

KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

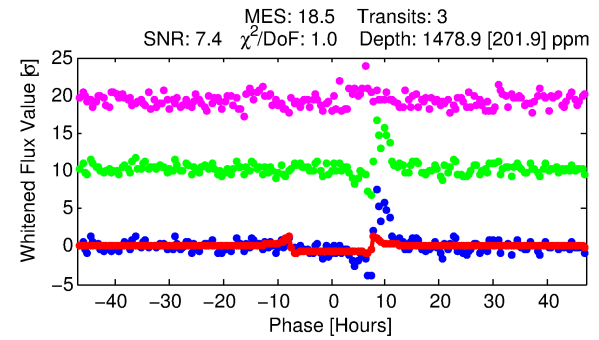
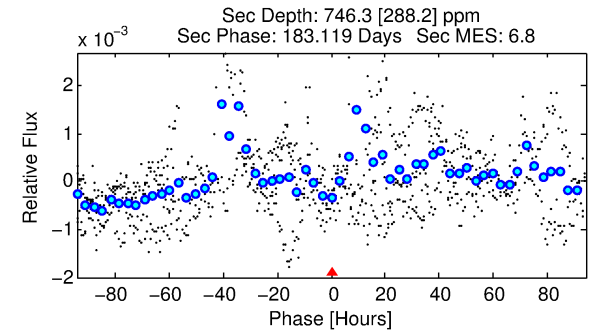
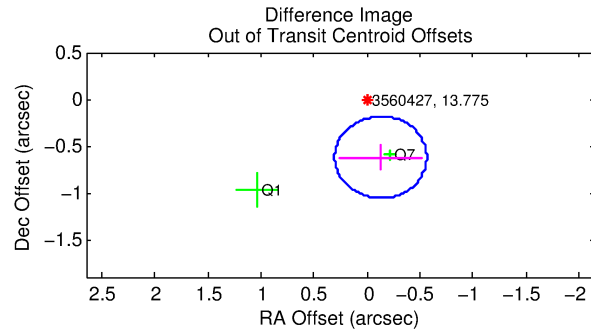
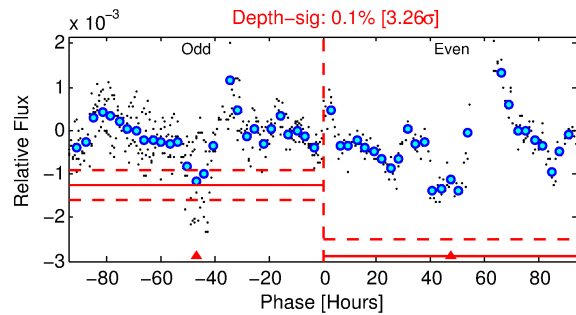
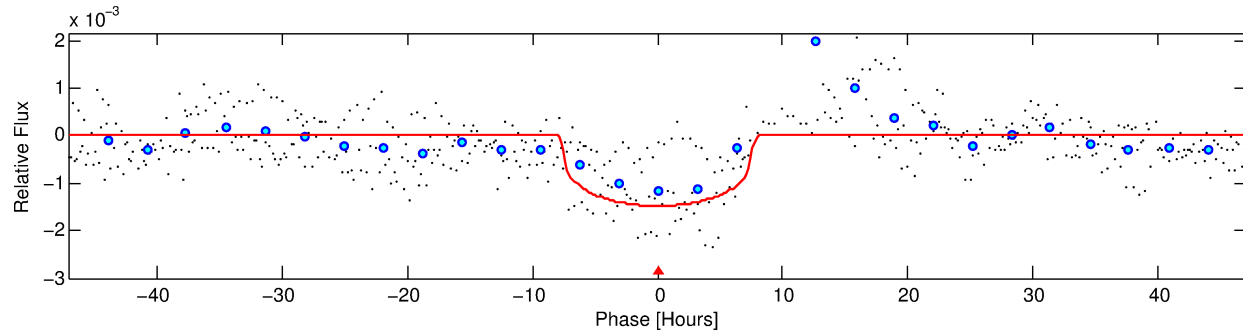
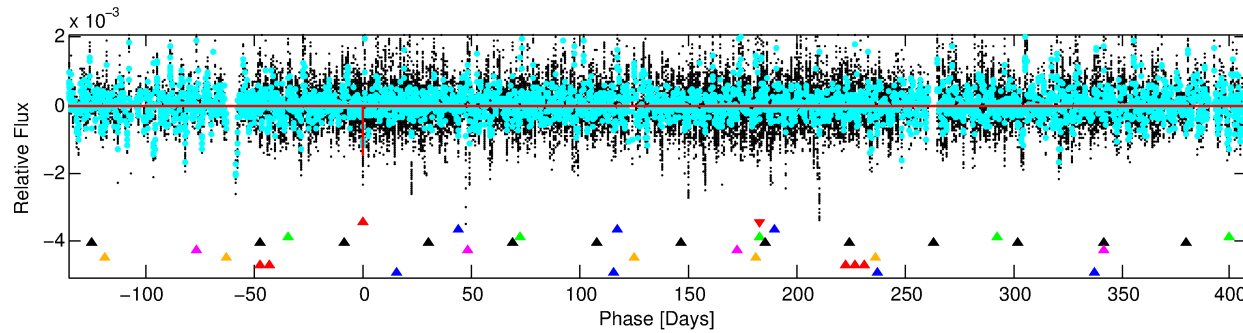
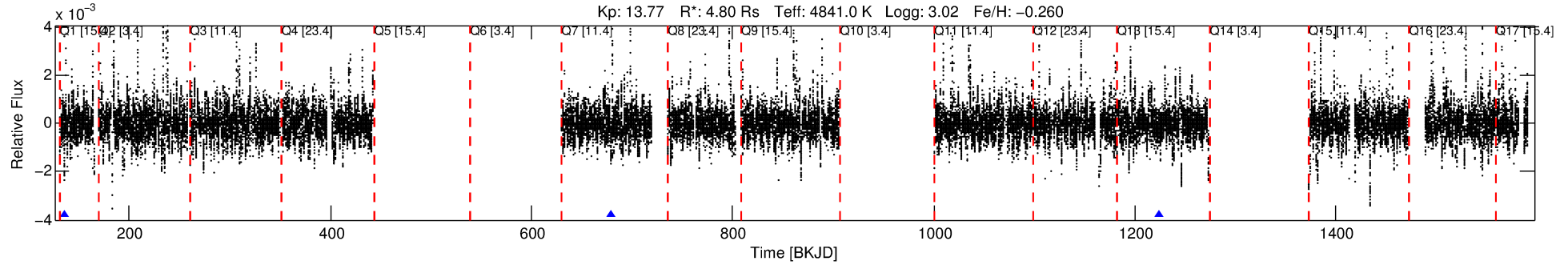
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-01

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 1 of 8 Period: 543.765 d



DV Fit Results:

Period = 543.76468 [0.00555] d
Epoch = 136.0104 [0.0072] BKJD
Rp/R* = 0.0345 [0.0075]
a/R* = 262.23 [175.59]
b = 0.29 [2.10]
Seff = 7.25 [5.65]
Teq = 418 [82] K
Rp = 18.06 [12.22] Re
a = 1.2503 [0.6679] AU
Ag = 1968.32 [1900.38] [1.04 σ]
Teffp = 4308 [640] K [6.03 σ]

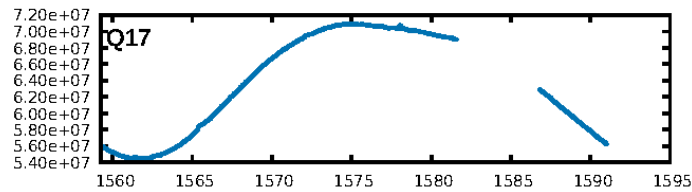
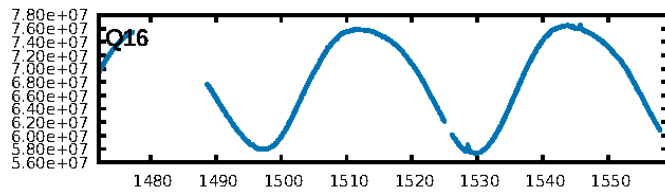
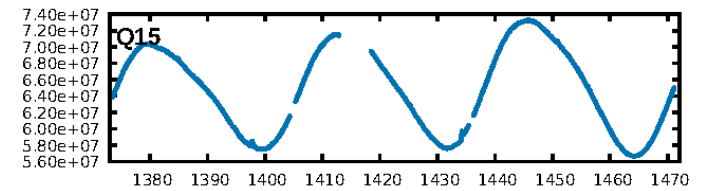
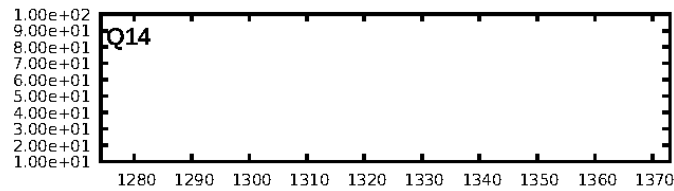
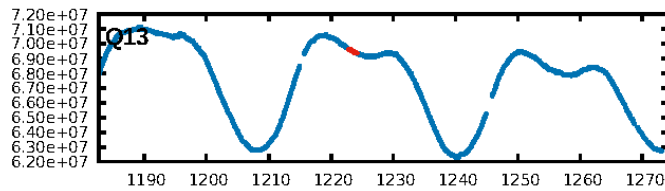
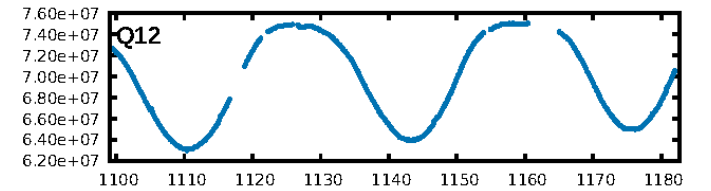
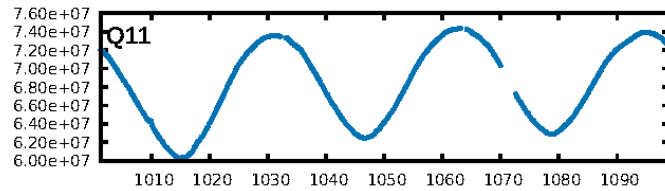
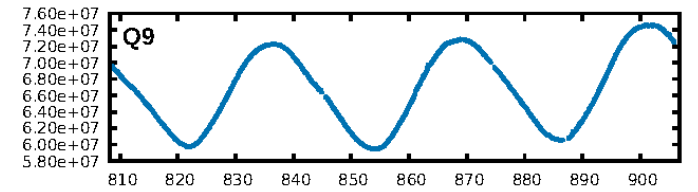
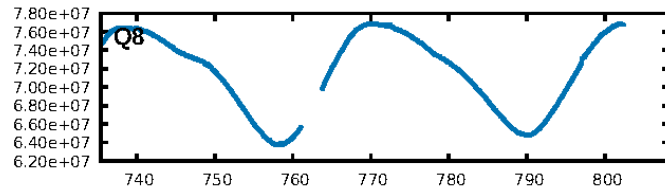
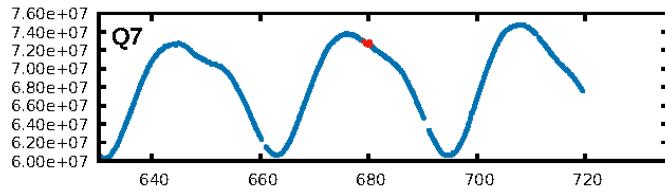
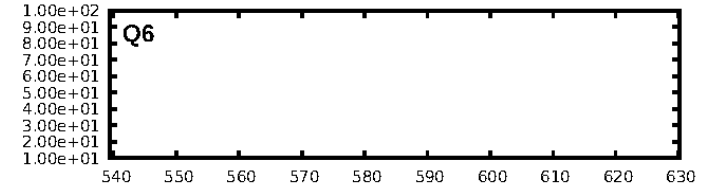
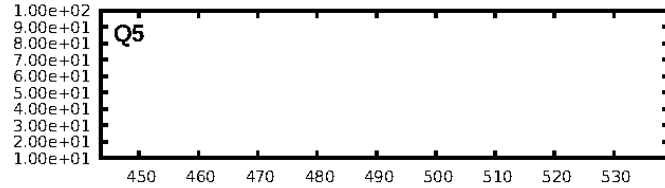
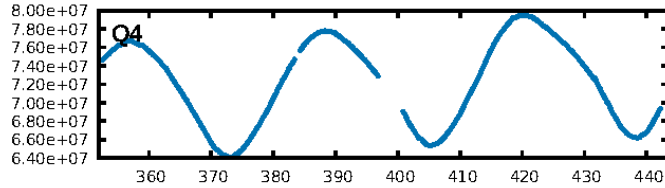
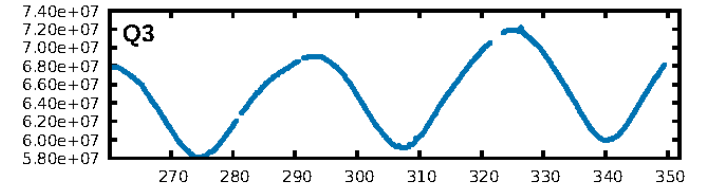
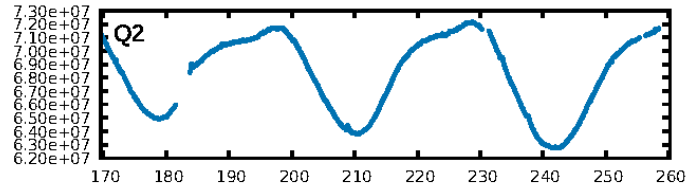
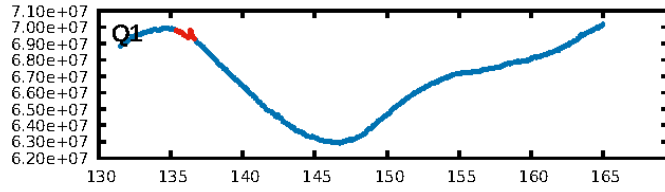
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [88.45 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 4.77e-20
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -3.473
Centroid-sig: 35.9%
Centroid-so: 0.141 arcsec [0.30 σ]
OotOffset-rm: 0.634 arcsec [4.37 σ]
KicOffset-rm: 0.649 arcsec [3.29 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

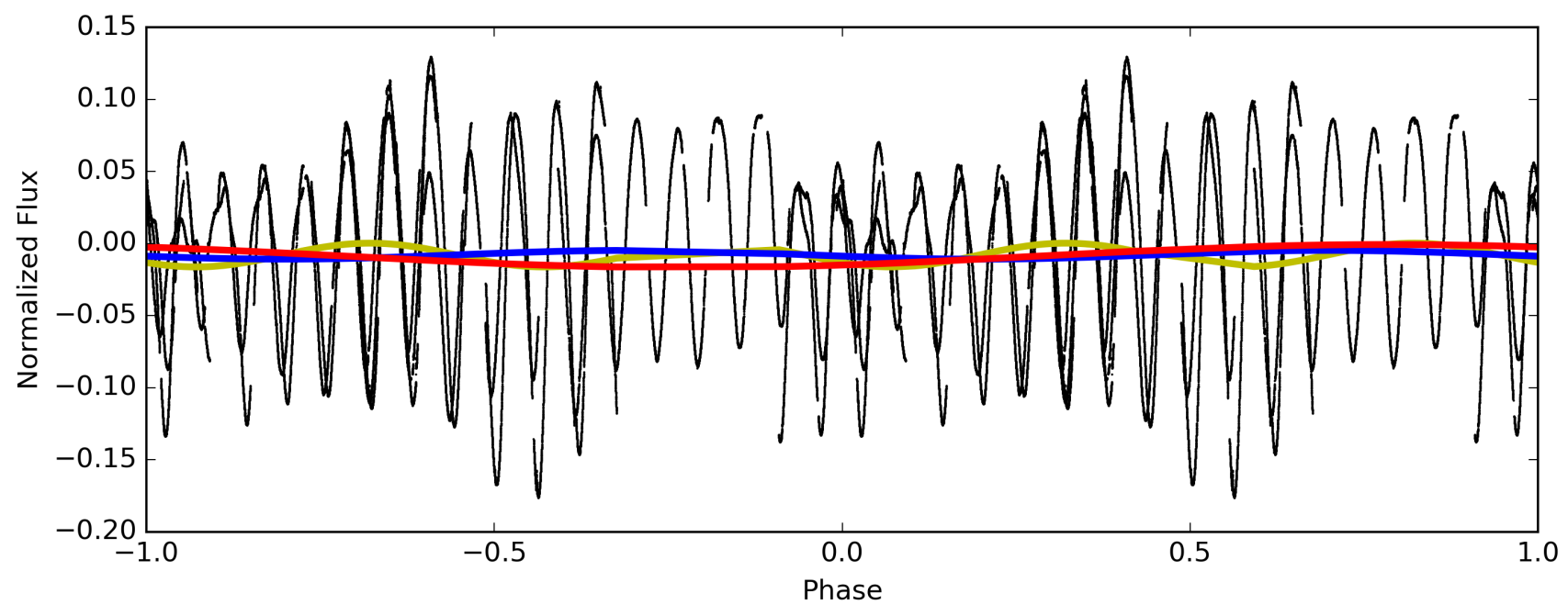
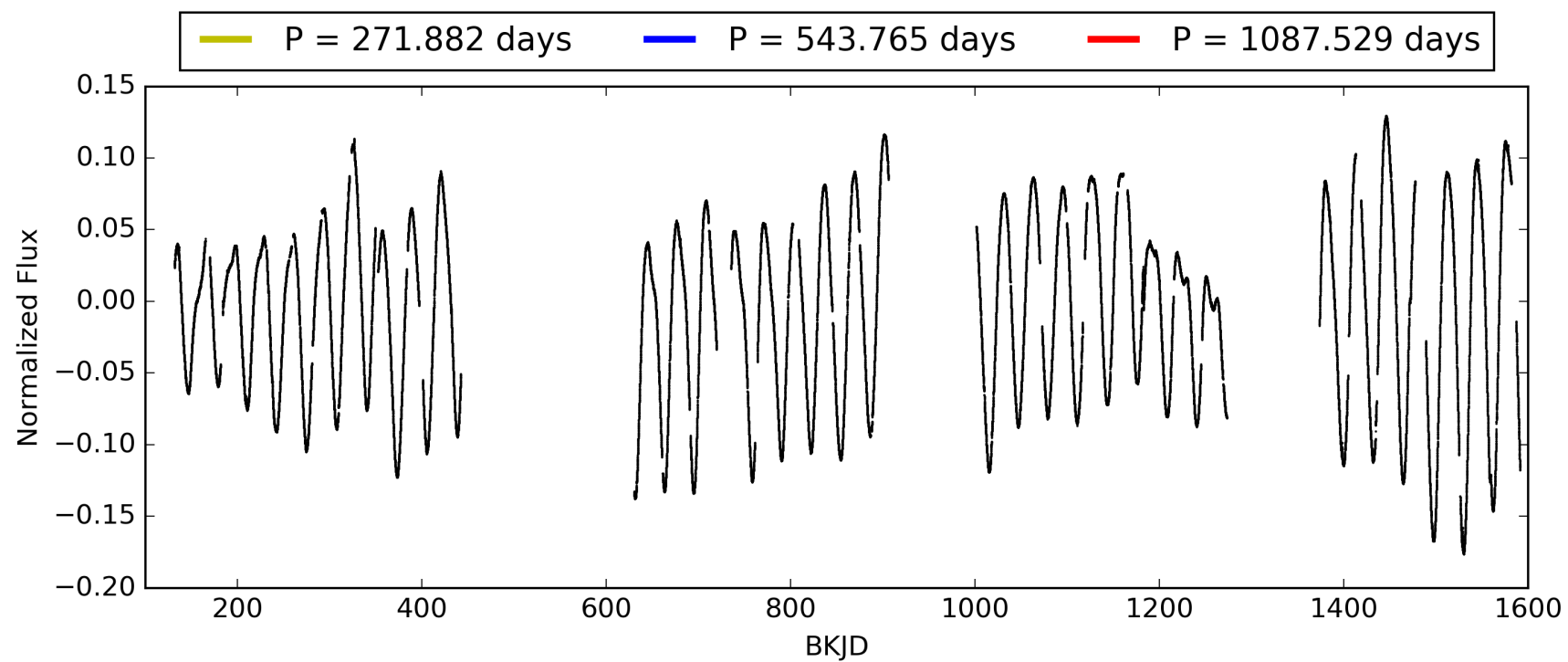
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:04 Z

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

TCE 003560427-01, PDC Light Curves

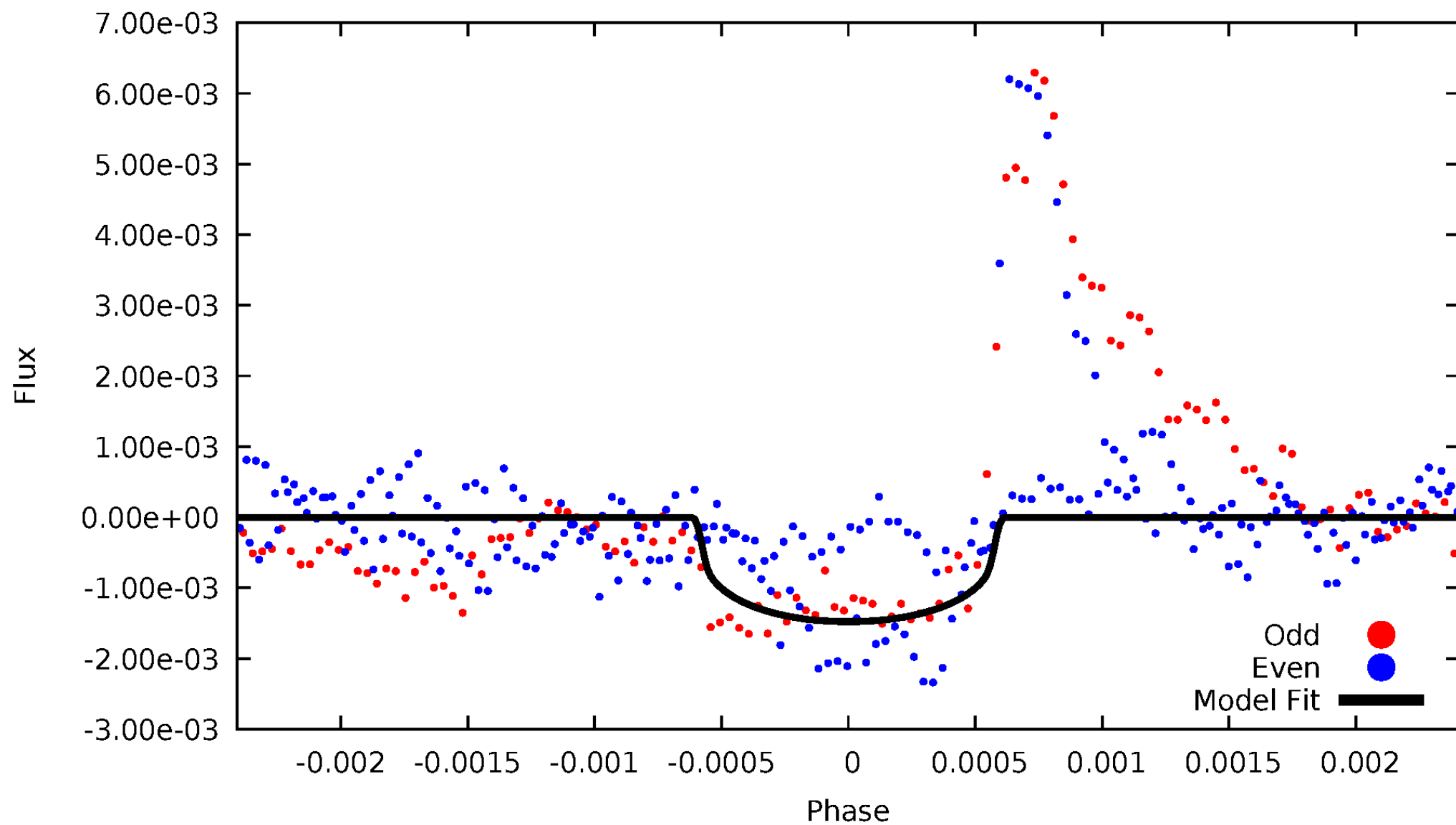


TCE 003560427-01



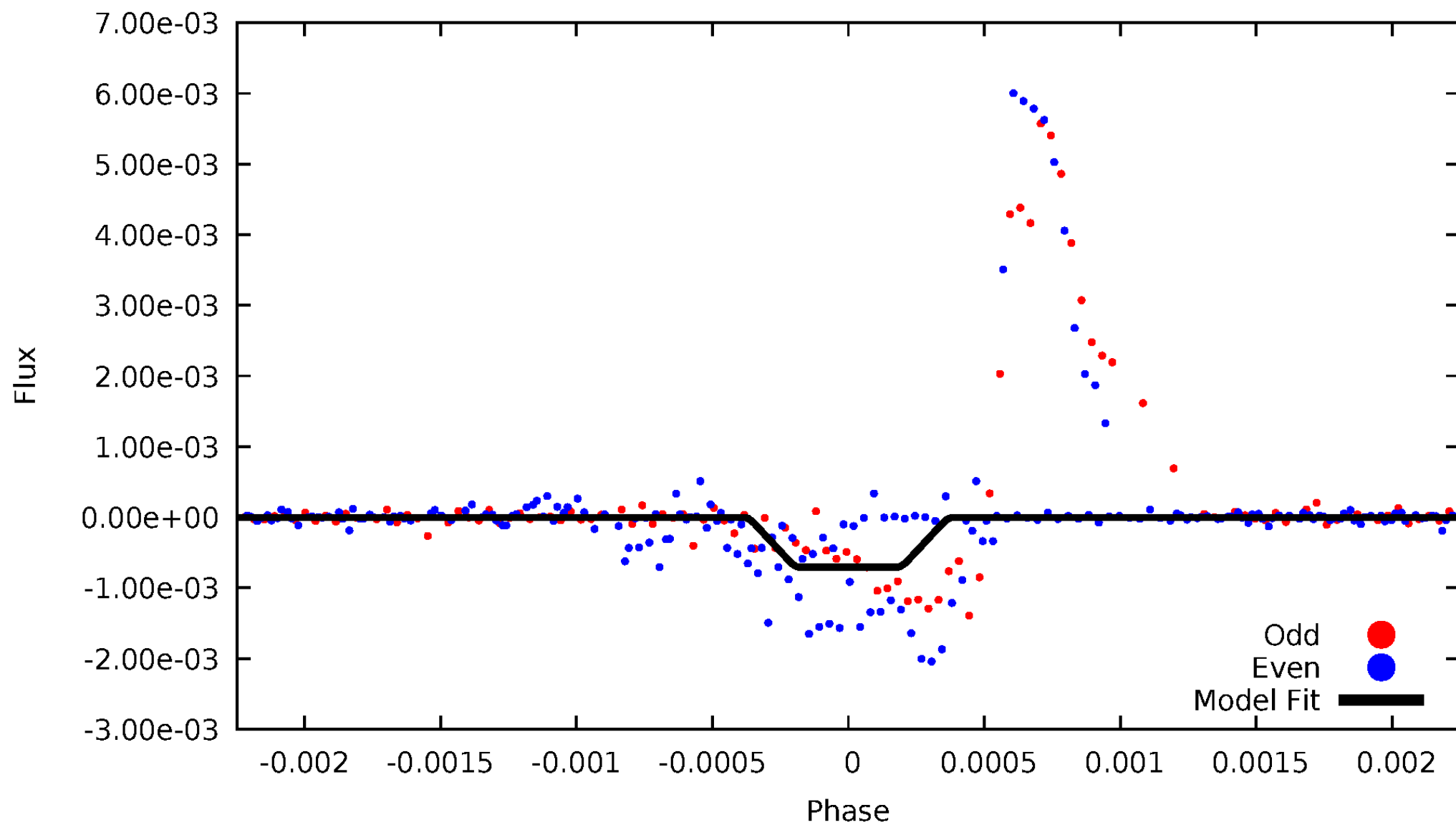
DV Odd/Even

TCE 003560427-01



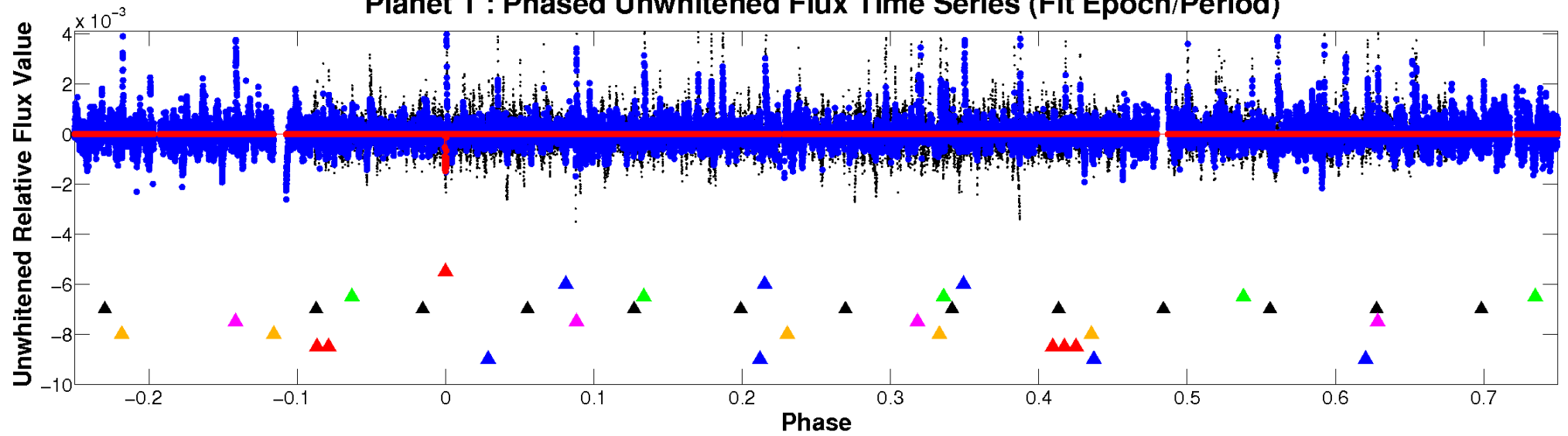
ALT Odd/Even

TCE 003560427-01

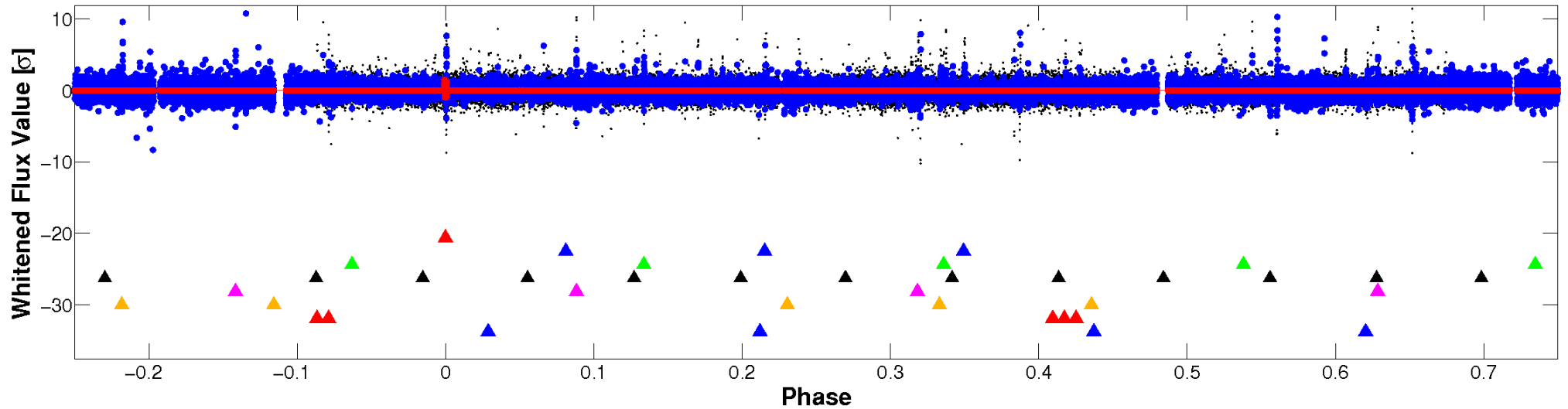


Non-Whitened Vs. Whitened Light Curve

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

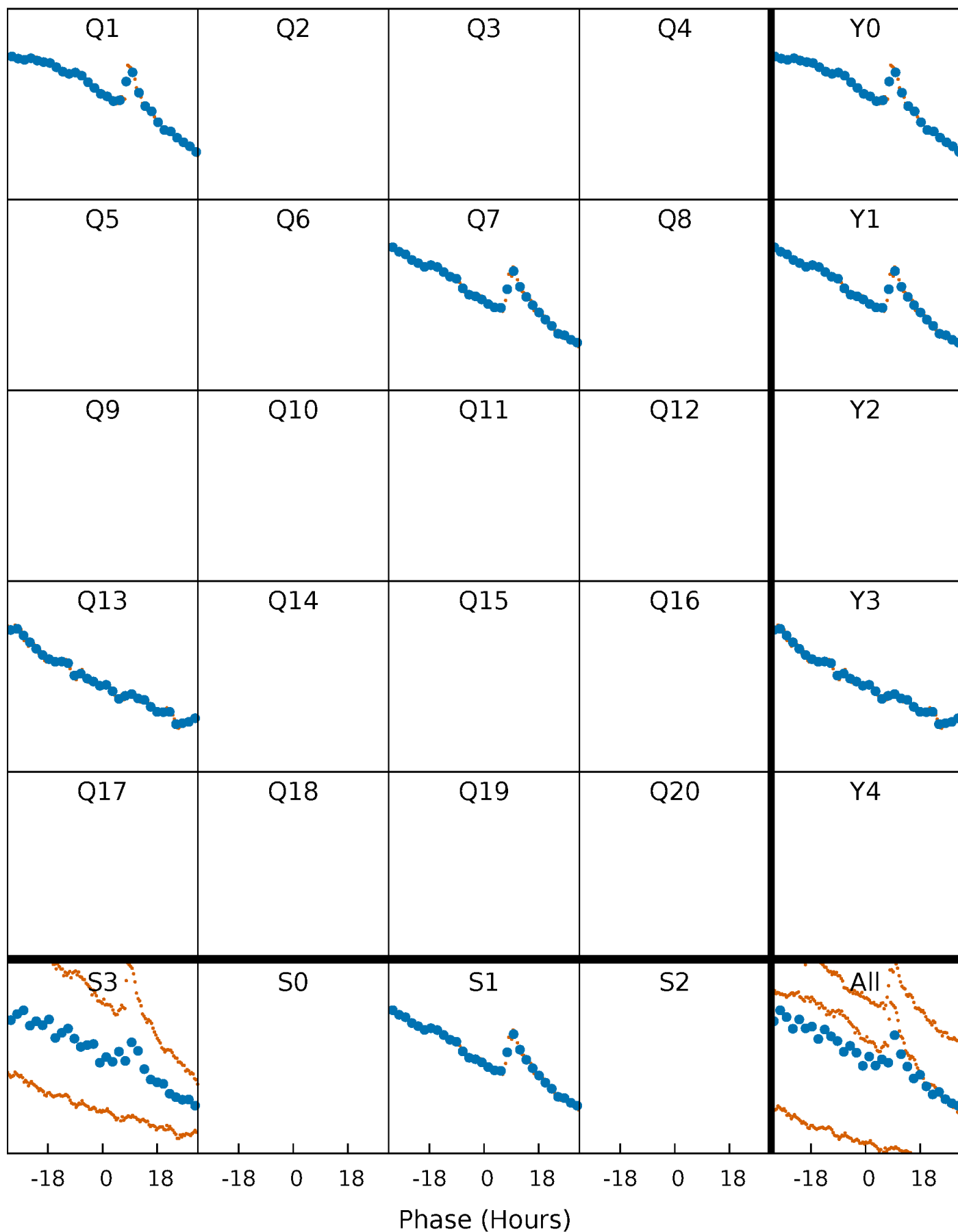


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



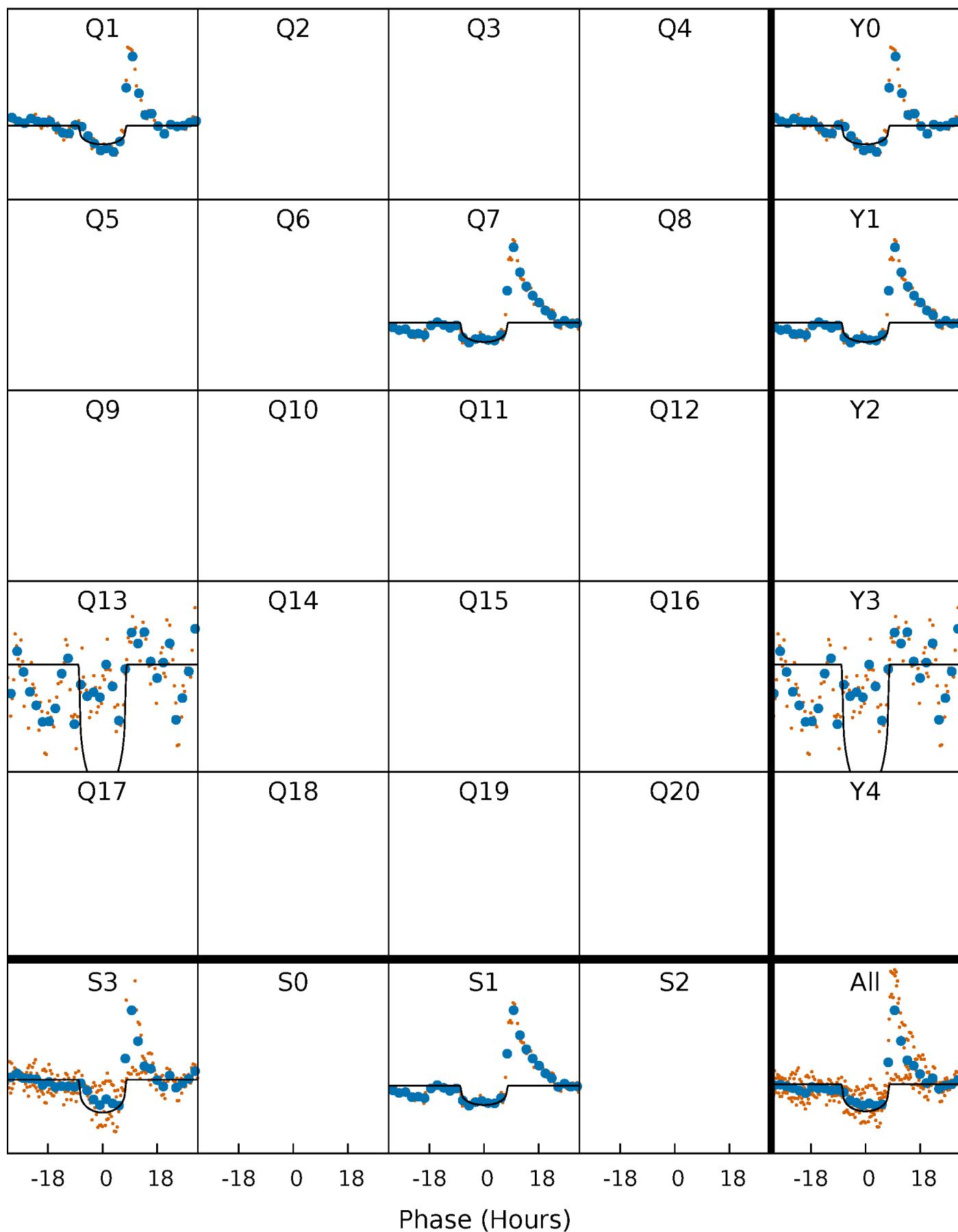
PDC Quarter-Phased Transit Curves

TCE 003560427-01 P=543.764679 Days $T_0=136.010358$ (BKJD)



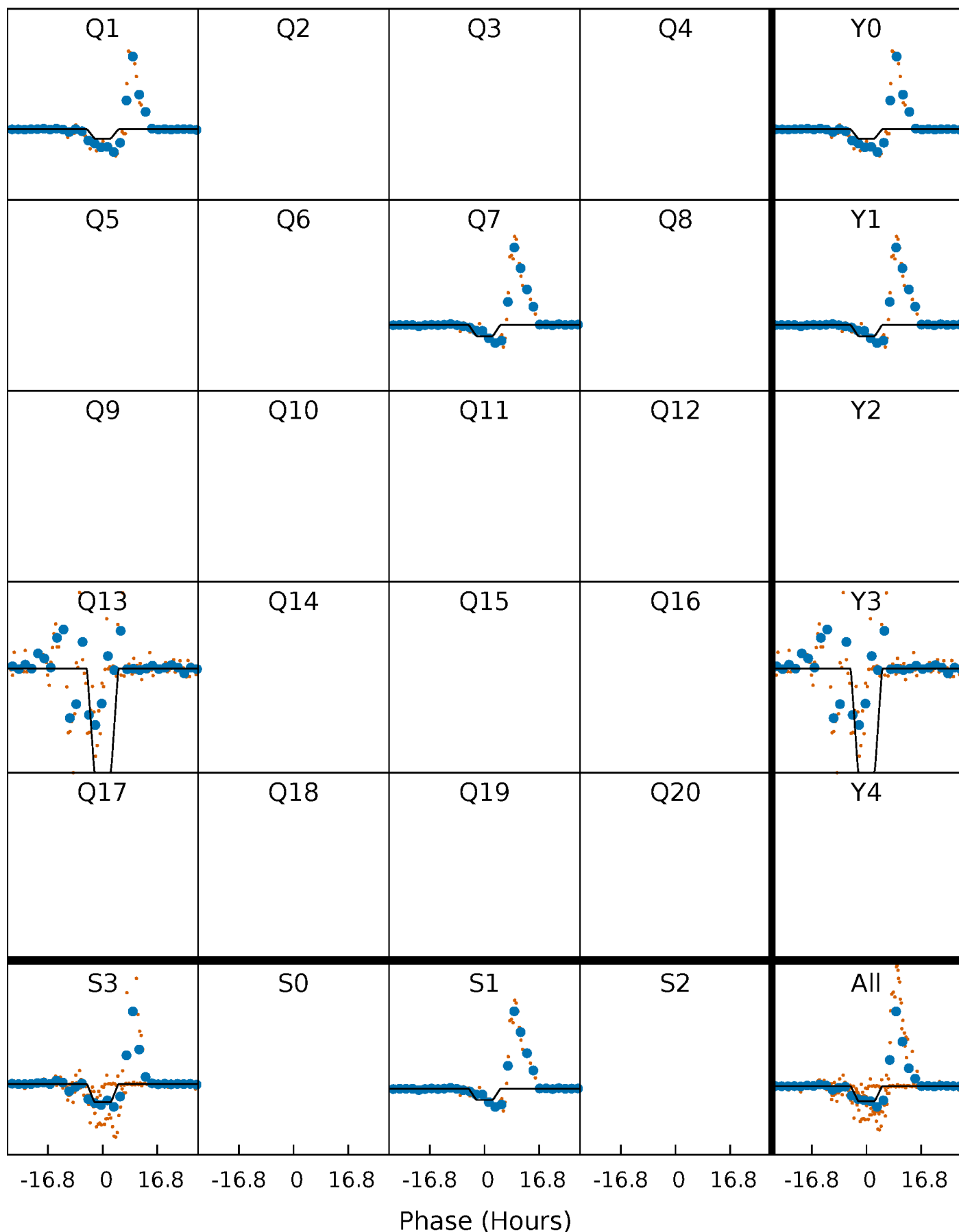
DV Quarter-Phased Transit Curves

TCE 003560427-01 P=543.764679 Days $T_0=136.010358$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

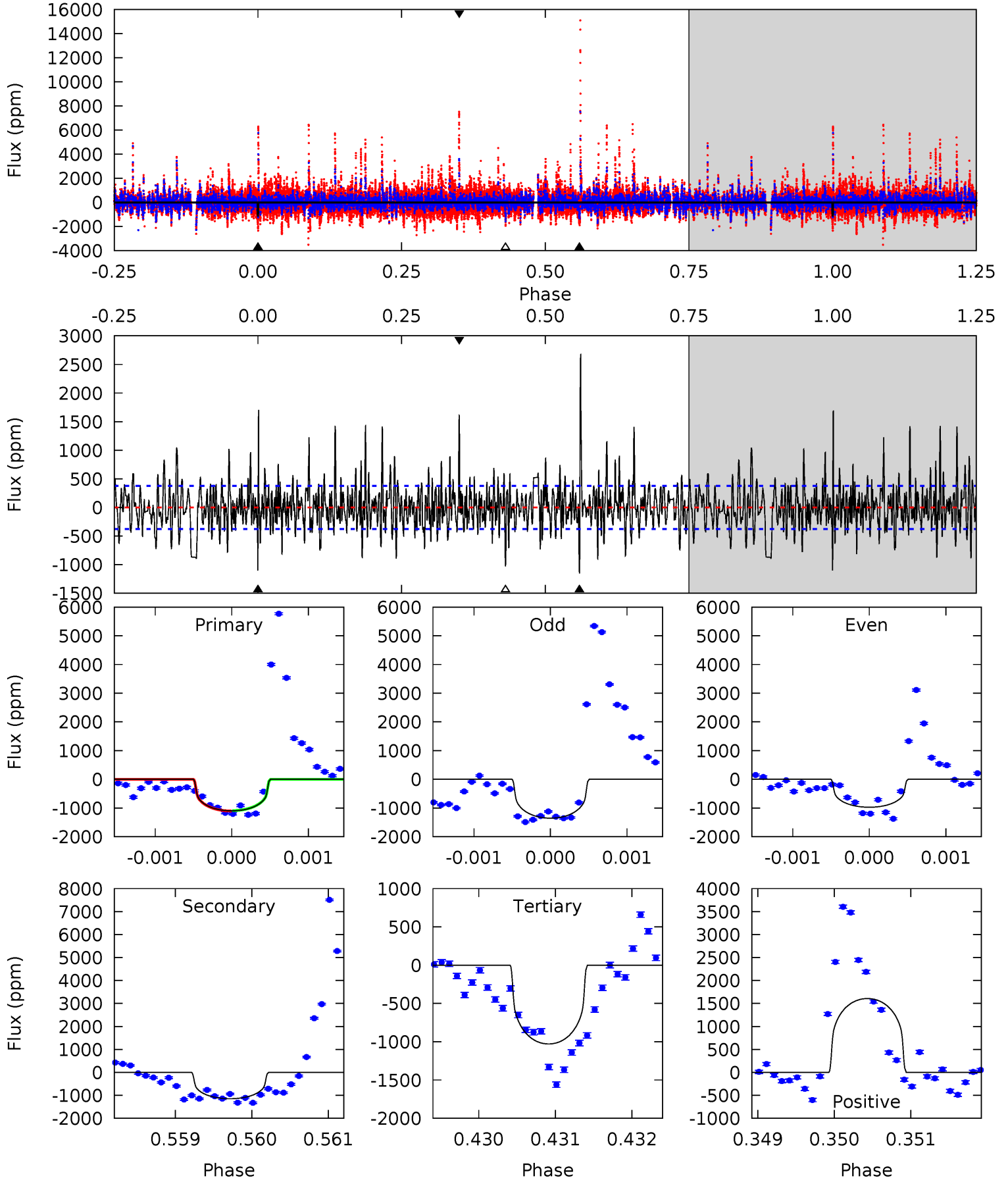
TCE 003560427-01 P=543.764276 Days $T_0=136.025257$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-01, P = 543.764679 Days, E = 136.010358 Days

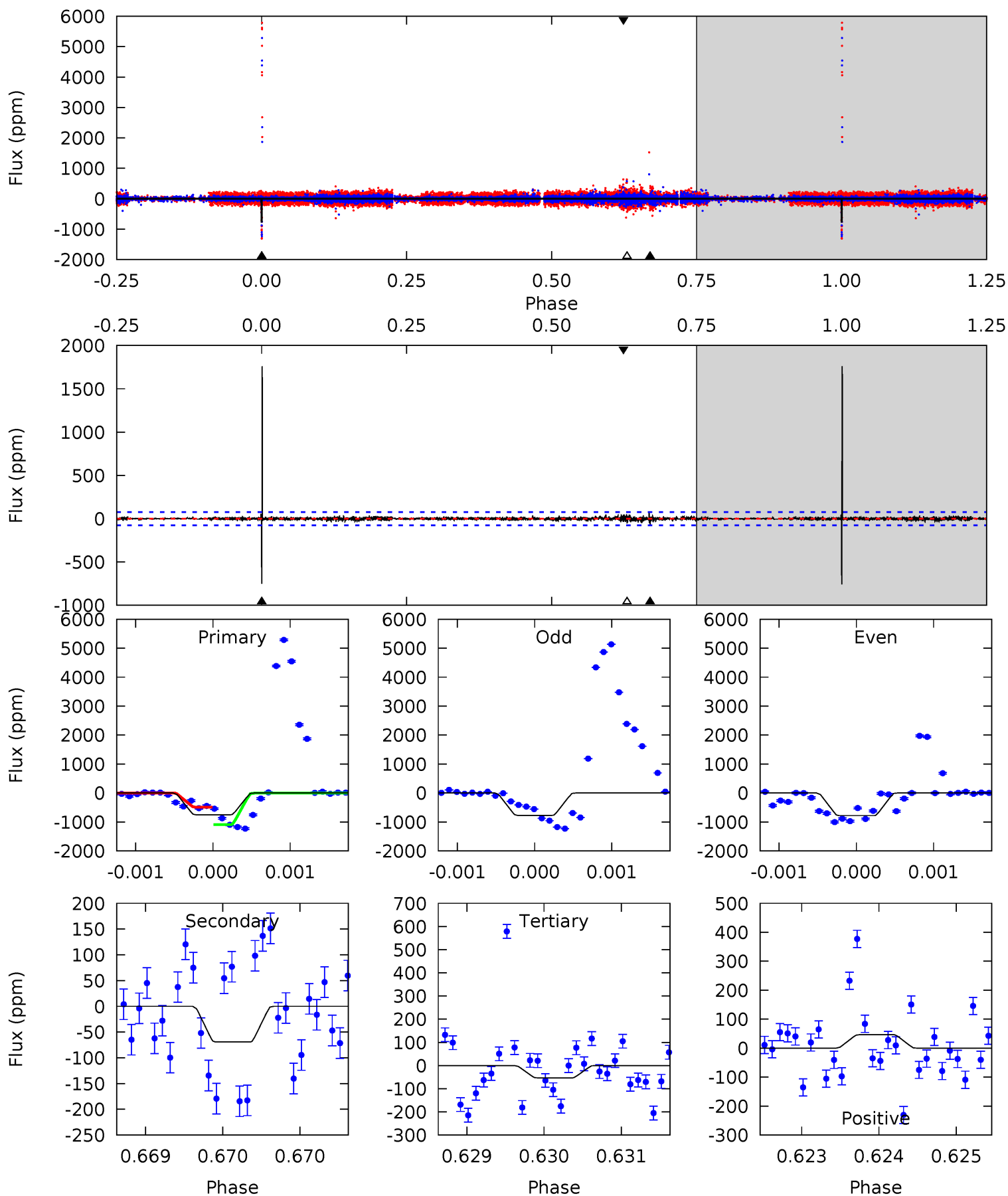
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	16.5	14.8	23.1	5.41	3.23	4.79	1.01	-7.29	1.71	-6.59	2.46	0.81	0.70	0.10



Alt Model-Shift Uniqueness Test

003560427-01, P = 543.764276 Days, E = 136.025257 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.8	4.95	3.81	3.30	5.50	3.37	1.70	50.0	50.5	1.14	1.65	0.35	1.13	0.70	21.7



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1148 ± 70	$17.76^{+7.50}_{-5.07}$	582^{+82}_{-65}	4824^{+576}_{-404}	3243^{+3238}_{-1596}
Alt.	-69 ± 14	$13.61^{+6.65}_{-5.03}$	582^{+92}_{-71}	3251^{+381}_{-280}	323^{+494}_{-174}

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

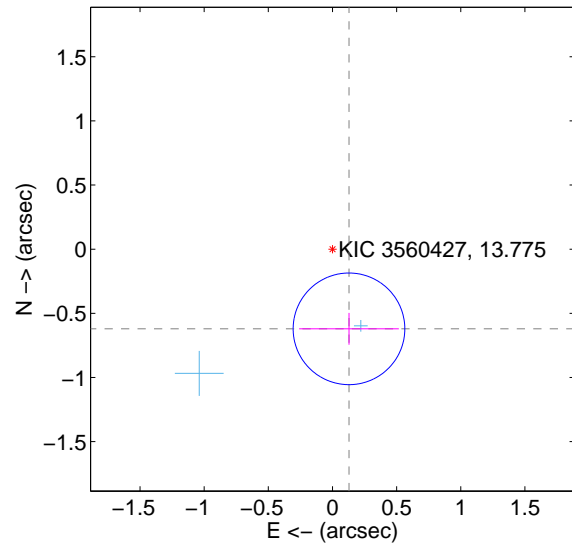
Supplemental centroid analysis for 003560427-01. Kepler magnitude: 13.78. Transit SNR 7.40

There are 2 quarters with good PRF difference image offsets

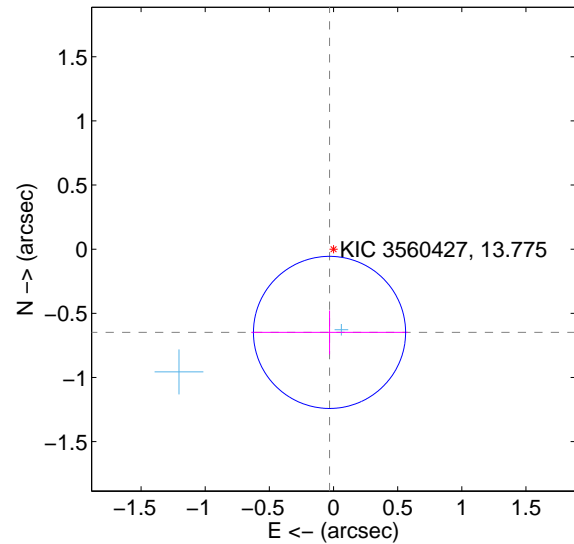
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.634 ± 0.145	4.37	-0.129 ± 0.389	-0.621 ± 0.124
PRF-fit source offset from KIC position	0.649 ± 0.198	3.29	0.031 ± 0.610	-0.649 ± 0.171
photometric centroid source offset	0.14 ± 0.48	0.30	0.09 ± 0.58	0.11 ± 0.40

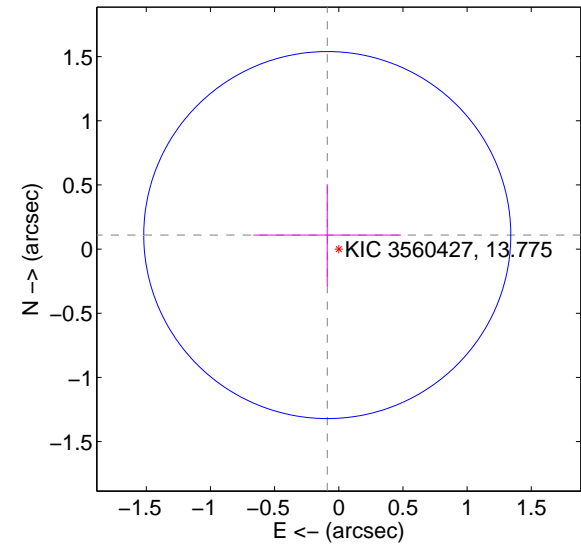
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

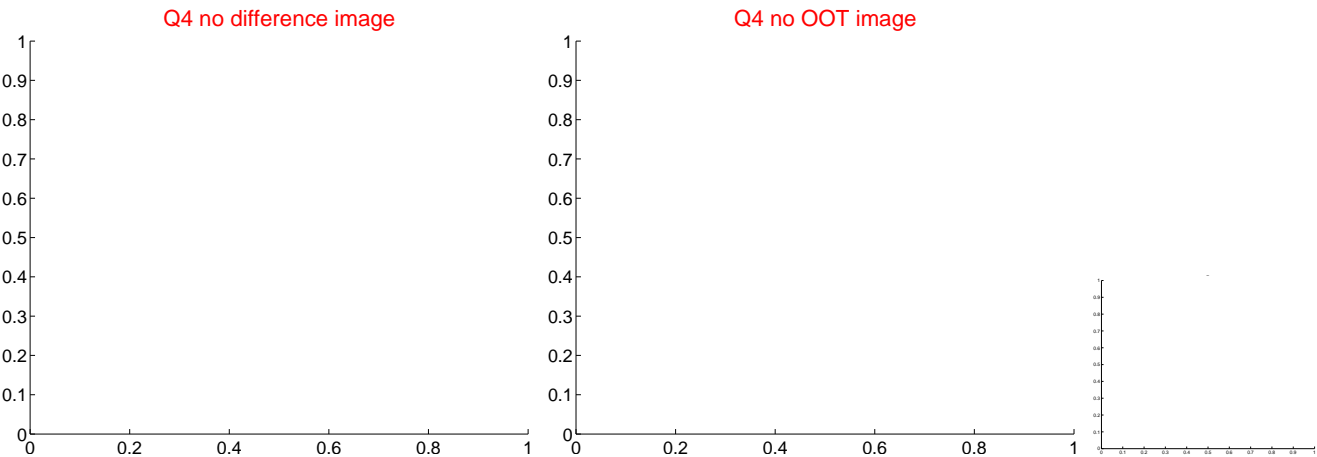
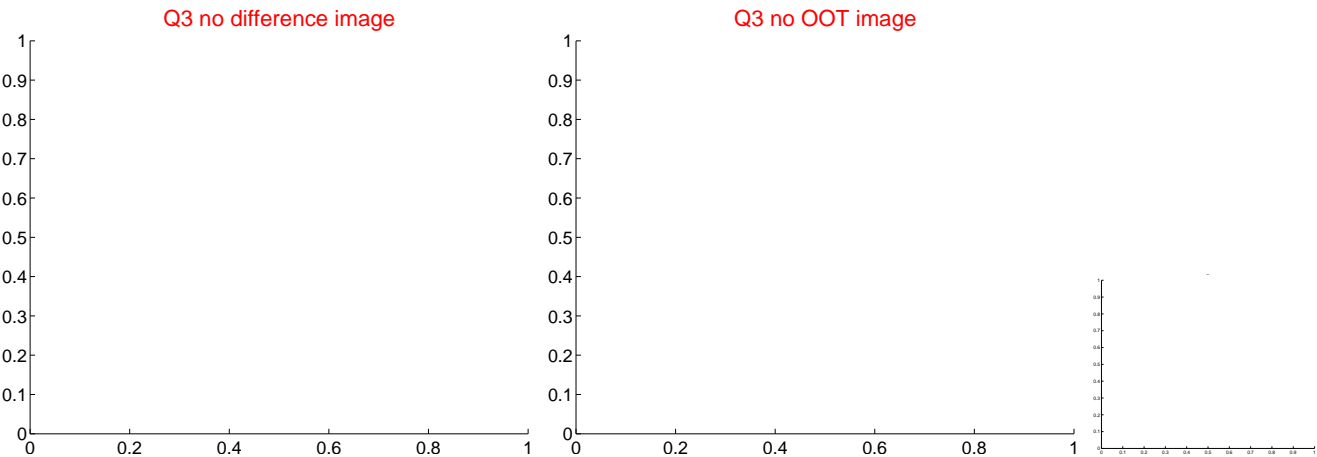
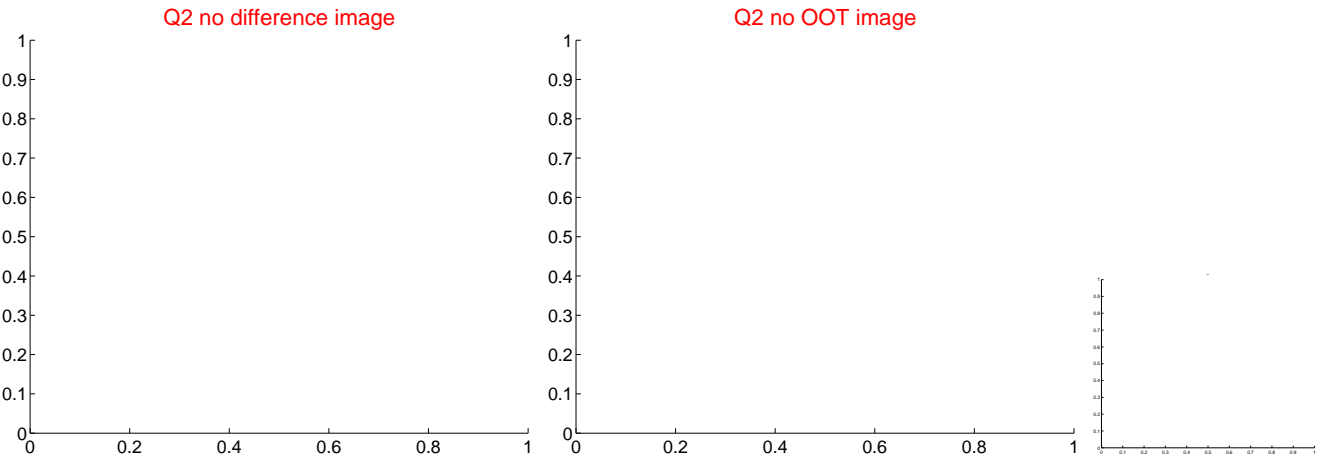
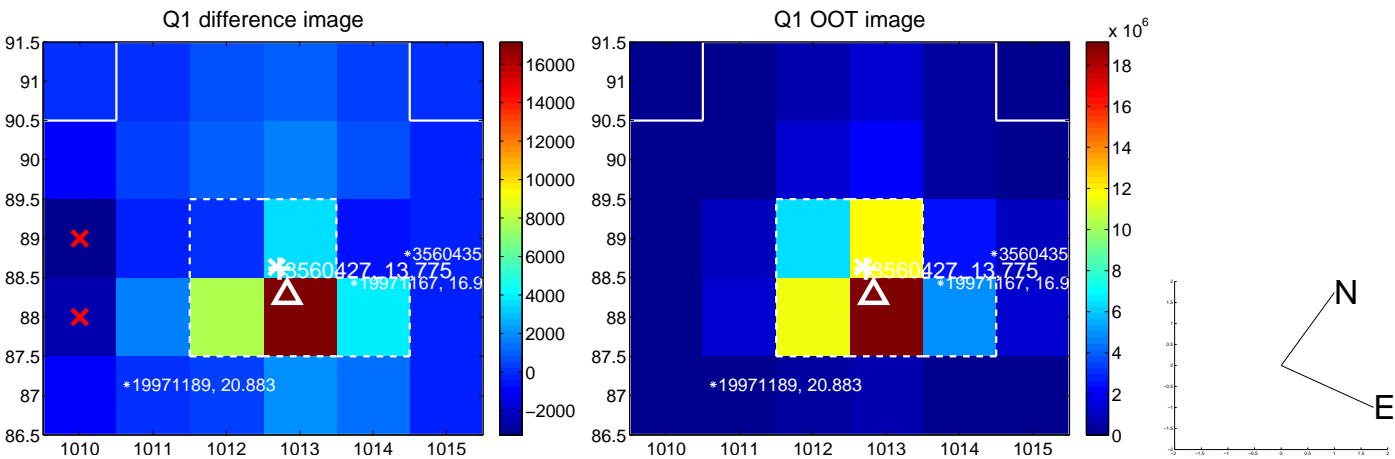


offset from photometric centroids

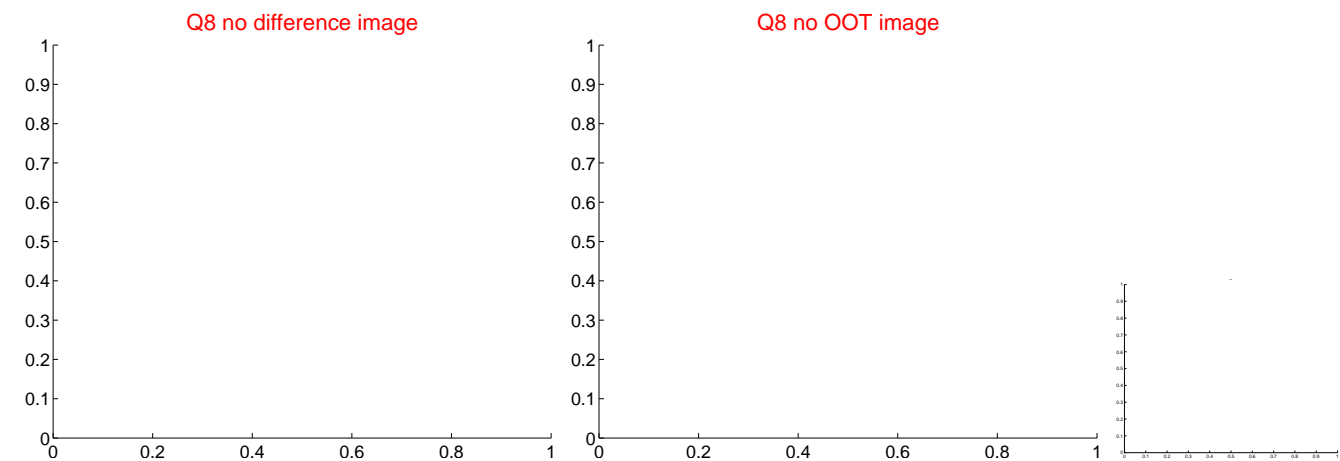
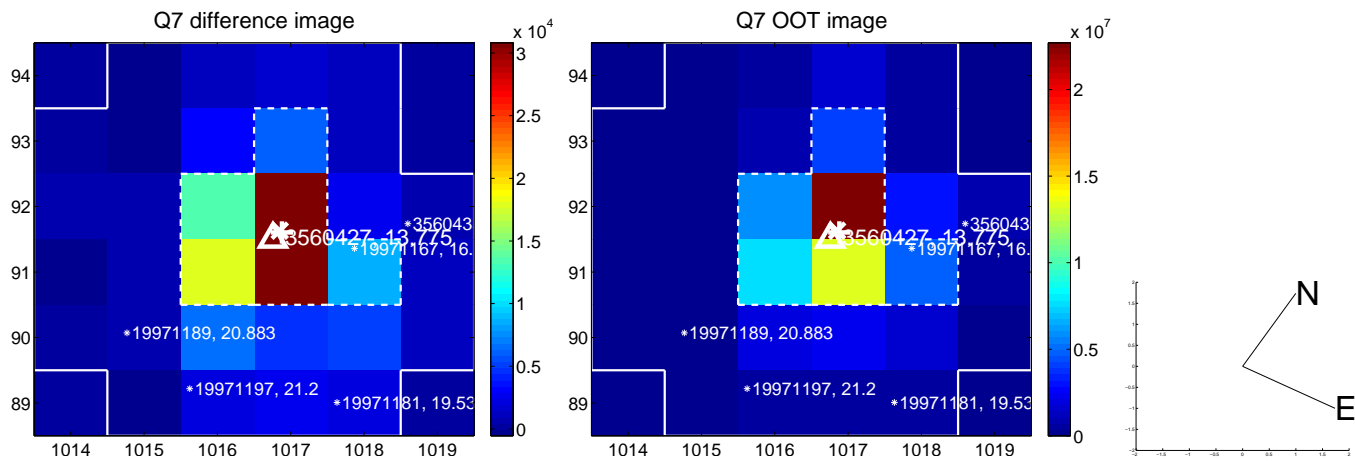
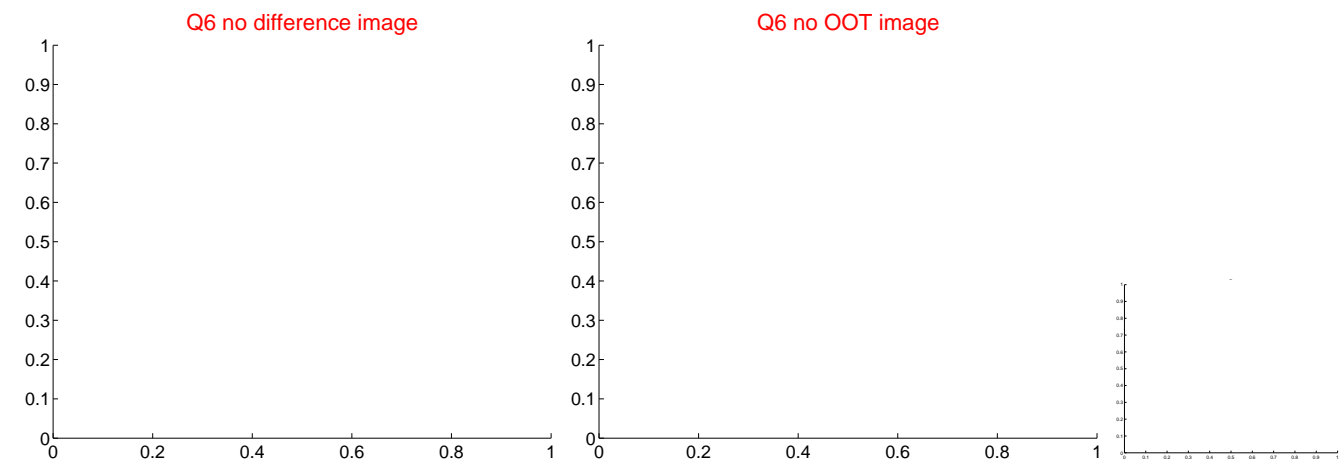
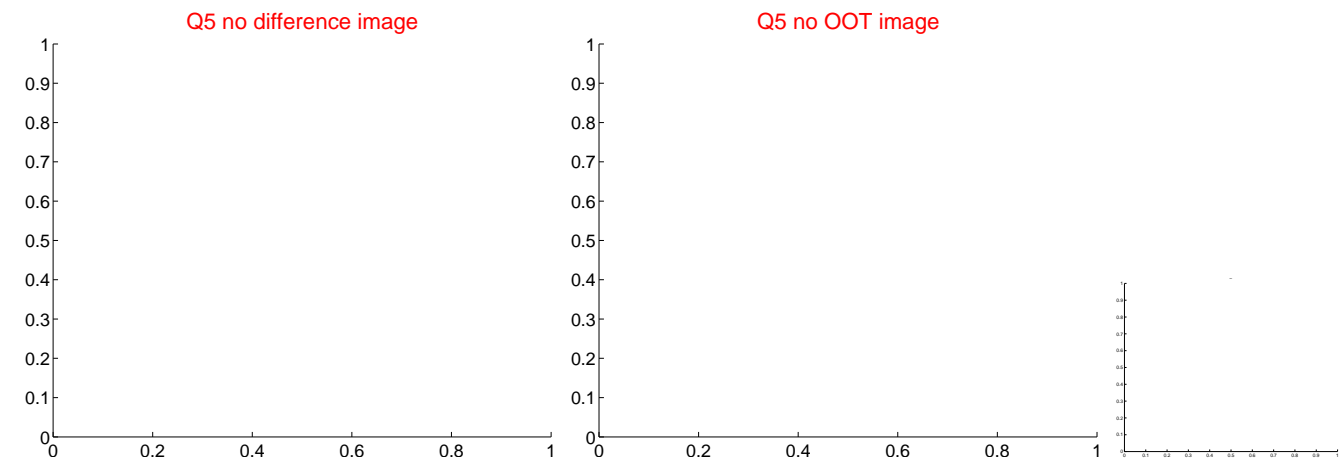


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



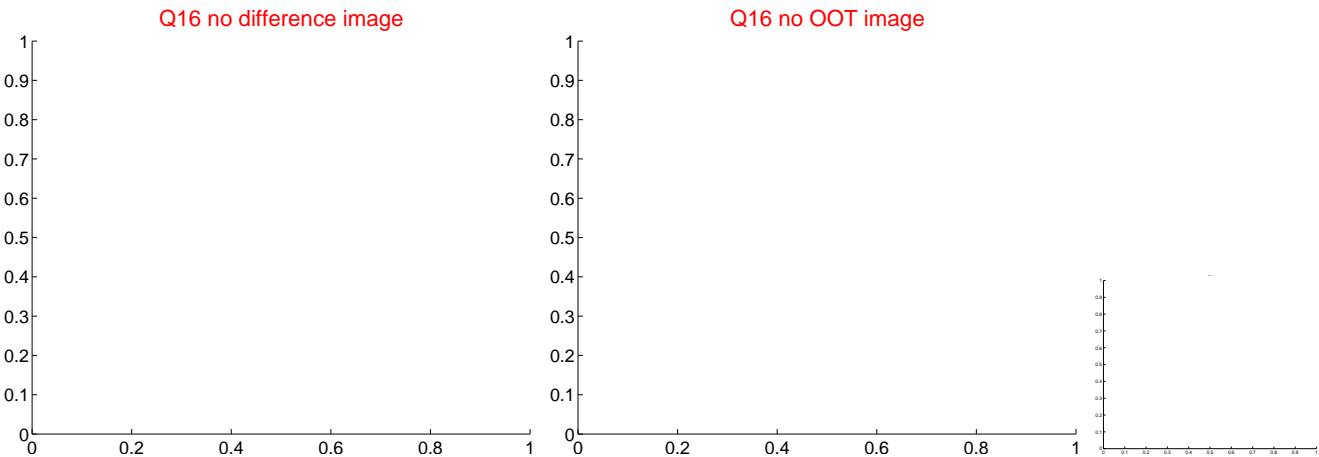
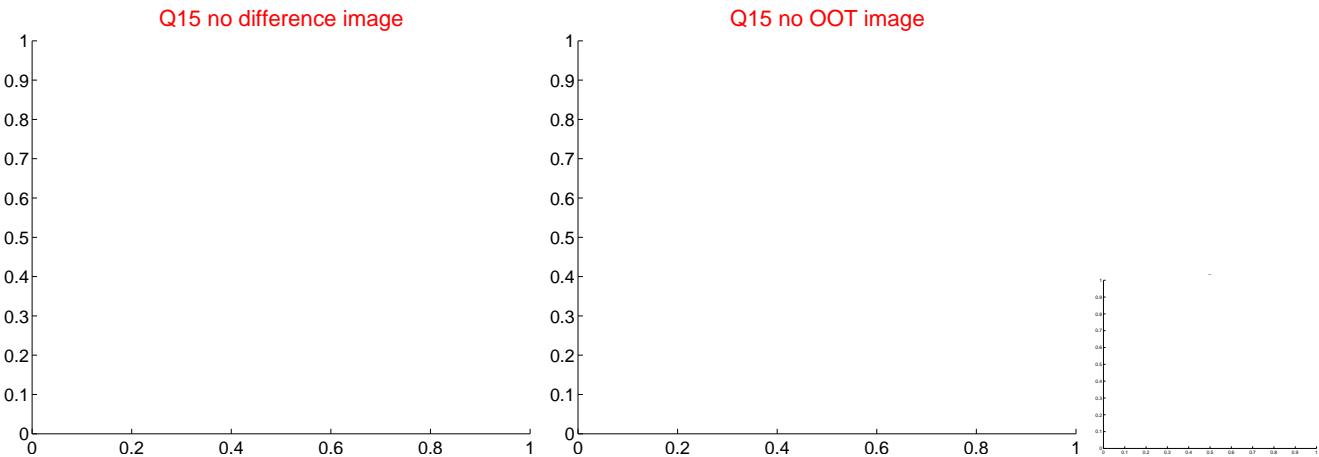
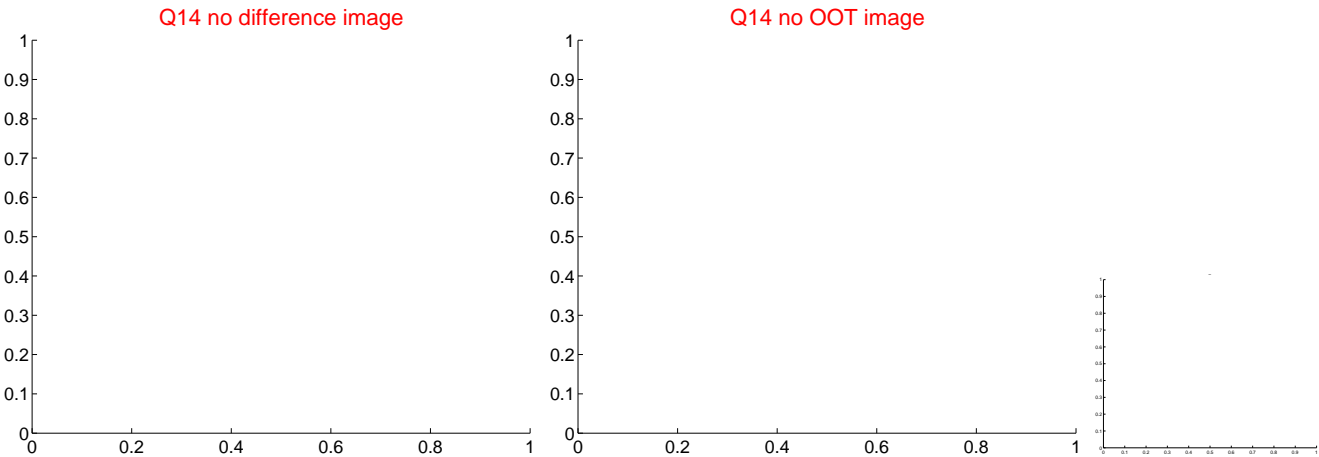
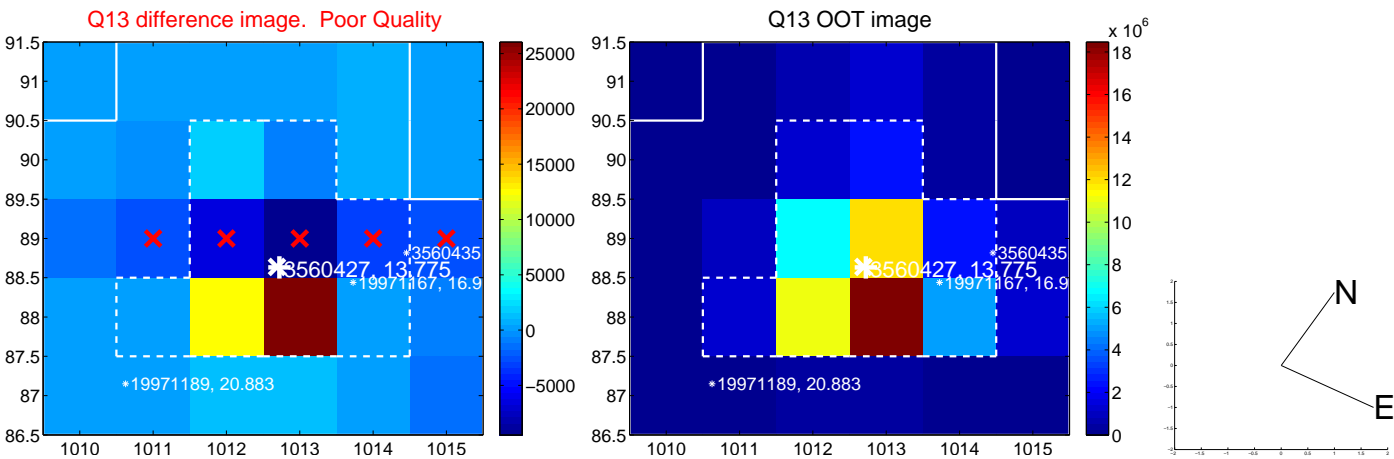
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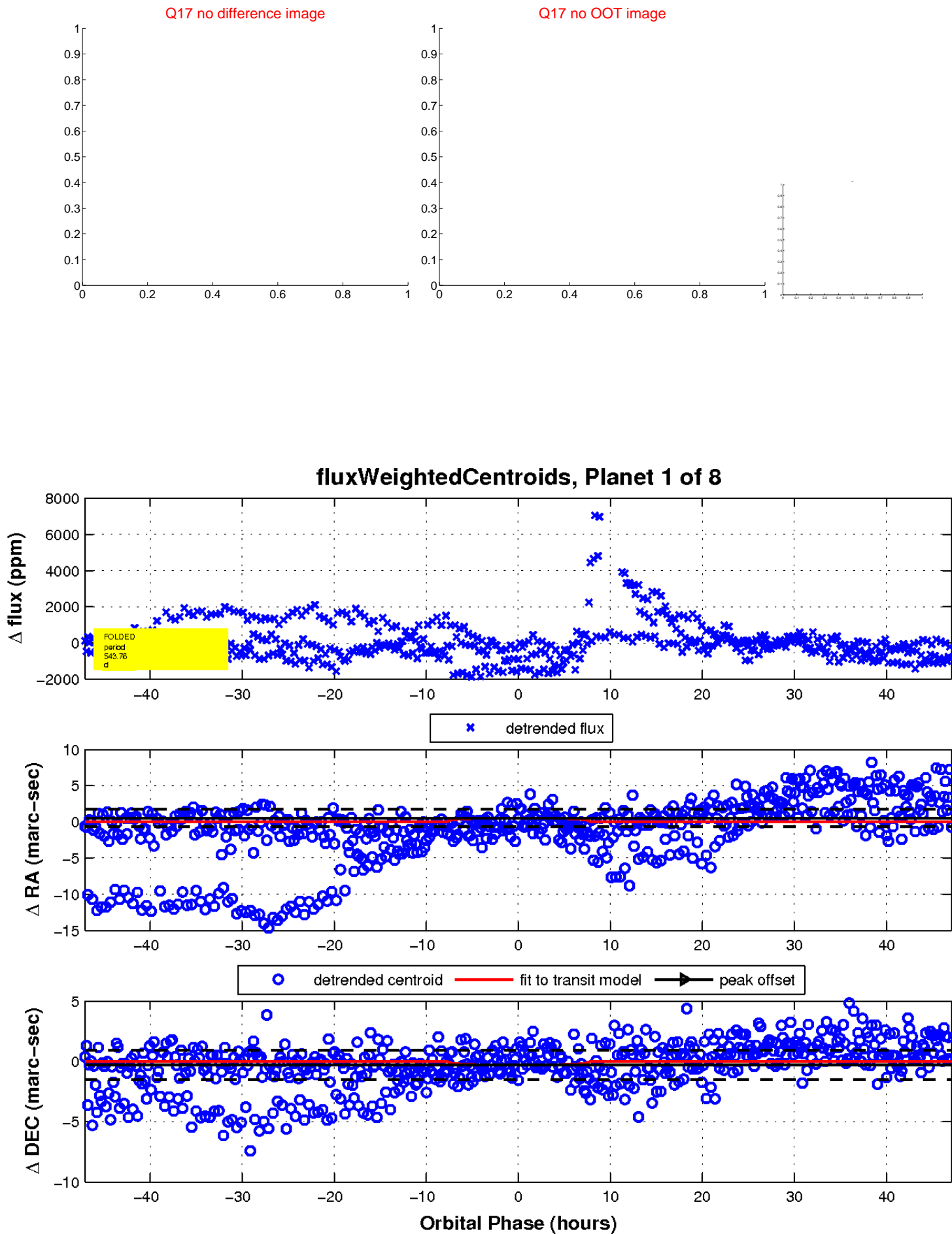
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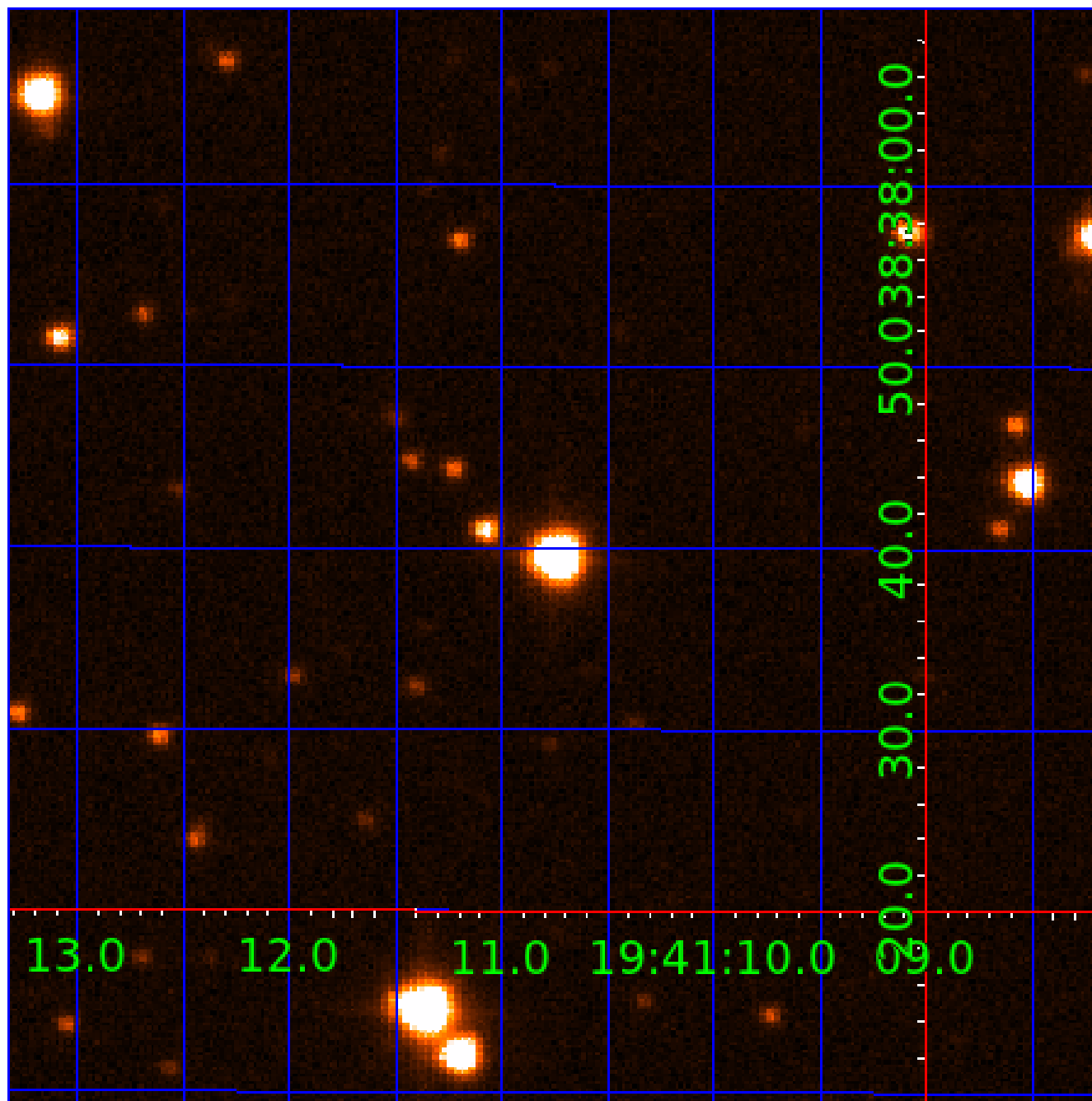


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UKIRT Image

Declination



KIC 003560427

Q1-17 DR25 TCE Parameters

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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

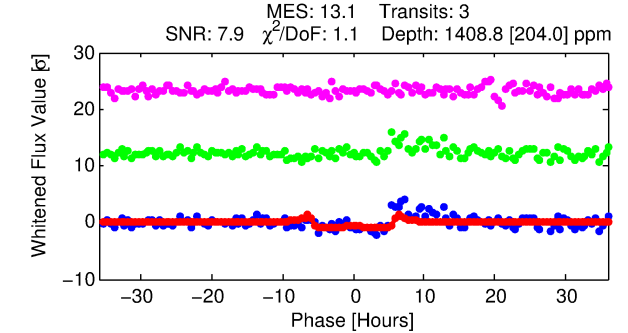
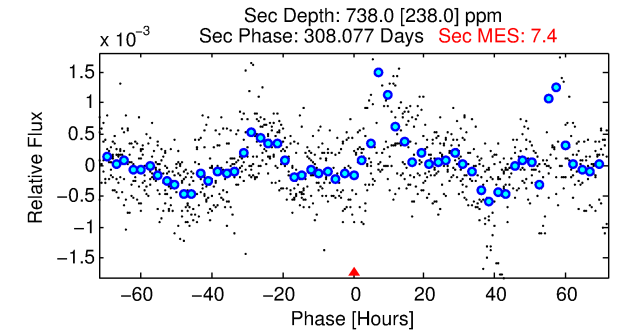
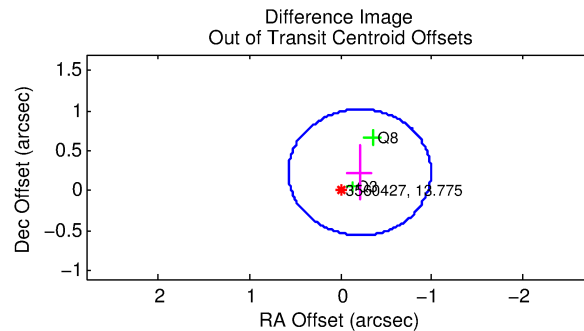
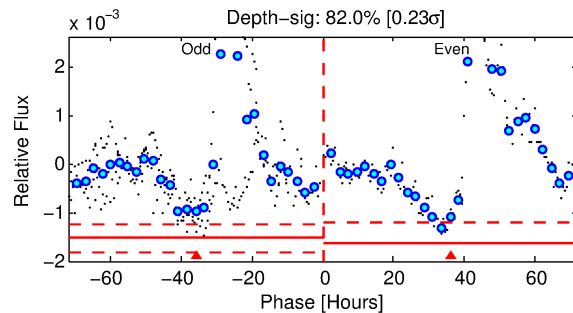
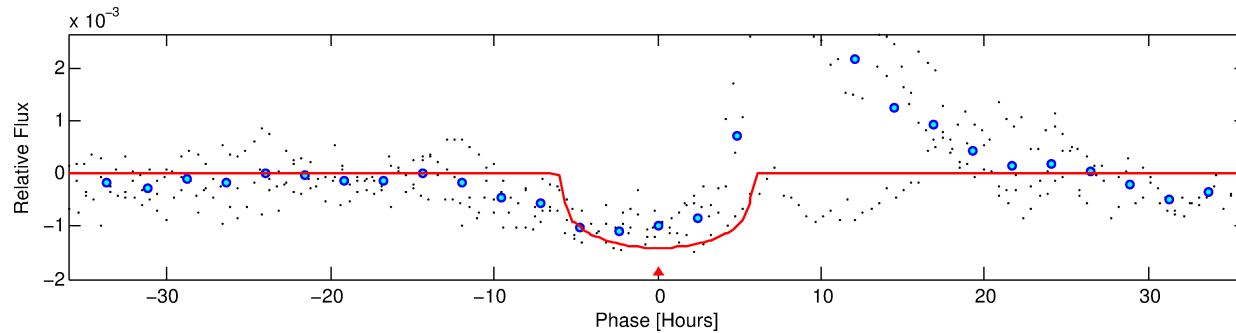
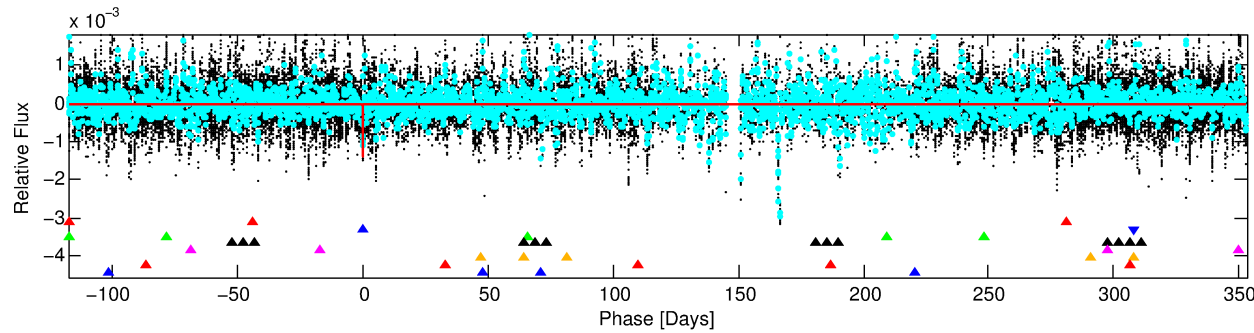
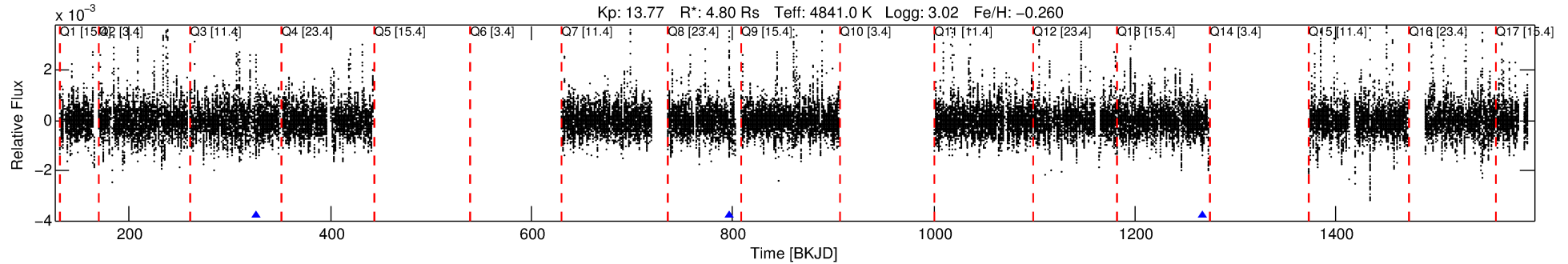
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-02

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 2 of 8 Period: 470.852 d



DV Fit Results:

Period = 470.85239 [0.00568] d
Epoch = 325.9442 [0.0078] BKJD
Rp/R* = 0.0337 [0.0133]
a/R* = 296.68 [382.15]
b = 0.29 [4.04]
Seff = 8.78 [6.85]
Teq = 439 [86] K
Rp = 17.63 [13.25] Re
a = 1.1359 [0.6068] AU
Ag = 1686.15 [1935.70] [0.87 σ]
Teffp = 4349 [934] K [4.17 σ]

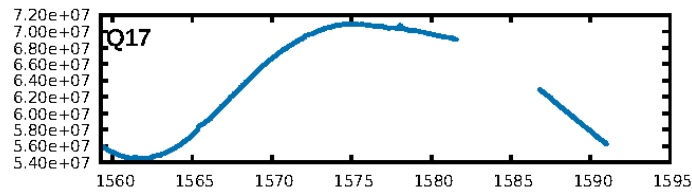
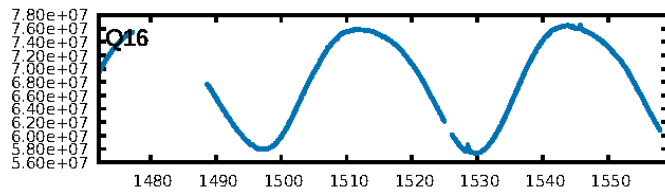
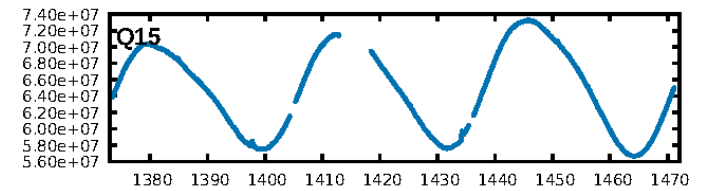
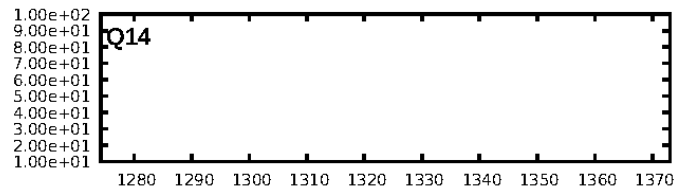
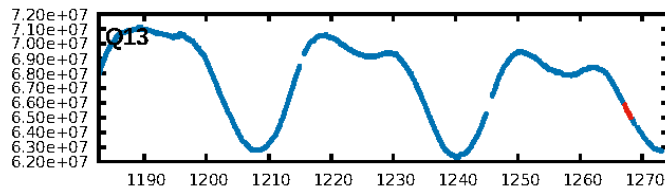
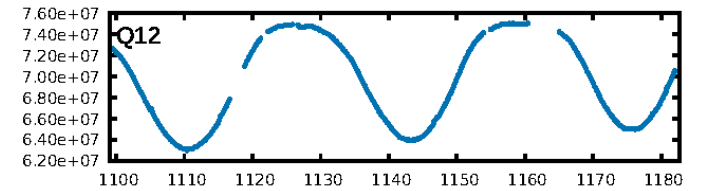
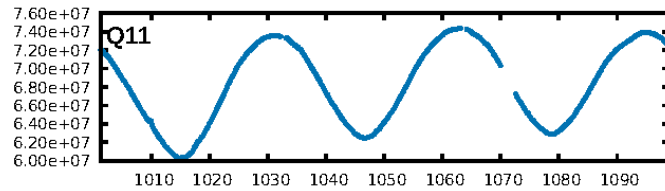
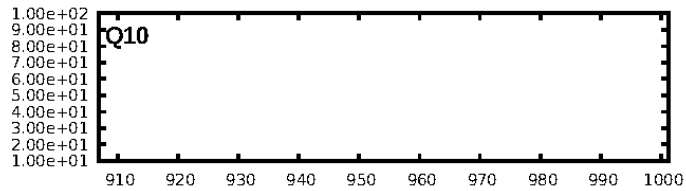
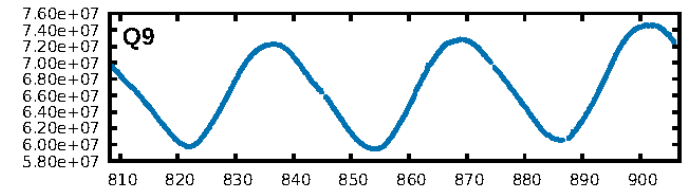
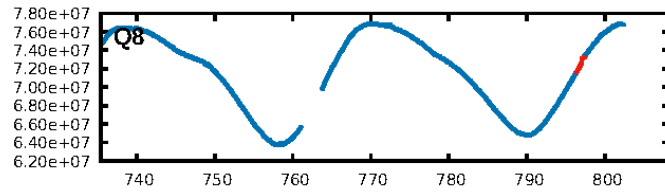
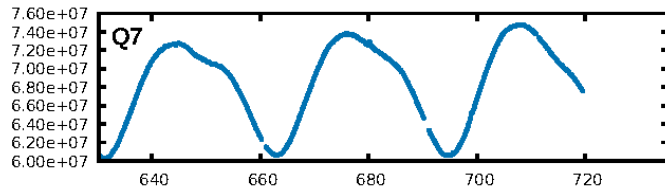
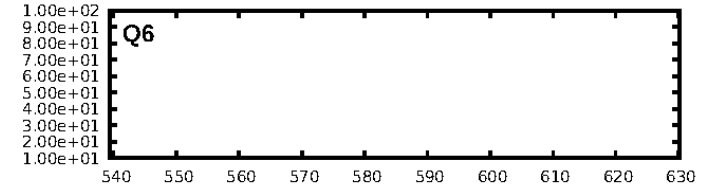
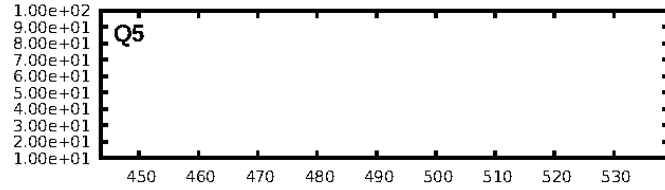
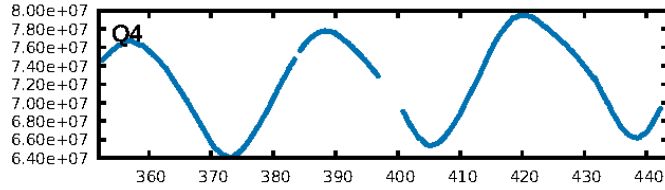
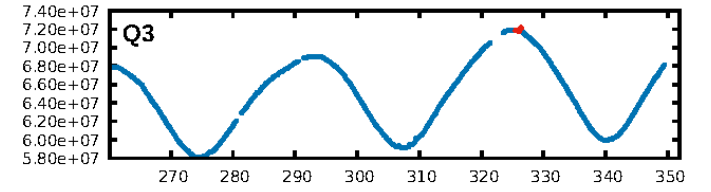
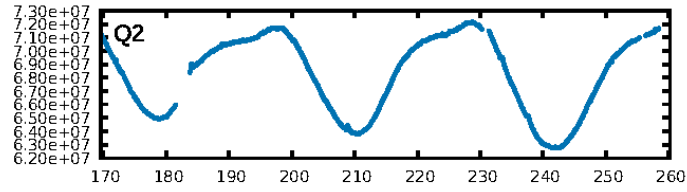
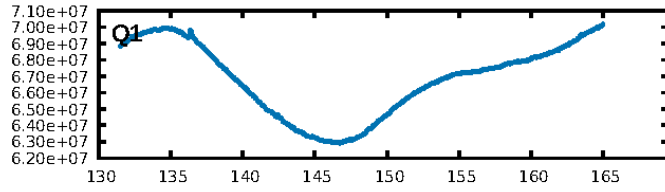
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [96.46 σ]
LongPeriod-sig: 100.0% [88.45 σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 83.7%
Bootstrap-pfa: 2.47e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.177
Centroid-sig: 42.8%
Centroid-so: 0.323 arcsec [0.40 σ]
OotOffset-rm: 0.311 arcsec [1.19 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.184 arcsec [0.73 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

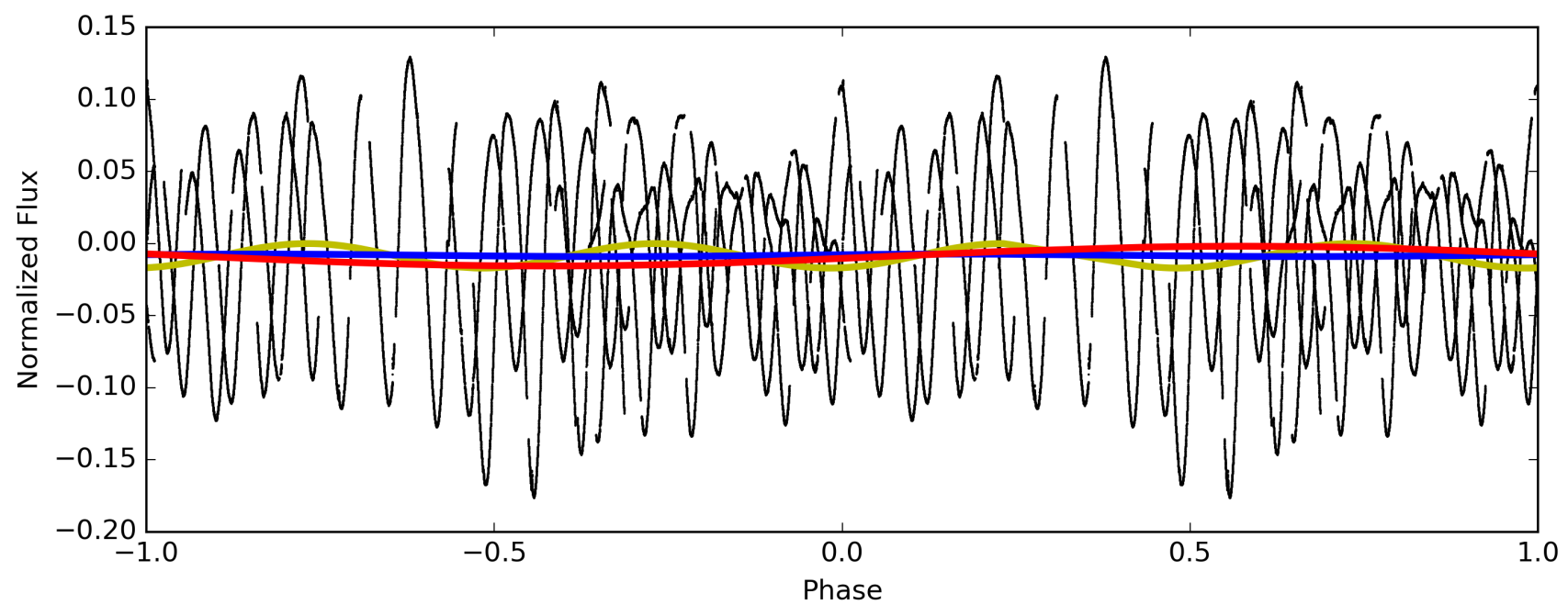
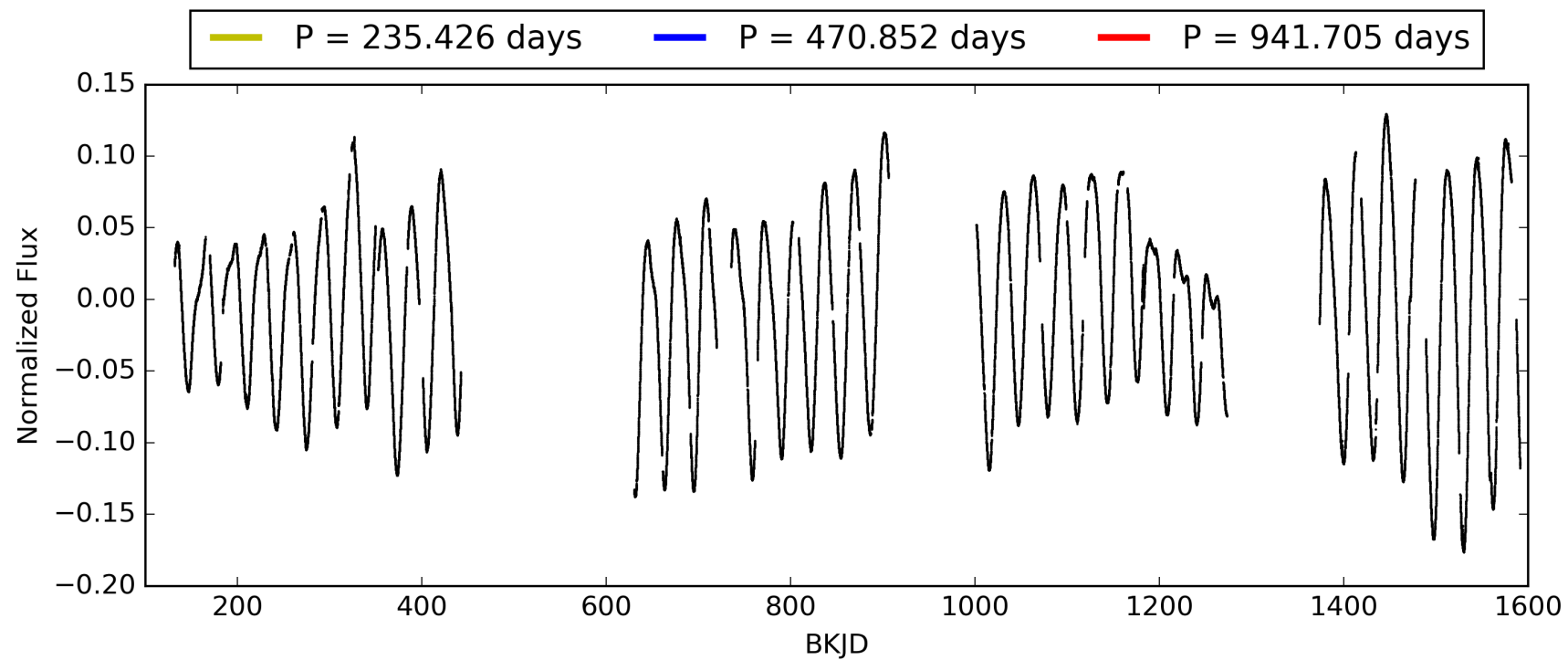
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:12 Z

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

TCE 003560427-02, PDC Light Curves

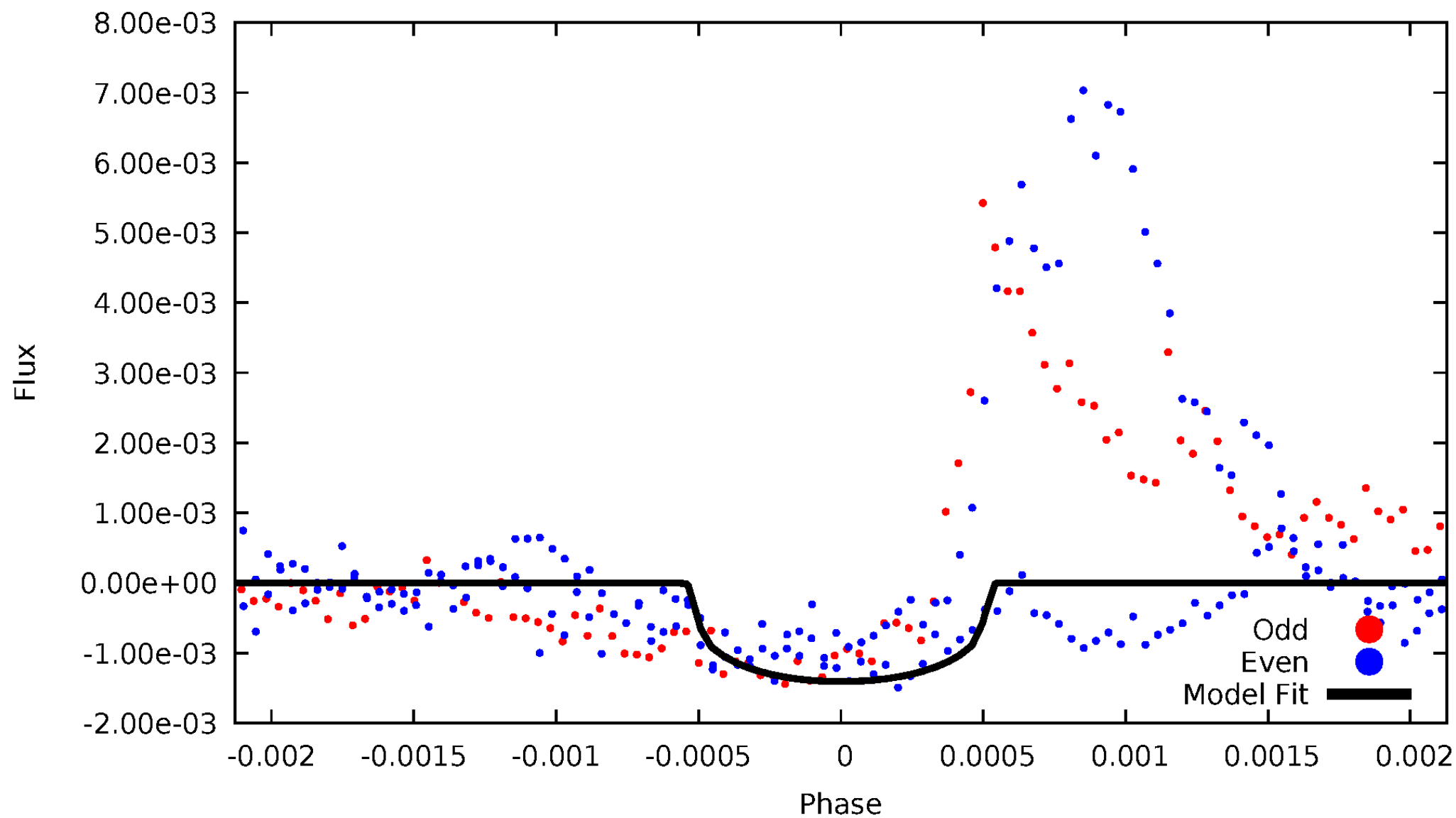


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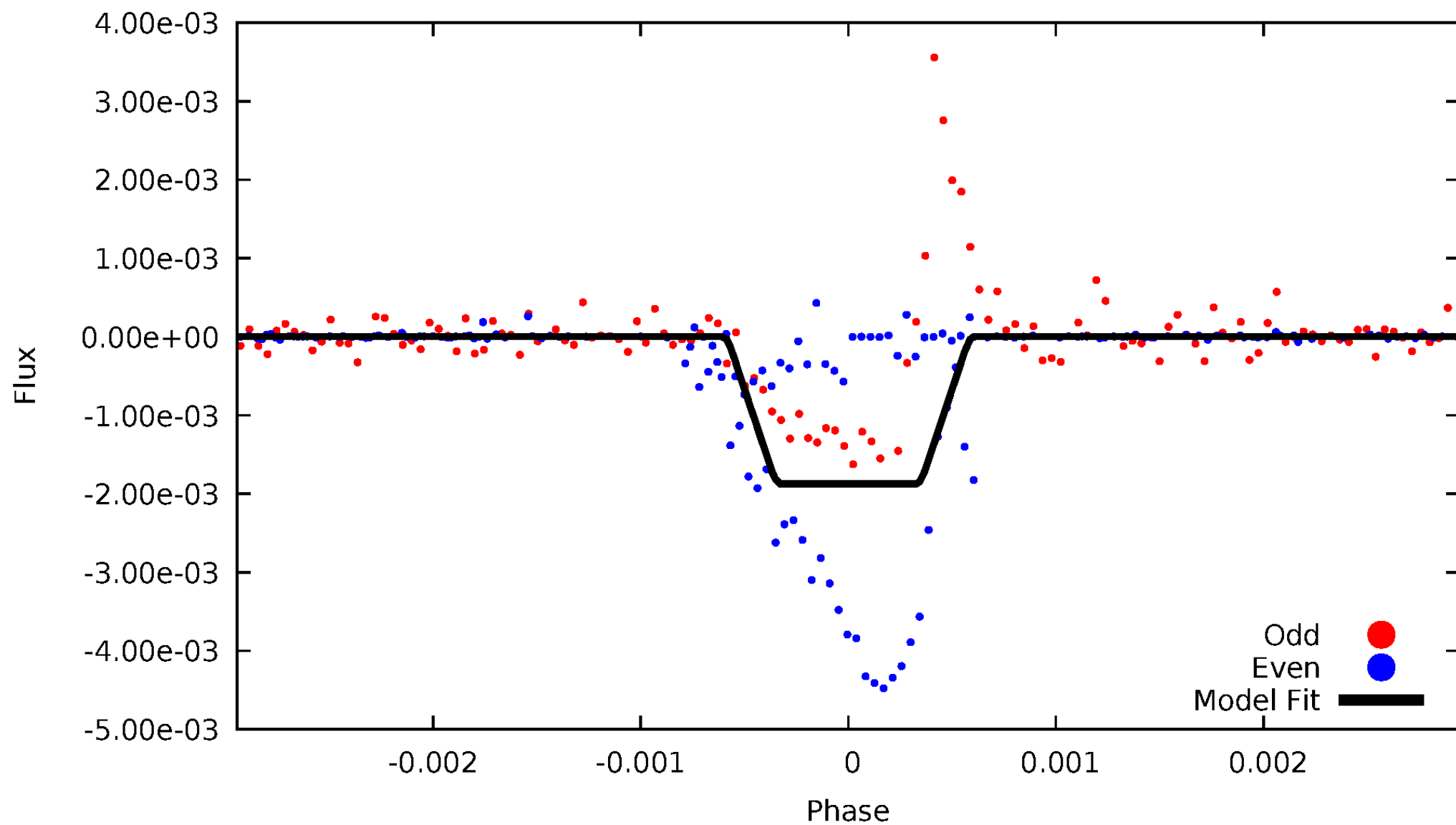
DV Odd/Even

TCE 003560427-02



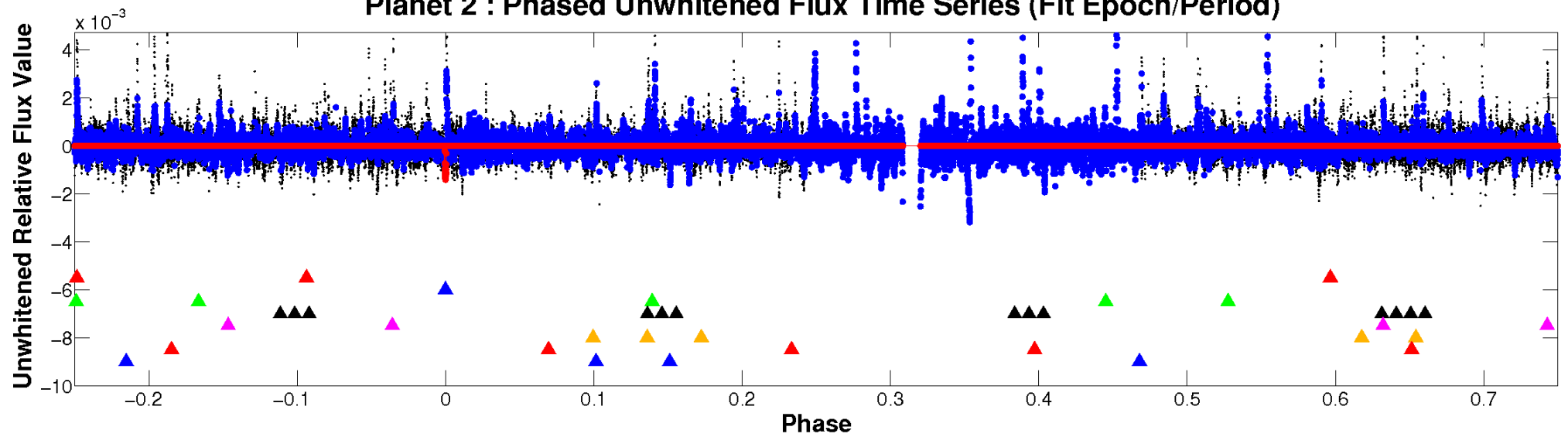
ALT Odd/Even

TCE 003560427-02

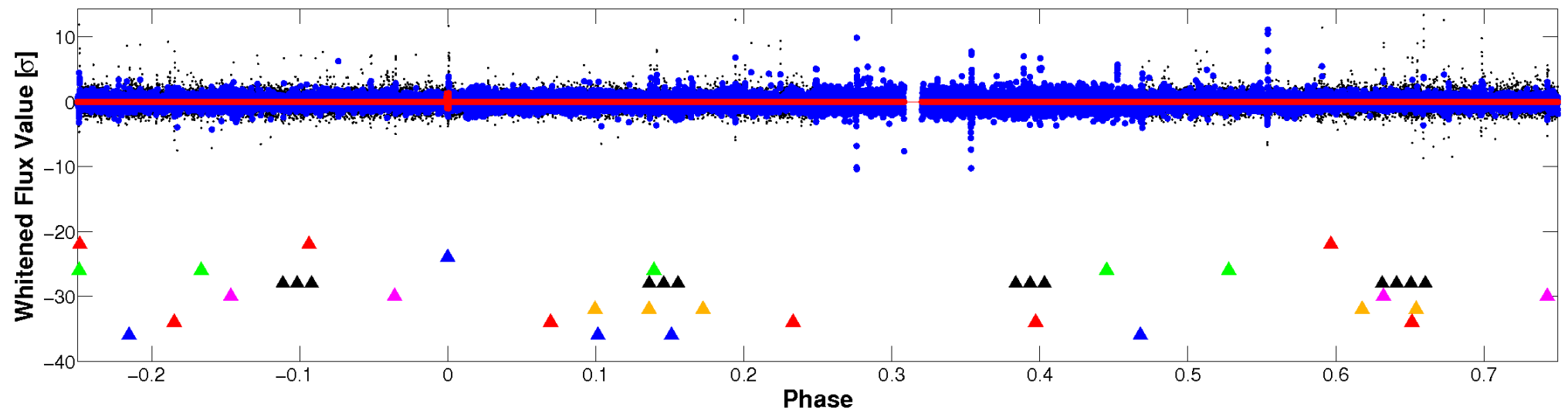


Non-Whitened Vs. Whitened Light Curve

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

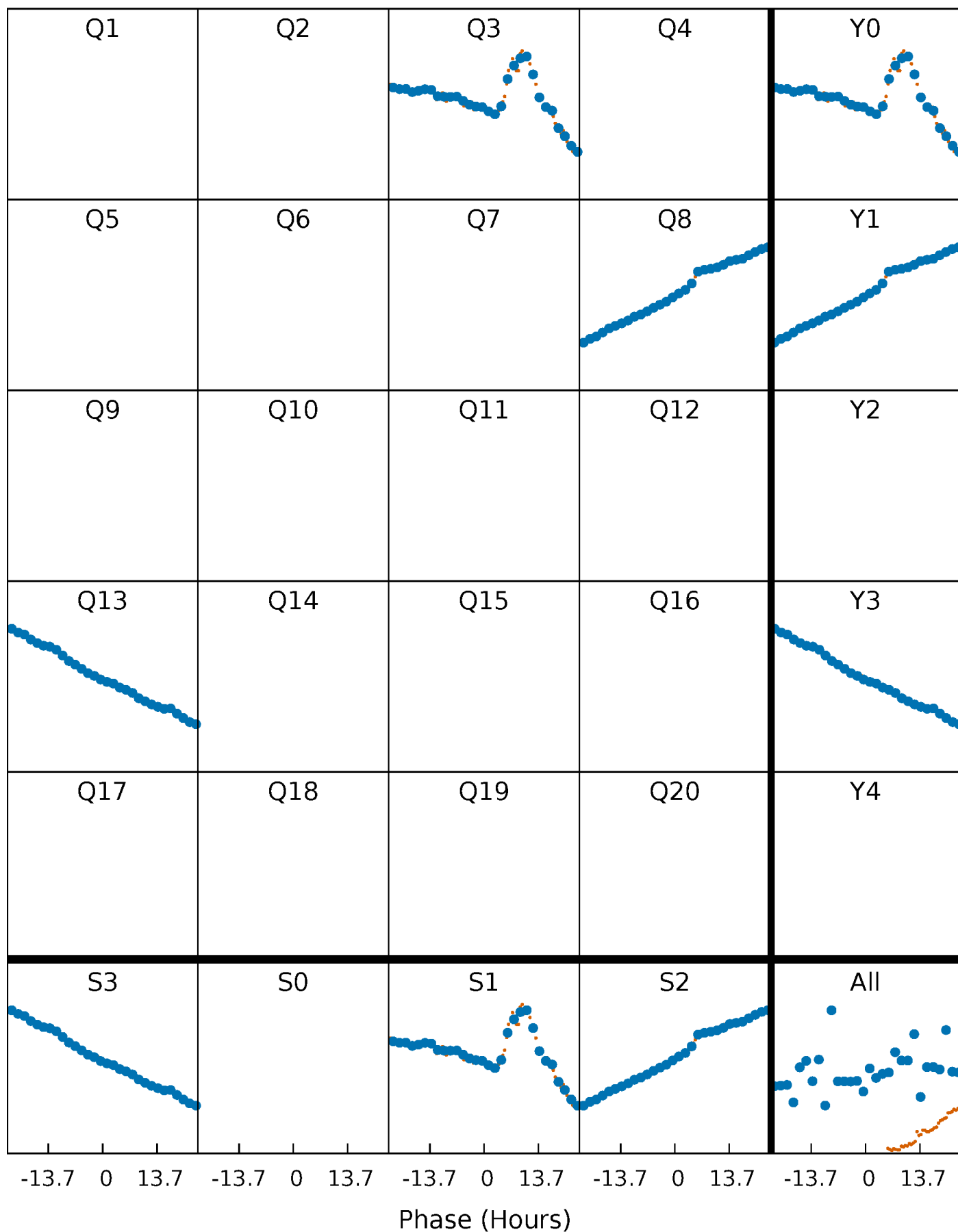


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



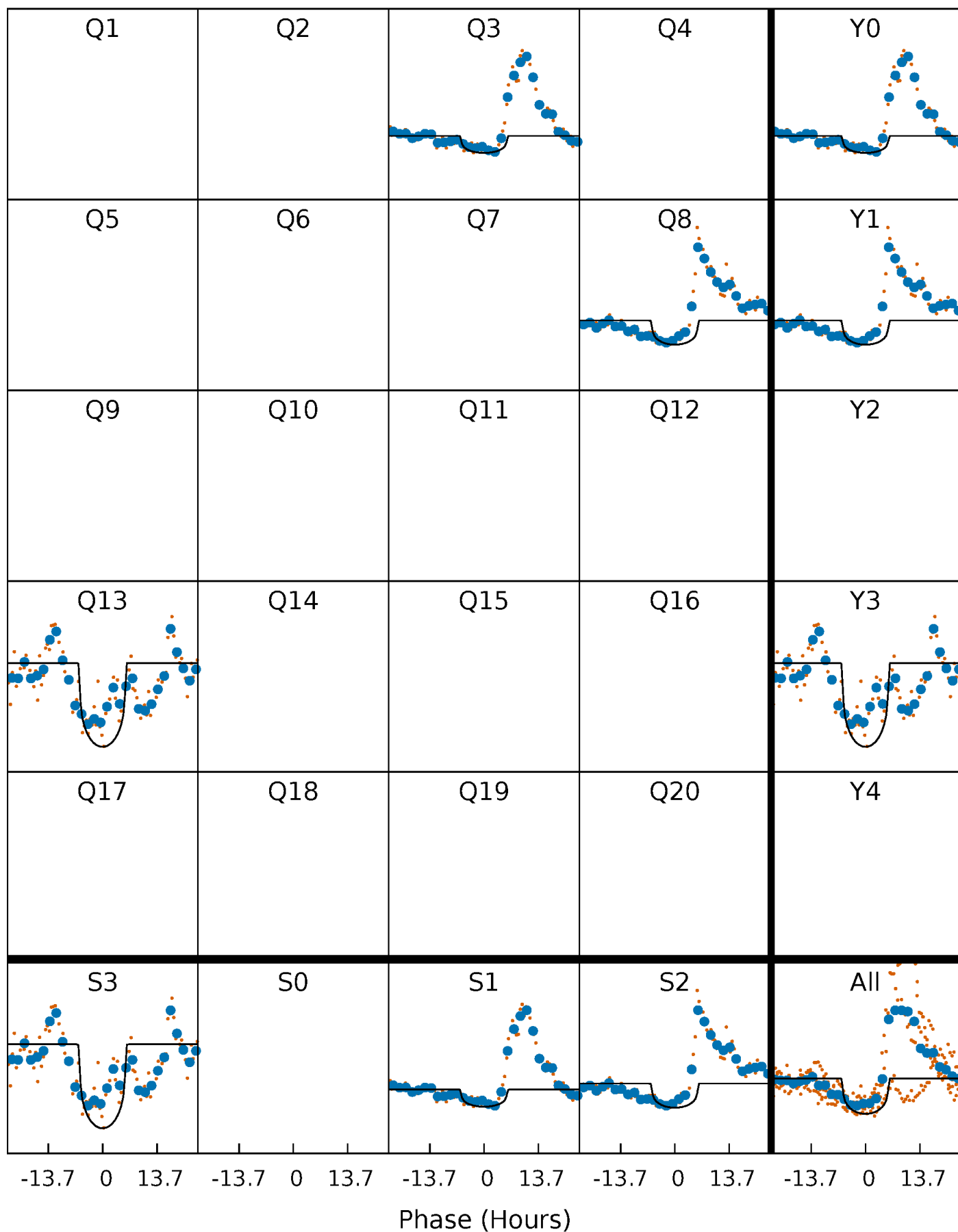
PDC Quarter-Phased Transit Curves

TCE 003560427-02 $P=470.852391$ Days $T_0=325.944237$ (BKJD)



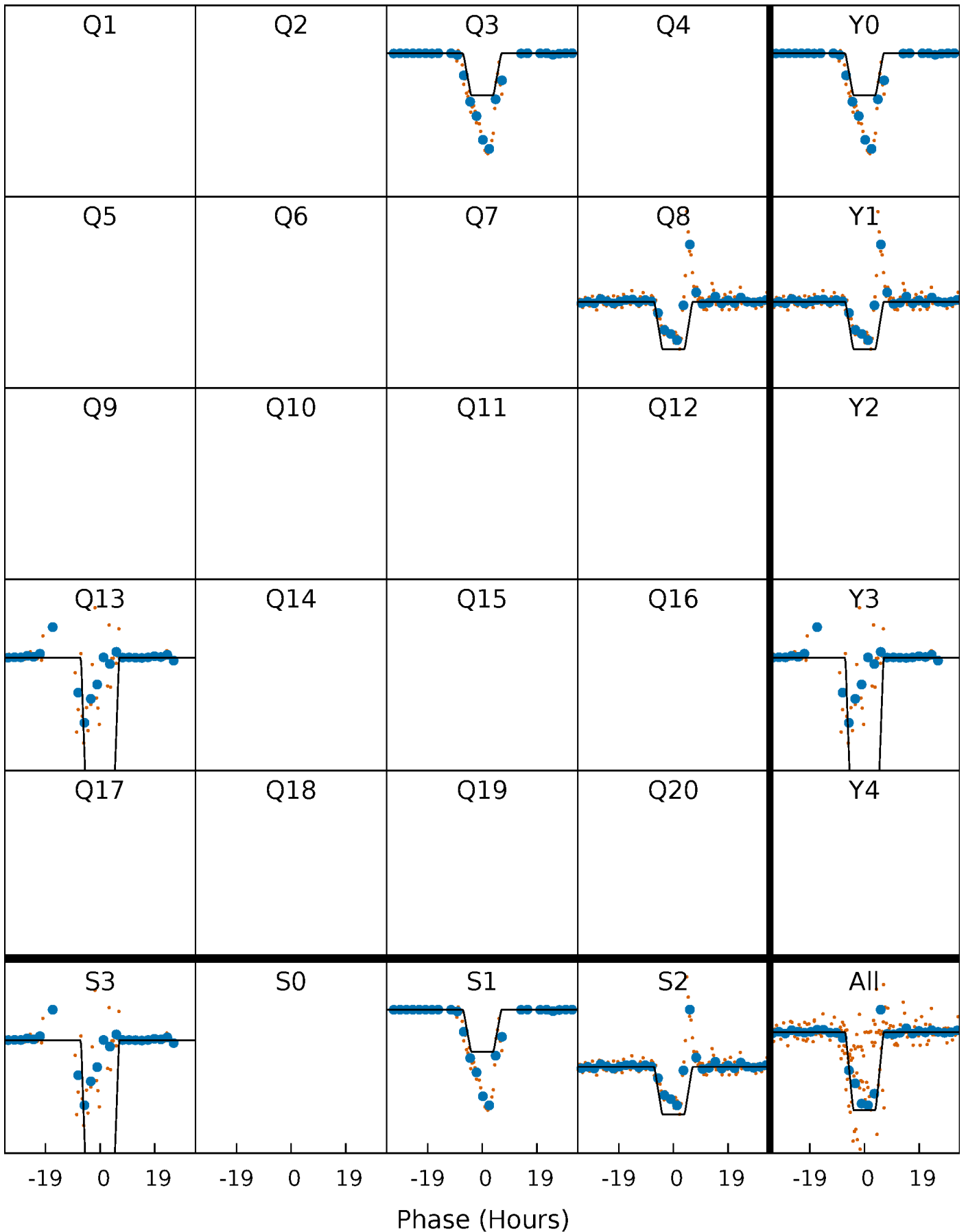
DV Quarter-Phased Transit Curves

TCE 003560427-02 $P=470.852391$ Days $T_0=325.944237$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

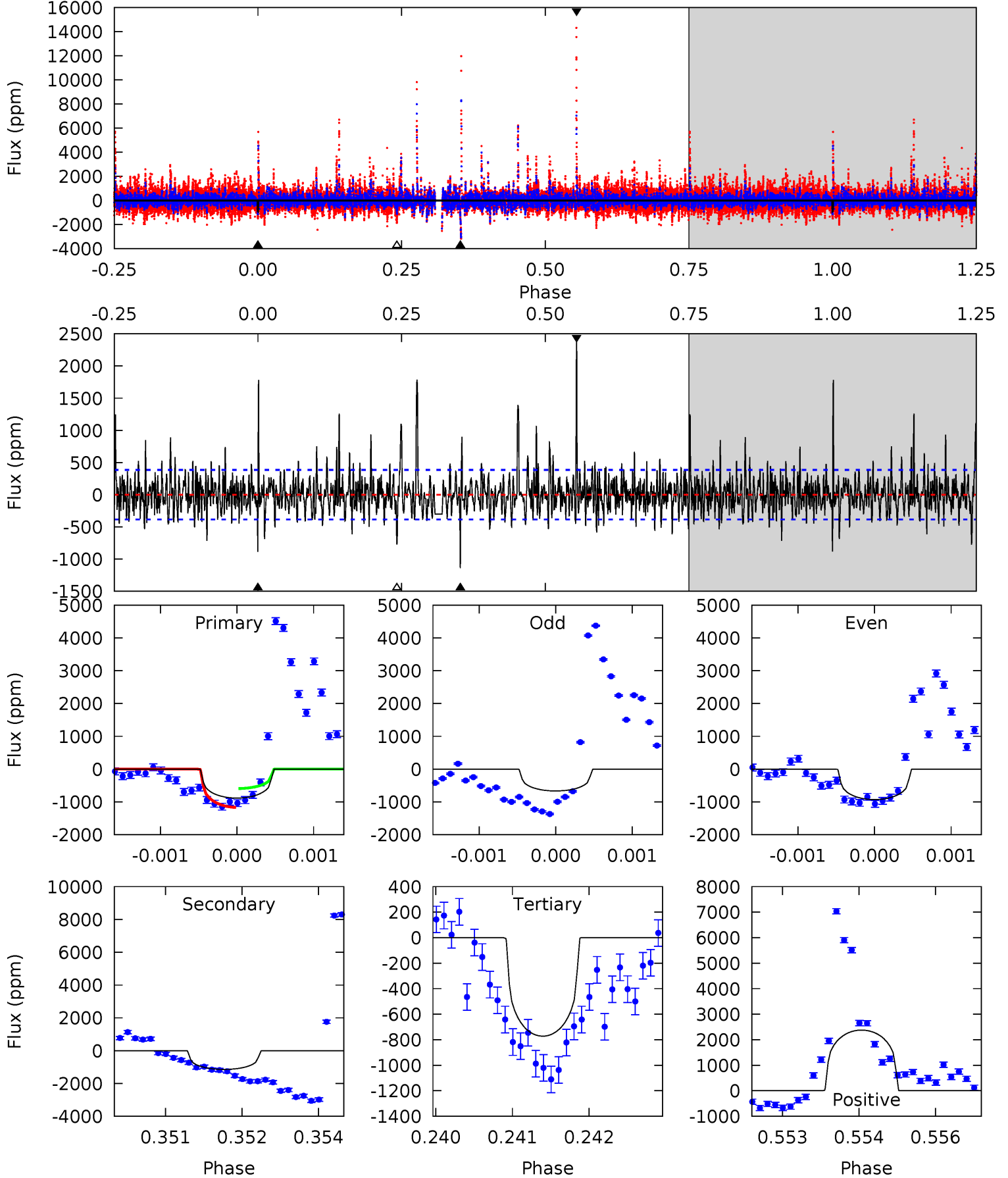
TCE 003560427-02 $P=470.836901$ Days $T_0=325.999605$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-02, P = 470.852391 Days, E = 325.944237 Days

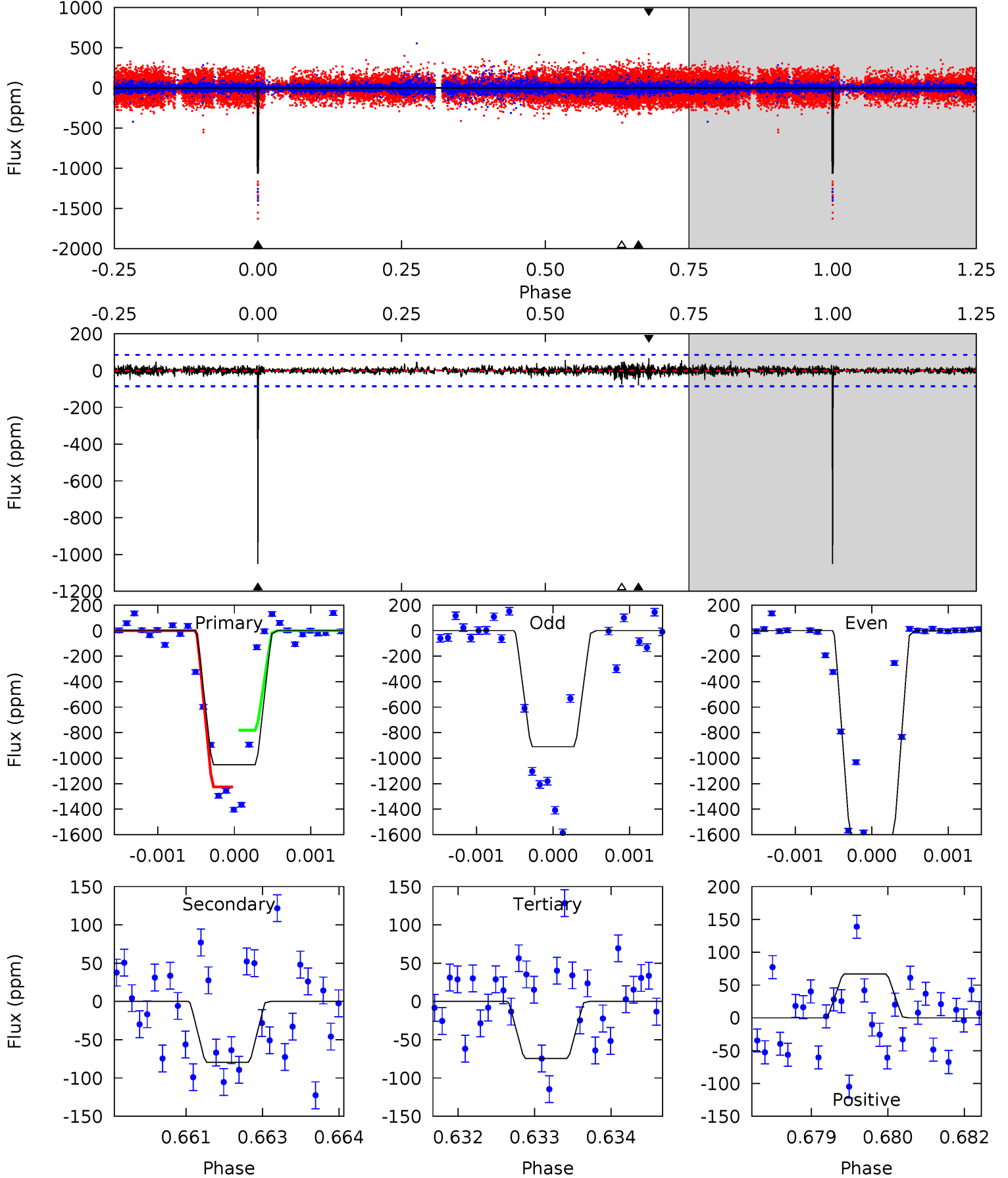
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	16.1	10.9	33.5	5.43	3.26	3.58	1.58	-21.0	5.20	-17.4	1.64	0.91	0.68	4.00



Alt Model-Shift Uniqueness Test

003560427-02, P = 470.836901 Days, E = 325.999605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
66.9	5.06	4.74	4.26	5.42	3.24	0.69	62.2	62.7	0.32	0.79	24.1	1.92	0.06	0



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1141 ± 71	$16.90^{+9.58}_{-7.41}$	606^{+87}_{-70}	4919^{+1265}_{-613}	2965^{+6816}_{-1786}
Alt.	-79 ± 16	$22.72^{+10.58}_{-8.47}$	609^{+97}_{-75}	2861^{+331}_{-217}	113^{+174}_{-63}

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

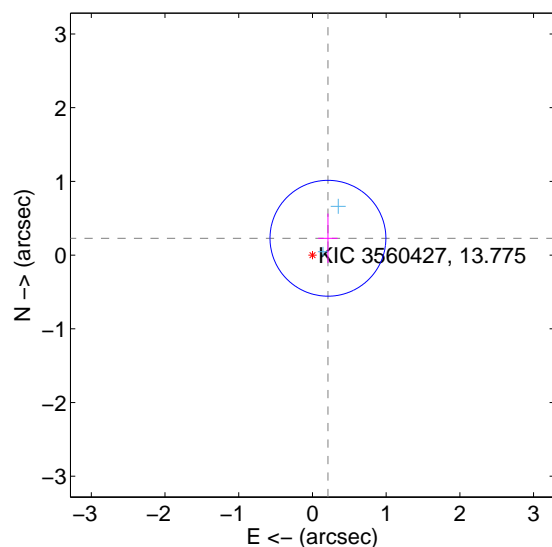
Supplemental centroid analysis for 003560427-02. Kepler magnitude: 13.78. Transit SNR 7.88

There are 2 quarters with good PRF difference image offsets

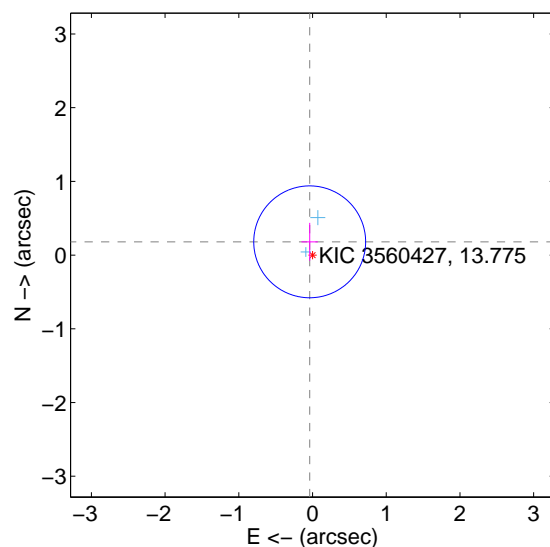
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.311 ± 0.262	1.19	-0.210 ± 0.131	0.228 ± 0.335
PRF-fit source offset from KIC position	0.184 ± 0.253	0.73	0.038 ± 0.111	0.180 ± 0.258
photometric centroid source offset	0.32 ± 0.80	0.40	-0.31 ± 0.82	-0.07 ± 0.47

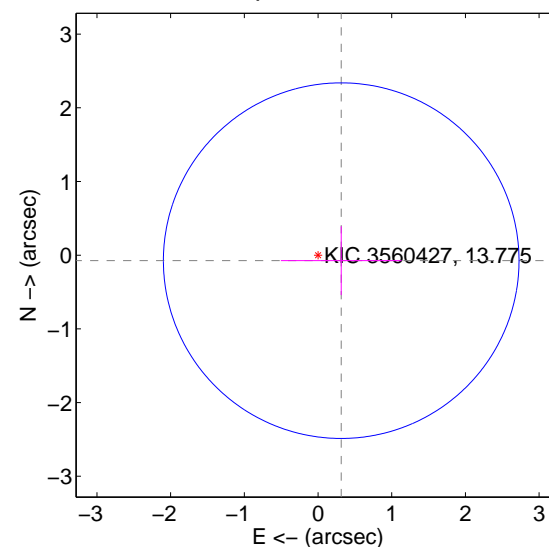
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

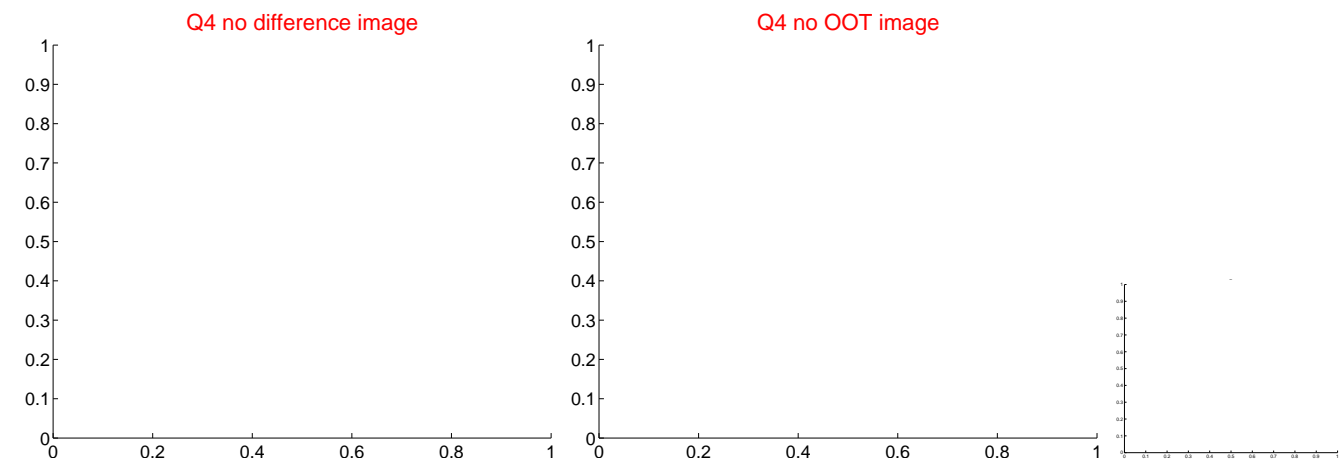
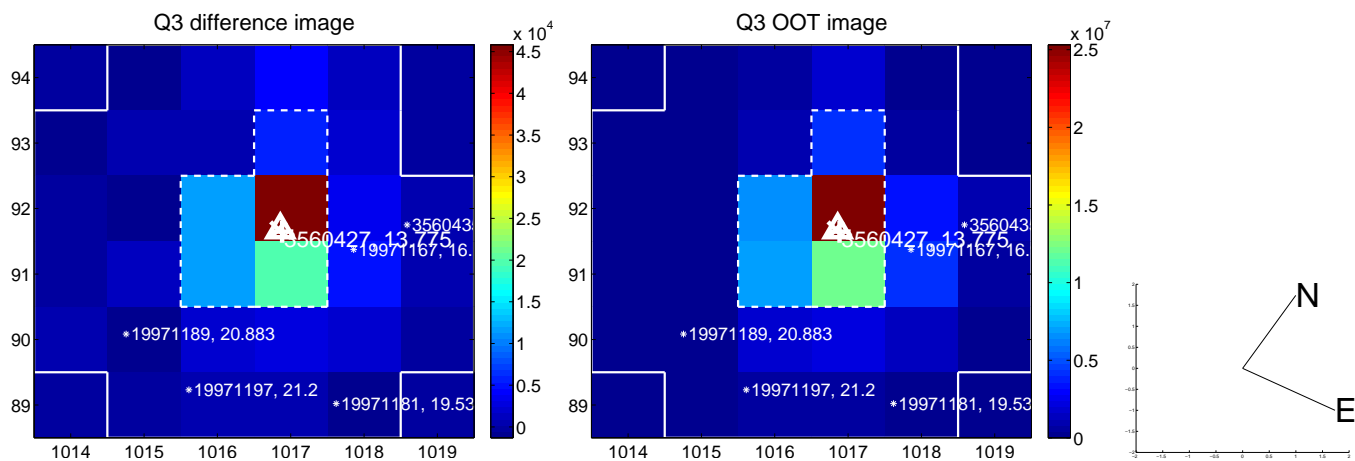
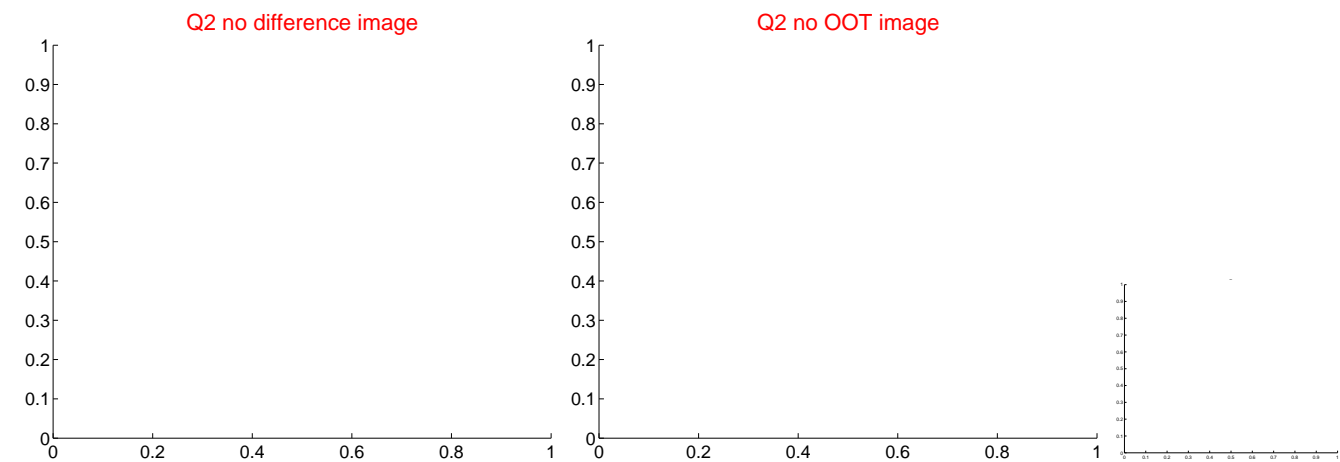
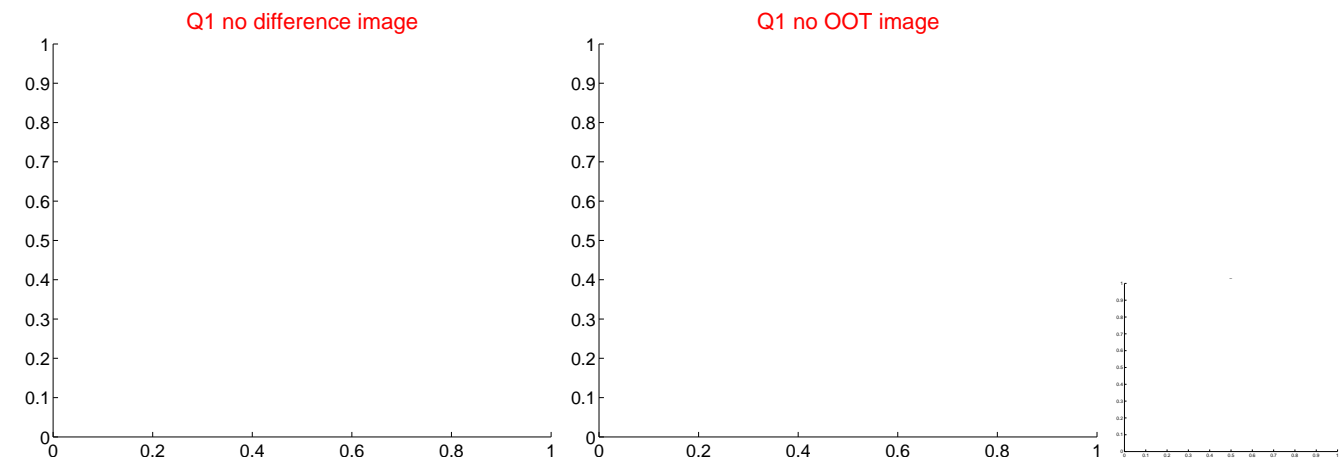


offset from photometric centroids

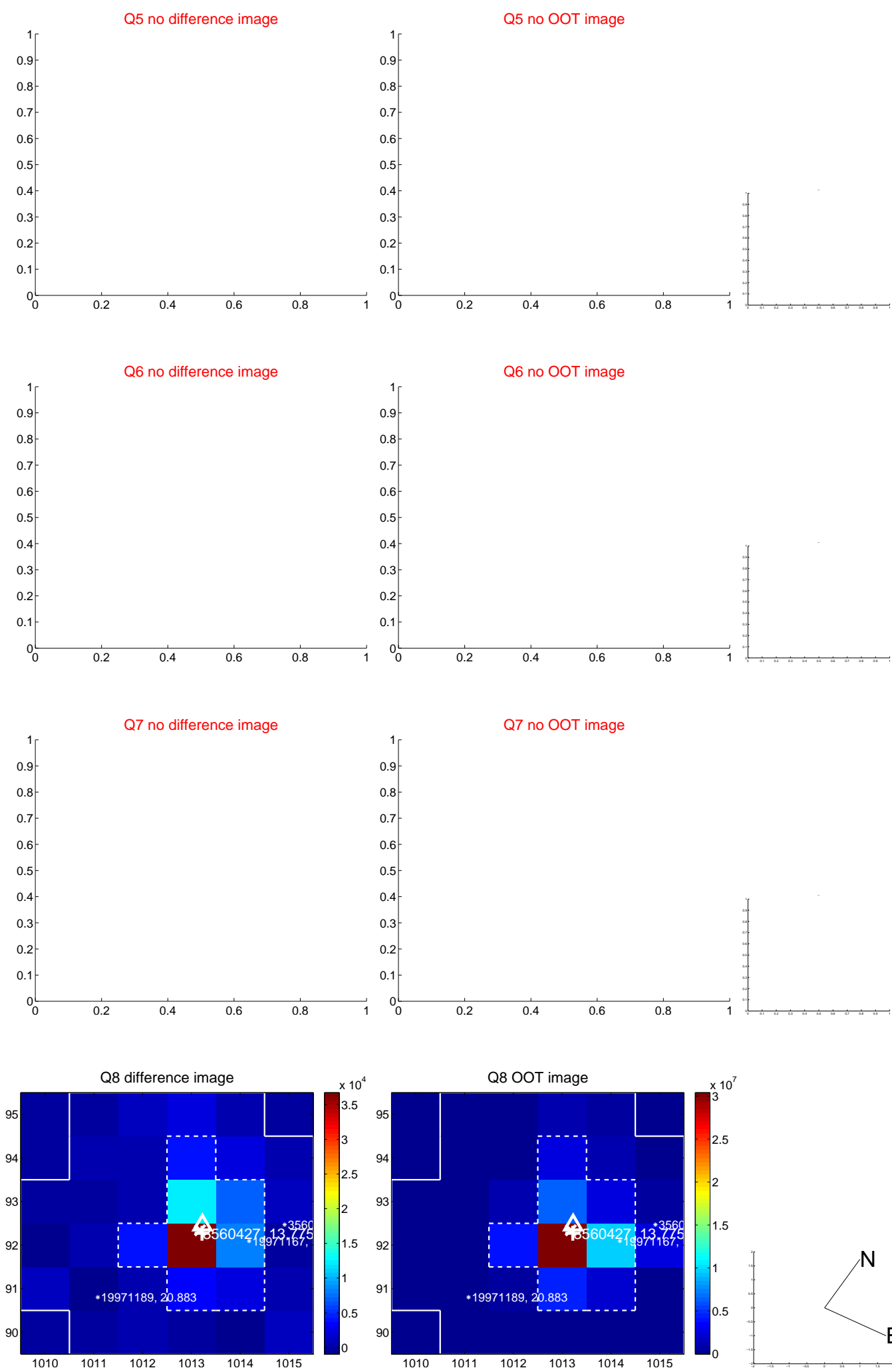


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



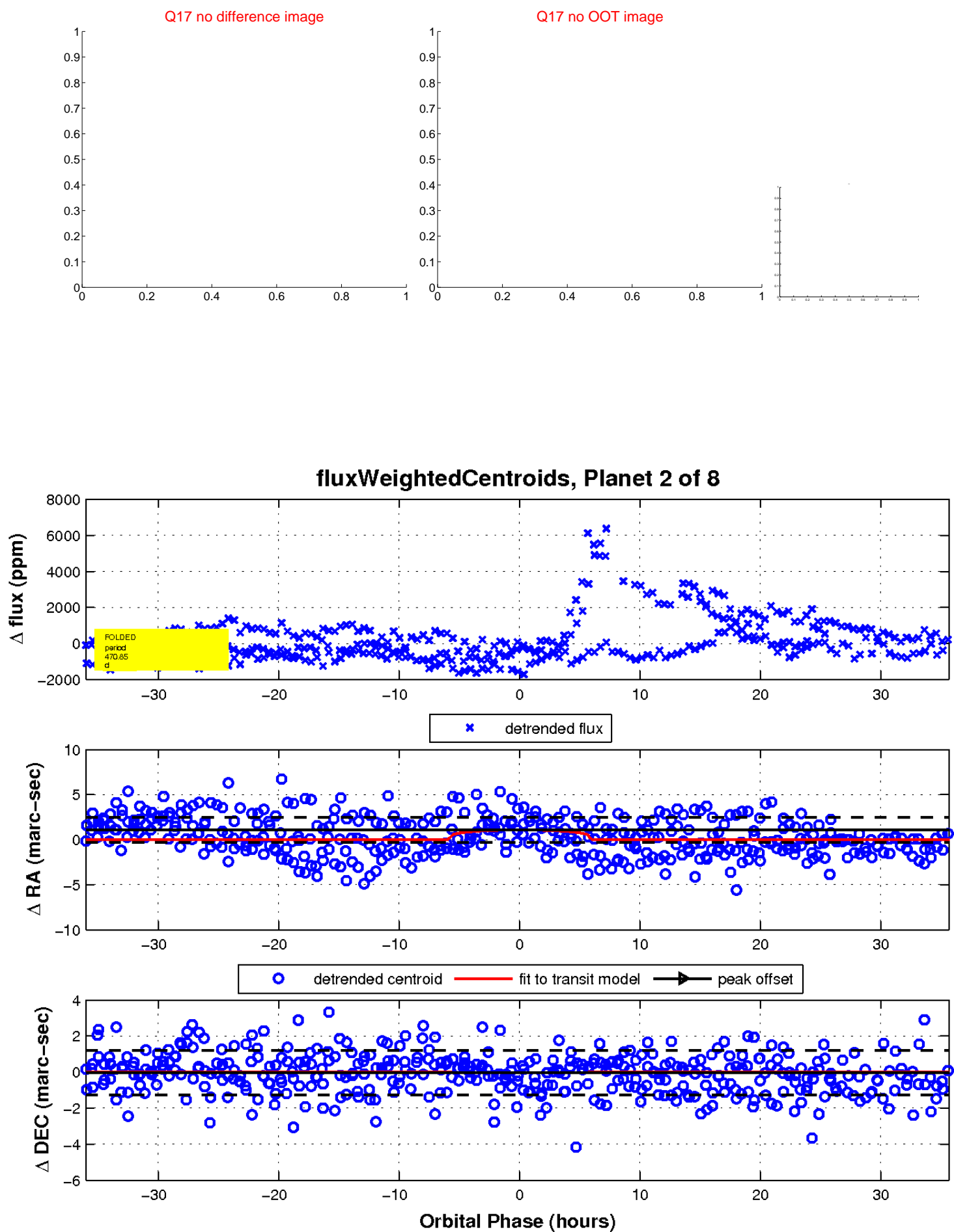
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

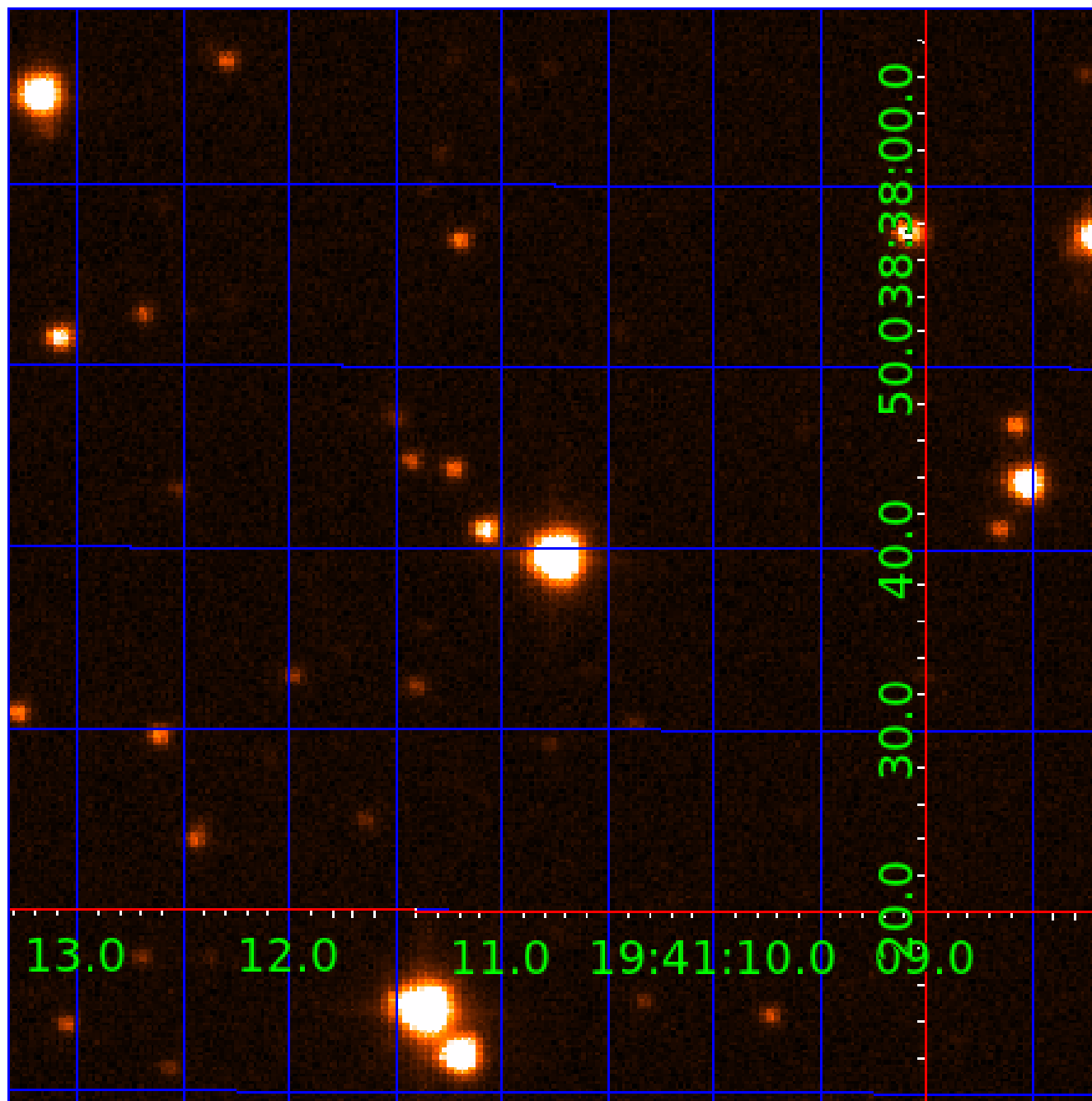


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

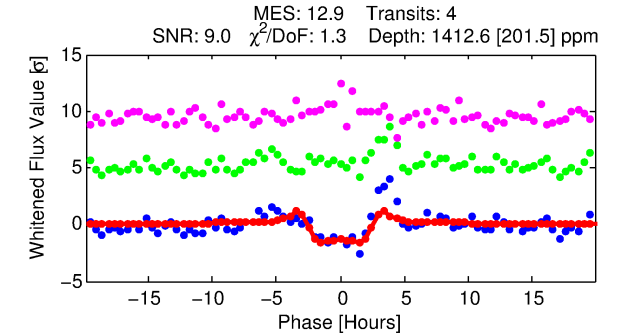
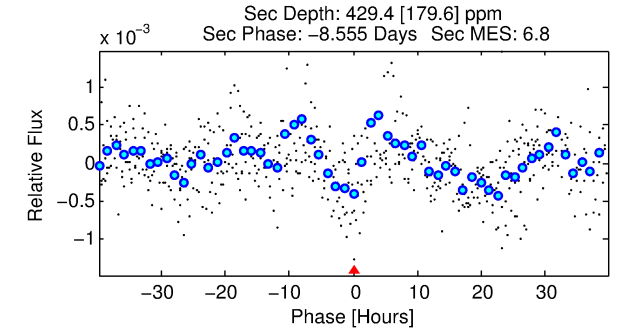
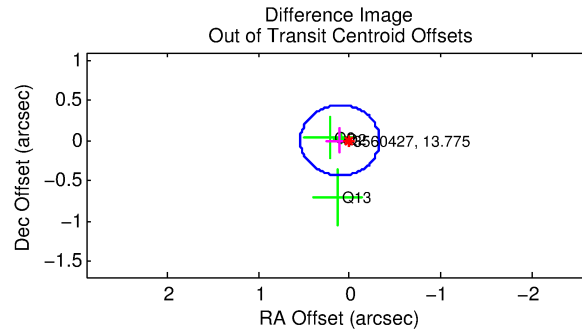
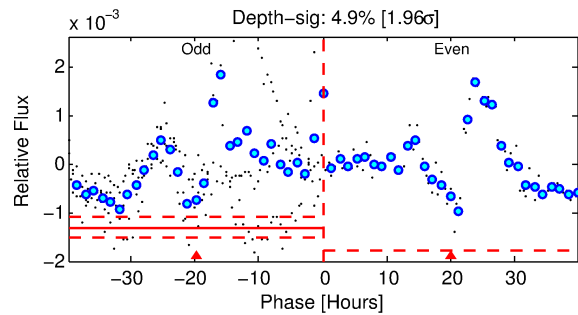
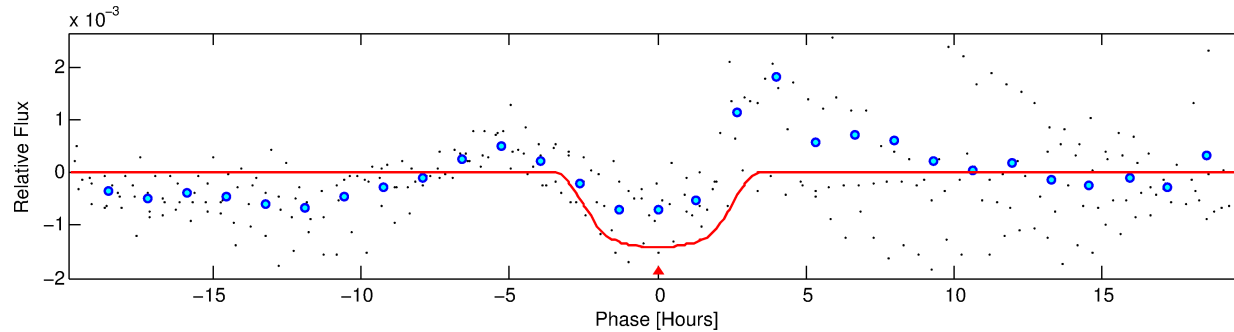
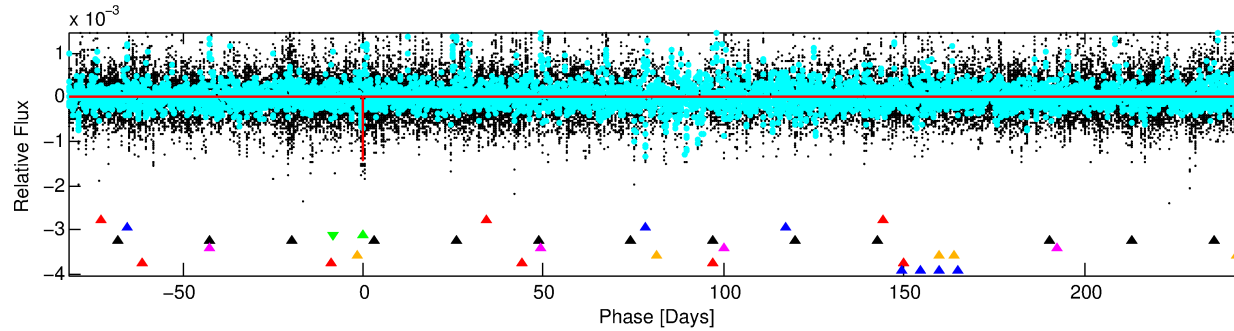
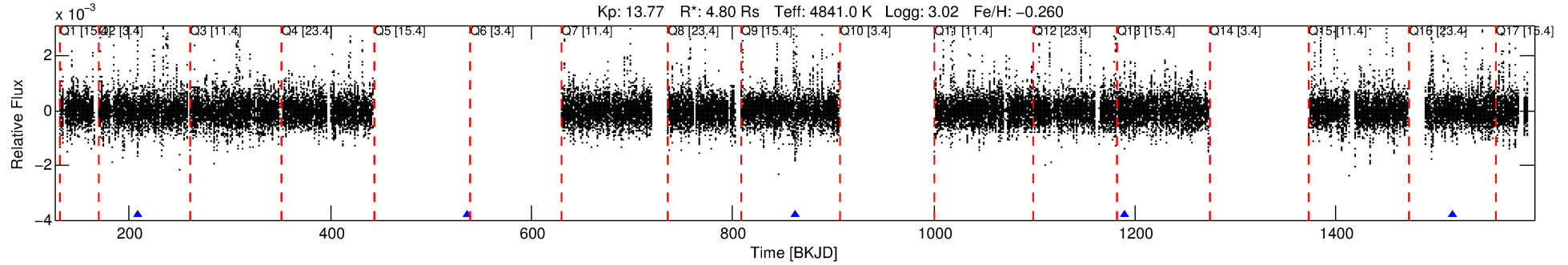
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-03

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 3 of 8 Period: 326.845 d



DV Fit Results:

Period = 326.84509 [0.00336] d
Epoch = 208.7122 [0.0090] BKJD
Rp/R* = 0.0436 [0.0038]
a/R* = 180.95 [24.86]
b = 0.93 [0.02]
Seff = 14.29 [11.15]
Teq = 496 [97] K
Rp = 22.83 [14.76] Re
a = 0.8905 [0.4757] AU
Ag = 359.43 [321.32] [1.12 σ]
Teffp = 3337 [391] K [7.06 σ]

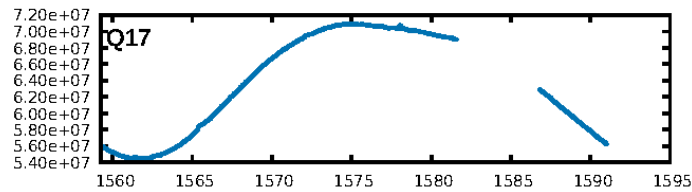
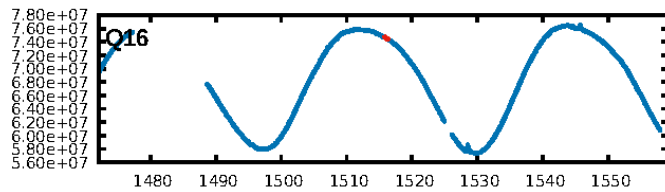
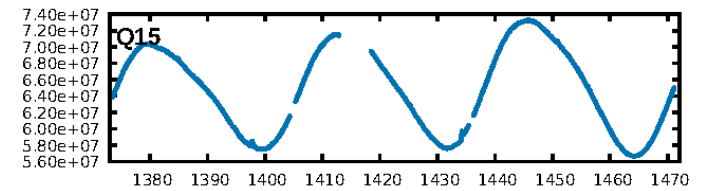
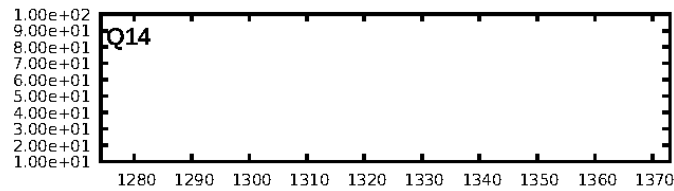
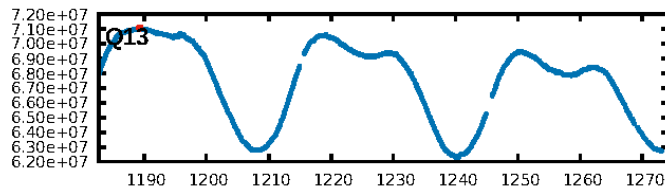
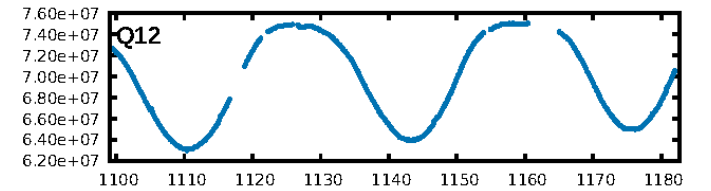
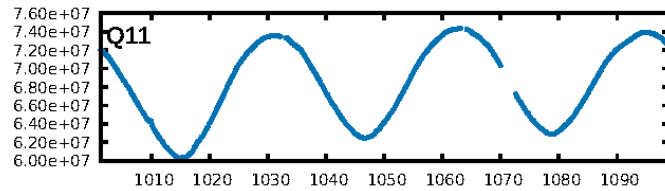
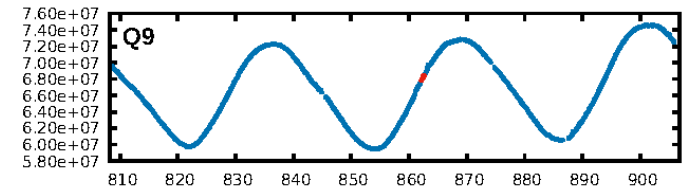
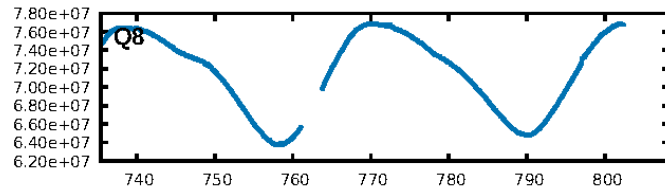
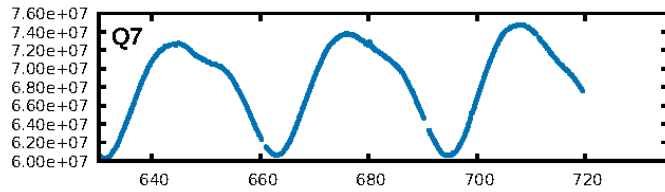
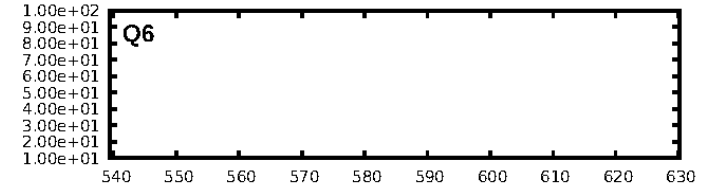
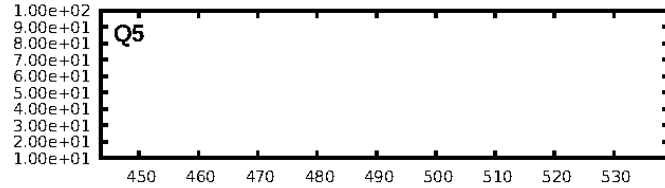
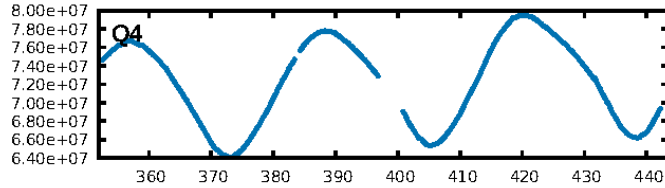
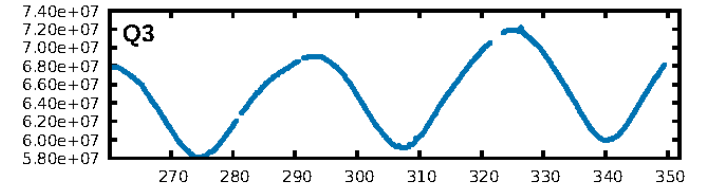
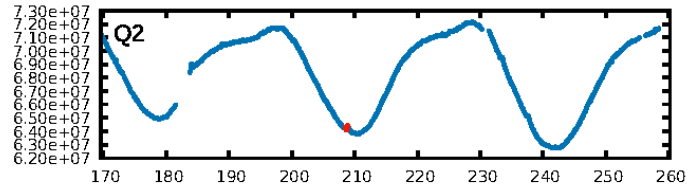
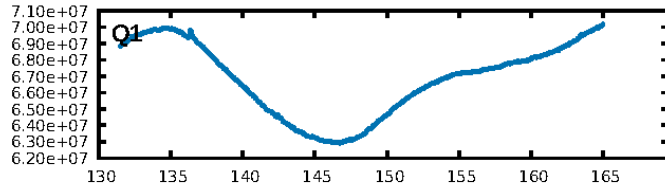
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.26 σ]
LongPeriod-sig: 100.0% [268.18 σ]
ModelChiSquare2-sig: 2.6%
ModelChiSquareGof-sig: 50.6%
Bootstrap-pfa: 1.84e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.365
Centroid-sig: 2.3%
Centroid-so: 1.213 arcsec [1.44 σ]
OotOffset-rm: 0.106 arcsec [0.72 σ]
KicOffset-rm: 0.258 arcsec [1.77 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

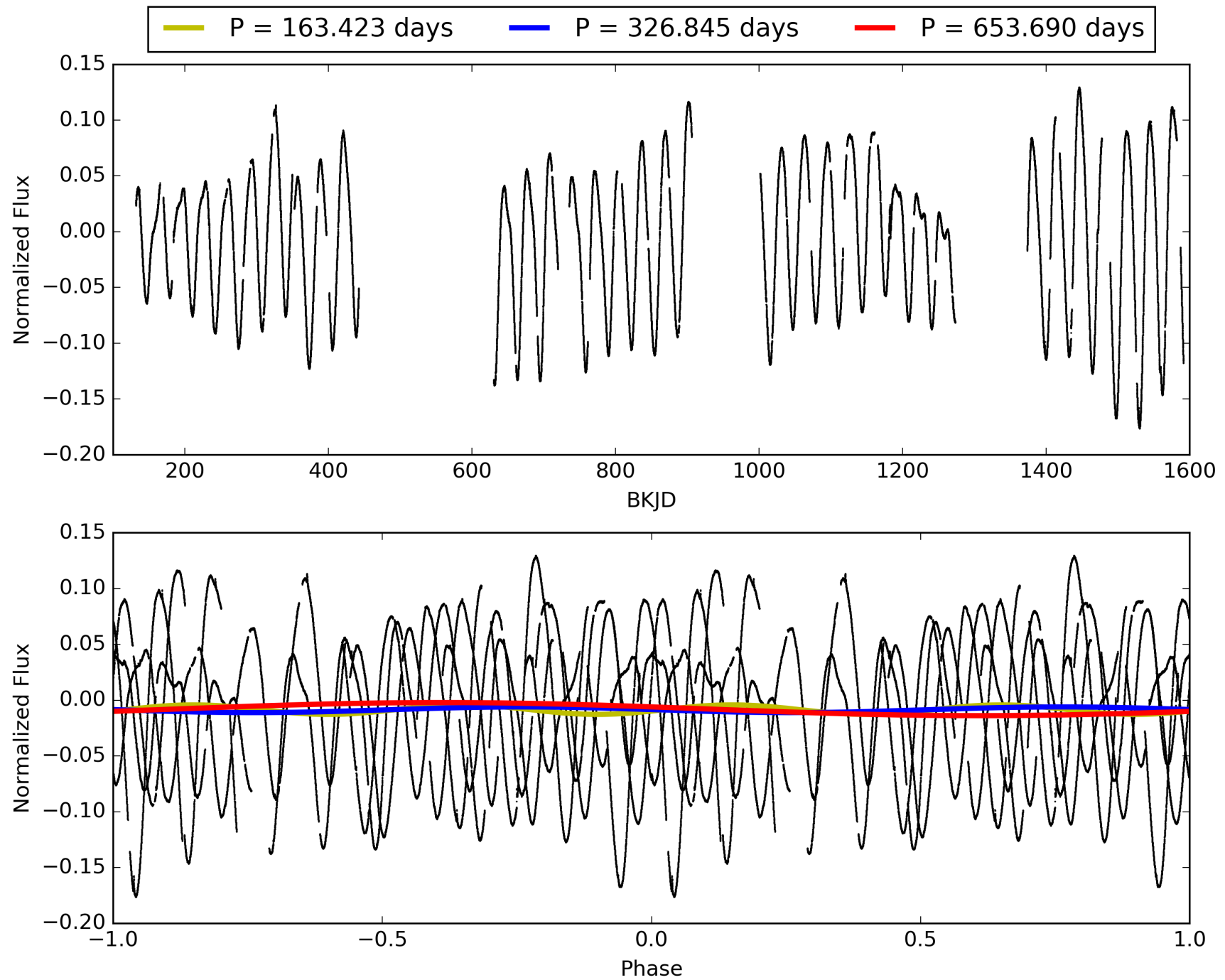
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:21 Z

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

TCE 003560427-03, PDC Light Curves

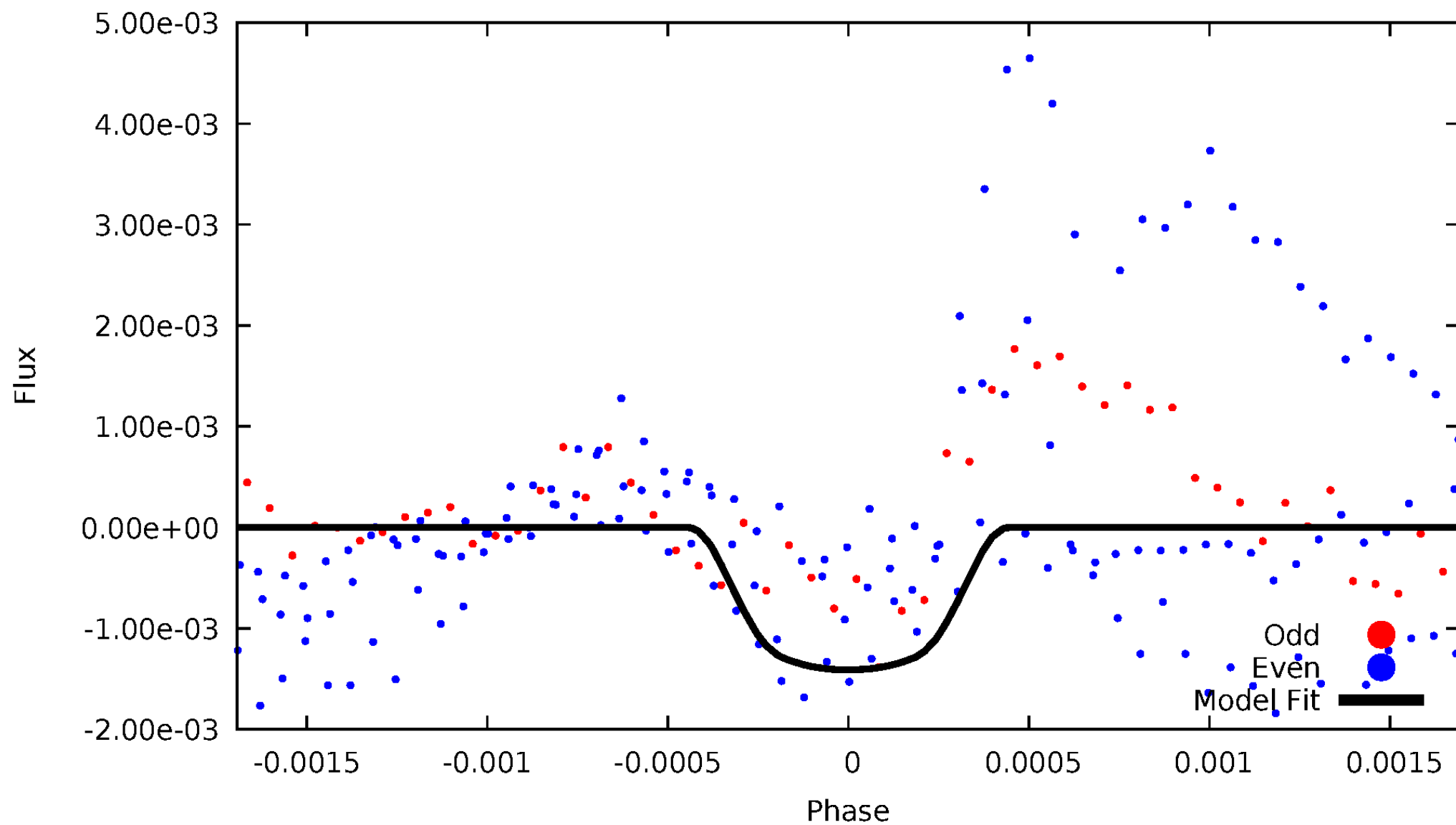


TCE 003560427-03



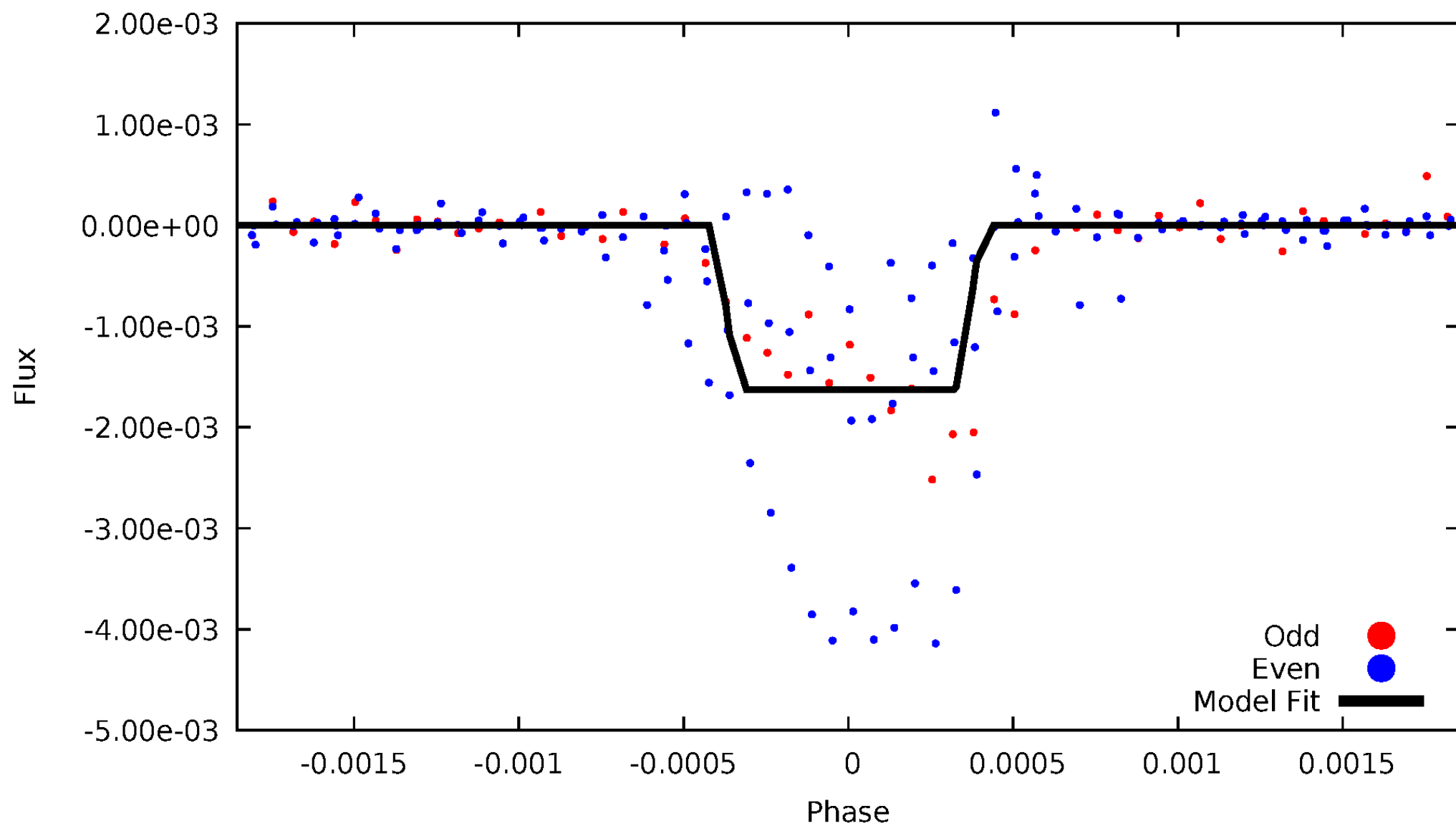
DV Odd/Even

TCE 003560427-03



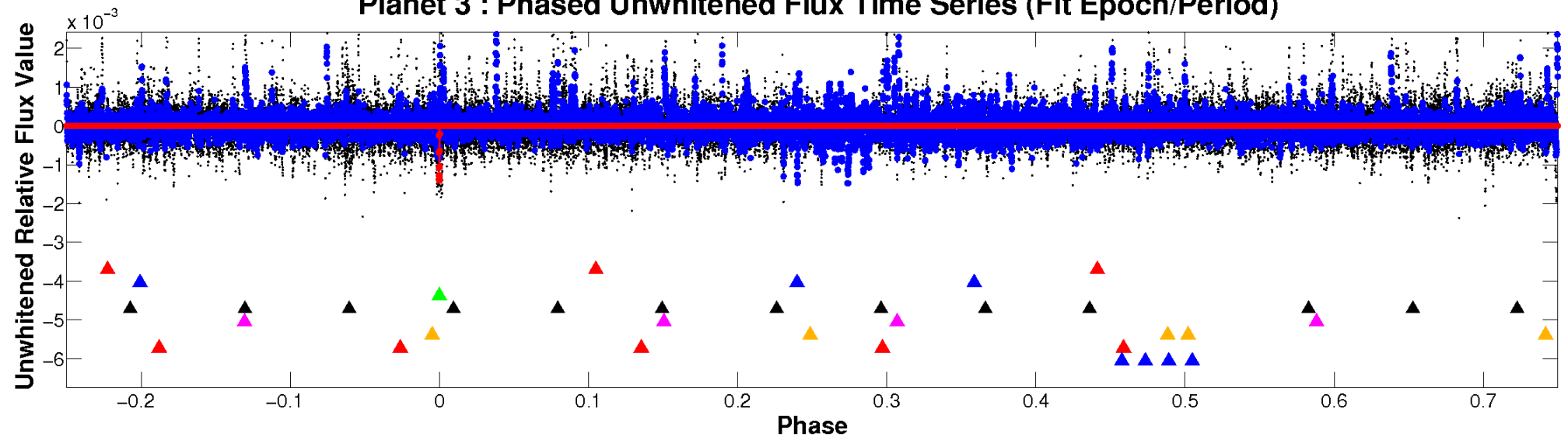
ALT Odd/Even

TCE 003560427-03

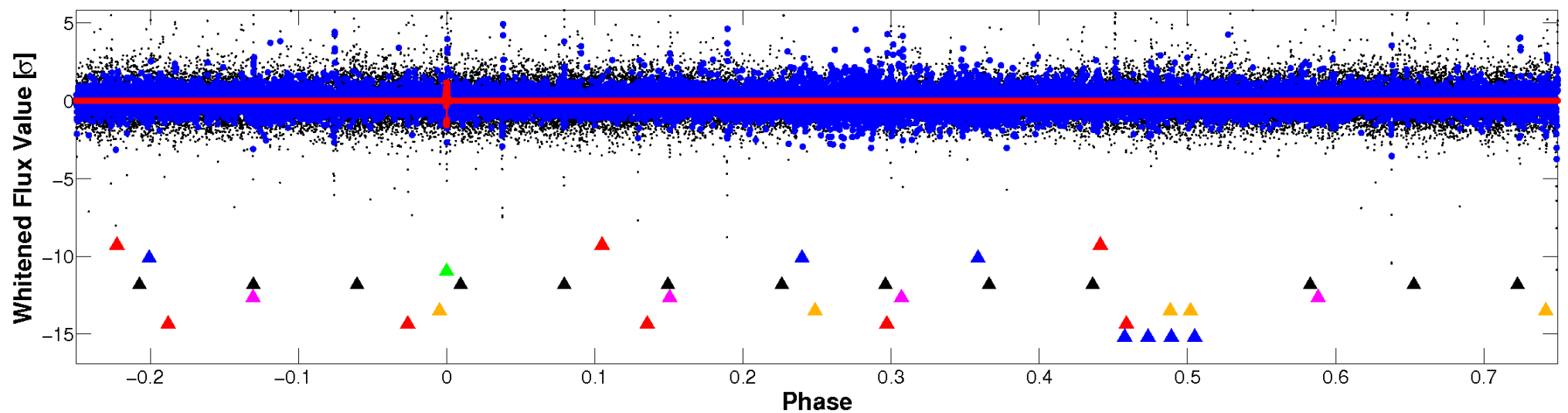


Non-Whitened Vs. Whitened Light Curve

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

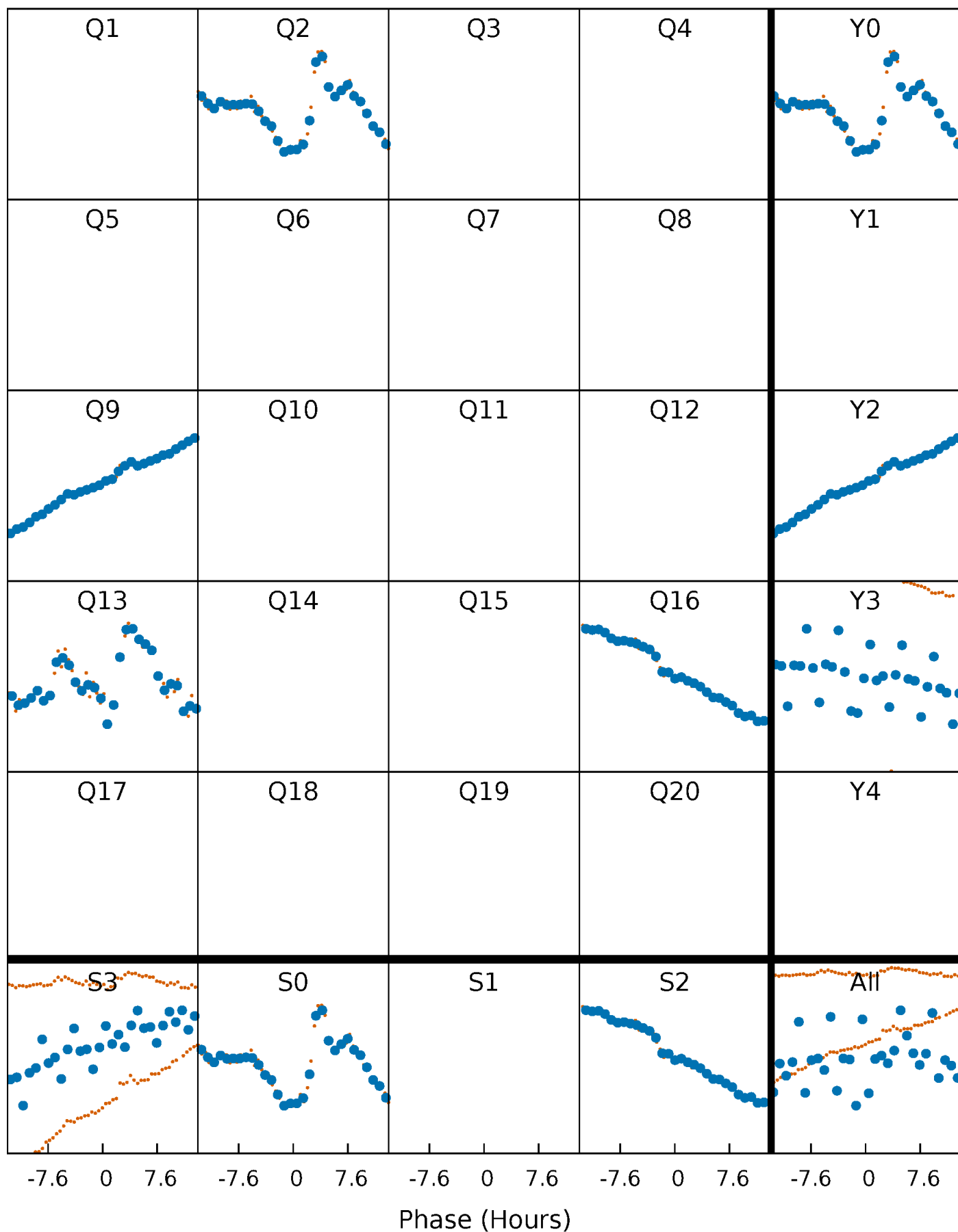


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



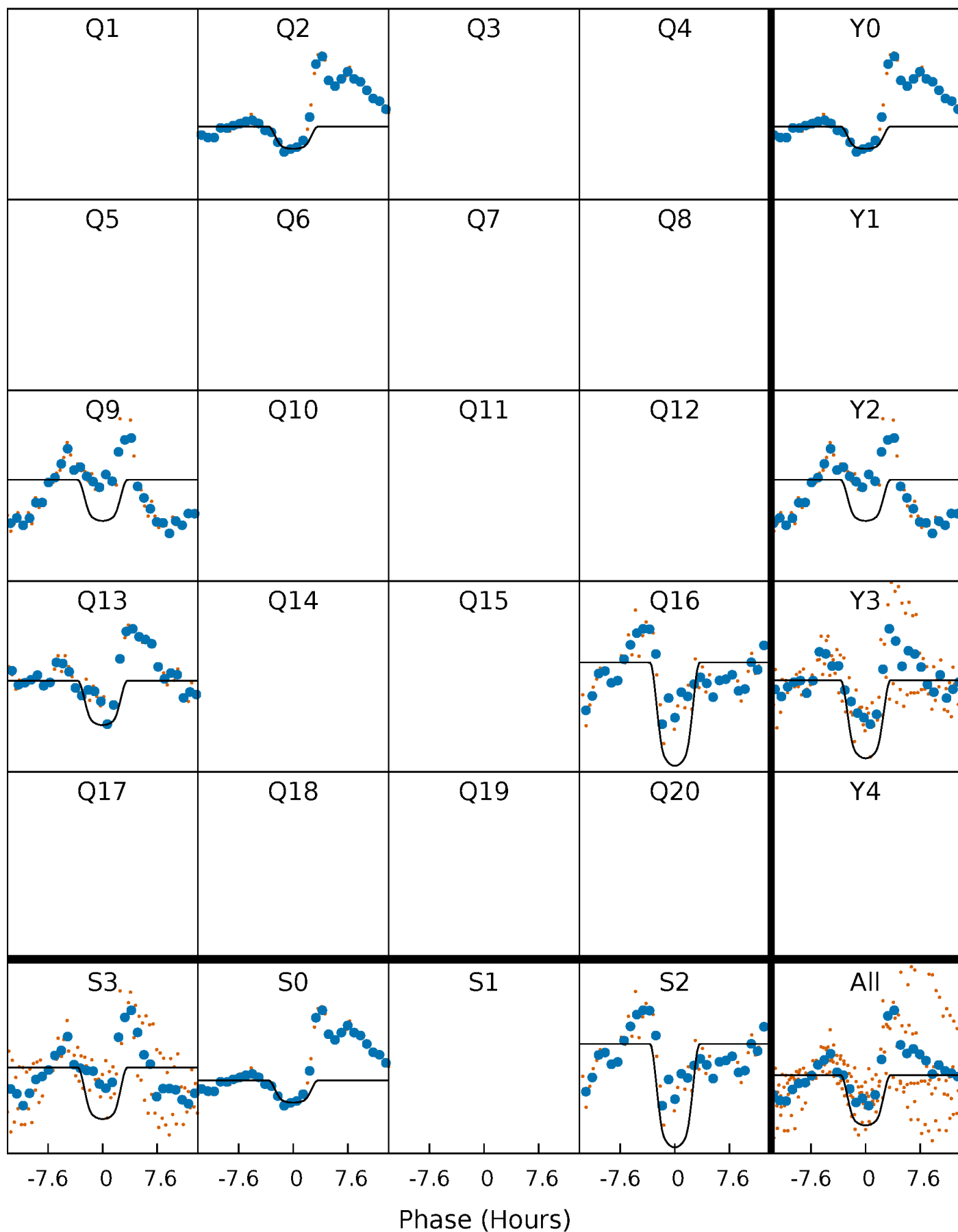
PDC Quarter-Phased Transit Curves

TCE 003560427-03 $P=326.845090$ Days $T_0=208.712201$ (BKJD)



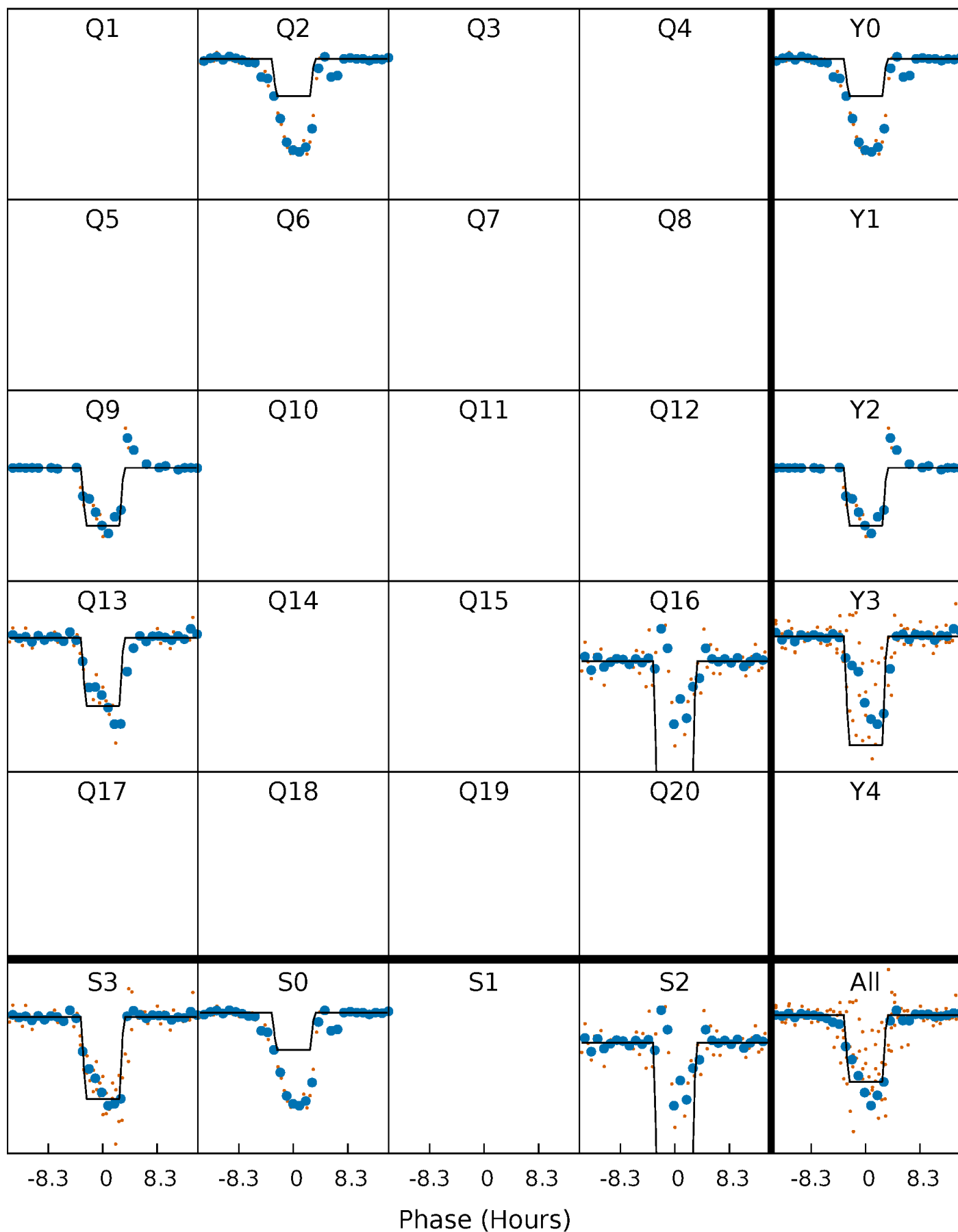
DV Quarter-Phased Transit Curves

TCE 003560427-03 $P=326.845090$ Days $T_0=208.712201$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

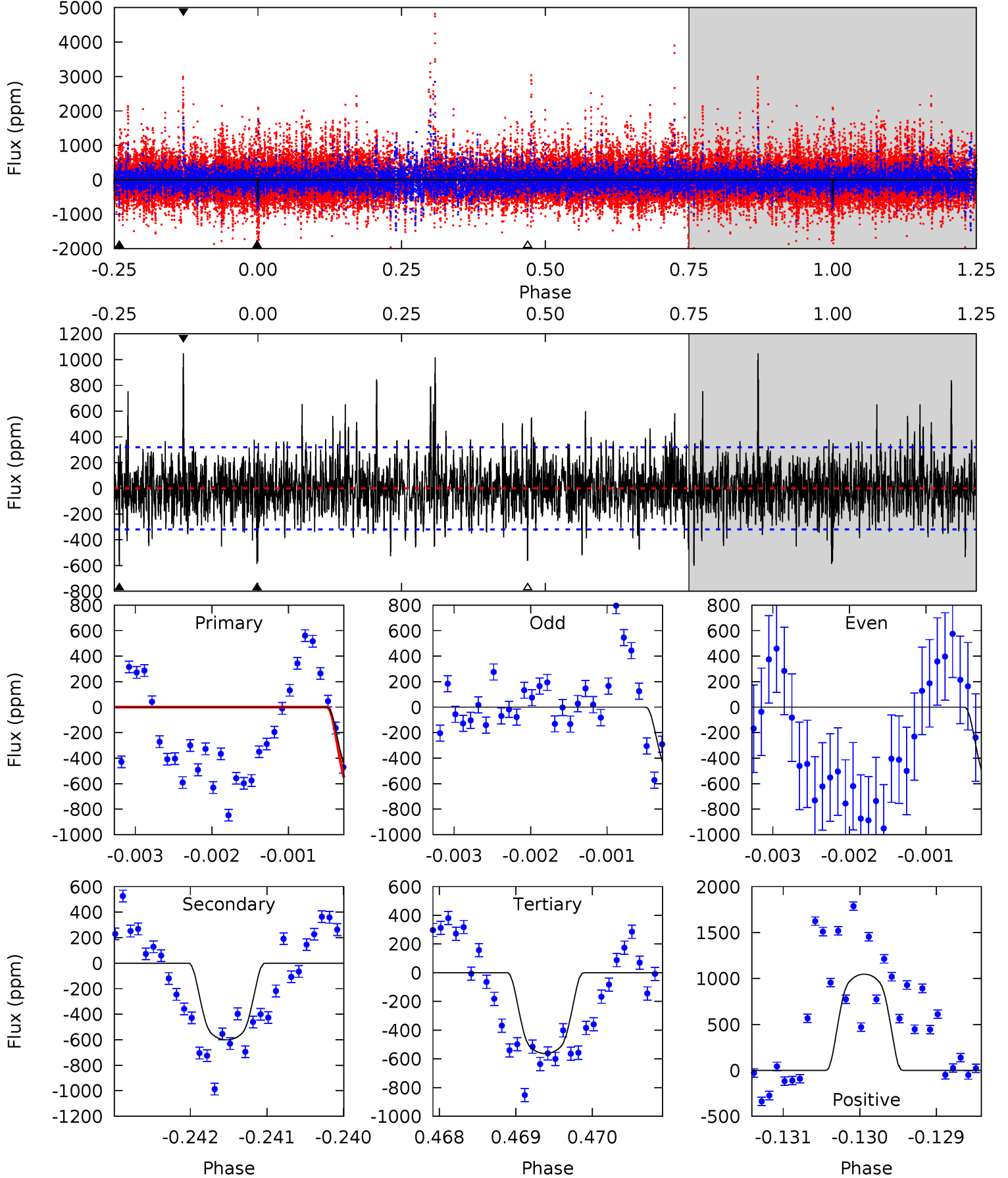
TCE 003560427-03 P=326.834792 Days $T_0=208.687694$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-03, P = 326.845090 Days, E = 208.712201 Days

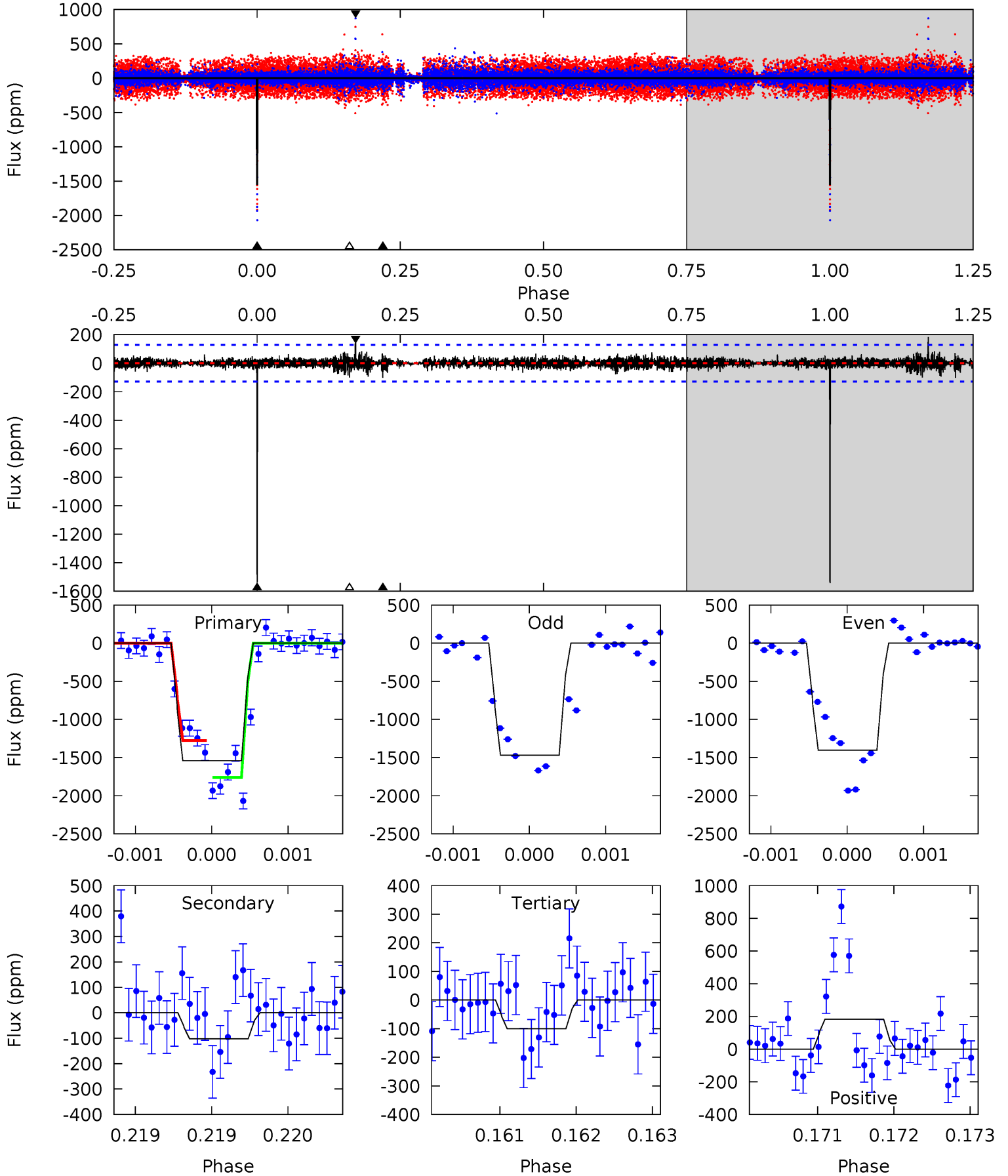
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	10.3	9.66	18.0	5.47	3.32	2.80	0.42	-7.89	0.65	-7.66	0.57	0.92	0.64	2.26



Alt Model-Shift Uniqueness Test

003560427-03, P = 326.834792 Days, E = 208.687694 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.5	4.33	4.27	7.76	5.49	3.35	0.72	61.2	57.8	0.06	-3.43	1.33	1.14	0.11	0



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-601 ± 58	$22.63^{+8.50}_{-5.56}$	684^{+106}_{-81}	3885^{+172}_{-140}	528^{+407}_{-244}
Alt.	-102 ± 24	$21.01^{+7.66}_{-4.95}$	687^{+106}_{-77}	3020^{+153}_{-130}	99^{+86}_{-45}

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

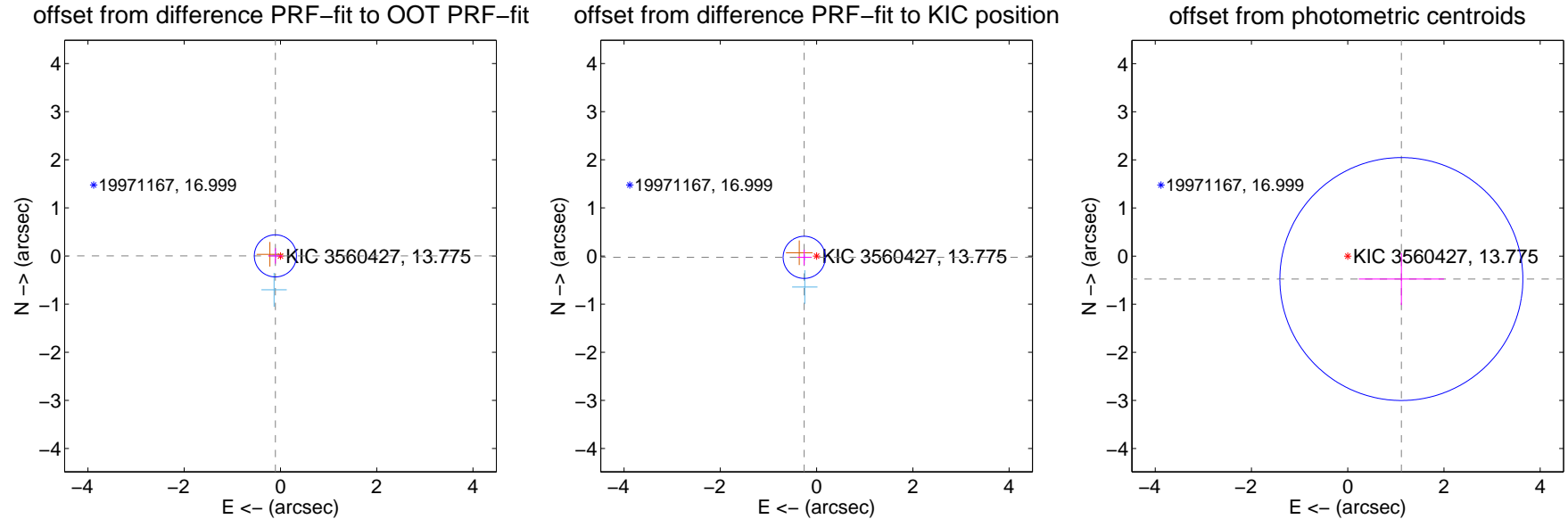
DV Centroid Data

Supplemental centroid analysis for 003560427-03. Kepler magnitude: 13.78. Transit SNR 9.05

There are 2 quarters with good PRF difference image offsets

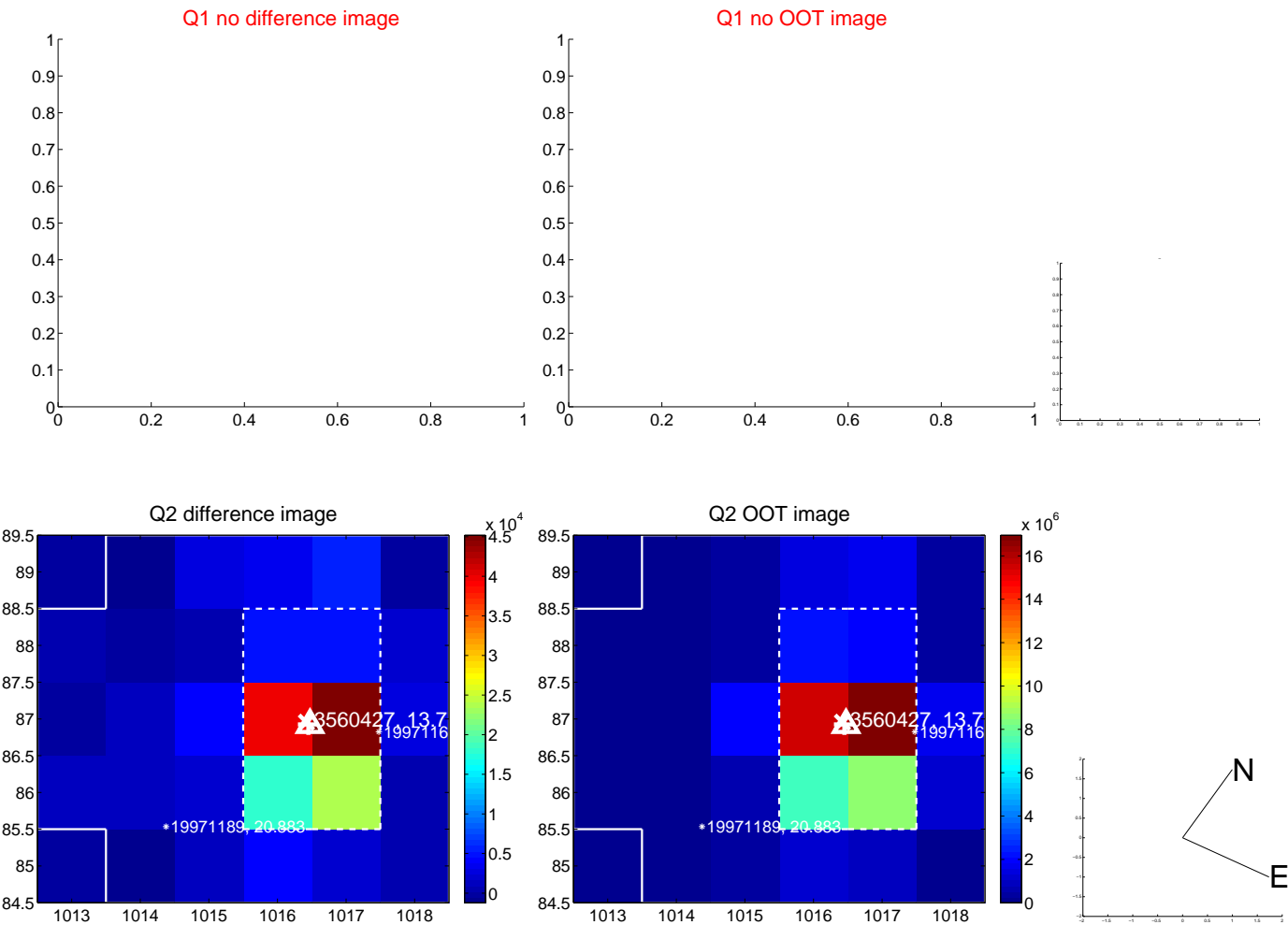
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 0.146	0.72	0.105 ± 0.146	0.003 ± 0.161
PRF-fit source offset from KIC position	0.258 ± 0.146	1.77	0.257 ± 0.146	-0.027 ± 0.161
photometric centroid source offset	1.21 ± 0.84	1.44	-1.11 ± 0.89	-0.48 ± 0.54



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

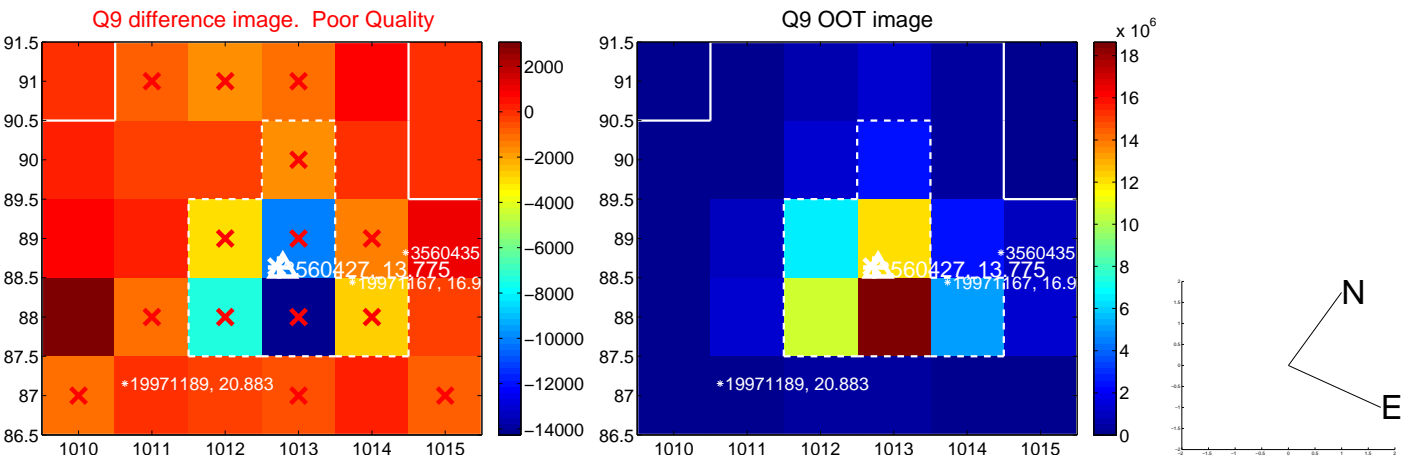
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



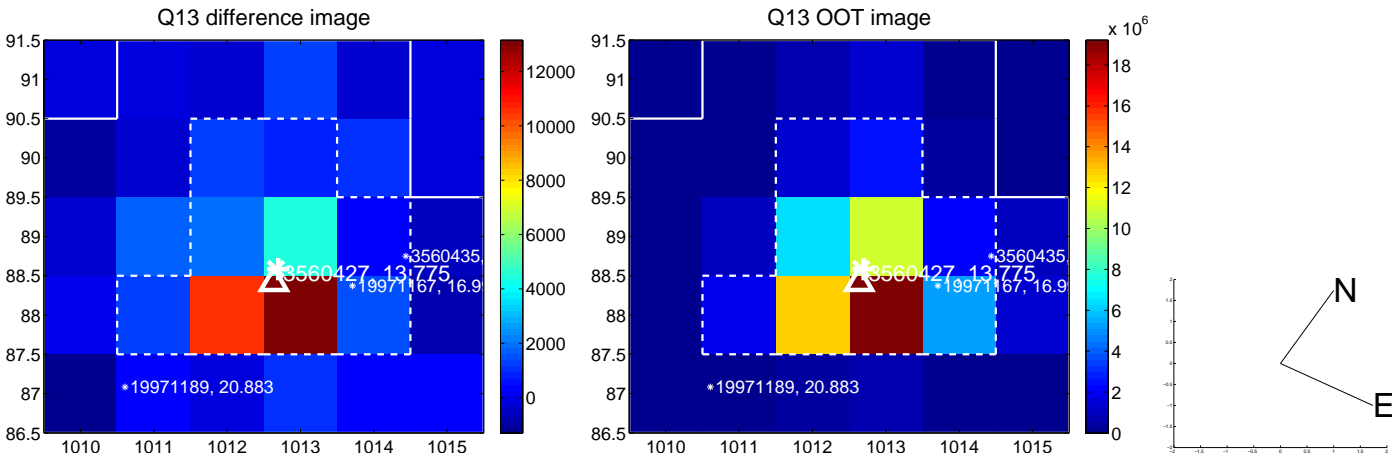
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



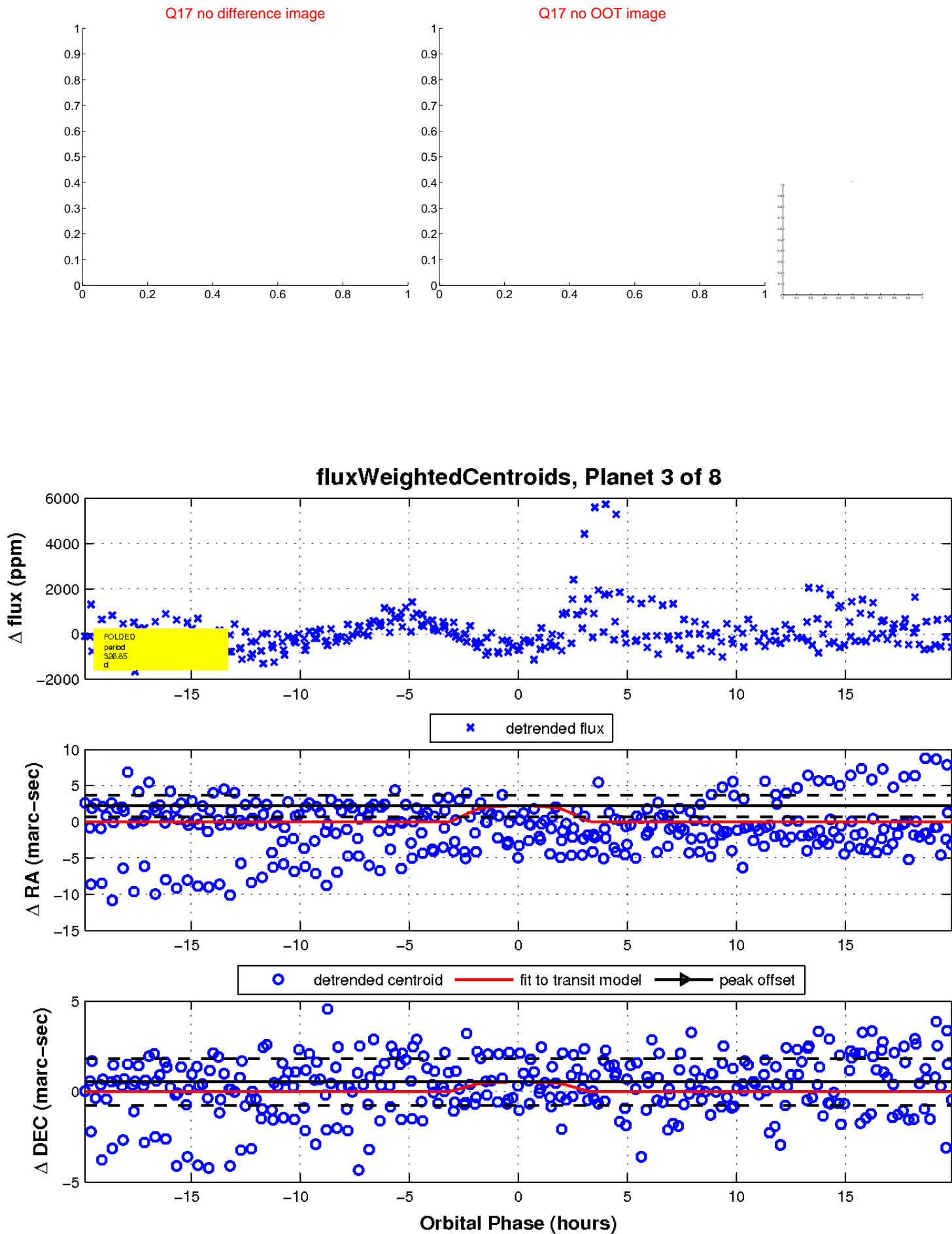
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

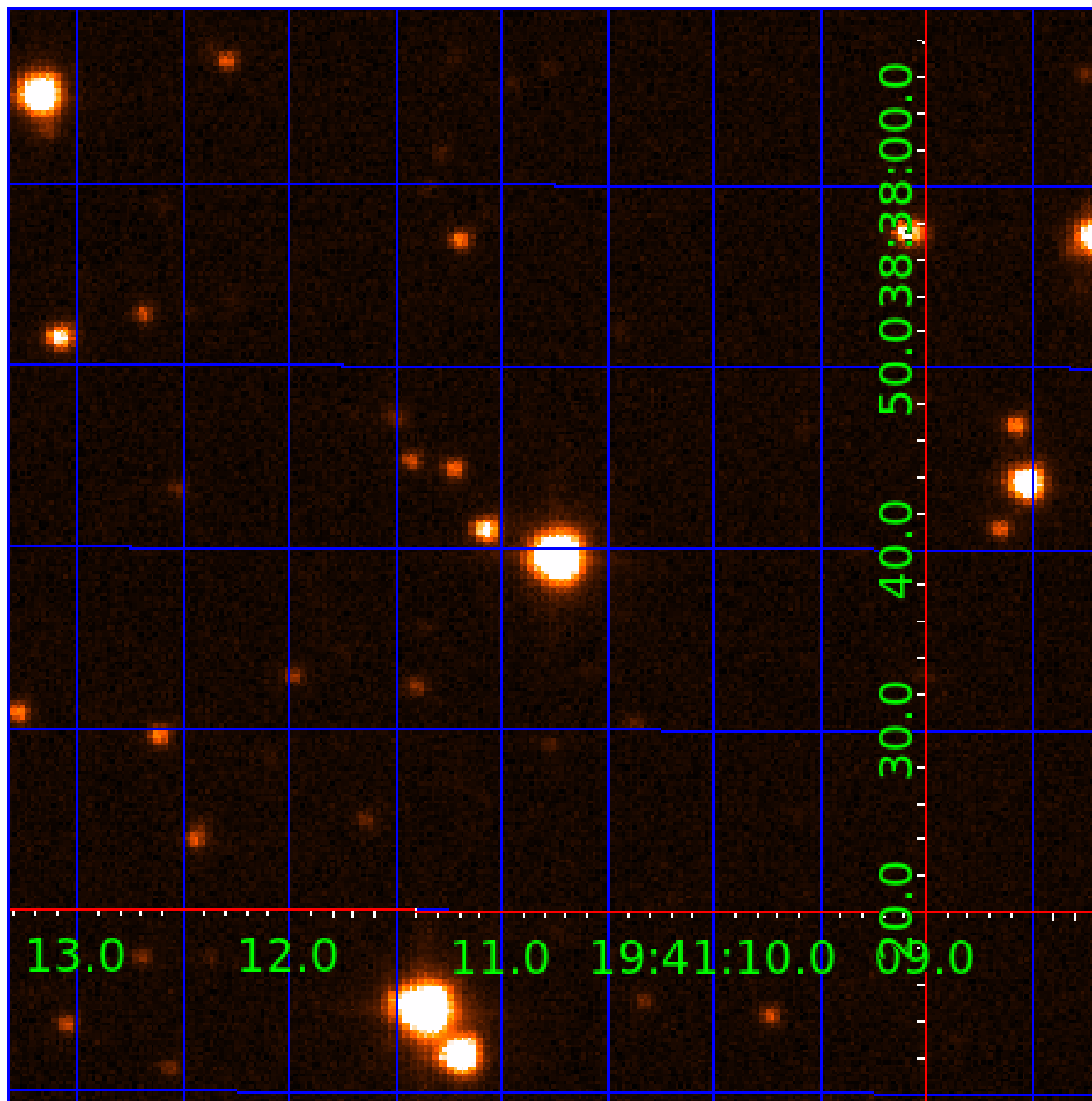


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

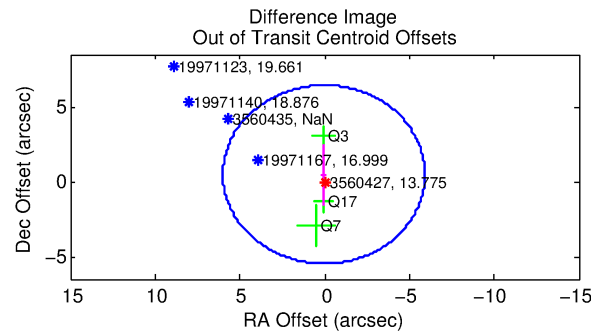
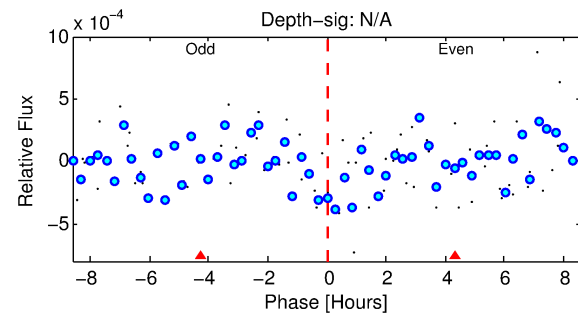
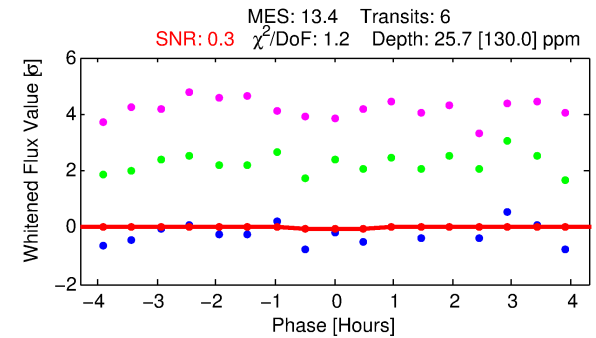
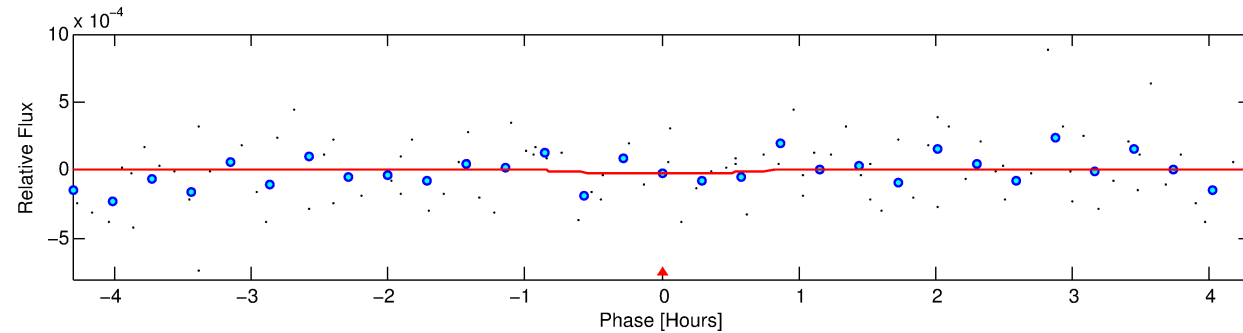
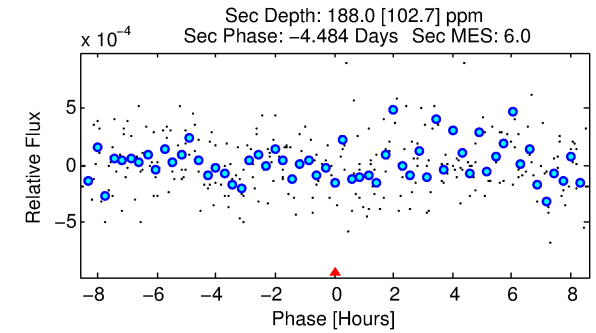
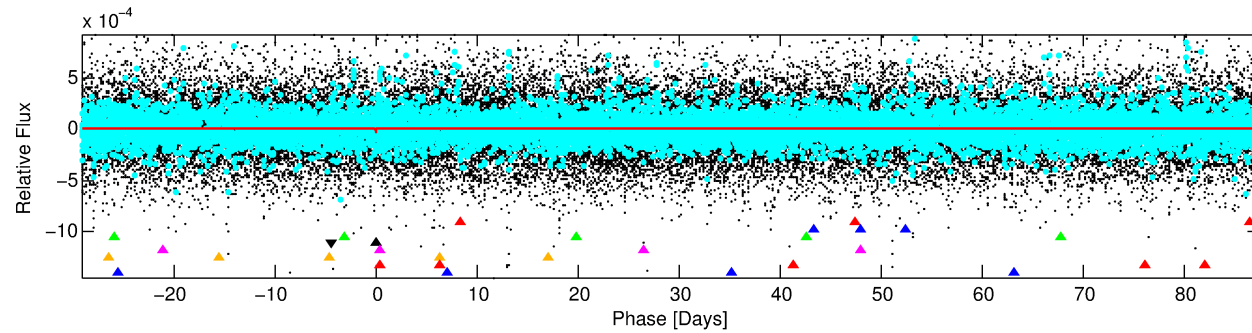
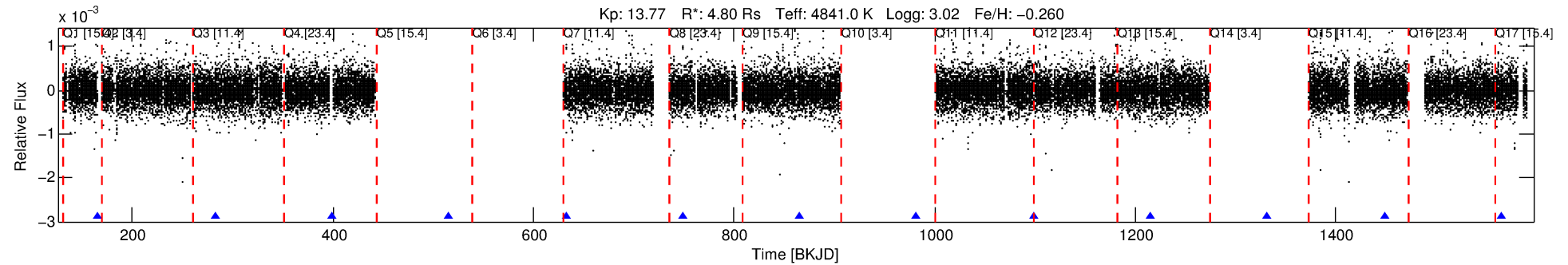
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-04

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 4 of 8 Period: 116.568 d



DV Fit Results:

Period = 116.56838 [0.01746] d
Epoch = 166.0864 [0.1282] BKJD
Rp/R* = 0.0062 [0.1265]
a/R* = 192.57 [17913.24]
b = 0.96 [8.37]
Seff = 56.48 [44.07]
Teq = 699 [136] K
Rp = 3.27 [66.25] Re
a = 0.4478 [0.2392] AU
Ag = 1941.49 [78696.95] [0.02σ]
Teffp = 7174 [72688] K [0.09σ]

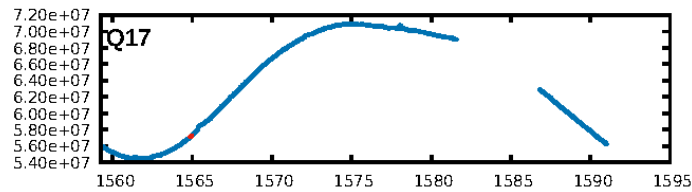
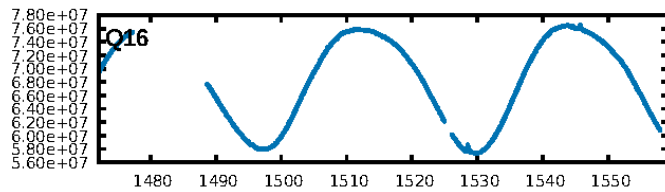
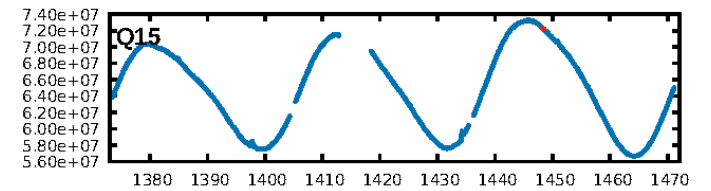
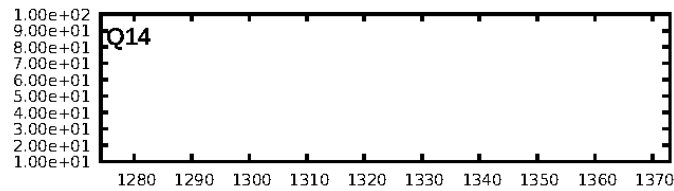
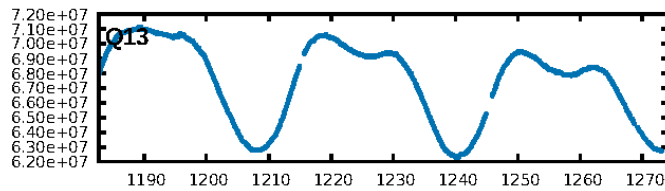
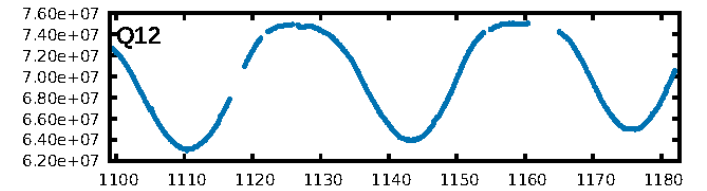
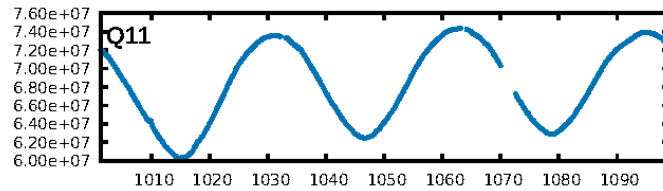
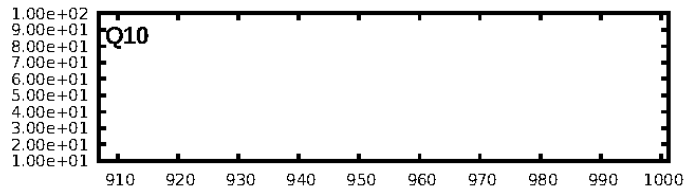
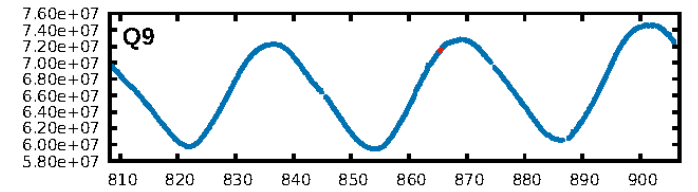
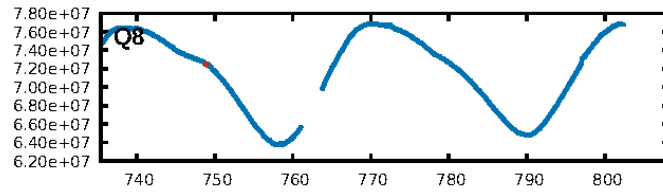
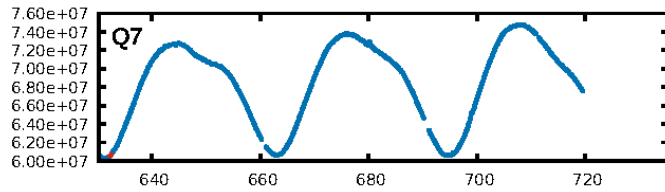
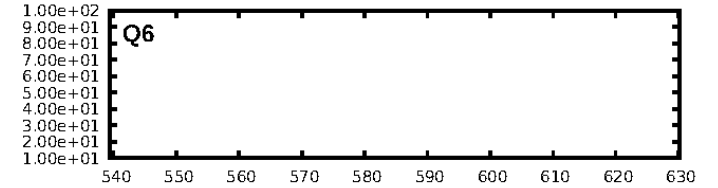
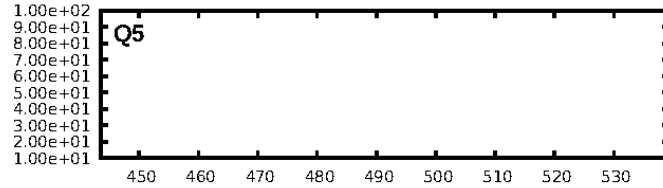
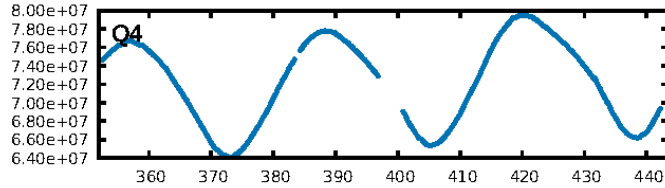
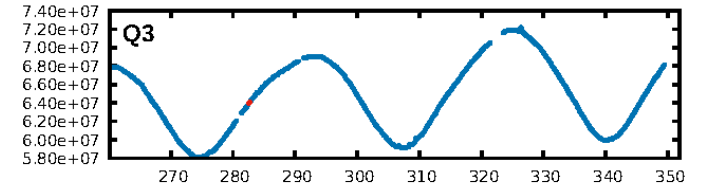
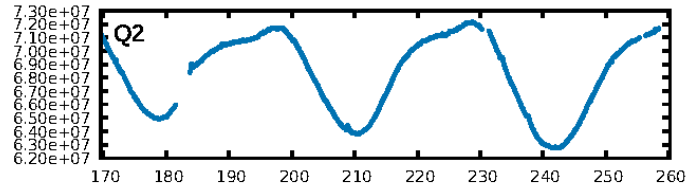
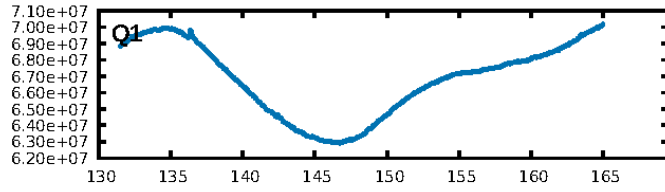
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [226.77σ]
ModelChiSquare2-sig: 94.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 4.31e-22
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 88.78
Centroid-sig: 42.7%
Centroid-so: 32.474 arcsec [0.73σ]
OotOffset-rm: 0.480 arcsec [0.24σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 0.502 arcsec [0.27σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [6/6]

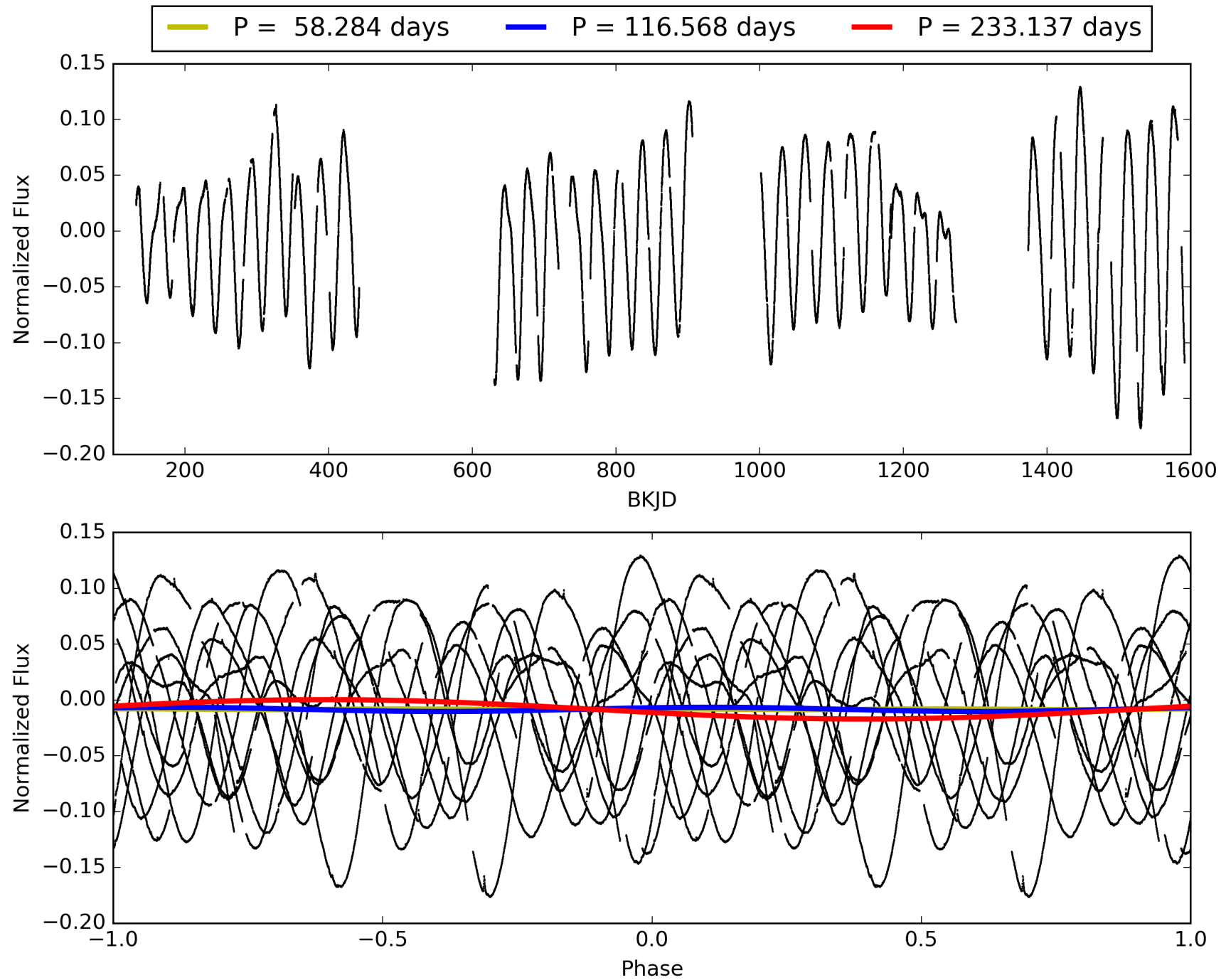
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:32 Z

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

TCE 003560427-04, PDC Light Curves

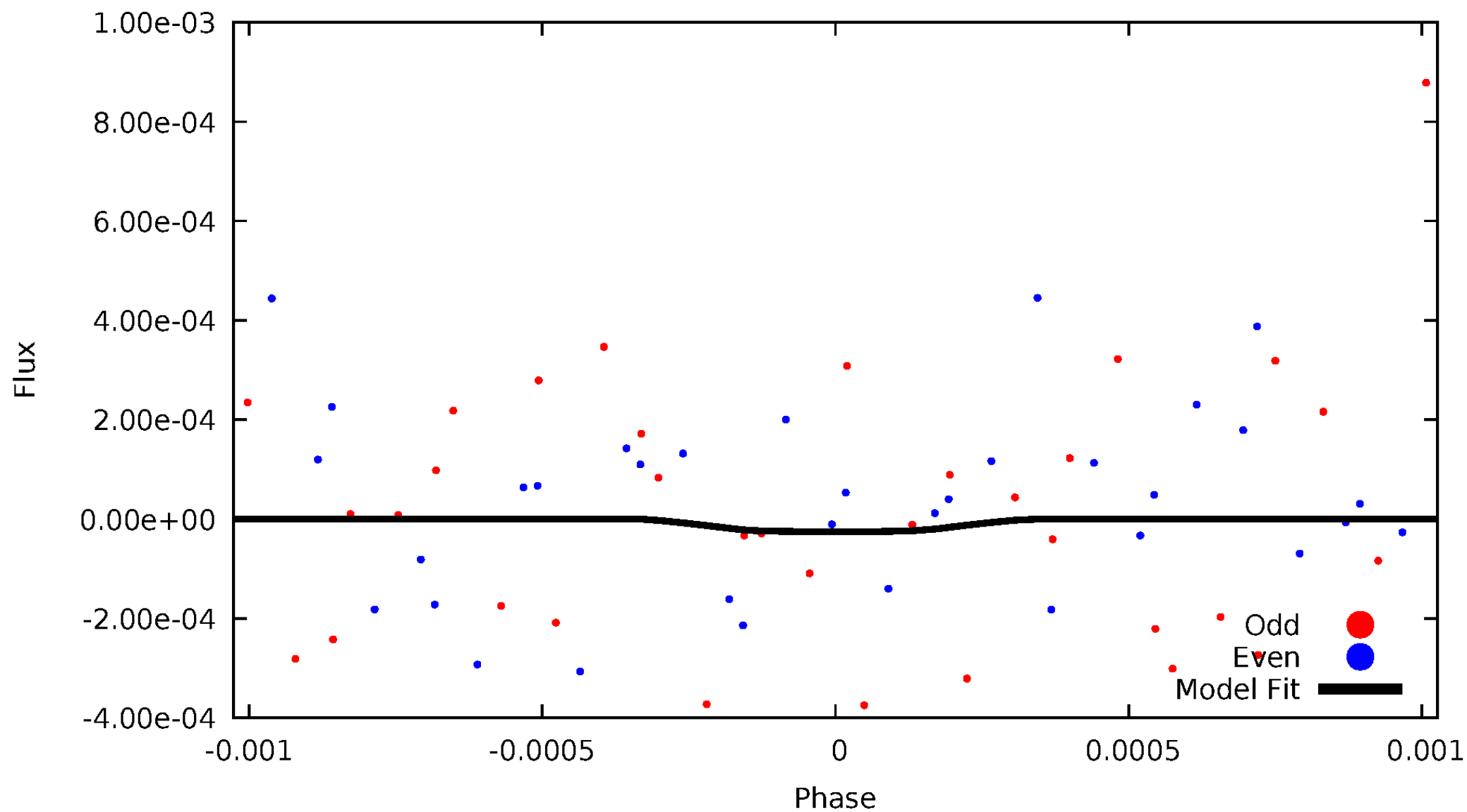


TCE 003560427-04



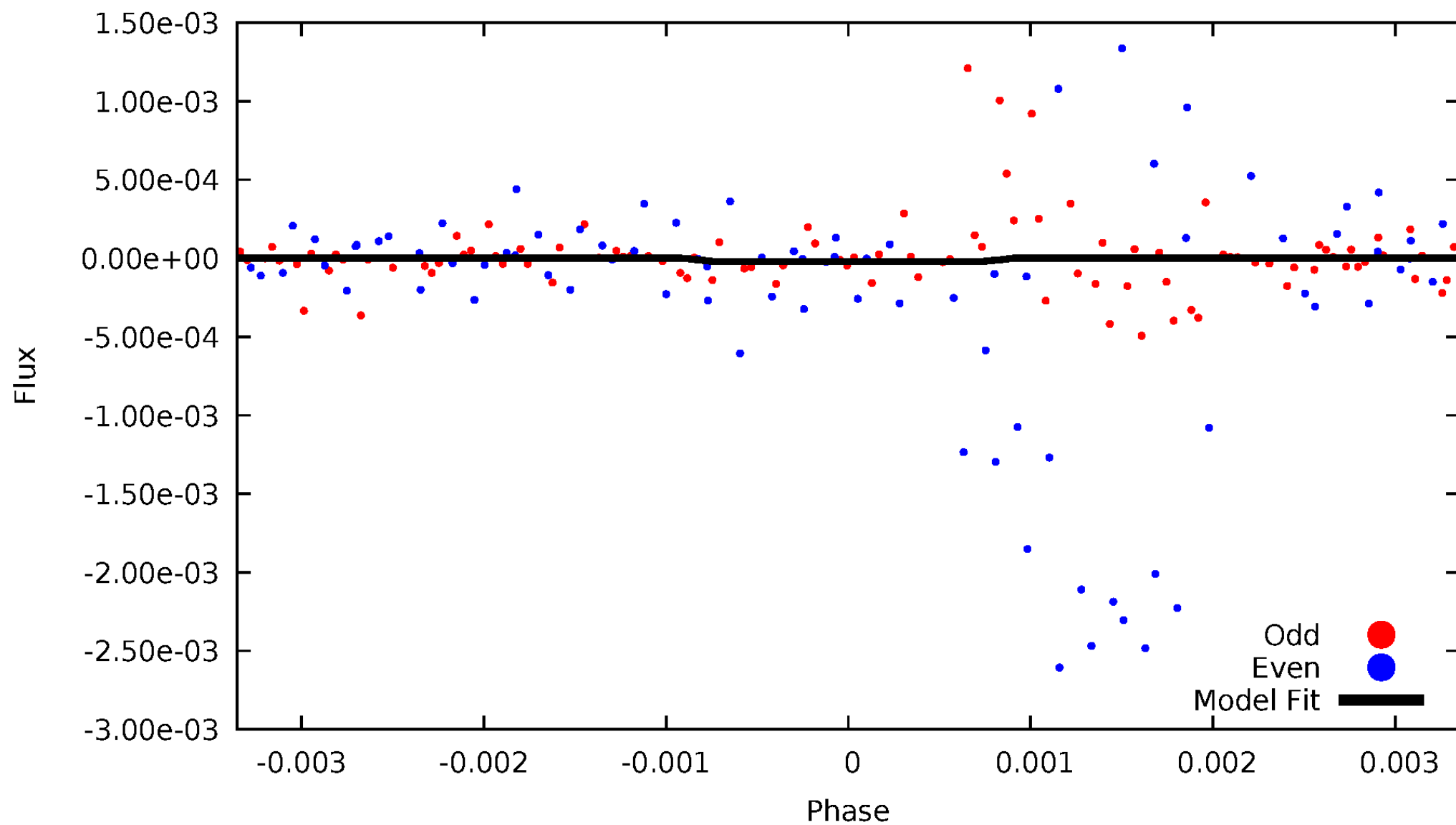
DV Odd/Even

TCE 003560427-04



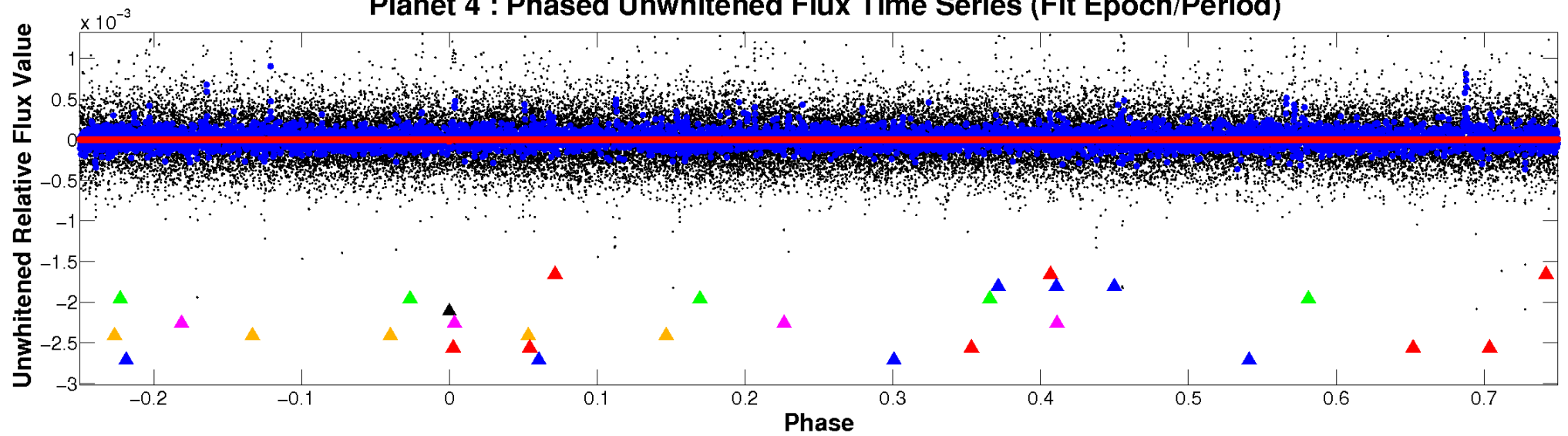
ALT Odd/Even

TCE 003560427-04

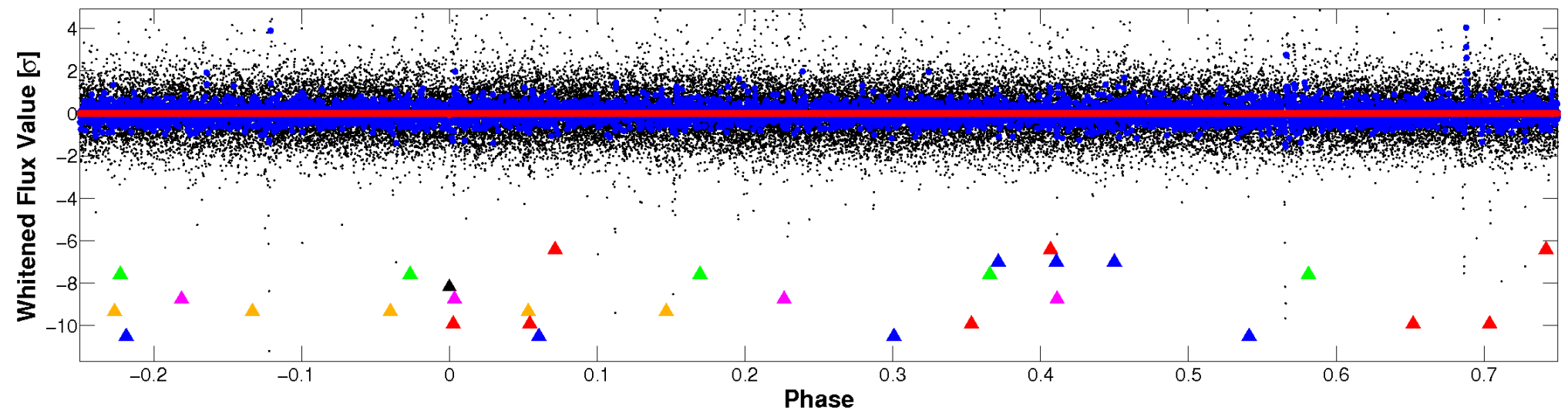


Non-Whitened Vs. Whitened Light Curve

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

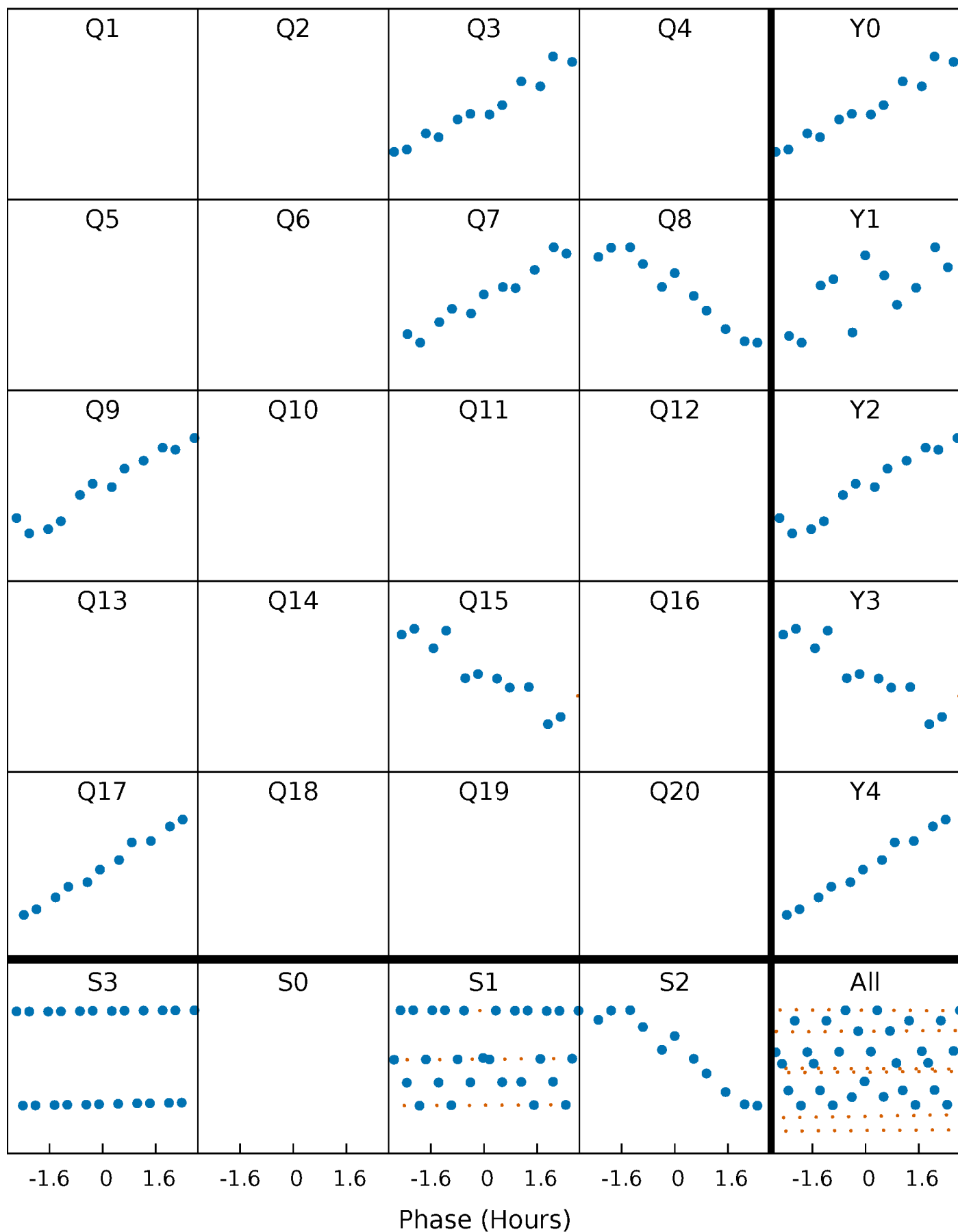


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



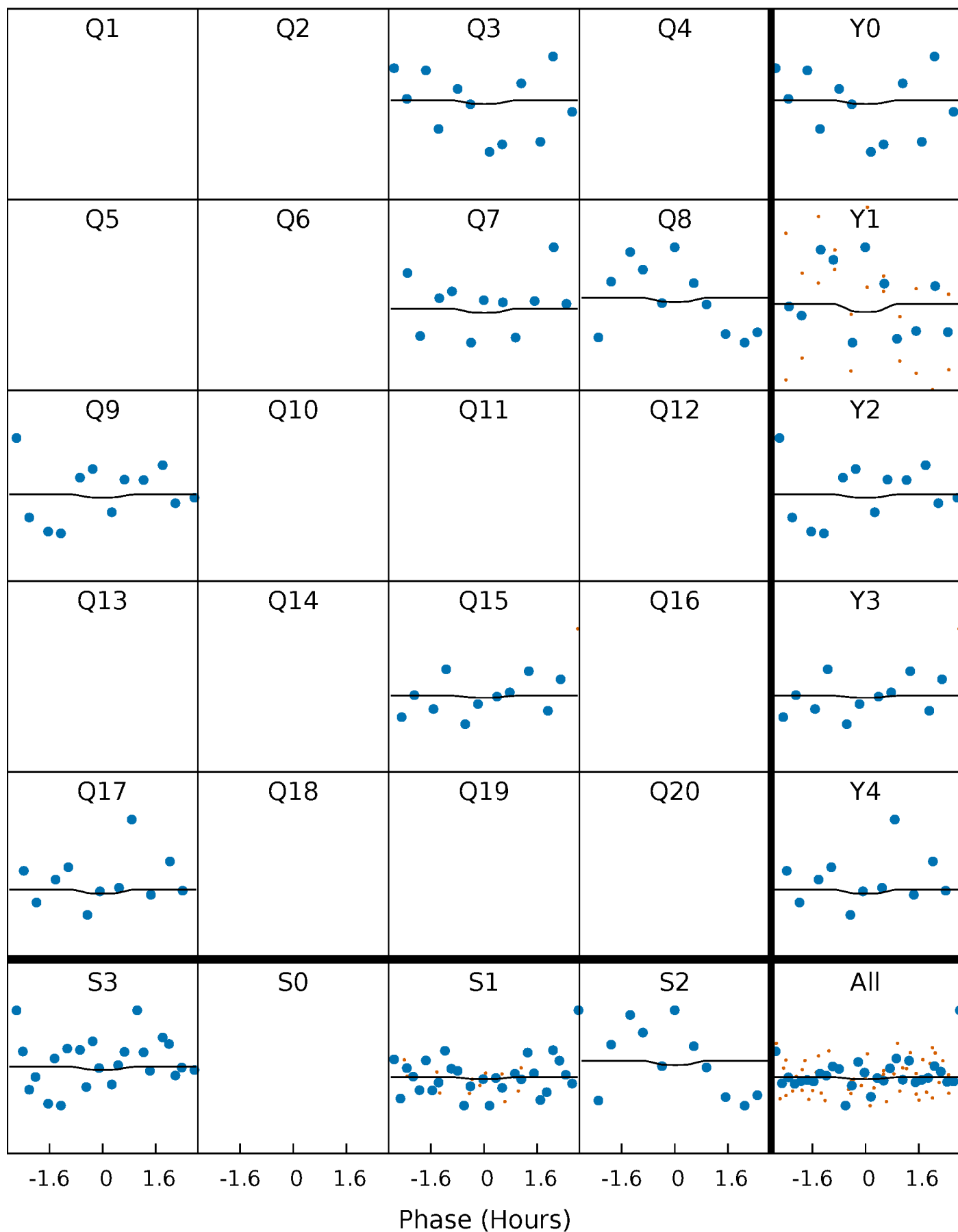
PDC Quarter-Phased Transit Curves

TCE 003560427-04 $P=116.568384$ Days $T_0=166.086354$ (BKJD)



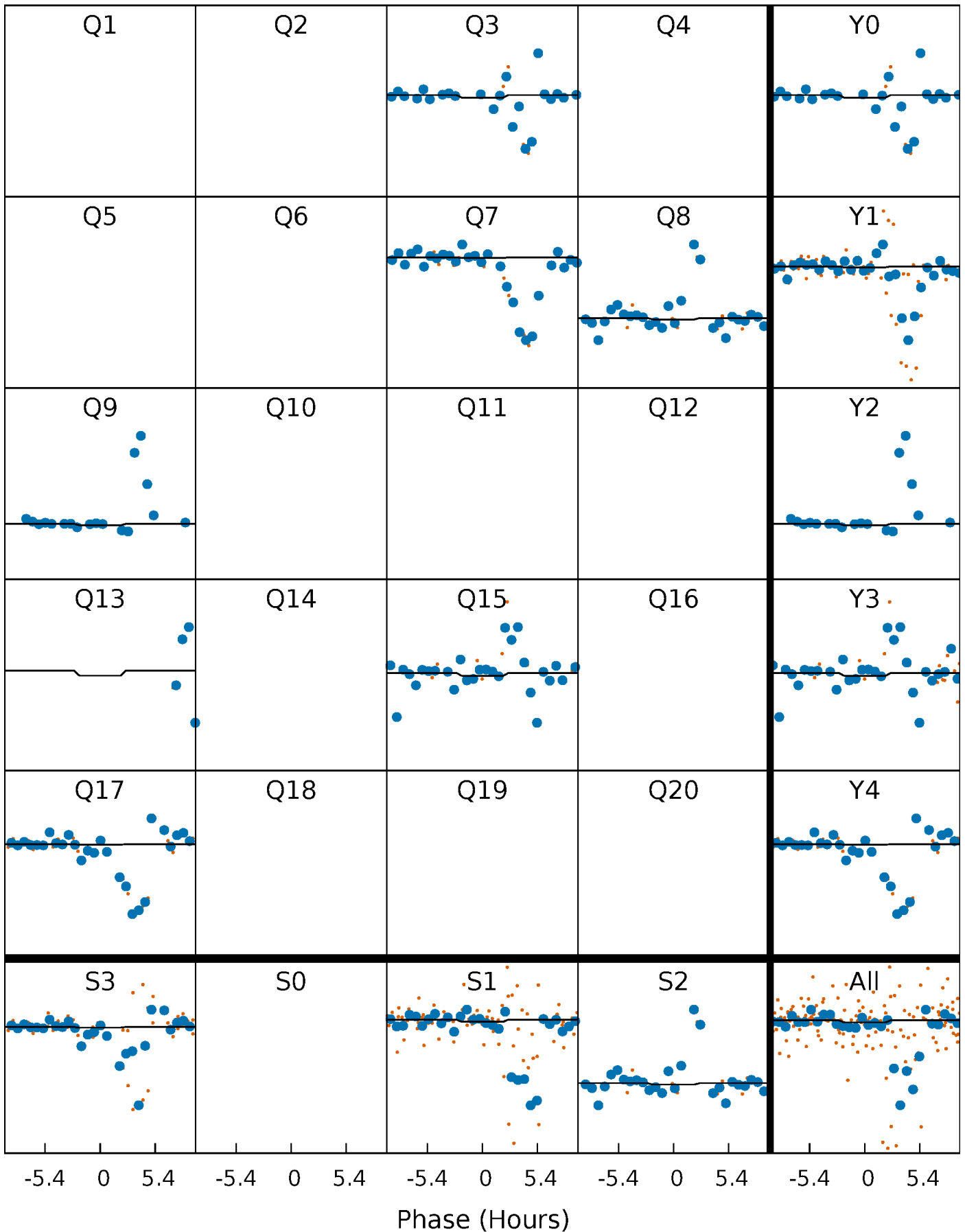
DV Quarter-Phased Transit Curves

TCE 003560427-04 $P=116.568384$ Days $T_0=166.086354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

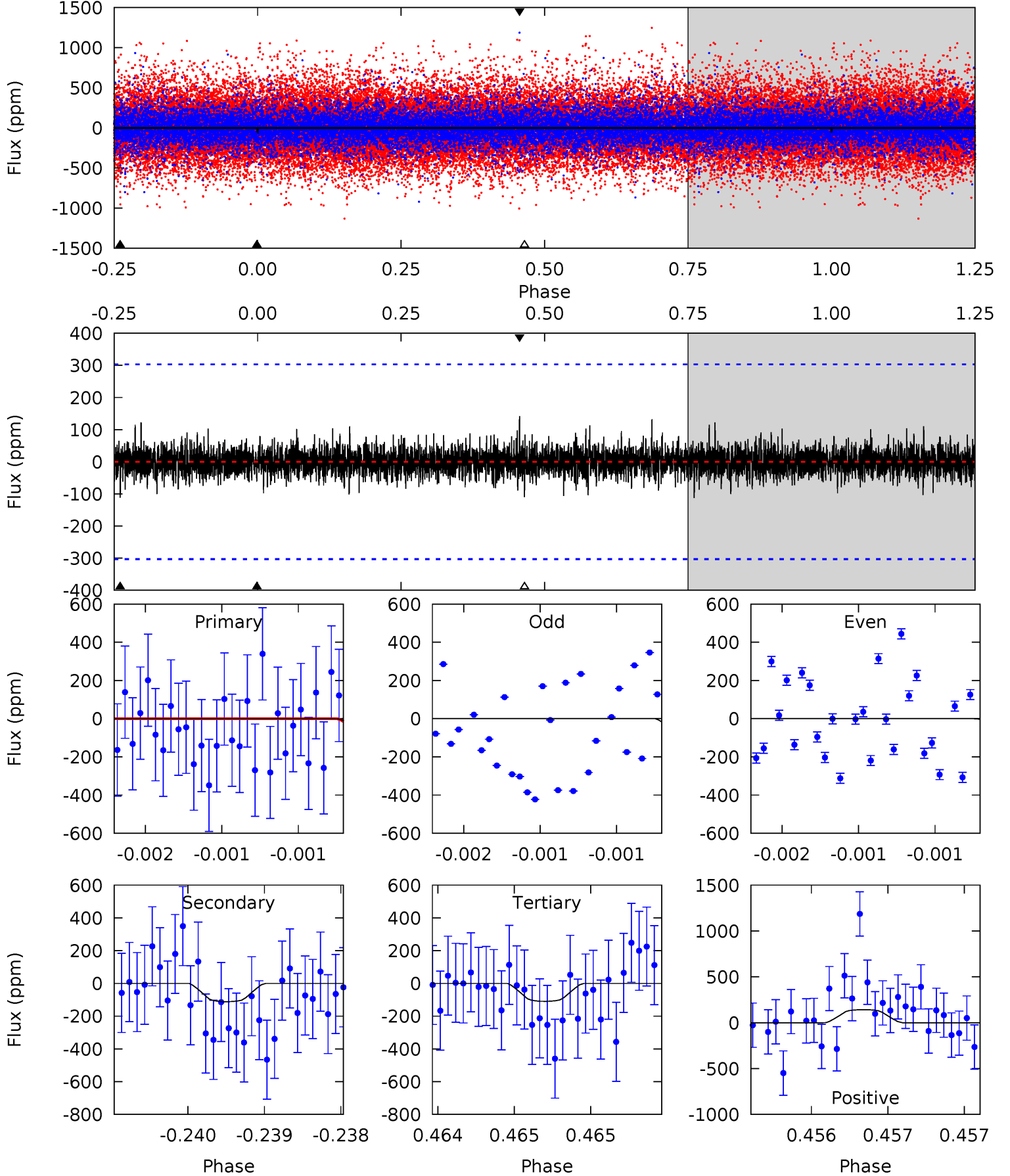
TCE 003560427-04 $P=116.580014$ Days $T_0=166.199309$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-04, $P = 116.568384$ Days, $E = 49.517970$ Days

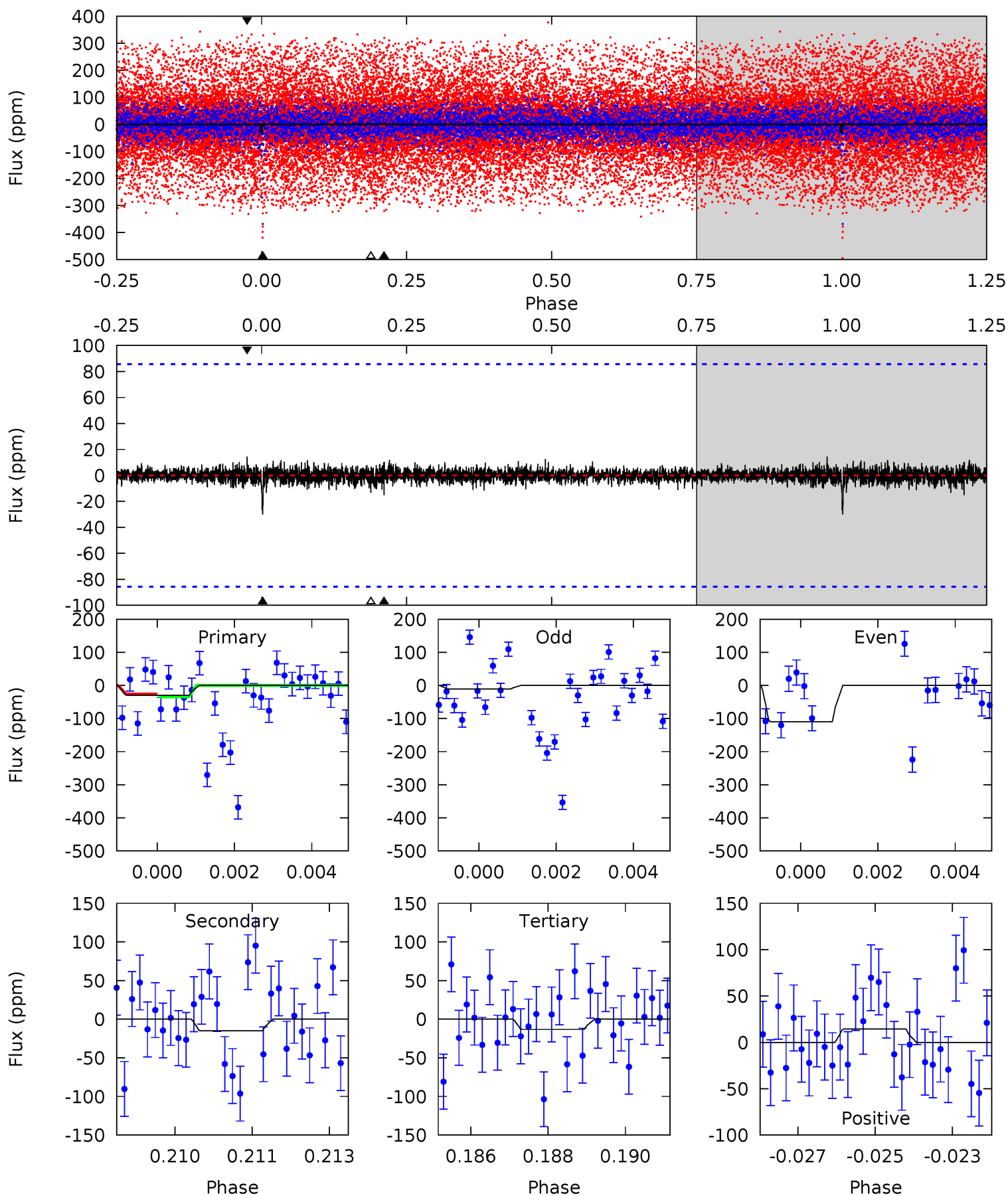
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.87	2.04	2.00	2.59	5.52	3.40	0.54	-1.13	-1.72	0.04	-0.55	0.60	0.94	0.56	0.37



Alt Model-Shift Uniqueness Test

003560427-04, P = 116.580014 Days, E = 49.619295 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.86	0.94	0.83	0.90	5.35	3.12	0.20	1.03	0.96	0.11	0.04	3.07	3.49	0.33	0.27



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	$+3\%/-2\%$	$+14\%/-11\%$	$+115\%/-77\%$	$+64\%/-34\%$	$+38\%/-16\%$	$+326\%/-68\%$
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 003560427-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-112 ± 55	$45.20^{+54.36}_{-31.51}$	967^{+140}_{-100}	2453^{+991}_{-471}	$5.365^{+57.373}_{-4.401}$
Alt.	-15 ± 16	$45.11^{+46.98}_{-31.34}$	967^{+146}_{-112}	1785^{+731}_{-3657}	$0.553^{+7.805}_{-0.569}$

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

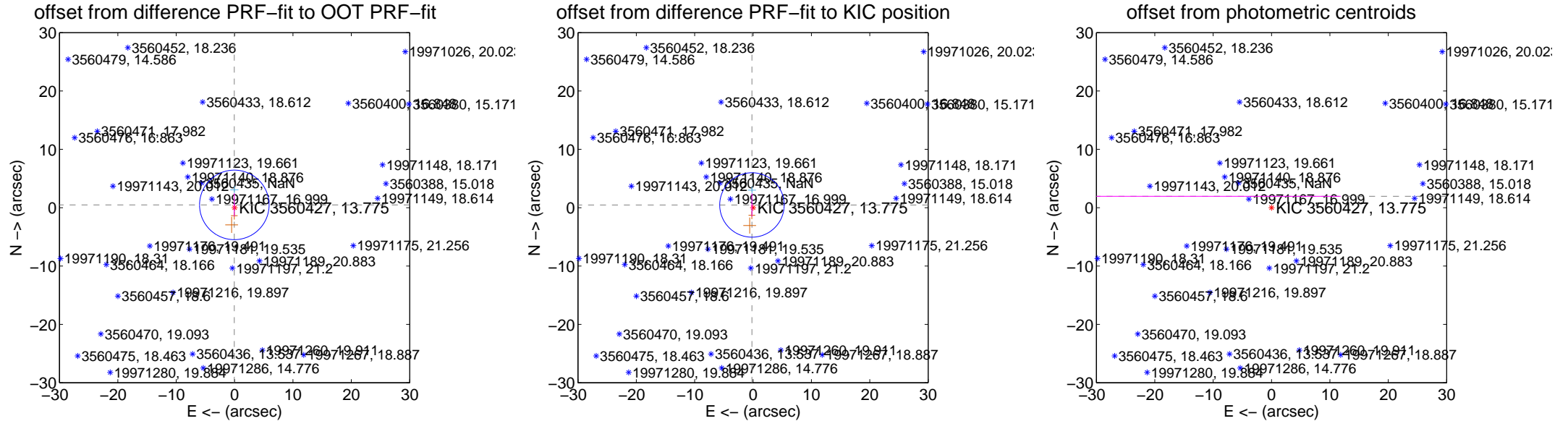
DV Centroid Data

Supplemental centroid analysis for 003560427-04. Kepler magnitude: 13.78. Transit SNR 0.30

There are 1 quarters with good PRF difference image offsets

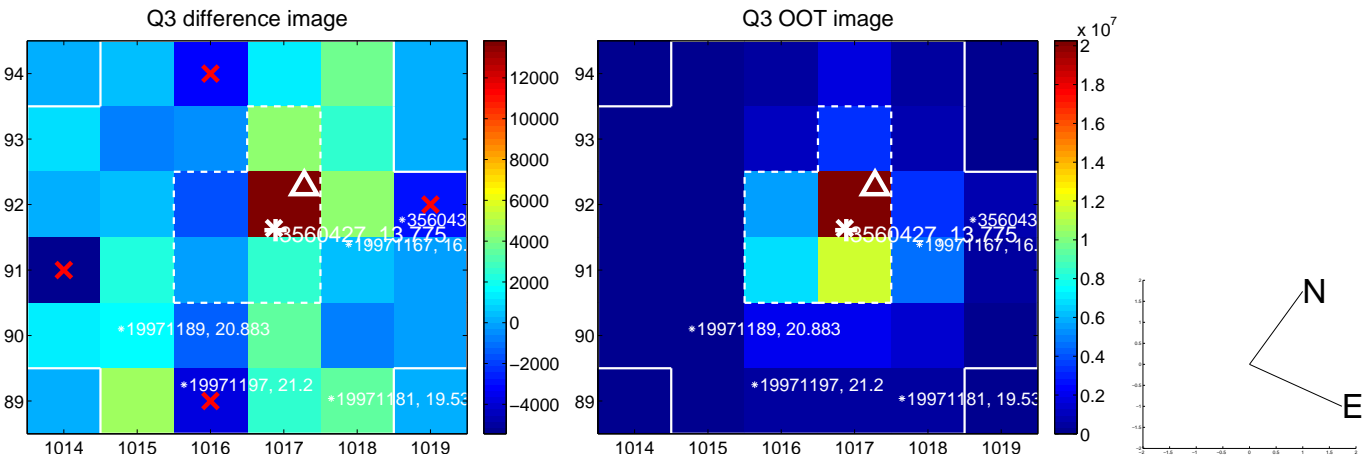
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.480 ± 1.986	0.24	0.043 ± 0.088	0.478 ± 1.994
PRF-fit source offset from KIC position	0.502 ± 1.840	0.27	0.189 ± 0.083	0.465 ± 1.986
photometric centroid source offset	32.47 ± 44.24	0.73	32.42 ± 44.26	1.96 ± 37.53

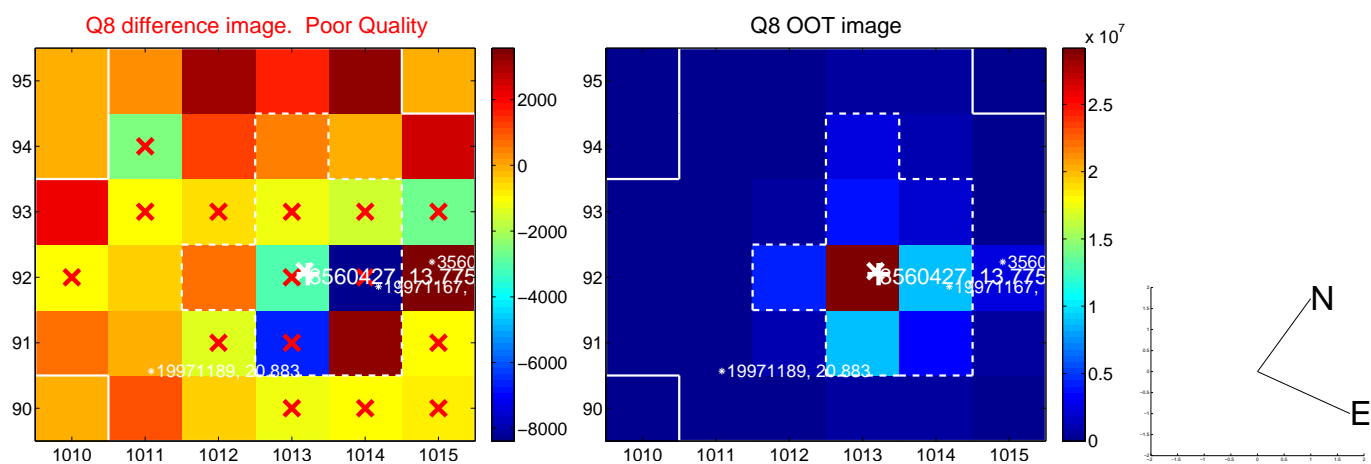
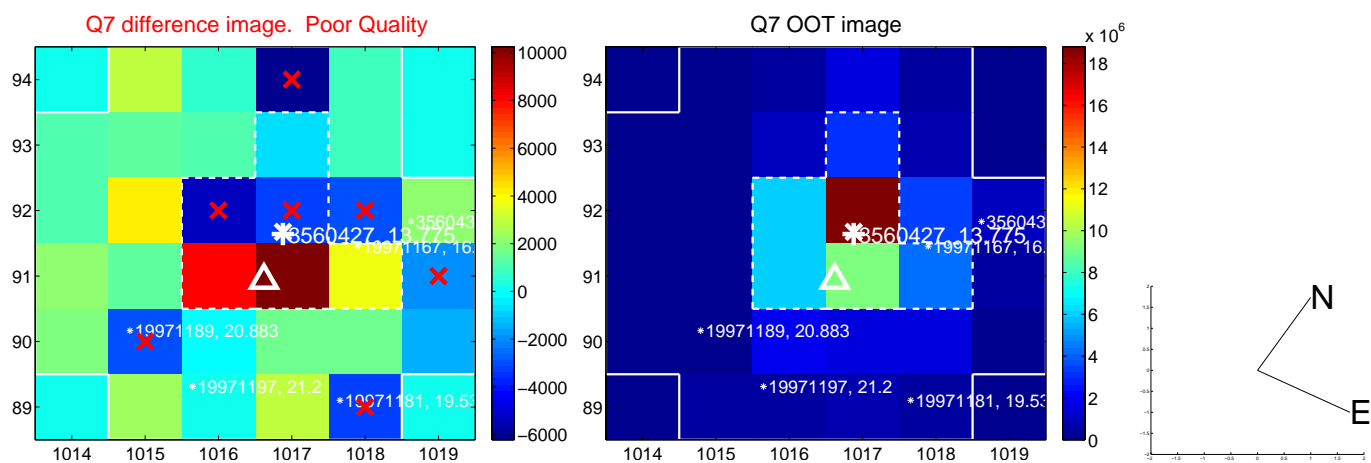
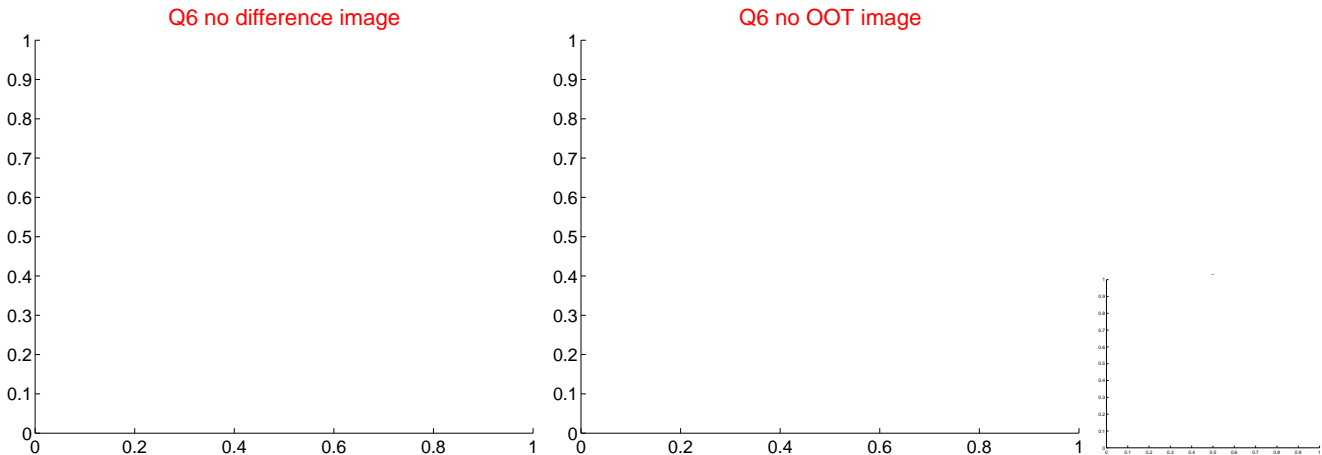
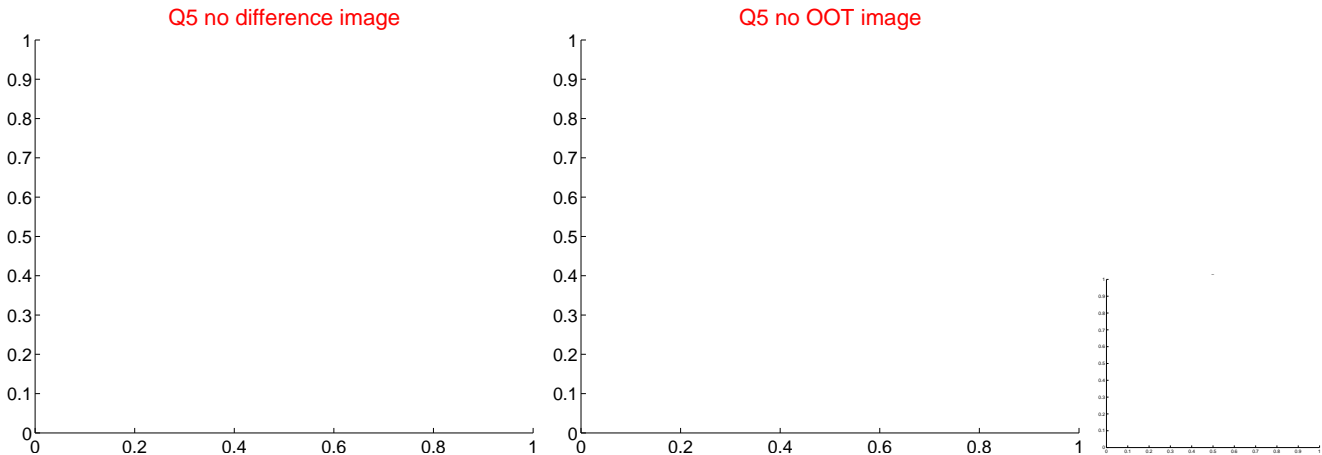


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

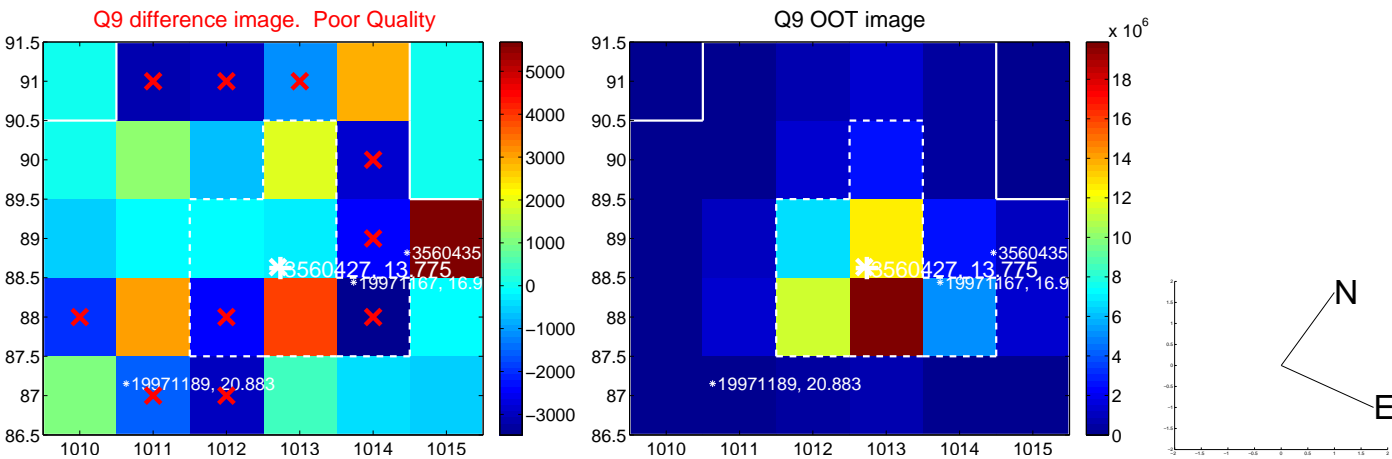
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



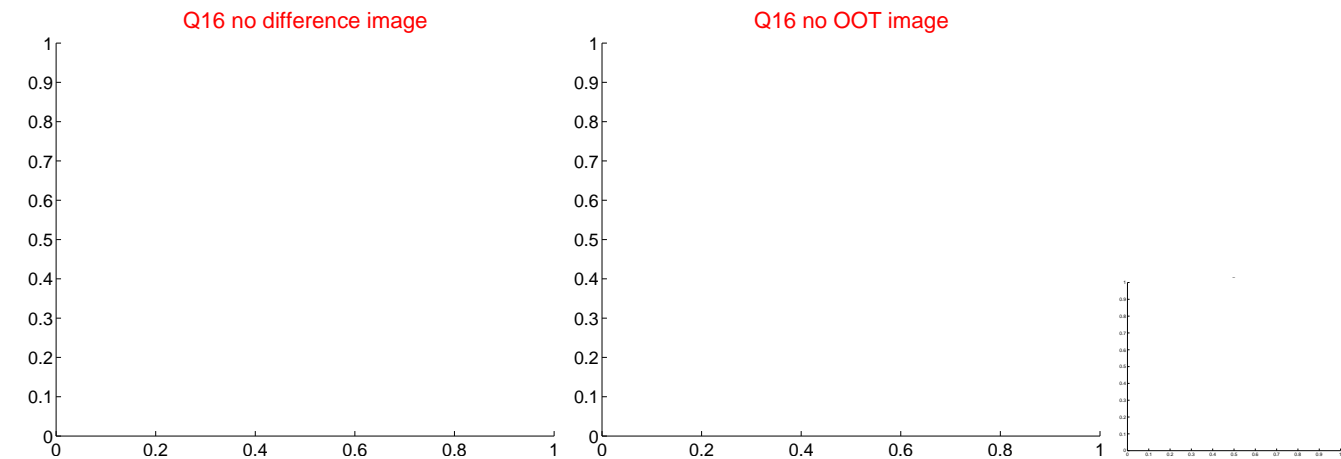
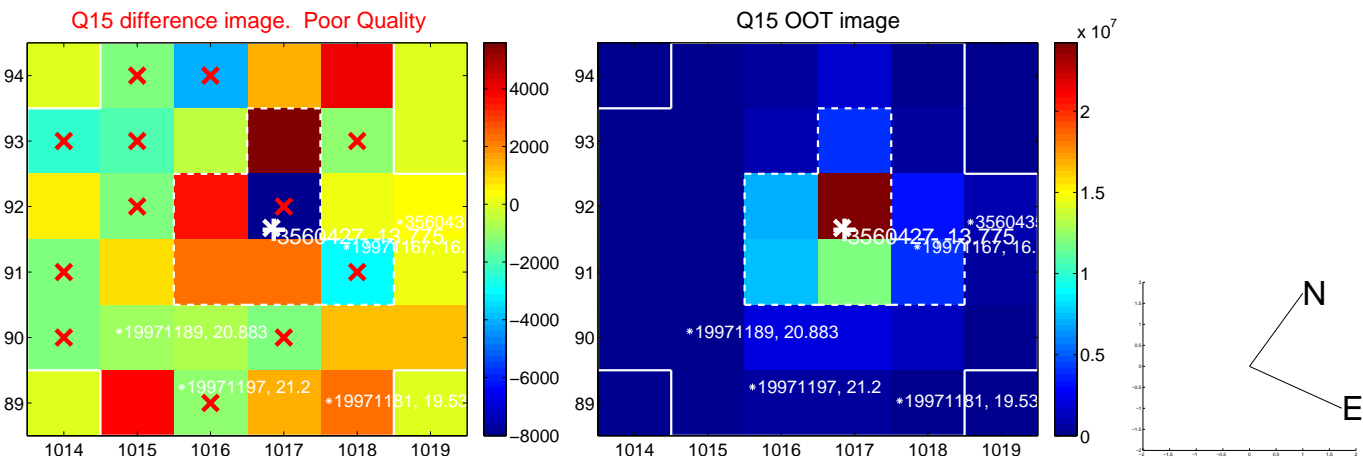
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



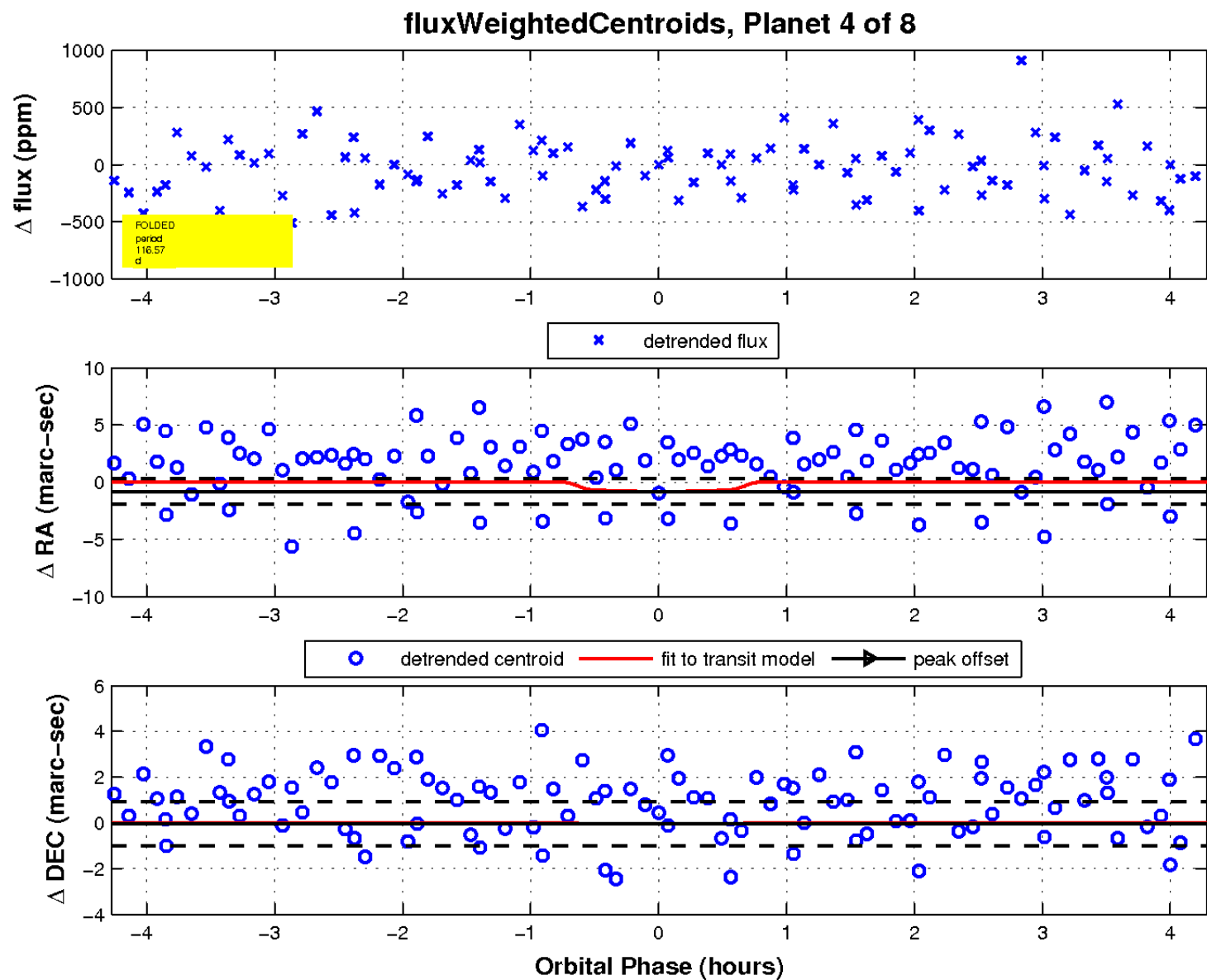
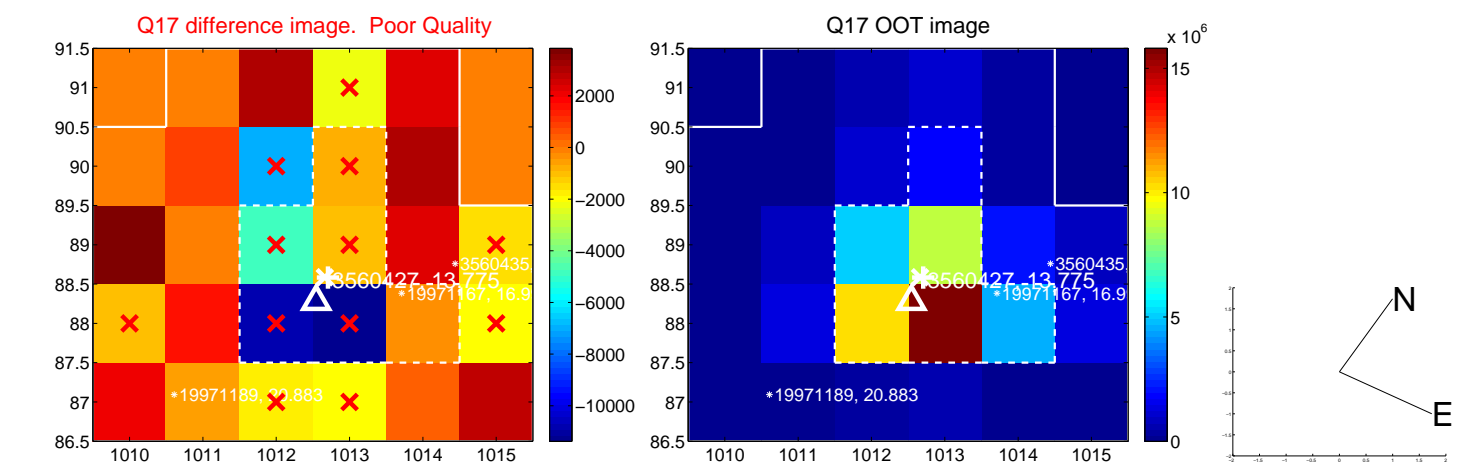
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

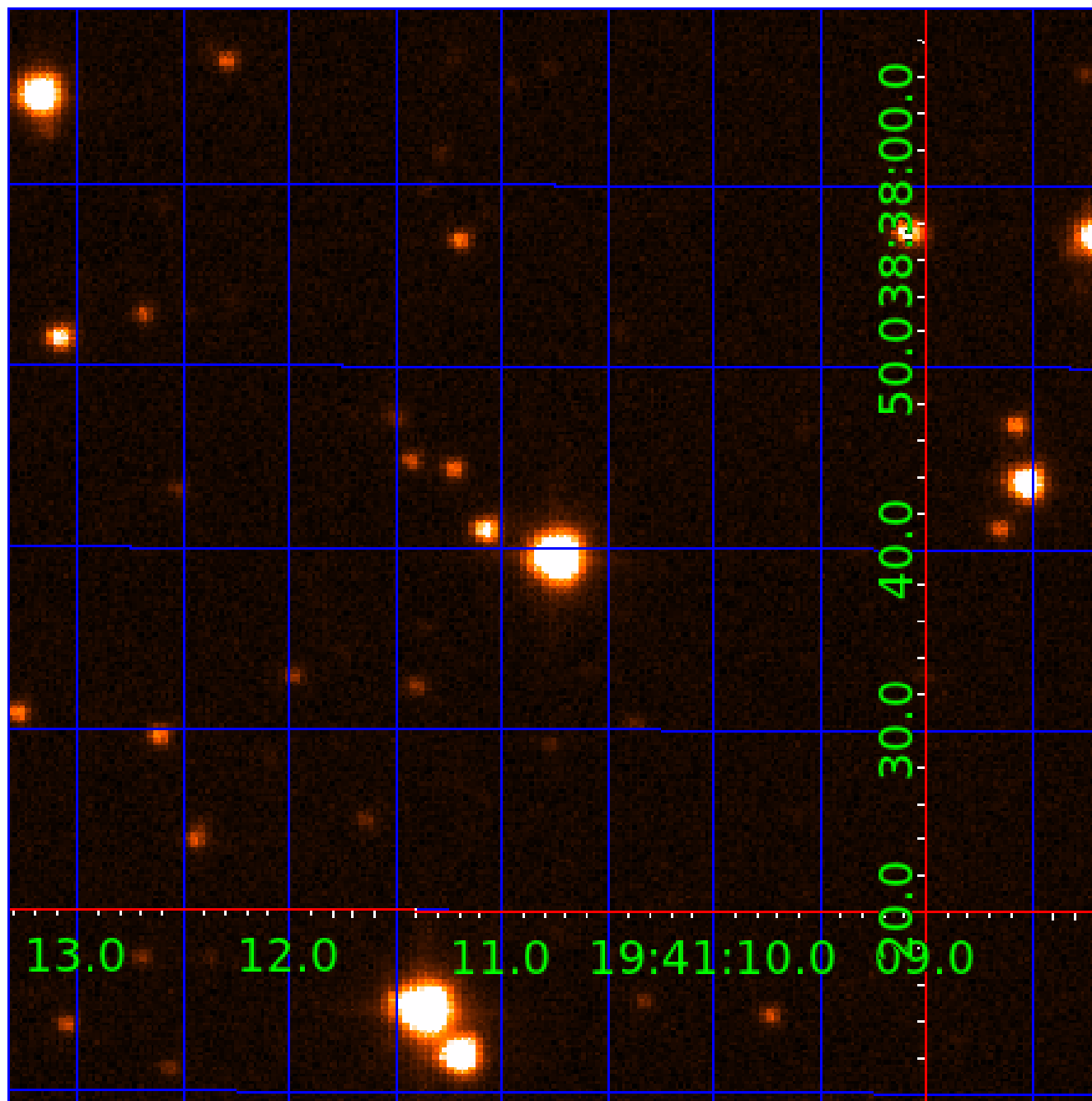


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

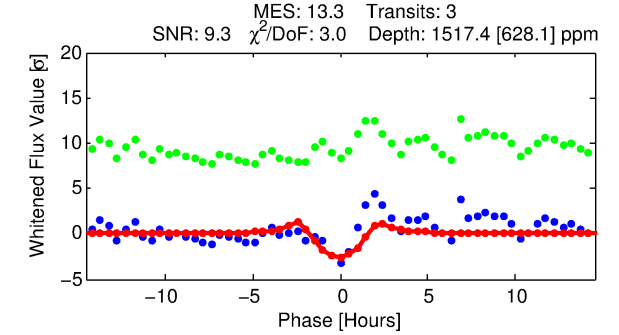
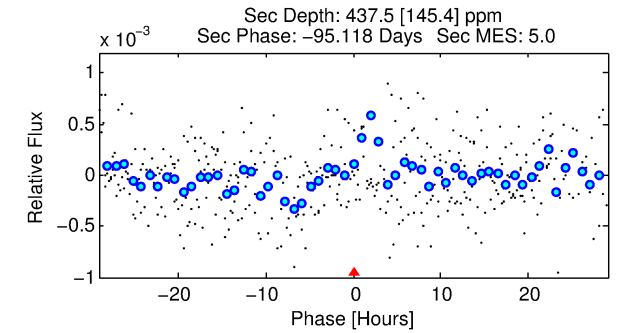
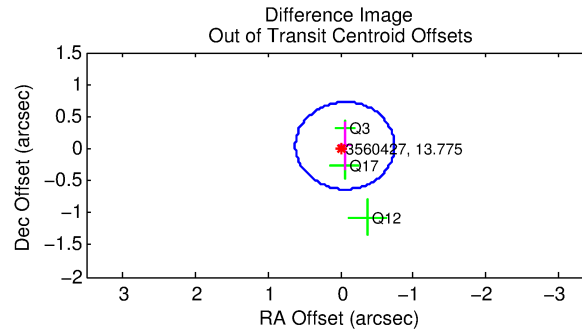
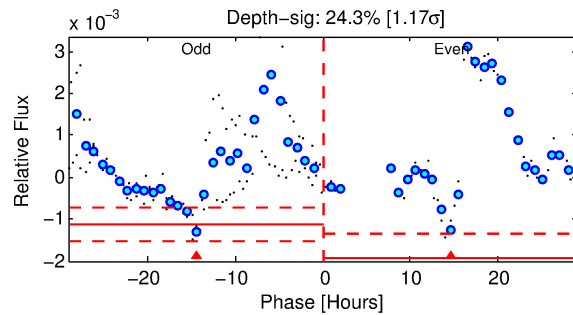
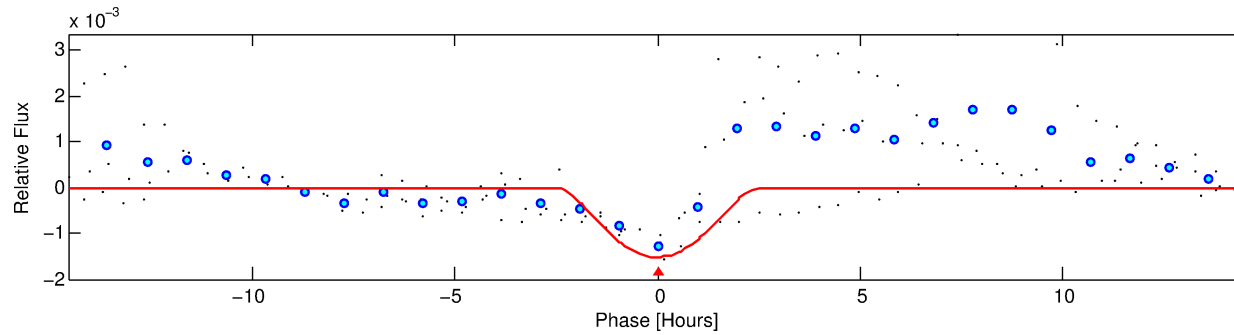
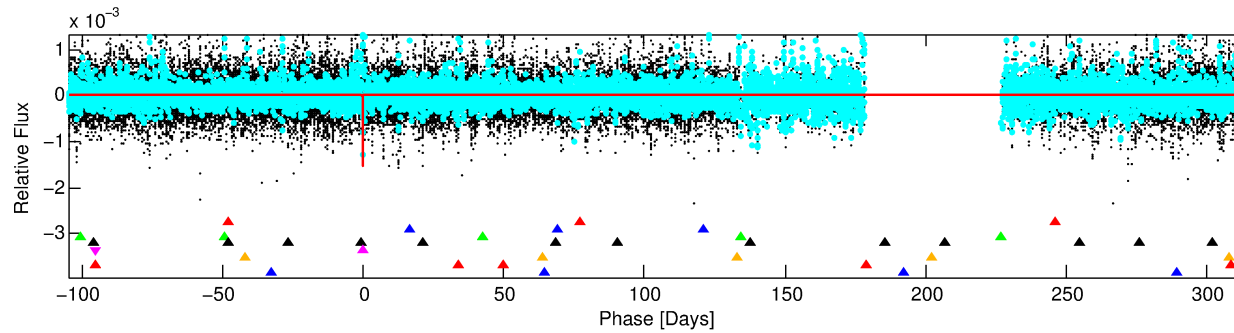
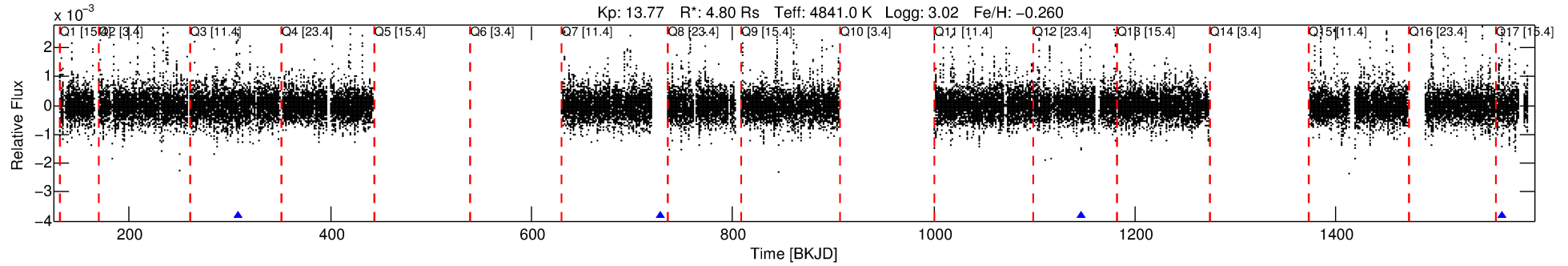
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-05

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 5 of 8 Period: 418.752 d



DV Fit Results:

Period = 418.75219 [0.00775] d
Epoch = 309.0565 [0.0172] BKJD
Rp/R* = 0.0717 [0.3055]
a/R* = 254.13 [236.23]
b = 1.00 [0.42]
Seff = 10.27 [8.01]
Teq = 456 [89] K
Rp = 37.53 [161.74] Re
a = 1.0504 [0.5611] AU
Ag = 188.54 [1614.69] [0.12 σ]
Teffp = 2615 [5577] K [0.39 σ]

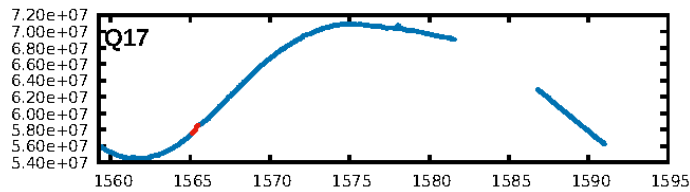
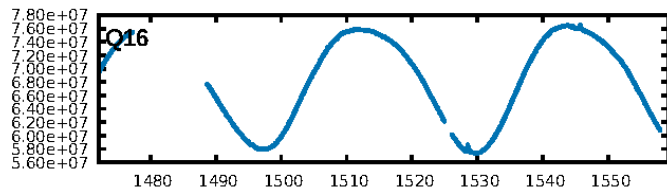
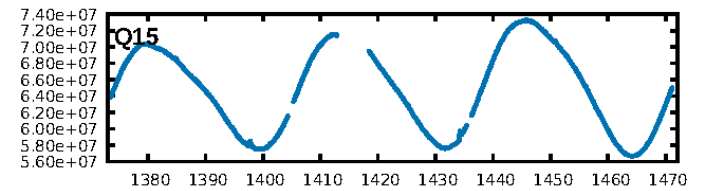
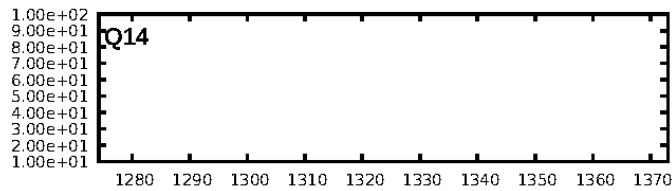
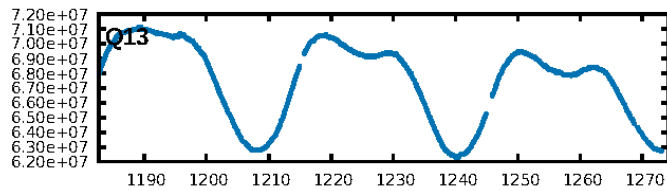
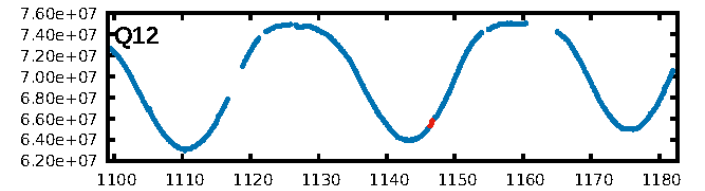
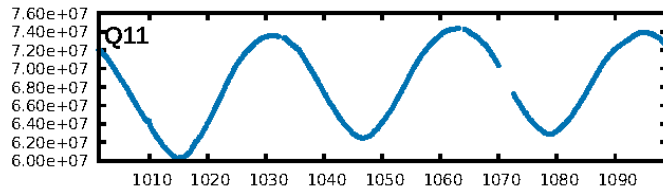
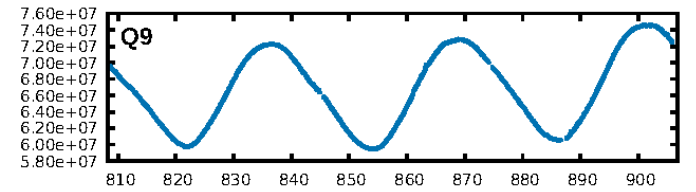
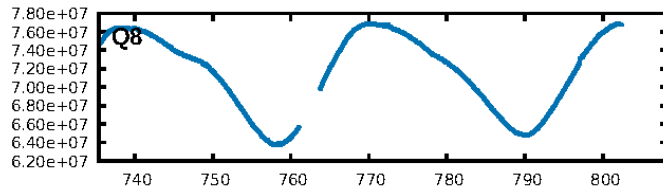
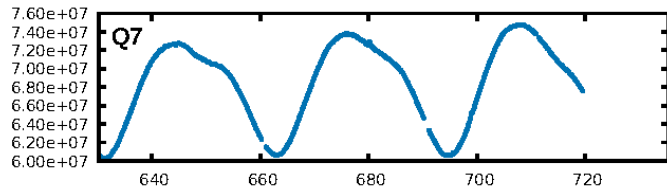
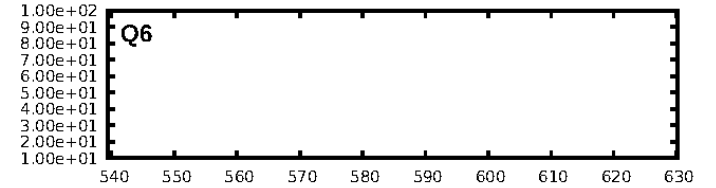
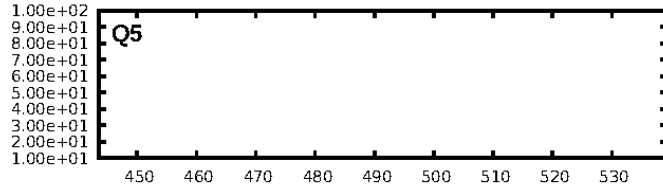
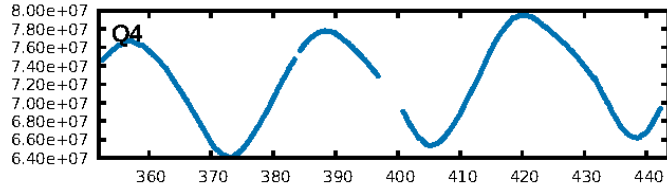
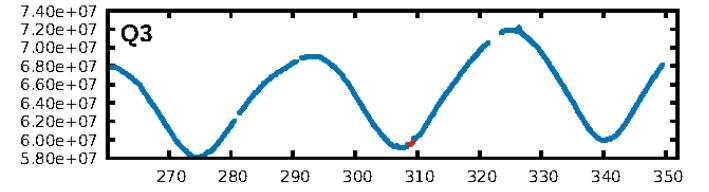
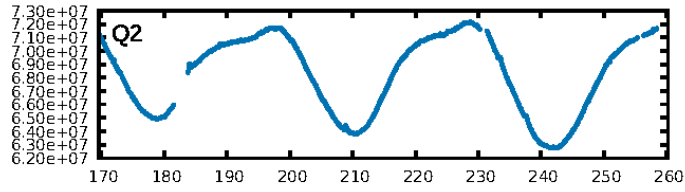
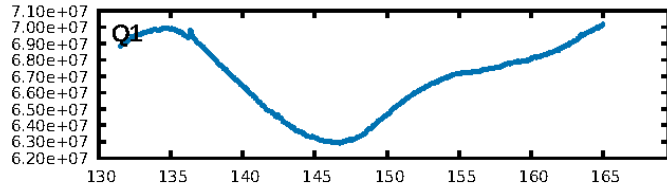
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [268.18 σ]
LongPeriod-sig: 100.0% [96.46 σ]
ModelChiSquare2-sig: 9.0%
ModelChiSquareGof-sig: 1.4%
Bootstrap-pfa: 8.16e-14
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 2.152
Centroid-sig: 60.9%
Centroid-so: 0.227 arcsec [0.29 σ]
OotOffset-rm: 0.074 arcsec [0.33 σ]
KicOffset-rm: 0.108 arcsec [0.60 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.67 [2/3]

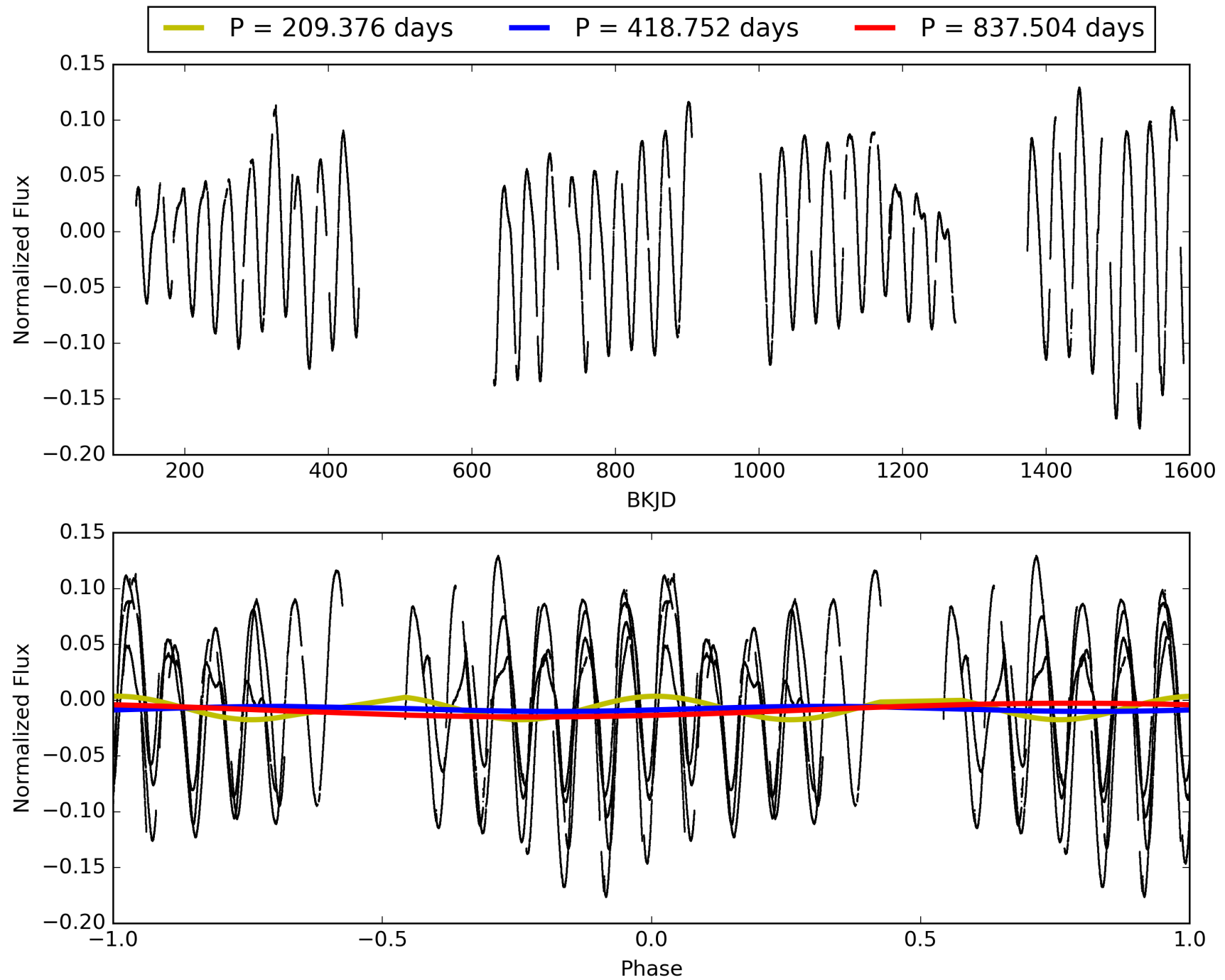
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:44 Z

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

TCE 003560427-05, PDC Light Curves

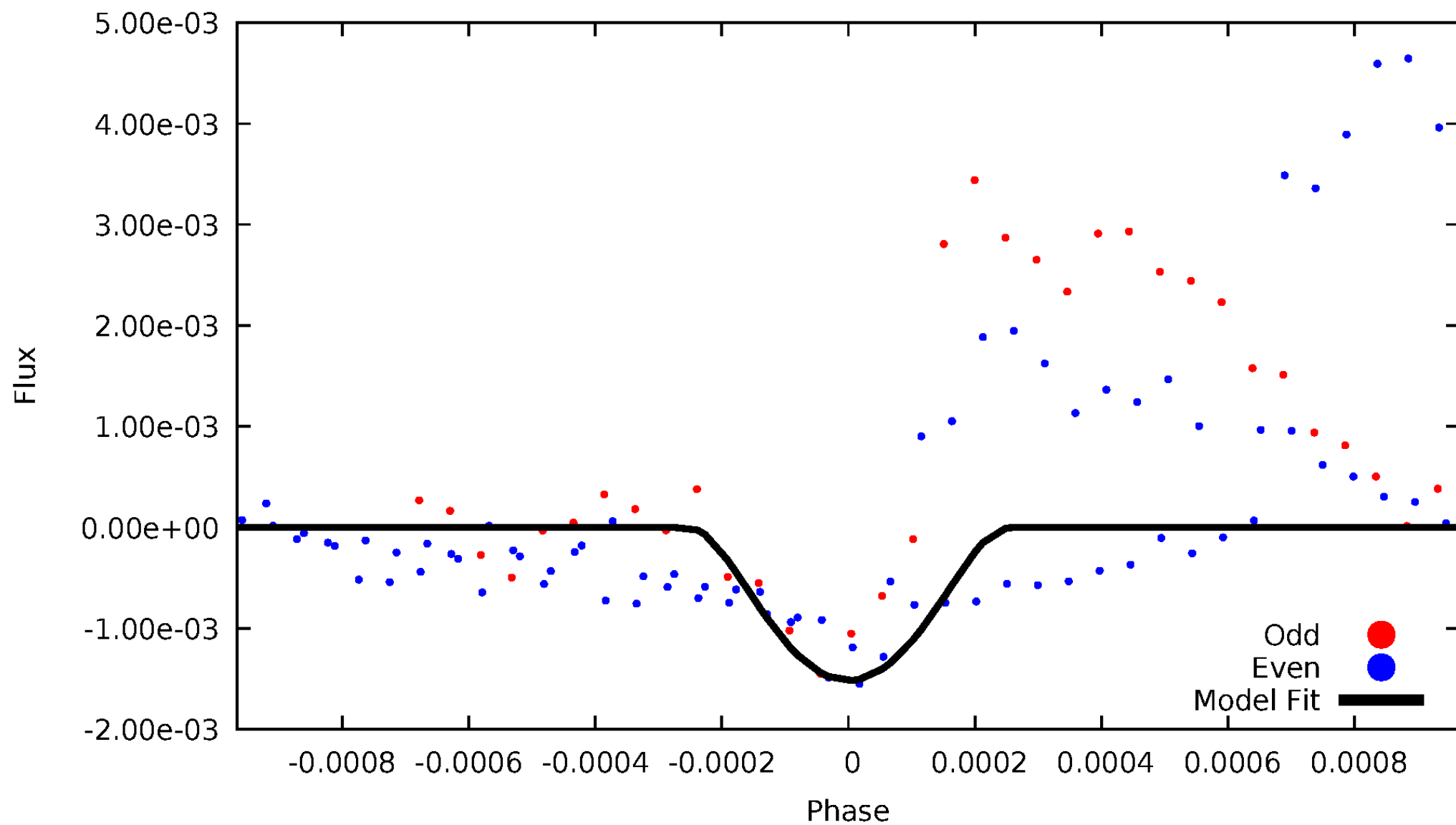


TCE 003560427-05



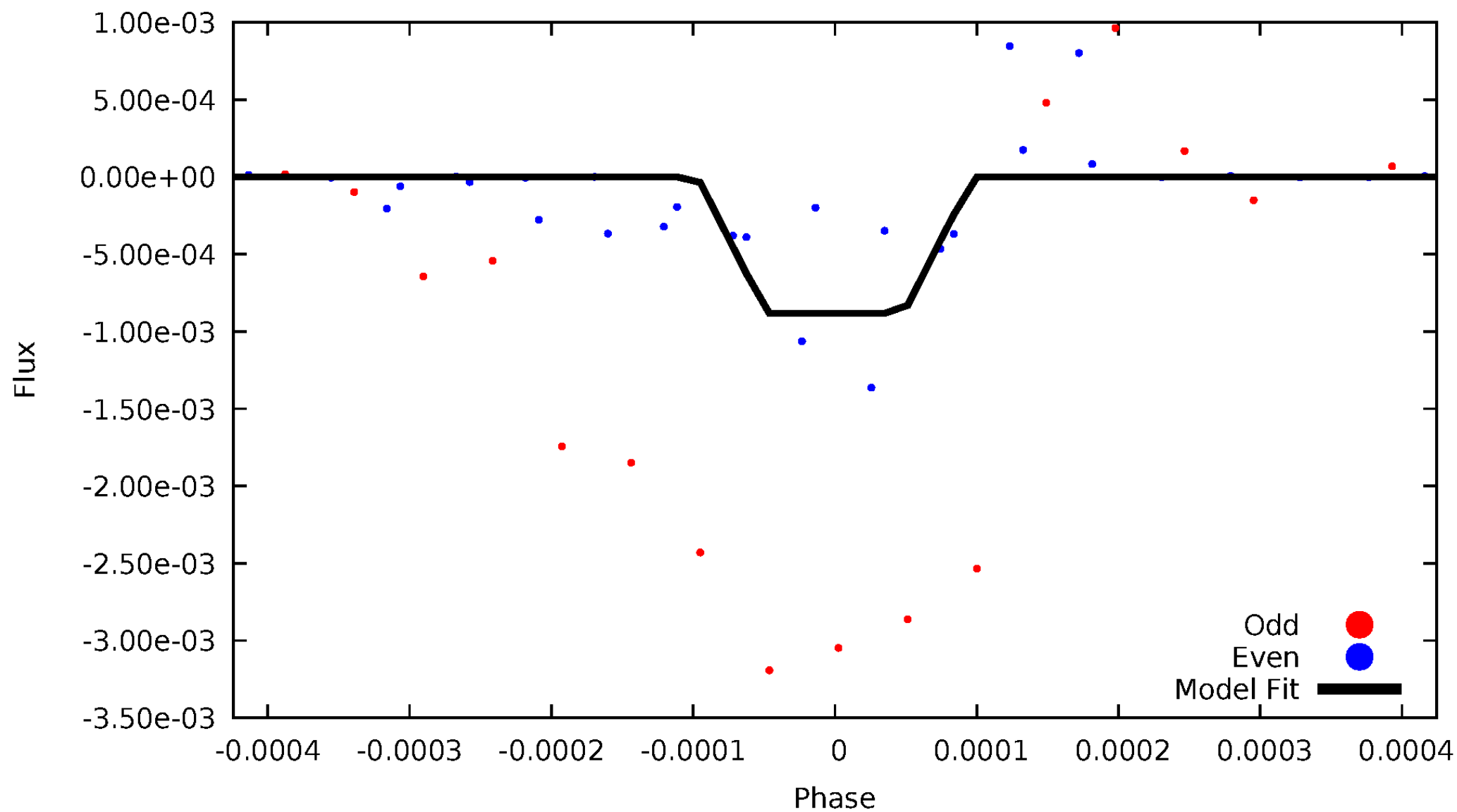
DV Odd/Even

TCE 003560427-05



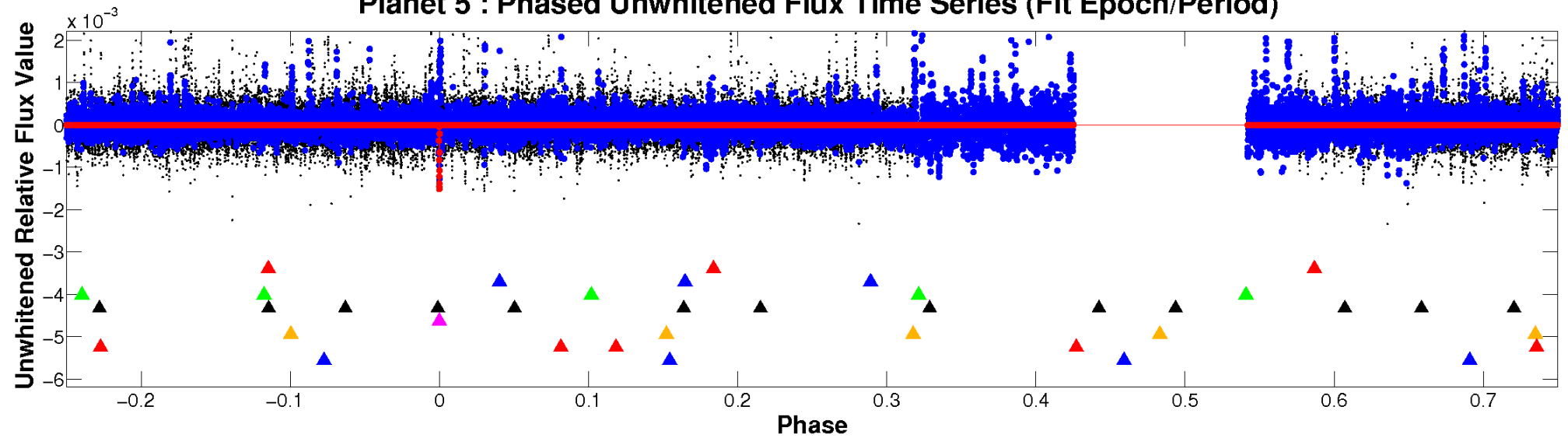
ALT Odd/Even

TCE 003560427-05

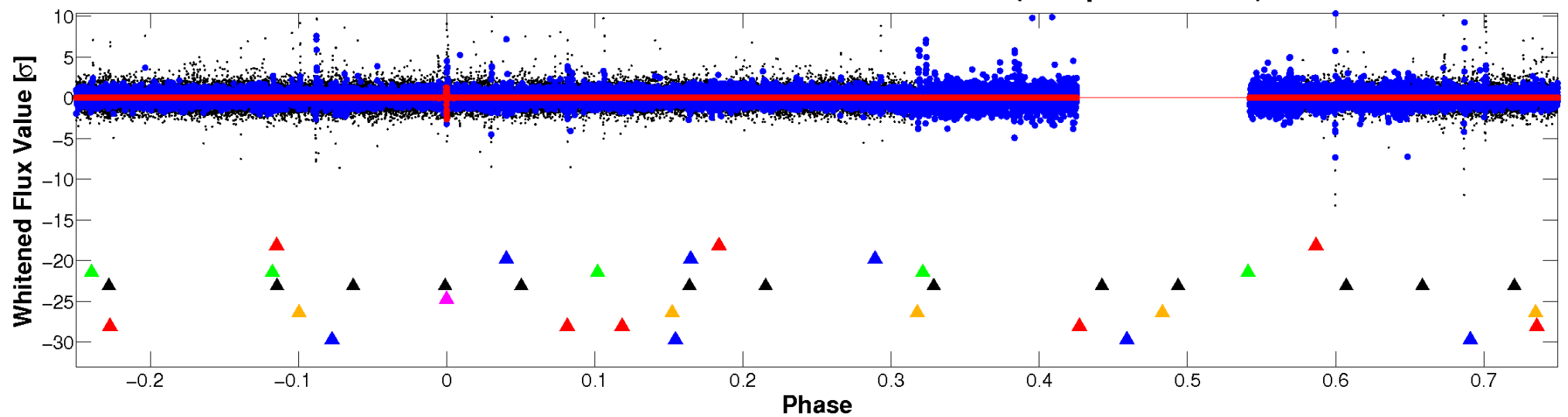


Non-Whitened Vs. Whitened Light Curve

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

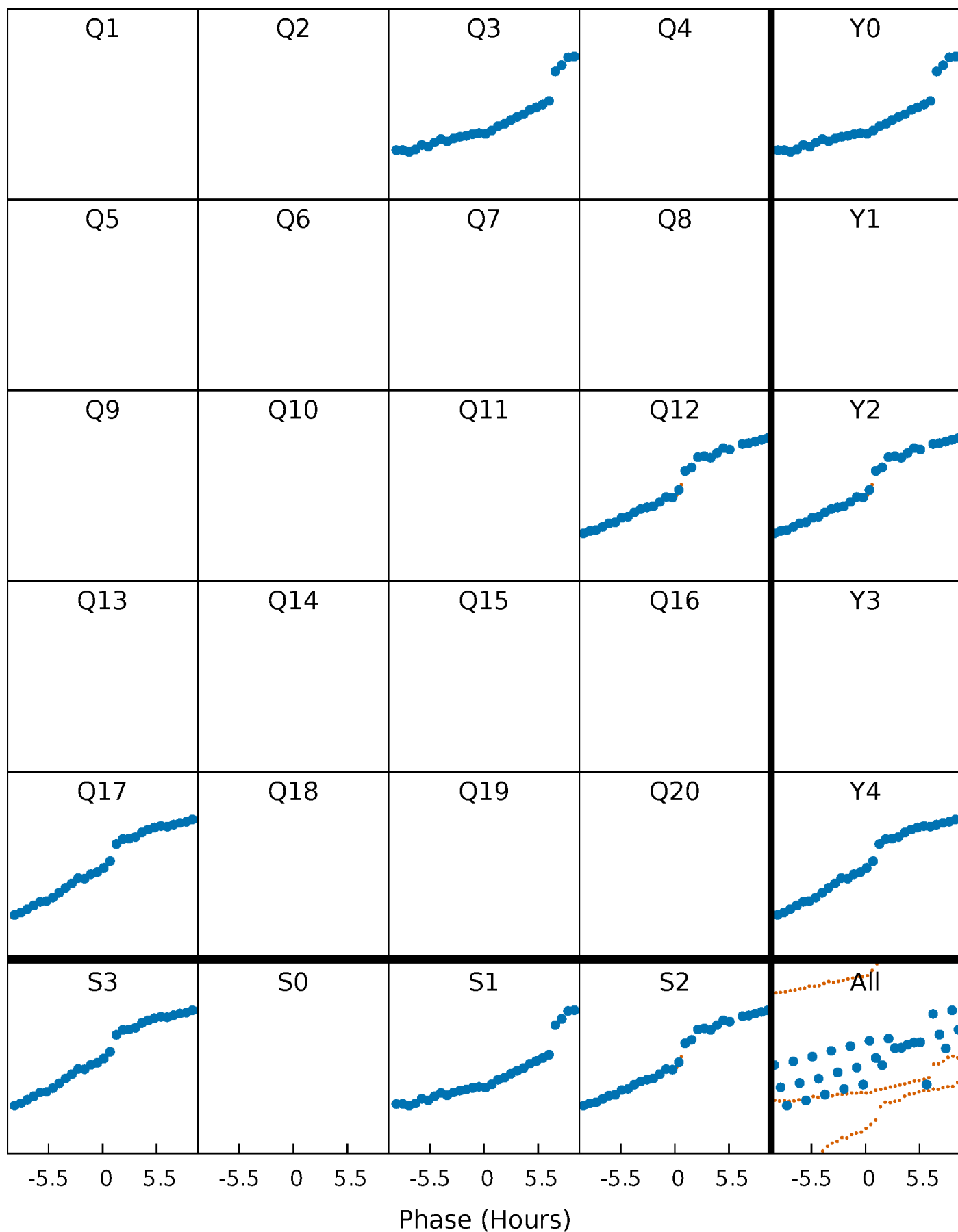


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



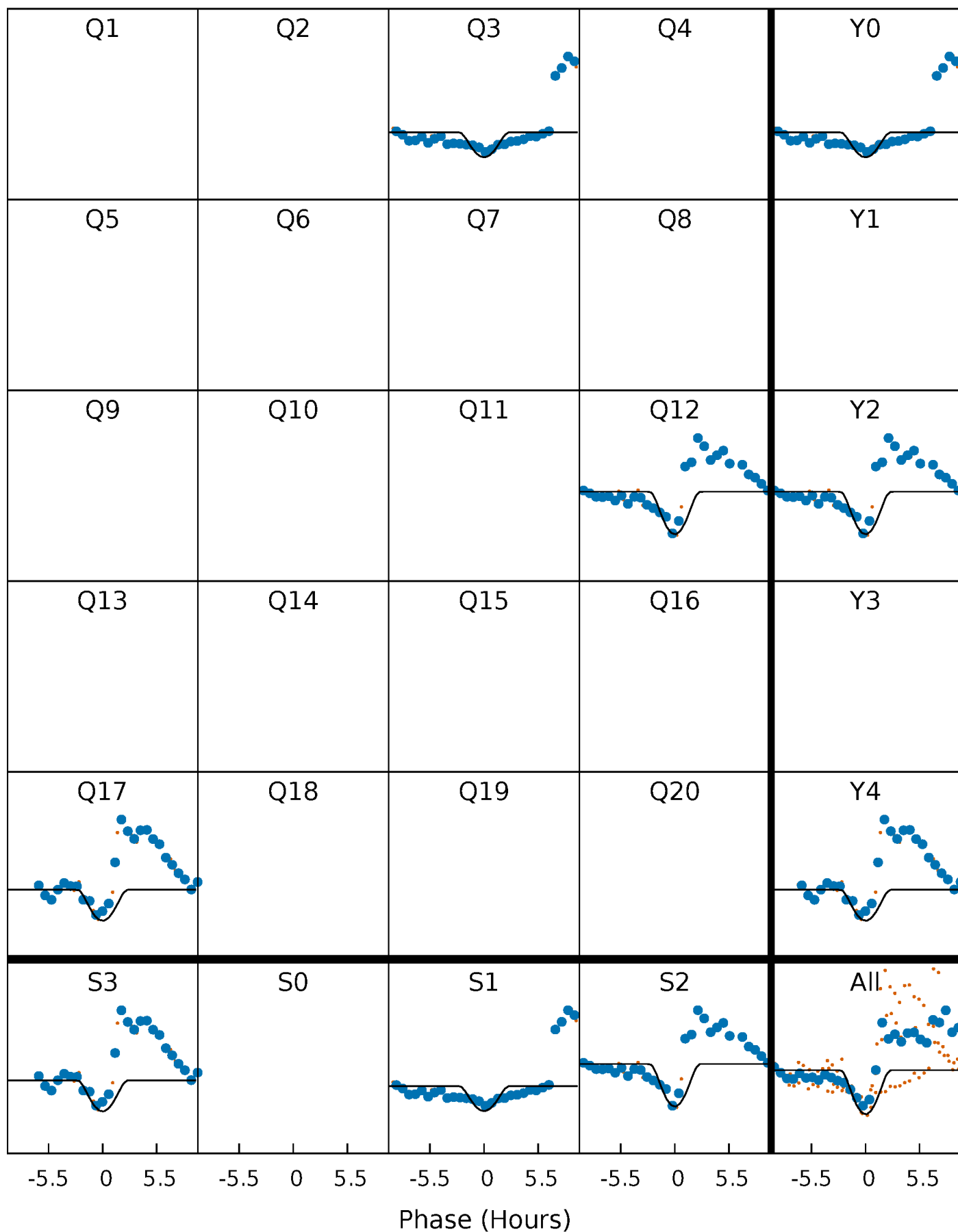
PDC Quarter-Phased Transit Curves

TCE 003560427-05 $P=418.752185$ Days $T_0=309.056473$ (BKJD)



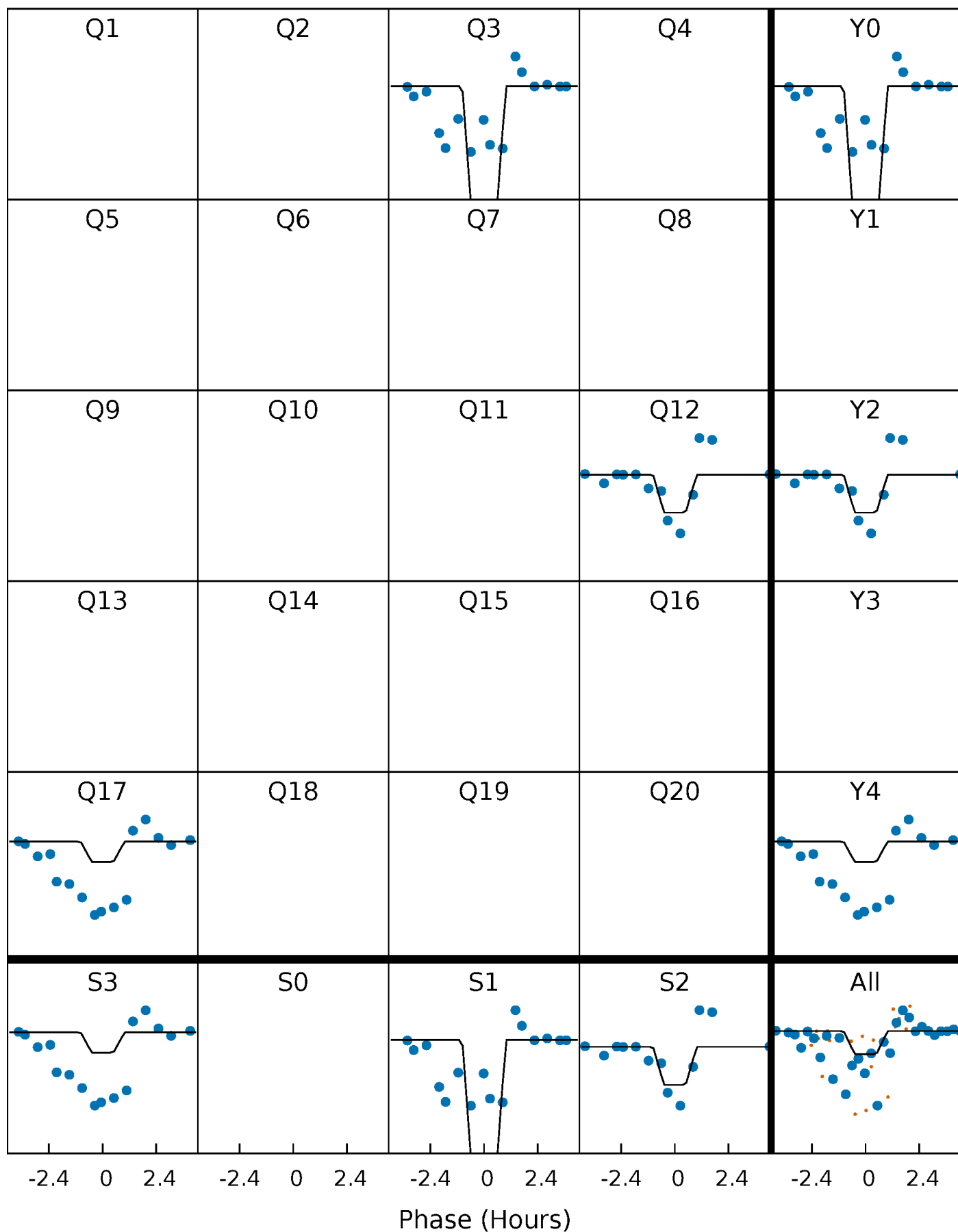
DV Quarter-Phased Transit Curves

TCE 003560427-05 $P=418.752185$ Days $T_0=309.056473$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

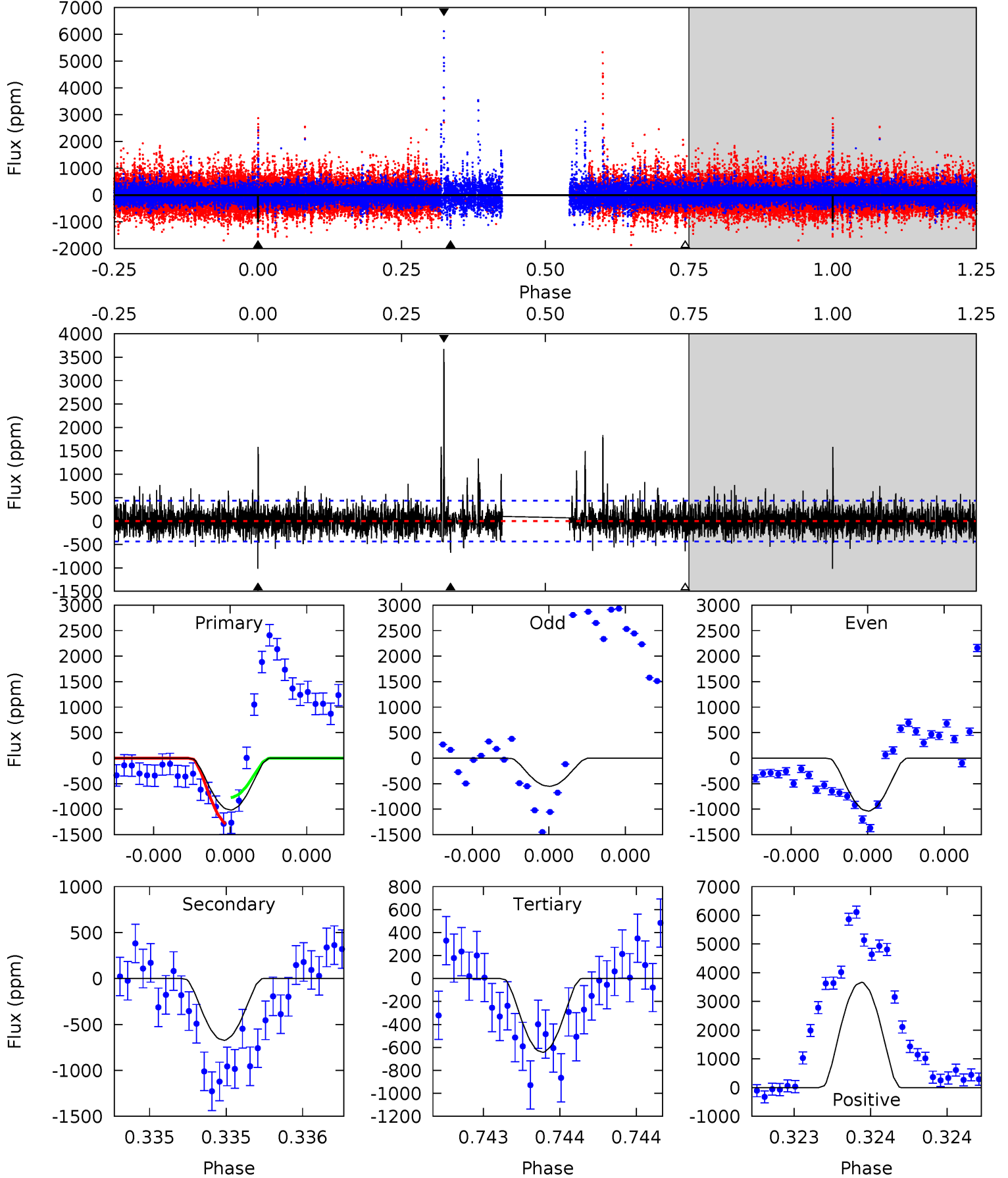
TCE 003560427-05 $P=418.756419$ Days $T_0=309.044640$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-05, P = 418.752185 Days, E = 309.056473 Days

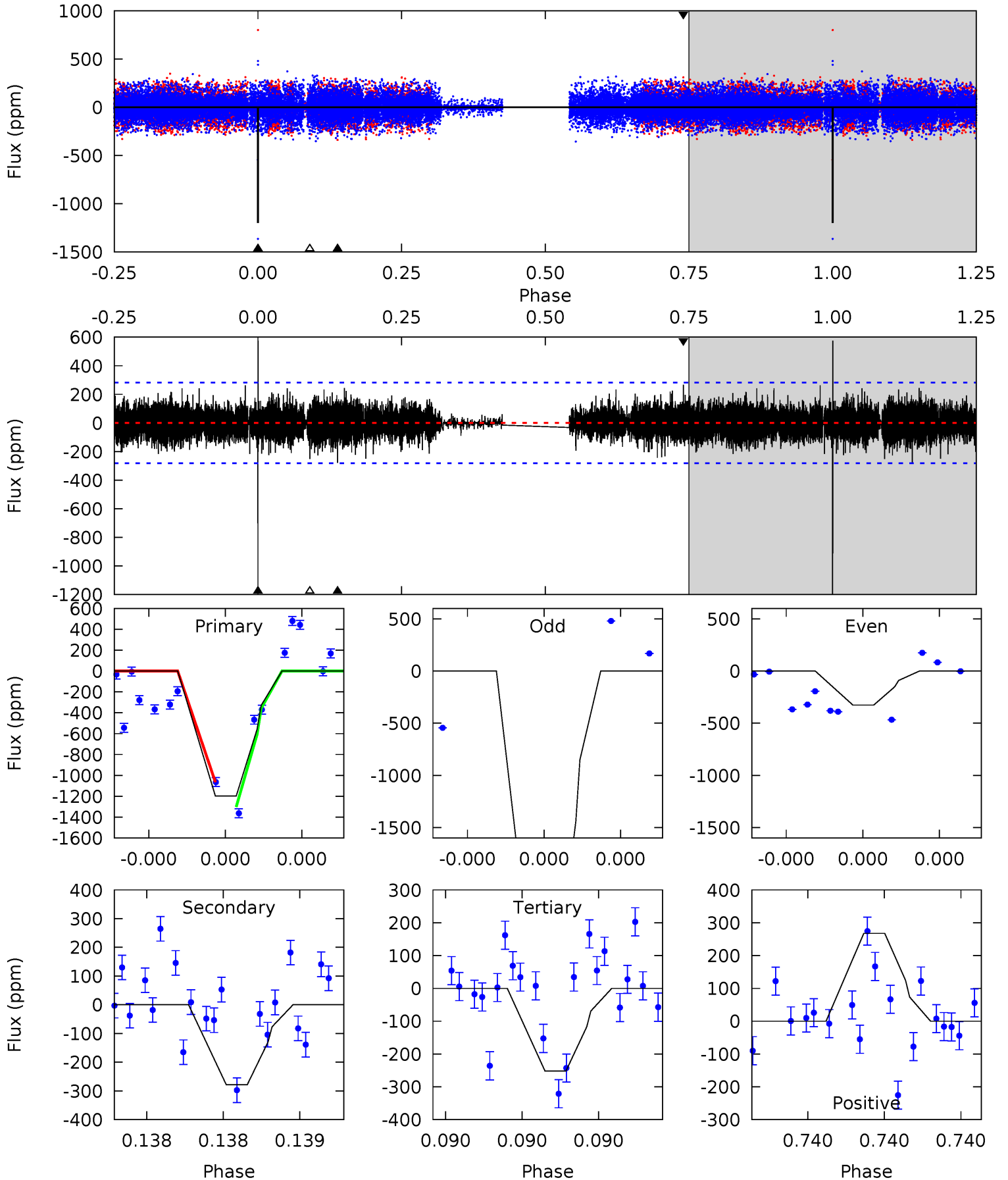
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	8.60	8.22	46.9	5.57	3.48	2.61	4.77	-33.9	0.38	-38.3	2.51	1.04	0.78	3.29



Alt Model-Shift Uniqueness Test

003560427-05, P = 418.756419 Days, E = 309.044640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.4	5.69	5.14	5.46	5.75	3.75	1.09	19.3	19.0	0.55	0.23	38.8	1.35	0.32	0



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-673 ± 78	$116.18^{+141.77}_{-82.99}$	637^{+92}_{-75}	2474^{+1003}_{-400}	31^{+354}_{-25}
Alt.	-279 ± 49	$121.11^{+136.60}_{-85.94}$	633^{+91}_{-73}	2199^{+803}_{-299}	11^{+127}_{-9}

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

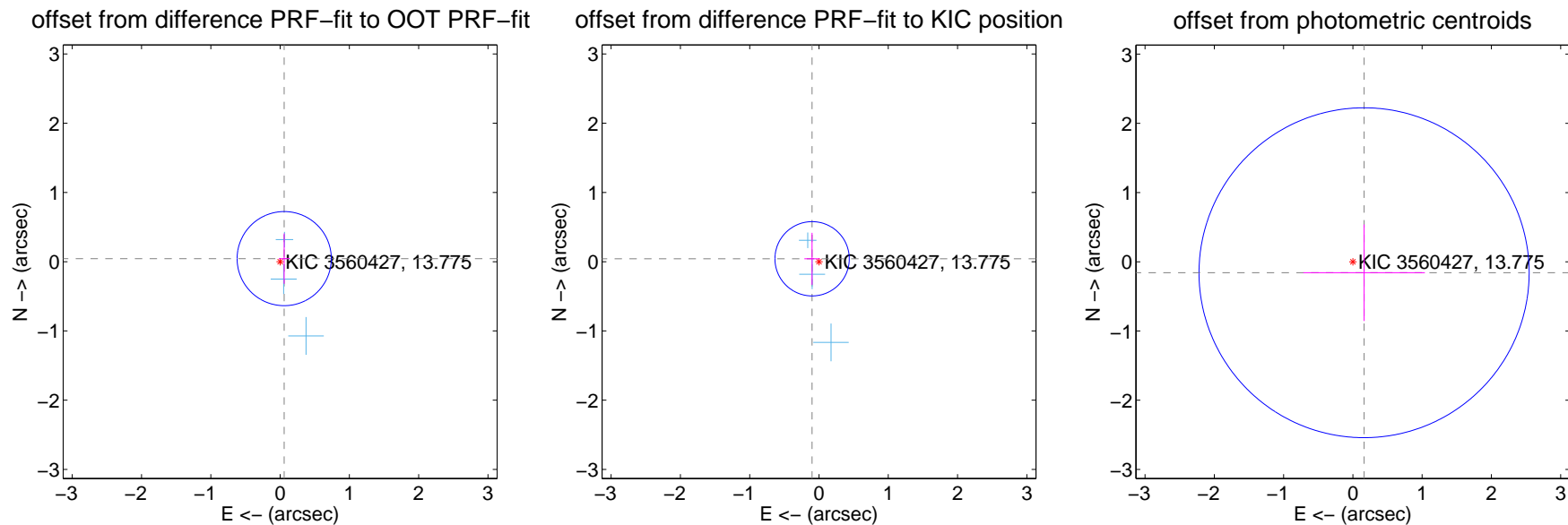
DV Centroid Data

Supplemental centroid analysis for 003560427-05. Kepler magnitude: 13.78. Transit SNR 9.34

There are 3 quarters with good PRF difference image offsets

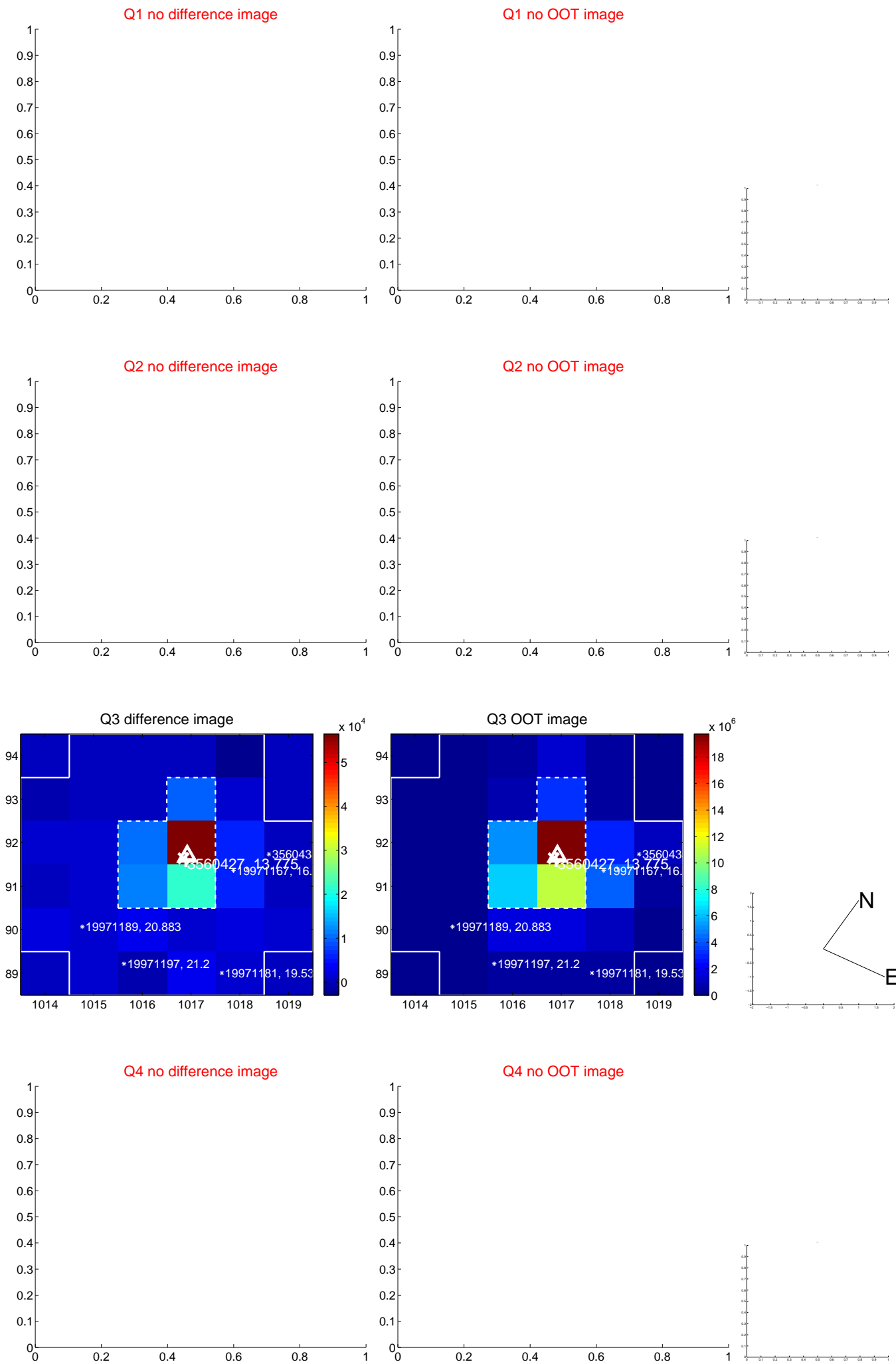
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.074 ± 0.227	0.33	-0.059 ± 0.078	0.044 ± 0.363
PRF-fit source offset from KIC position	0.108 ± 0.179	0.60	0.099 ± 0.111	0.042 ± 0.376
photometric centroid source offset	0.23 ± 0.79	0.29	-0.16 ± 0.88	-0.16 ± 0.70



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

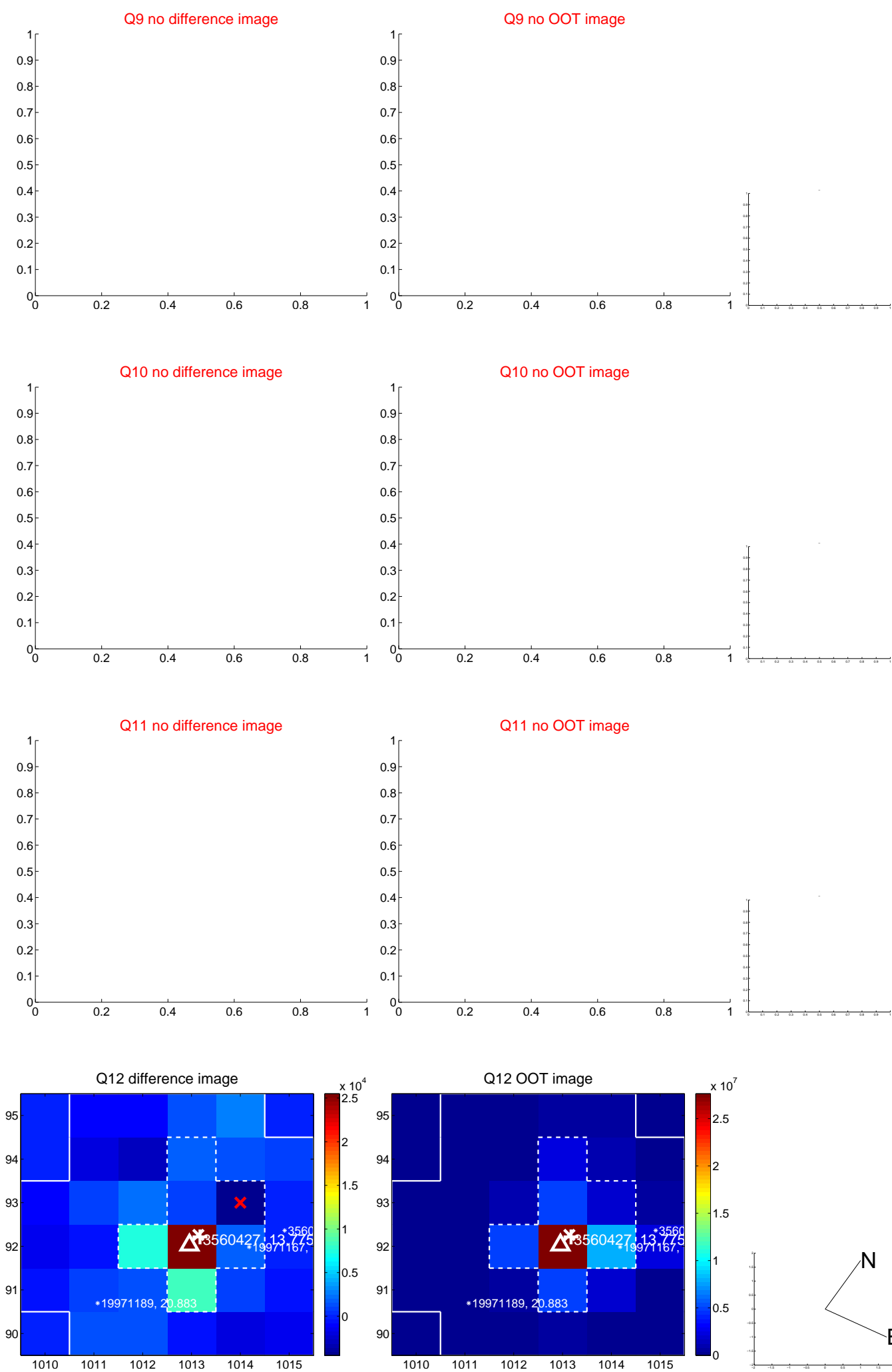
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



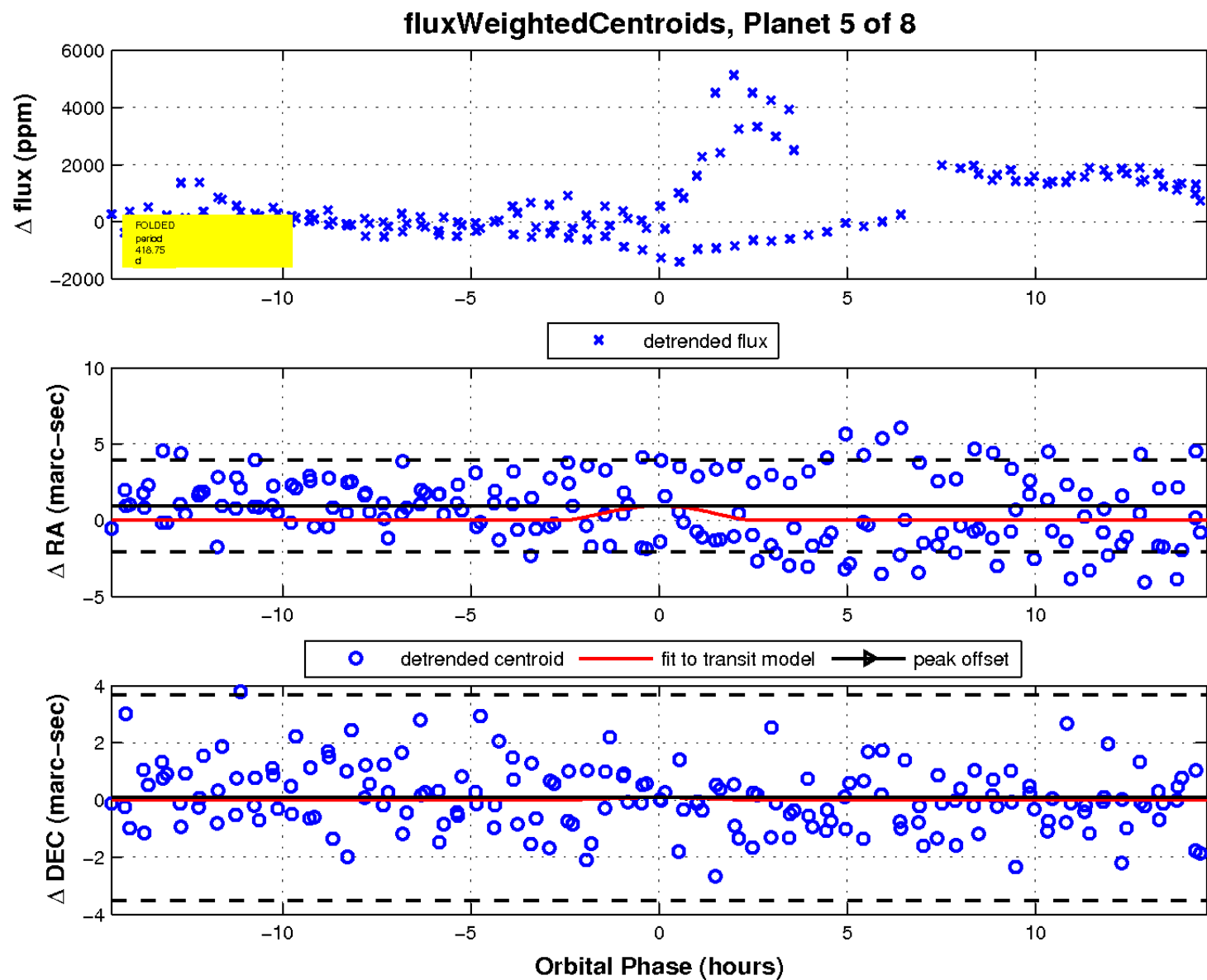
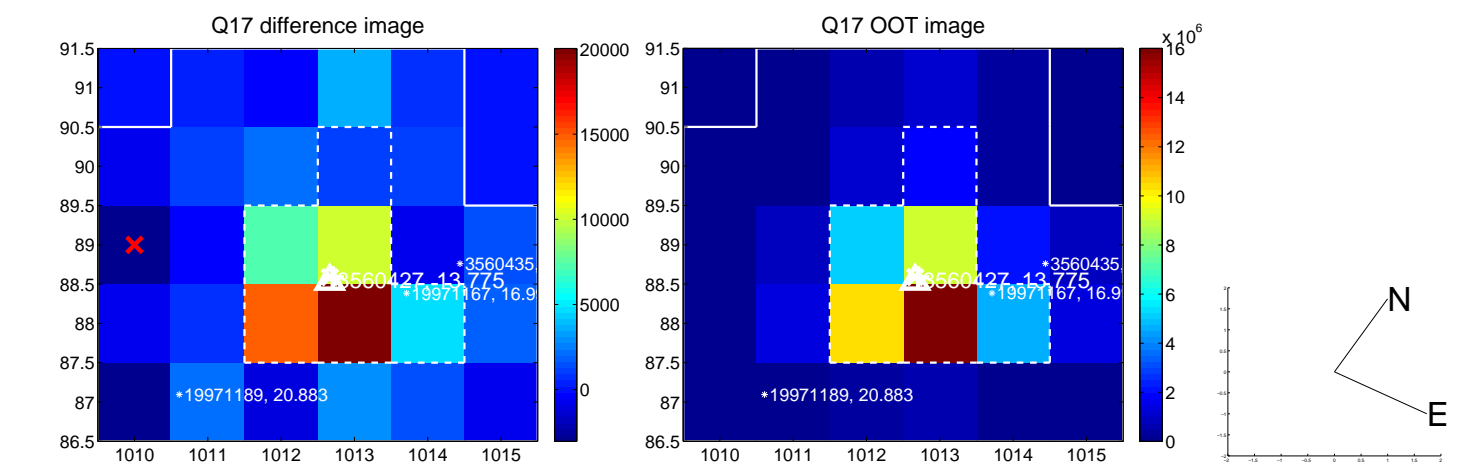
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

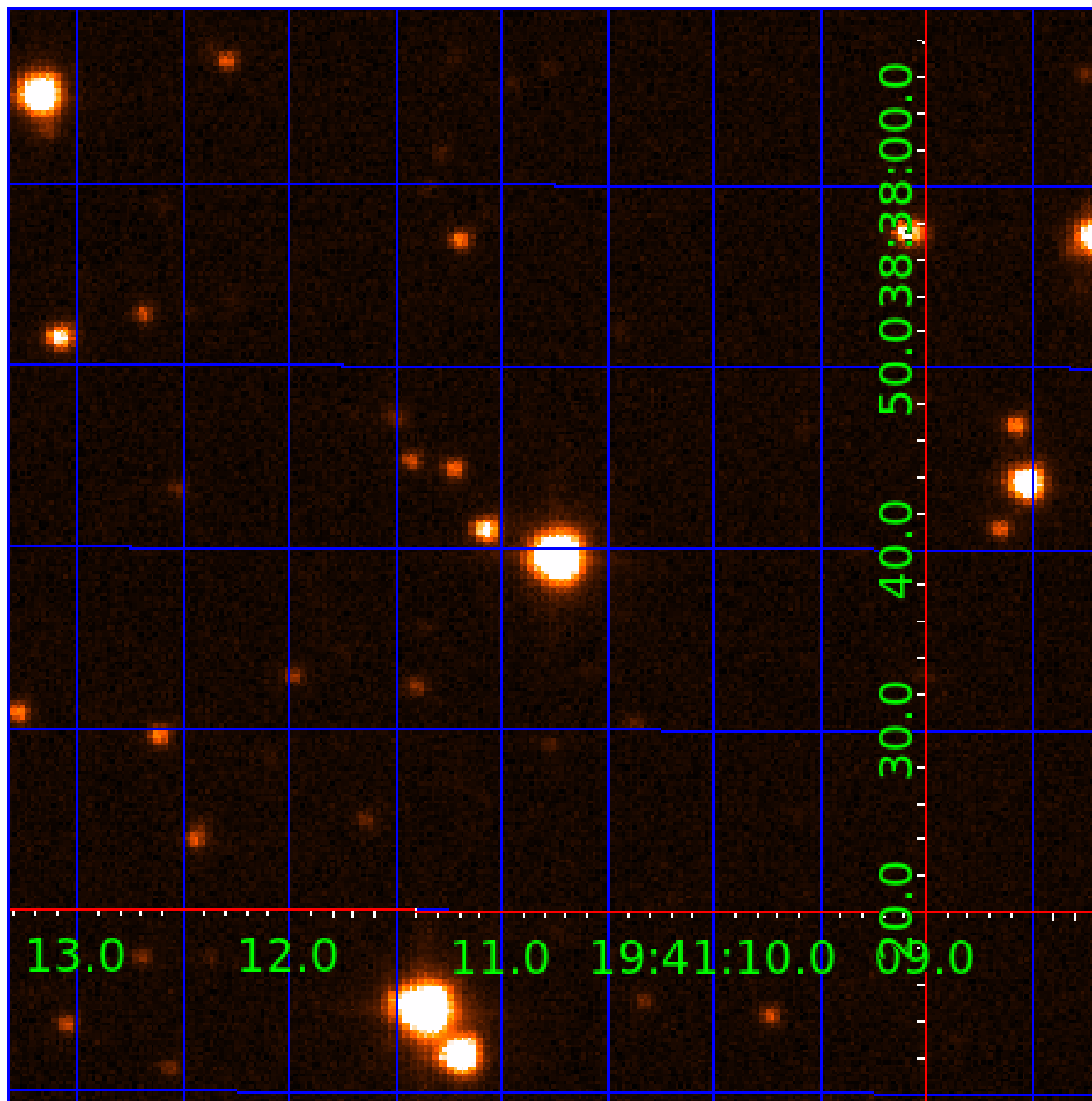


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

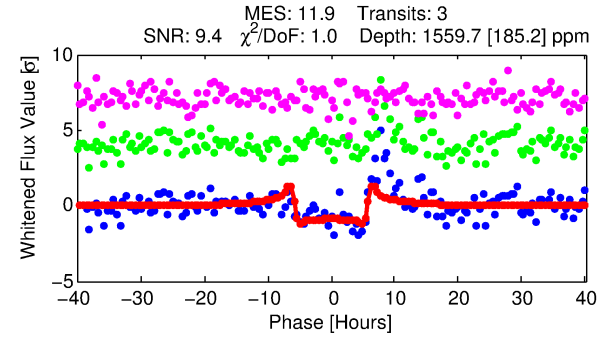
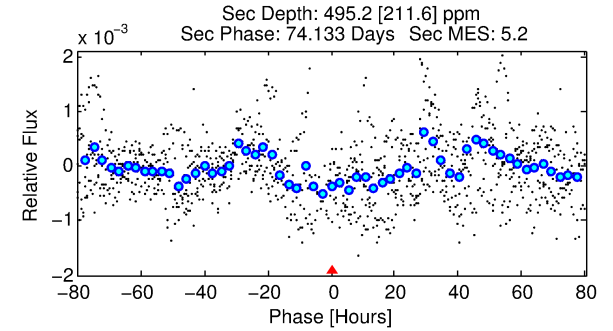
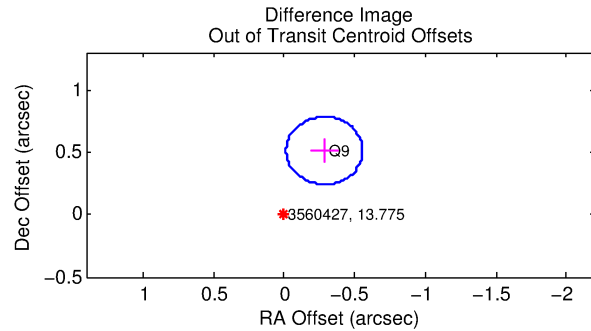
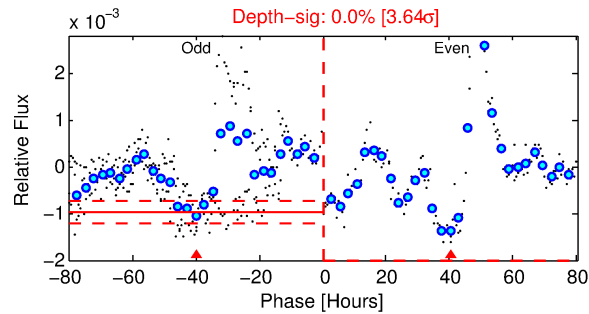
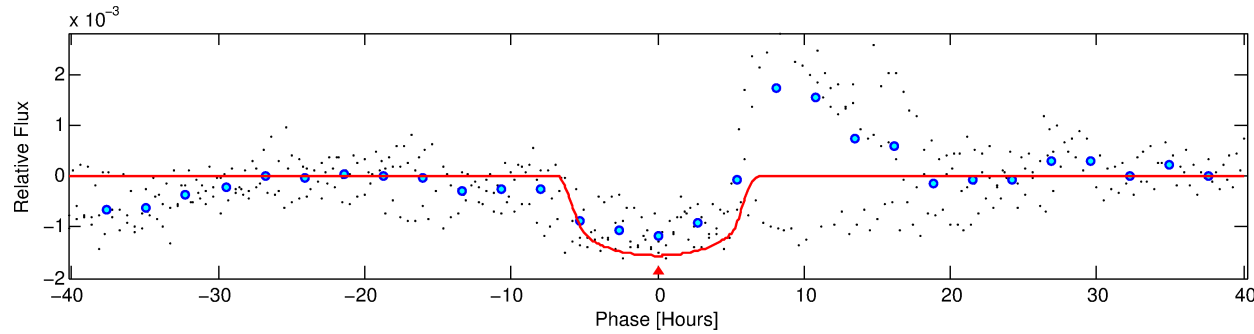
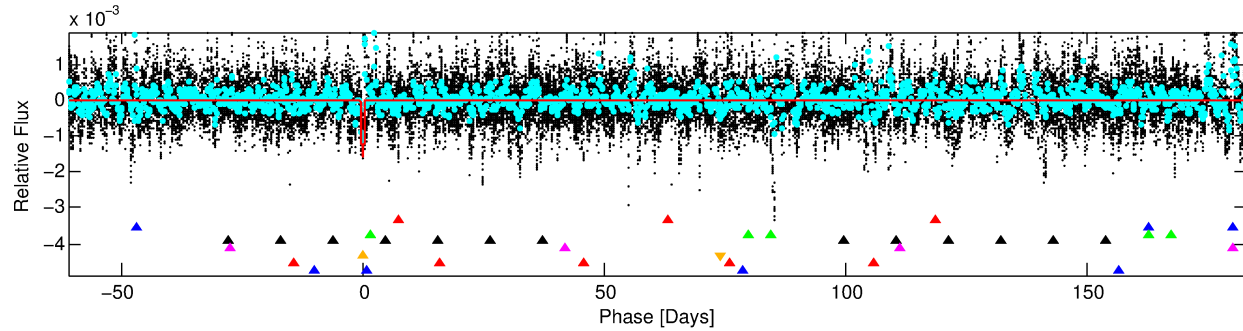
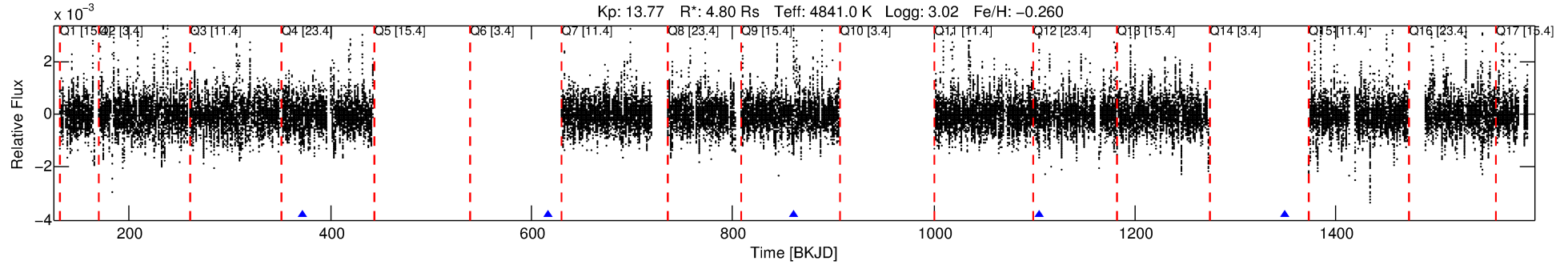
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-06

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 6 of 8 Period: 244.015 d



DV Fit Results:

Period = 244.01459 [0.00438] d
Epoch = 372.8160 [0.0088] BKJD
Rp/R* = 0.0414 [0.0031]
a/R* = 87.48 [12.02]
b = 0.83 [0.05]
Seff = 21.09 [16.46]
Teq = 546 [107] K
Rp = 21.65 [13.97] Re
a = 0.7328 [0.3915] AU
Ag = 312.03 [278.94] [1.12σ]
Teffp = 3551 [416] K [7.00σ]

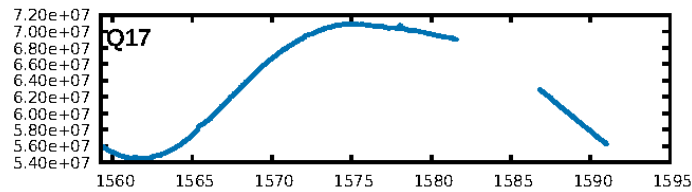
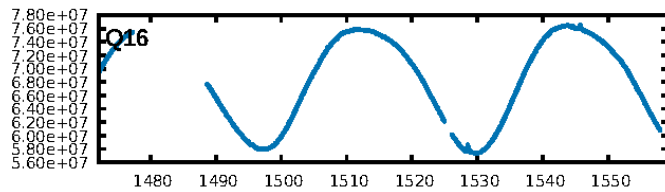
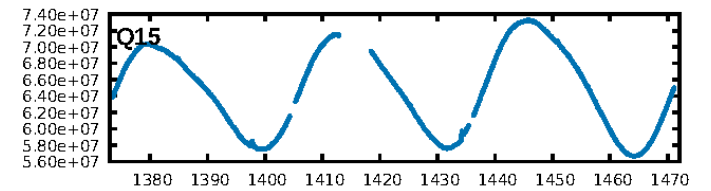
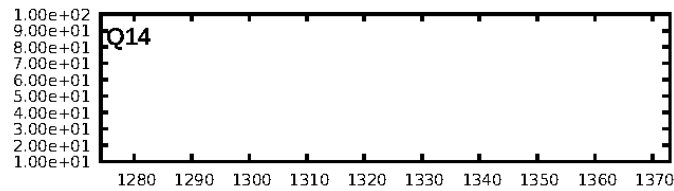
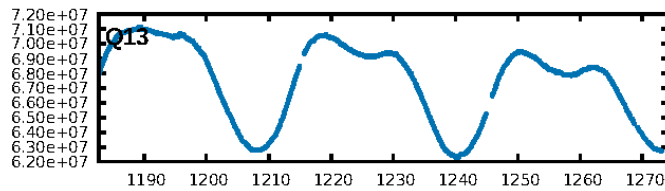
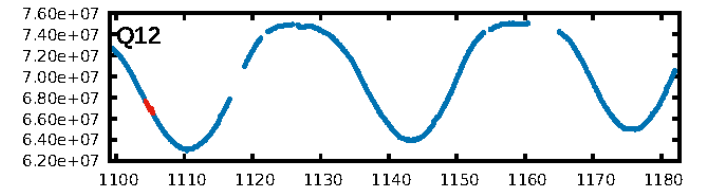
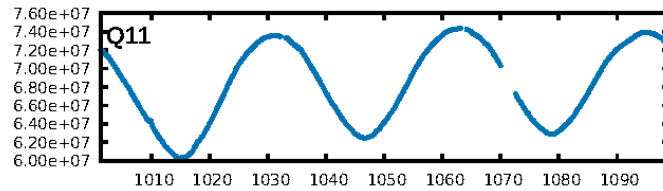
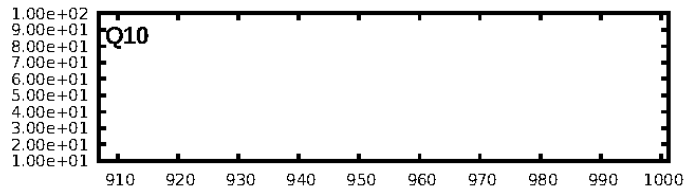
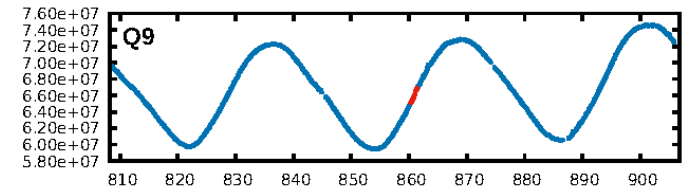
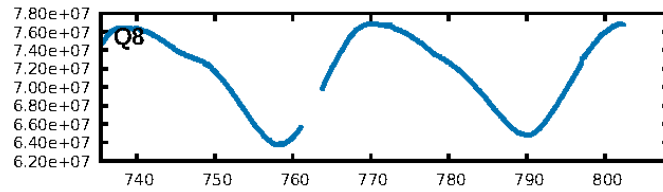
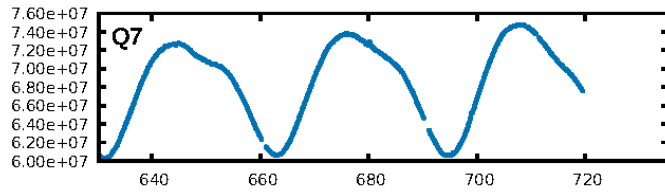
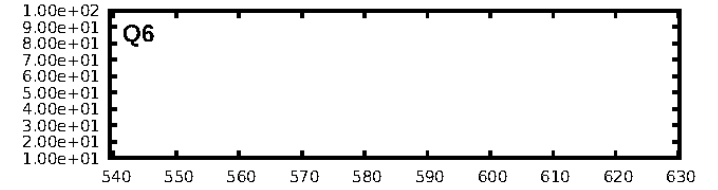
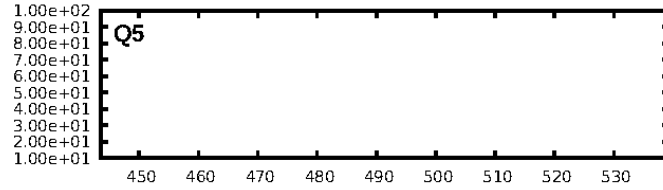
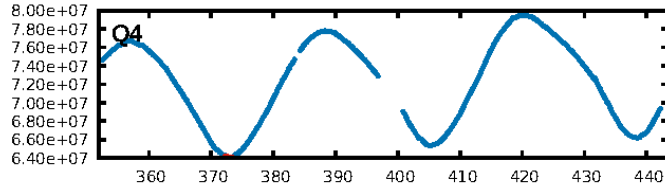
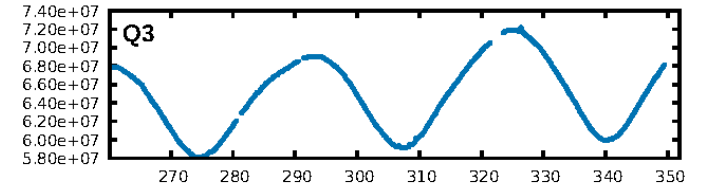
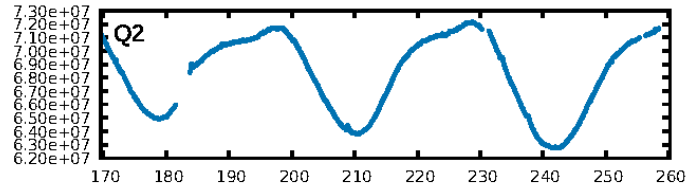
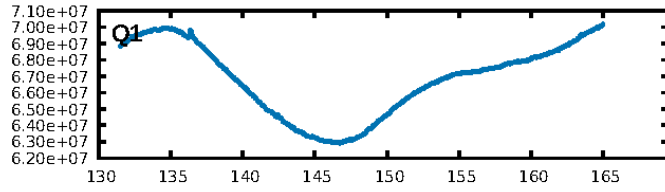
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [226.77σ]
LongPeriod-sig: 100.0% [51.56σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 81.3%
Bootstrap-pfa: 9.68e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.272
Centroid-sig: 49.5%
Centroid-so: 1.096 arcsec [1.37σ]
OotOffset-rm: 0.587 arcsec [6.49σ]
KicOffset-rm: 0.565 arcsec [6.24σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

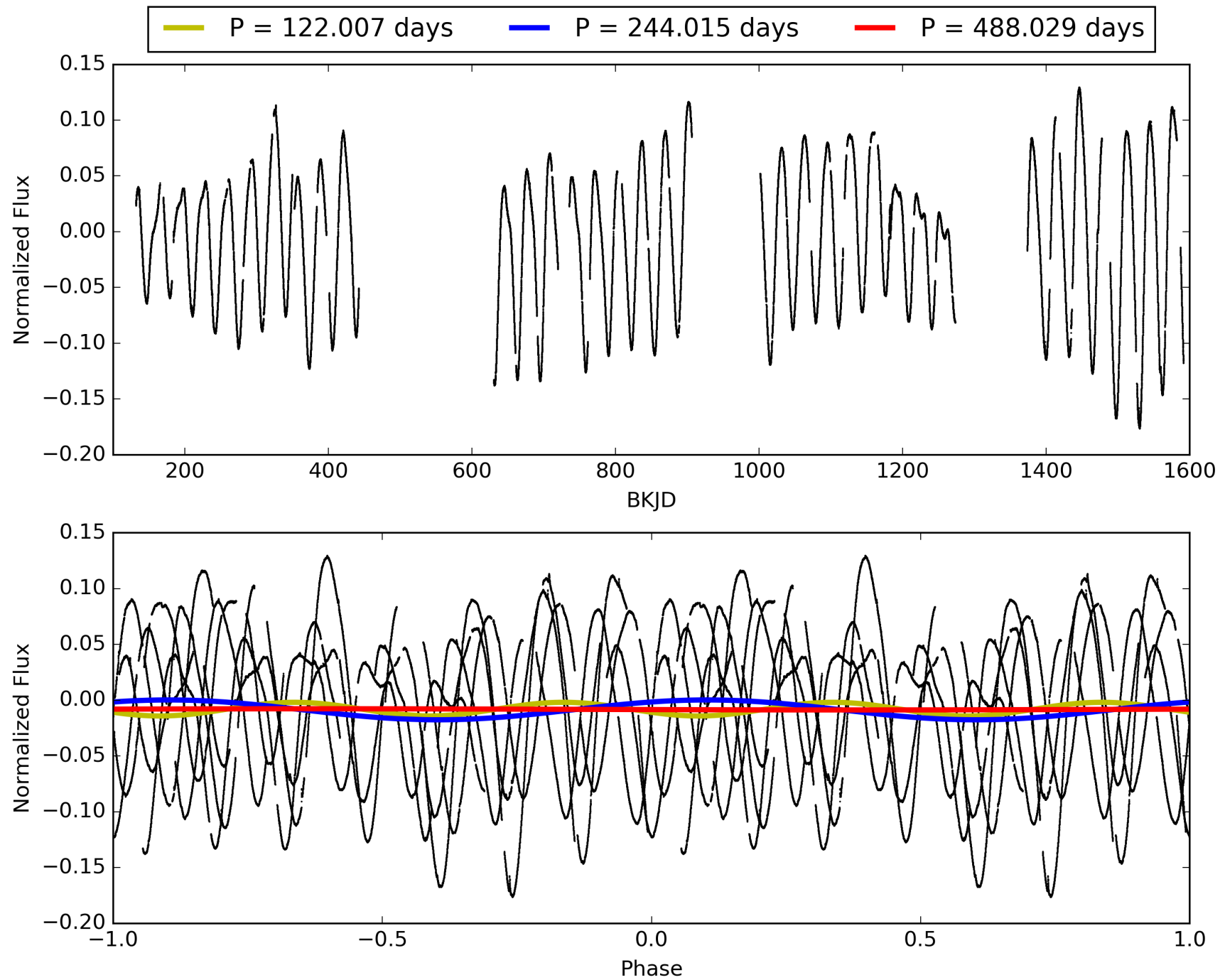
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:51 Z

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

TCE 003560427-06, PDC Light Curves

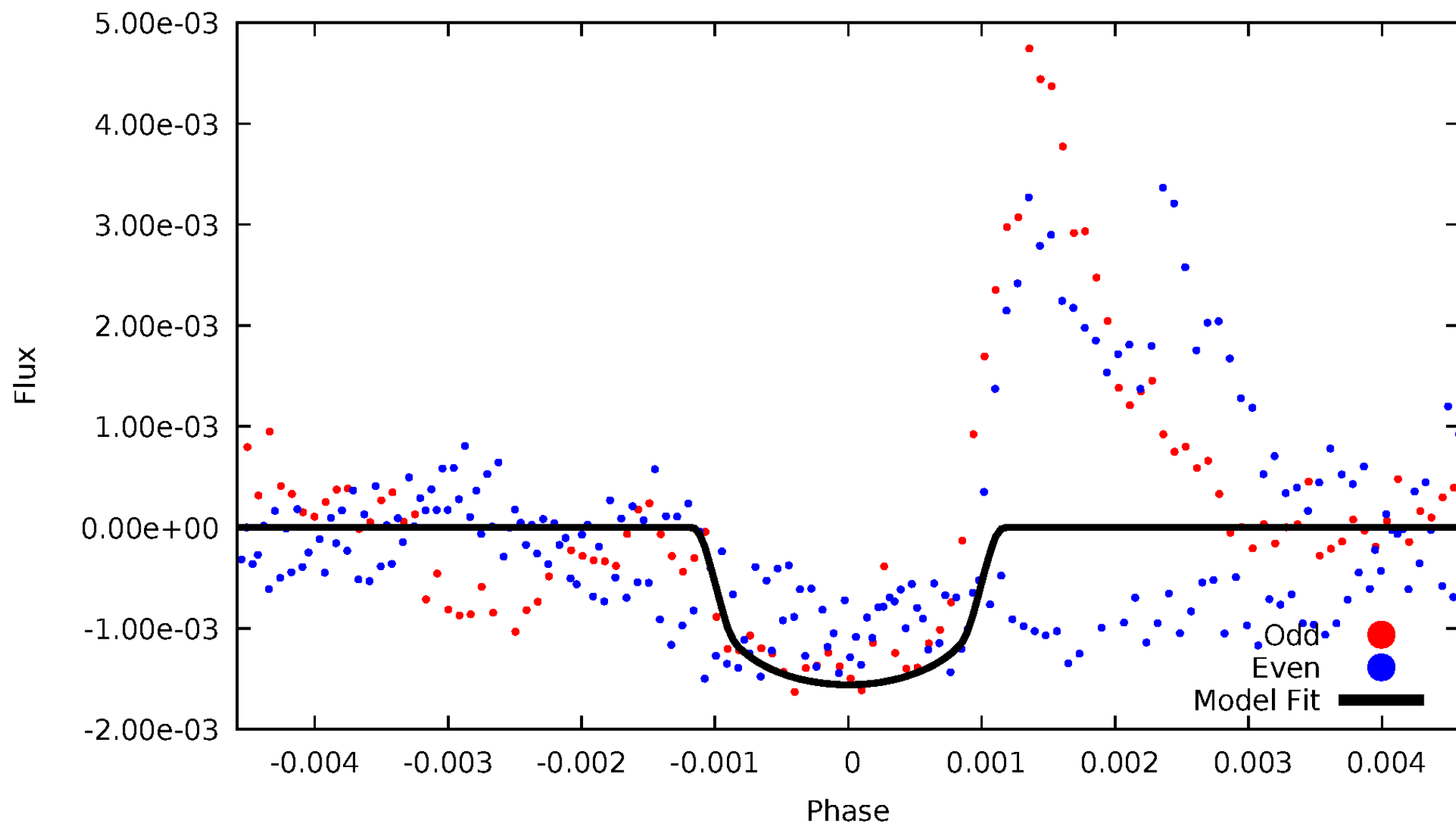


TCE 003560427-06



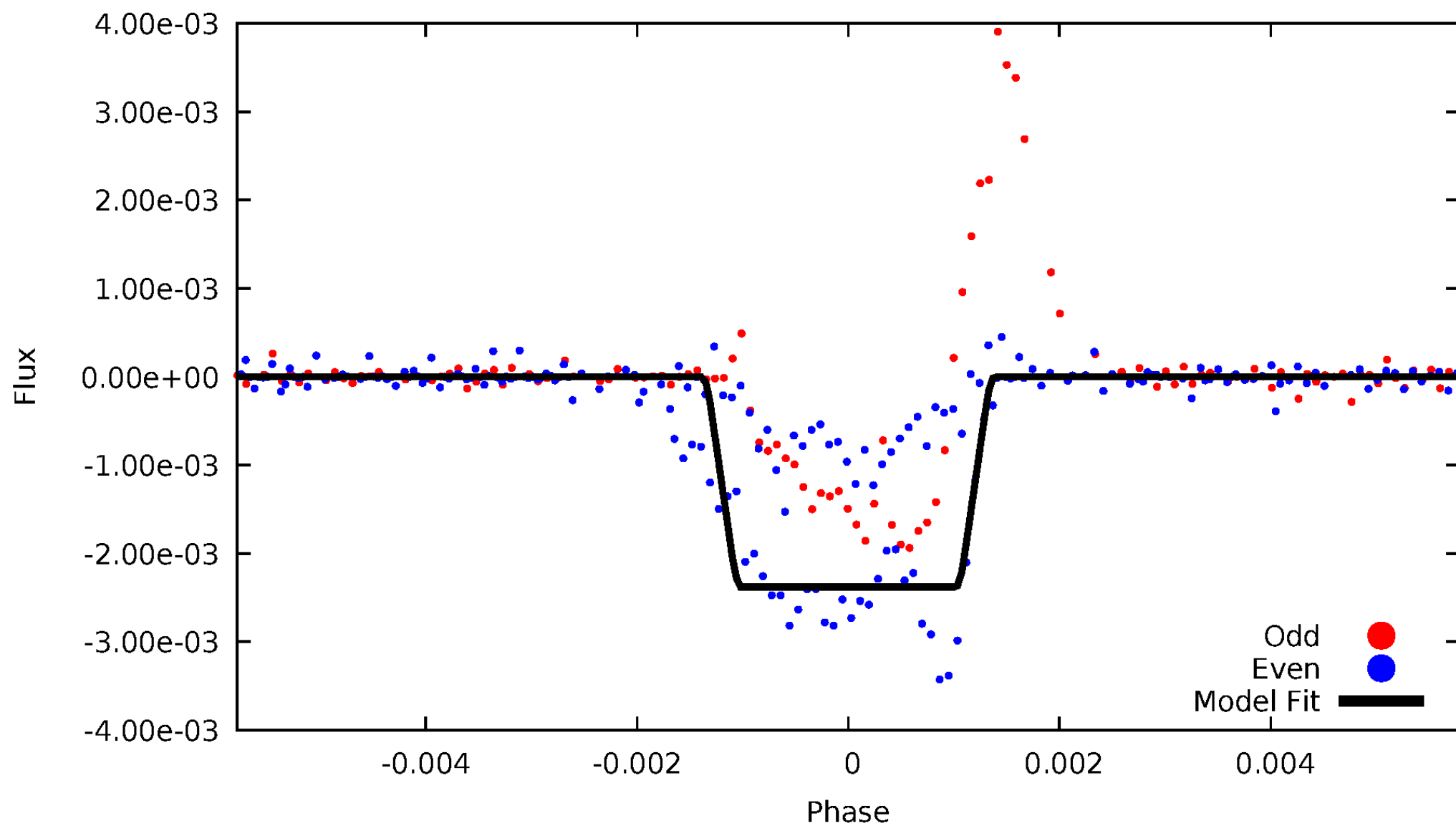
DV Odd/Even

TCE 003560427-06



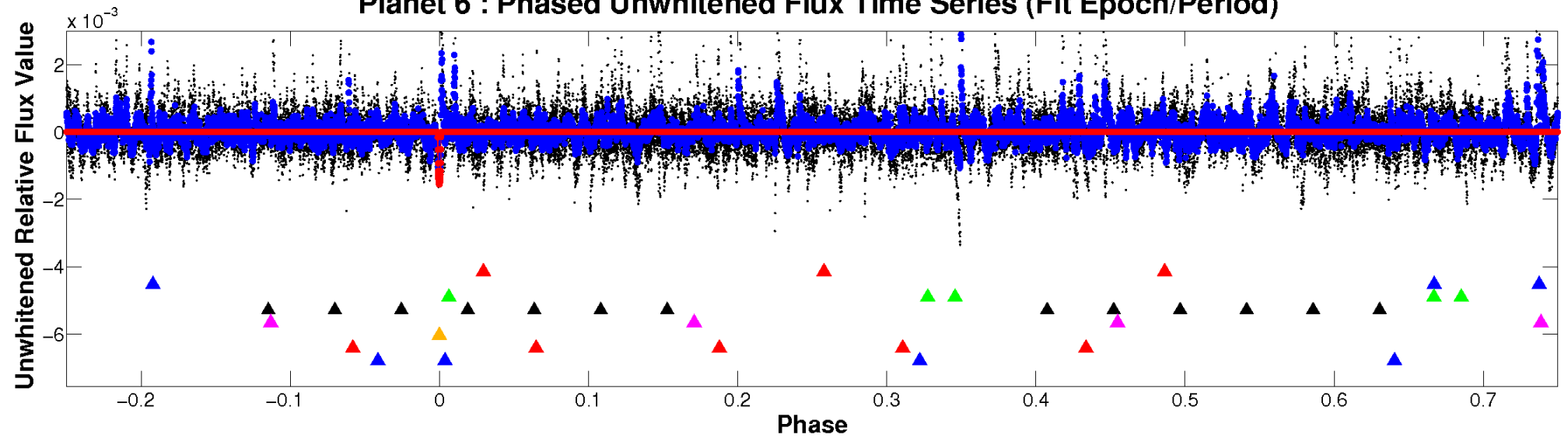
ALT Odd/Even

TCE 003560427-06

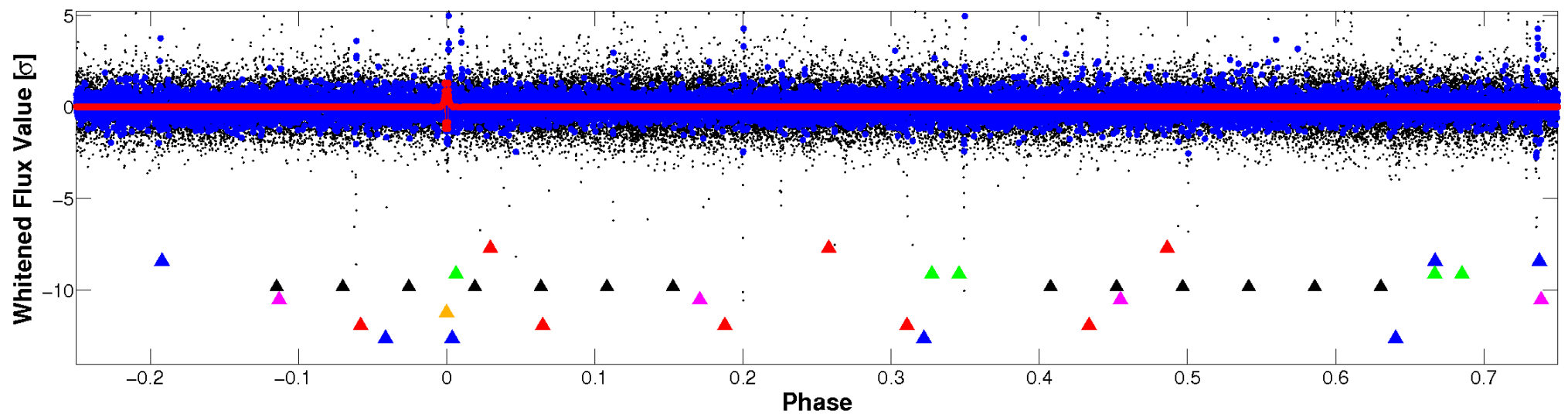


Non-Whitened Vs. Whitened Light Curve

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

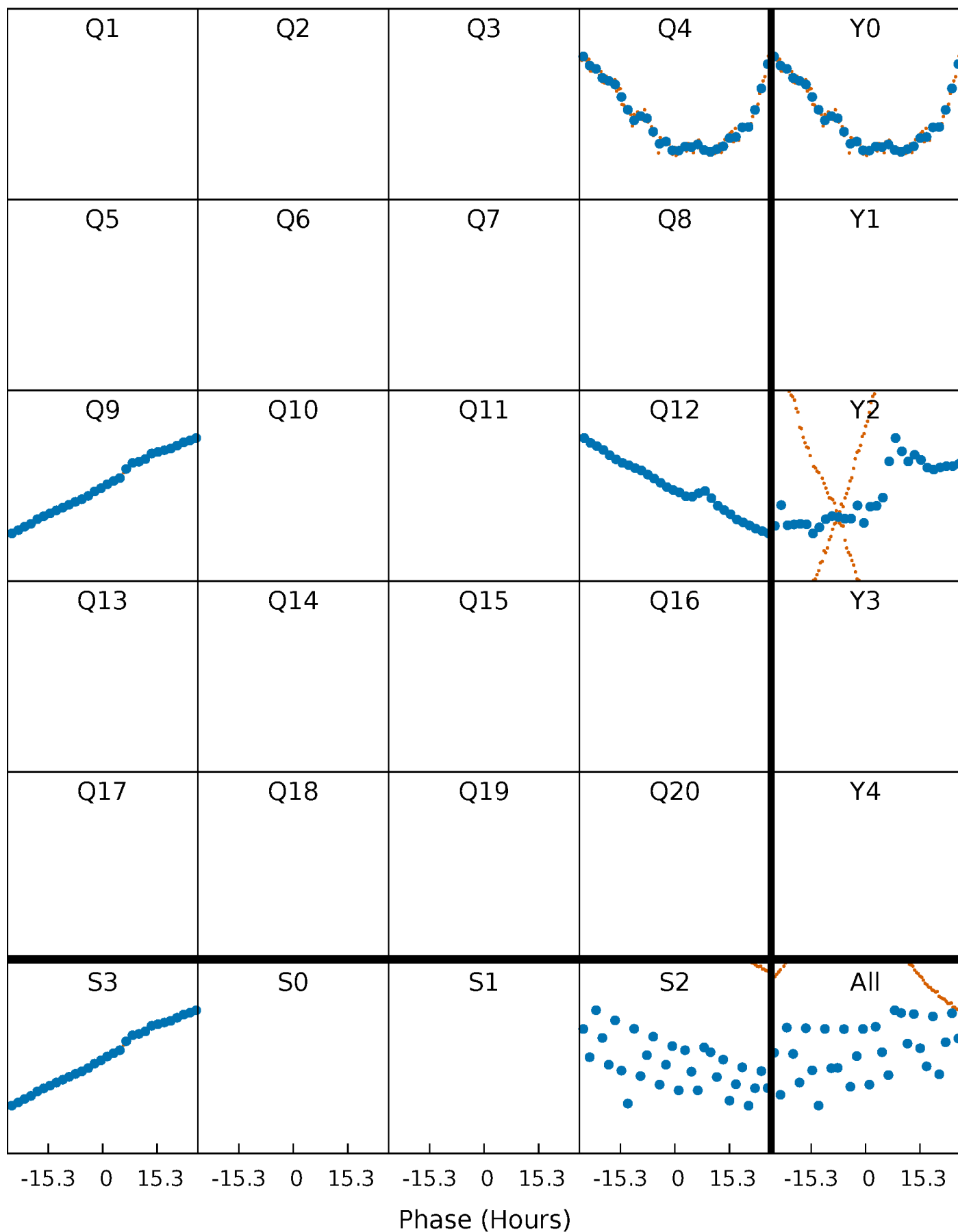


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



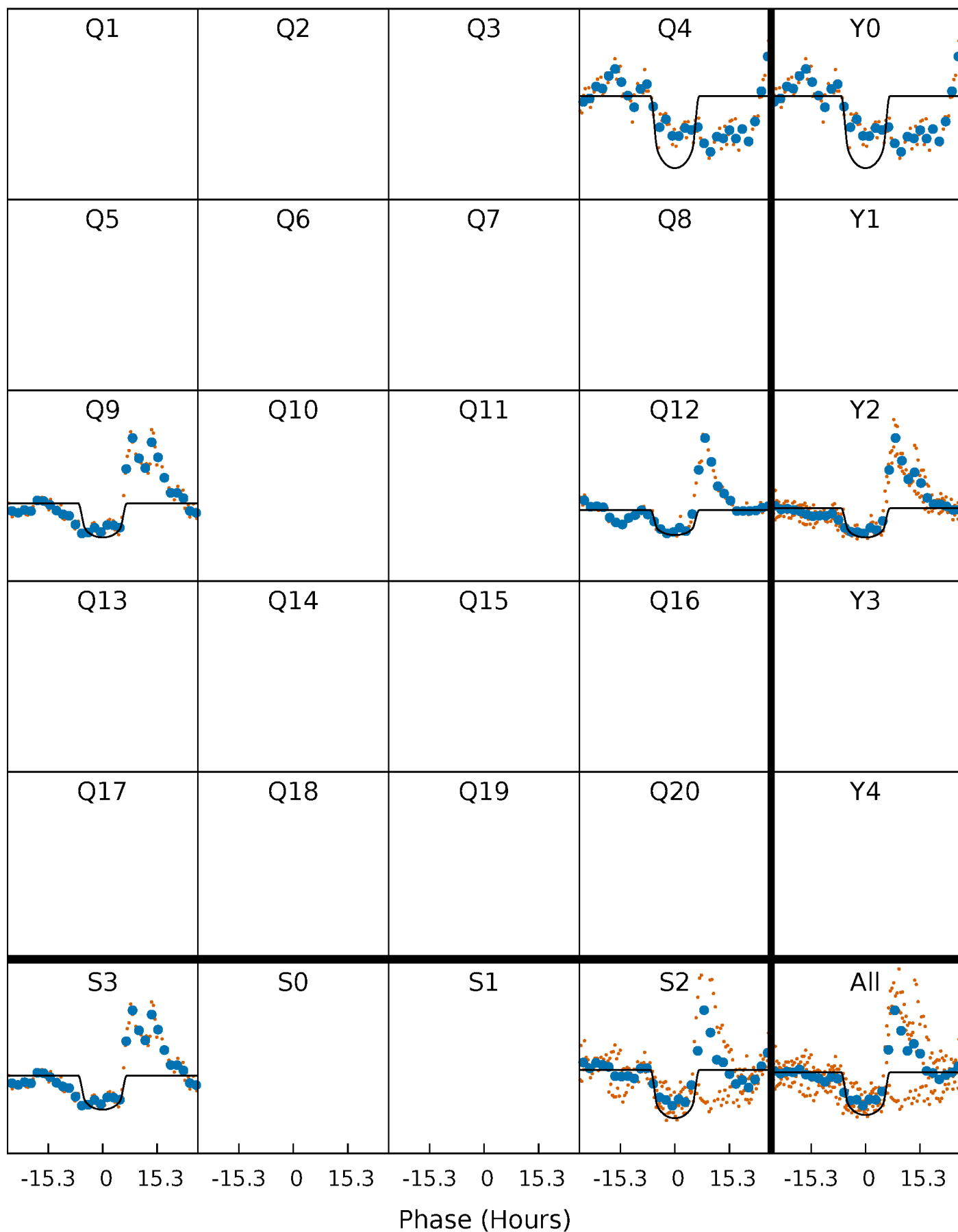
PDC Quarter-Phased Transit Curves

TCE 003560427-06 $P=244.014594$ Days $T_0=372.815957$ (BKJD)



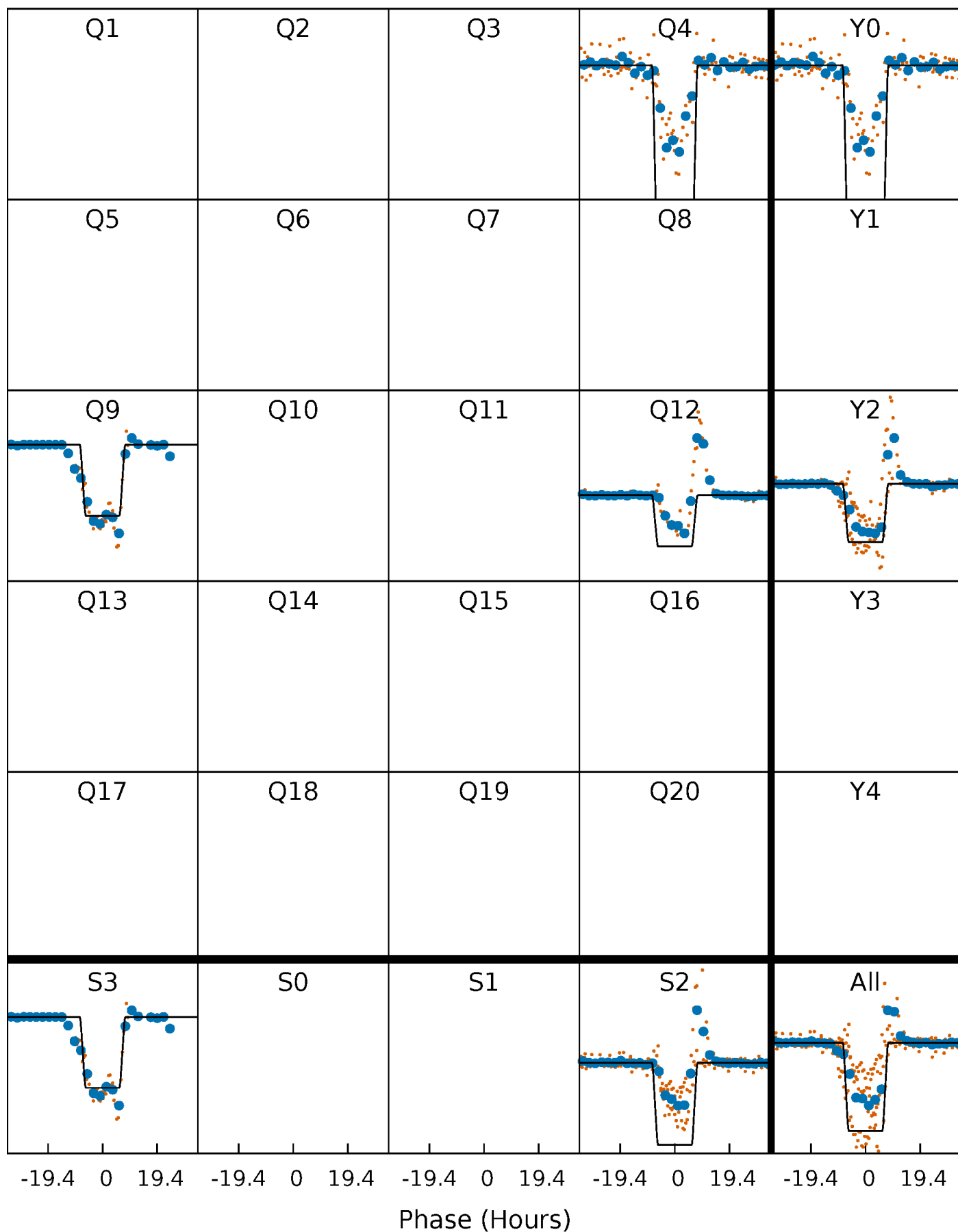
DV Quarter-Phased Transit Curves

TCE 003560427-06 $P=244.014594$ Days $T_0=372.815957$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

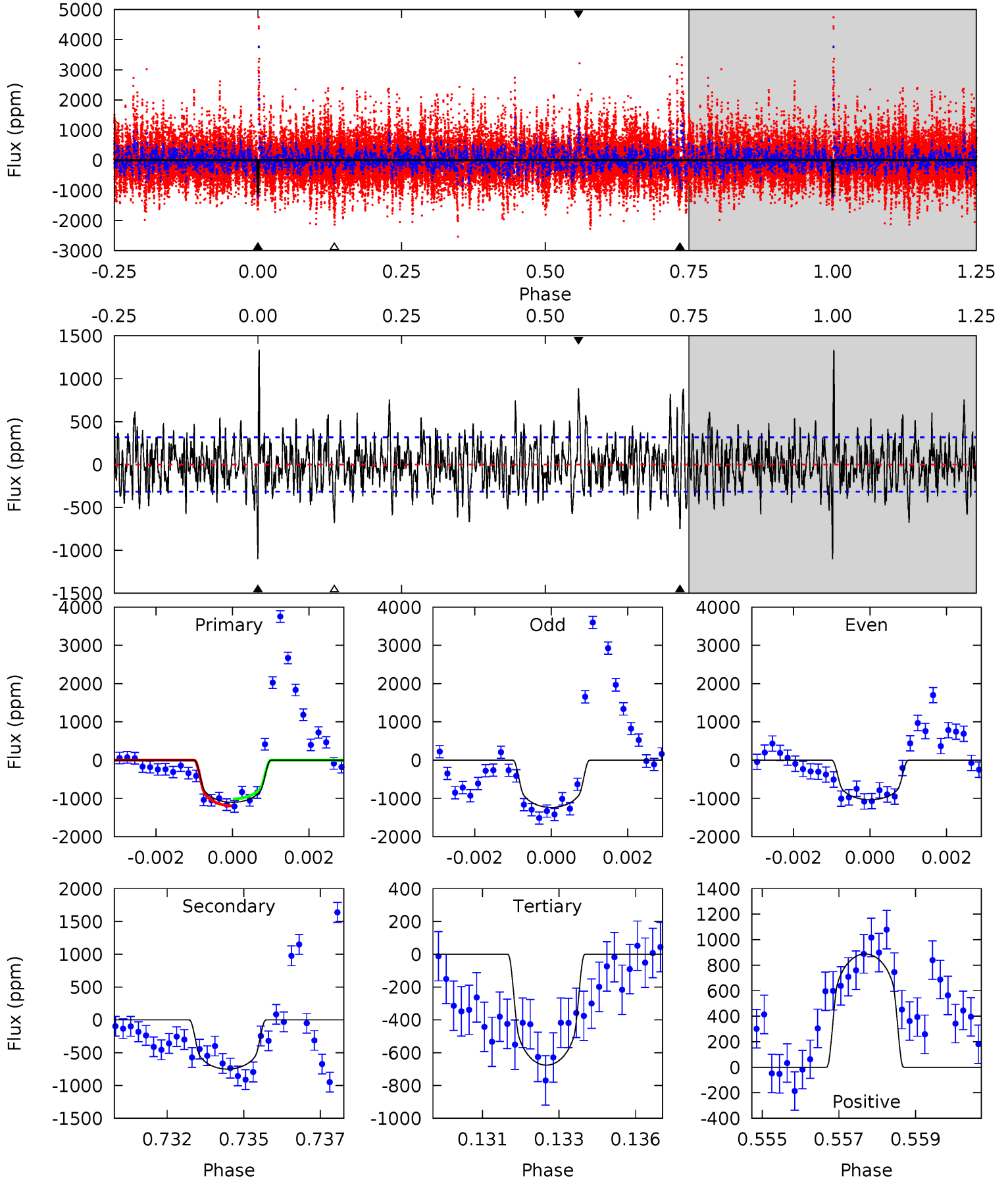
TCE 003560427-06 P=244.024385 Days $T_0=372.771927$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-06, P = 244.014594 Days, E = 128.801363 Days

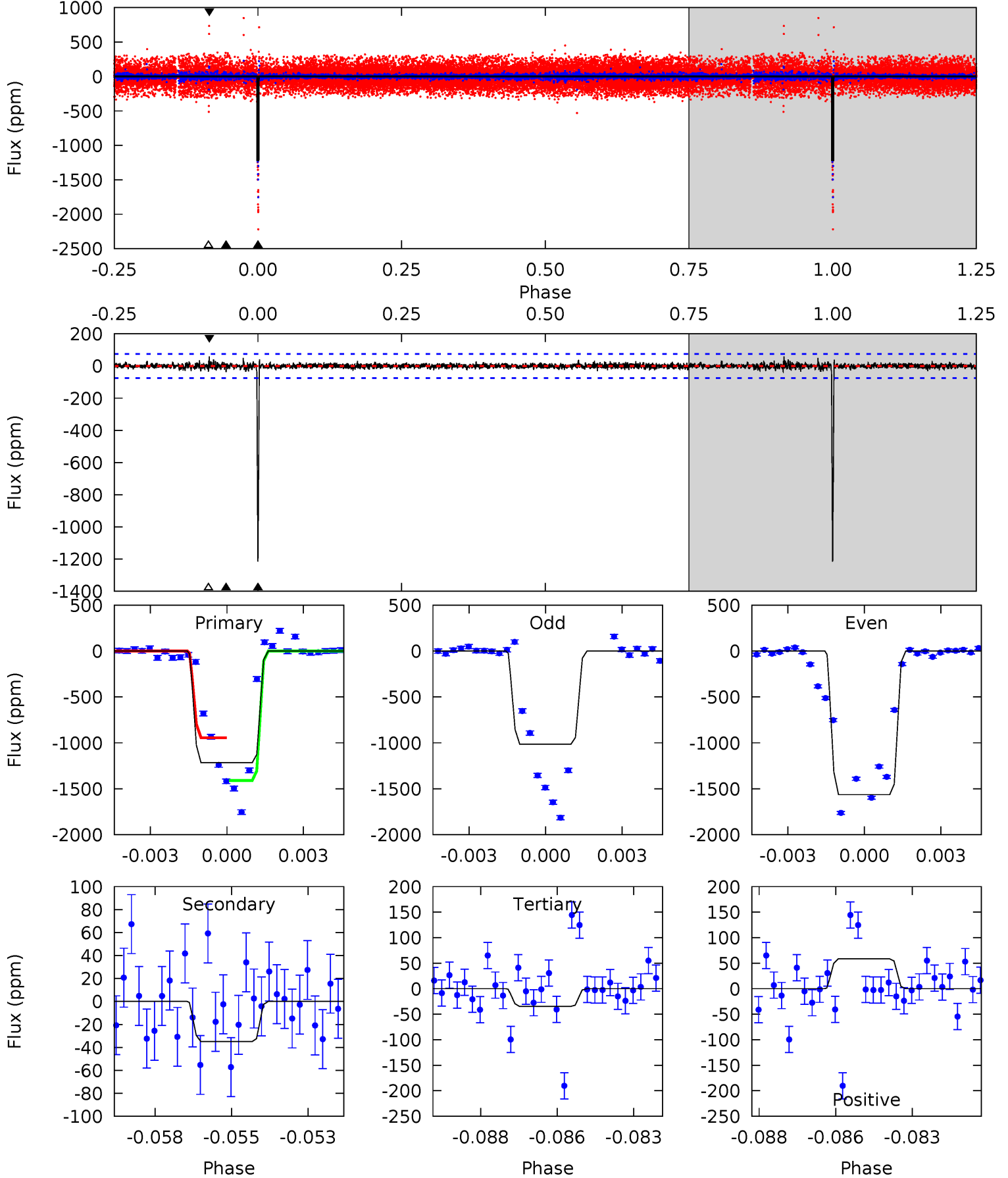
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	12.5	11.3	14.9	5.30	3.04	3.85	7.13	3.59	1.24	-2.31	1.42	0.89	0.55	1.52



Alt Model-Shift Uniqueness Test

003560427-06, P = 244.024385 Days, E = 128.747542 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.0	2.44	2.43	4.10	5.27	2.99	0.58	82.6	80.9	0.01	-1.66	24.0	1.46	0.05	15.8



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-750 ± 60	$21.77^{+8.68}_{-4.71}$	758^{+125}_{-76}	4126^{+176}_{-140}	480^{+304}_{-218}
Alt.	-35 ± 14	$25.44^{+8.37}_{-5.47}$	759^{+115}_{-83}	2494^{+127}_{-167}	15^{+13}_{-8}

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

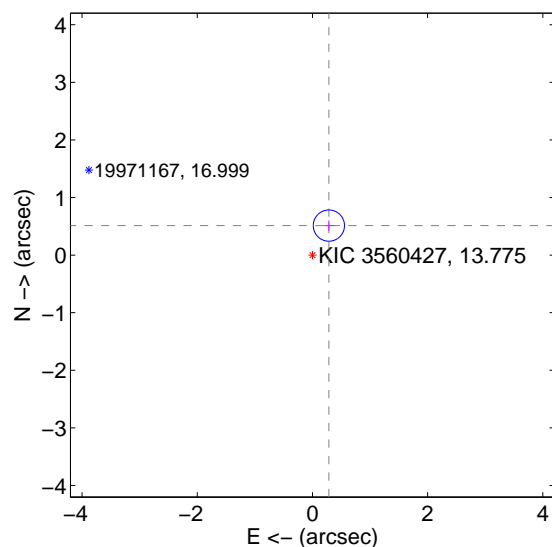
Supplemental centroid analysis for 003560427-06. Kepler magnitude: 13.78. Transit SNR 9.43

There are 1 quarters with good PRF difference image offsets

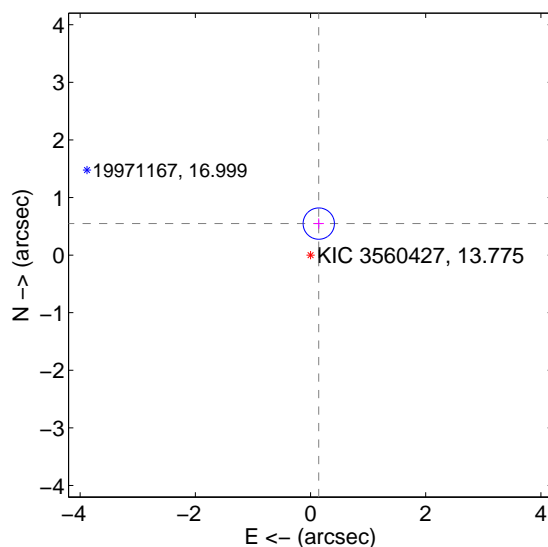
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.587 ± 0.090	6.49	-0.285 ± 0.090	0.512 ± 0.091
PRF-fit source offset from KIC position	0.565 ± 0.091	6.24	-0.143 ± 0.090	0.547 ± 0.091
photometric centroid source offset	1.10 ± 0.80	1.37	1.09 ± 0.81	-0.14 ± 0.45

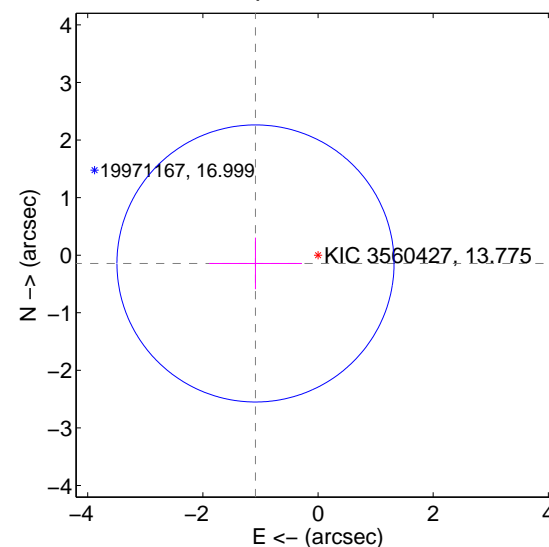
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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

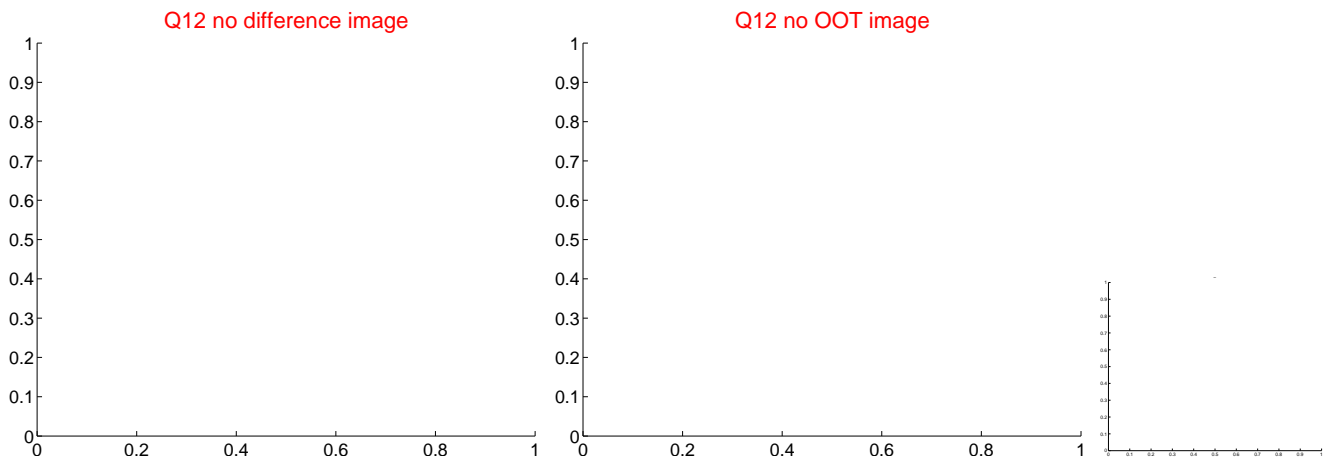
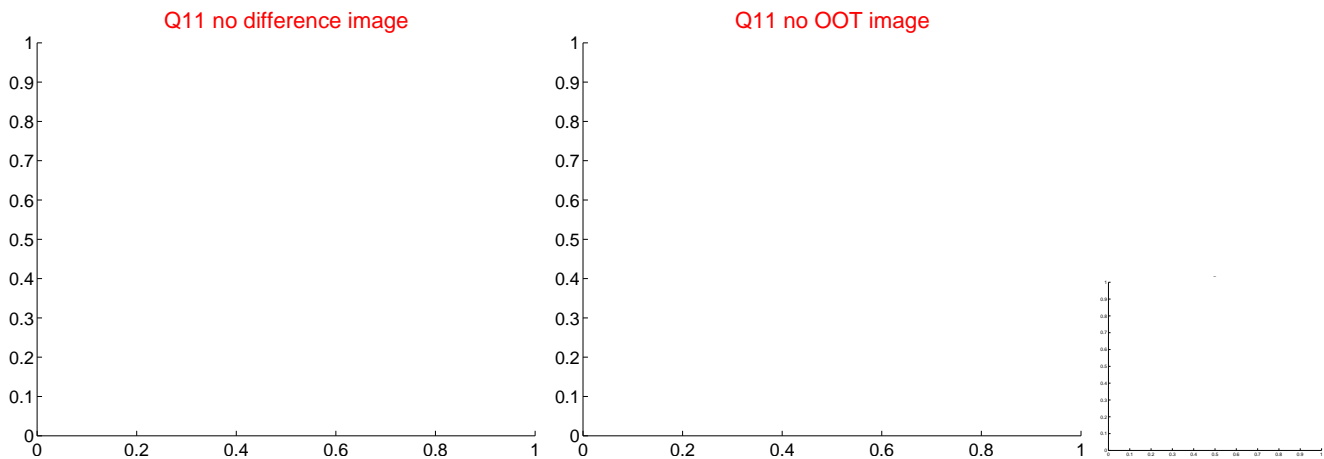
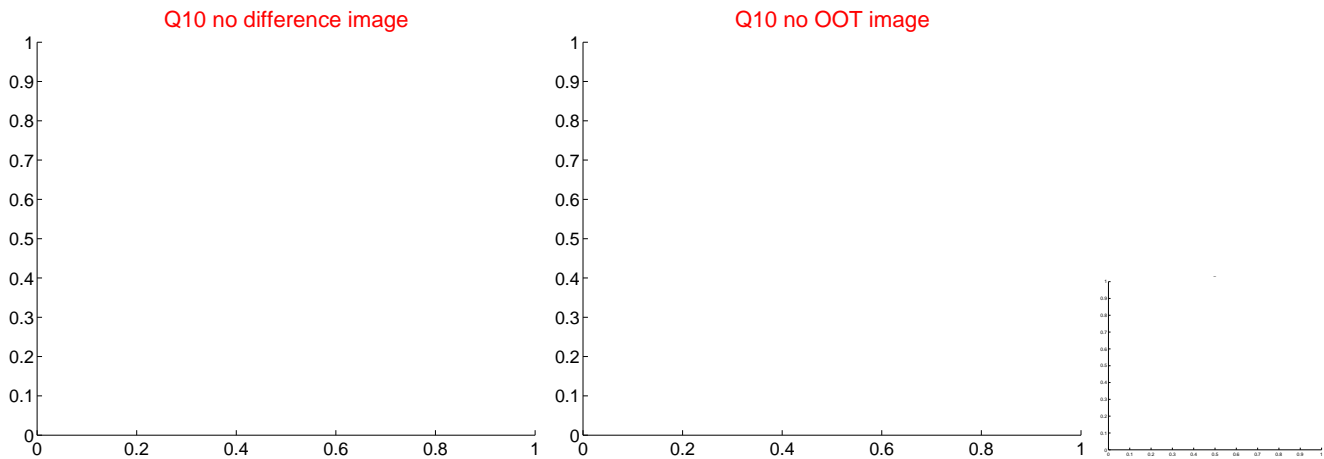
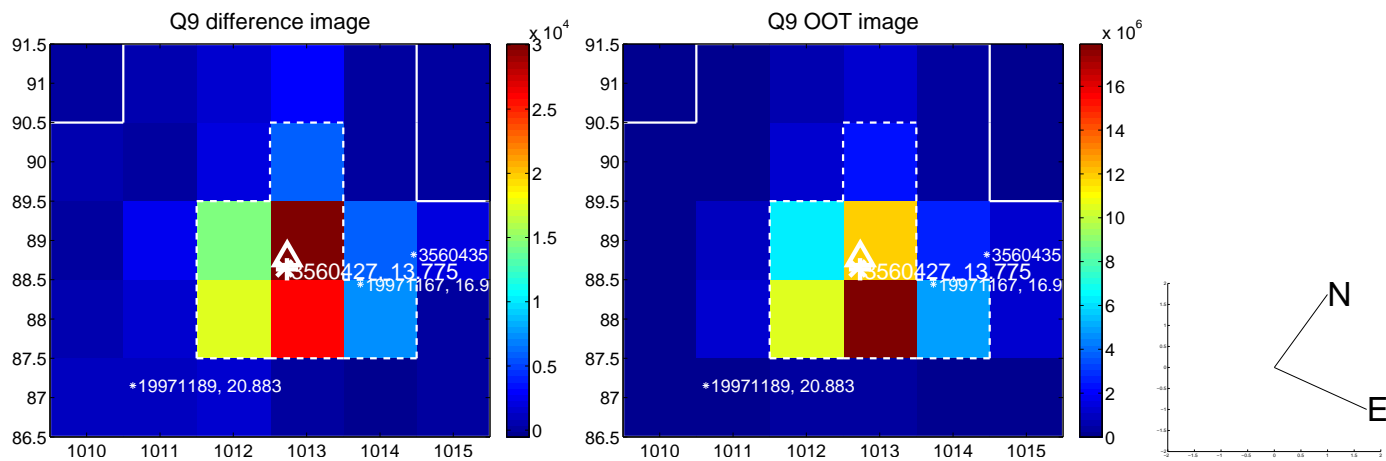
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



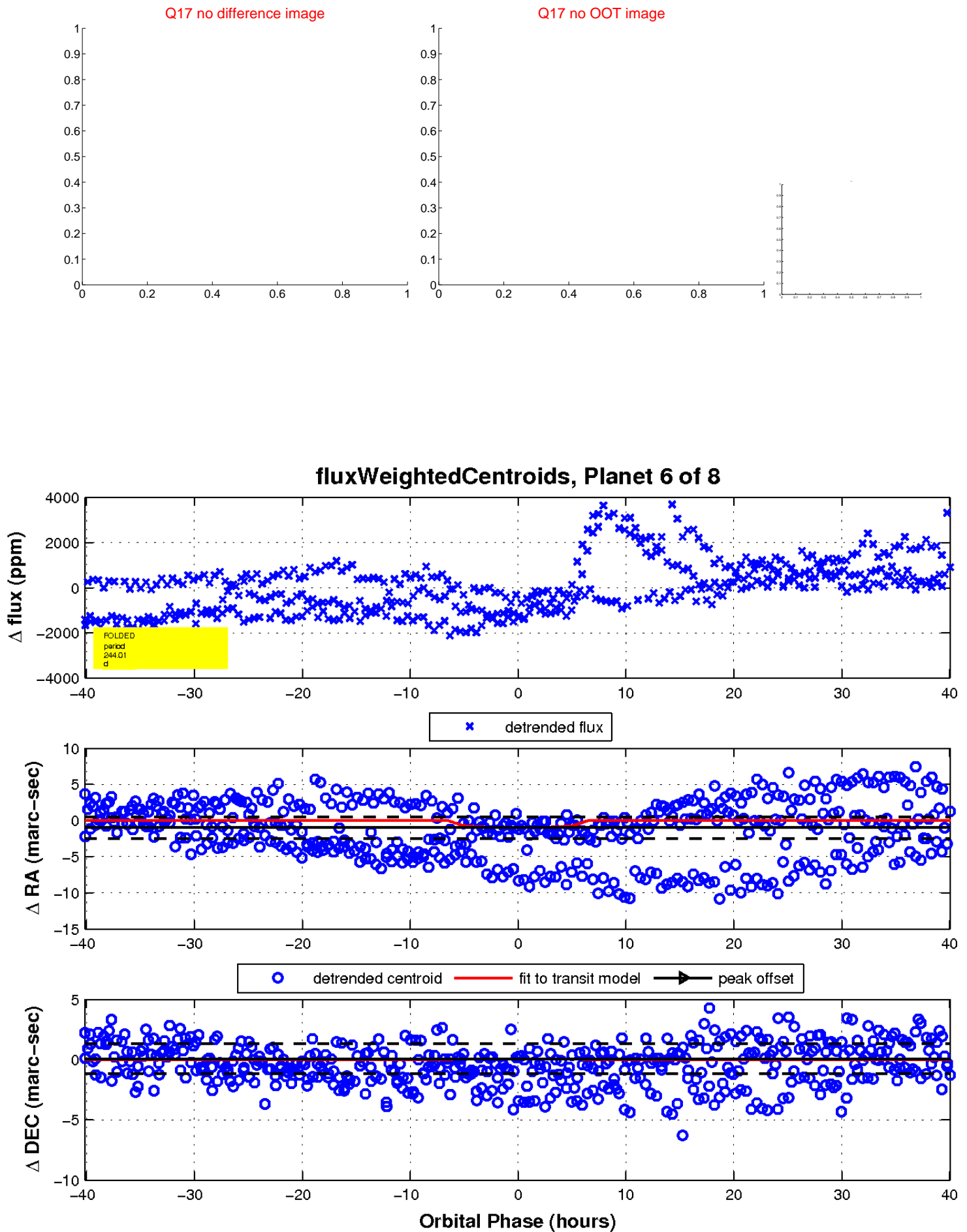
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

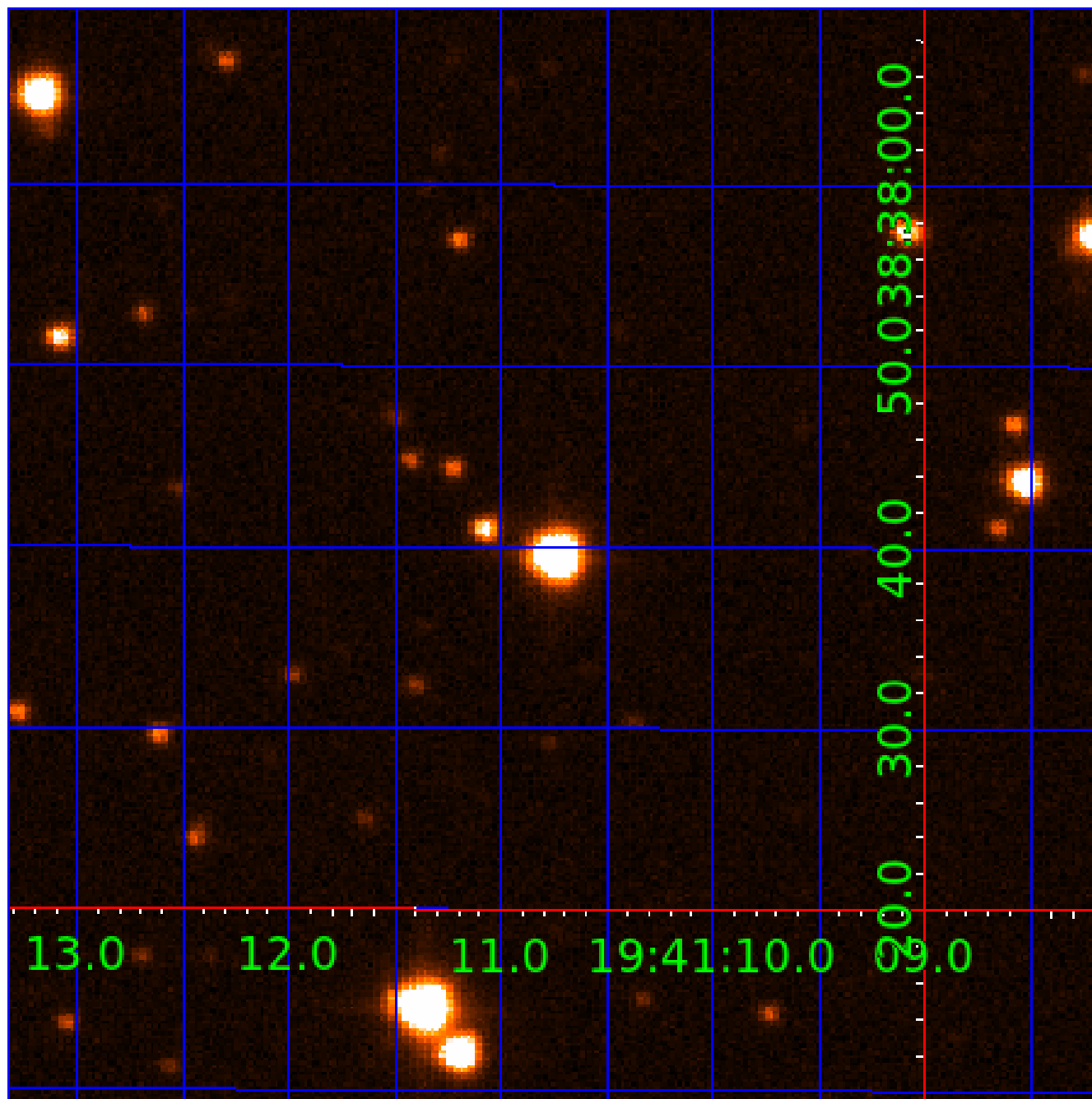


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

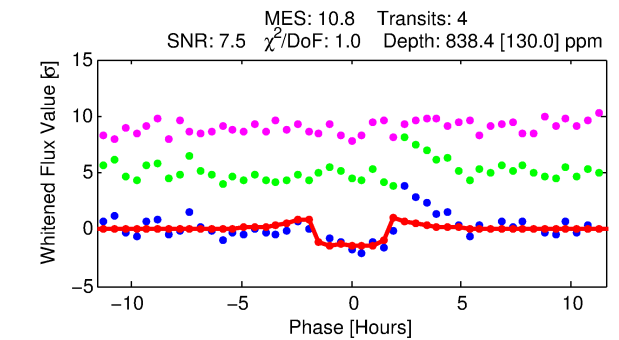
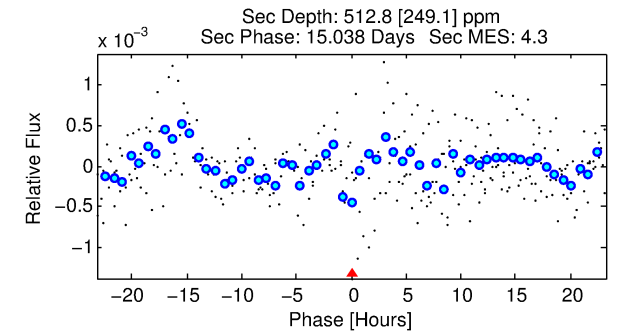
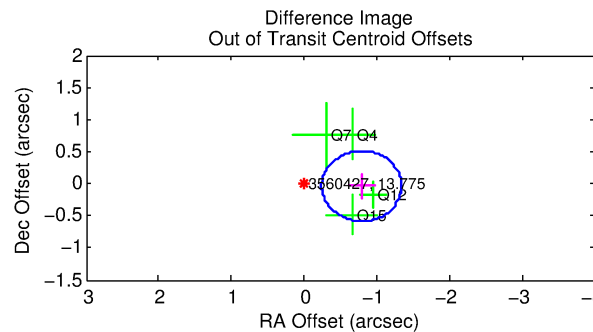
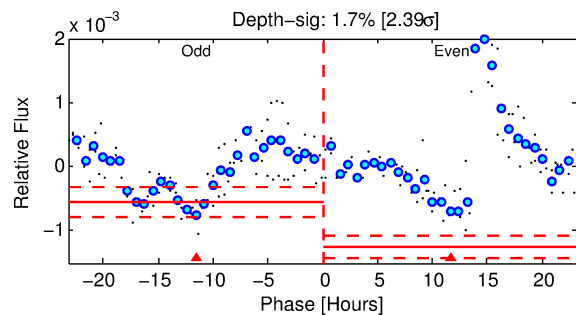
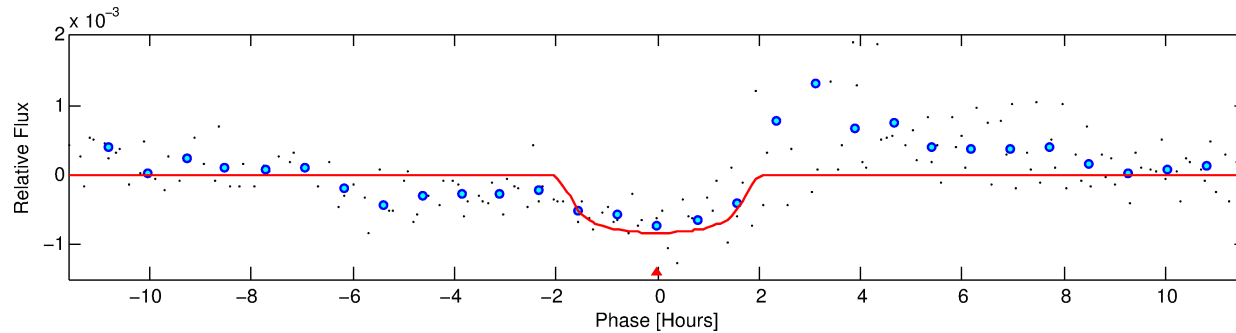
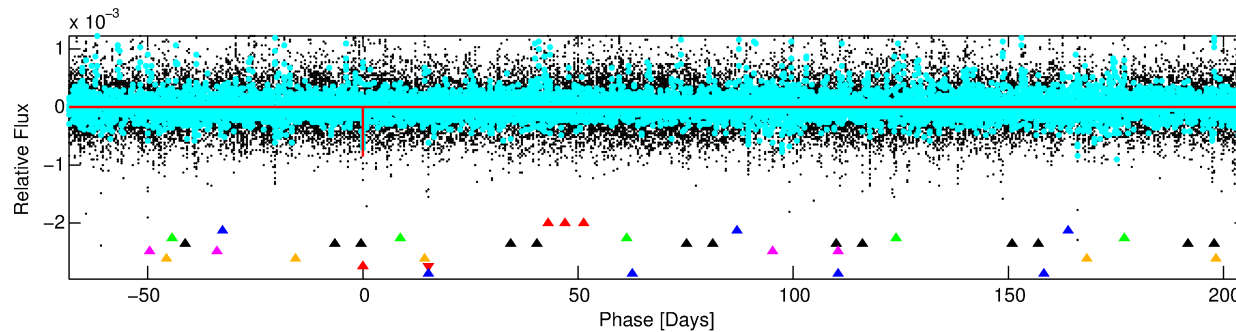
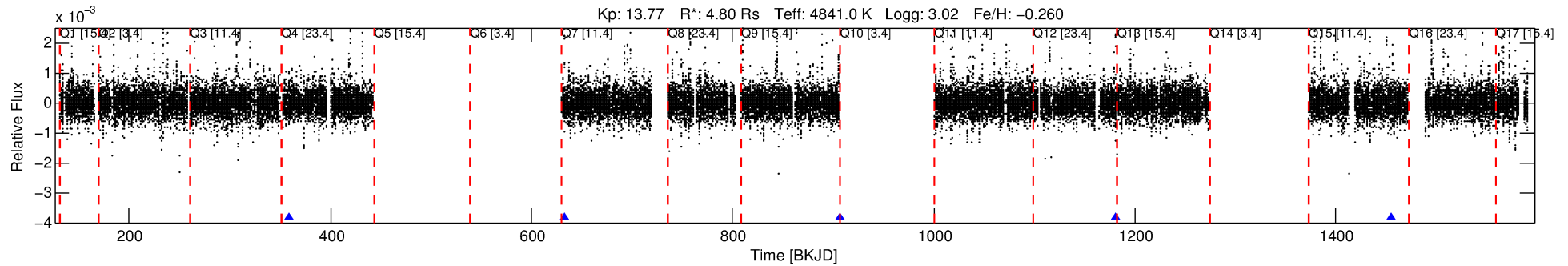
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-07

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 7 of 8 Period: 274.004 d



DV Fit Results:

Period = 274.00371 [0.00242] d
Epoch = 358.6652 [0.0062] BKJD
Rp/R* = 0.0305 [0.0109]
a/R* = 325.65 [388.34]
b = 0.84 [0.44]
Seff = 18.07 [14.10]
Teq = 526 [103] K
Rp = 15.97 [11.71] Re
a = 0.7917 [0.4229] AU
Ag = 693.66 [802.90] [0.86σ]
Teff = 4172 [909] K [3.98σ]

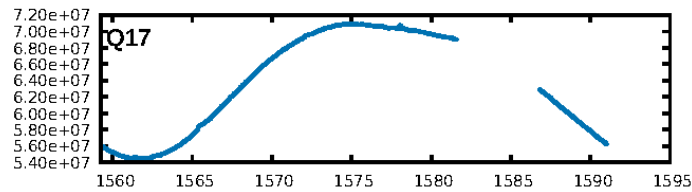
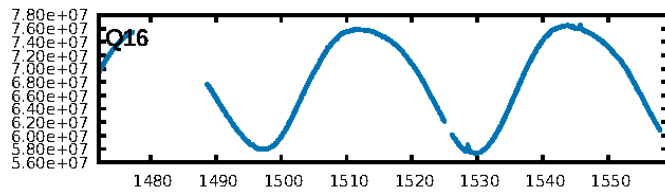
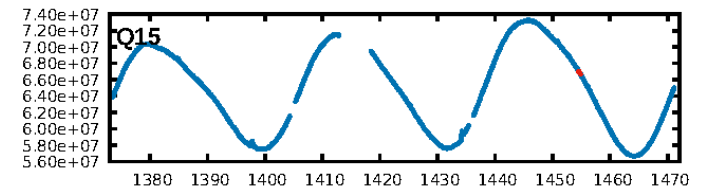
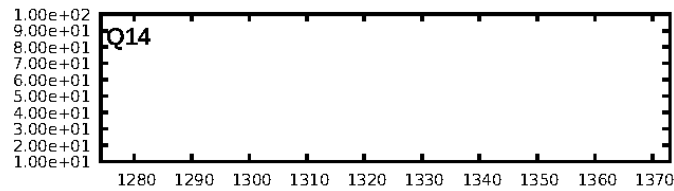
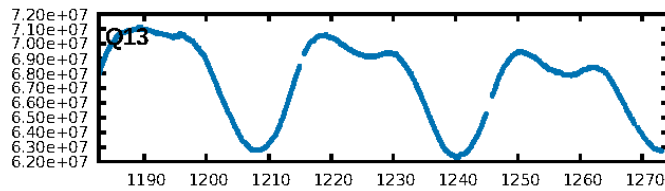
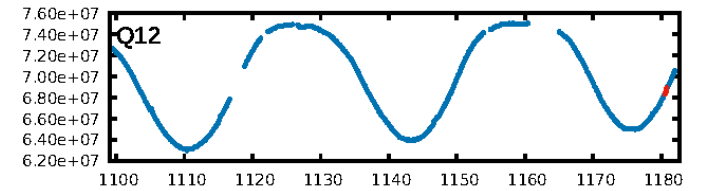
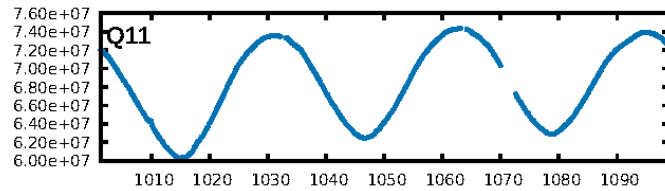
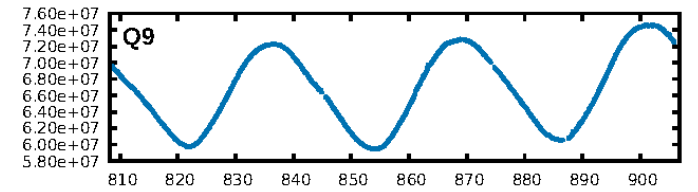
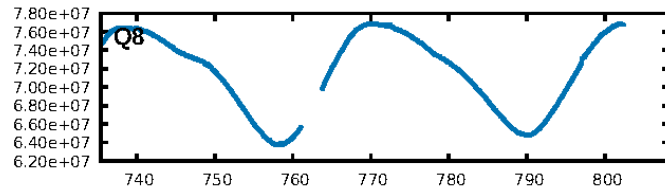
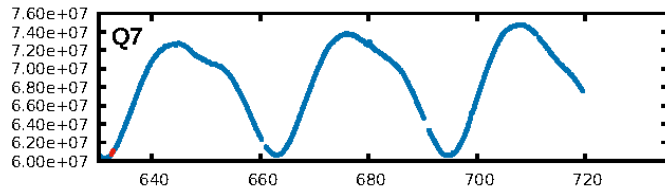
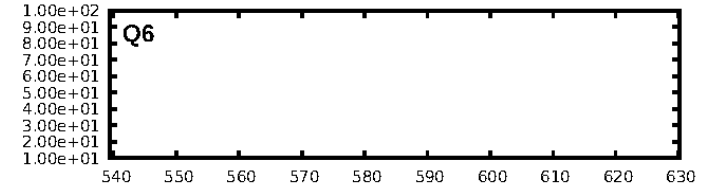
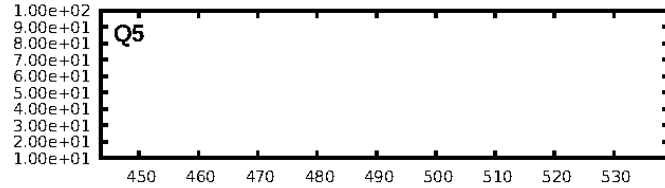
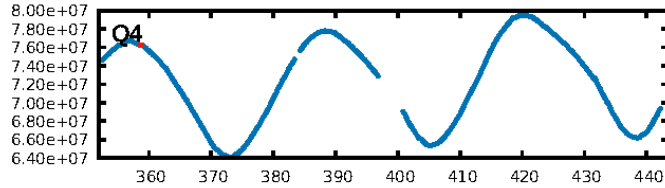
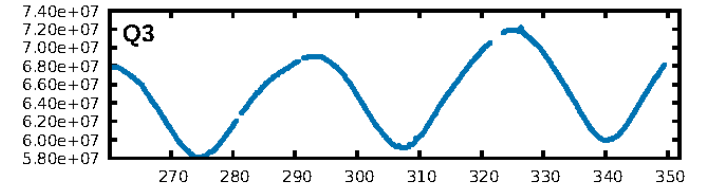
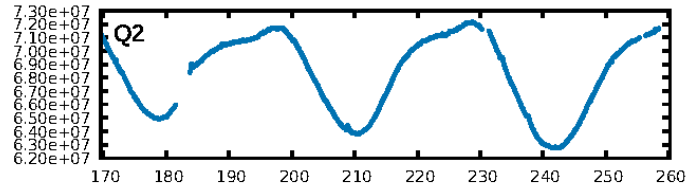
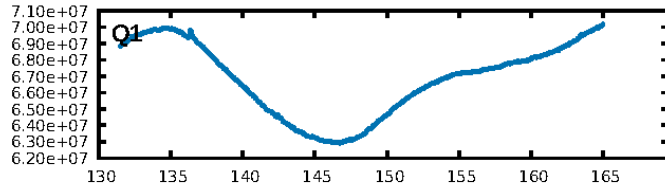
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.56σ]
LongPeriod-sig: 100.0% [168.77σ]
ModelChiSquare2-sig: 32.8%
ModelChiSquareGof-sig: 95.7%
Bootstrap-pfa: 1.67e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -42.57
Centroid-sig: 51.8%
Centroid-so: 1.040 arcsec [0.87σ]
OotOffset-rm: 0.789 arcsec [4.32σ]
KicOffset-rm: 0.620 arcsec [3.38σ]
OotOffset-st: 0/2/2/0 [4]
KicOffset-st: 0/2/2/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.75 [3/4]

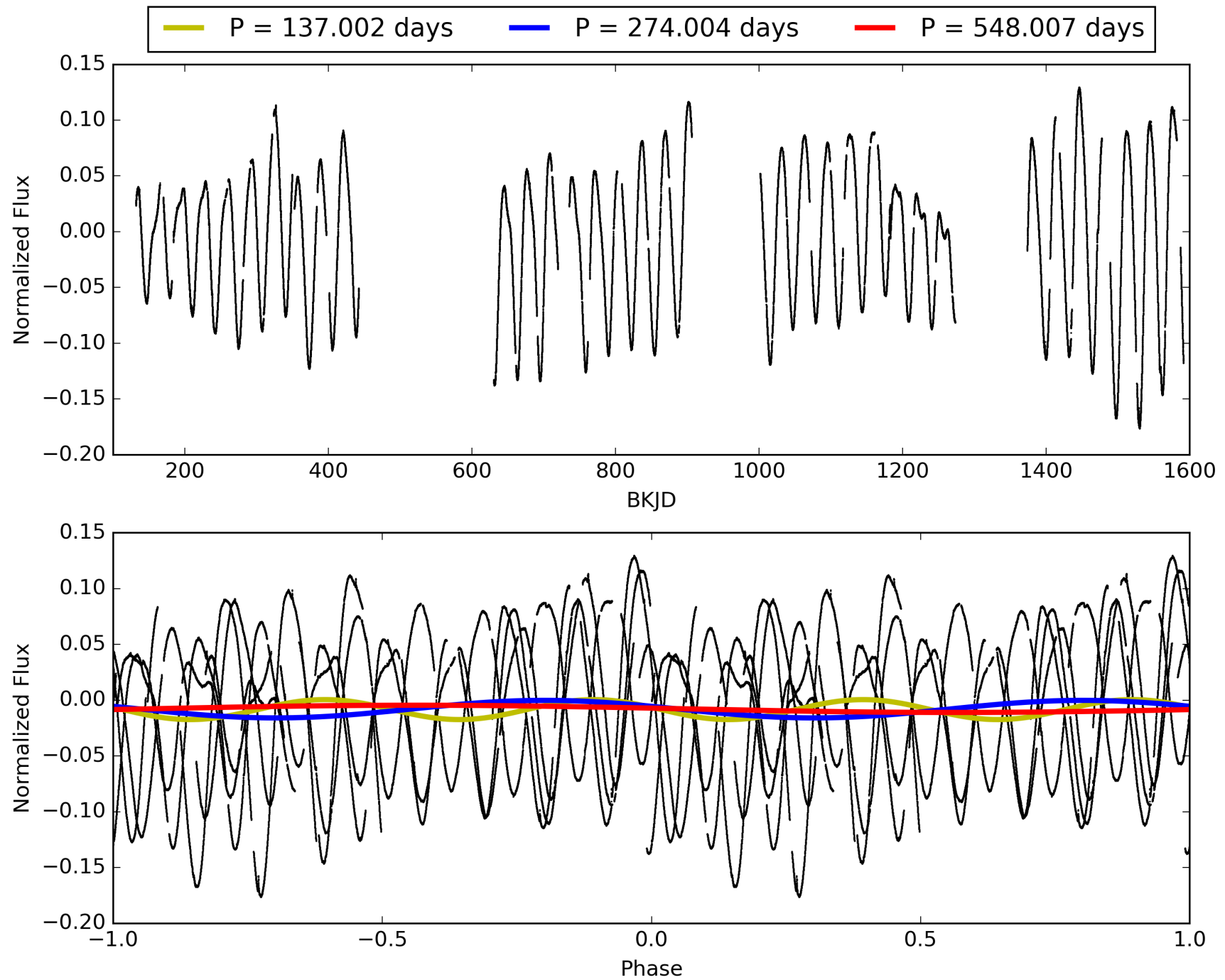
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:31:01 Z

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

TCE 003560427-07, PDC Light Curves

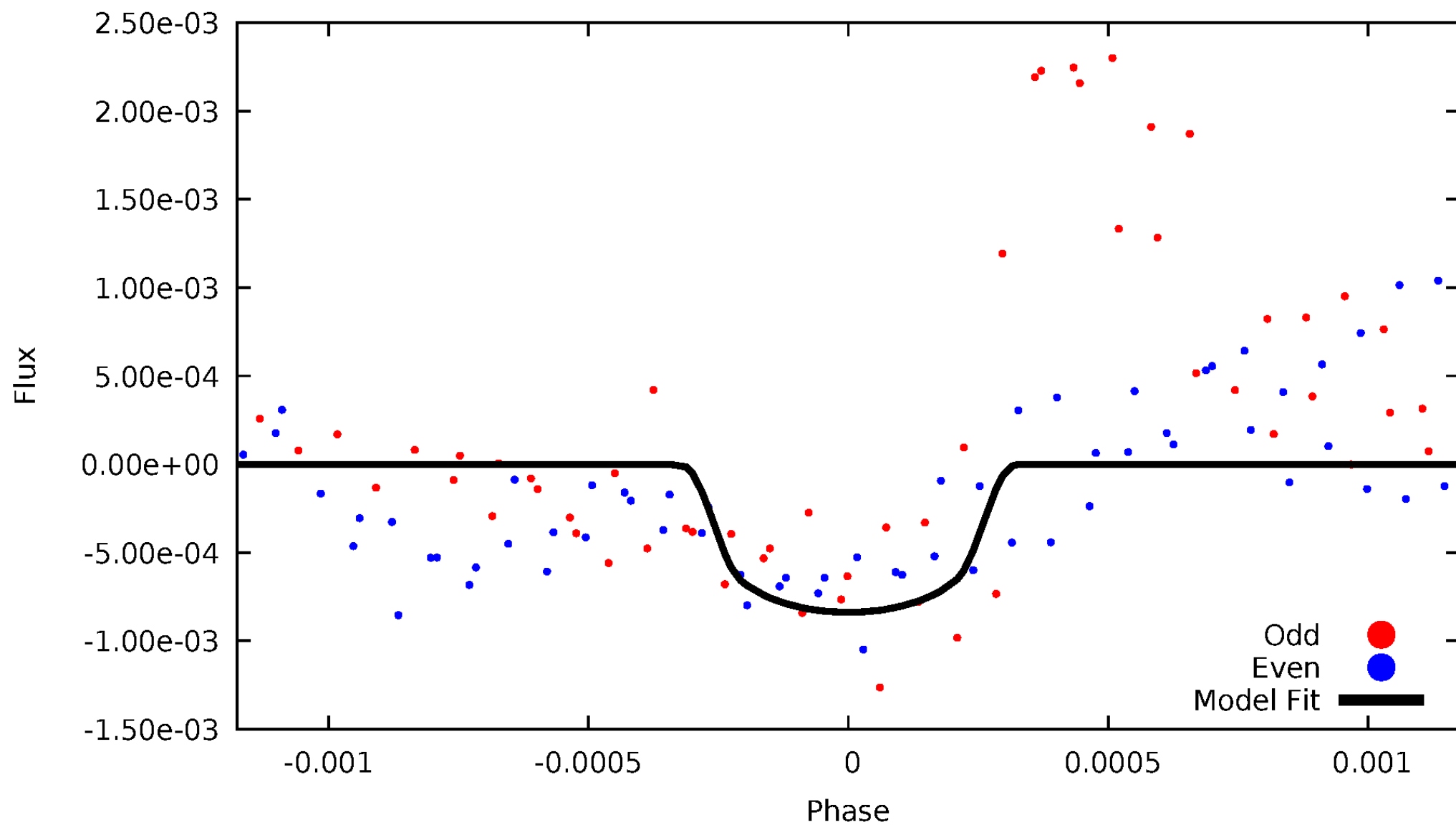


TCE 003560427-07



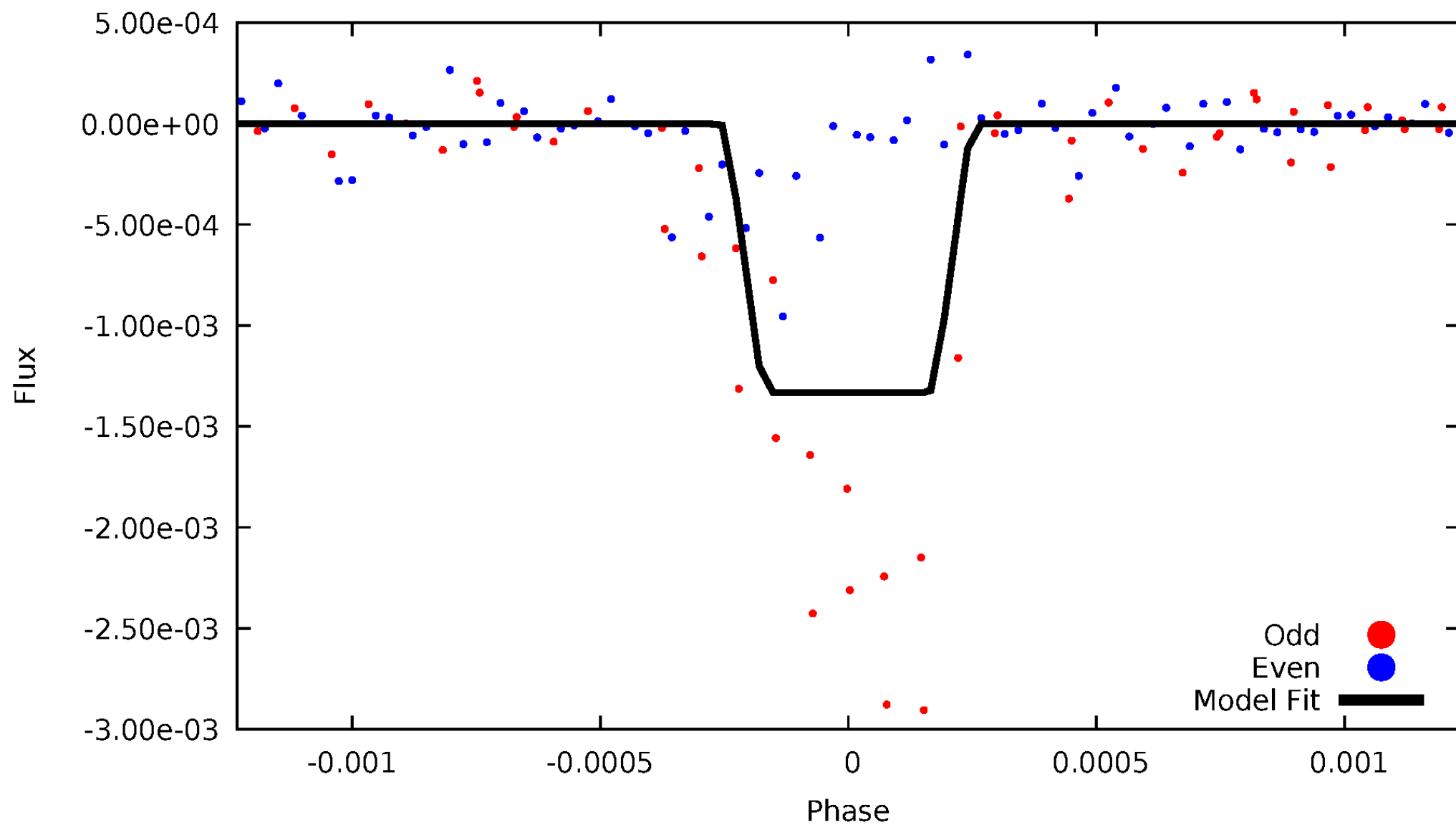
DV Odd/Even

TCE 003560427-07



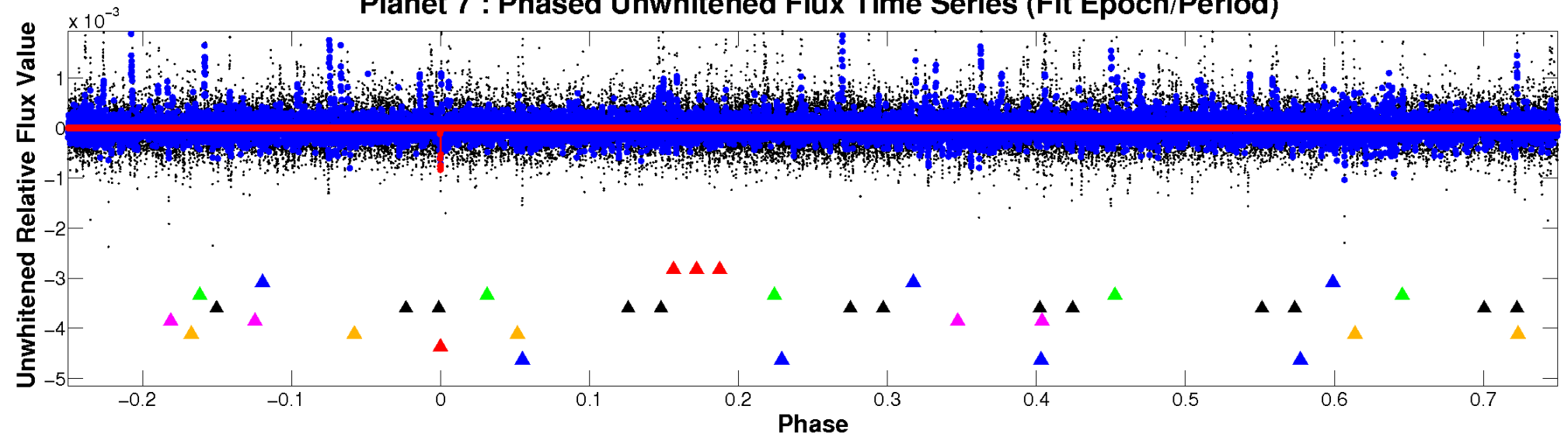
ALT Odd/Even

TCE 003560427-07

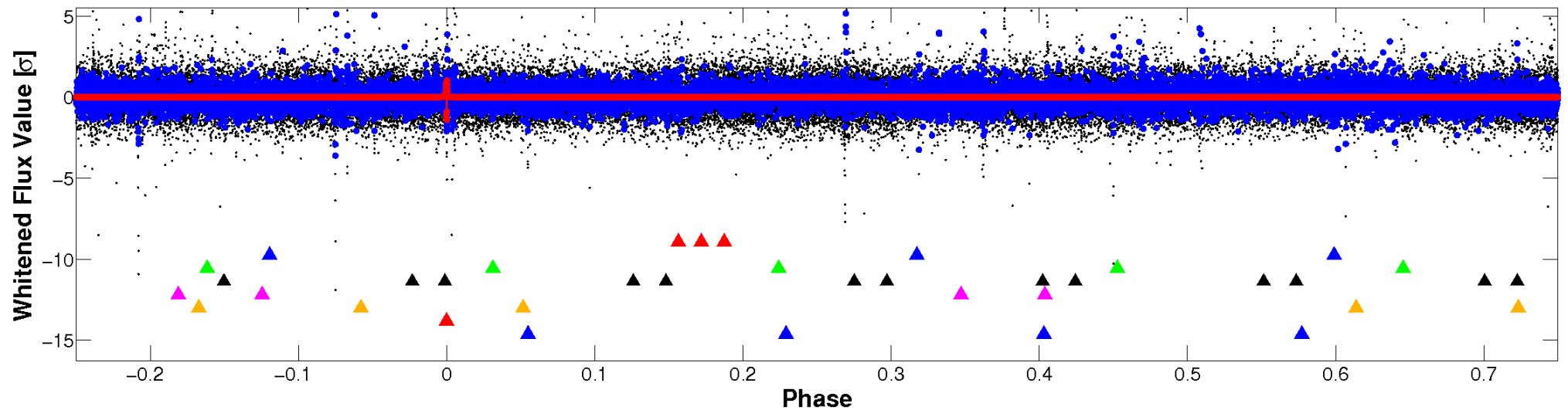


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

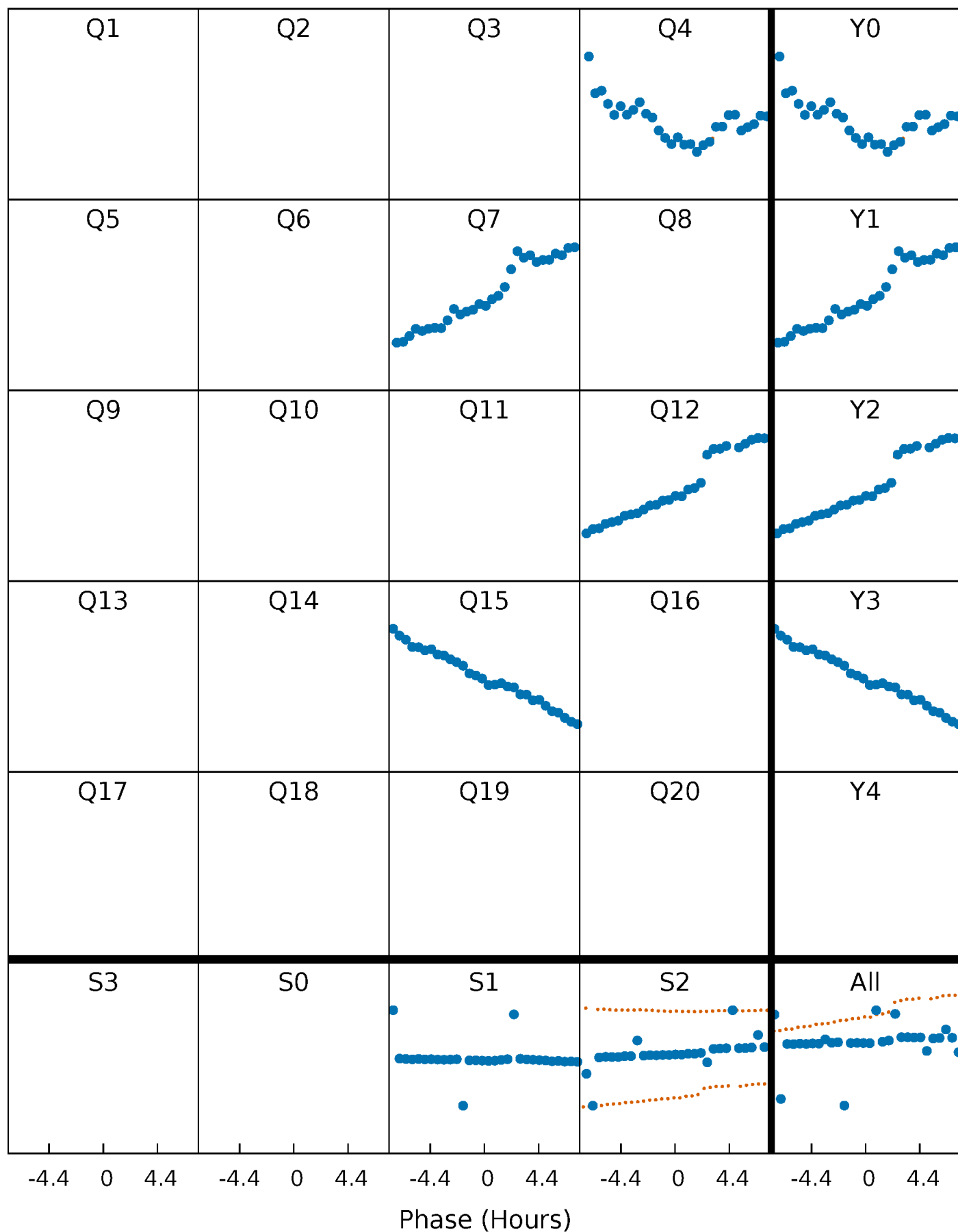


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



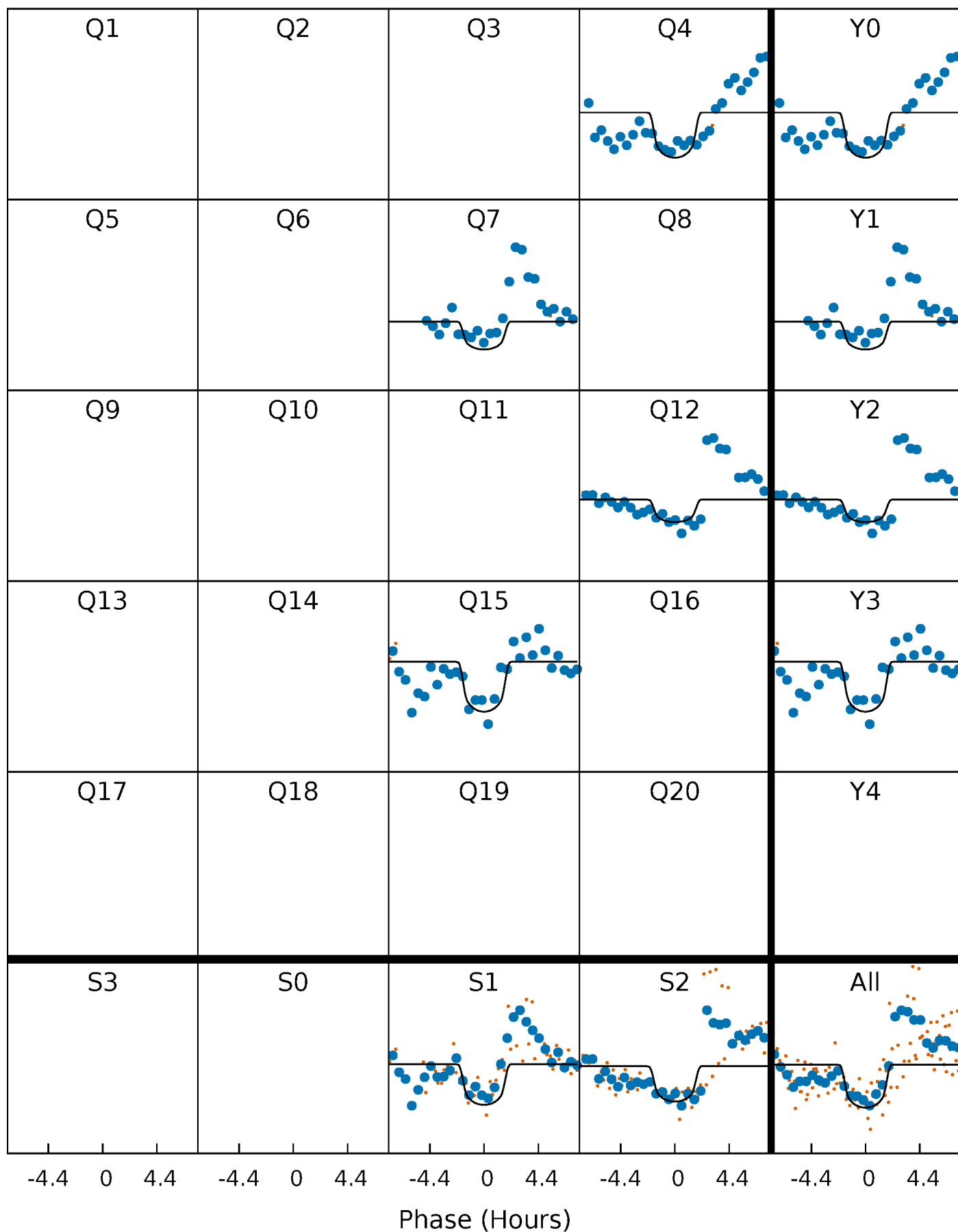
PDC Quarter-Phased Transit Curves

TCE 003560427-07 $P=274.003711$ Days $T_0=358.665214$ (BKJD)



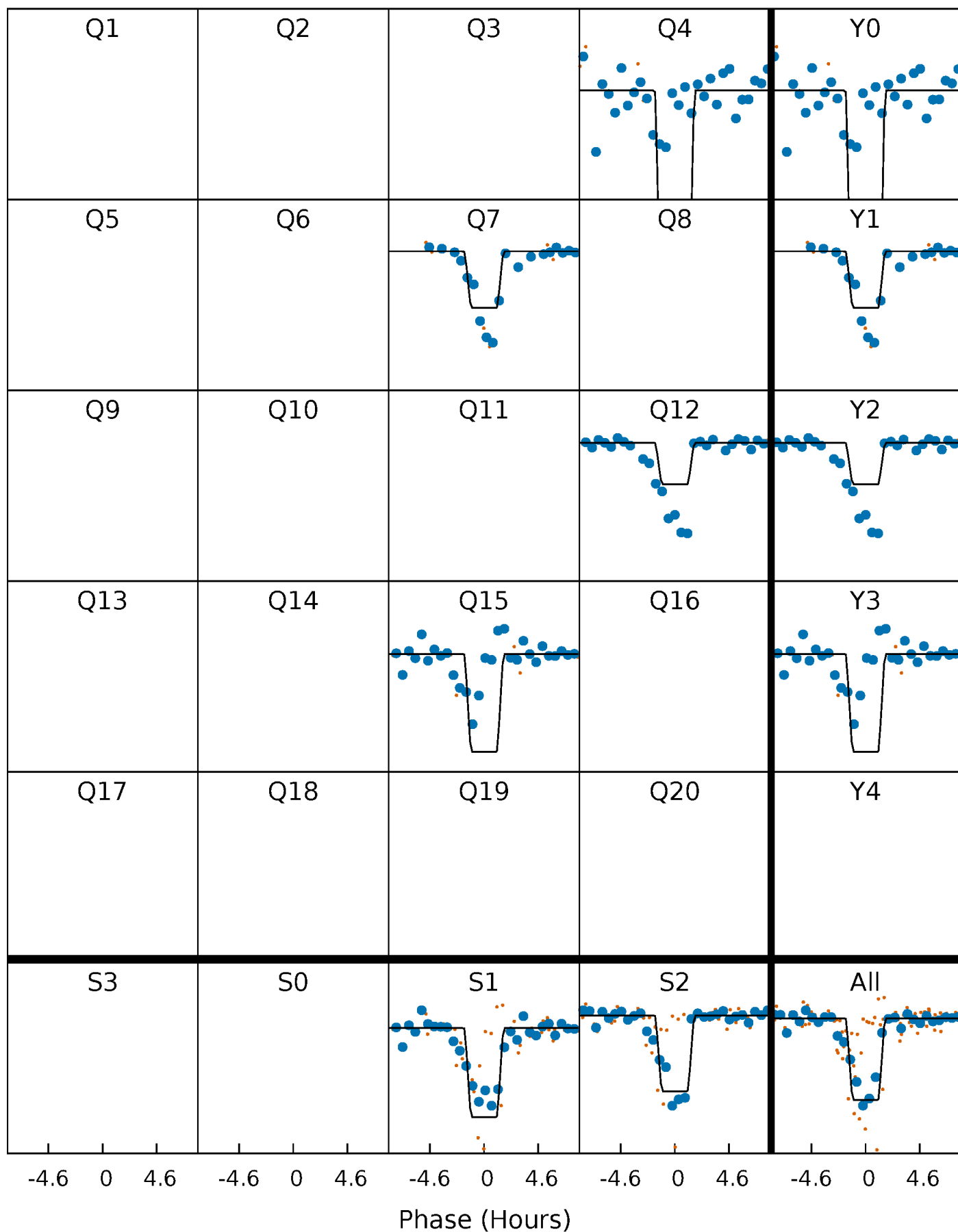
DV Quarter-Phased Transit Curves

TCE 003560427-07 $P=274.003711$ Days $T_0=358.665214$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

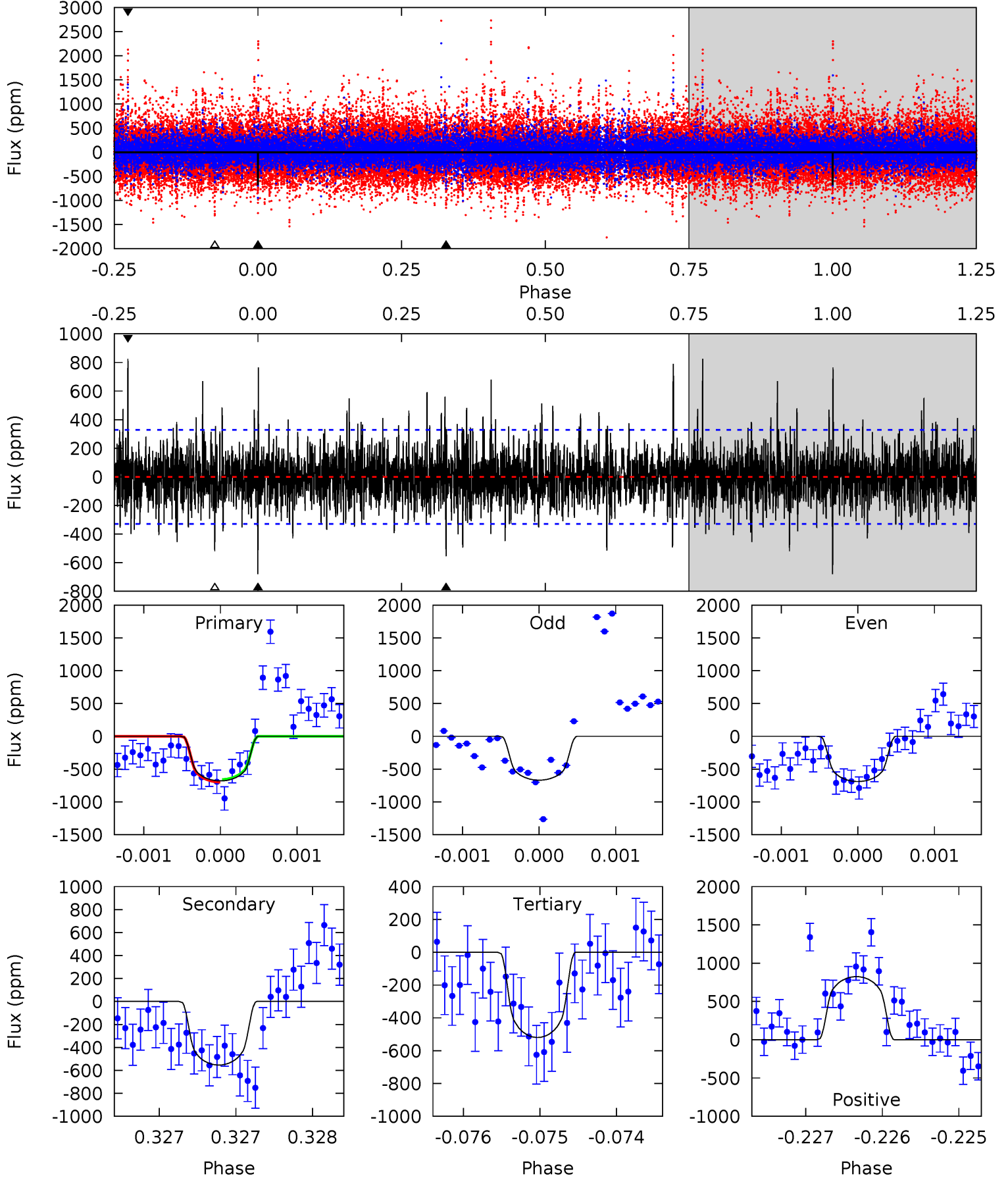
TCE 003560427-07 $P=274.011499$ Days $T_0=358.678134$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-07, P = 274.003711 Days, E = 84.661503 Days

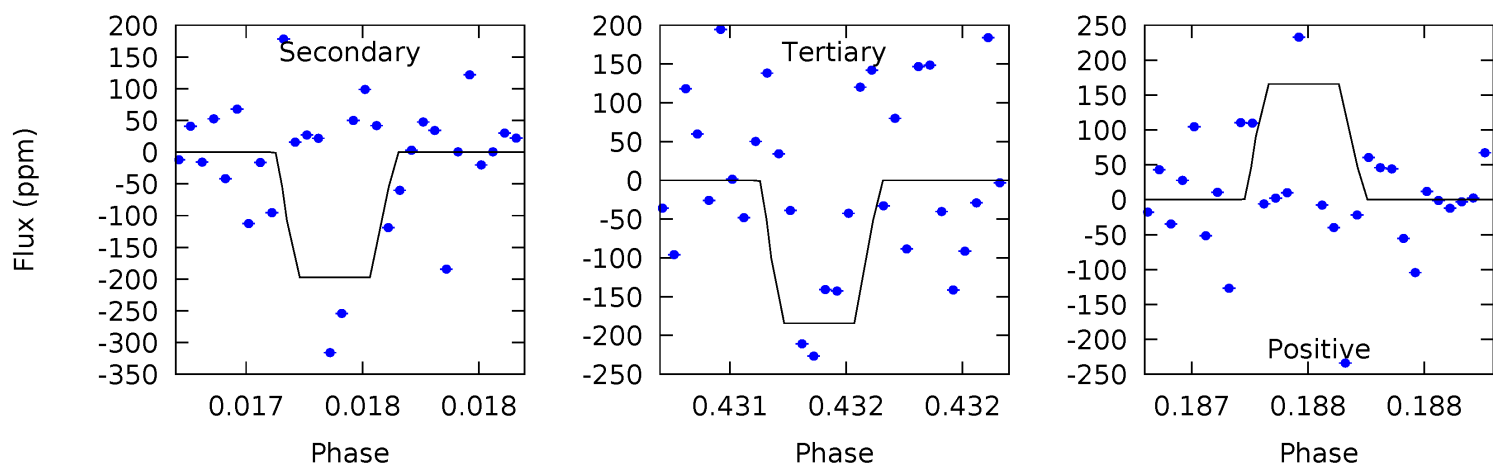
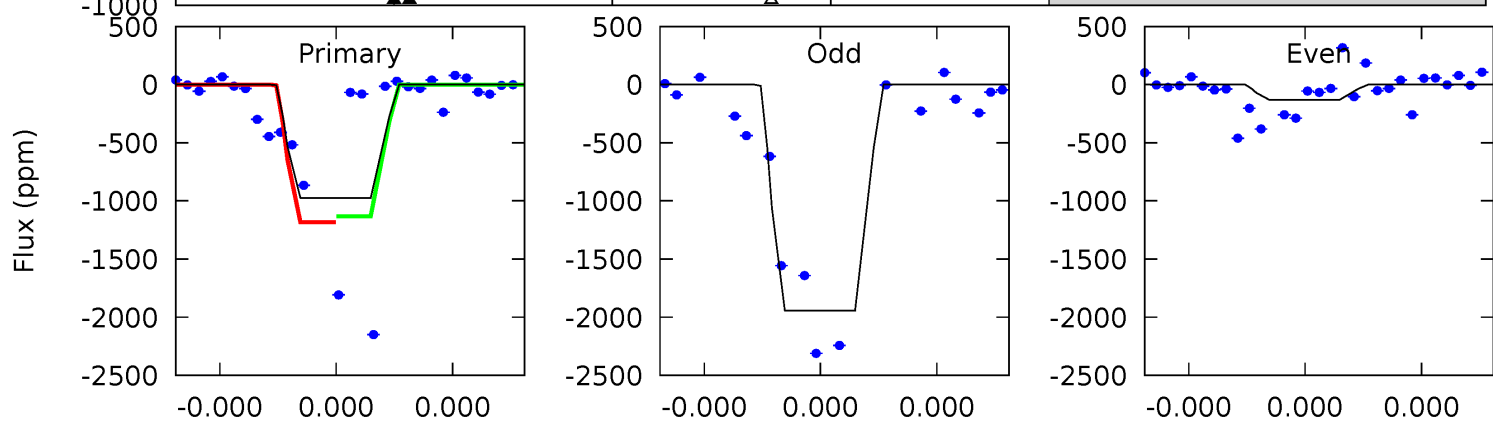
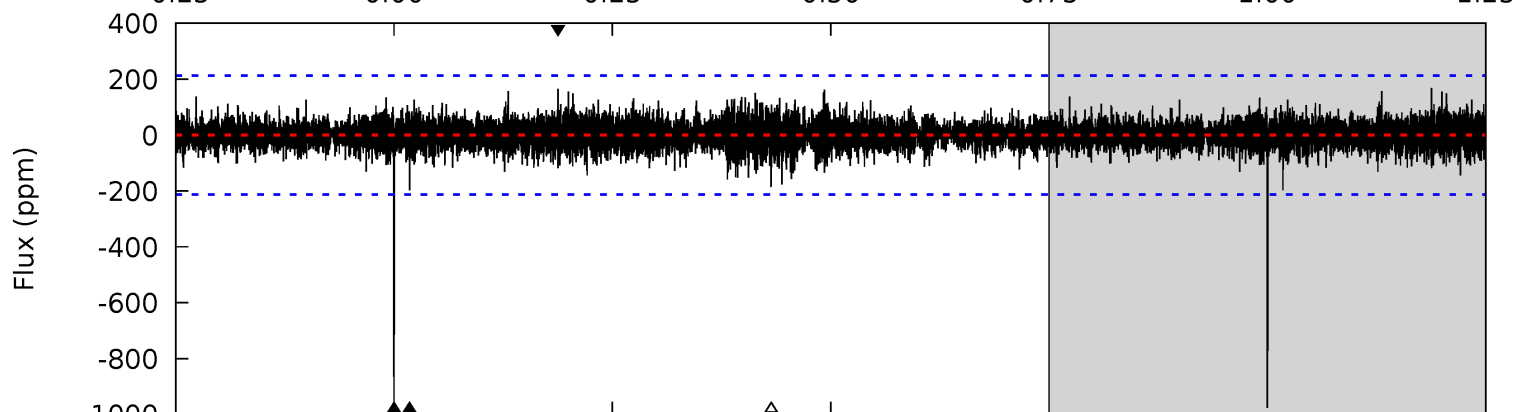
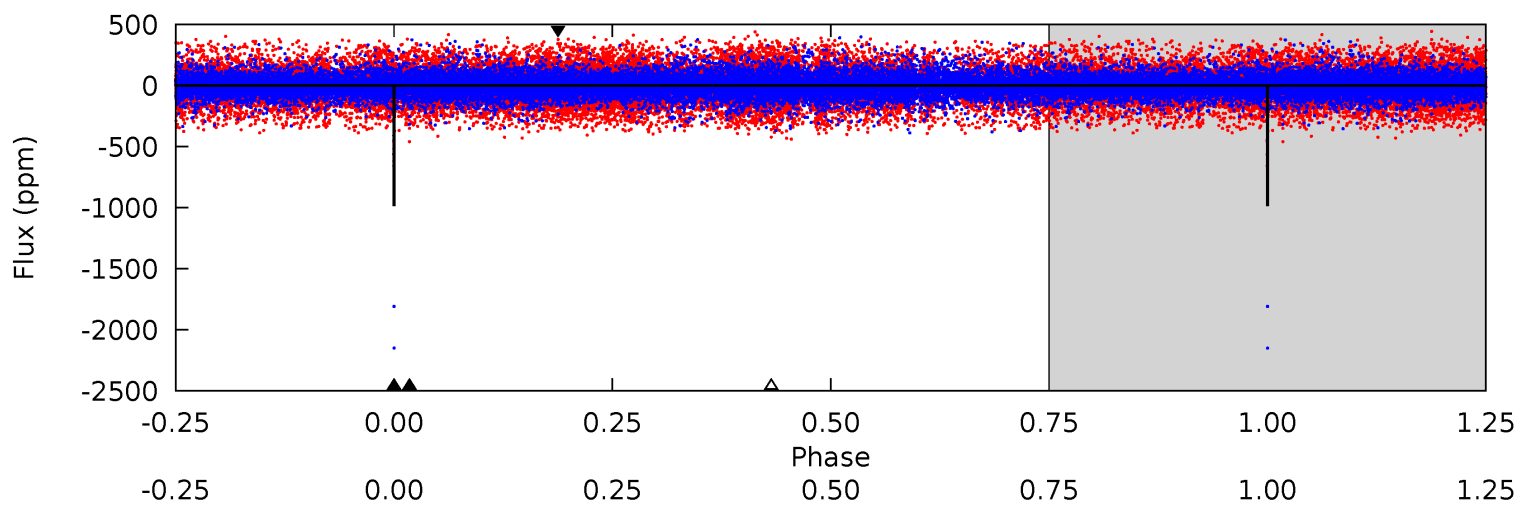
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	9.30	8.73	13.8	5.53	3.41	2.37	2.69	-2.43	0.57	-4.55	0.15	0.99	0.55	0.32



Alt Model-Shift Uniqueness Test

003560427-07, P = 274.011499 Days, E = 84.666635 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.6	5.18	4.83	4.34	5.58	3.48	0.89	20.8	21.2	0.35	0.83	28.2	1.11	0.15	0.75



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-554 ± 60	$16.10^{+8.71}_{-6.50}$	735^{+107}_{-88}	4364^{+836}_{-469}	755^{+1362}_{-426}
Alt.	-198 ± 38	$19.03^{+8.20}_{-7.22}$	728^{+116}_{-86}	3470^{+454}_{-321}	197^{+308}_{-106}

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 $A_{obs} \gg 1.0$

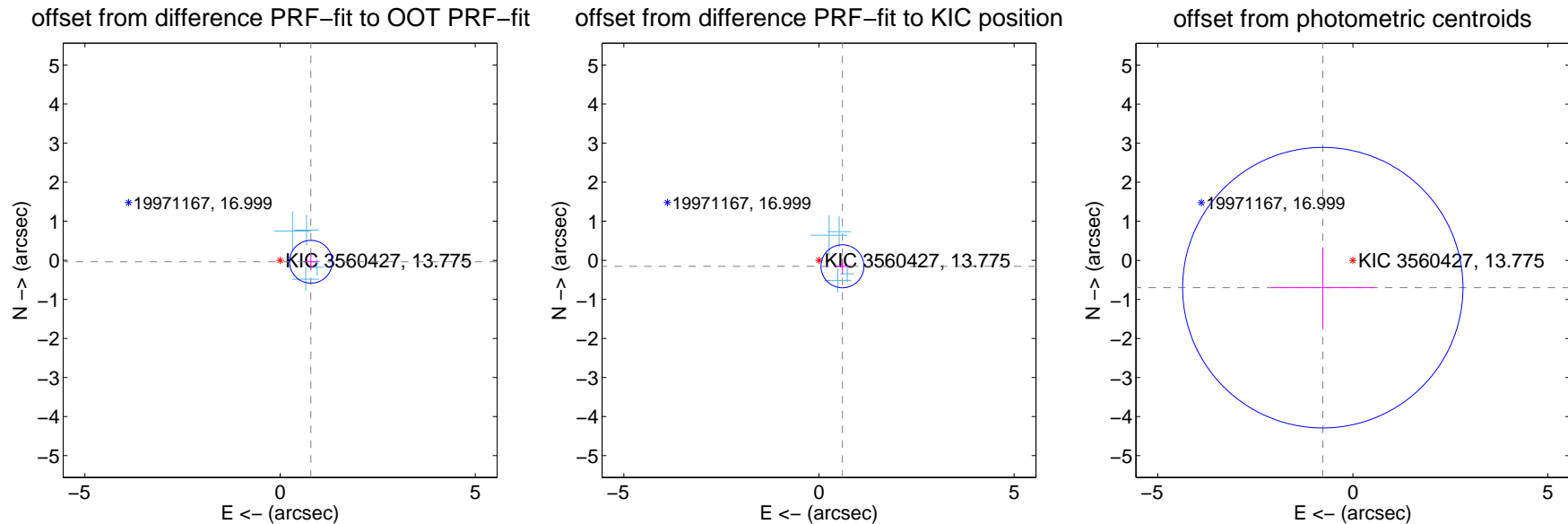
DV Centroid Data

Supplemental centroid analysis for 003560427-07. Kepler magnitude: 13.78. Transit SNR 7.52

There are 4 quarters with good PRF difference image offsets

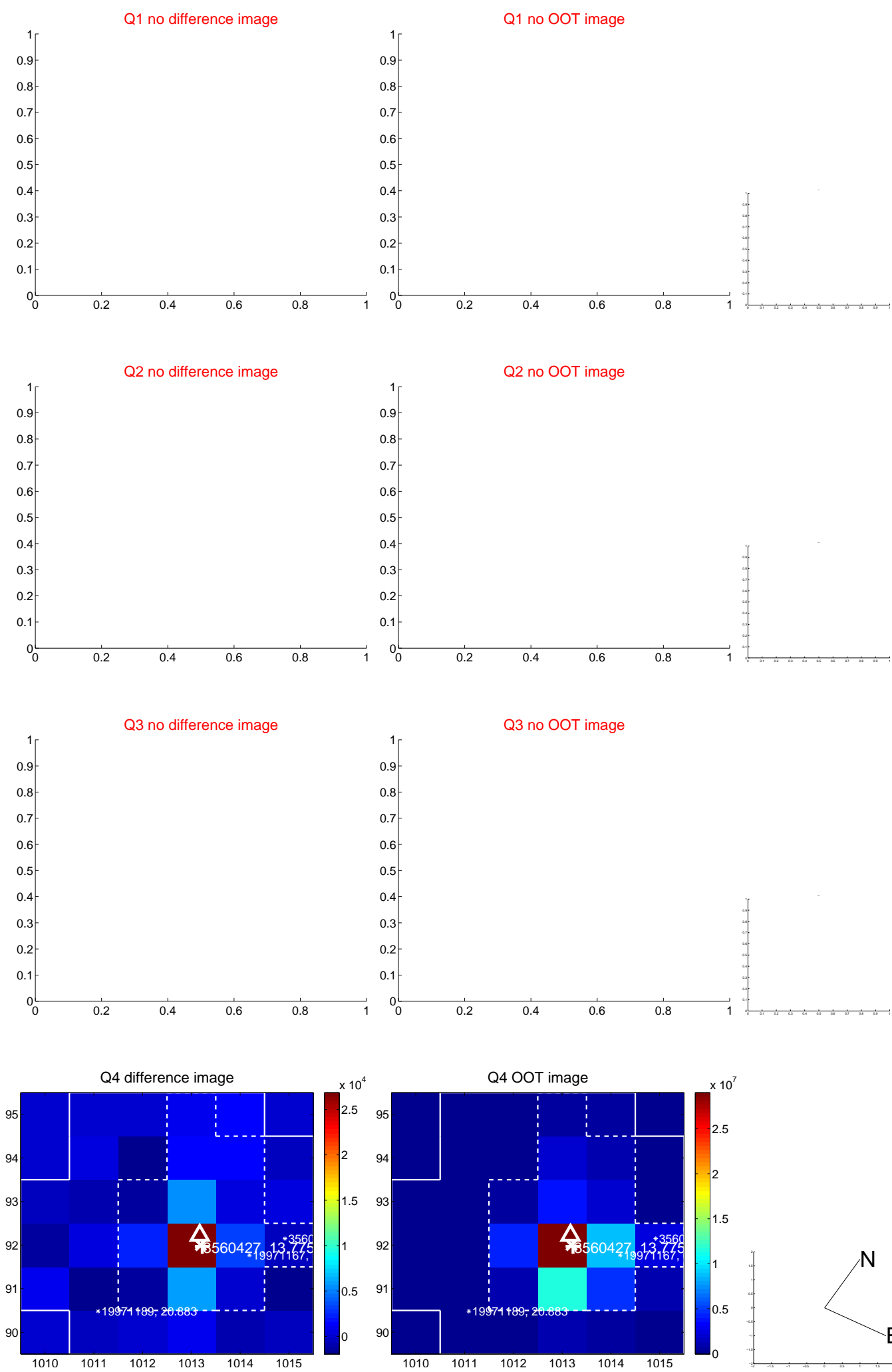
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.789 ± 0.183	4.32	-0.789 ± 0.183	-0.038 ± 0.197
PRF-fit source offset from KIC position	0.620 ± 0.183	3.38	-0.601 ± 0.183	-0.153 ± 0.197
photometric centroid source offset	1.04 ± 1.20	0.87	0.77 ± 1.32	-0.70 ± 1.03

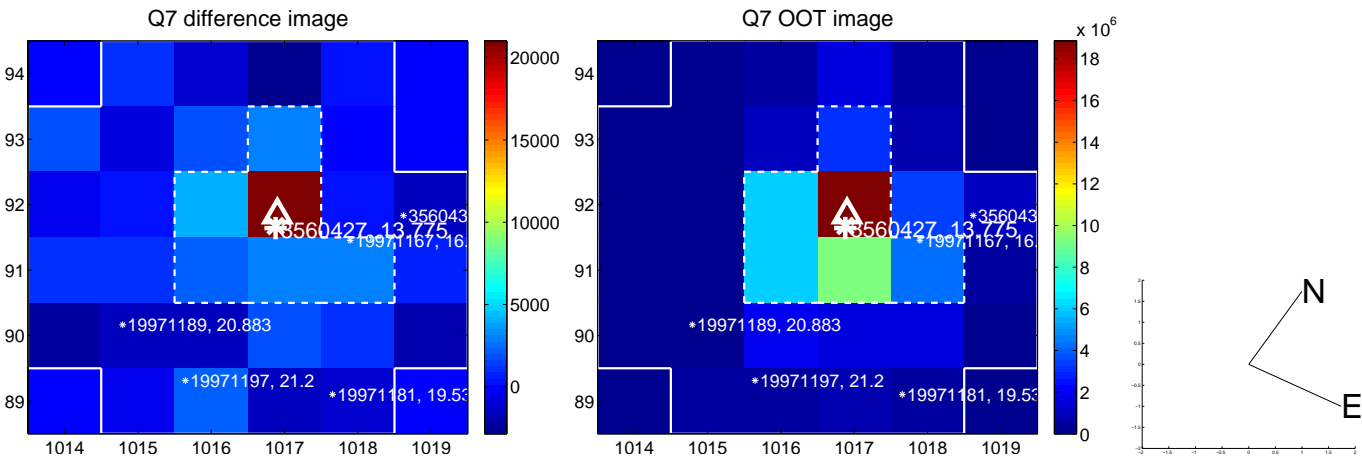


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

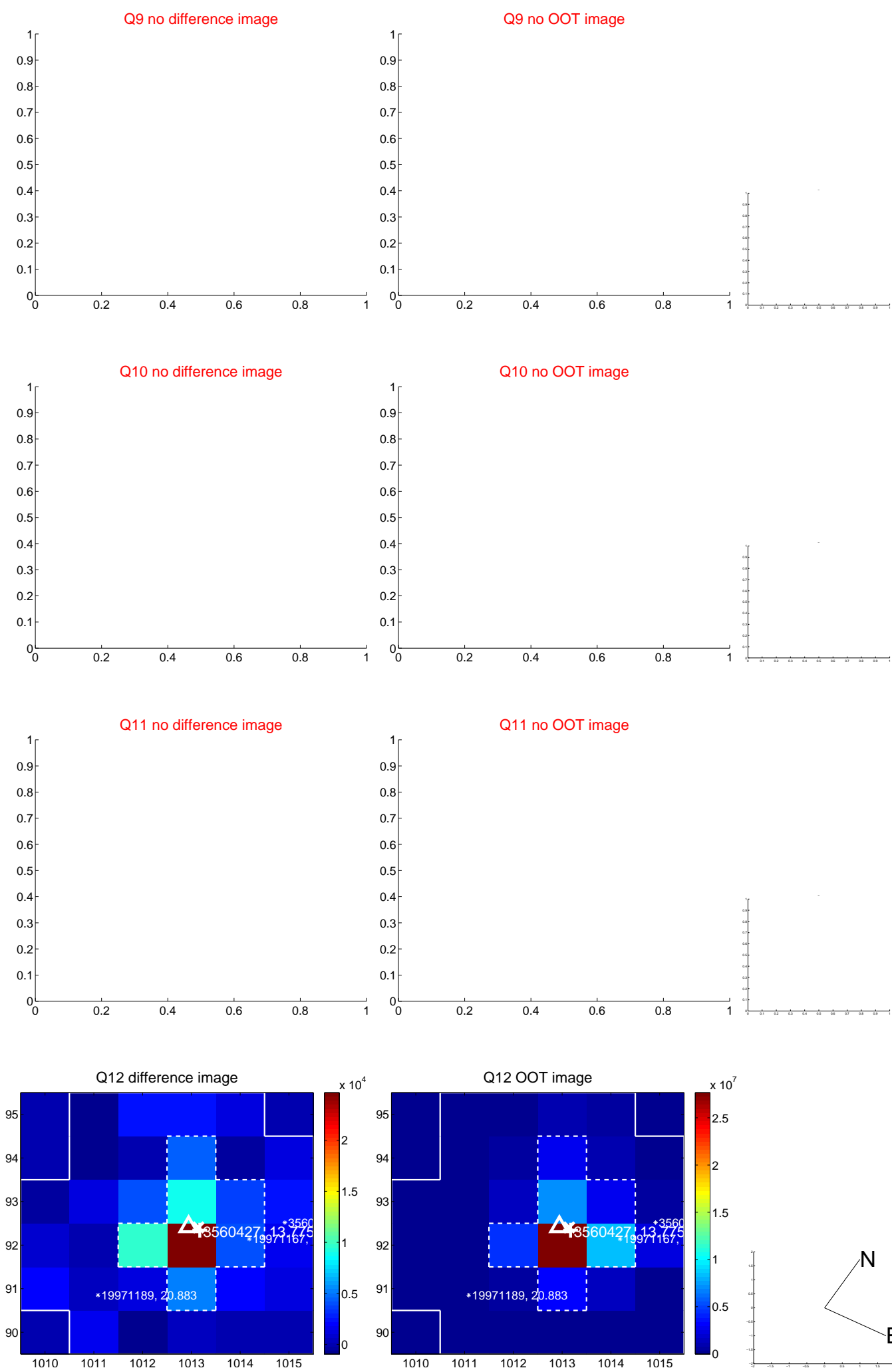
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



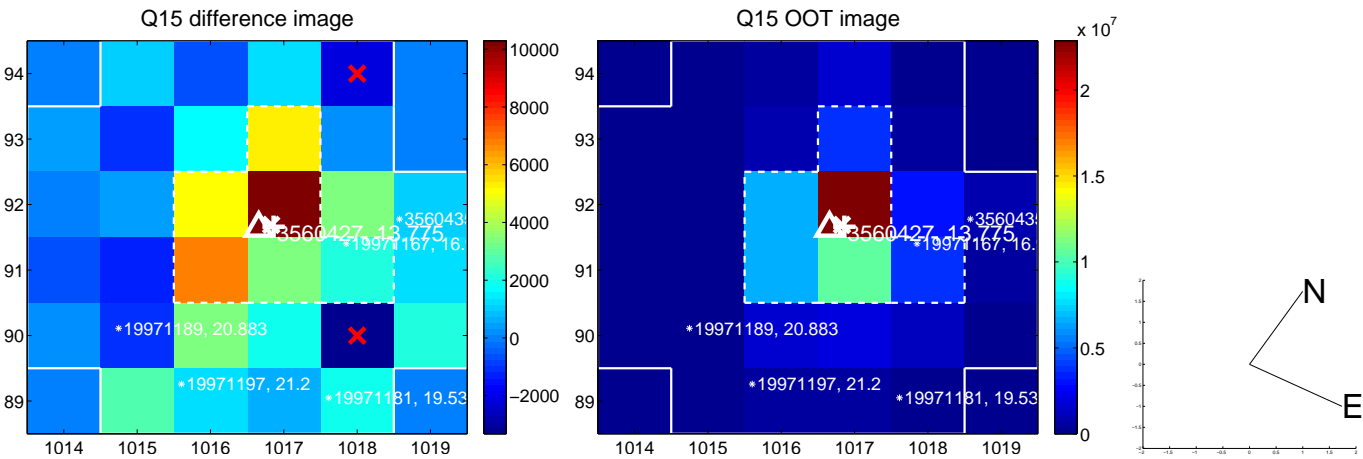
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



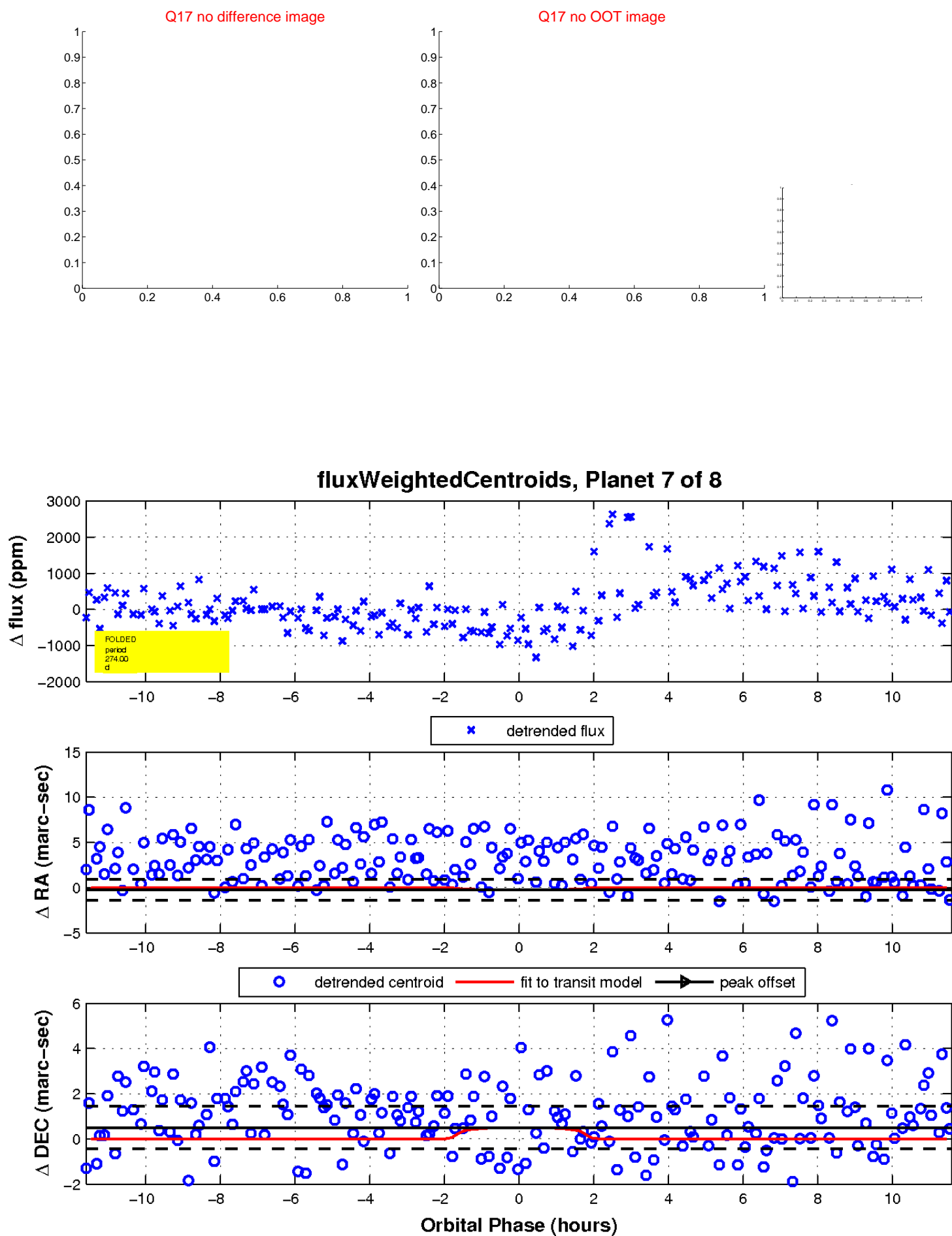
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

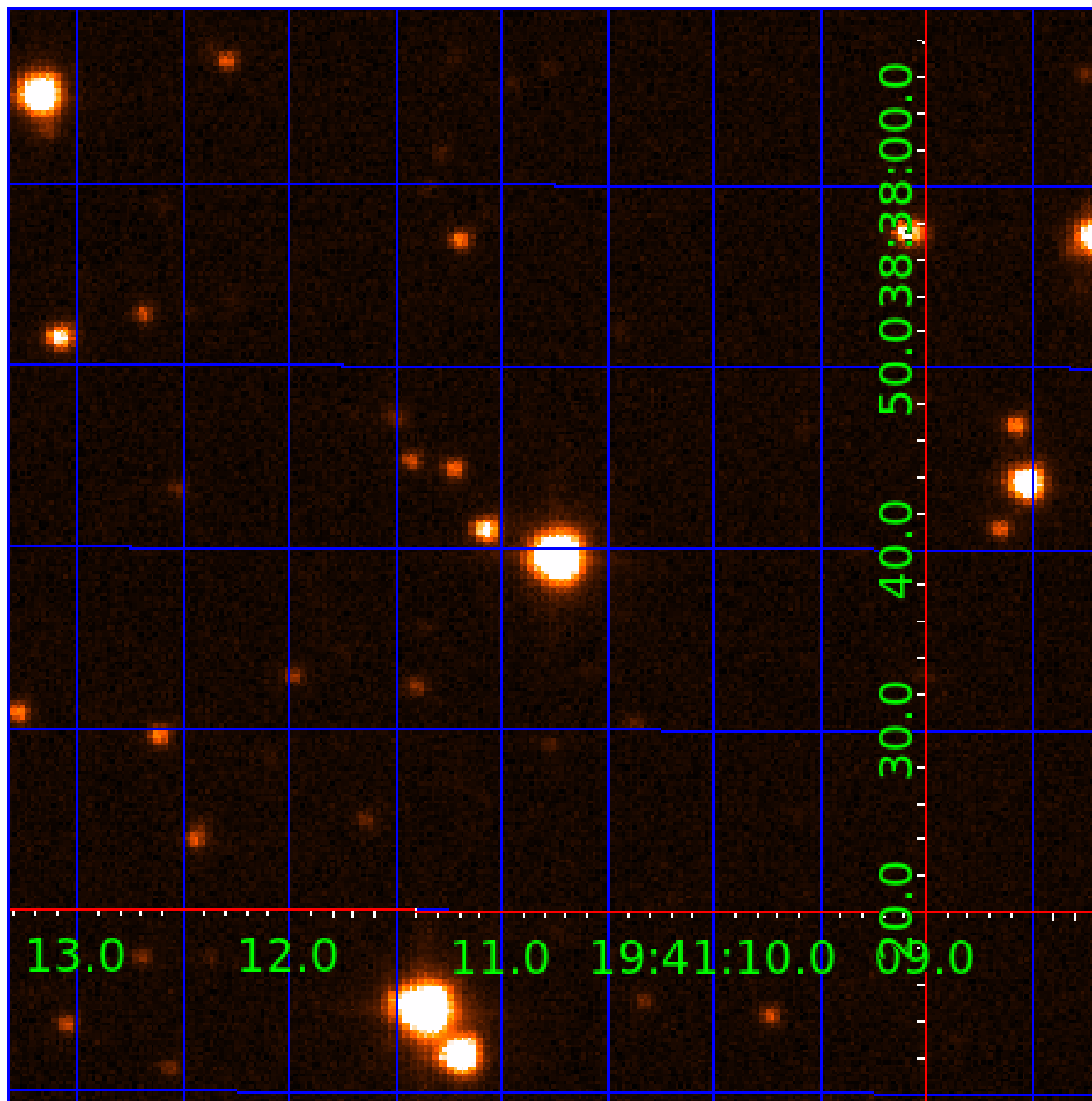


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003560427

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})
003560427-01	OBS	No	543.764679	136.010358	1478.9	15.714	18.5	7.4	4.80	4841	18.06	7.25
003560427-02	OBS	No	470.852391	325.944237	1408.8	12.020	13.1	7.9	4.80	4841	17.63	8.78
003560427-03	OBS	No	326.845090	208.712201	1412.6	6.640	12.9	9.0	4.80	4841	22.83	14.29
003560427-04	OBS	No	116.568384	166.086354	25.7	1.436	13.4	0.3	4.80	4841	3.27	56.48
003560427-05	OBS	No	418.752185	309.056473	1517.4	4.854	13.3	9.3	4.80	4841	37.53	10.27
003560427-06	OBS	No	244.014594	372.815956	1559.7	13.412	11.9	9.4	4.80	4841	21.66	21.09
003560427-07	OBS	No	274.003711	358.665214	838.4	3.867	10.8	7.5	4.80	4841	15.97	18.07
003560427-08	OBS	No	321.696705	373.739304	1123.1	5.572	9.9	8.4	4.80	4841	16.27	14.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003560427-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
003560427-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003560427-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV

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

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

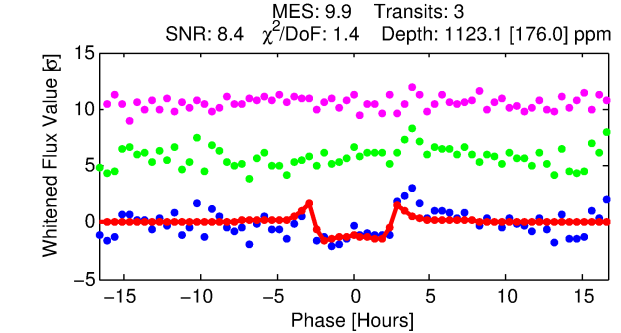
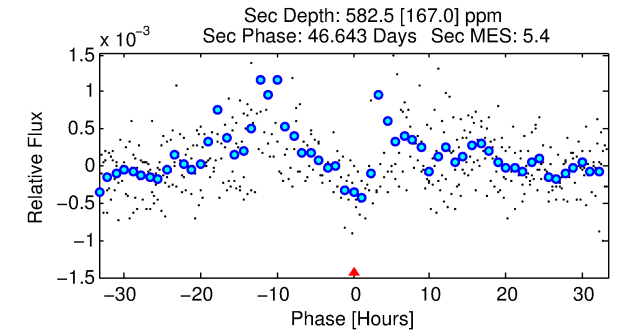
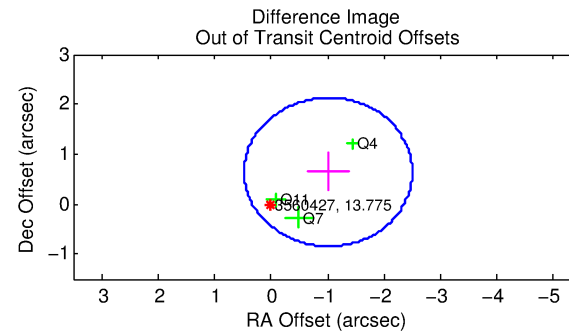
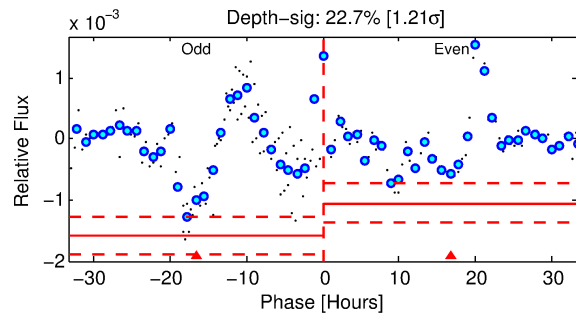
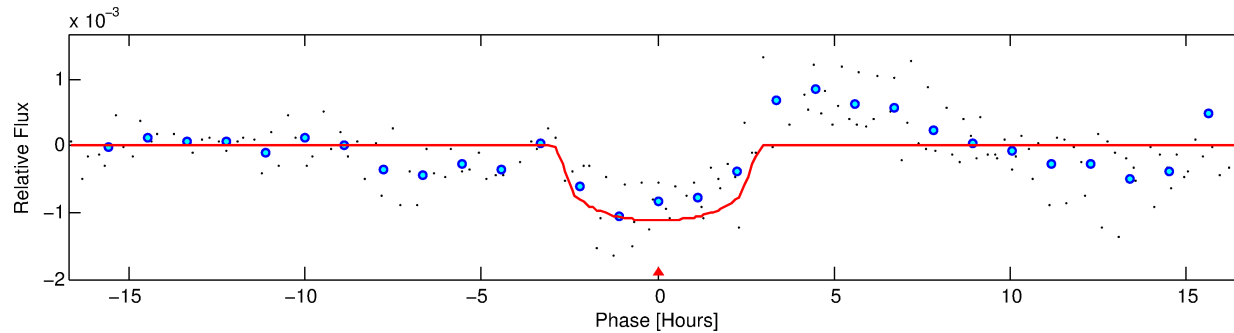
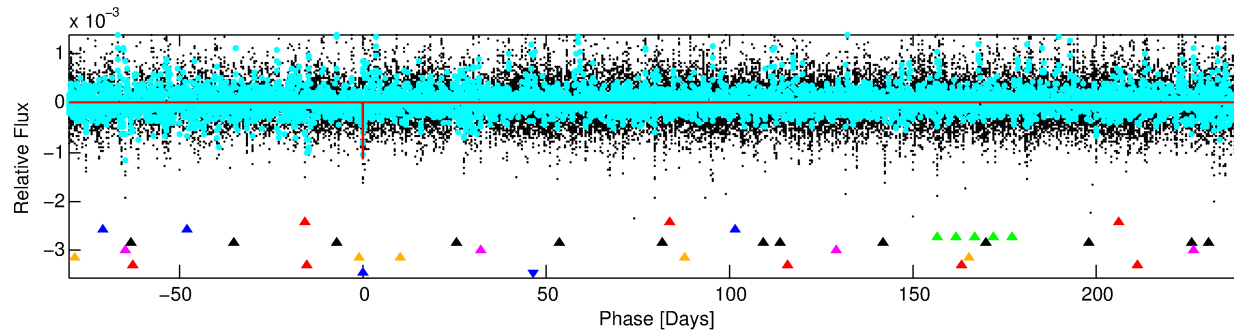
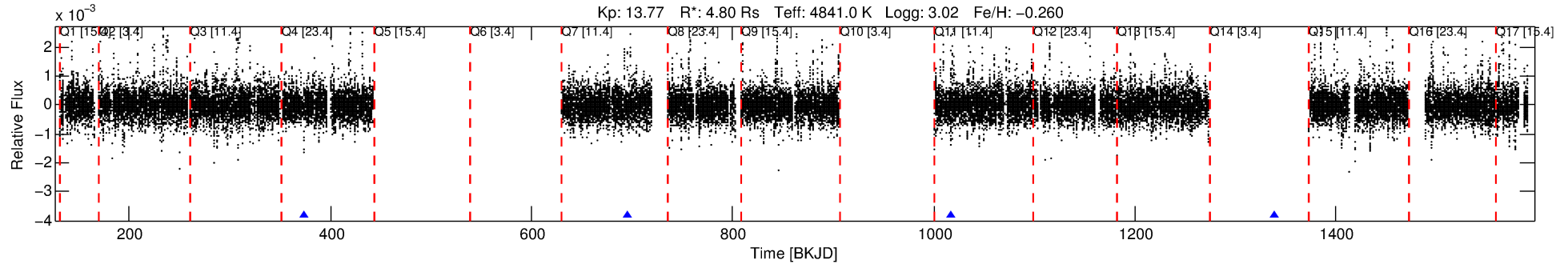
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003560427-08

No Significant Match Found

DV One-Page Summary

KIC: 3560427 Candidate: 8 of 8 Period: 321.697 d



DV Fit Results:

Period = 321.69671 [0.00589] d
Epoch = 373.7393 [0.0080] BKJD
Rp/R* = 0.0311 [0.0233]
a/R* = 392.63 [986.61]
b = 0.52 [3.56]
Seff = 14.59 [11.38]
Teq = 498 [97] K
Rp = 16.27 [16.05] Re
a = 0.8811 [0.4707] AU
Ag = 939.40 [1606.50] [0.58 σ]
Teffp = 4266 [1633] K [2.30 σ]

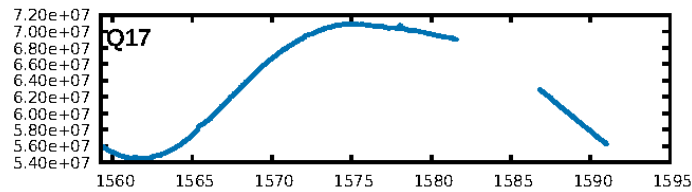
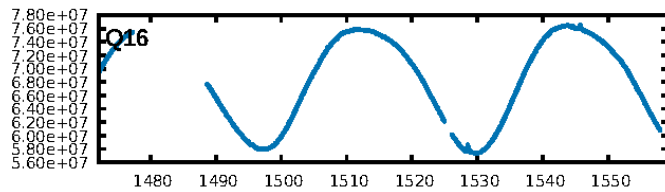
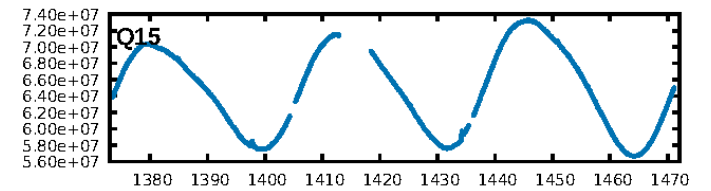
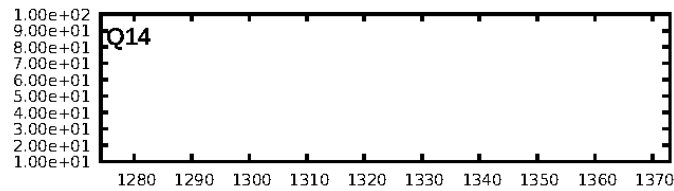
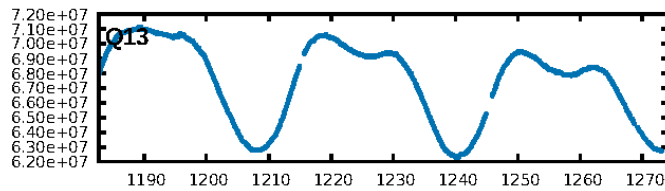
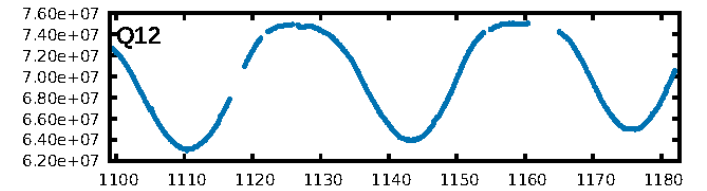
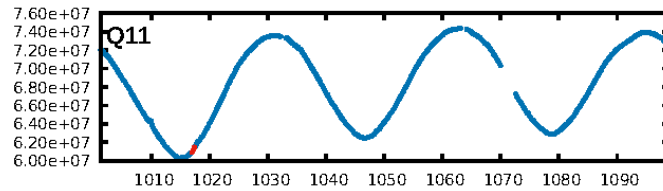
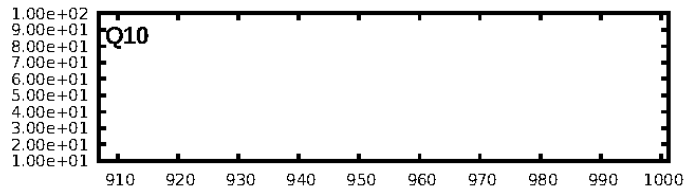
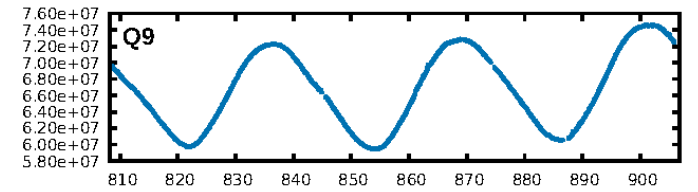
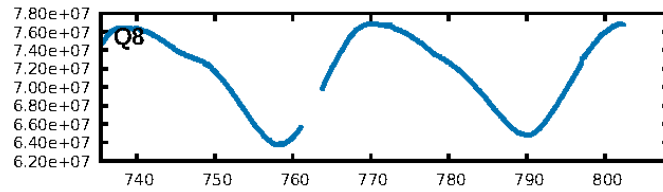
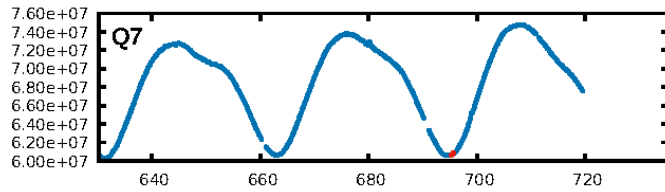
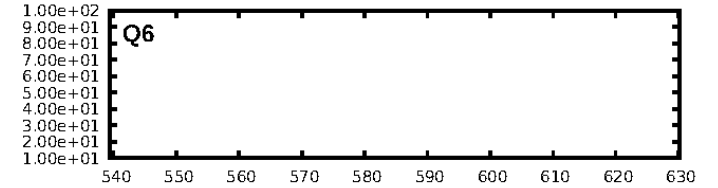
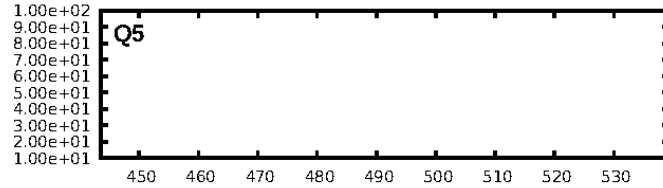
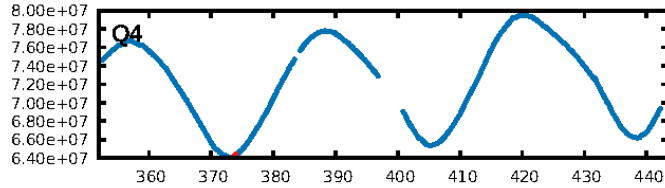
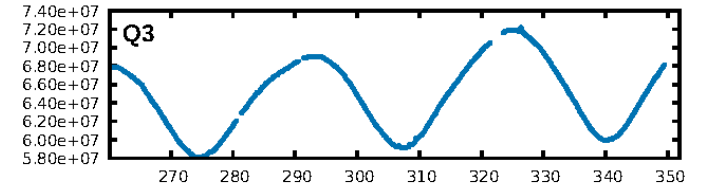
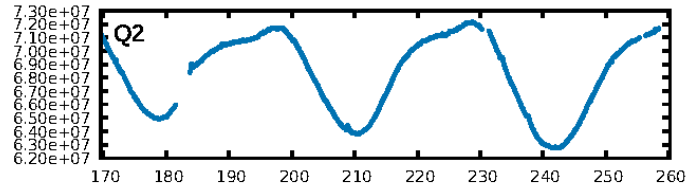
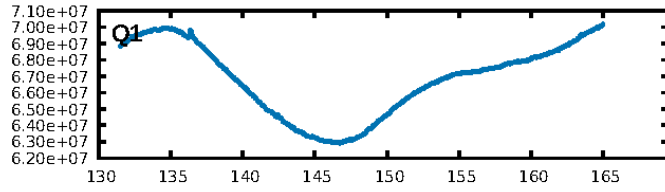
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [168.77 σ]
LongPeriod-sig: 100.0% [14.26 σ]
ModelChiSquare2-sig: 82.2%
ModelChiSquareGof-sig: 83.0%
Bootstrap-pfa: 2.50e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.584
Centroid-sig: 4.9%
Centroid-so: 1.120 arcsec [1.12 σ]
OotOffset-rm: 1.199 arcsec [2.42 σ]
KicOffset-rm: 1.044 arcsec [2.24 σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

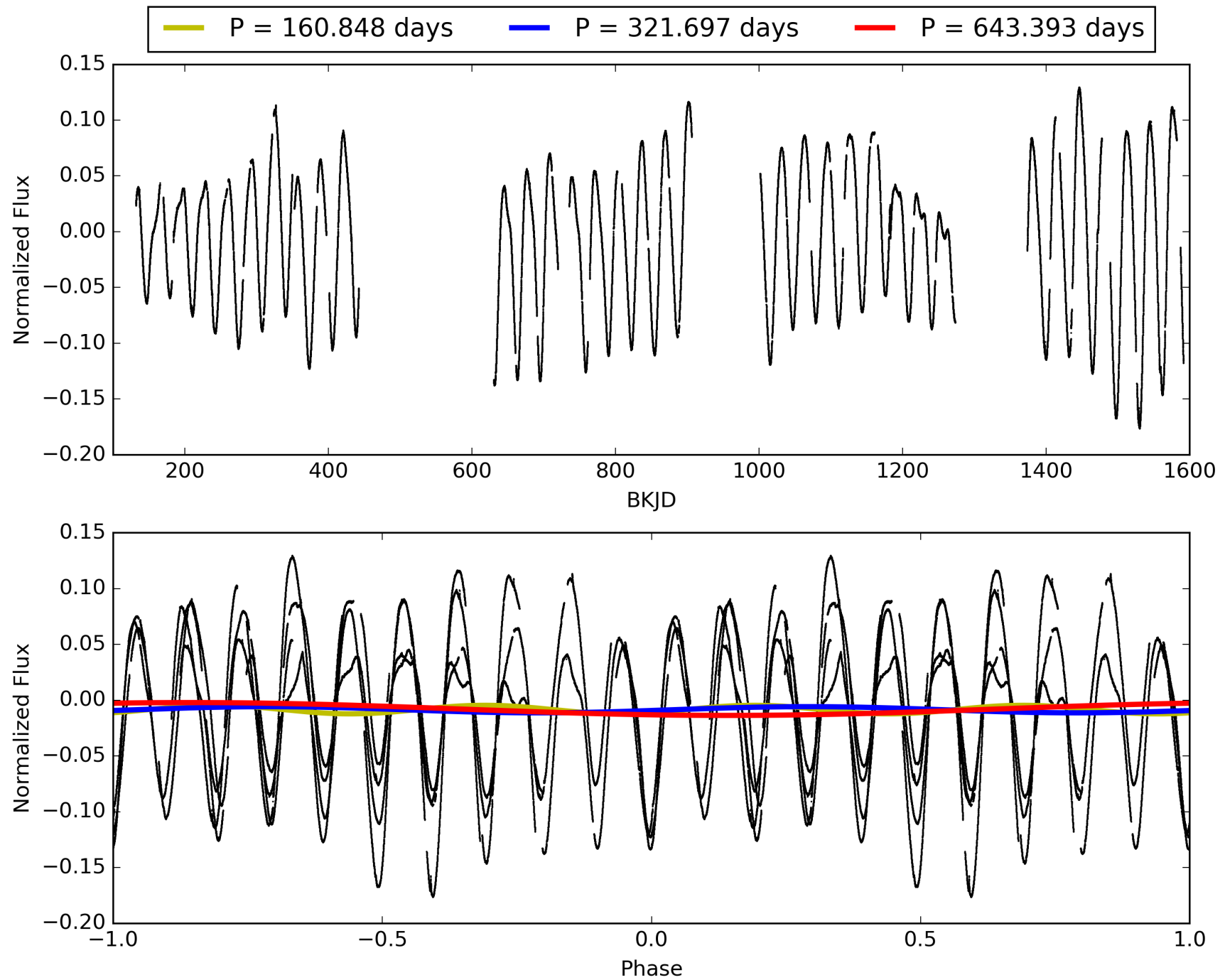
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:31:11 Z

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

TCE 003560427-08, PDC Light Curves

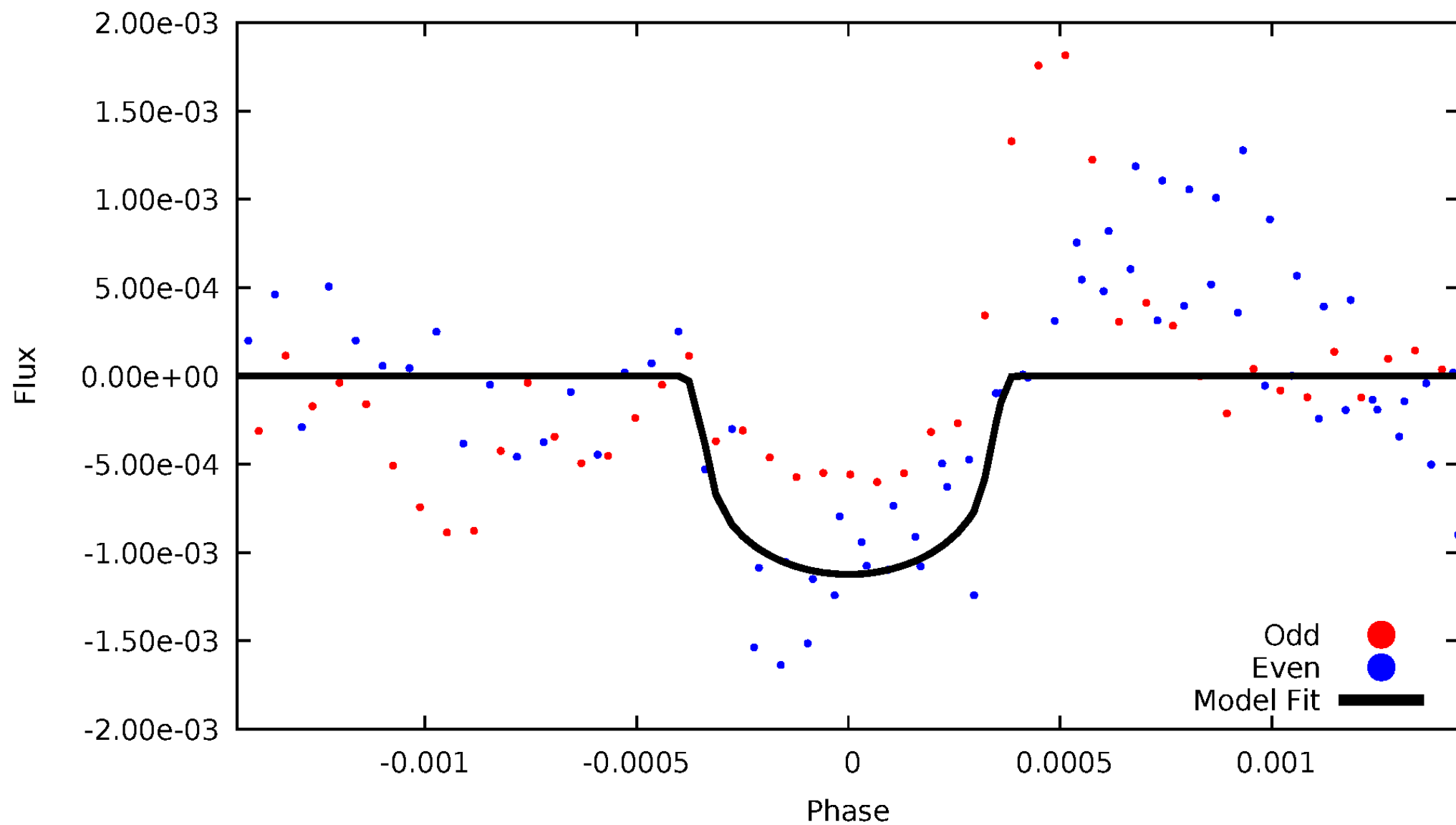


TCE 003560427-08



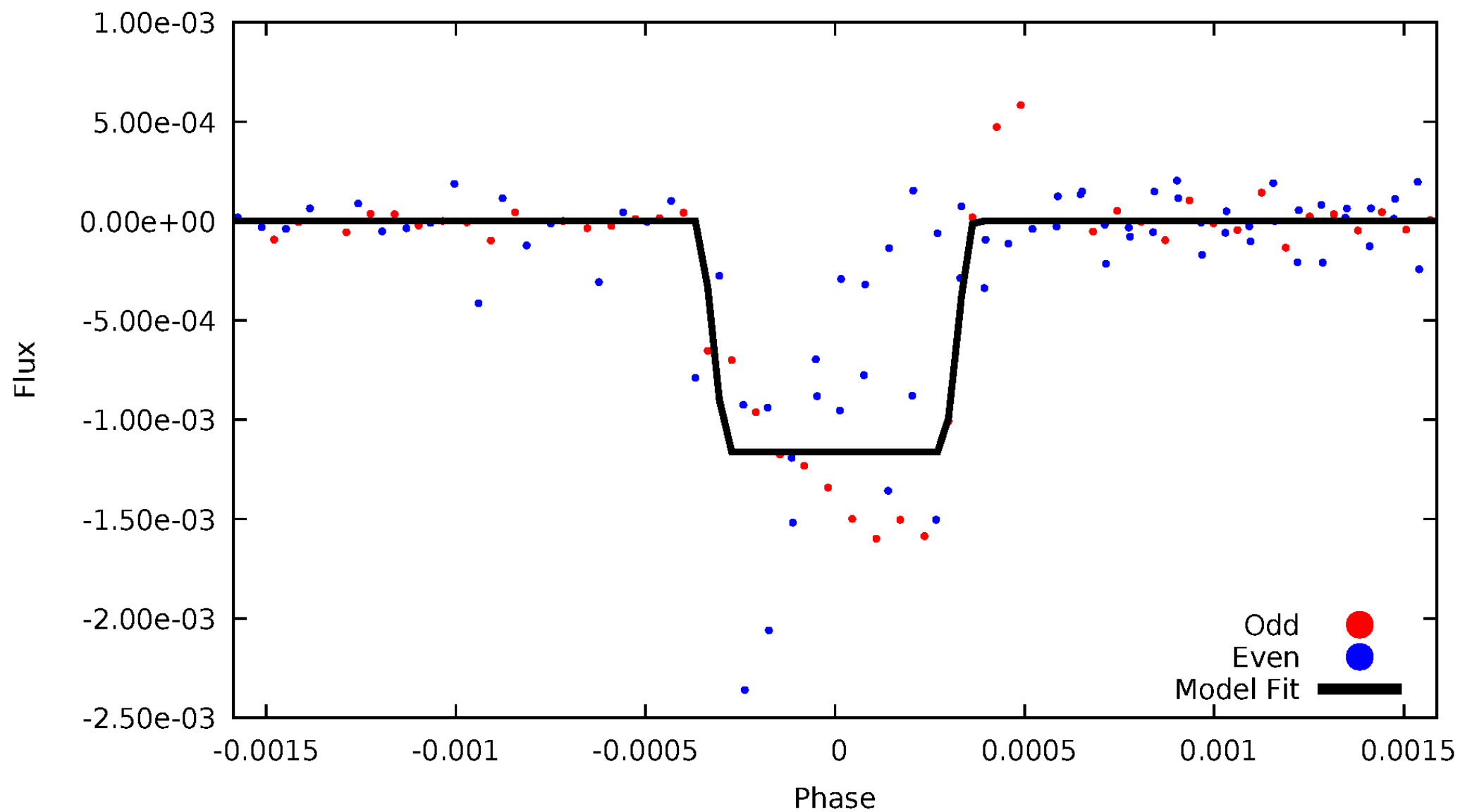
DV Odd/Even

TCE 003560427-08



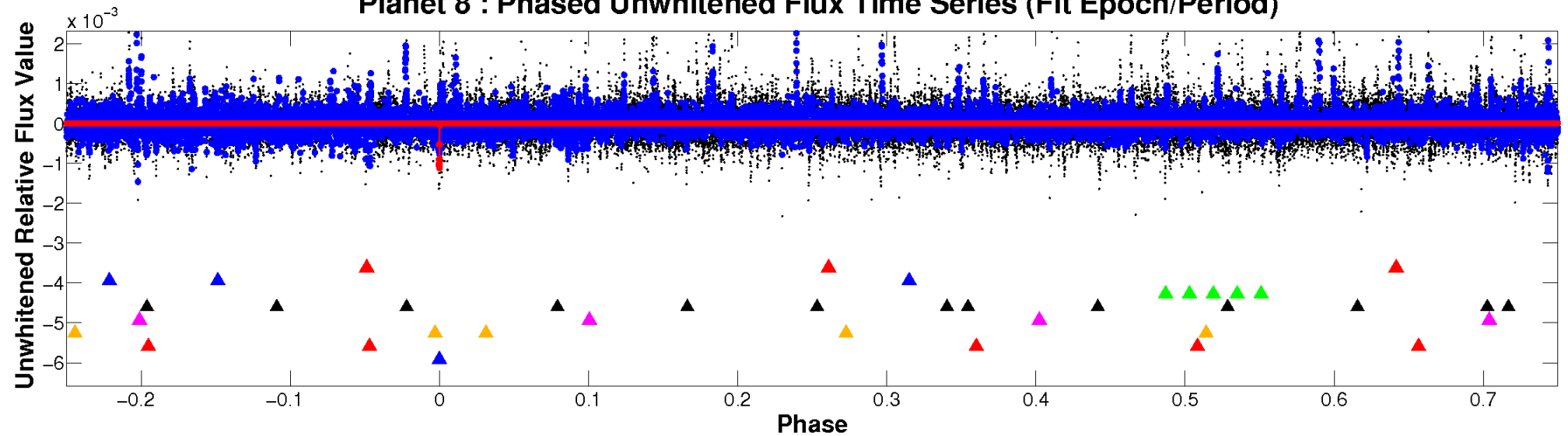
ALT Odd/Even

TCE 003560427-08

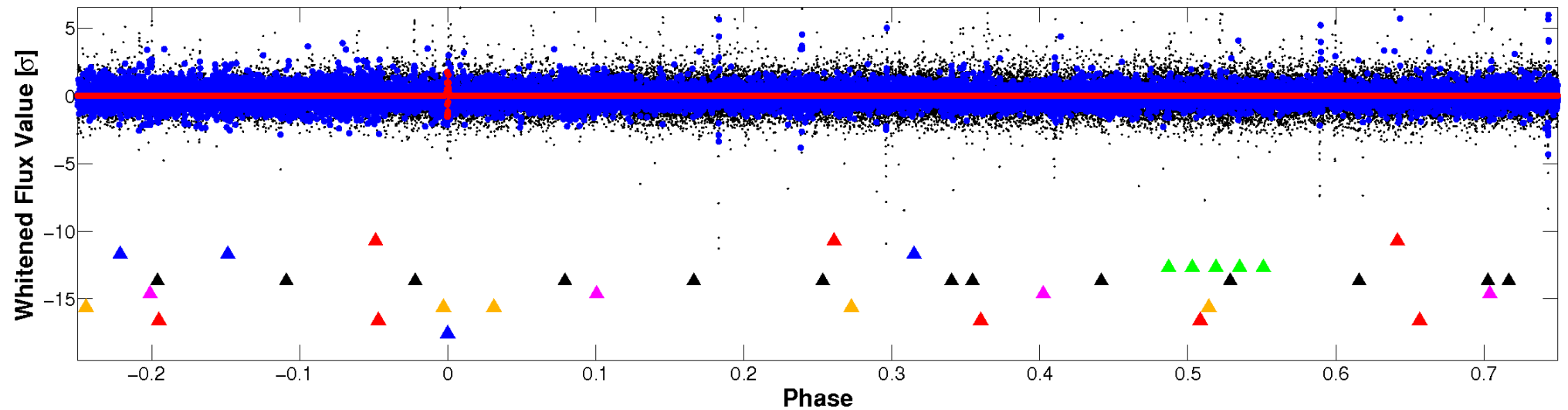


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

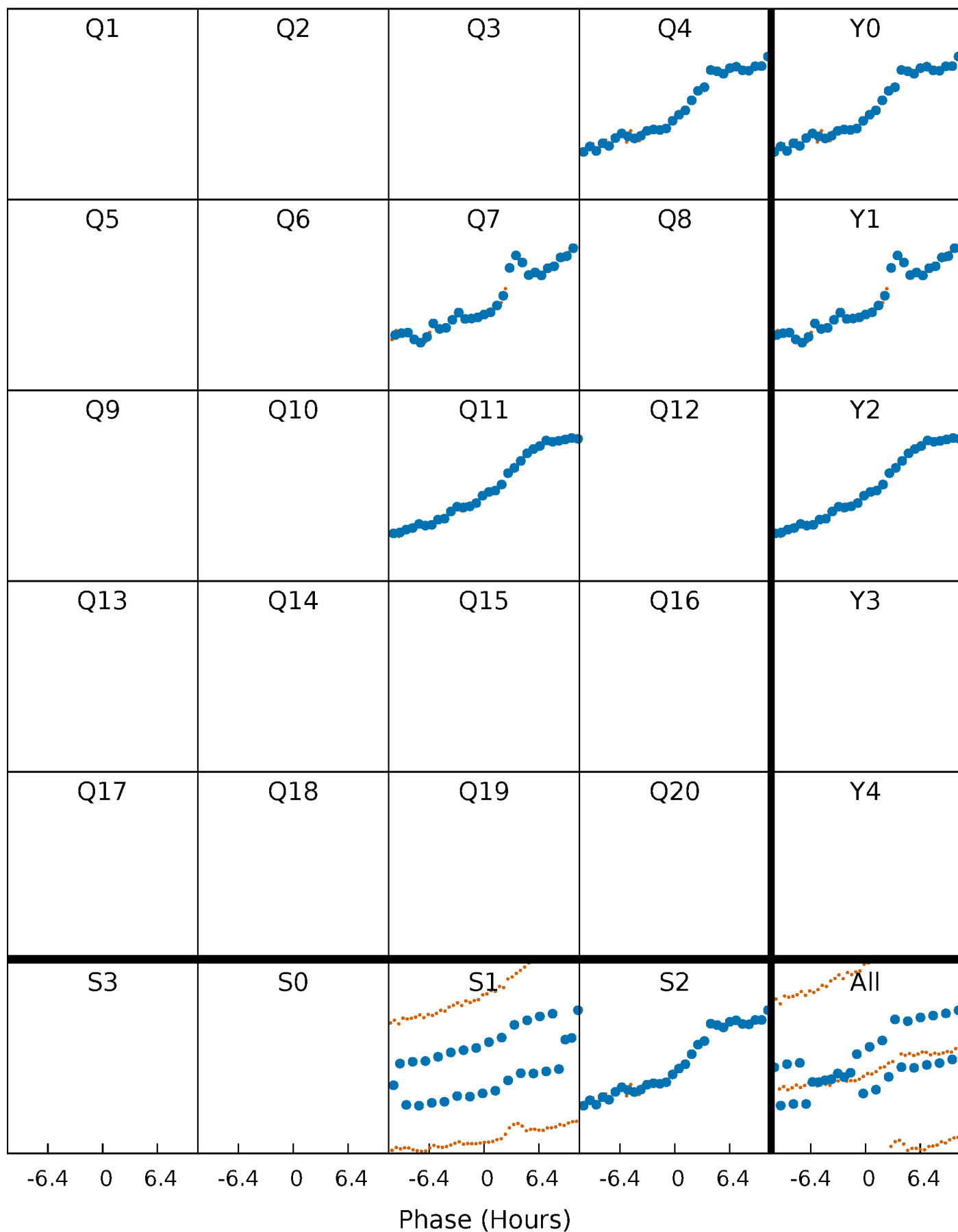


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



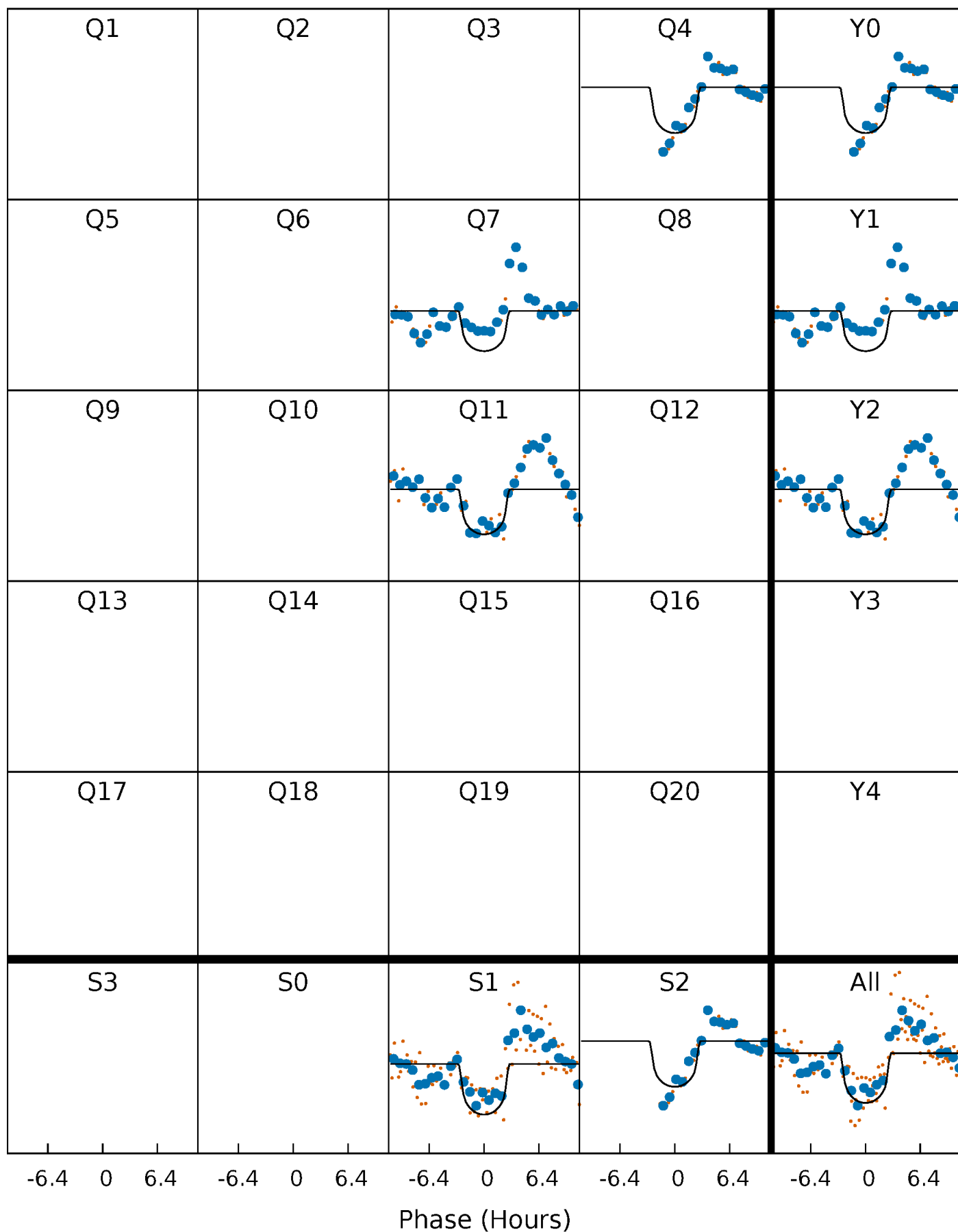
PDC Quarter-Phased Transit Curves

TCE 003560427-08 $P=321.696706$ Days $T_0=373.739304$ (BKJD)



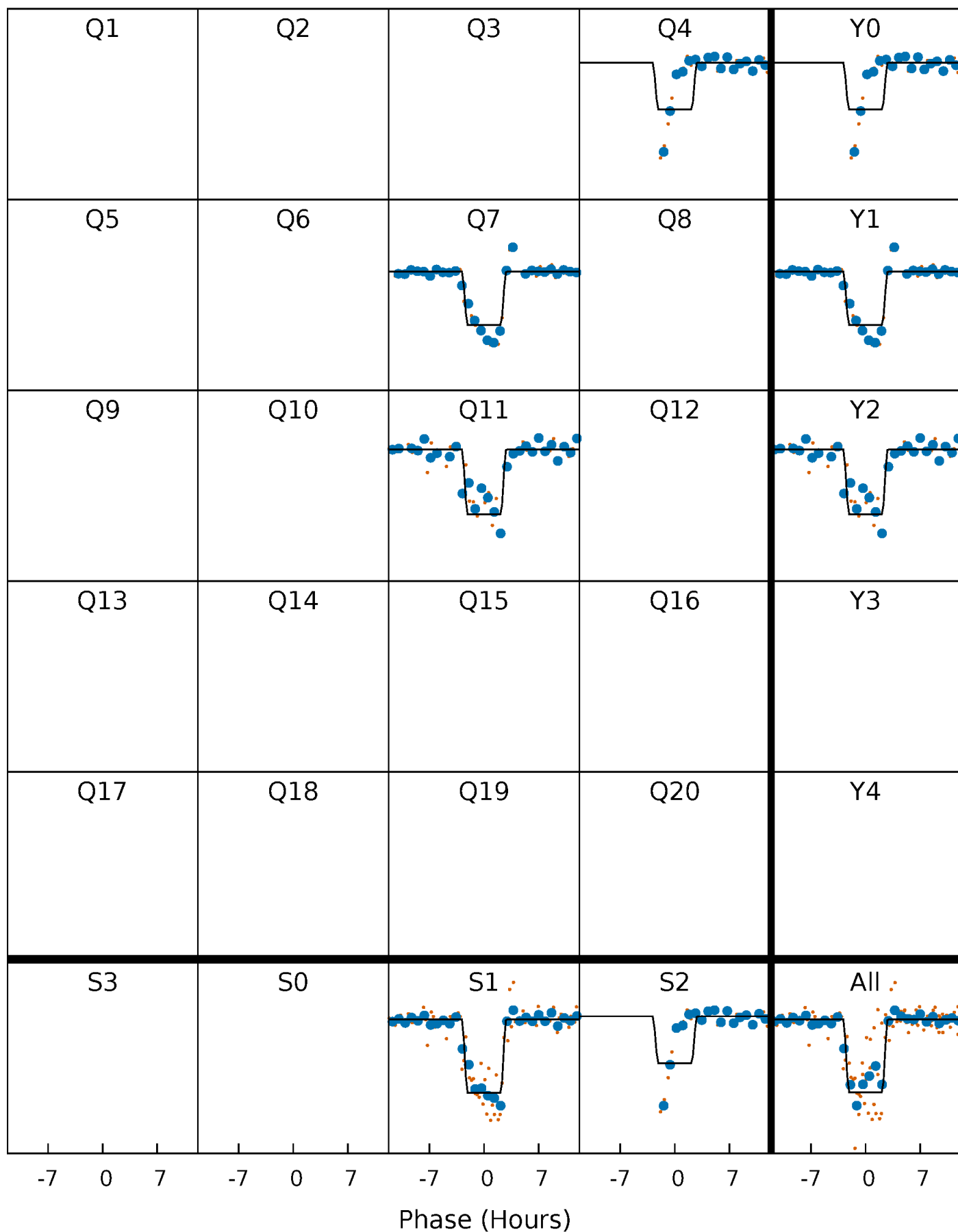
DV Quarter-Phased Transit Curves

TCE 003560427-08 $P=321.696706$ Days $T_0=373.739304$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

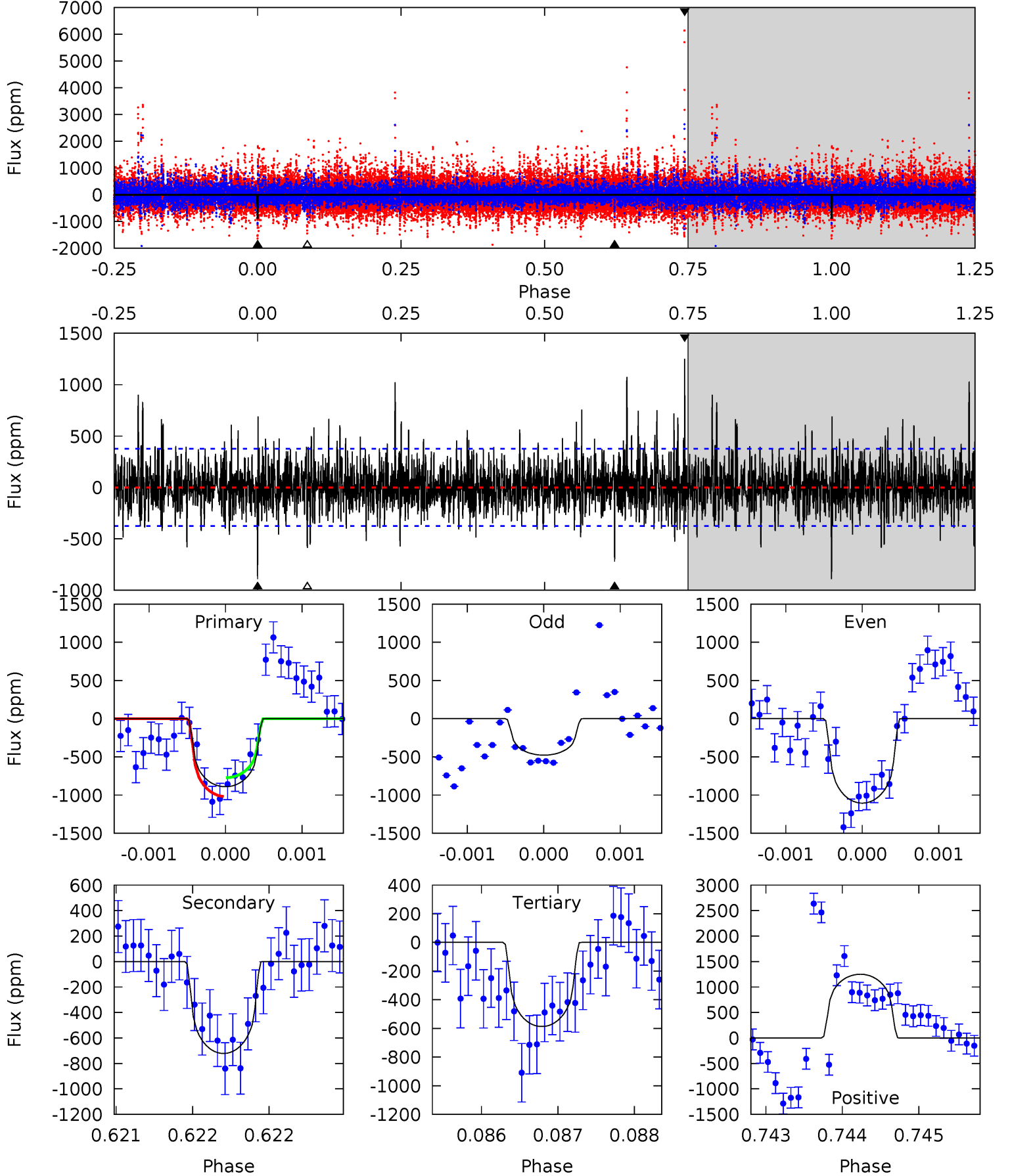
TCE 003560427-08 P=321.699157 Days $T_0=373.744236$ (BKJD)



DV Model-Shift Uniqueness Test

003560427-08, P = 321.696706 Days, E = 52.042598 Days

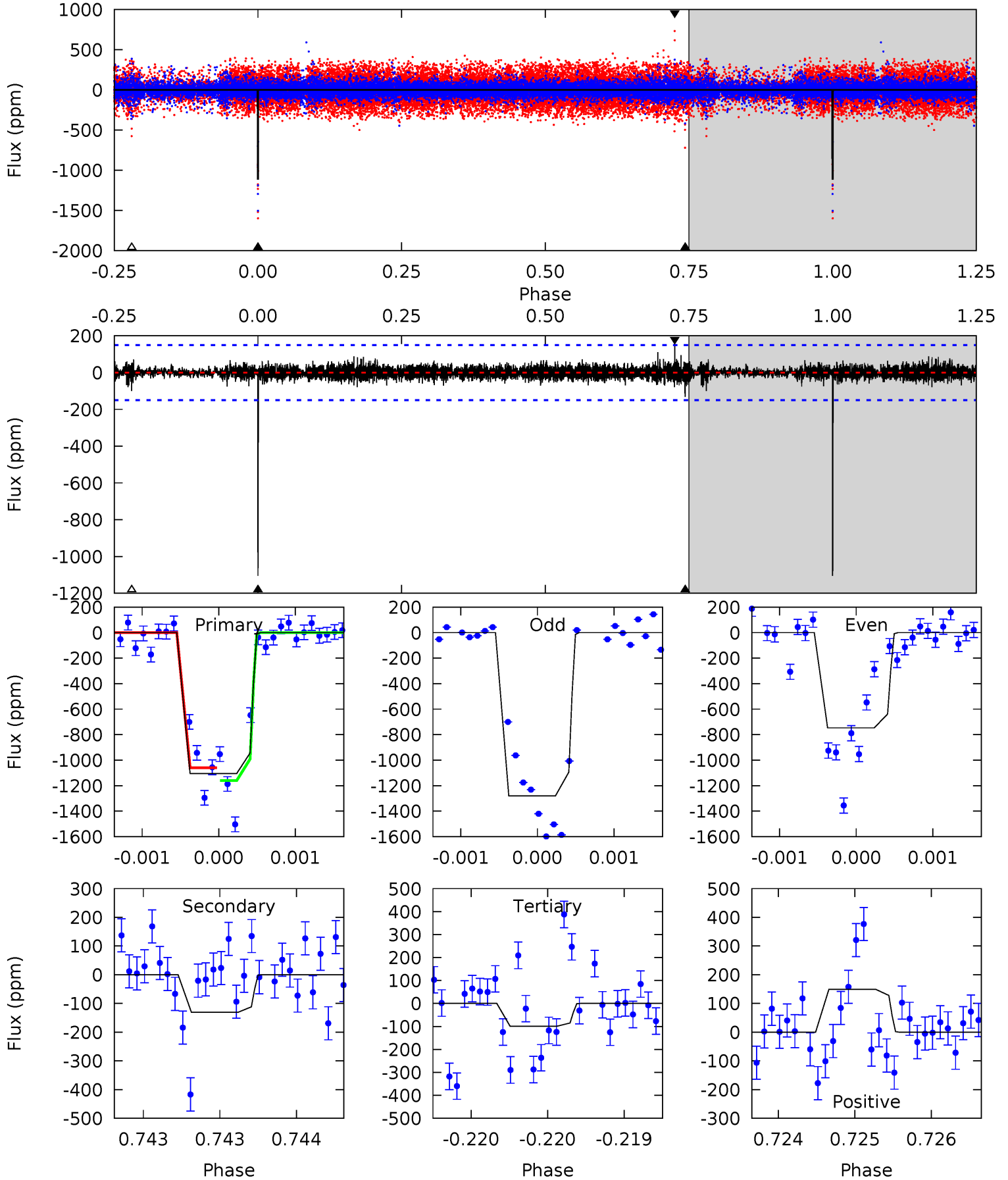
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	10.5	8.58	18.3	5.49	3.36	2.64	4.44	-5.26	1.97	-7.73	4.05	0.88	0.58	1.80



Alt Model-Shift Uniqueness Test

003560427-08, P = 321.699157 Days, E = 52.045079 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	4.81	3.65	5.50	5.51	3.38	0.69	37.0	35.1	1.15	-0.70	12.4	1.05	0.12	1.89



Stellar Parameters For KIC 003560427

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4841^{+146}_{-110}	$3.021^{+0.418}_{-0.342}$	$-0.260^{+0.300}_{-0.200}$	$4.798^{+3.074}_{-1.655}$	$0.881^{+0.333}_{-0.143}$	$0.011^{+0.037}_{-0.008}$
	+3%/-2%	+14%/-11%	+115%/-77%	+64%/-34%	+38%/-16%	+326%/-68%
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 003560427-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-722 ± 68	$16.95^{+12.88}_{-9.91}$	690^{+99}_{-83}	4547^{+1965}_{-829}	1105^{+5271}_{-739}
Alt.	-131 ± 27	$18.32^{+13.96}_{-10.05}$	690^{+104}_{-81}	3256^{+982}_{-449}	170^{+652}_{-116}

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

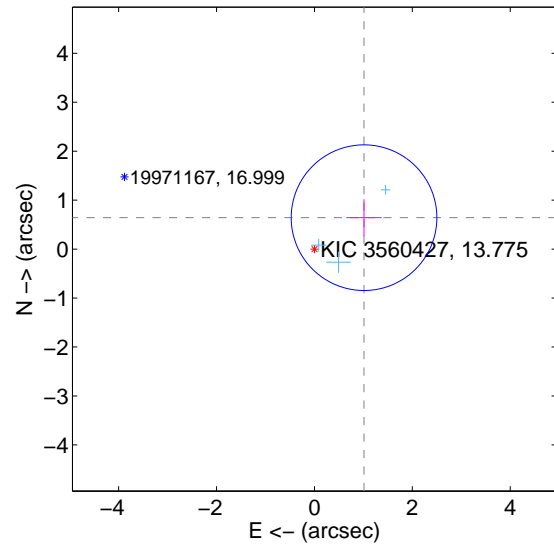
Supplemental centroid analysis for 003560427-08. Kepler magnitude: 13.78. Transit SNR 8.43

There are 3 quarters with good PRF difference image offsets

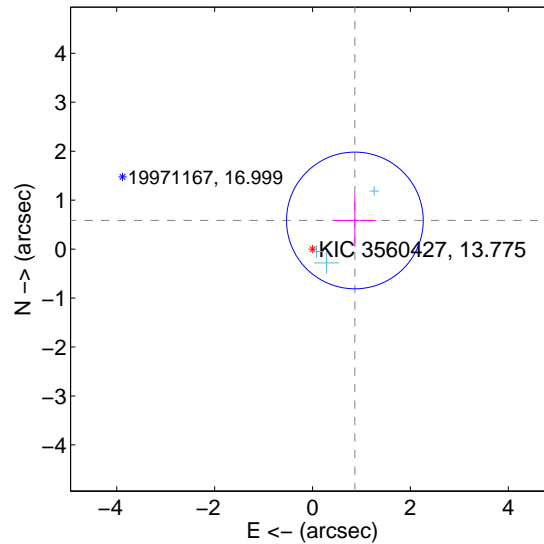
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.199 ± 0.496	2.42	-1.013 ± 0.364	0.642 ± 0.377
PRF-fit source offset from KIC position	1.044 ± 0.465	2.24	-0.865 ± 0.427	0.585 ± 0.539
photometric centroid source offset	1.12 ± 1.00	1.12	-0.75 ± 1.15	-0.83 ± 0.86

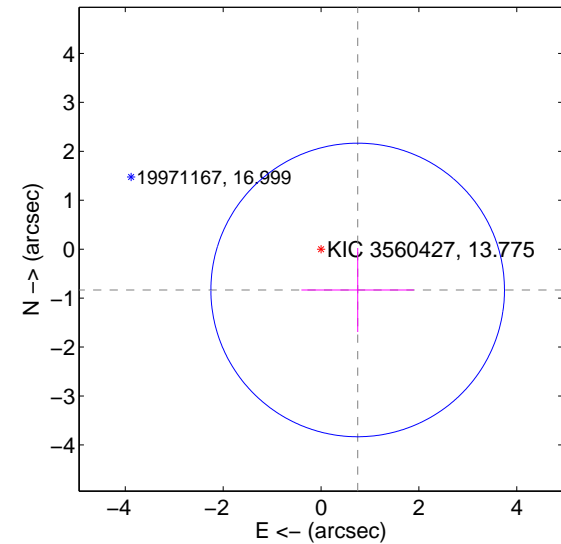
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

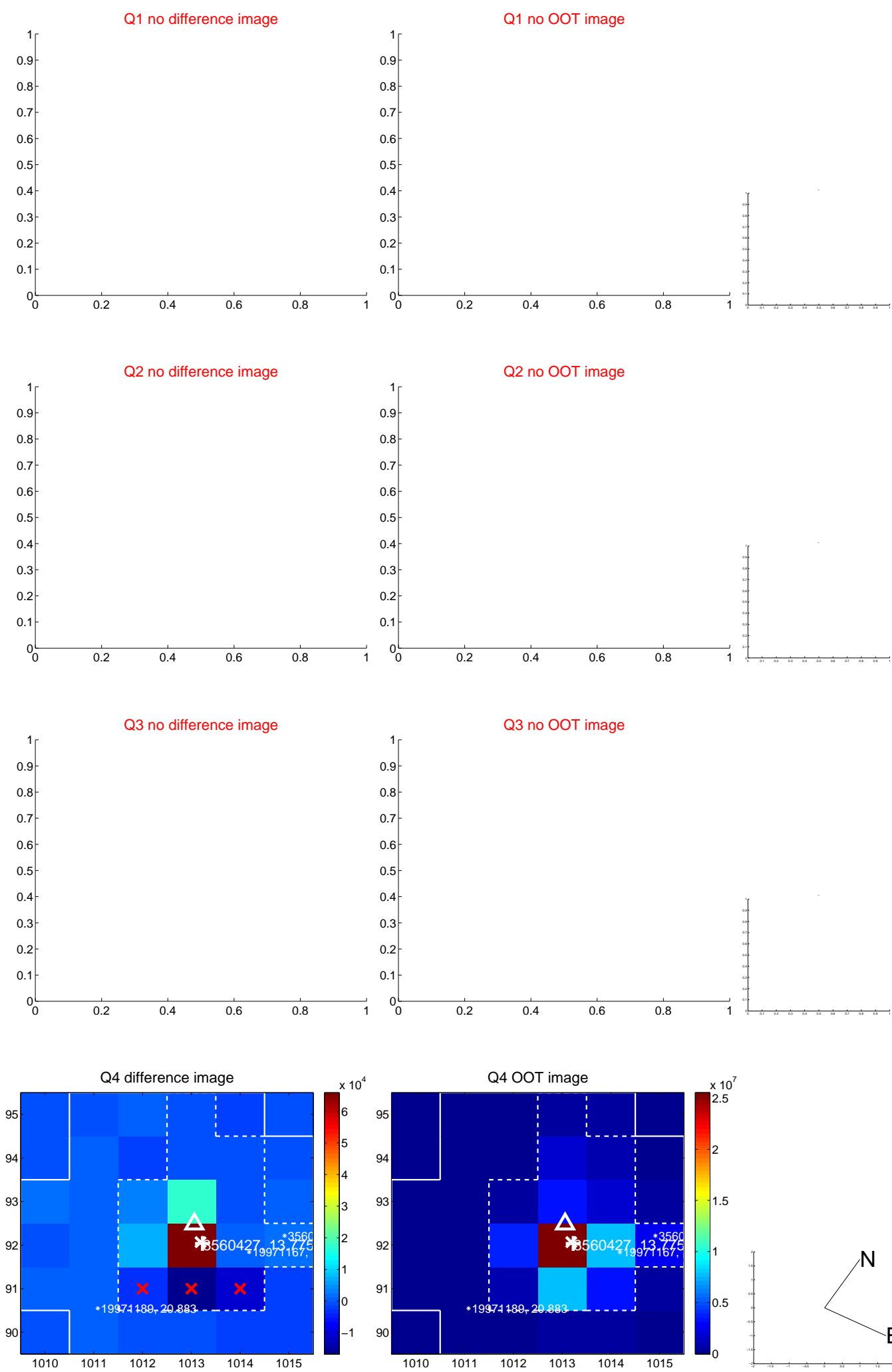


offset from photometric centroids

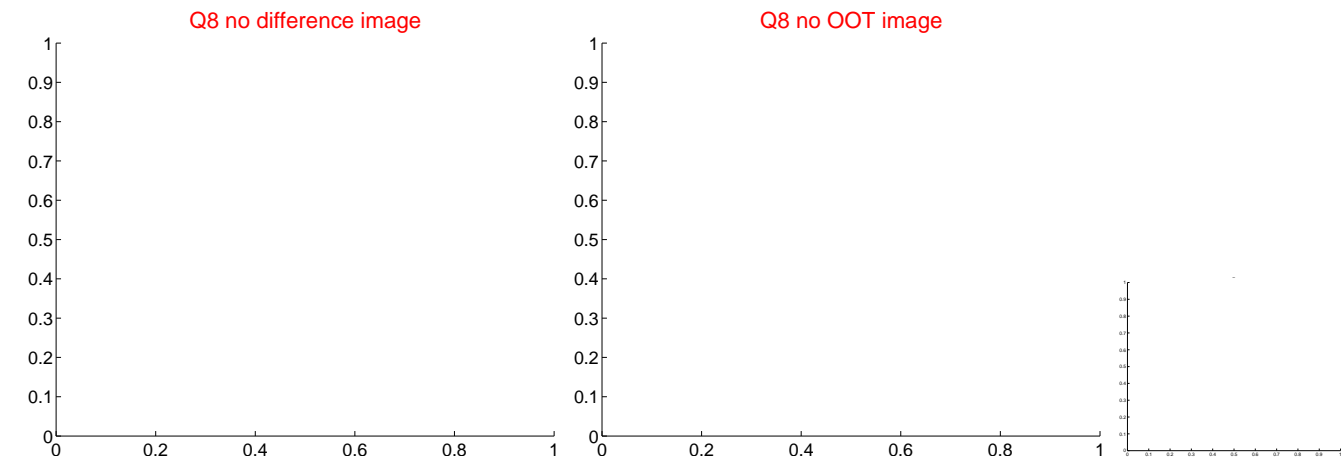
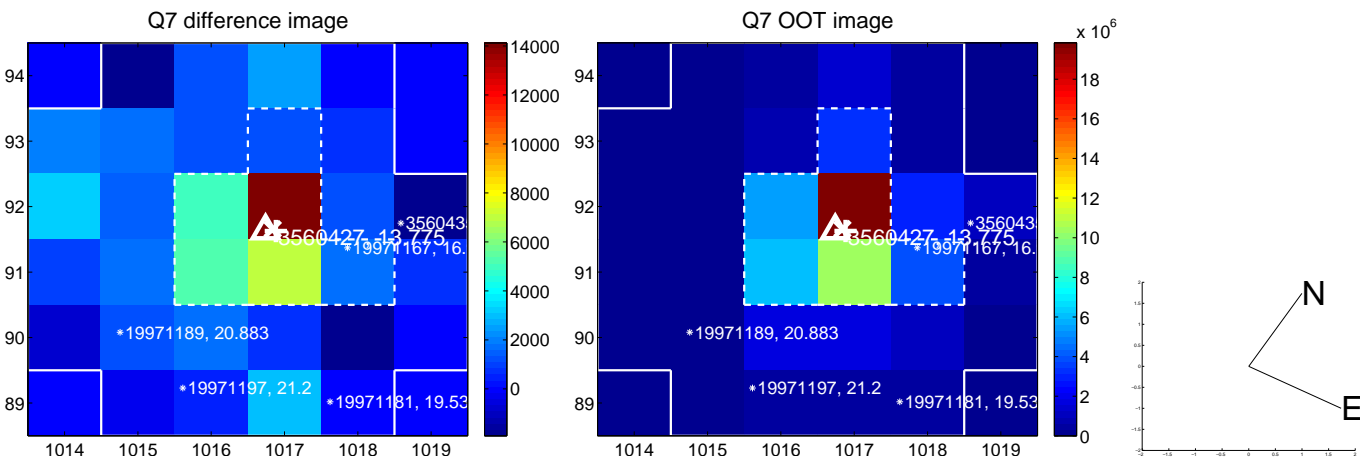


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

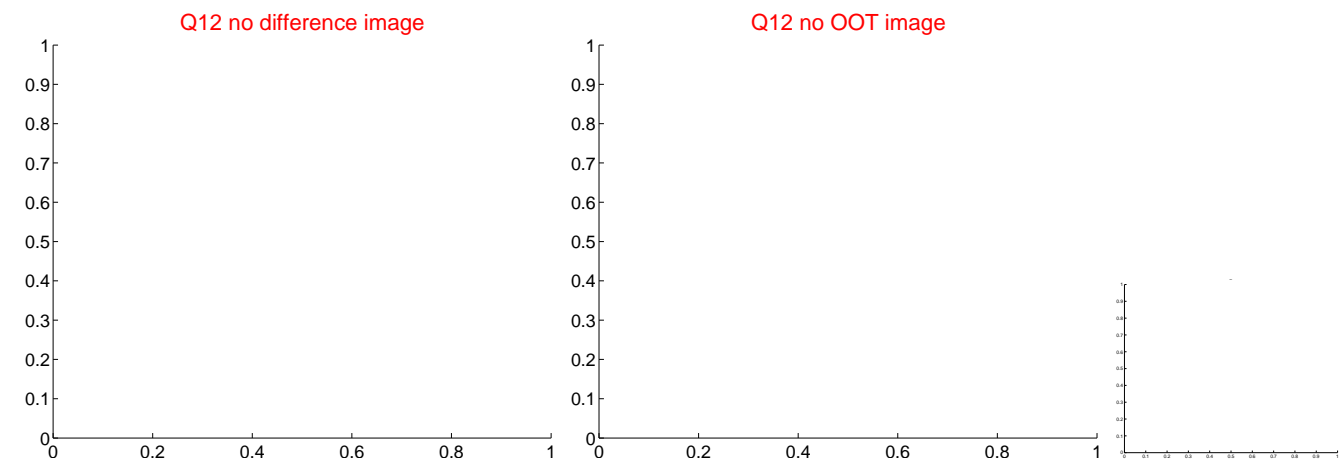
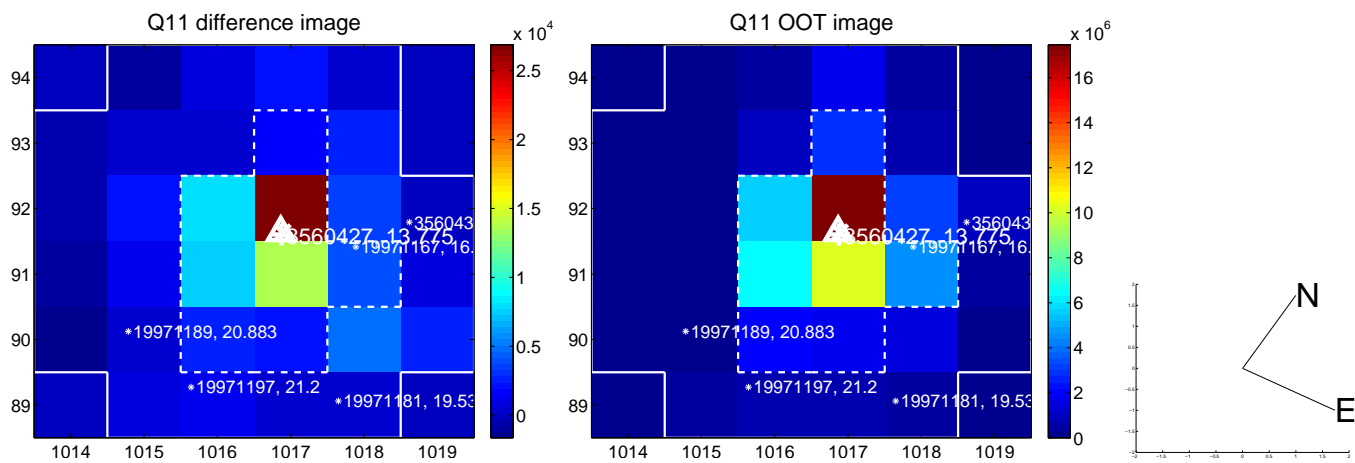
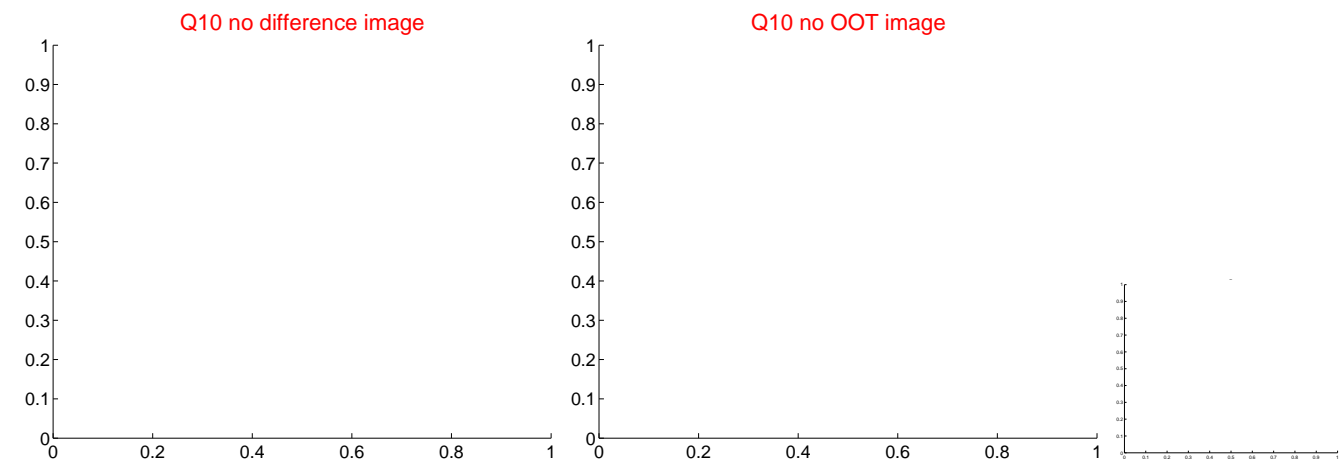
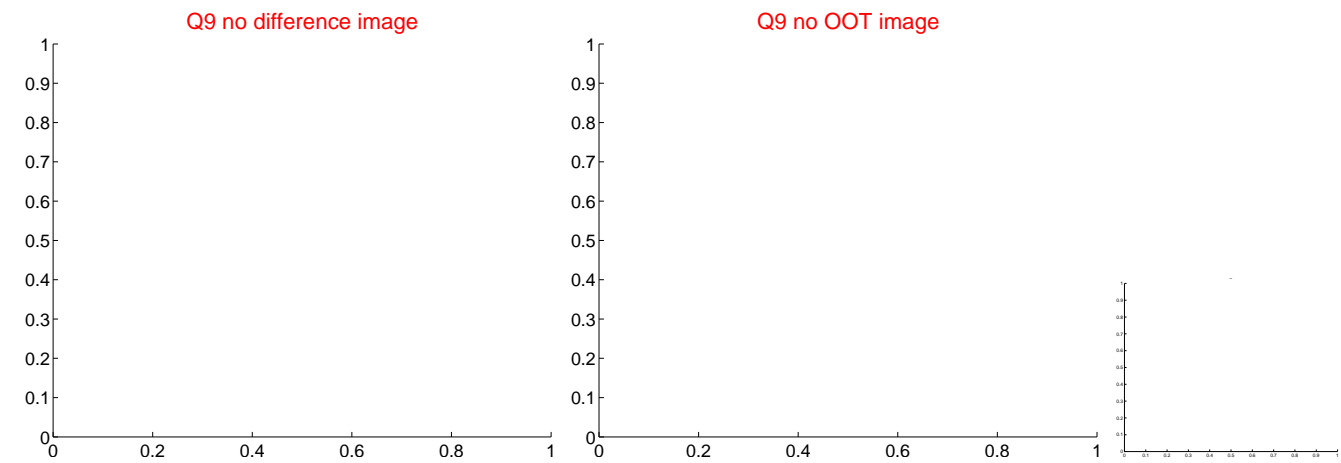
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



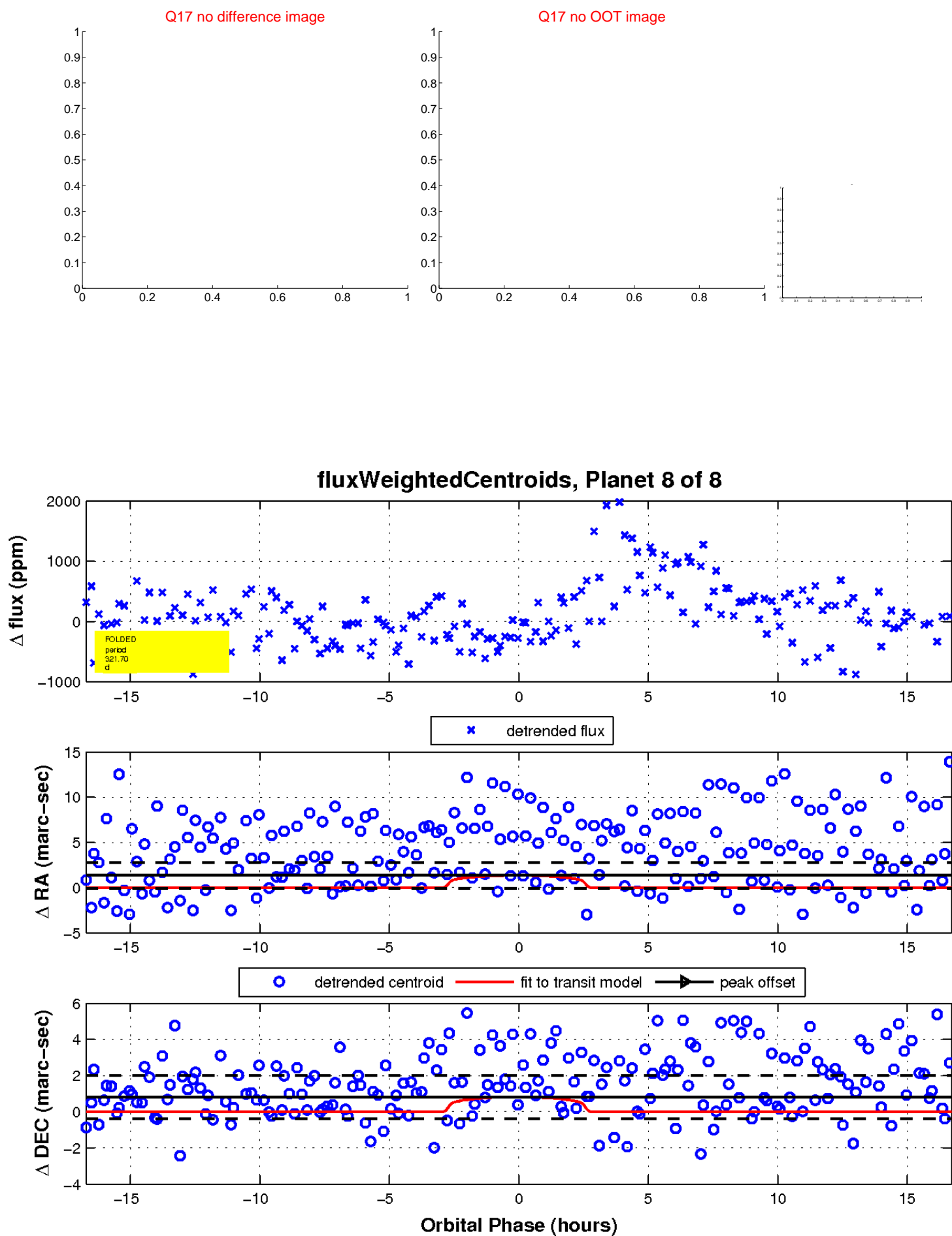
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

