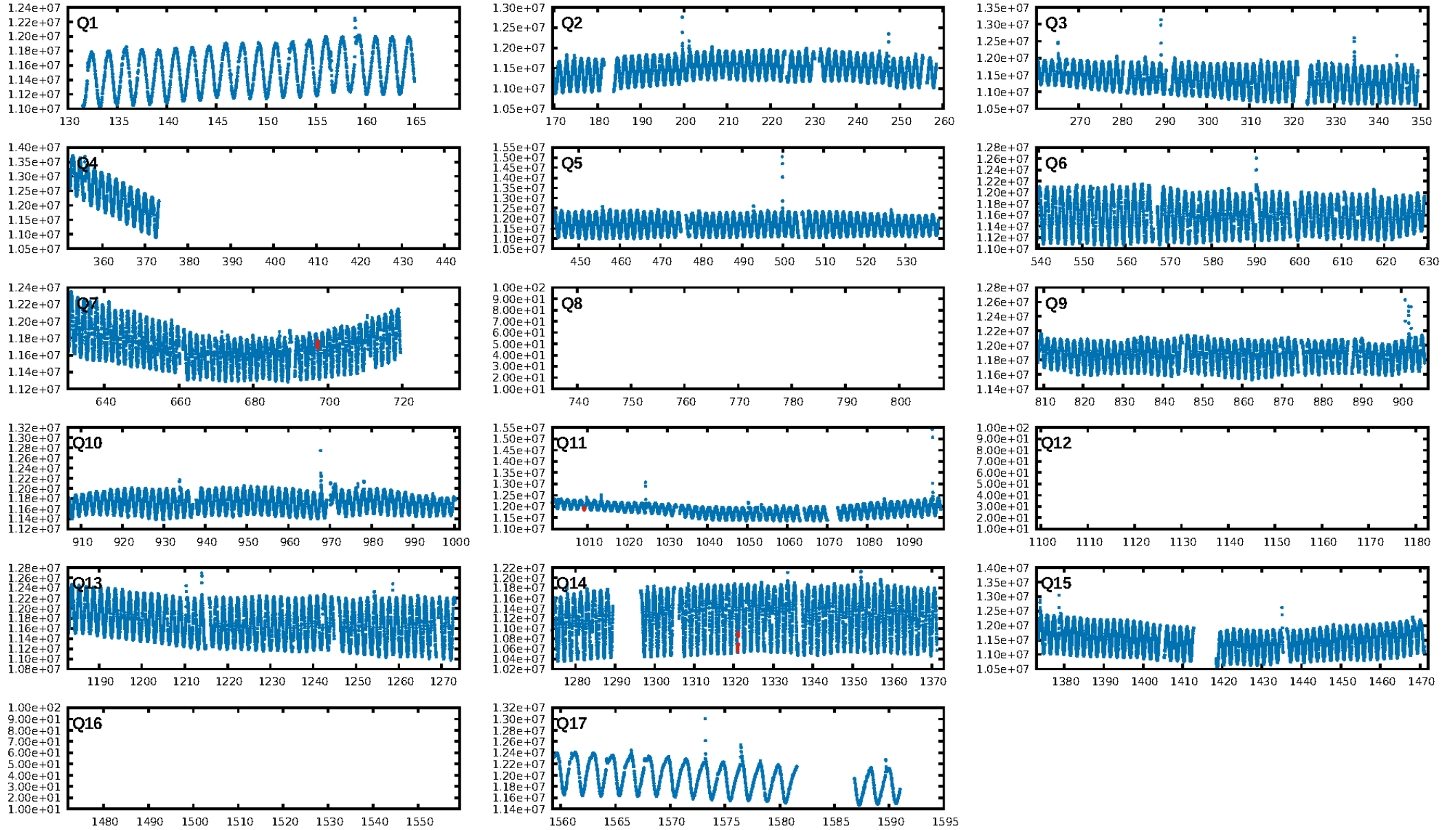
KIC: 11854061 Candidate: 5 of 6 Period: 311.918 d



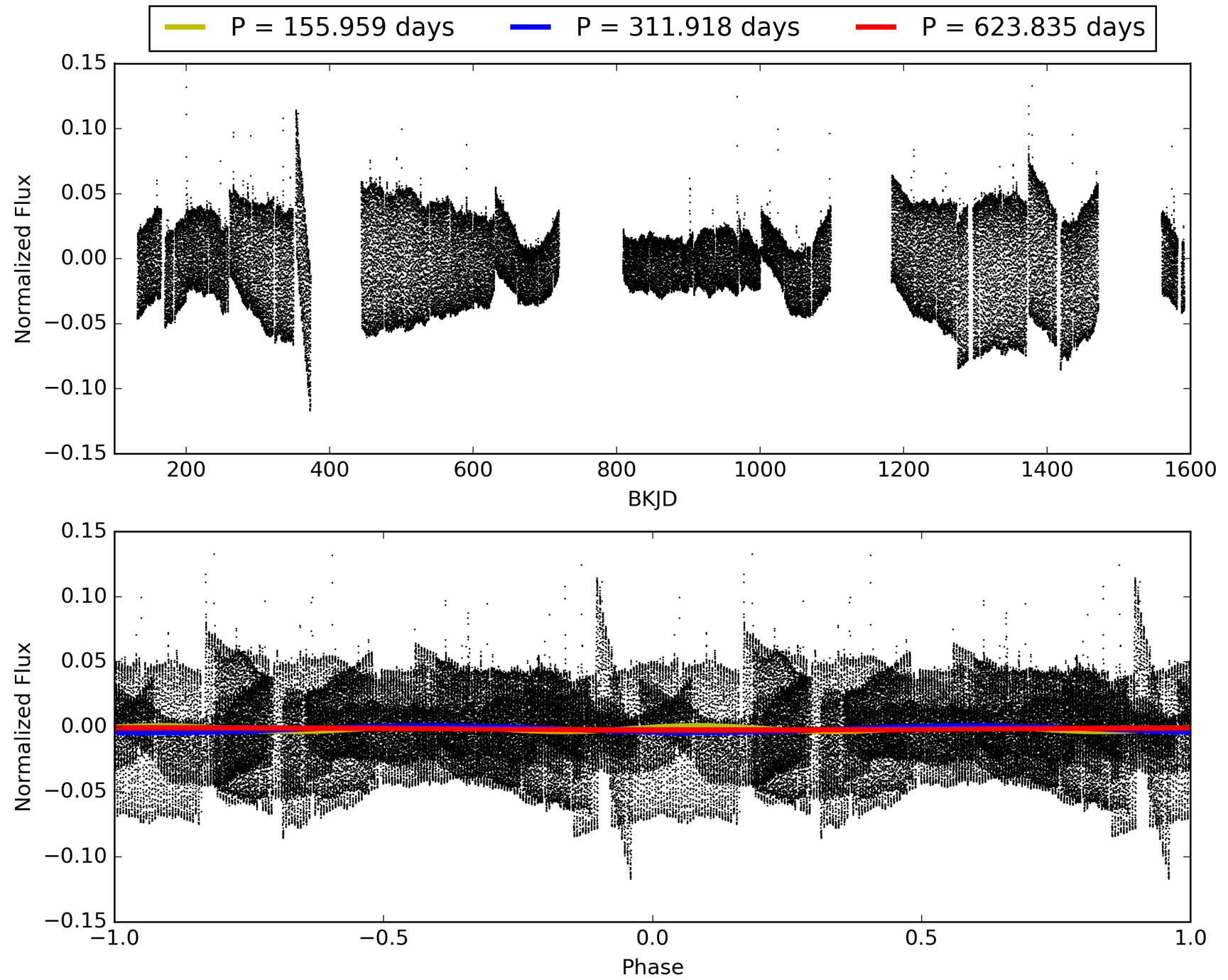
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:29:45 Z

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

TCE 011854061-05, PDC Light Curves

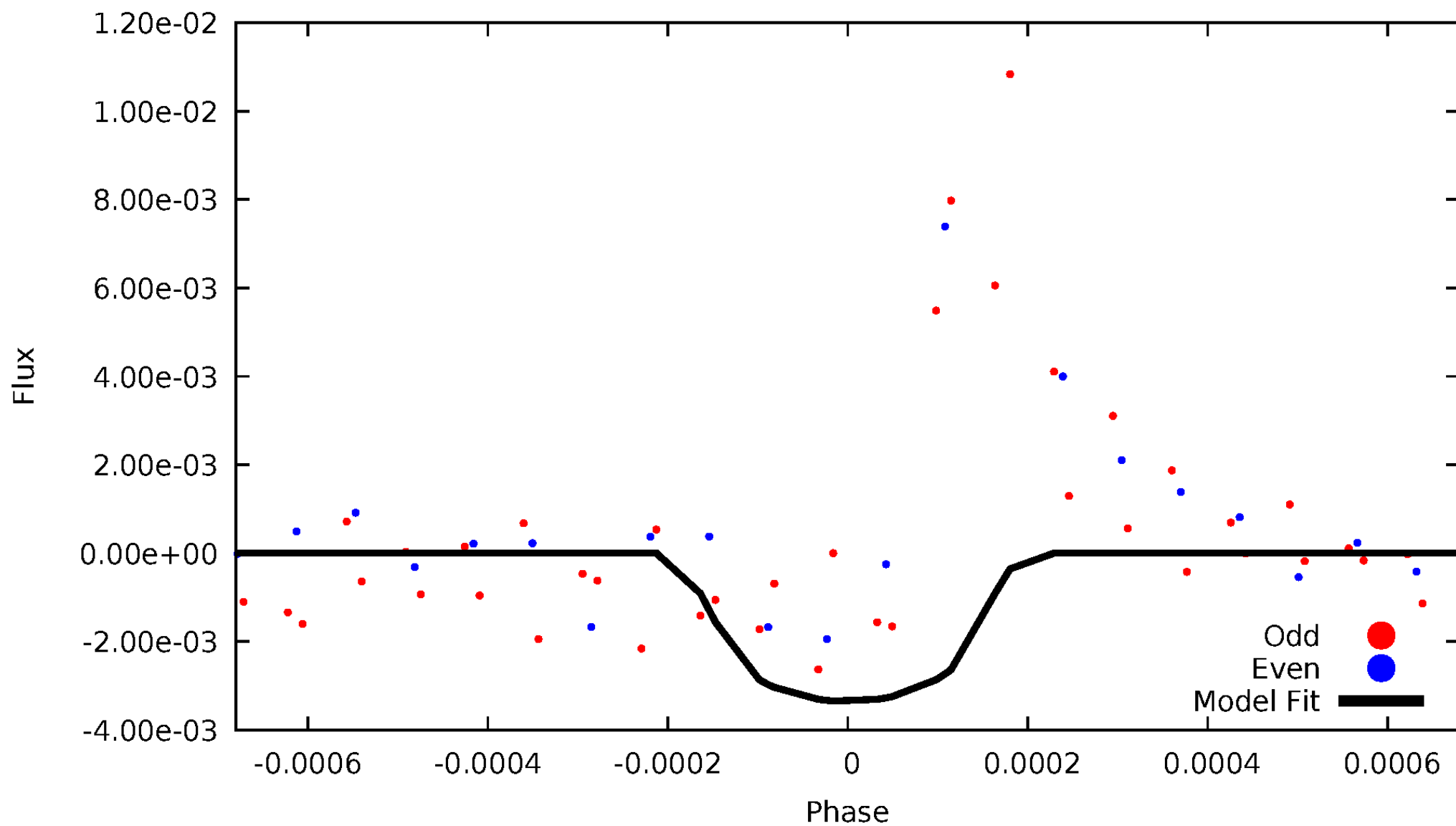


TCE 011854061-05



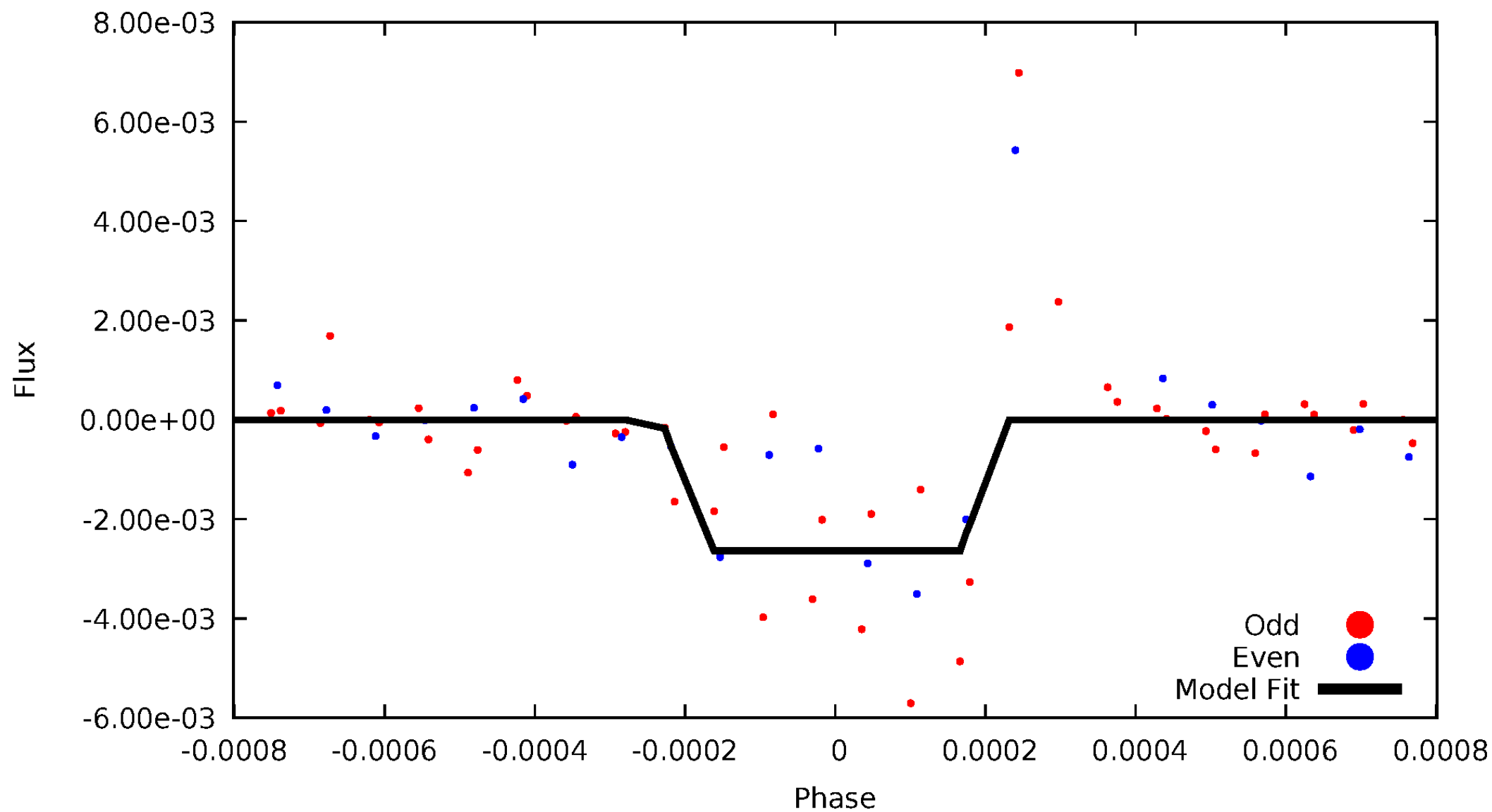
DV Odd/Even

TCE 011854061-05



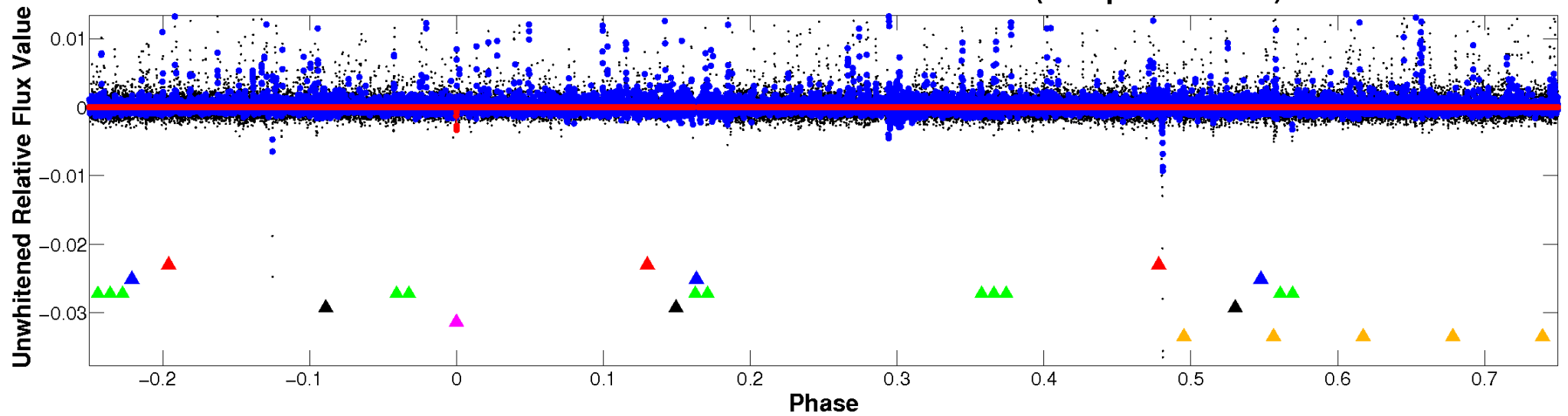
ALT Odd/Even

TCE 011854061-05

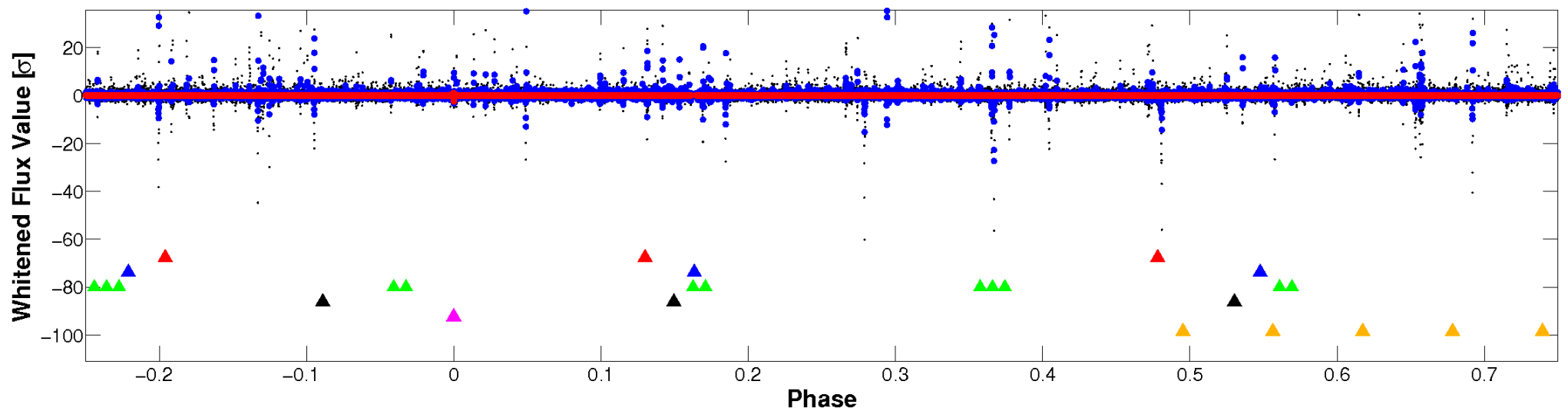


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

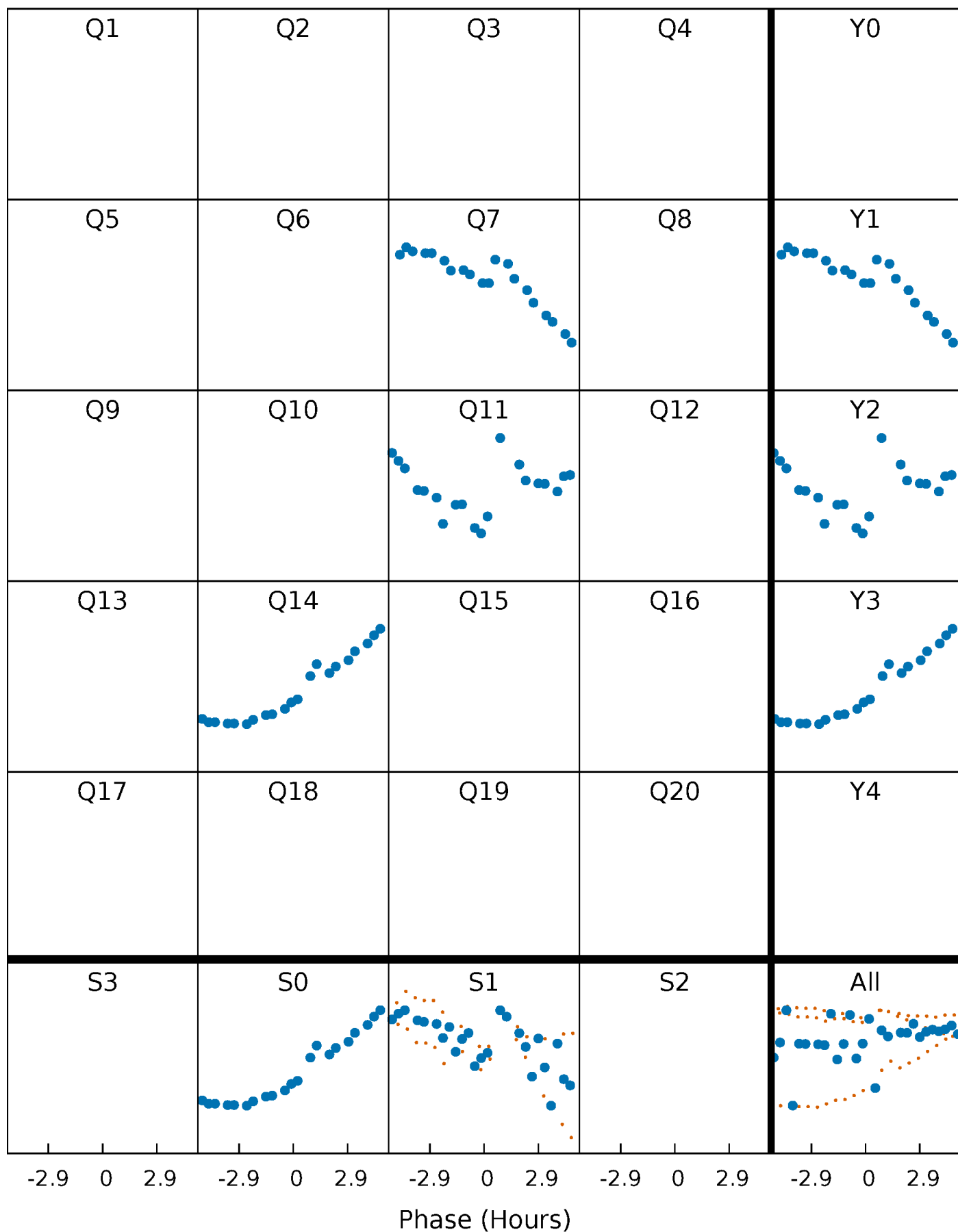


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



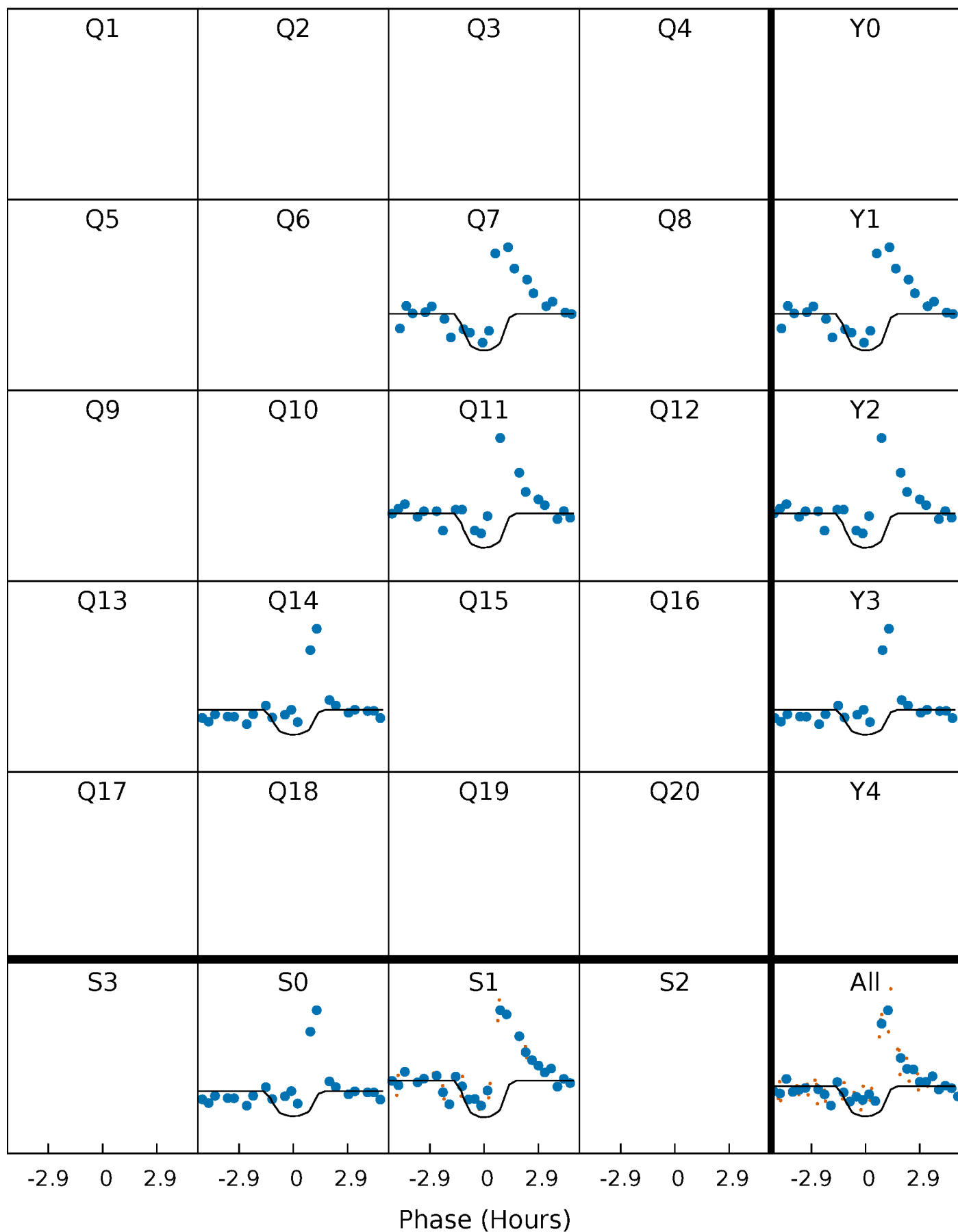
PDC Quarter-Phased Transit Curves

TCE 011854061-05 $P=311.917609$ Days $T_0=385.348689$ (BKJD)



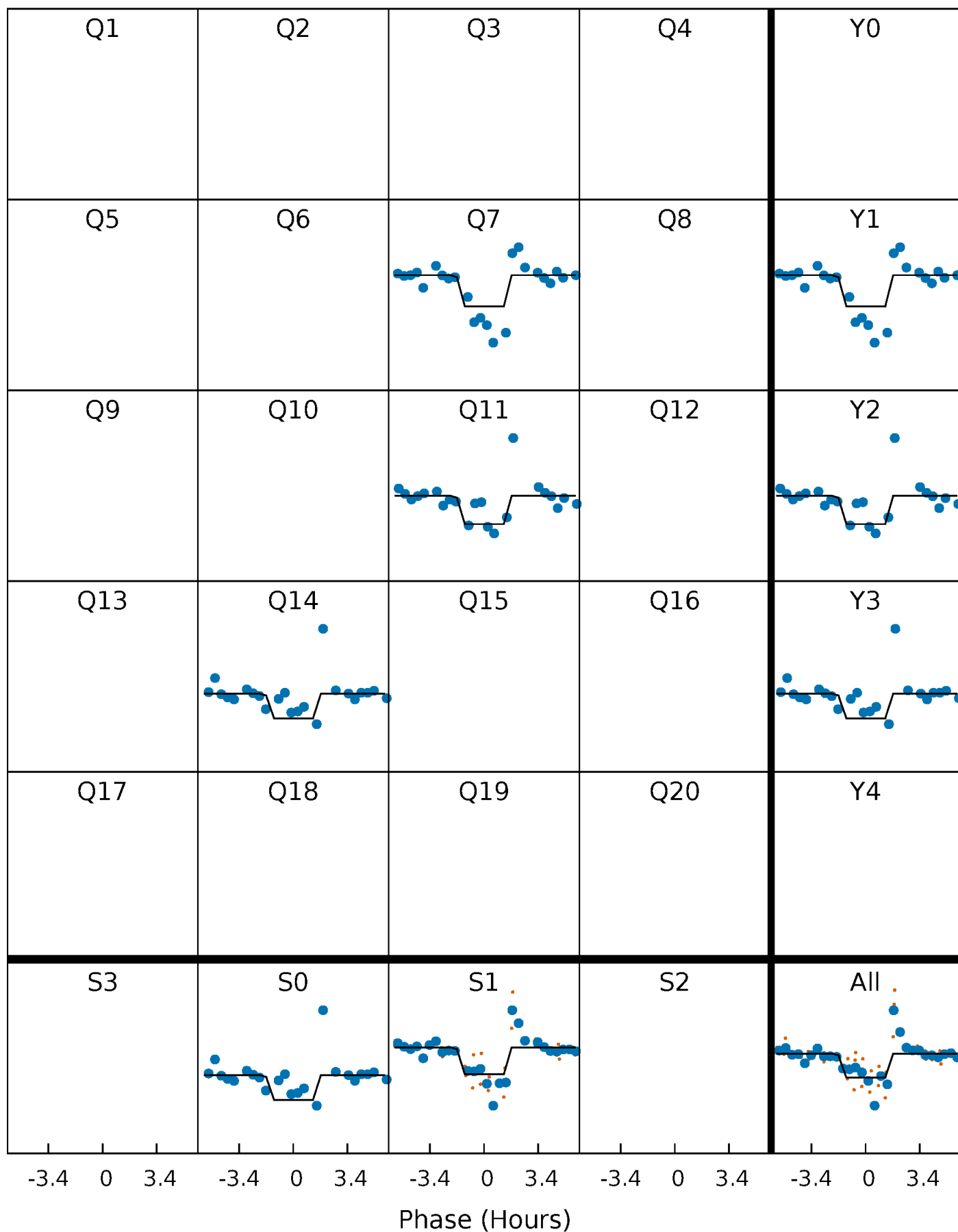
DV Quarter-Phased Transit Curves

TCE 011854061-05 $P=311.917609$ Days $T_0=385.348689$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

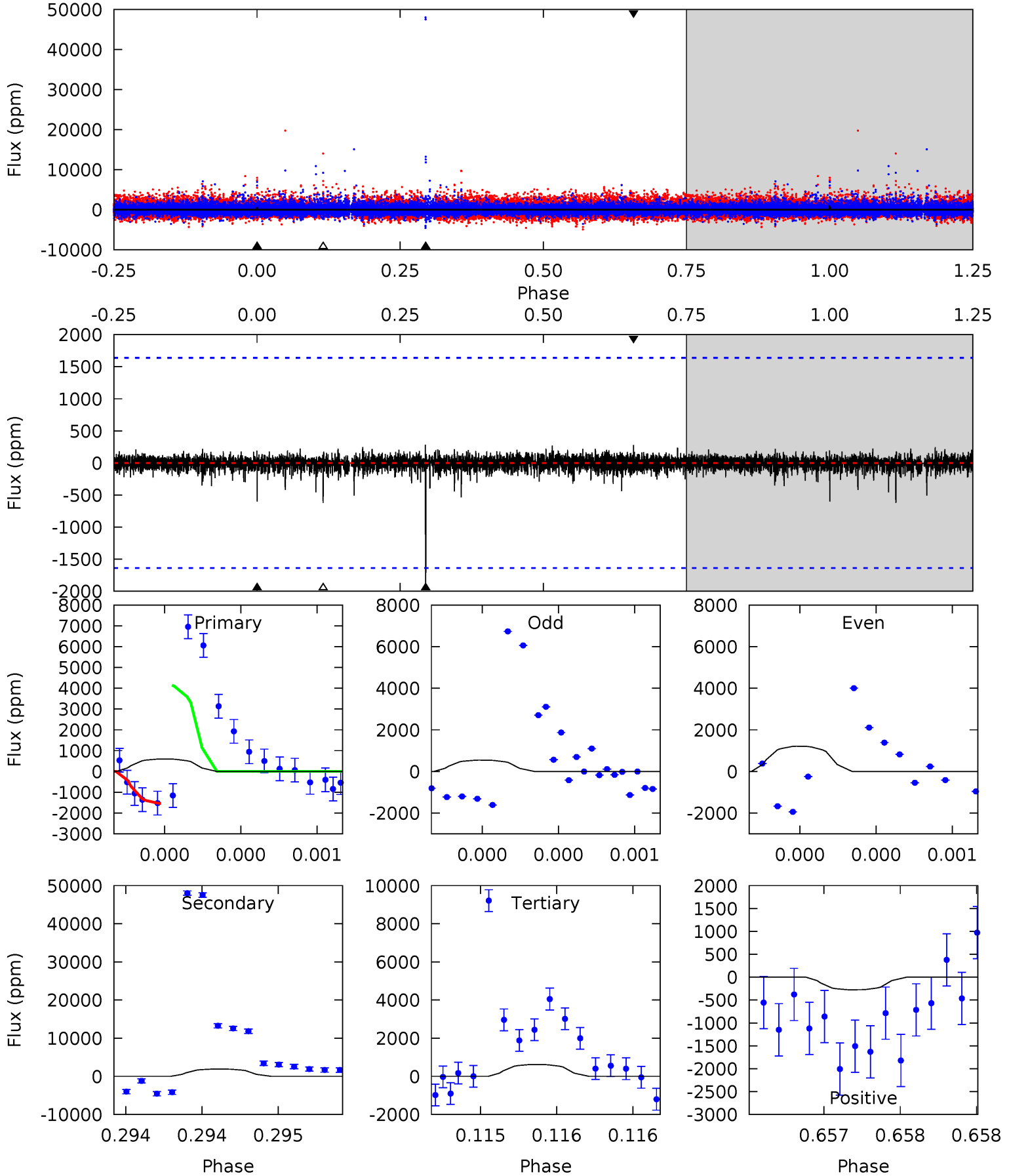
TCE 011854061-05 $P=311.918174$ Days $T_0=385.306510$ (BKJD)



DV Model-Shift Uniqueness Test

011854061-05, P = 311.917609 Days, E = 73.431080 Days

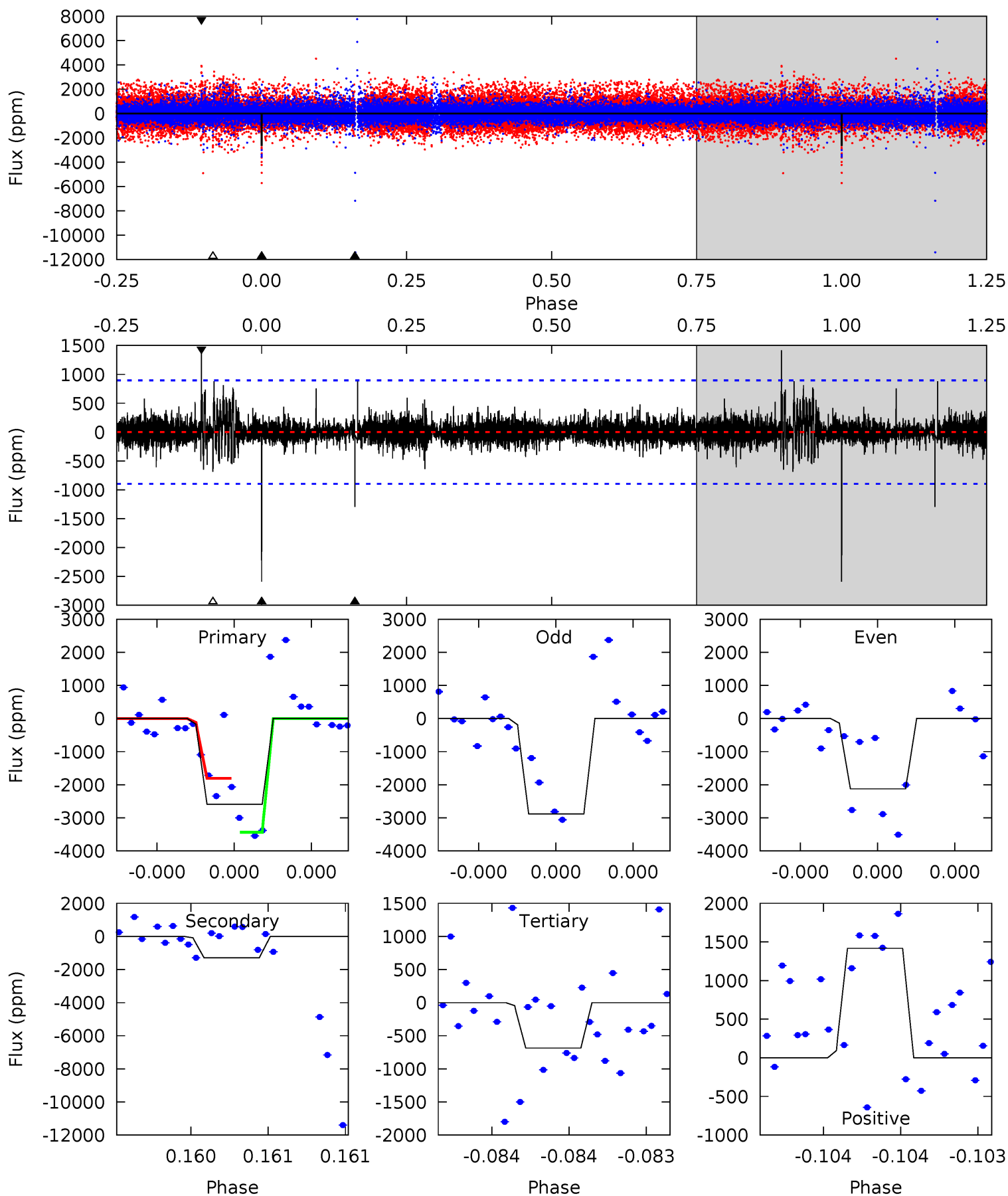
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.07	6.63	2.15	0.95	5.64	3.59	0.26	-0.08	1.11	4.49	5.68	0.47	0.99	0.13	4.33



Alt Model-Shift Uniqueness Test

011854061-05, P = 311.918174 Days, E = 73.388336 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	8.08	4.28	8.83	5.59	3.50	0.85	11.9	7.32	3.80	-0.75	1.81	1.21	0.35	5.06



Stellar Parameters For KIC 011854061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4559^{+143}_{-143}	$4.612^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.655^{+0.052}_{-0.058}$	$0.641^{+0.077}_{-0.051}$	$3.209^{+0.811}_{-0.367}$
	+3%/-3%	+1%/-1%	+115%/-115%	+8%/-9%	+12%/-8%	+25%/-11%
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 011854061-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1926 ± 290	$14.49^{+13.49}_{-10.10}$	256^{+9}_{-9}	2806^{+1226}_{-440}	3159^{+29764}_{-2351}
Alt.	-1296 ± 160	$13.78^{+14.57}_{-9.33}$	256^{+9}_{-9}	2668^{+1037}_{-429}	2246^{+19412}_{-1710}

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 $A_{obs} \gg 1.0$

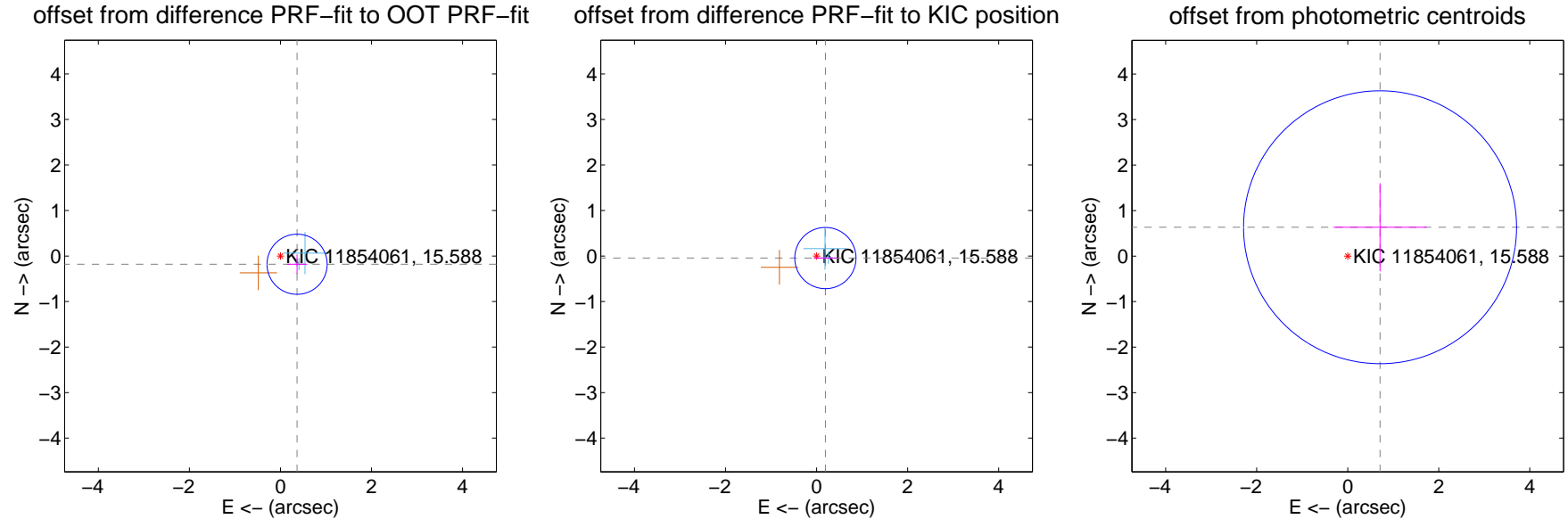
DV Centroid Data

Supplemental centroid analysis for 011854061-05. Kepler magnitude: 15.59. Transit SNR 7.29

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.407 ± 0.220	1.85	-0.365 ± 0.221	-0.181 ± 0.215
PRF-fit source offset from KIC position	0.199 ± 0.224	0.89	-0.194 ± 0.248	-0.045 ± 0.119
photometric centroid source offset	0.95 ± 1.00	0.95	-0.71 ± 1.02	0.63 ± 0.97



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.

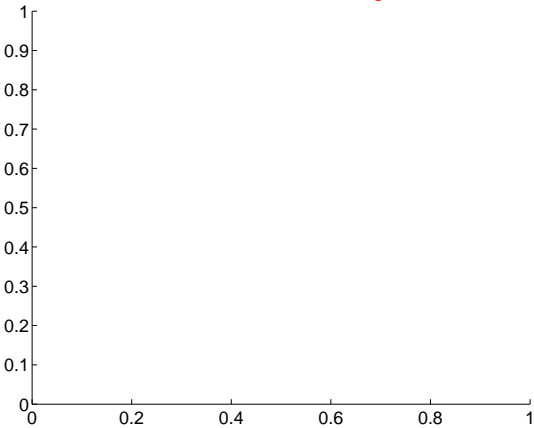
Q5 no difference image



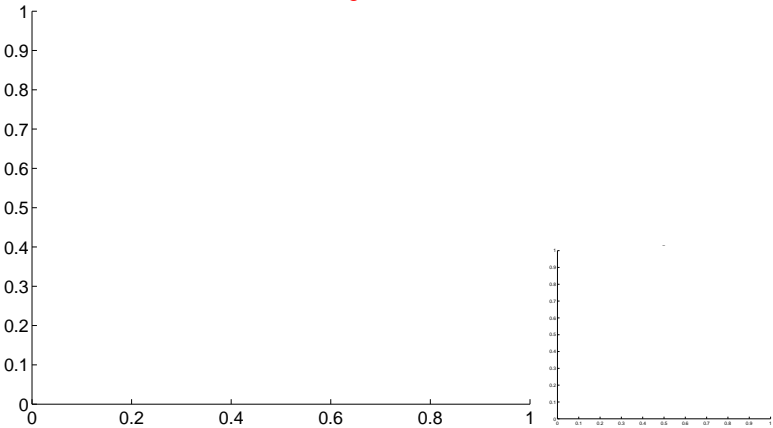
Q5 no OOT image



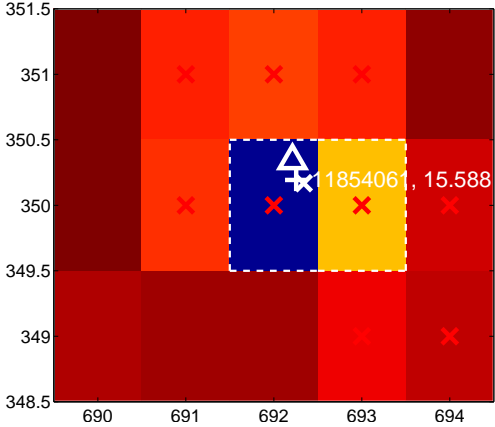
Q6 no difference image



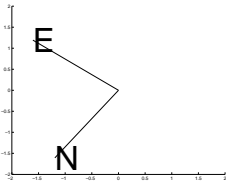
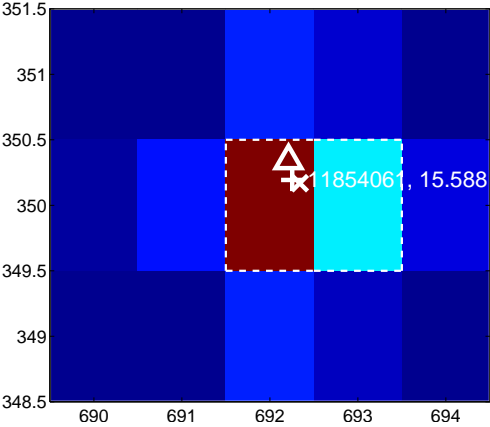
Q6 no OOT image



Q7 difference image. Poor Quality



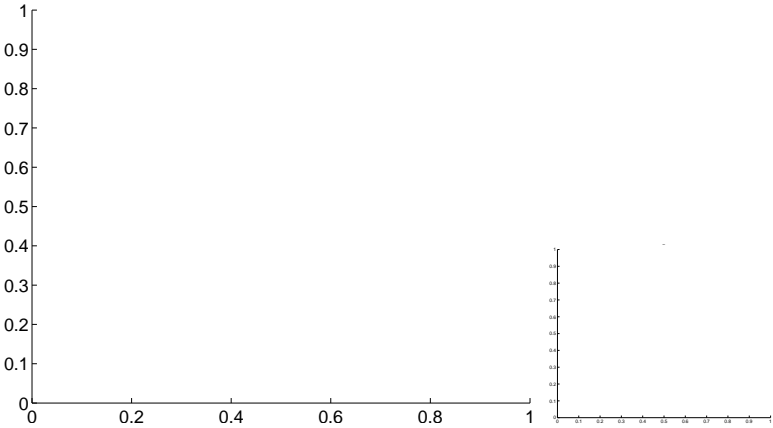
Q7 OOT image



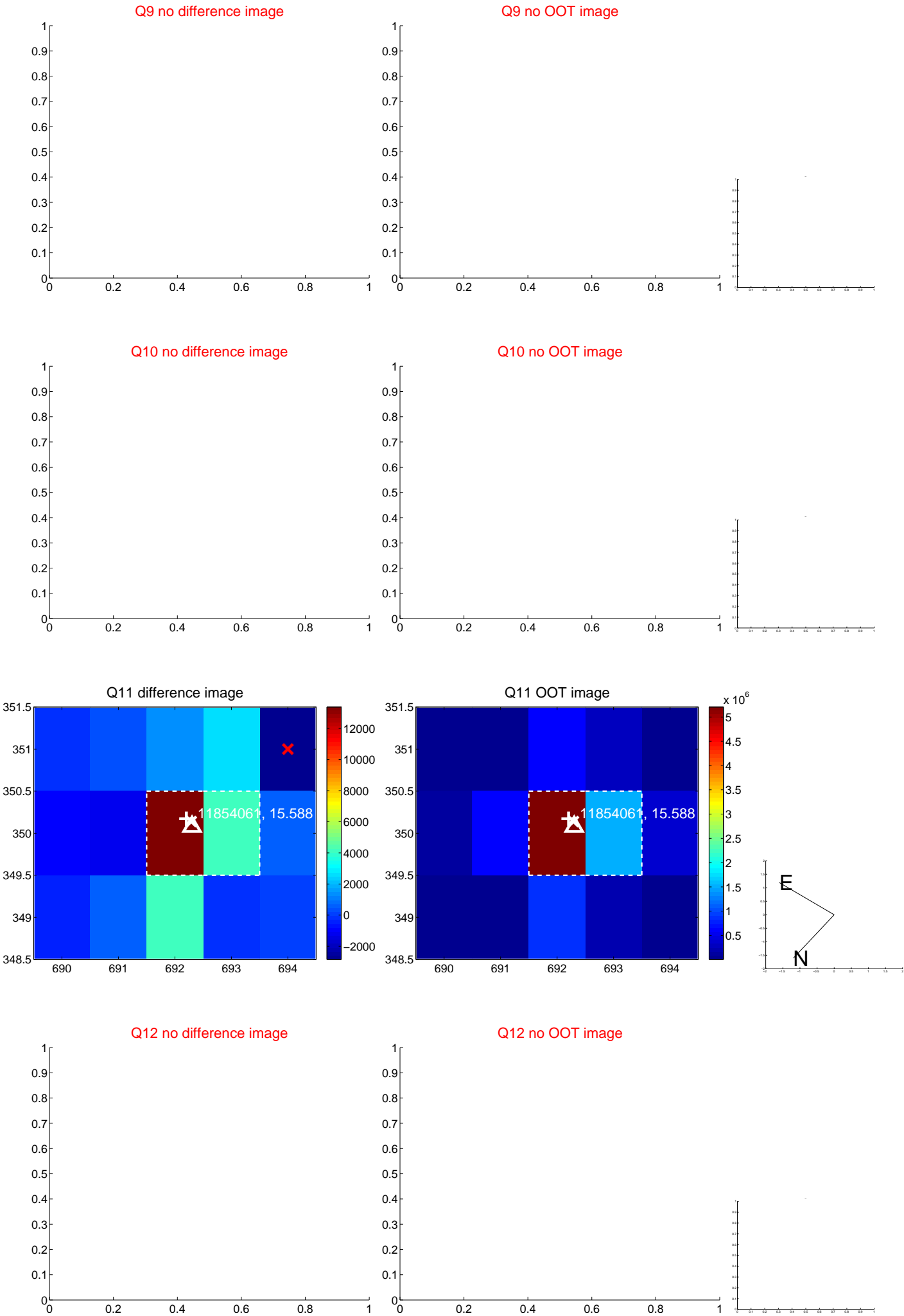
Q8 no difference image



Q8 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.

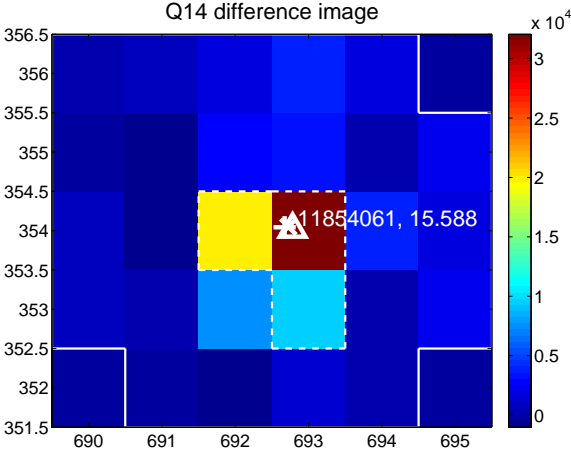
Q13 no difference image



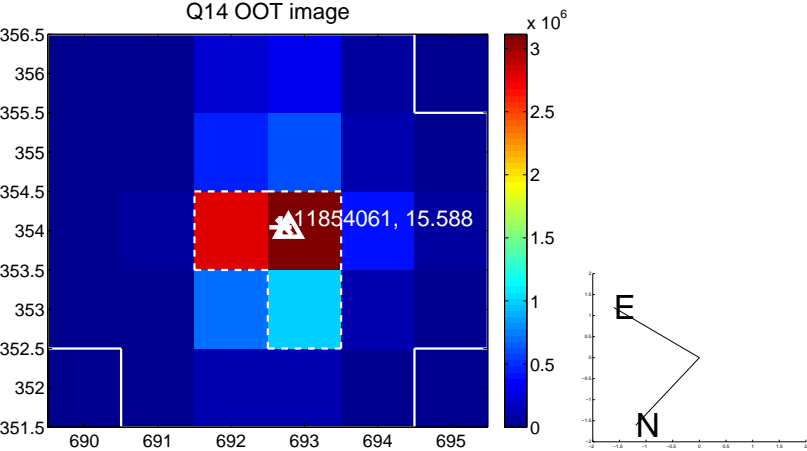
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



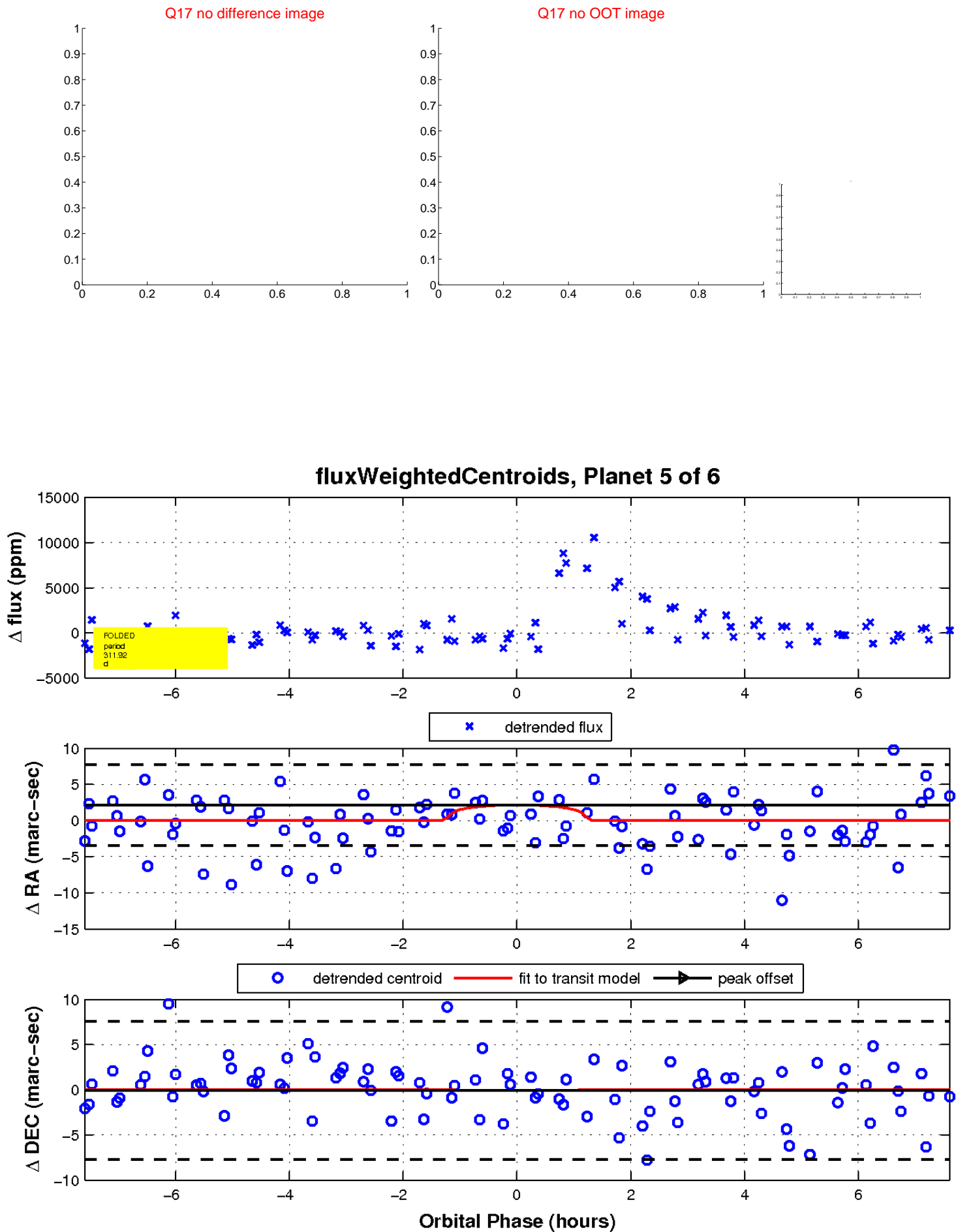
Q16 no difference image



Q16 no OOT image

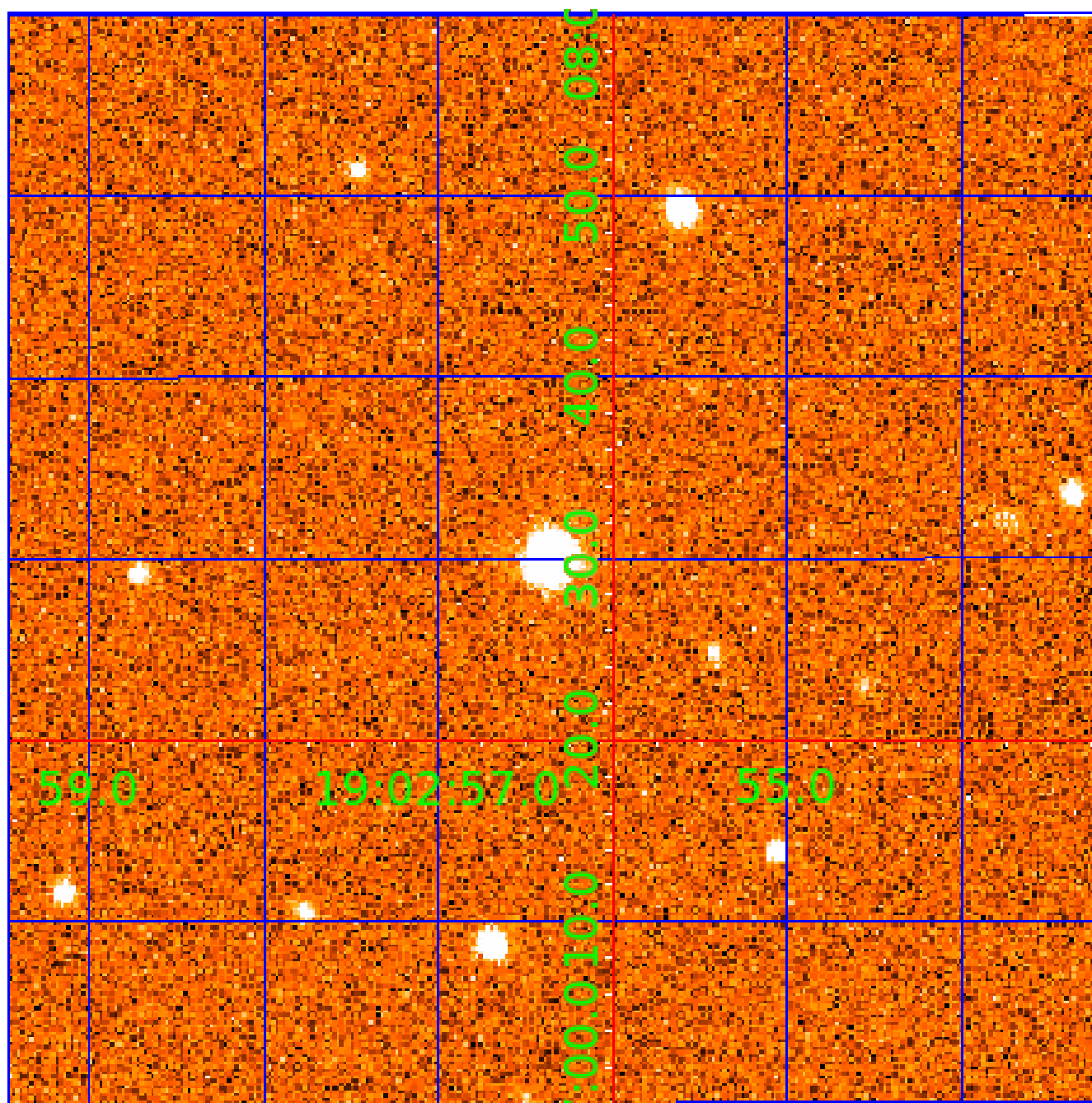


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011854061

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})
011854061-01	OBS	No	413.568315	534.497752	1079.9	0.828	10.3	1.7	0.66	4559	2.16	0.19
011854061-02	OBS	No	503.942846	556.203448	3772.0	5.359	12.1	7.6	0.66	4559	3.98	0.14
011854061-03	OBS	No	124.242768	190.199399	1689.6	5.435	10.8	6.3	0.66	4559	2.79	0.94
011854061-04	OBS	8230.01	505.066293	357.598196	4479.4	21.892	8.7	7.6	0.66	4559	5.09	0.14
011854061-05	OBS	No	311.917609	385.348689	3341.6	2.545	11.4	7.3	0.66	4559	3.64	0.28
011854061-06	OBS	No	330.959108	227.924538	3016.2	3.550	10.8	6.9	0.66	4559	4.74	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011854061-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011854061-03	OBS	FP	0.00	1	0	0	0	MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
011854061-04	OBS	FP	0.00	1	0	0	0	ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011854061-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
011854061-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

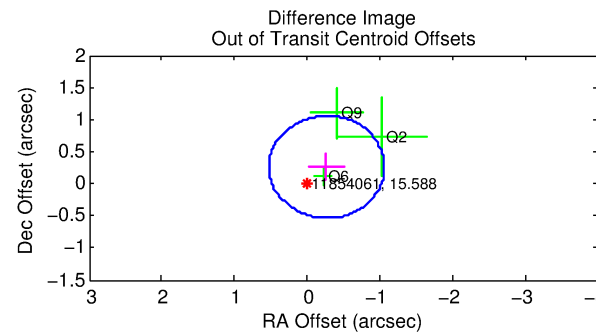
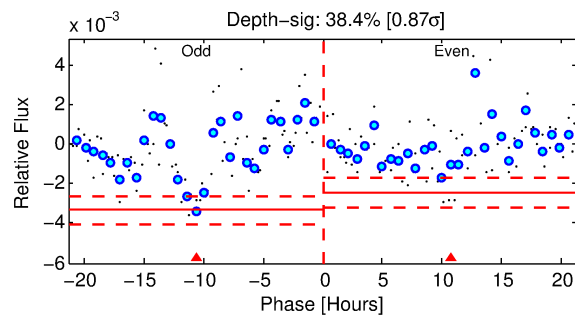
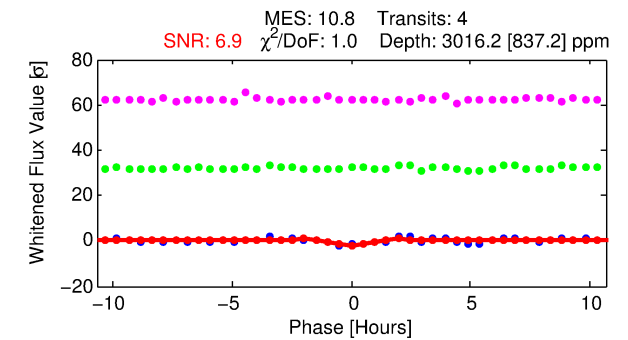
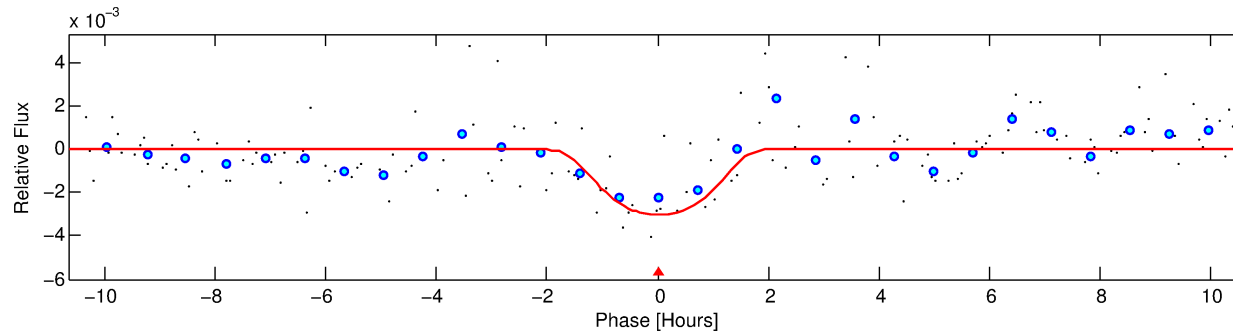
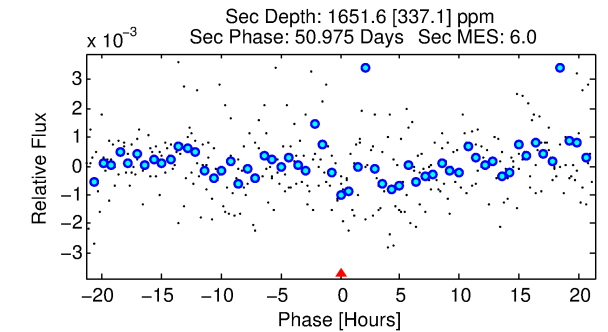
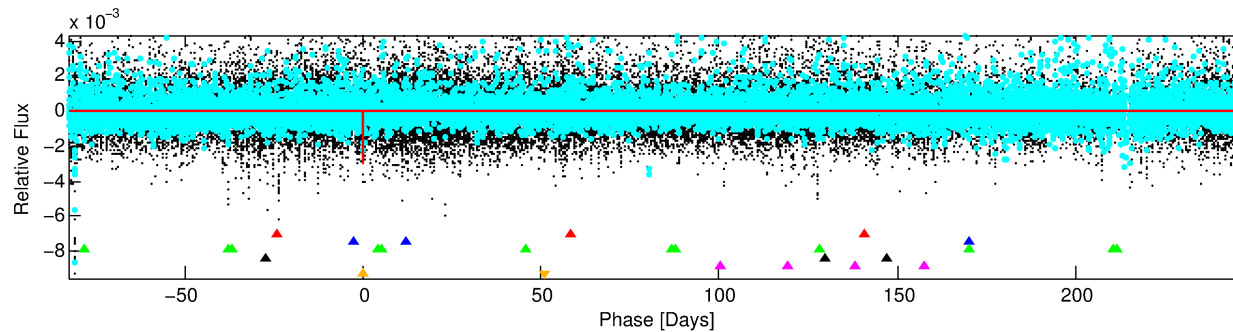
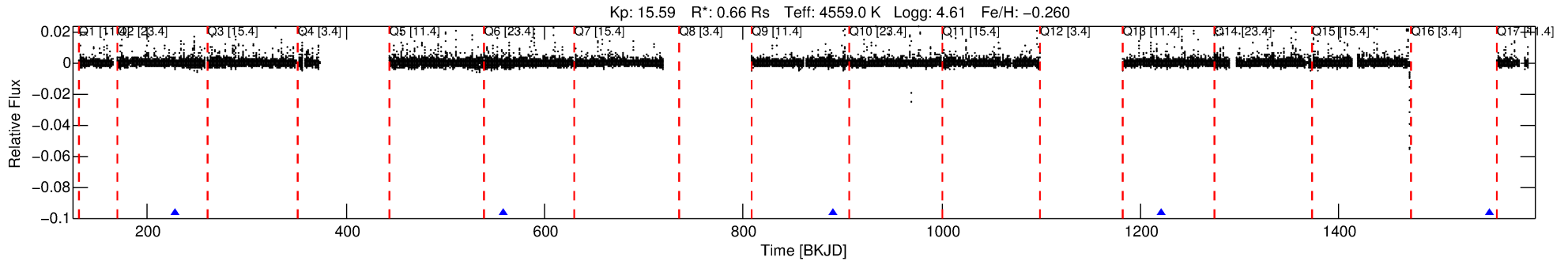
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011854061-06

No Significant Match Found

DV One-Page Summary

KIC: 11854061 Candidate: 6 of 6 Period: 330.959 d



DV Fit Results:

Period = 330.95911 [0.00521] d
Epoch = 227.9245 [0.0083] BKJD
Rp/R* = 0.0663 [0.0197]
a/R* = 364.59 [103.06]
b = 0.94 [0.06]
Seff = 0.25 [0.04]
Teq = 181 [7] K
Rp = 4.74 [1.47] Re
a = 0.8073 [0.0590] AU
Ag = 26355.63 [16811.86] [1.57σ]
Teffp = 3569 [573] K [5.92σ]

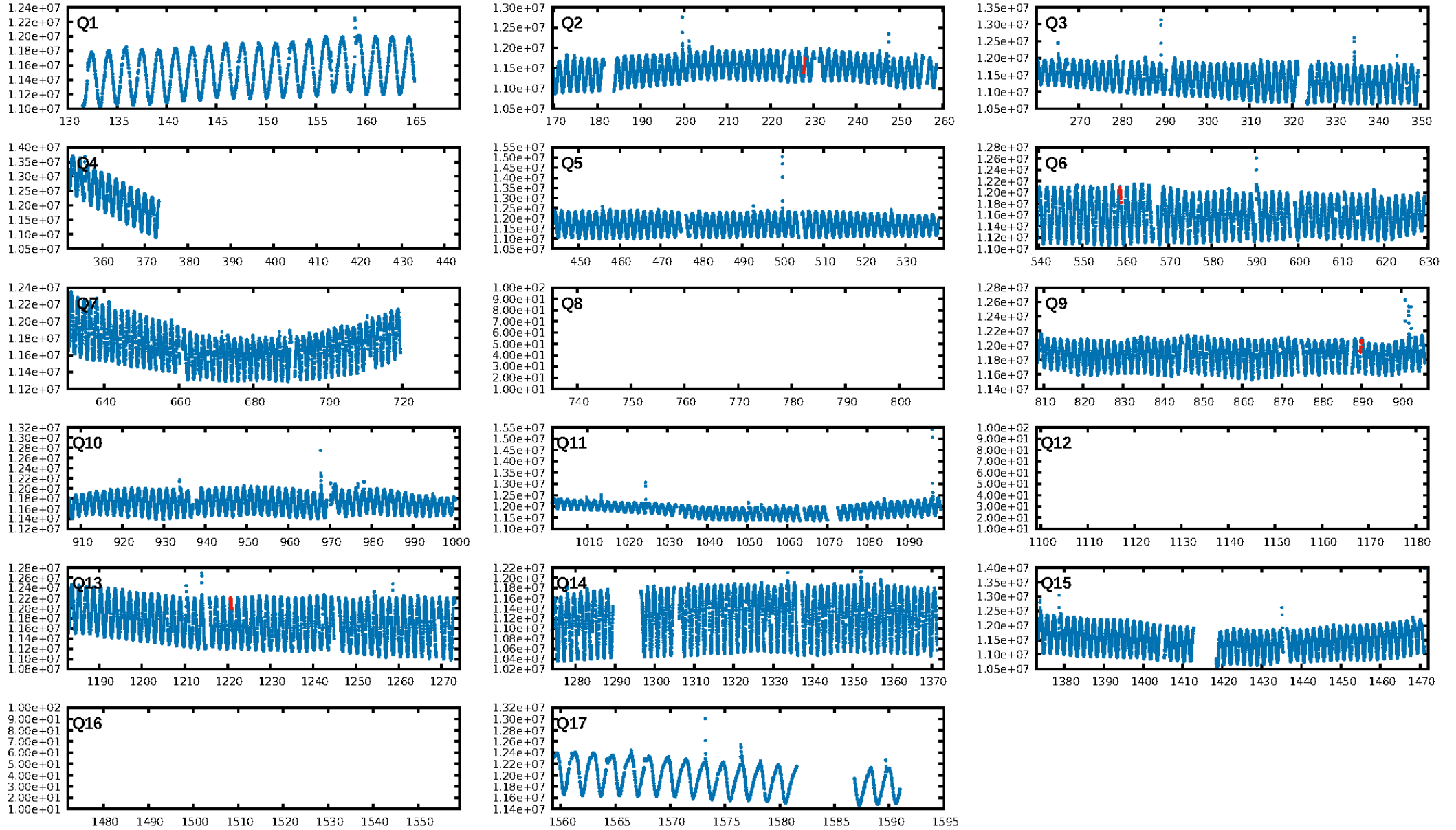
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.62σ]
LongPeriod-sig: 100.0% [543.88σ]
ModelChiSquare2-sig: 10.8%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: 1.63e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.466
Centroid-sig: 79.4%
Centroid-so: 0.923 arcsec [0.96σ]
OotOffset-rm: 0.372 arcsec [1.40σ]
KicOffset-rm: 0.477 arcsec [1.86σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

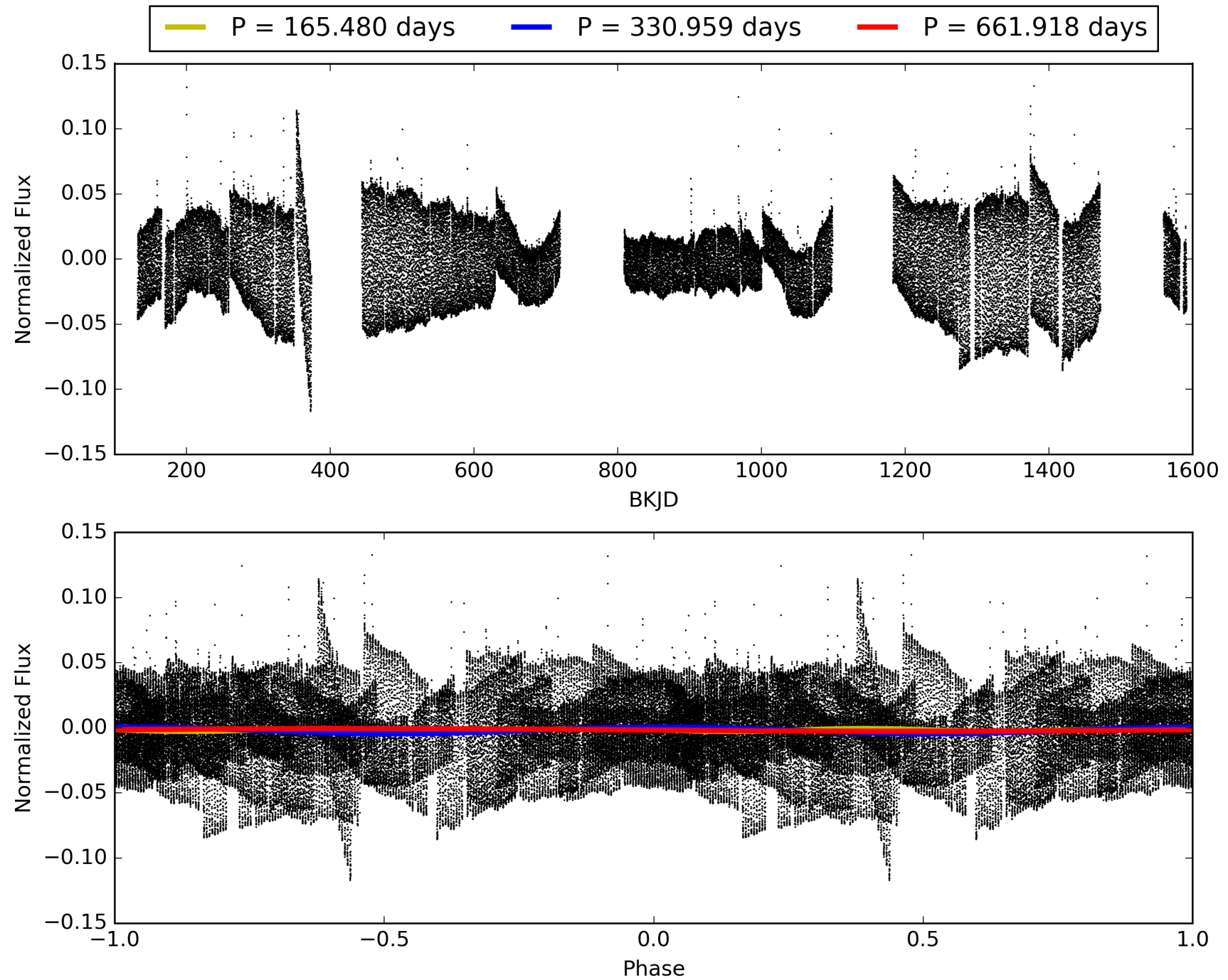
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:29:58 Z

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

TCE 011854061-06, PDC Light Curves

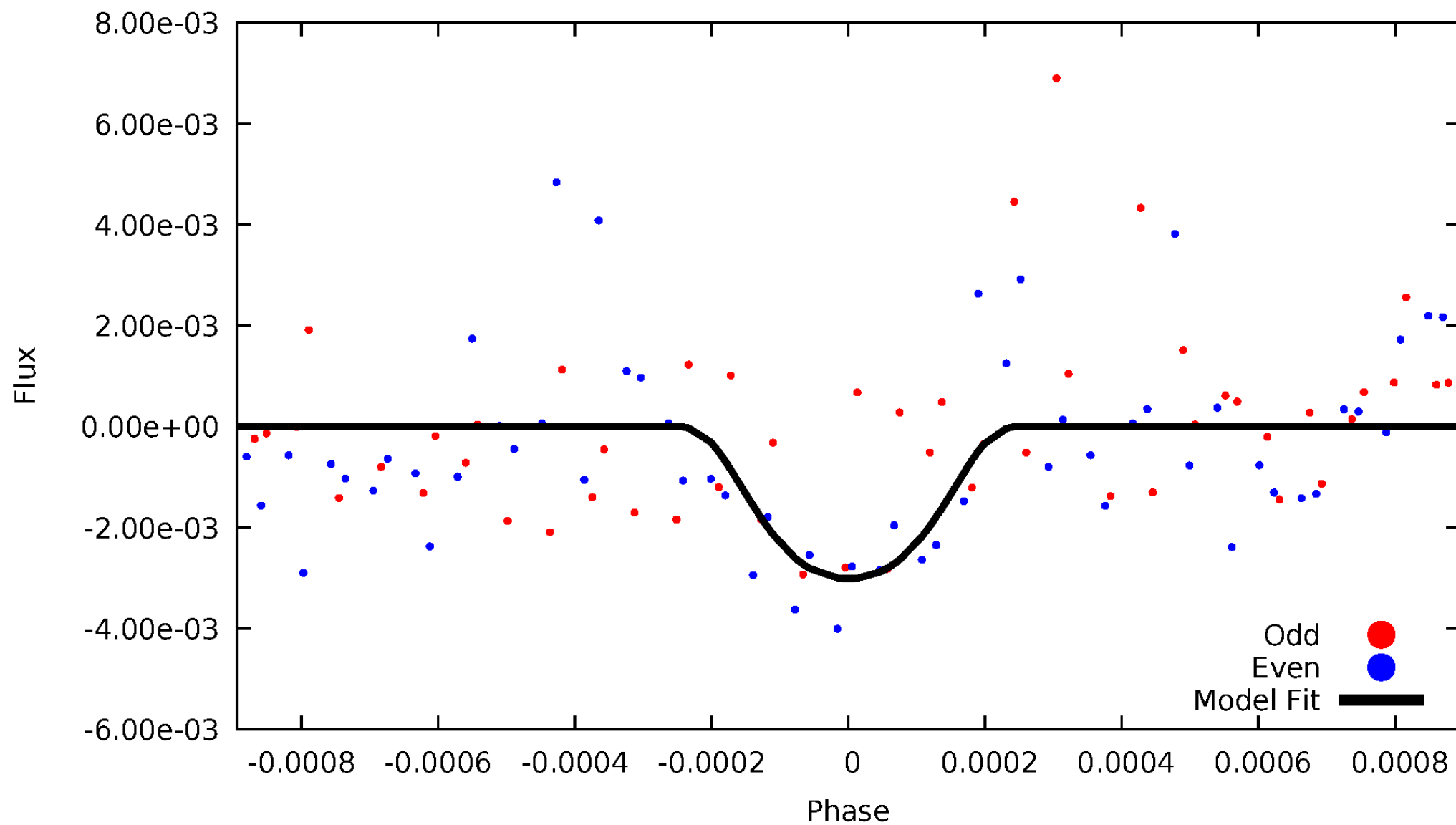


TCE 011854061-06



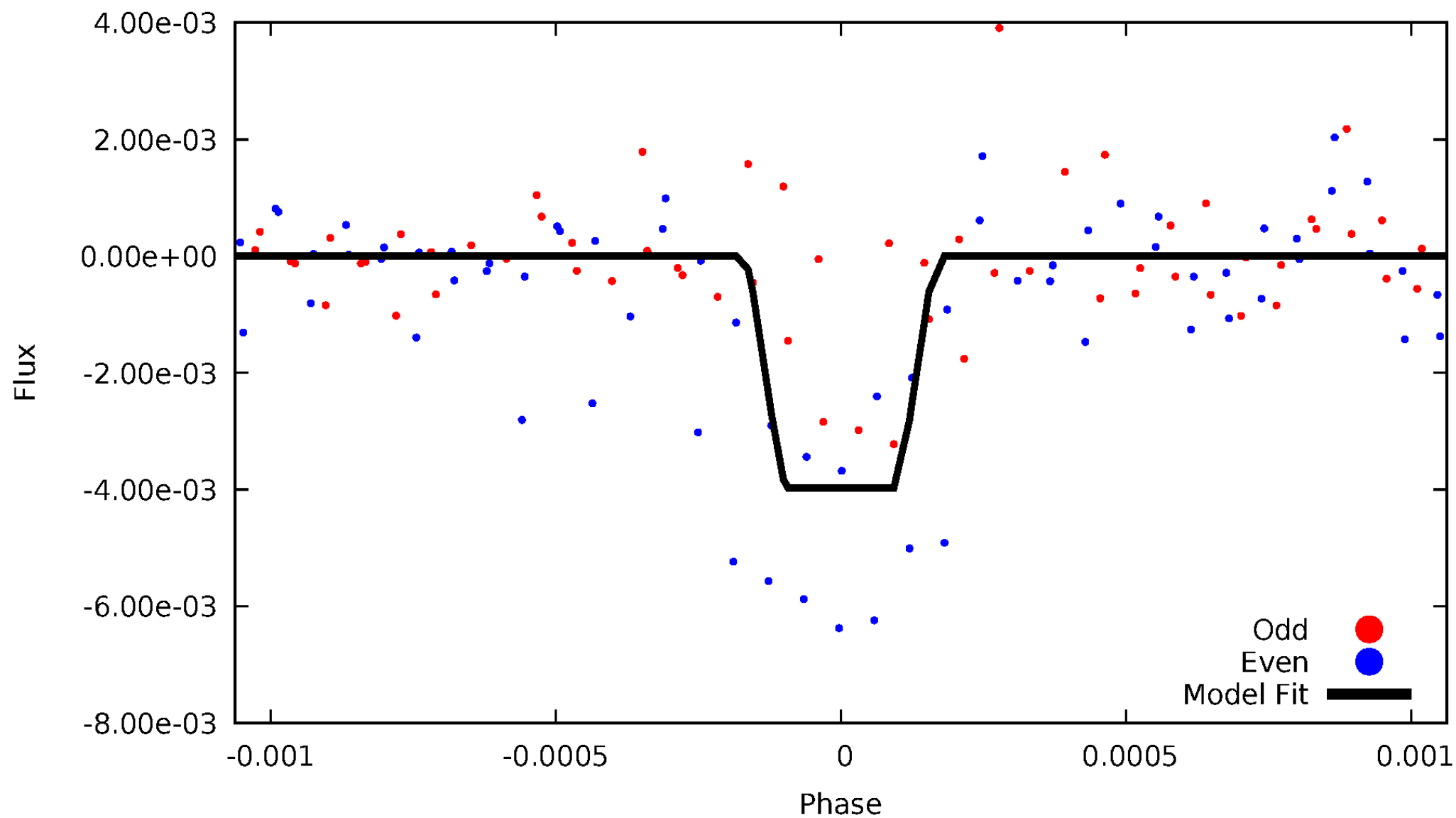
DV Odd/Even

TCE 011854061-06



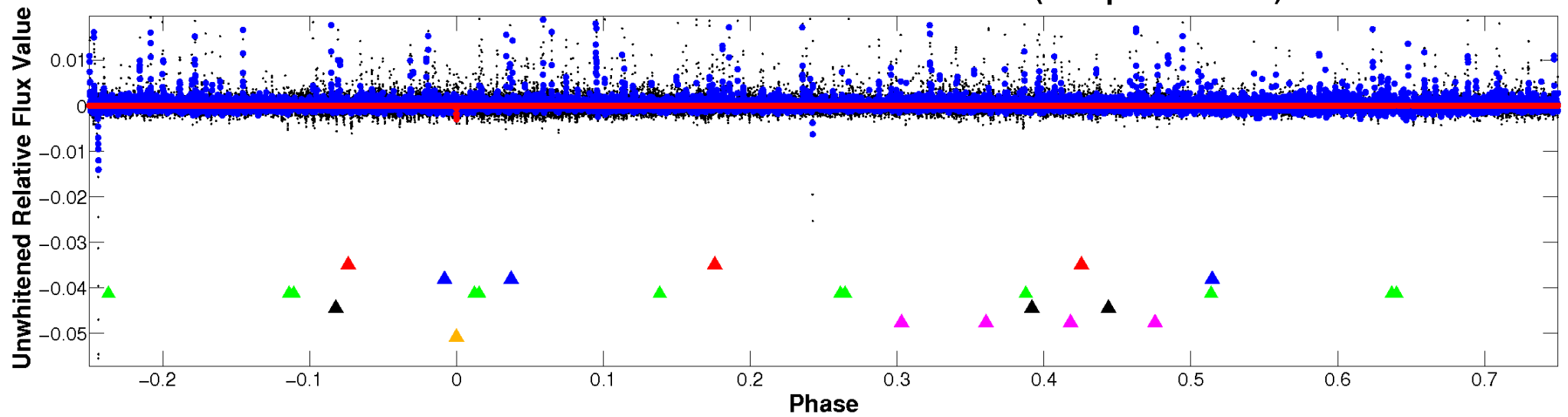
ALT Odd/Even

TCE 011854061-06

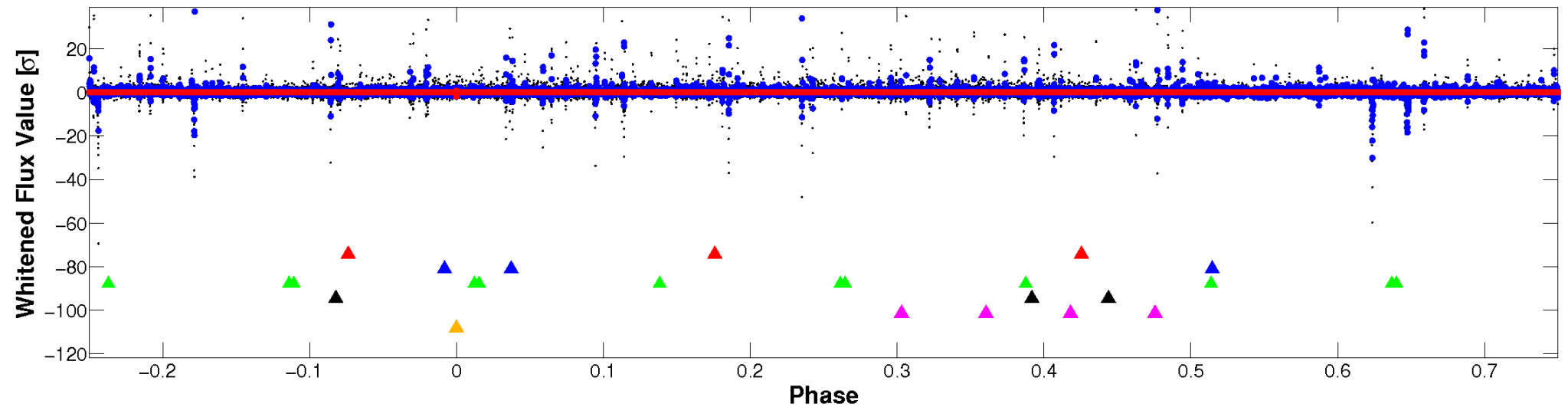


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

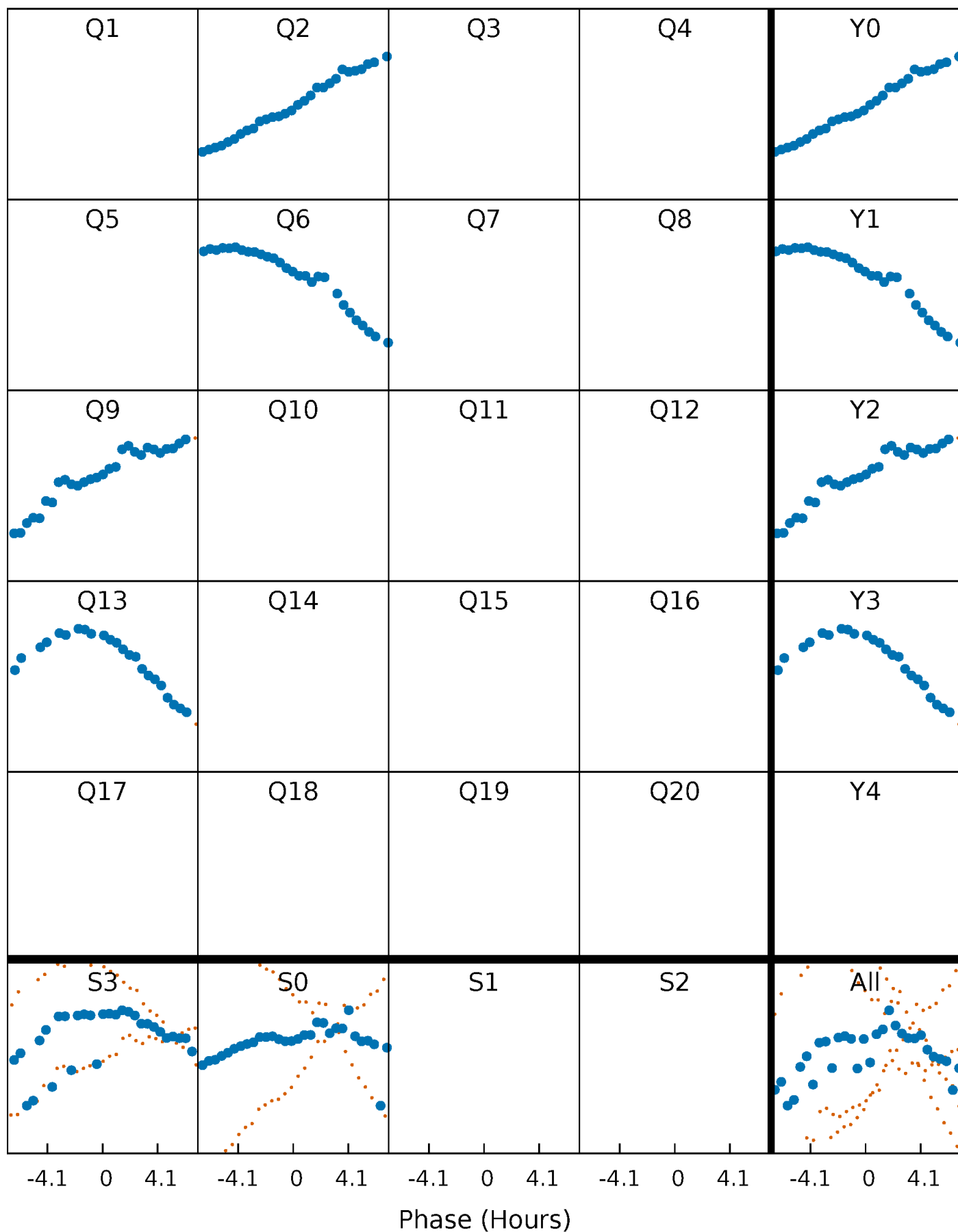


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



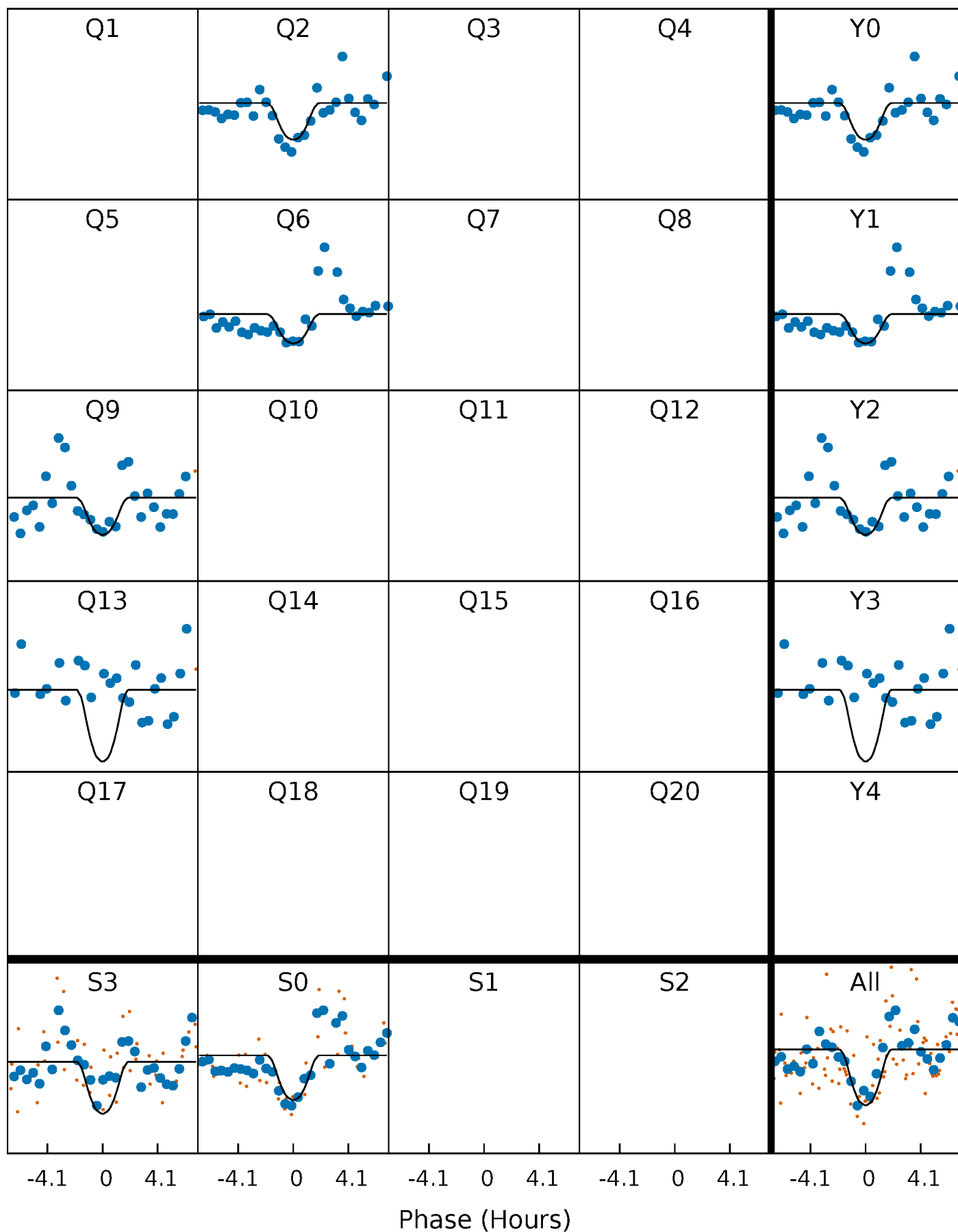
PDC Quarter-Phased Transit Curves

TCE 011854061-06 P=330.959108 Days $T_0=227.924538$ (BKJD)



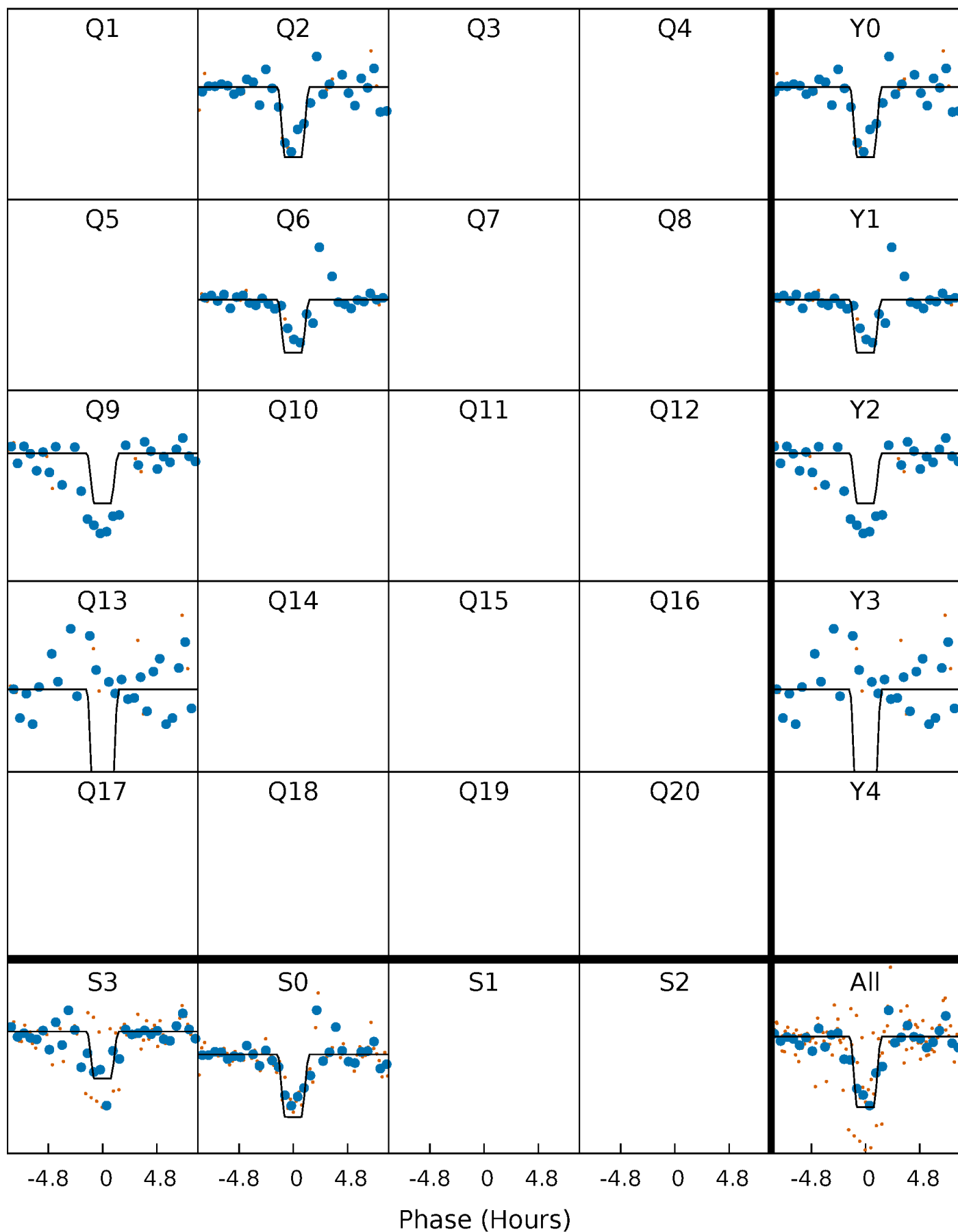
DV Quarter-Phased Transit Curves

TCE 011854061-06 P=330.959108 Days $T_0=227.924538$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

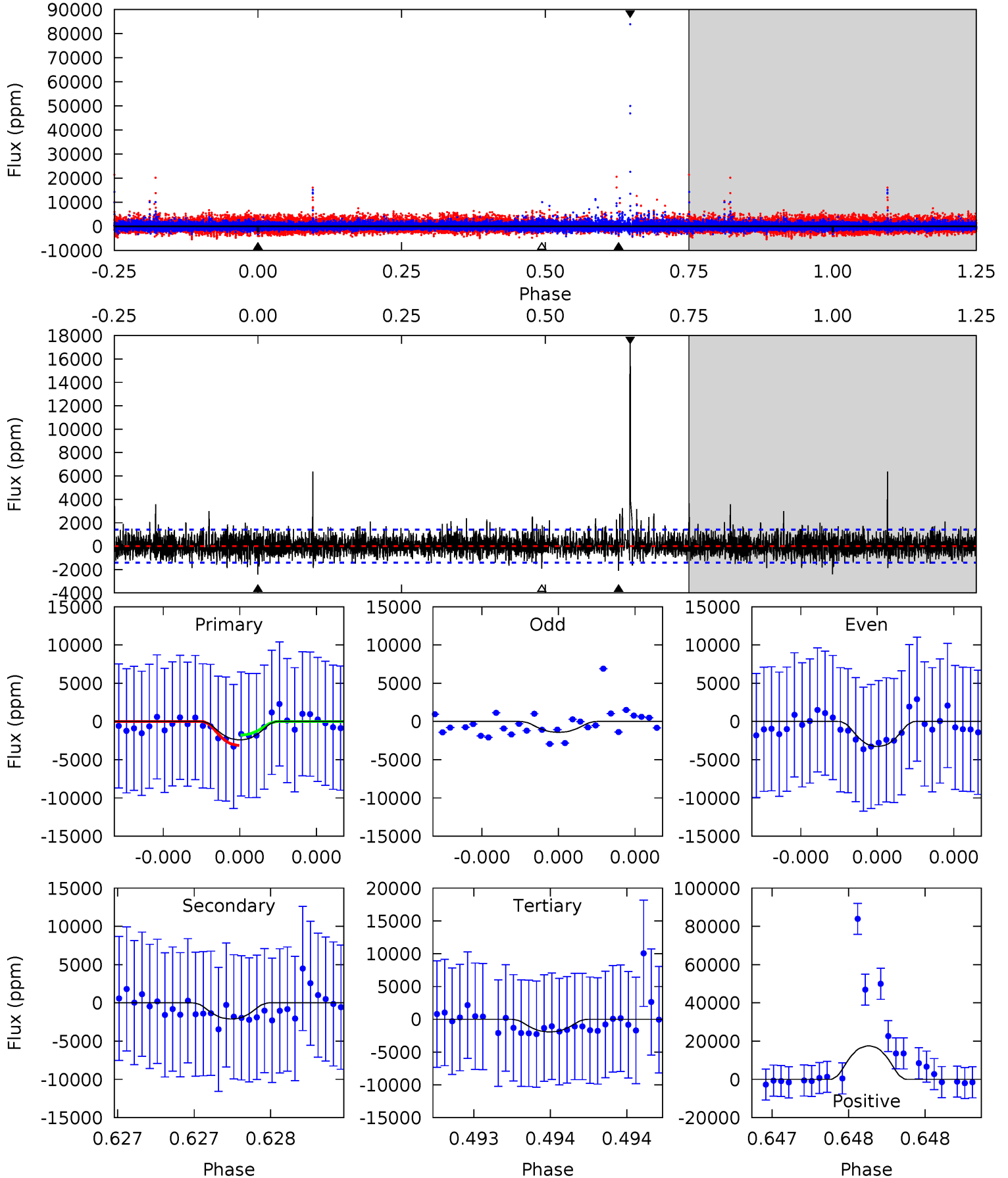
TCE 011854061-06 P=330.953179 Days $T_0=227.918829$ (BKJD)



DV Model-Shift Uniqueness Test

011854061-06, P = 330.959108 Days, E = 227.924538 Days

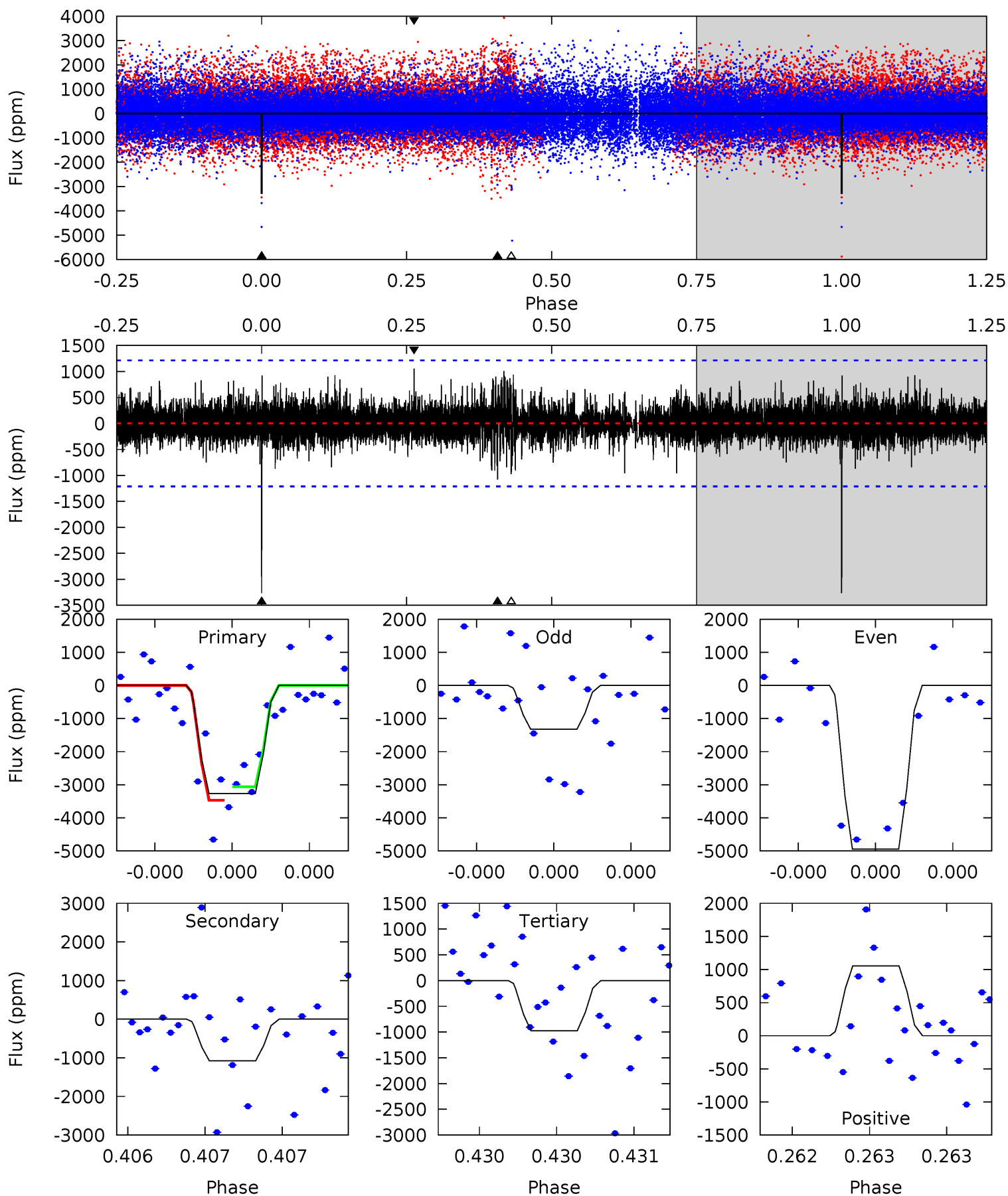
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.53	8.35	7.63	69.3	5.58	3.48	2.69	1.90	-59.8	0.72	-61.0	2.07	0.82	0.88	2.64



Alt Model-Shift Uniqueness Test

011854061-06, P = 330.953179 Days, E = 227.918829 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	5.02	4.54	4.91	5.66	3.61	0.96	10.7	10.3	0.48	0.11	8.36	1.01	0.24	0



Stellar Parameters For KIC 011854061

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4559^{+143}_{-143}	$4.612^{+0.056}_{-0.024}$	$-0.260^{+0.300}_{-0.300}$	$0.655^{+0.052}_{-0.058}$	$0.641^{+0.077}_{-0.051}$	$3.209^{+0.811}_{-0.367}$
	+3%/-3%	+1%/-1%	+115%/-115%	+8%/-9%	+12%/-8%	+25%/-11%
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 011854061-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2108 ± 253	$4.64^{+1.35}_{-1.50}$	251^{+9}_{-9}	3996^{+657}_{-374}	35422^{+42008}_{-14518}
Alt.	-1078 ± 215	$4.46^{+1.40}_{-1.46}$	252^{+9}_{-9}	3614^{+525}_{-323}	19622^{+23927}_{-8861}

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

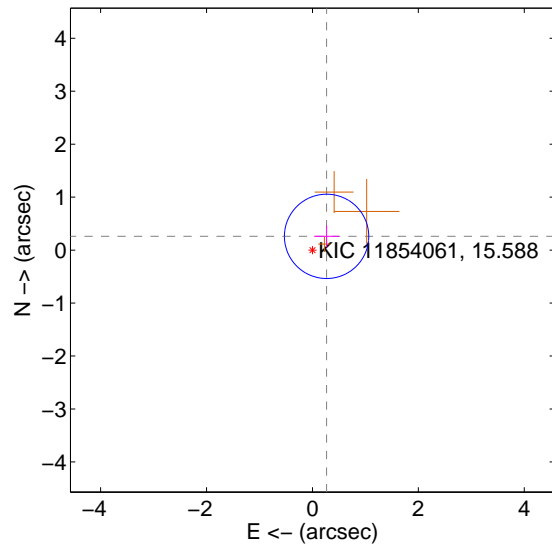
Supplemental centroid analysis for 011854061-06. Kepler magnitude: 15.59. Transit SNR 6.89

There are 0 quarters with good PRF difference image offsets

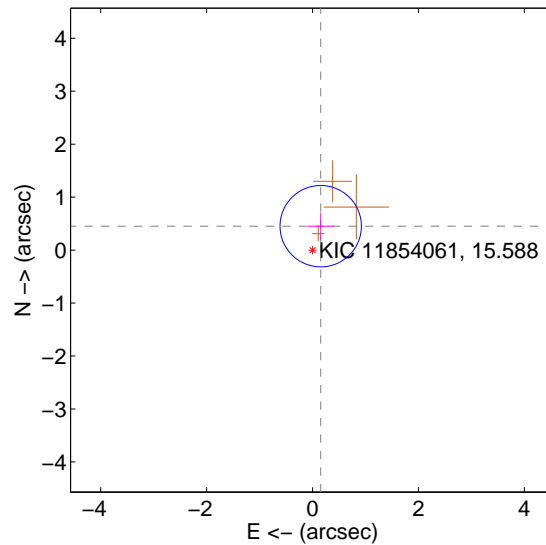
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.372 ± 0.265	1.40	-0.267 ± 0.236	0.260 ± 0.204
PRF-fit source offset from KIC position	0.477 ± 0.256	1.86	-0.155 ± 0.252	0.452 ± 0.257
photometric centroid source offset	0.92 ± 0.96	0.96	0.41 ± 1.02	0.83 ± 0.95

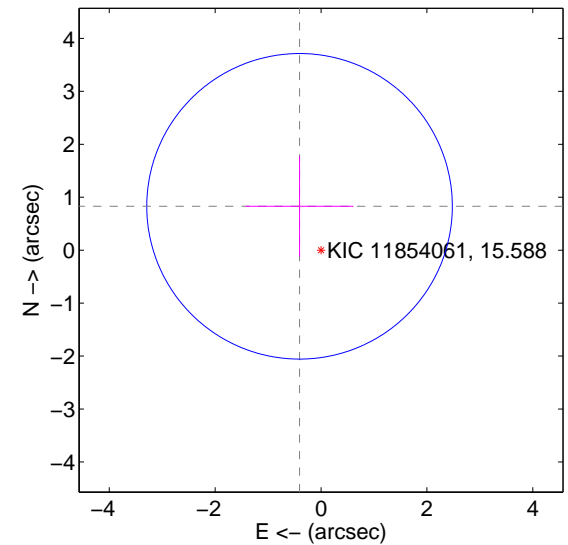
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

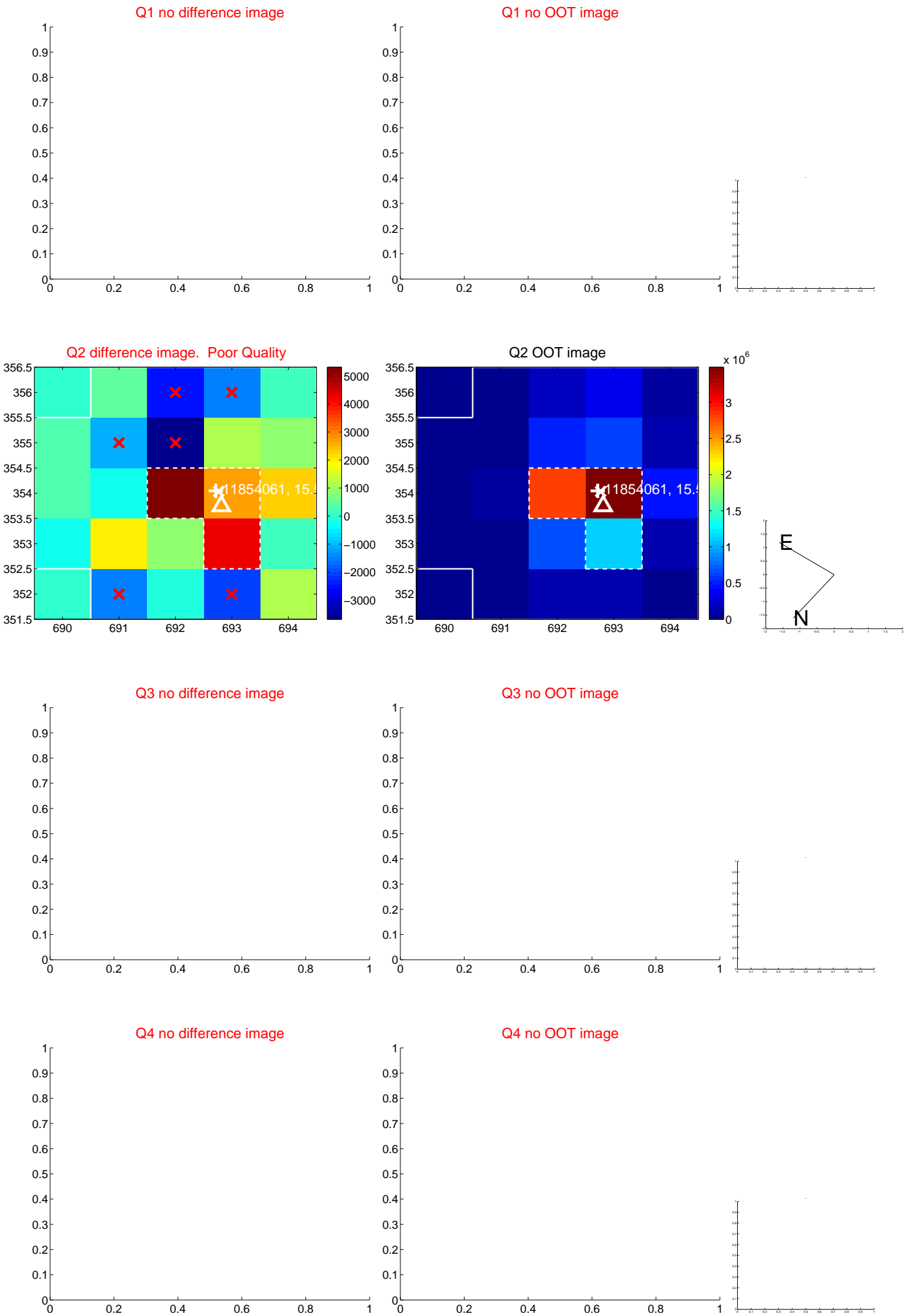


offset from photometric centroids

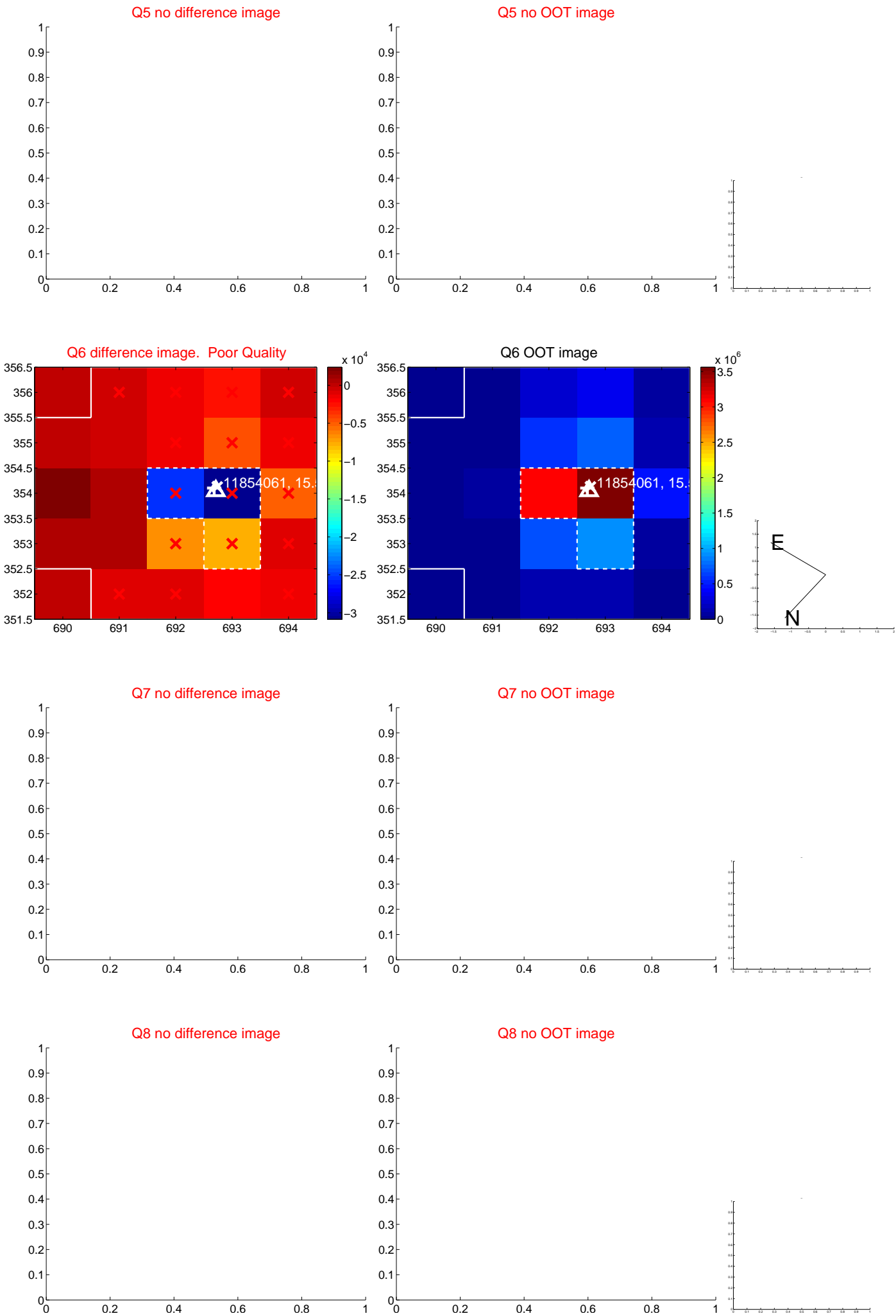


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

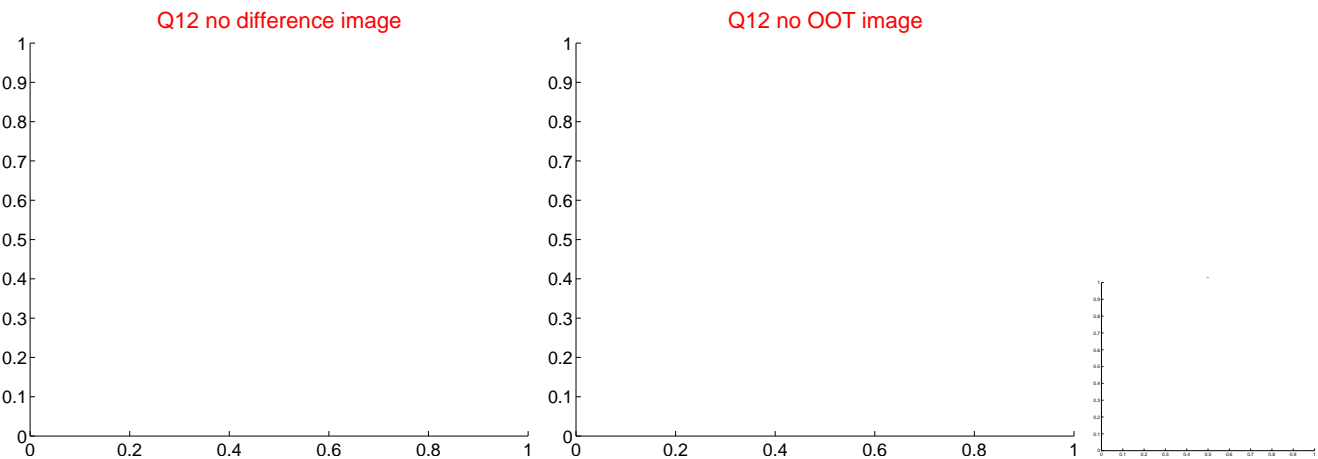
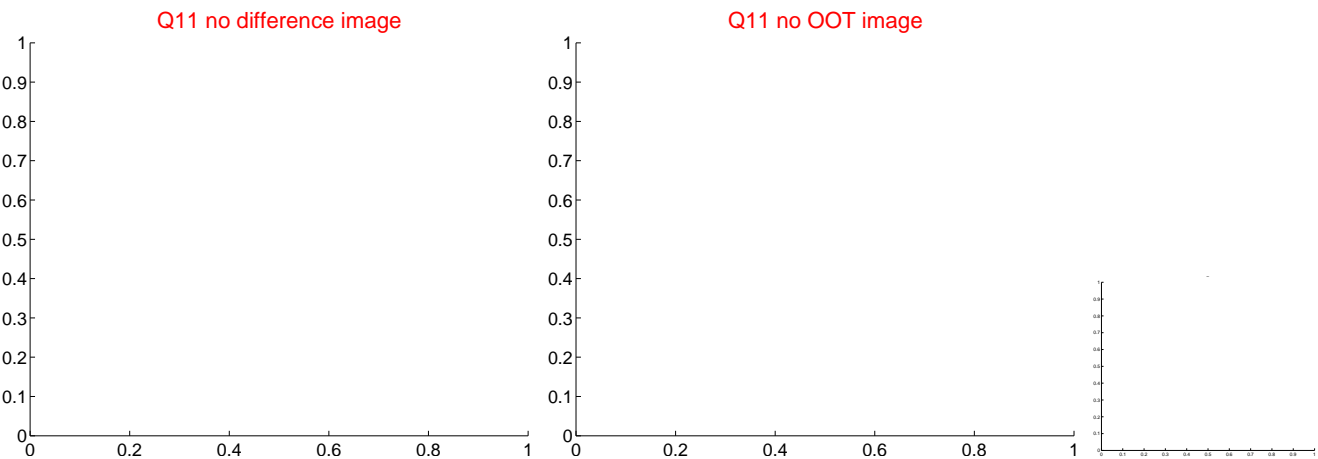
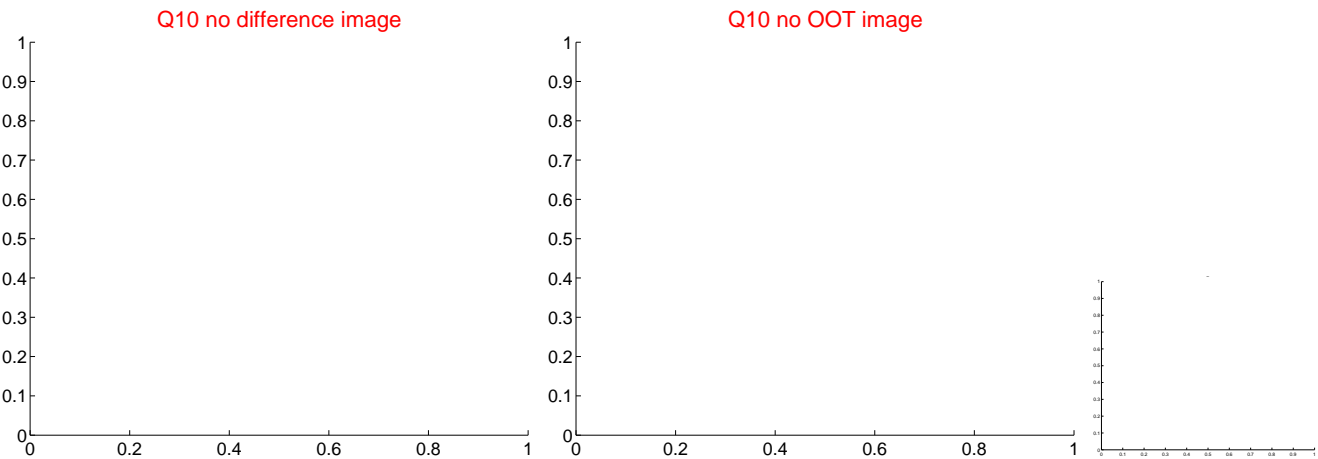
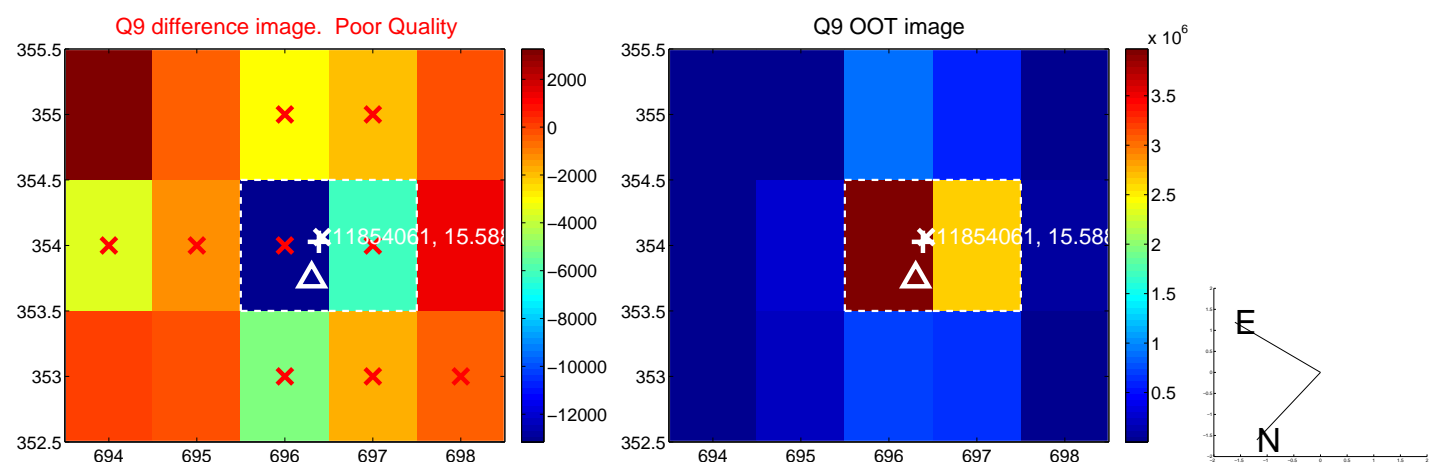
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



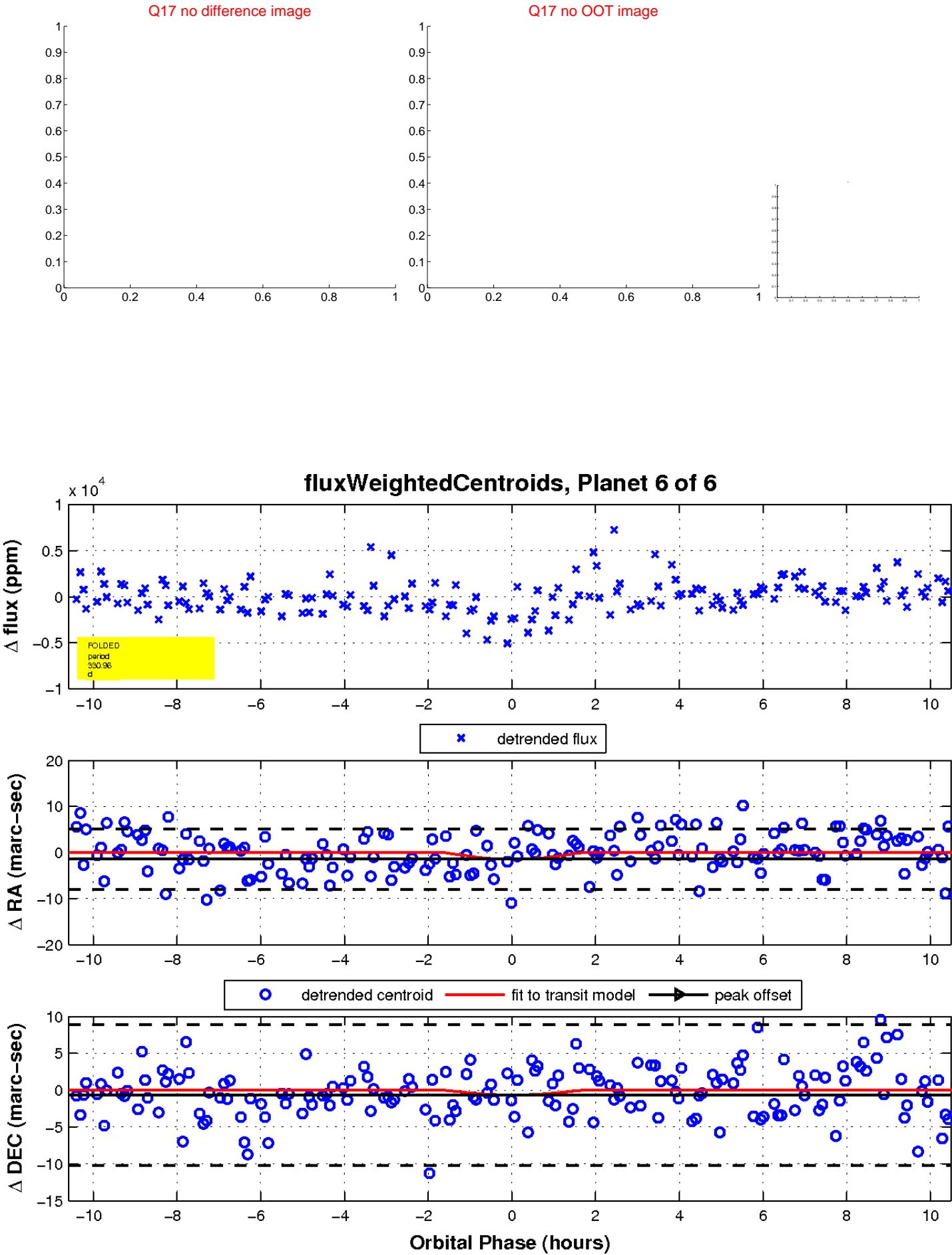
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

