

KIC 005341486

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})
005341486-01	OBS	No	201.655077	141.078215	4868.7	11.041	10.8	8.4	0.15	3204	1.06	0.02
005341486-02	OBS	No	80.625120	182.879592	3734.5	3.760	9.3	6.9	0.15	3204	0.93	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005341486-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
005341486-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

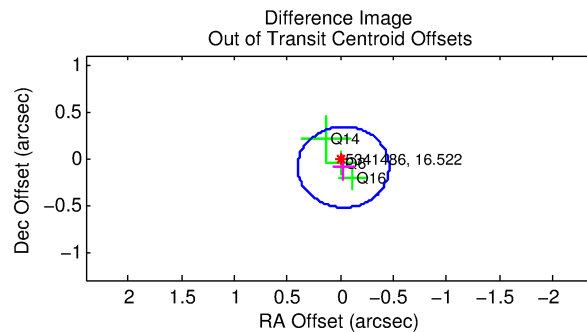
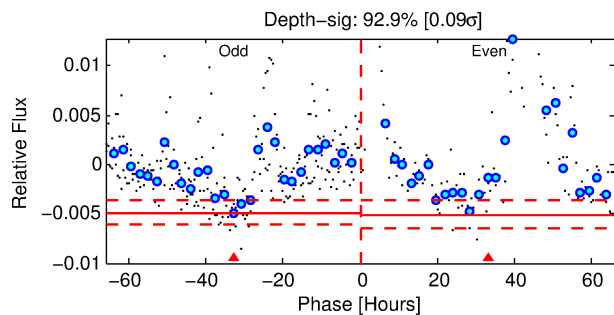
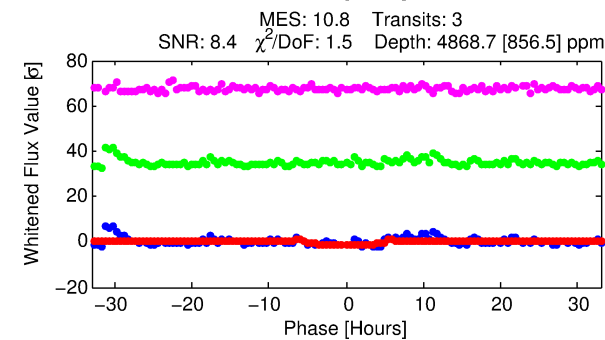
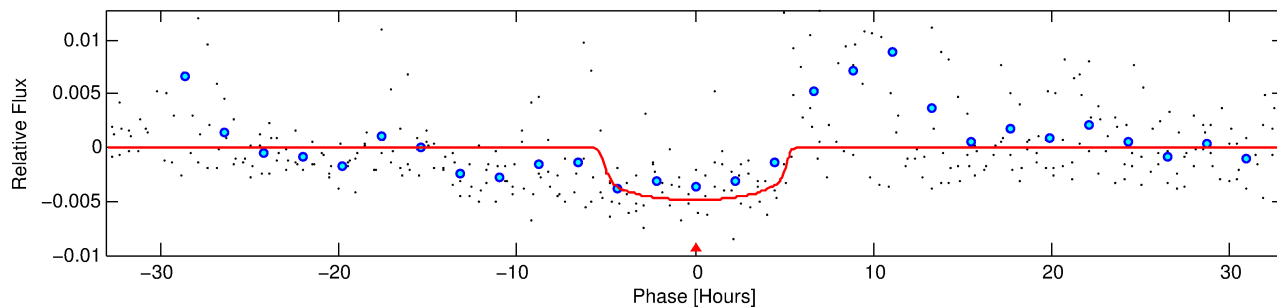
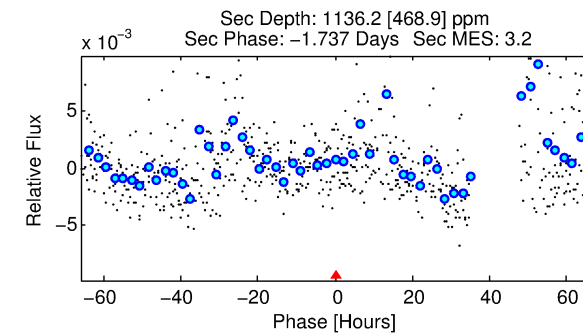
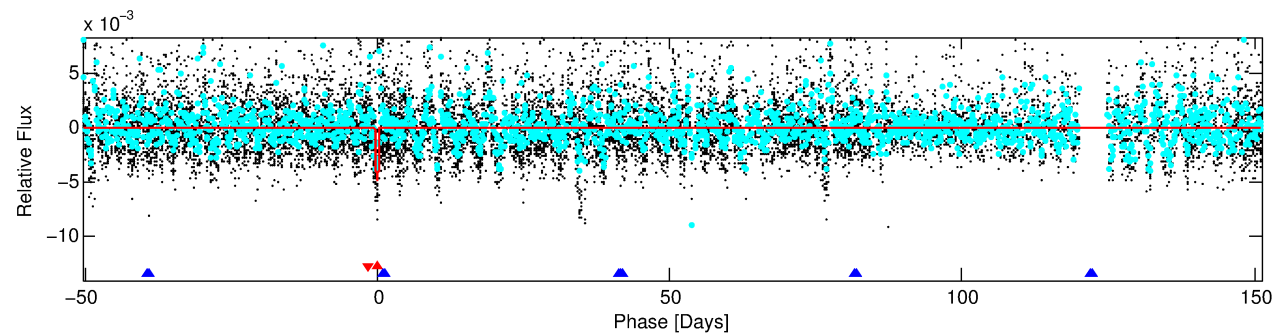
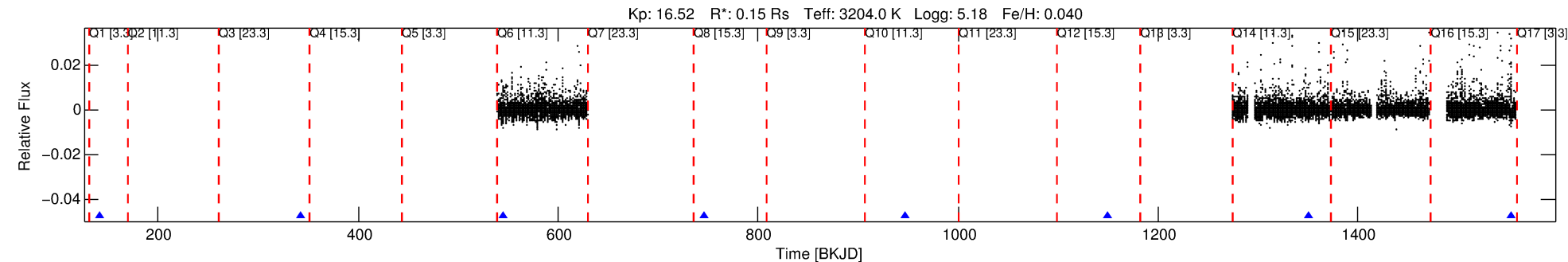
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005341486-01

No Significant Match Found

DV One-Page Summary

KIC: 5341486 Candidate: 1 of 2 Period: 201.655 d



DV Fit Results:

Period = 201.65508 [0.00426] d
Epoch = 141.0782 [0.0228] BKJD
Rp/R* = 0.0630 [0.0186]
a/R* = 148.32 [168.99]
b = 0.00 [1409.69]
Seff = 0.02 [0.01]
Teq = 95 [6] K
Rp = 1.07 [0.46] Re
a = 0.3443 [0.0763] AU
Ag = 65306.19 [50010.92] [1.31σ]
Teff = 2344 [423] K [5.32σ]

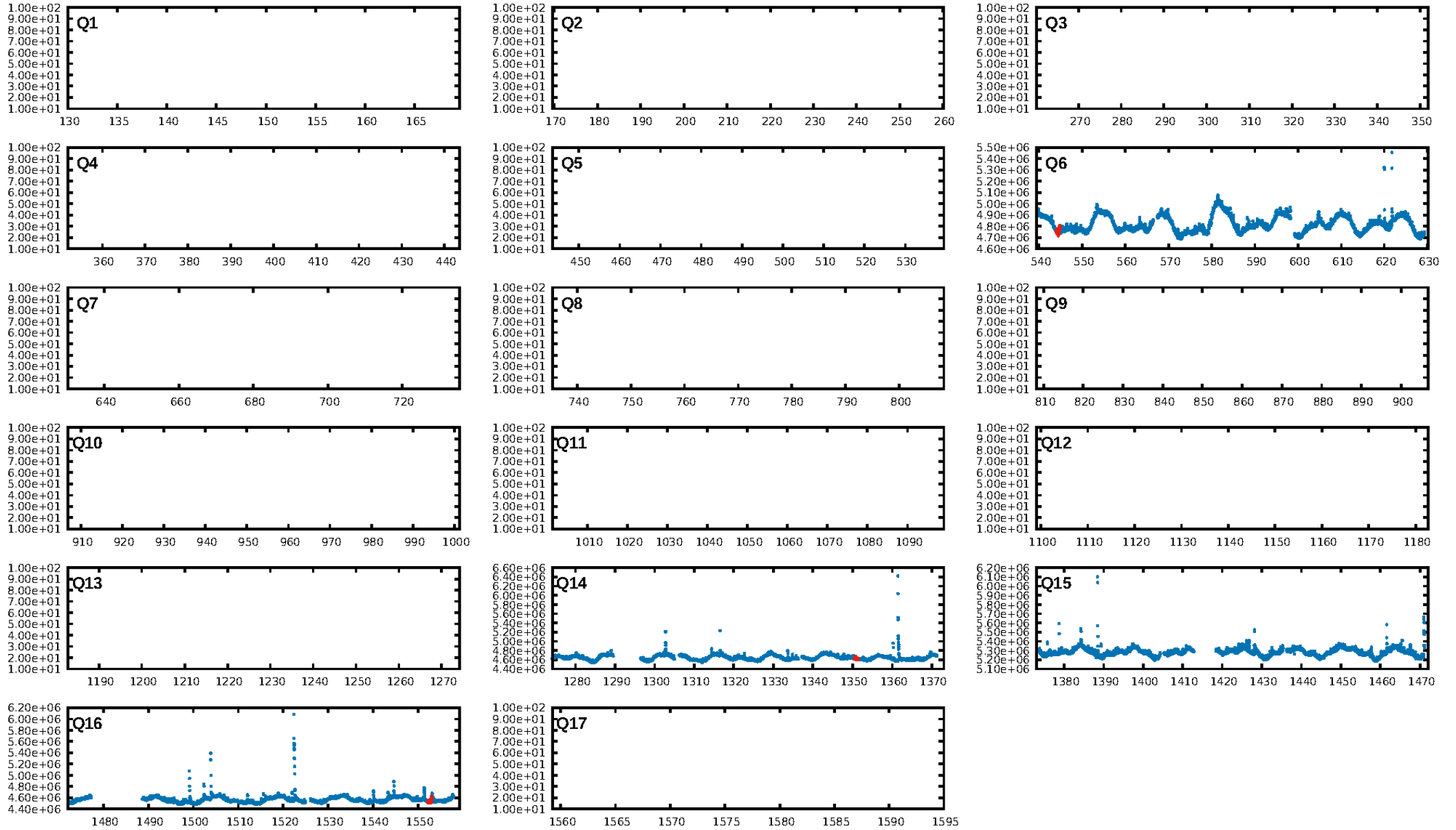
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [249.05σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 35.9%
ModelChiSquareGof-sig: 88.8%
Bootstrap-pfa: 2.42e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.585
Centroid-sig: 70.9%
Centroid-so: 0.813 arcsec [1.26σ]
OotOffset-rm: 0.098 arcsec [0.68σ]
KicOffset-rm: 0.351 arcsec [2.97σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.67 [2/3]

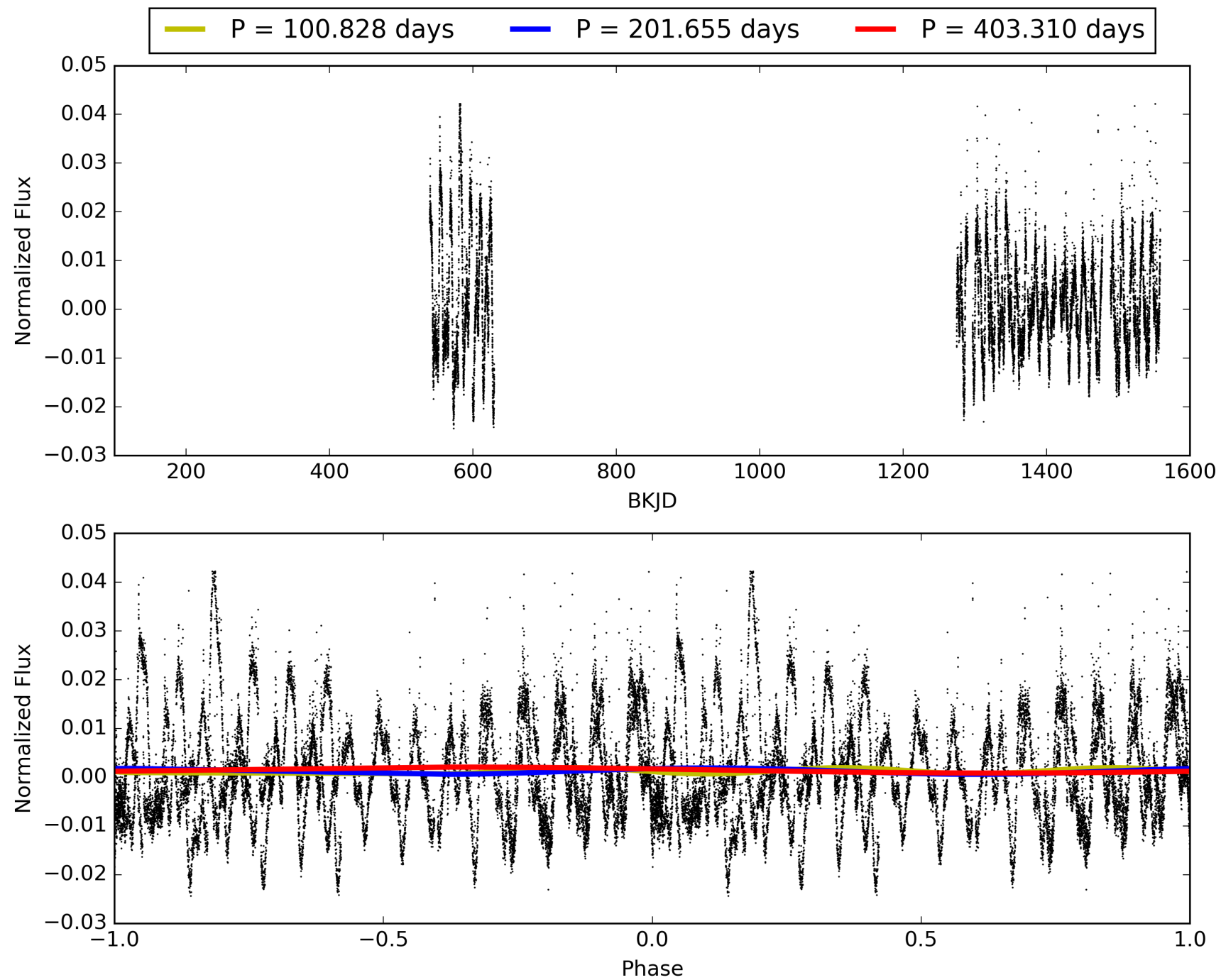
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:12:28 Z

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

TCE 005341486-01, PDC Light Curves

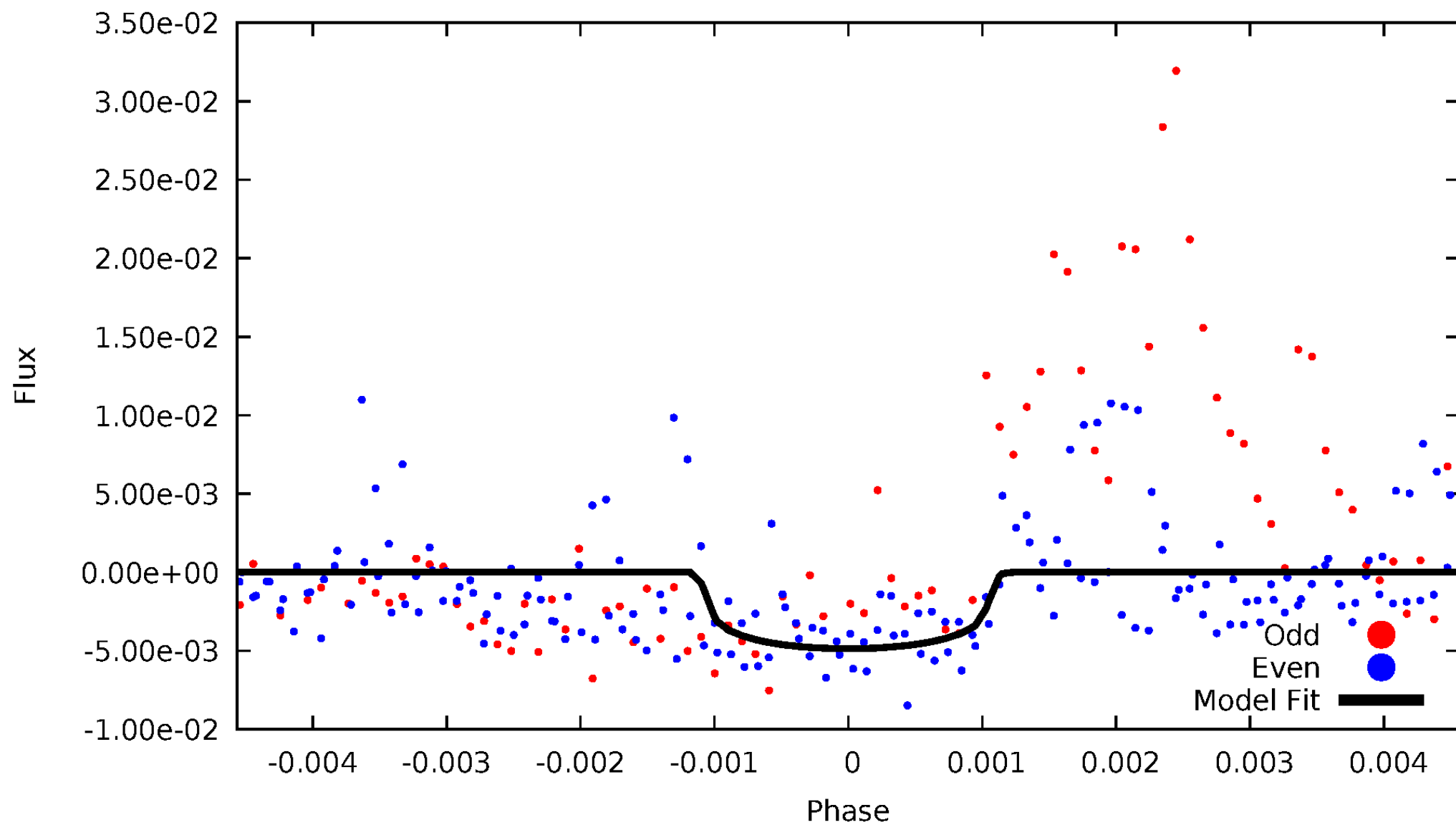


TCE 005341486-01



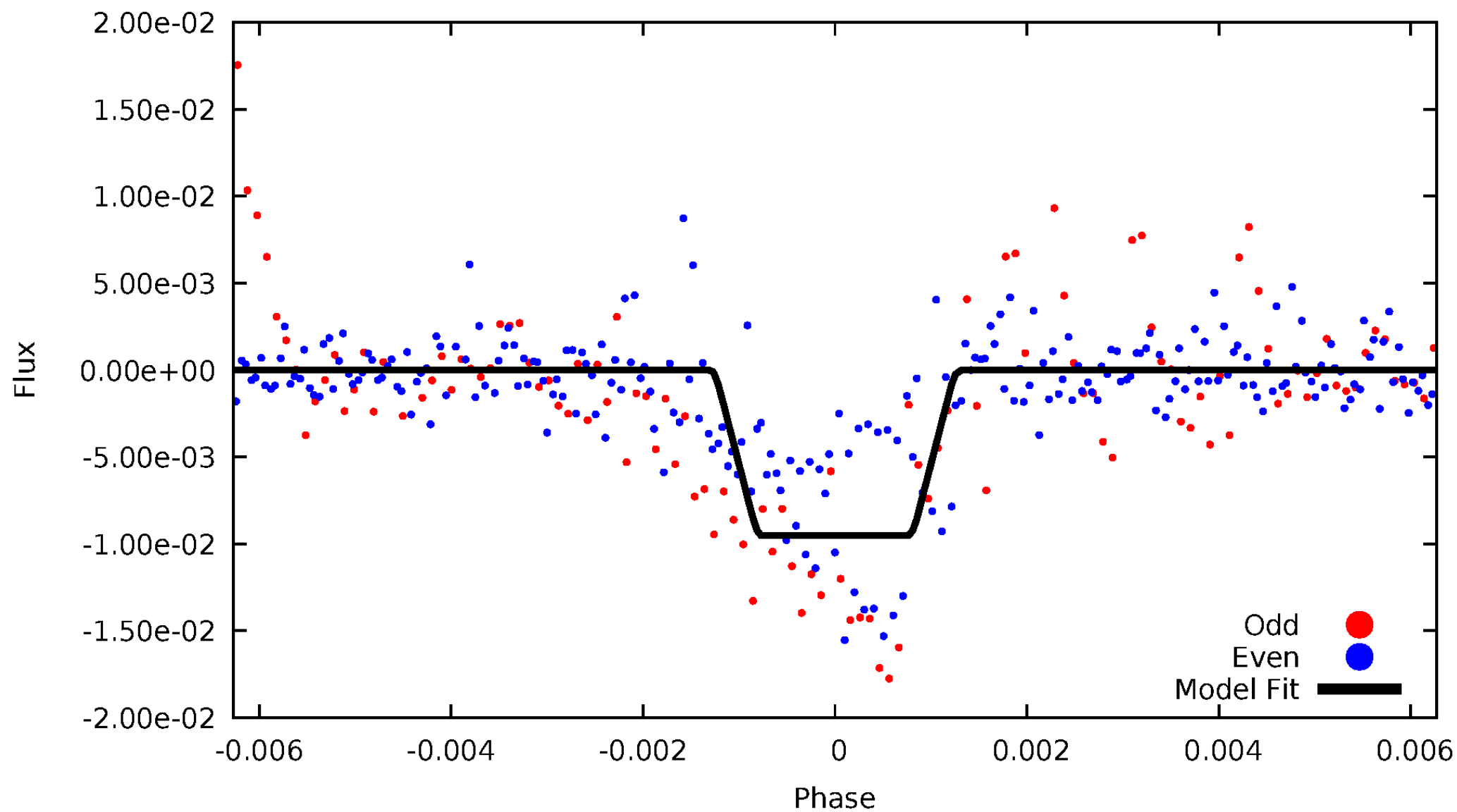
DV Odd/Even

TCE 005341486-01



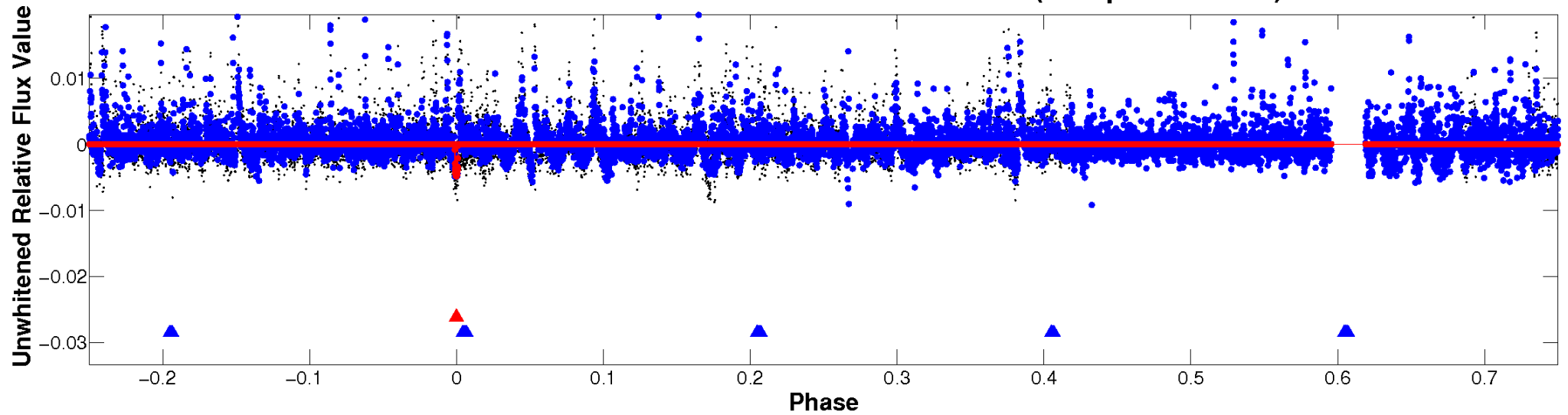
ALT Odd/Even

TCE 005341486-01

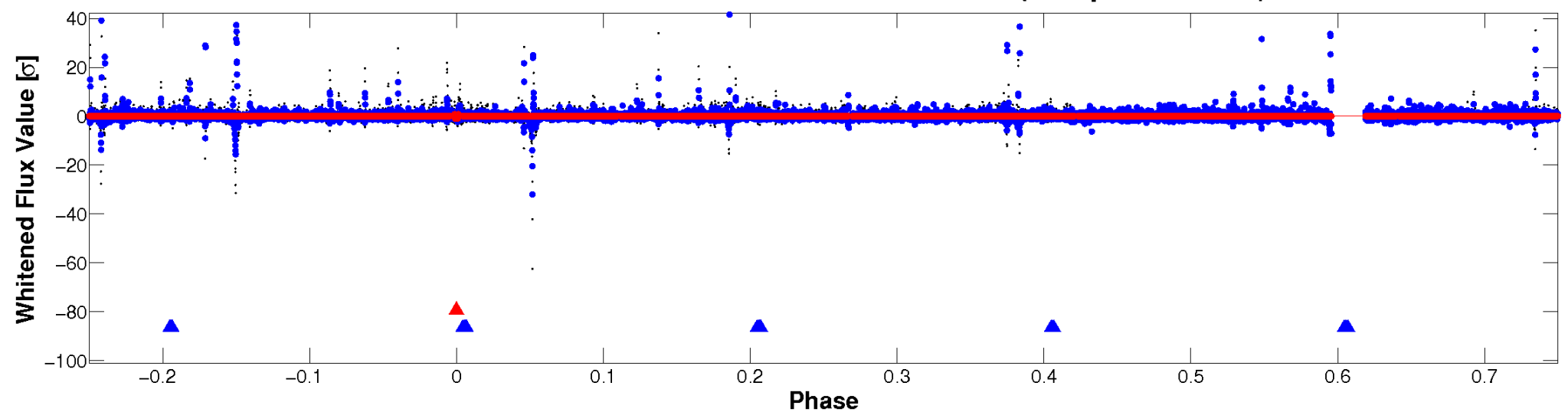


Non-Whitened Vs. Whitened Light Curve

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

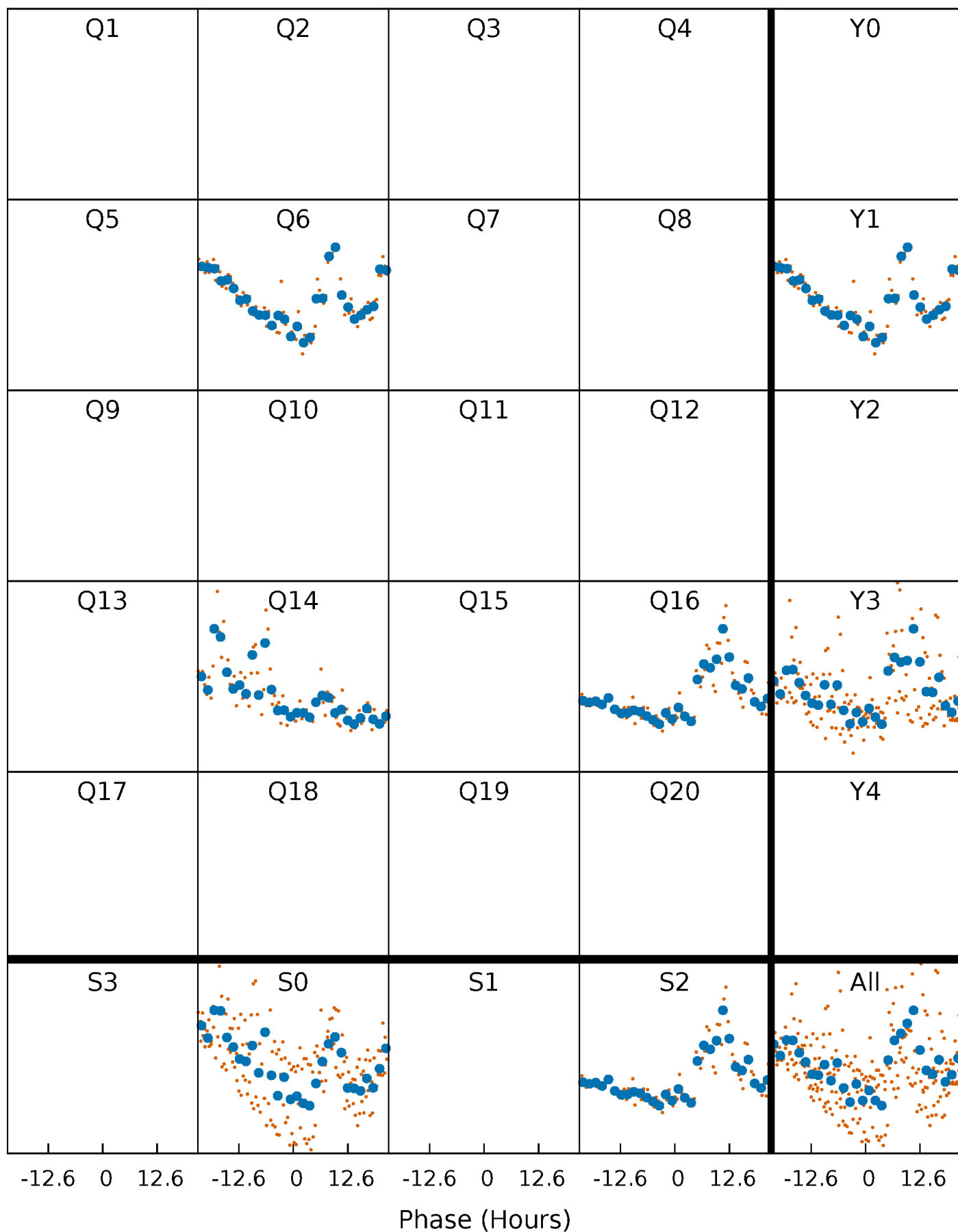


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



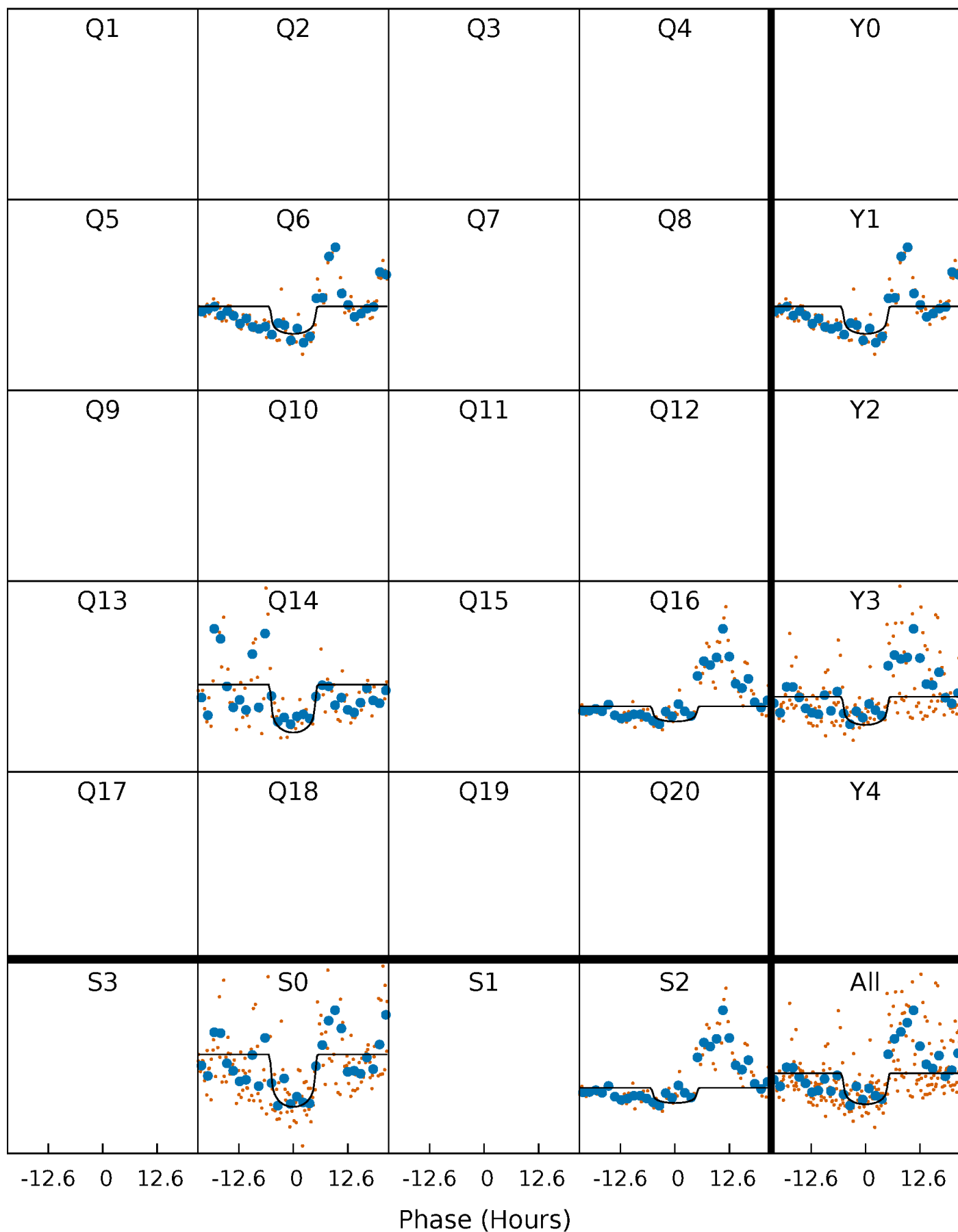
PDC Quarter-Phased Transit Curves

TCE 005341486-01 P=201.655077 Days $T_0=141.078215$ (BKJD)



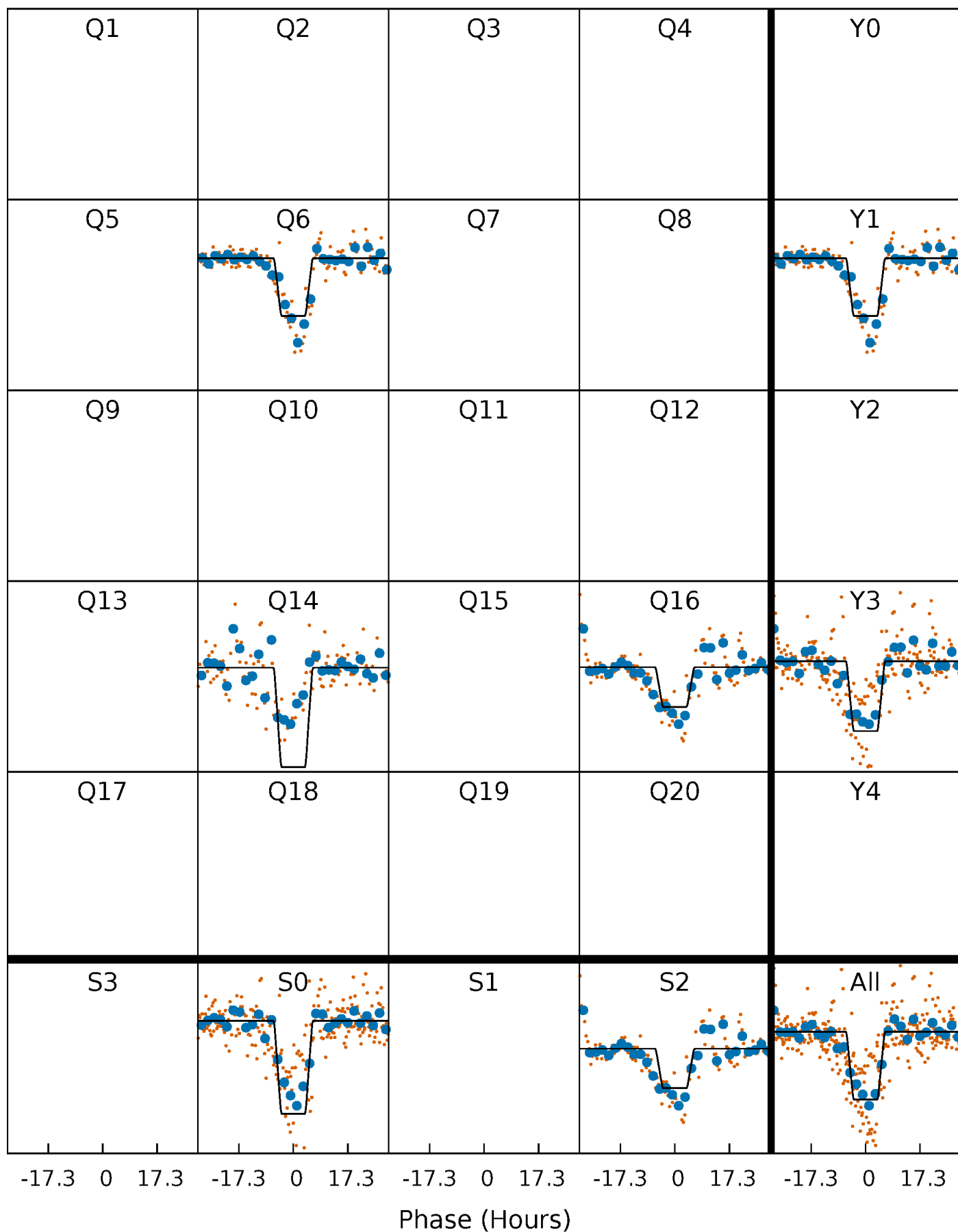
DV Quarter-Phased Transit Curves

TCE 005341486-01 P=201.655077 Days $T_0=141.078215$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

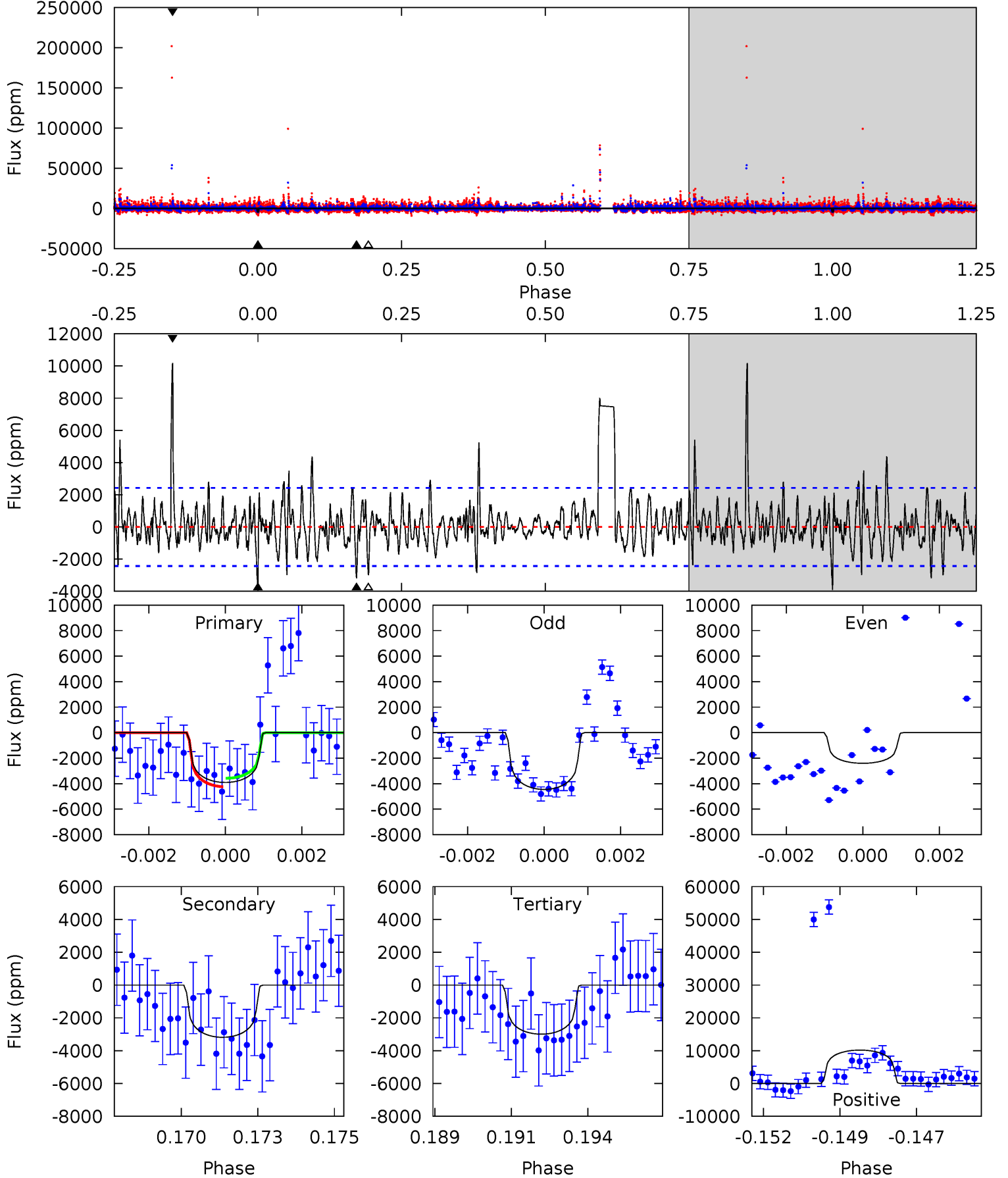
TCE 005341486-01 P=201.651992 Days $T_0=141.152732$ (BKJD)



DV Model-Shift Uniqueness Test

005341486-01, P = 201.655077 Days, E = 141.078215 Days

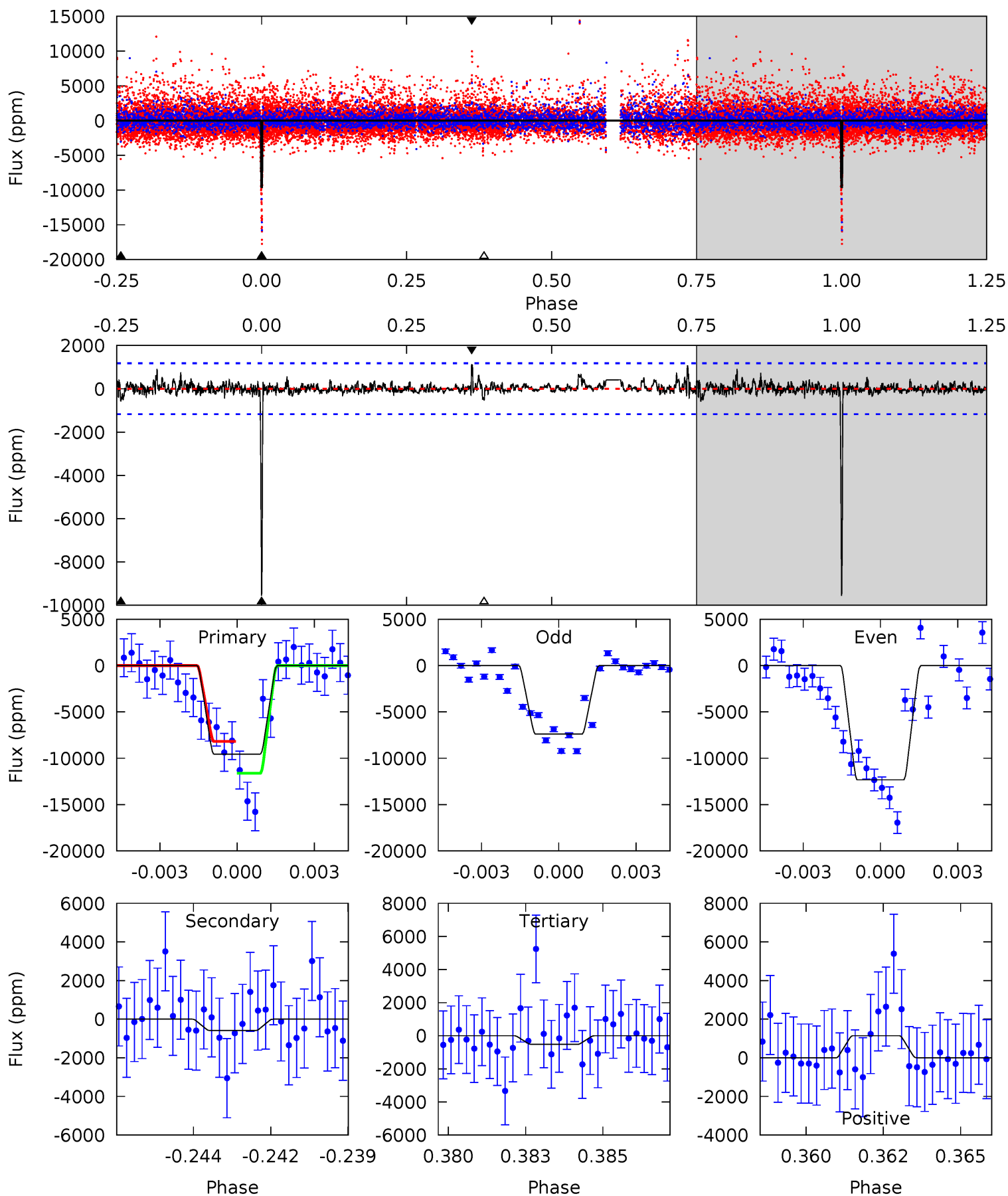
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.52	6.95	6.53	22.2	5.30	3.04	2.63	1.99	-13.7	0.42	-15.3	1.08	1.02	0.72	0.72



Alt Model-Shift Uniqueness Test

005341486-01, P = 201.651992 Days, E = 141.152732 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.9	2.63	2.34	5.15	5.28	3.02	0.76	40.6	37.8	0.29	-2.52	7.06	0.86	0.11	7.61



Stellar Parameters For KIC 005341486

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3204^{+44}_{-31}	$5.184^{+0.045}_{-0.105}$	$0.040^{+0.200}_{-0.150}$	$0.155^{+0.048}_{-0.016}$	$0.134^{+0.048}_{-0.015}$	$50.600^{+12.170}_{-20.040}$
	+1%/-1%	+1%/-2%	+500%/-375%	+31%/-10%	+36%/-11%	+24%/-40%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005341486-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3185 ± 458	$1.11^{+0.35}_{-0.34}$	134^{+6}_{-4}	3112^{+342}_{-239}	$171881^{+177270}_{-71748}$
Alt.	-585 ± 222	$1.71^{+0.38}_{-0.35}$	134^{+6}_{-3}	2239^{+139}_{-143}	13010^{+8960}_{-5960}

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

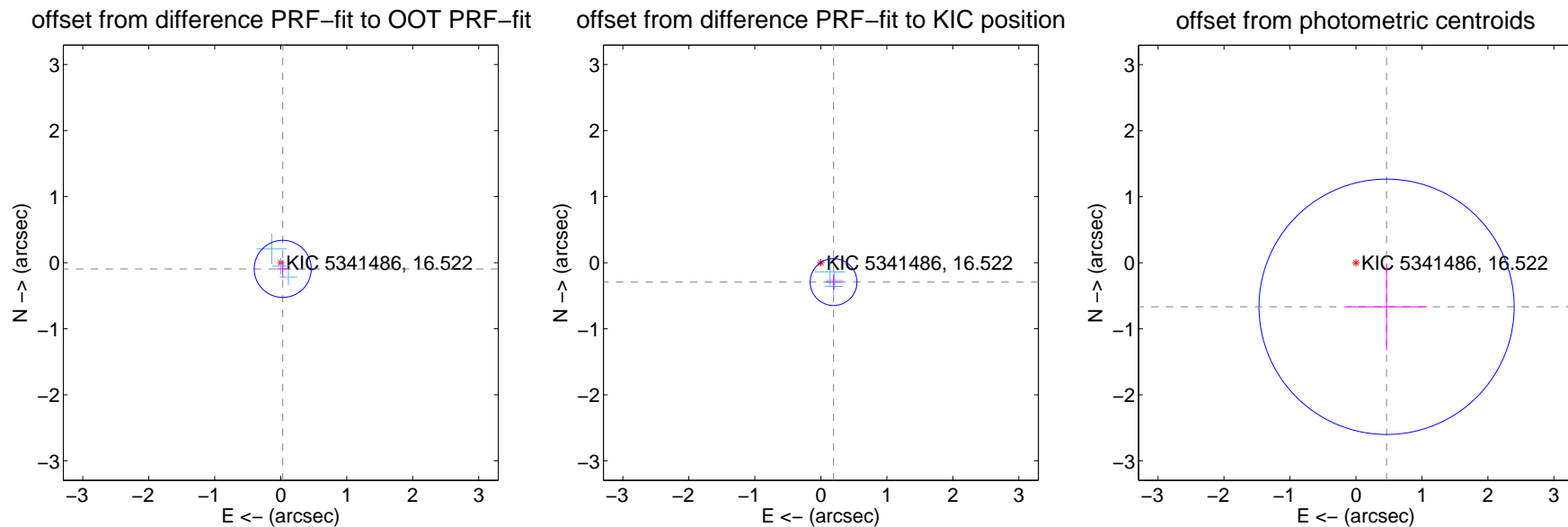
DV Centroid Data

Supplemental centroid analysis for 005341486-01. Kepler magnitude: 16.52. Transit SNR 8.36

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.098 ± 0.144	0.68	-0.030 ± 0.094	-0.094 ± 0.131
PRF-fit source offset from KIC position	0.351 ± 0.118	2.97	-0.193 ± 0.119	-0.294 ± 0.118
photometric centroid source offset	0.81 ± 0.64	1.26	-0.46 ± 0.61	-0.67 ± 0.66

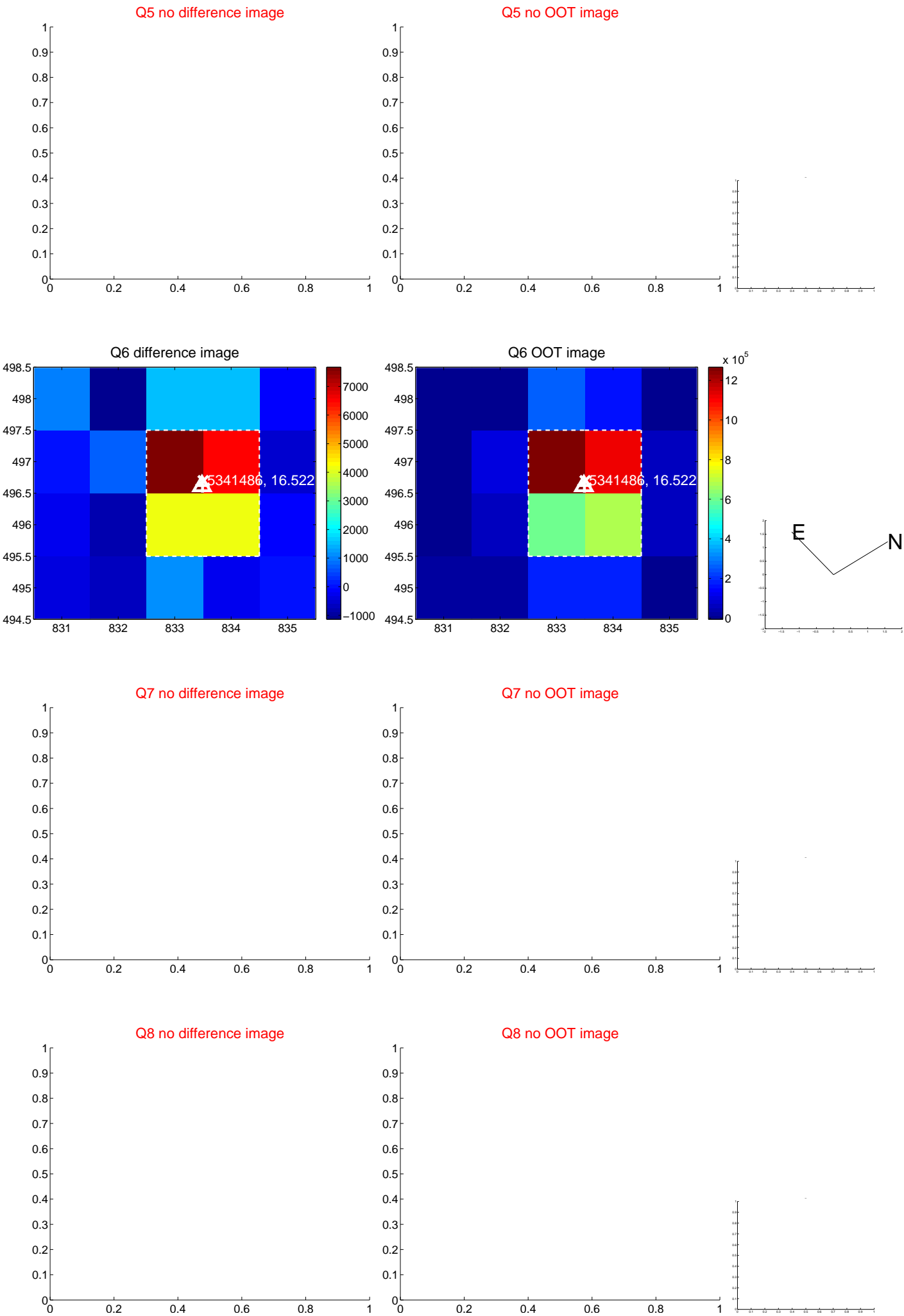


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



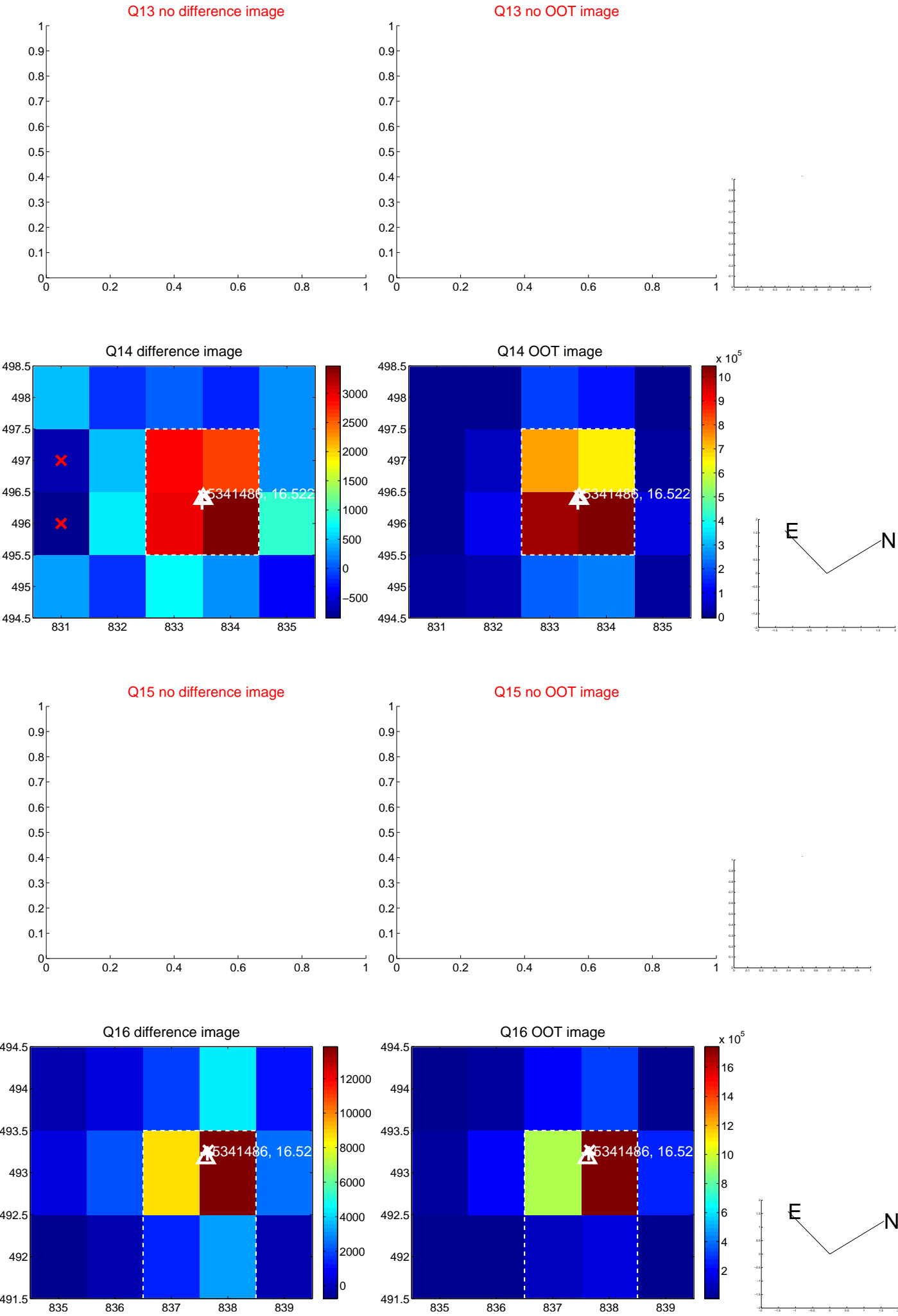
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



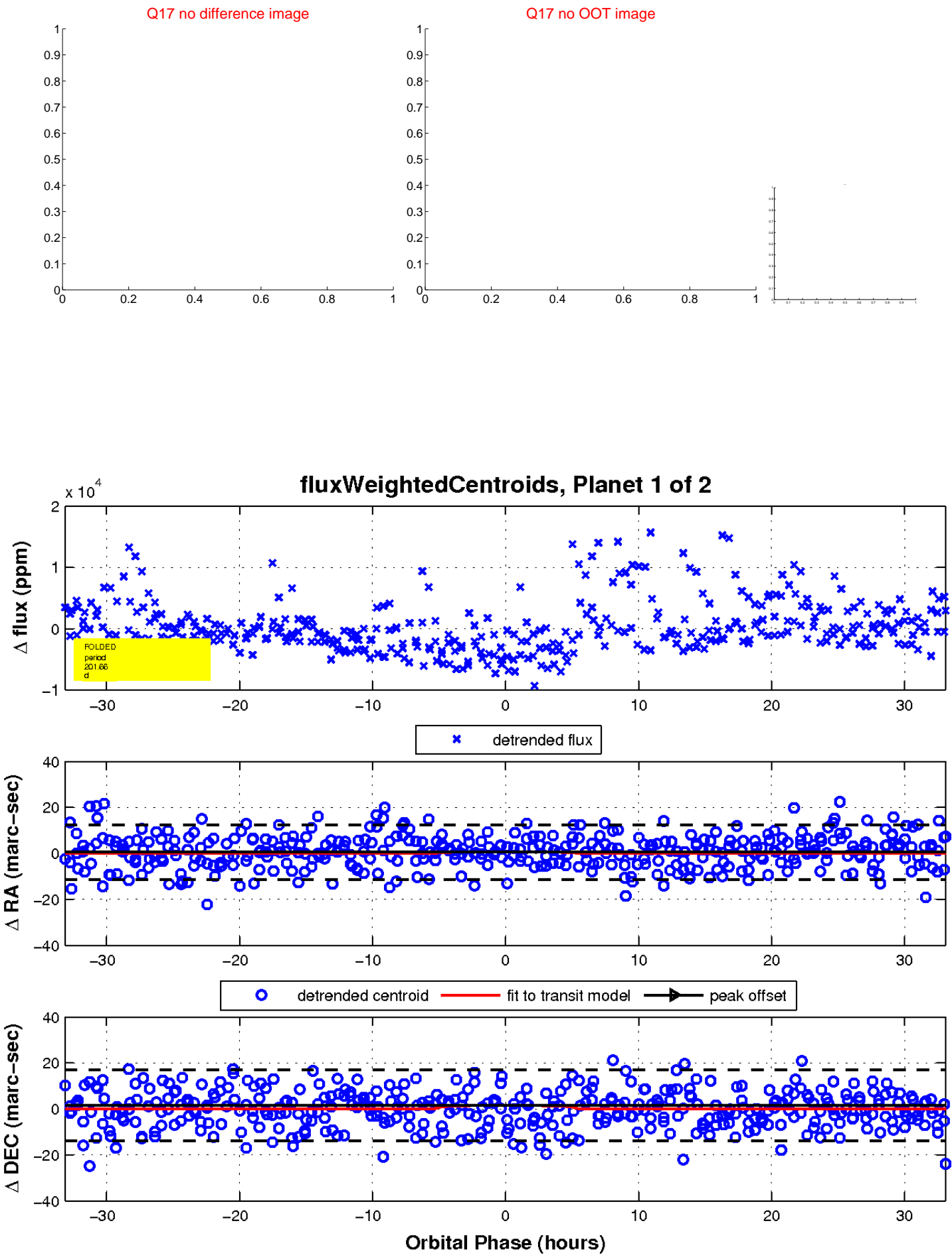
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

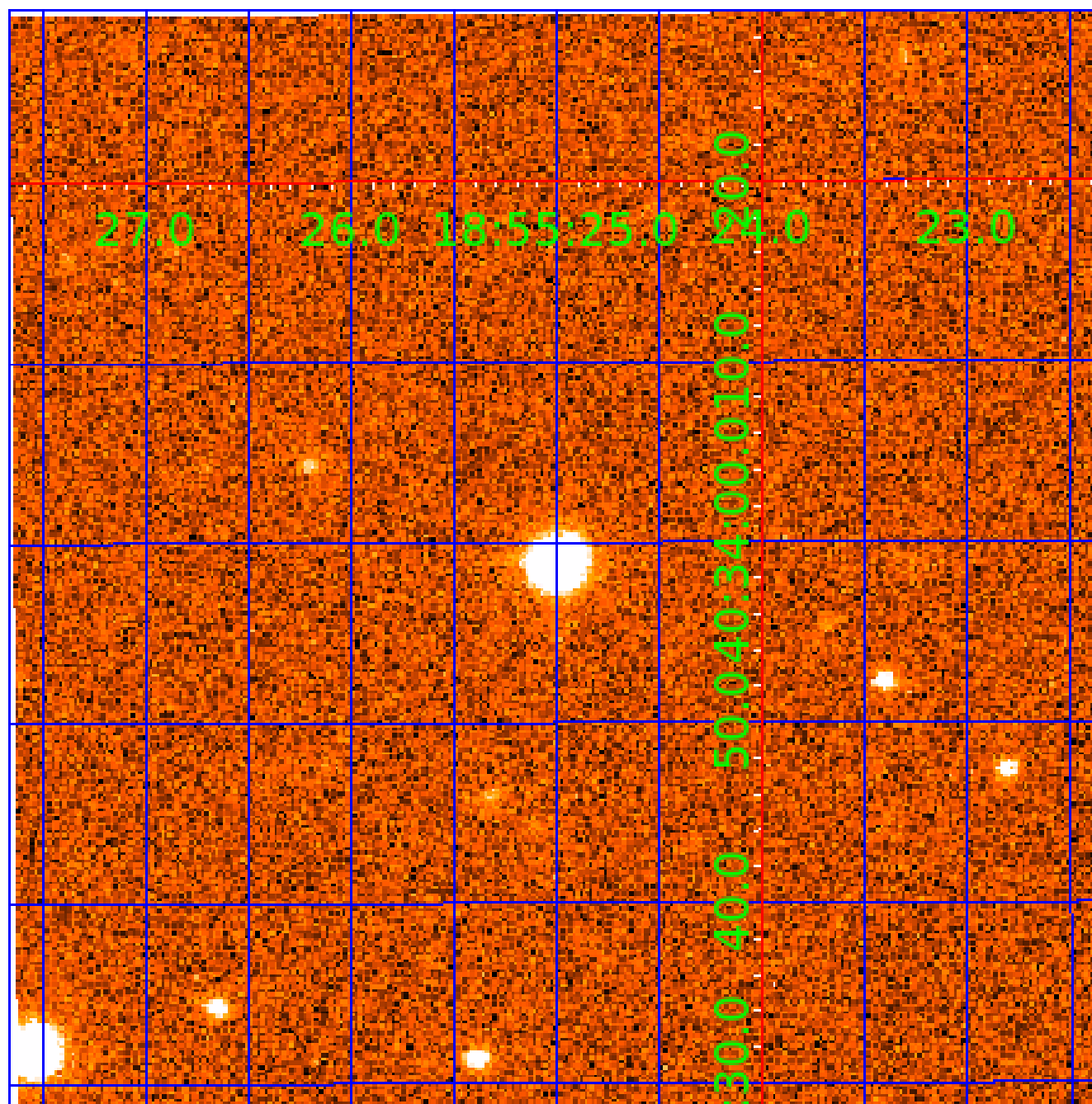


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005341486

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})
005341486-01	OBS	No	201.655077	141.078215	4868.7	11.041	10.8	8.4	0.15	3204	1.06	0.02
005341486-02	OBS	No	80.625120	182.879592	3734.5	3.760	9.3	6.9	0.15	3204	0.93	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005341486-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
005341486-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

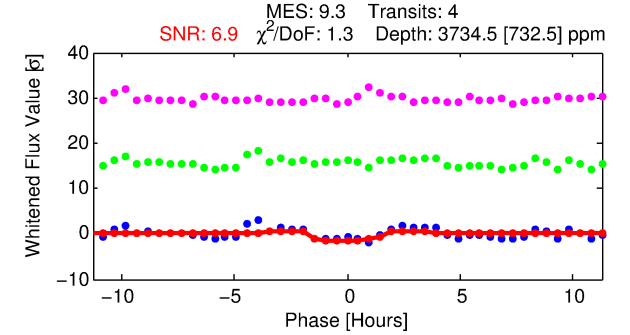
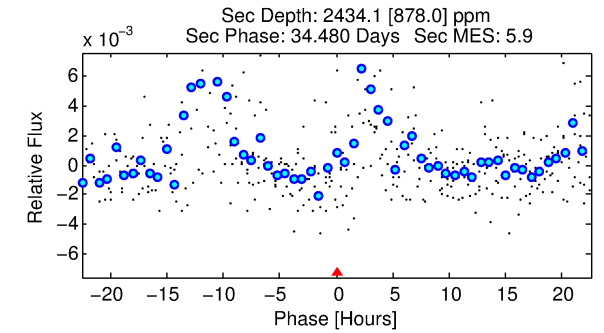
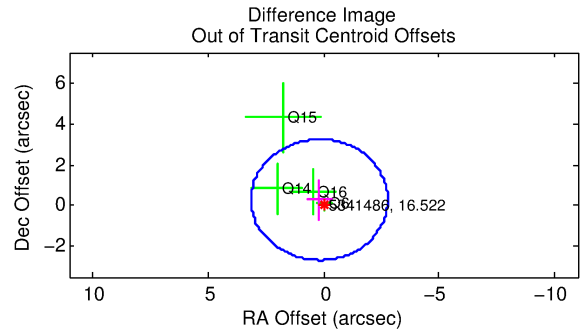
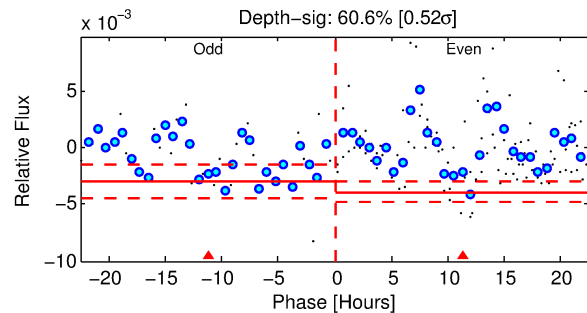
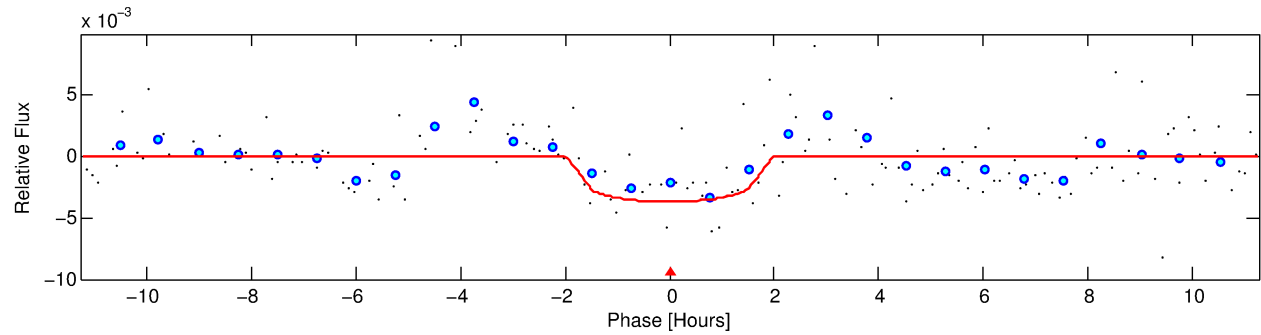
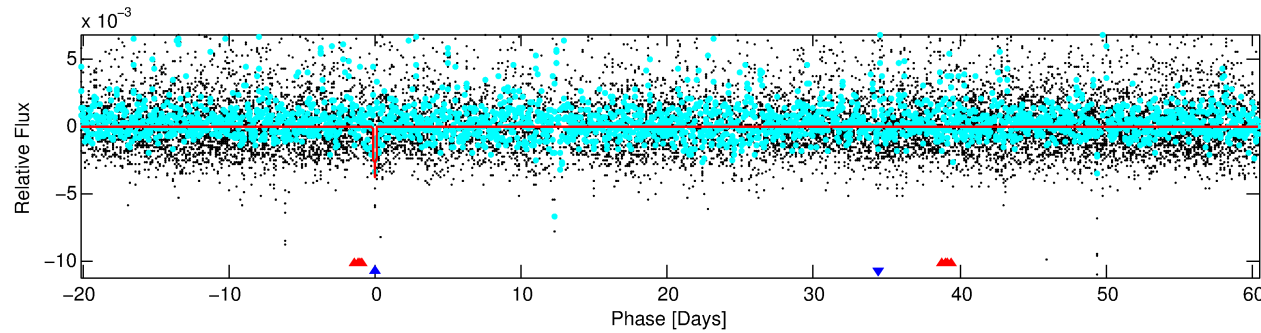
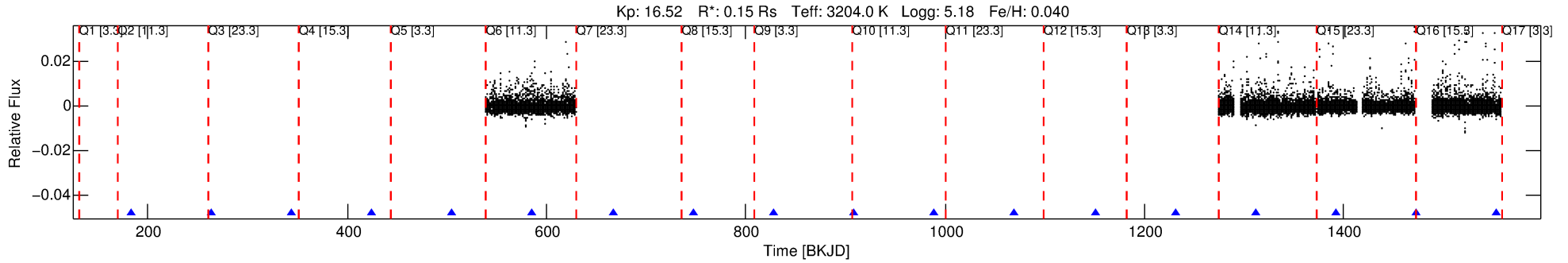
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005341486-02

No Significant Match Found

DV One-Page Summary

KIC: 5341486 Candidate: 2 of 2 Period: 80.625 d



DV Fit Results:

Period = 80.62512 [0.00115] d
Epoch = 182.8796 [0.0145] BKJD
Rp/R* = 0.0552 [0.0910]
a/R* = 172.85 [1211.39]
b = 0.02 [450.95]
Seff = 0.06 [0.02]
Teq = 129 [9] K
Rp = 0.93 [1.57] Re
a = 0.1869 [0.0414] AU
Ag = 53658.37 [178618.80] [0.30 σ]
Teffp = 3029 [2513] K [1.15 σ]

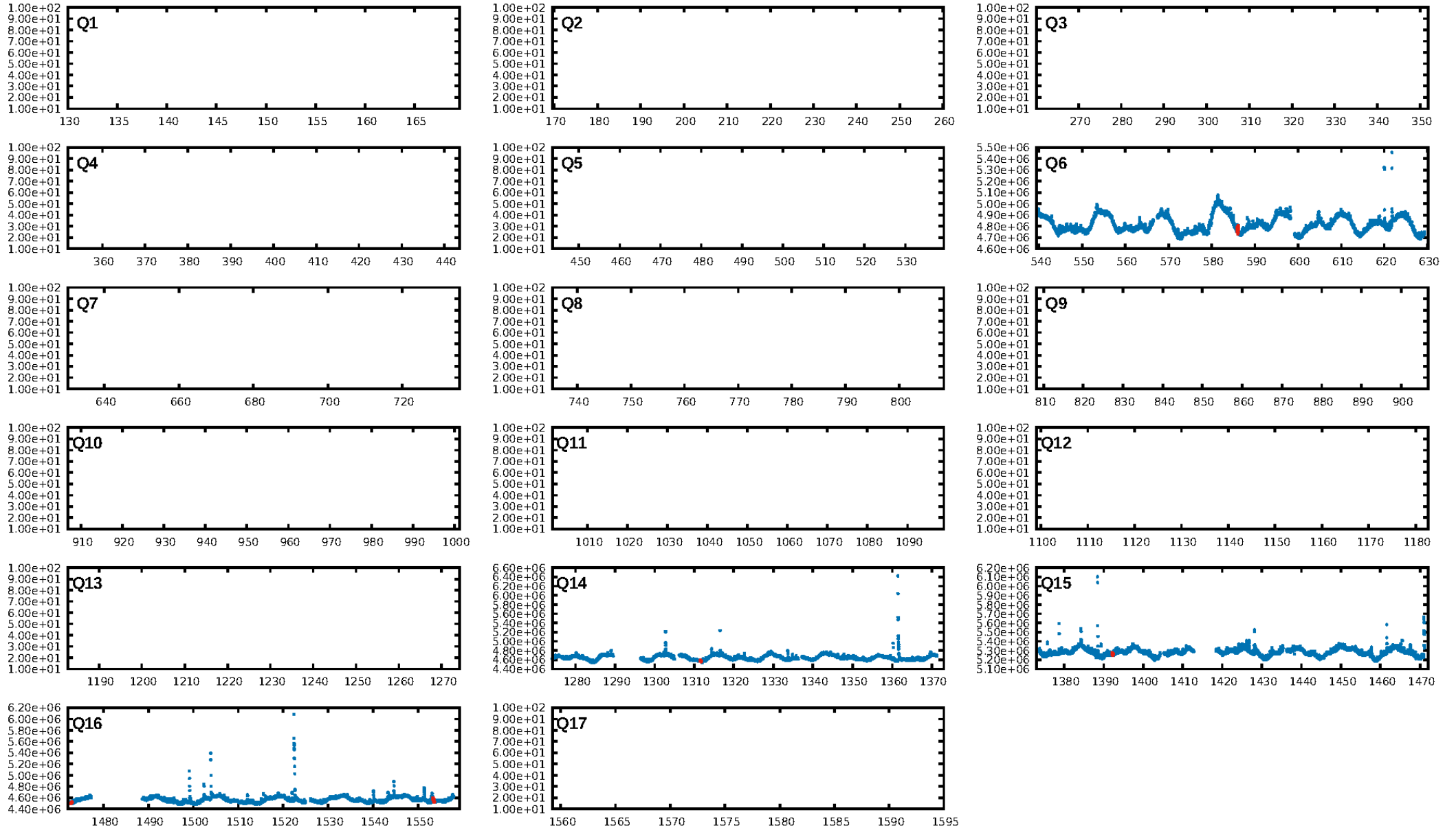
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [249.05 σ]
ModelChiSquare2-sig: 4.2%
ModelChiSquareGof-sig: 91.2%
Bootstrap-pfa: 3.46e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -13.64
Centroid-sig: 41.6%
Centroid-so: 1.376 arcsec [1.13 σ]
OotOffset-rm: 0.333 arcsec [0.34 σ]
KicOffset-rm: 0.064 arcsec [0.12 σ]
OotOffset-st: 2/1/1/0 [4]
KicOffset-st: 2/1/1/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

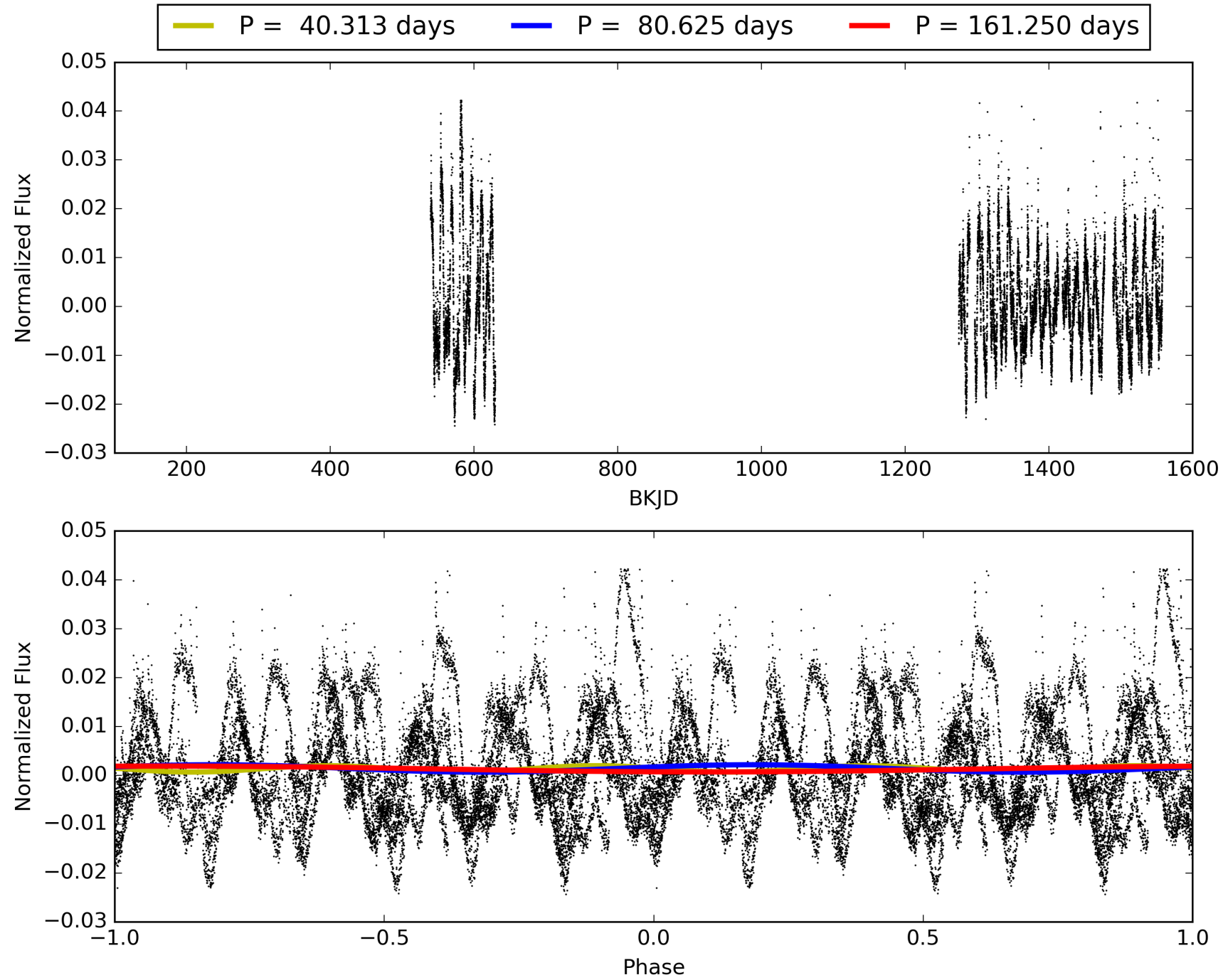
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:12:32 Z

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

TCE 005341486-02, PDC Light Curves

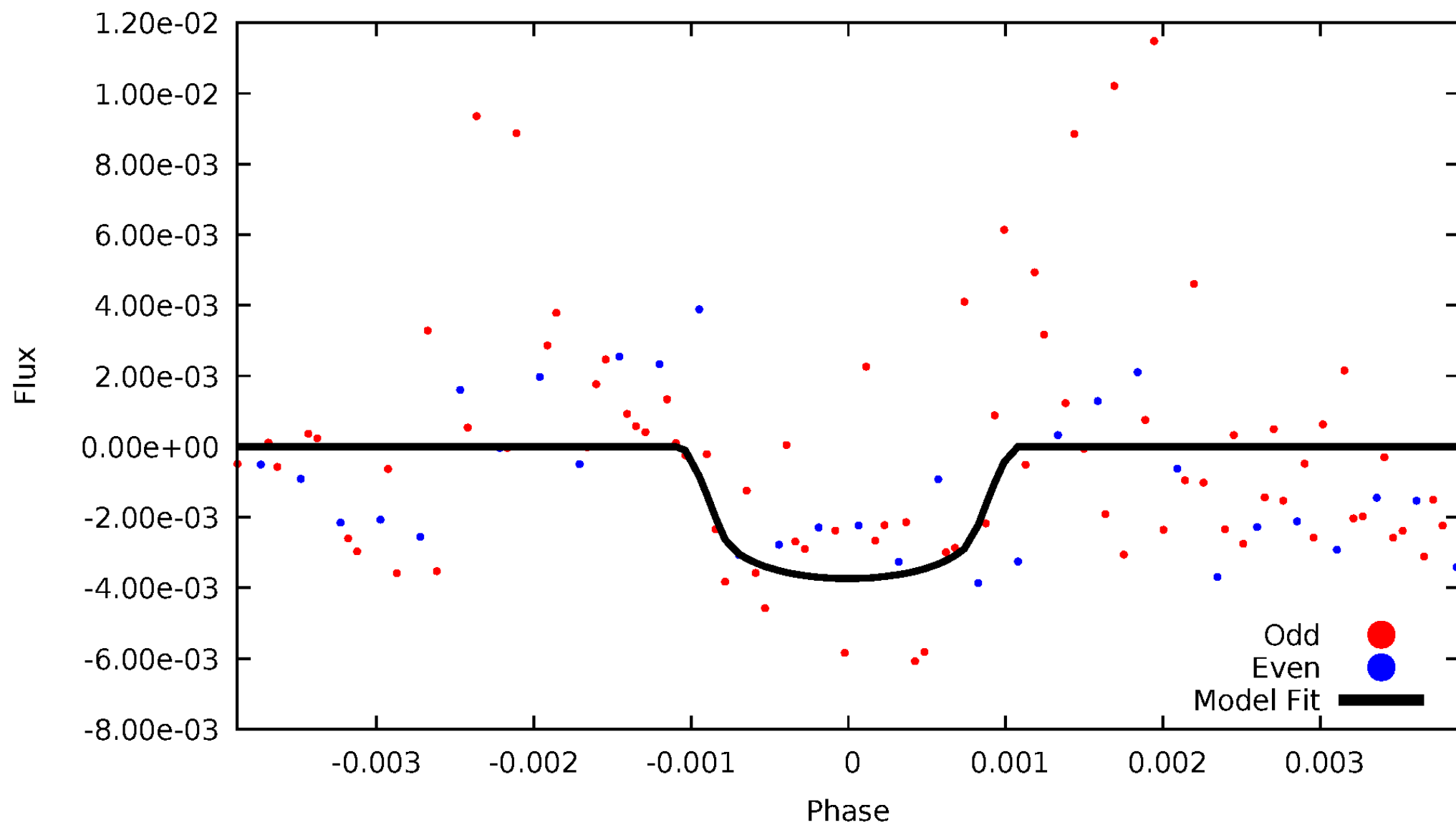


TCE 005341486-02



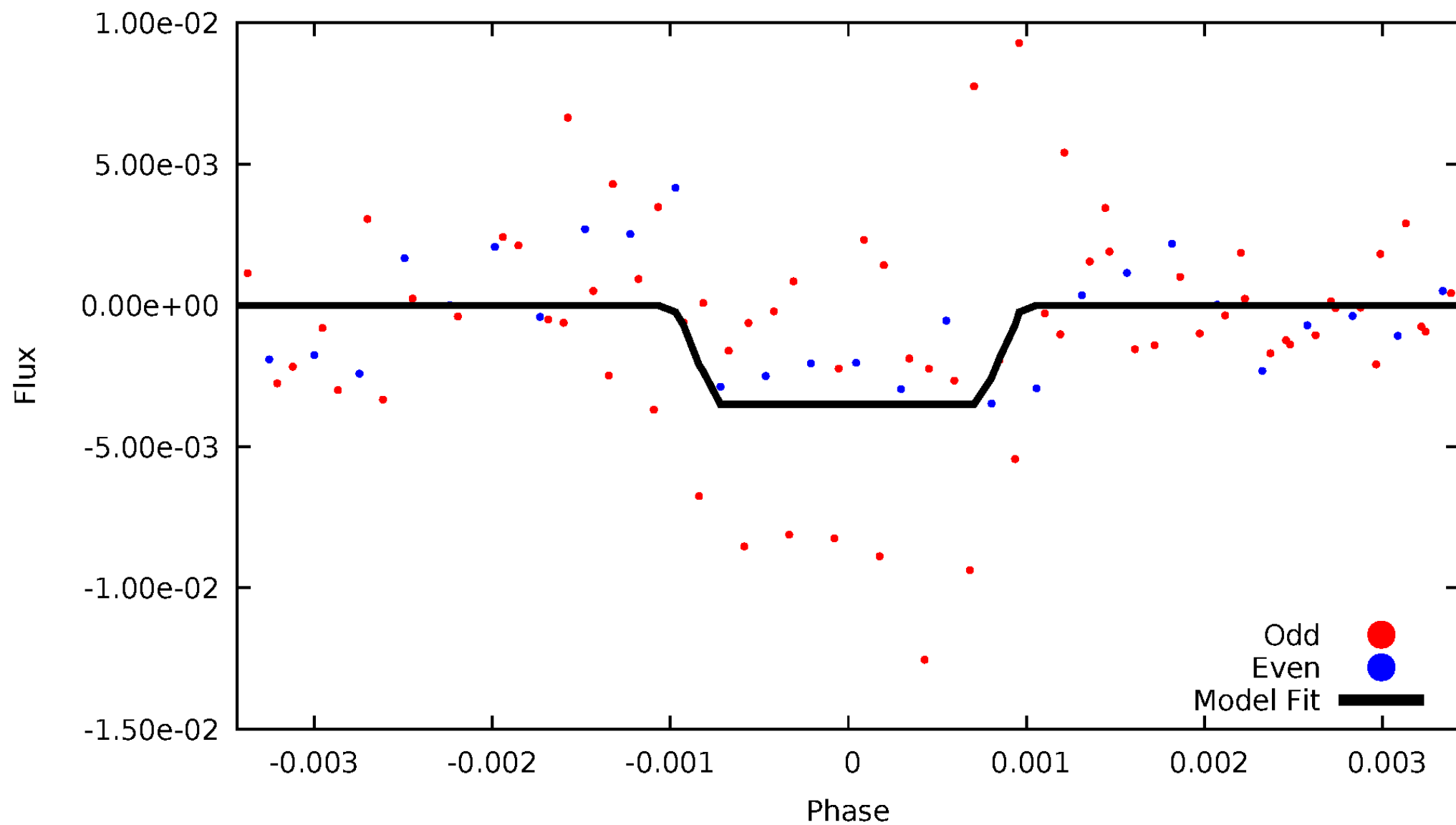
DV Odd/Even

TCE 005341486-02



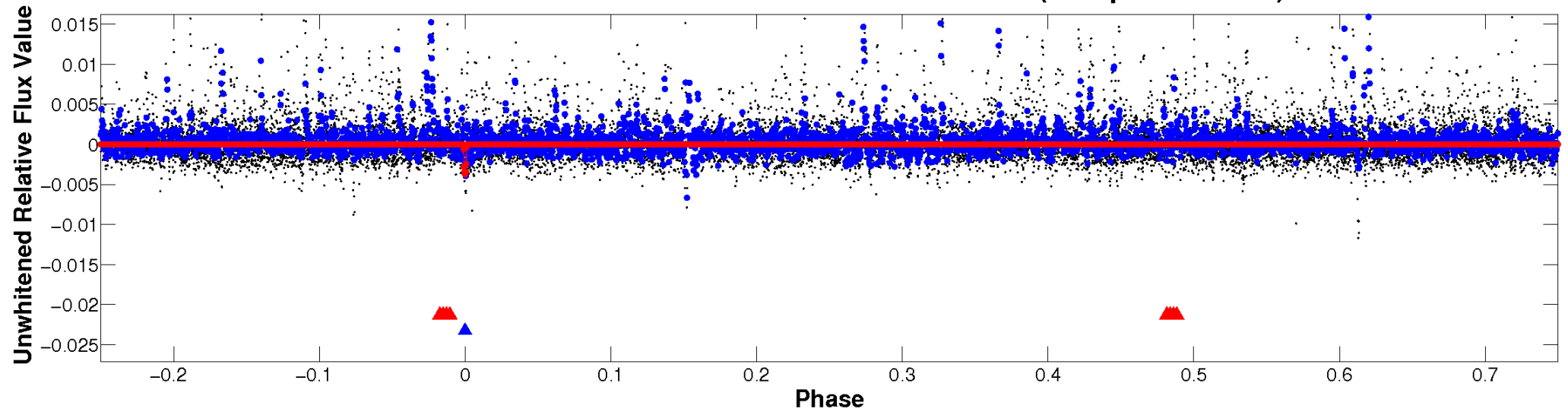
ALT Odd/Even

TCE 005341486-02

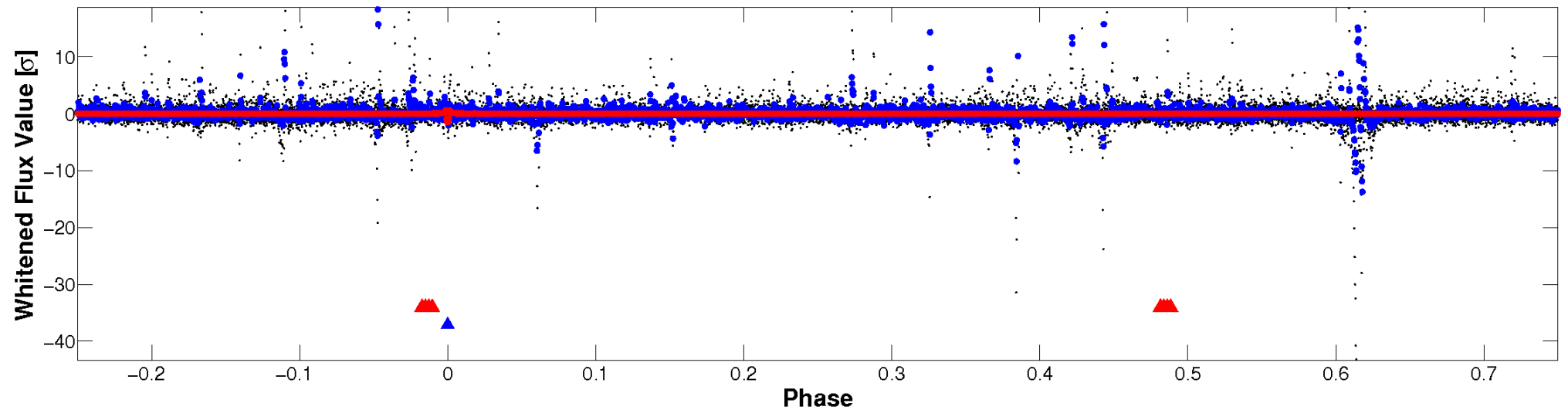


Non-Whitened Vs. Whitened Light Curve

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

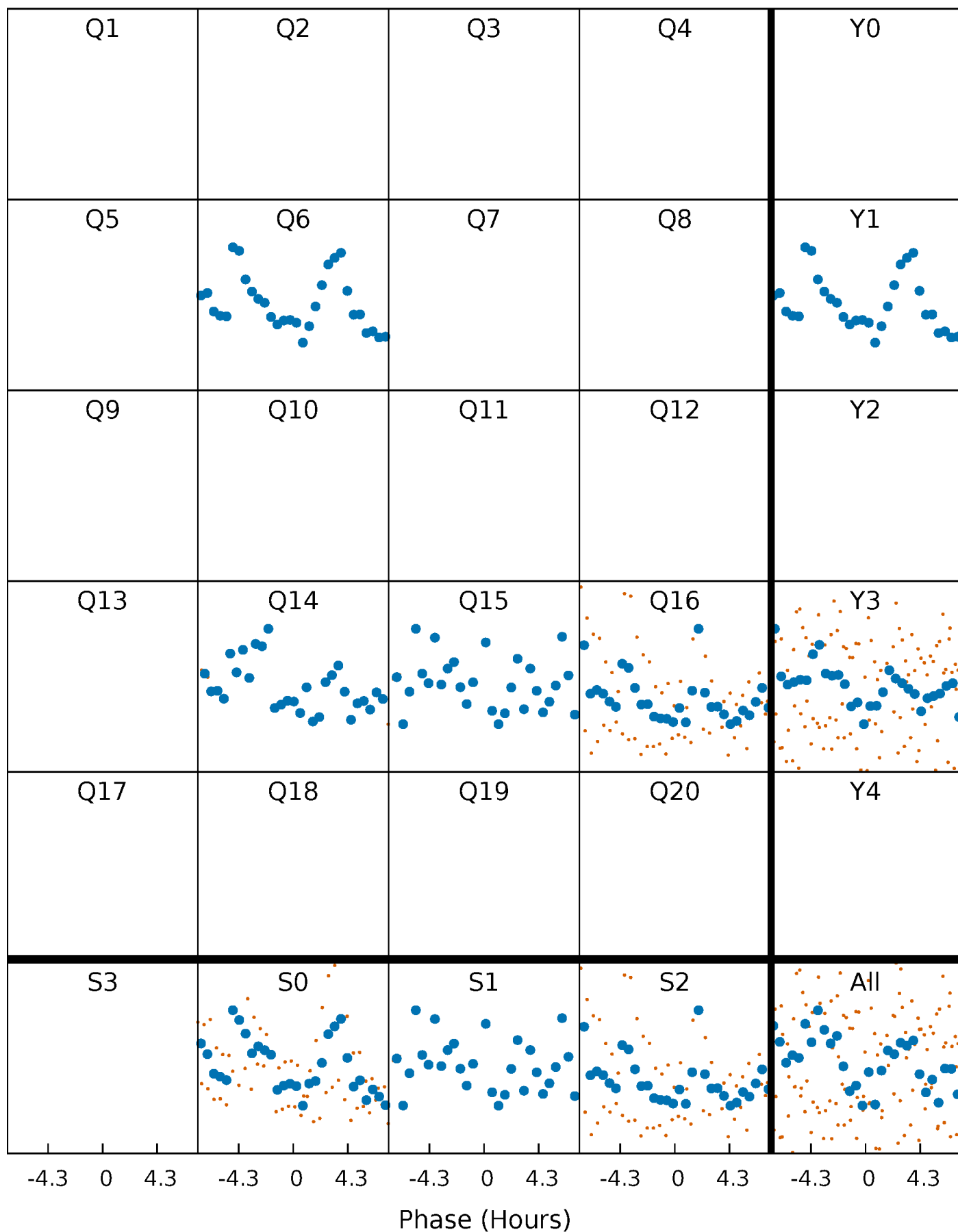


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



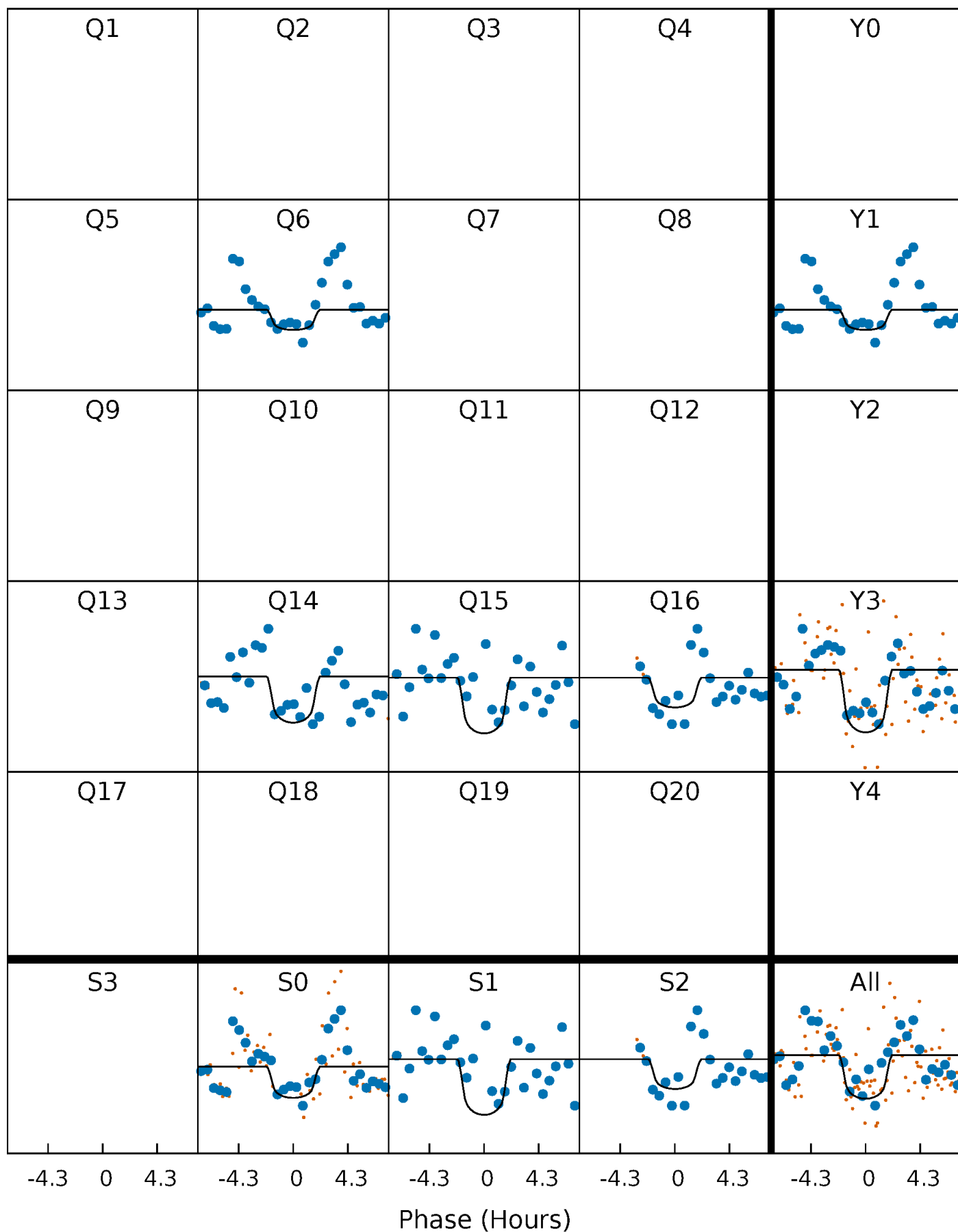
PDC Quarter-Phased Transit Curves

TCE 005341486-02 P= 80.625120 Days $T_0=182.879592$ (BKJD)



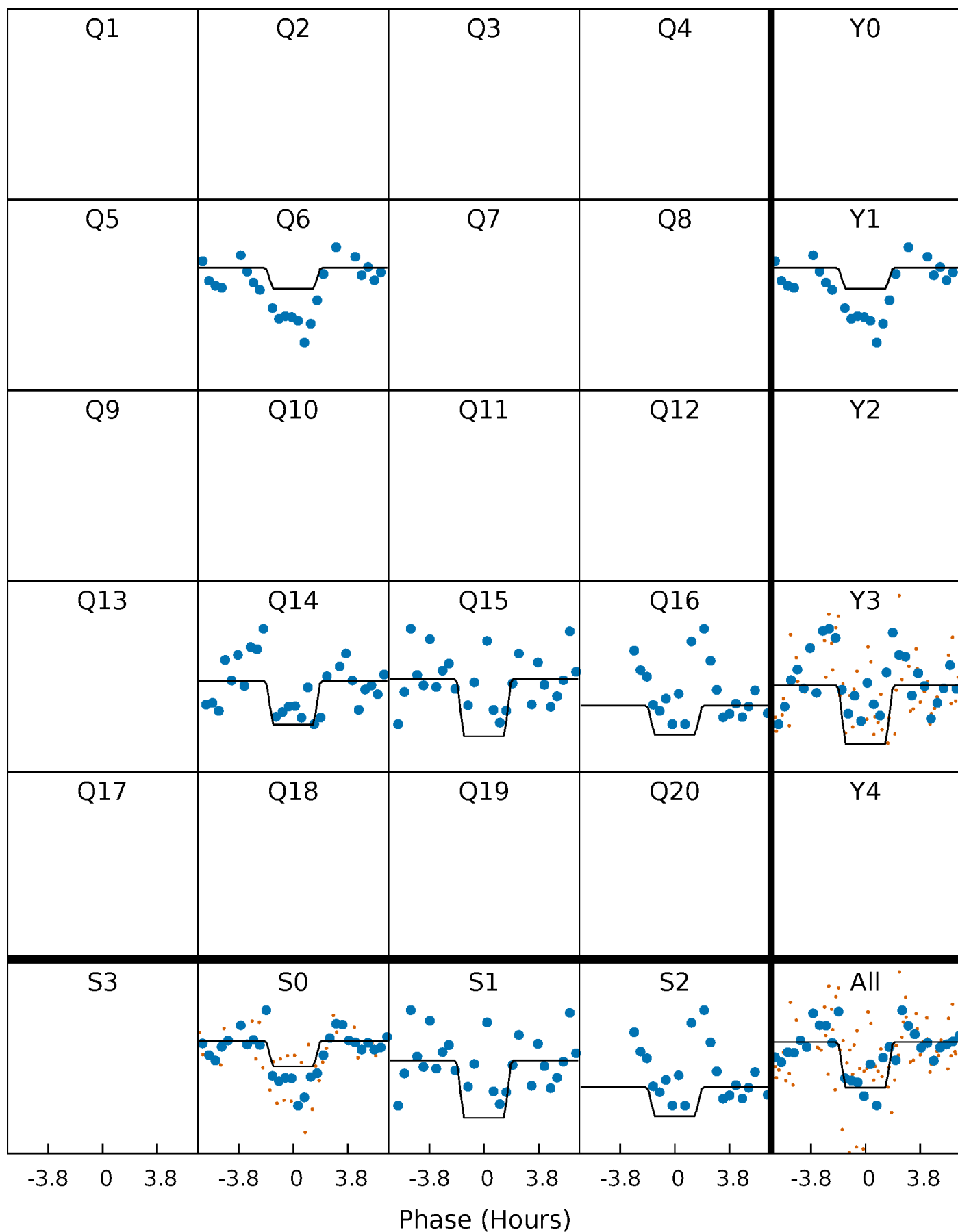
DV Quarter-Phased Transit Curves

TCE 005341486-02 P= 80.625120 Days $T_0=182.879592$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

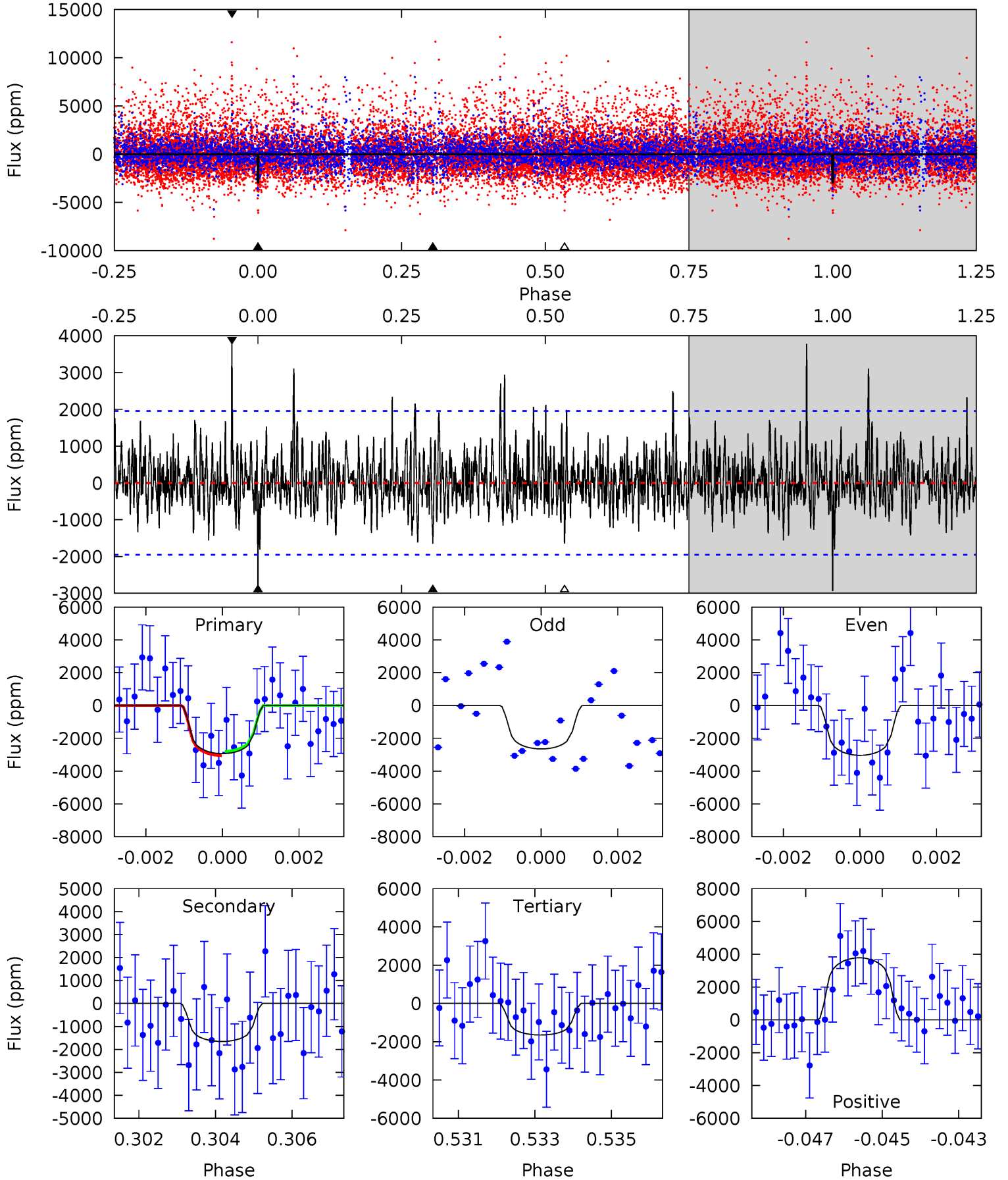
TCE 005341486-02 $P = 80.625367$ Days $T_0 = 182.877947$ (BKJD)



DV Model-Shift Uniqueness Test

005341486-02, P = 80.625120 Days, E = 182.879592 Days

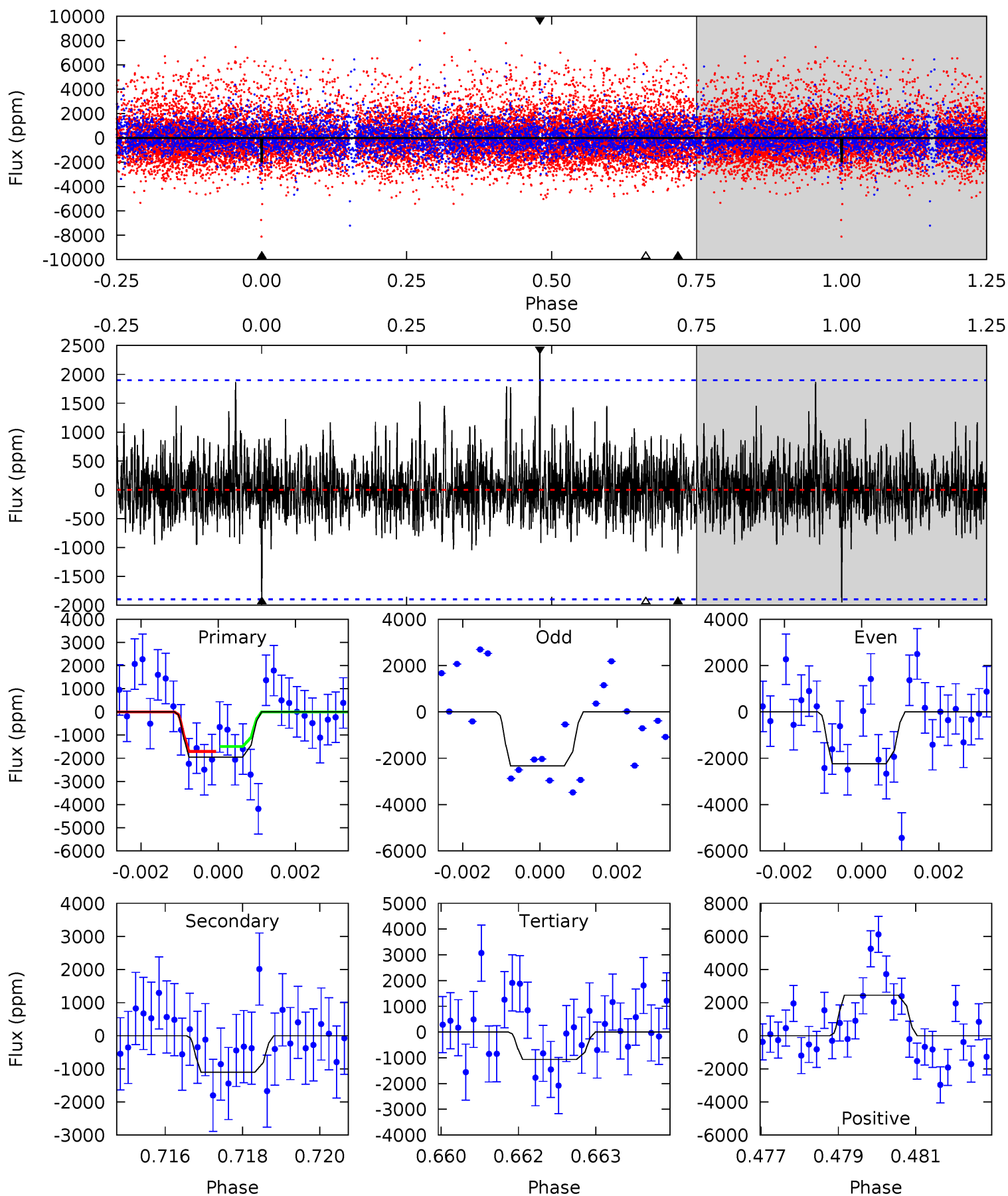
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.00	4.51	4.49	10.3	5.32	3.09	1.70	3.50	-2.30	0.01	-5.79	0.29	0.87	0.56	0.36



Alt Model-Shift Uniqueness Test

005341486-02, P = 80.625367 Days, E = 182.877947 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.48	3.10	3.00	6.90	5.34	3.11	1.11	2.49	-1.41	0.10	-3.80	0.11	1.81	0.56	0.29



Stellar Parameters For KIC 005341486

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3204^{+44}_{-31}	$5.184^{+0.045}_{-0.105}$	$0.040^{+0.200}_{-0.150}$	$0.155^{+0.048}_{-0.016}$	$0.134^{+0.048}_{-0.015}$	$50.600^{+12.170}_{-20.040}$
	+1%/-1%	+1%/-2%	+500%/-375%	+31%/-10%	+36%/-11%	+24%/-40%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005341486-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1654 ± 367	$1.51^{+1.45}_{-1.00}$	182^{+8}_{-5}	2601^{+1021}_{-373}	$13373^{+114587}_{-9767}$
Alt.	-1102 ± 355	$1.65^{+1.34}_{-1.07}$	182^{+8}_{-5}	2428^{+793}_{-309}	7752^{+54616}_{-5456}

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 $A_{obs} \gg 1.0$

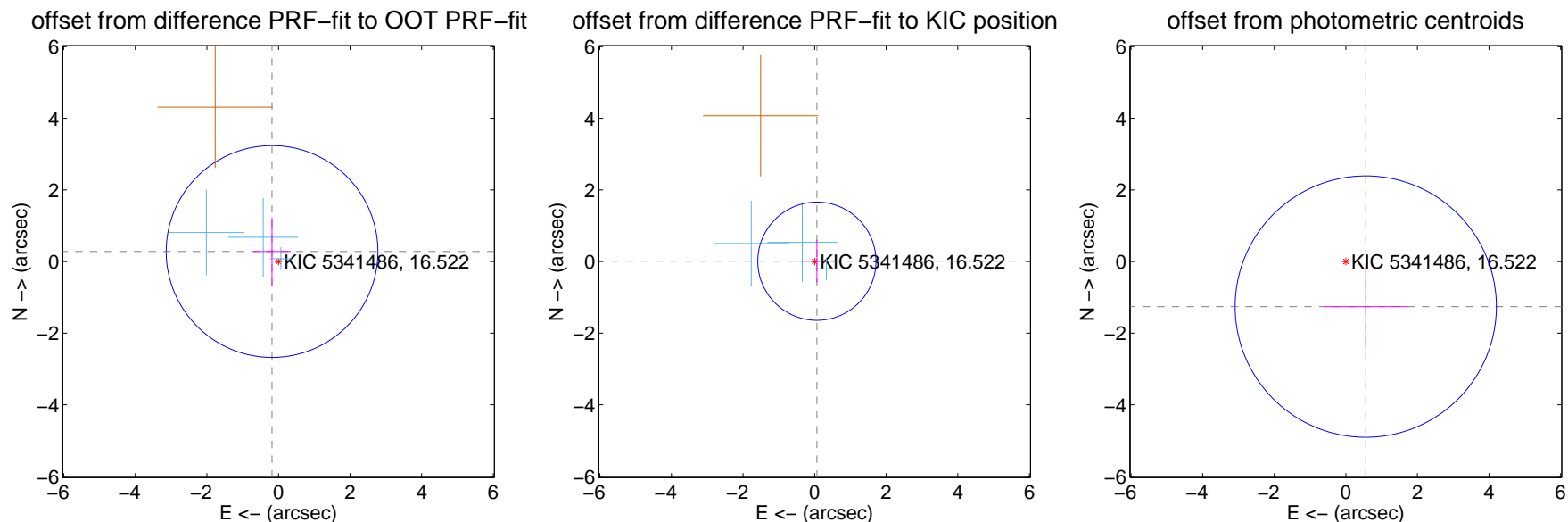
DV Centroid Data

Supplemental centroid analysis for 005341486-02. Kepler magnitude: 16.52. Transit SNR 6.91

There are 3 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.333 ± 0.986	0.34	0.180 ± 0.523	0.280 ± 0.950
PRF-fit source offset from KIC position	0.064 ± 0.550	0.12	-0.063 ± 0.549	0.009 ± 0.596
photometric centroid source offset	1.38 ± 1.22	1.13	-0.56 ± 1.18	-1.26 ± 1.22

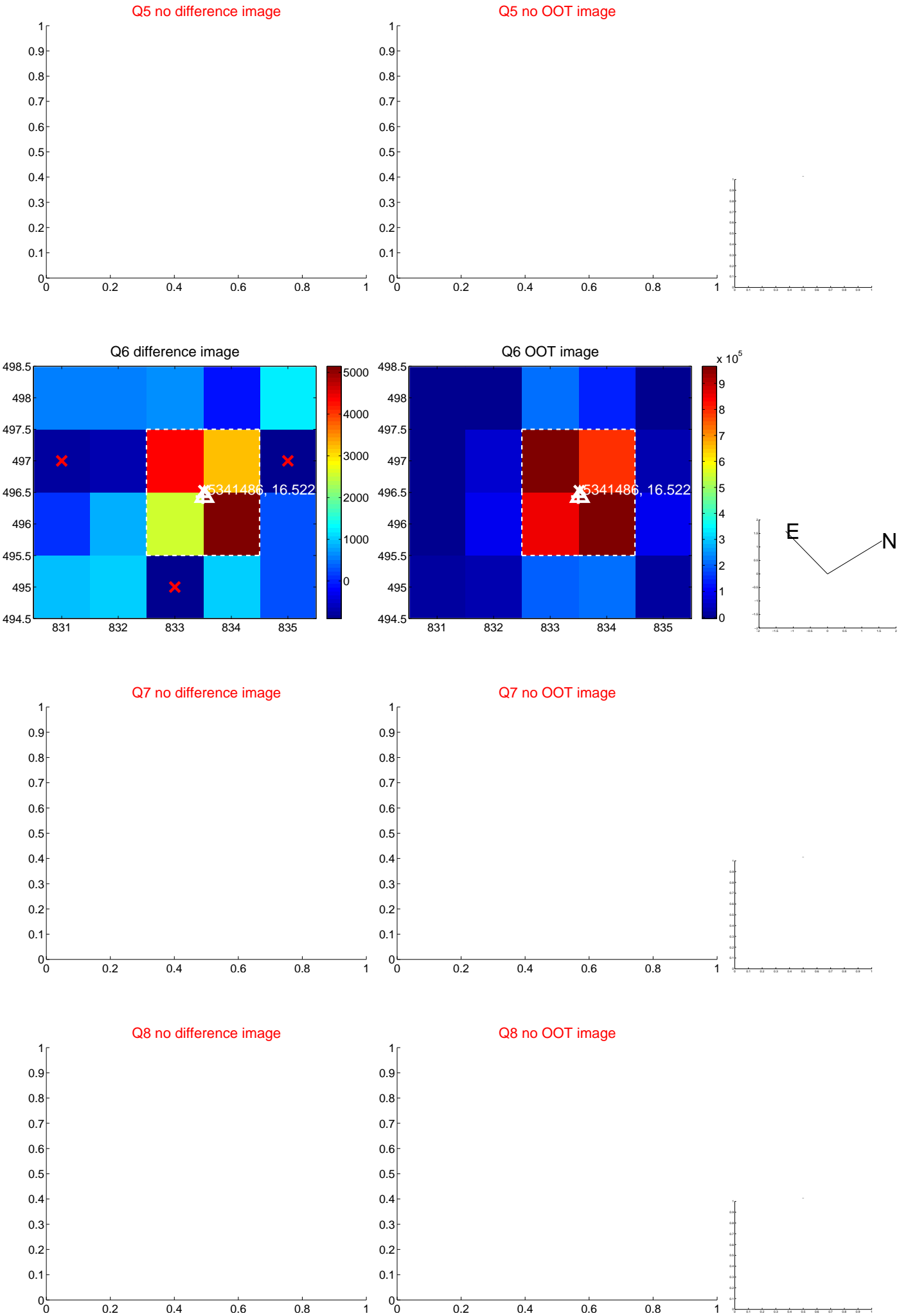


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



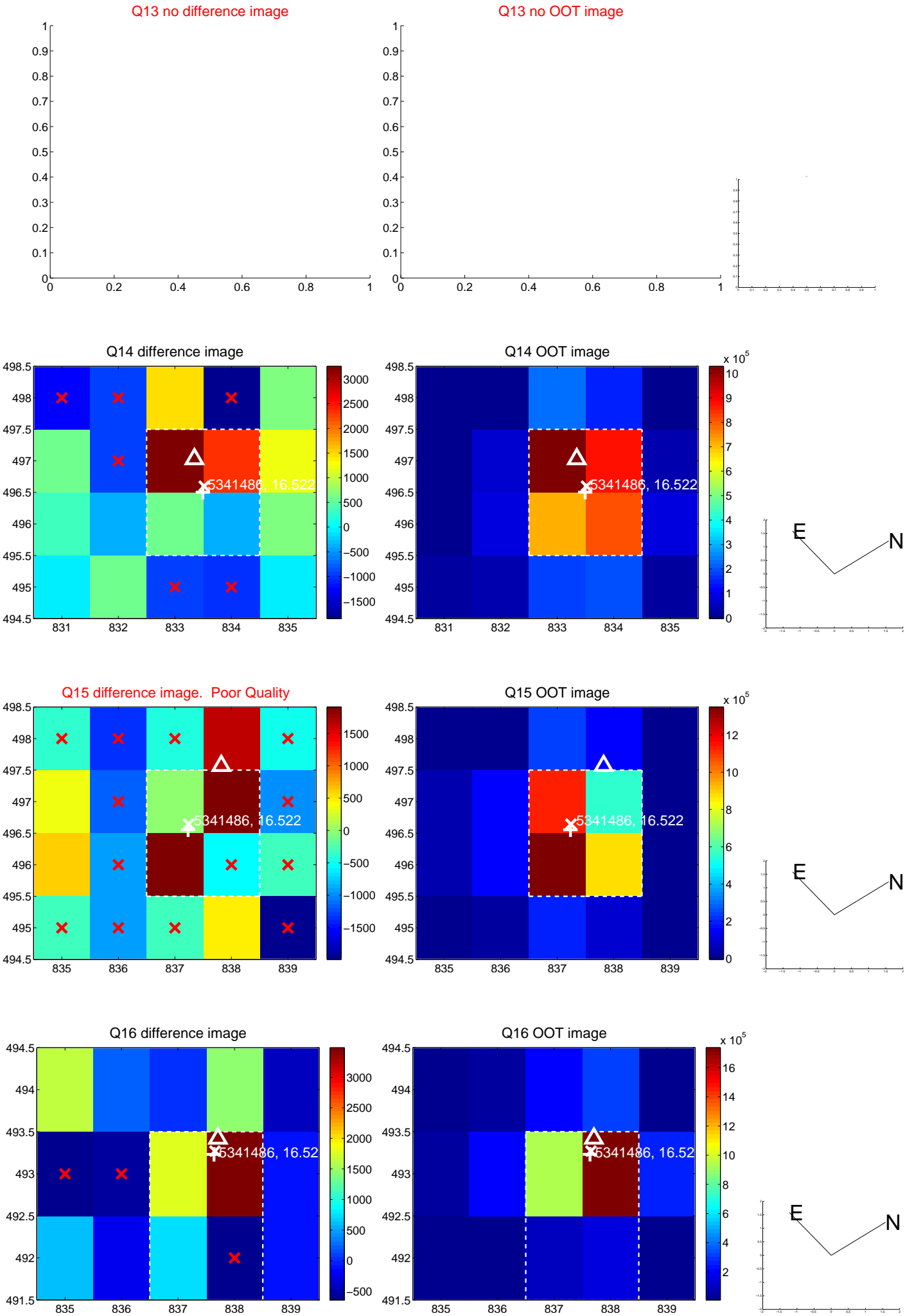
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



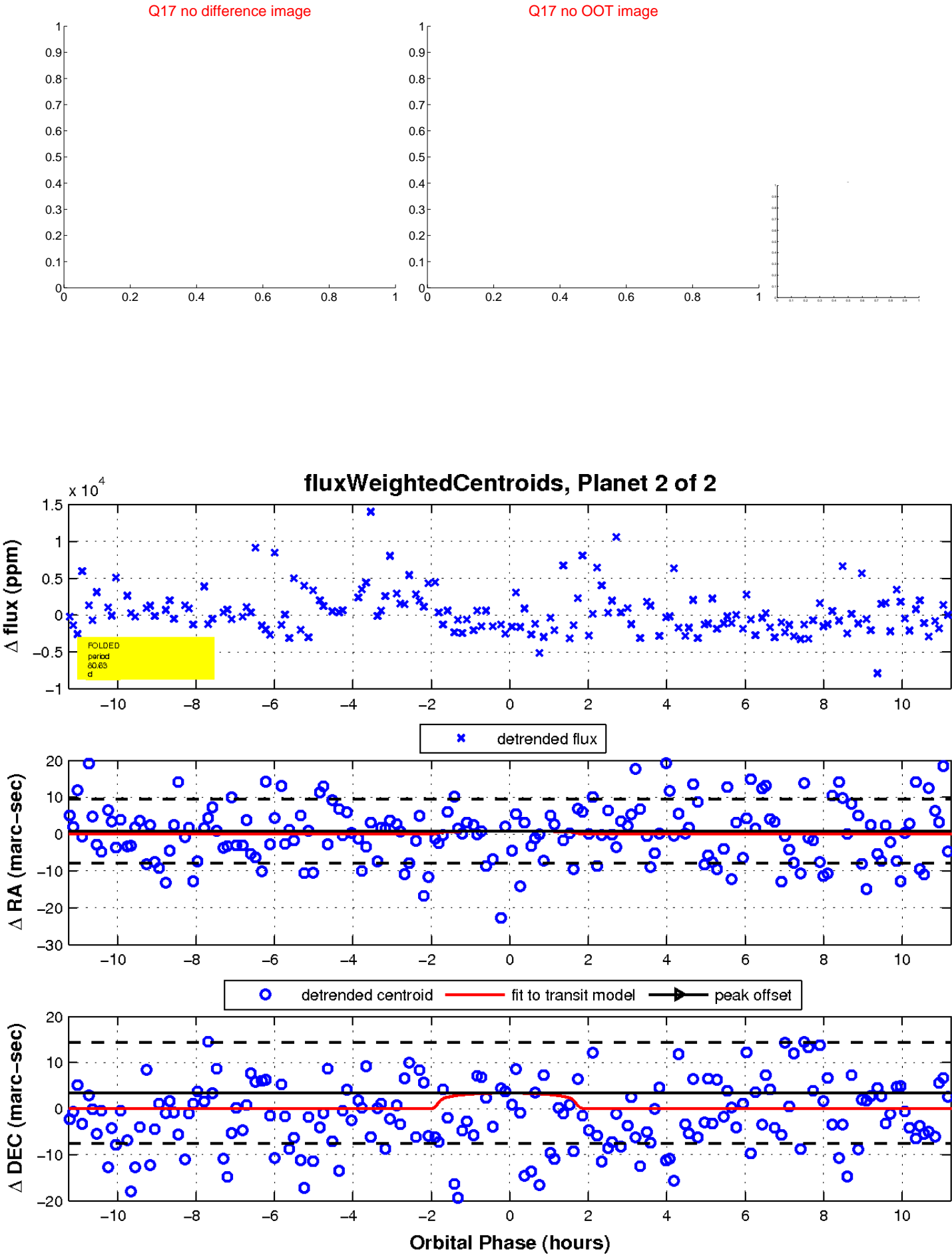
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

