

KIC 008330548

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})
008330548-01	OBS	1132.01	0.957074	131.776727	7787.6	3.465	1057.7	702.3	1.12	6289	12.13	4381.15
008330548-02	OBS	No	321.397280	225.429319	18.7	0.570	10.0	0.1	1.12	6289	0.50	1.88
008330548-03	OBS	No	321.495235	225.334982	115.0	119.599	9.9	0.3	1.12	6289	1.23	1.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008330548-01	OBS	FP	0.00	0	0	1	1	SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
008330548-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008330548-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST

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

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

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

Ephemeris Match Information For 008330548-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008330548-01	8330548	7020.01	8330575	1:1	12.3	2	3	13.48	14.44	7.52	Direct-PRF	0	0.56	0.23

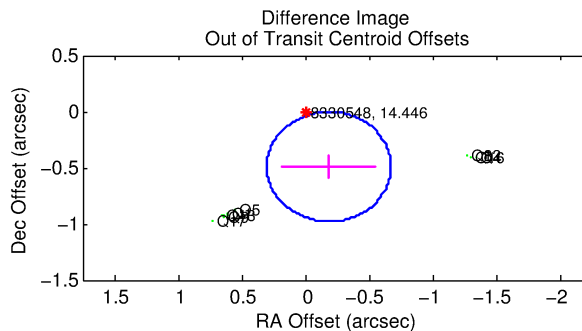
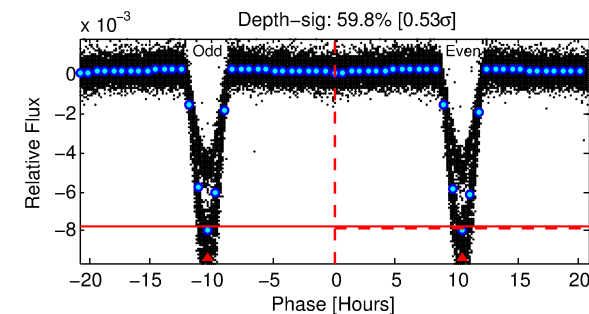
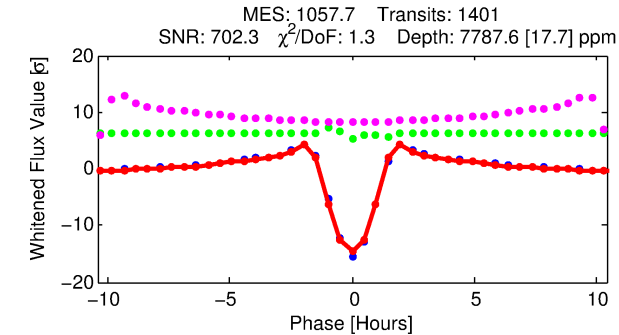
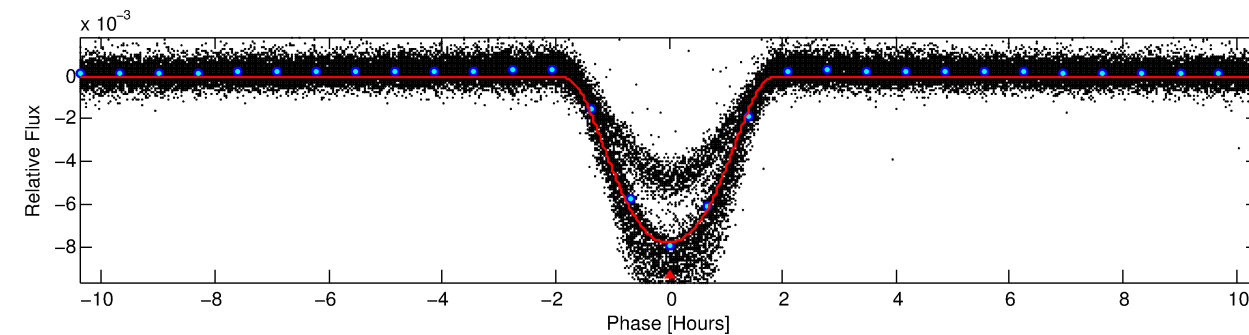
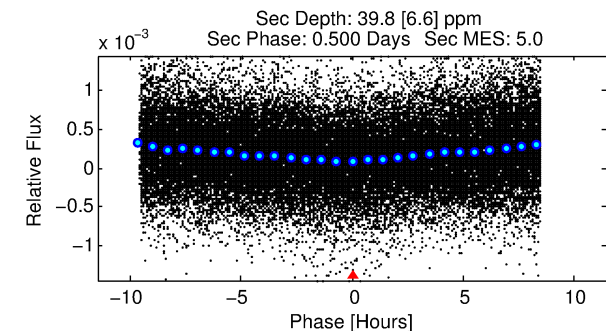
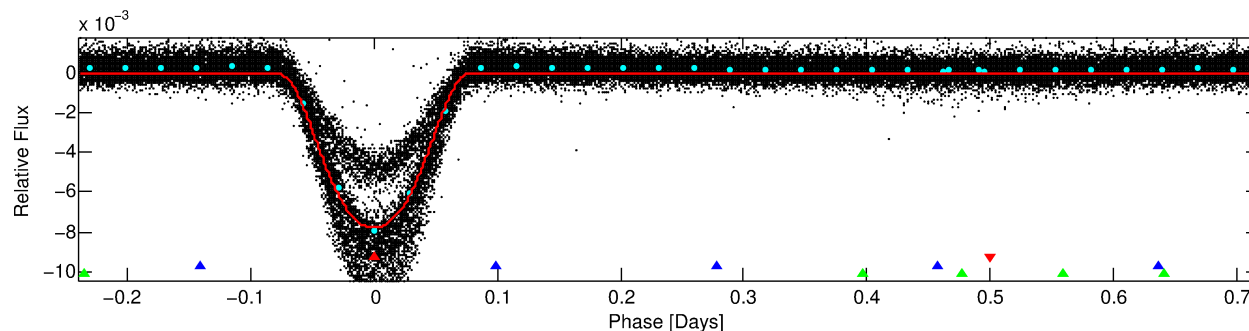
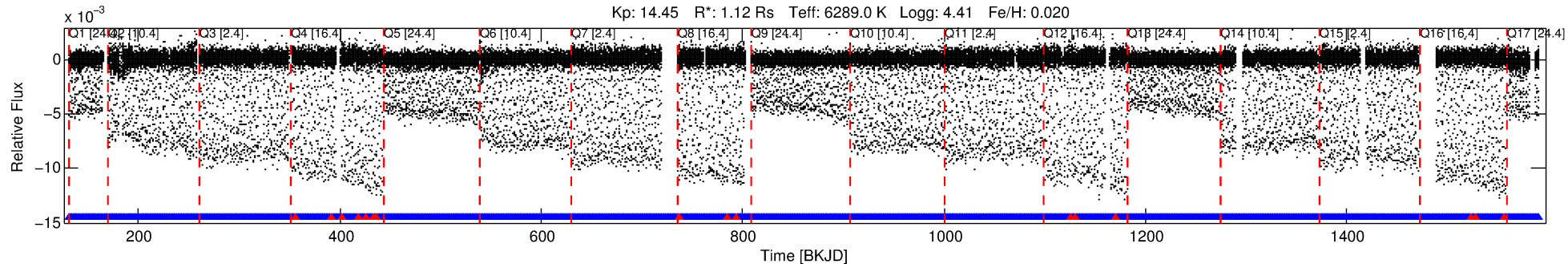
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 8330548 Candidate: 1 of 3 Period: 0.957 d

KOI: K01132.02 Corr: 0.891

Kp: 14.45 R*: 1.12 Rs Teff: 6289.0 K Logg: 4.41 Fe/H: 0.020



DV Fit Results:

Period = 0.95707 [0.00000] d
Epoch = 131.7767 [0.0000] BKJD
Rp/R* = 0.0994 [0.0004]
a/R* = 1.62 [0.00]
b = 0.91 [0.00]
Seff = 4381.15 [1913.79]
Teff = 2075 [227] K
Rp = 12.13 [4.21] Re
a = 0.0200 [0.0058] AU
Ag = 0.06 [0.03] [-35.37σ]
Teff = 1585 [85] K [-2.02σ]

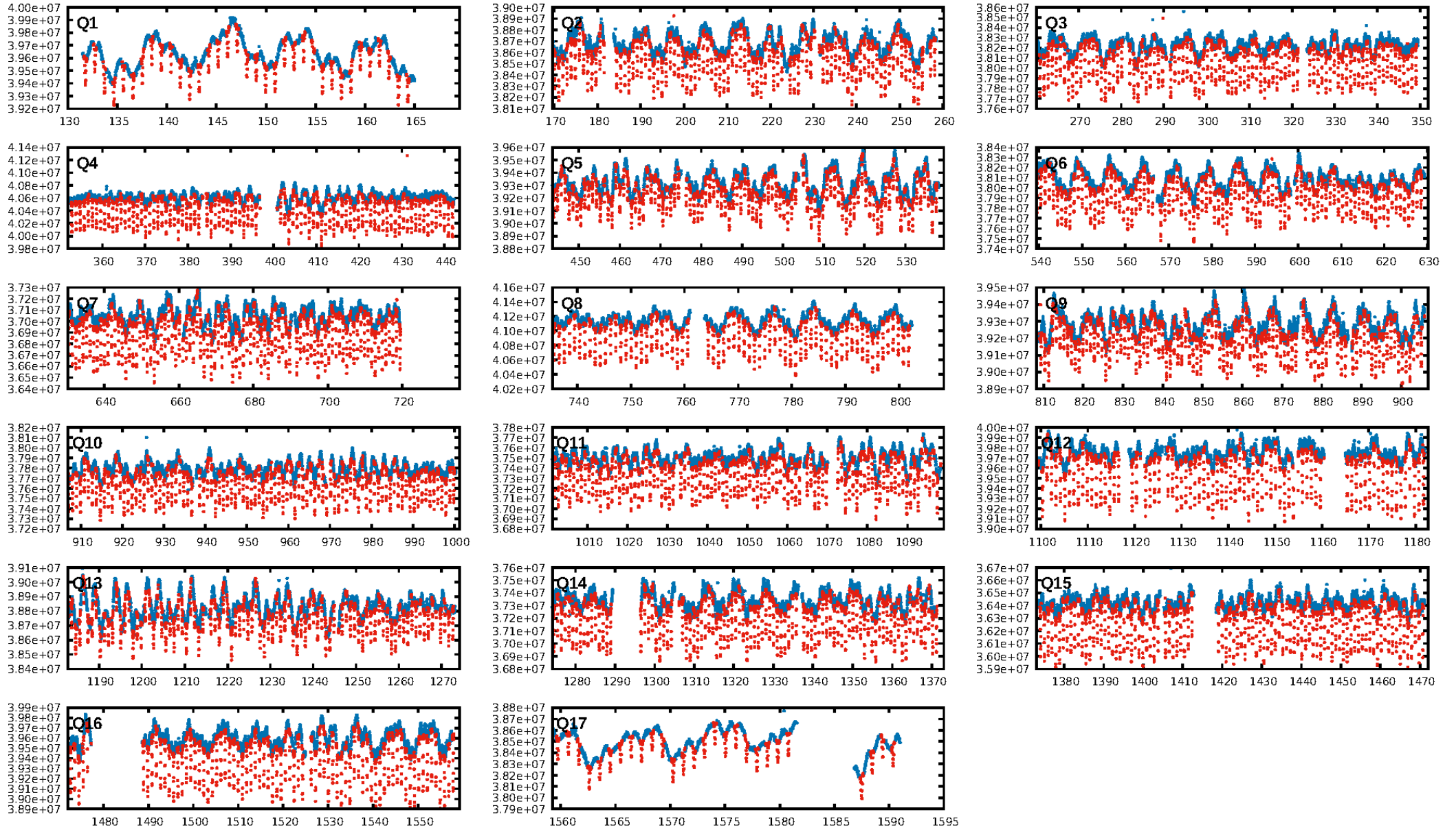
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [2190.05σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [1323/1339]
GhostDiagnostic-chr: -0.1125
Centroid-sig: N/A
Centroid-so: 9.995 arcsec [1131.99σ]
OotOffset-rm: 0.525 arcsec [3.23σ]
KicOffset-rm: 12.187 arcsec [167.73σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

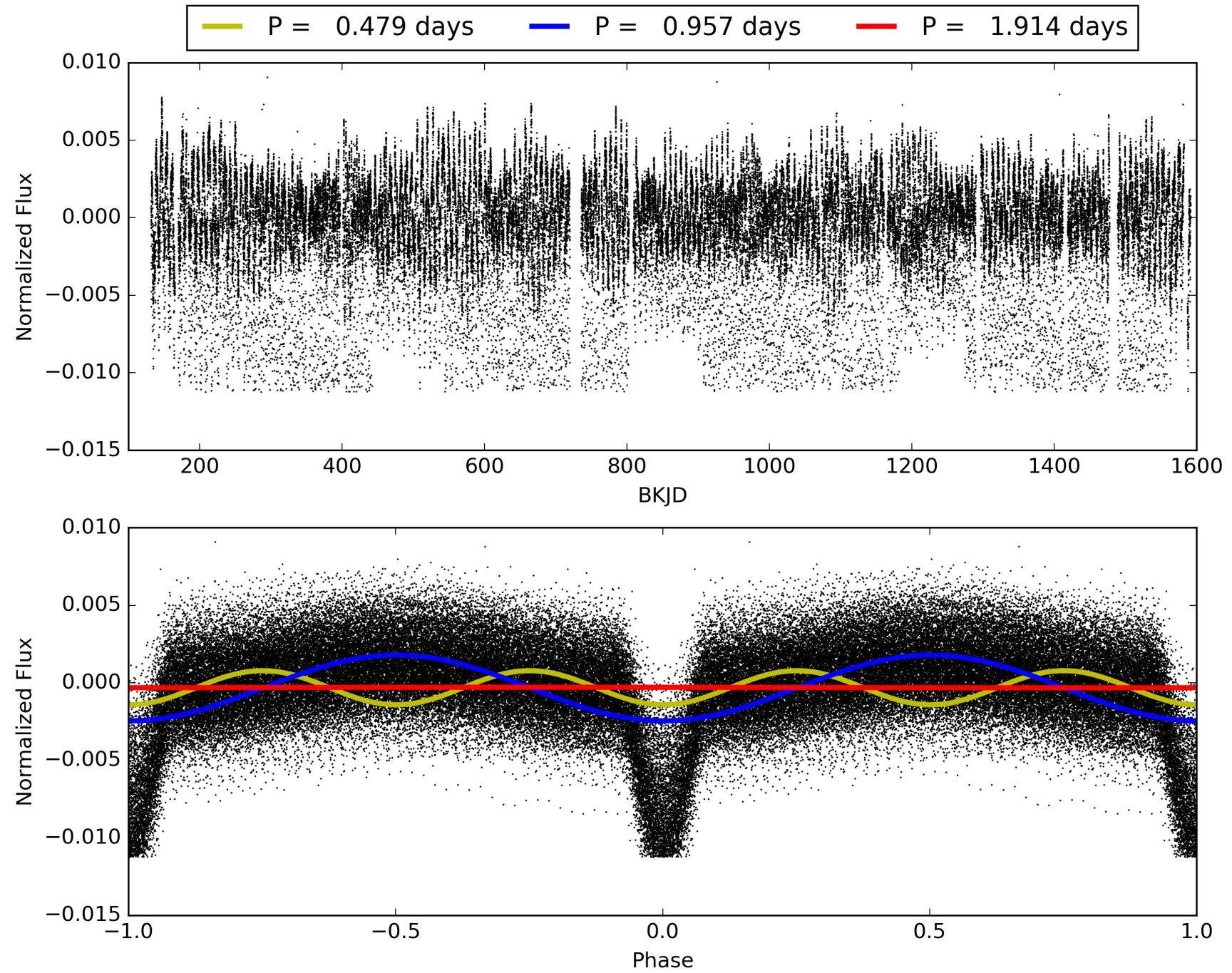
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:42:59 Z

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

TCE 008330548-01, PDC Light Curves

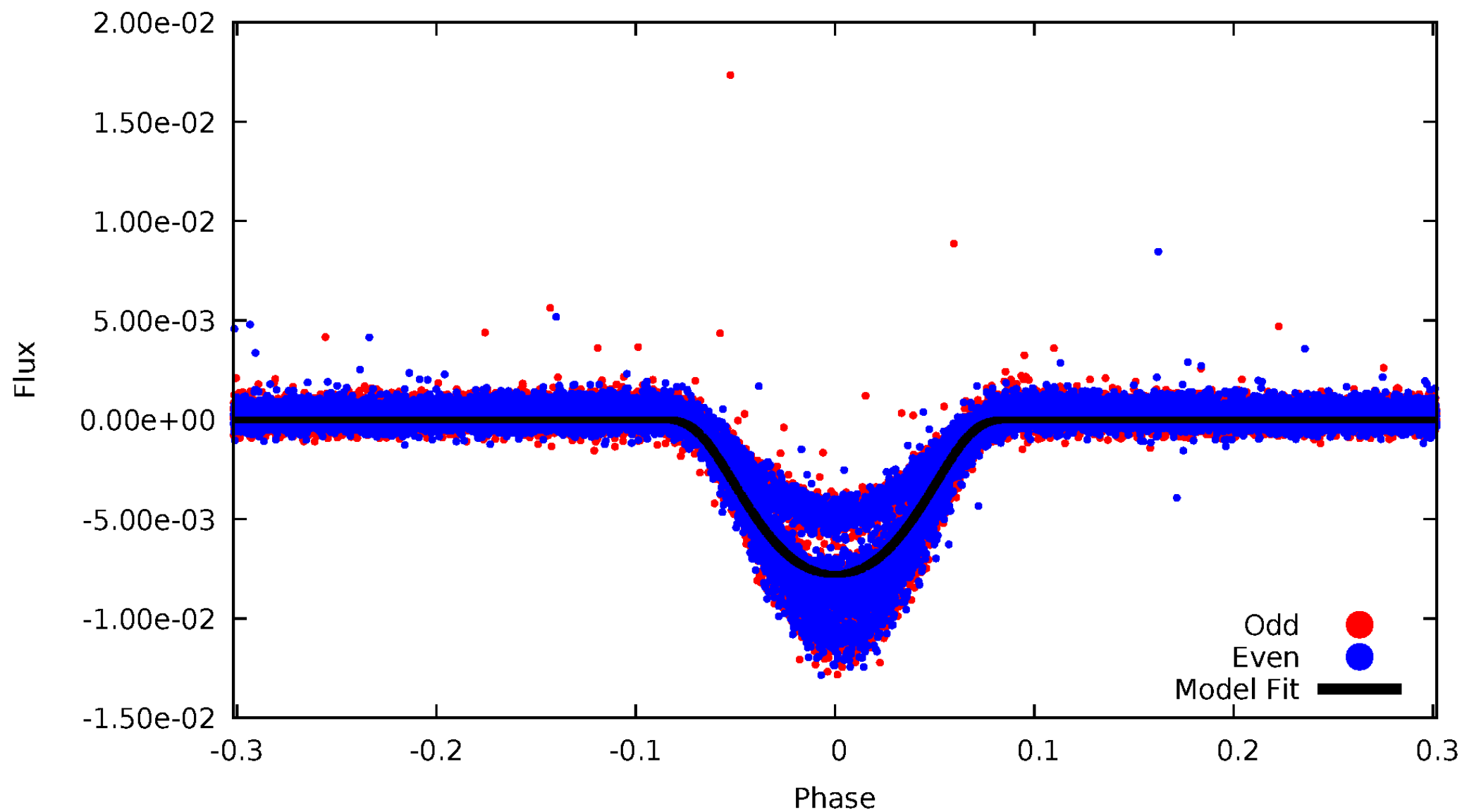


TCE 008330548-01



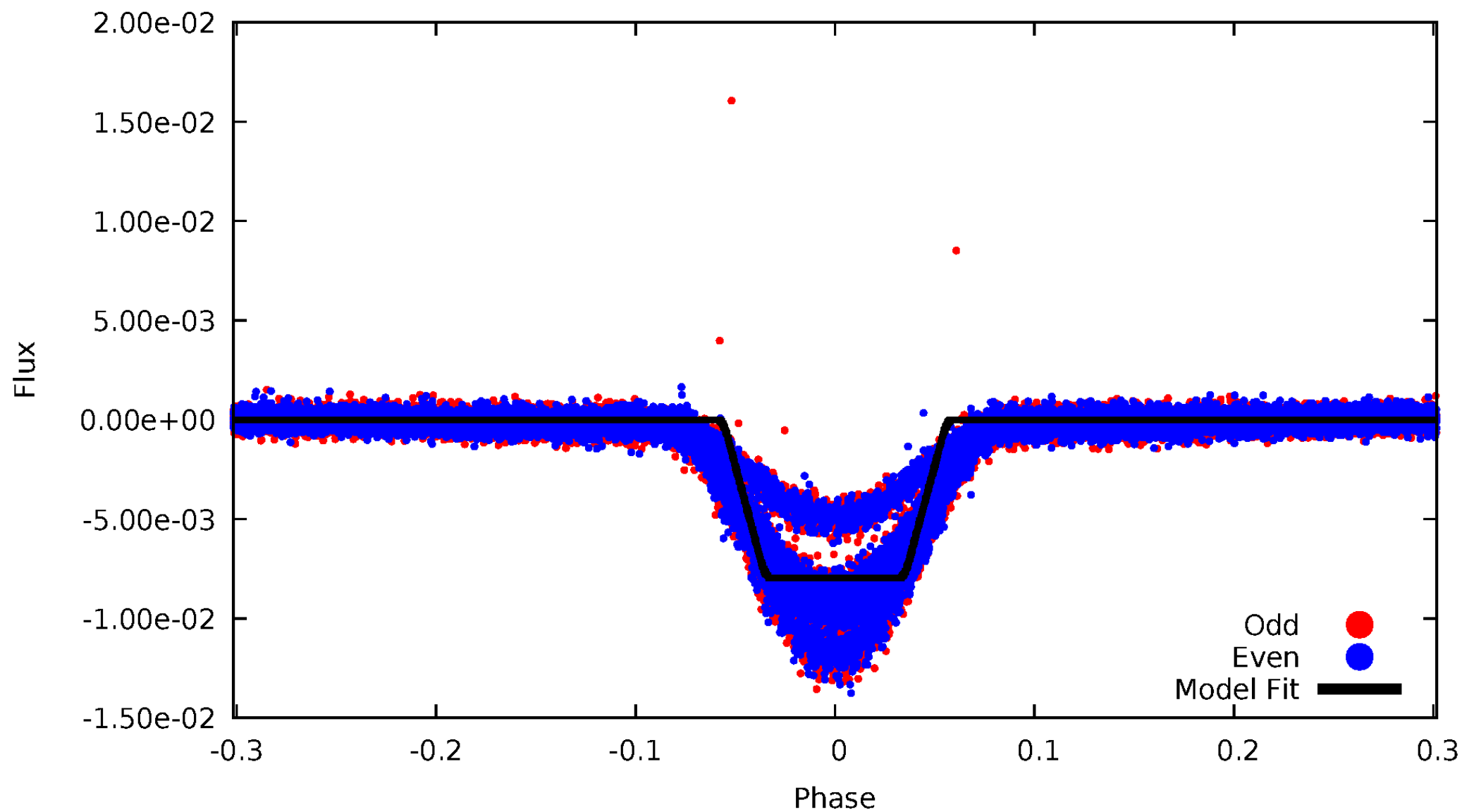
DV Odd/Even

TCE 008330548-01



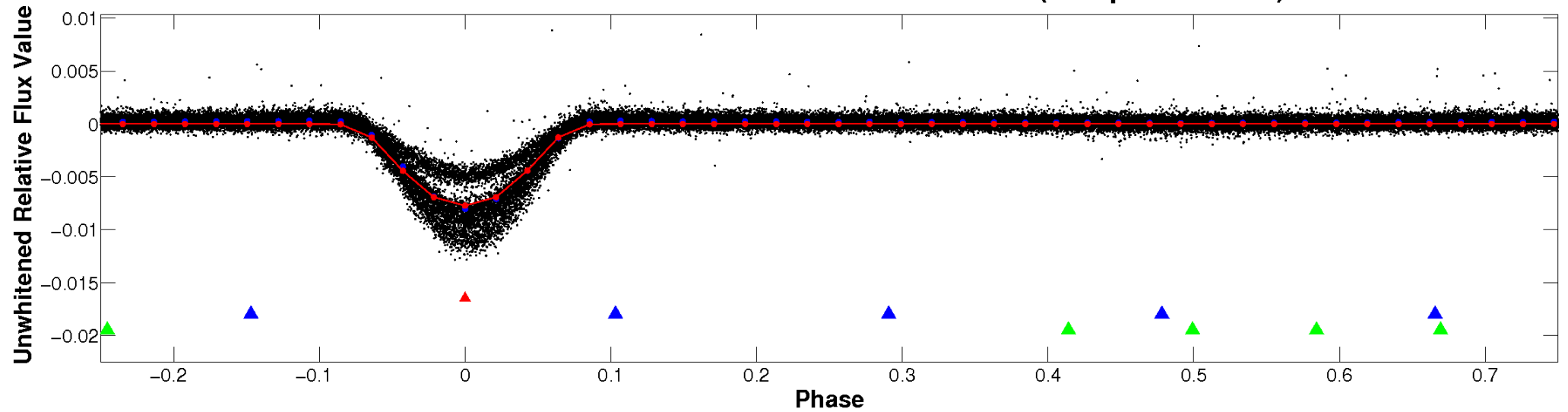
ALT Odd/Even

TCE 008330548-01

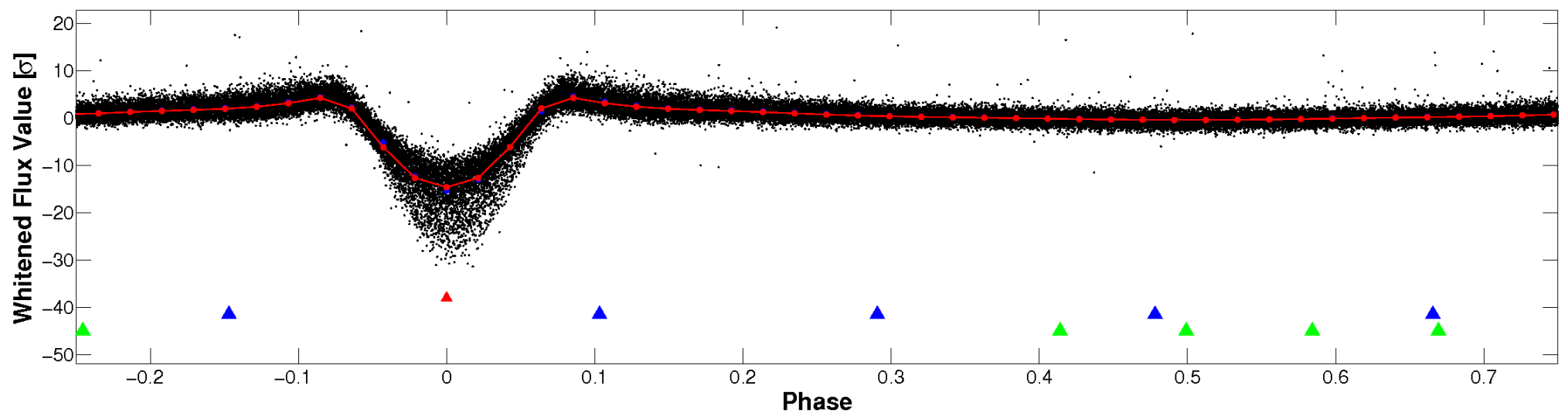


Non-Whitened Vs. Whitened Light Curve

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

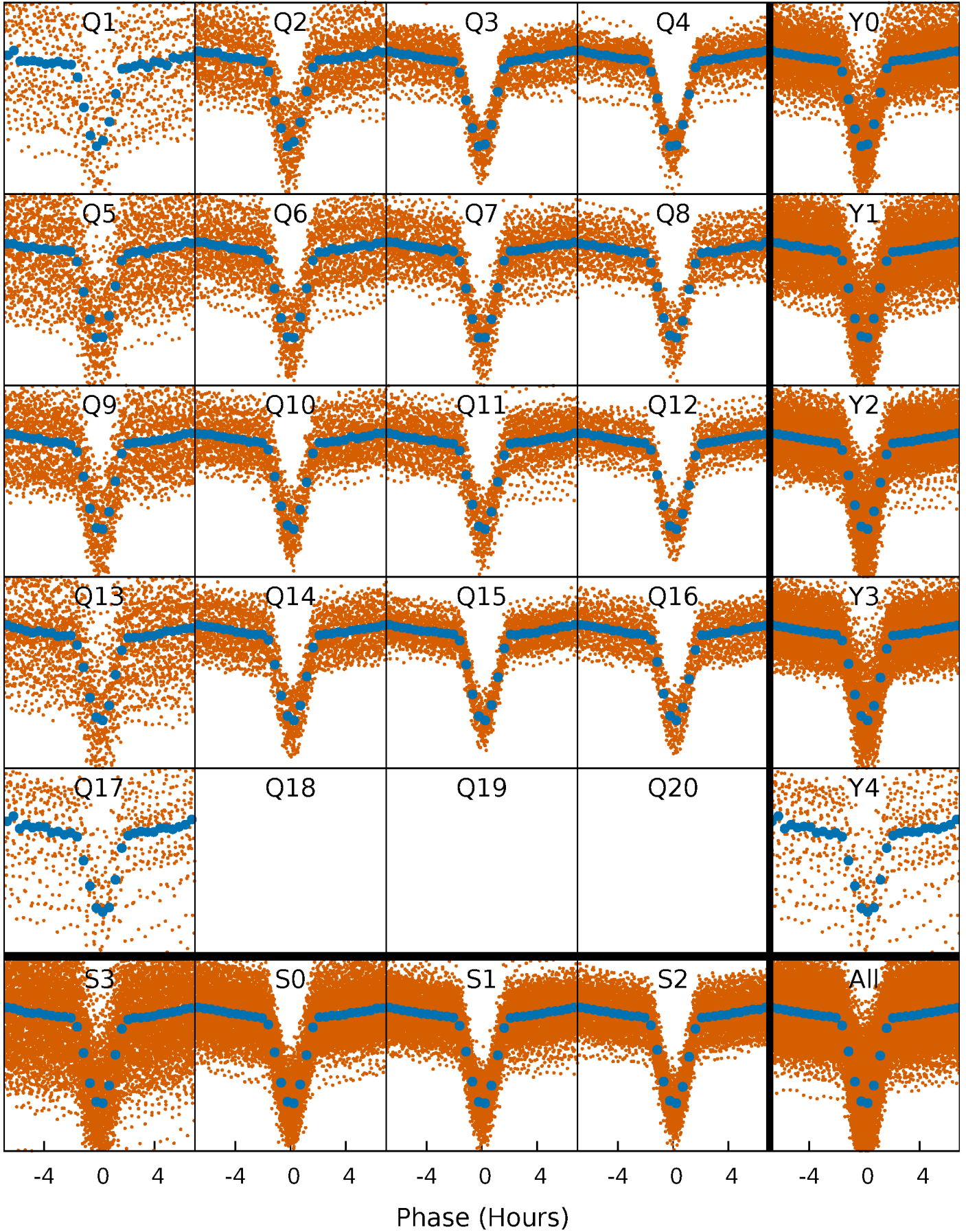


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



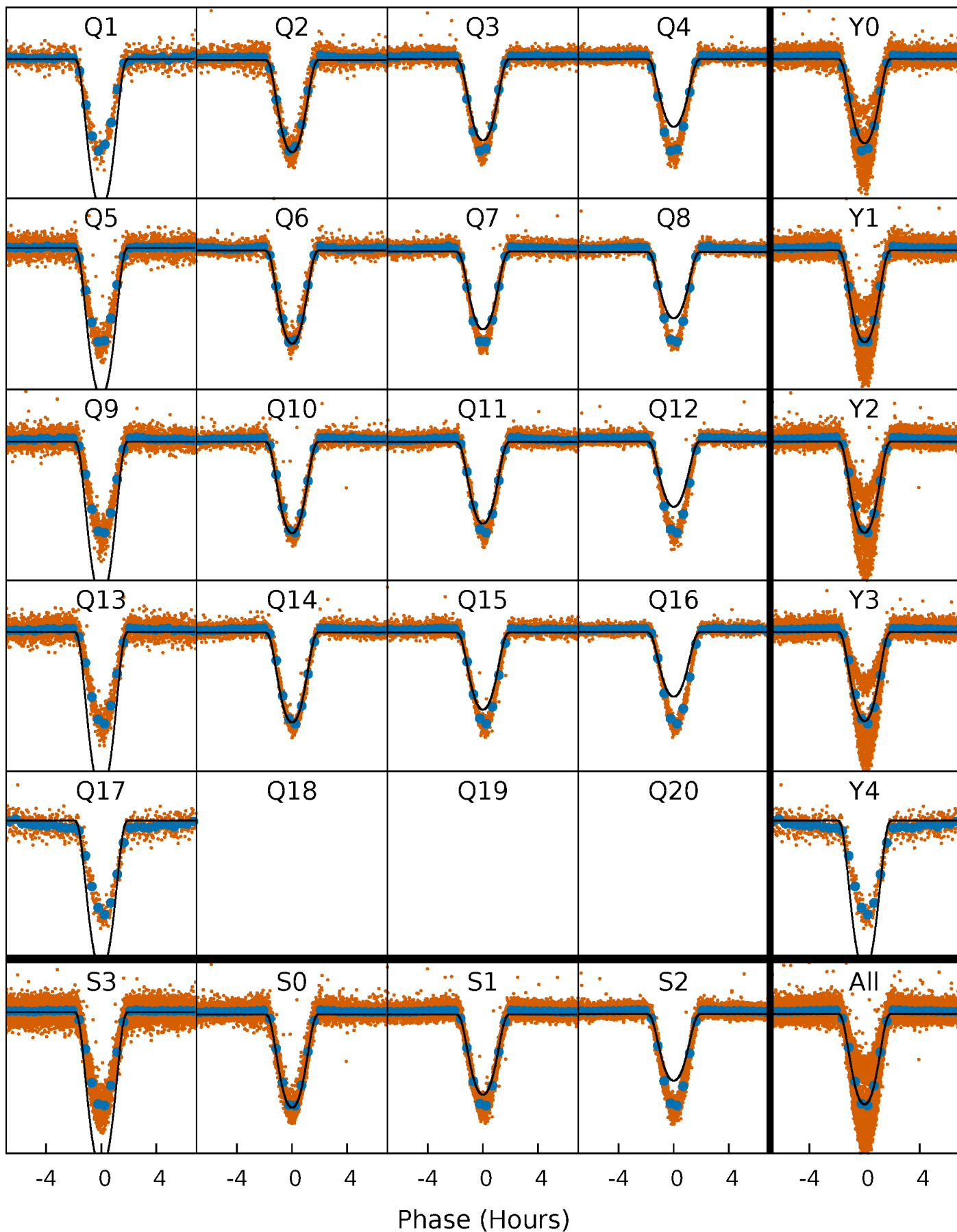
PDC Quarter-Phased Transit Curves

TCE 008330548-01 P= 0.957073 Days $T_0=131.776727$ (BKJD)



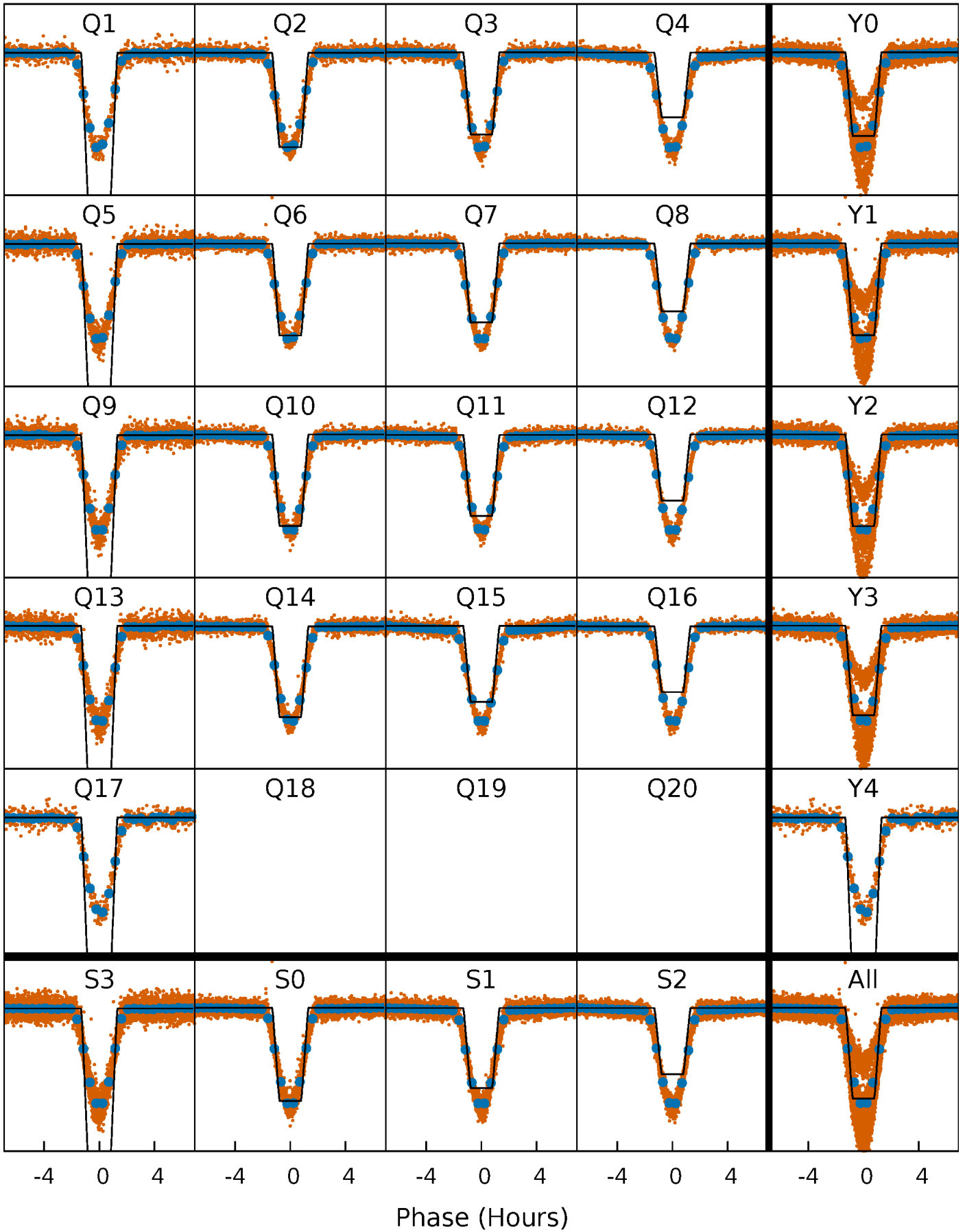
DV Quarter-Phased Transit Curves

TCE 008330548-01 P= 0.957073 Days $T_0=131.776727$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

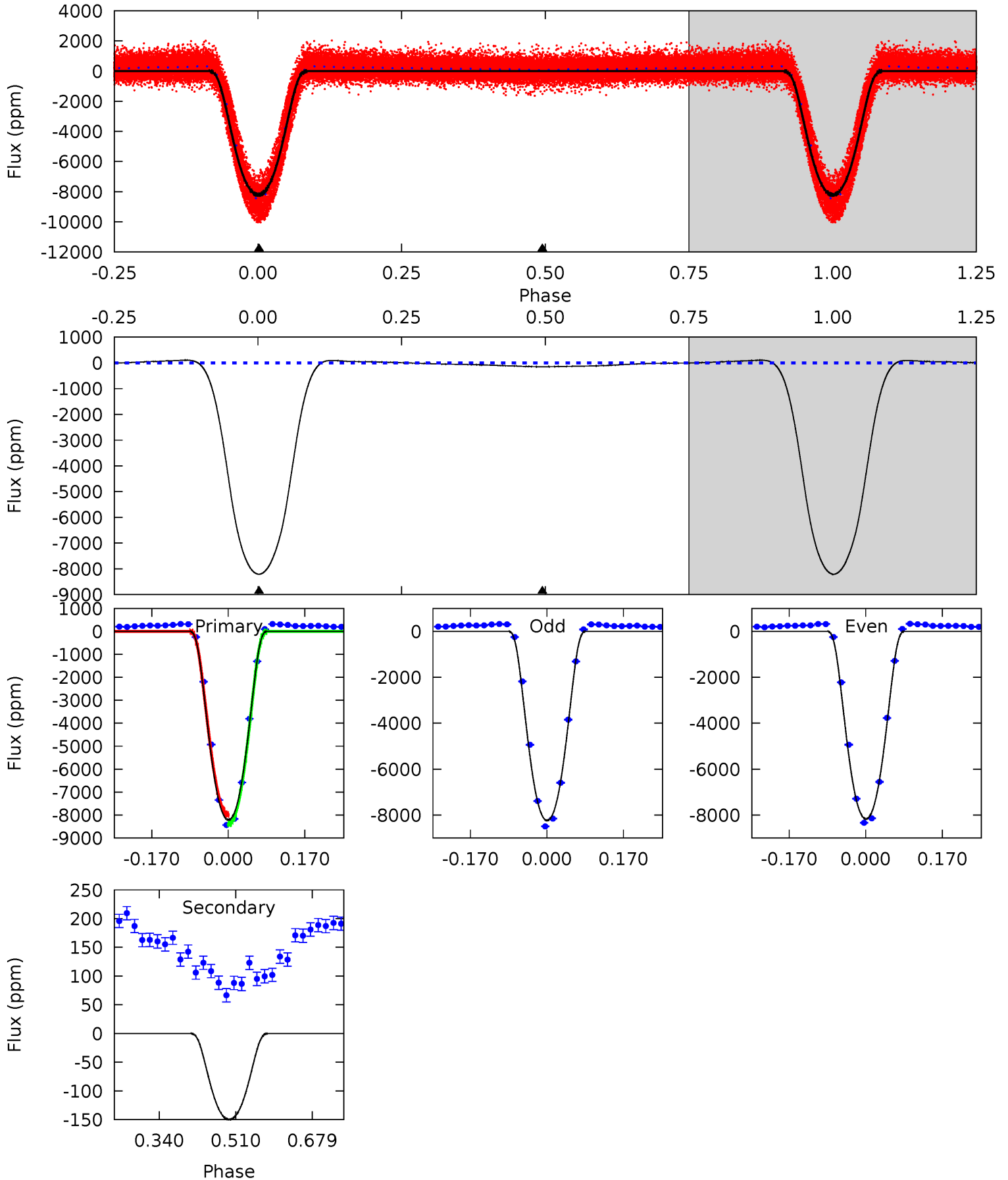
TCE 008330548-01 P= 0.957077 Days $T_0=131.774988$ (BKJD)



DV Model-Shift Uniqueness Test

008330548-01, P = 0.957073 Days, E = 130.819654 Days

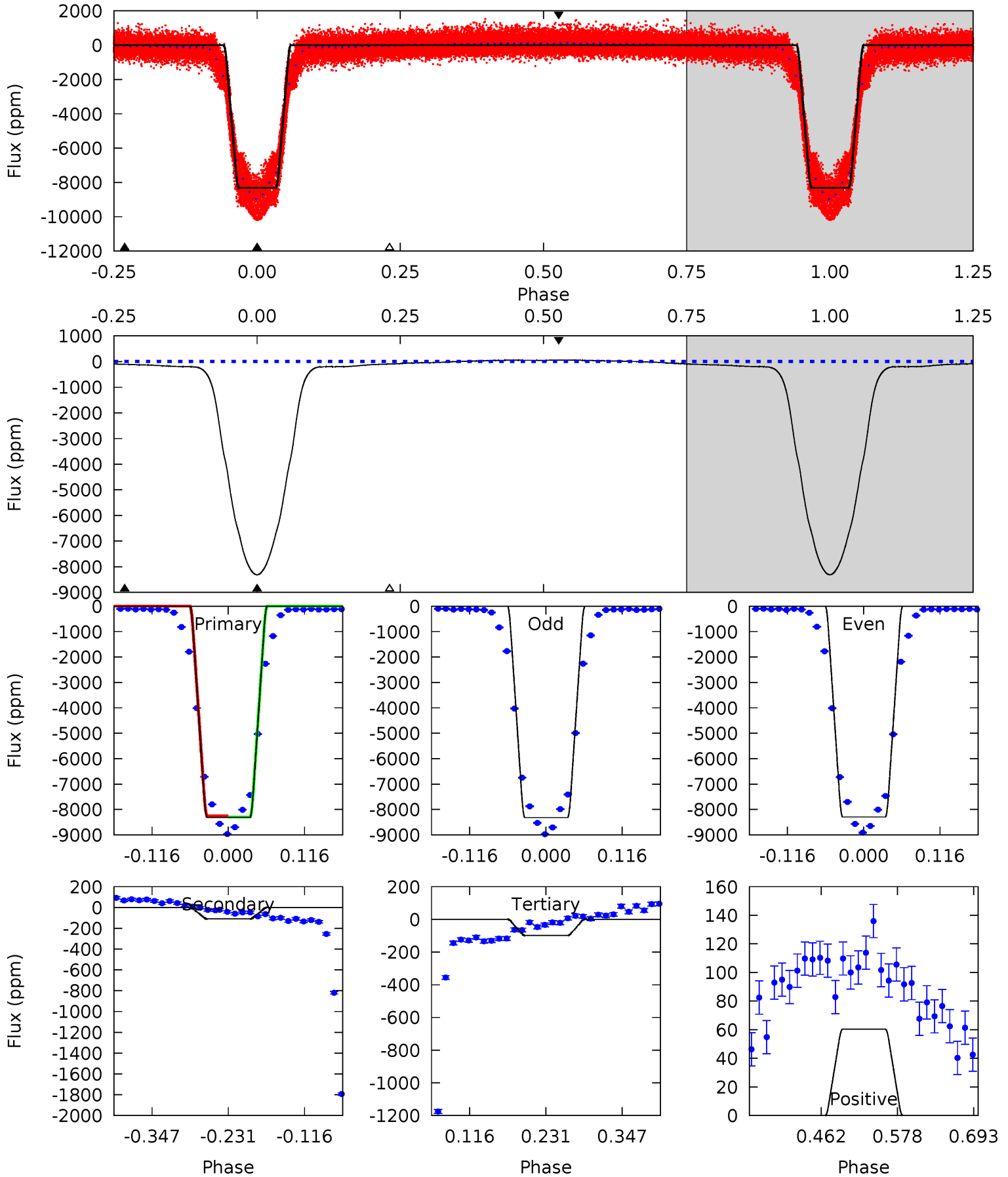
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1727	31.5	0	0	4.45	1.37	6.10	1727	1727	31.5	31.5	7.14	0.97	0.01	42.6



Alt Model-Shift Uniqueness Test

008330548-01, P = 0.957077 Days, E = 130.817911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1655	21.8	19.5	12.0	4.53	1.57	15.5	1636	1643	2.33	9.79	2.22	0.97	0.01	0



Stellar Parameters For KIC 008330548

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6289^{+174}_{-217}	$4.407^{+0.070}_{-0.224}$	$0.020^{+0.250}_{-0.300}$	$1.118^{+0.388}_{-0.129}$	$1.164^{+0.169}_{-0.152}$	$1.173^{+0.360}_{-0.650}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+35%/-12%	+15%/-13%	+31%/-55%
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 008330548-01 / KOI 1132.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-150 ± 5	$12.36^{+2.43}_{-0.90}$	2954^{+243}_{-155}	-2597^{+192}_{-291}	$0.210^{+0.035}_{-0.056}$
Alt.	-110 ± 5	$11.09^{+2.02}_{-0.87}$	2946^{+233}_{-155}	-2666^{+175}_{-248}	$0.191^{+0.034}_{-0.050}$

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

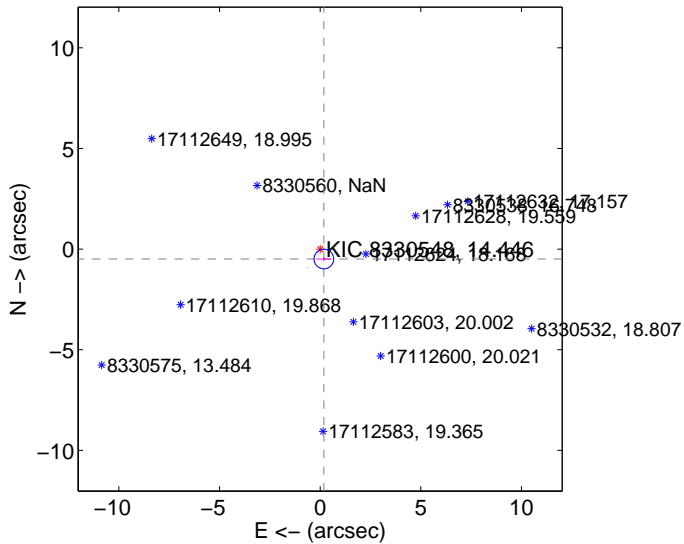
Supplemental centroid analysis for 008330548-01. Kepler magnitude: 14.45. Transit SNR 702.34

There are 9 quarters with good PRF difference image offsets

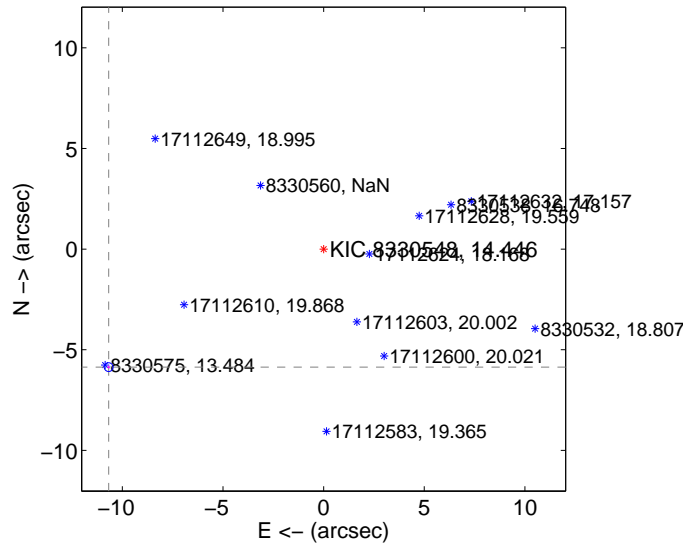
The OOT PRF centroid is offset from the target star catalog position by about 11.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.525 ± 0.163	3.23	-0.184 ± 0.371	-0.492 ± 0.104
PRF-fit source offset from KIC position	12.187 ± 0.073	167.73	10.682 ± 0.074	-5.866 ± 0.067
photometric centroid source offset	9.99 ± 0.01	1131.99	7.88 ± 0.01	-6.15 ± 0.01

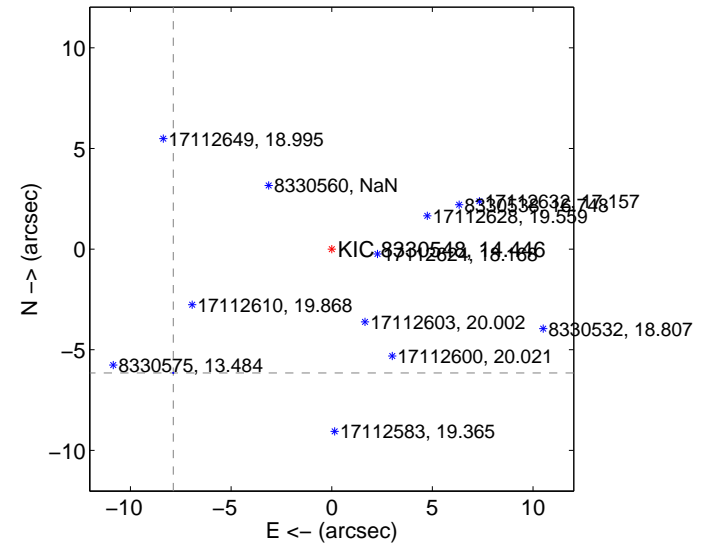
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

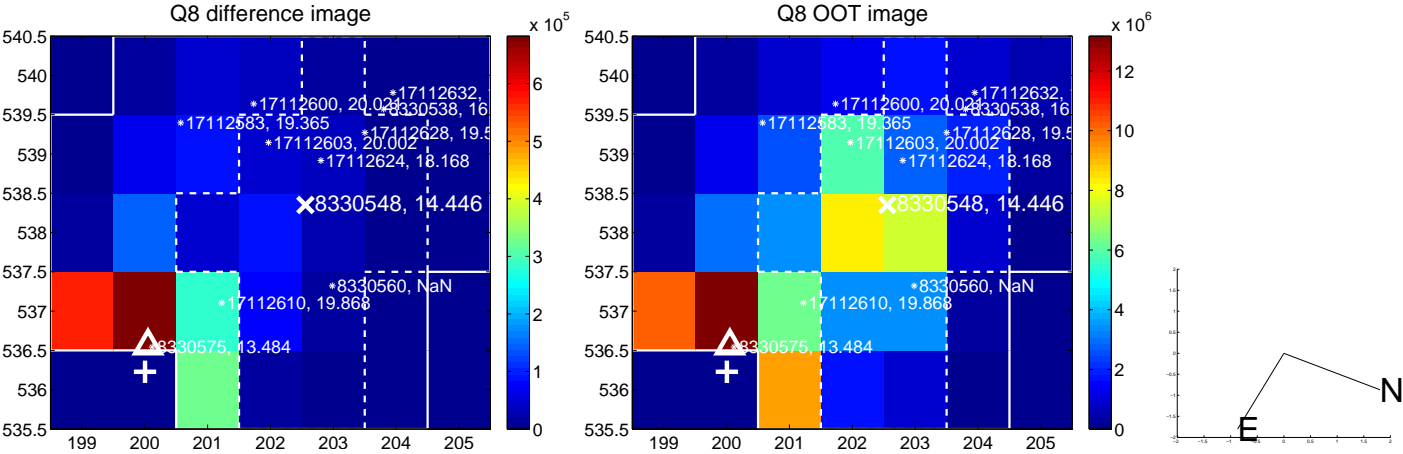
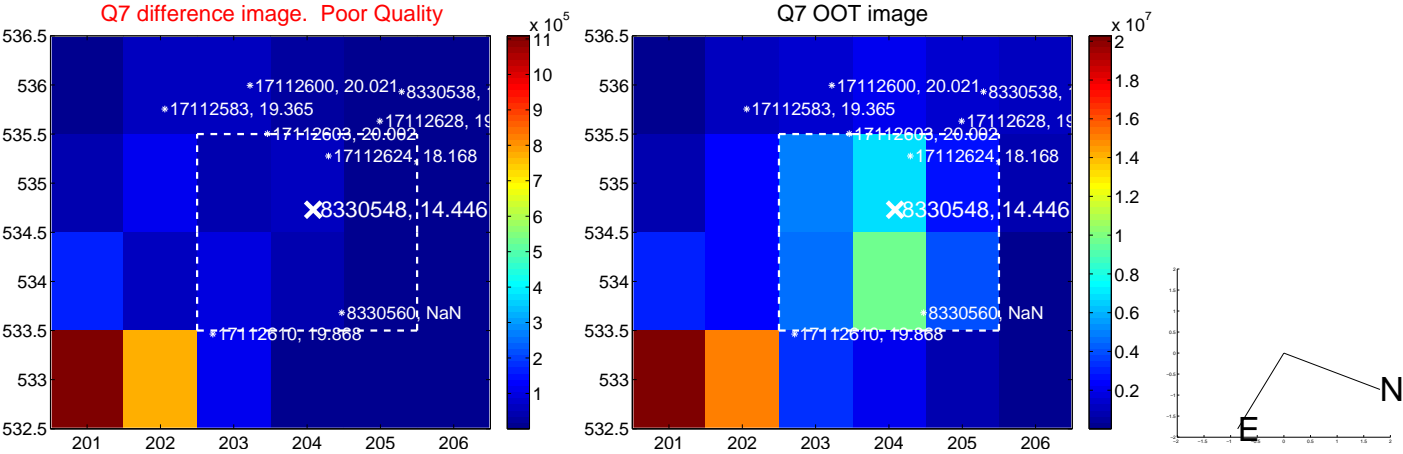
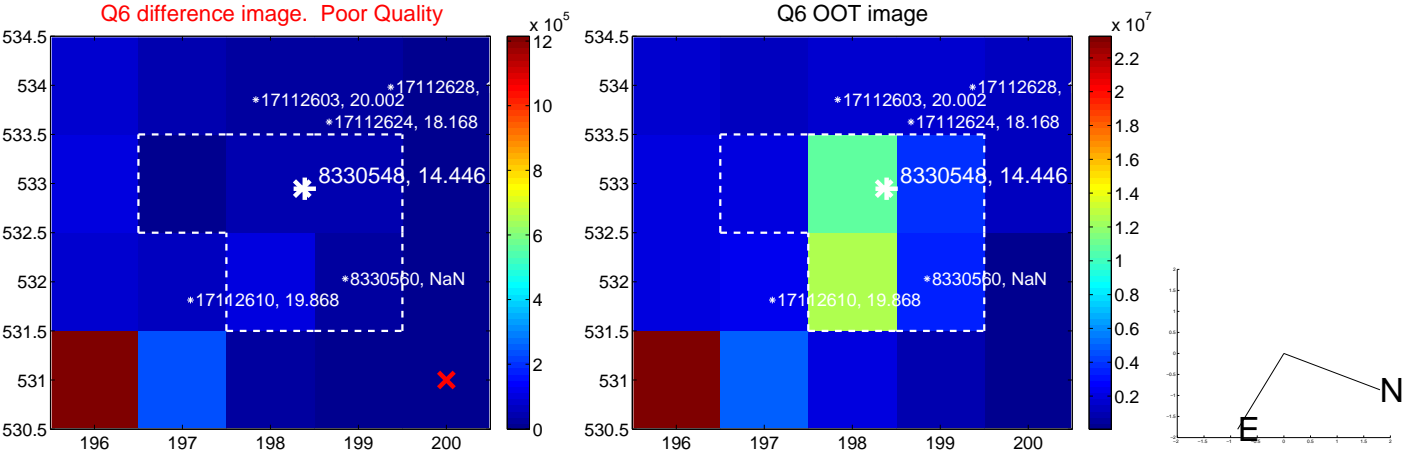
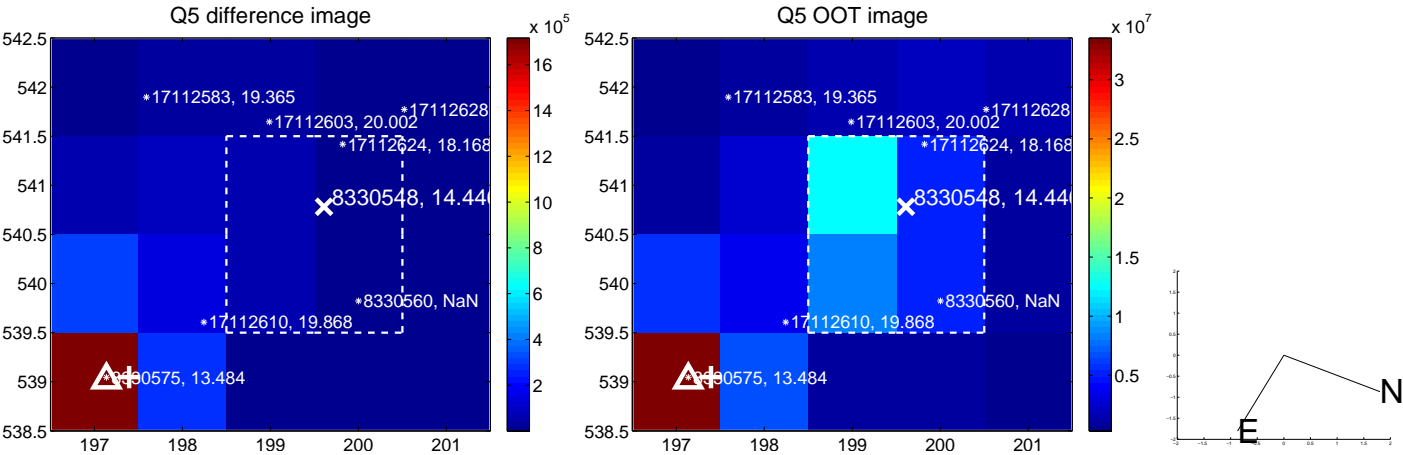


offset from photometric centroids

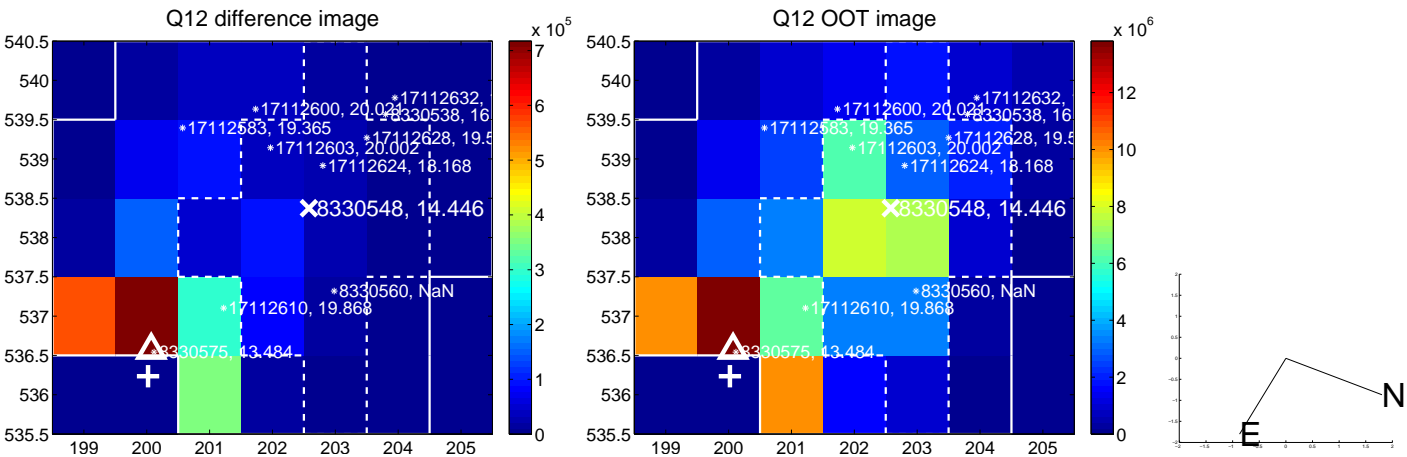
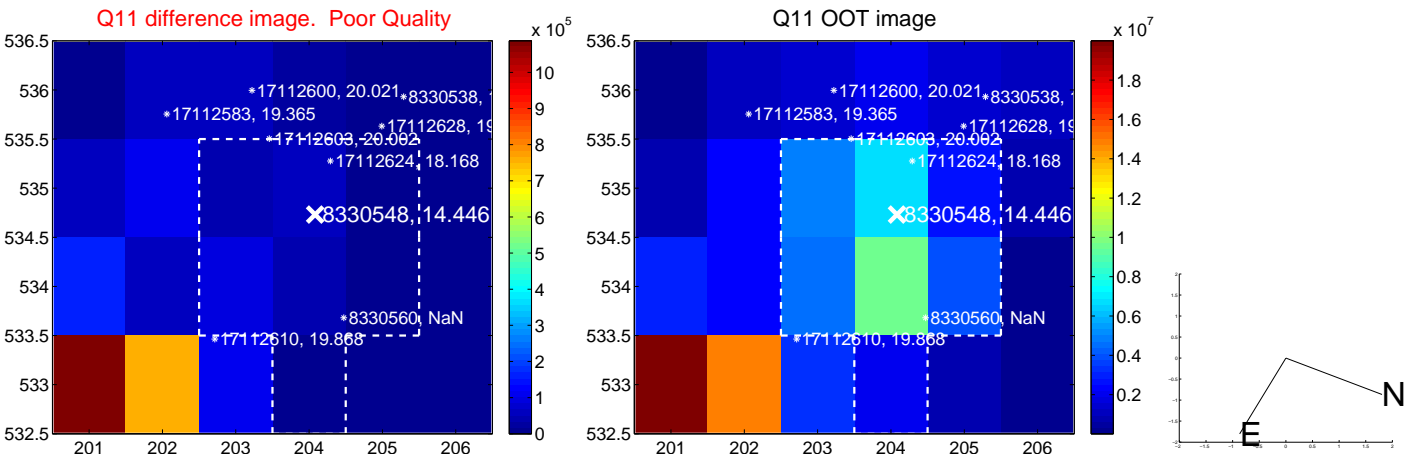
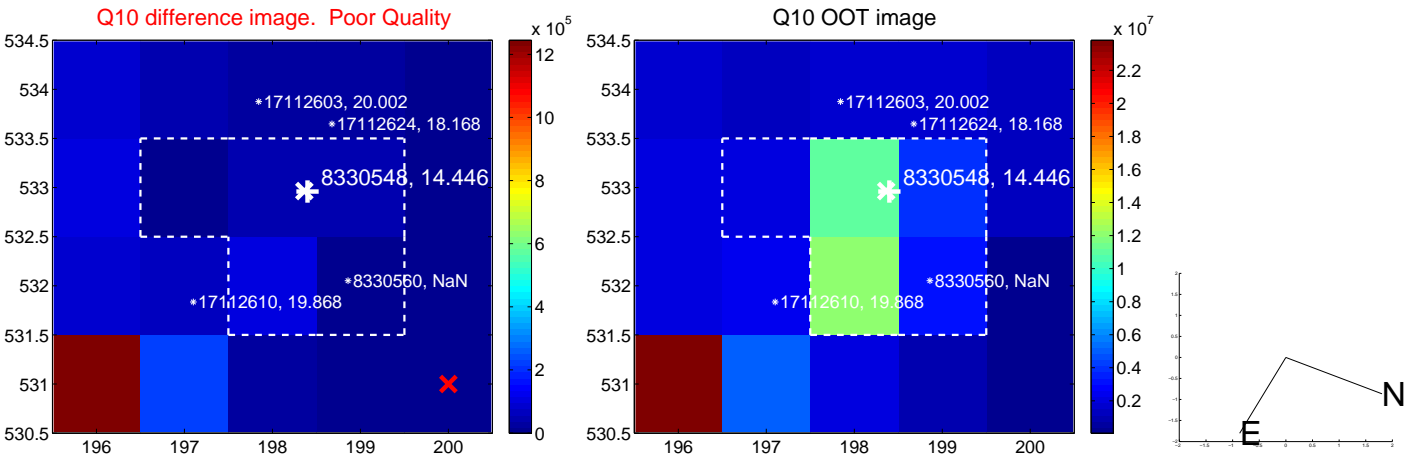
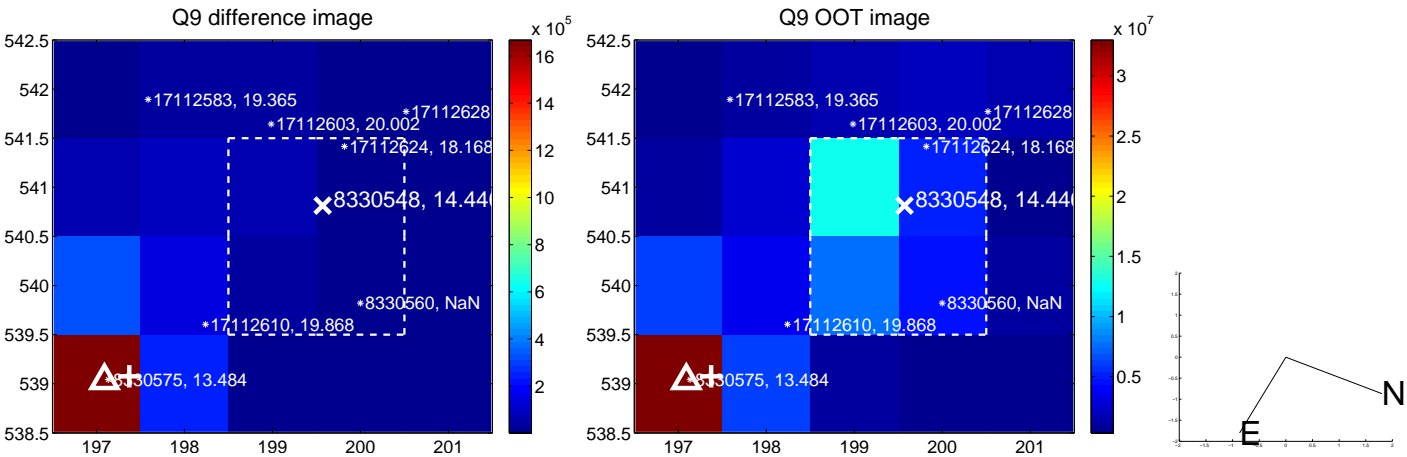


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

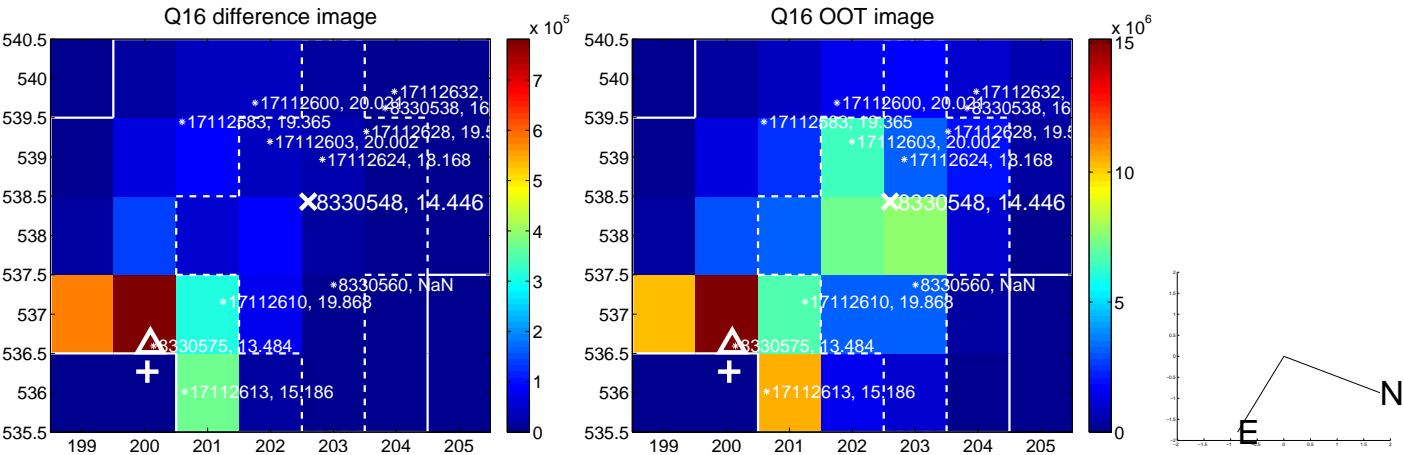
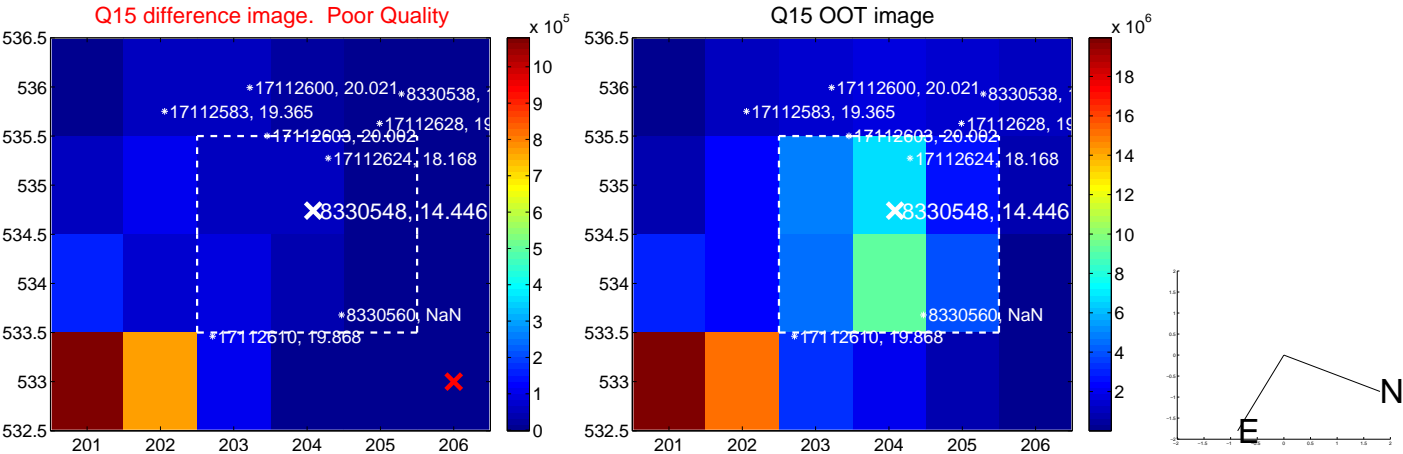
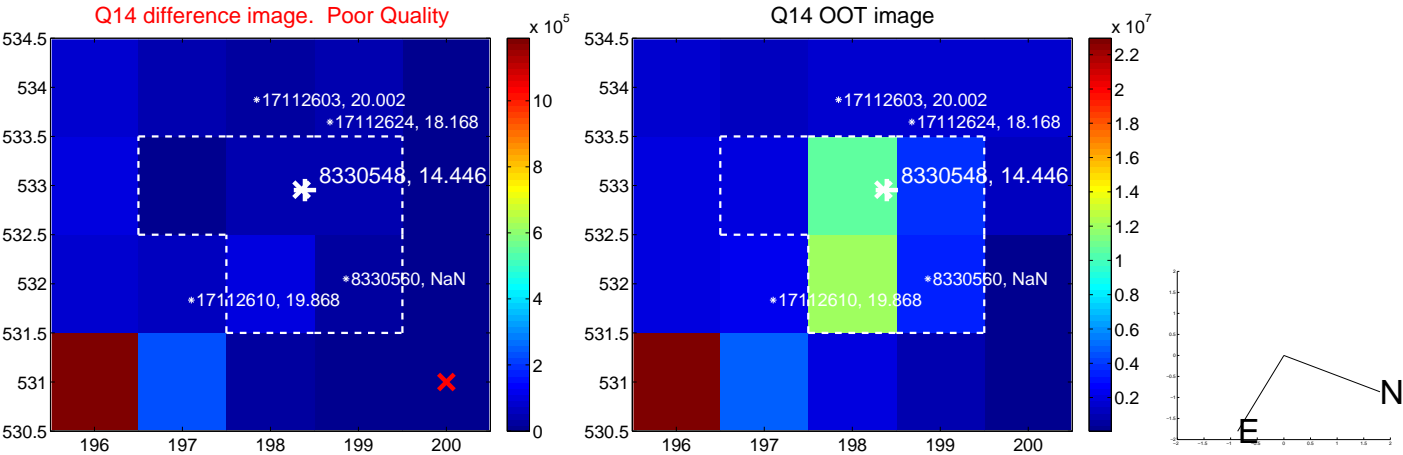
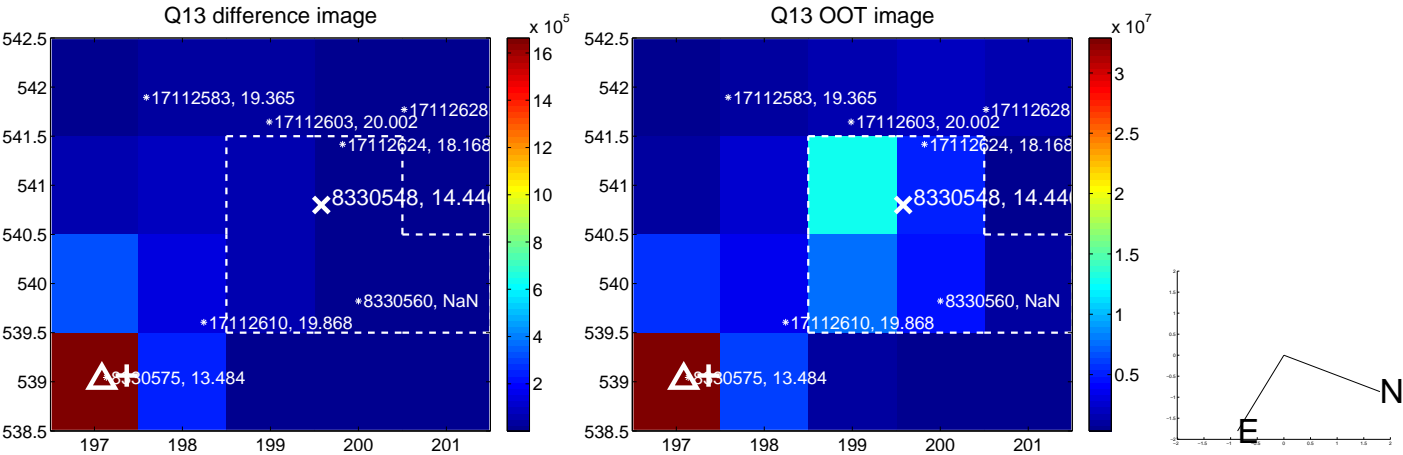
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



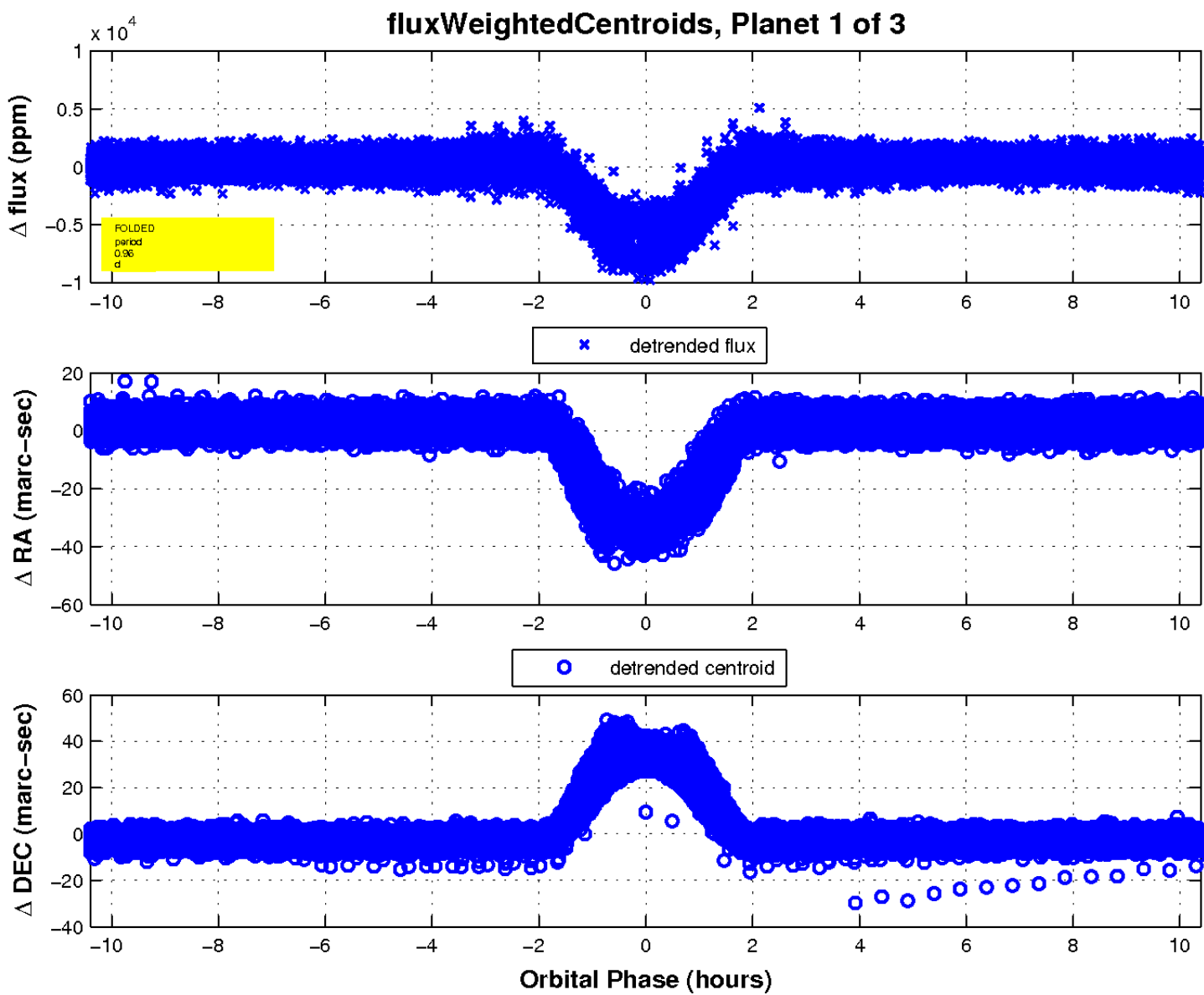
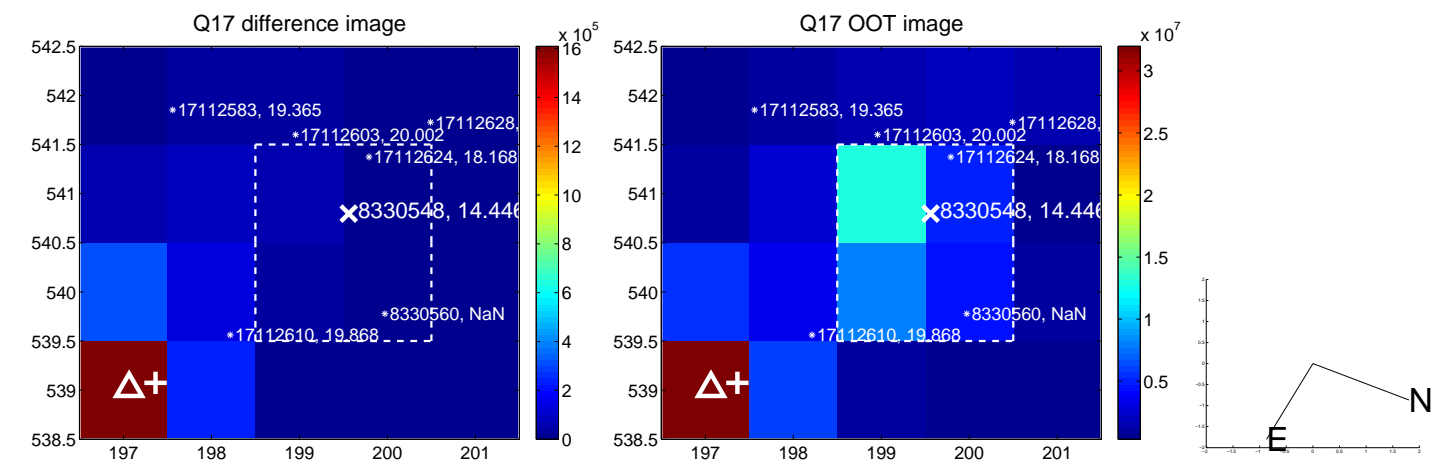
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

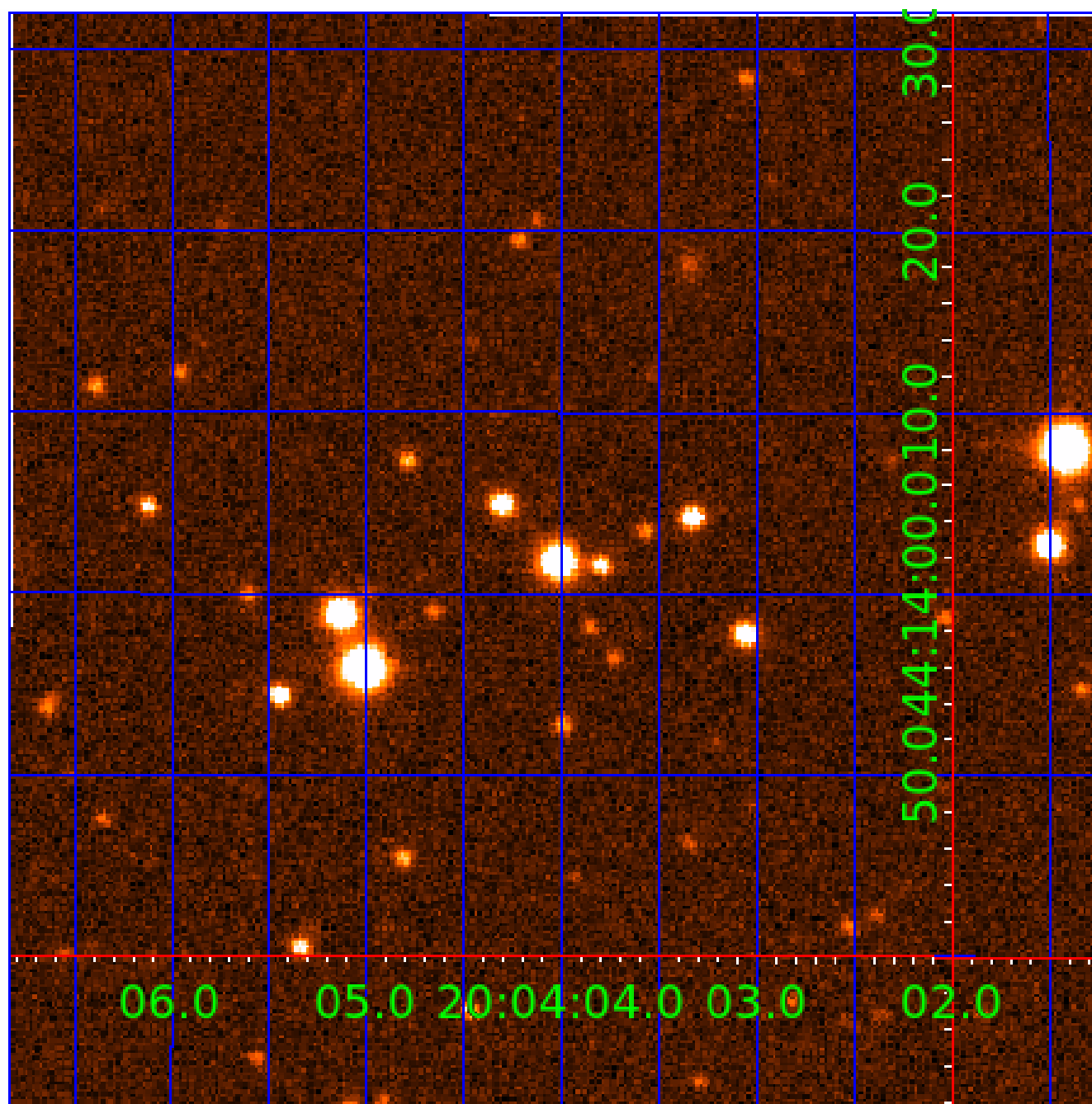


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008330548

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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008330548-02	OBS	No	321.397280	225.429319	18.7	0.570	10.0	0.1	1.12	6289	0.50	1.88
008330548-03	OBS	No	321.495235	225.334982	115.0	119.599	9.9	0.3	1.12	6289	1.23	1.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008330548-01	OBS	FP	0.00	0	0	1	1	SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
008330548-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008330548-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST

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

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

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

Ephemeris Match Information For 008330548-02

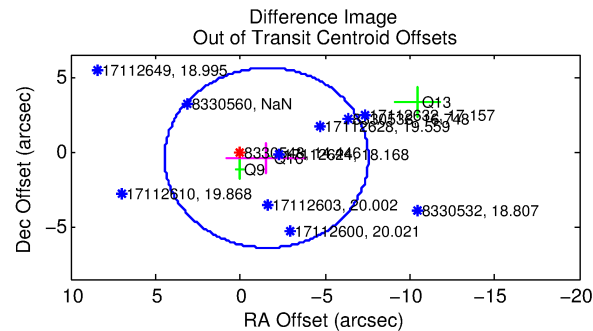
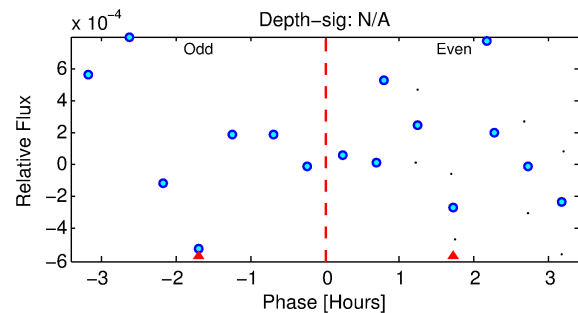
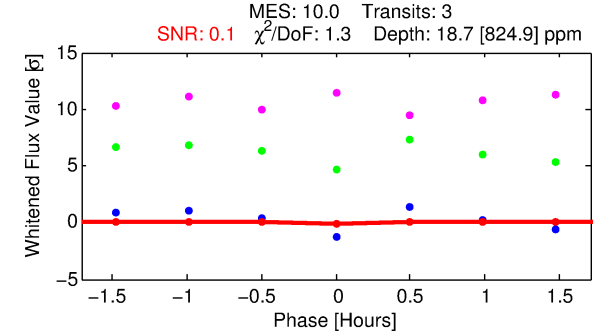
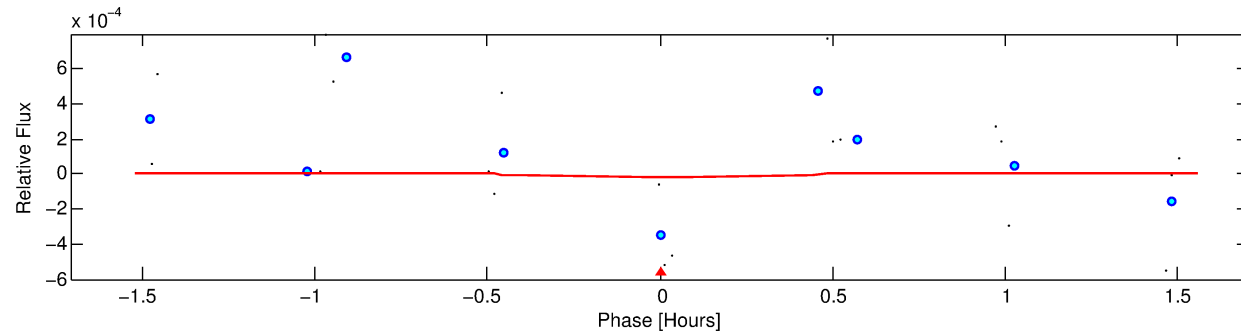
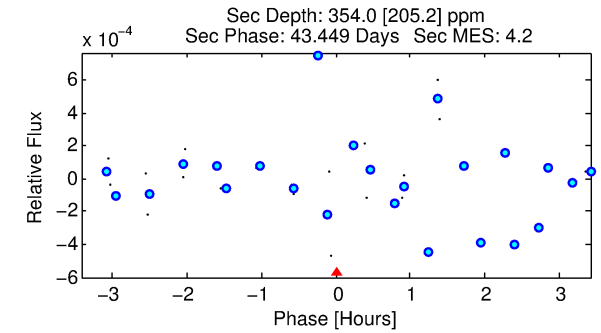
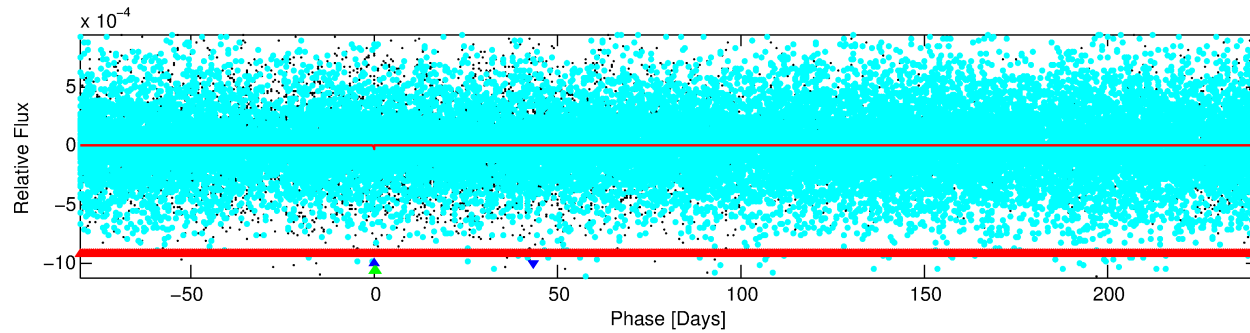
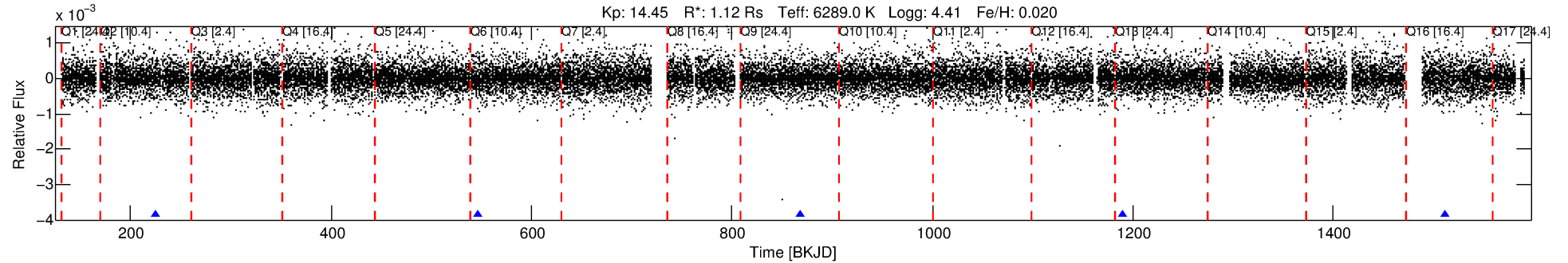
No Significant Match Found

DV One-Page Summary

KIC: 8330548 Candidate: 2 of 3 Period: 321.397 d

KOI: K01132 Corr: No Ephemeris Match

Kp: 14.45 R*: 1.12 Rs T_{eff}: 6289.0 K Logg: 4.41 Fe/H: 0.020



DV Fit Results:

Period = 321.39728 [0.06470] d
Epoch = 225.4293 [0.3540] BKJD
Rp/R* = 0.0041 [8.9130]
a/R* = 4323.83 [46611637.16]
b = 0.03 [350247.71]
Seff = 1.88 [0.82]
Teq = 298 [33] K
Rp = 0.50 [1087.38] Re
a = 0.9661 [0.2785] AU
Ag = 729730.73 [3179813099.13] [0.00σ]
Teffp = 13487 [14692681] K [0.00σ]

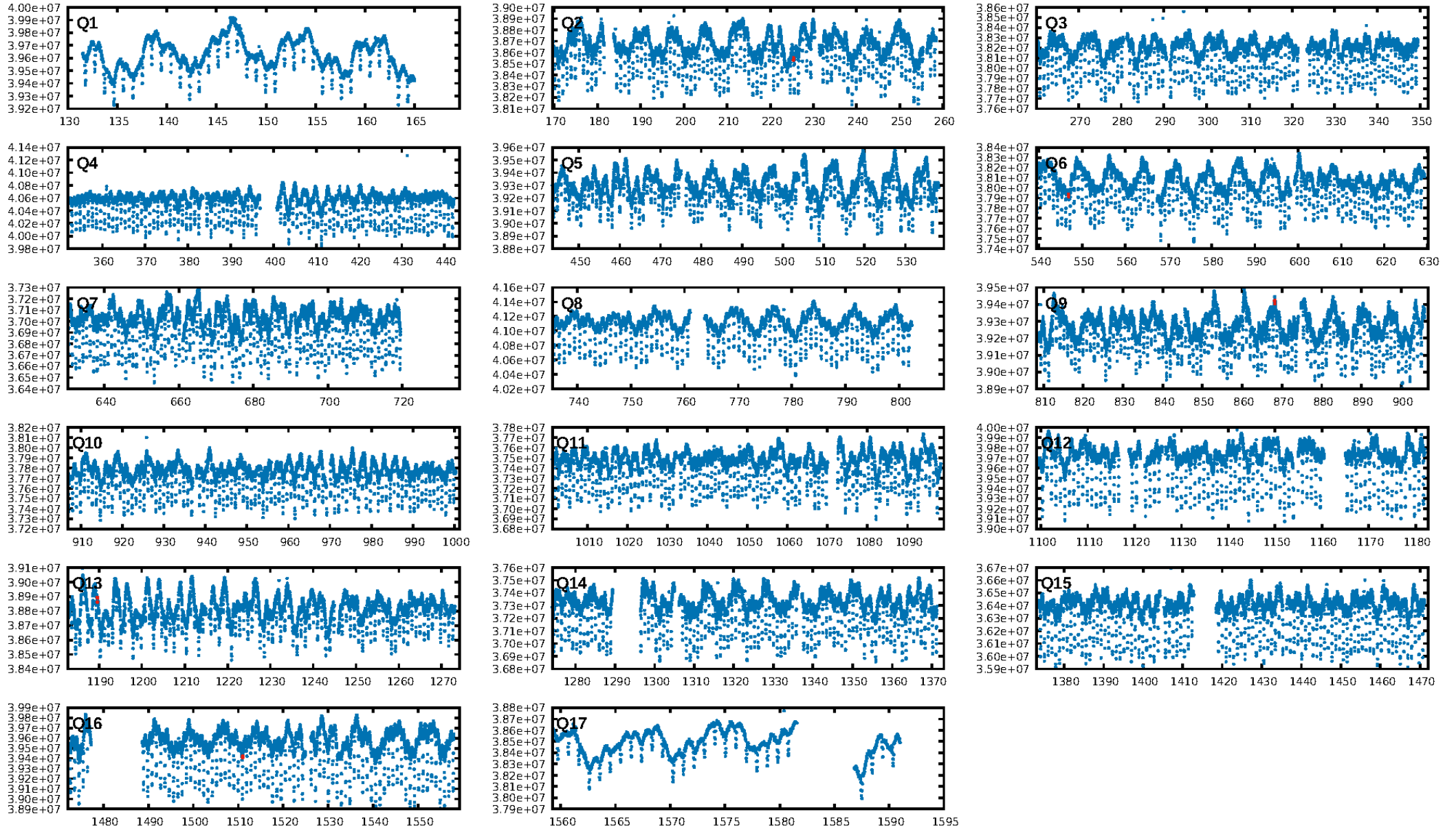
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [2190.05σ]
LongPeriod-sig: 1.6% [0.02σ]
ModelChiSquare2-sig: 88.5%
ModelChiSquareGof-sig: 96.8%
Bootstrap-pfa: 7.62e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1273
Centroid-sig: N/A
Centroid-so: 53.241 arcsec [0.65σ]
OotOffset-rm: 1.616 arcsec [0.81σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-rm: **11.896 arcsec [4.36σ]**
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/5]

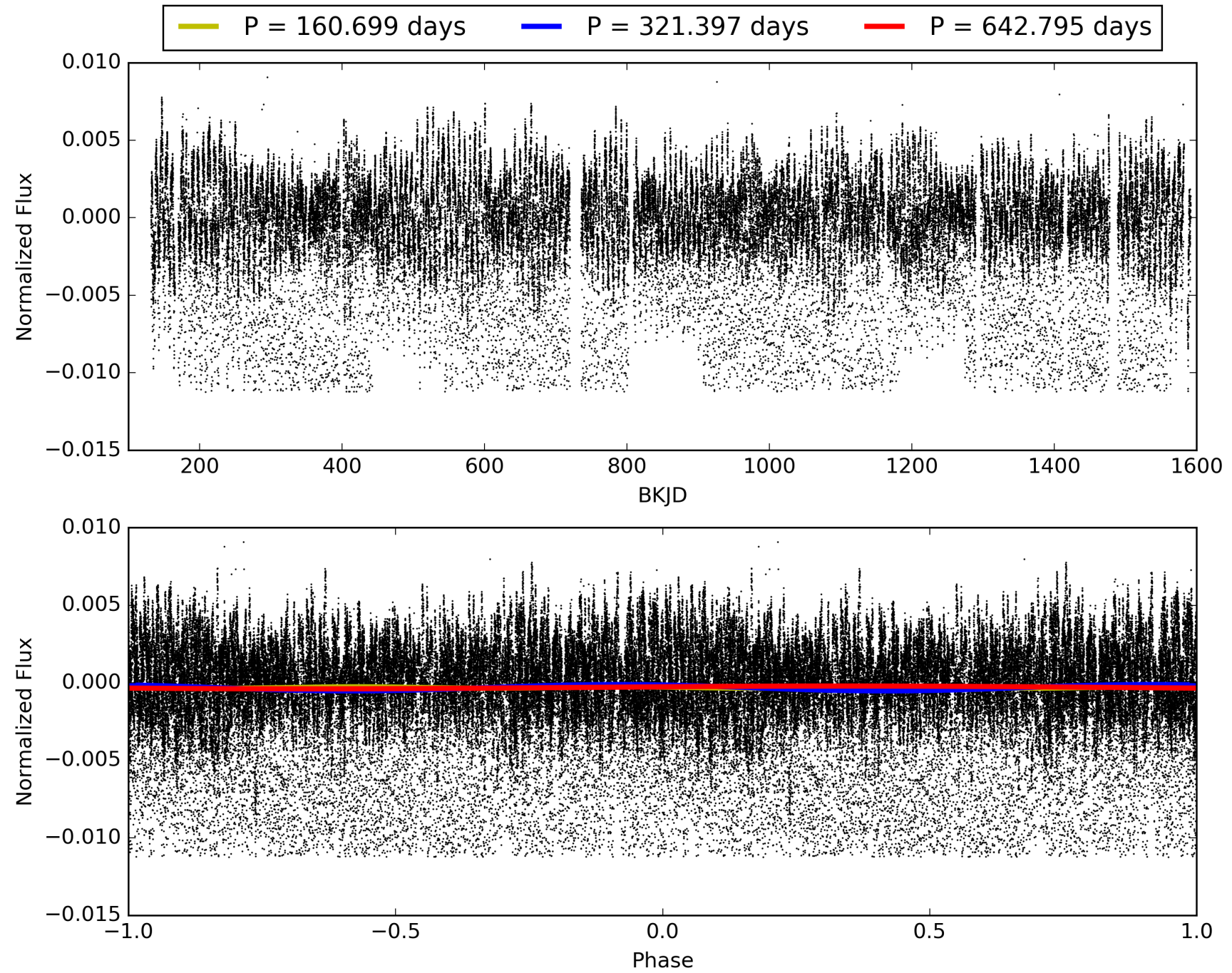
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008330548-02, PDC Light Curves

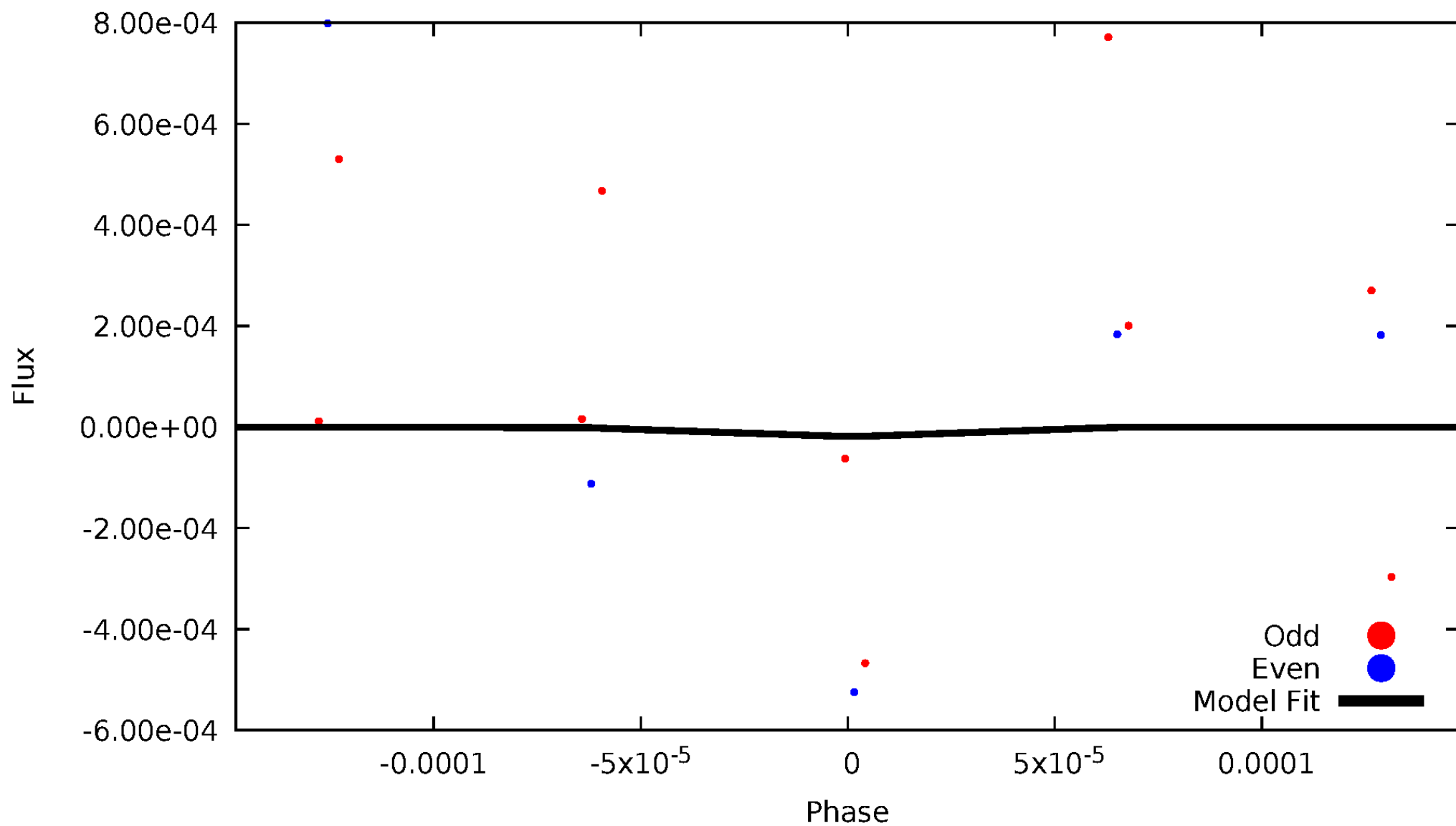


TCE 008330548-02



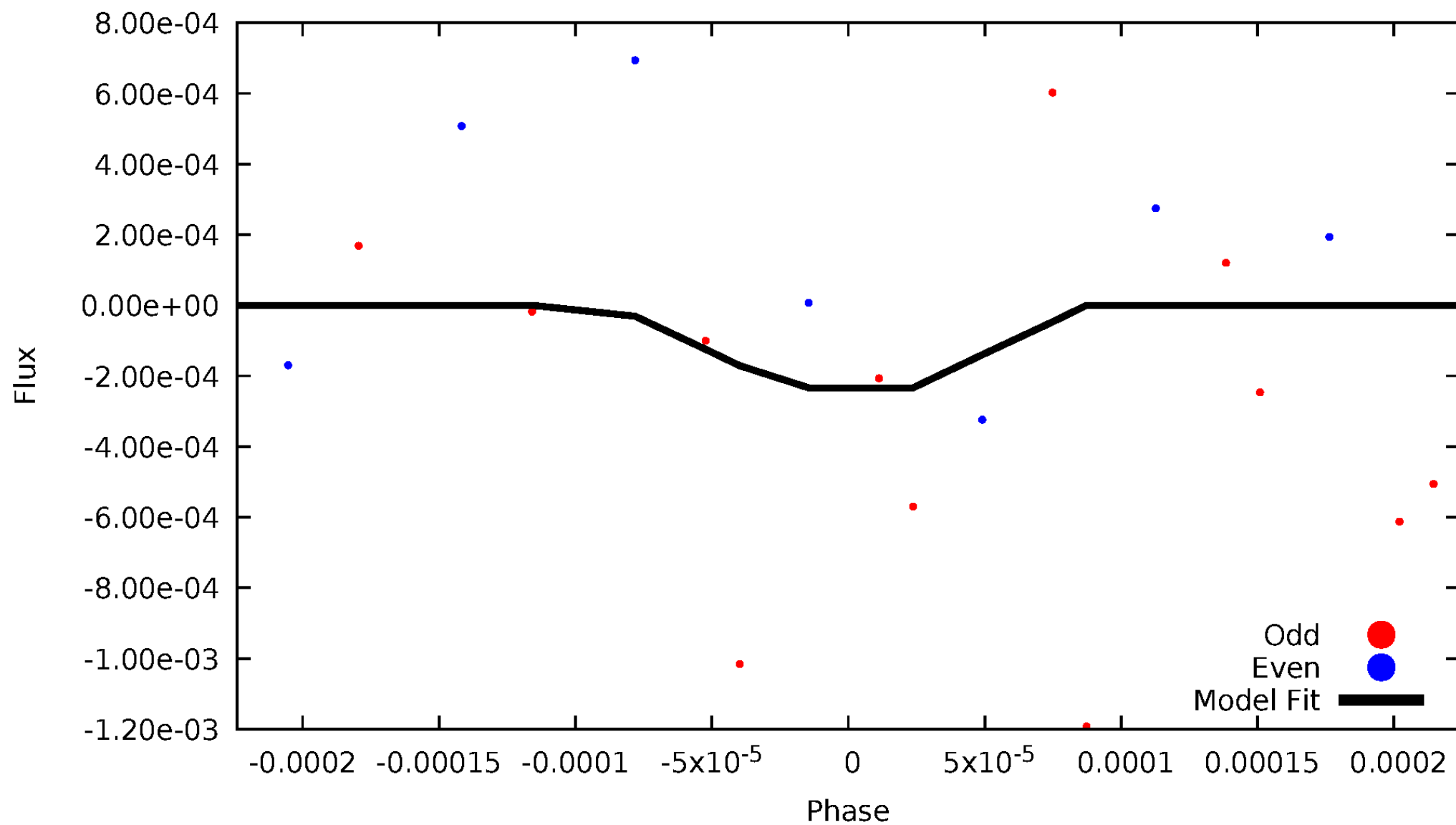
DV Odd/Even

TCE 008330548-02



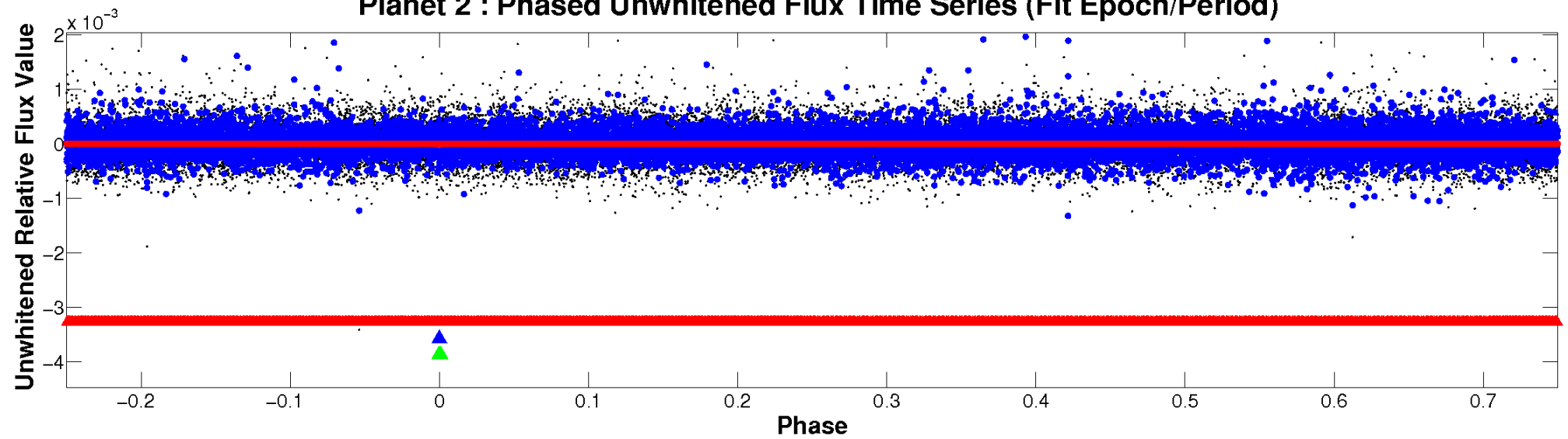
ALT Odd/Even

TCE 008330548-02

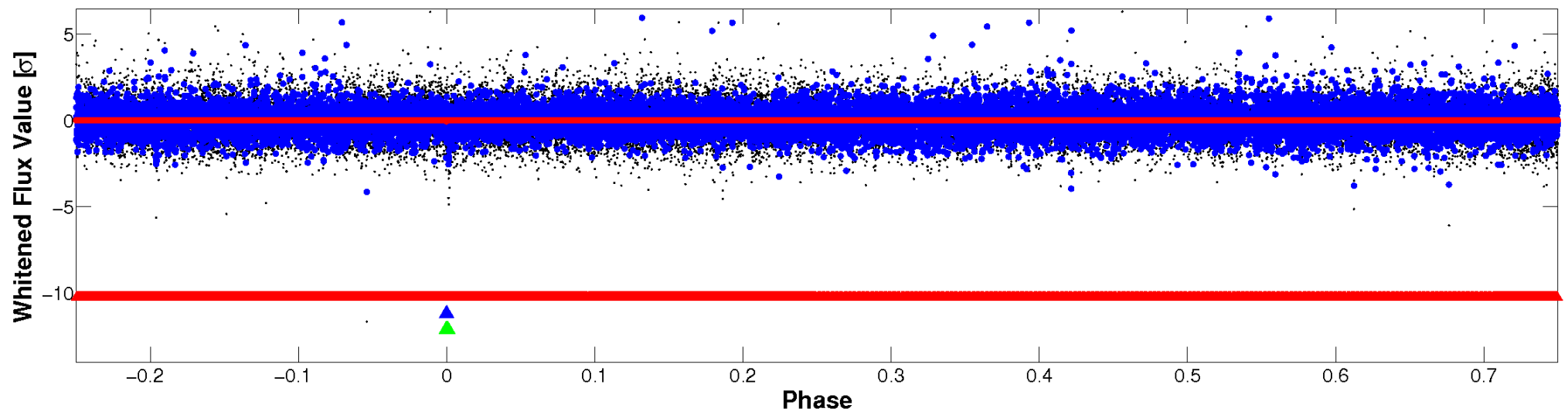


Non-Whitened Vs. Whitened Light Curve

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

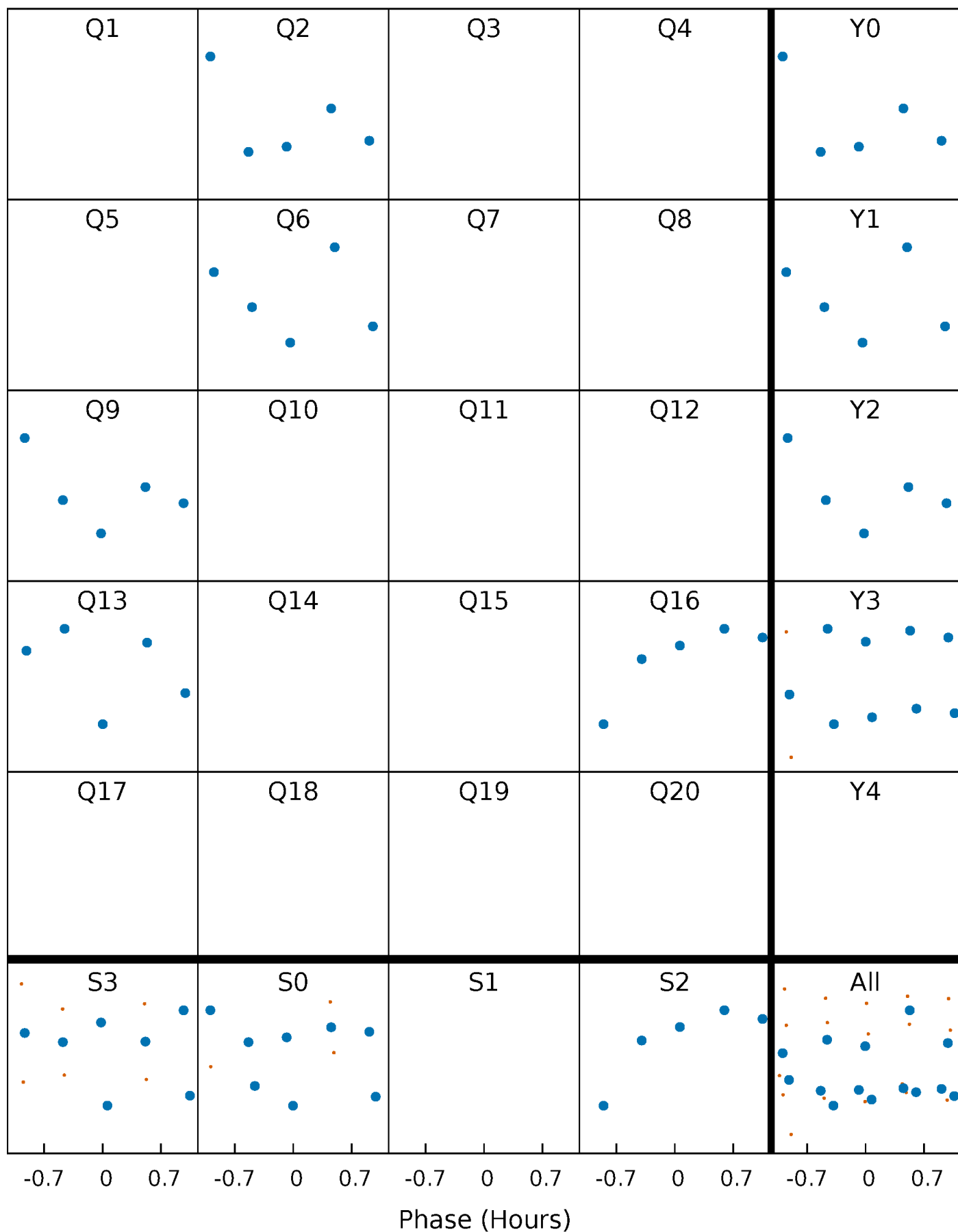


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



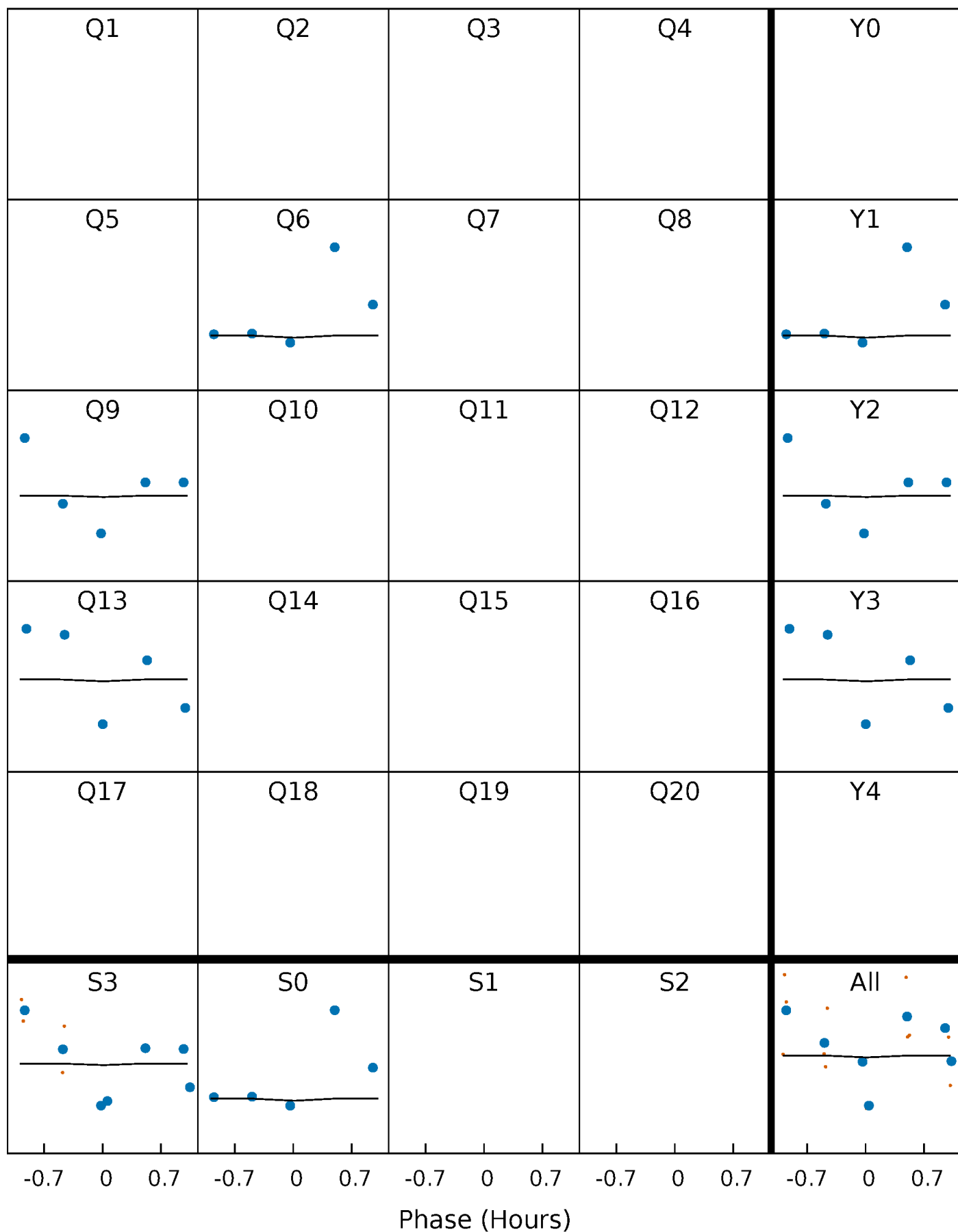
PDC Quarter-Phased Transit Curves

TCE 008330548-02 P=321.397280 Days $T_0=225.429319$ (BKJD)



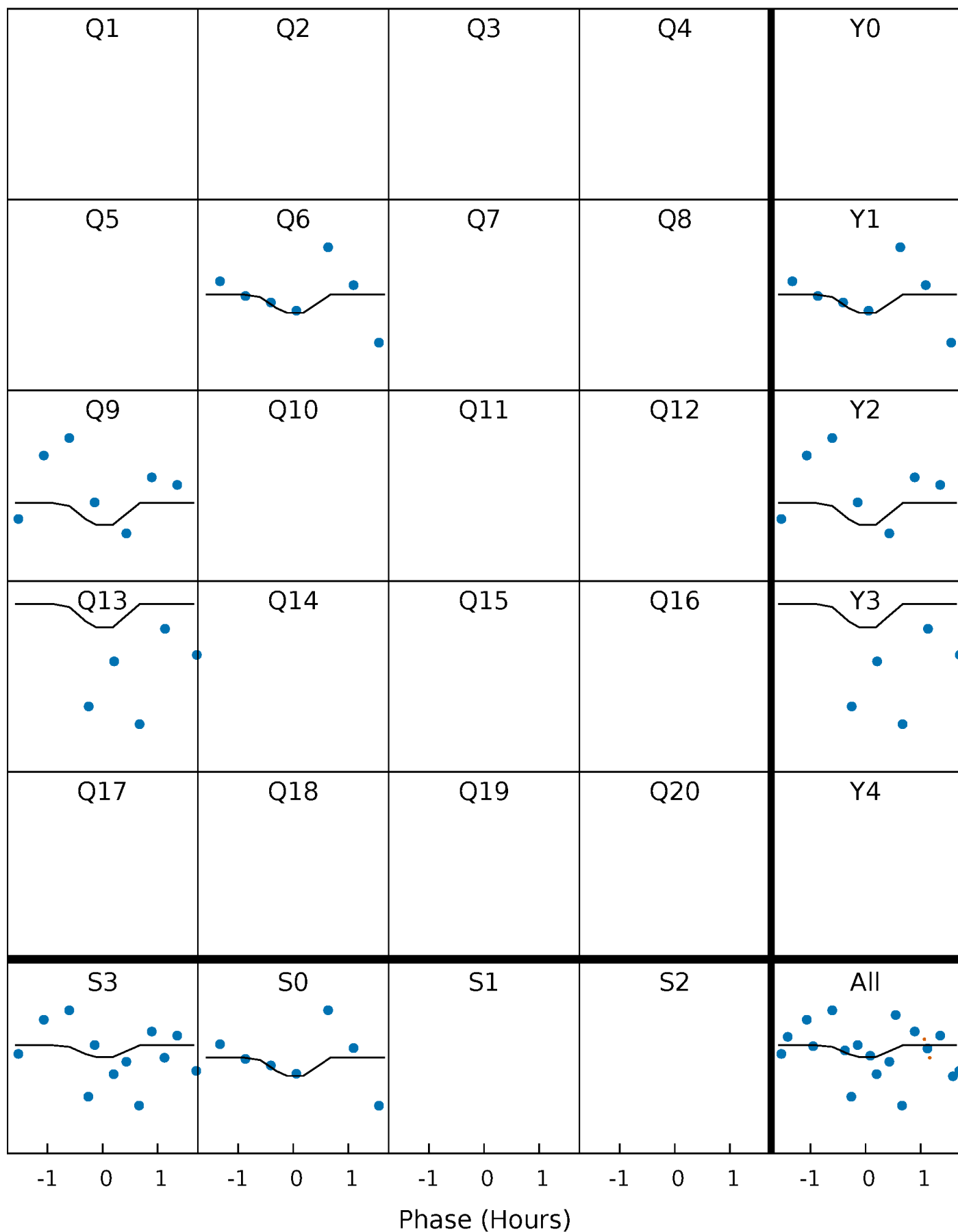
DV Quarter-Phased Transit Curves

TCE 008330548-02 P=321.397280 Days $T_0=225.429319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

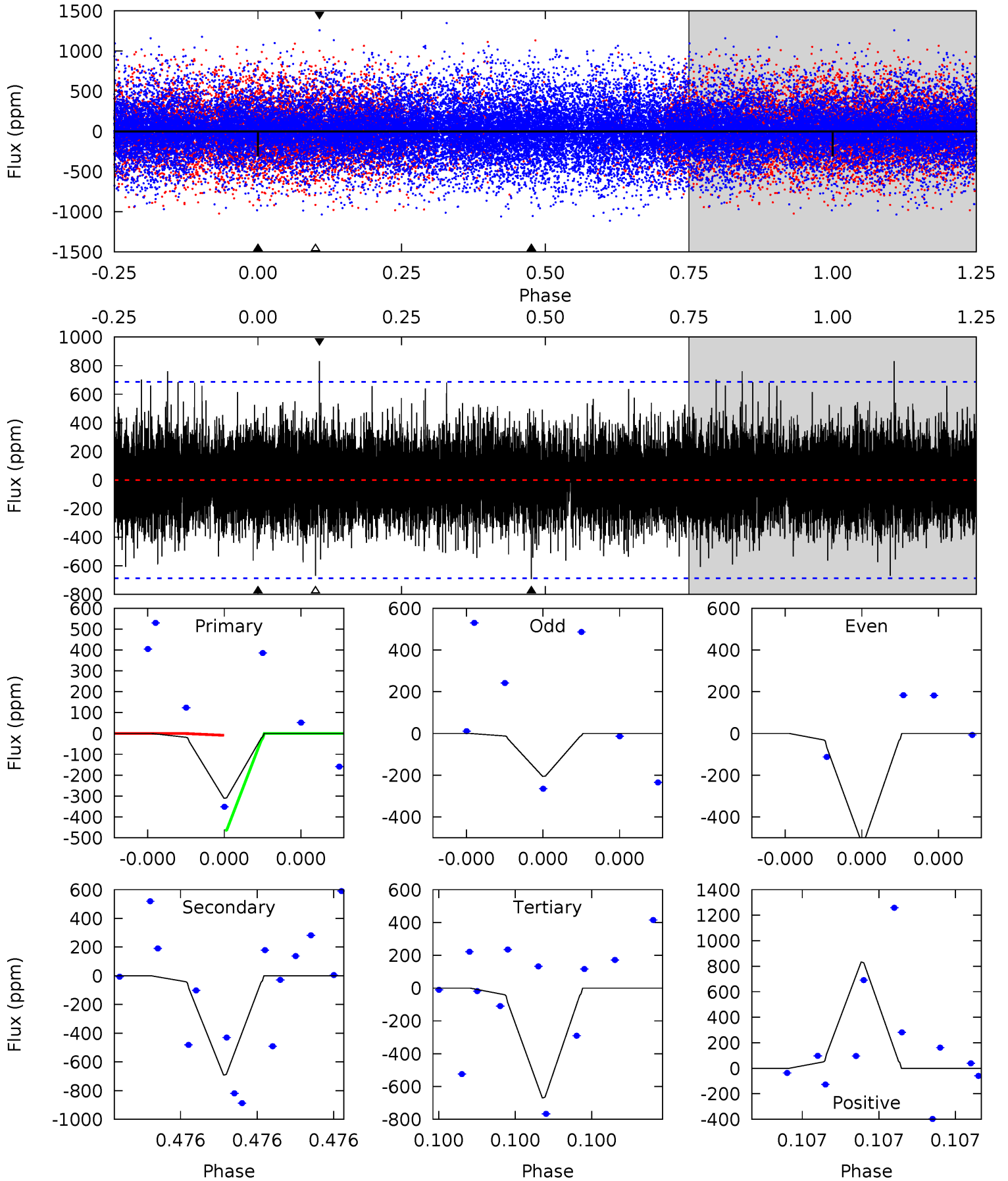
TCE 008330548-02 P=321.385843 Days $T_0=225.436936$ (BKJD)



DV Model-Shift Uniqueness Test

008330548-02, P = 321.397280 Days, E = 225.429319 Days

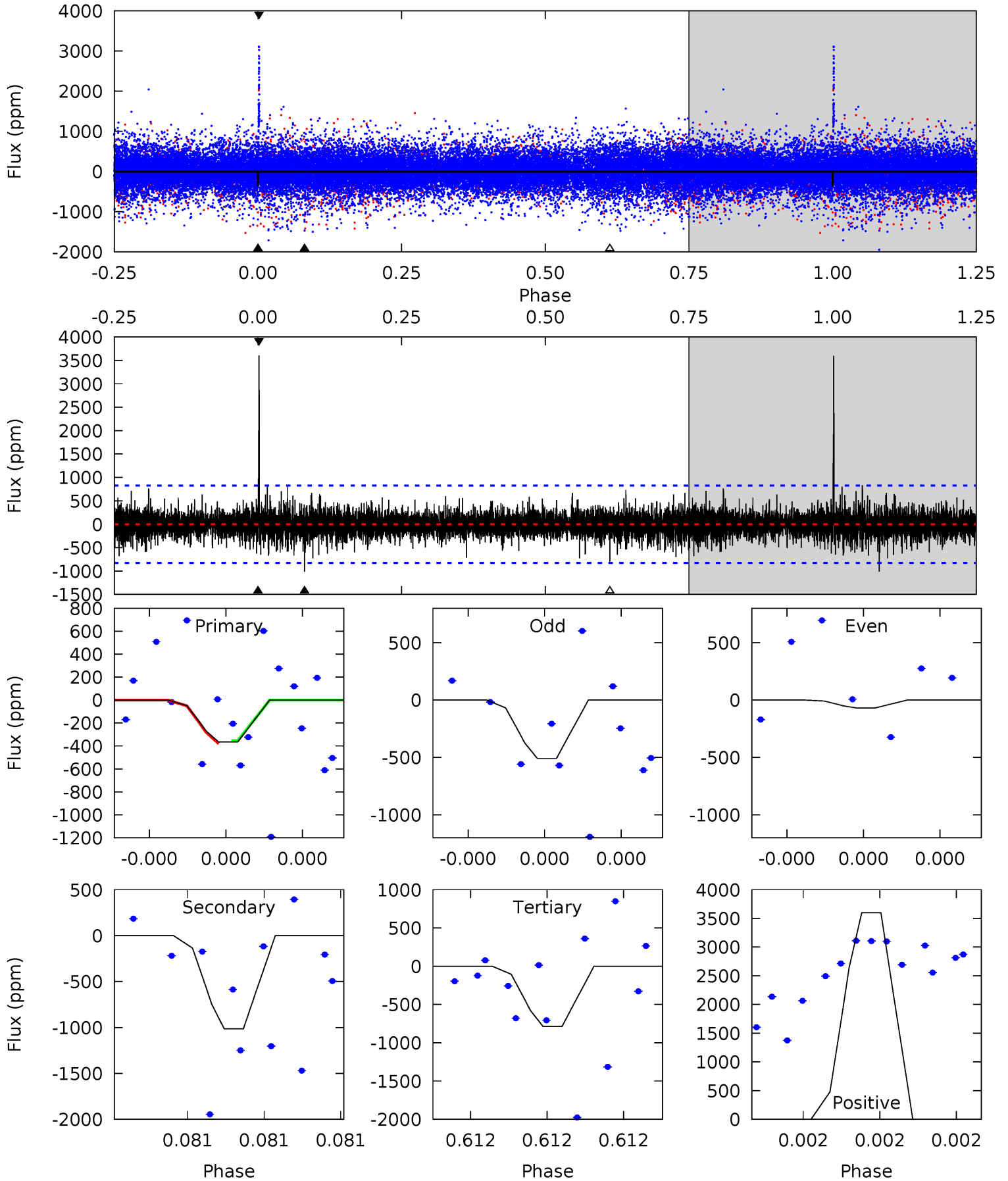
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.62	5.85	5.66	7.03	5.80	3.83	1.28	-3.03	-4.41	0.19	-1.18	1.25	0.77	0.55	1.82



Alt Model-Shift Uniqueness Test

008330548-02, P = 321.385843 Days, E = 225.436936 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.56	7.10	5.50	25.2	5.78	3.79	1.34	-2.94	-22.6	1.60	-18.1	1.41	3.25	0.78	0.09



Stellar Parameters For KIC 008330548

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6289^{+174}_{-217}	$4.407^{+0.070}_{-0.224}$	$0.020^{+0.250}_{-0.300}$	$1.118^{+0.388}_{-0.129}$	$1.164^{+0.169}_{-0.152}$	$1.173^{+0.360}_{-0.650}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+35%/-12%	+15%/-13%	+31%/-55%
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 008330548-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-692 ± 118	$806.19^{+896.80}_{-559.60}$	425^{+35}_{-22}	1350^{+413}_{-2691}	$0.521^{+5.165}_{-0.412}$
Alt.	-1014 ± 143	$756.89^{+818.29}_{-521.98}$	423^{+34}_{-23}	1453^{+407}_{-2728}	$0.884^{+8.172}_{-0.677}$

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 $A_{obs} \gg 1.0$

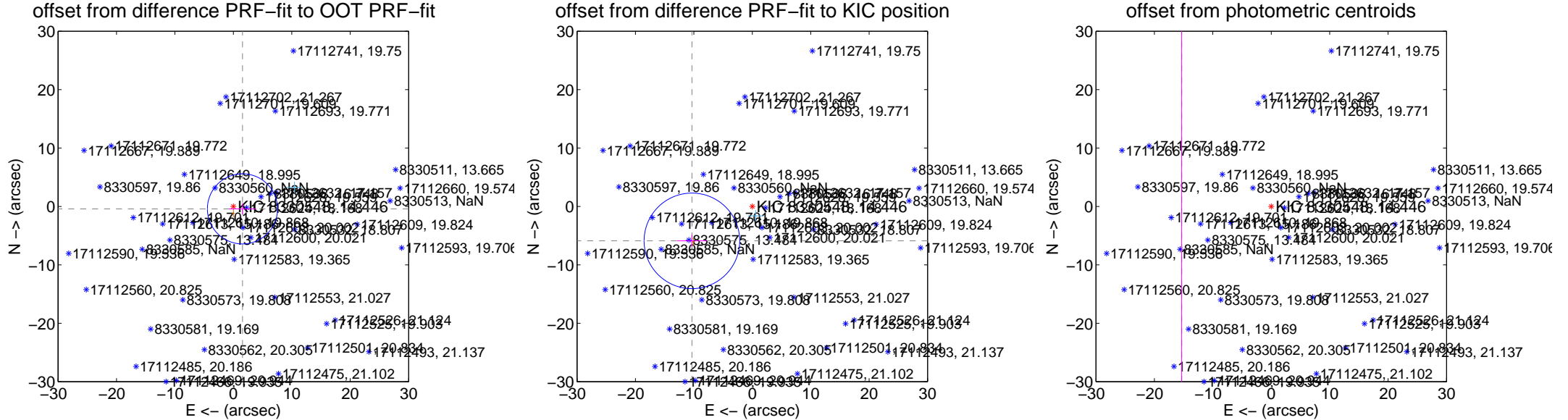
DV Centroid Data

Supplemental centroid analysis for 008330548-02. Kepler magnitude: 14.45. Transit SNR 0.09

There are 1 quarters with good PRF difference image offsets

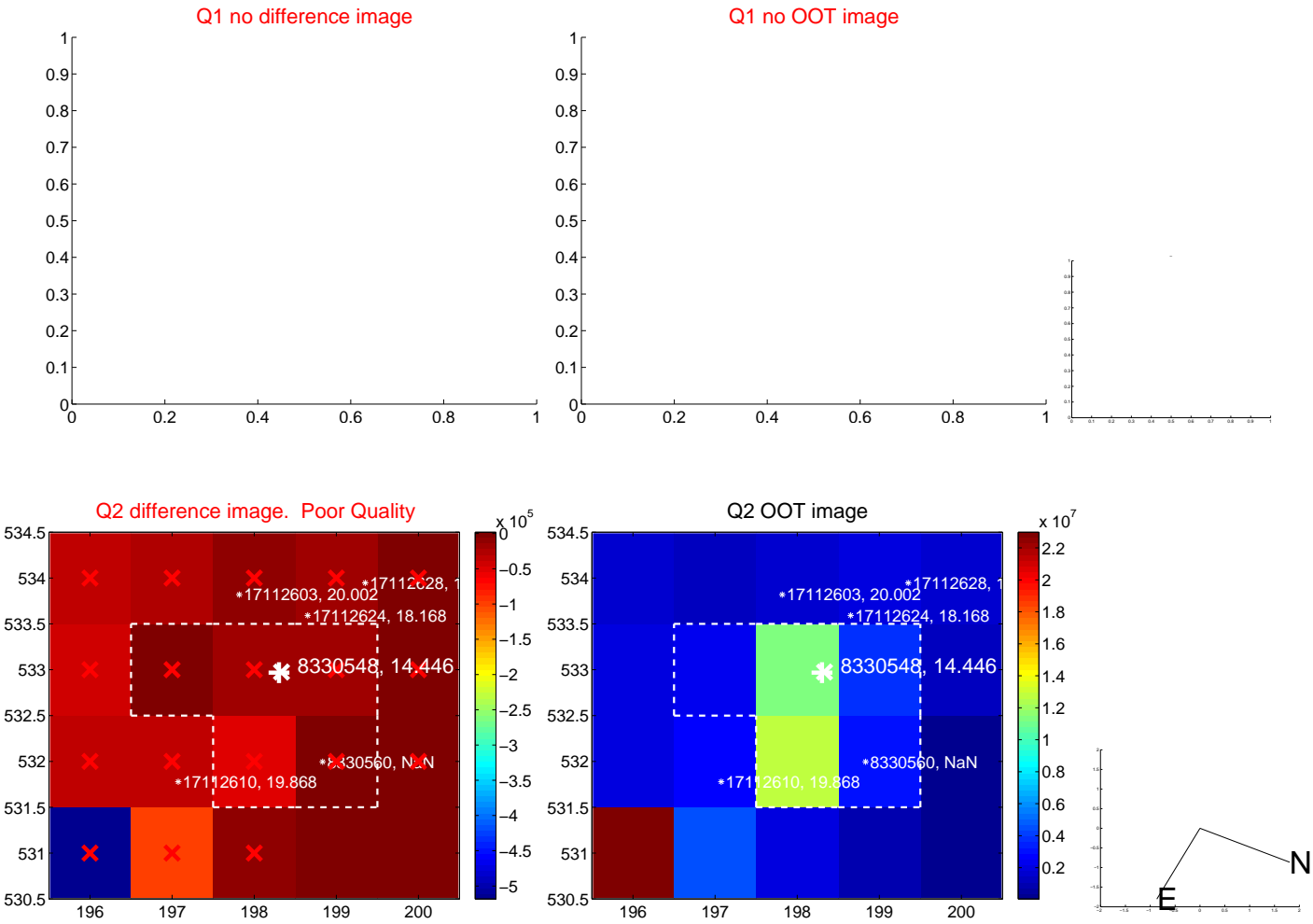
The OOT PRF centroid is offset from the target star catalog position by about 13.27 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.616 ± 2.002	0.81	-1.562 ± 2.331	-0.413 ± 0.987
PRF-fit source offset from KIC position	11.896 ± 2.727	4.36	10.336 ± 2.554	-5.889 ± 1.030
photometric centroid source offset	53.24 ± 81.92	0.65	15.33 ± 83.20	50.98 ± 81.80



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.

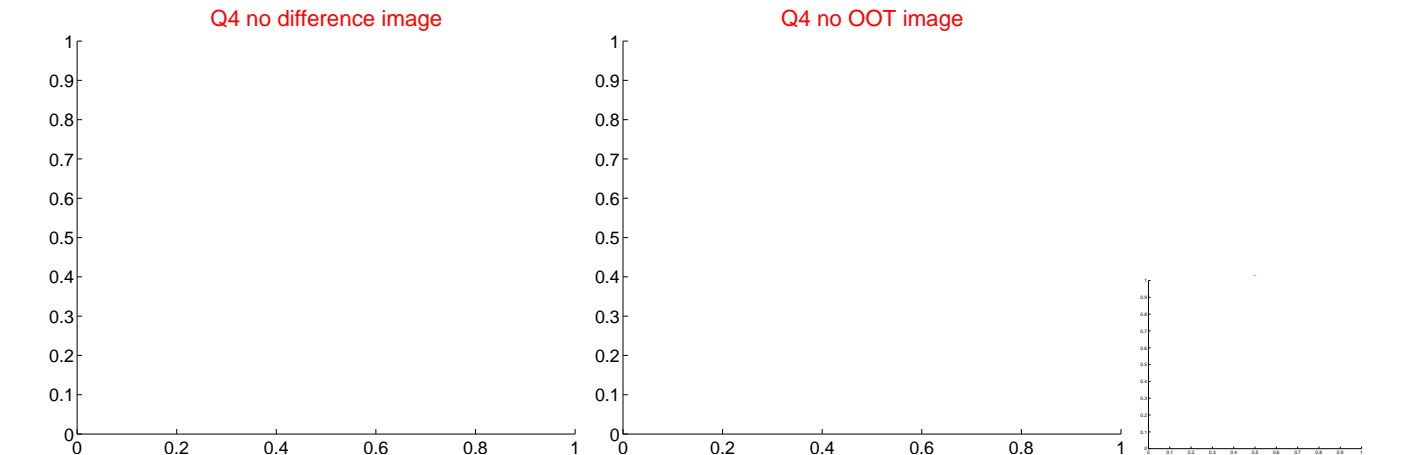
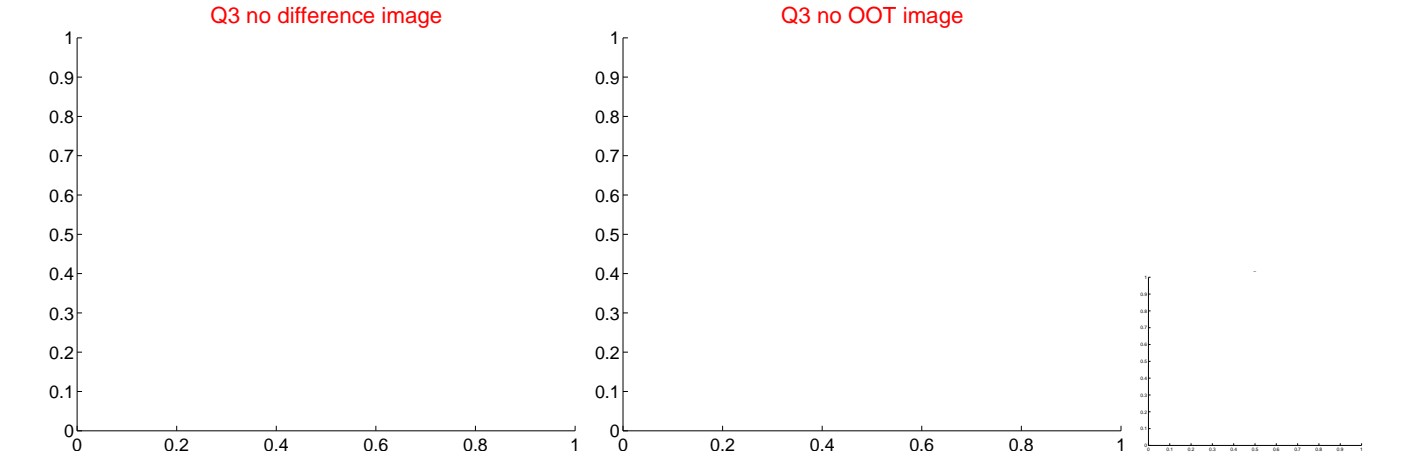
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



Q2 difference image. Poor Quality

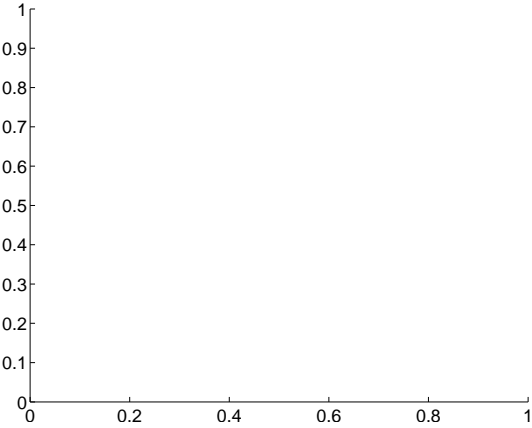
Q2 OOT image

Compass

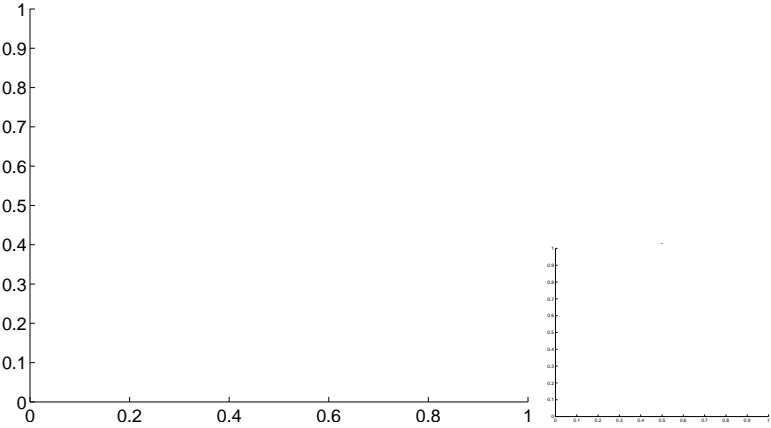


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

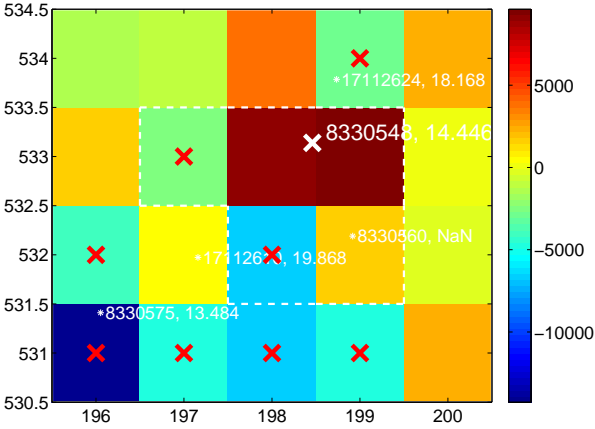
Q5 no difference image



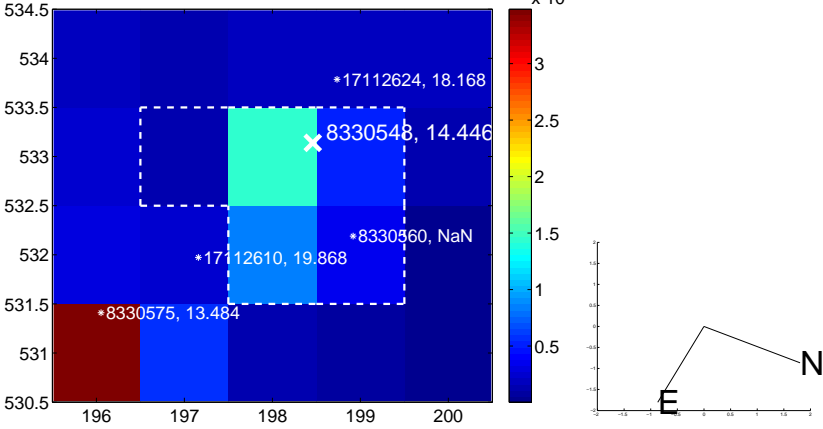
Q5 no OOT image



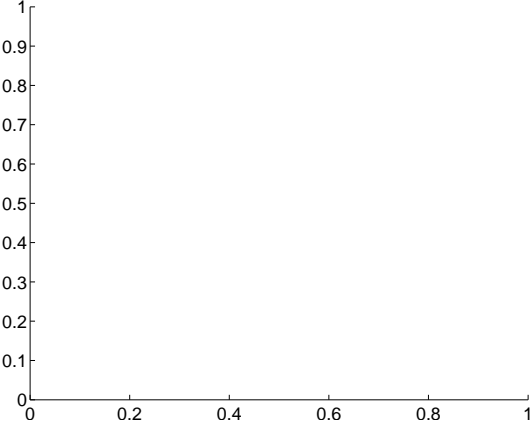
Q6 difference image. Poor Quality



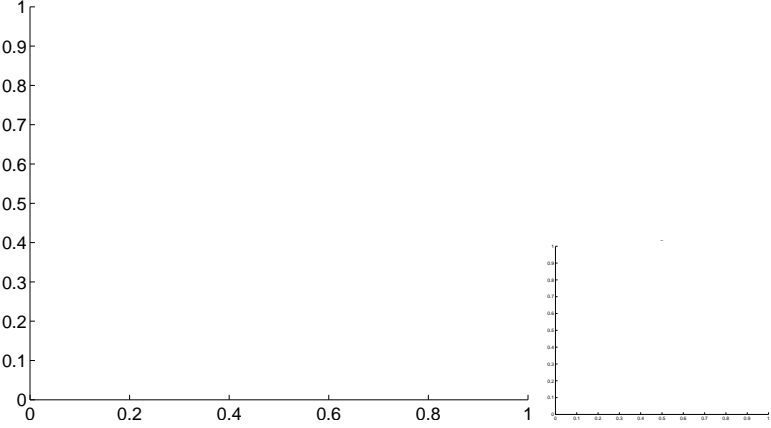
Q6 OOT image



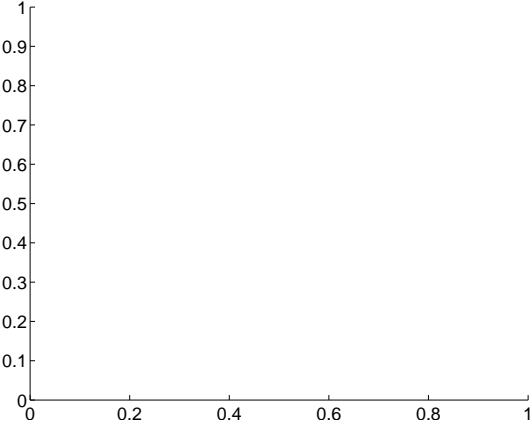
Q7 no difference image



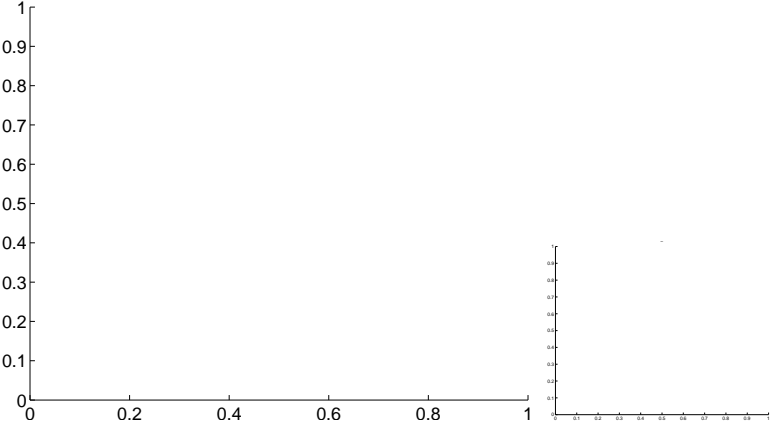
Q7 no OOT image



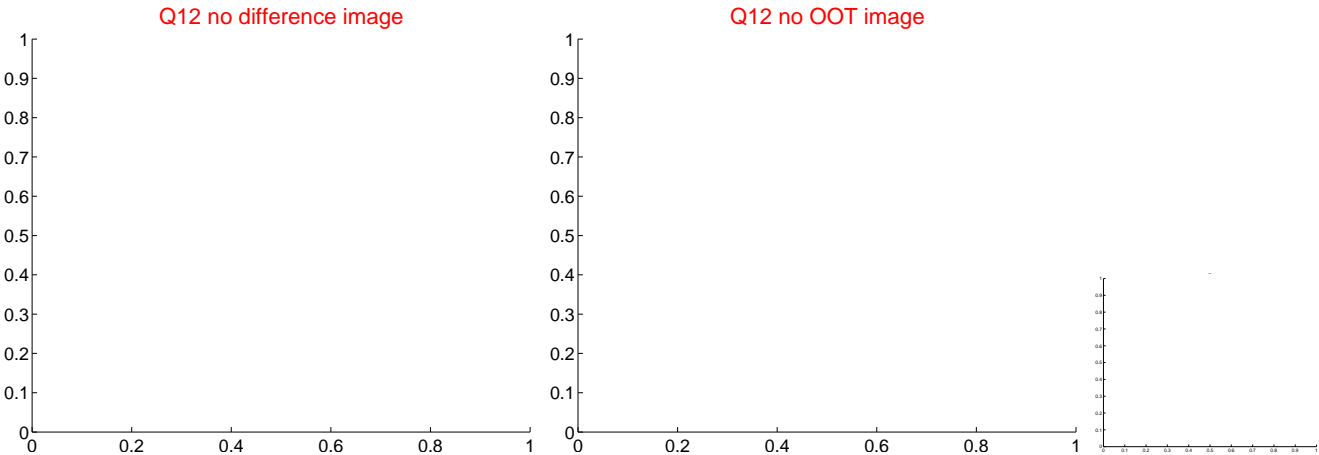
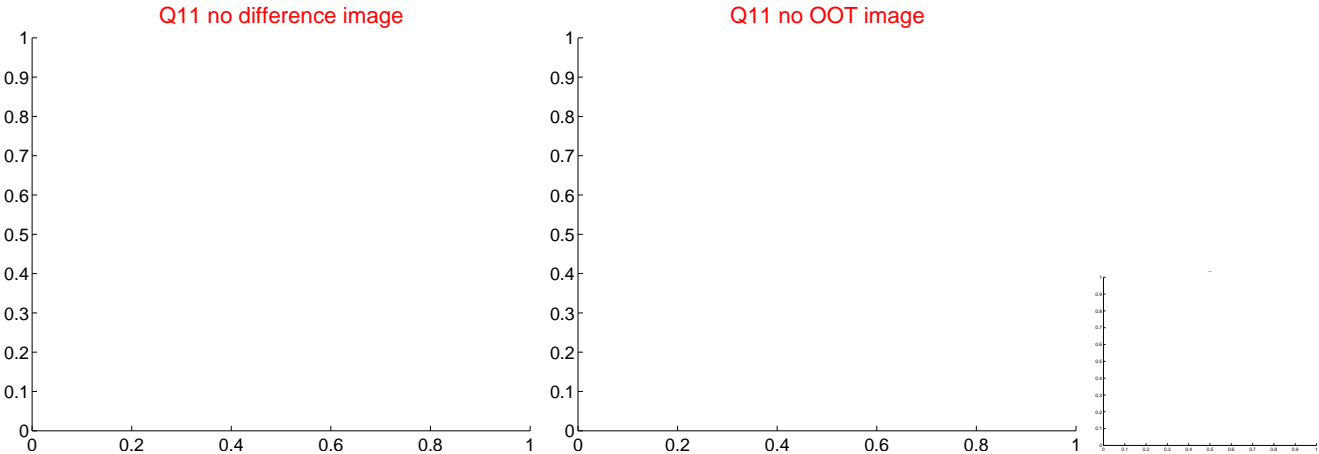
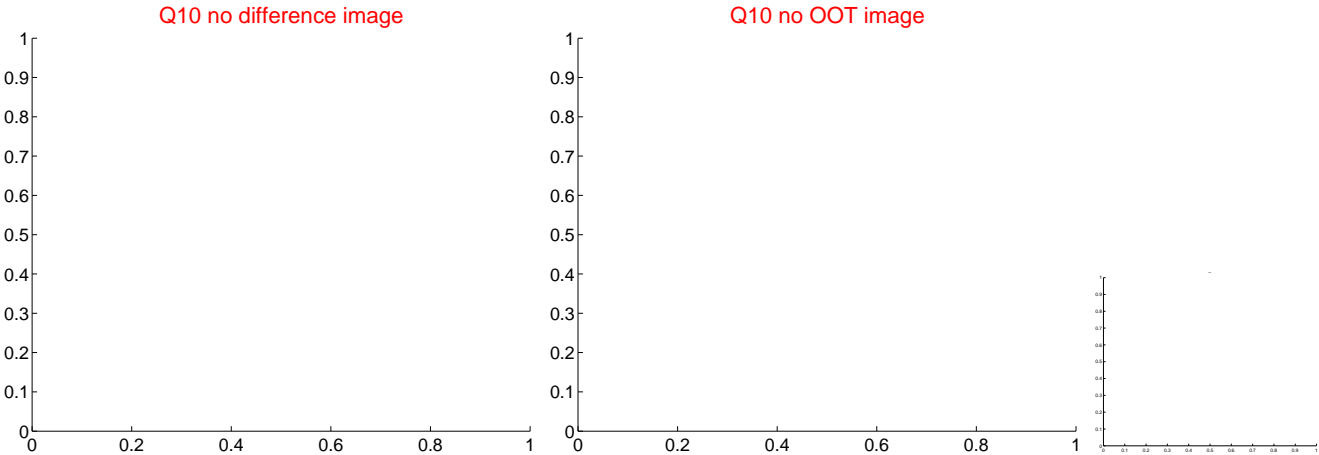
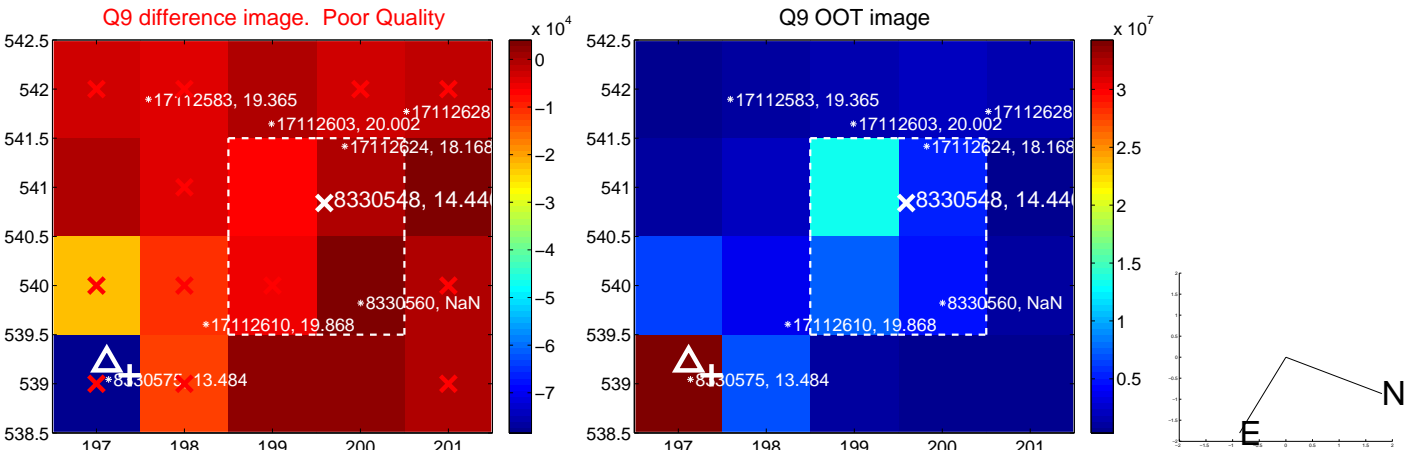
Q8 no difference image



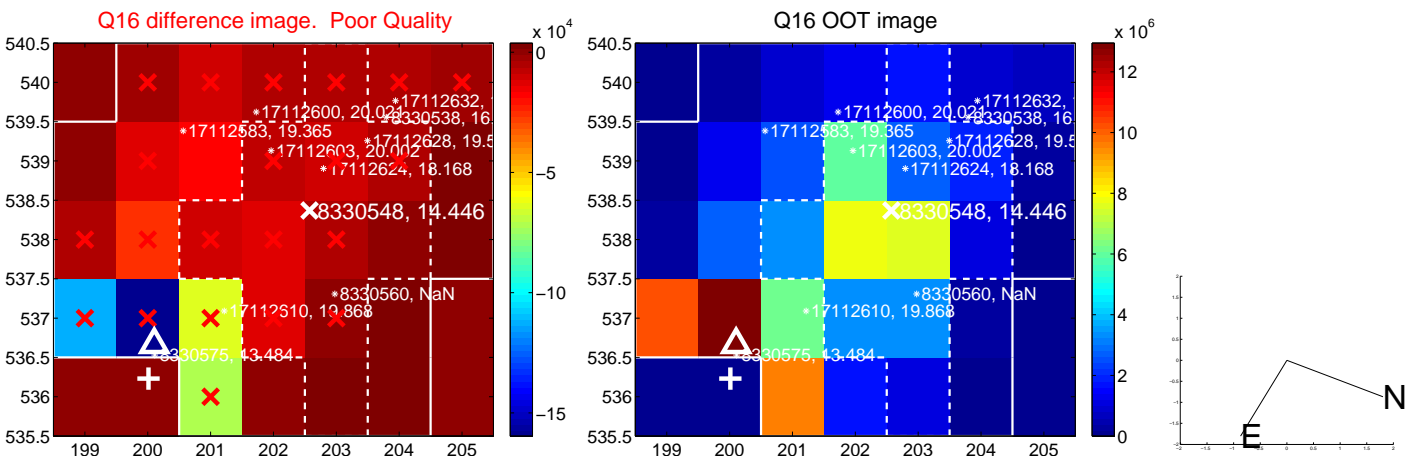
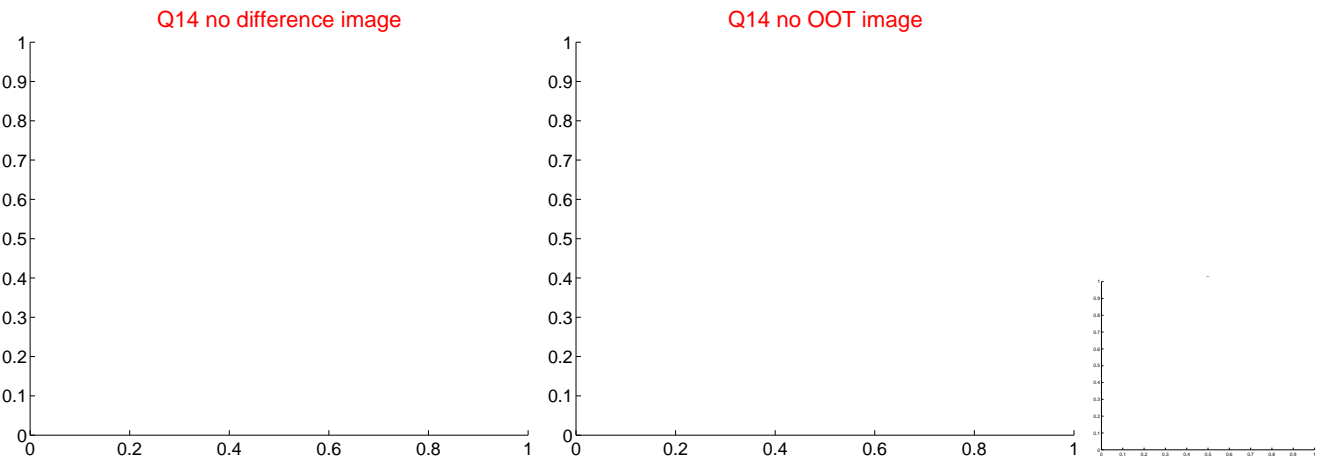
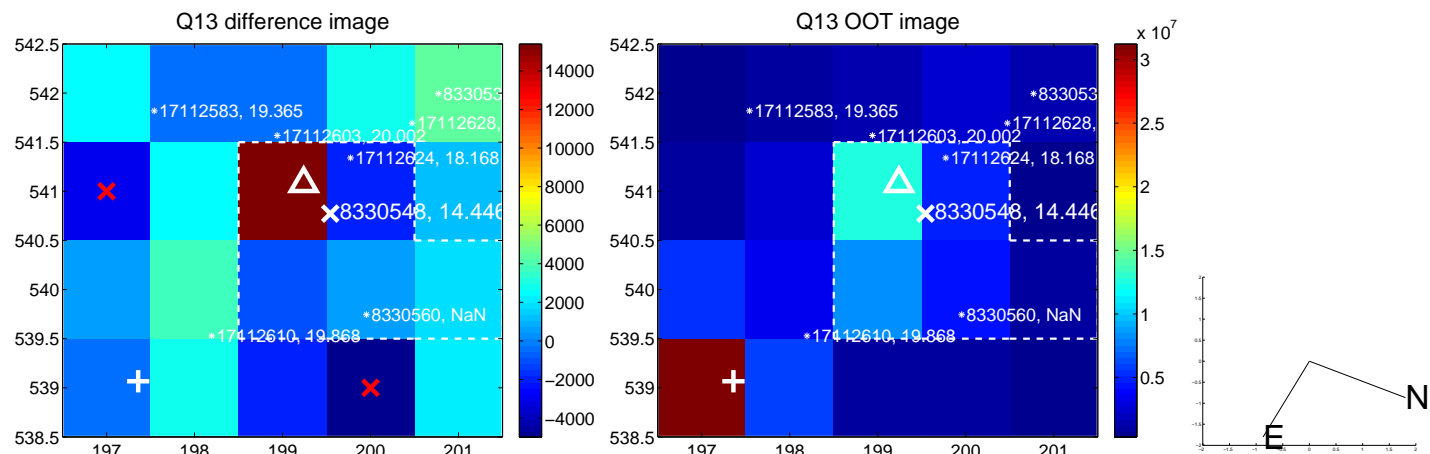
Q8 no OOT image



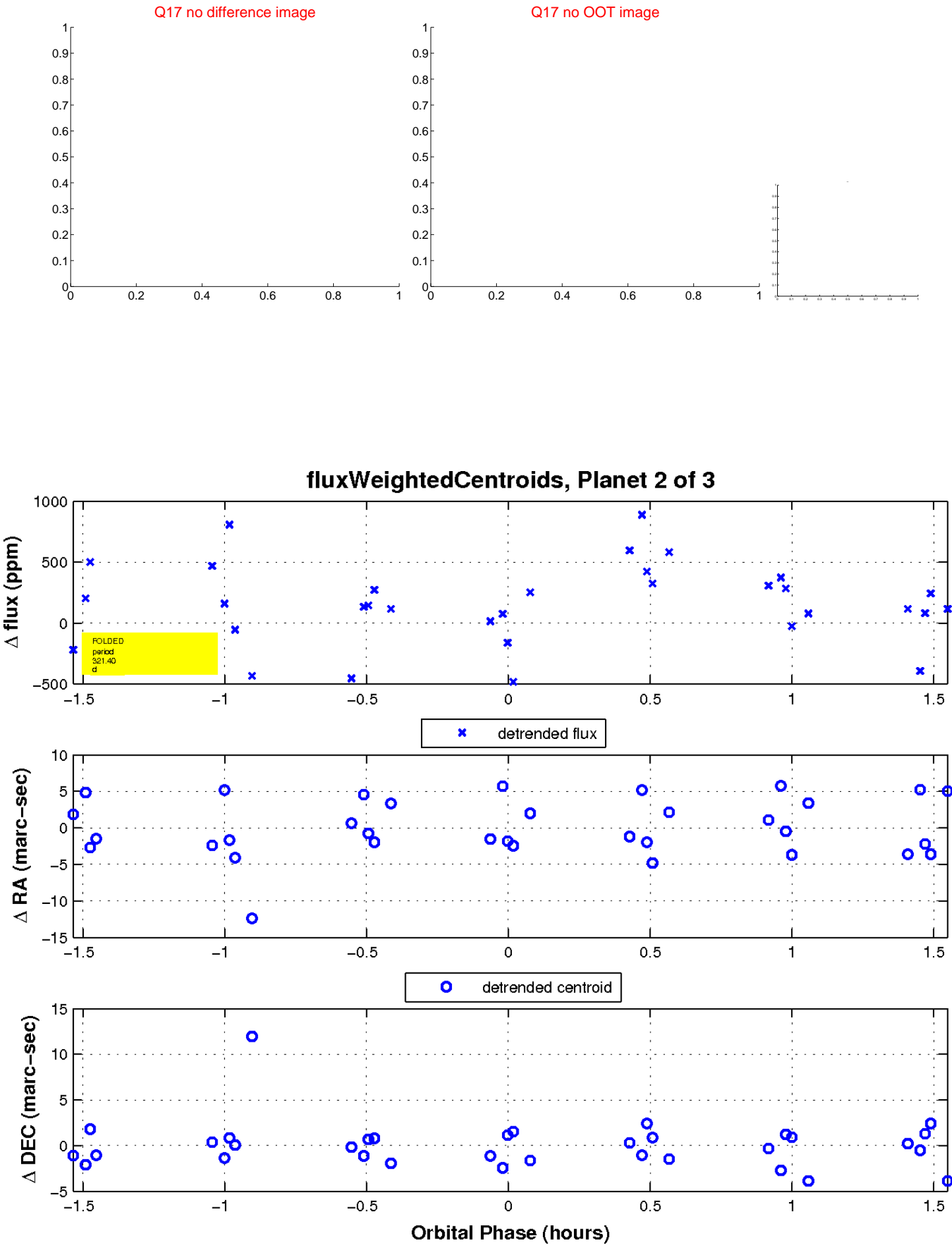
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



This astronomical image shows a field of stars against a dark background. A blue grid is overlaid on the image. Green text labels are present: '06.0', '05.0', '20:04:04.0', '03.0', and '02.0' along the bottom edge, and '50.044:14:00.0', '10.0', '20.0', and '30.0' along the right edge. The stars vary in brightness, with some appearing as distinct points and others as larger, more diffuse blobs.

Declination

KIC 008330548

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})
008330548-01	OBS	1132.01	0.957074	131.776727	7787.6	3.465	1057.7	702.3	1.12	6289	12.13	4381.15
008330548-02	OBS	No	321.397280	225.429319	18.7	0.570	10.0	0.1	1.12	6289	0.50	1.88
008330548-03	OBS	No	321.495235	225.334982	115.0	119.599	9.9	0.3	1.12	6289	1.23	1.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008330548-01	OBS	FP	0.00	0	0	1	1	SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH
008330548-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008330548-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST

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

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

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

Ephemeris Match Information For 008330548-03

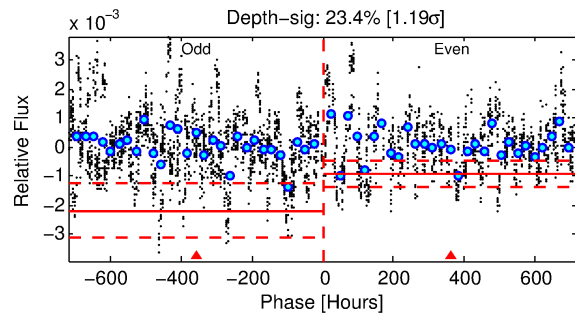
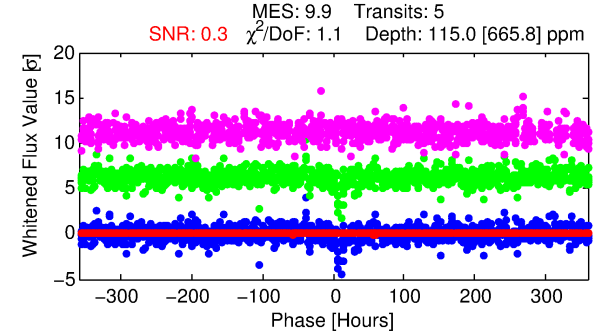
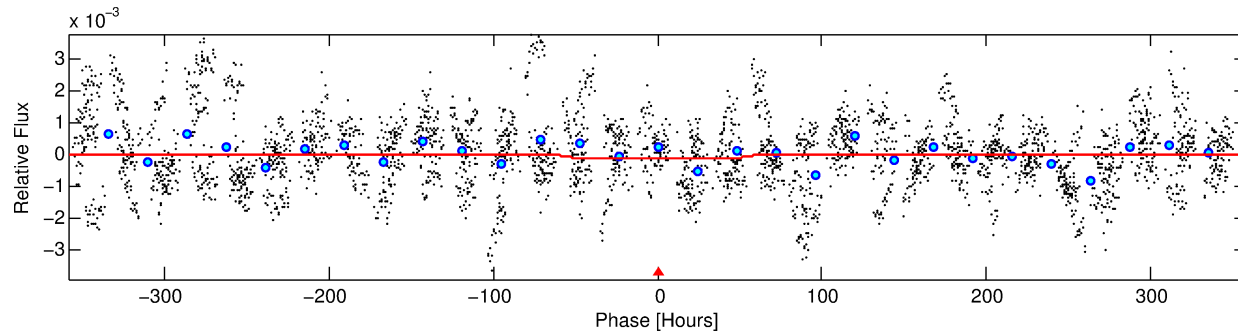
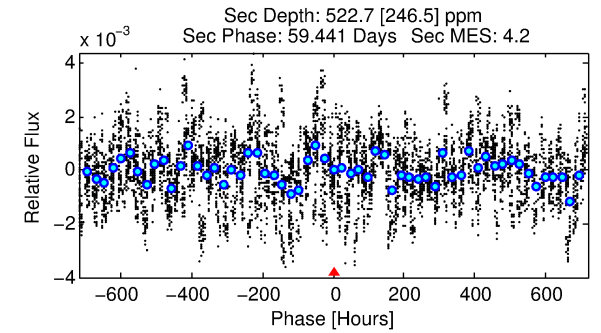
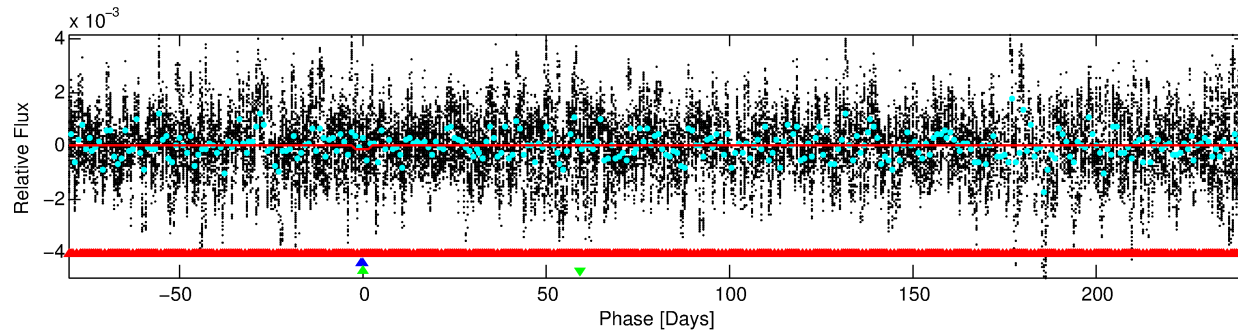
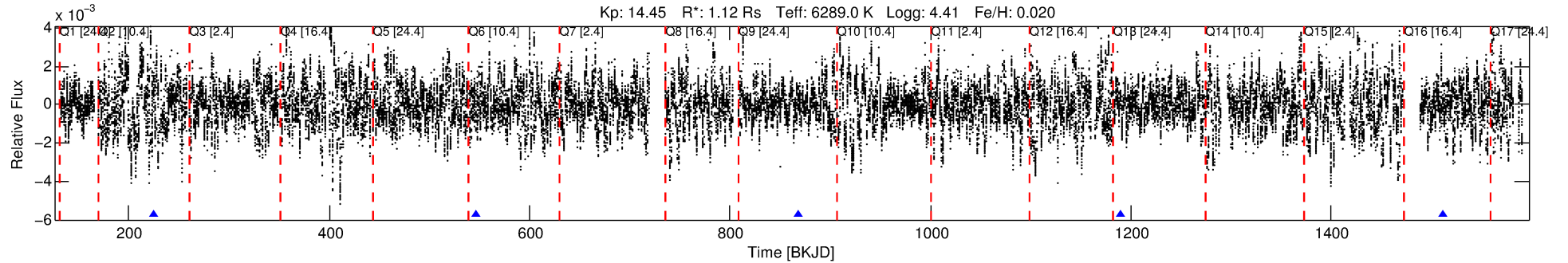
No Significant Match Found

DV One-Page Summary

KIC: 8330548 Candidate: 3 of 3 Period: 321.495 d

KOI: K01132 Corr: No Ephemeris Match

Kp: 14.45 R*: 1.12 Rs Teff: 6289.0 K Logg: 4.41 Fe/H: 0.020



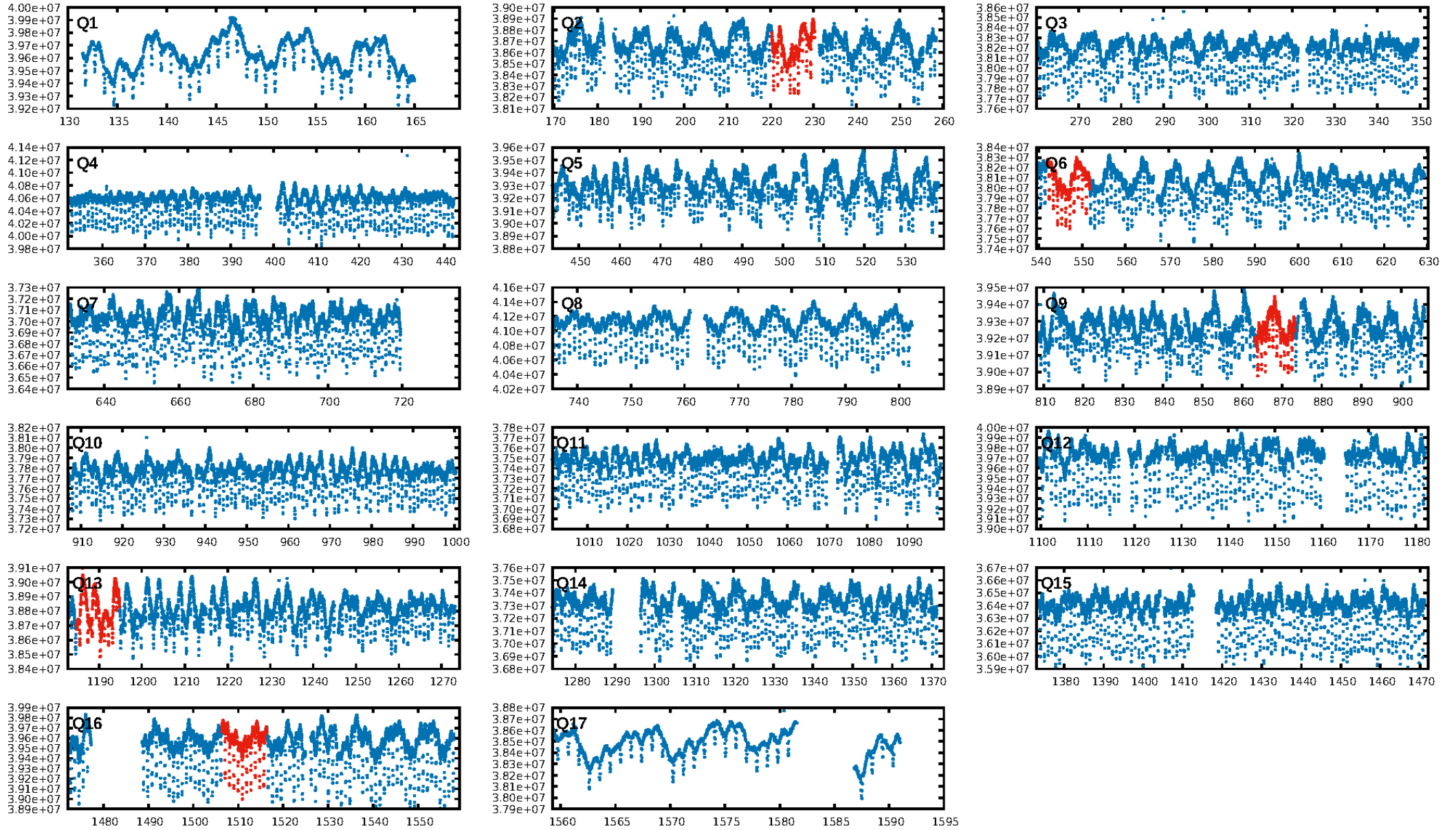
DV Fit Results:

Period = 321.49523 [41.21189] d
Epoch = 225.3350 [96.8590] BKJD
Rp/R* = 0.0101 [0.7814]
a/R* = 18.25 [7052.15]
b = 0.48 [623.11]
Seff = 1.88 [0.88]
Teq = 298 [35] K
Rp = 1.23 [95.33] Re
a = 0.9663 [0.2905] AU
Ag = 177219.47 [27450340.57] [0.01σ]
Teffp = 9467 [366600] K [0.03σ]

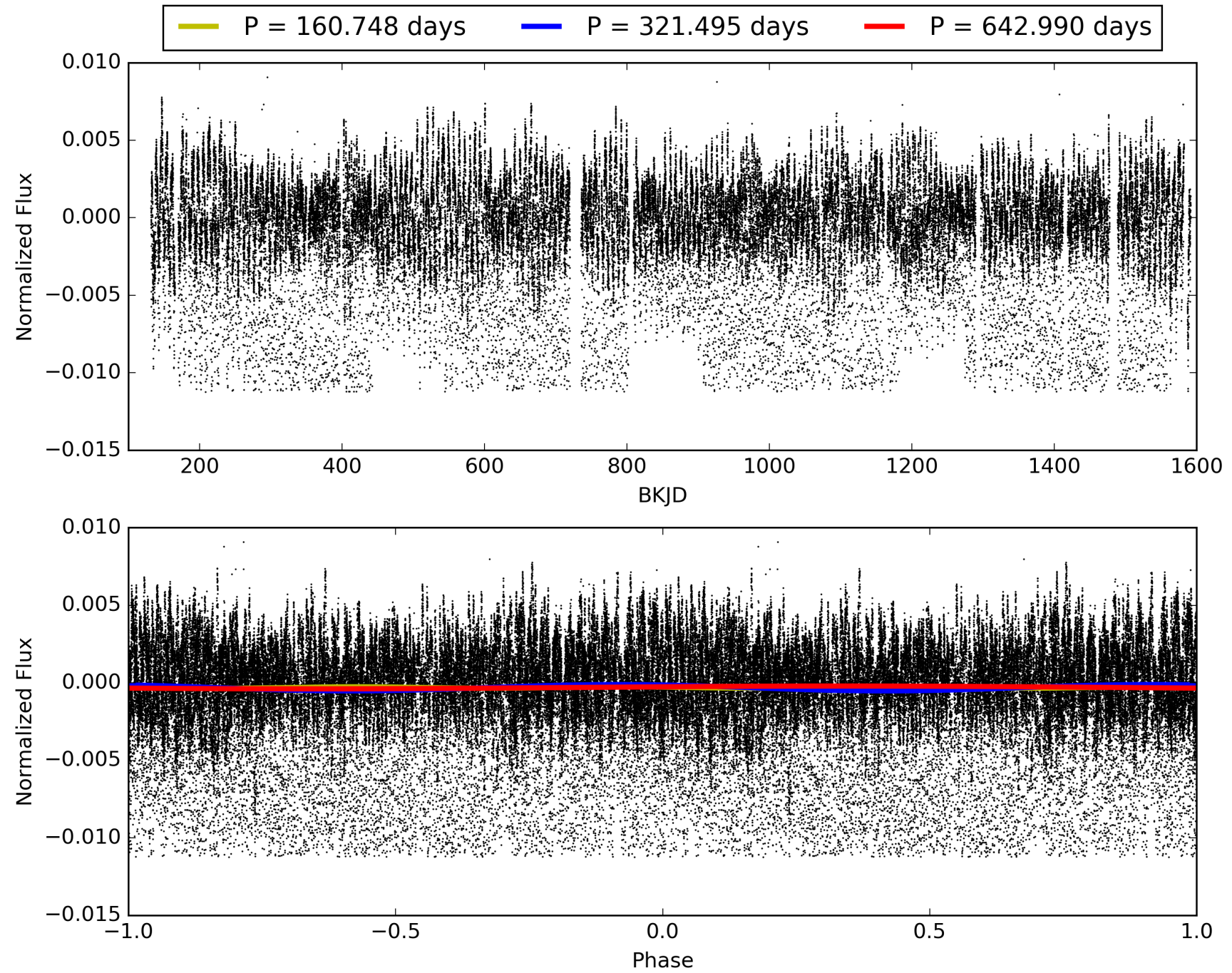
DV Diagnostic Results:

ShortPeriod-sig: 1.6% [0.02σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.07e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.1955
Centroid-sig: N/A
Centroid-so: 5.257 arcsec [1.00σ]
QotOffset-rm: N/A
KicOffset-rm: N/A
QotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

TCE 008330548-03, PDC Light Curves

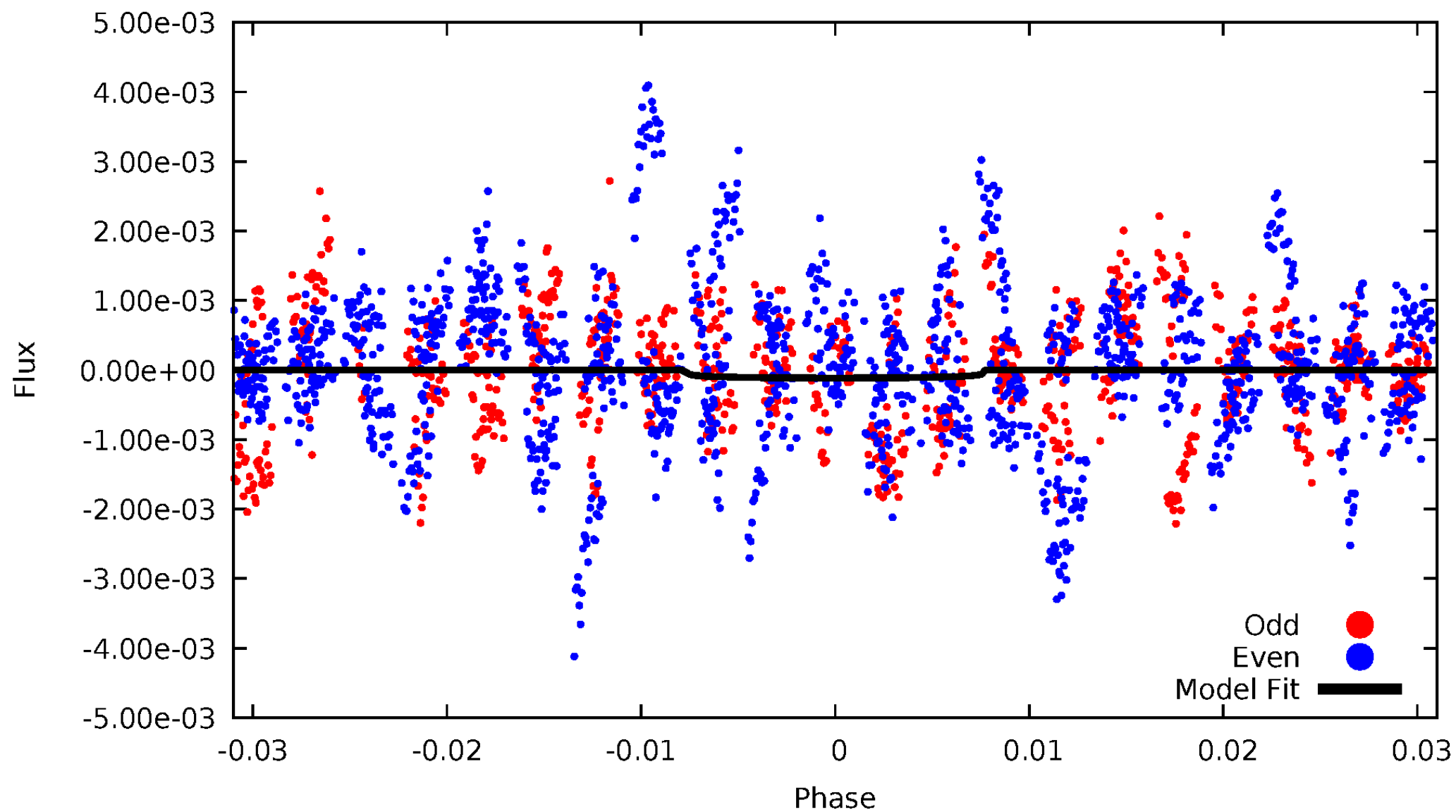


TCE 008330548-03



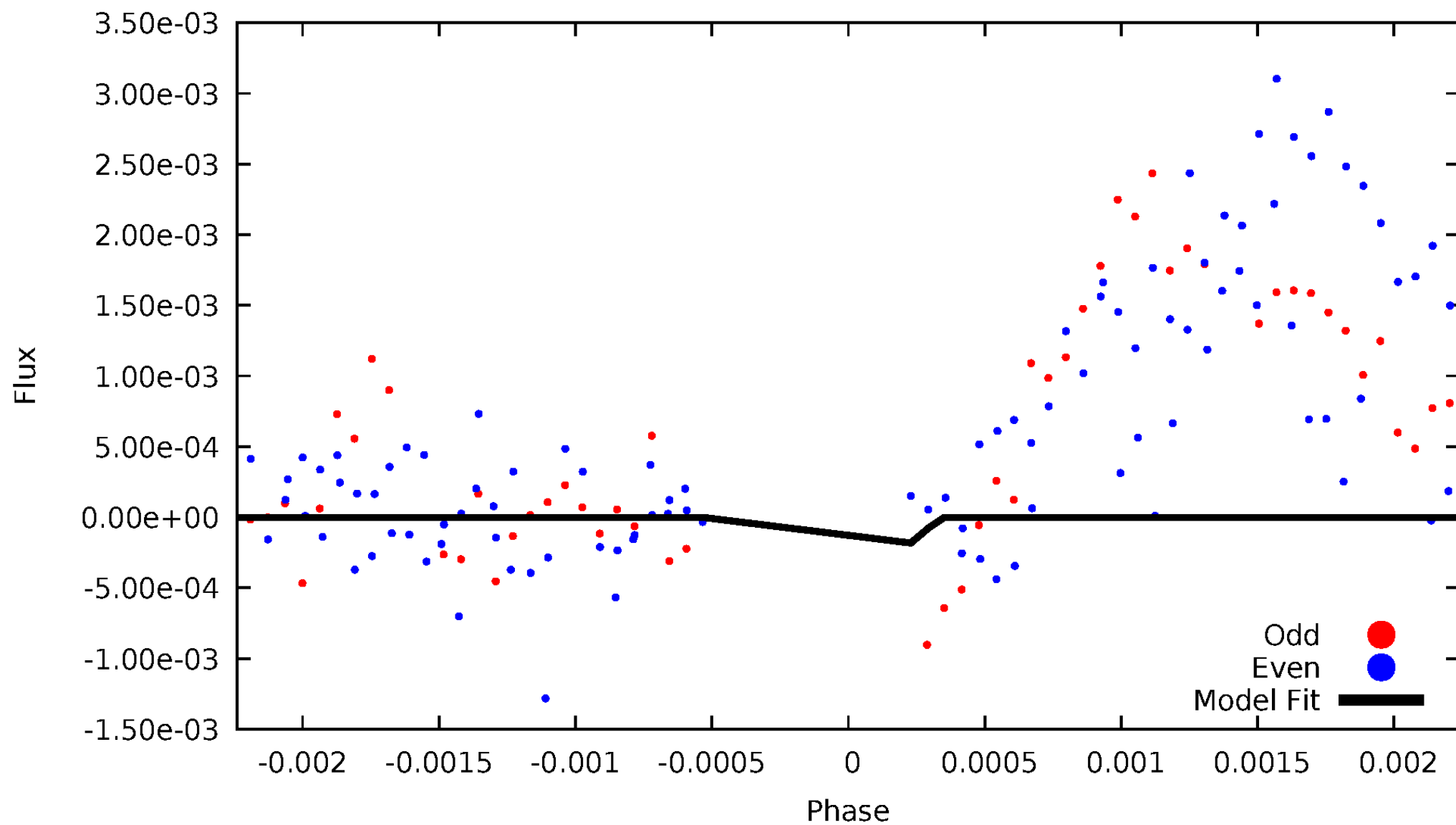
DV Odd/Even

TCE 008330548-03



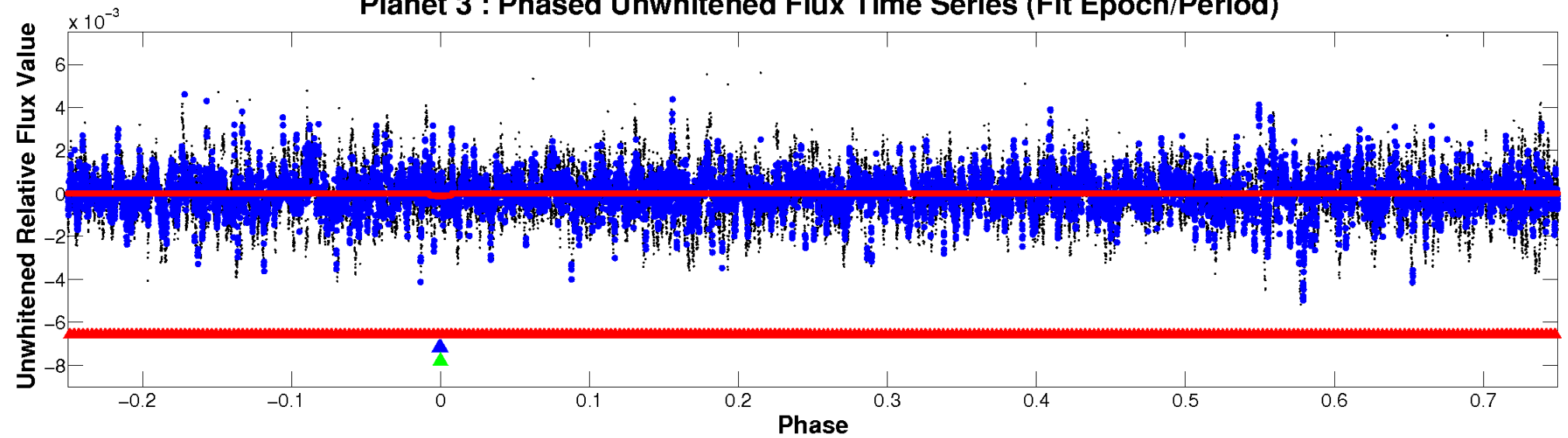
ALT Odd/Even

TCE 008330548-03

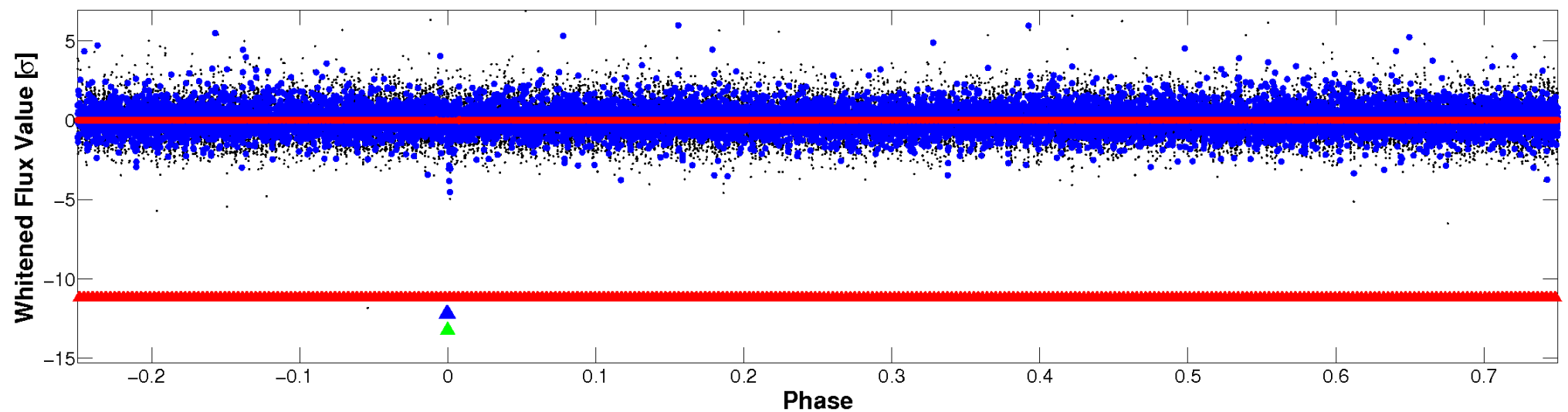


Non-Whitened Vs. Whitened Light Curve

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

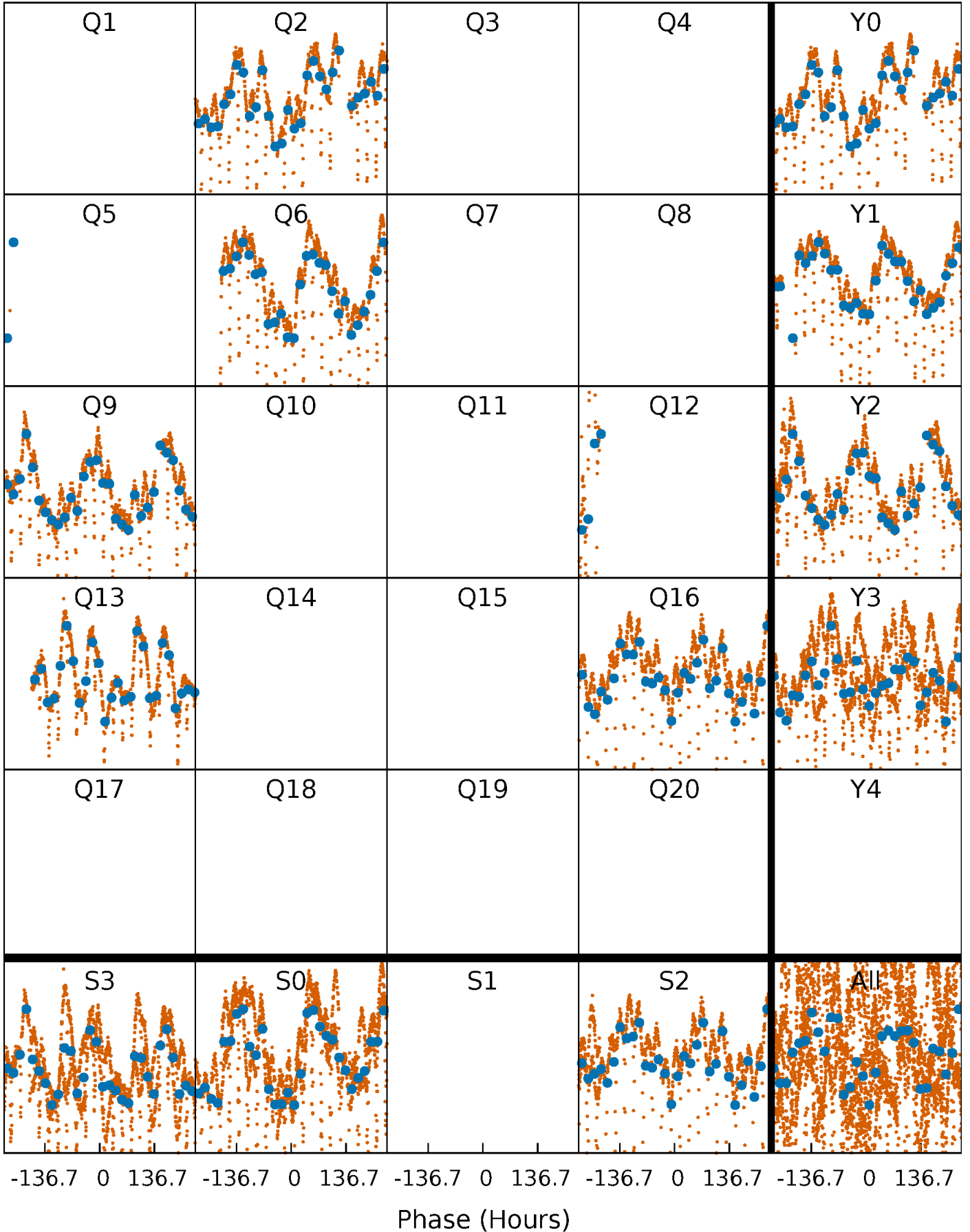


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



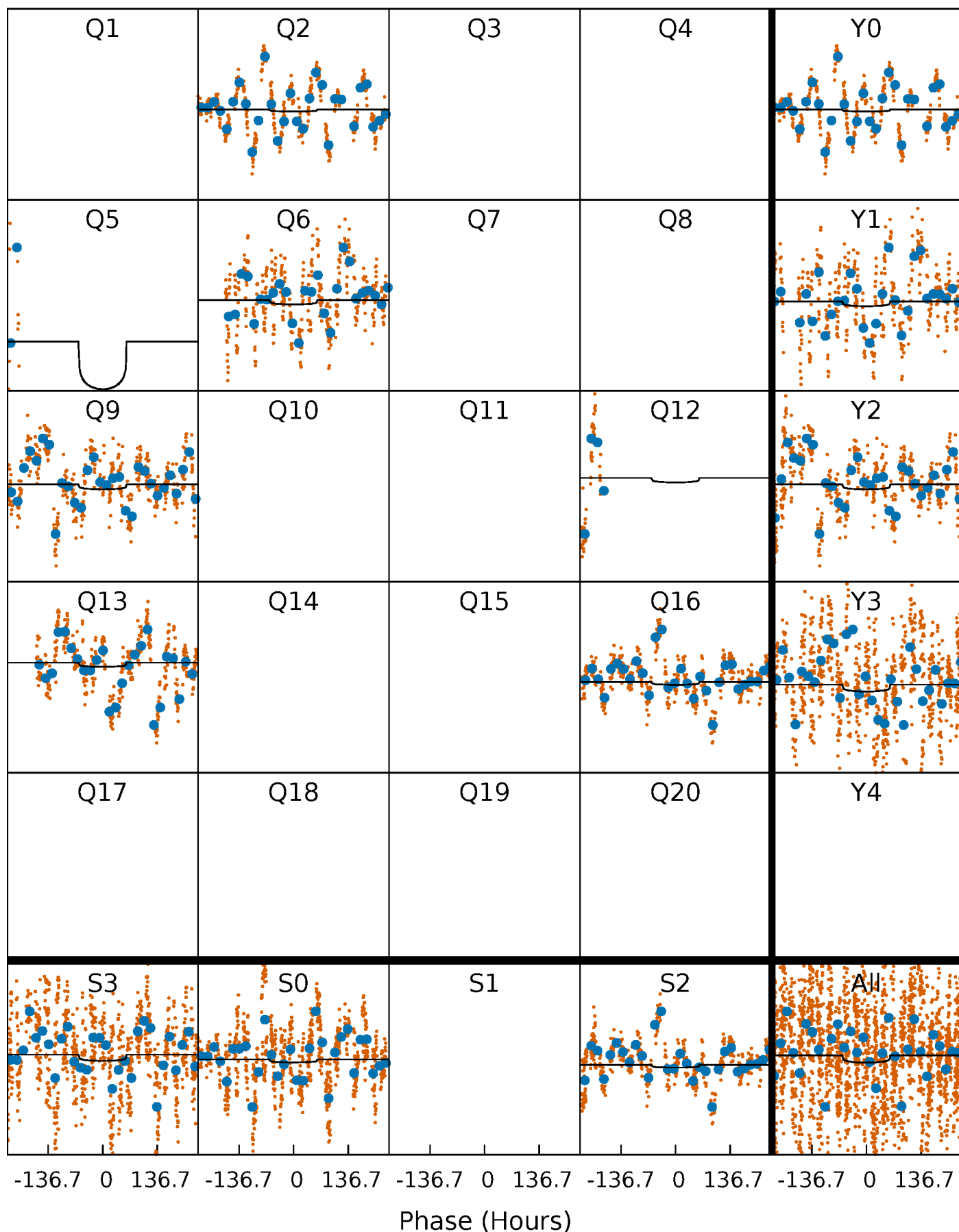
PDC Quarter-Phased Transit Curves

TCE 008330548-03 P=321.495235 Days $T_0=225.334982$ (BKJD)



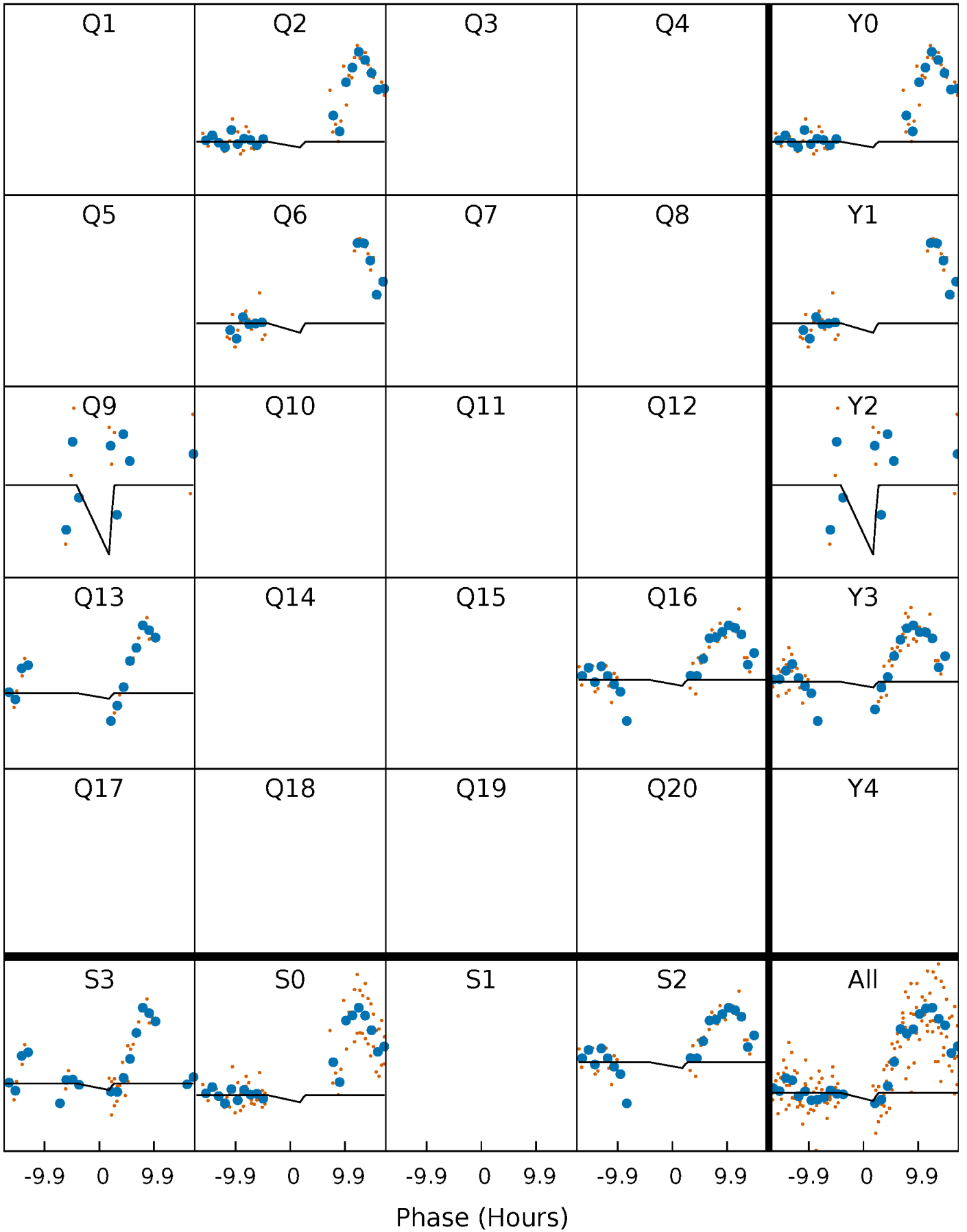
DV Quarter-Phased Transit Curves

TCE 008330548-03 P=321.495235 Days $T_0=225.334982$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

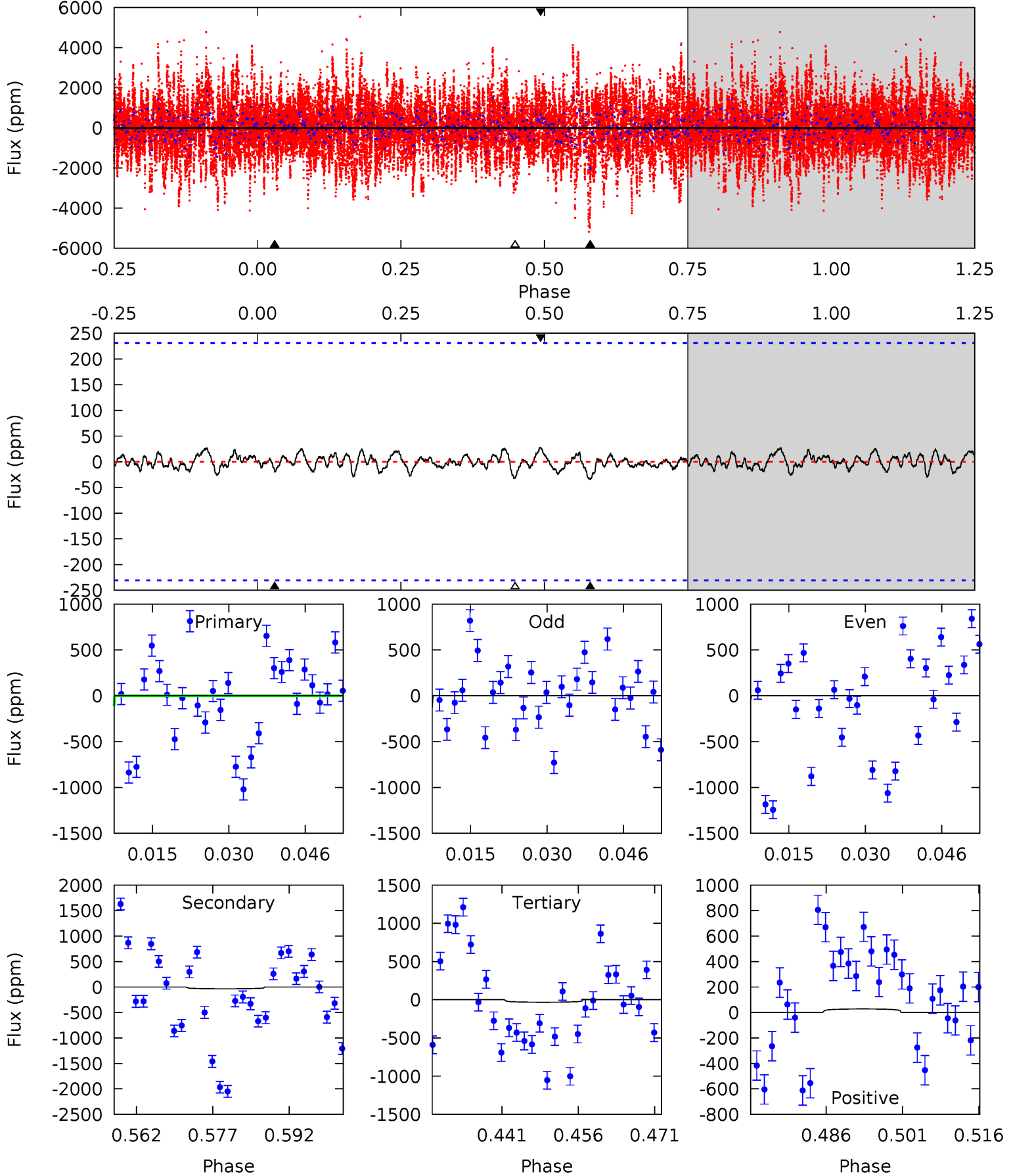
TCE 008330548-03 P=321.379032 Days $T_0=225.515414$ (BKJD)



DV Model-Shift Uniqueness Test

008330548-03, P = 321.495235 Days, E = 225.334982 Days

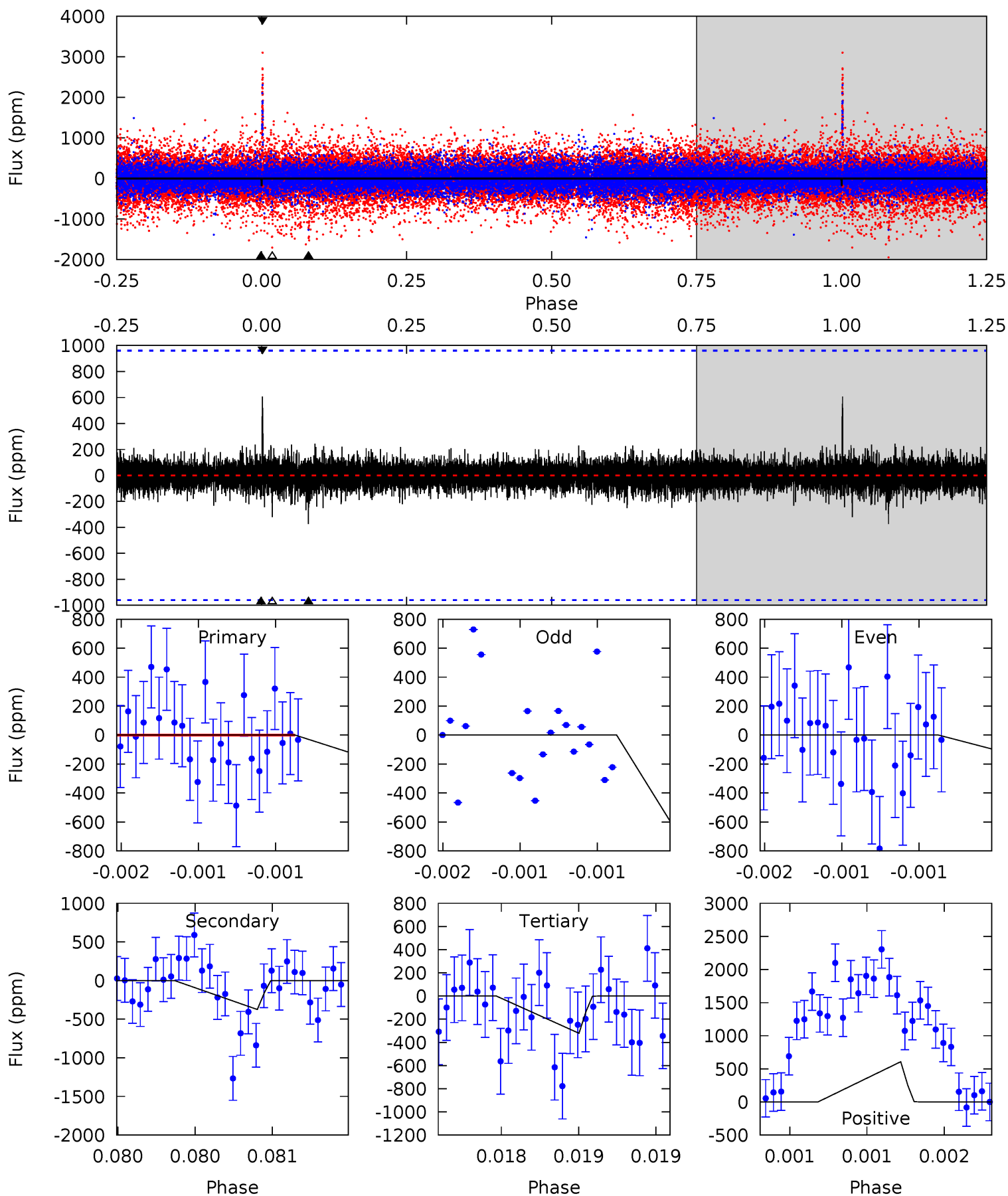
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.43	0.74	0.69	0.60	4.95	2.43	0.24	-0.25	-0.16	0.05	0.14	1.45	0.43	0.45	0.50



Alt Model-Shift Uniqueness Test

008330548-03, P = 321.379032 Days, E = 225.515414 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.05	2.15	1.85	3.48	5.51	3.38	0.33	-0.79	-2.43	0.30	-1.34	2.18	1.00	0.62	0



Stellar Parameters For KIC 008330548

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6289^{+174}_{-217}	$4.407^{+0.070}_{-0.224}$	$0.020^{+0.250}_{-0.300}$	$1.118^{+0.388}_{-0.129}$	$1.164^{+0.169}_{-0.152}$	$1.173^{+0.360}_{-0.650}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+35%/-12%	+15%/-13%	+31%/-55%
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 008330548-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-34 ± 47	$62.24^{+80.79}_{-43.61}$	427^{+34}_{-31}	1636^{+504}_{-3158}	$2.571^{+33.333}_{-3.211}$
Alt.	-374 ± 174	$70.59^{+80.53}_{-49.20}$	426^{+38}_{-29}	2107^{+719}_{-305}	32^{+336}_{-25}

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

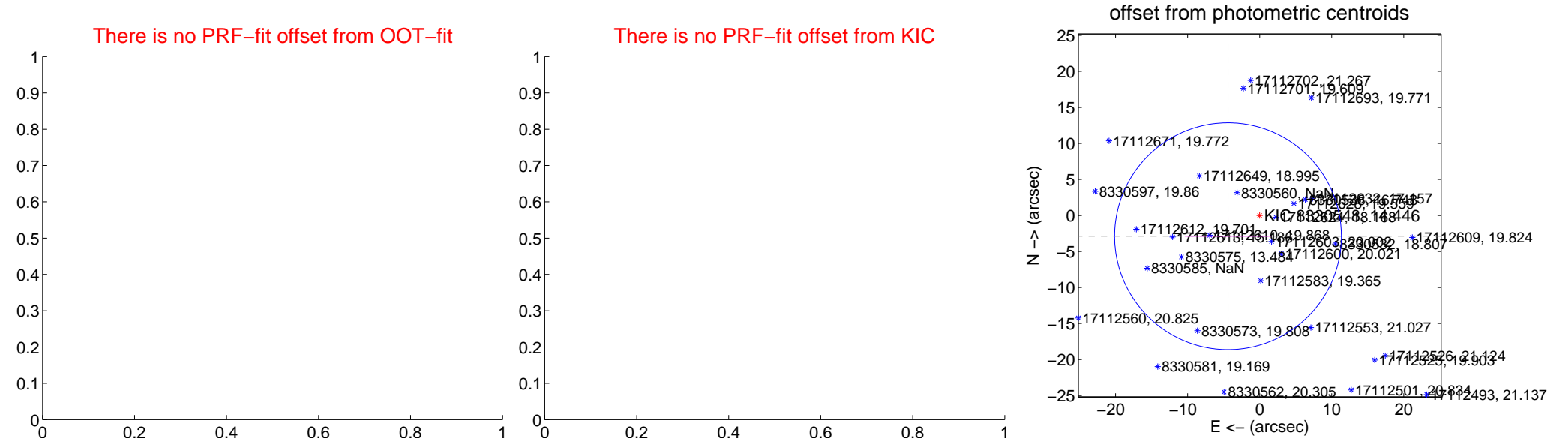
DV Centroid Data

Supplemental centroid analysis for 008330548-03. Kepler magnitude: 14.45. Transit SNR 0.32

There are 0 quarters with good PRF difference image offsets

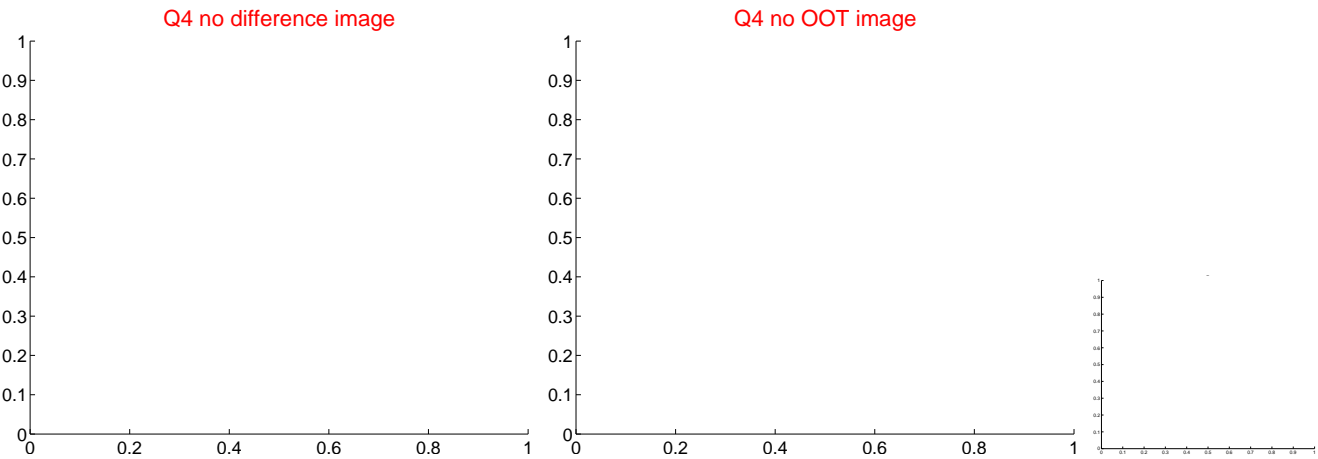
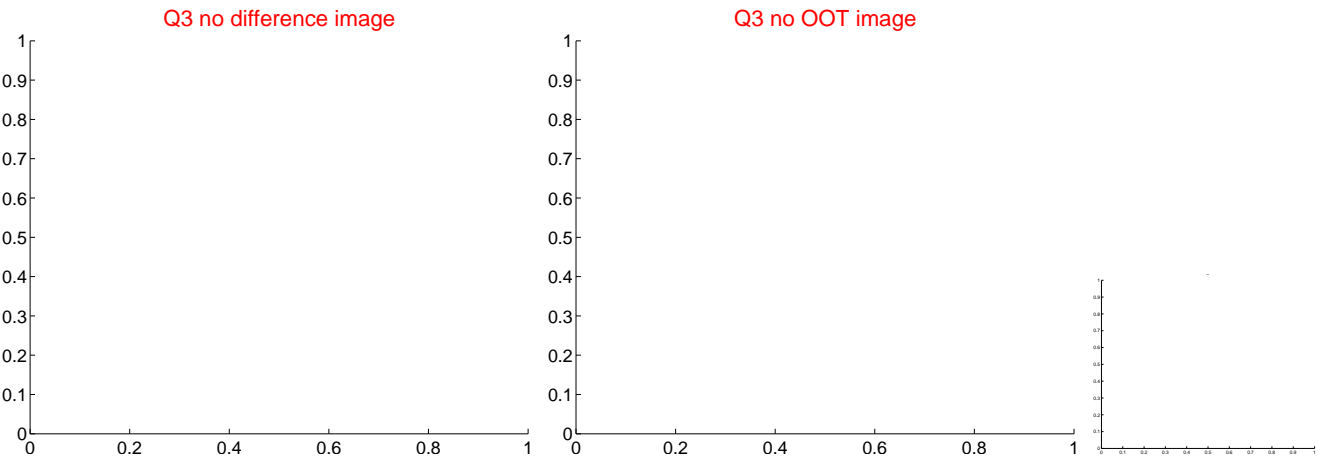
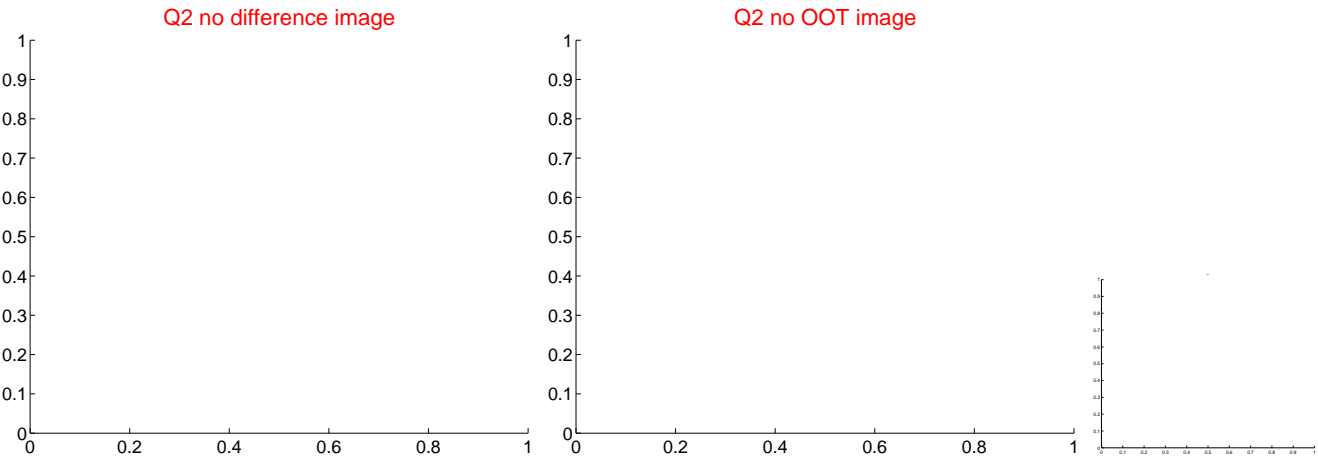
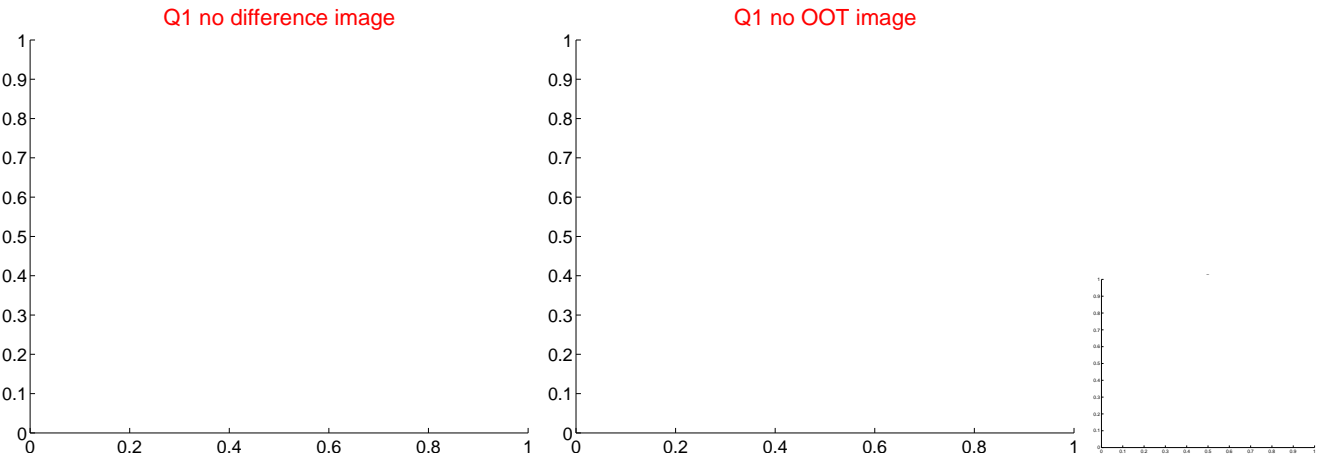
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	5.26 ± 5.25	1.00	4.40 ± 5.99	-2.88 ± 2.82

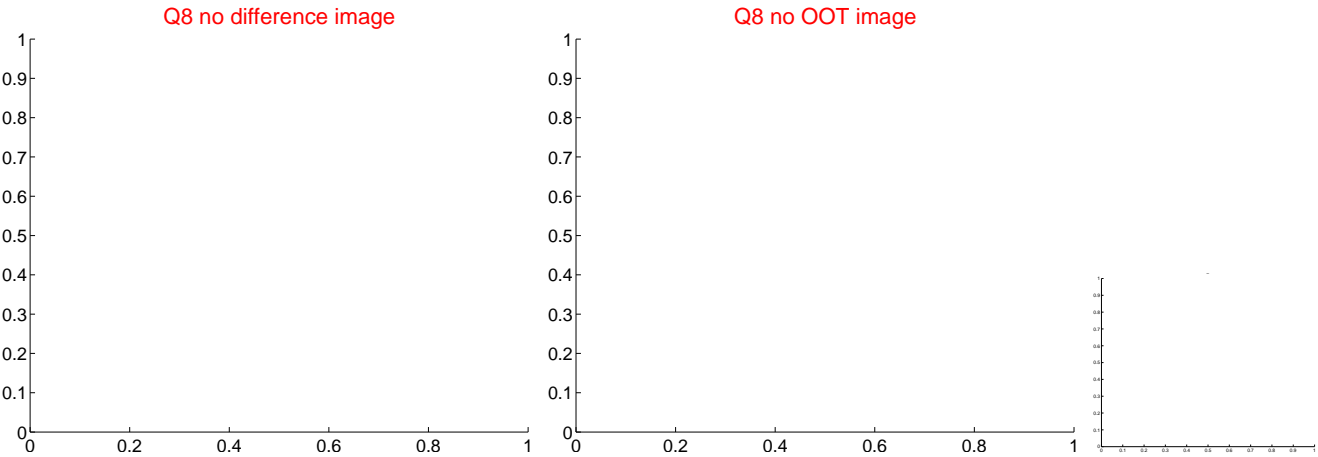
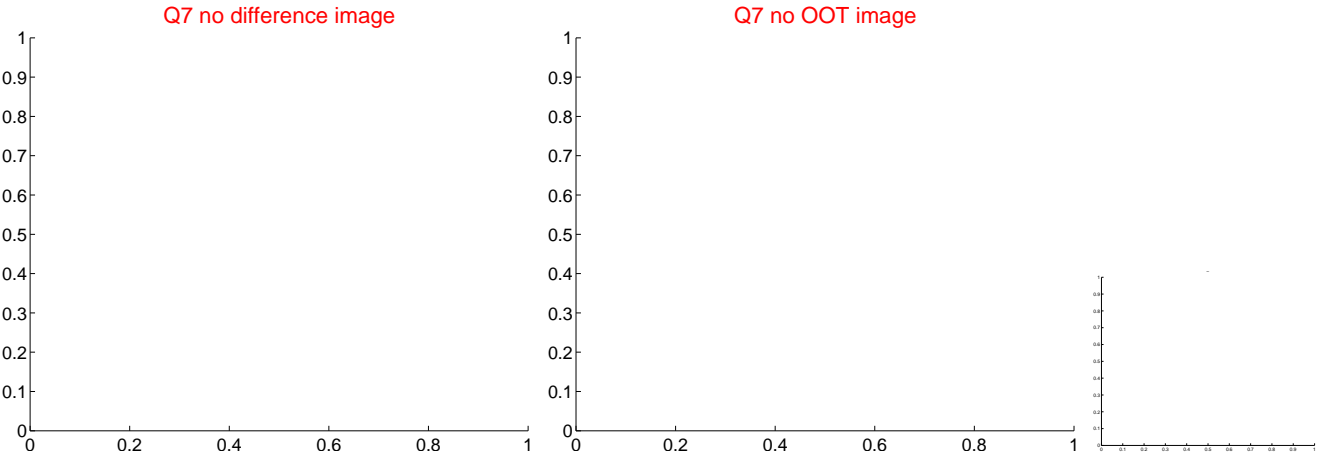
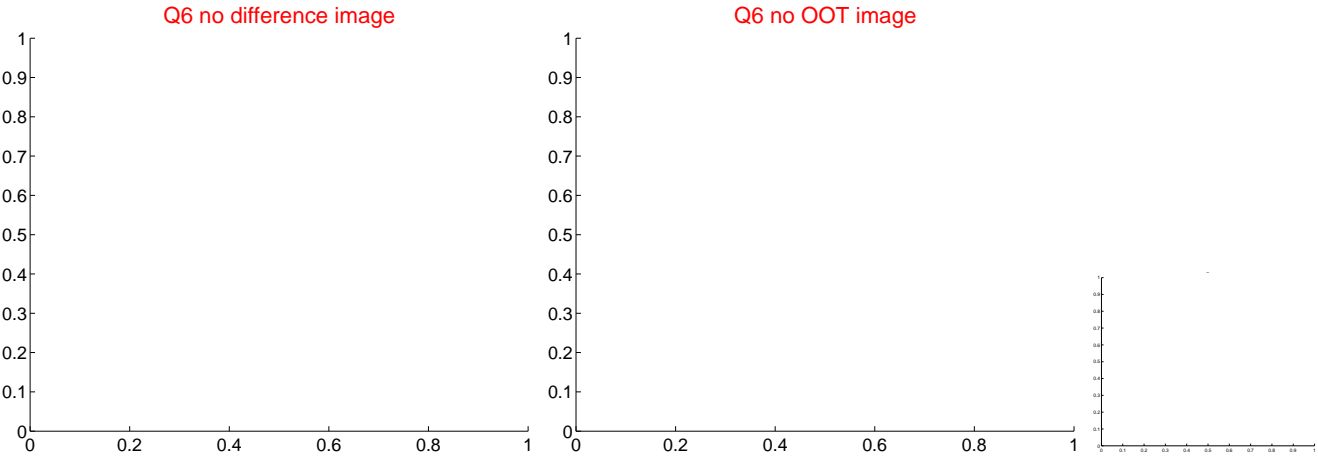
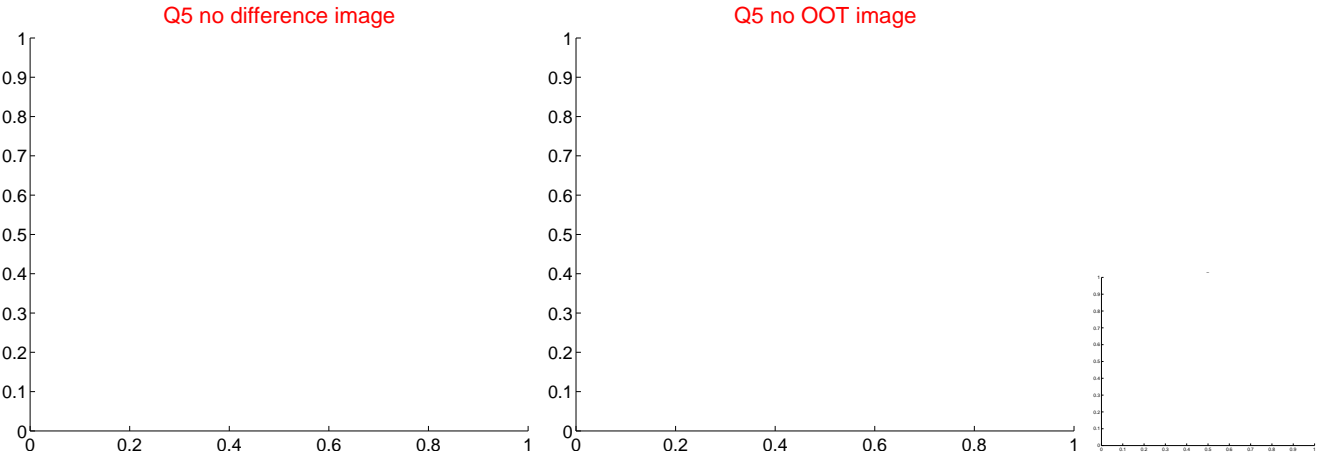


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

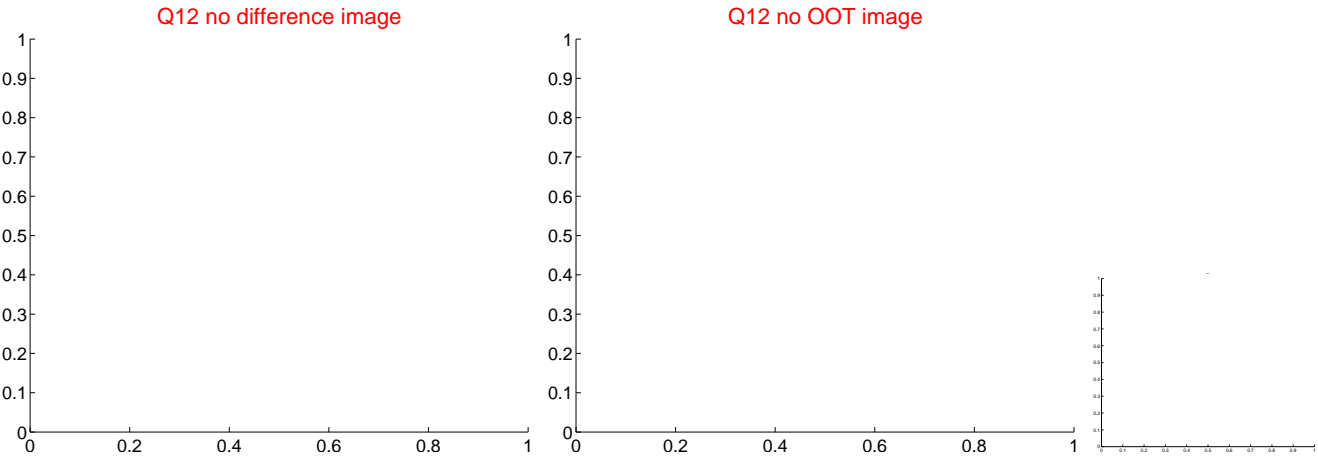
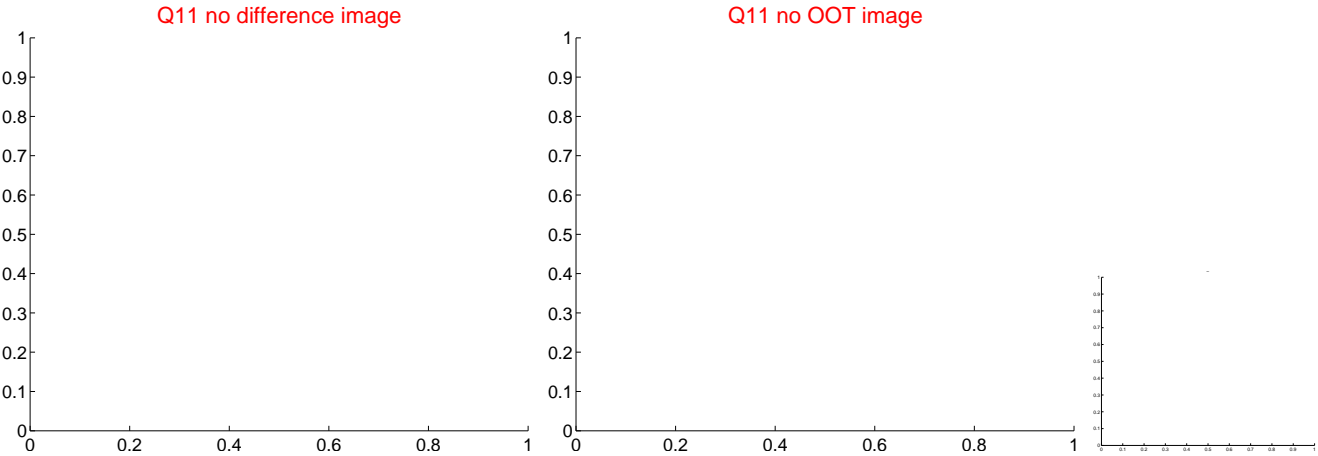
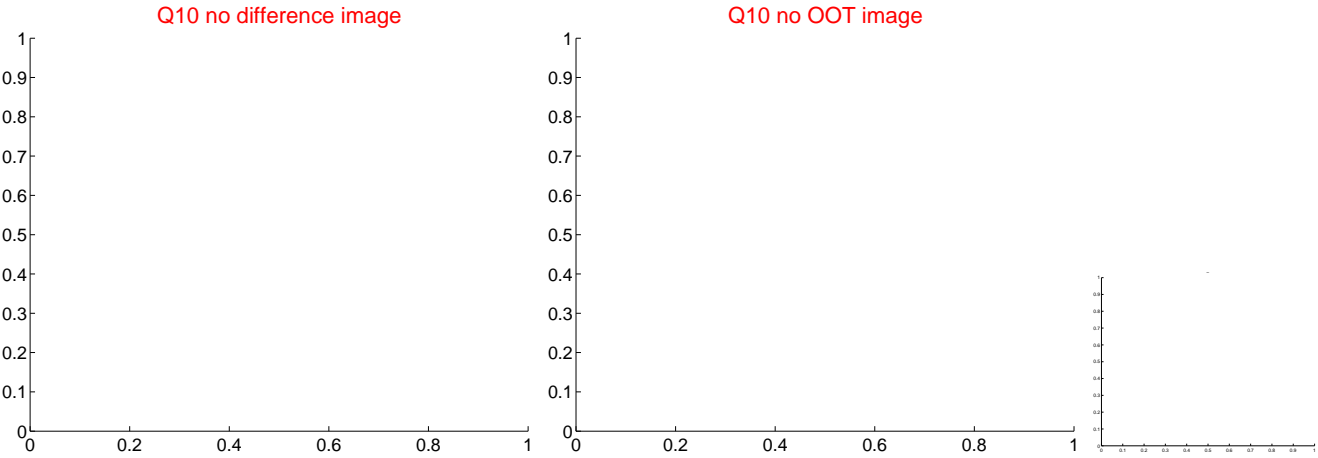
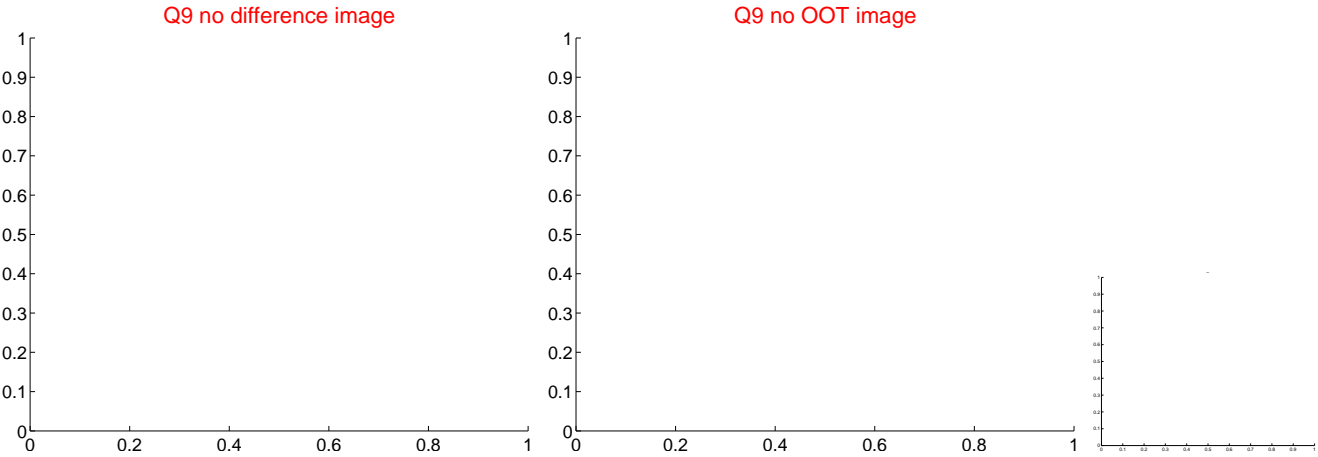
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



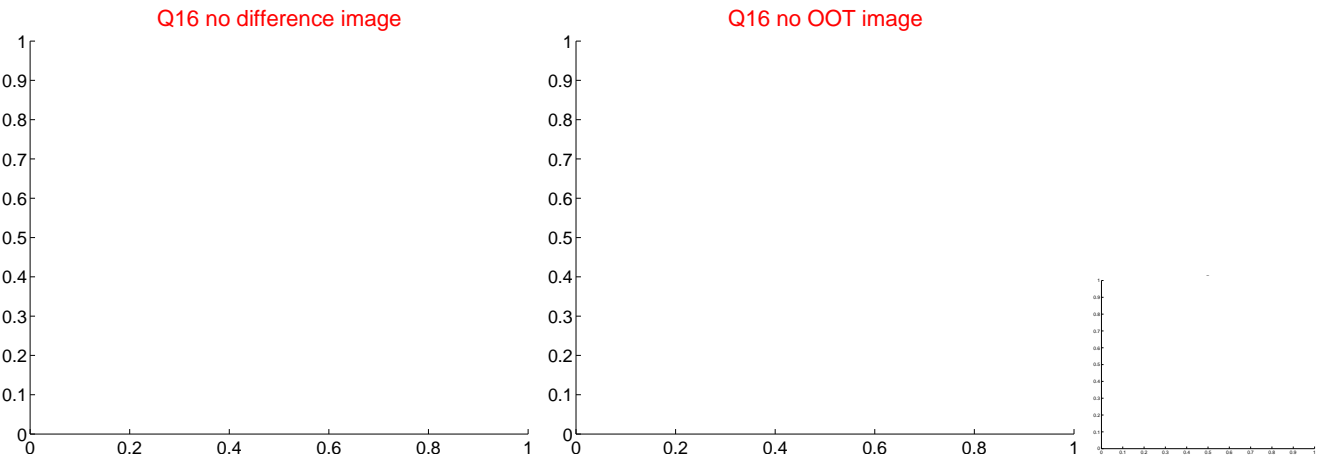
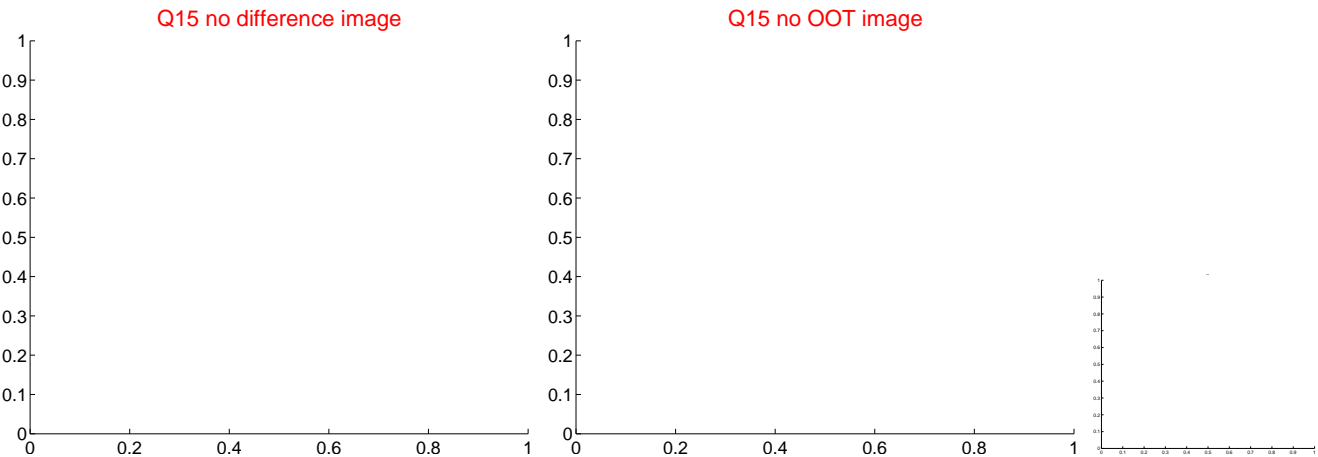
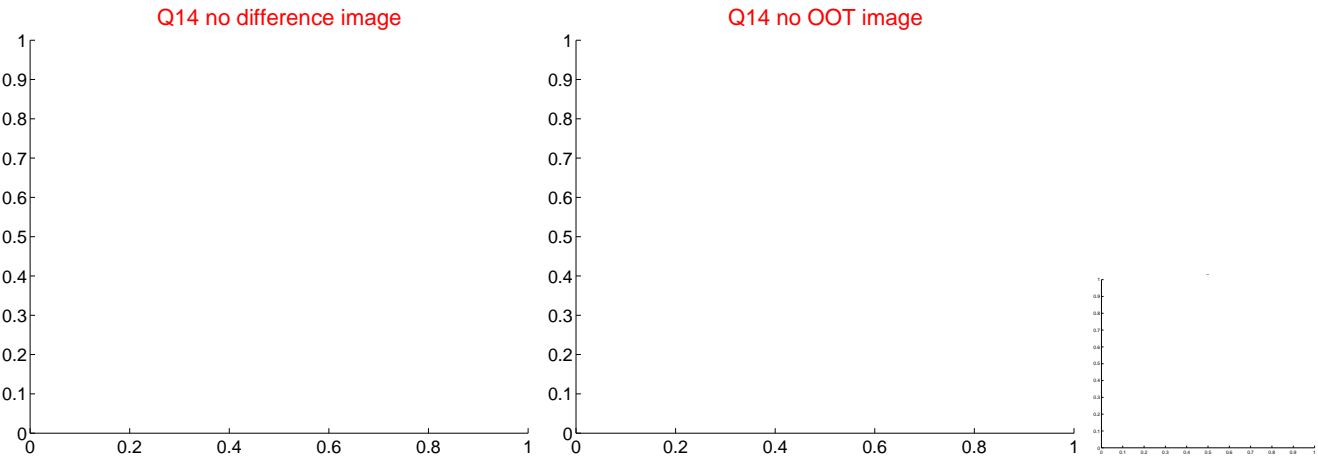
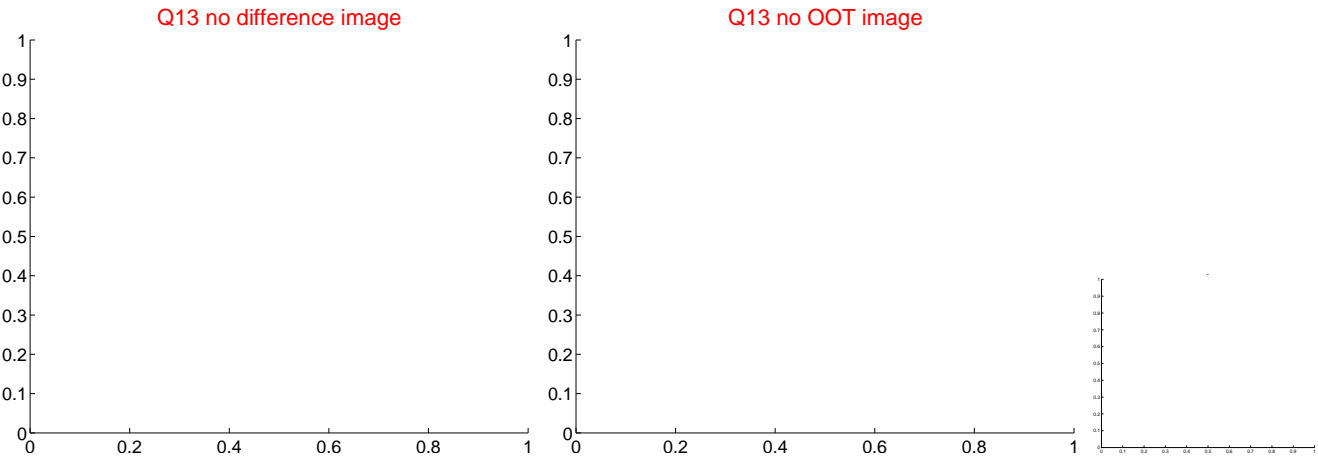
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



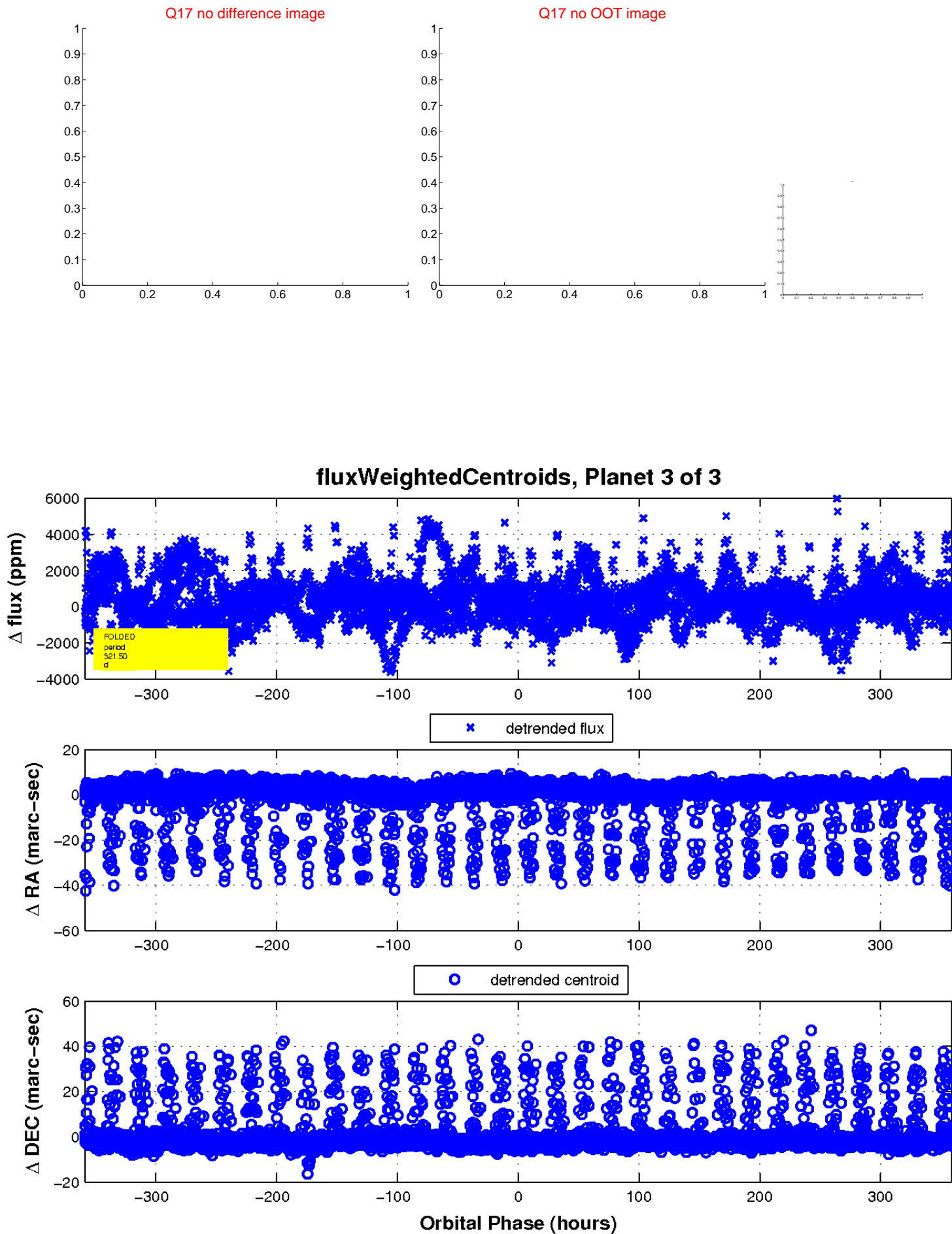
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

