

KIC 012602250

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})
012602250-01	OBS	No	205.126556	327.016887	686.6	1.671	24.9	6.6	1.67	7193	4.79	11.23
012602250-02	OBS	No	294.392529	349.351682	455.7	3.009	14.6	7.6	1.67	7193	3.63	6.94
012602250-03	OBS	No	341.322015	255.207877	341.9	13.962	14.3	7.3	1.67	7193	3.18	5.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012602250-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
012602250-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
012602250-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

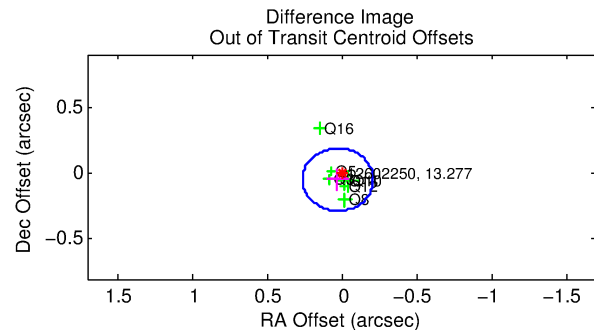
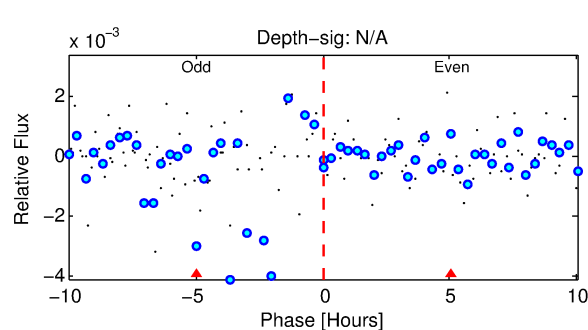
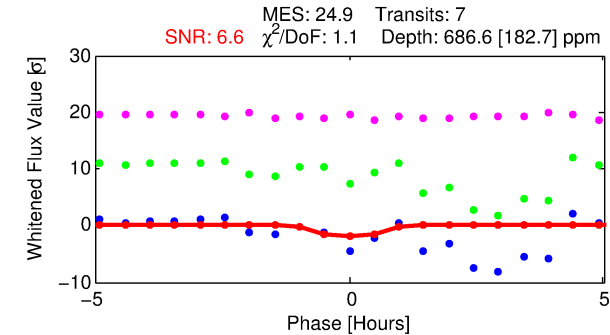
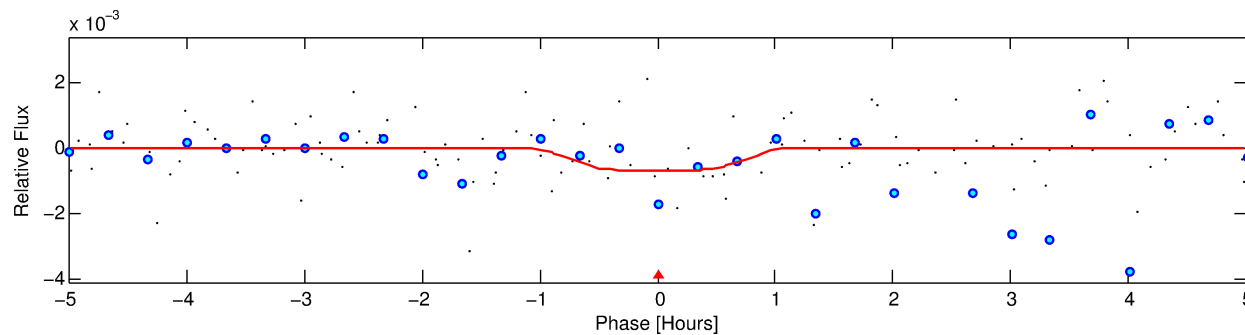
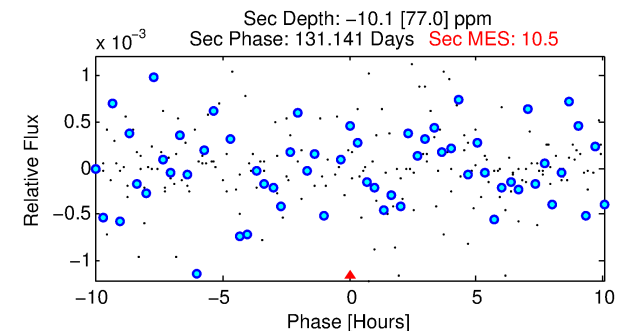
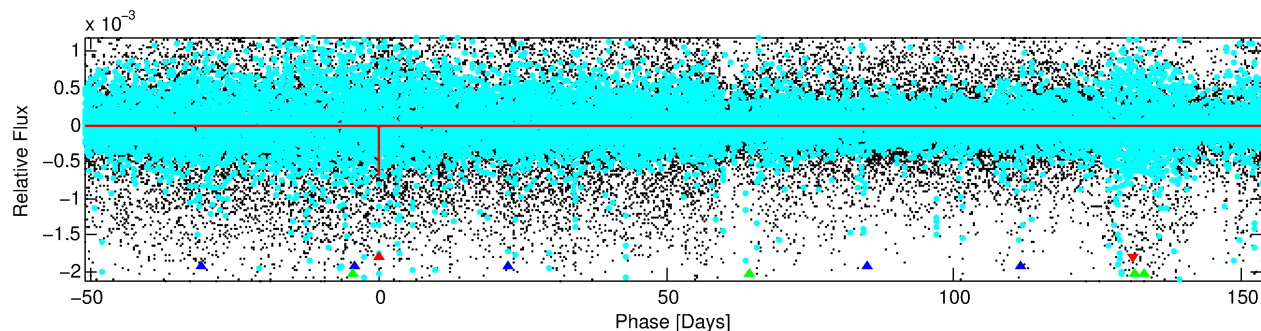
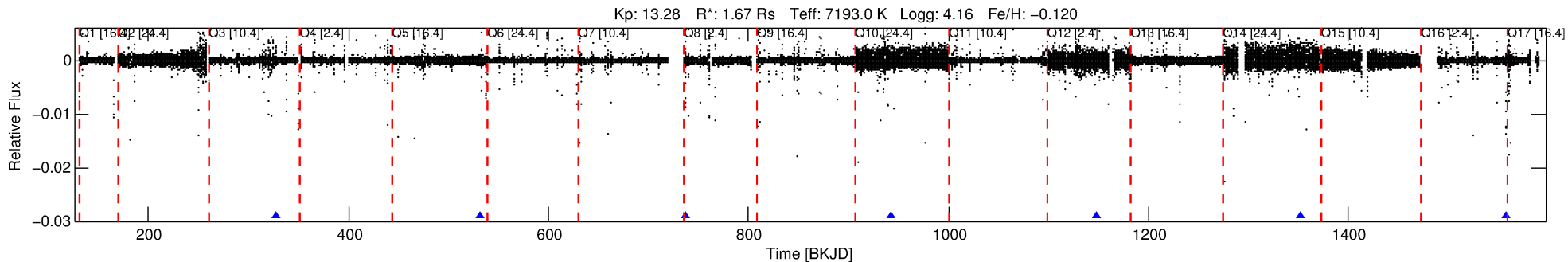
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012602250-01

No Significant Match Found

DV One-Page Summary

KIC: 12602250 Candidate: 1 of 3 Period: 205.127 d



DV Fit Results:

Period = 205.12656 [0.00294] d
Epoch = 327.0169 [0.0091] BKJD
Rp/R* = 0.0263 [0.0493]
a/R* = 633.64 [7153.16]
b = 0.77 [5.95]
Seff = 11.23 [4.41]
Teq = 467 [46] K
Rp = 4.79 [9.11] Re
a = 0.7721 [0.1977] AU
Ag = N/A
Teffp = N/A

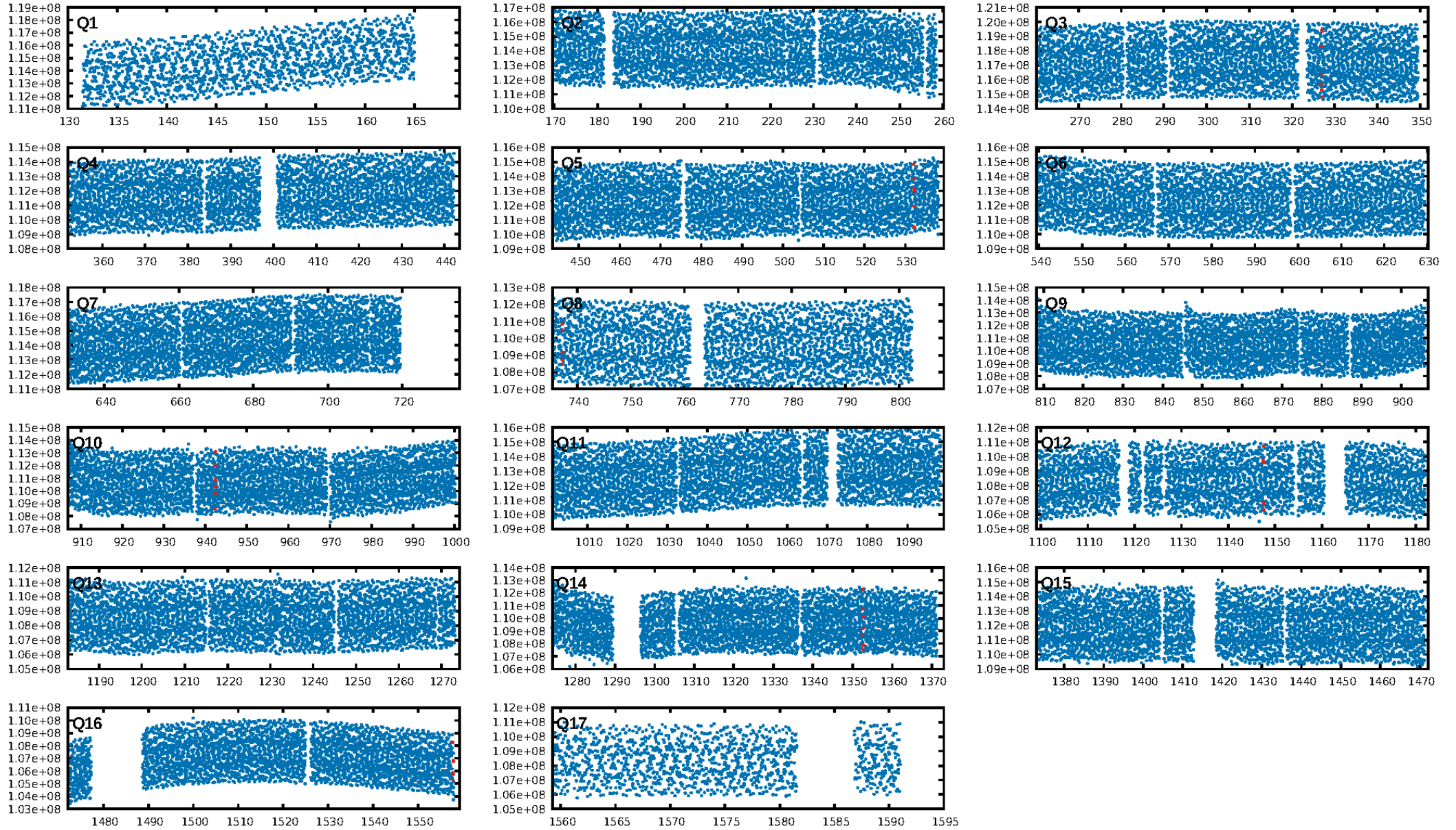
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [622.44σ]
ModelChiSquare2-sig: 1.5%
ModelChiSquareGof-sig: 5.7%
Bootstrap-pfa: 4.54e-07
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -3.097
Centroid-sig: 1.3%
Centroid-so: 1.981 arcsec [2.45σ]
OotOffset-rm: 0.054 arcsec [0.69σ]
KicOffset-rm: 0.067 arcsec [0.83σ]
OotOffset-st: 2/1/3/1 [7]
KicOffset-st: 2/1/3/1 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [7/7]

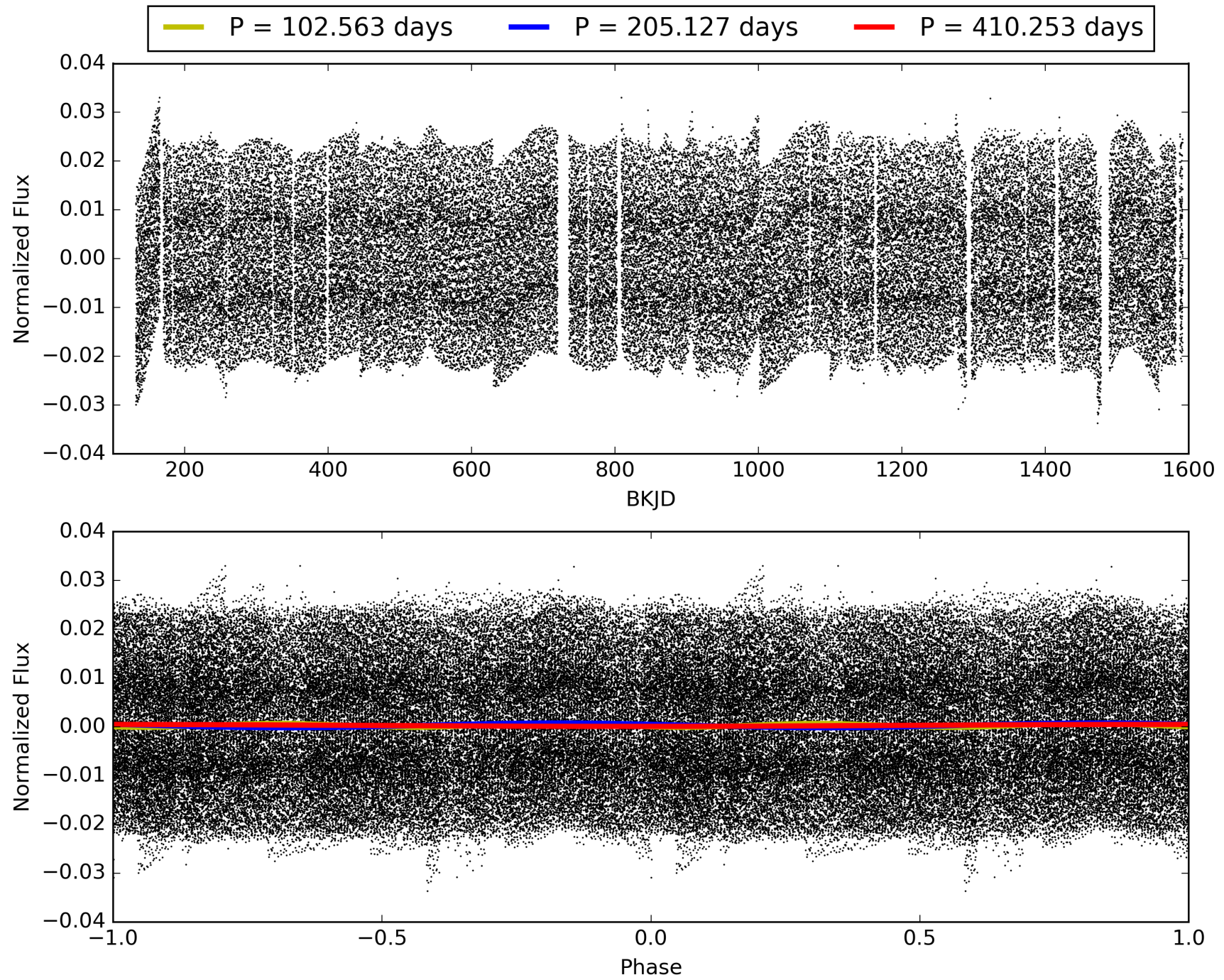
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:17:15 Z

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

TCE 012602250-01, PDC Light Curves

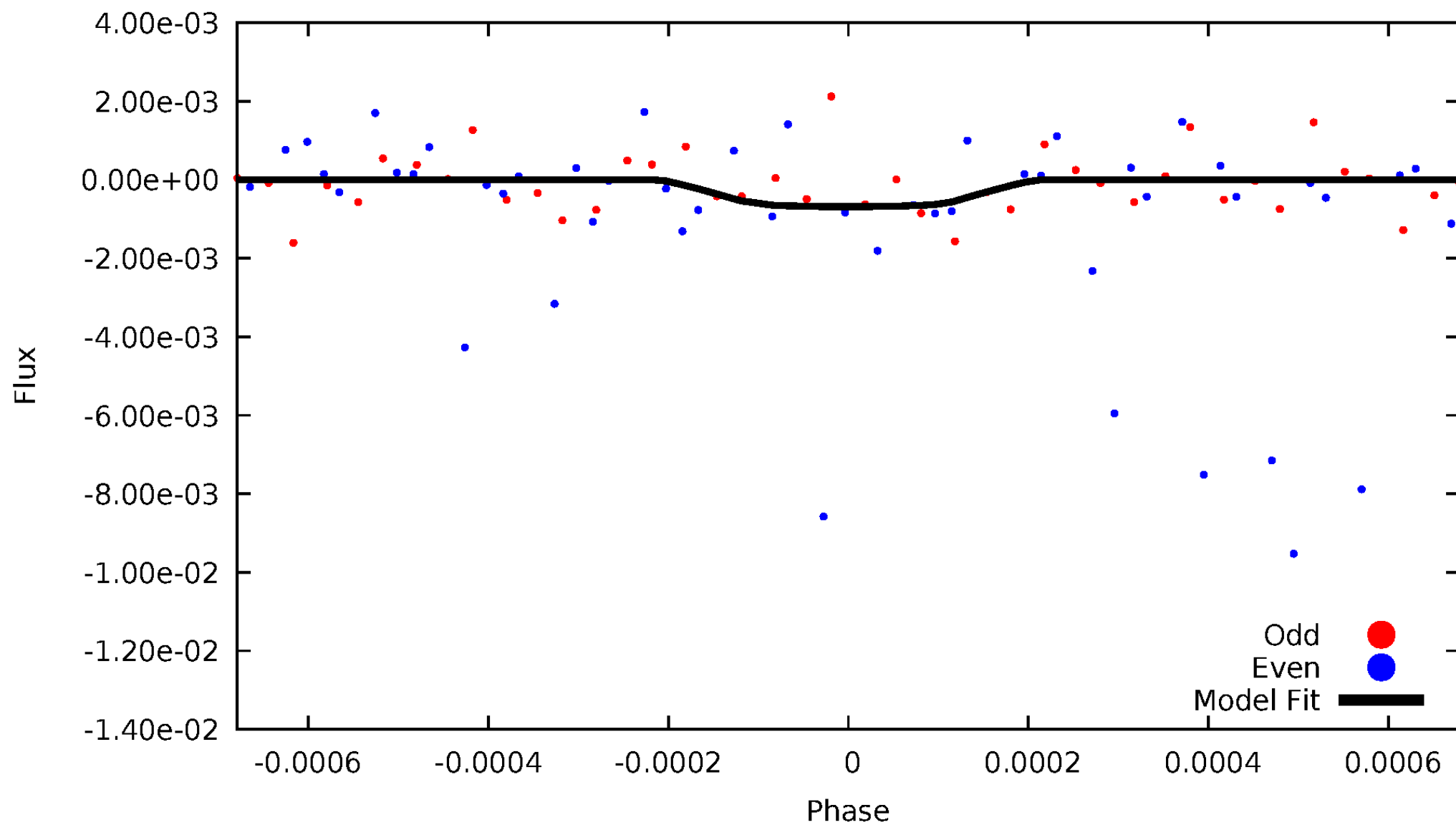


TCE 012602250-01



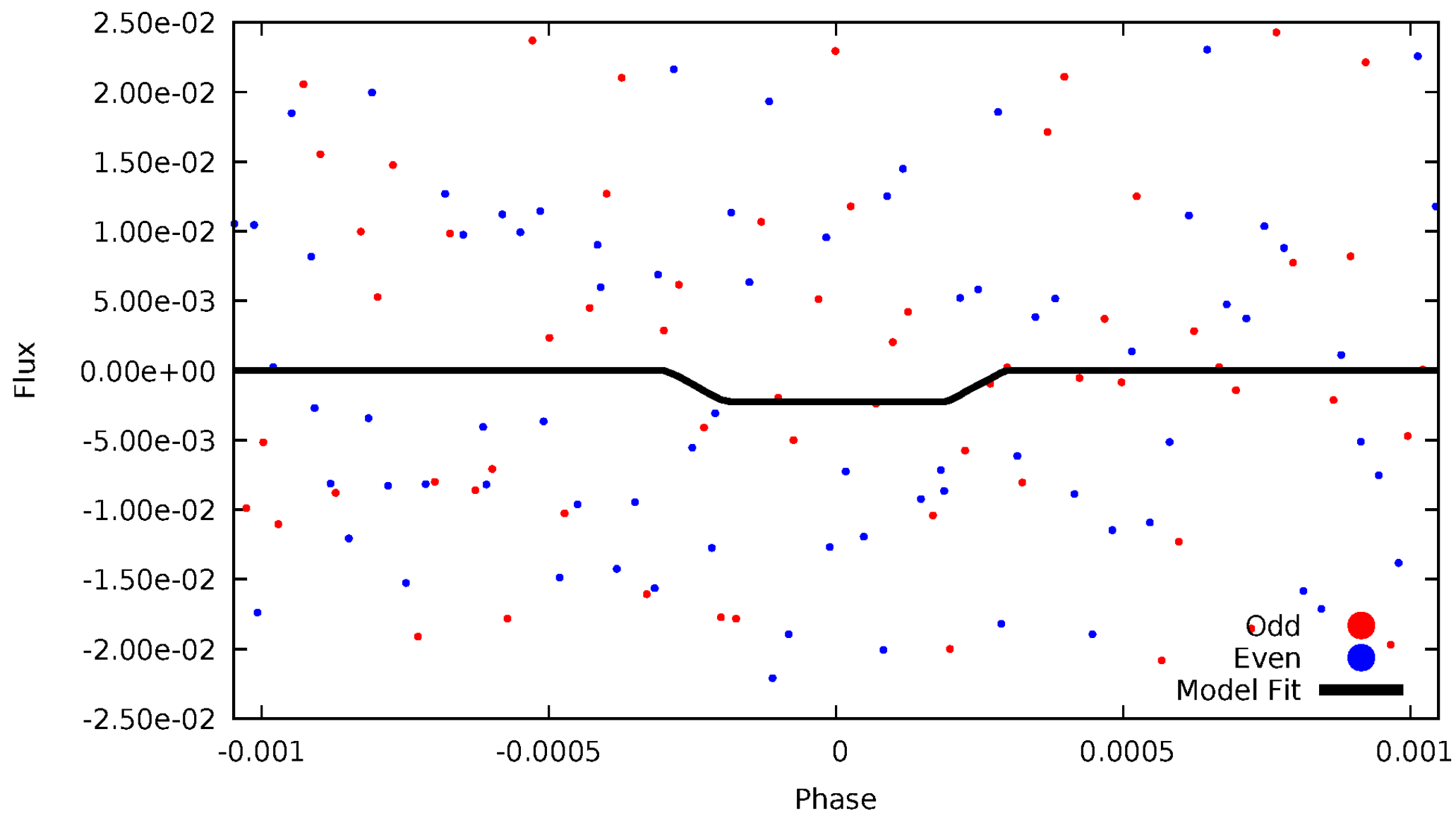
DV Odd/Even

TCE 012602250-01



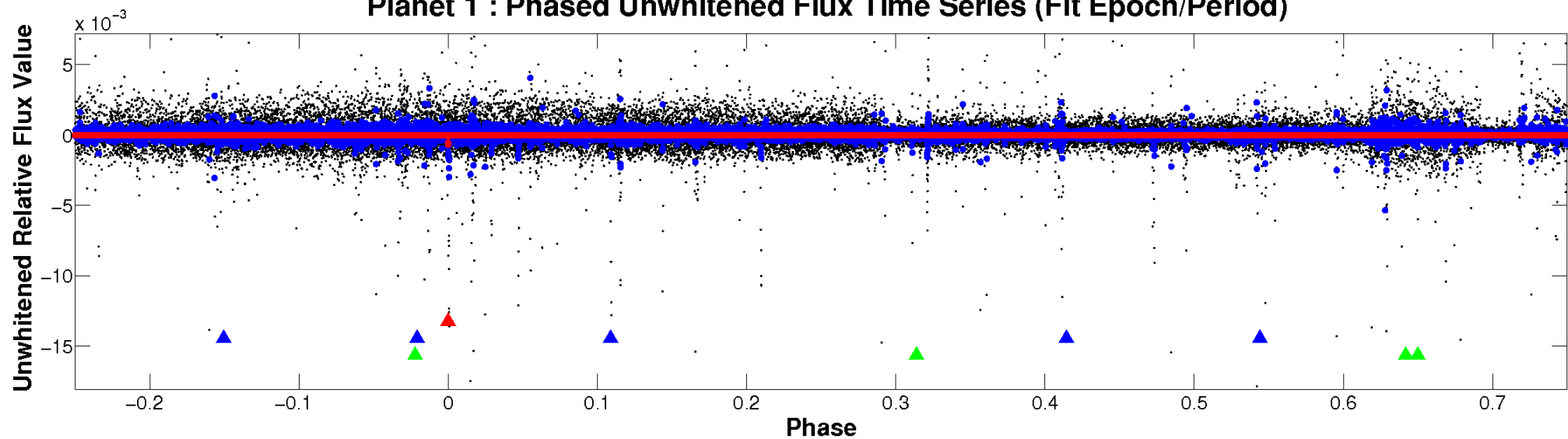
ALT Odd/Even

TCE 012602250-01

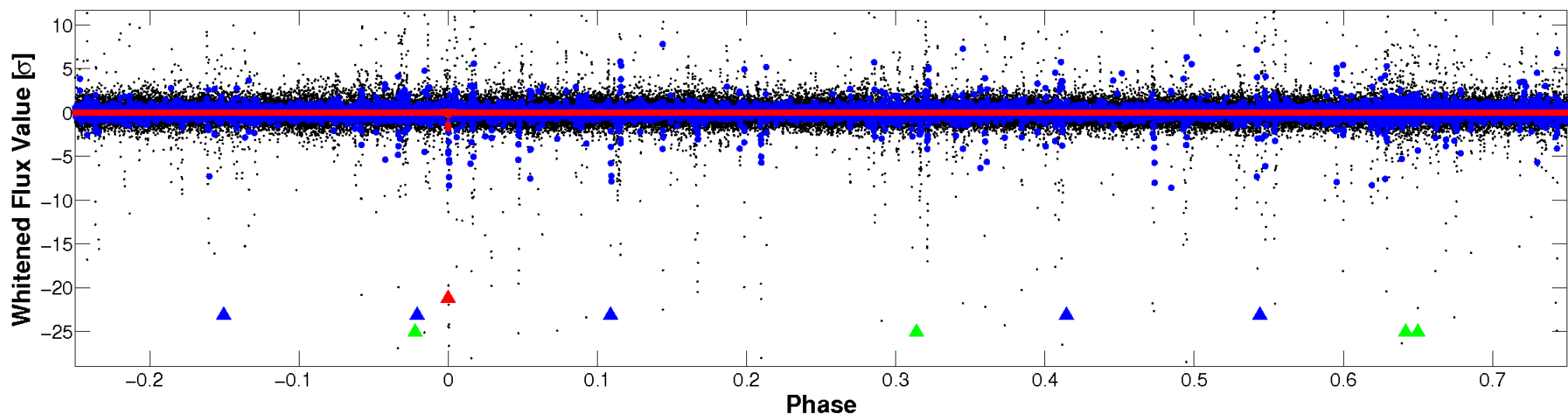


Non-Whitened Vs. Whitened Light Curve

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

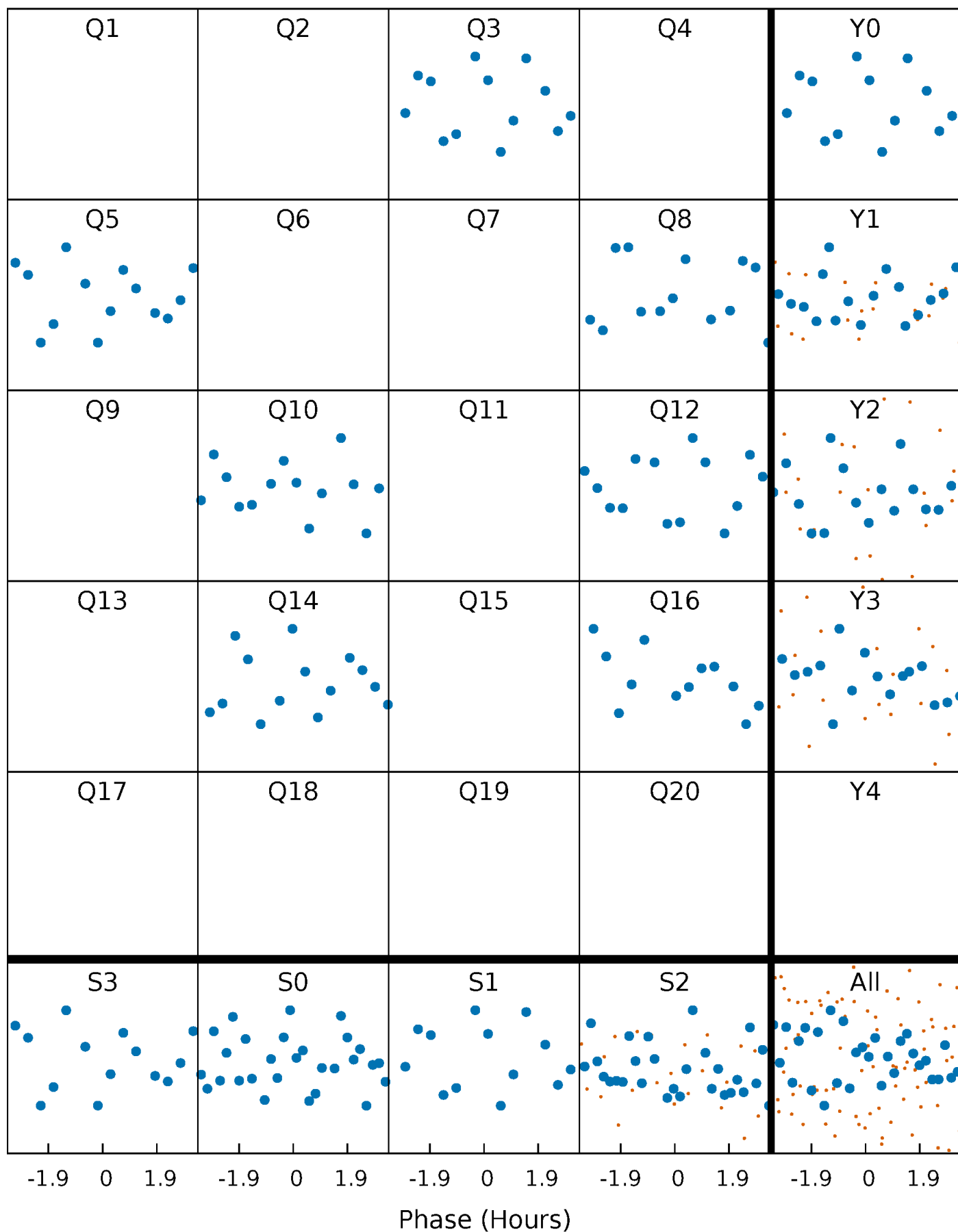


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



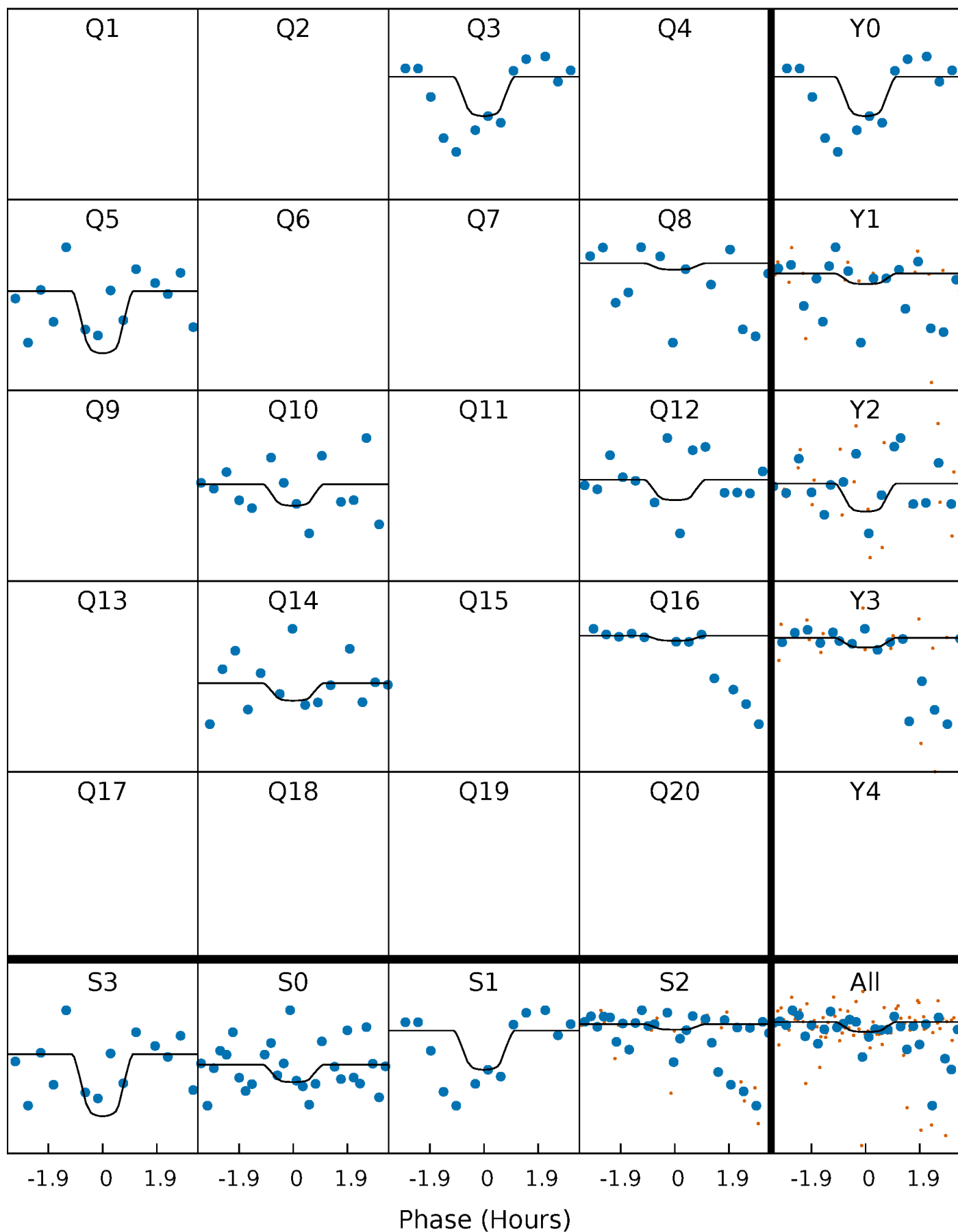
PDC Quarter-Phased Transit Curves

TCE 012602250-01 P=205.126556 Days $T_0=327.016887$ (BKJD)



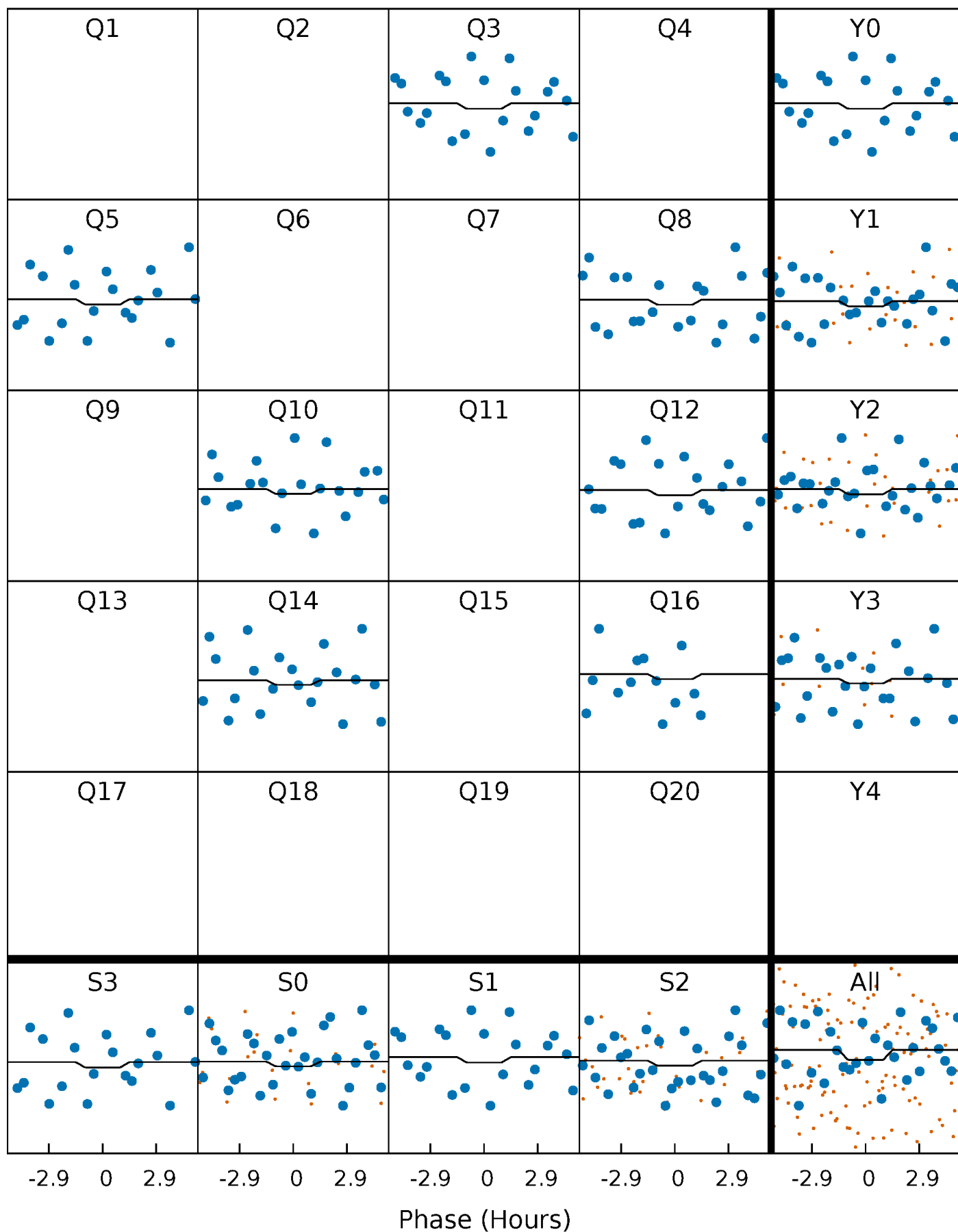
DV Quarter-Phased Transit Curves

TCE 012602250-01 P=205.126556 Days $T_0=327.016887$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

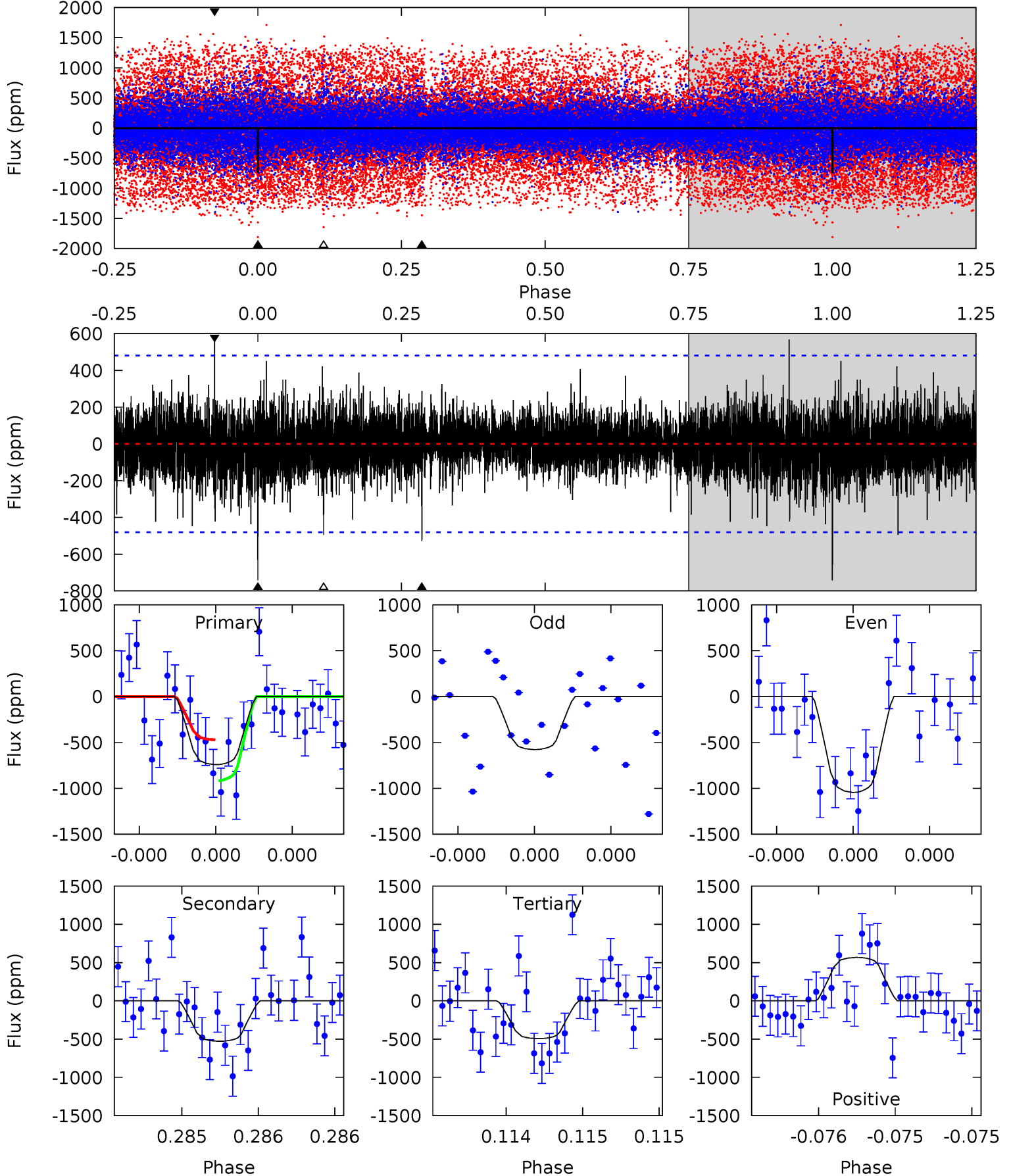
TCE 012602250-01 P=205.146159 Days $T_0=327.023421$ (BKJD)



DV Model-Shift Uniqueness Test

012602250-01, P = 205.126556 Days, E = 121.890331 Days

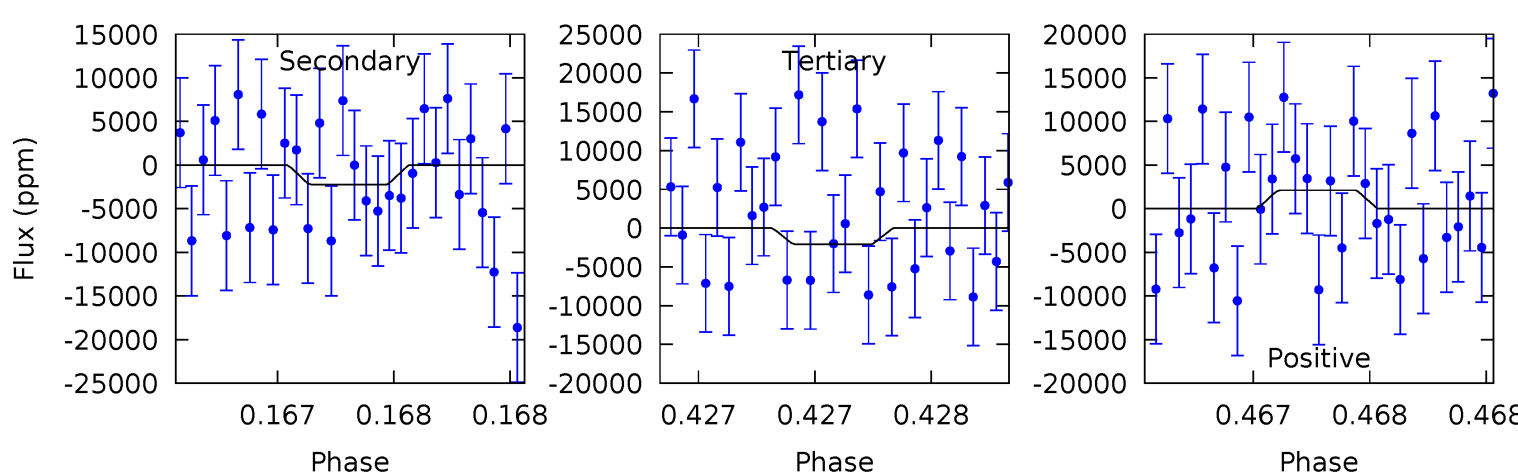
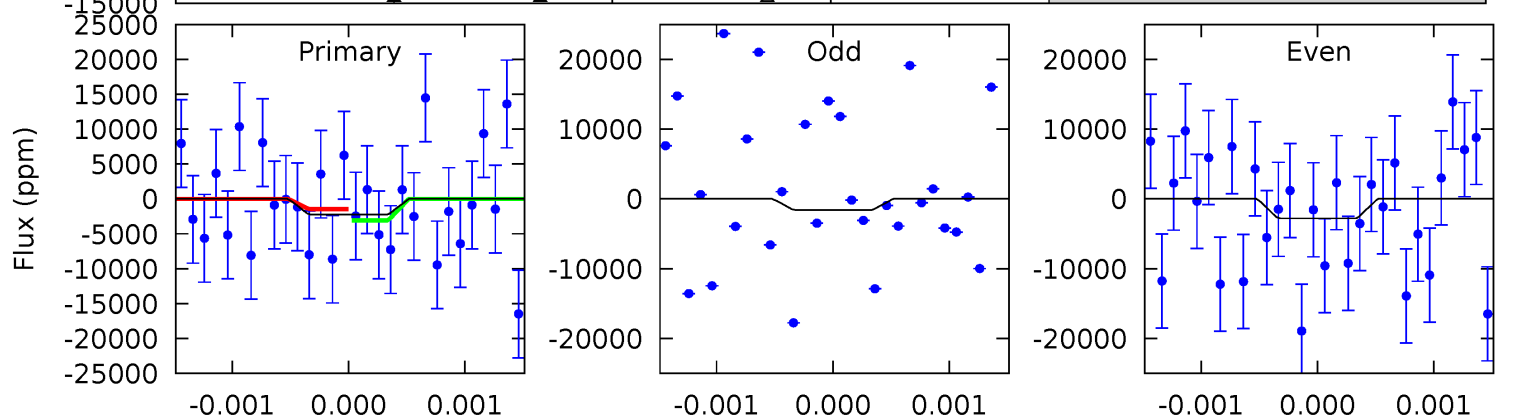
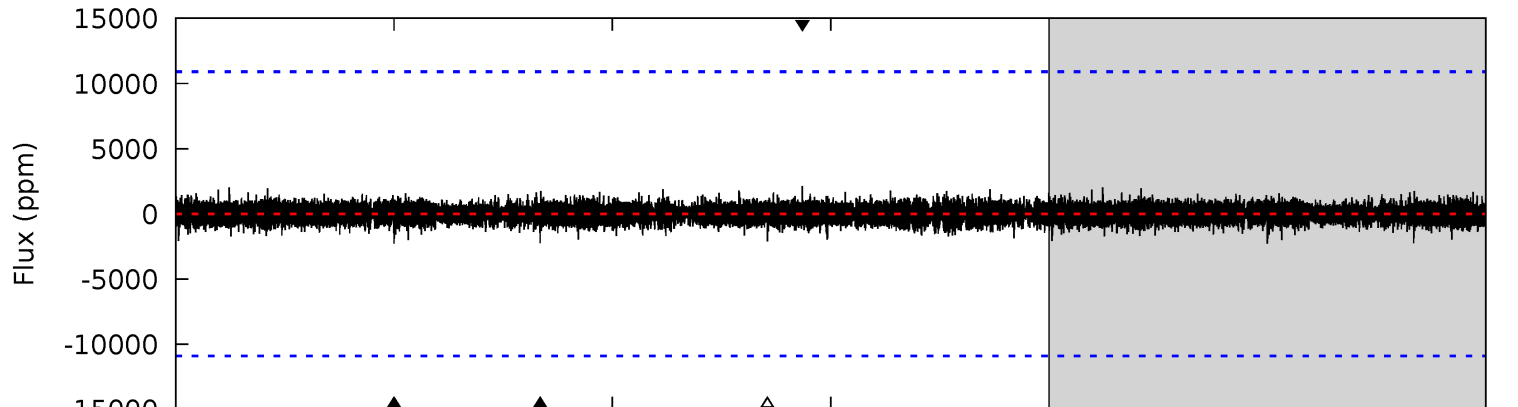
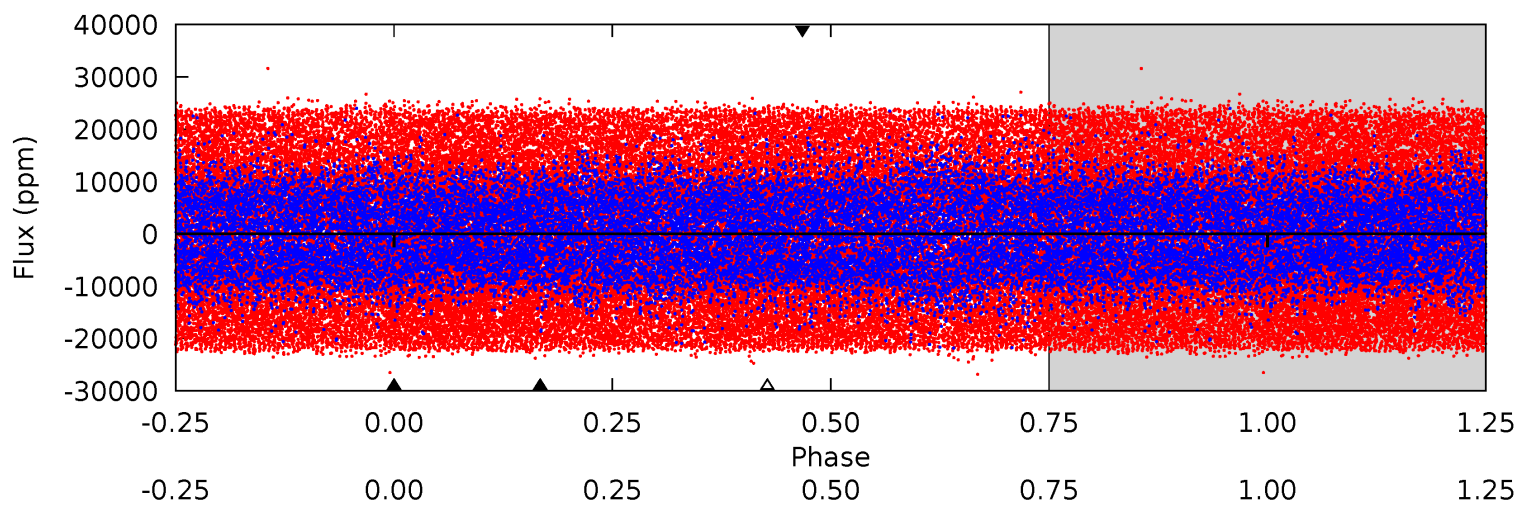
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.66	6.16	5.76	6.62	5.61	3.54	1.16	2.90	2.04	0.40	-0.46	2.47	1.36	0.43	2.62



Alt Model-Shift Uniqueness Test

012602250-01, P = 205.146159 Days, E = 121.877262 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.15	1.13	1.07	1.08	5.55	3.45	0.26	0.09	0.07	0.07	0.05	0.31	1.10	0.48	0.41



Stellar Parameters For KIC 012602250

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7193^{+200}_{-275}	$4.156^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.671^{+0.525}_{-0.350}$	$1.460^{+0.218}_{-0.239}$	$0.441^{+0.288}_{-0.235}$
	+3%/-4%	+3%/-5%	+208%/-292%	+31%/-21%	+15%/-16%	+65%/-53%
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 012602250-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-528 ± 86	$7.71^{+8.10}_{-4.94}$	658^{+51}_{-43}	5290^{+4353}_{-1275}	2824^{+20658}_{-2138}
Alt.	-2222 ± 1963	$10.53^{+8.58}_{-6.61}$	656^{+51}_{-42}	6134^{+5680}_{-2655}	4983^{+36331}_{-4690}

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

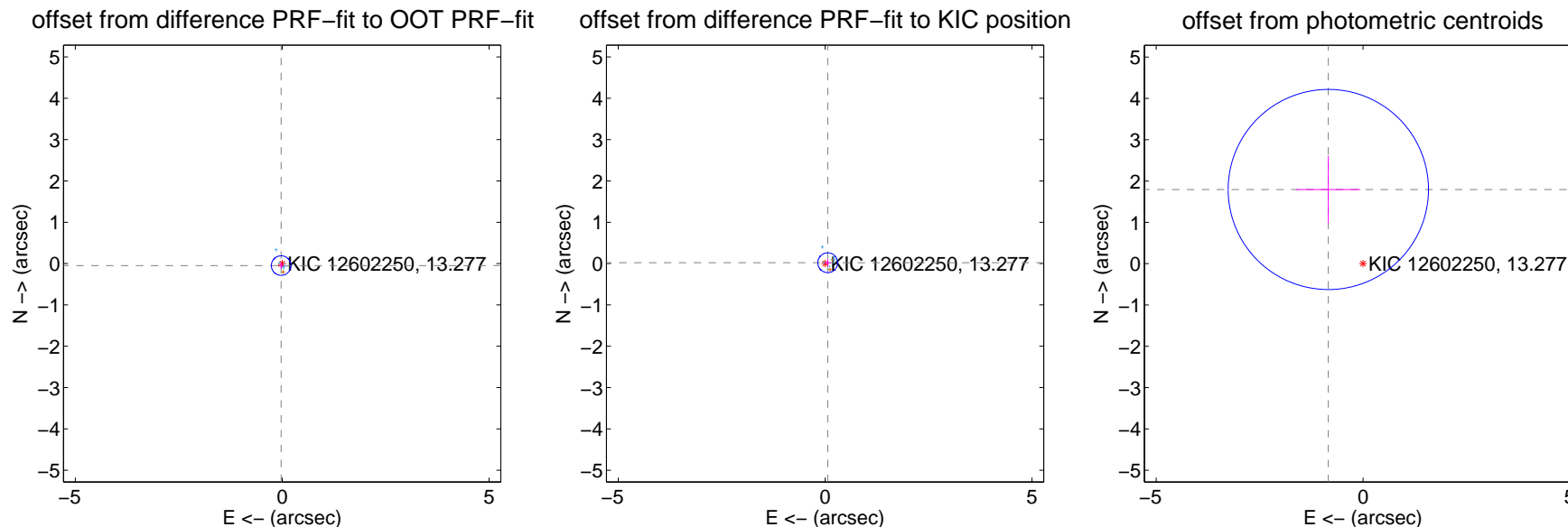
DV Centroid Data

Supplemental centroid analysis for 012602250-01. Kepler magnitude: 13.28. Transit SNR 6.61

There are 4 quarters with good PRF difference image offsets

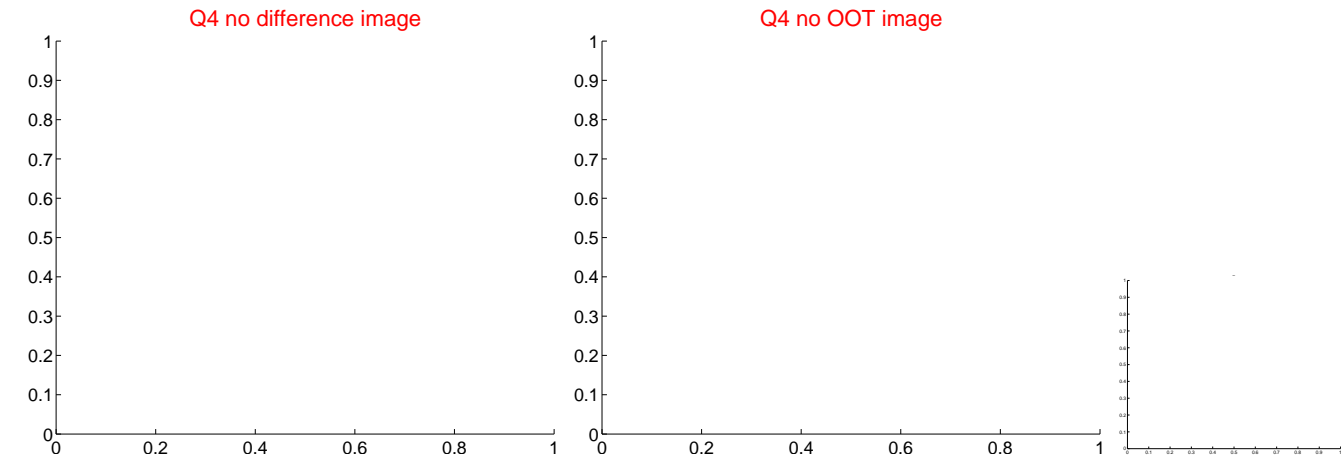
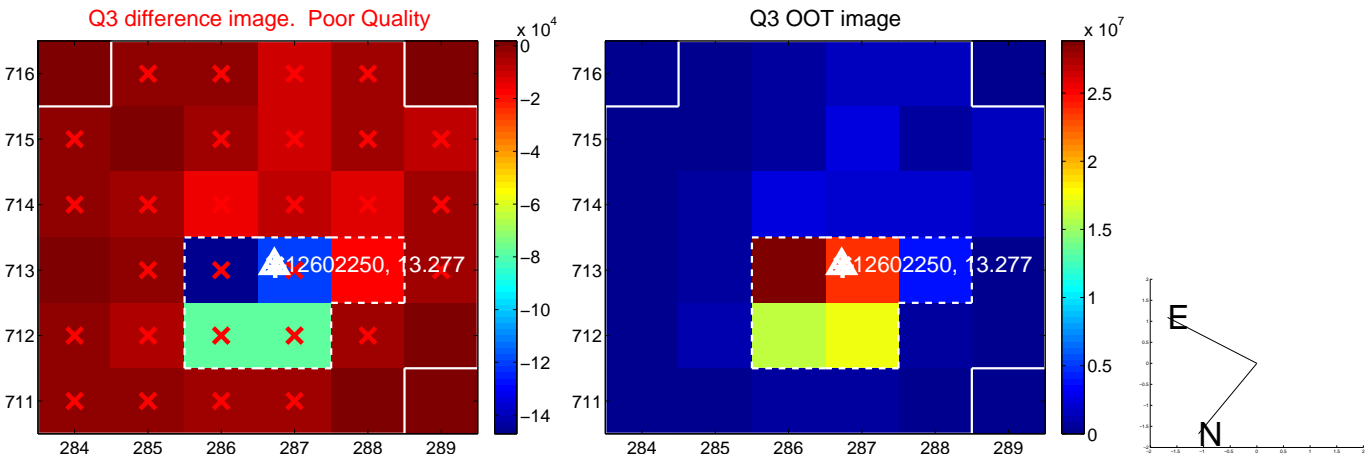
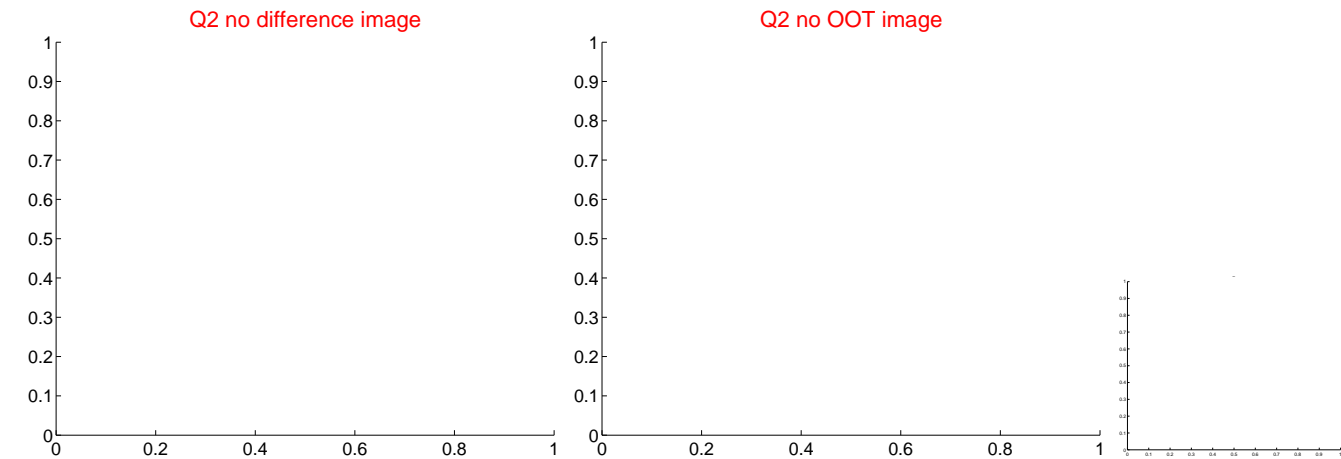
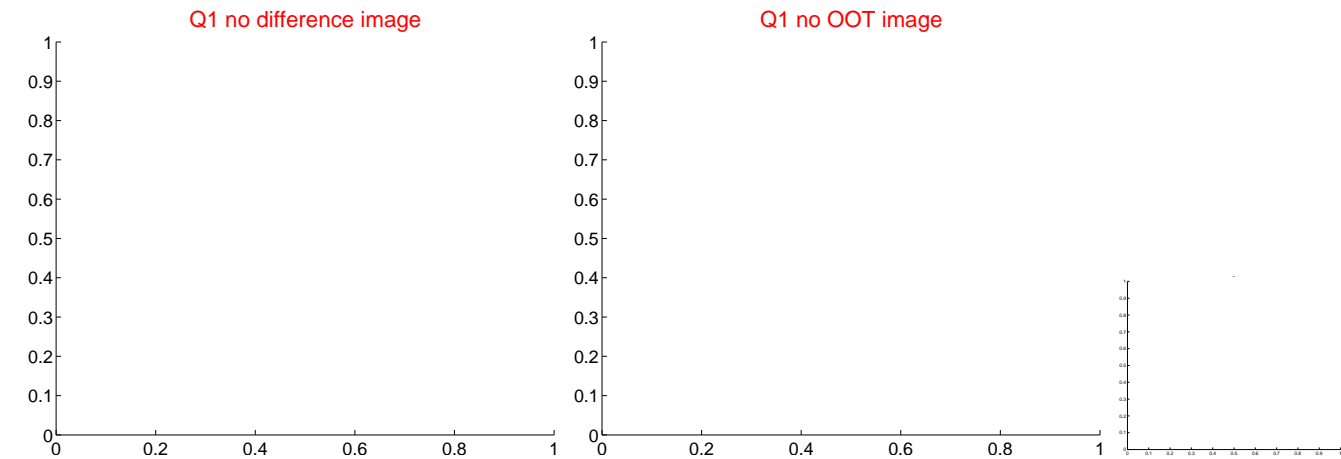
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.079	0.69	0.025 ± 0.071	-0.048 ± 0.081
PRF-fit source offset from KIC position	0.067 ± 0.080	0.83	-0.063 ± 0.079	0.021 ± 0.087
photometric centroid source offset	1.98 ± 0.81	2.45	0.84 ± 0.77	1.80 ± 0.82

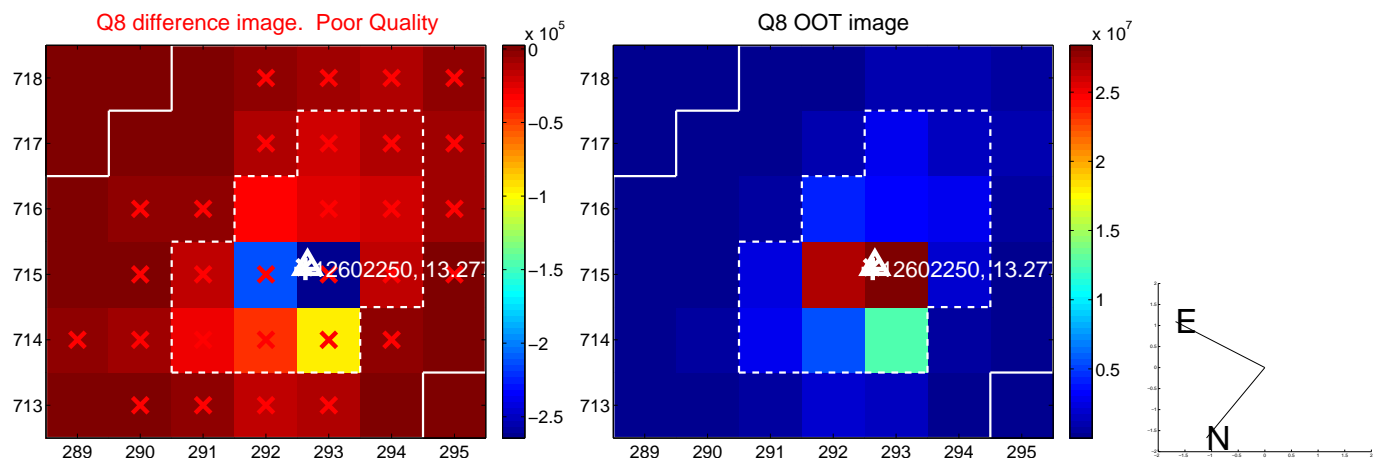
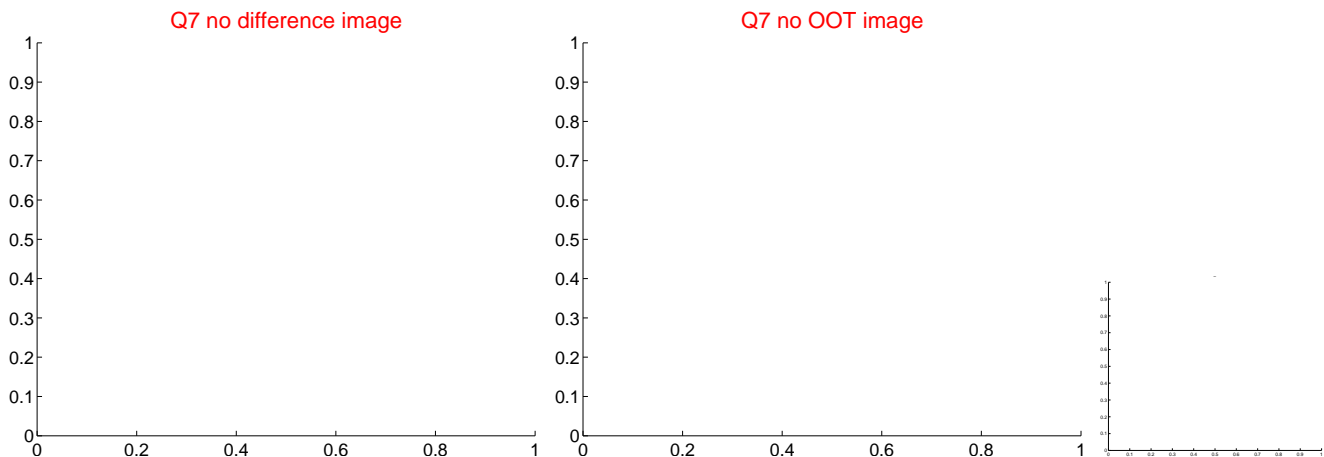
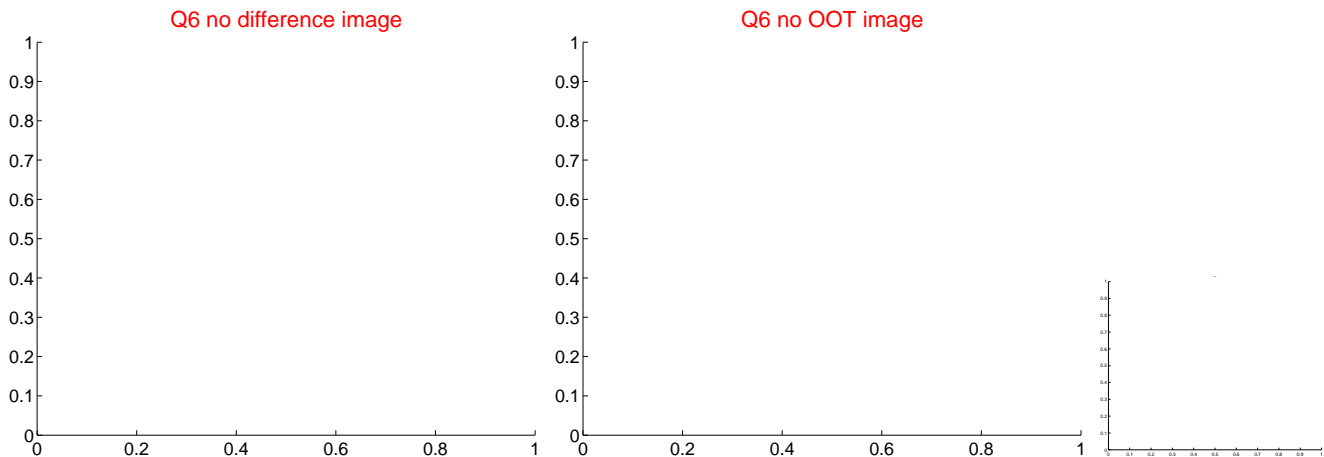
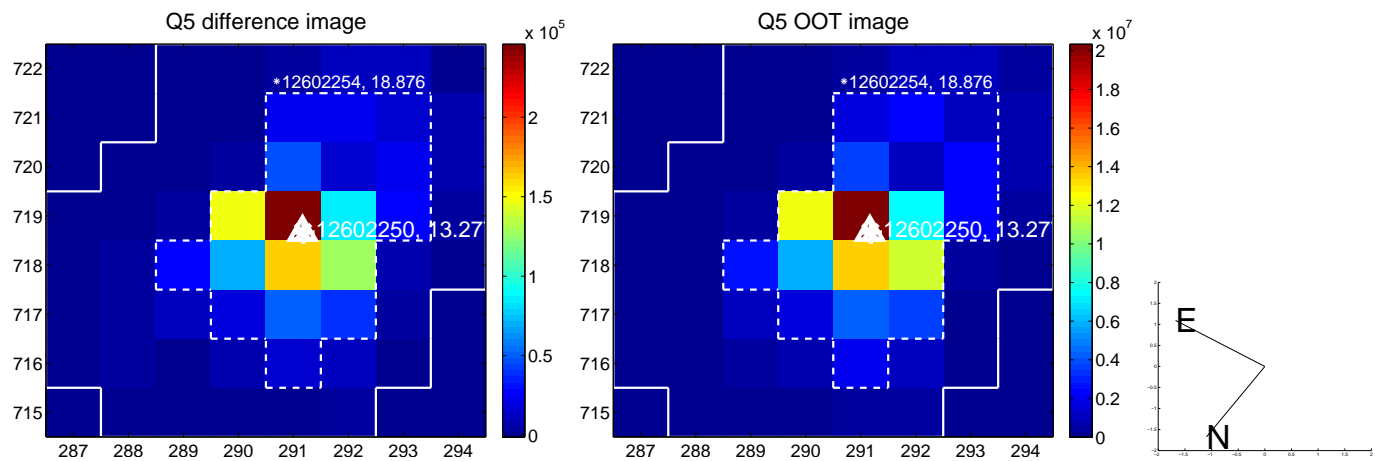


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

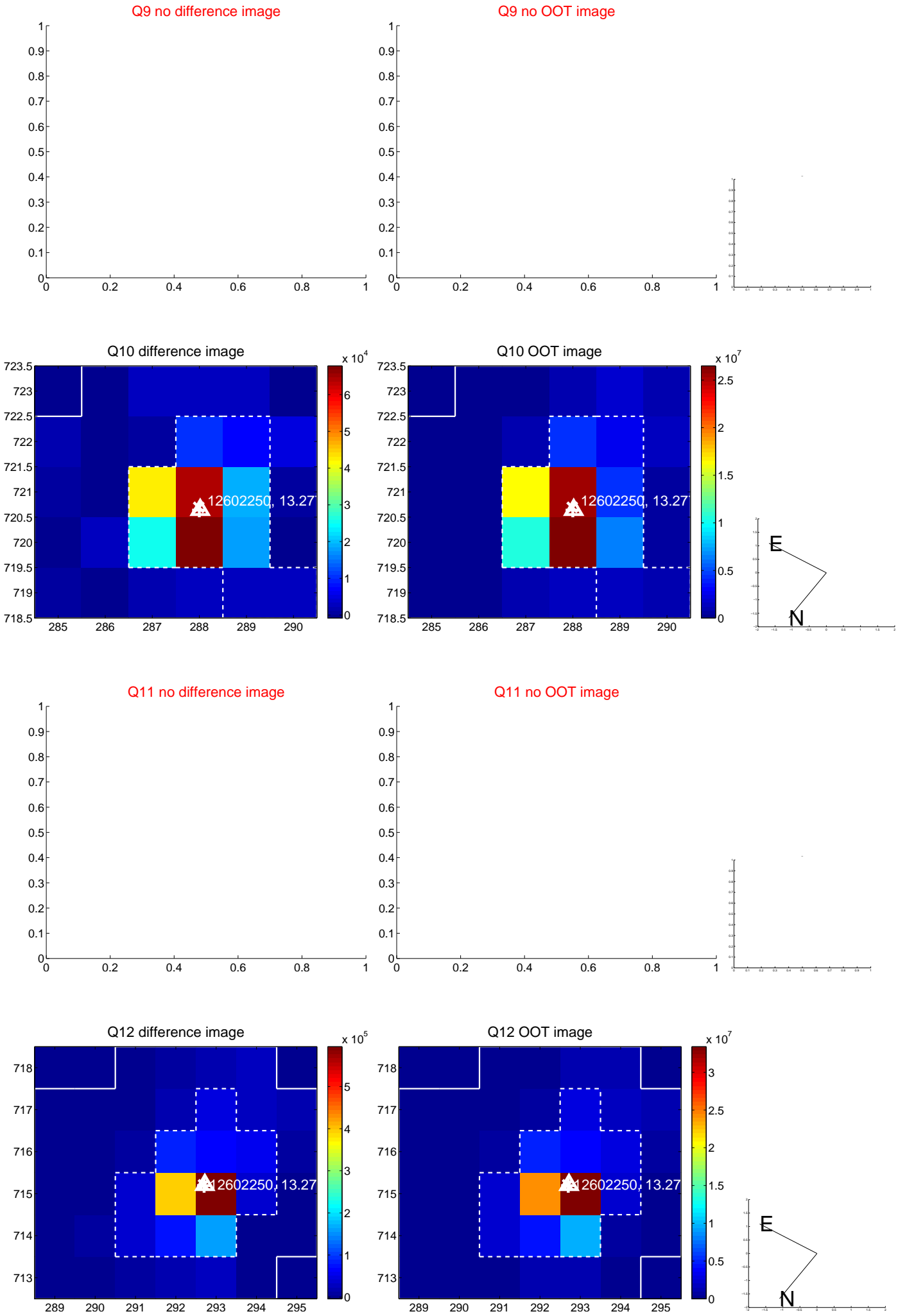
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



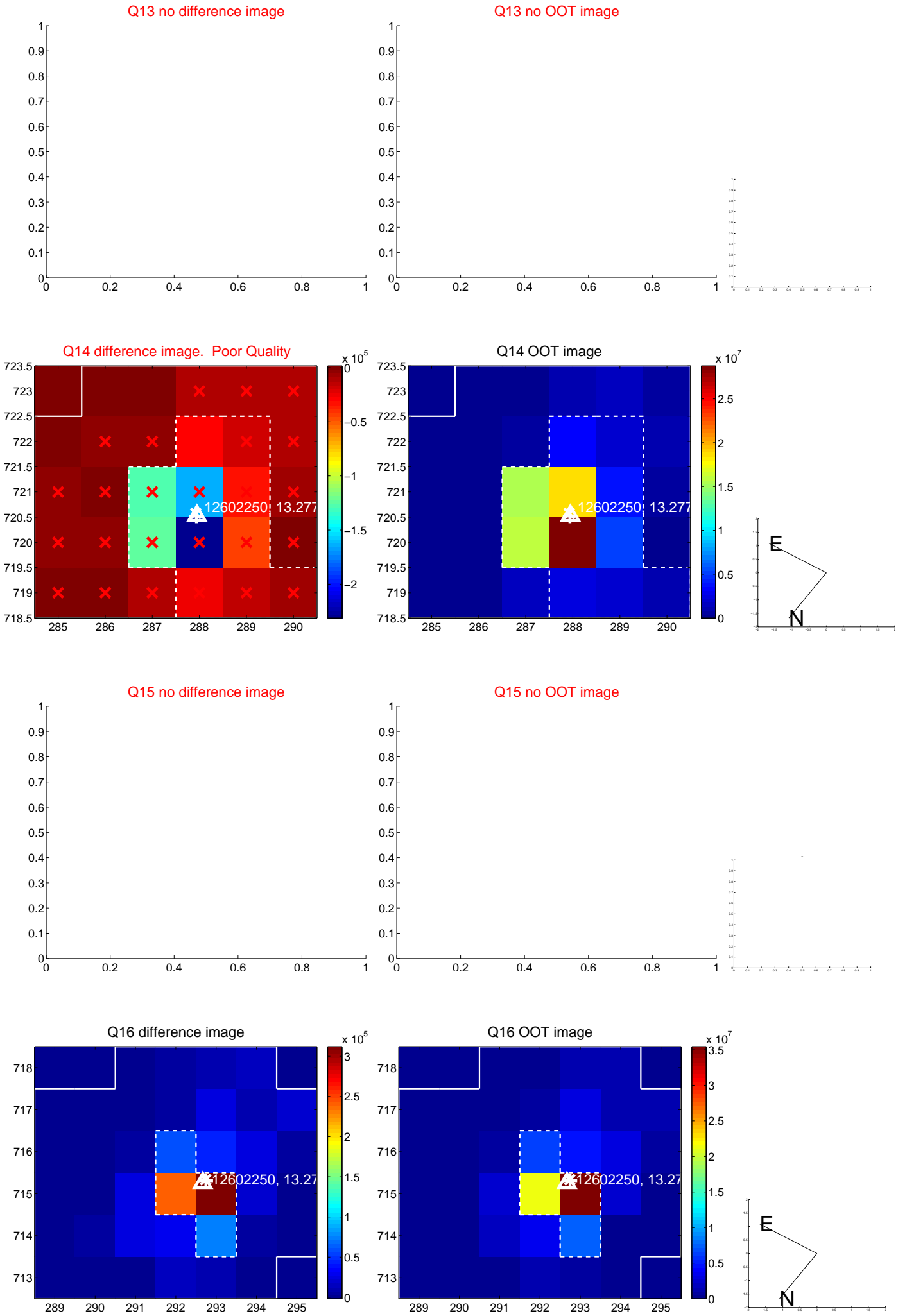
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



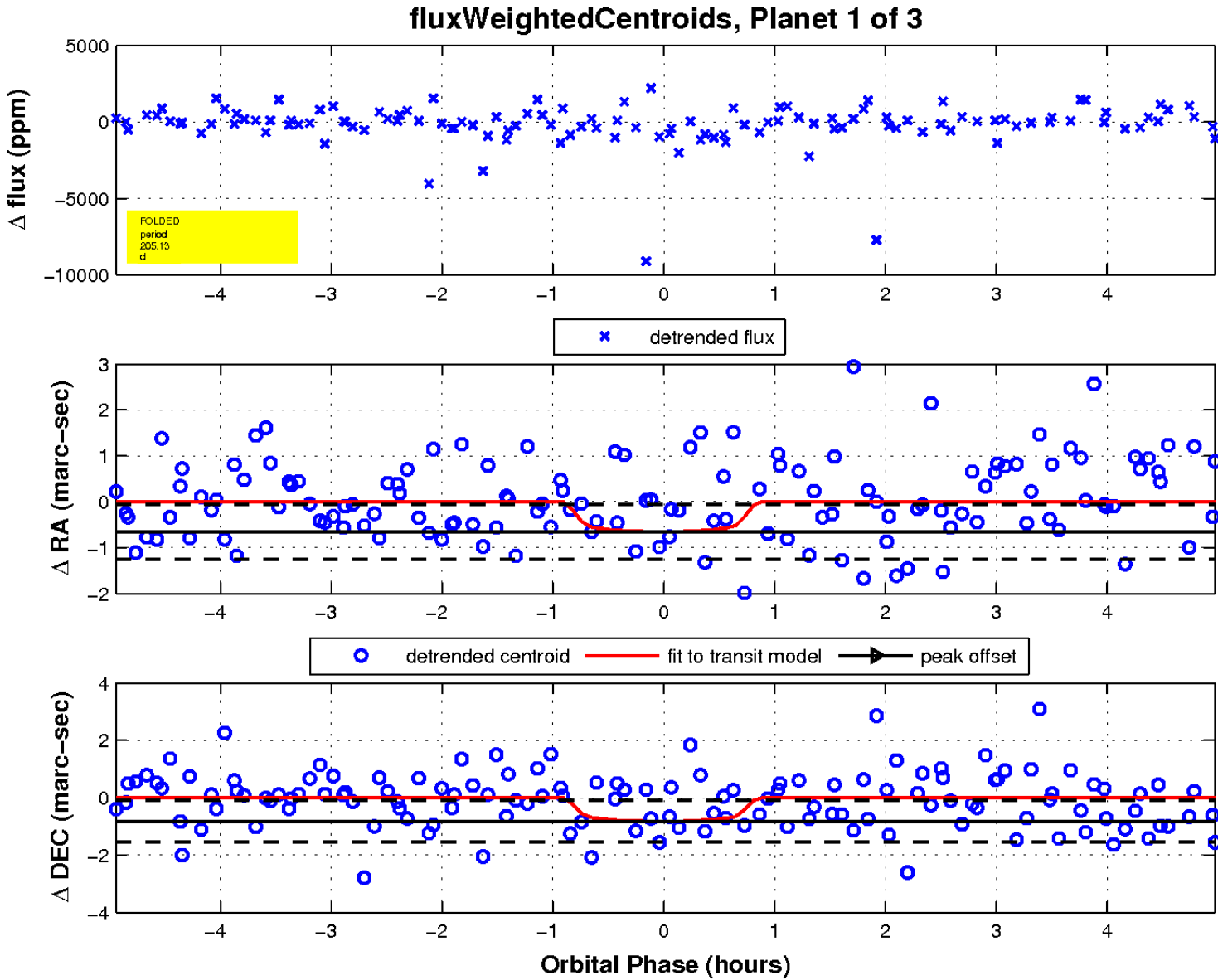
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

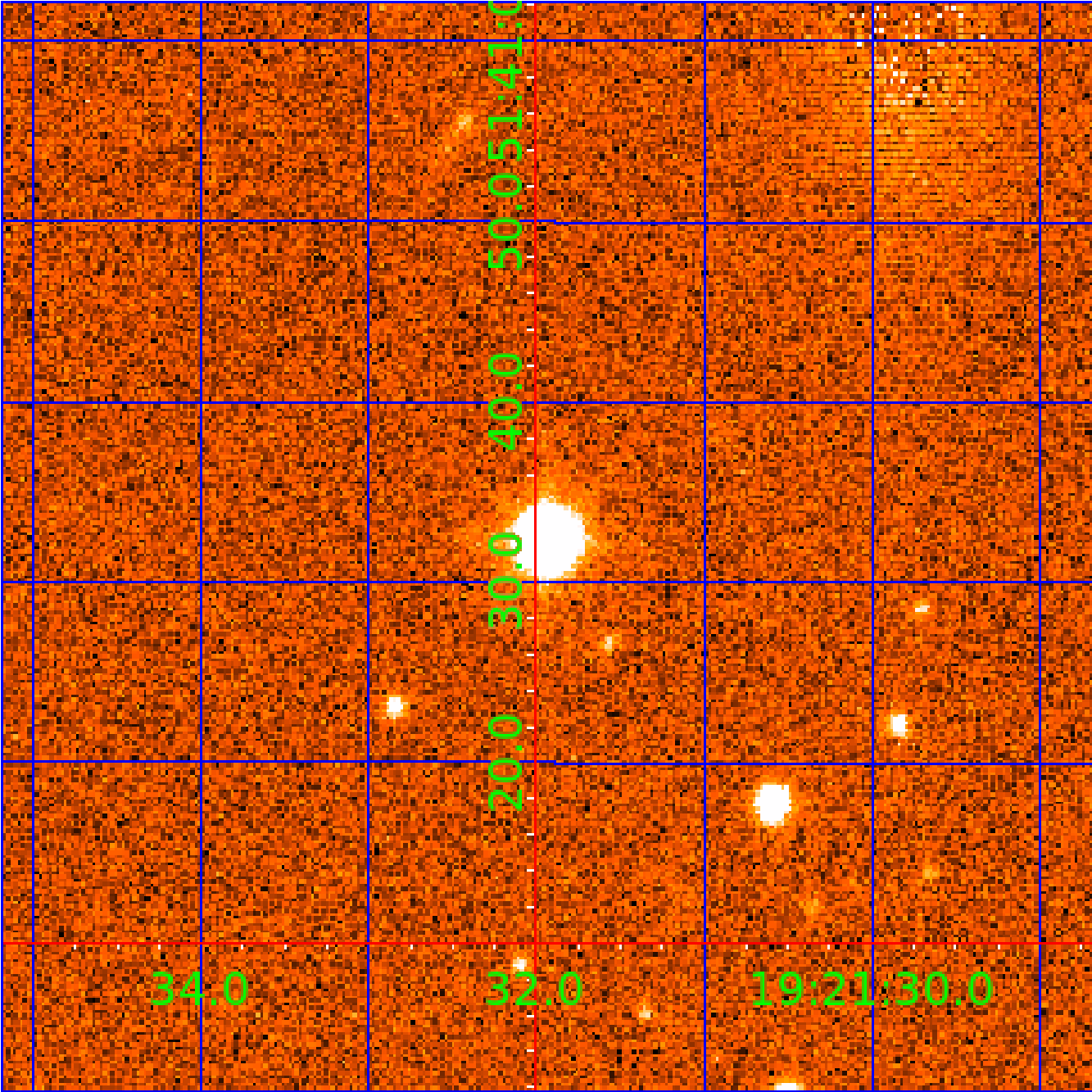
Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination



KIC 012602250

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})
012602250-01	OBS	No	205.126556	327.016887	686.6	1.671	24.9	6.6	1.67	7193	4.79	11.23
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012602250-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
012602250-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
012602250-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

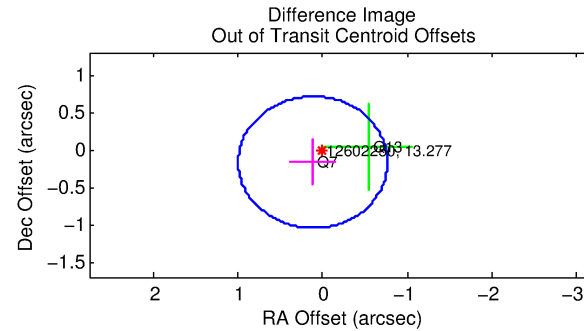
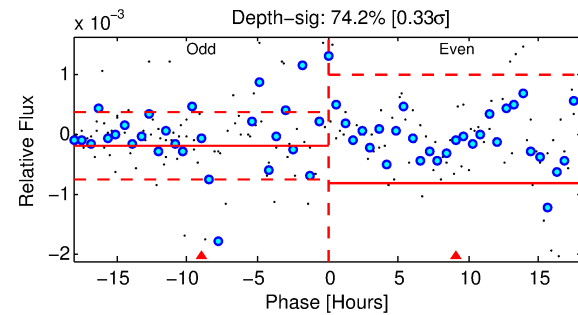
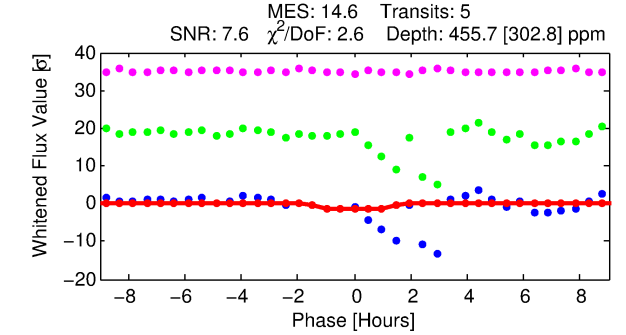
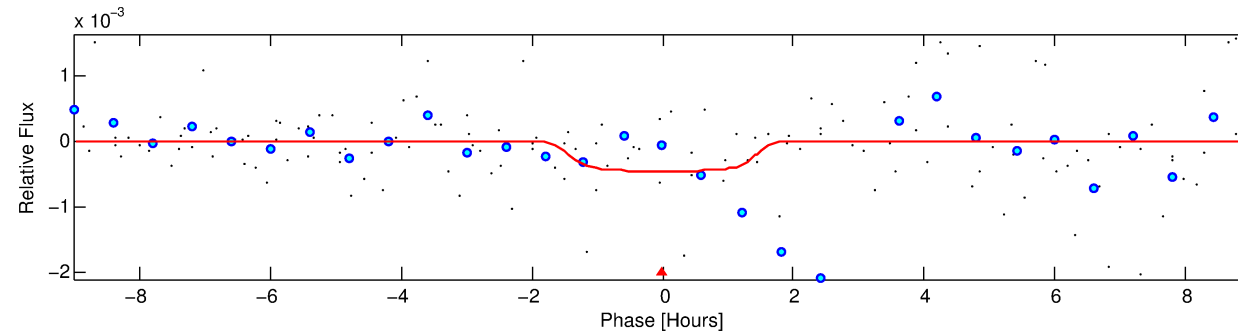
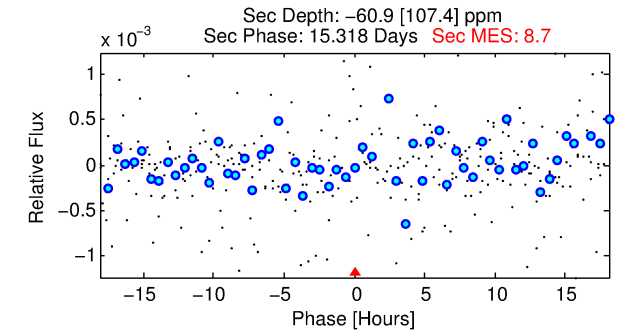
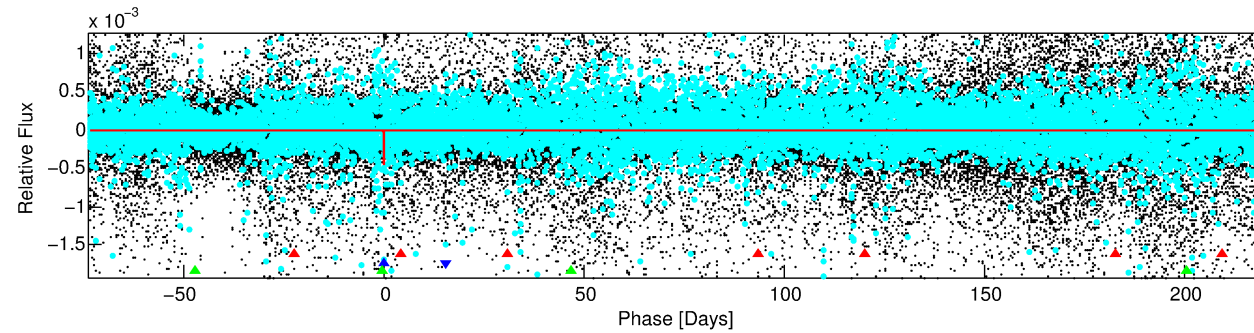
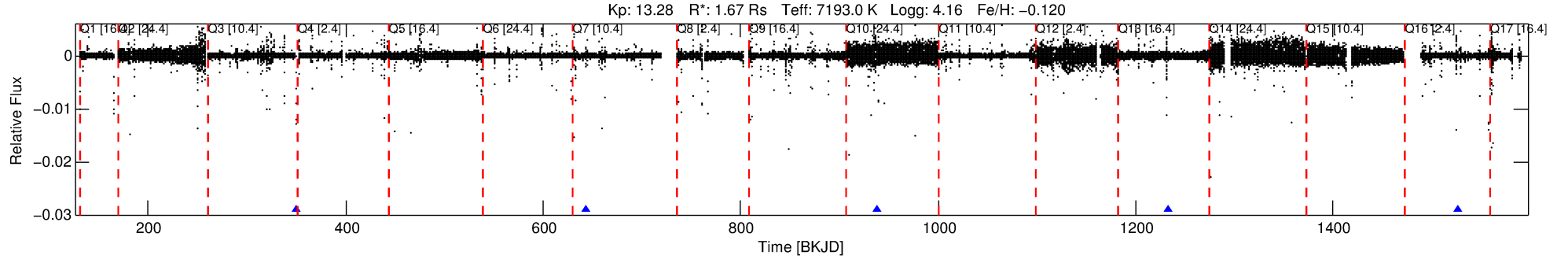
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012602250-02

No Significant Match Found

DV One-Page Summary

KIC: 12602250 Candidate: 2 of 3 Period: 294.393 d



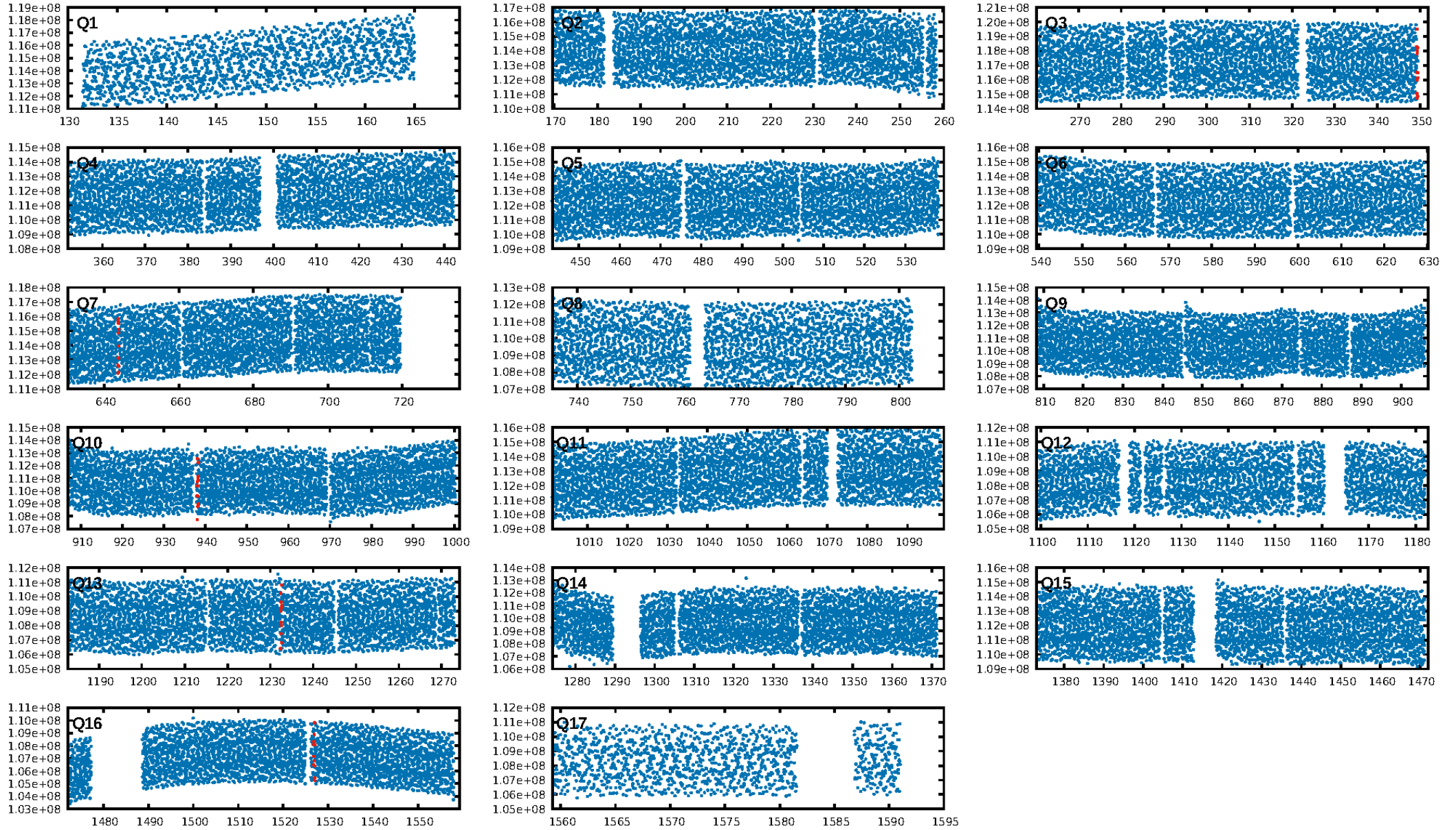
DV Fit Results:

Period = 294.39253 [0.01563] d
Epoch = 349.3517 [0.0306] BKJD
Rp/R* = 0.0199 [0.1972]
a/R* = 742.25 [42710.39]
b = 0.23 [236.02]
Seff = 6.94 [2.72]
Teq = 414 [41] K
Rp = 3.63 [35.97] Re
a = 0.9824 [0.2516] AU
Ag = N/A
Teffp = N/A

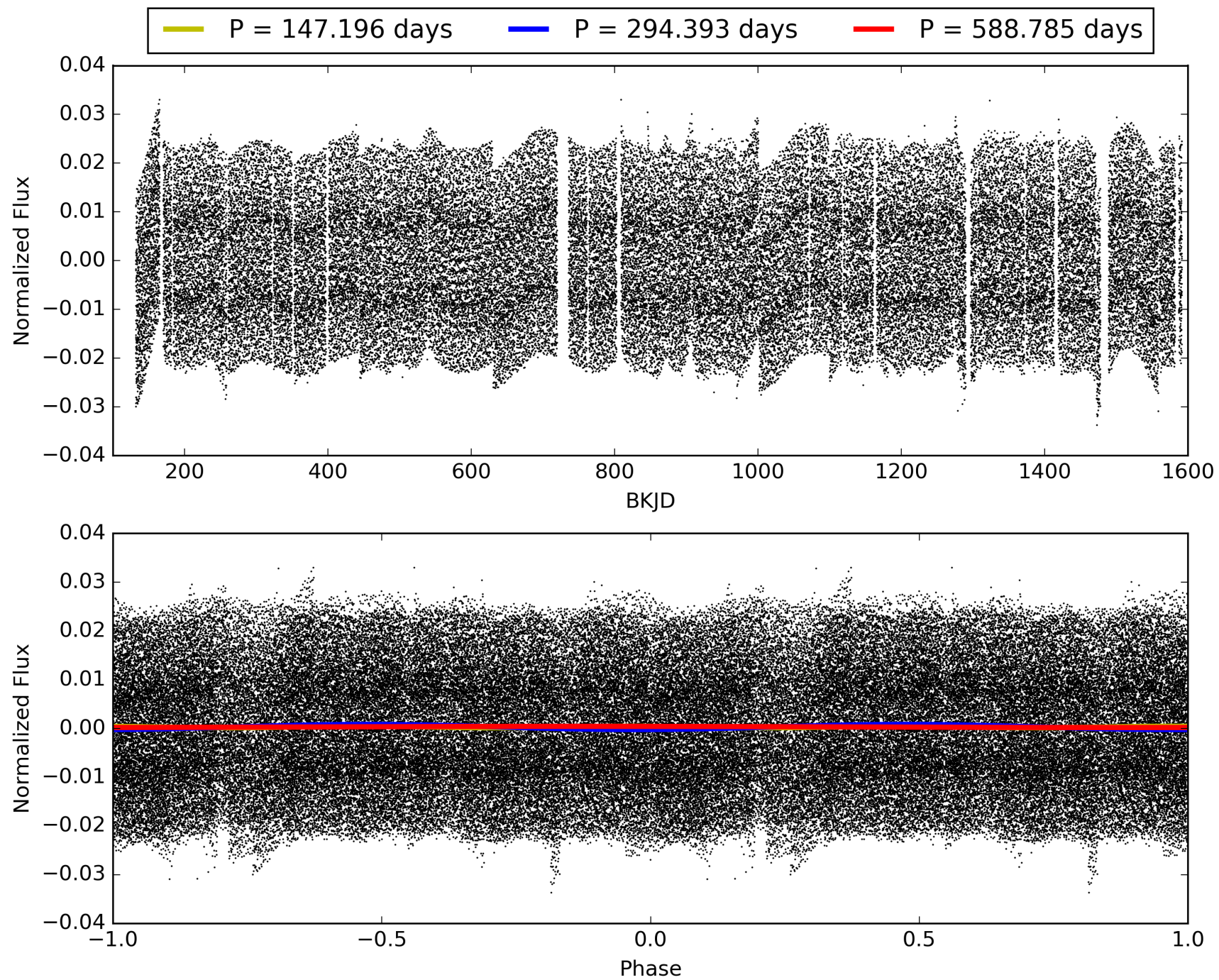
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [622.44σ]
LongPeriod-sig: 100.0% [78.86σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 4.81e-04
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.178
Centroid-sig: 58.0%
Centroid-so: 0.226 arcsec [0.25σ]
OotOffset-rm: 0.202 arcsec [0.69σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 0.121 arcsec [0.39σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 012602250-02, PDC Light Curves

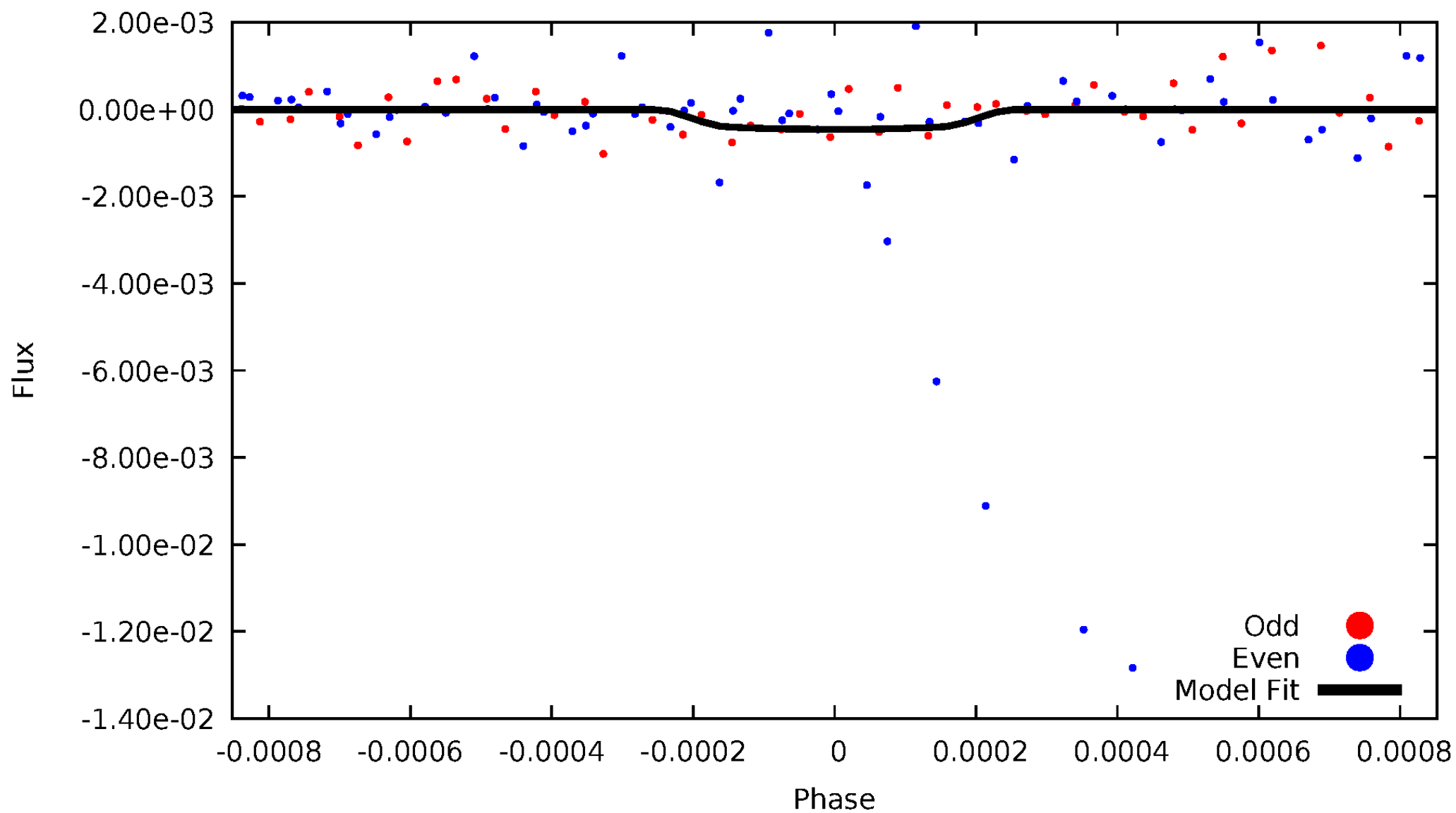


TCE 012602250-02



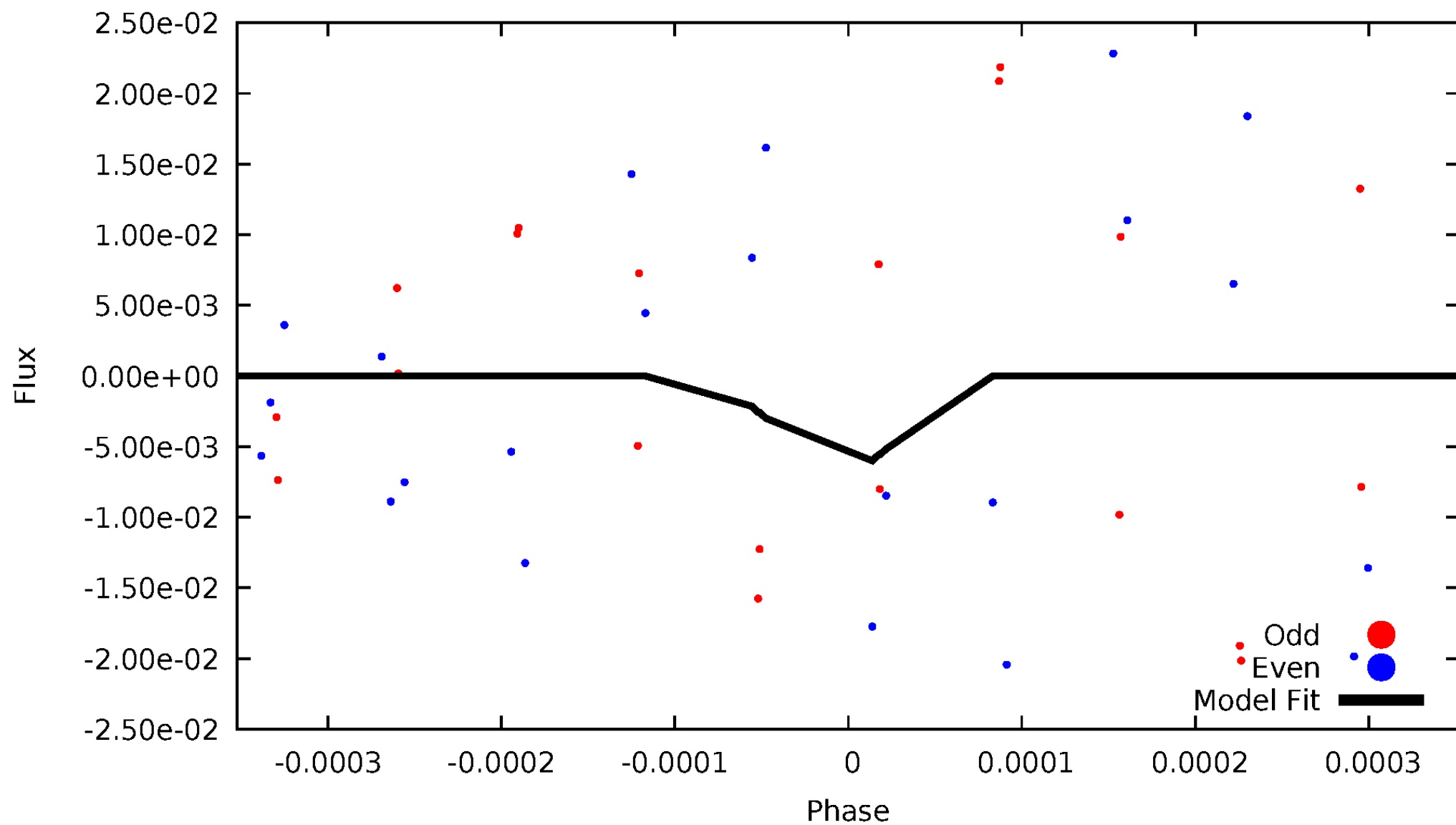
DV Odd/Even

TCE 012602250-02



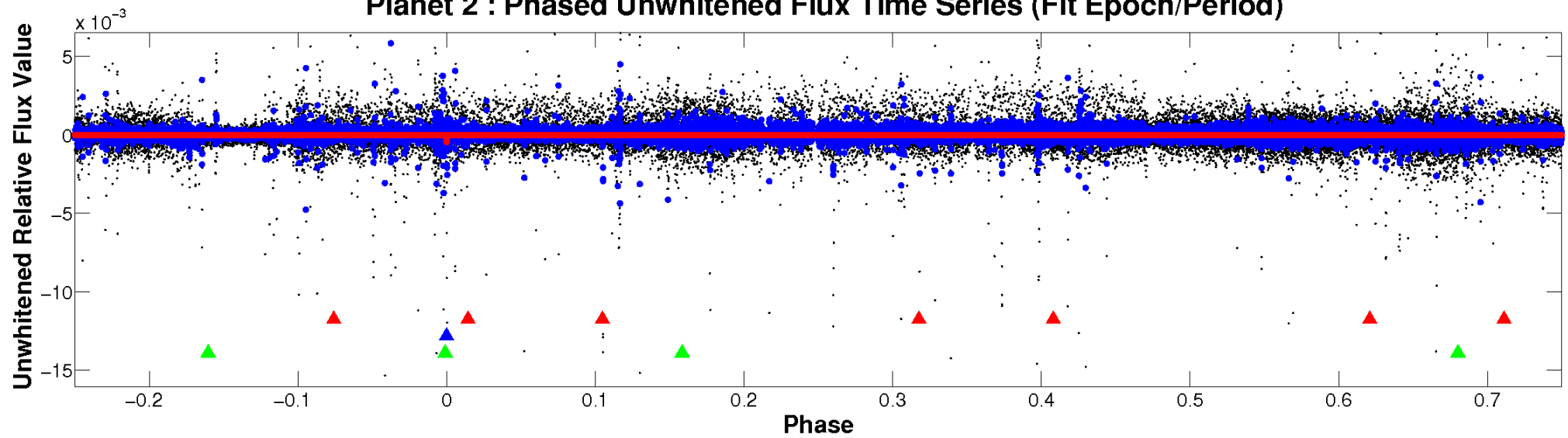
ALT Odd/Even

TCE 012602250-02

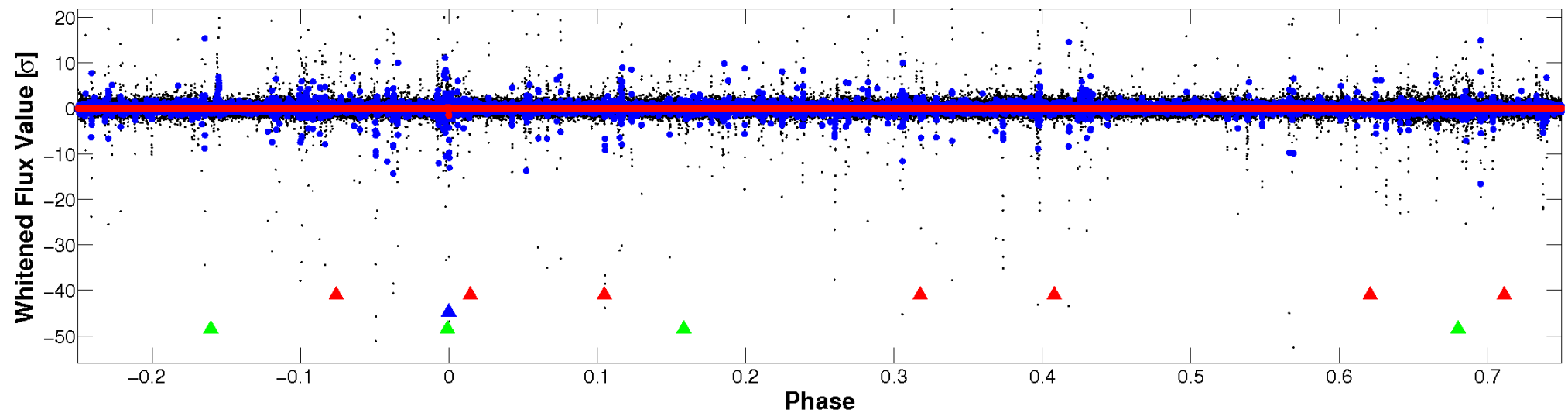


Non-Whitened Vs. Whitened Light Curve

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

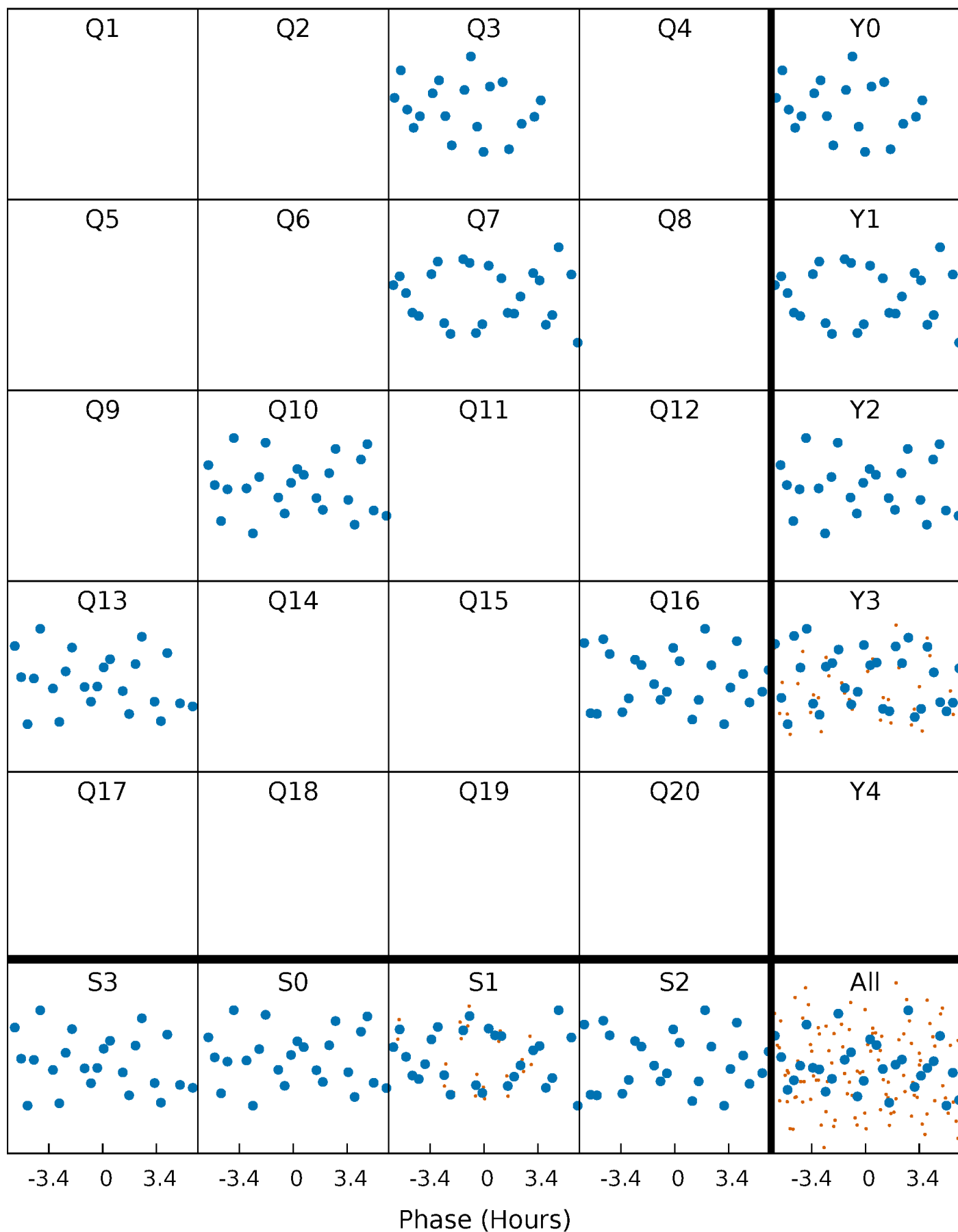


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 012602250-02 $P=294.392529$ Days $T_0=349.351682$ (BKJD)



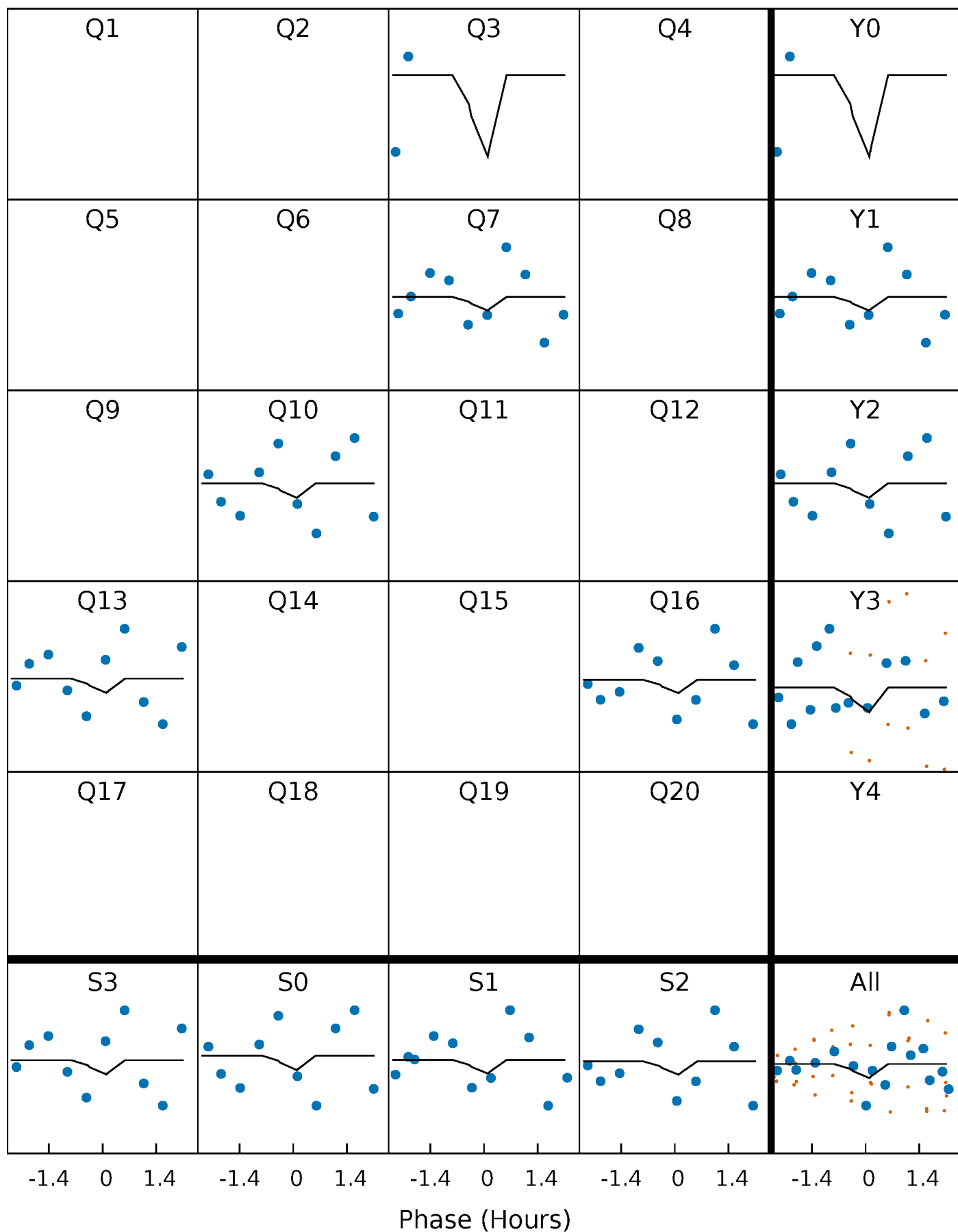
DV Quarter-Phased Transit Curves

TCE 012602250-02 $P=294.392529$ Days $T_0=349.351682$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

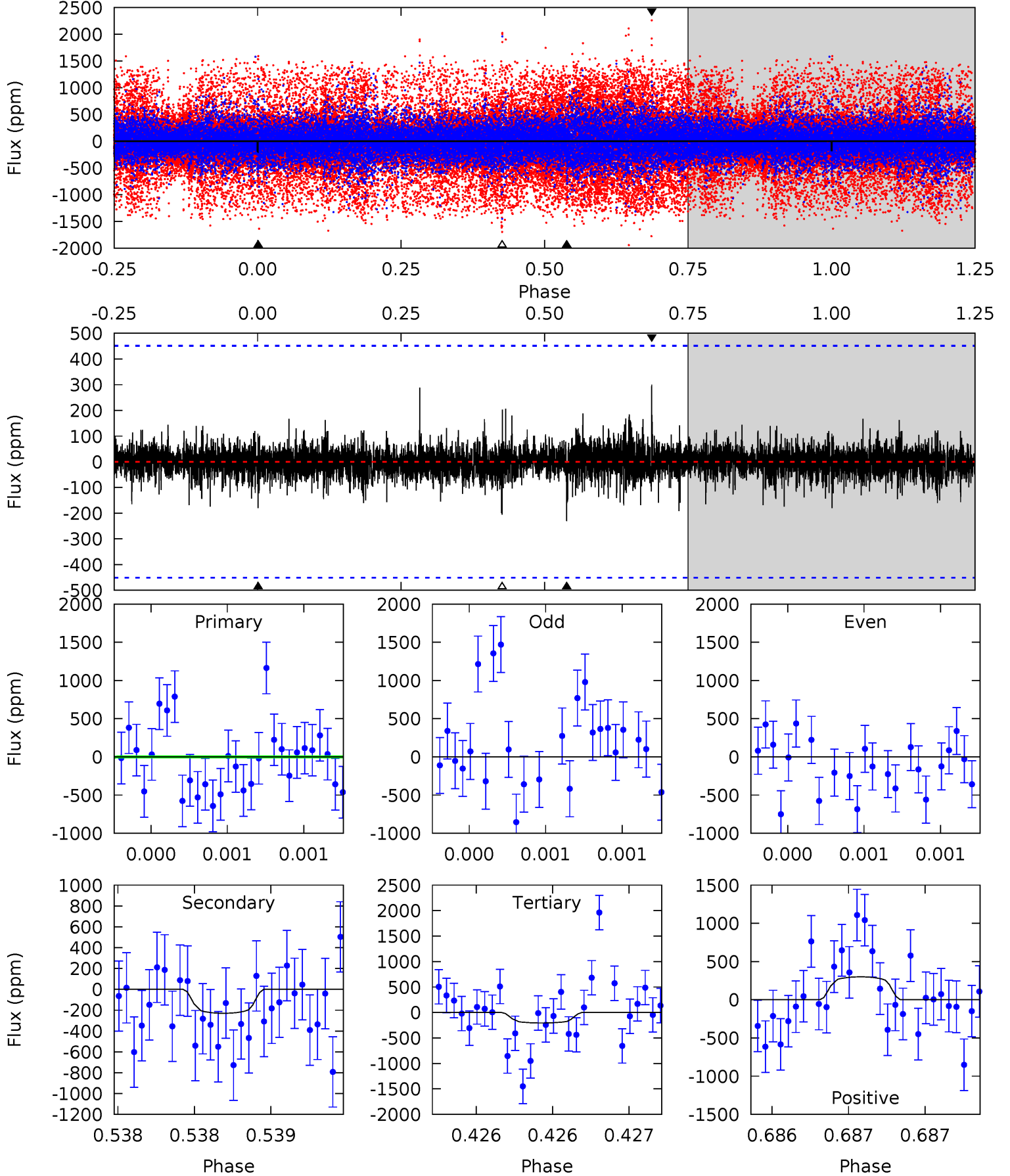
TCE 012602250-02 P=294.345432 Days $T_0=349.575469$ (BKJD)



DV Model-Shift Uniqueness Test

012602250-02, P = 294.392529 Days, E = 54.959153 Days

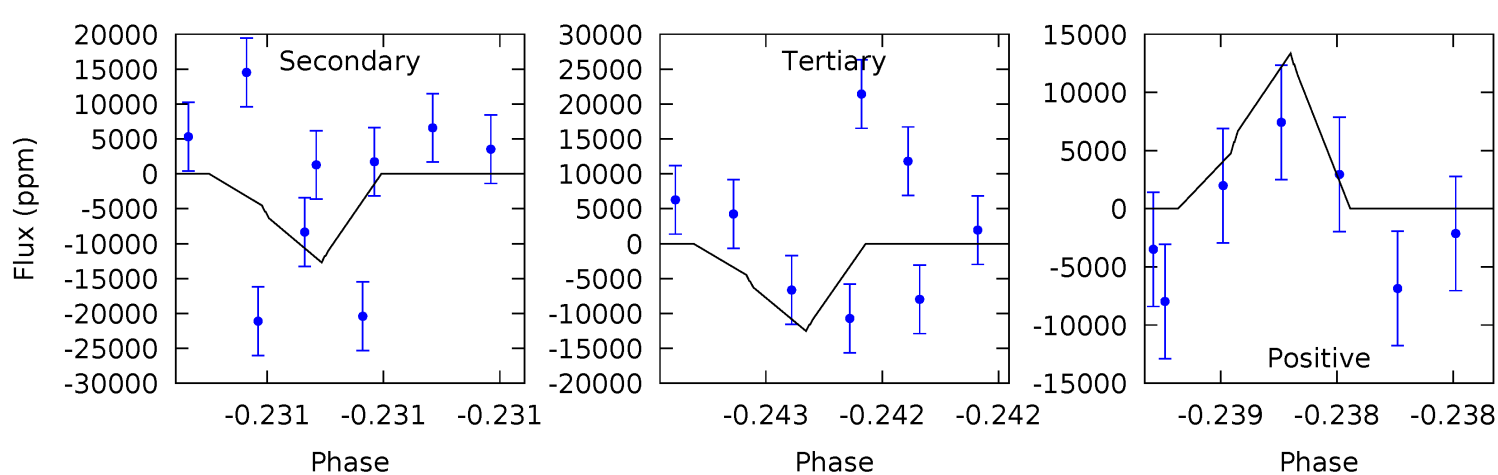
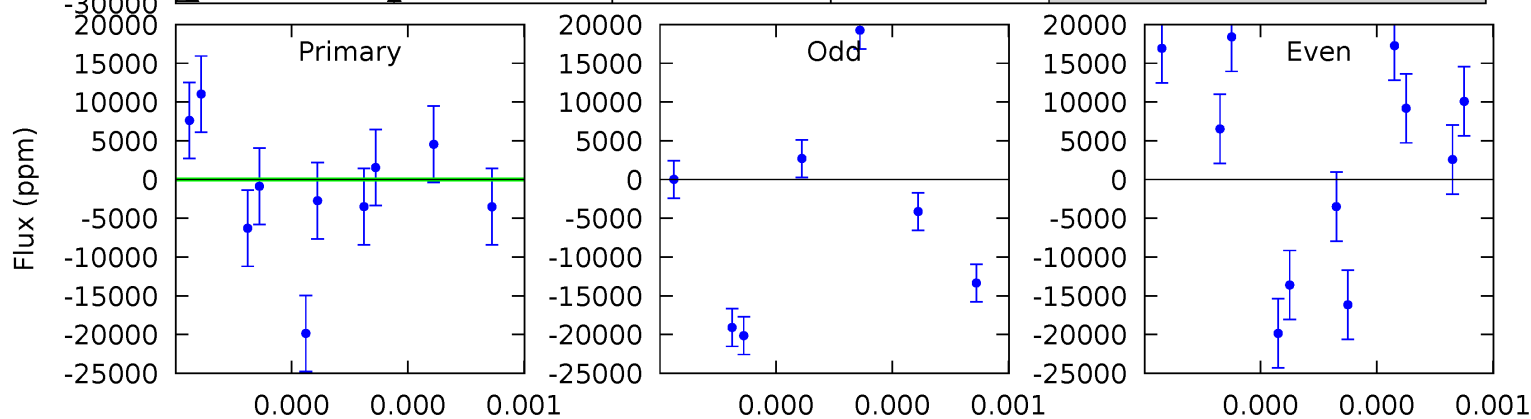
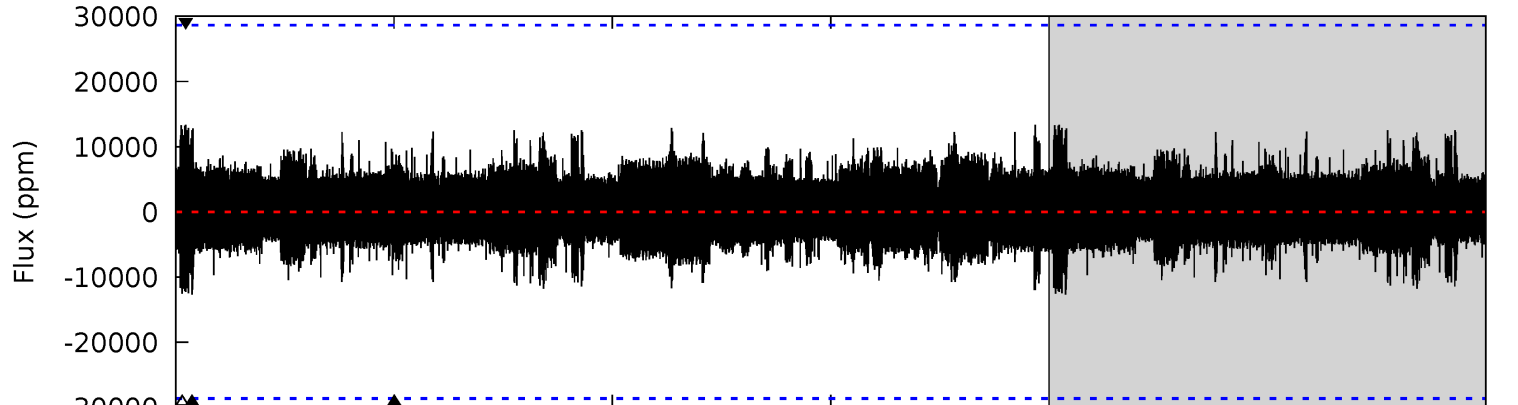
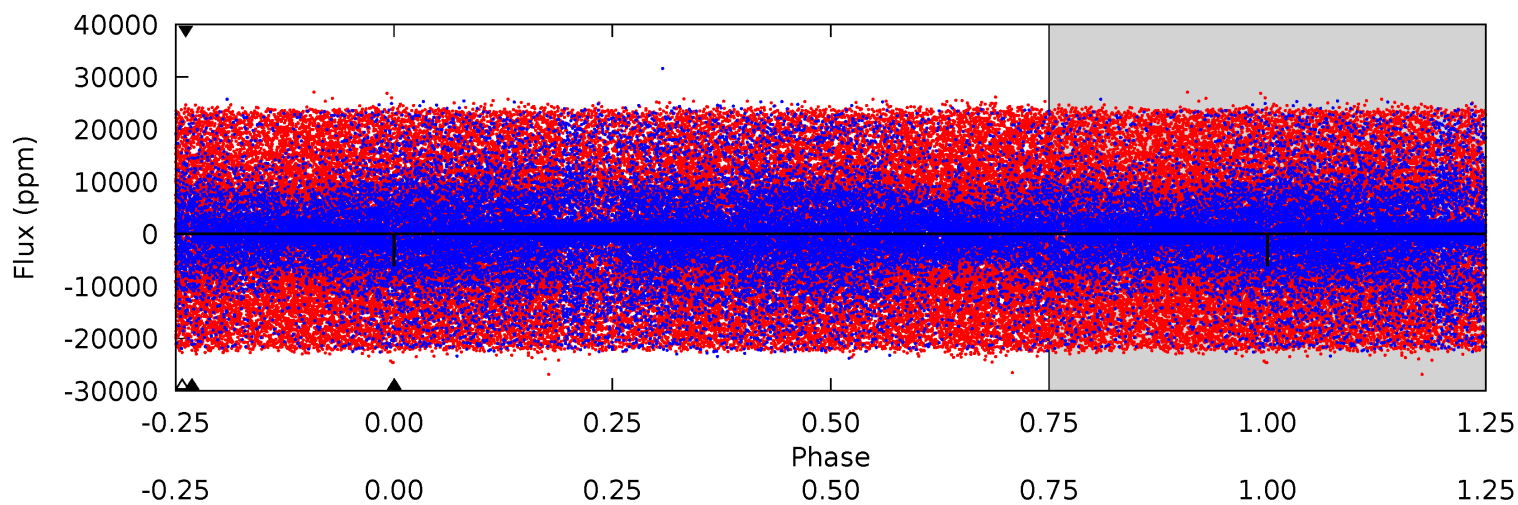
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.23	2.85	2.53	3.71	5.58	3.49	0.53	-0.30	-1.48	0.31	-0.87	0.84	5.99	0.57	0.97



Alt Model-Shift Uniqueness Test

012602250-02, P = 294.345432 Days, E = 55.230037 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.25	2.57	2.54	2.70	5.80	3.82	0.58	-1.29	-1.45	0.03	-0.13	0.13	1.03	0.51	0.63



Stellar Parameters For KIC 012602250

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7193^{+200}_{-275}	$4.156^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.671^{+0.525}_{-0.350}$	$1.460^{+0.218}_{-0.239}$	$0.441^{+0.288}_{-0.235}$
	+3%/-4%	+3%/-5%	+208%/-292%	+31%/-21%	+15%/-16%	+65%/-53%
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 012602250-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-230 ± 81	$26.18^{+29.30}_{-17.81}$	583^{+44}_{-35}	3017^{+1272}_{-565}	175^{+1499}_{-139}
Alt.	-12696 ± 4940	$32.36^{+27.83}_{-22.71}$	581^{+46}_{-37}	5710^{+5588}_{-1383}	6588^{+55294}_{-4979}

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 $A_{obs} \gg 1.0$

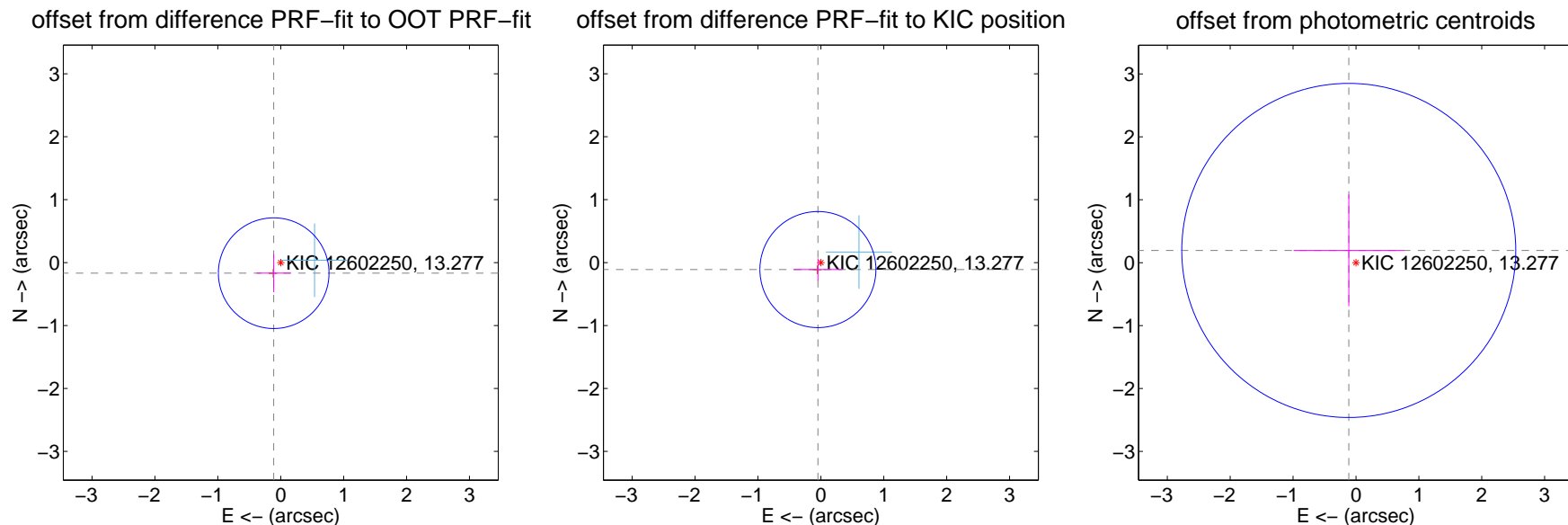
DV Centroid Data

Supplemental centroid analysis for 012602250-02. Kepler magnitude: 13.28. Transit SNR 7.62

There are 1 quarters with good PRF difference image offsets

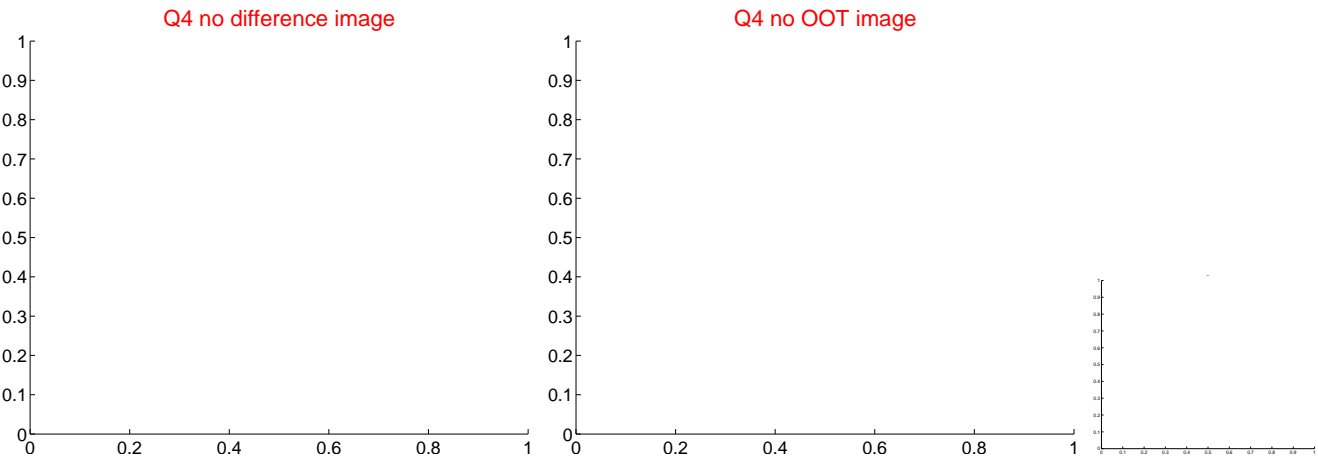
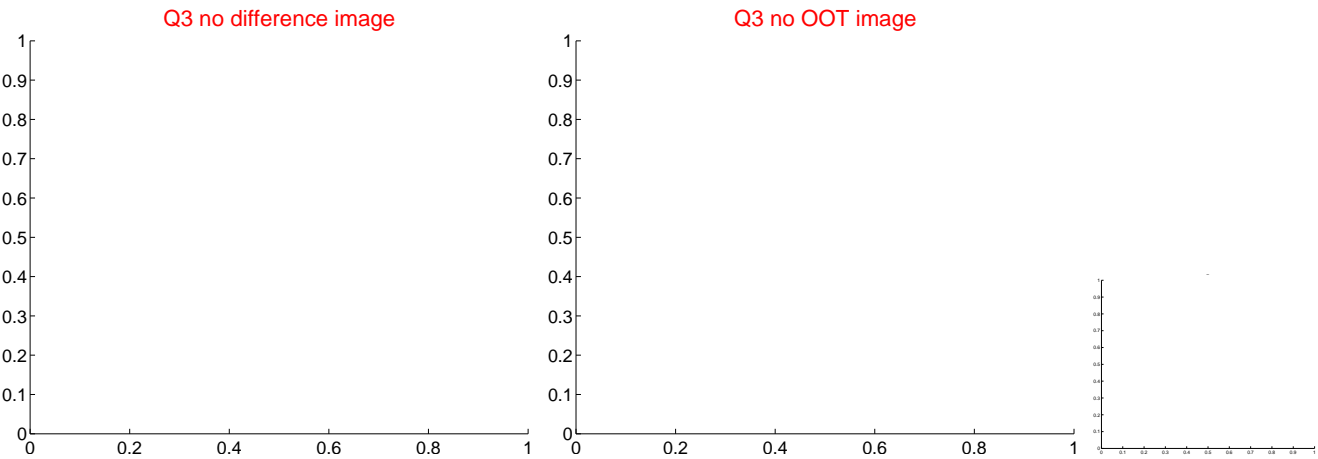
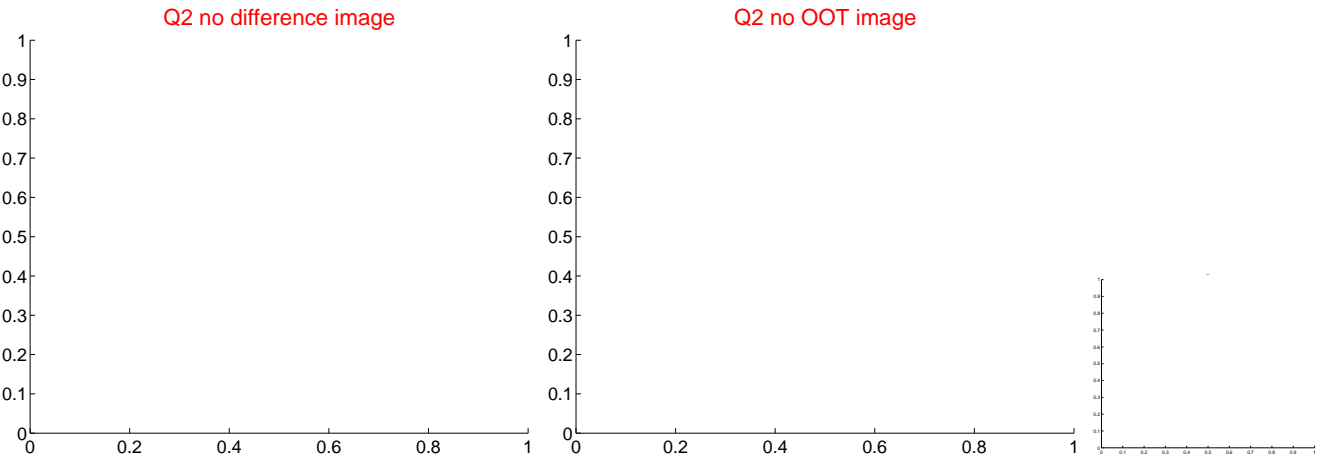
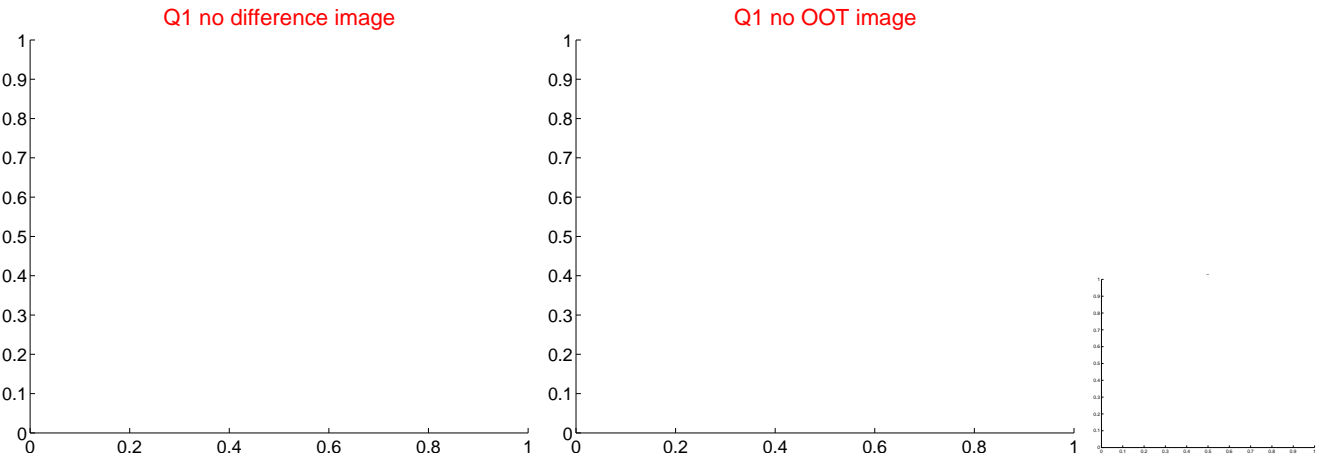
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.293	0.69	0.112 ± 0.273	-0.168 ± 0.302
PRF-fit source offset from KIC position	0.121 ± 0.307	0.39	0.047 ± 0.389	-0.111 ± 0.176
photometric centroid source offset	0.23 ± 0.89	0.25	0.11 ± 0.88	0.19 ± 0.89

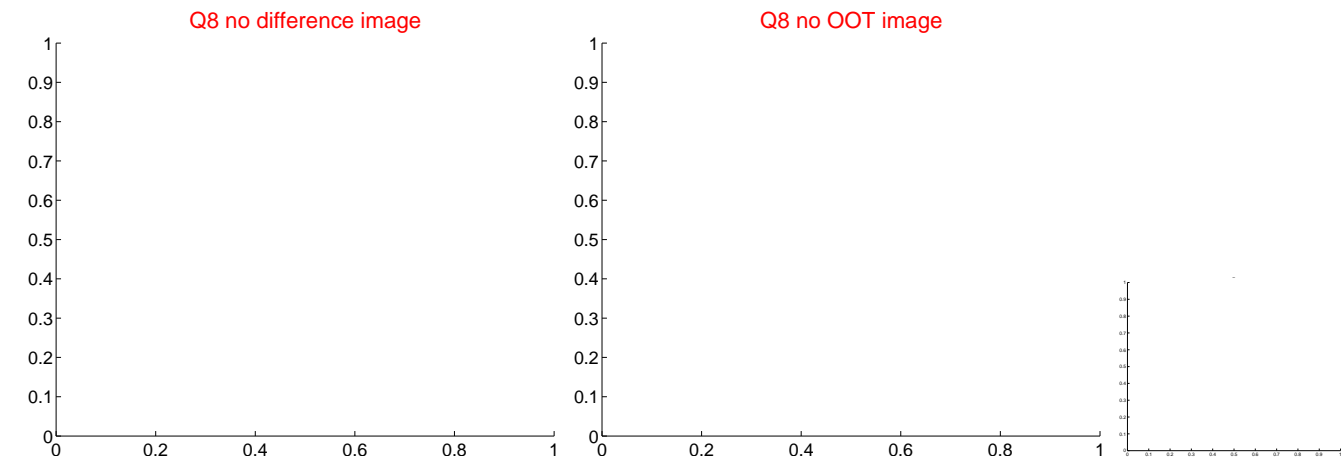
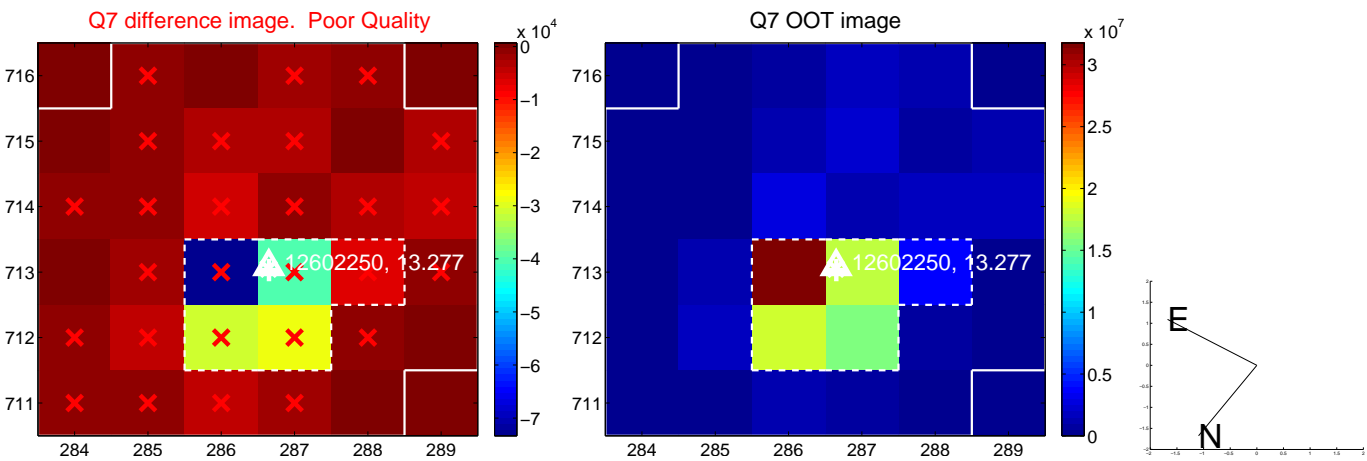
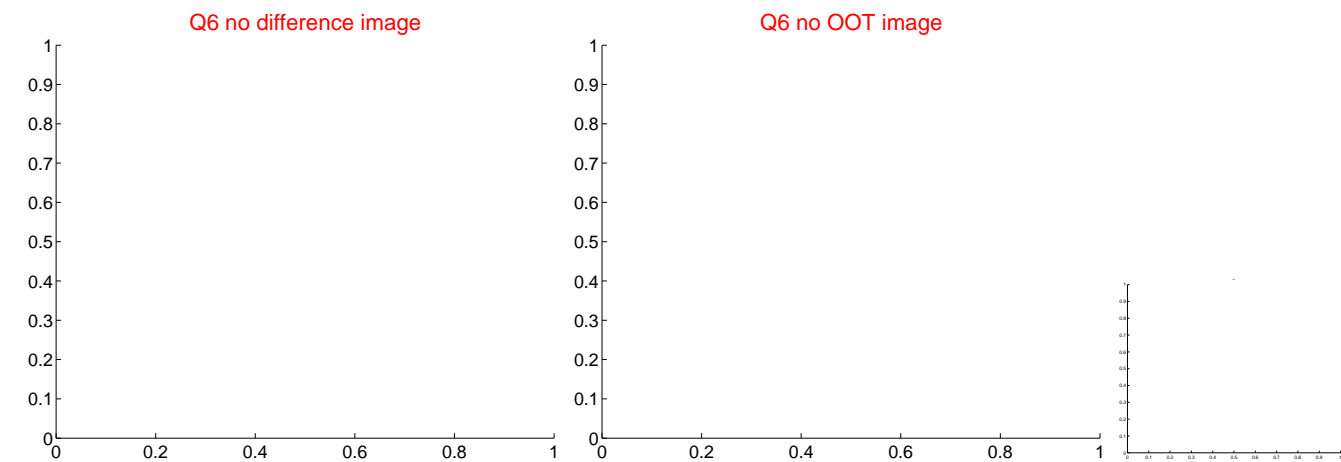
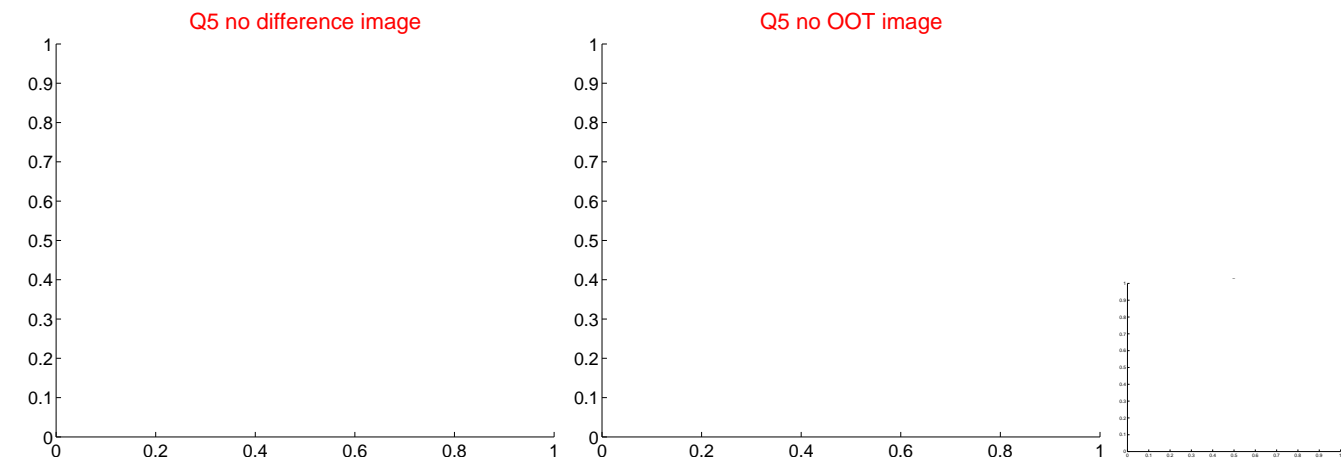


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



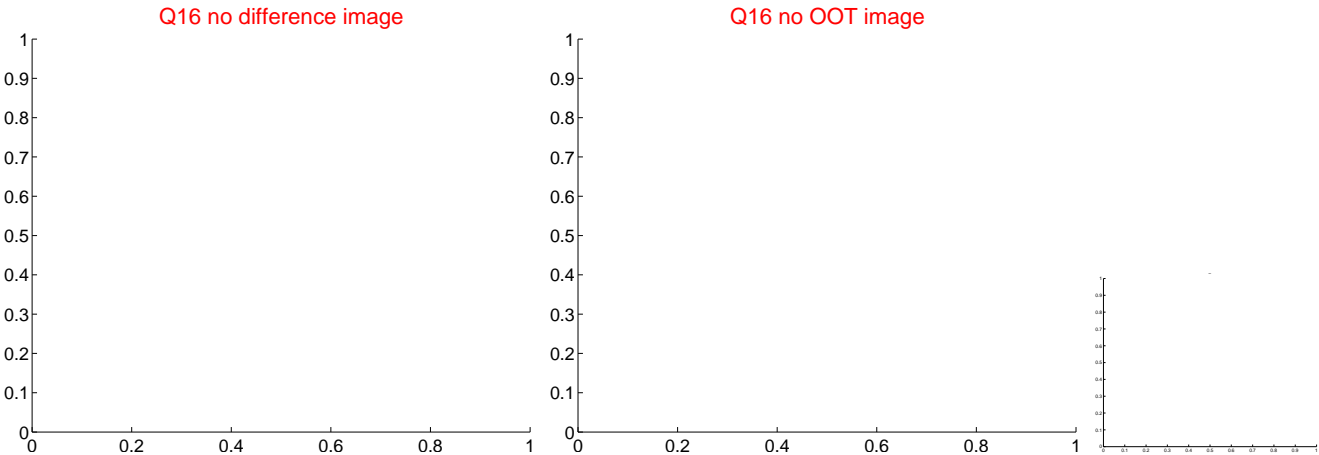
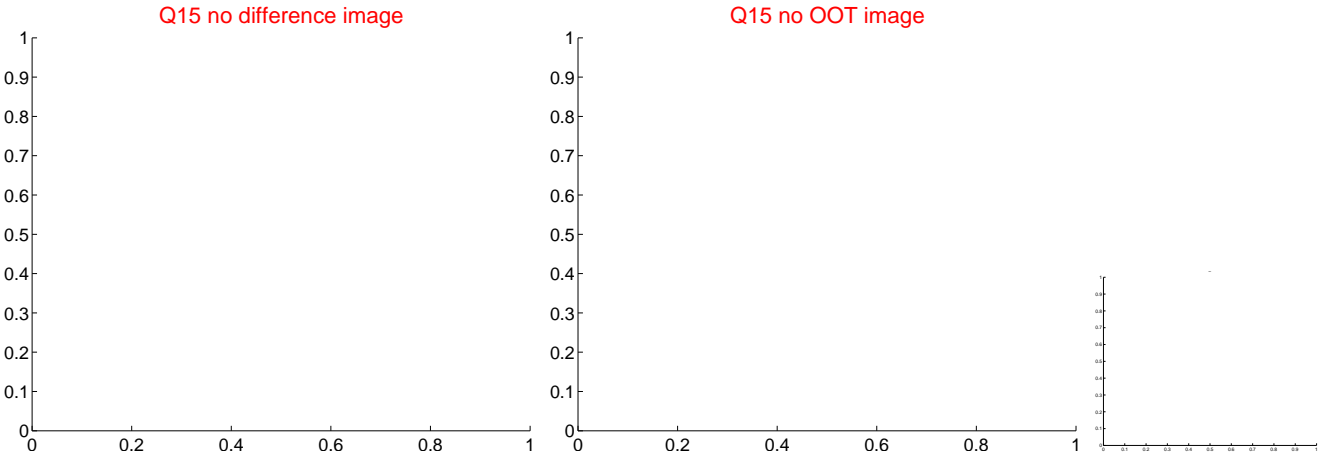
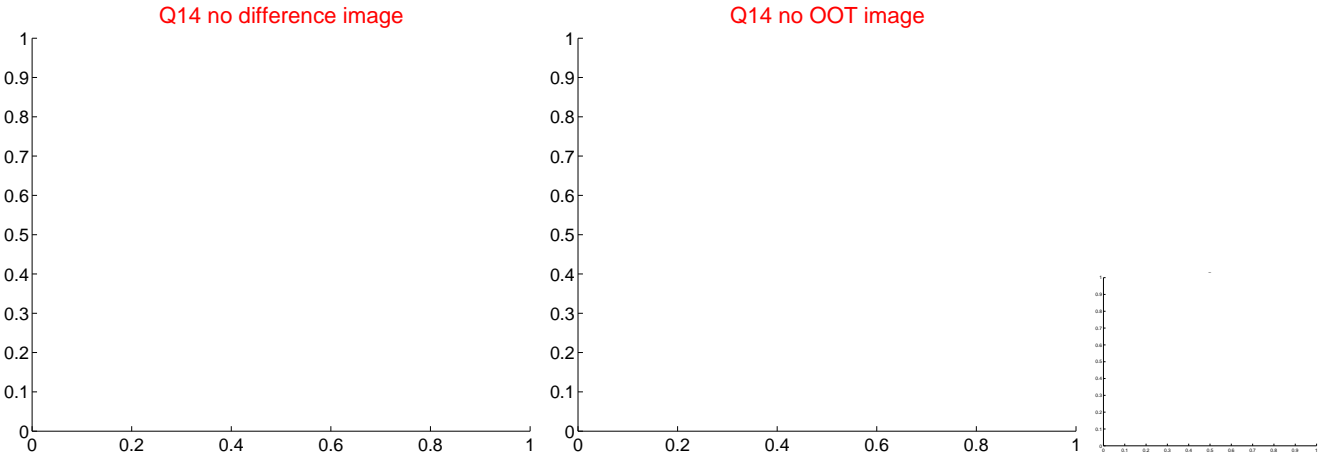
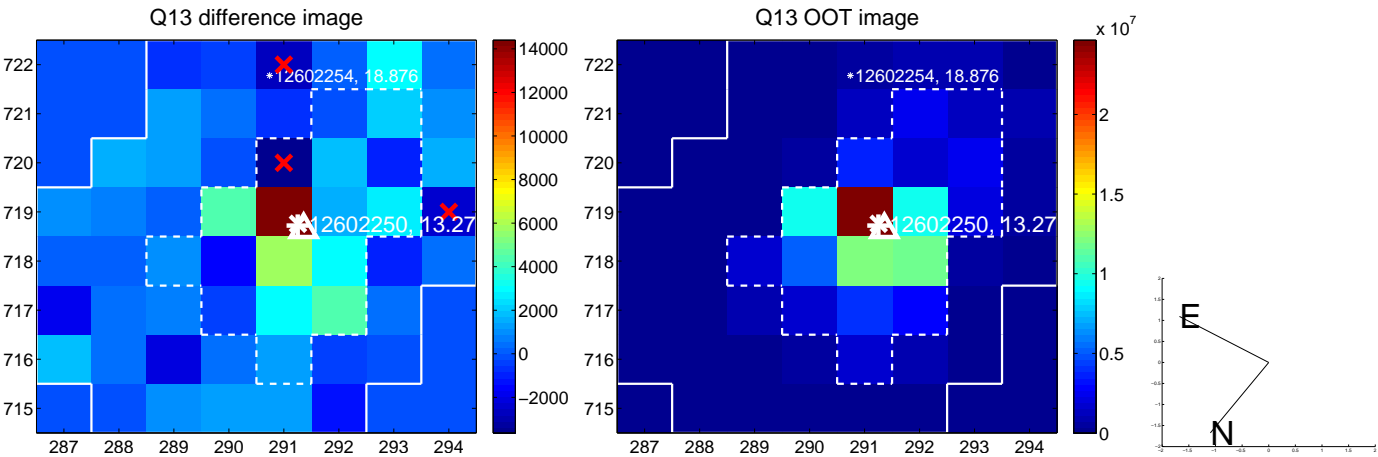
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

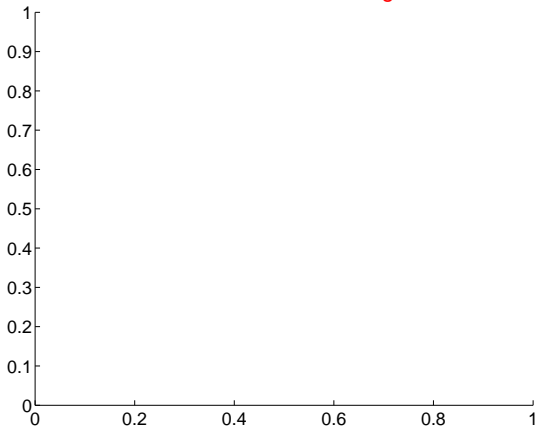


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

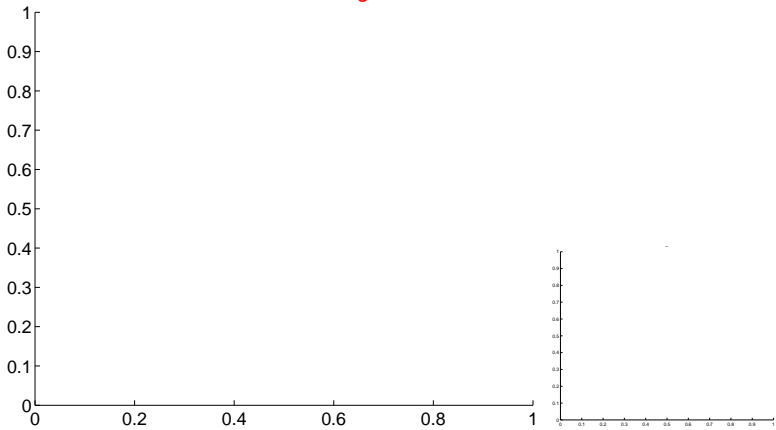


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

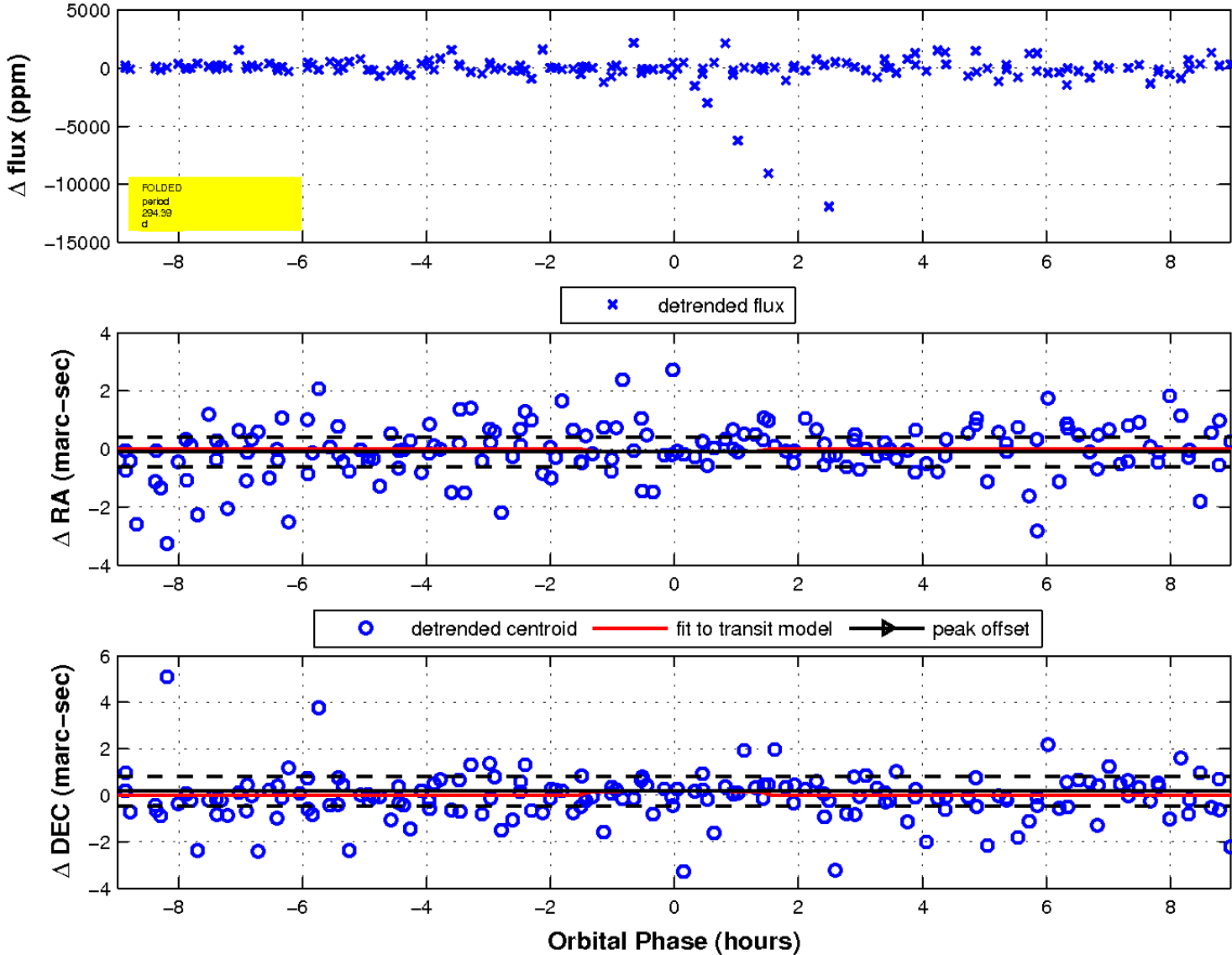
Q17 no difference image



Q17 no OOT image

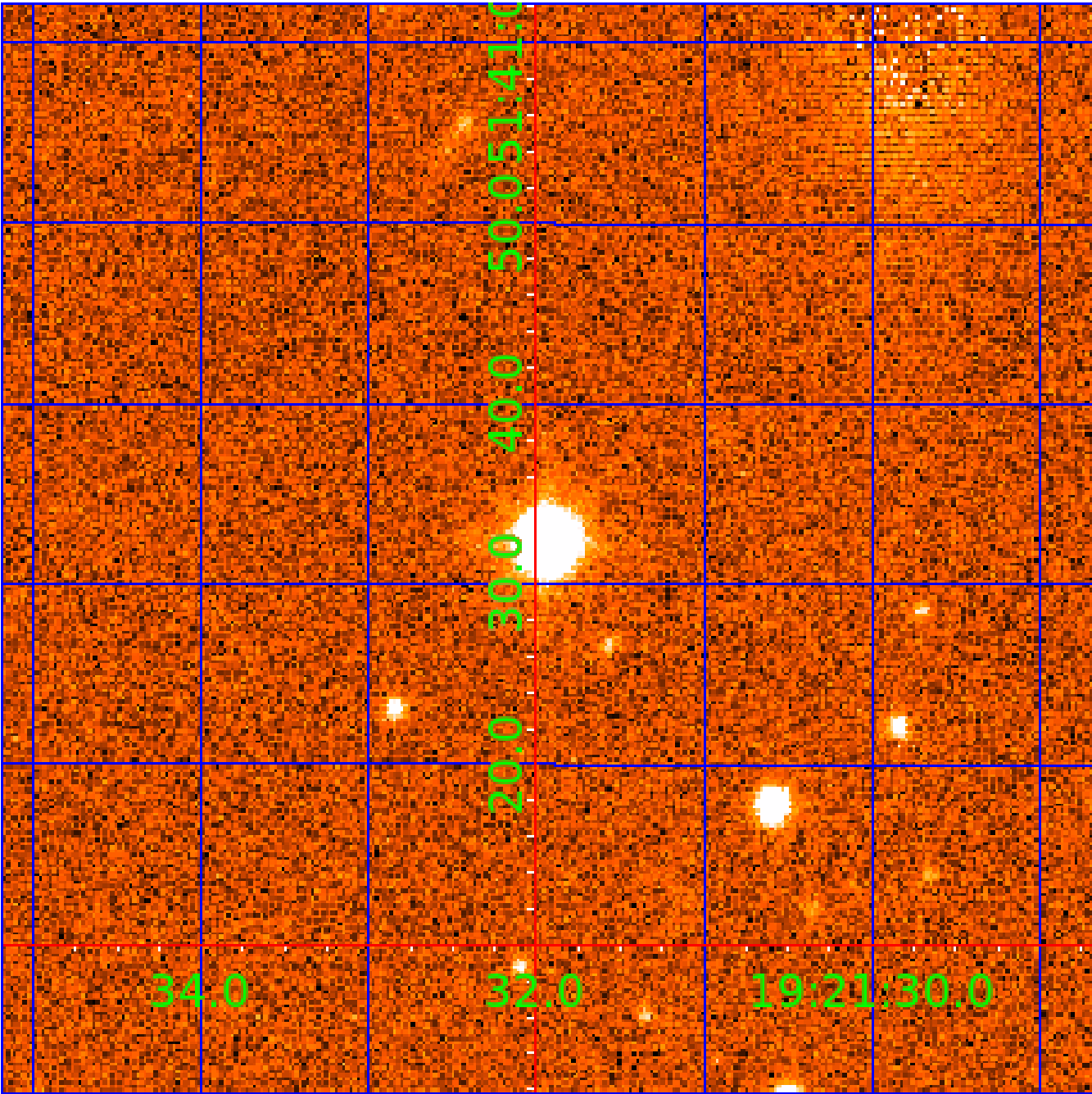


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 012602250

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})
012602250-01	OBS	No	205.126556	327.016887	686.6	1.671	24.9	6.6	1.67	7193	4.79	11.23
012602250-02	OBS	No	294.392529	349.351682	455.7	3.009	14.6	7.6	1.67	7193	3.63	6.94
012602250-03	OBS	No	341.322015	255.207877	341.9	13.962	14.3	7.3	1.67	7193	3.18	5.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012602250-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
012602250-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
012602250-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—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.

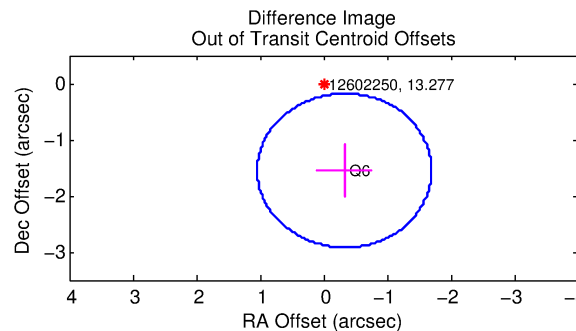
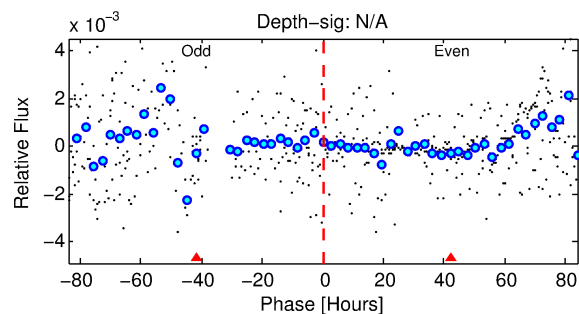
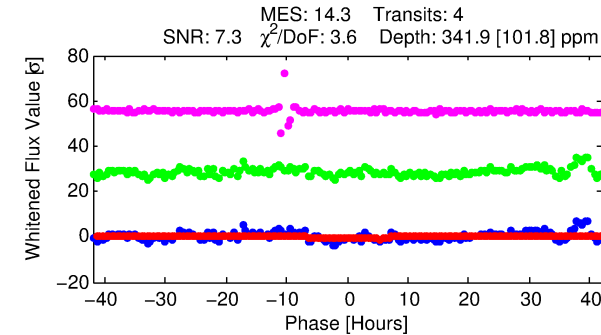
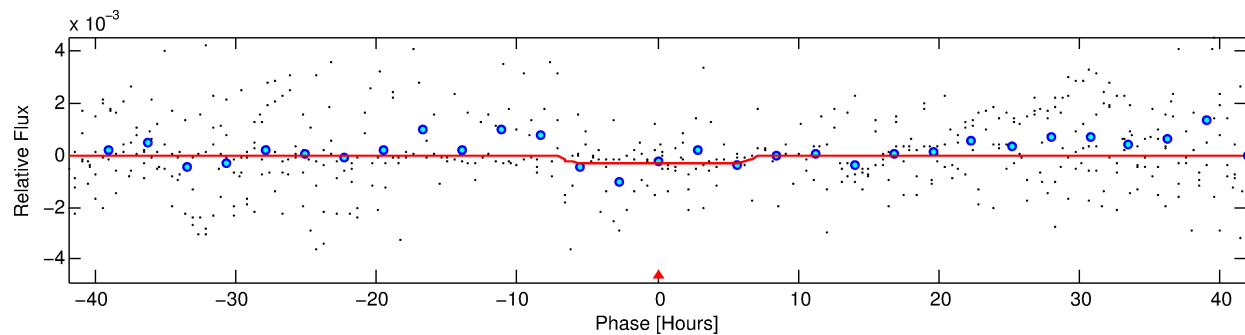
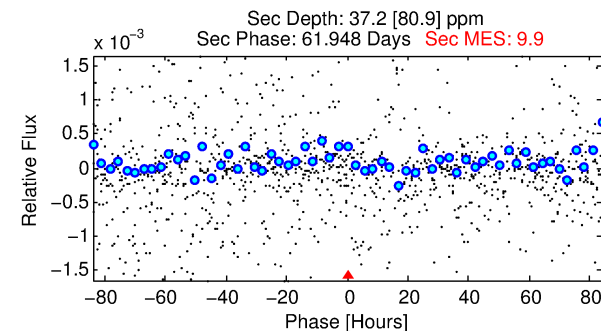
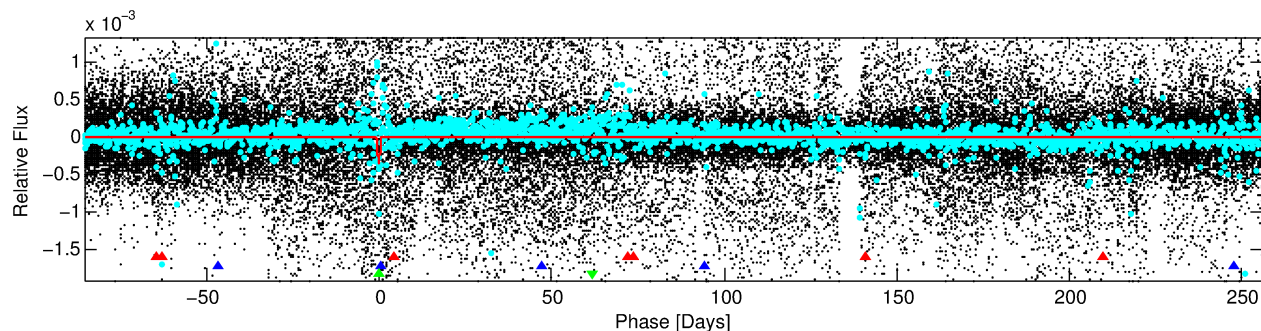
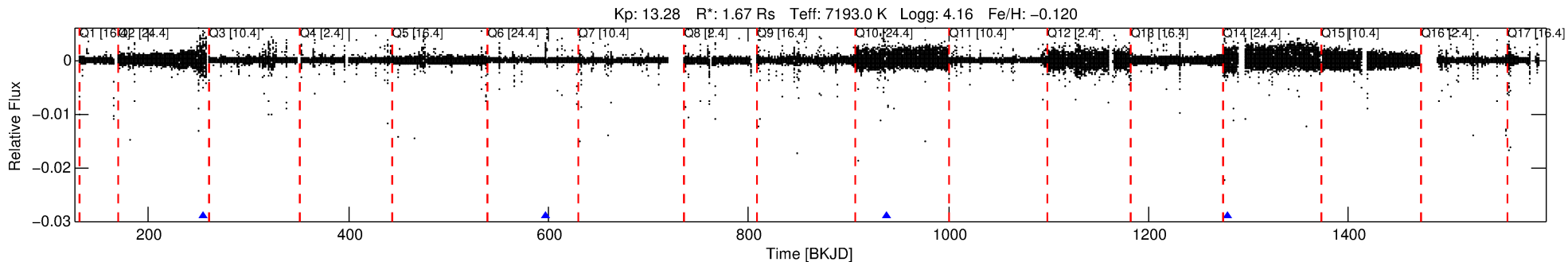
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012602250-03

No Significant Match Found

DV One-Page Summary

KIC: 12602250 Candidate: 3 of 3 Period: 341.322 d



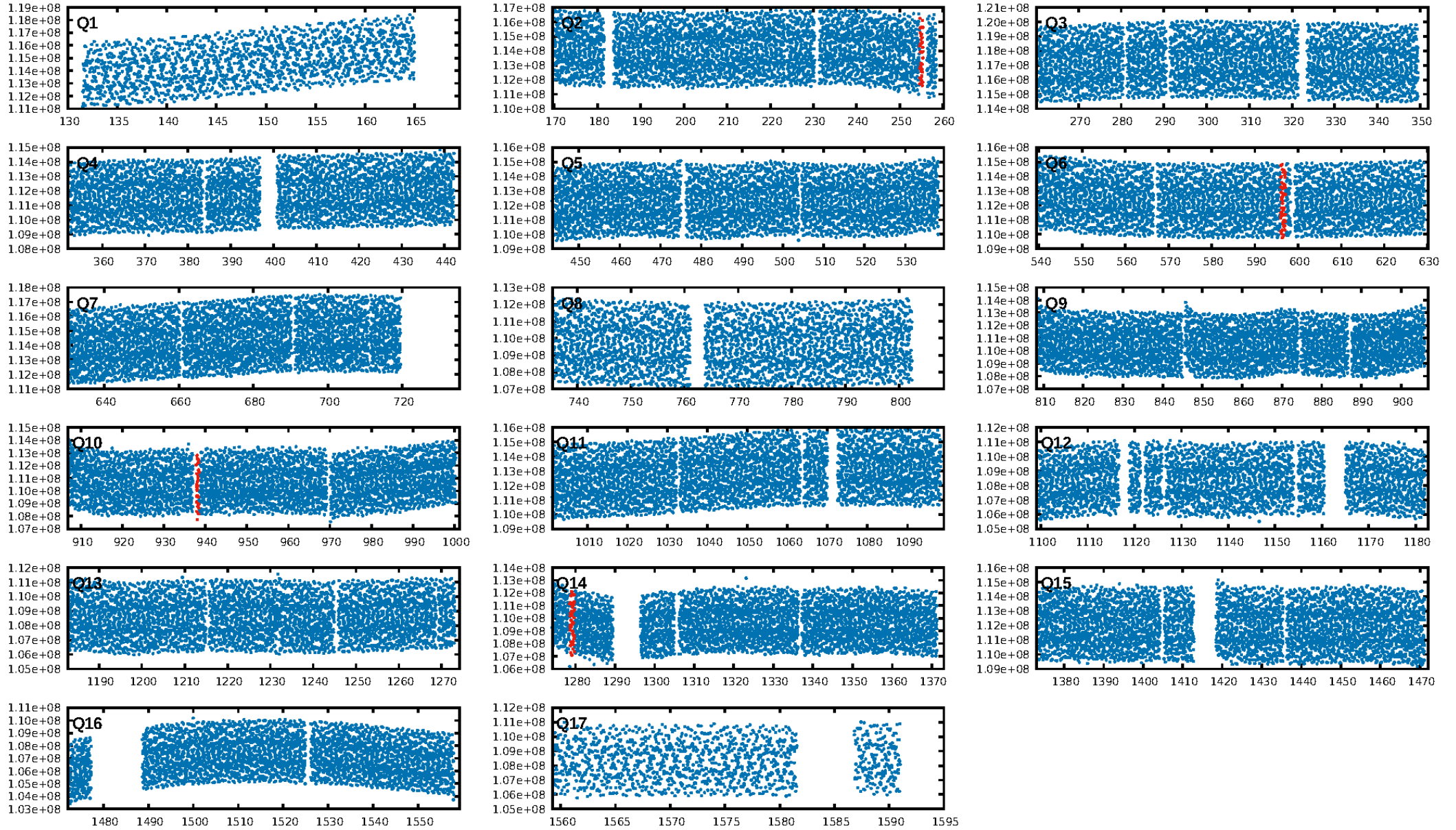
DV Fit Results:

Period = 341.32202 [0.04563] d
Epoch = 255.2079 [0.0580] BKJD
Rp/R* = 0.0174 [0.0237]
a/R* = 172.68 [1374.21]
b = 0.42 [15.36]
Seff = 5.70 [2.24]
Teq = 394 [39] K
Rp = 3.18 [4.43] Re
a = 1.0842 [0.2777] AU
Ag = 2376.96 [8311.19] [0.29σ]
Teffp = 4253 [3701] K [1.04σ]

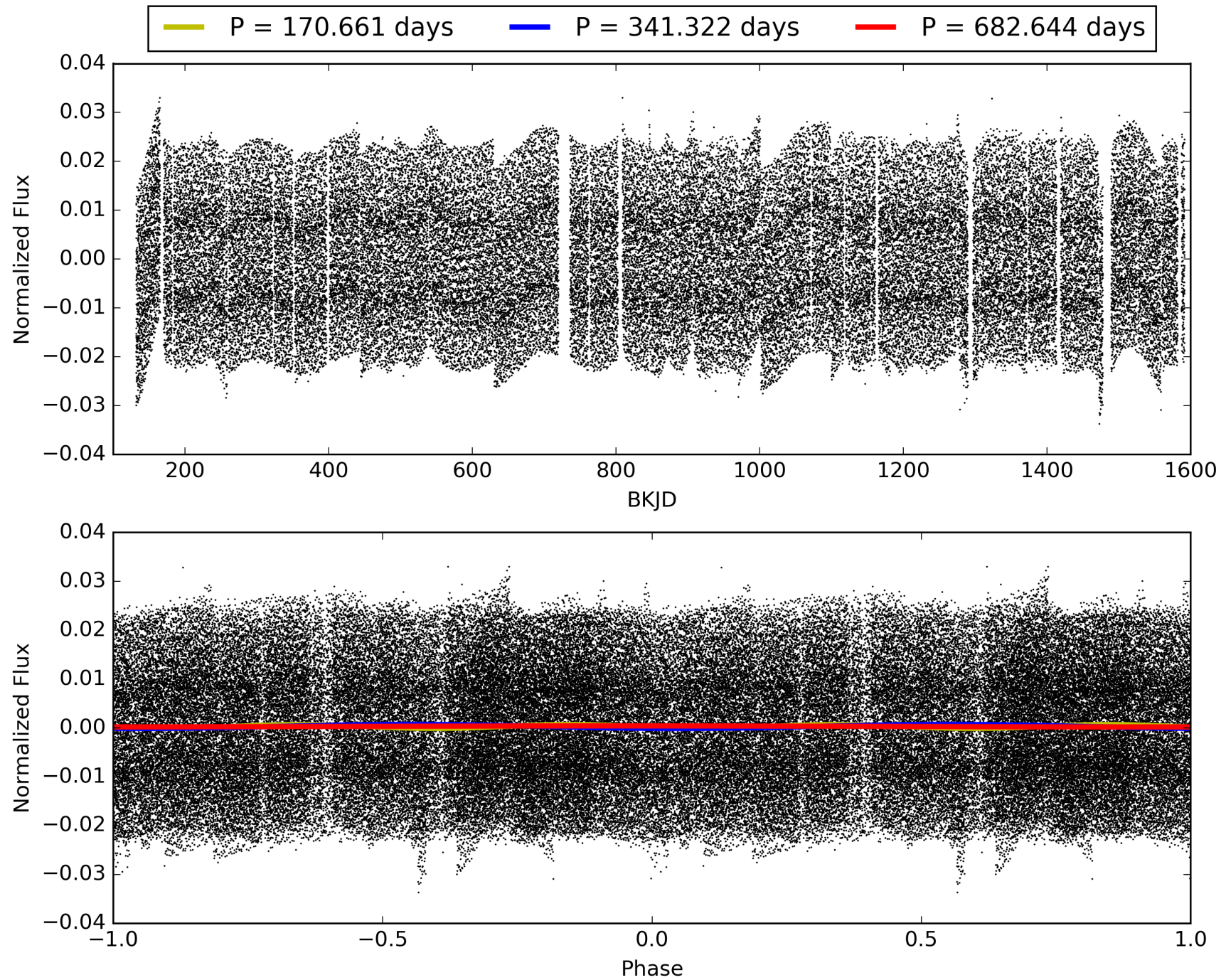
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [78.86σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 20.6%
Bootstrap-pfa: 2.25e-04
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -6.644
Centroid-sig: 28.9%
Centroid-so: 0.112 arcsec [0.13σ]
OotOffset-rm: 1.585 arcsec [3.47σ]
KicOffset-rm: 1.511 arcsec [3.32σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

TCE 012602250-03, PDC Light Curves

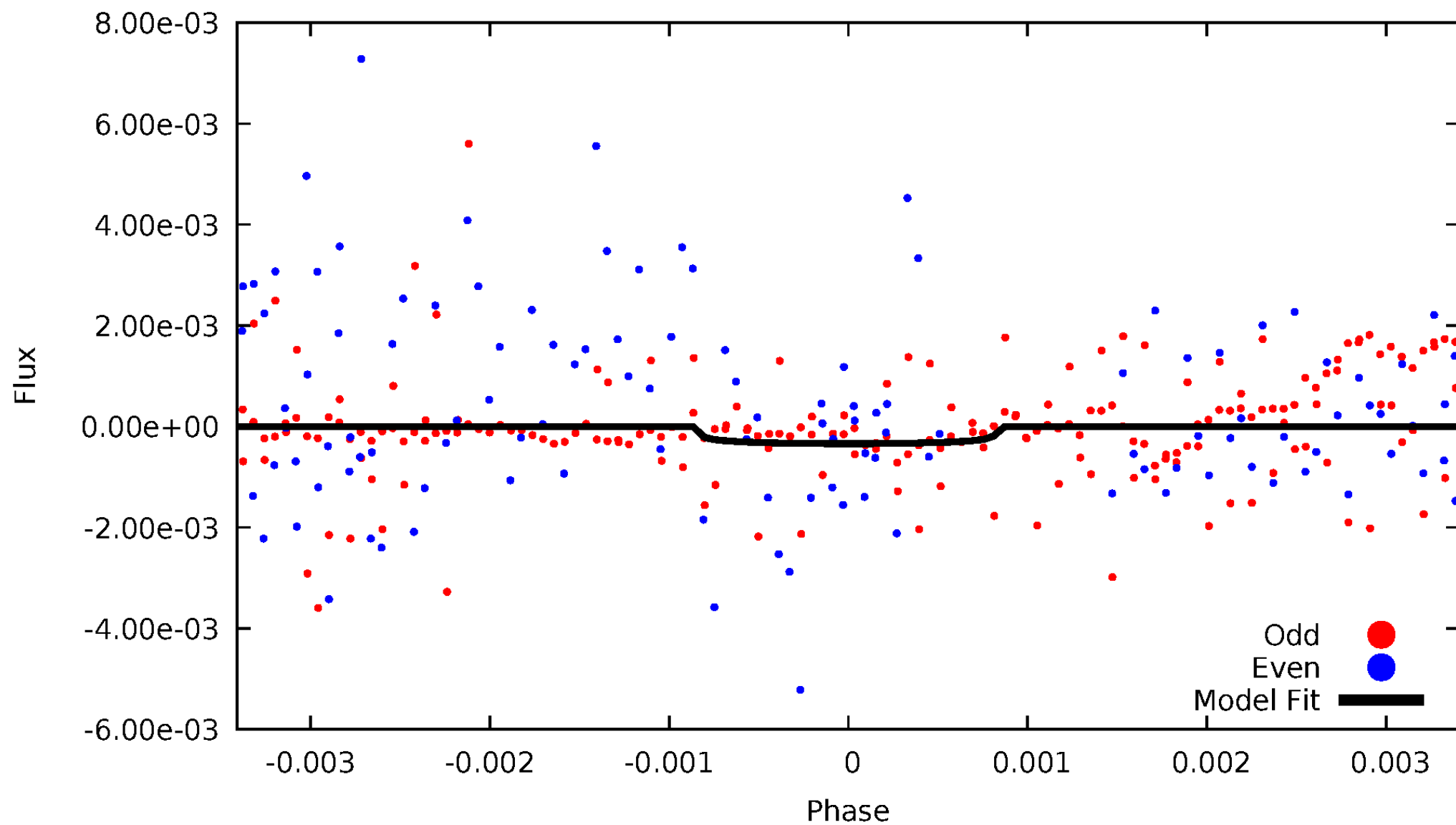


TCE 012602250-03



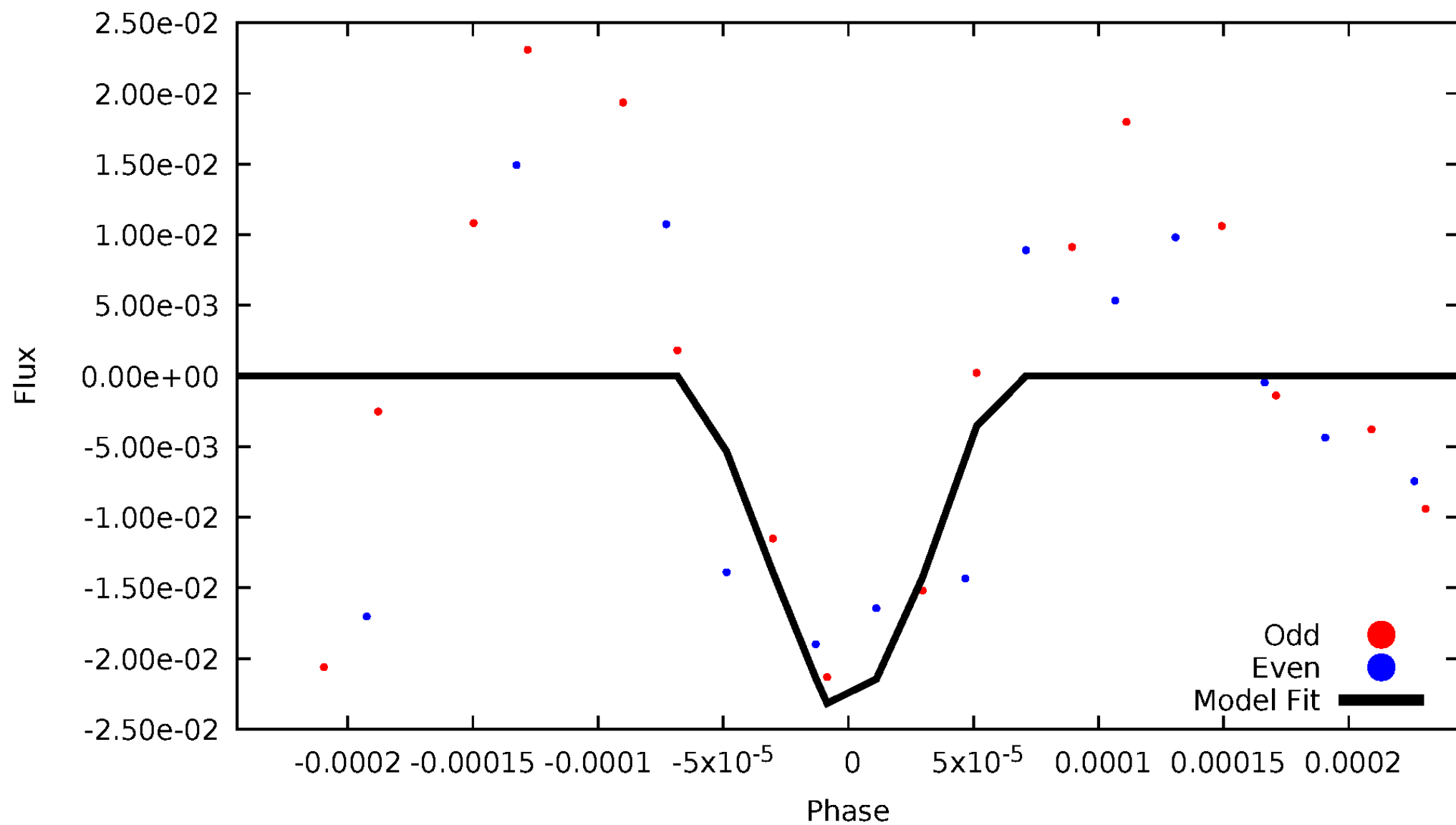
DV Odd/Even

TCE 012602250-03



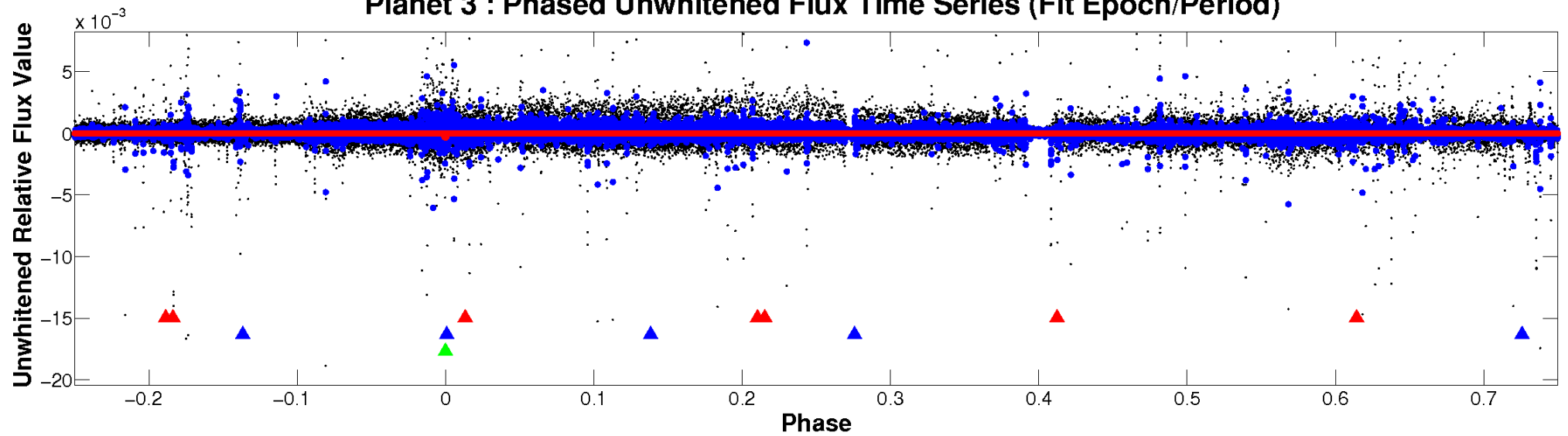
ALT Odd/Even

TCE 012602250-03

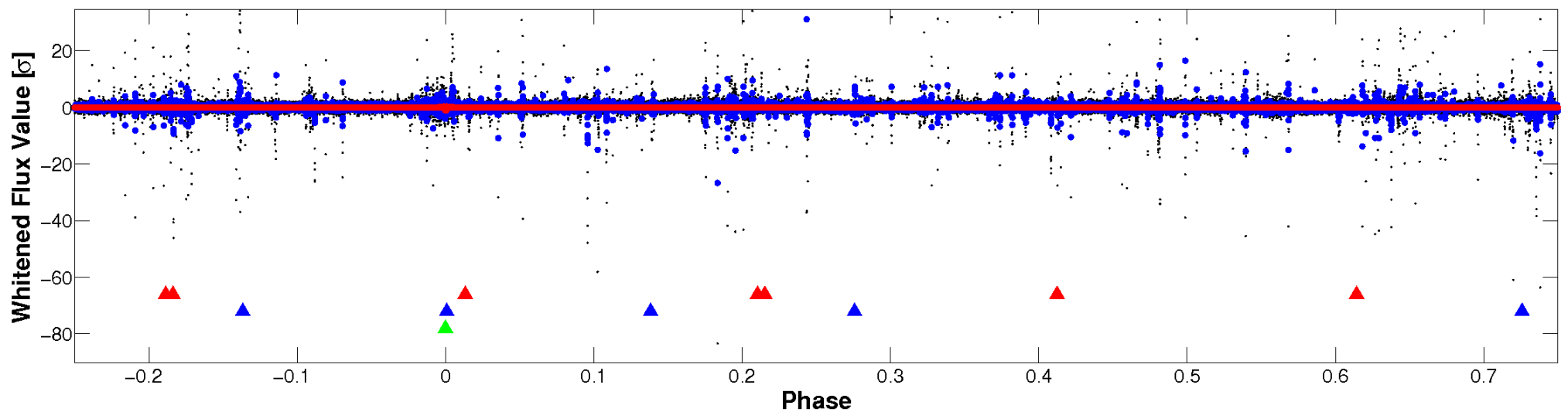


Non-Whitened Vs. Whitened Light Curve

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

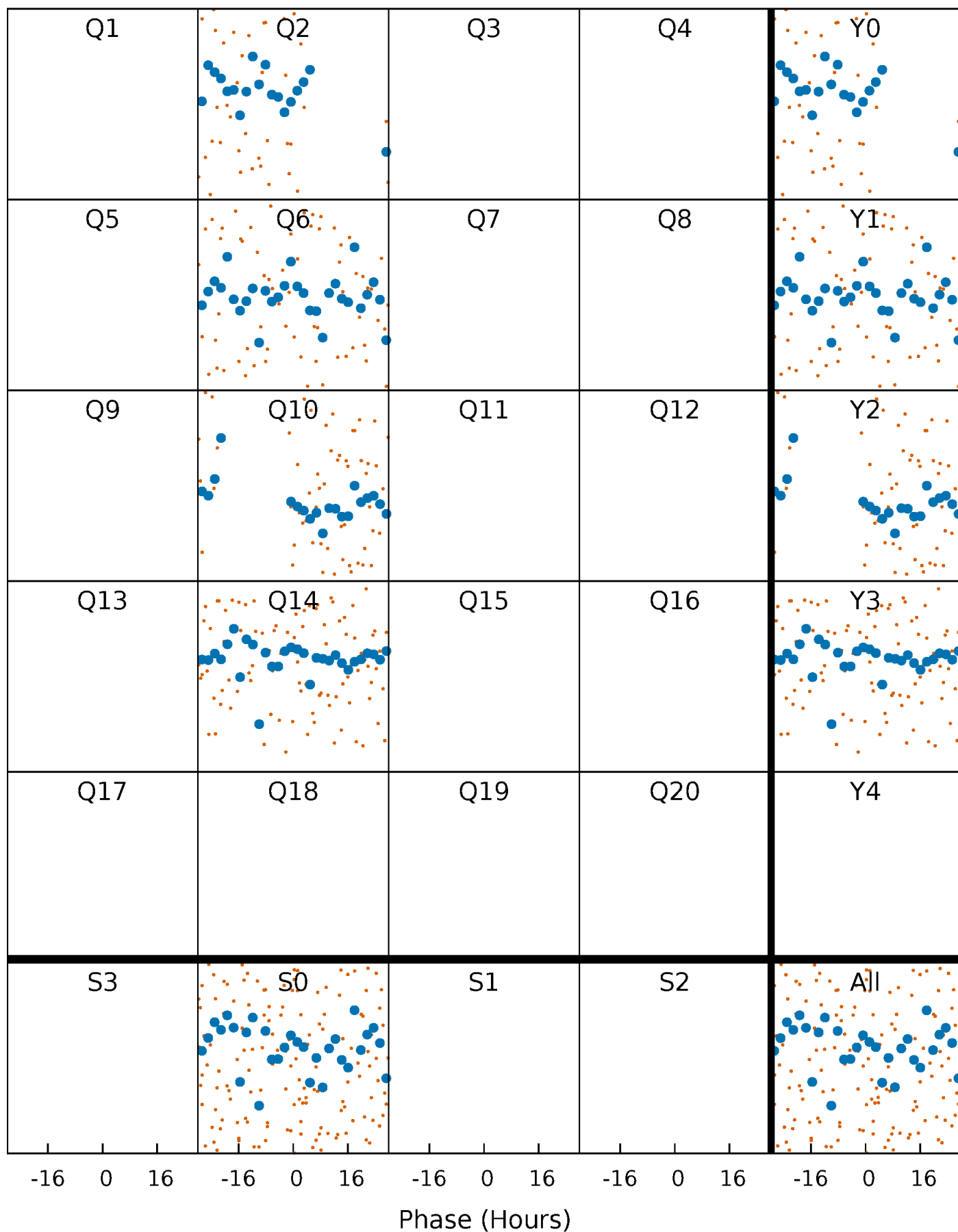


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



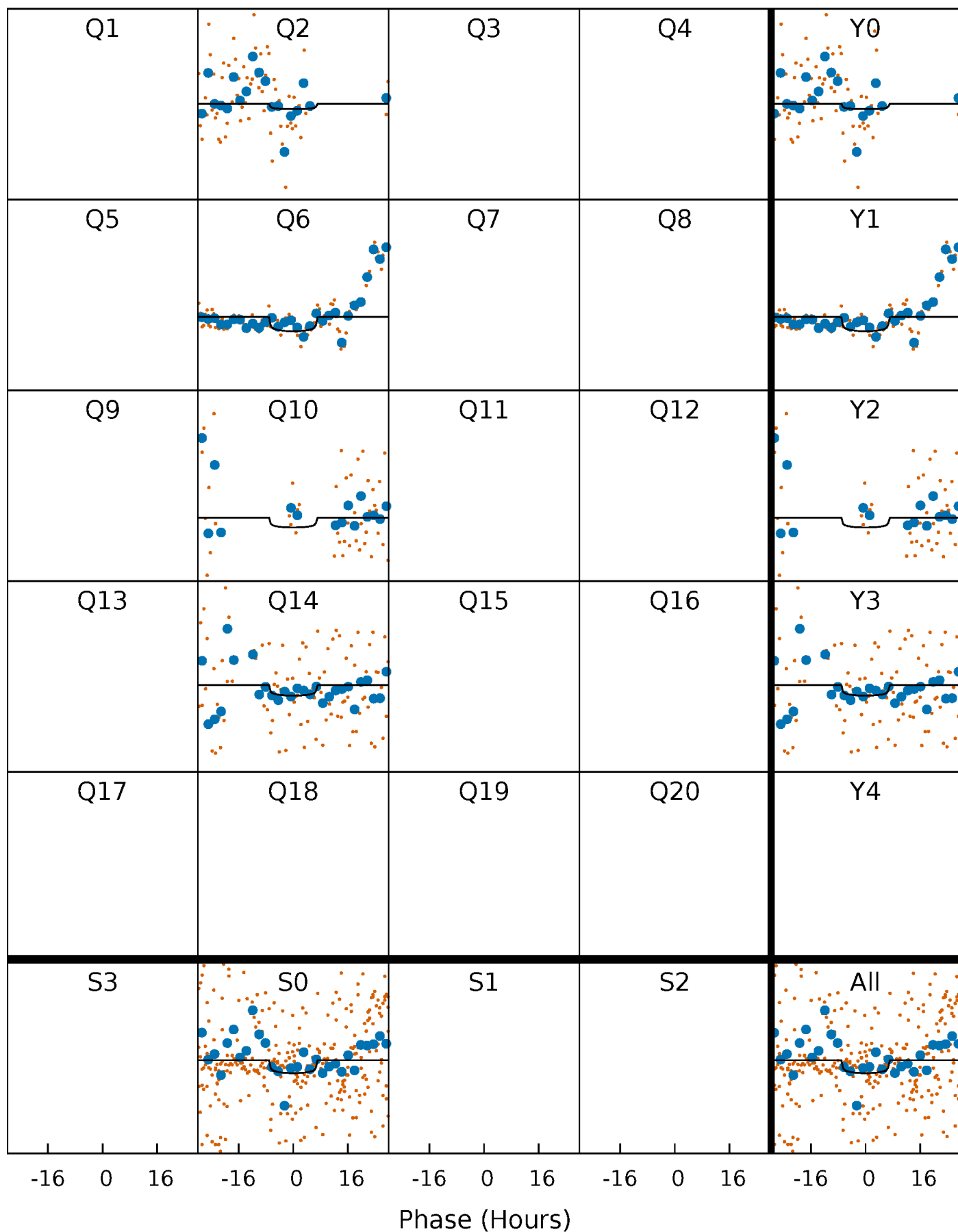
PDC Quarter-Phased Transit Curves

TCE 012602250-03 $P=341.322015$ Days $T_0=255.207877$ (BKJD)



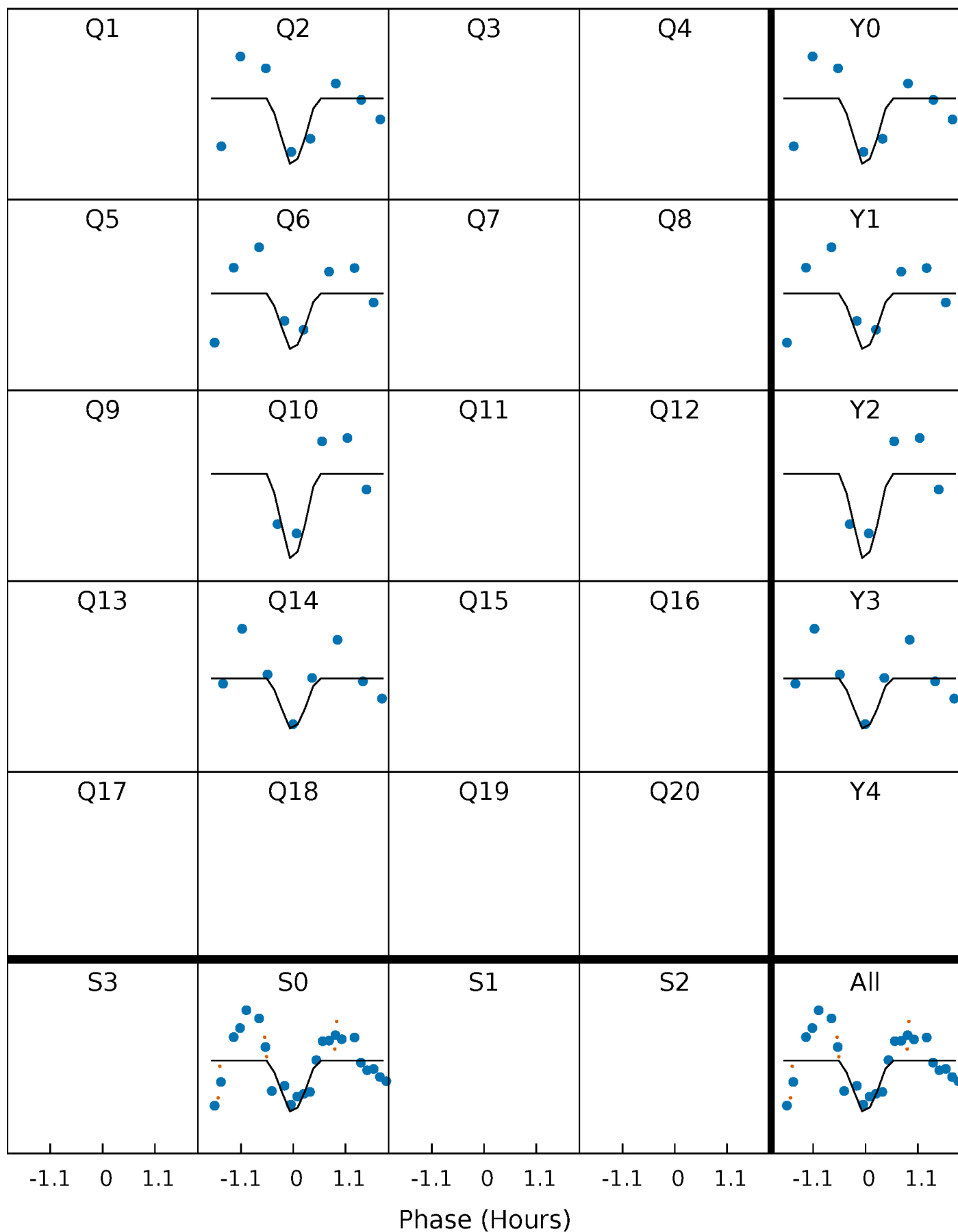
DV Quarter-Phased Transit Curves

TCE 012602250-03 $P=341.322015$ Days $T_0=255.207877$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

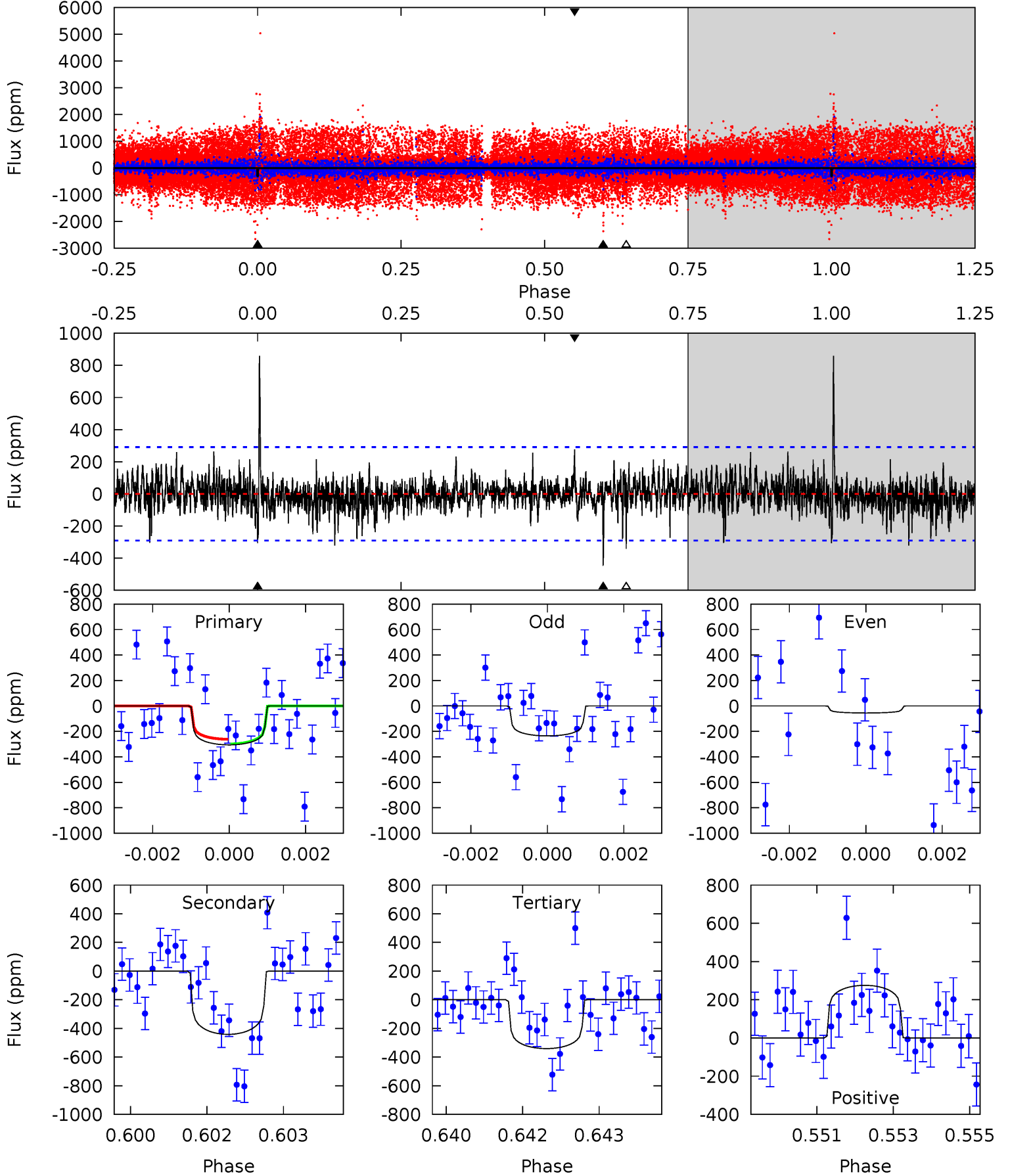
TCE 012602250-03 P=341.655934 Days $T_0=255.059252$ (BKJD)



DV Model-Shift Uniqueness Test

012602250-03, P = 341.322015 Days, E = 255.207877 Days

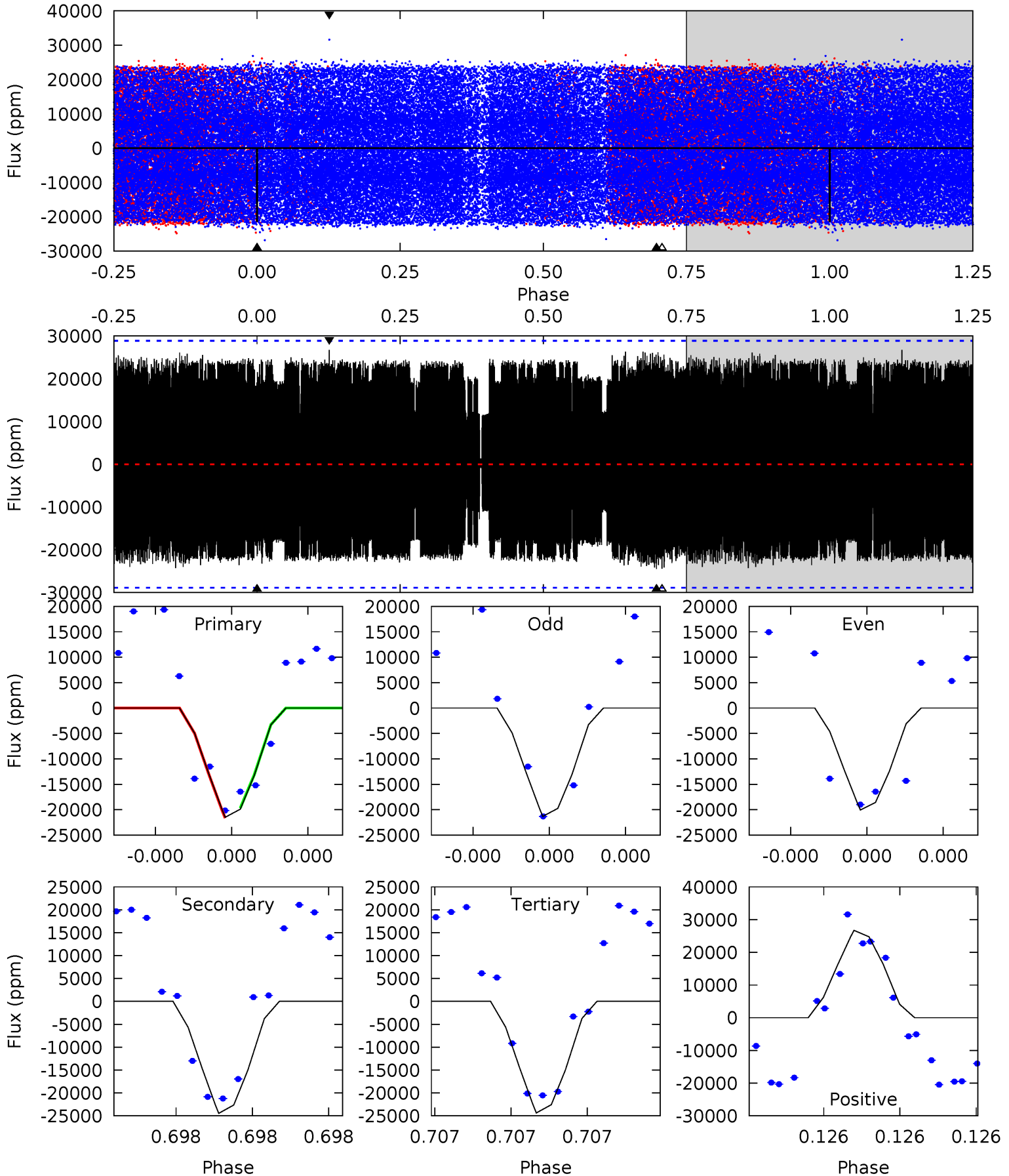
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.62	8.12	6.27	5.07	5.35	3.13	1.37	-0.65	0.56	1.85	3.05	1.59	0.90	0.66	0.35



Alt Model-Shift Uniqueness Test

012602250-03, P = 341.655934 Days, E = 255.059252 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.35	4.95	4.93	5.41	5.85	3.89	2.38	-0.59	-1.06	0.02	-0.46	0.13	1.01	0.52	0.20



Stellar Parameters For KIC 012602250

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7193^{+200}_{-275}	$4.156^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.350}$	$1.671^{+0.525}_{-0.350}$	$1.460^{+0.218}_{-0.239}$	$0.441^{+0.288}_{-0.235}$
	+3%/-4%	+3%/-5%	+208%/-292%	+31%/-21%	+15%/-16%	+65%/-53%
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 012602250-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-441 ± 54	$4.56^{+3.66}_{-2.86}$	553^{+43}_{-35}	6538^{+5993}_{-1577}	13144^{+90707}_{-9052}
Alt.	-24457 ± 4940	$30.28^{+6.68}_{-5.70}$	551^{+45}_{-33}	7047^{+788}_{-725}	17408^{+9021}_{-6462}

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

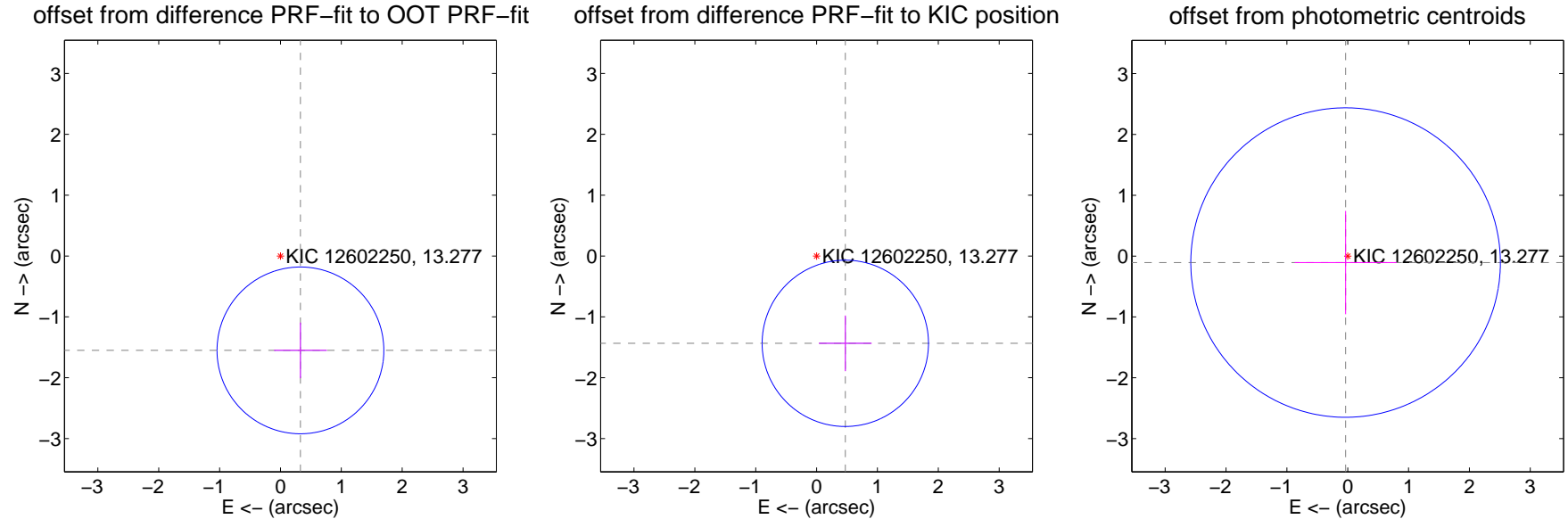
DV Centroid Data

Supplemental centroid analysis for 012602250-03. Kepler magnitude: 13.28. Transit SNR 7.29

There are 1 quarters with good PRF difference image offsets

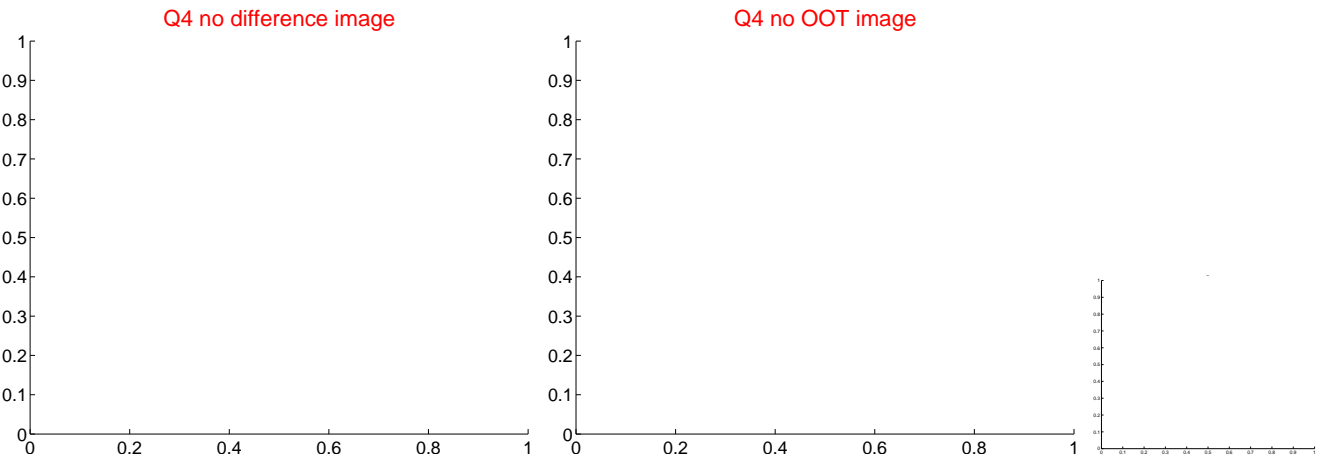
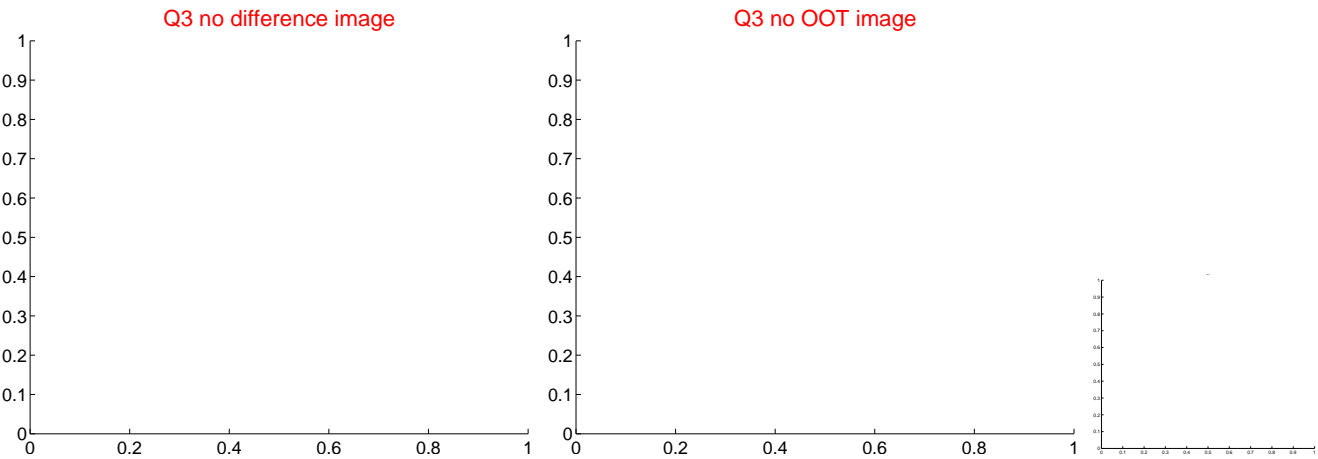
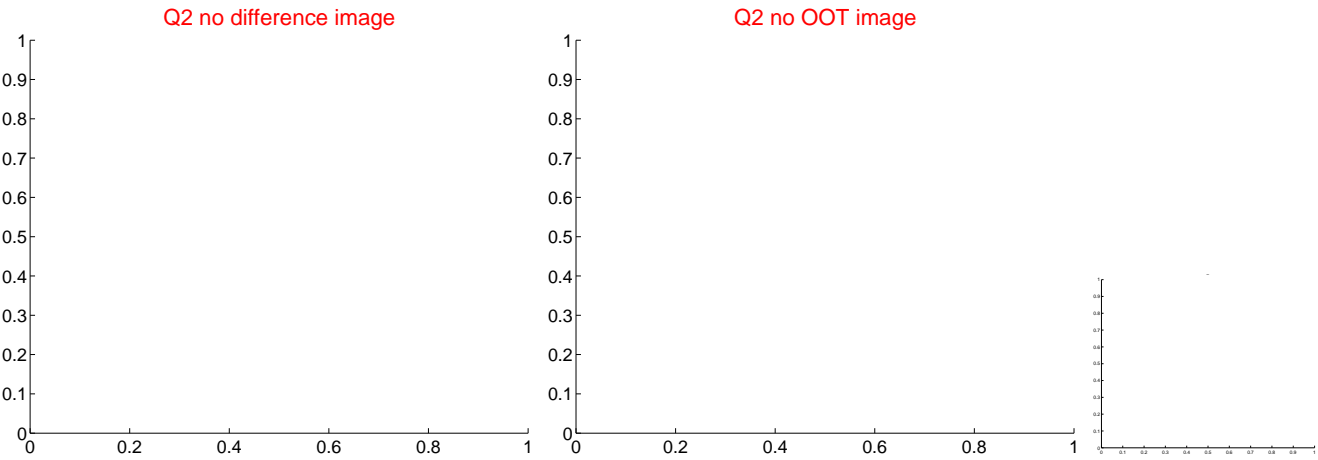
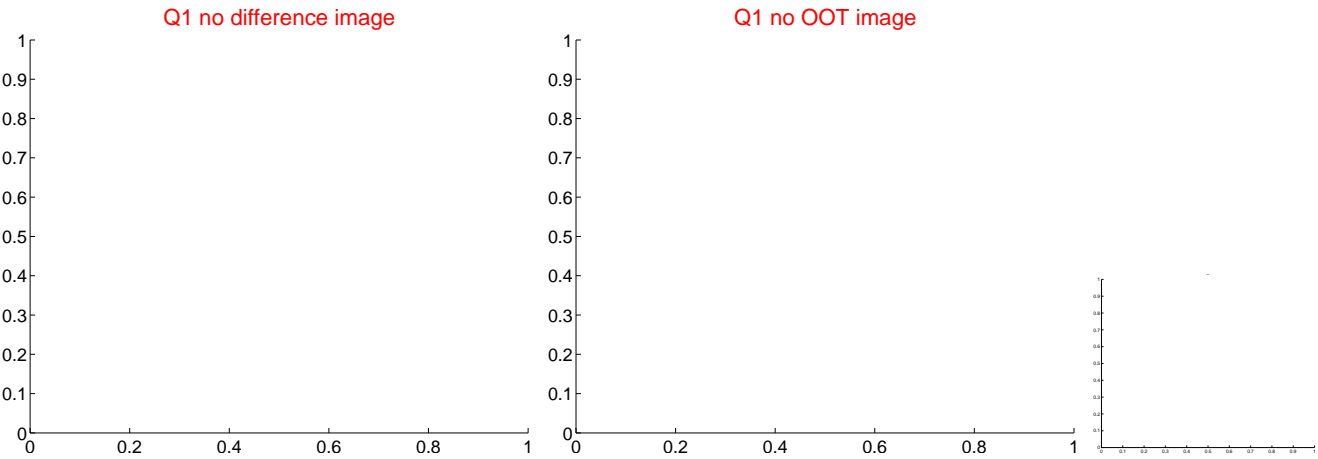
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.585 ± 0.457	3.47	-0.328 ± 0.434	-1.551 ± 0.458
PRF-fit source offset from KIC position	1.511 ± 0.456	3.32	-0.472 ± 0.434	-1.435 ± 0.458
photometric centroid source offset	0.11 ± 0.85	0.13	0.04 ± 0.84	-0.11 ± 0.85

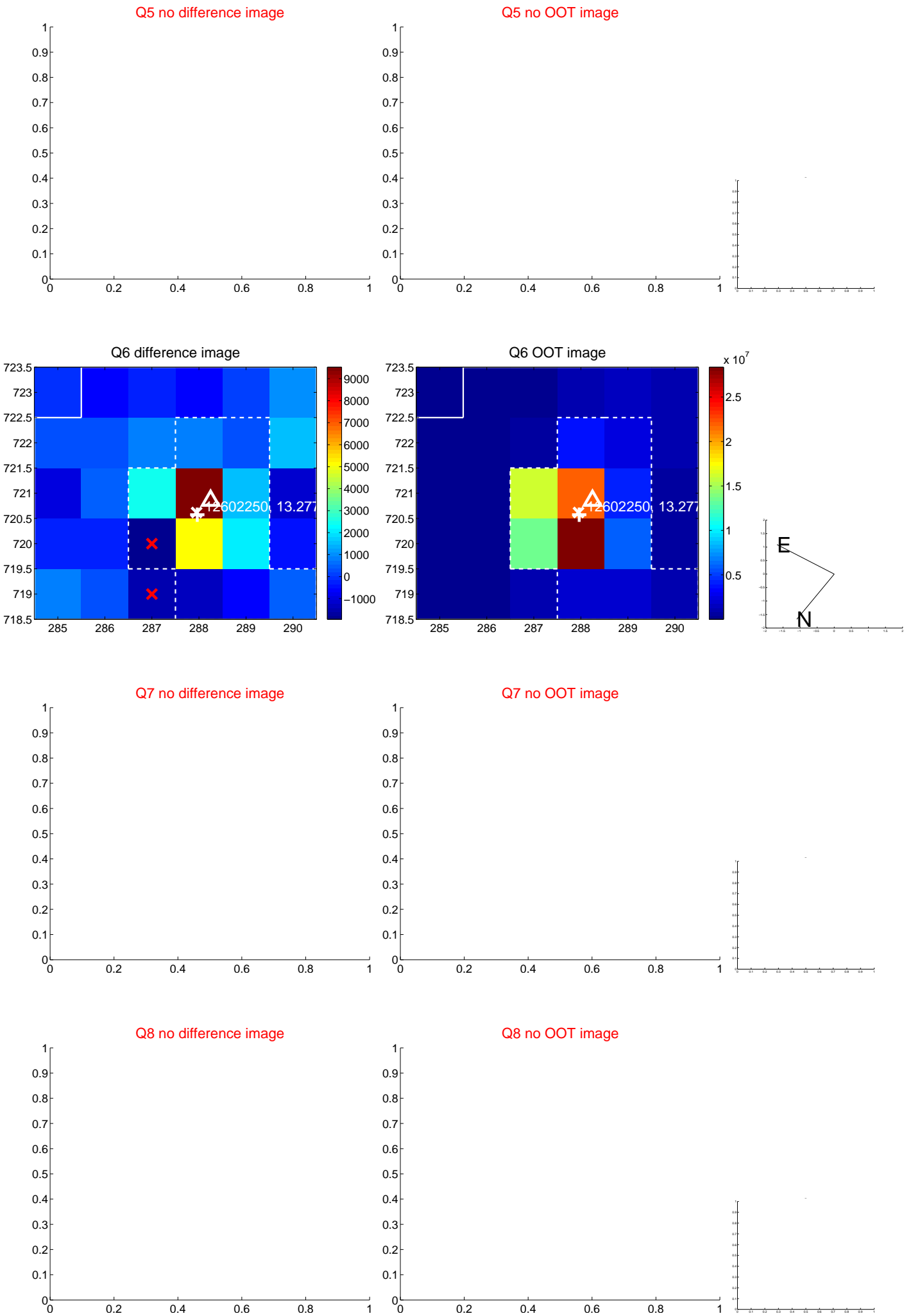


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

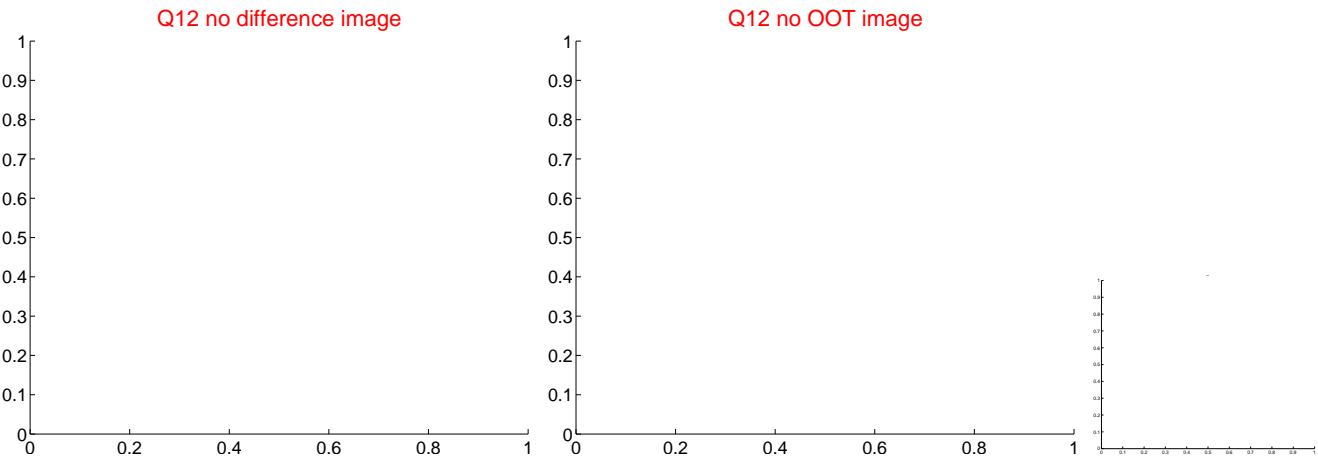
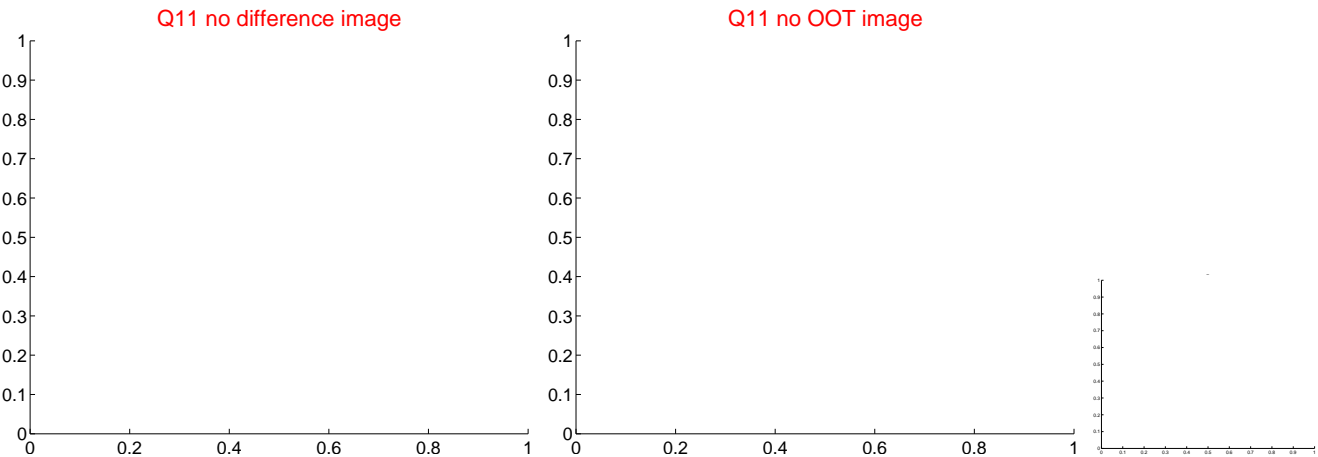
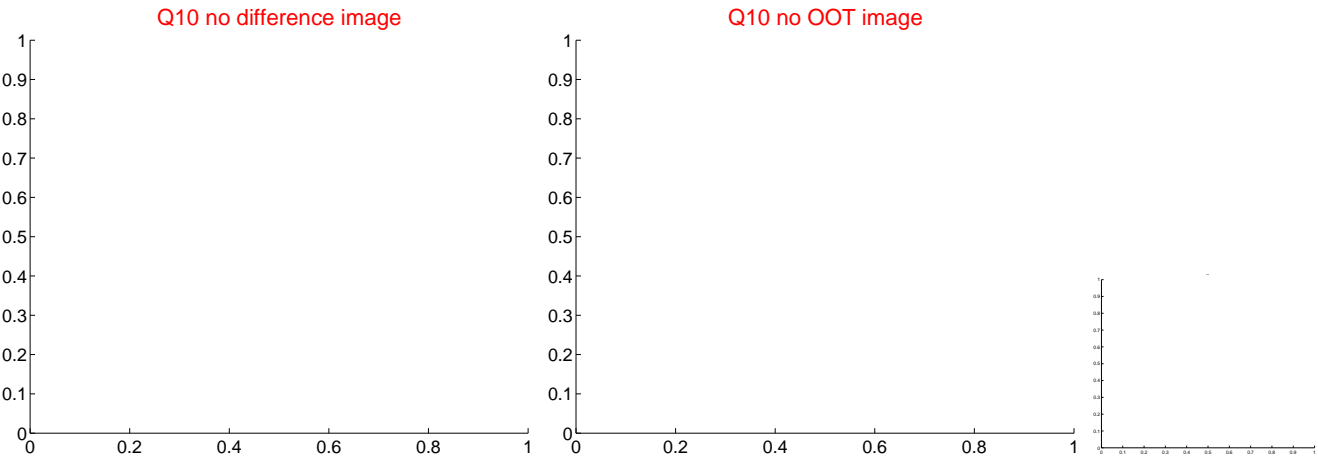
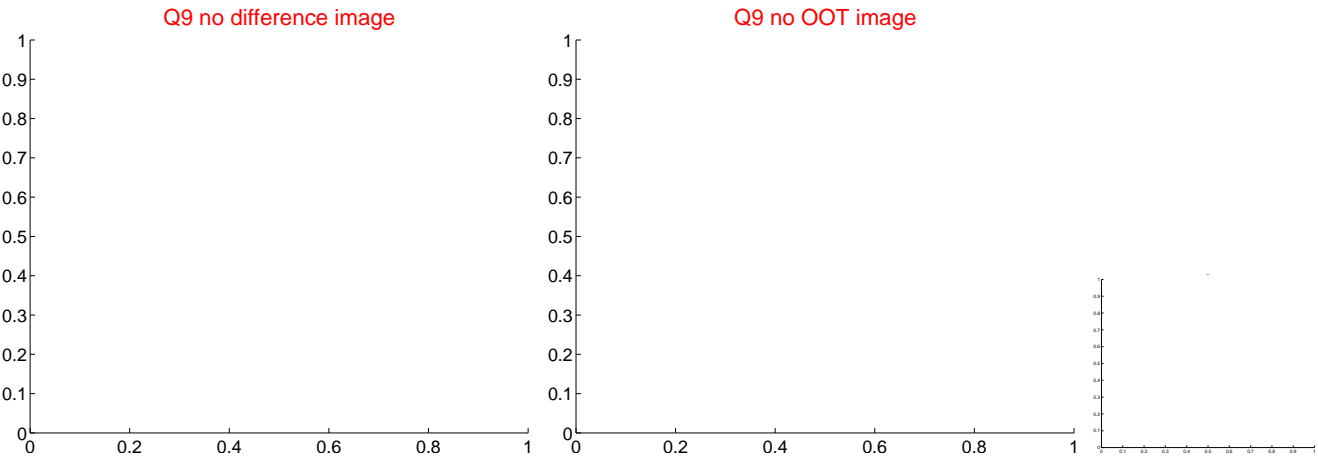
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



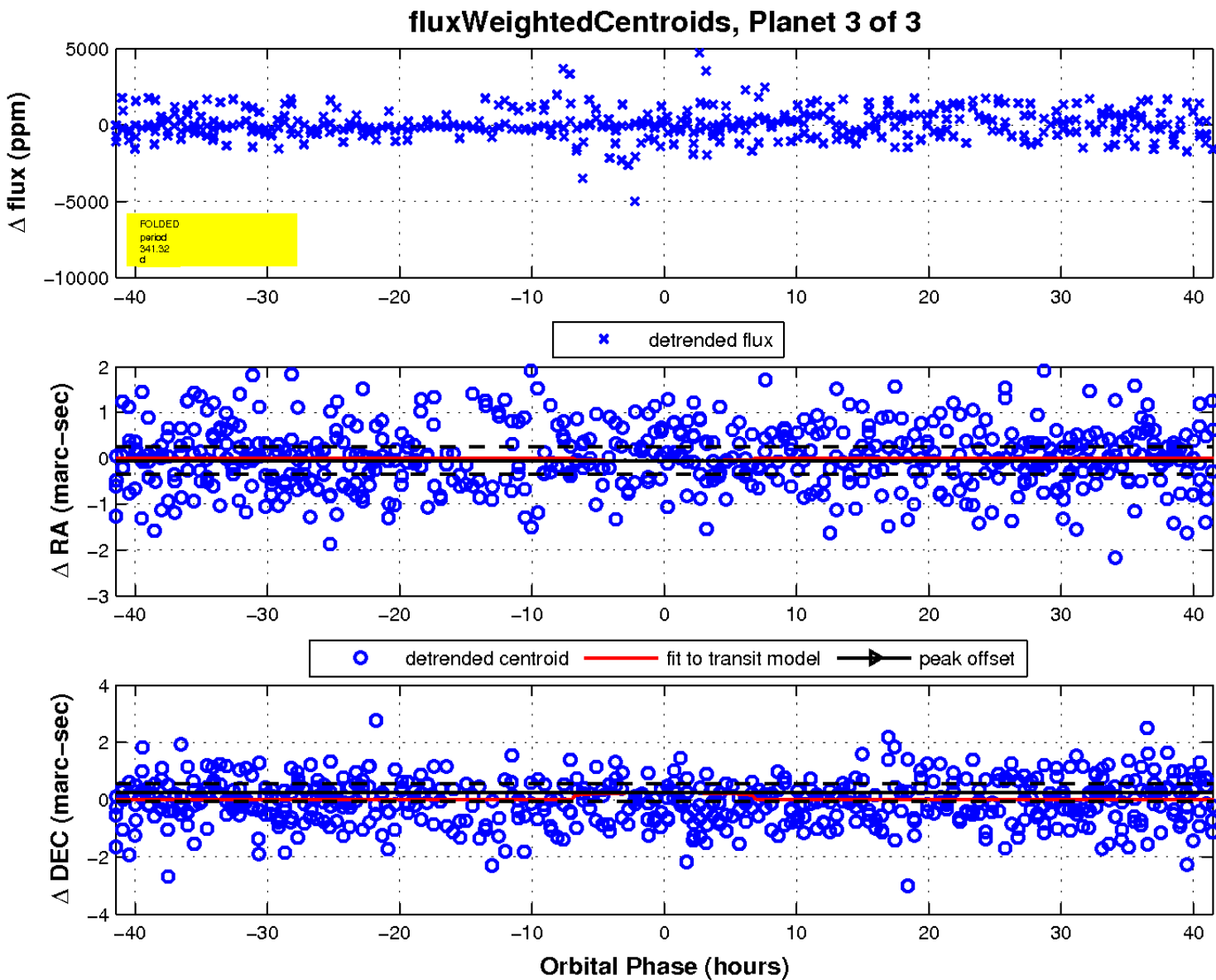
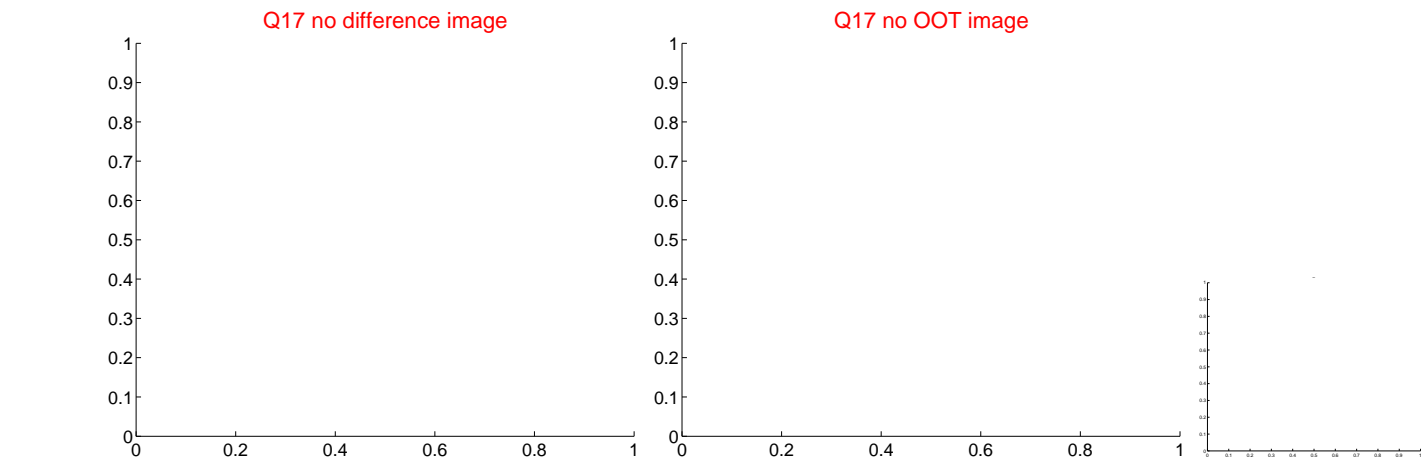
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

