

KIC 007350496

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})
007350496-01	OBS	No	541.110433	376.790625	959.0	4.907	16.3	10.6	2.15	5668	6.98	2.54
007350496-03	OBS	No	625.440339	192.432239	627.4	3.466	14.6	7.2	2.15	5668	5.85	2.10
007350496-04	OBS	No	334.280429	378.724092	902.1	6.178	12.0	11.9	2.15	5668	7.76	4.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007350496-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
007350496-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
007350496-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

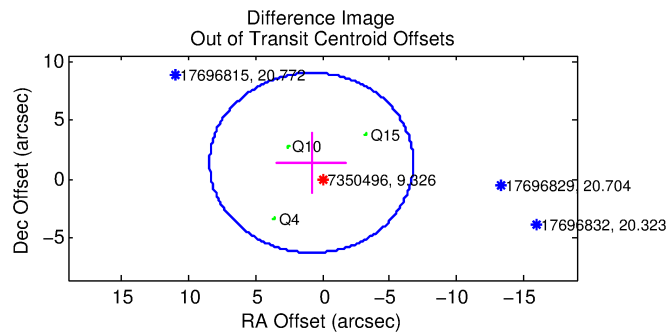
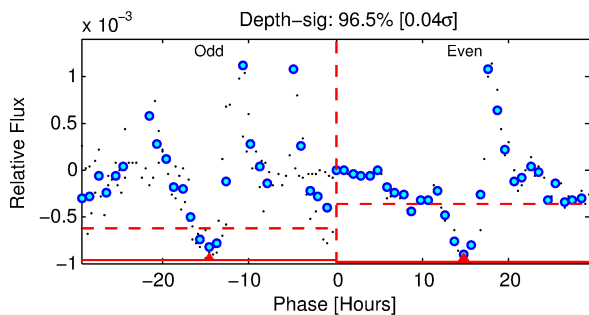
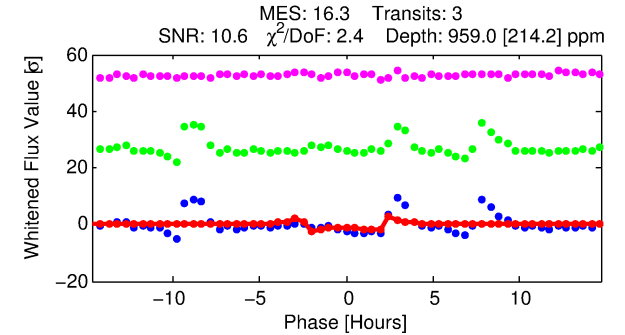
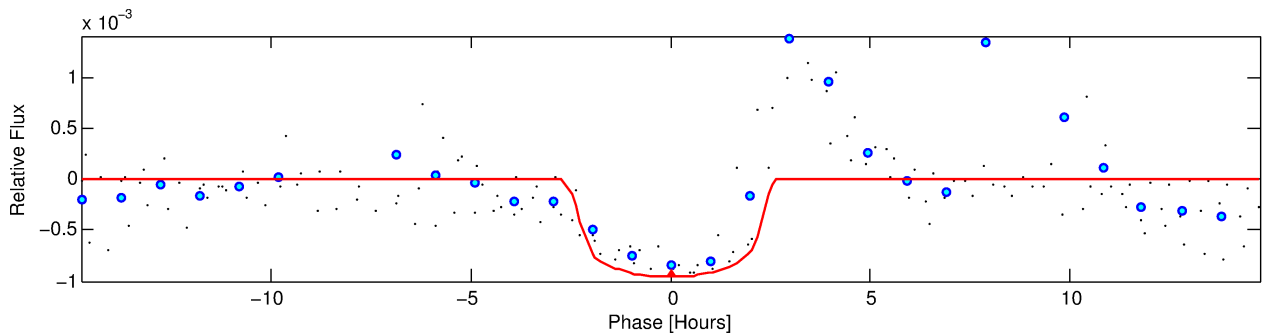
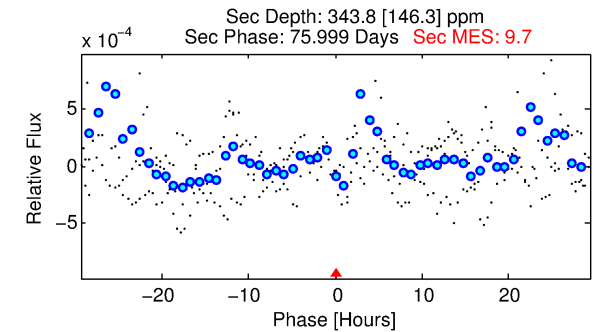
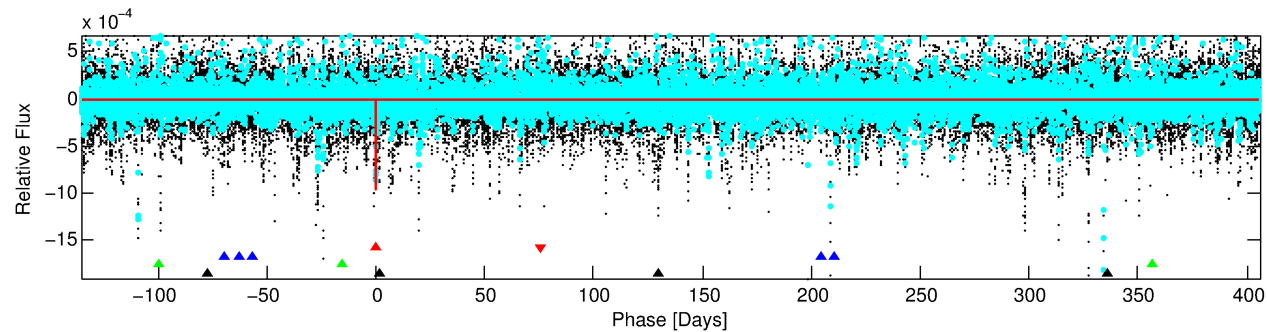
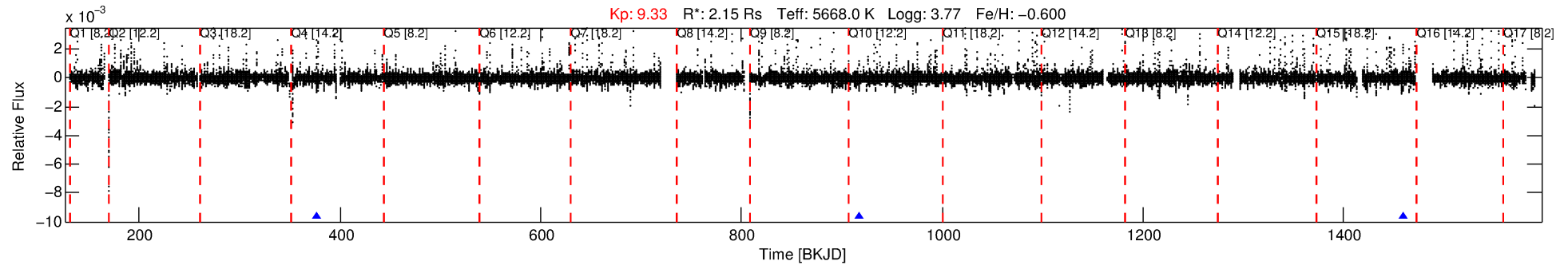
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007350496-01

No Significant Match Found

DV One-Page Summary

KIC: 7350496 Candidate: 1 of 4 Period: 541.110 d



DV Fit Results:

Period = 541.11043 [0.00519] d
Epoch = 376.7906 [0.0081] BKJD
Rp/R* = 0.0298 [0.0206]
a/R* = 687.59 [2134.68]
b = 0.63 [3.02]
Seff = 2.55 [3.15]
Teff = 322 [100] K
Rp = 6.98 [6.37] Re
a = 1.2953 [0.9140] AU
Ag = 6507.83 [12355.88] [0.53σ]
Teffp = 4473 [1622] K [2.55σ]

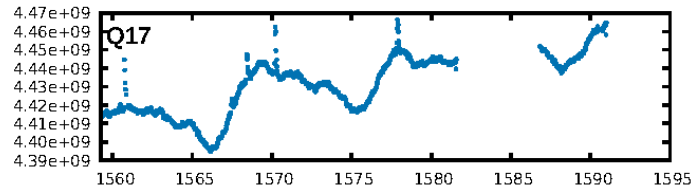
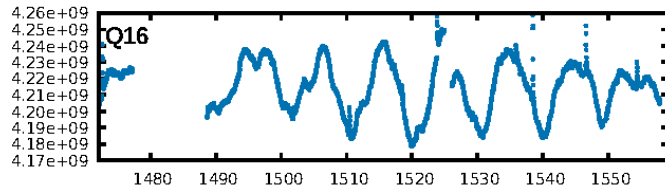
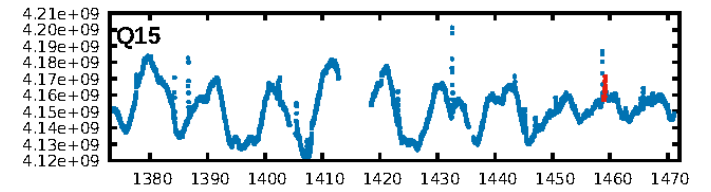
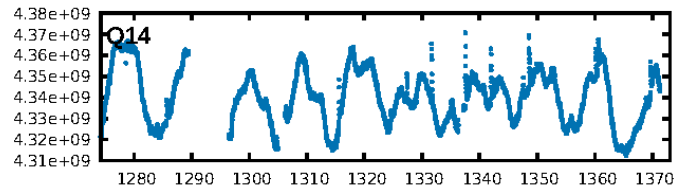
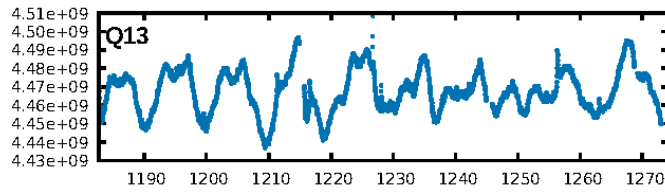
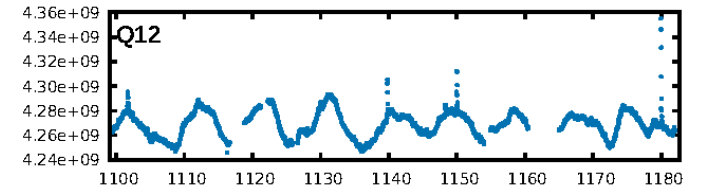
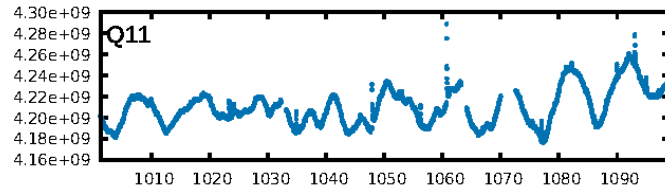
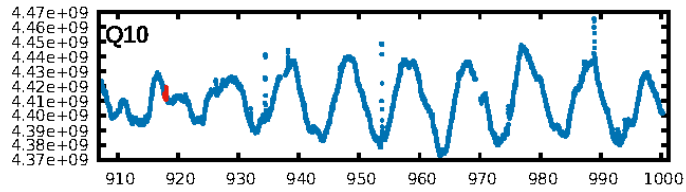
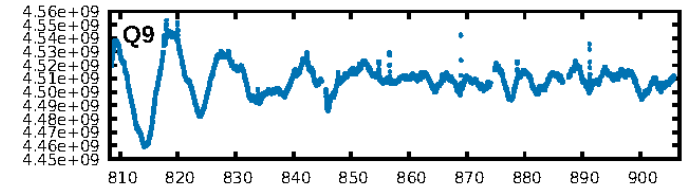
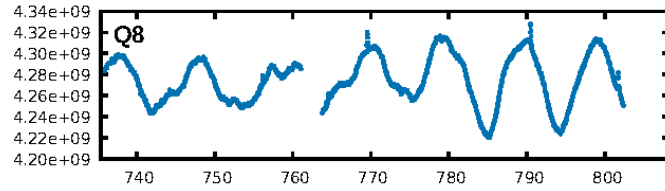
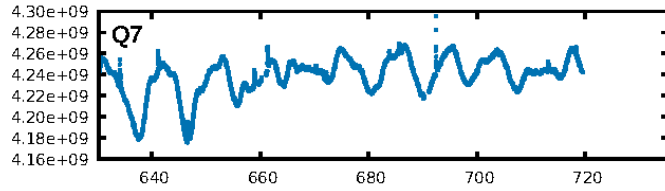
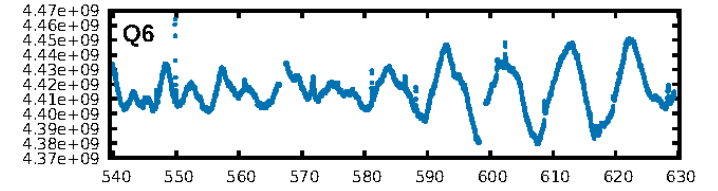
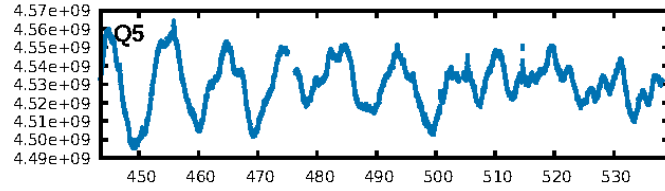
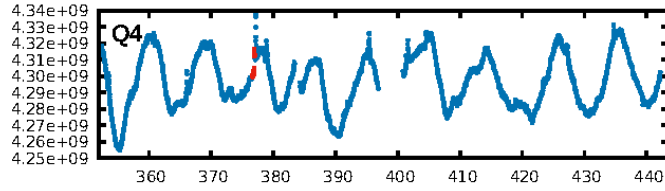
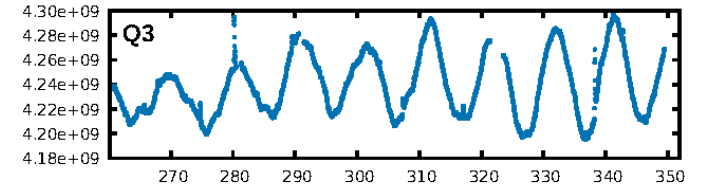
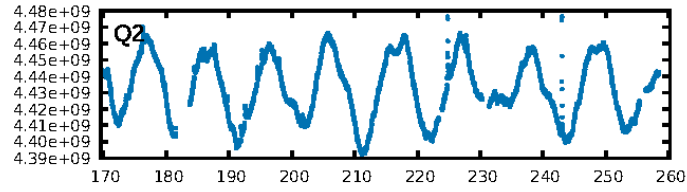
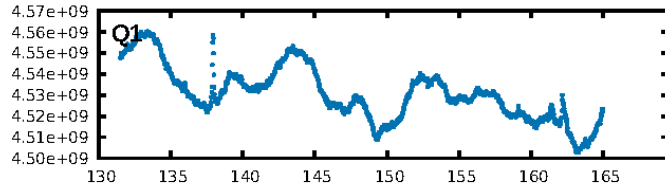
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [629.19σ]
LongPeriod-sig: 100.0% [336.89σ]
ModelChiSquare2-sig: 2.3%
ModelChiSquareGof-sig: 10.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 2.2%
Centroid-so: 1.231 arcsec [2.83σ]
OotOffset-rm: 1.629 arcsec [0.64σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 1.805 arcsec [0.62σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

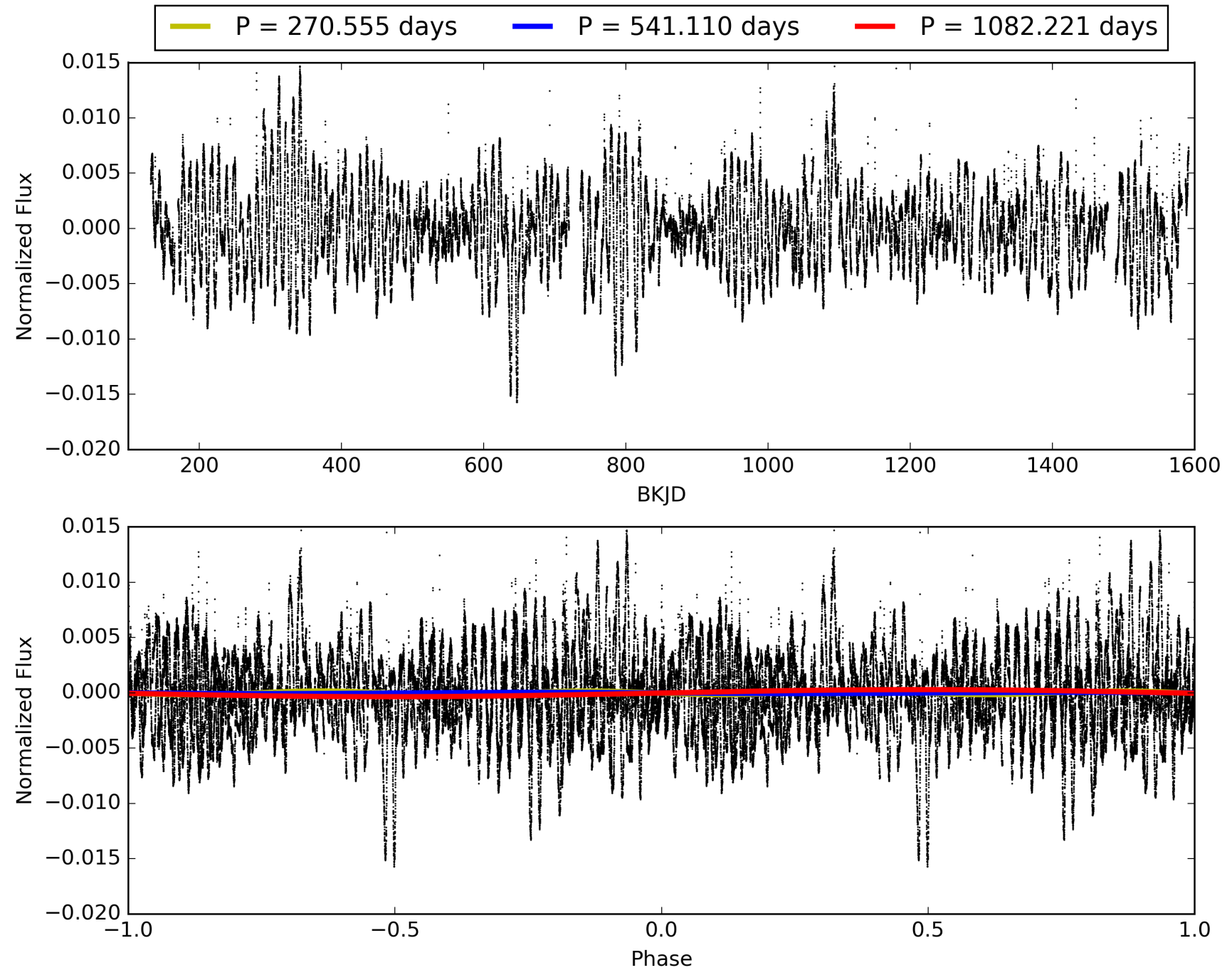
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007350496-01, PDC Light Curves

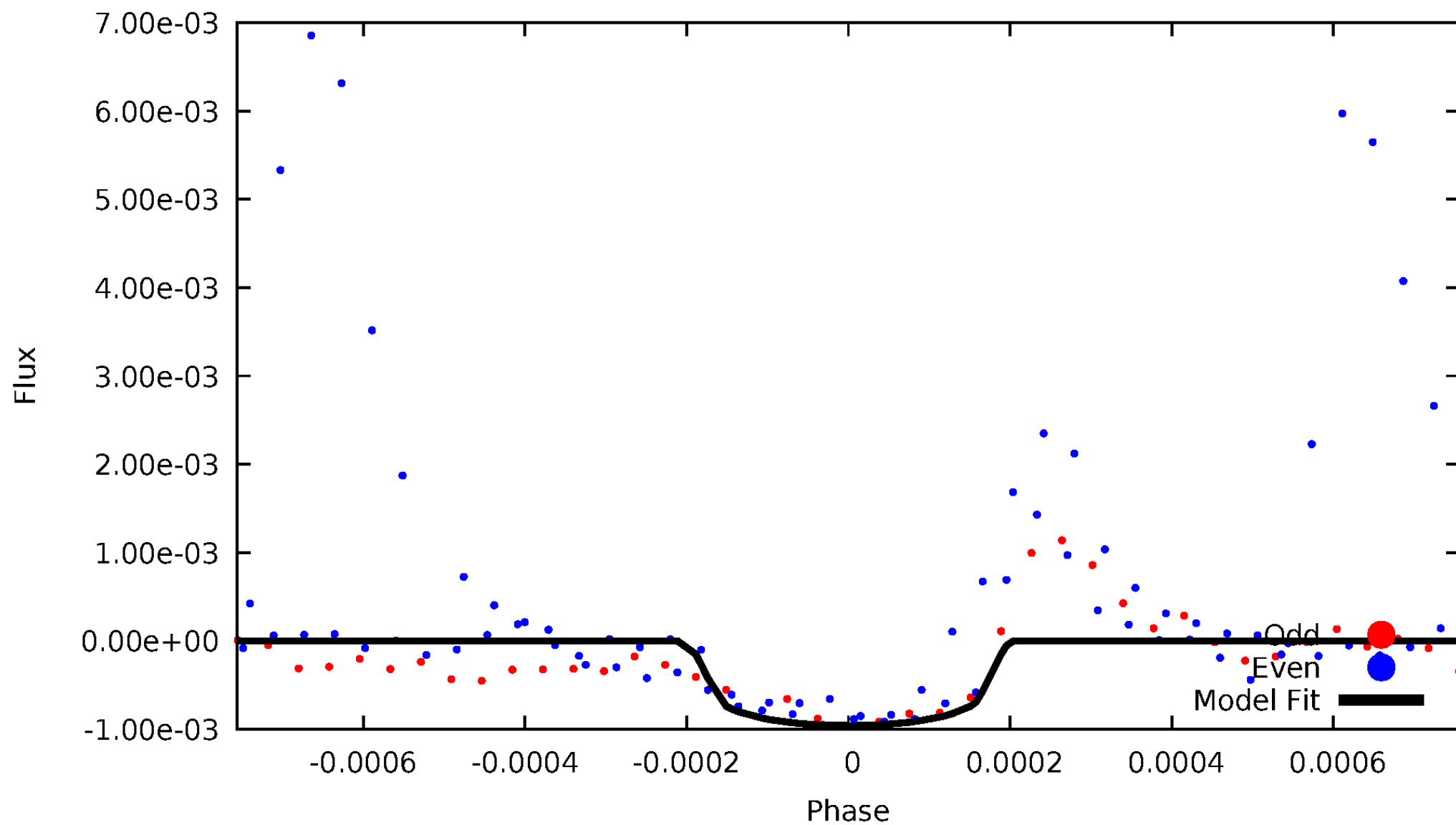


TCE 007350496-01



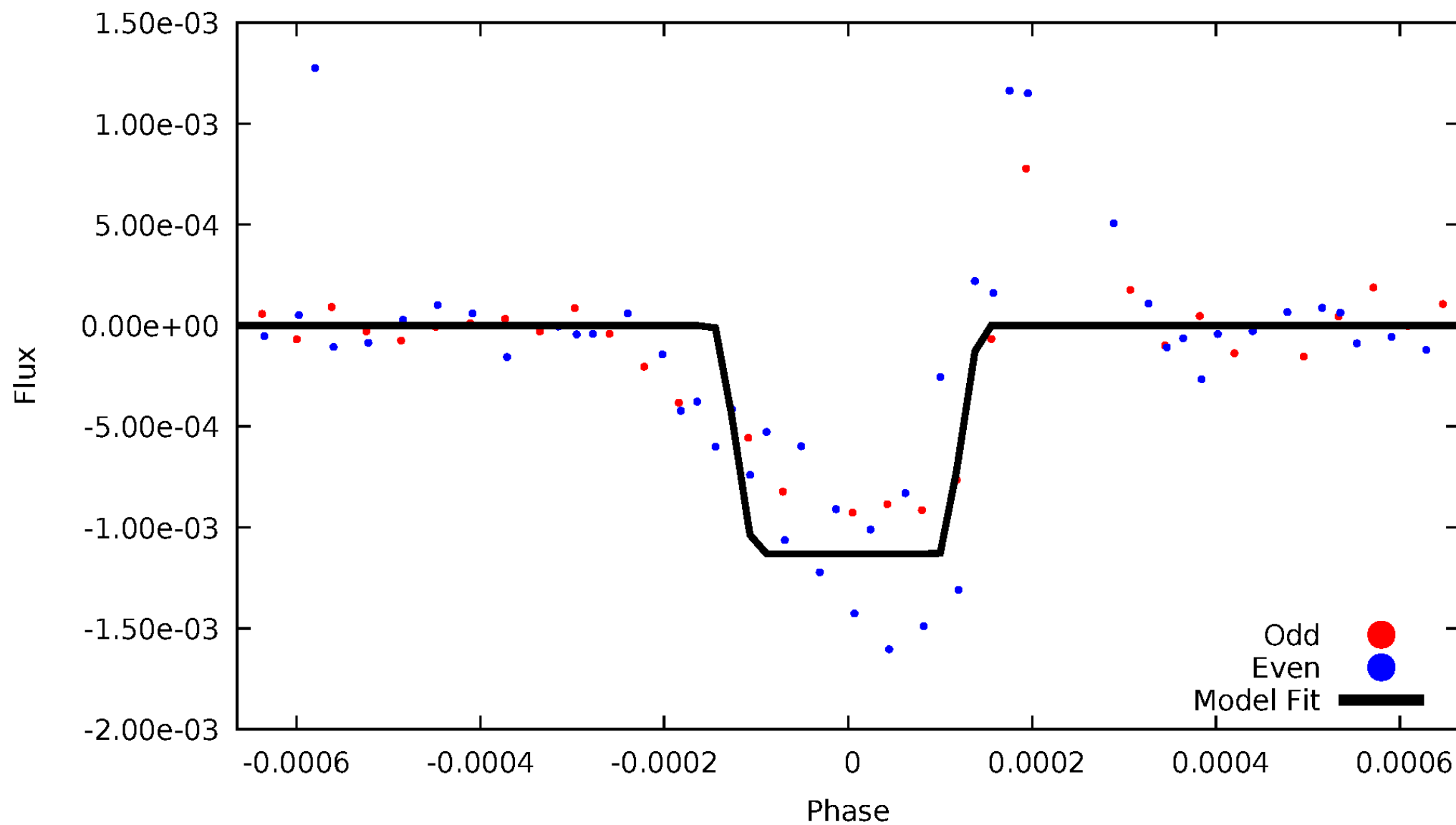
DV Odd/Even

TCE 007350496-01

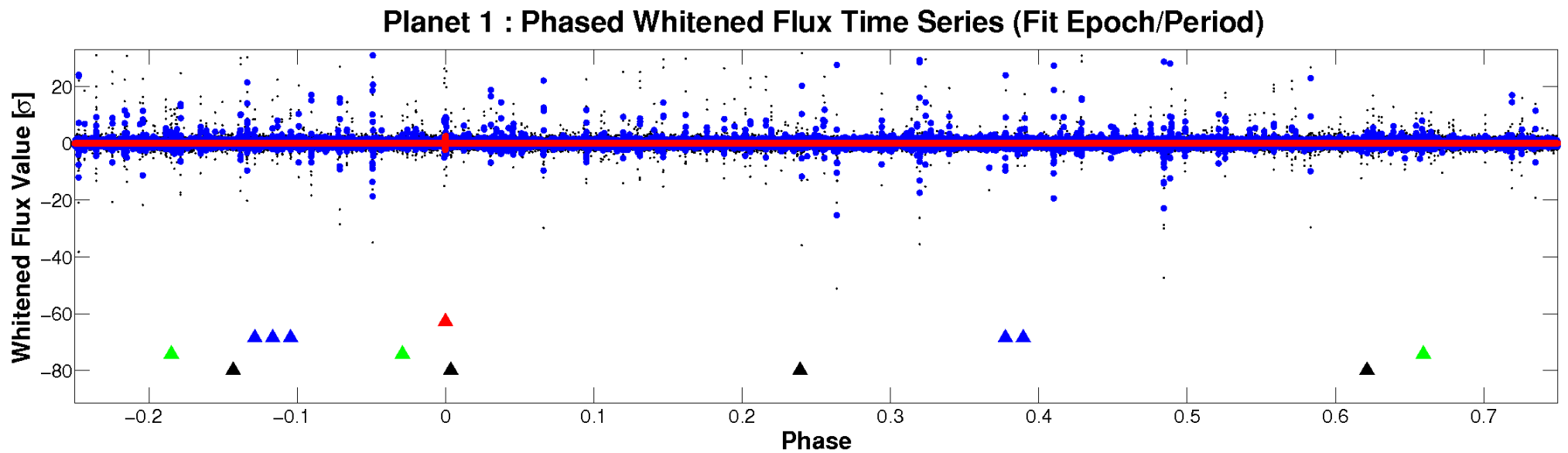
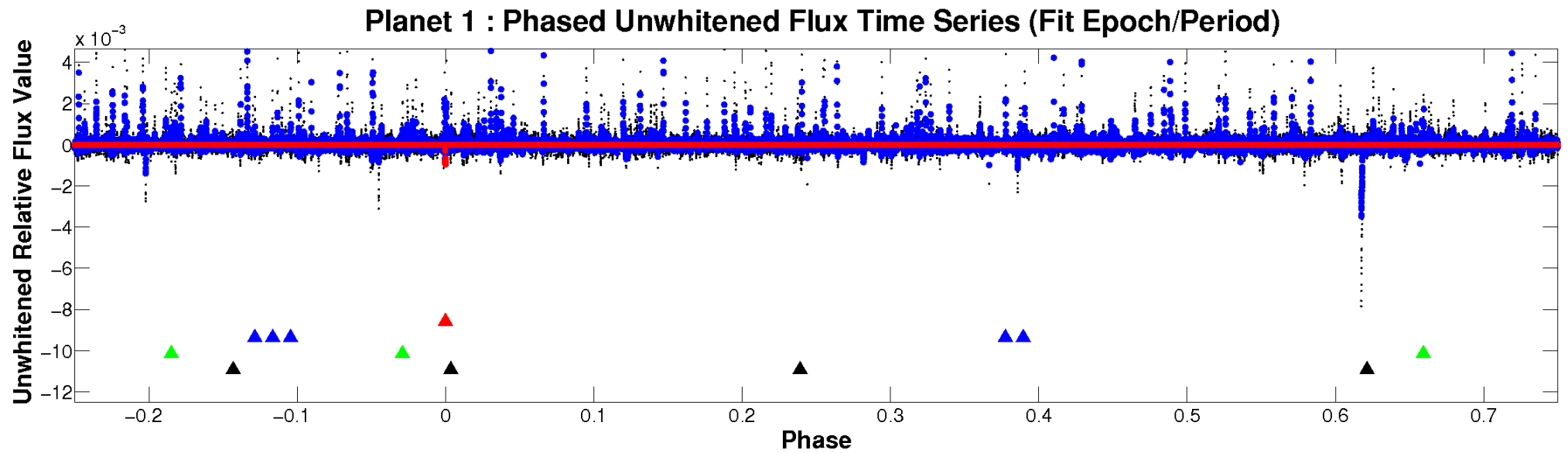


ALT Odd/Even

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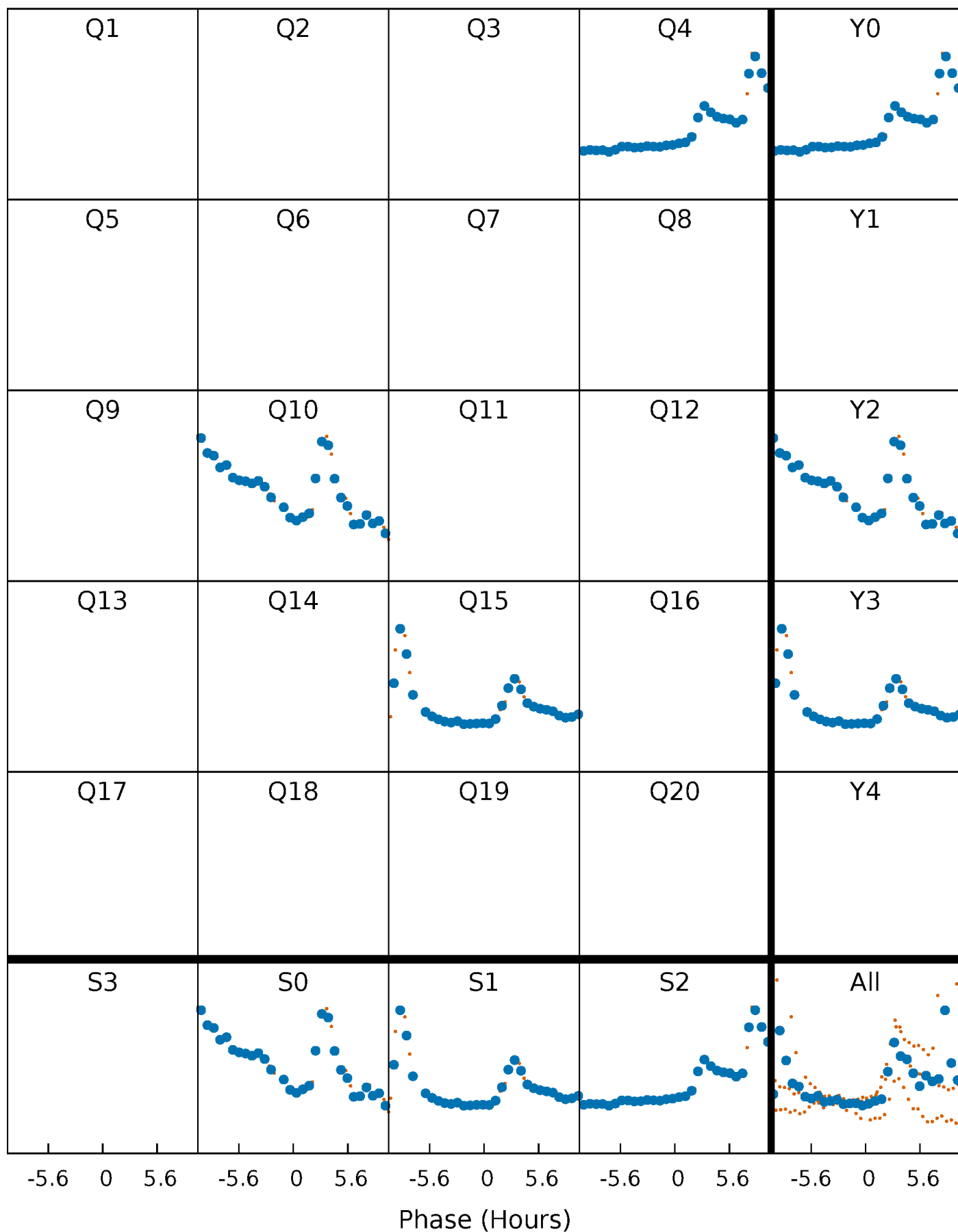


Non-Whitened Vs. Whitened Light Curve



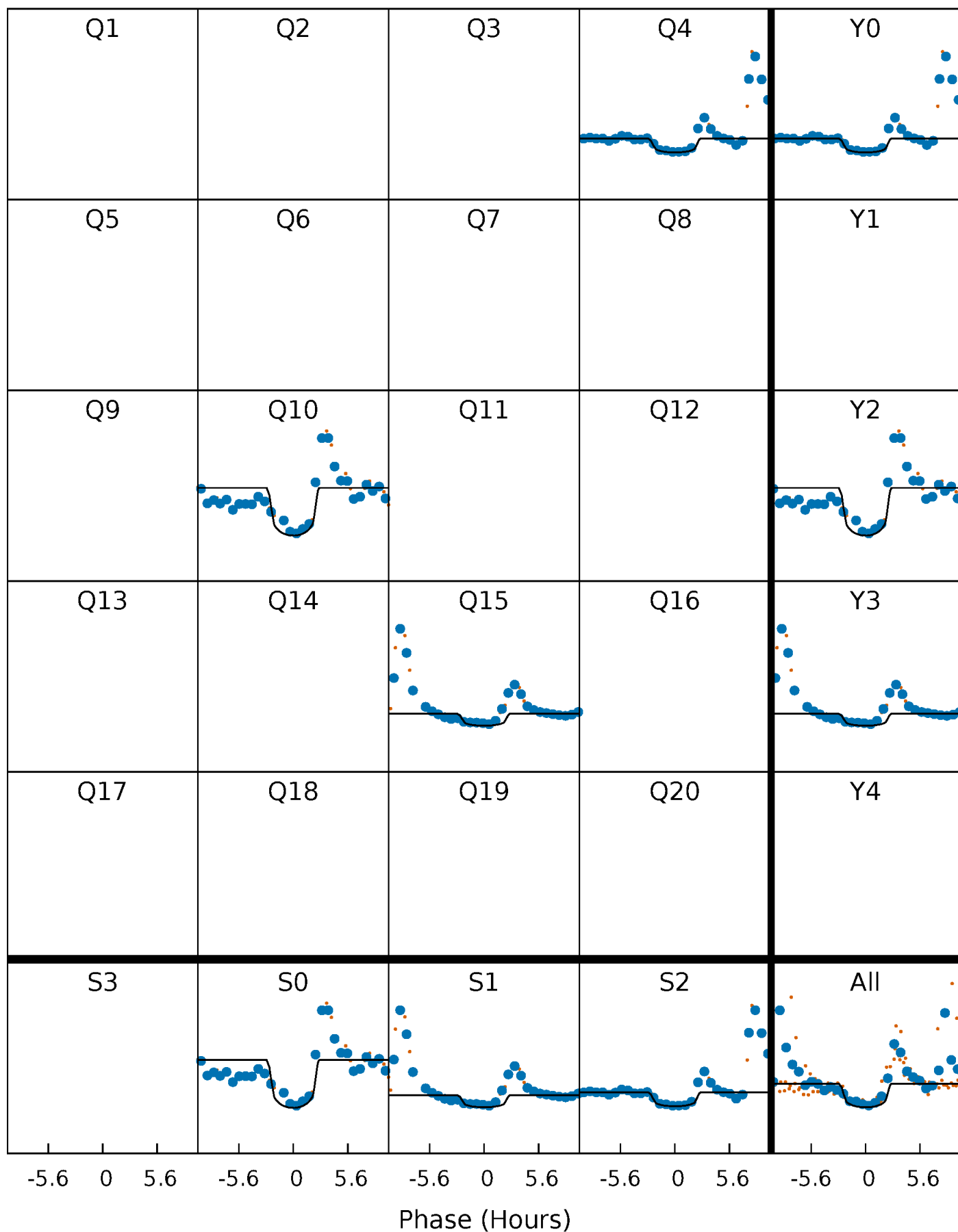
PDC Quarter-Phased Transit Curves

TCE 007350496-01 P=541.110433 Days $T_0=376.790625$ (BKJD)



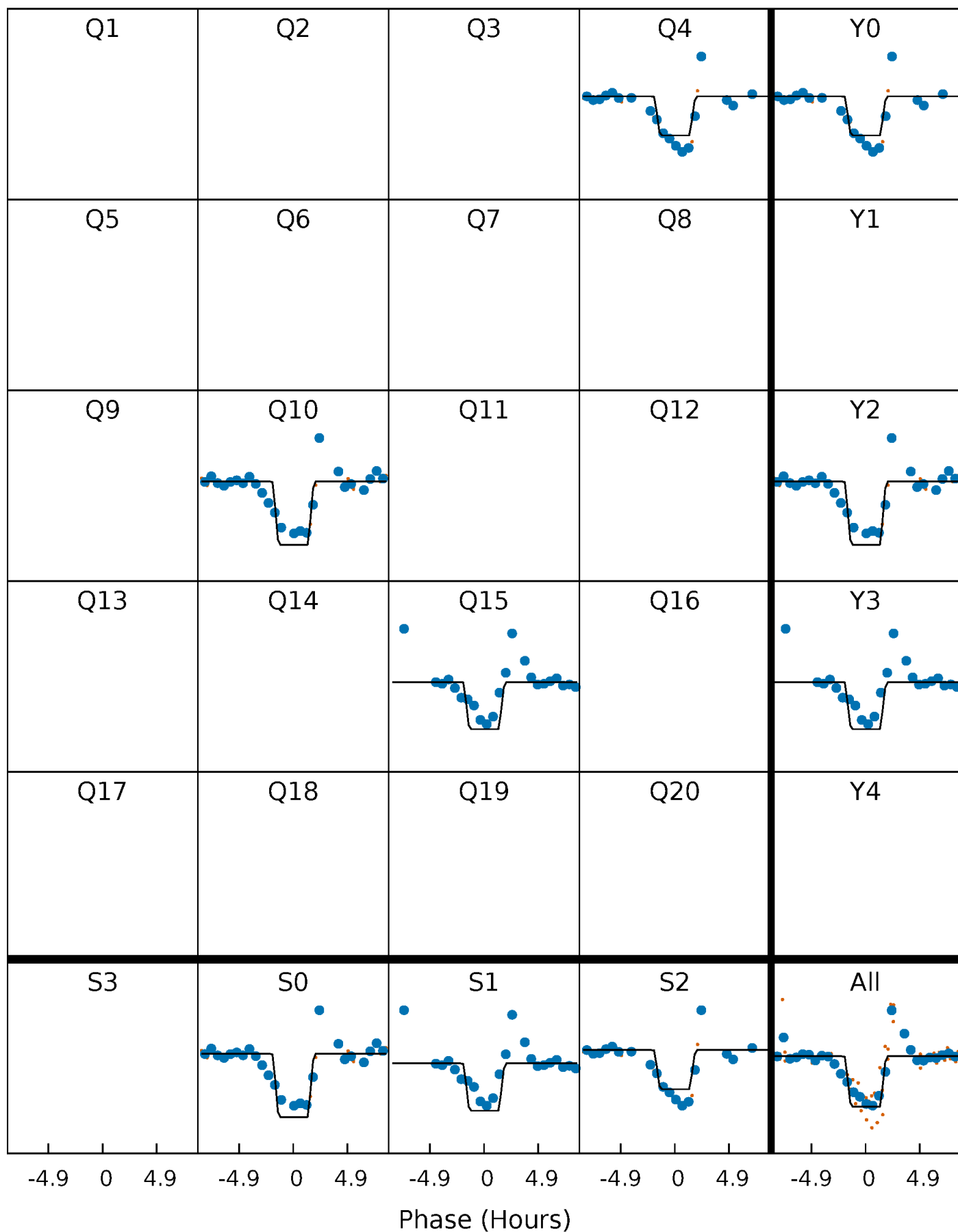
DV Quarter-Phased Transit Curves

TCE 007350496-01 P=541.110433 Days $T_0=376.790625$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

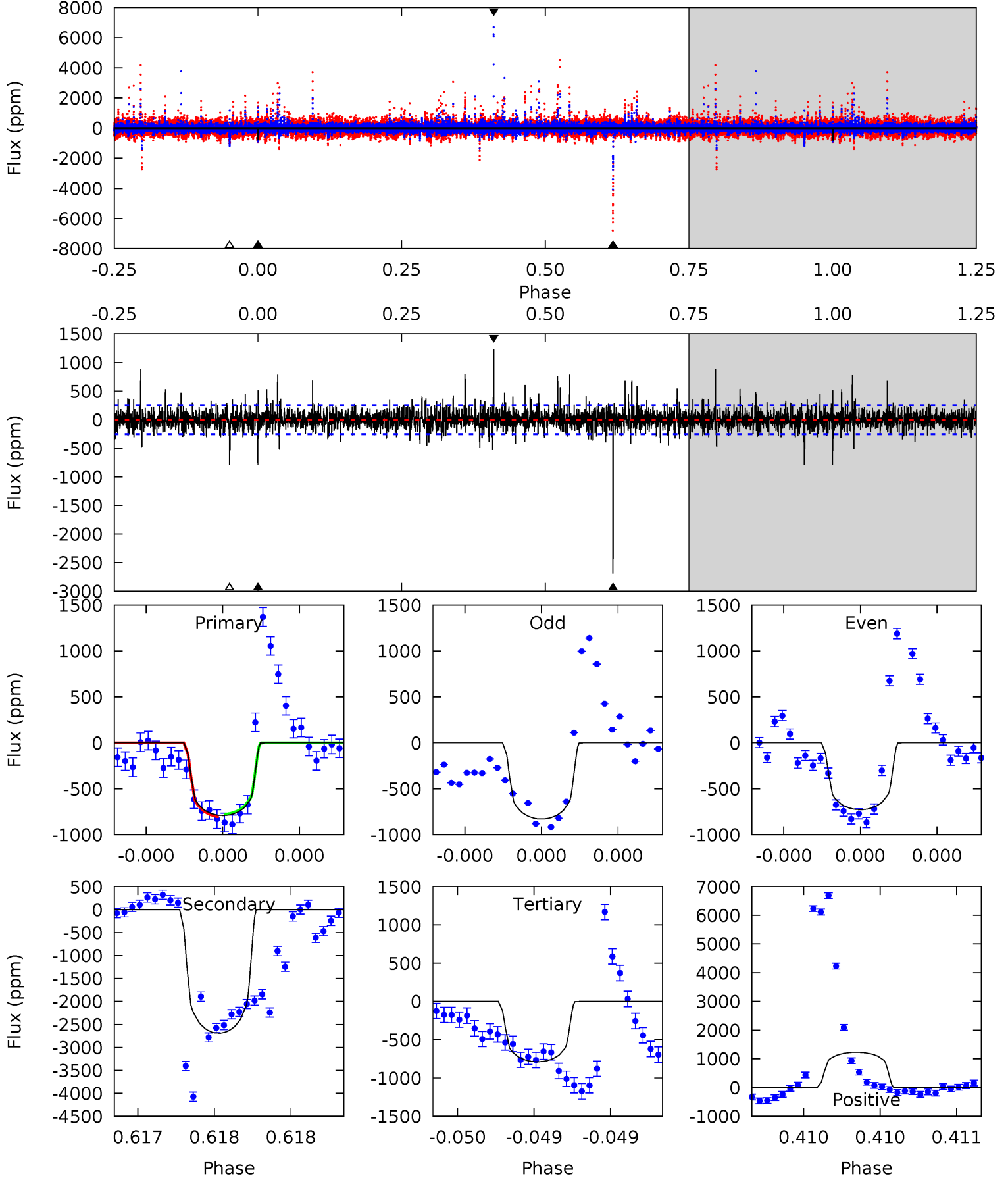
TCE 007350496-01 P=541.107913 Days $T_0=376.811124$ (BKJD)



DV Model-Shift Uniqueness Test

007350496-01, P = 541.110433 Days, E = 376.790625 Days

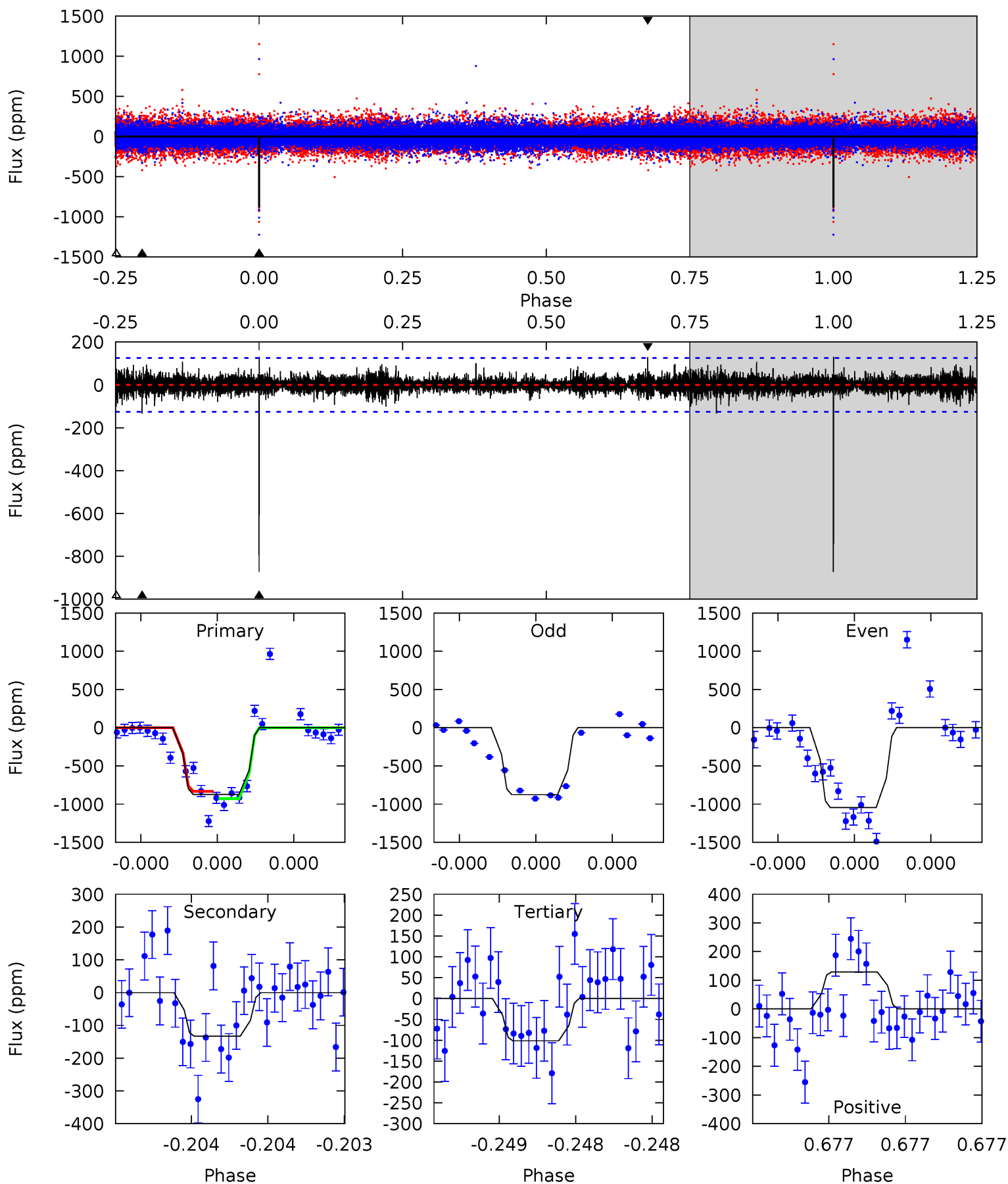
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	59.4	17.4	27.2	5.61	3.53	2.67	0.09	-9.67	42.0	32.3	0.56	0.91	0.31	0.31



Alt Model-Shift Uniqueness Test

007350496-01, P = 541.107913 Days, E = 376.811124 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.4	6.03	4.58	5.83	5.67	3.63	0.92	34.9	33.6	1.45	0.20	3.75	1.11	0.13	2.14



Stellar Parameters For KIC 007350496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5668^{+187}_{-136}	$3.769^{+0.760}_{-0.190}$	$-0.600^{+0.350}_{-0.250}$	$2.149^{+0.853}_{-1.280}$	$0.989^{+0.190}_{-0.209}$	$0.140^{+1.996}_{-0.079}$
	+3%/-2%	+20%/-5%	+58%/-42%	+40%/-60%	+19%/-21%	+1422%/-56%
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 007350496-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2691 ± 45	$6.53^{+5.23}_{-3.81}$	431^{+53}_{-79}	7298^{+5313}_{-1649}	$58653^{+292720}_{-40223}$
Alt.	-133 ± 22	$6.84^{+5.36}_{-4.11}$	433^{+50}_{-74}	3670^{+1365}_{-502}	2475^{+12935}_{-1689}

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

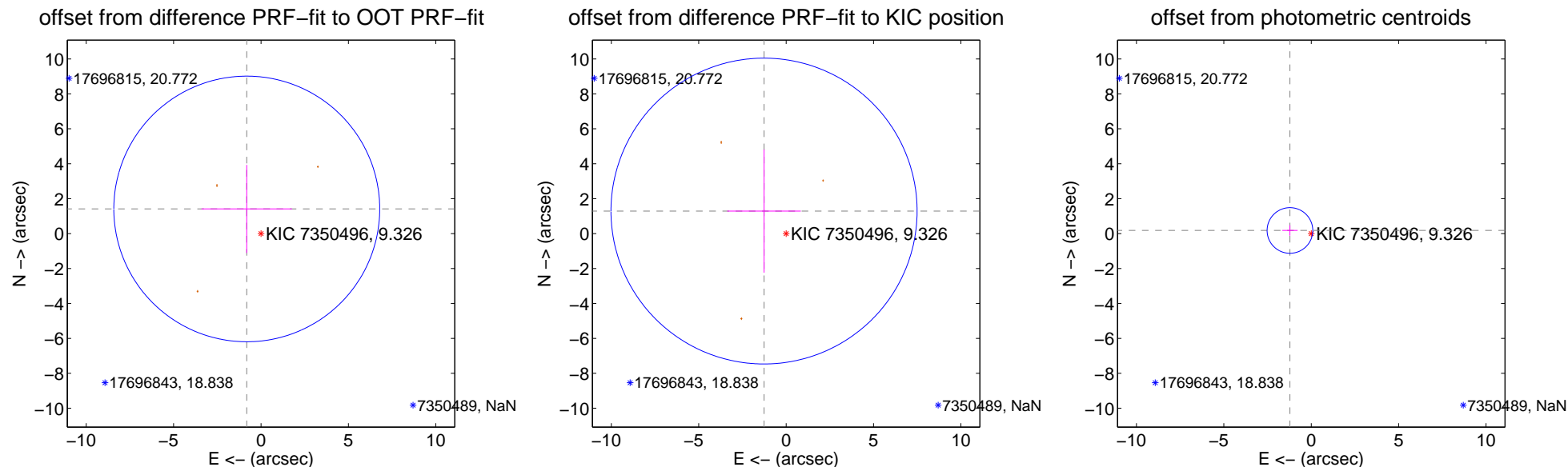
DV Centroid Data

Supplemental centroid analysis for 007350496-01. **Kepler magnitude: 9.33.** Transit SNR 10.63

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.629 ± 2.535	0.64	0.815 ± 2.587	1.411 ± 2.518
PRF-fit source offset from KIC position	1.805 ± 2.919	0.62	1.263 ± 2.105	1.289 ± 3.528
photometric centroid source offset	1.23 ± 0.44	2.83	1.22 ± 0.44	0.18 ± 0.30



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

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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



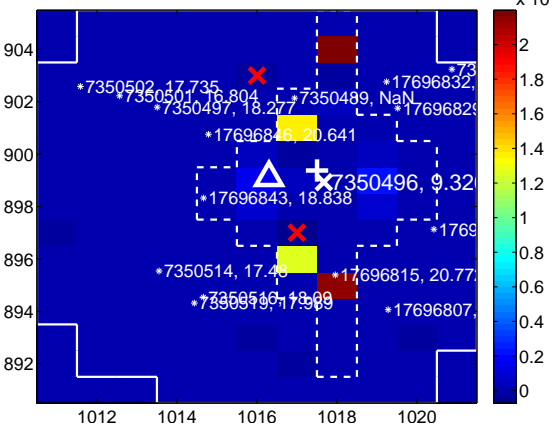
Q3 no difference image



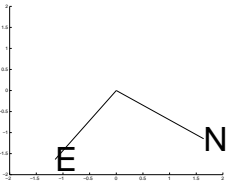
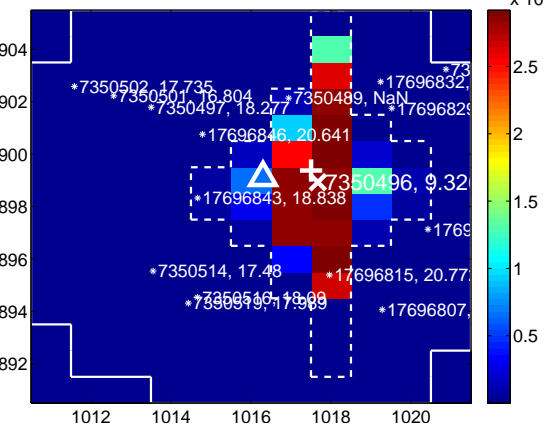
Q3 no OOT image



Q4 difference image. Poor Quality



Q4 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.

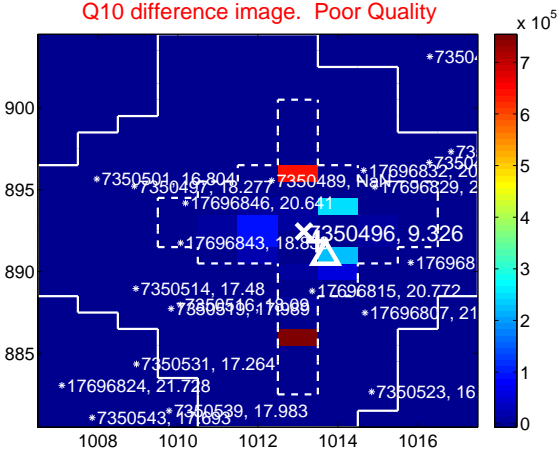
Q9 no difference image



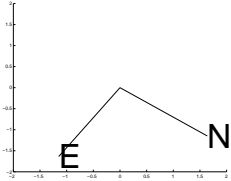
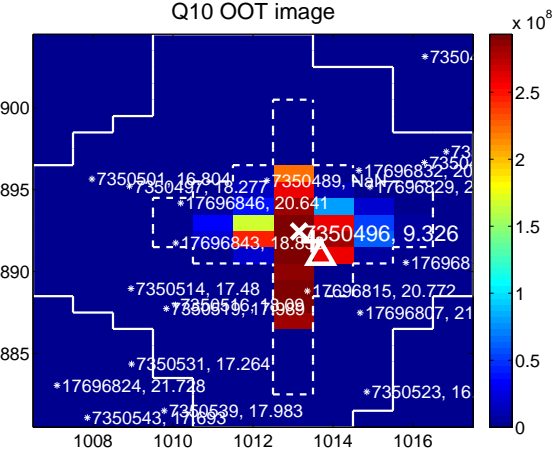
Q9 no OOT image



Q10 difference image. Poor Quality



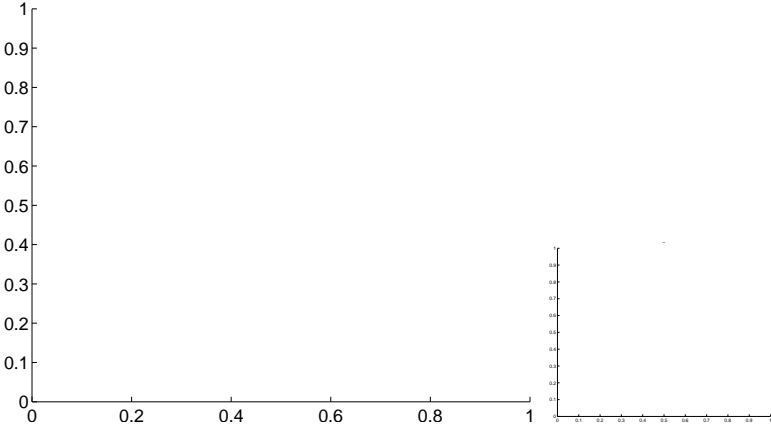
Q10 OOT image



Q11 no difference image



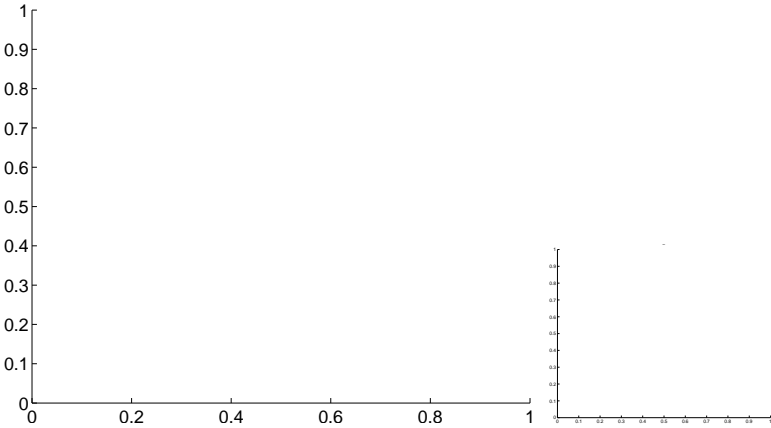
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



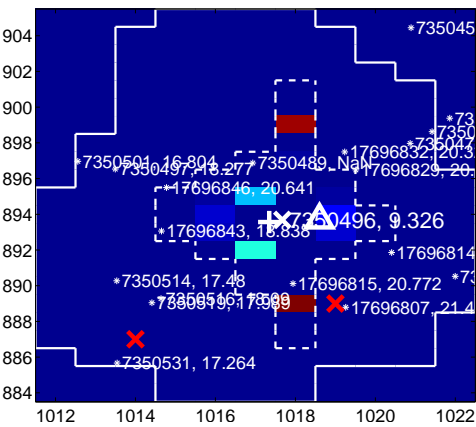
Q14 no difference image



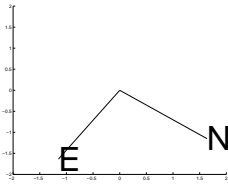
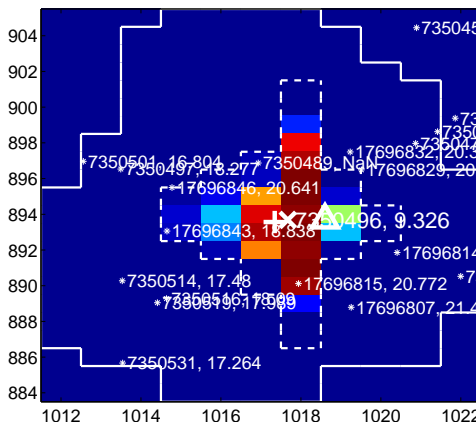
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



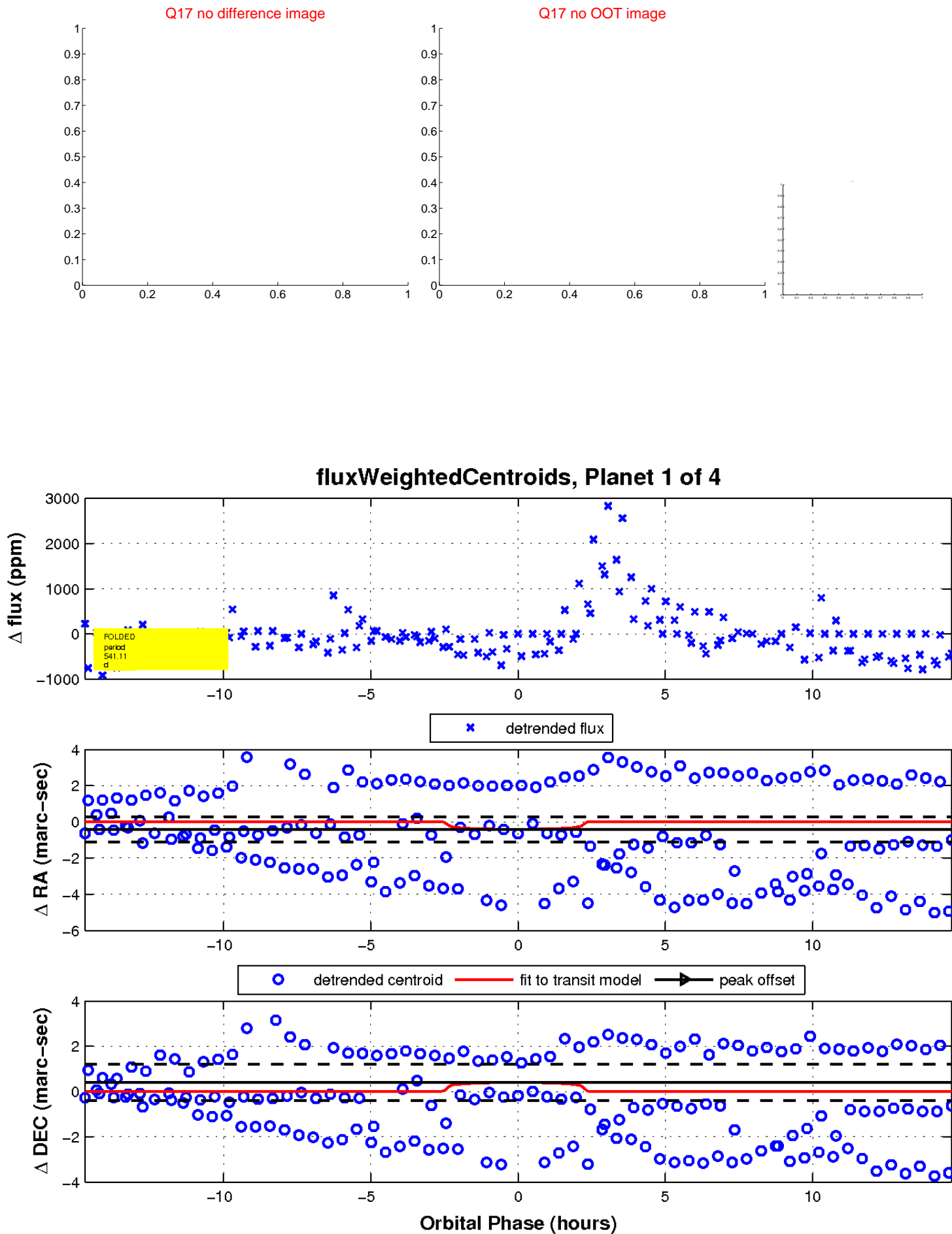
Q16 no difference image



Q16 no OOT image

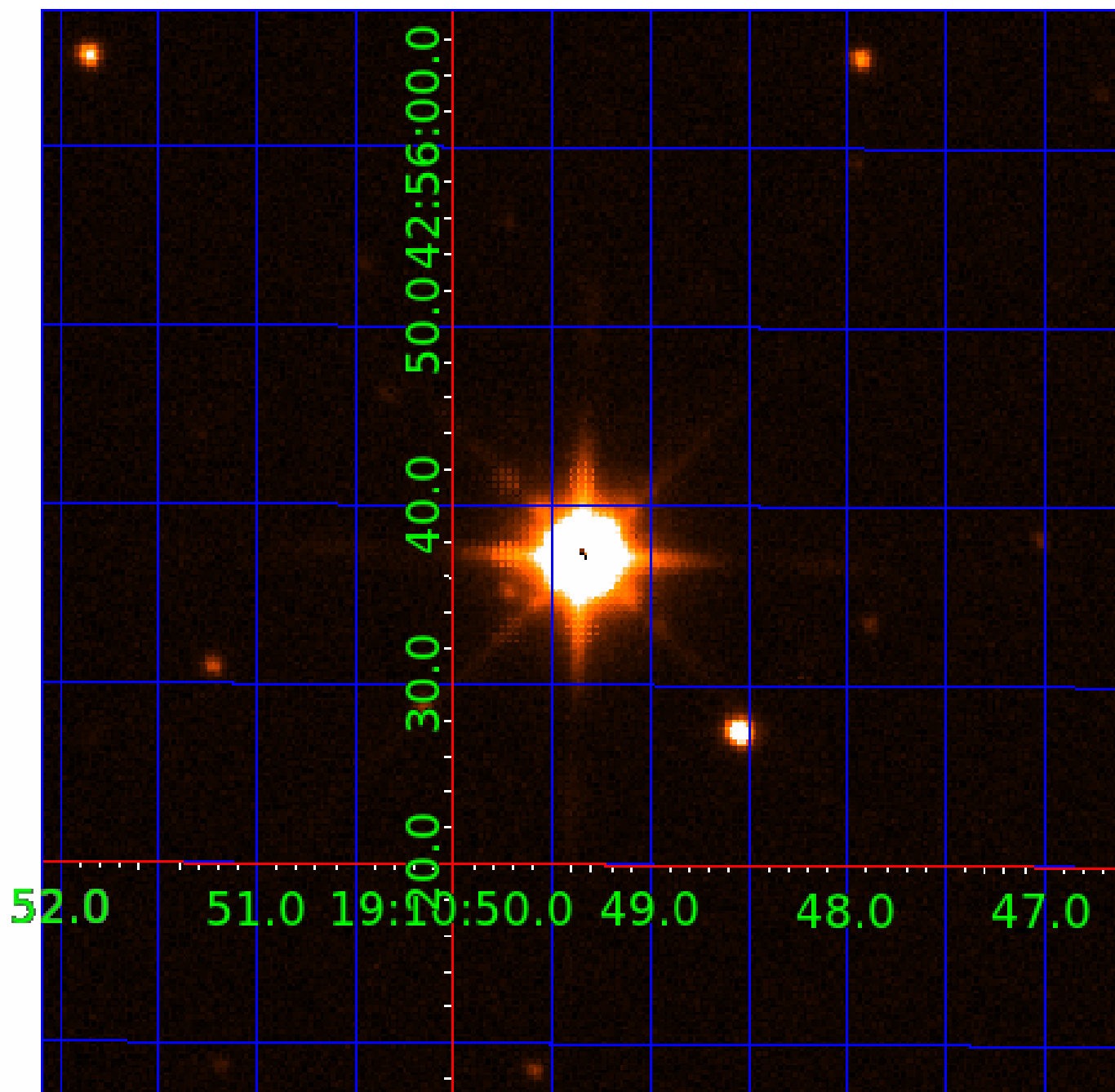


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007350496

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007350496-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
007350496-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
007350496-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

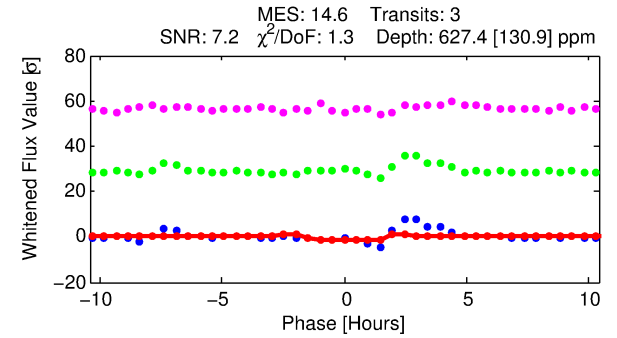
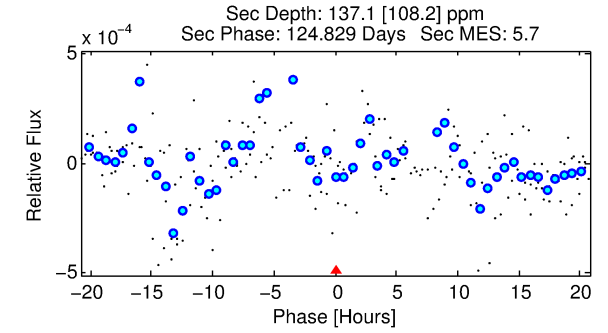
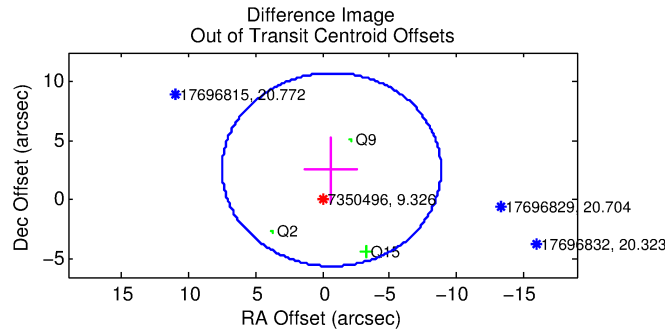
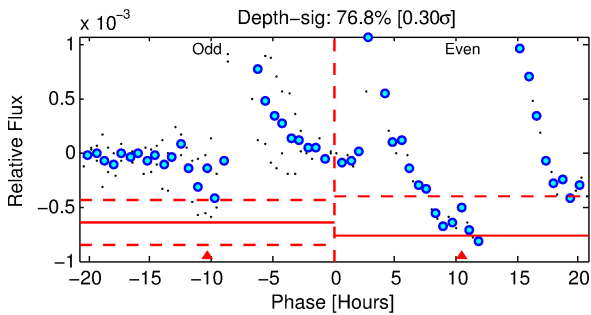
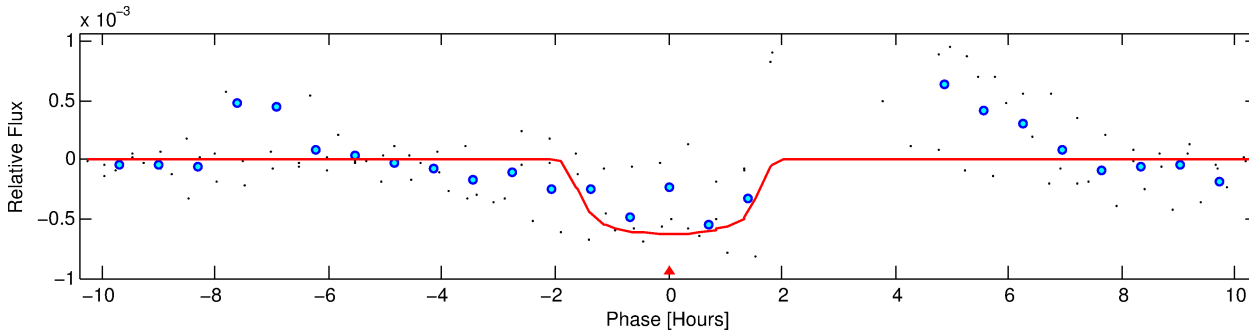
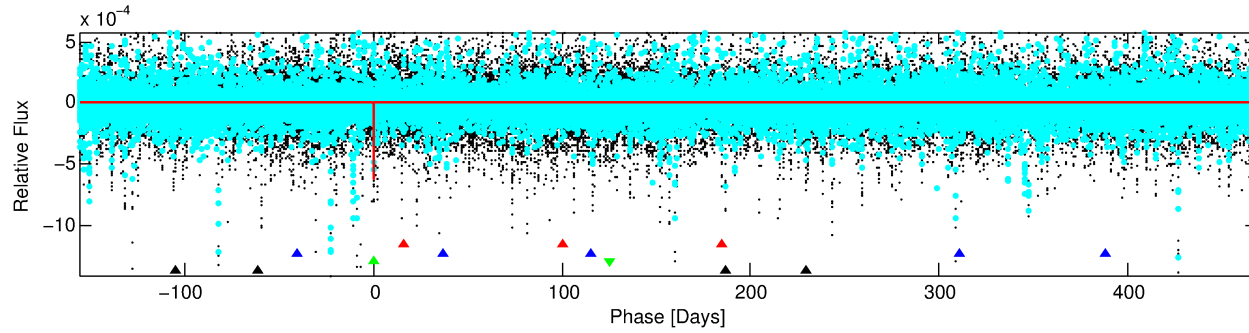
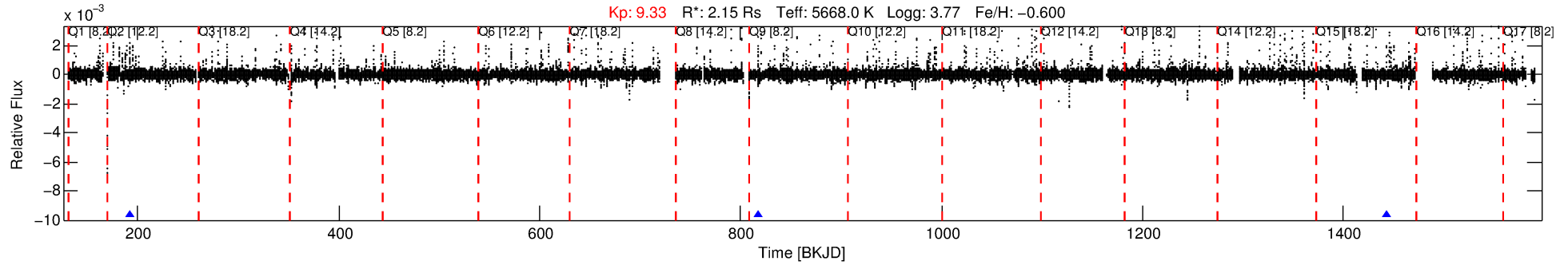
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007350496-03

No Significant Match Found

DV One-Page Summary

KIC: 7350496 Candidate: 3 of 4 Period: 625.440 d



DV Fit Results:

Period = 625.44034 [0.00496] d
Epoch = 192.4322 [0.0075] BKJD
Rp/R* = 0.0250 [0.0186]
a/R* = 958.93 [3241.58]
b = 0.75 [1.97]
Seff = 2.10 [2.60]
Teq = 307 [95] K
Rp = 5.85 [5.58] Re
a = 1.4266 [1.0067] AU
Ag = 4478.40 [9354.28] [0.48 σ]
Teffp = 3882 [1642] K [2.17 σ]

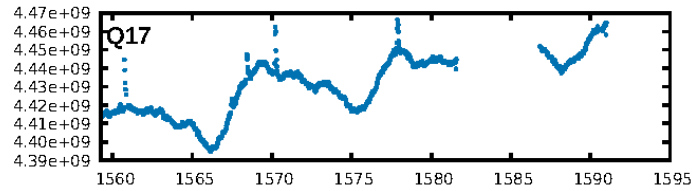
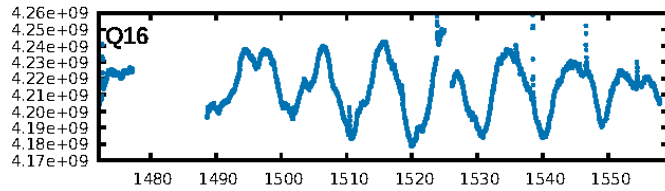
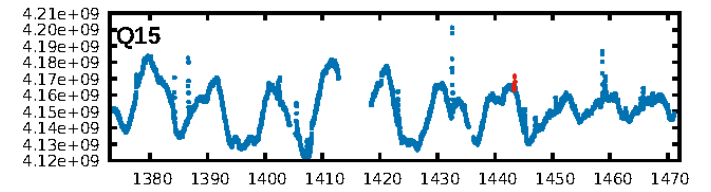
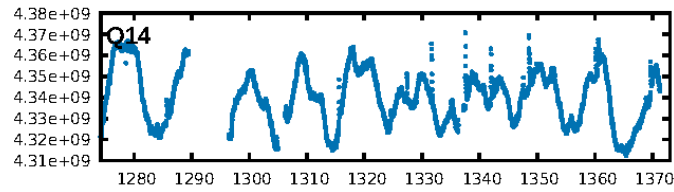
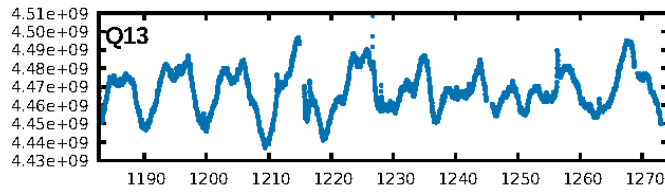
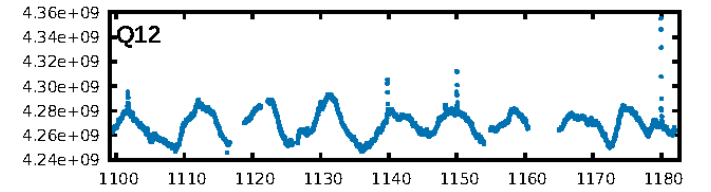
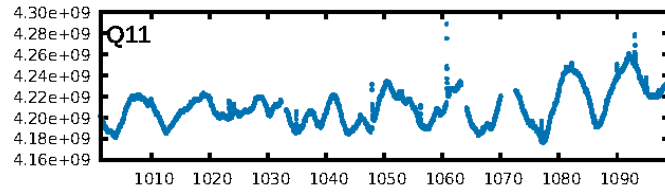
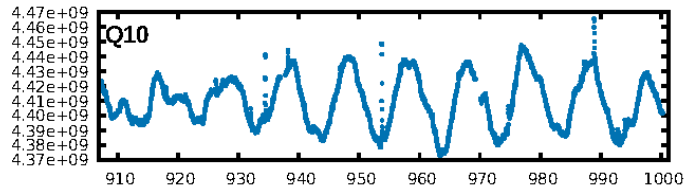
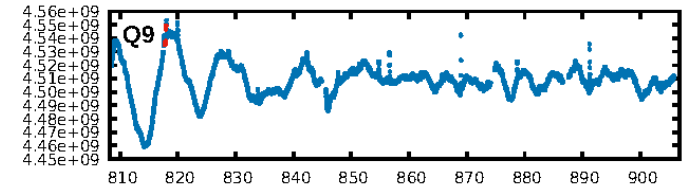
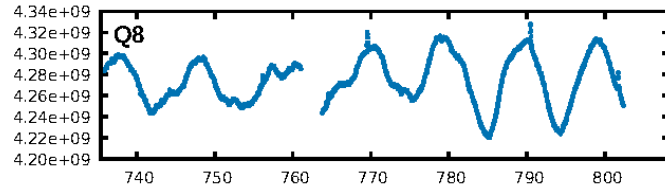
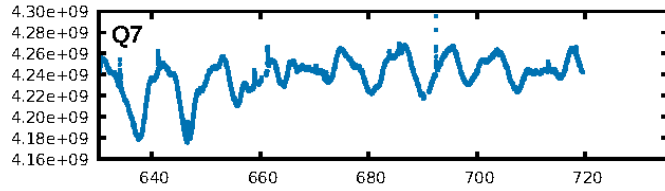
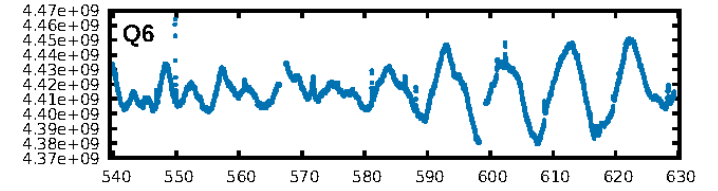
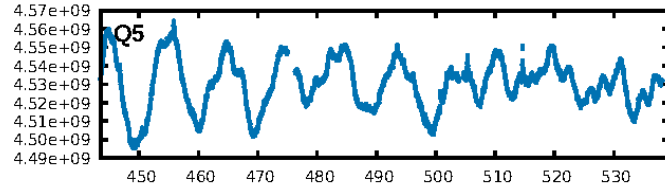
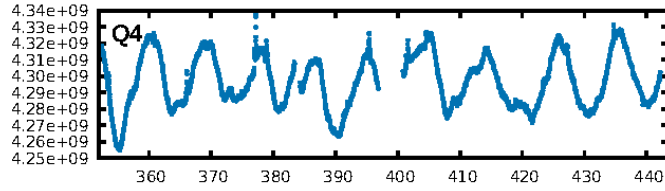
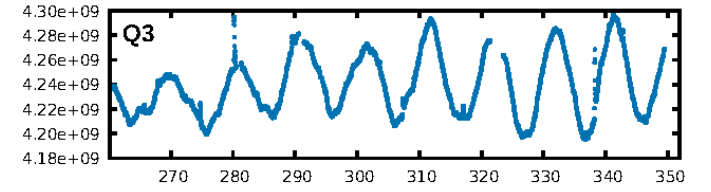
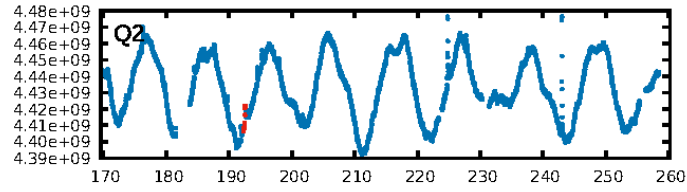
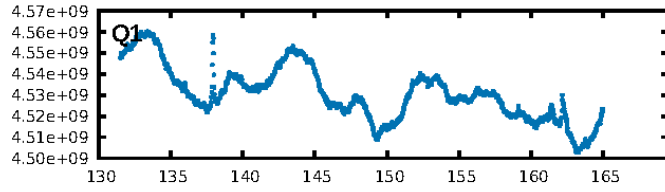
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [336.89 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.5%
ModelChiSquareGof-sig: 70.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.1%
Centroid-so: 2.476 arcsec [3.60 σ]
OotOffset-rm: 2.670 arcsec [0.98 σ]
KicOffset-rm: 3.665 arcsec [1.19 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

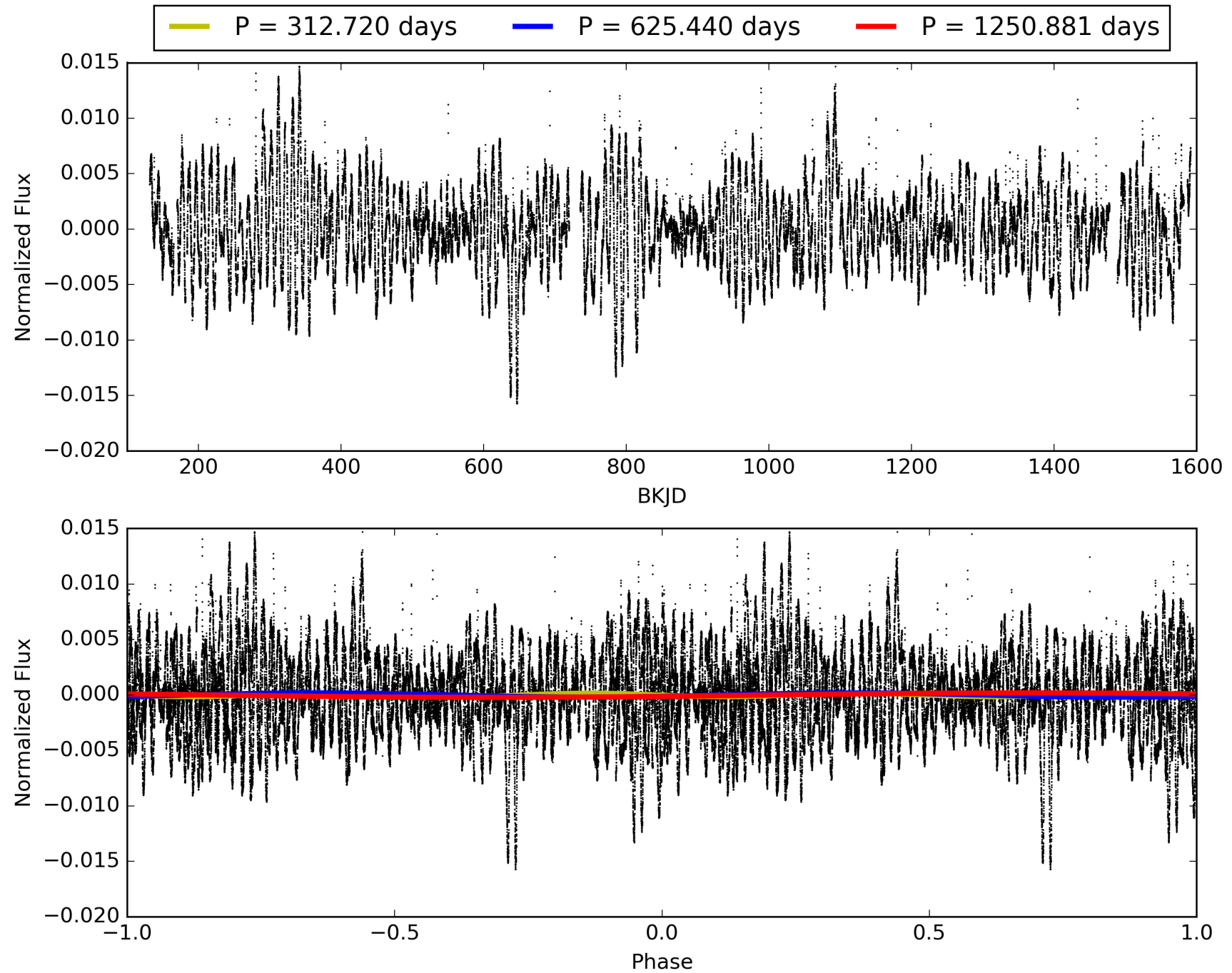
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:04:22 Z

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

TCE 007350496-03, PDC Light Curves

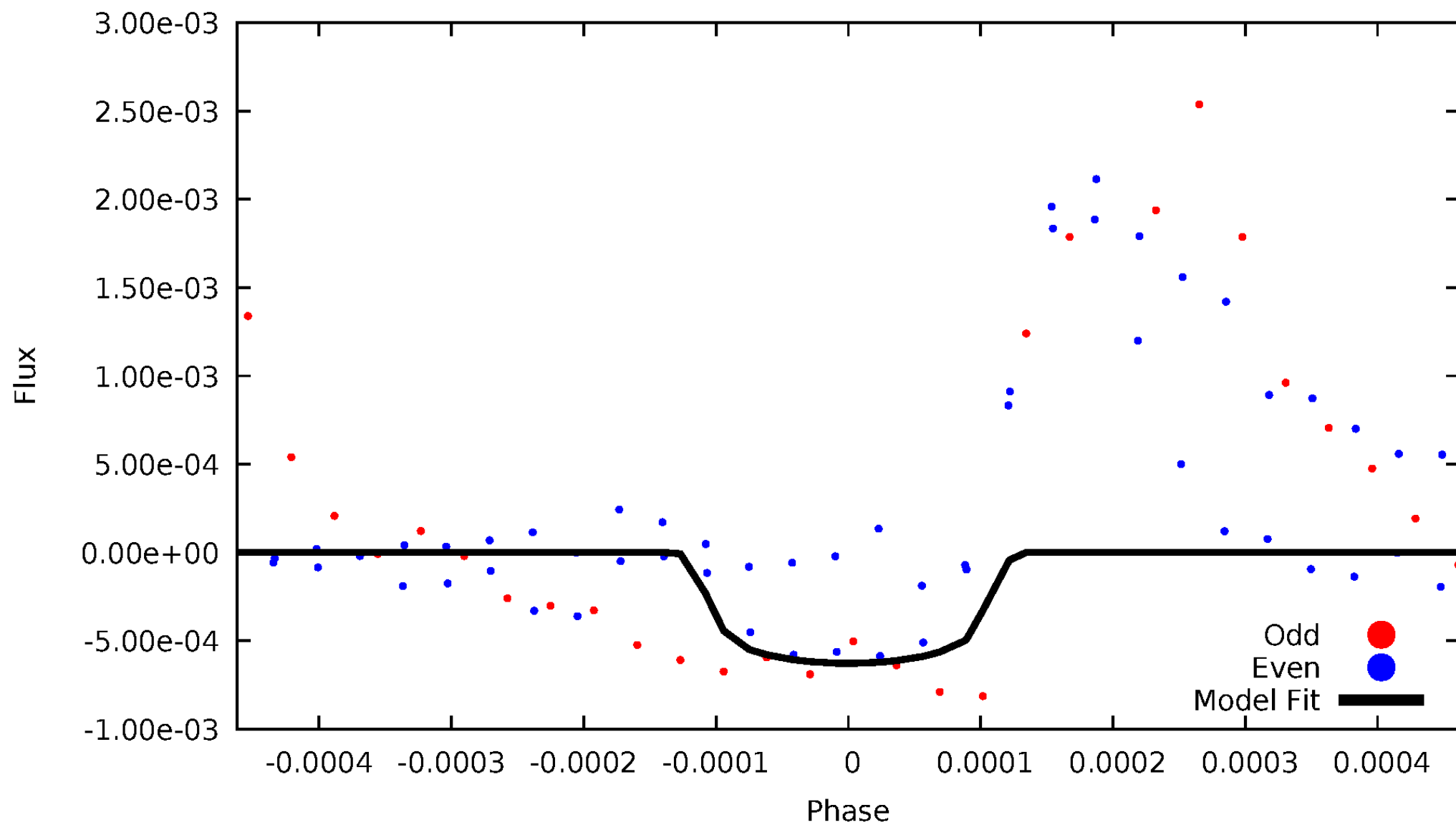


TCE 007350496-03



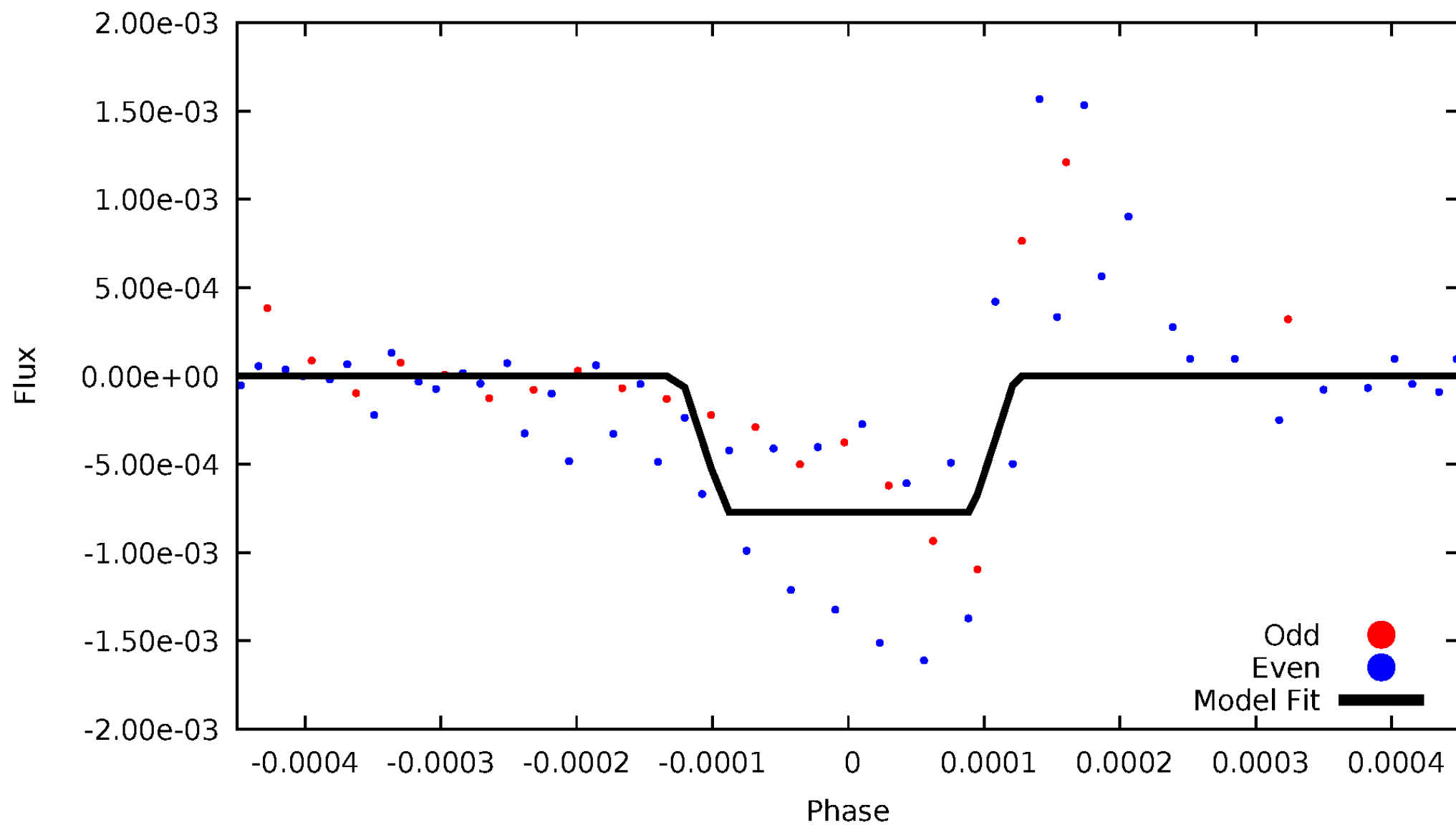
DV Odd/Even

TCE 007350496-03



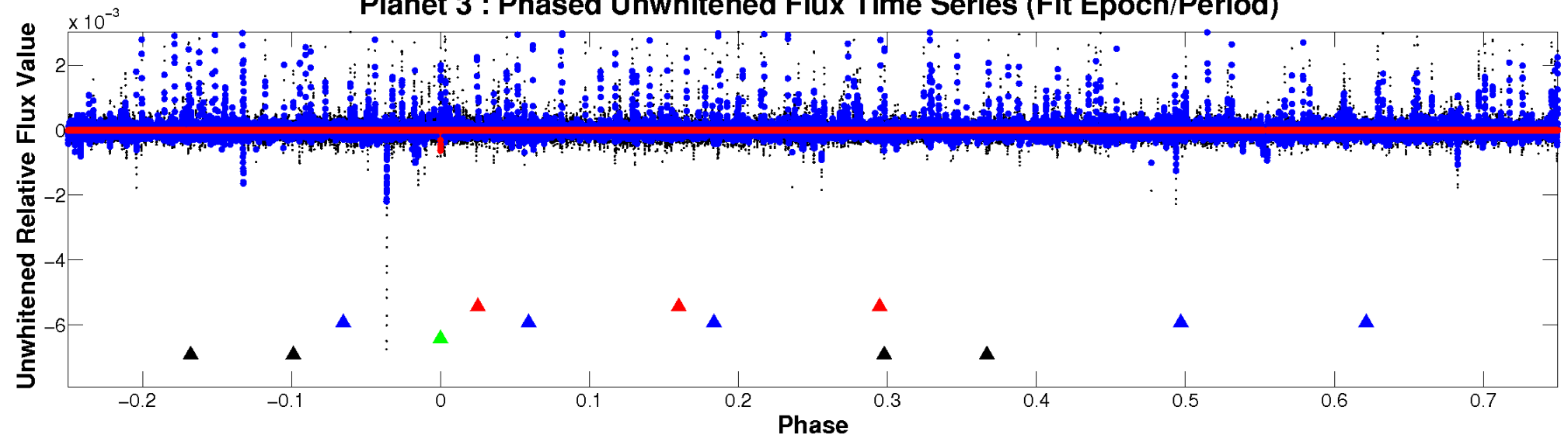
ALT Odd/Even

TCE 007350496-03

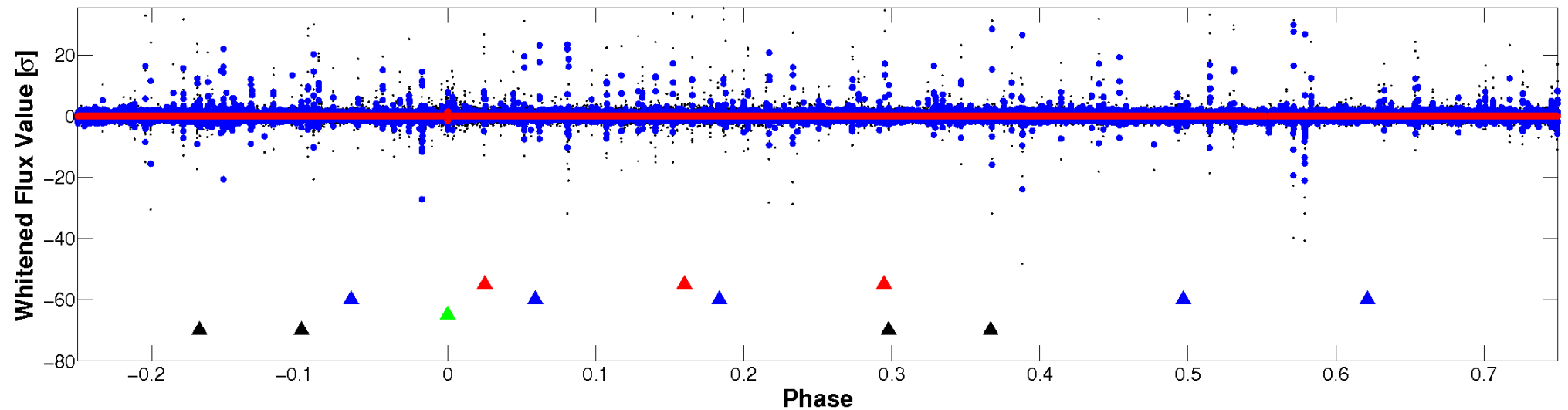


Non-Whitened Vs. Whitened Light Curve

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

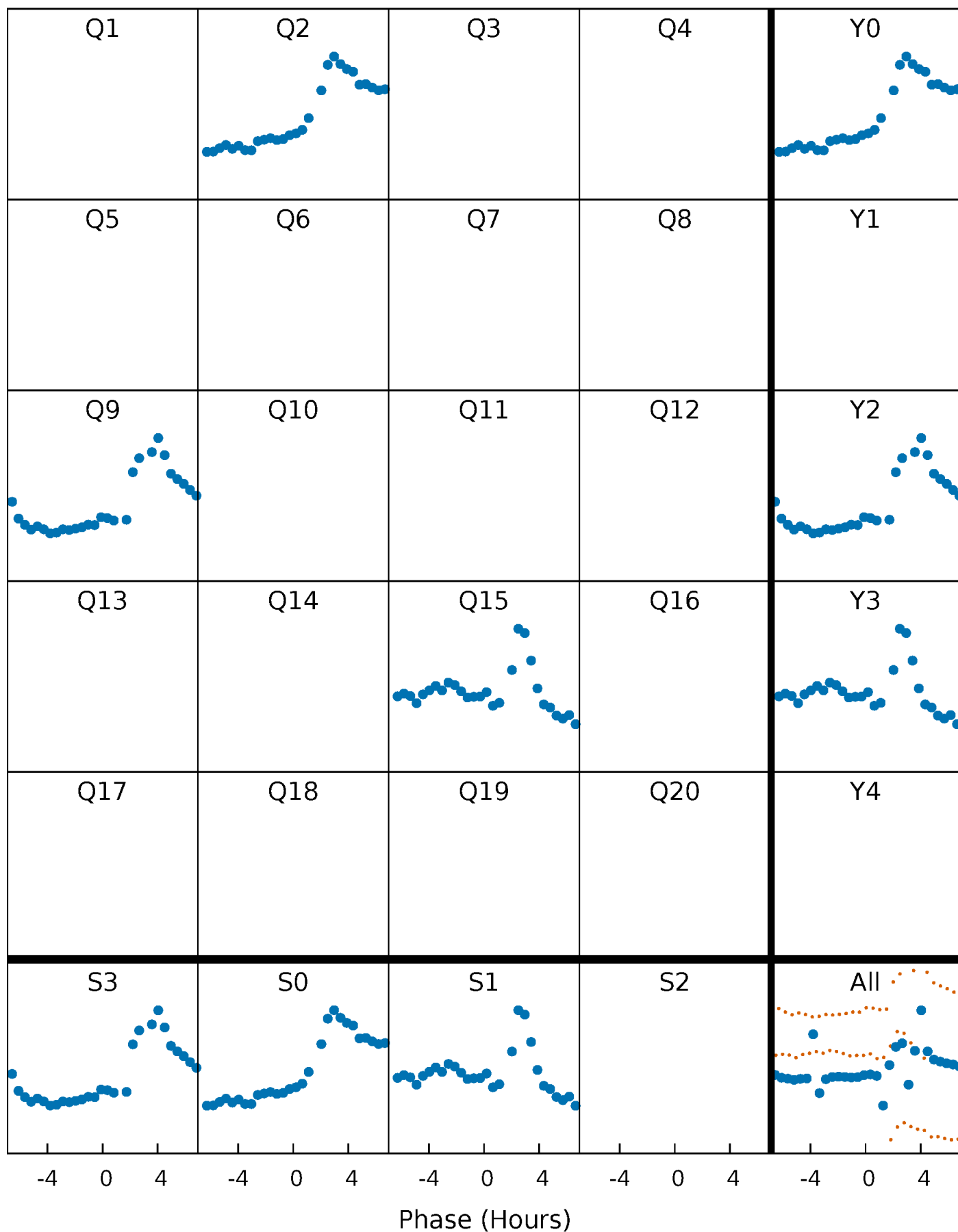


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



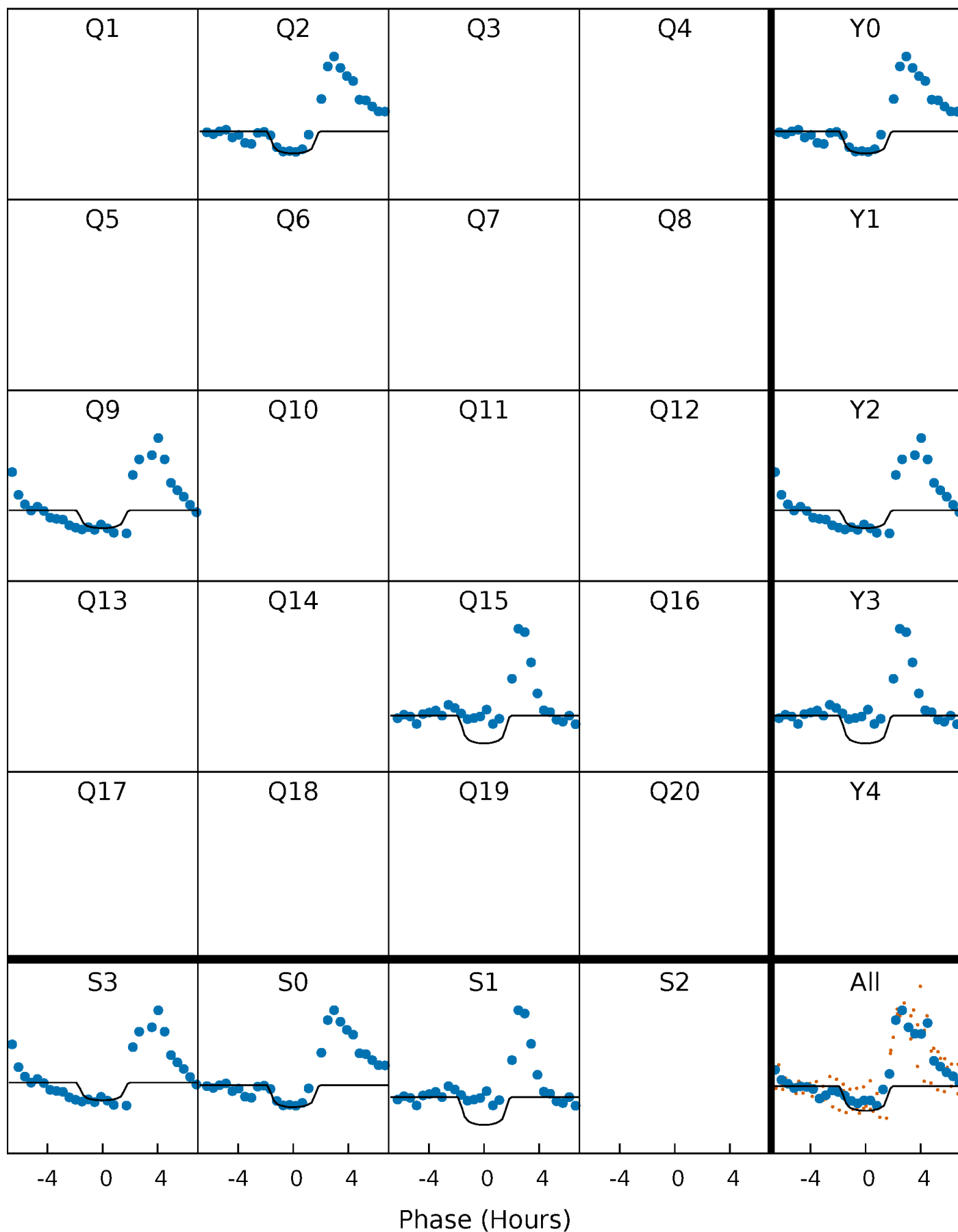
PDC Quarter-Phased Transit Curves

TCE 007350496-03 P=625.440339 Days $T_0=192.432239$ (BKJD)



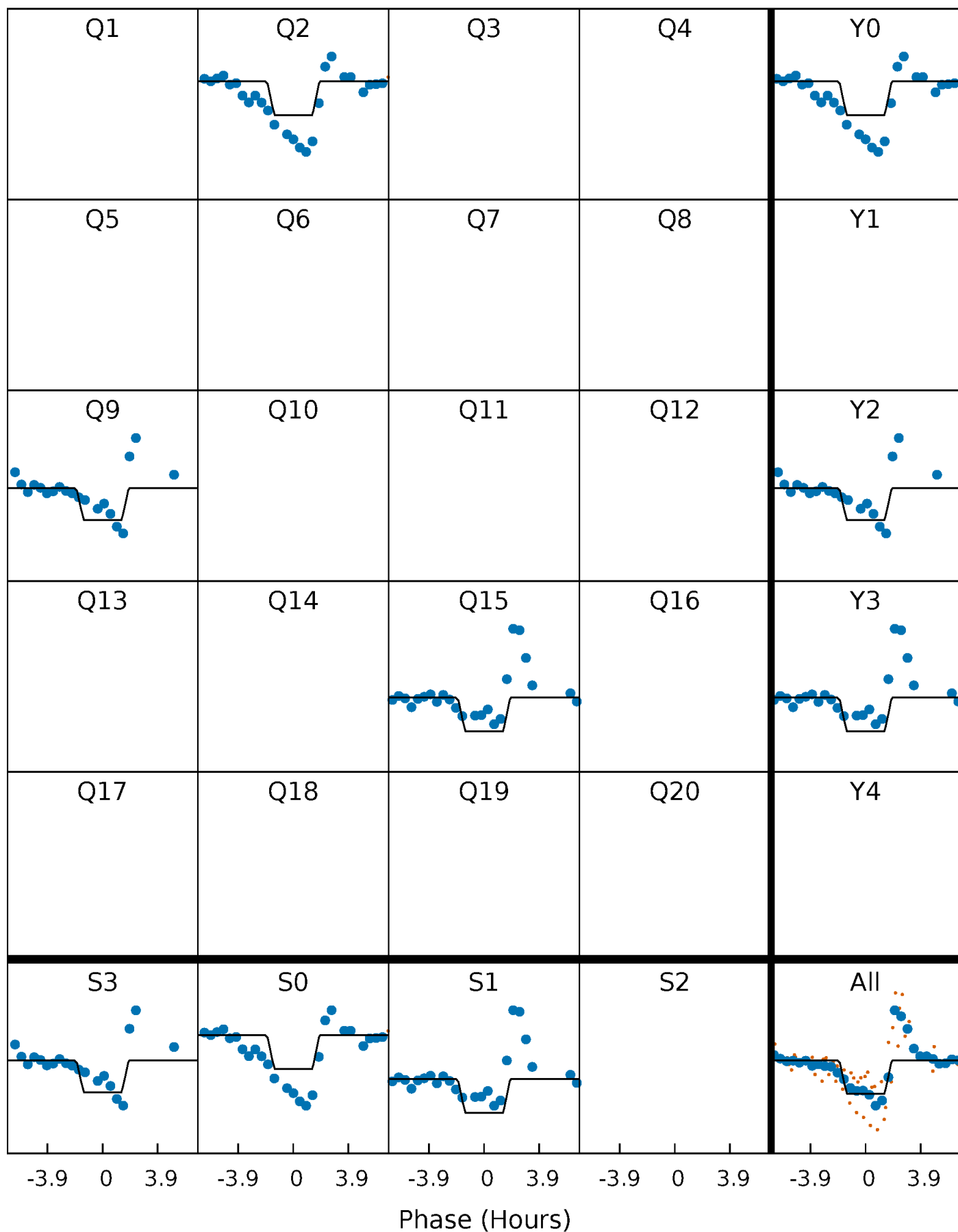
DV Quarter-Phased Transit Curves

TCE 007350496-03 $P=625.440339$ Days $T_0=192.432239$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

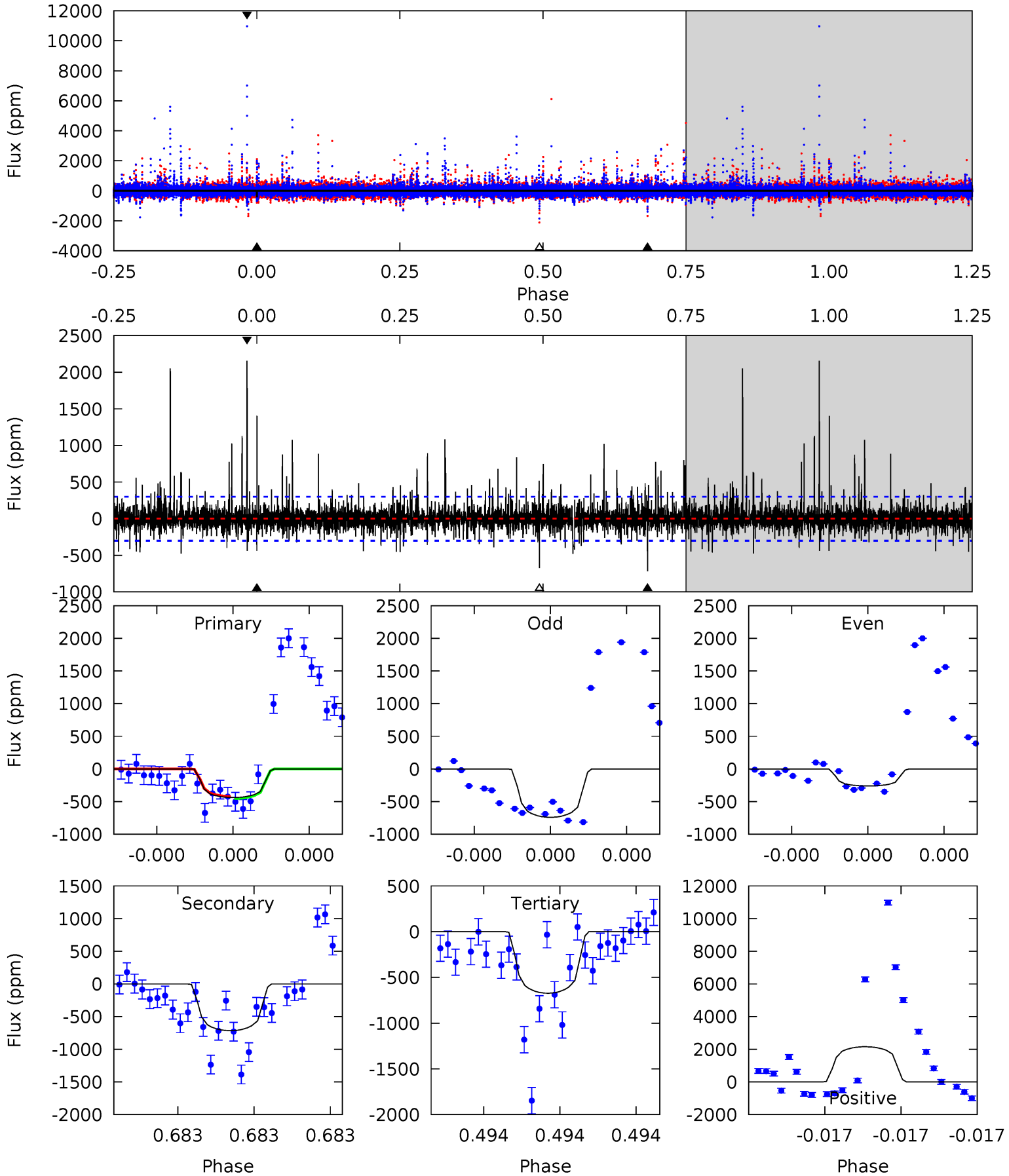
TCE 007350496-03 $P=625.444027$ Days $T_0=192.432778$ (BKJD)



DV Model-Shift Uniqueness Test

007350496-03, P = 625.440339 Days, E = 192.432239 Days

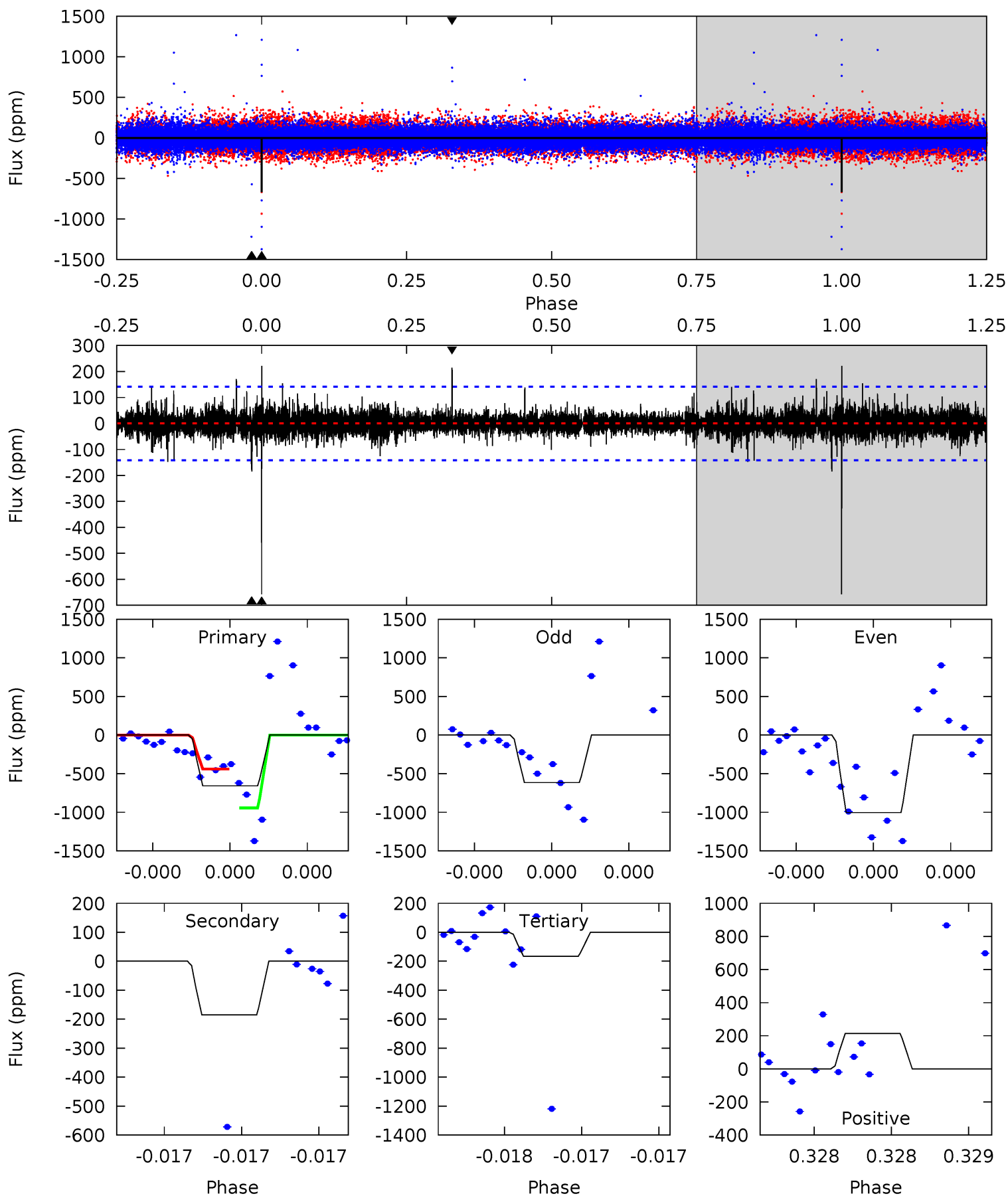
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.31	13.6	12.8	40.9	5.69	3.66	2.30	-4.47	-32.6	0.80	-27.3	2.70	0.85	0.75	0.29



Alt Model-Shift Uniqueness Test

007350496-03, P = 625.444027 Days, E = 192.432778 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	7.44	6.64	8.60	5.69	3.66	0.93	19.8	17.9	0.80	-1.16	9.34	1.27	0.25	10.0



Stellar Parameters For KIC 007350496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5668^{+187}_{-136}	$3.769^{+0.760}_{-0.190}$	$-0.600^{+0.350}_{-0.250}$	$2.149^{+0.853}_{-1.280}$	$0.989^{+0.190}_{-0.209}$	$0.140^{+1.996}_{-0.079}$
	+3%/-2%	+20%/-5%	+58%/-42%	+40%/-60%	+19%/-21%	+1422%/-56%
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 007350496-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-716 ± 53	$5.68^{+4.00}_{-3.28}$	417^{+46}_{-76}	5603^{+2911}_{-1004}	$24880^{+114123}_{-16097}$
Alt.	-185 ± 25	$6.04^{+4.93}_{-3.63}$	418^{+42}_{-71}	4121^{+1520}_{-603}	5602^{+28656}_{-3898}

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 $A_{obs} \gg 1.0$

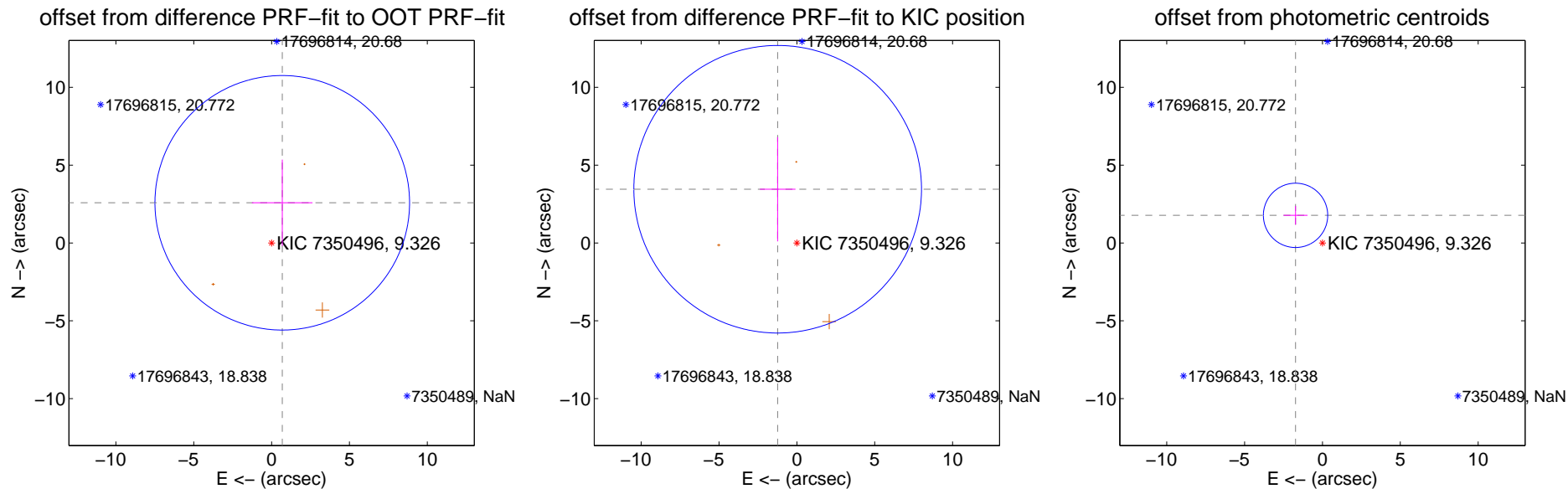
DV Centroid Data

Supplemental centroid analysis for 007350496-03. **Kepler magnitude: 9.33.** Transit SNR 7.20

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.670 ± 2.725	0.98	-0.684 ± 1.943	2.581 ± 2.772
PRF-fit source offset from KIC position	3.665 ± 3.079	1.19	1.233 ± 1.143	3.451 ± 3.347
photometric centroid source offset	2.48 ± 0.69	3.60	1.73 ± 0.77	1.77 ± 0.60



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

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

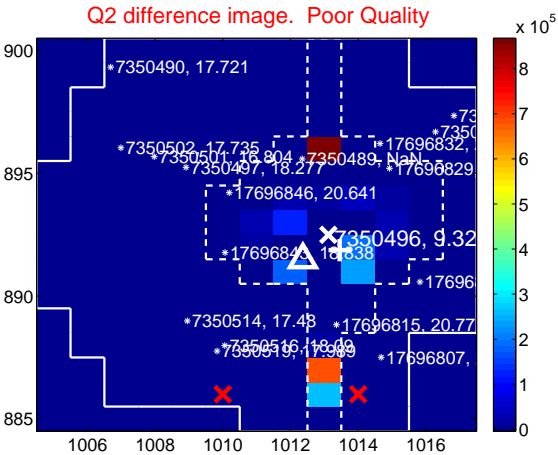
Q1 no difference image



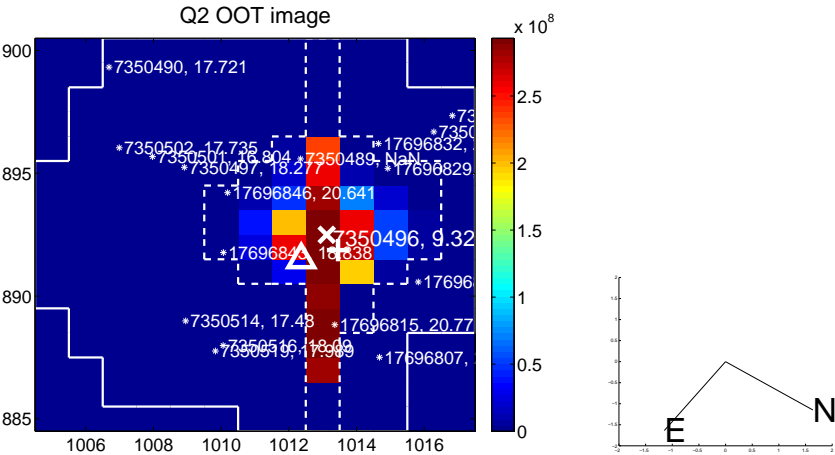
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



Q3 no difference image



Q3 no OOT image



Q4 no difference image



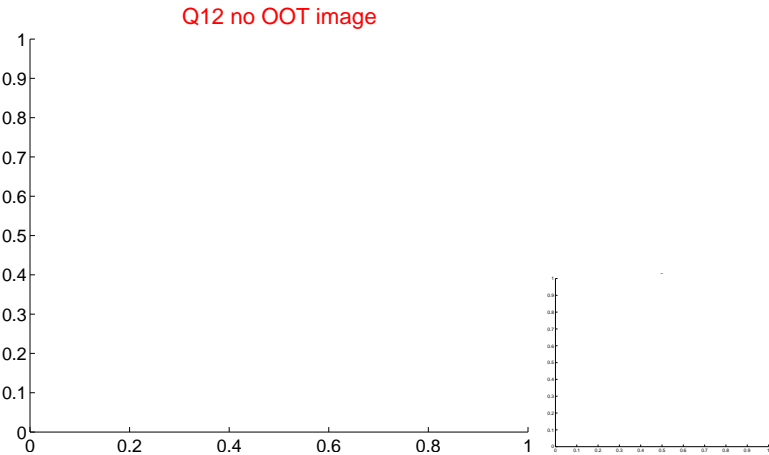
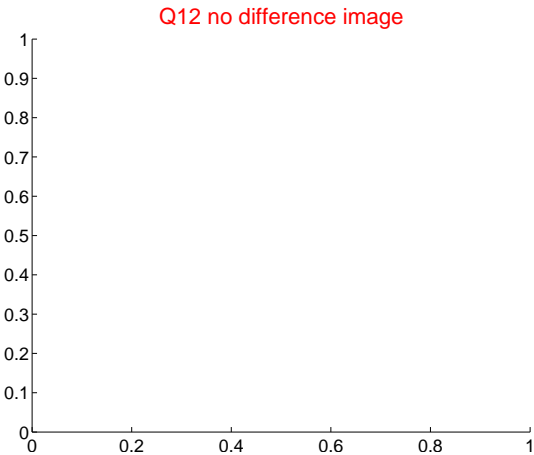
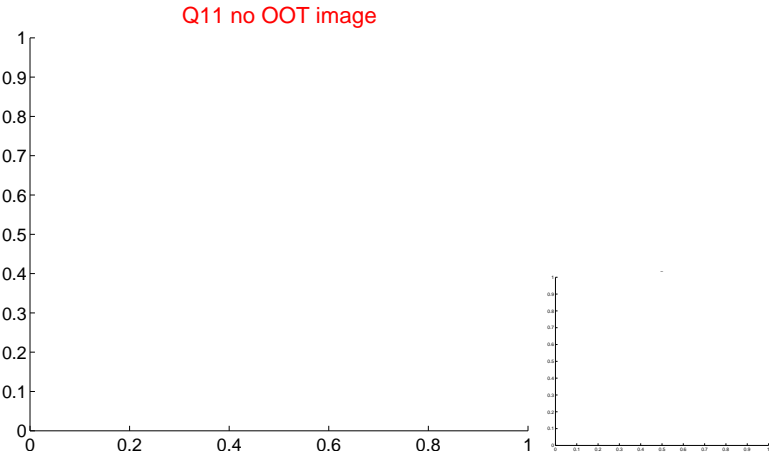
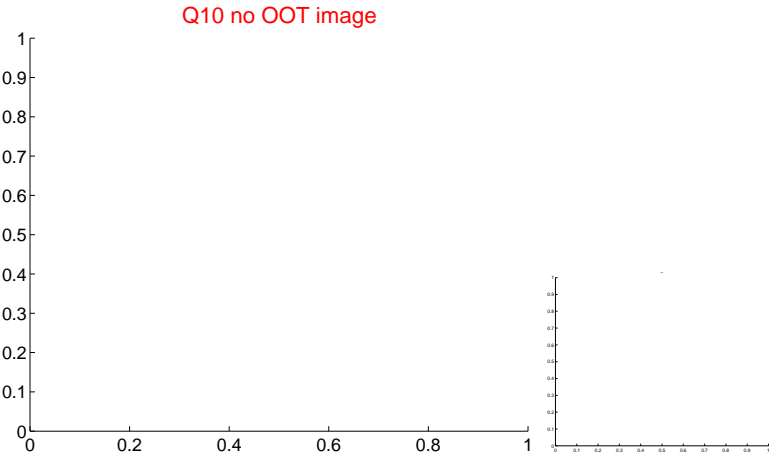
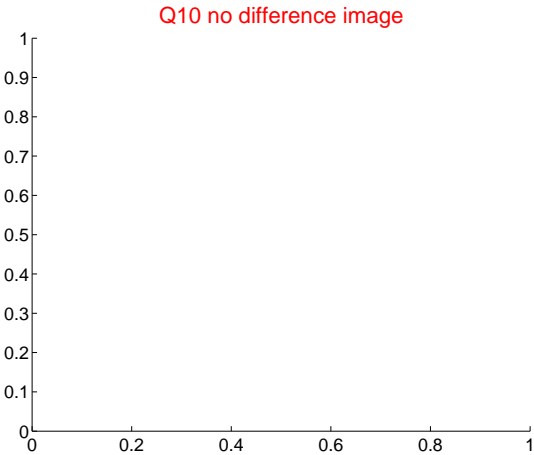
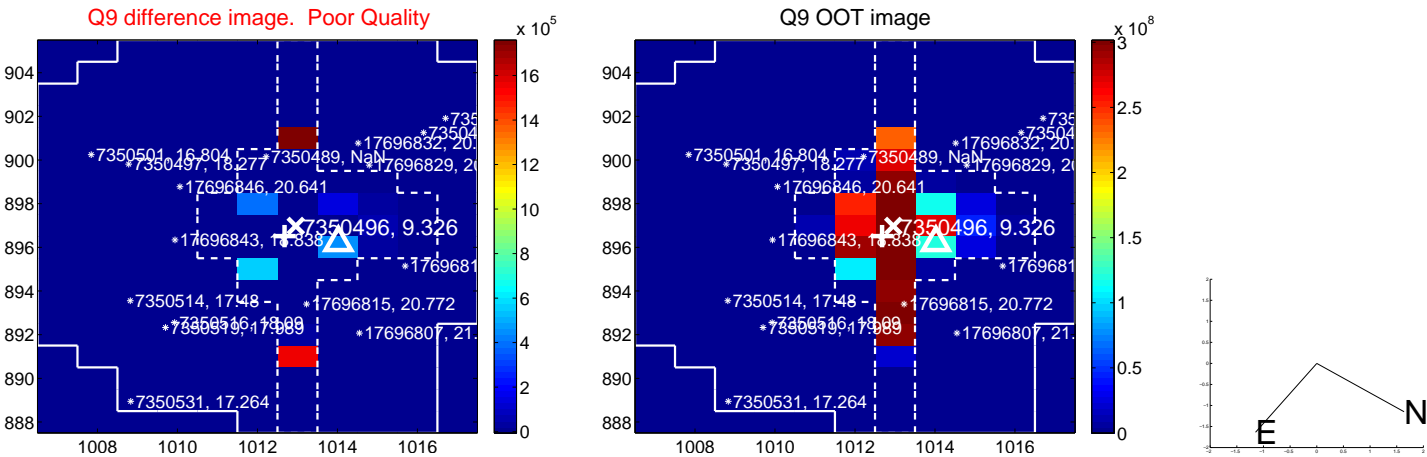
Q4 no OOT image



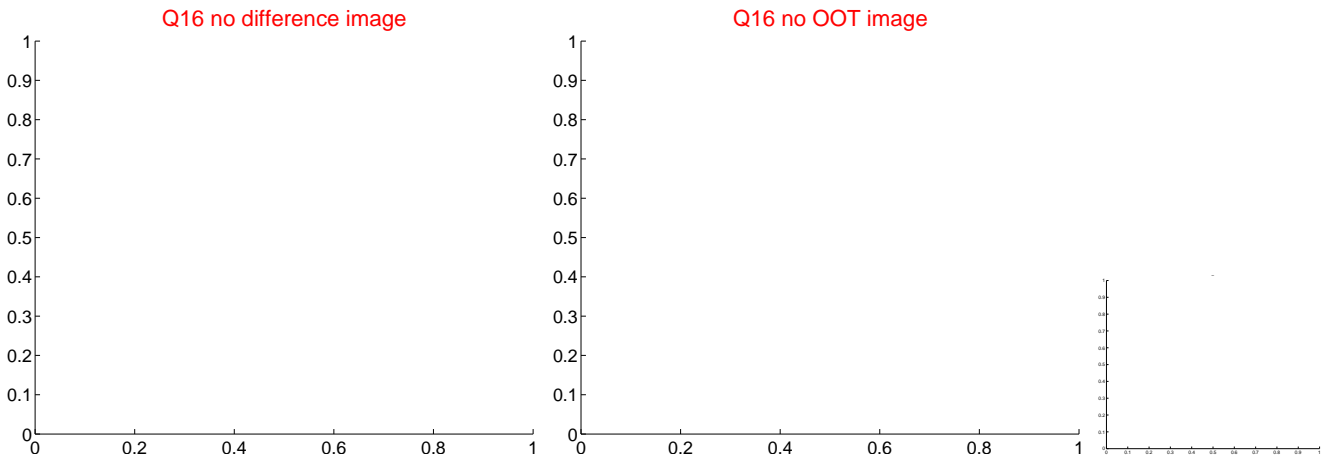
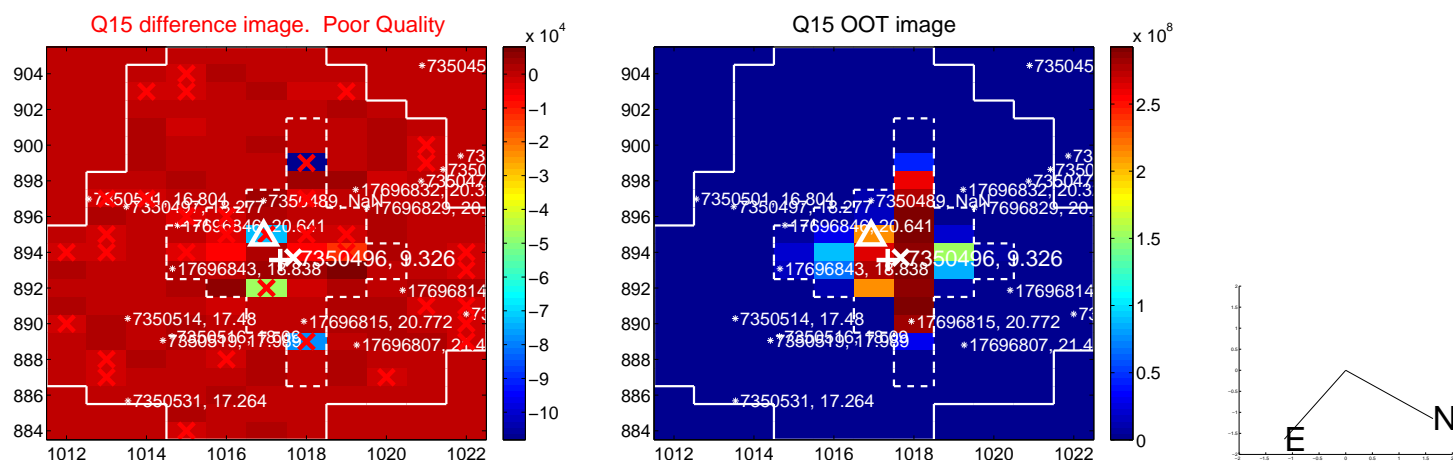
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



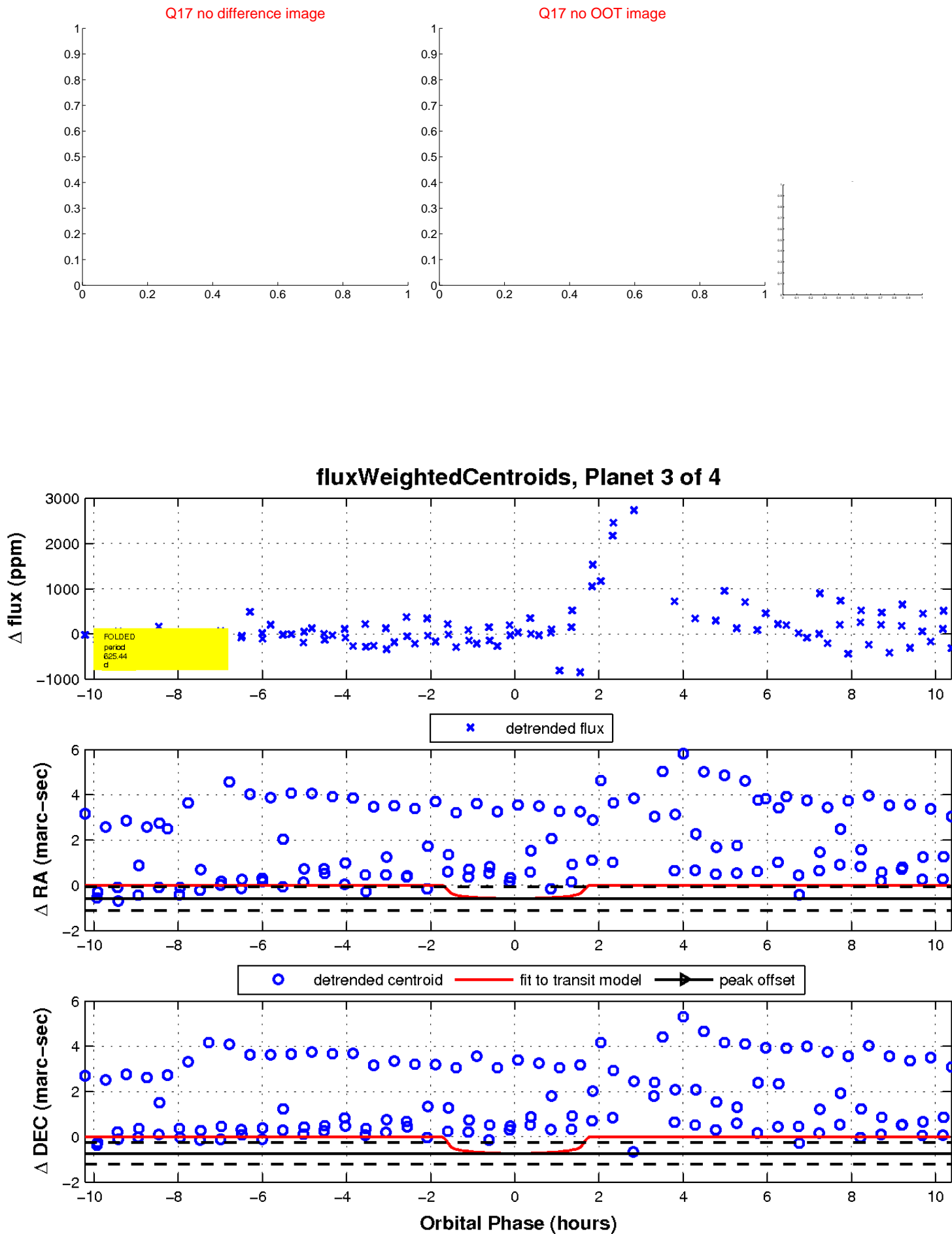
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



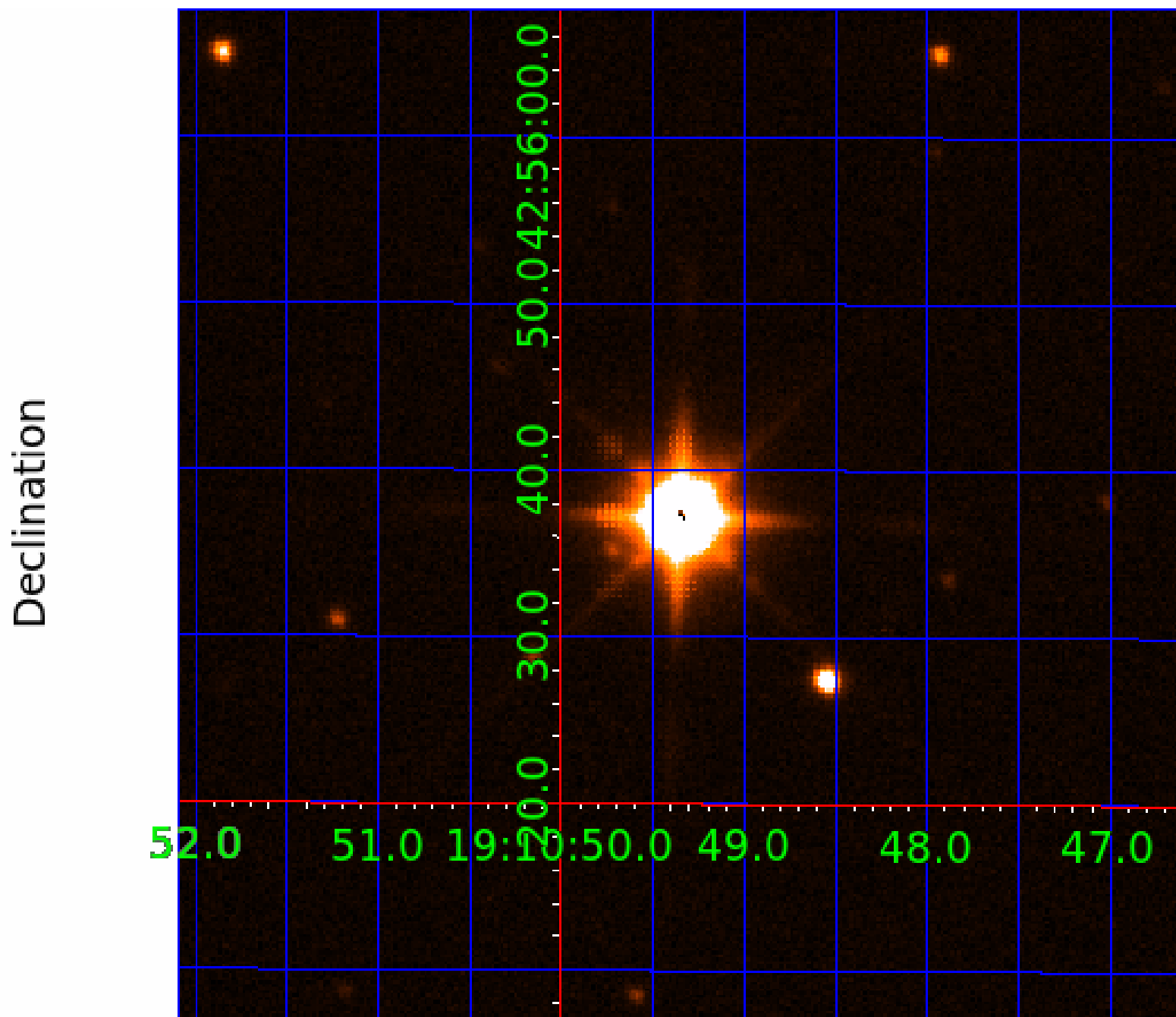
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 007350496

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})
007350496-01	OBS	No	541.110433	376.790625	959.0	4.907	16.3	10.6	2.15	5668	6.98	2.54
007350496-03	OBS	No	625.440339	192.432239	627.4	3.466	14.6	7.2	2.15	5668	5.85	2.10
007350496-04	OBS	No	334.280429	378.724092	902.1	6.178	12.0	11.9	2.15	5668	7.76	4.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007350496-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
007350496-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED
007350496-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—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.

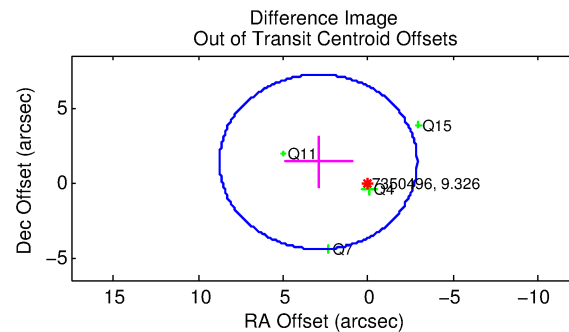
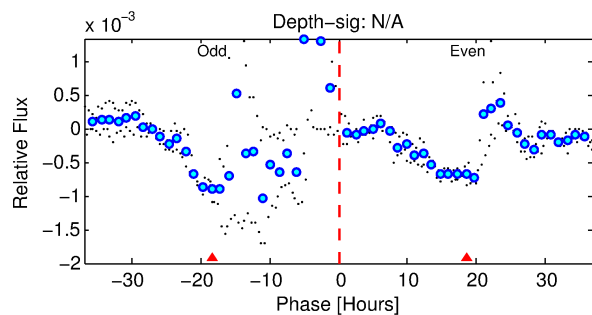
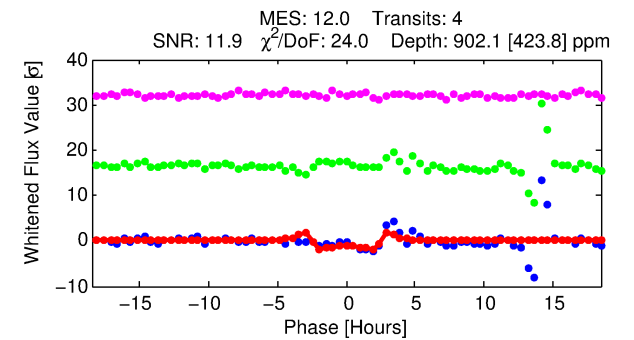
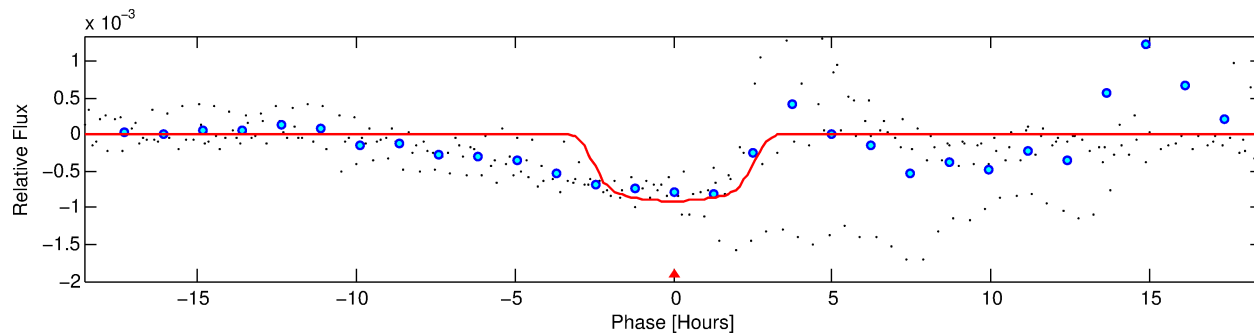
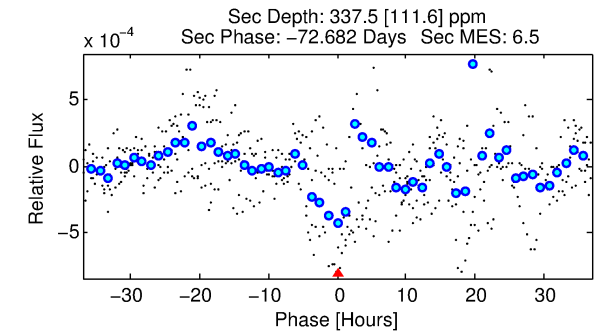
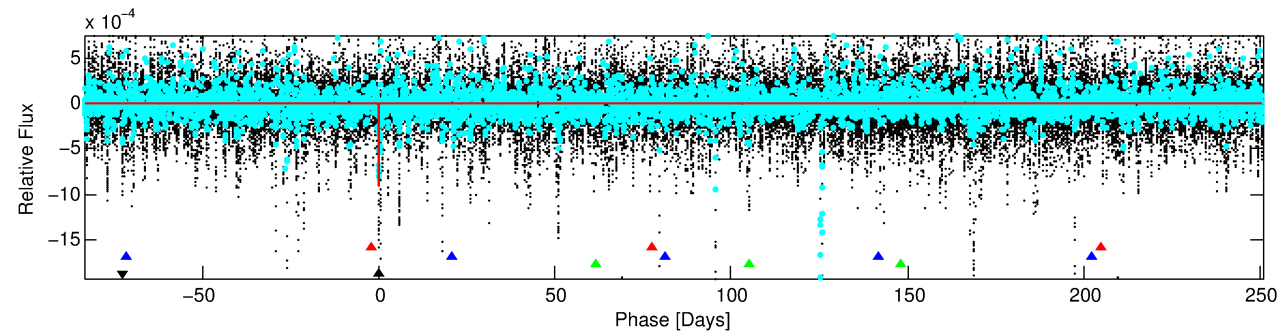
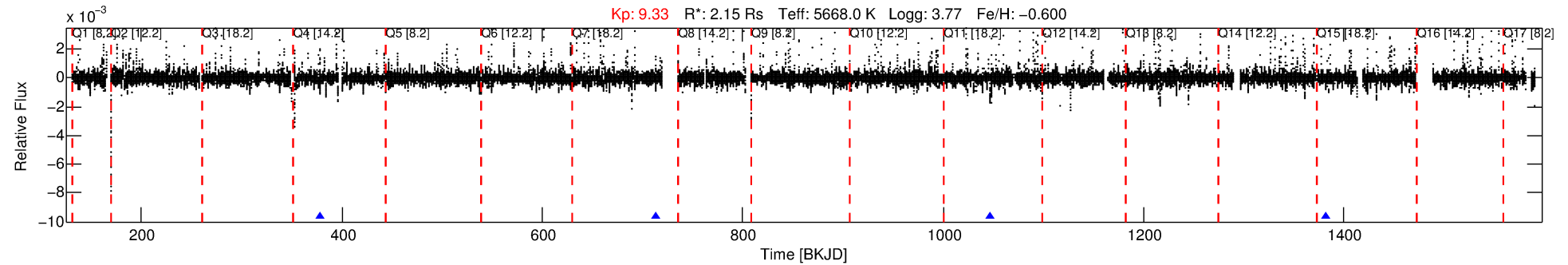
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007350496-04

No Significant Match Found

DV One-Page Summary

KIC: 7350496 Candidate: 4 of 4 Period: 334.280 d



DV Fit Results:

Period = 334.28043 [0.00997] d
Epoch = 378.7241 [0.0173] BKJD
Rp/R* = 0.0331 [0.0087]
a/R* = 196.75 [75.56]
b = 0.92 [0.07]
Seff = 4.84 [6.00]
Teff = 378 [117] K
Rp = 7.76 [5.06] Re
a = 0.9396 [0.6630] AU
Ag = 2719.13 [3755.17] [0.72σ]
Teffp = 4222 [672] K [5.63σ]

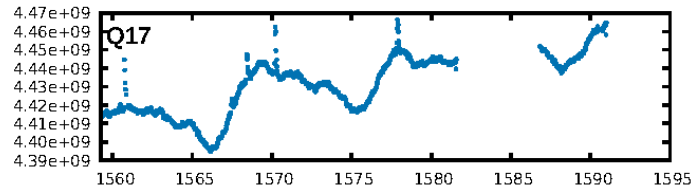
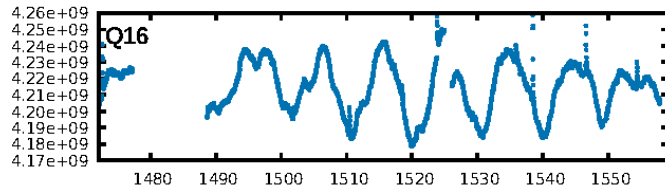
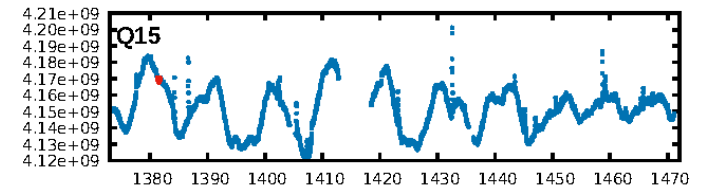
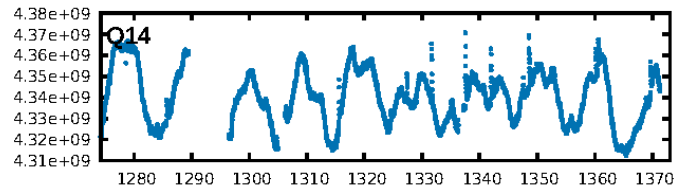
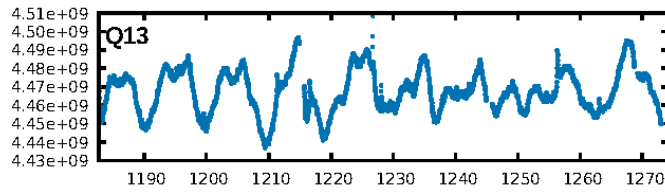
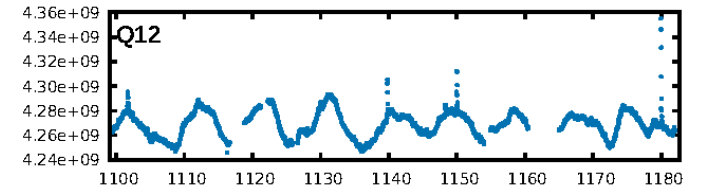
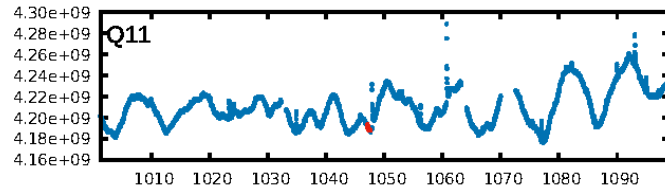
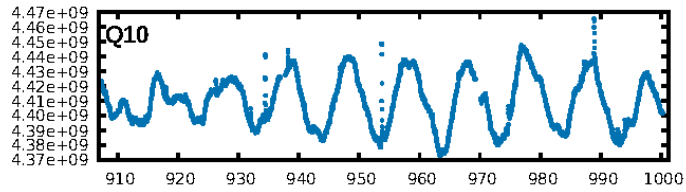
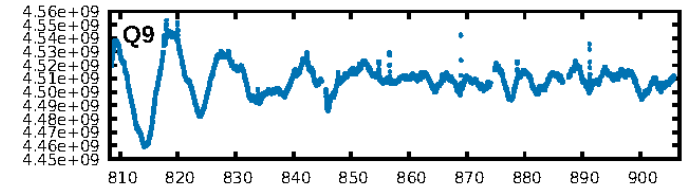
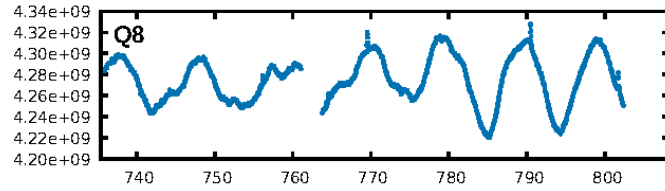
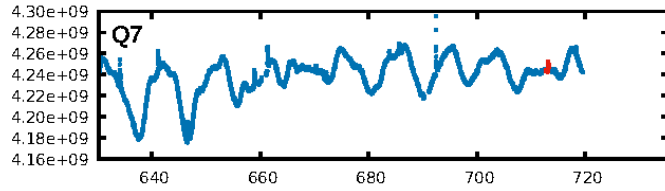
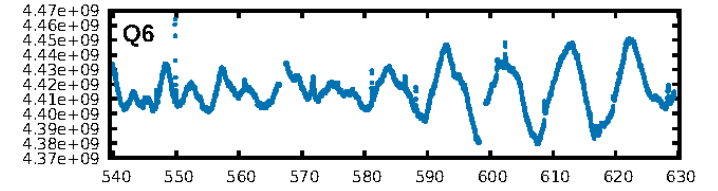
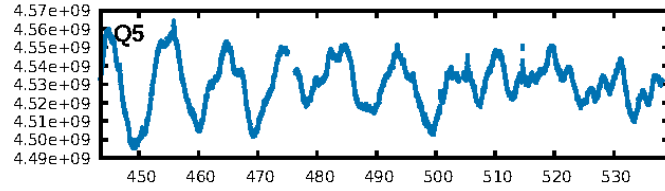
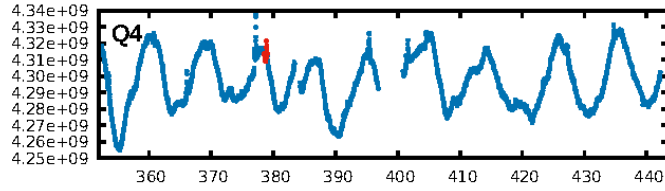
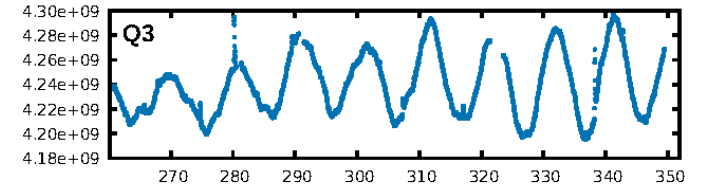
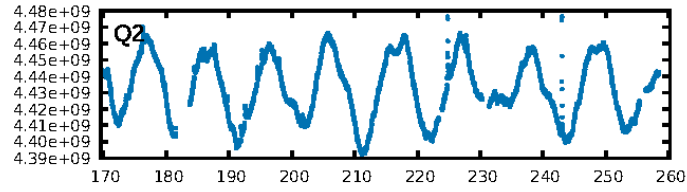
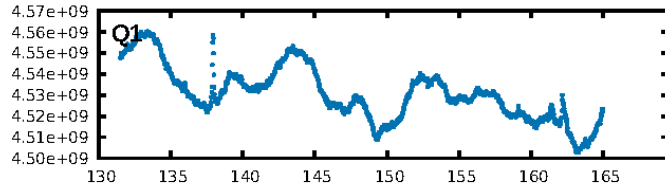
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [203.22σ]
LongPeriod-sig: 100.0% [629.19σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 19.1%
Centroid-so: 1.384 arcsec [3.88σ]
OotOffset-rm: 3.228 arcsec [1.66σ]
KicOffset-rm: 4.109 arcsec [1.96σ]
OotOffset-st: 0/3/1/0 [4]
KicOffset-st: 0/3/1/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [4/4]

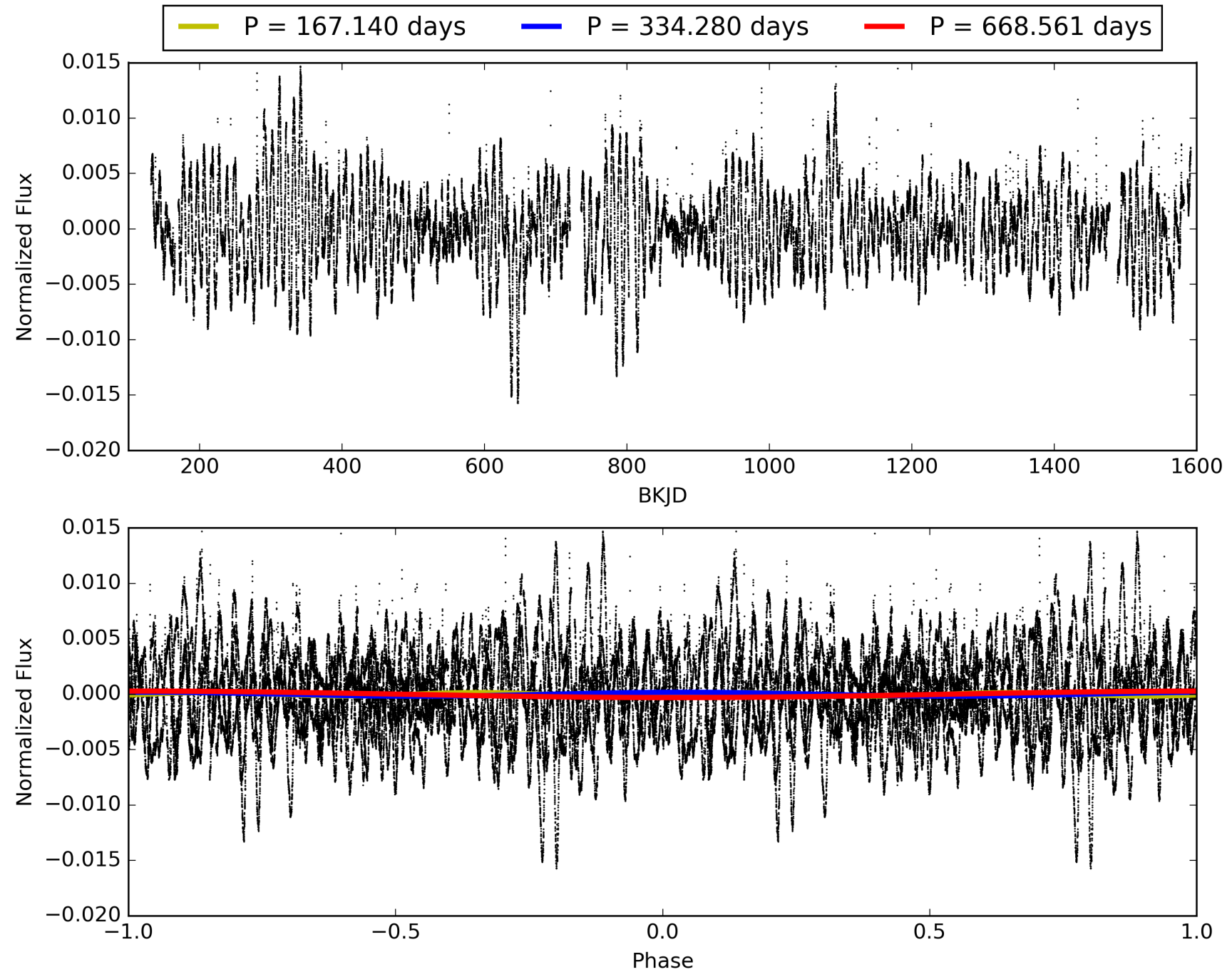
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:04:34 Z

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

TCE 007350496-04, PDC Light Curves

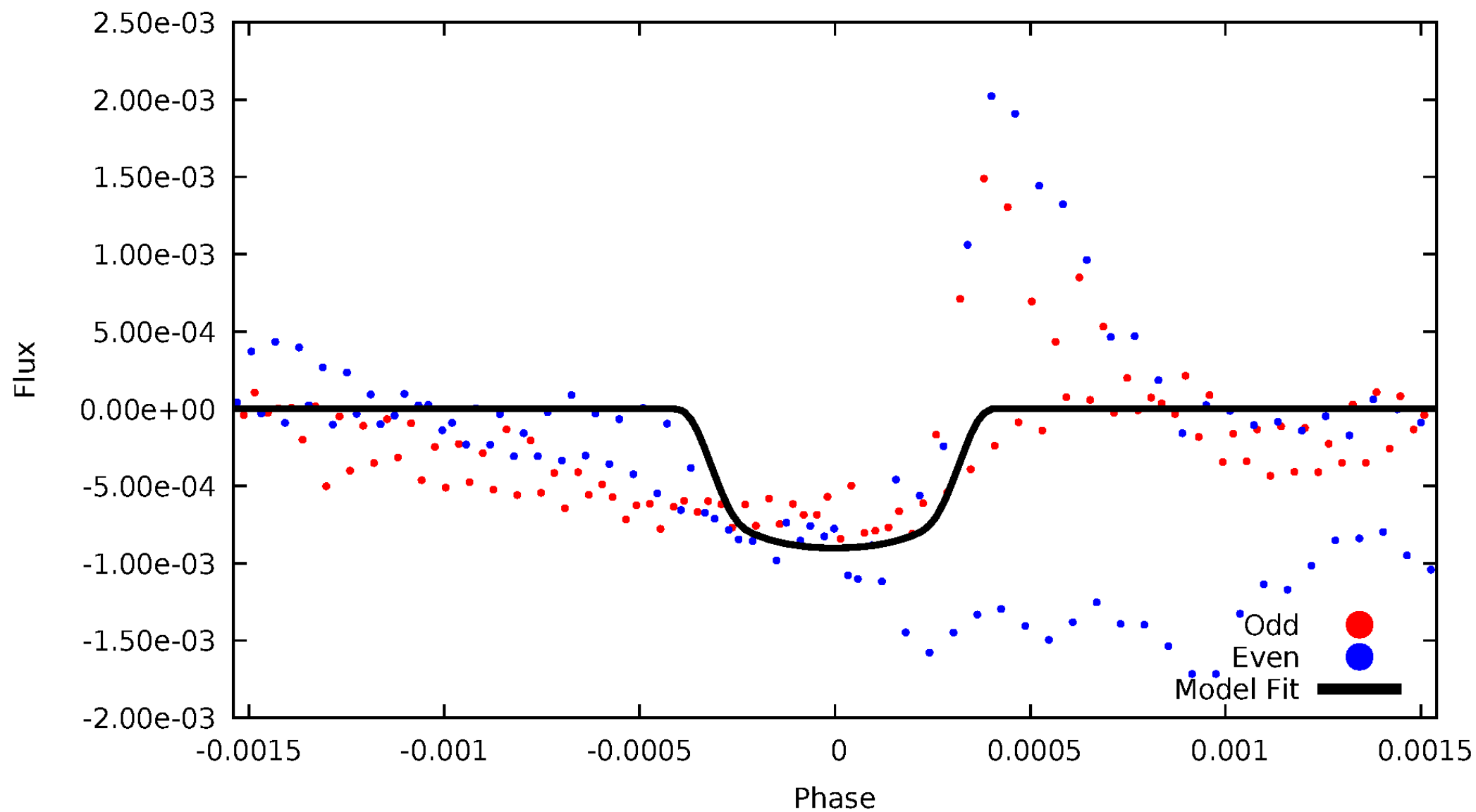


TCE 007350496-04



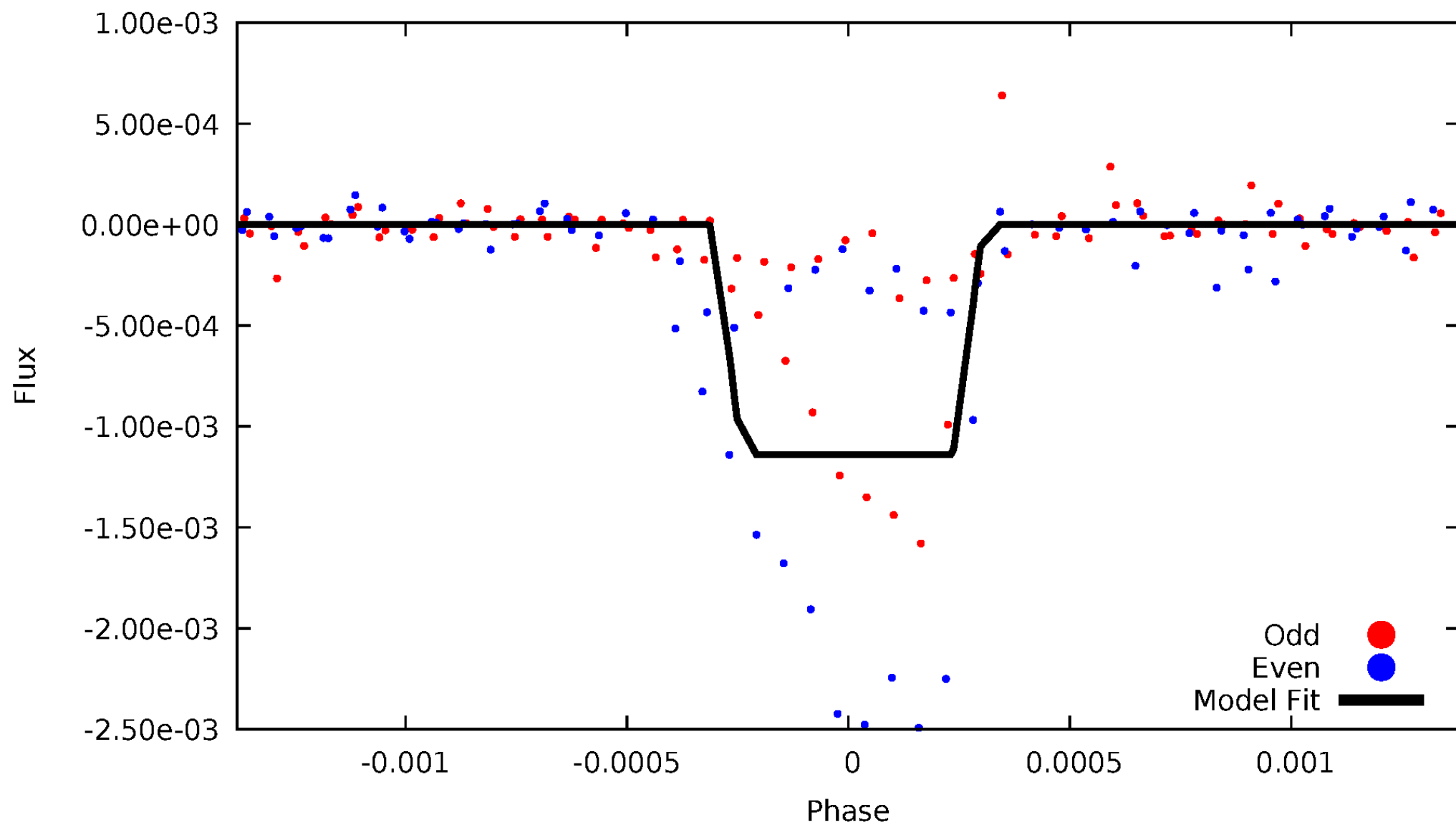
DV Odd/Even

TCE 007350496-04



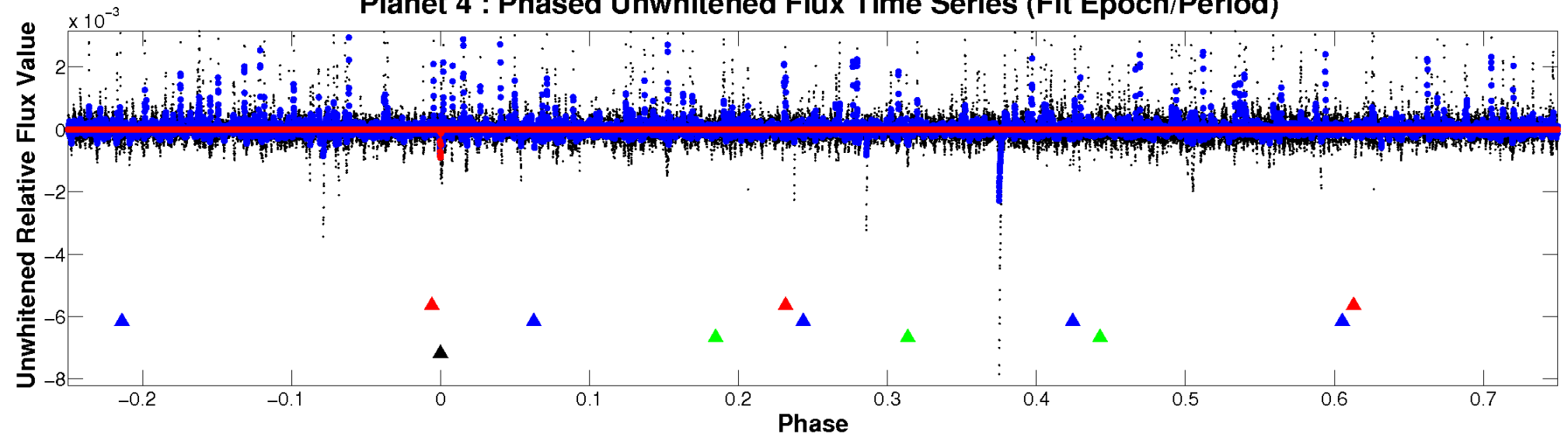
ALT Odd/Even

TCE 007350496-04

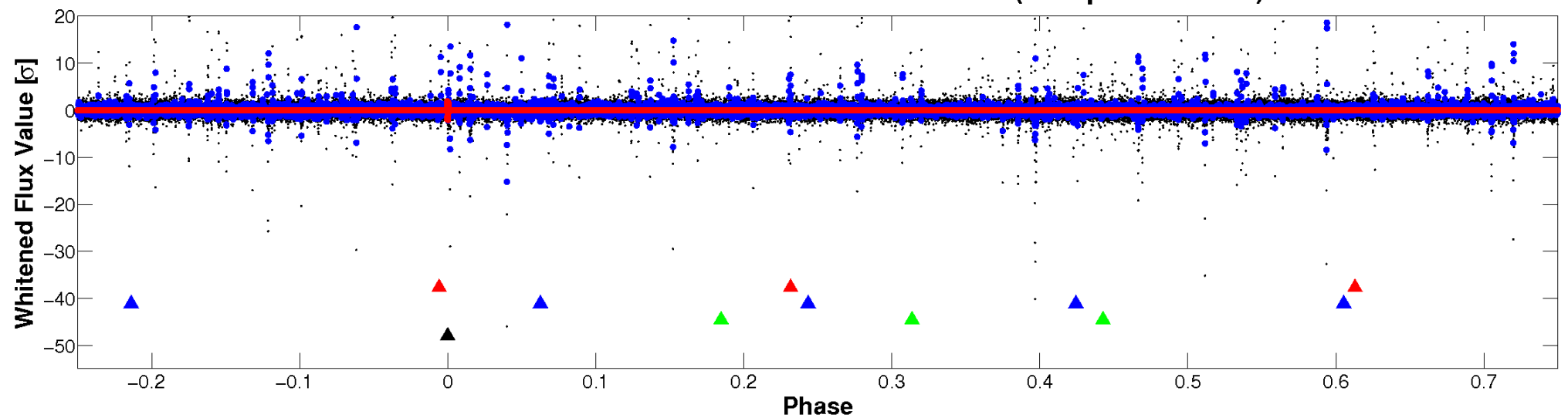


Non-Whitened Vs. Whitened Light Curve

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

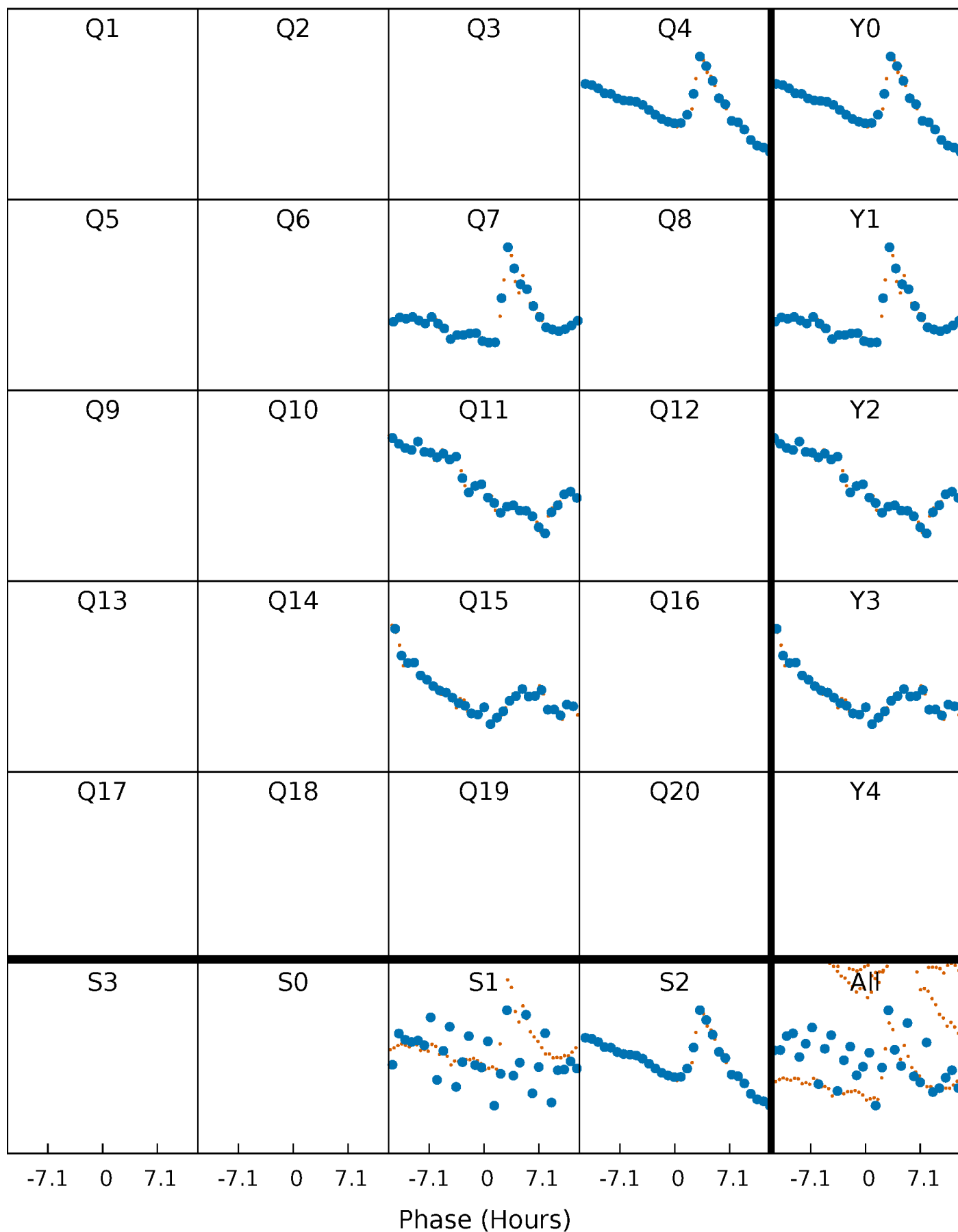


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



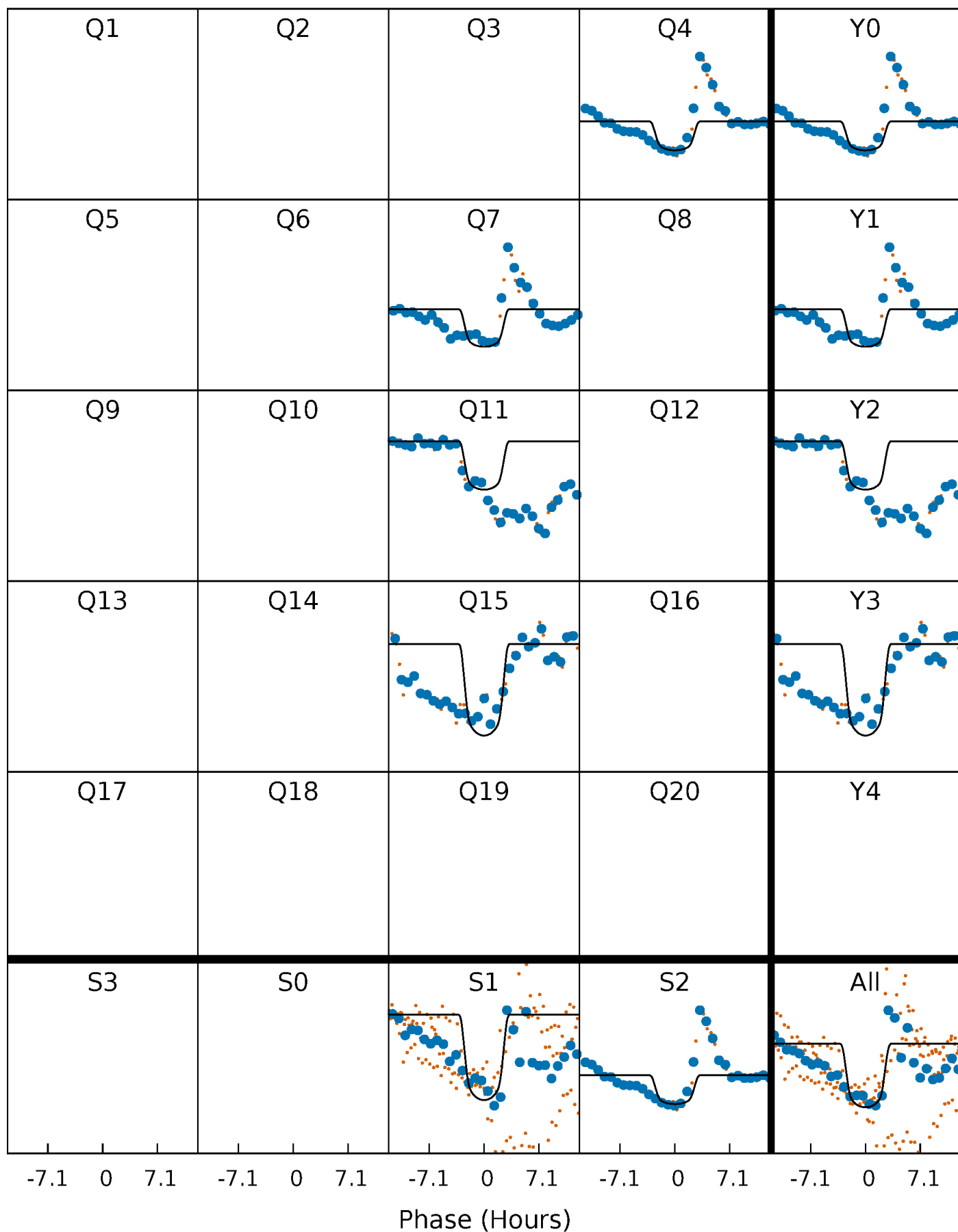
PDC Quarter-Phased Transit Curves

TCE 007350496-04 $P=334.280429$ Days $T_0=378.724092$ (BKJD)



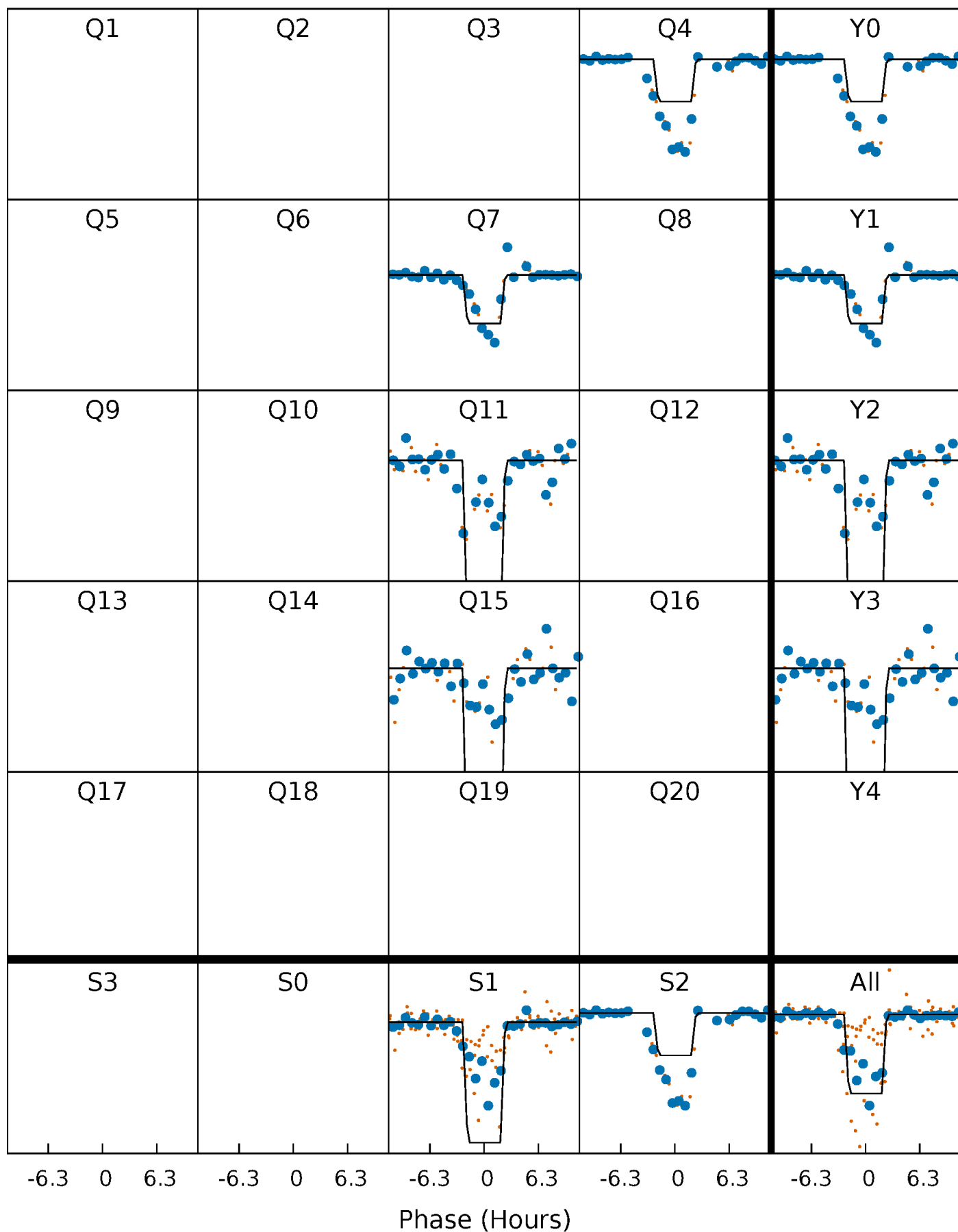
DV Quarter-Phased Transit Curves

TCE 007350496-04 $P=334.280429$ Days $T_0=378.724092$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

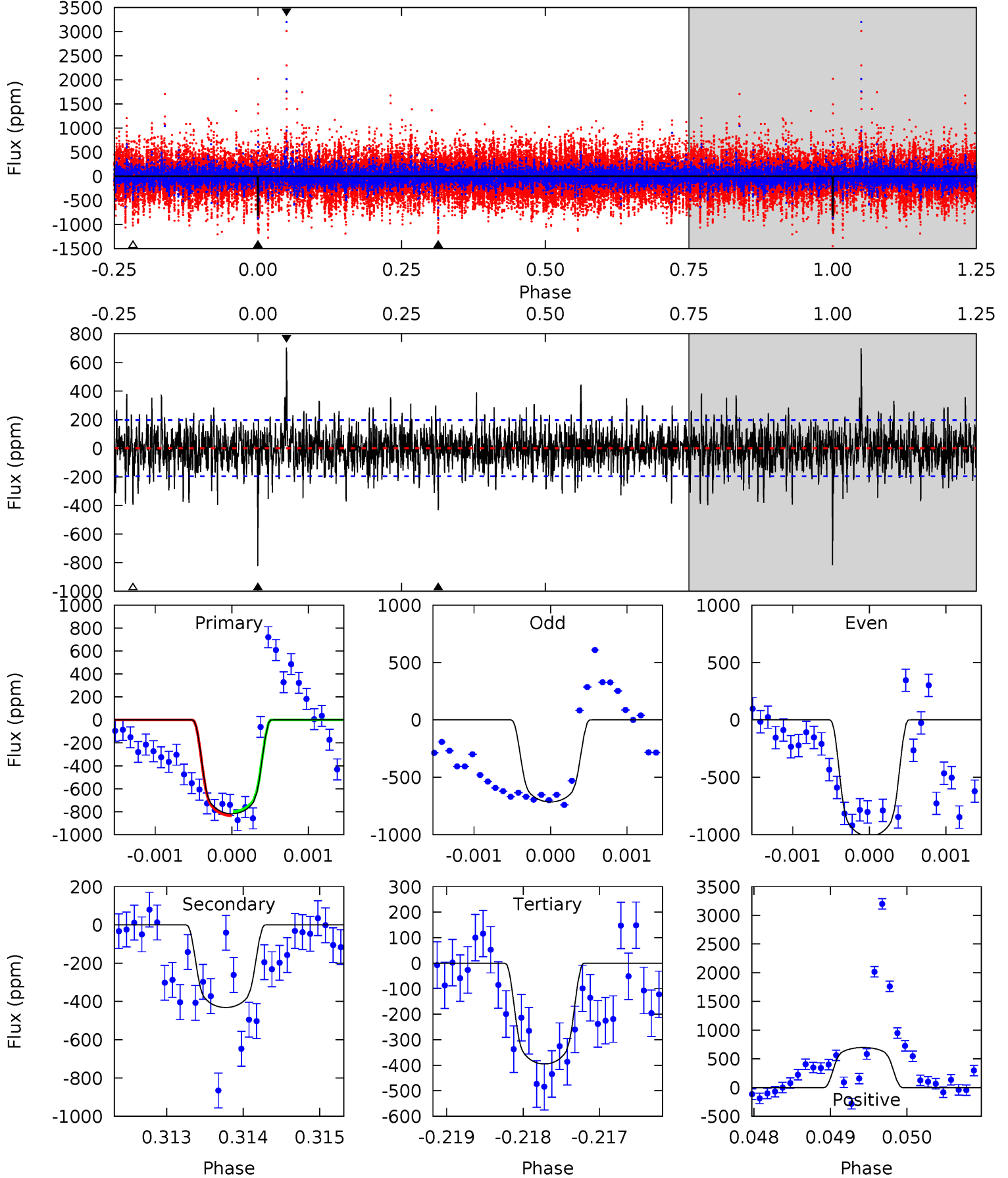
TCE 007350496-04 $P=334.272608$ Days $T_0=378.743465$ (BKJD)



DV Model-Shift Uniqueness Test

007350496-04, P = 334.280429 Days, E = 44.443663 Days

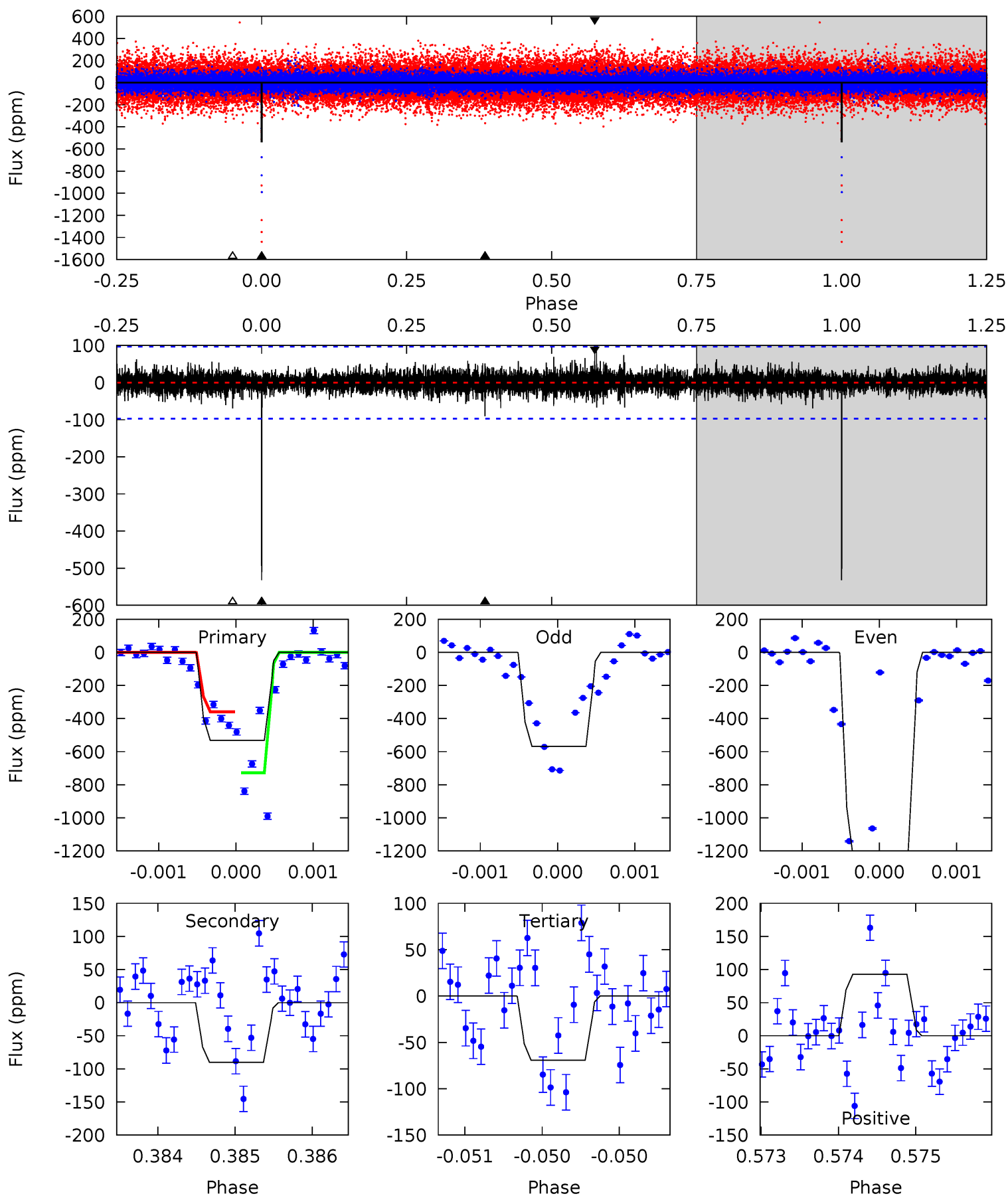
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	12.1	11.0	19.5	5.49	3.35	2.91	11.8	3.33	1.02	-7.46	3.55	1.10	0.46	0.48



Alt Model-Shift Uniqueness Test

007350496-04, P = 334.272608 Days, E = 44.470857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.3	5.13	3.95	5.29	5.54	3.43	0.91	26.4	25.0	1.18	-0.17	22.0	1.35	0.15	9.95



Stellar Parameters For KIC 007350496

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5668^{+187}_{-136}	$3.769^{+0.760}_{-0.190}$	$-0.600^{+0.350}_{-0.250}$	$2.149^{+0.853}_{-1.280}$	$0.989^{+0.190}_{-0.209}$	$0.140^{+1.996}_{-0.079}$
	+3%/-2%	+20%/-5%	+58%/-42%	+40%/-60%	+19%/-21%	+1422%/-56%
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 007350496-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-432 ± 36	$6.74^{+3.03}_{-2.50}$	507^{+59}_{-88}	4637^{+663}_{-409}	4380^{+7081}_{-2107}
Alt.	-90 ± 18	$6.87^{+2.89}_{-2.58}$	506^{+60}_{-87}	3491^{+380}_{-256}	900^{+1590}_{-450}

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

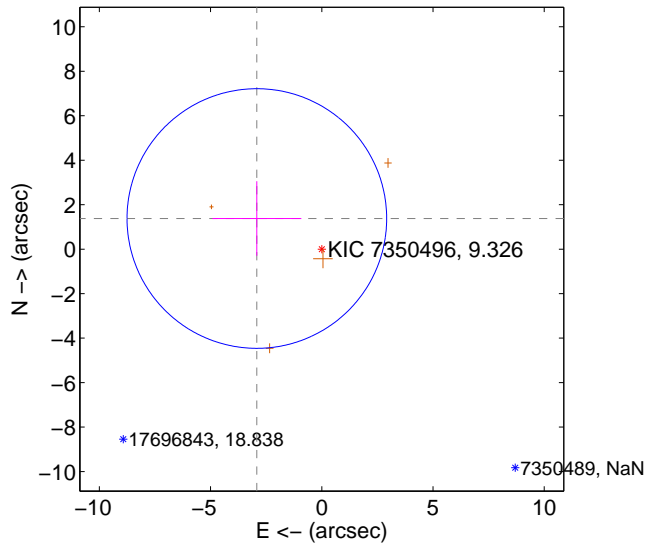
Supplemental centroid analysis for 007350496-04. **Kepler magnitude: 9.33.** Transit SNR 11.87

There are 0 quarters with good PRF difference image offsets

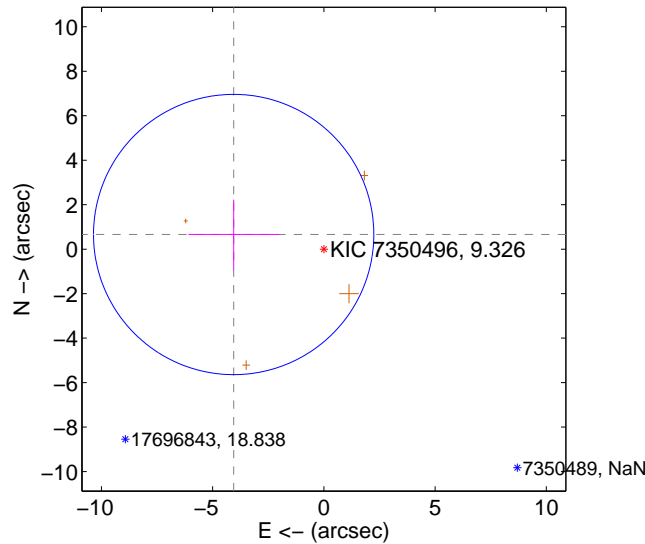
The direct PRF centroid is offset from the target star catalog position by about 1.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.228 ± 1.946	1.66	2.919 ± 2.001	1.378 ± 1.675
PRF-fit source offset from KIC position	4.109 ± 2.100	1.96	4.056 ± 2.034	0.659 ± 1.567
photometric centroid source offset	1.38 ± 0.36	3.88	1.23 ± 0.37	0.63 ± 0.29

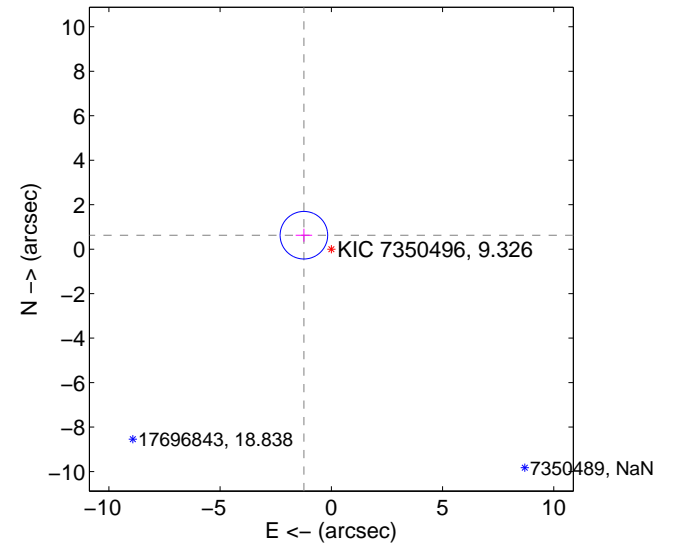
offset from difference PRF-fit to OOT PRF-fit



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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



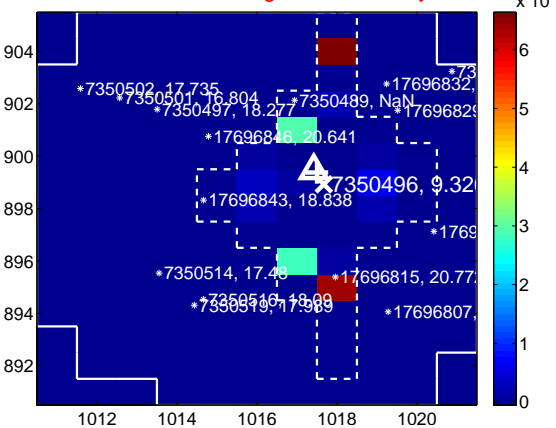
Q3 no difference image



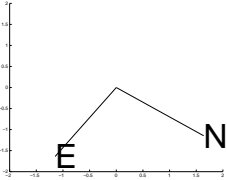
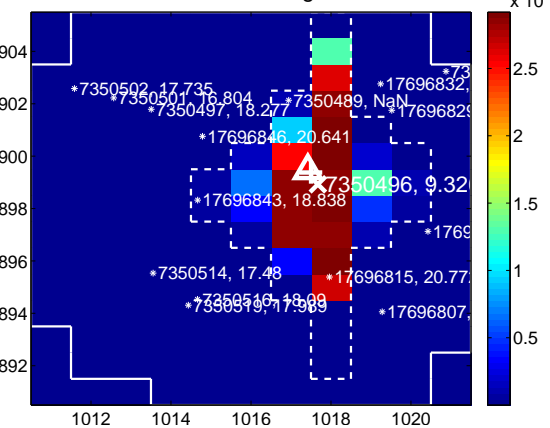
Q3 no OOT image



Q4 difference image. Poor Quality



Q4 OOT image



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

Q5 no difference image



Q5 no OOT image



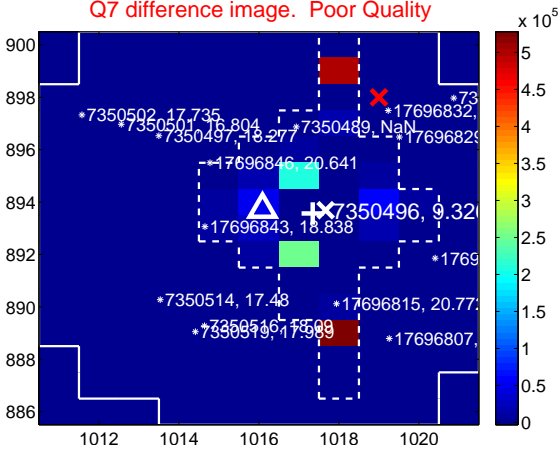
Q6 no difference image



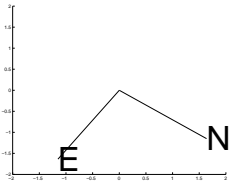
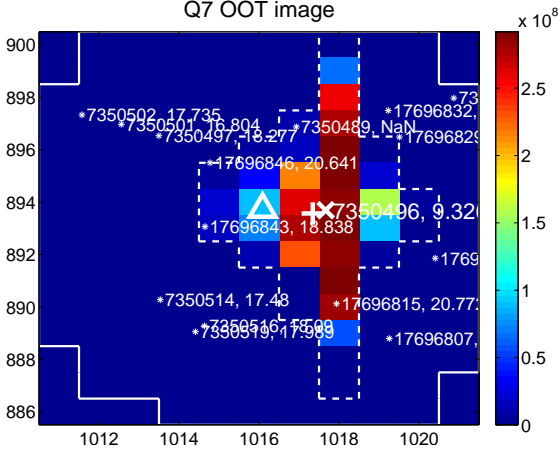
Q6 no OOT image



Q7 difference image. Poor Quality



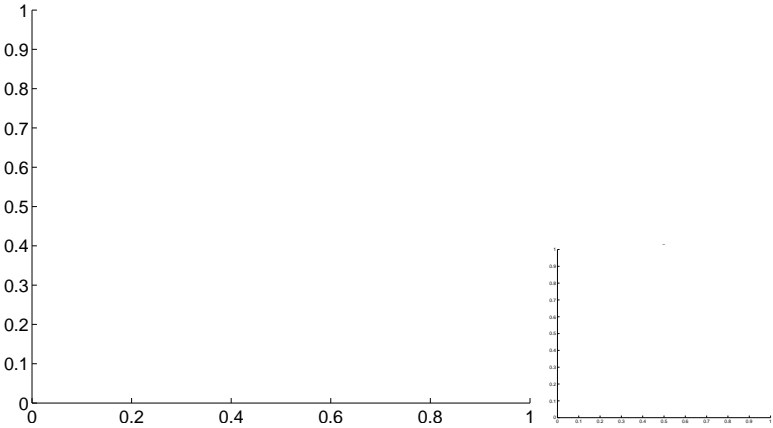
Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



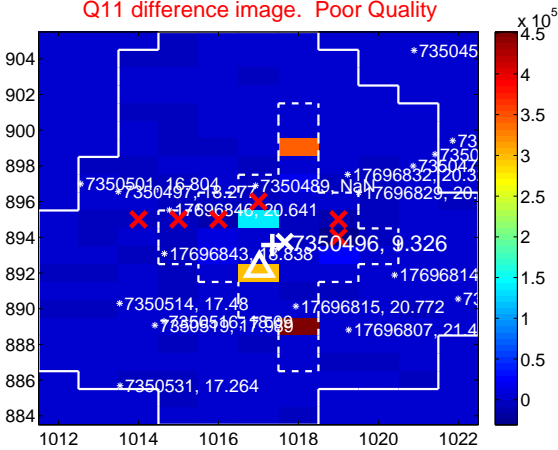
Q10 no difference image



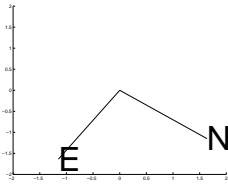
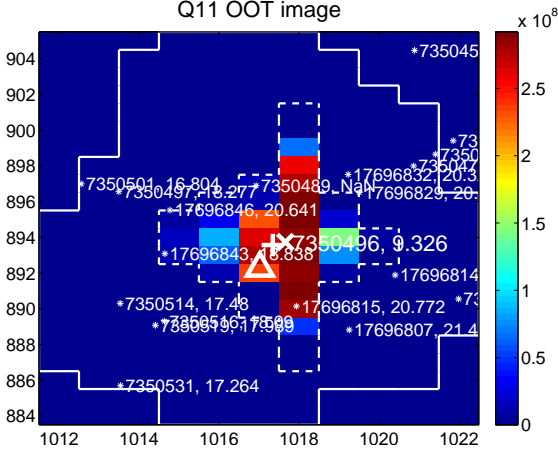
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



Q12 no OOT image



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

Q13 no difference image



Q13 no OOT image



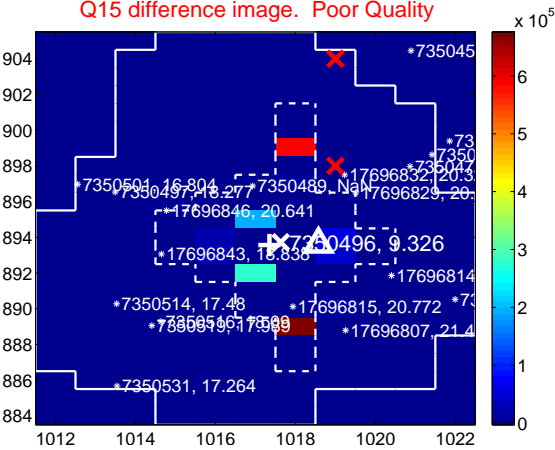
Q14 no difference image



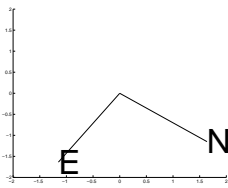
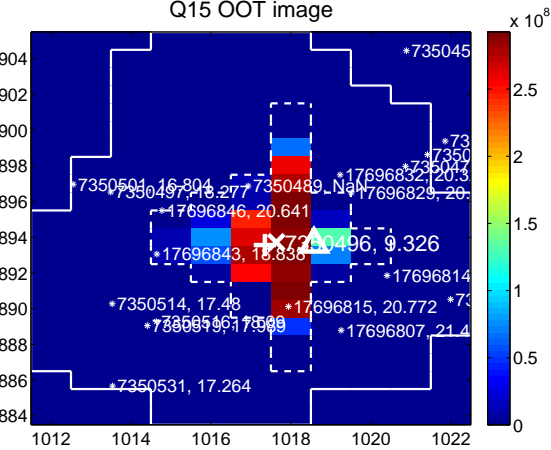
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



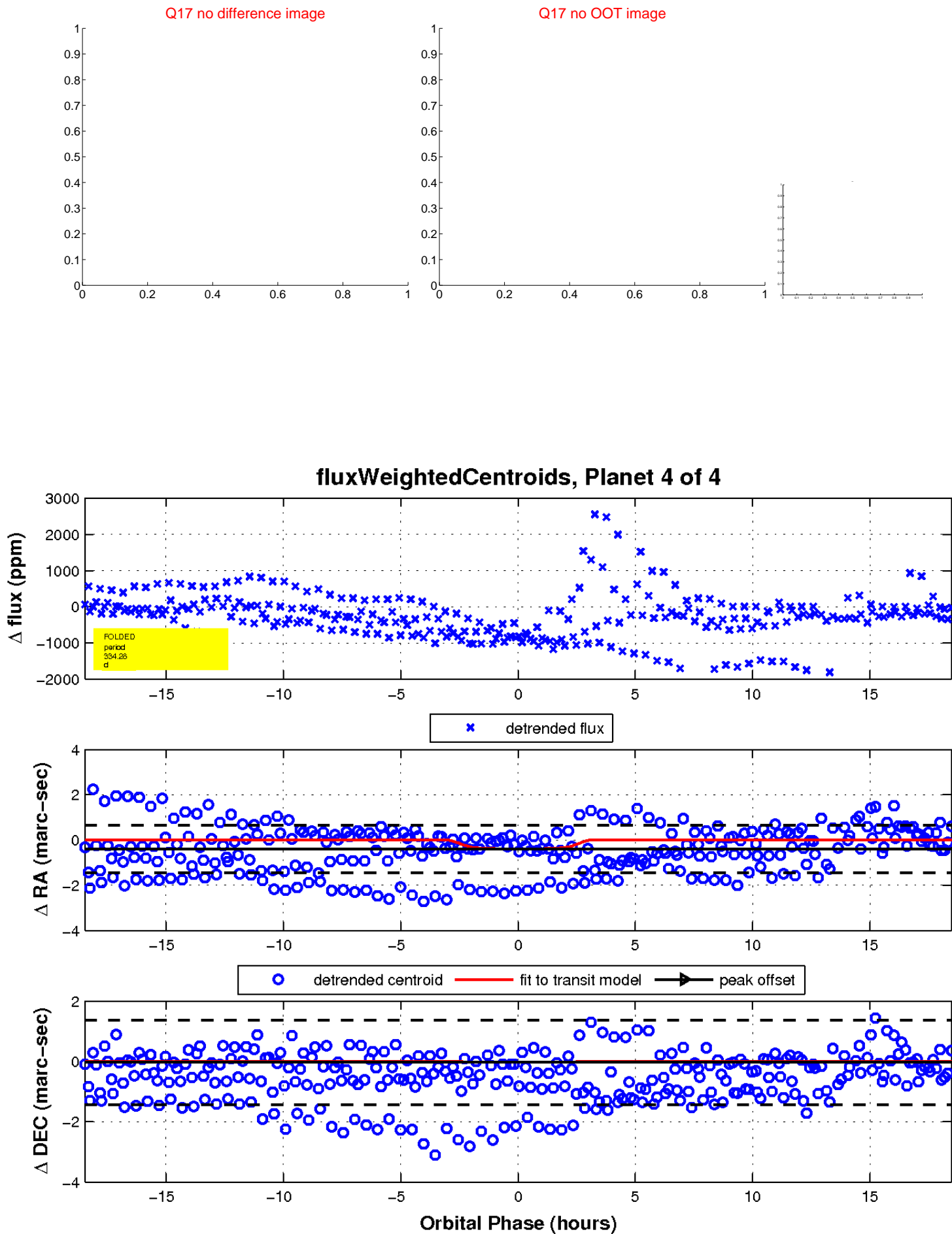
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

