

KIC 007032727

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})
007032727-01	OBS	No	0.566816	131.804302	37.3	3.244	7.5	8.3	0.71	5348	0.44	2432.52
007032727-02	OBS	No	359.295687	288.305778	4974.2	26.075	10.9	7.0	0.71	5348	5.70	0.45
007032727-03	OBS	No	261.130722	340.911435	1534.2	6.112	9.4	4.1	0.71	5348	2.91	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007032727-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH
007032727-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007032727-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_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.

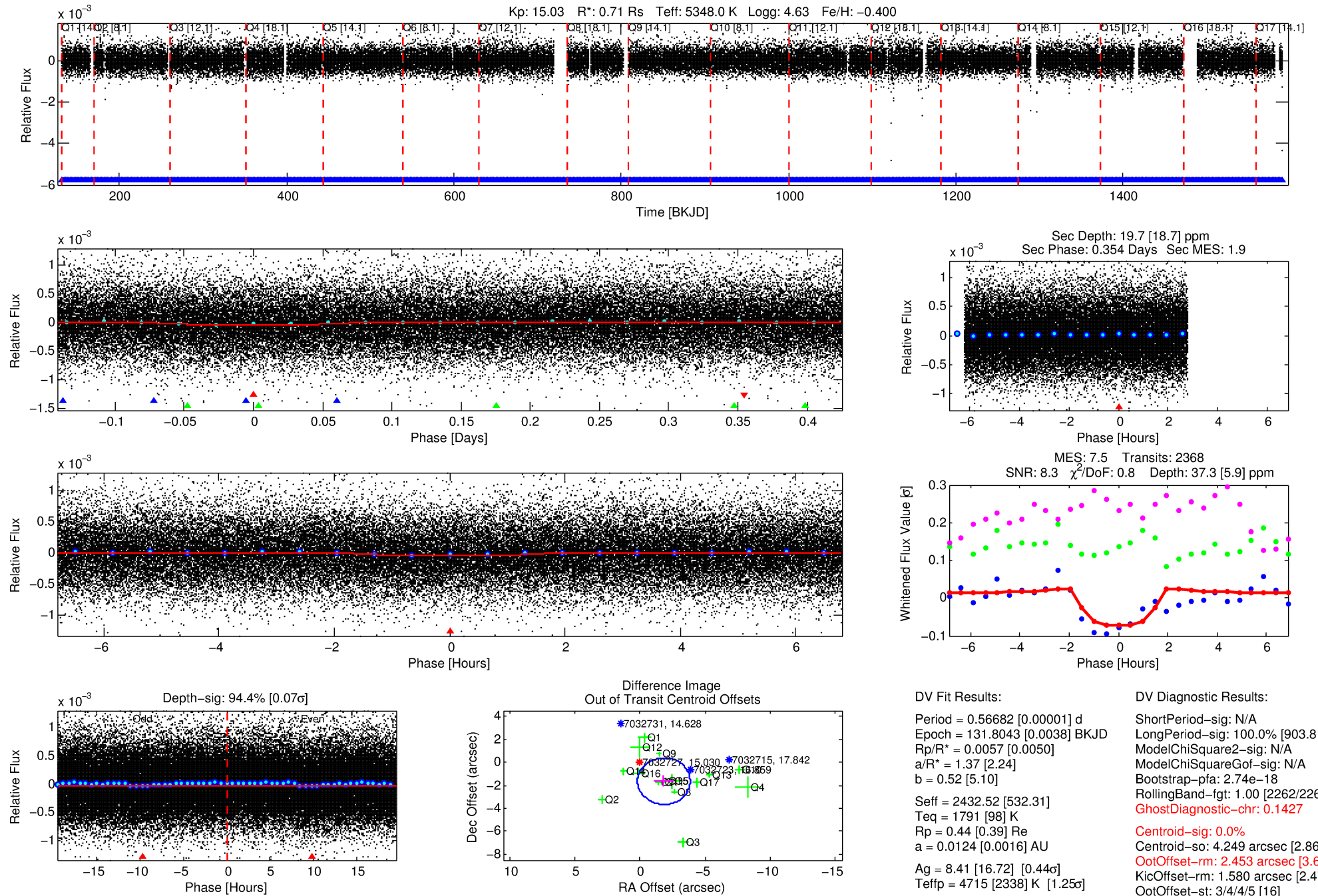
Ephemeris Match Information For 007032727-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (μ)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007032727-01	7032727	RR-Lyr-pri	7198959	1:1	766.7	192	-14	7.86	15.03	16846.00	Direct-PRF	0	2.31	23.59

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

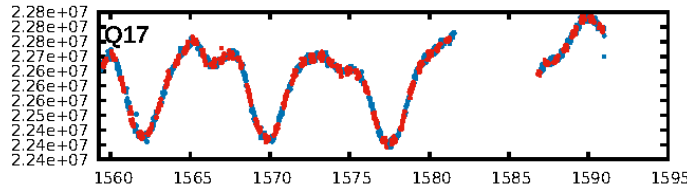
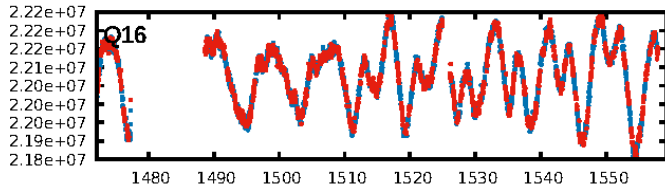
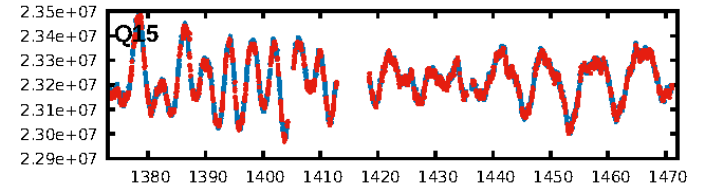
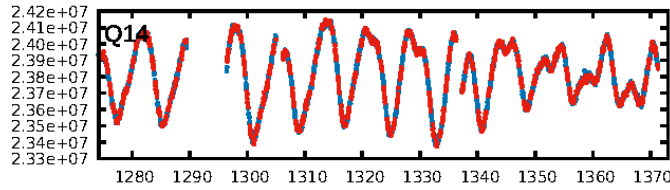
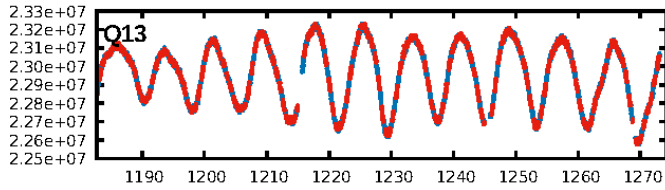
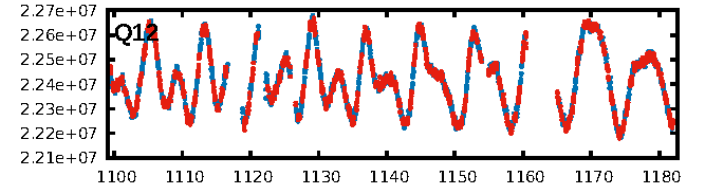
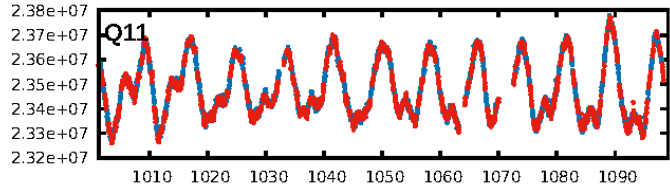
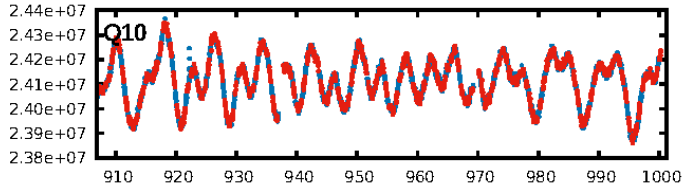
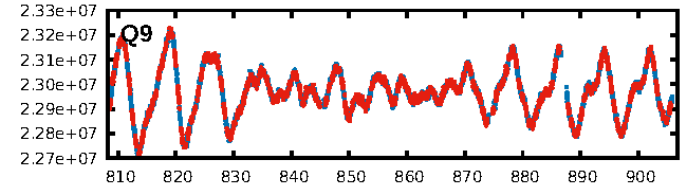
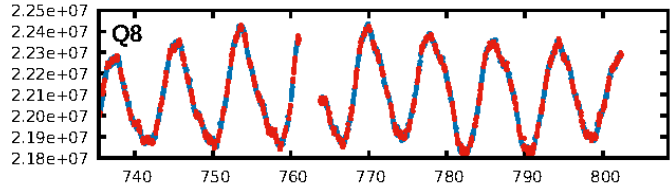
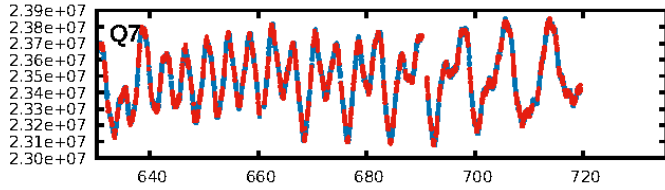
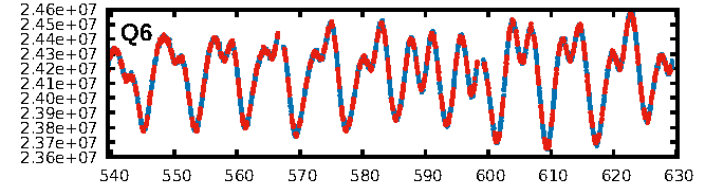
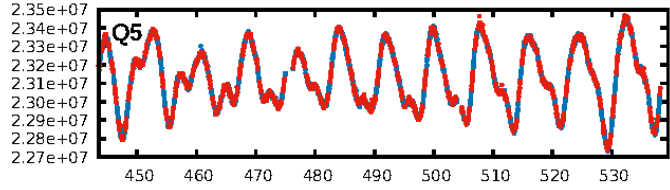
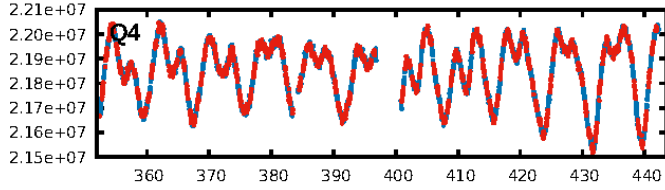
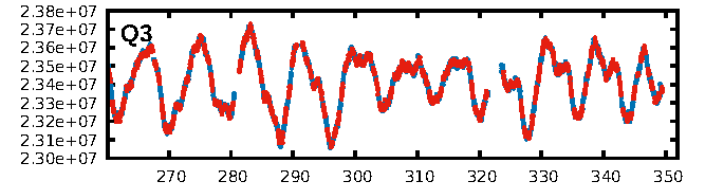
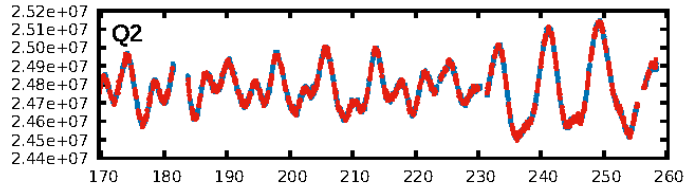
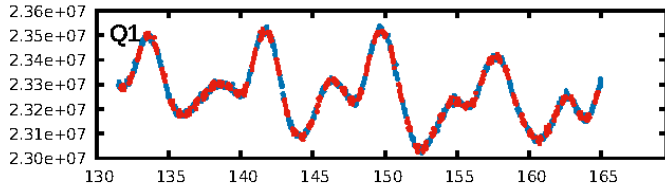
KIC: 7032727 Candidate: 1 of 3 Period: 0.567 d



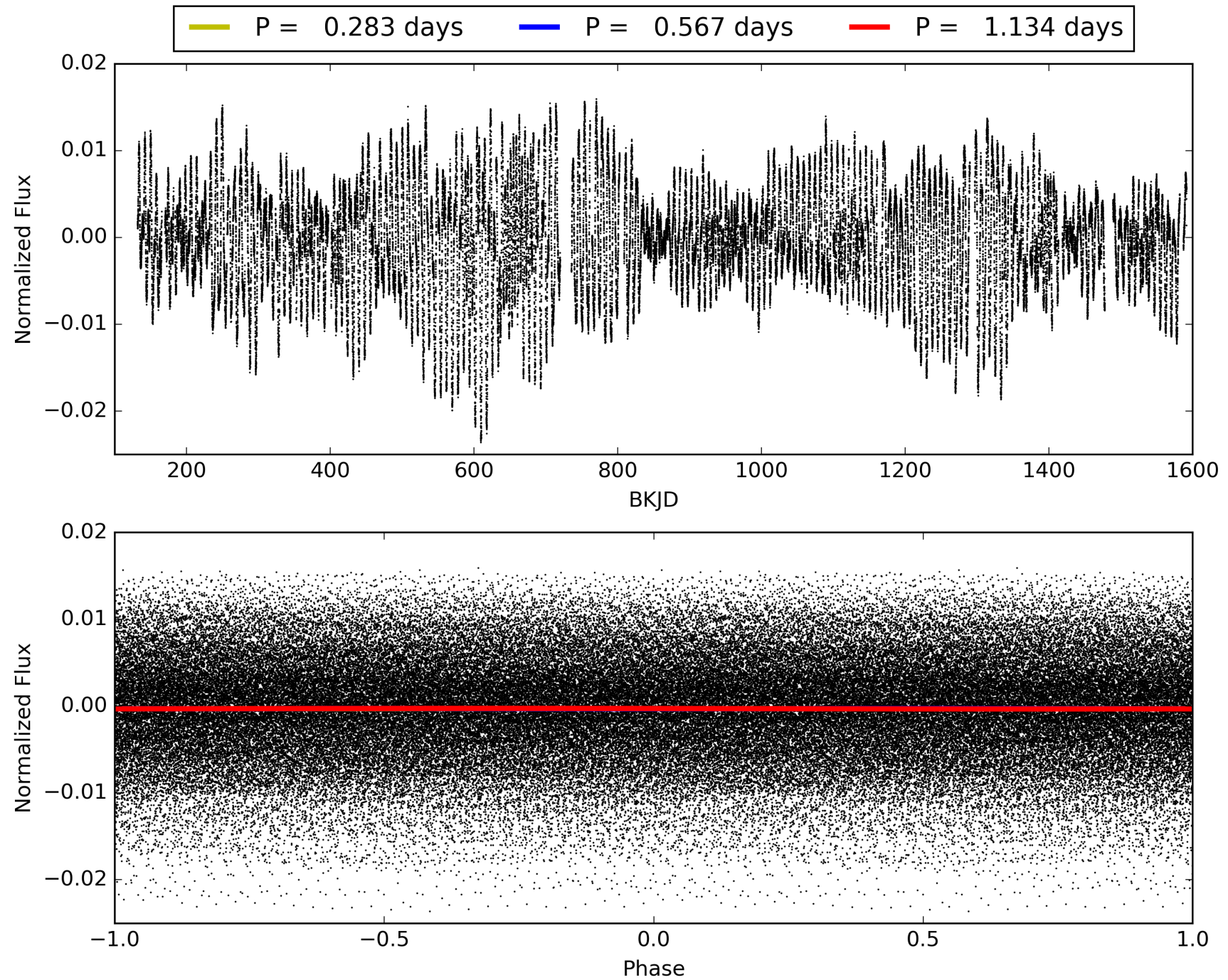
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007032727-01, PDC Light Curves

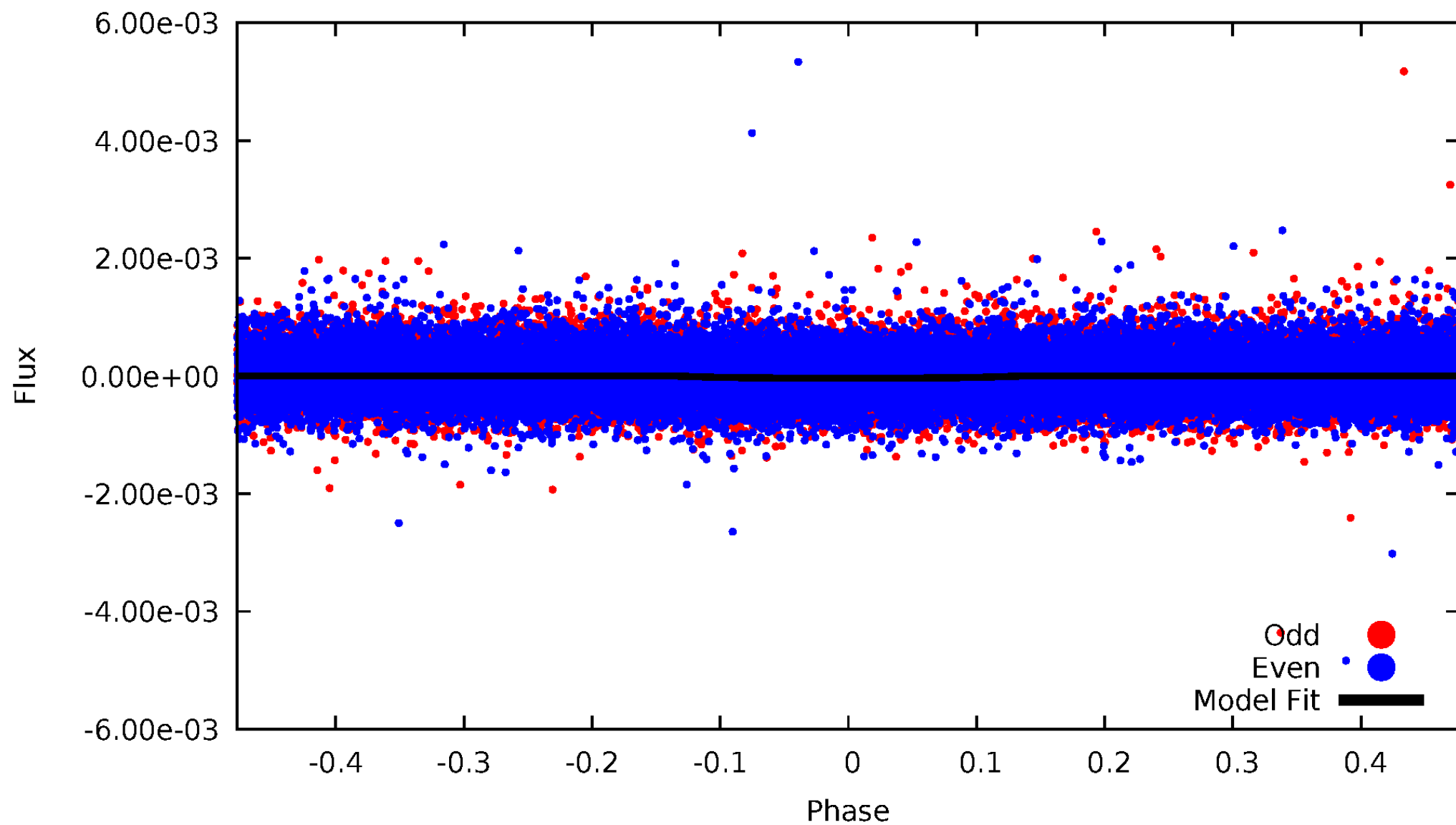


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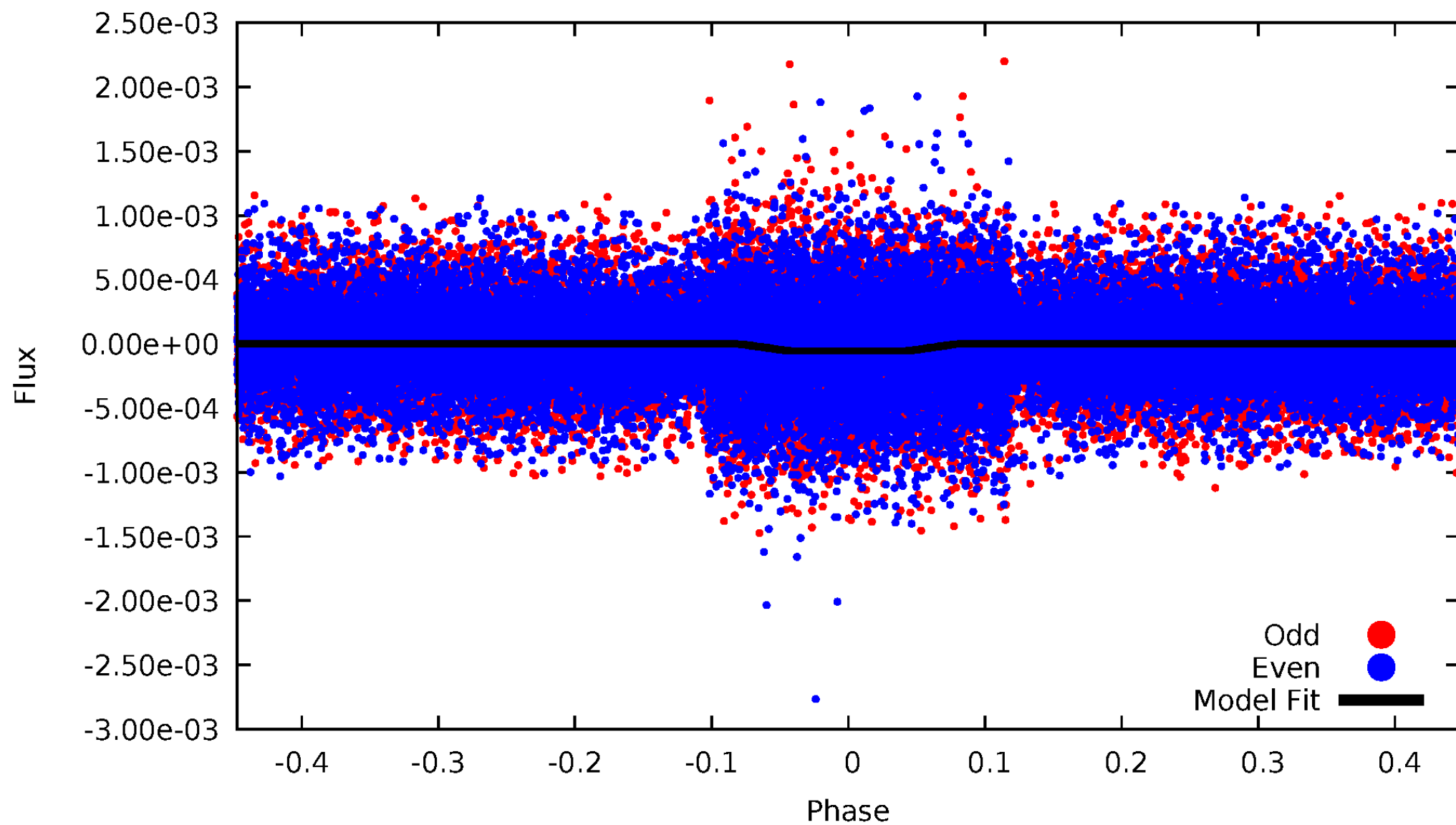
DV Odd/Even

TCE 007032727-01

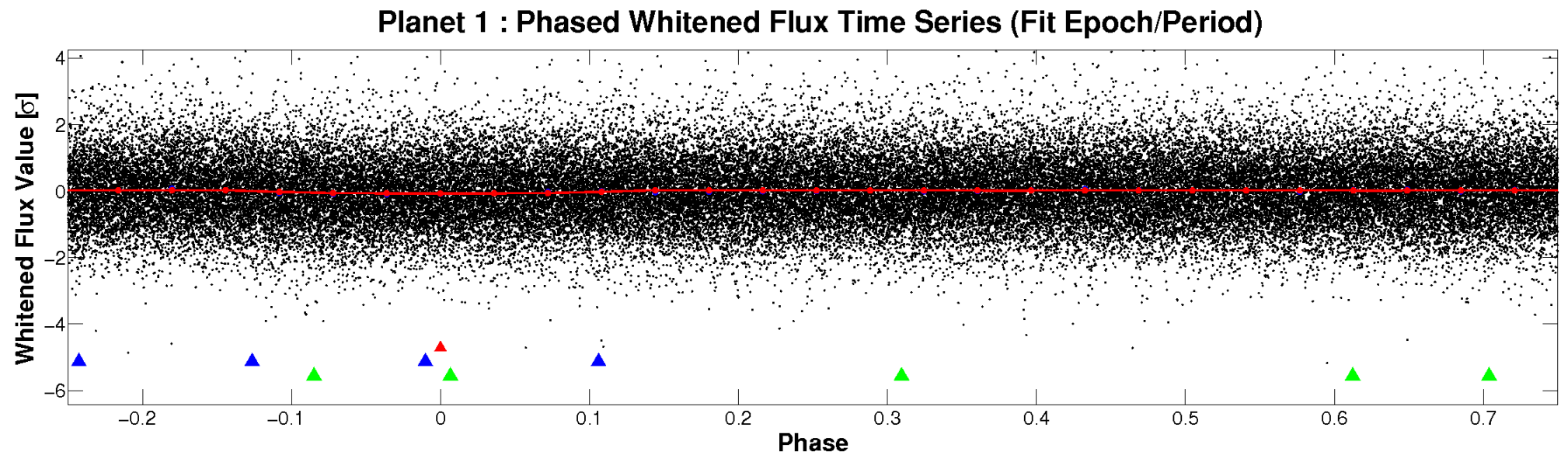
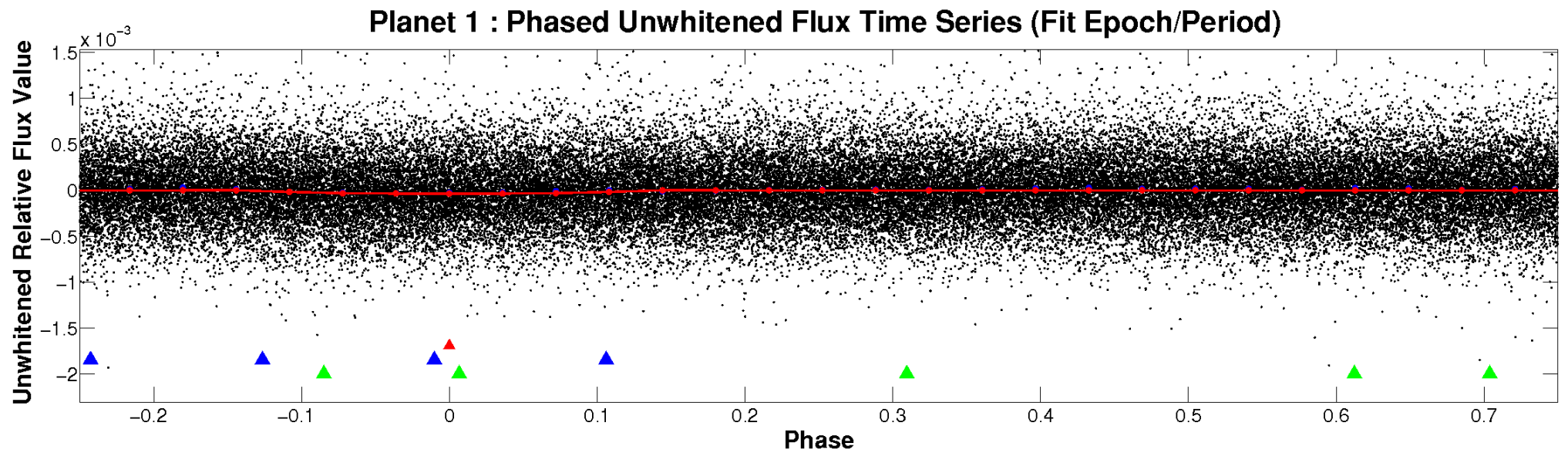


ALT Odd/Even

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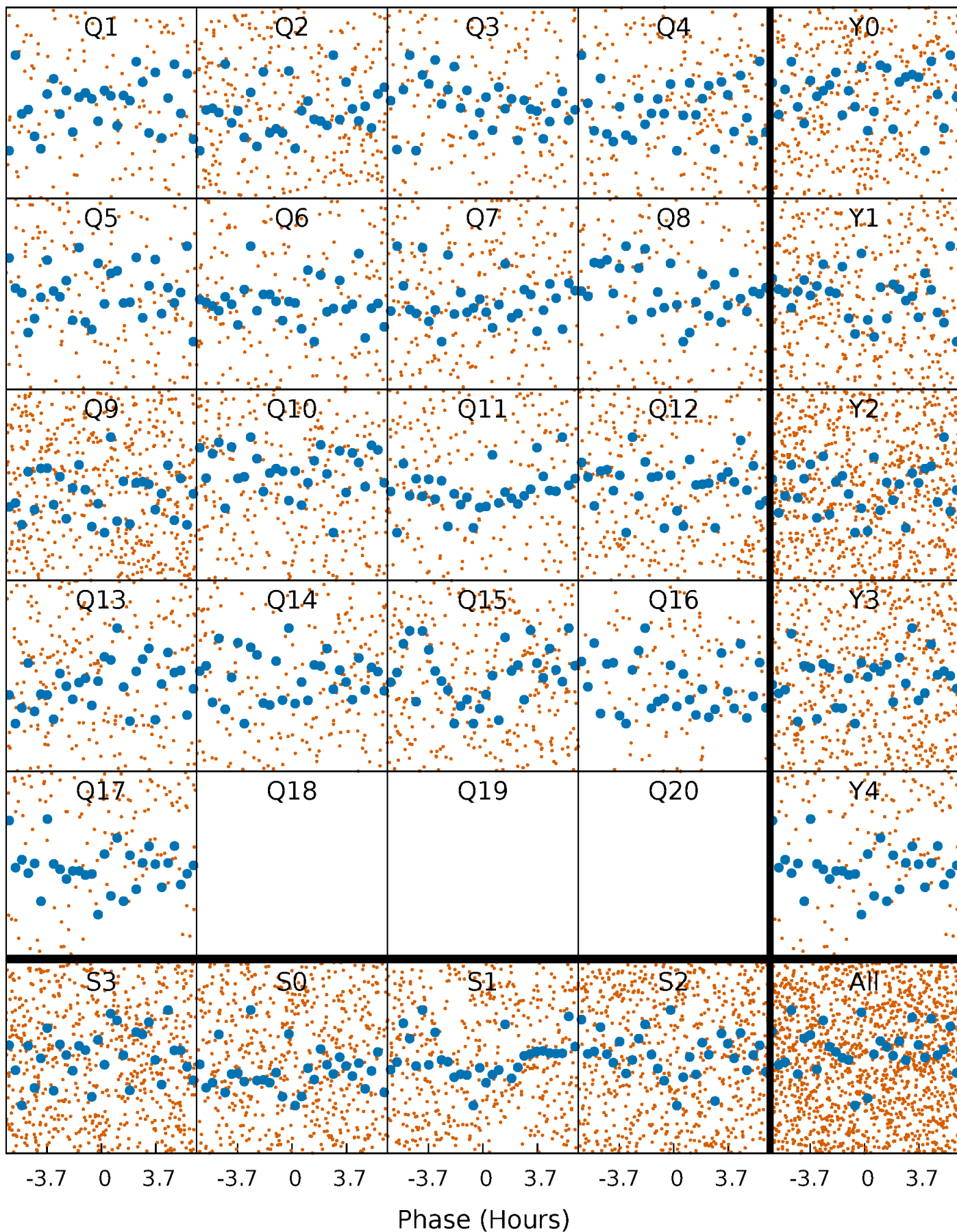


Non-Whitened Vs. Whitened Light Curve



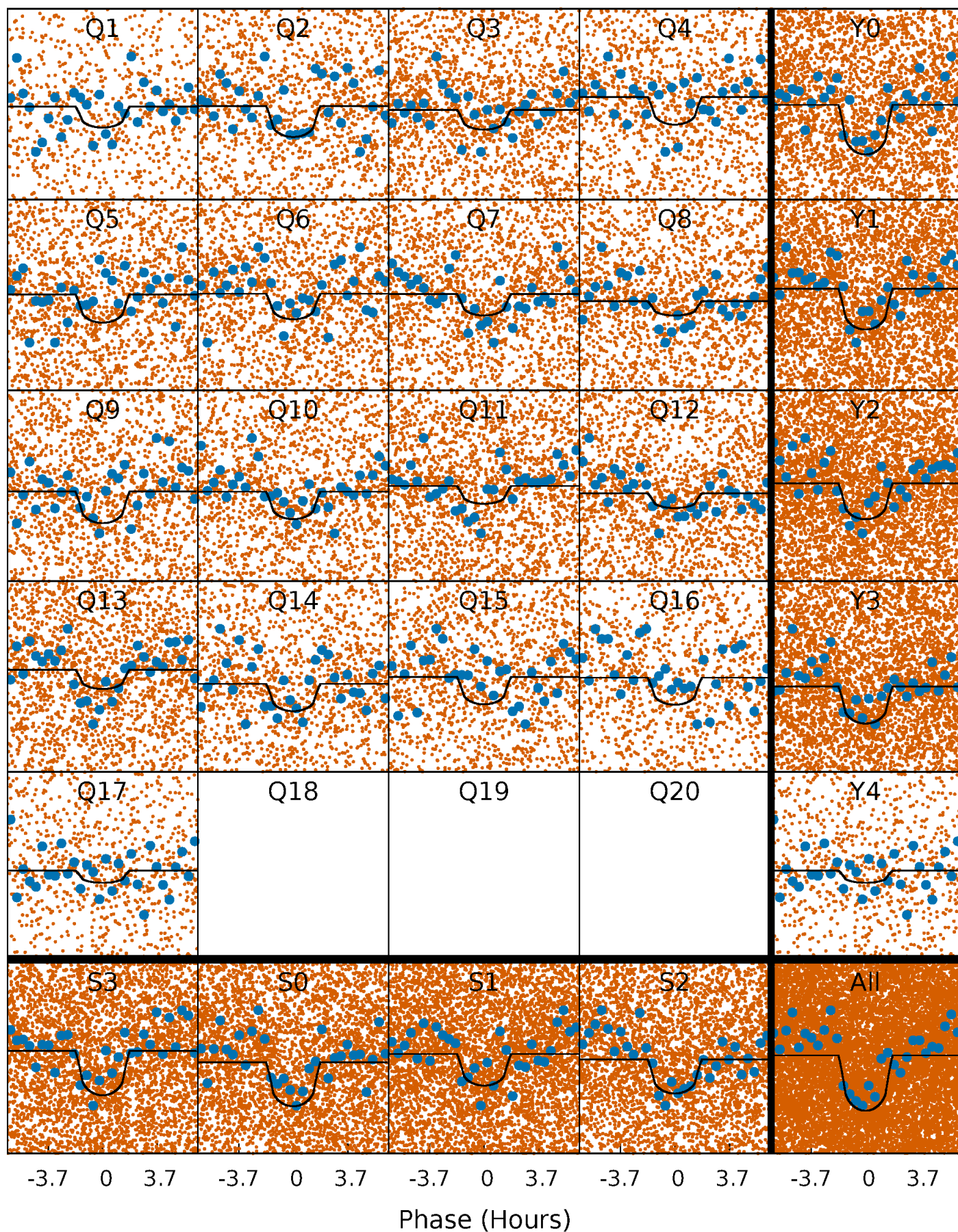
PDC Quarter-Phased Transit Curves

TCE 007032727-01 P= 0.566816 Days $T_0=131.804302$ (BKJD)



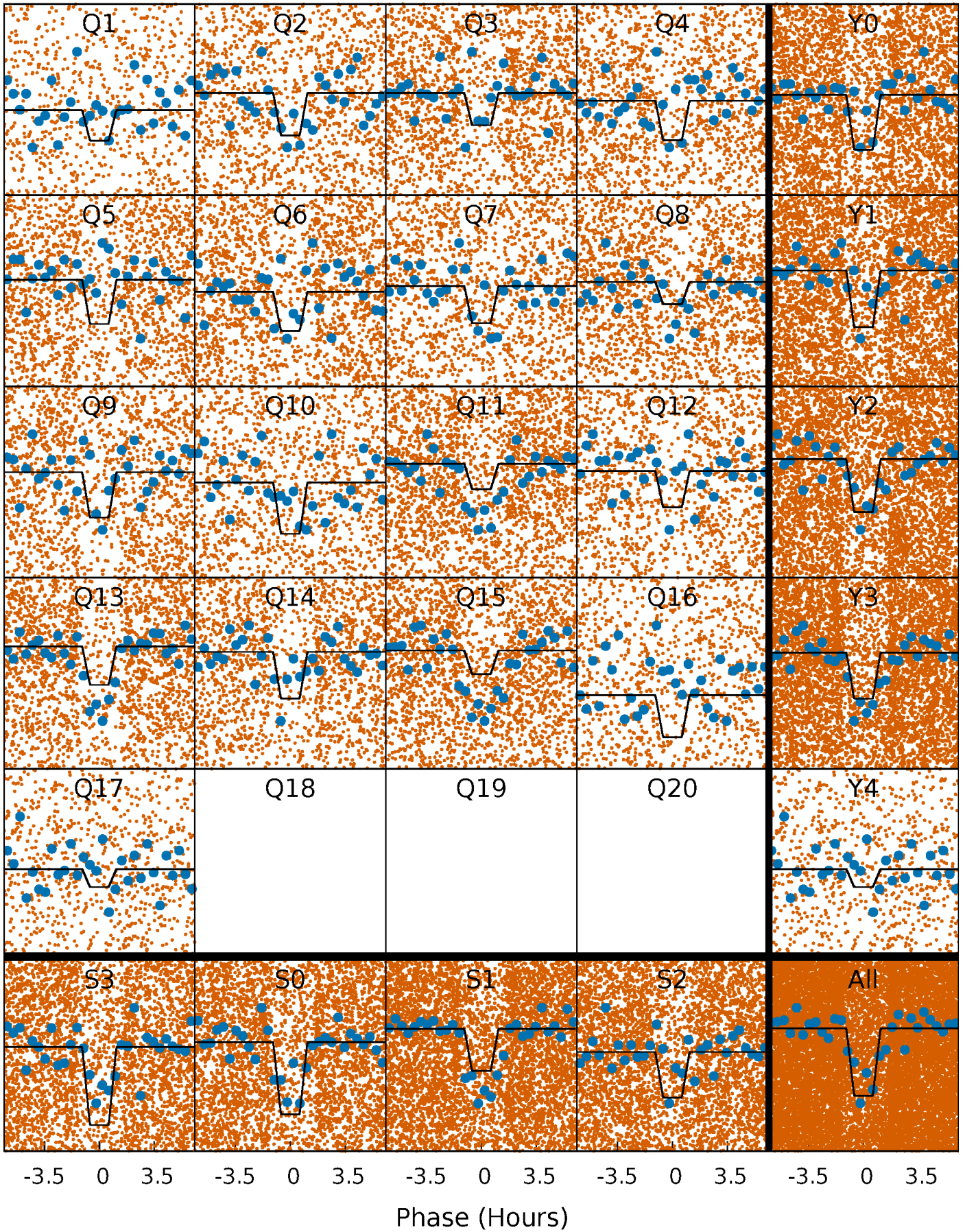
DV Quarter-Phased Transit Curves

TCE 007032727-01 P= 0.566816 Days $T_0=131.804302$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

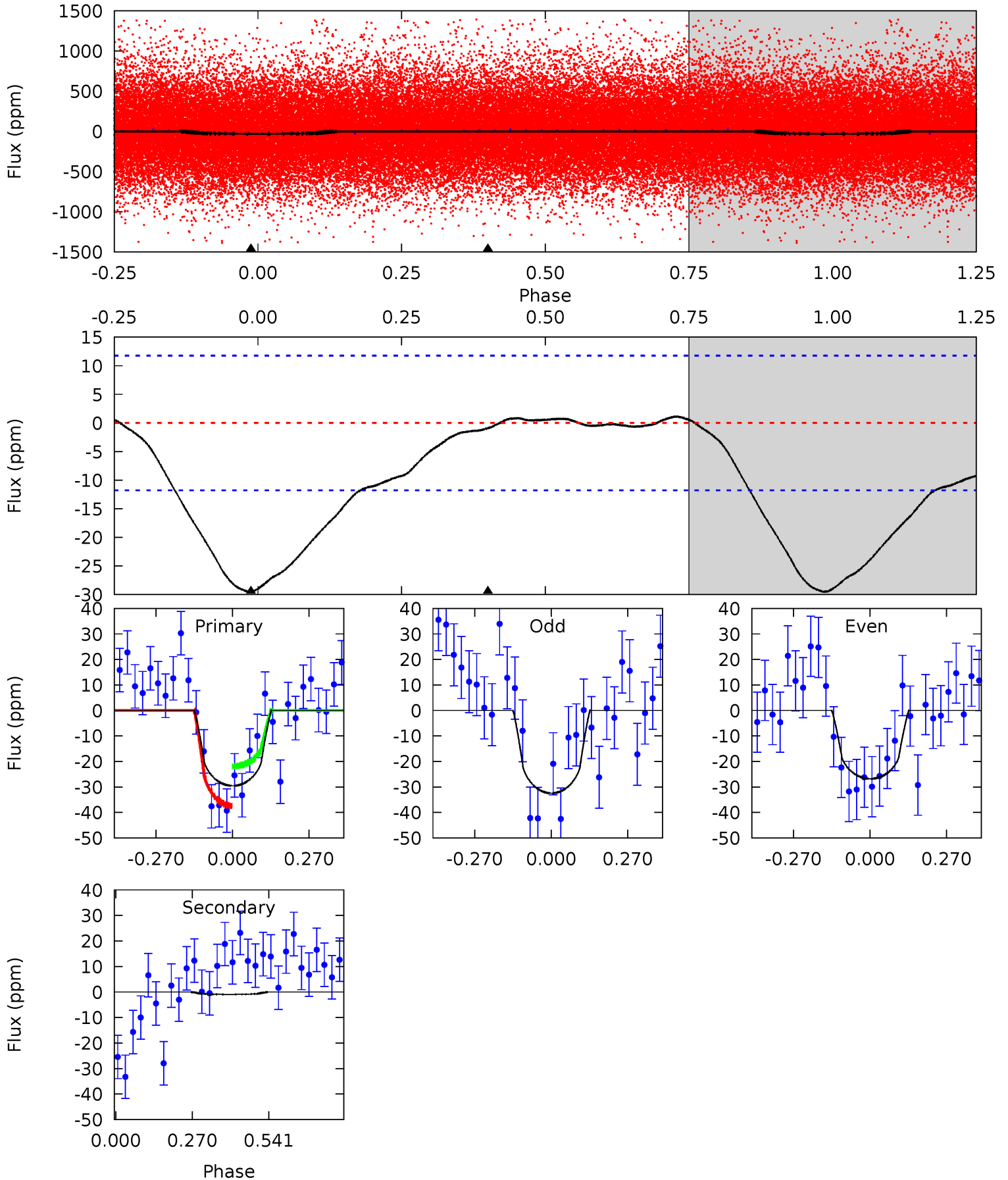
TCE 007032727-01 P= 0.566801 Days $T_0=131.794286$ (BKJD)



DV Model-Shift Uniqueness Test

007032727-01, P = 0.566816 Days, E = 131.237486 Days

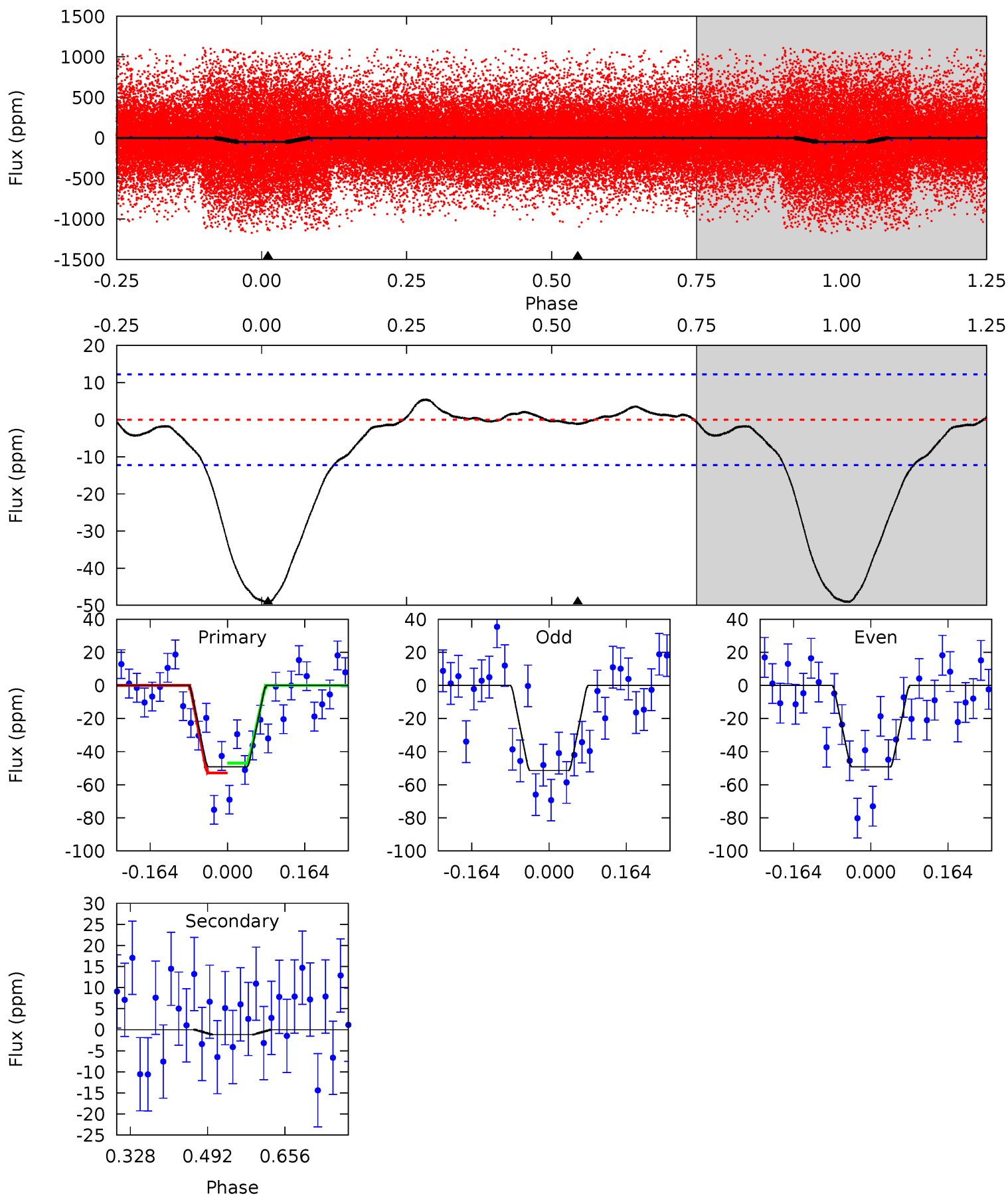
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	0.35	0	0	4.35	1.10	0.25	10.9	10.9	0.35	0.35	1.06	0.95	0.04	2.89



Alt Model-Shift Uniqueness Test

007032727-01, P = 0.566801 Days, E = 131.227485 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	0.42	0	0	4.46	1.39	0.94	17.9	17.9	0.42	0.42	0.43	1.08	0.10	1.08



Stellar Parameters For KIC 007032727

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5348^{+160}_{-144}	$4.627^{+0.032}_{-0.097}$	$-0.400^{+0.350}_{-0.300}$	$0.712^{+0.114}_{-0.052}$	$0.795^{+0.076}_{-0.084}$	$3.106^{+0.442}_{-0.968}$
	+3%/-3%	+1%/-2%	+87%/-75%	+16%/-7%	+10%/-11%	+14%/-31%
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 007032727-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 3	$0.51^{+0.36}_{-0.29}$	2532^{+109}_{-95}	-2437^{+6151}_{-860}	$0.205^{+2.087}_{-0.779}$
Alt.	-1 ± 3	$0.64^{+0.37}_{-0.34}$	2539^{+103}_{-91}	-2574^{+5981}_{-558}	$0.141^{+1.321}_{-0.478}$

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

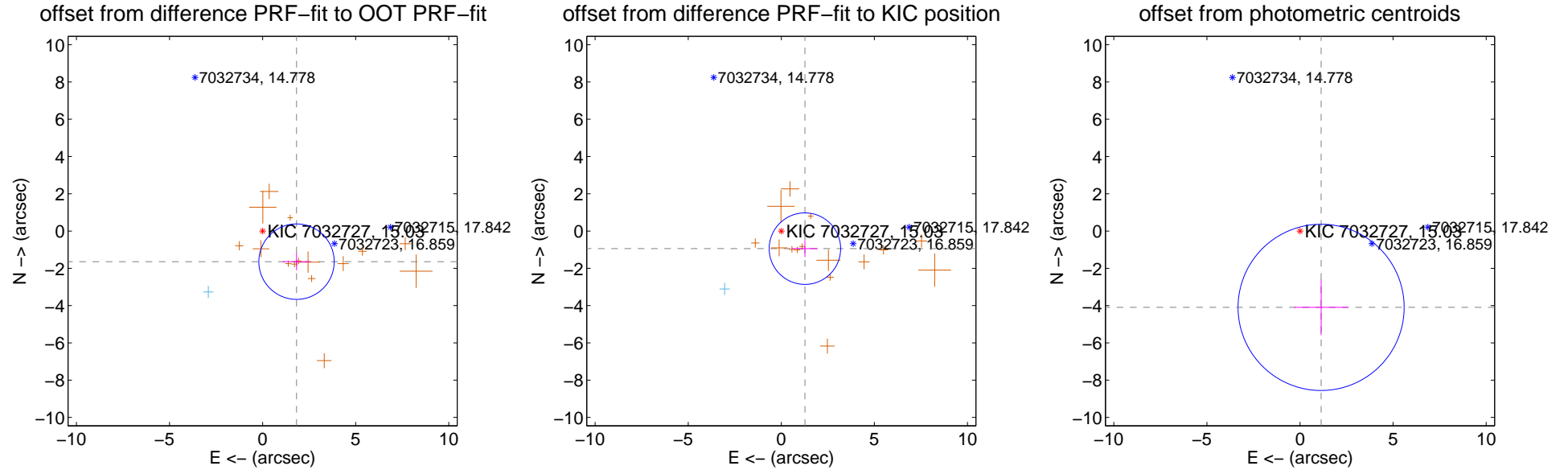
DV Centroid Data

Supplemental centroid analysis for 007032727-01. Kepler magnitude: 15.03. Transit SNR 8.26

There are 1 quarters with good PRF difference image offsets

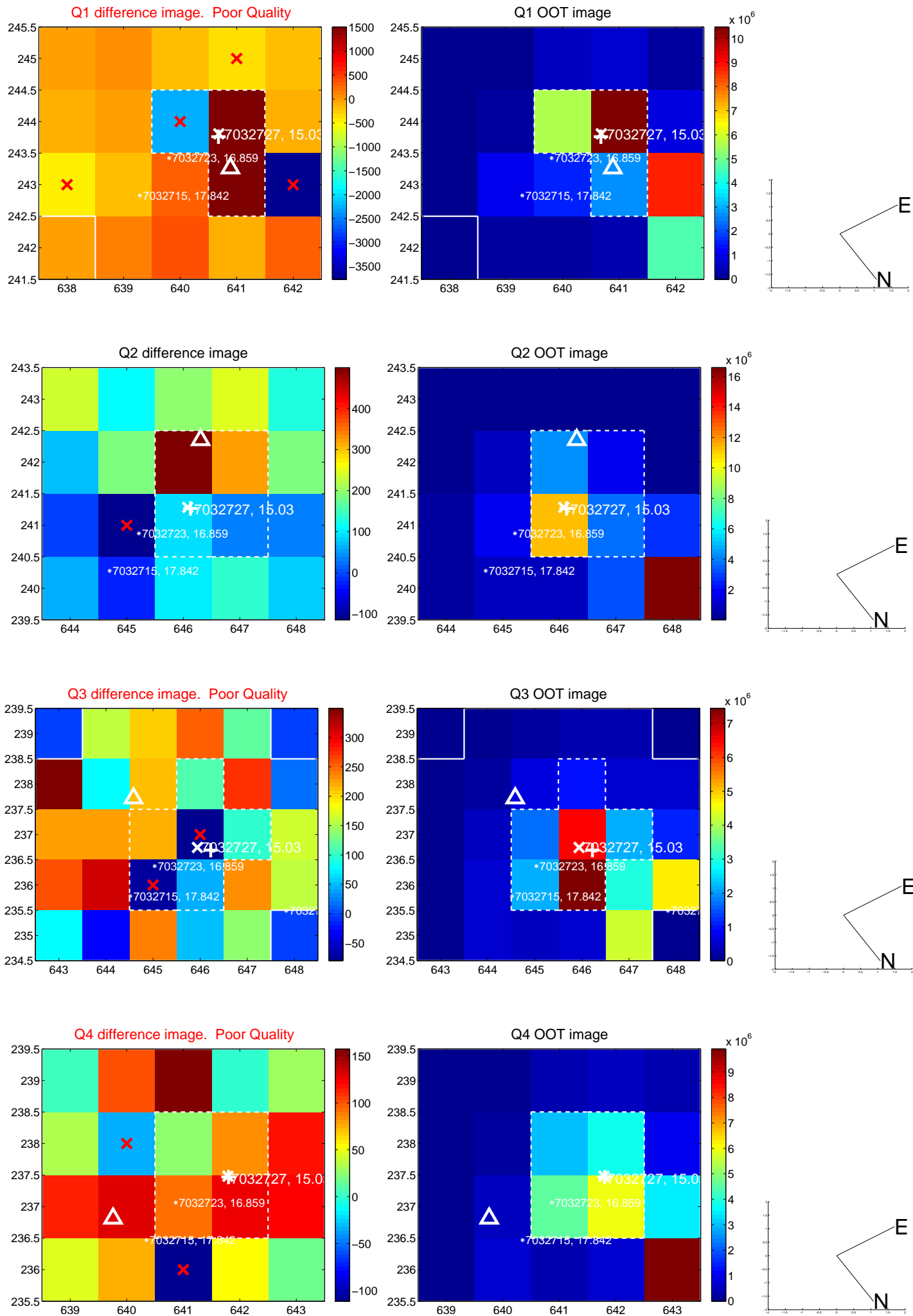
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.453 ± 0.675	3.64	-1.822 ± 0.746	-1.642 ± 0.463
PRF-fit source offset from KIC position	1.580 ± 0.640	2.47	-1.267 ± 0.701	-0.943 ± 0.450
photometric centroid source offset	4.25 ± 1.49	2.86	-1.13 ± 1.45	-4.10 ± 1.49

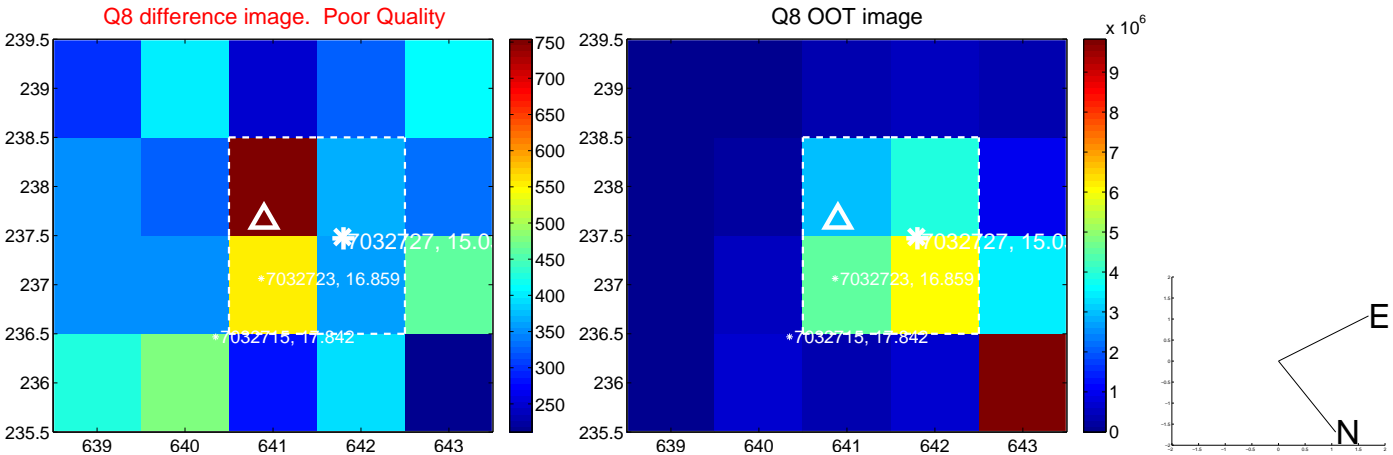
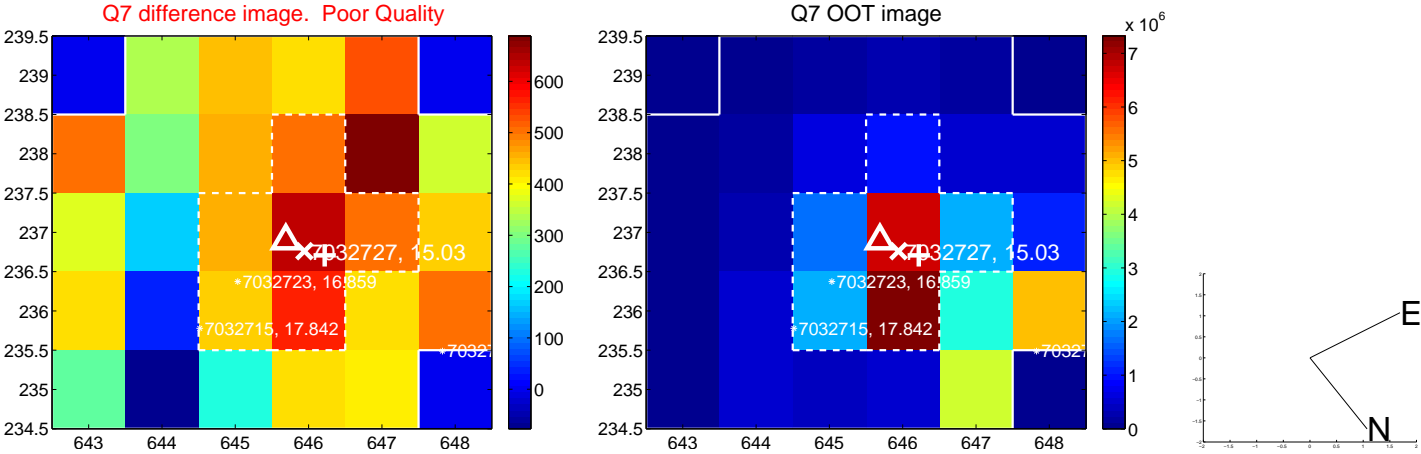
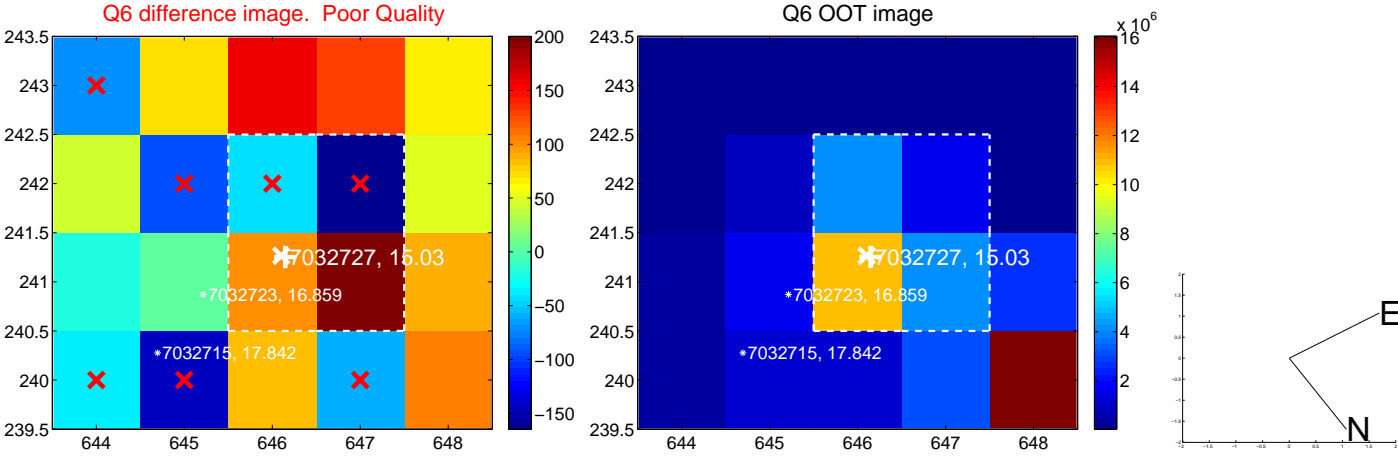
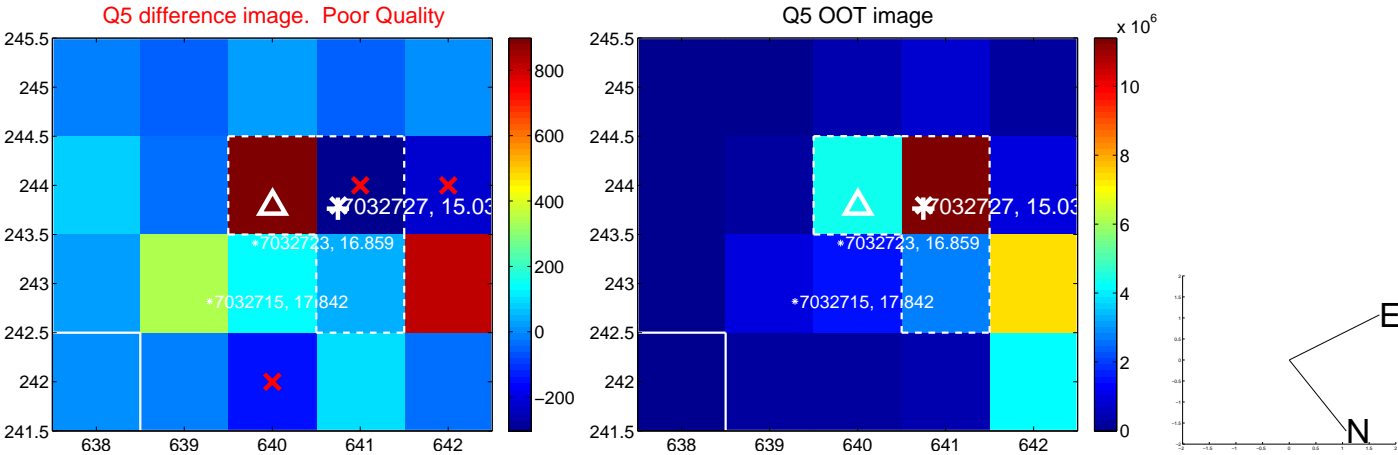


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

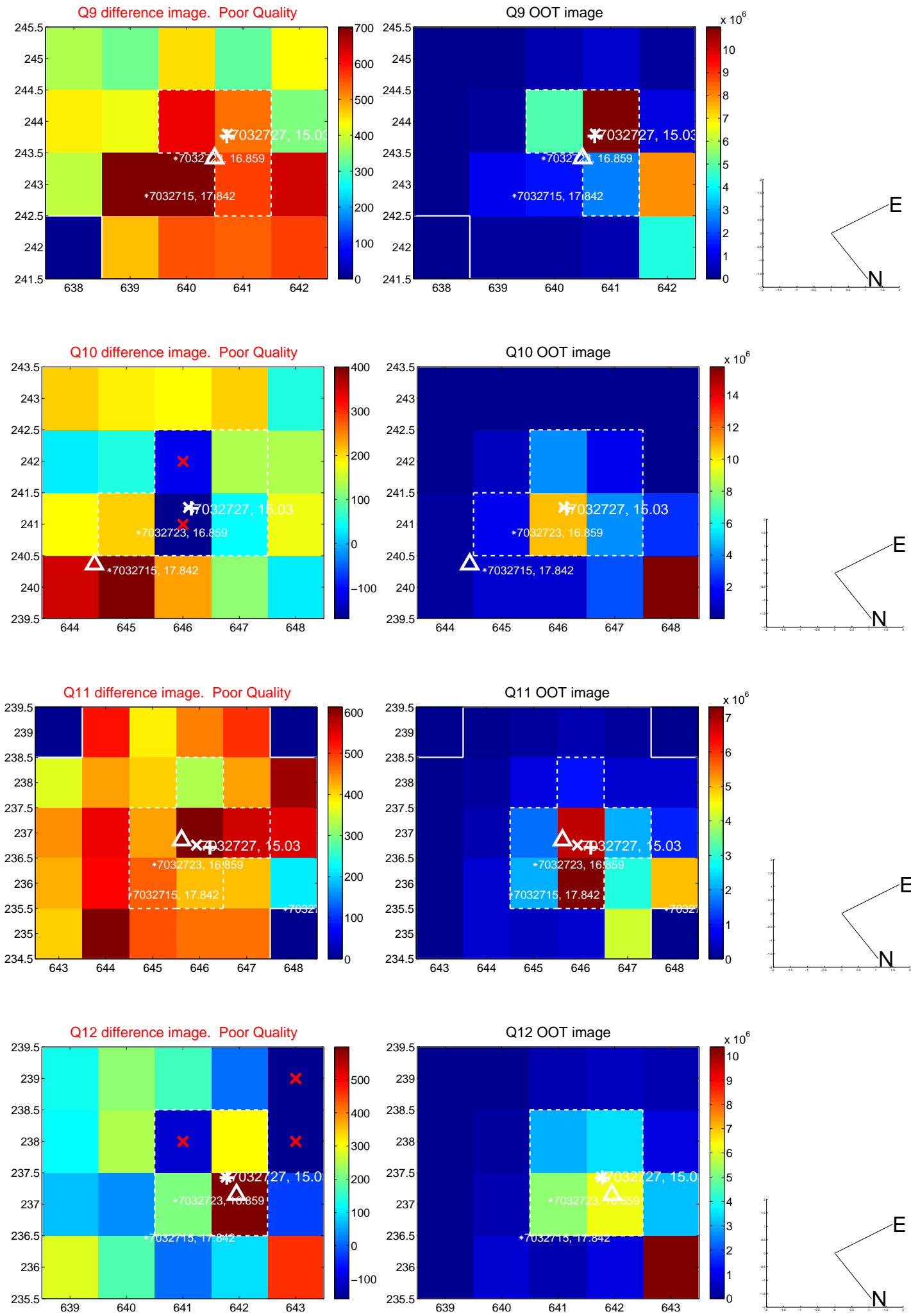
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



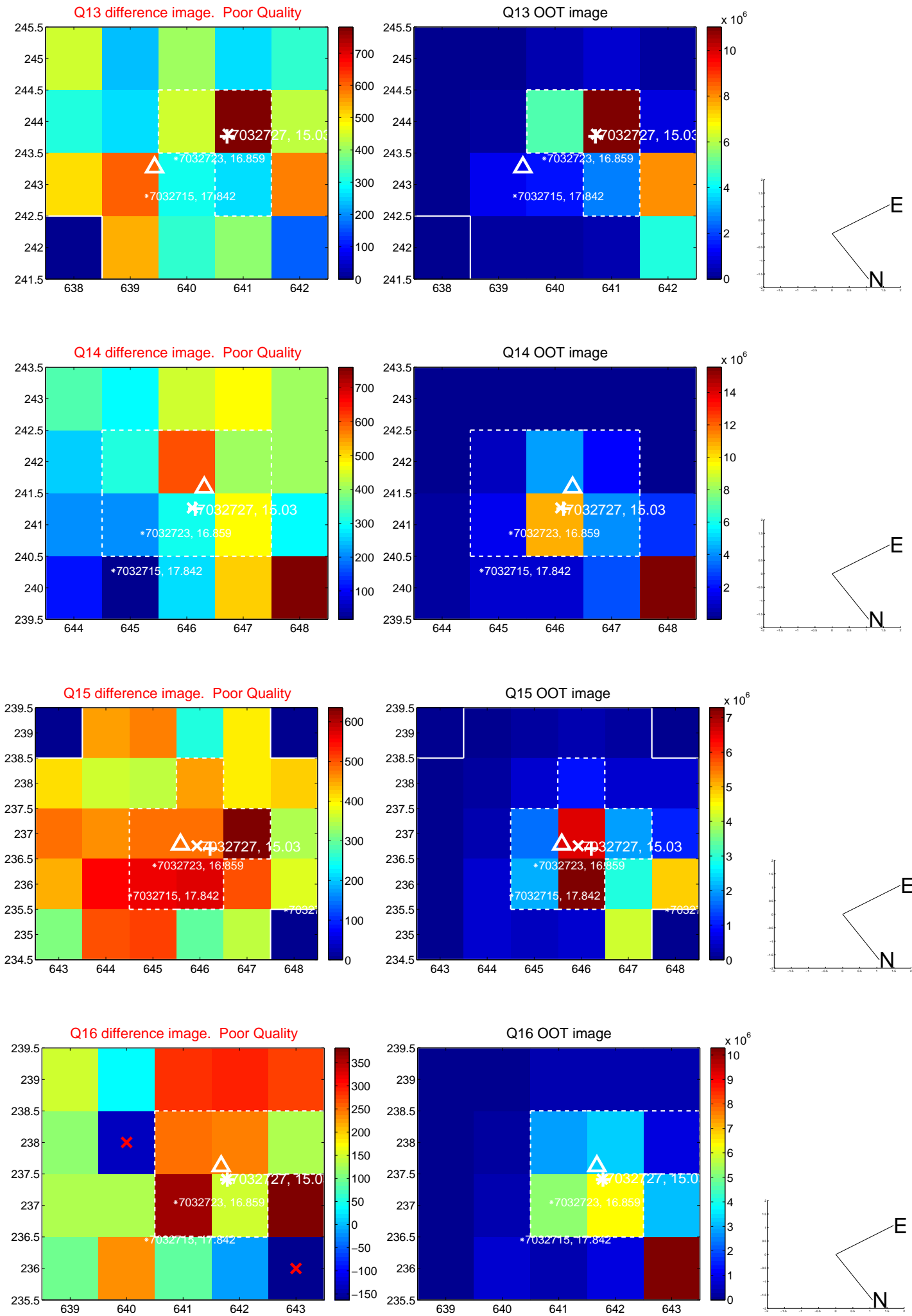
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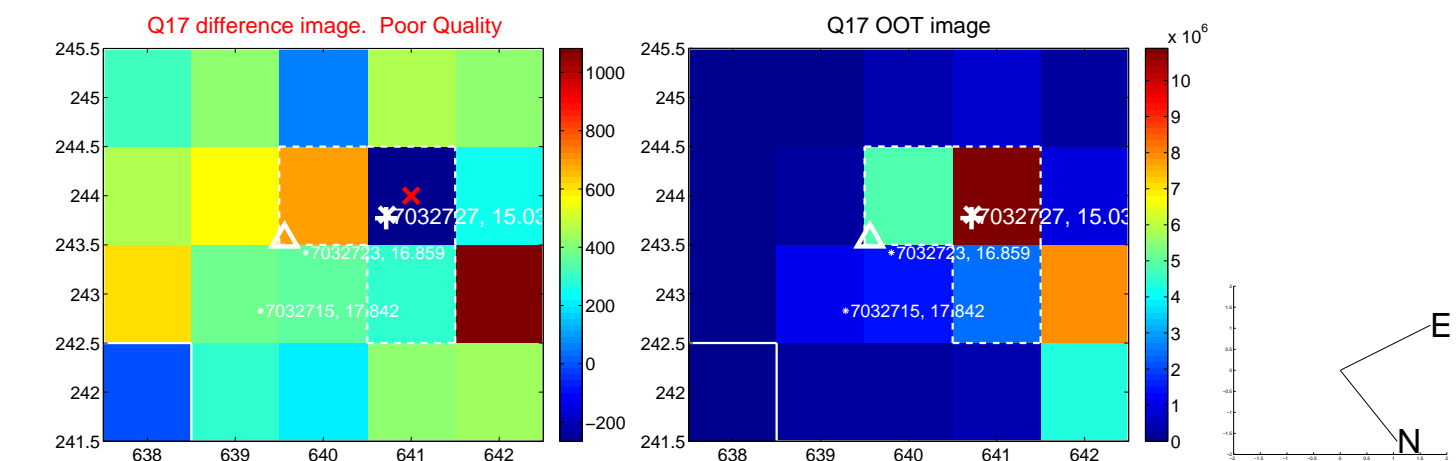
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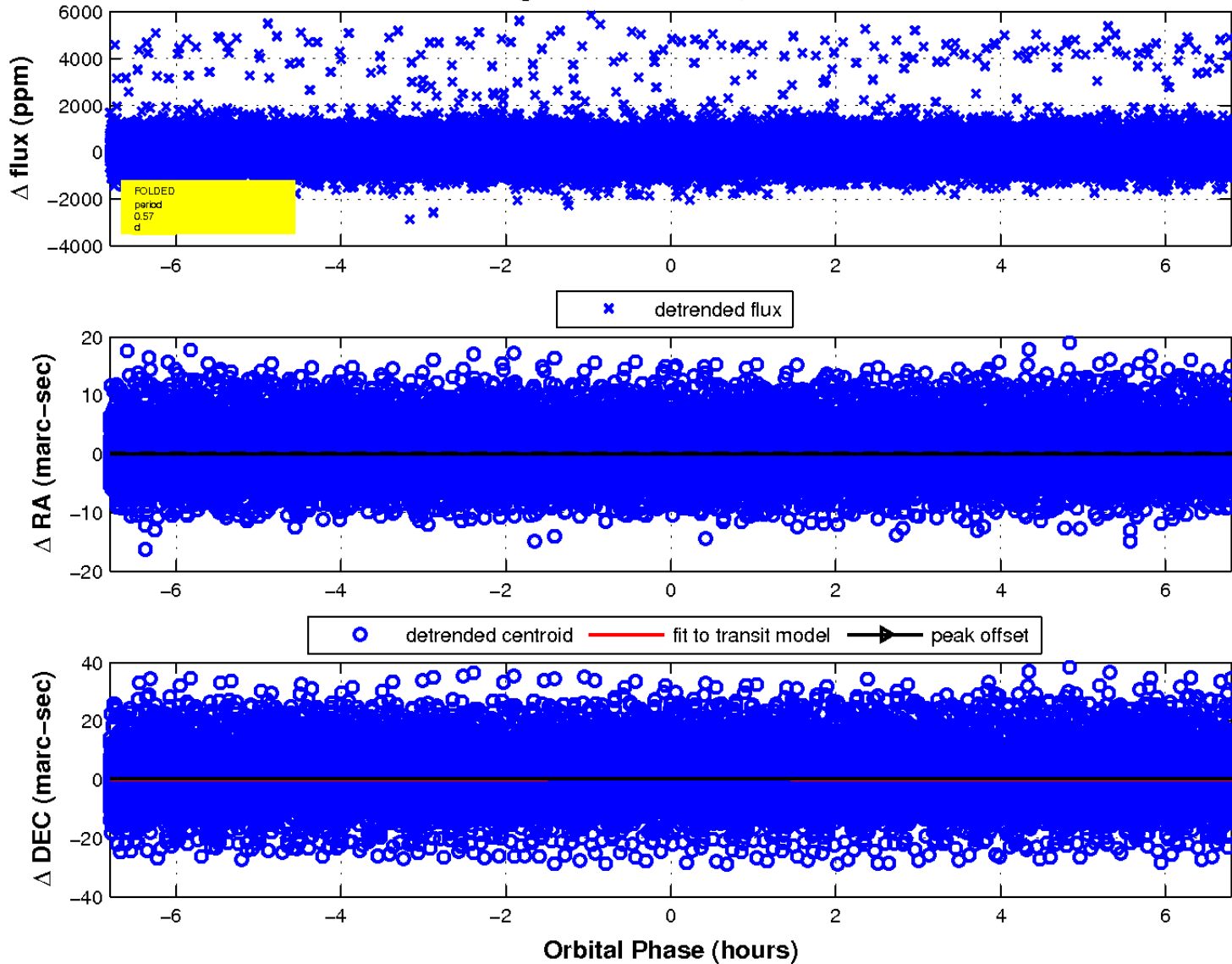
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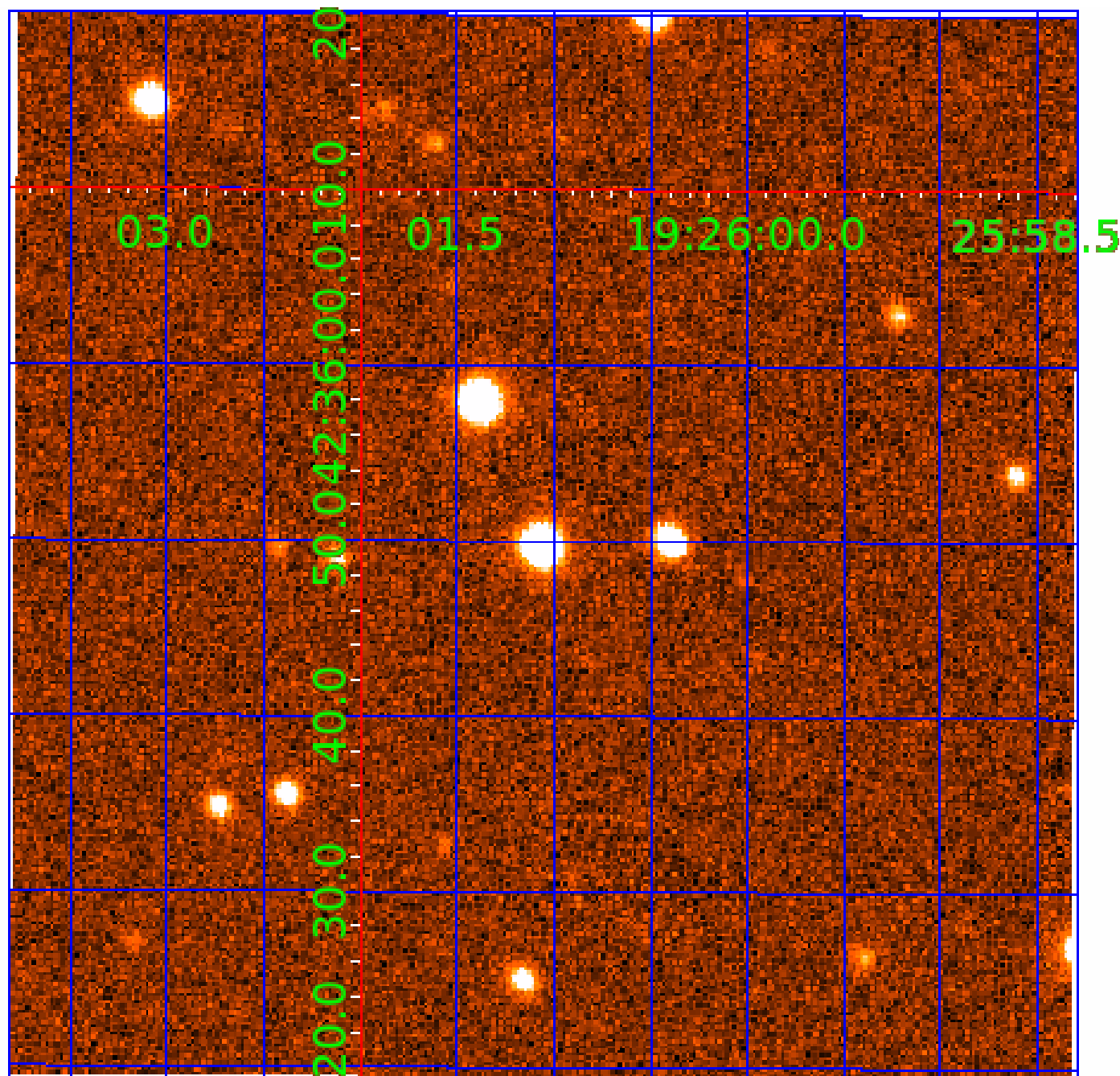


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 007032727

Q1-17 DR25 TCE Parameters

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007032727-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

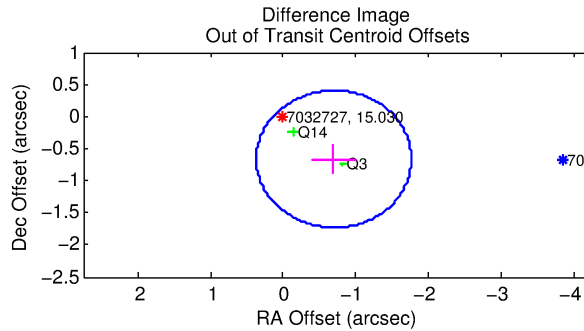
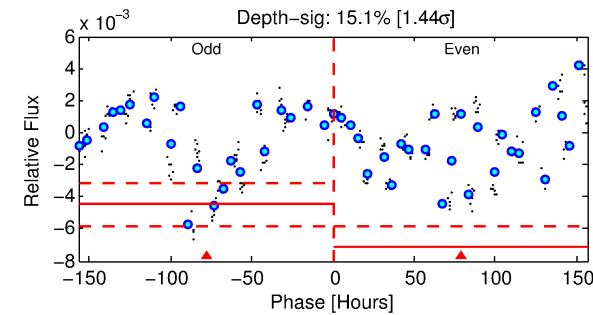
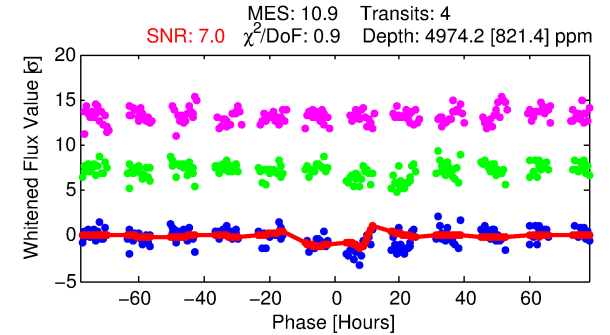
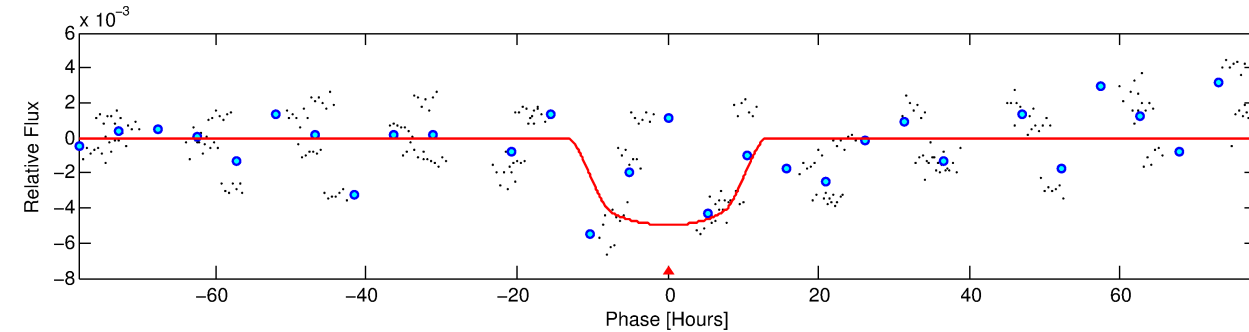
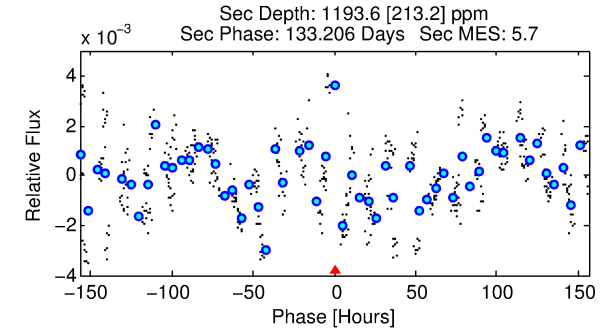
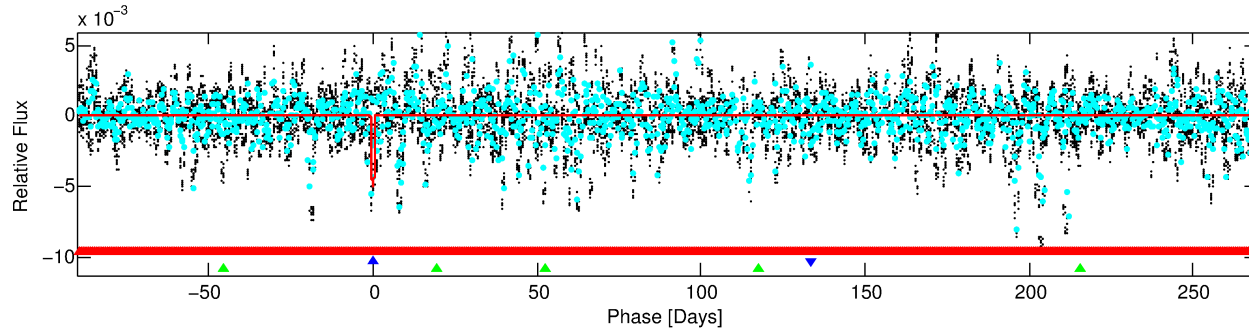
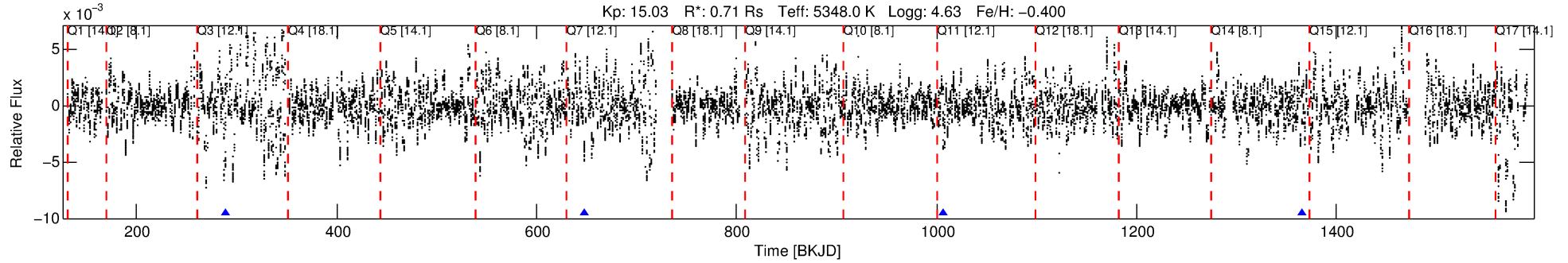
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007032727-02

No Significant Match Found

DV One-Page Summary

KIC: 7032727 Candidate: 2 of 3 Period: 359.296 d



DV Fit Results:

Period = 359.29569 [0.02601] d
Epoch = 288.3058 [0.0490] BKJD
Rp/R* = 0.0734 [0.0066]
a/R* = 71.43 [10.77]
b = 0.83 [0.04]
Seff = 0.45 [0.10]
Teq = 208 [11] K
Rp = 5.70 [1.05] Re
a = 0.9120 [0.1187] AU
Ag = 16805.94 [5261.64] [3.19σ]
Teffp = 3670 [257] K [13.43σ]

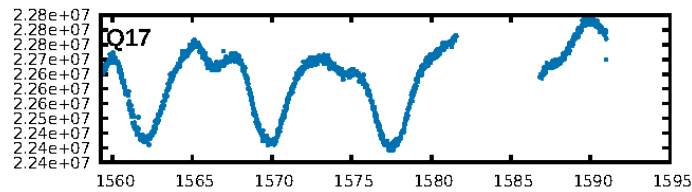
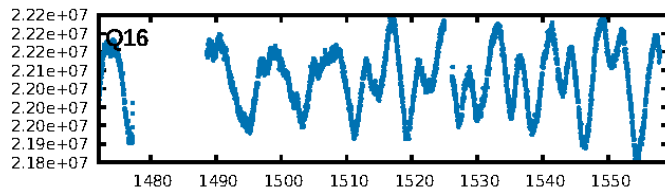
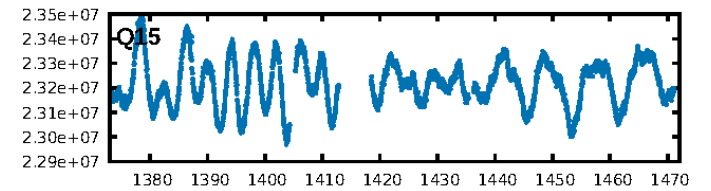
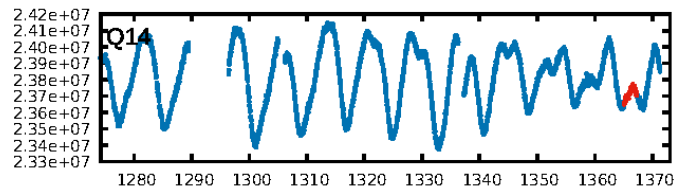
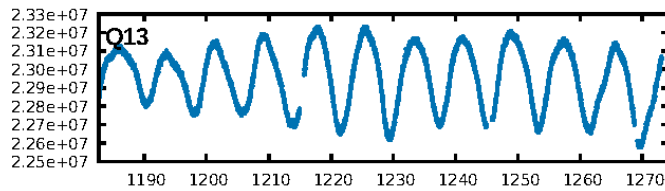
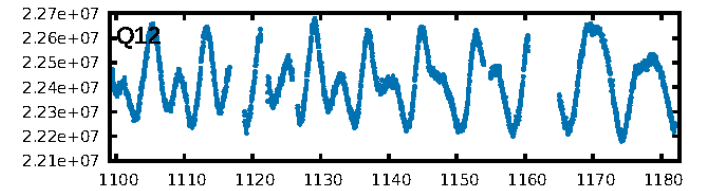
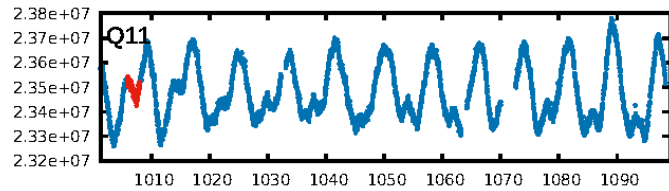
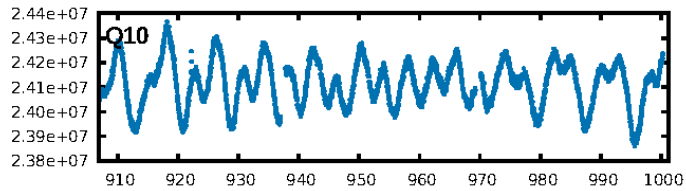
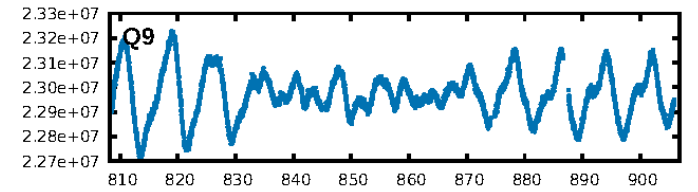
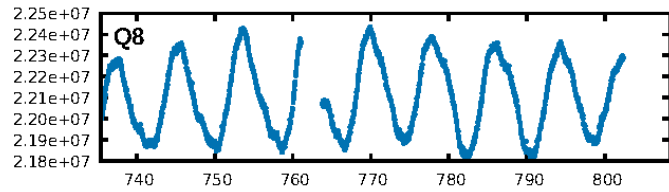
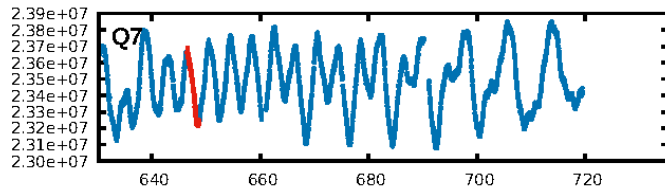
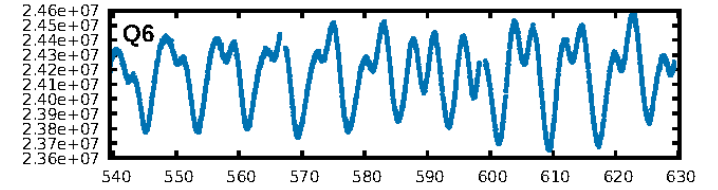
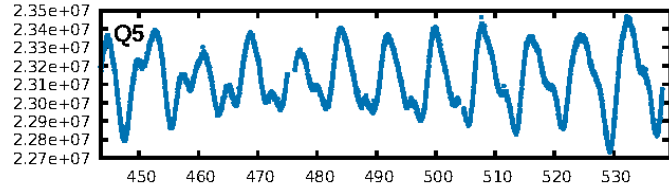
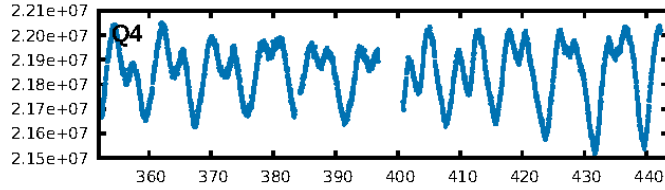
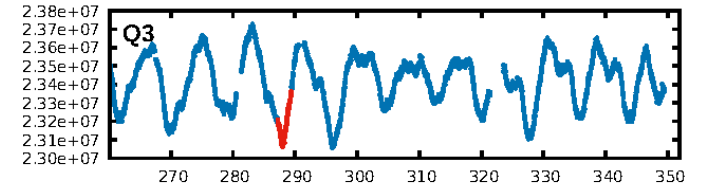
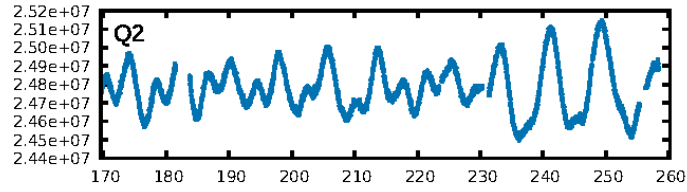
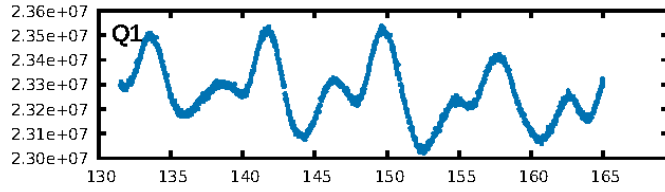
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [87.97σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.56e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2745
Centroid-sig: 70.9%
Centroid-so: 2.805 arcsec [6.40σ]
OotOffset-rm: 0.963 arcsec [2.71σ]
KicOffset-rm: 0.004 arcsec [0.05σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/3]

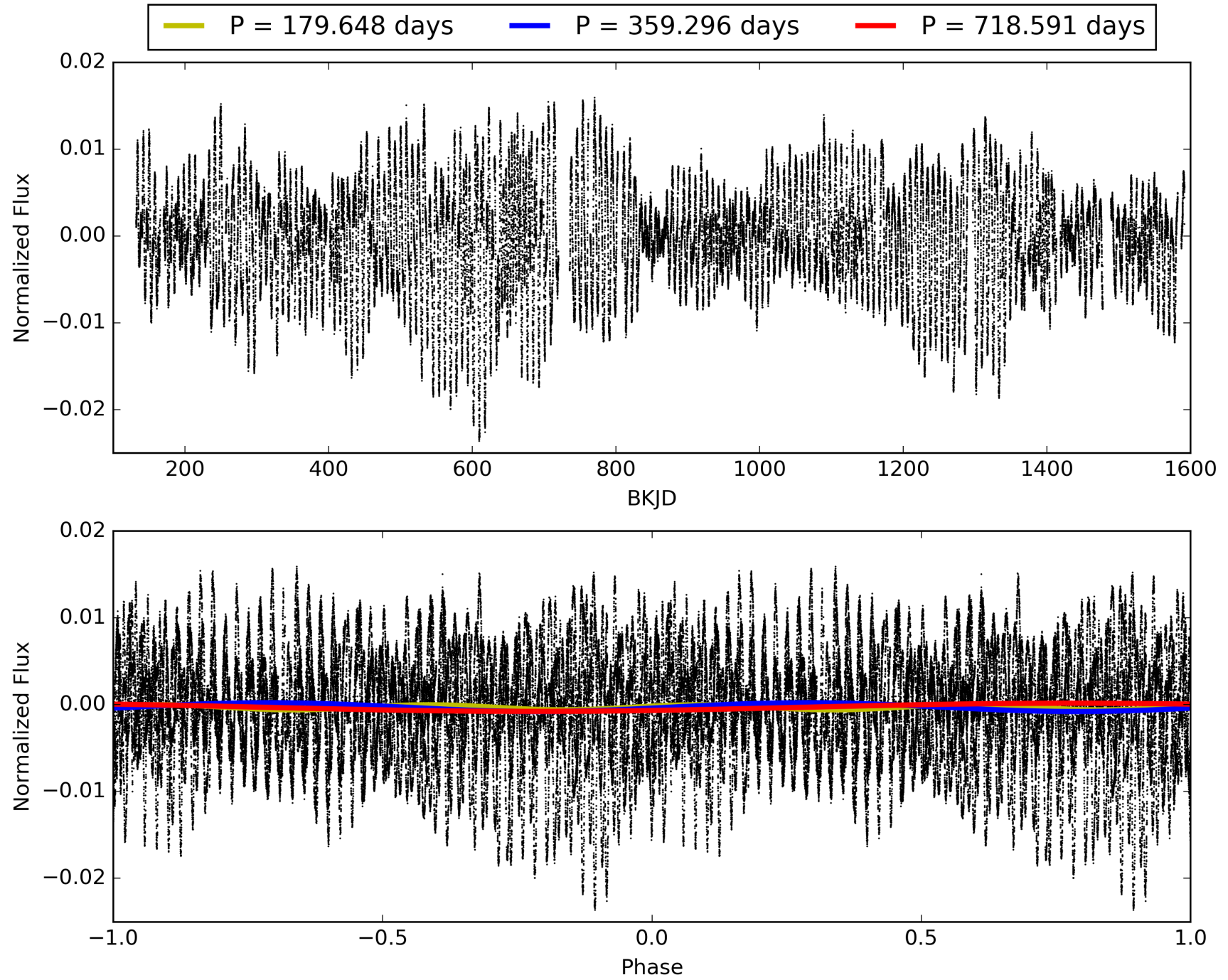
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:26:17 Z

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

TCE 007032727-02, PDC Light Curves

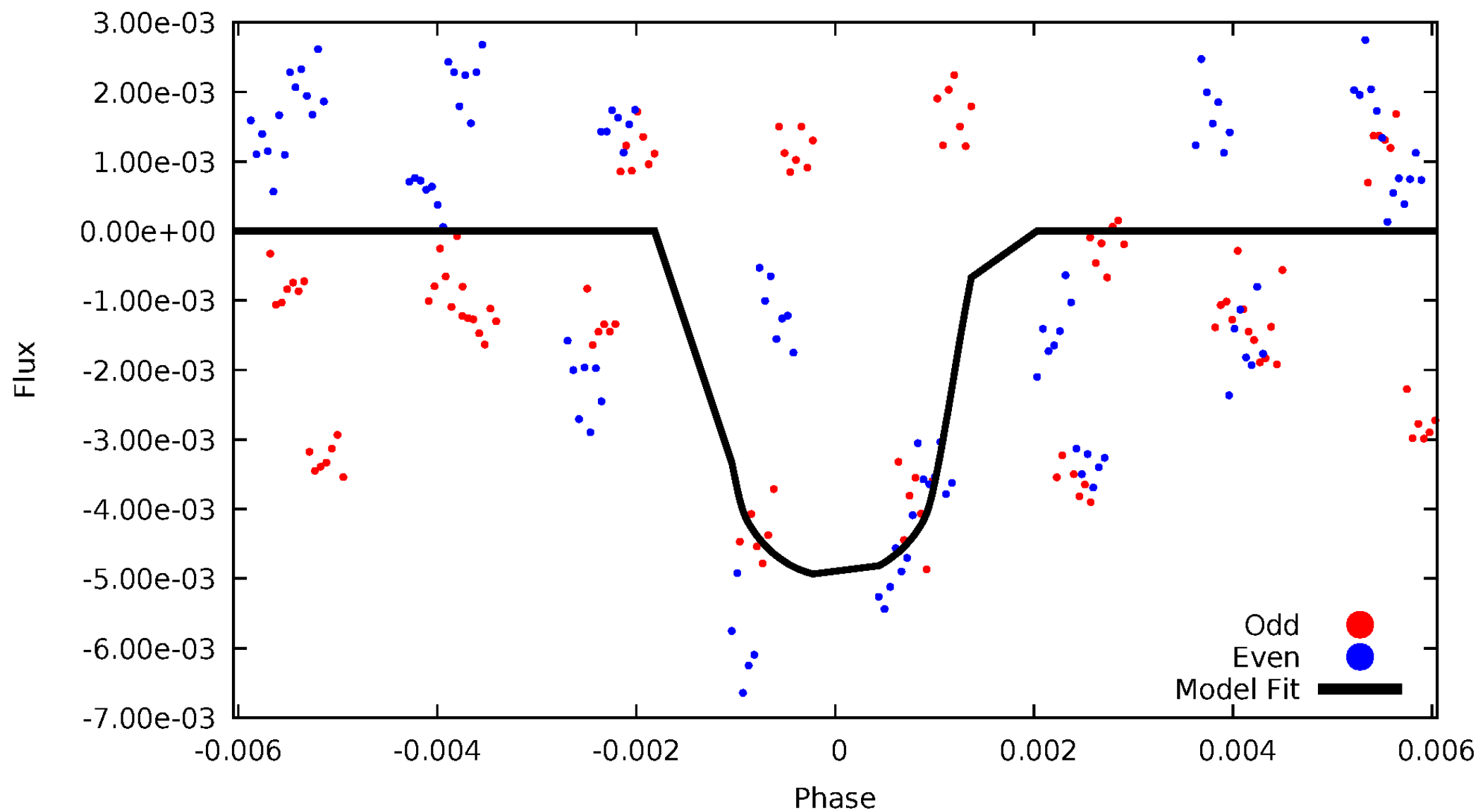


TCE 007032727-02



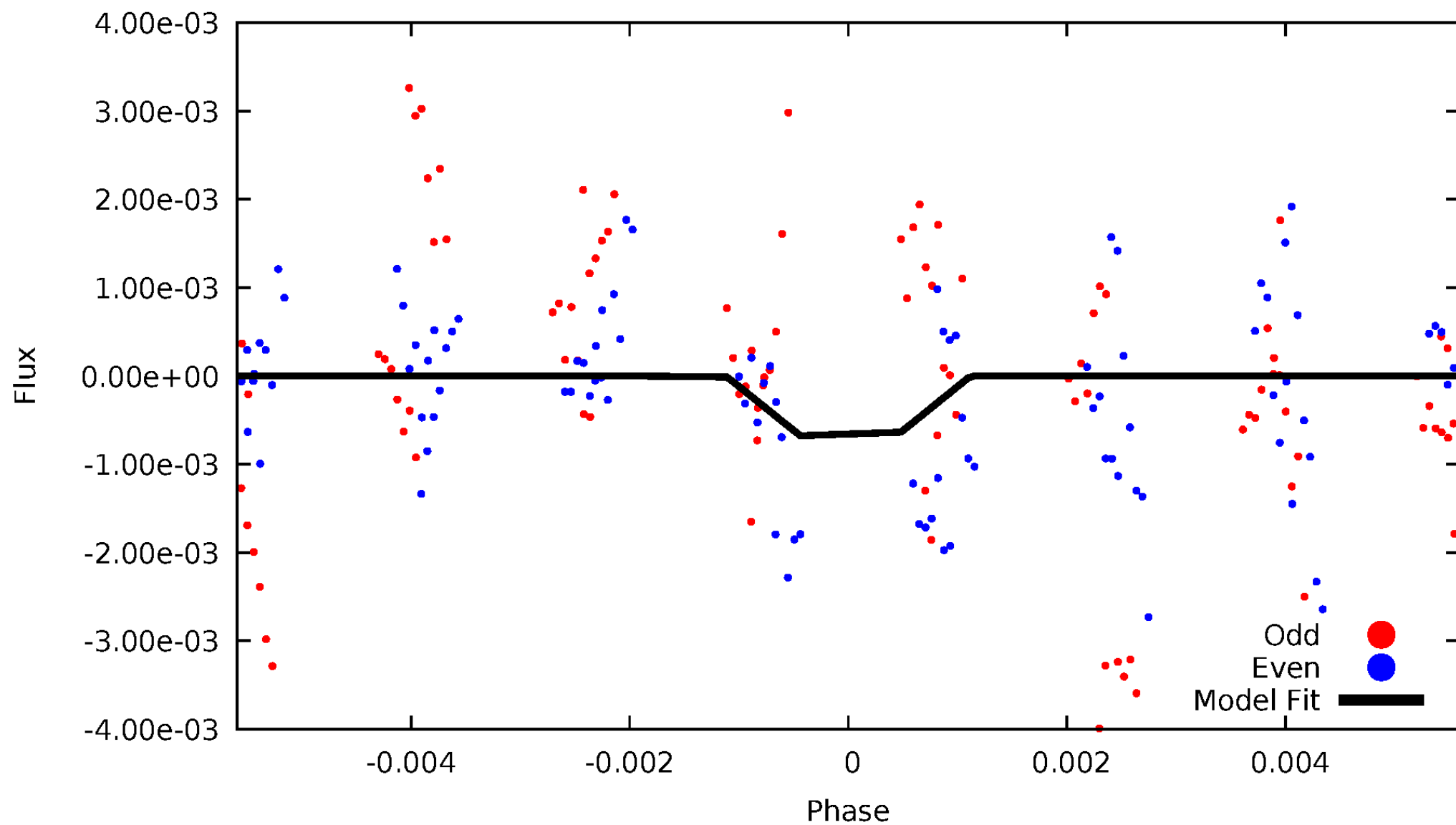
DV Odd/Even

TCE 007032727-02



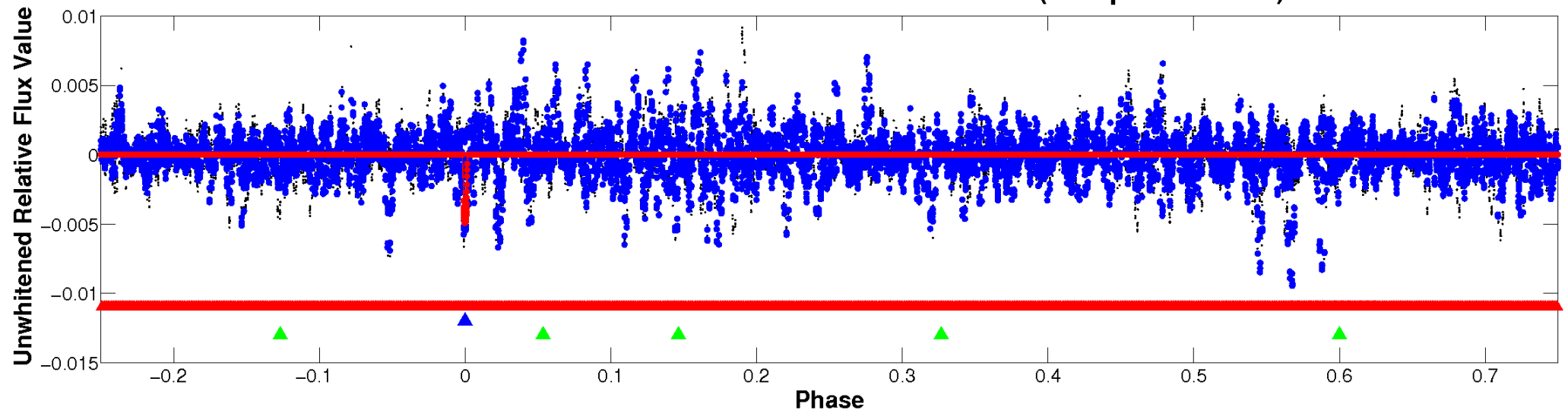
ALT Odd/Even

TCE 007032727-02

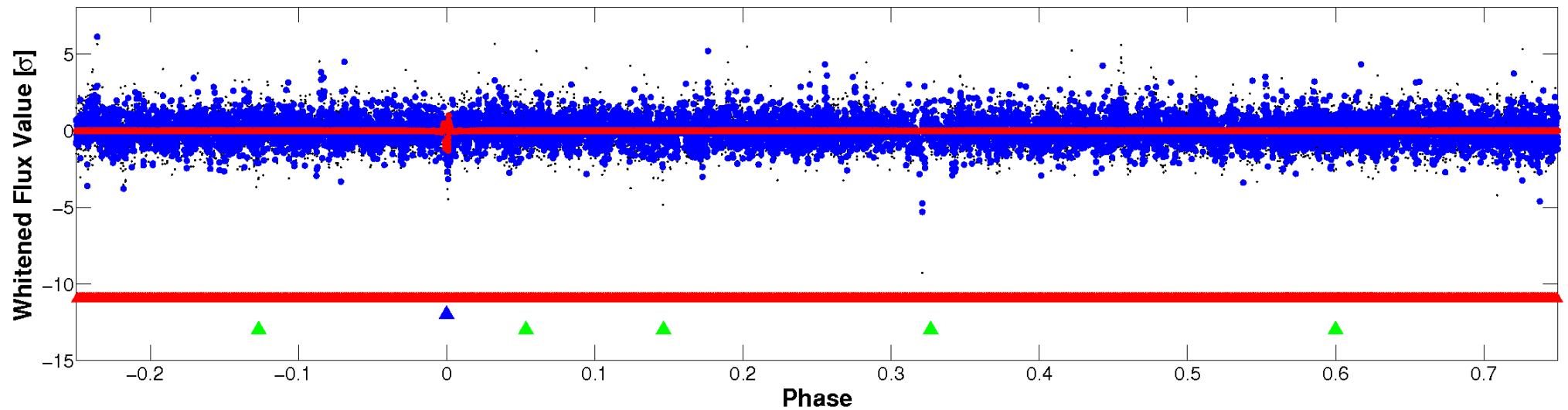


Non-Whitened Vs. Whitened Light Curve

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

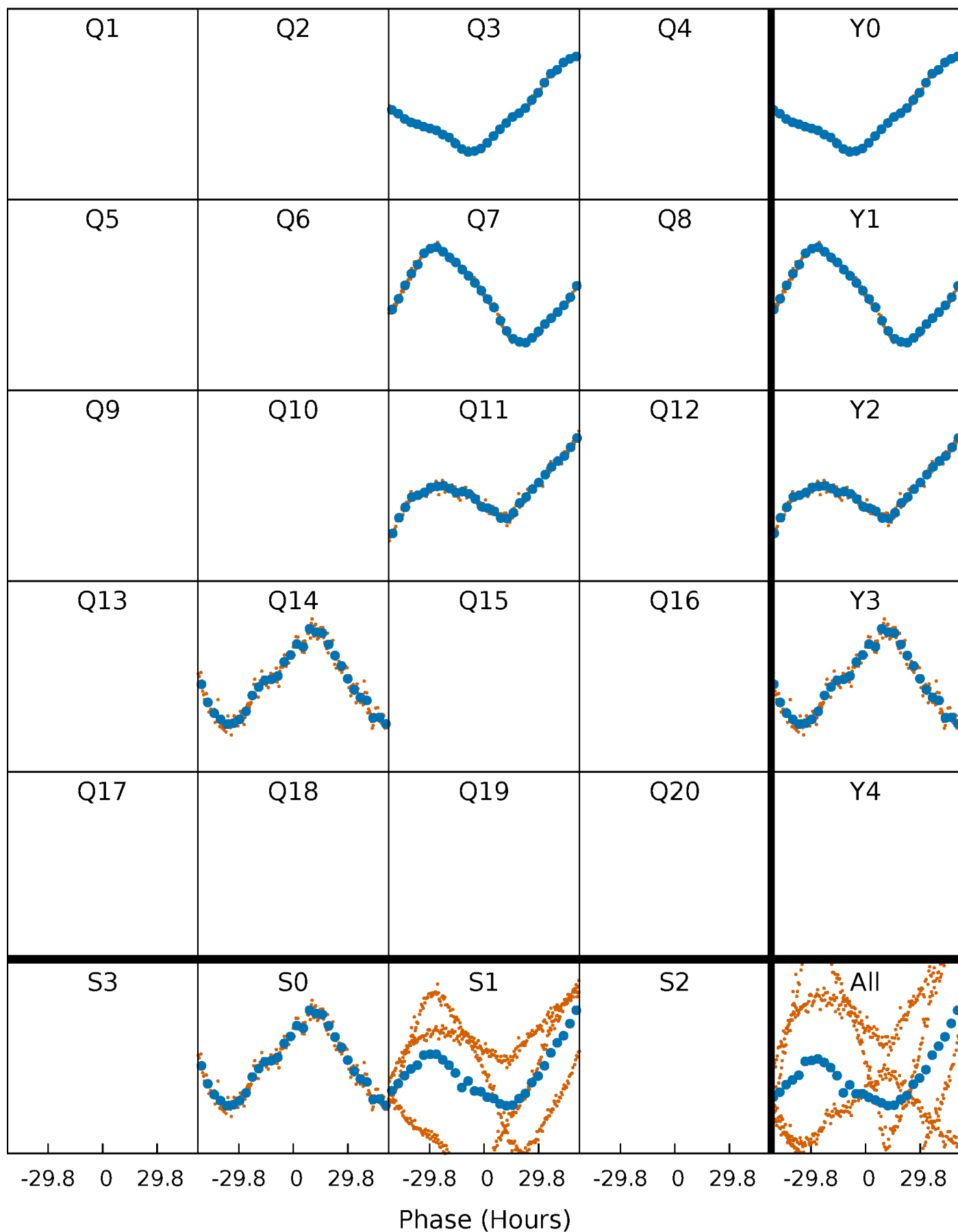


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



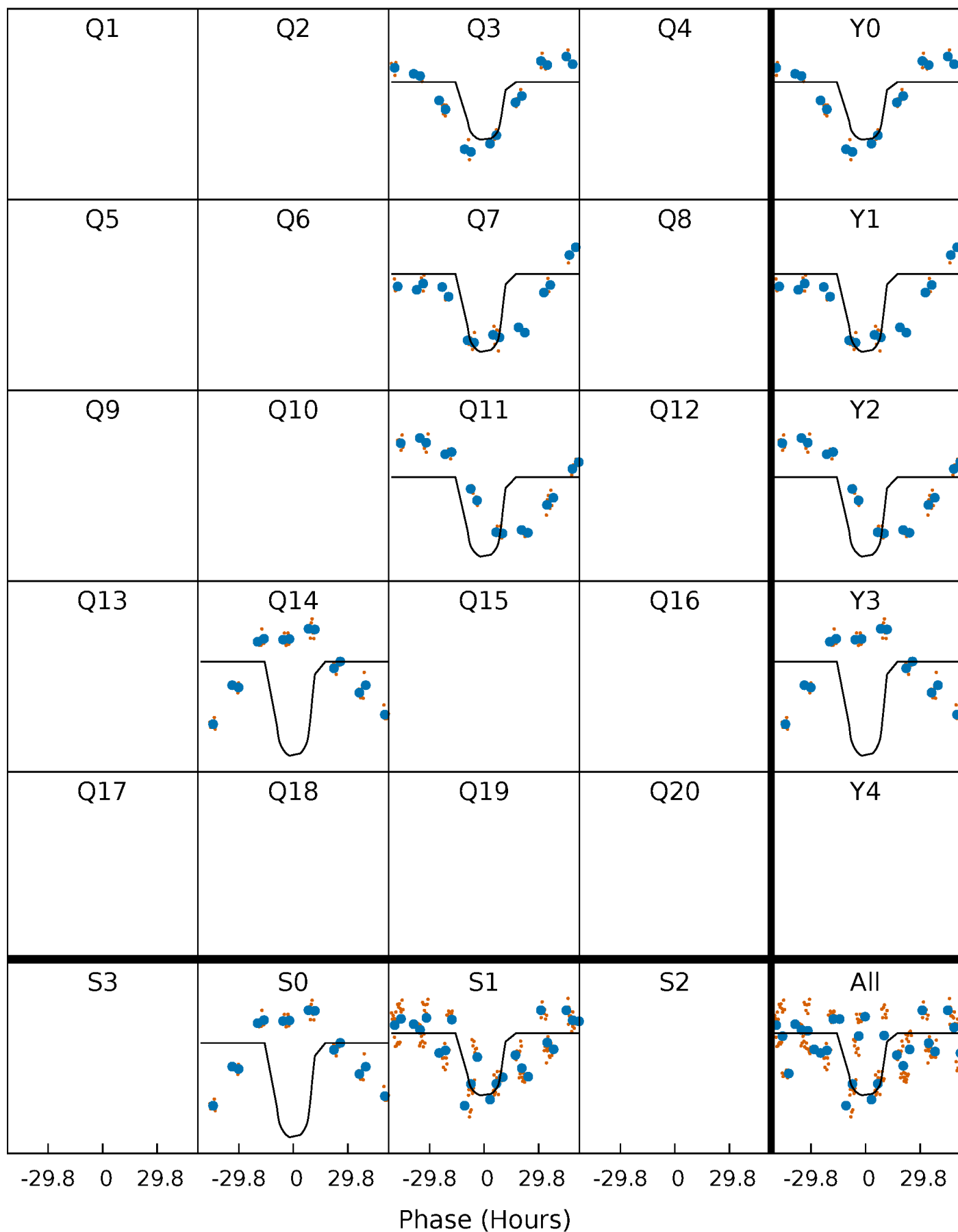
PDC Quarter-Phased Transit Curves

TCE 007032727-02 $P=359.295687$ Days $T_0=288.305778$ (BKJD)



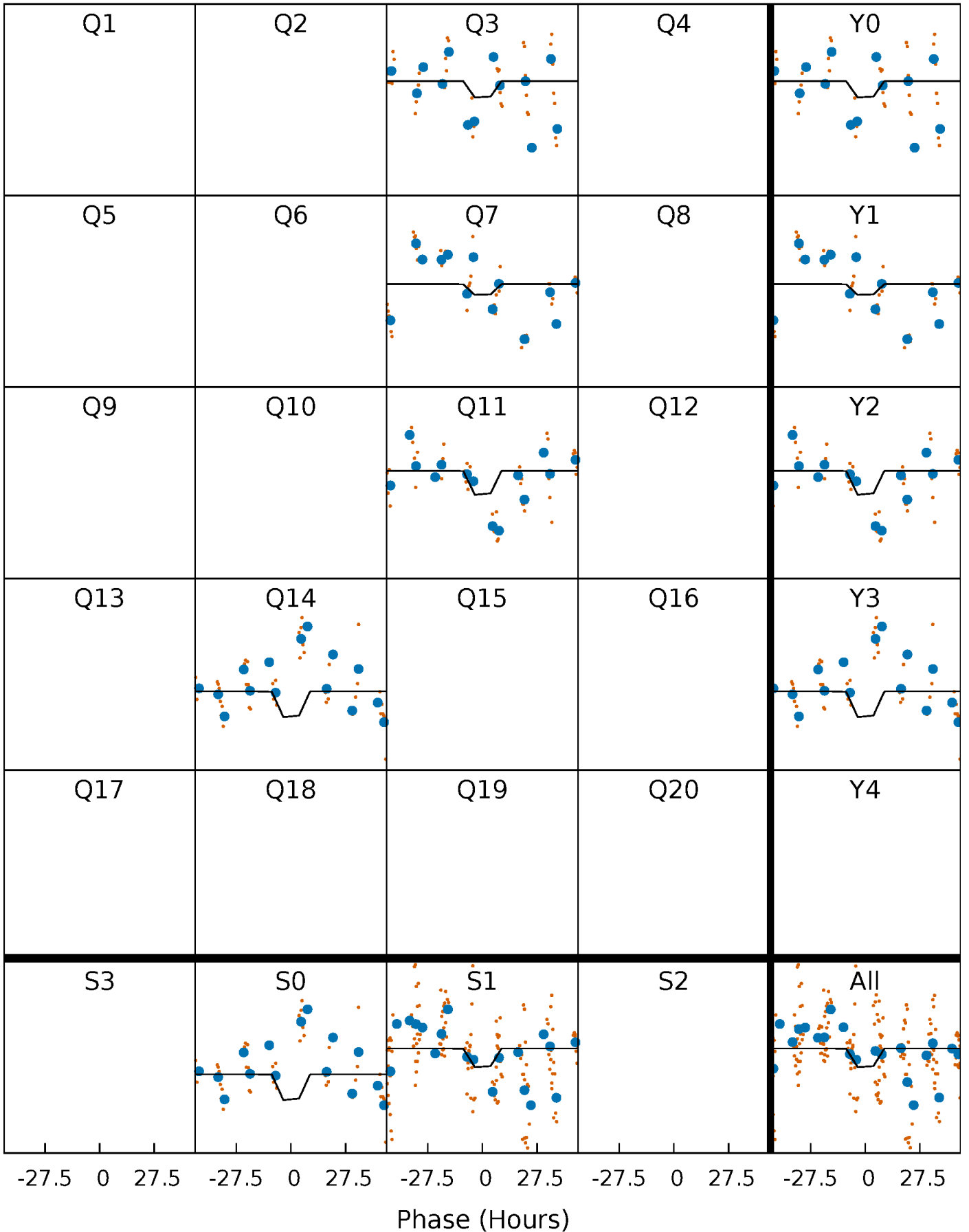
DV Quarter-Phased Transit Curves

TCE 007032727-02 $P=359.295687$ Days $T_0=288.305778$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

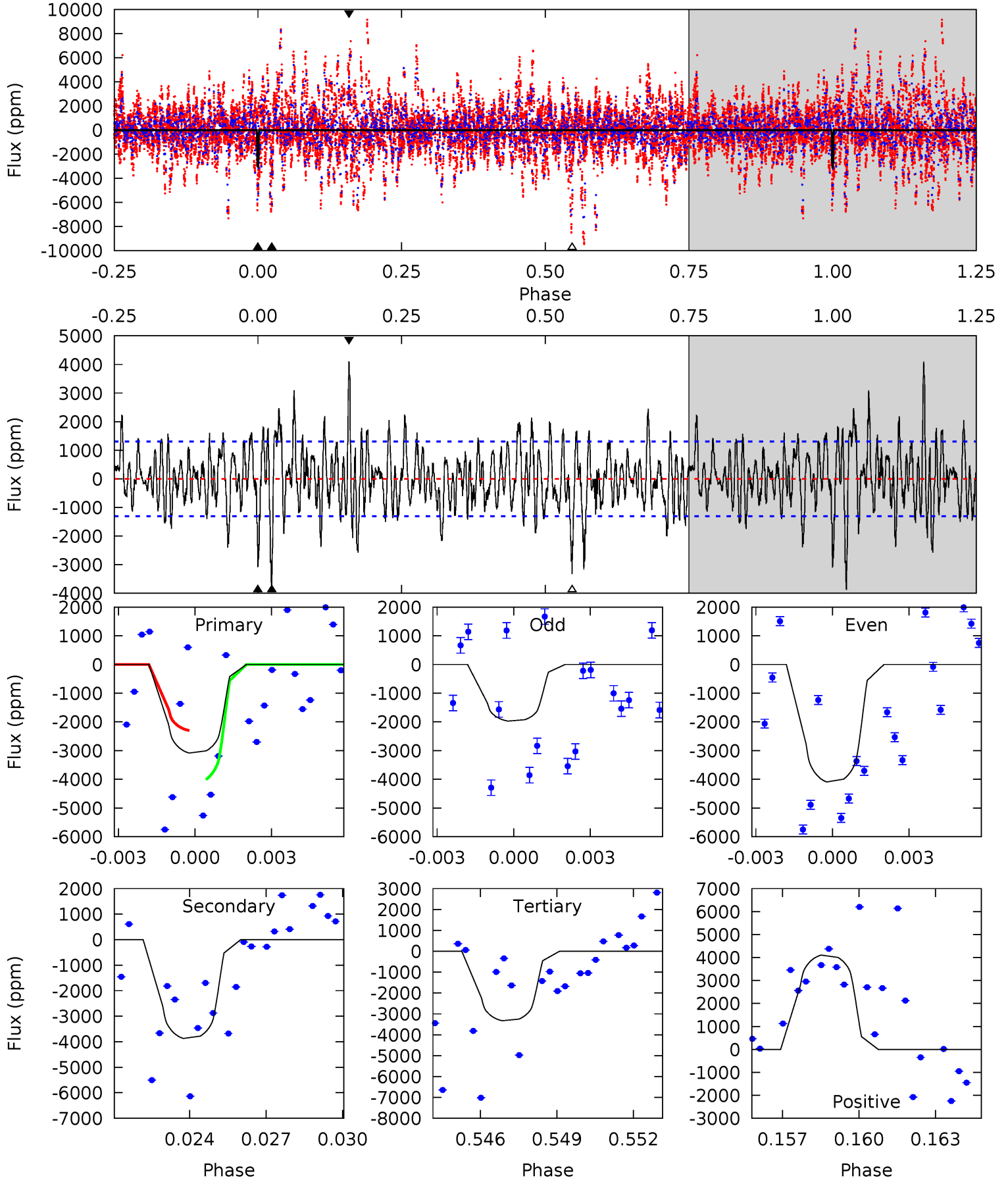
TCE 007032727-02 $P=359.405887$ Days $T_0=288.171028$ (BKJD)



DV Model-Shift Uniqueness Test

007032727-02, P = 359.295687 Days, E = 288.305778 Days

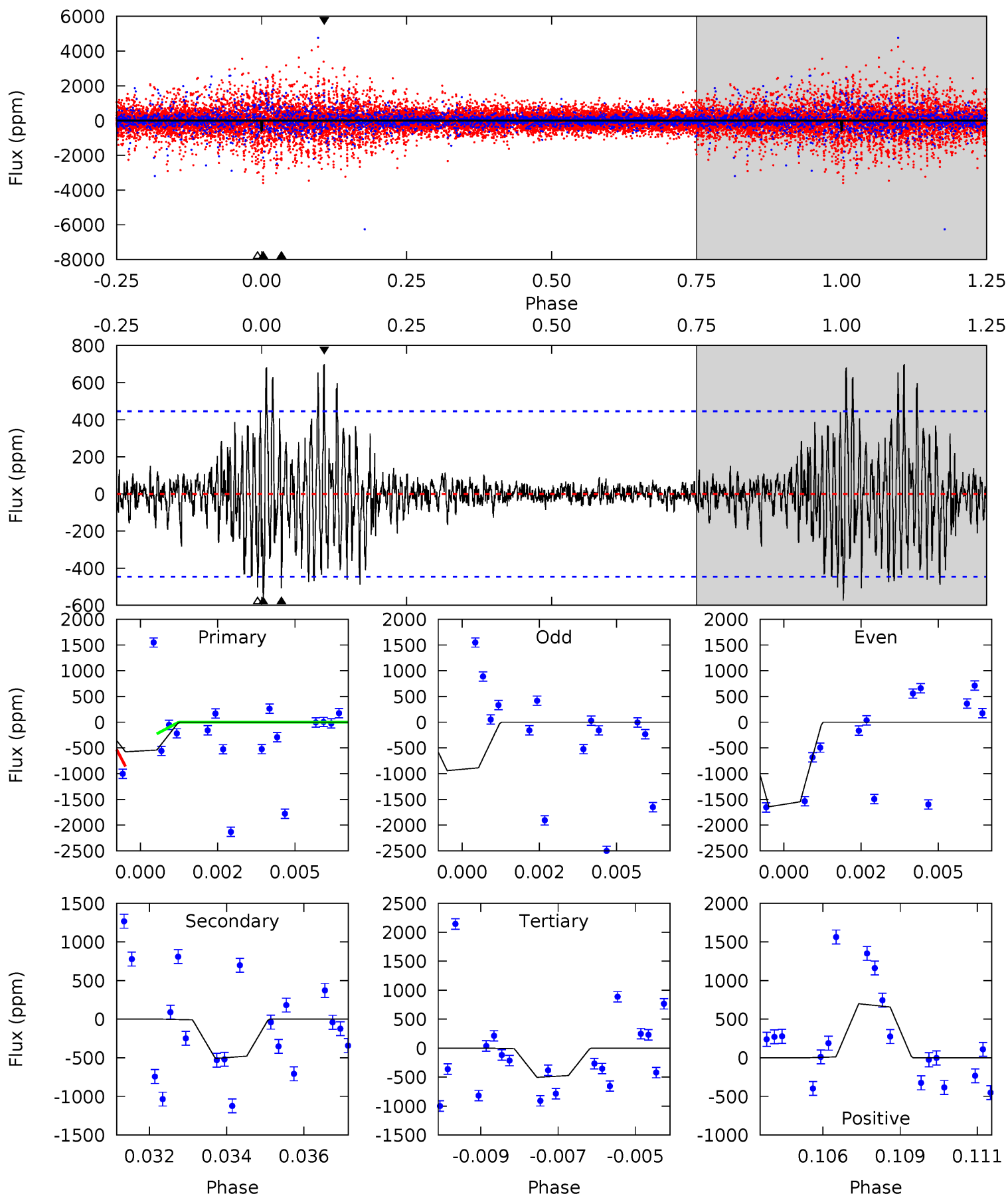
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	15.6	13.4	16.5	5.25	2.97	3.71	-0.97	-4.09	2.19	-0.93	4.23	0.80	0.51	3.45



Alt Model-Shift Uniqueness Test

007032727-02, P = 359.405887 Days, E = 288.171028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.84	6.05	5.99	8.33	5.30	3.05	1.47	0.84	-1.49	0.06	-2.27	3.88	0.54	0.55	3.72



Stellar Parameters For KIC 007032727

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5348^{+160}_{-144}	$4.627^{+0.032}_{-0.097}$	$-0.400^{+0.350}_{-0.300}$	$0.712^{+0.114}_{-0.052}$	$0.795^{+0.076}_{-0.084}$	$3.106^{+0.442}_{-0.968}$
	+3%/-3%	+1%/-2%	+87%/-75%	+16%/-7%	+10%/-11%	+14%/-31%
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 007032727-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3872 ± 249	$5.88^{+0.66}_{-0.62}$	295^{+12}_{-11}	4988^{+249}_{-224}	51505^{+13407}_{-9669}
Alt.	-509 ± 84	$2.10^{+0.60}_{-0.52}$	295^{+14}_{-11}	4968^{+756}_{-481}	52338^{+41343}_{-22509}

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 $A_{obs} \gg 1.0$

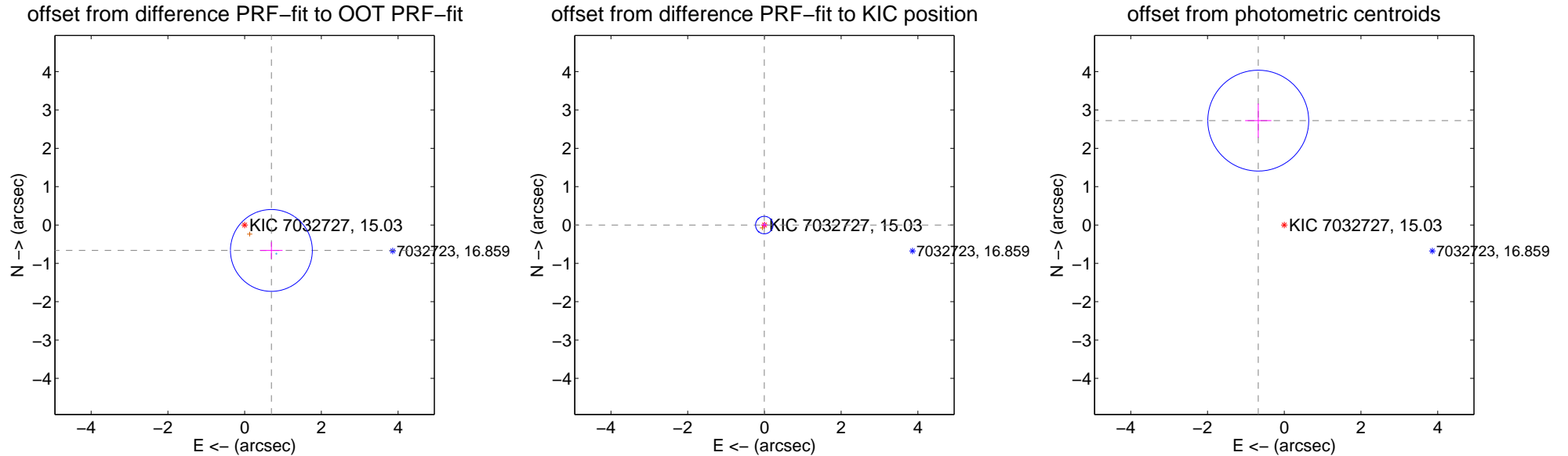
DV Centroid Data

Supplemental centroid analysis for 007032727-02. Kepler magnitude: 15.03. Transit SNR 7.01

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.963 ± 0.356	2.71	-0.698 ± 0.291	-0.664 ± 0.219
PRF-fit source offset from KIC position	0.004 ± 0.076	0.05	0.003 ± 0.076	-0.002 ± 0.074
photometric centroid source offset	2.81 ± 0.44	6.40	0.68 ± 0.34	2.72 ± 0.44



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.

Q1 no difference image



Q1 no OOT image



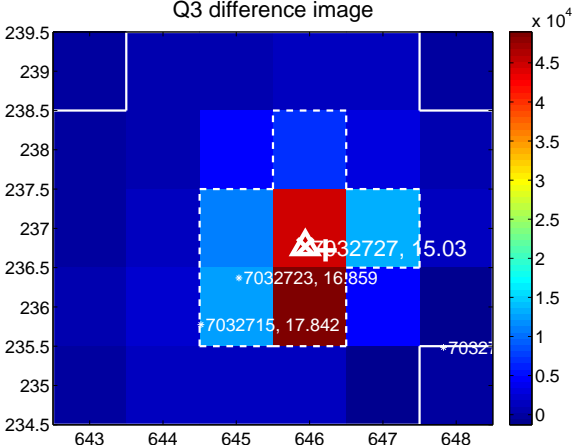
Q2 no difference image



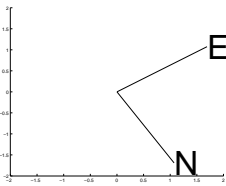
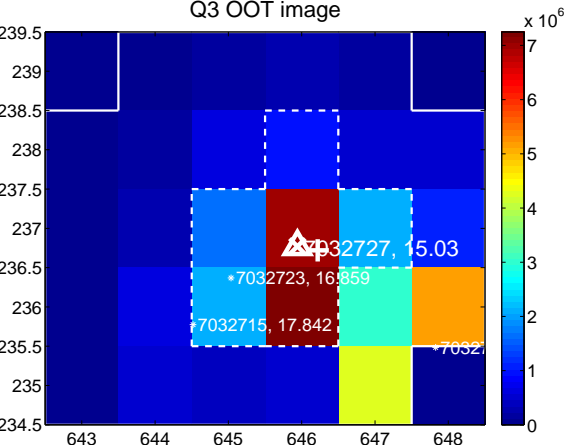
Q2 no OOT image



Q3 difference image



Q3 OOT image



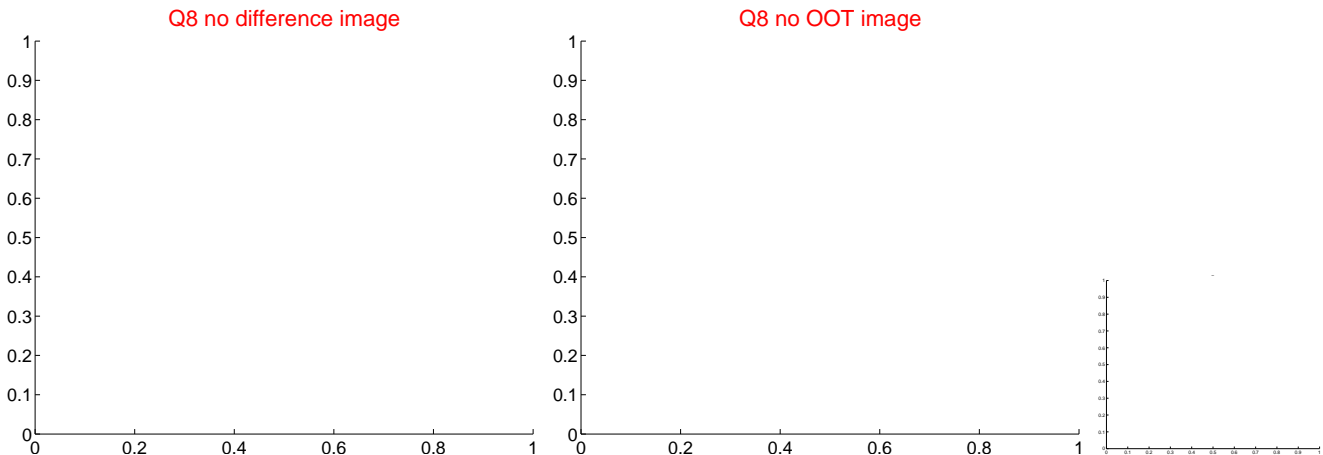
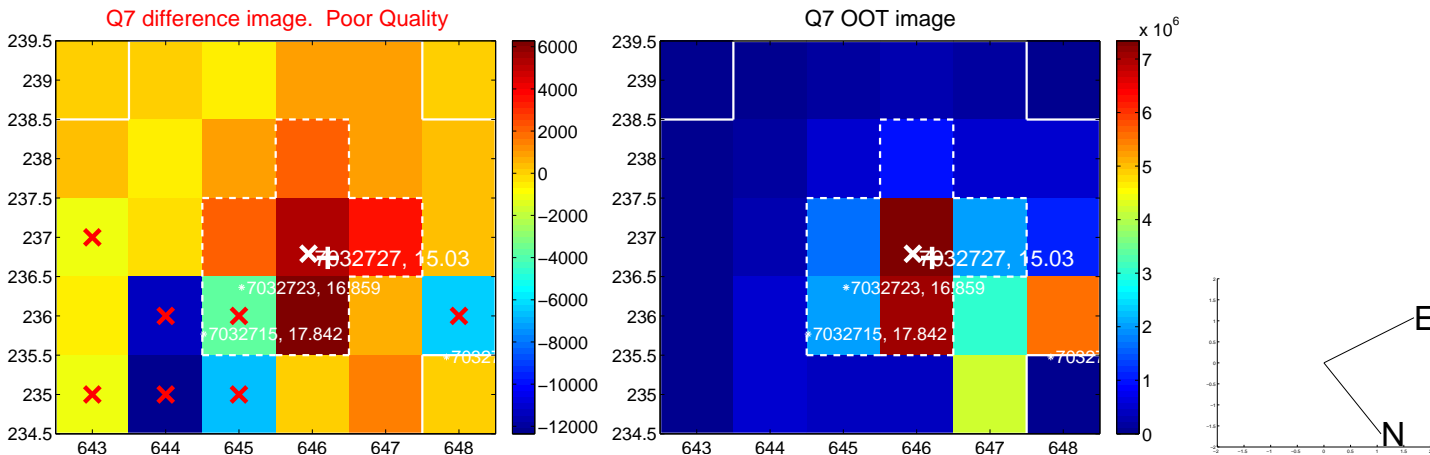
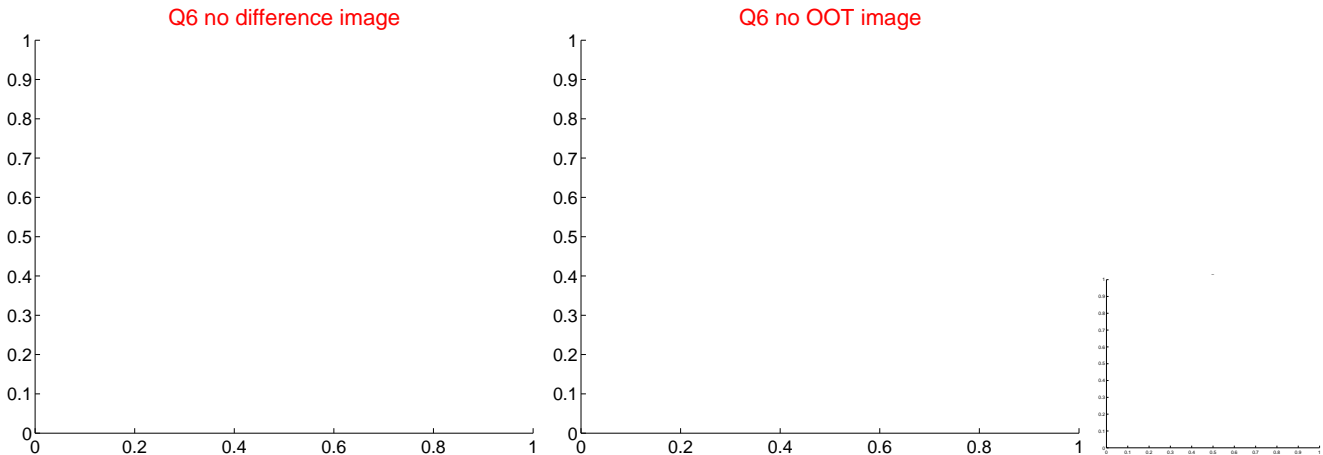
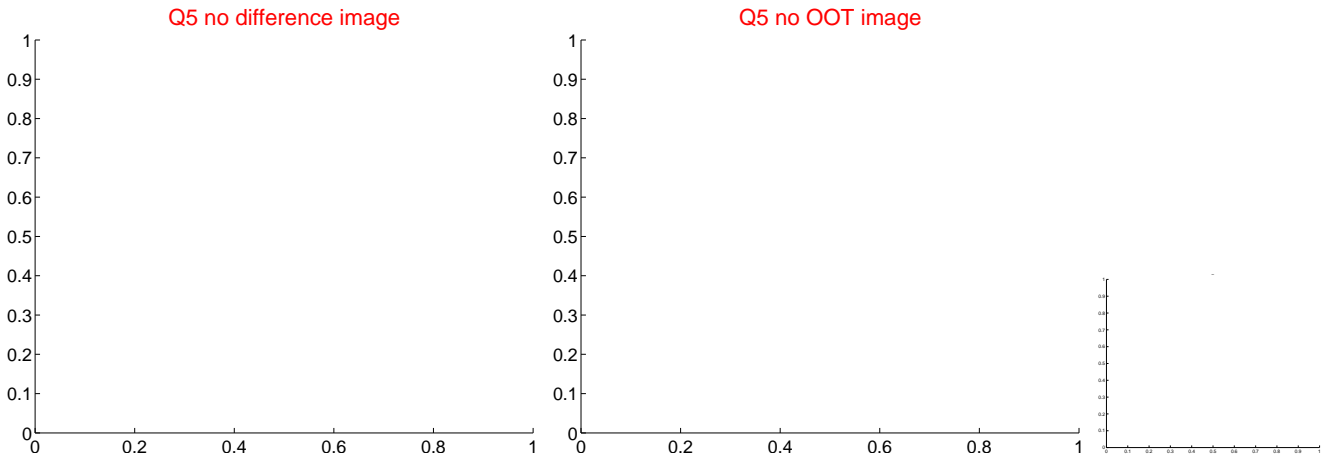
Q4 no difference image



Q4 no OOT image



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



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



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

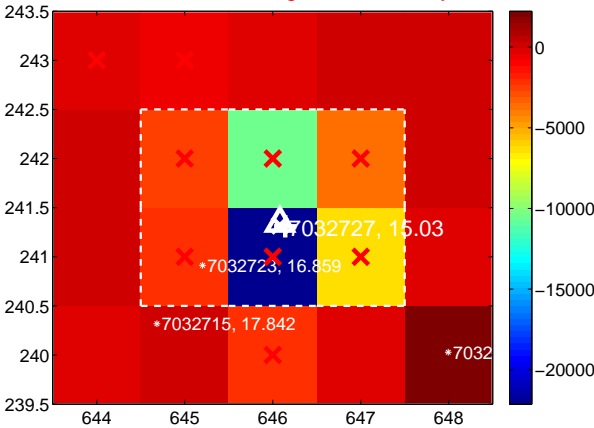
Q13 no difference image



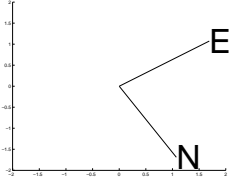
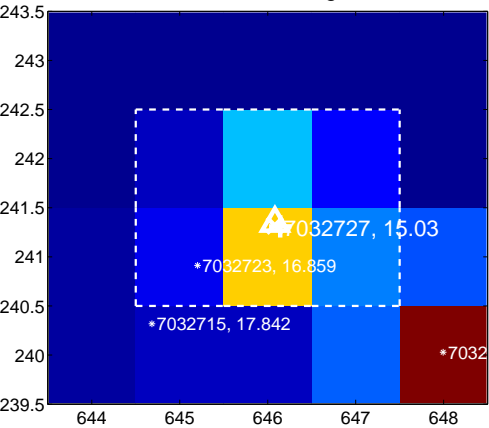
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



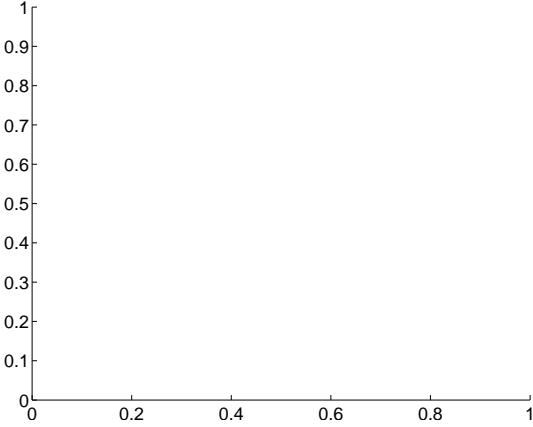
Q15 no difference image



Q15 no OOT image



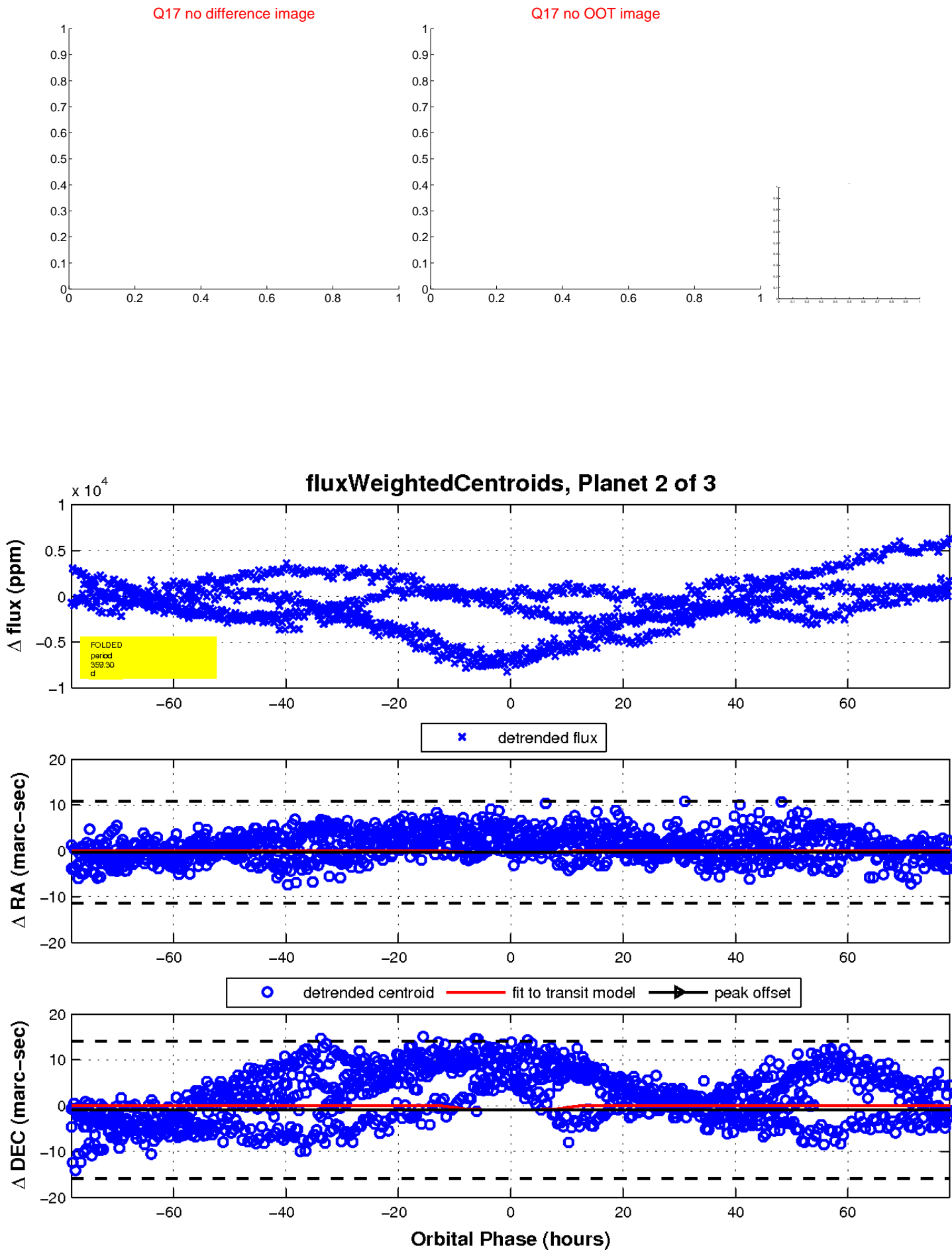
Q16 no difference image



Q16 no OOT image

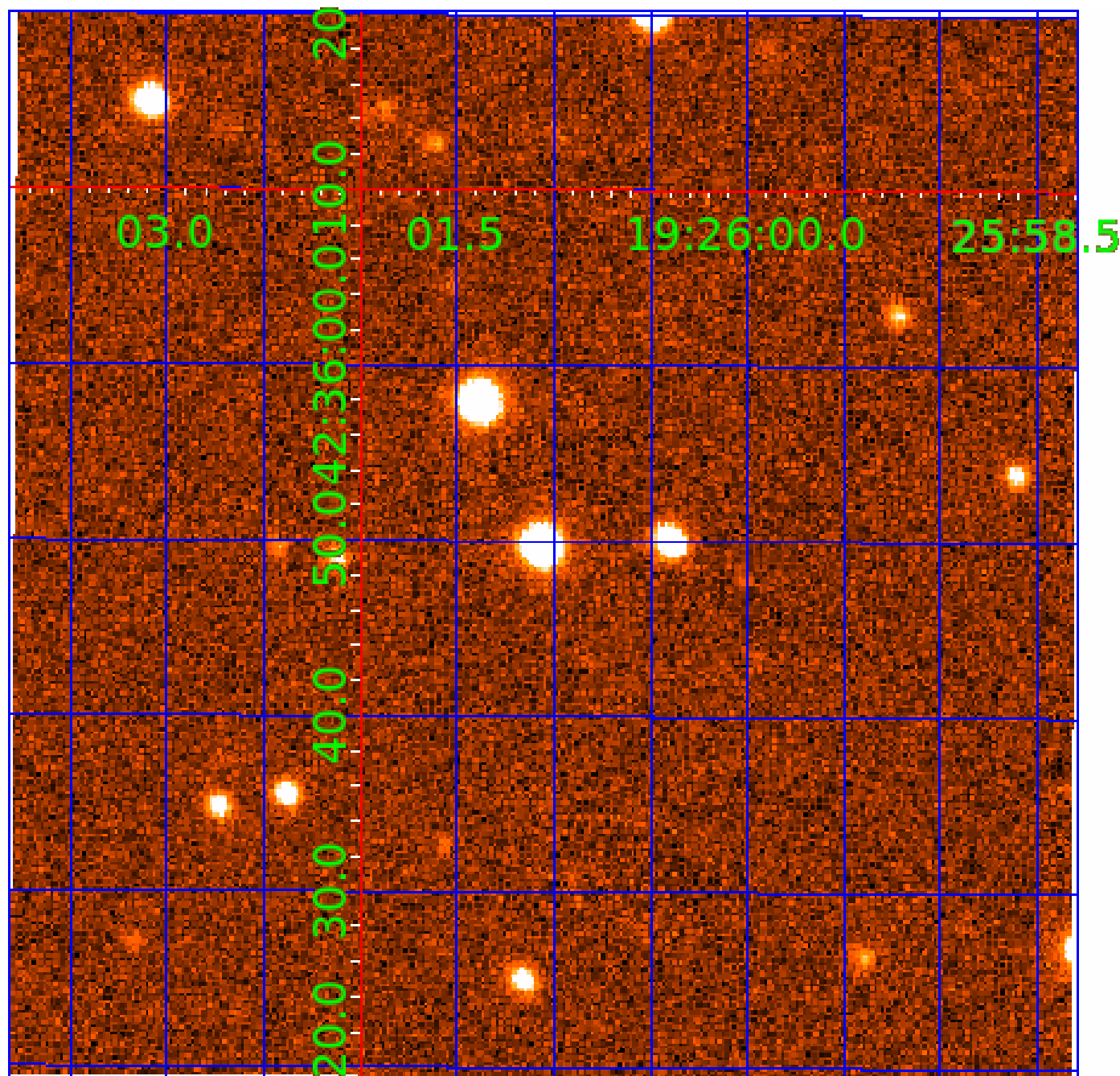


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007032727

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})
007032727-01	OBS	No	0.566816	131.804302	37.3	3.244	7.5	8.3	0.71	5348	0.44	2432.52
007032727-02	OBS	No	359.295687	288.305778	4974.2	26.075	10.9	7.0	0.71	5348	5.70	0.45
007032727-03	OBS	No	261.130722	340.911435	1534.2	6.112	9.4	4.1	0.71	5348	2.91	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007032727-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH
007032727-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007032727-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_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.

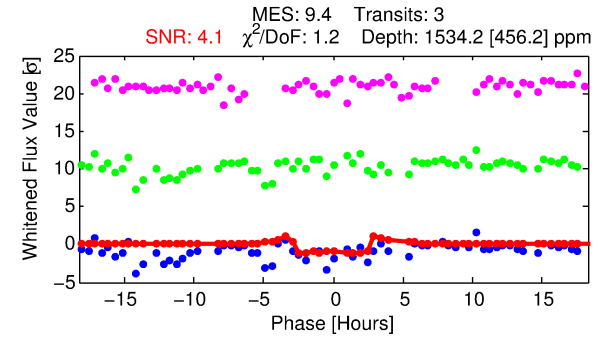
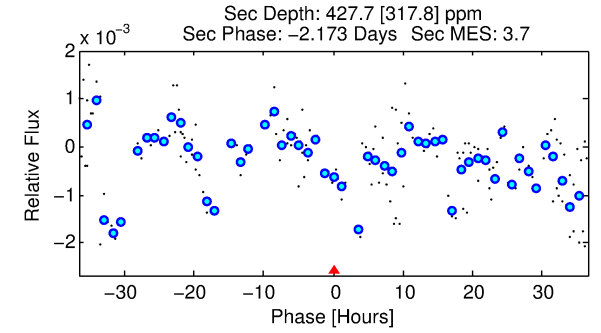
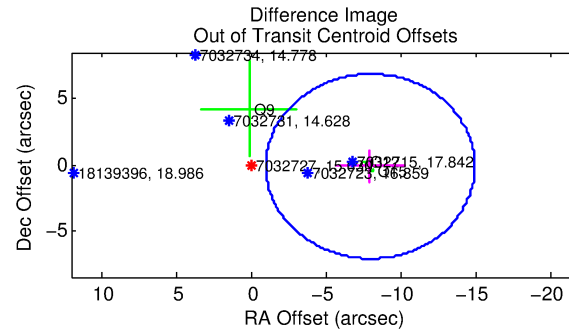
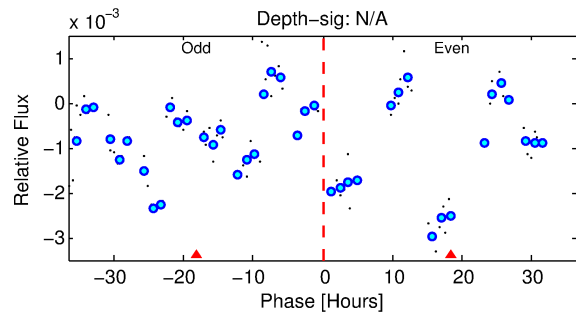
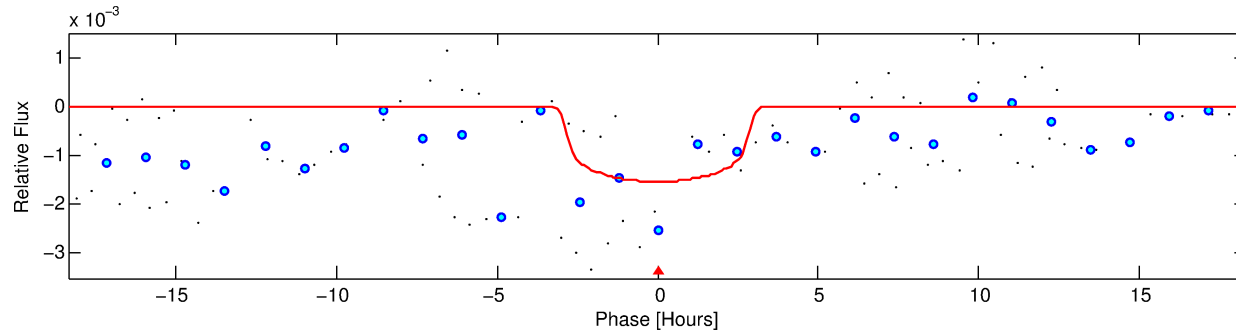
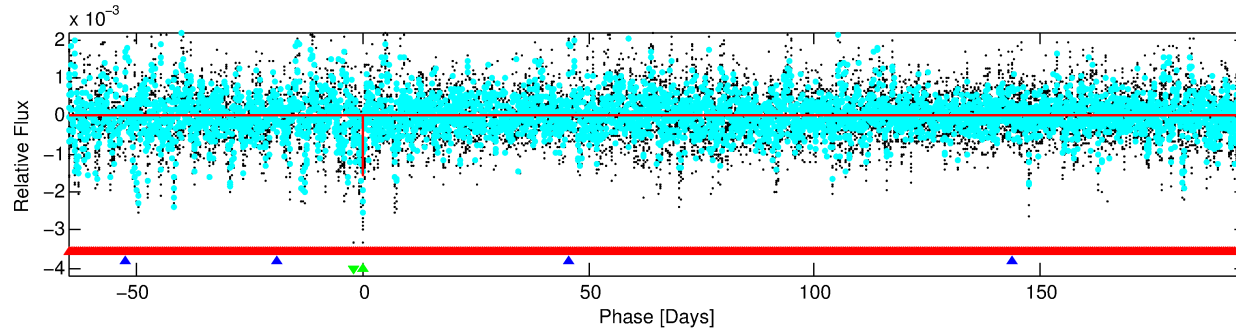
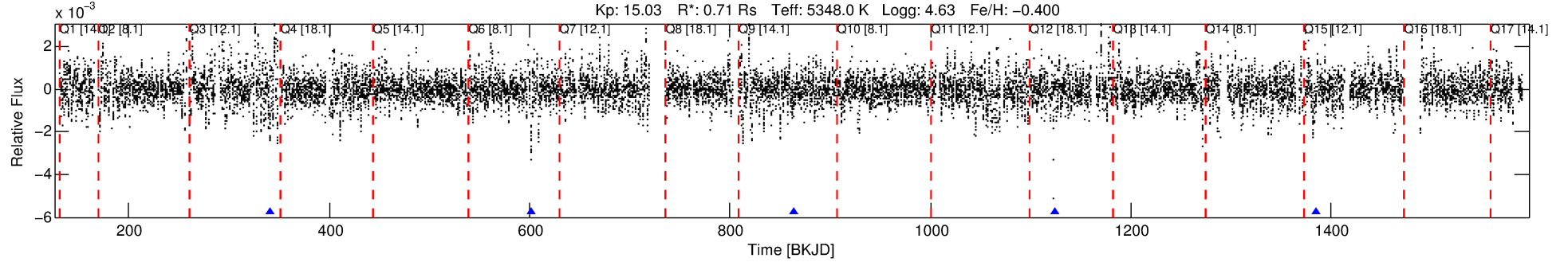
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007032727-03

No Significant Match Found

DV One-Page Summary

KIC: 7032727 Candidate: 3 of 3 Period: 261.131 d



DV Fit Results:

Period = 261.13072 [0.00610] d
Epoch = 340.9114 [0.0170] BKJD
Rp/R* = 0.0375 [0.0241]
a/R* = 270.71 [630.57]
b = 0.62 [2.33]
Seff = 0.68 [0.15]
Teq = 232 [13] K
Rp = 2.91 [1.93] Re
a = 0.7372 [0.0959] AU
Ag = 15100.65 [22577.33] [0.67σ]
Teffp = 3974 [1479] K [2.53σ]

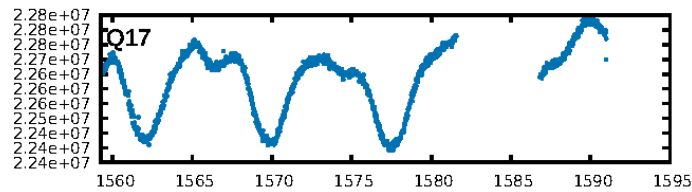
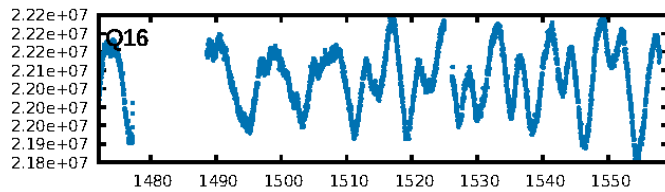
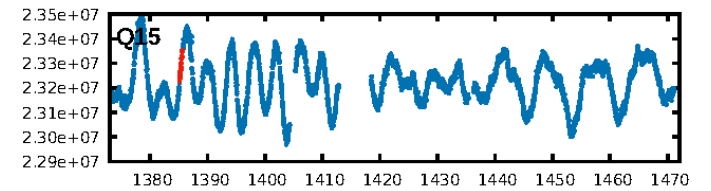
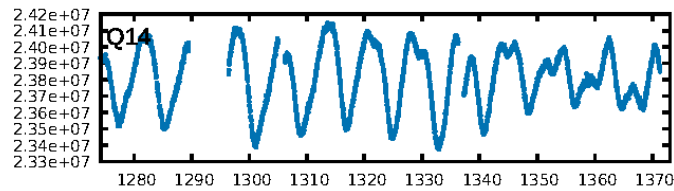
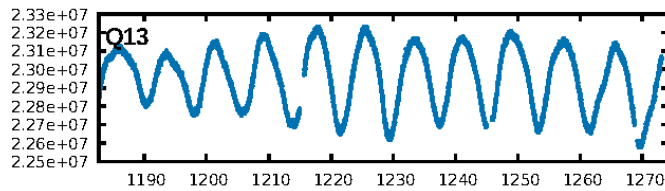
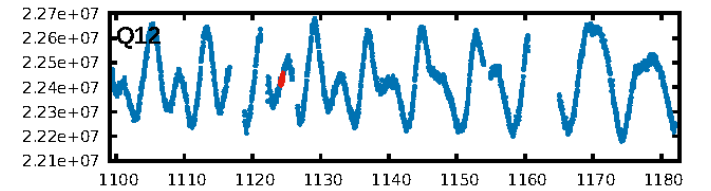
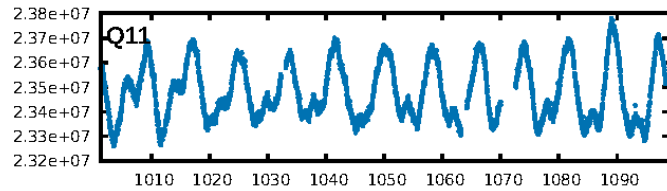
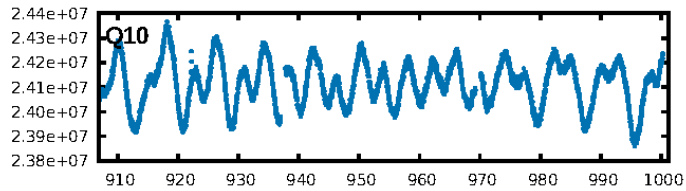
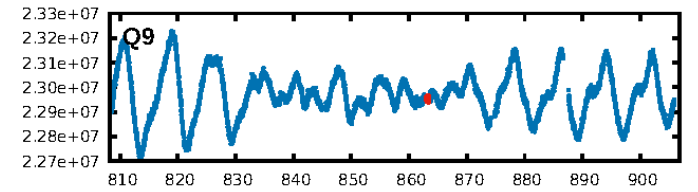
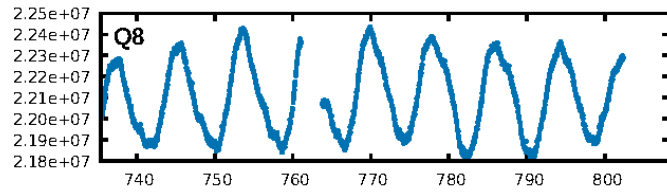
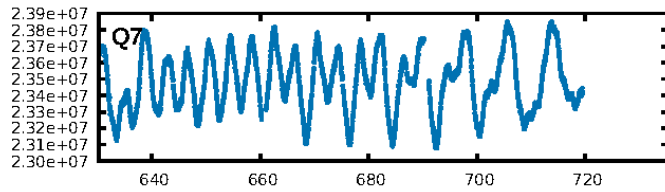
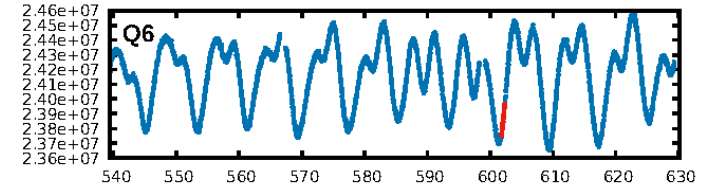
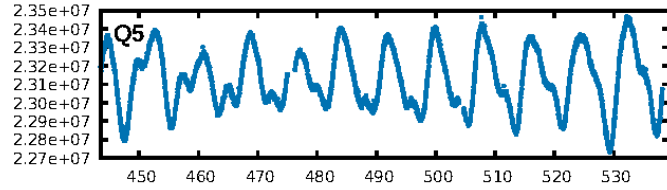
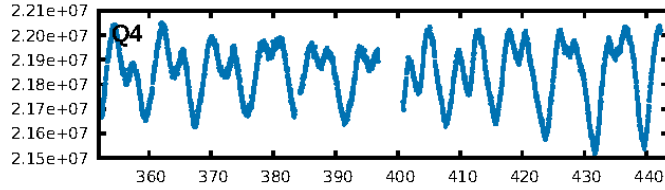
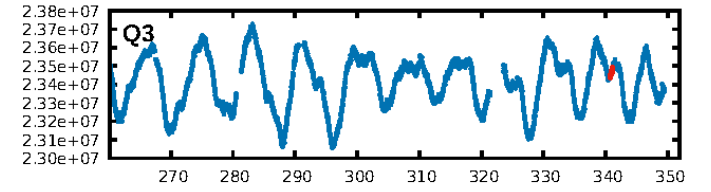
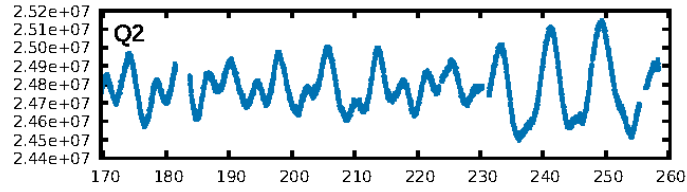
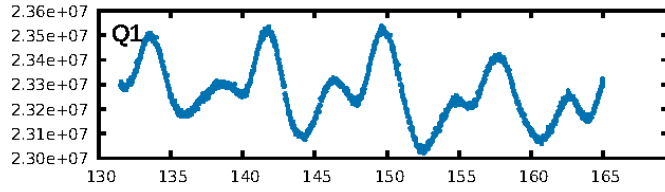
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [903.81σ]
LongPeriod-sig: 100.0% [87.97σ]
ModelChiSquare2-sig: 11.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.69e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 7.254
Centroid-sig: 0.2%
Centroid-so: 4.388 arcsec [5.35σ]
OotOffset-rm: 7.998 arcsec [3.44σ]
KicOffset-rm: 7.500 arcsec [3.58σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/5]

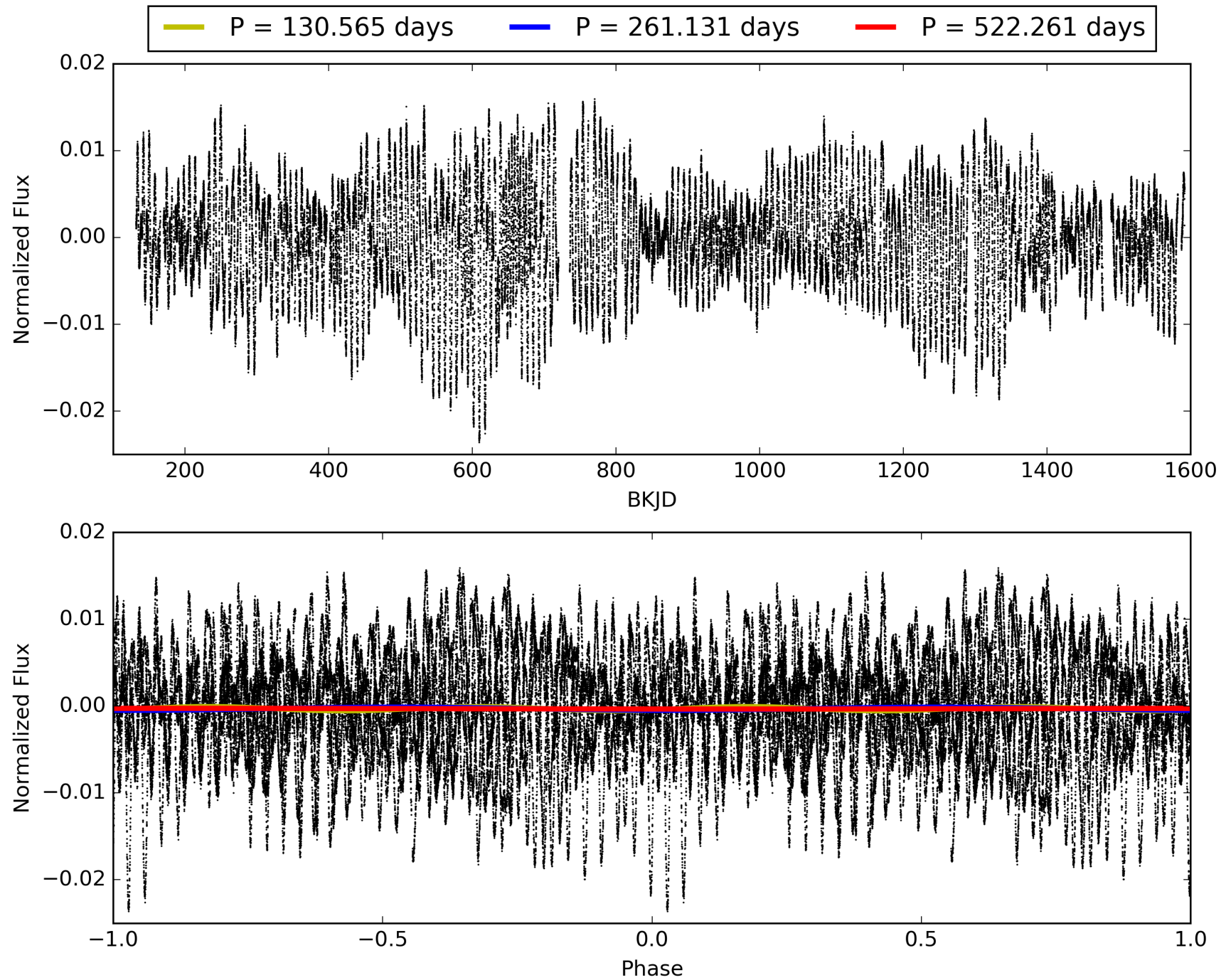
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:26:22 Z

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

TCE 007032727-03, PDC Light Curves

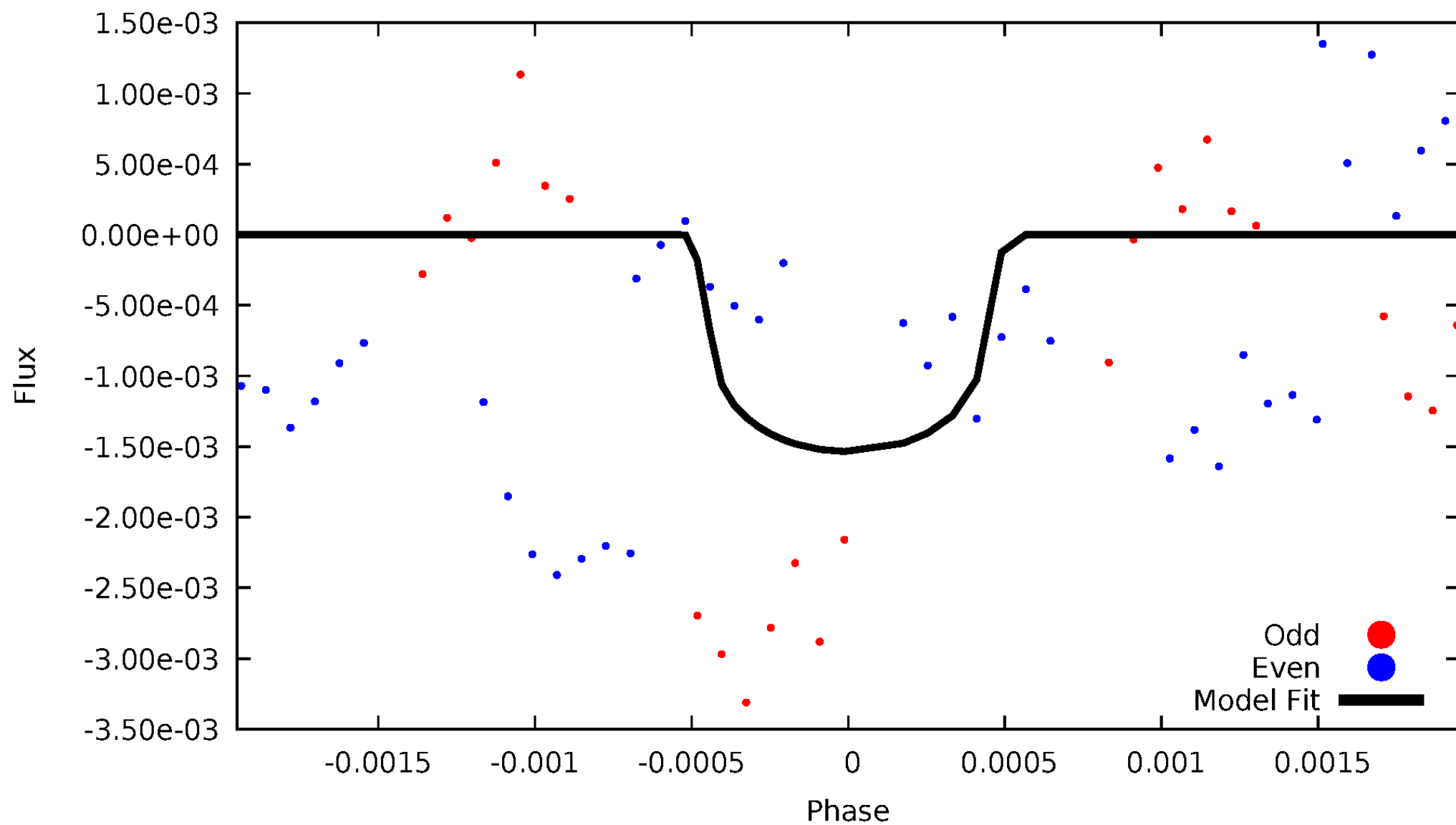


TCE 007032727-03



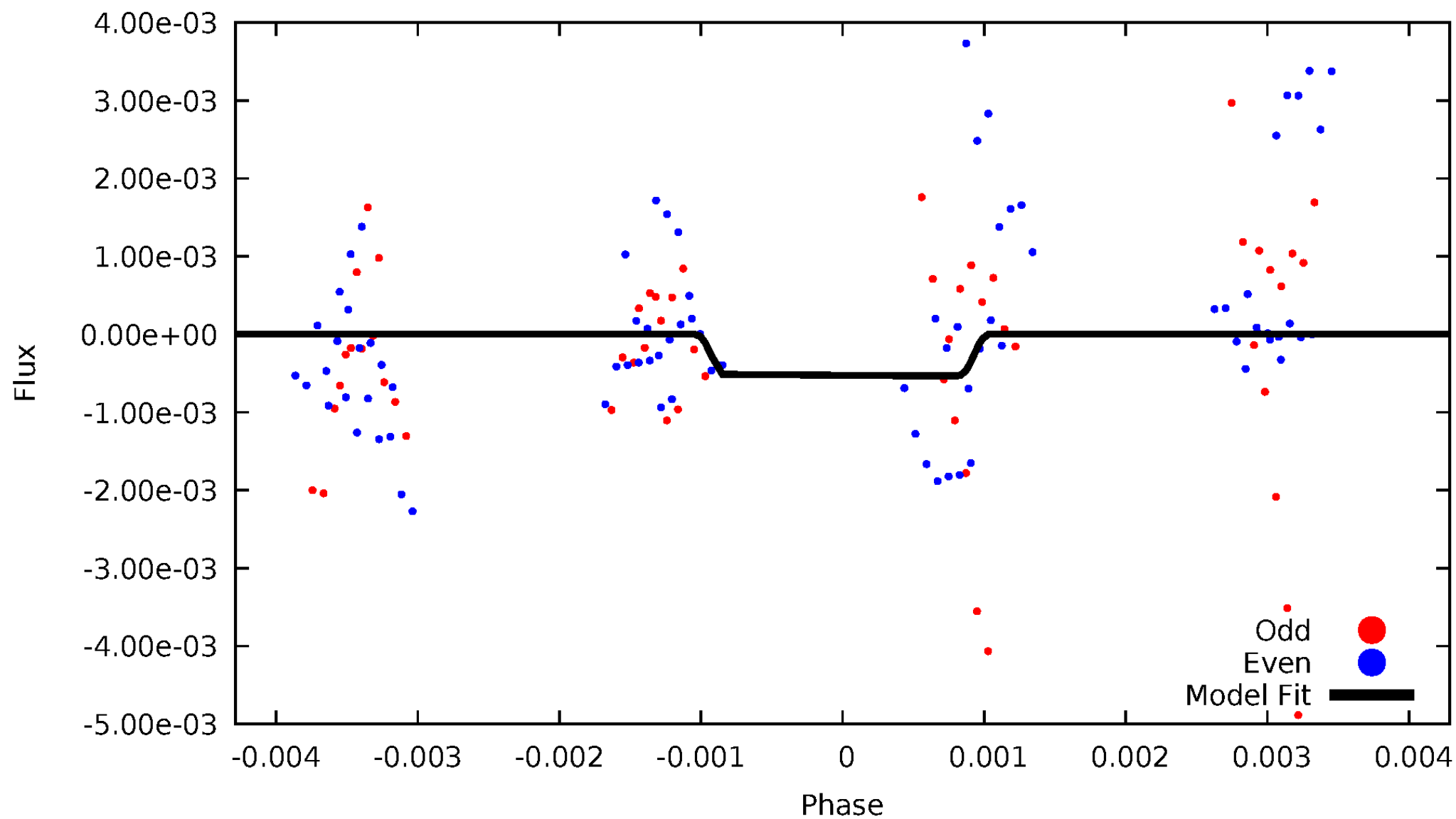
DV Odd/Even

TCE 007032727-03



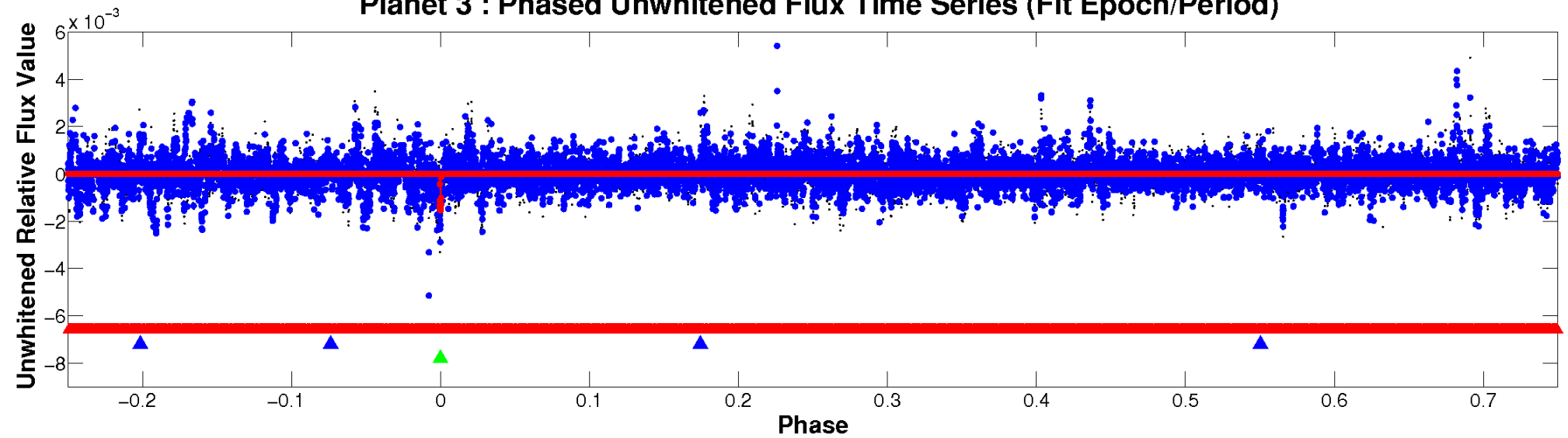
ALT Odd/Even

TCE 007032727-03

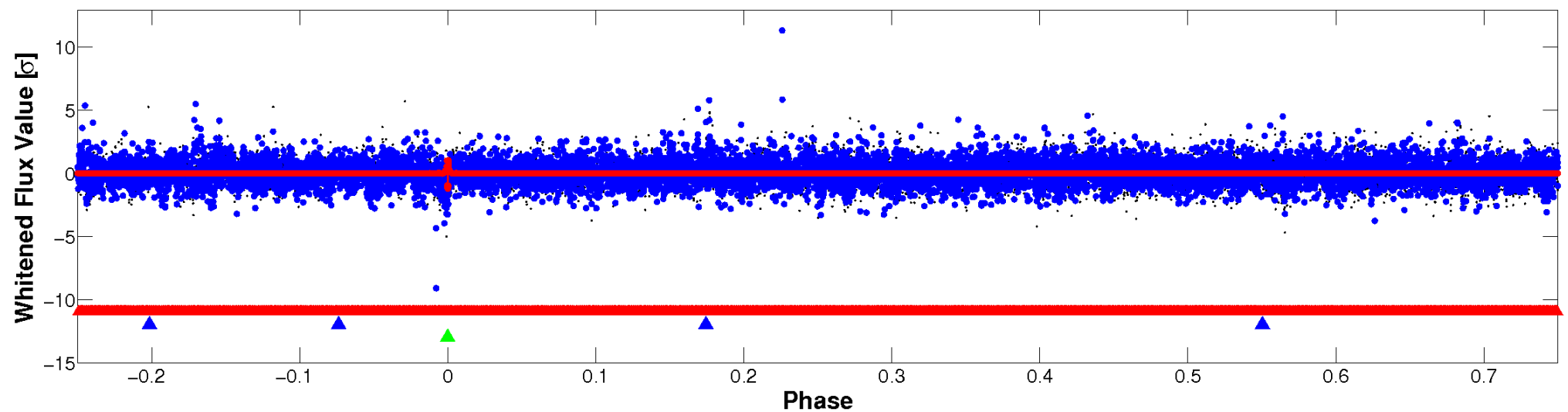


Non-Whitened Vs. Whitened Light Curve

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

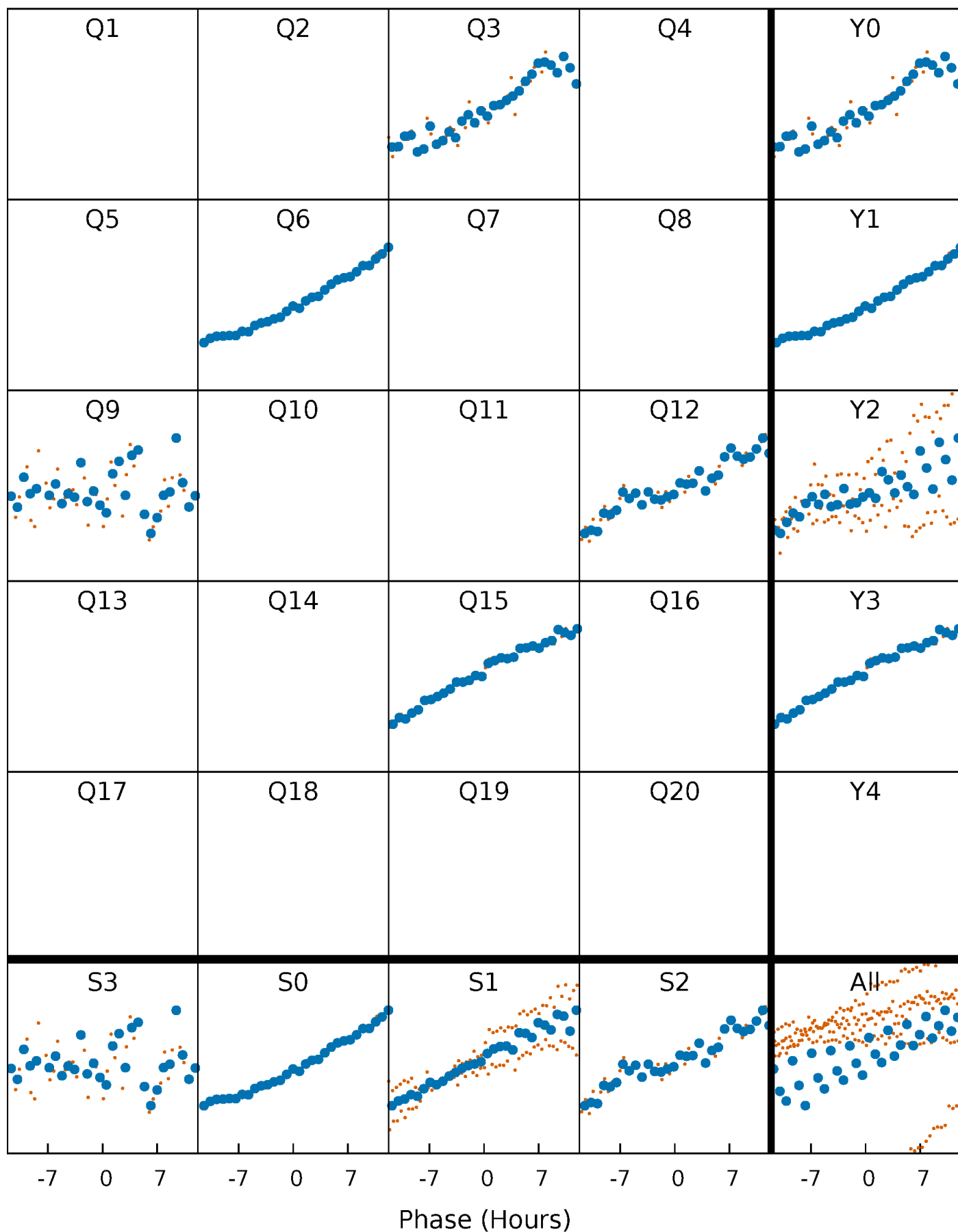


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



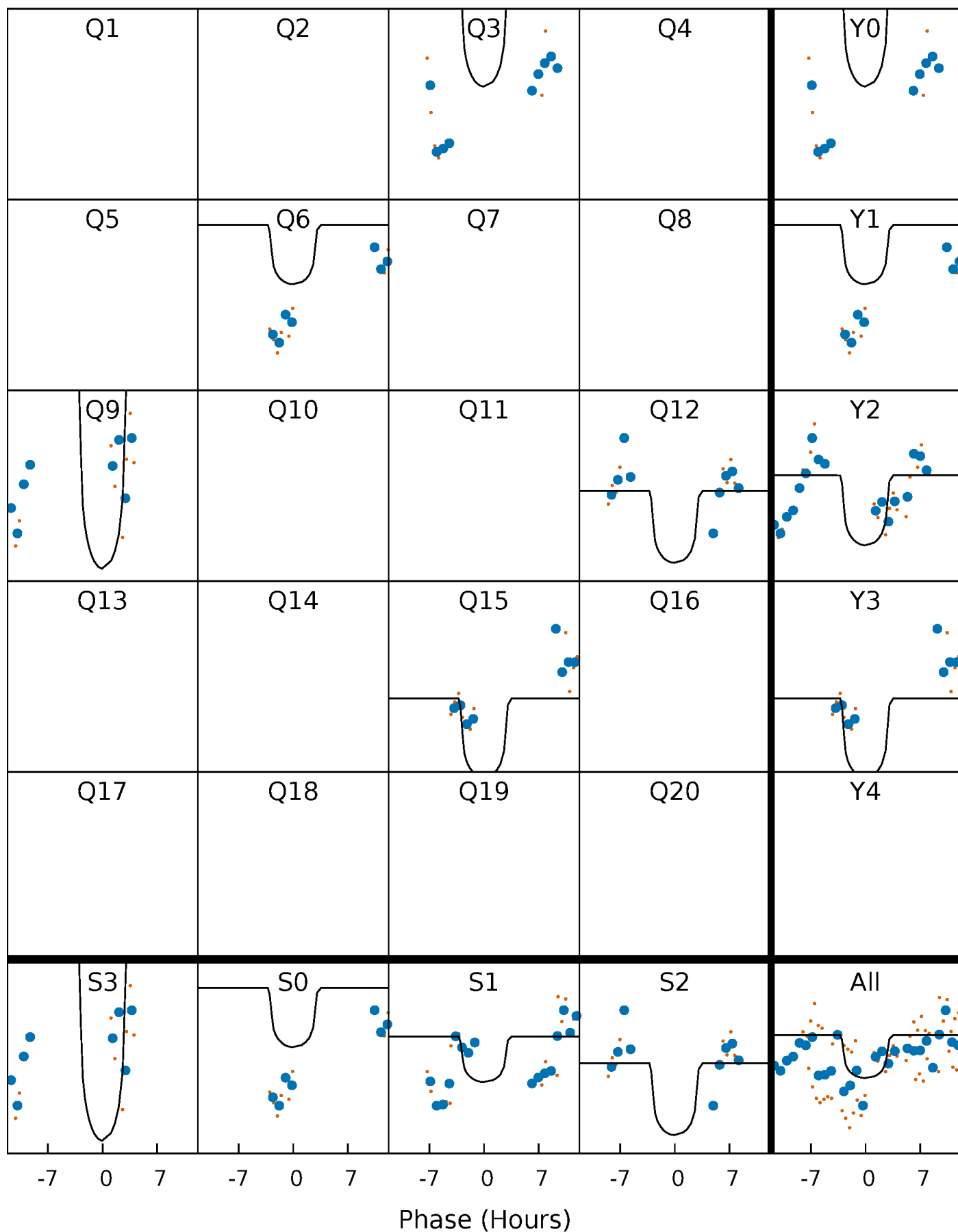
PDC Quarter-Phased Transit Curves

TCE 007032727-03 $P=261.130722$ Days $T_0=340.911435$ (BKJD)



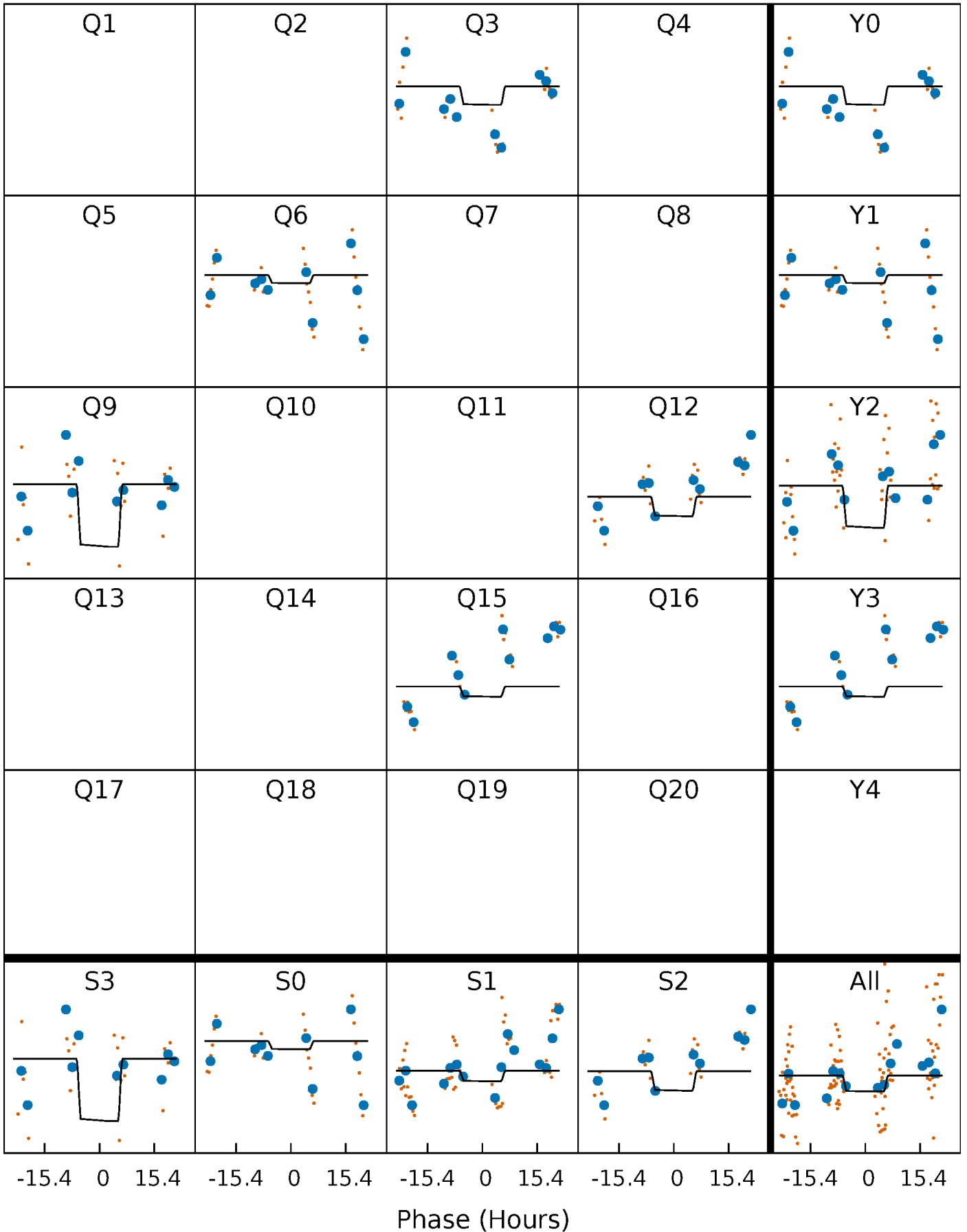
DV Quarter-Phased Transit Curves

TCE 007032727-03 $P=261.130722$ Days $T_0=340.911435$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

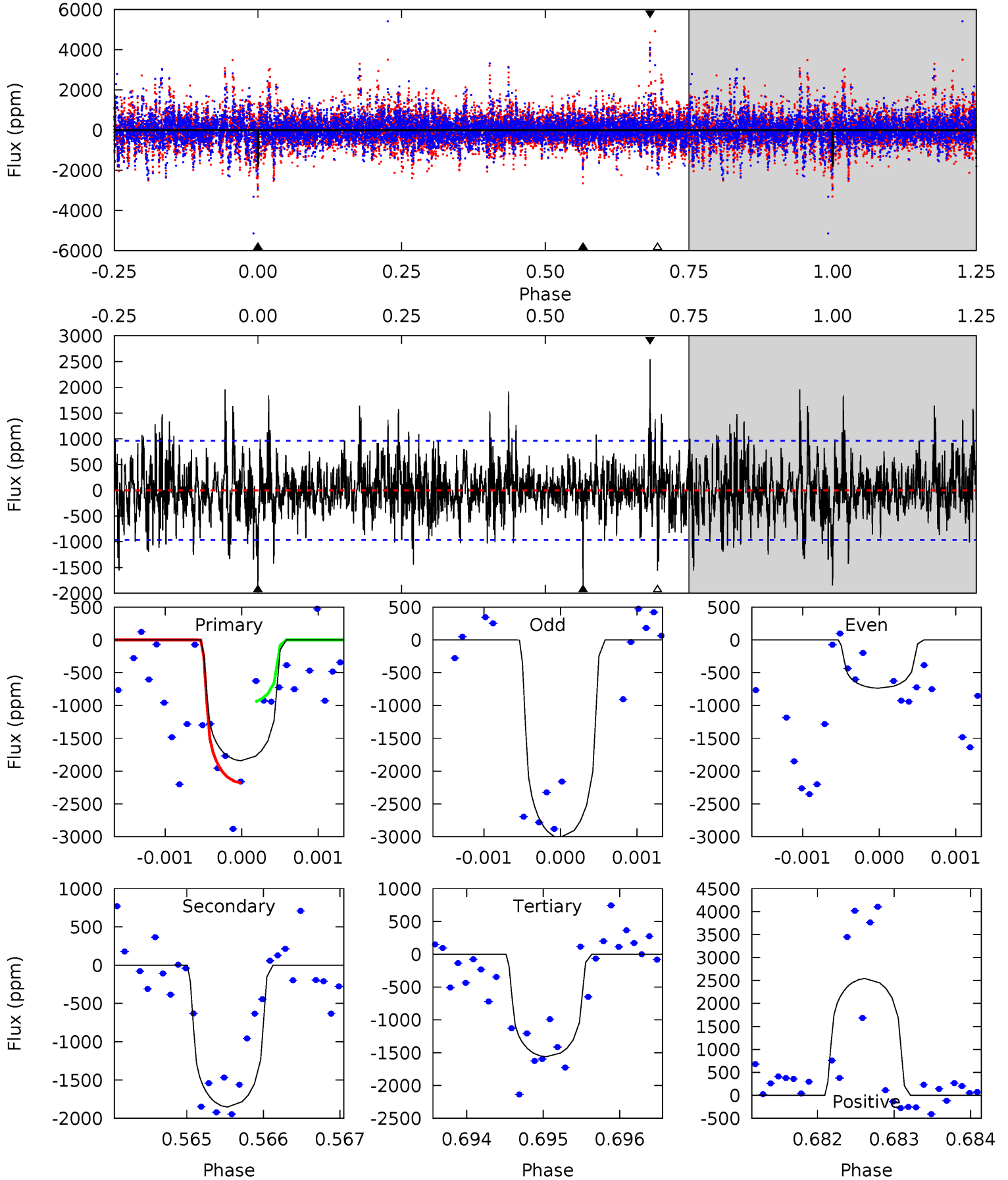
TCE 007032727-03 $P=261.277121$ Days $T_0=340.493111$ (BKJD)



DV Model-Shift Uniqueness Test

007032727-03, P = 261.130722 Days, E = 79.780713 Days

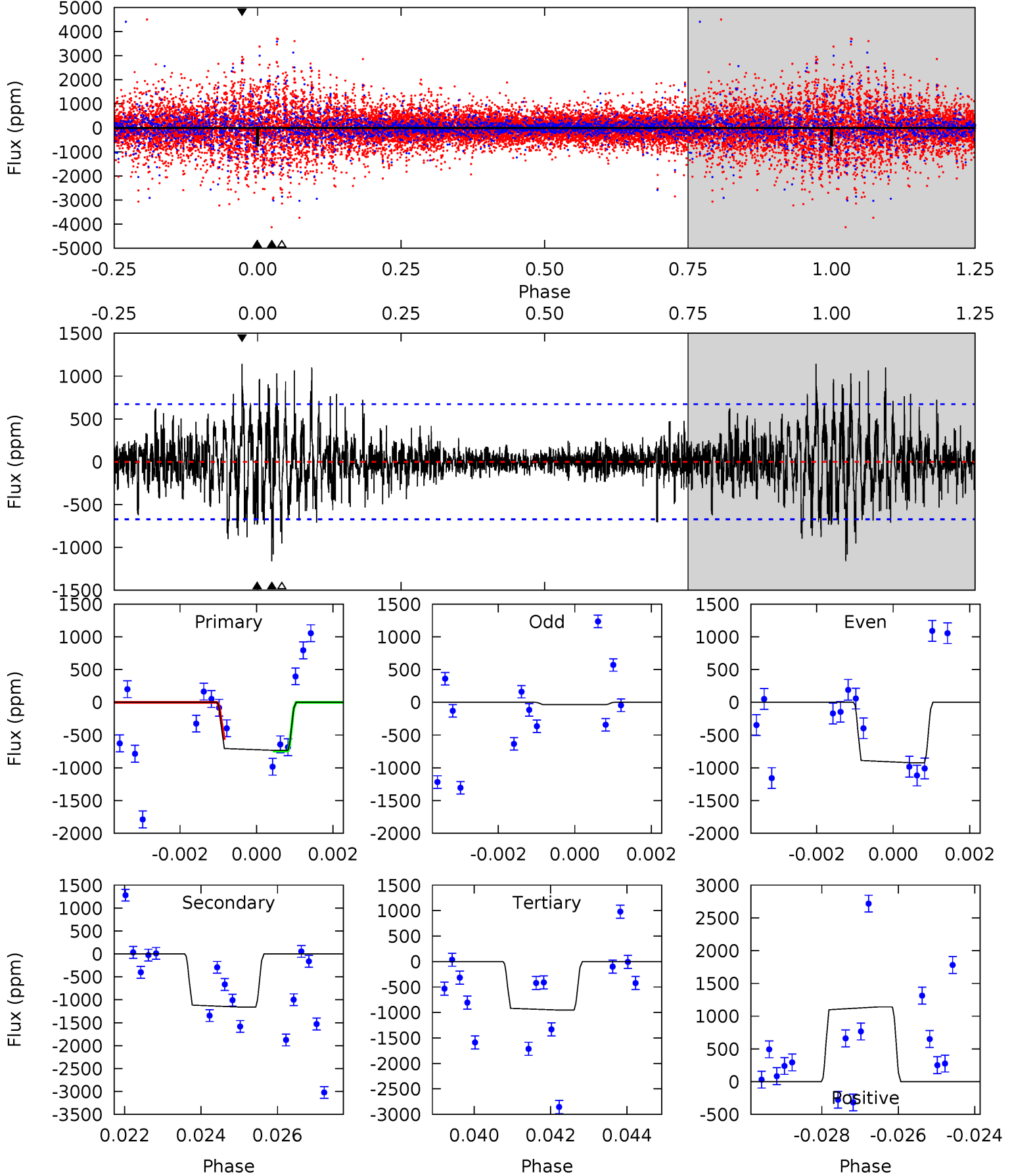
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	10.5	8.86	14.4	5.46	3.30	2.31	1.59	-3.97	1.65	-3.91	6.63	1.53	0.58	3.22



Alt Model-Shift Uniqueness Test

007032727-03, P = 261.277121 Days, E = 79.215990 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.80	9.19	7.54	9.03	5.33	3.09	1.73	-1.74	-3.22	1.64	0.16	3.39	0.06	0.50	0.41



Stellar Parameters For KIC 007032727

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5348^{+160}_{-144}	$4.627^{+0.032}_{-0.097}$	$-0.400^{+0.350}_{-0.300}$	$0.712^{+0.114}_{-0.052}$	$0.795^{+0.076}_{-0.084}$	$3.106^{+0.442}_{-0.968}$
	+3%/-3%	+1%/-2%	+87%/-75%	+16%/-7%	+10%/-11%	+14%/-31%
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 007032727-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1853 ± 176	$3.17^{+1.92}_{-1.78}$	328^{+14}_{-11}	5519^{+3169}_{-976}	$55331^{+231014}_{-34126}$
Alt.	-1160 ± 126	$2.33^{+1.81}_{-1.46}$	329^{+14}_{-12}	5772^{+4800}_{-1232}	$62600^{+424446}_{-42588}$

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

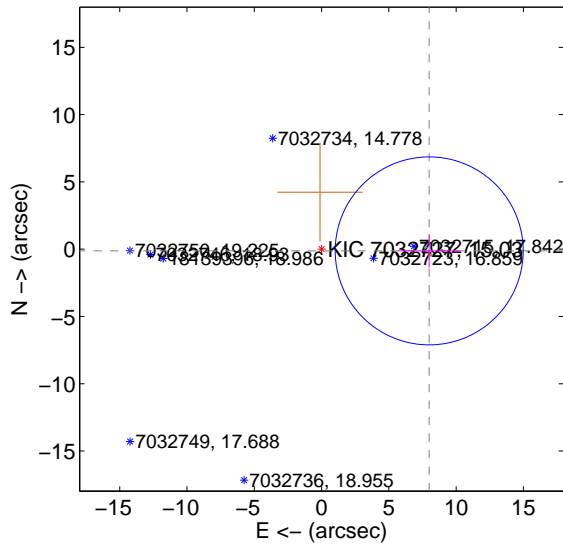
Supplemental centroid analysis for 007032727-03. Kepler magnitude: 15.03. Transit SNR 4.11

There are 1 quarters with good PRF difference image offsets

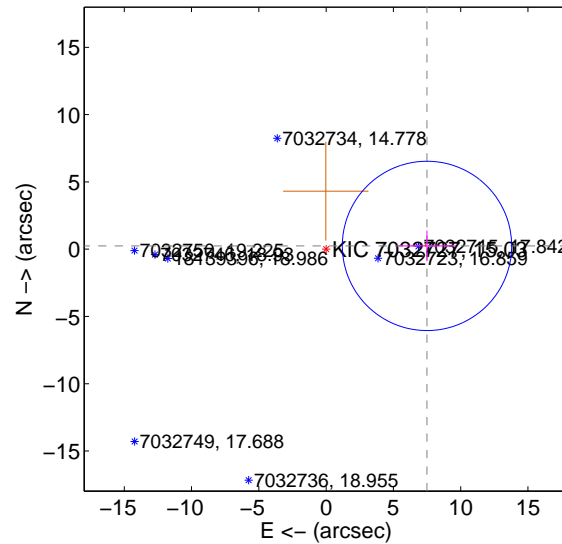
The direct PRF centroid is offset from the target star catalog position by about 1.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.998 ± 2.328	3.44	-7.997 ± 2.309	-0.127 ± 1.243
PRF-fit source offset from KIC position	7.500 ± 2.097	3.58	-7.496 ± 2.135	0.243 ± 1.139
photometric centroid source offset	4.39 ± 0.82	5.35	0.99 ± 0.84	4.27 ± 0.82

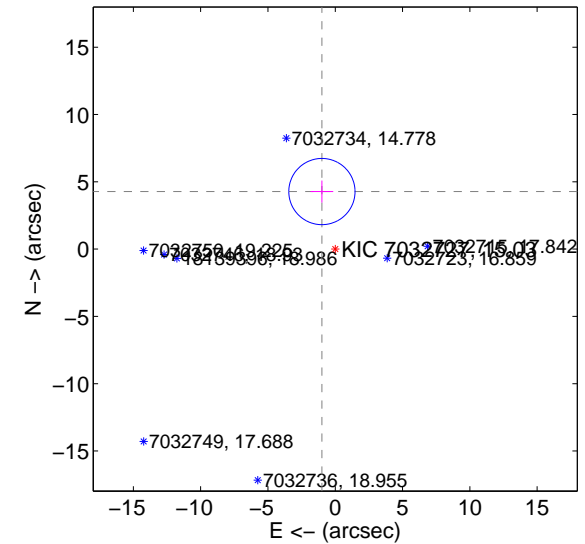
offset from difference PRF-fit to OOT PRF-fit



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.

Q1 no difference image



Q1 no OOT image



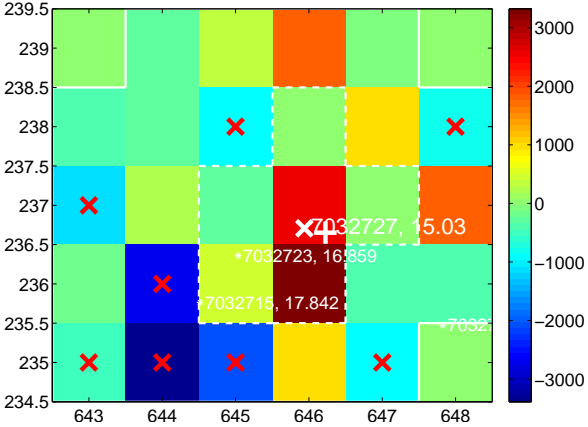
Q2 no difference image



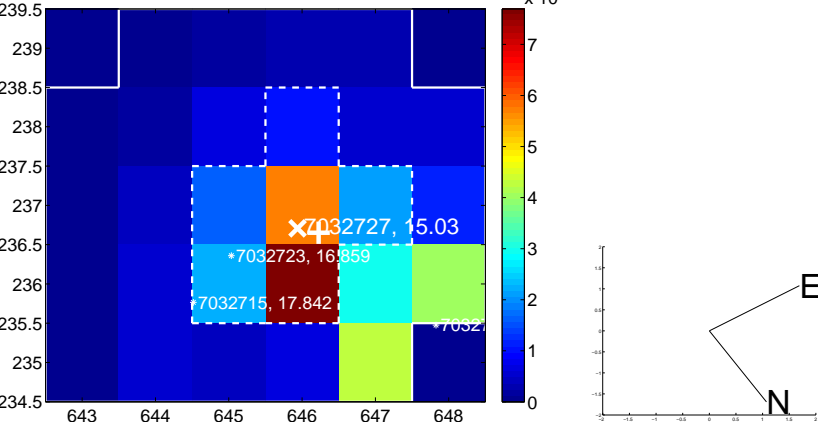
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



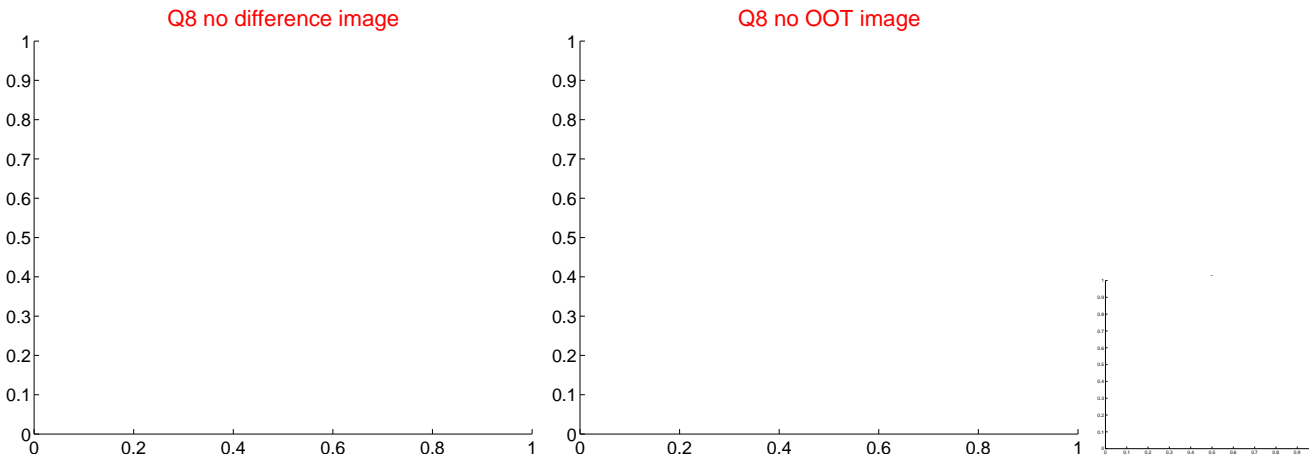
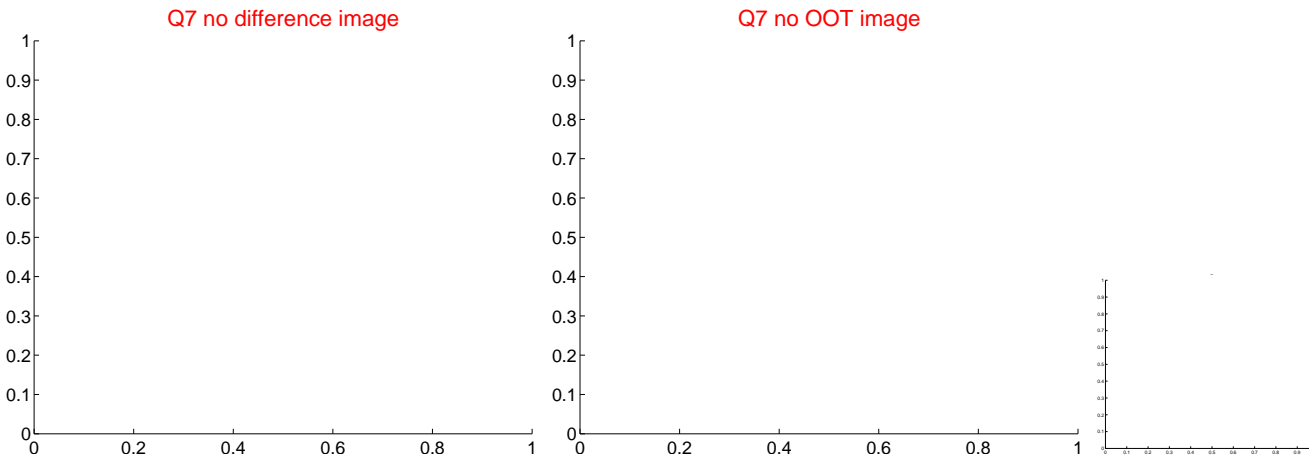
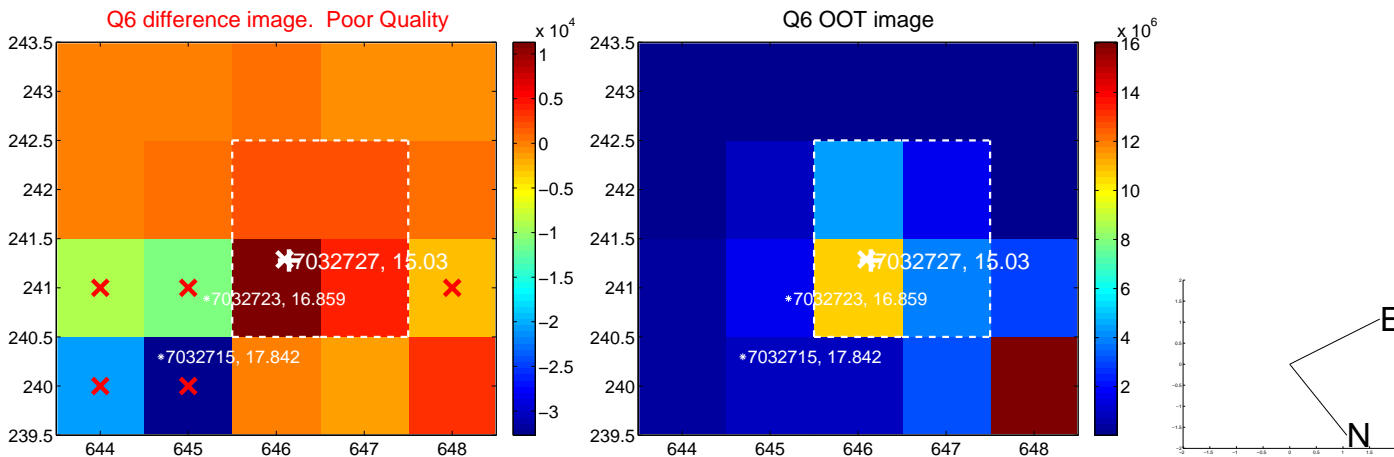
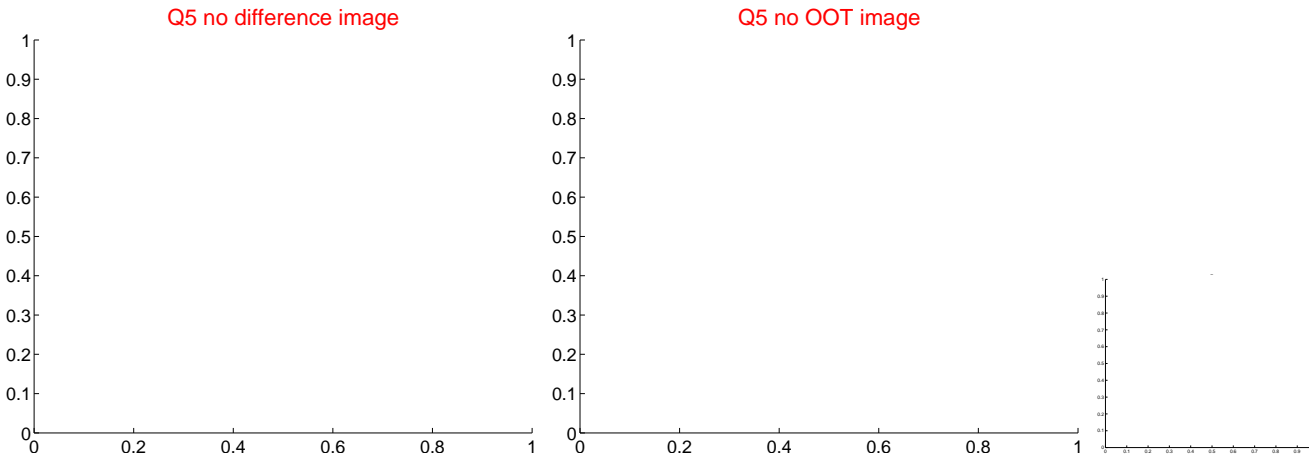
Q4 no difference image



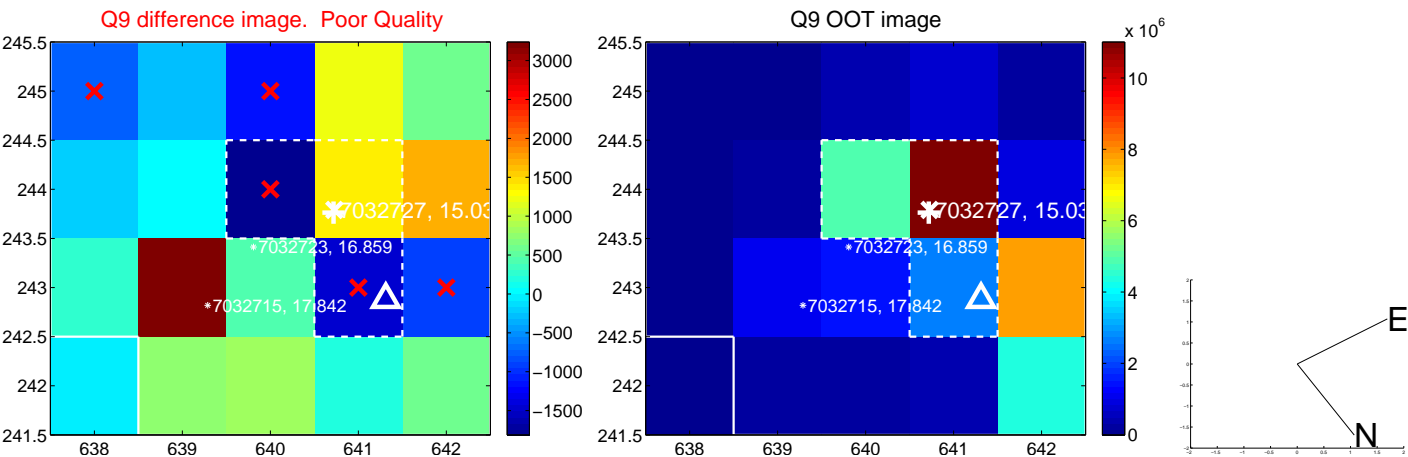
Q4 no OOT image



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

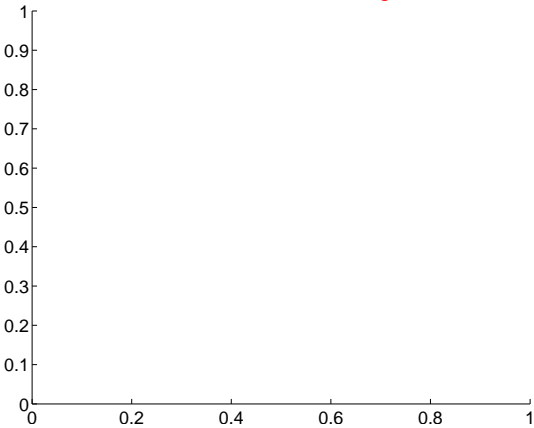


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

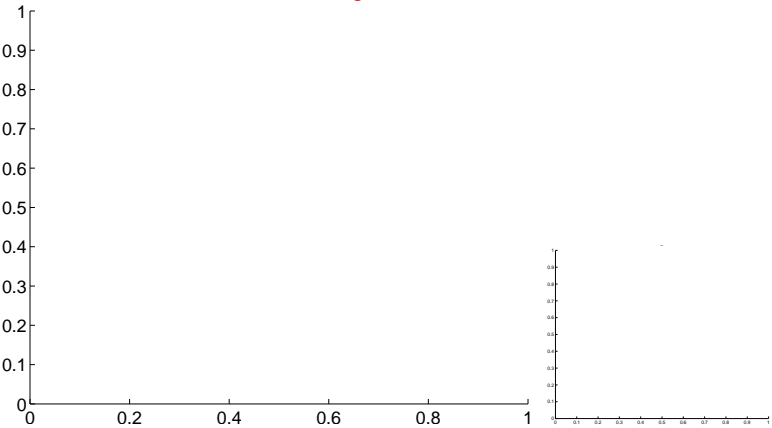


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

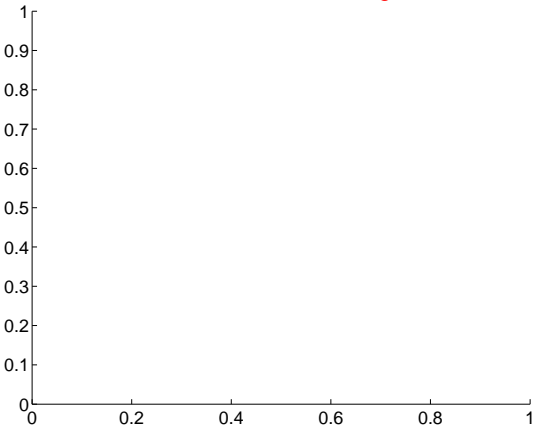
Q13 no difference image



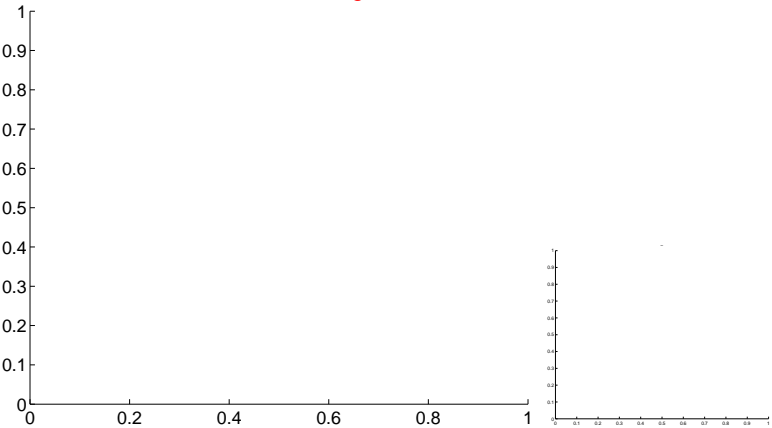
Q13 no OOT image



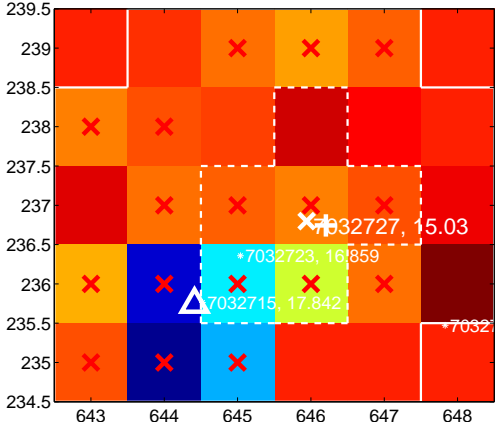
Q14 no difference image



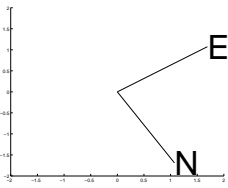
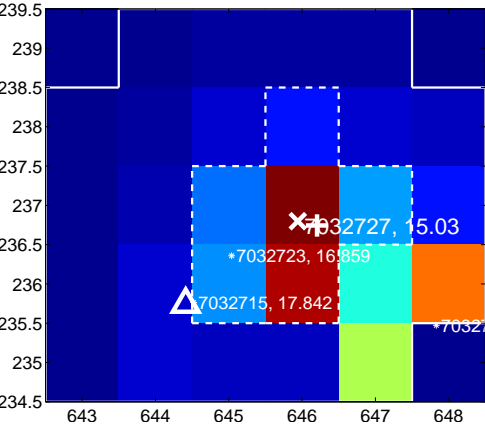
Q14 no OOT image



Q15 difference image. Poor Quality



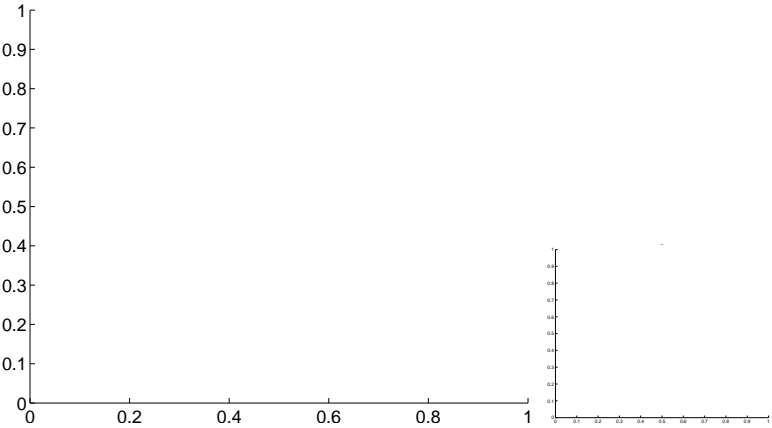
Q15 OOT image



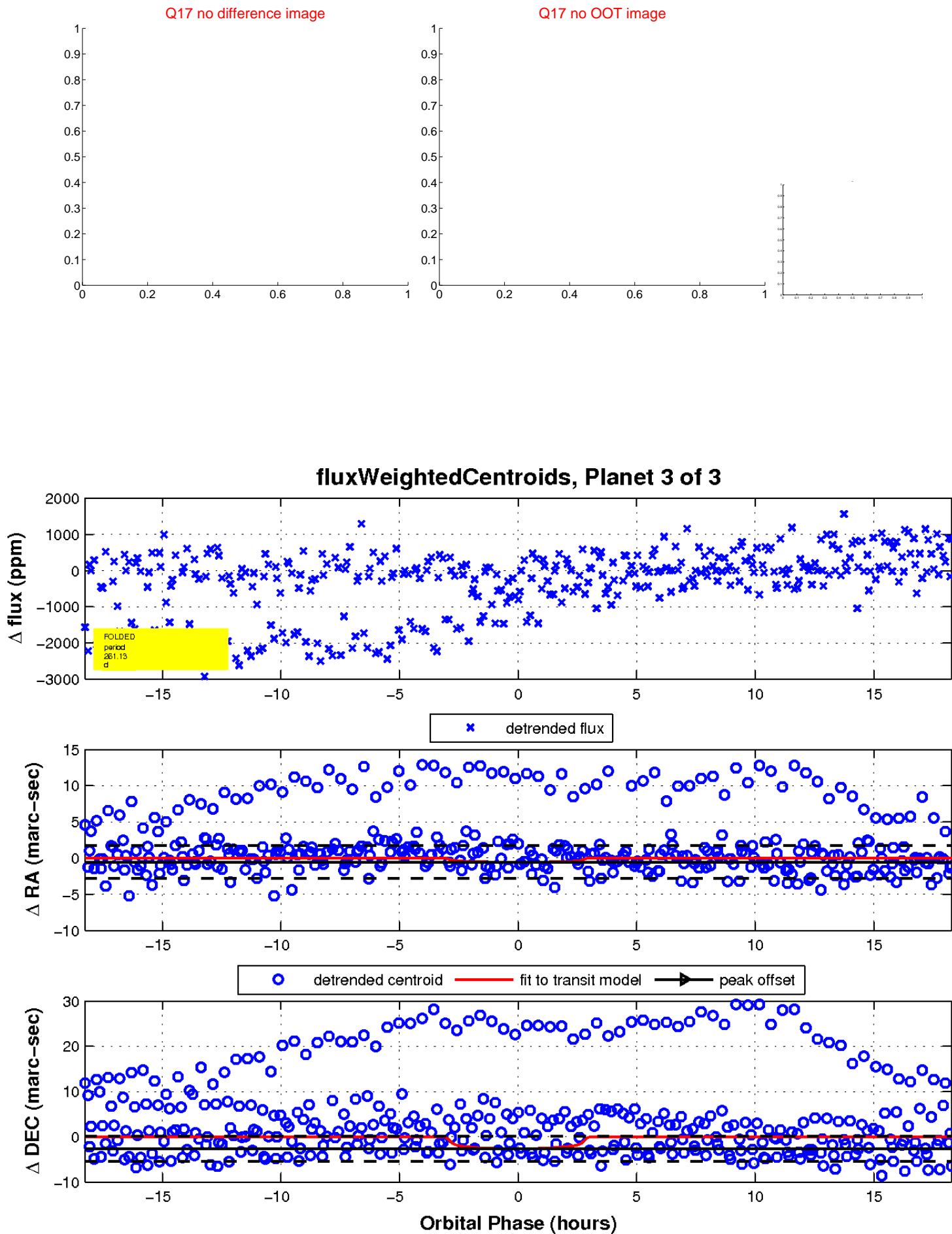
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

