

KIC 008226464

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})
008226464-01	OBS	No	402.106087	525.480111	556.7	7.944	16.2	7.2	1.53	6028	3.76	2.53
008226464-02	OBS	No	381.616809	413.487218	632.9	2.750	16.6	10.1	1.53	6028	4.03	2.72
008226464-03	OBS	No	459.284927	214.240735	720.0	3.811	19.7	8.2	1.53	6028	4.45	2.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008226464-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008226464-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
008226464-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

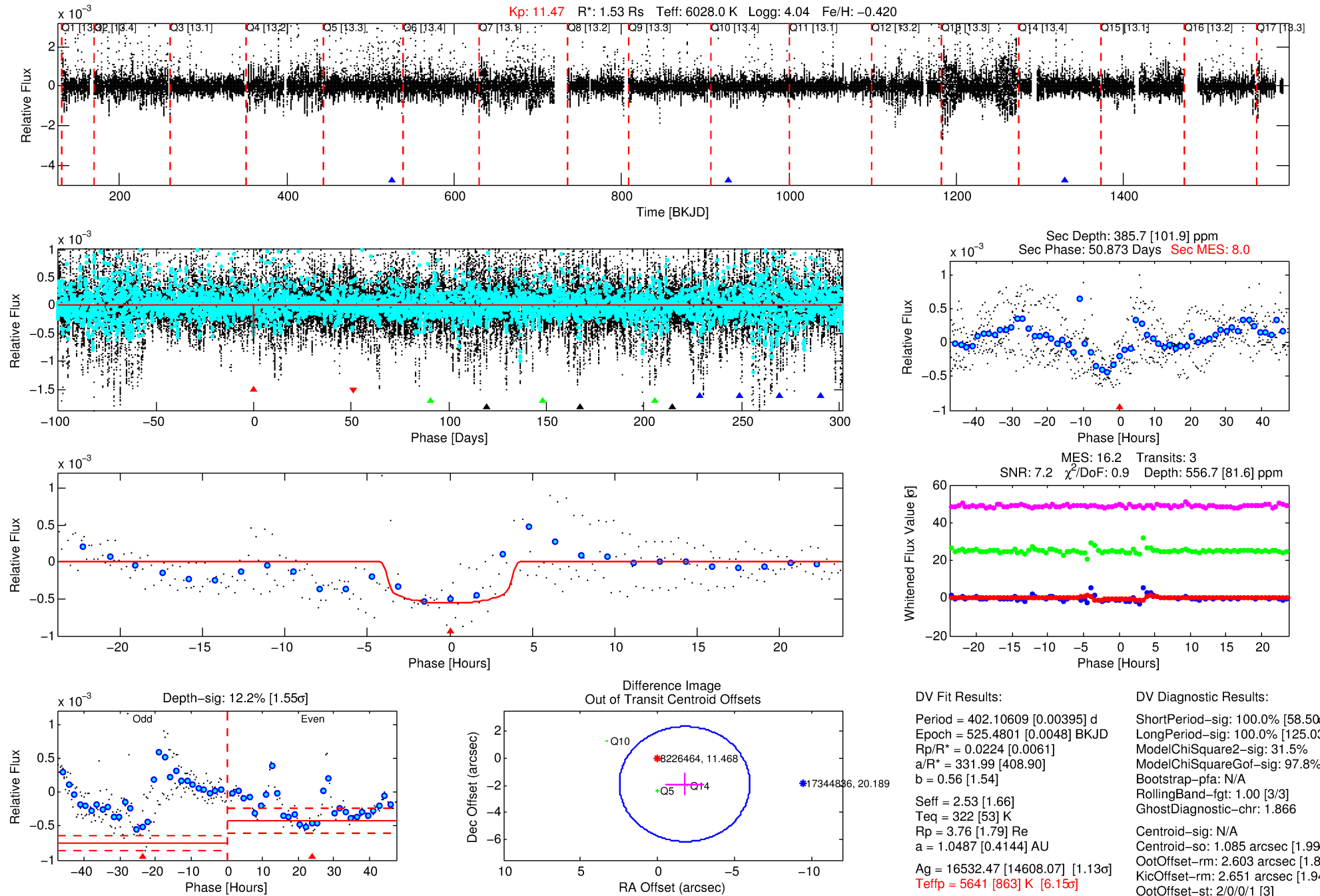
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008226464-01

No Significant Match Found

DV One-Page Summary

KIC: 8226464 Candidate: 1 of 4 Period: 402.106 d



DV Fit Results:

Period = 402.10609 [0.00395] d
Epoch = 525.4801 [0.0048] BKJD
Rp/R* = 0.0224 [0.0061]
a/R* = 331.99 [408.90]
b = 0.56 [1.54]
Seff = 2.53 [1.66]
Teff = 322 [53] K
Rp = 3.76 [1.79] Re
a = 1.0487 [0.4144] AU
Ag = 16532.47 [14608.07] [1.13σ]
Teffp = 5641 [863] K [6.15σ]

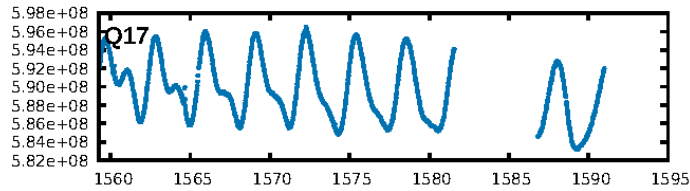
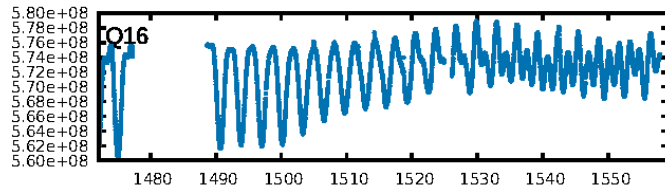
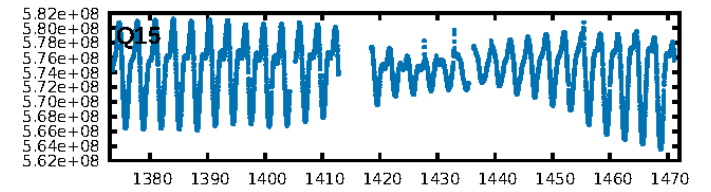
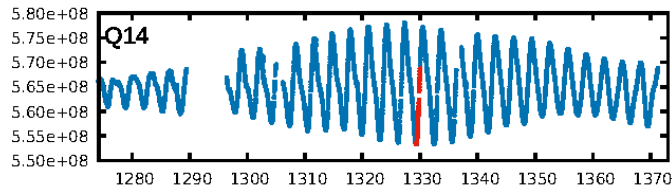
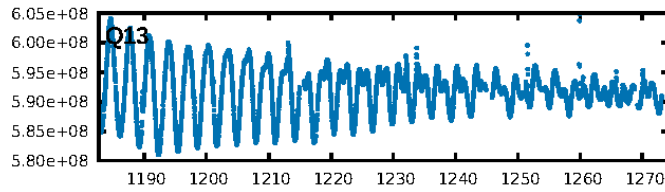
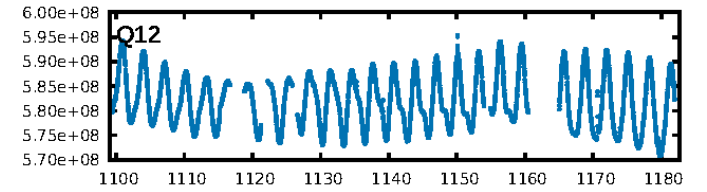
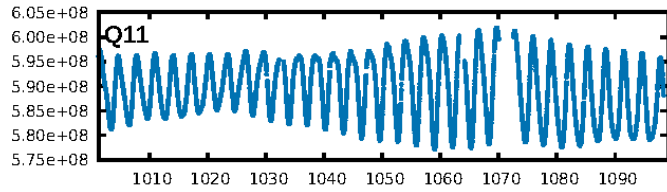
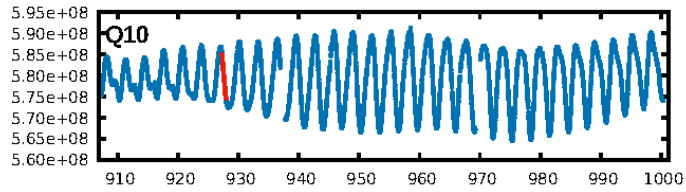
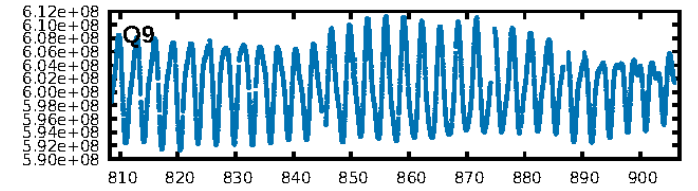
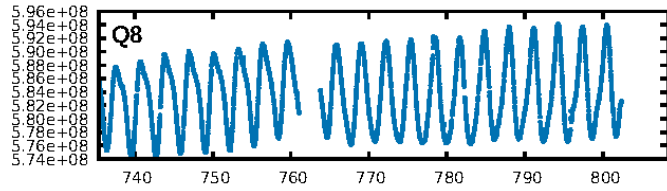
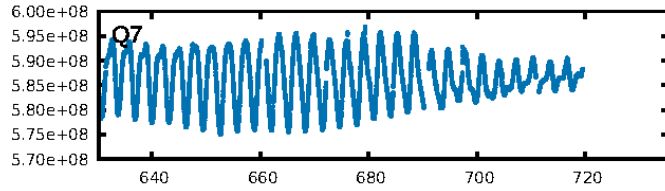
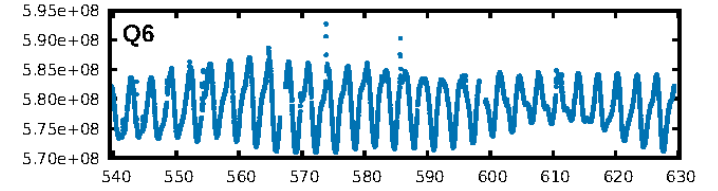
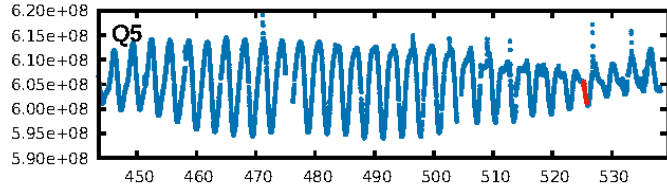
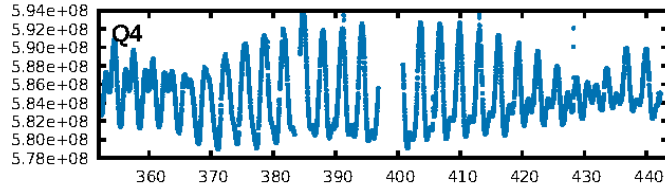
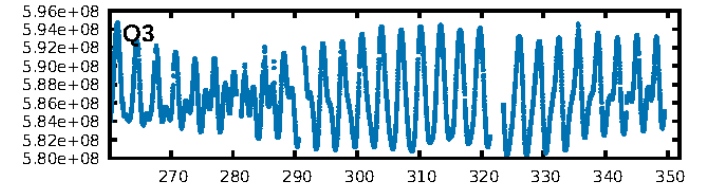
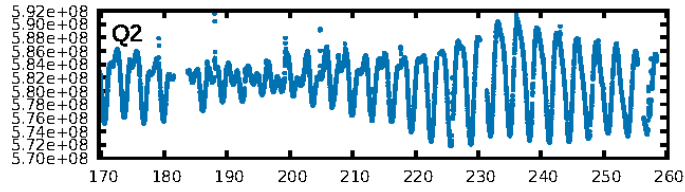
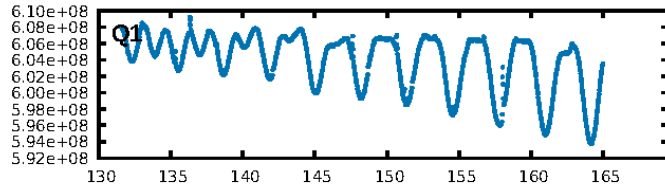
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [58.50σ]
LongPeriod-sig: 100.0% [125.03σ]
ModelChiSquare2-sig: 31.5%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.866
Centroid-sig: N/A
Centroid-so: 1.085 arcsec [1.99σ]
OotOffset-rm: 2.603 arcsec [1.84σ]
KicOffset-rm: 2.651 arcsec [1.94σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

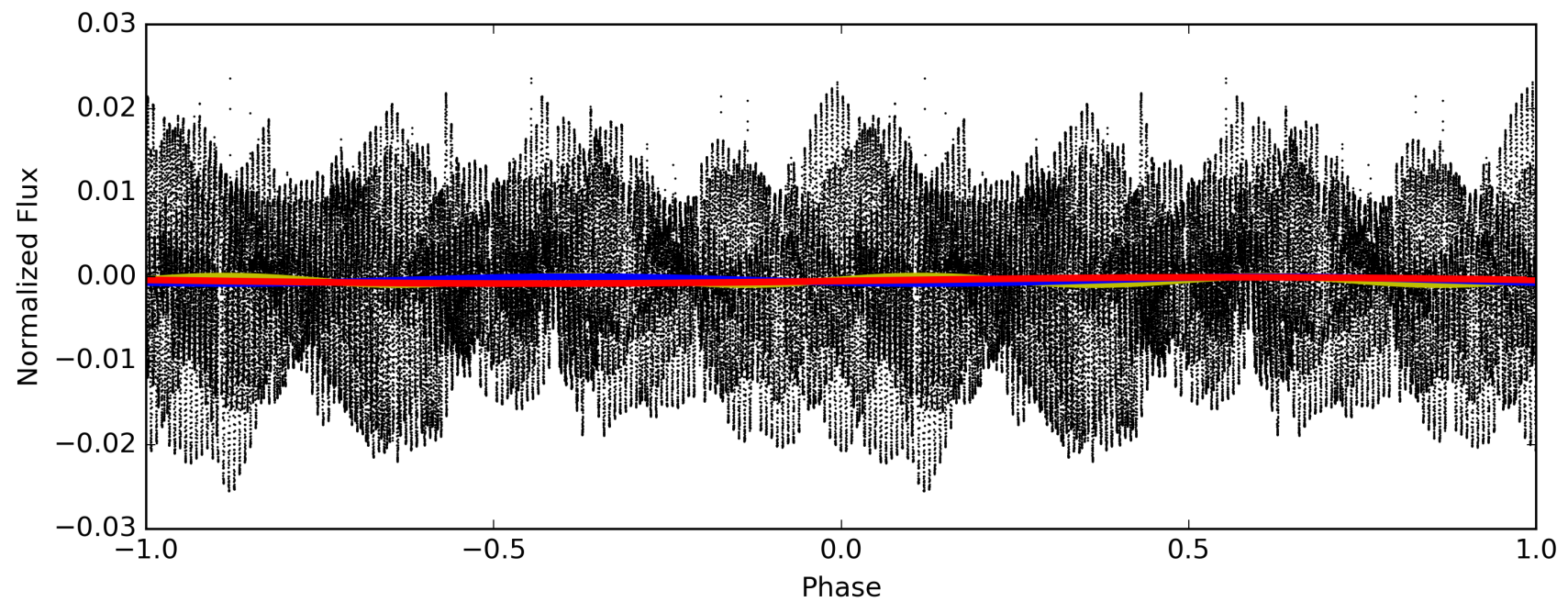
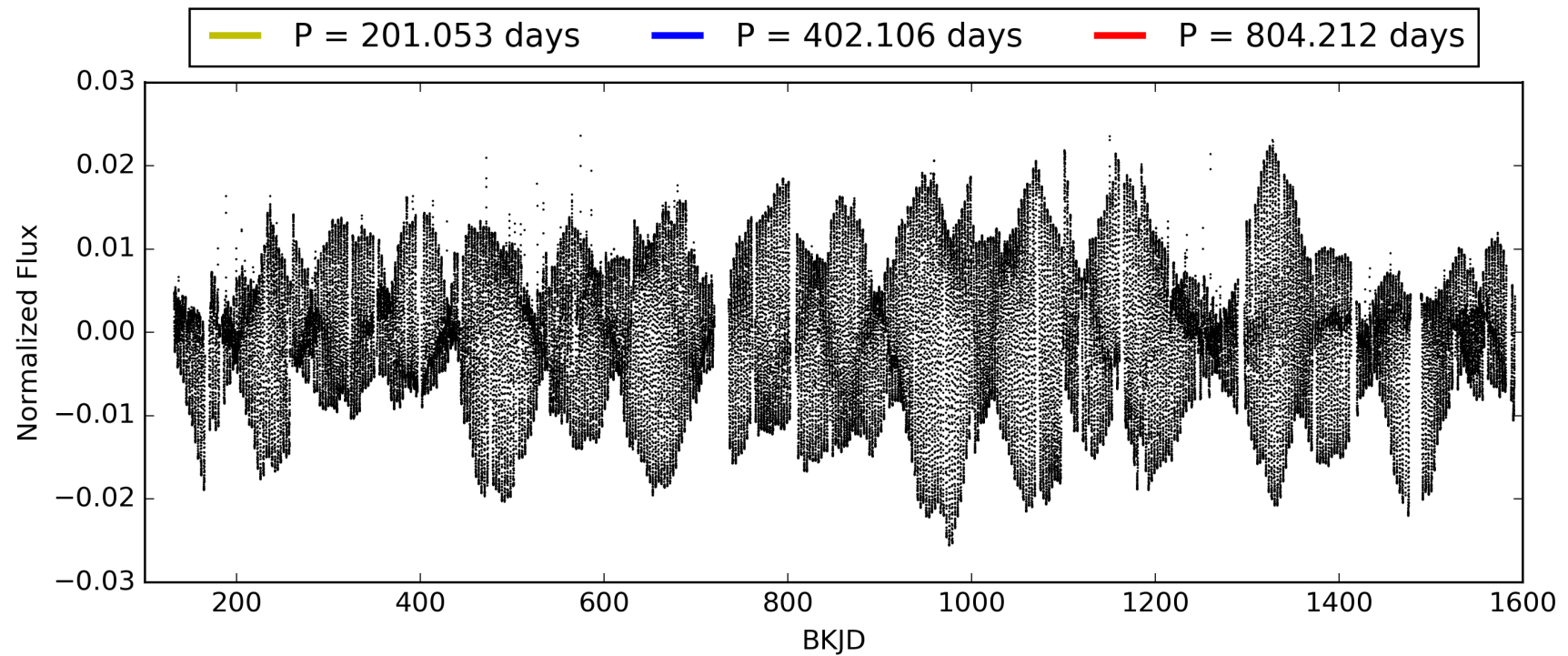
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:34:52 Z

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

TCE 008226464-01, PDC Light Curves

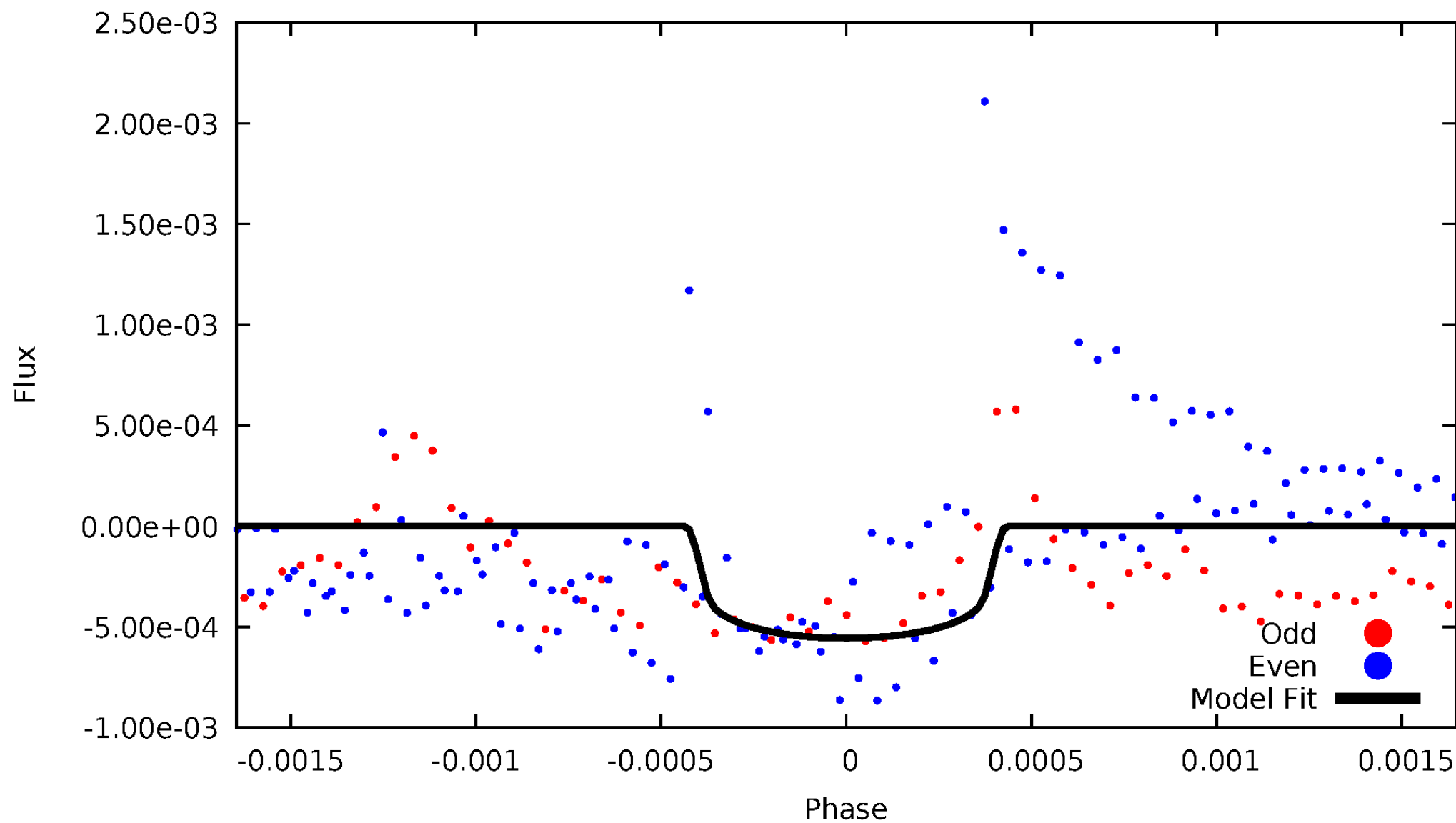


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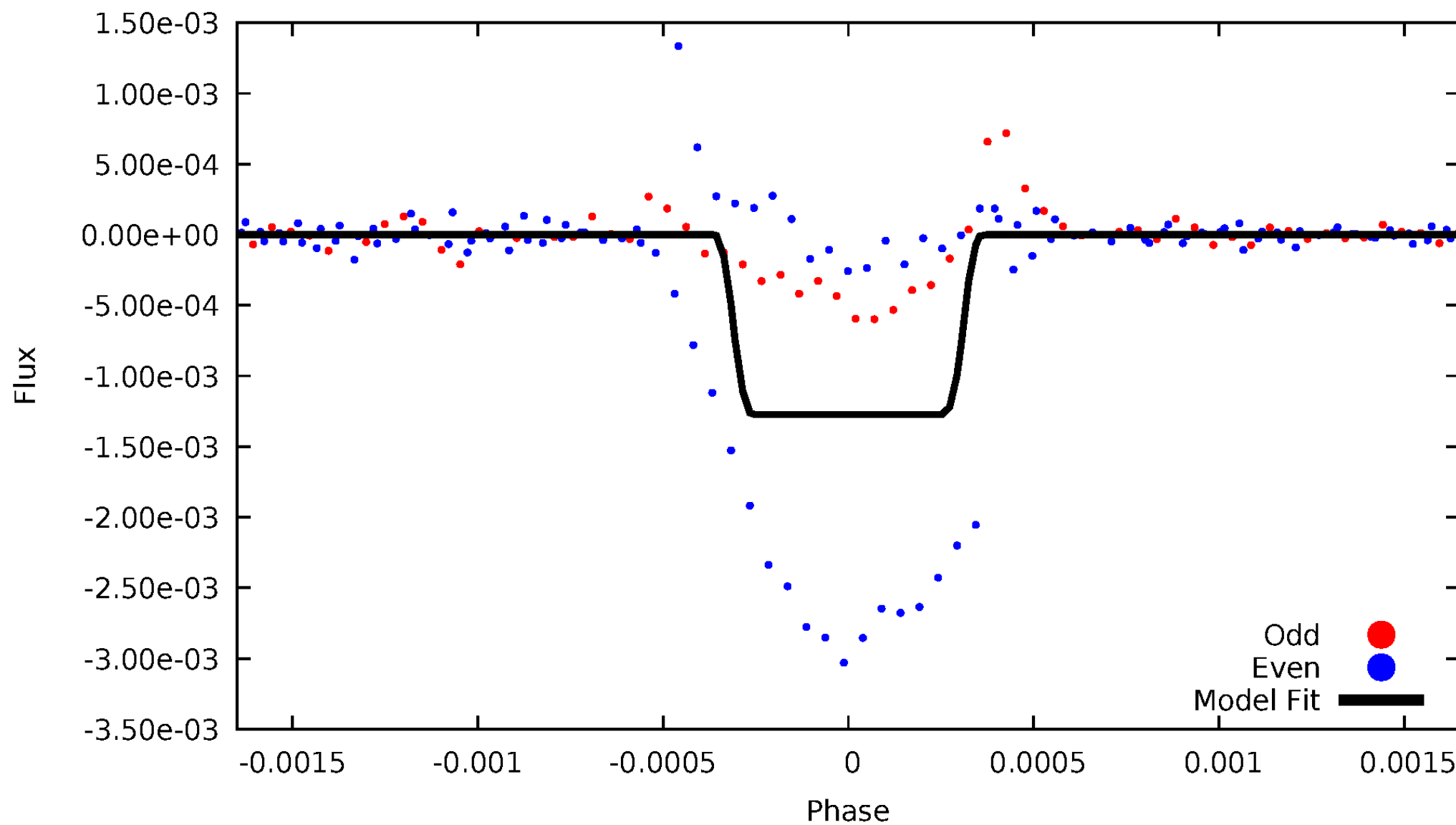
DV Odd/Even

TCE 008226464-01



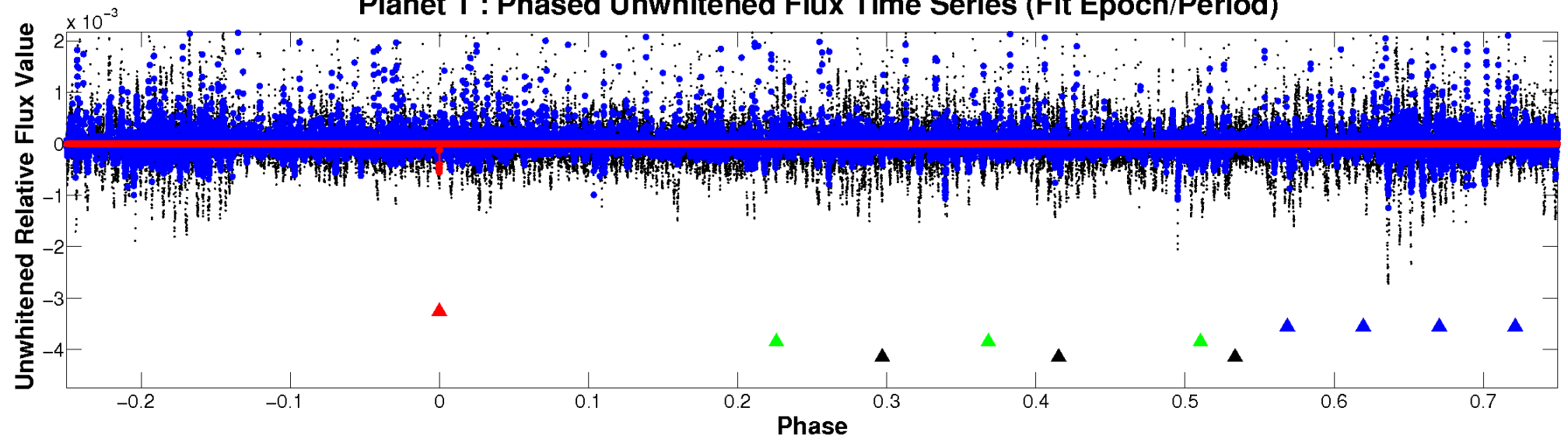
ALT Odd/Even

TCE 008226464-01

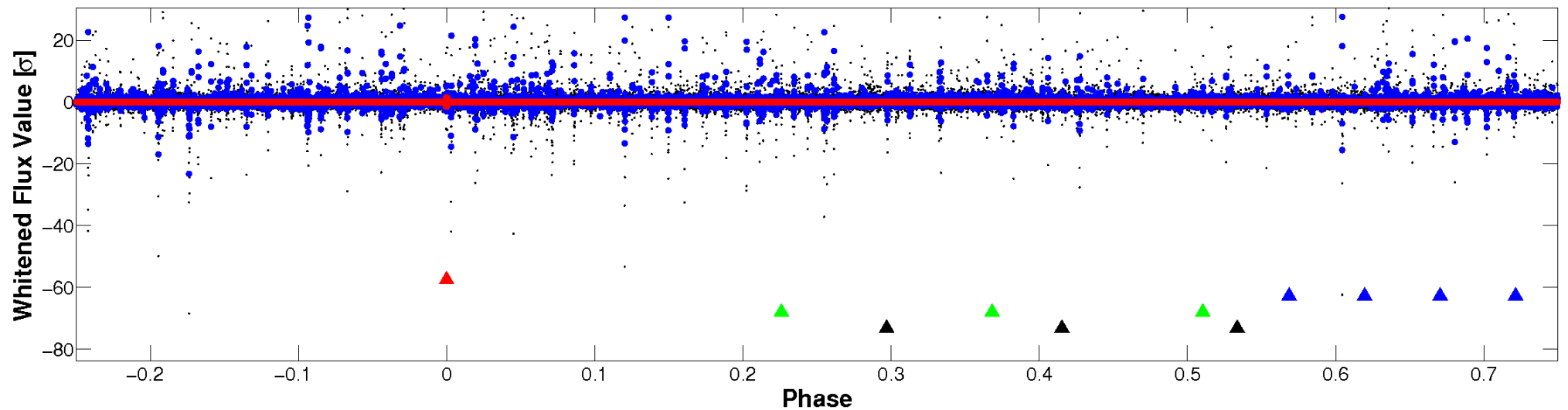


Non-Whitened Vs. Whitened Light Curve

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

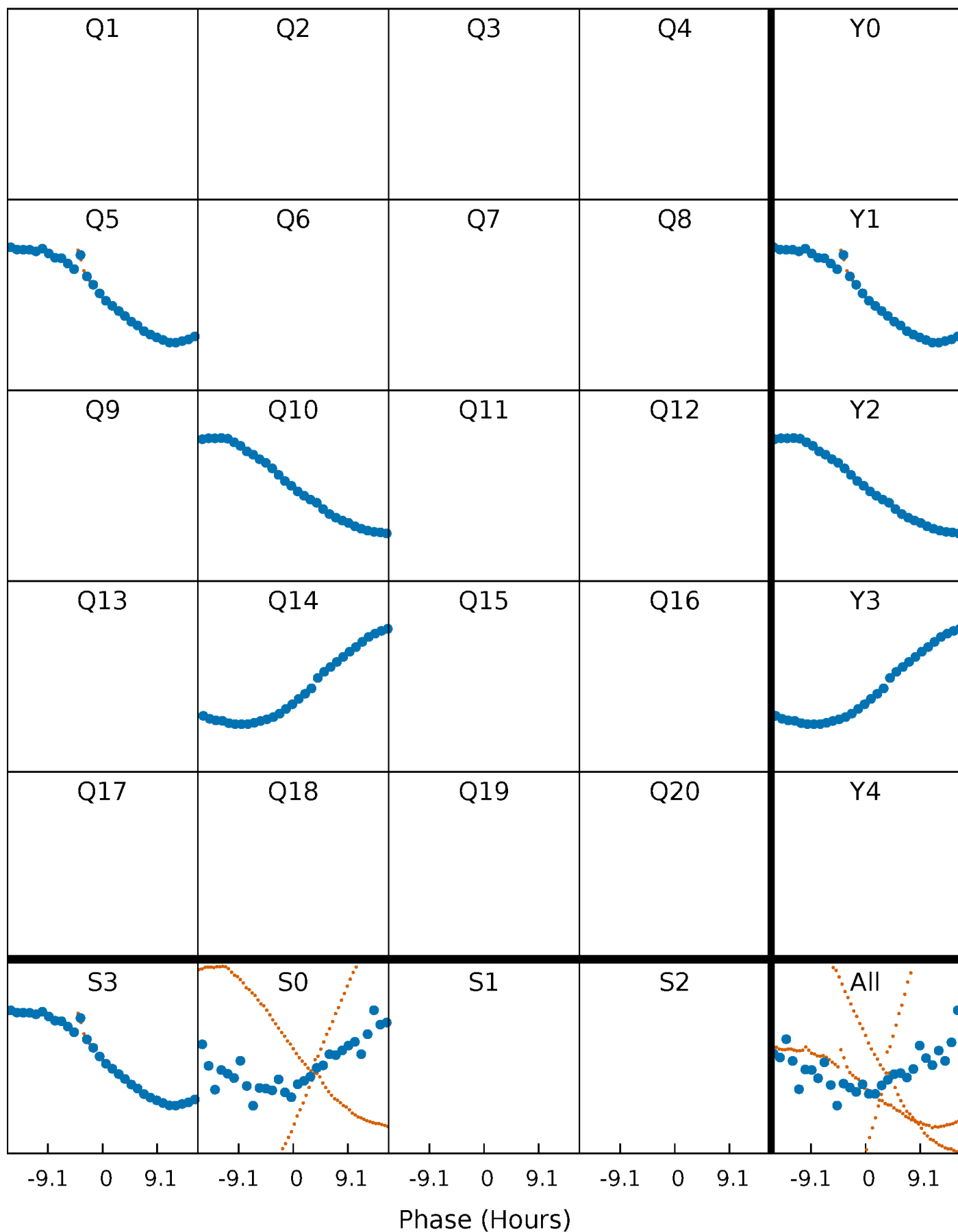


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



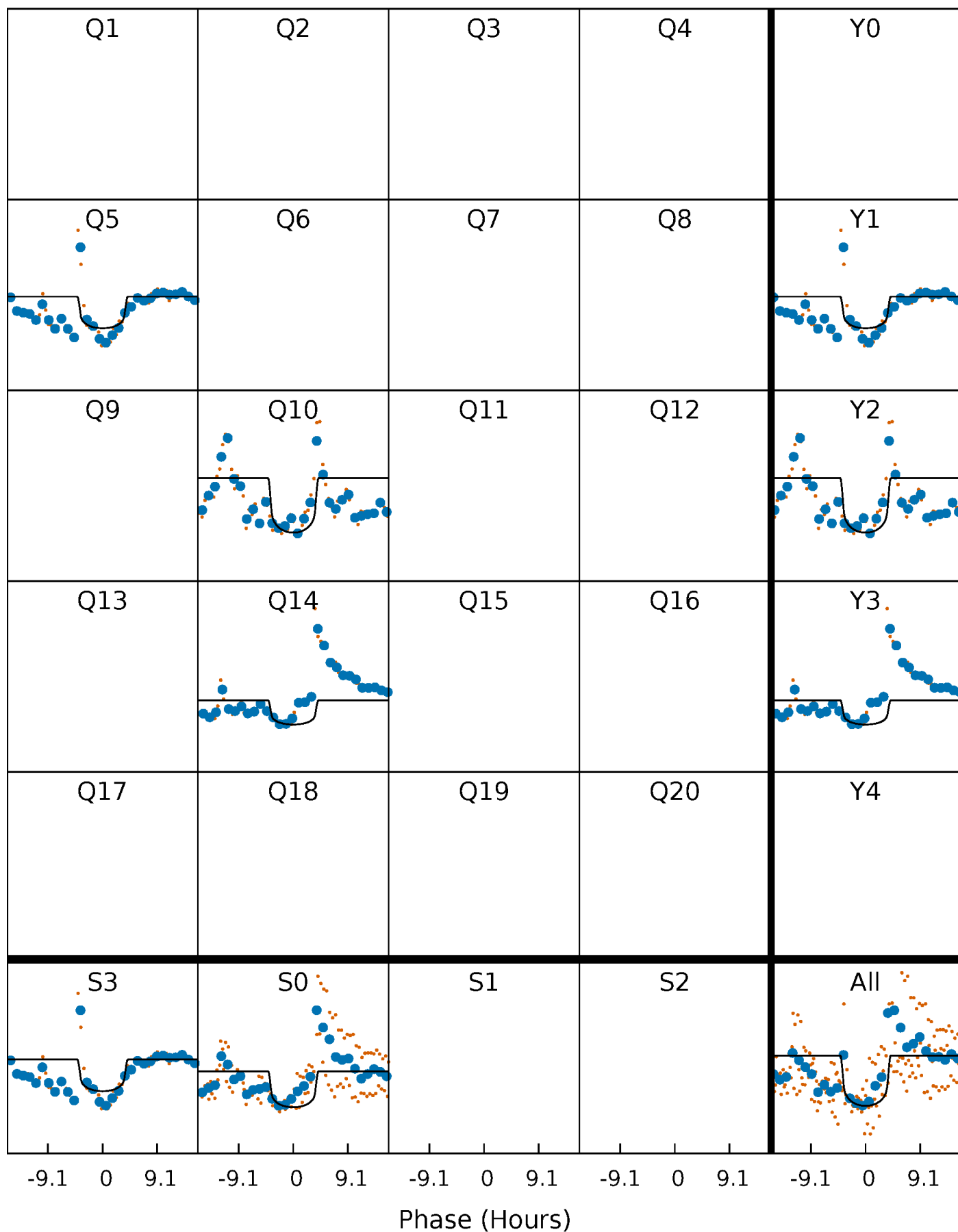
PDC Quarter-Phased Transit Curves

TCE 008226464-01 $P=402.106088$ Days $T_0=525.480111$ (BKJD)



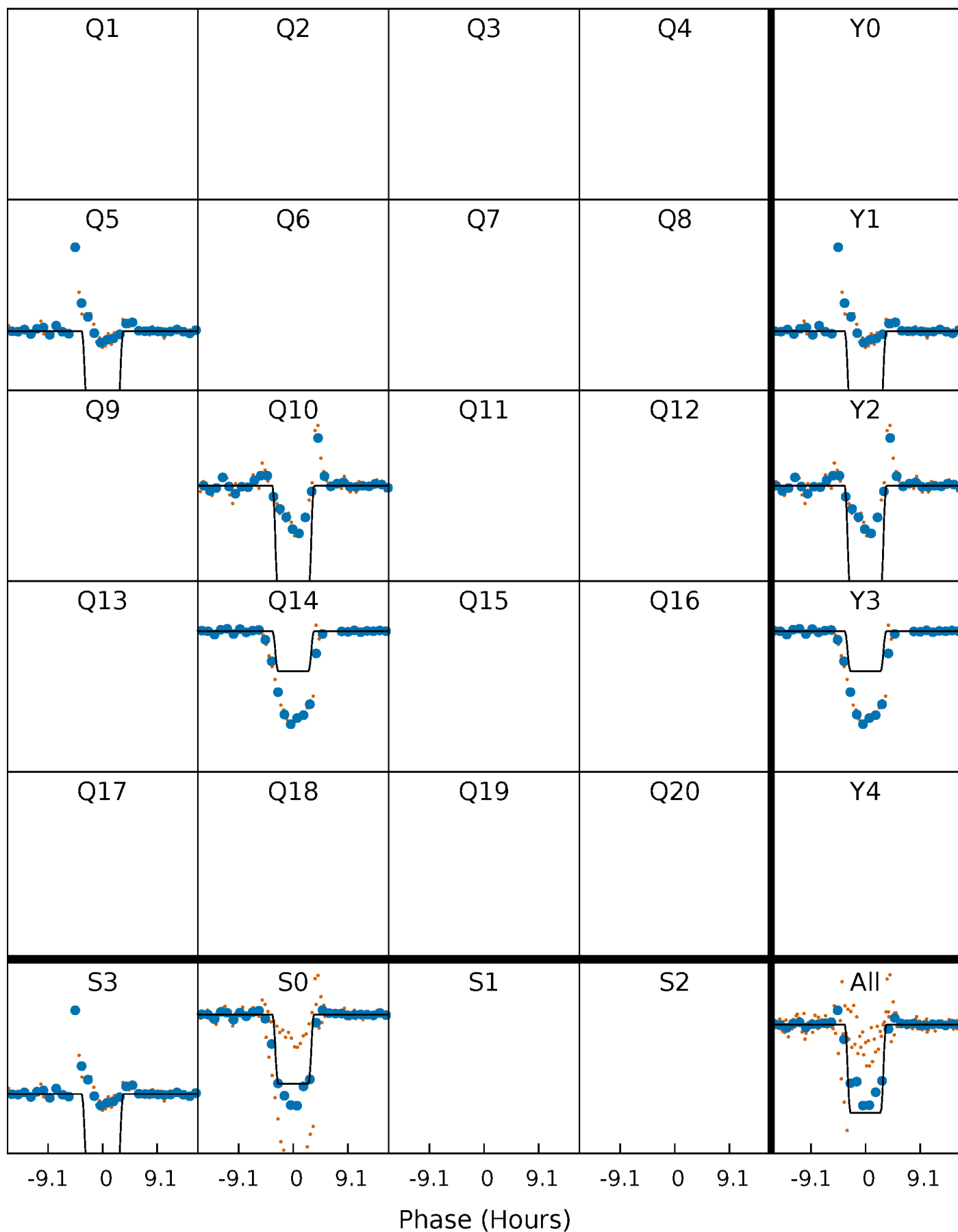
DV Quarter-Phased Transit Curves

TCE 008226464-01 P=402.106088 Days $T_0=525.480111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

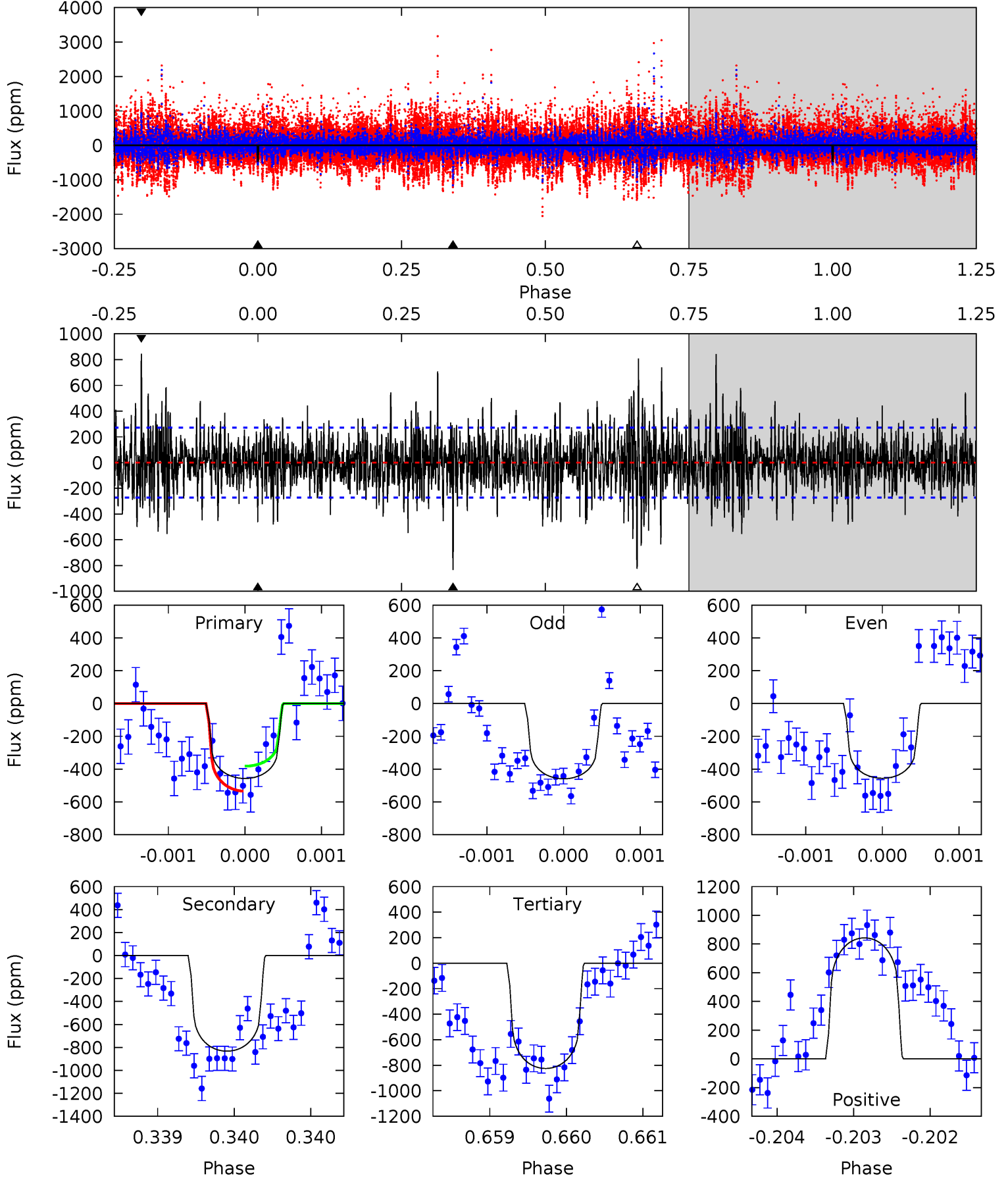
TCE 008226464-01 P=402.084783 Days $T_0=525.514319$ (BKJD)



DV Model-Shift Uniqueness Test

008226464-01, P = 402.106088 Days, E = 123.374023 Days

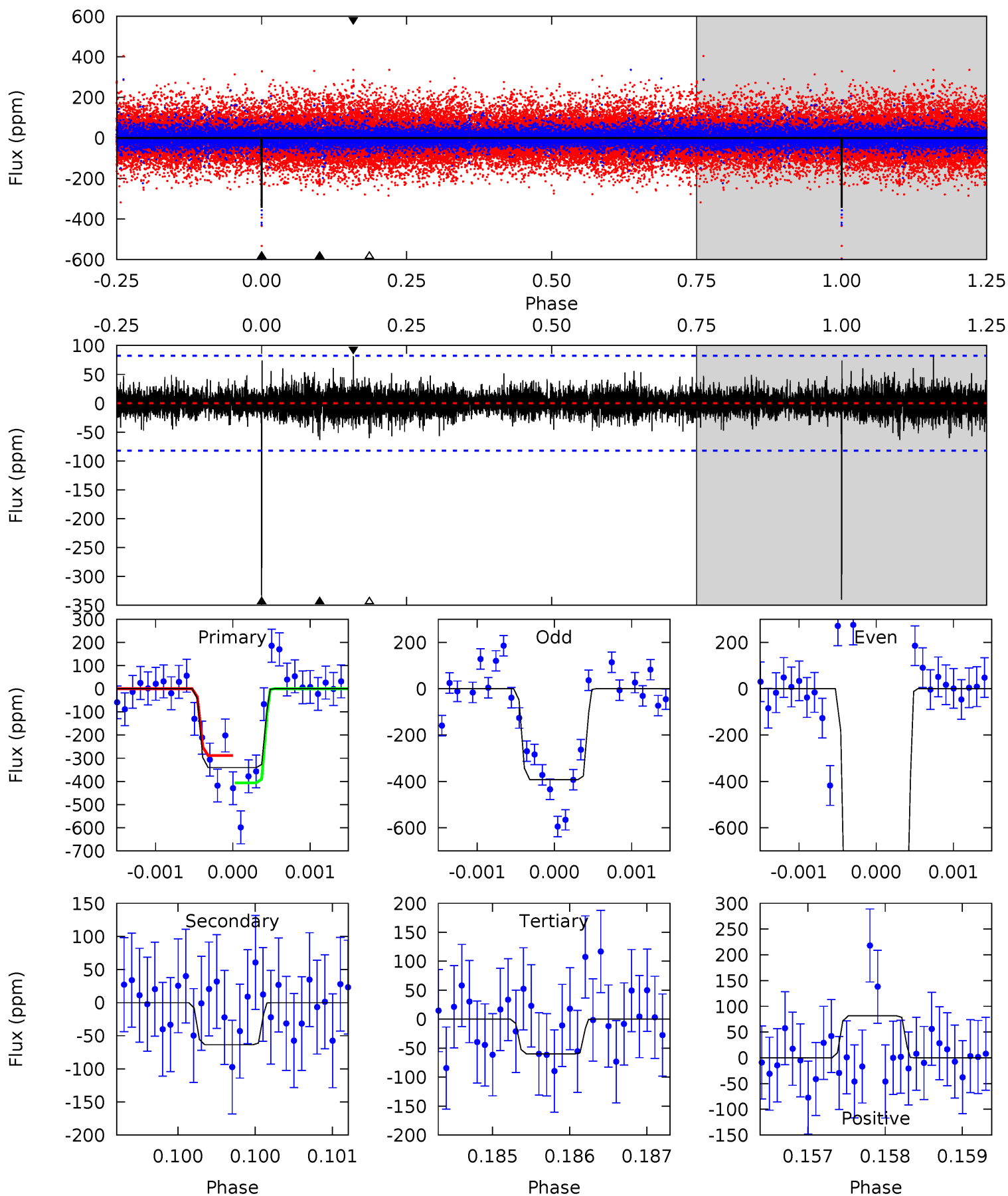
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.21	16.8	16.6	17.0	5.48	3.33	3.40	-7.42	-7.77	0.15	-0.21	0.03	0.91	0.50	1.53



Alt Model-Shift Uniqueness Test

008226464-01, P = 402.084783 Days, E = 123.429536 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	4.26	4.02	5.47	5.51	3.38	0.84	18.8	17.3	0.24	-1.21	45.8	2.61	0.19	3.96



Stellar Parameters For KIC 008226464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6028^{+164}_{-164}	$4.044^{+0.385}_{-0.165}$	$-0.420^{+0.300}_{-0.300}$	$1.535^{+0.403}_{-0.604}$	$0.951^{+0.129}_{-0.116}$	$0.371^{+1.211}_{-0.159}$
	+3%/-3%	+10%/-4%	+71%/-71%	+26%/-39%	+14%/-12%	+327%/-43%
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 008226464-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-833 ± 50	$3.51^{+1.40}_{-1.10}$	444^{+35}_{-49}	6890^{+1305}_{-812}	40655^{+45257}_{-19073}
Alt.	-64 ± 15	$5.73^{+1.44}_{-1.41}$	443^{+37}_{-47}	3374^{+229}_{-203}	1153^{+966}_{-459}

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

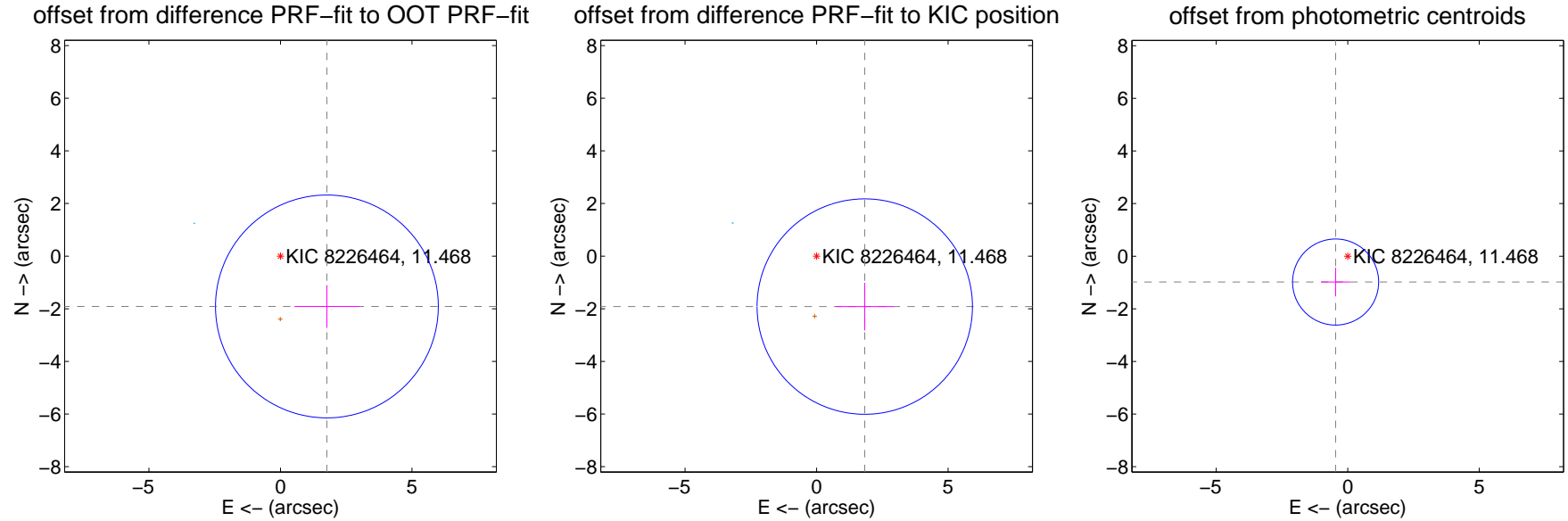
DV Centroid Data

Supplemental centroid analysis for 008226464-01. **Kepler magnitude: 11.47.** Transit SNR 7.22

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.603 ± 1.411	1.84	-1.765 ± 1.231	-1.912 ± 0.813
PRF-fit source offset from KIC position	2.651 ± 1.364	1.94	-1.831 ± 1.093	-1.917 ± 0.907
photometric centroid source offset	1.08 ± 0.55	1.99	0.46 ± 0.55	-0.98 ± 0.54

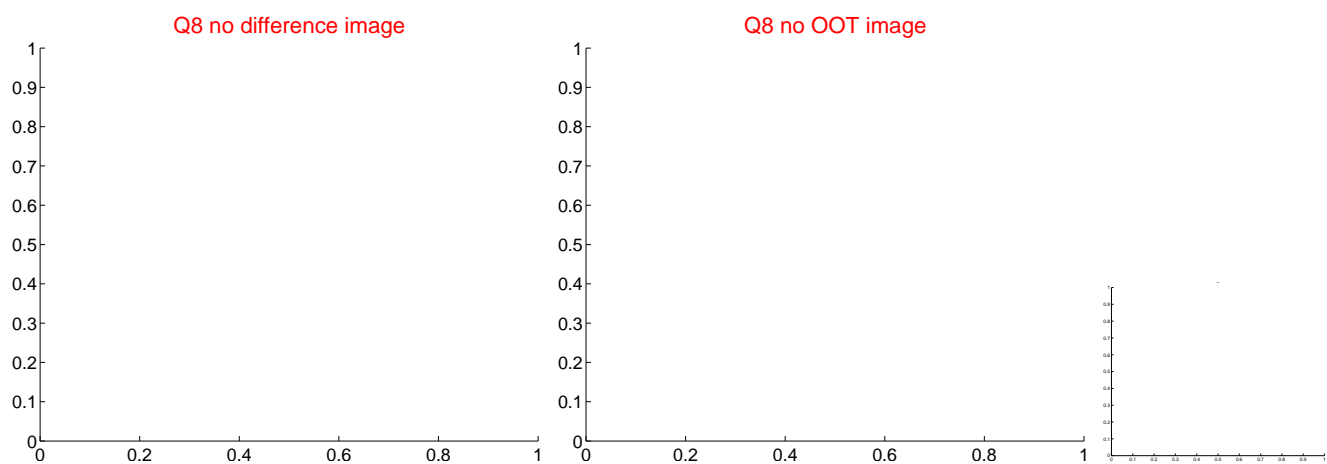
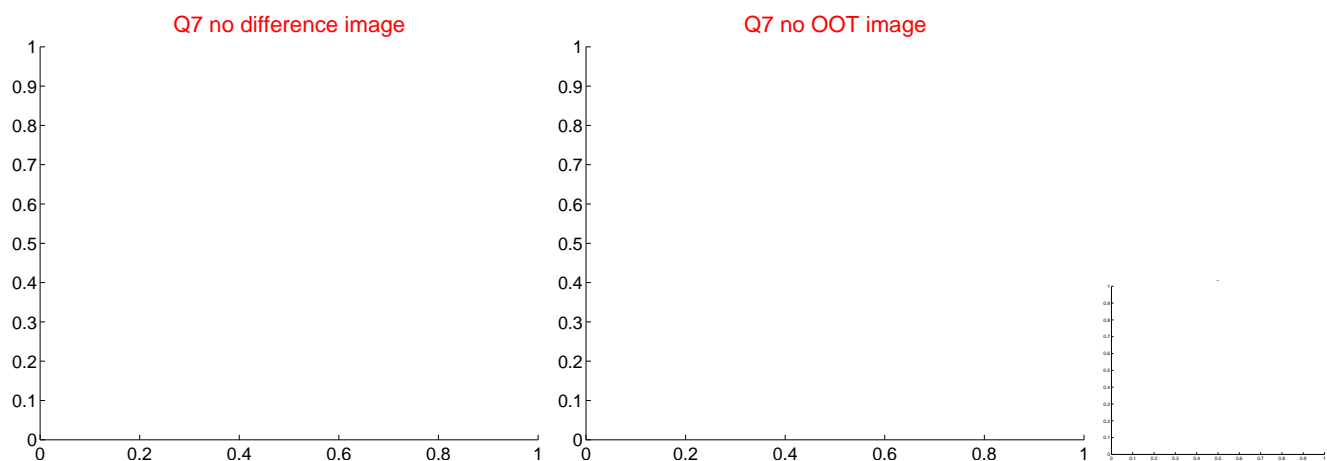
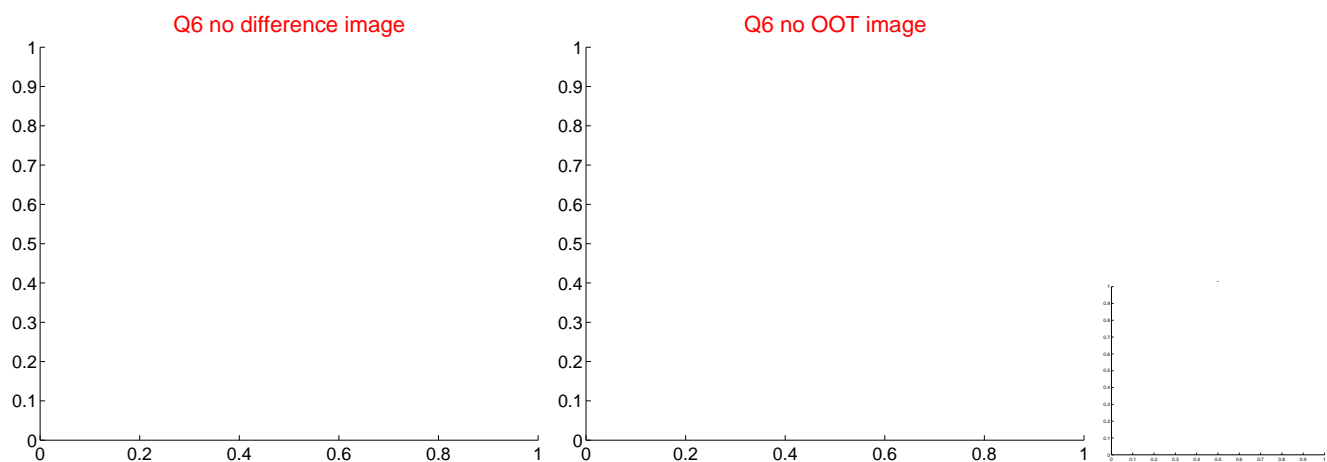
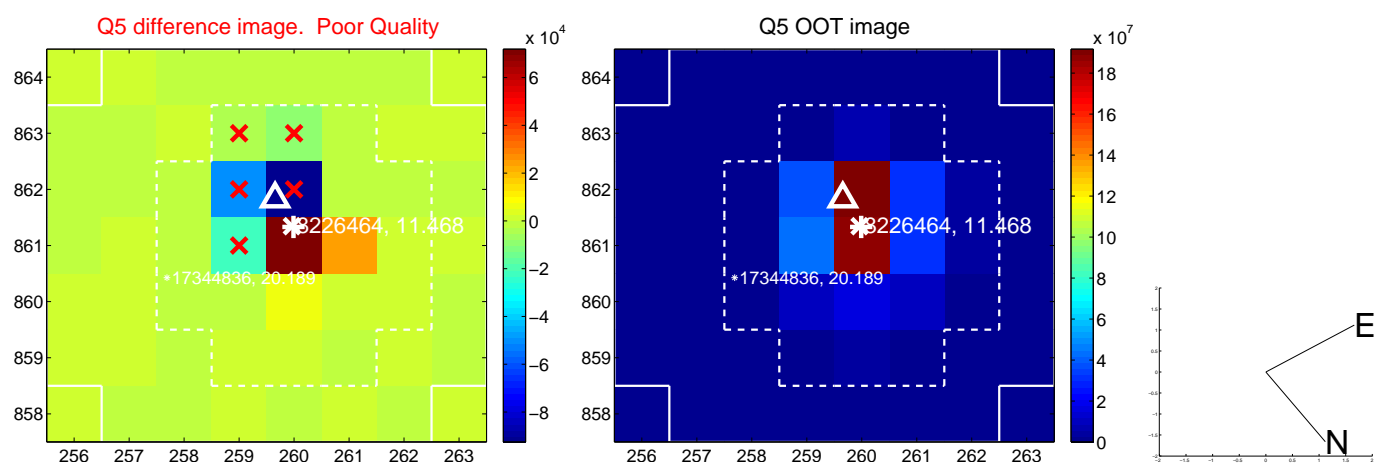


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

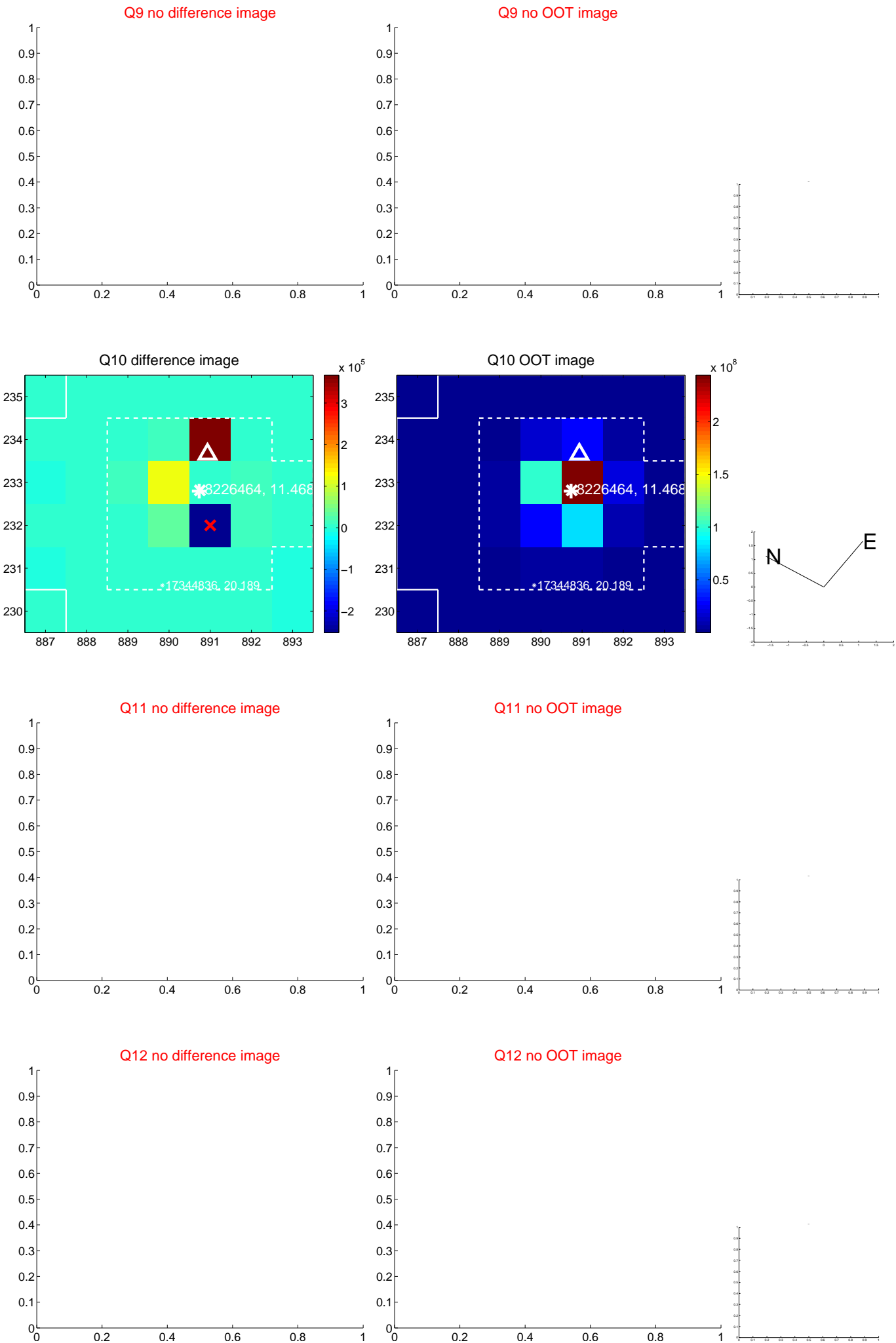
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



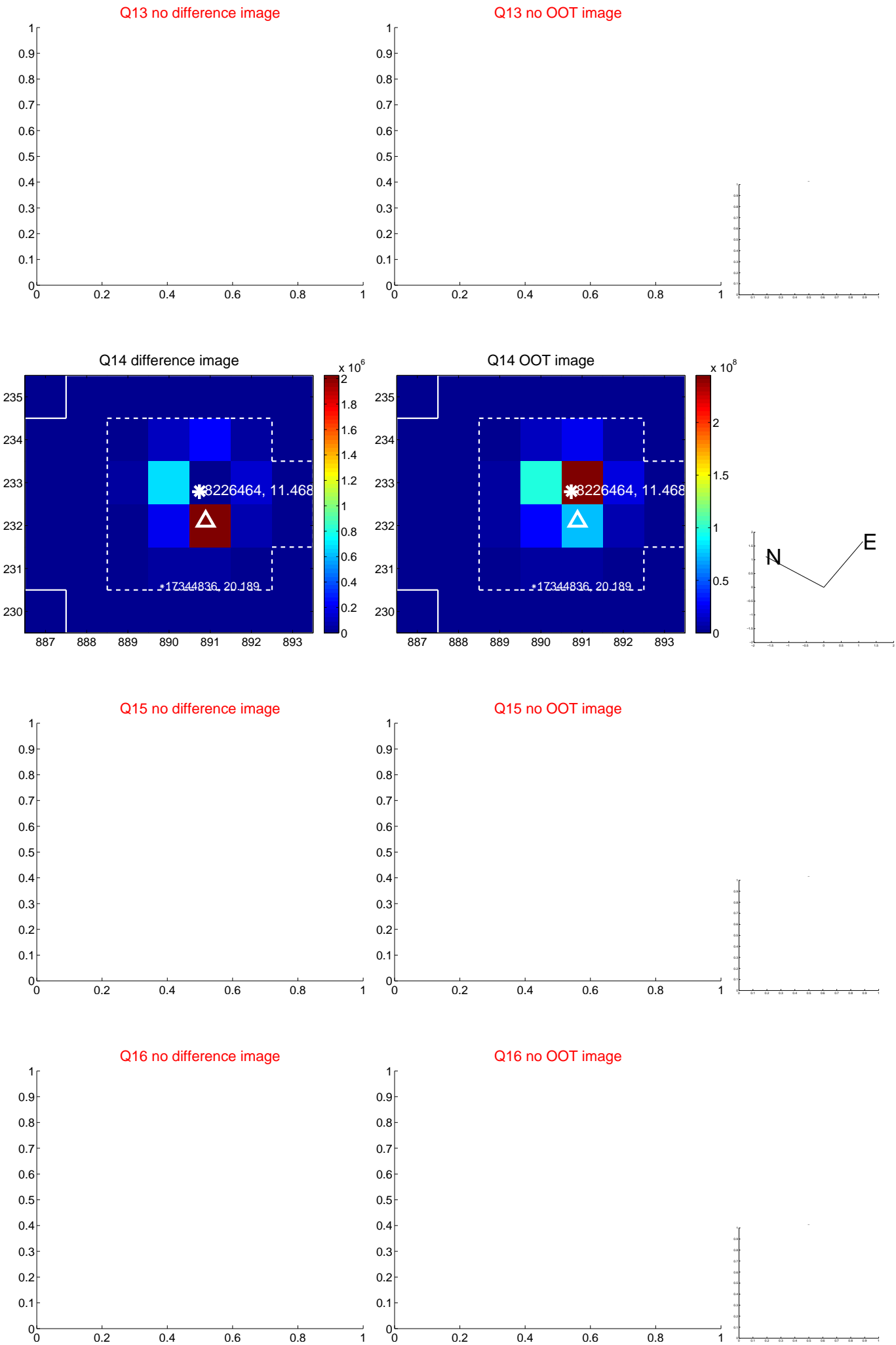
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



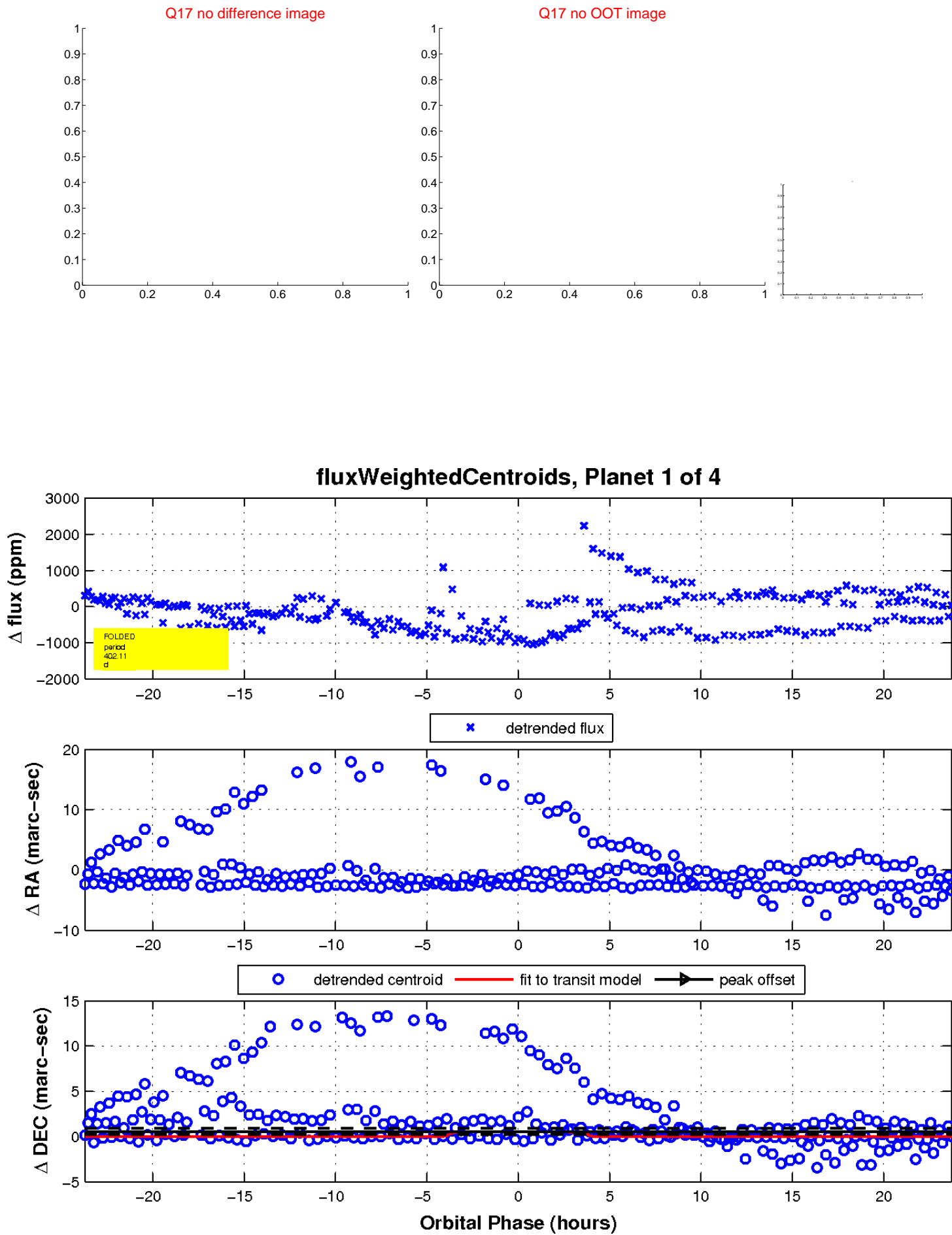
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

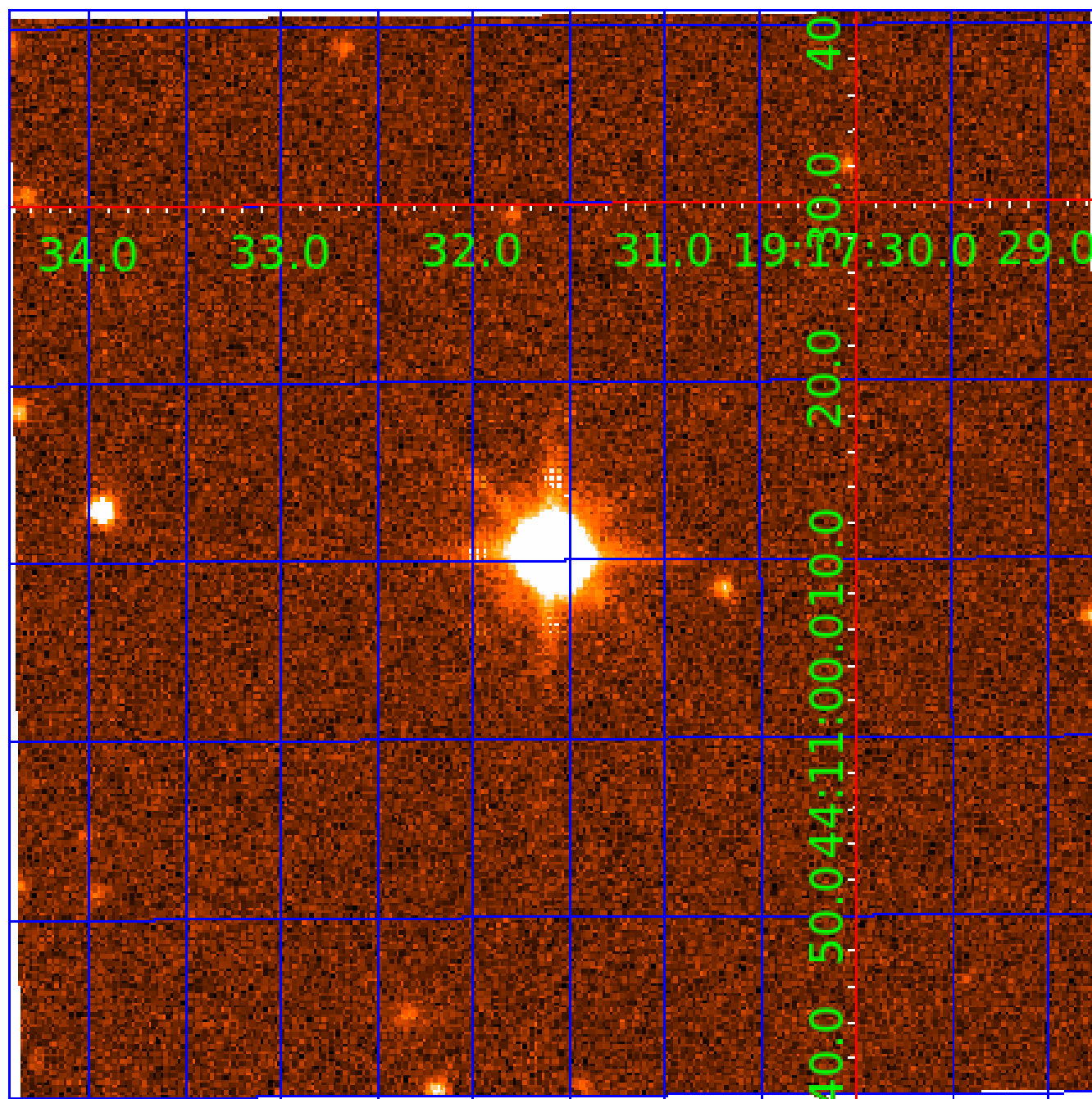


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008226464

Q1-17 DR25 TCE Parameters

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Robovetter Results

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008226464-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED— HALO_GHOST
008226464-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

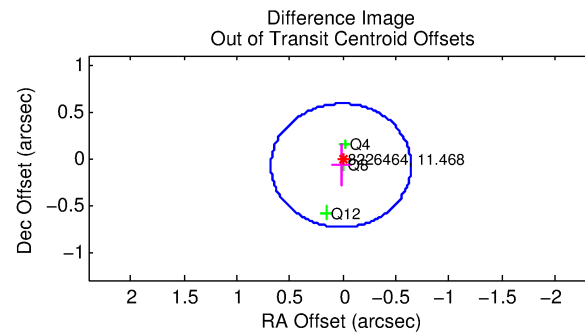
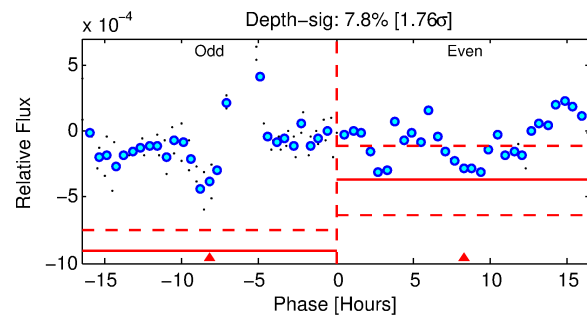
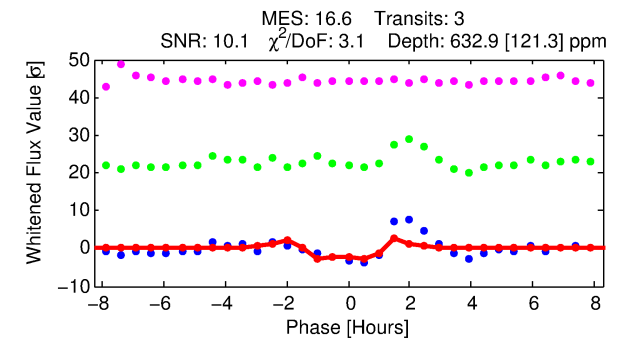
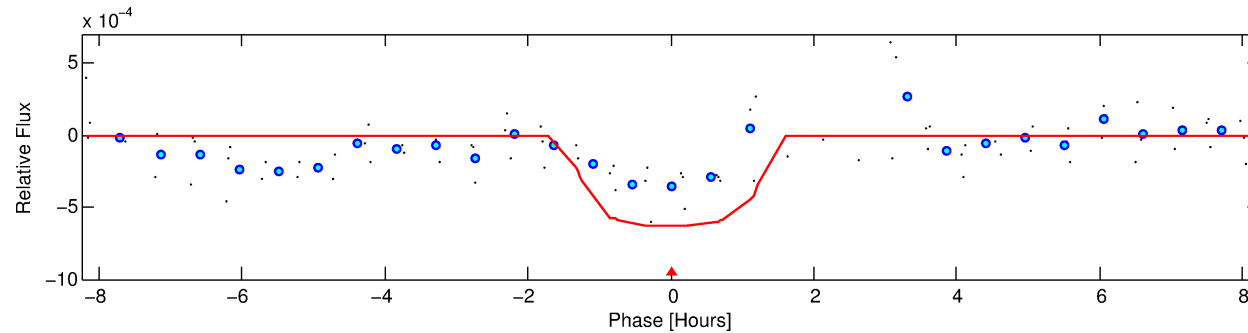
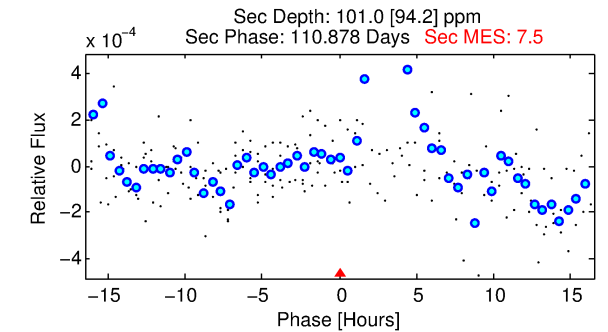
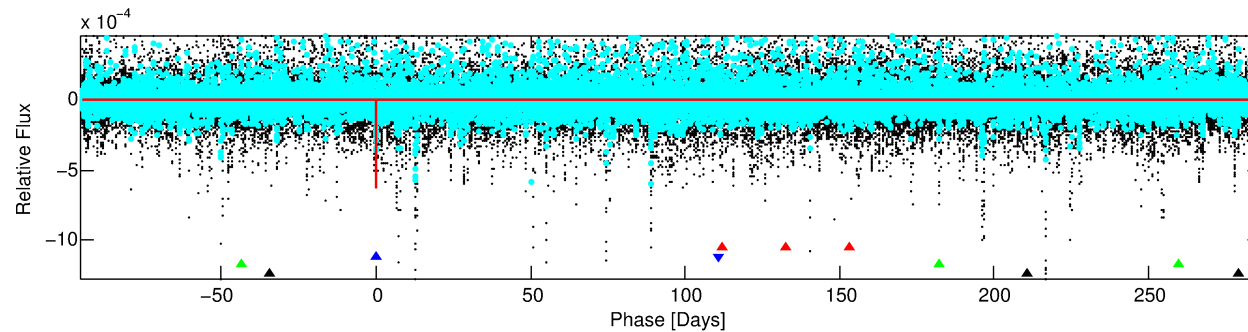
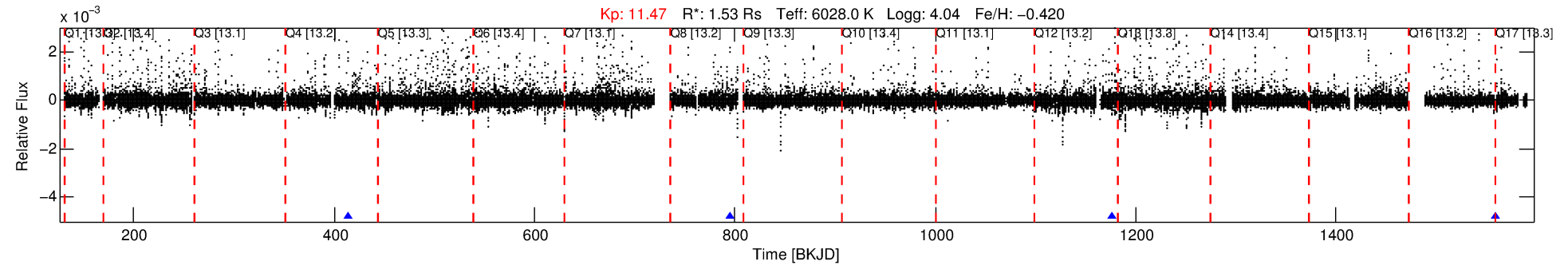
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008226464-02

No Significant Match Found

DV One-Page Summary

KIC: 8226464 Candidate: 2 of 4 Period: 381.617 d



DV Fit Results:

Period = 381.61681 [0.00395] d
Epoch = 413.4872 [0.0058] BKJD
Rp/R* = 0.0240 [0.0320]
a/R* = 898.91 [5978.57]
b = 0.57 [7.84]
Seff = 2.72 [1.78]
Teq = 327 [54] K
Rp = 4.03 [5.59] Re
a = 1.0128 [0.4002] AU
Ag = 3512.04 [10162.24] [0.35σ]
Teffp = 3897 [2750] K [1.30σ]

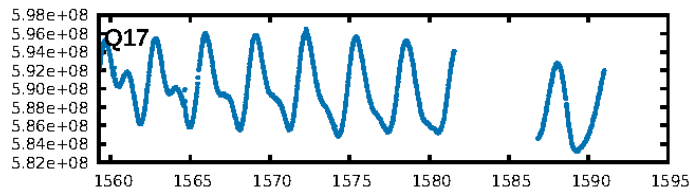
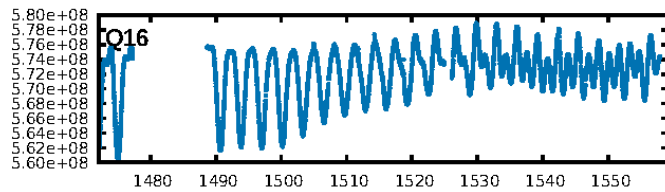
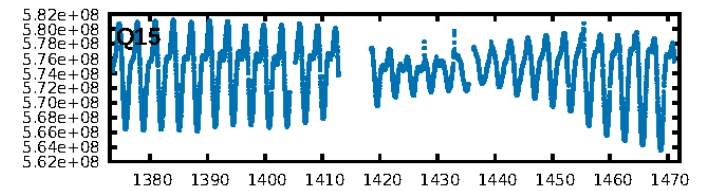
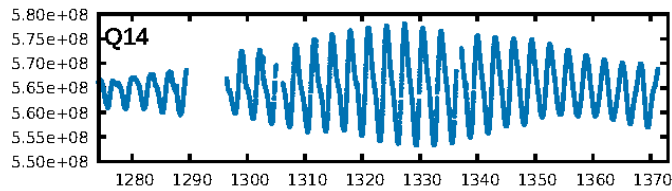
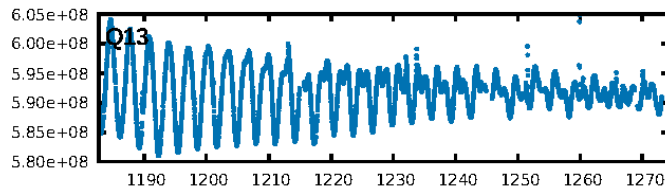
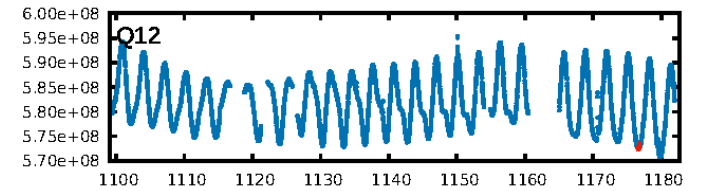
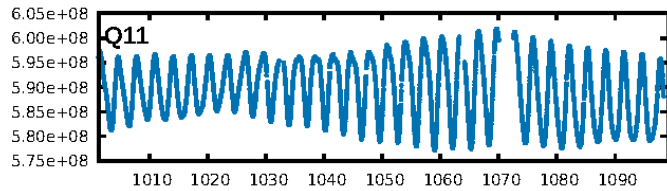
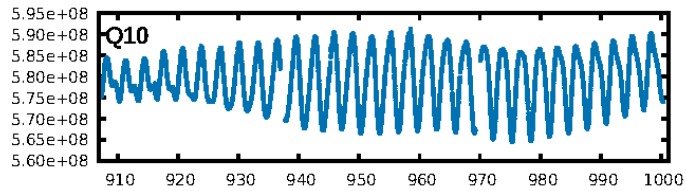
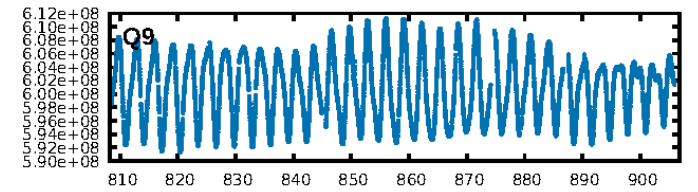
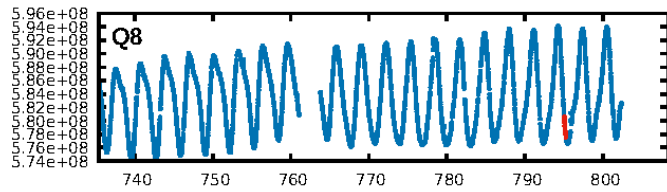
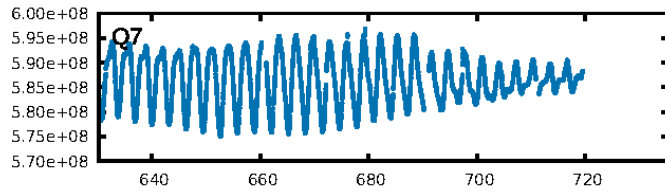
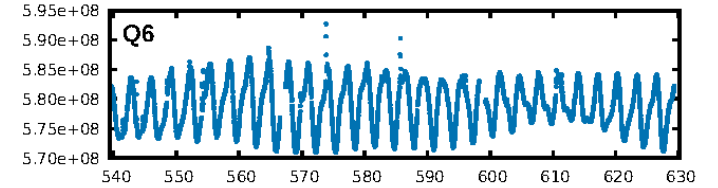
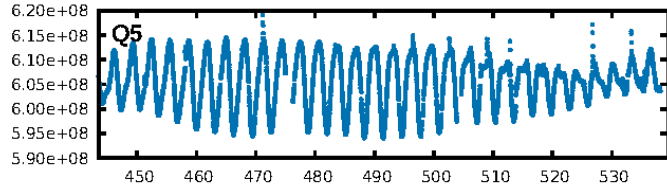
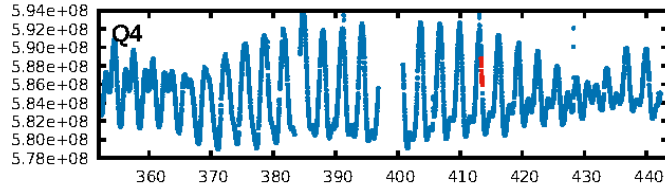
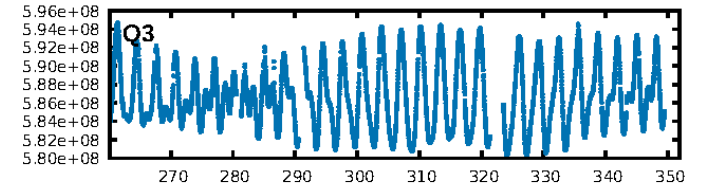
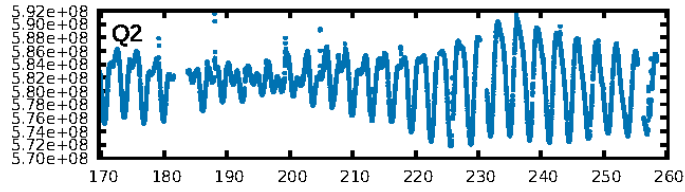
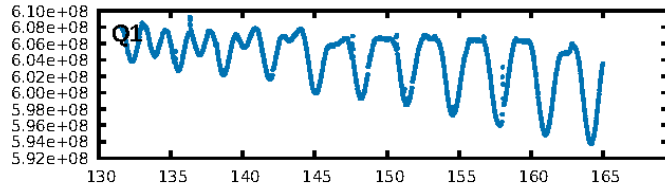
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [58.50σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.04917
Centroid-sig: N/A
Centroid-so: 0.081 arcsec [0.20σ]
OotOffset-rm: 0.078 arcsec [0.35σ]
OotOffset-st: 0/0/3/0 [3]
KicOffset-rm: 0.058 arcsec [0.54σ]
KicOffset-st: 0/0/3/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

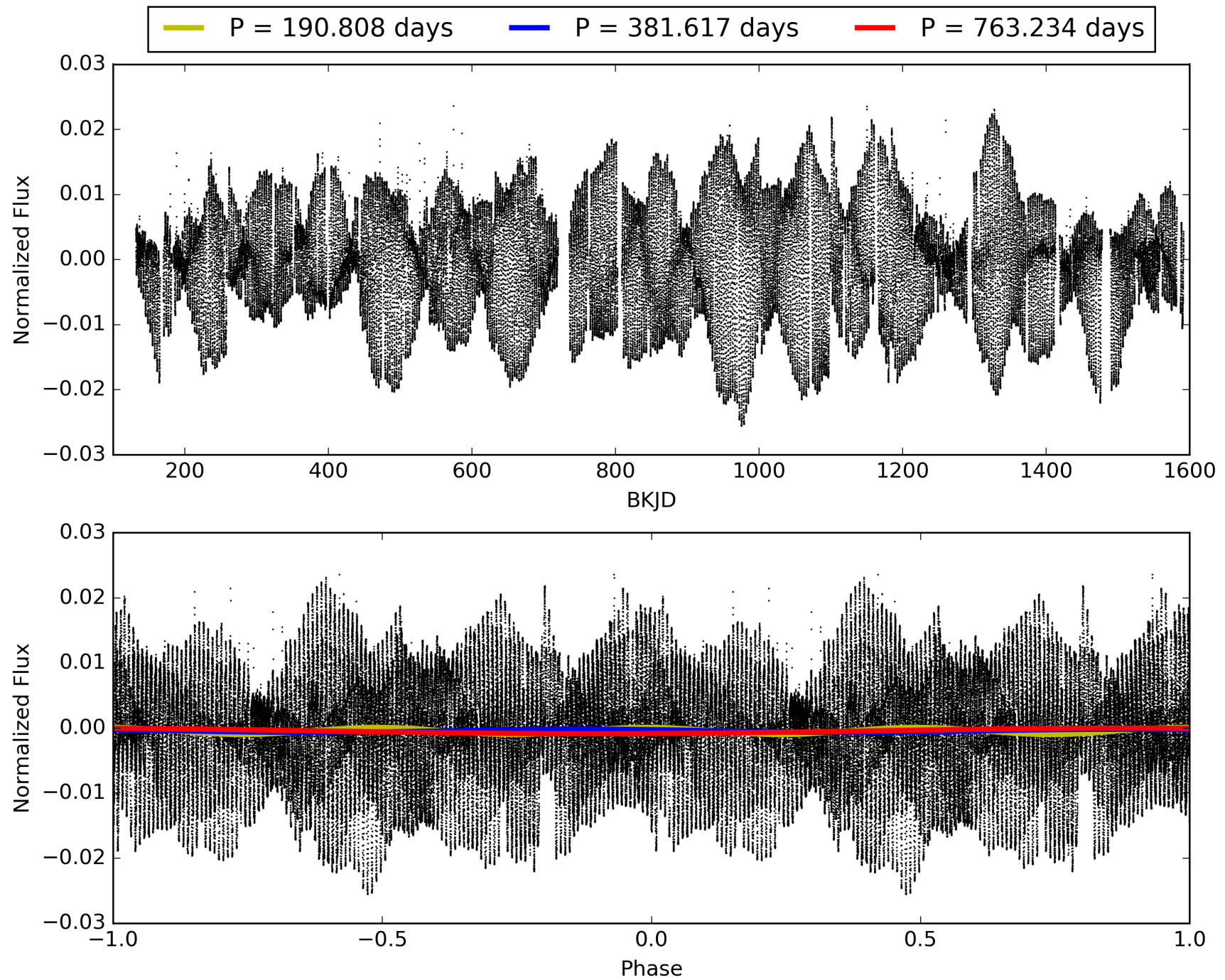
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:35:11 Z

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

TCE 008226464-02, PDC Light Curves

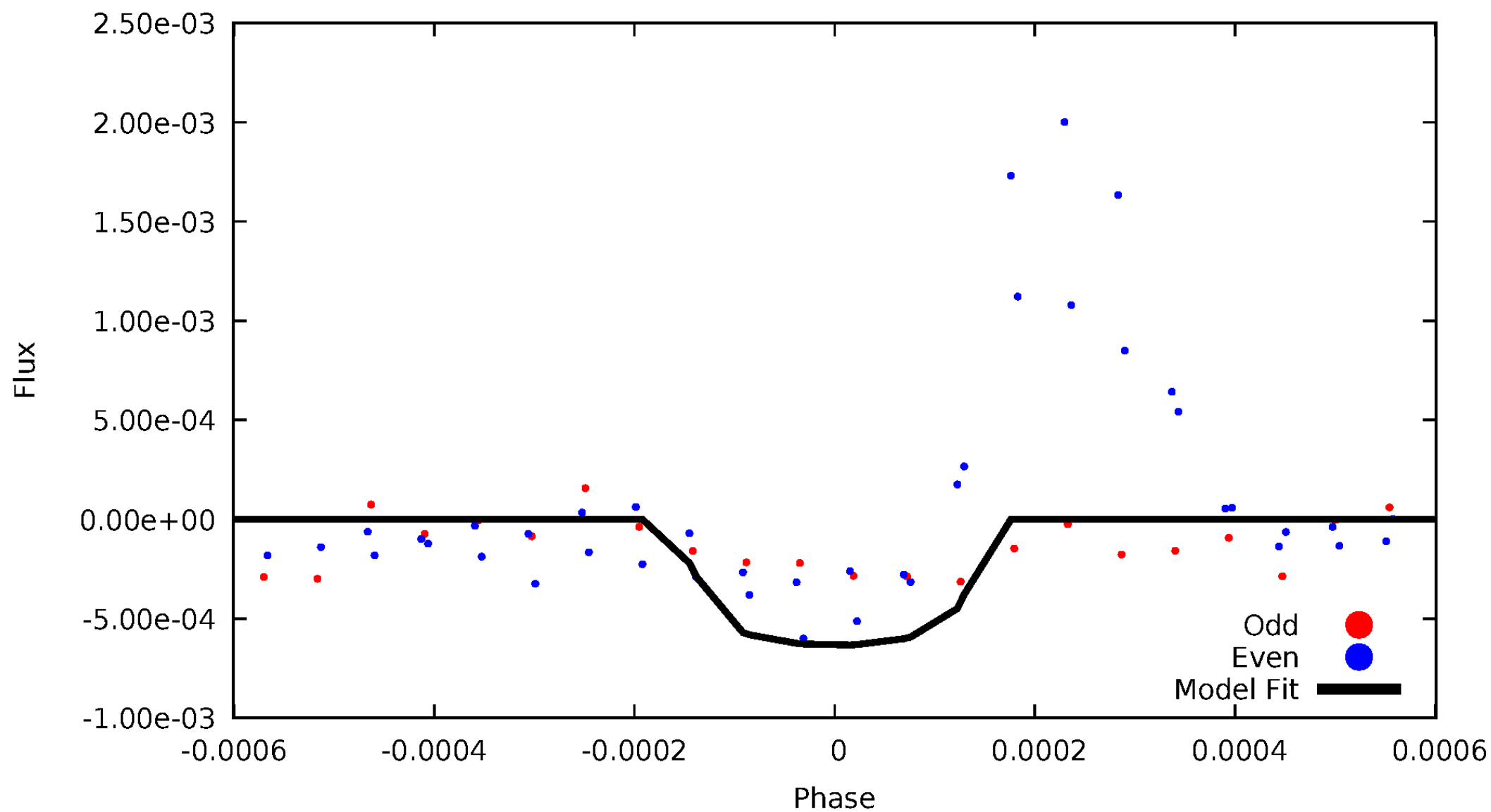


TCE 008226464-02



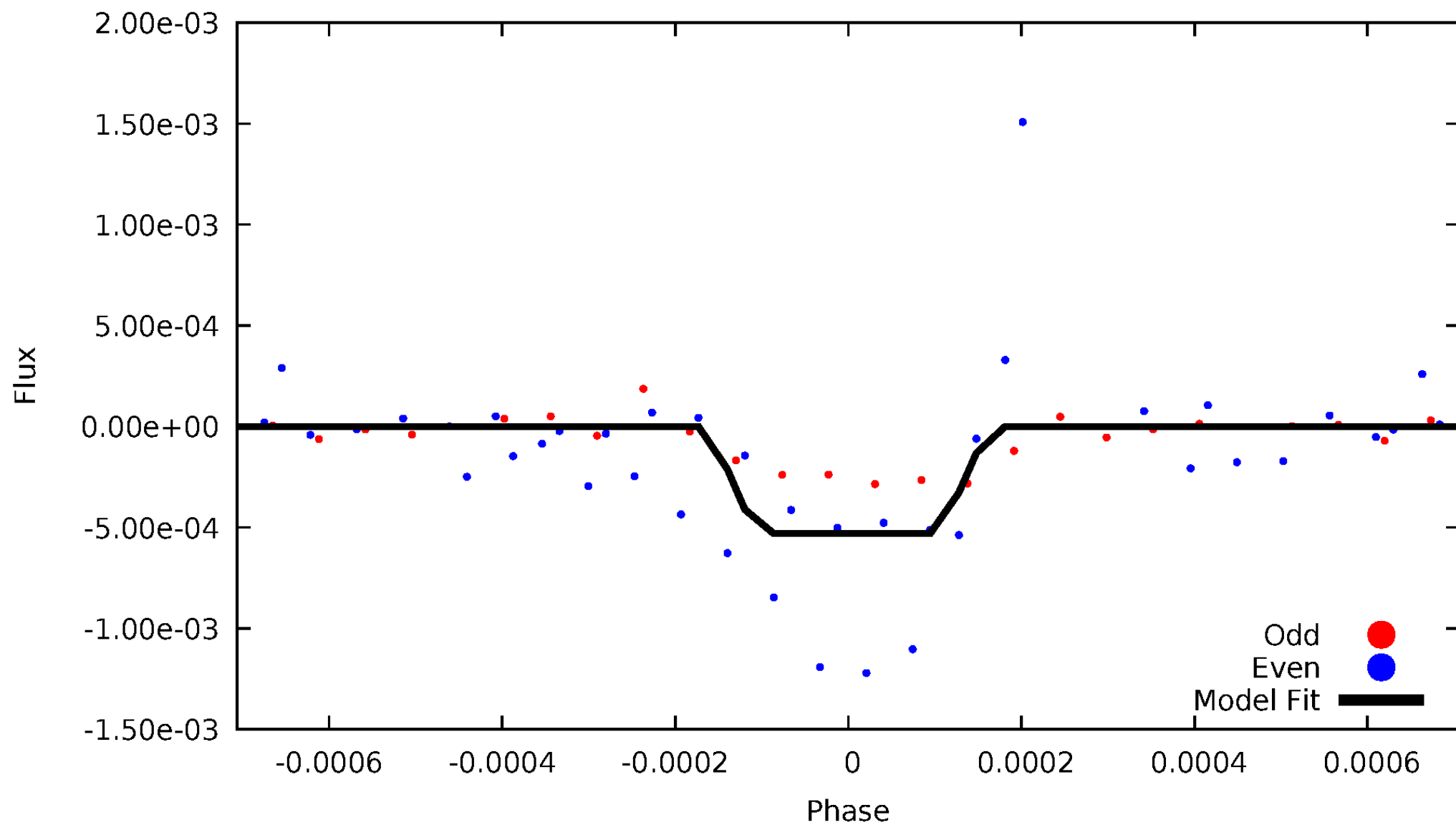
DV Odd/Even

TCE 008226464-02



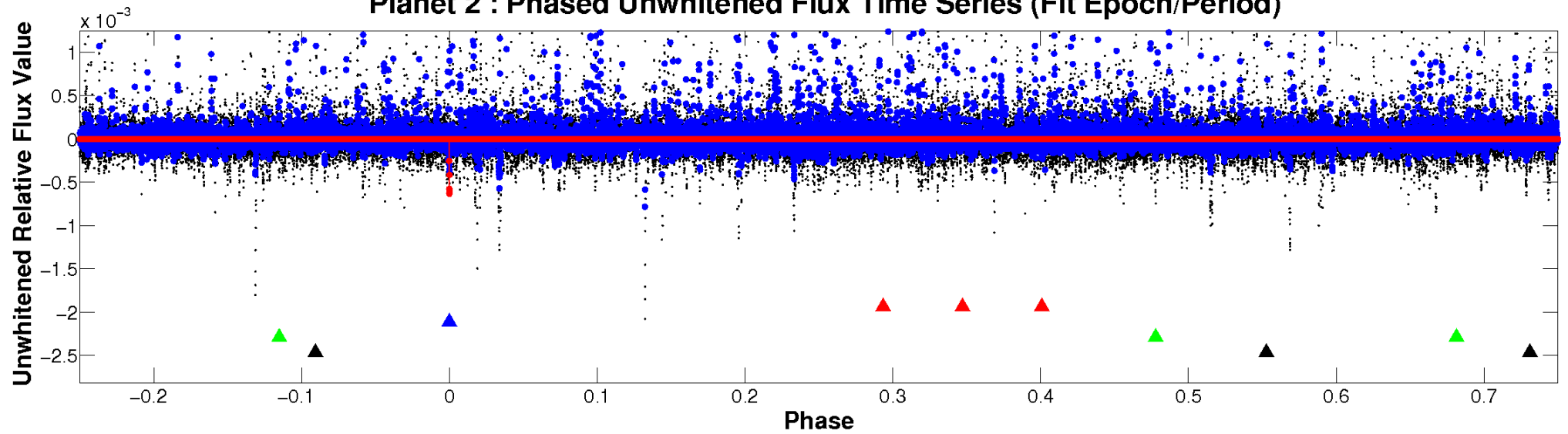
ALT Odd/Even

TCE 008226464-02

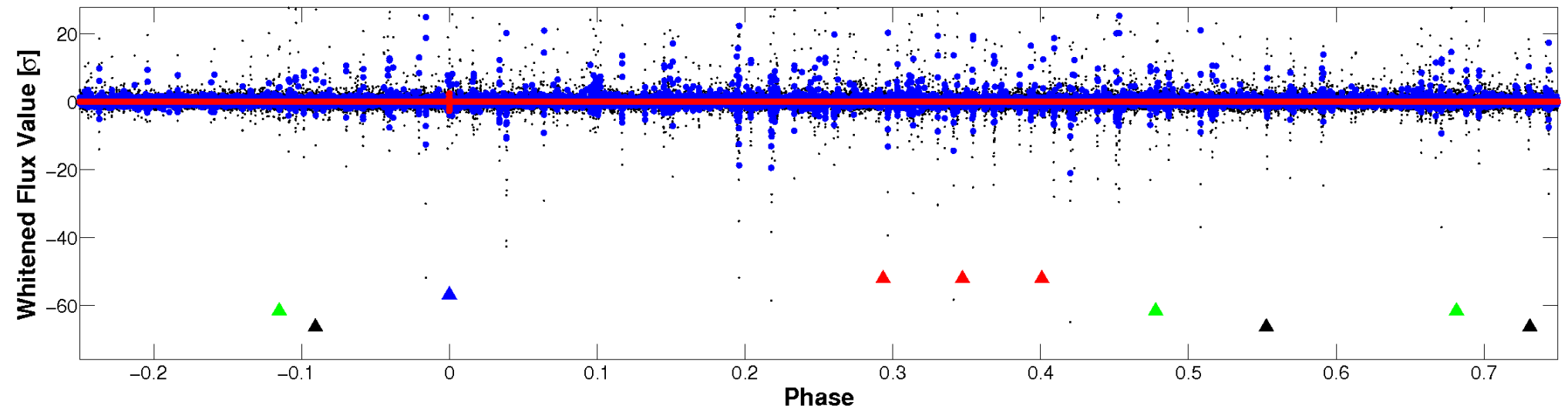


Non-Whitened Vs. Whitened Light Curve

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

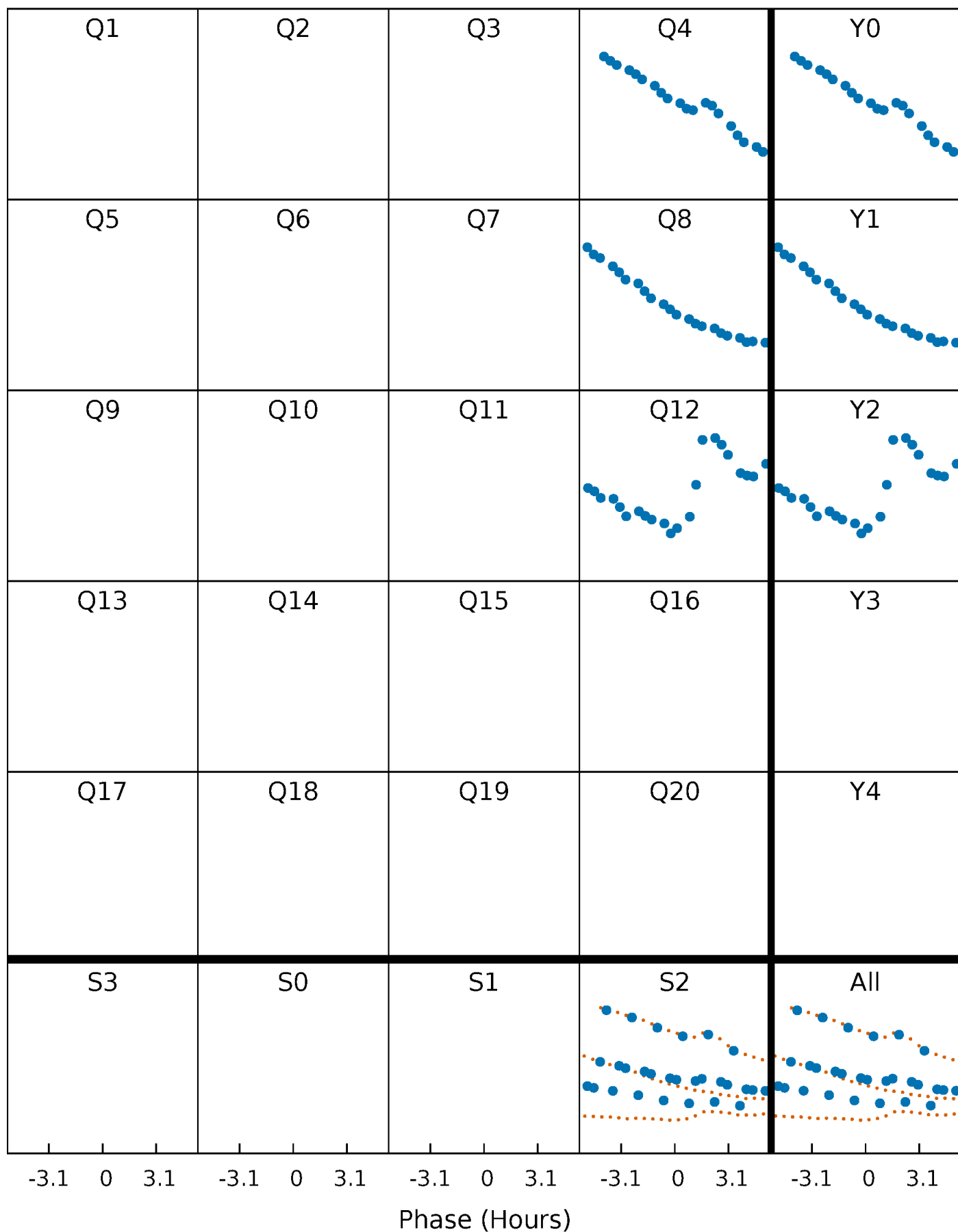


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



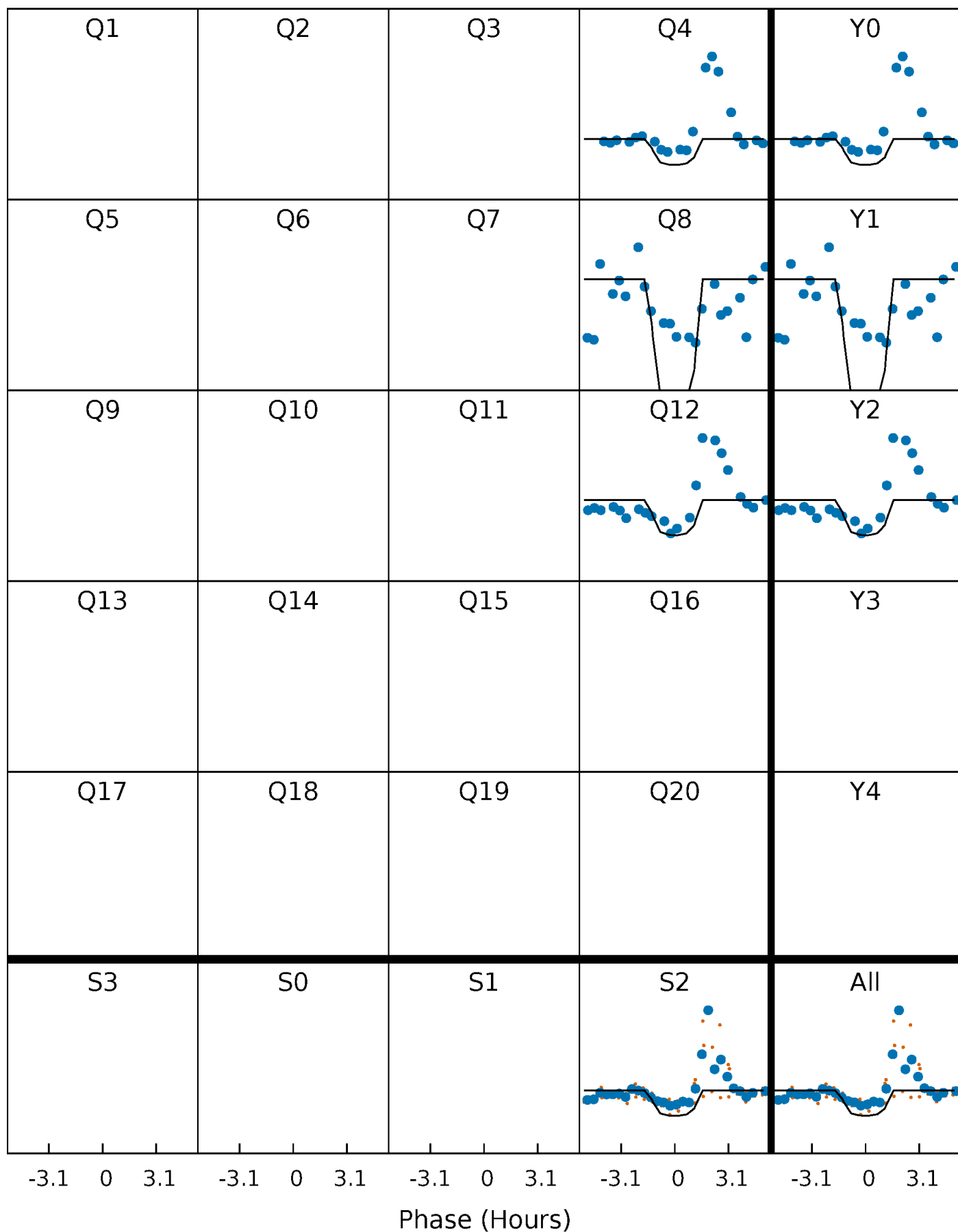
PDC Quarter-Phased Transit Curves

TCE 008226464-02 P=381.616809 Days $T_0=413.487218$ (BKJD)



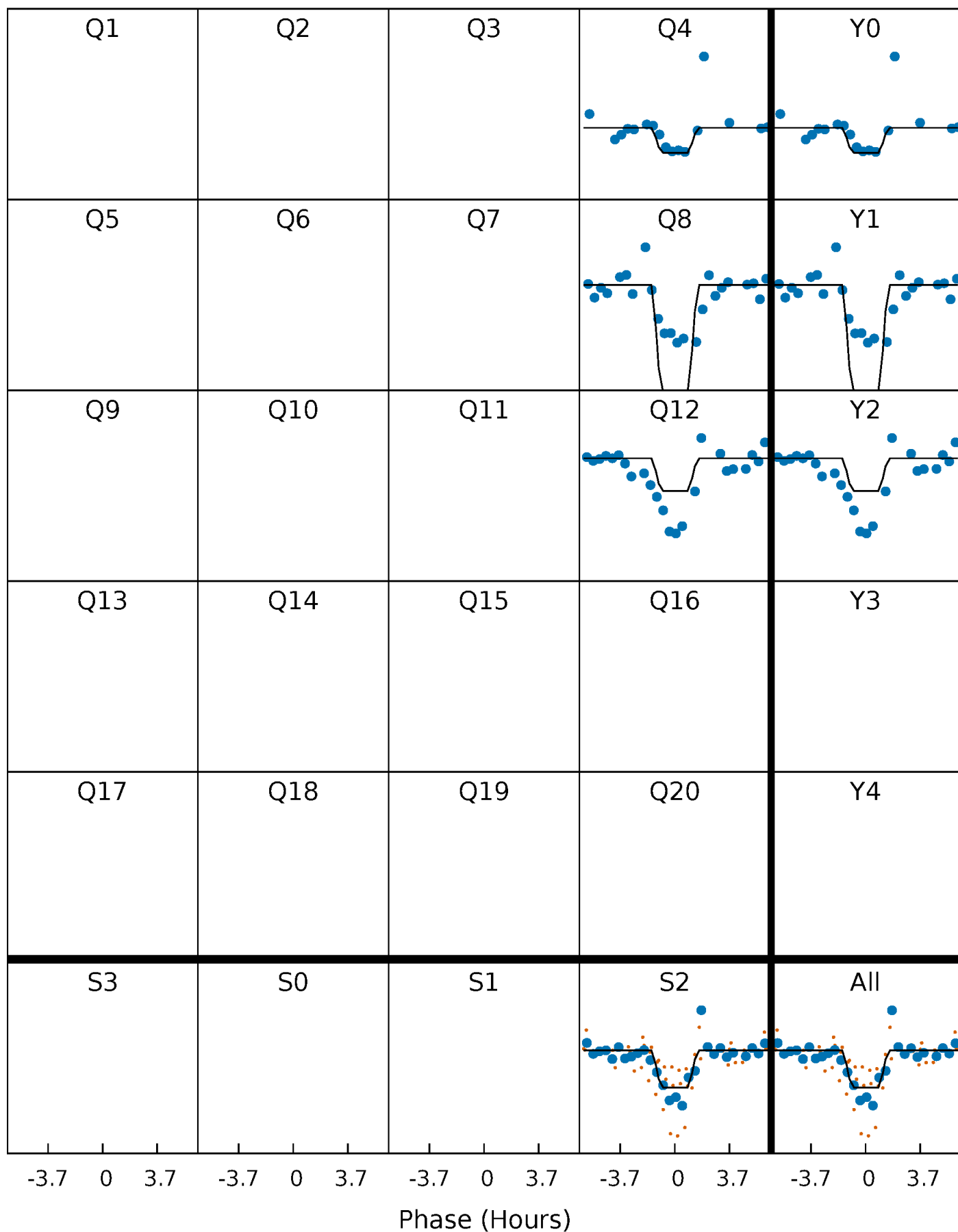
DV Quarter-Phased Transit Curves

TCE 008226464-02 P=381.616809 Days $T_0=413.487218$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

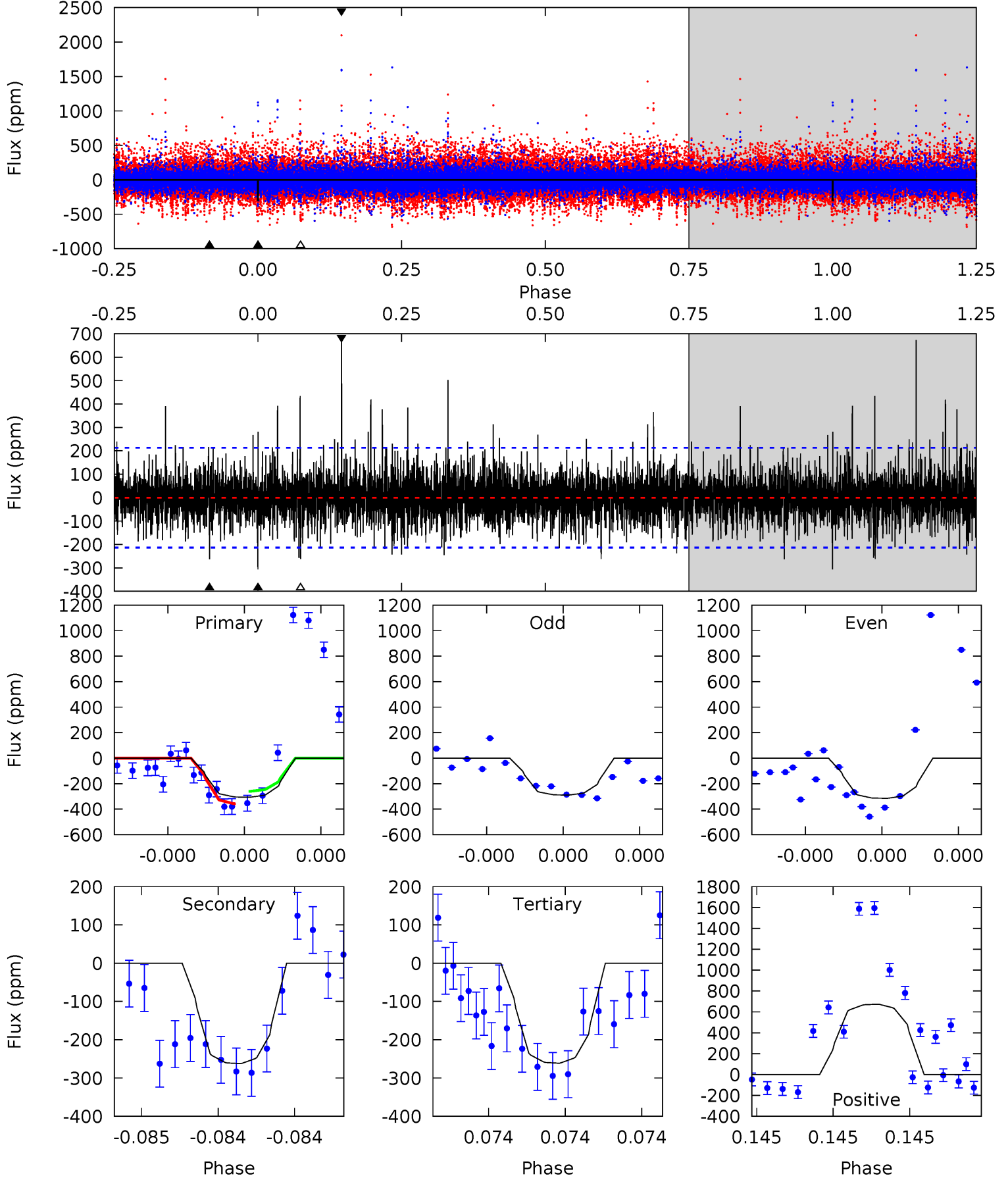
TCE 008226464-02 P=381.621941 Days $T_0=413.477508$ (BKJD)



DV Model-Shift Uniqueness Test

008226464-02, P = 381.616809 Days, E = 31.870409 Days

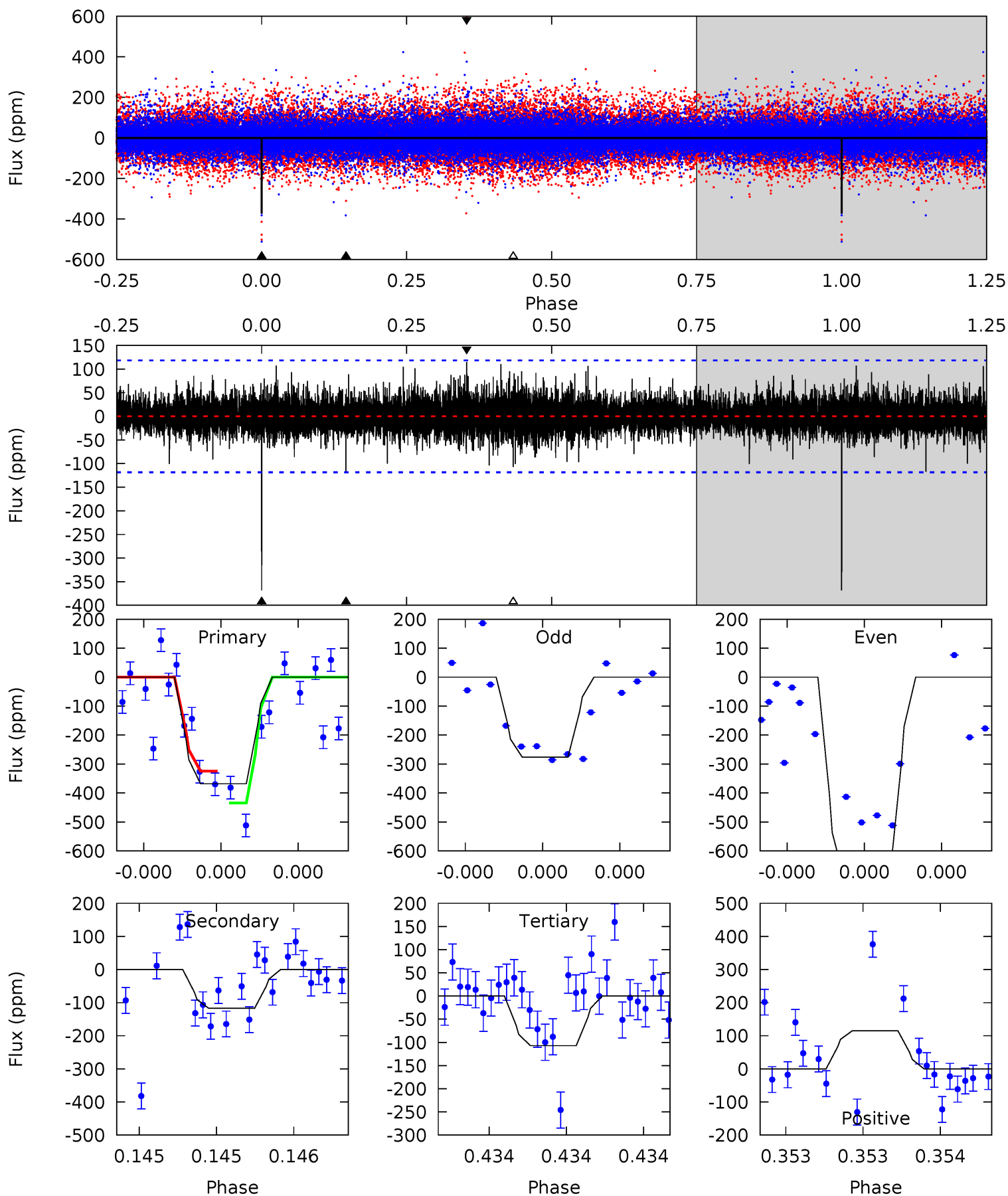
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.17	6.99	6.96	17.9	5.68	3.64	1.79	1.21	-9.77	0.03	-10.9	0.24	1.06	0.69	1.31



Alt Model-Shift Uniqueness Test

008226464-02, P = 381.621941 Days, E = 31.855567 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	5.61	5.12	5.49	5.67	3.63	1.04	12.5	12.1	0.49	0.12	11.5	1.38	0.24	2.88



Stellar Parameters For KIC 008226464

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6028^{+164}_{-164}	$4.044^{+0.385}_{-0.165}$	$-0.420^{+0.300}_{-0.300}$	$1.535^{+0.403}_{-0.604}$	$0.951^{+0.129}_{-0.116}$	$0.371^{+1.211}_{-0.159}$
	+3%/-3%	+10%/-4%	+71%/-71%	+26%/-39%	+14%/-12%	+327%/-43%
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 008226464-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-263 ± 38	$5.15^{+4.73}_{-3.49}$	454^{+35}_{-47}	4420^{+3009}_{-855}	5350^{+48445}_{-3799}
Alt.	-117 ± 21	$4.96^{+4.95}_{-3.09}$	450^{+37}_{-50}	3849^{+1950}_{-702}	2665^{+15376}_{-1971}

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 $A_{obs} \gg 1.0$

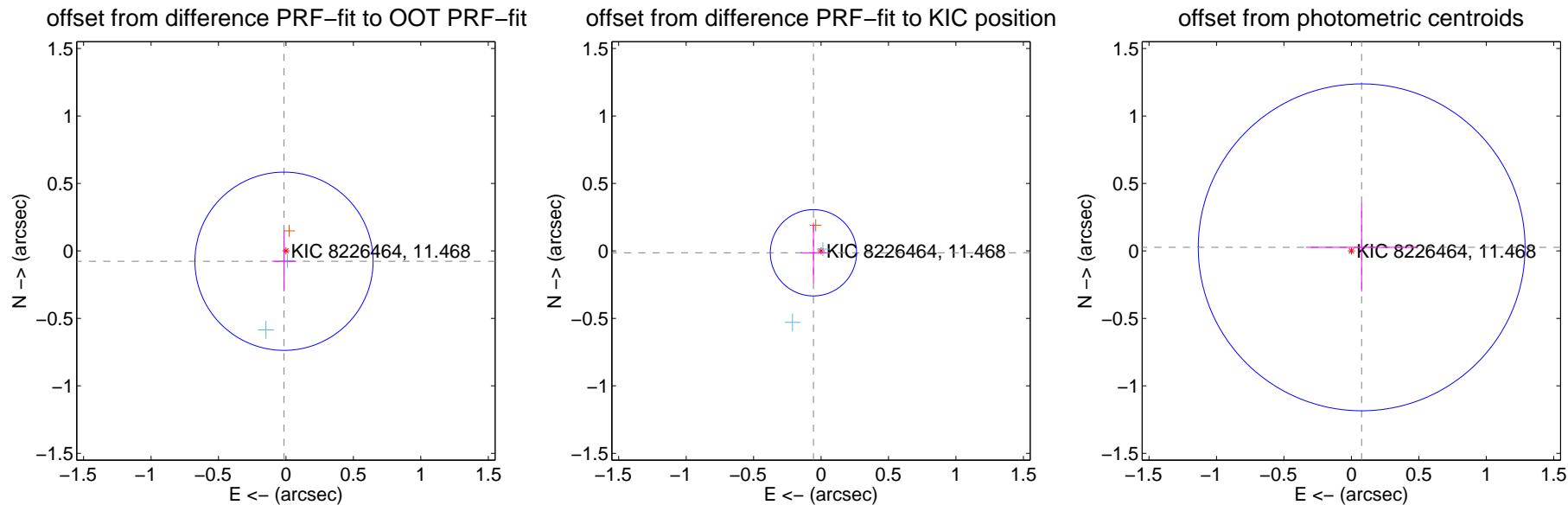
DV Centroid Data

Supplemental centroid analysis for 008226464-02. **Kepler magnitude: 11.47.** Transit SNR 10.11

There are 2 quarters with good PRF difference image offsets

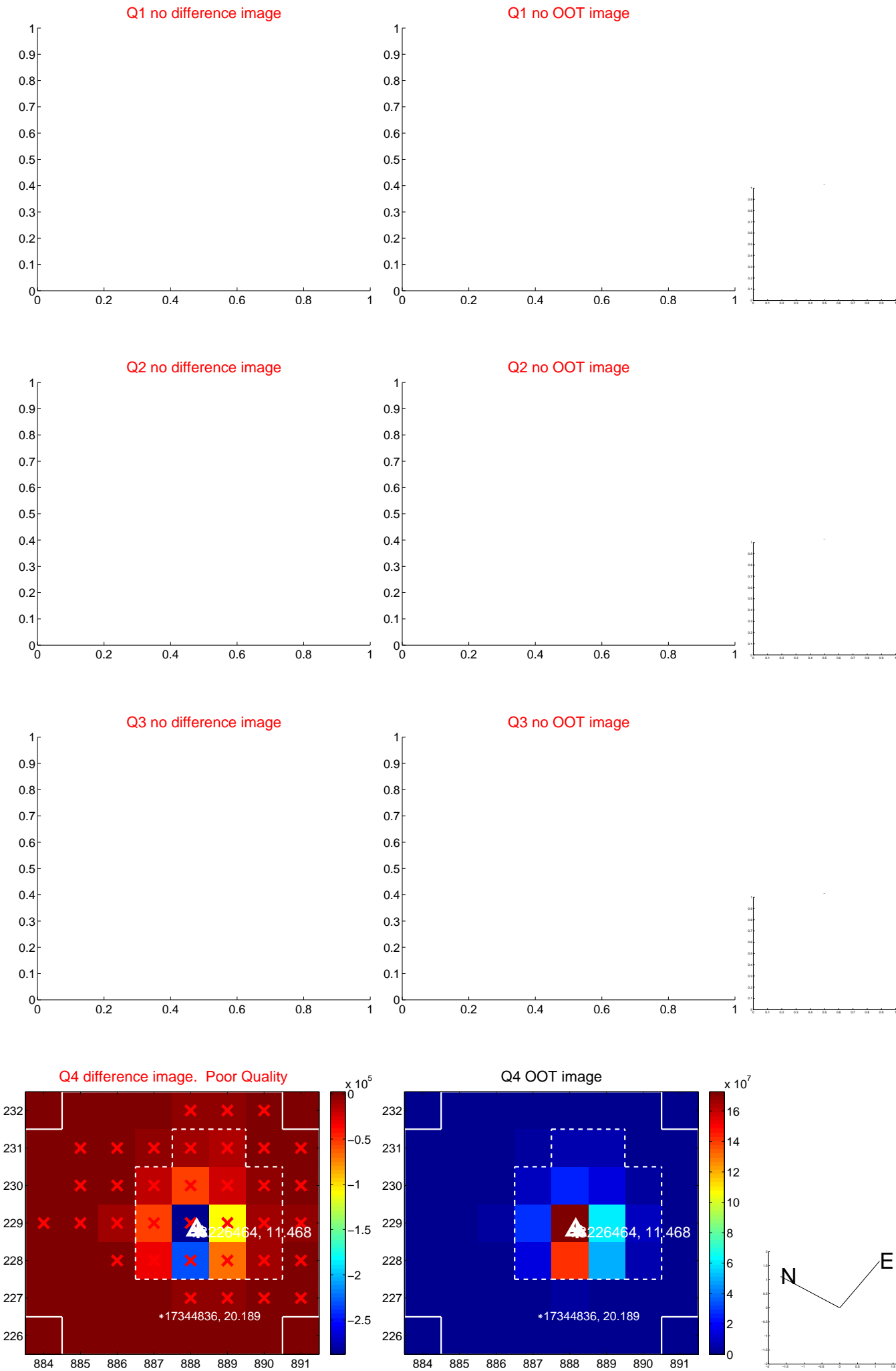
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.078 ± 0.220	0.35	0.014 ± 0.090	-0.077 ± 0.223
PRF-fit source offset from KIC position	0.058 ± 0.107	0.54	0.056 ± 0.095	-0.014 ± 0.222
photometric centroid source offset	0.08 ± 0.40	0.20	-0.08 ± 0.41	0.03 ± 0.33

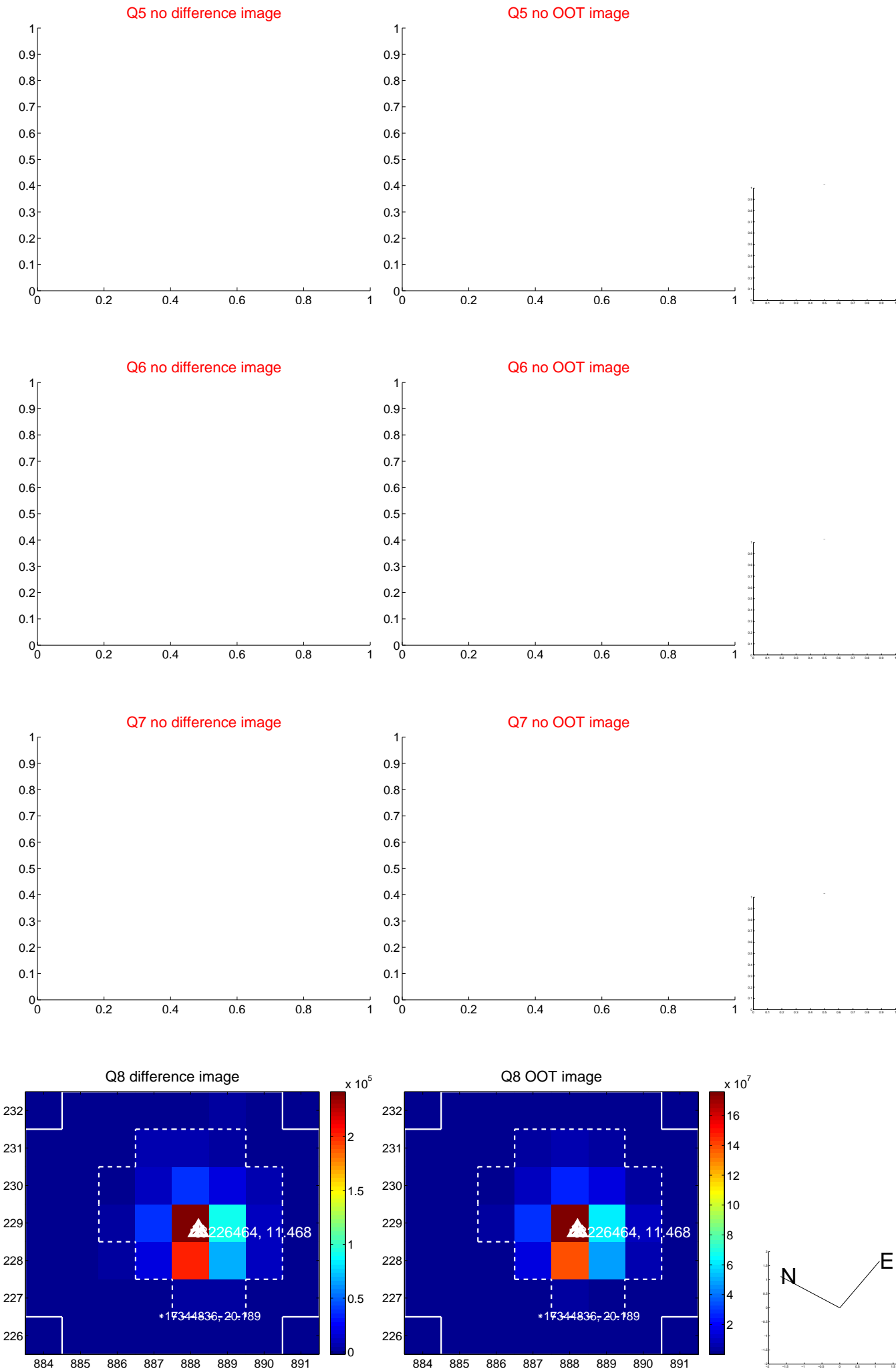


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

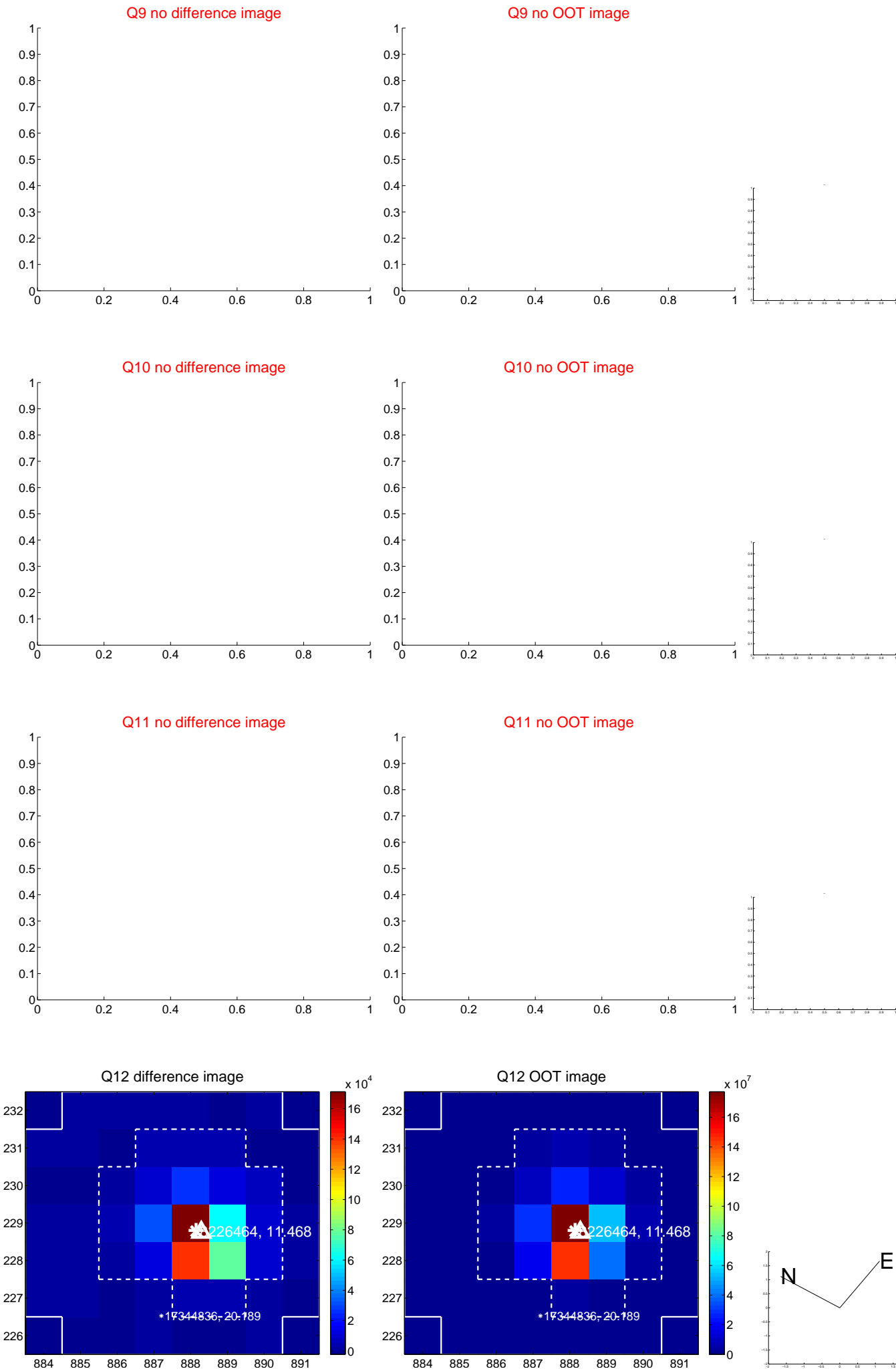
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



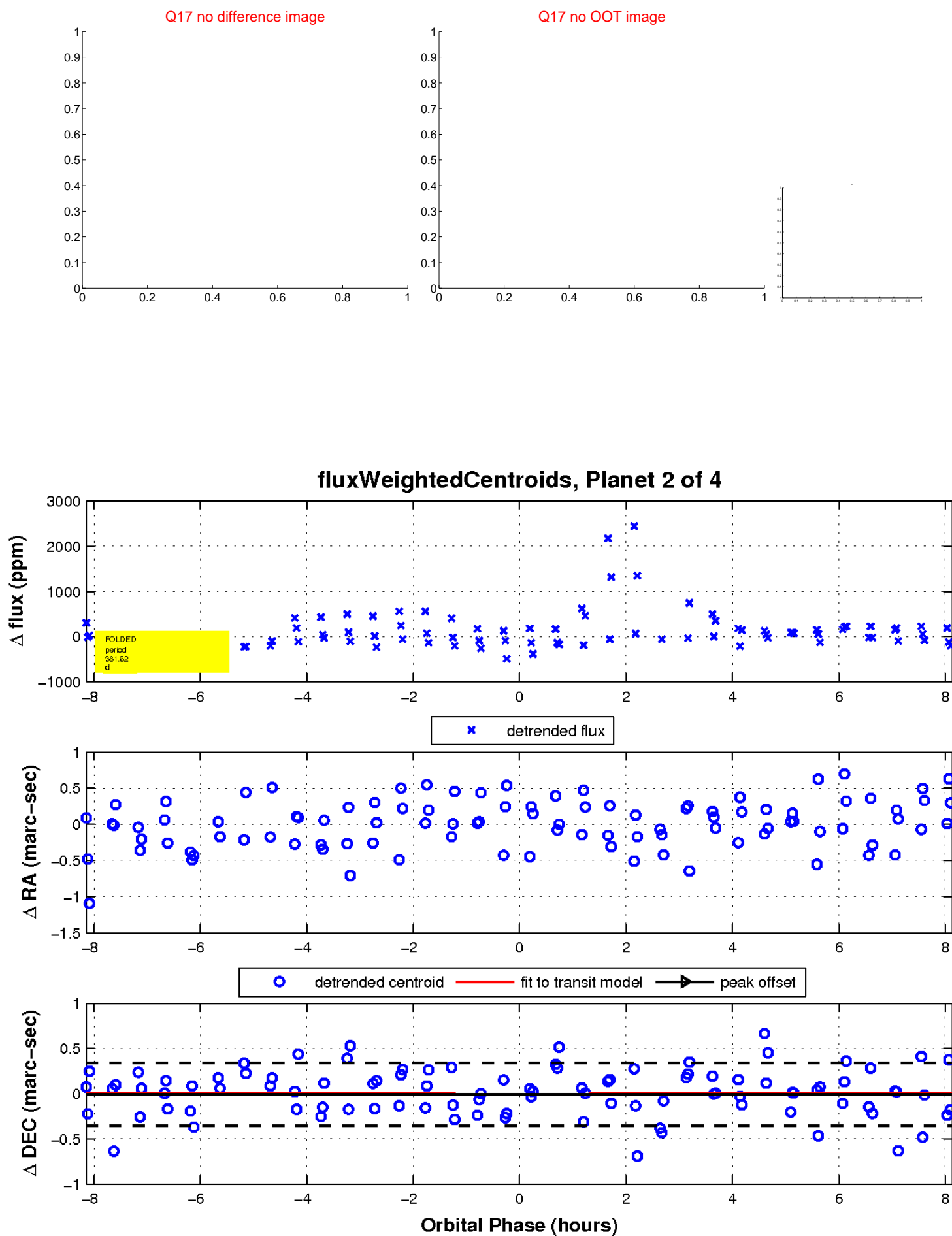
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

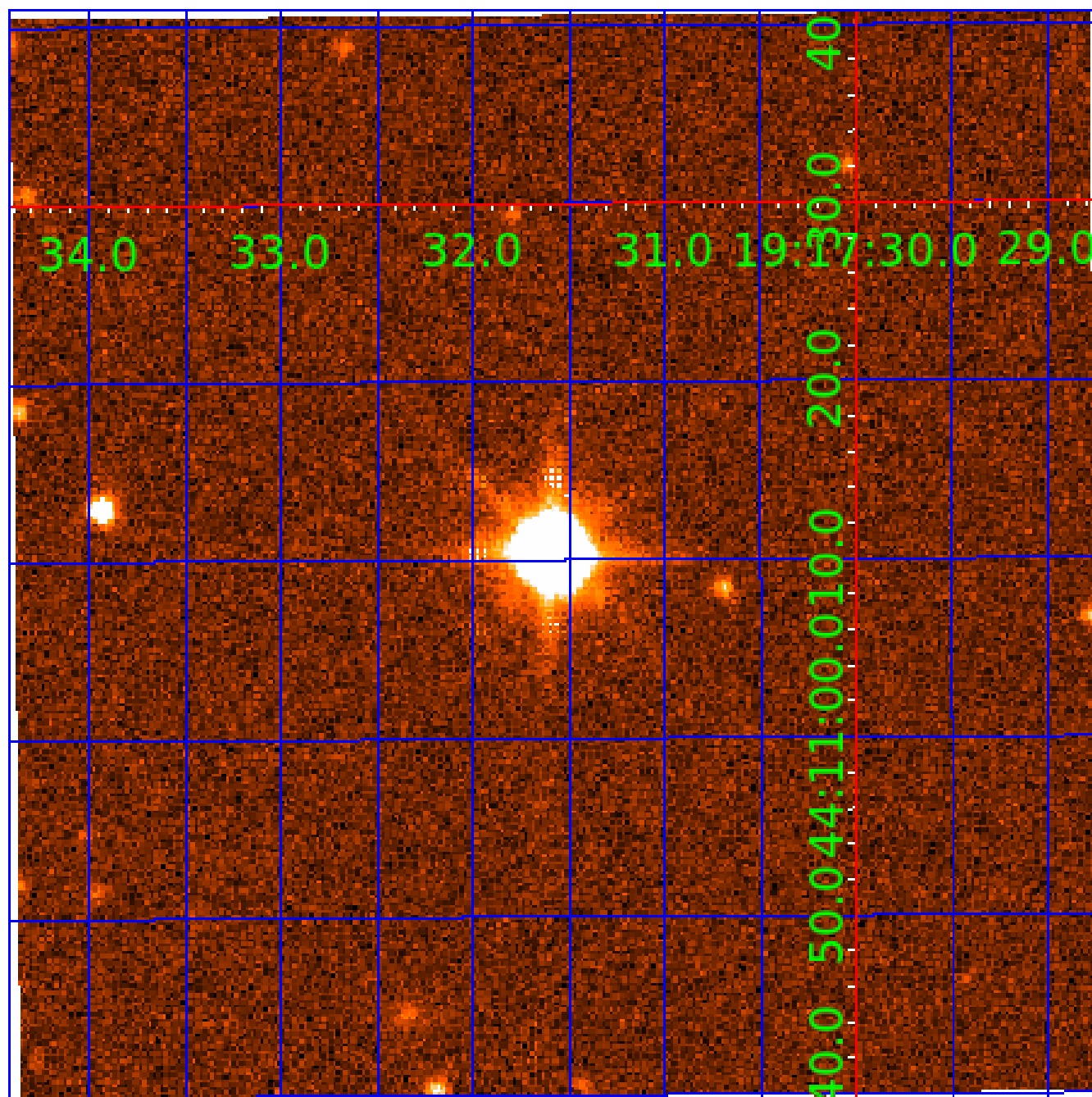


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008226464

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})
008226464-01	OBS	No	402.106087	525.480111	556.7	7.944	16.2	7.2	1.53	6028	3.76	2.53
008226464-02	OBS	No	381.616809	413.487218	632.9	2.750	16.6	10.1	1.53	6028	4.03	2.72
008226464-03	OBS	No	459.284927	214.240735	720.0	3.811	19.7	8.2	1.53	6028	4.45	2.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008226464-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008226464-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
008226464-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

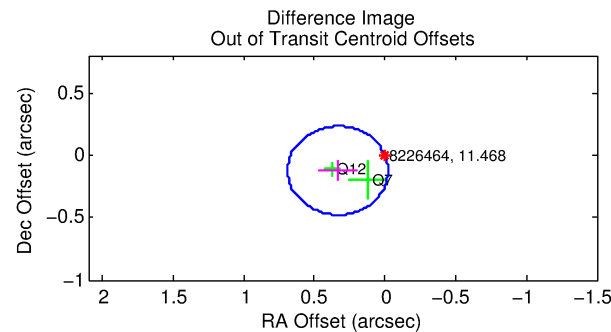
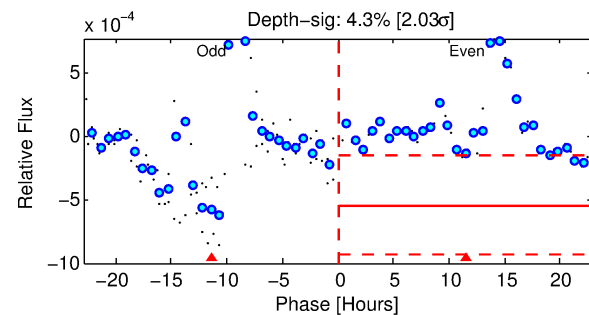
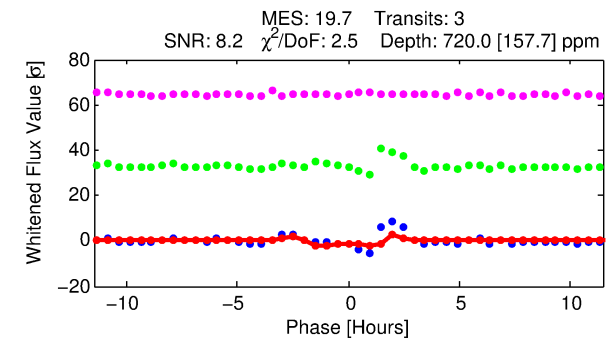
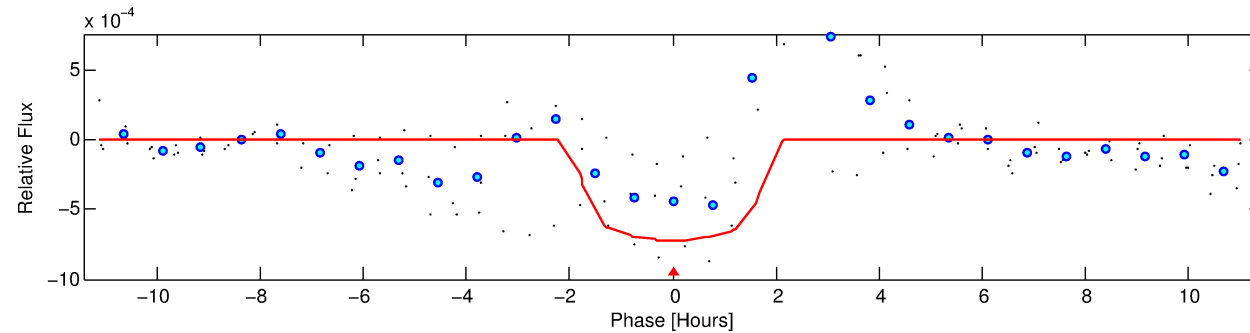
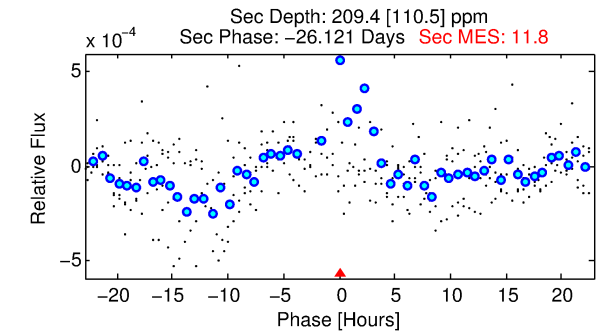
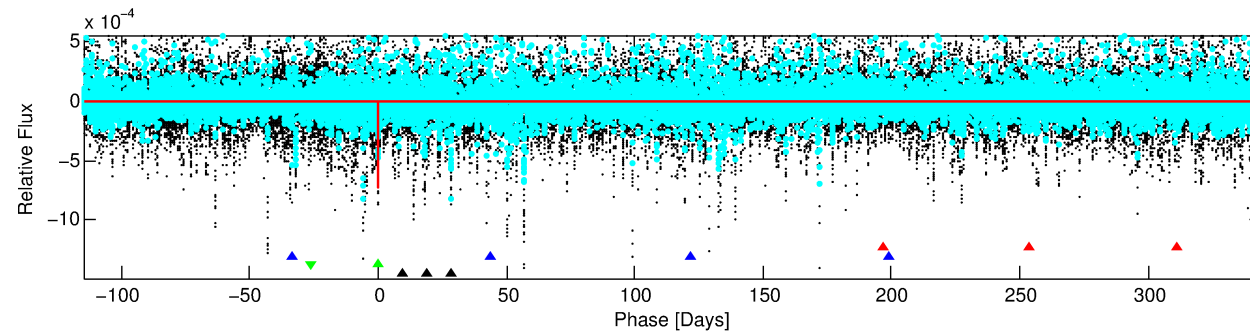
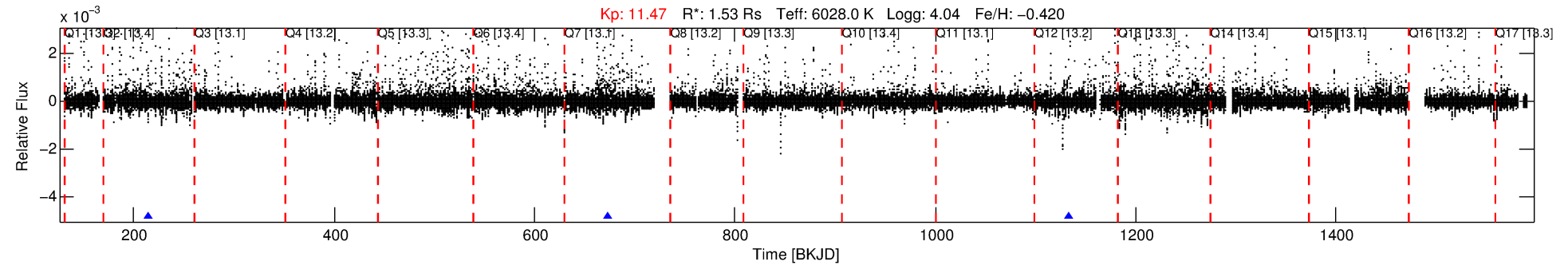
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008226464-03

No Significant Match Found

DV One-Page Summary

KIC: 8226464 Candidate: 3 of 4 Period: 459.285 d



DV Fit Results:

Period = 459.28493 [0.00501] d
Epoch = 214.2407 [0.0062] BKJD
Rp/R* = 0.0266 [0.0424]
a/R* = 660.25 [5401.15]
b = 0.73 [5.17]
Seff = 2.12 [1.39]
Teq = 308 [50] K
Rp = 4.45 [7.32] Re
a = 1.1459 [0.4528] AU
Ag = 7627.50 [25171.22] [0.30 σ]
Teffp = 4447 [3600] K [1.15 σ]

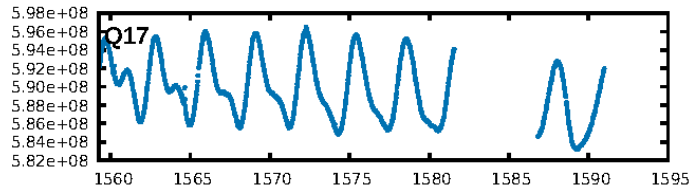
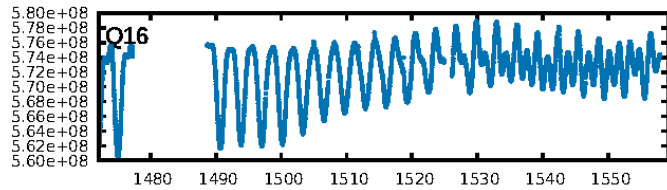
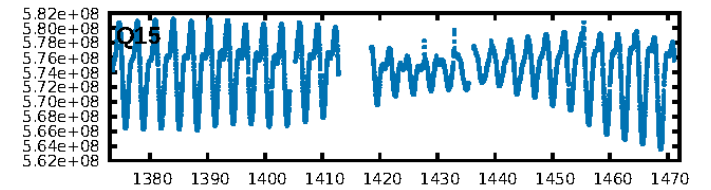
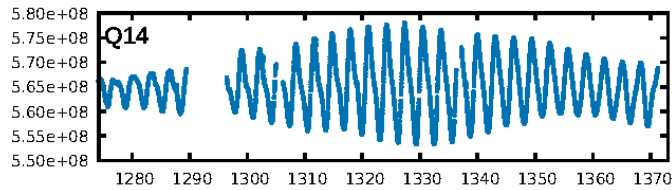
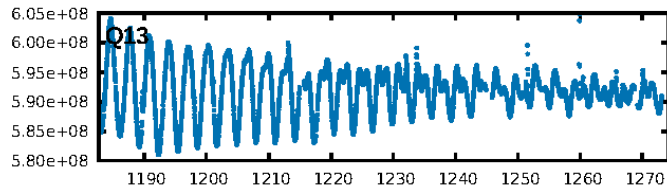
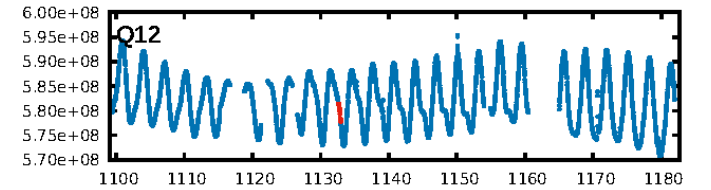
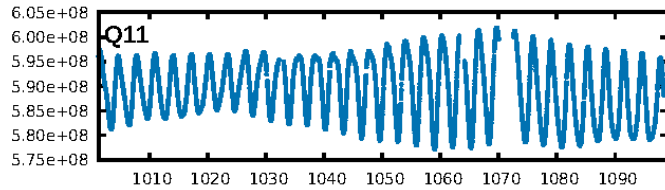
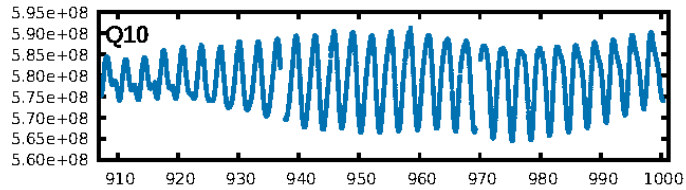
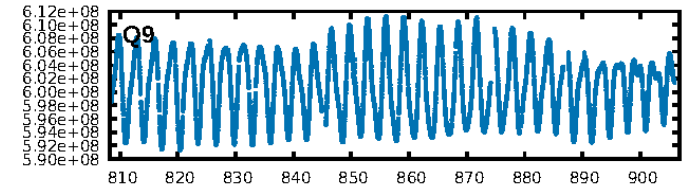
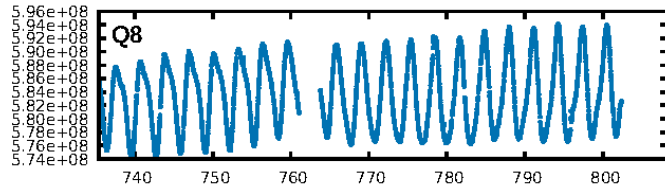
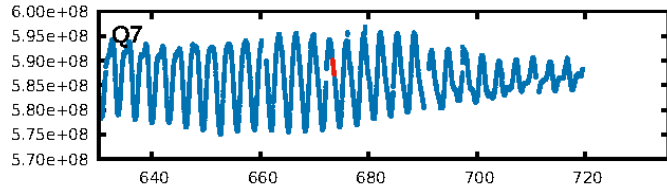
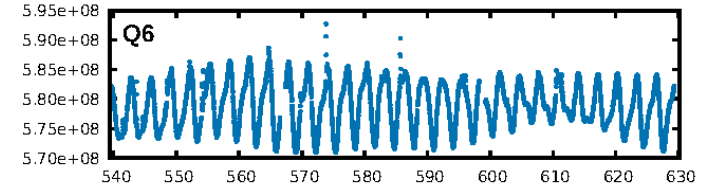
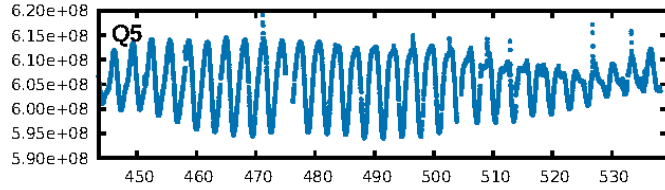
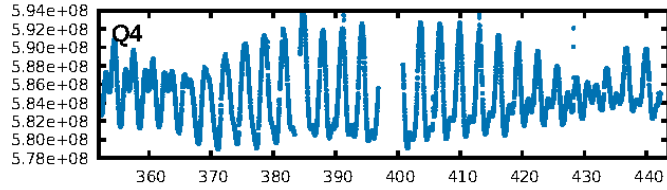
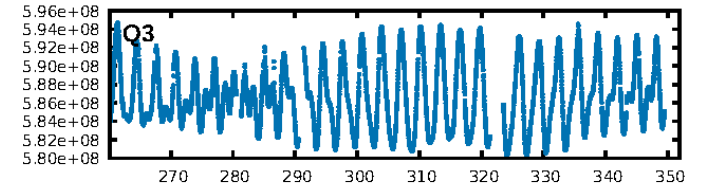
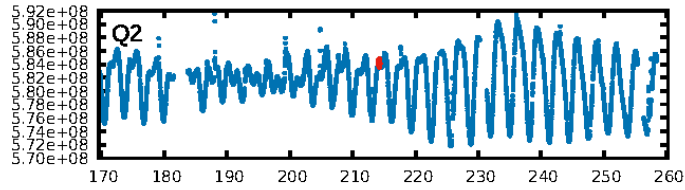
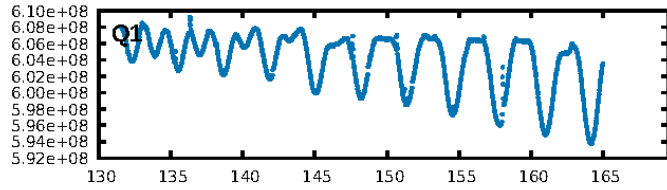
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [39.14 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 16.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.652
Centroid-sig: N/A
Centroid-so: 0.277 arcsec [0.65 σ]
OotOffset-rm: 0.356 arcsec [3.01 σ]
KicOffset-rm: 0.395 arcsec [3.31 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

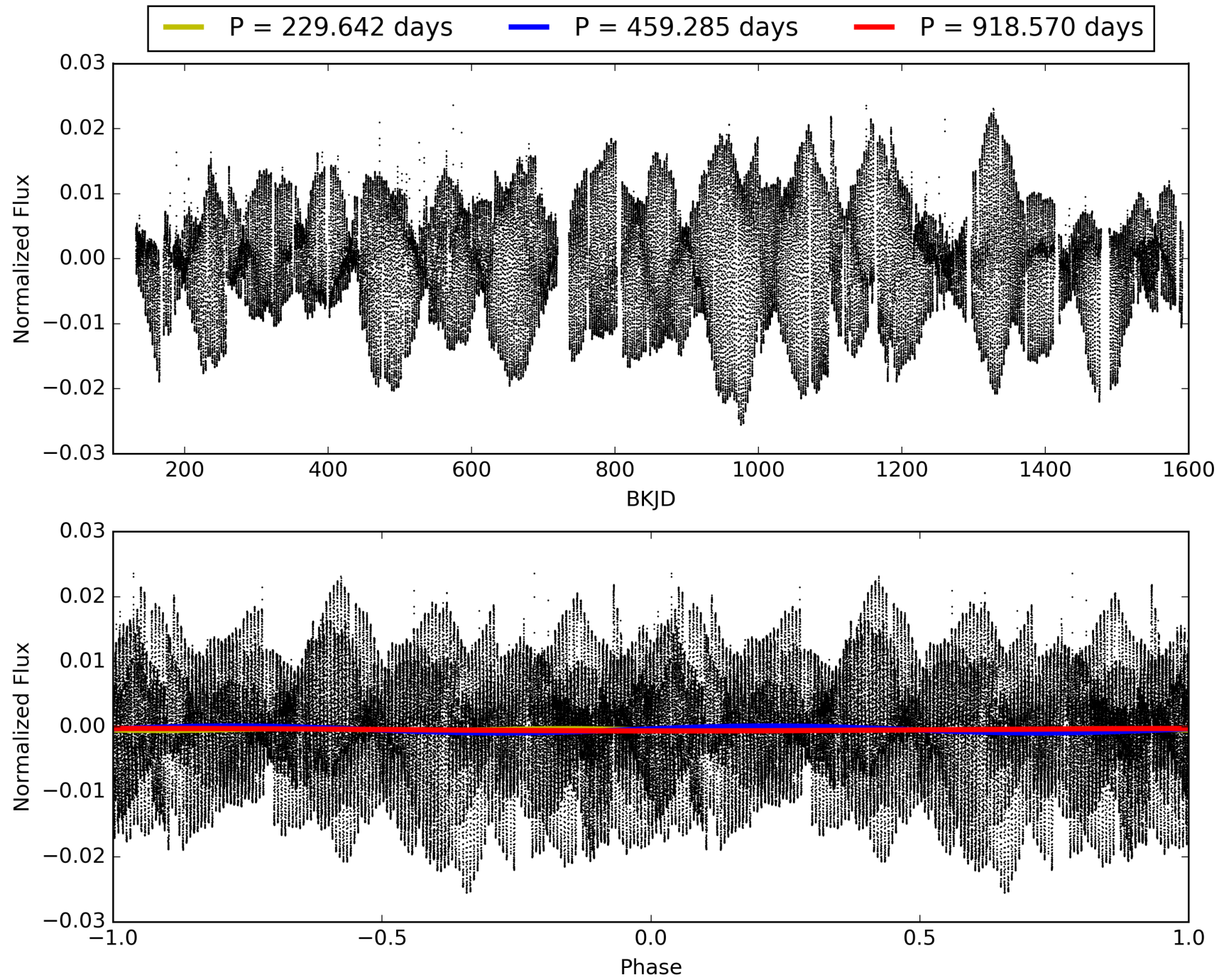
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:35:28 Z

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

TCE 008226464-03, PDC Light Curves

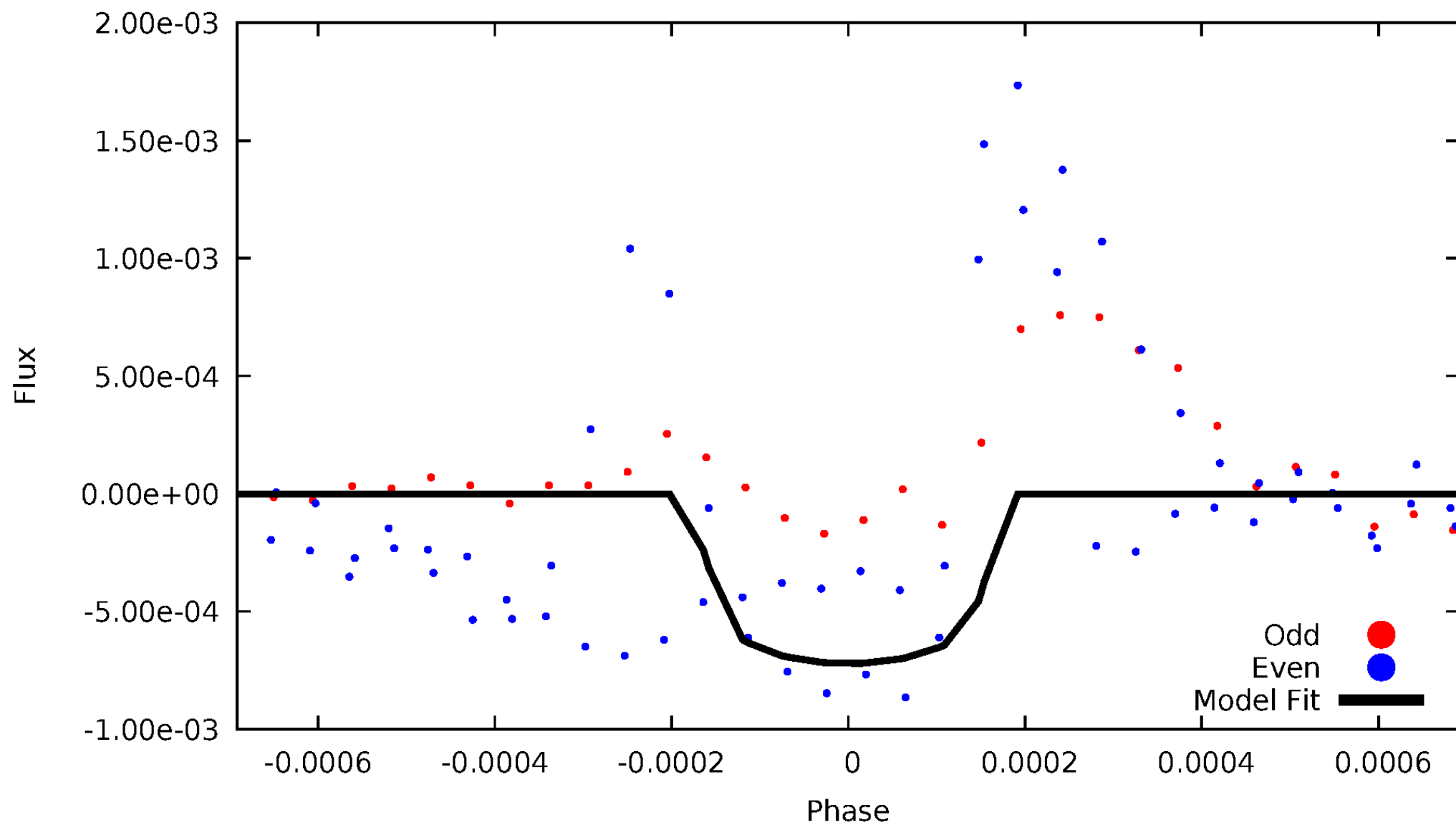


TCE 008226464-03



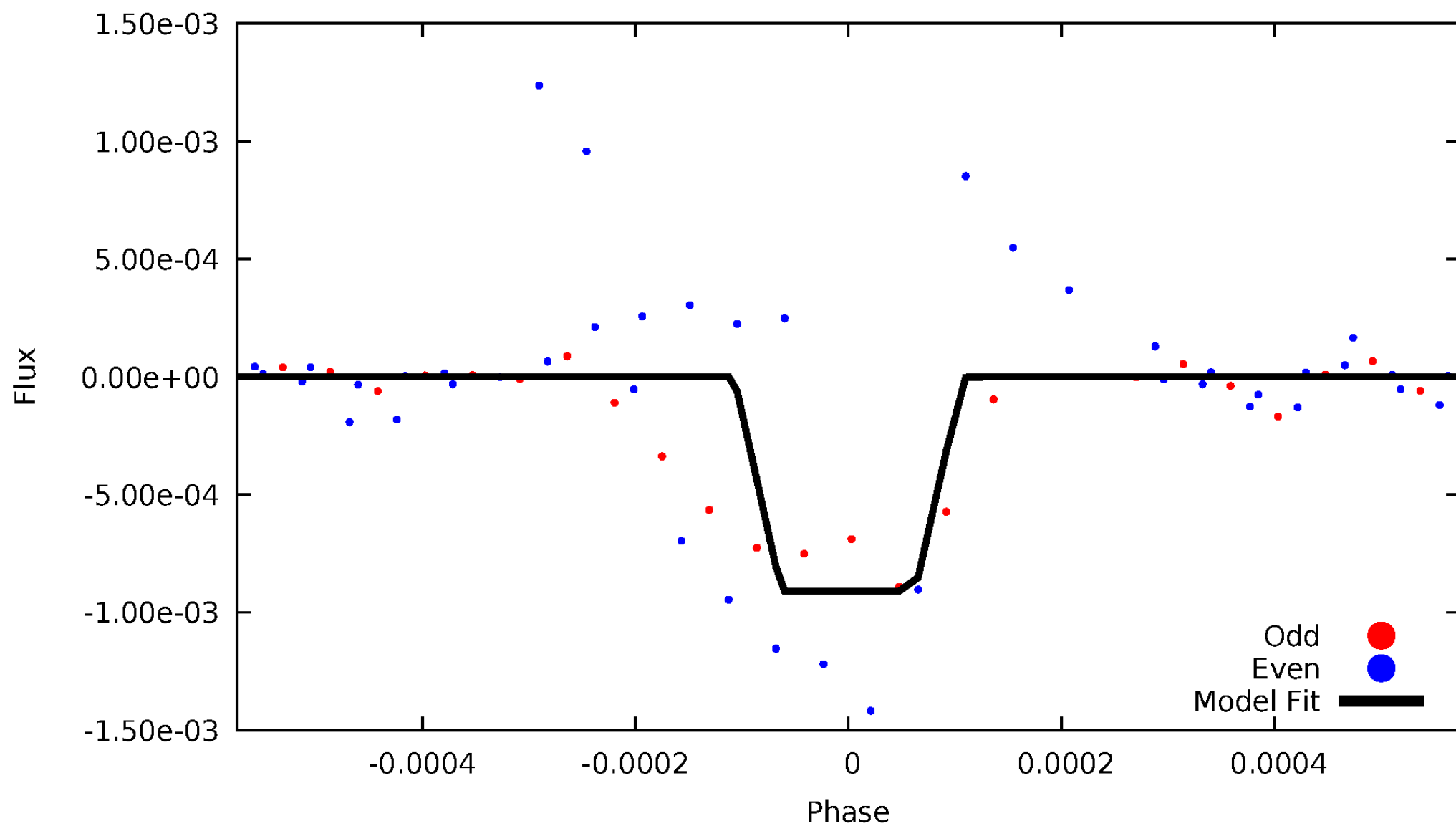
DV Odd/Even

TCE 008226464-03



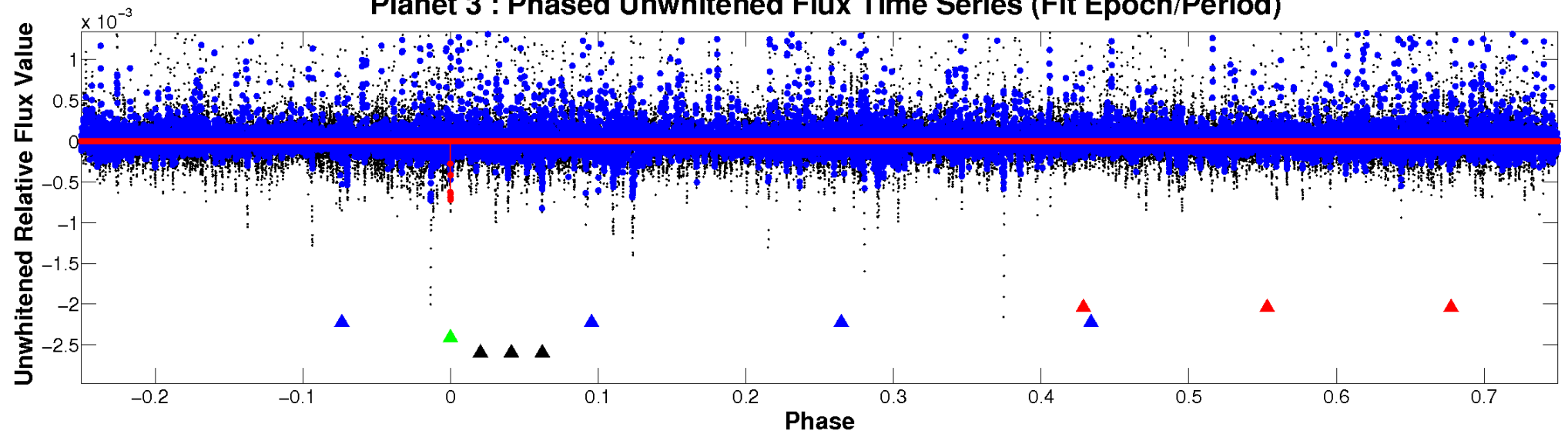
ALT Odd/Even

TCE 008226464-03

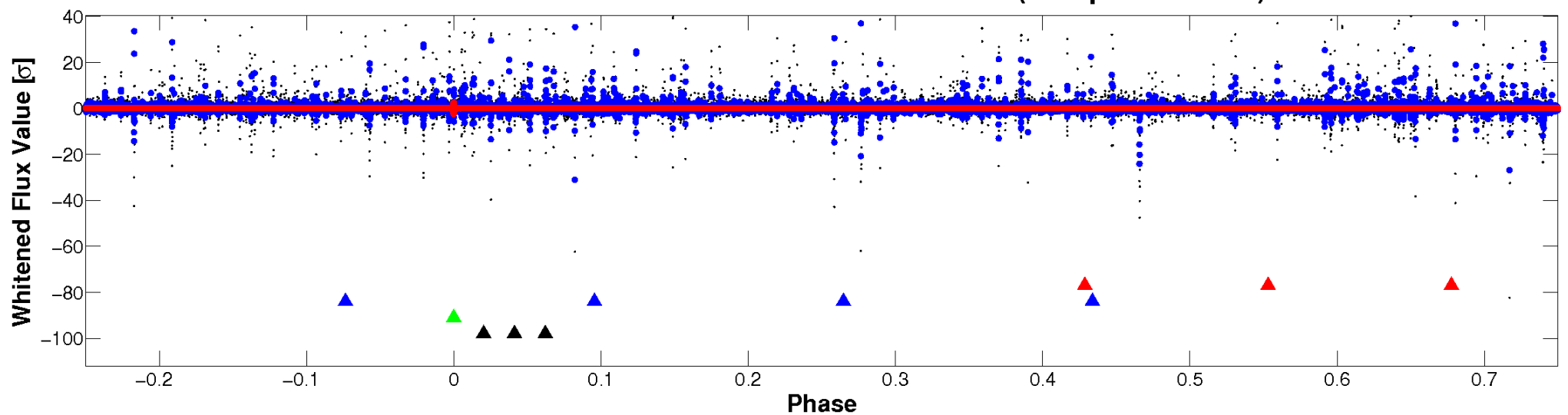


Non-Whitened Vs. Whitened Light Curve

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

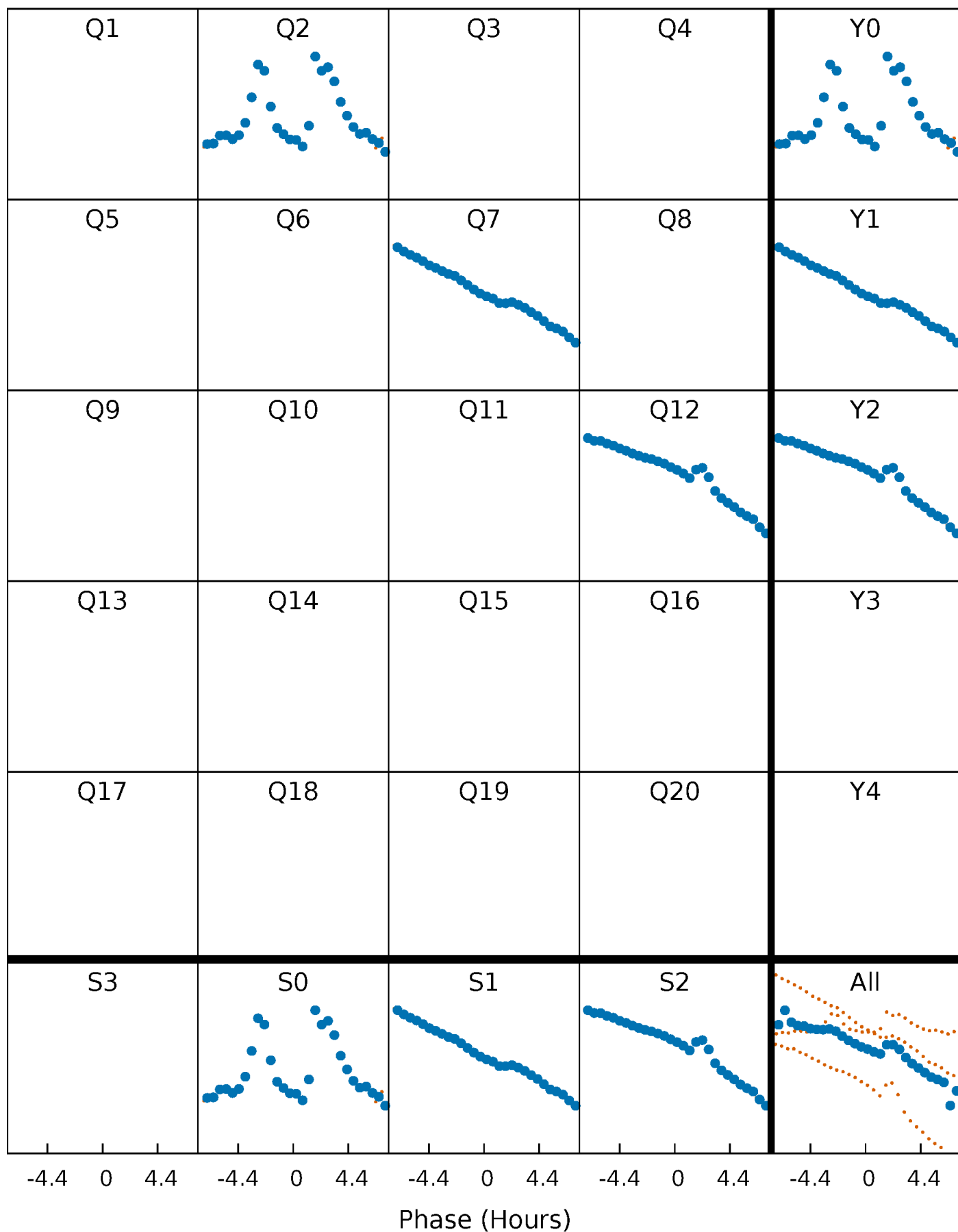


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



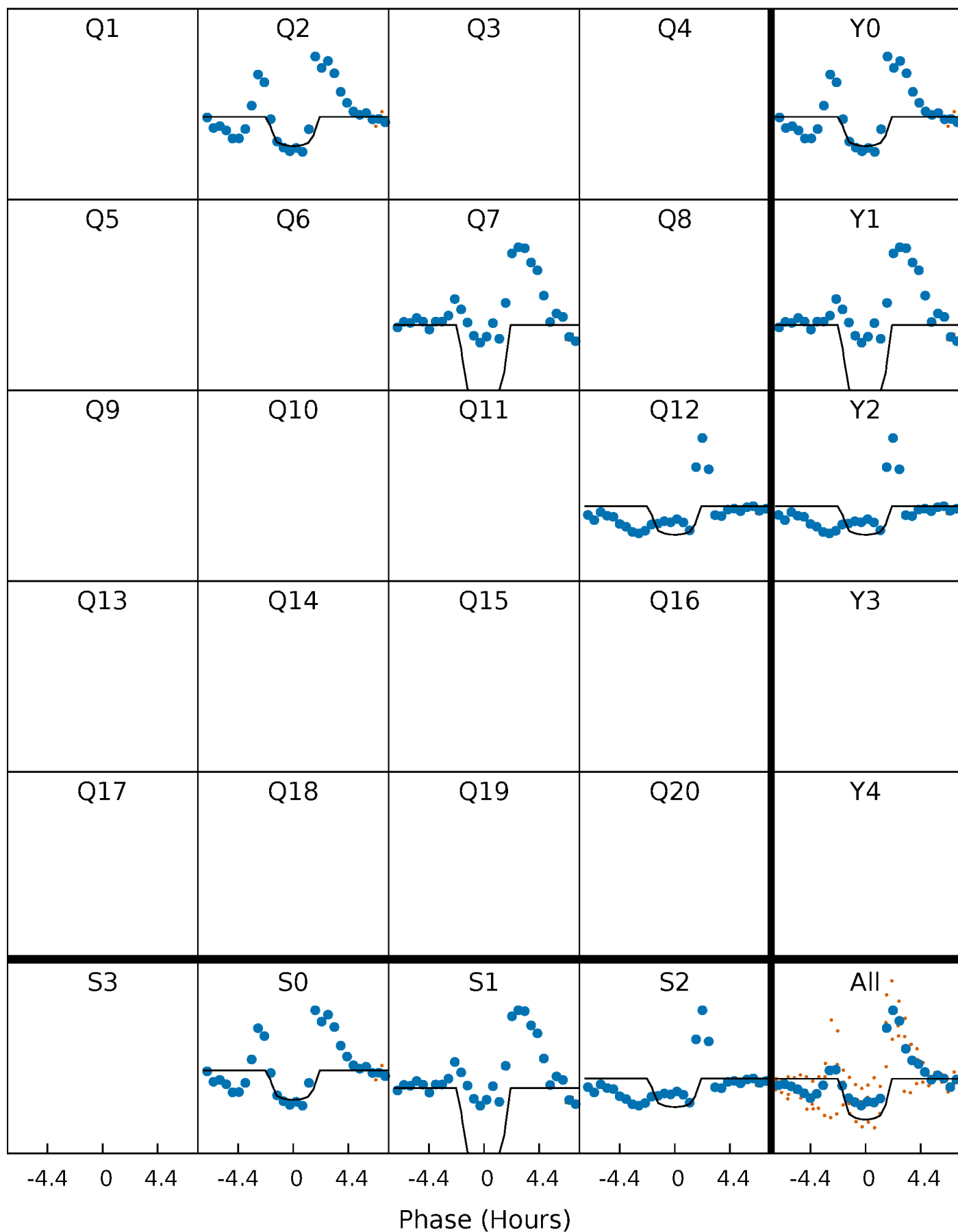
PDC Quarter-Phased Transit Curves

TCE 008226464-03 P=459.284927 Days $T_0=214.240735$ (BKJD)



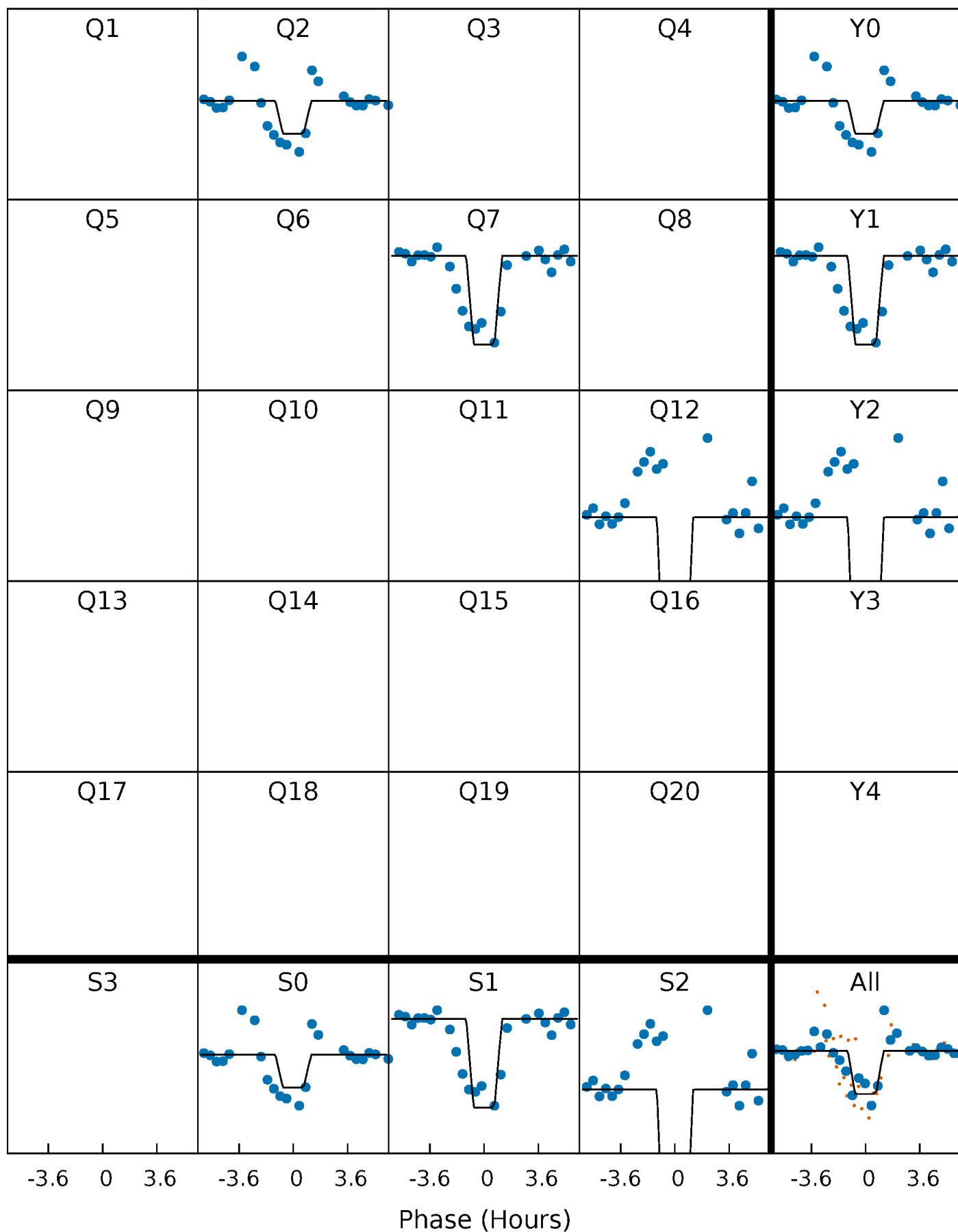
DV Quarter-Phased Transit Curves

TCE 008226464-03 P=459.284927 Days $T_0=214.240735$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

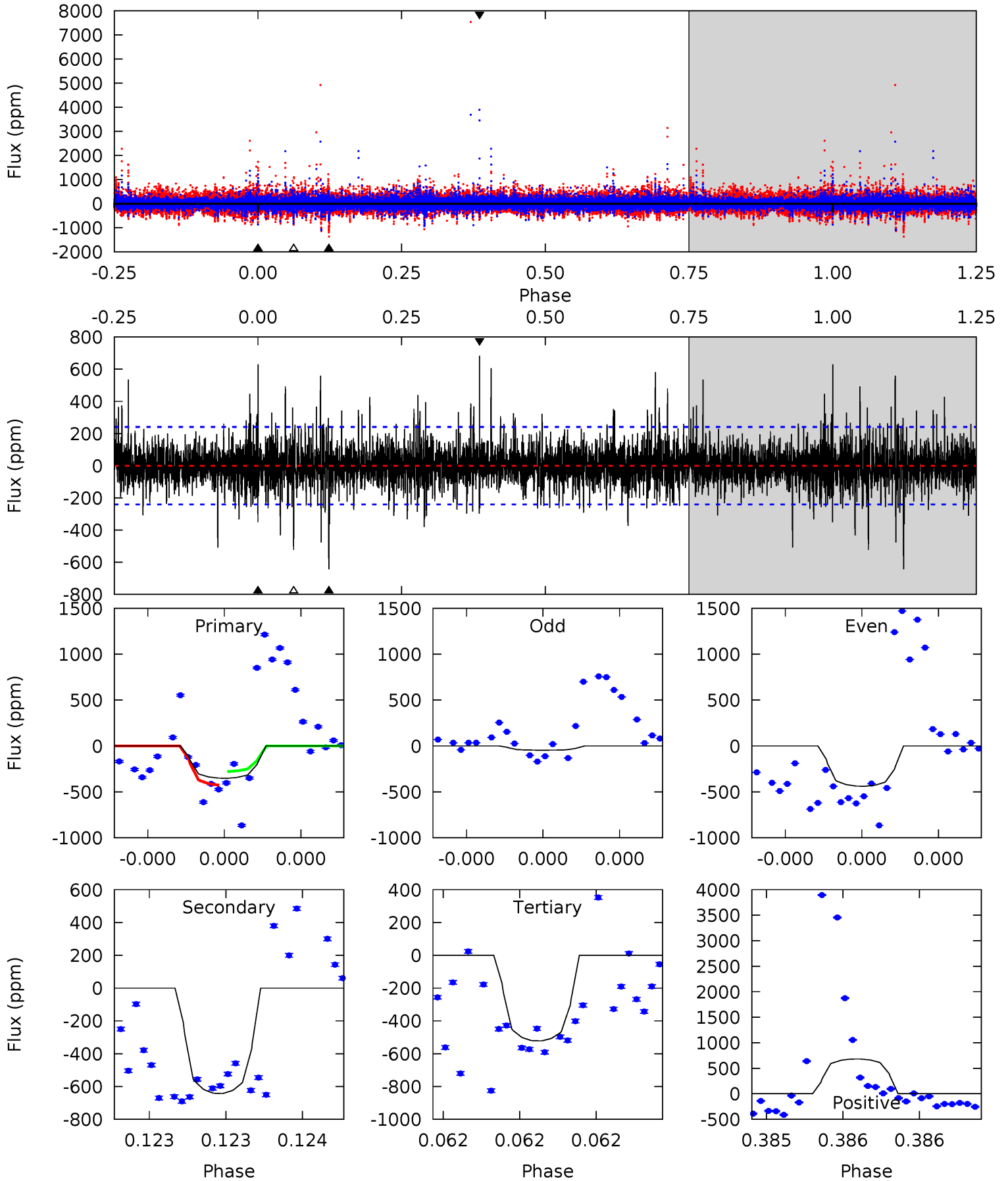
TCE 008226464-03 P=459.291939 Days $T_0=214.260601$ (BKJD)



DV Model-Shift Uniqueness Test

008226464-03, P = 459.284927 Days, E = 214.240735 Days

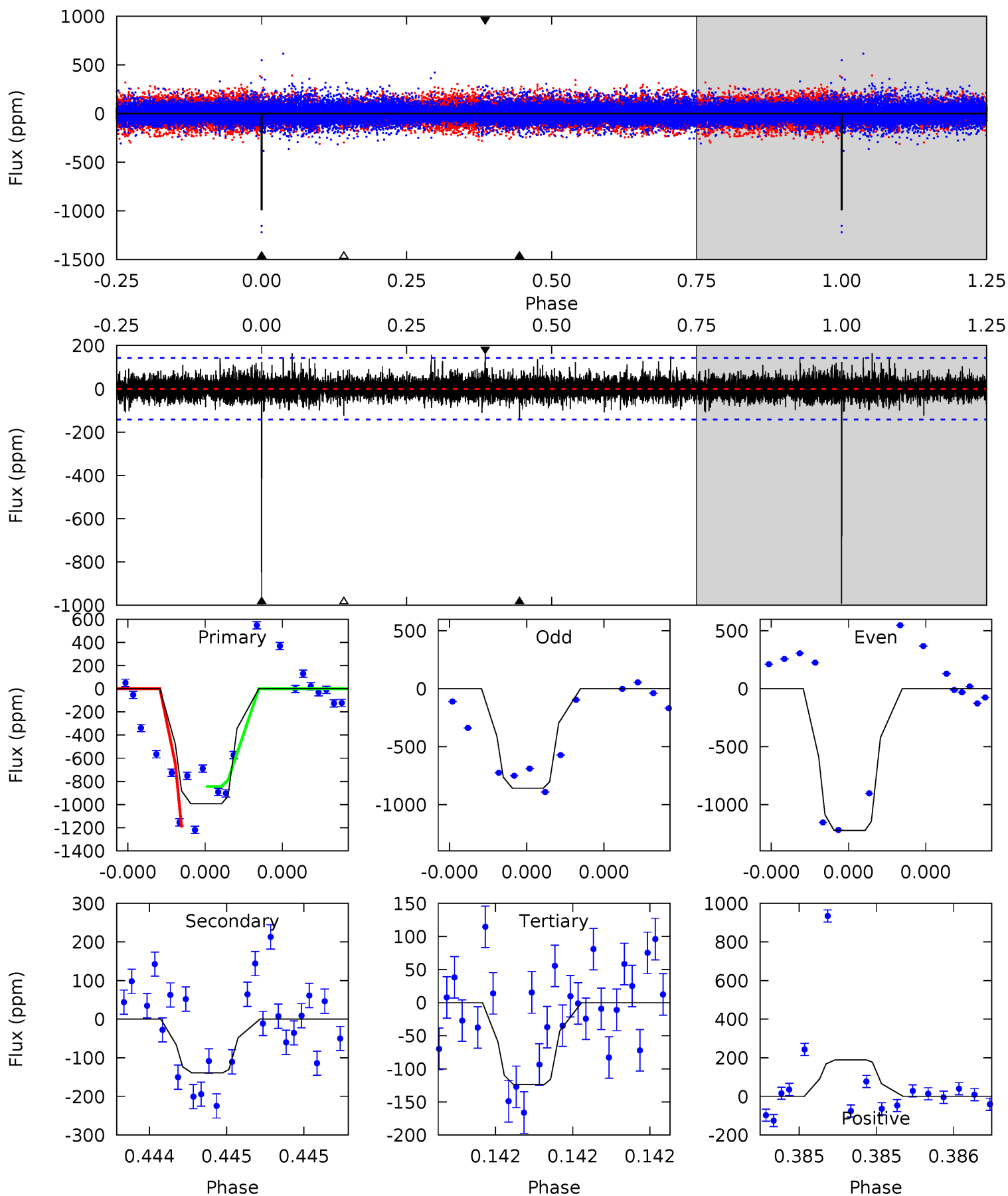
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.22	15.0	12.2	16.0	5.63	3.57	2.24	-3.99	-7.76	2.82	-0.94	3.22	0.94	0.52	1.74



Alt Model-Shift Uniqueness Test

008226464-03, P = 459.291939 Days, E = 214.260601 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.8	5.58	4.96	7.61	5.71	3.69	1.04	34.9	32.2	0.62	-2.04	7.34	0.71	0.16	0



Stellar Parameters For KIC 008226464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6028^{+164}_{-164}	$4.044^{+0.385}_{-0.165}$	$-0.420^{+0.300}_{-0.300}$	$1.535^{+0.403}_{-0.604}$	$0.951^{+0.129}_{-0.116}$	$0.371^{+1.211}_{-0.159}$
	+3%/-3%	+10%/-4%	+71%/-71%	+26%/-39%	+14%/-12%	+327%/-43%
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 008226464-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-643 ± 43	$6.58^{+6.30}_{-4.38}$	425^{+33}_{-45}	4884^{+3284}_{-1088}	10627^{+87490}_{-7712}
Alt.	-139 ± 25	$6.54^{+6.62}_{-4.36}$	424^{+36}_{-44}	3664^{+1867}_{-686}	2426^{+18397}_{-1856}

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 $A_{obs} \gg 1.0$

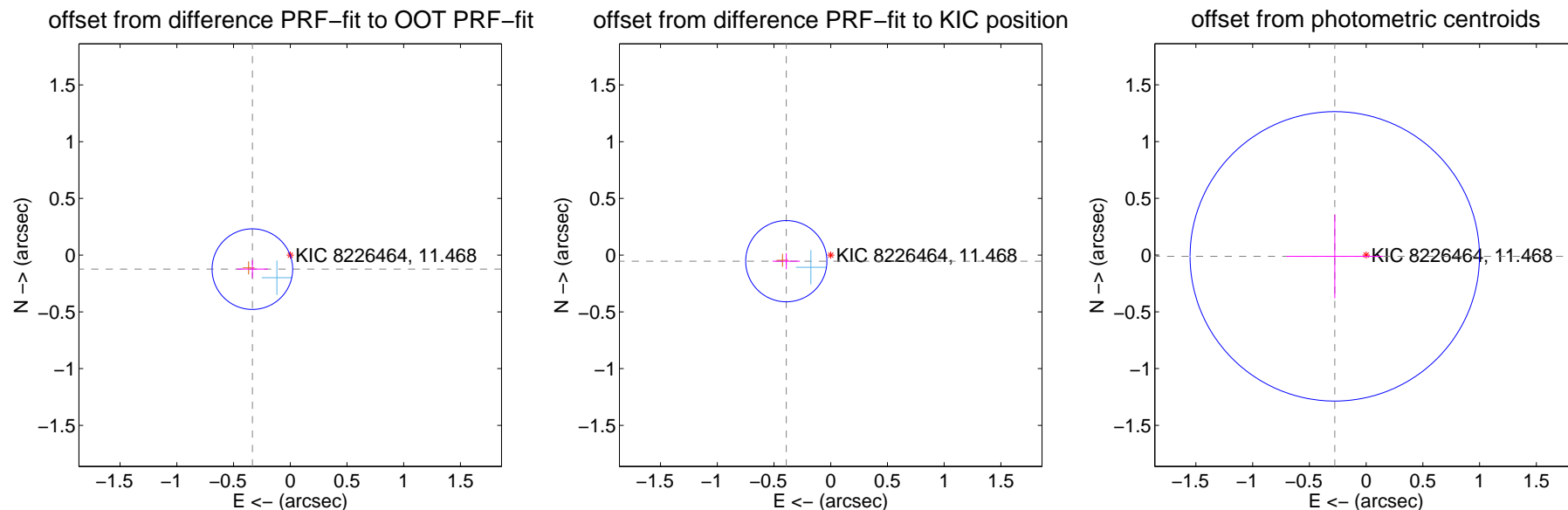
DV Centroid Data

Supplemental centroid analysis for 008226464-03. **Kepler magnitude: 11.47.** Transit SNR 8.19

There are 1 quarters with good PRF difference image offsets

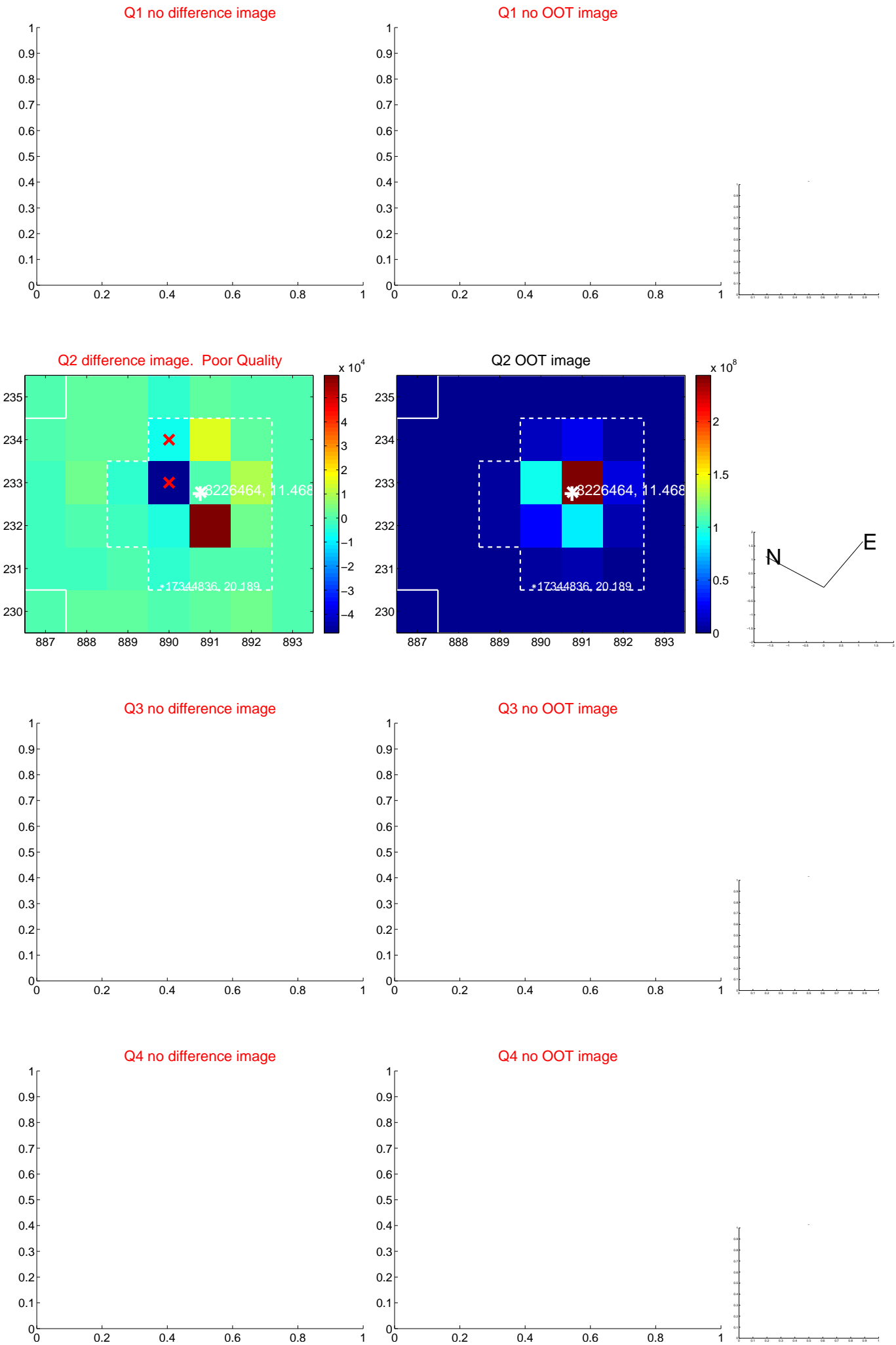
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.356 ± 0.118	3.01	0.334 ± 0.137	-0.123 ± 0.079
PRF-fit source offset from KIC position	0.395 ± 0.119	3.31	0.392 ± 0.120	-0.053 ± 0.071
photometric centroid source offset	0.28 ± 0.43	0.65	0.28 ± 0.43	-0.01 ± 0.37

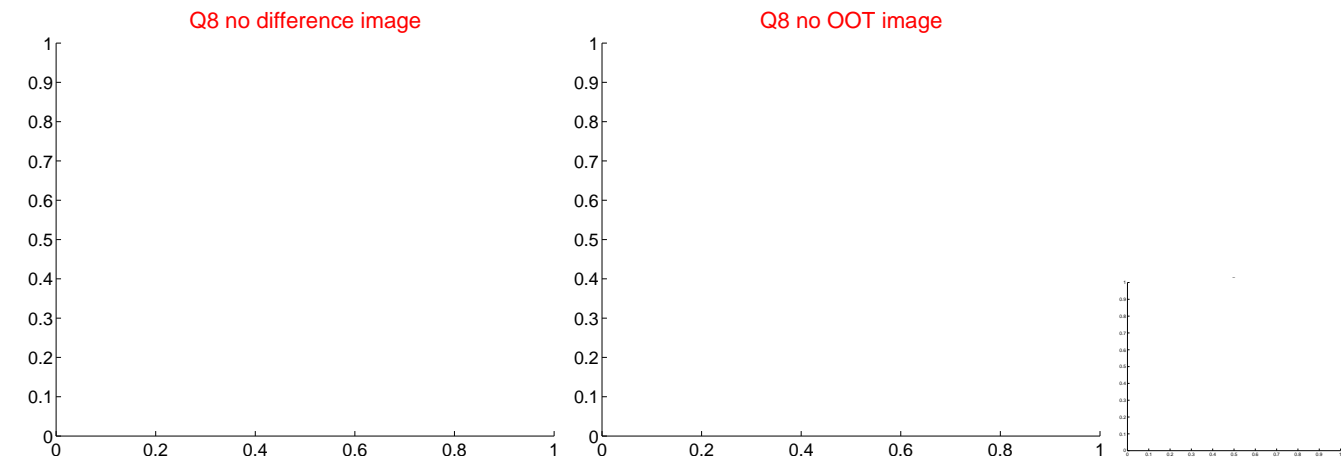
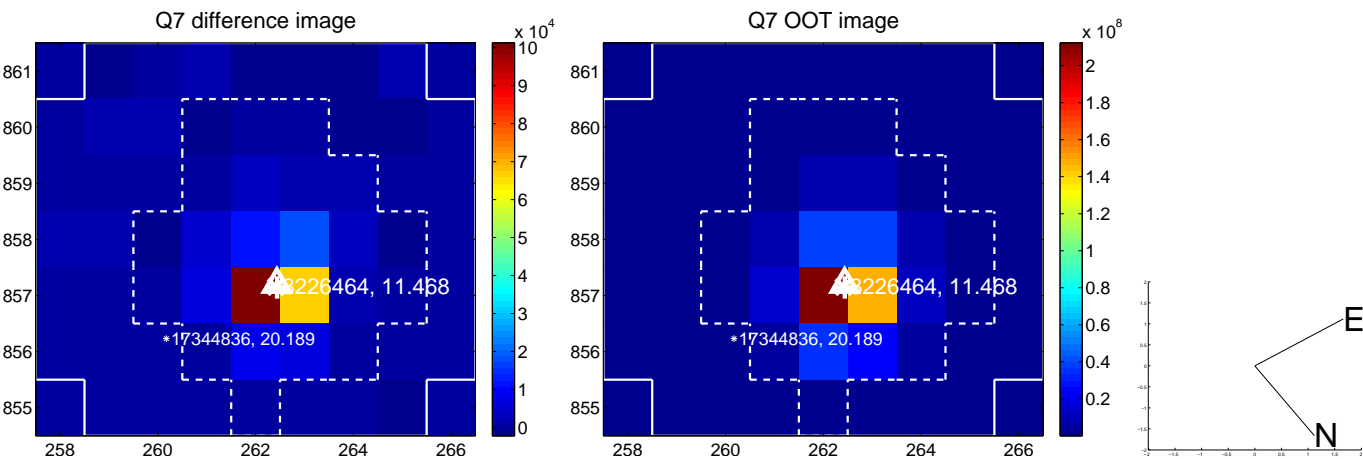
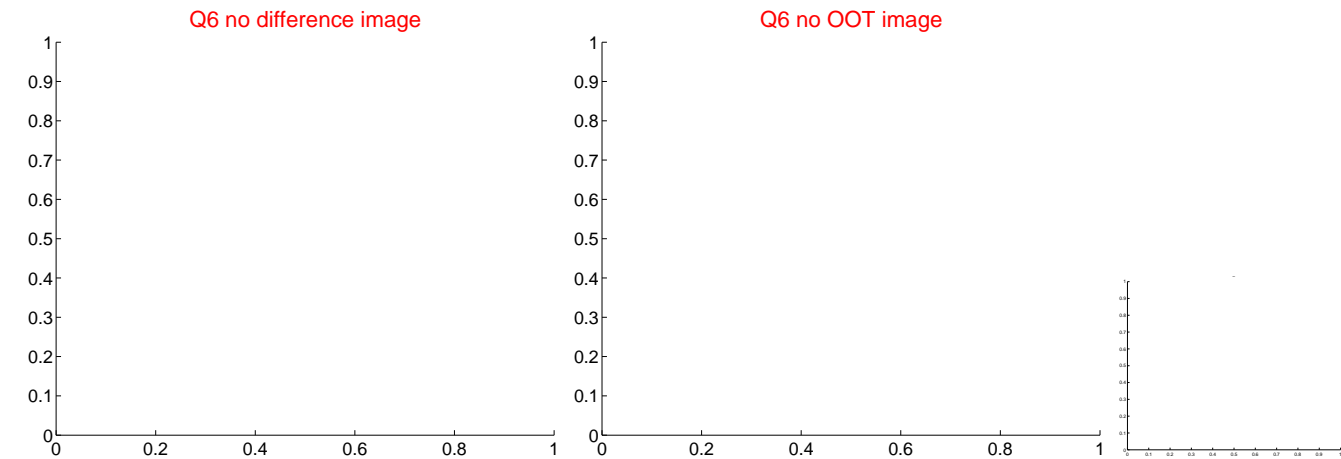
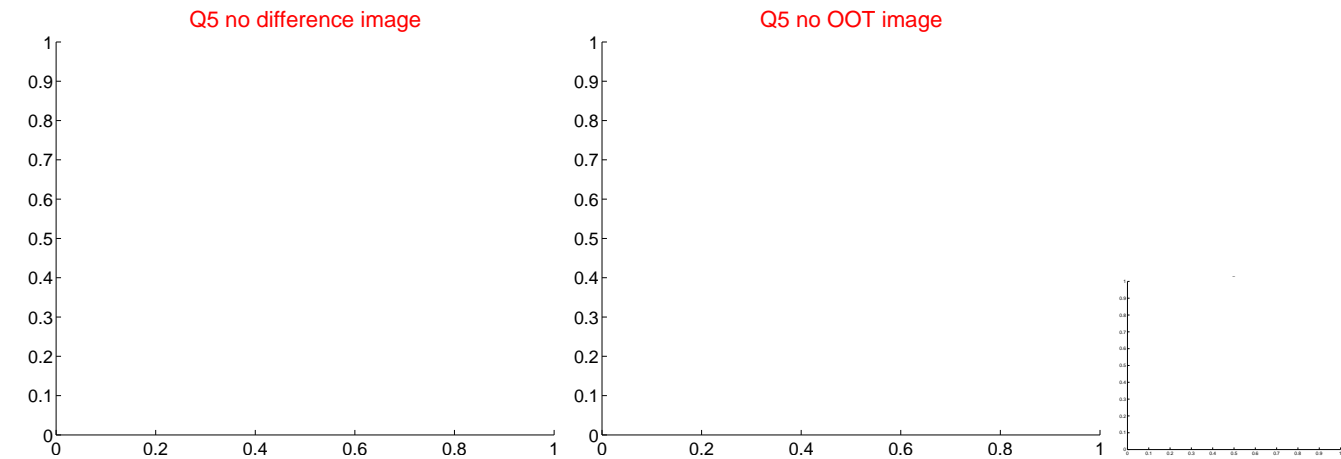


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

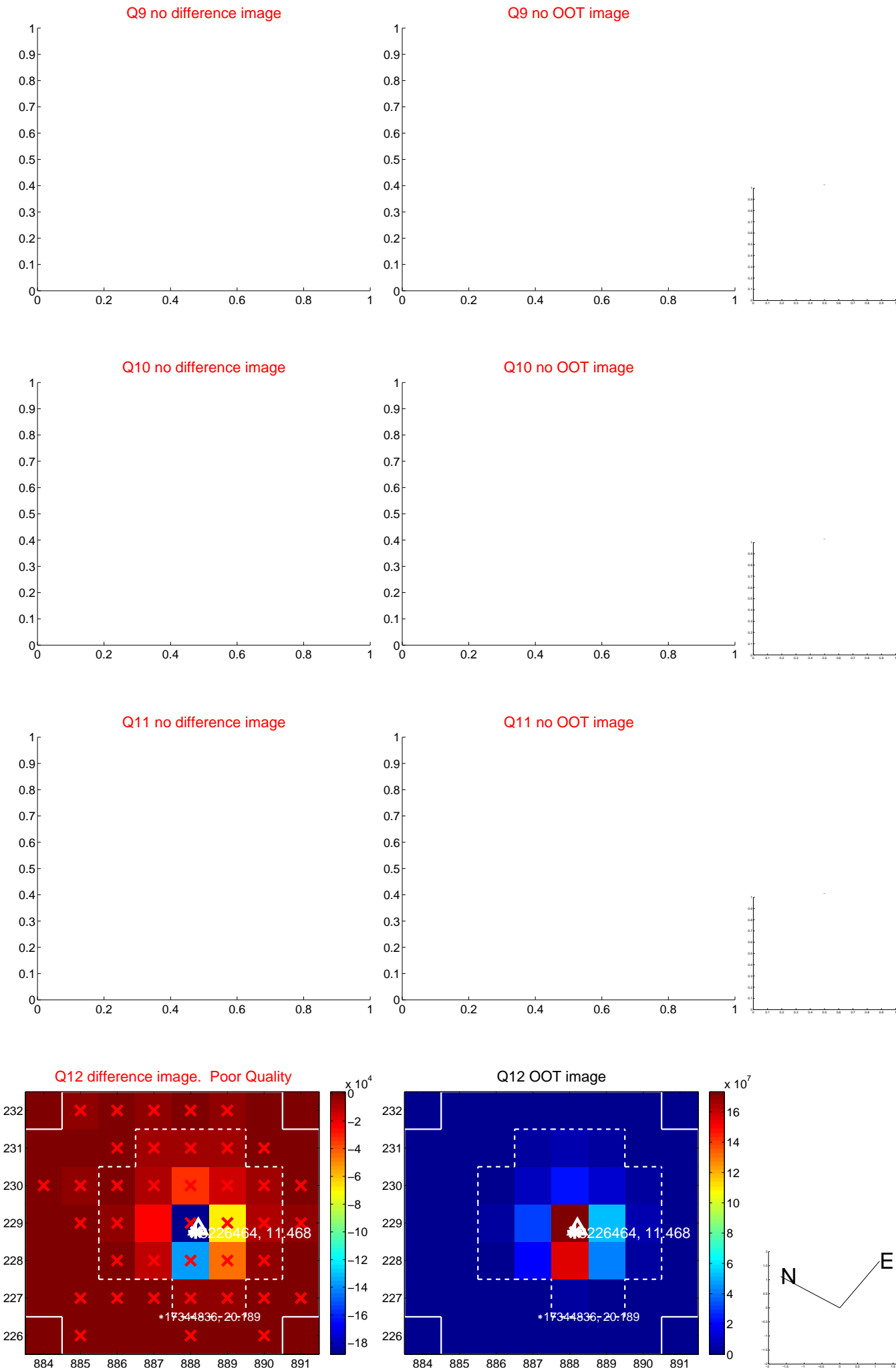
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



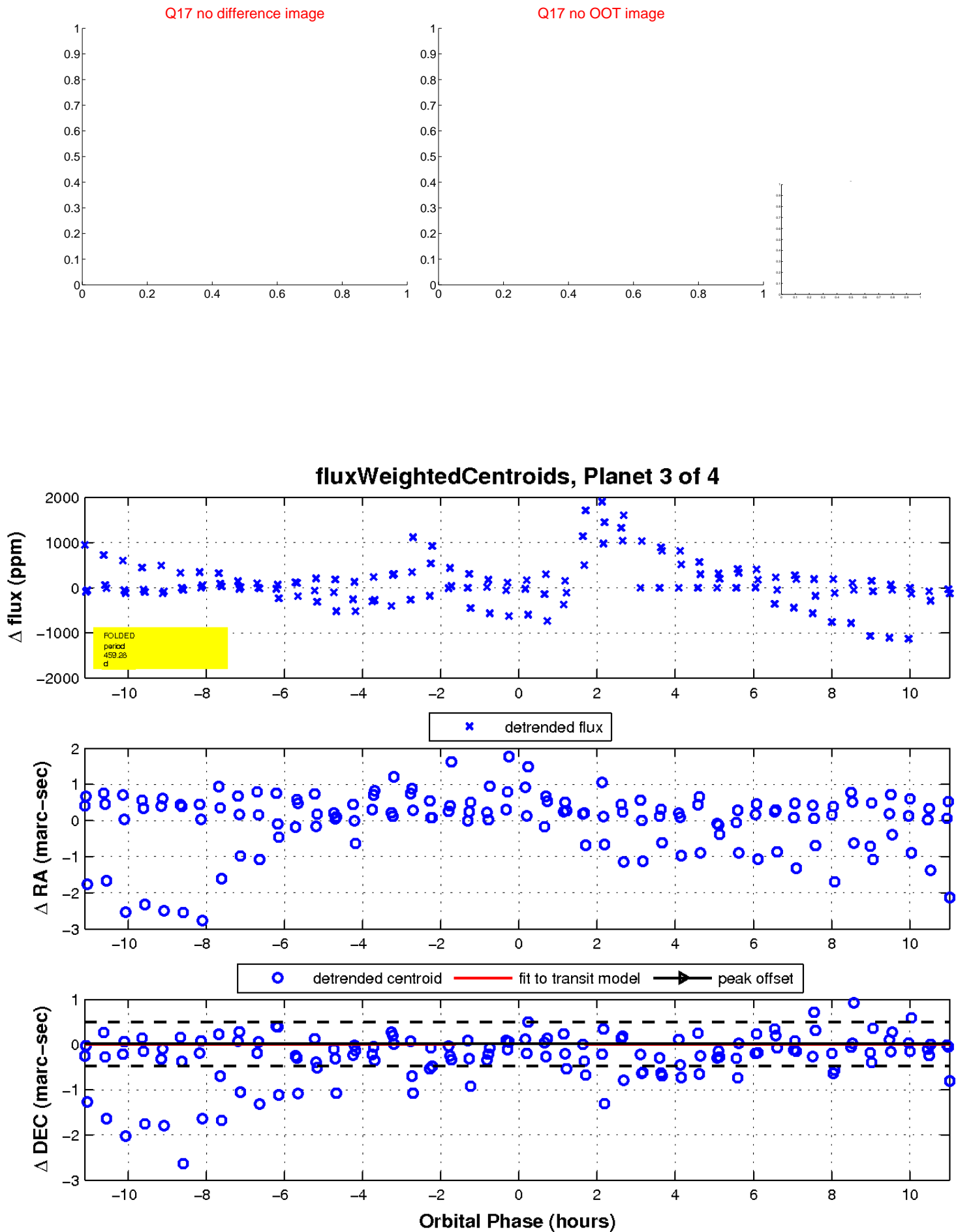
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

