

KIC 011135986

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})
011135986-01	OBS	No	443.391096	511.128117	1164.2	6.810	18.7	7.7	4.72	5125	16.84	8.89
011135986-02	OBS	No	560.124898	325.838665	1394.6	10.459	20.6	8.2	4.72	5125	17.33	6.51
011135986-03	OBS	No	345.929773	341.082334	992.7	4.532	19.0	6.8	4.72	5125	15.19	12.38
011135986-04	OBS	No	324.761518	188.124398	1224.3	4.731	18.8	7.9	4.72	5125	16.81	13.46
011135986-05	OBS	No	553.204915	314.774970	838.8	4.574	16.4	6.5	4.72	5125	14.79	6.62
011135986-06	OBS	No	363.182774	350.898874	1221.5	7.290	15.2	7.6	4.72	5125	16.14	11.60
011135986-07	OBS	No	396.124994	168.127933	1176.2	3.500	16.3	-1.0	4.72	5125	15.87	10.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011135986-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011135986-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011135986-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
011135986-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

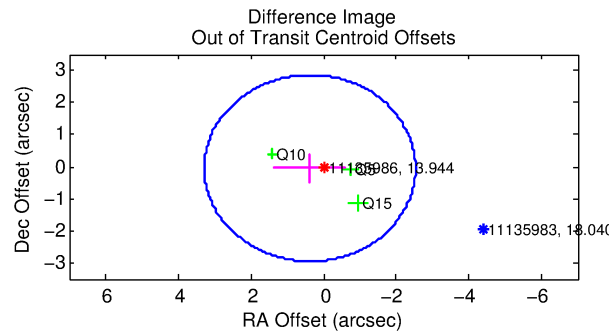
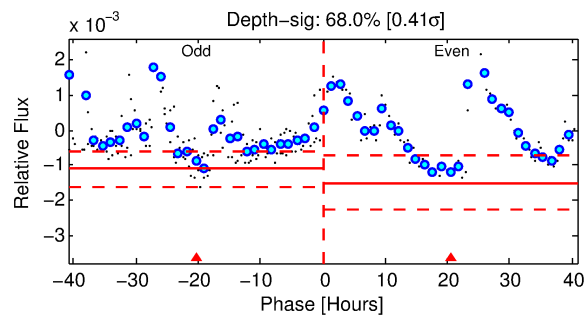
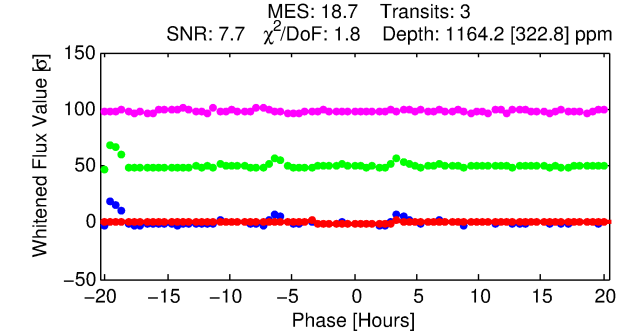
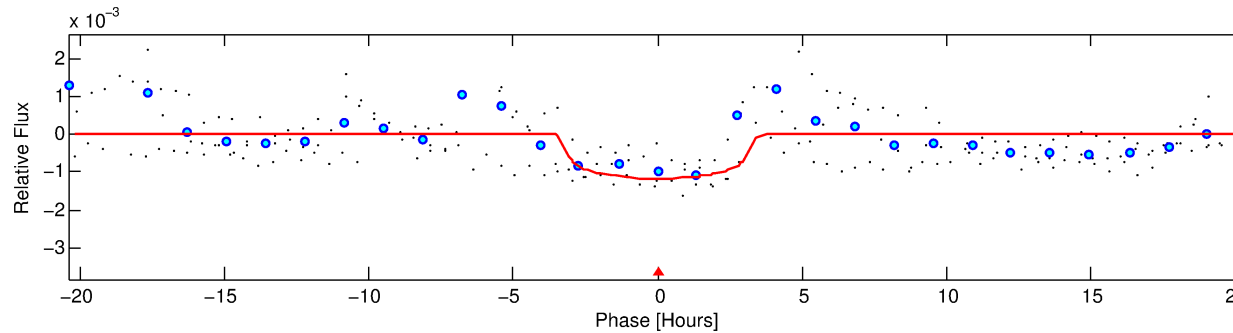
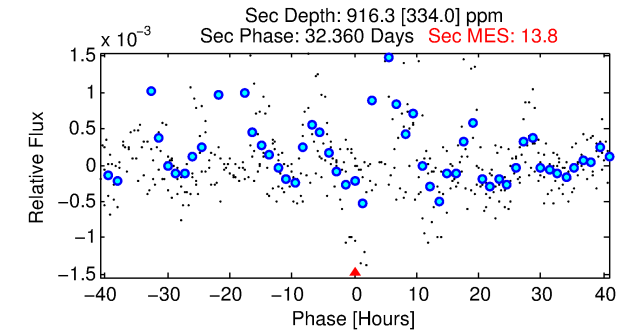
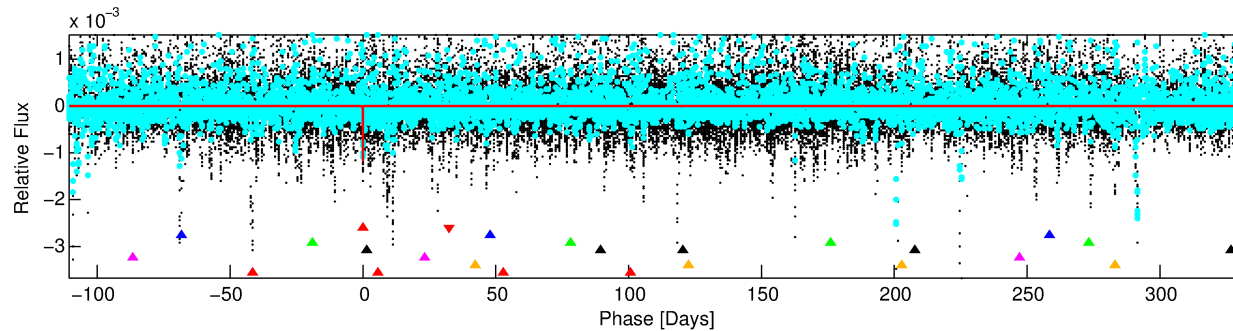
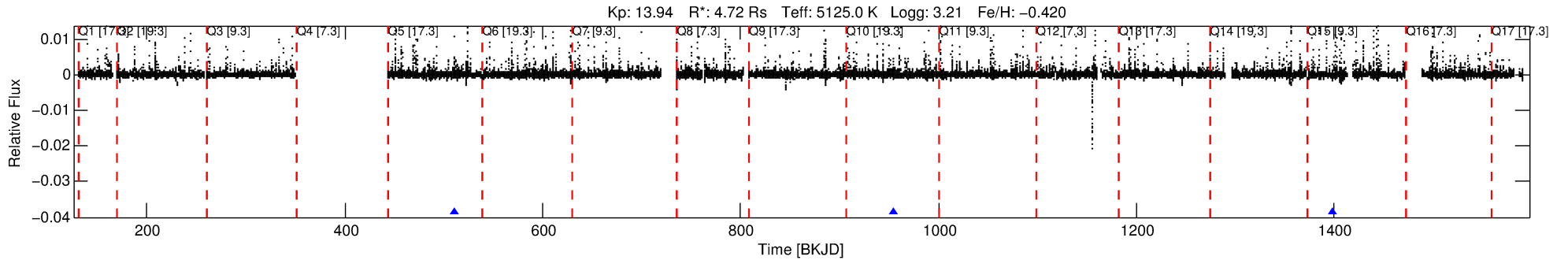
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-01

No Significant Match Found

DV One-Page Summary

KIC: 11135986 Candidate: 1 of 7 Period: 443.391 d



DV Fit Results:

Period = 443.39110 [0.00975] d
Epoch = 511.1281 [0.0147] BKJD
Rp/R* = 0.0327 [0.0195]
a/R* = 405.73 [858.01]
b = 0.63 [2.02]
Seff = 8.89 [5.38]
Teq = 440 [67] K
Rp = 16.84 [11.87] Re
a = 1.2457 [0.4586] AU
Ag = 2758.95 [3824.01] [0.72σ]
Teffp = 4934 [1547] K [2.90σ]

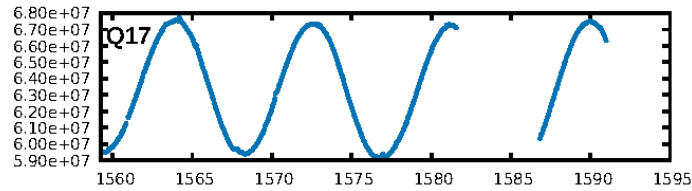
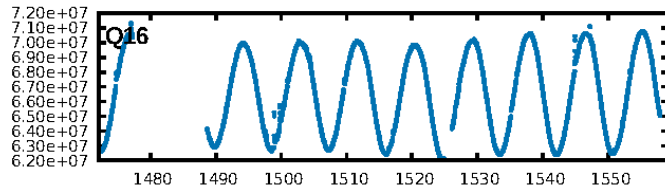
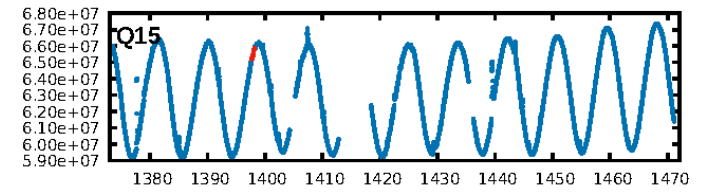
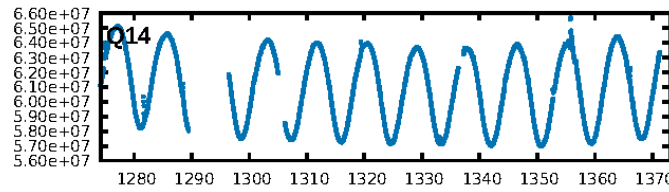
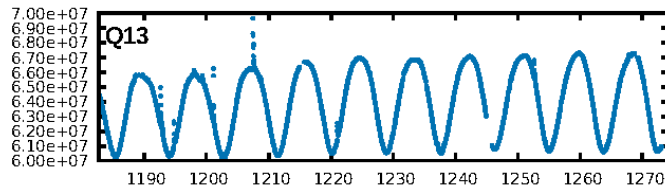
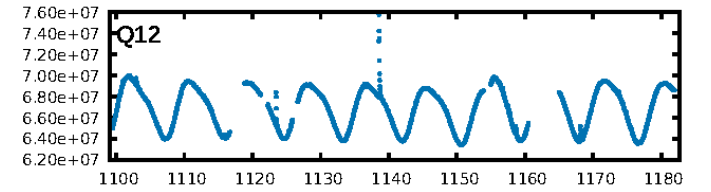
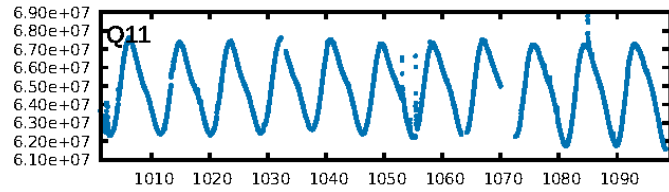
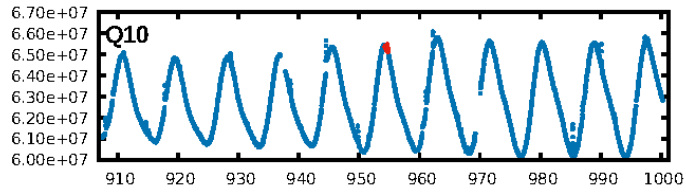
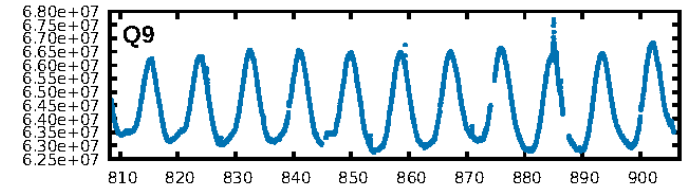
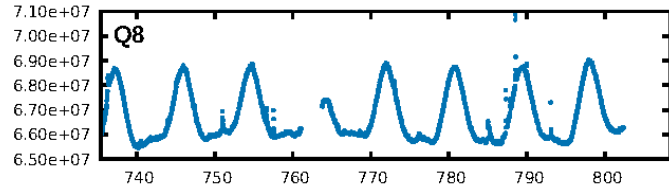
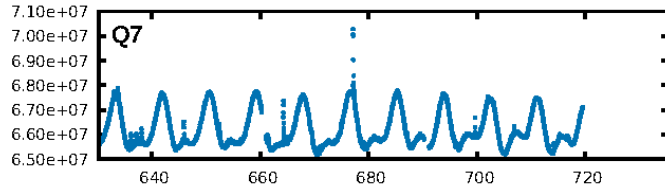
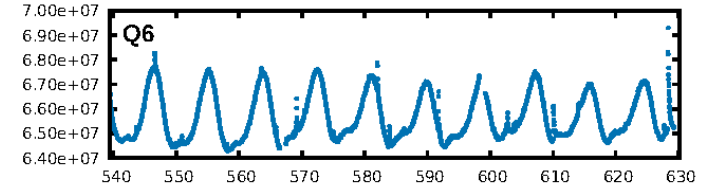
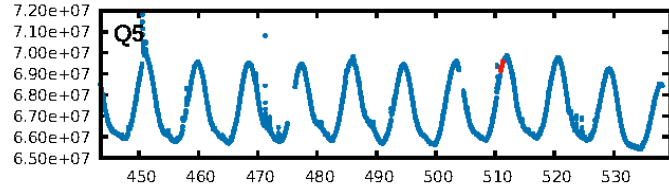
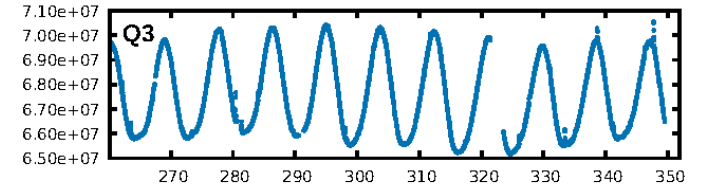
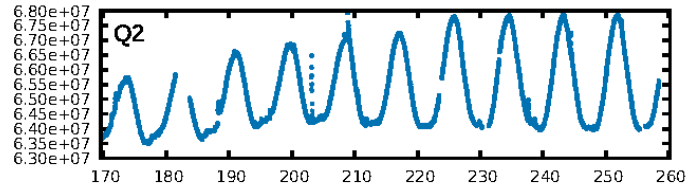
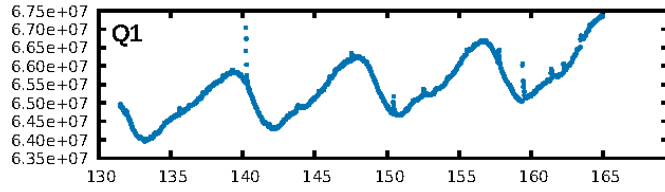
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [148.16σ]
LongPeriod-sig: 100.0% [321.28σ]
ModelChiSquare2-sig: 75.9%
ModelChiSquareGof-sig: 81.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.277
Centroid-sig: 1.0%
Centroid-so: 0.786 arcsec [1.86σ]
OotOffset-rm: 0.378 arcsec [0.39σ]
KicOffset-rm: 0.251 arcsec [0.27σ]
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]

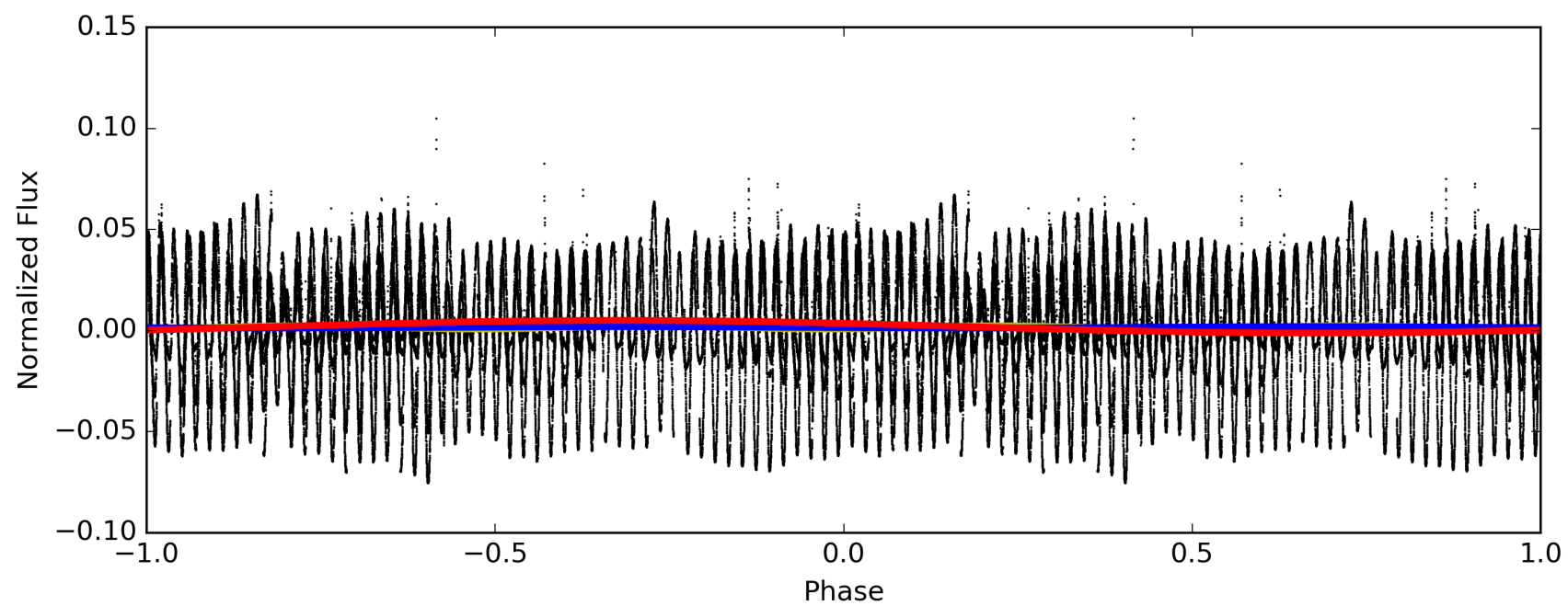
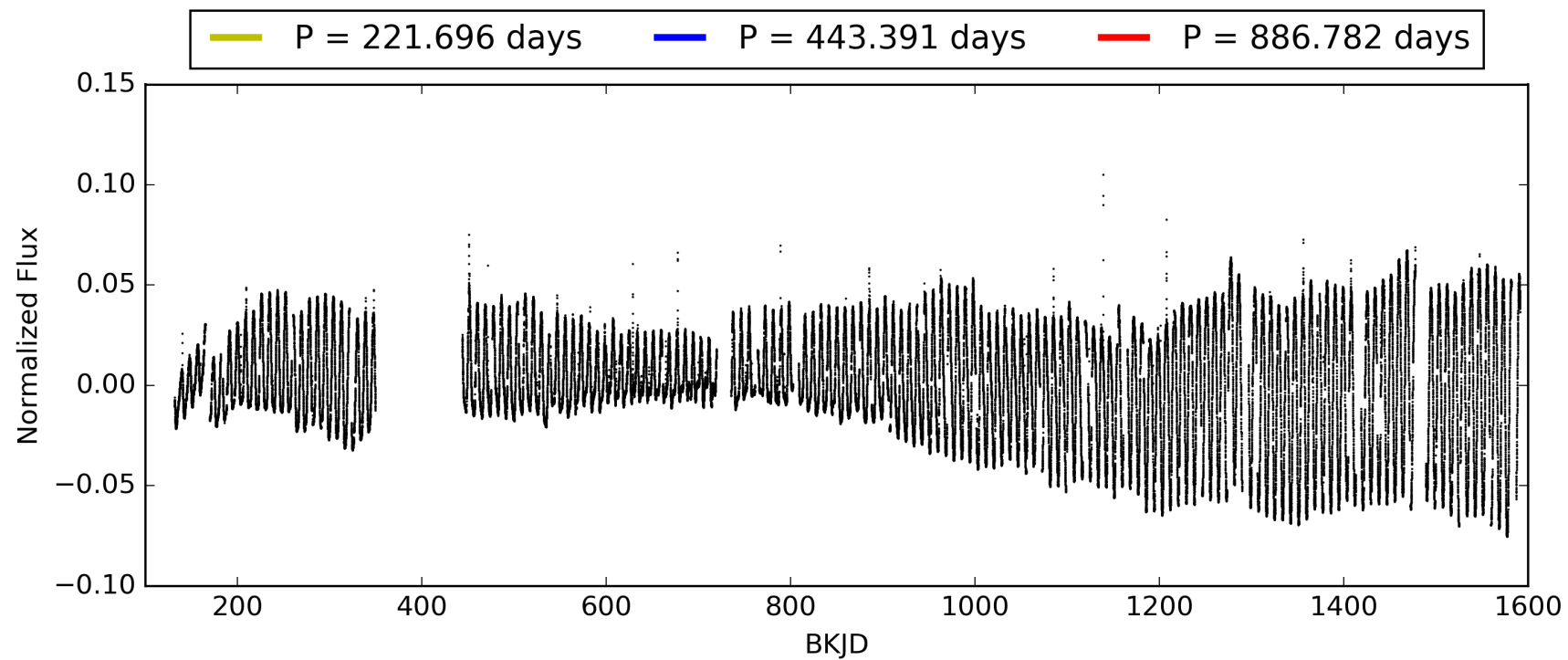
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011135986-01, PDC Light Curves

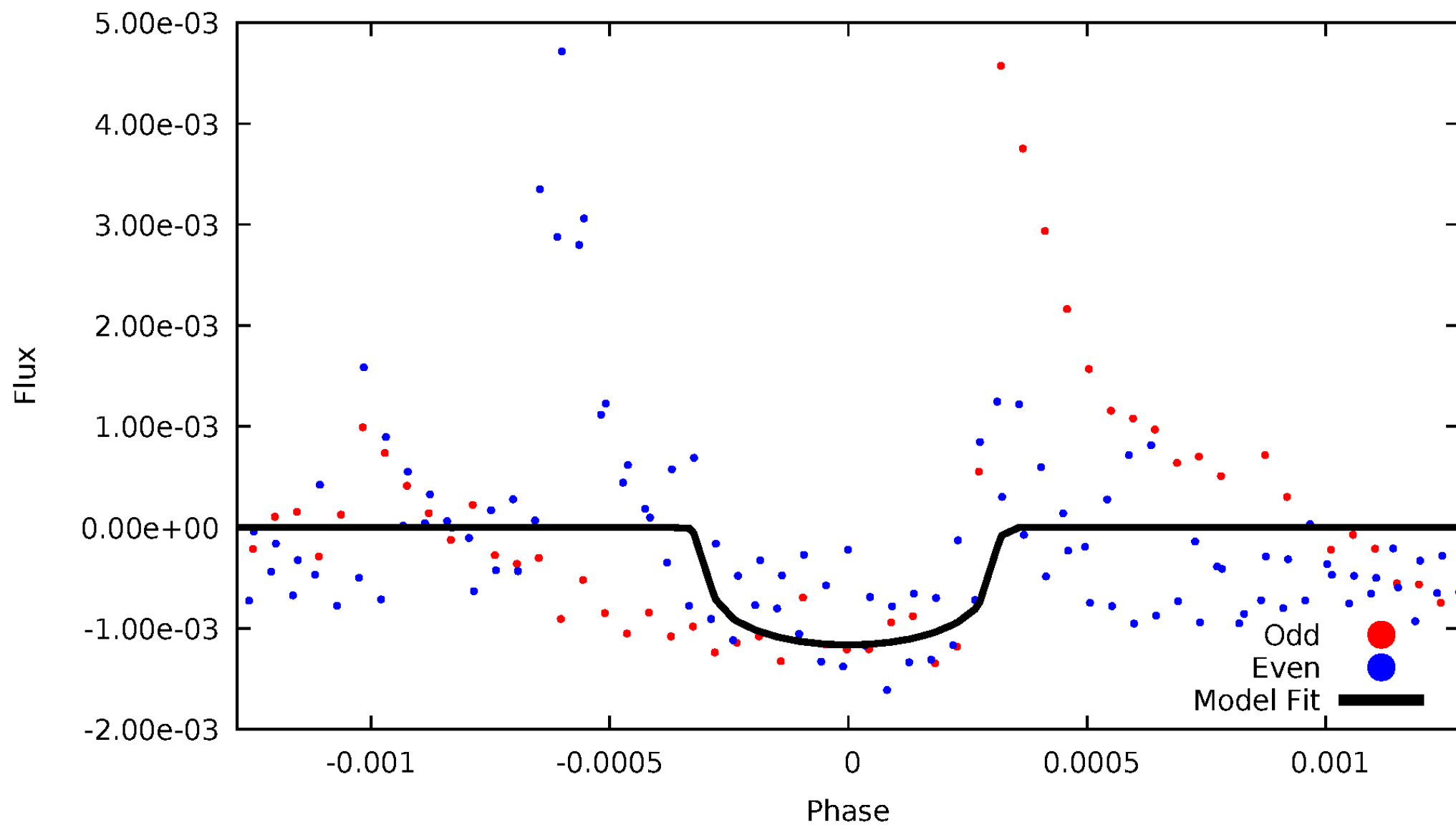


TCE 011135986-01



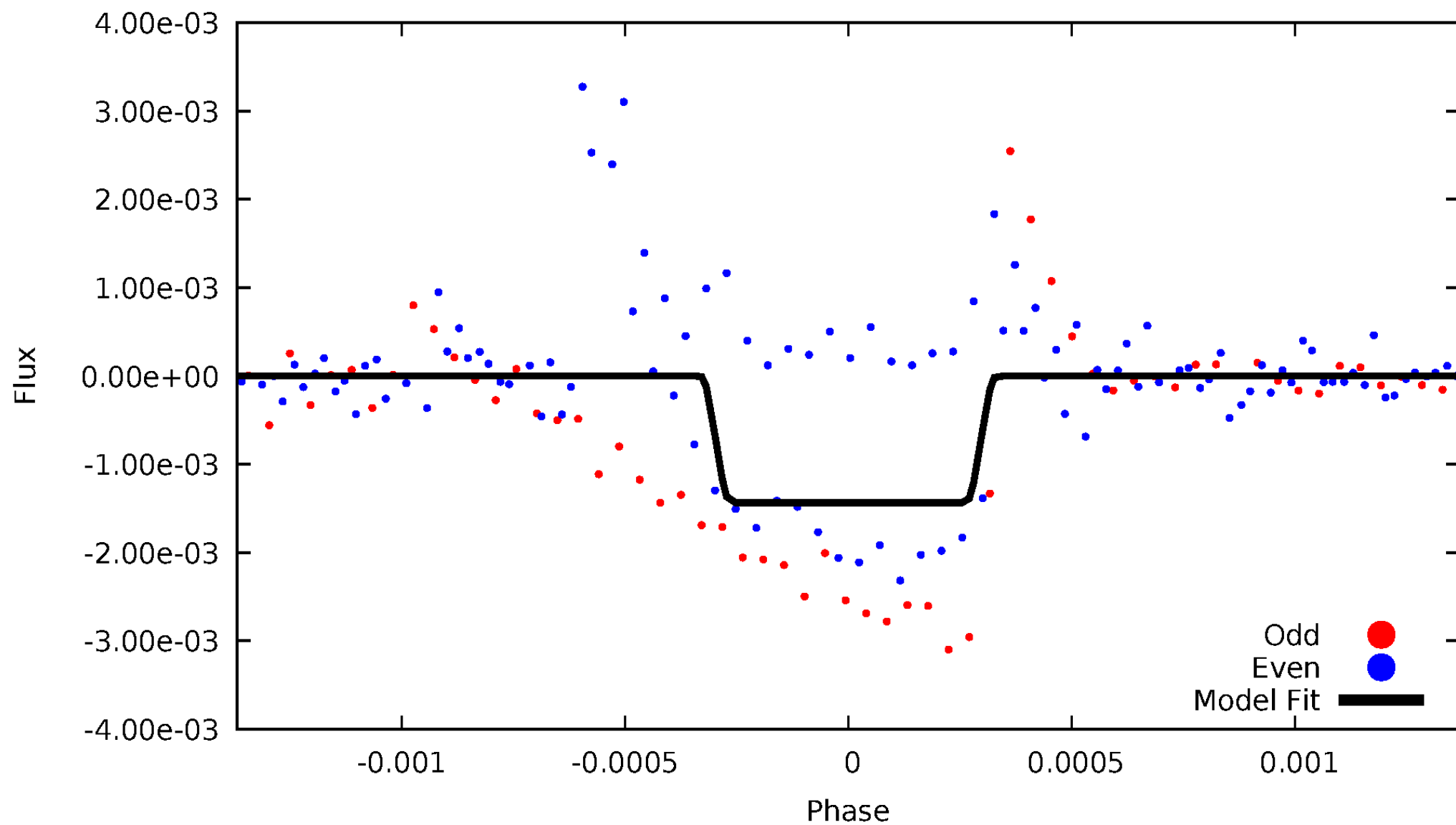
DV Odd/Even

TCE 011135986-01



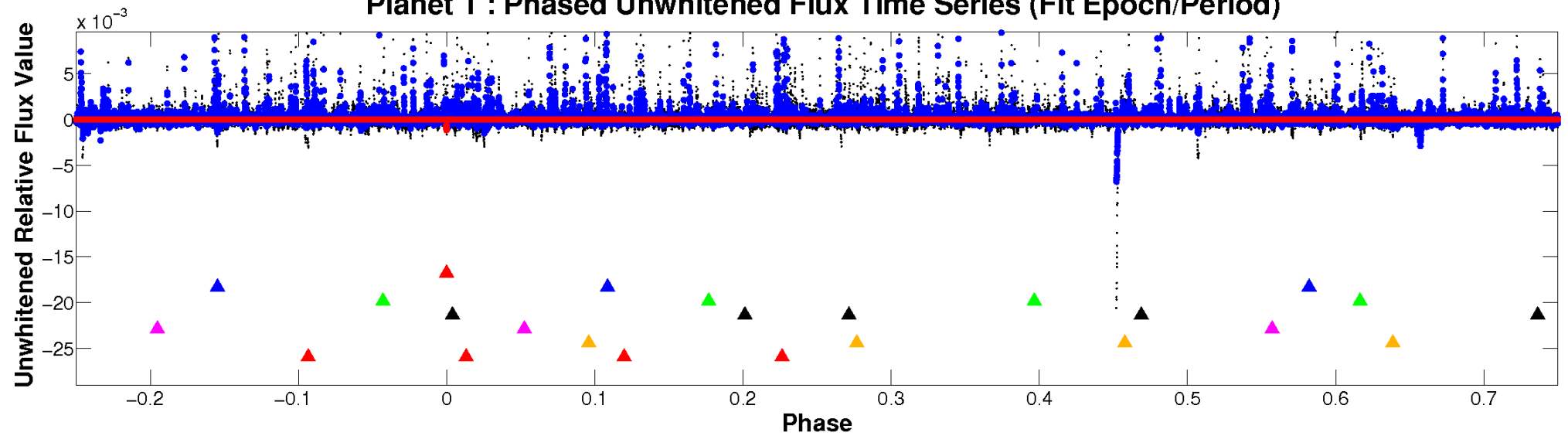
ALT Odd/Even

TCE 011135986-01

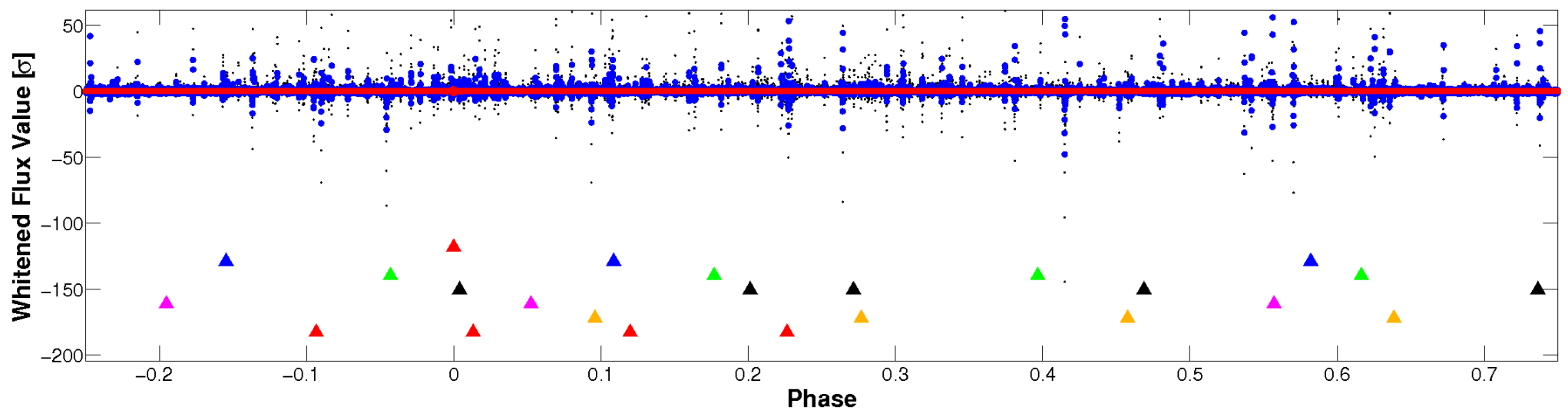


Non-Whitened Vs. Whitened Light Curve

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

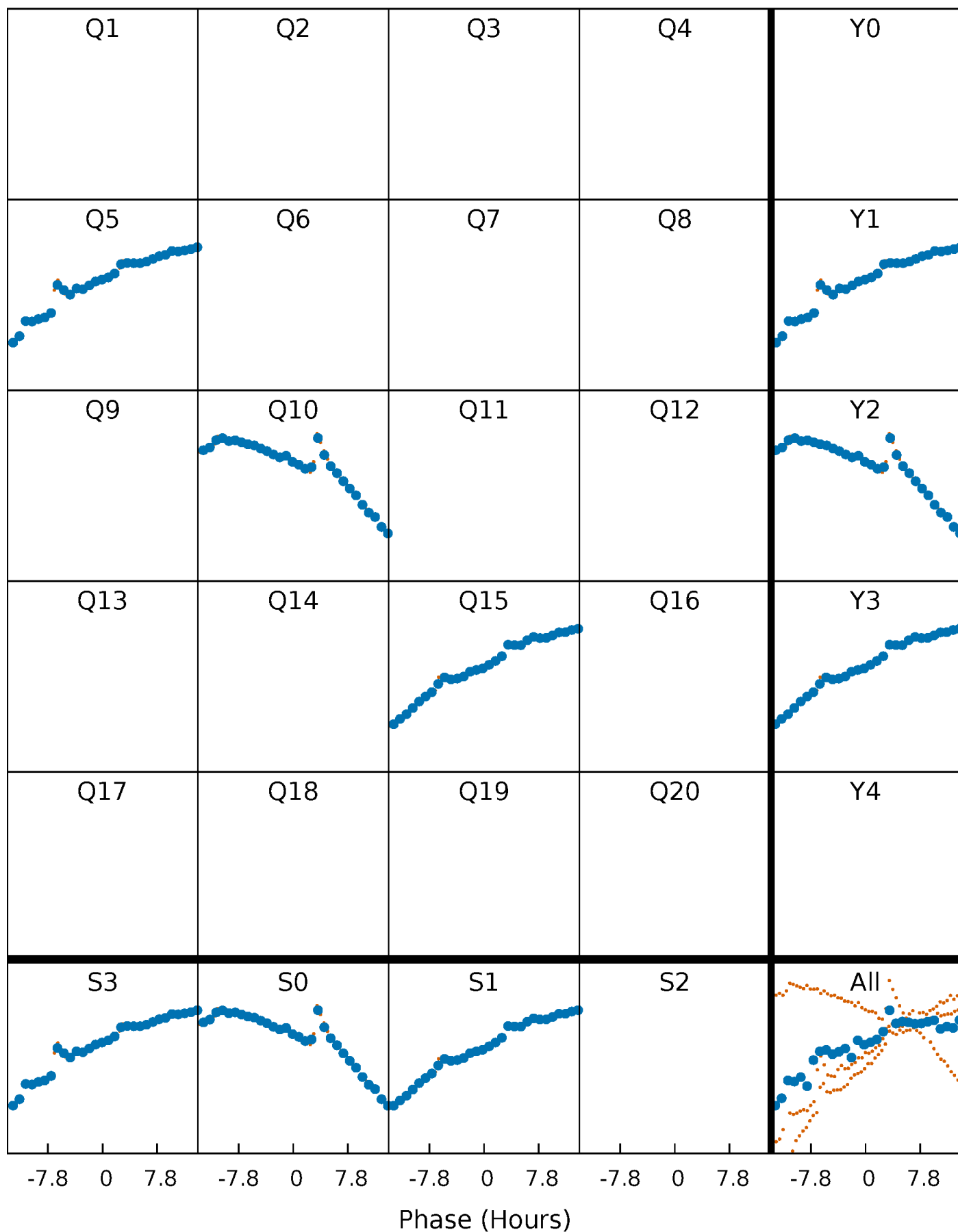


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



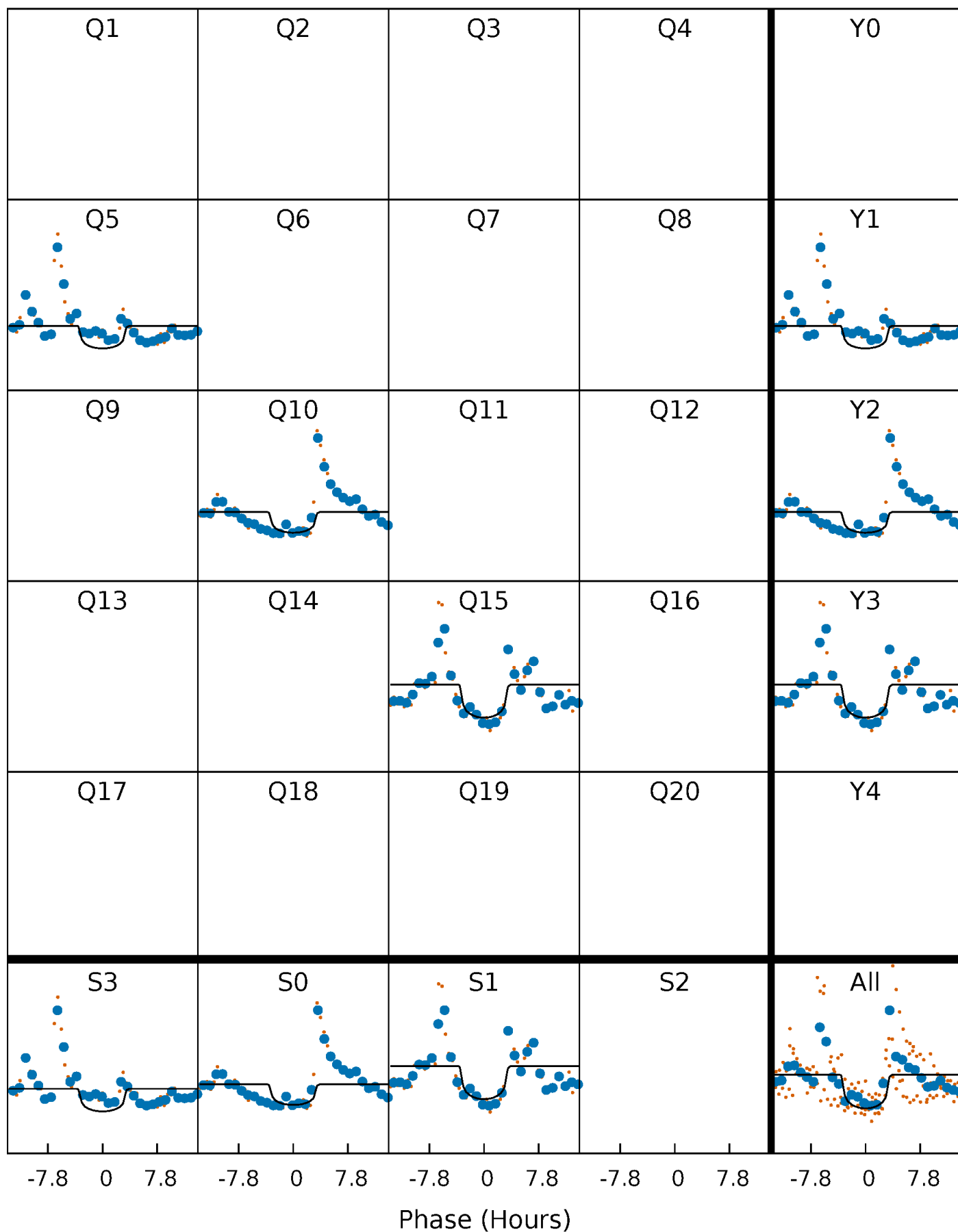
PDC Quarter-Phased Transit Curves

TCE 011135986-01 P=443.391096 Days $T_0=511.128117$ (BKJD)



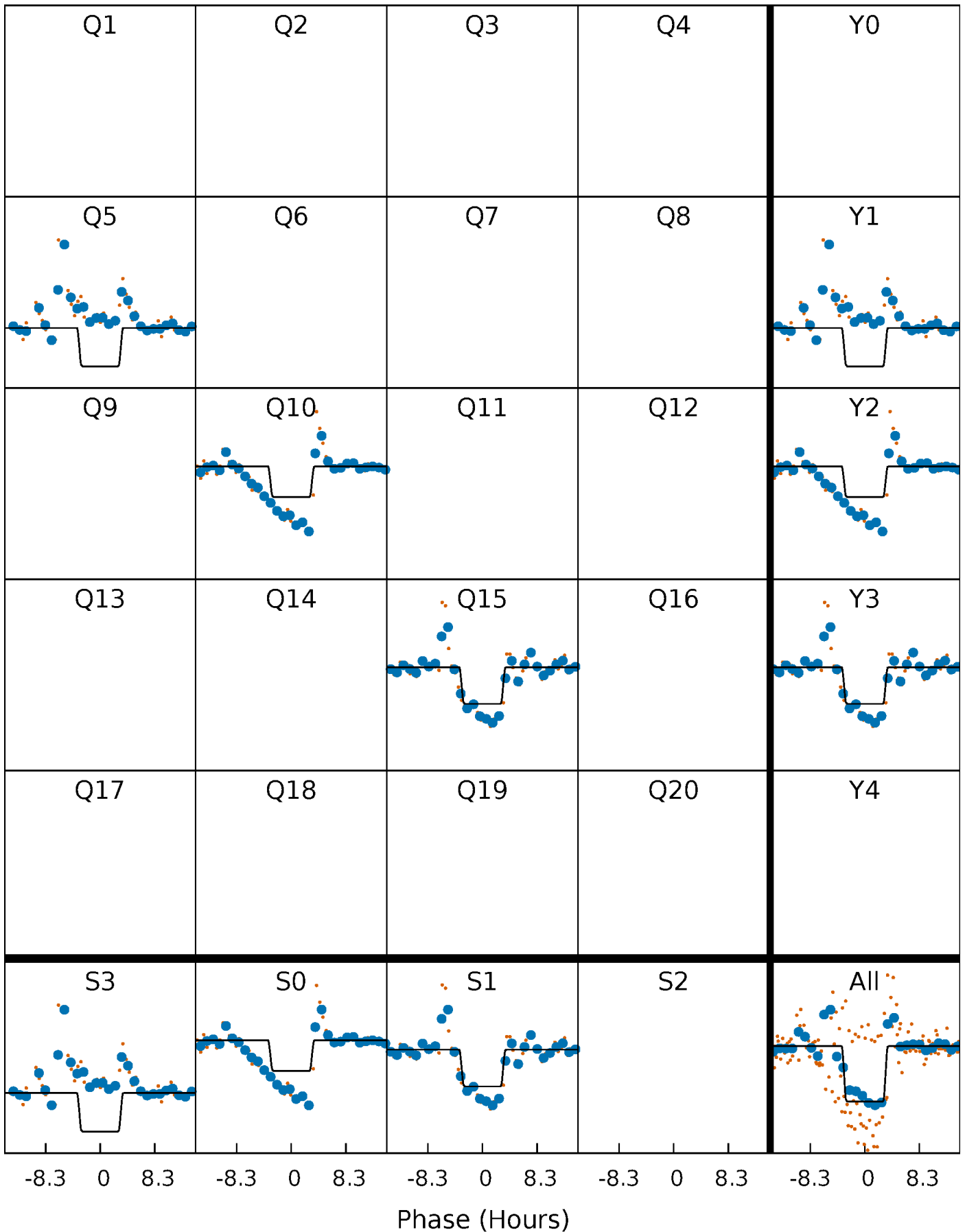
DV Quarter-Phased Transit Curves

TCE 011135986-01 P=443.391096 Days $T_0=511.128117$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

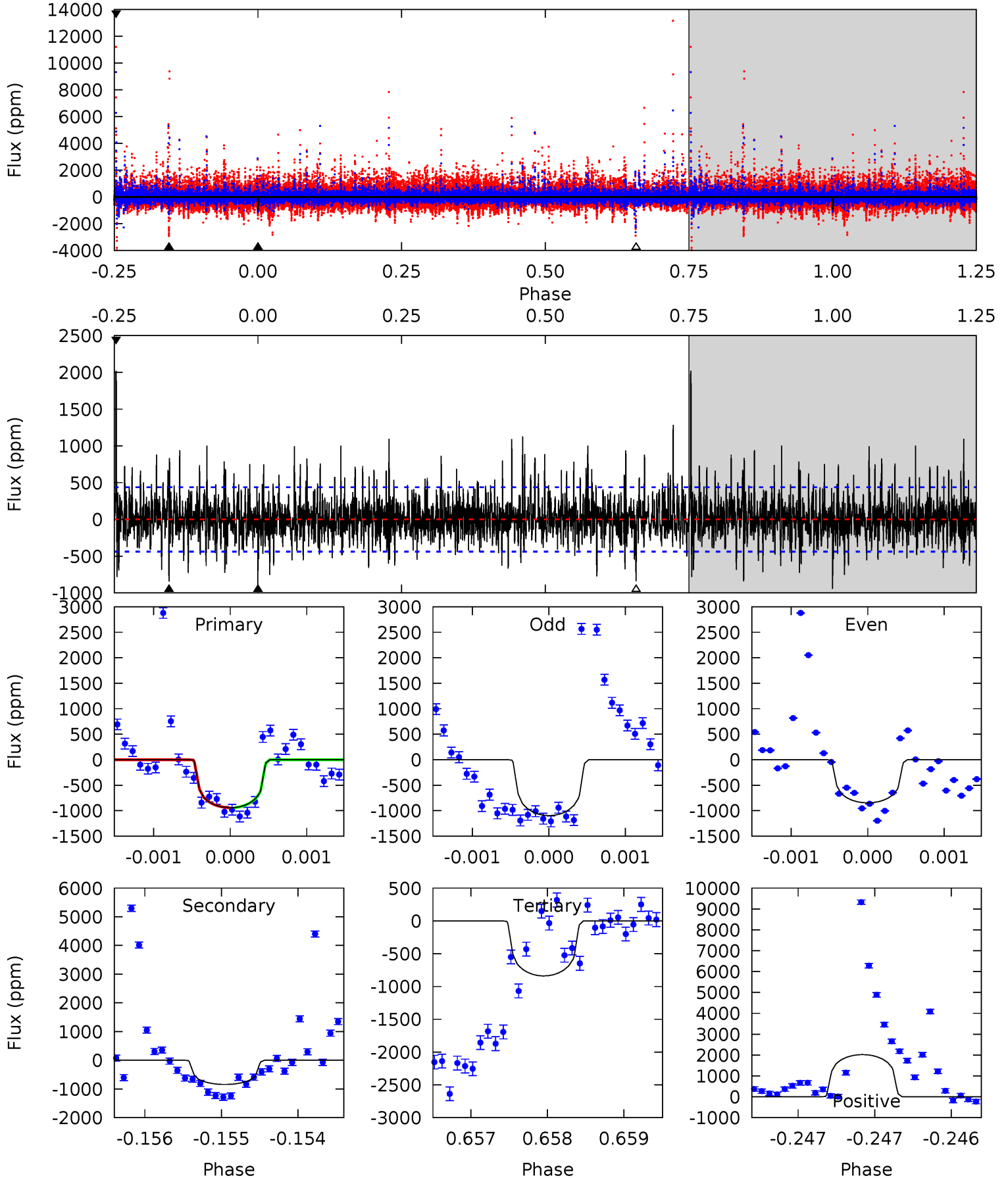
TCE 011135986-01 P=443.394630 Days $T_0=511.105487$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-01, P = 443.391096 Days, E = 67.737021 Days

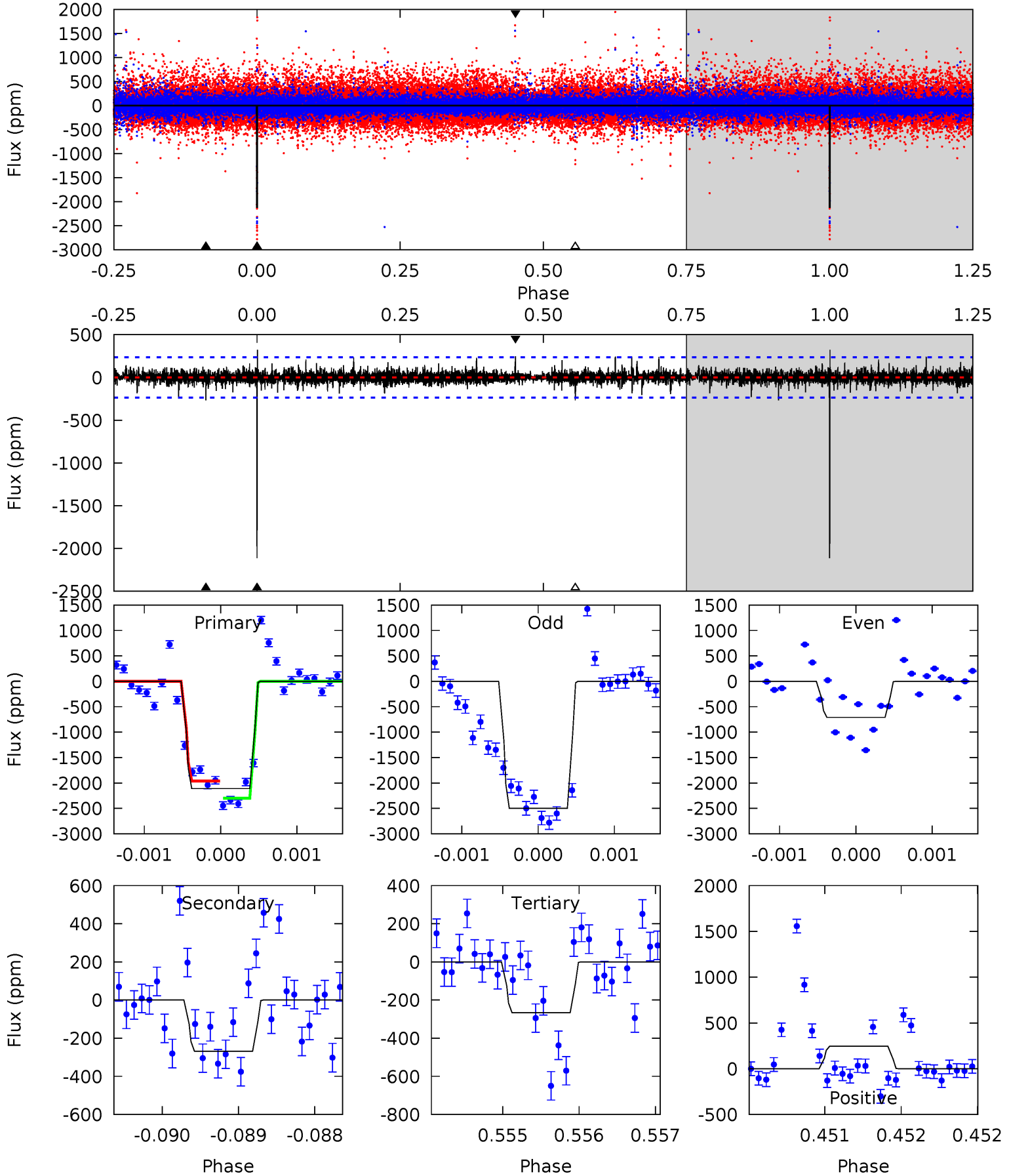
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	10.6	10.6	25.5	5.52	3.39	2.93	1.30	-13.6	0.05	-14.8	0.77	0.85	0.68	0.00



Alt Model-Shift Uniqueness Test

011135986-01, $P = 443.394630$ Days, $E = 67.710857$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.4	6.27	6.22	5.76	5.52	3.40	0.94	43.1	43.6	0.04	0.51	22.5	0.70	0.13	3.96



Stellar Parameters For KIC 011135986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-843 ± 79	$16.45^{+10.49}_{-9.25}$	613^{+67}_{-66}	4810^{+2123}_{-778}	2552^{+10363}_{-1610}
Alt.	-268 ± 43	$19.59^{+11.39}_{-9.24}$	611^{+64}_{-61}	3662^{+872}_{-420}	578^{+1566}_{-343}

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 $A_{obs} \gg 1.0$

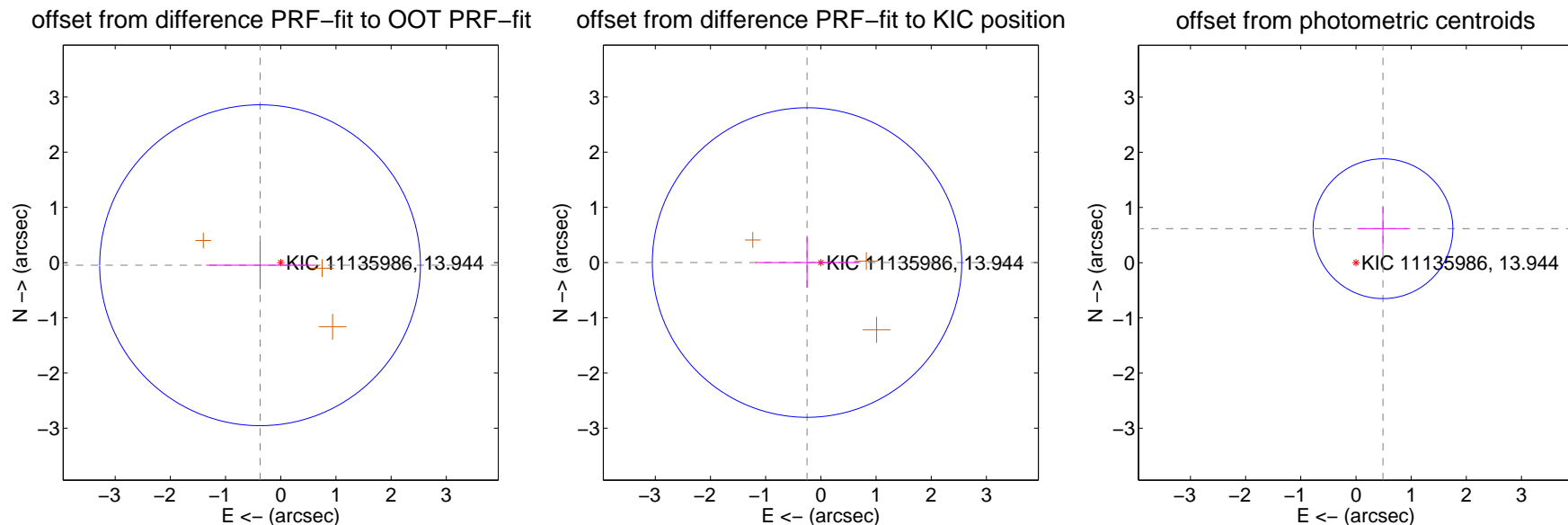
DV Centroid Data

Supplemental centroid analysis for 011135986-01. Kepler magnitude: 13.94. Transit SNR 7.71

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.378 ± 0.968	0.39	0.375 ± 0.975	-0.048 ± 0.433
PRF-fit source offset from KIC position	0.251 ± 0.934	0.27	0.251 ± 0.934	0.001 ± 0.457
photometric centroid source offset	0.79 ± 0.42	1.86	-0.49 ± 0.46	0.62 ± 0.39

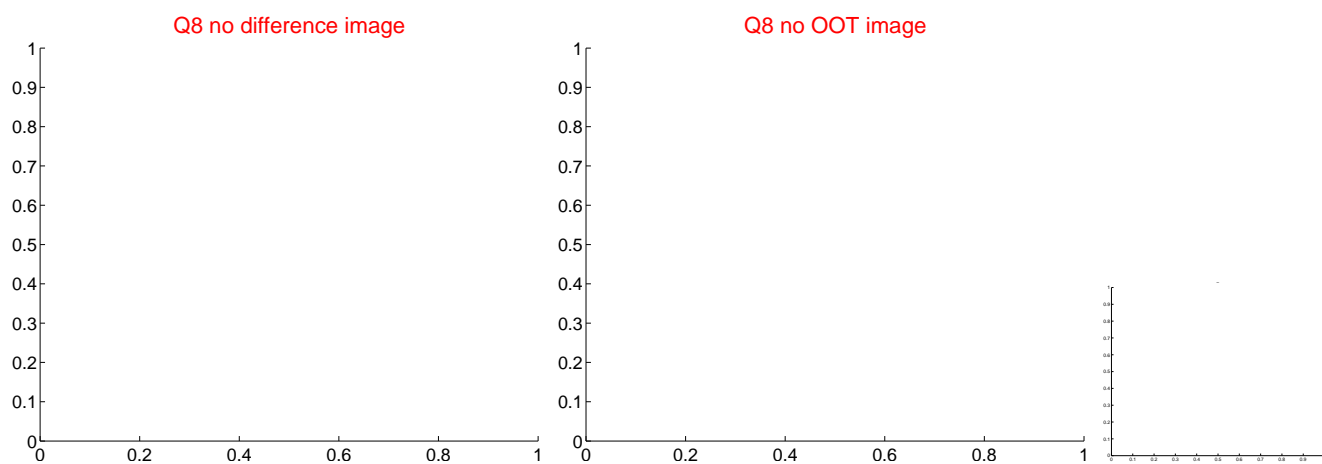
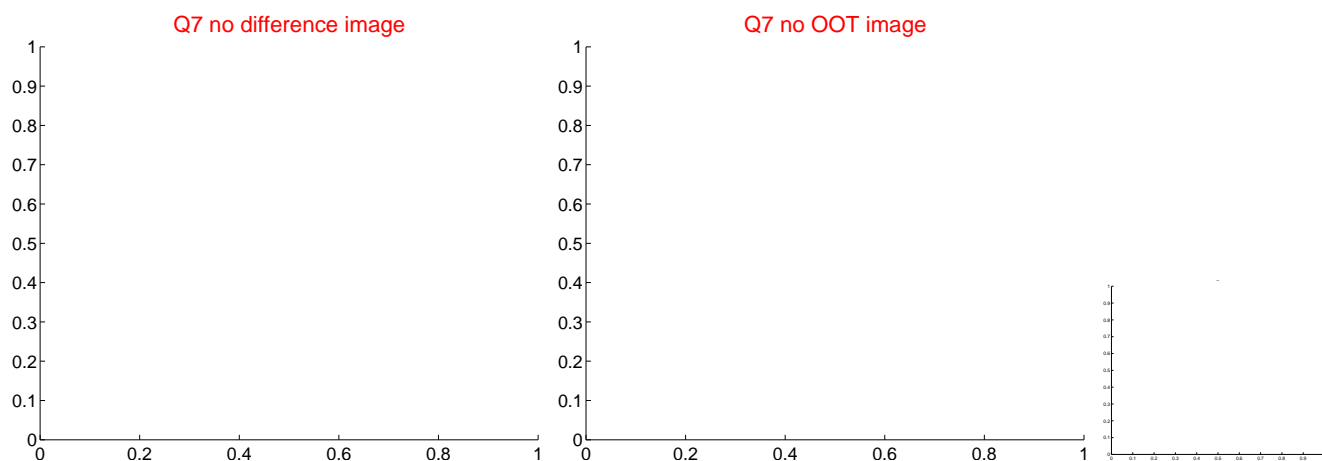
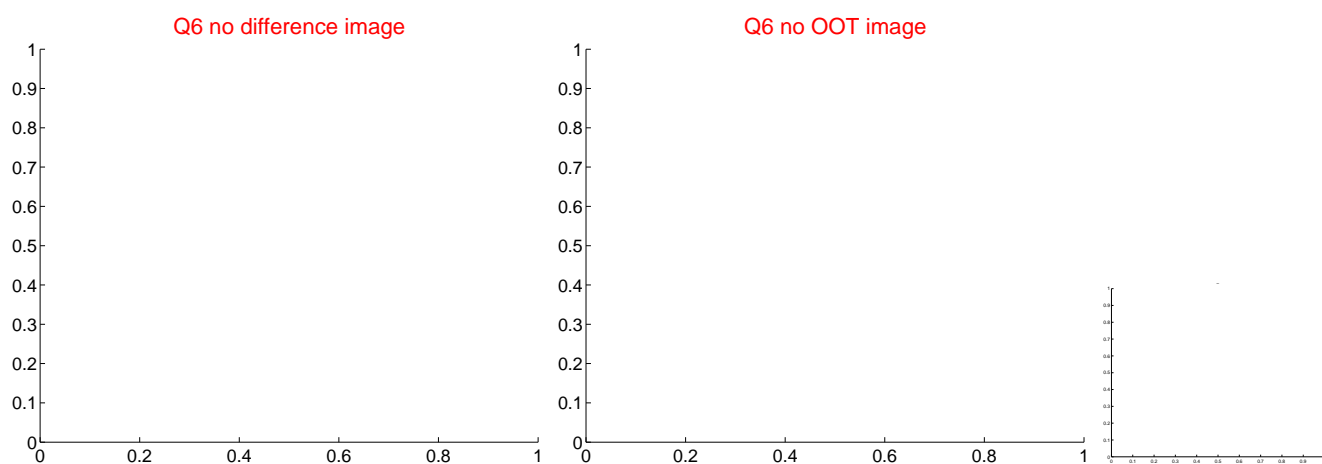
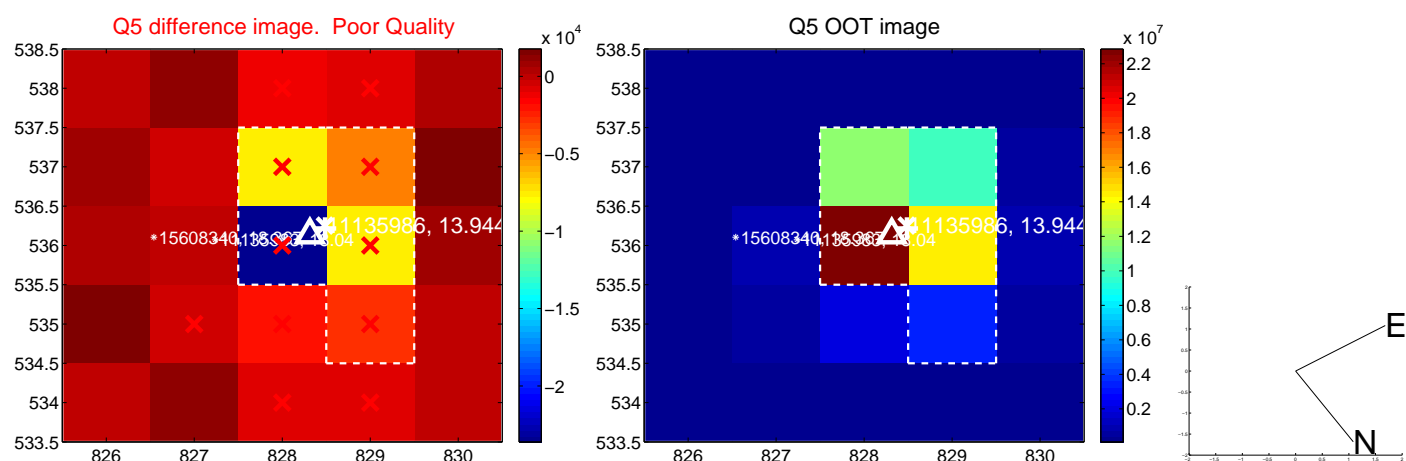


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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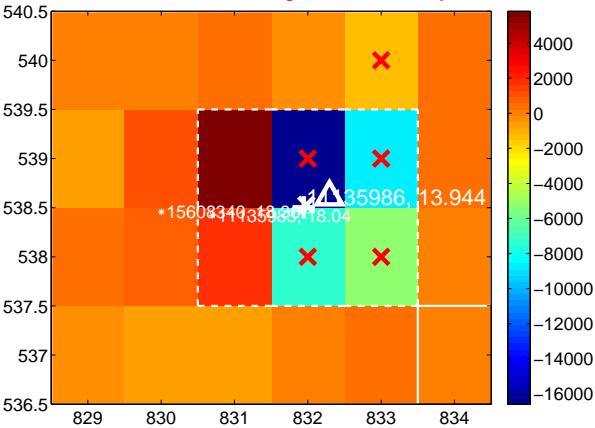
Q9 no difference image



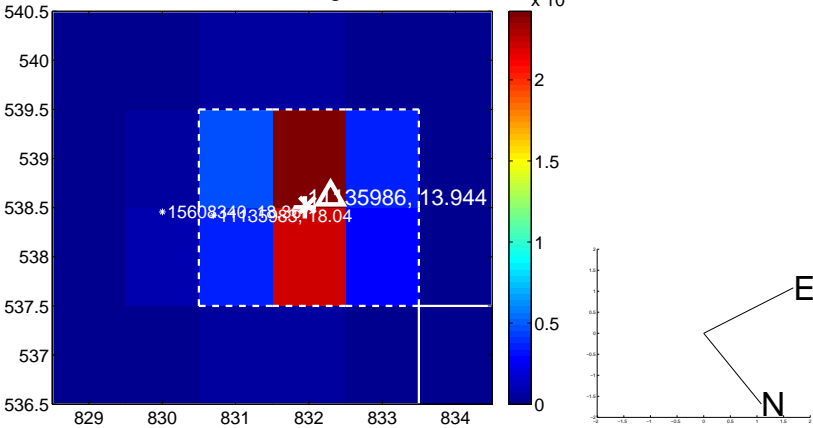
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



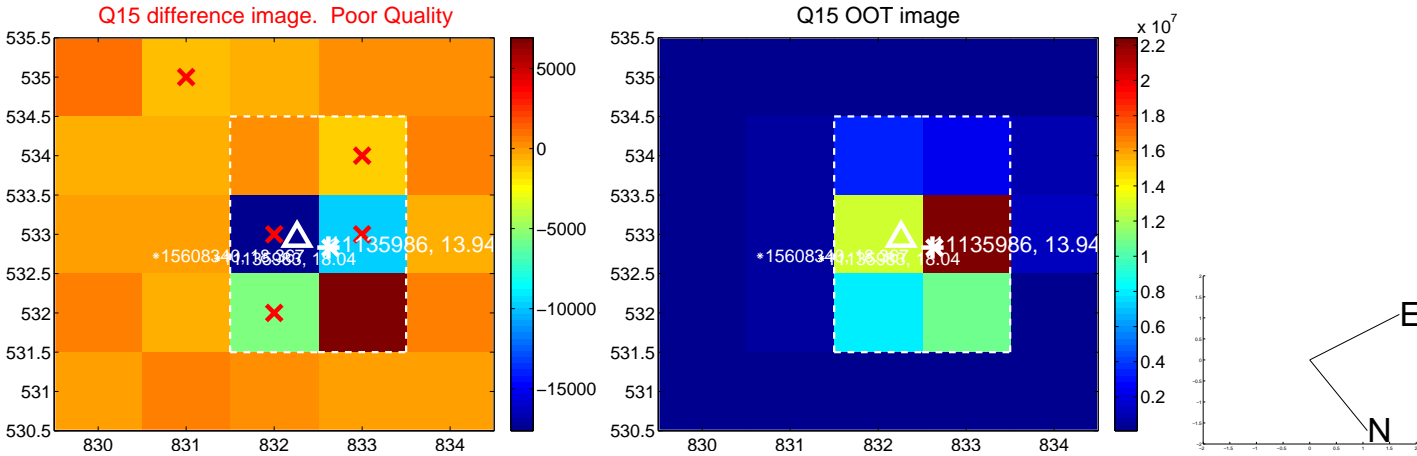
Q12 no difference image



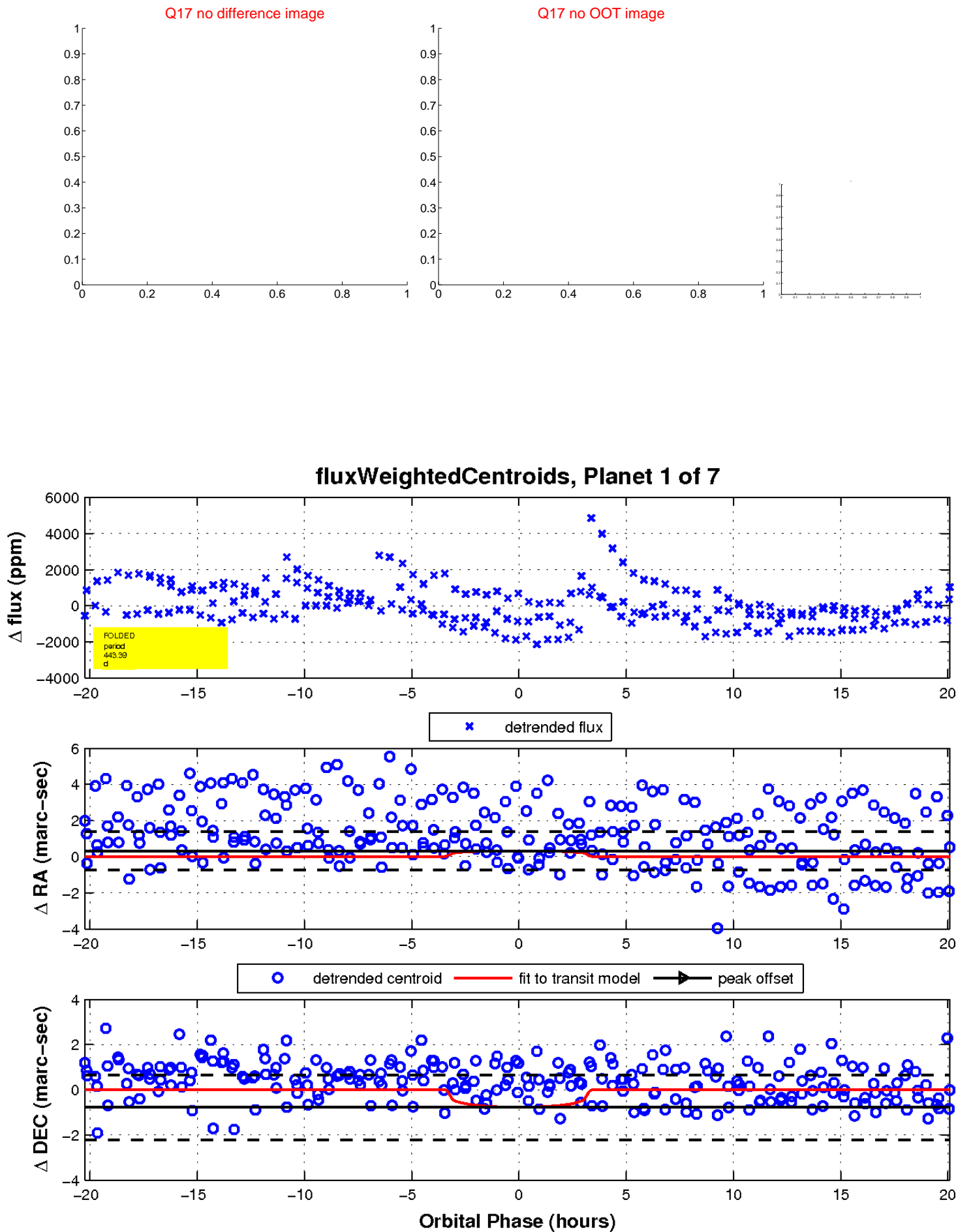
Q12 no OOT image



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

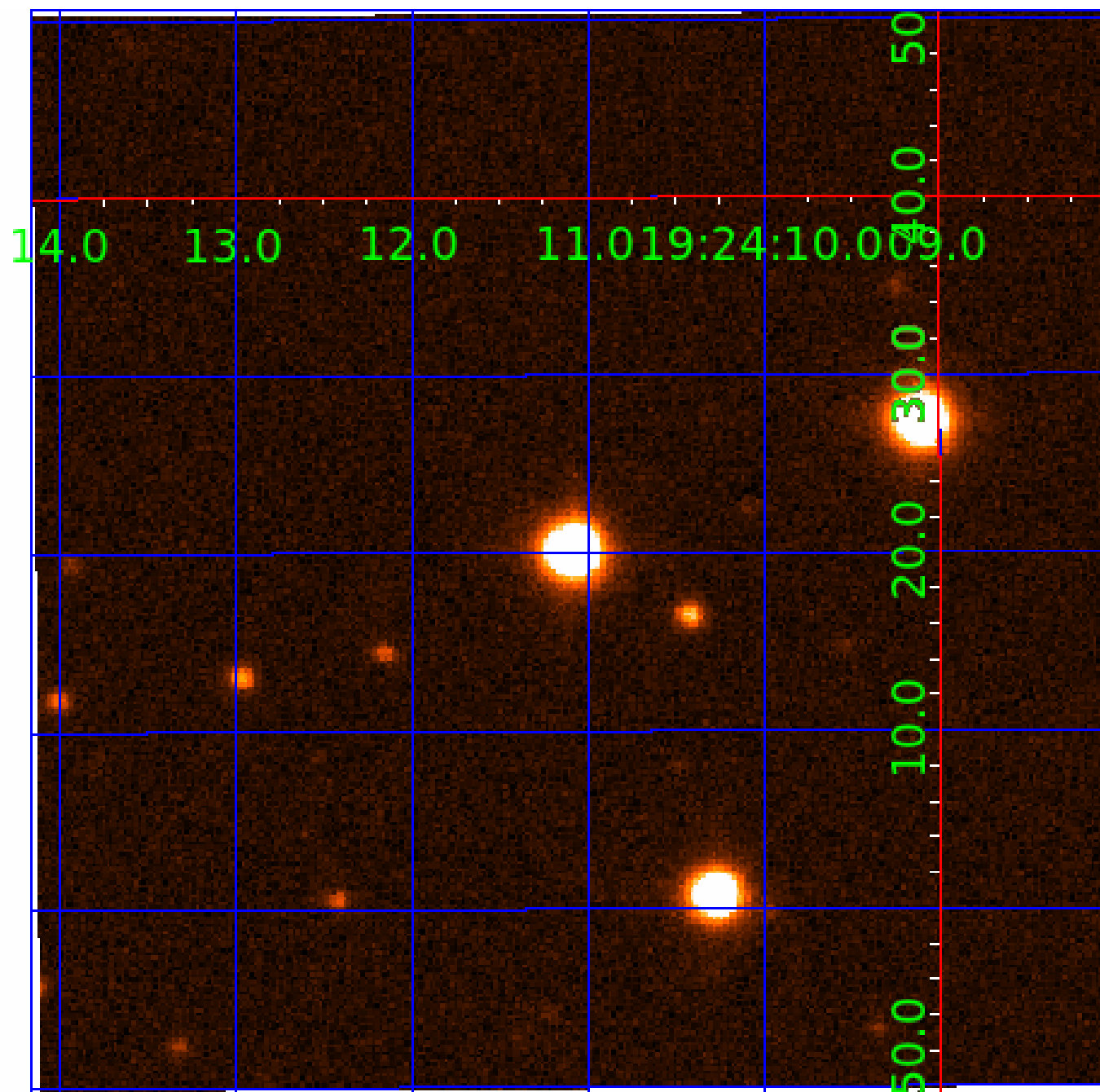


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UKIRT Image

Declination



KIC 011135986

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011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
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N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

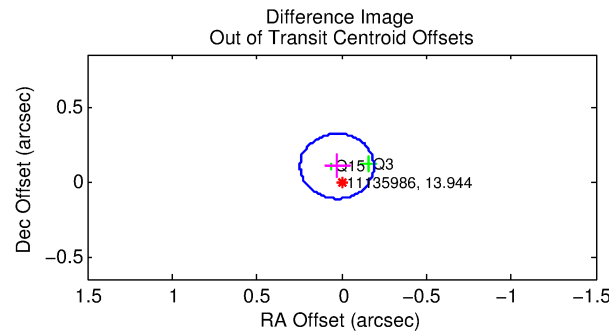
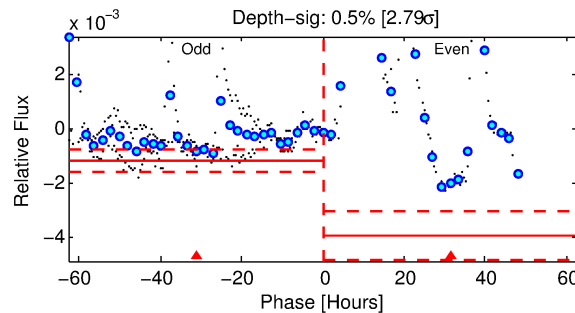
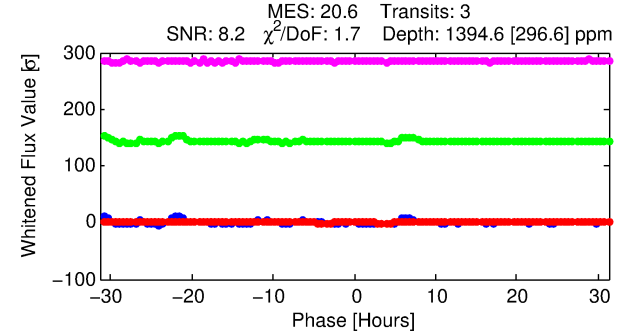
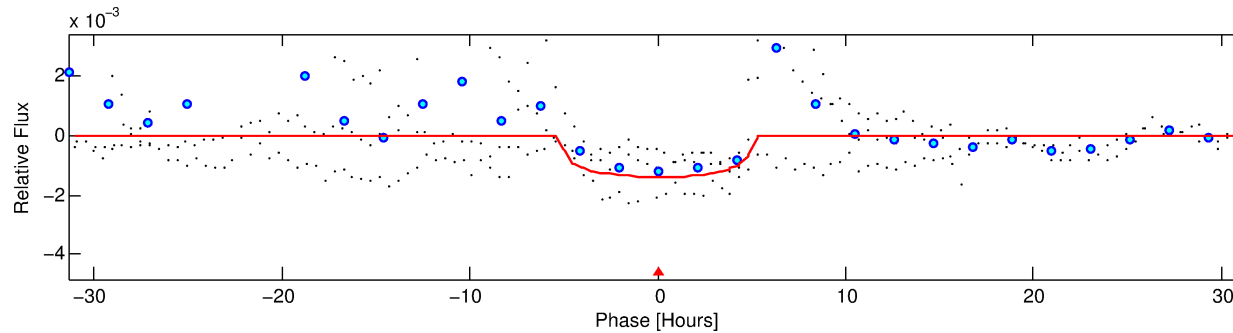
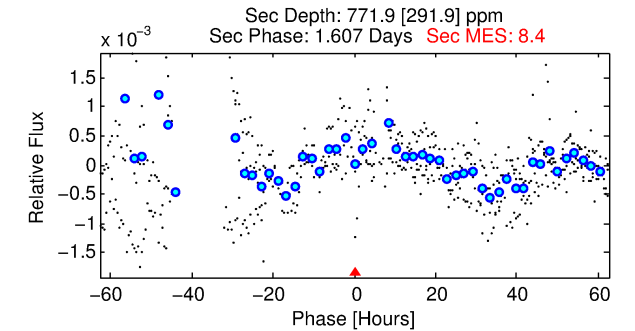
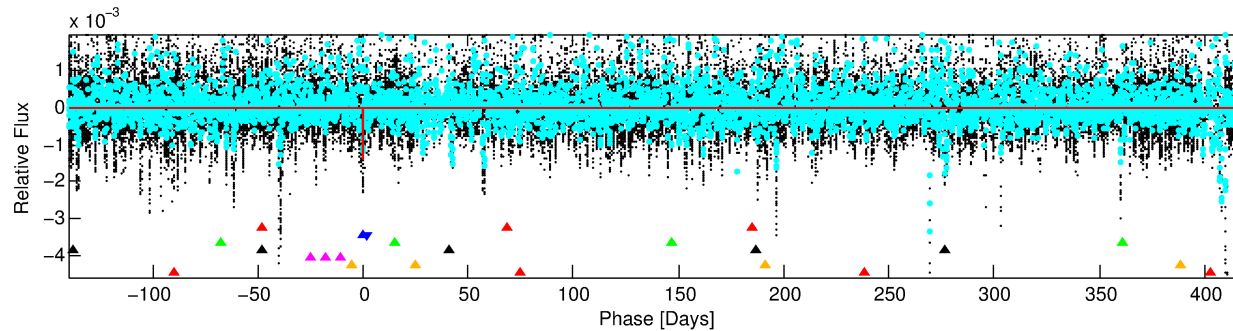
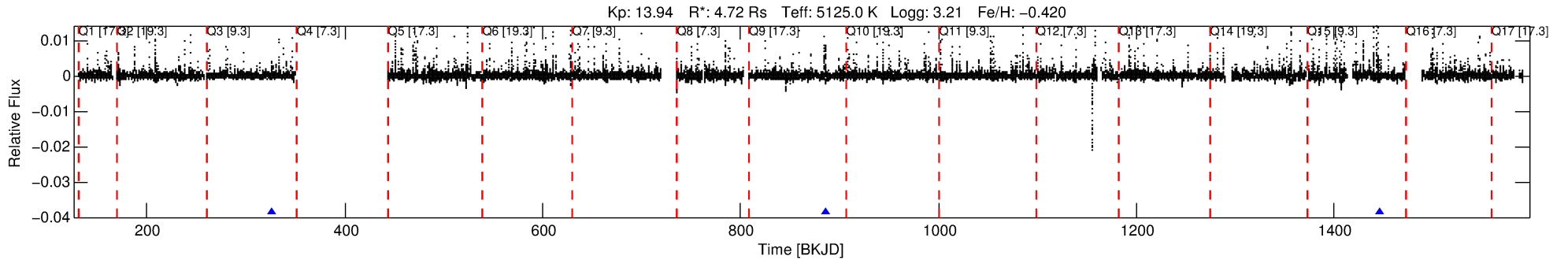
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-02

No Significant Match Found

DV One-Page Summary

KIC: 11135986 Candidate: 2 of 7 Period: 560.125 d



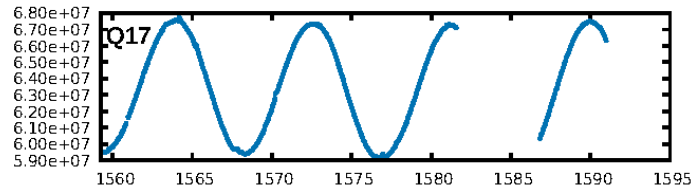
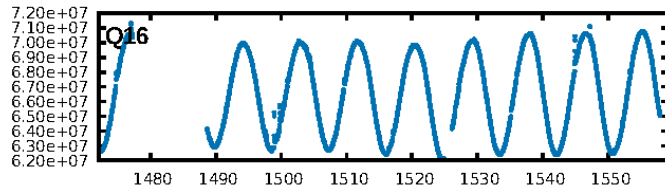
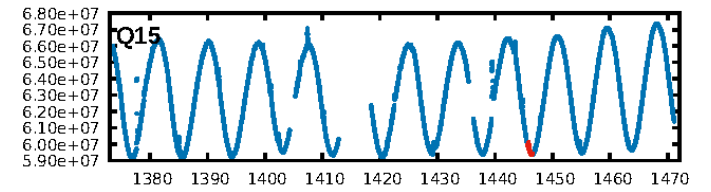
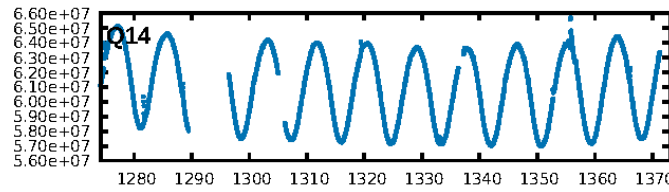
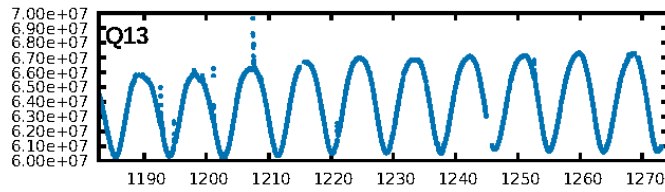
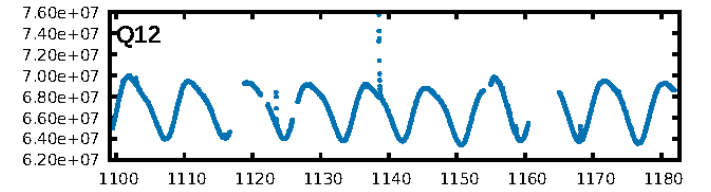
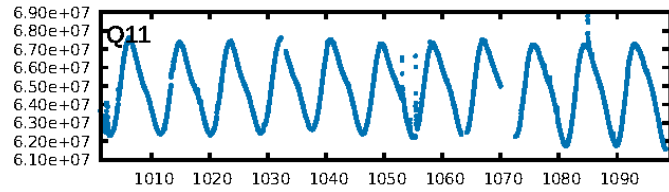
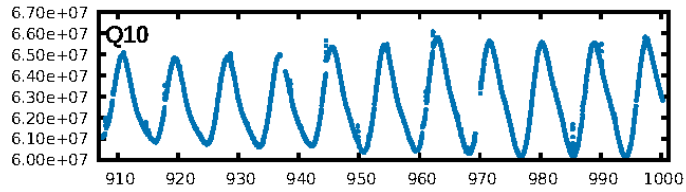
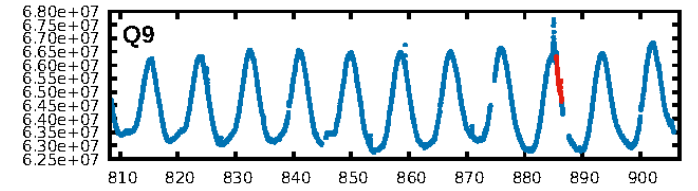
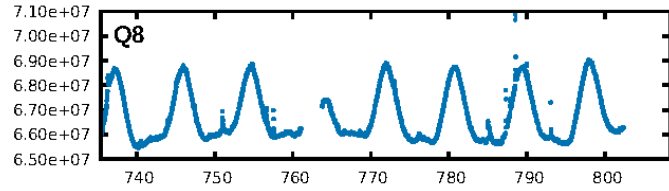
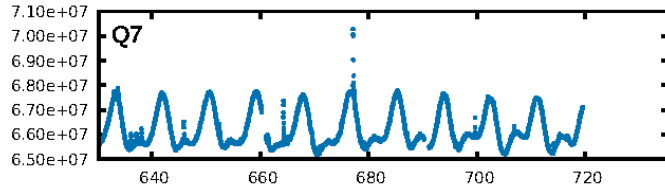
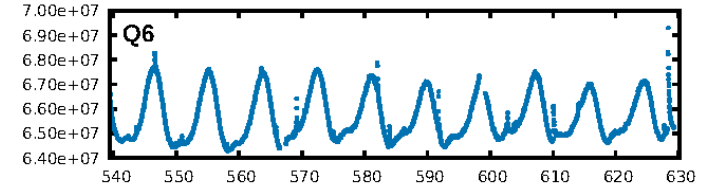
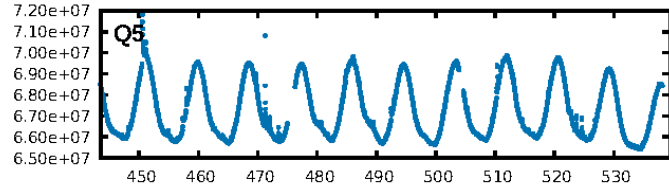
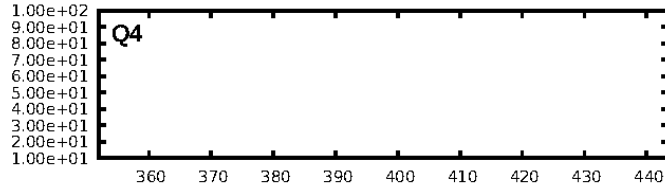
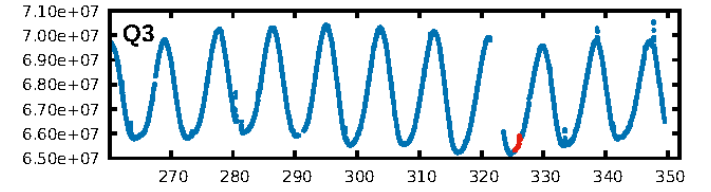
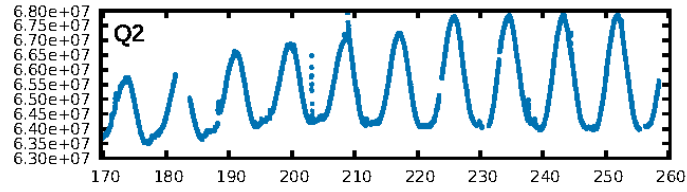
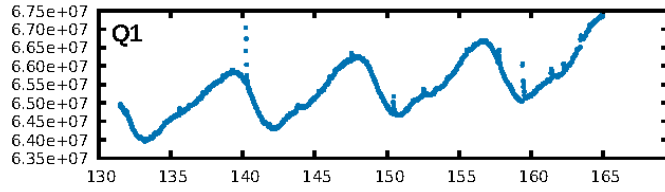
DV Fit Results:

Period = 560.12490 [0.00623] d
Epoch = 325.8387 [0.0085] BKJD
Rp/R* = 0.0336 [0.0186]
a/R* = 415.01 [833.24]
b = 0.20 [9.75]
Seff = 6.51 [3.94]
Teq = 407 [62] K
Rp = 17.33 [11.57] Re
a = 1.4558 [0.5359] AU
Ag = 2995.47 [3938.34] [0.76 σ]
Teffp = 4659 [1369] K [3.10 σ]

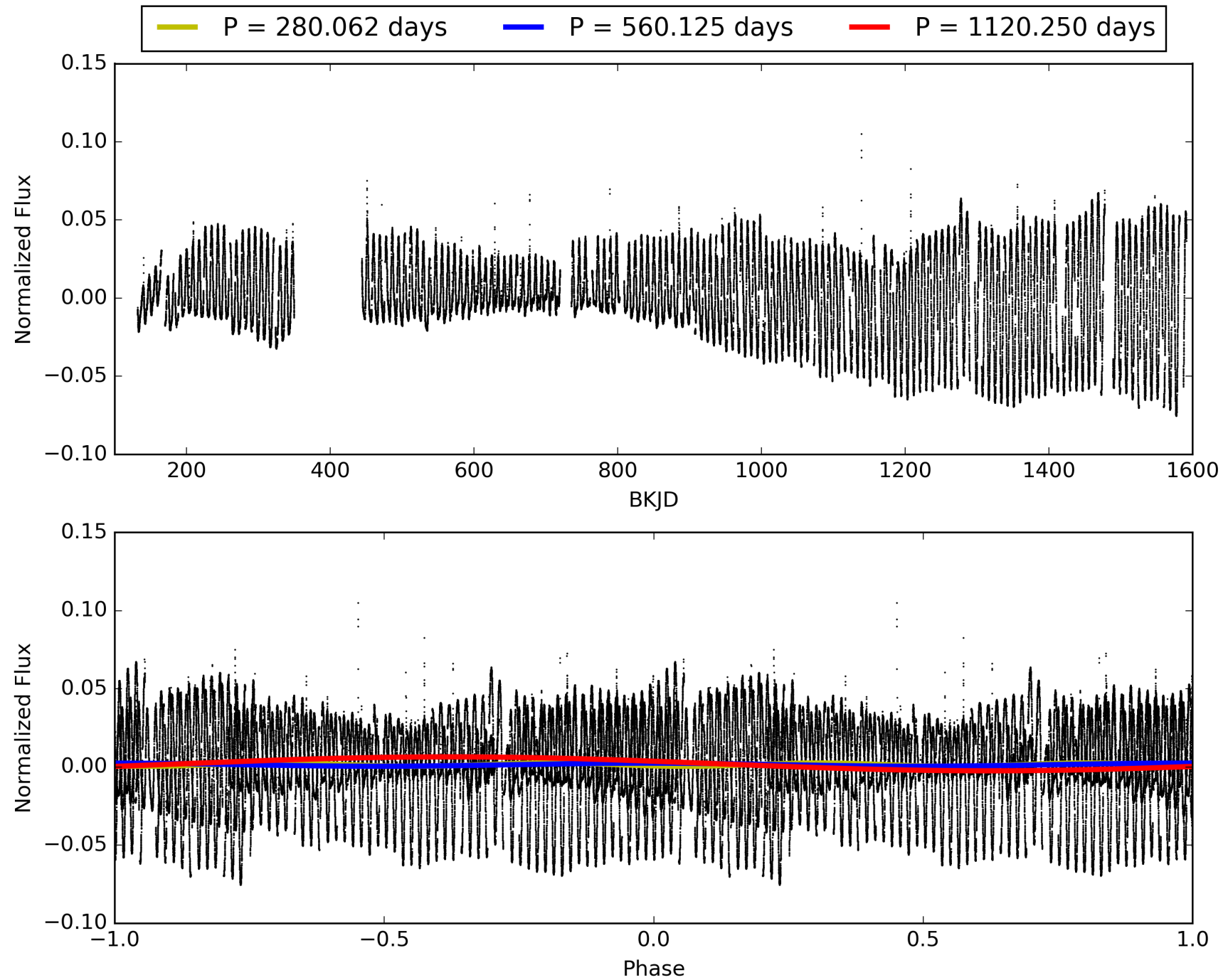
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.55 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 37.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.66
Centroid-sig: 8.6%
Centroid-so: 0.760 arcsec [1.94 σ]
OotOffset-rm: 0.107 arcsec [1.48 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-rm: 0.126 arcsec [1.10 σ]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 011135986-02, PDC Light Curves

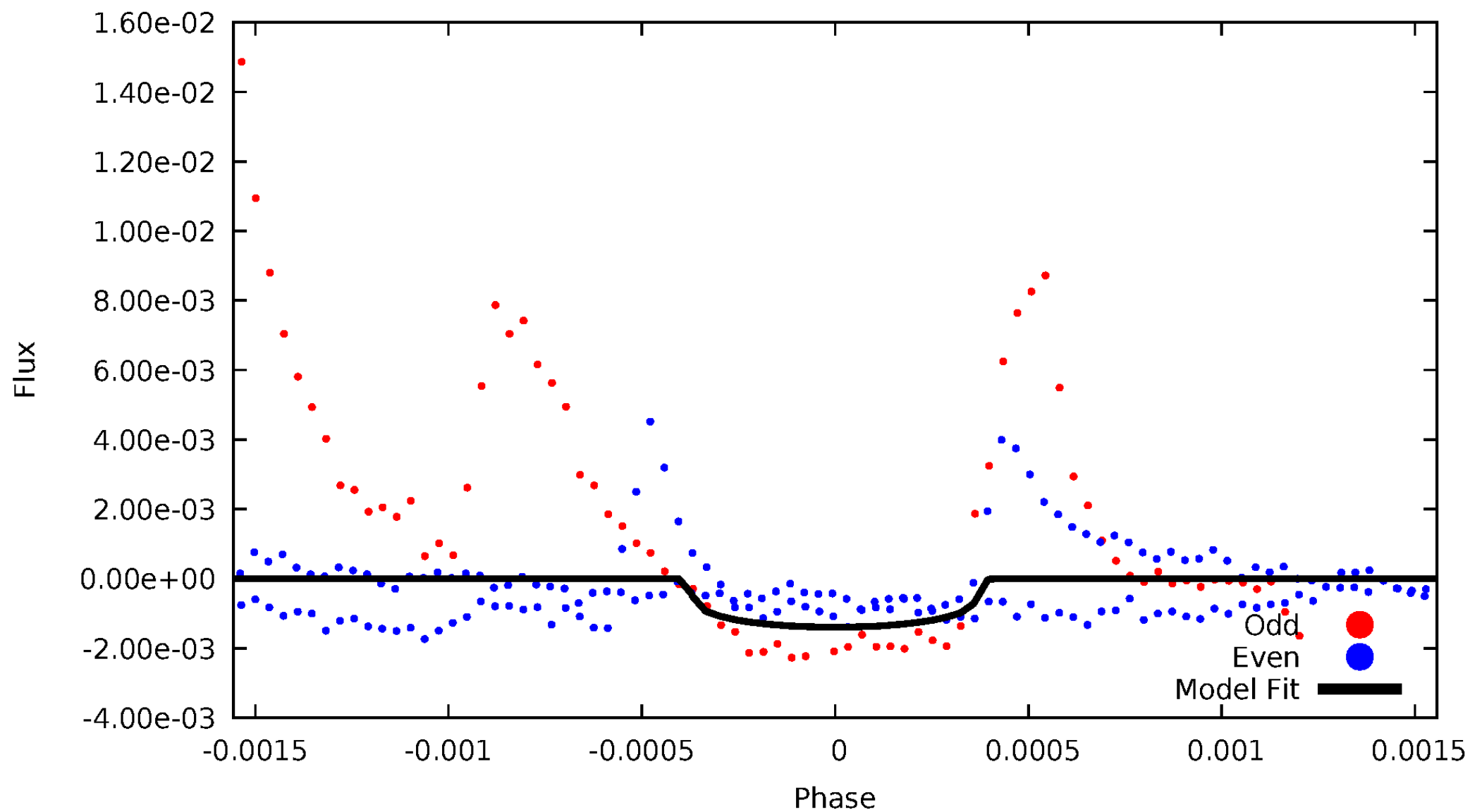


TCE 011135986-02



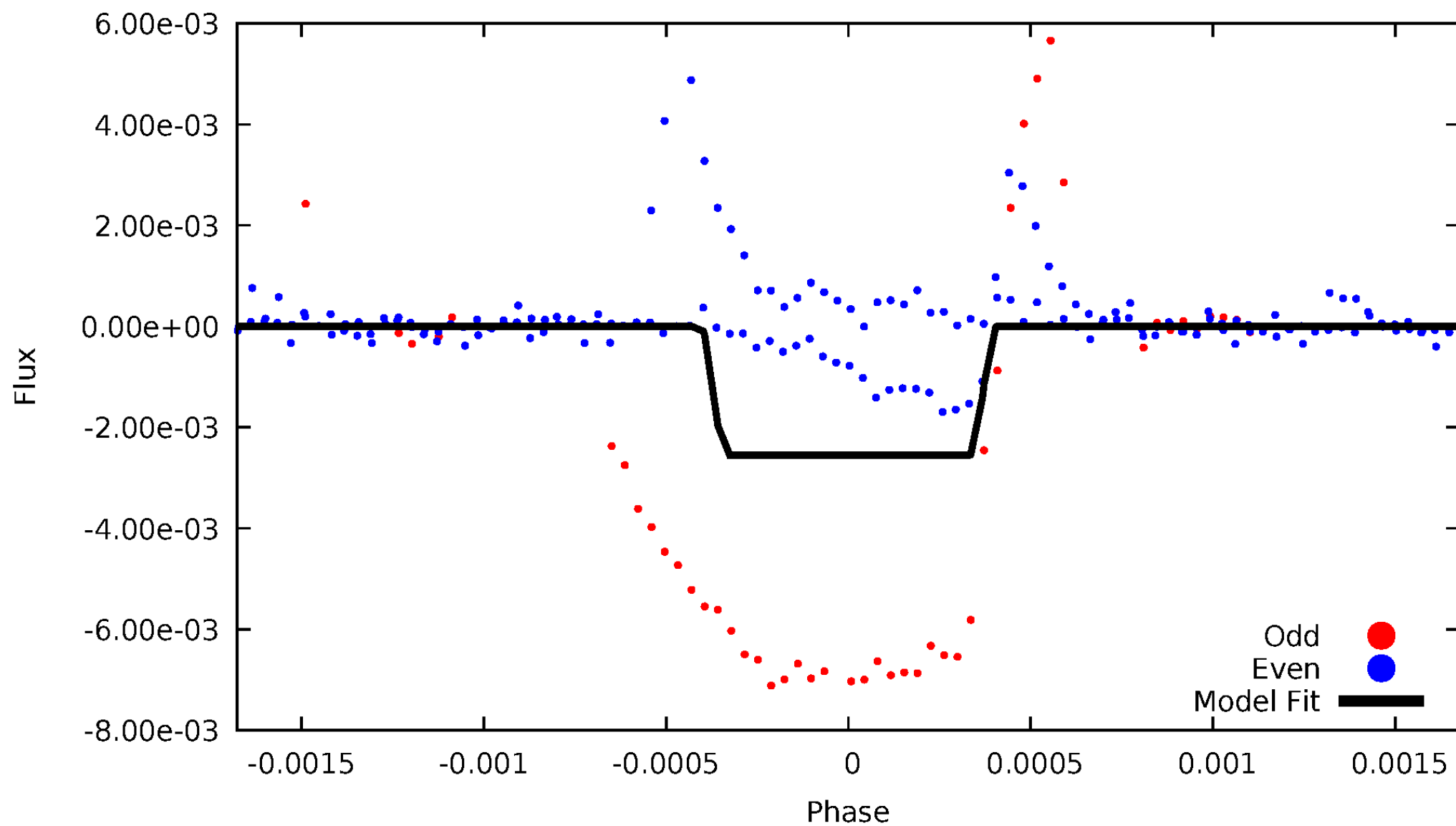
DV Odd/Even

TCE 011135986-02



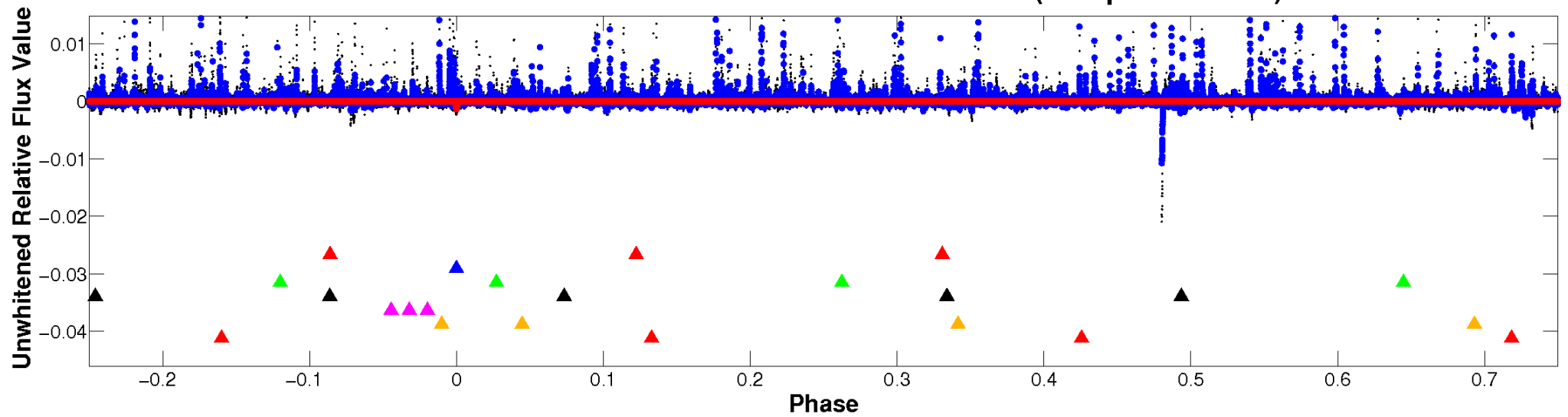
ALT Odd/Even

TCE 011135986-02

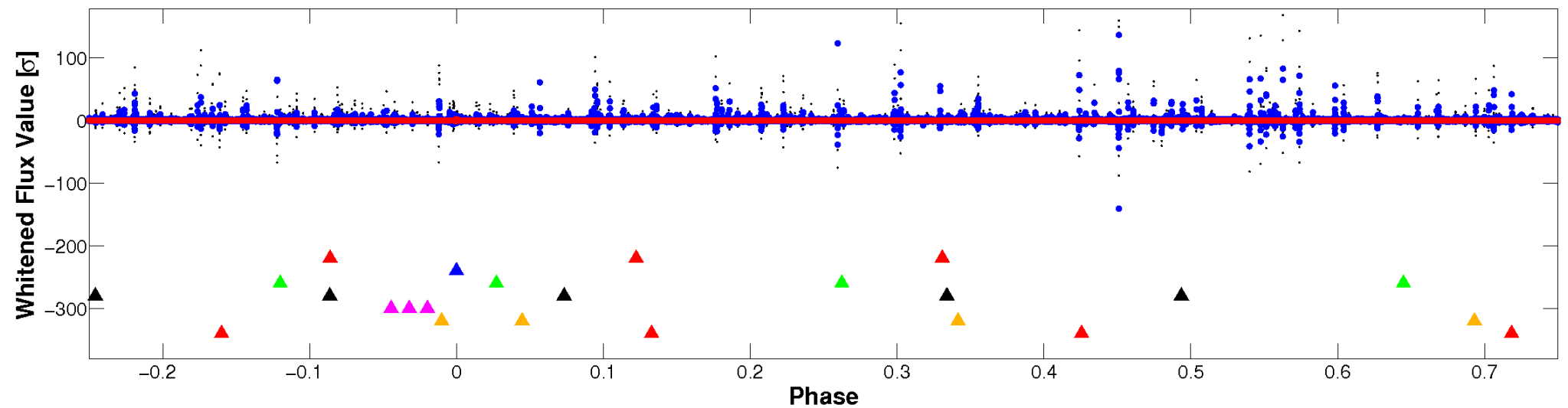


Non-Whitened Vs. Whitened Light Curve

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

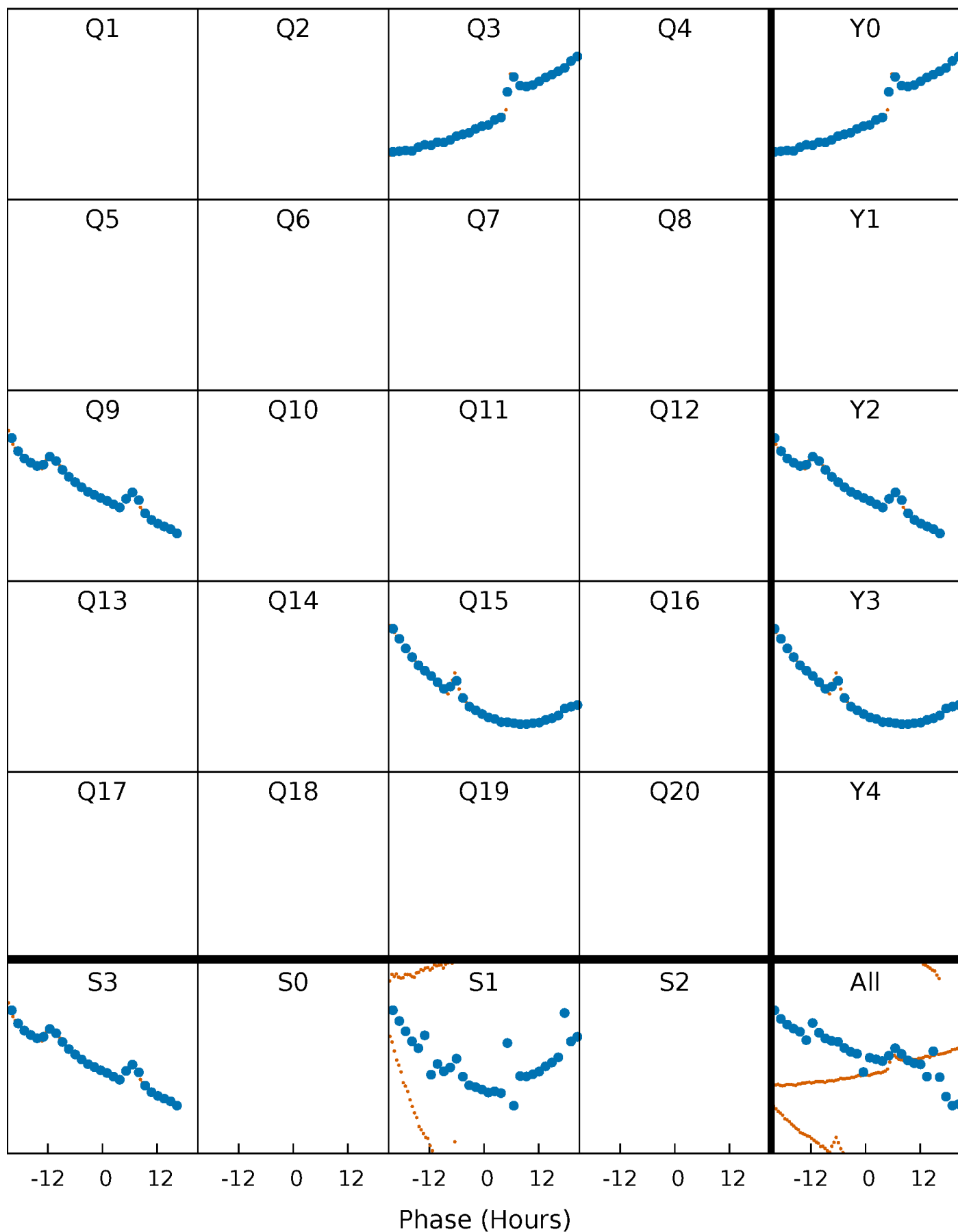


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



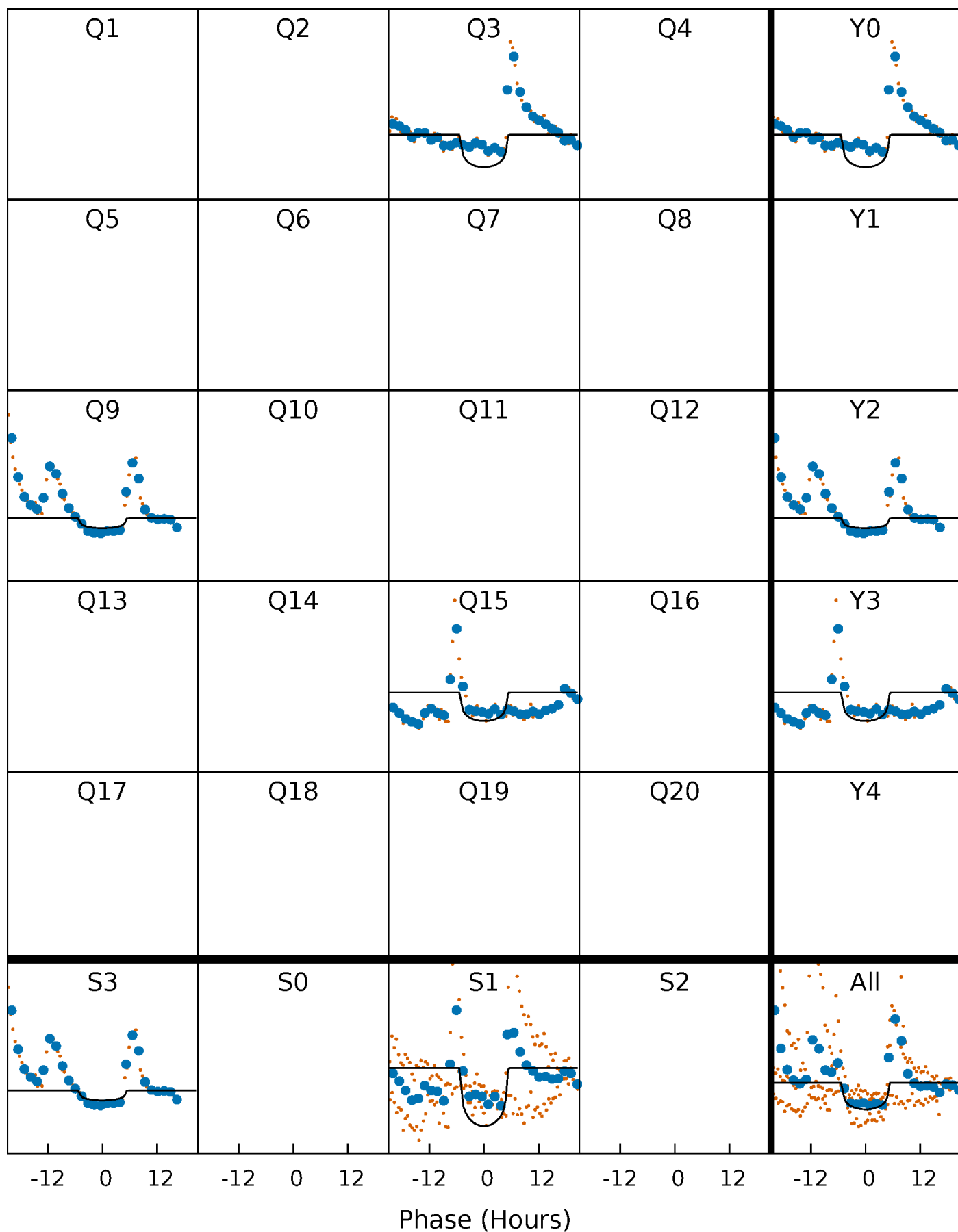
PDC Quarter-Phased Transit Curves

TCE 011135986-02 $P=560.124898$ Days $T_0=325.838665$ (BKJD)



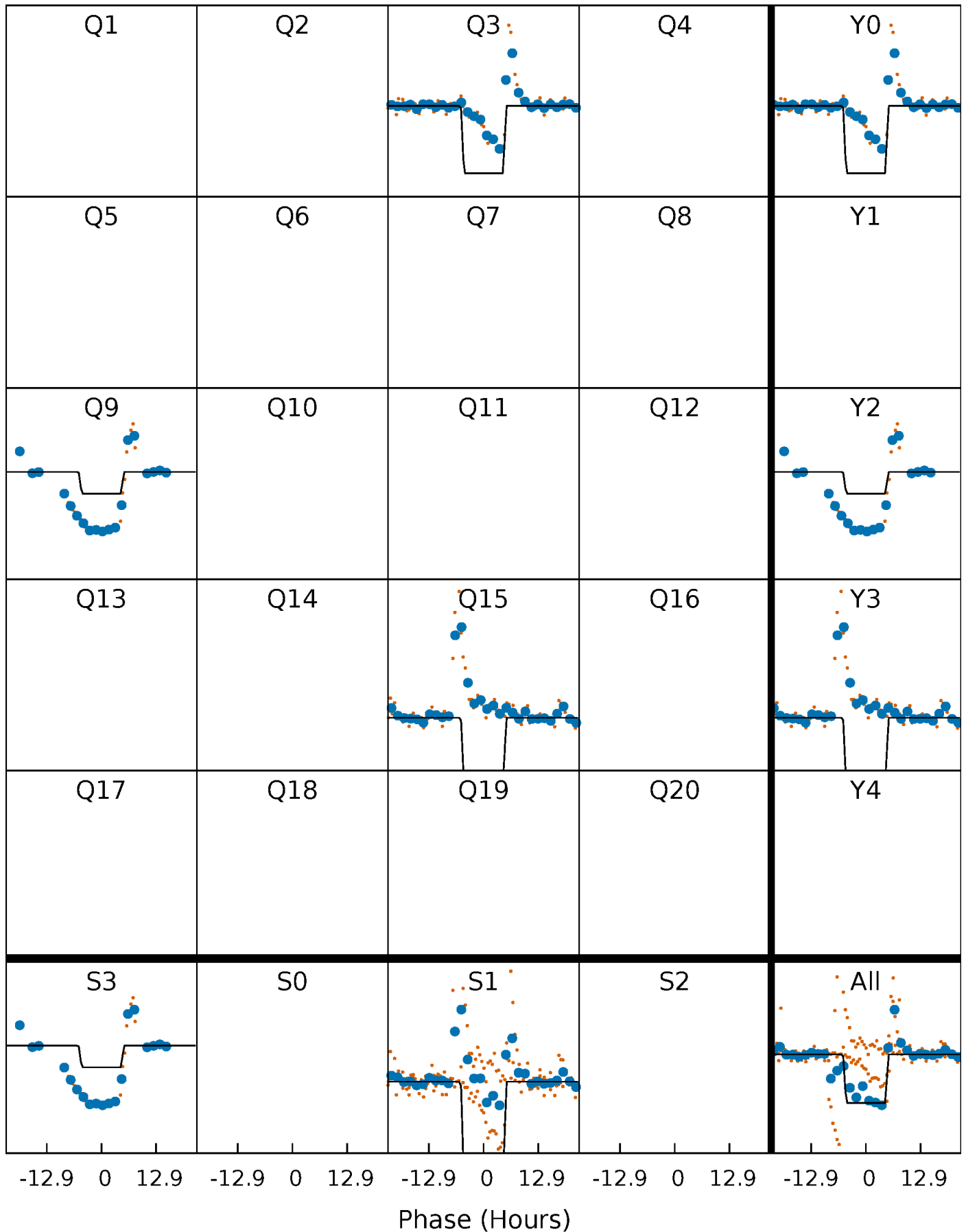
DV Quarter-Phased Transit Curves

TCE 011135986-02 $P=560.124898$ Days $T_0=325.838665$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

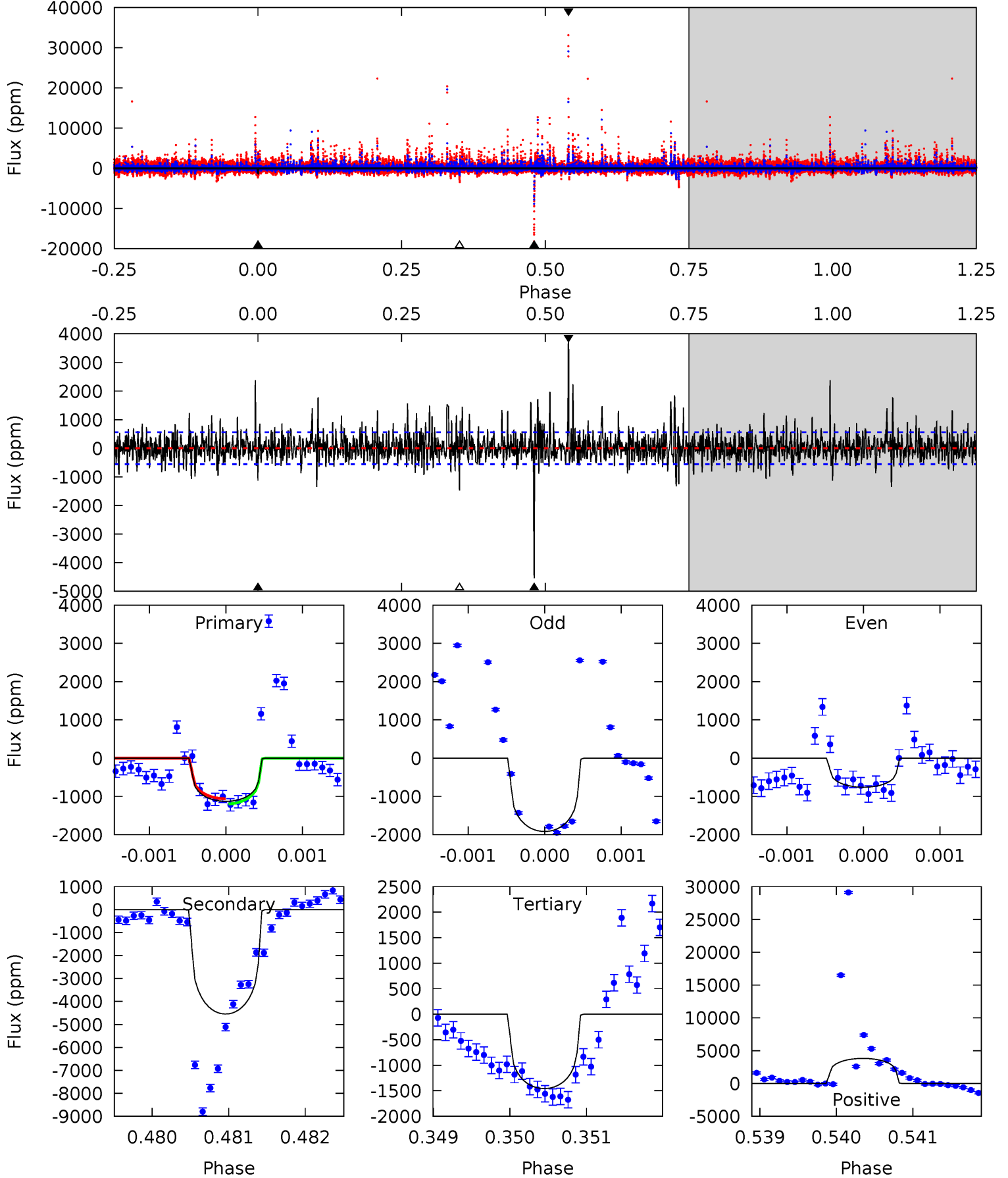
TCE 011135986-02 P=560.124747 Days $T_0=325.832998$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-02, P = 560.124898 Days, E = 325.838665 Days

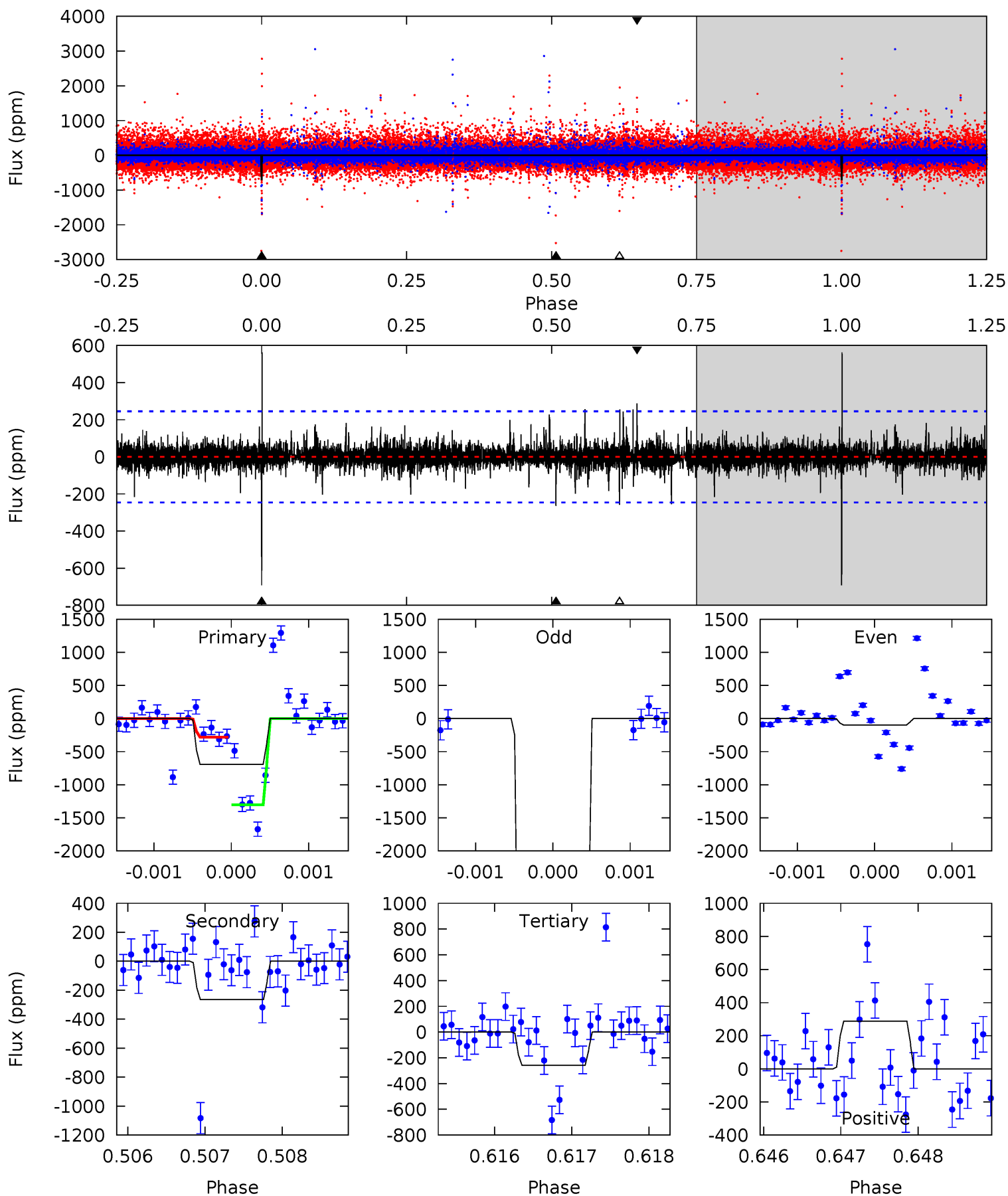
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	44.4	14.2	37.3	5.48	3.34	3.80	-3.21	-26.3	30.2	7.11	2.63	1.23	0.46	0.67



Alt Model-Shift Uniqueness Test

011135986-02, P = 560.124747 Days, E = 325.832998 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	5.91	5.78	6.43	5.49	3.35	0.84	9.69	9.04	0.14	-0.52	96.5	2.66	0.45	11.0



Stellar Parameters For KIC 011135986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4548 ± 102	$17.09^{+10.36}_{-9.43}$	567^{+59}_{-64}	7165^{+4296}_{-1410}	18080^{+68827}_{-11156}
Alt.	-264 ± 45	$23.87^{+12.52}_{-9.28}$	563^{+57}_{-61}	3376^{+602}_{-309}	511^{+854}_{-294}

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

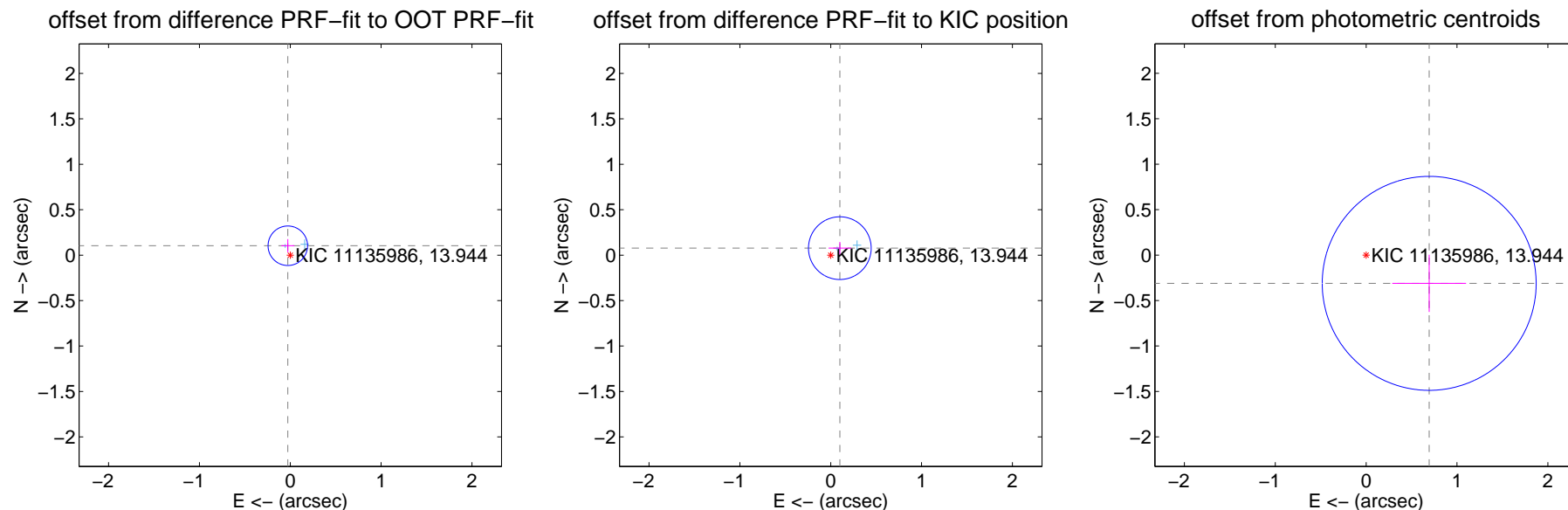
DV Centroid Data

Supplemental centroid analysis for 011135986-02. Kepler magnitude: 13.94. Transit SNR 8.20

There are 2 quarters with good PRF difference image offsets

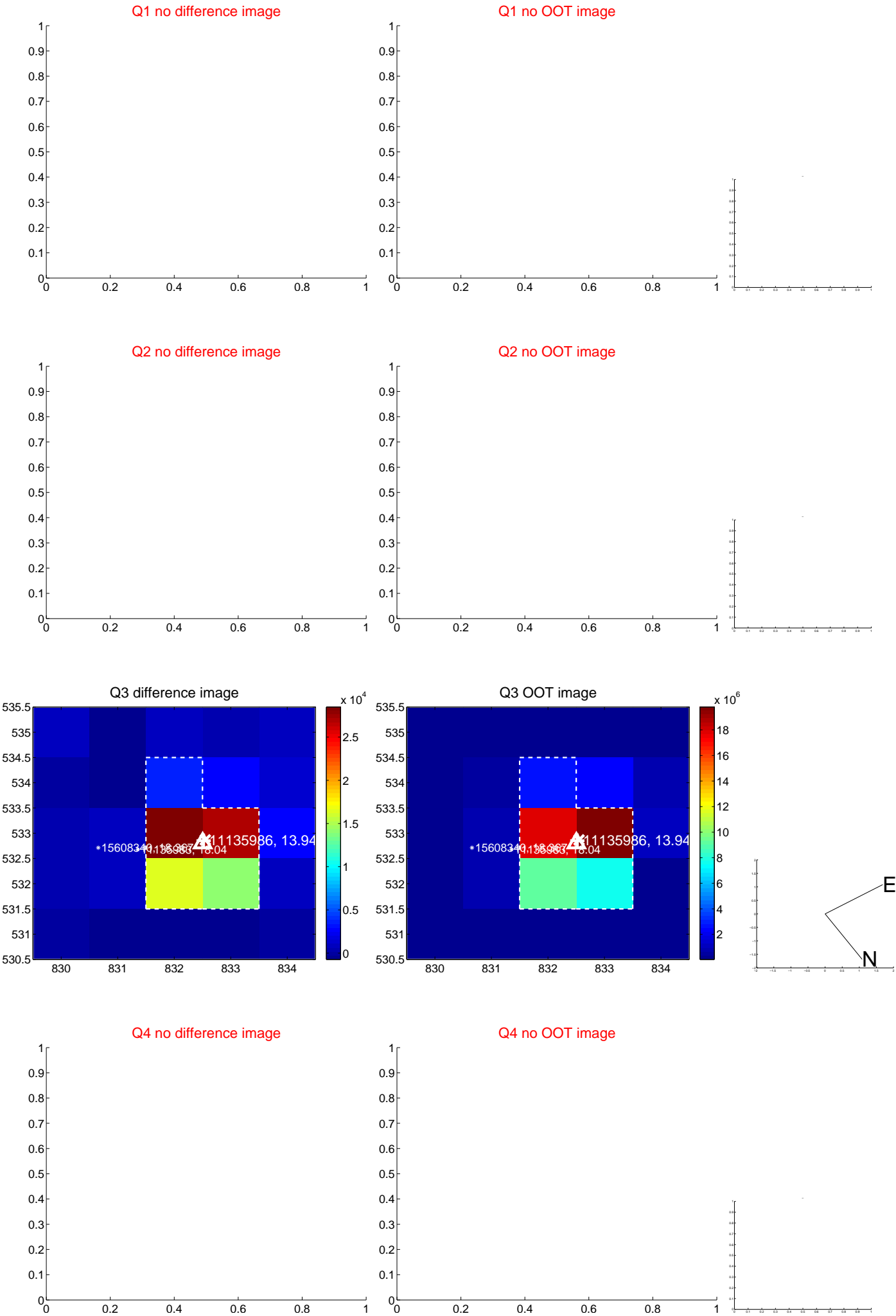
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.107 ± 0.072	1.48	0.027 ± 0.071	0.104 ± 0.073
PRF-fit source offset from KIC position	0.126 ± 0.115	1.10	-0.100 ± 0.124	0.077 ± 0.069
photometric centroid source offset	0.76 ± 0.39	1.94	-0.69 ± 0.41	-0.31 ± 0.31



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.



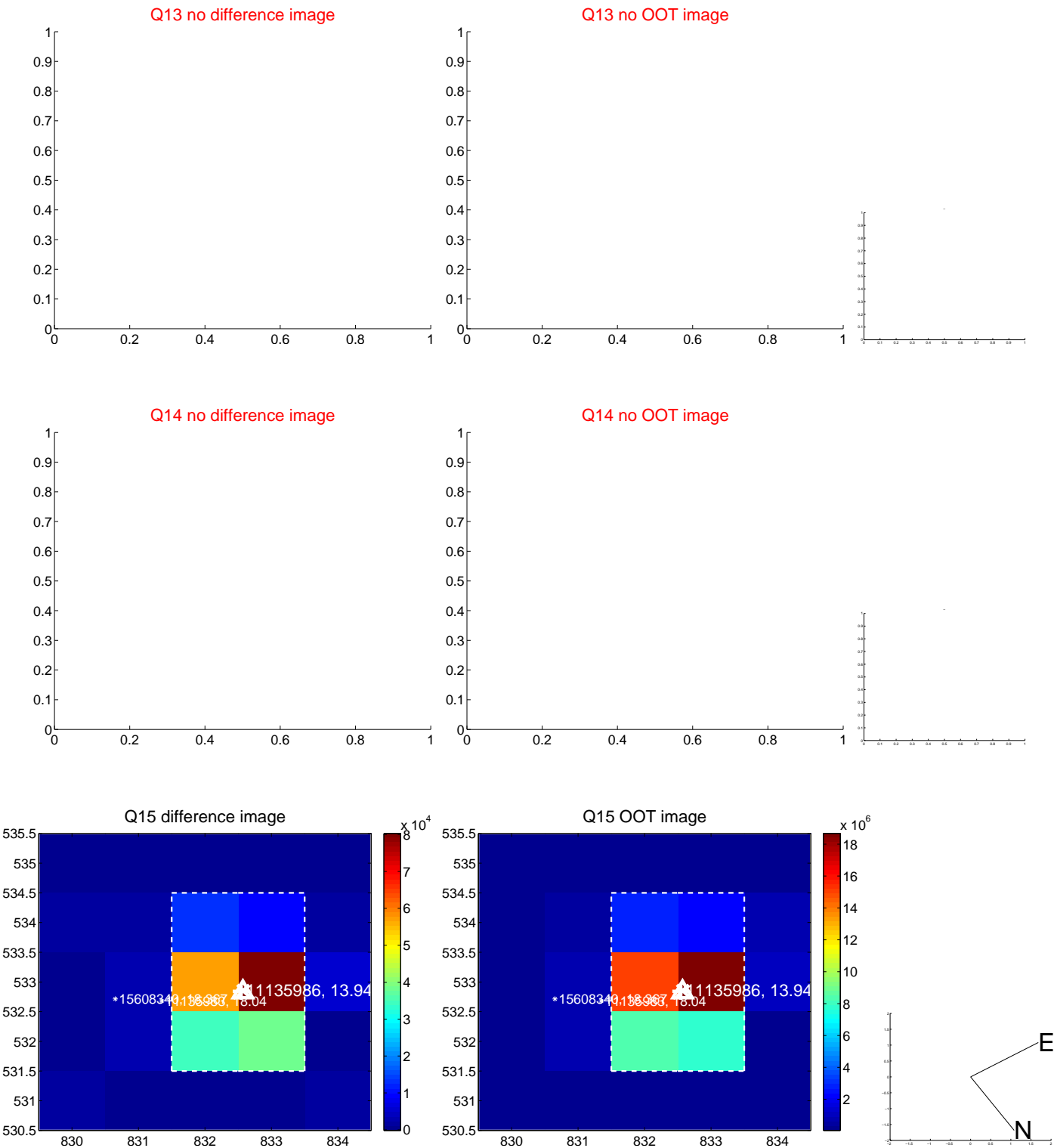
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



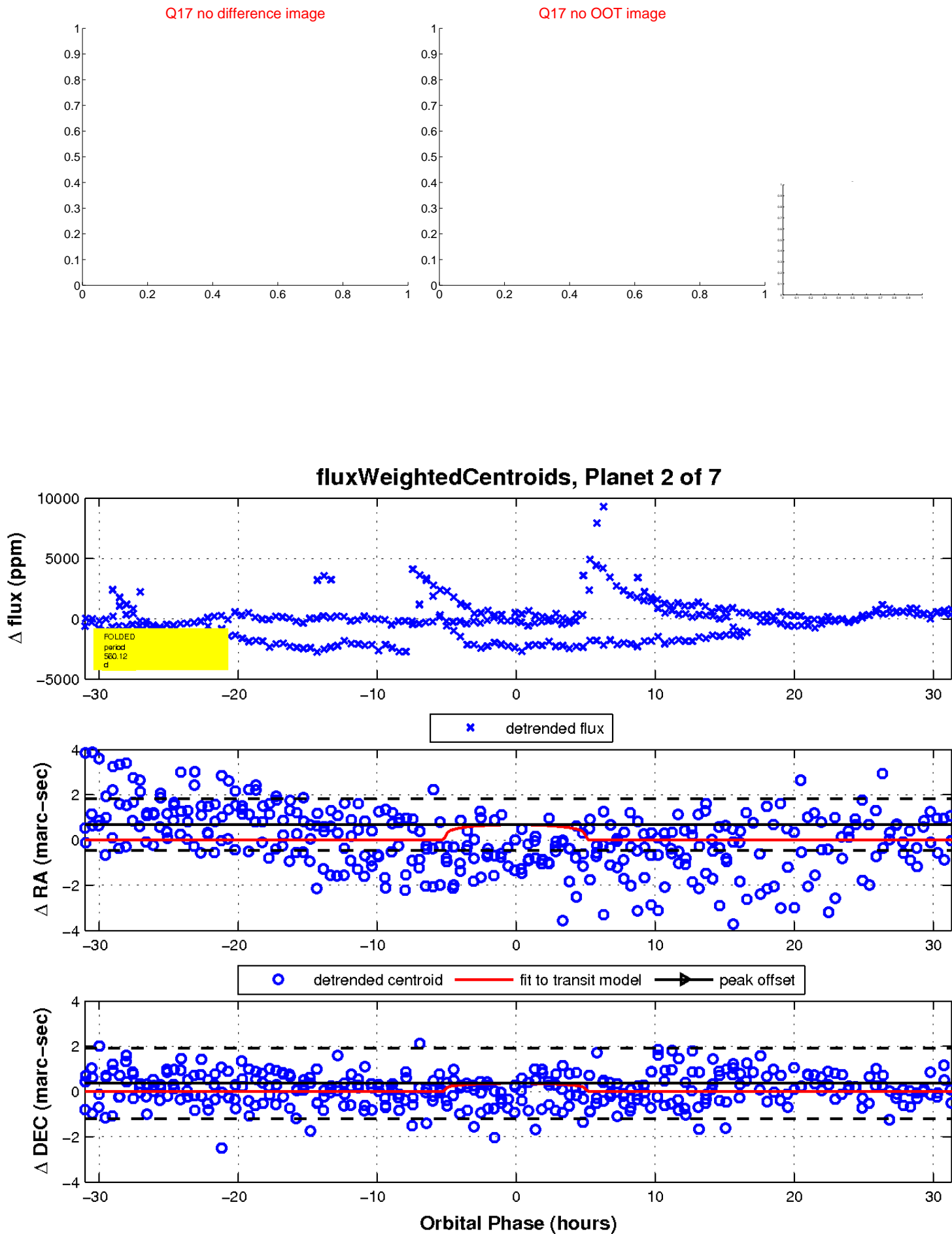
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

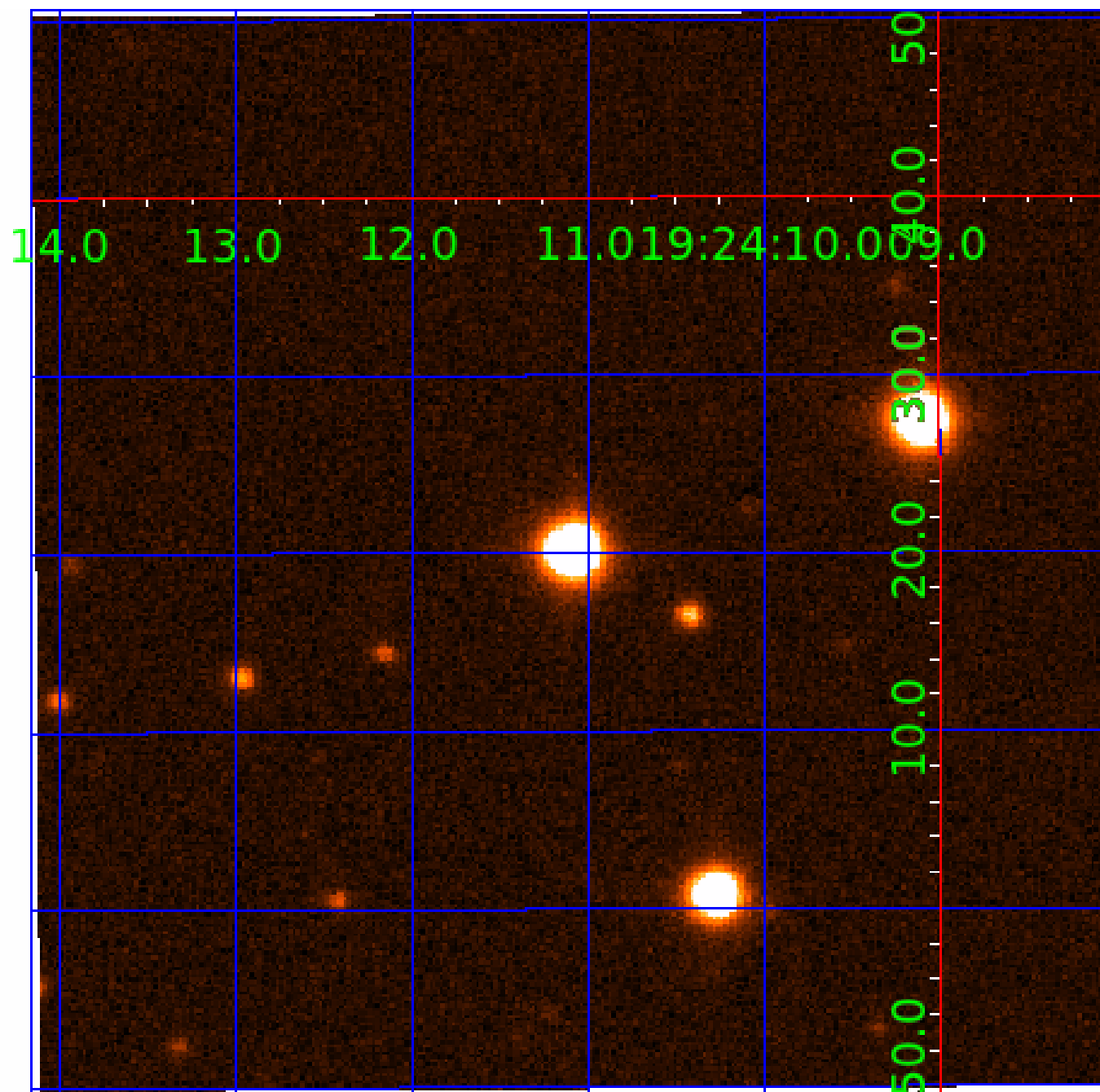


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011135986

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})
011135986-01	OBS	No	443.391096	511.128117	1164.2	6.810	18.7	7.7	4.72	5125	16.84	8.89
011135986-02	OBS	No	560.124898	325.838665	1394.6	10.459	20.6	8.2	4.72	5125	17.33	6.51
011135986-03	OBS	No	345.929773	341.082334	992.7	4.532	19.0	6.8	4.72	5125	15.19	12.38
011135986-04	OBS	No	324.761518	188.124398	1224.3	4.731	18.8	7.9	4.72	5125	16.81	13.46
011135986-05	OBS	No	553.204915	314.774970	838.8	4.574	16.4	6.5	4.72	5125	14.79	6.62
011135986-06	OBS	No	363.182774	350.898874	1221.5	7.290	15.2	7.6	4.72	5125	16.14	11.60
011135986-07	OBS	No	396.124994	168.127933	1176.2	3.500	16.3	-1.0	4.72	5125	15.87	10.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011135986-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011135986-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011135986-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
011135986-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

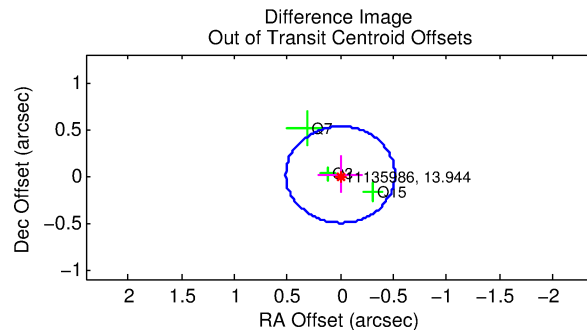
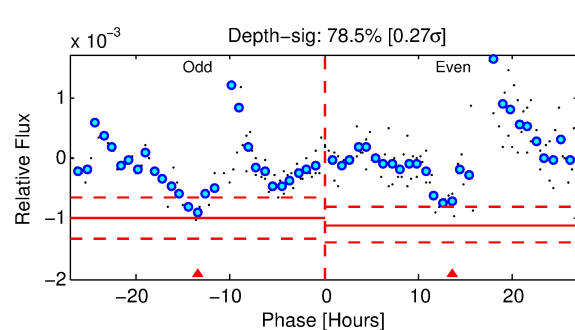
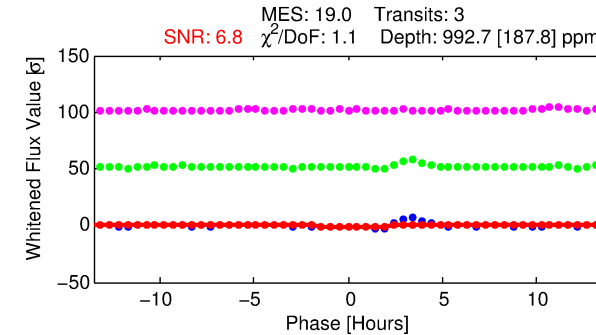
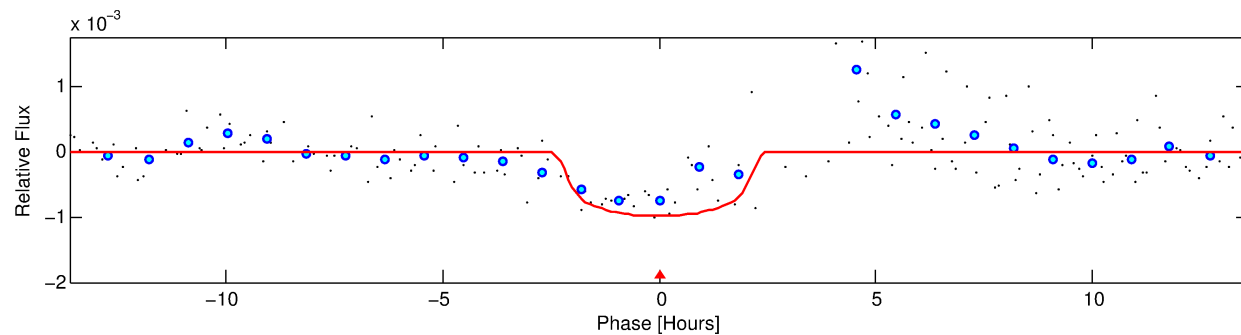
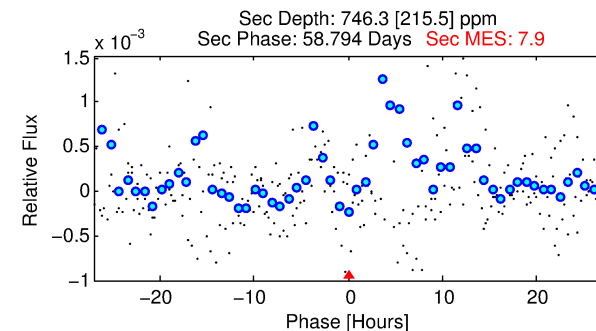
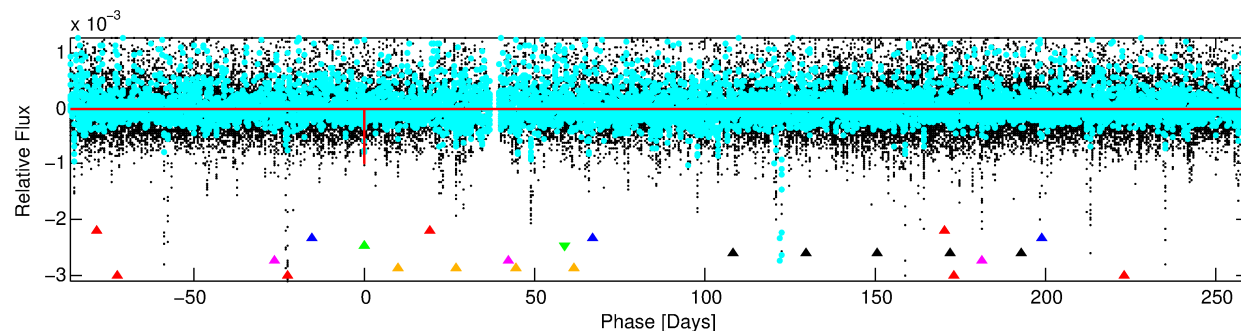
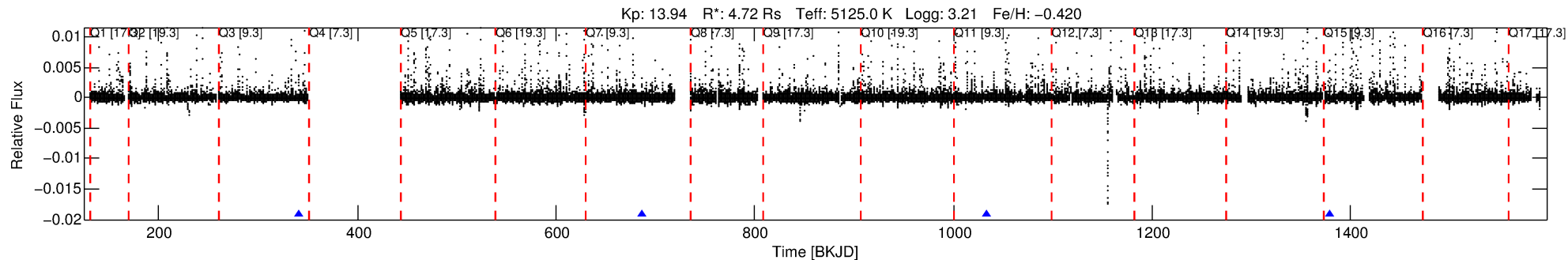
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-03

No Significant Match Found

DV One-Page Summary

KIC: 11135986 Candidate: 3 of 7 Period: 345.930 d



DV Fit Results:

Period = 345.92977 [0.00384] d
Epoch = 341.0823 [0.0066] BKJD
Rp/R* = 0.0295 [0.0622]
a/R* = 515.14 [4180.76]
b = 0.53 [11.22]
Seff = 12.38 [7.50]
Teq = 478 [72] K
Rp = 15.19 [32.56] Re
a = 1.0558 [0.3886] AU
Ag = 1984.61 [8484.48] [0.23σ]
Teff = 4935 [5225] K [0.85σ]

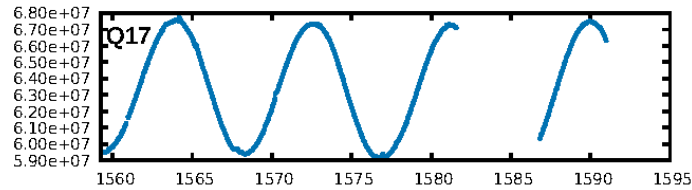
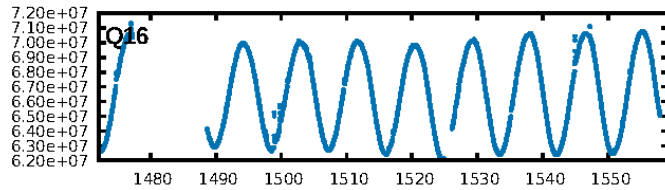
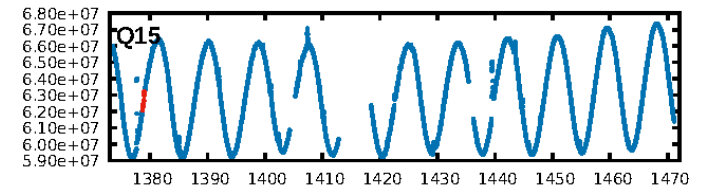
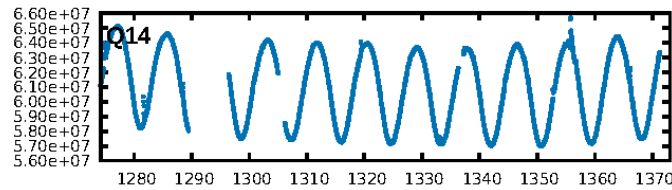
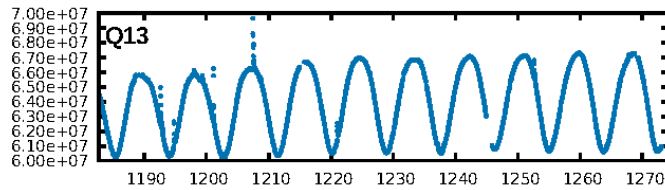
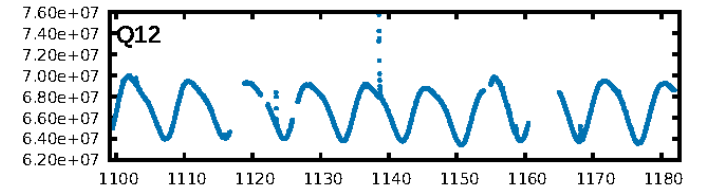
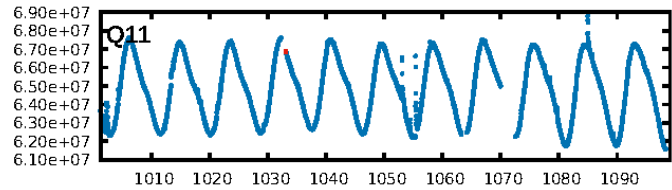
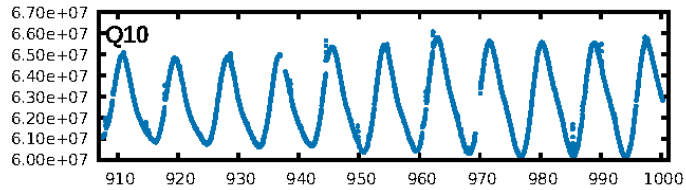
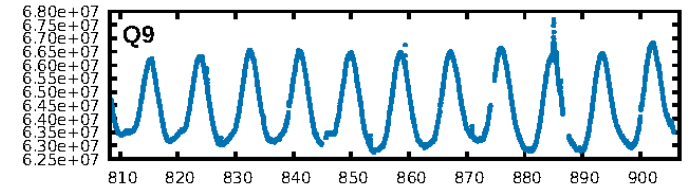
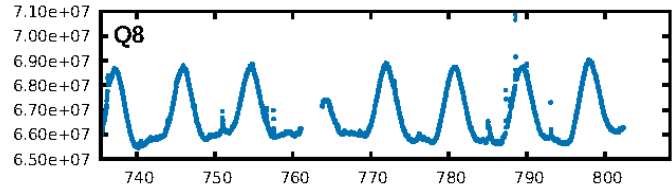
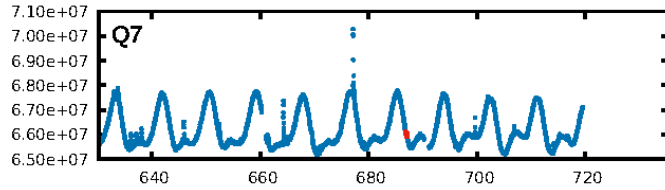
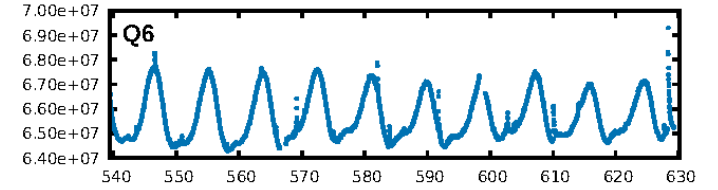
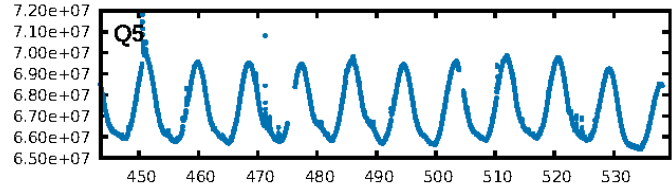
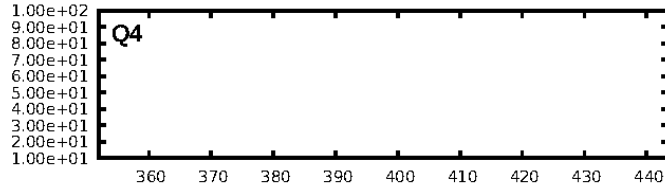
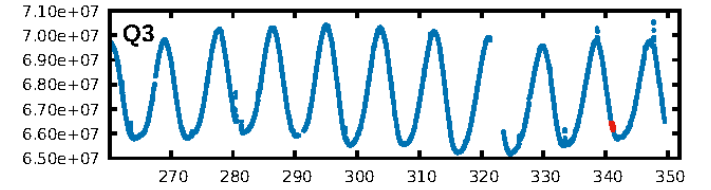
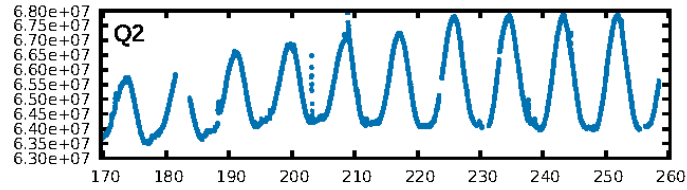
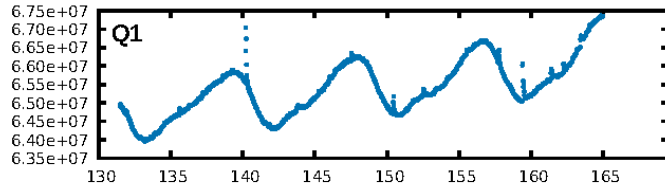
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [77.55σ]
LongPeriod-sig: 100.0% [48.24σ]
ModelChiSquare2-sig: 34.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.536
Centroid-sig: 3.5%
Centroid-so: 0.678 arcsec [1.18σ]
OotOffset-rm: 0.014 arcsec [0.08σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-rm: 0.111 arcsec [0.58σ]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

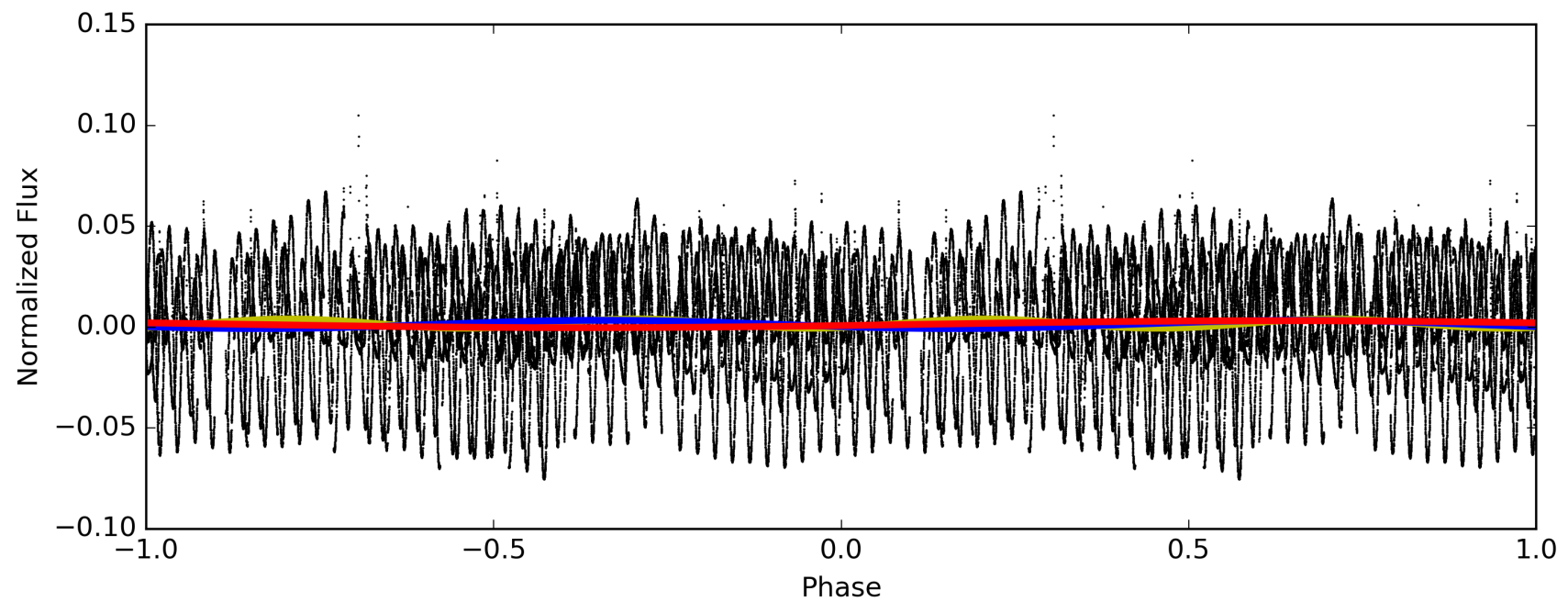
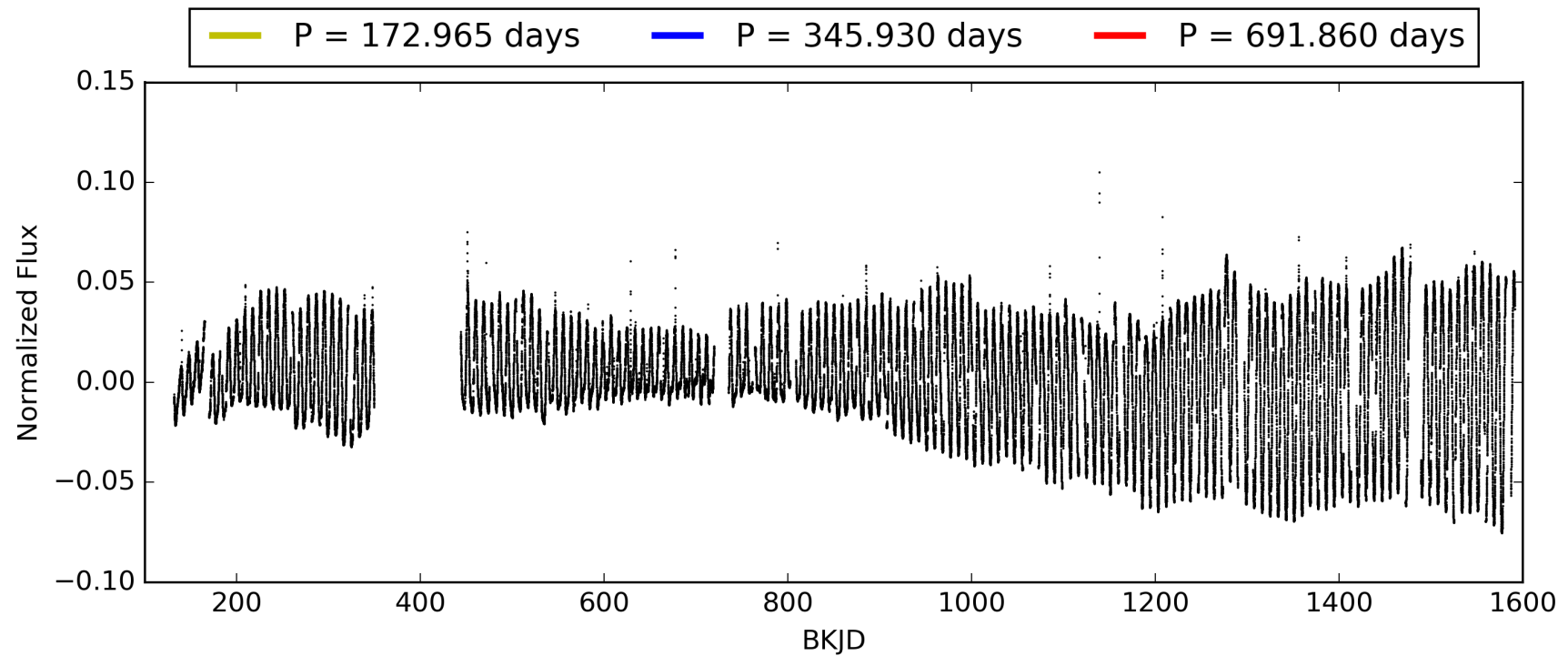
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:18 Z

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

TCE 011135986-03, PDC Light Curves

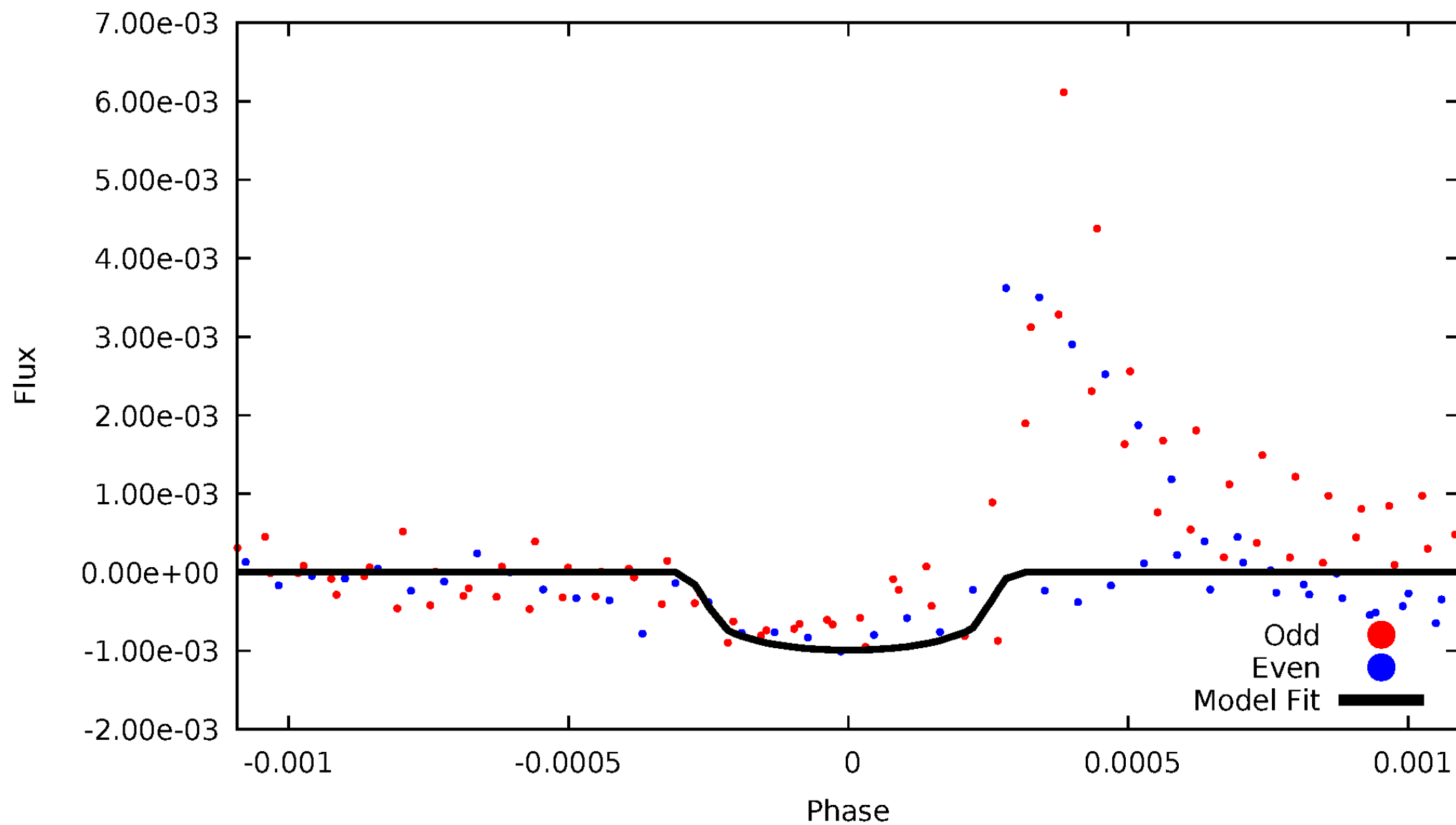


TCE 011135986-03



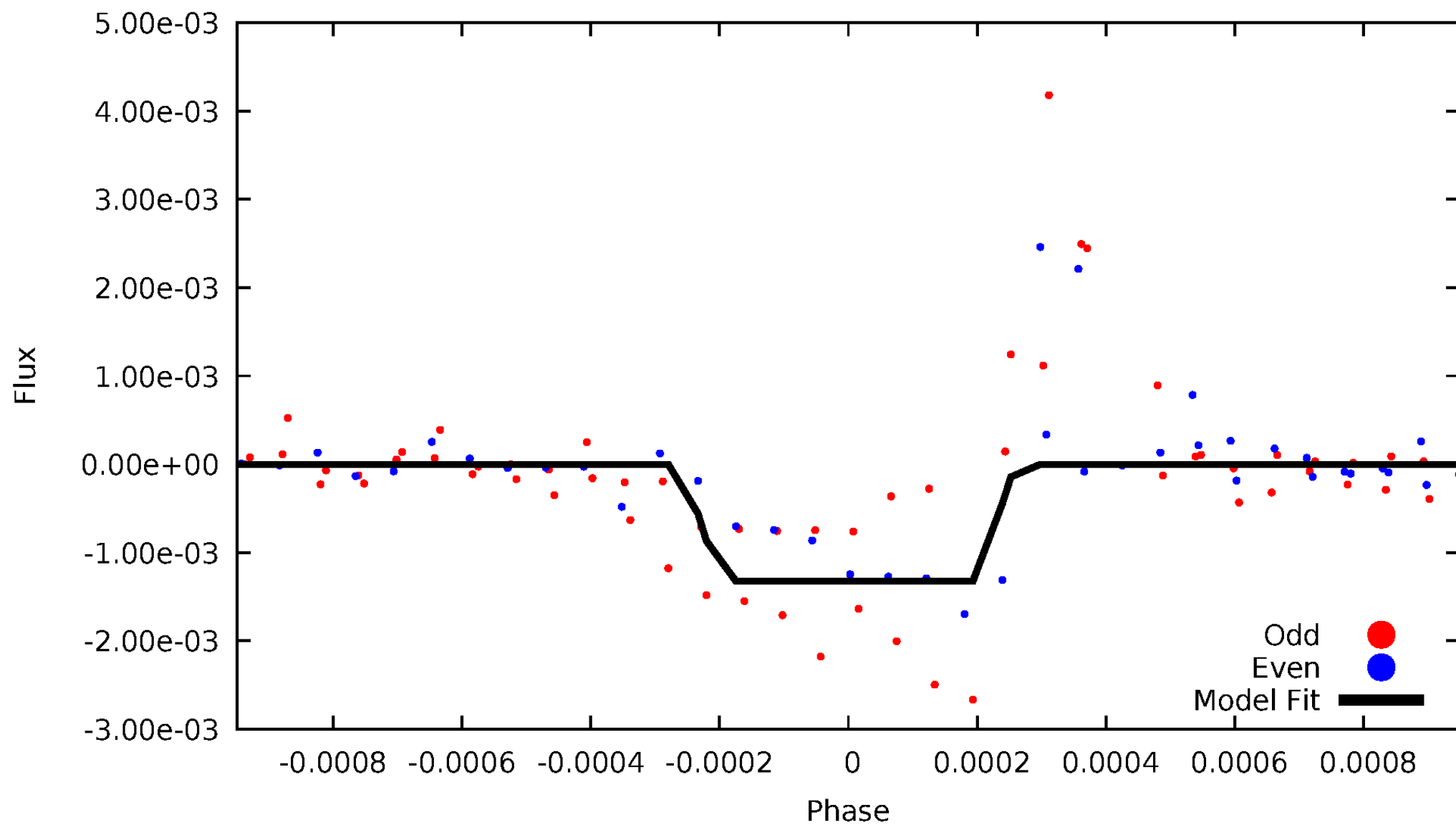
DV Odd/Even

TCE 011135986-03



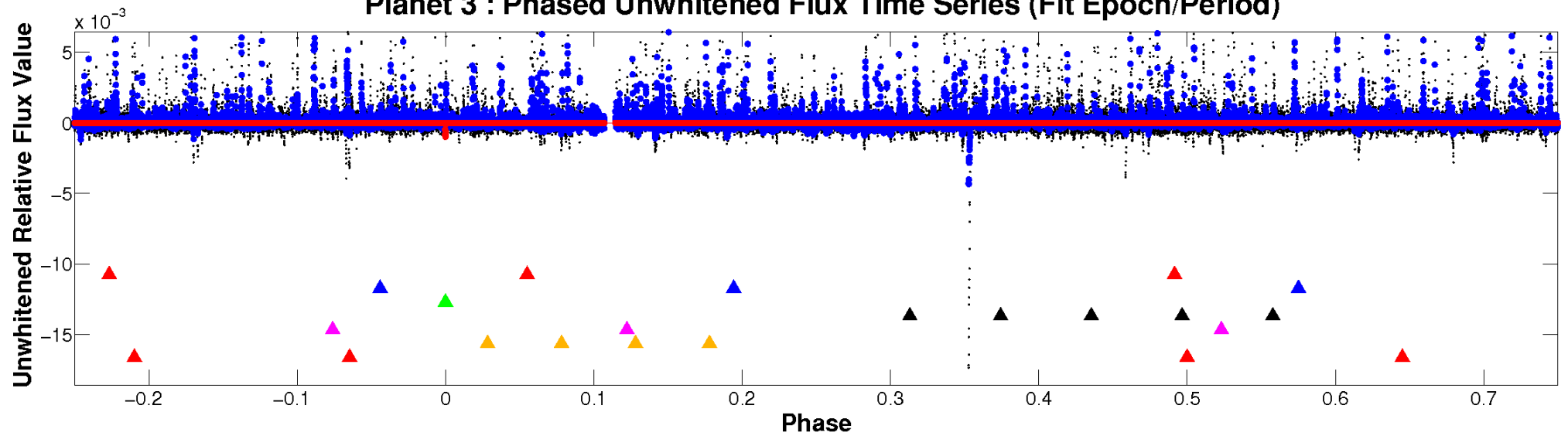
ALT Odd/Even

TCE 011135986-03

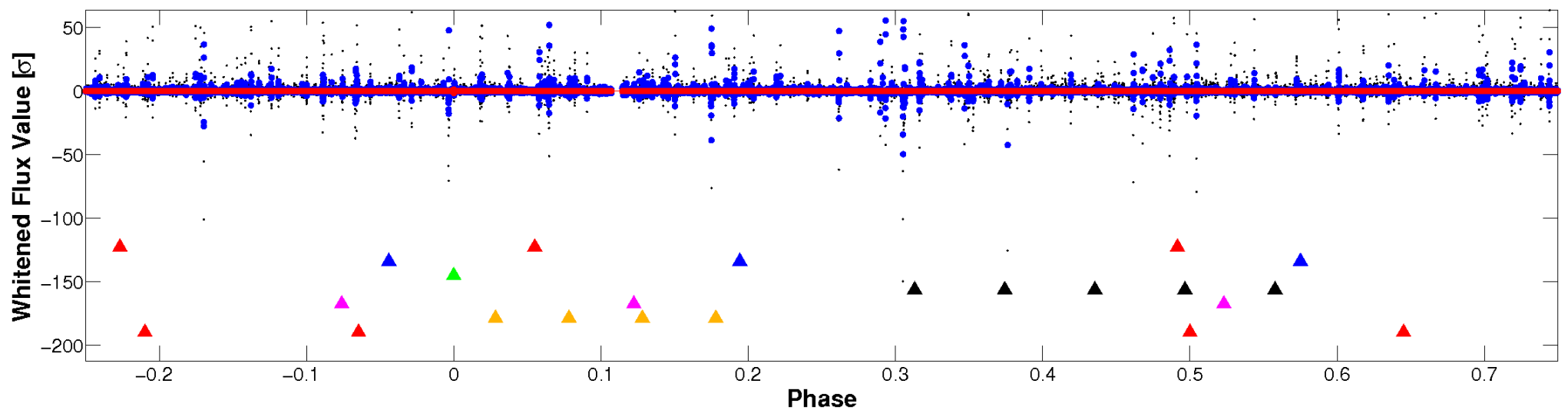


Non-Whitened Vs. Whitened Light Curve

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

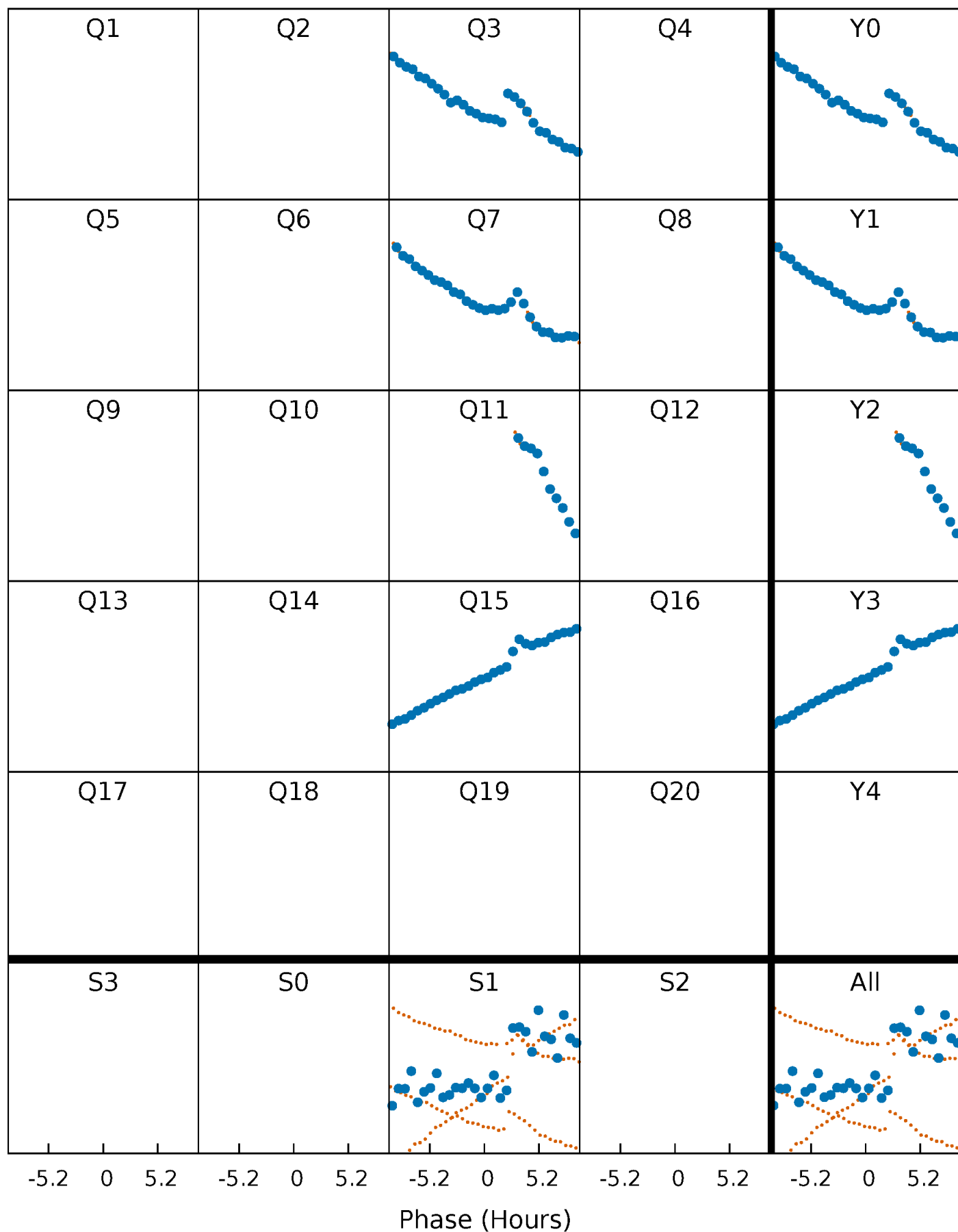


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



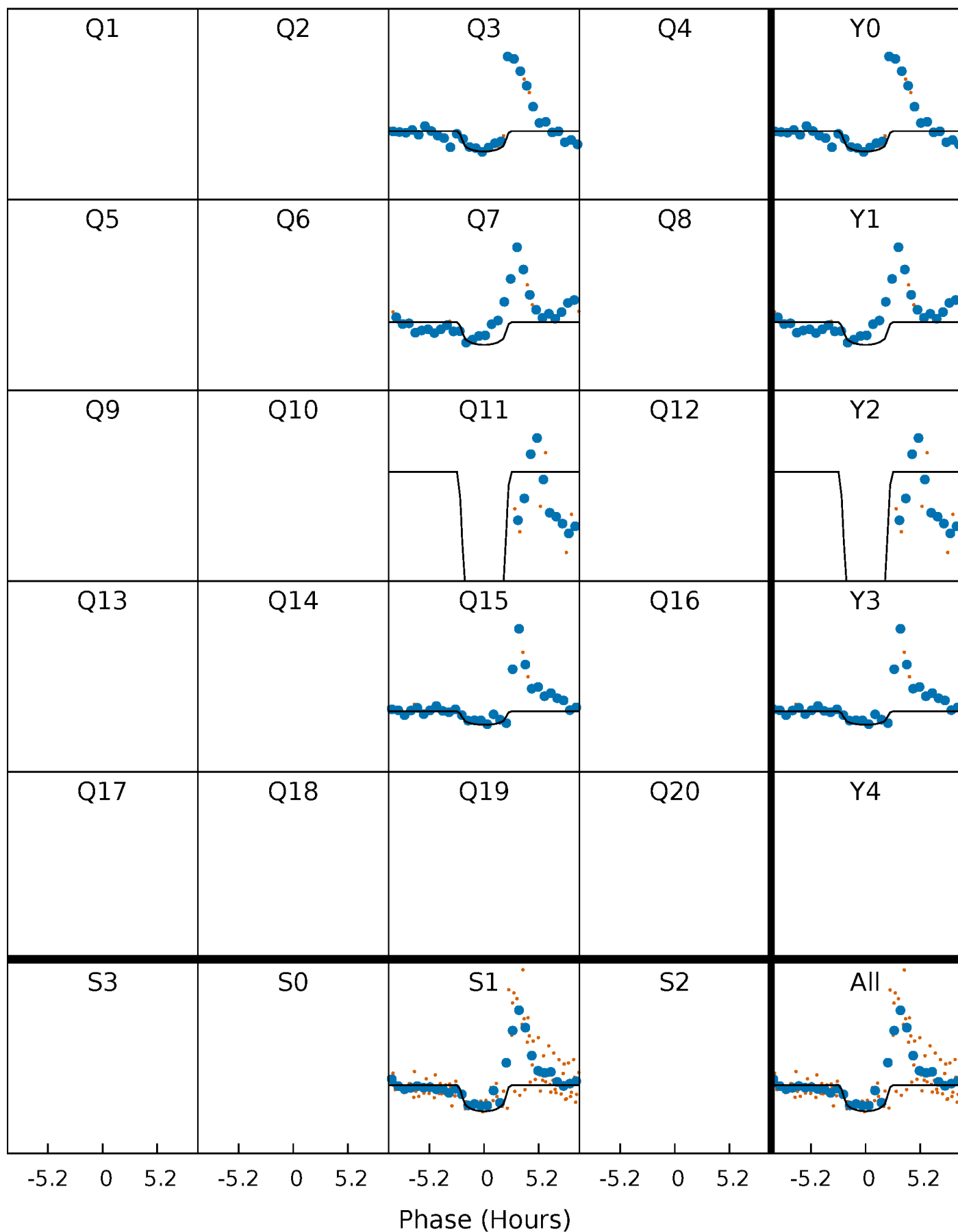
PDC Quarter-Phased Transit Curves

TCE 011135986-03 $P=345.929773$ Days $T_0=341.082334$ (BKJD)



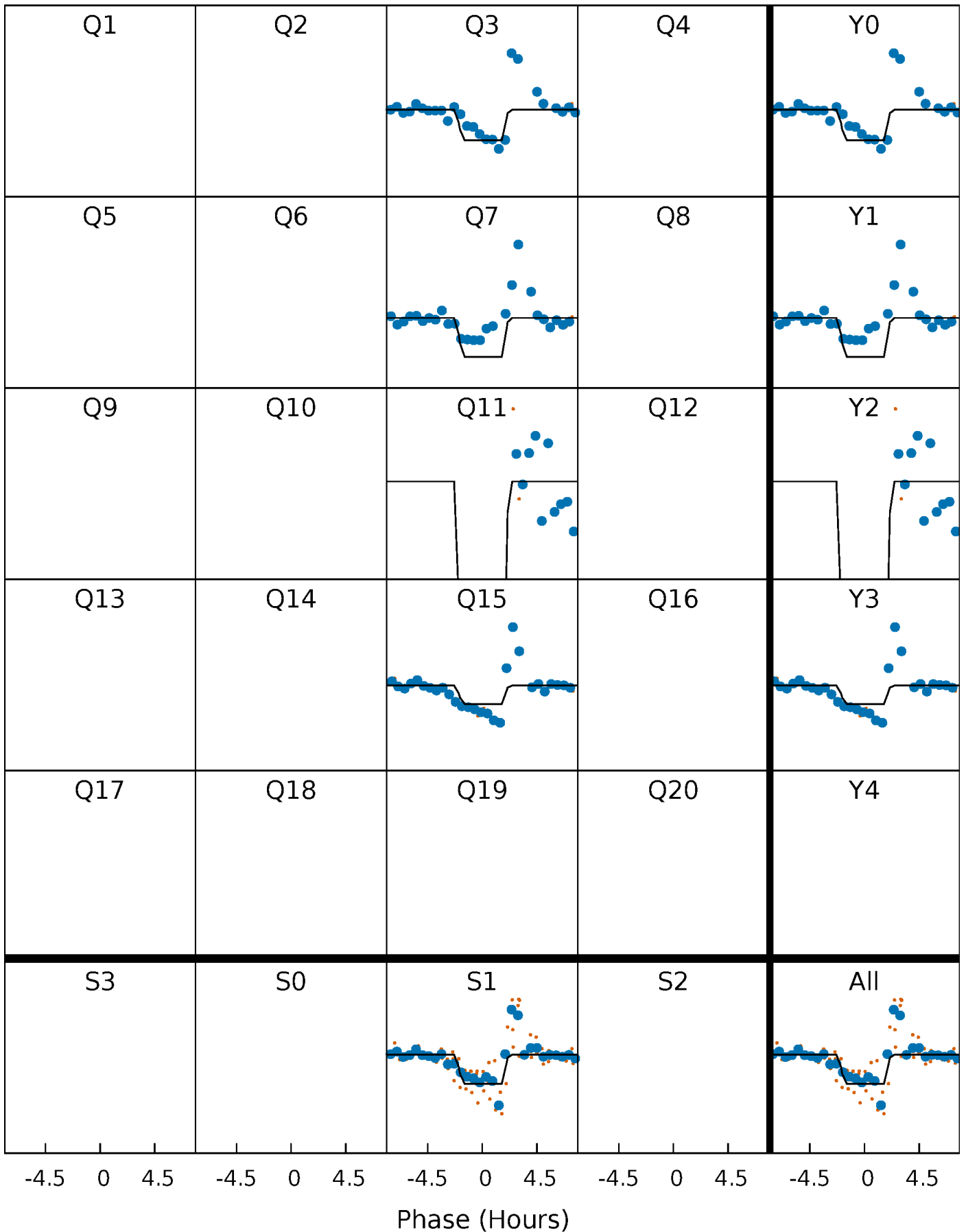
DV Quarter-Phased Transit Curves

TCE 011135986-03 $P=345.929773$ Days $T_0=341.082334$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

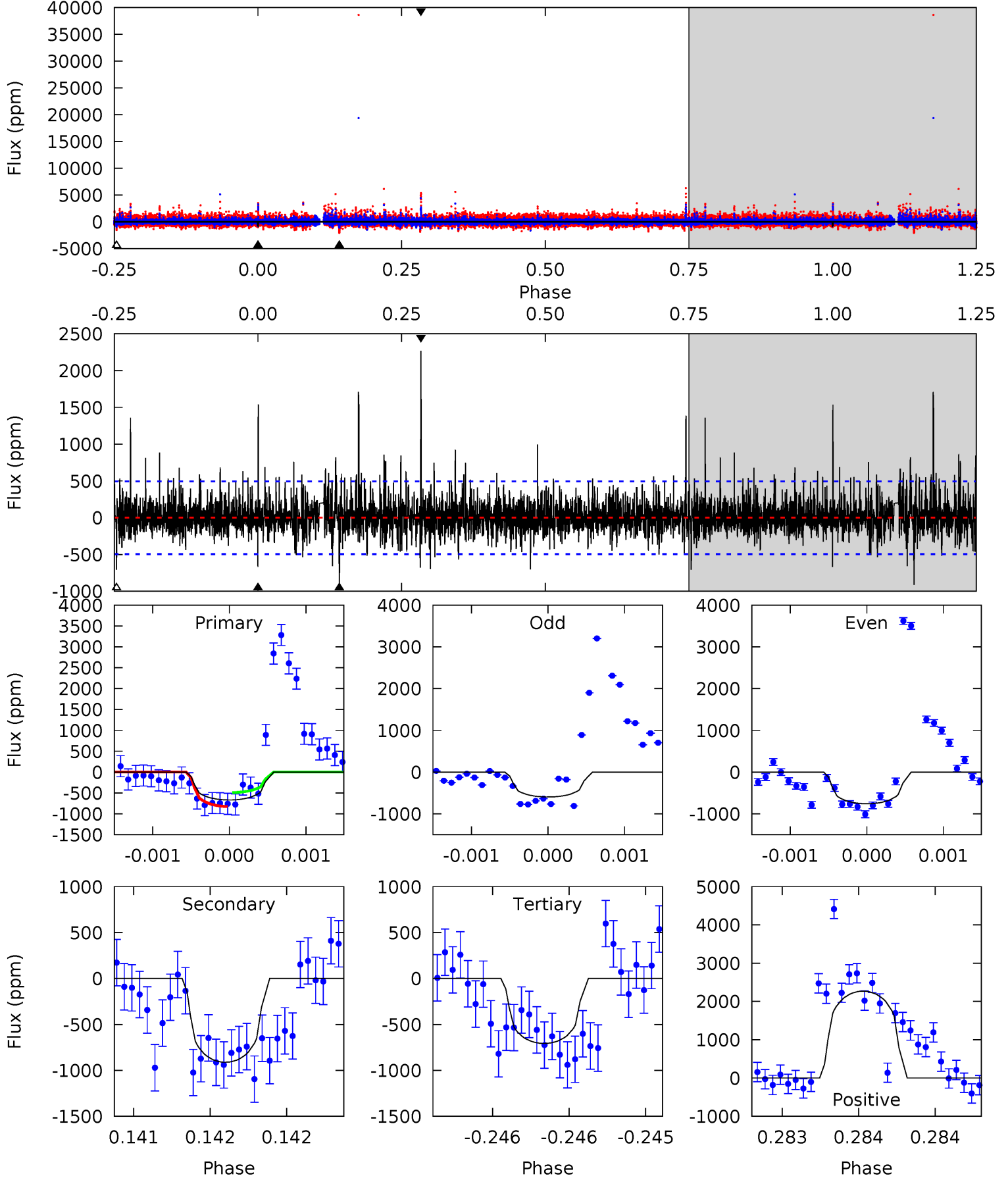
TCE 011135986-03 $P=345.940171$ Days $T_0=341.076698$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-03, P = 345.929773 Days, E = 341.082334 Days

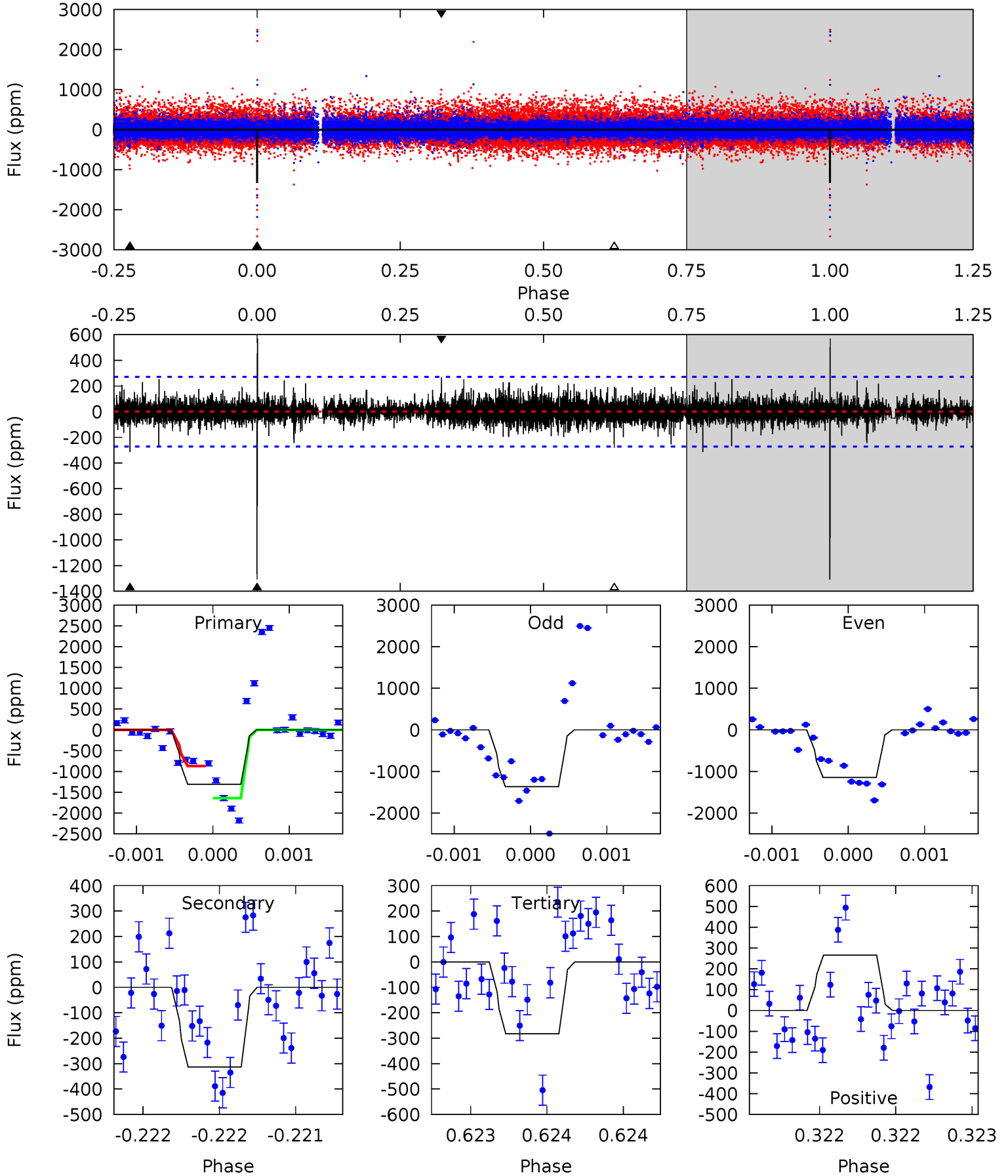
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.51	10.2	7.95	25.5	5.56	3.46	2.08	-0.43	-18.0	2.30	-15.3	0.49	0.91	0.71	1.86



Alt Model-Shift Uniqueness Test

011135986-03, P = 345.940171 Days, E = 341.076698 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	6.41	5.80	5.45	5.56	3.47	1.08	21.0	21.4	0.62	0.96	2.06	1.11	0.30	0



Stellar Parameters For KIC 011135986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-911 ± 89	$25.82^{+28.75}_{-17.79}$	659^{+67}_{-70}	4097^{+2796}_{-833}	832^{+8098}_{-646}
Alt.	-313 ± 49	$28.28^{+29.77}_{-19.21}$	663^{+66}_{-69}	3318^{+1621}_{-567}	239^{+2037}_{-184}

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

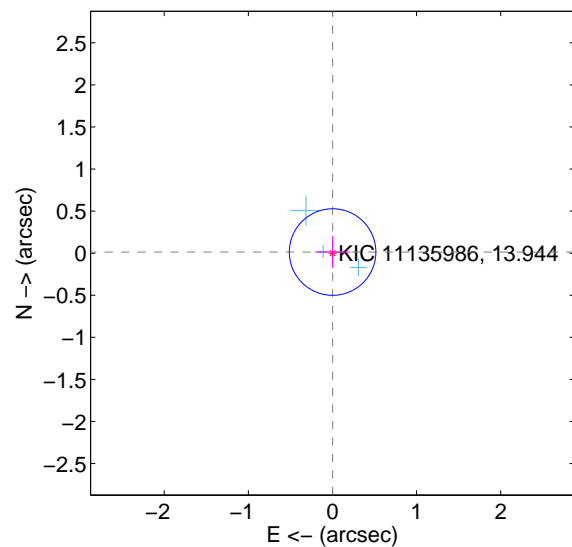
Supplemental centroid analysis for 011135986-03. Kepler magnitude: 13.94. Transit SNR 6.78

There are 3 quarters with good PRF difference image offsets

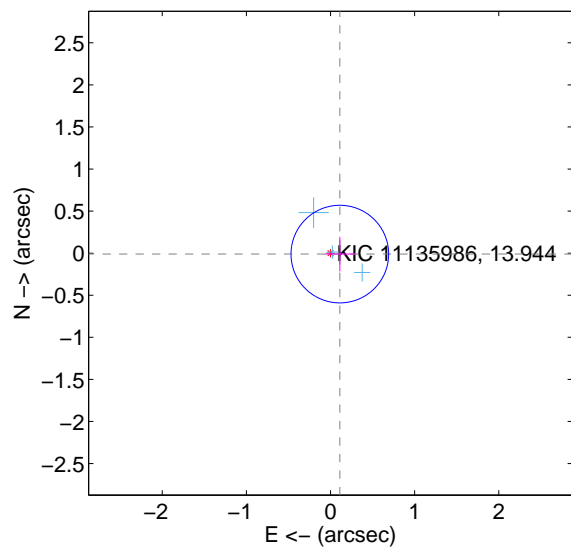
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.171	0.08	-0.002 ± 0.210	0.013 ± 0.190
PRF-fit source offset from KIC position	0.111 ± 0.193	0.58	-0.111 ± 0.177	-0.011 ± 0.205
photometric centroid source offset	0.68 ± 0.57	1.18	0.44 ± 0.61	0.51 ± 0.54

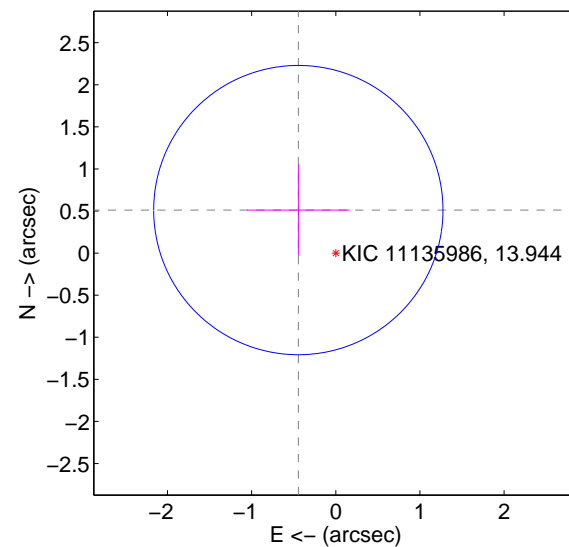
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

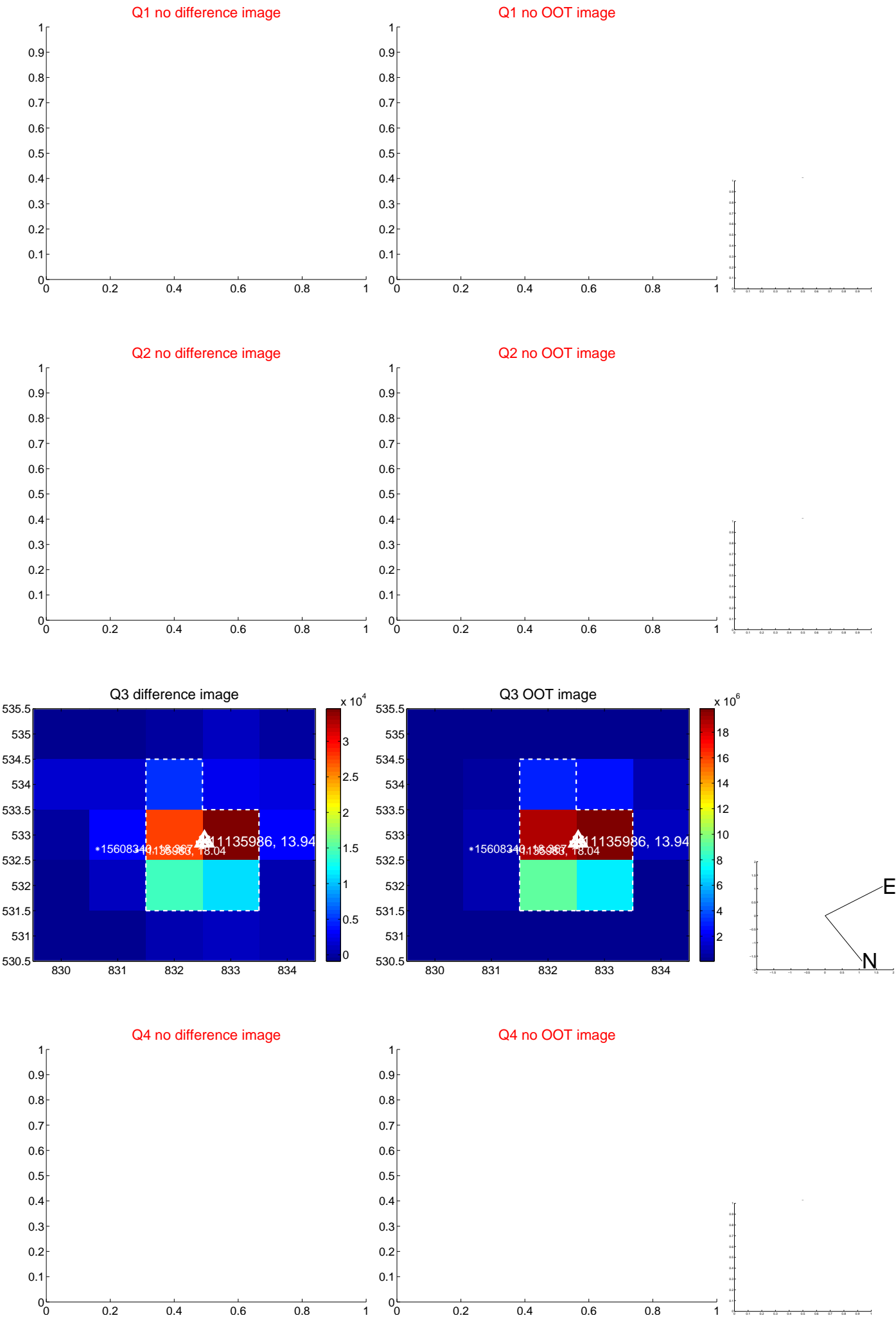


offset from photometric centroids

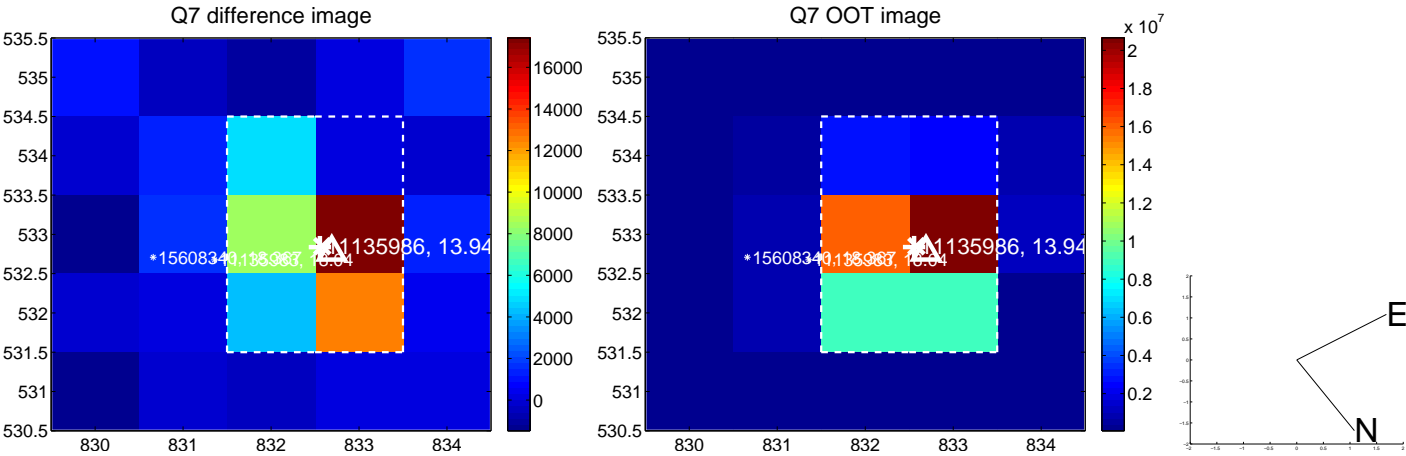


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

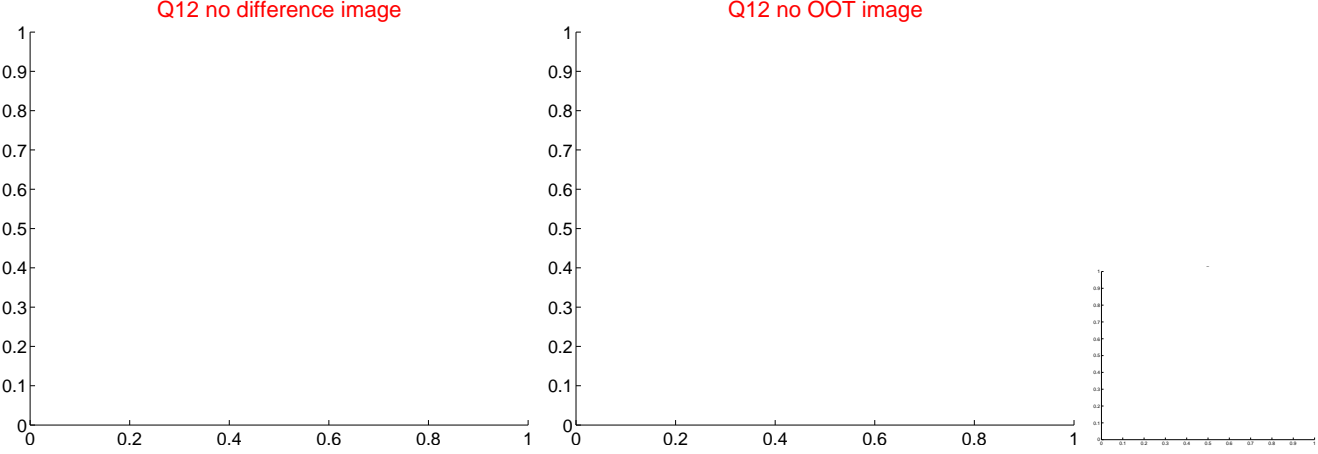
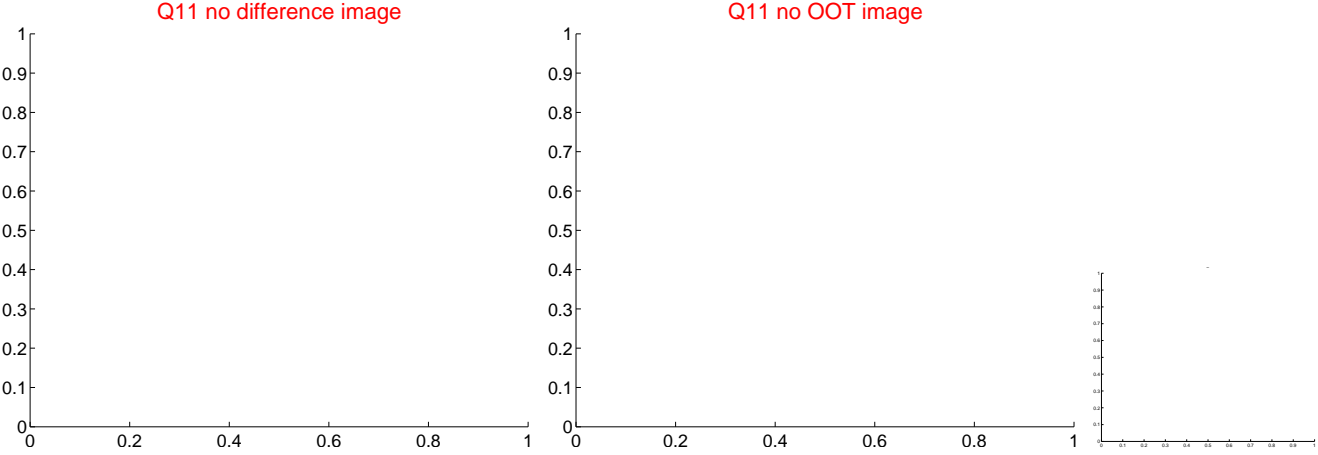
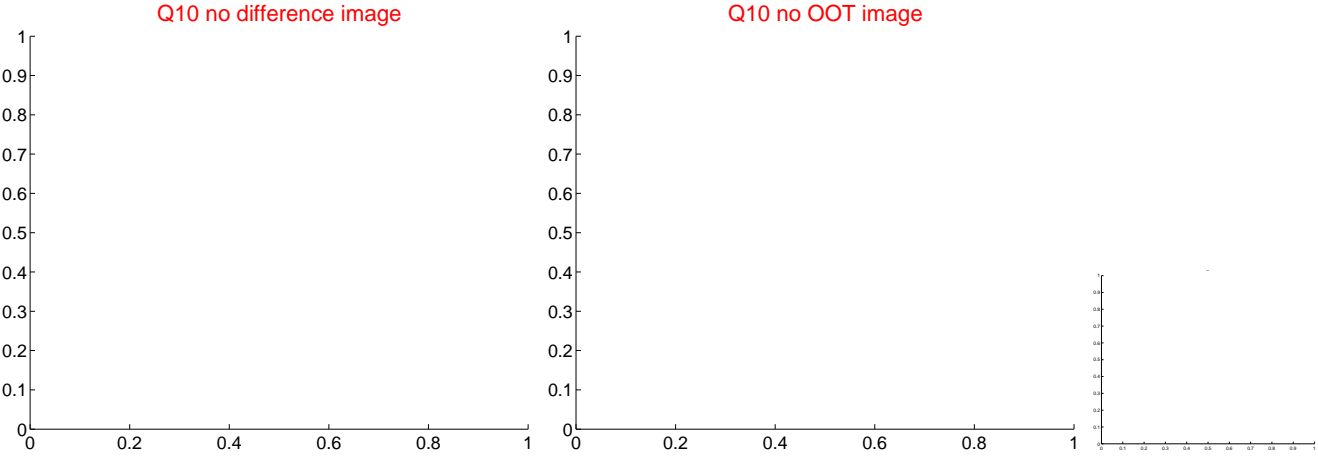
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



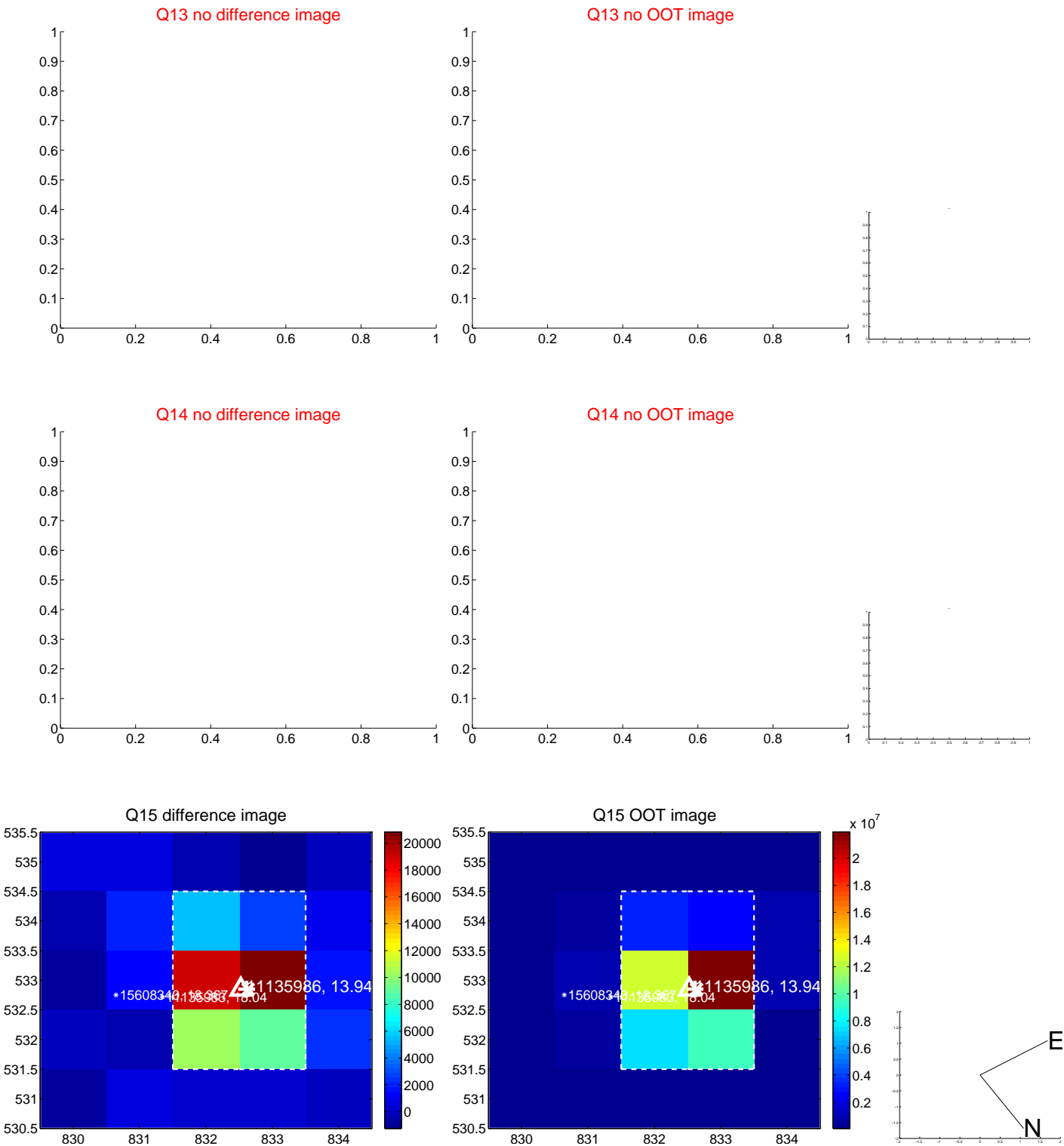
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



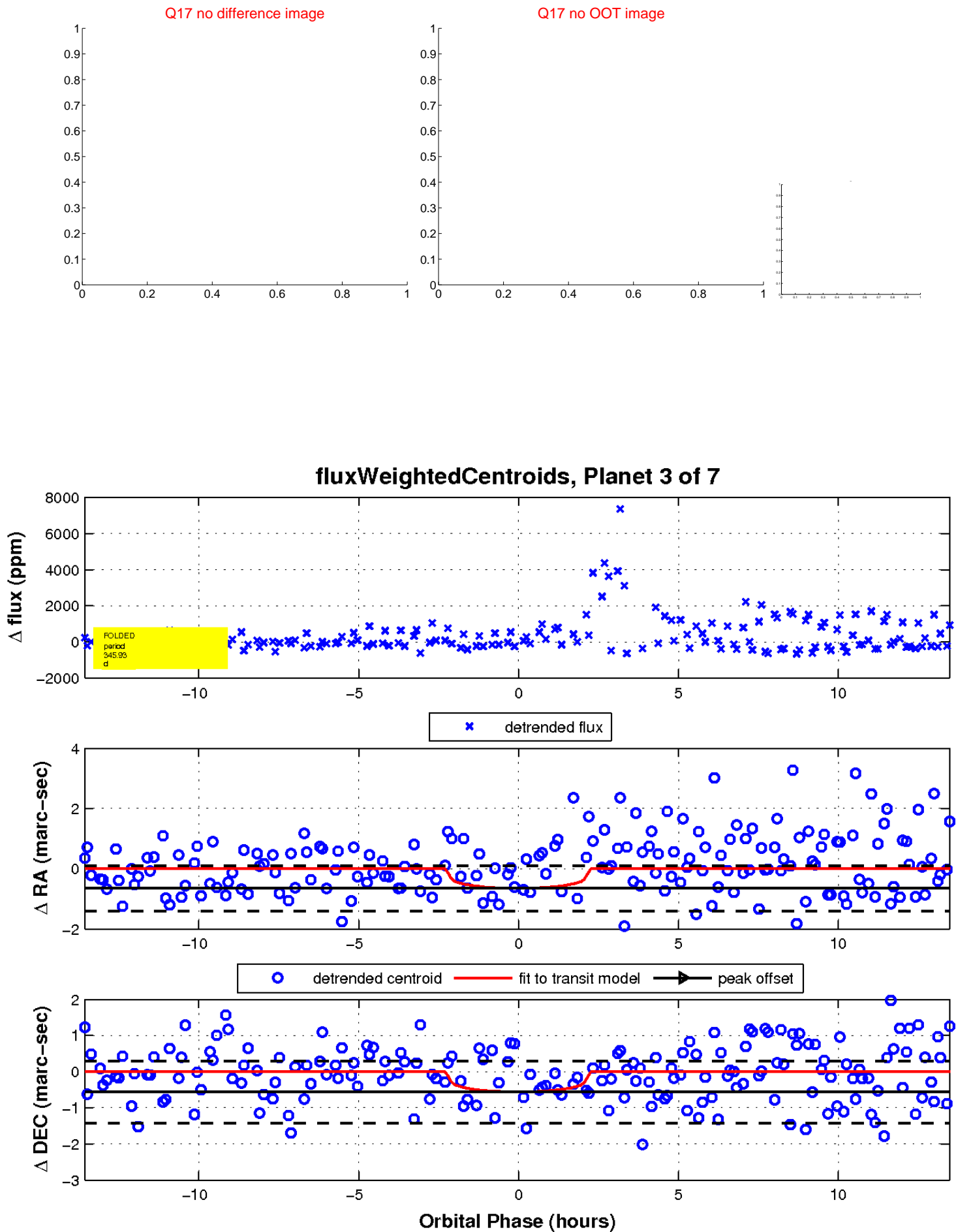
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

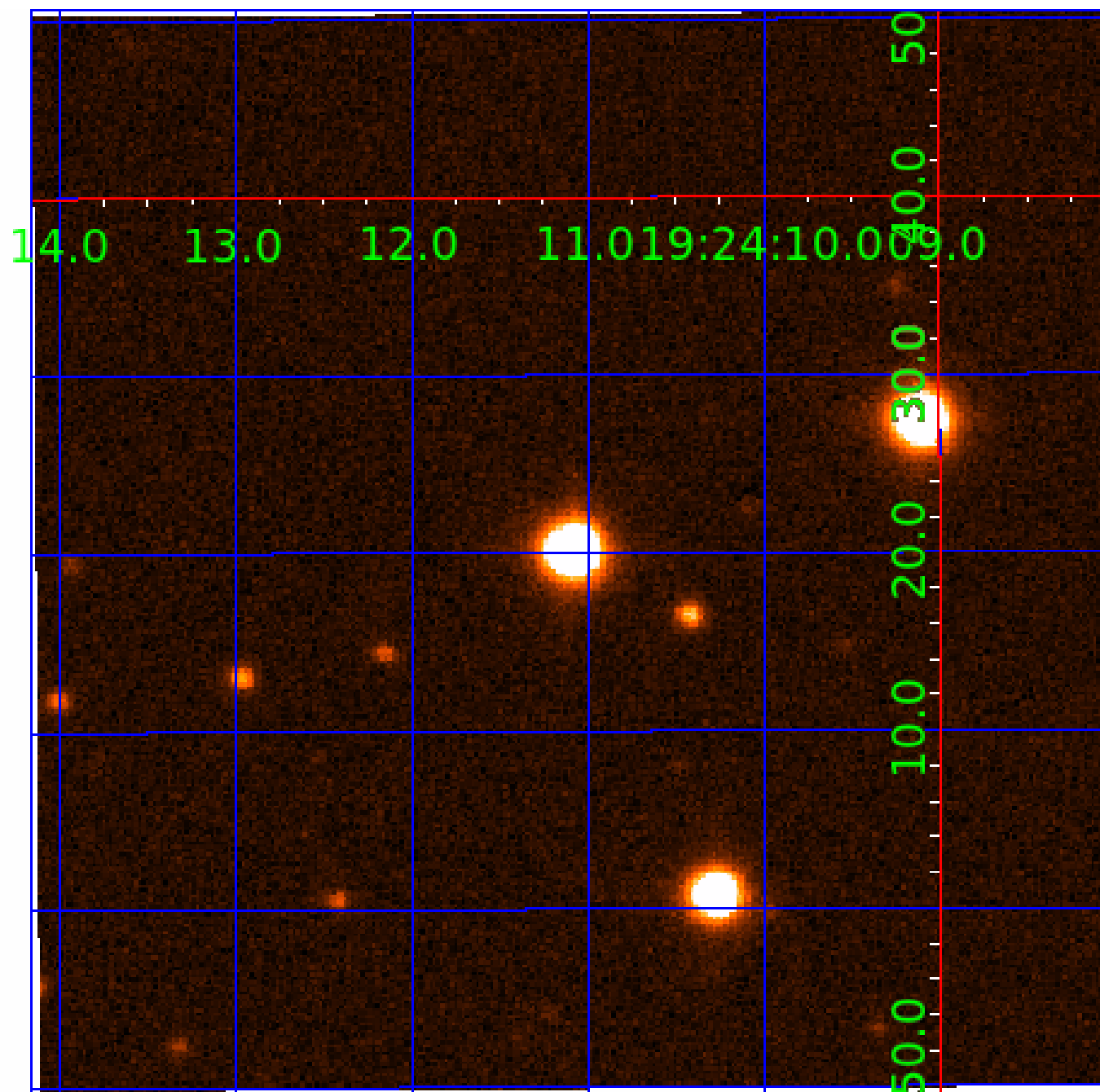


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011135986

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})
011135986-01	OBS	No	443.391096	511.128117	1164.2	6.810	18.7	7.7	4.72	5125	16.84	8.89
011135986-02	OBS	No	560.124898	325.838665	1394.6	10.459	20.6	8.2	4.72	5125	17.33	6.51
011135986-03	OBS	No	345.929773	341.082334	992.7	4.532	19.0	6.8	4.72	5125	15.19	12.38
011135986-04	OBS	No	324.761518	188.124398	1224.3	4.731	18.8	7.9	4.72	5125	16.81	13.46
011135986-05	OBS	No	553.204915	314.774970	838.8	4.574	16.4	6.5	4.72	5125	14.79	6.62
011135986-06	OBS	No	363.182774	350.898874	1221.5	7.290	15.2	7.6	4.72	5125	16.14	11.60
011135986-07	OBS	No	396.124994	168.127933	1176.2	3.500	16.3	-1.0	4.72	5125	15.87	10.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011135986-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011135986-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011135986-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
011135986-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

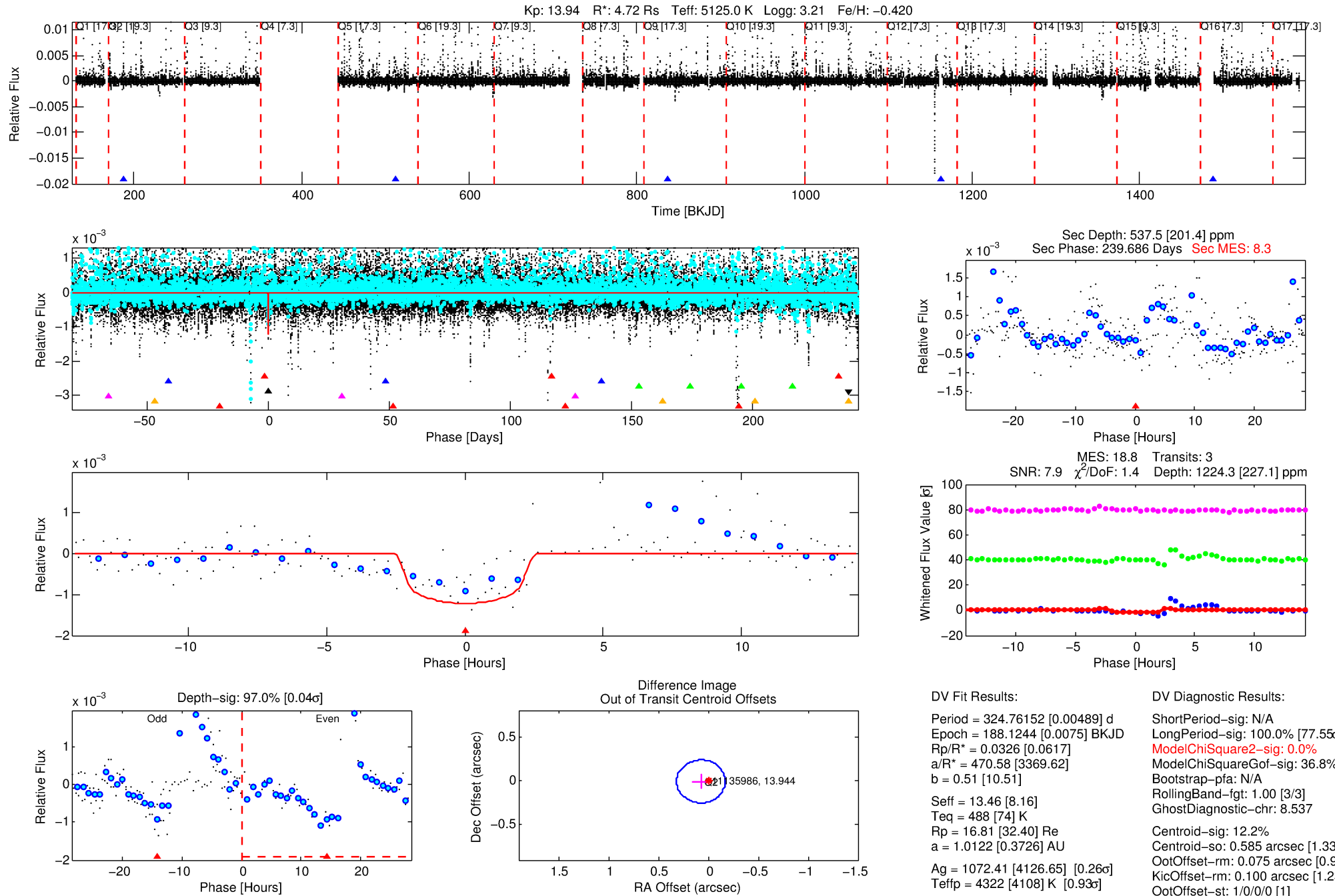
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-04

No Significant Match Found

DV One-Page Summary

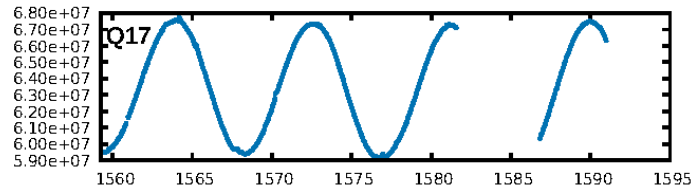
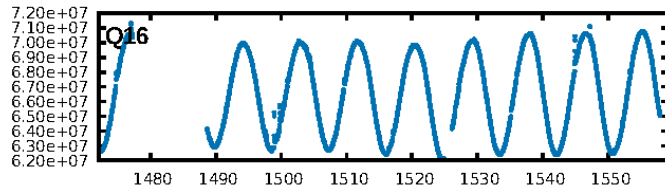
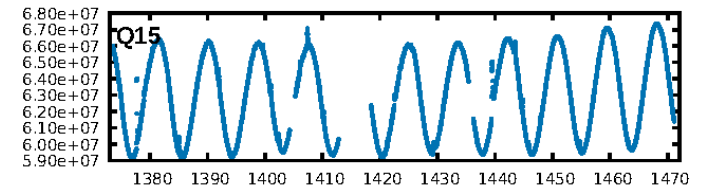
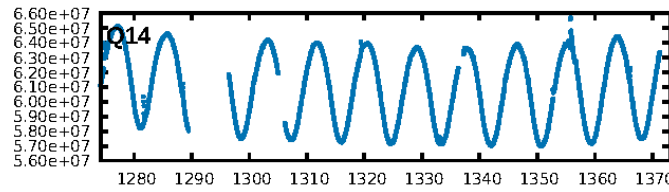
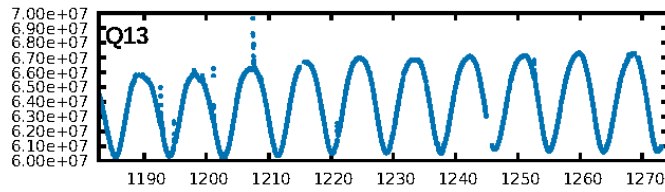
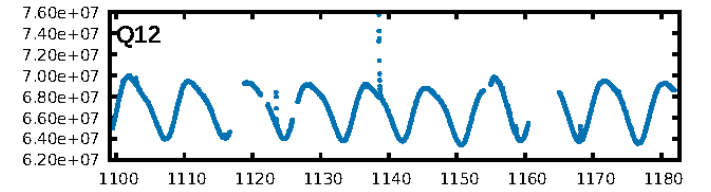
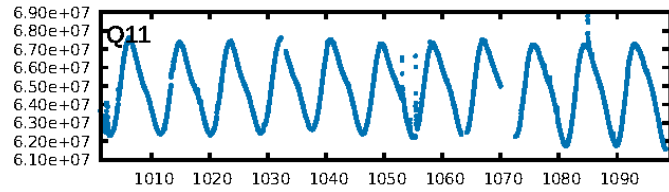
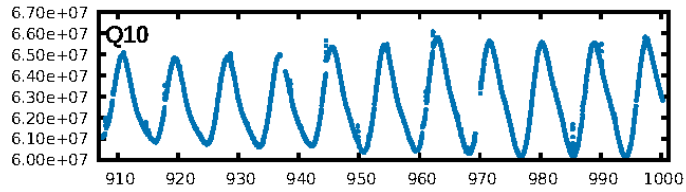
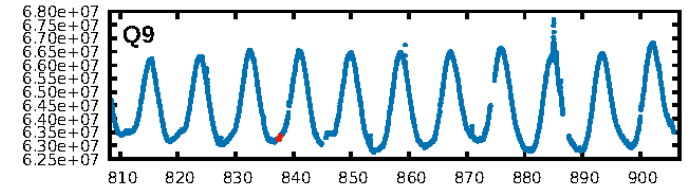
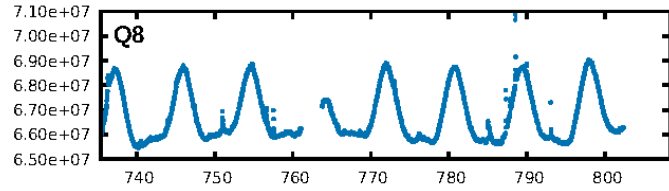
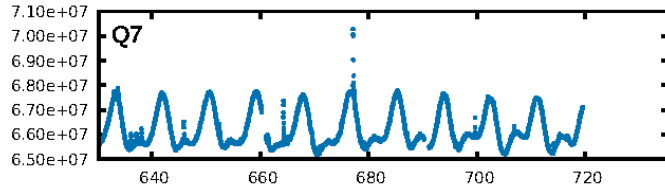
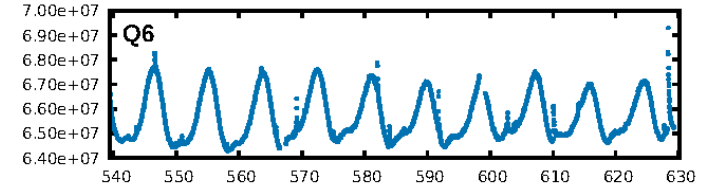
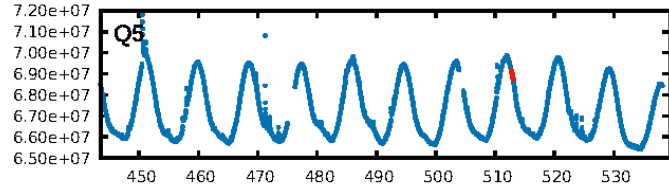
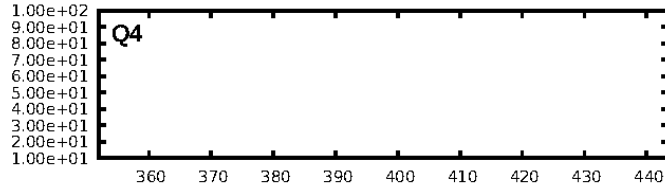
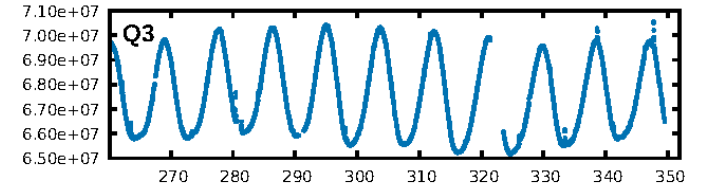
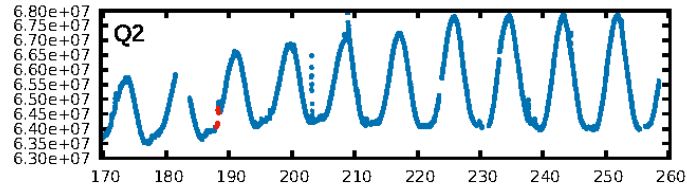
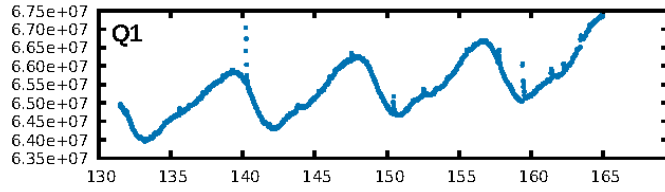
KIC: 11135986 Candidate: 4 of 7 Period: 324.762 d



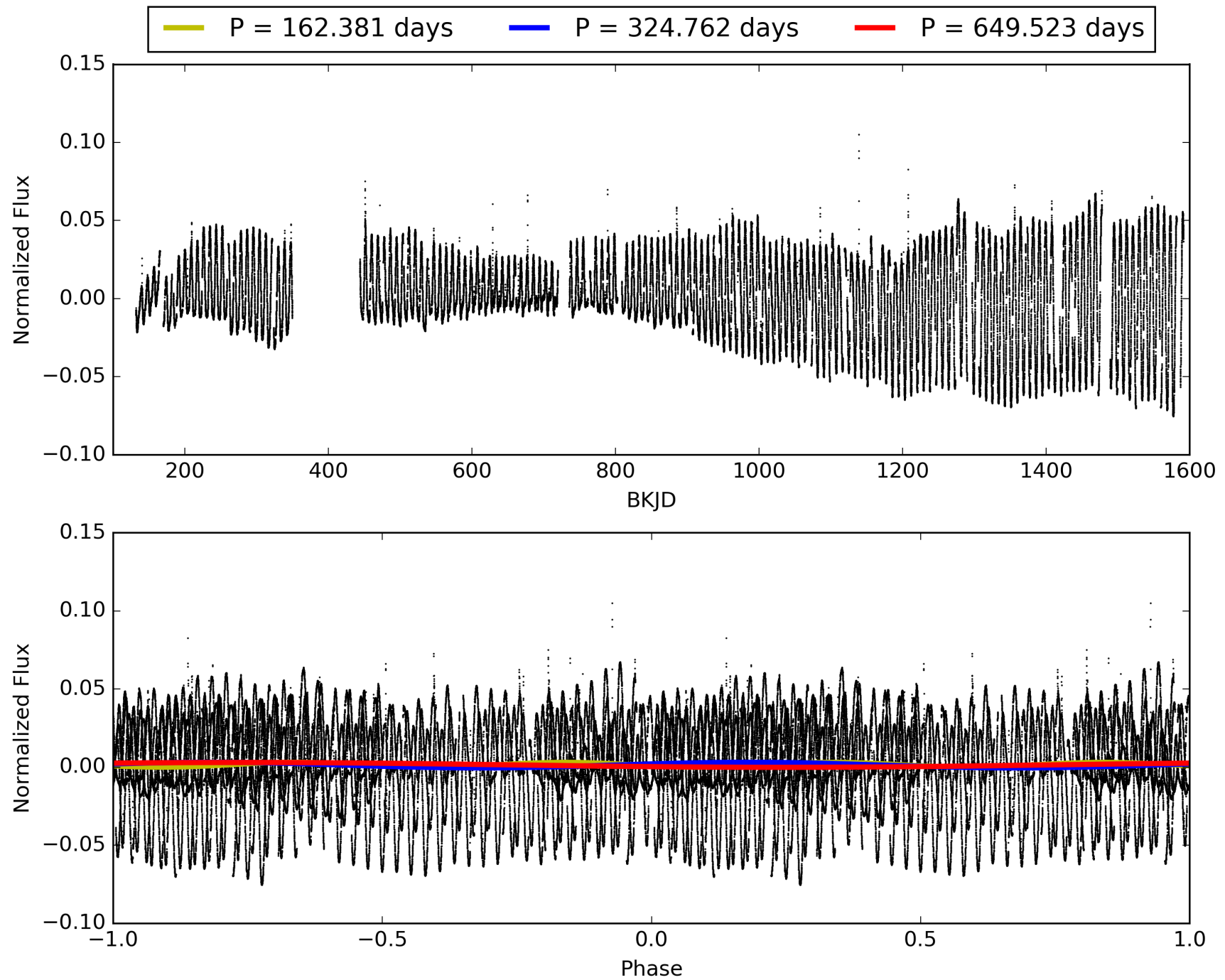
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:30 Z

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

TCE 011135986-04, PDC Light Curves

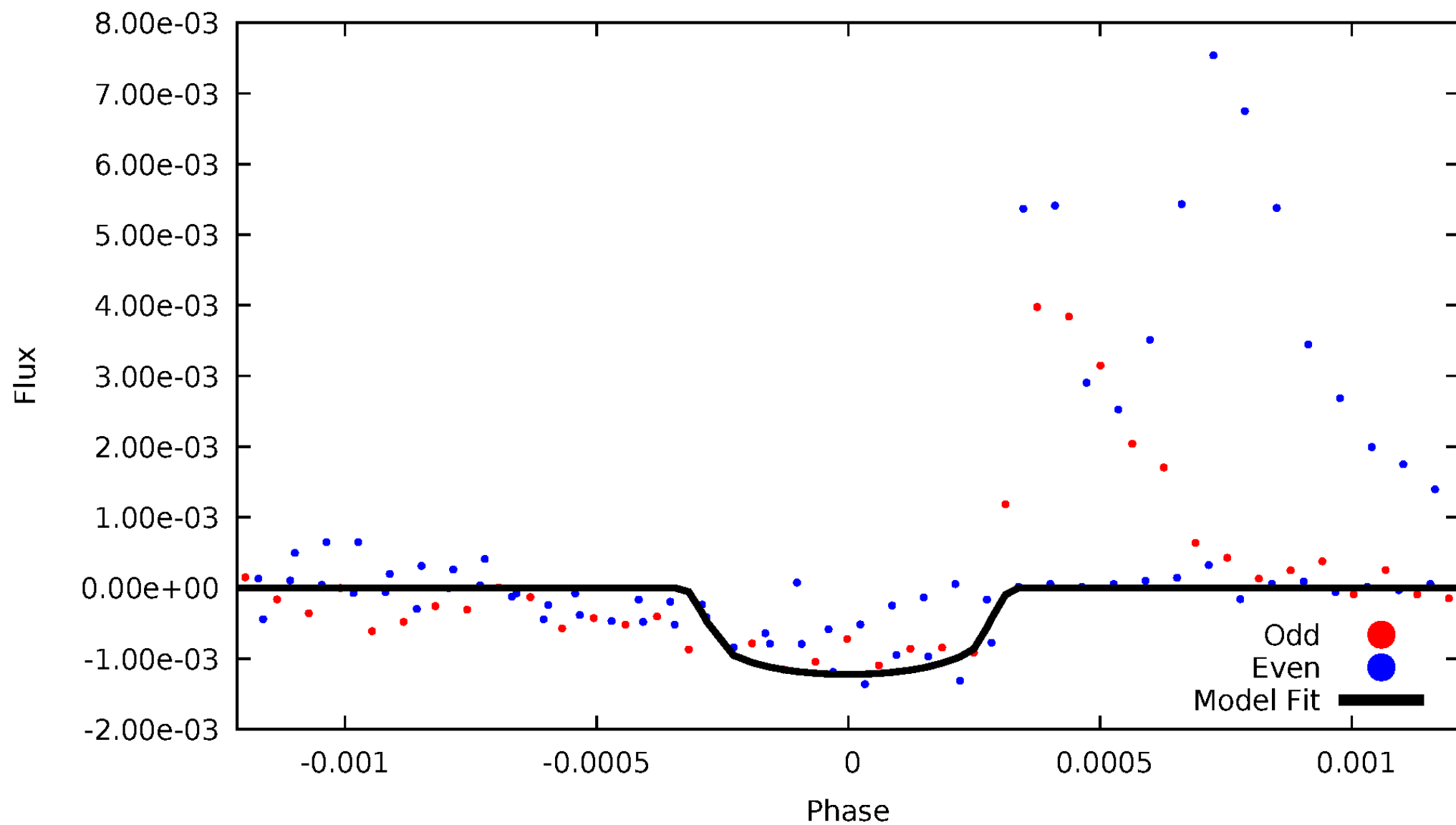


TCE 011135986-04



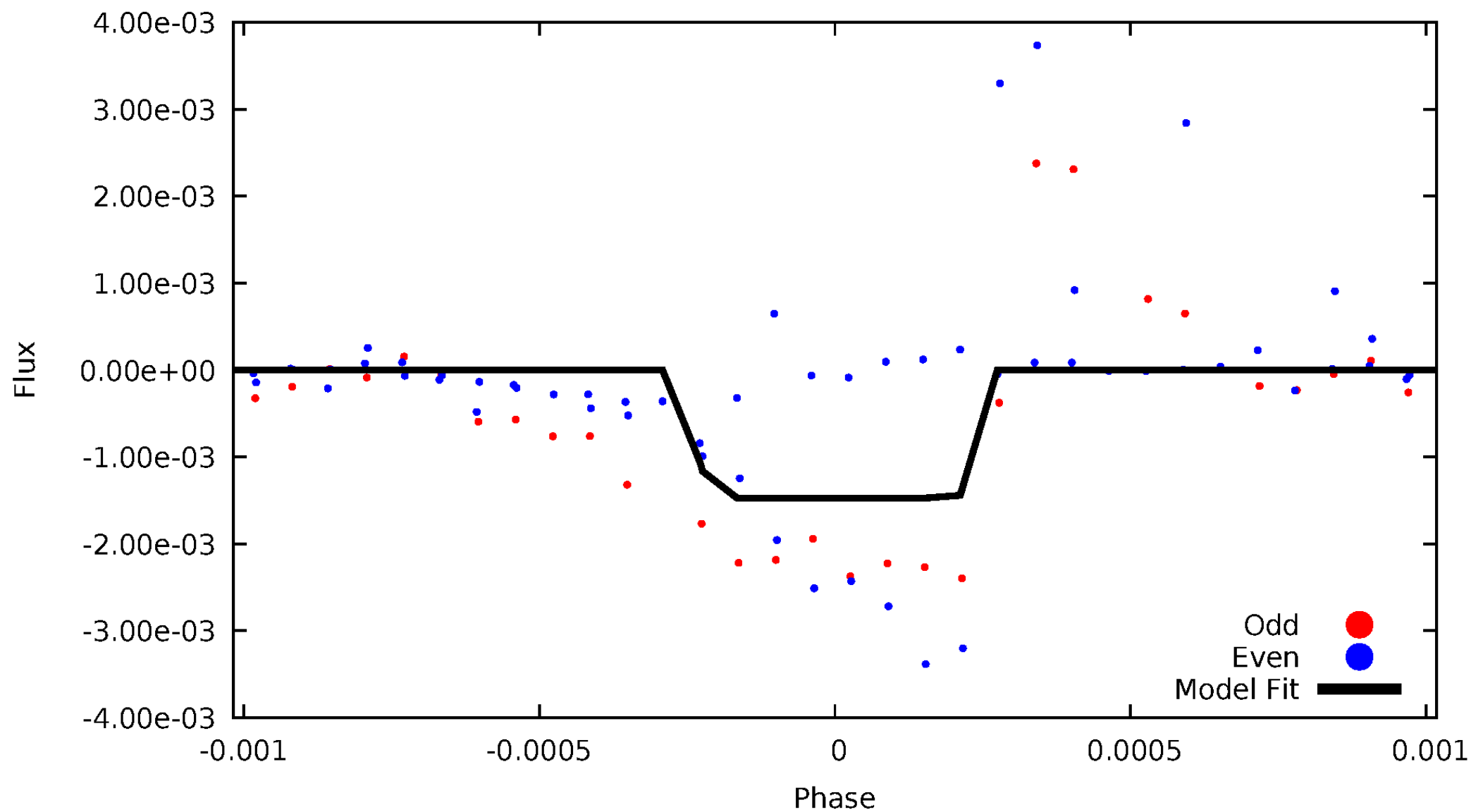
DV Odd/Even

TCE 011135986-04



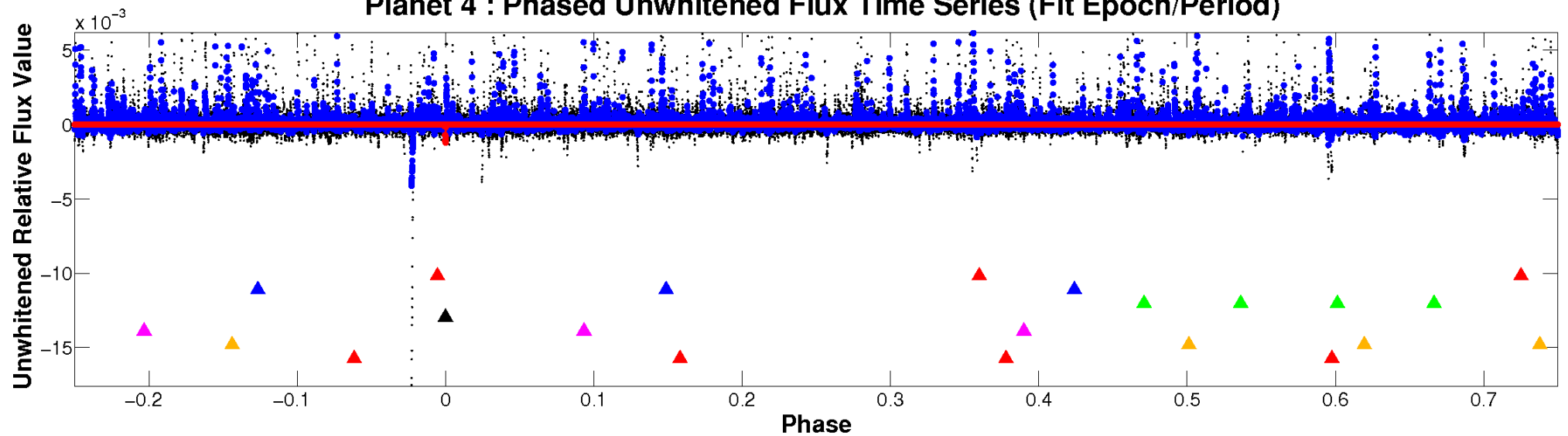
ALT Odd/Even

TCE 011135986-04

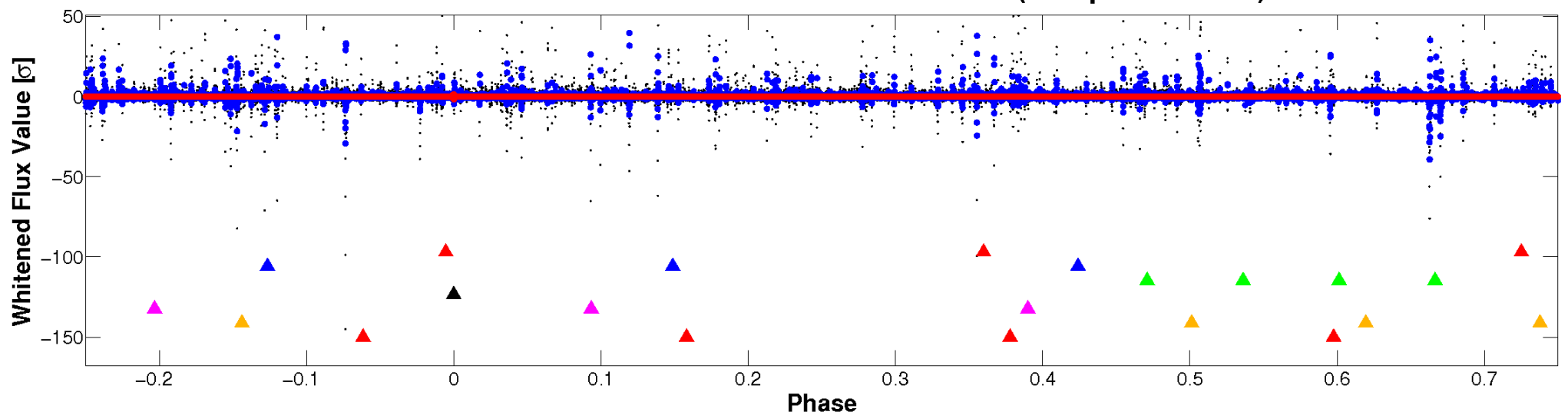


Non-Whitened Vs. Whitened Light Curve

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

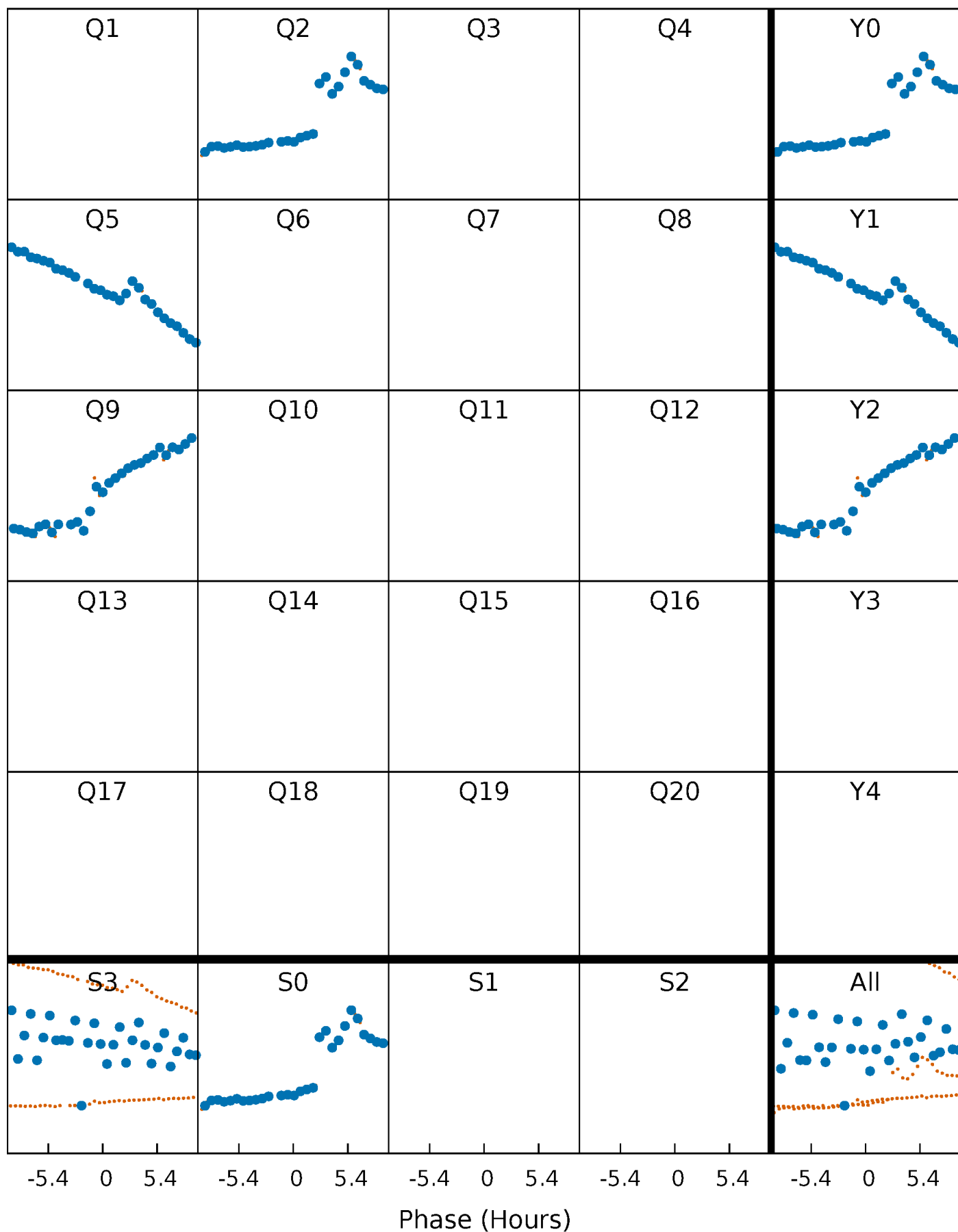


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



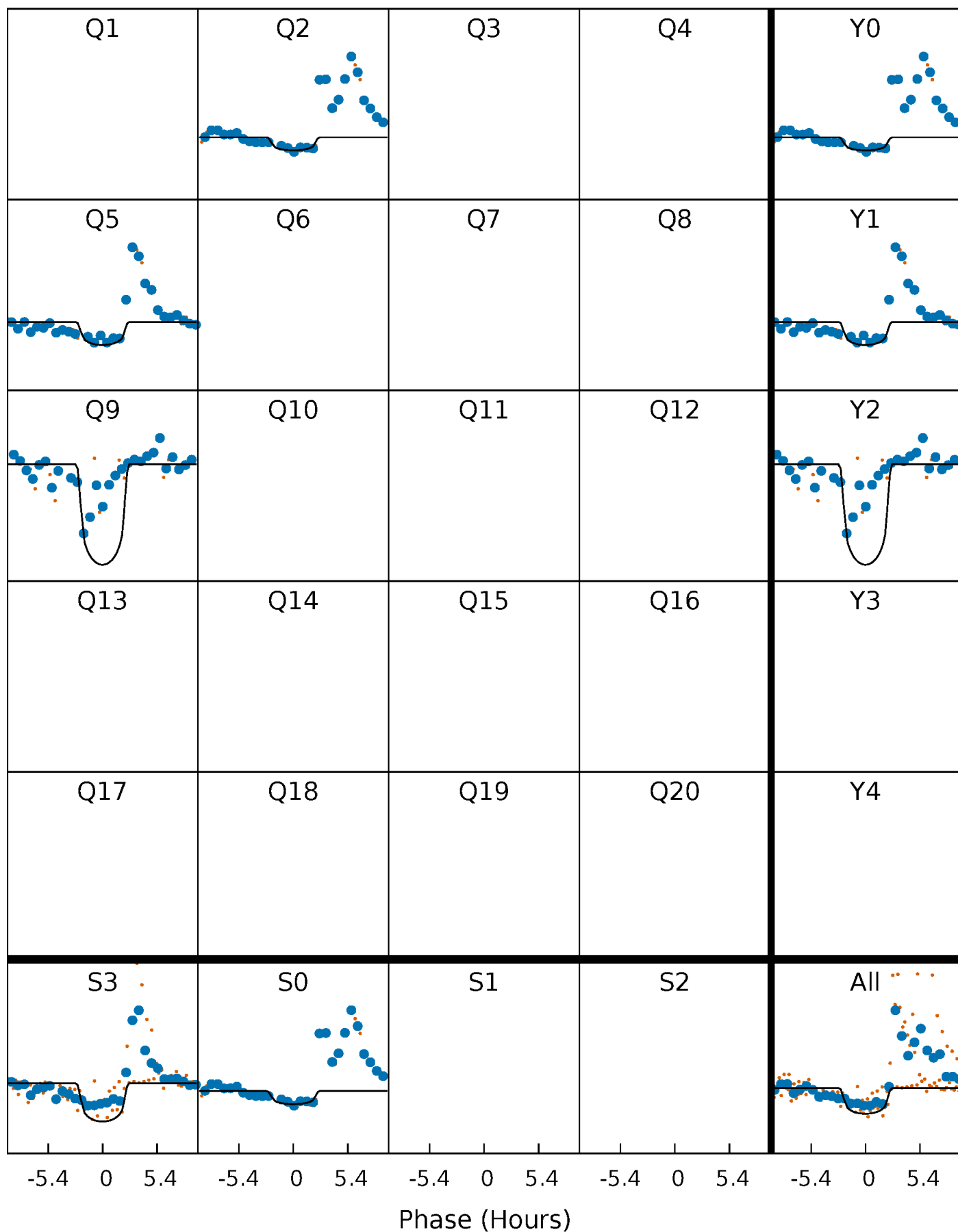
PDC Quarter-Phased Transit Curves

TCE 011135986-04 P=324.761518 Days $T_0=188.124398$ (BKJD)



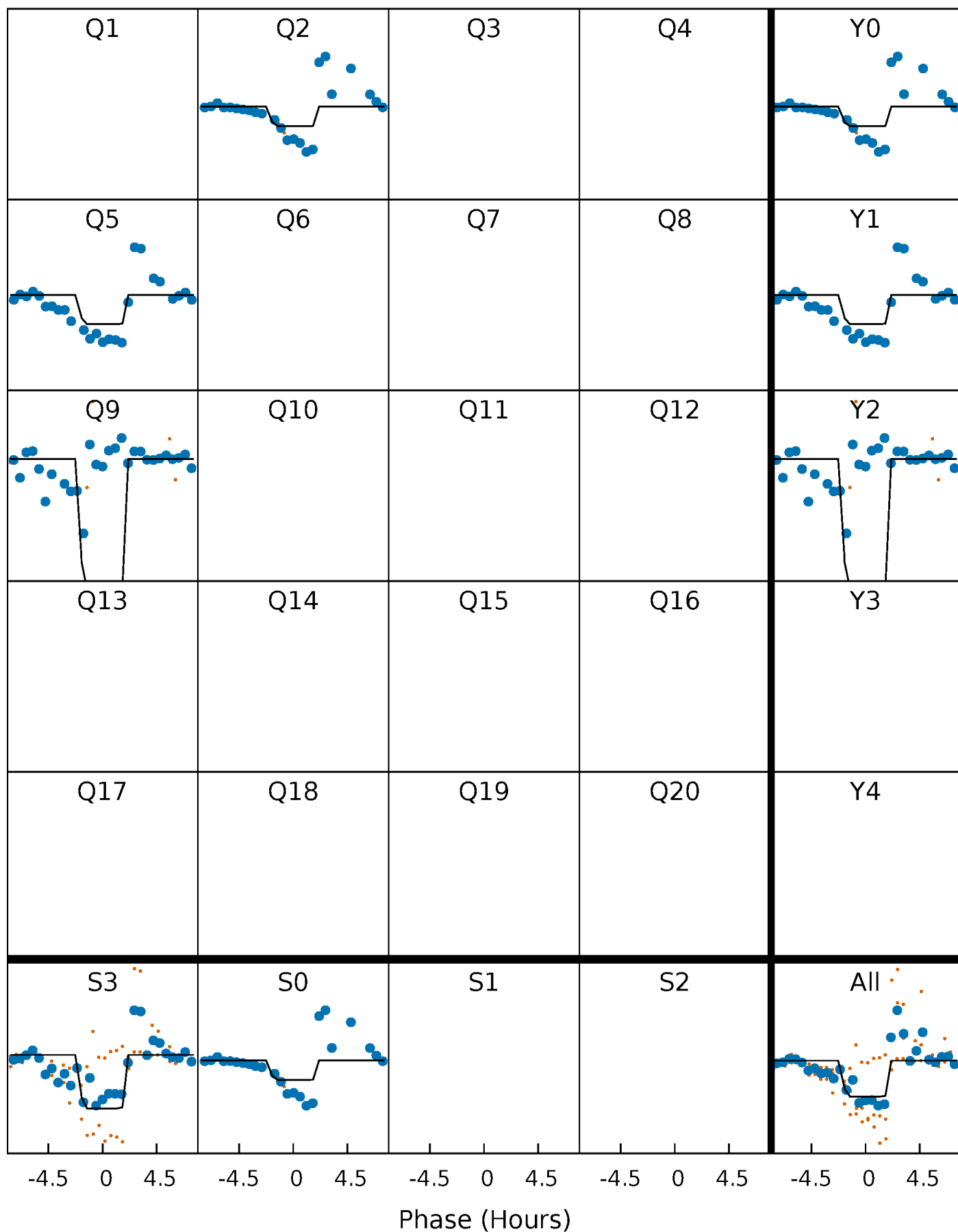
DV Quarter-Phased Transit Curves

TCE 011135986-04 $P=324.761518$ Days $T_0=188.124398$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

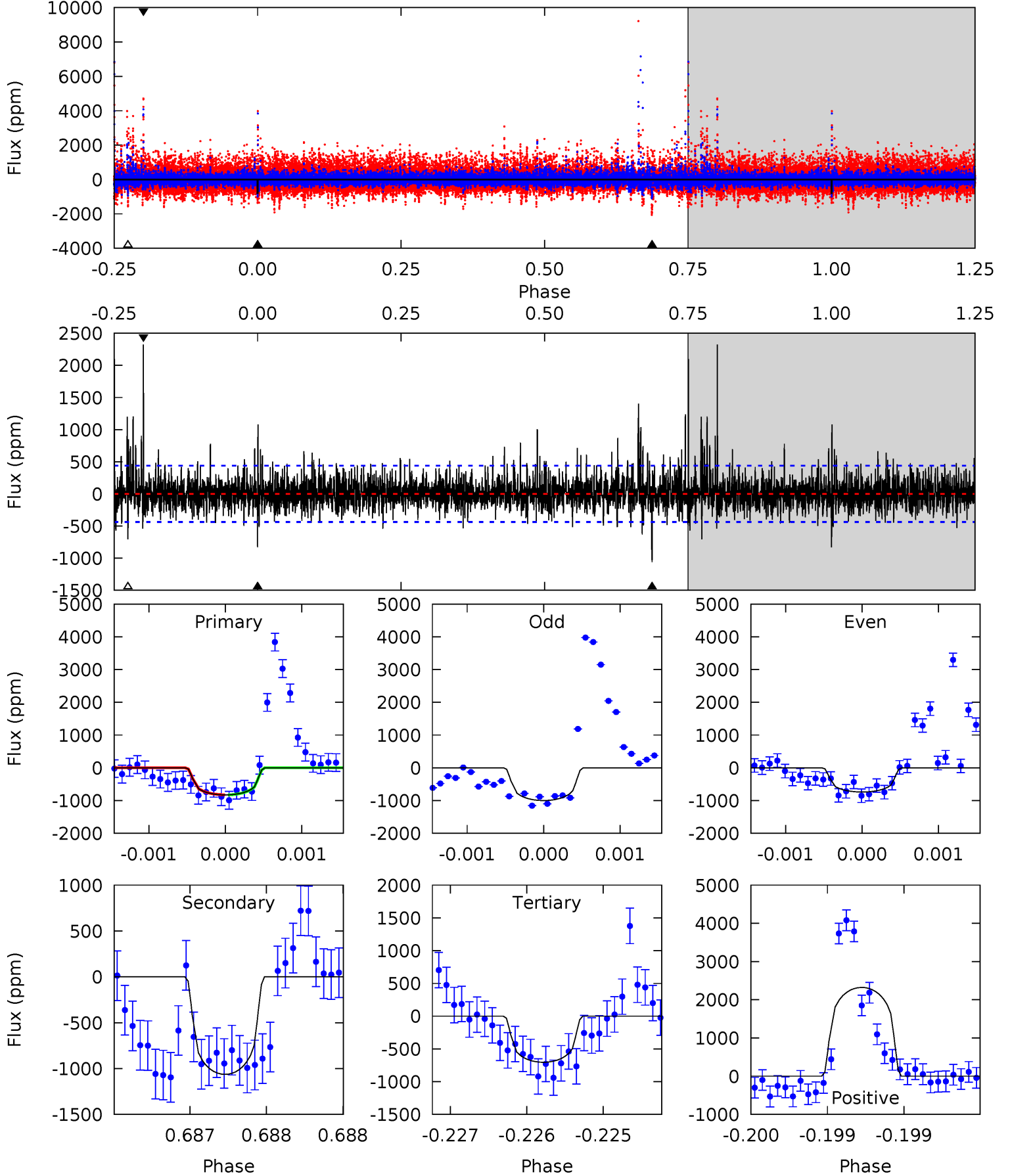
TCE 011135986-04 $P=324.750569$ Days $T_0=188.146501$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-04, P = 324.761518 Days, E = 188.124398 Days

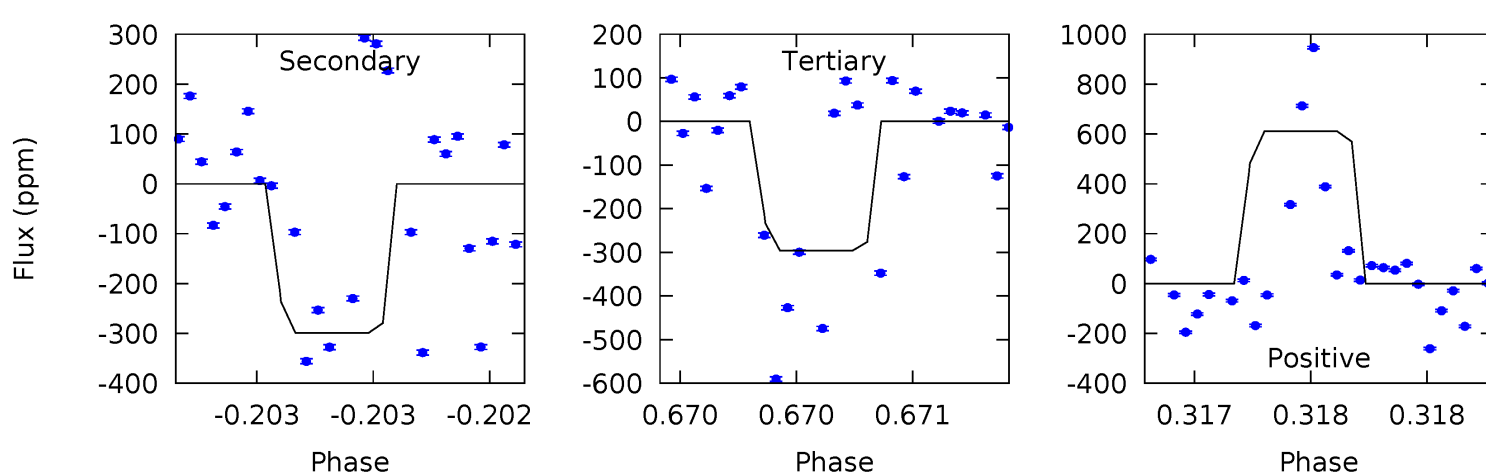
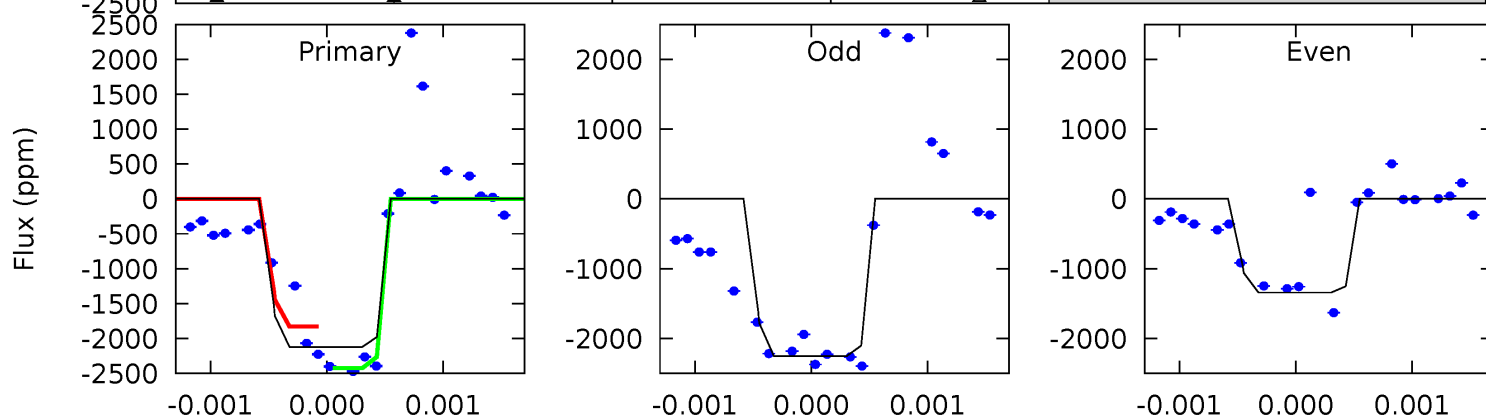
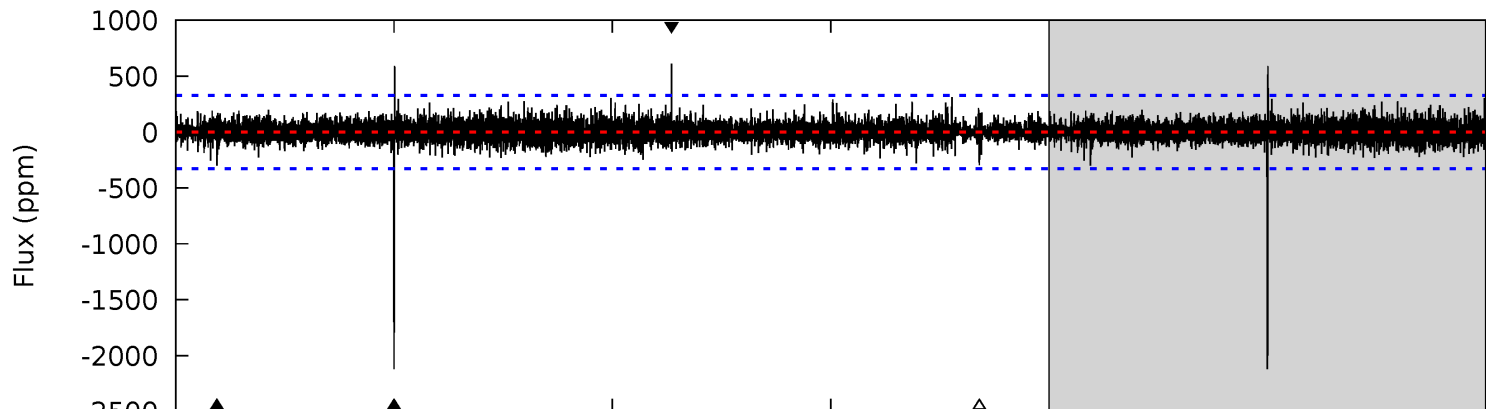
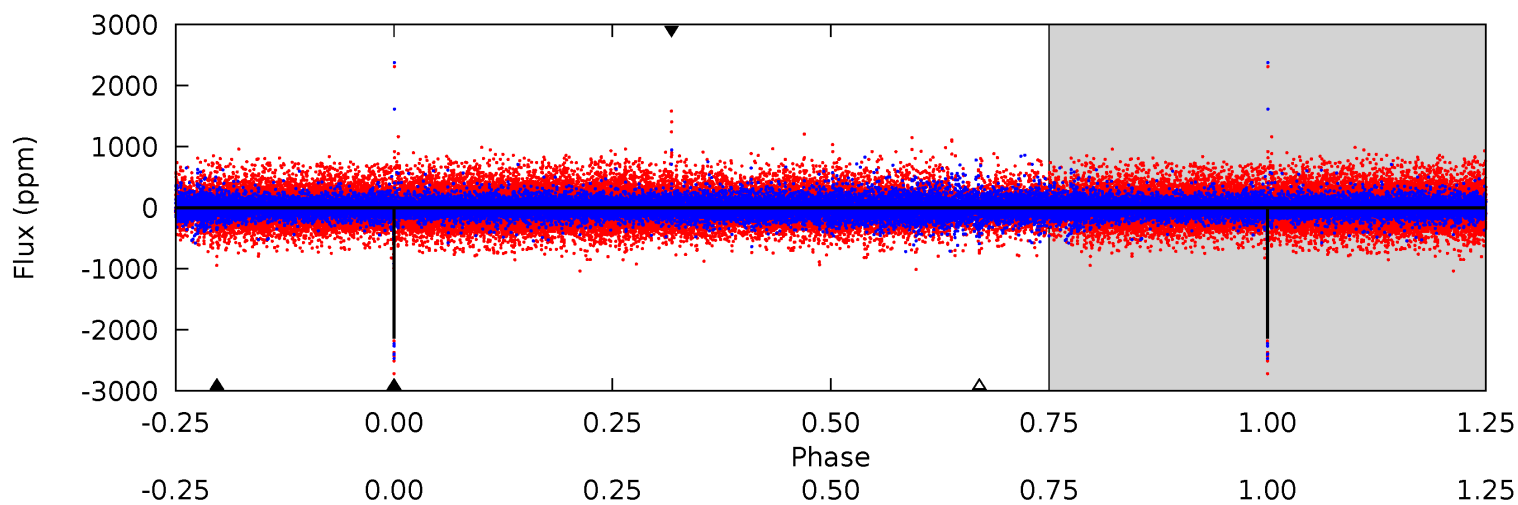
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	13.4	8.89	29.3	5.53	3.41	2.43	1.55	-18.9	4.53	-15.9	0.76	0.84	0.69	0.03



Alt Model-Shift Uniqueness Test

011135986-04, P = 324.750569 Days, E = 188.146501 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.1	5.10	5.04	10.4	5.57	3.48	1.07	31.1	25.7	0.06	-5.30	7.75	0.69	0.22	5.13



Stellar Parameters For KIC 011135986

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1064 ± 79	$27.15^{+28.43}_{-18.49}$	679^{+63}_{-67}	4163^{+2513}_{-854}	802^{+7287}_{-609}
Alt.	-299 ± 59	$29.19^{+30.22}_{-20.18}$	678^{+72}_{-72}	3256^{+1675}_{-532}	184^{+1763}_{-138}

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

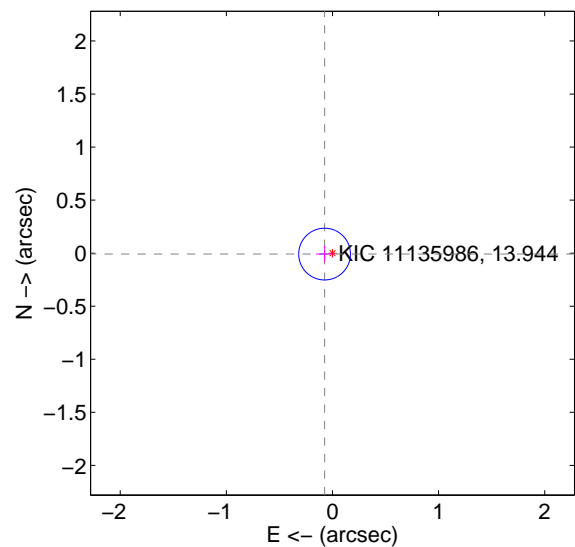
Supplemental centroid analysis for 011135986-04. Kepler magnitude: 13.94. Transit SNR 7.88

There are 1 quarters with good PRF difference image offsets

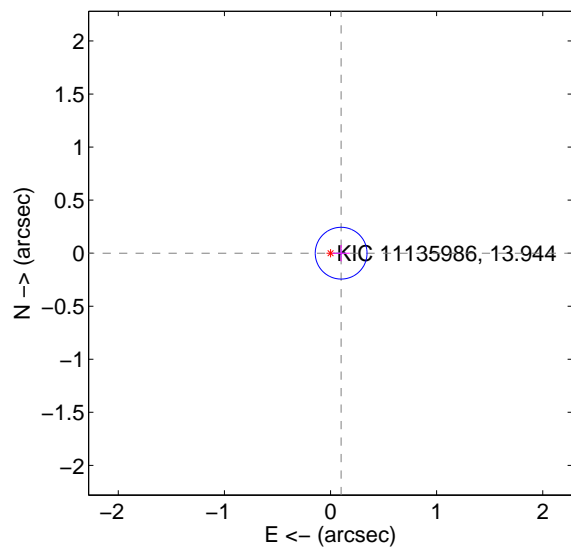
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.081	0.92	0.074 ± 0.081	-0.009 ± 0.078
PRF-fit source offset from KIC position	0.100 ± 0.081	1.23	-0.100 ± 0.081	-0.000 ± 0.078
photometric centroid source offset	0.58 ± 0.44	1.33	-0.34 ± 0.43	0.48 ± 0.44

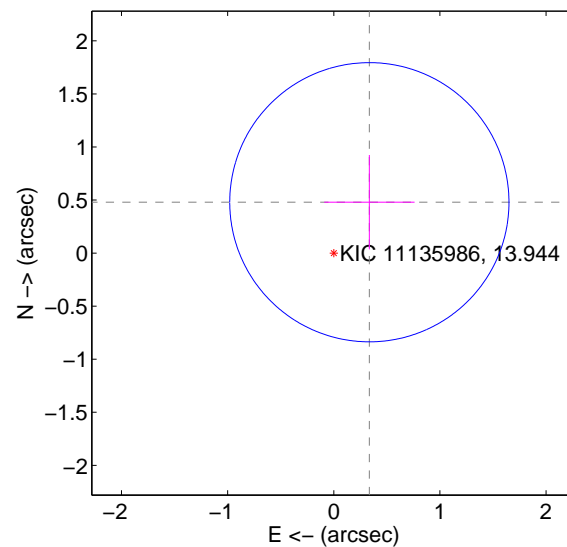
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

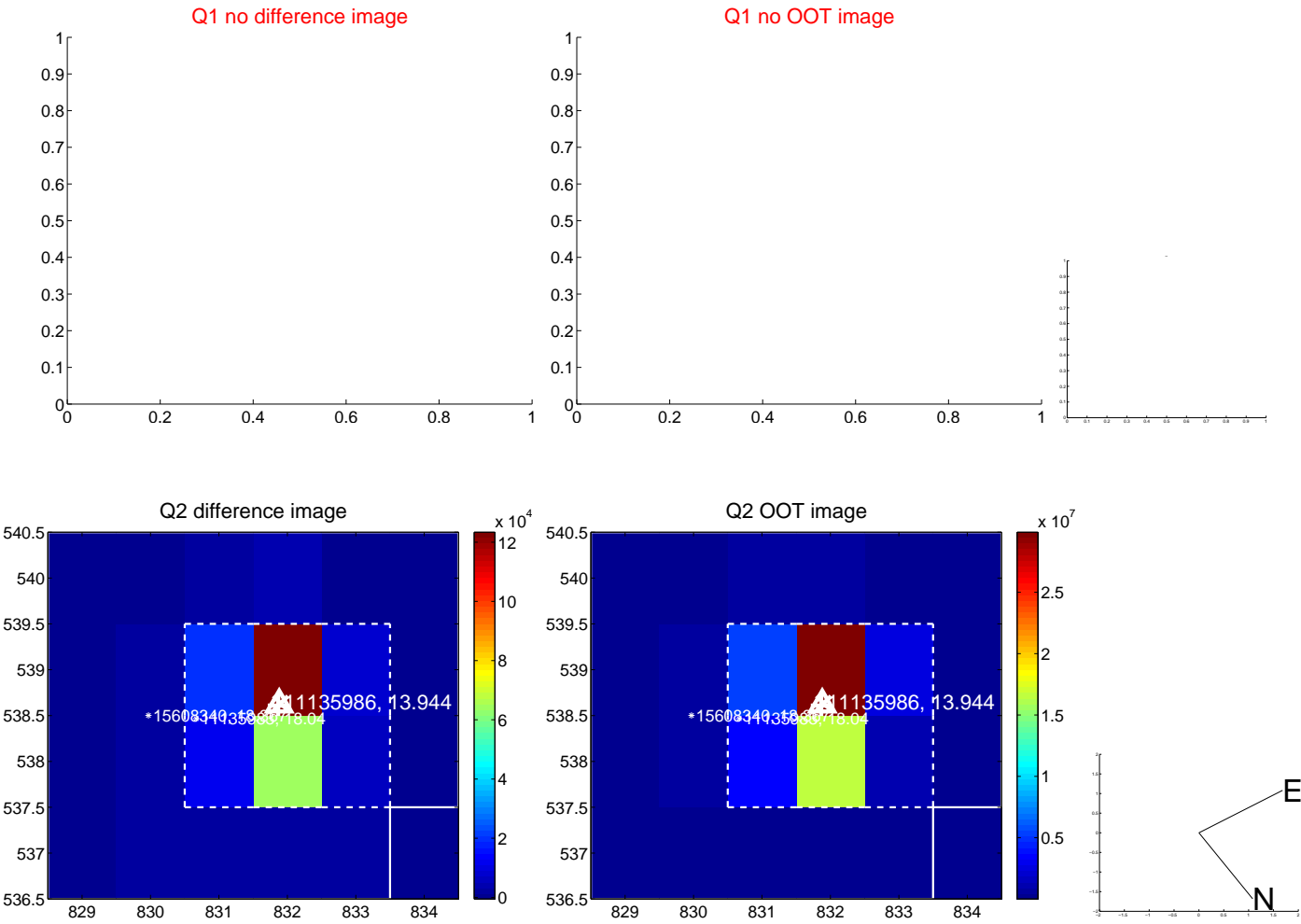


offset from photometric centroids

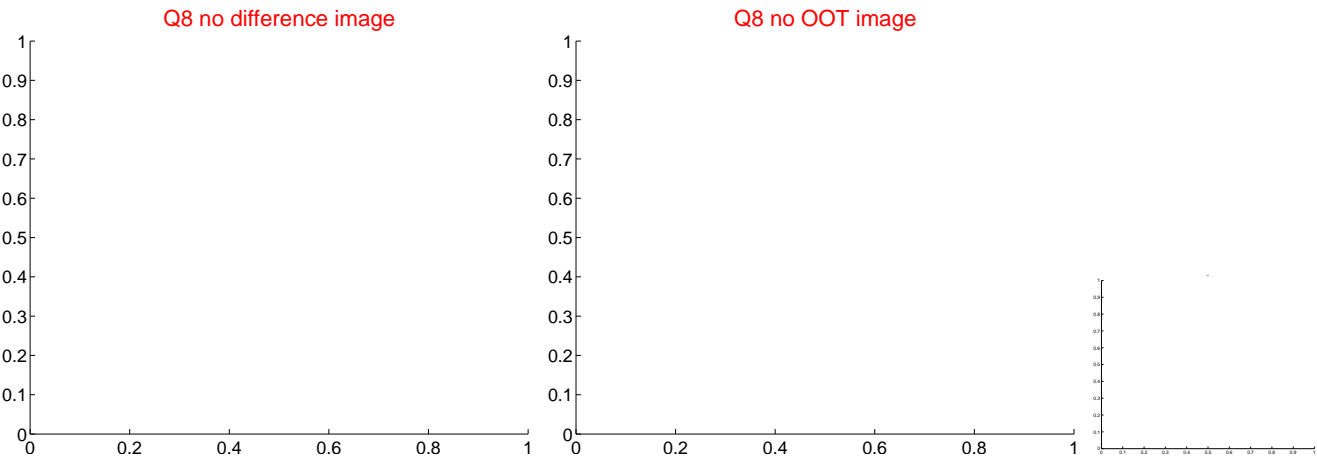
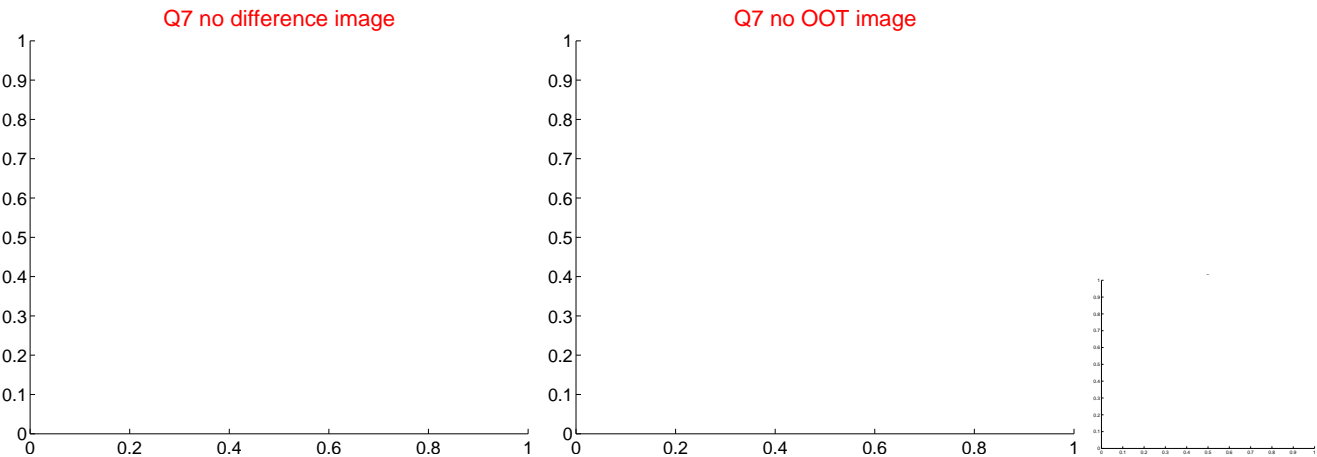
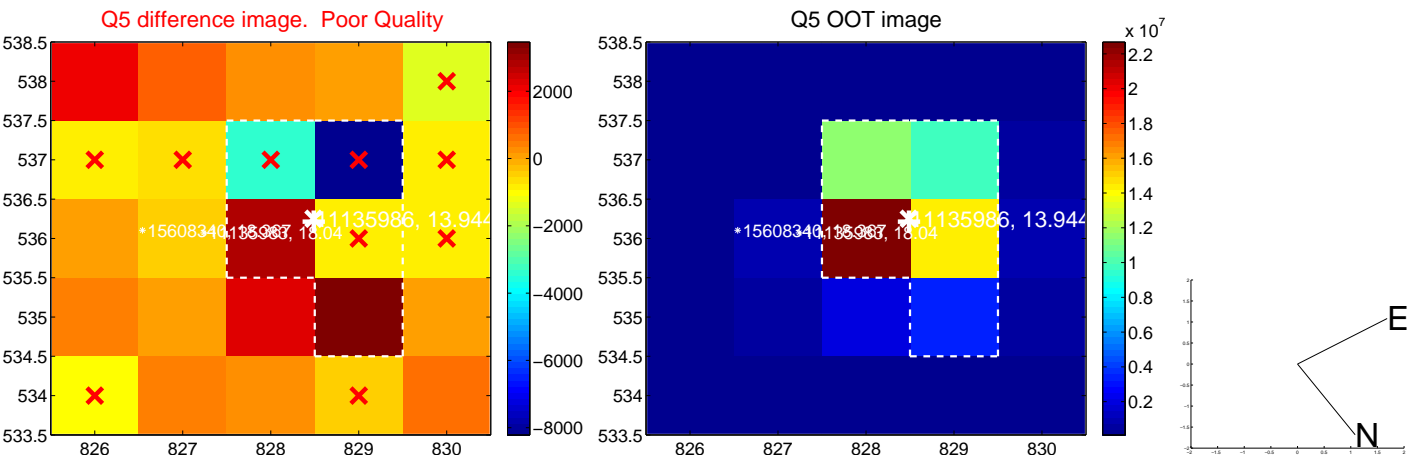


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

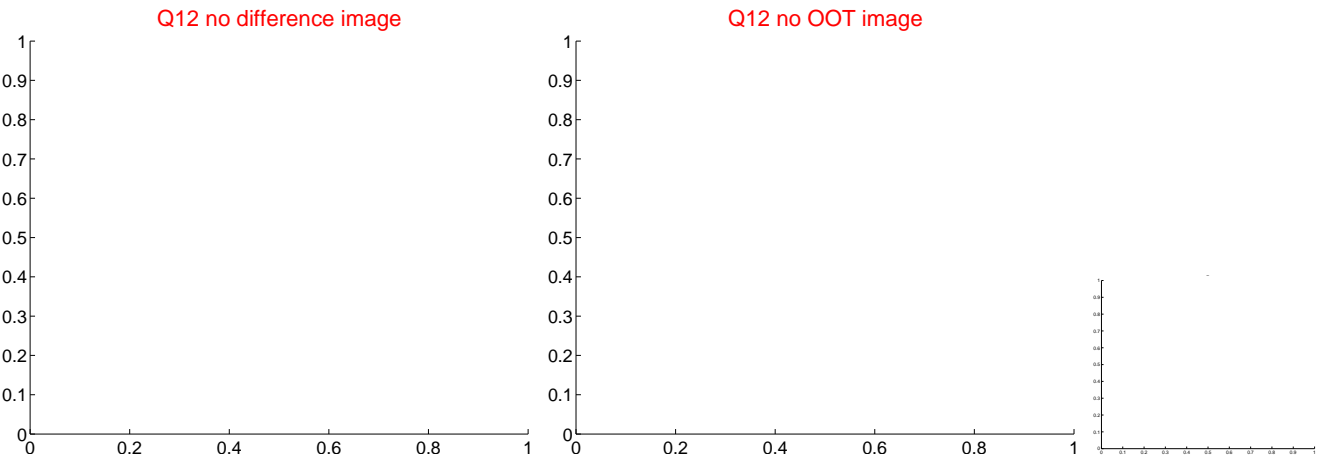
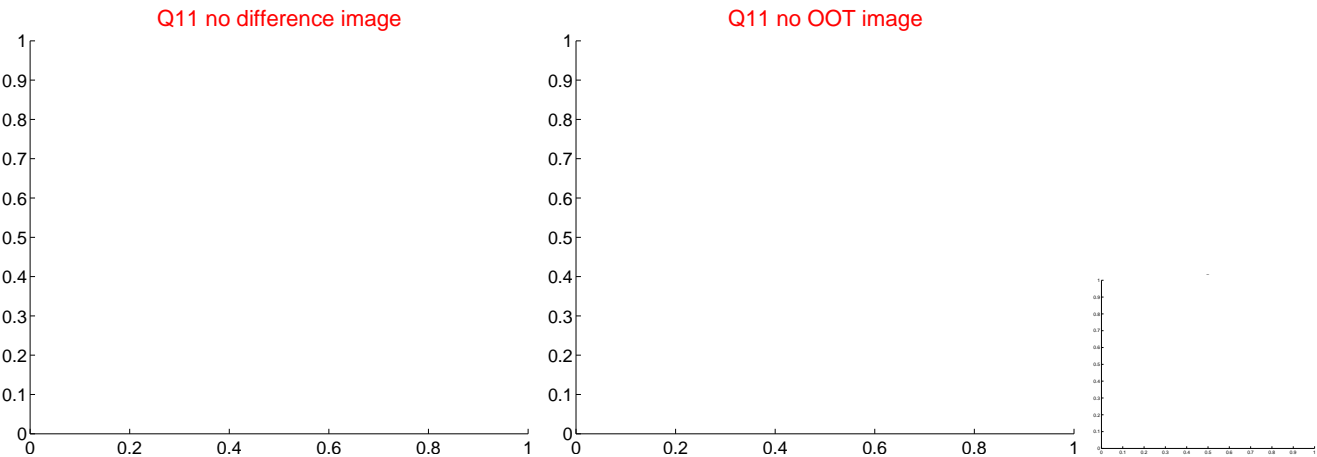
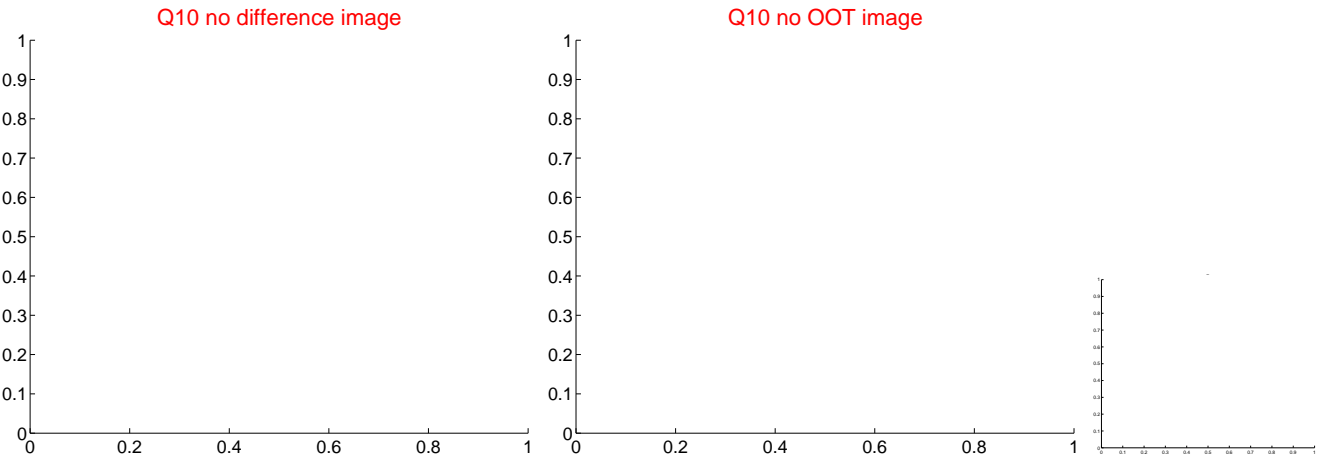
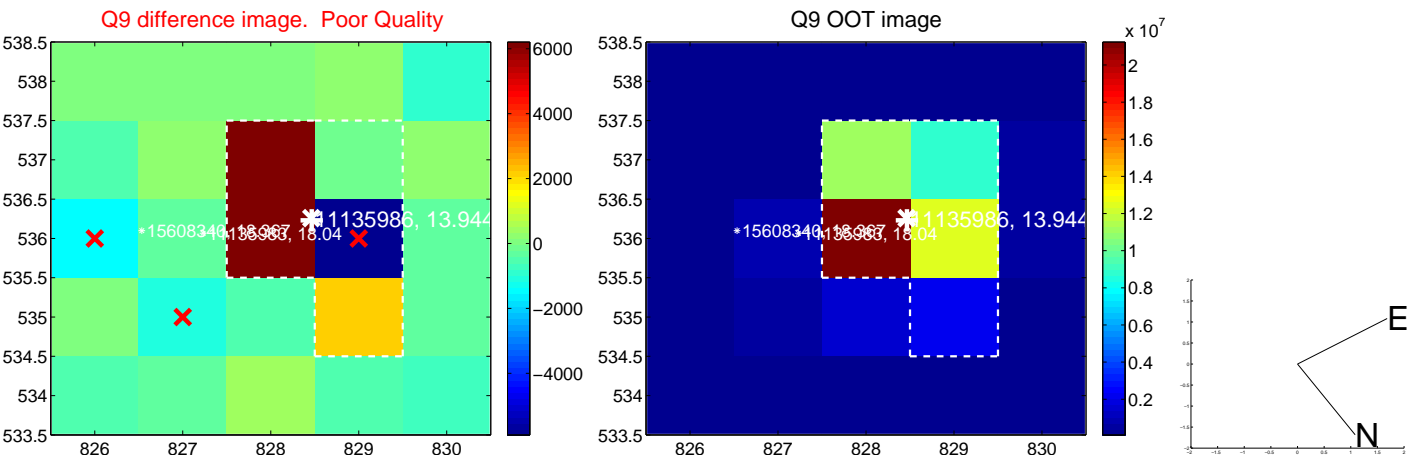
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



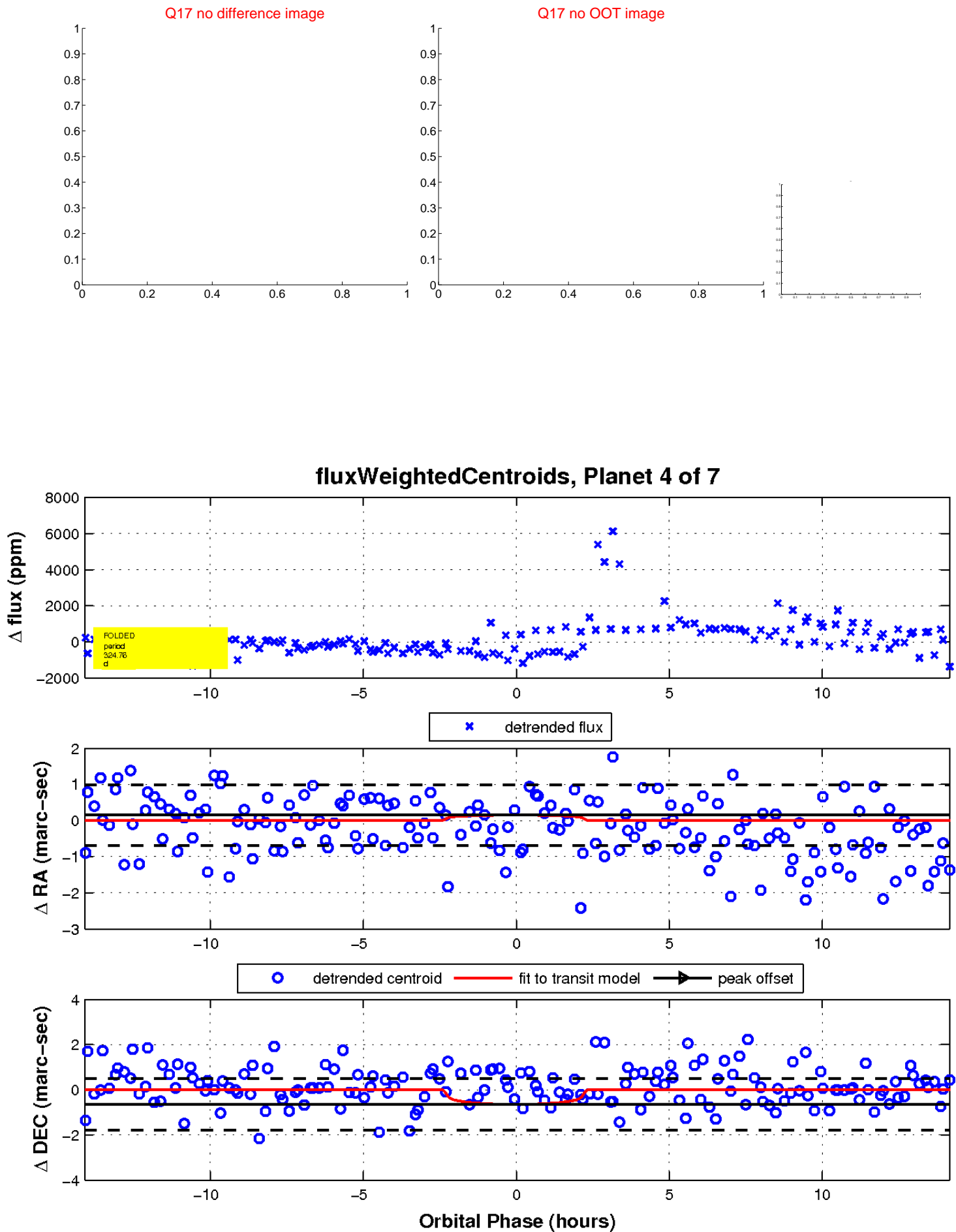
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

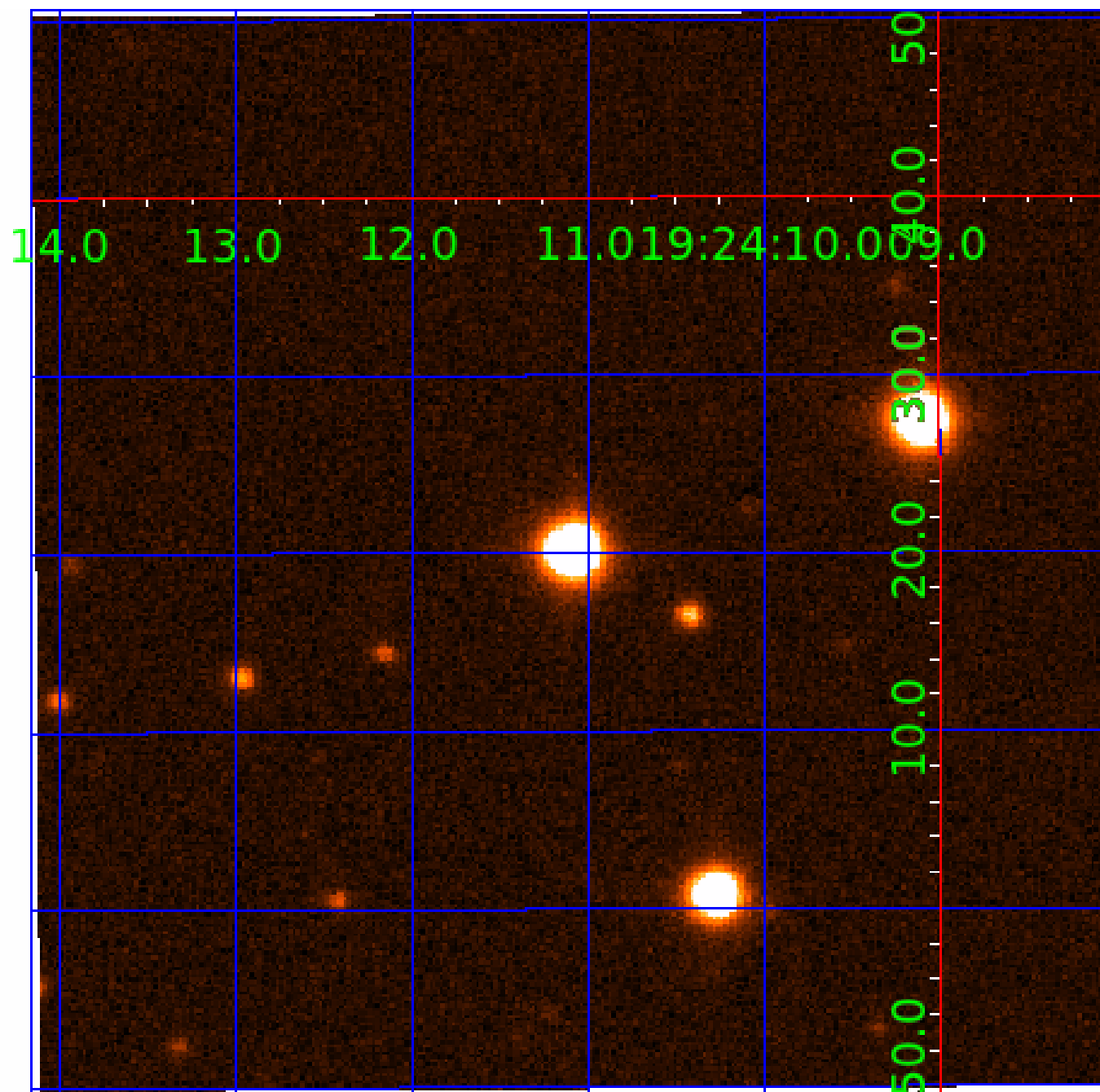


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011135986

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})
011135986-01	OBS	No	443.391096	511.128117	1164.2	6.810	18.7	7.7	4.72	5125	16.84	8.89
011135986-02	OBS	No	560.124898	325.838665	1394.6	10.459	20.6	8.2	4.72	5125	17.33	6.51
011135986-03	OBS	No	345.929773	341.082334	992.7	4.532	19.0	6.8	4.72	5125	15.19	12.38
011135986-04	OBS	No	324.761518	188.124398	1224.3	4.731	18.8	7.9	4.72	5125	16.81	13.46
011135986-05	OBS	No	553.204915	314.774970	838.8	4.574	16.4	6.5	4.72	5125	14.79	6.62
011135986-06	OBS	No	363.182774	350.898874	1221.5	7.290	15.2	7.6	4.72	5125	16.14	11.60
011135986-07	OBS	No	396.124994	168.127933	1176.2	3.500	16.3	-1.0	4.72	5125	15.87	10.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011135986-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011135986-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011135986-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
011135986-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

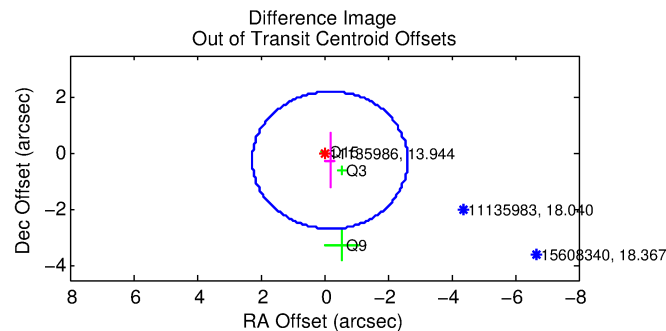
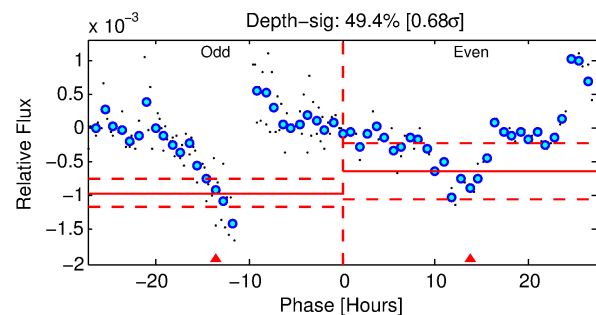
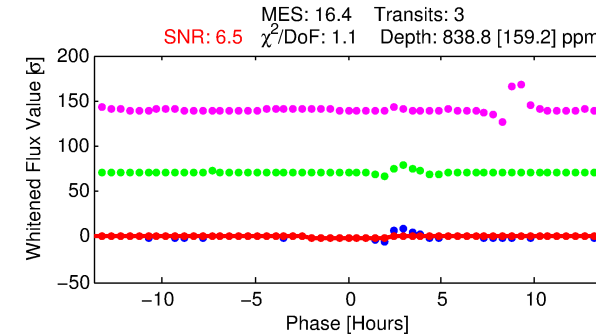
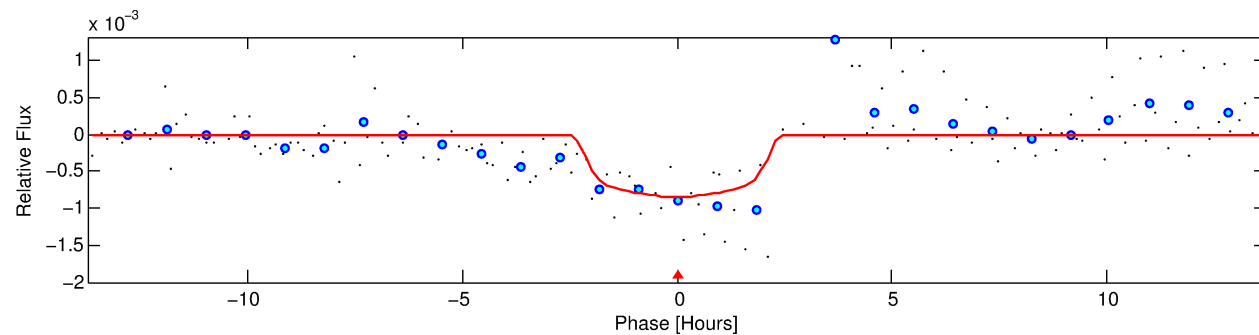
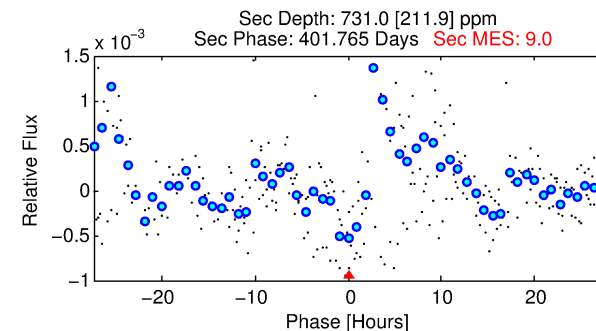
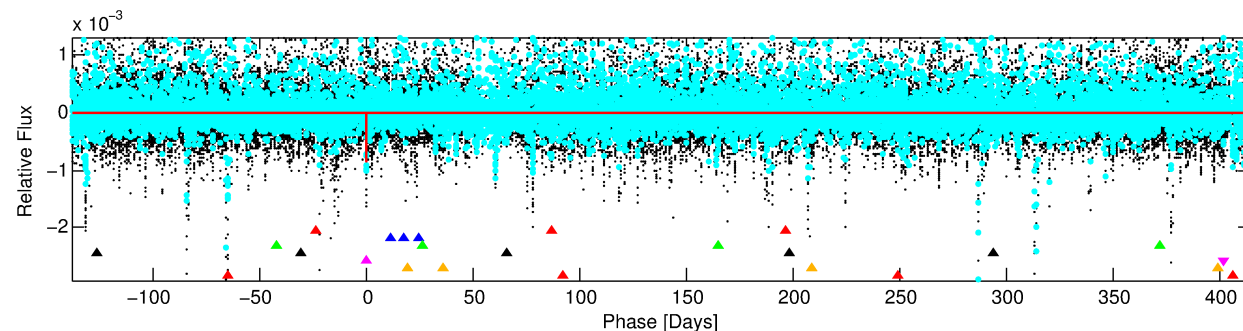
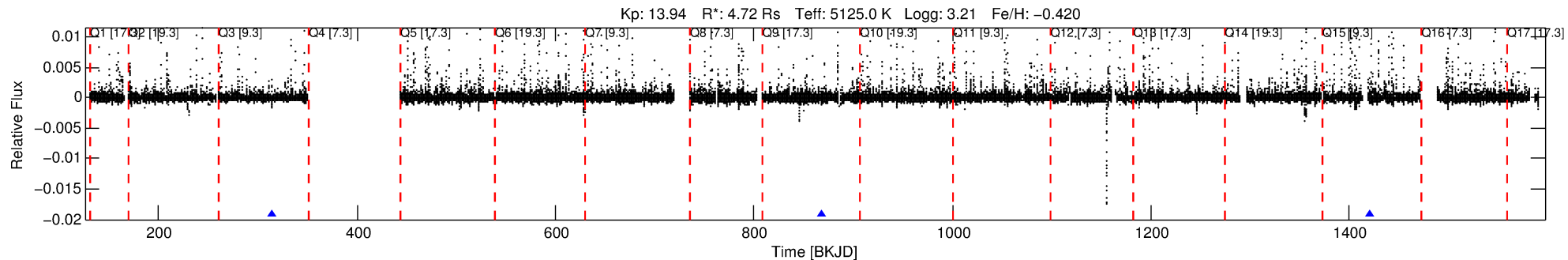
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-05

No Significant Match Found

DV One-Page Summary

KIC: 11135986 Candidate: 5 of 7 Period: 553.205 d



DV Fit Results:

Period = 553.20491 [0.00540] d
Epoch = 314.7750 [0.0069] BKJD
Rp/R* = 0.0287 [0.0187]
a/R* = 665.77 [1621.94]
b = 0.73 [1.55]
Seff = 6.62 [4.01]
Teq = 409 [62] K
Rp = 14.79 [11.08] Re
a = 1.4438 [0.5315] AU
Ag = 3834.20 [5600.18] [0.68σ]
Teffp = 4976 [1663] K [2.74σ]

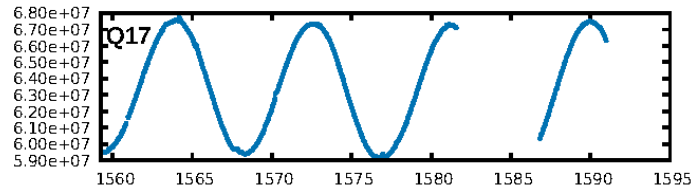
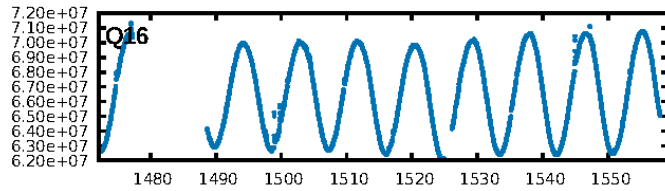
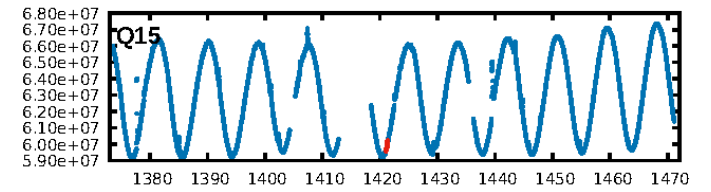
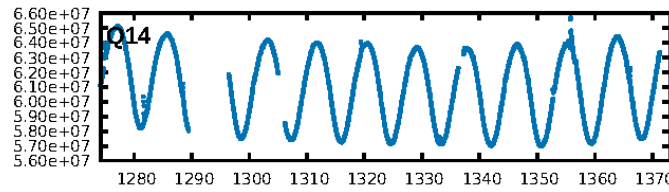
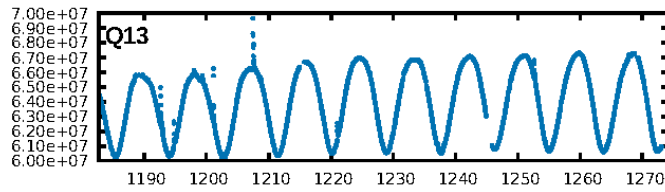
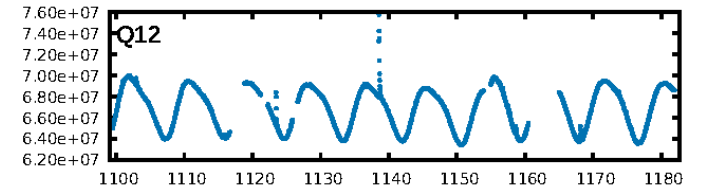
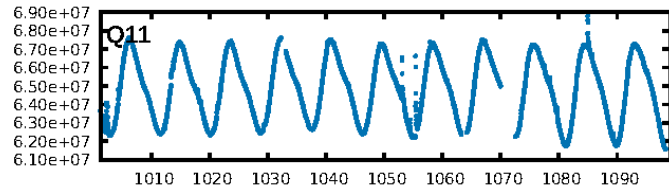
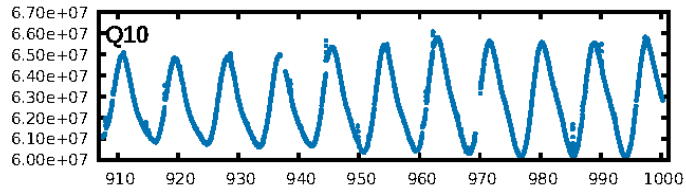
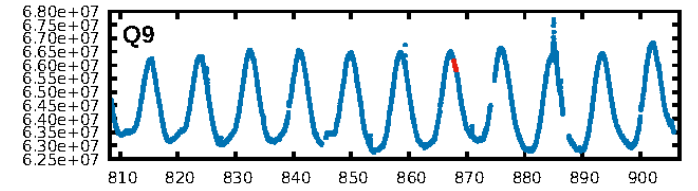
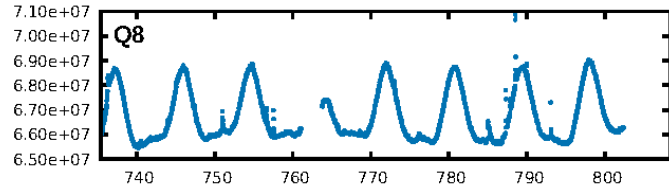
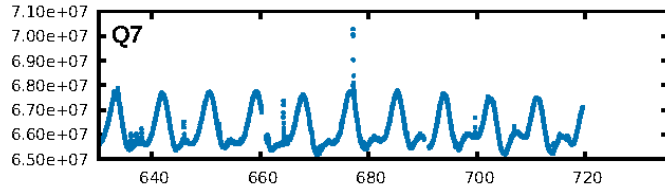
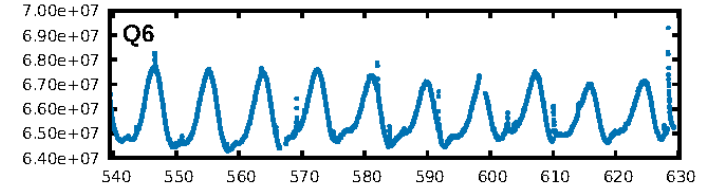
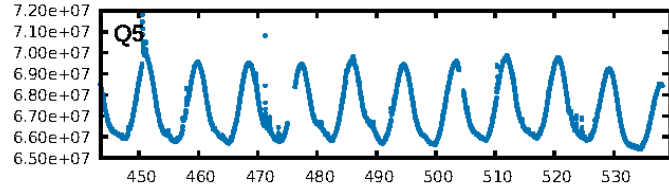
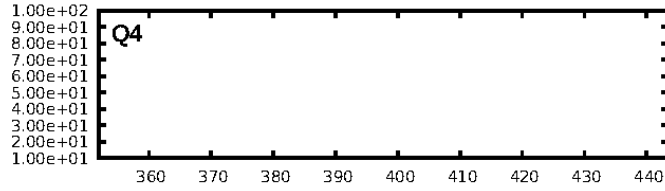
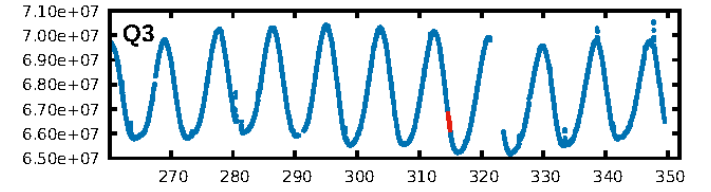
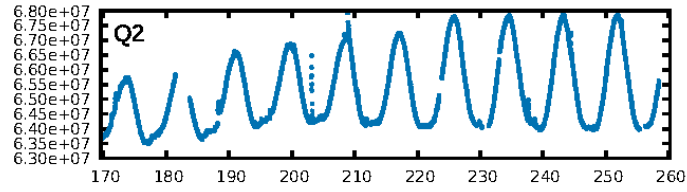
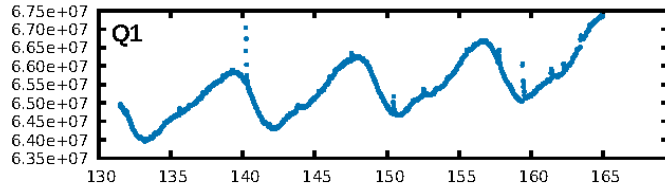
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [321.28σ]
LongPeriod-sig: 100.0% [14.55σ]
ModelChiSquare2-sig: 51.5%
ModelChiSquareGof-sig: 95.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4676
Centroid-sig: 6.2%
Centroid-so: 1.365 arcsec [1.97σ]
OotOffset-rm: 0.298 arcsec [0.37σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 0.394 arcsec [1.28σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

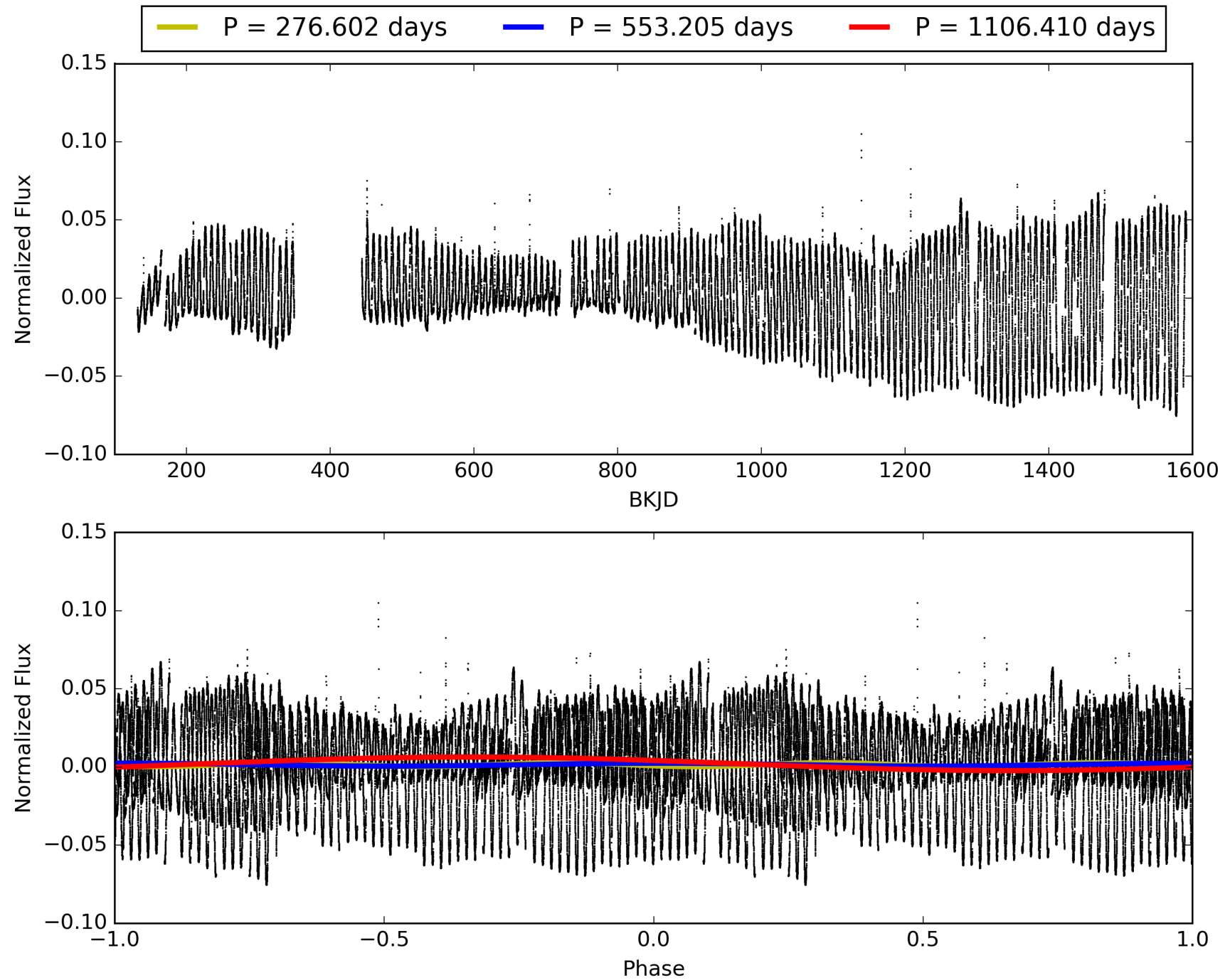
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:46 Z

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

TCE 011135986-05, PDC Light Curves

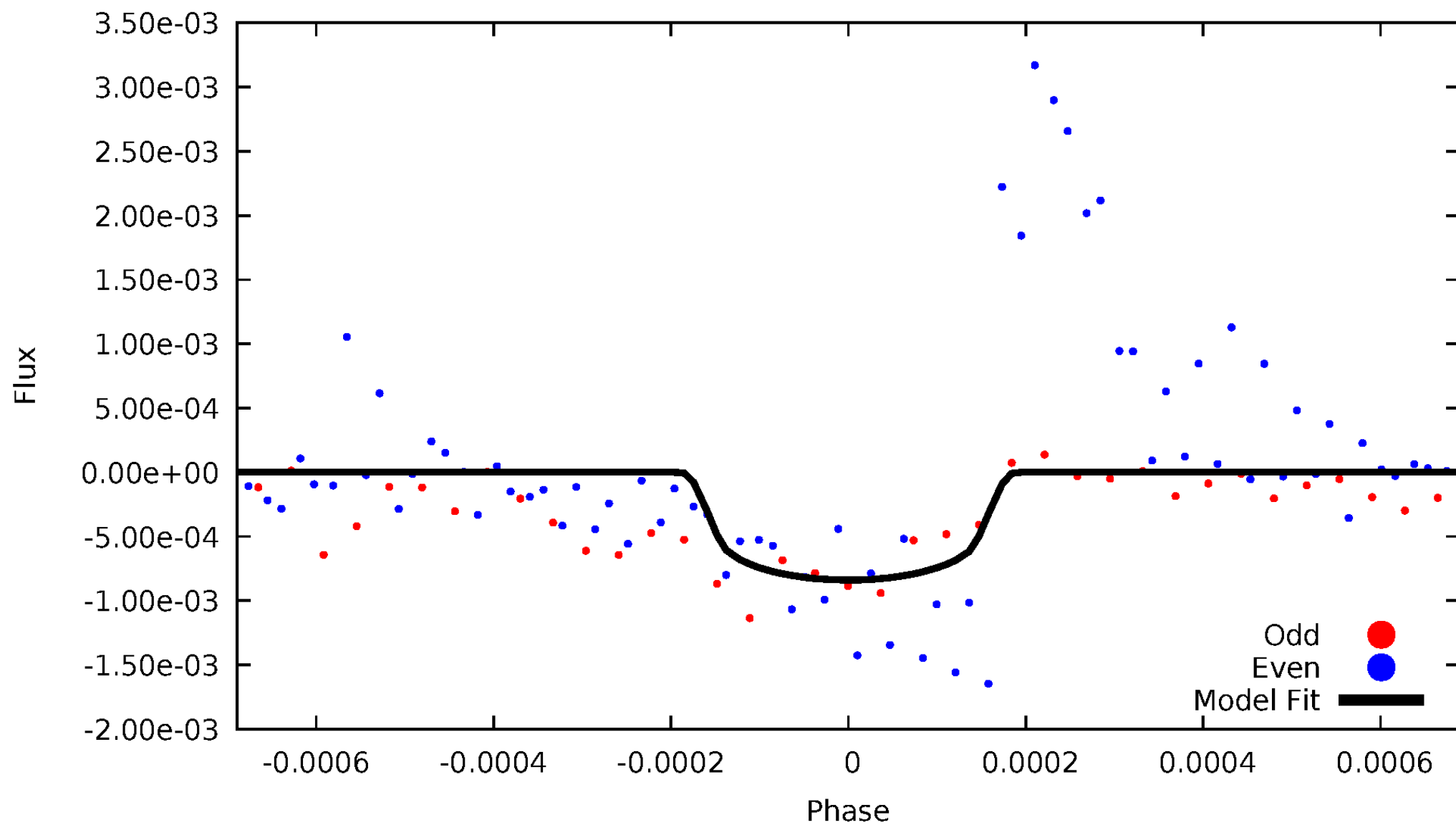


TCE 011135986-05



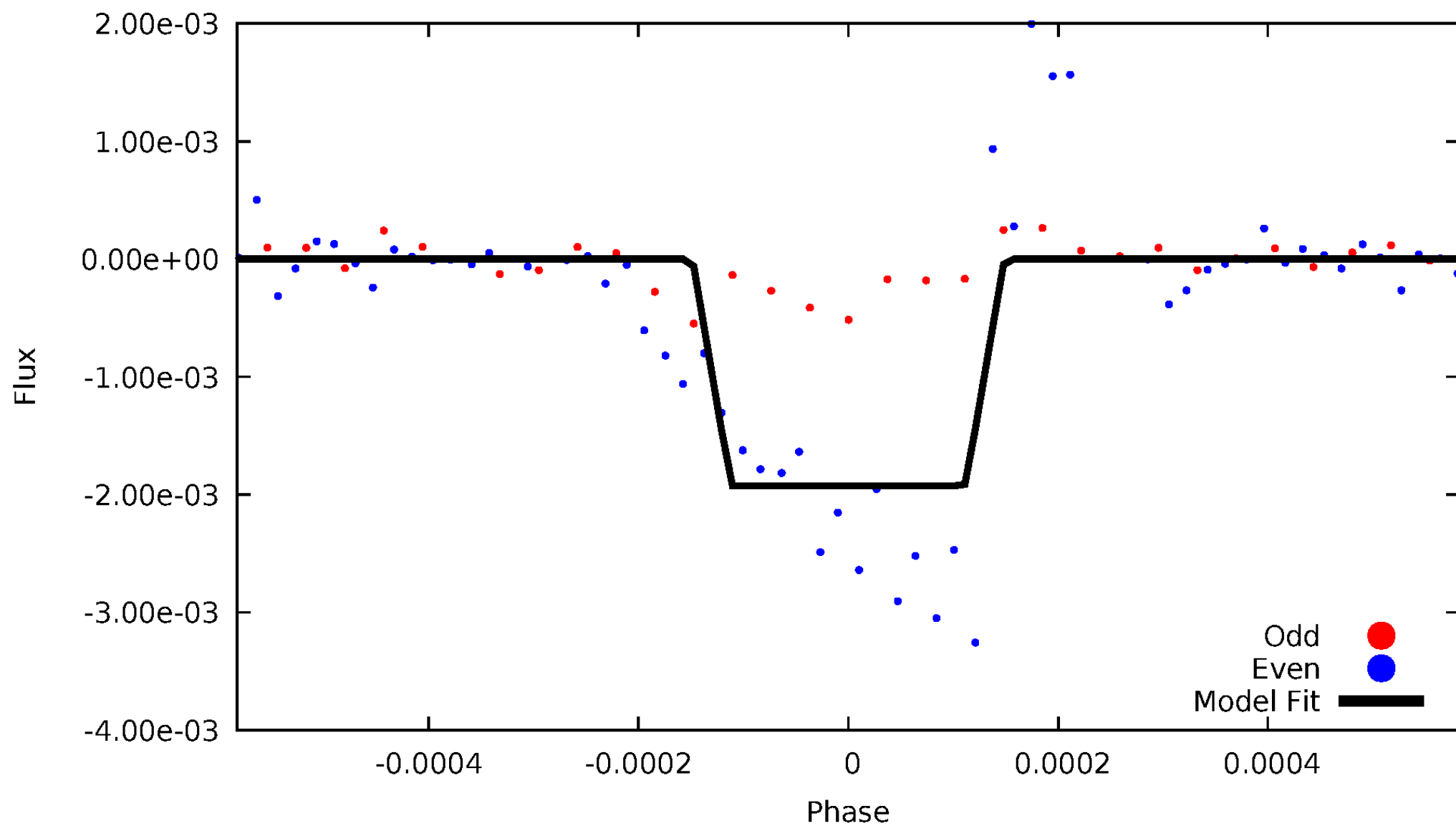
DV Odd/Even

TCE 011135986-05



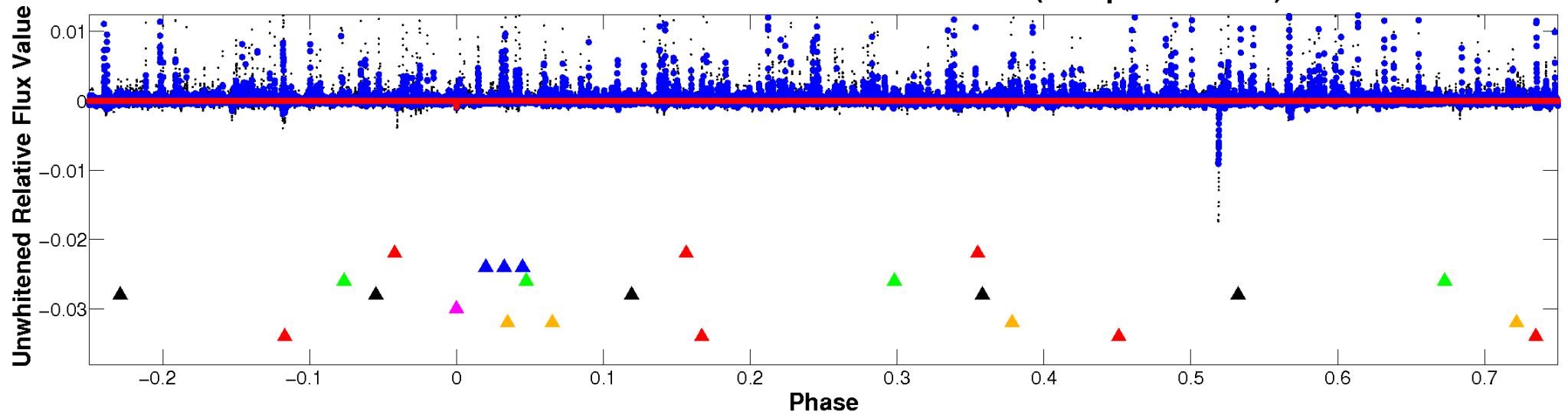
ALT Odd/Even

TCE 011135986-05

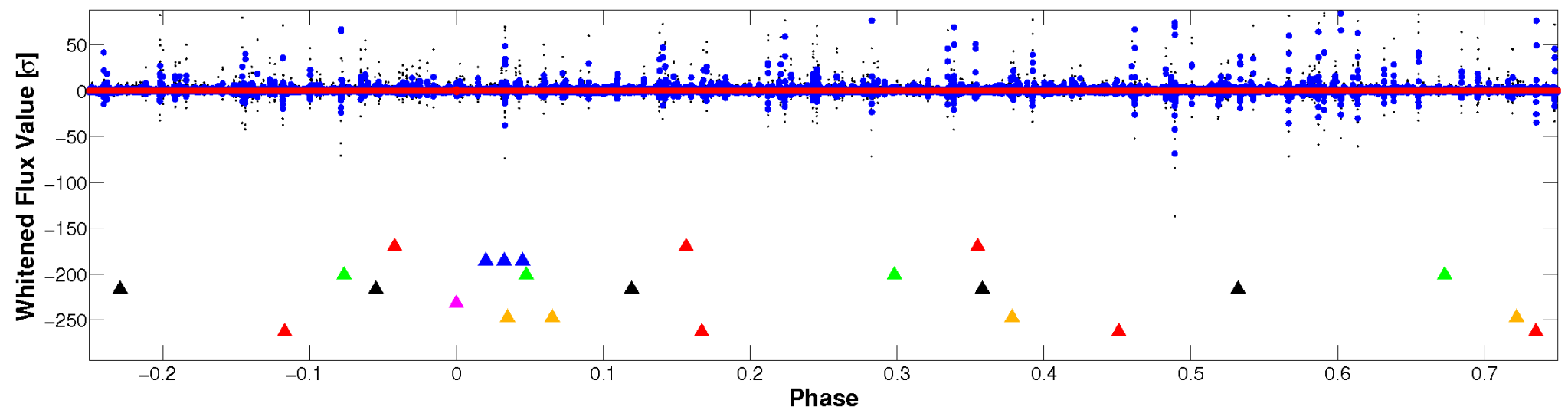


Non-Whitened Vs. Whitened Light Curve

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



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



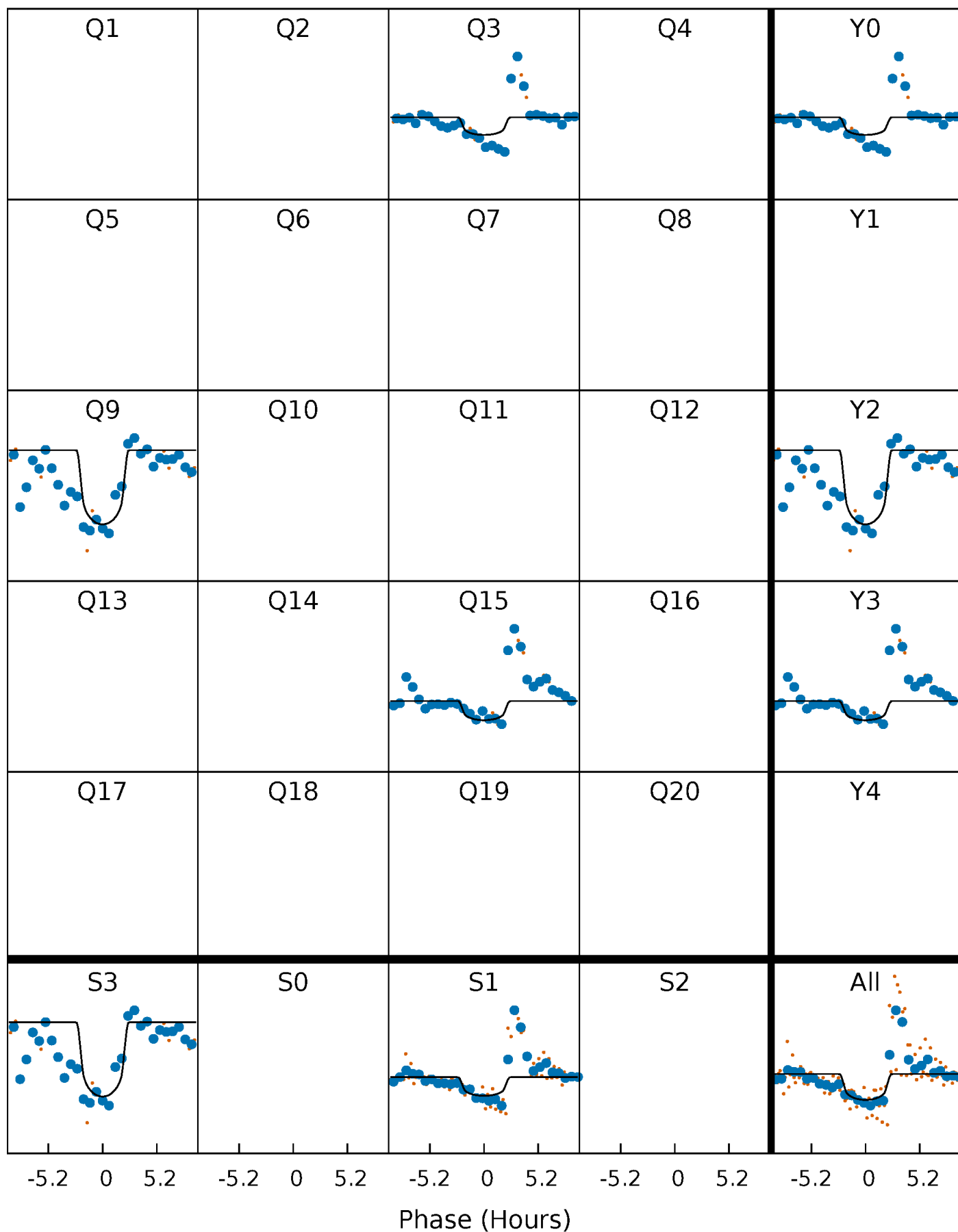
PDC Quarter-Phased Transit Curves

TCE 011135986-05 $P=553.204915$ Days $T_0=314.774970$ (BKJD)



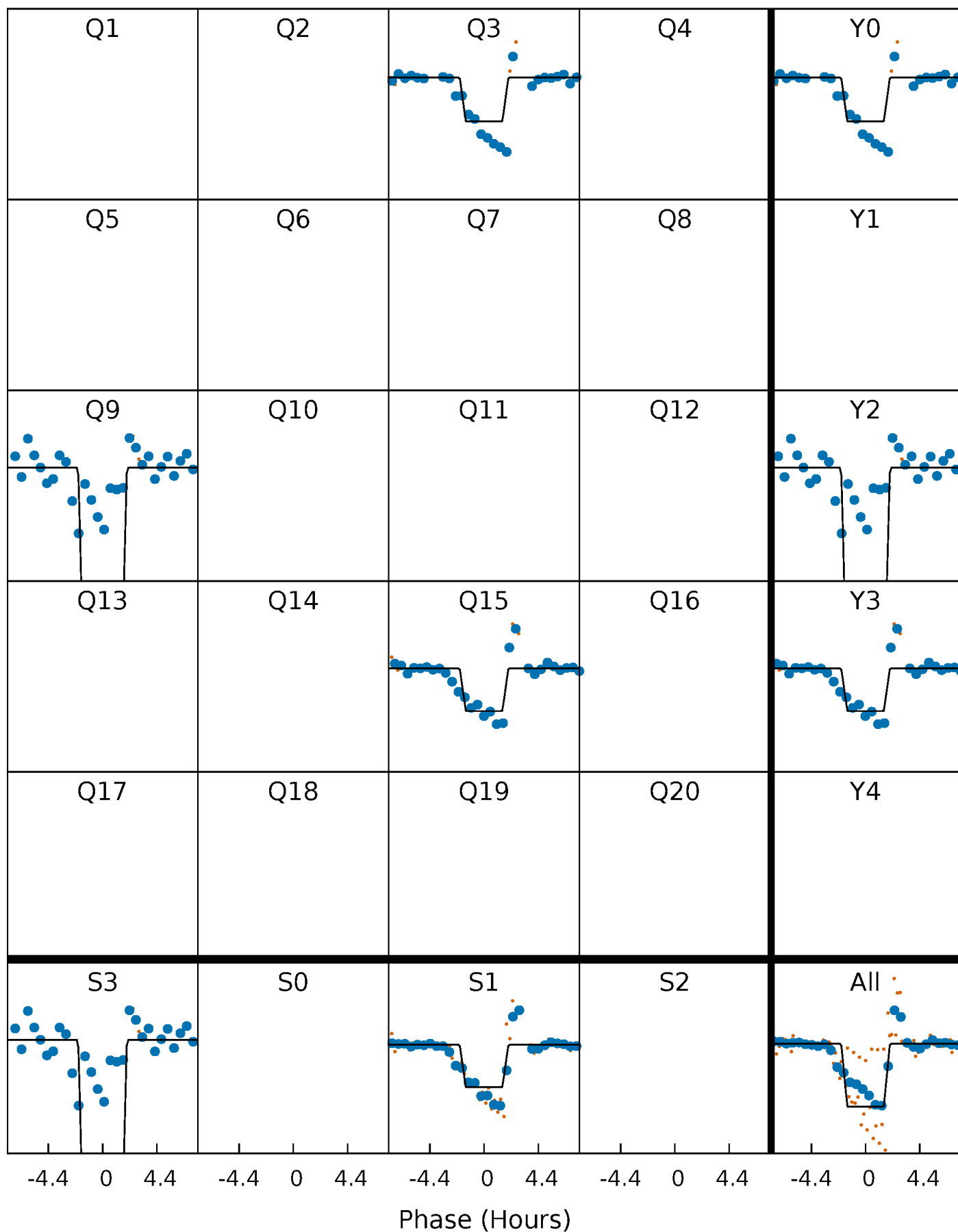
DV Quarter-Phased Transit Curves

TCE 011135986-05 $P=553.204915$ Days $T_0=314.774970$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

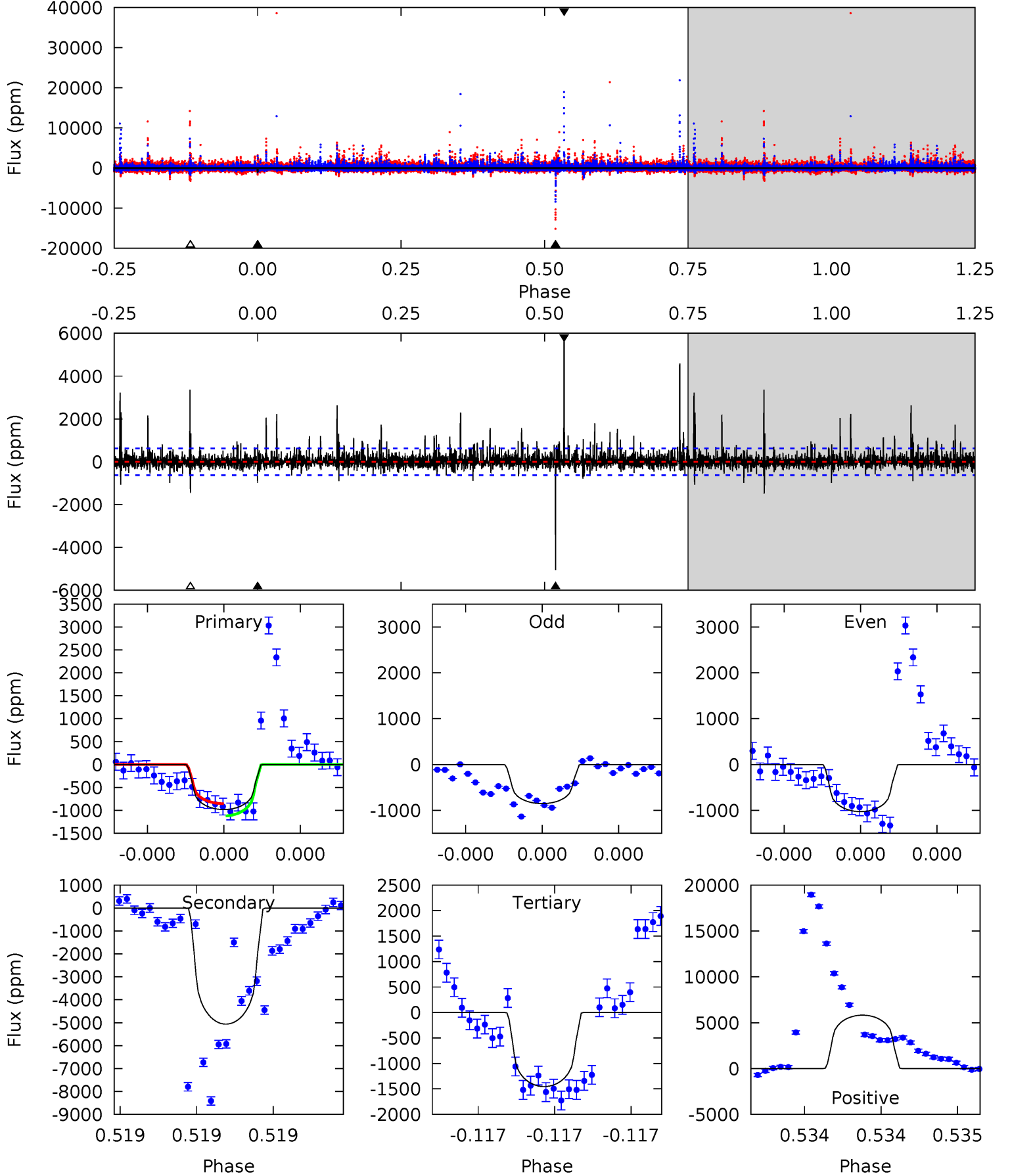
TCE 011135986-05 $P=553.204581$ Days $T_0=314.795337$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-05, P = 553.204915 Days, E = 314.774970 Days

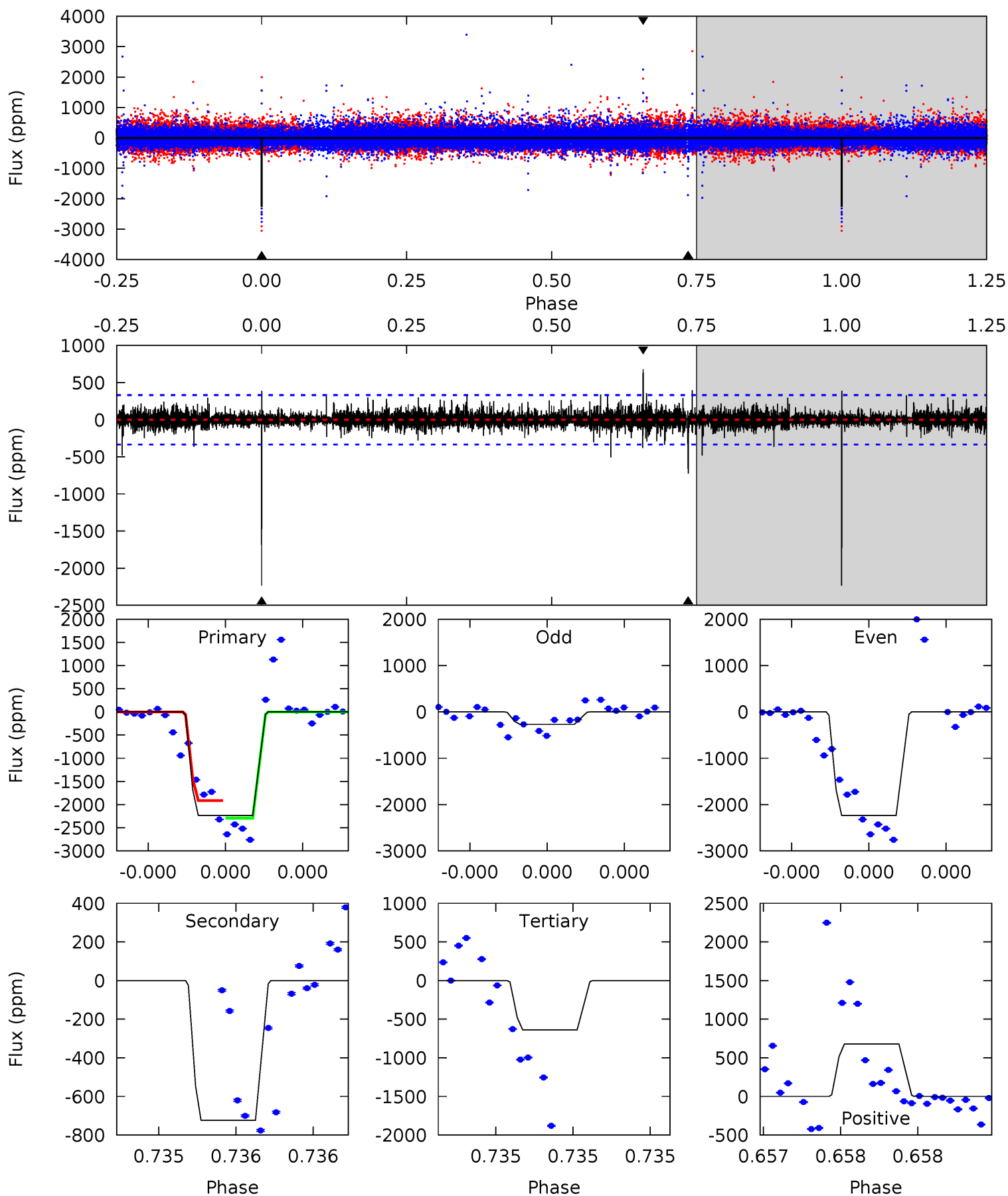
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.82	45.5	13.1	52.3	5.62	3.55	2.66	-4.24	-43.5	32.4	-6.81	0.29	1.14	0.53	1.21



Alt Model-Shift Uniqueness Test

011135986-05, P = 553.204581 Days, E = 314.795337 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.1	12.3	10.9	11.6	5.67	3.63	1.00	27.2	26.5	1.47	0.74	16.1	0.81	0.23	3.37



Stellar Parameters For KIC 011135986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5064 ± 111	$14.94^{+9.51}_{-8.94}$	566^{+58}_{-57}	8061^{+6802}_{-1995}	$26069^{+118984}_{-16565}$
Alt.	-723 ± 59	$21.14^{+11.46}_{-8.58}$	565^{+59}_{-53}	4186^{+1007}_{-497}	1730^{+3447}_{-973}

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 $A_{obs} \gg 1.0$

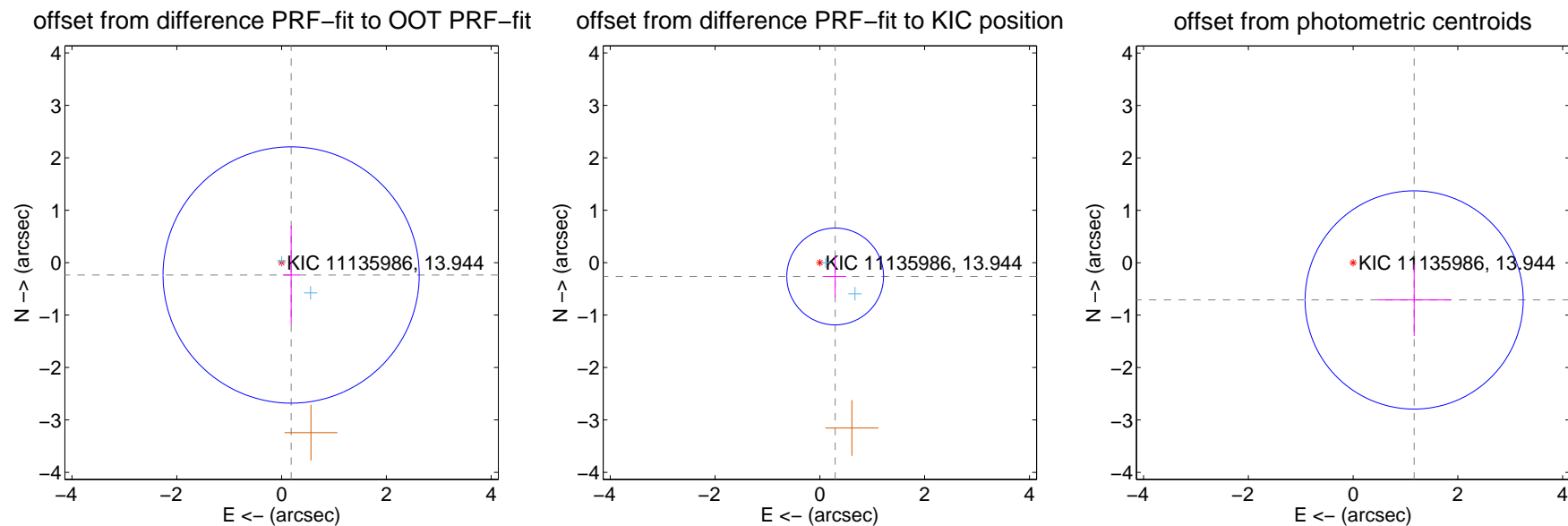
DV Centroid Data

Supplemental centroid analysis for 011135986-05. Kepler magnitude: 13.94. Transit SNR 6.51

There are 2 quarters with good PRF difference image offsets

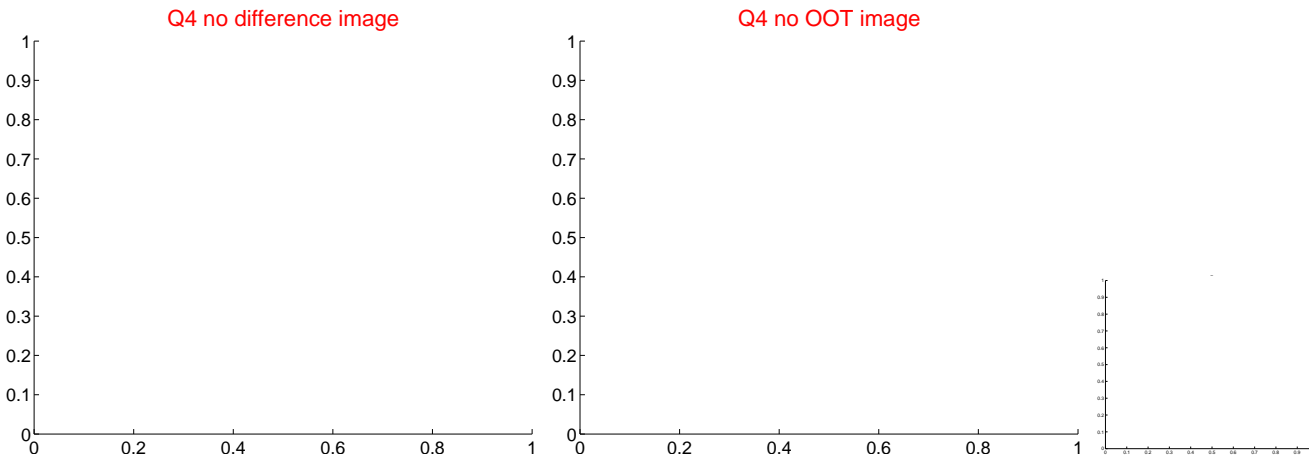
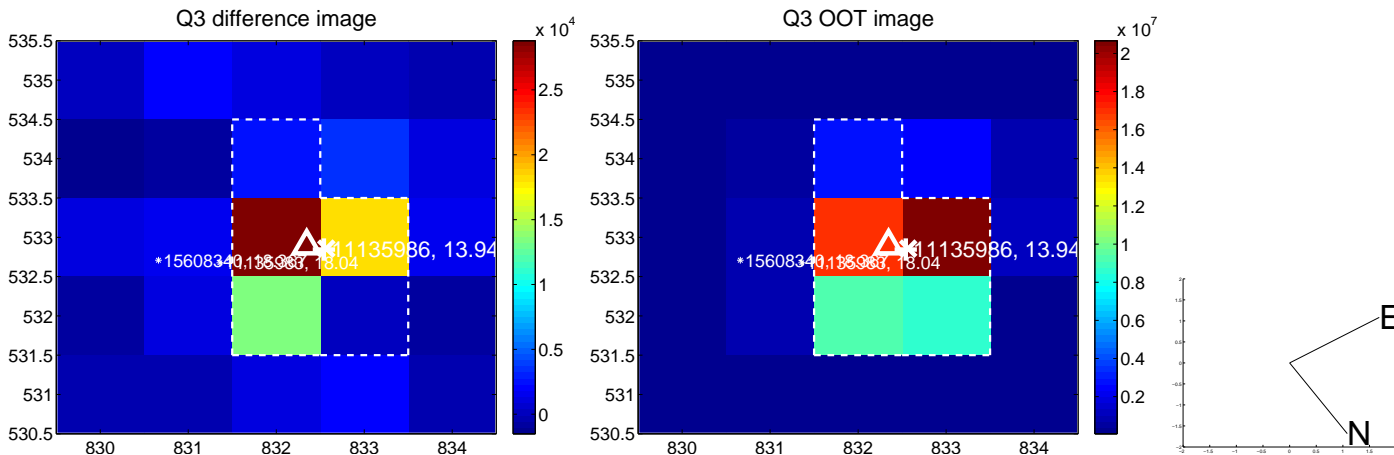
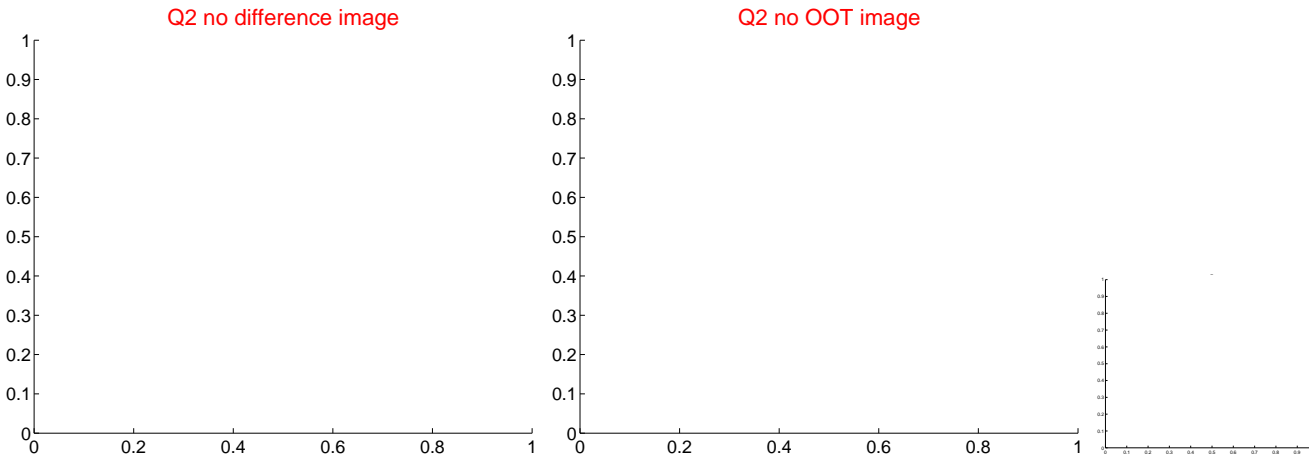
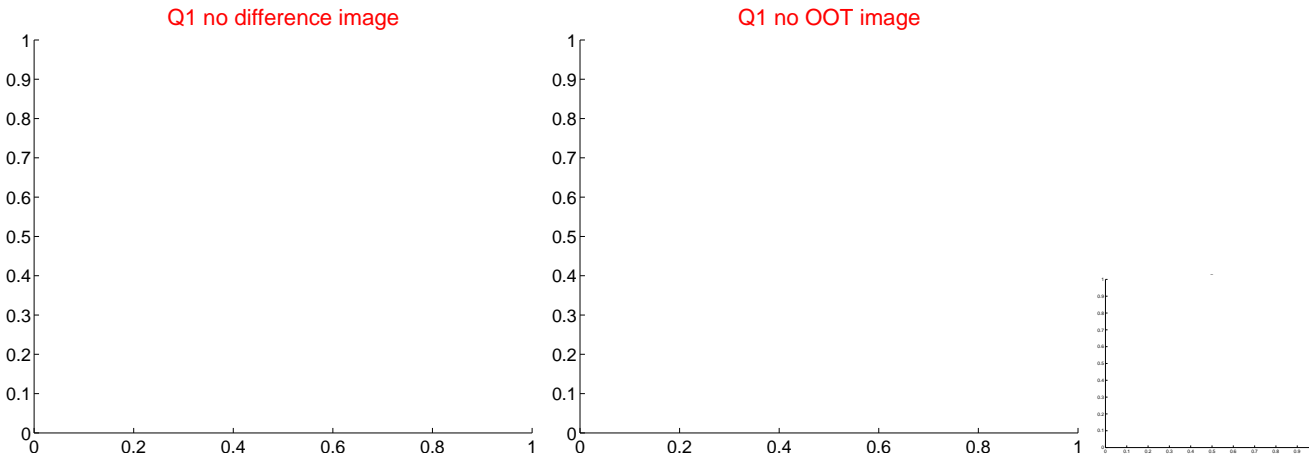
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.298 ± 0.815	0.37	-0.182 ± 0.160	-0.236 ± 0.941
PRF-fit source offset from KIC position	0.394 ± 0.308	1.28	-0.293 ± 0.210	-0.264 ± 0.396
photometric centroid source offset	1.36 ± 0.69	1.97	-1.17 ± 0.70	-0.71 ± 0.69



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.

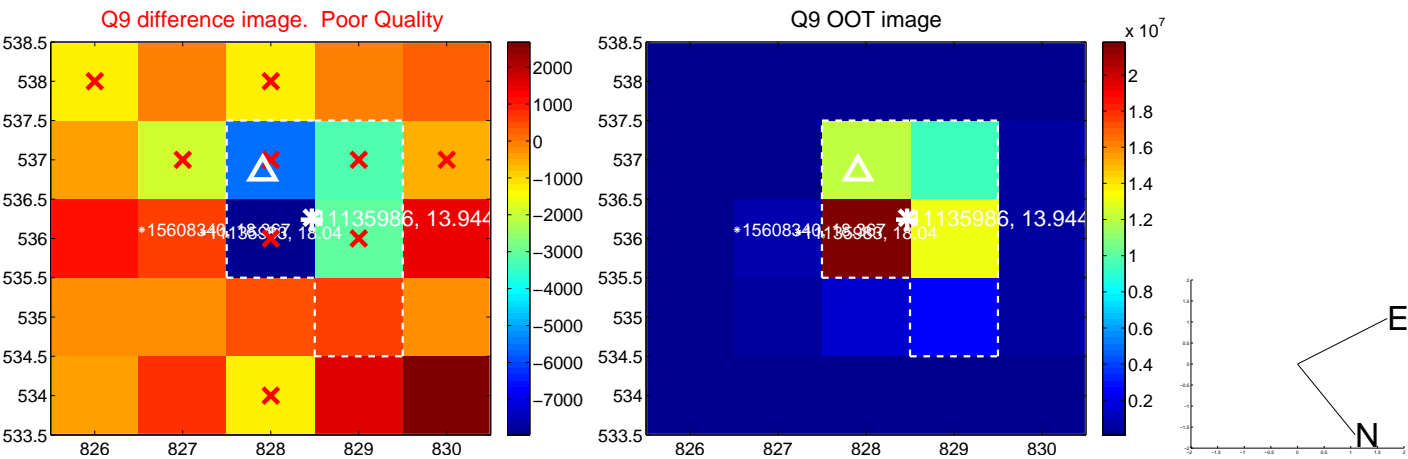
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



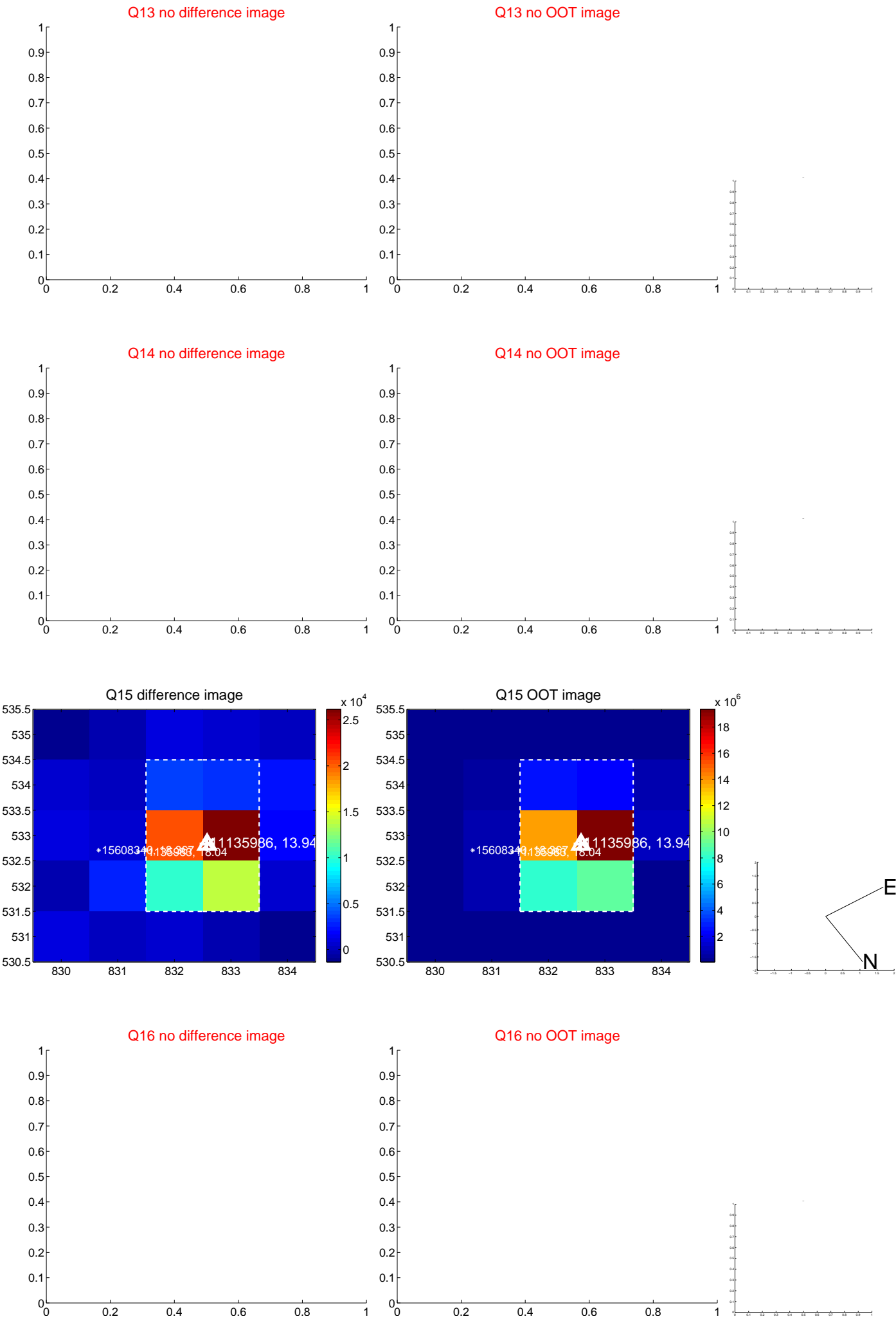
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



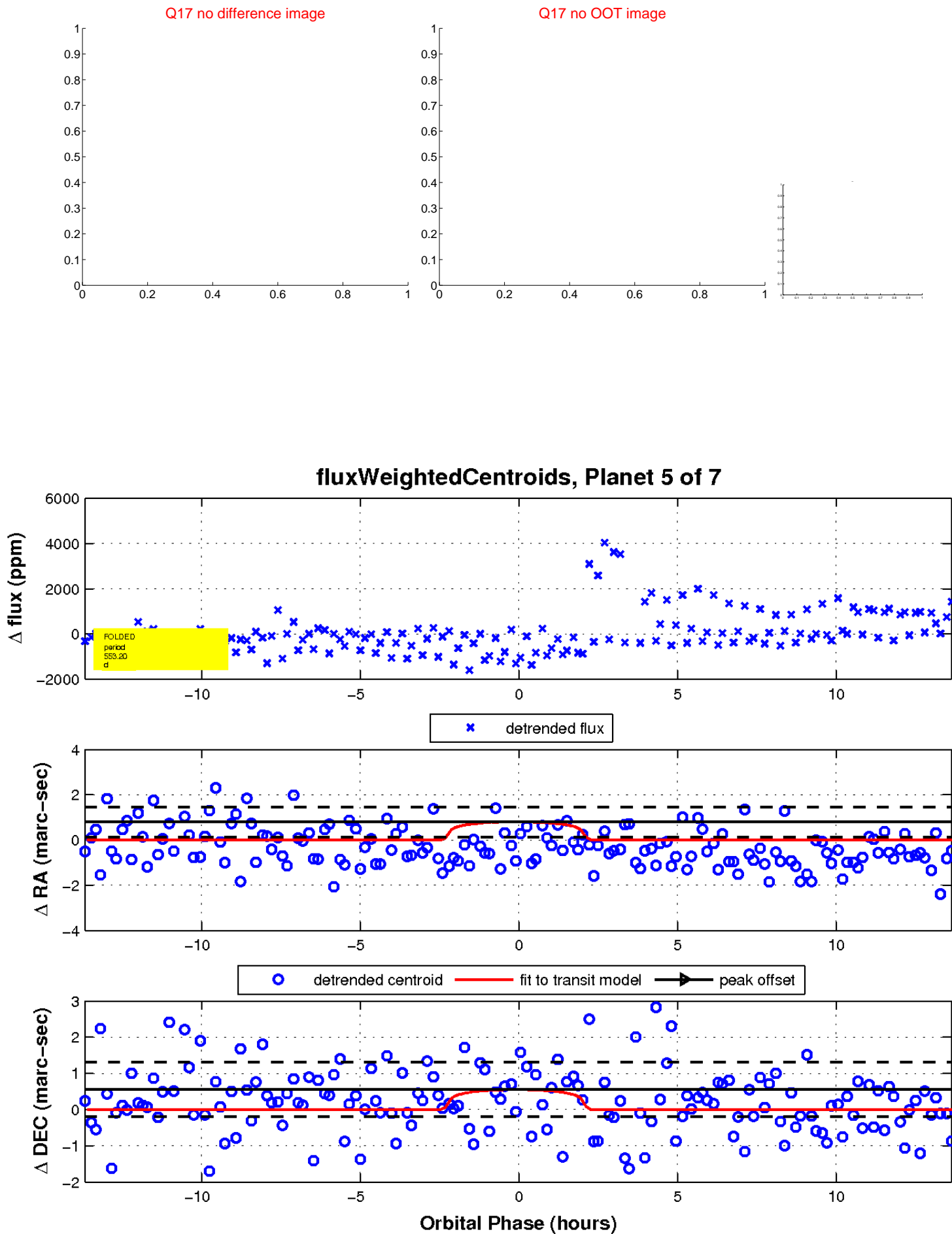
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

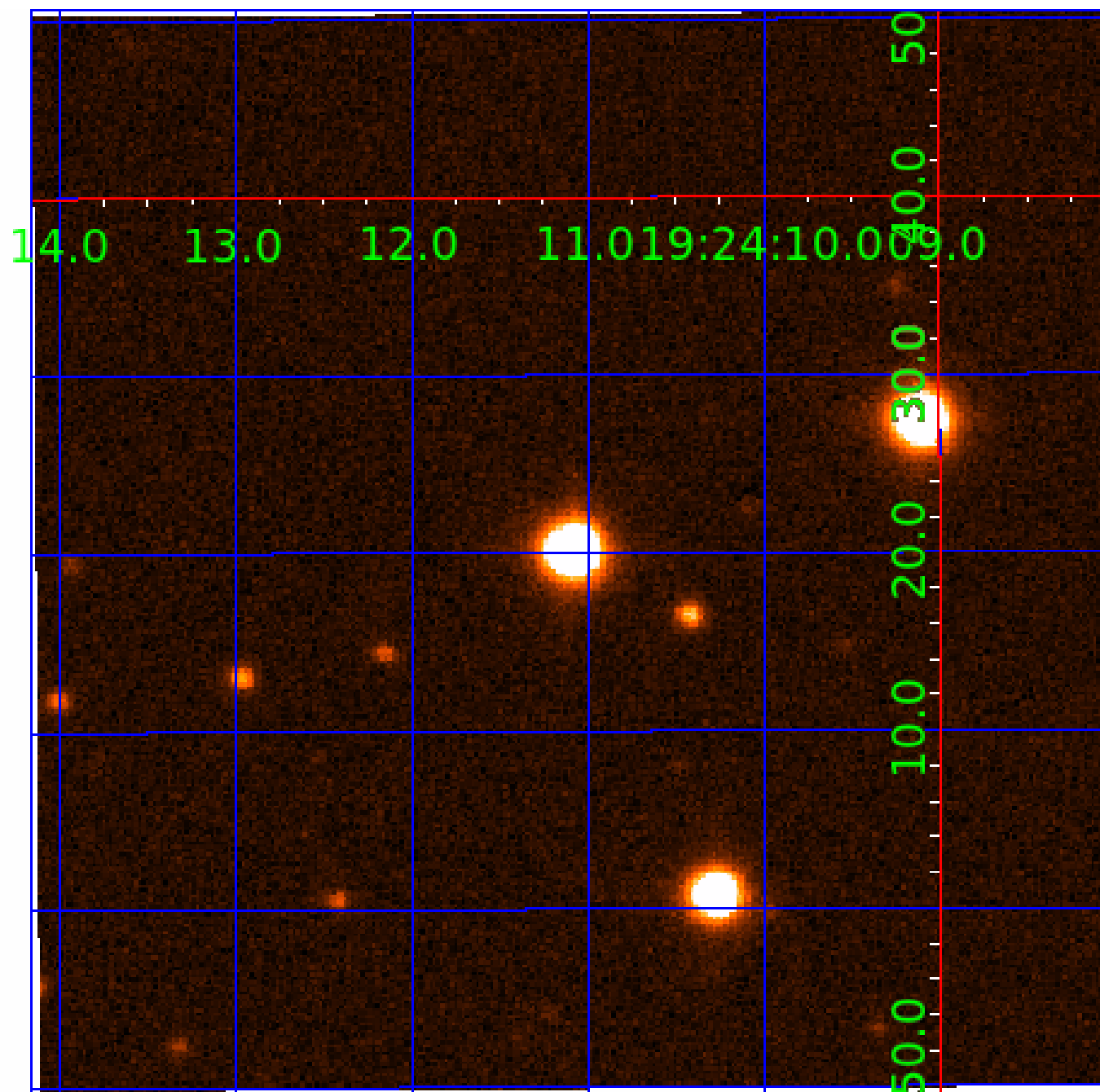


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011135986

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})
011135986-01	OBS	No	443.391096	511.128117	1164.2	6.810	18.7	7.7	4.72	5125	16.84	8.89
011135986-02	OBS	No	560.124898	325.838665	1394.6	10.459	20.6	8.2	4.72	5125	17.33	6.51
011135986-03	OBS	No	345.929773	341.082334	992.7	4.532	19.0	6.8	4.72	5125	15.19	12.38
011135986-04	OBS	No	324.761518	188.124398	1224.3	4.731	18.8	7.9	4.72	5125	16.81	13.46
011135986-05	OBS	No	553.204915	314.774970	838.8	4.574	16.4	6.5	4.72	5125	14.79	6.62
011135986-06	OBS	No	363.182774	350.898874	1221.5	7.290	15.2	7.6	4.72	5125	16.14	11.60
011135986-07	OBS	No	396.124994	168.127933	1176.2	3.500	16.3	-1.0	4.72	5125	15.87	10.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011135986-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011135986-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011135986-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
011135986-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

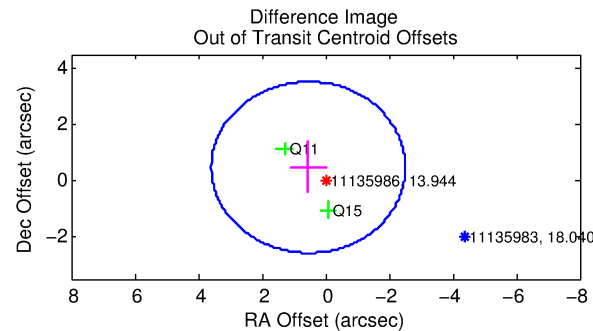
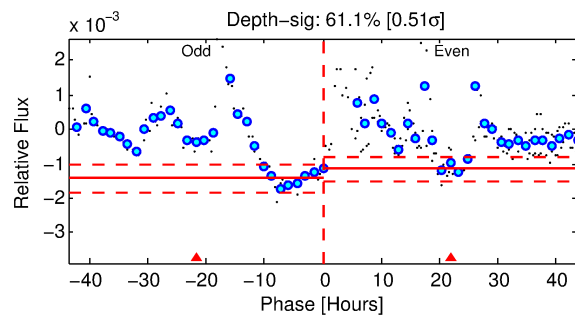
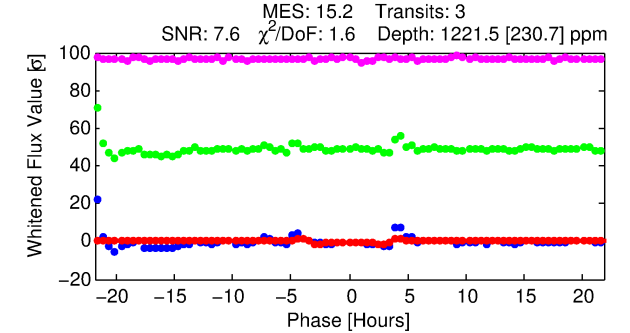
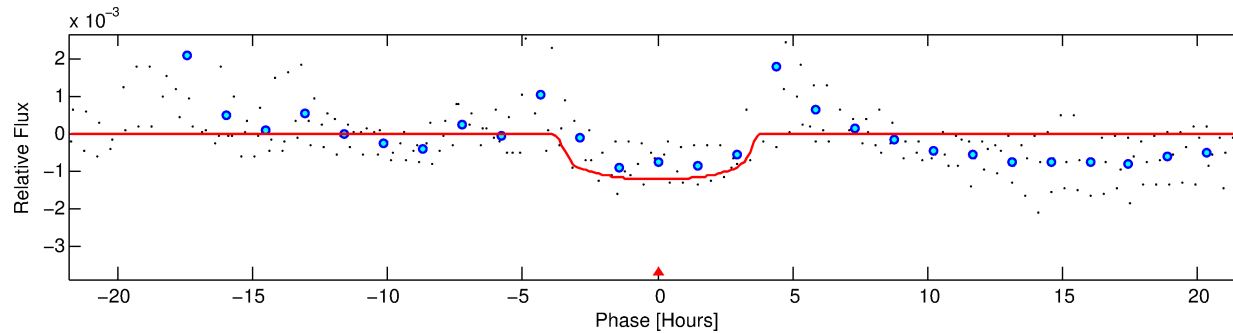
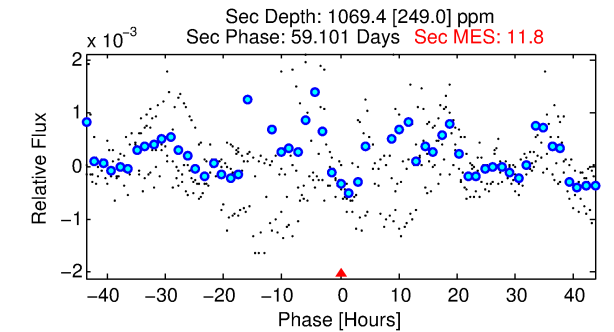
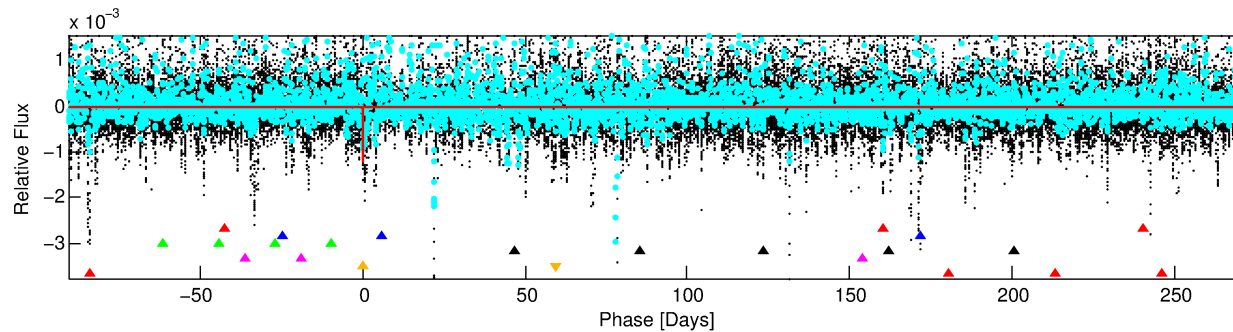
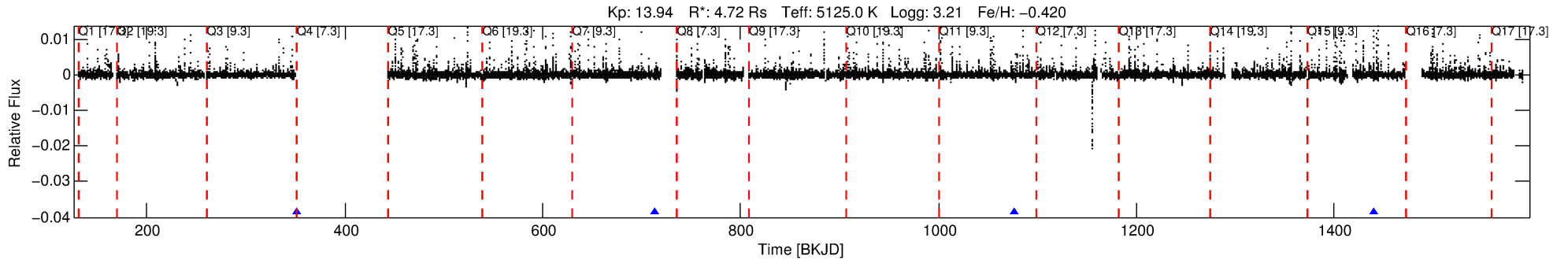
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-06

No Significant Match Found

DV One-Page Summary

KIC: 11135986 Candidate: 6 of 7 Period: 363.183 d



DV Fit Results:

Period = 363.18277 [0.00554] d
Epoch = 350.8989 [0.0132] BKJD
Rp/R* = 0.0313 [0.0375]
a/R* = 392.50 [1790.12]
b = 0.00 [3365.36]
Seff = 11.60 [7.03]
Teff = 471 [71] K
Rp = 16.14 [20.23] Re
a = 1.0906 [0.4015] AU
Ag = 2686.20 [6656.71] [0.40σ]
Teffp = 5238 [3152] K [1.51σ]

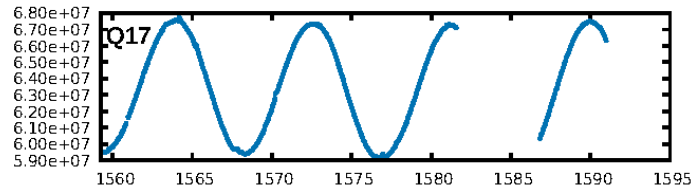
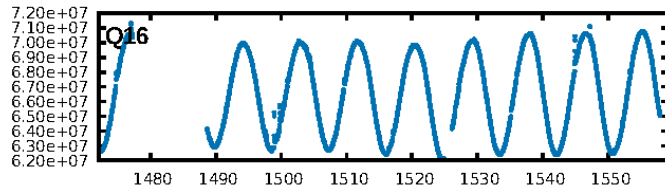
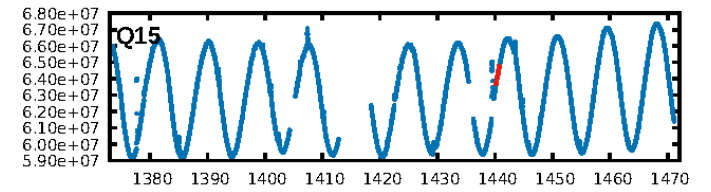
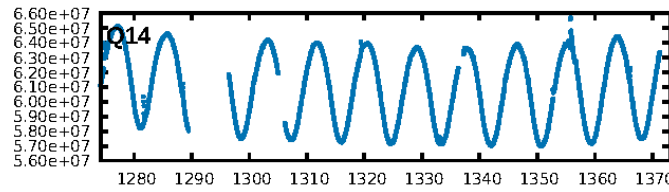
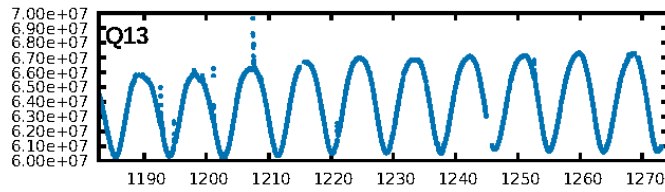
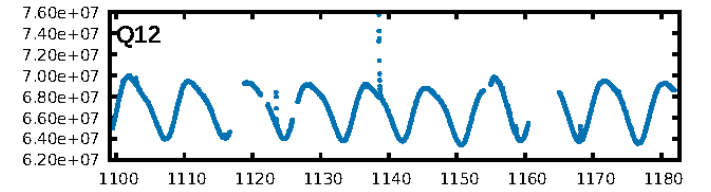
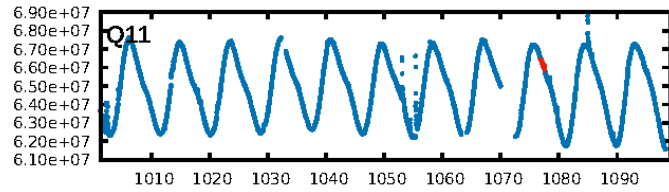
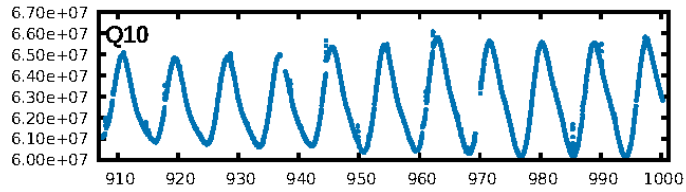
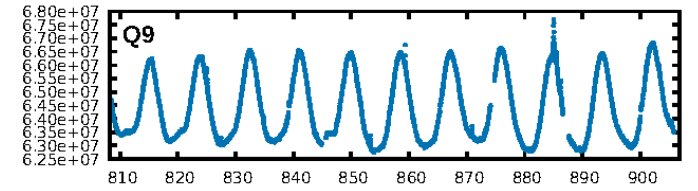
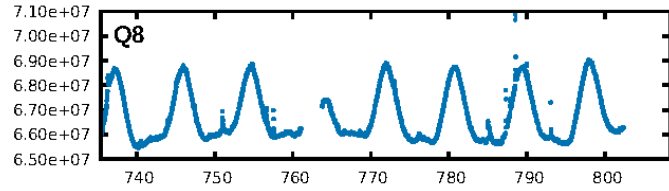
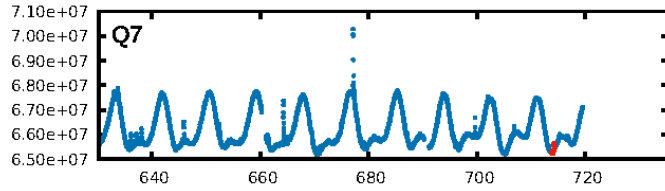
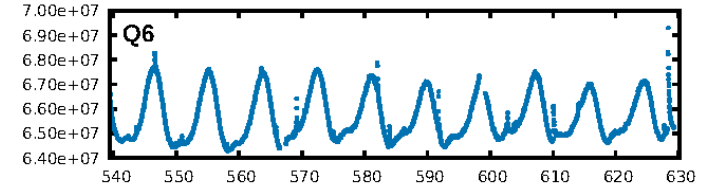
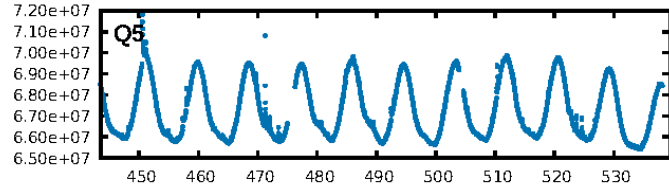
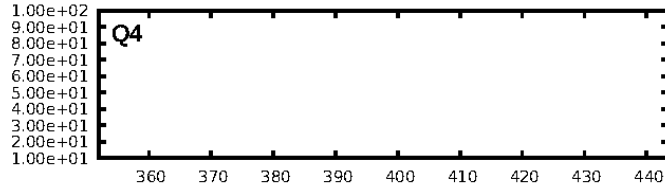
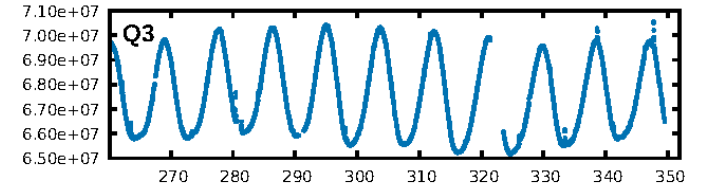
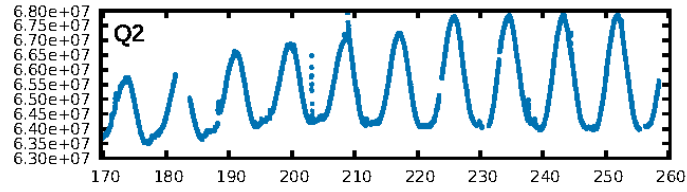
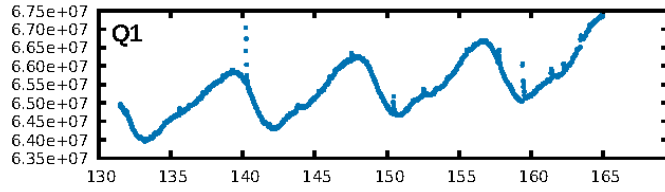
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [48.24σ]
LongPeriod-sig: 100.0% [97.77σ]
ModelChiSquare2-sig: 66.6%
ModelChiSquareGof-sig: 92.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1299
Centroid-sig: 31.8%
Centroid-so: 0.404 arcsec [0.90σ]
OotOffset-rm: 0.718 arcsec [0.71σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-rm: 0.615 arcsec [0.60σ]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

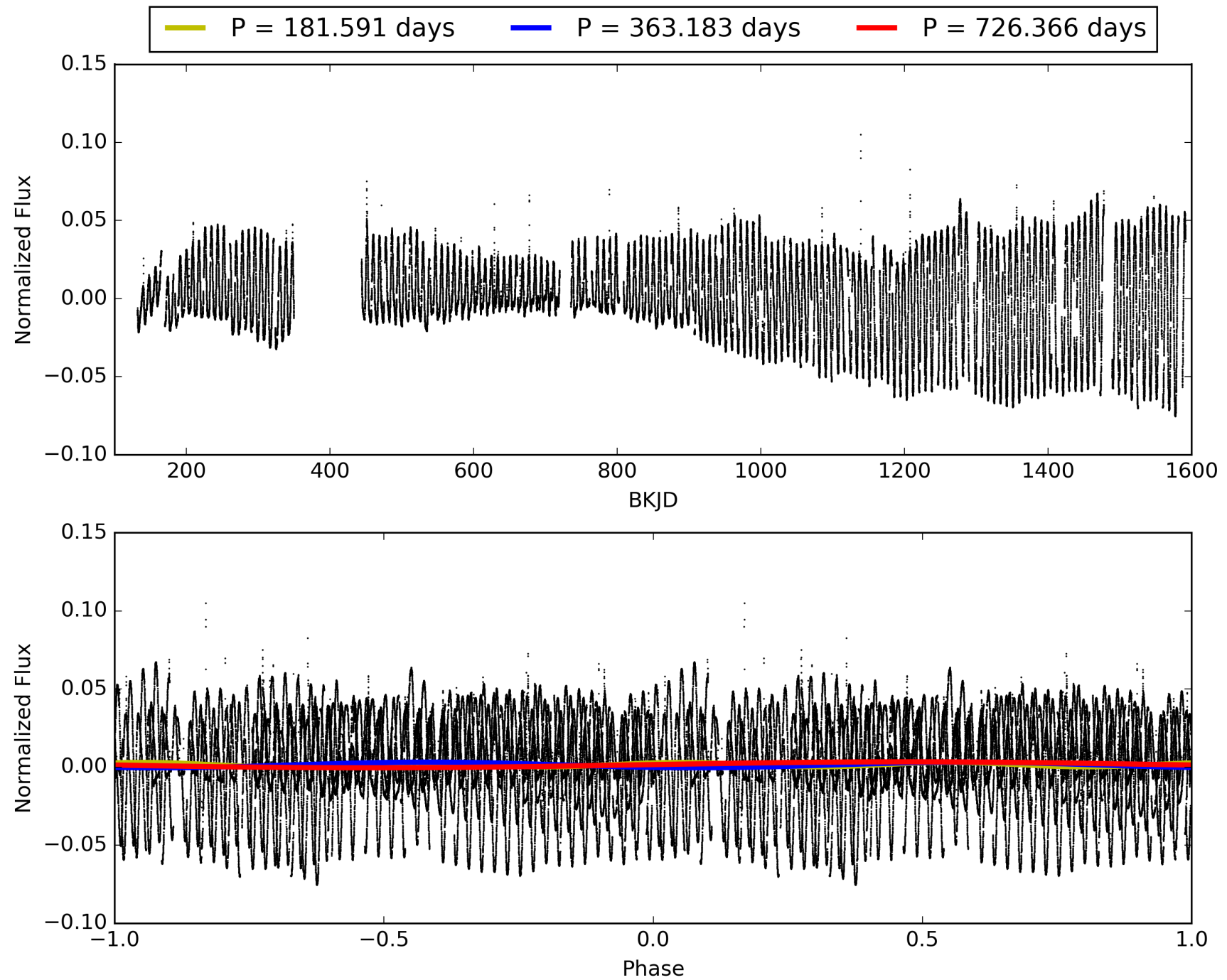
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:09:56 Z

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

TCE 011135986-06, PDC Light Curves

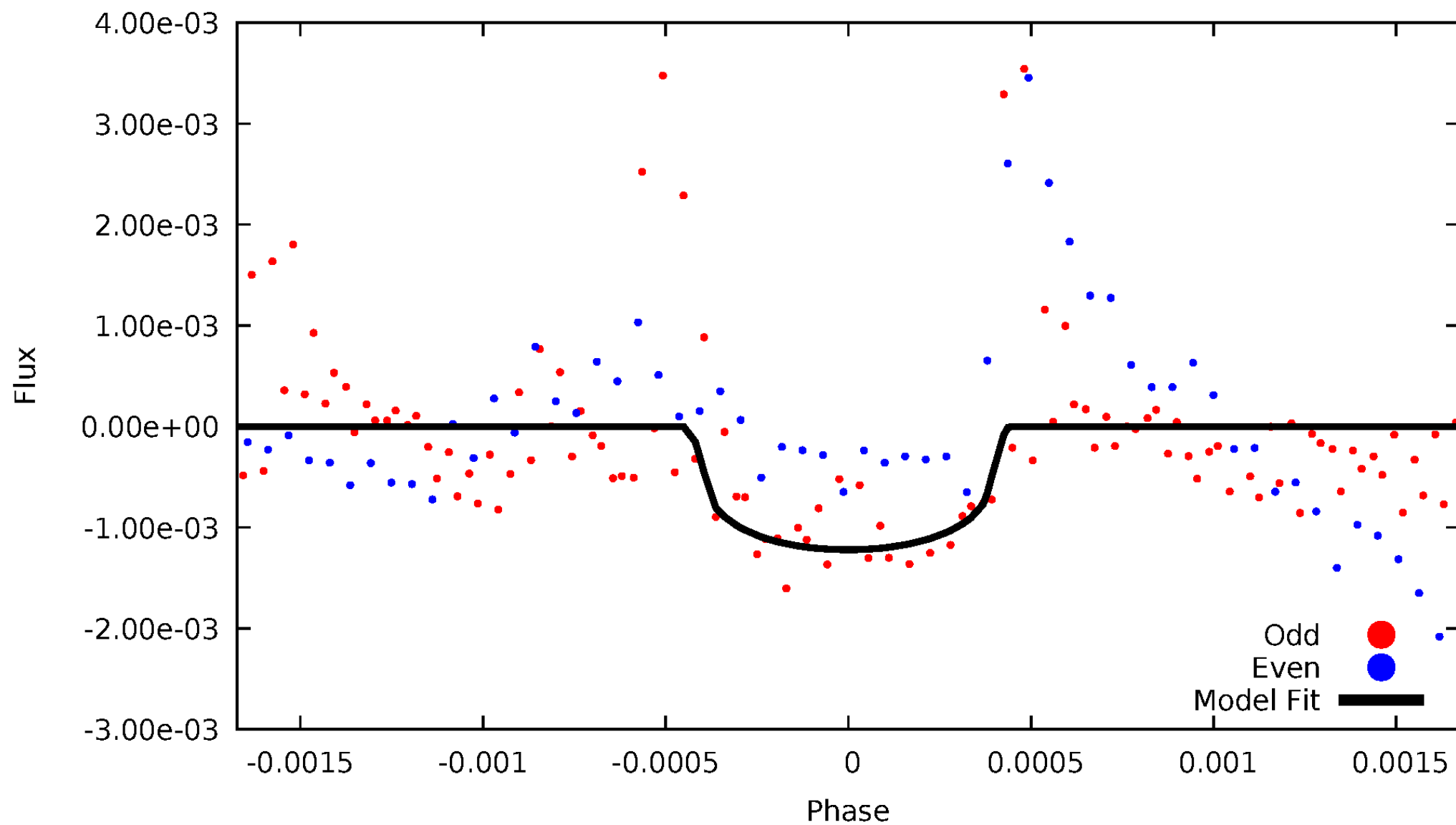


TCE 011135986-06



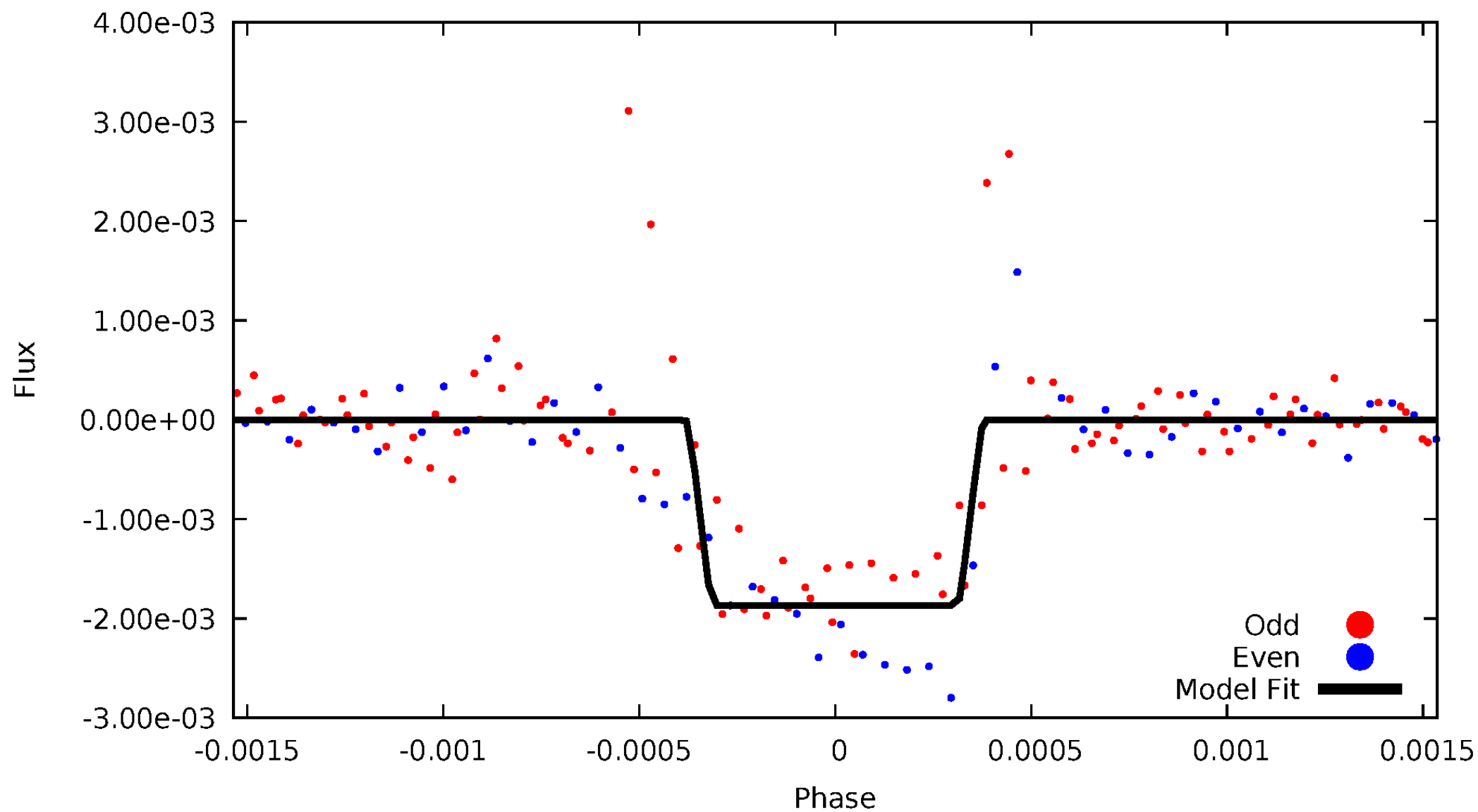
DV Odd/Even

TCE 011135986-06



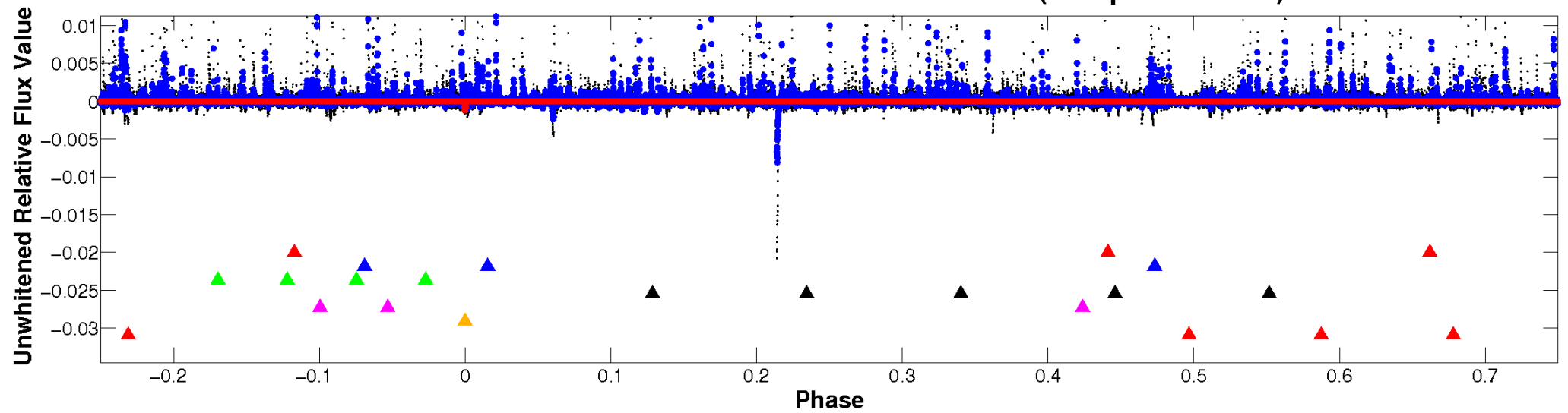
ALT Odd/Even

TCE 011135986-06

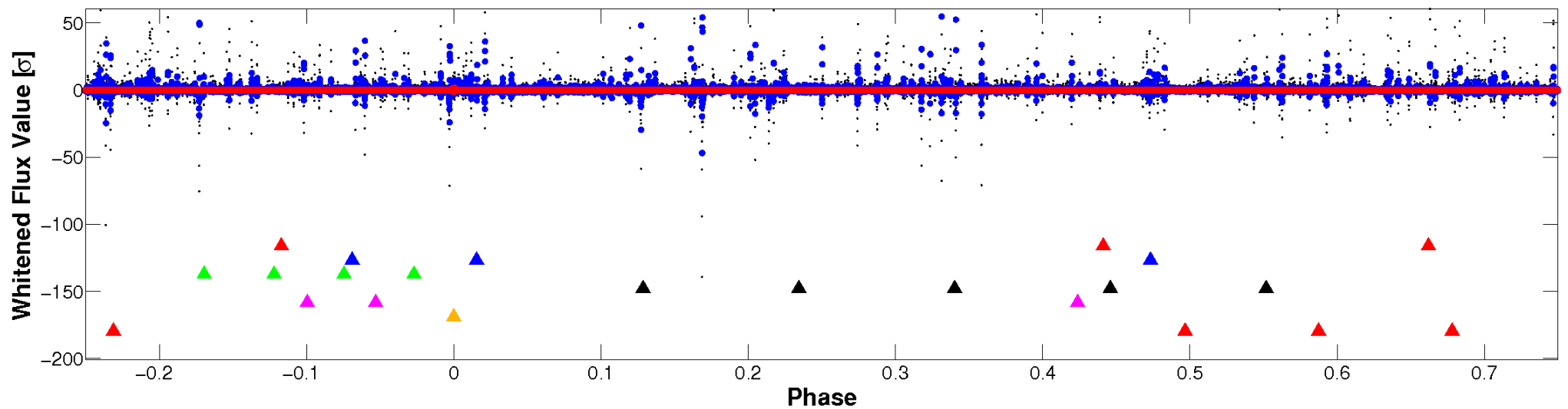


Non-Whitened Vs. Whitened Light Curve

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

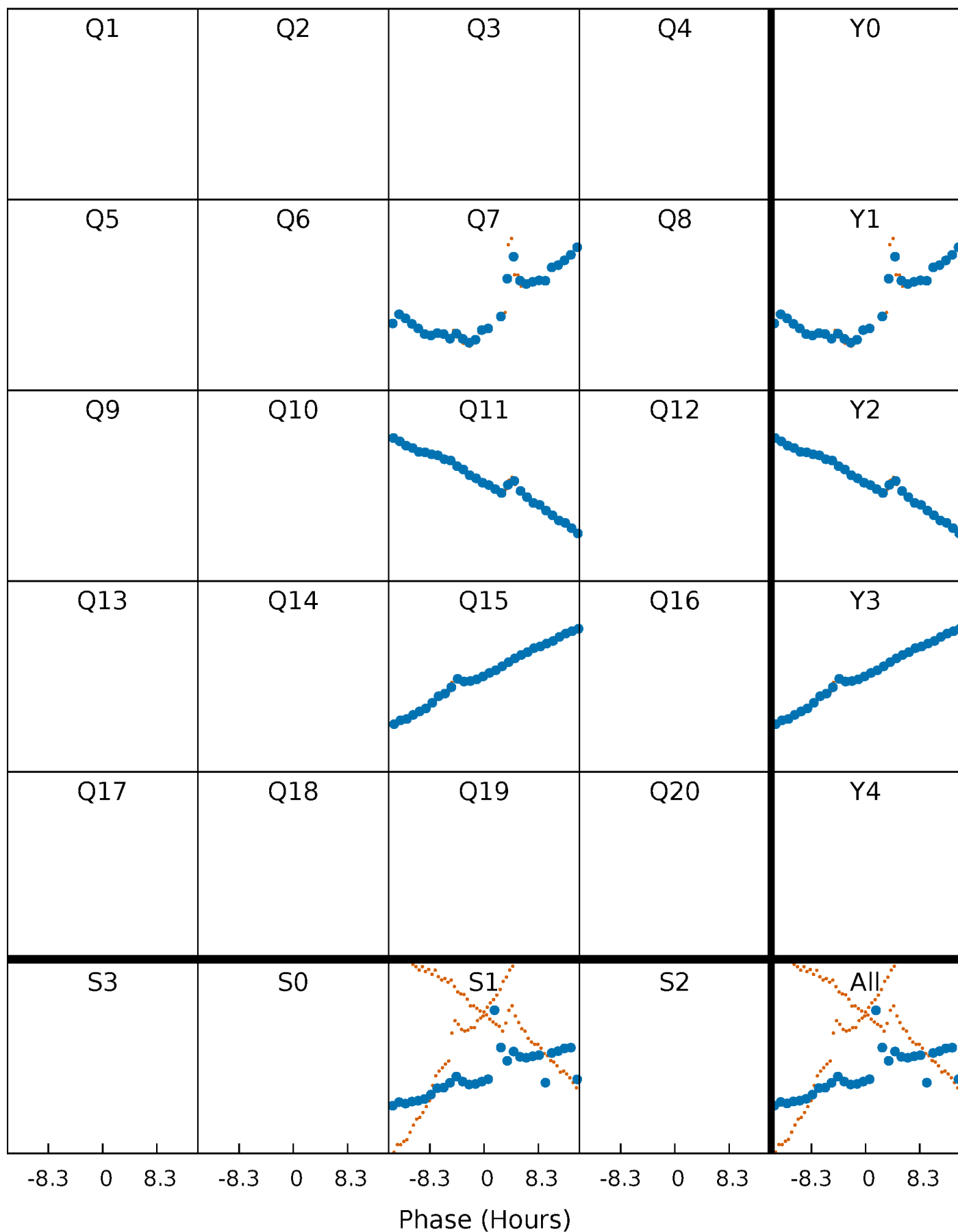


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



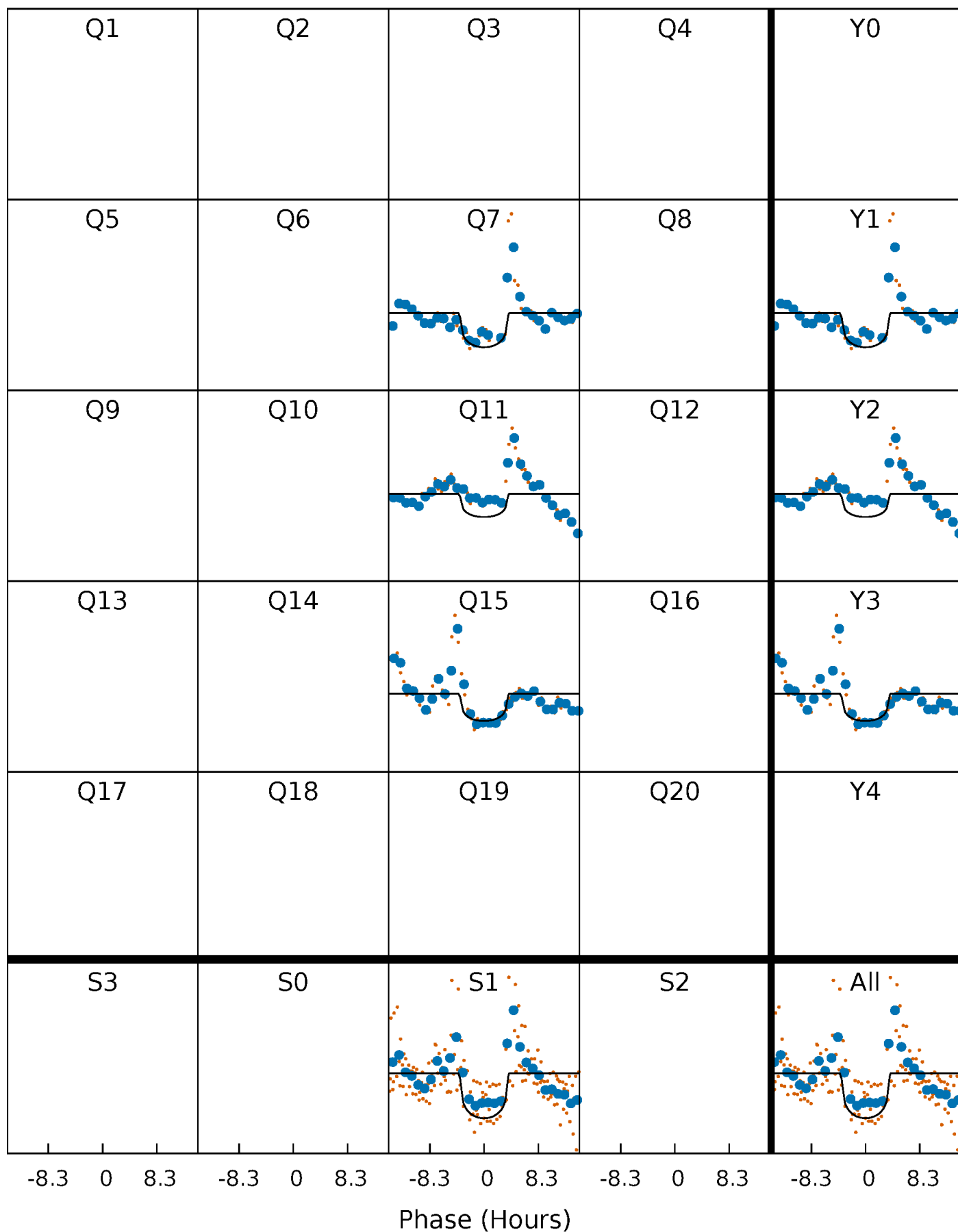
PDC Quarter-Phased Transit Curves

TCE 011135986-06 P=363.182773 Days $T_0=350.898874$ (BKJD)



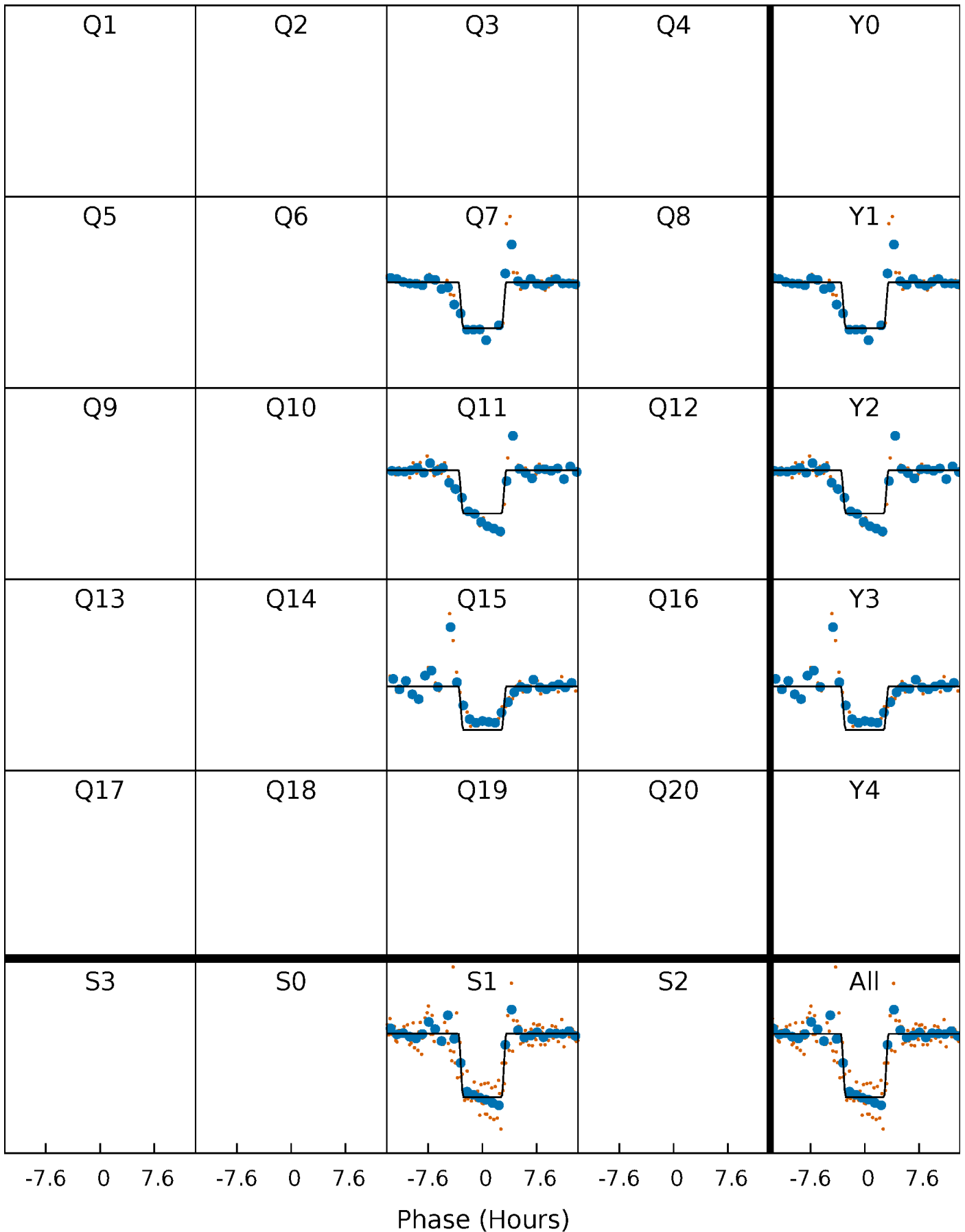
DV Quarter-Phased Transit Curves

TCE 011135986-06 $P=363.182773$ Days $T_0=350.898874$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

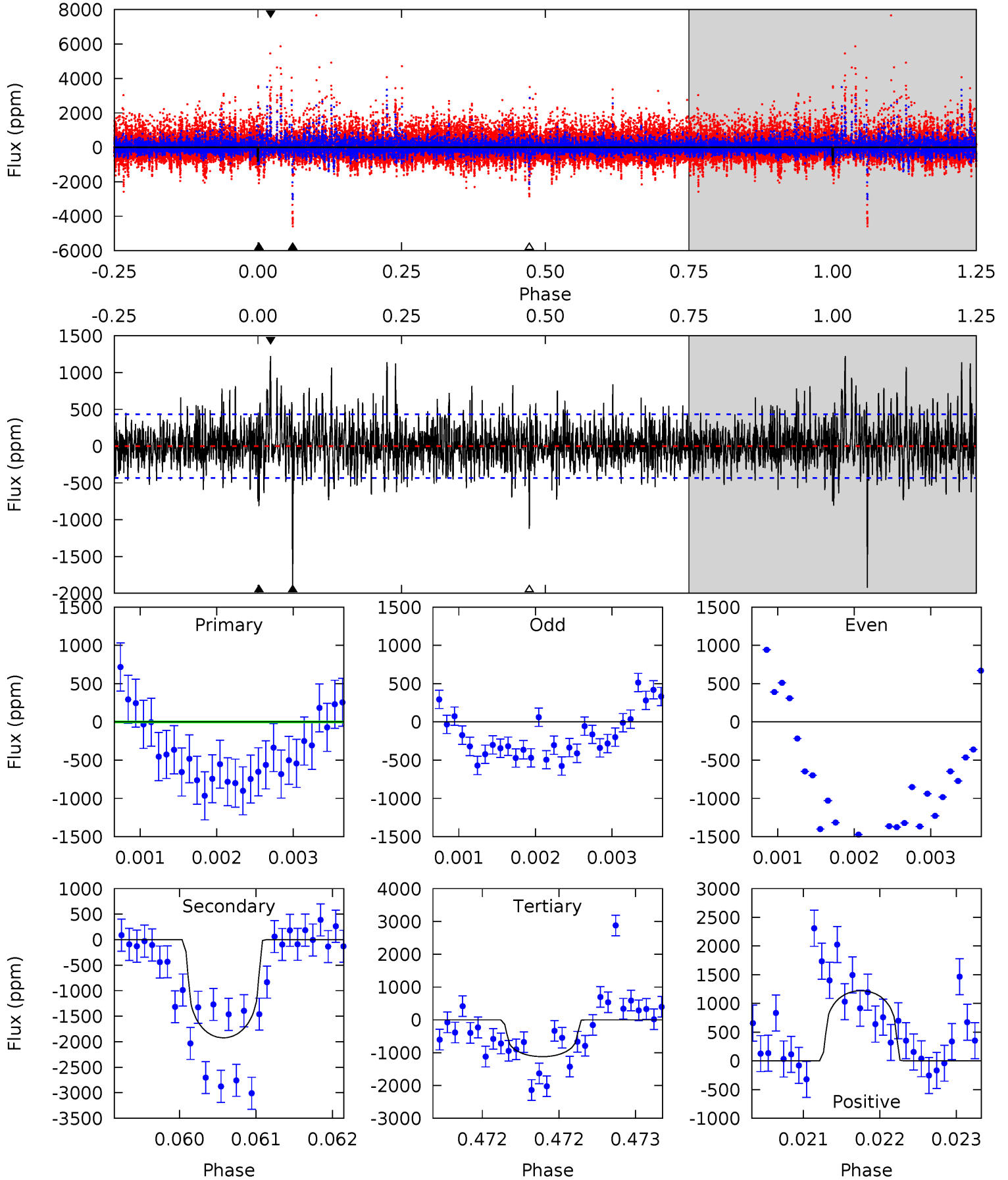
TCE 011135986-06 $P=363.179284$ Days $T_0=350.916346$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-06, P = 363.182773 Days, E = 350.898874 Days

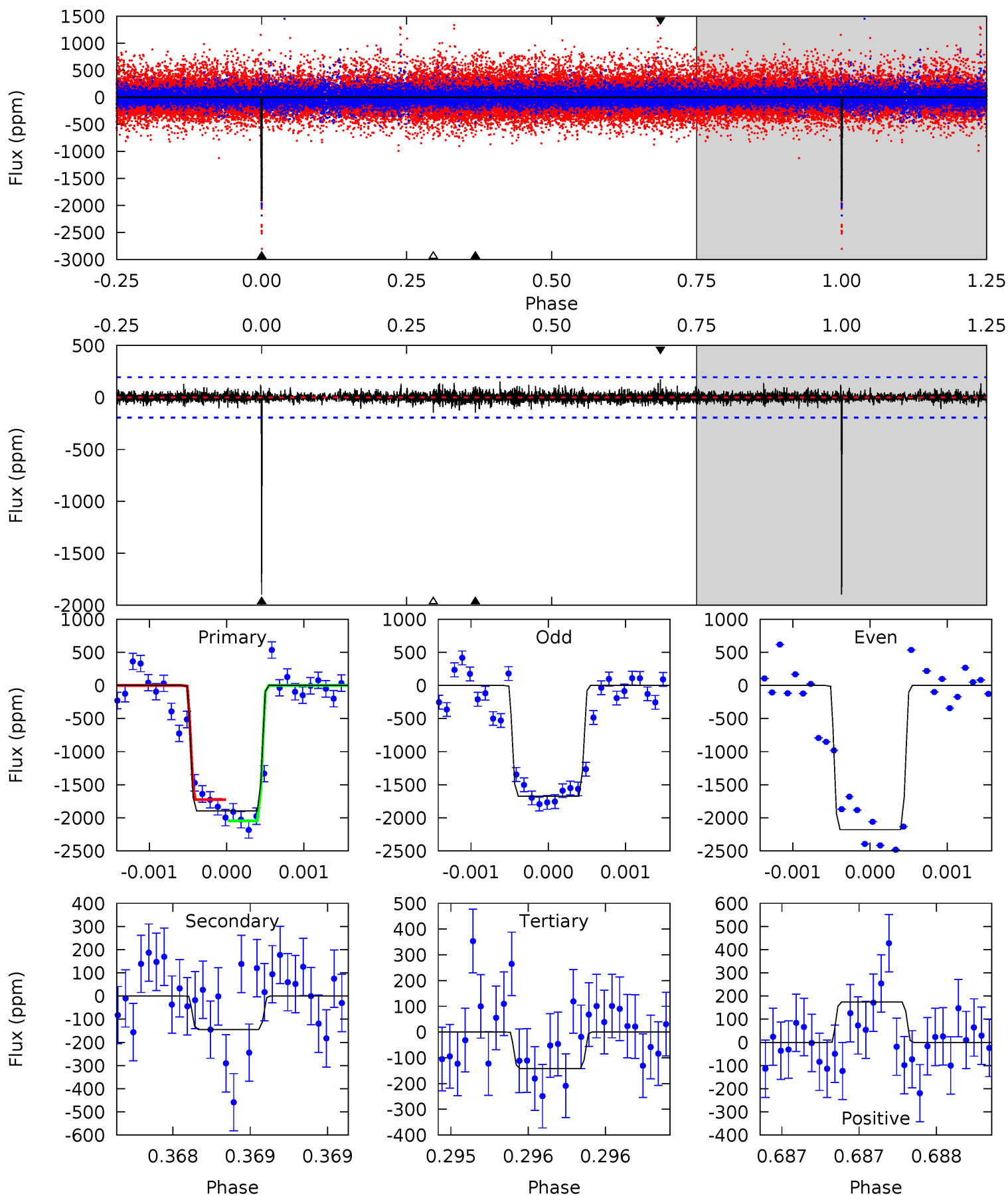
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	24.3	14.2	15.5	5.48	3.33	2.83	-4.09	-5.36	10.1	8.87	2.26	0.85	0.39	0.34



Alt Model-Shift Uniqueness Test

011135986-06, P = 363.179284 Days, E = 350.916346 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.7	4.10	4.02	4.93	5.50	3.37	0.81	49.7	48.8	0.08	-0.83	6.48	0.93	0.08	4.60



Stellar Parameters For KIC 011135986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1923 ± 79	$20.08^{+18.11}_{-13.17}$	653^{+69}_{-69}	5263^{+4107}_{-1088}	2999^{+23384}_{-2128}
Alt.	-145 ± 35	$24.43^{+19.72}_{-14.74}$	655^{+66}_{-72}	3093^{+1089}_{-420}	148^{+857}_{-104}

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 $A_{obs} \gg 1.0$

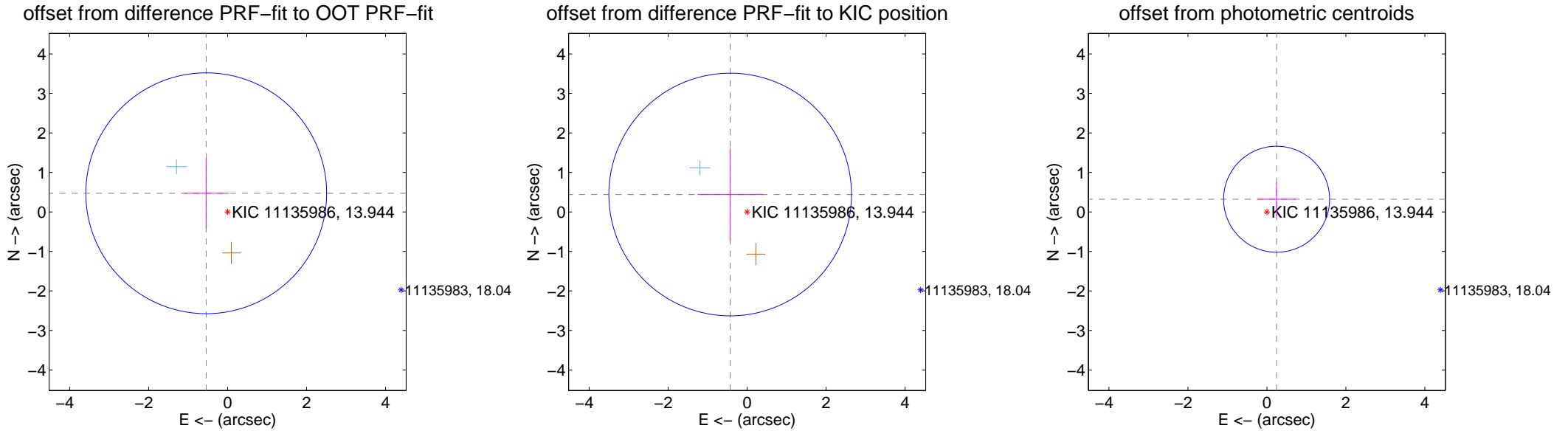
DV Centroid Data

Supplemental centroid analysis for 011135986-06. Kepler magnitude: 13.94. Transit SNR 7.62

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.718 ± 1.016	0.71	0.541 ± 0.571	0.472 ± 0.895
PRF-fit source offset from KIC position	0.615 ± 1.024	0.60	0.429 ± 0.827	0.441 ± 1.180
photometric centroid source offset	0.40 ± 0.45	0.90	-0.25 ± 0.49	0.32 ± 0.42



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.

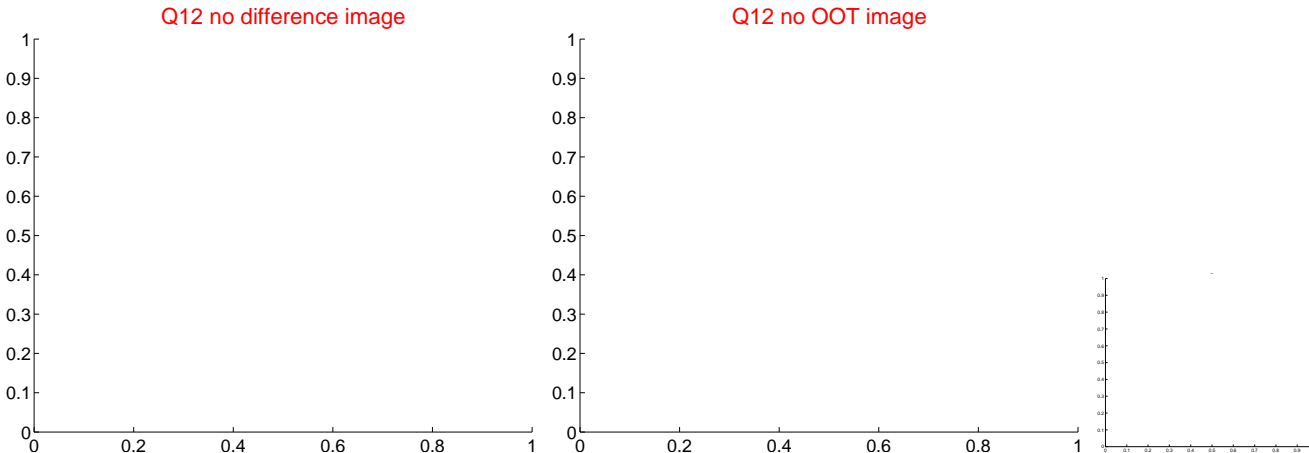
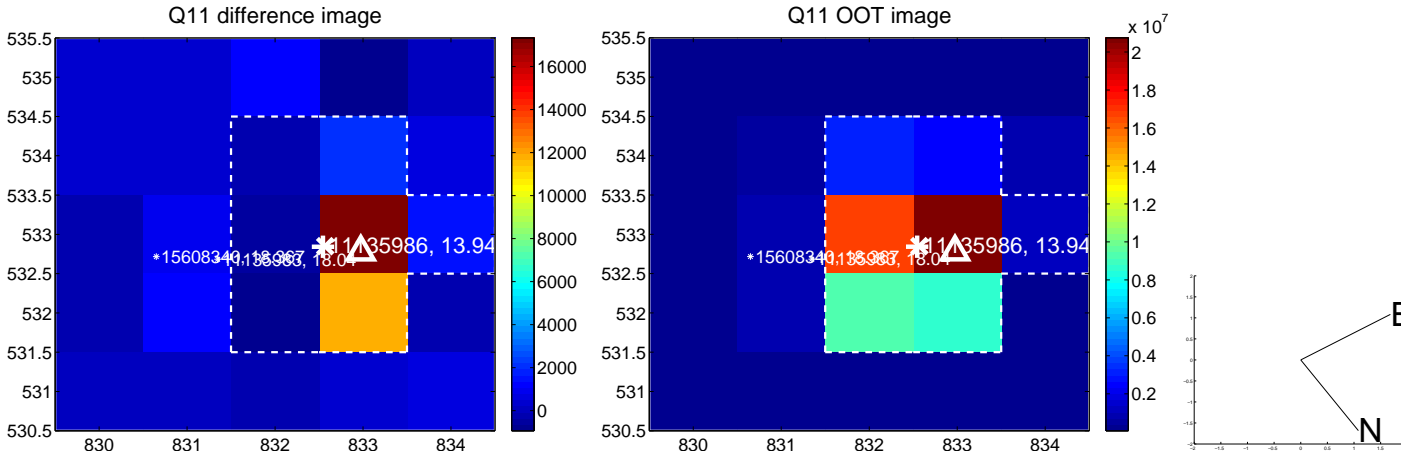
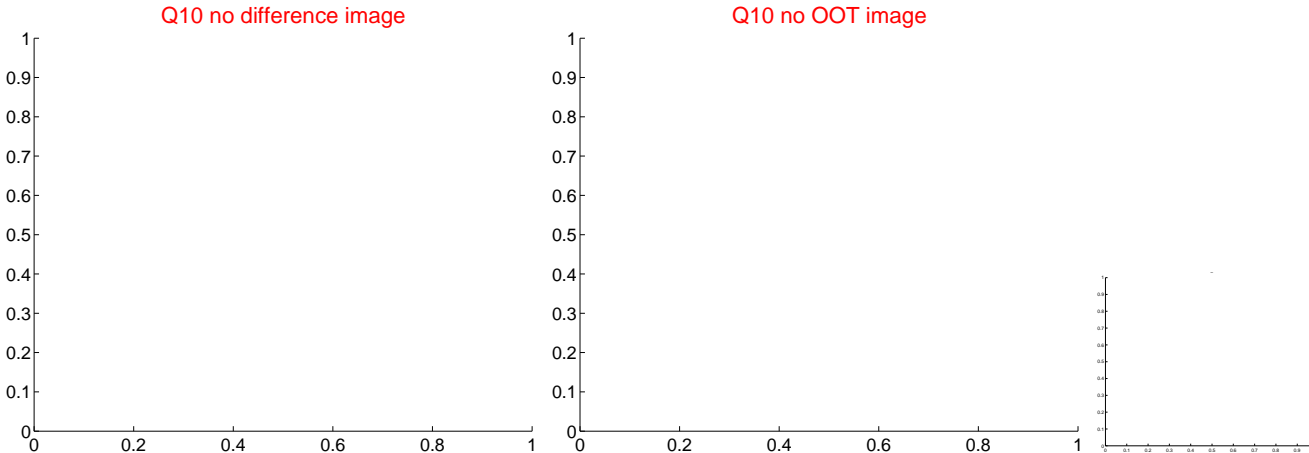
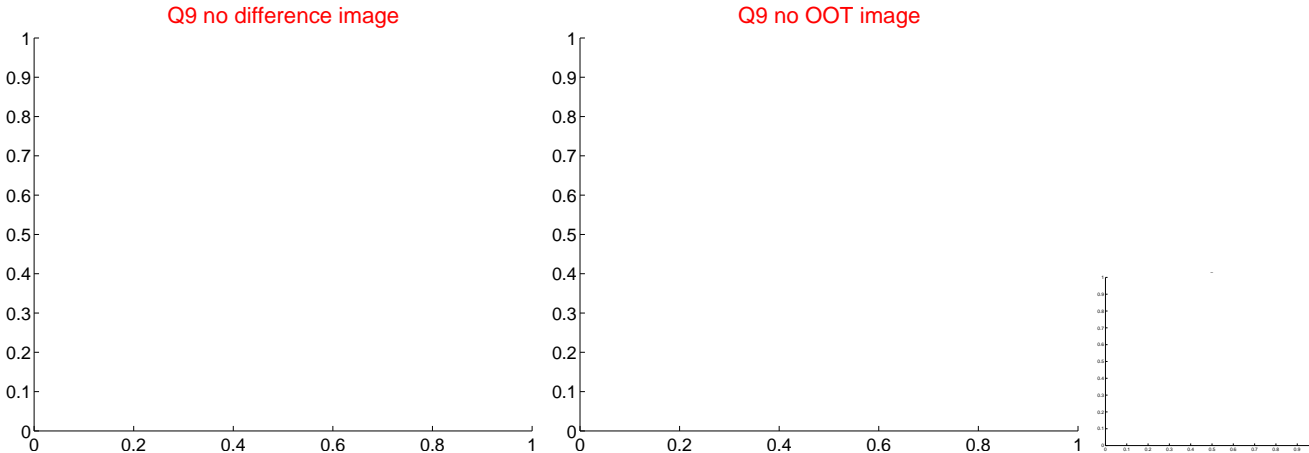
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

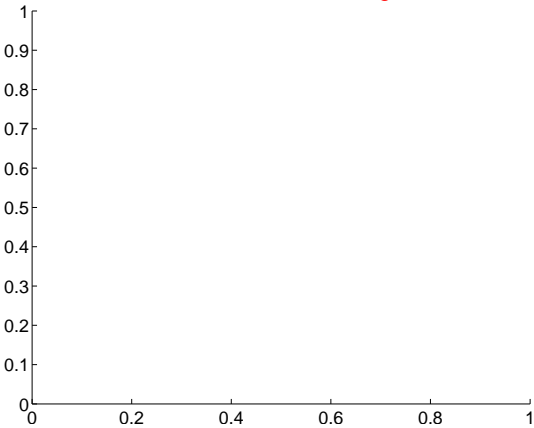


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value

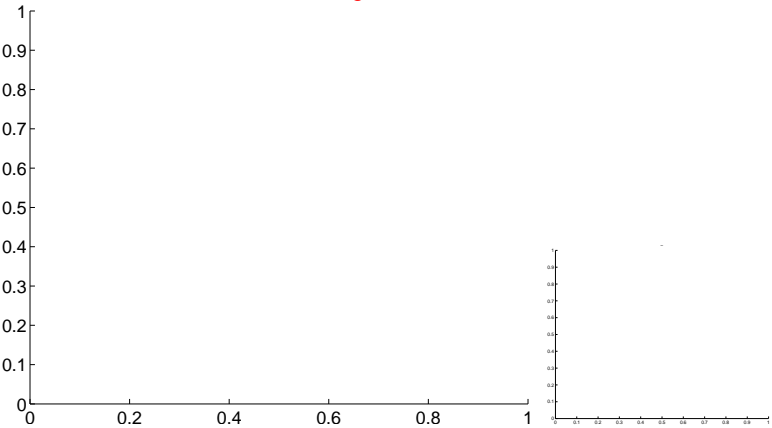


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

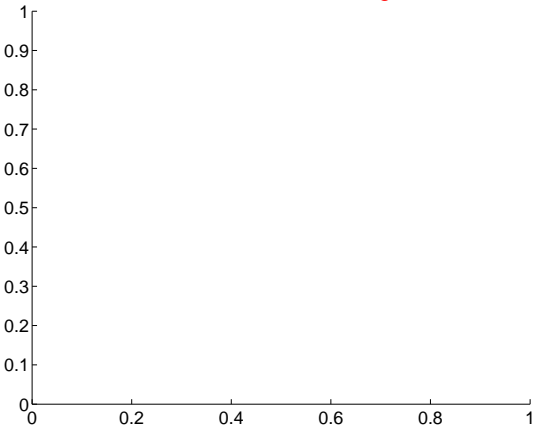
Q13 no difference image



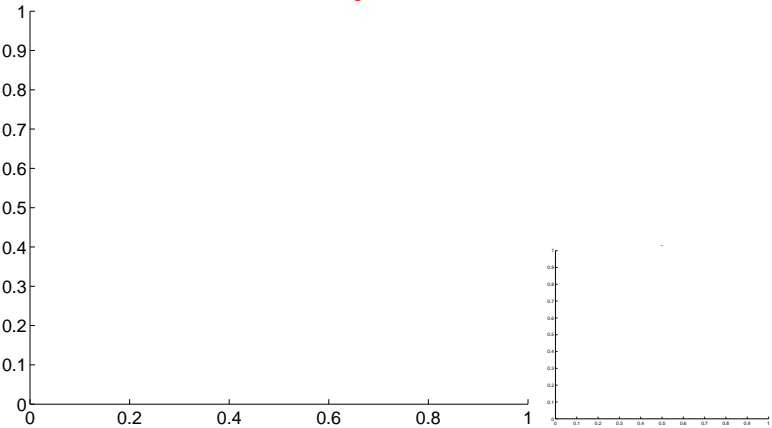
Q13 no OOT image



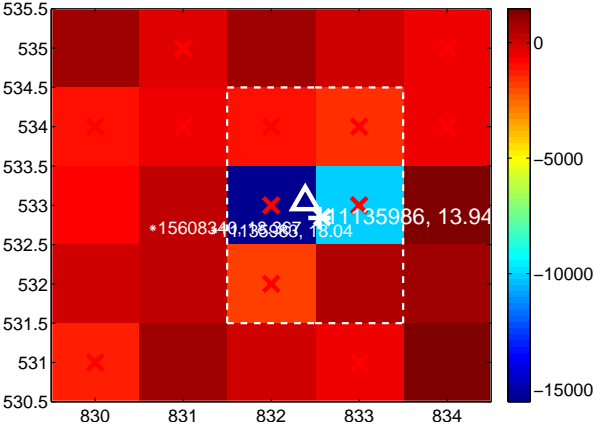
Q14 no difference image



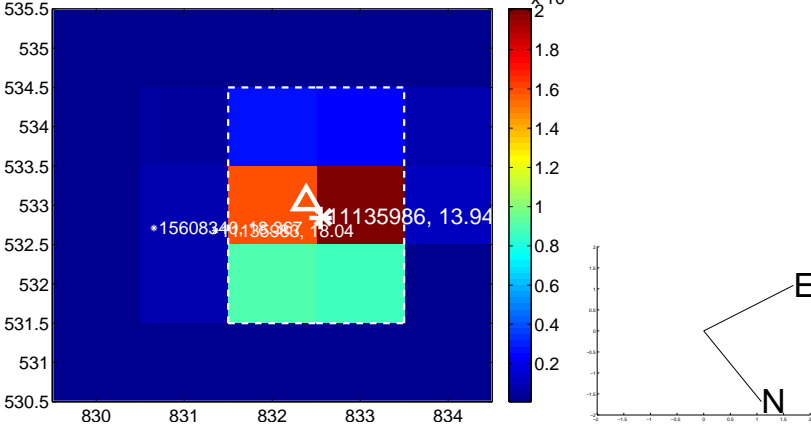
Q14 no OOT image



Q15 difference image. Poor Quality



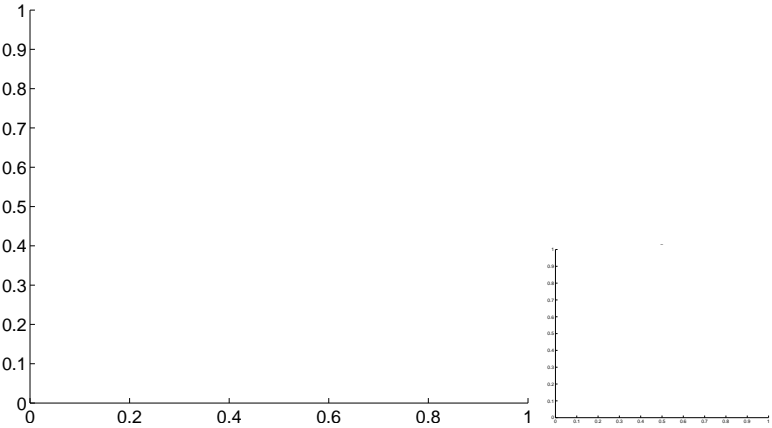
Q15 OOT image



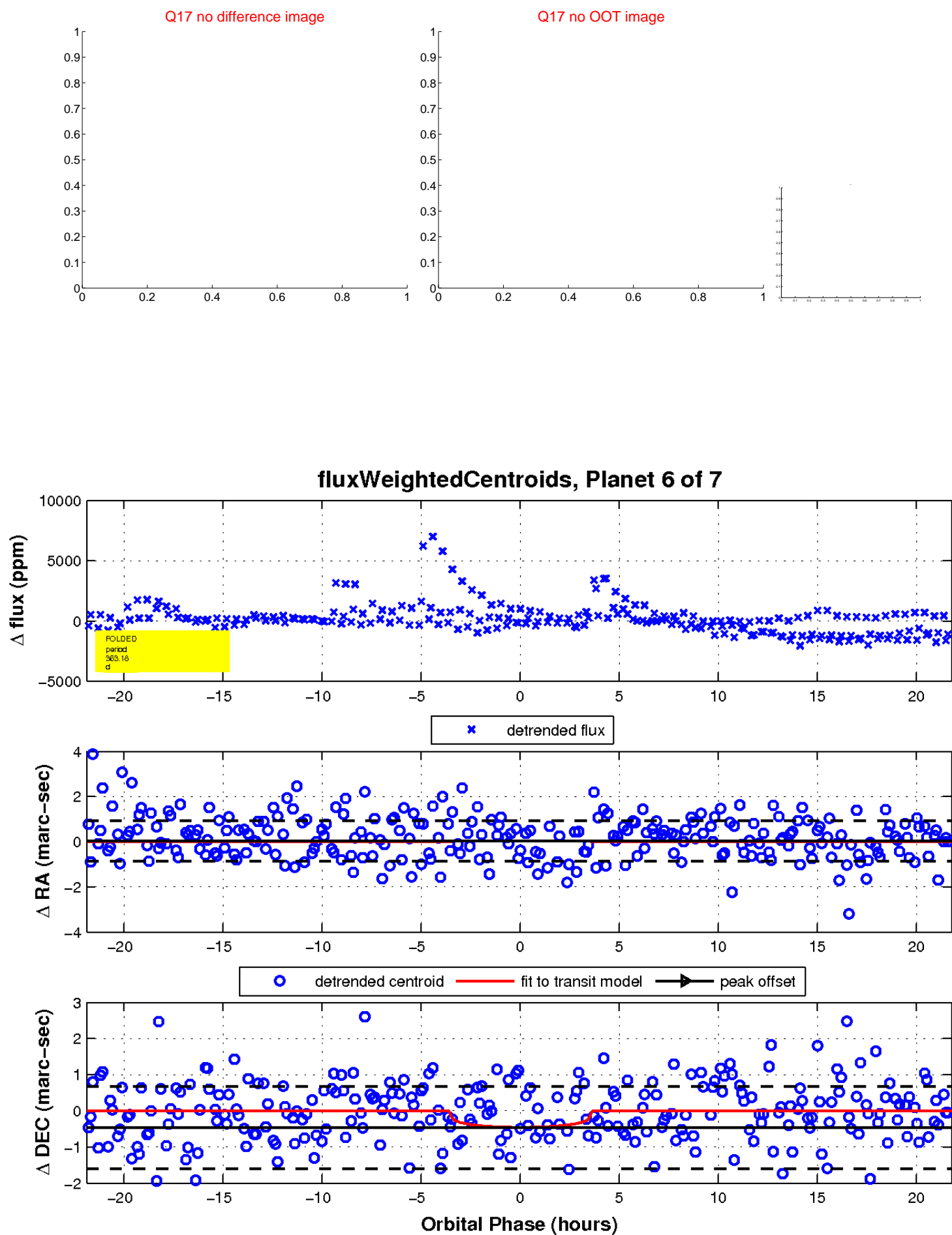
Q16 no difference image



Q16 no OOT image

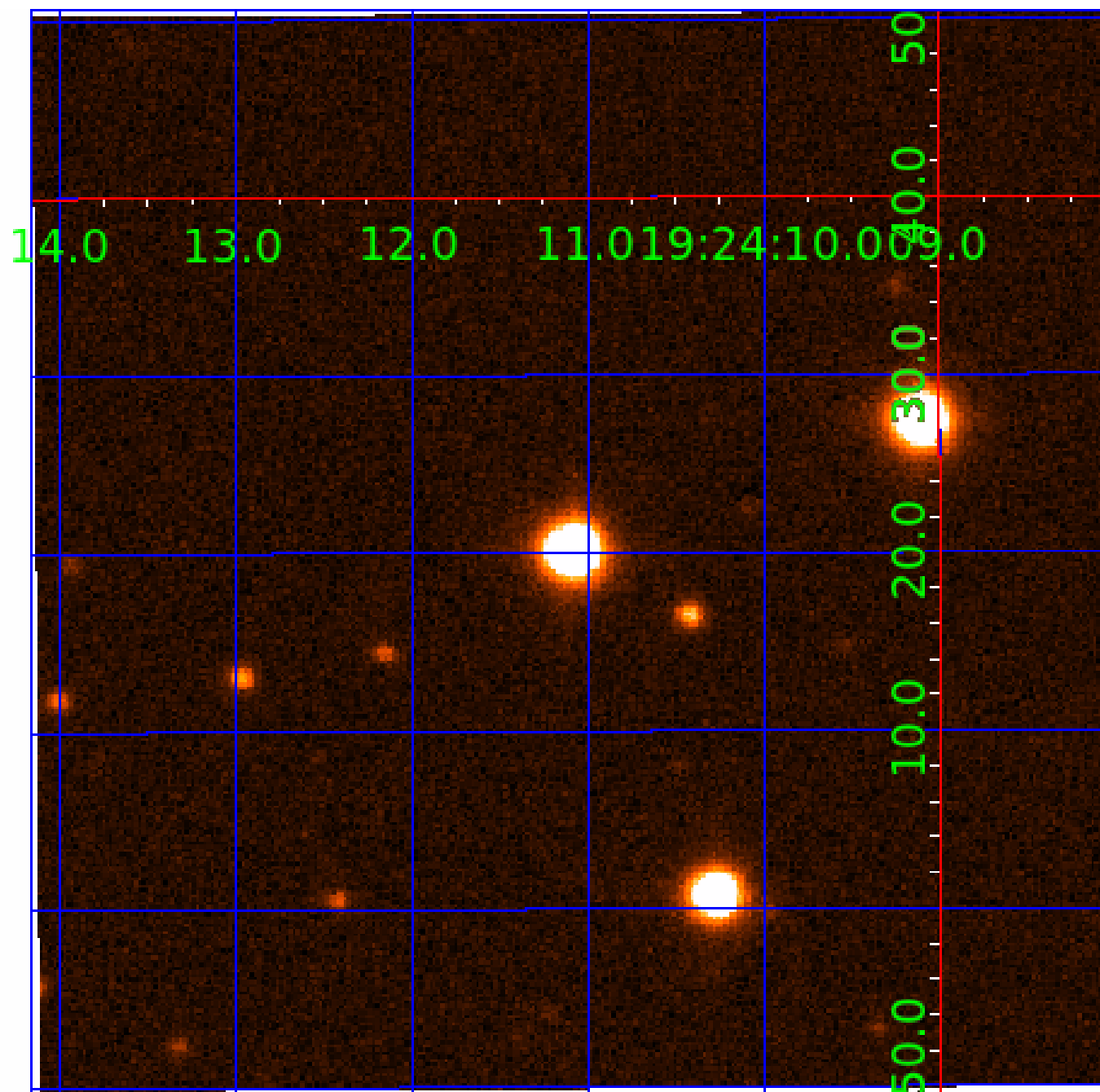


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011135986

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})
011135986-01	OBS	No	443.391096	511.128117	1164.2	6.810	18.7	7.7	4.72	5125	16.84	8.89
011135986-02	OBS	No	560.124898	325.838665	1394.6	10.459	20.6	8.2	4.72	5125	17.33	6.51
011135986-03	OBS	No	345.929773	341.082334	992.7	4.532	19.0	6.8	4.72	5125	15.19	12.38
011135986-04	OBS	No	324.761518	188.124398	1224.3	4.731	18.8	7.9	4.72	5125	16.81	13.46
011135986-05	OBS	No	553.204915	314.774970	838.8	4.574	16.4	6.5	4.72	5125	14.79	6.62
011135986-06	OBS	No	363.182774	350.898874	1221.5	7.290	15.2	7.6	4.72	5125	16.14	11.60
011135986-07	OBS	No	396.124994	168.127933	1176.2	3.500	16.3	-1.0	4.72	5125	15.87	10.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011135986-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
011135986-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011135986-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011135986-05	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_FEW_DIFFS
011135986-06	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—CENT_FEW_DIFFS—HALO_GHOST
011135986-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

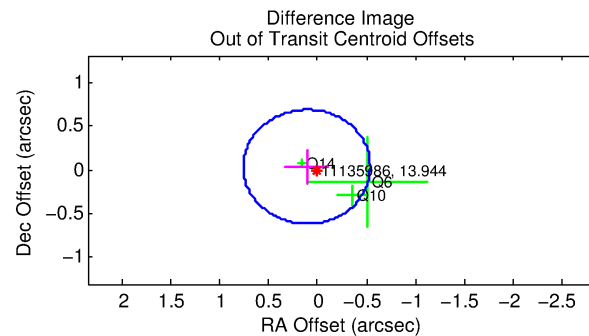
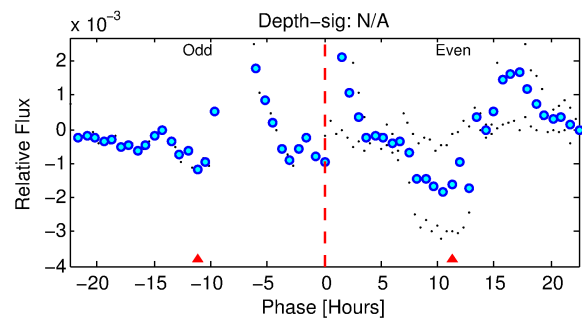
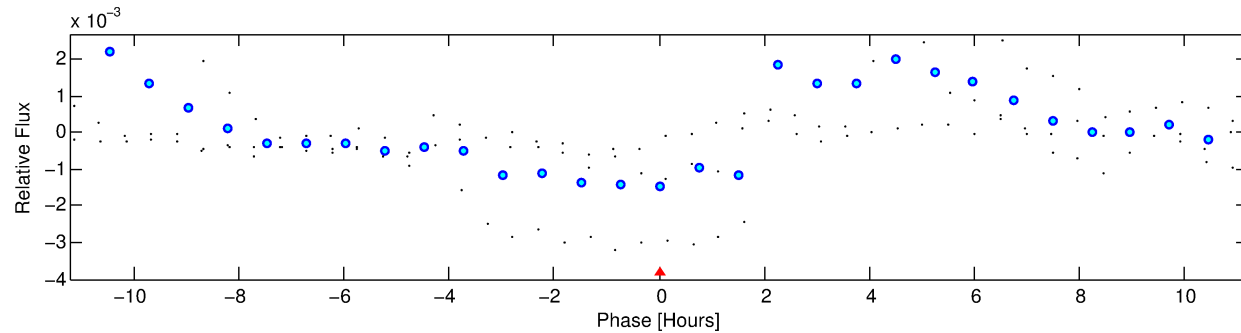
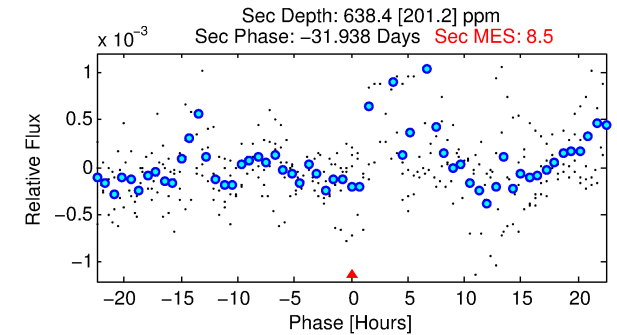
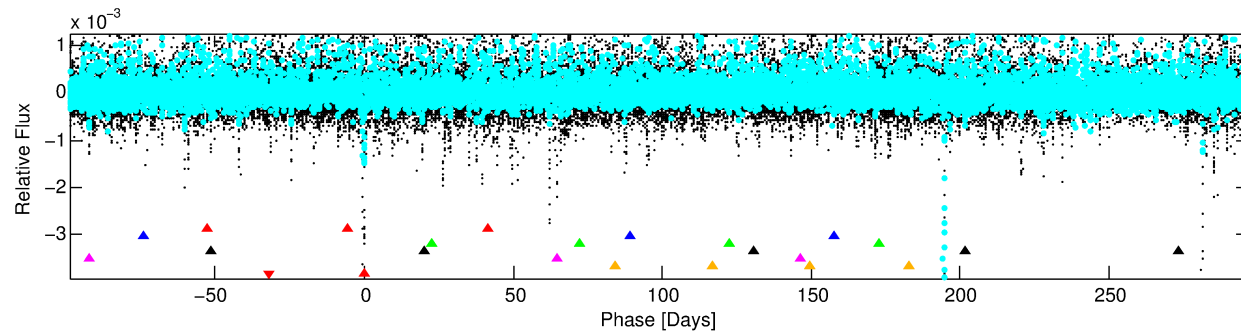
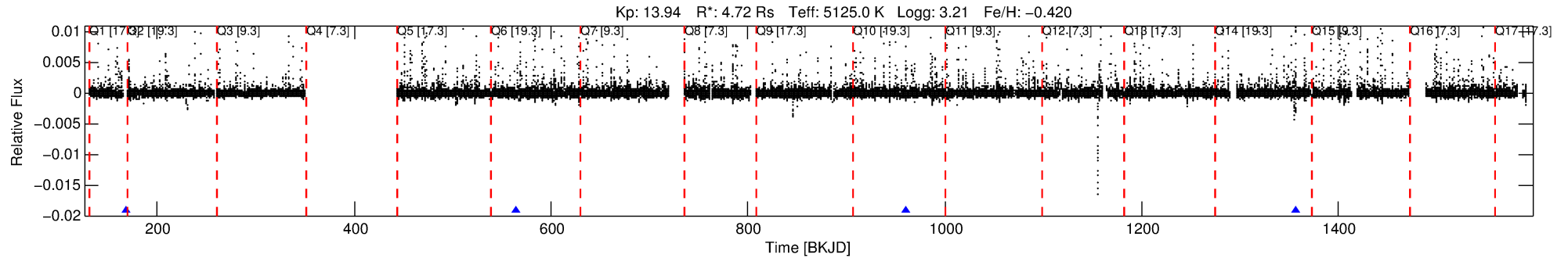
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011135986-07

No Significant Match Found

DV One-Page Summary

KIC: 11135986 Candidate: 7 of 7 Period: 396.125 d



TPS TCE Results:

Period = 396.12499 d
Epoch = 168.1279 BKJD

DV fit results are unavailable

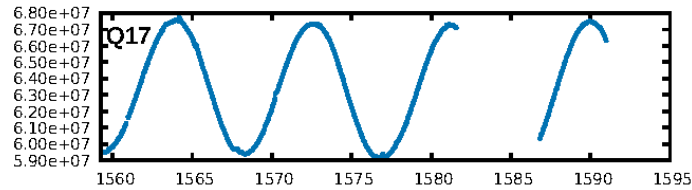
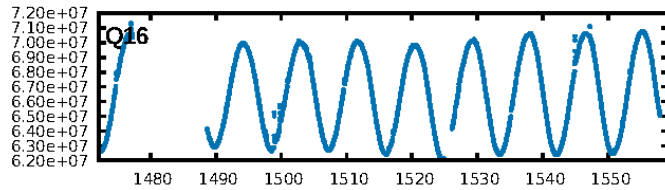
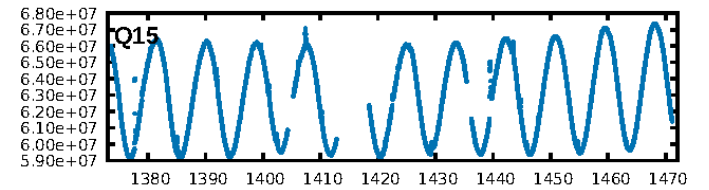
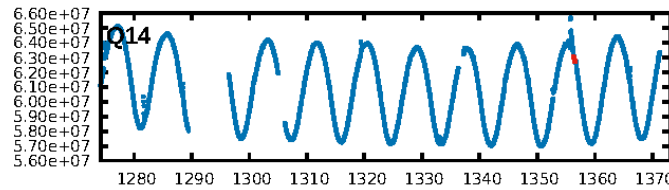
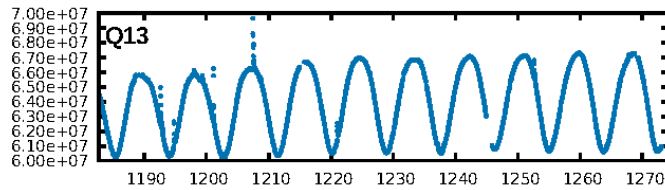
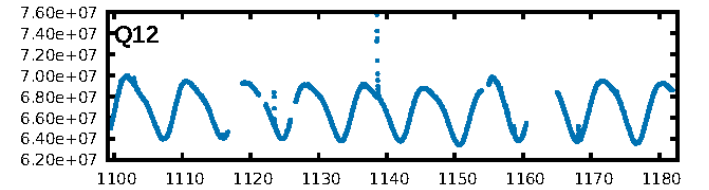
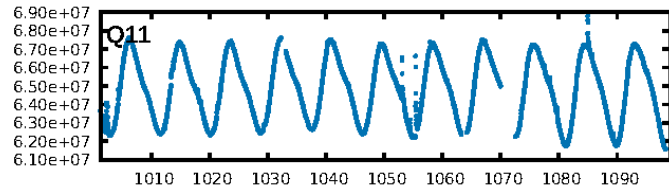
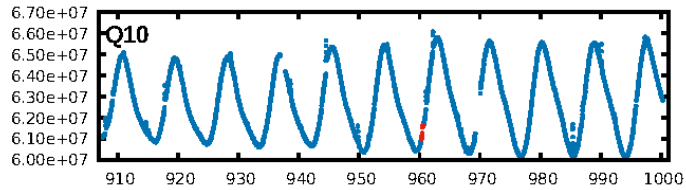
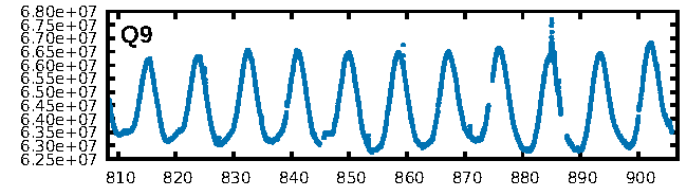
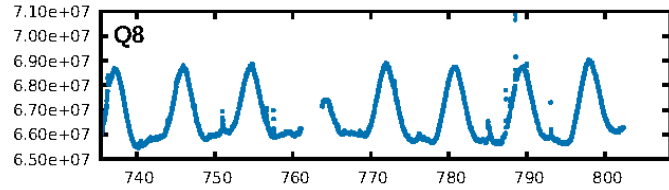
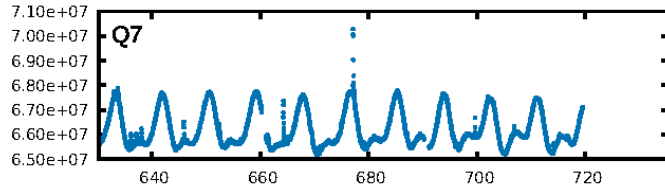
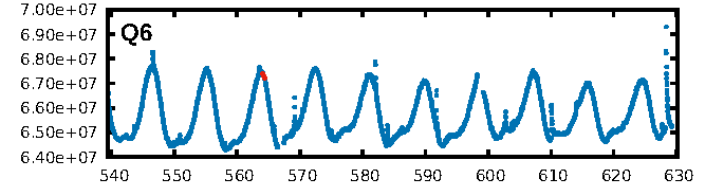
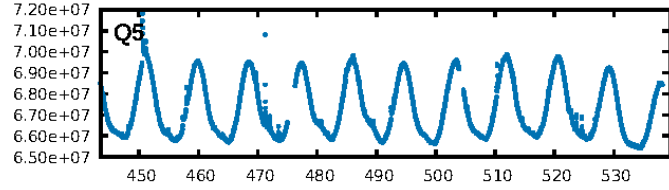
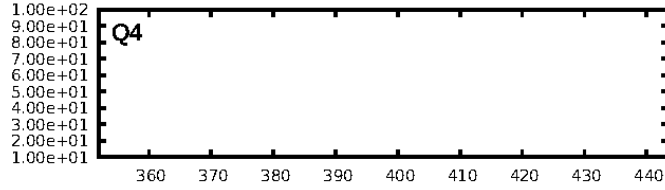
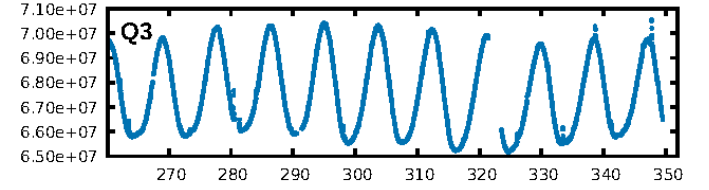
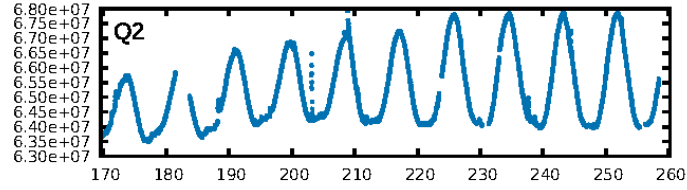
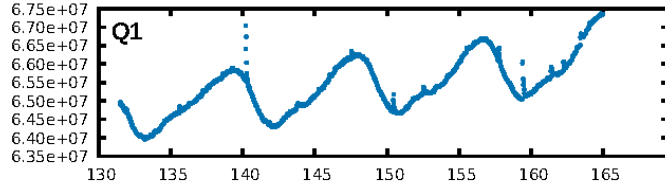
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [97.77 σ]
LongPeriod-sig: 100.0% [148.16 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.5177
Centroid-sig: 71.1%
Centroid-so: 0.437 arcsec [1.25 σ]
OotOffset-rm: 0.117 arcsec [0.54 σ]
KicOffset-rm: 0.094 arcsec [0.50 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

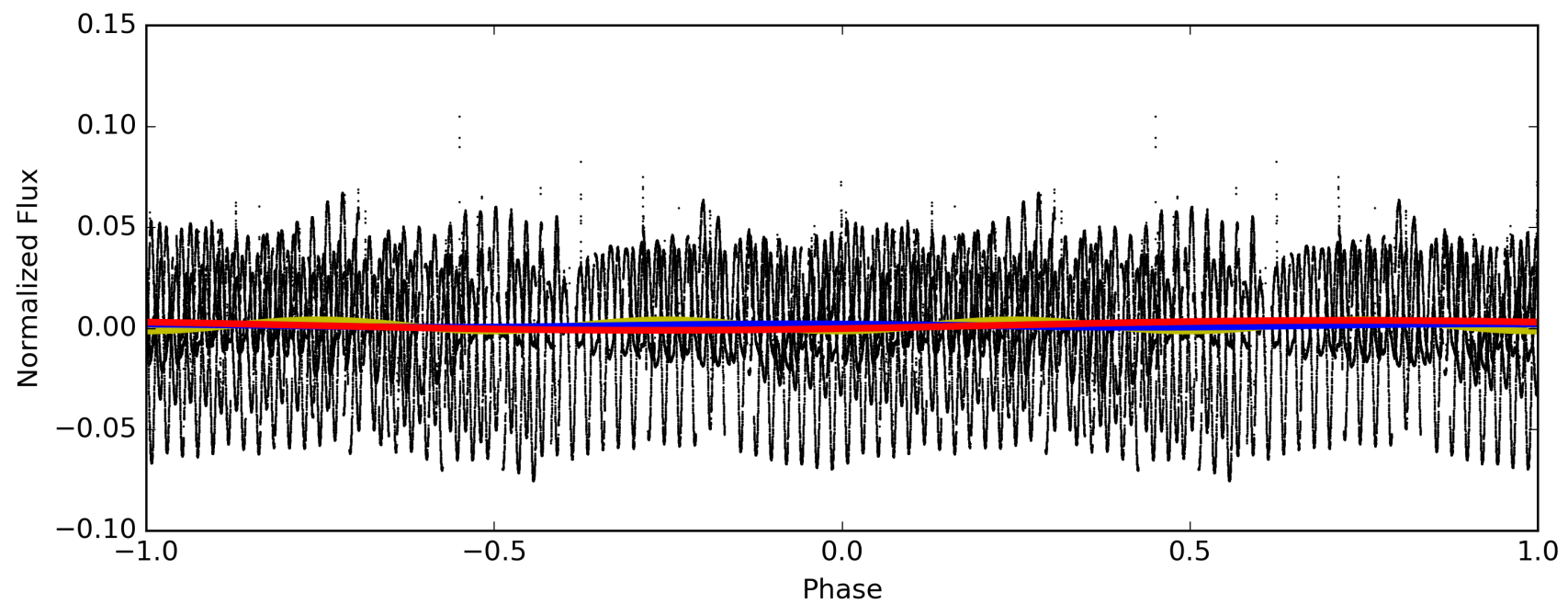
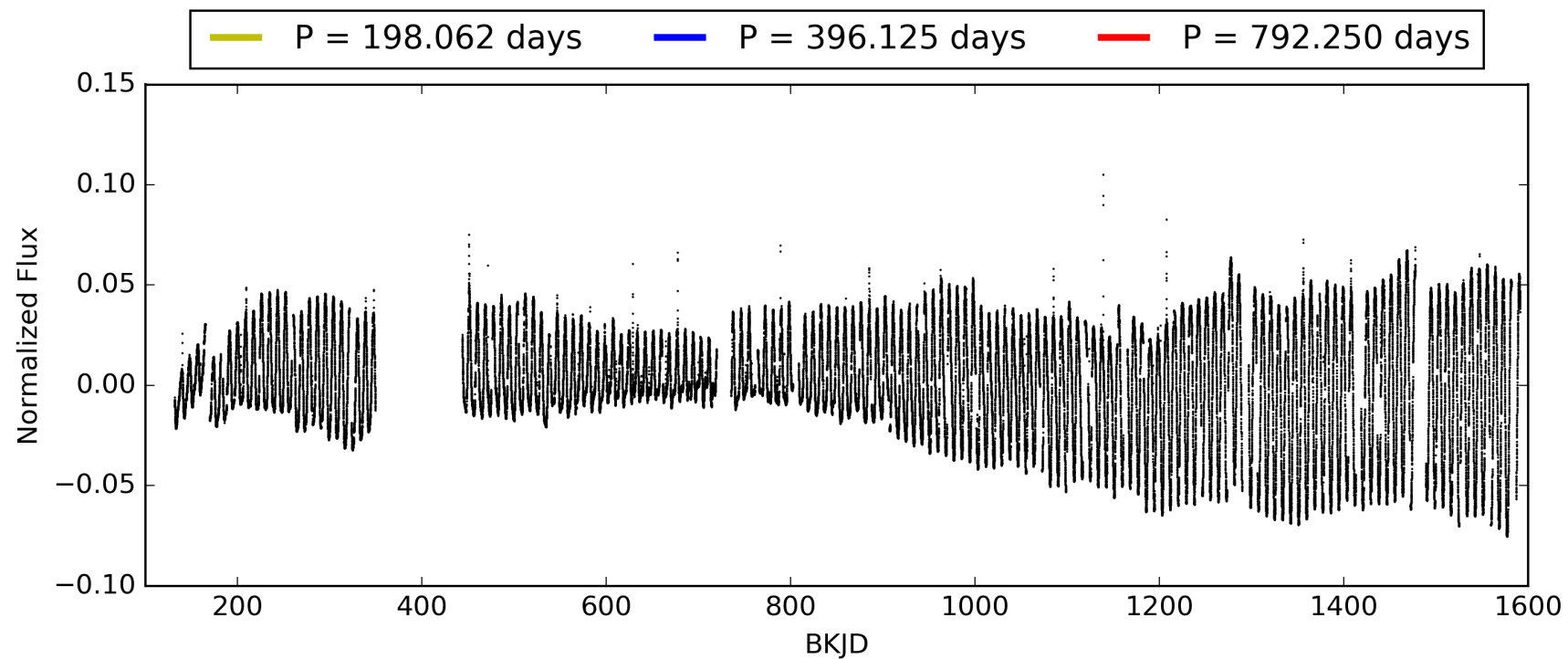
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:10:11 Z

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

TCE 011135986-07, PDC Light Curves

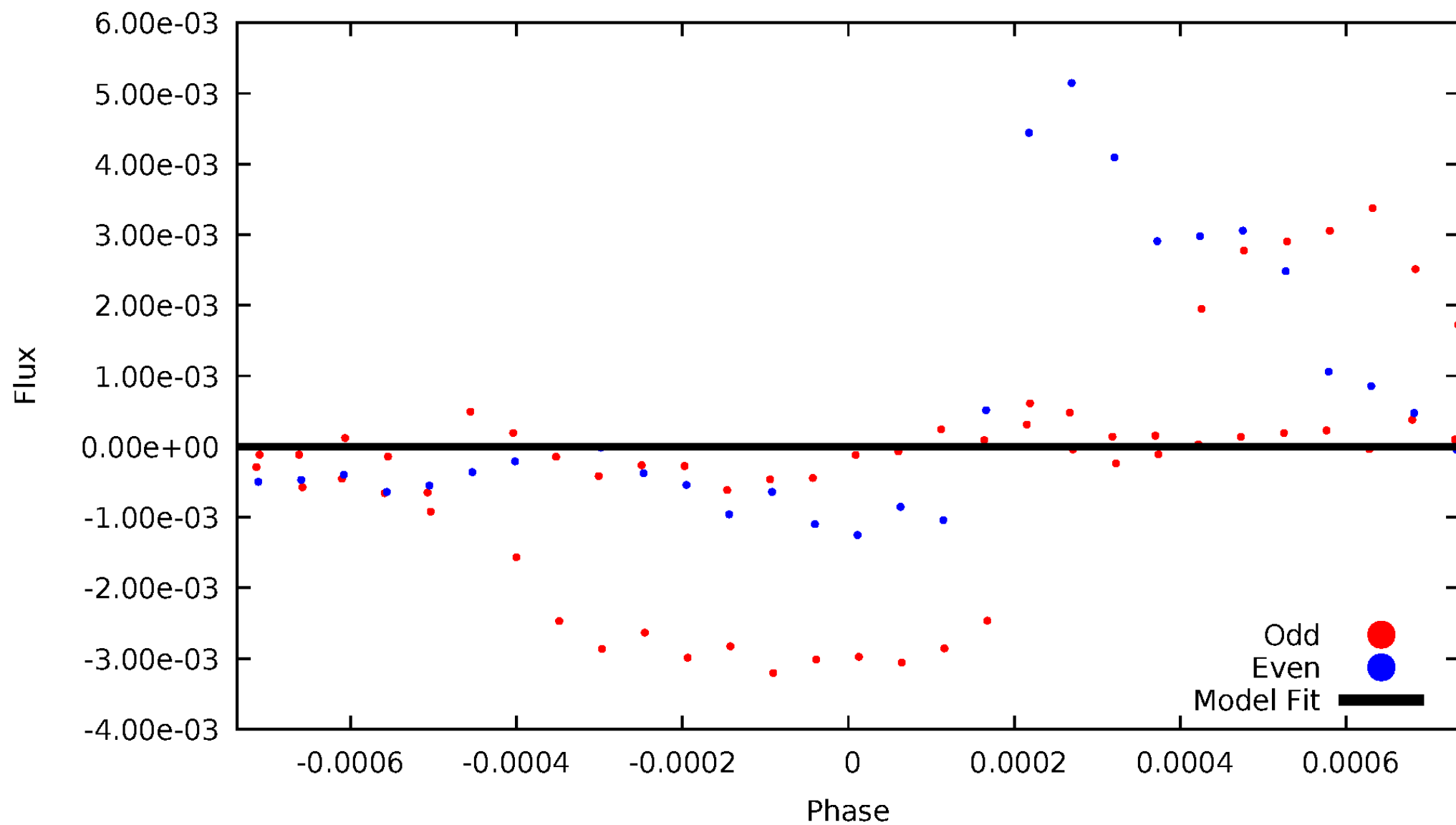


TCE 011135986-07



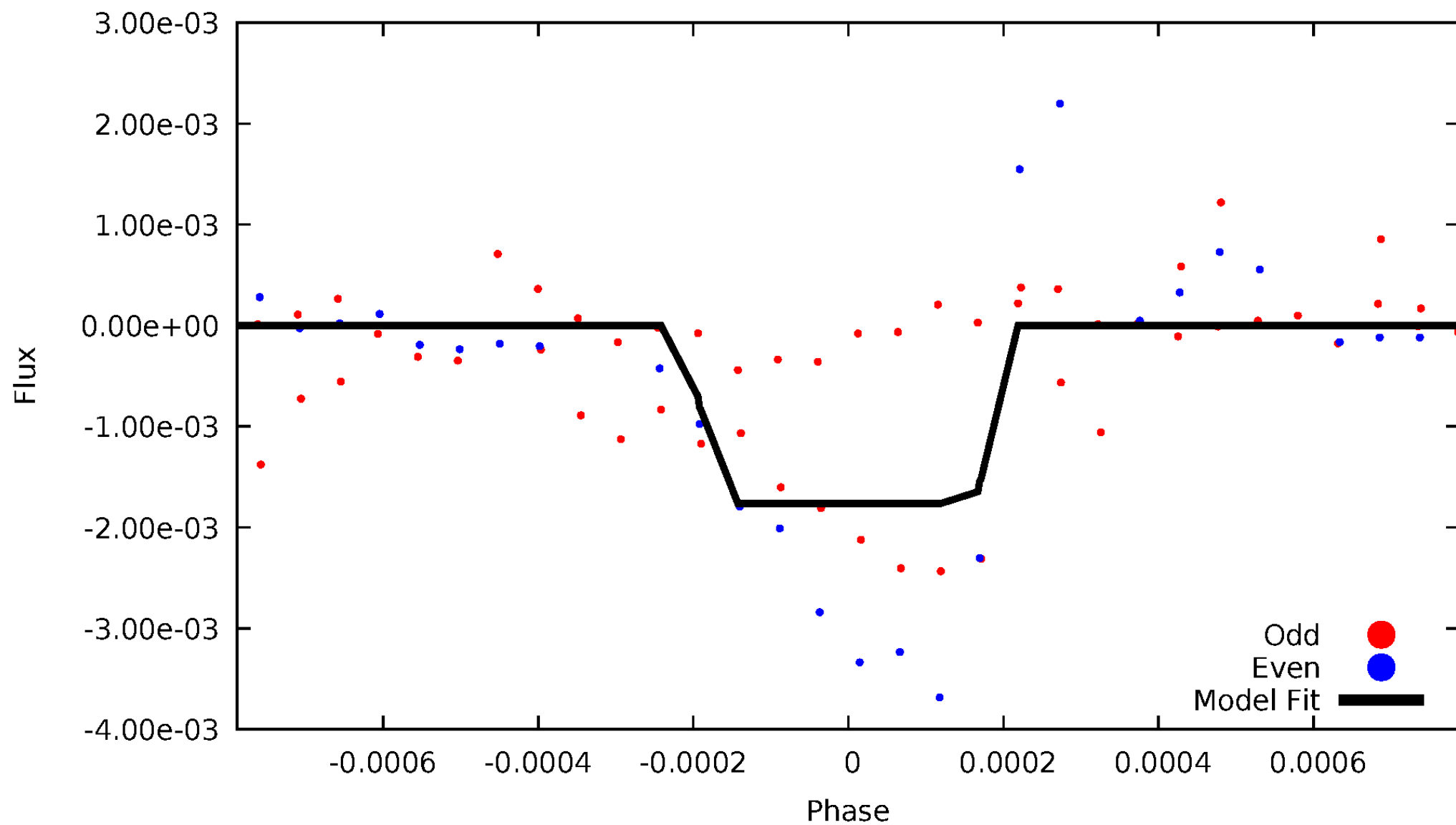
DV Odd/Even

TCE 011135986-07

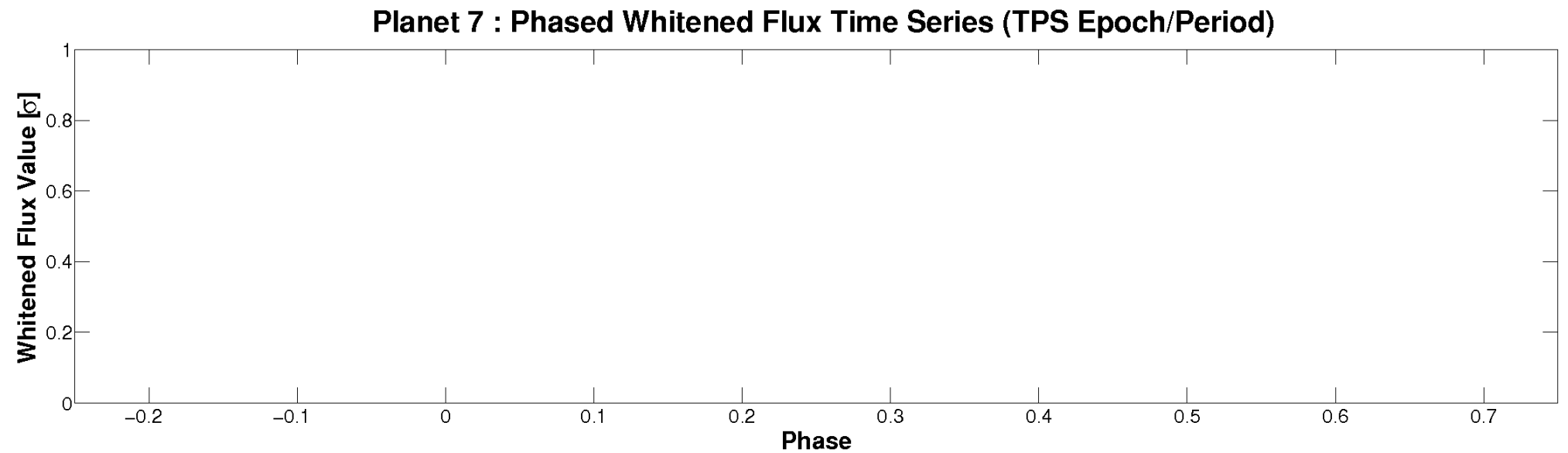
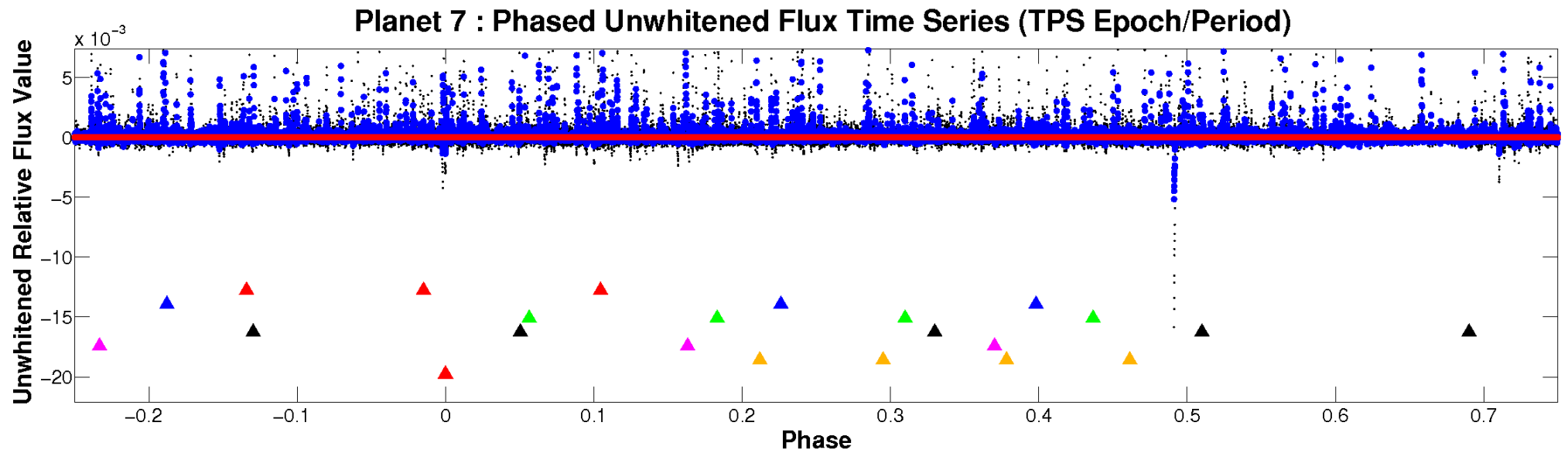


ALT Odd/Even

TCE 011135986-07

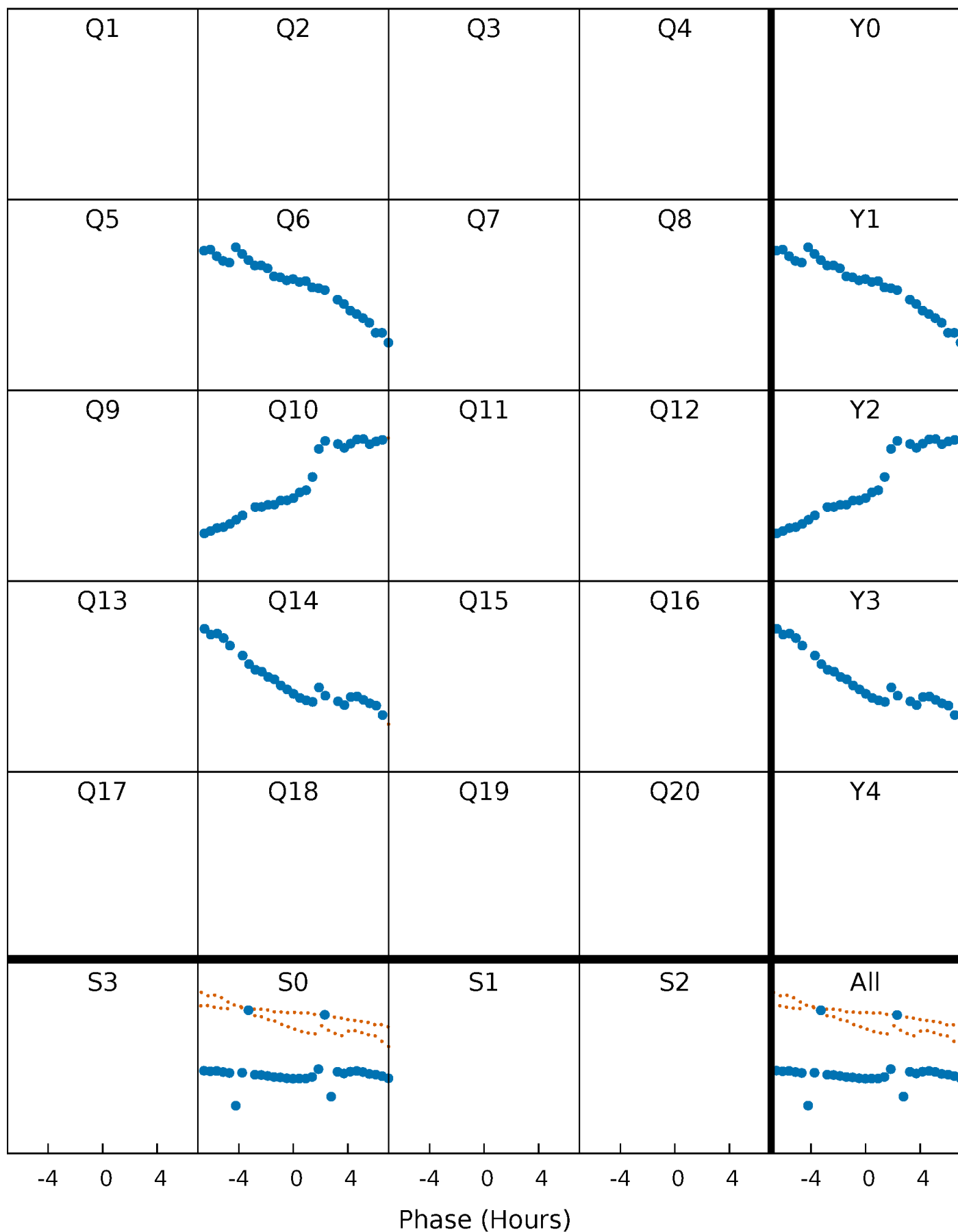


Non-Whitened Vs. Whitened Light Curve



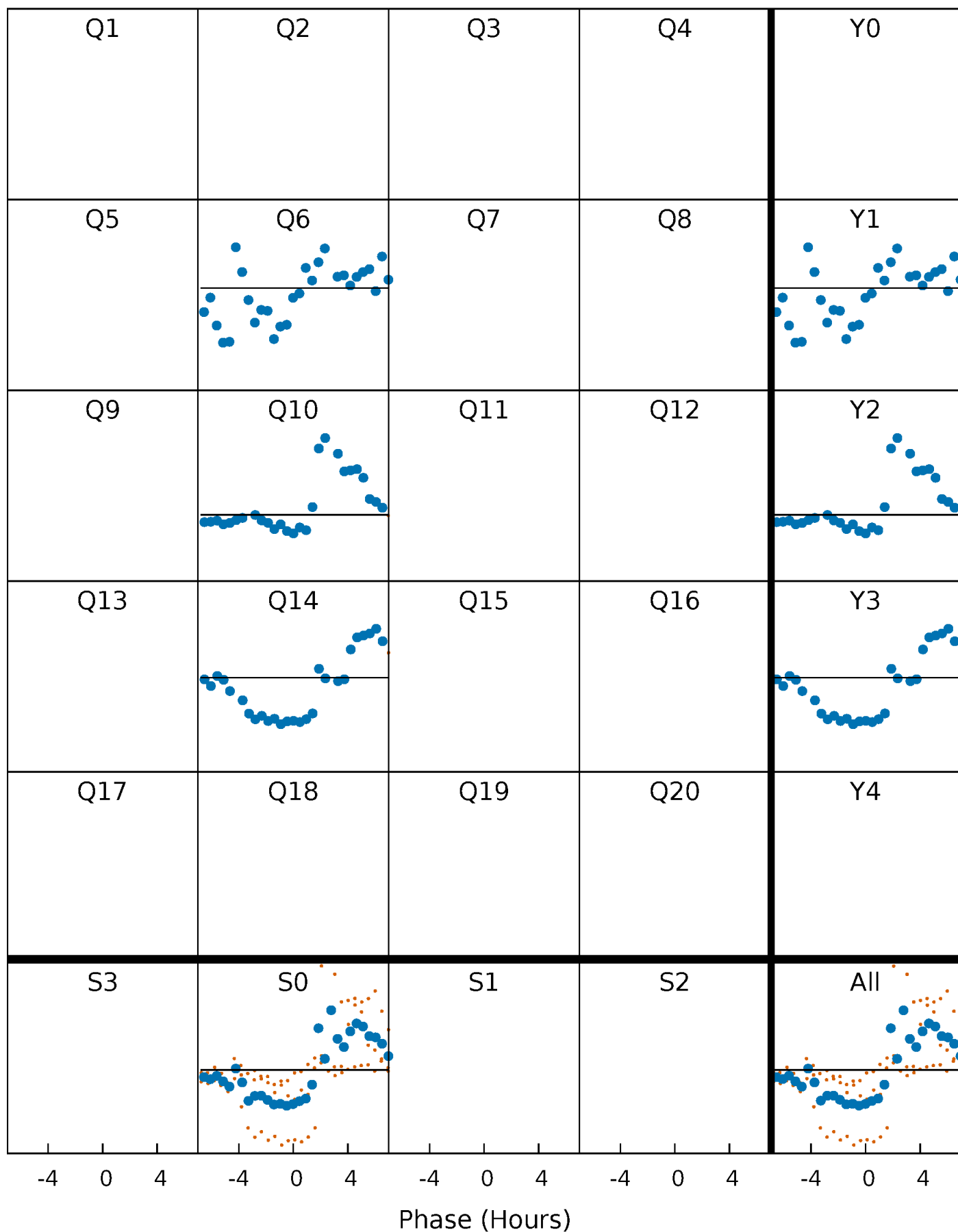
PDC Quarter-Phased Transit Curves

TCE 011135986-07 P=396.124994 Days $T_0=168.127933$ (BKJD)



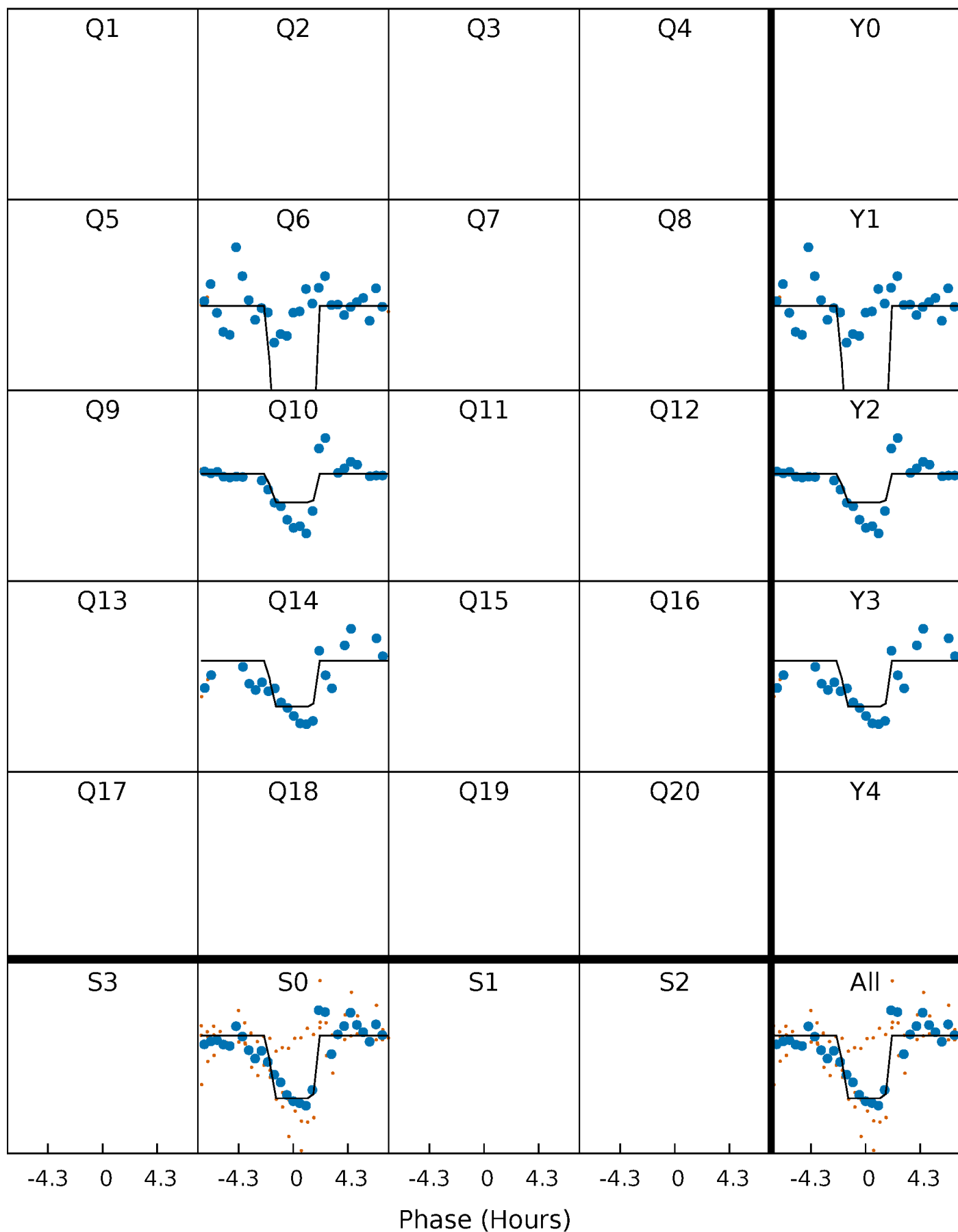
DV Quarter-Phased Transit Curves

TCE 011135986-07 $P=396.124994$ Days $T_0=168.127933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

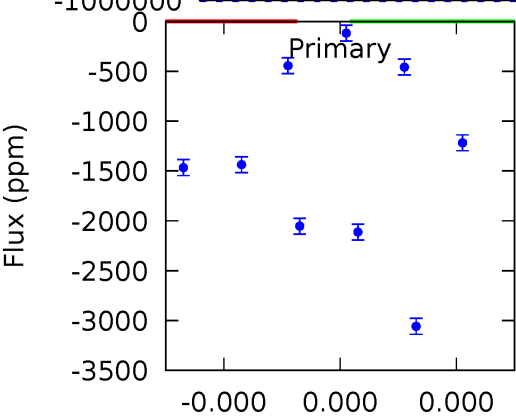
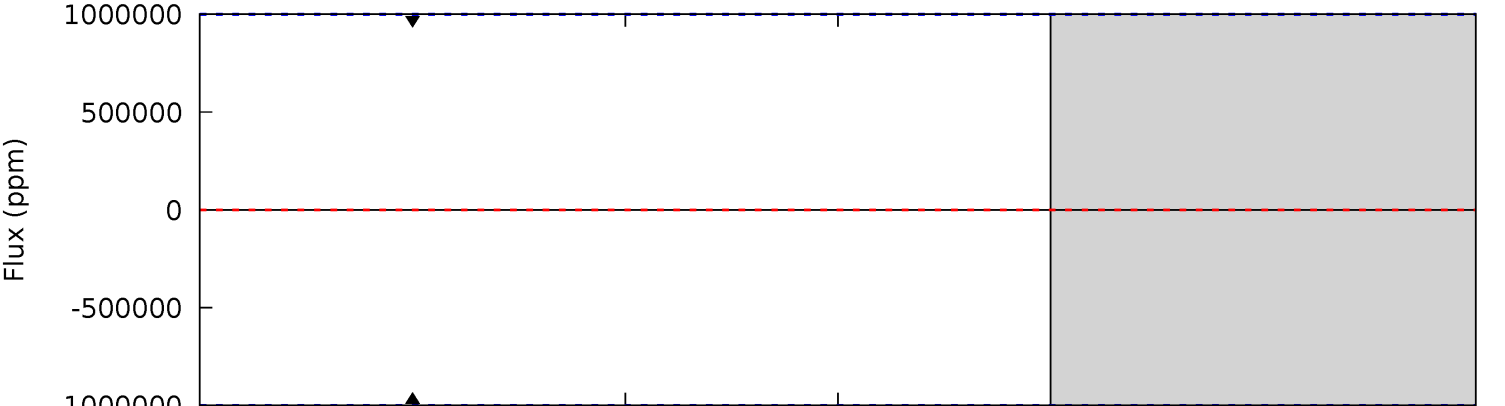
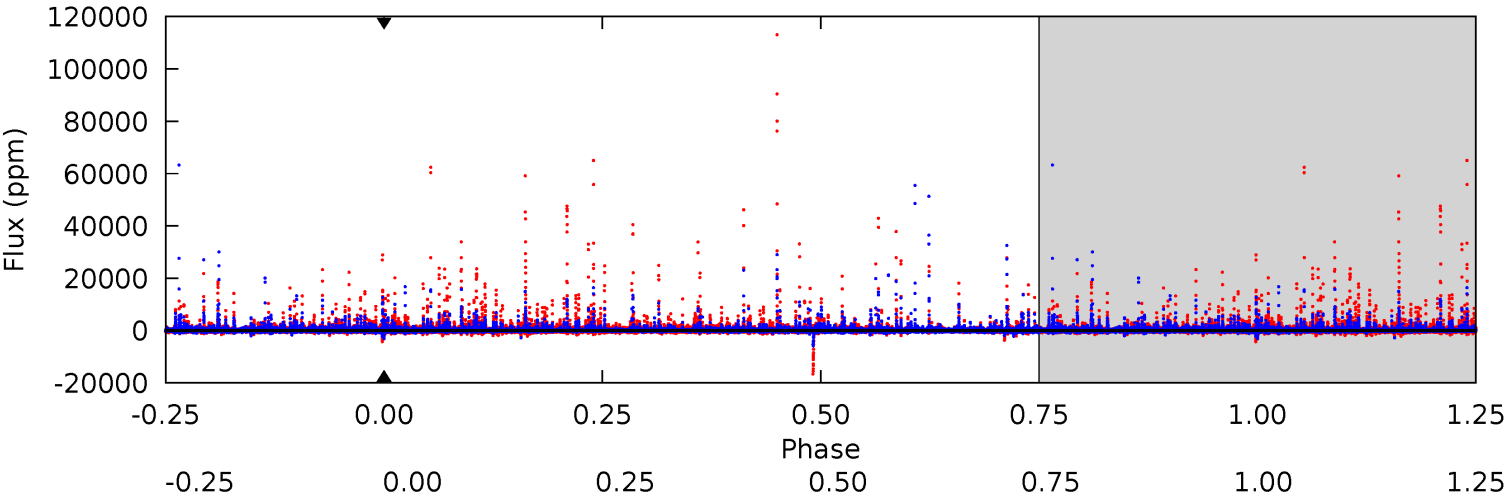
TCE 011135986-07 P=396.124994 Days $T_0=168.126531$ (BKJD)



DV Model-Shift Uniqueness Test

011135986-07, P = 396.124994 Days, E = 168.127933 Days

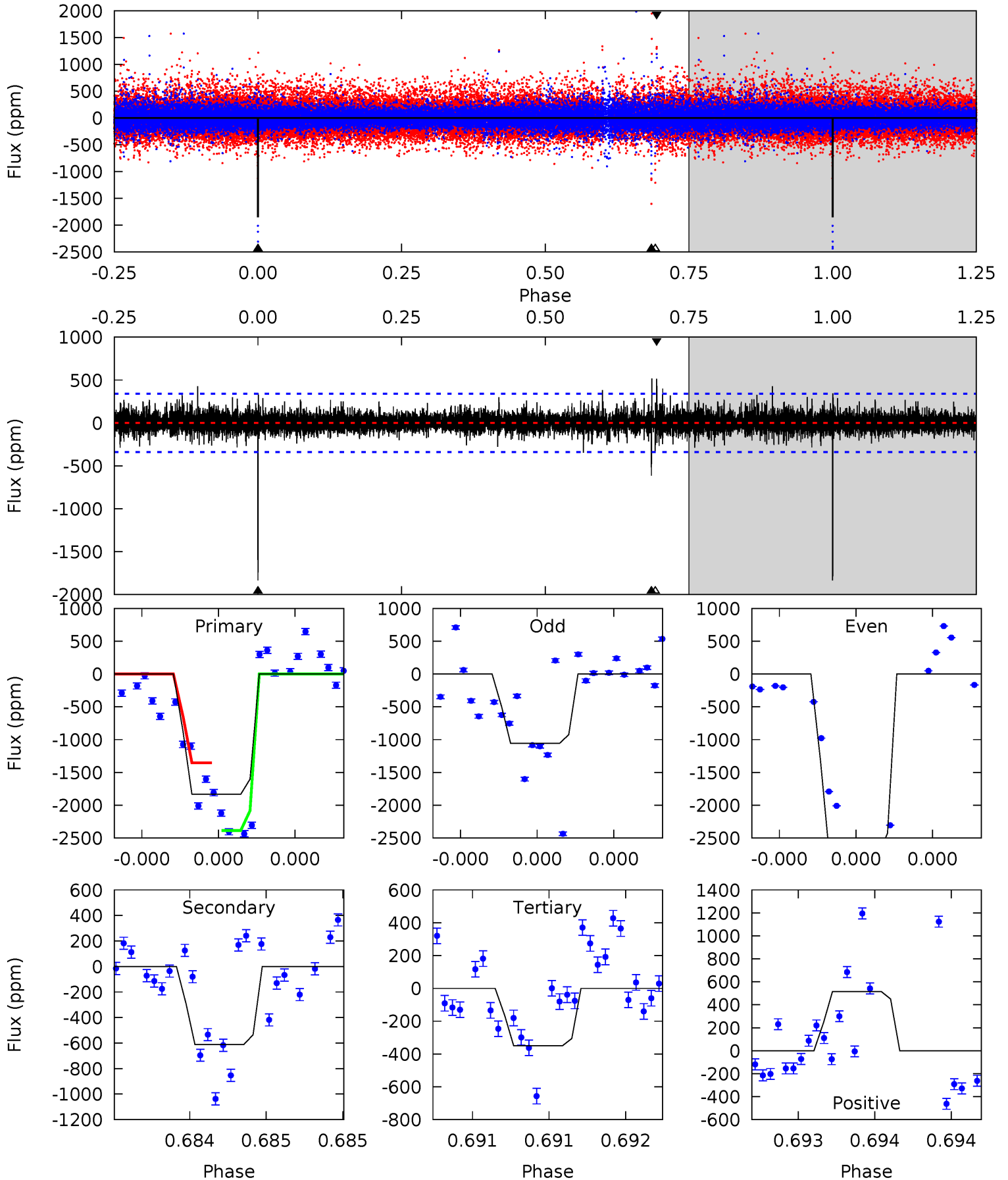
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011135986-07, P = 396.124994 Days, E = 168.126531 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.2	10.1	5.77	8.50	5.61	3.53	1.10	24.5	21.7	4.33	1.60	17.7	0.82	0.22	8.58



Stellar Parameters For KIC 011135986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5125^{+115}_{-128}	$3.207^{+0.354}_{-0.236}$	$-0.420^{+0.250}_{-0.250}$	$4.724^{+1.760}_{-1.760}$	$1.310^{+0.189}_{-0.350}$	$0.018^{+0.046}_{-0.010}$
	+2%/-2%	+11%/-7%	+60%/-60%	+37%/-37%	+14%/-27%	+262%/-58%
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 011135986-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$36.14^{+45.88}_{-24.38}$	631^{+68}_{-63}	-3616^{+18529}_{-11200}	$-626.774^{+93386.460}_{-83622.623}$
Alt.	-612 ± 61	$42.67^{+43.53}_{-29.10}$	637^{+66}_{-67}	3279^{+1582}_{-572}	236^{+2086}_{-176}

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

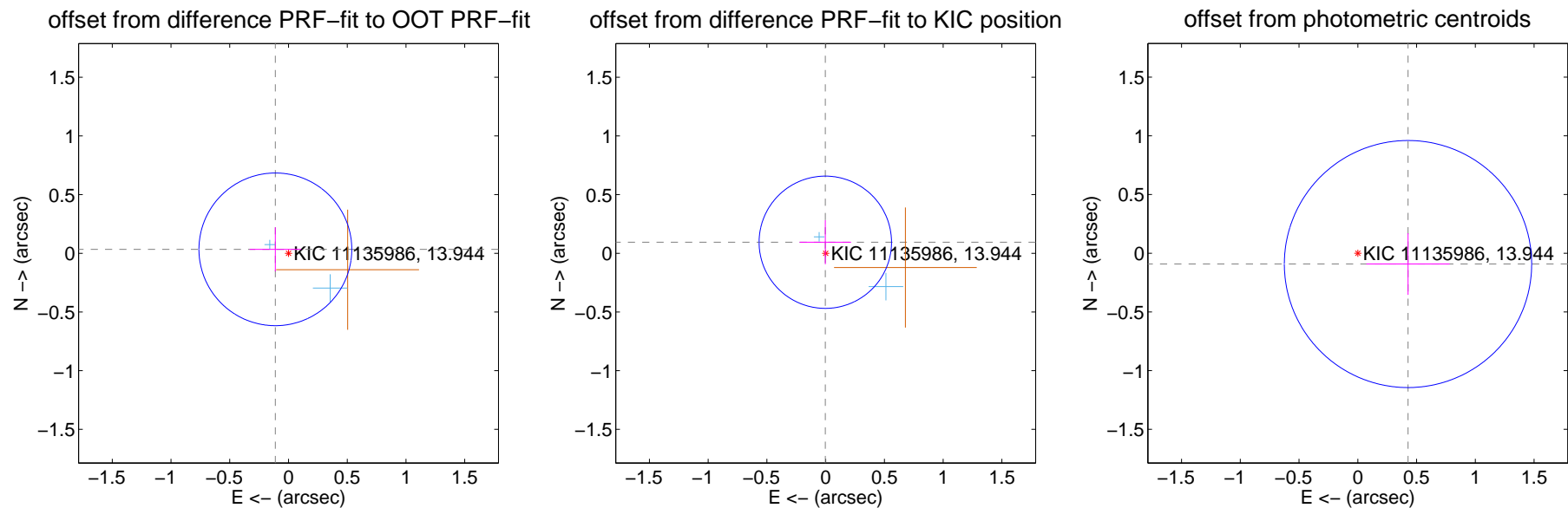
DV Centroid Data

Supplemental centroid analysis for 011135986-07. Kepler magnitude: 13.94. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.117 ± 0.217	0.54	0.112 ± 0.219	0.034 ± 0.188
PRF-fit source offset from KIC position	0.094 ± 0.188	0.50	0.003 ± 0.219	0.094 ± 0.188
photometric centroid source offset	0.44 ± 0.35	1.25	-0.43 ± 0.35	-0.09 ± 0.26

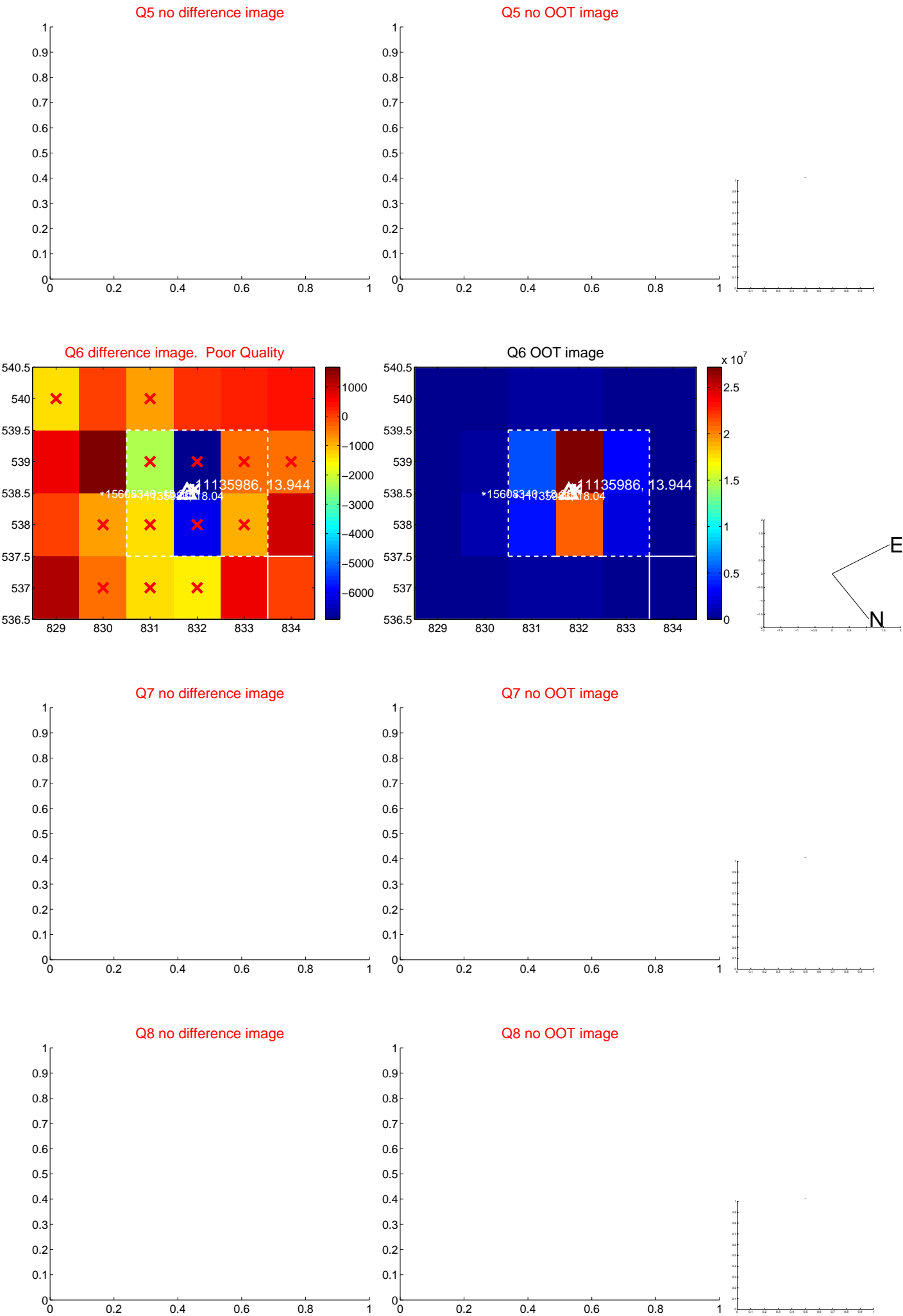


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

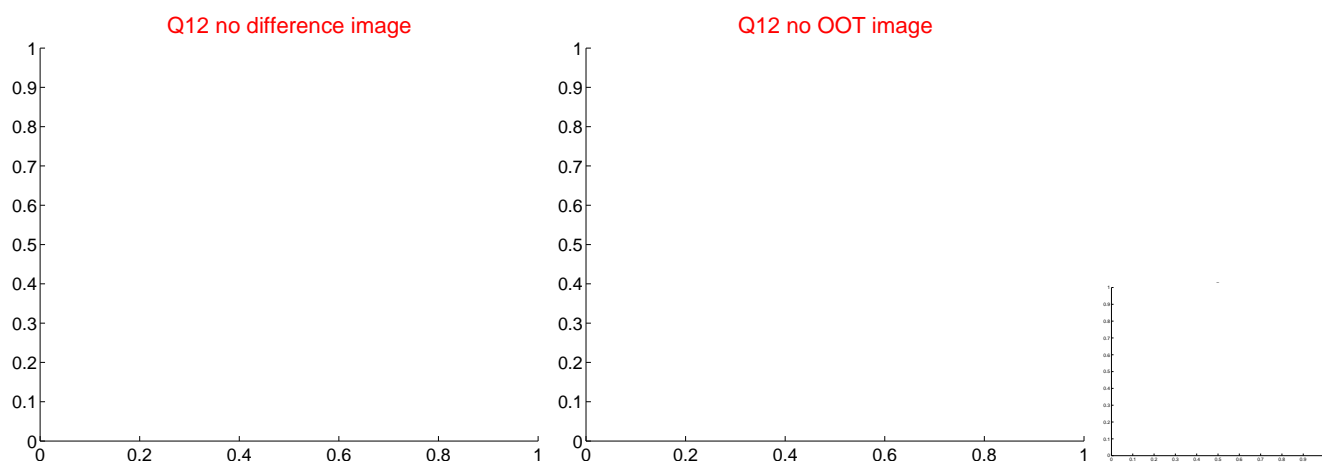
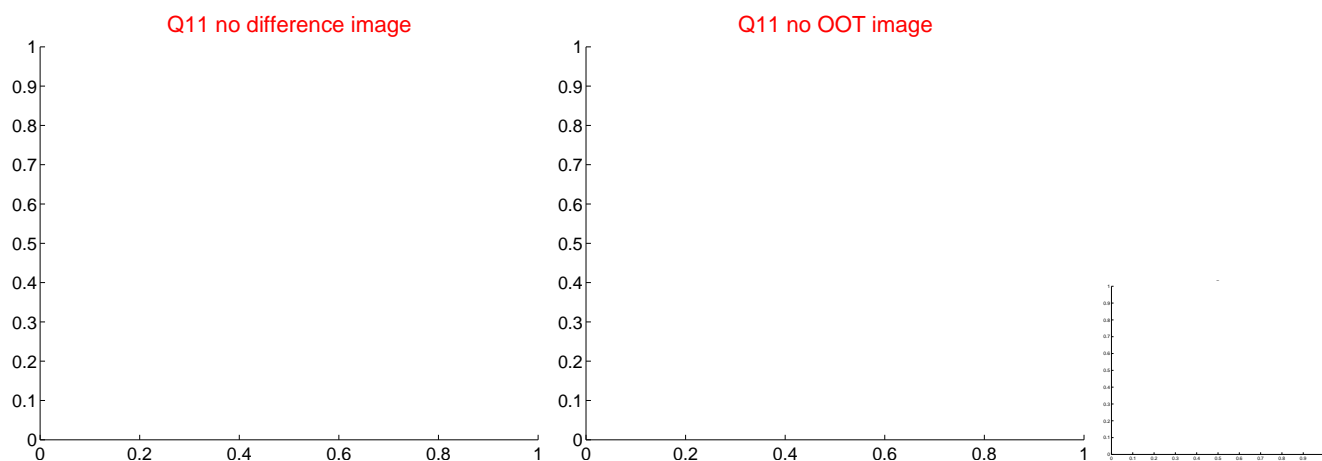
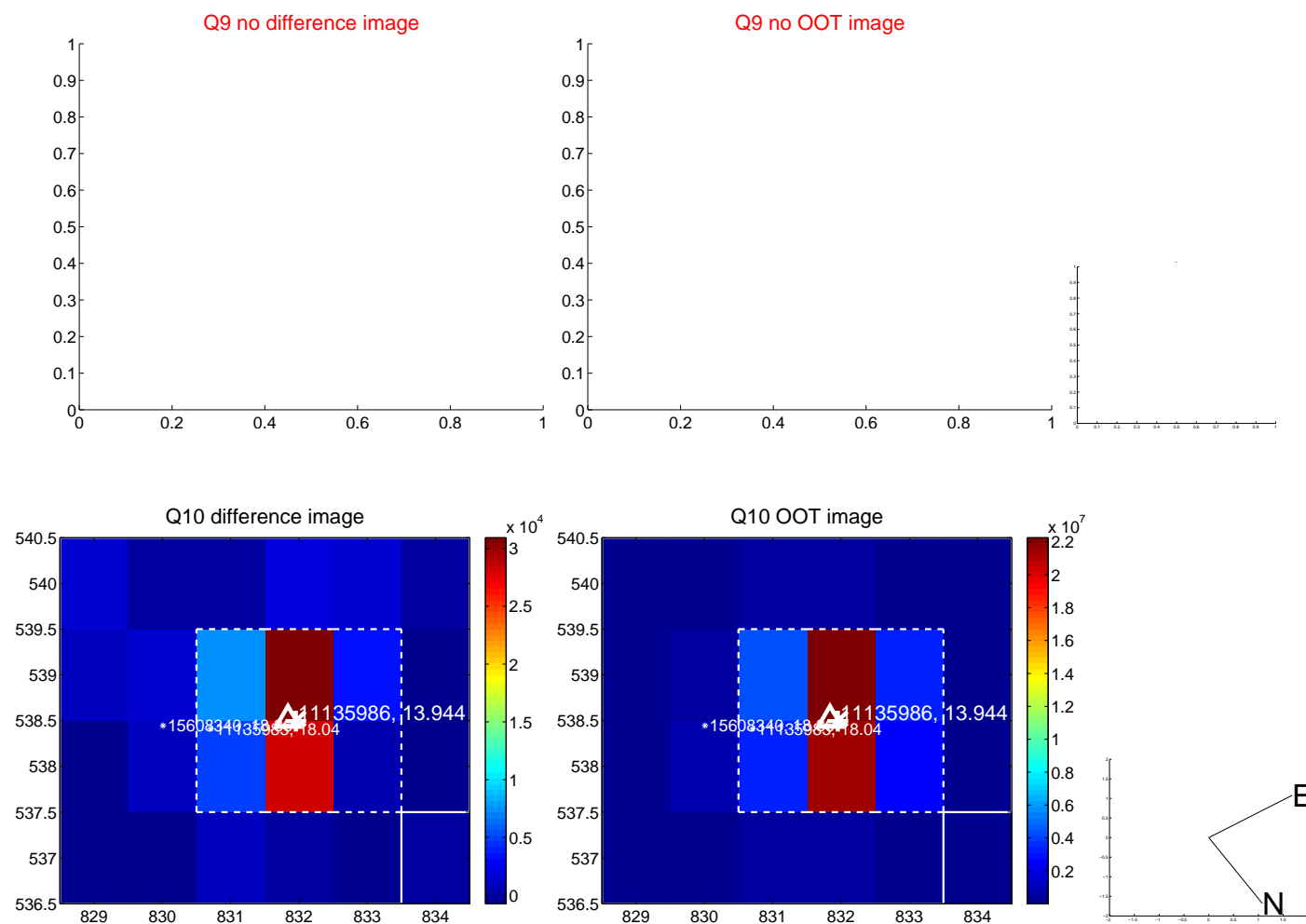
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



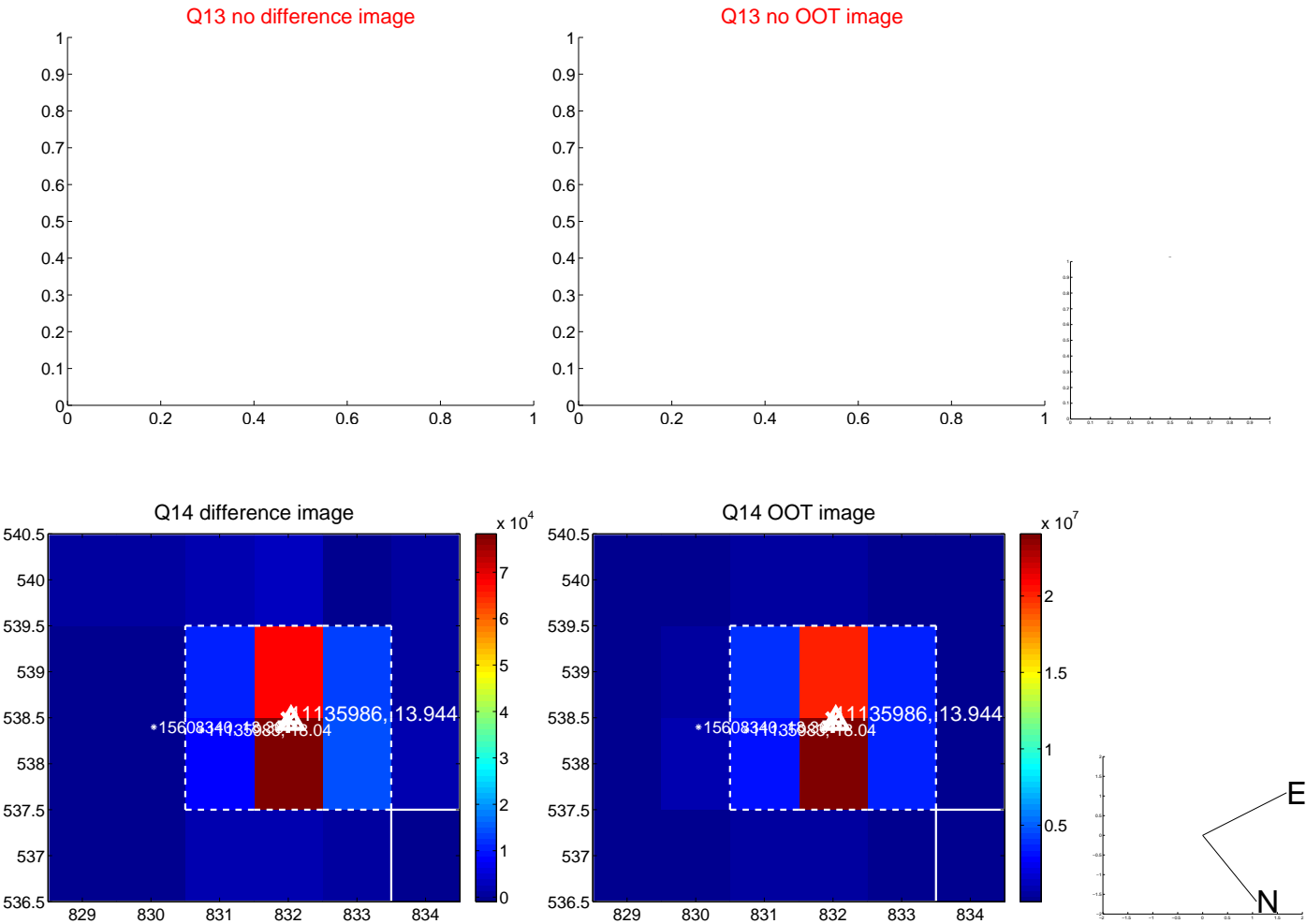
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



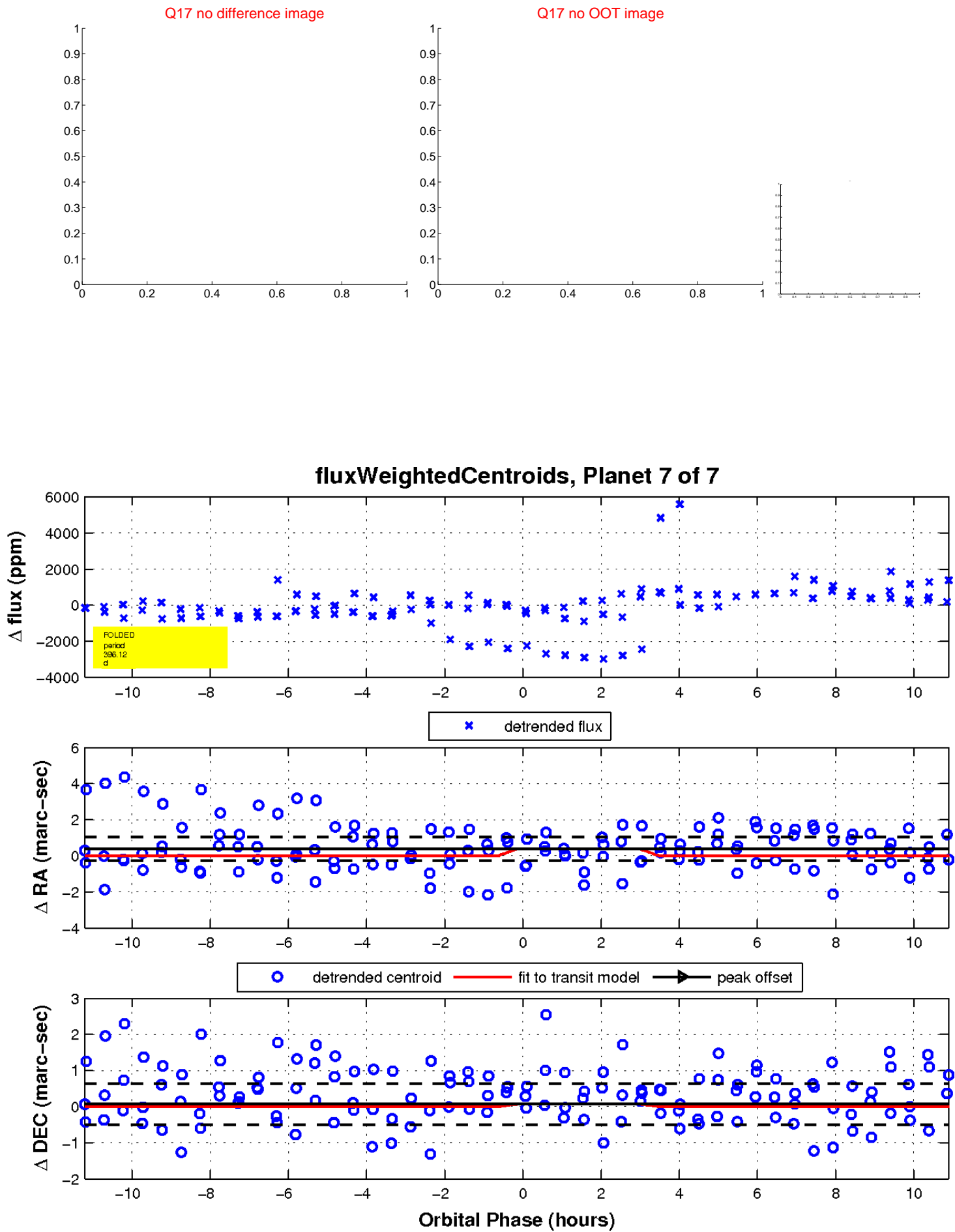
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

