

KIC 010197260

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})
010197260-01	OBS	No	343.821892	157.907748	975.1	6.000	36.8	-1.0	2.08	5134	6.34	3.27
010197260-02	OBS	No	530.139040	151.429075	1608.1	14.088	18.7	7.1	2.08	5134	10.09	1.84
010197260-03	OBS	No	366.752805	343.133396	231.4	15.243	19.2	1.4	2.08	5134	4.17	3.00
010197260-04	OBS	No	489.179426	150.493771	179.3	12.500	14.1	-1.0	2.08	5134	2.72	2.04
010197260-05	OBS	No	381.328416	314.149940	1051.6	14.642	15.3	6.5	2.08	5134	6.78	2.85
010197260-06	OBS	No	244.687246	239.216289	277.4	3.500	13.2	-1.0	2.08	5134	3.38	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010197260-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010197260-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
010197260-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

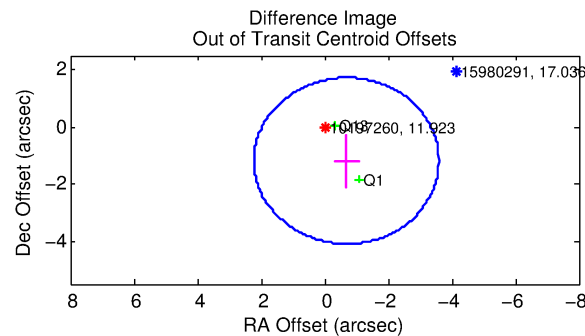
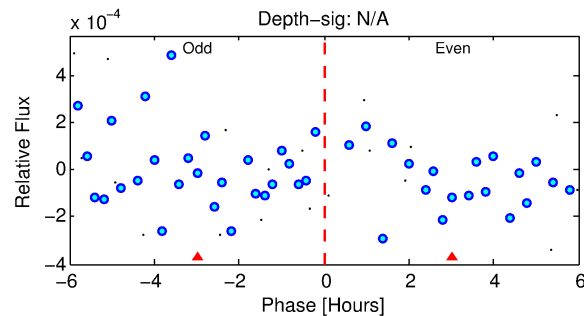
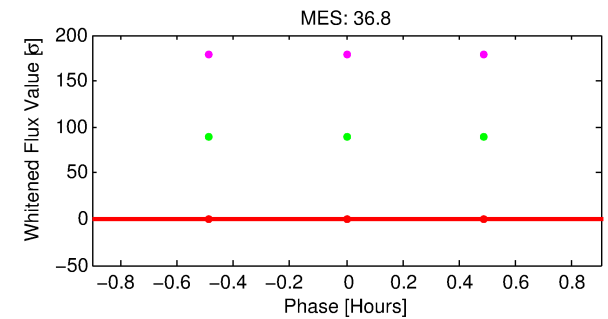
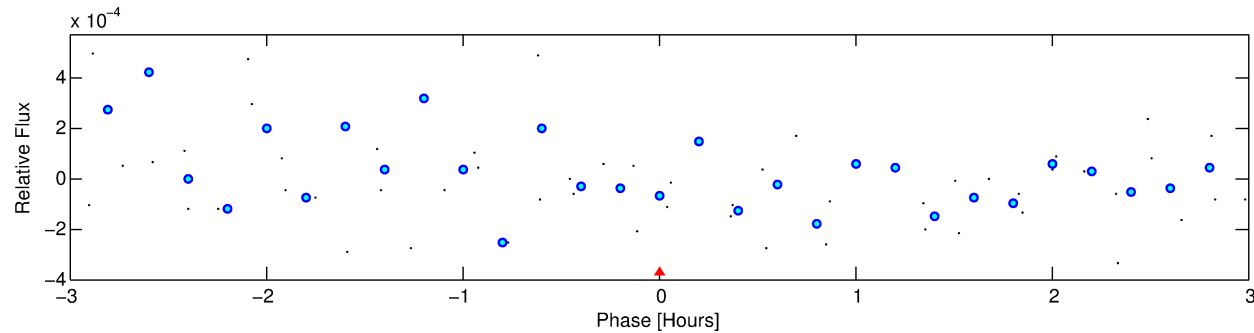
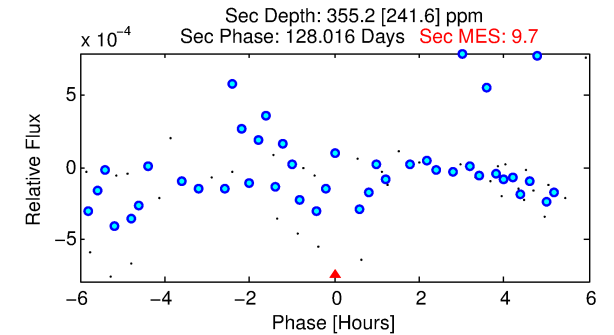
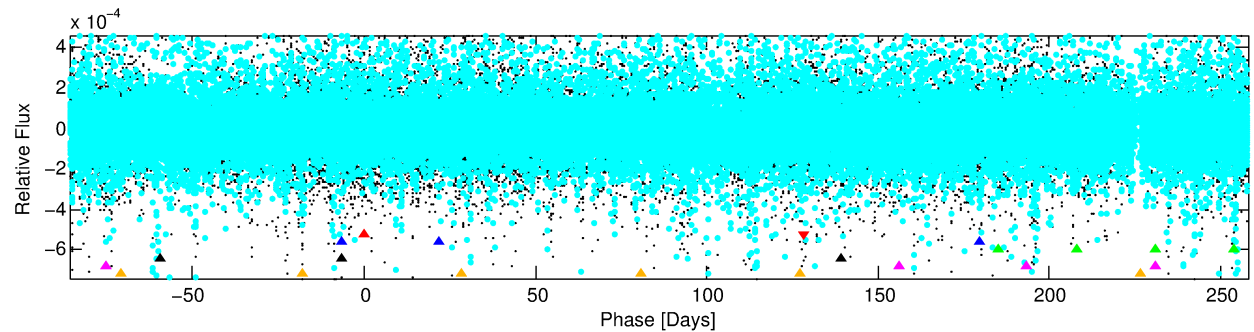
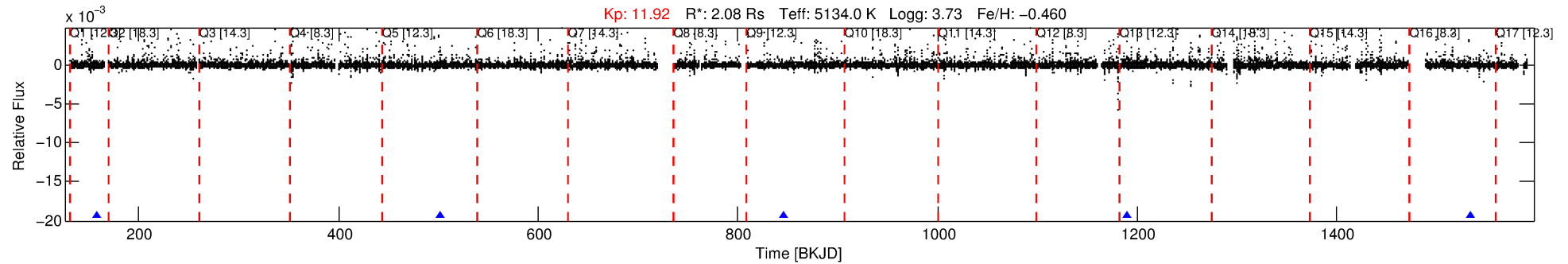
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010197260-01

No Significant Match Found

DV One-Page Summary

KIC: 10197260 Candidate: 1 of 6 Period: 343.822 d



TPS TCE Results:

Period = 343.82189 d
Epoch = 157.9077 BKJD

DV fit results are unavailable

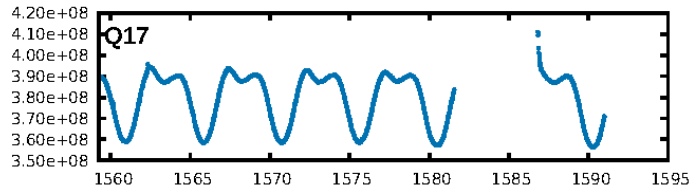
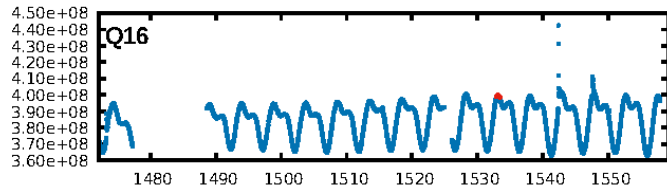
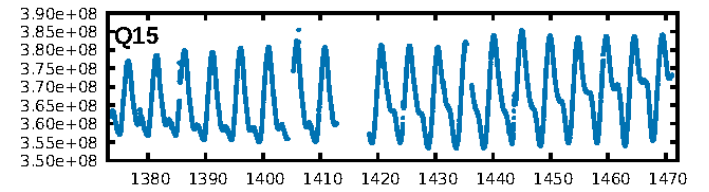
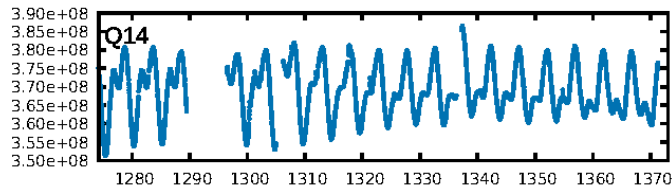
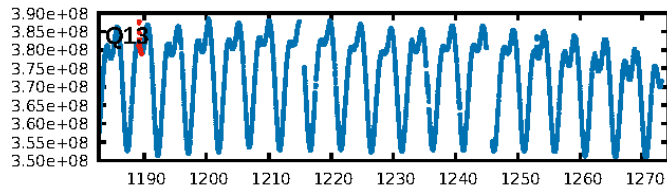
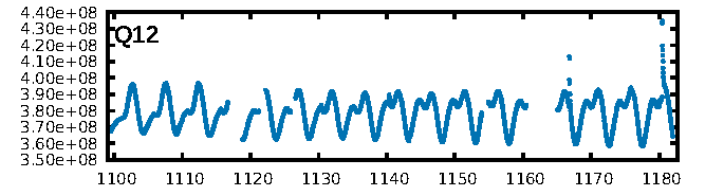
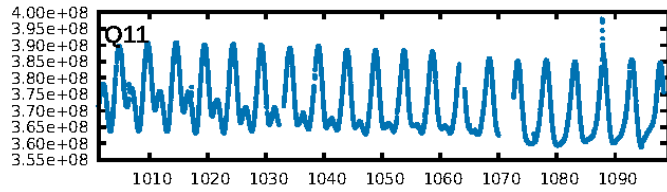
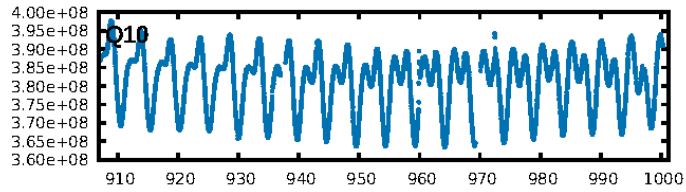
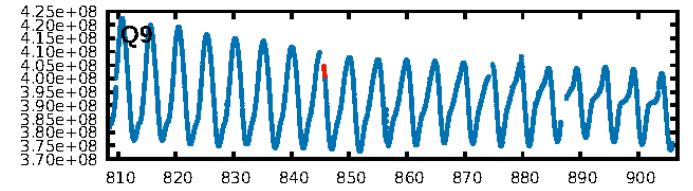
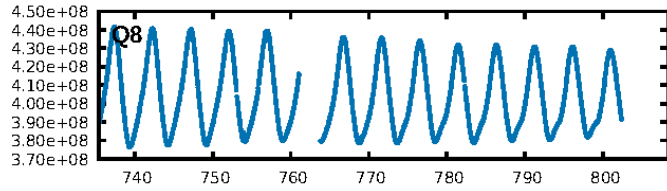
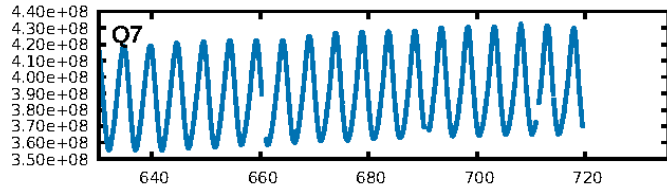
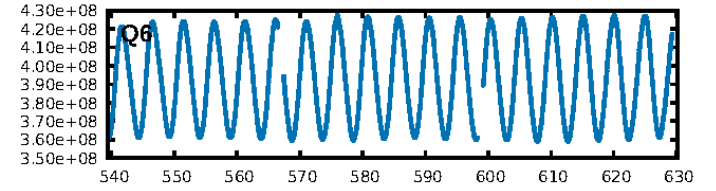
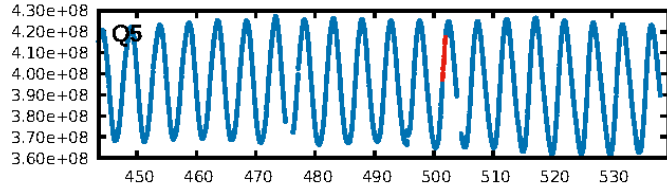
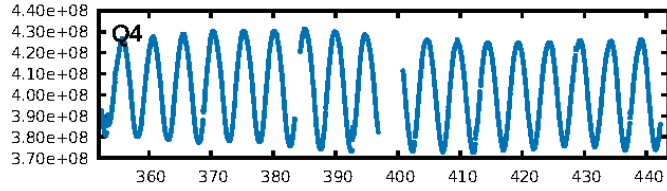
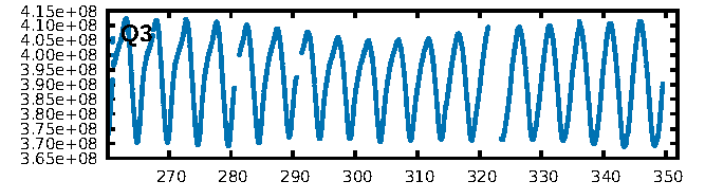
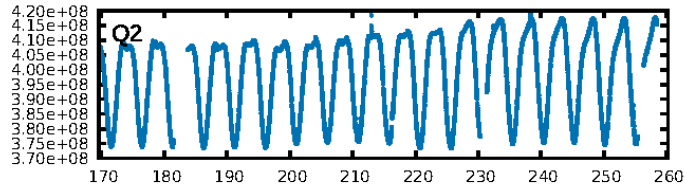
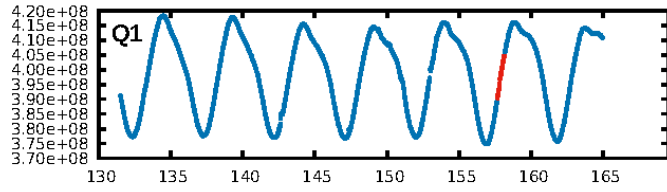
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [342.52σ]
LongPeriod-sig: 100.0% [33.59σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2187
Centroid-sig: 64.2%
Centroid-so: 4.633 arcsec [0.60σ]
OotOffset-rm: 1.369 arcsec [1.41σ]
KicOffset-rm: 1.338 arcsec [1.40σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

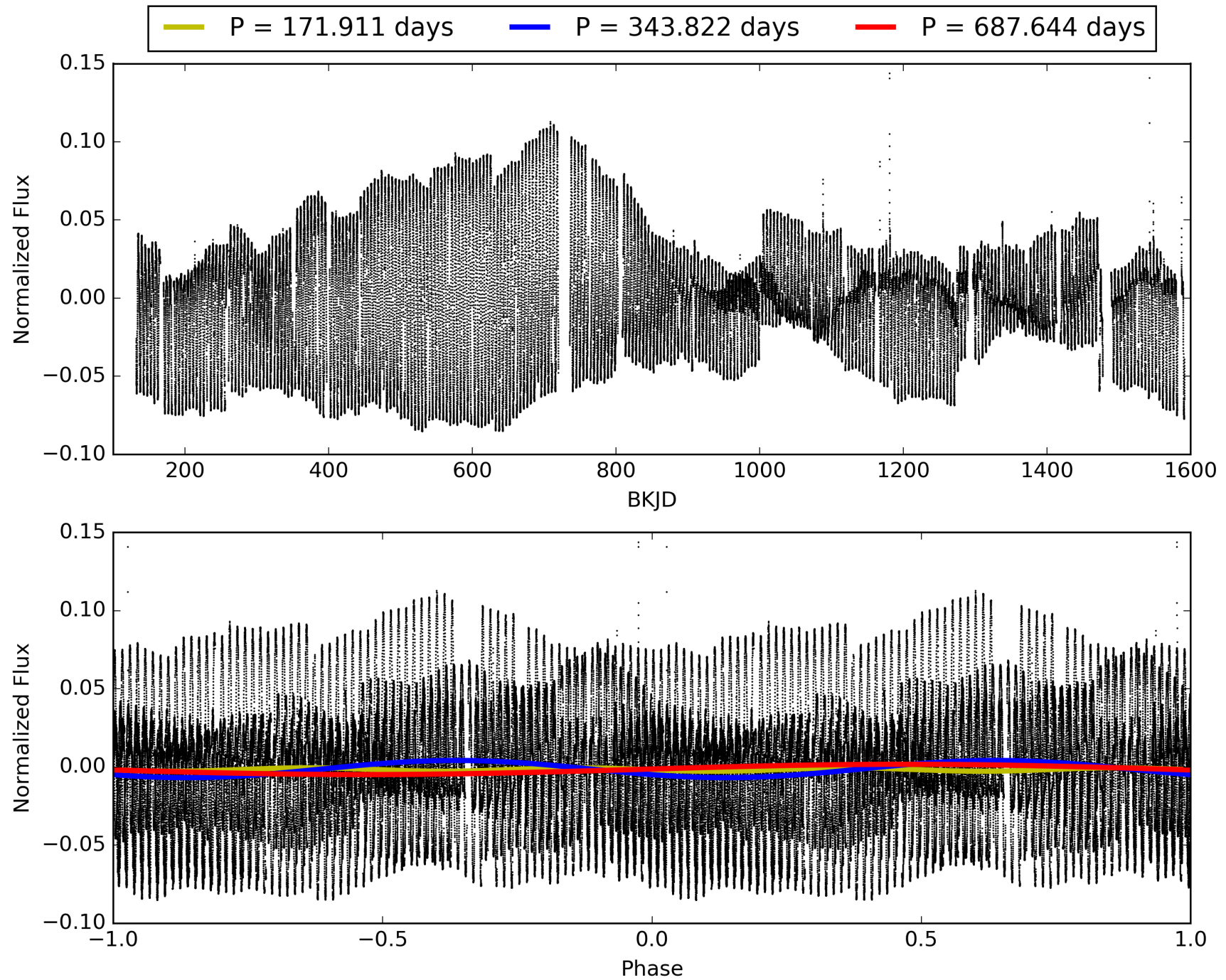
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010197260-01, PDC Light Curves

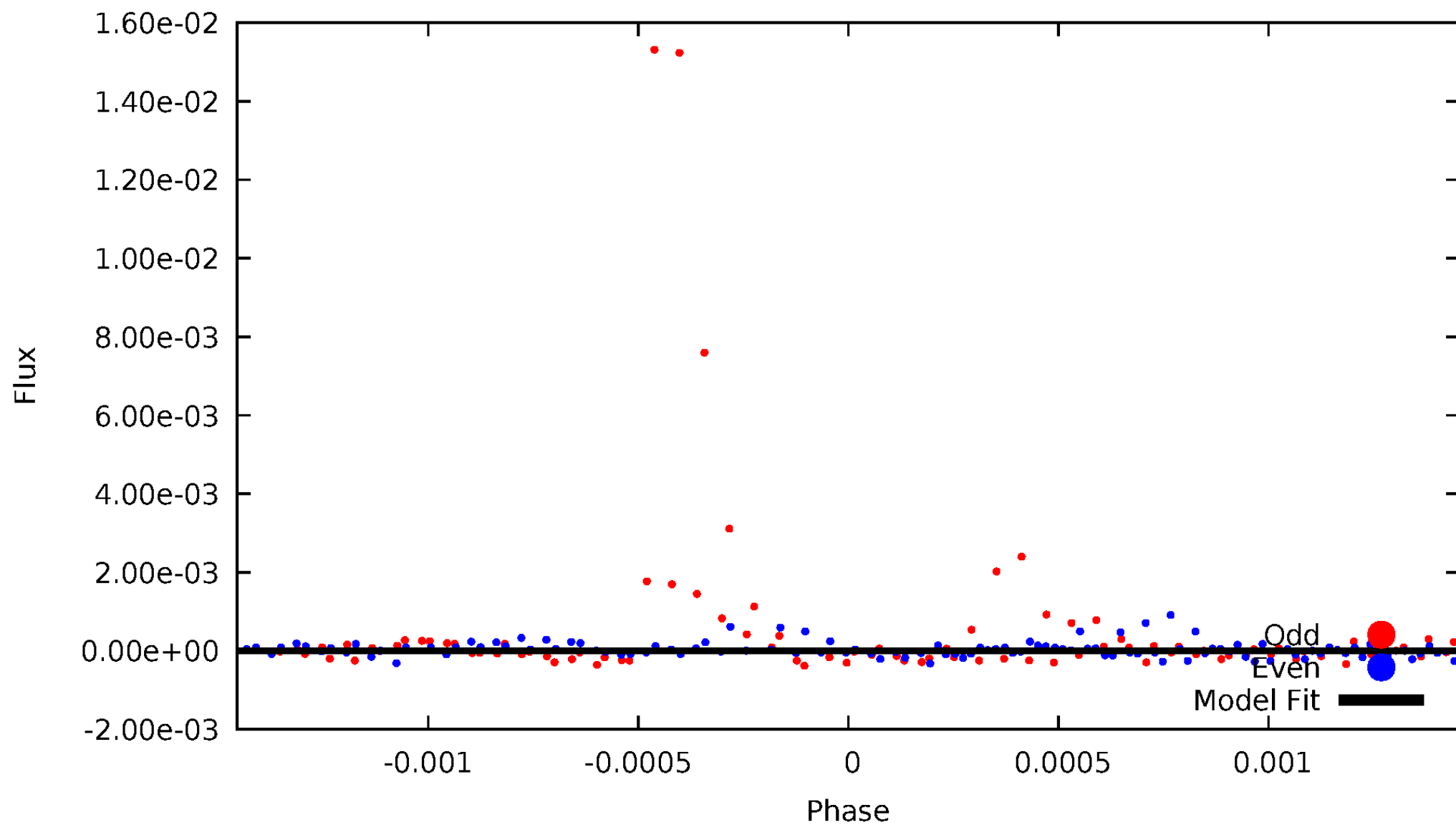


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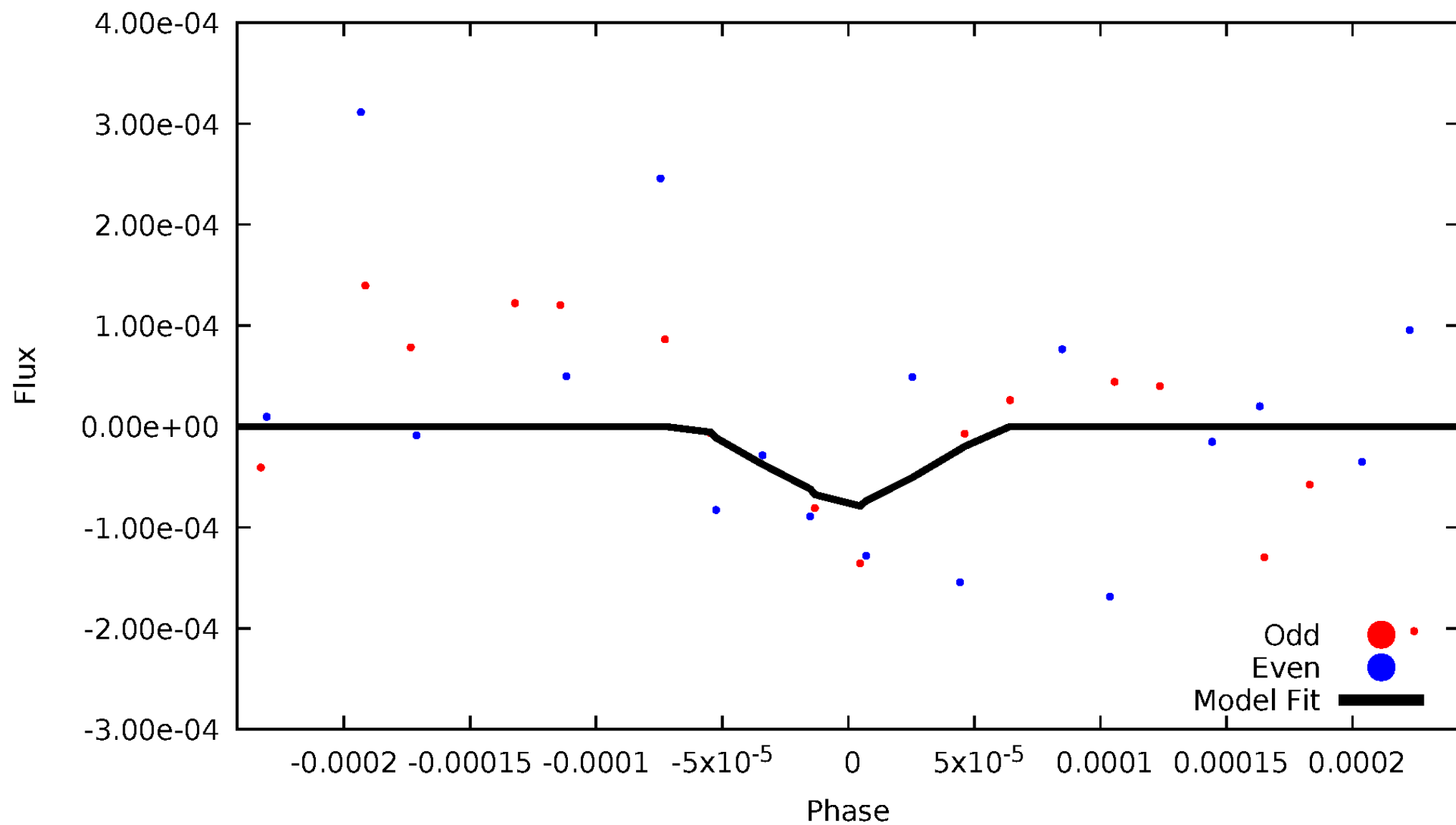
DV Odd/Even

TCE 010197260-01

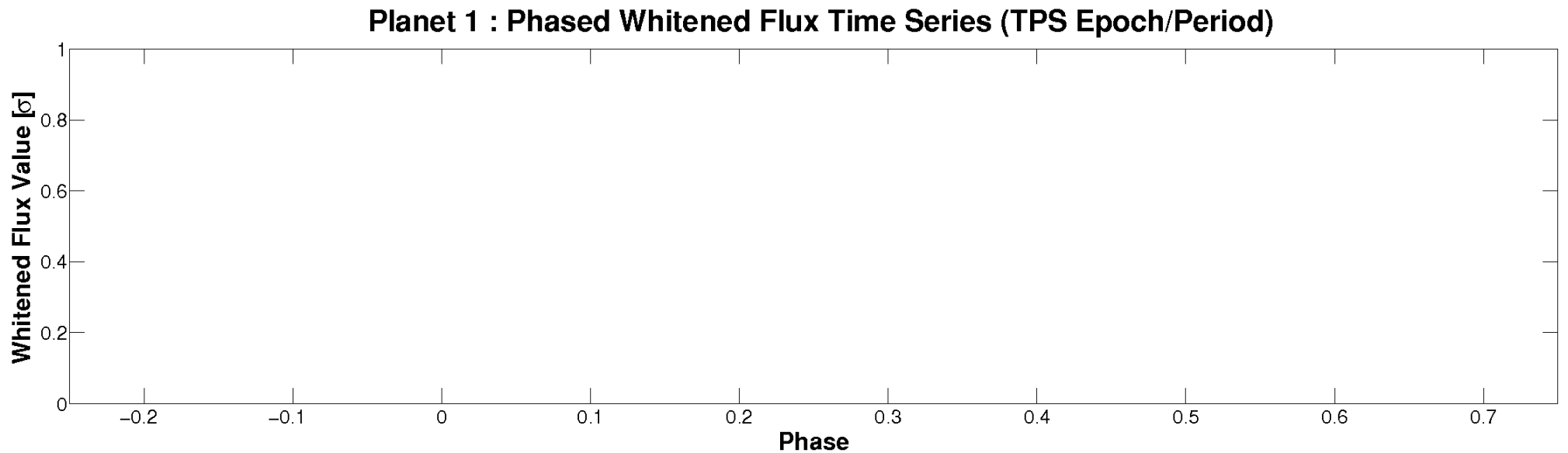
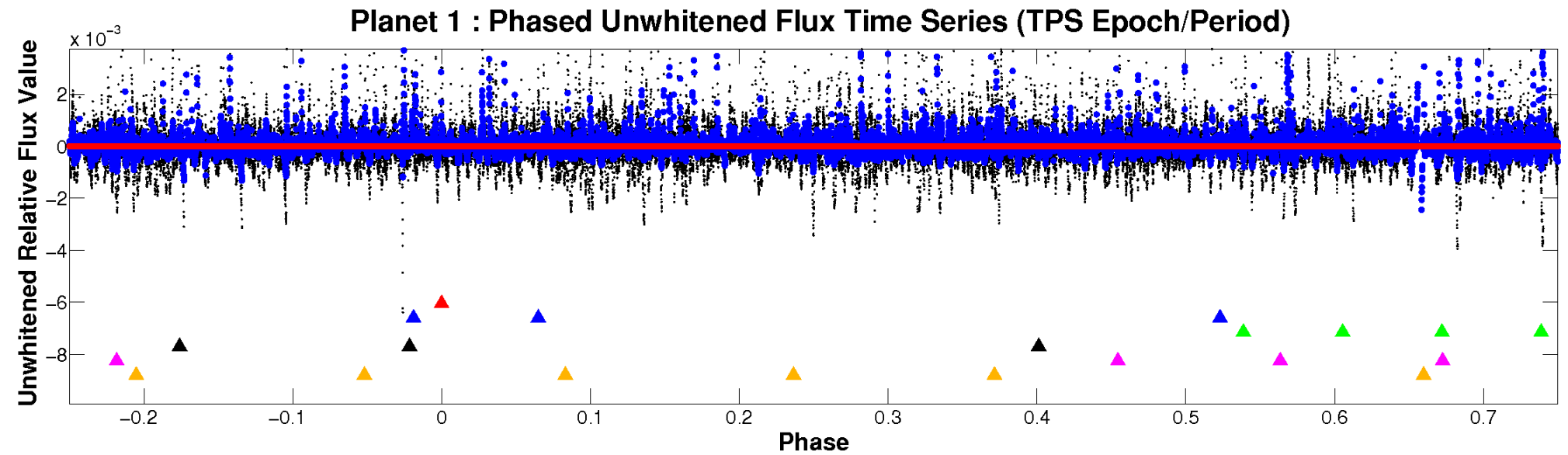


ALT Odd/Even

TCE 010197260-01

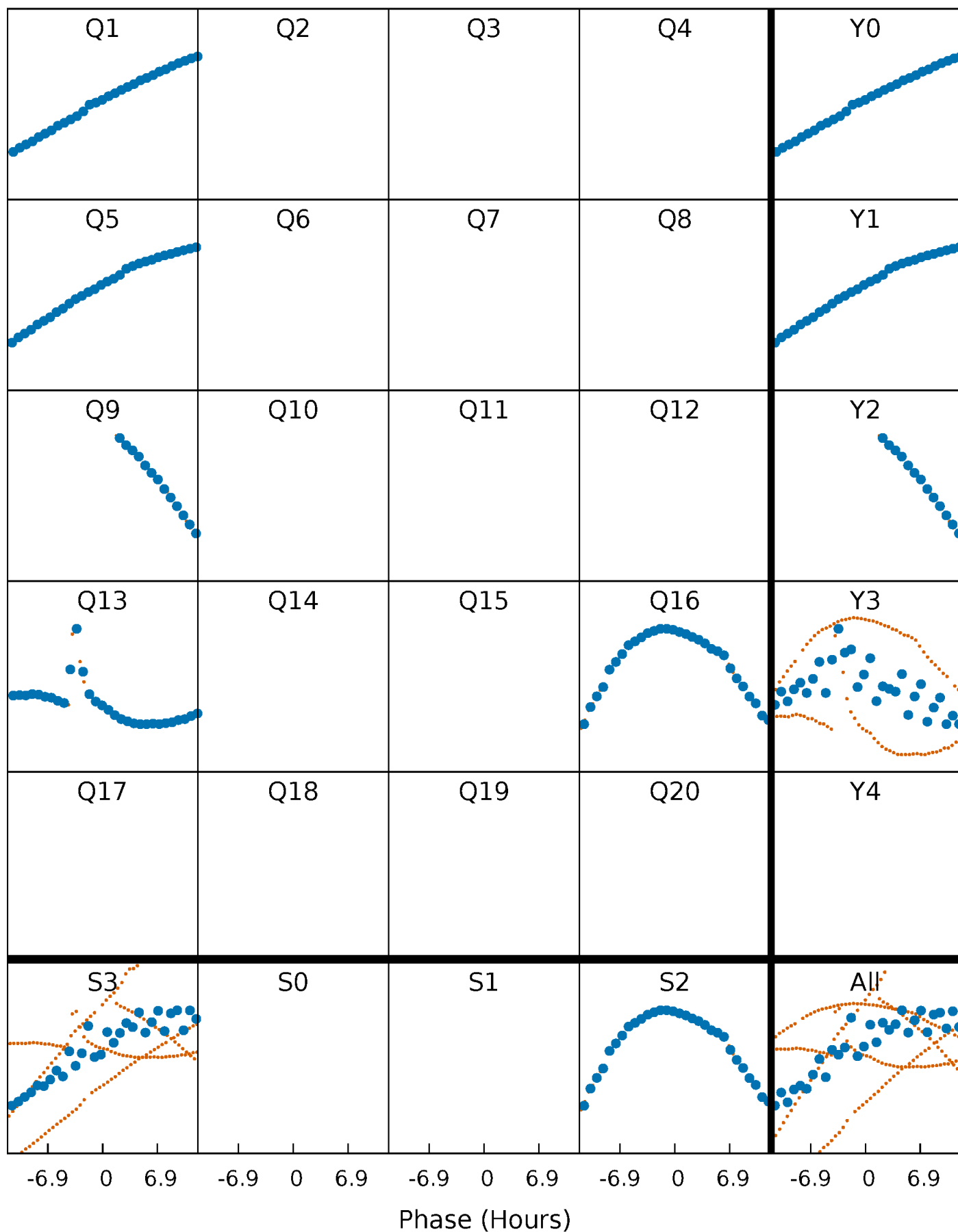


Non-Whitened Vs. Whitened Light Curve



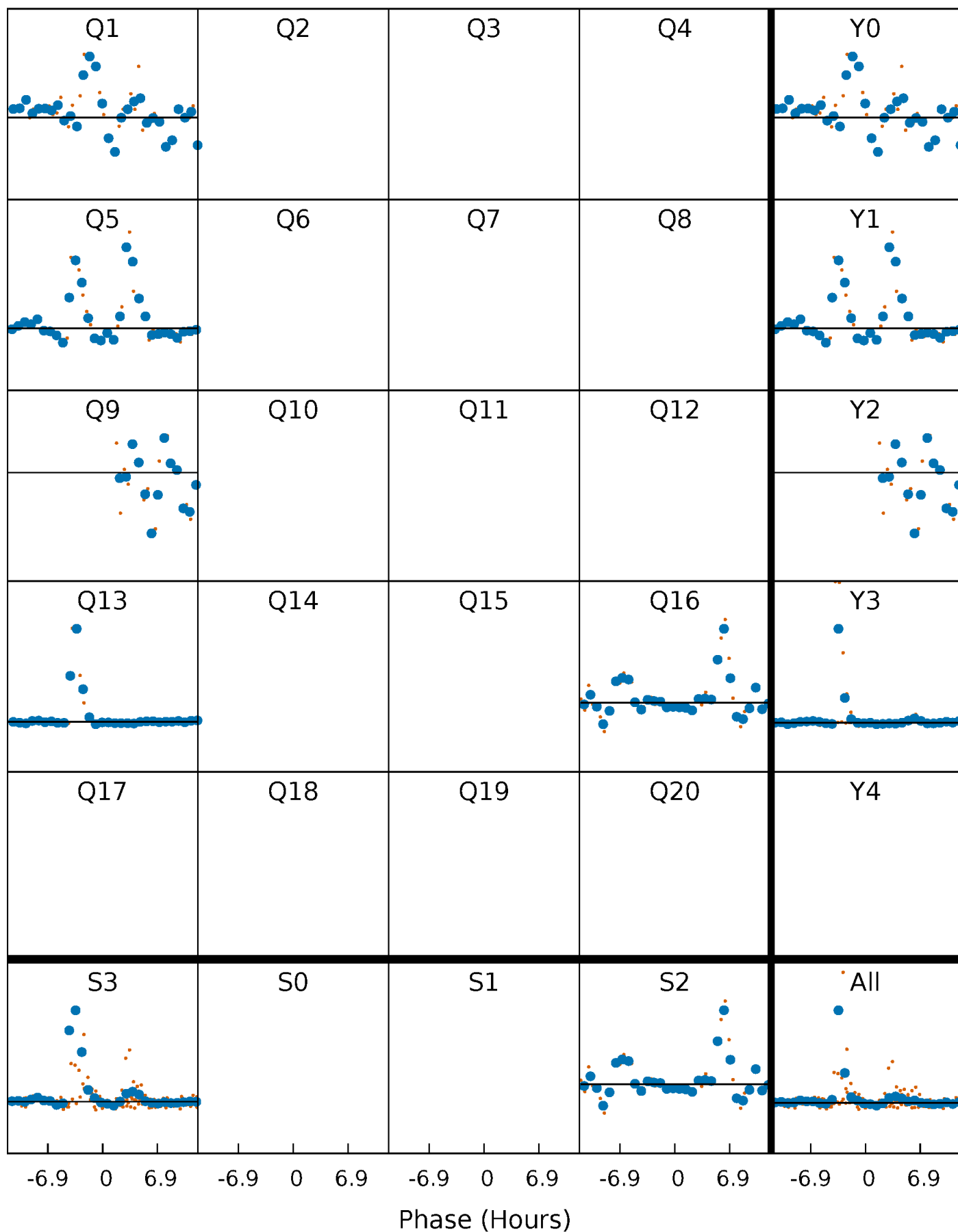
PDC Quarter-Phased Transit Curves

TCE 010197260-01 P=343.821892 Days $T_0=157.907748$ (BKJD)



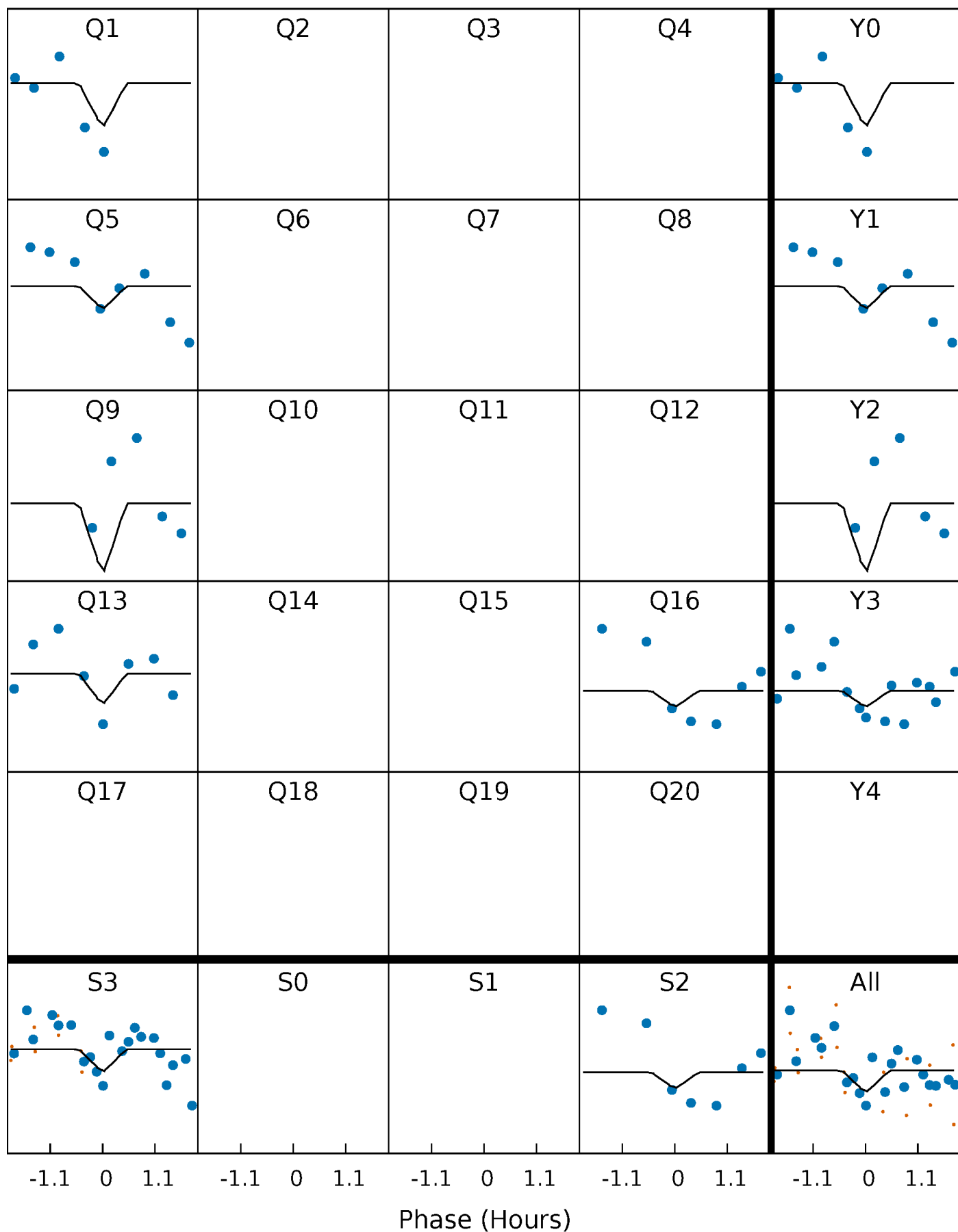
DV Quarter-Phased Transit Curves

TCE 010197260-01 $P=343.821892$ Days $T_0=157.907748$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

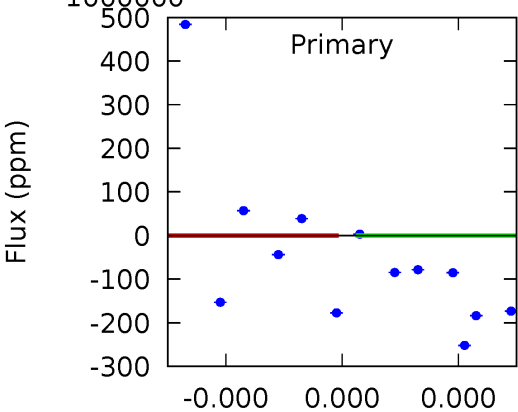
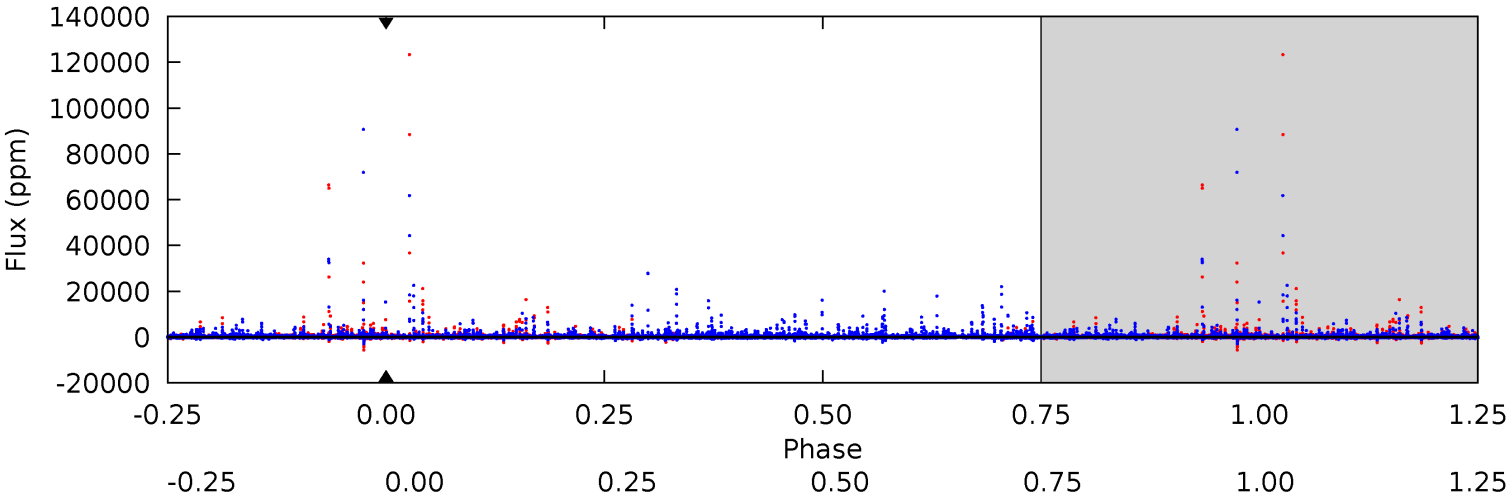
TCE 010197260-01 P=343.821892 Days $T_0=158.217514$ (BKJD)



DV Model-Shift Uniqueness Test

010197260-01, P = 343.821892 Days, E = 157.907748 Days

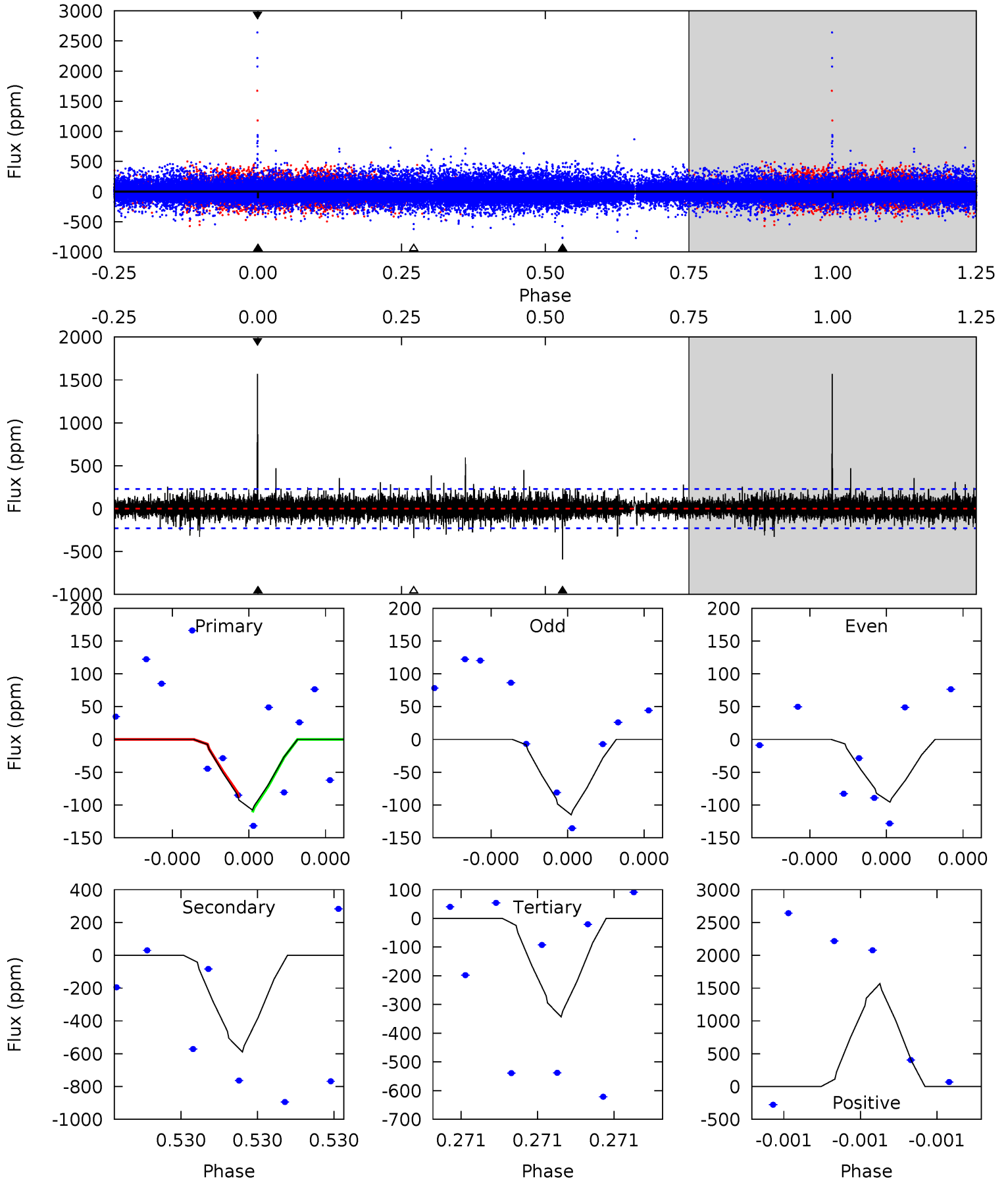
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010197260-01, P = 343.821892 Days, E = 158.217514 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.74	15.0	8.74	39.9	5.85	3.89	1.59	-5.99	-37.2	6.27	-24.9	0.16	0.75	0.73	0.29



Stellar Parameters For KIC 010197260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5134^{+140}_{-127}	$3.726^{+0.854}_{-0.366}$	$-0.460^{+0.350}_{-0.250}$	$2.075^{+1.352}_{-1.488}$	$0.836^{+0.253}_{-0.136}$	$0.132^{+2.931}_{-0.102}$
	+3%/-2%	+23%/-10%	+76%/-54%	+65%/-72%	+30%/-16%	+2224%/-77%
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 010197260-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$16.64^{+20.51}_{-11.83}$	469^{+85}_{-94}	4289^{+11777}_{-17759}	$3828^{+368718}_{-320088}$
Alt.	-589 ± 39	$14.05^{+18.10}_{-10.04}$	469^{+81}_{-96}	3482^{+2022}_{-657}	1404^{+14512}_{-1131}

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 $A_{obs} \gg 1.0$

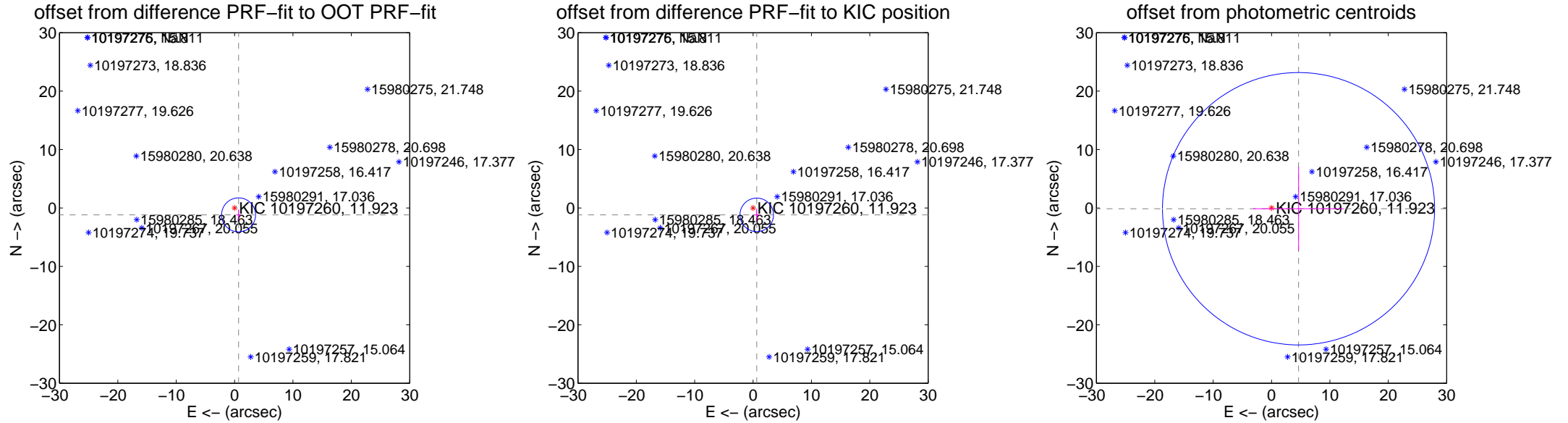
DV Centroid Data

Supplemental centroid analysis for 010197260-01. **Kepler magnitude: 11.92.** Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

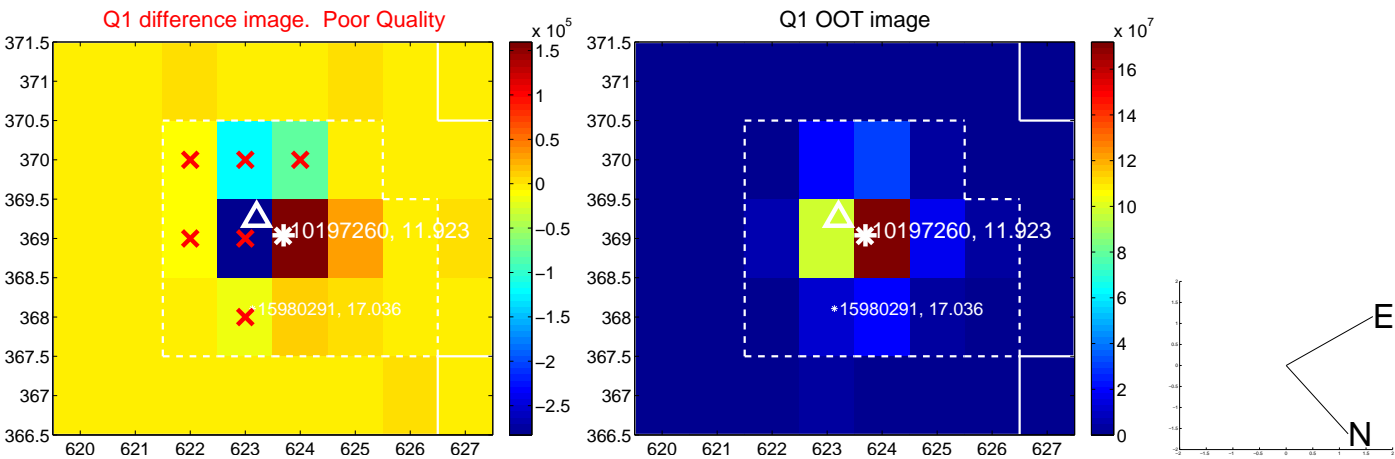
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.369 ± 0.970	1.41	-0.685 ± 0.376	-1.185 ± 0.907
PRF-fit source offset from KIC position	1.338 ± 0.957	1.40	-0.631 ± 0.463	-1.181 ± 1.056
photometric centroid source offset	4.63 ± 7.77	0.60	-4.63 ± 7.77	-0.14 ± 7.20

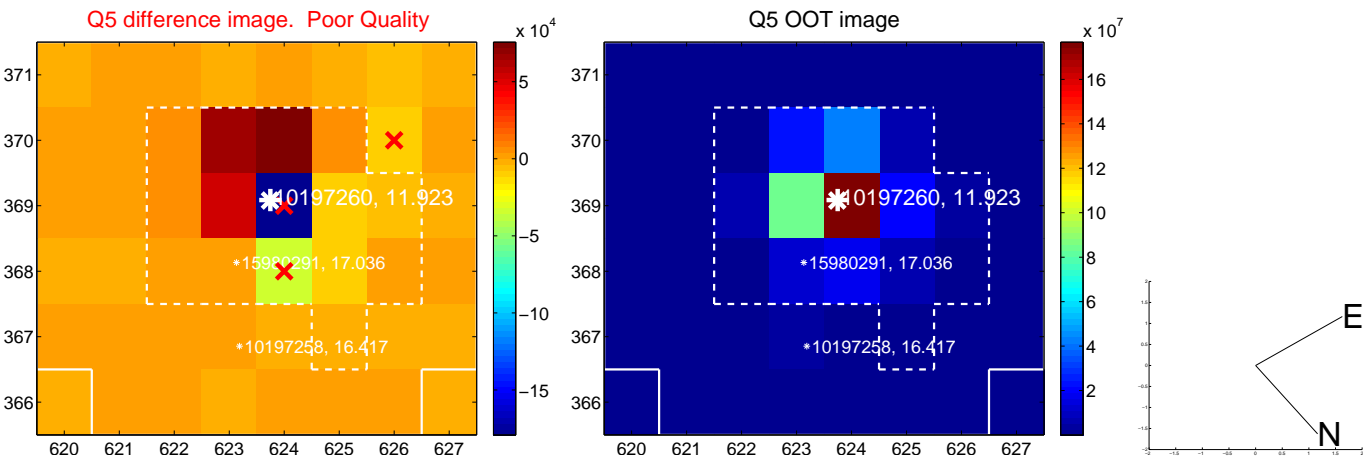


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



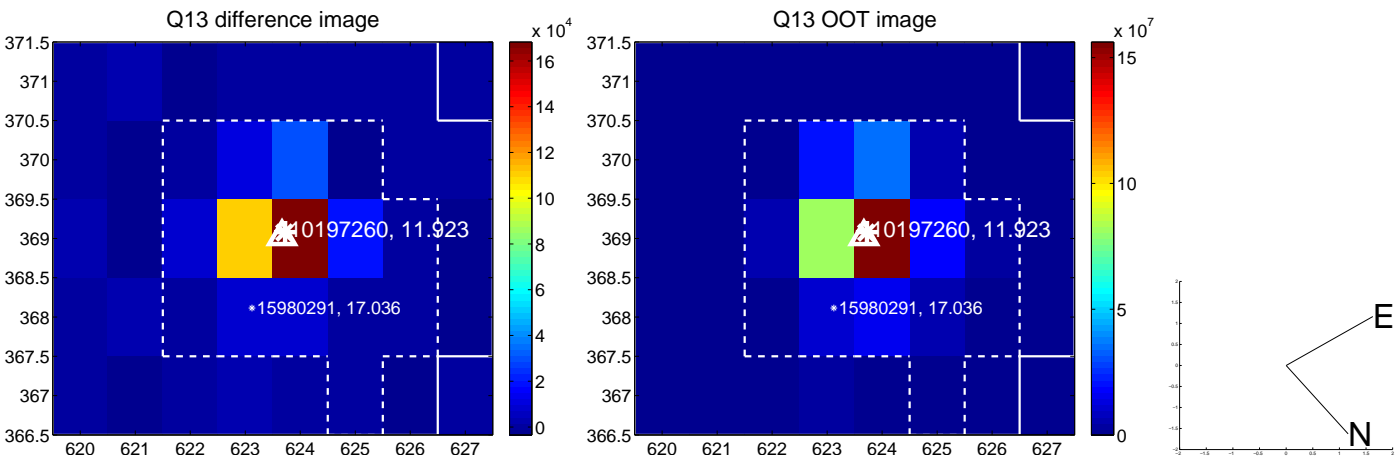
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



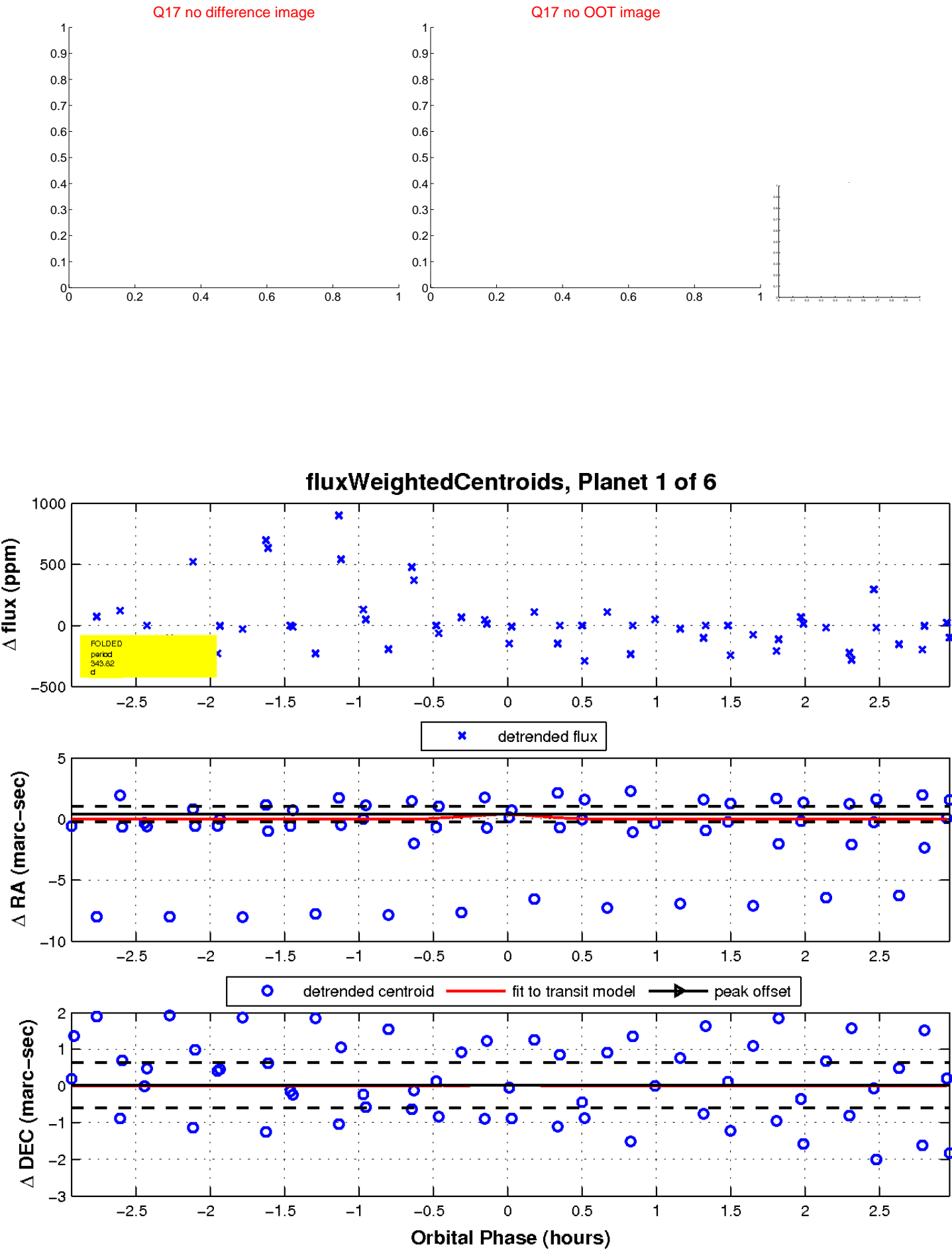
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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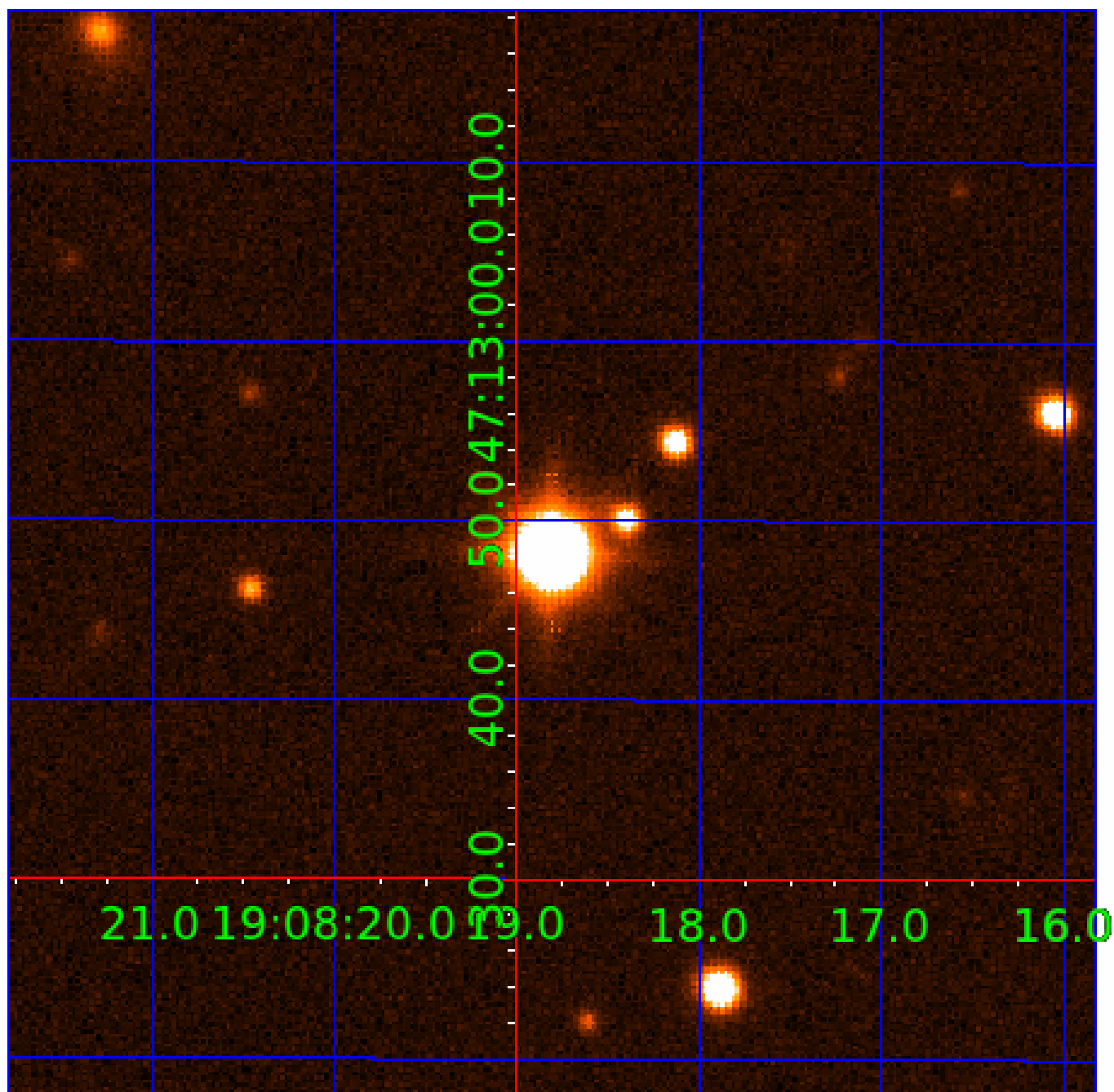


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010197260

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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010197260-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
010197260-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

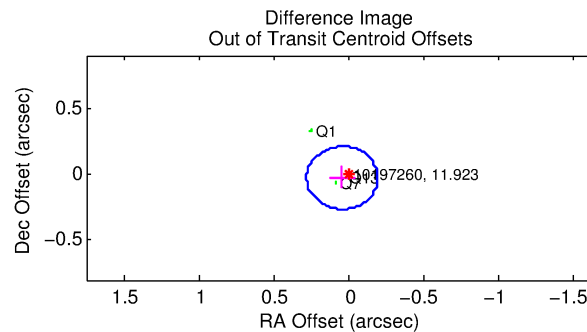
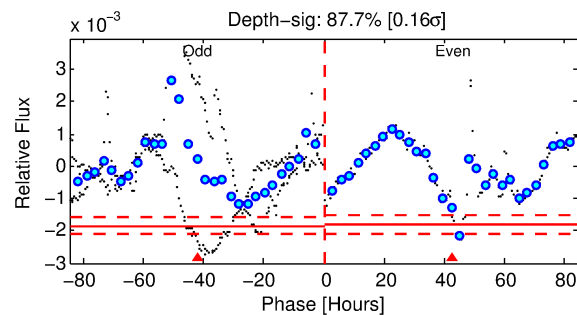
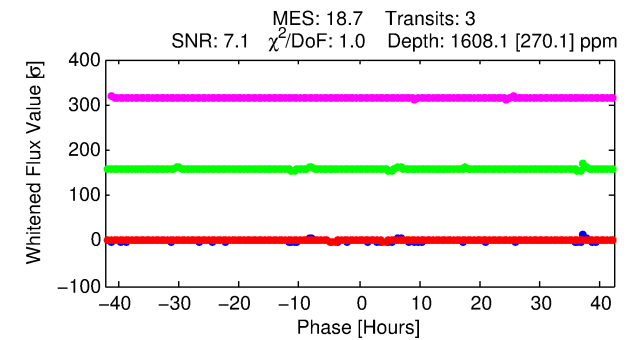
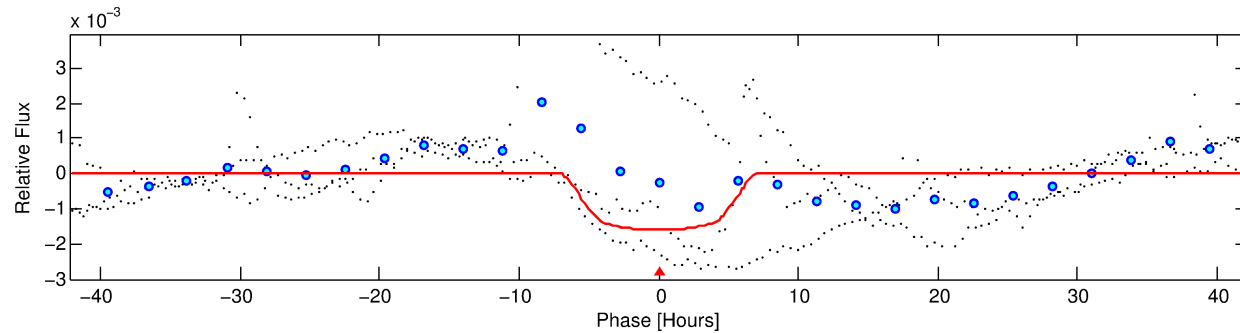
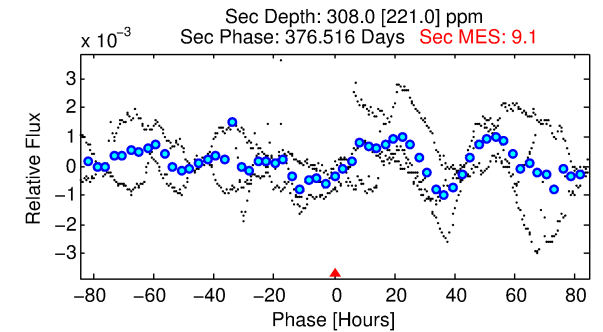
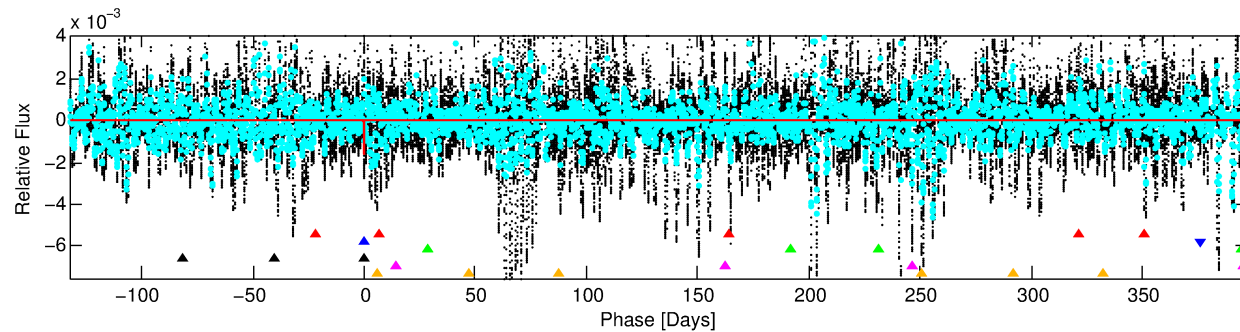
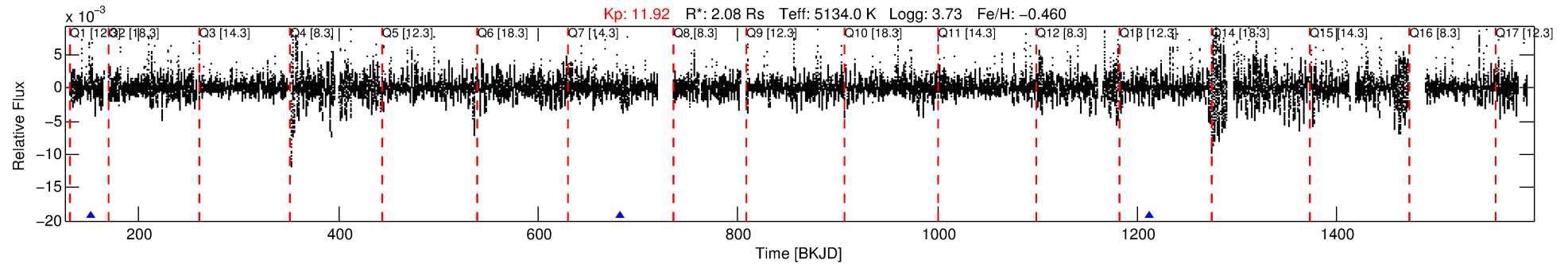
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010197260-02

No Significant Match Found

DV One-Page Summary

KIC: 10197260 Candidate: 2 of 6 Period: 530.139 d



DV Fit Results:

Period = 530.13904 [0.00821] d
Epoch = 151.4291 [0.0107] BKJD
Rp/R* = 0.0445 [0.0038]
a/R* = 150.01 [9.69]
b = 0.90 [0.01]
Seff = 1.84 [2.57]
Teq = 297 [104] K
Rp = 10.09 [7.28] Re
a = 1.2077 [0.9798] AU
Ag = 2429.07 [3834.03] [0.63σ]
Teffp = 3222 [601] K [4.80σ]

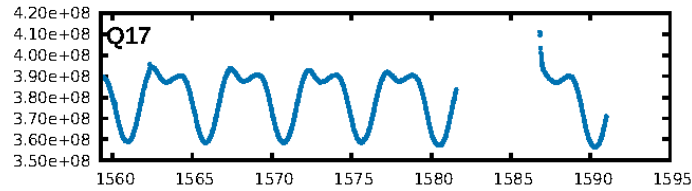
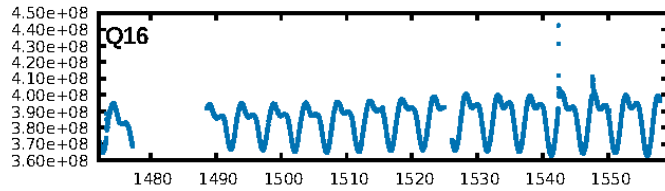
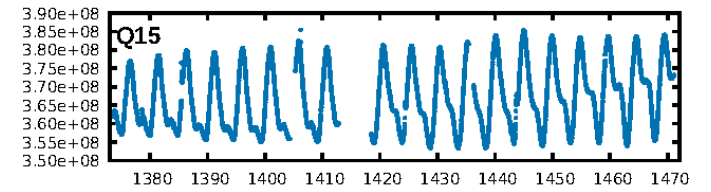
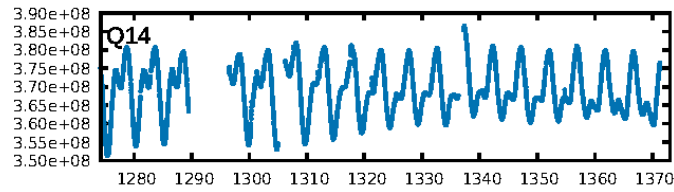
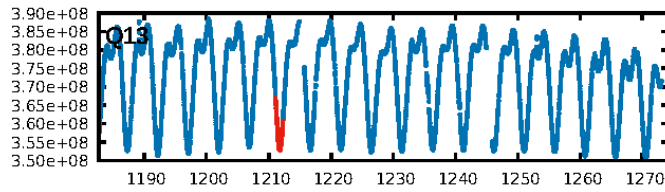
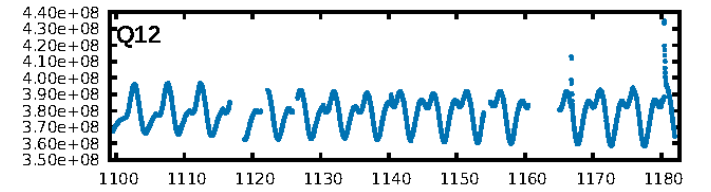
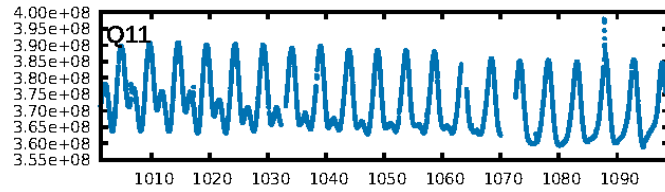
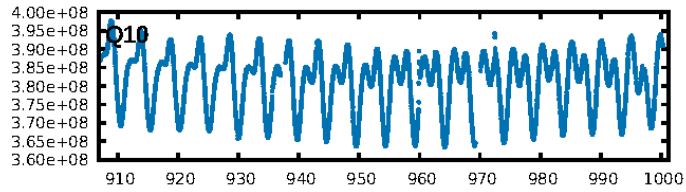
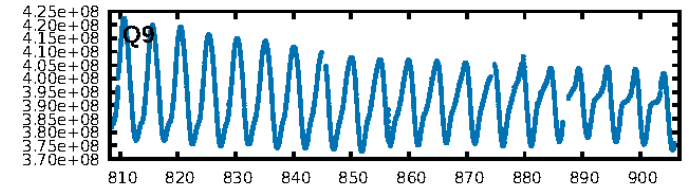
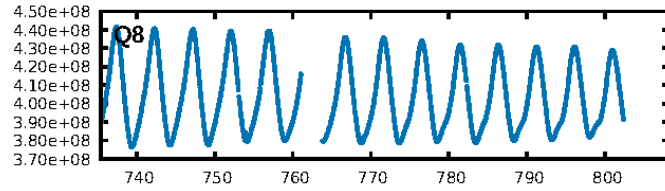
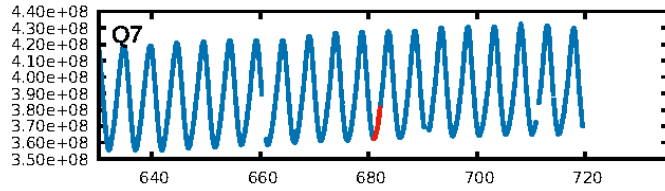
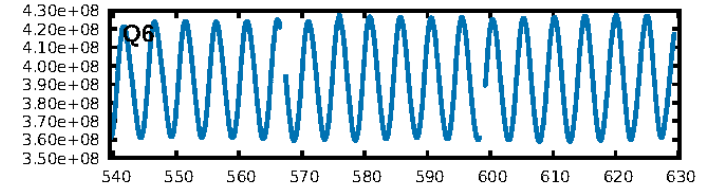
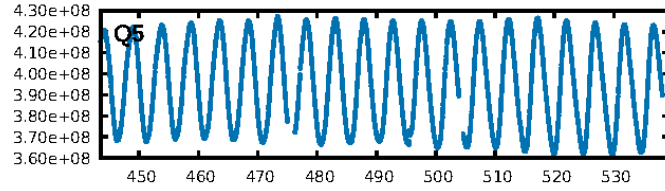
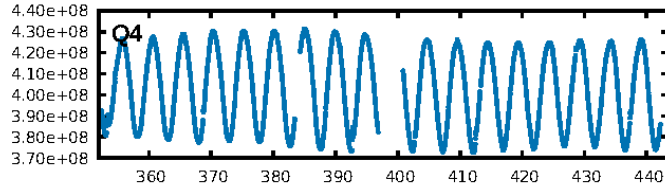
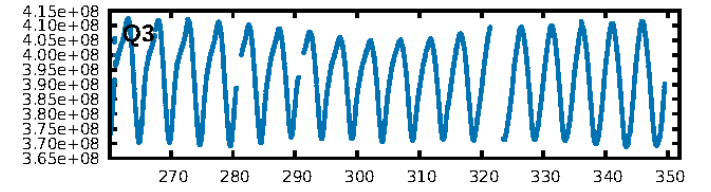
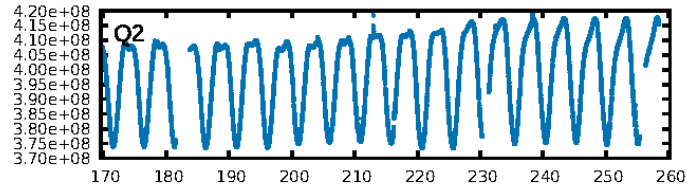
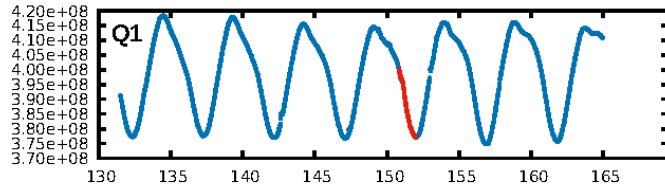
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [52.19σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.0%
ModelChiSquareGof-sig: 96.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.7461
Centroid-sig: 3.7%
Centroid-so: 0.629 arcsec [1.45σ]
OotOffset-rm: 0.048 arcsec [0.61σ]
OotOffset-st: 0.1/0/2 [3]
KicOffset-rm: 0.104 arcsec [1.32σ]
KicOffset-st: 0.1/0/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.67 [2/3]

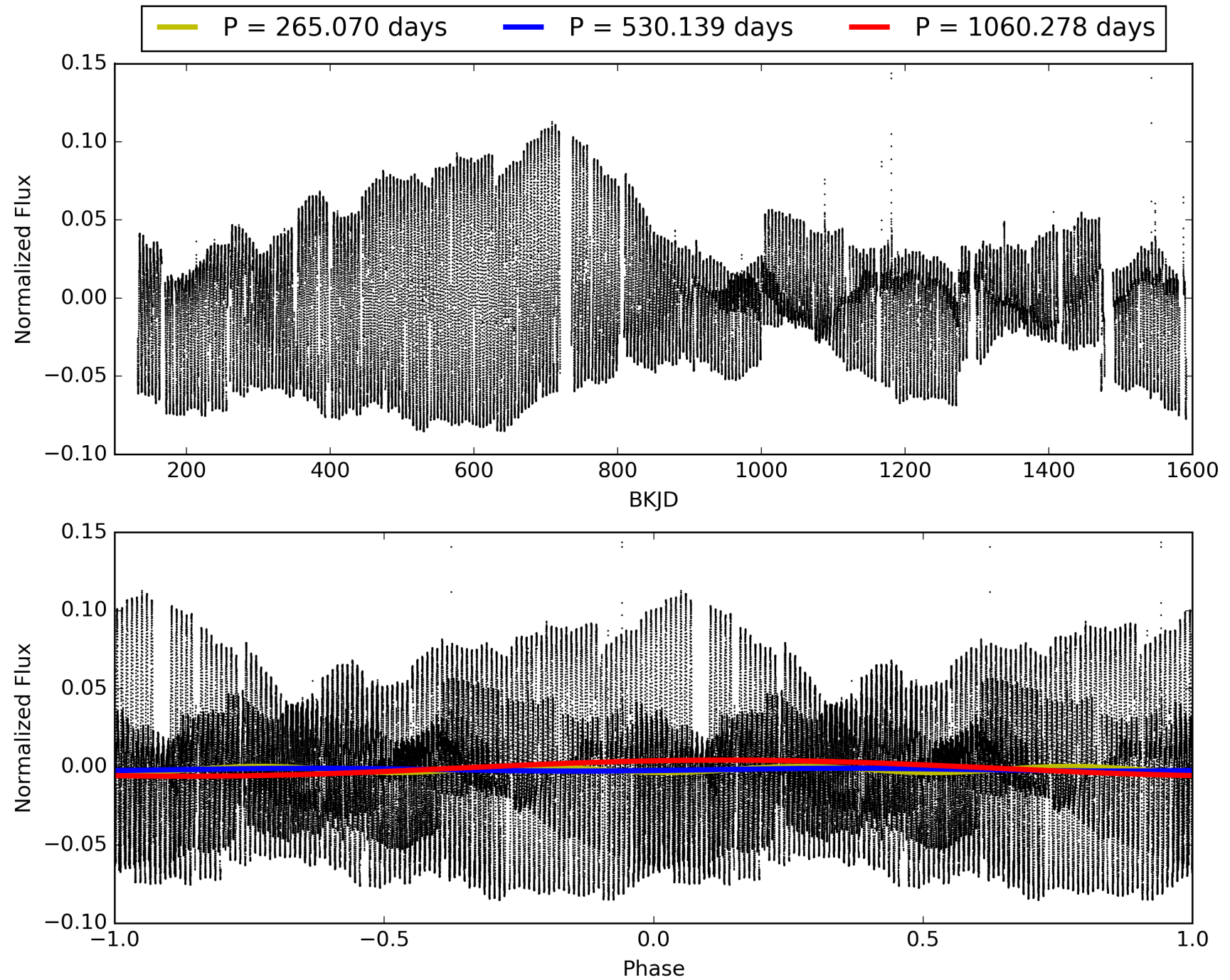
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:57:03 Z

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

TCE 010197260-02, PDC Light Curves

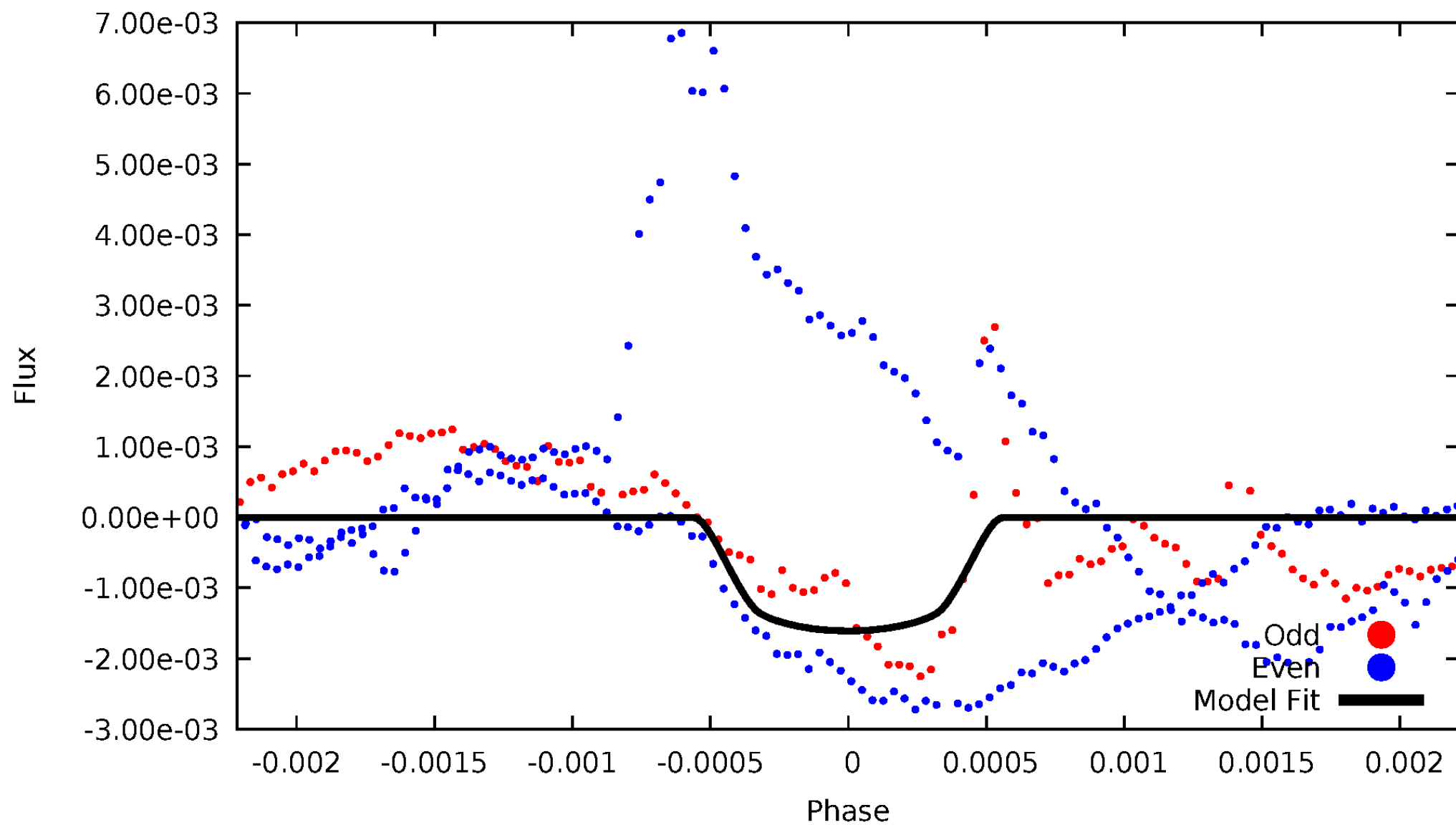


TCE 010197260-02



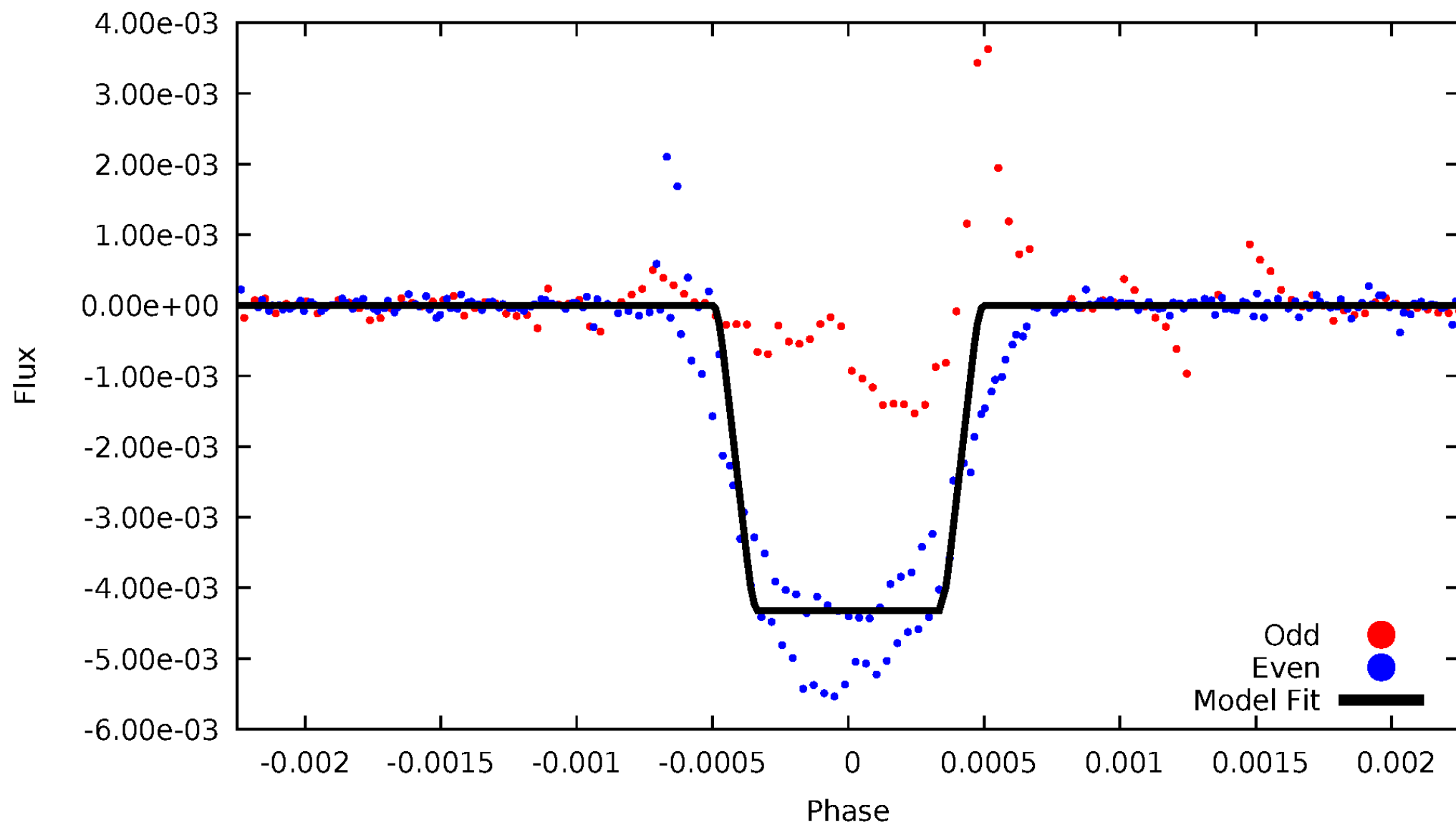
DV Odd/Even

TCE 010197260-02



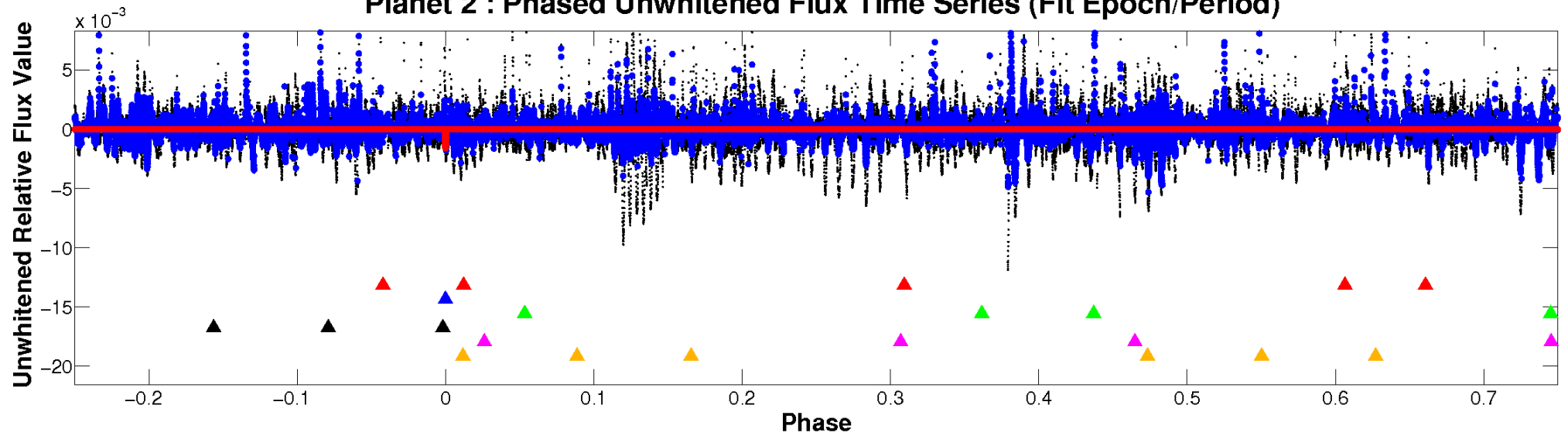
ALT Odd/Even

TCE 010197260-02

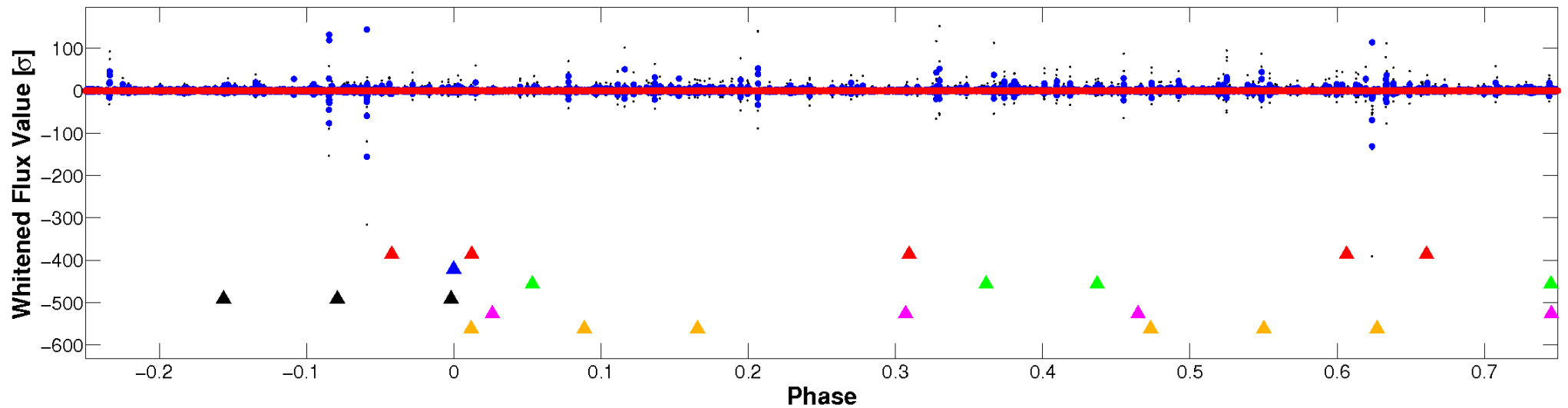


Non-Whitened Vs. Whitened Light Curve

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

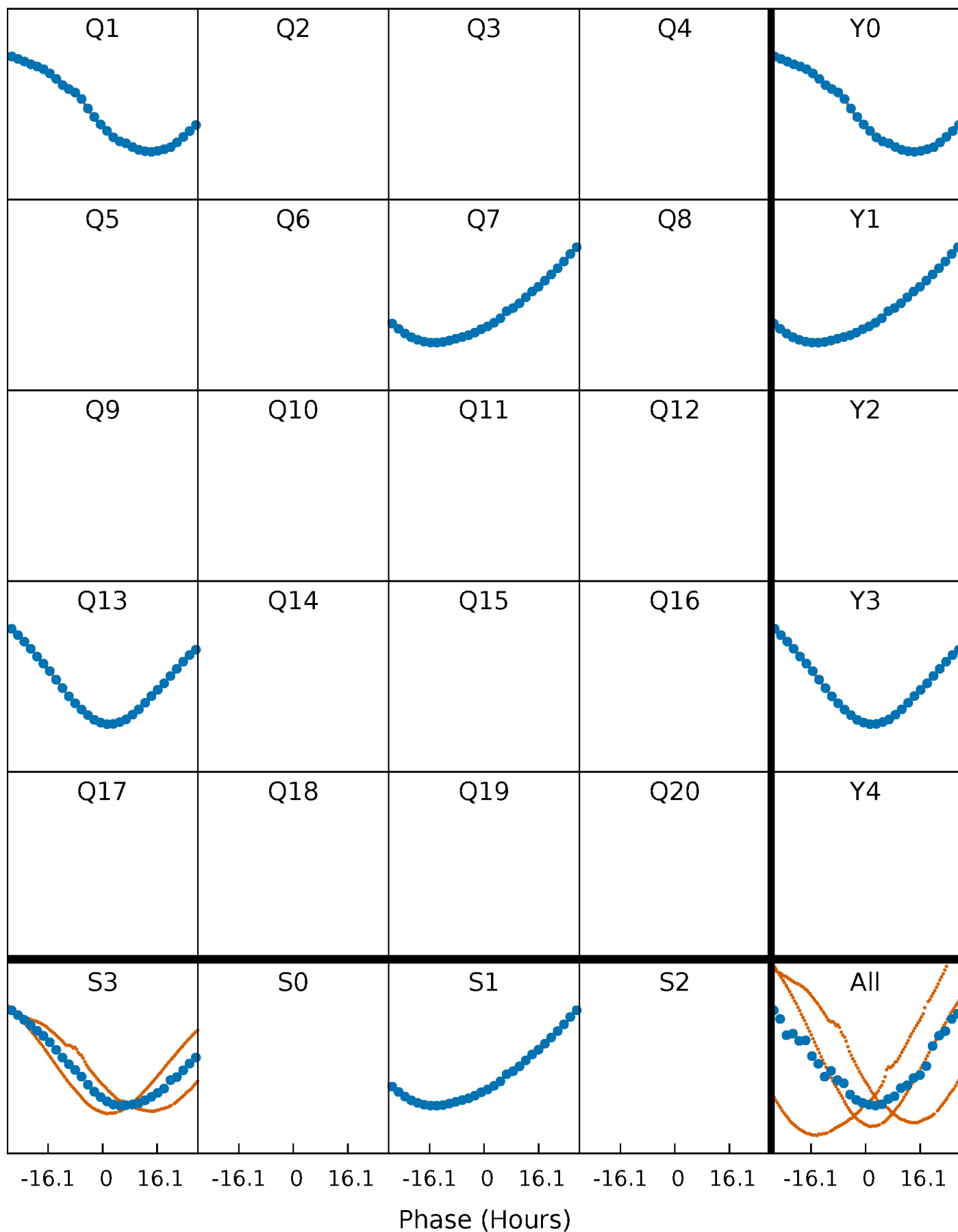


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



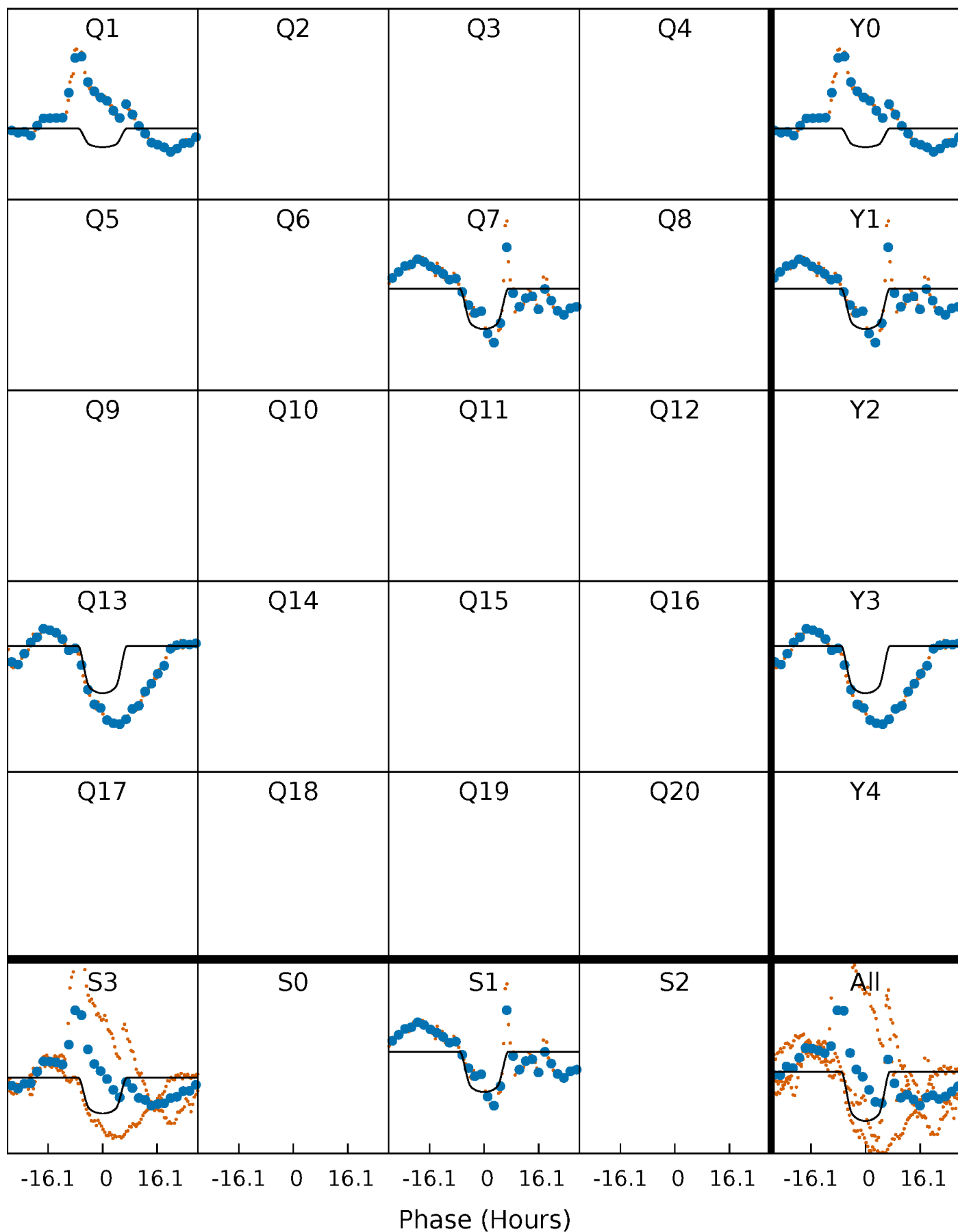
PDC Quarter-Phased Transit Curves

TCE 010197260-02 $P=530.139040$ Days $T_0=151.429075$ (BKJD)



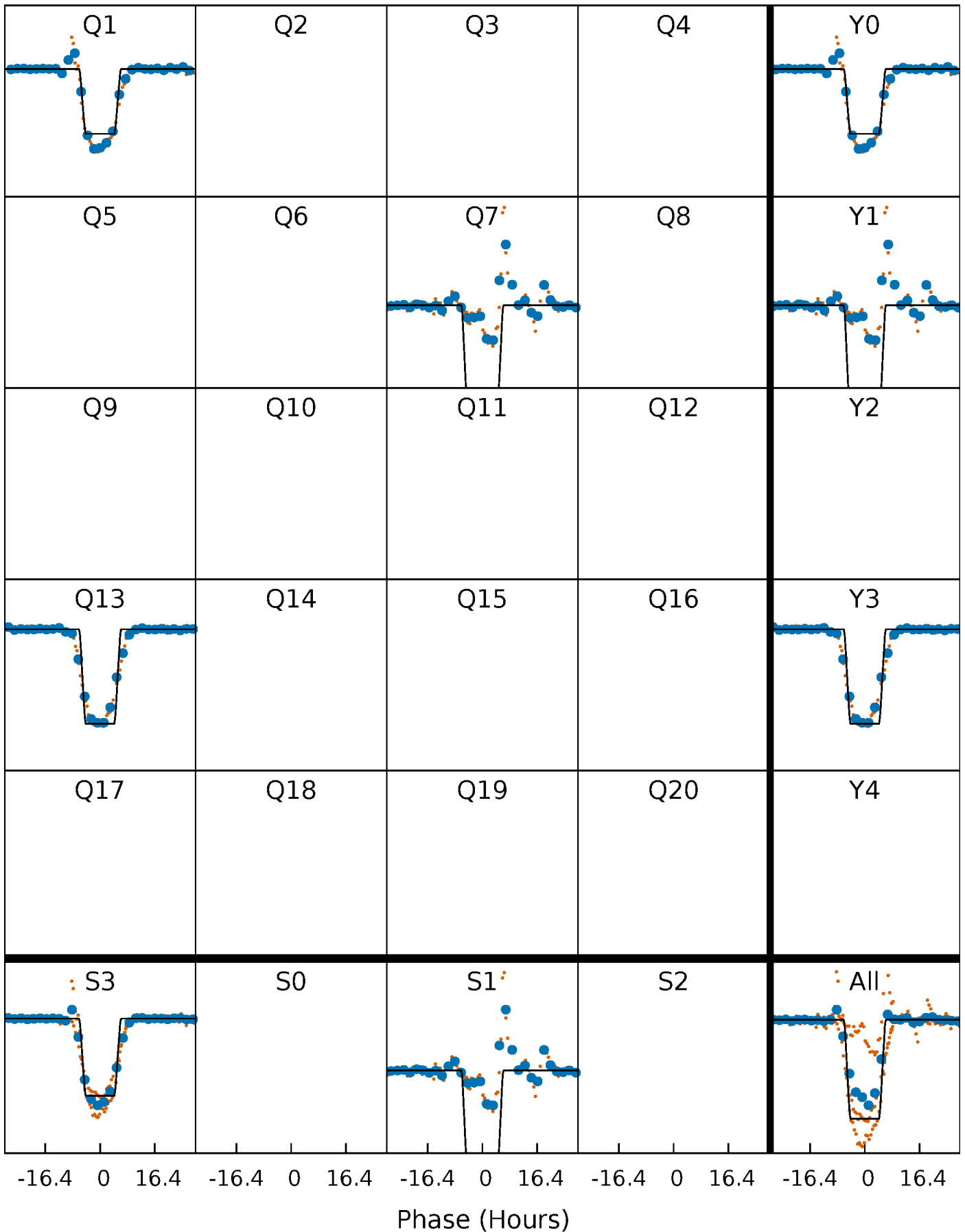
DV Quarter-Phased Transit Curves

TCE 010197260-02 $P=530.139040$ Days $T_0=151.429075$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

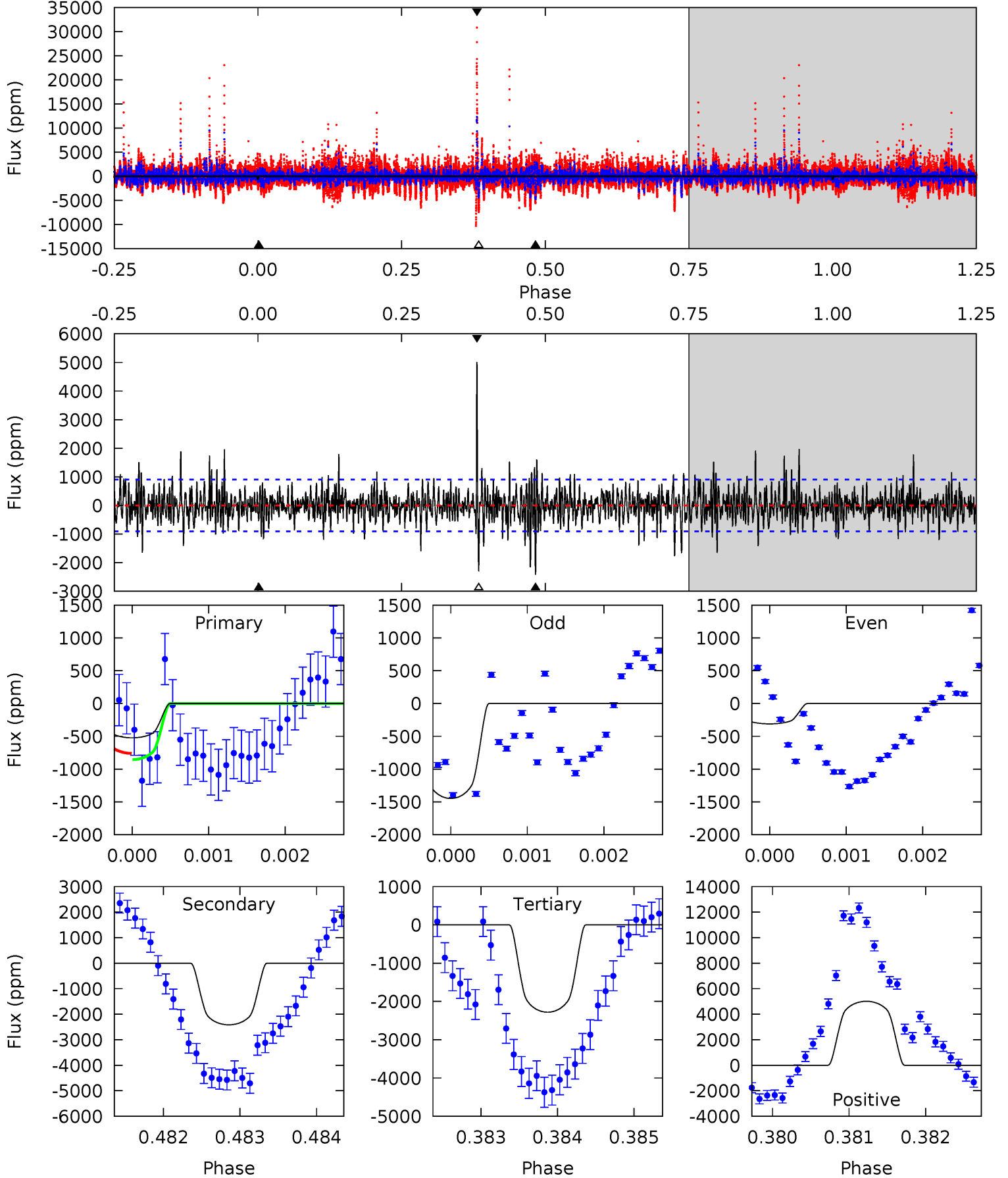
TCE 010197260-02 P=530.135092 Days $T_0=151.442289$ (BKJD)



DV Model-Shift Uniqueness Test

010197260-02, P = 530.139040 Days, E = 151.429075 Days

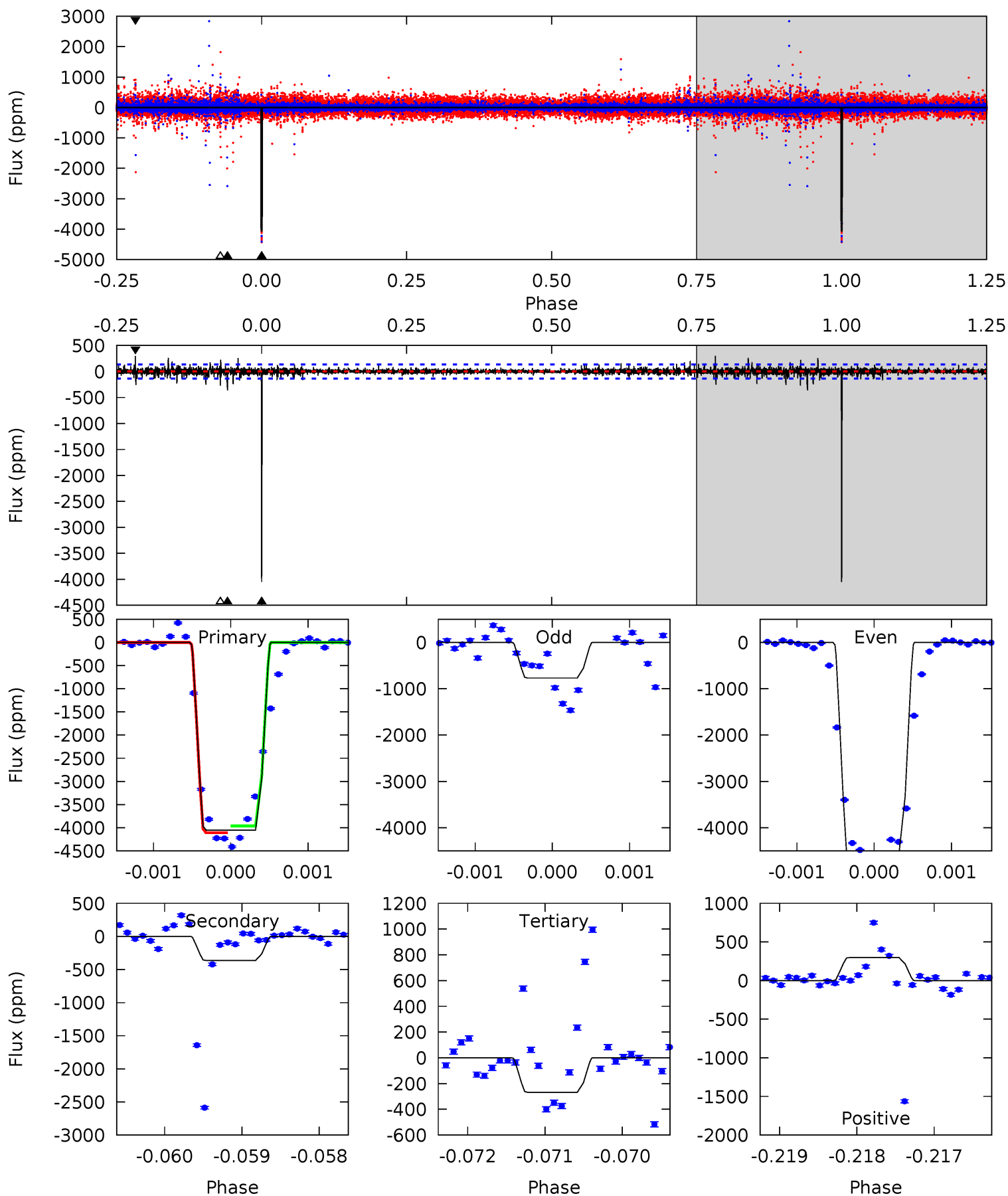
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.13	14.5	13.7	30.0	5.43	3.25	2.80	-10.5	-26.9	0.81	-15.6	3.11	0.20	0.67	0.28



Alt Model-Shift Uniqueness Test

010197260-02, P = 530.135092 Days, E = 151.442289 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
162.9	14.6	10.8	12.0	5.46	3.30	1.17	152.1	150.9	3.80	2.60	82.8	0.80	0.07	0



Stellar Parameters For KIC 010197260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5134^{+140}_{-127}	$3.726^{+0.854}_{-0.366}$	$-0.460^{+0.350}_{-0.250}$	$2.075^{+1.352}_{-1.488}$	$0.836^{+0.253}_{-0.136}$	$0.132^{+2.931}_{-0.102}$
	+3%/-2%	+23%/-10%	+76%/-54%	+65%/-72%	+30%/-16%	+2224%/-77%
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 010197260-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2415 ± 167	$9.90^{+3.53}_{-3.43}$	410^{+65}_{-77}	5371^{+276}_{-249}	20044^{+27314}_{-9189}
Alt.	-363 ± 25	$14.84^{+5.36}_{-5.44}$	411^{+68}_{-81}	3285^{+102}_{-83}	1380^{+1864}_{-627}

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

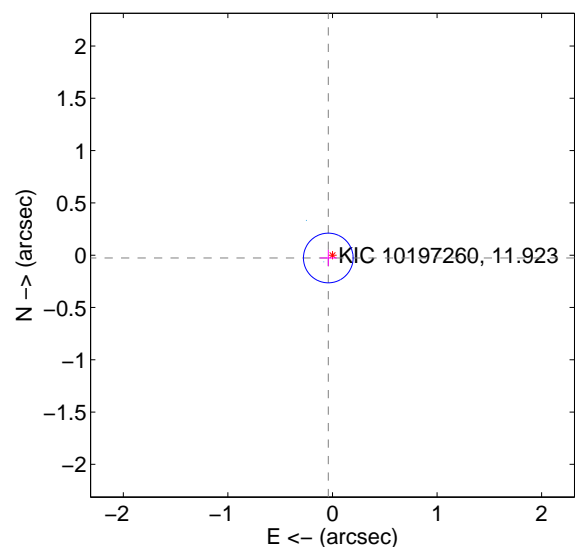
Supplemental centroid analysis for 010197260-02. **Kepler magnitude: 11.92.** Transit SNR 7.13

There are 3 quarters with good PRF difference image offsets

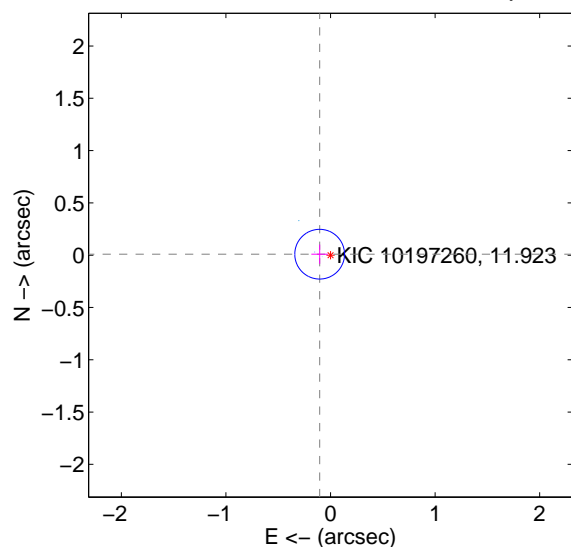
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.079	0.61	0.040 ± 0.080	-0.027 ± 0.078
PRF-fit source offset from KIC position	0.104 ± 0.079	1.32	0.104 ± 0.079	0.009 ± 0.092
photometric centroid source offset	0.63 ± 0.43	1.45	0.57 ± 0.44	-0.27 ± 0.38

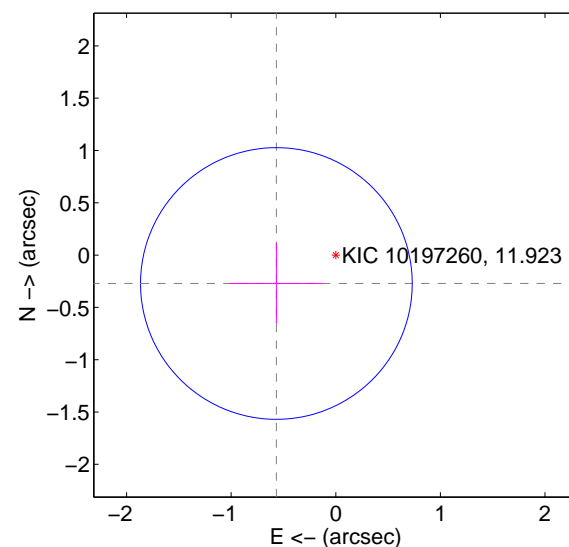
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

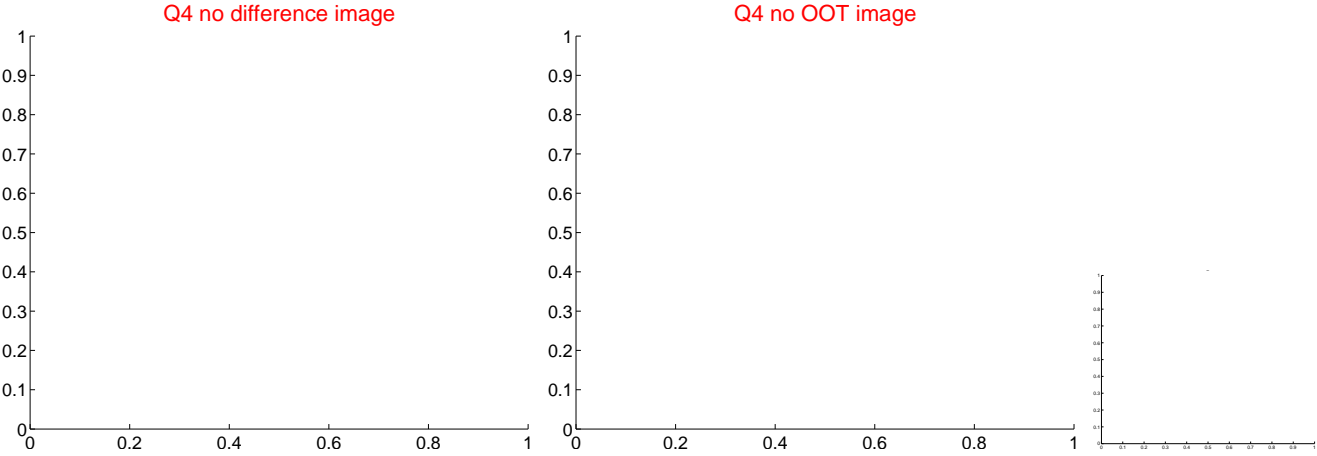
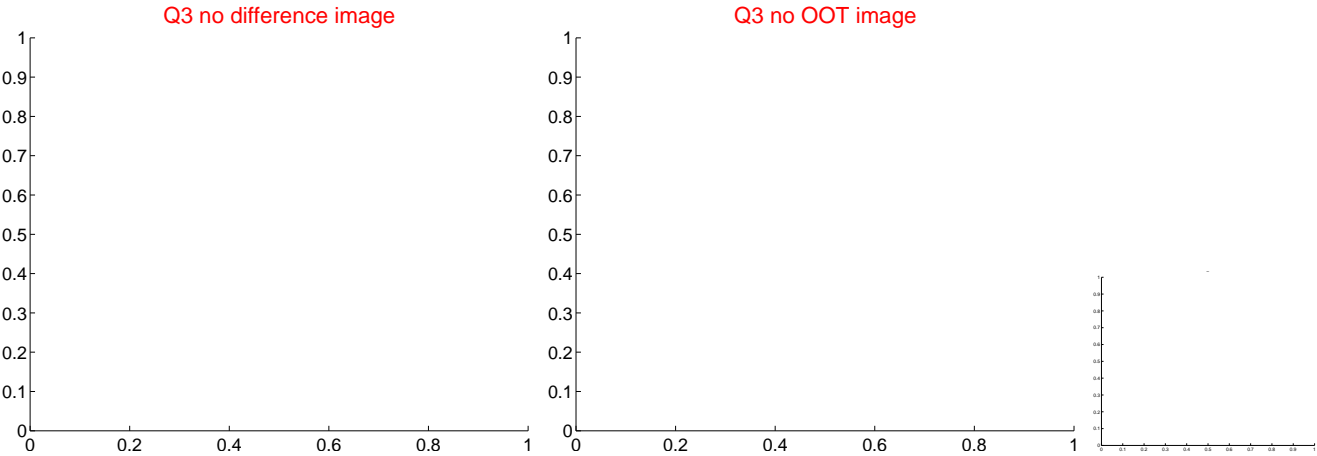
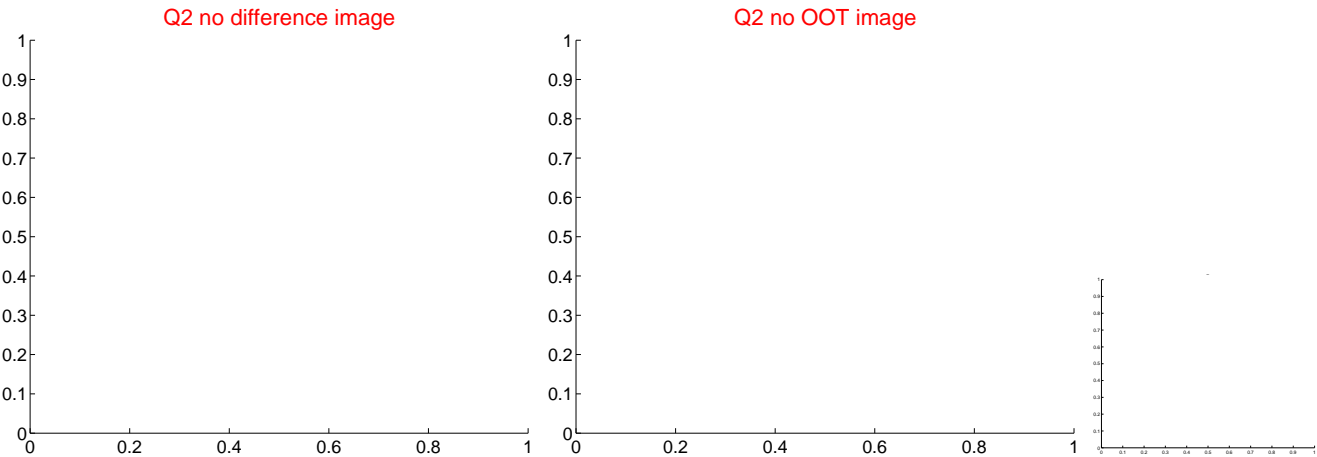
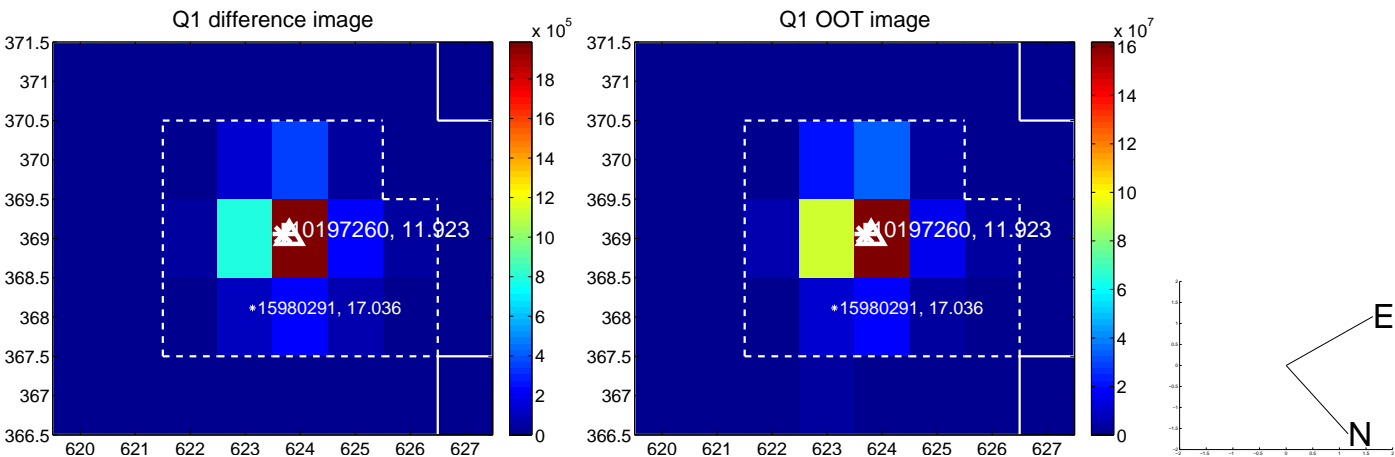


offset from photometric centroids

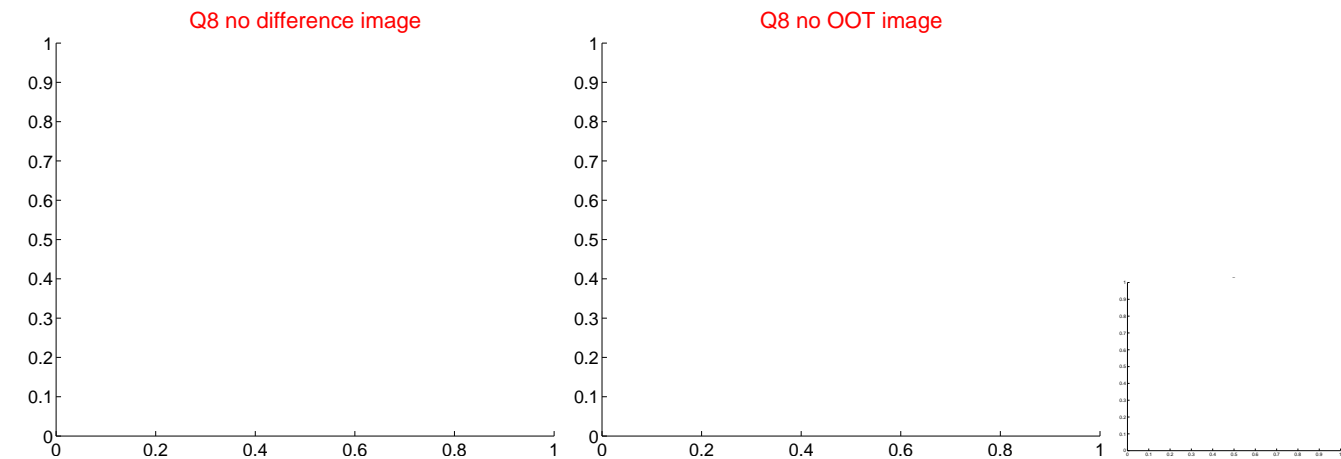
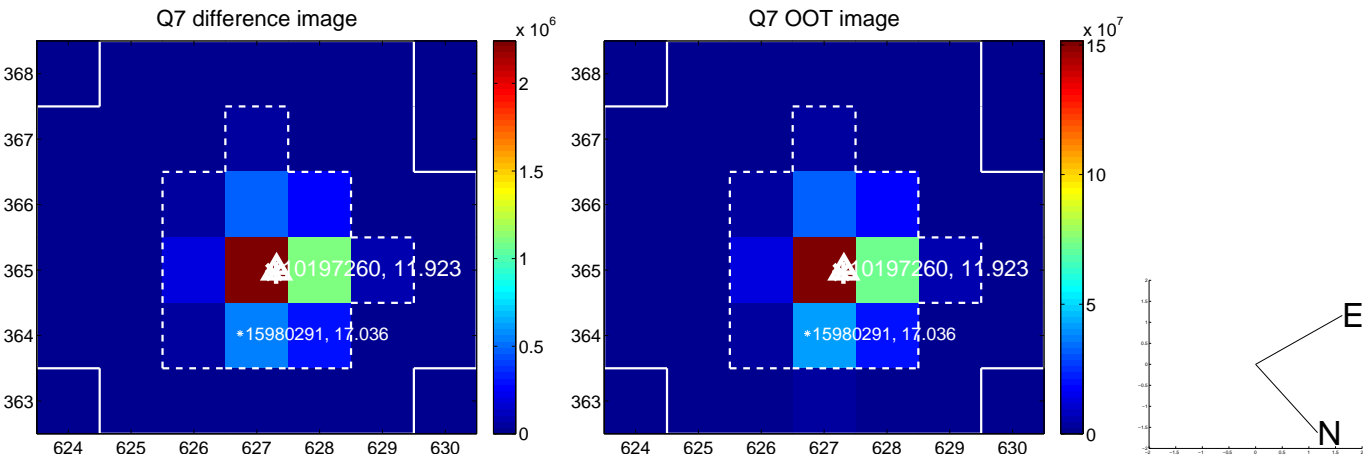


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



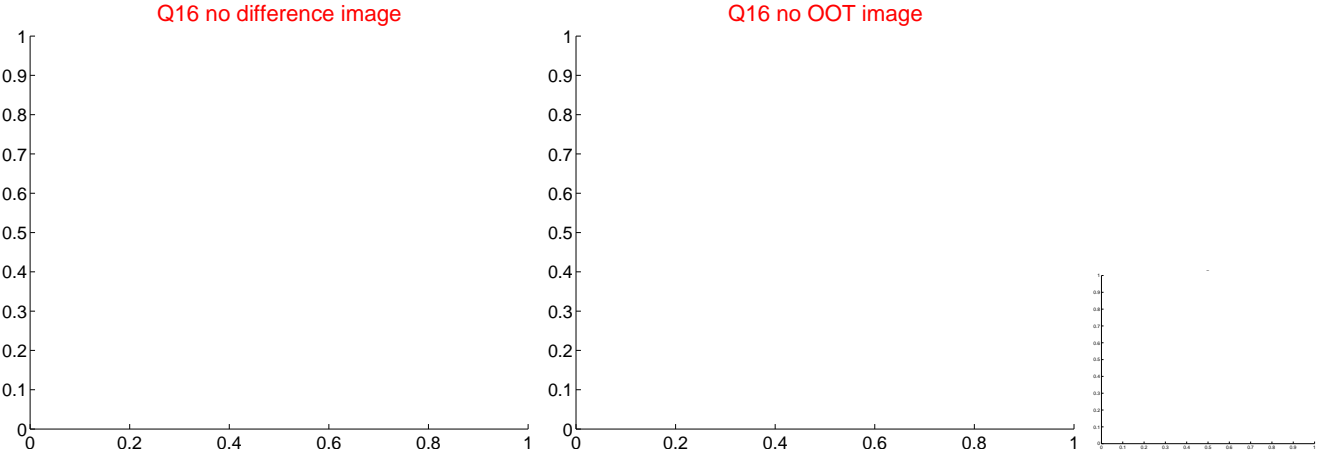
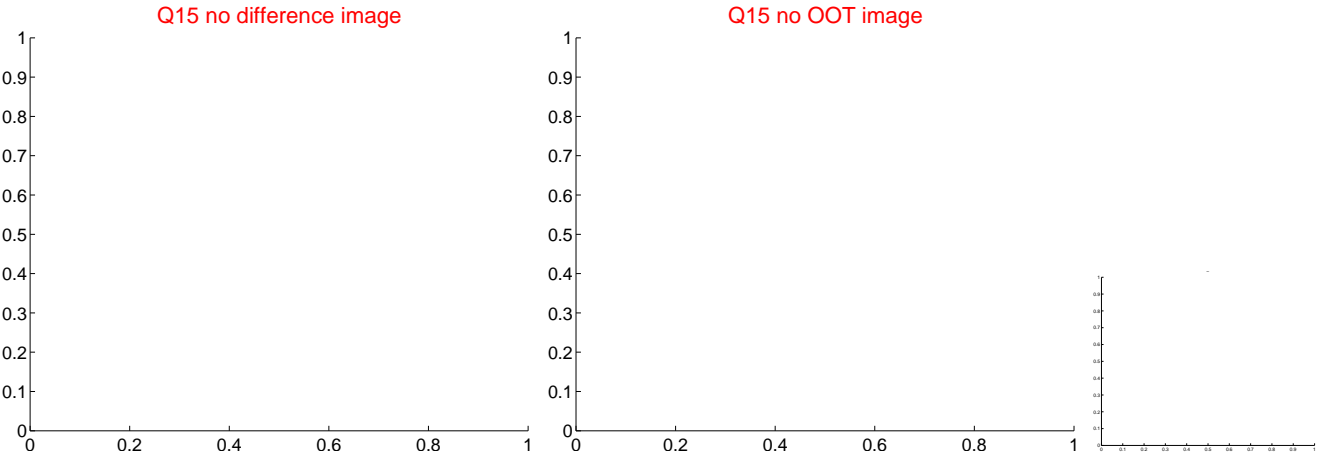
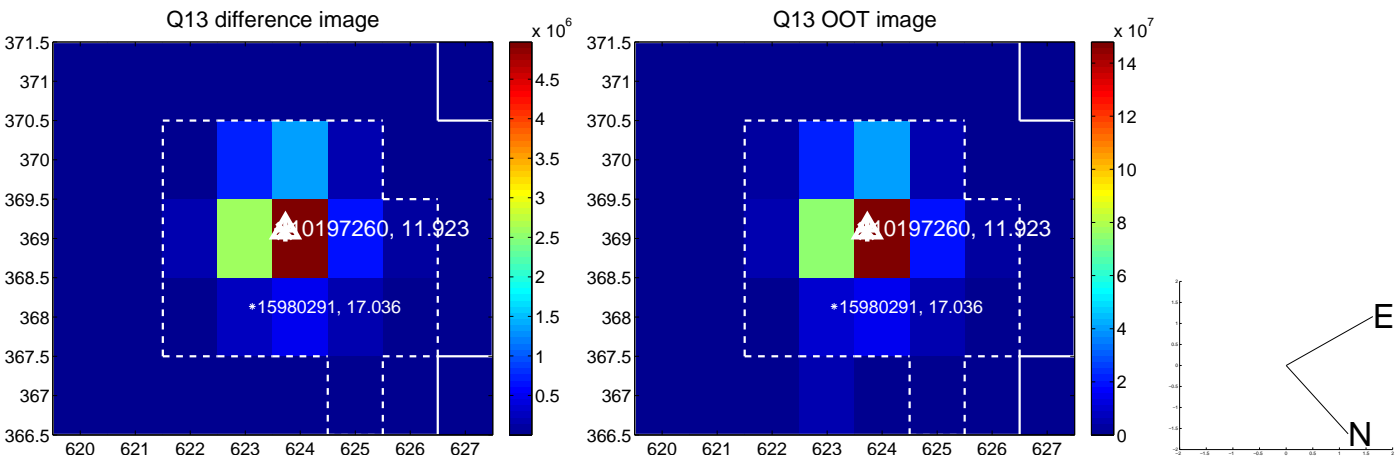
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



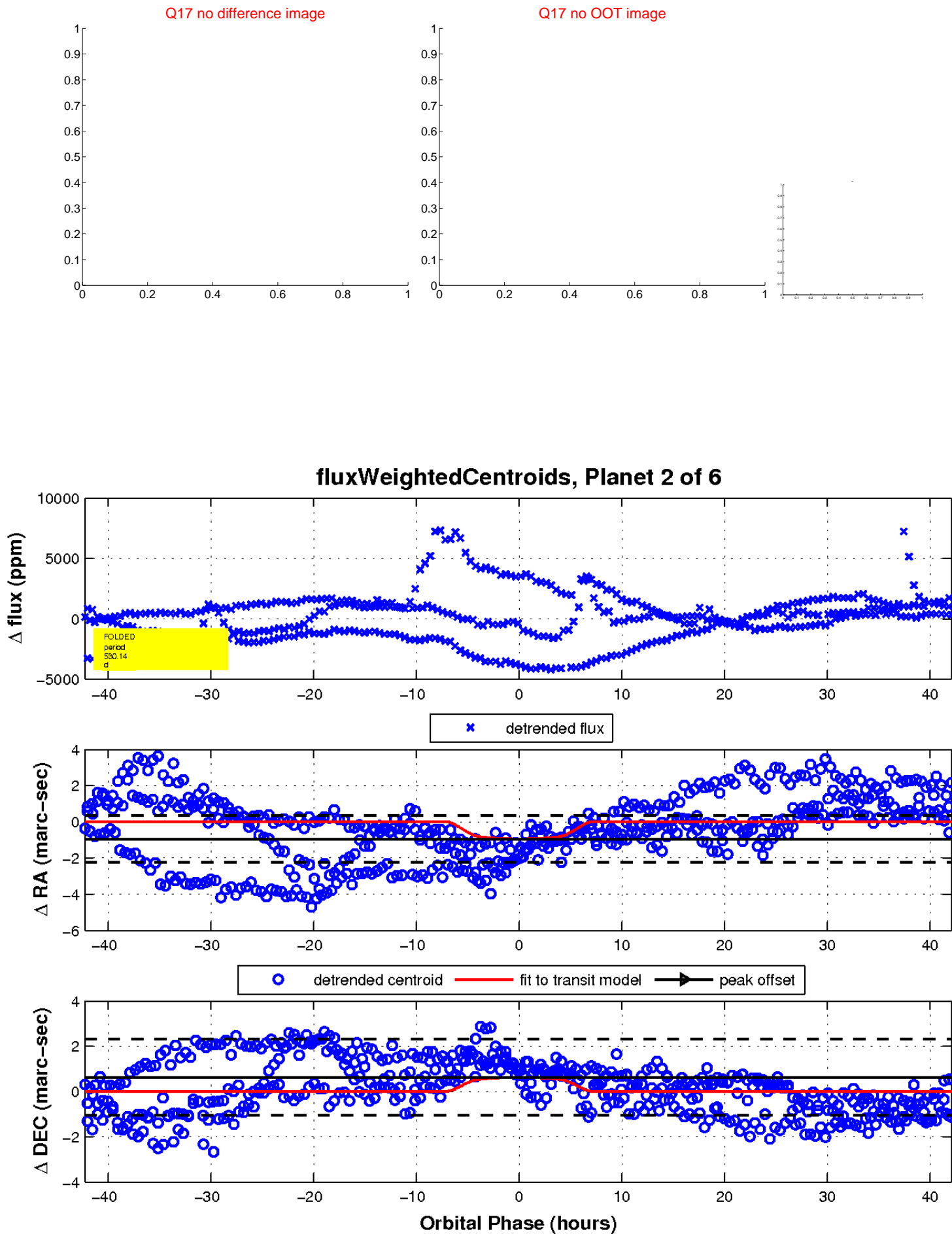
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

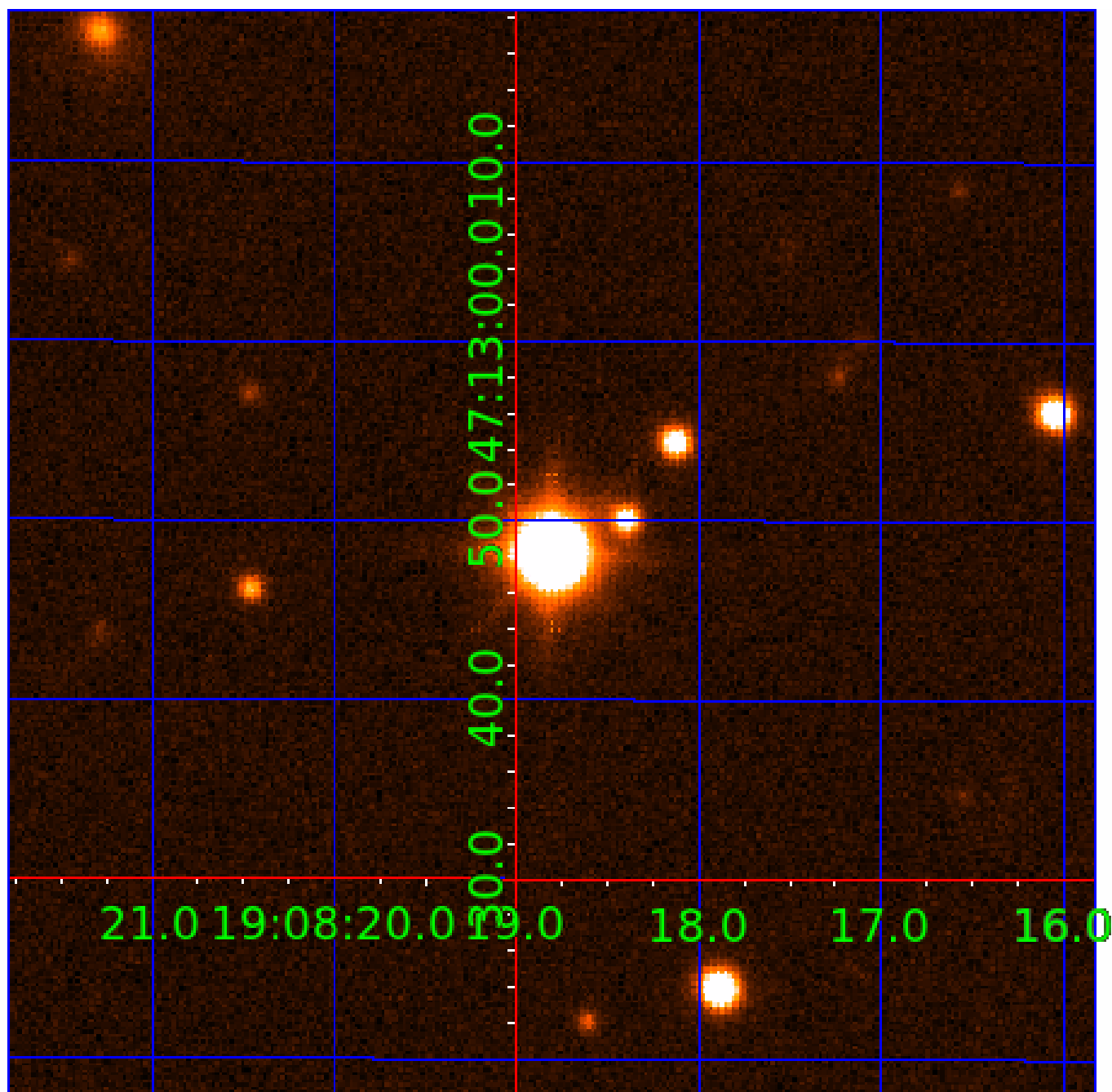


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010197260

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})
010197260-01	OBS	No	343.821892	157.907748	975.1	6.000	36.8	-1.0	2.08	5134	6.34	3.27
010197260-02	OBS	No	530.139040	151.429075	1608.1	14.088	18.7	7.1	2.08	5134	10.09	1.84
010197260-03	OBS	No	366.752805	343.133396	231.4	15.243	19.2	1.4	2.08	5134	4.17	3.00
010197260-04	OBS	No	489.179426	150.493771	179.3	12.500	14.1	-1.0	2.08	5134	2.72	2.04
010197260-05	OBS	No	381.328416	314.149940	1051.6	14.642	15.3	6.5	2.08	5134	6.78	2.85
010197260-06	OBS	No	244.687246	239.216289	277.4	3.500	13.2	-1.0	2.08	5134	3.38	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010197260-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010197260-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
010197260-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

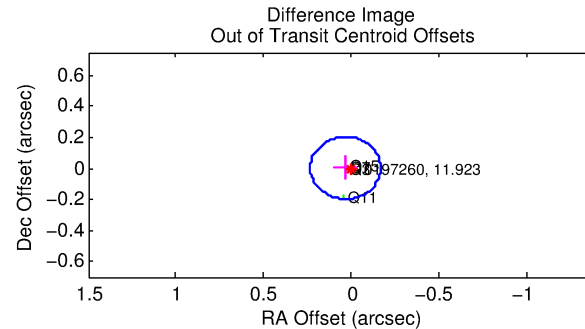
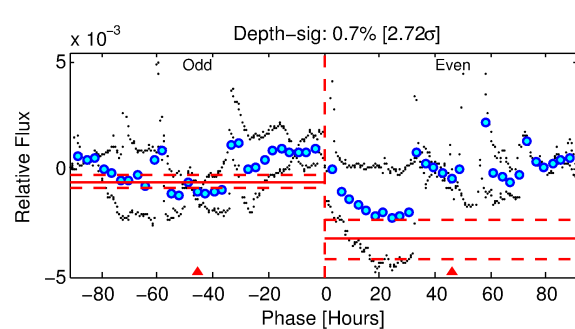
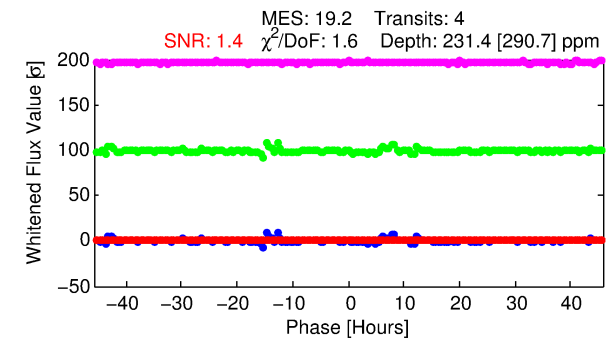
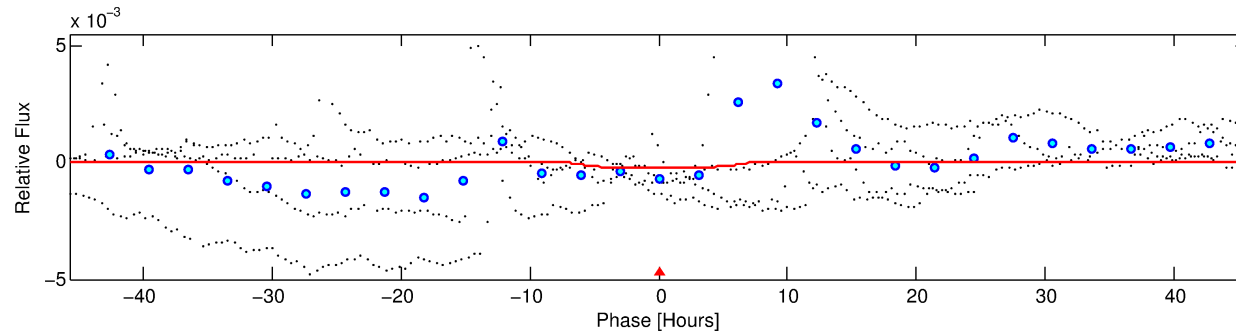
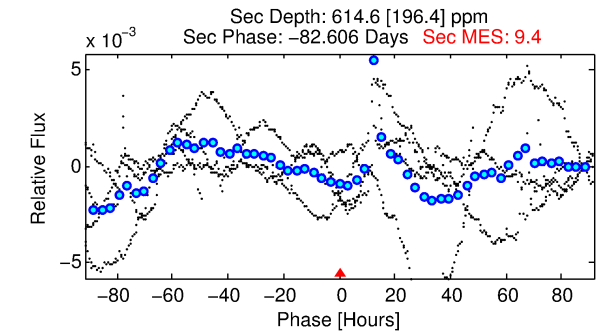
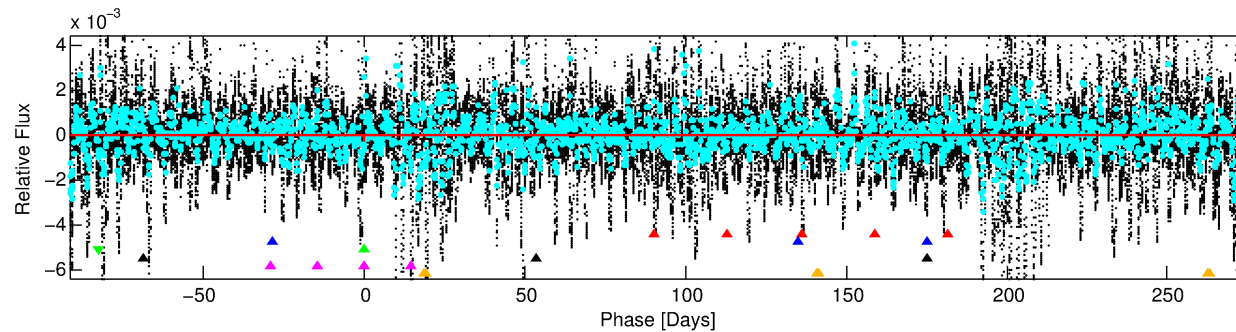
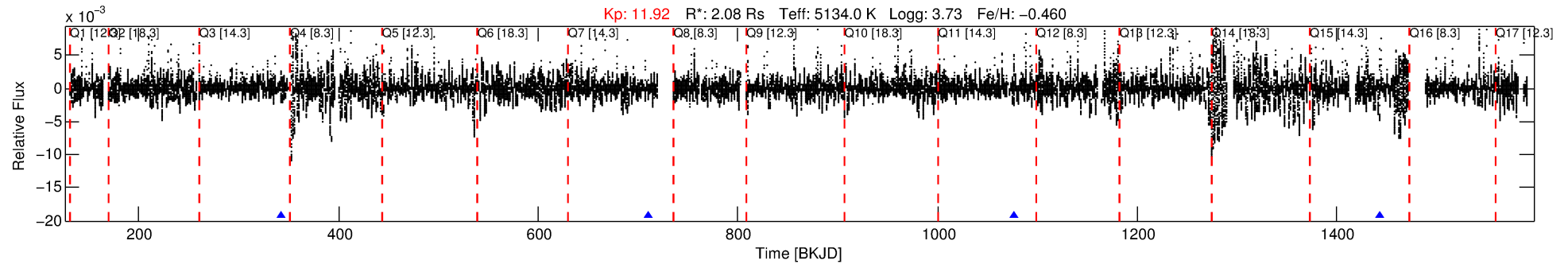
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010197260-03

No Significant Match Found

DV One-Page Summary

KIC: 10197260 Candidate: 3 of 6 Period: 366.753 d



DV Fit Results:

Period = 366.75281 [0.04590] d
Epoch = 343.1334 [0.0809] BKJD
Rp/R* = 0.0184 [0.0118]
a/R* = 62.63 [30.99]
b = 0.96 [0.04]
Seff = 3.00 [4.20]
Teq = 336 [117] K
Rp = 4.17 [4.02] Re
a = 0.9447 [0.7664] AU
Ag = 17314.72 [33278.29] [0.52 σ]
Teffp = 5953 [1974] K [2.84 σ]

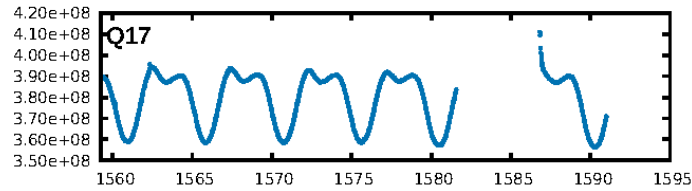
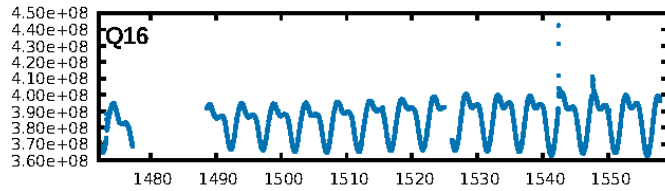
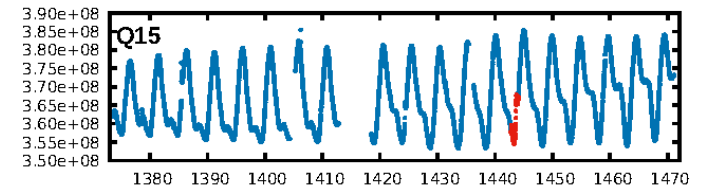
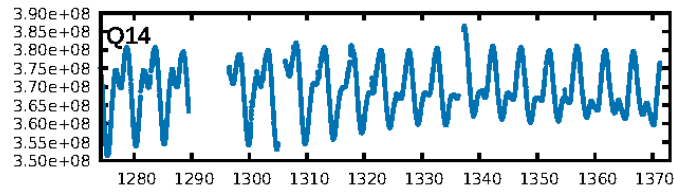
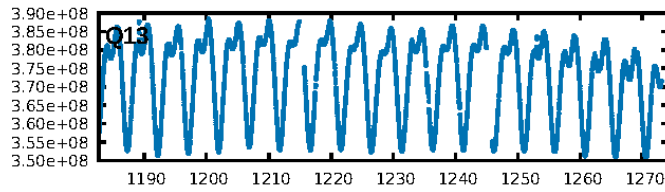
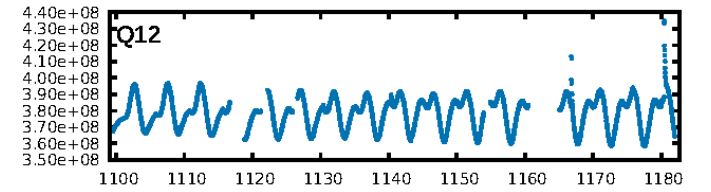
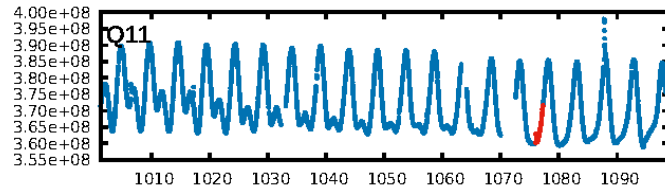
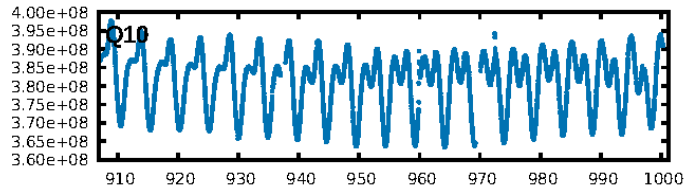
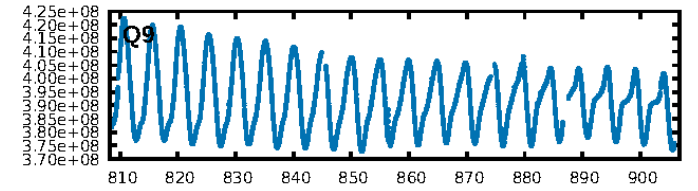
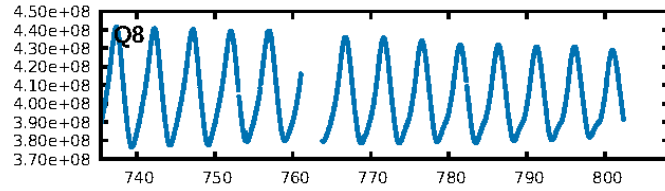
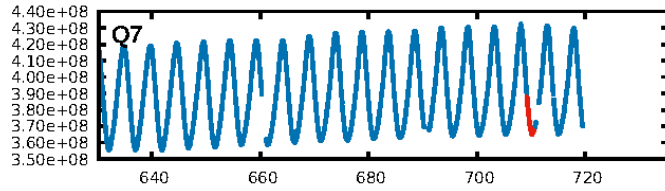
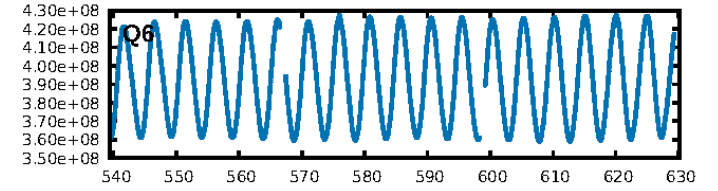
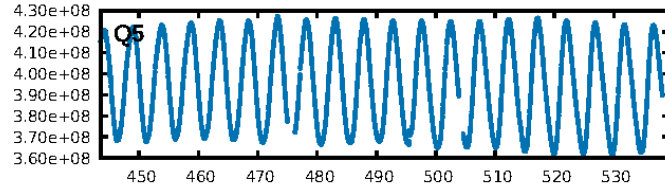
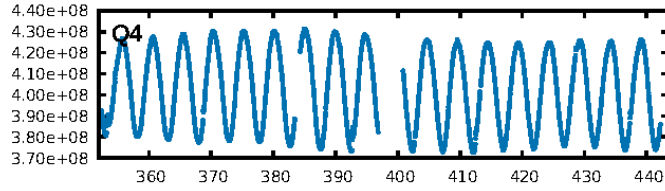
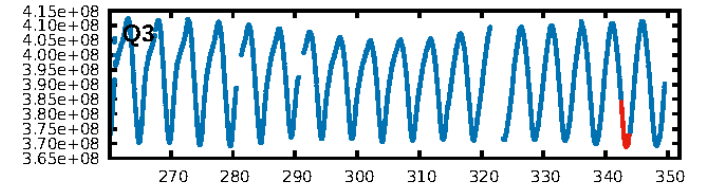
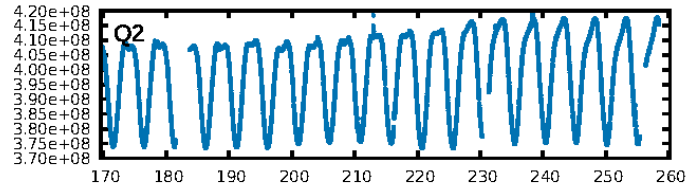
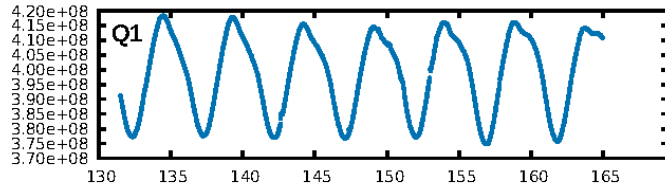
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.59 σ]
LongPeriod-sig: 100.0% [16.55 σ]
ModelChiSquare2-sig: 5.3%
ModelChiSquareGof-sig: 50.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.545
Centroid-sig: 4.5%
Centroid-so: 4.550 arcsec [1.89 σ]
OotOffset-rm: 0.035 arcsec [0.52 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-rm: 0.128 arcsec [1.74 σ]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.75 [3/4]

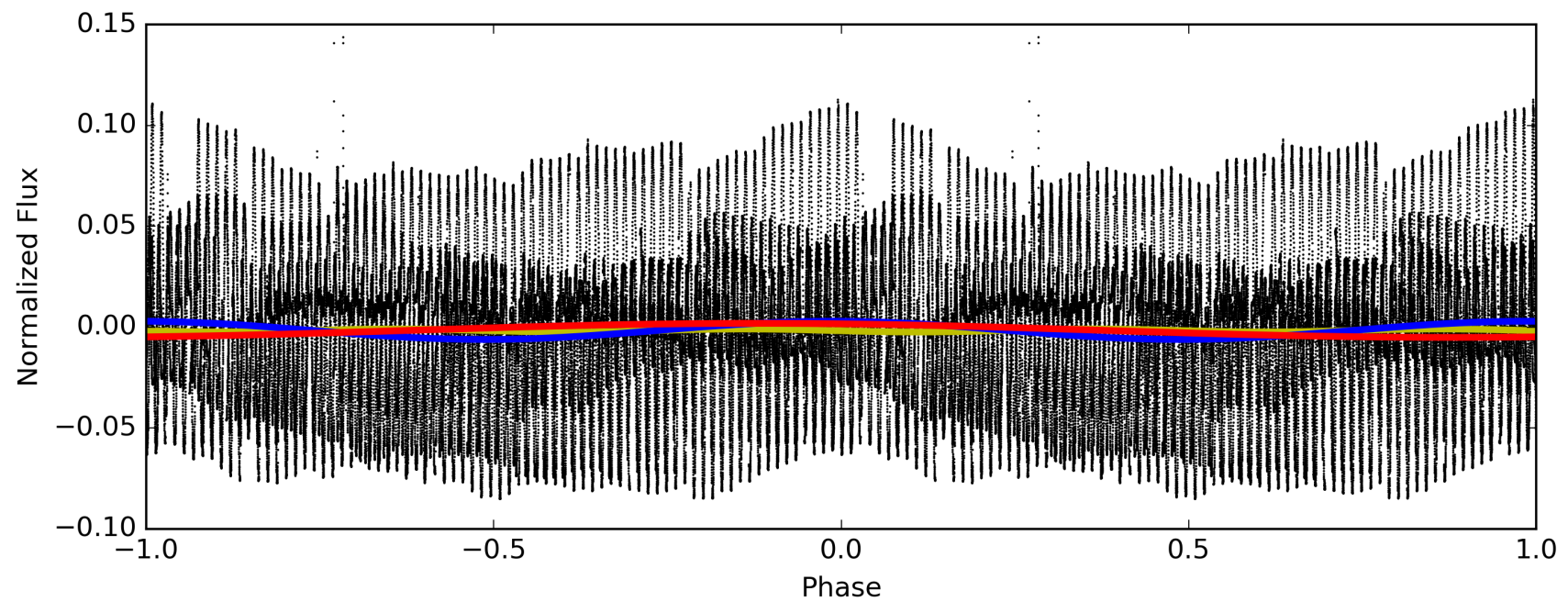
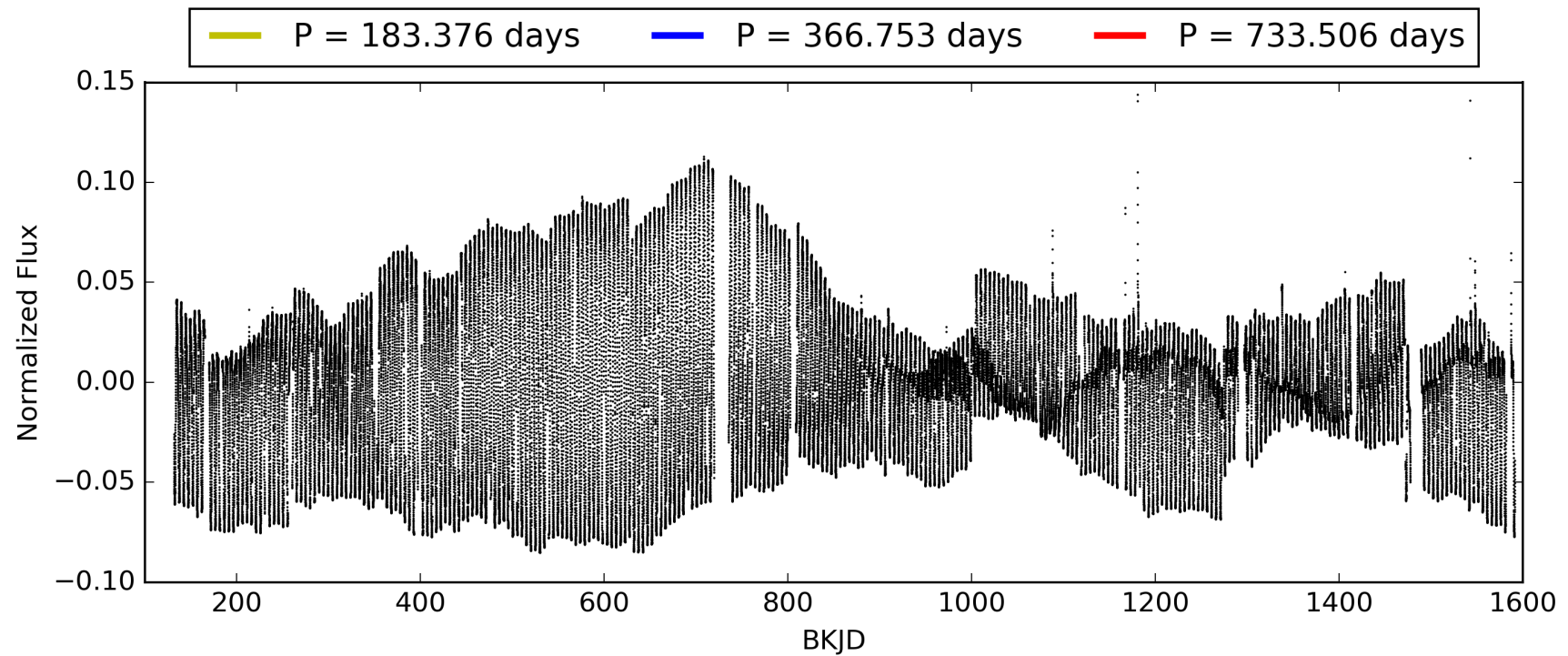
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:57:10 Z

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

TCE 010197260-03, PDC Light Curves

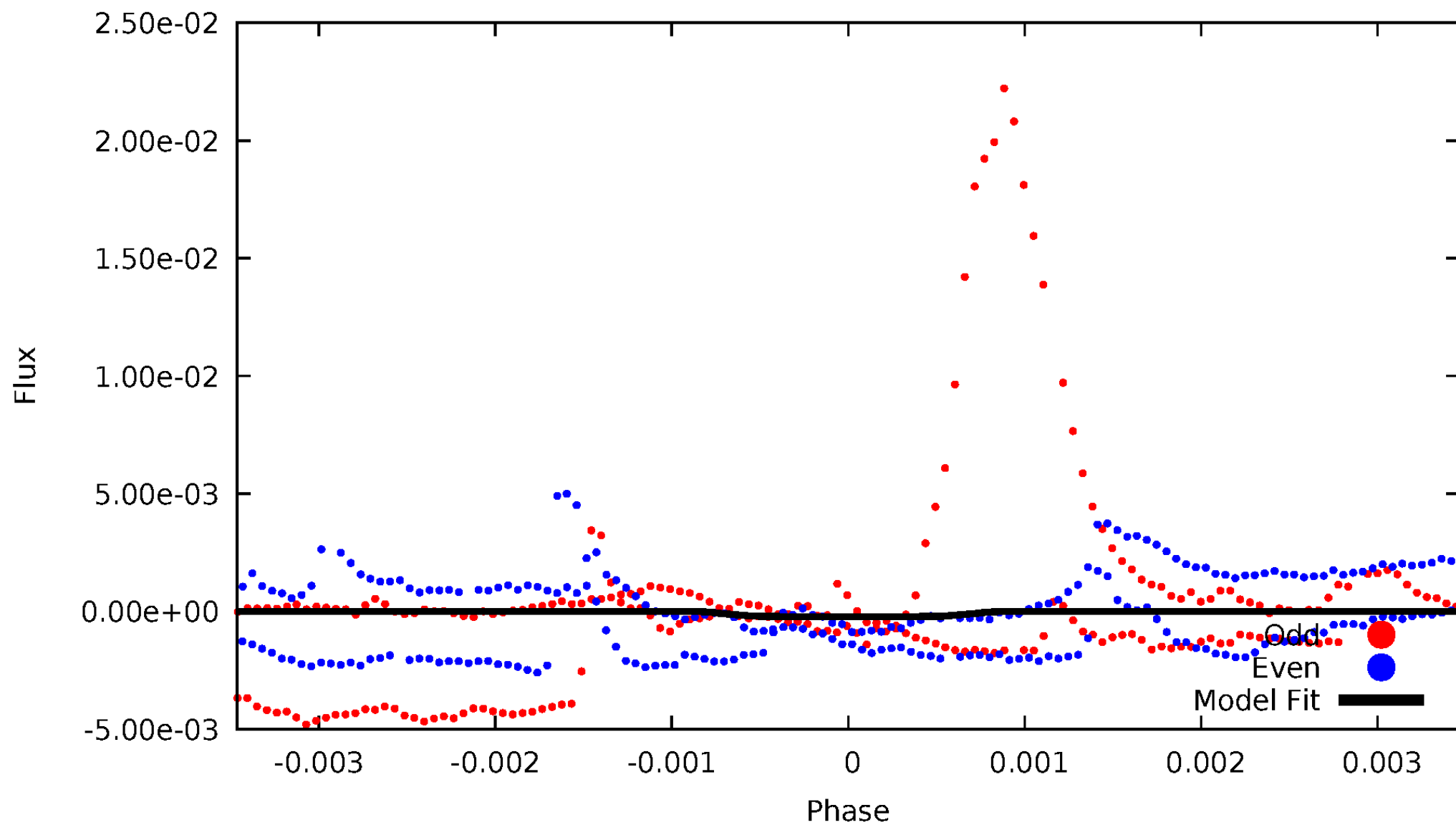


TCE 010197260-03



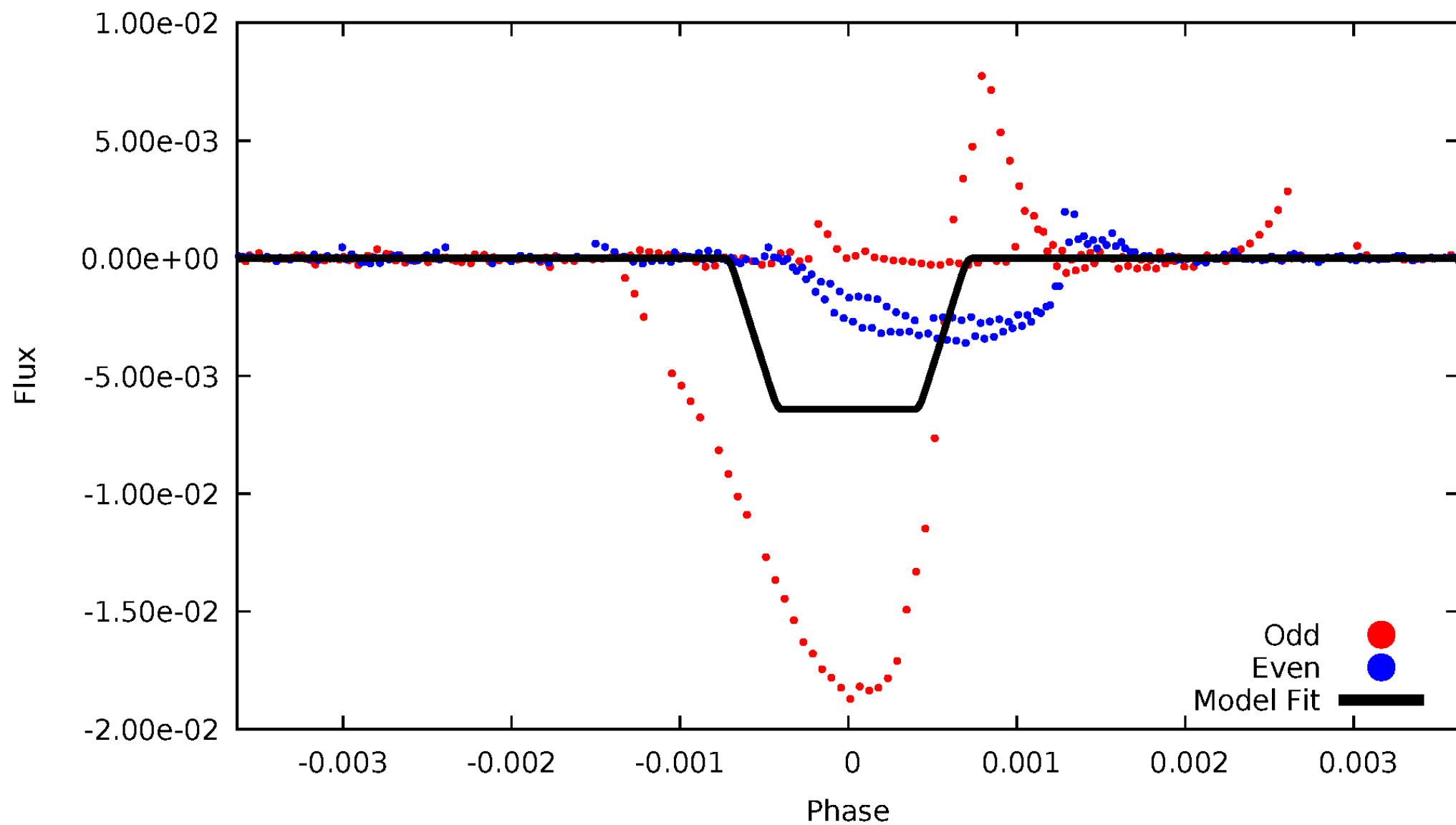
DV Odd/Even

TCE 010197260-03



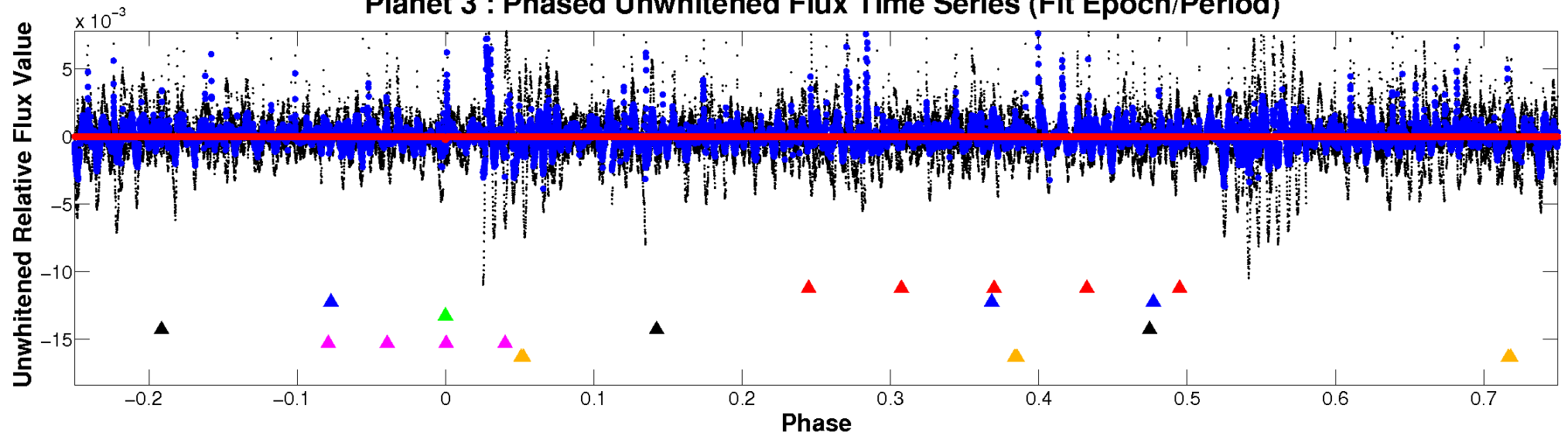
ALT Odd/Even

TCE 010197260-03

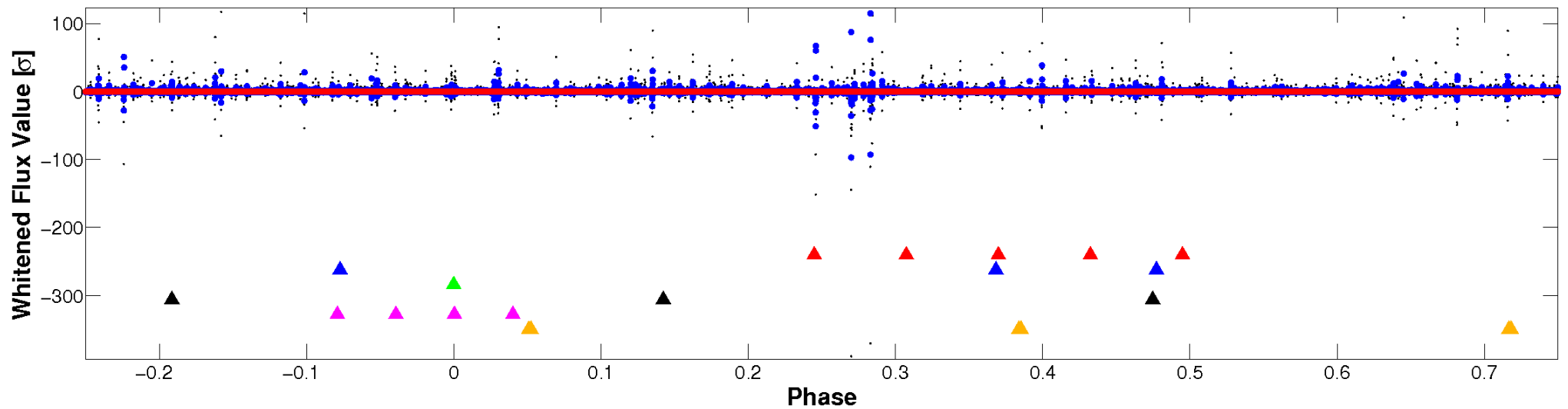


Non-Whitened Vs. Whitened Light Curve

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

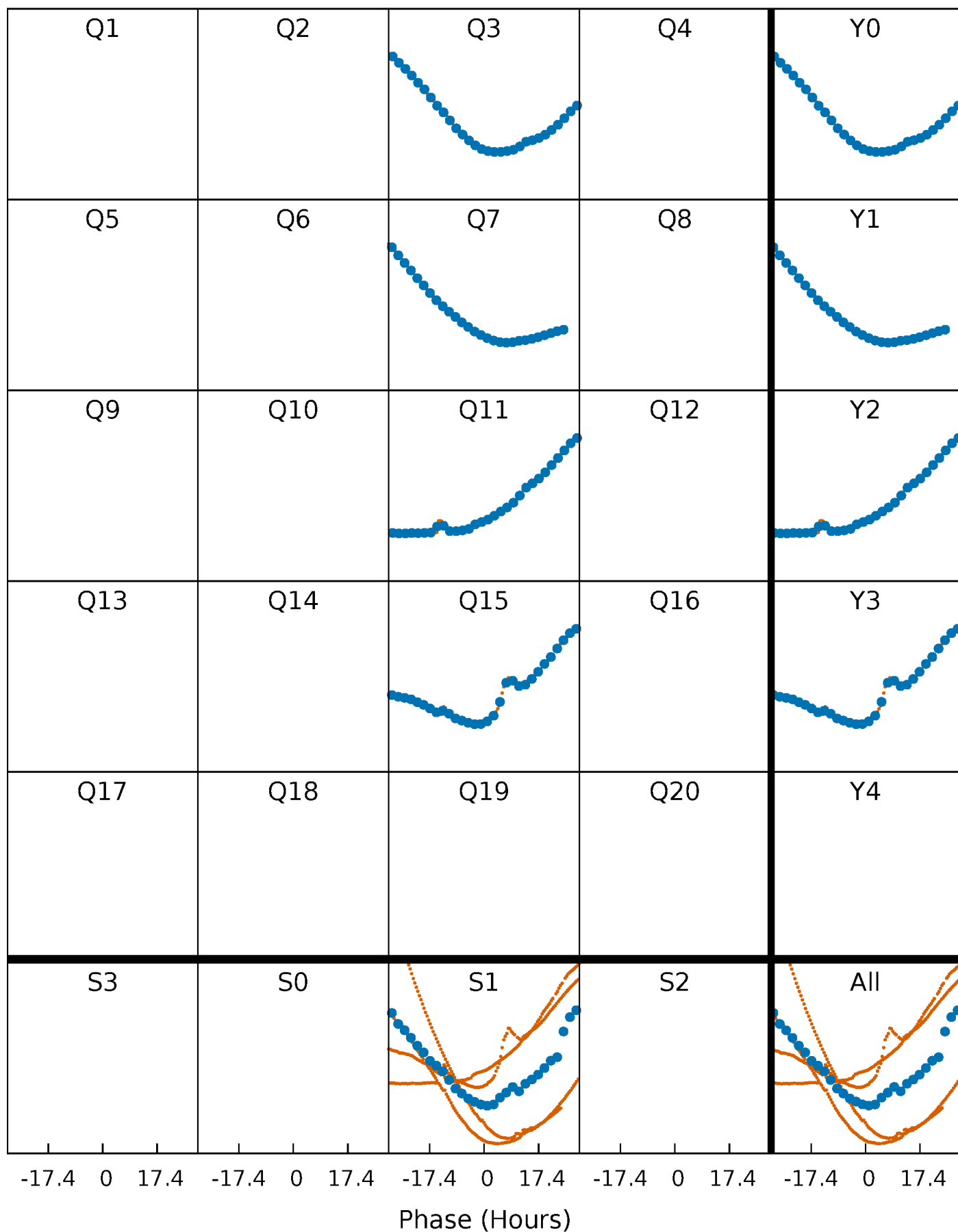


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



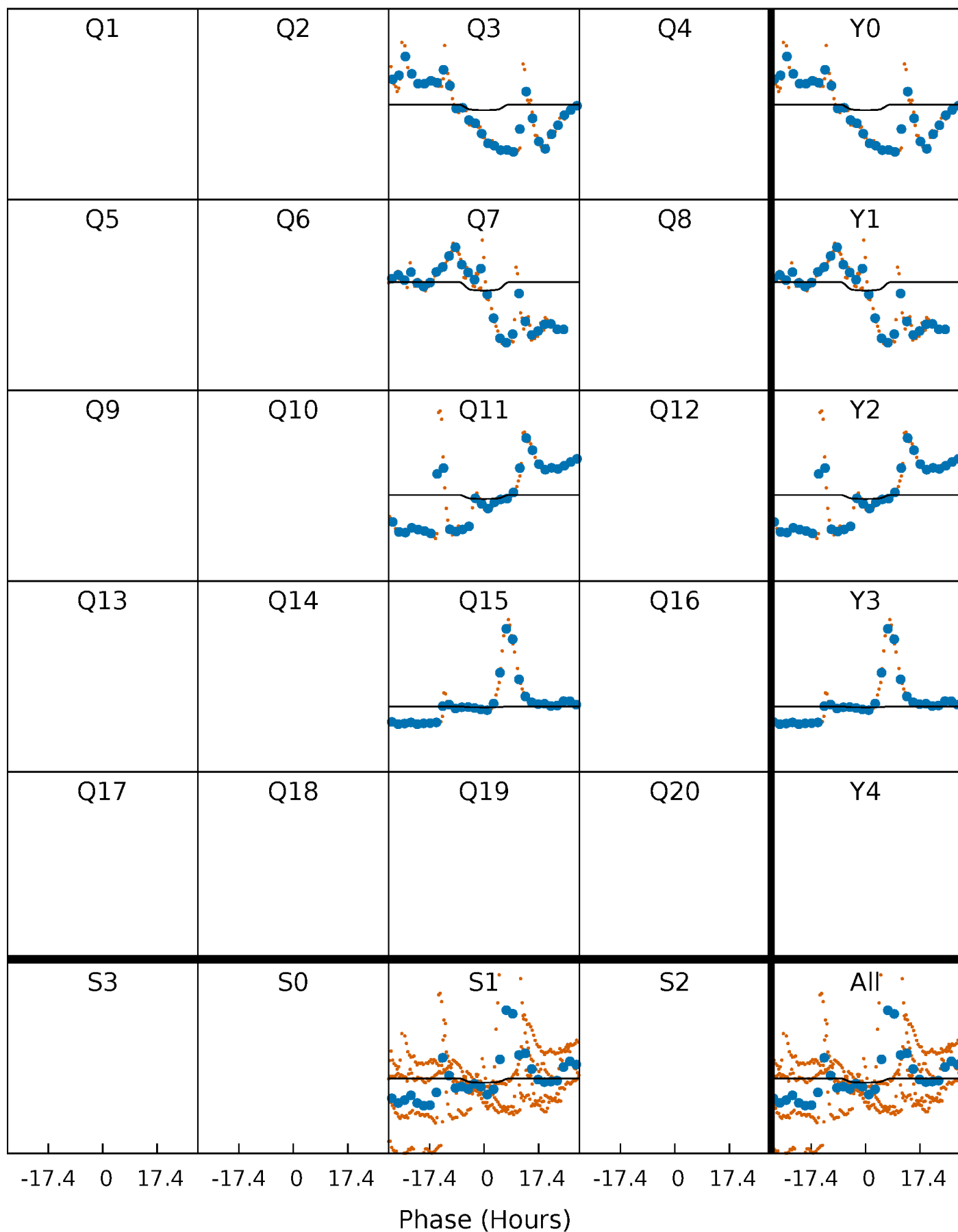
PDC Quarter-Phased Transit Curves

TCE 010197260-03 $P=366.752806$ Days $T_0=343.133396$ (BKJD)



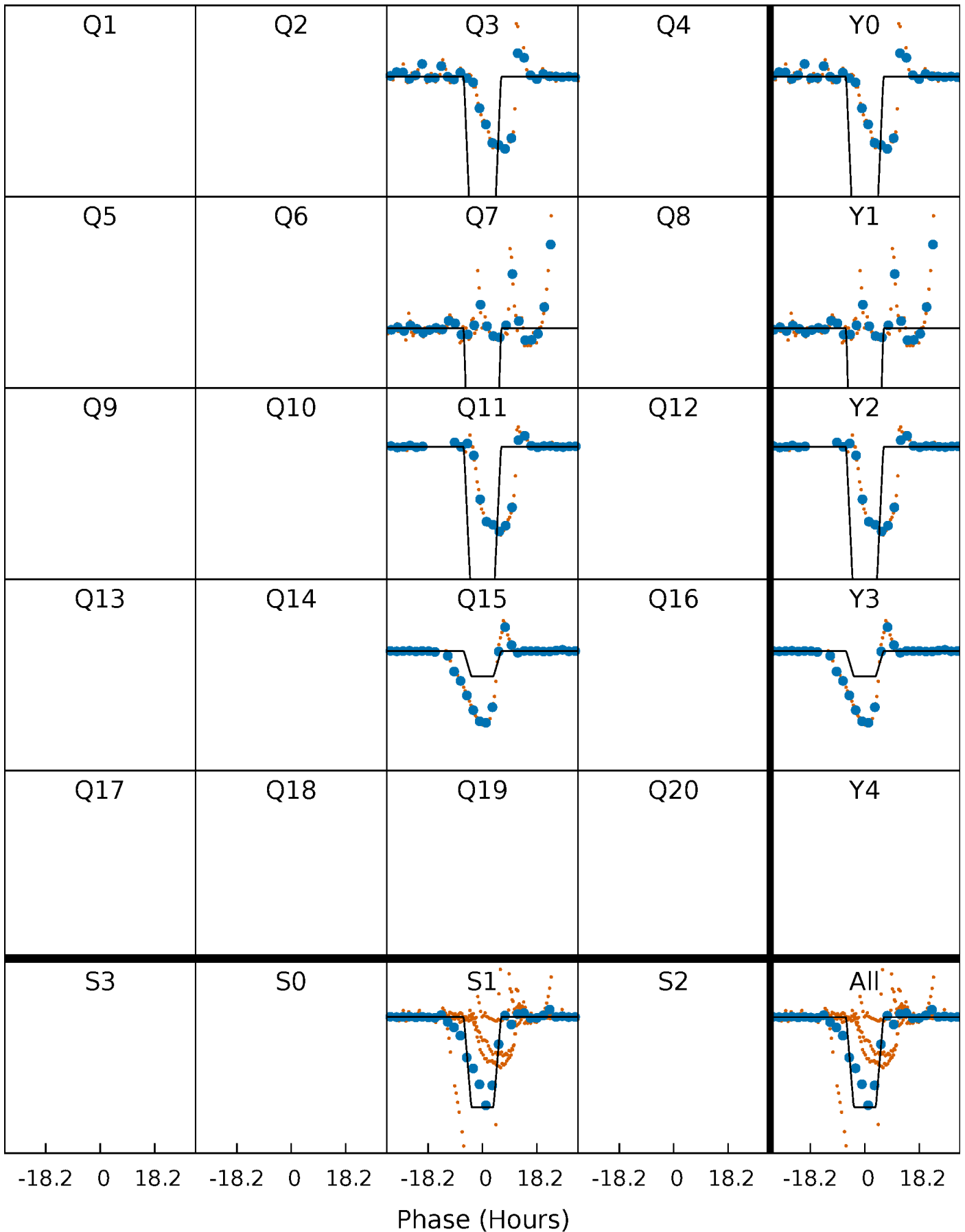
DV Quarter-Phased Transit Curves

TCE 010197260-03 $P=366.752806$ Days $T_0=343.133396$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

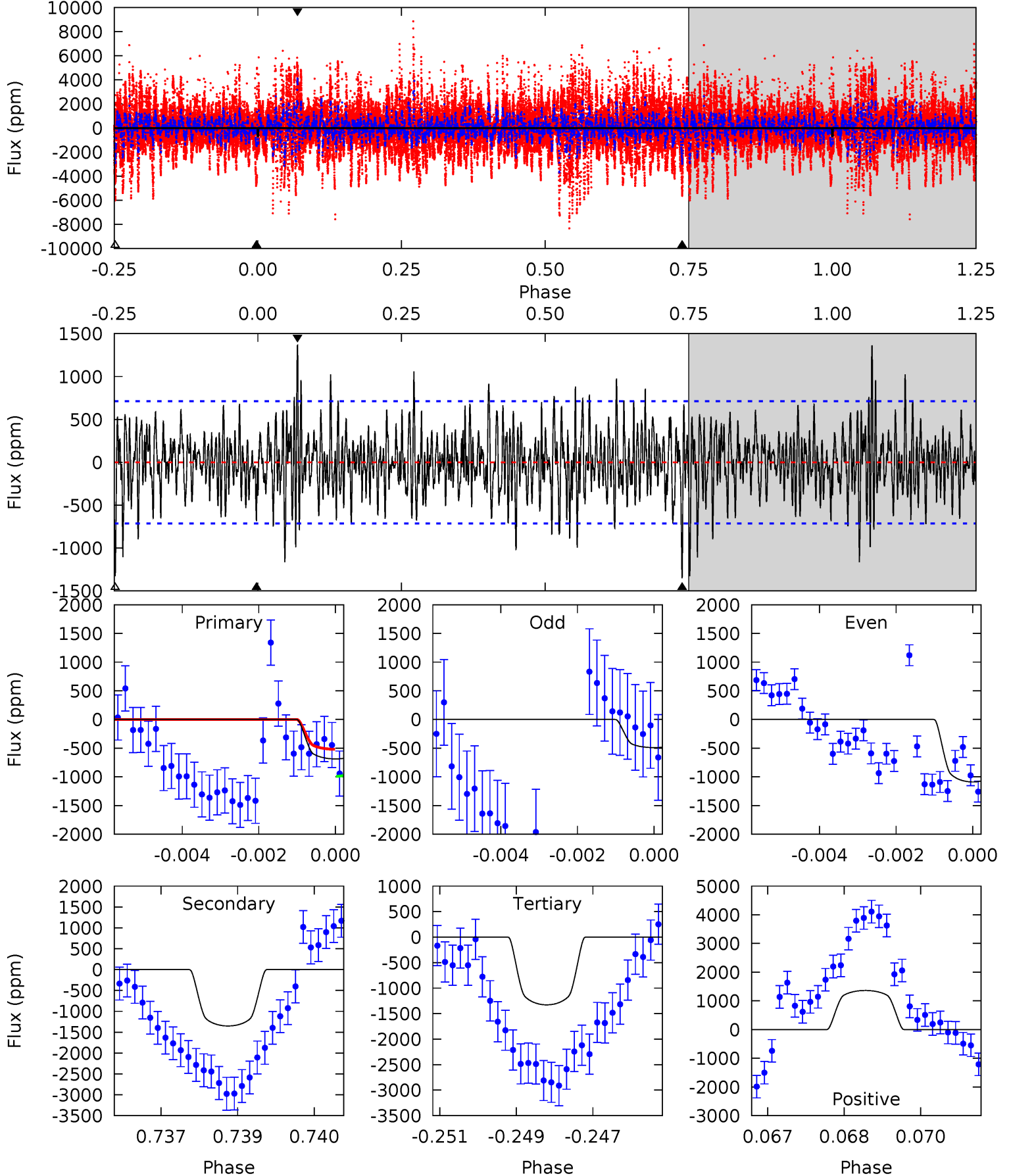
TCE 010197260-03 $P=366.748346$ Days $T_0=343.180342$ (BKJD)



DV Model-Shift Uniqueness Test

010197260-03, P = 366.752806 Days, E = 343.133396 Days

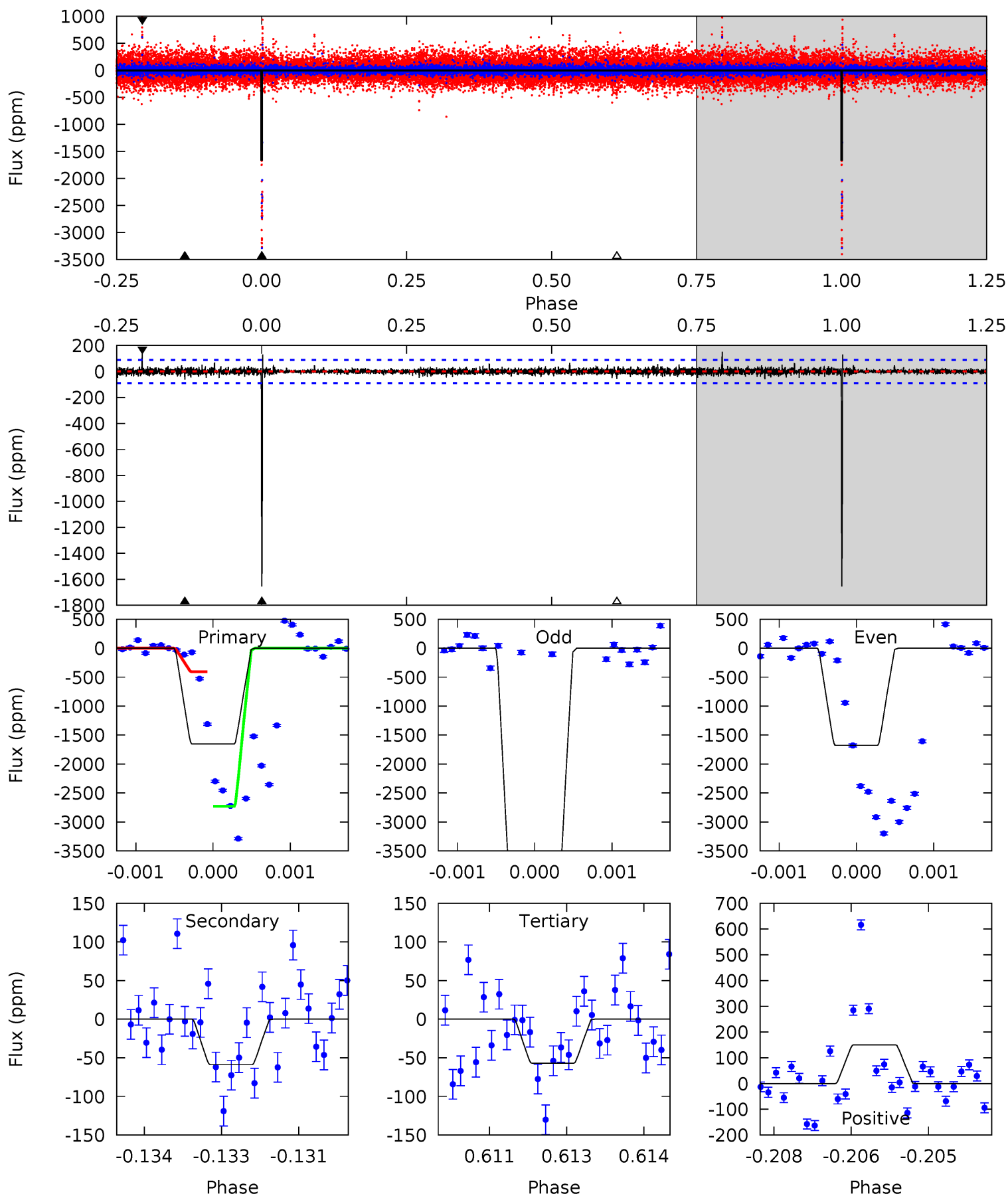
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.16	10.1	9.96	10.2	5.35	3.13	2.40	-4.81	-5.06	0.18	-0.08	1.99	0.52	0.50	1.78



Alt Model-Shift Uniqueness Test

010197260-03, P = 366.748346 Days, E = 343.180342 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
100.4	3.57	3.45	9.14	5.39	3.19	0.76	97.0	91.3	0.11	-5.57	68.6	2.69	0.08	0



Stellar Parameters For KIC 010197260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5134^{+140}_{-127}	$3.726^{+0.854}_{-0.366}$	$-0.460^{+0.350}_{-0.250}$	$2.075^{+1.352}_{-1.488}$	$0.836^{+0.253}_{-0.136}$	$0.132^{+2.931}_{-0.102}$
	+3%/-2%	+23%/-10%	+76%/-54%	+65%/-72%	+30%/-16%	+2224%/-77%
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 010197260-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1352 ± 133	$4.00^{+3.41}_{-2.38}$	462^{+80}_{-83}	7117^{+5108}_{-1517}	$42278^{+197077}_{-29788}$
Alt.	-59 ± 16	$17.39^{+7.43}_{-6.40}$	464^{+77}_{-91}	2447^{+129}_{-123}	96^{+149}_{-52}

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

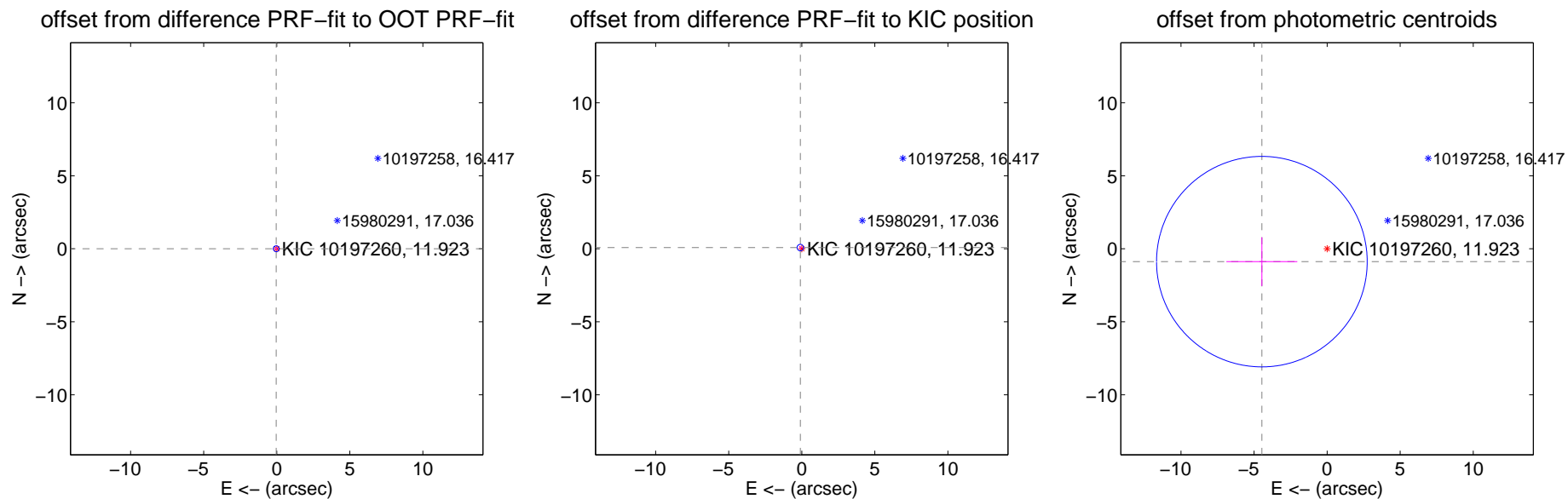
DV Centroid Data

Supplemental centroid analysis for 010197260-03. **Kepler magnitude: 11.92.** Transit SNR 1.36

There are 4 quarters with good PRF difference image offsets

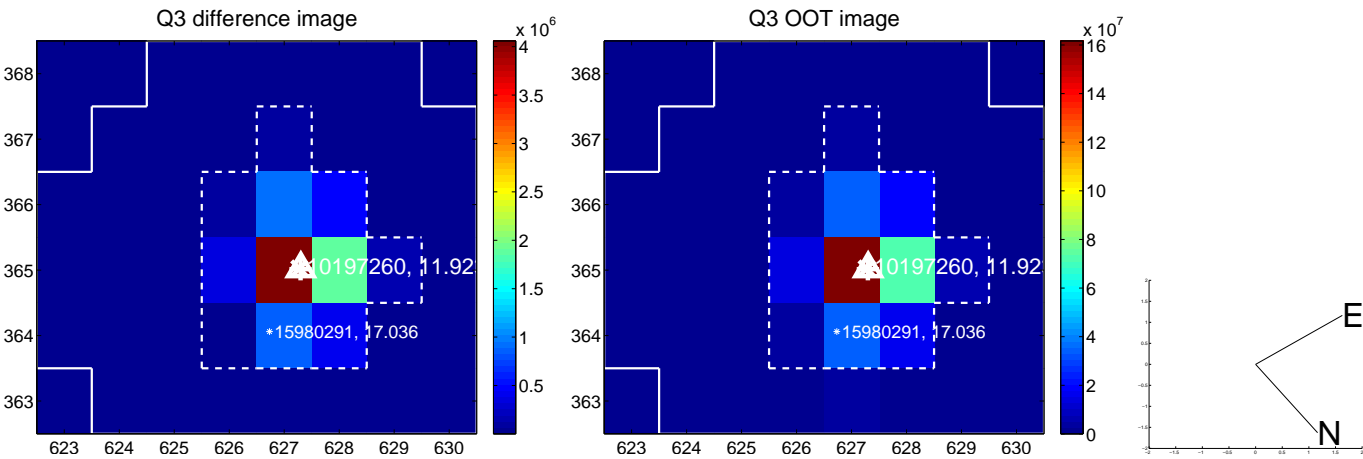
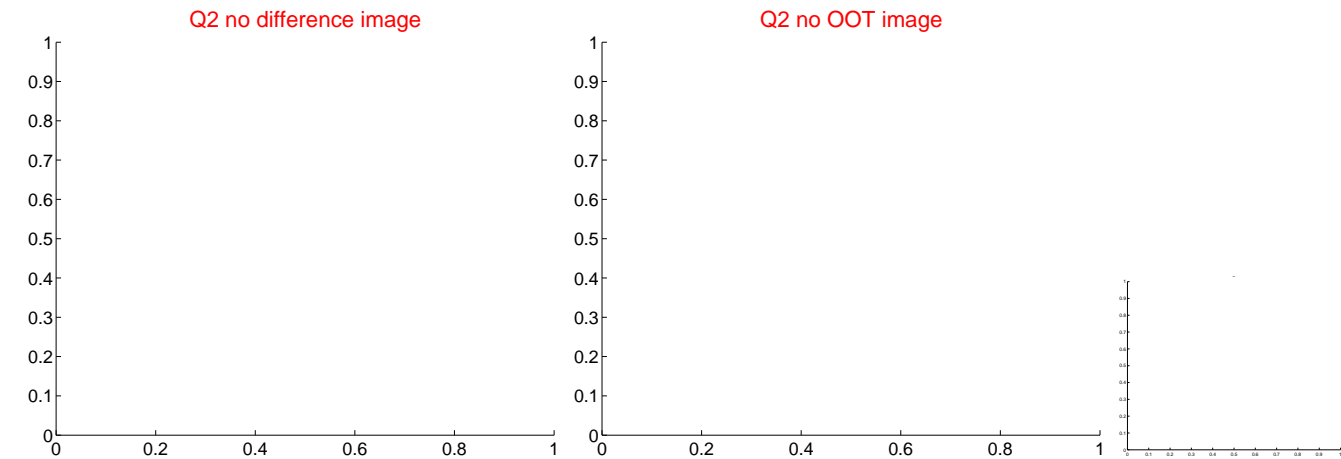
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.067	0.52	0.035 ± 0.067	0.004 ± 0.072
PRF-fit source offset from KIC position	0.128 ± 0.074	1.74	0.098 ± 0.067	0.083 ± 0.084
photometric centroid source offset	4.55 ± 2.40	1.89	4.46 ± 2.43	-0.88 ± 1.67

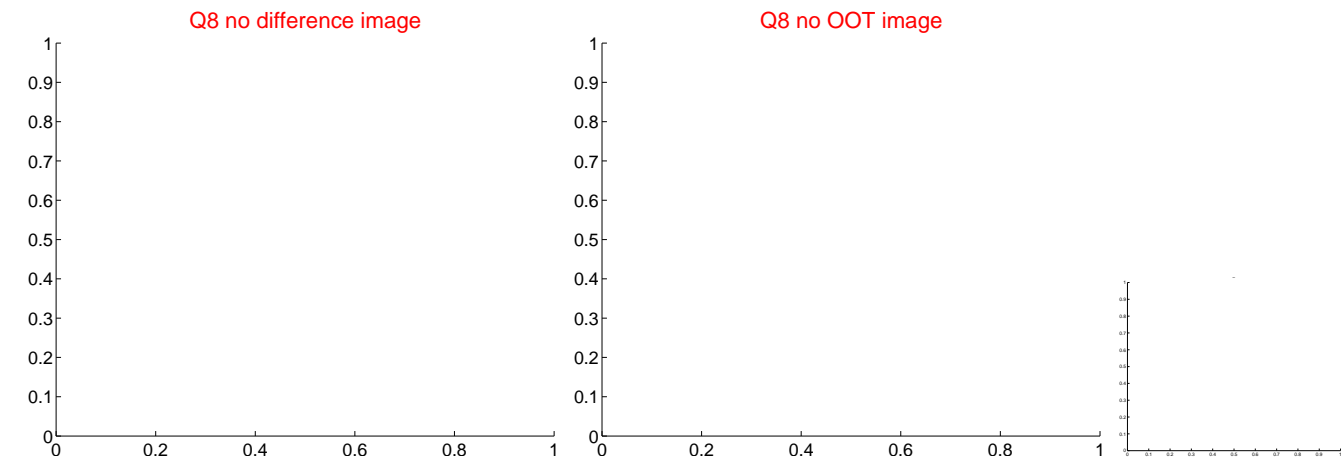
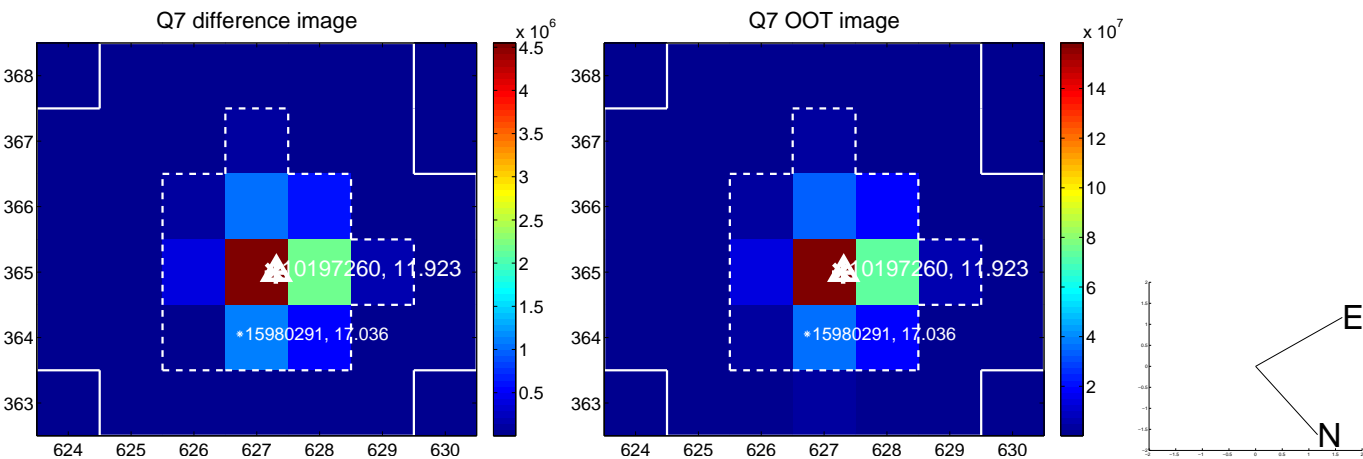
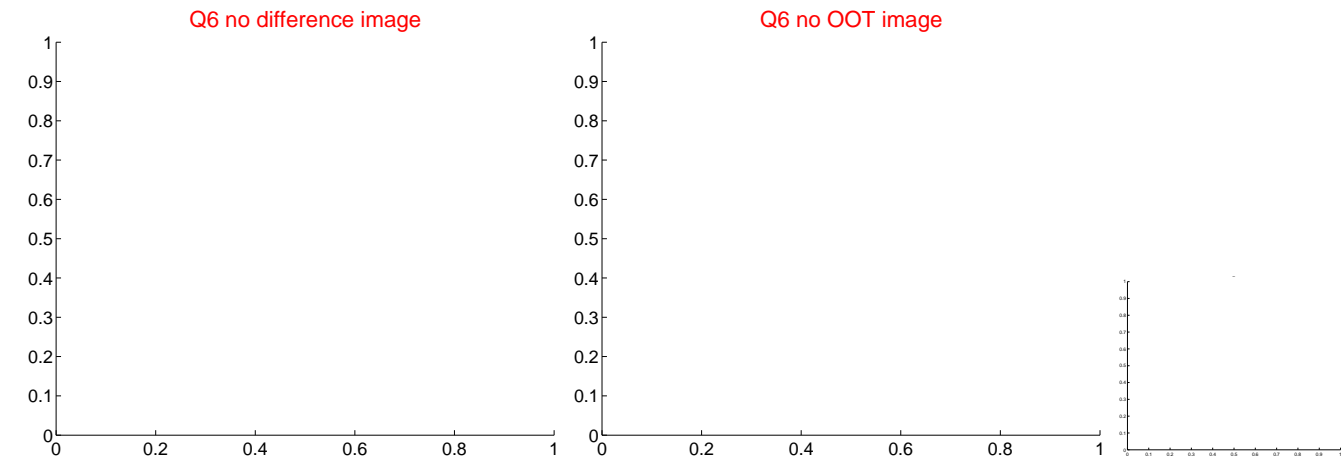


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

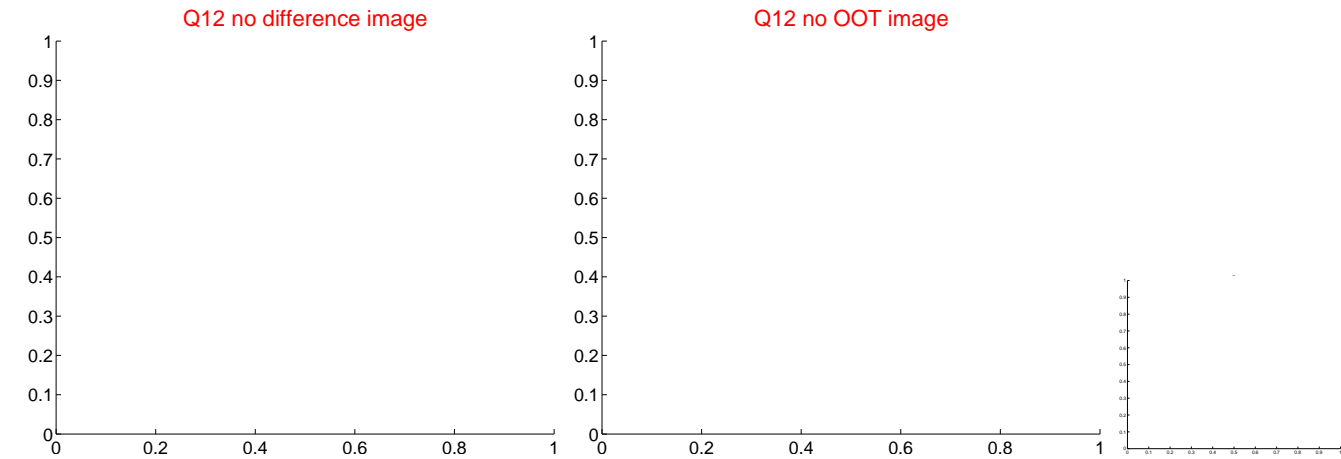
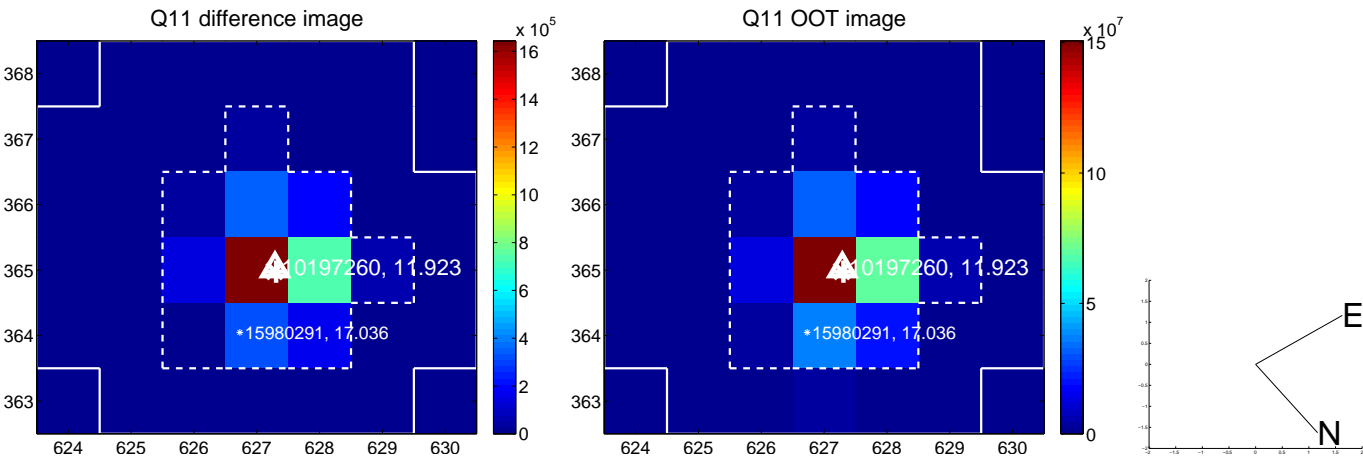
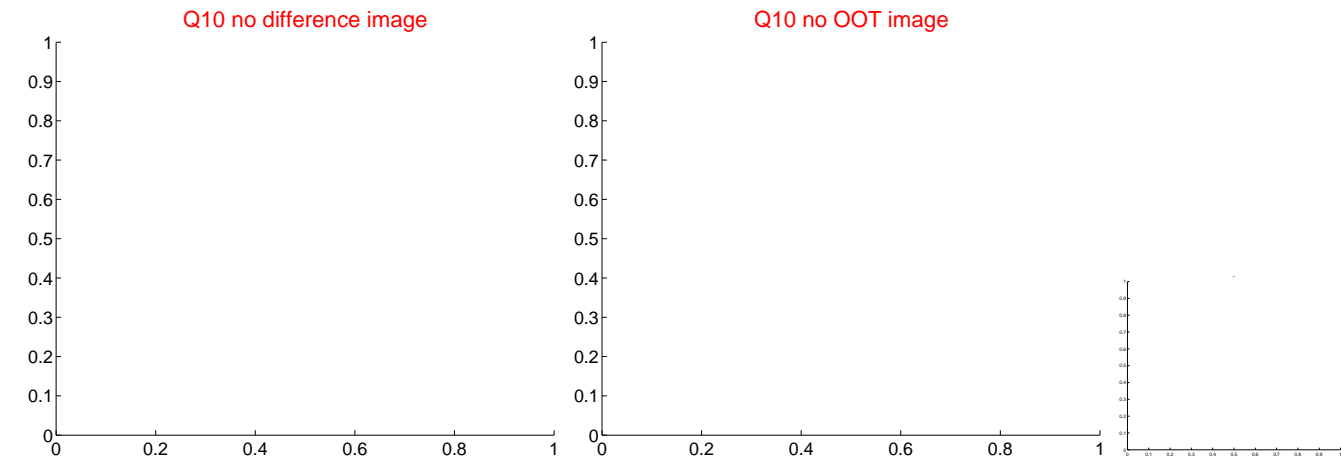
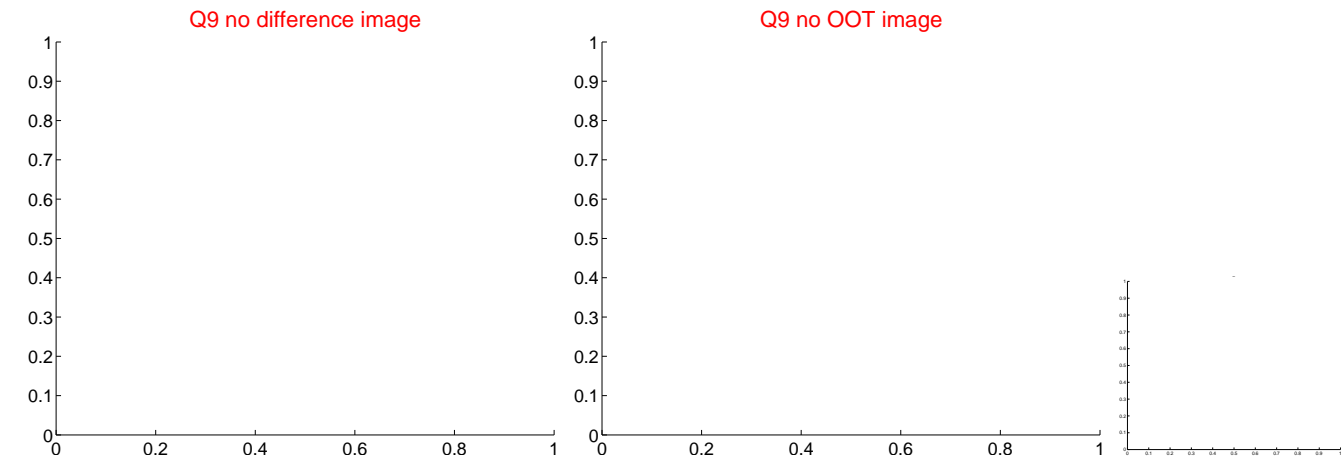
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



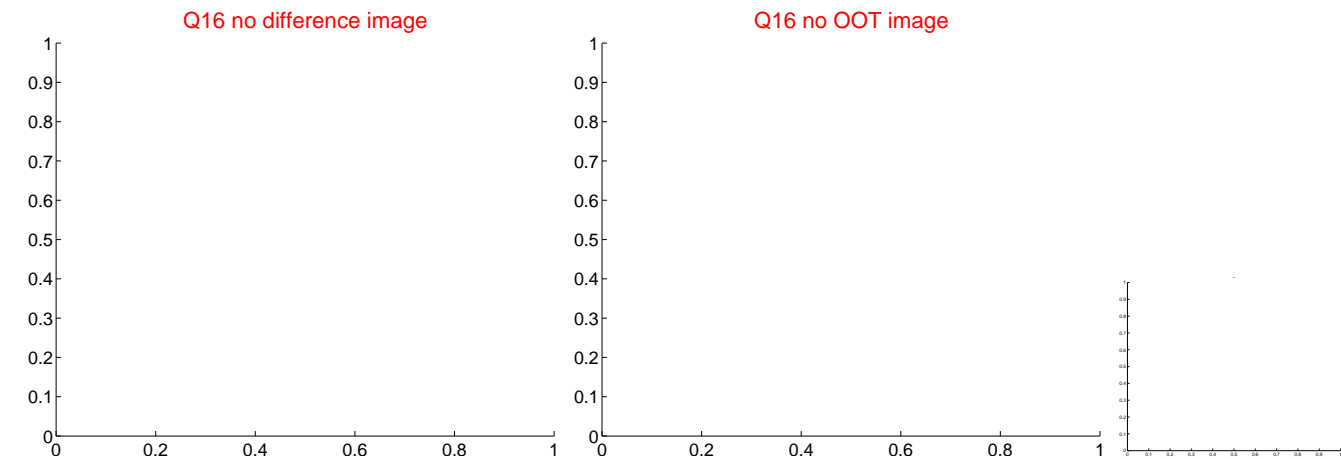
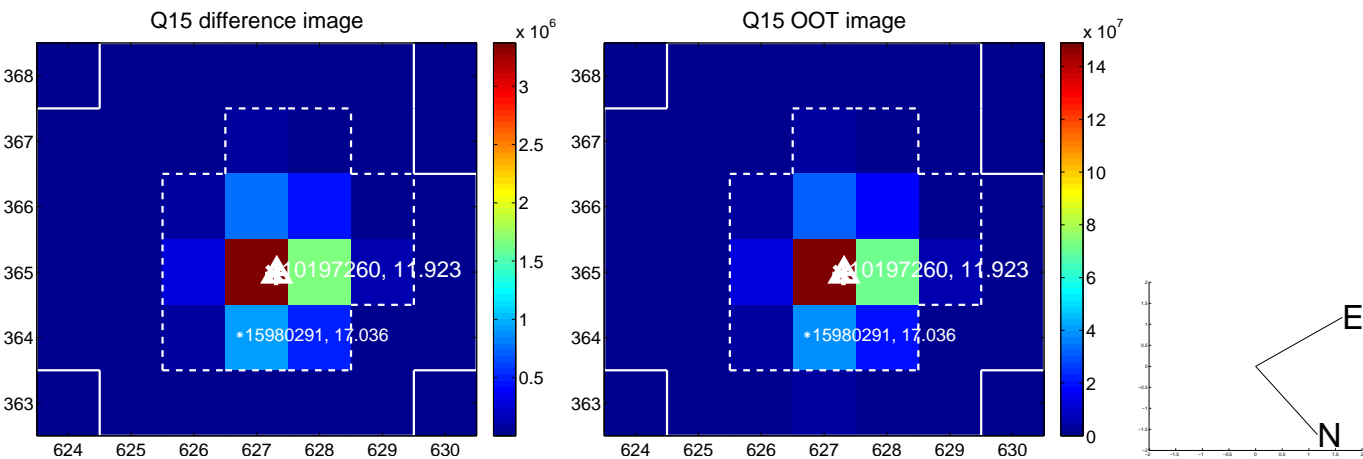
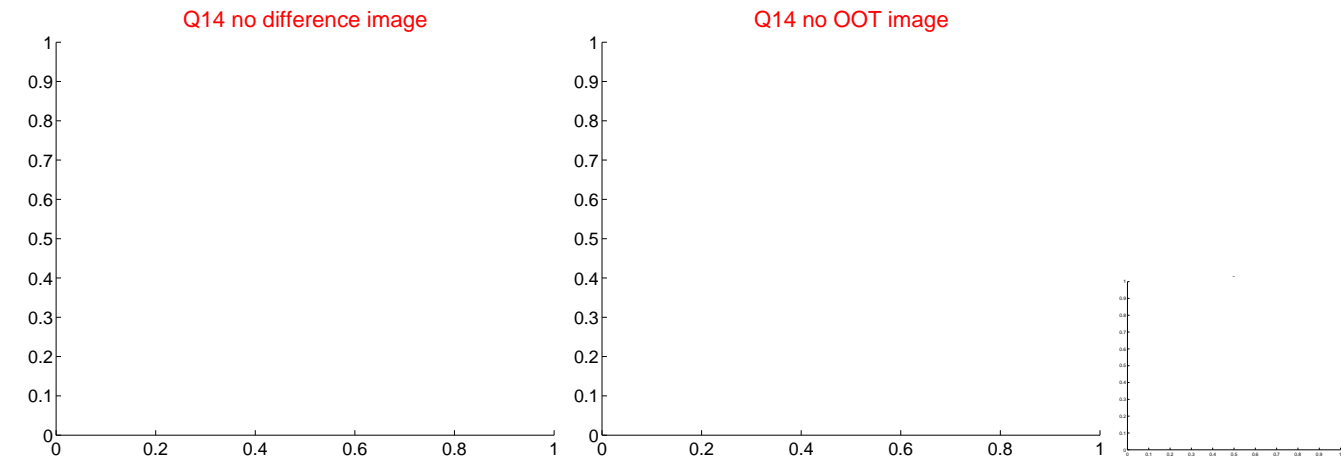
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



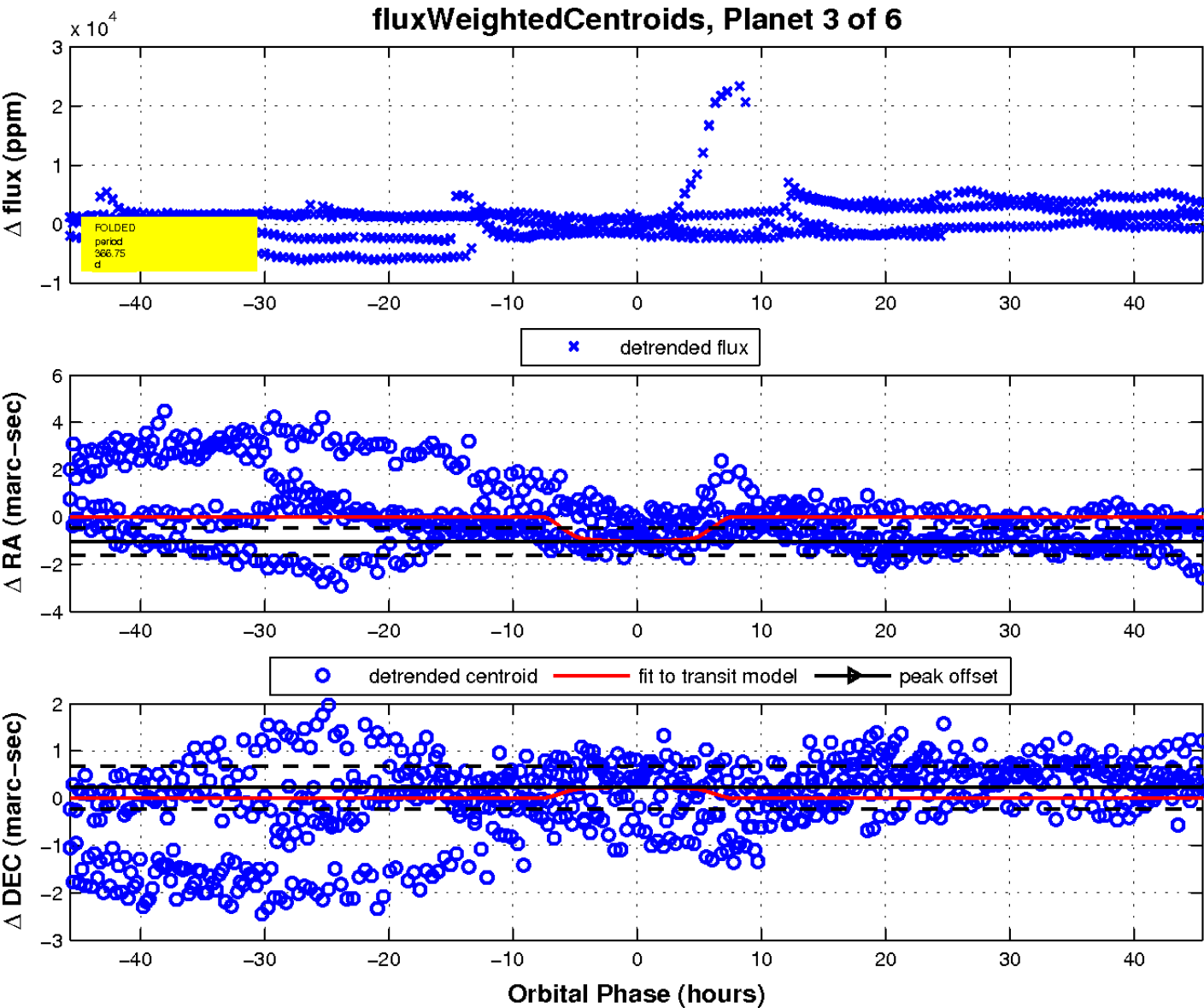
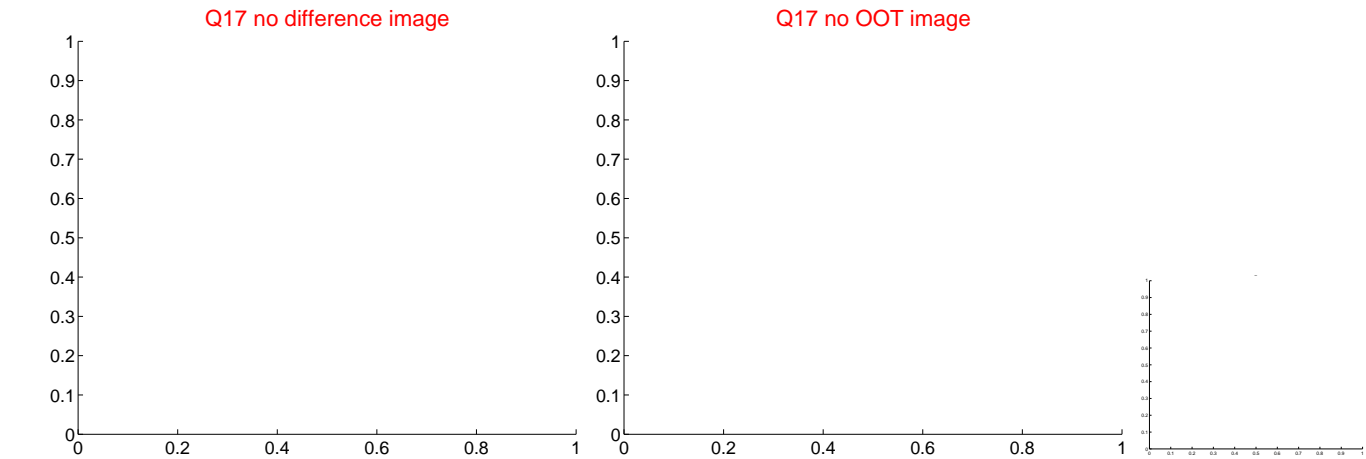
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

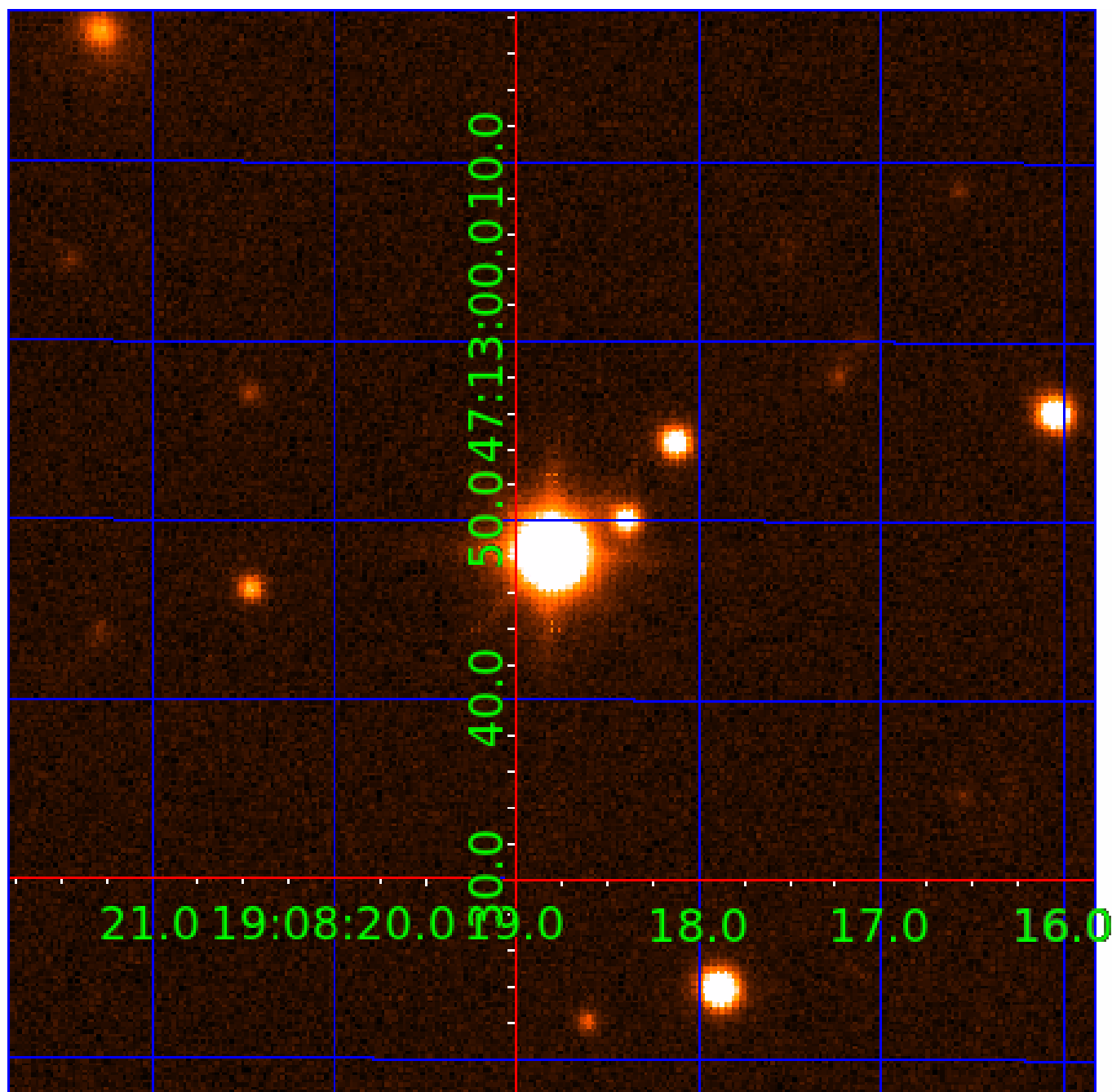


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010197260

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})
010197260-01	OBS	No	343.821892	157.907748	975.1	6.000	36.8	-1.0	2.08	5134	6.34	3.27
010197260-02	OBS	No	530.139040	151.429075	1608.1	14.088	18.7	7.1	2.08	5134	10.09	1.84
010197260-03	OBS	No	366.752805	343.133396	231.4	15.243	19.2	1.4	2.08	5134	4.17	3.00
010197260-04	OBS	No	489.179426	150.493771	179.3	12.500	14.1	-1.0	2.08	5134	2.72	2.04
010197260-05	OBS	No	381.328416	314.149940	1051.6	14.642	15.3	6.5	2.08	5134	6.78	2.85
010197260-06	OBS	No	244.687246	239.216289	277.4	3.500	13.2	-1.0	2.08	5134	3.38	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010197260-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010197260-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
010197260-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

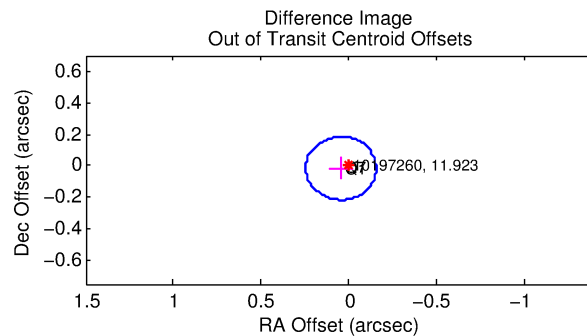
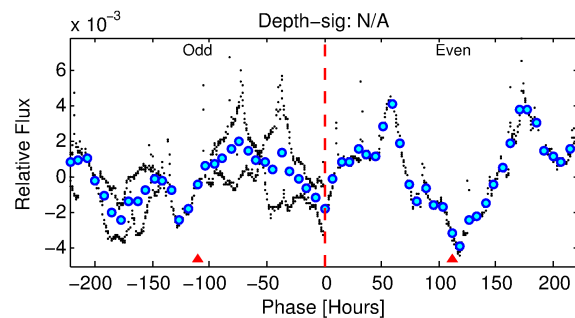
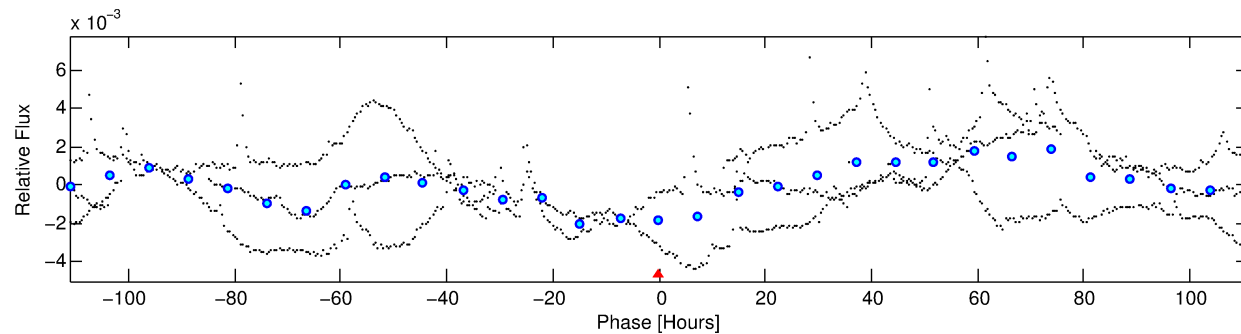
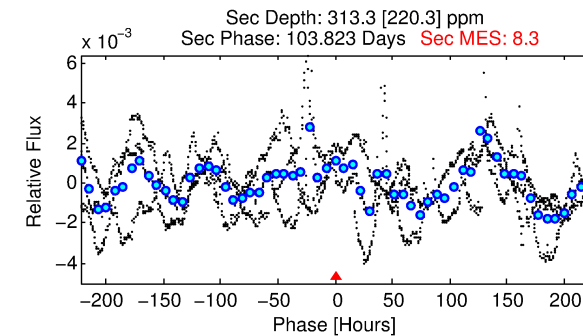
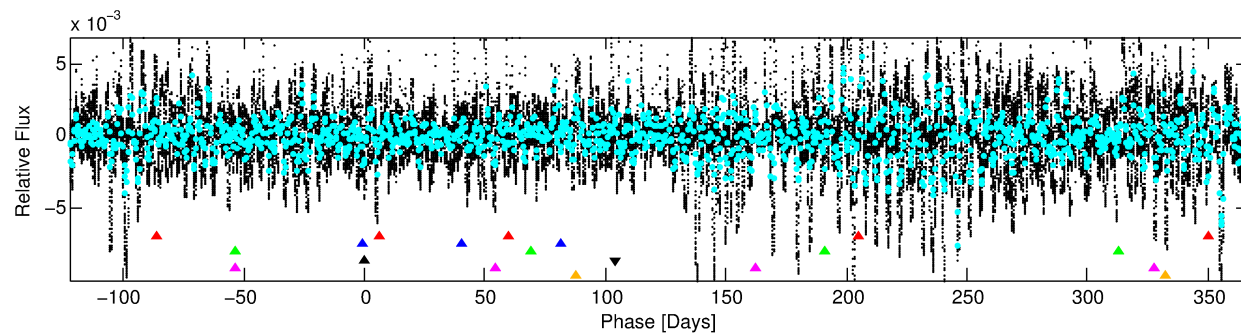
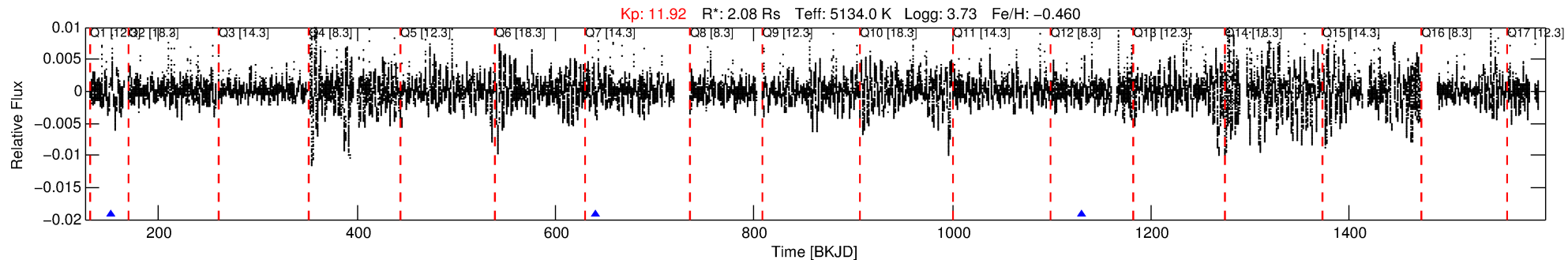
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010197260-04

No Significant Match Found

DV One-Page Summary

KIC: 10197260 Candidate: 4 of 6 Period: 489.179 d



TPS TCE Results:

Period = 489.17943 d
Epoch = 150.4938 BKJD

DV fit results are unavailable

DV Diagnostic Results:

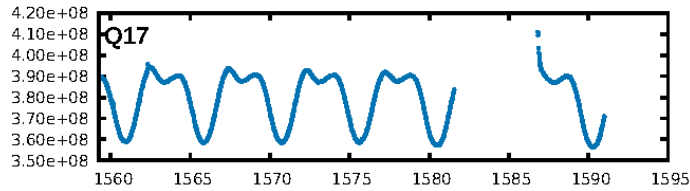
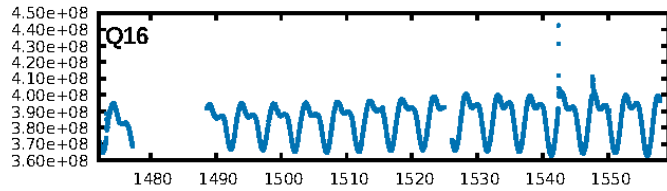
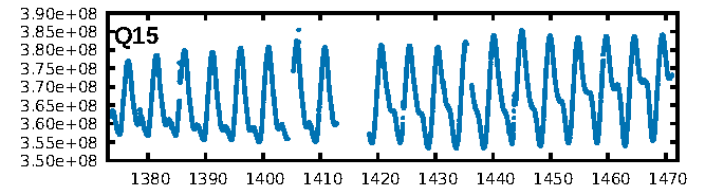
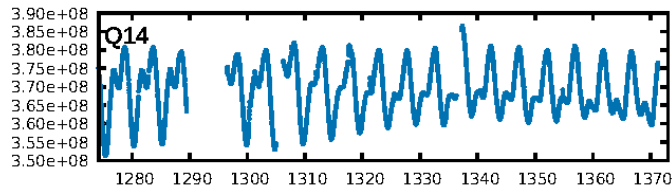
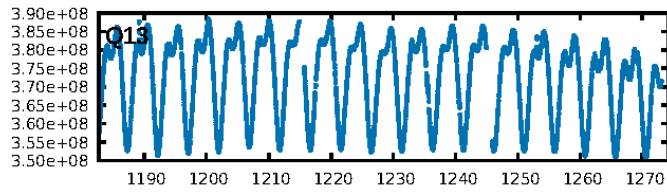
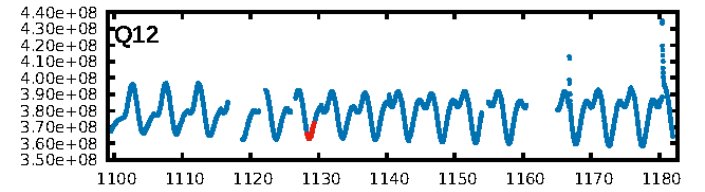
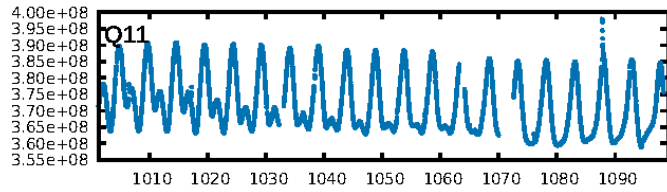
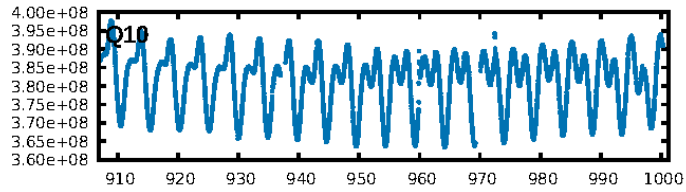
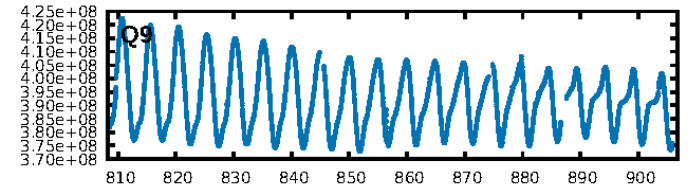
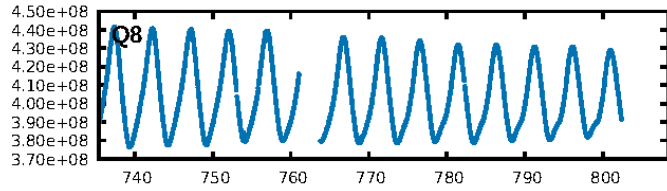
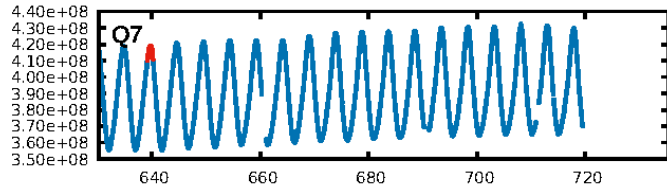
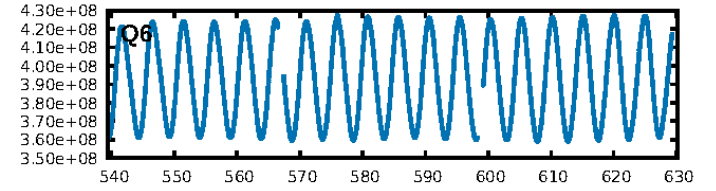
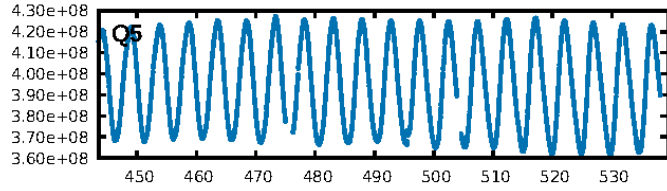
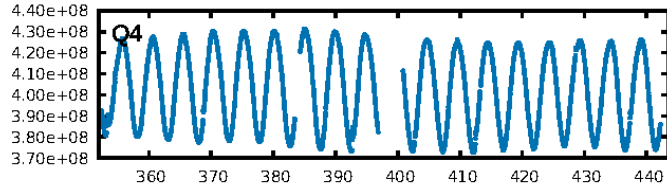
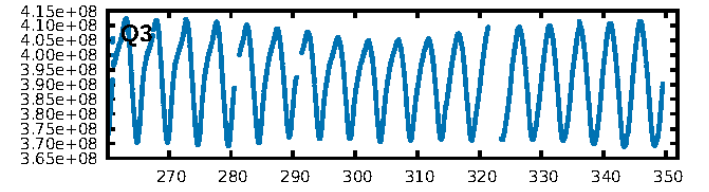
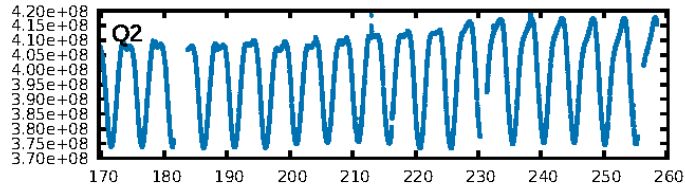
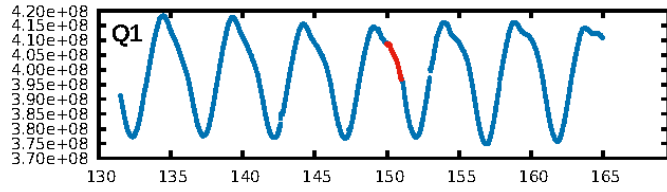
ShortPeriod-sig: 100.0% [134.45 σ]
LongPeriod-sig: 100.0% [52.19 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.219

Centroid-sig: 73.1%
Centroid-so: 0.497 arcsec [0.55 σ]
OotOffset-rm: 0.049 arcsec [0.73 σ]
KicOffset-rm: 0.107 arcsec [1.58 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
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DiffImageOverlap-fno: 0.50 [1/2]

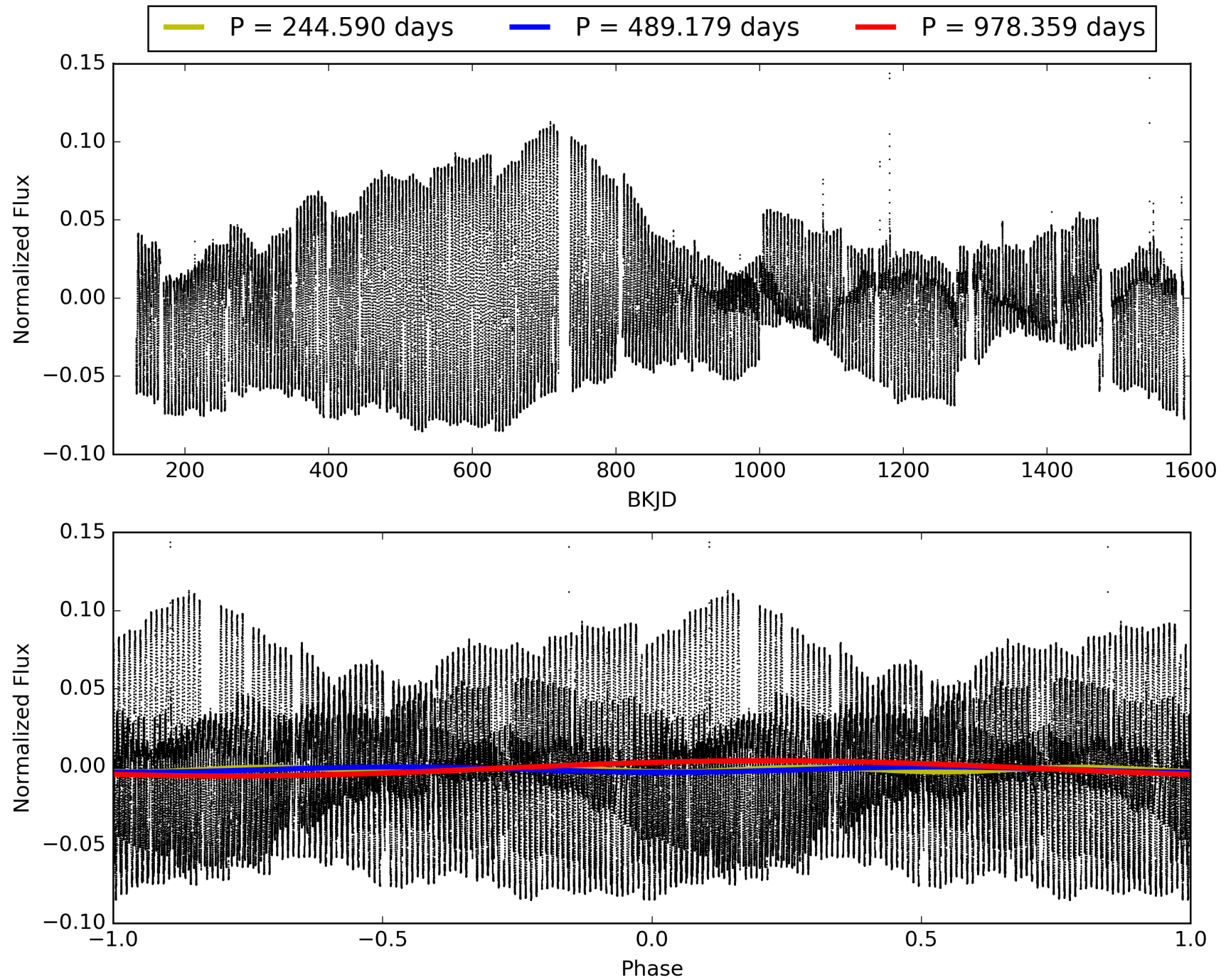
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:57:18 Z

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

TCE 010197260-04, PDC Light Curves

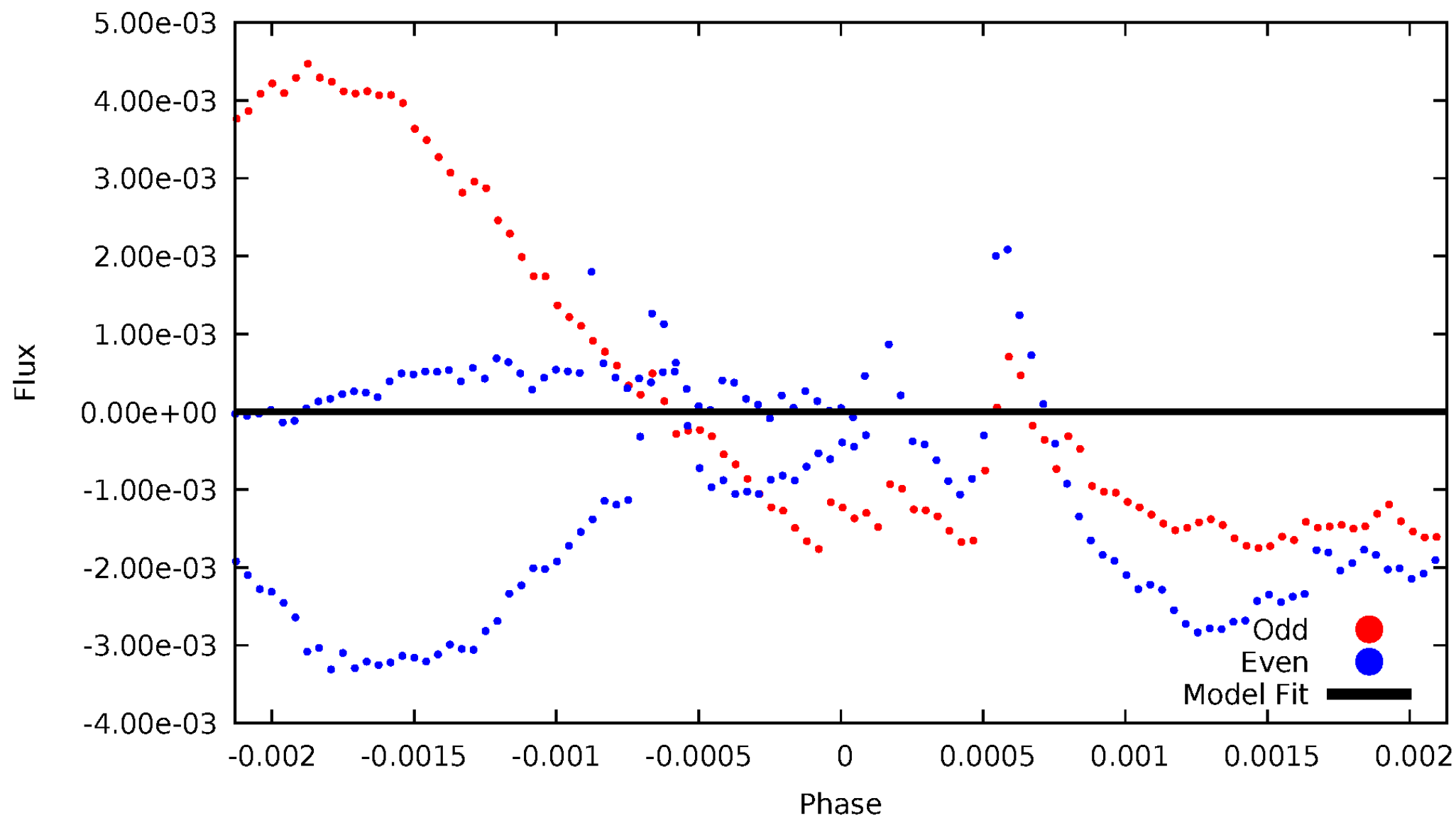


TCE 010197260-04



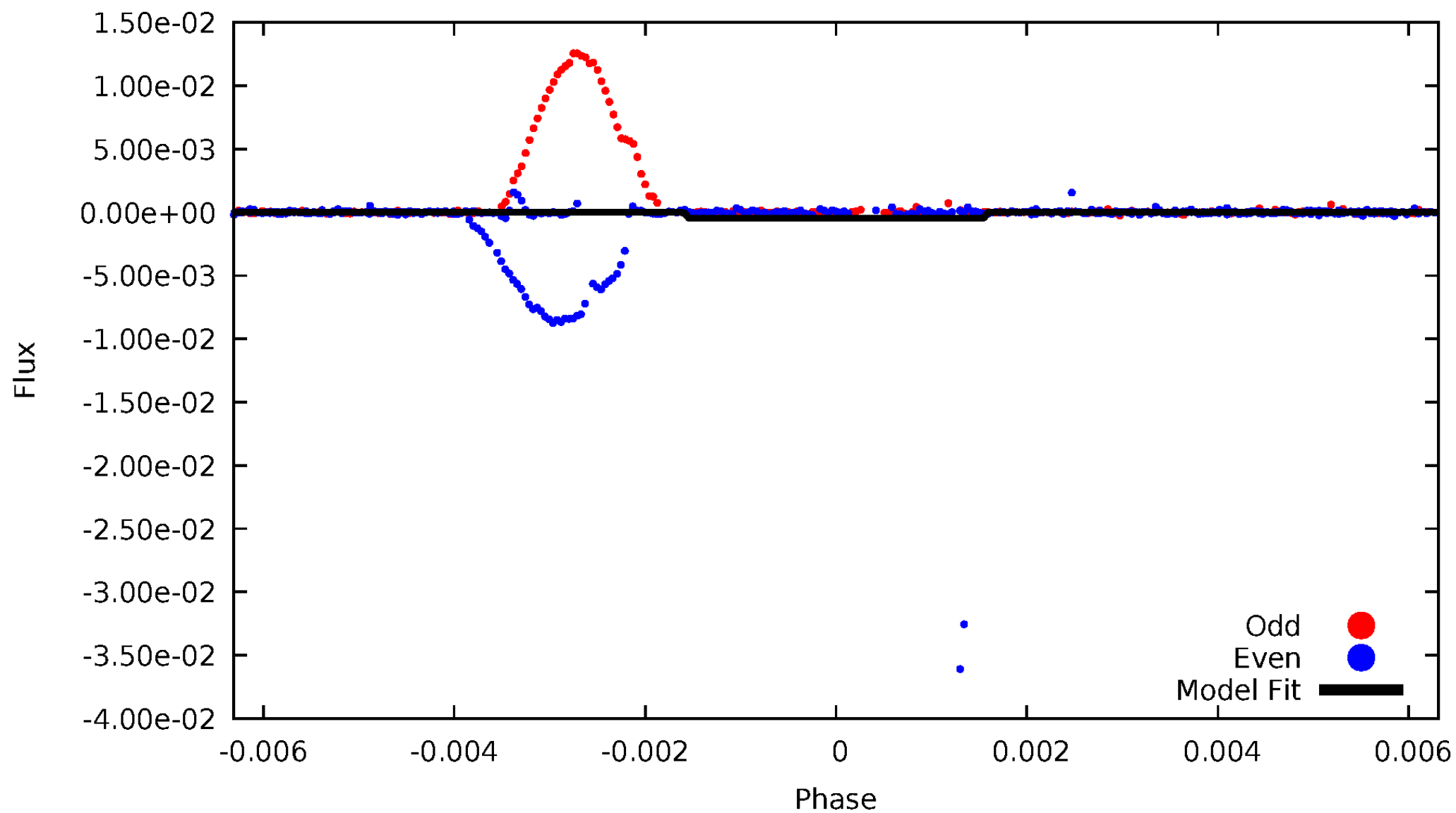
DV Odd/Even

TCE 010197260-04



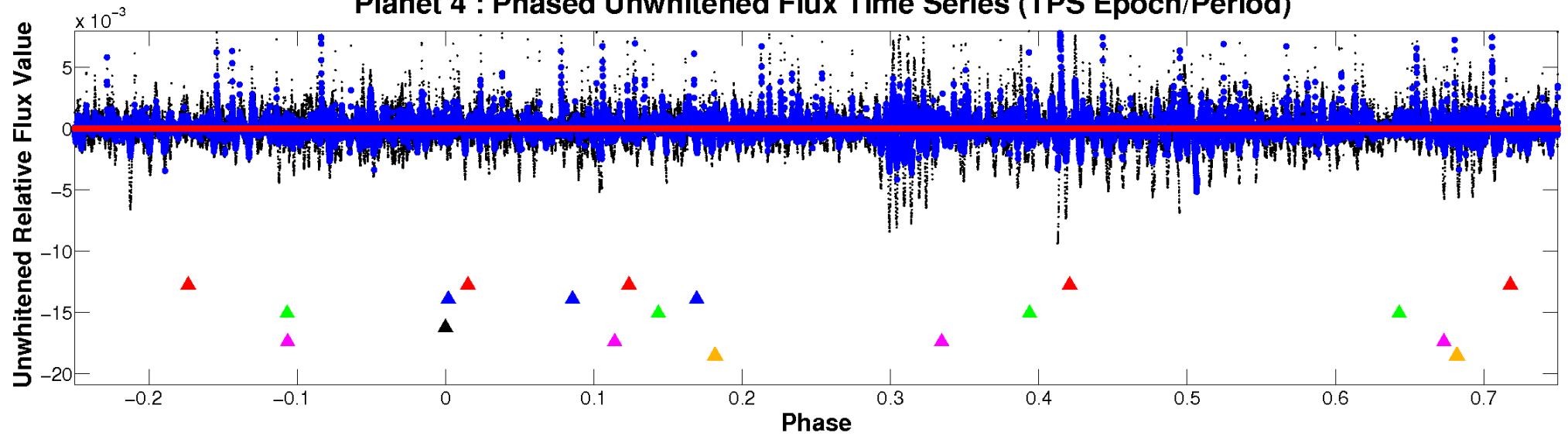
ALT Odd/Even

TCE 010197260-04

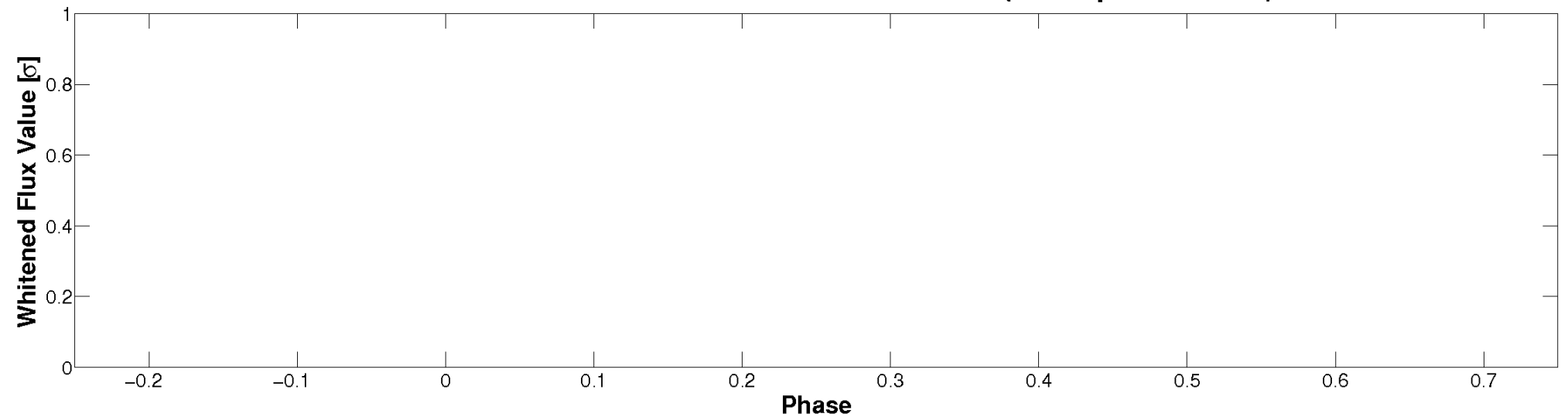


Non-Whitened Vs. Whitened Light Curve

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

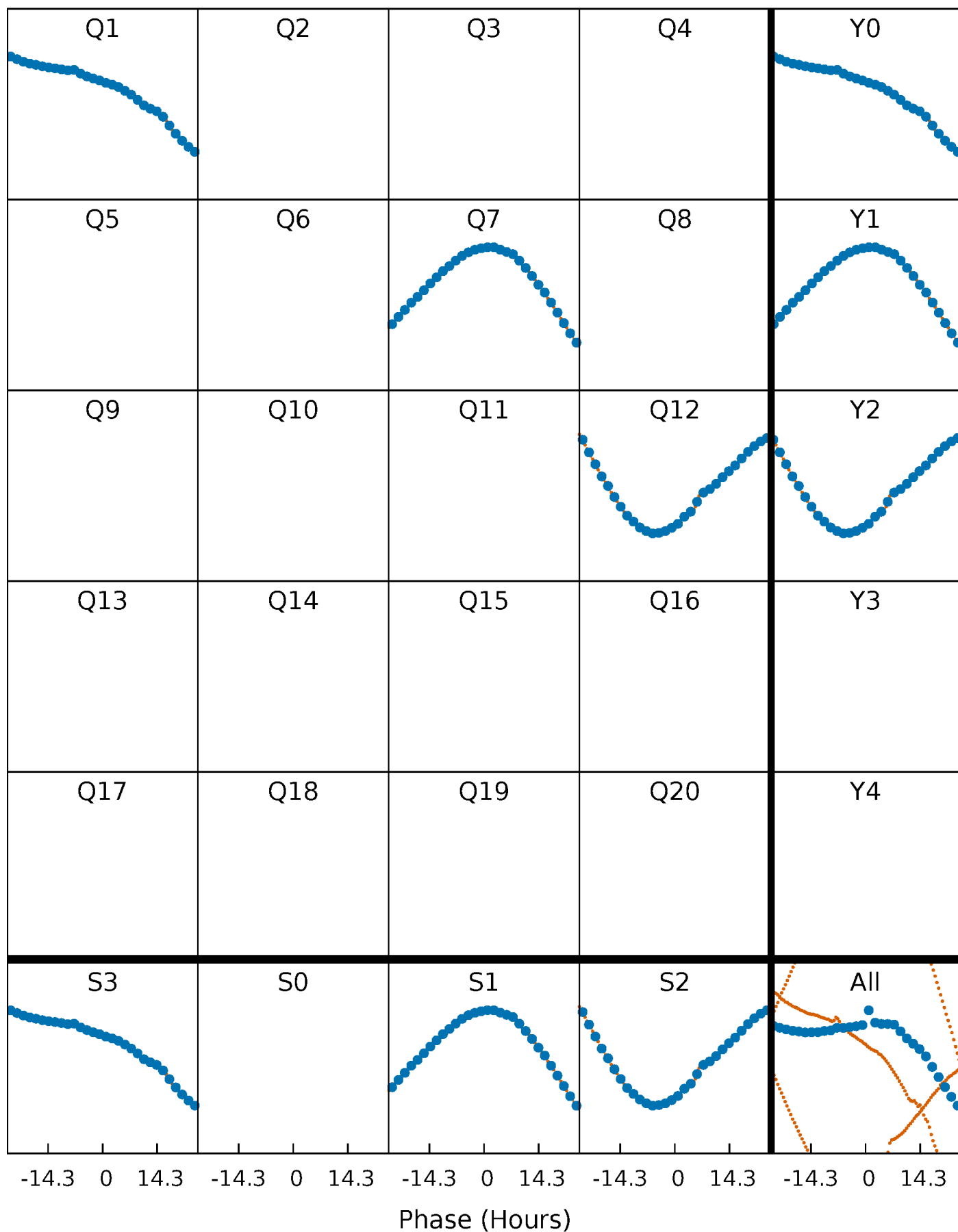


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



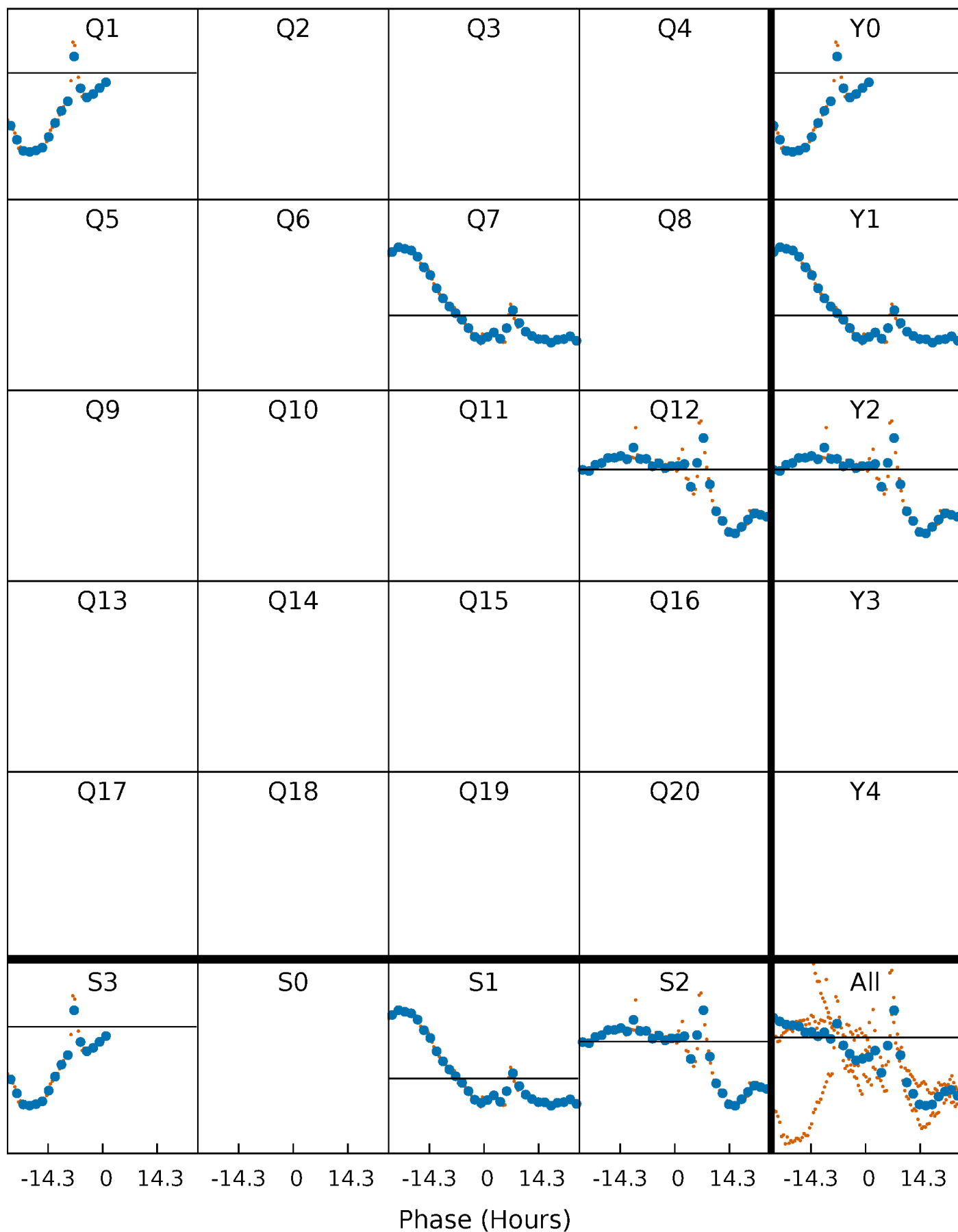
PDC Quarter-Phased Transit Curves

TCE 010197260-04 P=489.179426 Days $T_0=150.493771$ (BKJD)



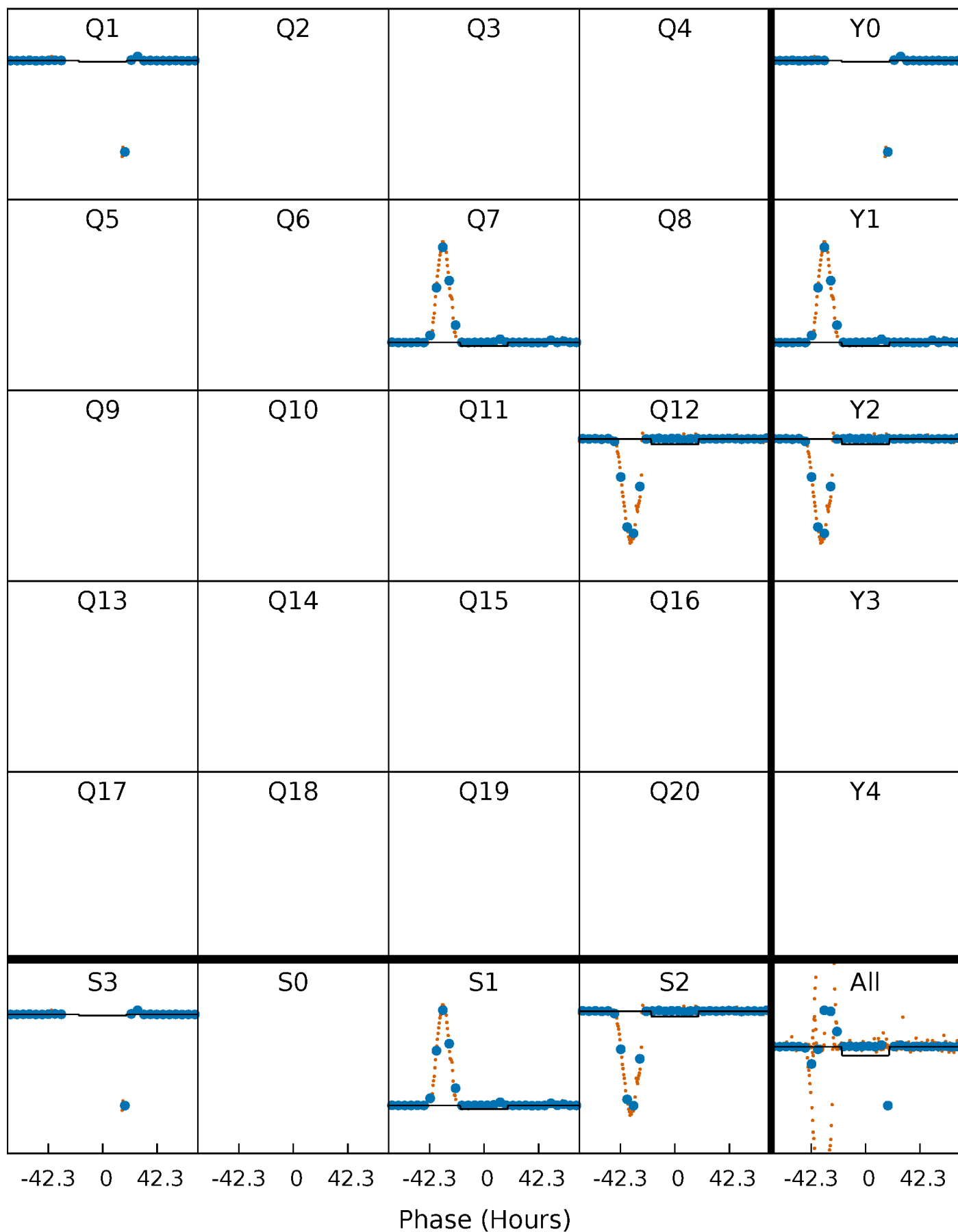
DV Quarter-Phased Transit Curves

TCE 010197260-04 $P=489.179426$ Days $T_0=150.493771$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

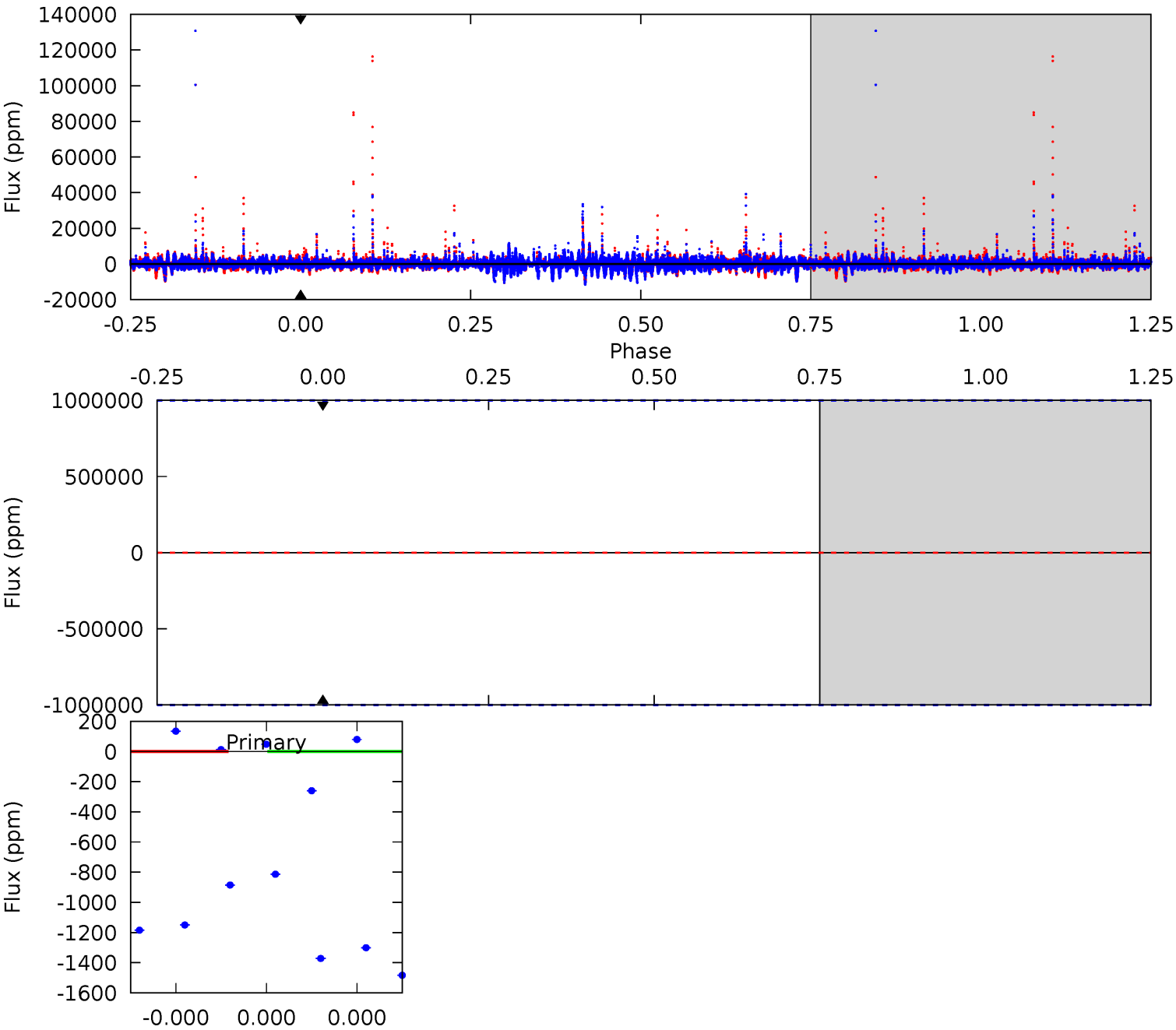
TCE 010197260-04 $P=489.179426$ Days $T_0=151.821467$ (BKJD)



DV Model-Shift Uniqueness Test

010197260-04, P = 489.179426 Days, E = 150.493771 Days

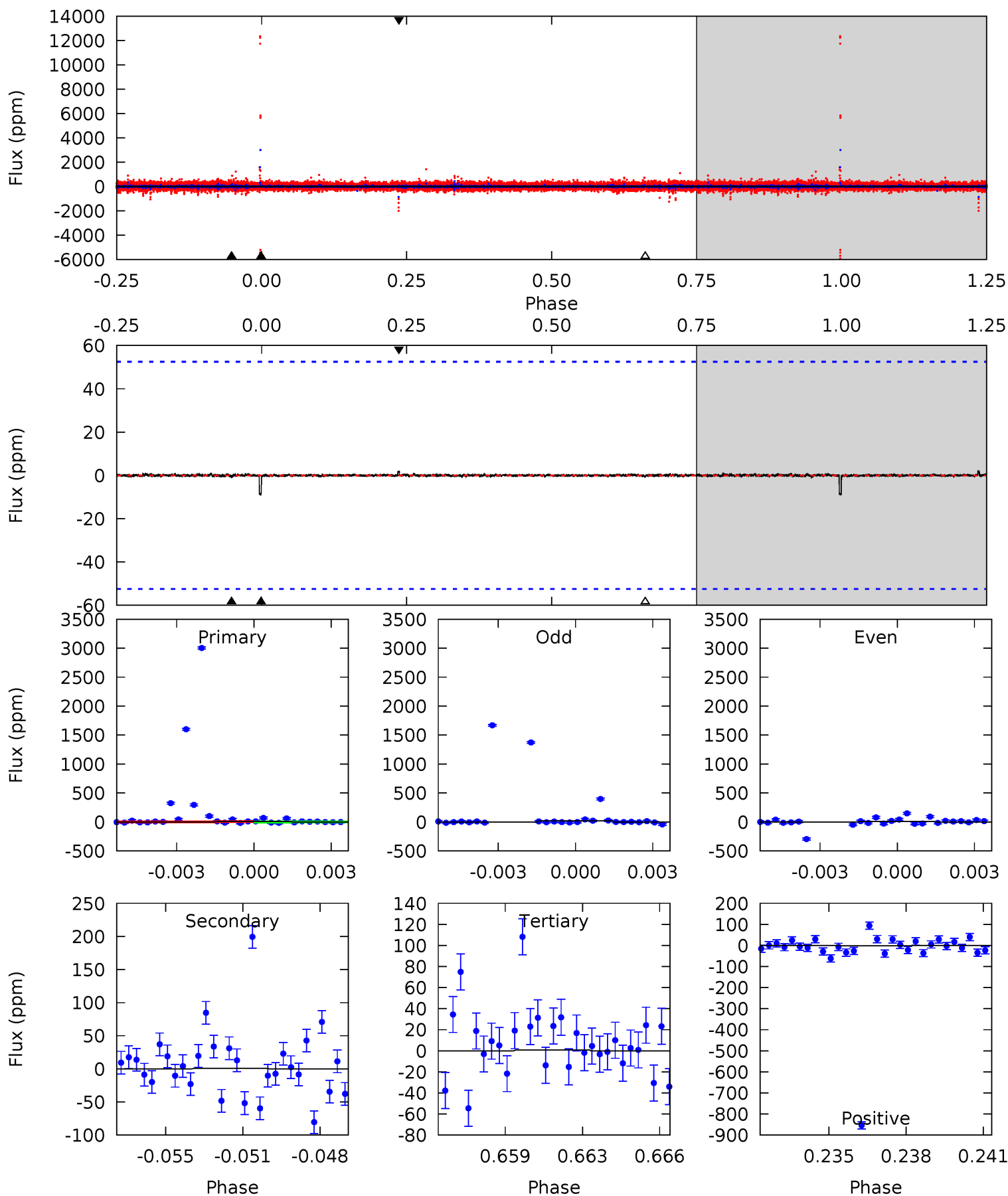
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010197260-04, P = 489.179426 Days, E = 151.821467 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.89	0.10	0.08	0.19	5.24	2.95	0.02	0.81	0.70	0.02	-0.09	0.31	-1172	0.18	0.14



Stellar Parameters For KIC 010197260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5134^{+140}_{-127}	$3.726^{+0.854}_{-0.366}$	$-0.460^{+0.350}_{-0.250}$	$2.075^{+1.352}_{-1.488}$	$0.836^{+0.253}_{-0.136}$	$0.132^{+2.931}_{-0.102}$
	+3%/-2%	+23%/-10%	+76%/-54%	+65%/-72%	+30%/-16%	+2224%/-77%
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 010197260-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$15.66^{+19.31}_{-11.62}$	419^{+70}_{-81}	4254^{+12439}_{-19359}	$3993^{+649670}_{-549003}$
Alt.	-1 ± 10	$15.76^{+21.27}_{-11.33}$	424^{+71}_{-81}	1477^{+743}_{-3603}	$0.951^{+68.482}_{-43.125}$

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

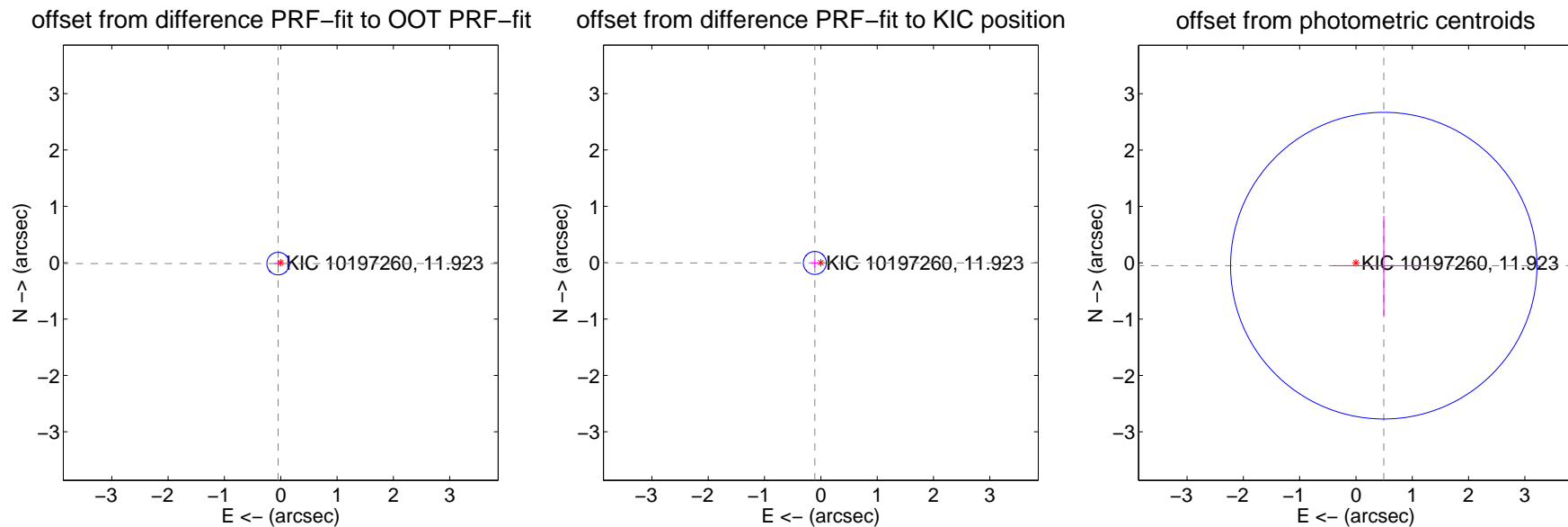
DV Centroid Data

Supplemental centroid analysis for 010197260-04. **Kepler magnitude: 11.92.** Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

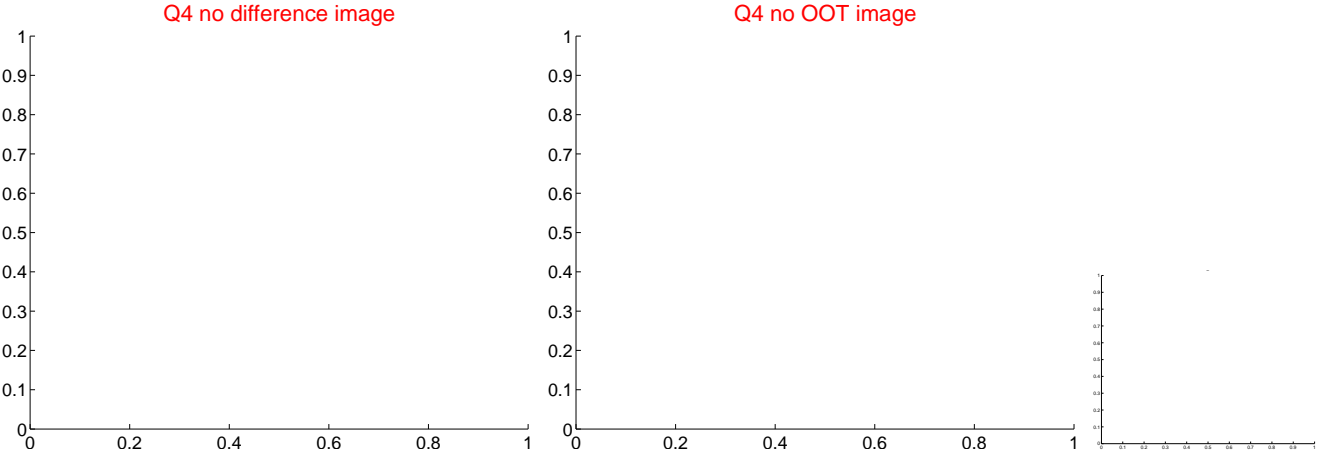
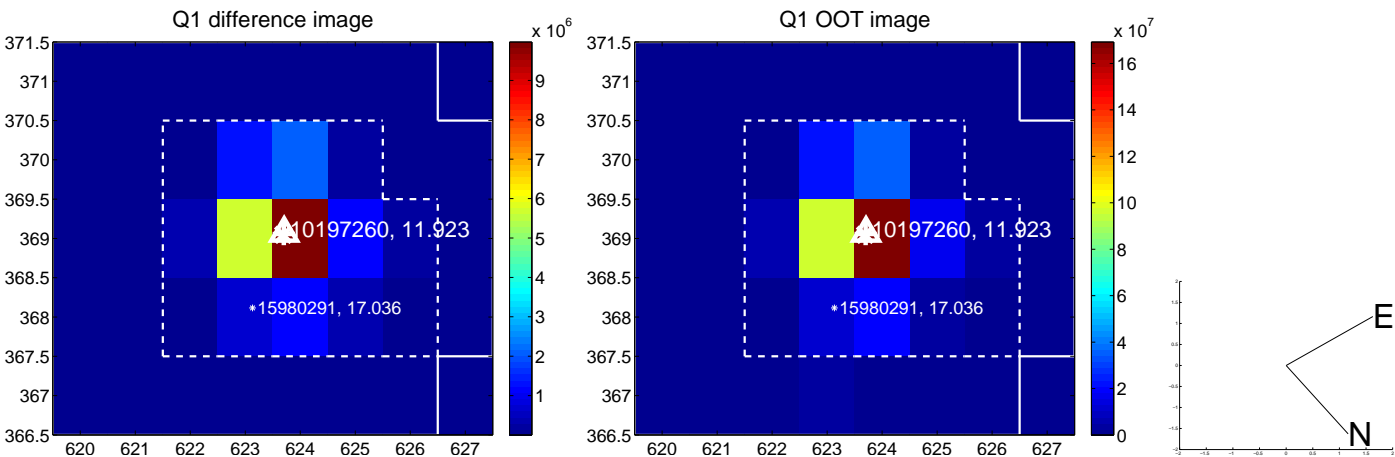
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.067	0.73	0.046 ± 0.067	-0.016 ± 0.067
PRF-fit source offset from KIC position	0.107 ± 0.068	1.58	0.107 ± 0.068	-0.005 ± 0.083
photometric centroid source offset	0.50 ± 0.91	0.55	-0.49 ± 0.91	-0.05 ± 0.88

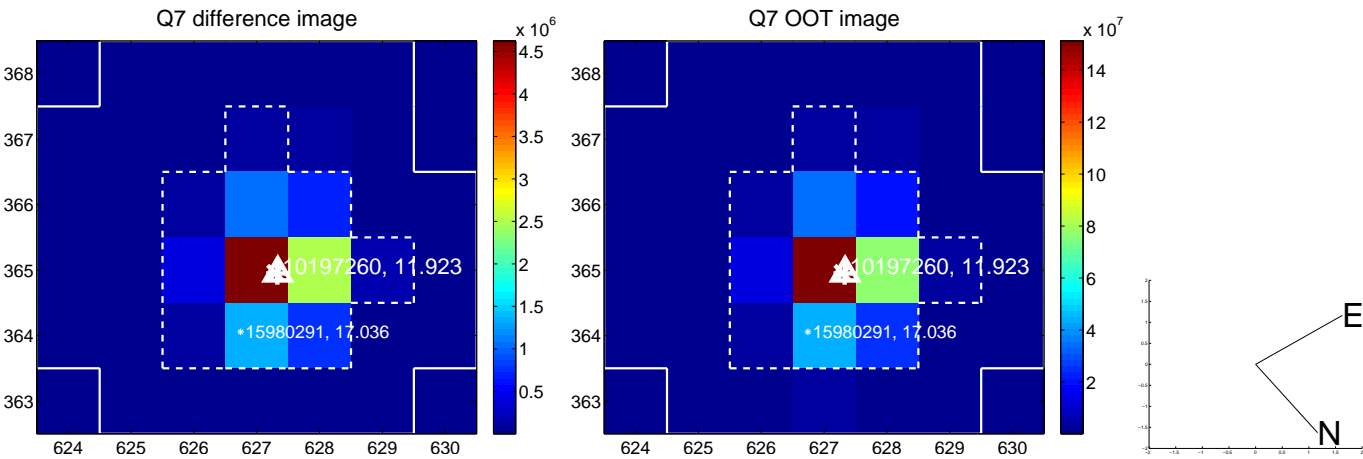


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



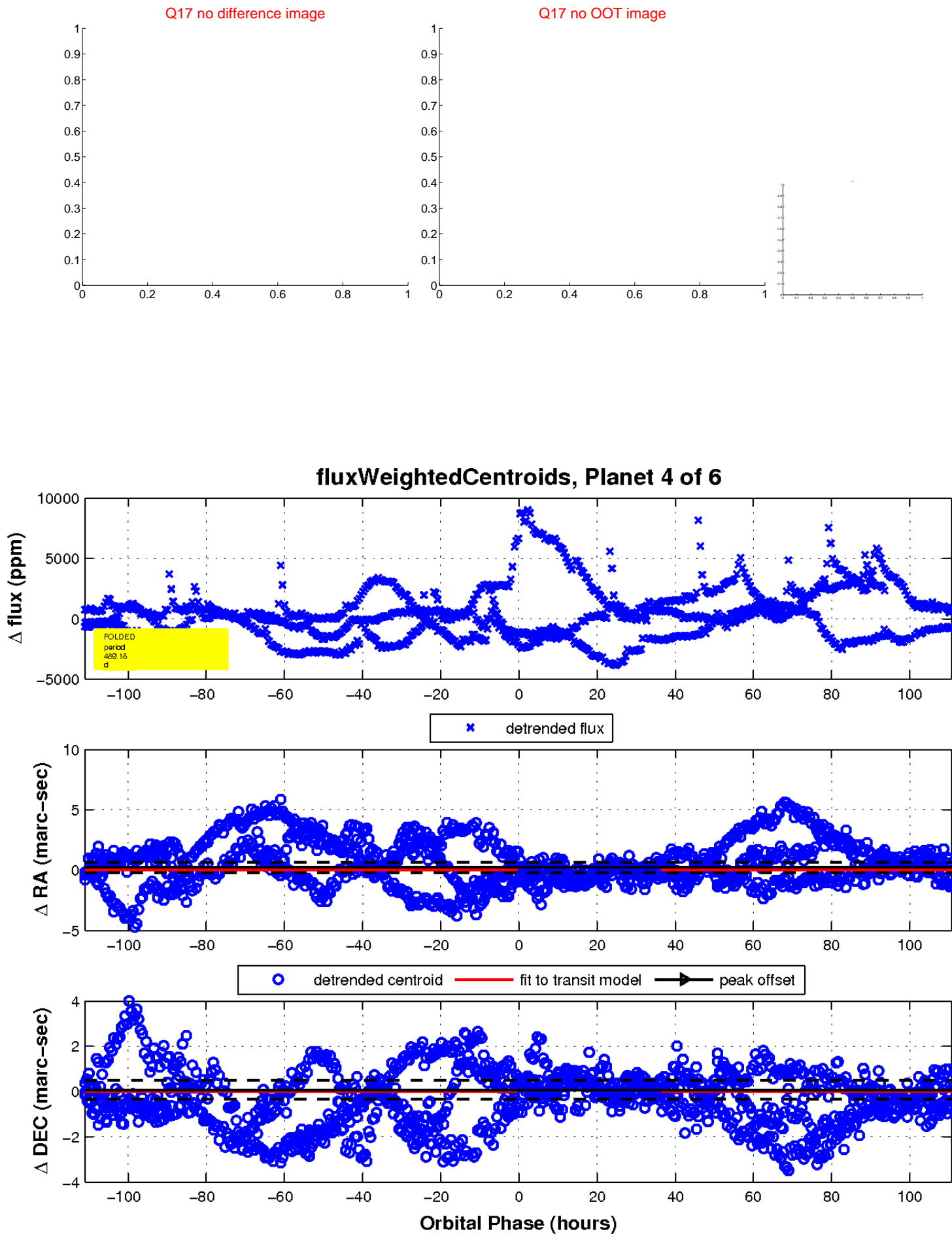
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

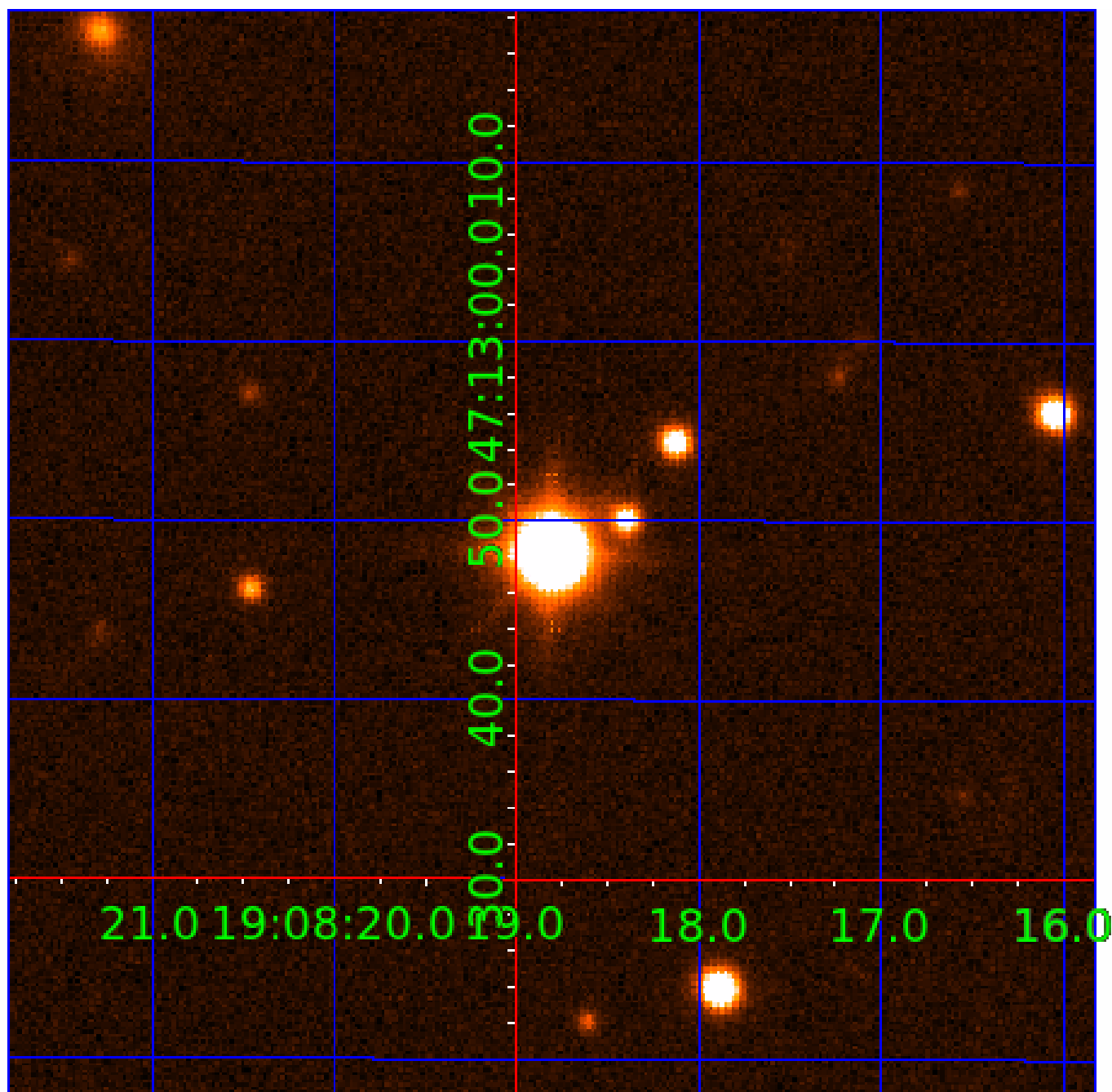


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010197260

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})
010197260-01	OBS	No	343.821892	157.907748	975.1	6.000	36.8	-1.0	2.08	5134	6.34	3.27
010197260-02	OBS	No	530.139040	151.429075	1608.1	14.088	18.7	7.1	2.08	5134	10.09	1.84
010197260-03	OBS	No	366.752805	343.133396	231.4	15.243	19.2	1.4	2.08	5134	4.17	3.00
010197260-04	OBS	No	489.179426	150.493771	179.3	12.500	14.1	-1.0	2.08	5134	2.72	2.04
010197260-05	OBS	No	381.328416	314.149940	1051.6	14.642	15.3	6.5	2.08	5134	6.78	2.85
010197260-06	OBS	No	244.687246	239.216289	277.4	3.500	13.2	-1.0	2.08	5134	3.38	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010197260-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010197260-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
010197260-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

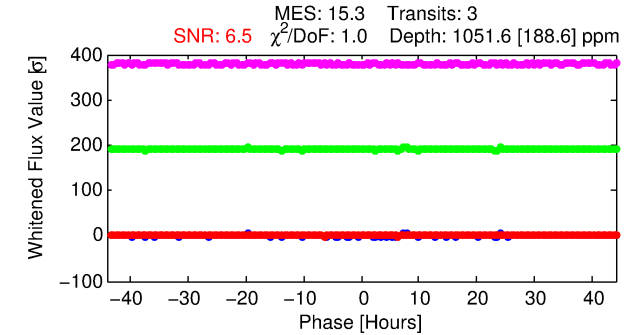
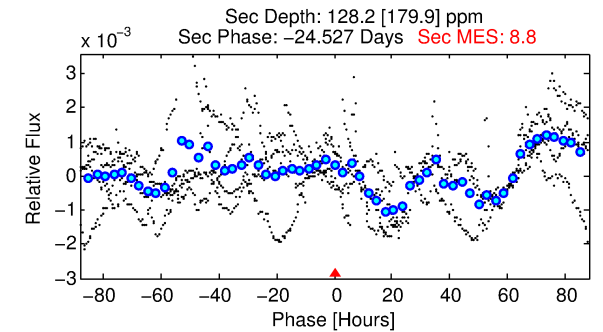
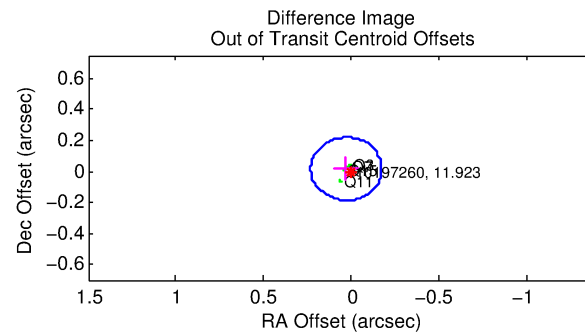
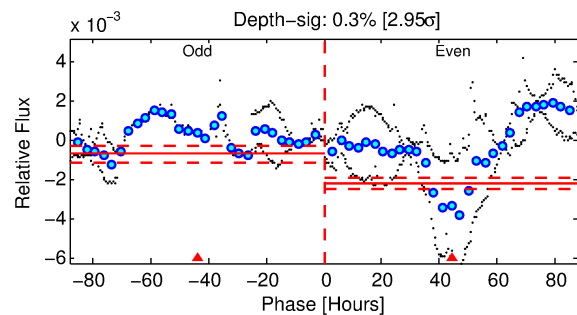
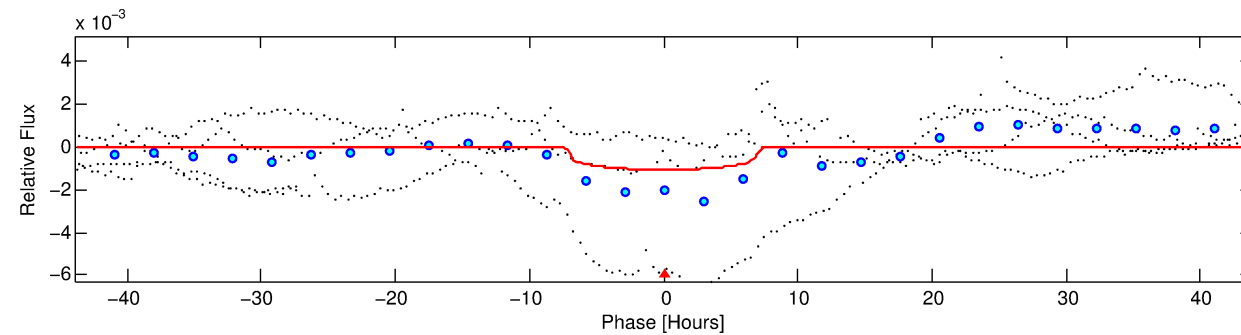
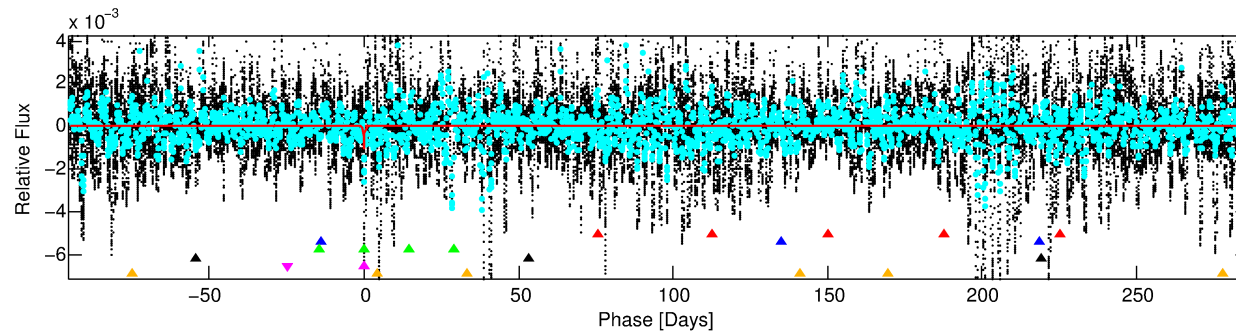
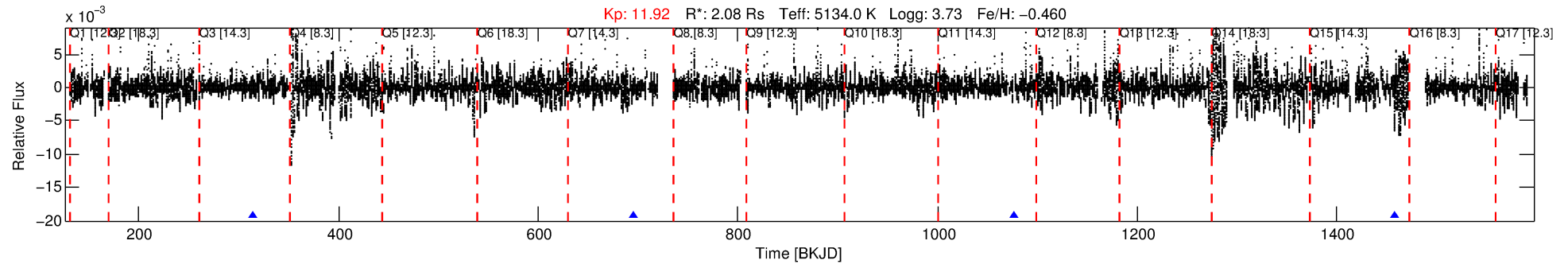
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010197260-05

No Significant Match Found

DV One-Page Summary

KIC: 10197260 Candidate: 5 of 6 Period: 381.328 d



DV Fit Results:

Period = 381.32842 [0.00240] d
Epoch = 314.1499 [0.0047] BKJD
Rp/R* = 0.0300 [0.0047]
a/R* = 183.27 [74.68]
b = 0.46 [0.70]
Seff = 2.85 [3.99]
Teq = 331 [116] K
Rp = 6.78 [4.98] Re
a = 0.9696 [0.7866] AU
Ag = 1441.65 [2888.76] [0.50 σ]
Teffp = 3157 [1138] K [2.47 σ]

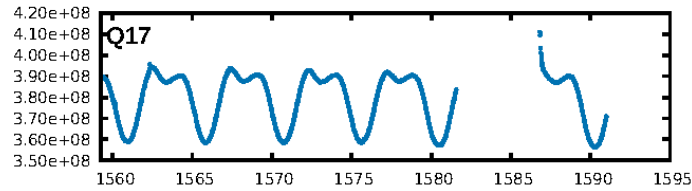
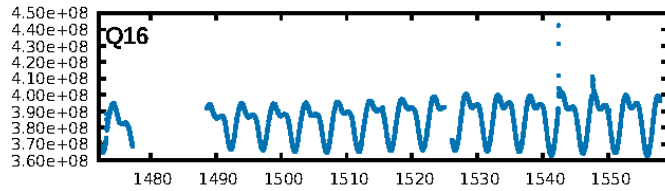
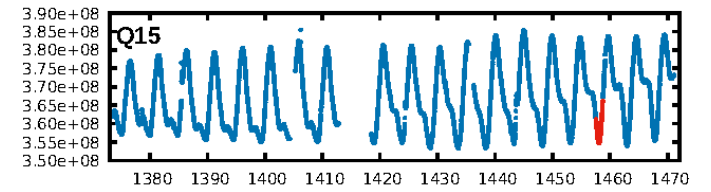
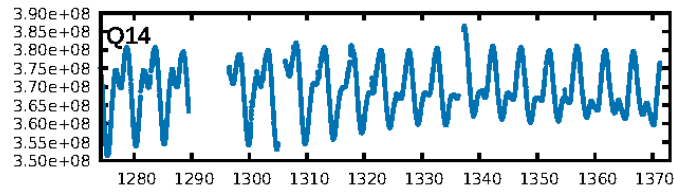
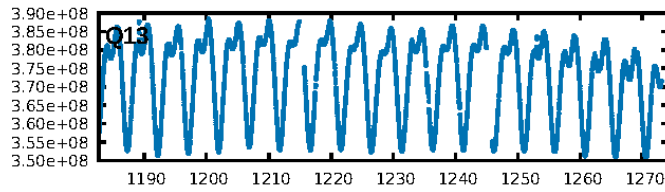
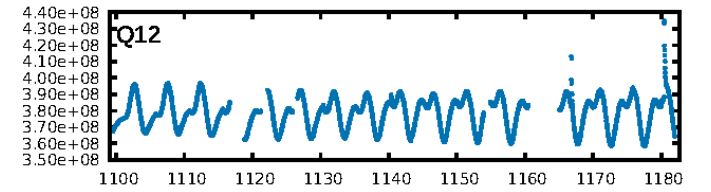
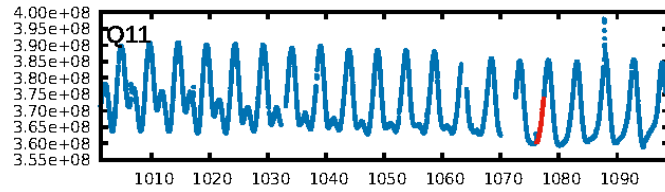
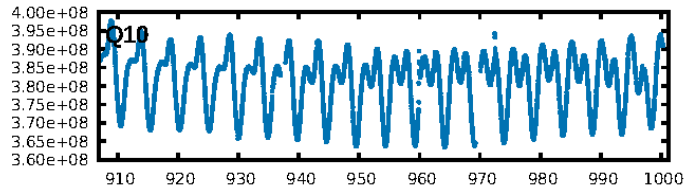
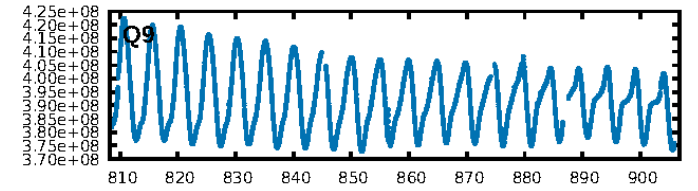
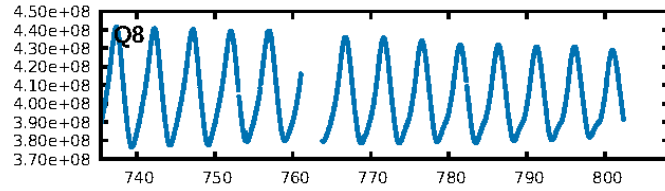
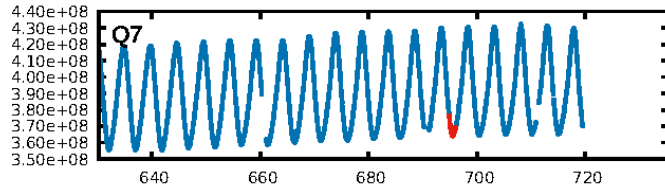
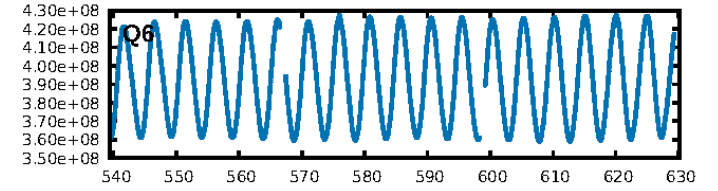
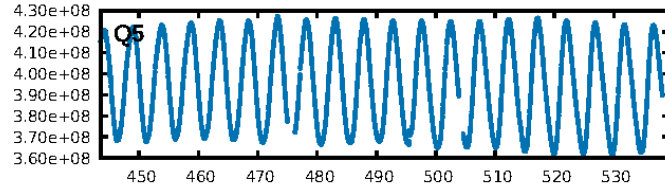
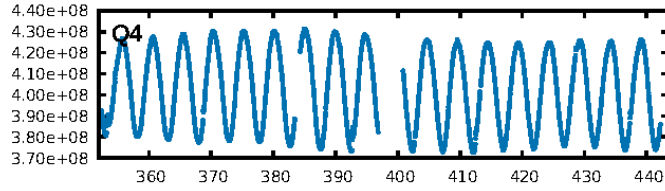
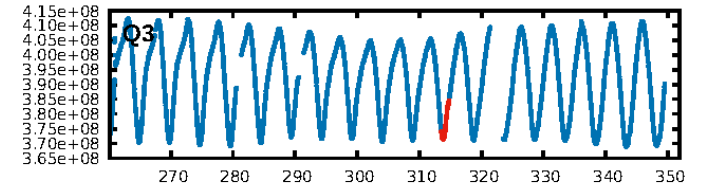
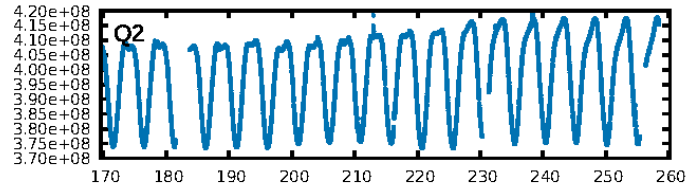
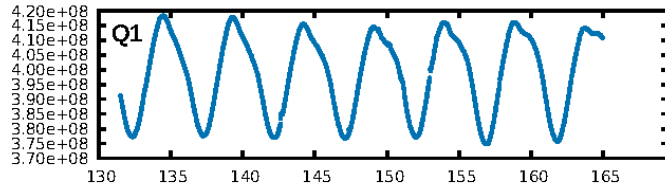
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.55 σ]
LongPeriod-sig: 100.0% [134.45 σ]
ModelChiSquare2-sig: 9.3%
ModelChiSquareGoF-sig: 95.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.23
Centroid-sig: 2.9%
Centroid-so: 0.793 arcsec [1.70 σ]
OotOffset-rm: 0.034 arcsec [0.50 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-rm: 0.137 arcsec [1.99 σ]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.75 [3/4]

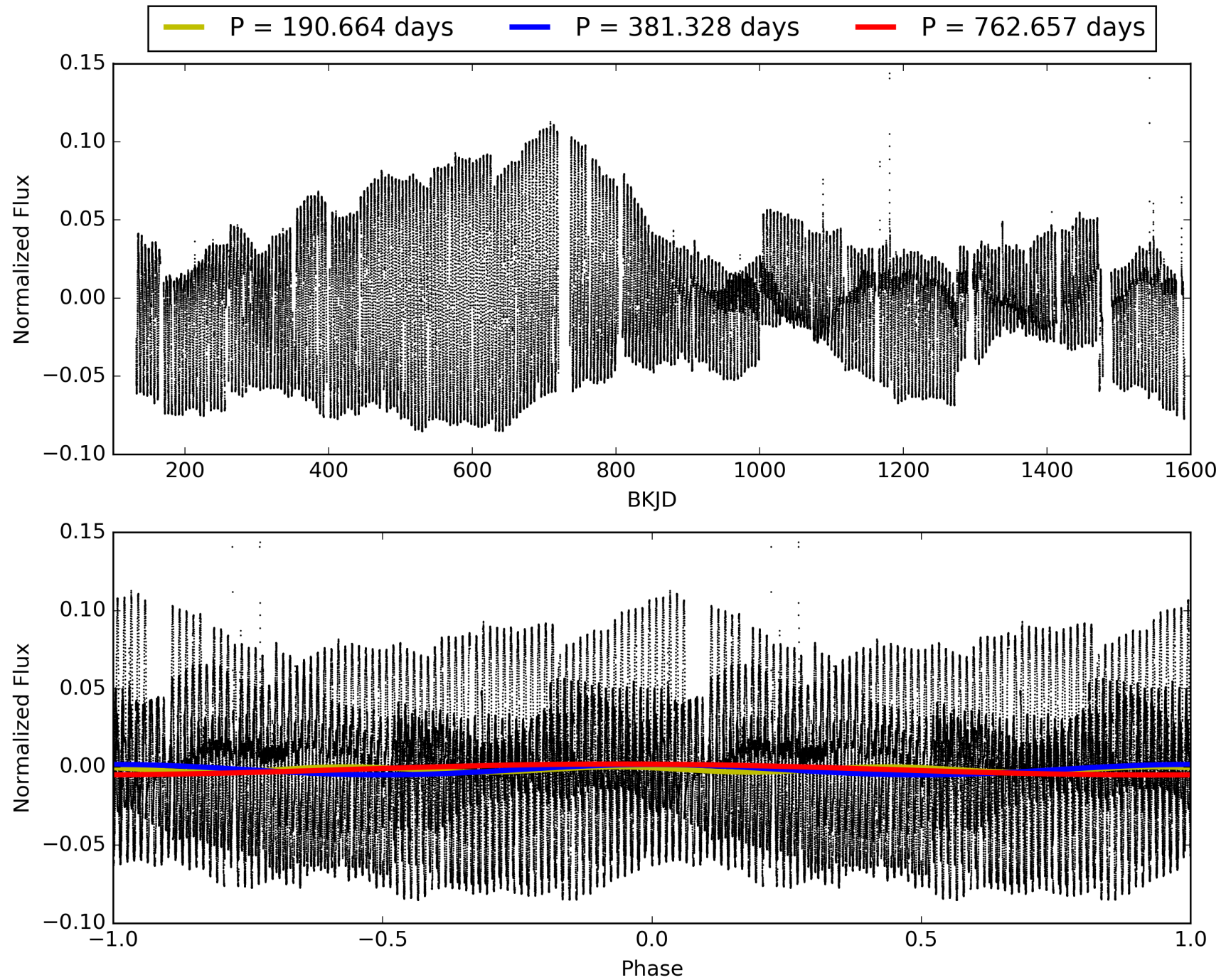
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:57:26 Z

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

TCE 010197260-05, PDC Light Curves

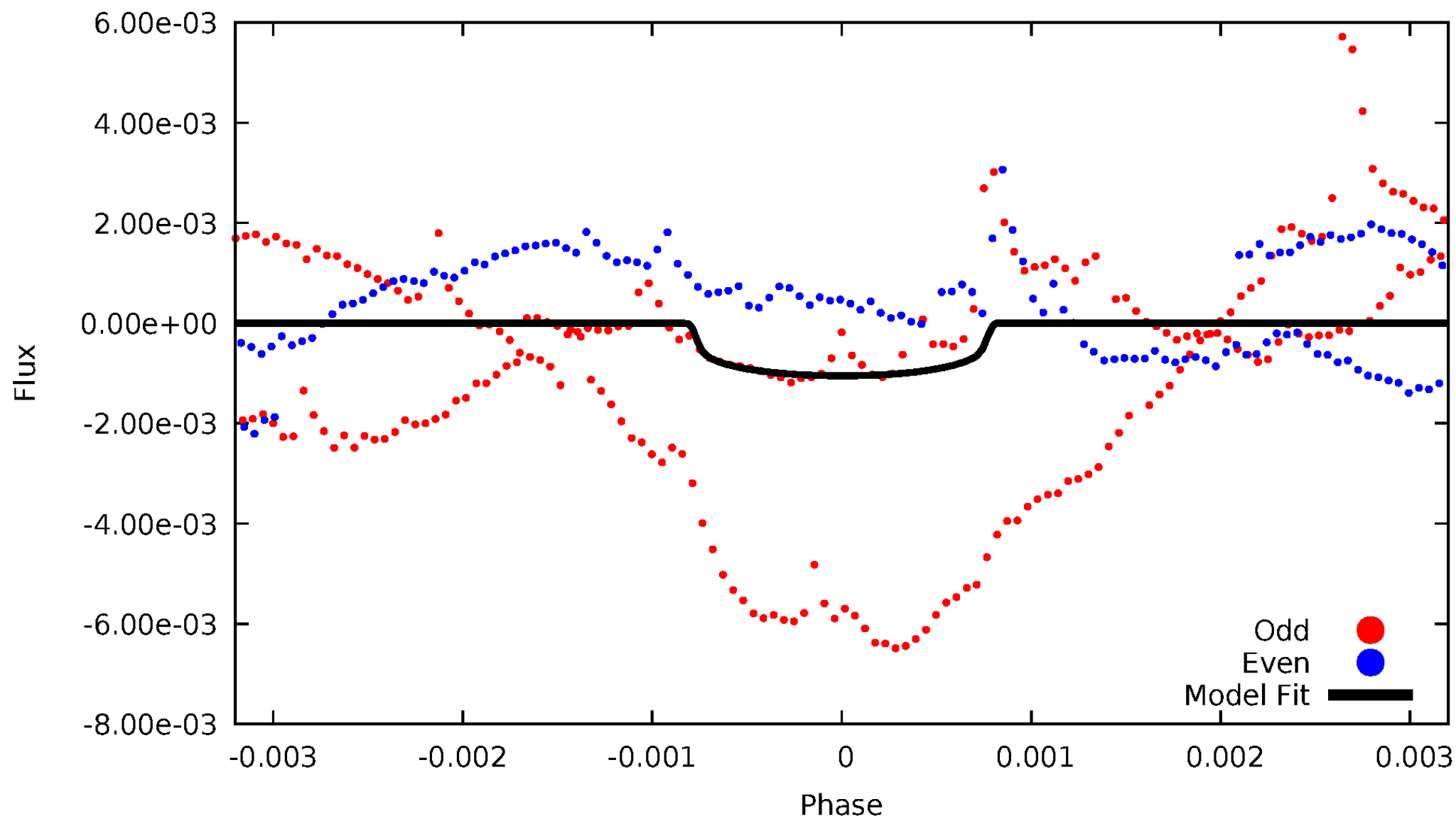


TCE 010197260-05



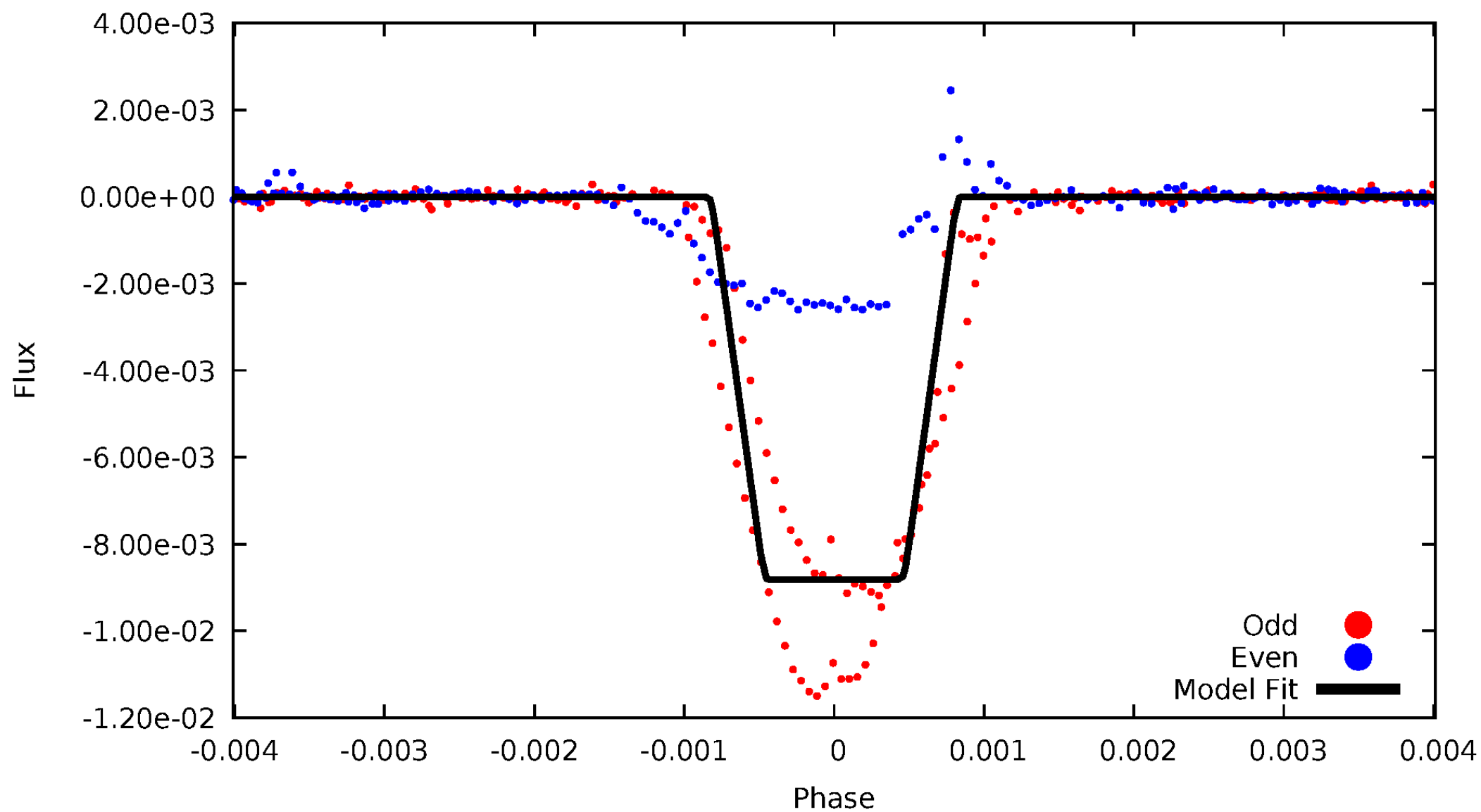
DV Odd/Even

TCE 010197260-05



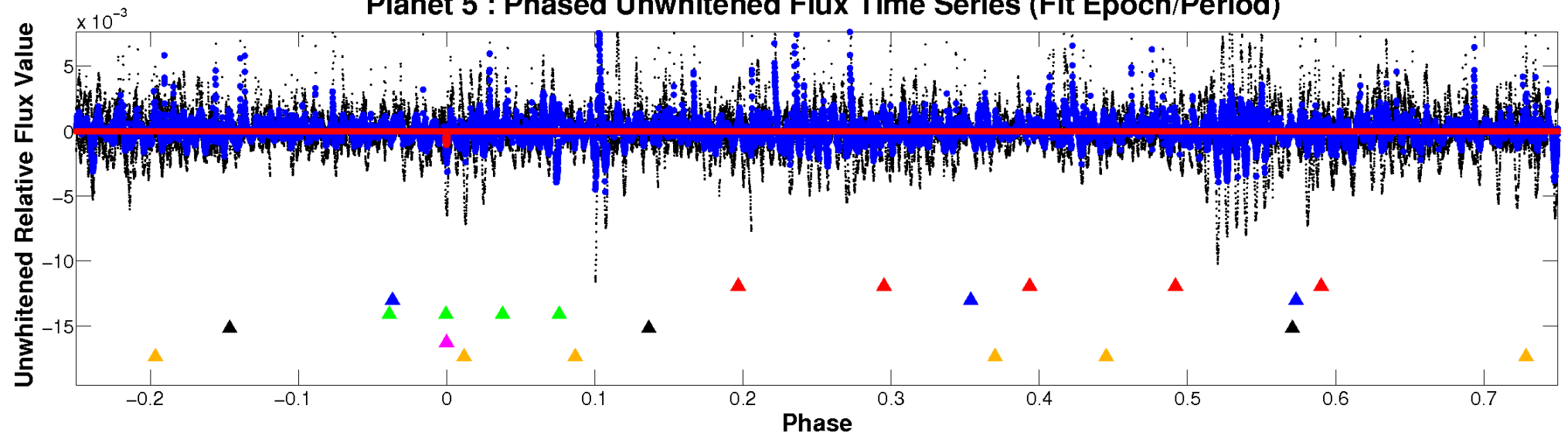
ALT Odd/Even

TCE 010197260-05

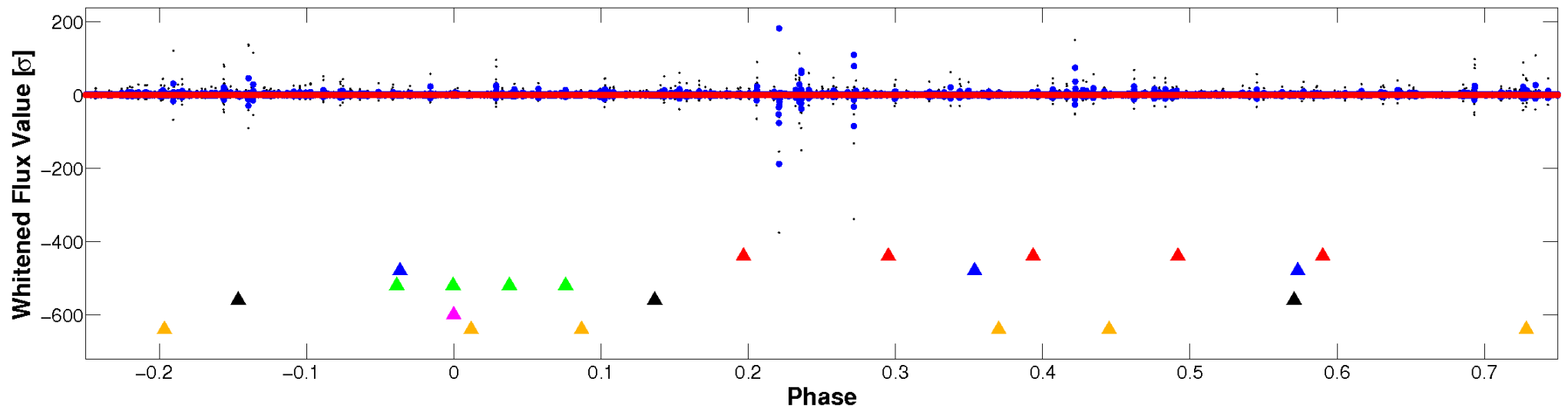


Non-Whitened Vs. Whitened Light Curve

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

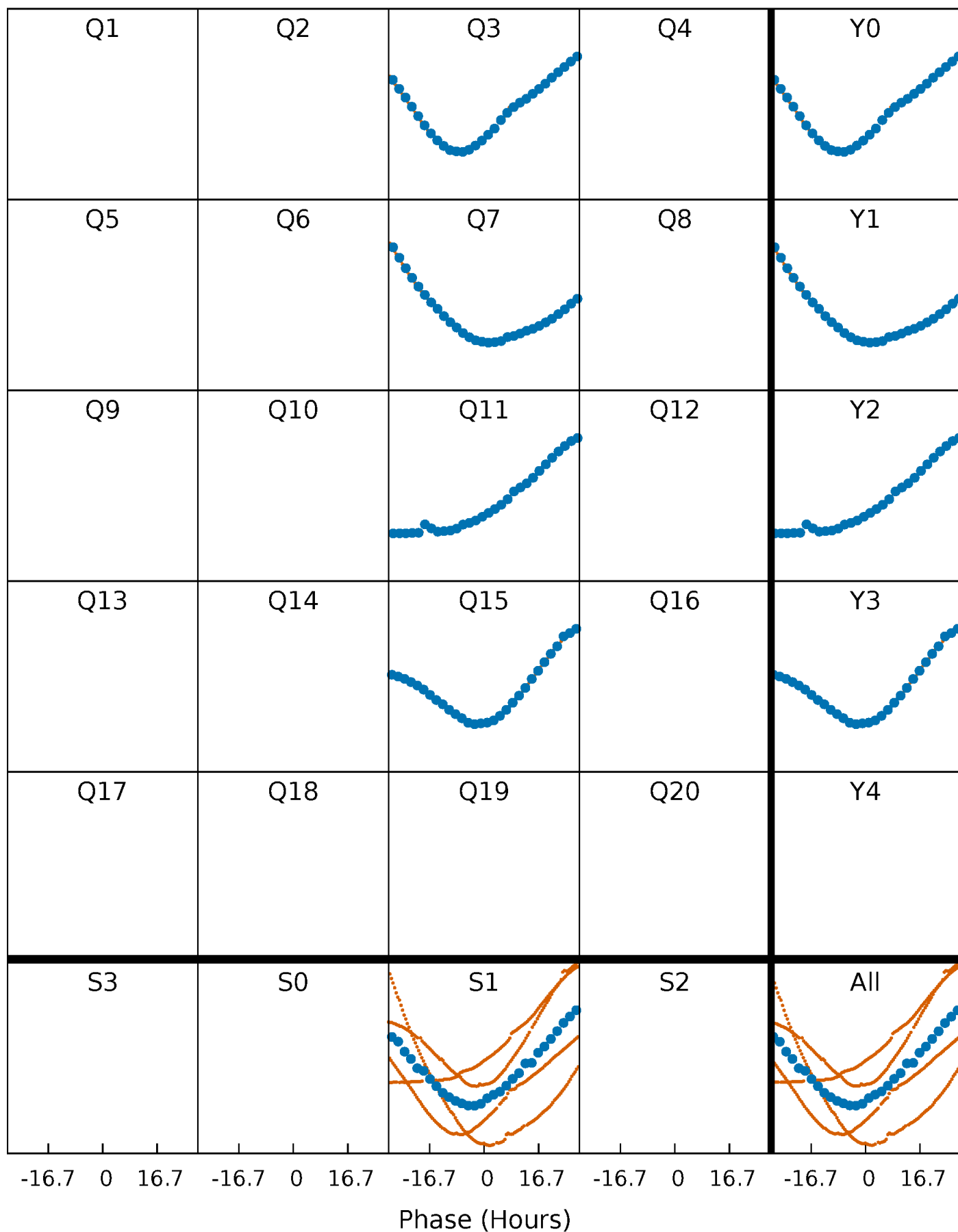


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



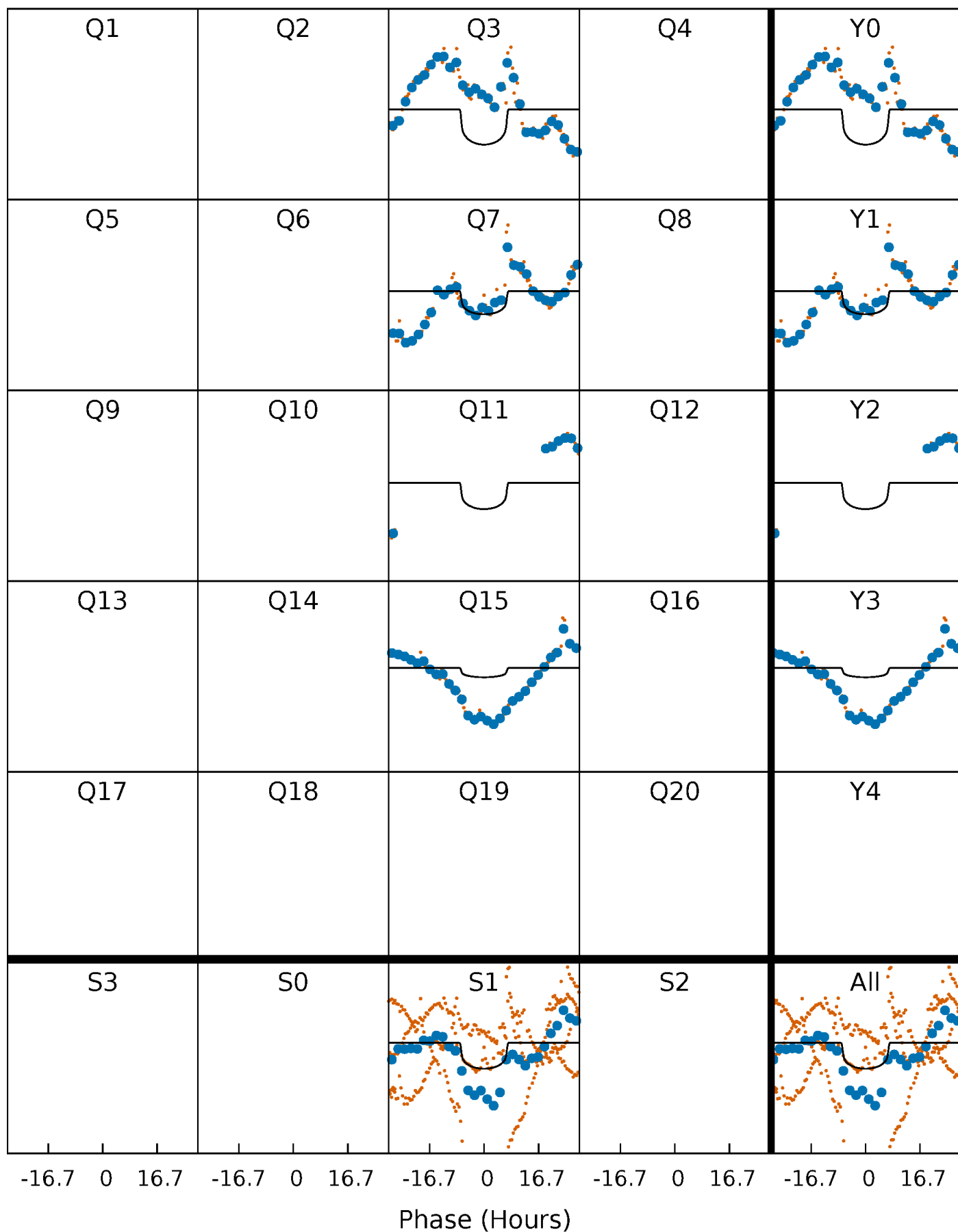
PDC Quarter-Phased Transit Curves

TCE 010197260-05 $P=381.328416$ Days $T_0=314.149940$ (BKJD)



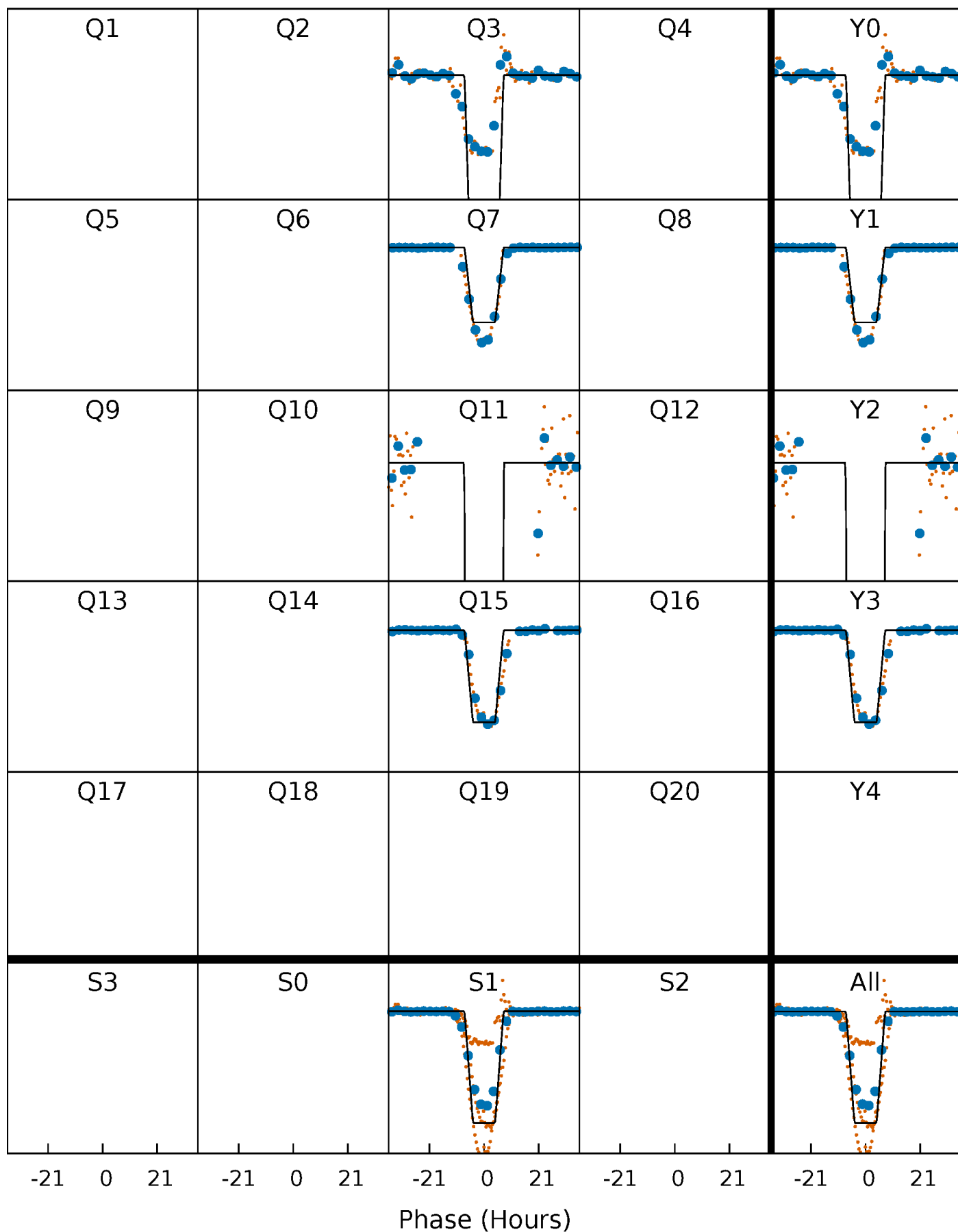
DV Quarter-Phased Transit Curves

TCE 010197260-05 $P=381.328416$ Days $T_0=314.149940$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

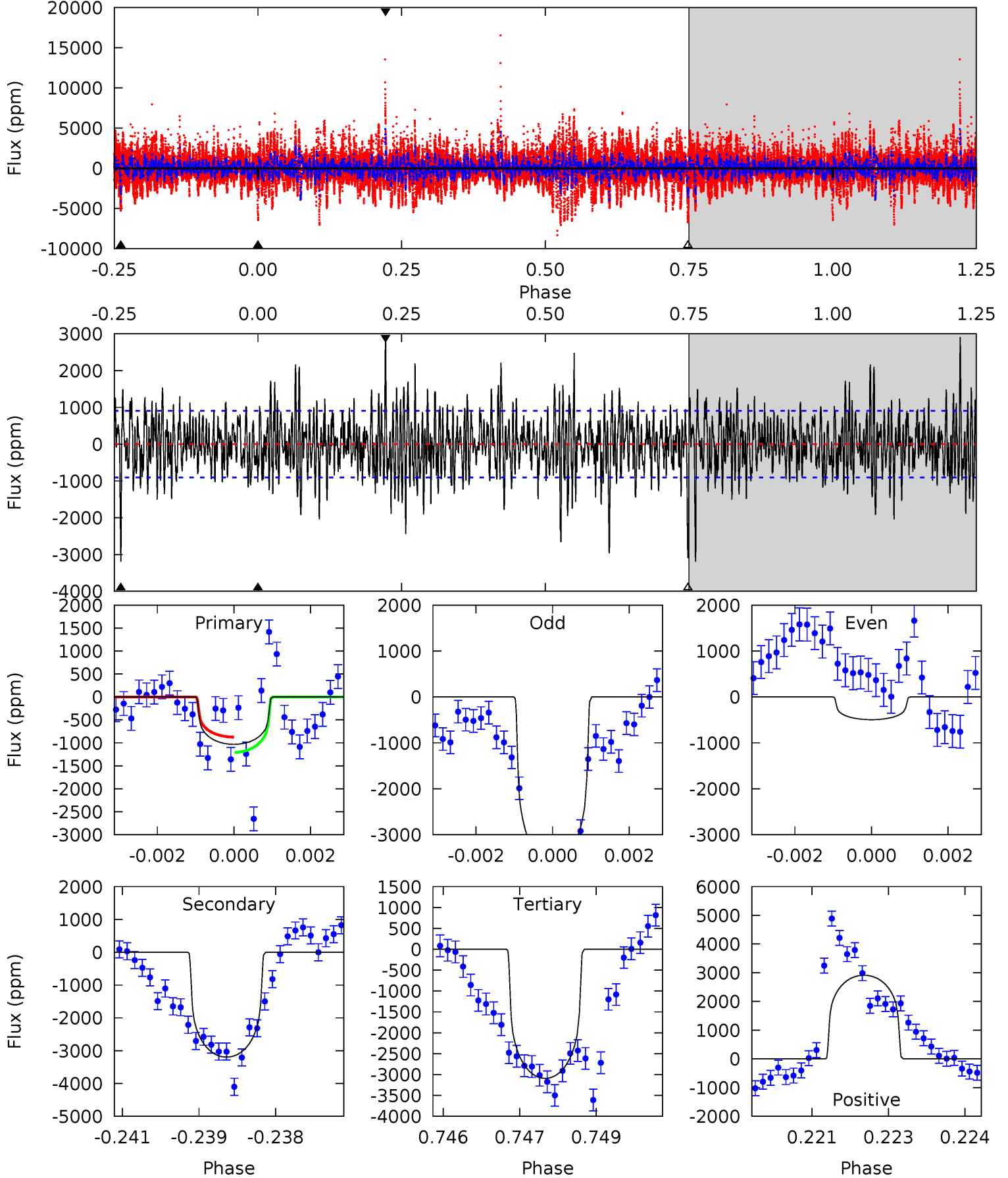
TCE 010197260-05 $P=381.303852$ Days $T_0=314.177023$ (BKJD)



DV Model-Shift Uniqueness Test

010197260-05, P = 381.328416 Days, E = 314.149940 Days

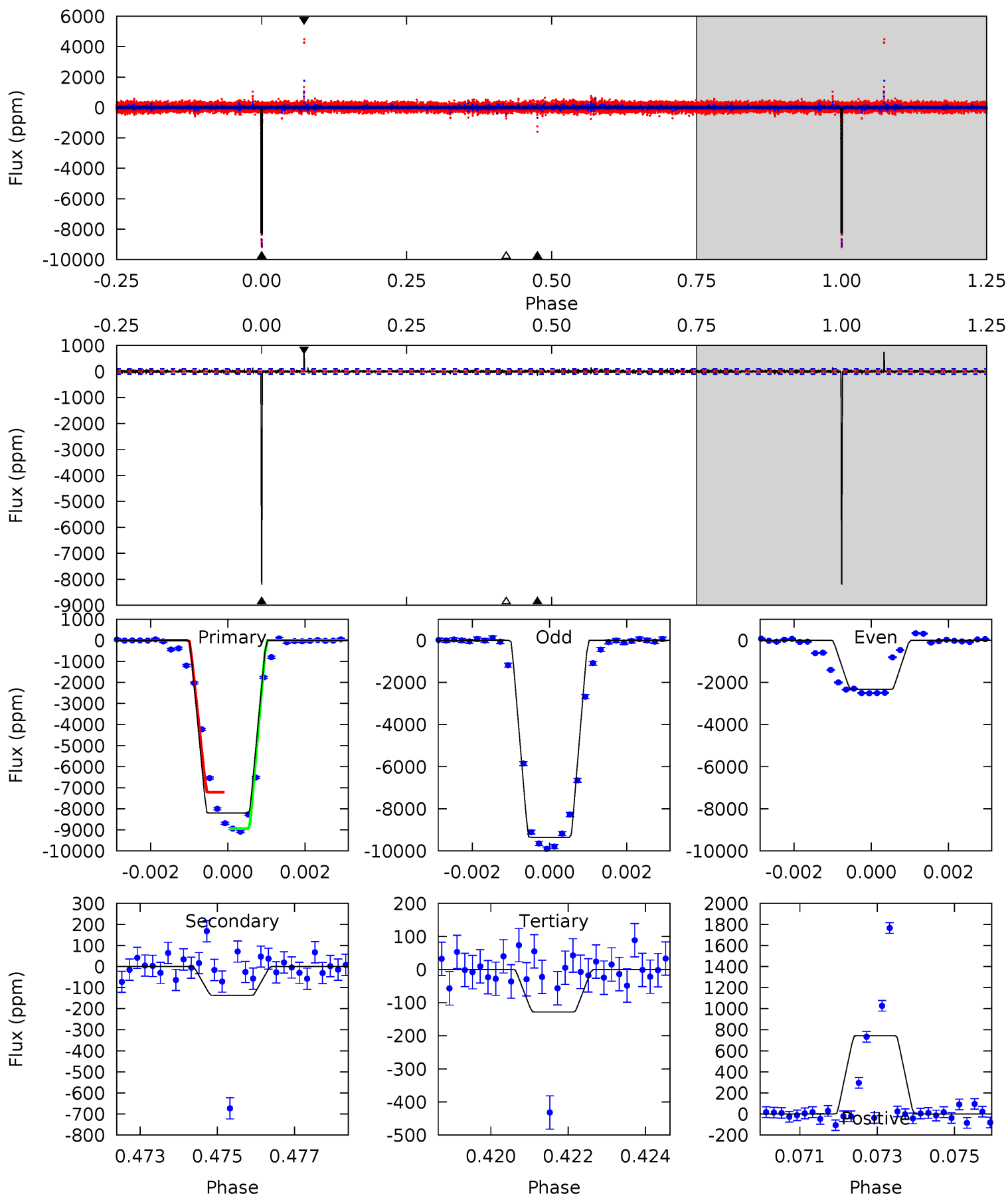
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.10	18.9	18.3	17.2	5.36	3.14	4.02	-12.2	-11.1	0.61	1.67	8.95	2.93	0.48	0.99



Alt Model-Shift Uniqueness Test

010197260-05, P = 381.303852 Days, E = 314.177023 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
422.6	7.02	6.61	38.3	5.36	3.14	1.30	416.0	384.3	0.42	-31.3	77.1	0.84	0.08	0



Stellar Parameters For KIC 010197260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5134^{+140}_{-127}	$3.726^{+0.854}_{-0.366}$	$-0.460^{+0.350}_{-0.250}$	$2.075^{+1.352}_{-1.488}$	$0.836^{+0.253}_{-0.136}$	$0.132^{+2.931}_{-0.102}$
	+3%/-2%	+23%/-10%	+76%/-54%	+65%/-72%	+30%/-16%	+2224%/-77%
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 010197260-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3196 ± 169	$6.64^{+2.94}_{-2.58}$	461^{+81}_{-92}	7047^{+767}_{-613}	39013^{+62379}_{-20699}
Alt.	-136 ± 19	$21.36^{+8.32}_{-7.48}$	461^{+78}_{-89}	2601^{+72}_{-69}	156^{+222}_{-74}

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

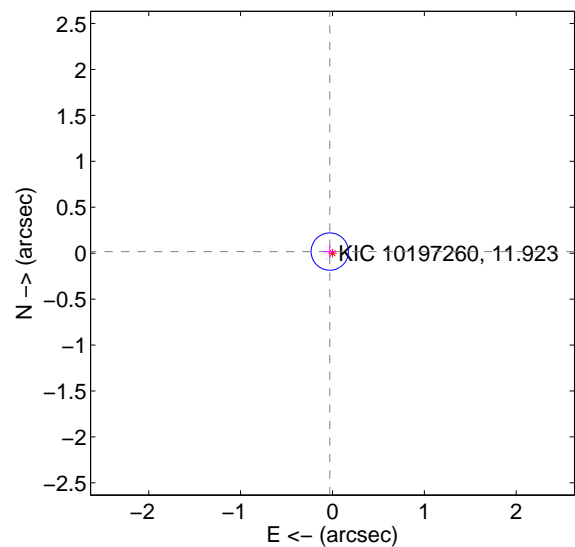
Supplemental centroid analysis for 010197260-05. **Kepler magnitude: 11.92.** Transit SNR 6.46

There are 4 quarters with good PRF difference image offsets

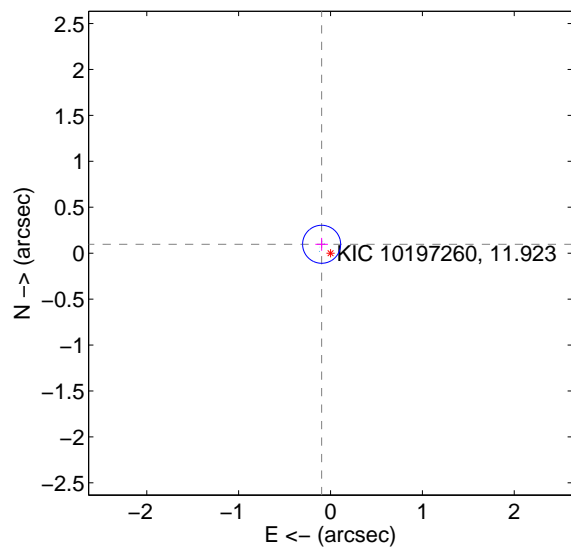
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.034 ± 0.068	0.50	0.029 ± 0.067	0.017 ± 0.068
PRF-fit source offset from KIC position	0.137 ± 0.069	1.99	0.097 ± 0.068	0.097 ± 0.070
photometric centroid source offset	0.79 ± 0.47	1.70	-0.76 ± 0.48	-0.23 ± 0.34

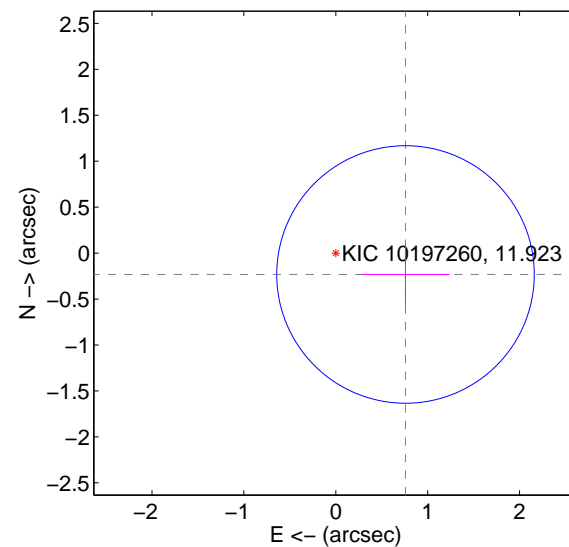
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

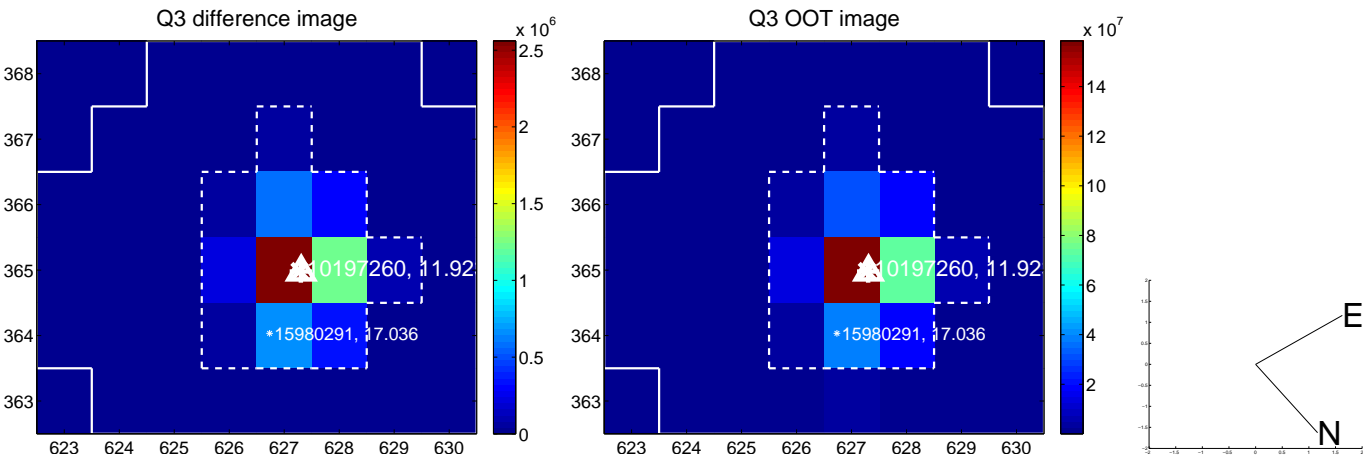
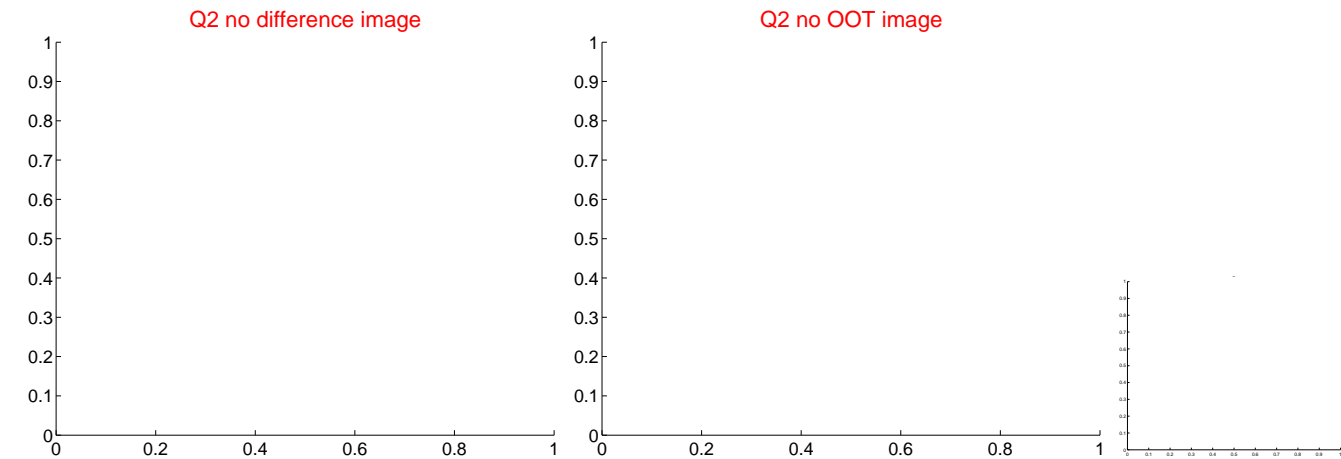


offset from photometric centroids

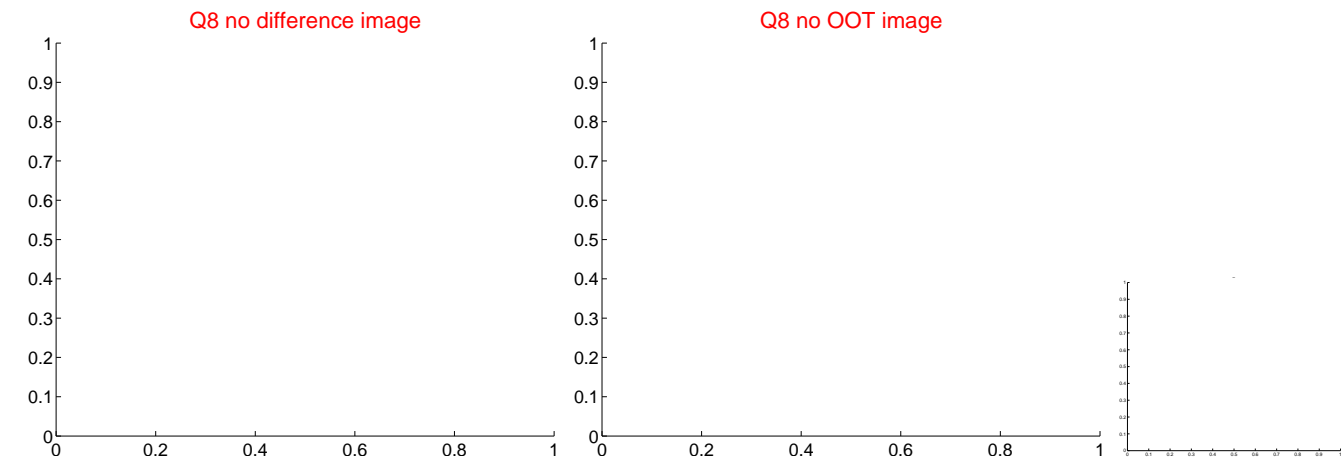
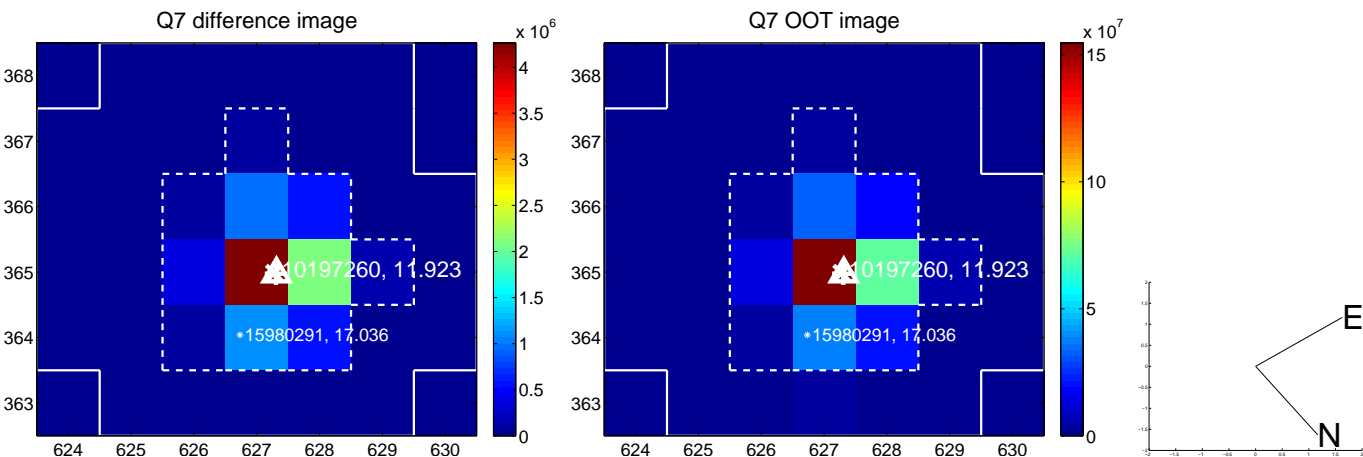
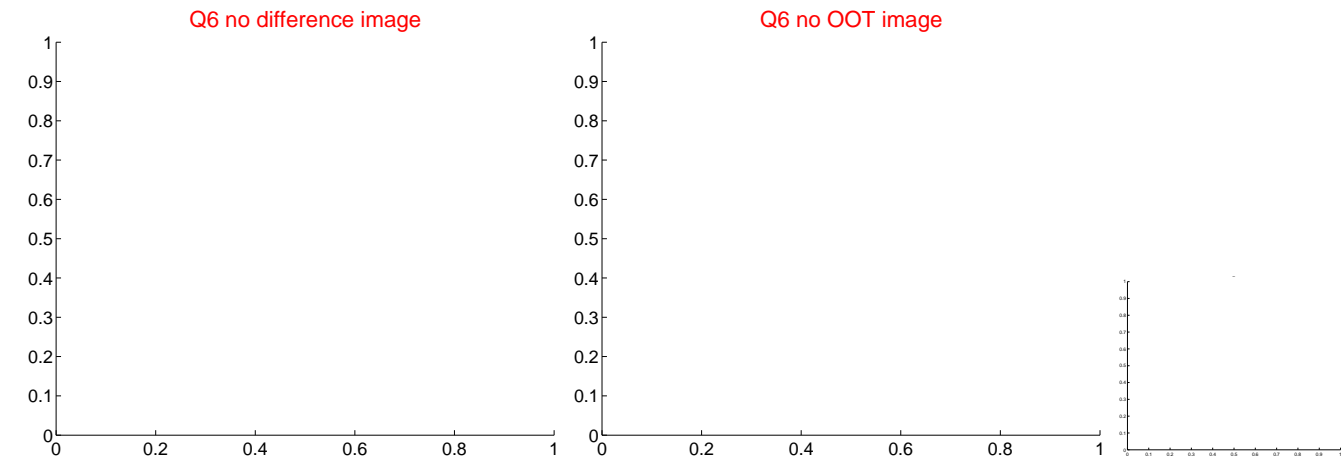


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

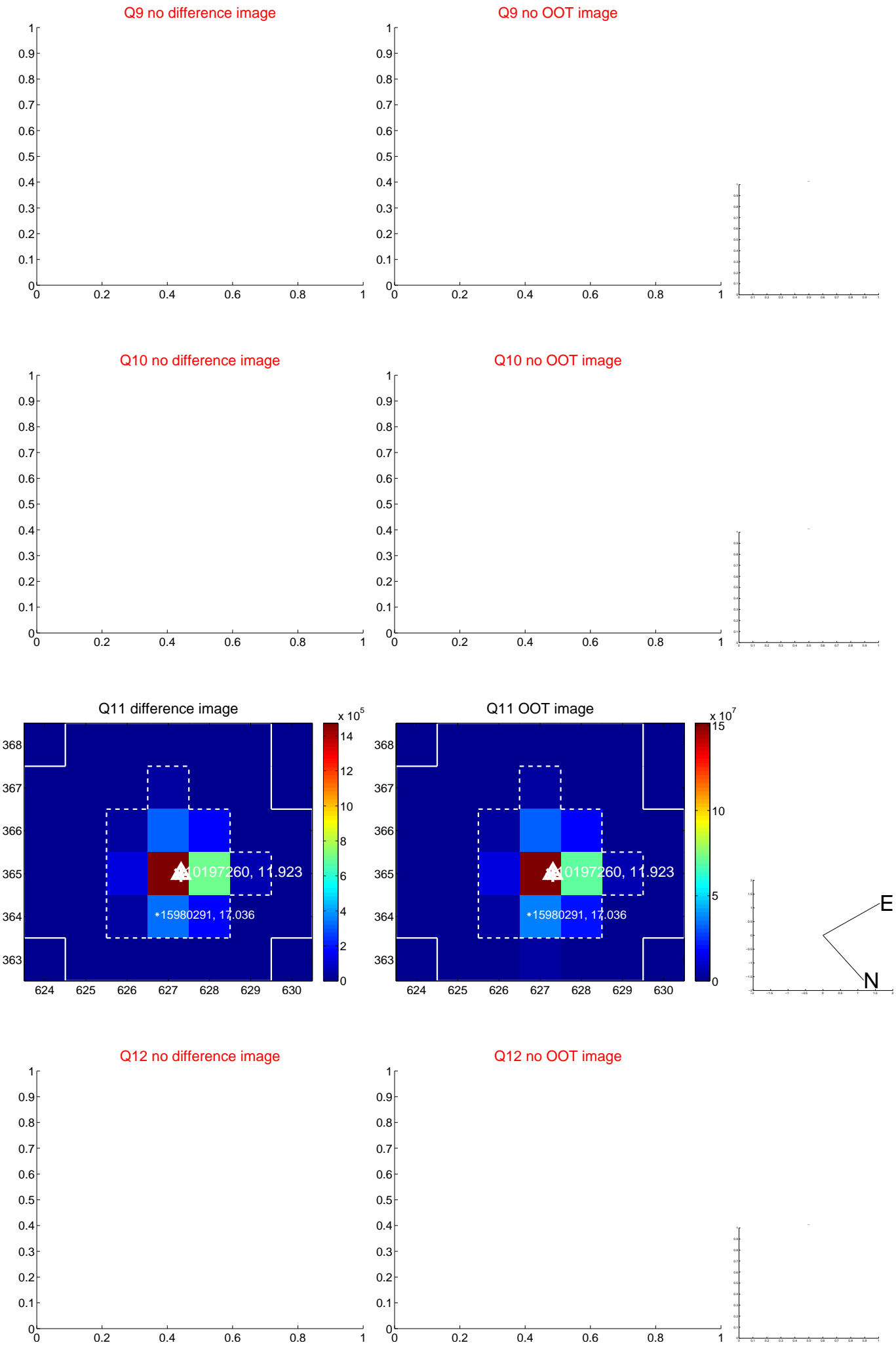
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



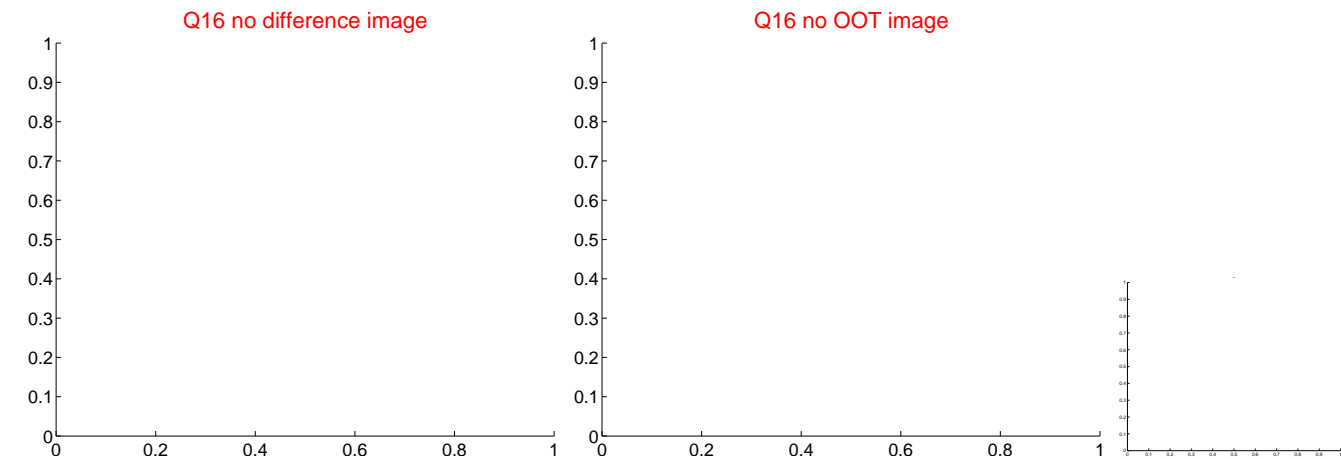
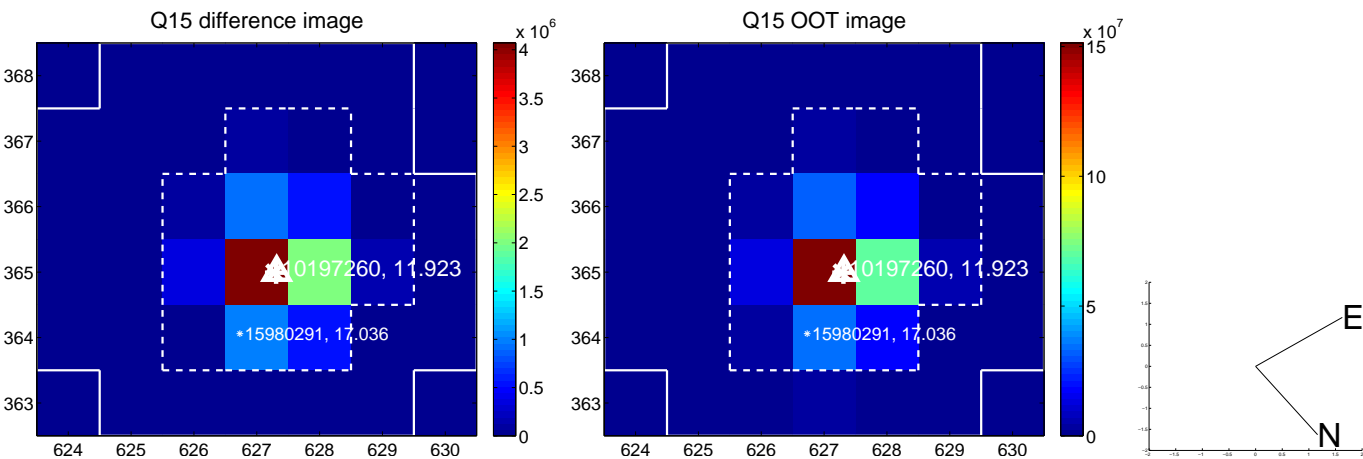
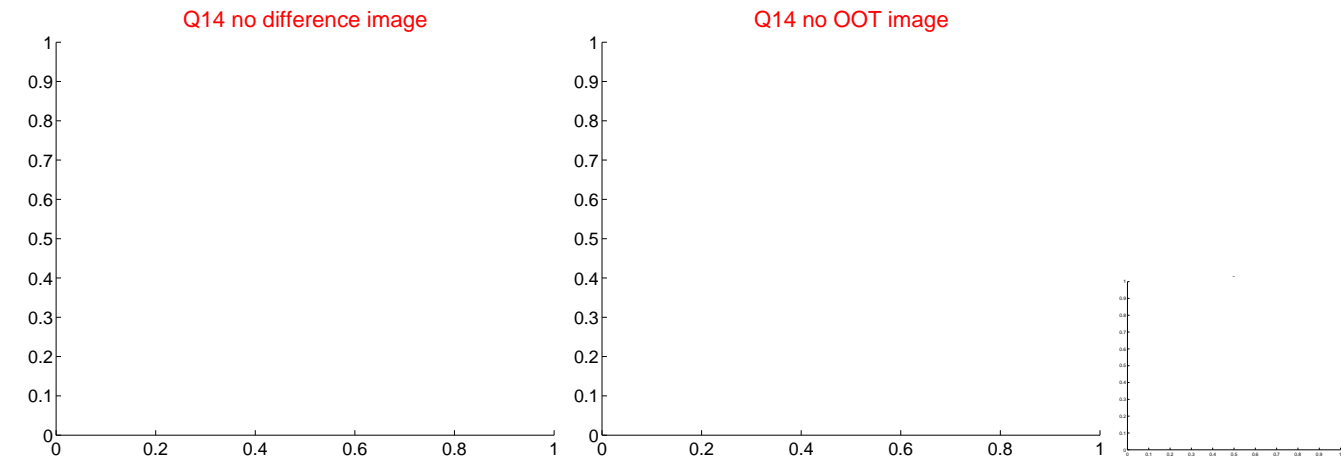
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



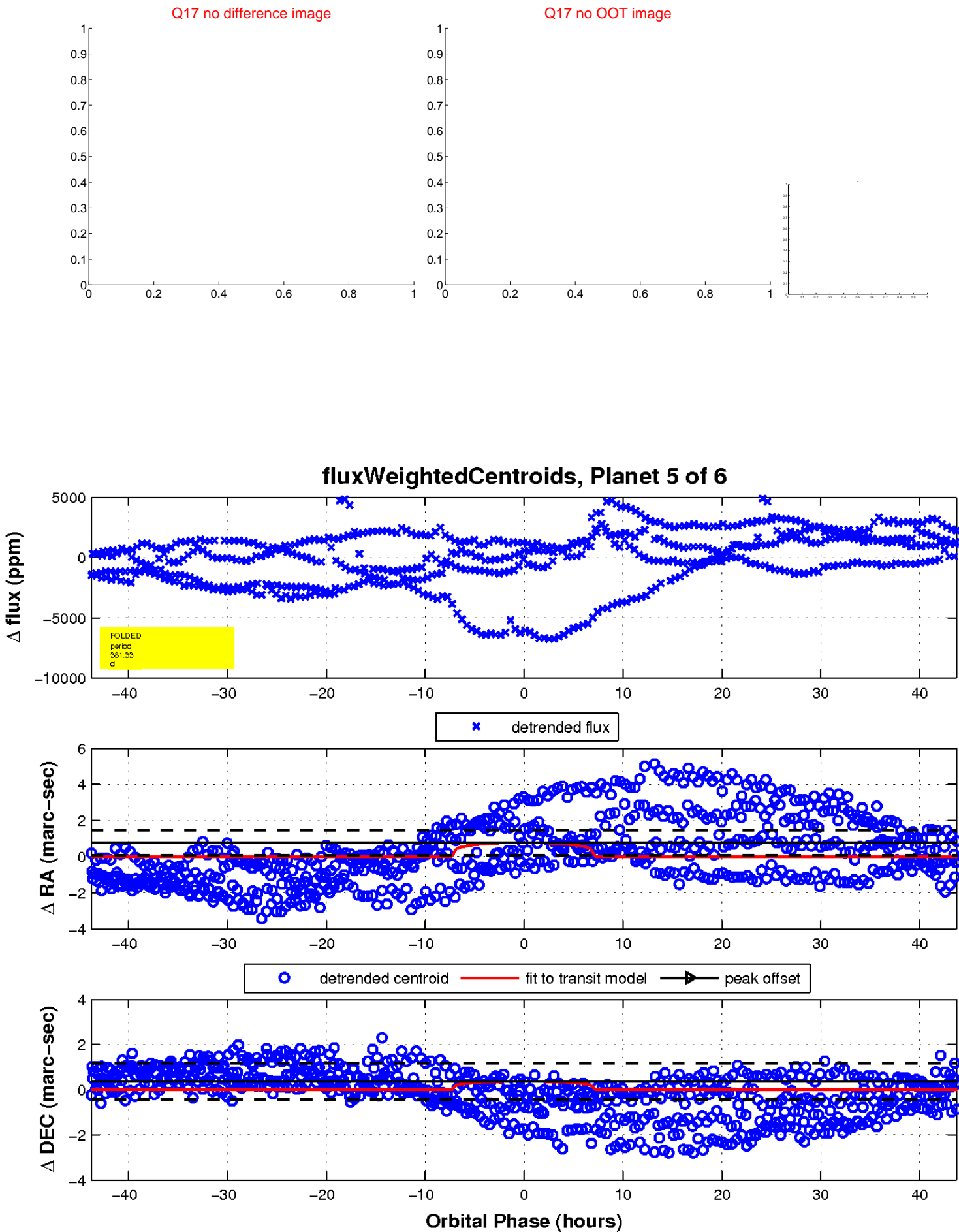
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

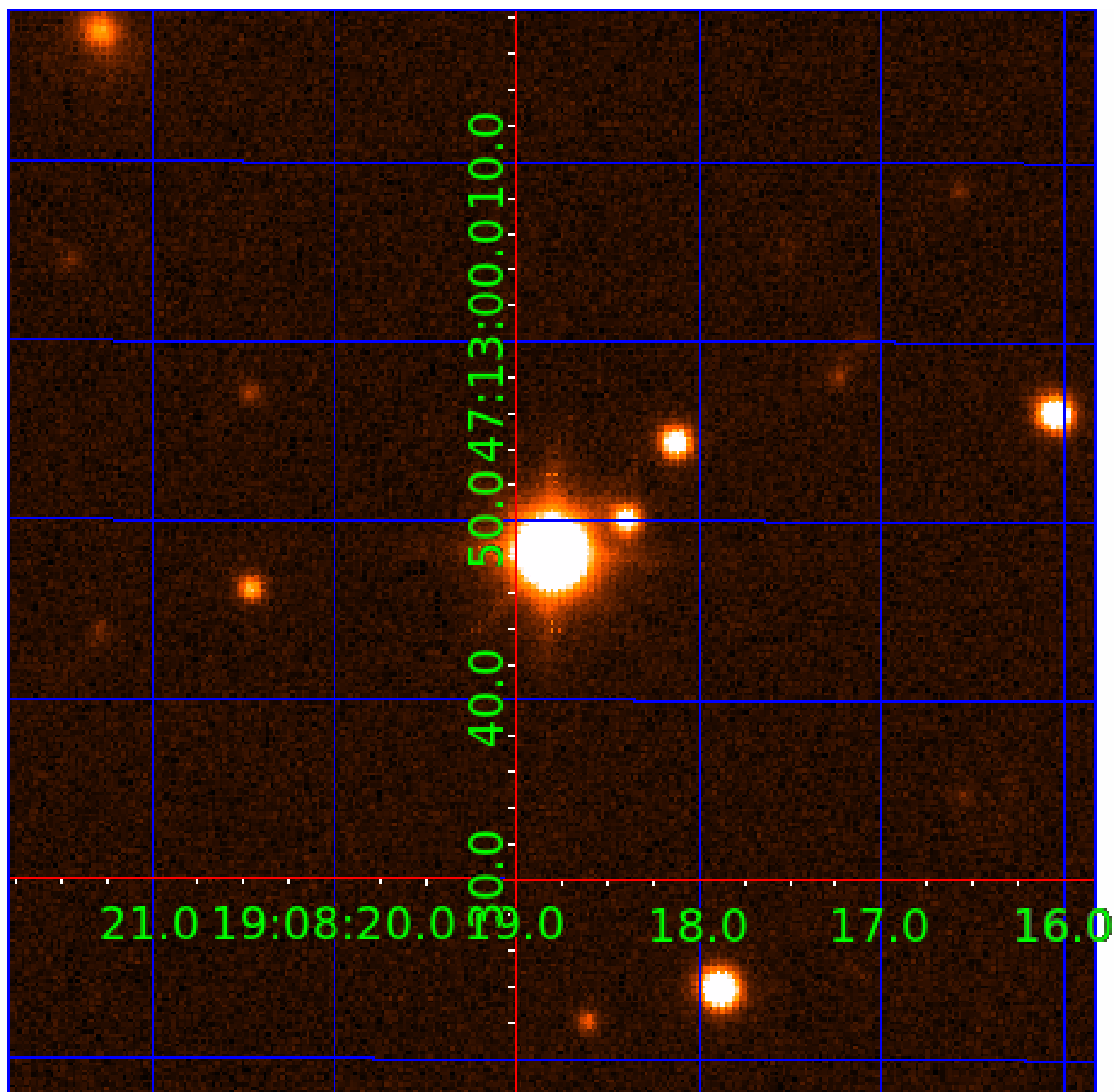


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010197260

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})
010197260-01	OBS	No	343.821892	157.907748	975.1	6.000	36.8	-1.0	2.08	5134	6.34	3.27
010197260-02	OBS	No	530.139040	151.429075	1608.1	14.088	18.7	7.1	2.08	5134	10.09	1.84
010197260-03	OBS	No	366.752805	343.133396	231.4	15.243	19.2	1.4	2.08	5134	4.17	3.00
010197260-04	OBS	No	489.179426	150.493771	179.3	12.500	14.1	-1.0	2.08	5134	2.72	2.04
010197260-05	OBS	No	381.328416	314.149940	1051.6	14.642	15.3	6.5	2.08	5134	6.78	2.85
010197260-06	OBS	No	244.687246	239.216289	277.4	3.500	13.2	-1.0	2.08	5134	3.38	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010197260-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010197260-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-03	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
010197260-05	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
010197260-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

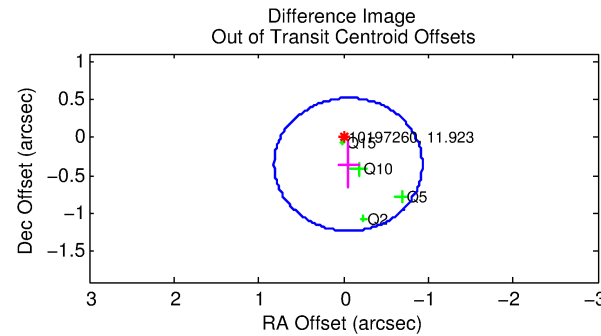
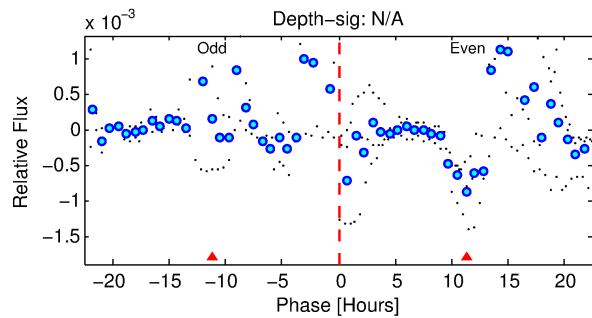
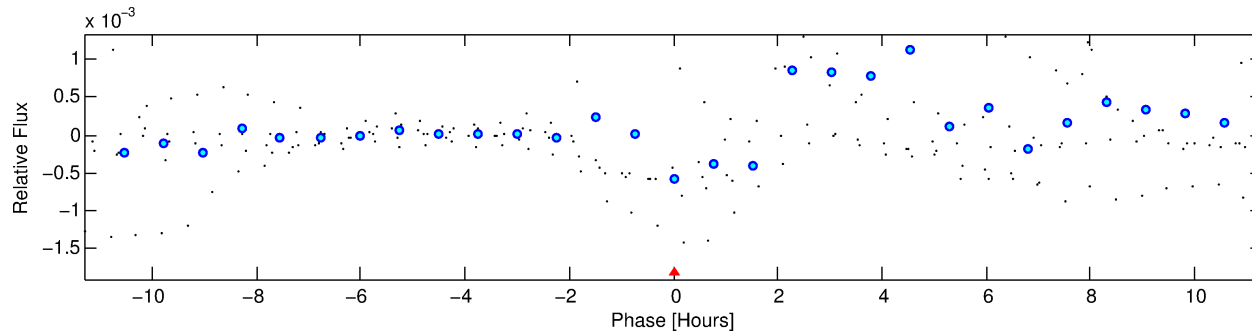
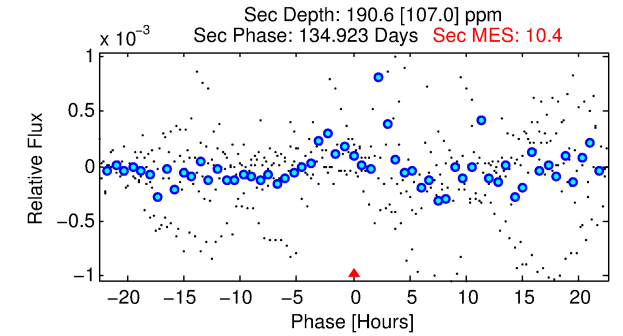
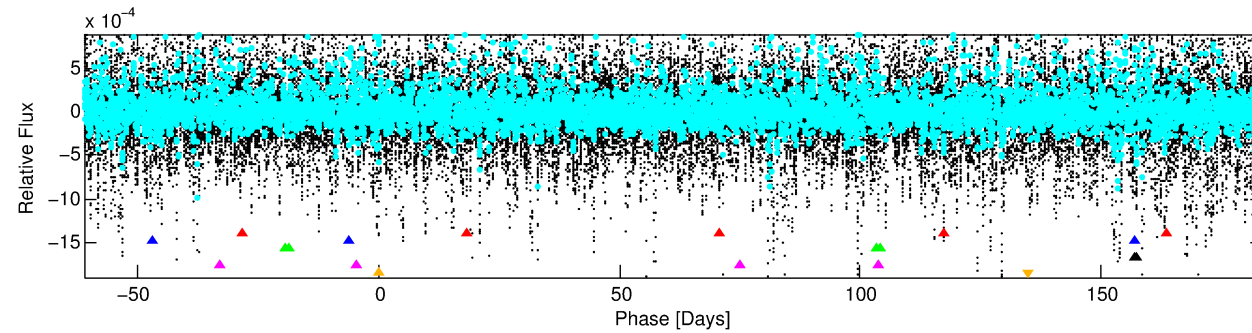
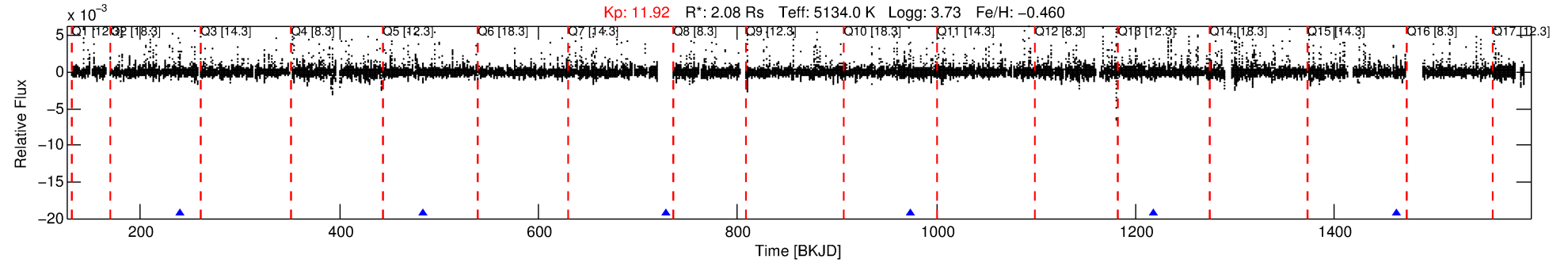
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010197260-06

No Significant Match Found

DV One-Page Summary

KIC: 10197260 Candidate: 6 of 6 Period: 244.687 d



TPS TCE Results:

Period = 244.68725 d
Epoch = 239.2163 BKJD

DV fit results are unavailable

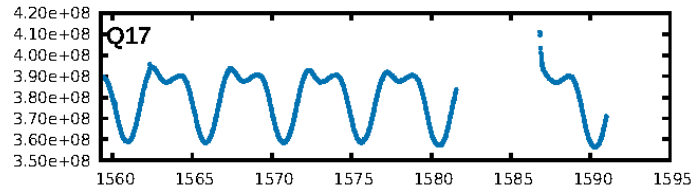
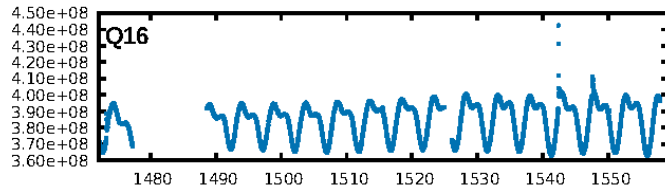
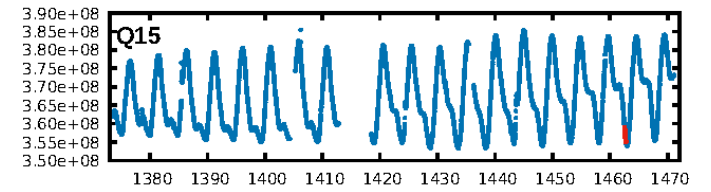
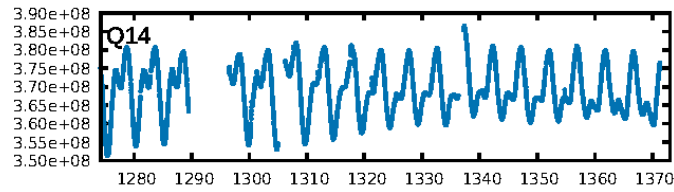
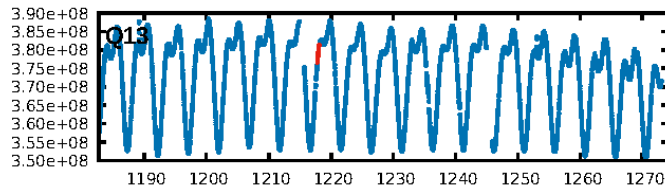
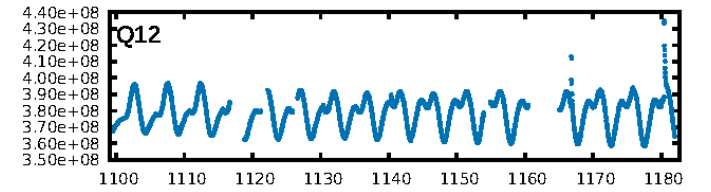
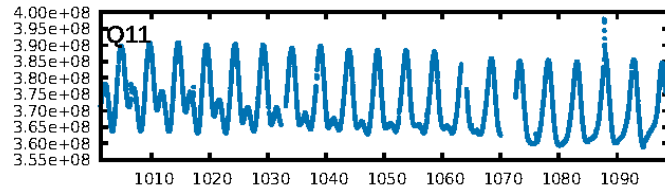
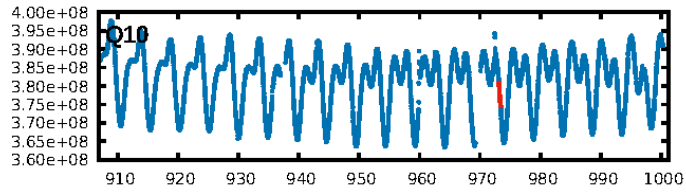
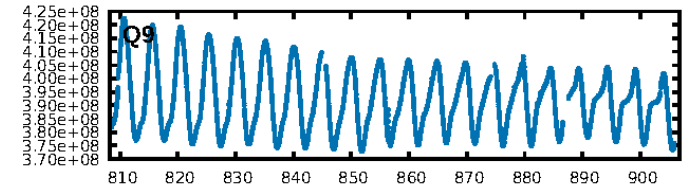
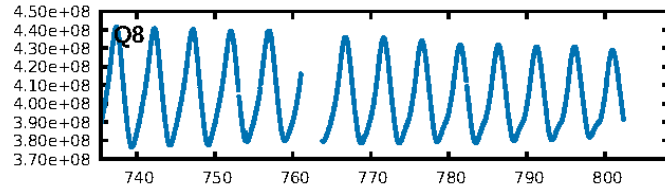
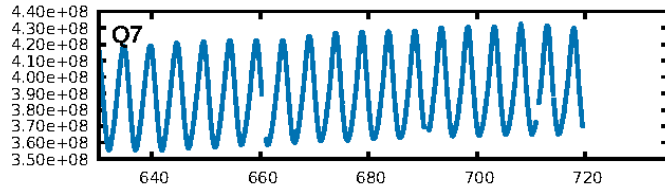
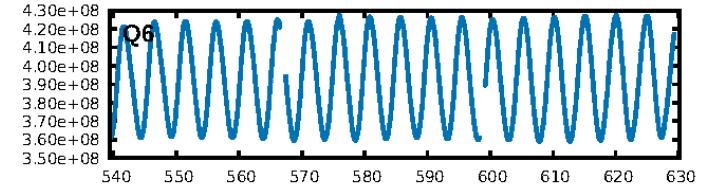
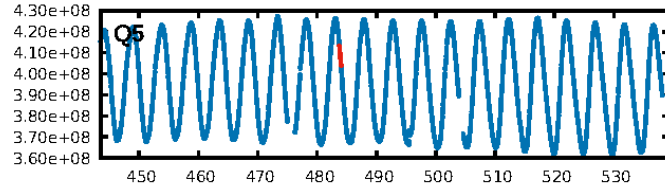
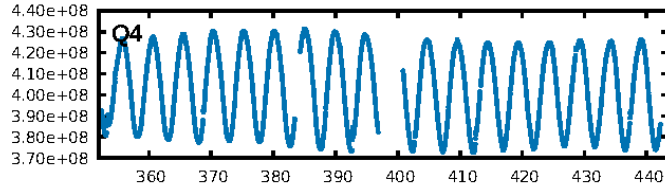
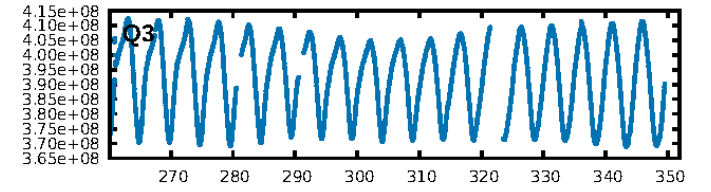
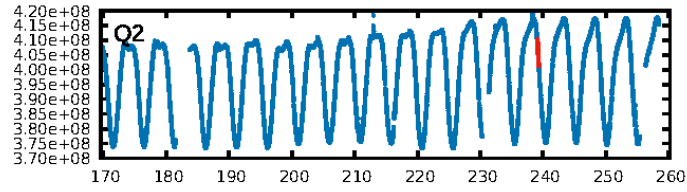
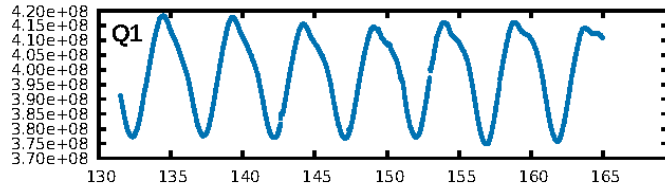
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [342.52 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.03624
Centroid-sig: 0.0%
Centroid-so: 1.009 arcsec [2.06 σ]
OotOffset-rm: 0.362 arcsec [1.24 σ]
KicOffset-rm: 0.288 arcsec [1.01 σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

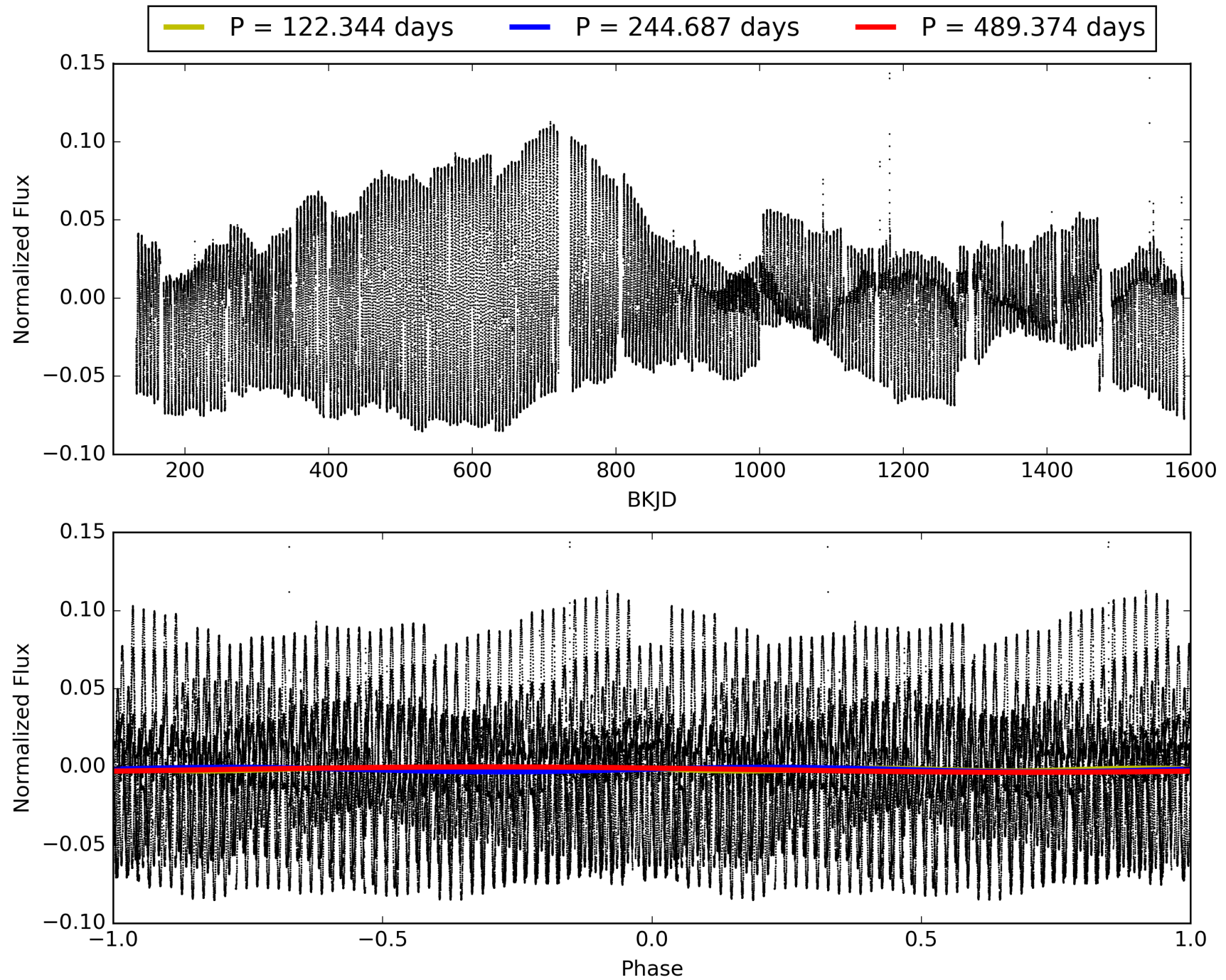
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:57:37 Z

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

TCE 010197260-06, PDC Light Curves

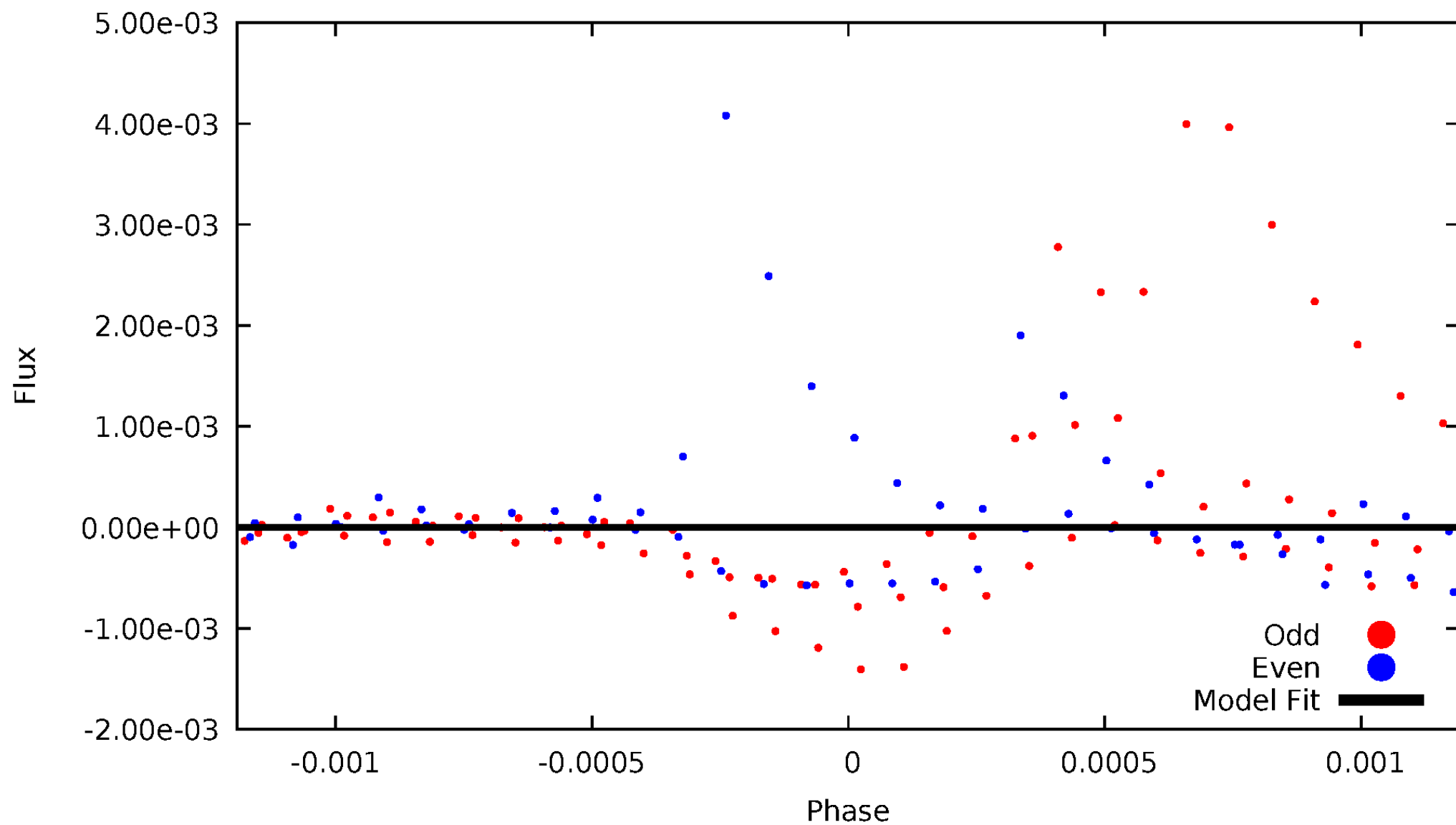


TCE 010197260-06



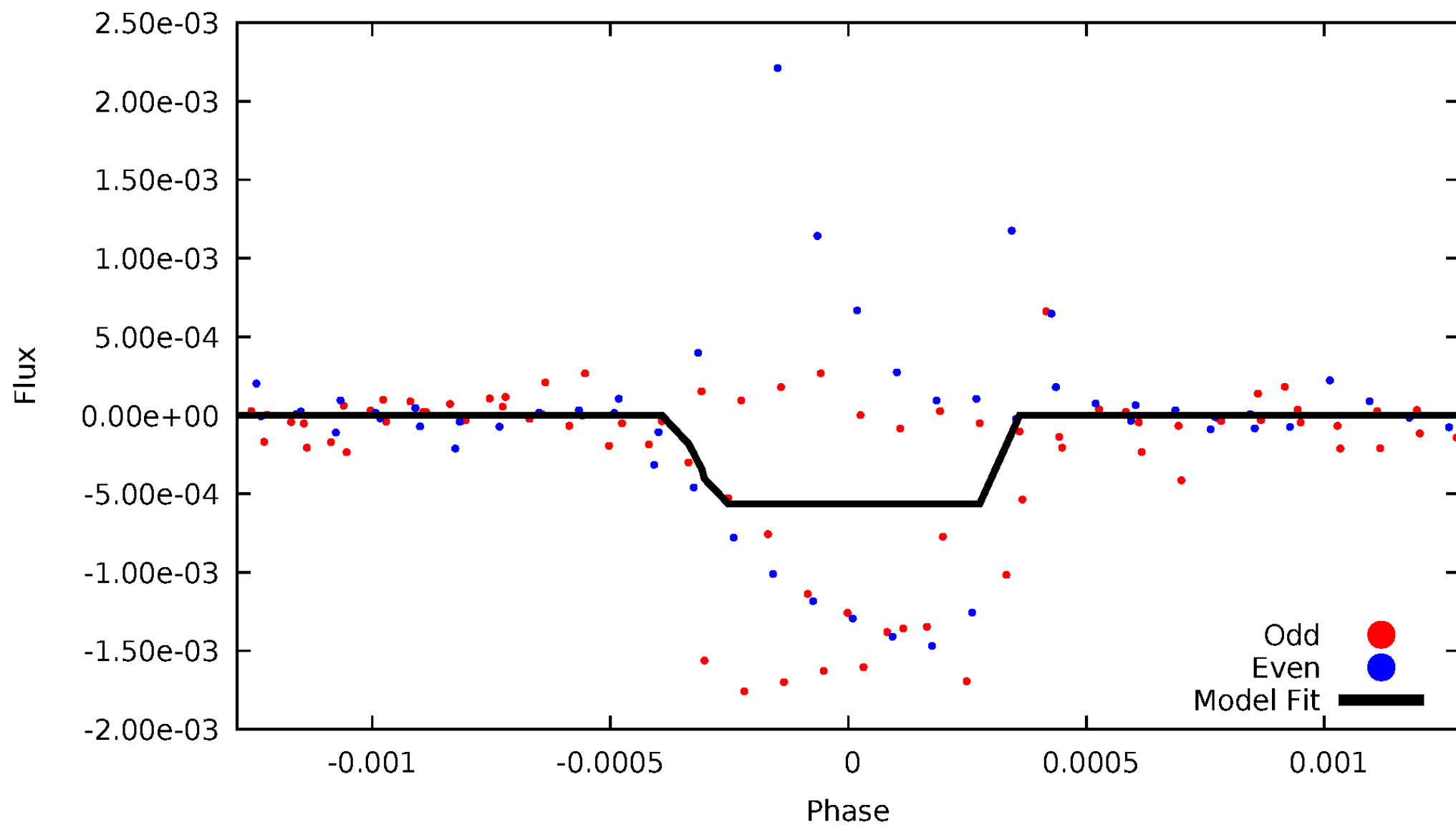
DV Odd/Even

TCE 010197260-06



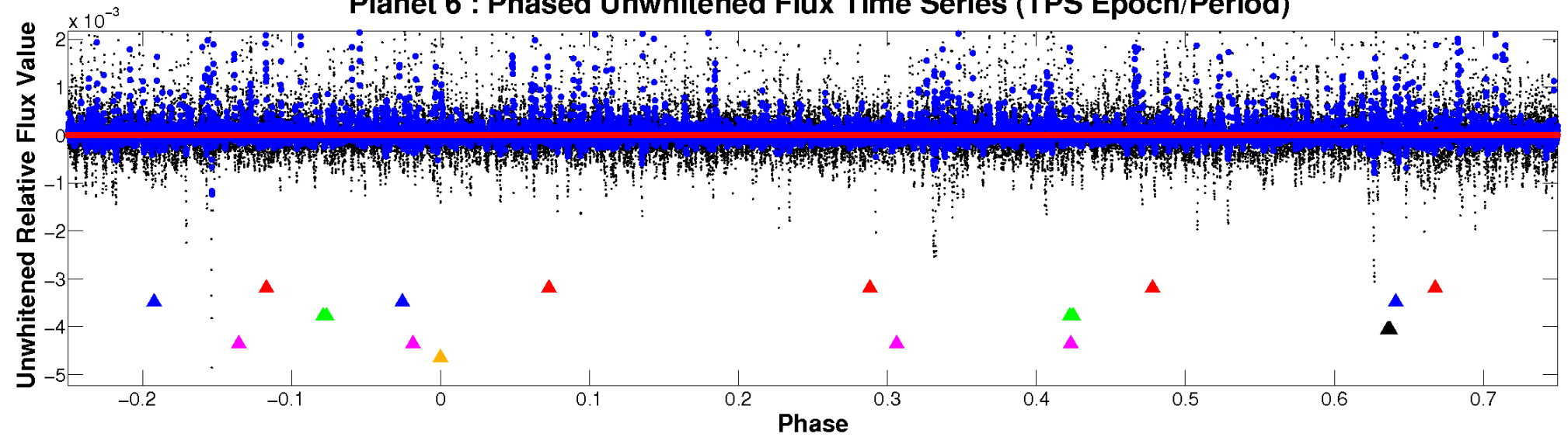
ALT Odd/Even

TCE 010197260-06

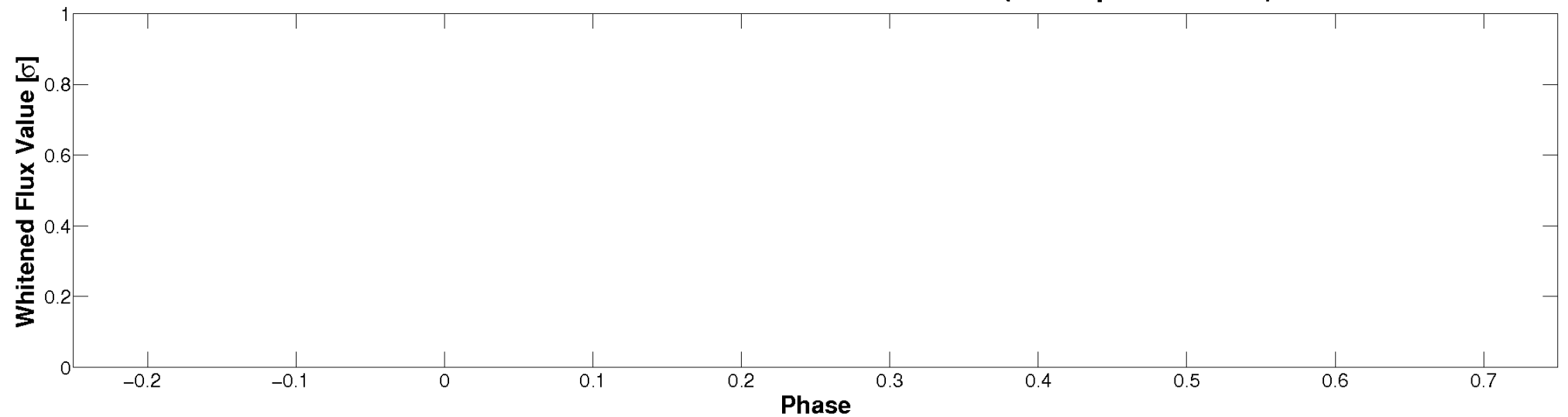


Non-Whitened Vs. Whitened Light Curve

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

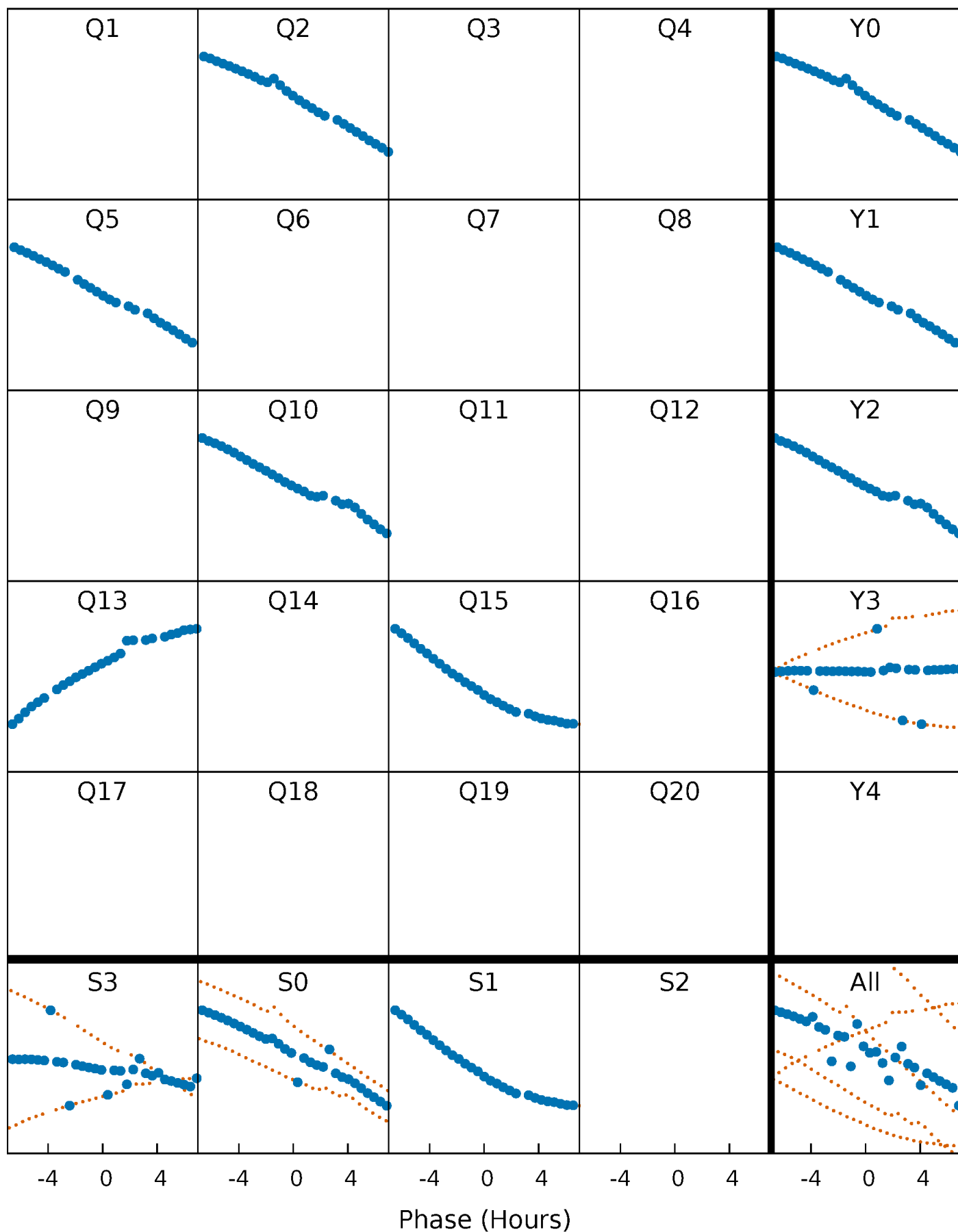


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



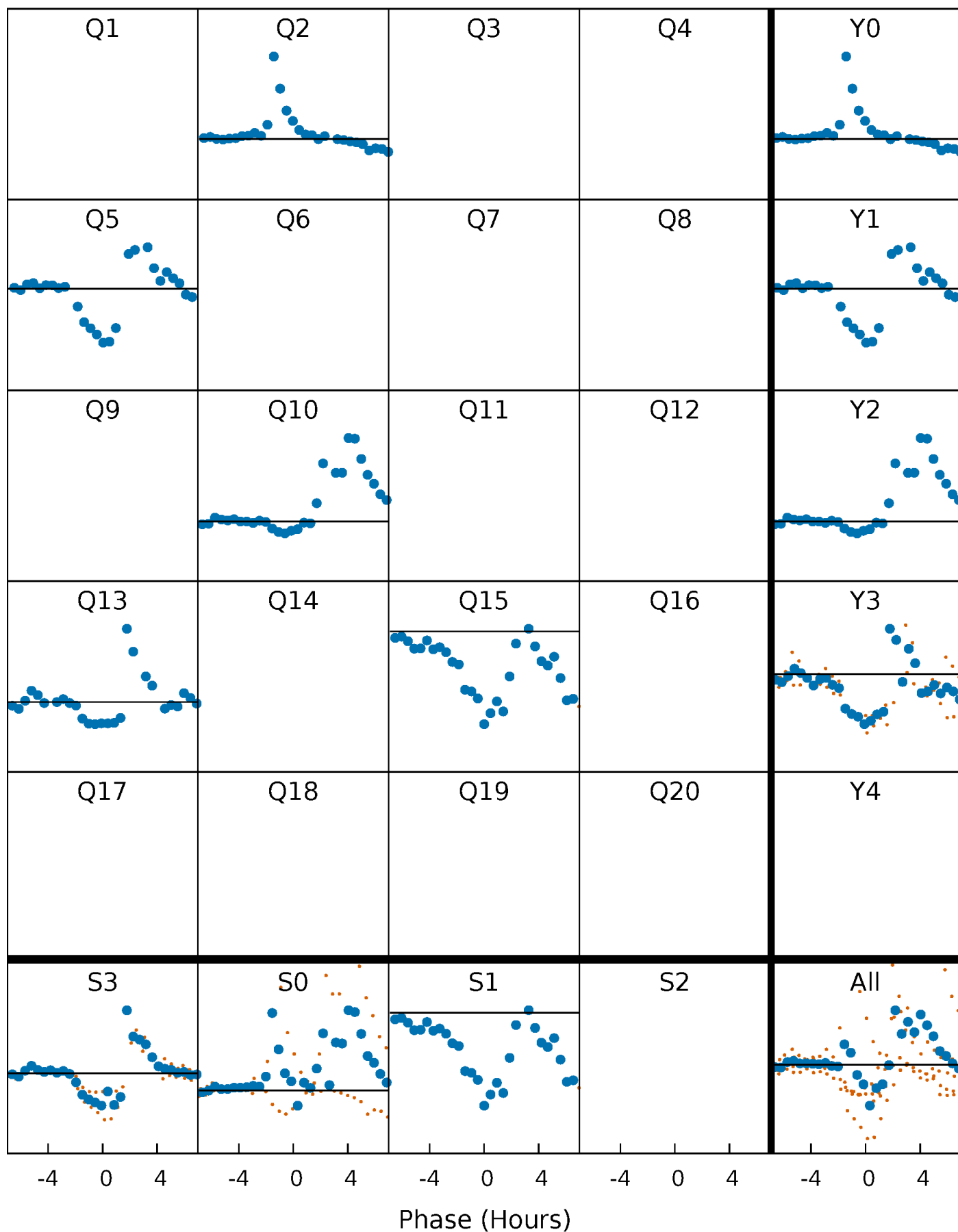
PDC Quarter-Phased Transit Curves

TCE 010197260-06 P=244.687246 Days $T_0=239.216289$ (BKJD)



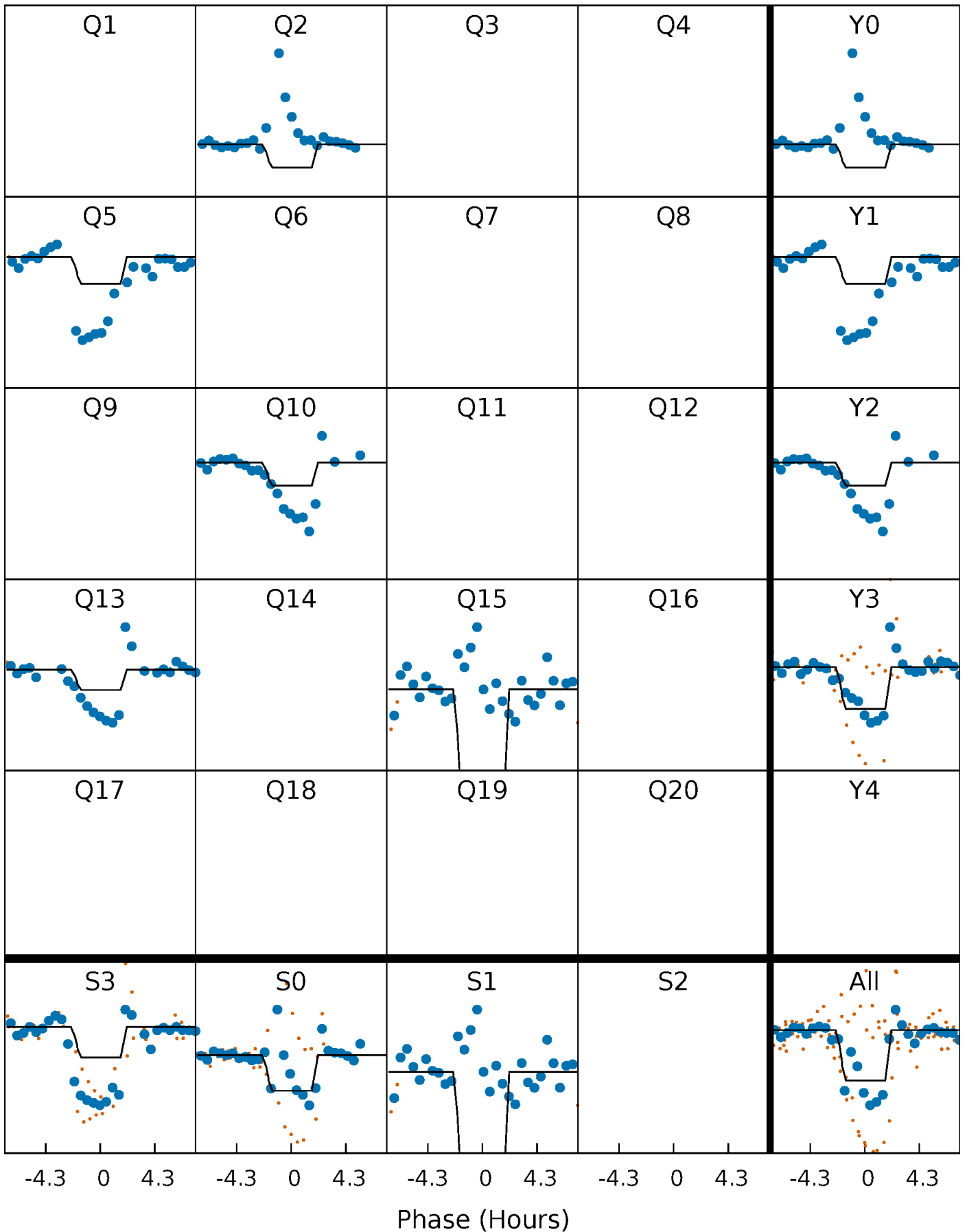
DV Quarter-Phased Transit Curves

TCE 010197260-06 $P=244.687246$ Days $T_0=239.216289$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

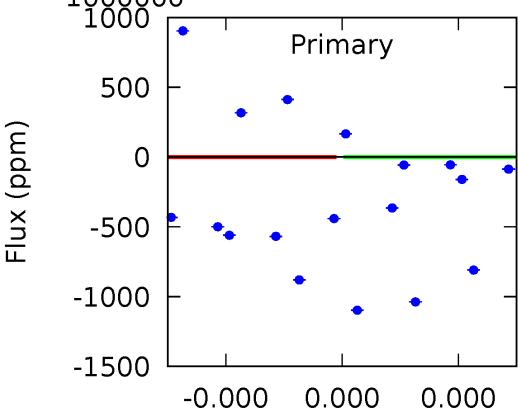
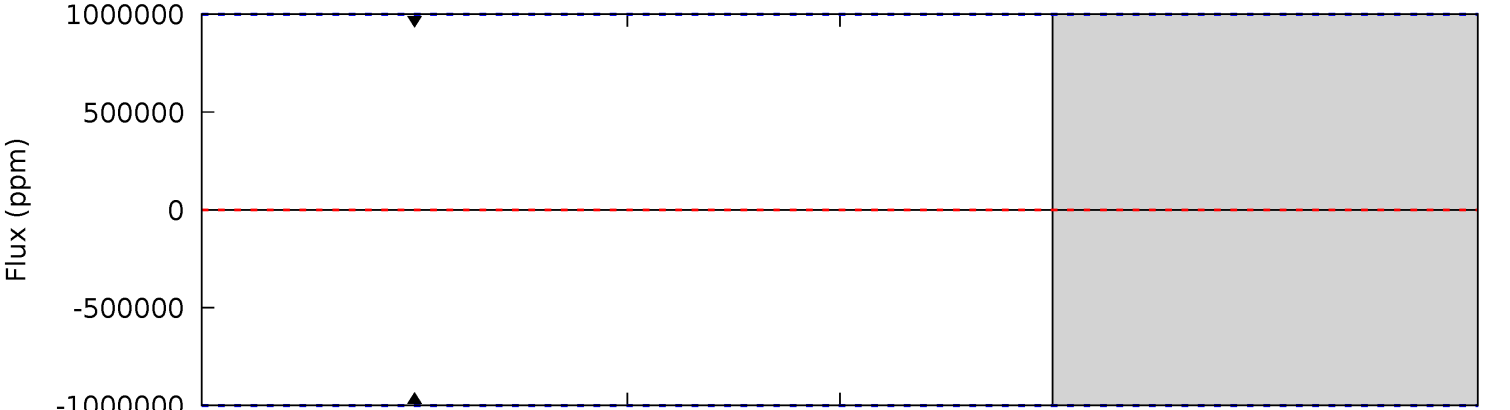
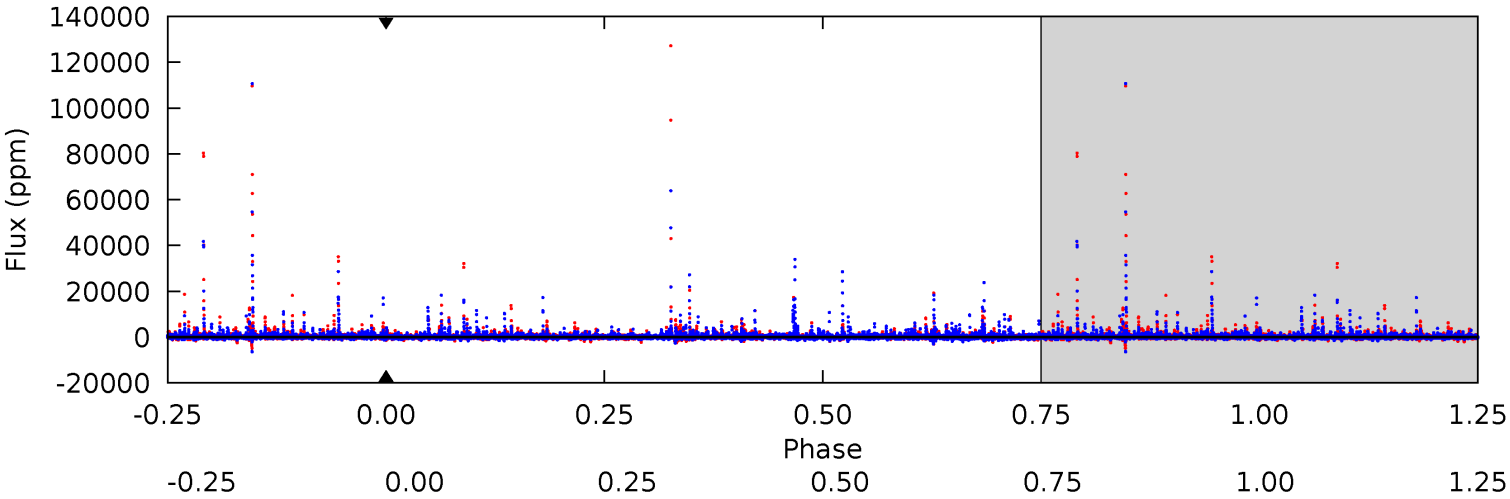
TCE 010197260-06 P=244.687246 Days $T_0=239.214592$ (BKJD)



DV Model-Shift Uniqueness Test

010197260-06, P = 244.687246 Days, E = 239.216289 Days

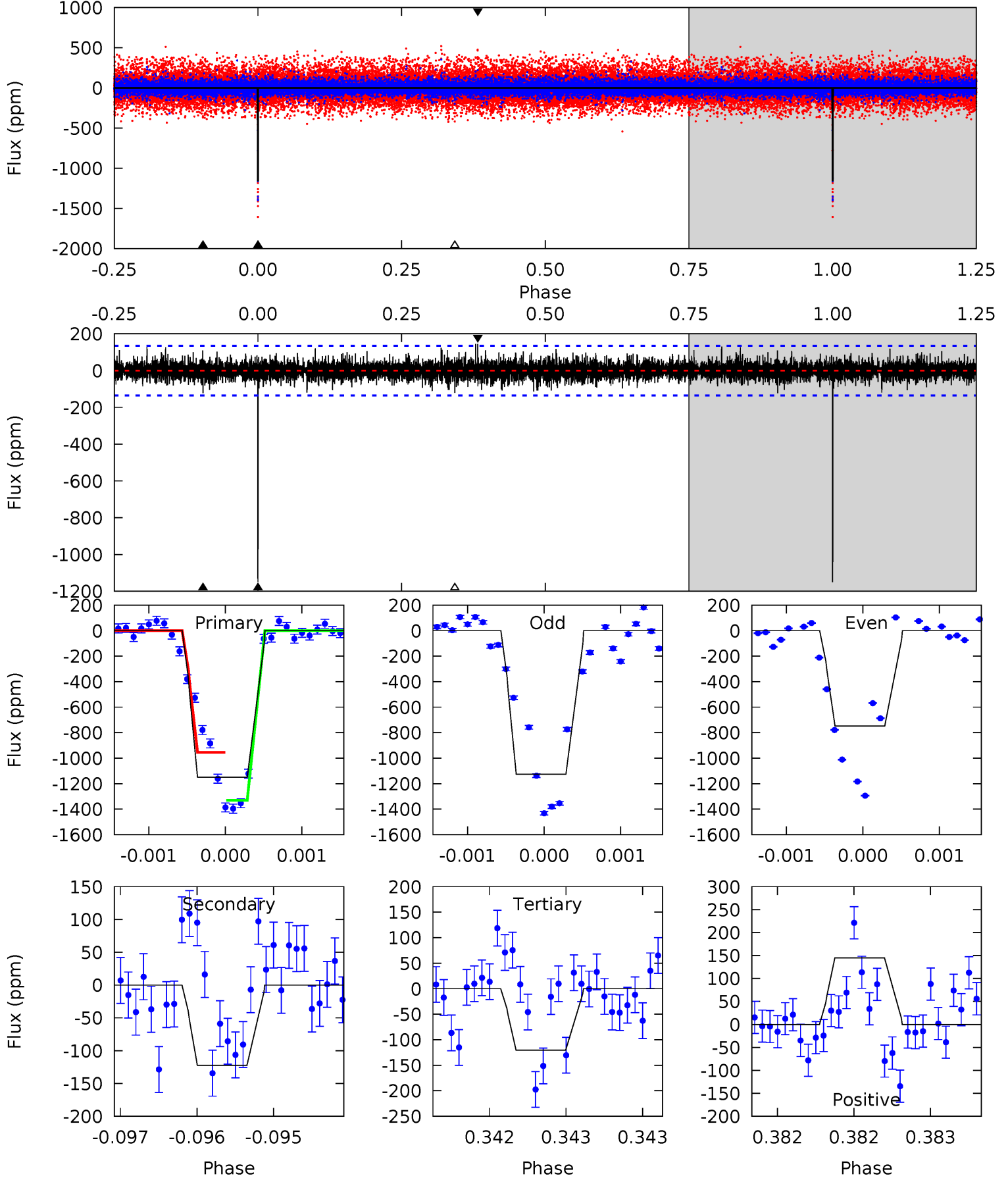
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010197260-06, P = 244.687246 Days, E = 239.214592 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.9	4.99	4.91	5.91	5.52	3.39	1.17	41.9	40.9	0.07	-0.93	7.71	0.53	0.11	7.53



Stellar Parameters For KIC 010197260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5134^{+140}_{-127}	$3.726^{+0.854}_{-0.366}$	$-0.460^{+0.350}_{-0.250}$	$2.075^{+1.352}_{-1.488}$	$0.836^{+0.253}_{-0.136}$	$0.132^{+2.931}_{-0.102}$
	+3%/-2%	+23%/-10%	+76%/-54%	+65%/-72%	+30%/-16%	+2224%/-77%
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 010197260-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$15.40^{+20.31}_{-11.08}$	533^{+88}_{-102}	-3716^{+20131}_{-11438}	$-1147.524^{+283200.999}_{-193570.137}$
Alt.	-122 ± 25	$16.86^{+19.29}_{-11.82}$	534^{+90}_{-100}	2691^{+1032}_{-431}	121^{+1269}_{-94}

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

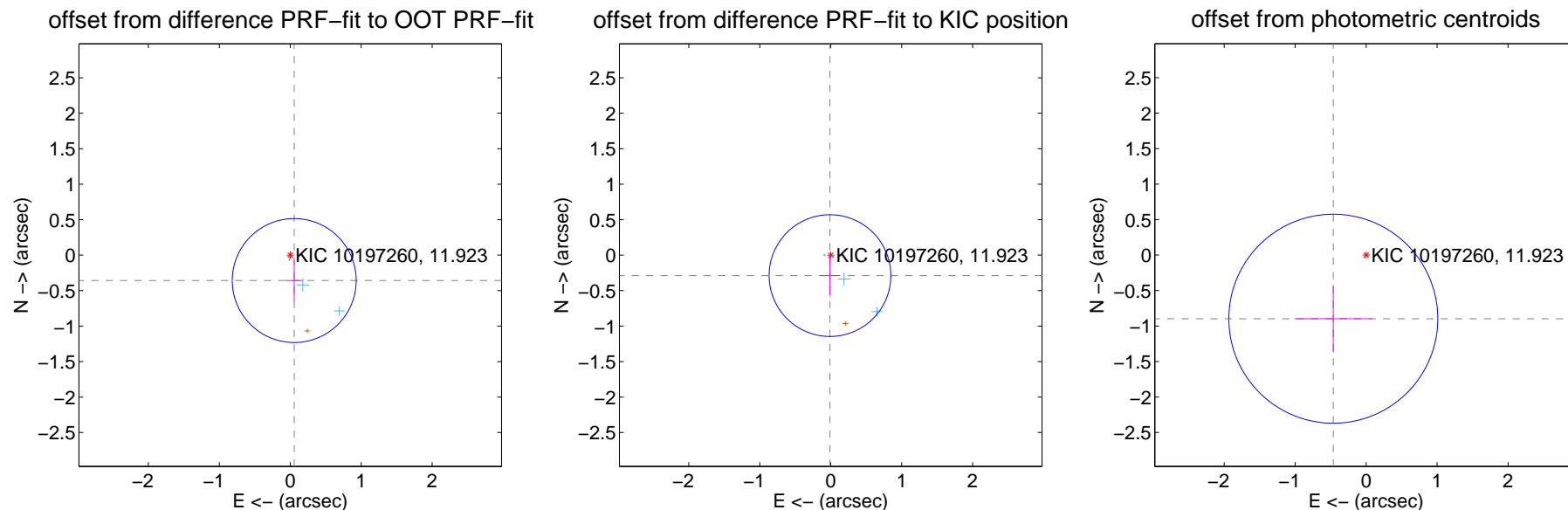
DV Centroid Data

Supplemental centroid analysis for 010197260-06. **Kepler magnitude: 11.92.** Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

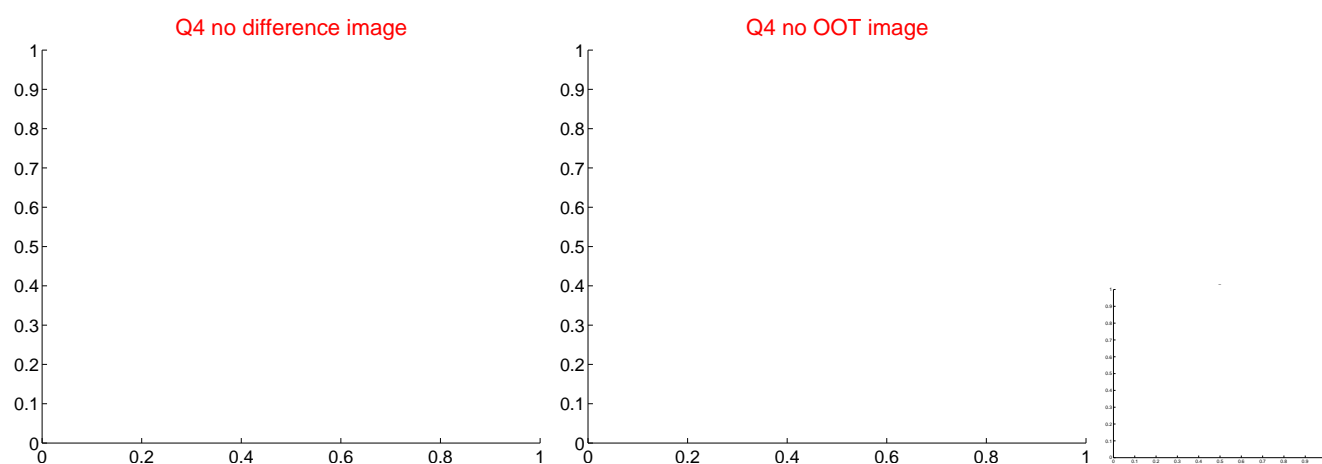
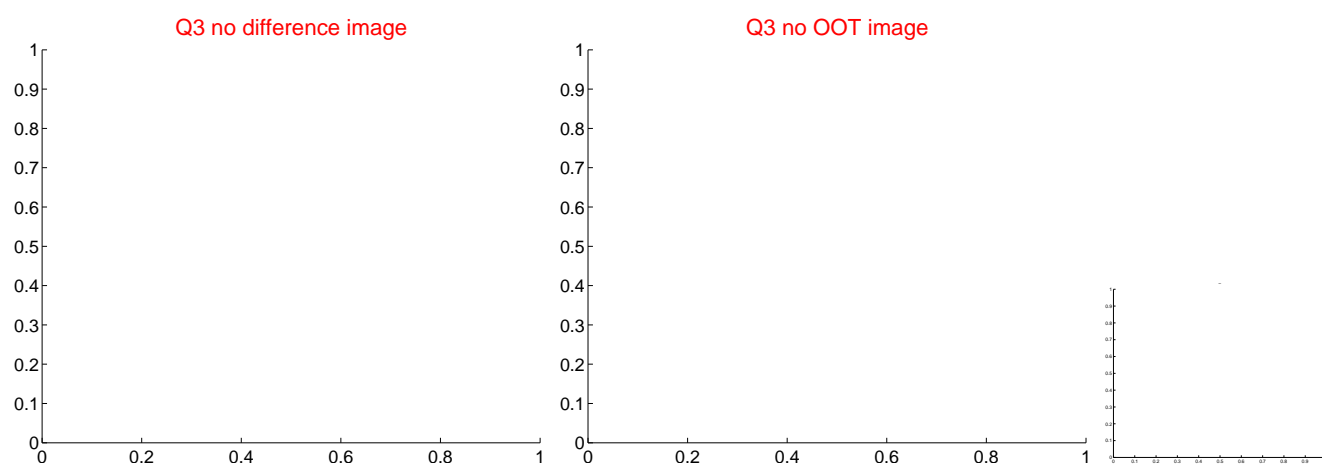
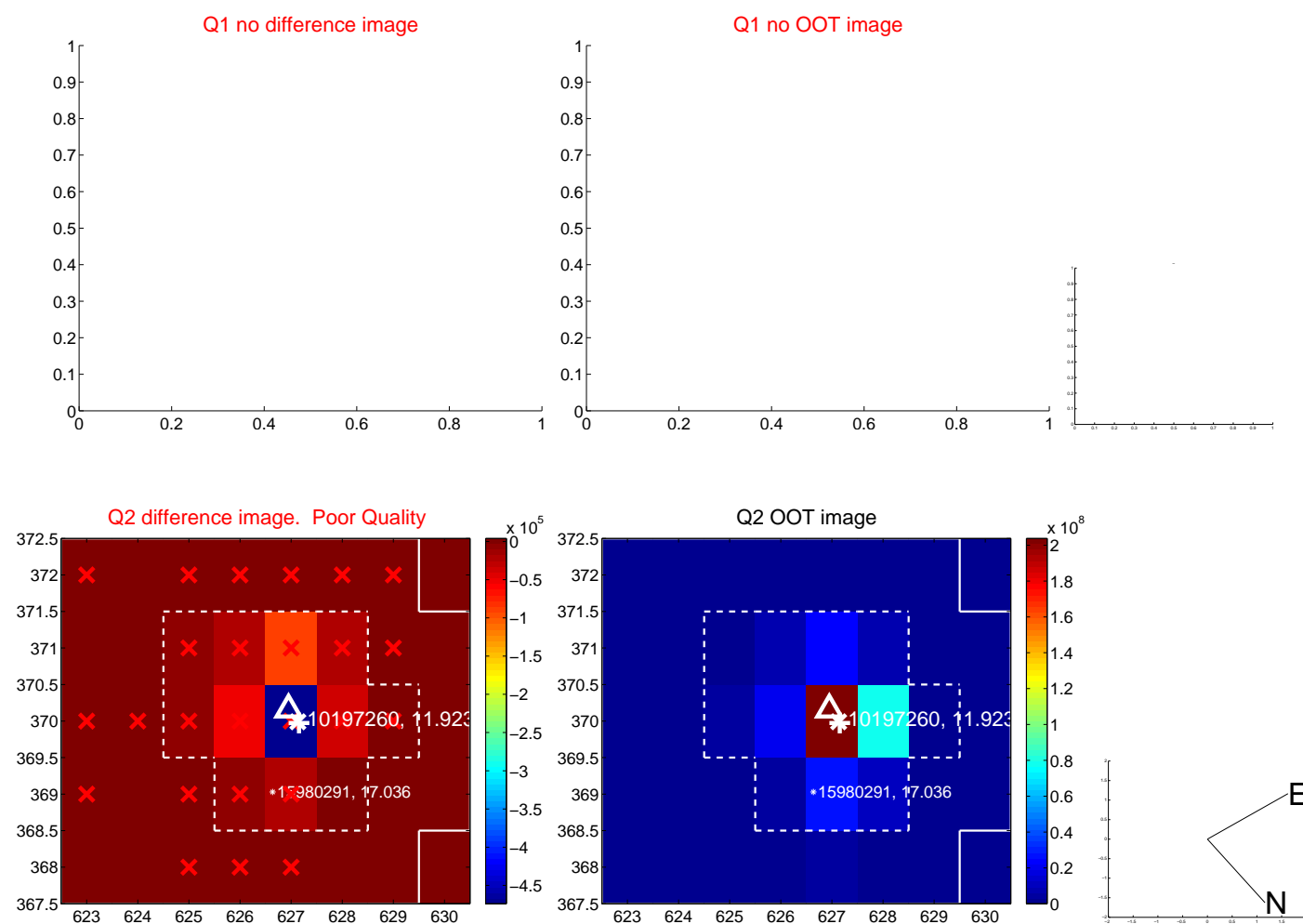
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.362 ± 0.291	1.24	-0.056 ± 0.121	-0.358 ± 0.294
PRF-fit source offset from KIC position	0.288 ± 0.286	1.01	0.010 ± 0.130	-0.288 ± 0.286
photometric centroid source offset	1.01 ± 0.49	2.06	0.46 ± 0.55	-0.90 ± 0.48

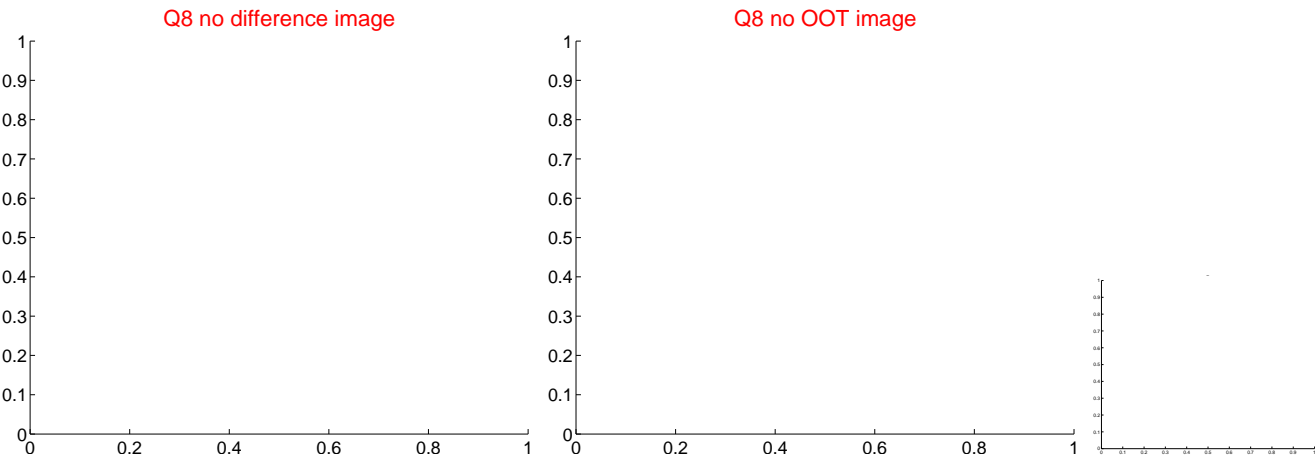
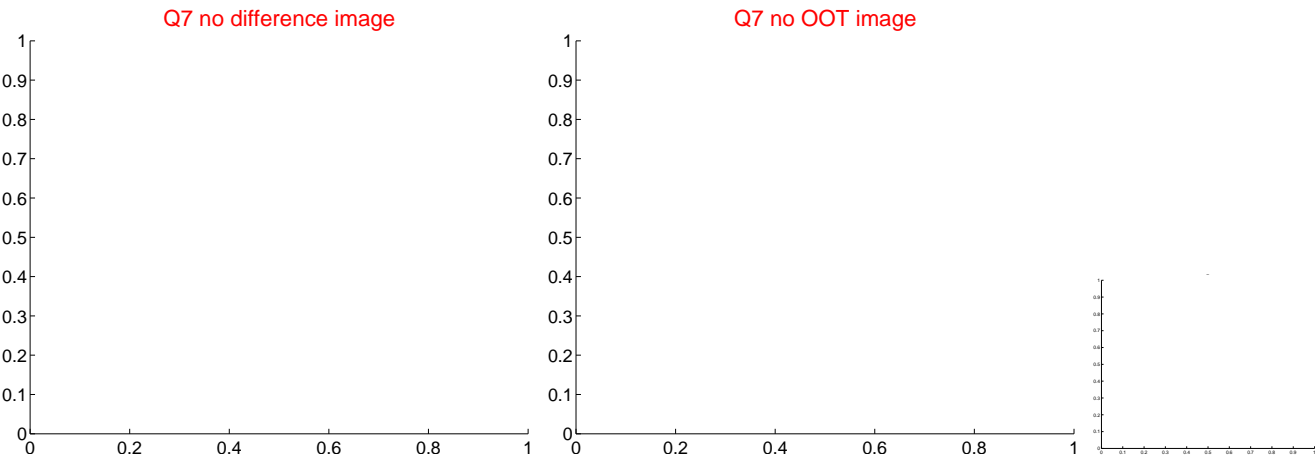
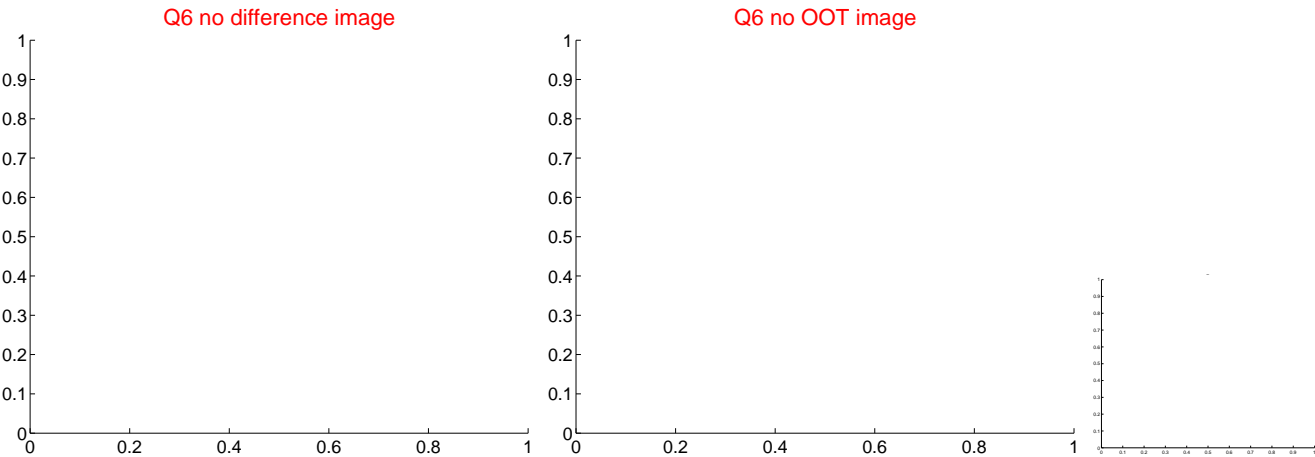
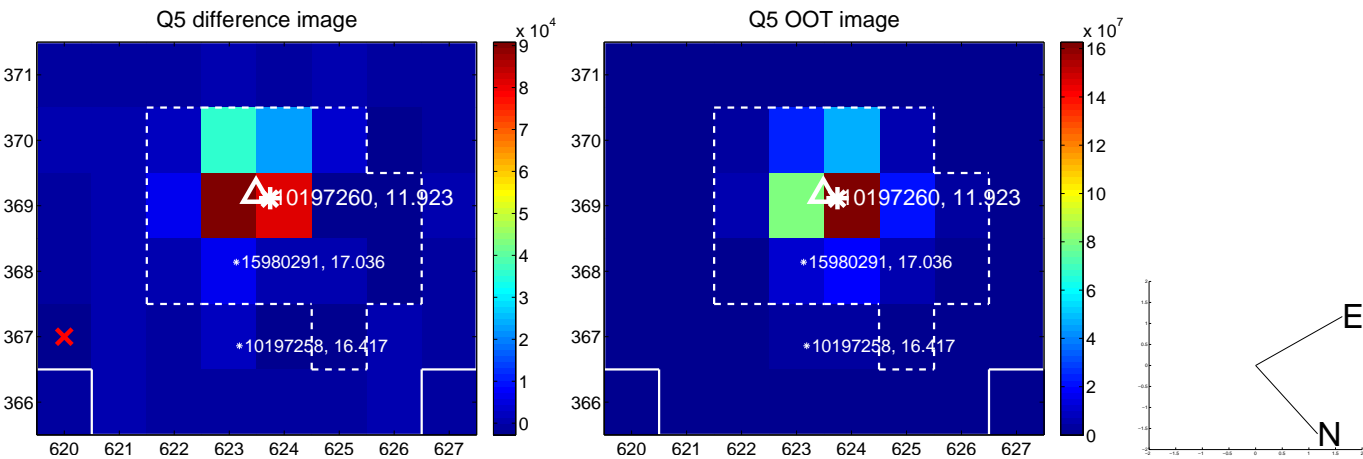


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

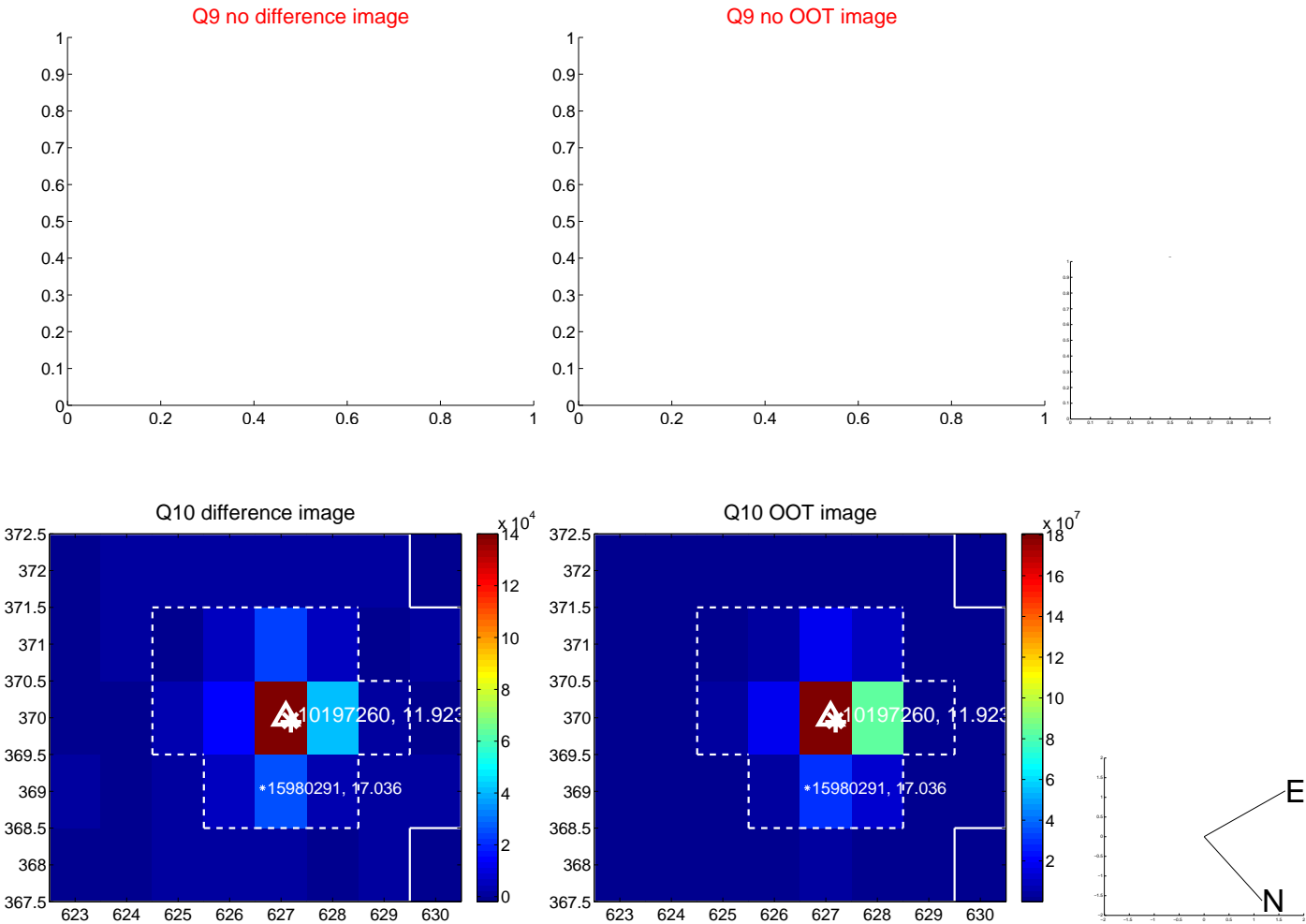
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



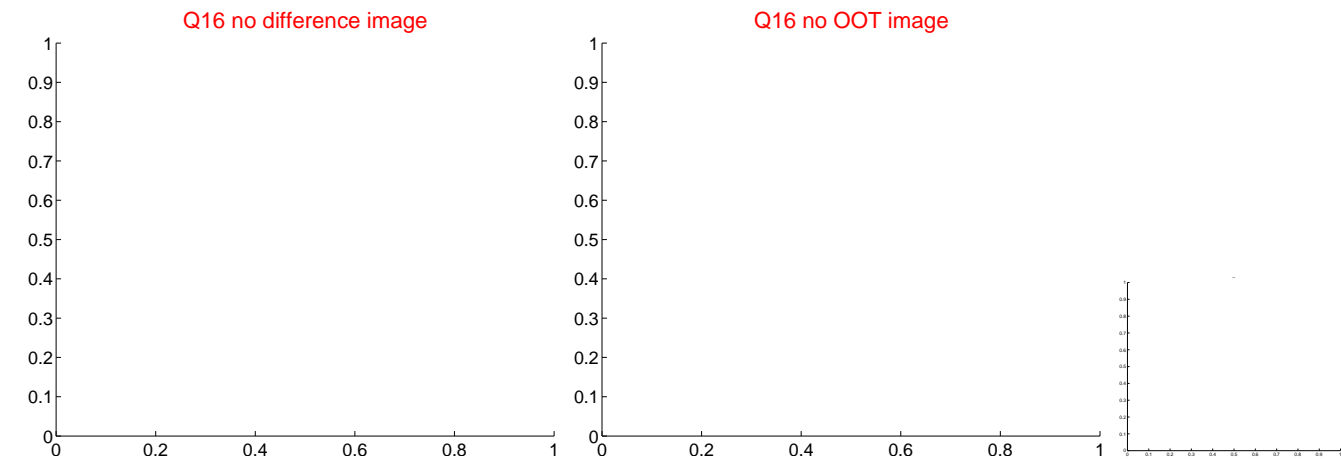
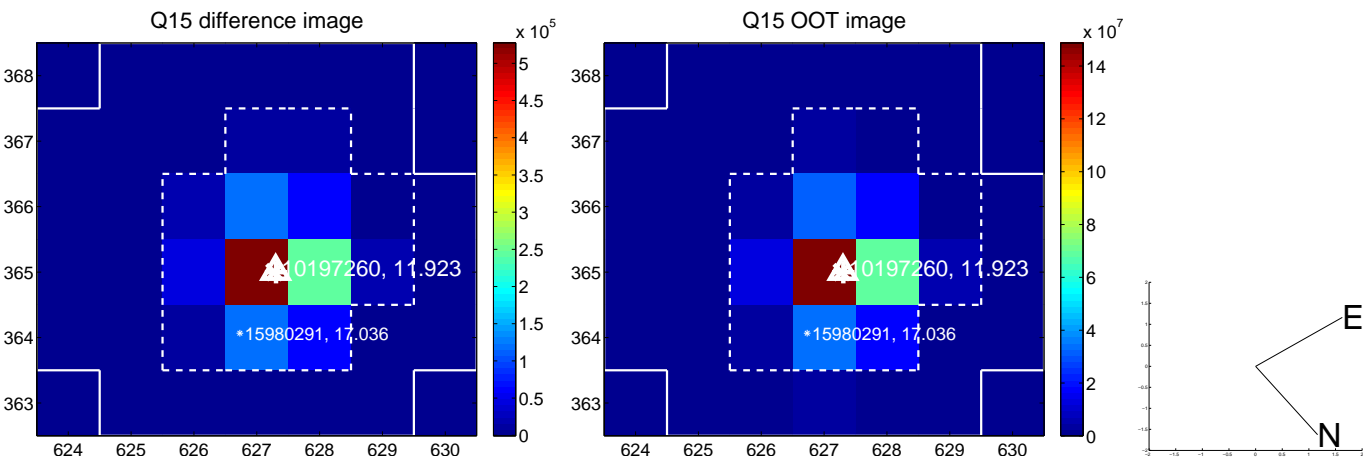
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



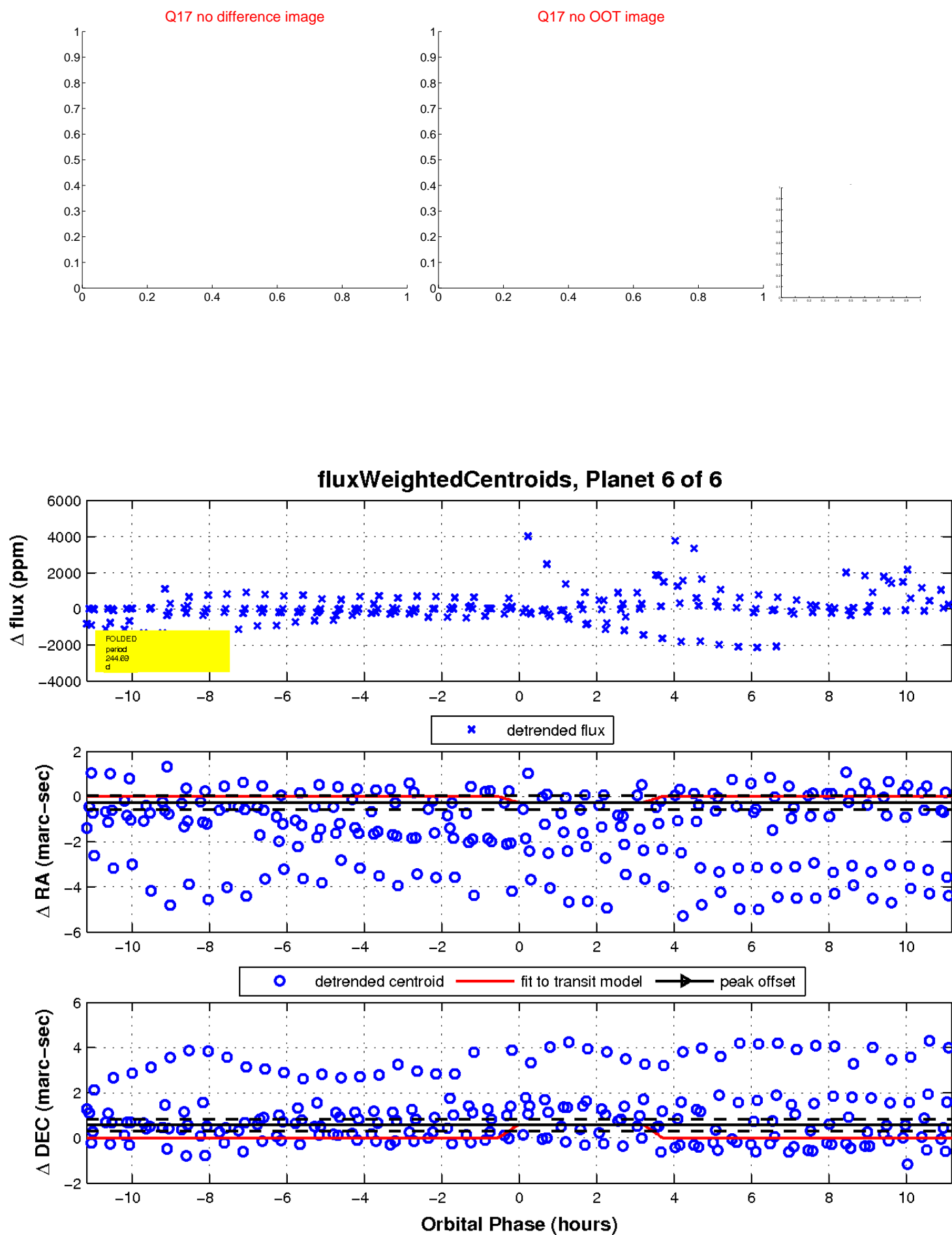
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

