

KIC 010527793

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})
010527793-01	OBS	No	514.578718	241.321323	1660.0	6.288	22.0	8.0	0.69	5178	2.91	0.26
010527793-02	OBS	No	462.794034	450.363195	1313.2	6.243	17.8	6.8	0.69	5178	2.56	0.30
010527793-03	OBS	No	512.407303	314.499602	3068.9	10.495	17.4	13.1	0.69	5178	4.91	0.26
010527793-04	OBS	No	541.287236	173.768126	1275.2	6.925	16.3	7.2	0.69	5178	2.47	0.24
010527793-05	OBS	No	445.287091	506.717205	1264.3	5.052	16.3	7.1	0.69	5178	2.64	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010527793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010527793-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

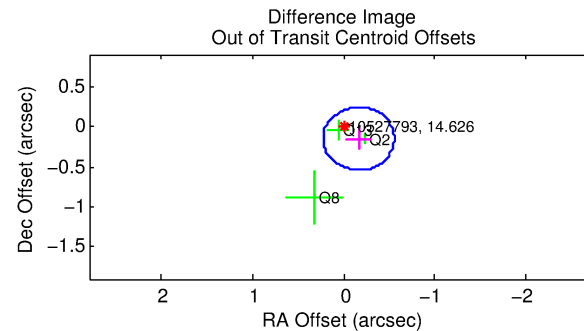
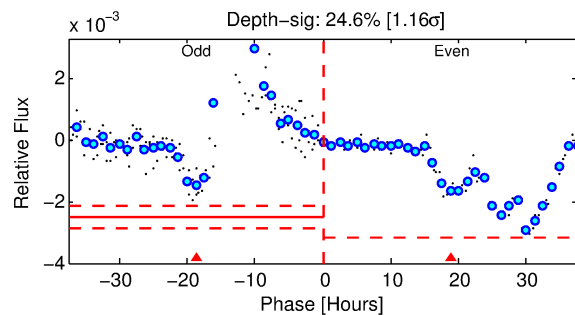
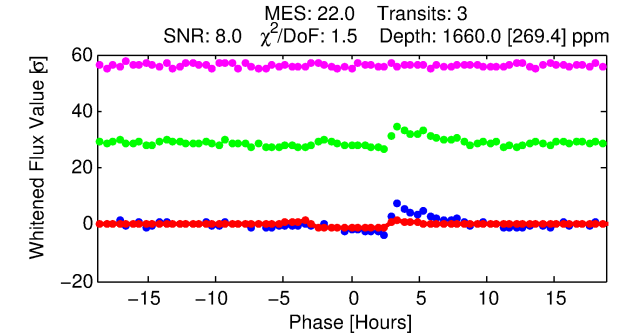
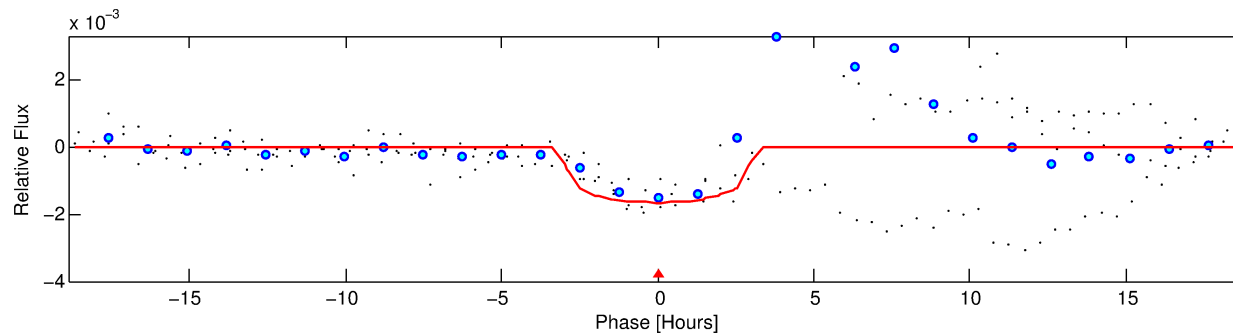
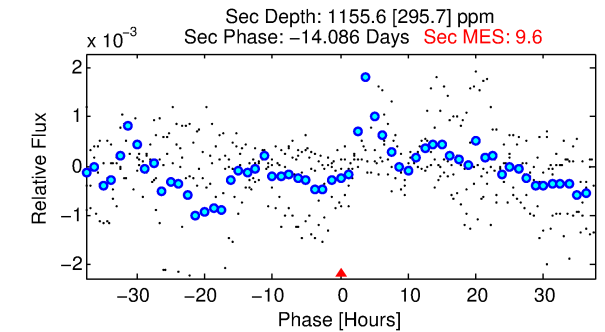
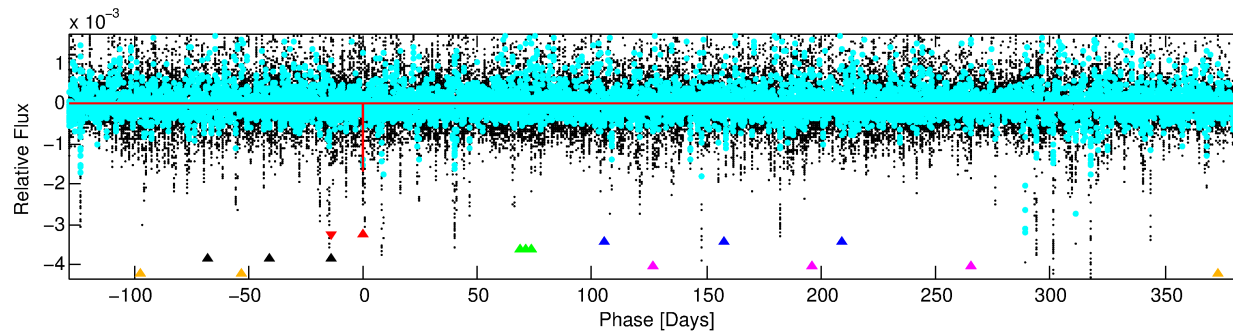
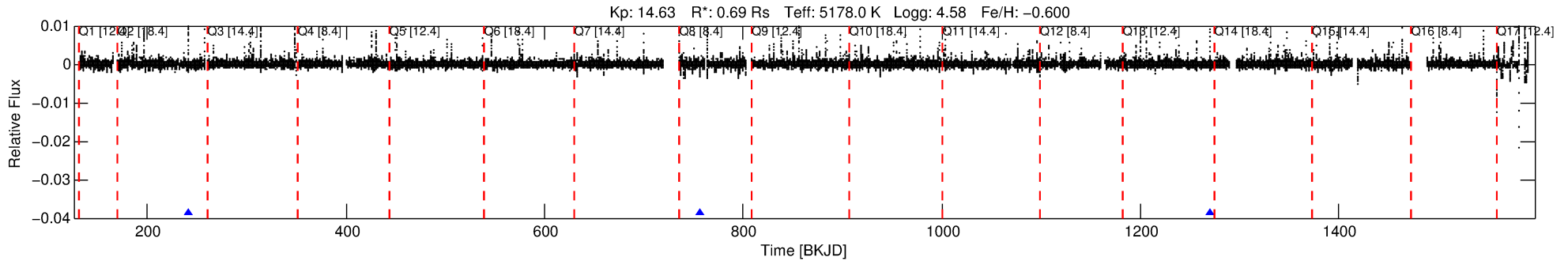
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010527793-01

No Significant Match Found

DV One-Page Summary

KIC: 10527793 Candidate: 1 of 6 Period: 514.579 d



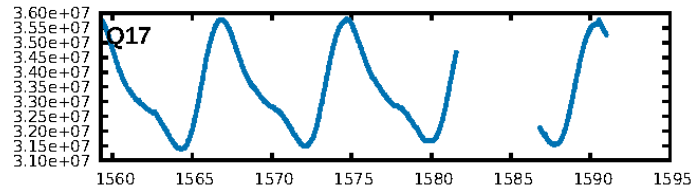
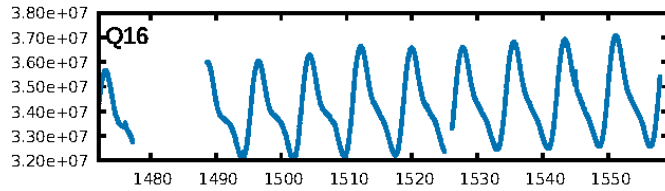
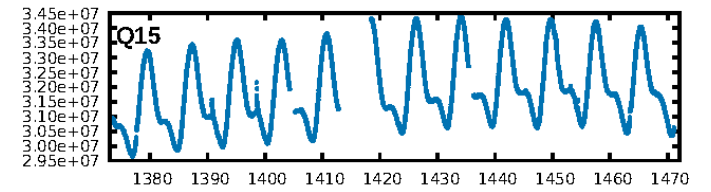
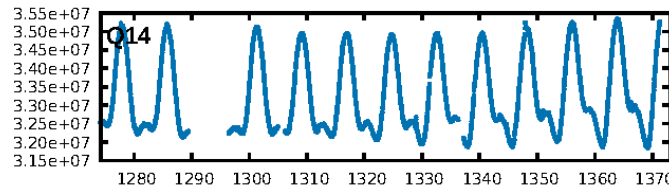
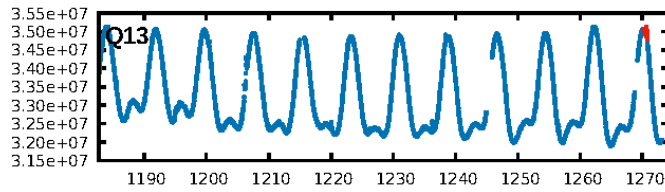
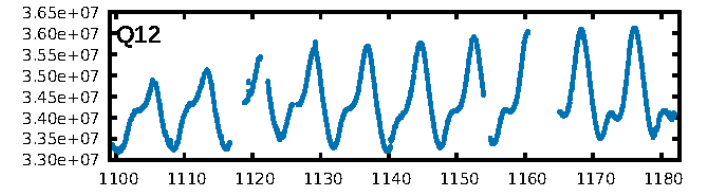
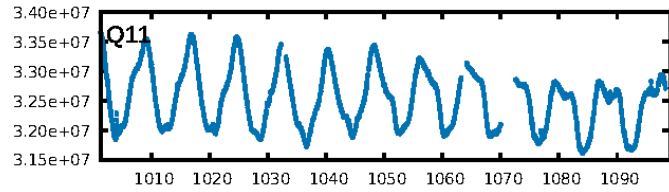
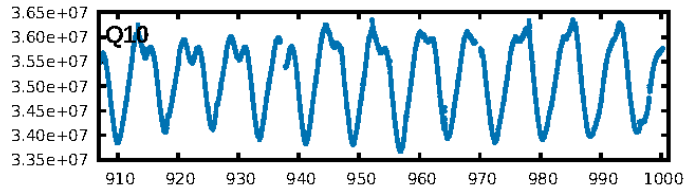
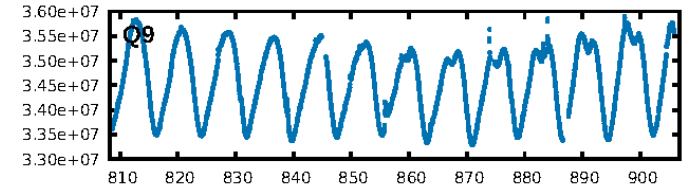
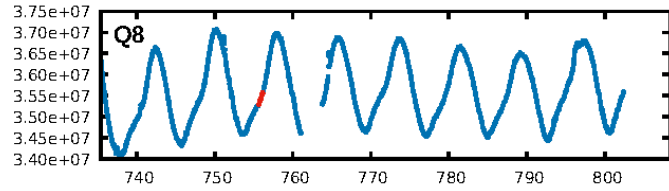
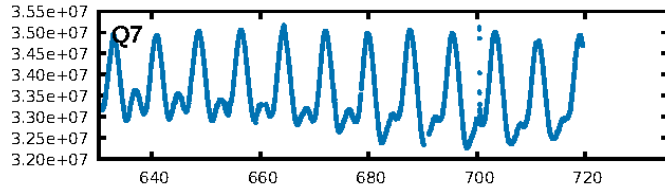
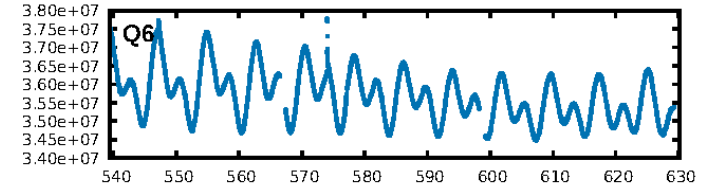
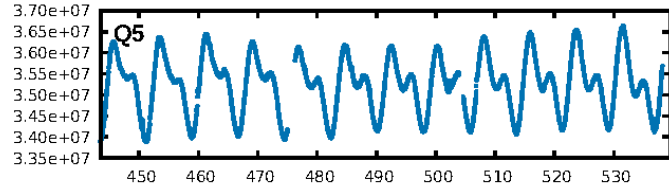
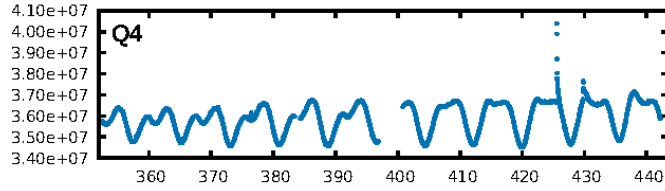
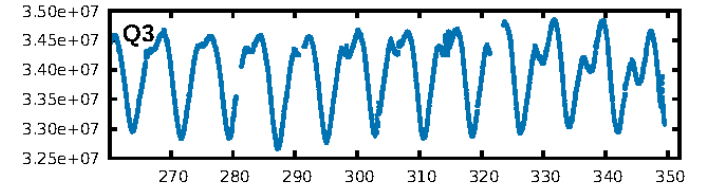
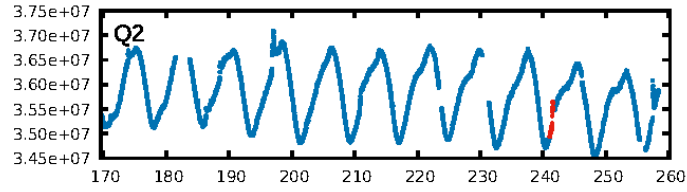
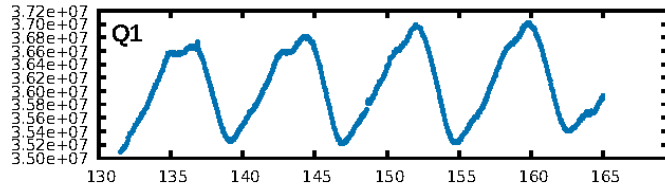
DV Fit Results:

Period = 514.57872 [0.00458] d
Epoch = 241.3213 [0.0053] BKJD
Rp/R* = 0.0384 [0.0838]
a/R* = 542.98 [4688.60]
b = 0.57 [10.40]
Seff = 0.26 [0.05]
Teq = 182 [8] K
Rp = 2.91 [6.35] Re
a = 1.0979 [0.1012] AU
Ag = 90409.44 [395019.14] [0.23σ]
Teffp = 4869 [5318] K [0.88σ]

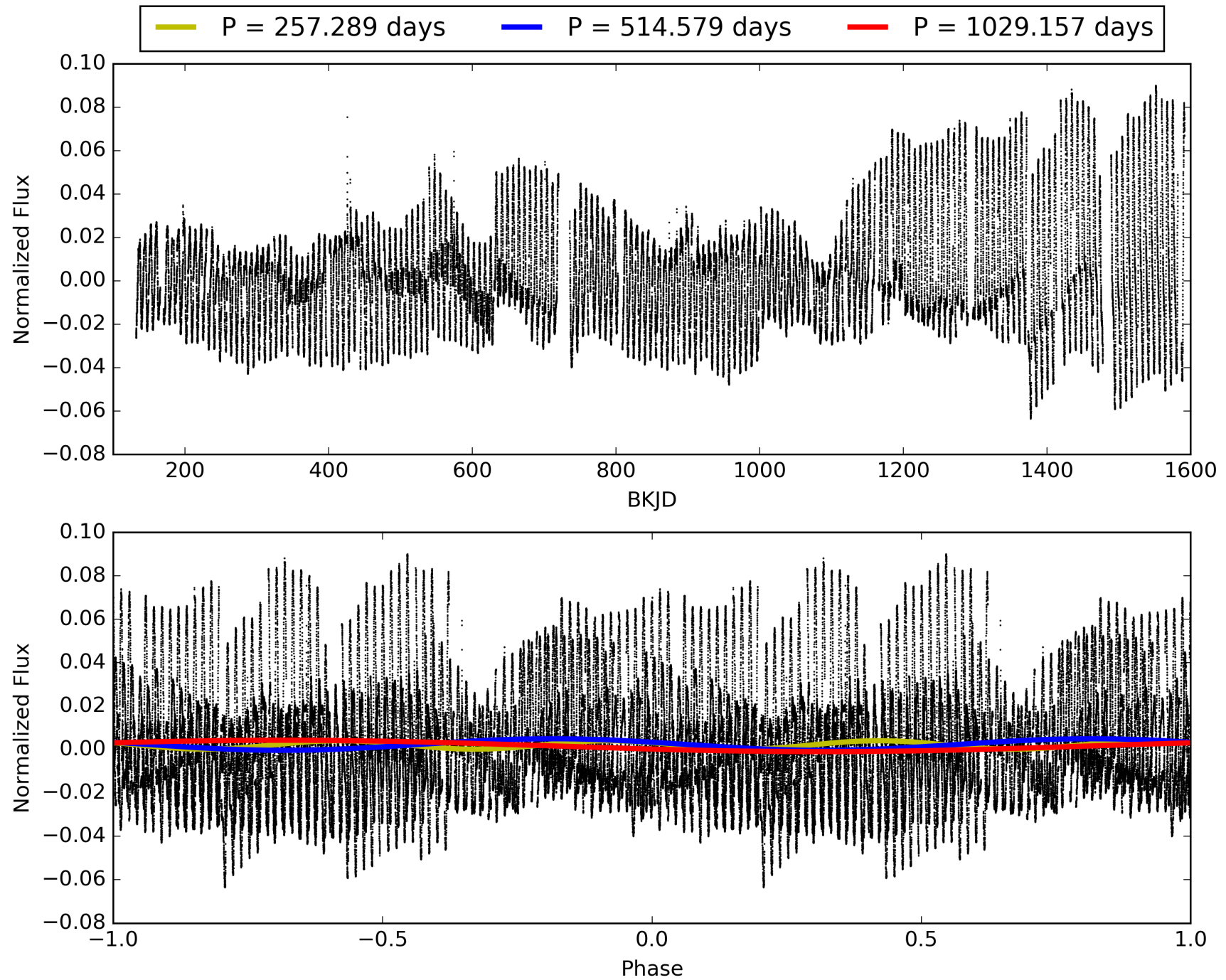
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.26σ]
LongPeriod-sig: 100.0% [68.53σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 21.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.599
Centroid-sig: 21.1%
Centroid-so: 0.760 arcsec [1.36σ]
OotOffset-rm: 0.225 arcsec [1.72σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.257 arcsec [2.00σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 010527793-01, PDC Light Curves

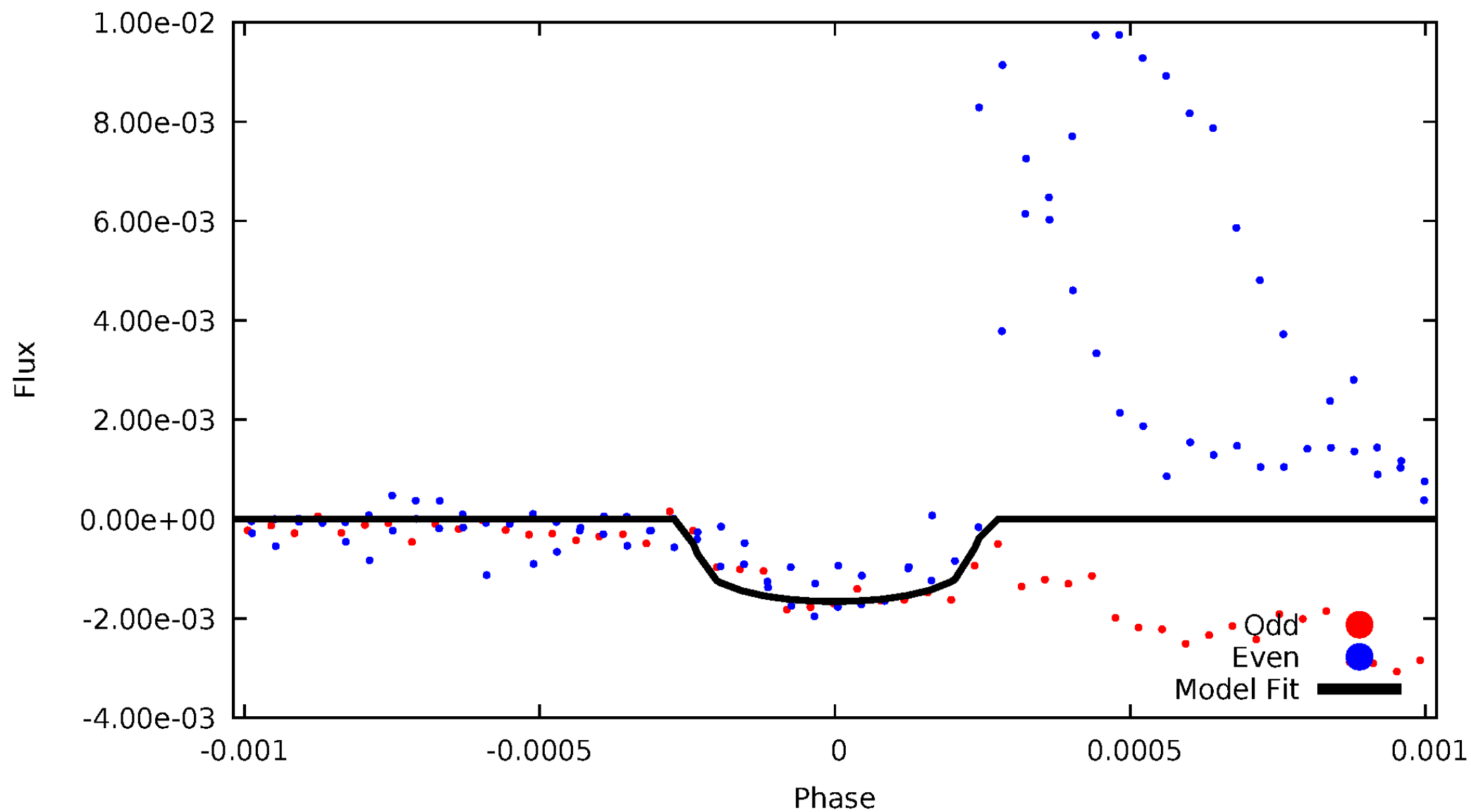


TCE 010527793-01



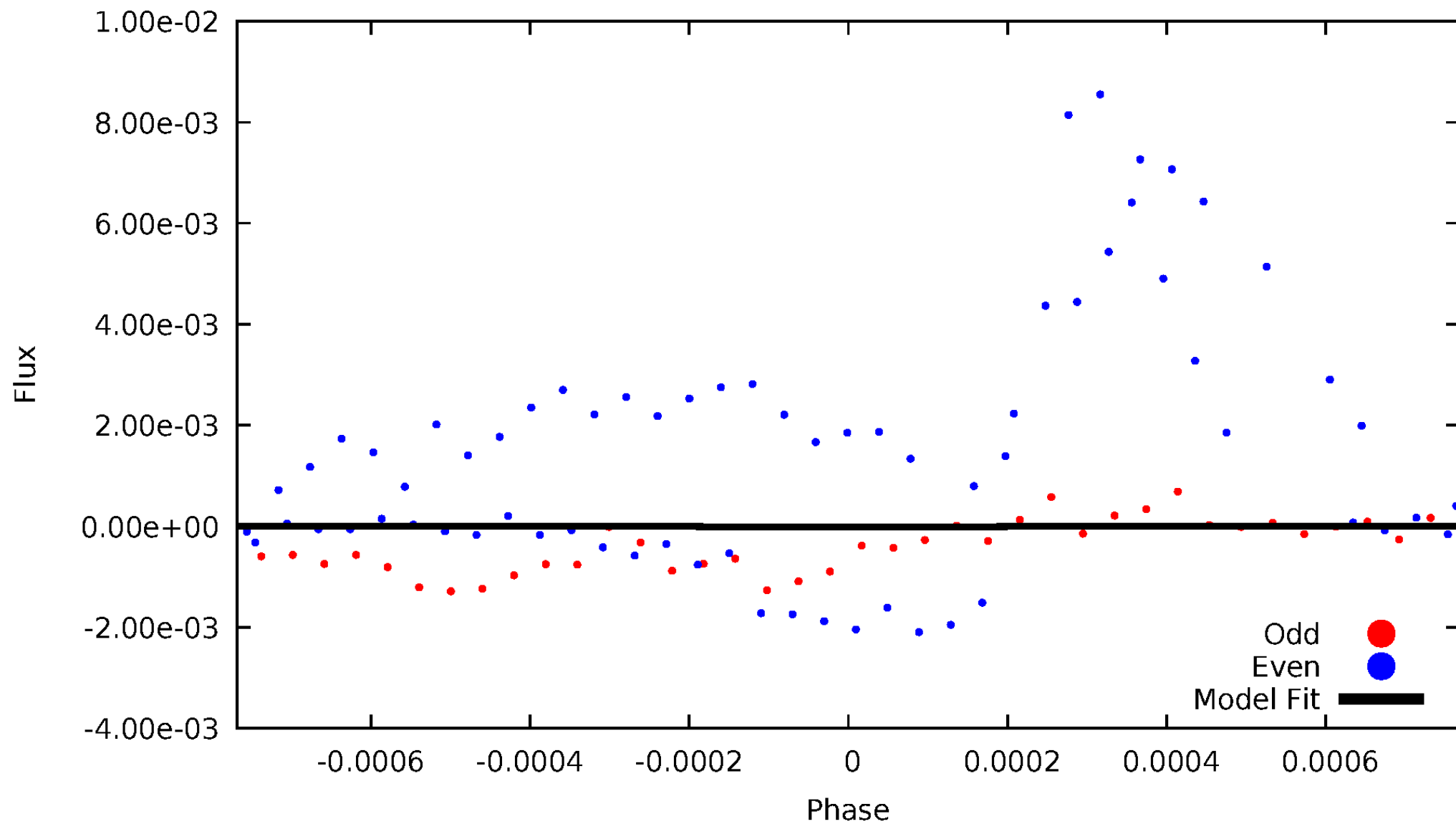
DV Odd/Even

TCE 010527793-01



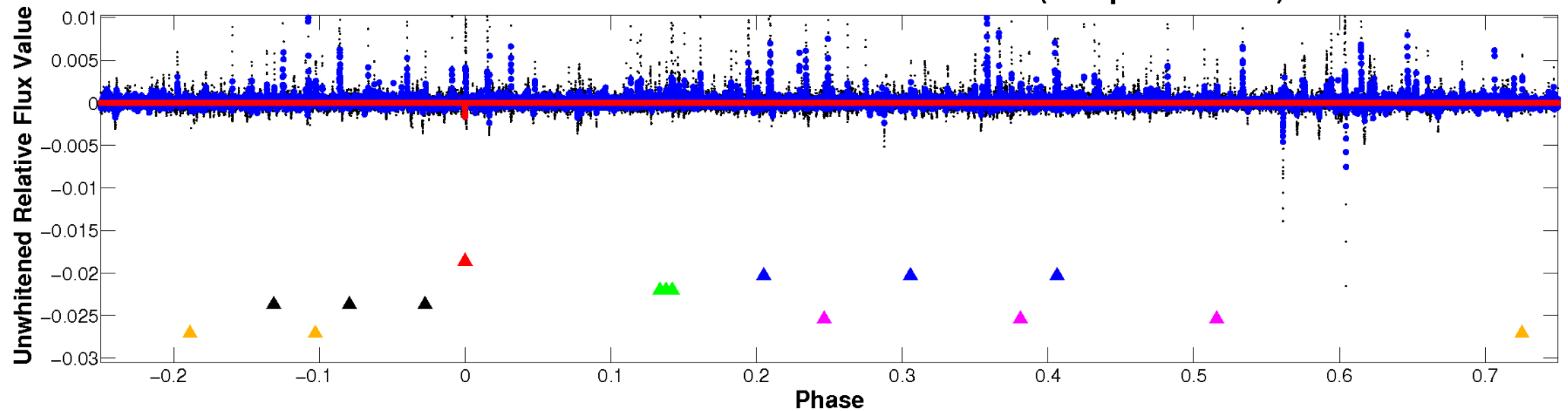
ALT Odd/Even

TCE 010527793-01

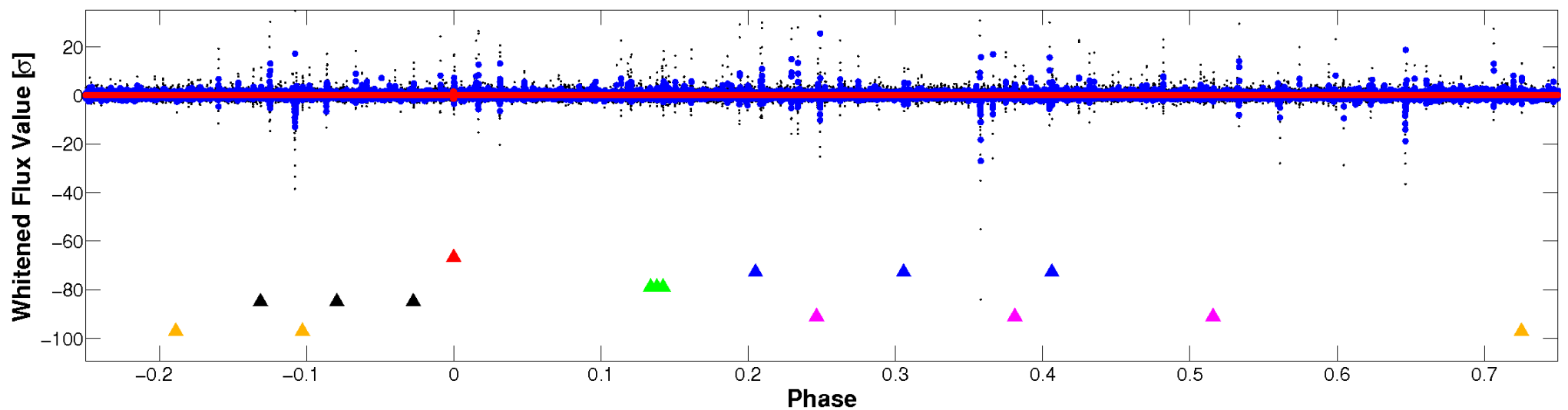


Non-Whitened Vs. Whitened Light Curve

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

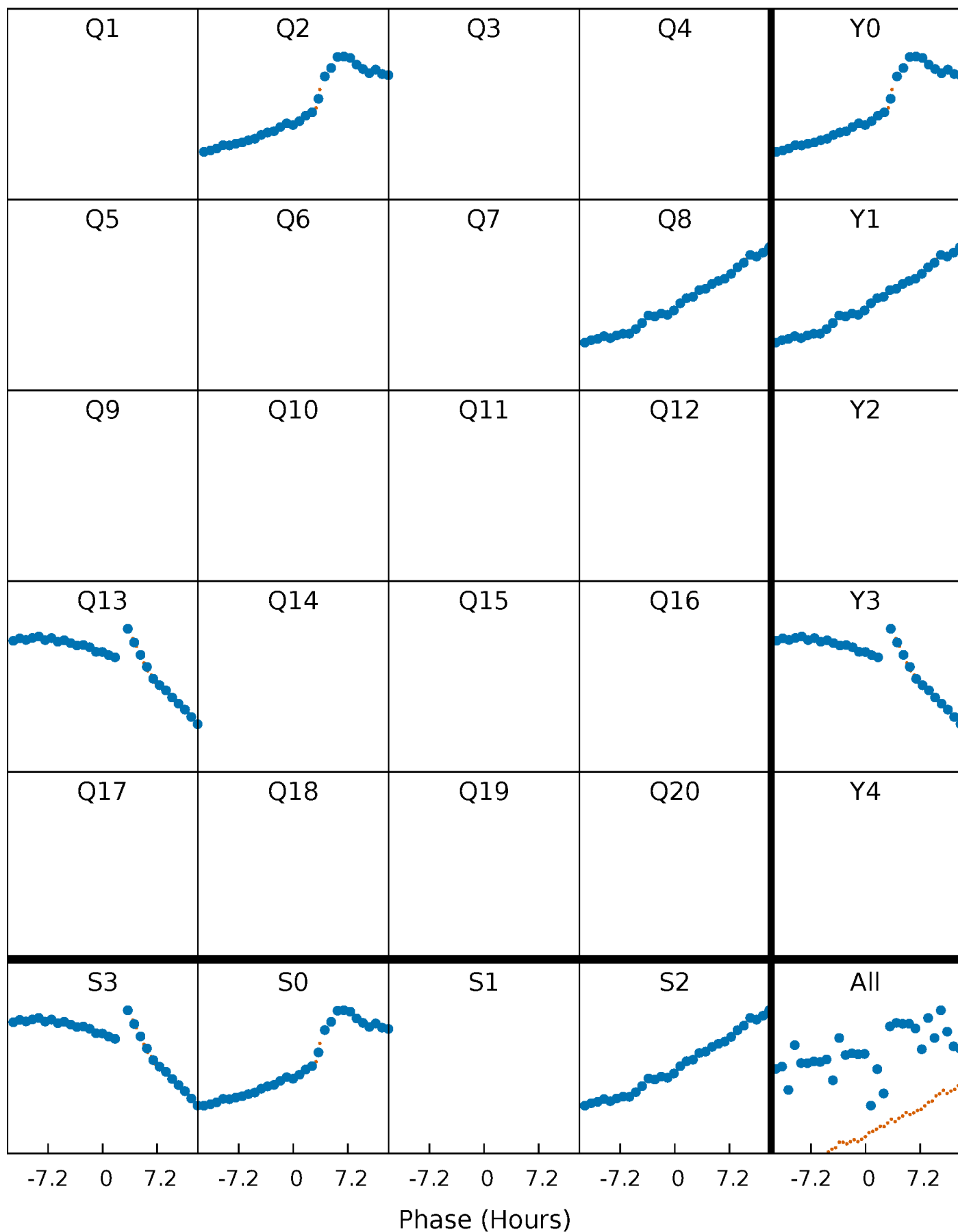


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



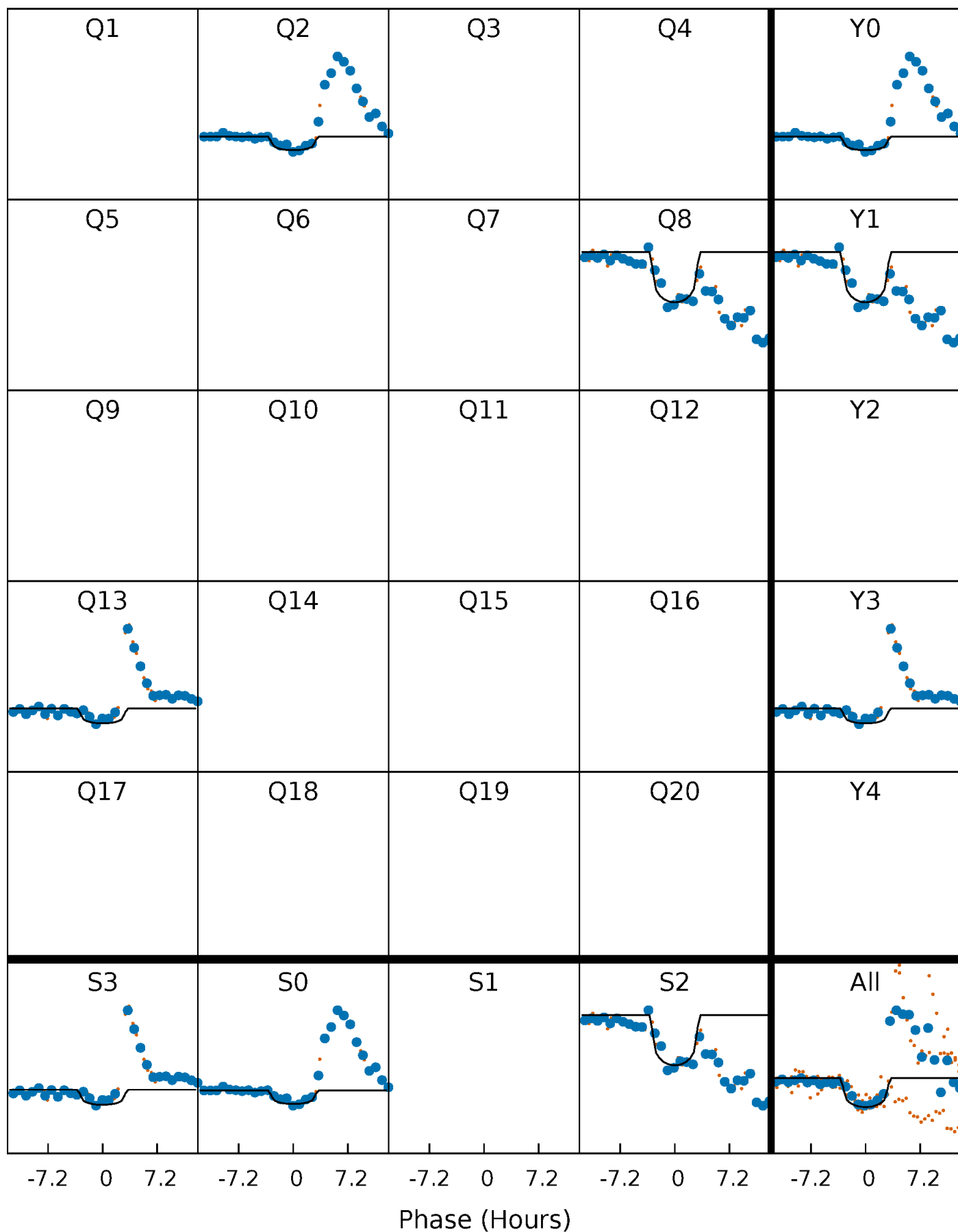
PDC Quarter-Phased Transit Curves

TCE 010527793-01 P=514.578718 Days $T_0=241.321323$ (BKJD)



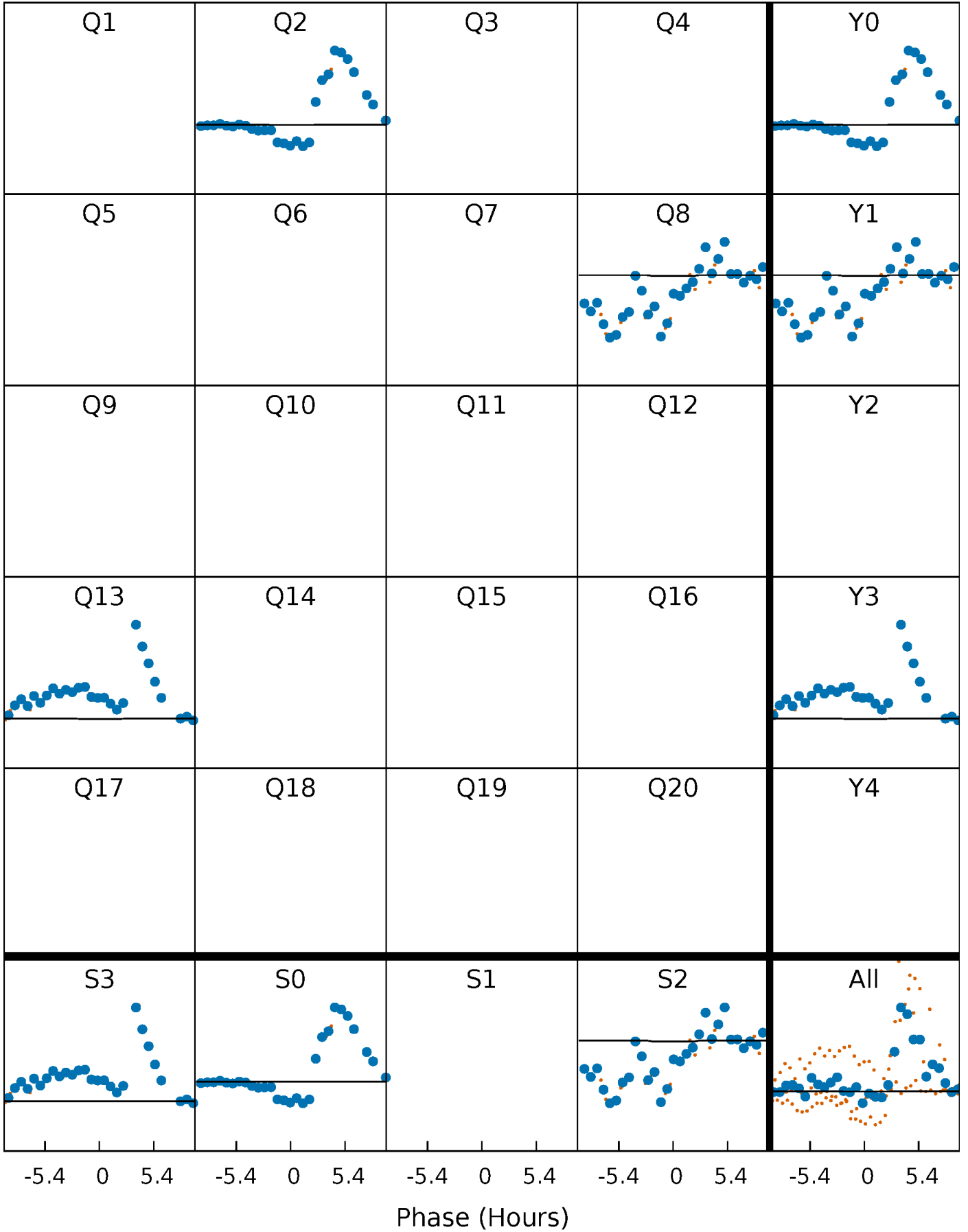
DV Quarter-Phased Transit Curves

TCE 010527793-01 P=514.578718 Days $T_0=241.321323$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

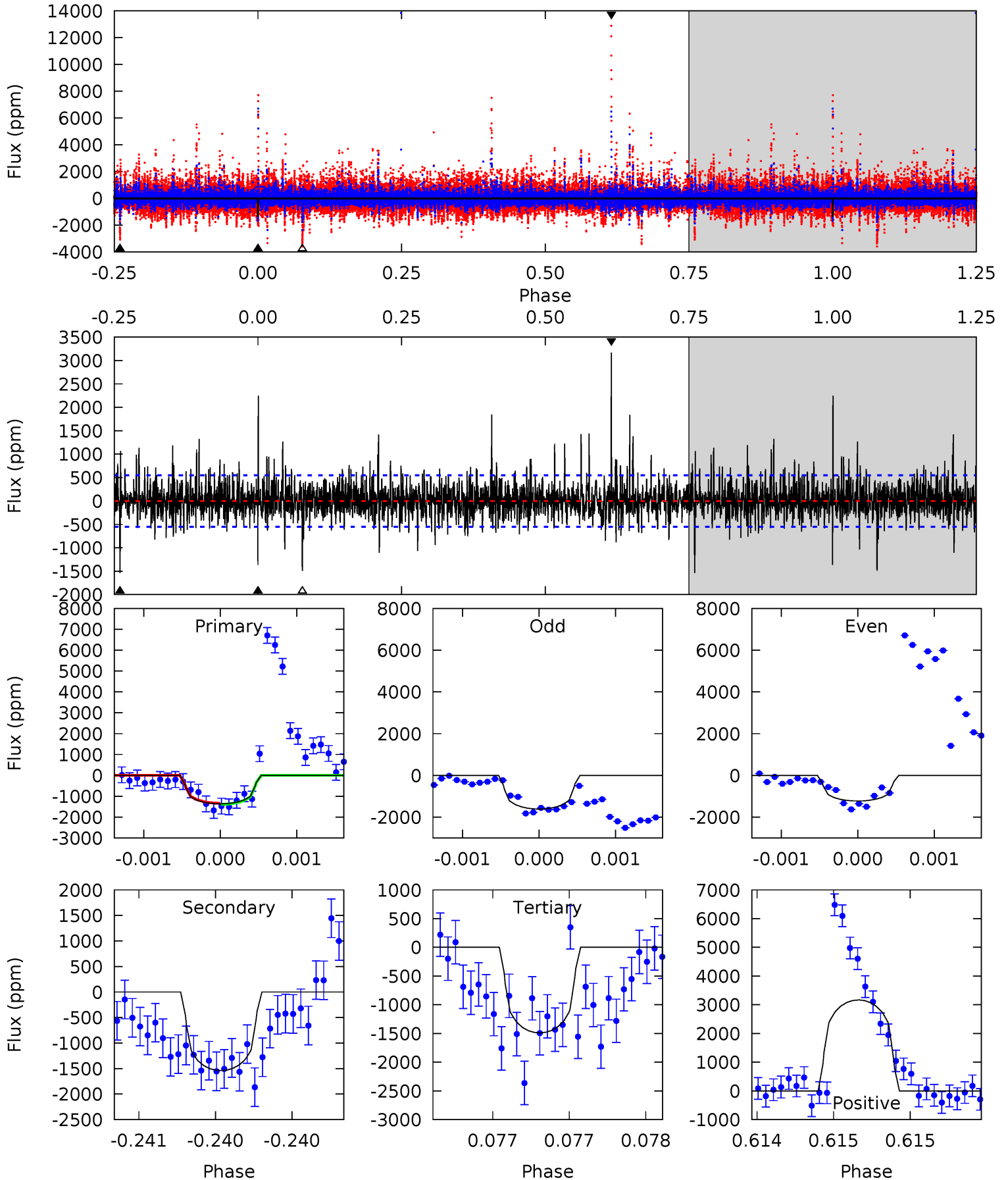
TCE 010527793-01 P=514.551097 Days $T_0=241.359846$ (BKJD)



DV Model-Shift Uniqueness Test

010527793-01, P = 514.578718 Days, E = 241.321323 Days

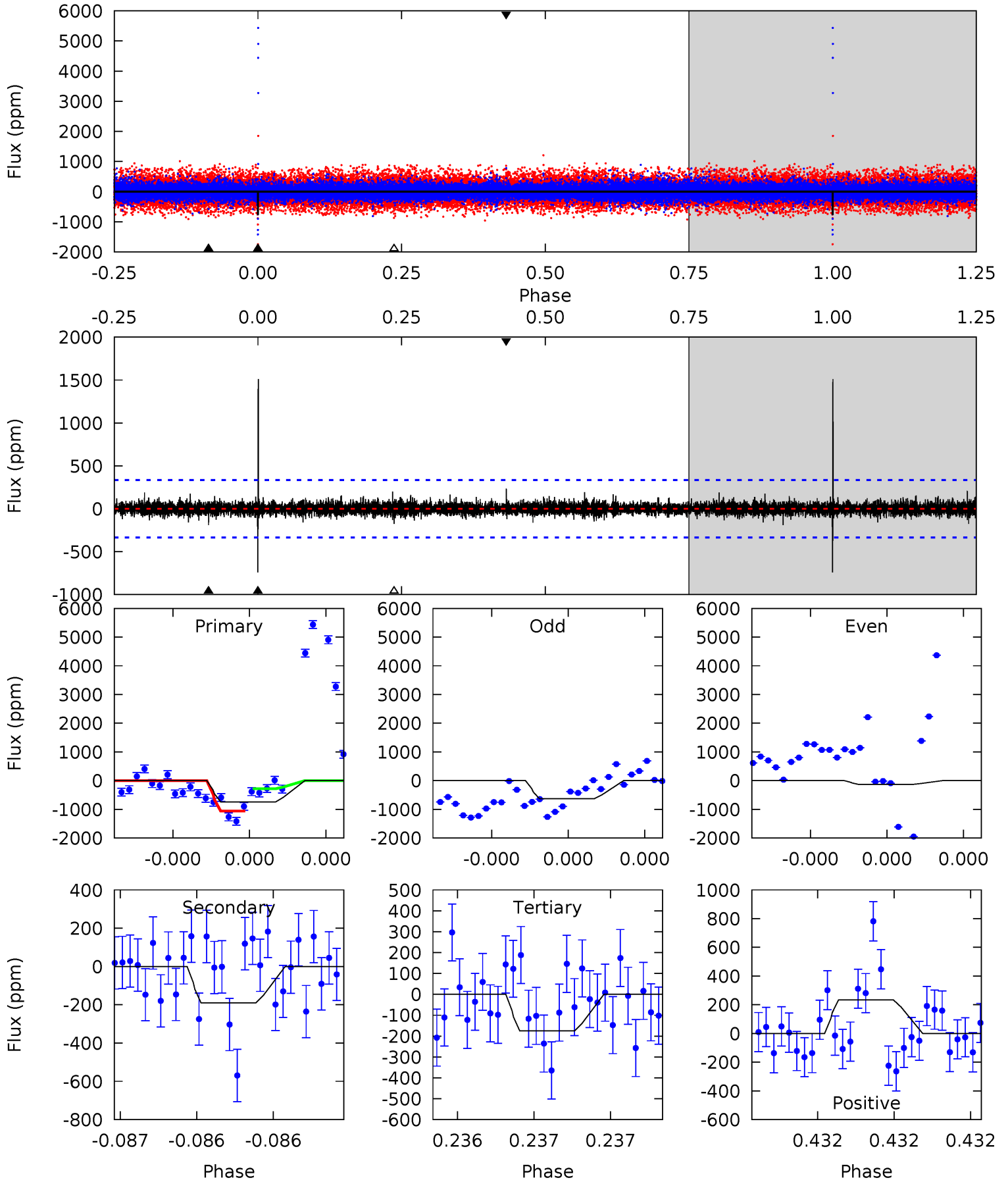
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	15.6	15.1	32.1	5.57	3.47	2.87	-1.29	-18.3	0.51	-16.5	1.00	0.88	0.67	0.27



Alt Model-Shift Uniqueness Test

010527793-01, P = 514.551097 Days, E = 241.359846 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	3.18	2.93	3.91	5.61	3.54	0.64	9.47	8.48	0.25	-0.74	5.33	0.18	0.67	0



Stellar Parameters For KIC 010527793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5178^{+154}_{-154}	$4.579^{+0.078}_{-0.052}$	$-0.600^{+0.350}_{-0.300}$	$0.694^{+0.073}_{-0.073}$	$0.666^{+0.081}_{-0.037}$	$2.809^{+0.910}_{-0.519}$
	+3%/-3%	+2%/-1%	+58%/-50%	+11%/-11%	+12%/-6%	+32%/-18%
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 010527793-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1539 ± 99	$5.46^{+5.10}_{-3.56}$	253^{+9}_{-10}	4056^{+2442}_{-785}	$34500^{+257494}_{-25186}$
Alt.	-190 ± 60	$4.44^{+5.09}_{-3.00}$	253^{+10}_{-9}	3093^{+1427}_{-576}	6074^{+56753}_{-4799}

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

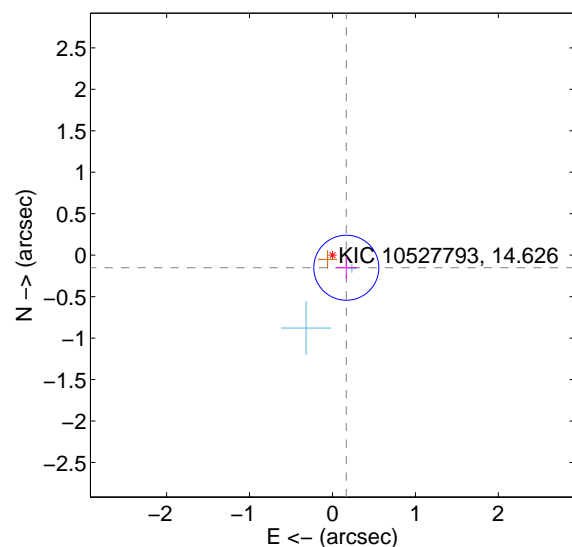
Supplemental centroid analysis for 010527793-01. Kepler magnitude: 14.63. Transit SNR 7.99

There are 2 quarters with good PRF difference image offsets

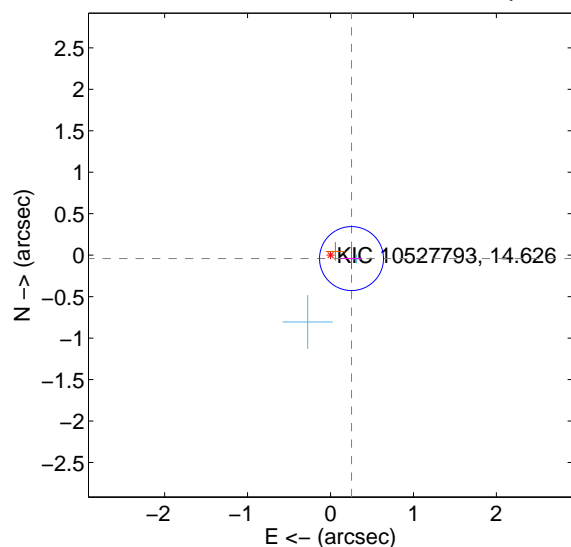
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.225 ± 0.131	1.72	-0.167 ± 0.128	-0.152 ± 0.134
PRF-fit source offset from KIC position	0.257 ± 0.129	2.00	-0.253 ± 0.129	-0.041 ± 0.127
photometric centroid source offset	0.76 ± 0.56	1.36	0.64 ± 0.57	0.42 ± 0.52

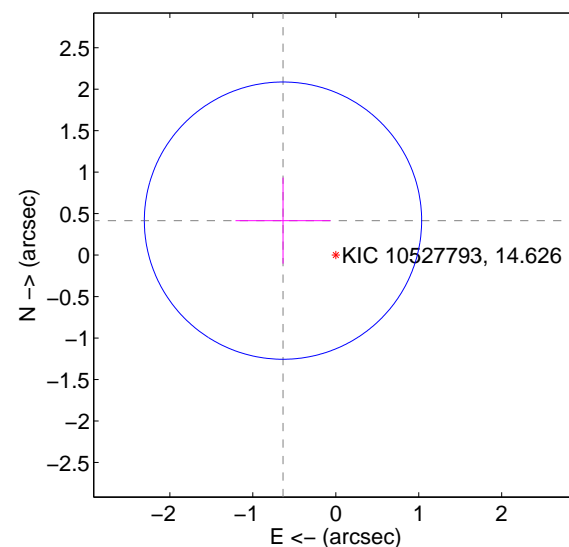
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

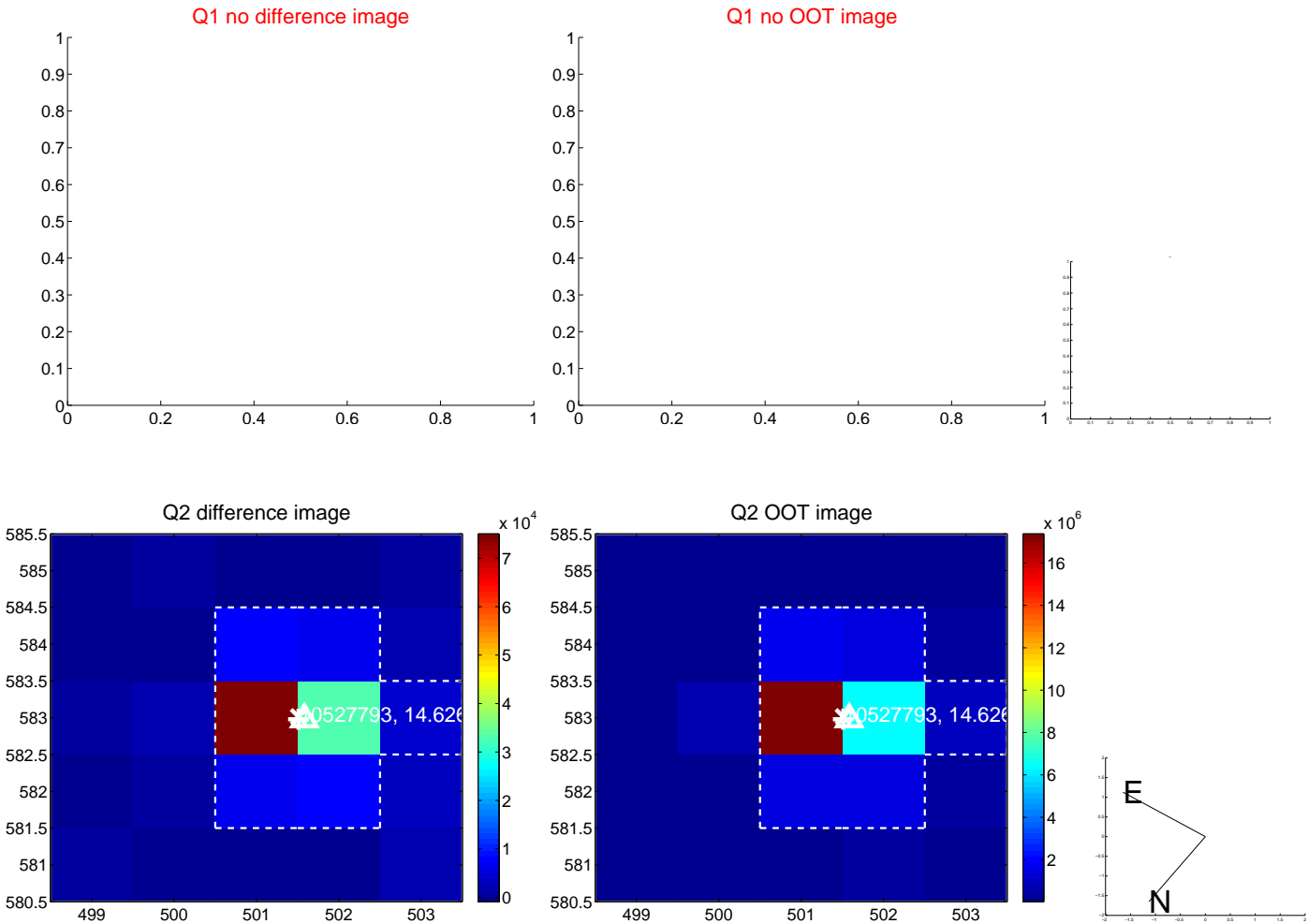


offset from photometric centroids

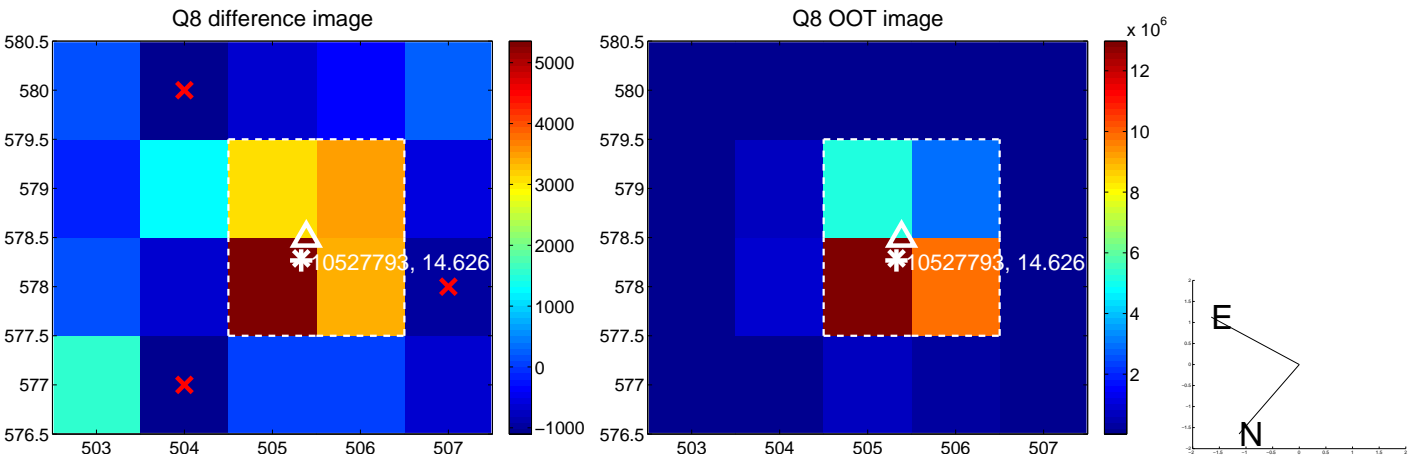
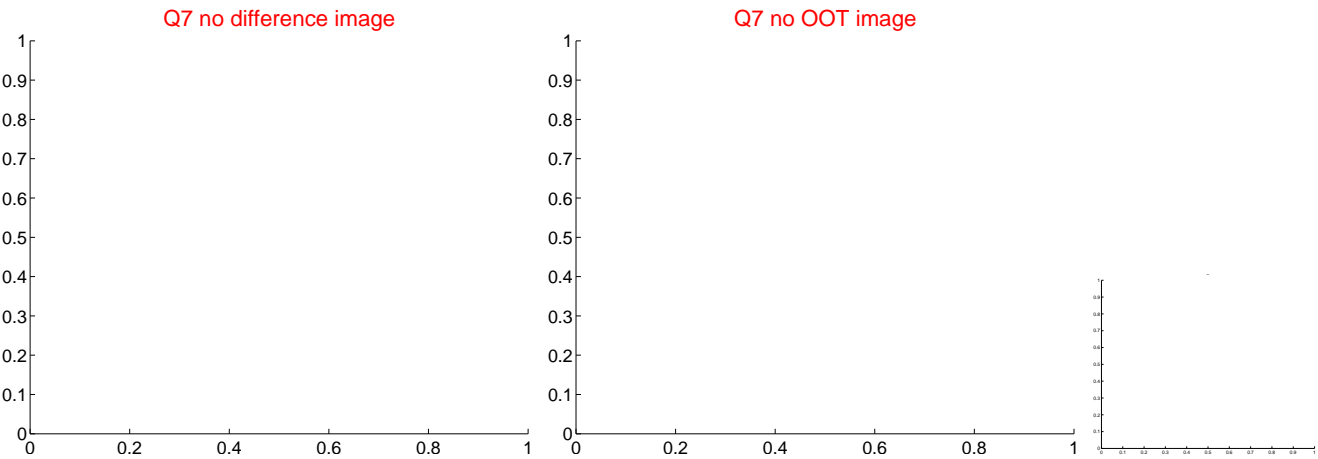
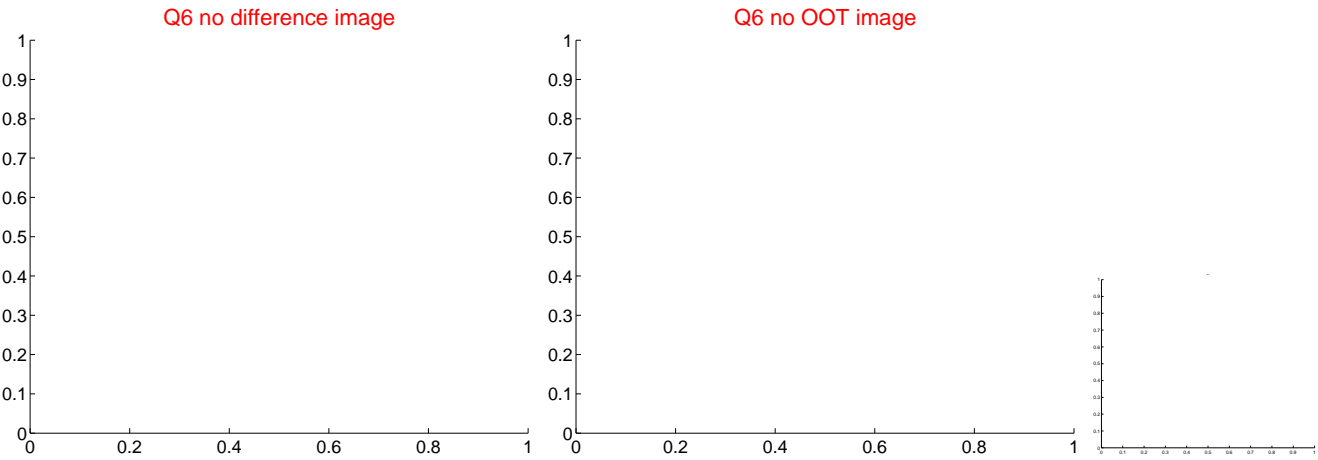
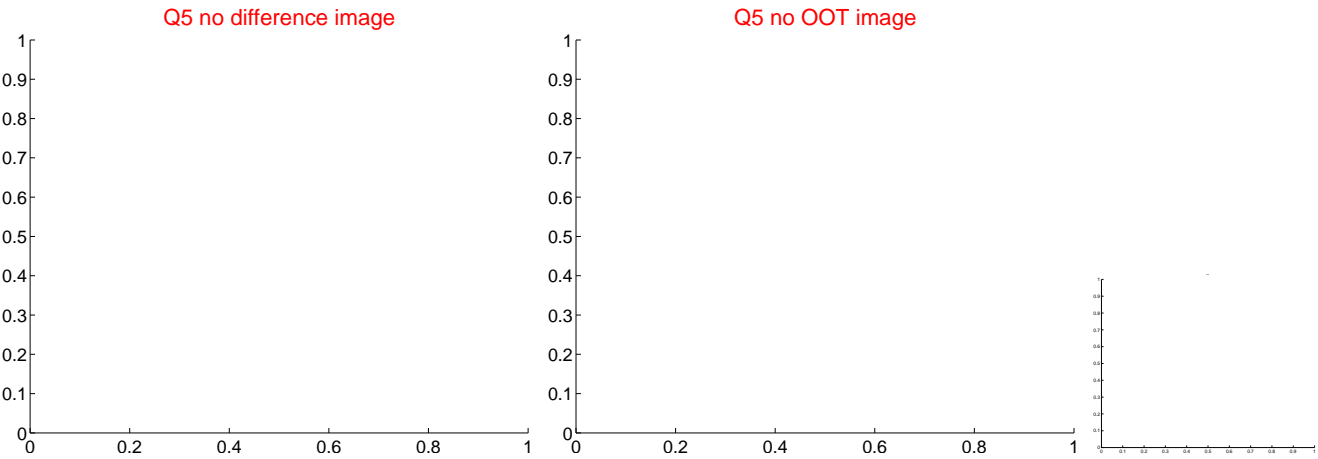


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

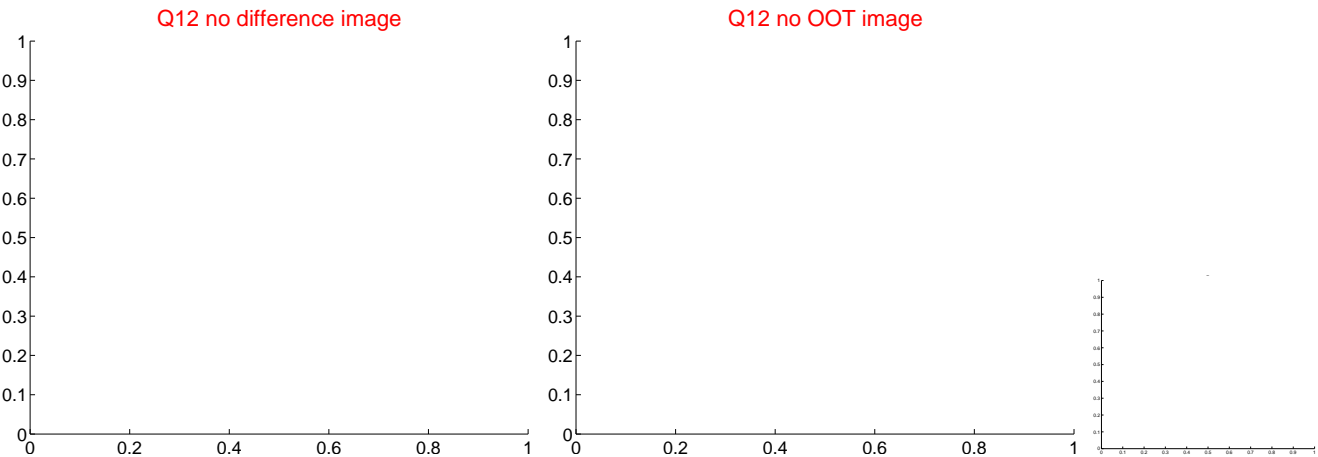
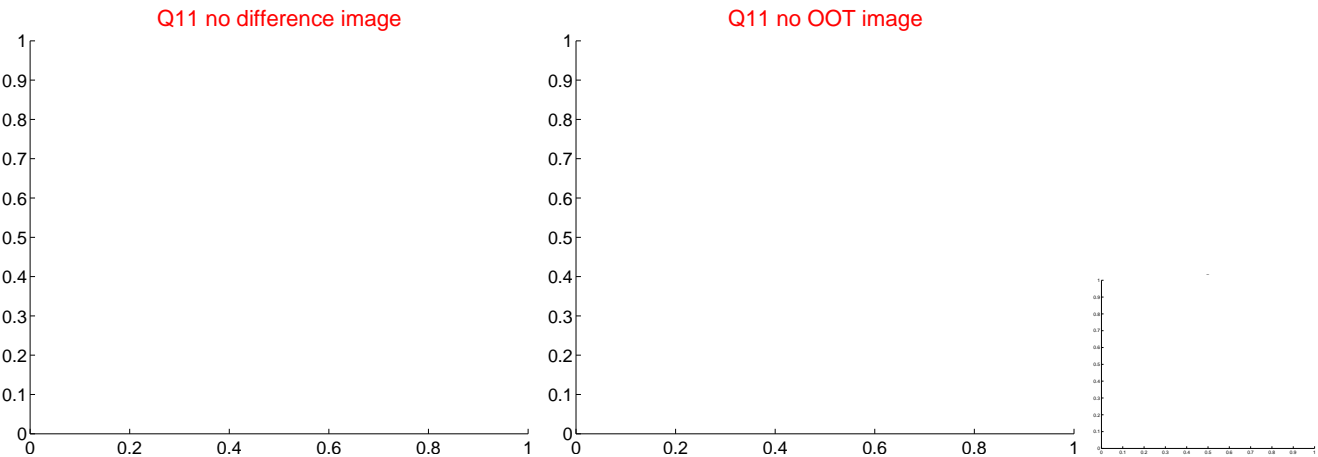
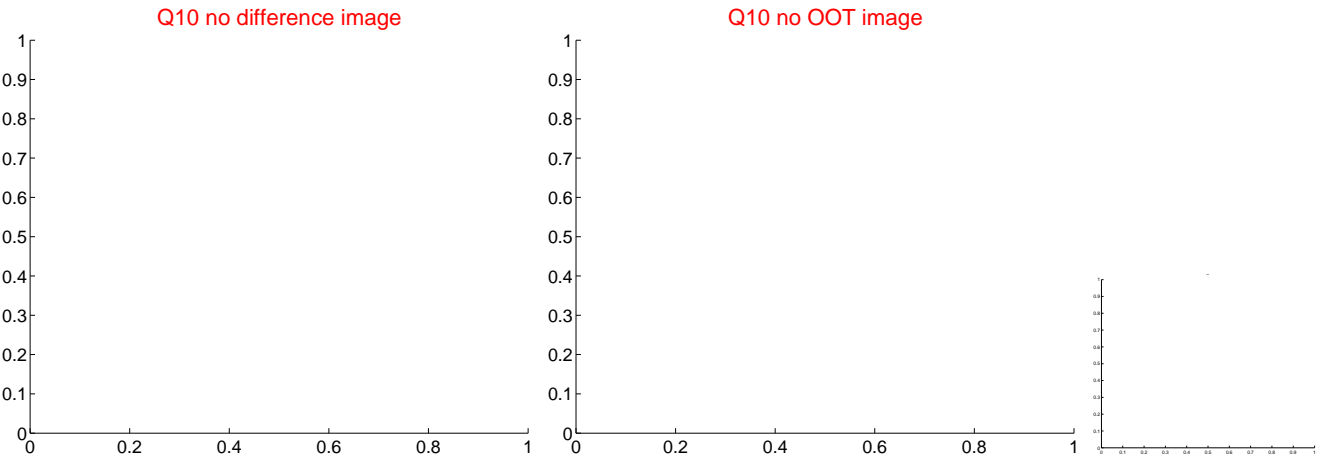
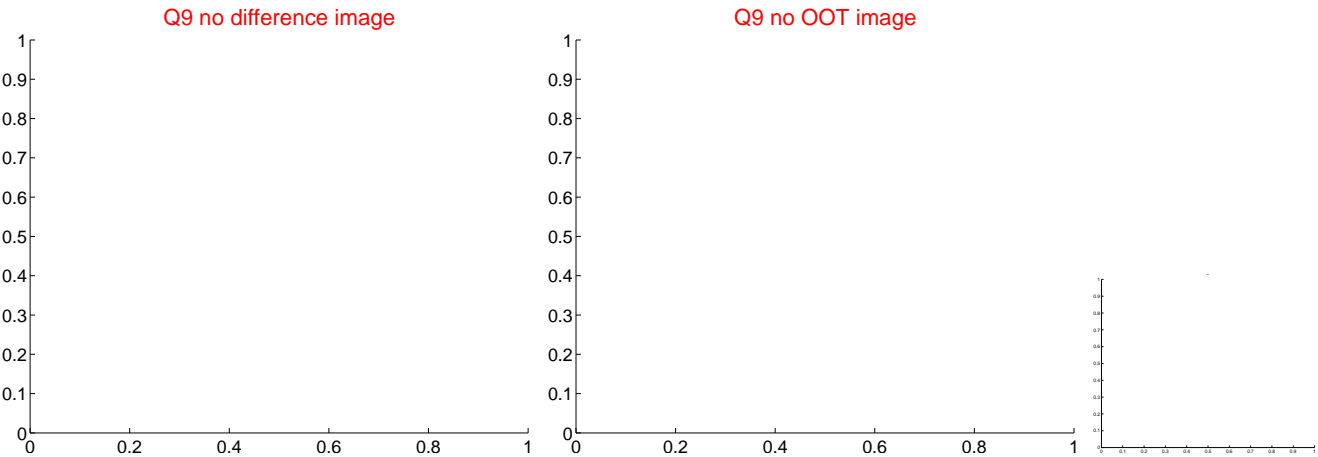
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



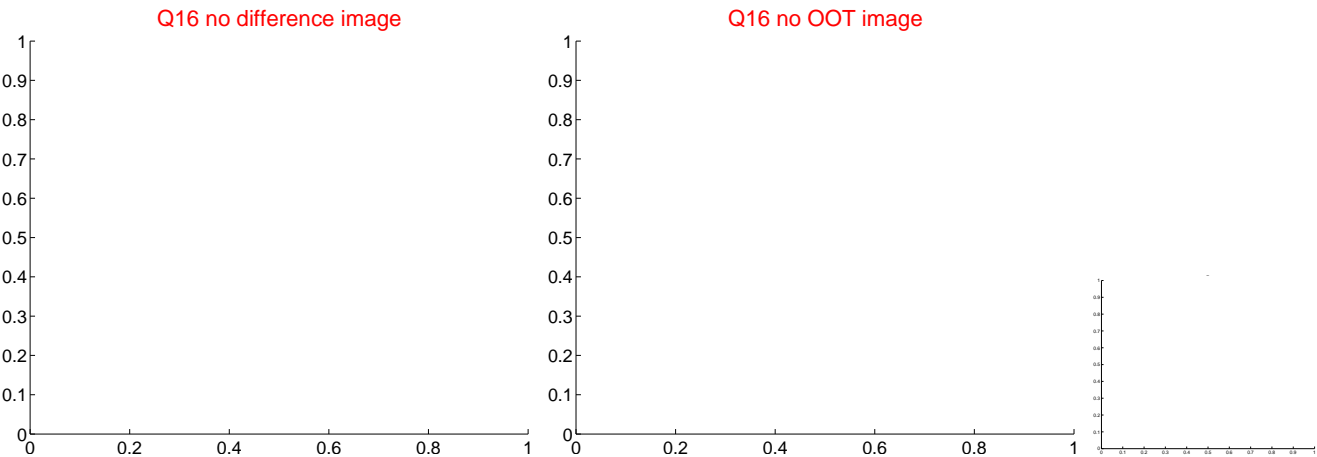
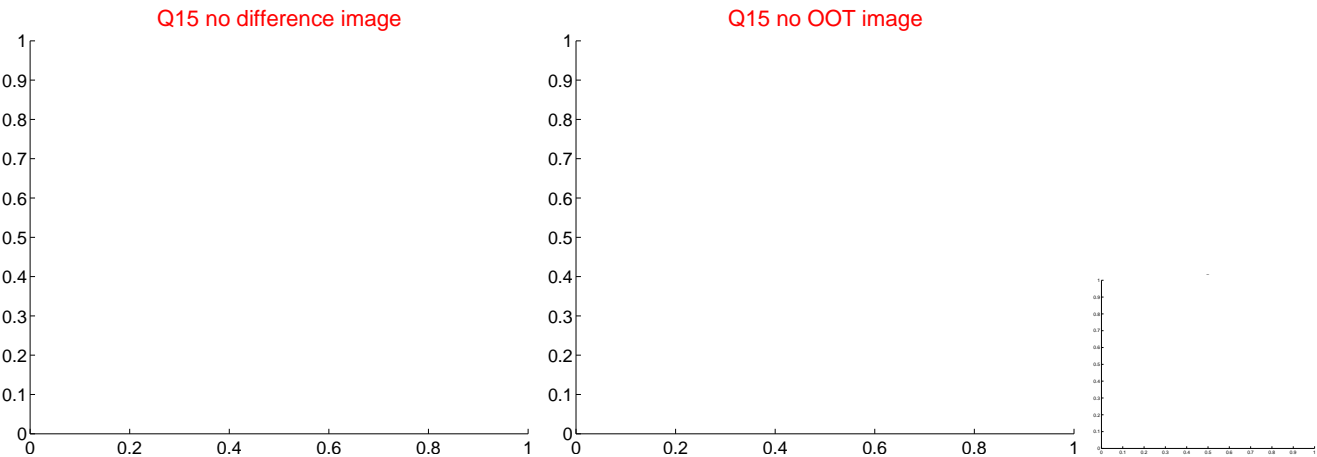
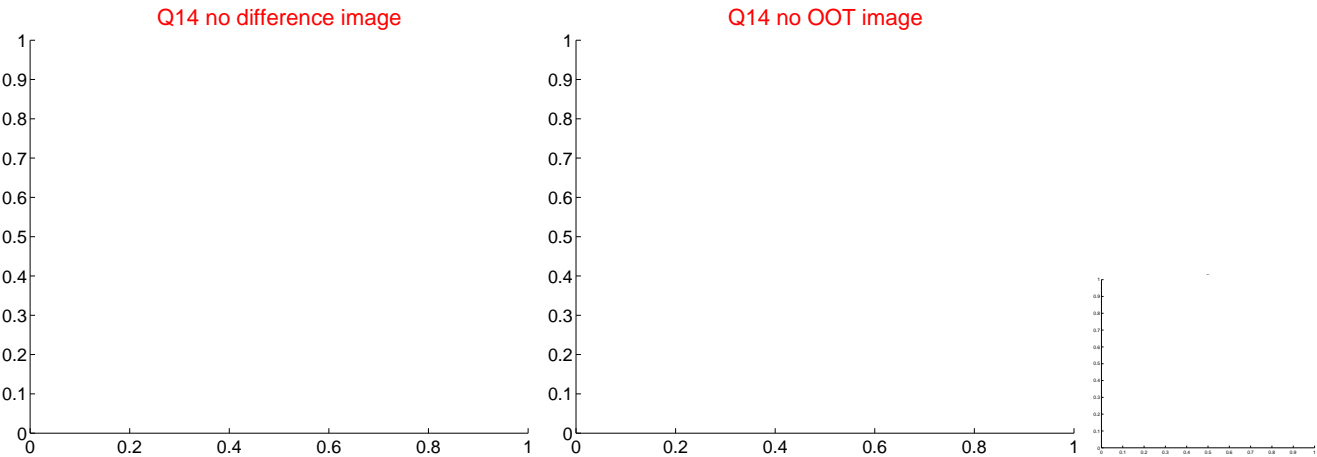
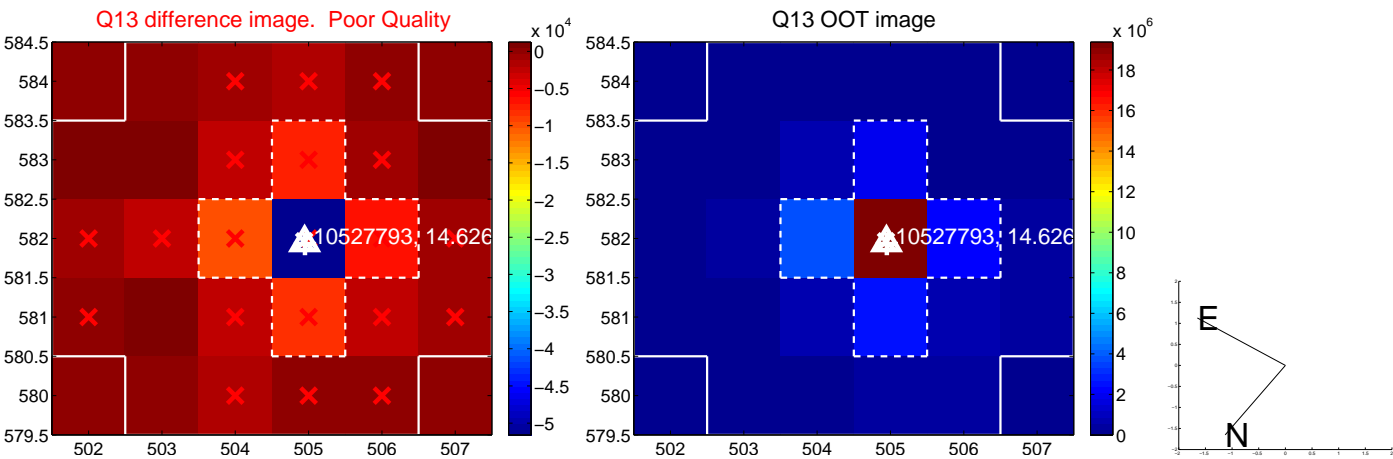
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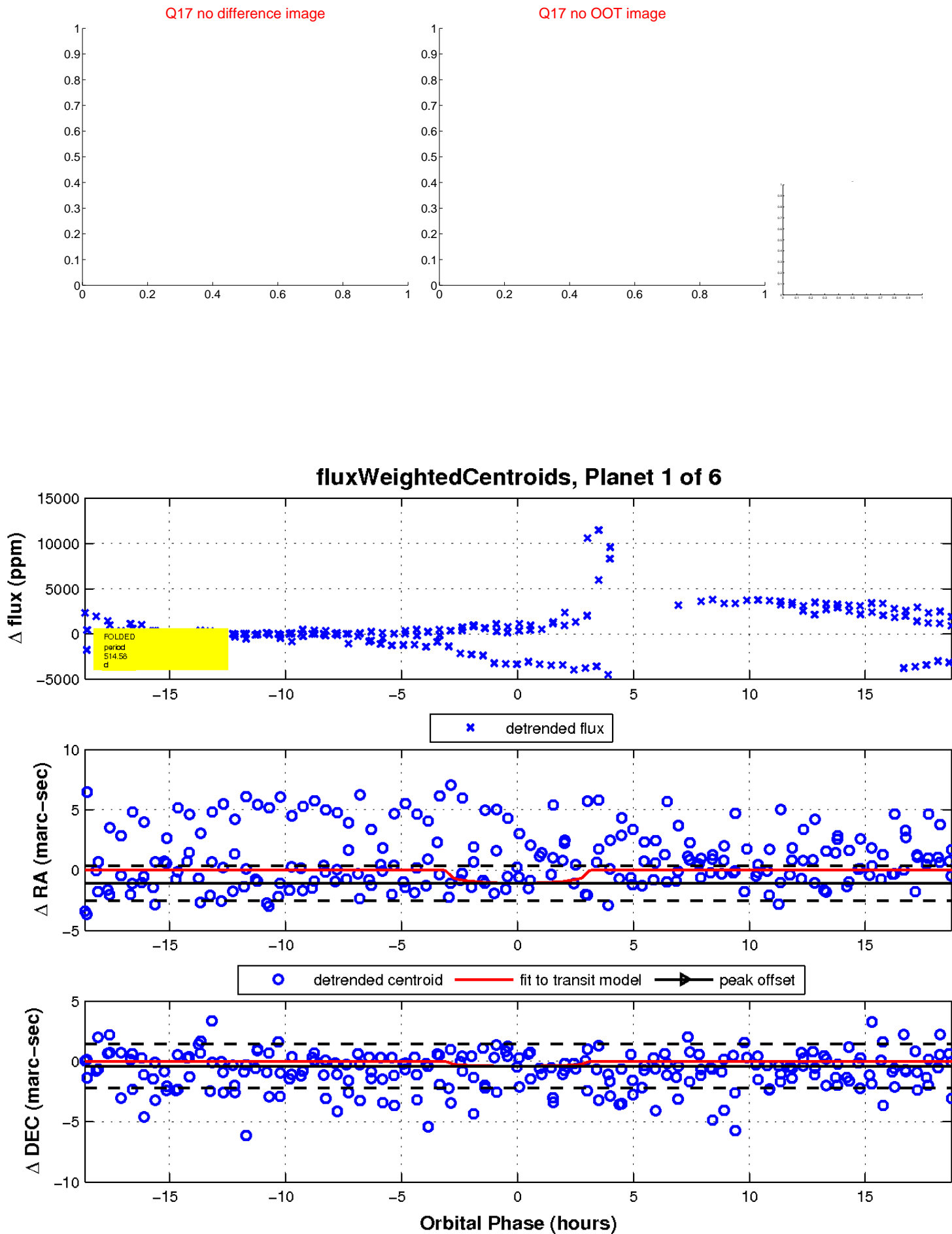
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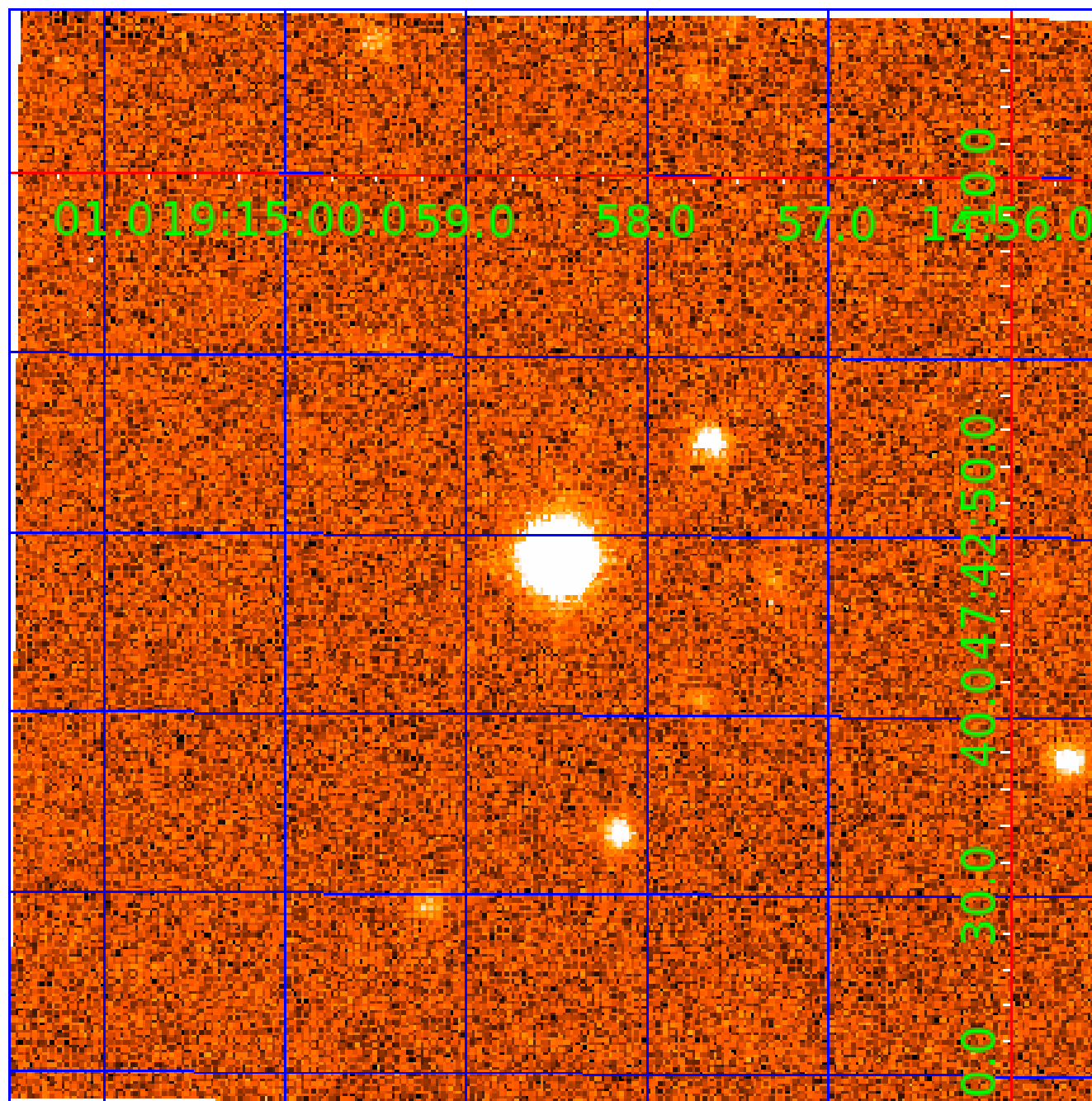


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UKIRT Image

Declination



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

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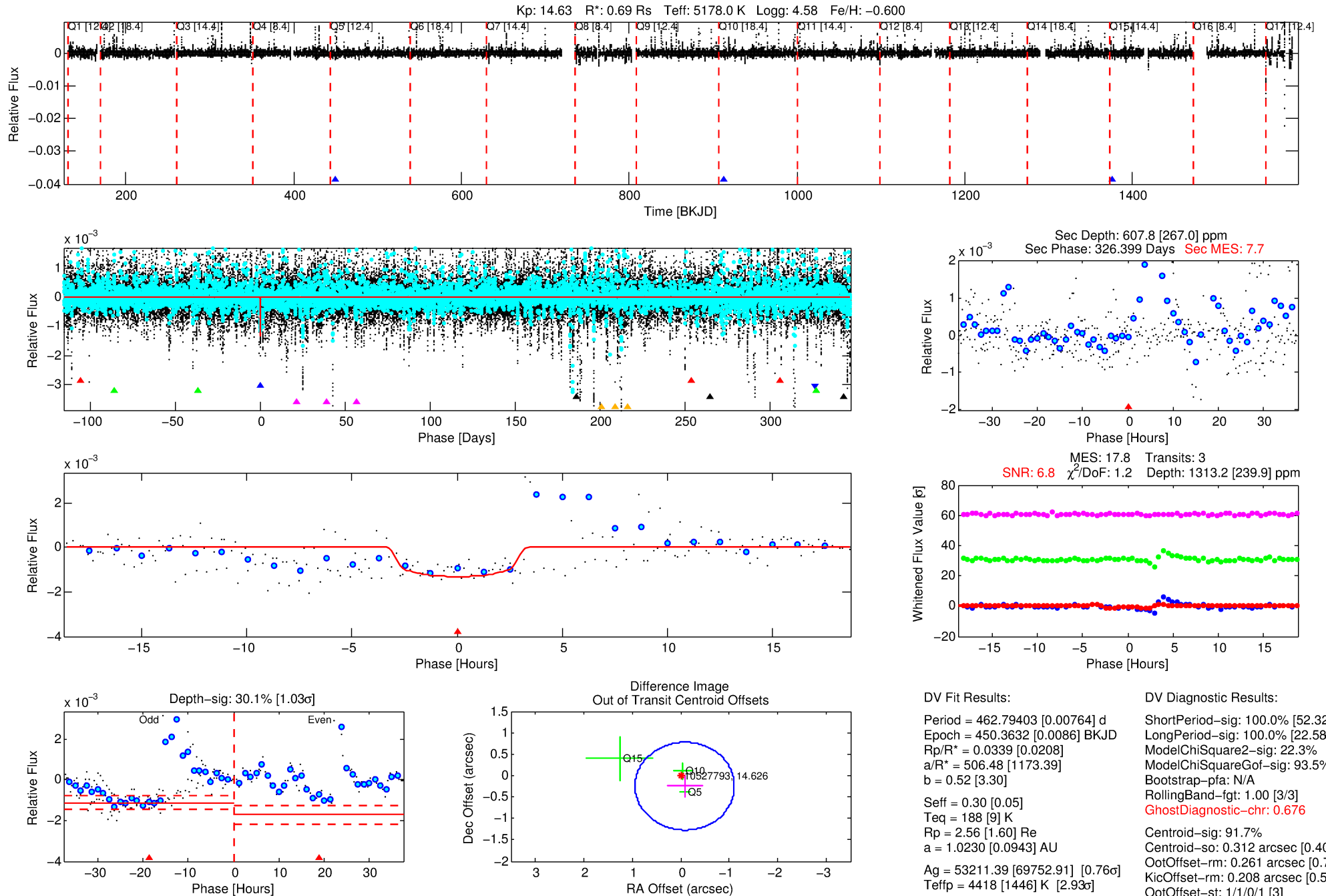
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010527793-02

No Significant Match Found

DV One-Page Summary

KIC: 10527793 Candidate: 2 of 6 Period: 462.794 d



DV Fit Results:

Period = 462.79403 [0.00764] d
Epoch = 450.3632 [0.0086] BKJD
Rp/R* = 0.0339 [0.0208]
a/R* = 506.48 [1173.39]
b = 0.52 [3.30]
Seff = 0.30 [0.05]
Teq = 188 [9] K
Rp = 2.56 [1.60] Re
a = 1.0230 [0.0943] AU
Ag = 53211.39 [69752.91] [0.76σ]
Teffp = 4418 [1446] K [2.93σ]

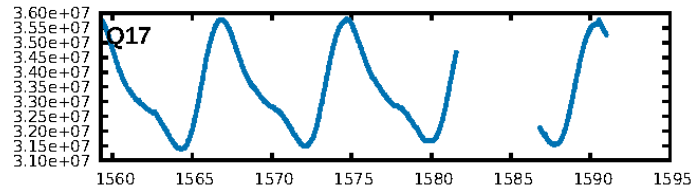
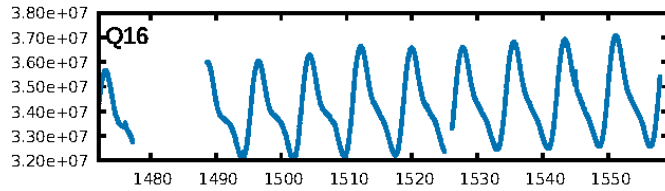
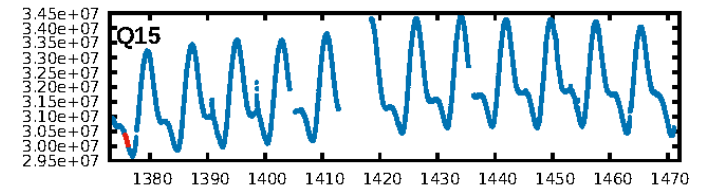
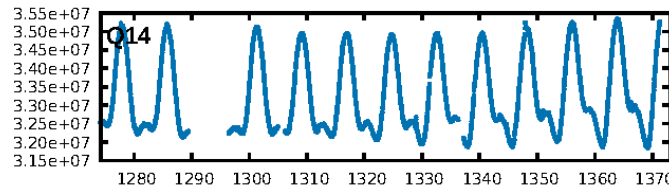
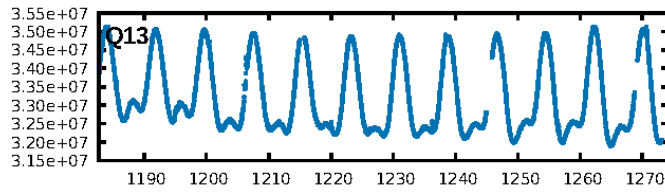
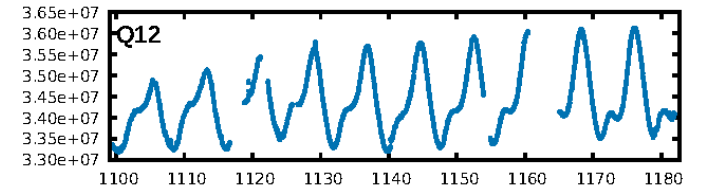
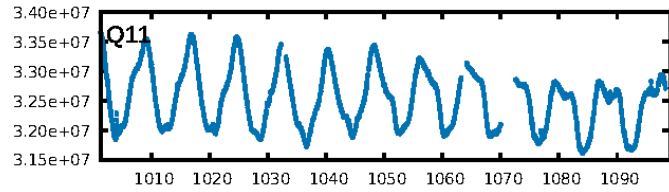
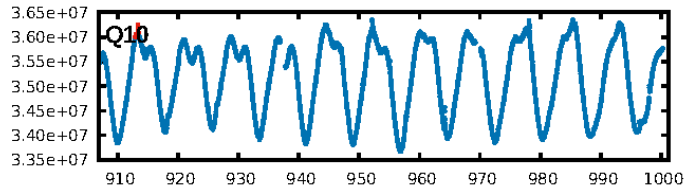
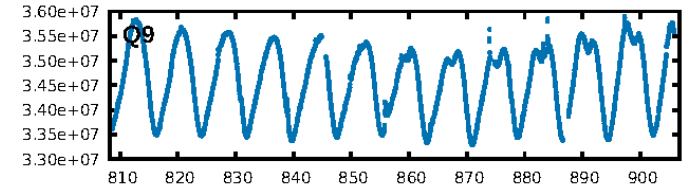
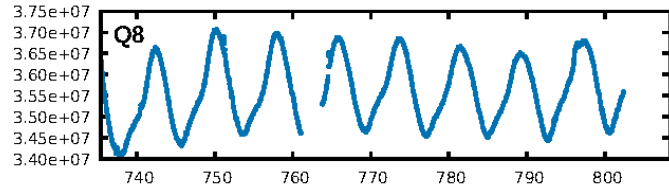
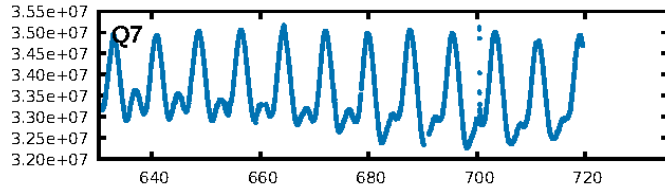
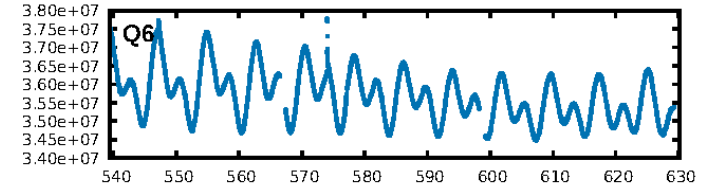
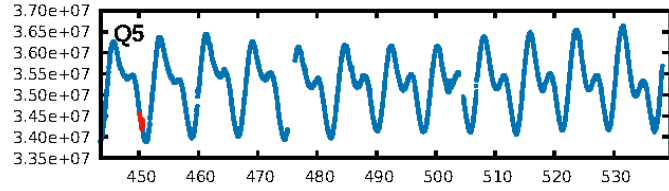
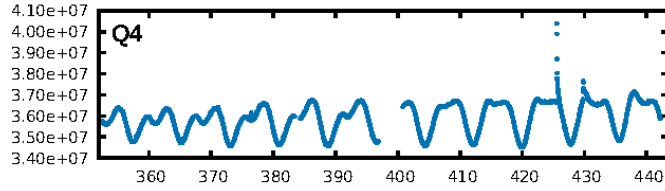
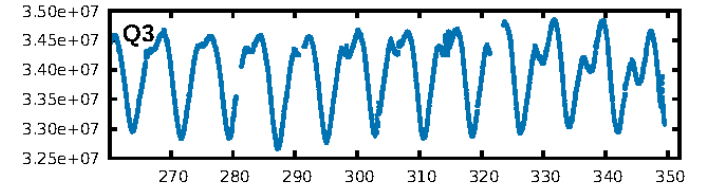
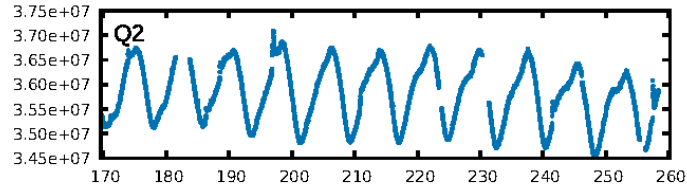
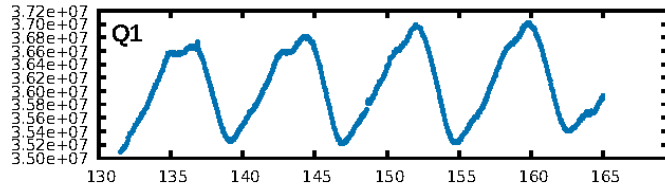
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [52.32σ]
LongPeriod-sig: 100.0% [22.58σ]
ModelChiSquare2-sig: 22.3%
ModelChiSquareGof-sig: 93.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.676
Centroid-sig: 91.7%
Centroid-so: 0.312 arcsec [0.40σ]
OotOffset-rm: 0.261 arcsec [0.76σ]
KicOffset-rm: 0.208 arcsec [0.51σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

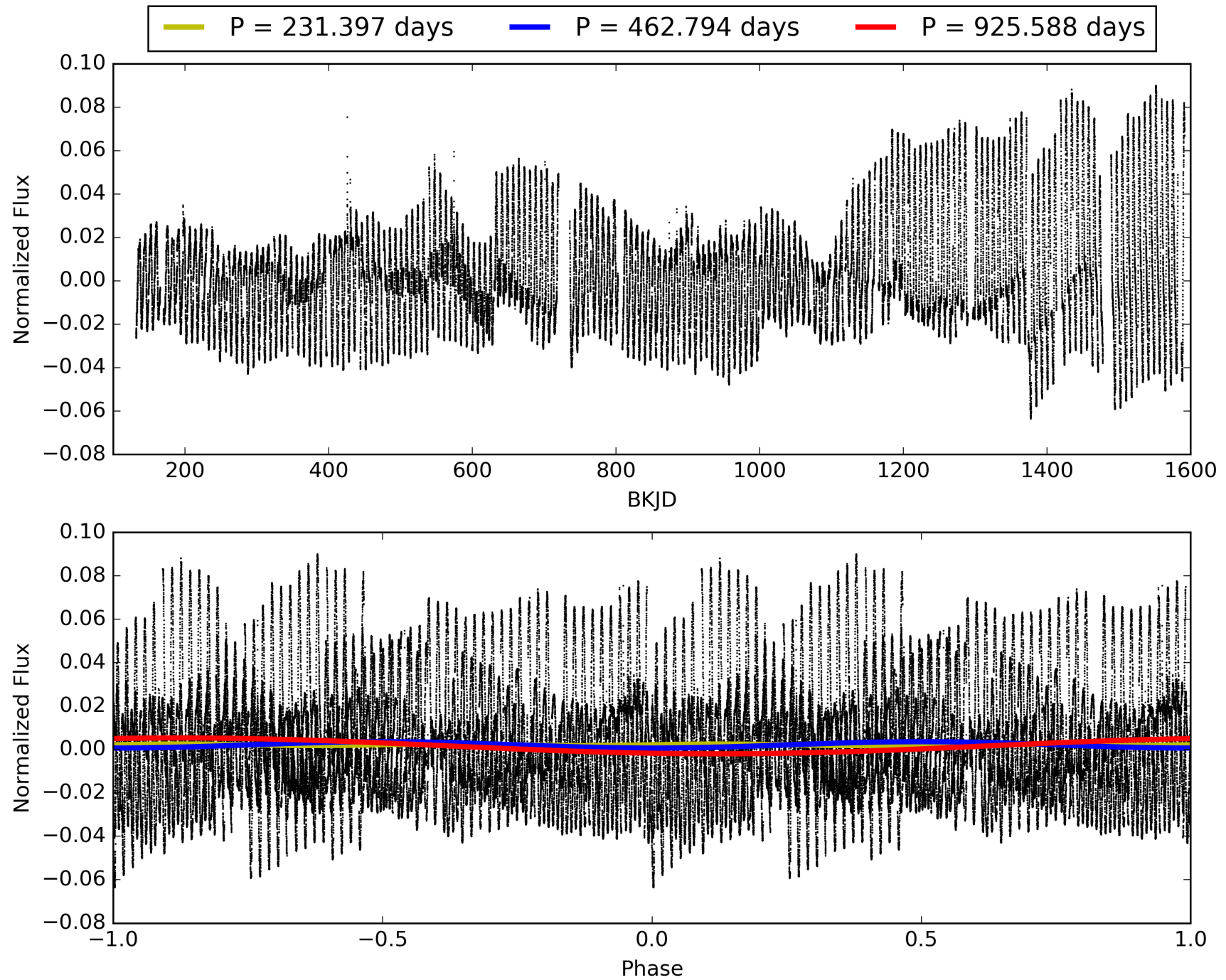
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:26:30 Z

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

TCE 010527793-02, PDC Light Curves

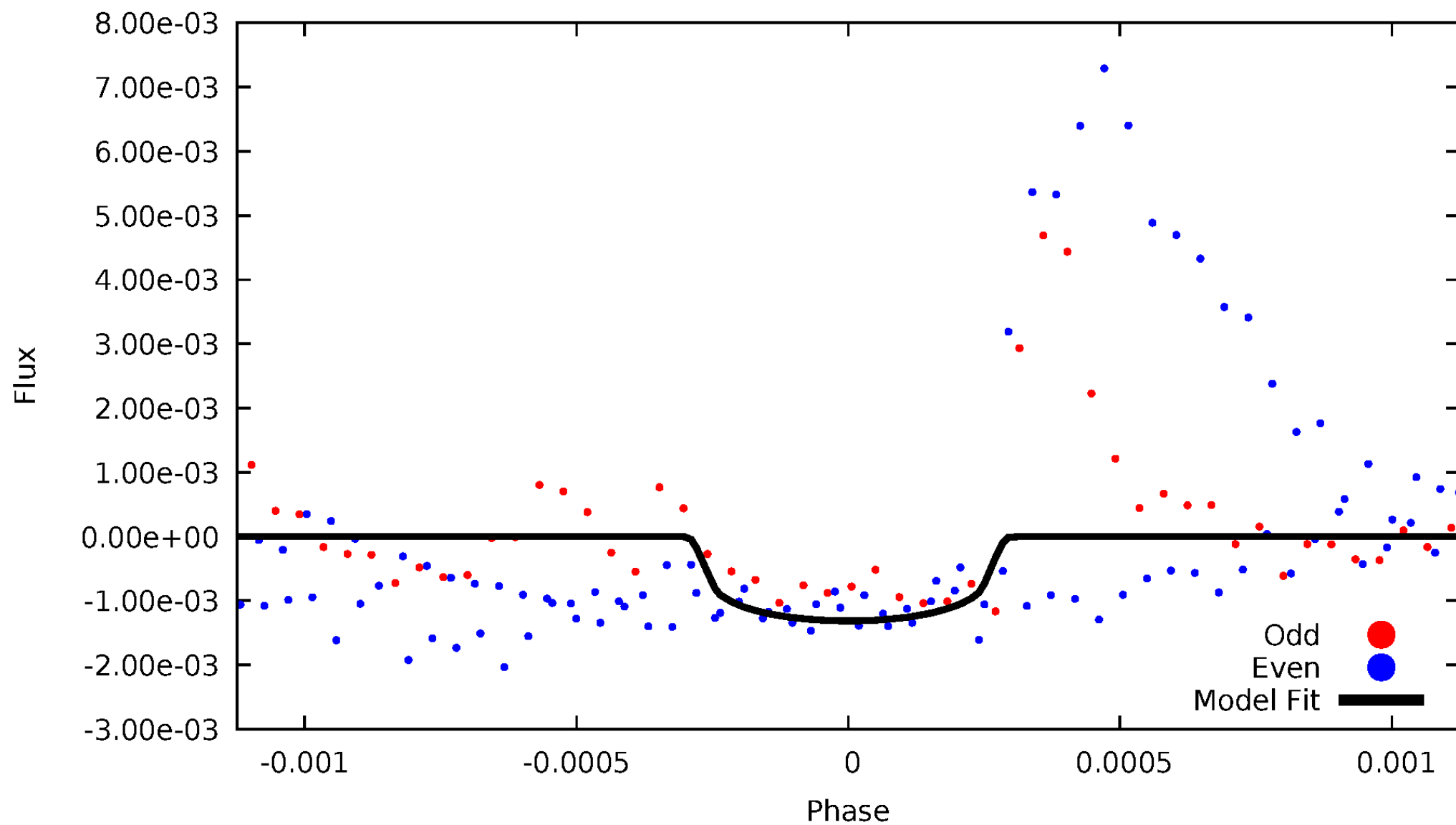


TCE 010527793-02



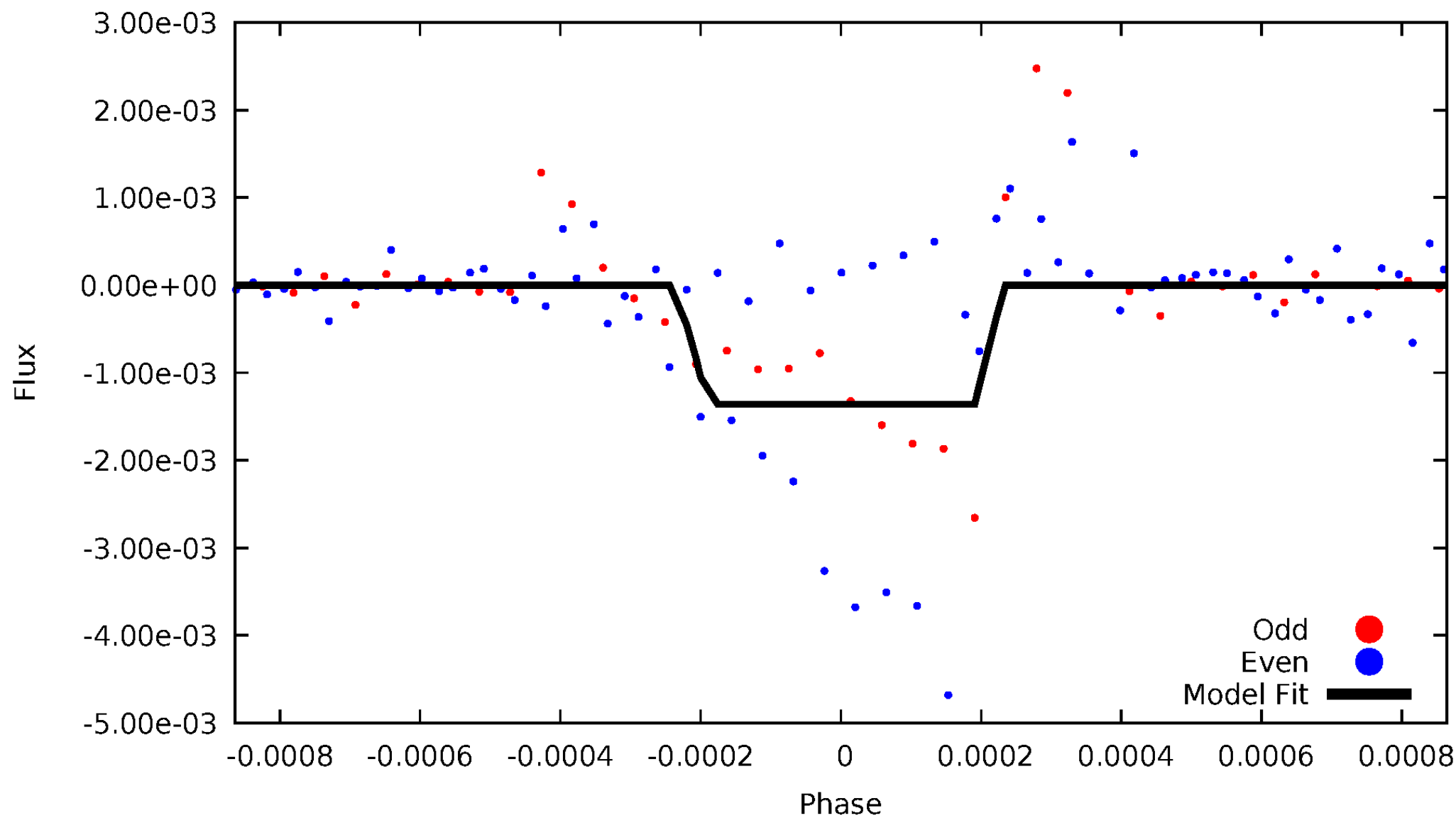
DV Odd/Even

TCE 010527793-02



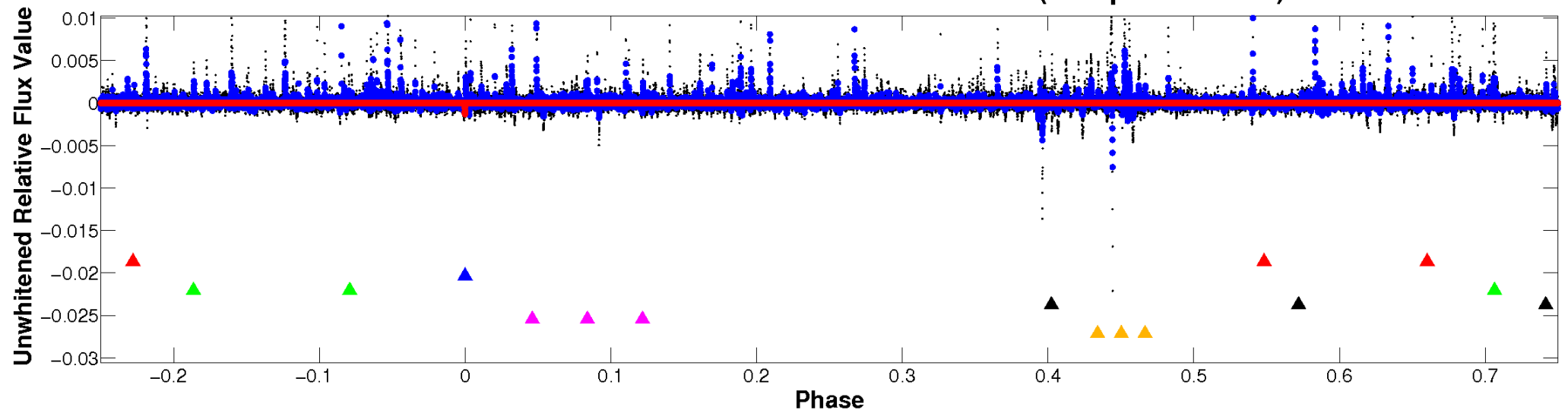
ALT Odd/Even

TCE 010527793-02

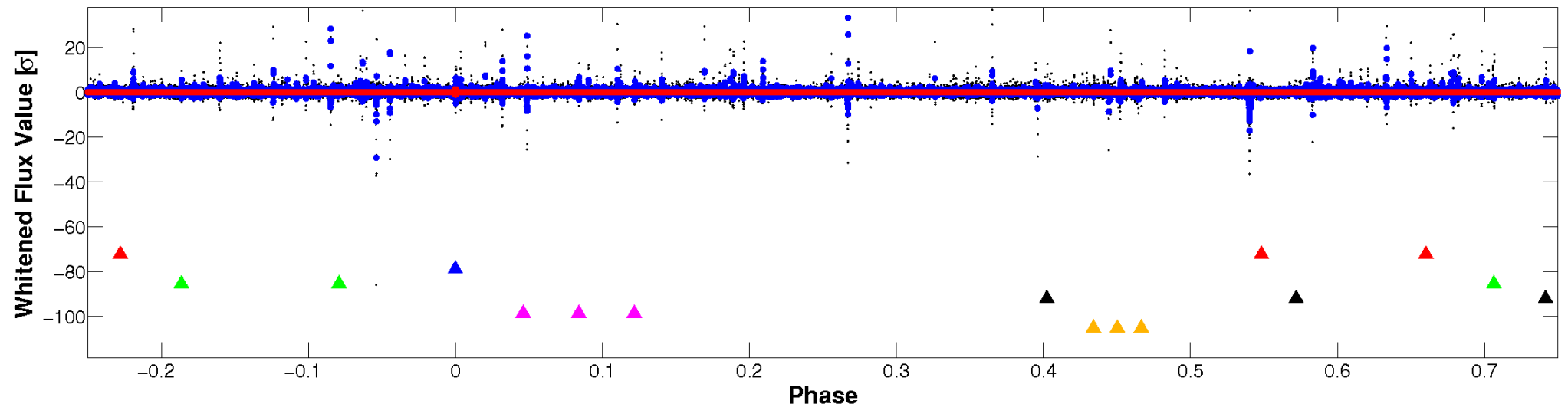


Non-Whitened Vs. Whitened Light Curve

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

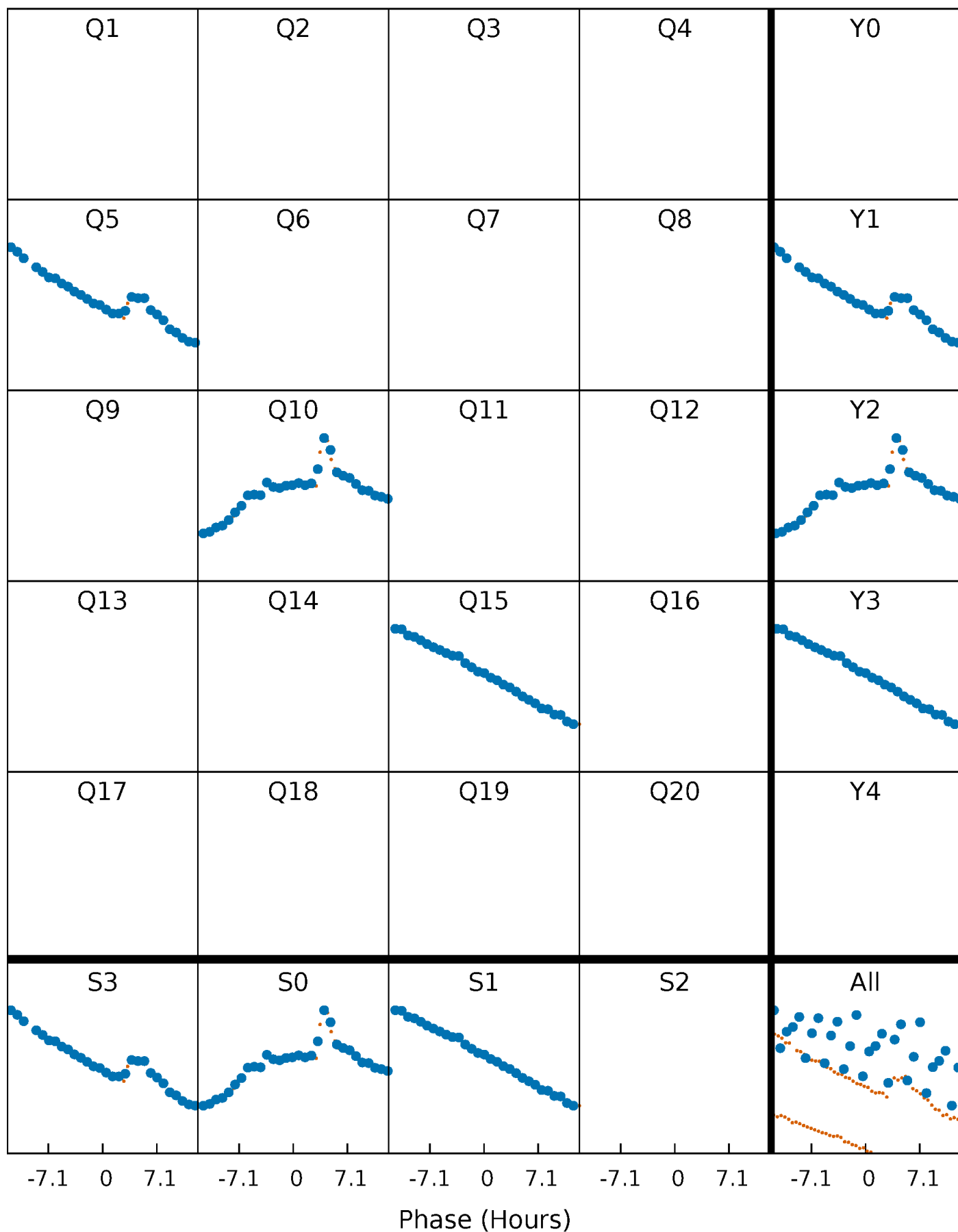


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



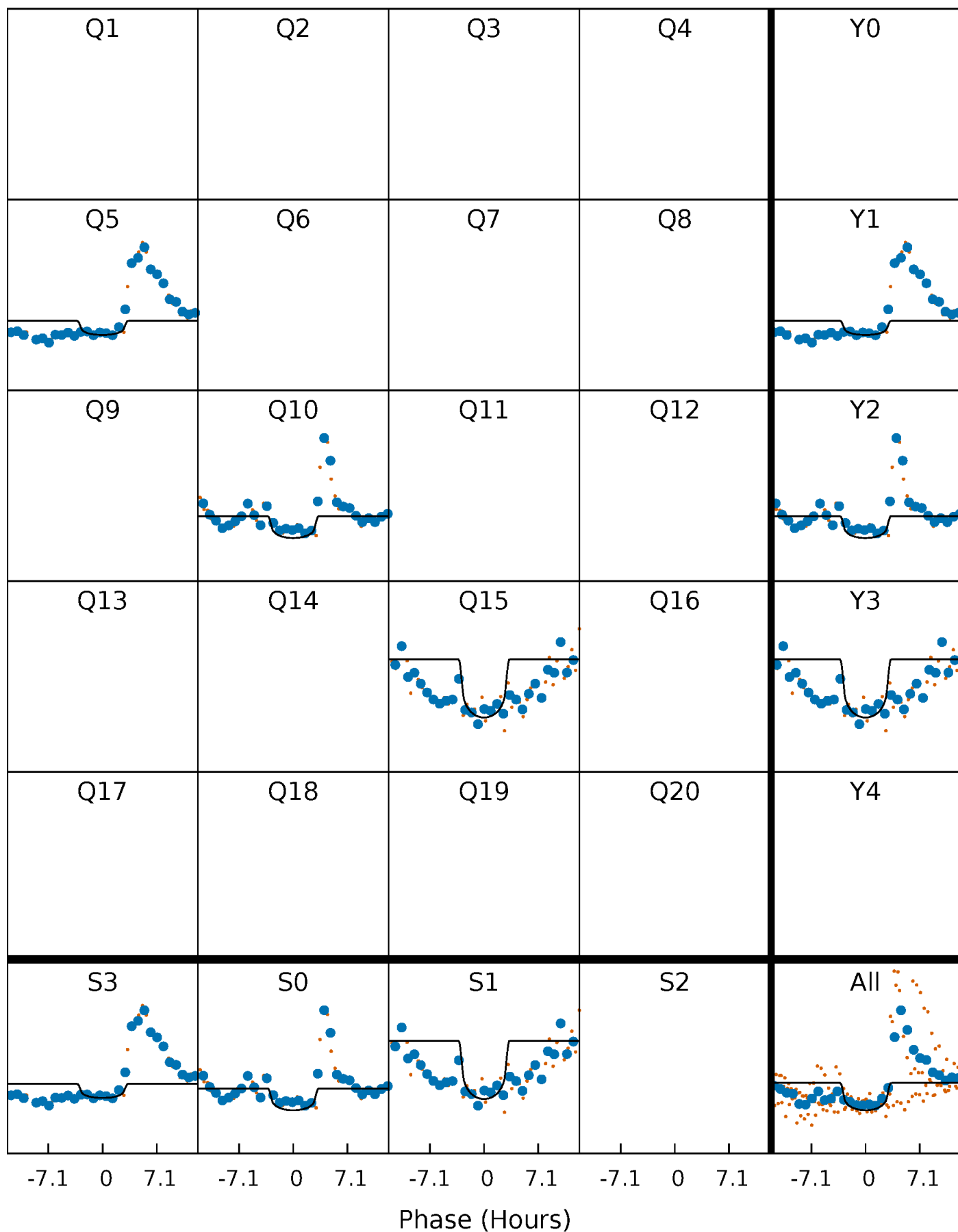
PDC Quarter-Phased Transit Curves

TCE 010527793-02 P=462.794034 Days $T_0=450.363195$ (BKJD)



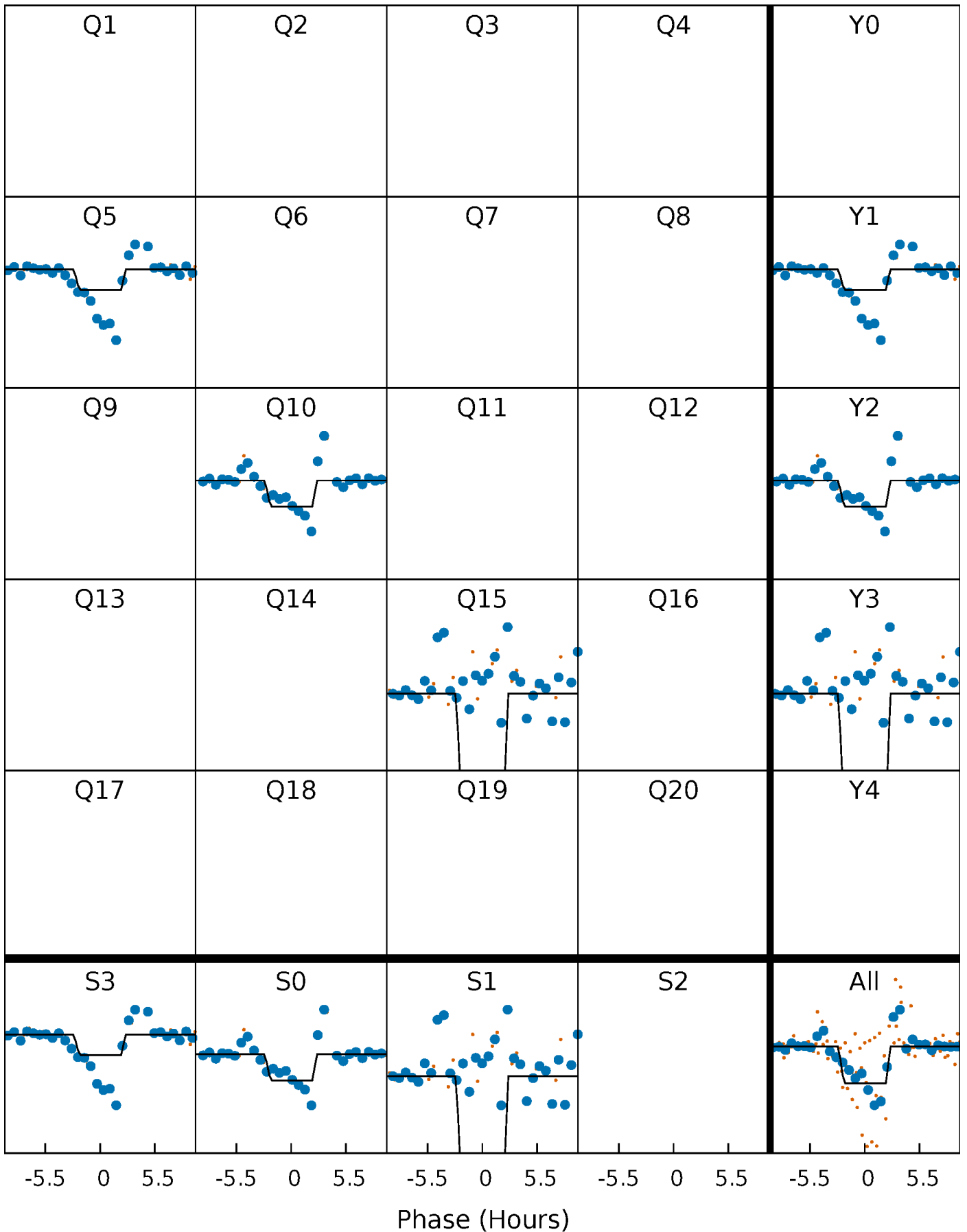
DV Quarter-Phased Transit Curves

TCE 010527793-02 P=462.794034 Days $T_0=450.363195$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

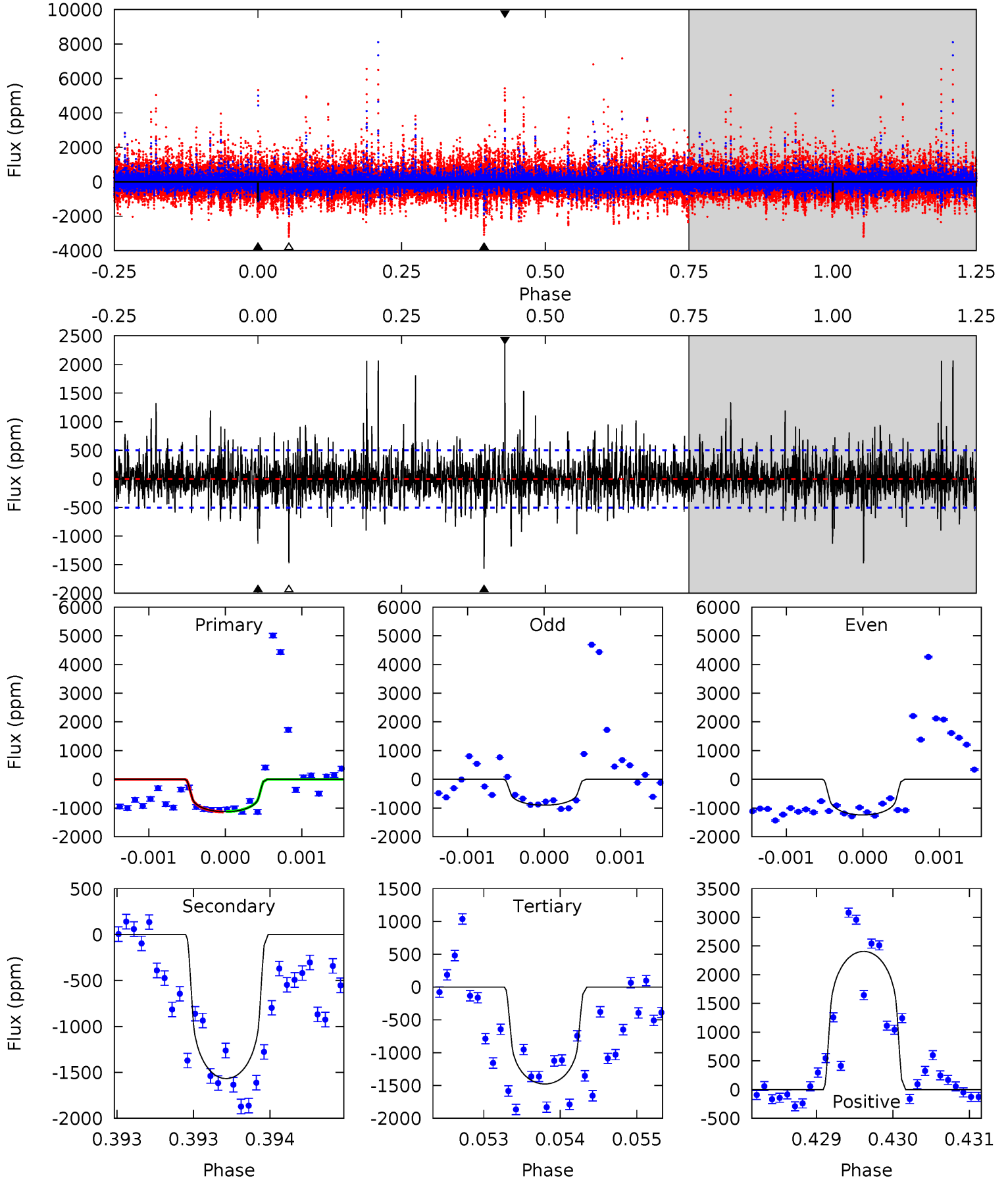
TCE 010527793-02 $P=462.786078$ Days $T_0=450.408152$ (BKJD)



DV Model-Shift Uniqueness Test

010527793-02, P = 462.794034 Days, E = 450.363195 Days

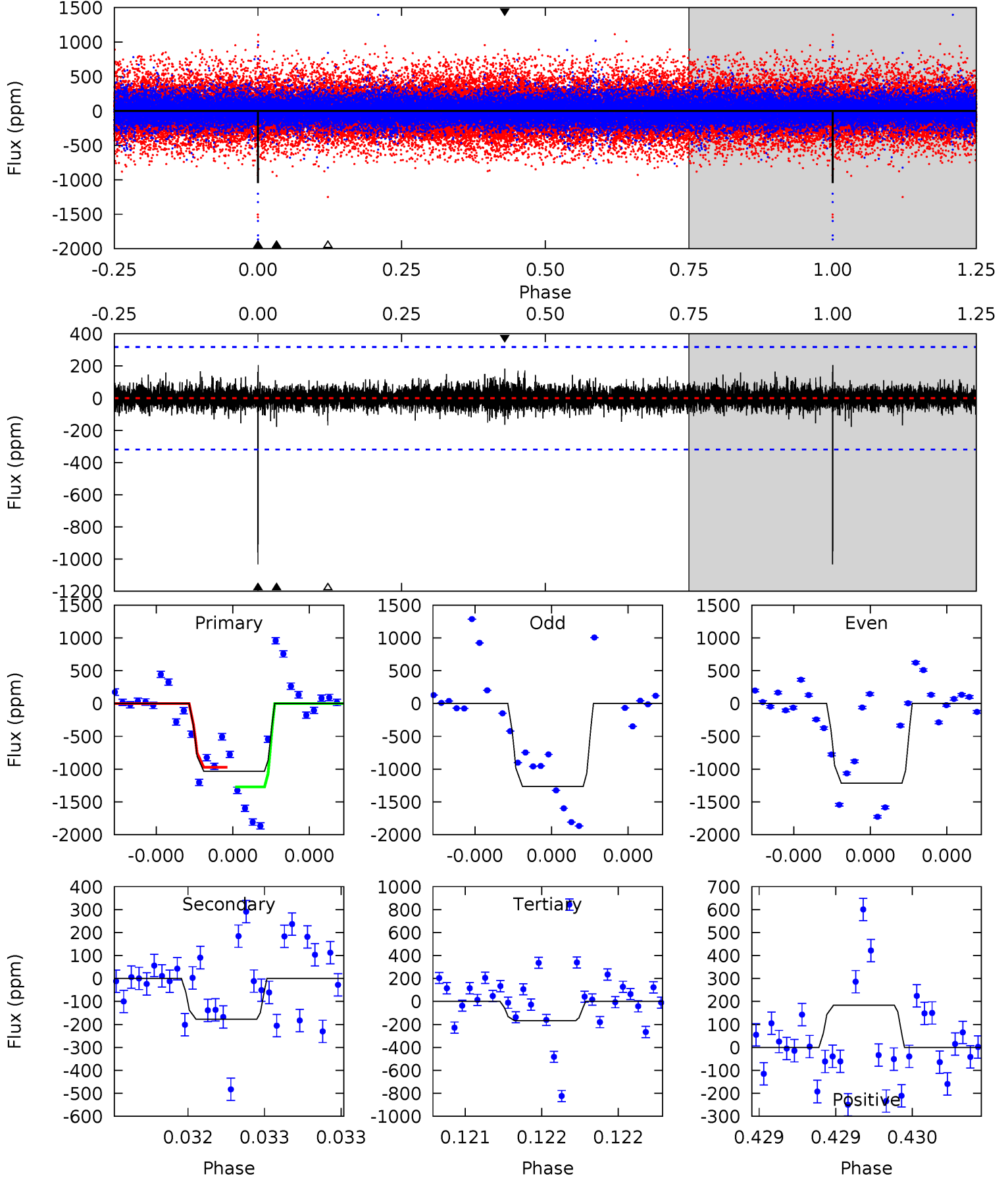
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	17.3	16.3	26.6	5.55	3.44	3.01	-3.82	-14.1	1.00	-9.27	0.97	0.96	0.61	0.07



Alt Model-Shift Uniqueness Test

010527793-02, P = 462.786078 Days, E = 450.408152 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	3.11	2.96	3.23	5.60	3.52	0.59	15.2	14.9	0.15	-0.11	0.56	0.96	0.17	0



Stellar Parameters For KIC 010527793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5178^{+154}_{-154}	$4.579^{+0.078}_{-0.052}$	$-0.600^{+0.350}_{-0.300}$	$0.694^{+0.073}_{-0.073}$	$0.666^{+0.081}_{-0.037}$	$2.809^{+0.910}_{-0.519}$
	+3%/-3%	+2%/-1%	+58%/-50%	+11%/-11%	+12%/-6%	+32%/-18%
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 010527793-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1568 ± 91	$2.66^{+1.50}_{-1.39}$	262^{+10}_{-10}	5492^{+2554}_{-960}	$132779^{+441227}_{-80217}$
Alt.	-177 ± 57	$2.82^{+1.52}_{-1.43}$	261^{+11}_{-10}	3474^{+1051}_{-476}	12166^{+40572}_{-7589}

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

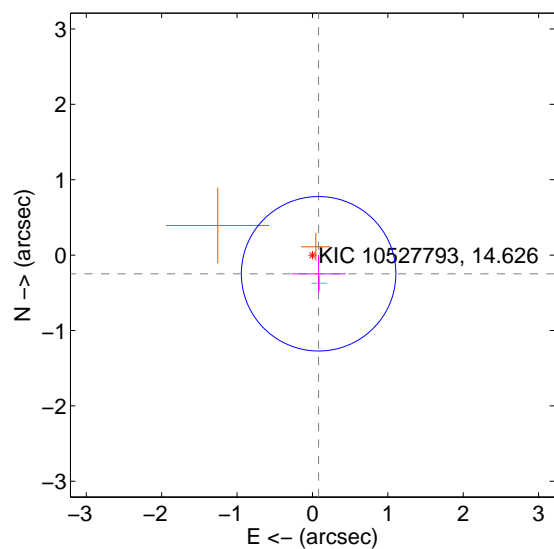
Supplemental centroid analysis for 010527793-02. Kepler magnitude: 14.63. Transit SNR 6.85

There are 1 quarters with good PRF difference image offsets

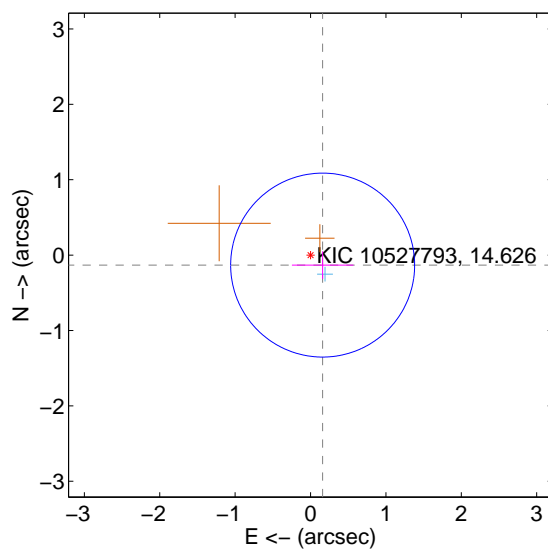
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.261 ± 0.342	0.76	-0.082 ± 0.360	-0.248 ± 0.251
PRF-fit source offset from KIC position	0.208 ± 0.407	0.51	-0.161 ± 0.408	-0.133 ± 0.183
photometric centroid source offset	0.31 ± 0.79	0.40	0.26 ± 0.83	0.18 ± 0.70

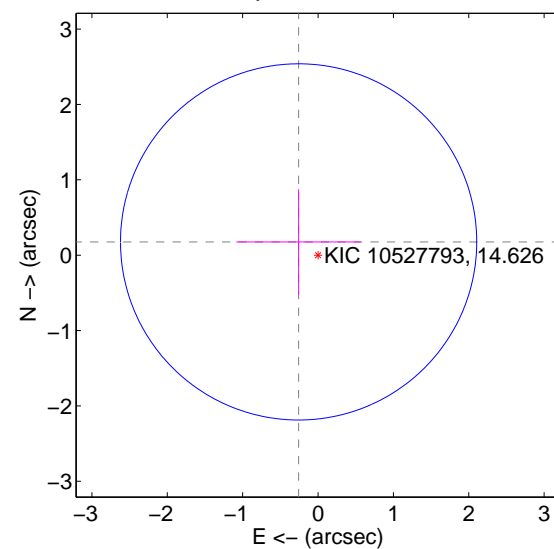
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

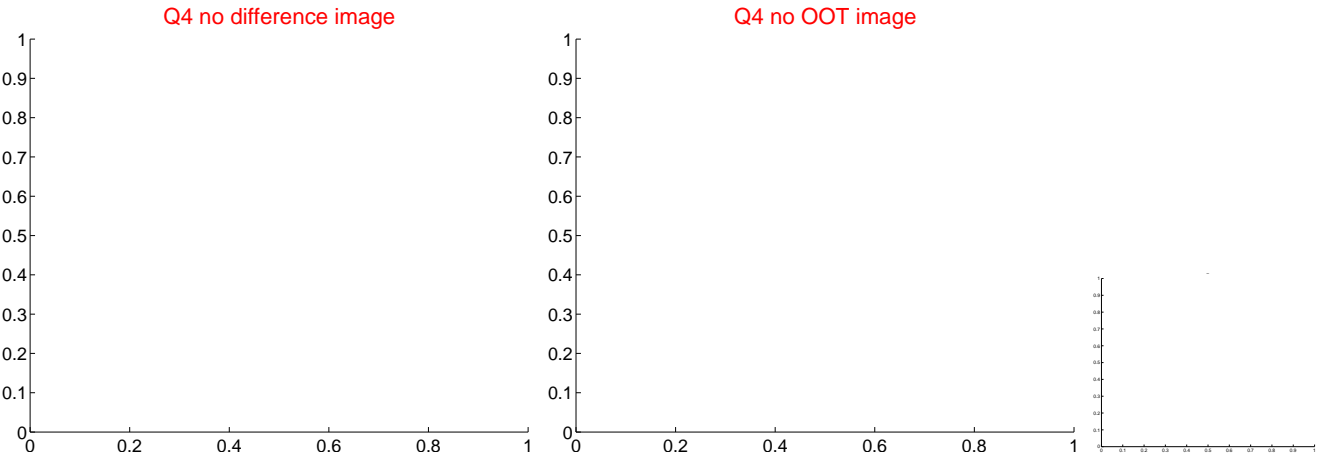
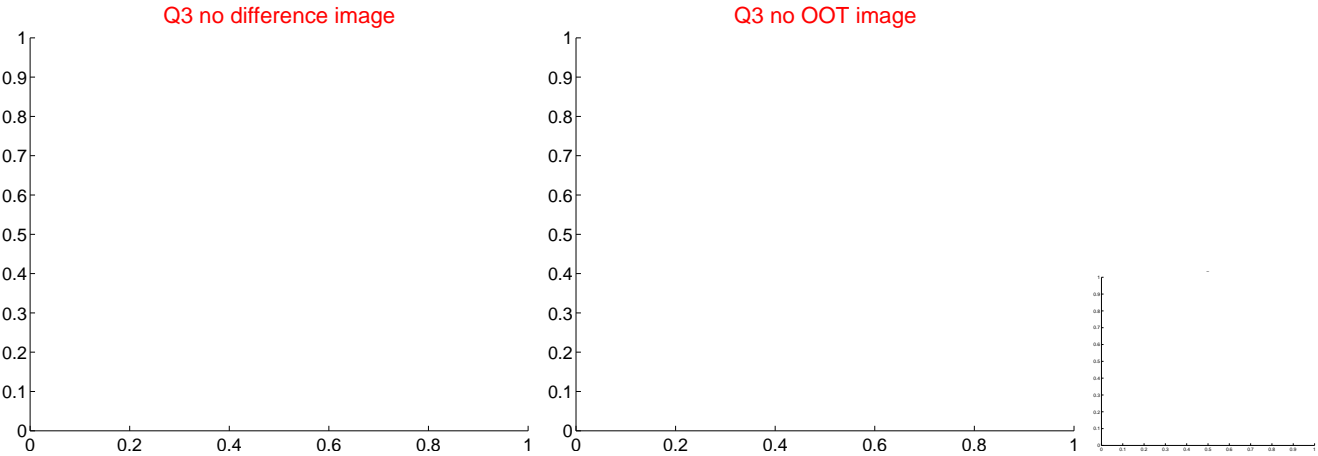
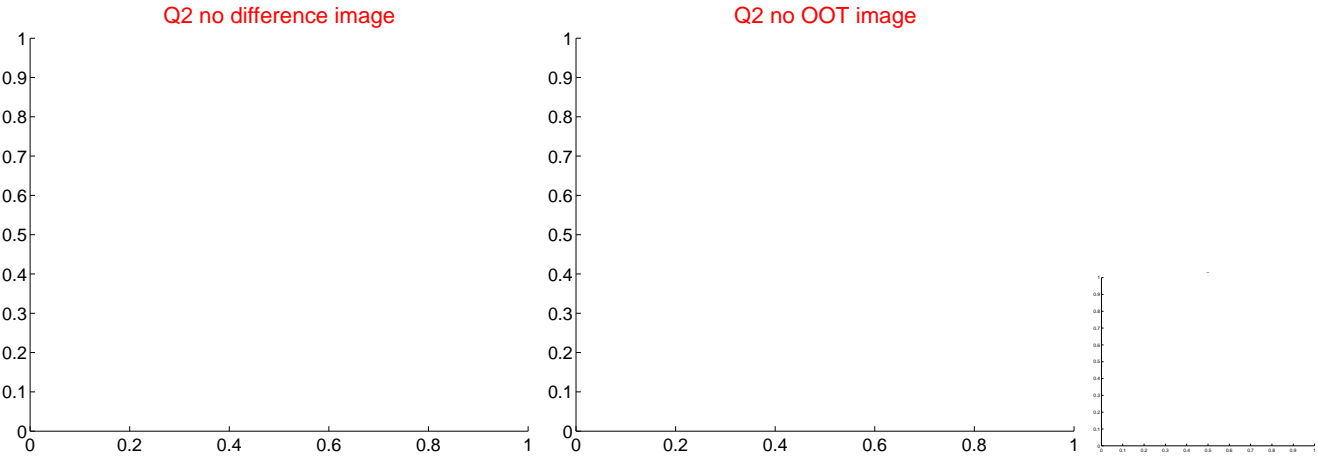
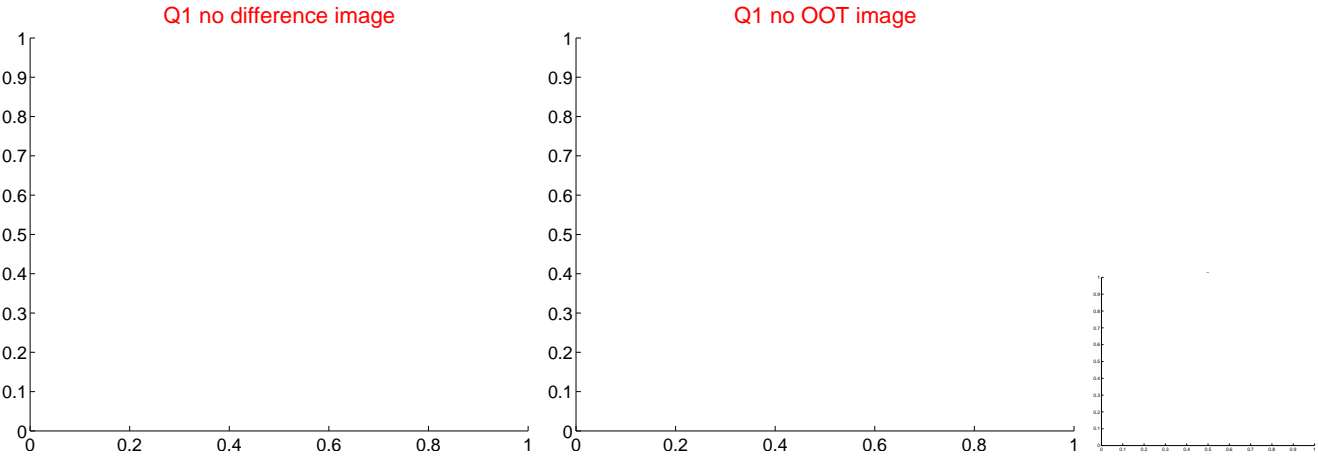


offset from photometric centroids

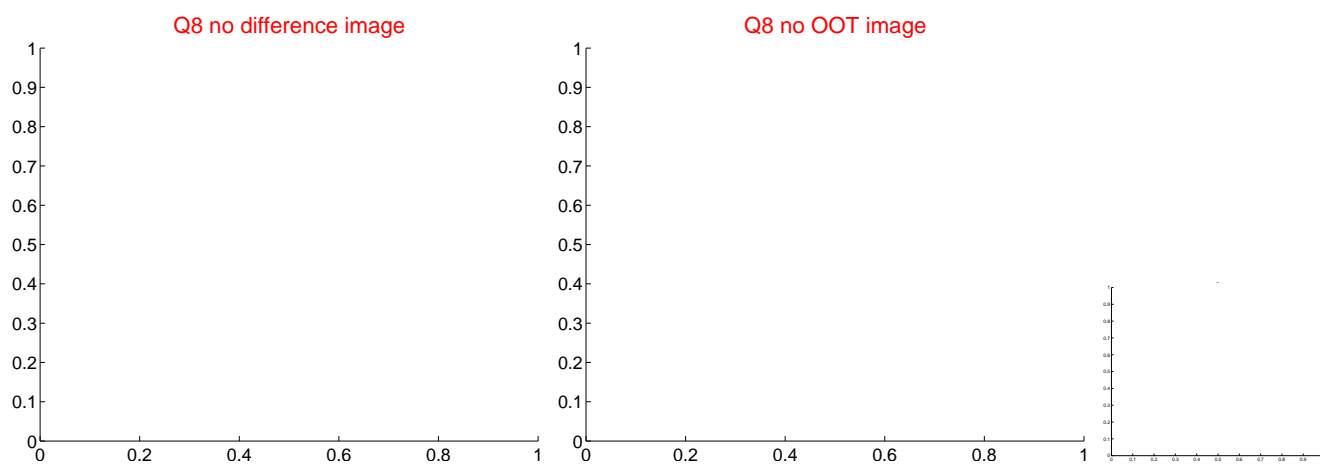
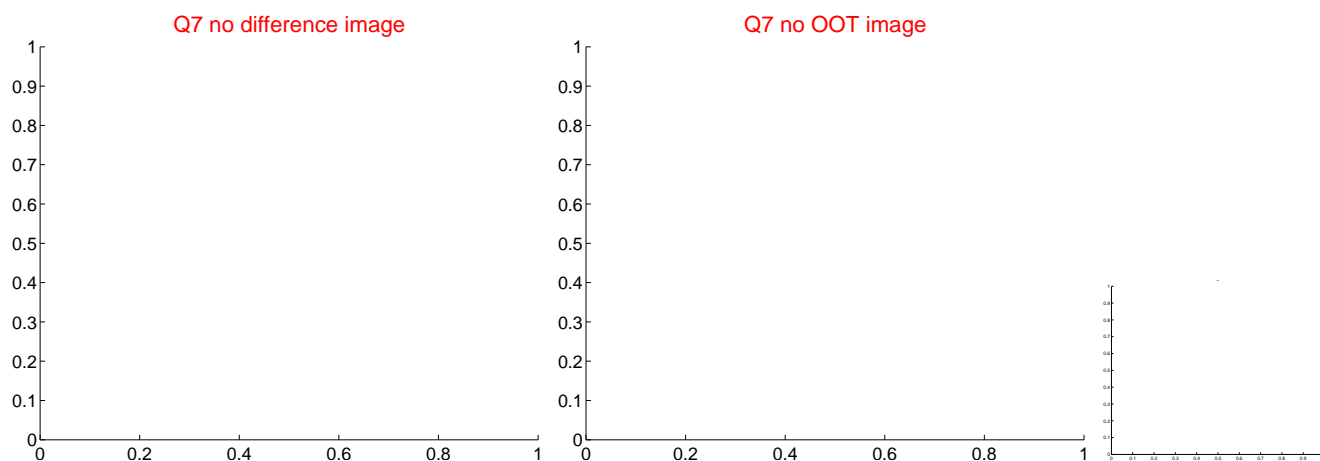
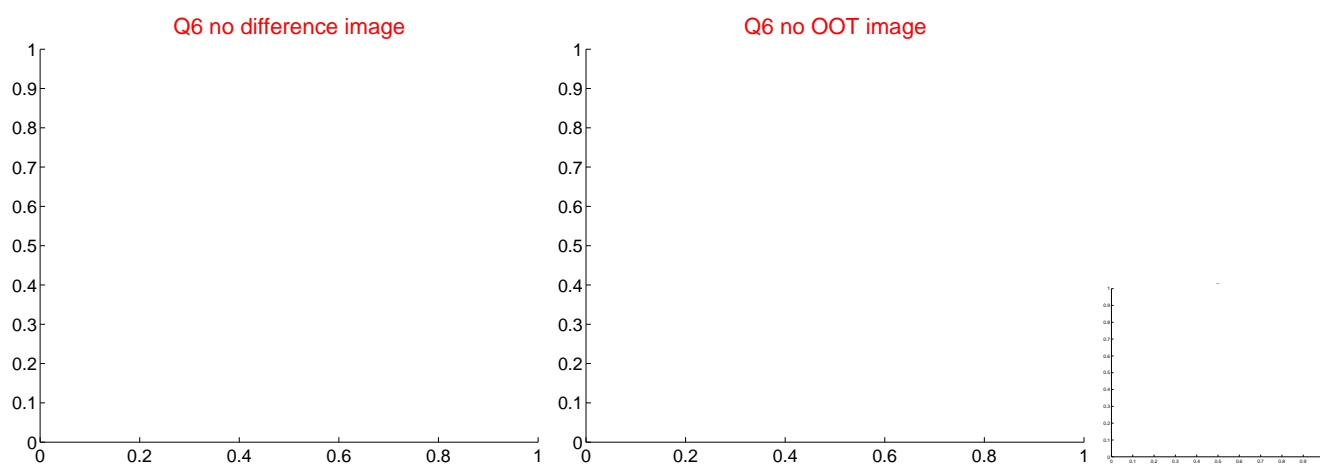
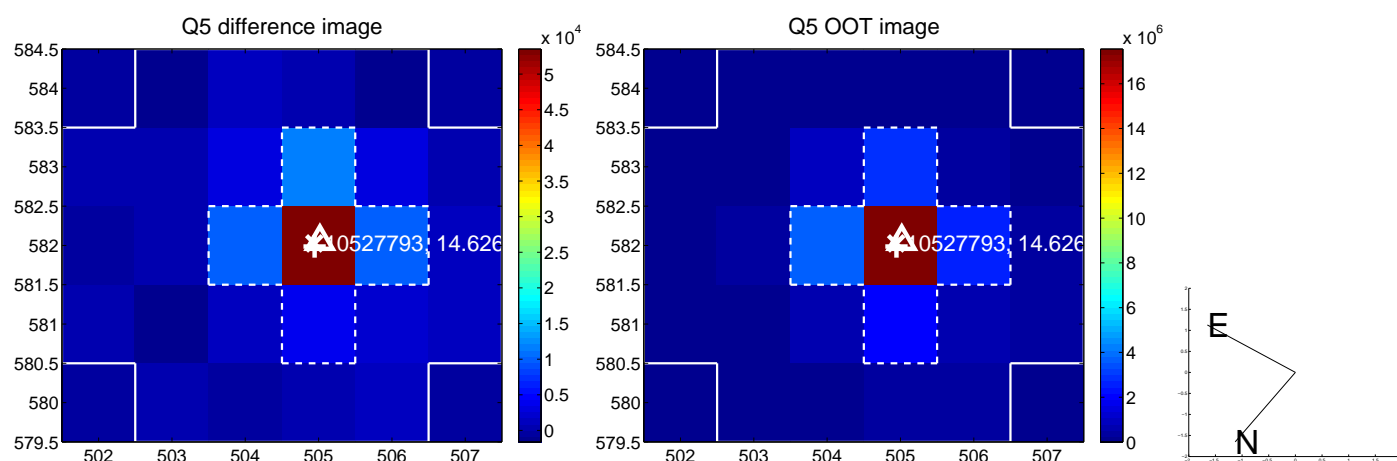


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

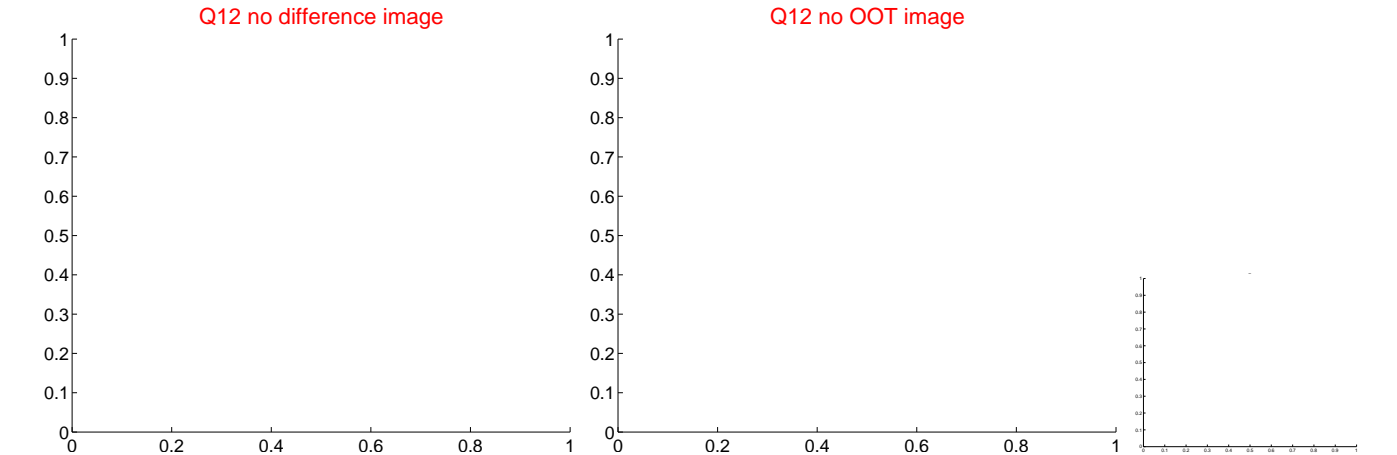
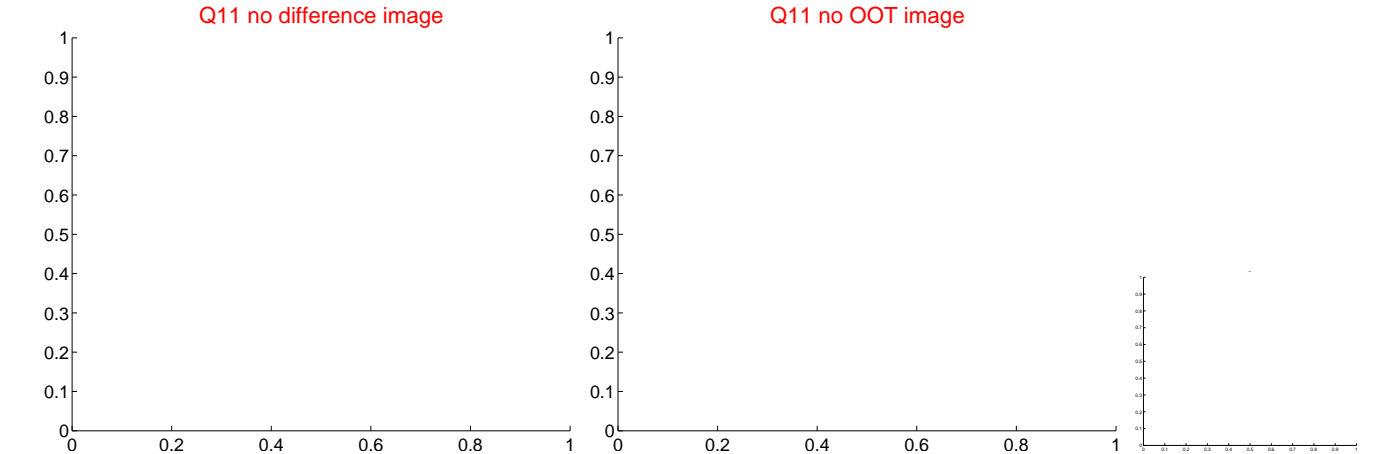
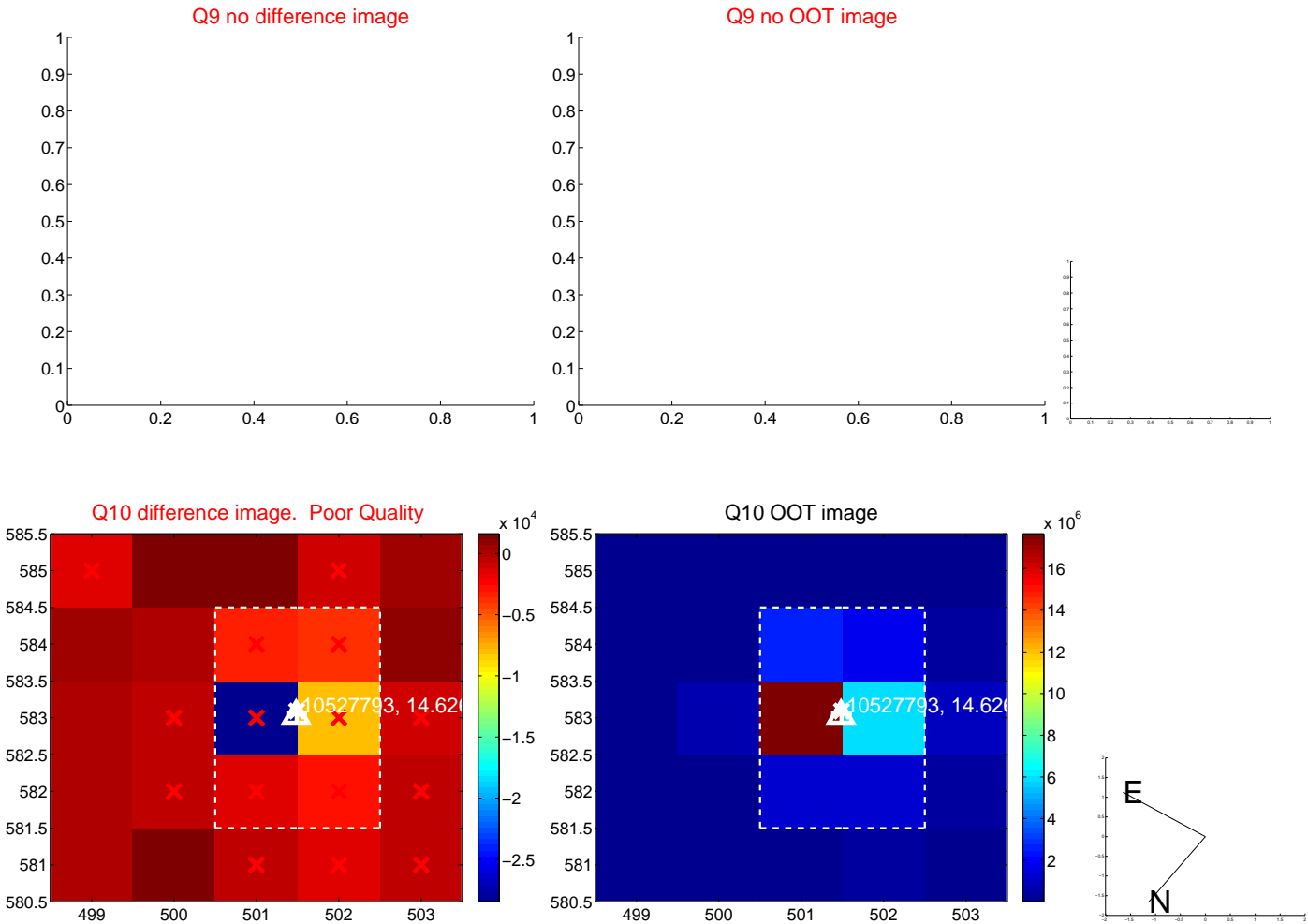
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



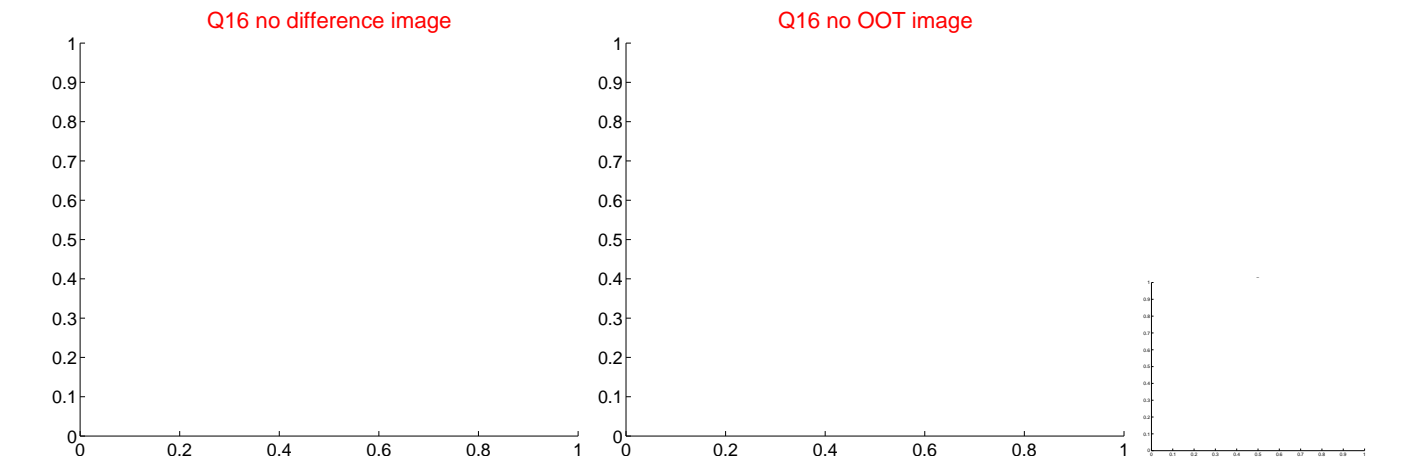
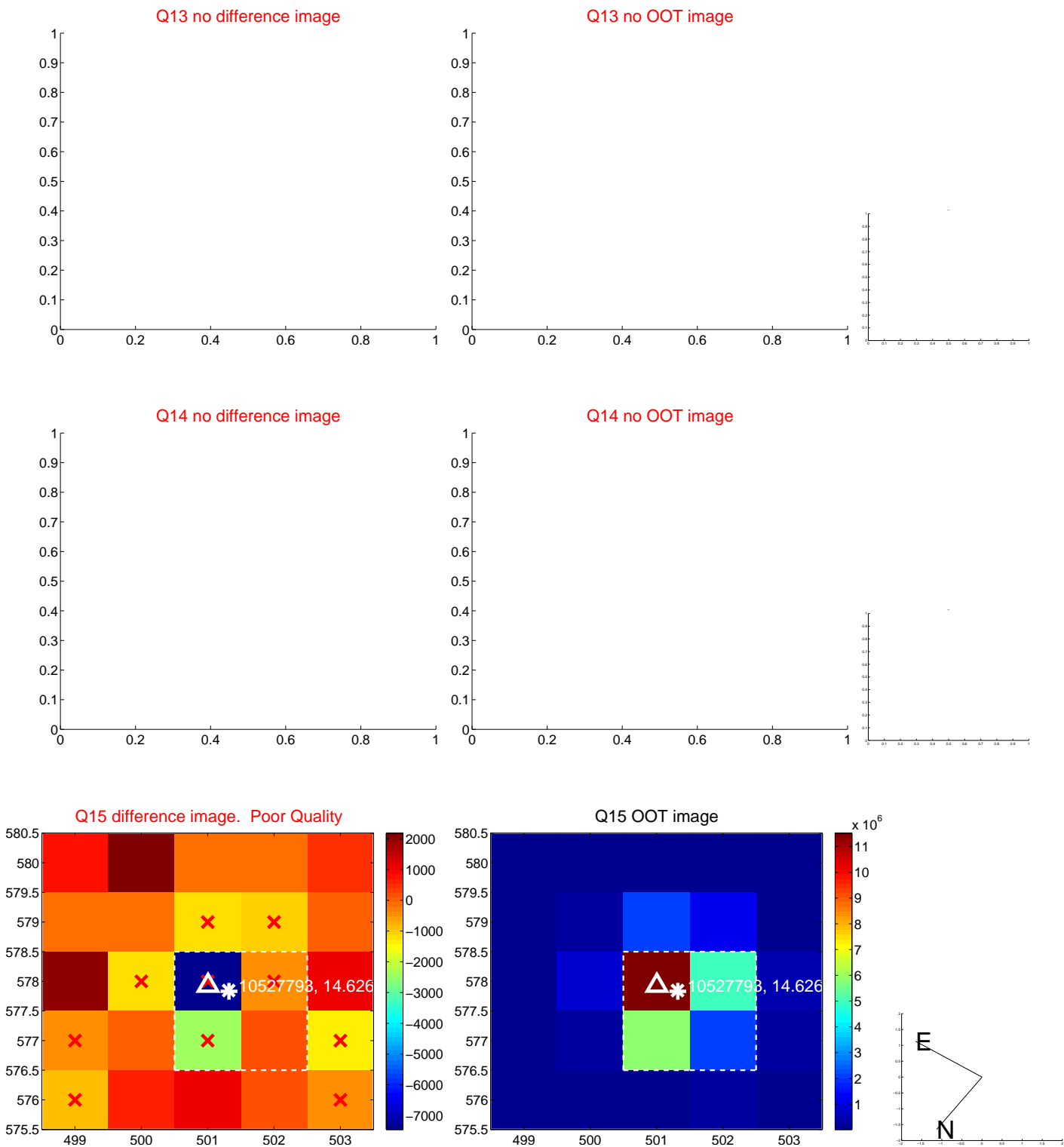
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



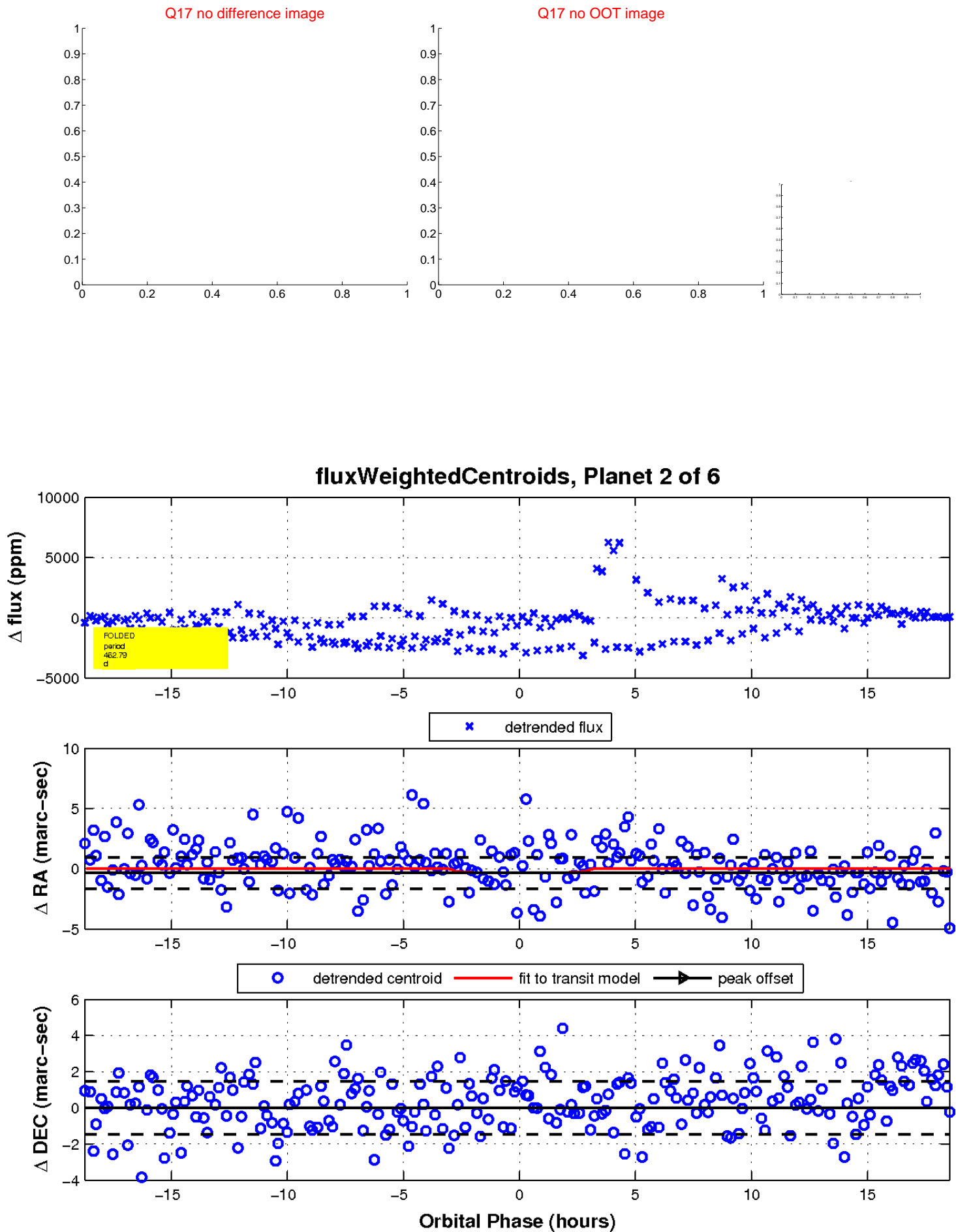
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

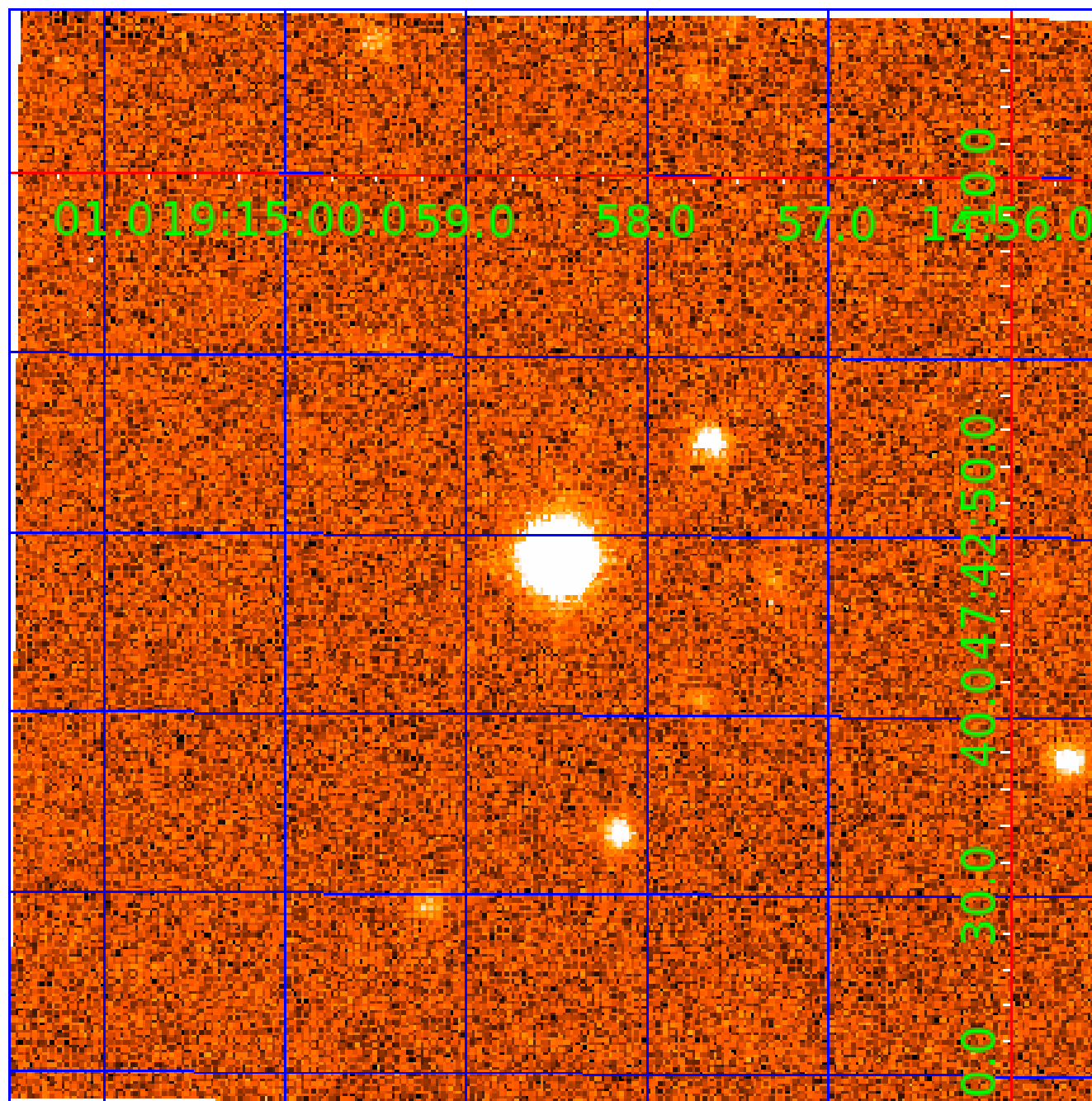


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010527793

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})
010527793-01	OBS	No	514.578718	241.321323	1660.0	6.288	22.0	8.0	0.69	5178	2.91	0.26
010527793-02	OBS	No	462.794034	450.363195	1313.2	6.243	17.8	6.8	0.69	5178	2.56	0.30
010527793-03	OBS	No	512.407303	314.499602	3068.9	10.495	17.4	13.1	0.69	5178	4.91	0.26
010527793-04	OBS	No	541.287236	173.768126	1275.2	6.925	16.3	7.2	0.69	5178	2.47	0.24
010527793-05	OBS	No	445.287091	506.717205	1264.3	5.052	16.3	7.1	0.69	5178	2.64	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010527793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010527793-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

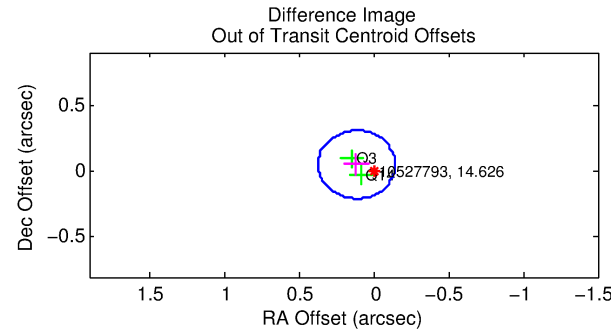
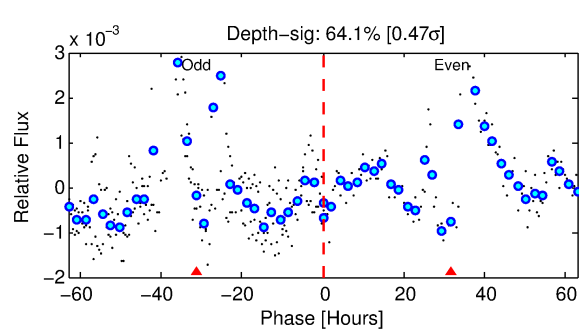
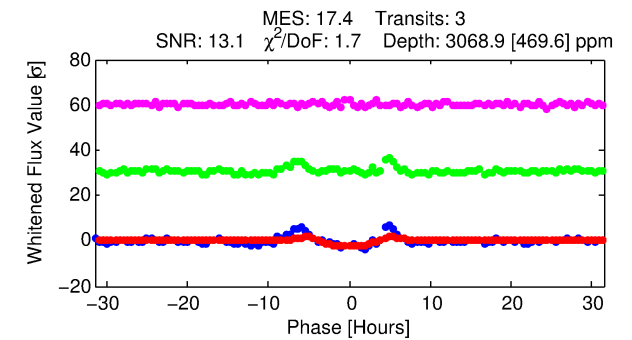
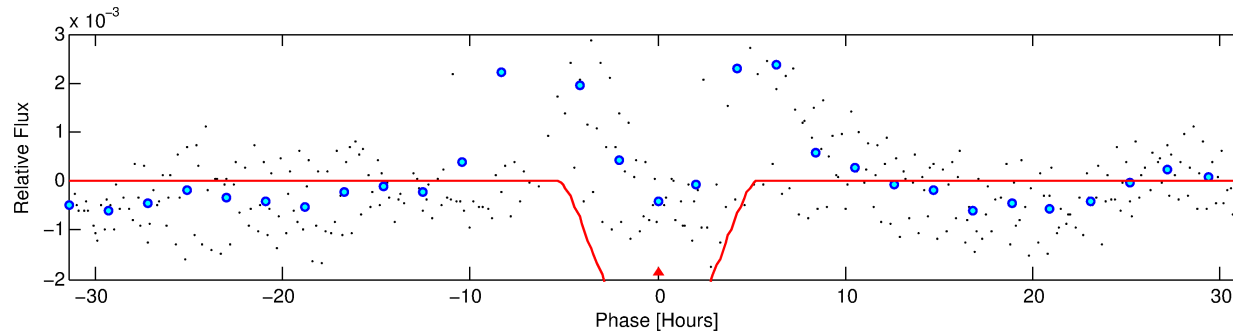
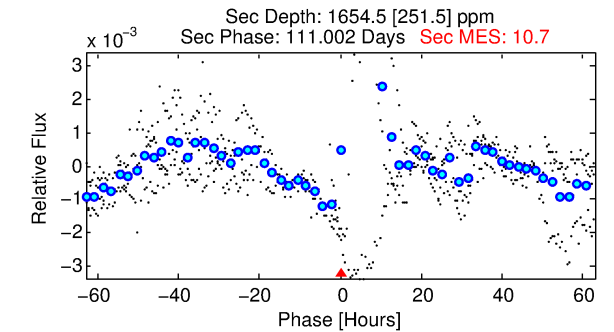
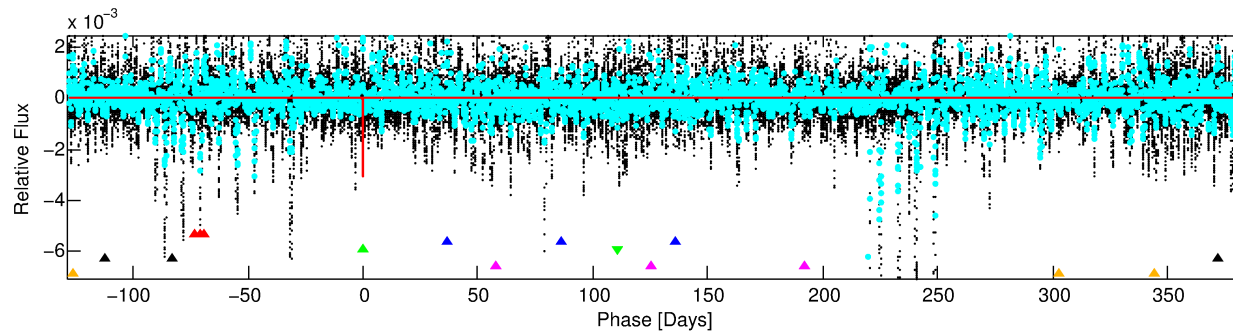
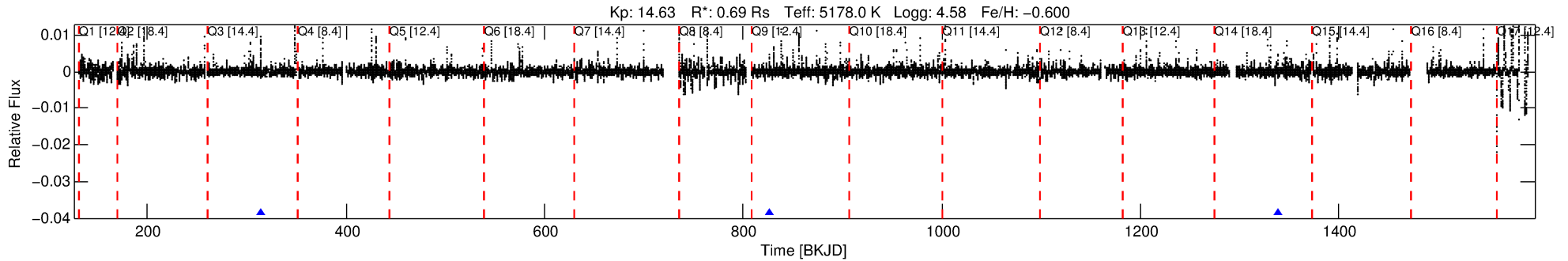
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010527793-03

No Significant Match Found

DV One-Page Summary

KIC: 10527793 Candidate: 3 of 6 Period: 512.407 d



DV Fit Results:

Period = 512.40730 [0.01040] d
Epoch = 314.4996 [0.0120] BKJD
Rp/R* = 0.0648 [0.0081]
a/R* = 188.59 [20.34]
b = 0.94 [0.02]
Seff = 0.26 [0.05]
Teff = 182 [8] K
Rp = 4.91 [0.80] Re
a = 1.0948 [0.1009] AU
Ag = 45295.47 [14697.87] [3.08σ]
Teffp = 4102 [325] K [12.07σ]

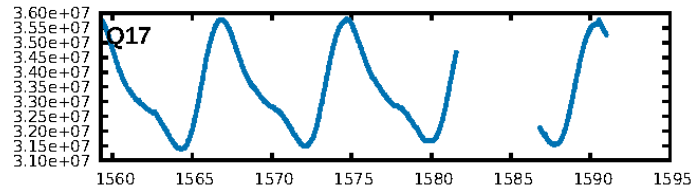
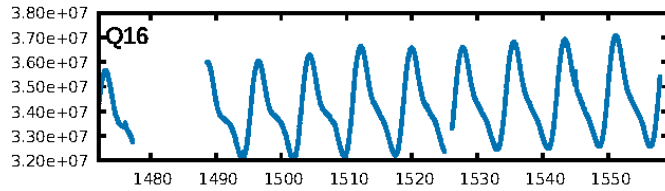
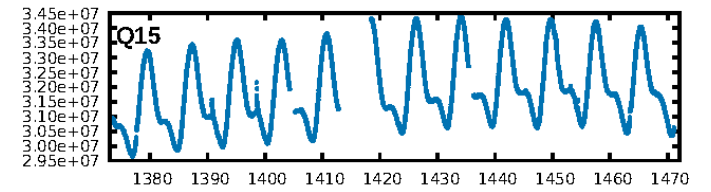
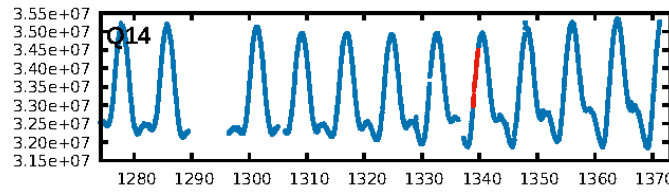
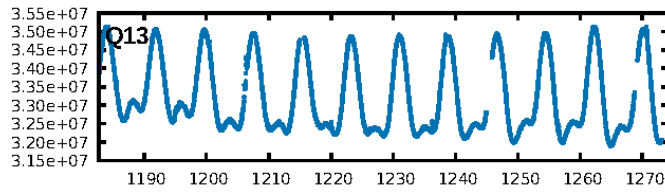
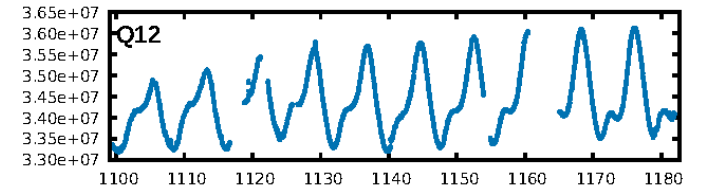
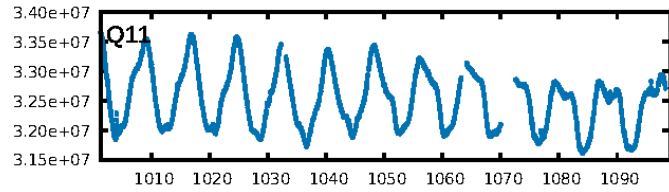
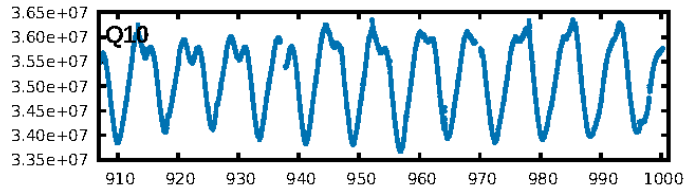
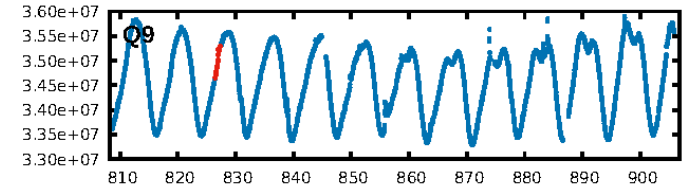
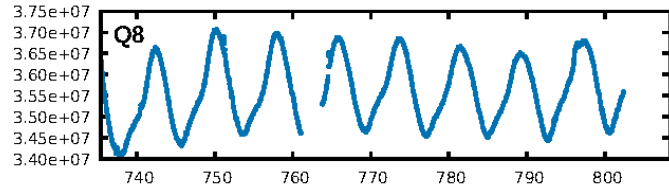
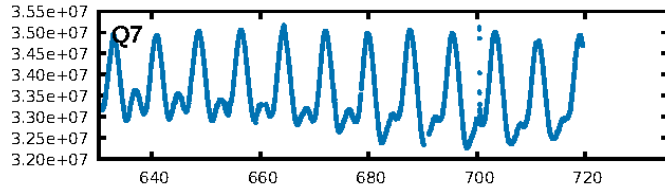
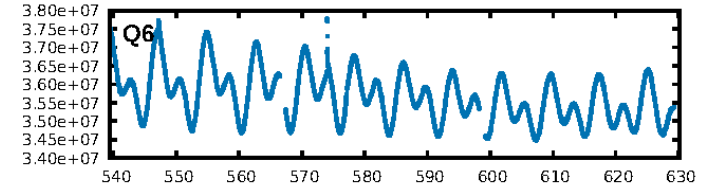
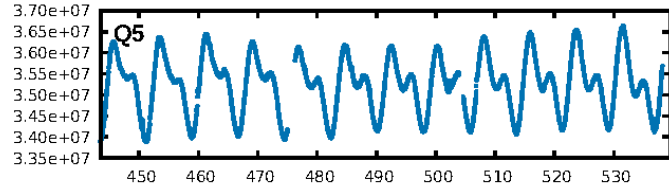
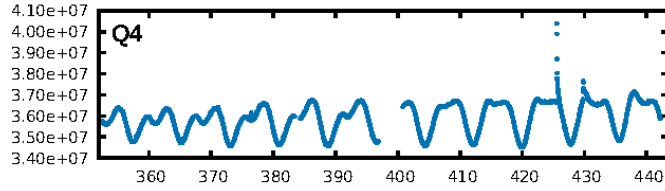
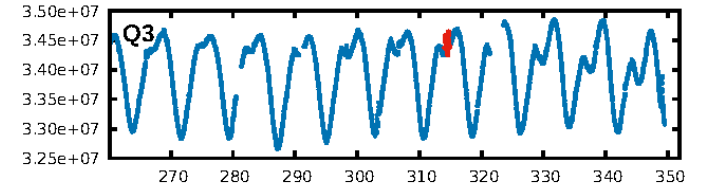
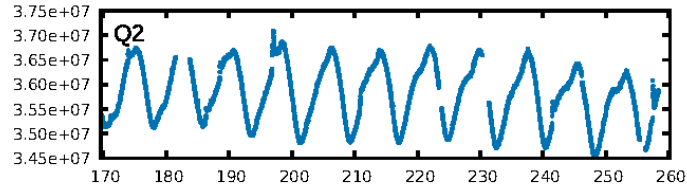
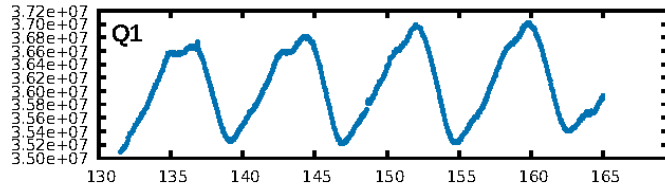
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [86.89σ]
LongPeriod-sig: 100.0% [4.26σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 28.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9431
Centroid-sig: 79.4%
Centroid-so: 0.152 arcsec [0.40σ]
OotOffset-rm: 0.124 arcsec [1.44σ]
KicOffset-rm: 0.156 arcsec [1.73σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

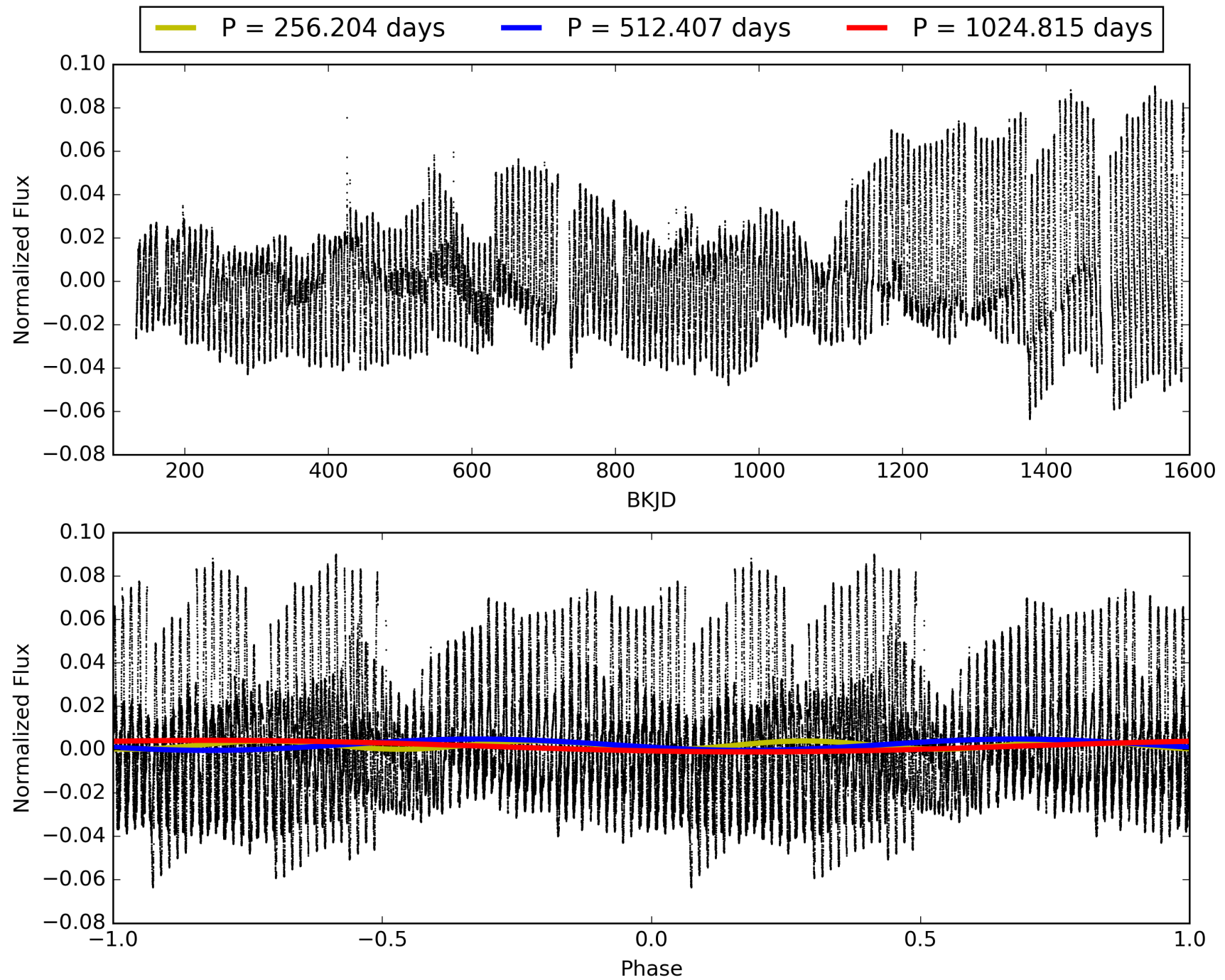
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:26:41 Z

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

TCE 010527793-03, PDC Light Curves

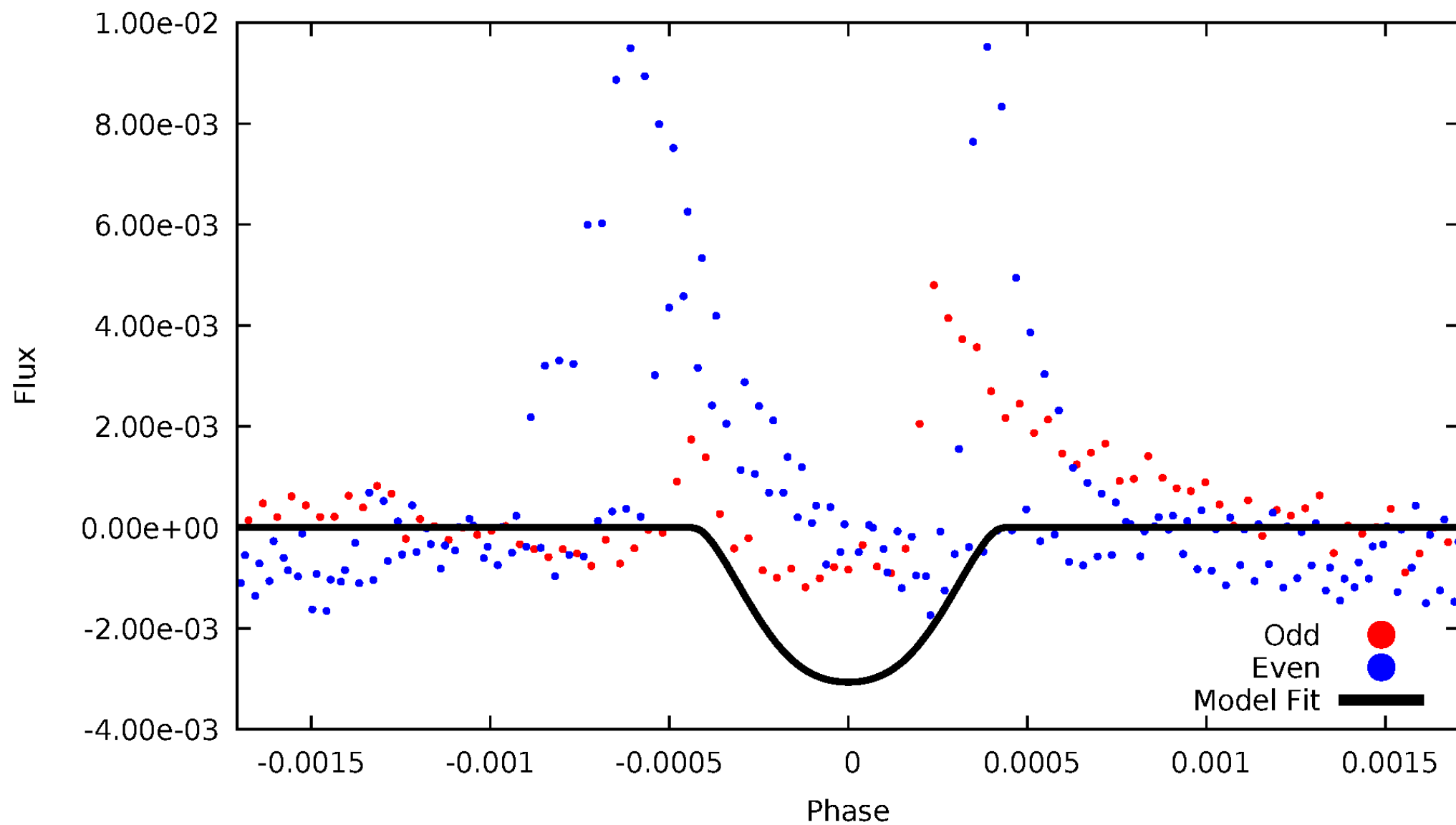


TCE 010527793-03



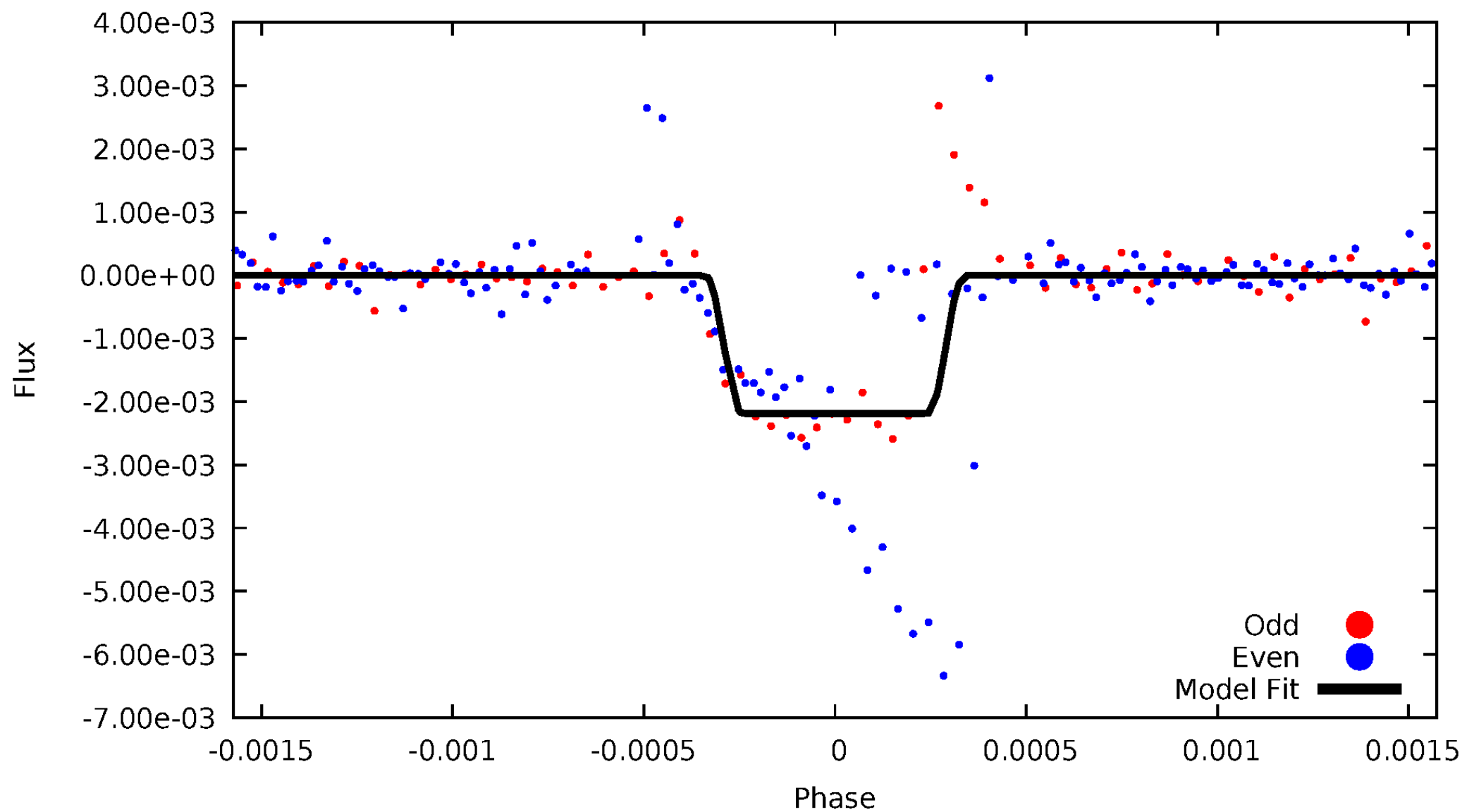
DV Odd/Even

TCE 010527793-03



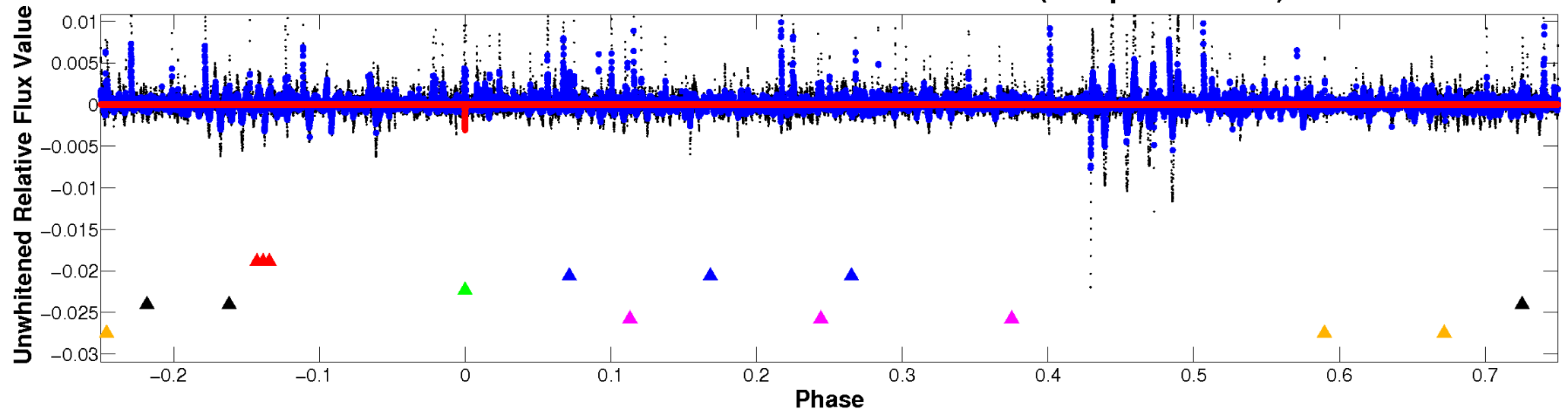
ALT Odd/Even

TCE 010527793-03

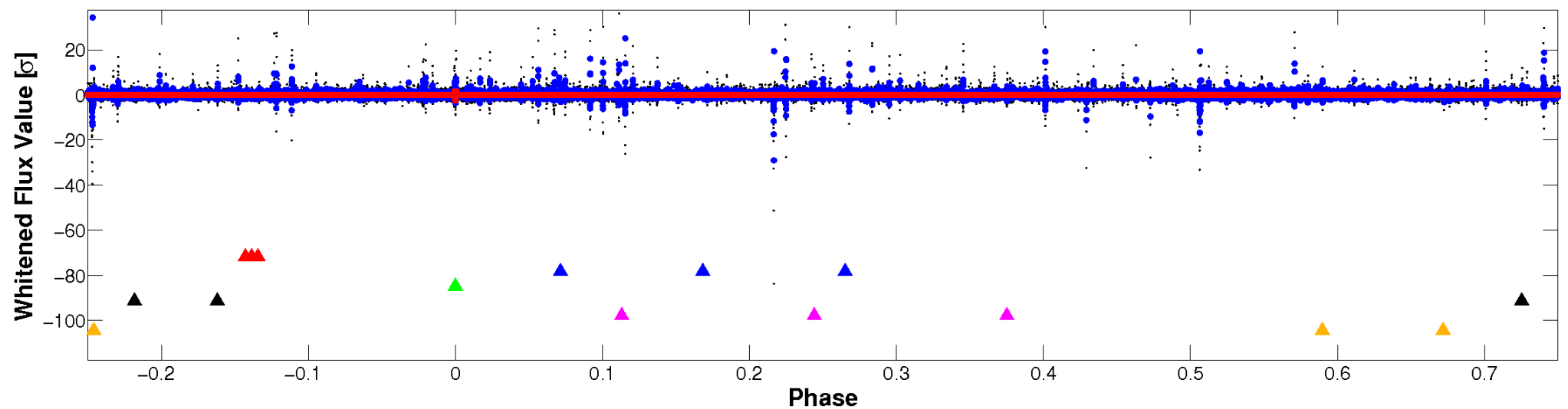


Non-Whitened Vs. Whitened Light Curve

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

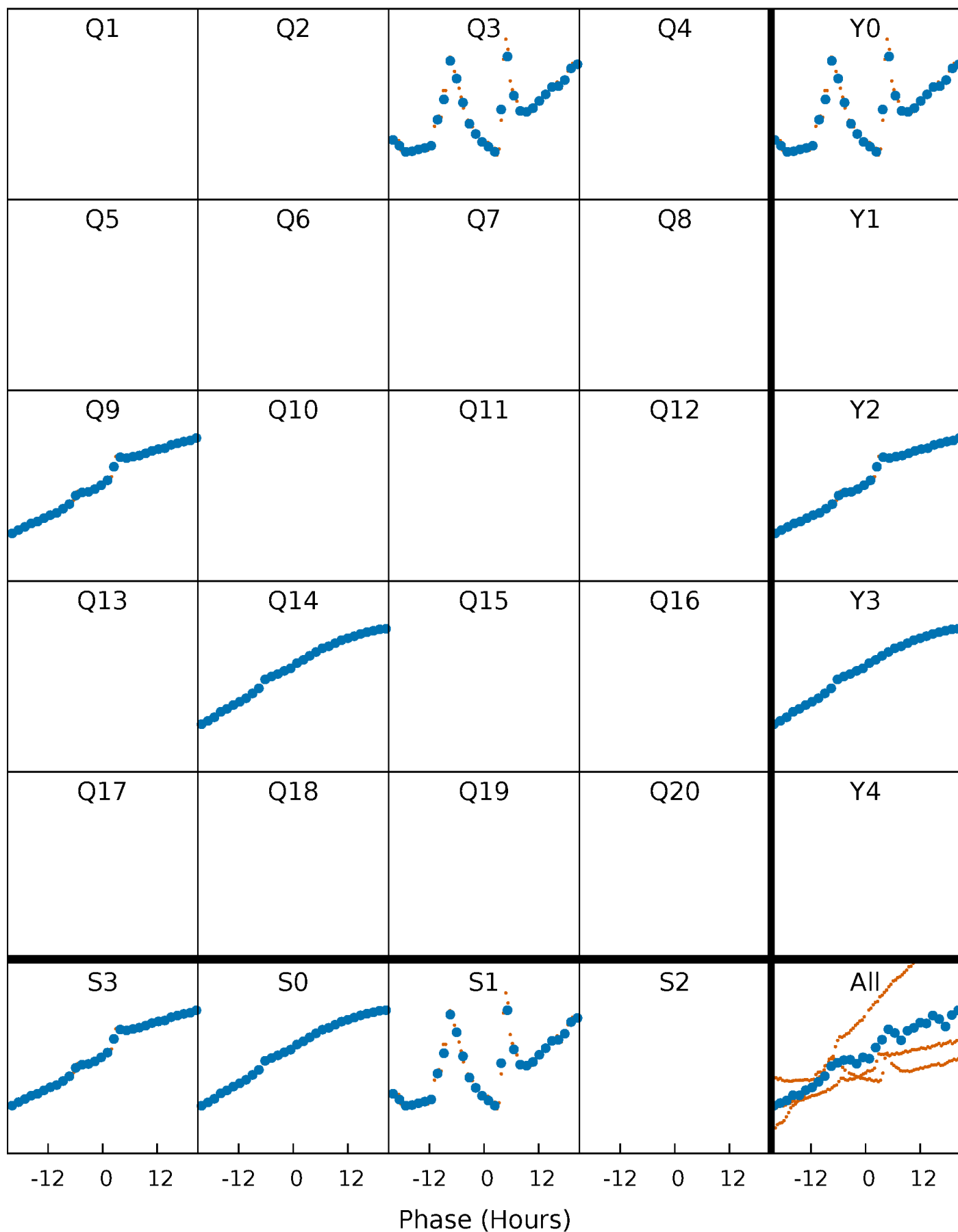


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



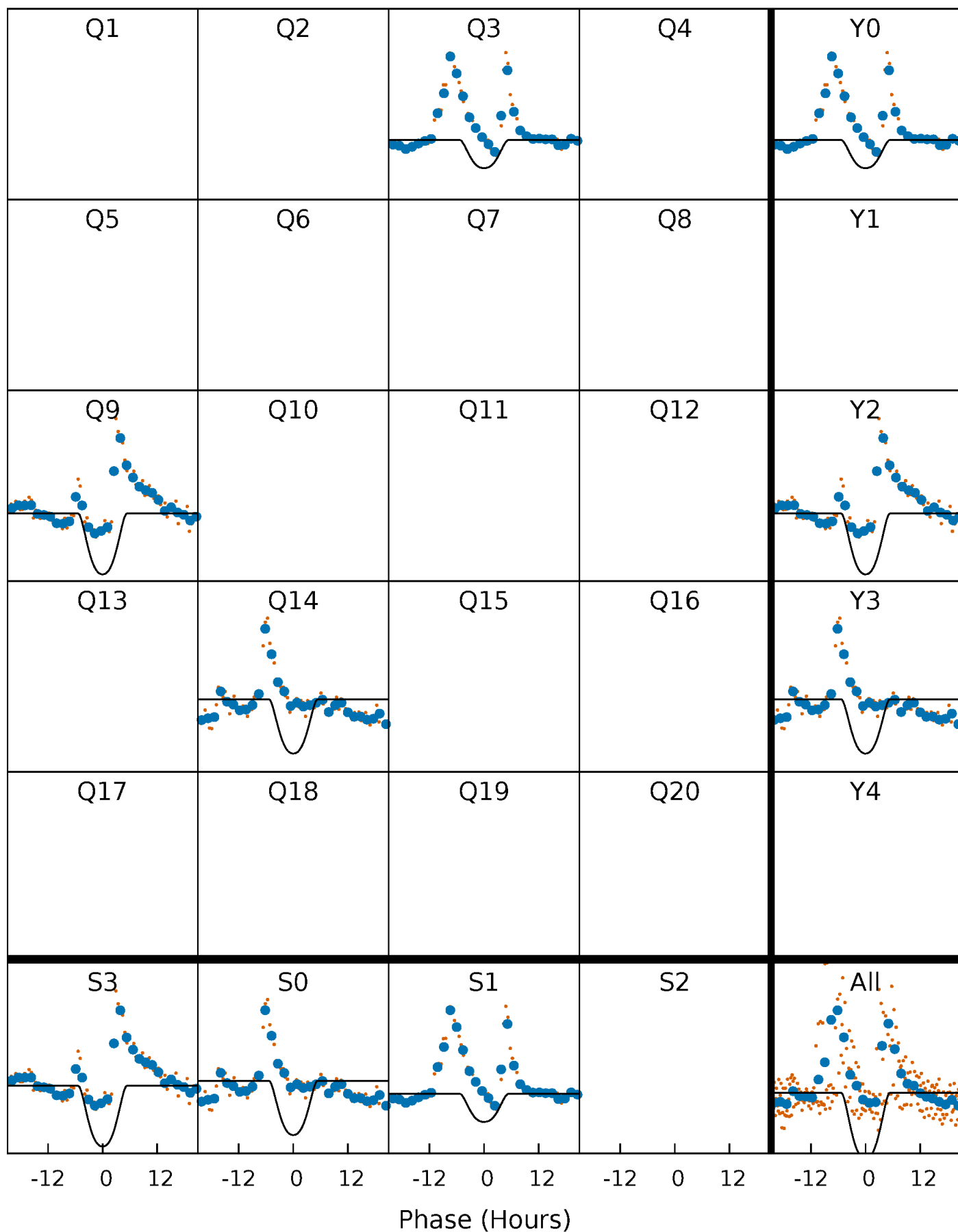
PDC Quarter-Phased Transit Curves

TCE 010527793-03 $P=512.407303$ Days $T_0=314.499601$ (BKJD)



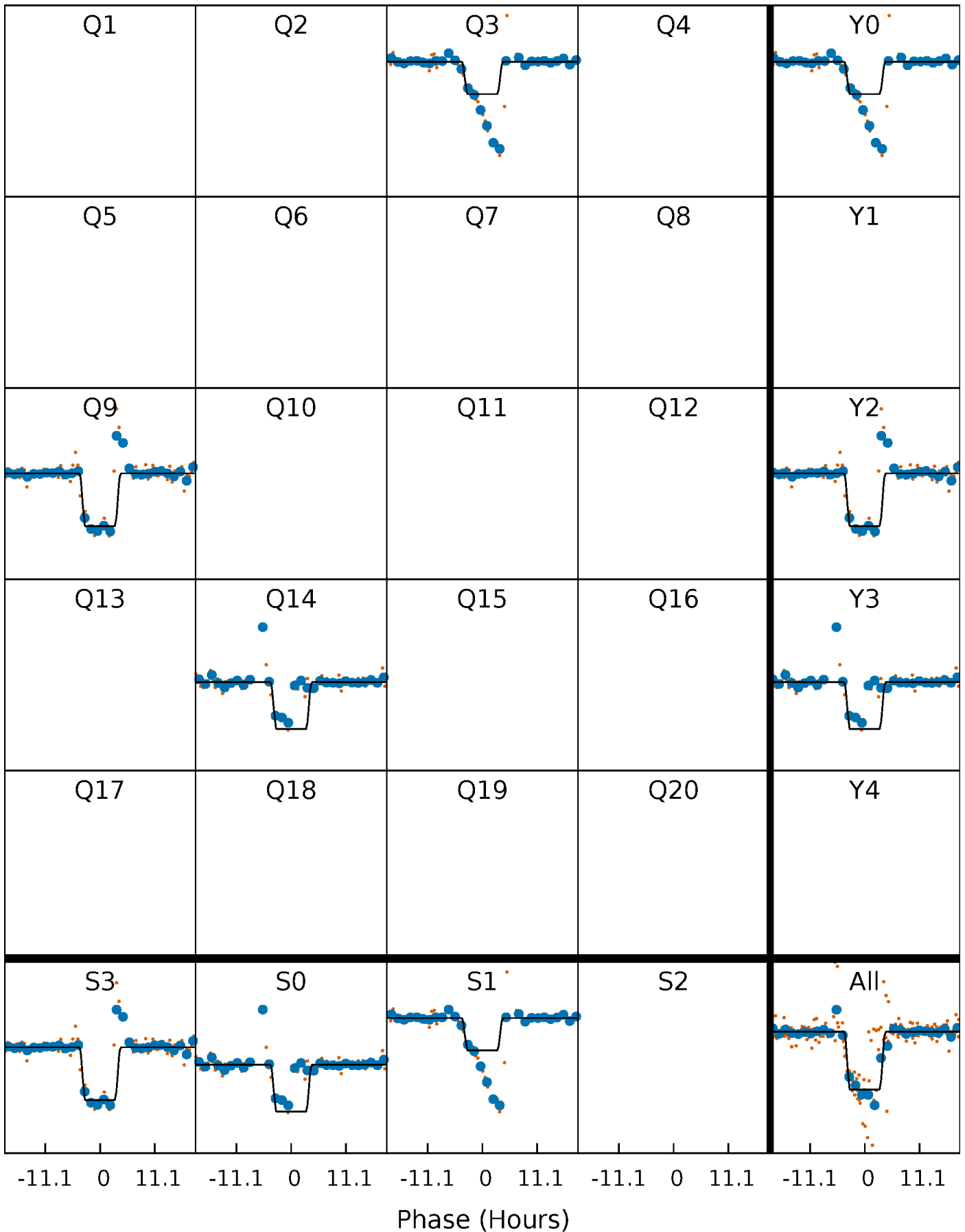
DV Quarter-Phased Transit Curves

TCE 010527793-03 $P=512.407303$ Days $T_0=314.499601$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

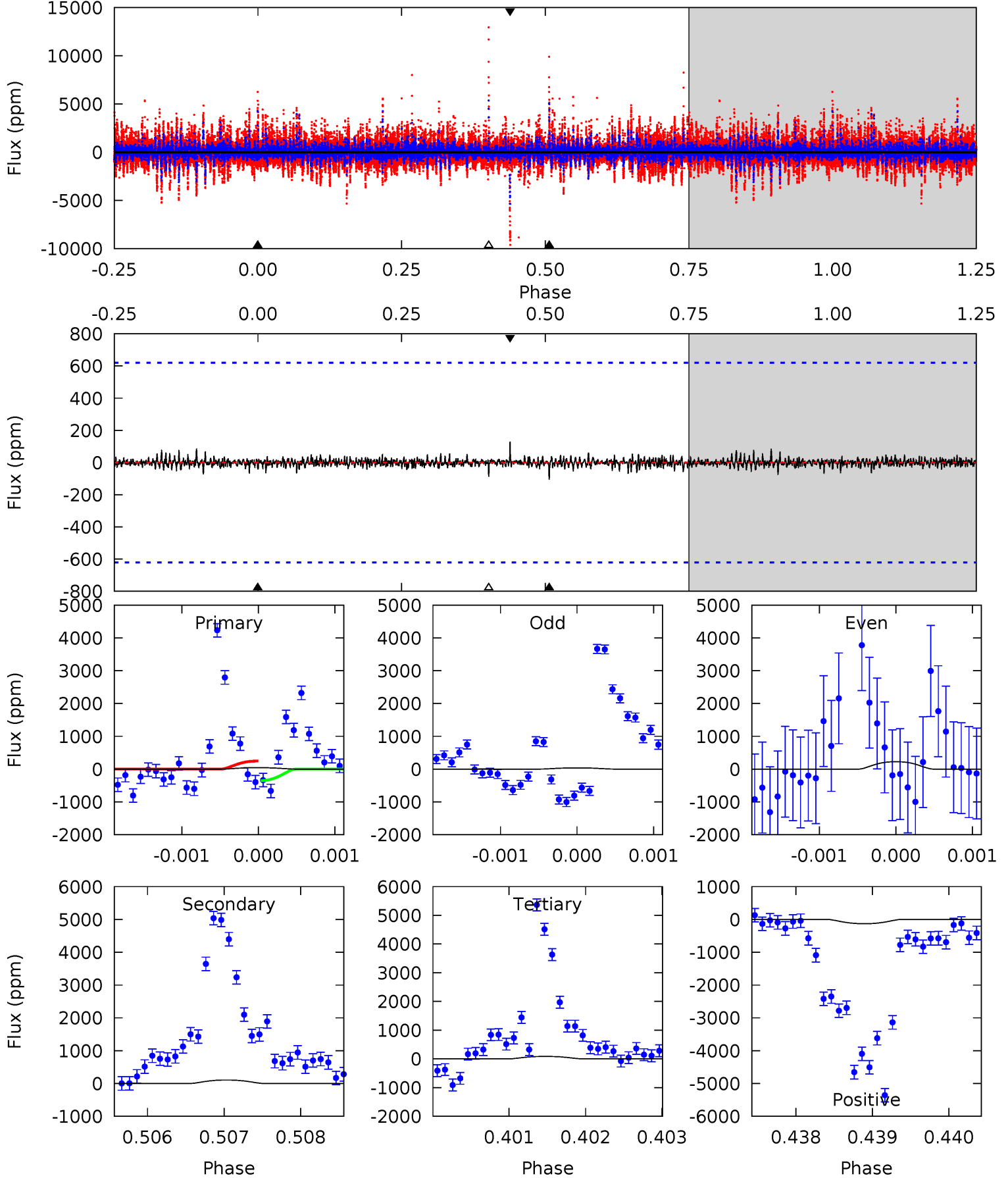
TCE 010527793-03 $P=512.419195$ Days $T_0=314.471262$ (BKJD)



DV Model-Shift Uniqueness Test

010527793-03, P = 512.407303 Days, E = 314.499601 Days

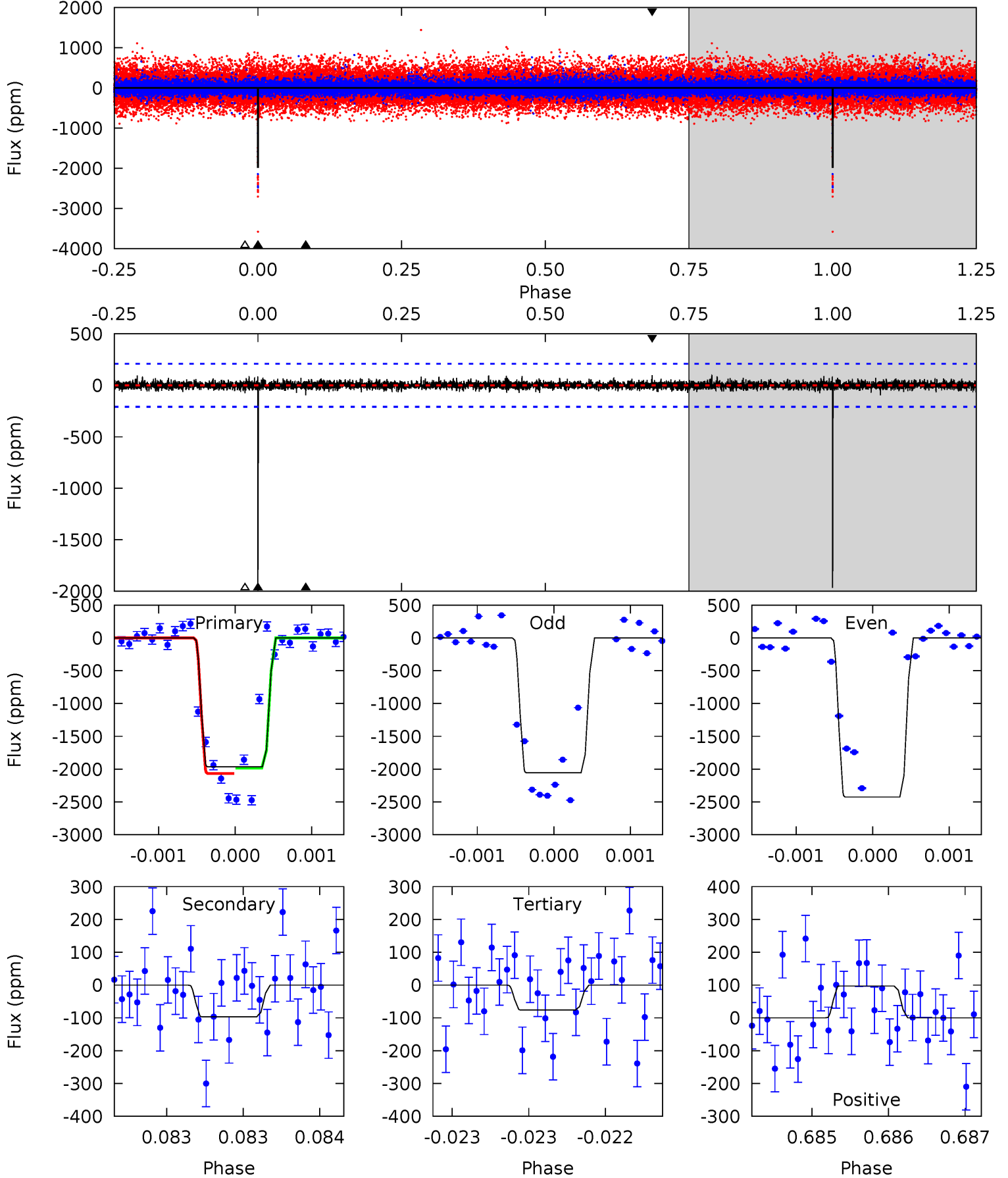
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.37	0.92	0.75	1.14	5.47	3.32	0.15	-0.39	-0.77	0.17	-0.22	0.56	5.77	0.55	0.47



Alt Model-Shift Uniqueness Test

010527793-03, P = 512.419195 Days, E = 314.471262 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.1	2.56	2.01	2.57	5.53	3.41	0.50	50.1	49.5	0.55	-0.01	5.31	1.24	0.05	0.99



Stellar Parameters For KIC 010527793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5178^{+154}_{-154}	$4.579^{+0.078}_{-0.052}$	$-0.600^{+0.350}_{-0.300}$	$0.694^{+0.073}_{-0.073}$	$0.666^{+0.081}_{-0.037}$	$2.809^{+0.910}_{-0.519}$
	+3%/-3%	+2%/-1%	+58%/-50%	+11%/-11%	+12%/-6%	+32%/-18%
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 010527793-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-105 ± 113	$4.91^{+0.71}_{-0.63}$	253^{+10}_{-9}	2774^{+322}_{-4932}	2799^{+3289}_{-3120}
Alt.	-97 ± 38	$3.54^{+0.70}_{-0.65}$	253^{+10}_{-10}	2987^{+248}_{-239}	4921^{+3775}_{-2251}

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

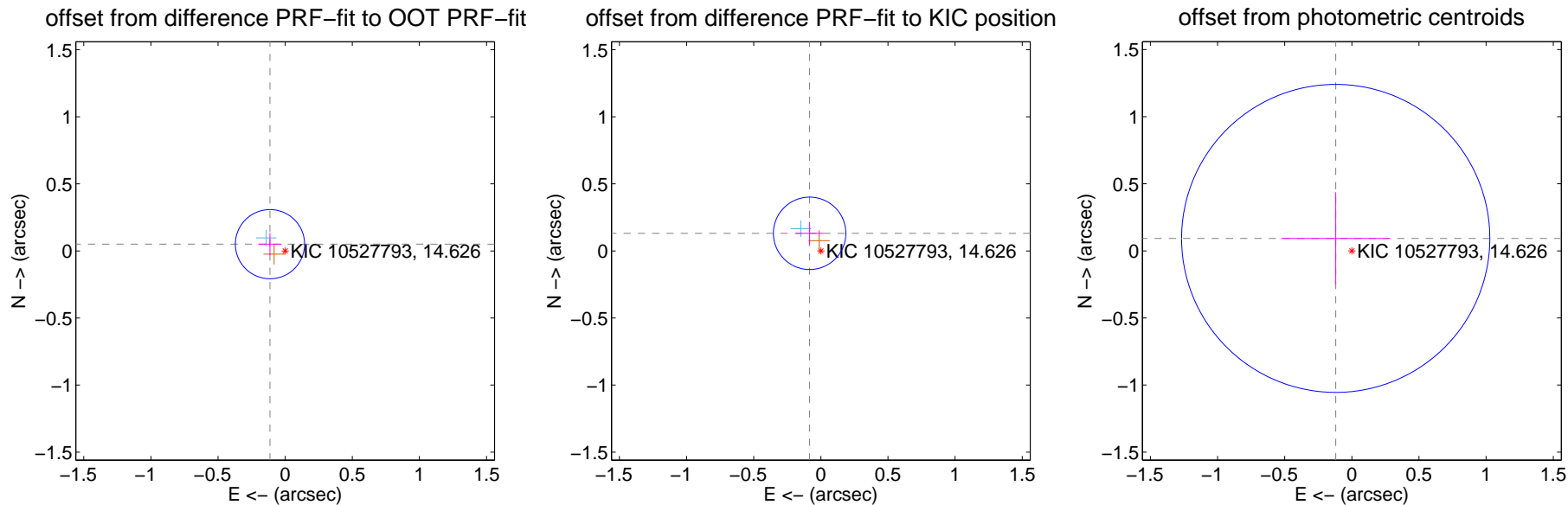
DV Centroid Data

Supplemental centroid analysis for 010527793-03. Kepler magnitude: 14.63. Transit SNR 13.11

There are 1 quarters with good PRF difference image offsets

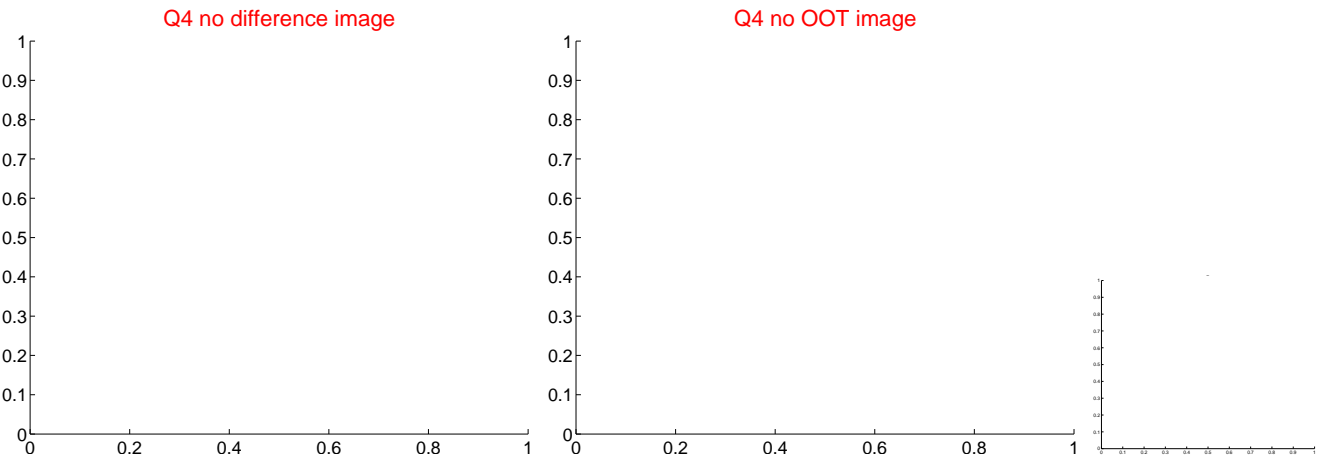
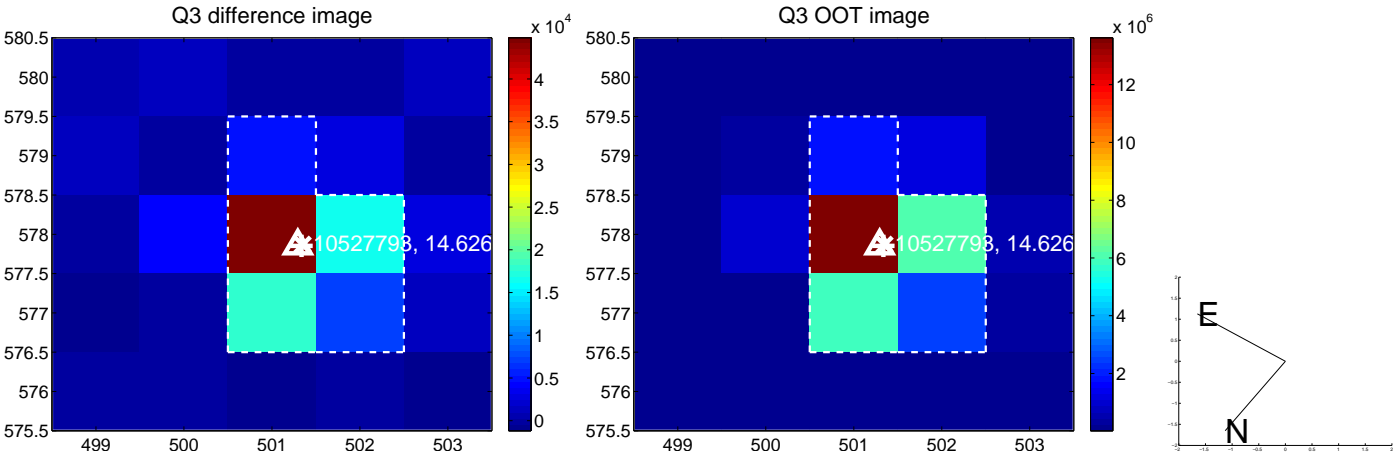
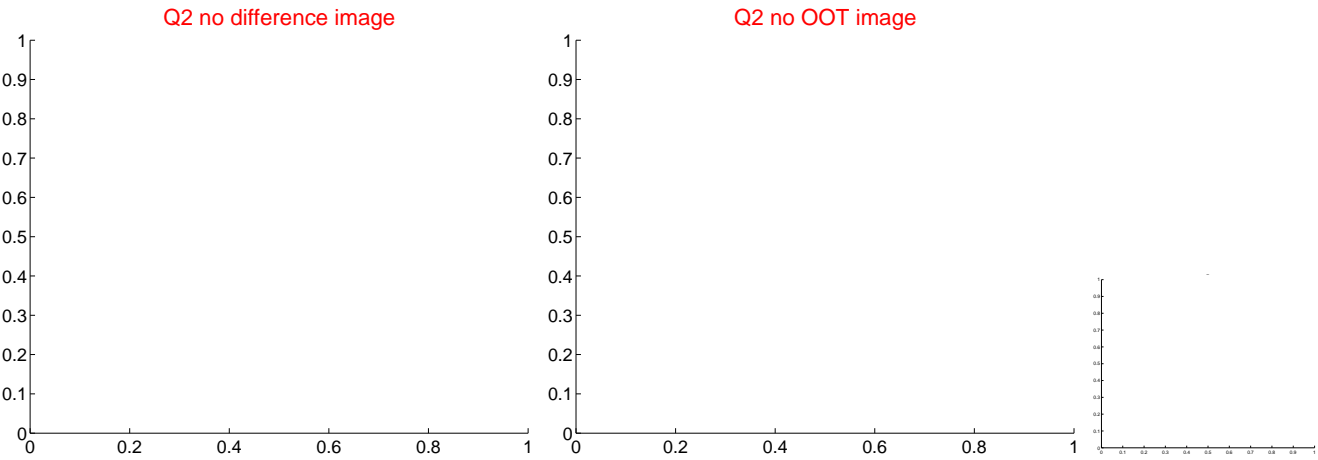
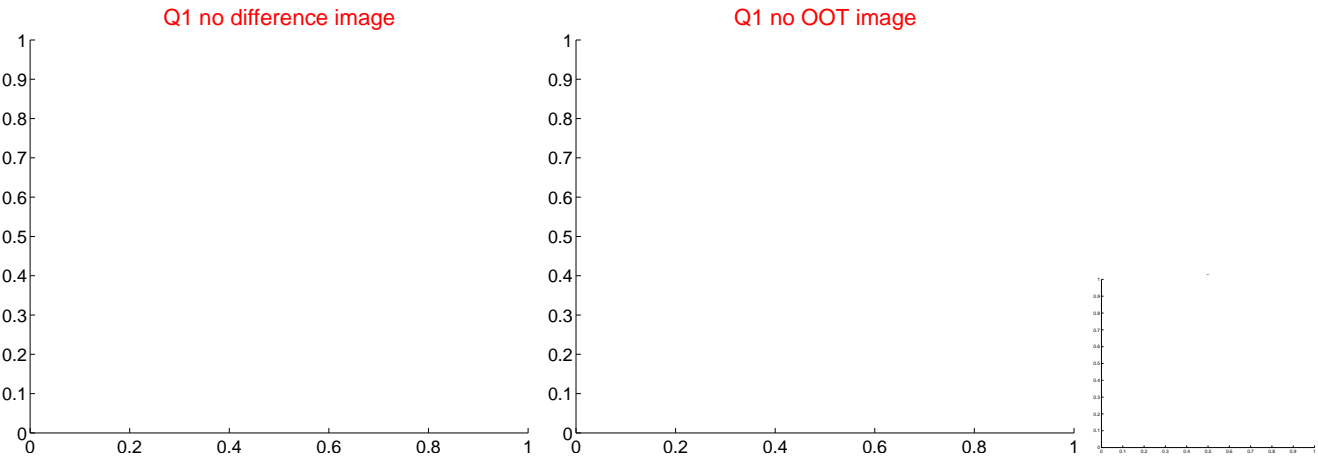
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.086	1.44	0.113 ± 0.086	0.050 ± 0.083
PRF-fit source offset from KIC position	0.156 ± 0.090	1.73	0.084 ± 0.103	0.131 ± 0.084
photometric centroid source offset	0.15 ± 0.38	0.40	0.12 ± 0.40	0.09 ± 0.34

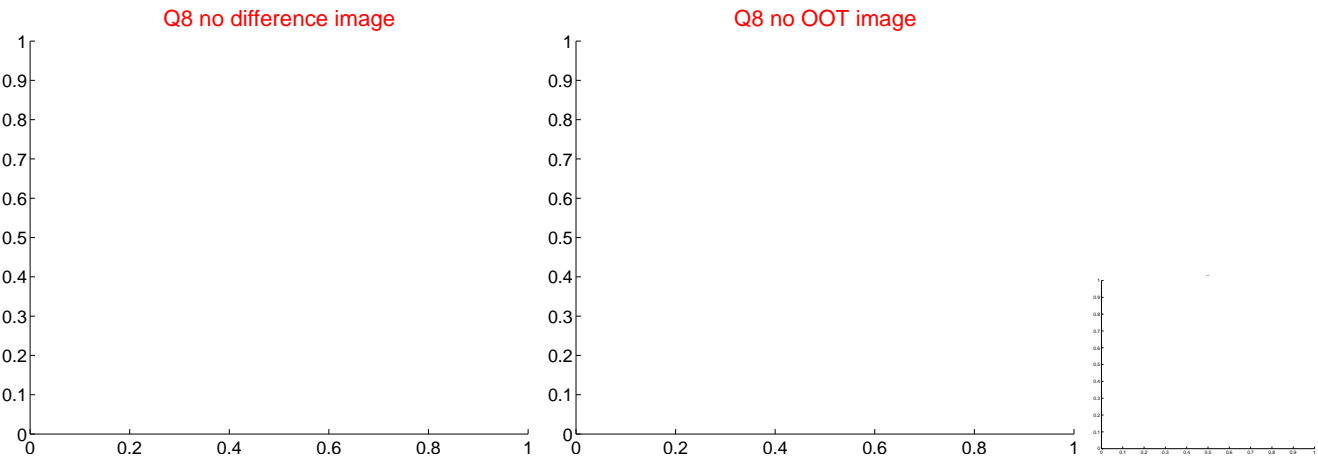
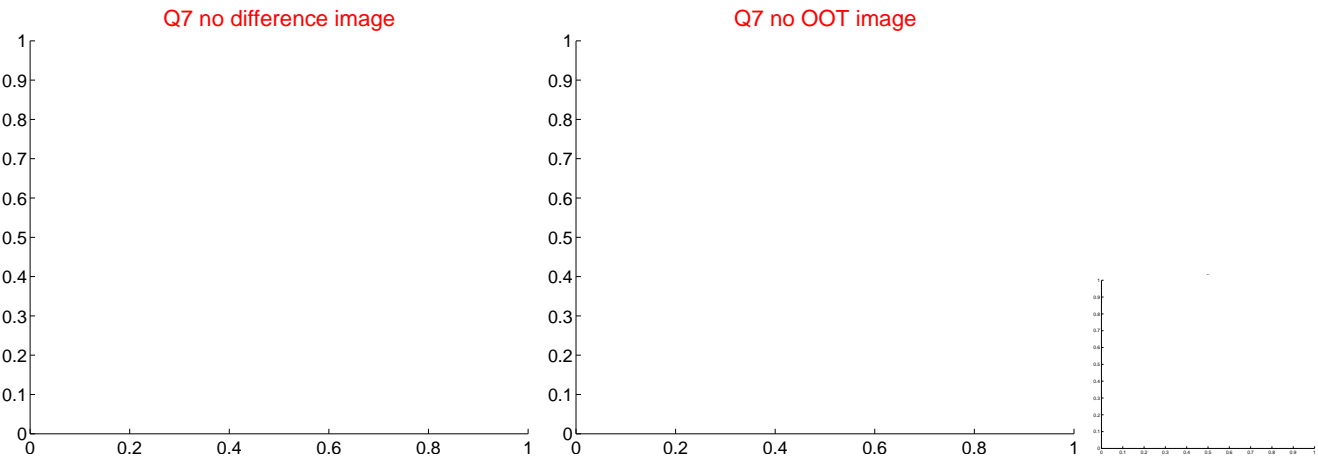
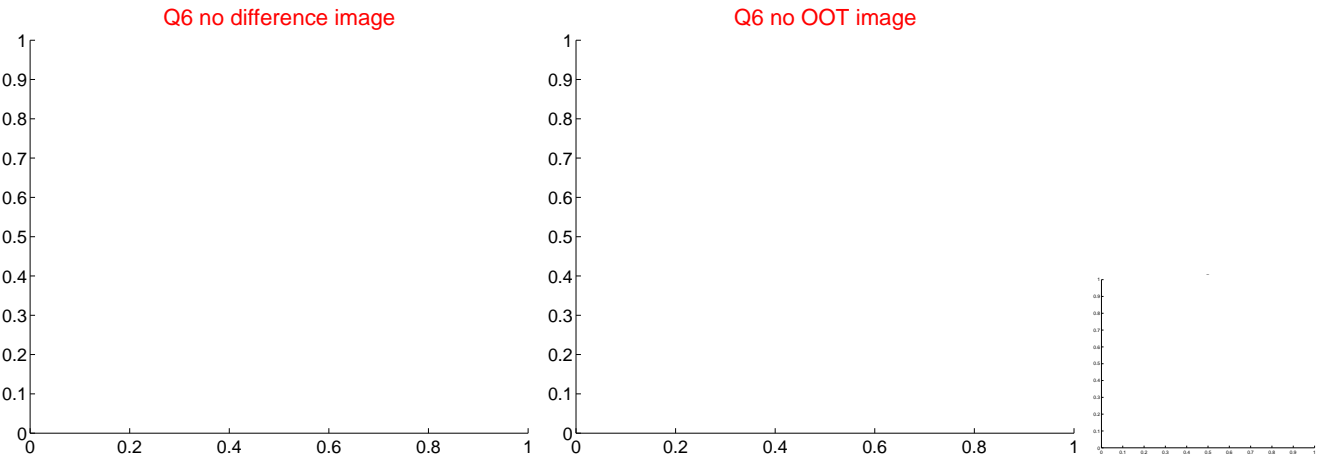
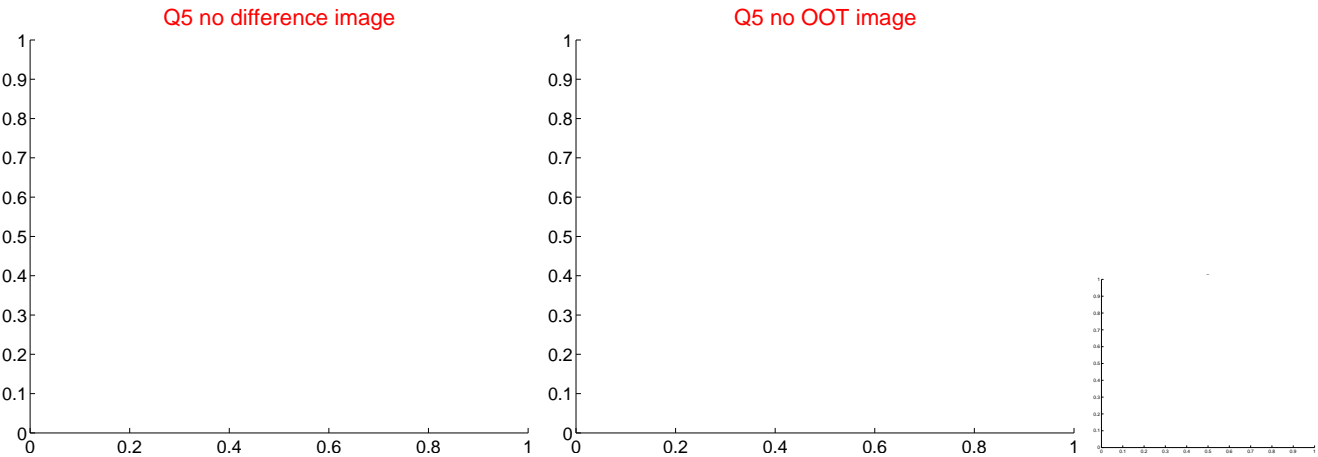


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

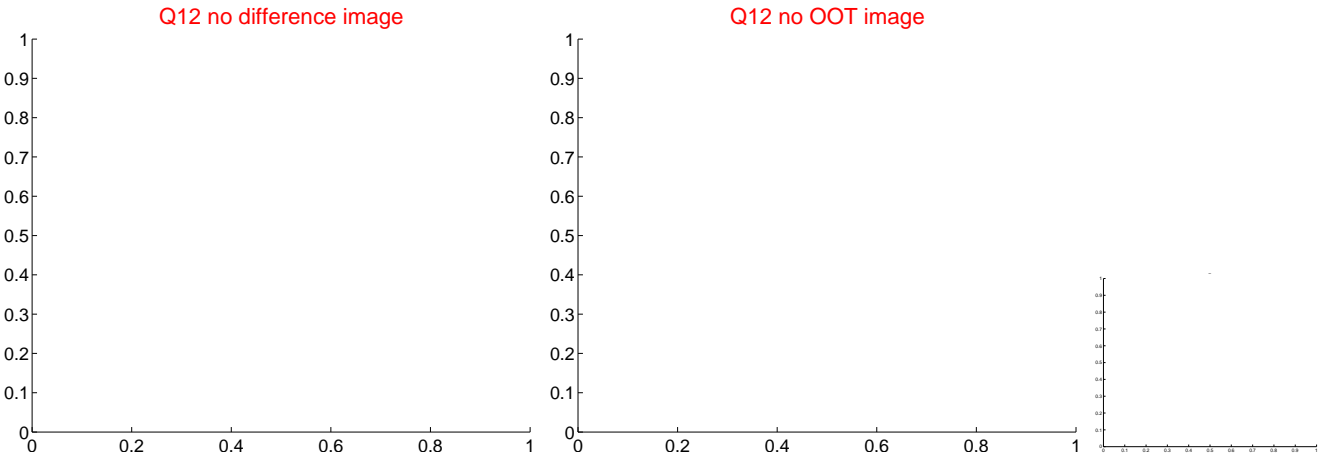
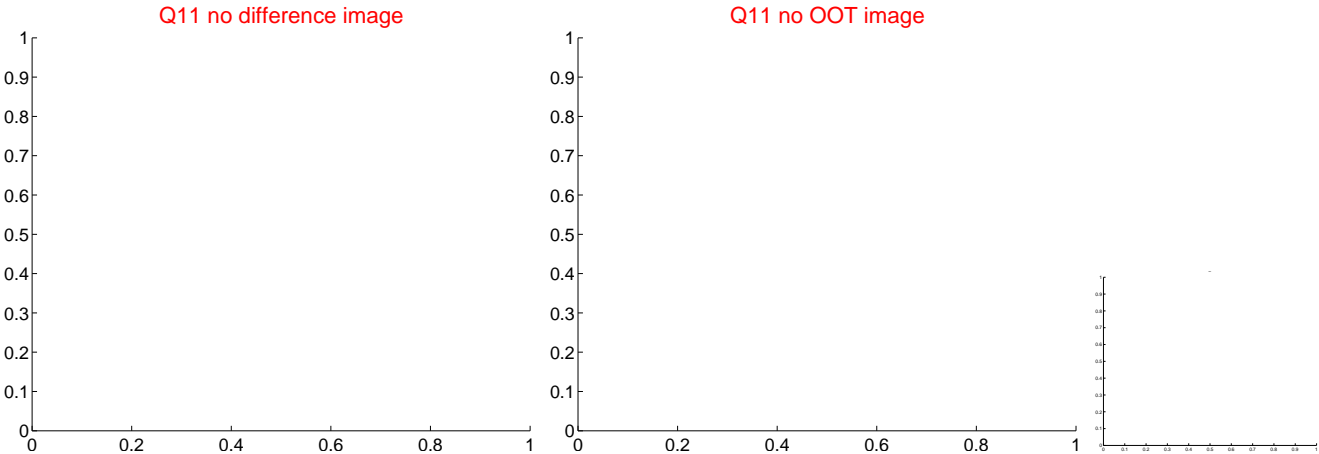
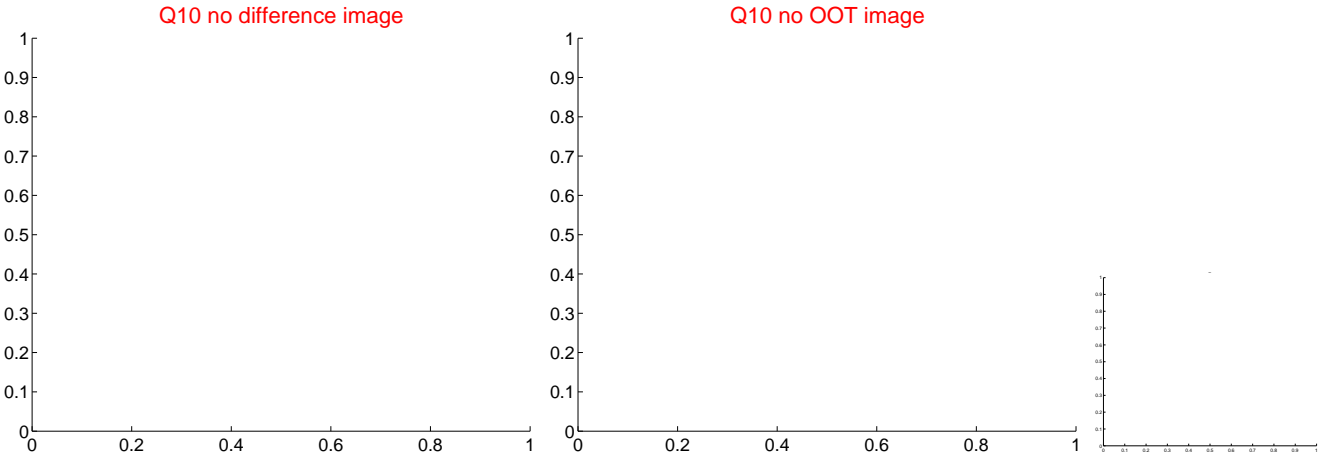
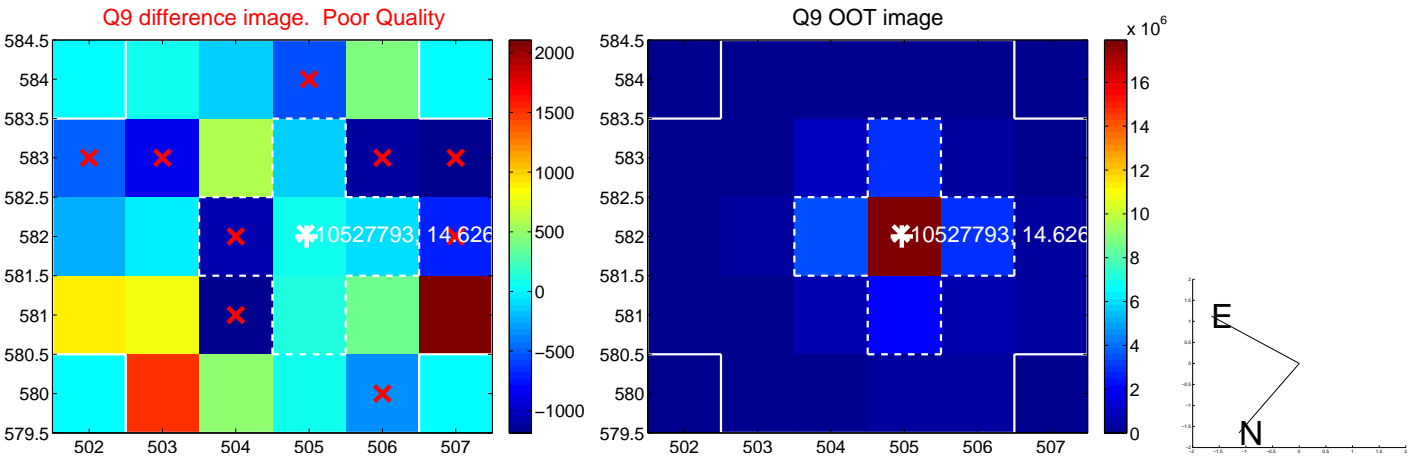
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



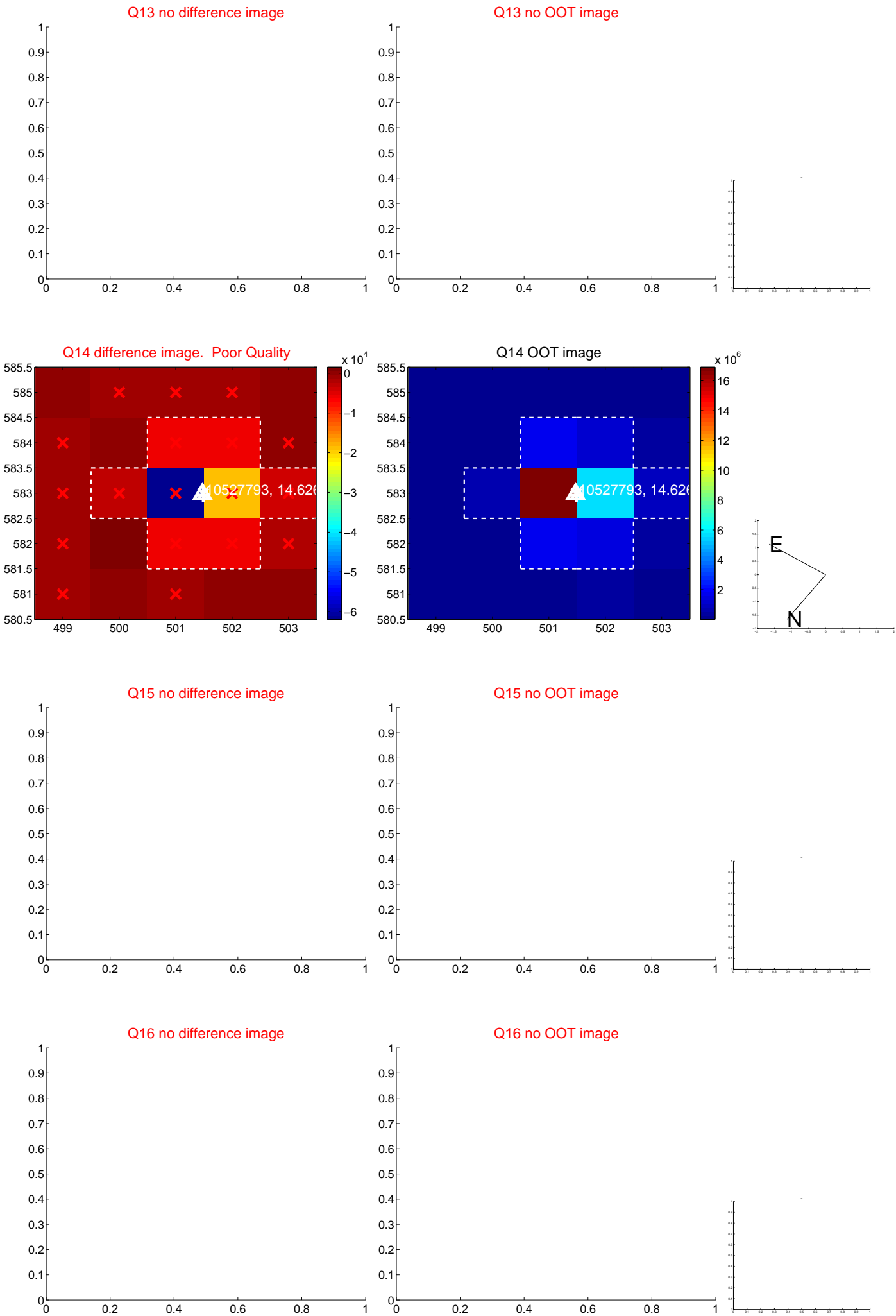
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



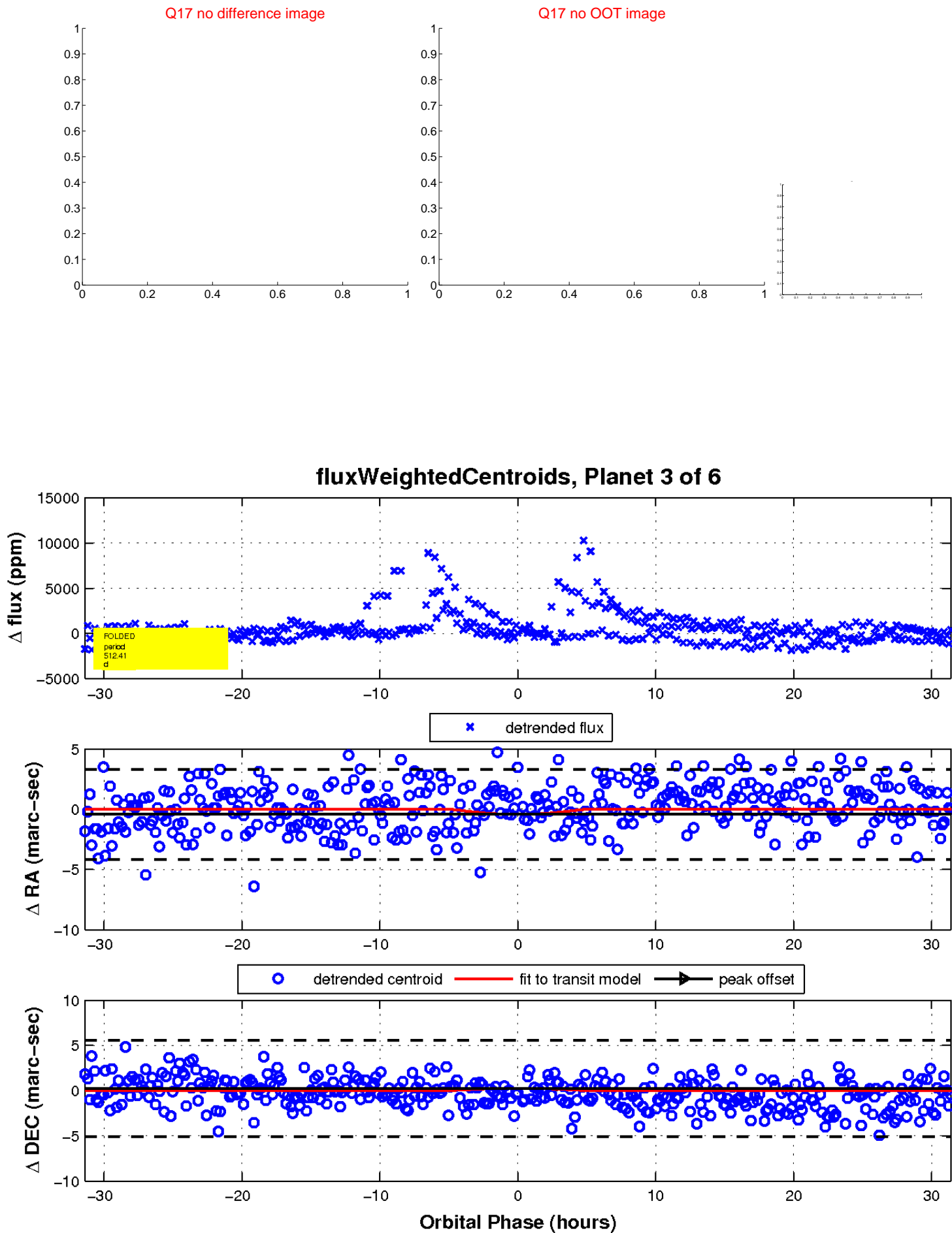
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

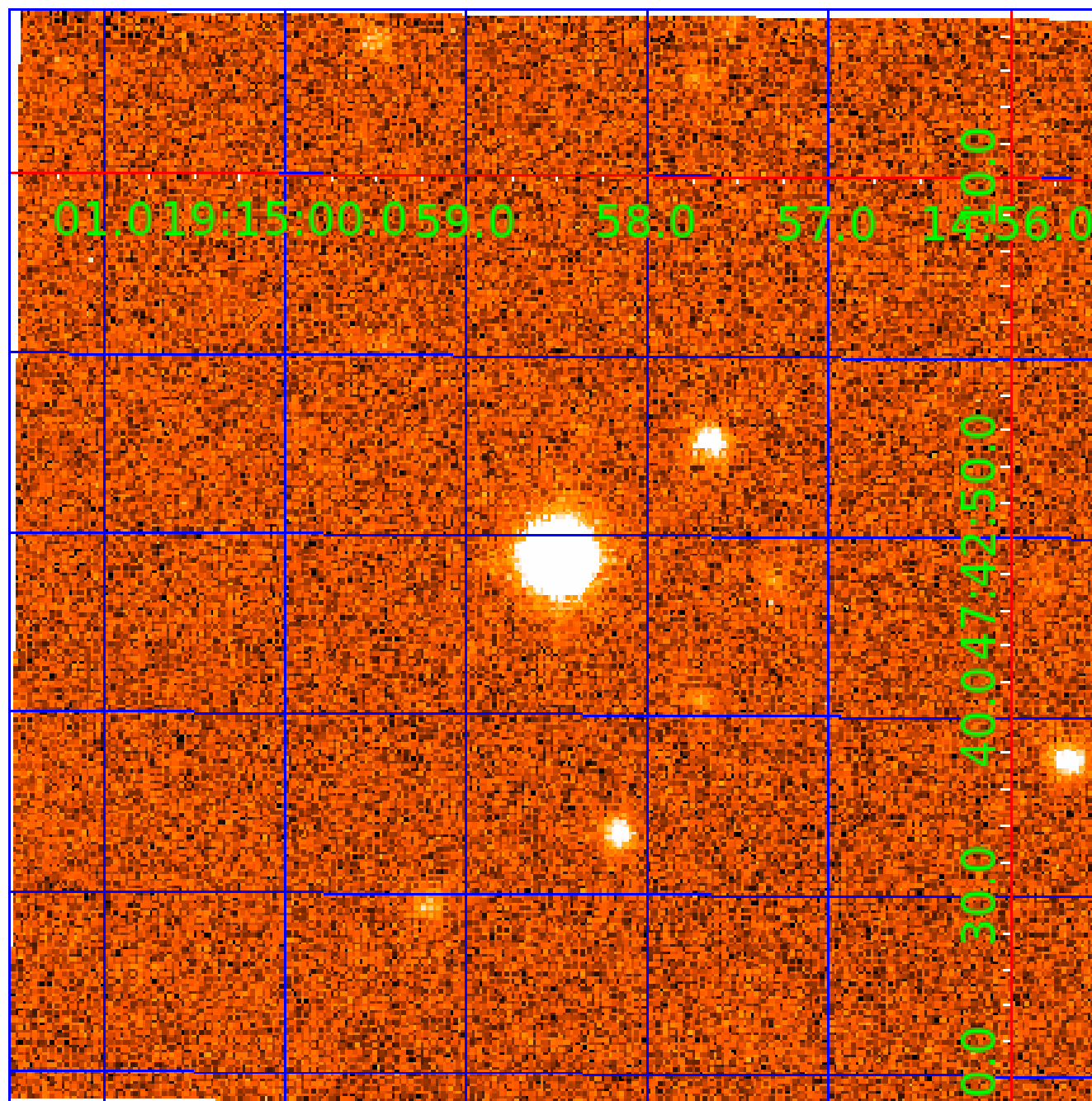


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010527793

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})
010527793-01	OBS	No	514.578718	241.321323	1660.0	6.288	22.0	8.0	0.69	5178	2.91	0.26
010527793-02	OBS	No	462.794034	450.363195	1313.2	6.243	17.8	6.8	0.69	5178	2.56	0.30
010527793-03	OBS	No	512.407303	314.499602	3068.9	10.495	17.4	13.1	0.69	5178	4.91	0.26
010527793-04	OBS	No	541.287236	173.768126	1275.2	6.925	16.3	7.2	0.69	5178	2.47	0.24
010527793-05	OBS	No	445.287091	506.717205	1264.3	5.052	16.3	7.1	0.69	5178	2.64	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010527793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010527793-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

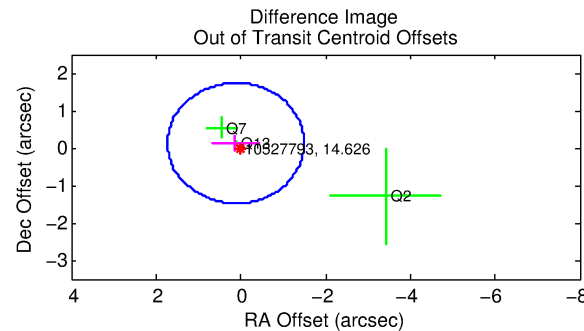
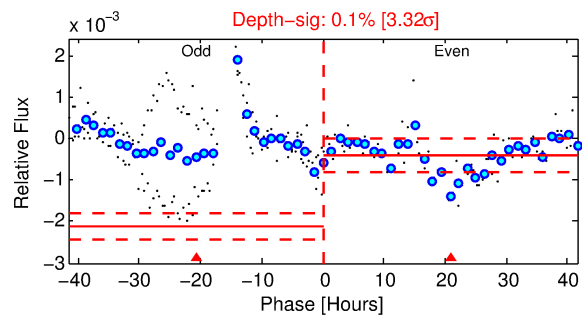
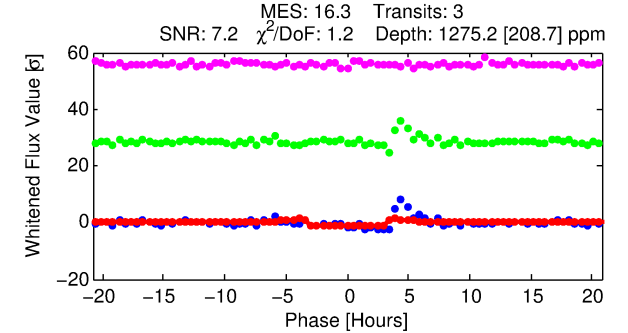
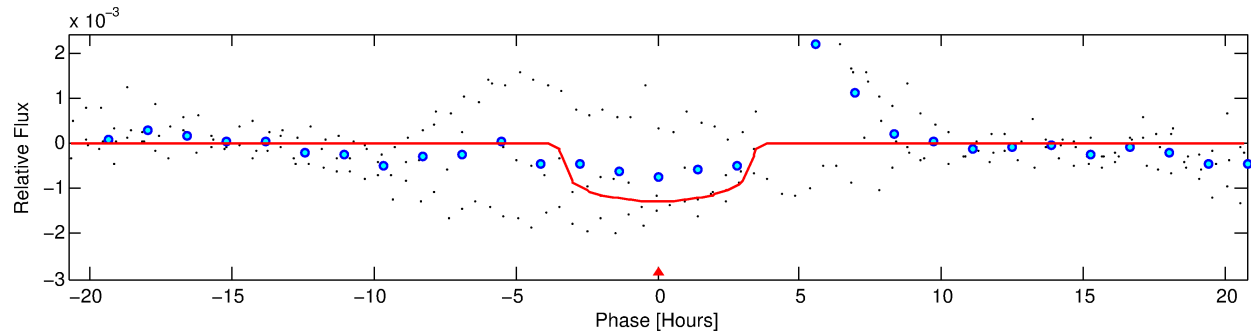
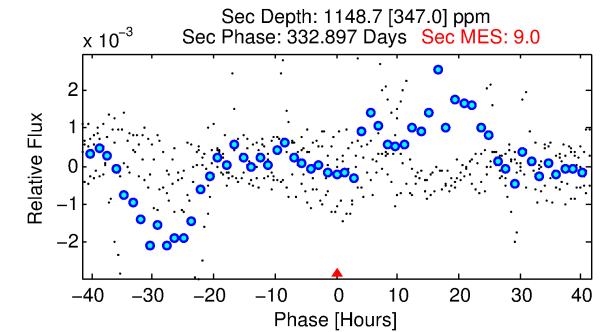
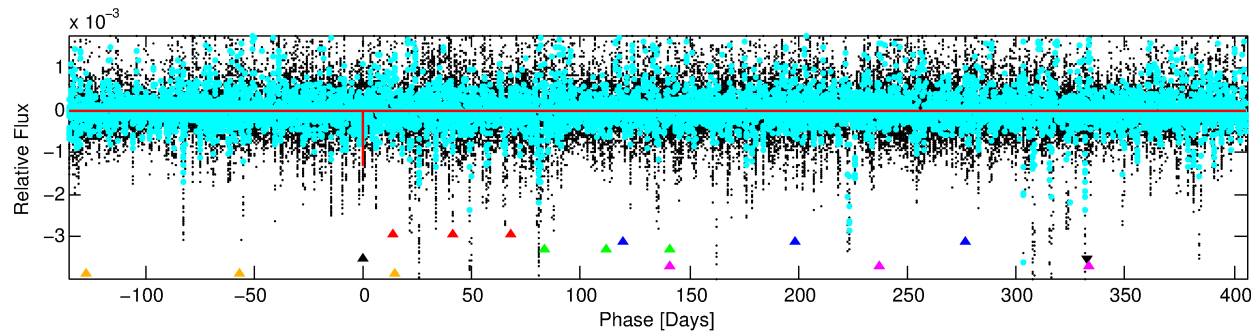
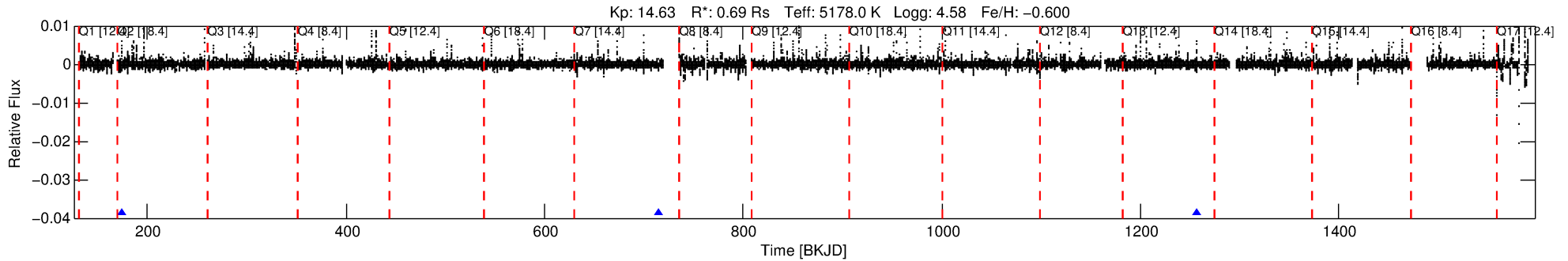
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010527793-04

No Significant Match Found

DV One-Page Summary

KIC: 10527793 Candidate: 4 of 6 Period: 541.287 d



DV Fit Results:

Period = 541.28724 [0.00563] d
Epoch = 173.7681 [0.0067] BKJD
Rp/R* = 0.0326 [0.0618]
a/R* = 578.16 [4340.07]
b = 0.36 [18.41]
Seff = 0.24 [0.04]
Teq = 179 [8] K
Rp = 2.47 [4.69] Re
a = 1.1356 [0.1047] AU
Ag = 133338.12 [507015.10] [0.26σ]
Teffp = 5276 [5015] K [1.02σ]

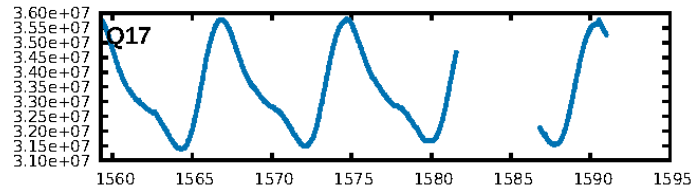
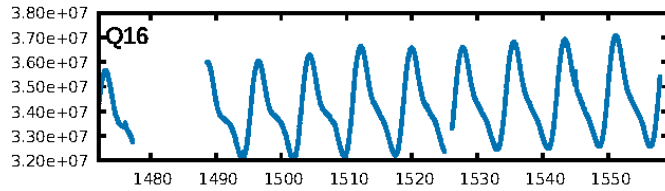
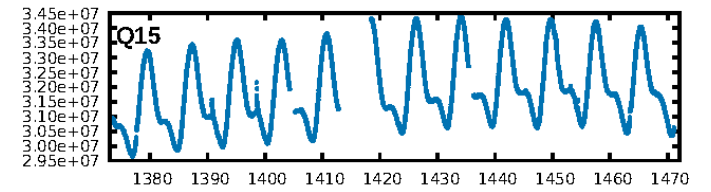
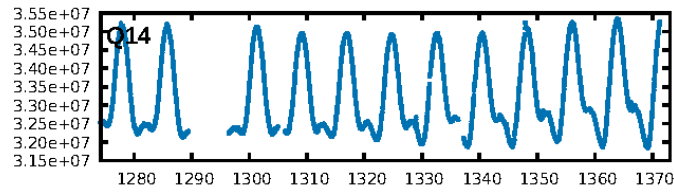
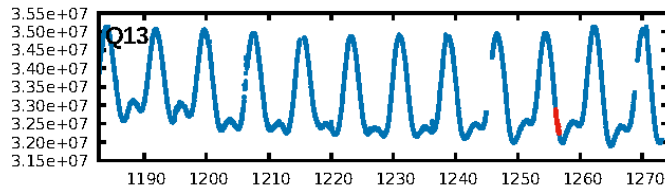
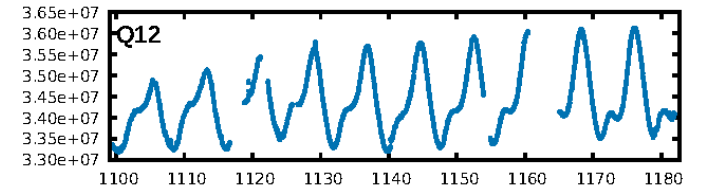
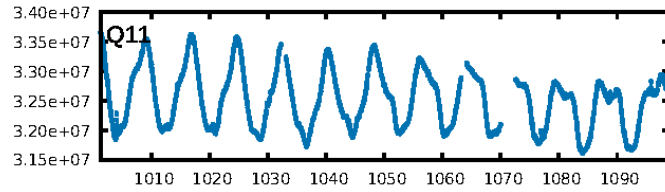
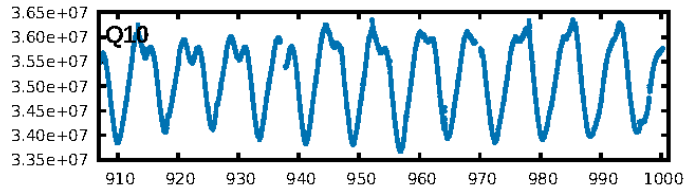
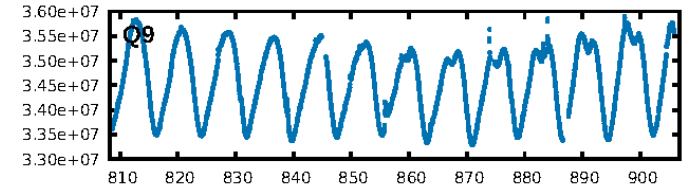
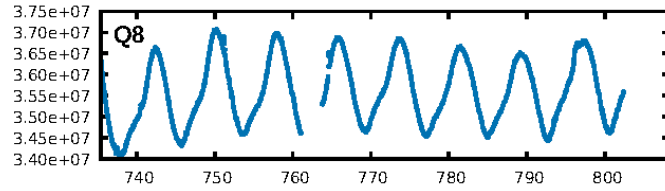
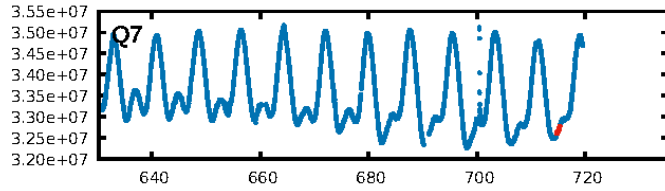
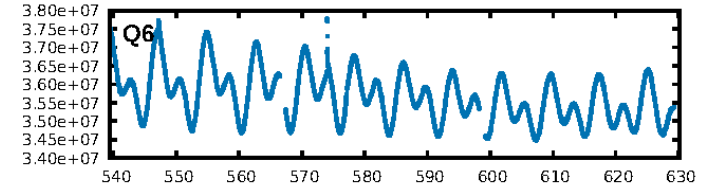
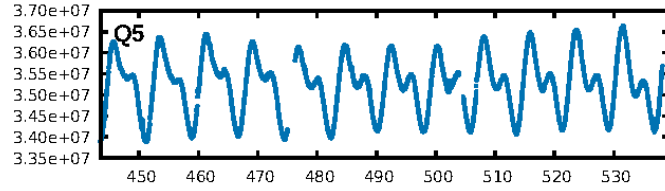
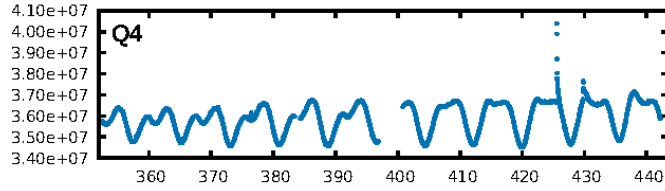
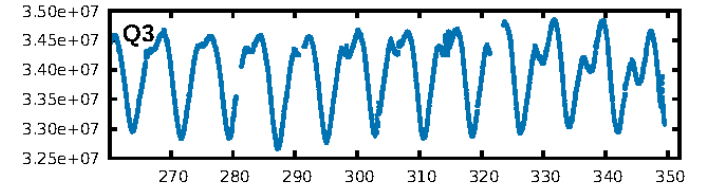
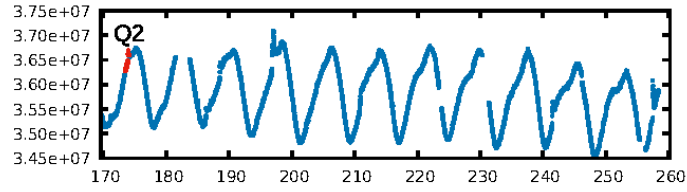
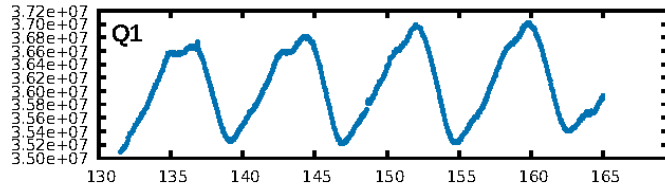
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [68.53σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.7%
ModelChiSquareGof-sig: 79.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7071
Centroid-sig: 0.3%
Centroid-so: 1.281 arcsec [1.69σ]
OotOffset-rm: 0.172 arcsec [0.32σ]
KicOffset-rm: 0.215 arcsec [0.46σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

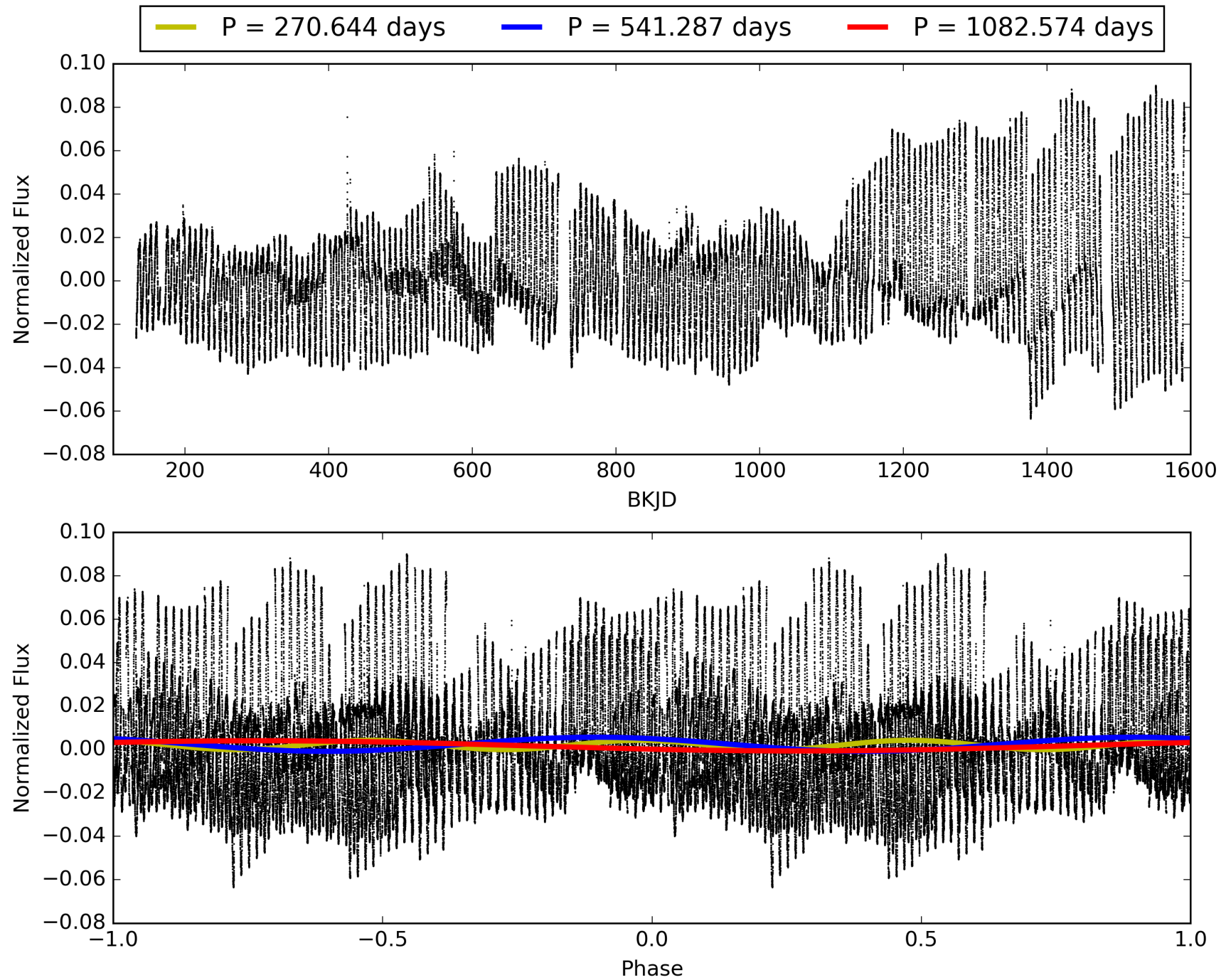
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:26:53 Z

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

TCE 010527793-04, PDC Light Curves

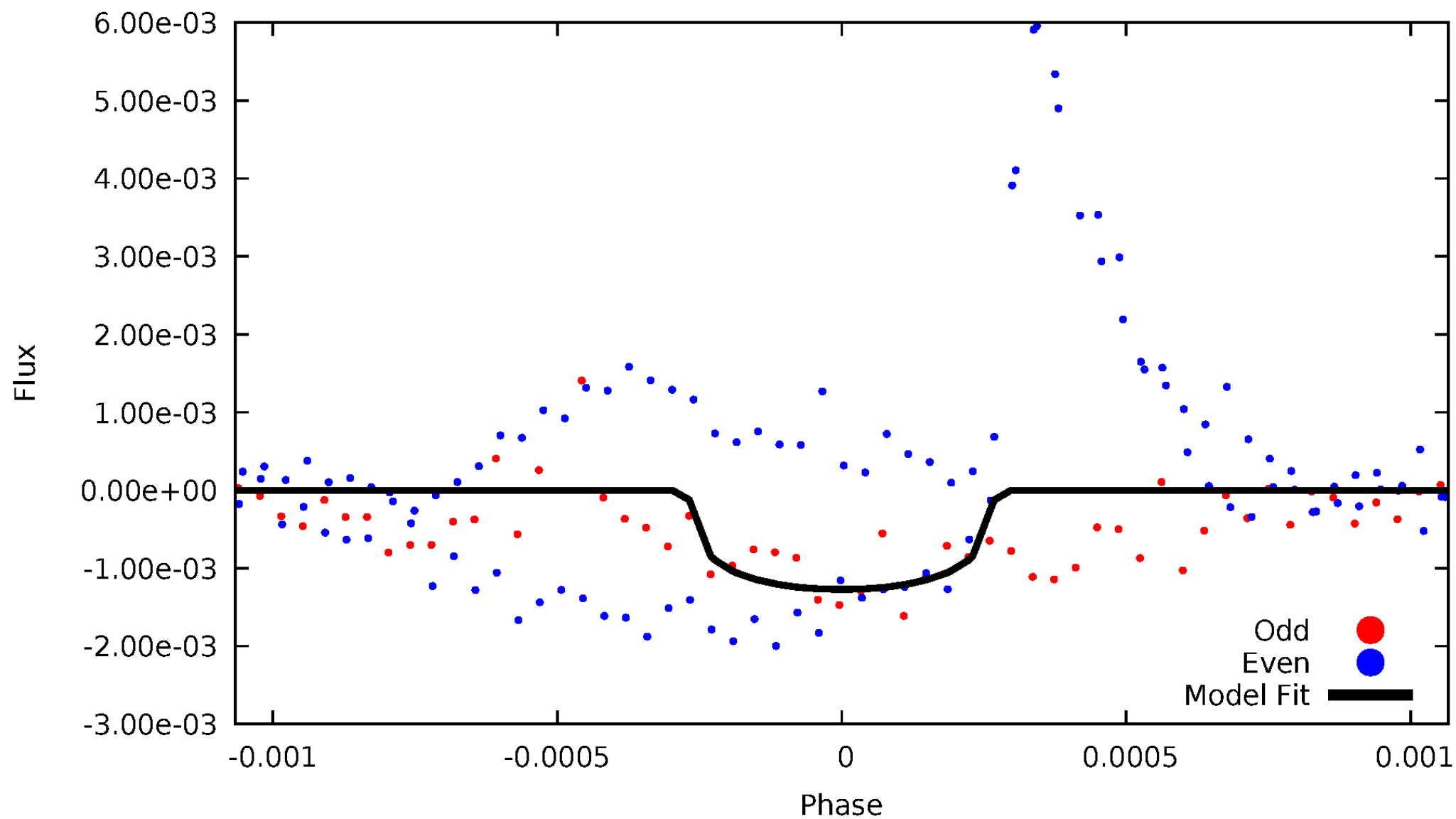


TCE 010527793-04



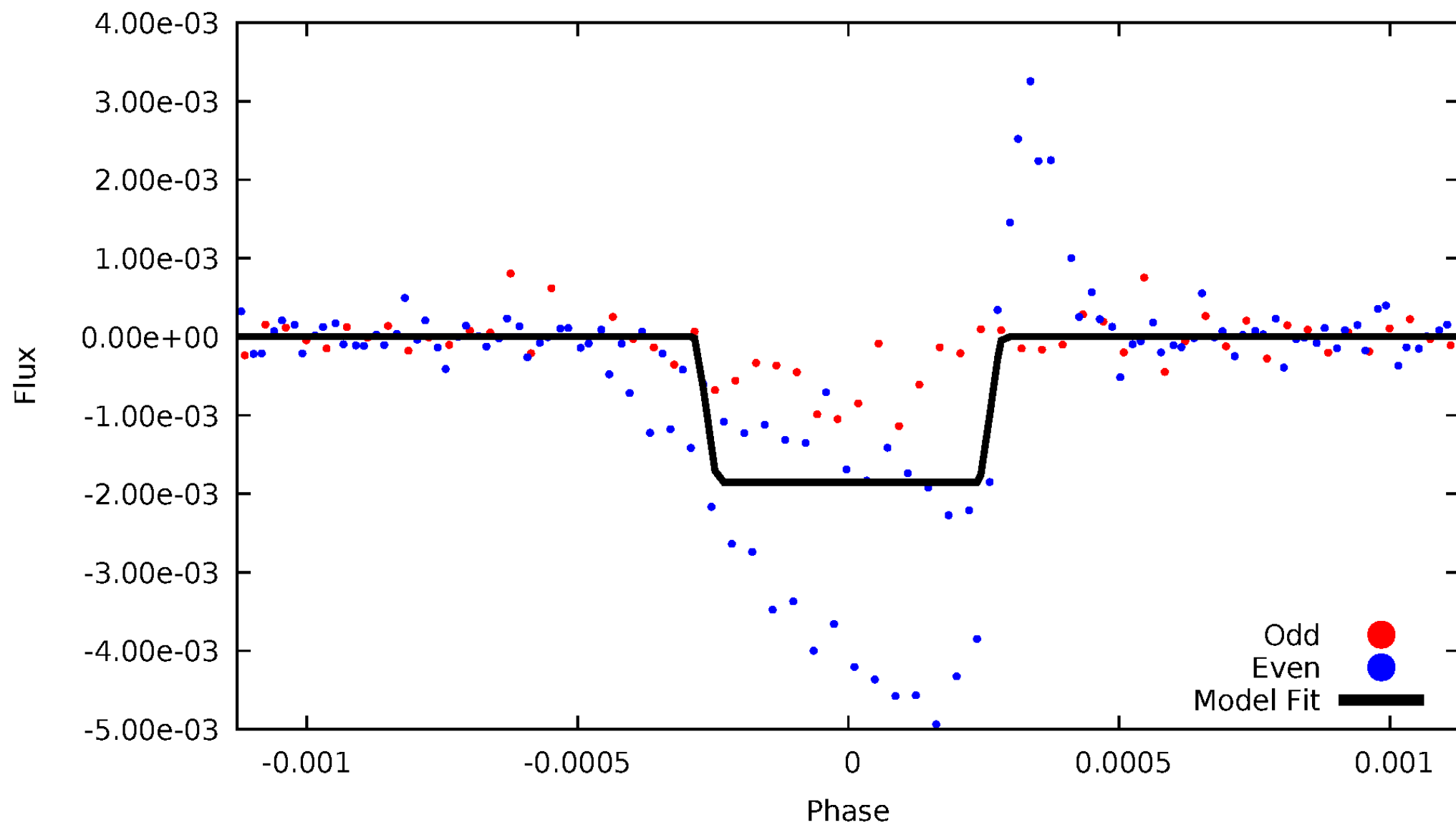
DV Odd/Even

TCE 010527793-04



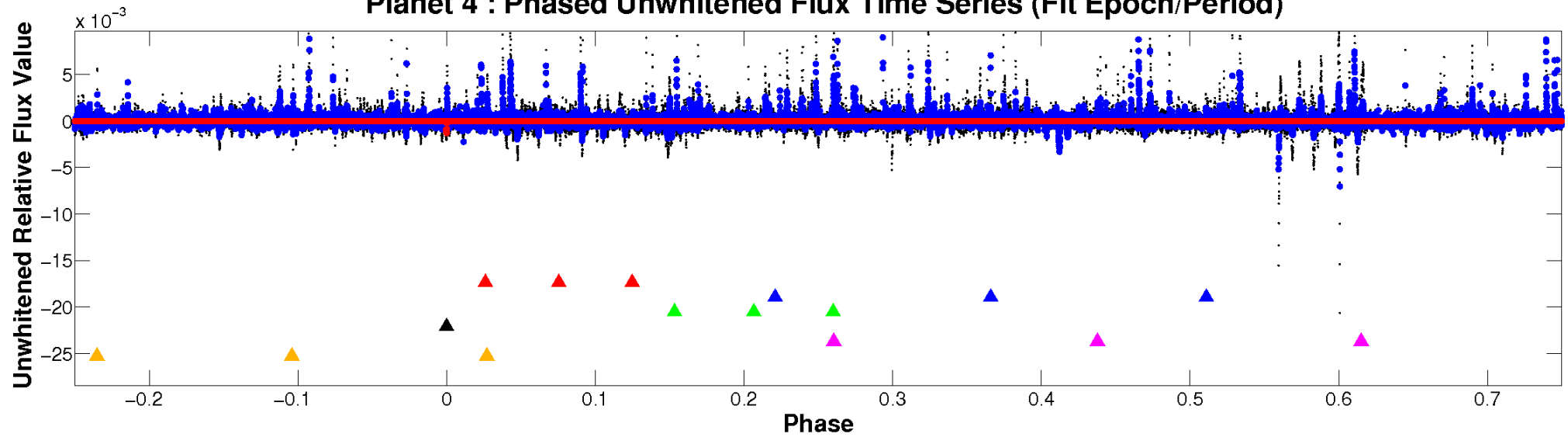
ALT Odd/Even

TCE 010527793-04

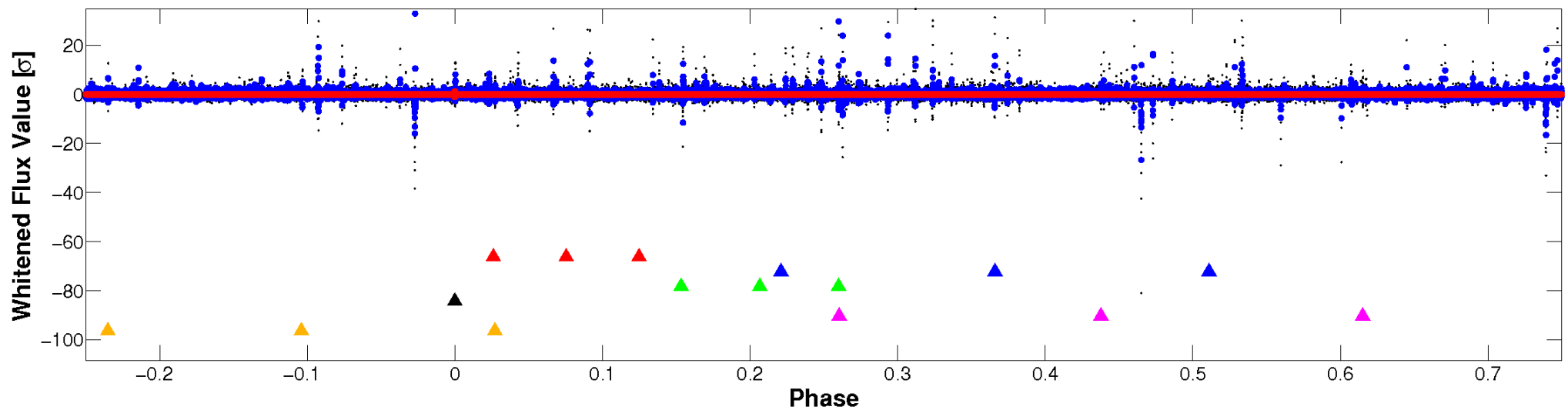


Non-Whitened Vs. Whitened Light Curve

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

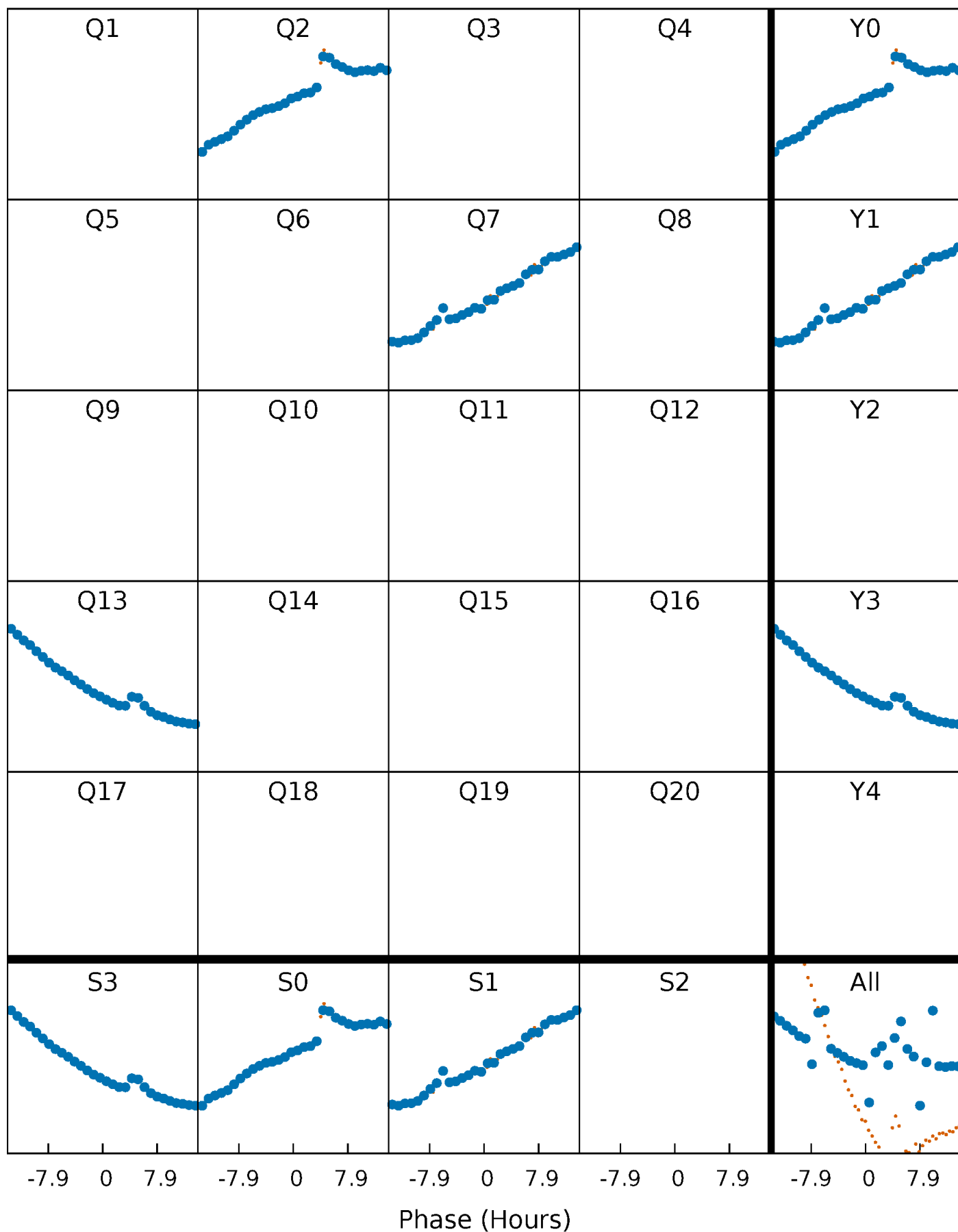


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



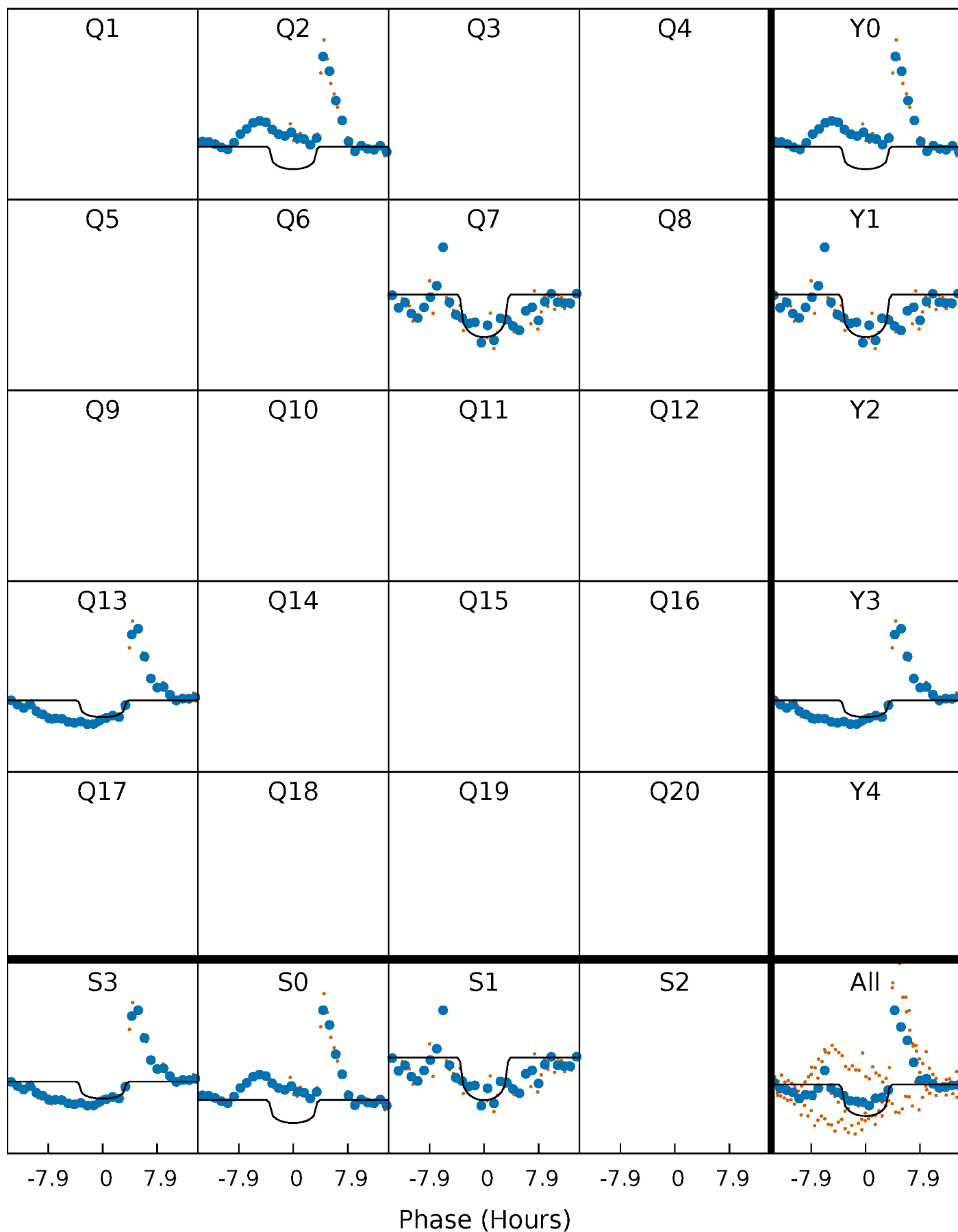
PDC Quarter-Phased Transit Curves

TCE 010527793-04 P=541.287236 Days $T_0=173.768126$ (BKJD)



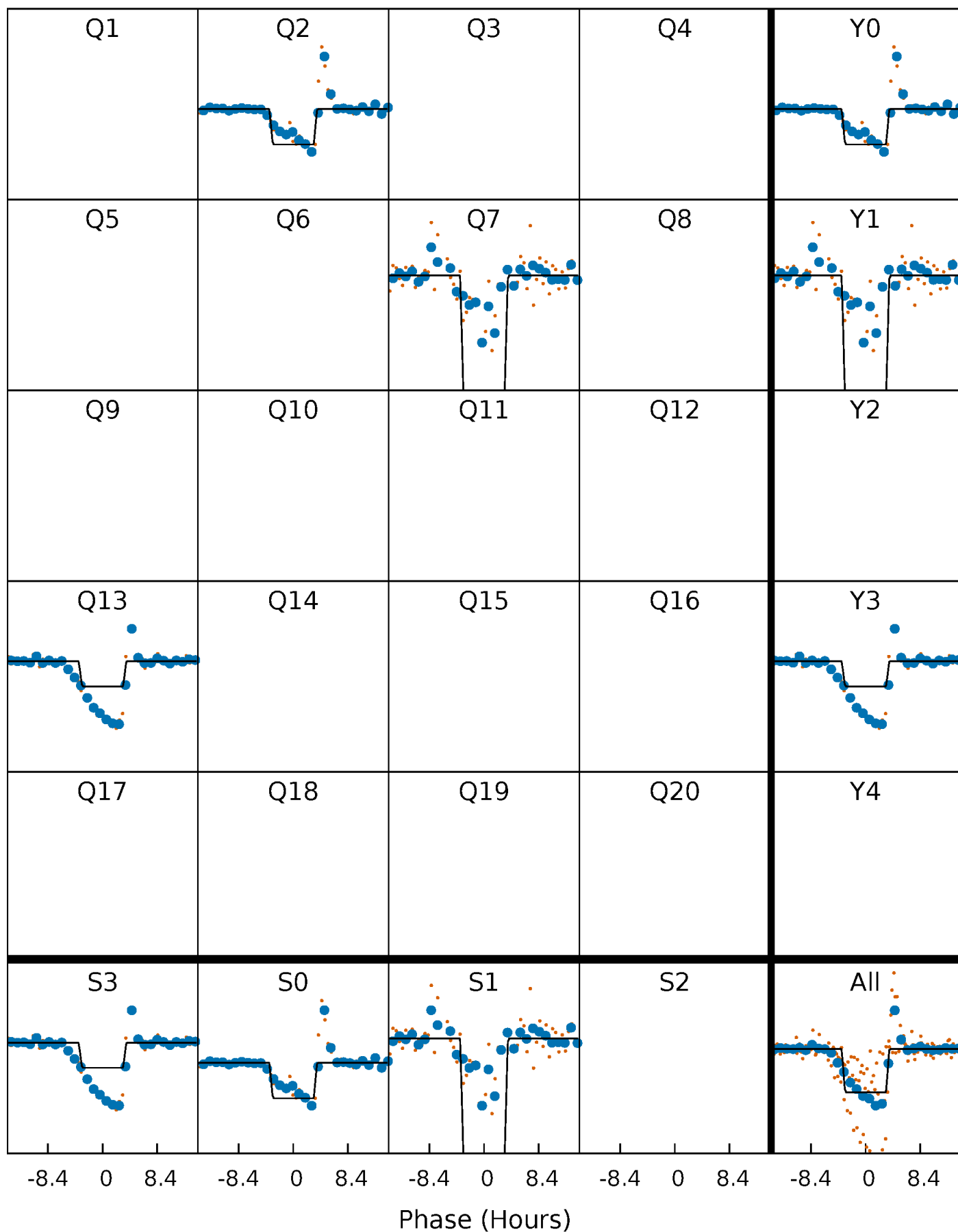
DV Quarter-Phased Transit Curves

TCE 010527793-04 P=541.287236 Days $T_0=173.768126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

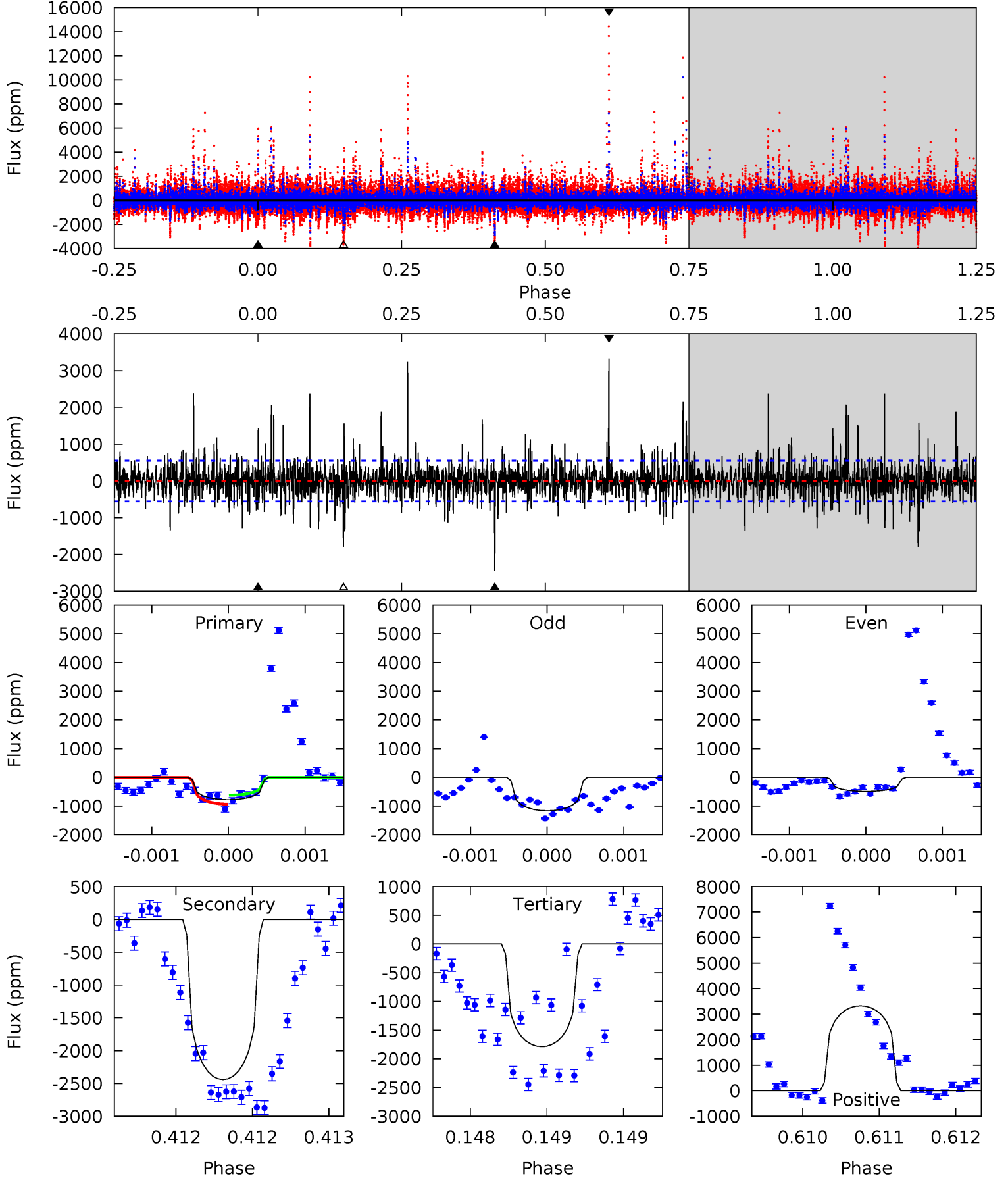
TCE 010527793-04 P=541.291816 Days $T_0=173.772032$ (BKJD)



DV Model-Shift Uniqueness Test

010527793-04, P = 541.287236 Days, E = 173.768126 Days

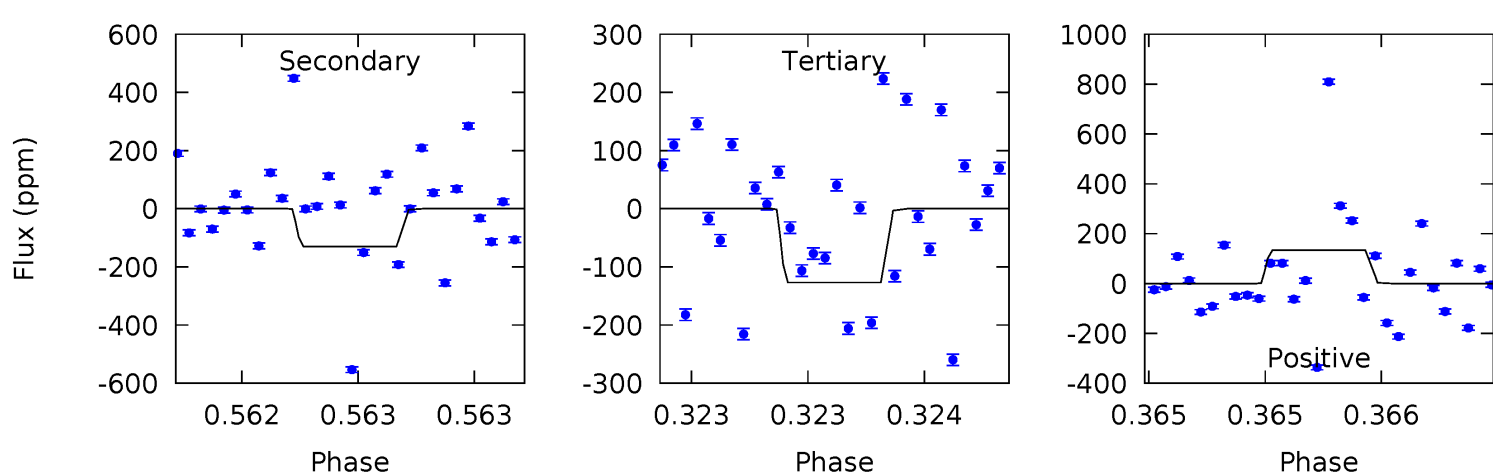
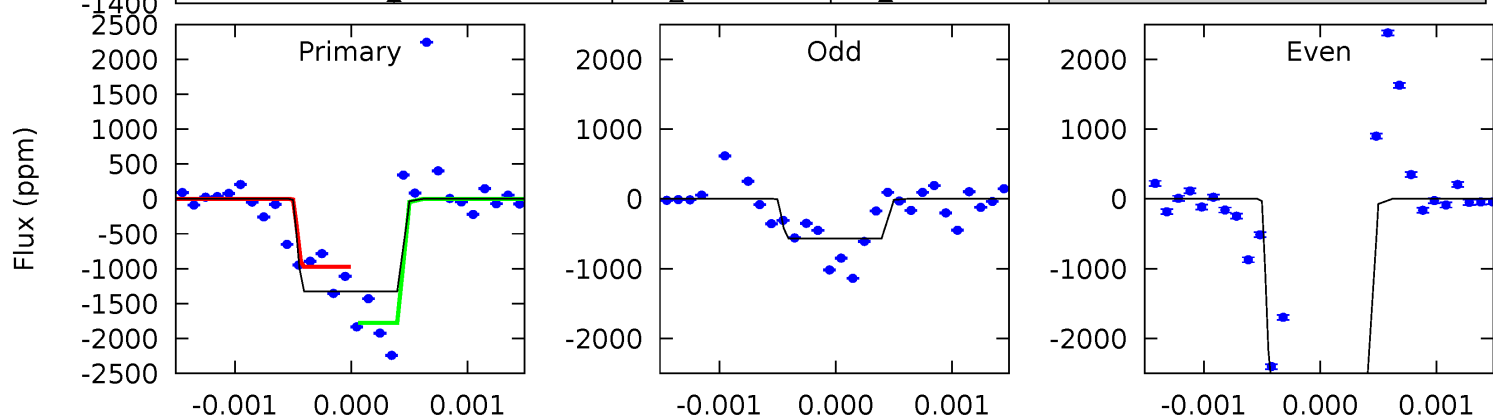
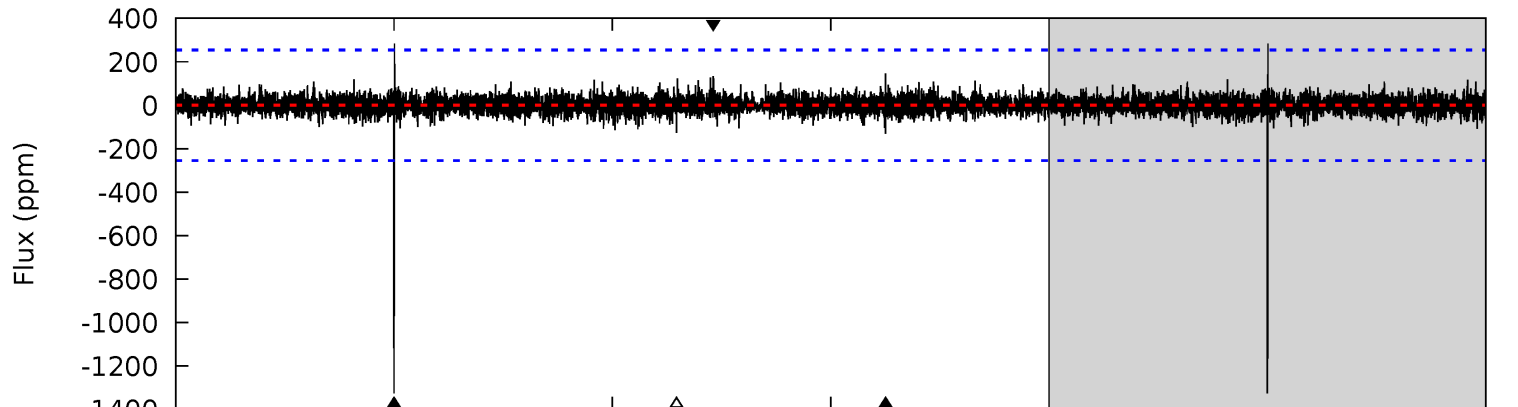
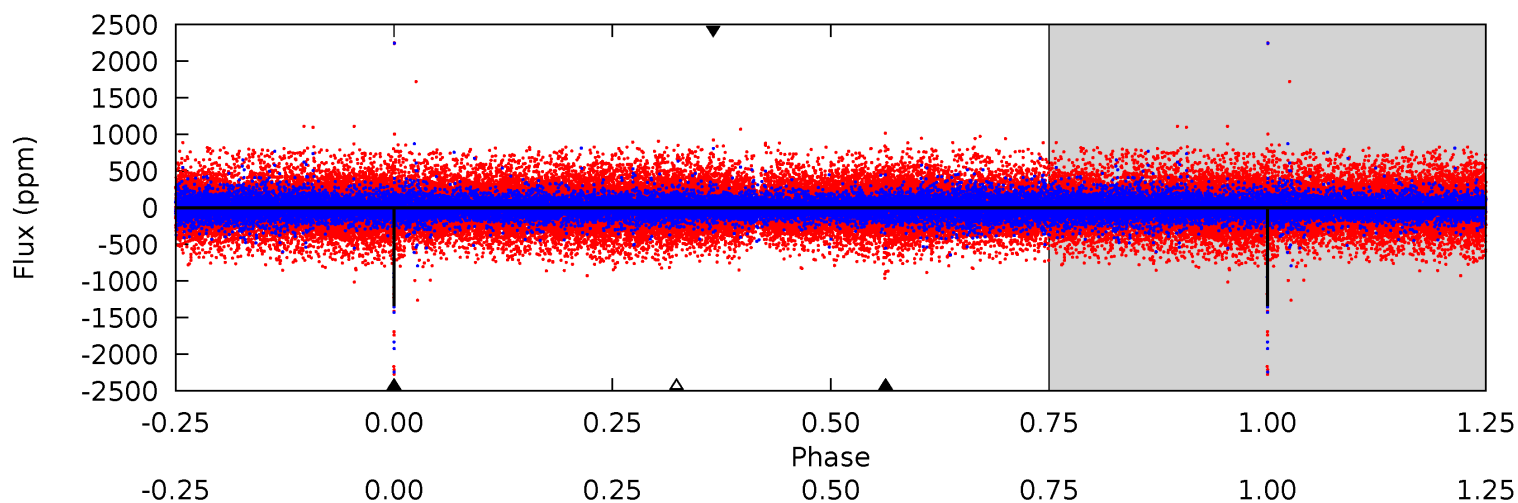
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.86	24.6	18.0	33.5	5.55	3.45	3.51	-10.2	-25.7	6.58	-8.93	1.85	0.61	0.58	1.58



Alt Model-Shift Uniqueness Test

010527793-04, P = 541.291816 Days, E = 173.772032 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	2.84	2.77	2.91	5.55	3.45	0.55	26.2	26.0	0.07	-0.07	31.8	1.26	0.18	8.57



Stellar Parameters For KIC 010527793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5178^{+154}_{-154}	$4.579^{+0.078}_{-0.052}$	$-0.600^{+0.350}_{-0.300}$	$0.694^{+0.073}_{-0.073}$	$0.666^{+0.081}_{-0.037}$	$2.809^{+0.910}_{-0.519}$
	+3%/-3%	+2%/-1%	+58%/-50%	+11%/-11%	+12%/-6%	+32%/-18%
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 010527793-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2441 ± 99	$4.27^{+4.18}_{-2.89}$	248^{+10}_{-10}	4862^{+3669}_{-1081}	$96347^{+769188}_{-71791}$
Alt.	-130 ± 46	$4.93^{+3.98}_{-3.20}$	248^{+9}_{-10}	2828^{+1103}_{-411}	3663^{+30061}_{-2658}

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 $A_{obs} \gg 1.0$

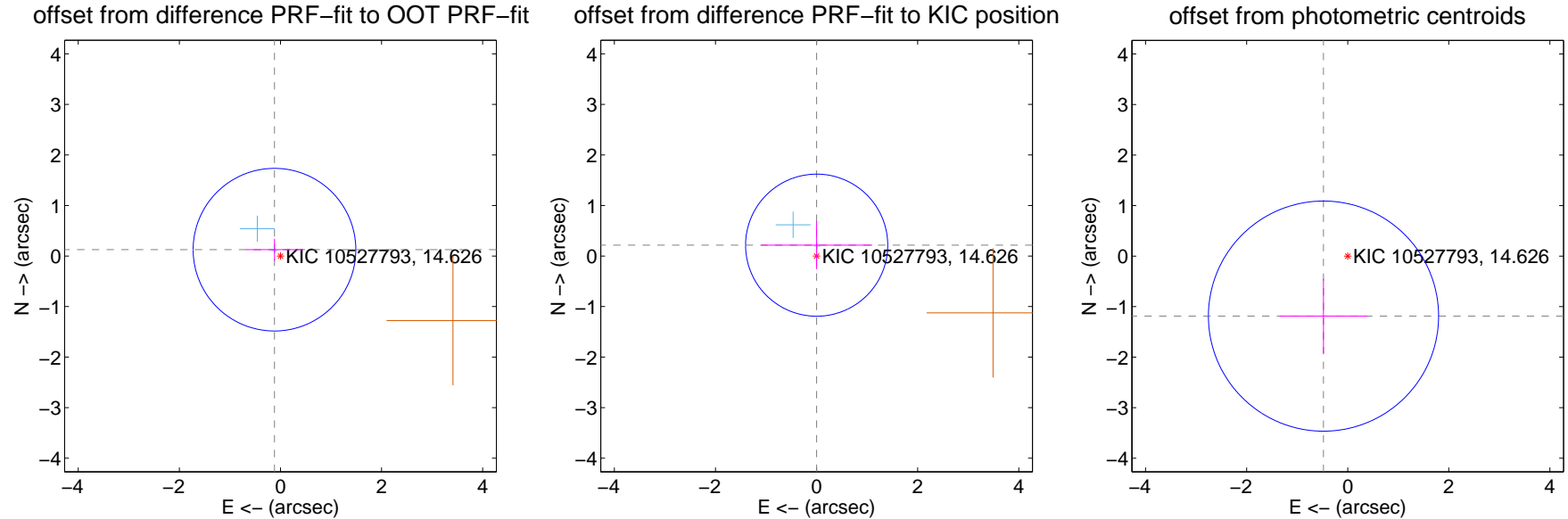
DV Centroid Data

Supplemental centroid analysis for 010527793-04. Kepler magnitude: 14.63. Transit SNR 7.16

There are 2 quarters with good PRF difference image offsets

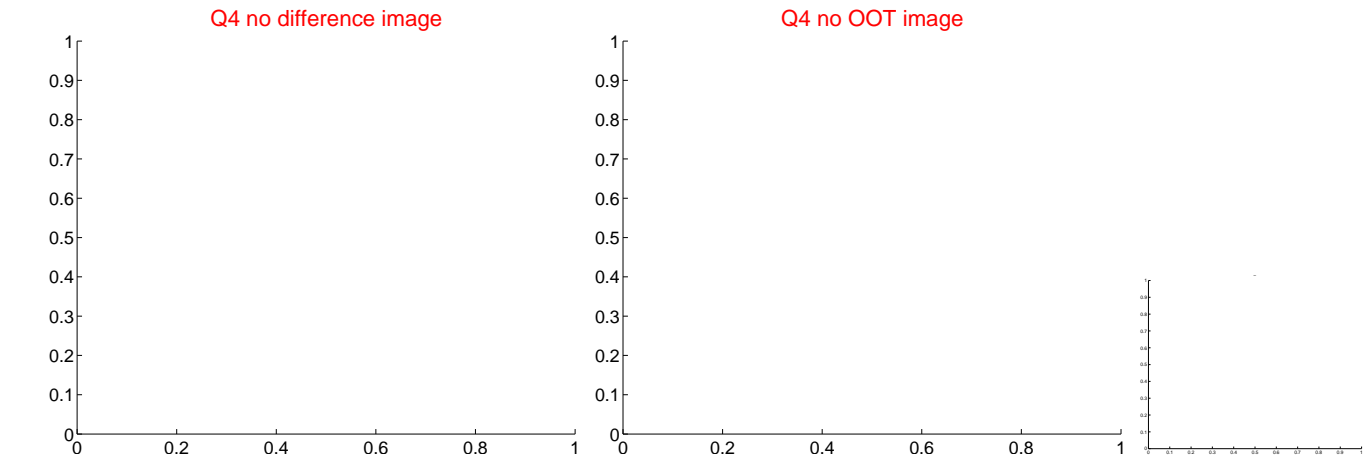
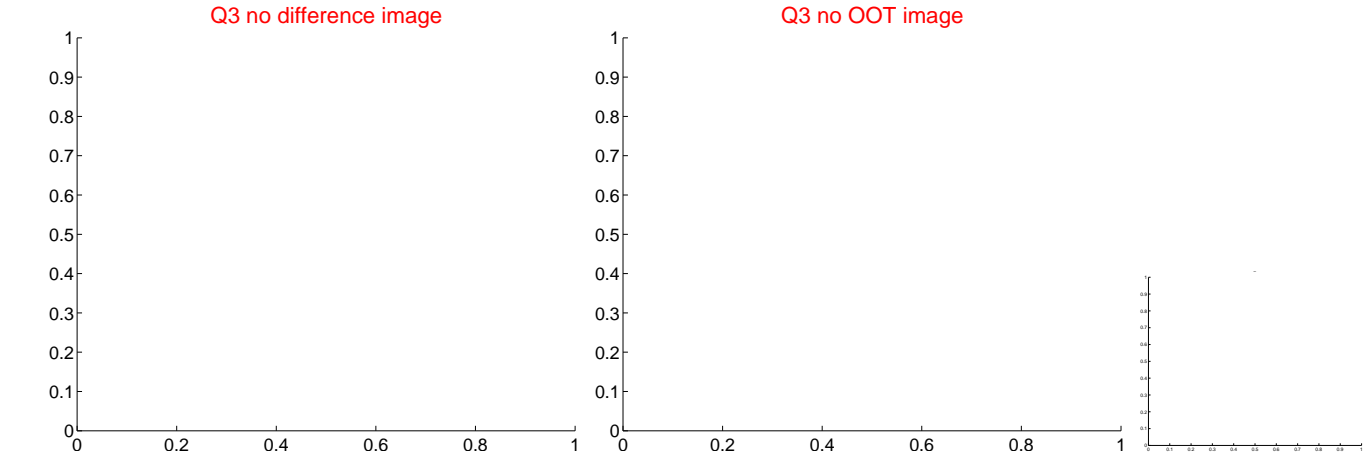
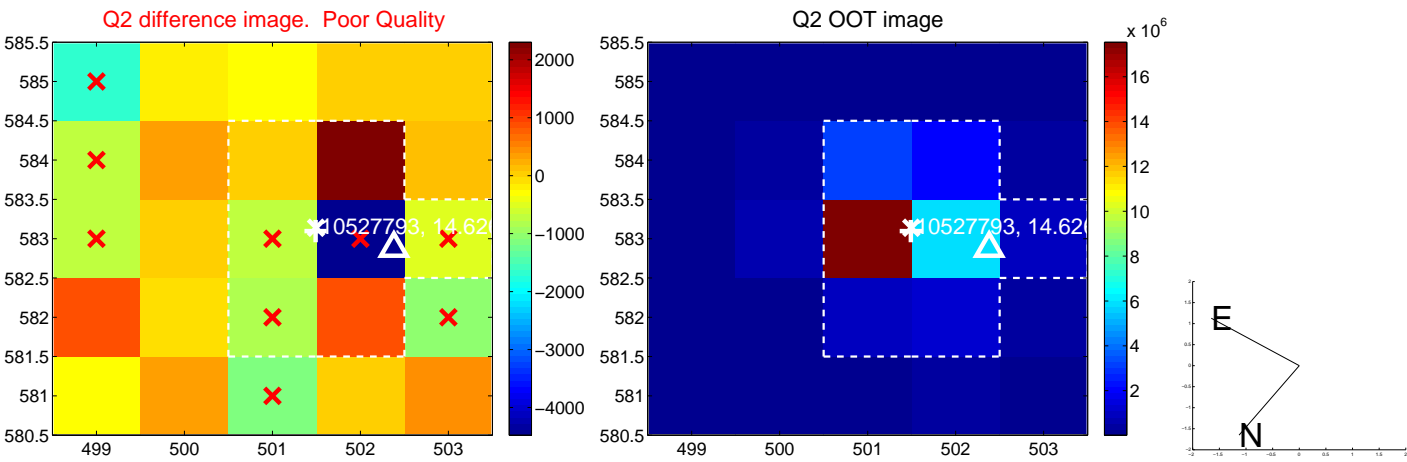
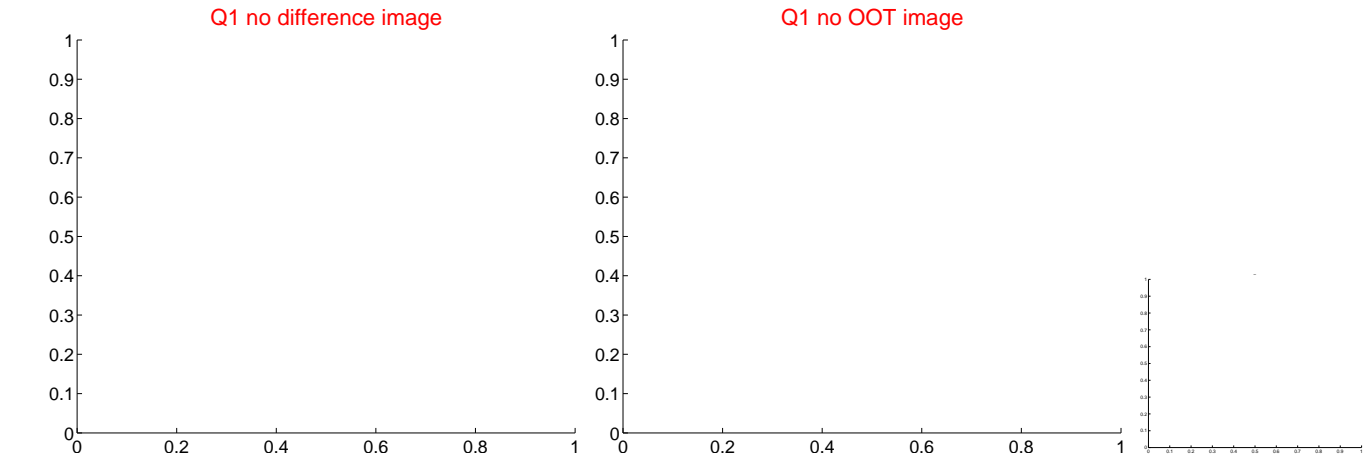
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.172 ± 0.536	0.32	0.118 ± 0.565	0.125 ± 0.217
PRF-fit source offset from KIC position	0.215 ± 0.469	0.46	-0.002 ± 1.099	0.215 ± 0.477
photometric centroid source offset	1.28 ± 0.76	1.69	0.48 ± 0.86	-1.19 ± 0.74

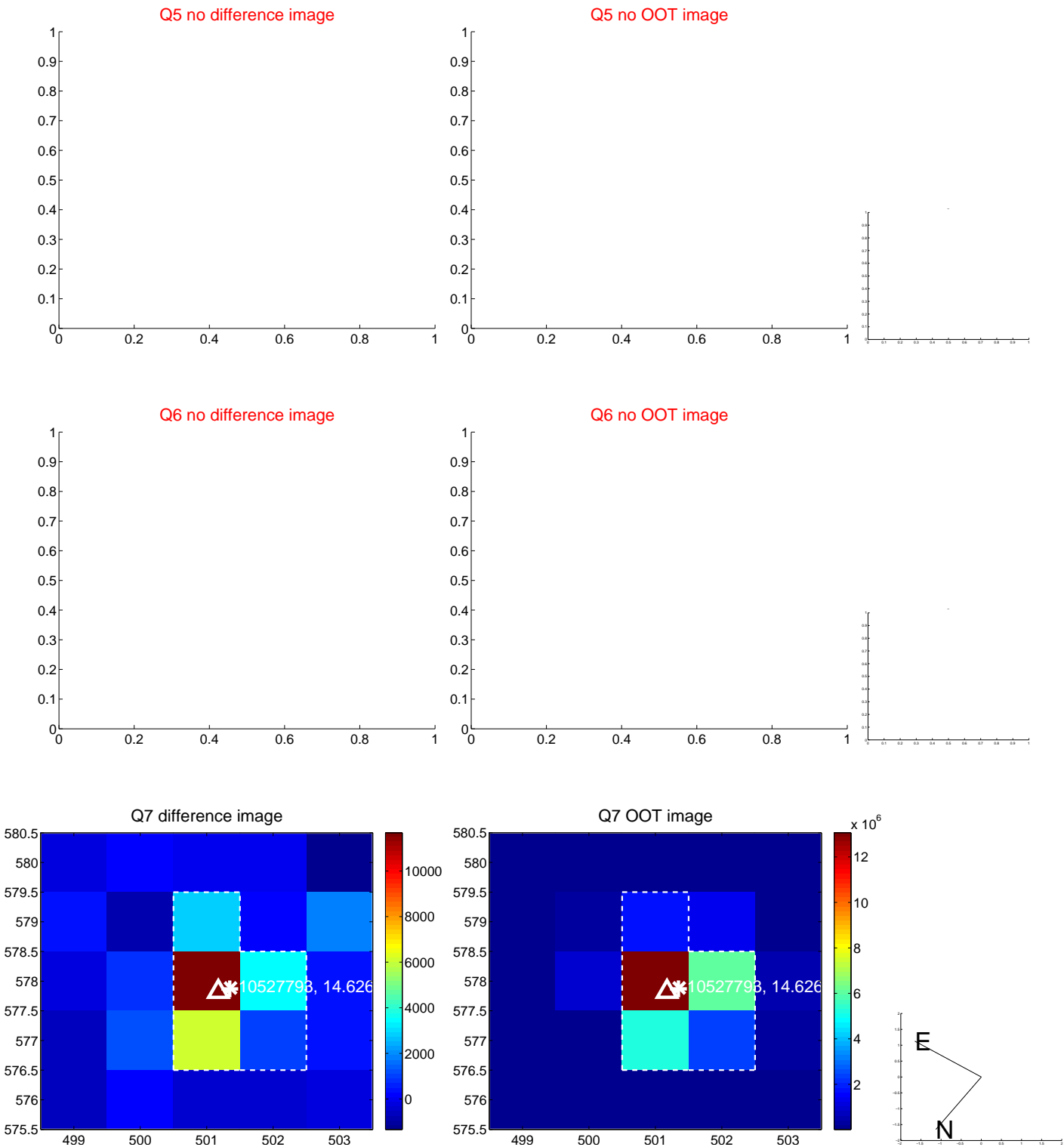


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

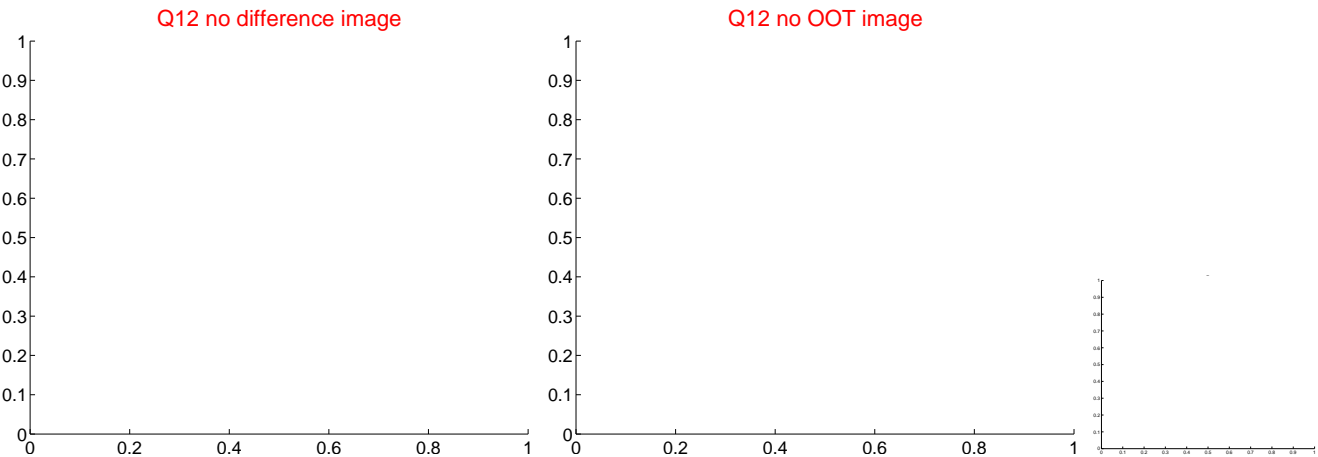
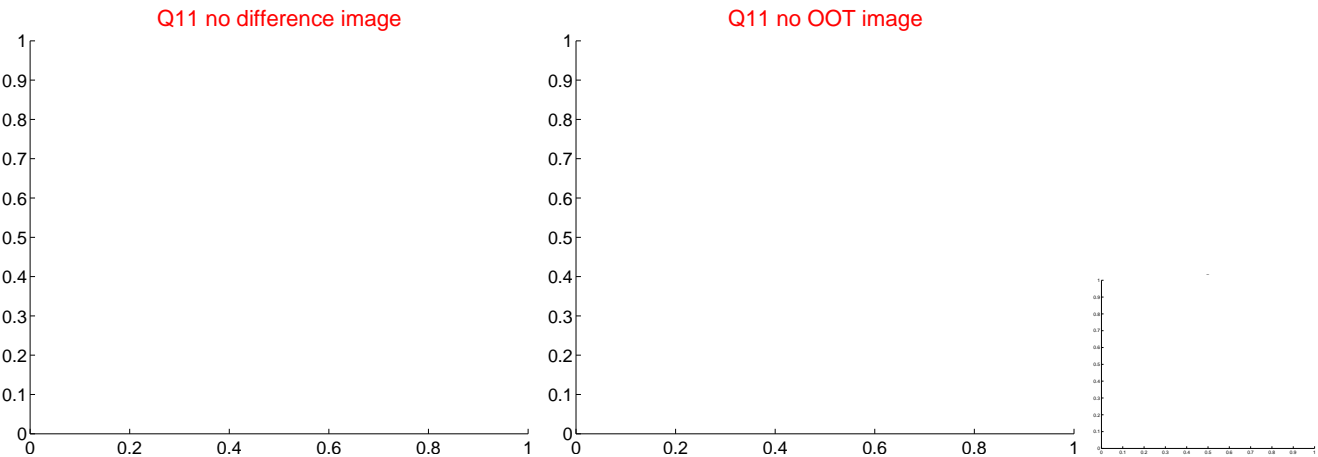
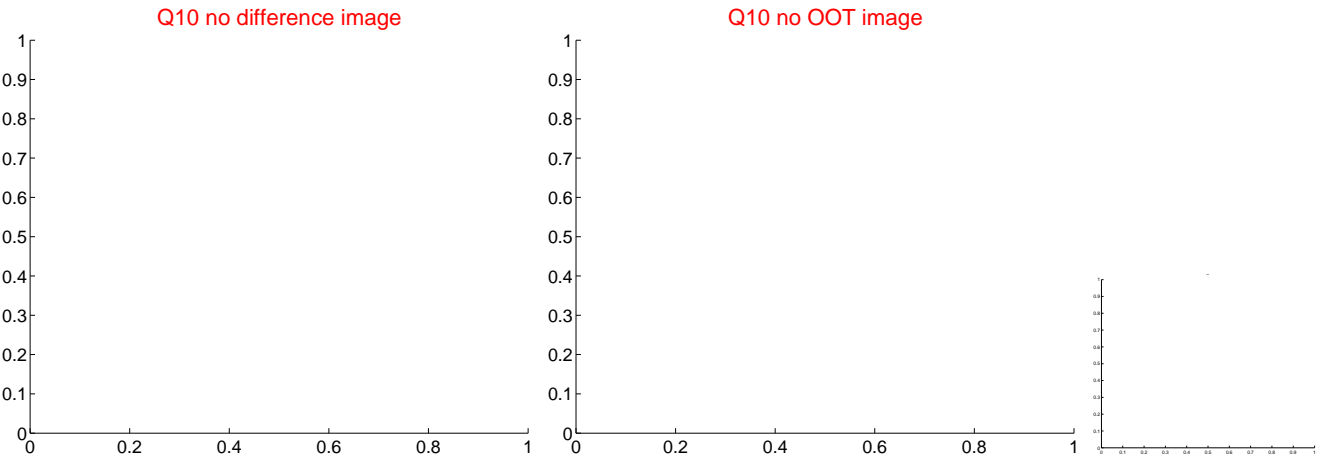
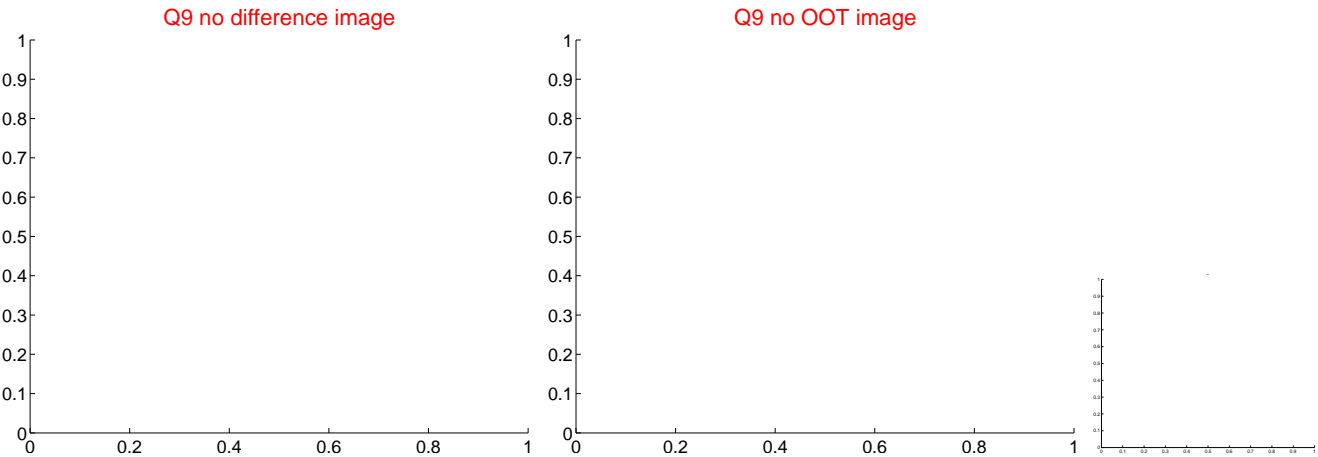
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



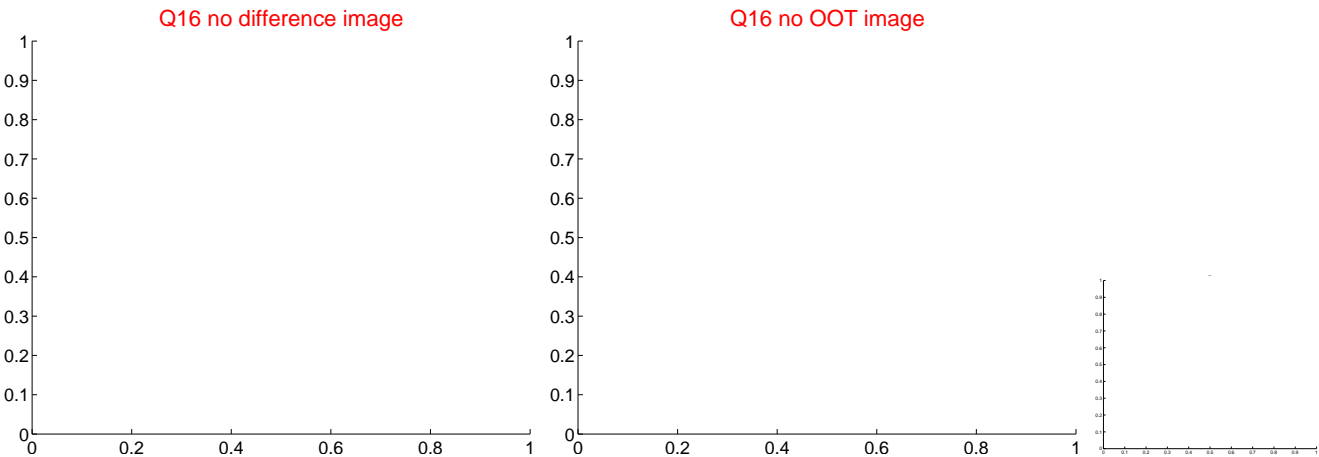
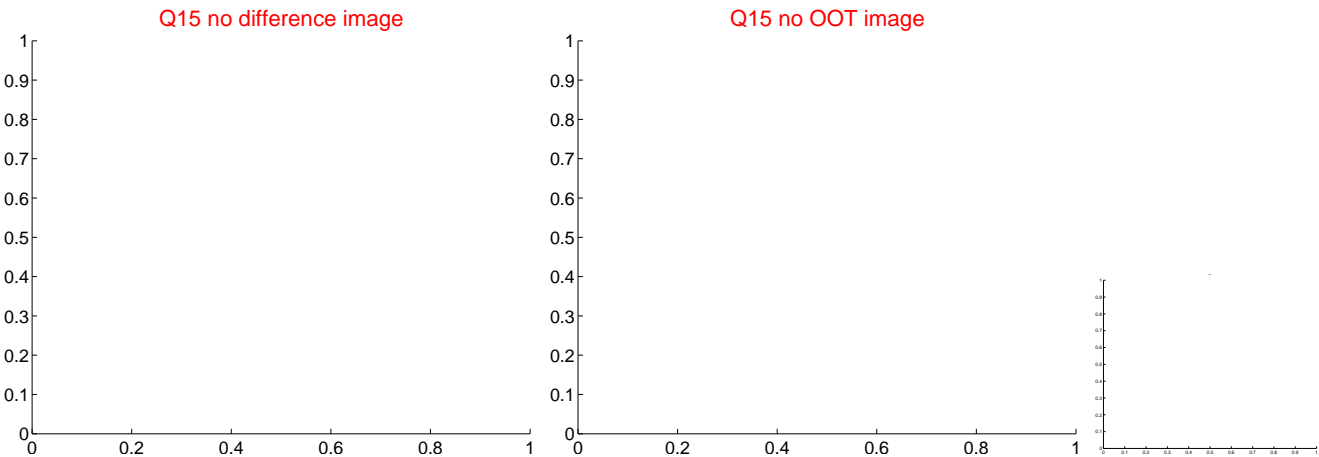
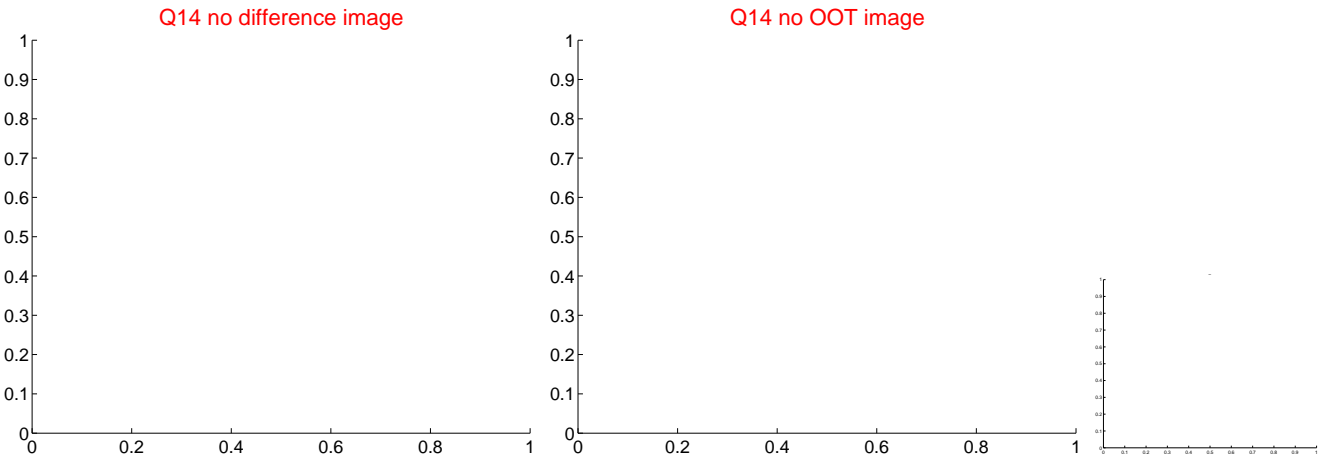
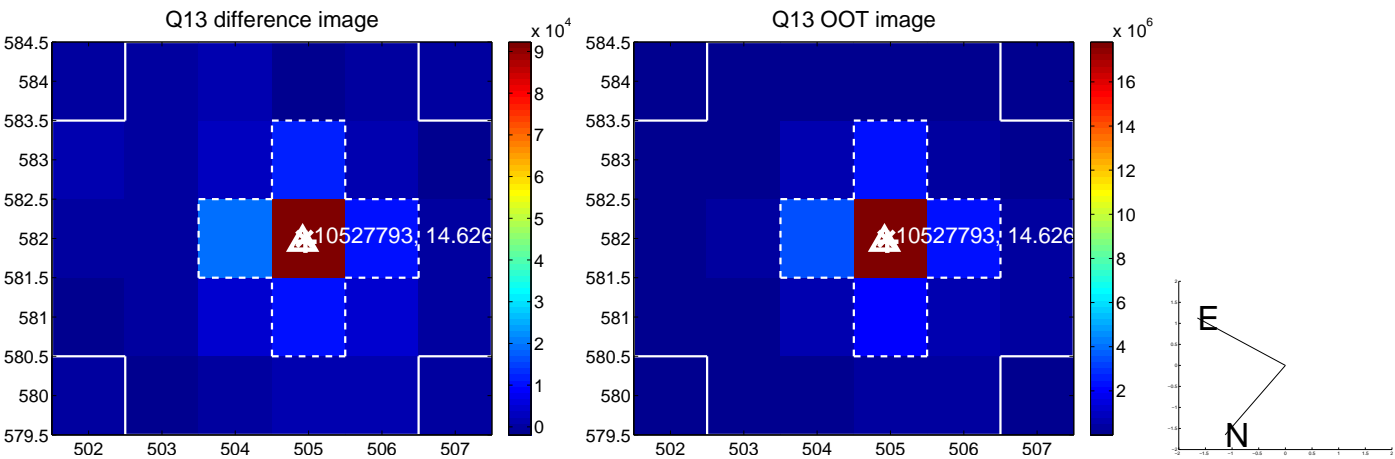
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



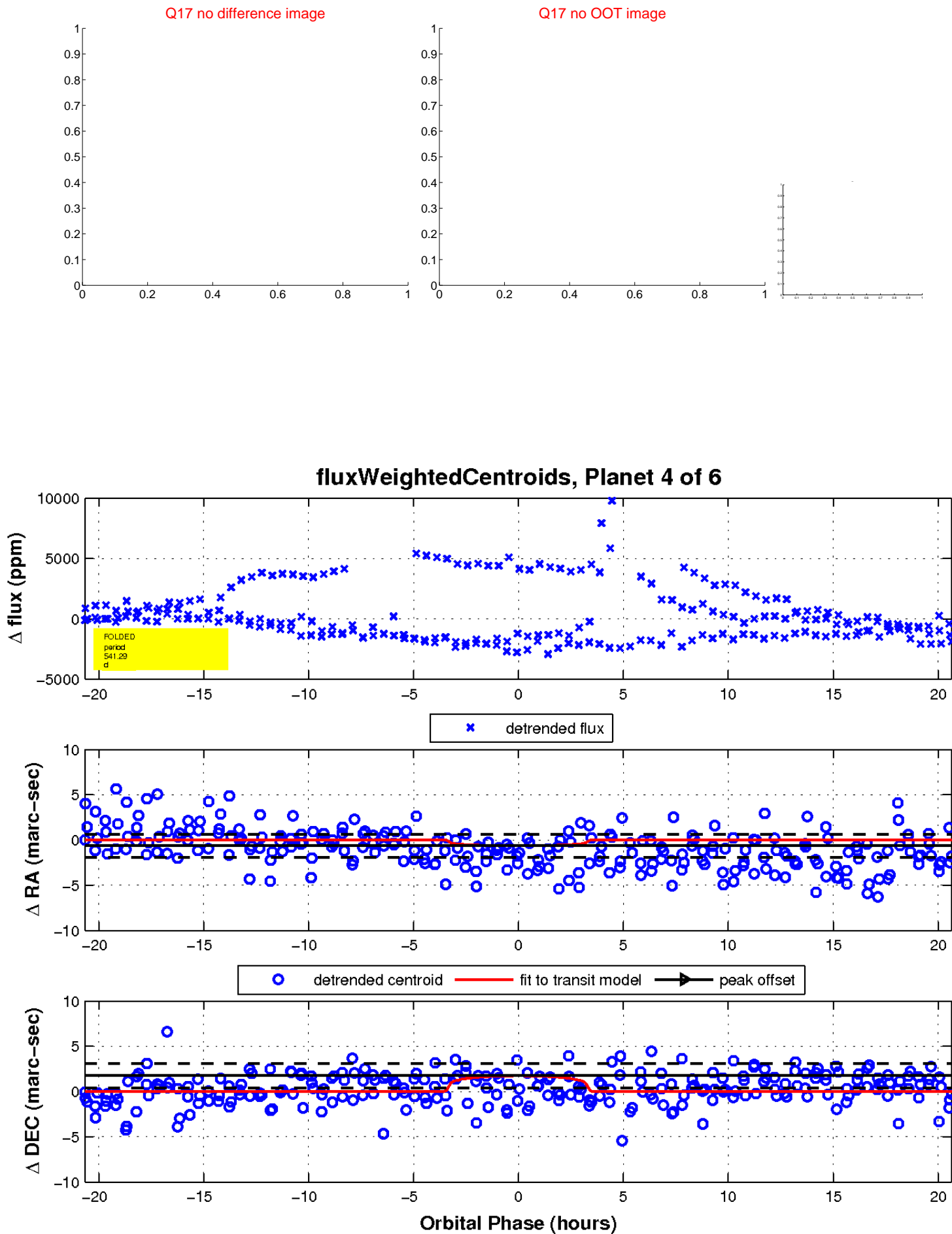
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

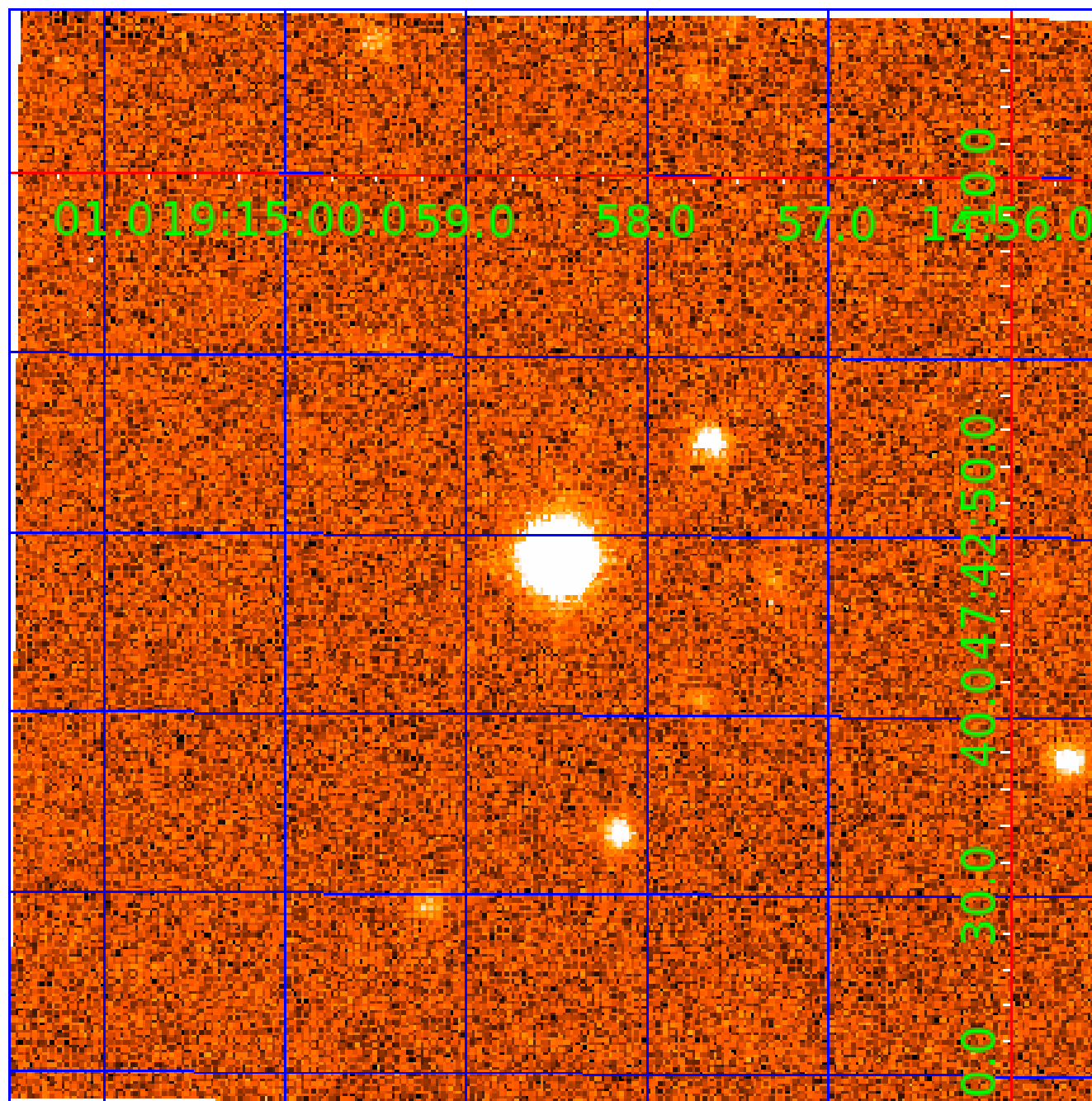


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010527793

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})
010527793-01	OBS	No	514.578718	241.321323	1660.0	6.288	22.0	8.0	0.69	5178	2.91	0.26
010527793-02	OBS	No	462.794034	450.363195	1313.2	6.243	17.8	6.8	0.69	5178	2.56	0.30
010527793-03	OBS	No	512.407303	314.499602	3068.9	10.495	17.4	13.1	0.69	5178	4.91	0.26
010527793-04	OBS	No	541.287236	173.768126	1275.2	6.925	16.3	7.2	0.69	5178	2.47	0.24
010527793-05	OBS	No	445.287091	506.717205	1264.3	5.052	16.3	7.1	0.69	5178	2.64	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010527793-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
010527793-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010527793-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

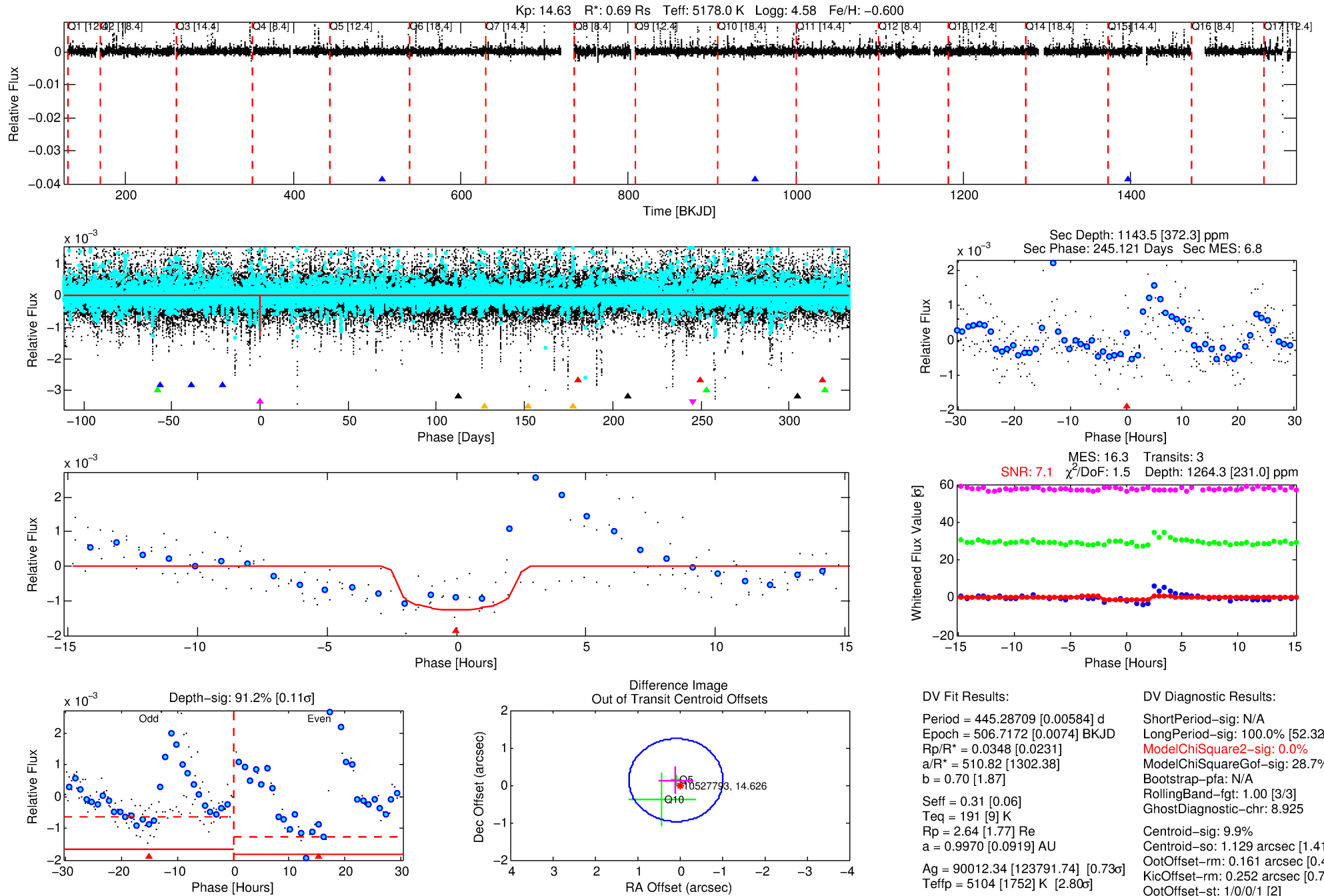
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010527793-05

No Significant Match Found

DV One-Page Summary

KIC: 10527793 Candidate: 5 of 6 Period: 445.287 d



DV Fit Results:

Period = 445.28709 [0.00584] d
Epoch = 506.7172 [0.0074] BKJD
Rp/R* = 0.0348 [0.0231]
a/R* = 510.82 [1302.38]
b = 0.70 [1.87]
Seff = 0.31 [0.06]
Teq = 191 [9] K
Rp = 2.64 [1.77] Re
a = 0.9970 [0.0919] AU
Ag = 90012.34 [123791.74] [0.73σ]
Teffp = 5104 [1752] K [2.80σ]

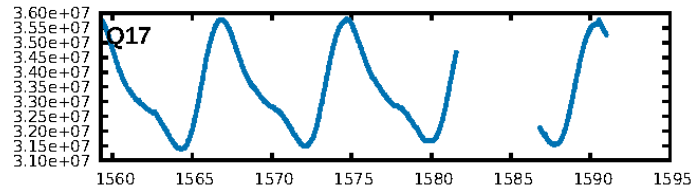
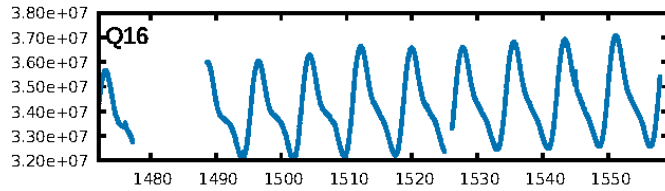
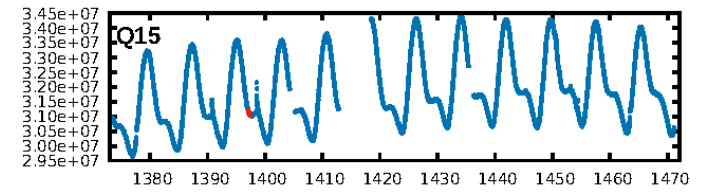
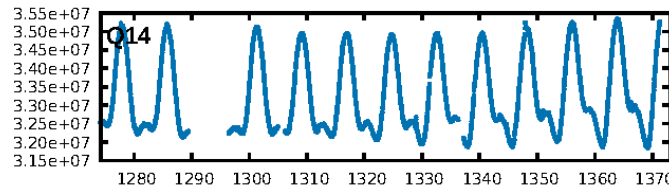
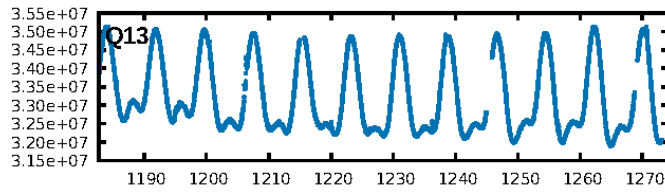
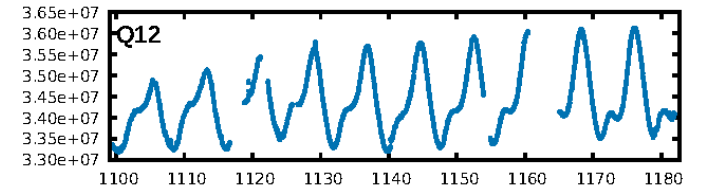
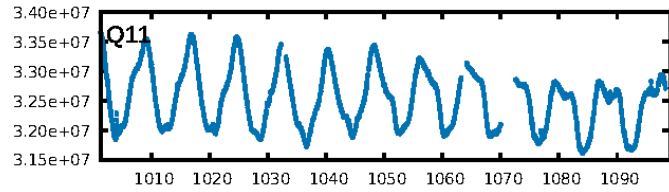
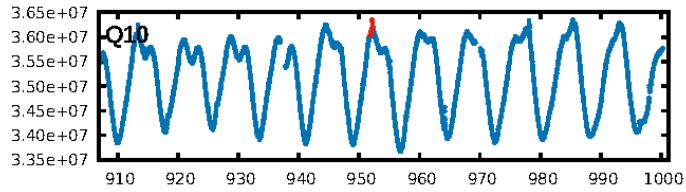
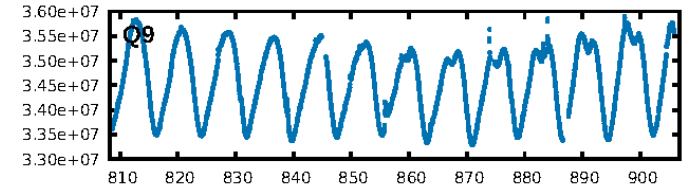
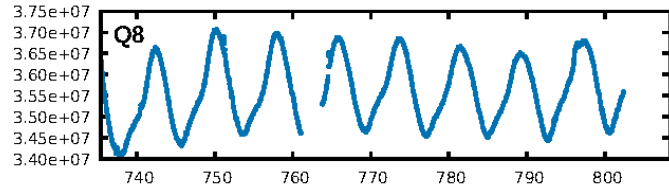
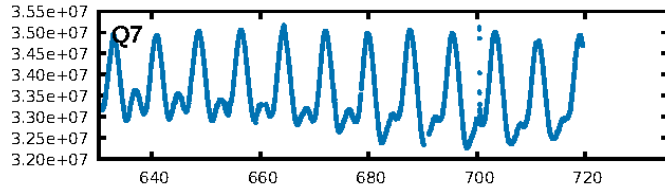
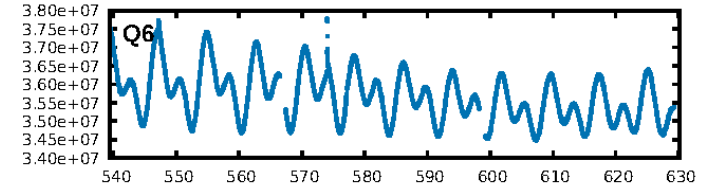
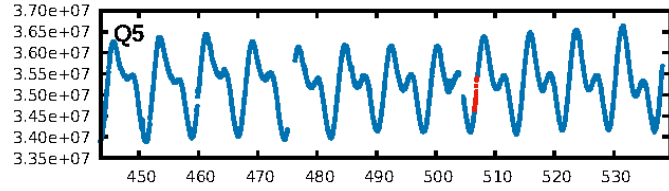
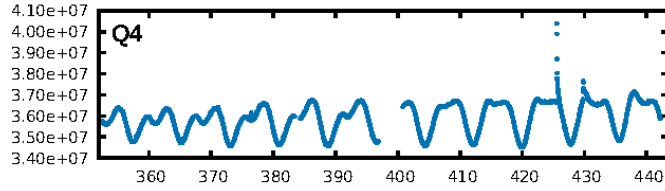
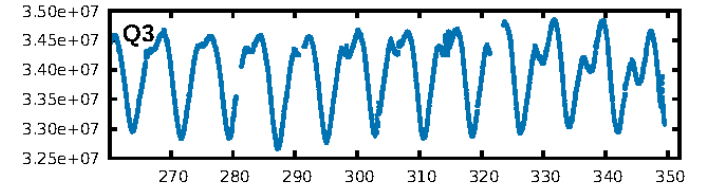
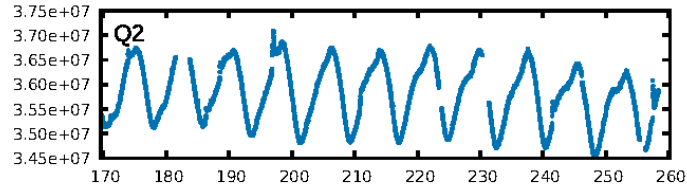
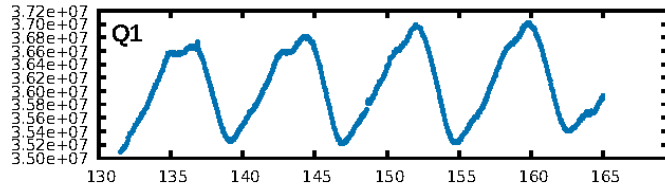
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [52.32σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 28.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.925
Centroid-sig: 9.9%
Centroid-so: 1.129 arcsec [1.41σ]
OotOffset-rm: 0.161 arcsec [0.44σ]
KicOffset-rm: 0.252 arcsec [0.71σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

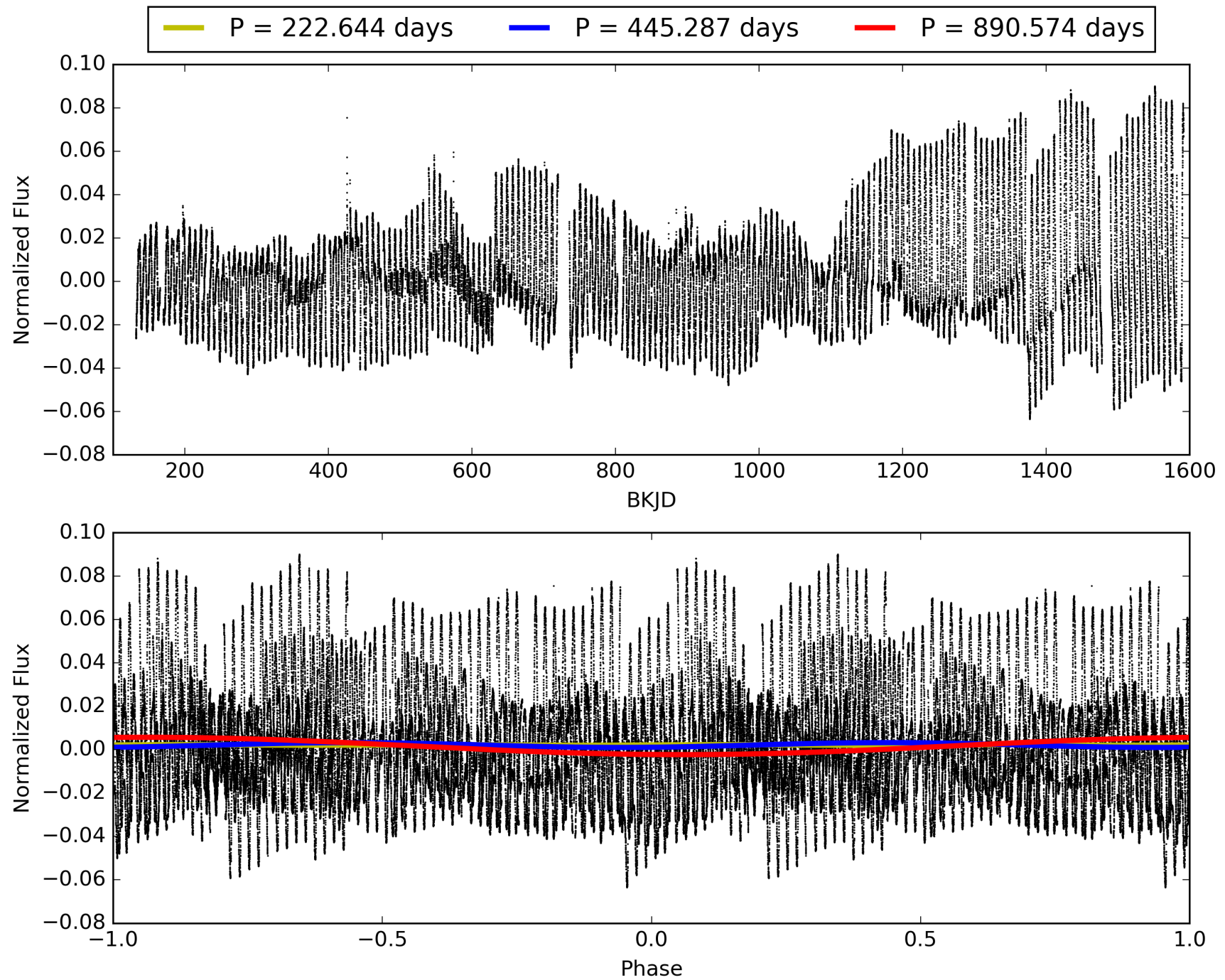
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:27:07 Z

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

TCE 010527793-05, PDC Light Curves

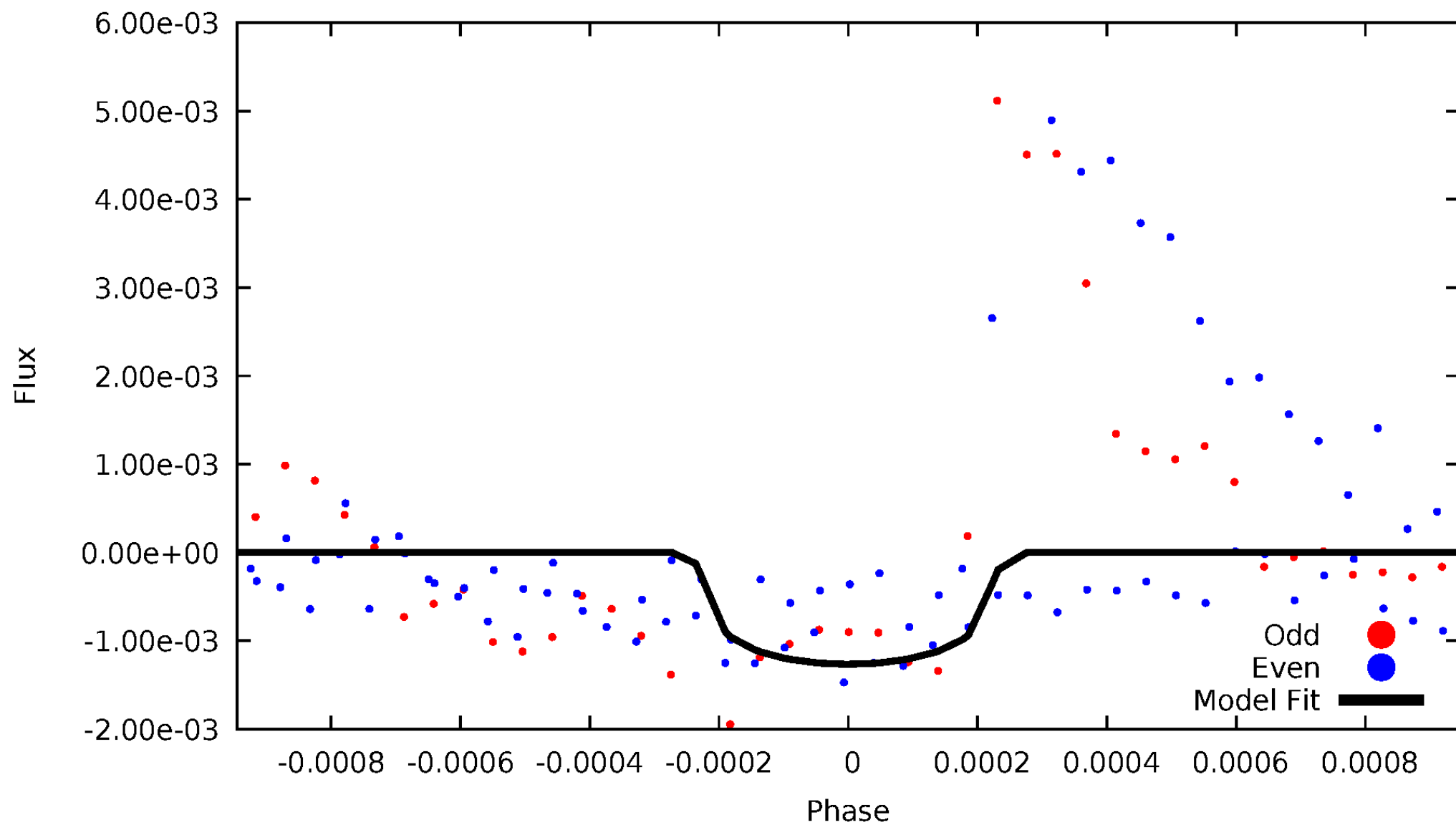


TCE 010527793-05



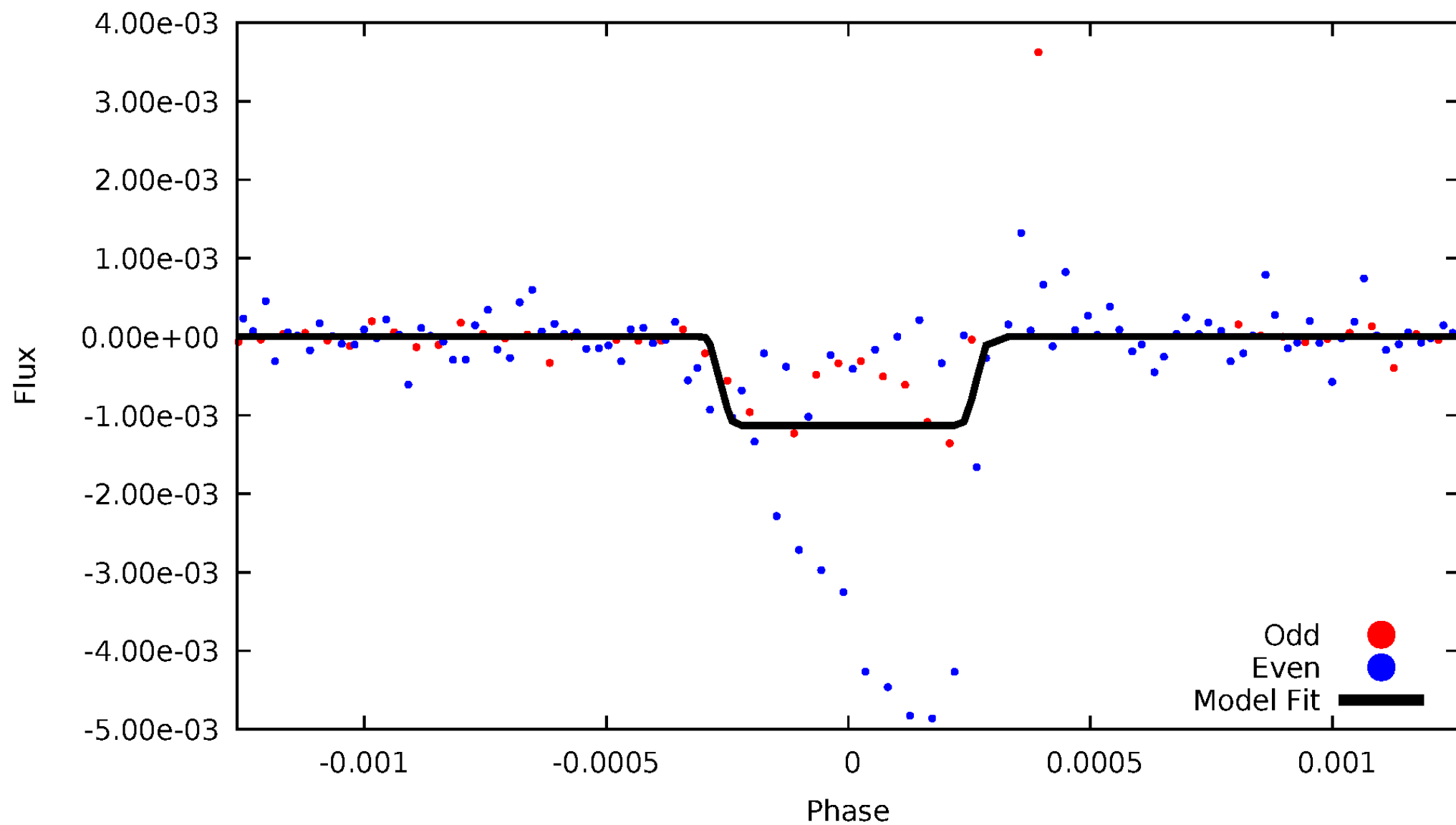
DV Odd/Even

TCE 010527793-05



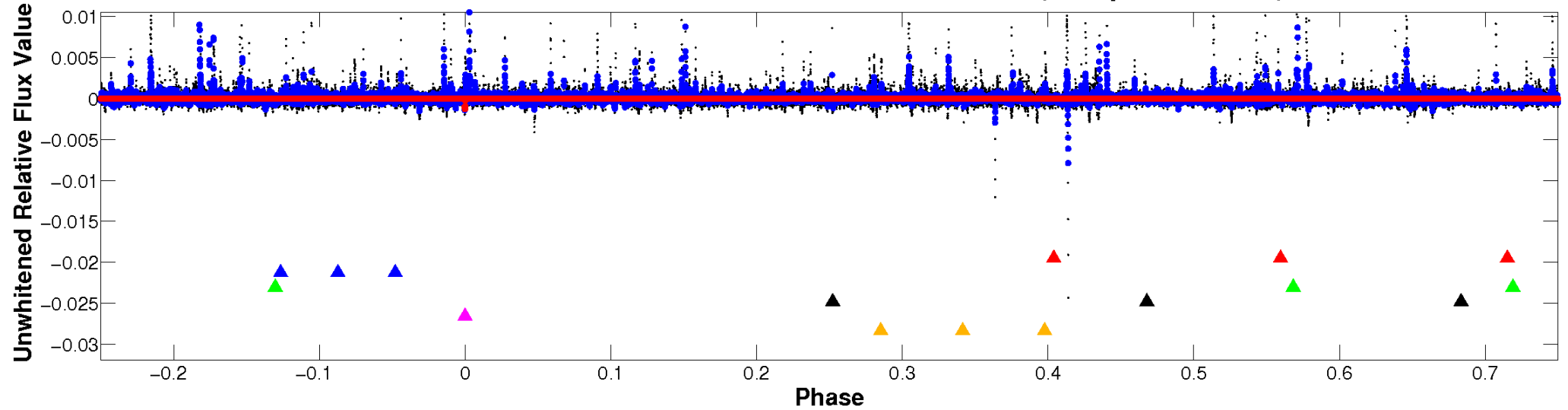
ALT Odd/Even

TCE 010527793-05

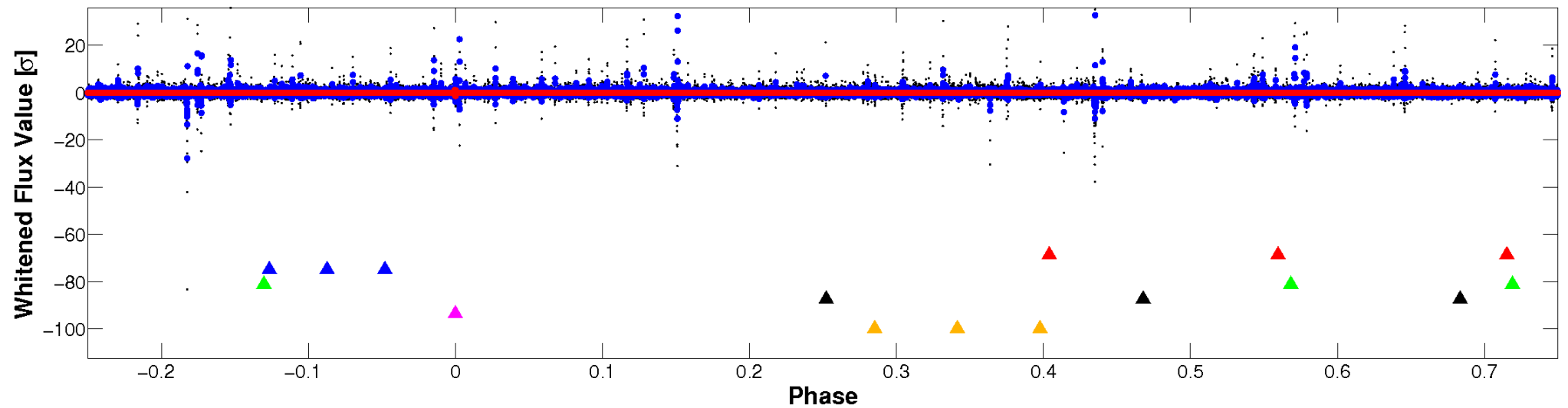


Non-Whitened Vs. Whitened Light Curve

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

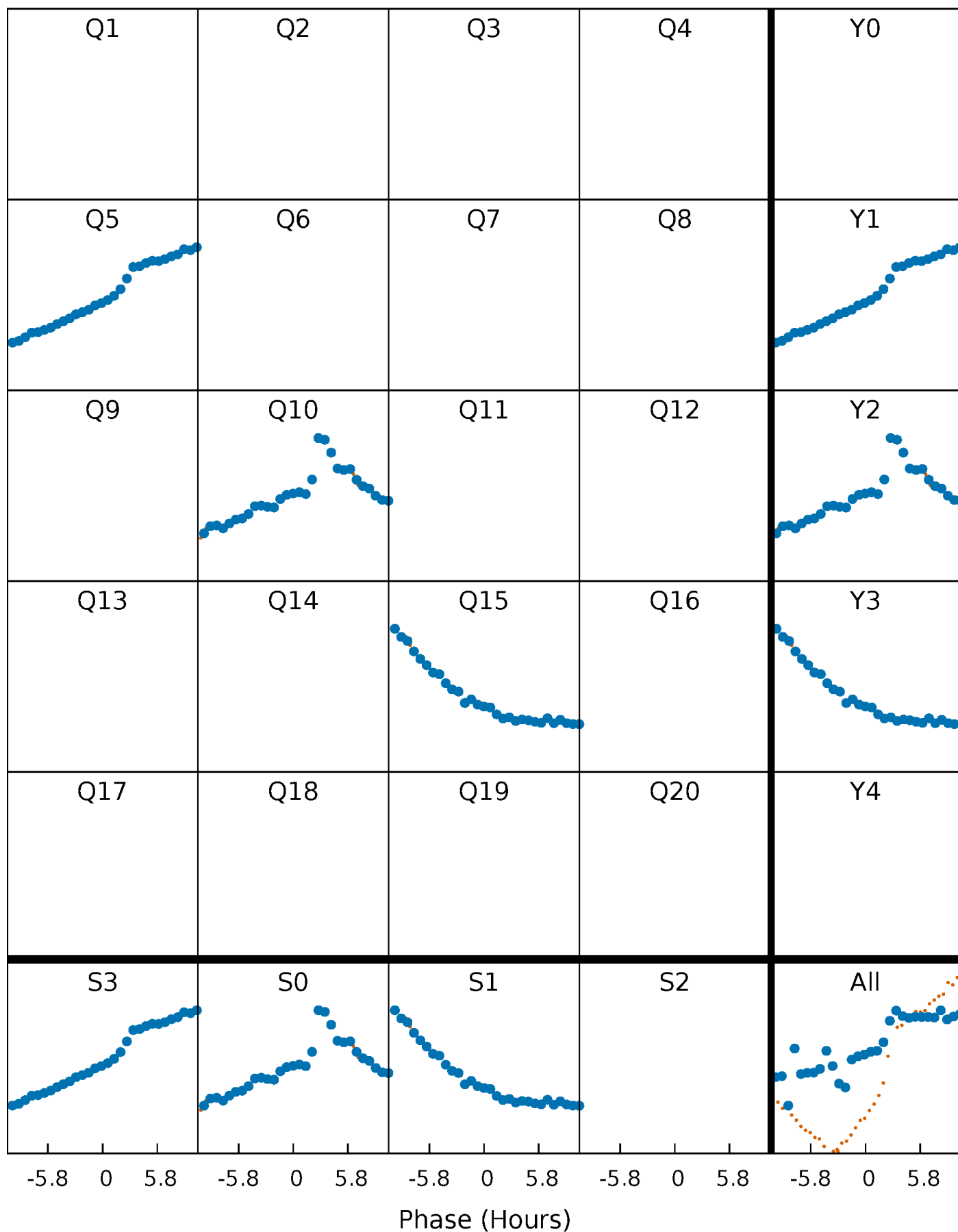


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



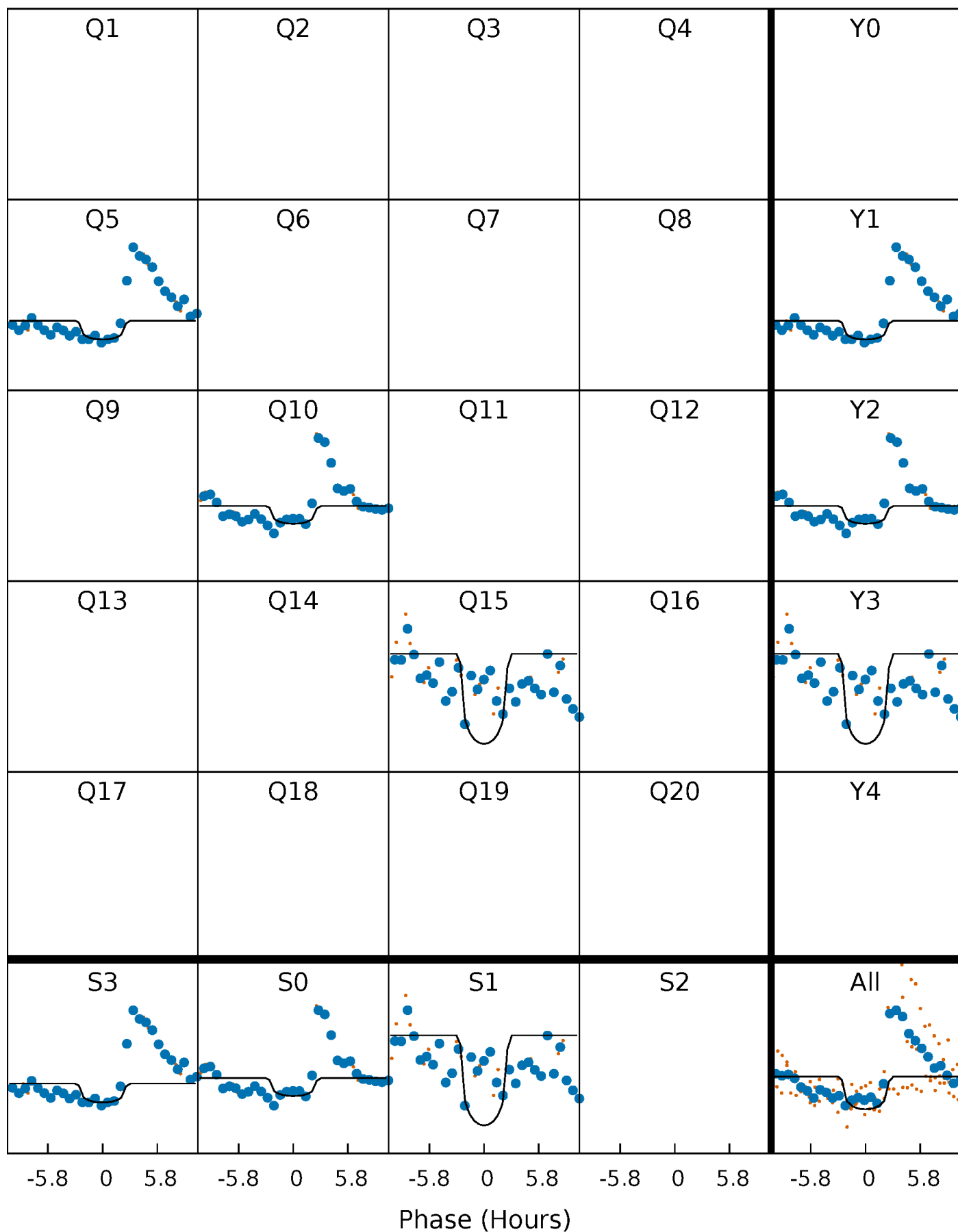
PDC Quarter-Phased Transit Curves

TCE 010527793-05 $P=445.287091$ Days $T_0=506.717205$ (BKJD)



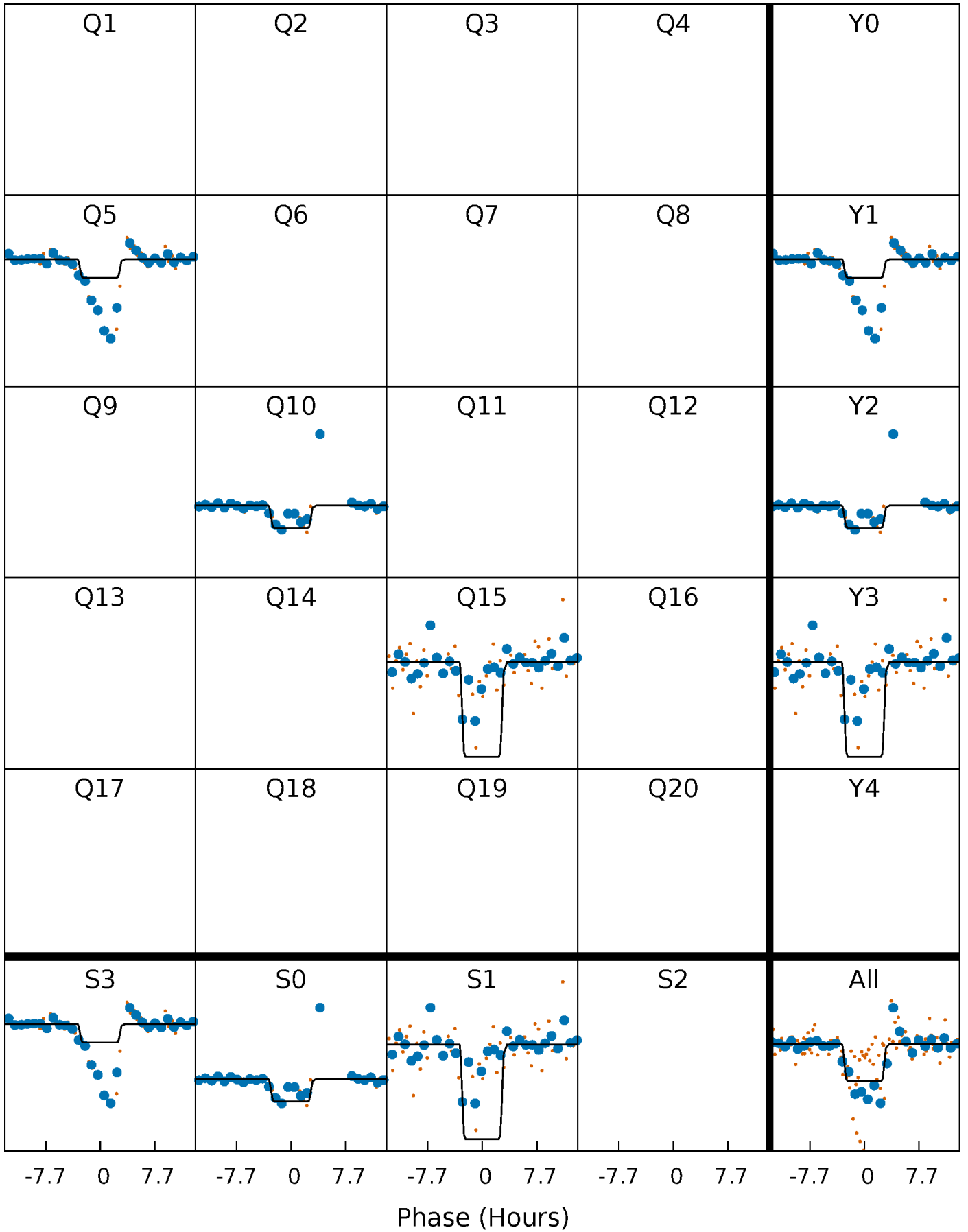
DV Quarter-Phased Transit Curves

TCE 010527793-05 $P=445.287091$ Days $T_0=506.717205$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

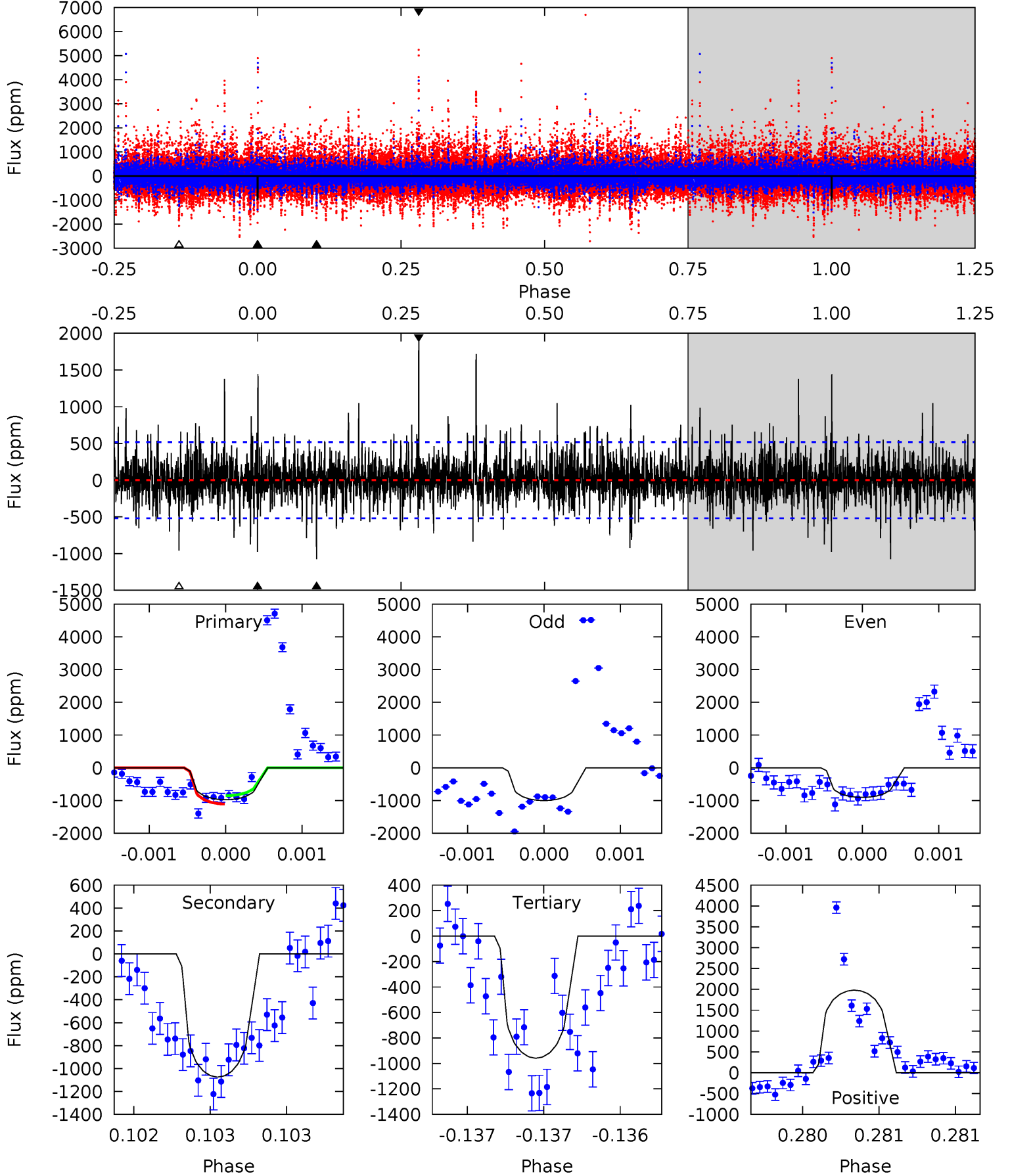
TCE 010527793-05 $P=445.274517$ Days $T_0=506.698286$ (BKJD)



DV Model-Shift Uniqueness Test

010527793-05, P = 445.287091 Days, E = 61.430114 Days

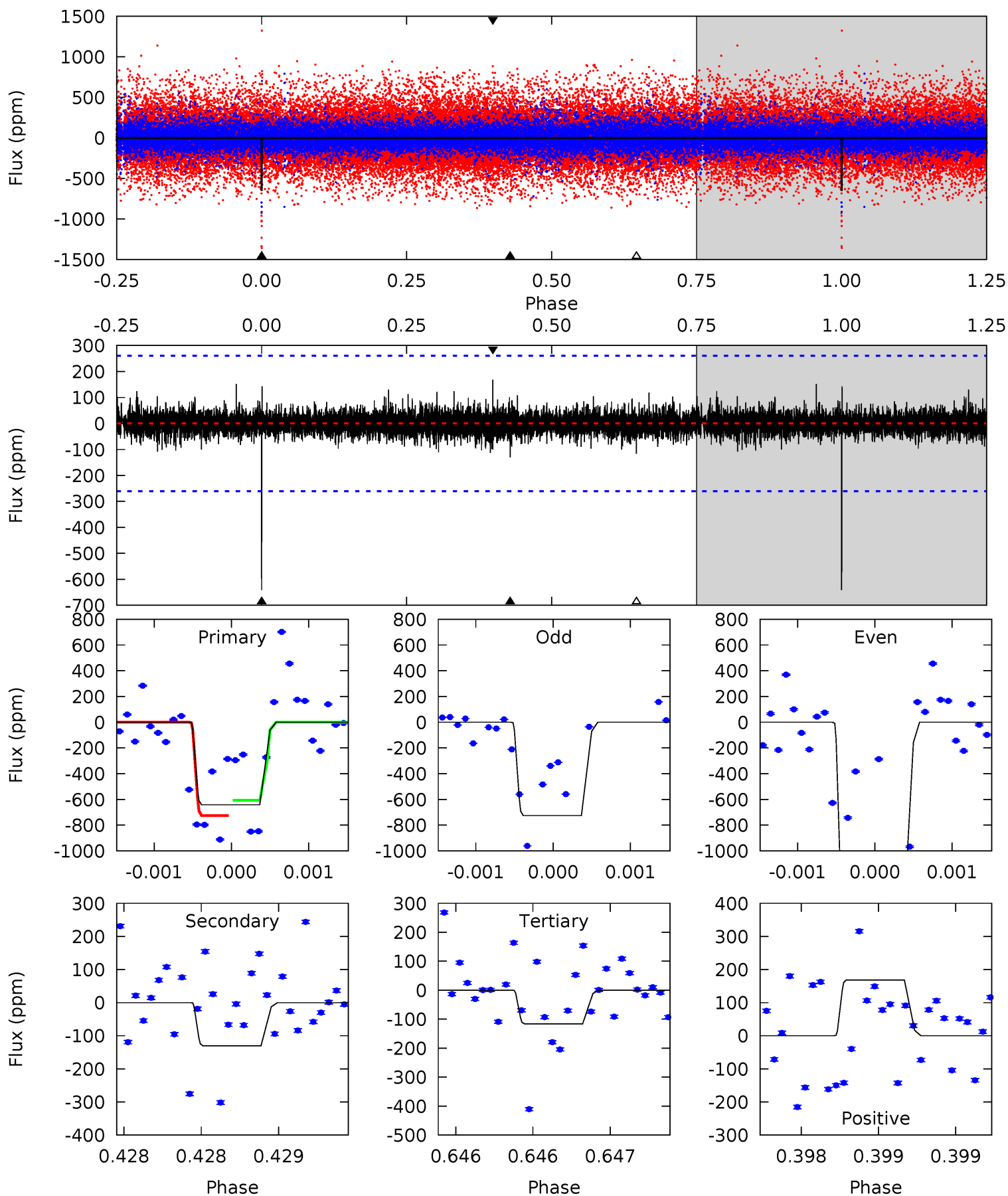
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	11.5	10.3	21.3	5.57	3.48	2.31	0.18	-10.8	1.24	-9.73	0.33	0.90	0.65	1.38



Alt Model-Shift Uniqueness Test

010527793-05, P = 445.274517 Days, E = 61.423769 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	2.78	2.48	3.59	5.55	3.45	0.56	11.2	10.1	0.30	-0.81	11.5	2.00	0.21	0



Stellar Parameters For KIC 010527793

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5178^{+154}_{-154}	$4.579^{+0.078}_{-0.052}$	$-0.600^{+0.350}_{-0.300}$	$0.694^{+0.073}_{-0.073}$	$0.666^{+0.081}_{-0.037}$	$2.809^{+0.910}_{-0.519}$
	+3%/-3%	+2%/-1%	+58%/-50%	+11%/-11%	+12%/-6%	+32%/-18%
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 010527793-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1074 ± 93	$2.68^{+1.76}_{-1.39}$	265^{+11}_{-11}	5007^{+2052}_{-921}	$83254^{+260472}_{-53897}$
Alt.	-130 ± 47	$2.79^{+1.66}_{-1.60}$	265^{+11}_{-9}	3395^{+1098}_{-512}	9391^{+39687}_{-6238}

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 $A_{obs} \gg 1.0$

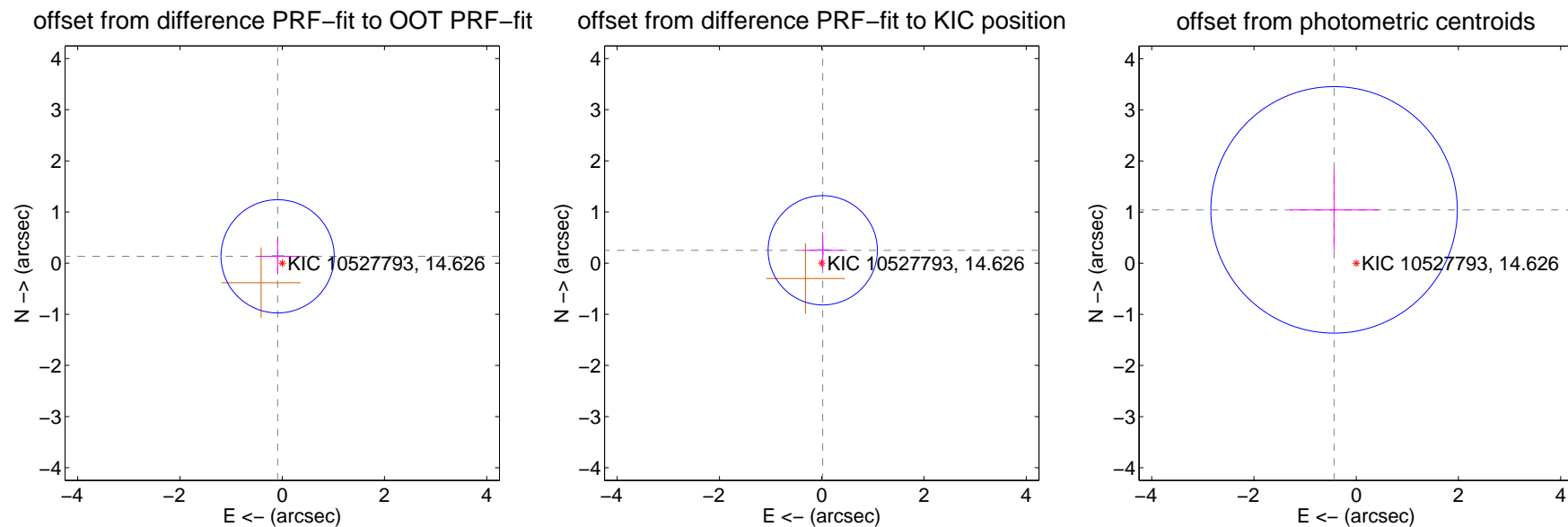
DV Centroid Data

Supplemental centroid analysis for 010527793-05. Kepler magnitude: 14.63. Transit SNR 7.07

There are 1 quarters with good PRF difference image offsets

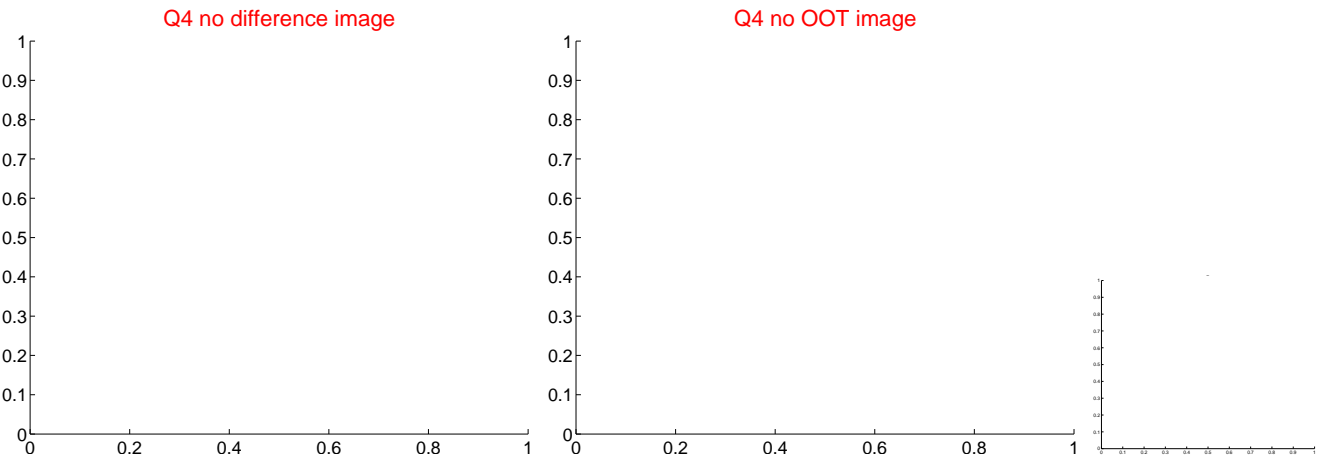
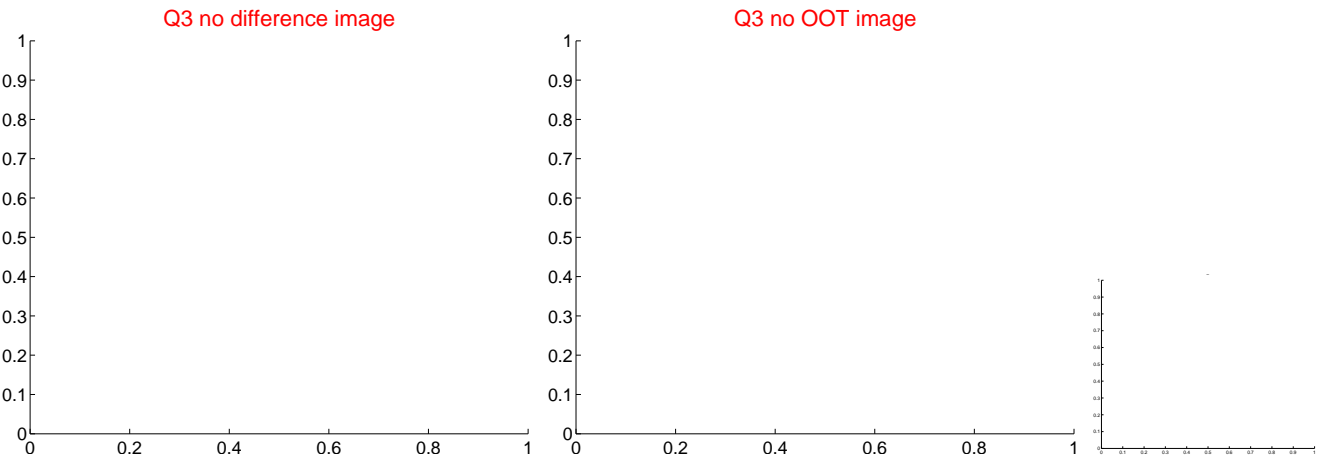
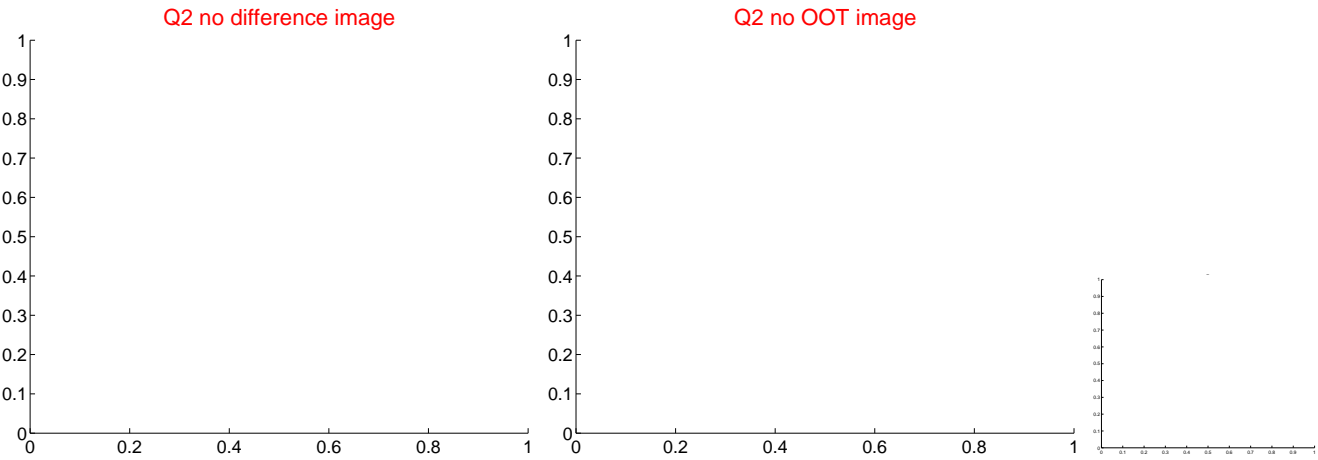
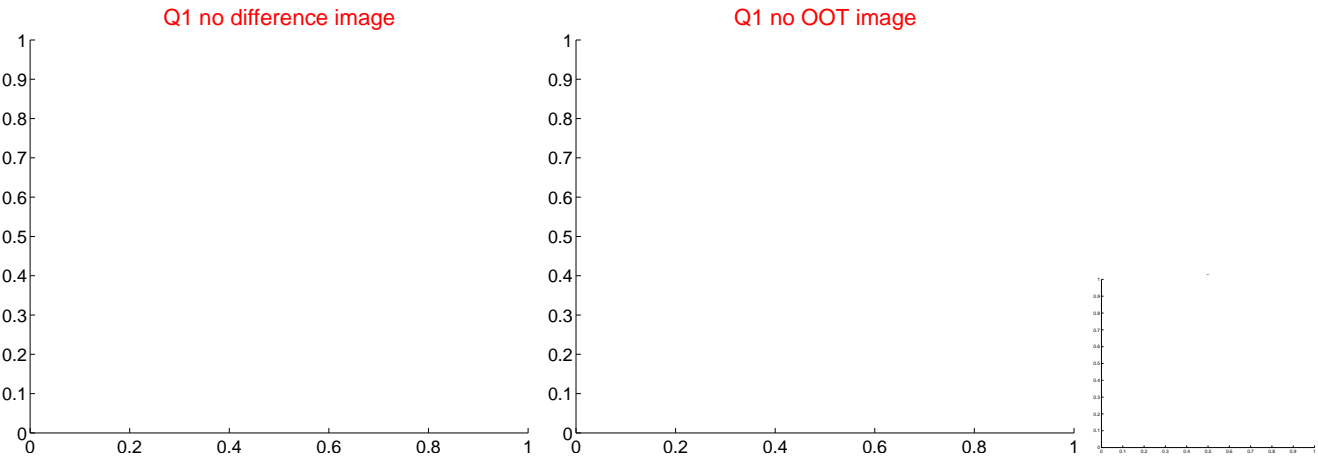
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.161 ± 0.369	0.44	0.090 ± 0.396	0.133 ± 0.356
PRF-fit source offset from KIC position	0.252 ± 0.356	0.71	-0.020 ± 0.396	0.251 ± 0.356
photometric centroid source offset	1.13 ± 0.80	1.41	0.43 ± 0.87	1.04 ± 0.79

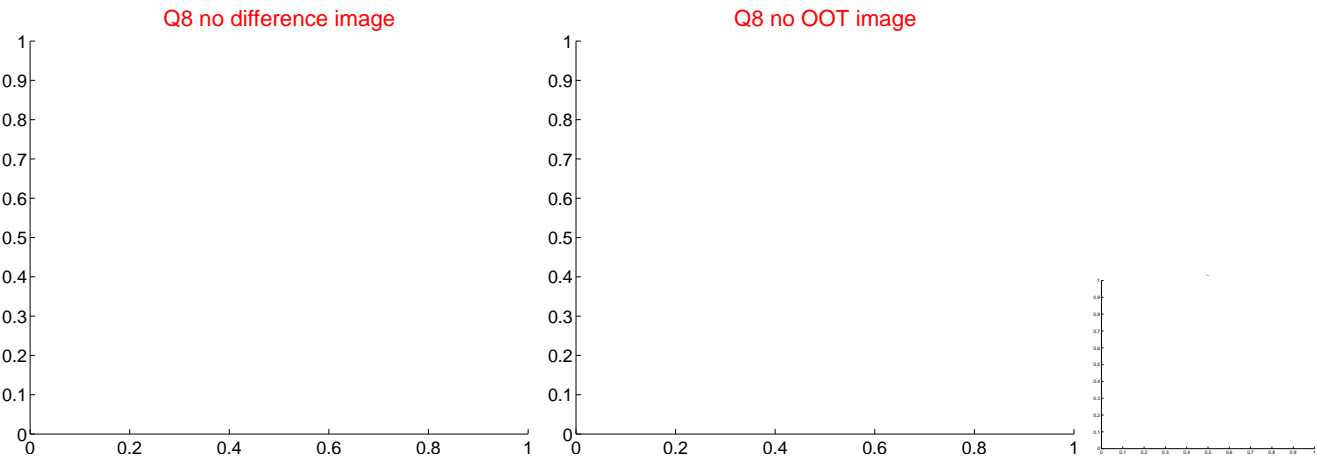
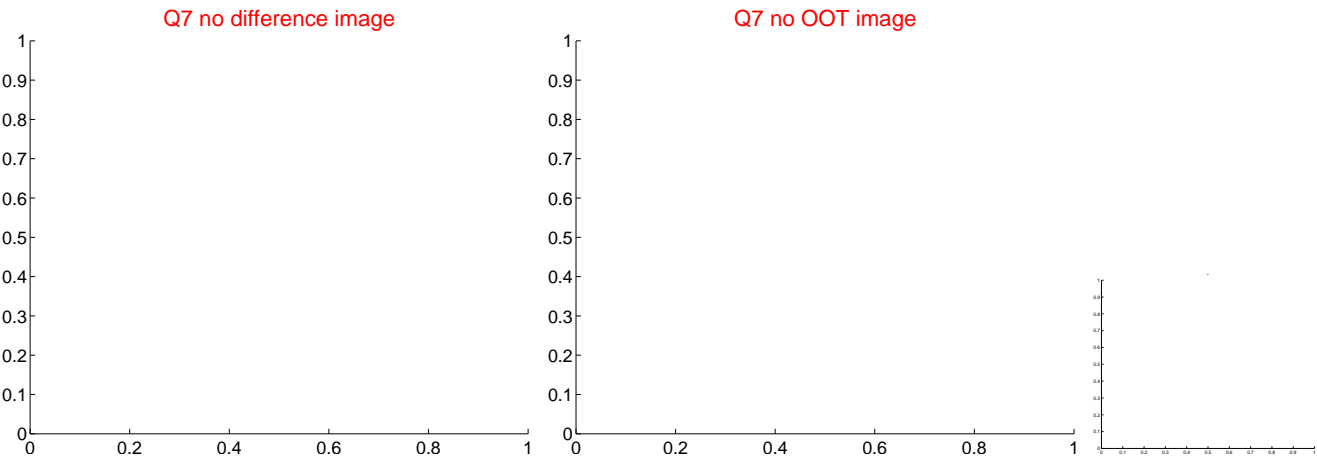
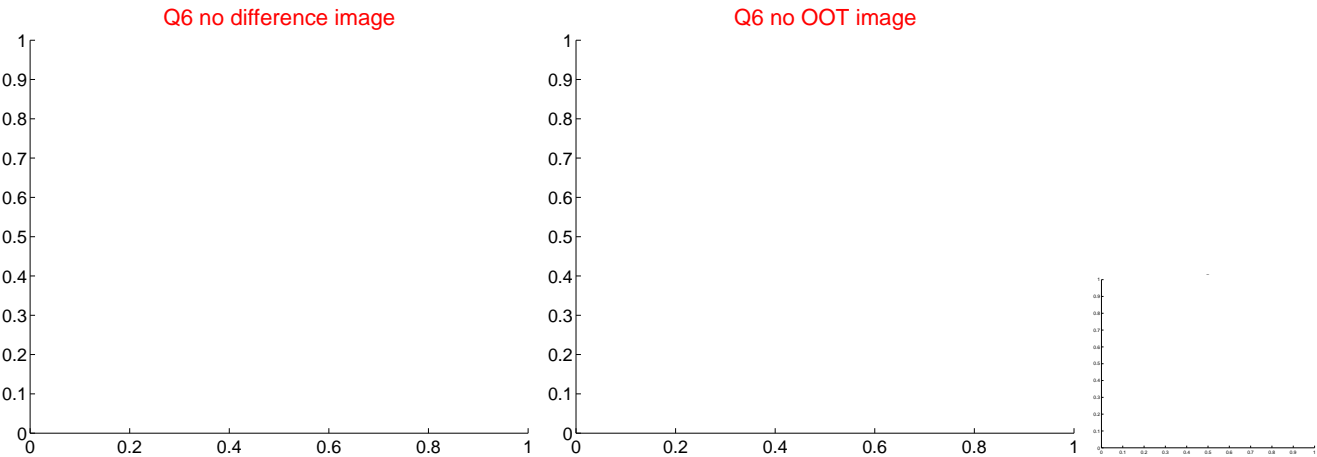
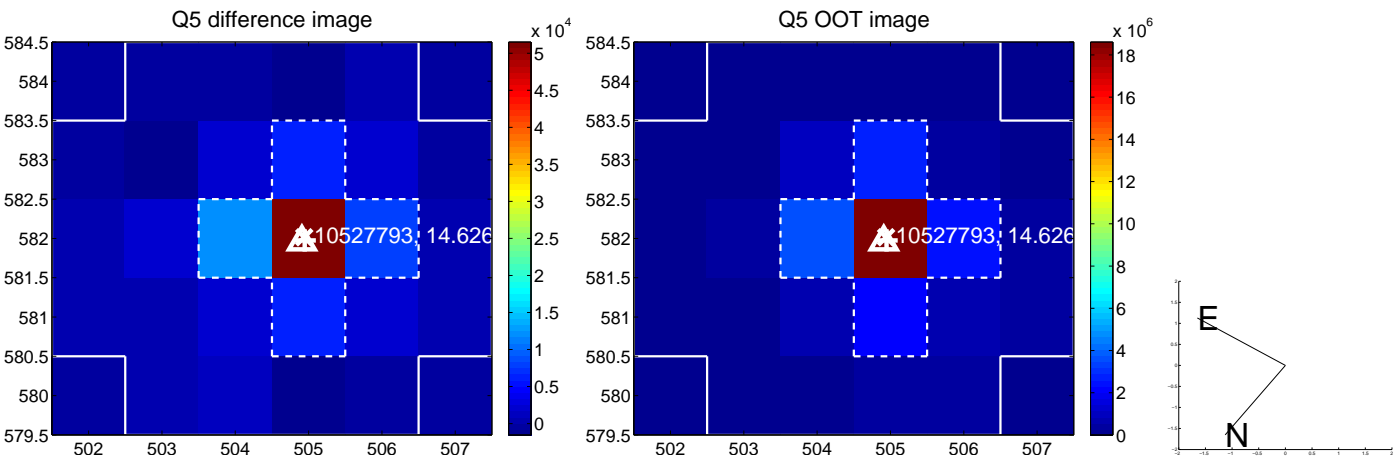


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

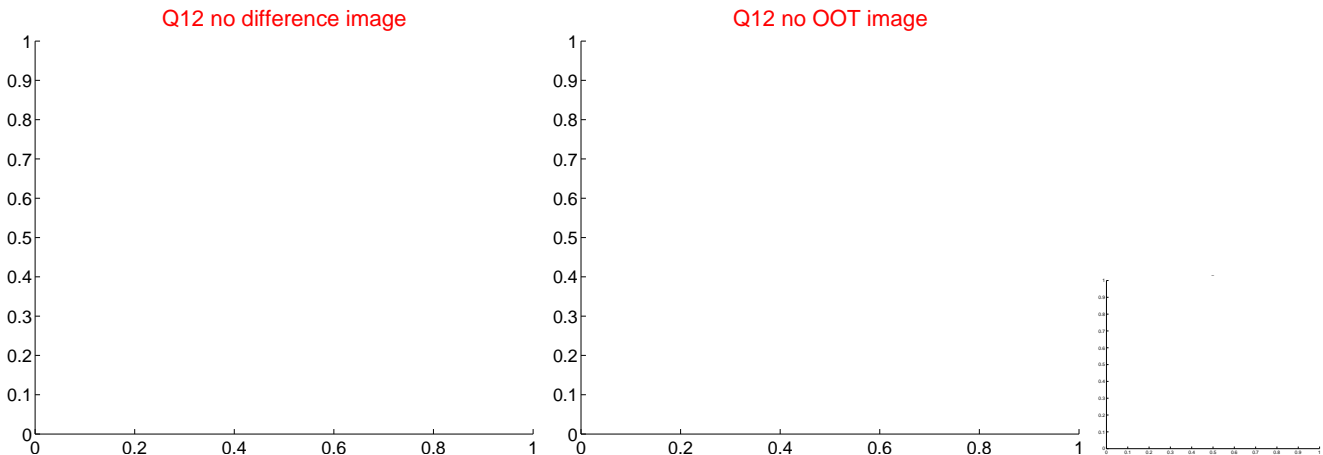
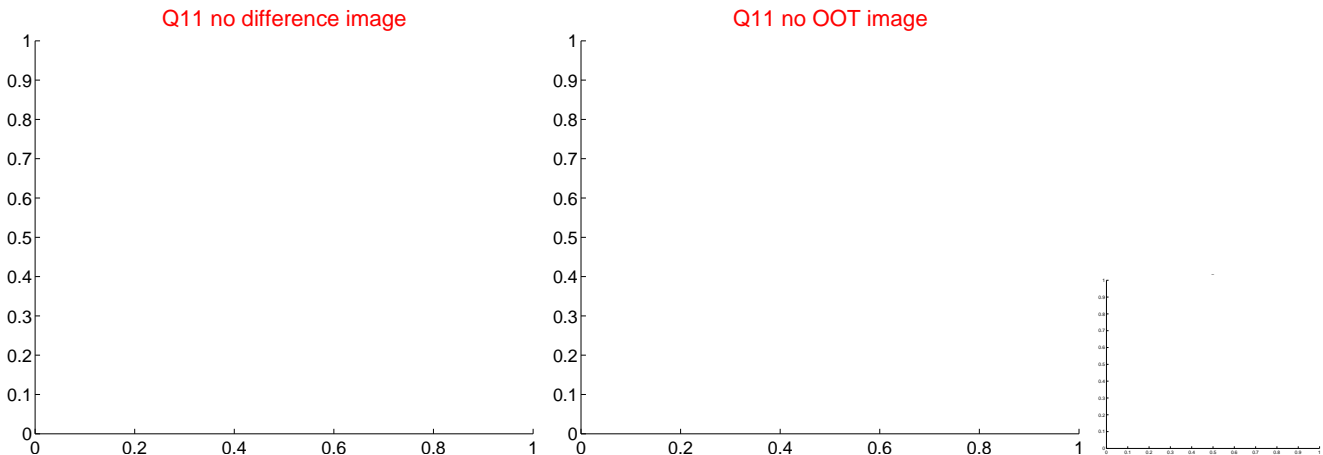
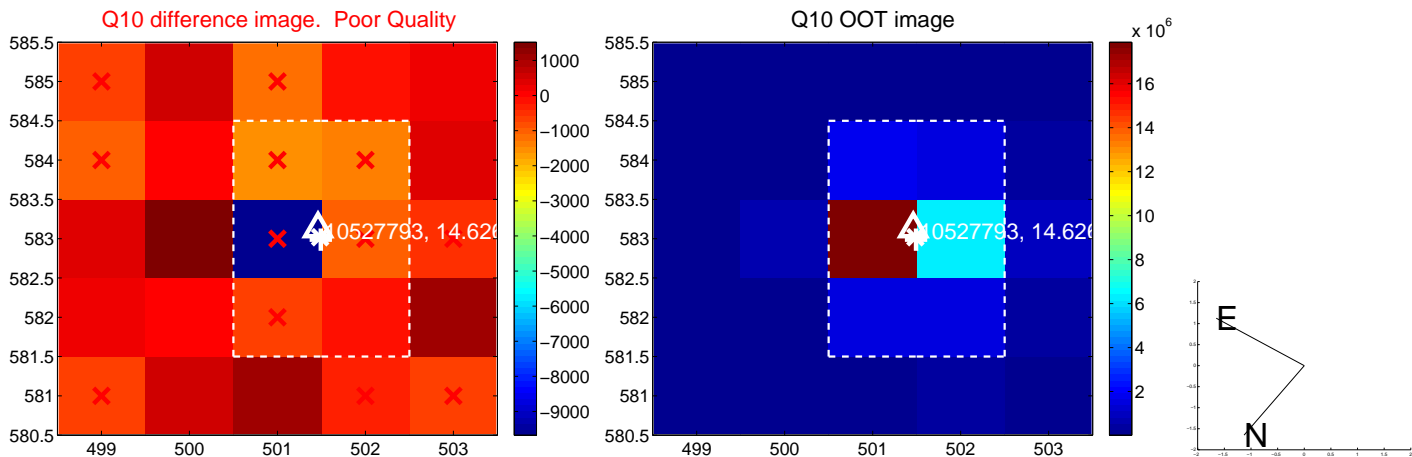
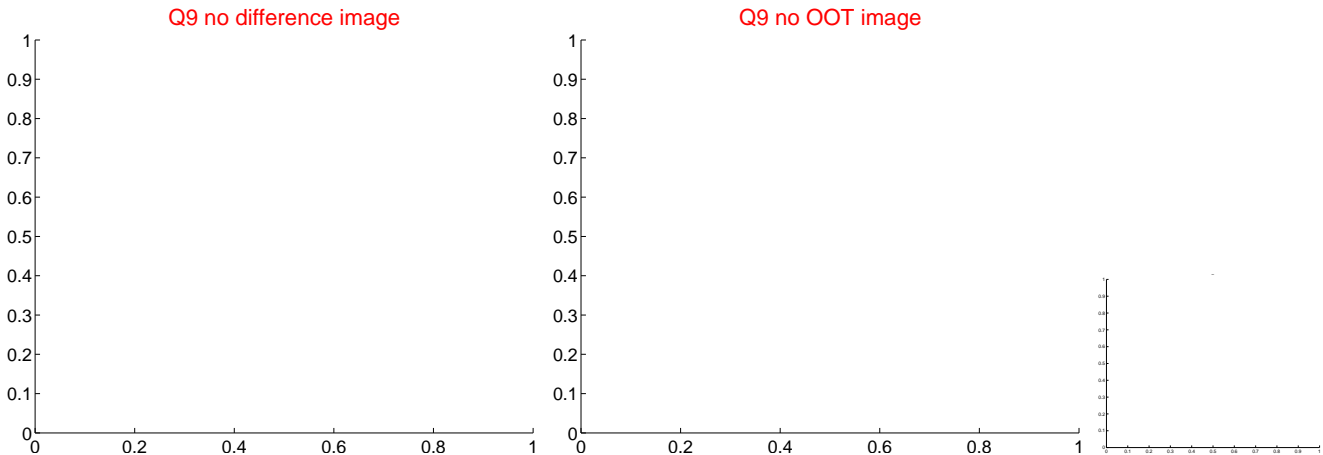
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



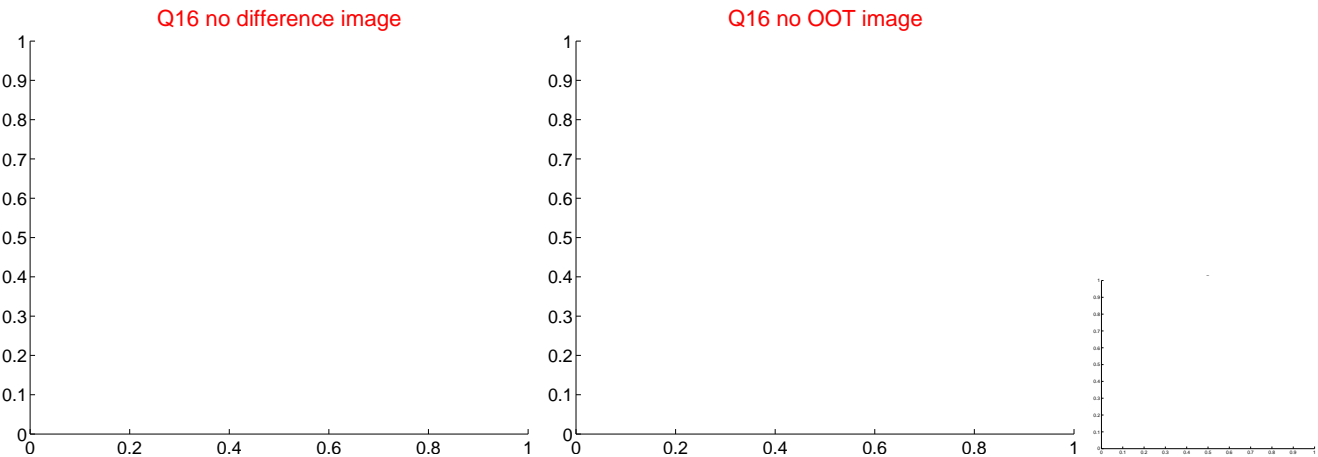
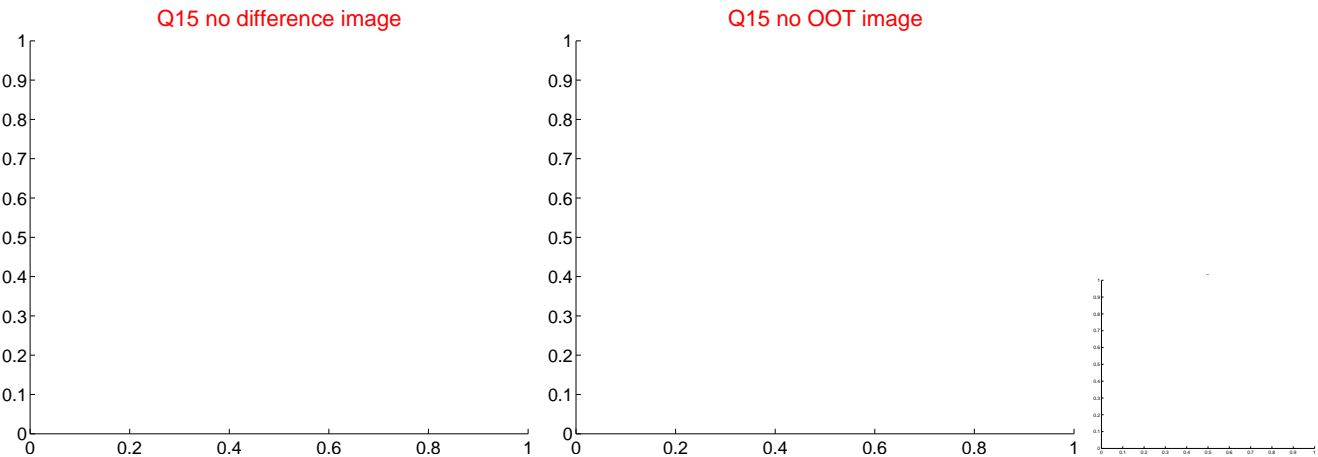
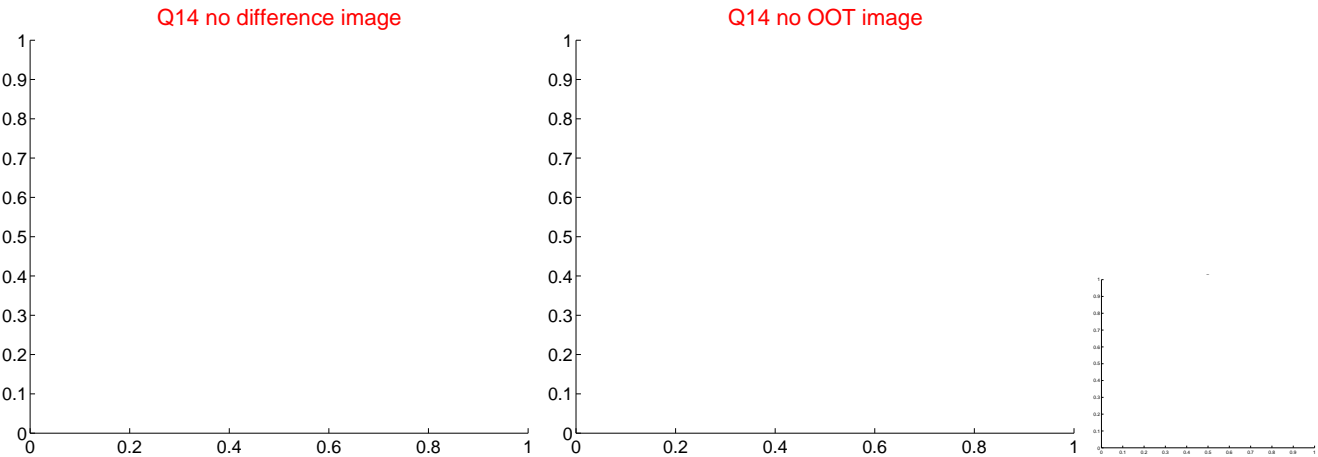
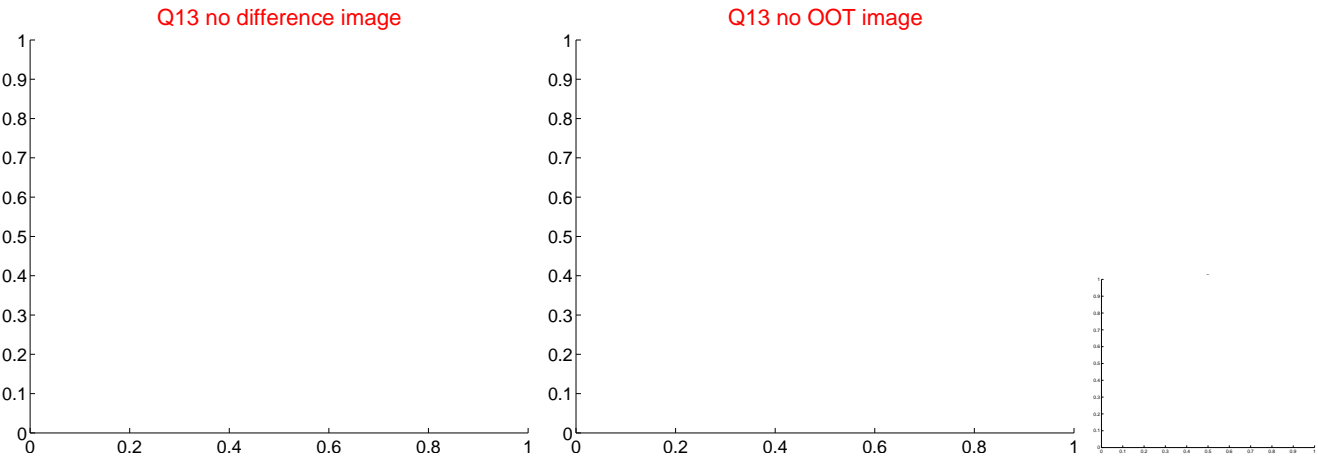
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



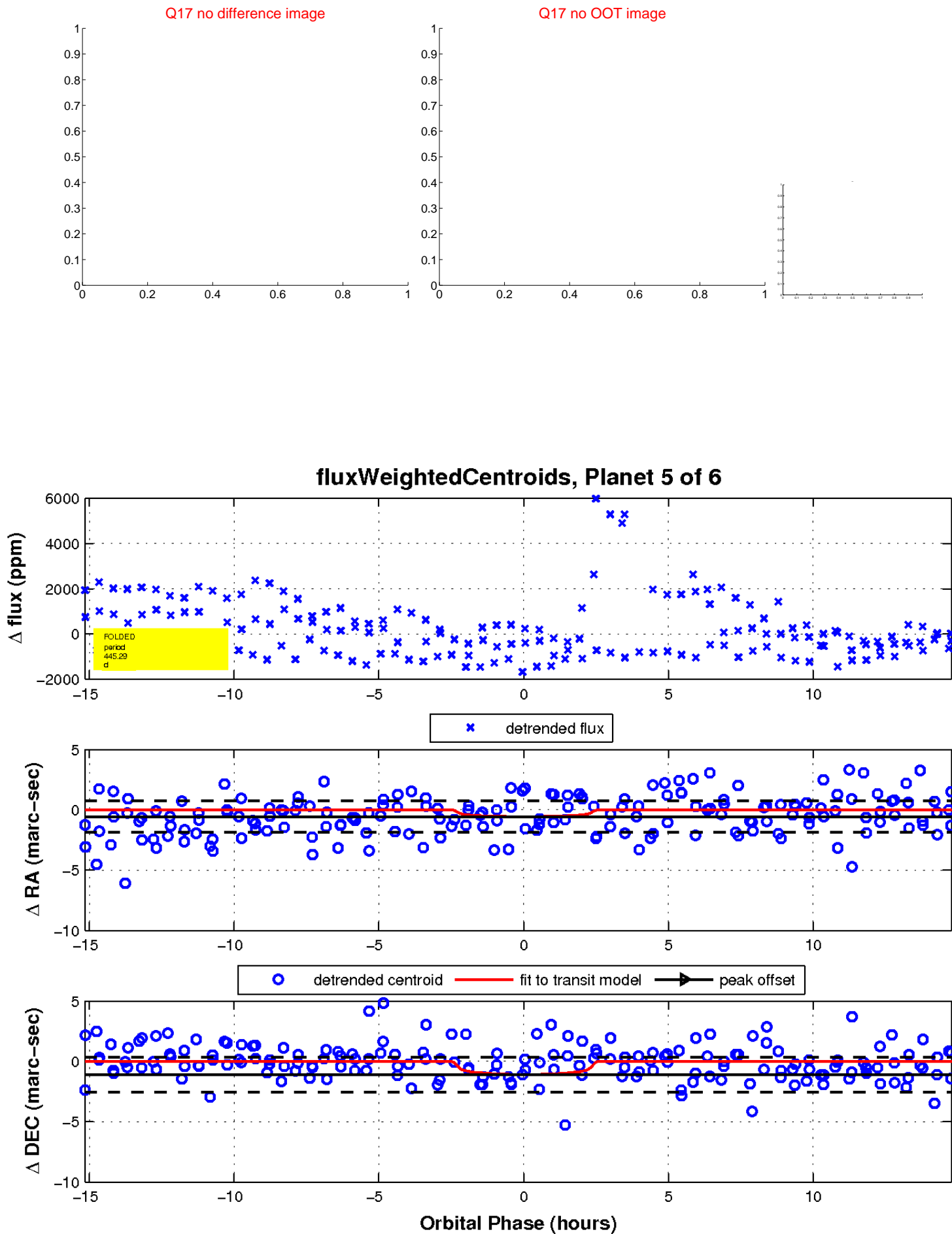
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

