

KIC 007830341

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})
007830341-01	OBS	No	435.515497	336.261915	1338.6	4.795	15.5	7.4	0.49	3801	1.88	0.06
007830341-02	OBS	No	437.083996	317.229705	1115.2	6.099	12.9	7.5	0.49	3801	1.69	0.06
007830341-03	OBS	No	458.950333	546.103220	1213.7	5.555	12.4	6.5	0.49	3801	1.83	0.05
007830341-04	OBS	No	410.474081	342.167943	970.9	5.148	12.1	5.6	0.49	3801	1.55	0.06
007830341-05	OBS	No	356.669107	252.078717	1092.7	3.440	12.4	7.2	0.49	3801	1.72	0.07
007830341-06	OBS	No	481.100093	607.751184	1625.6	11.546	11.5	7.9	0.49	3801	2.14	0.05
007830341-07	OBS	No	341.708181	440.121071	1529.2	15.825	11.5	7.4	0.49	3801	1.91	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

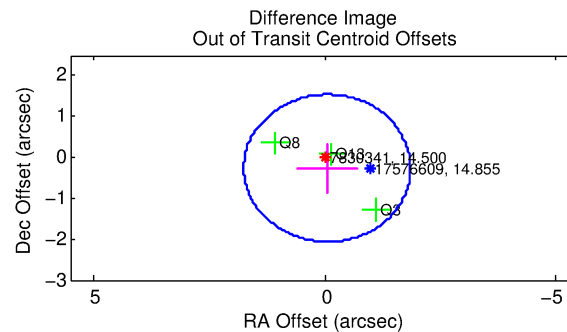
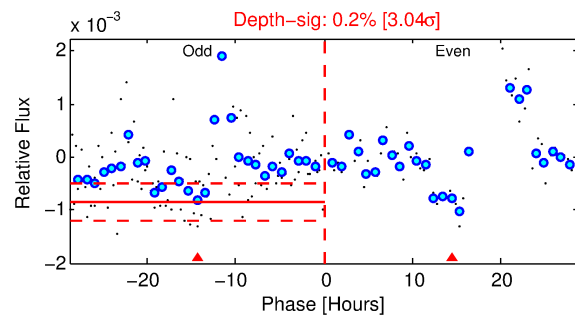
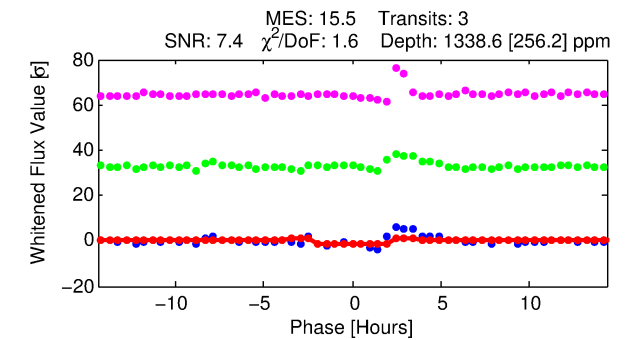
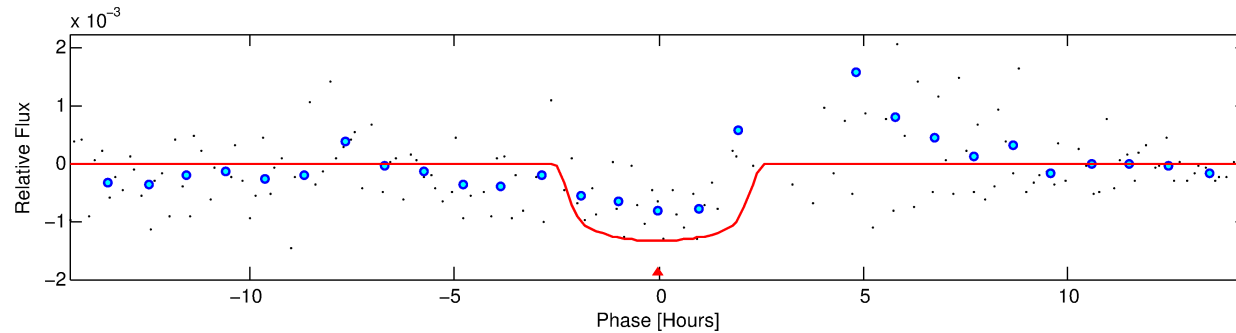
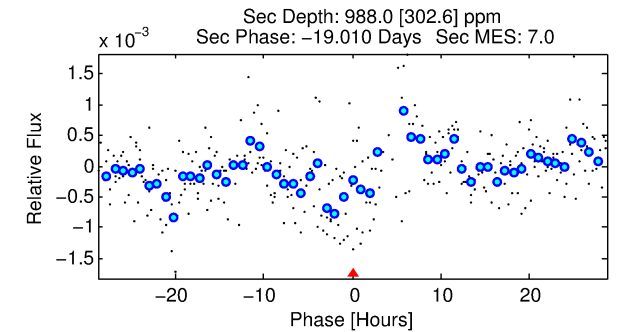
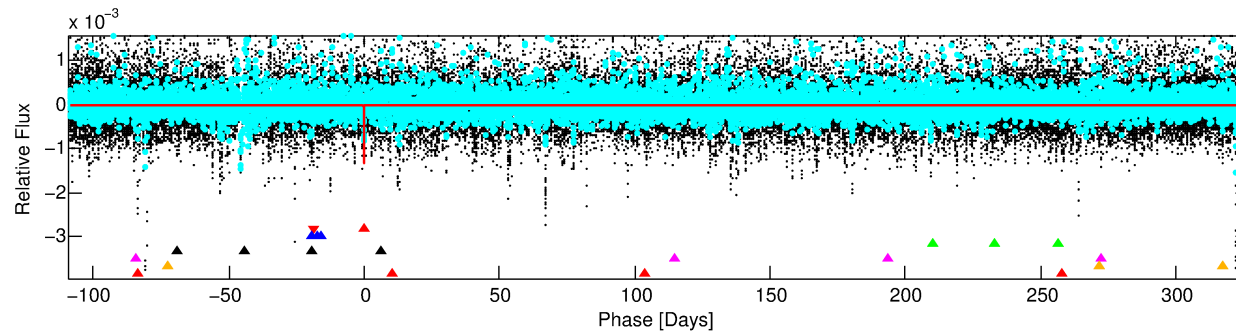
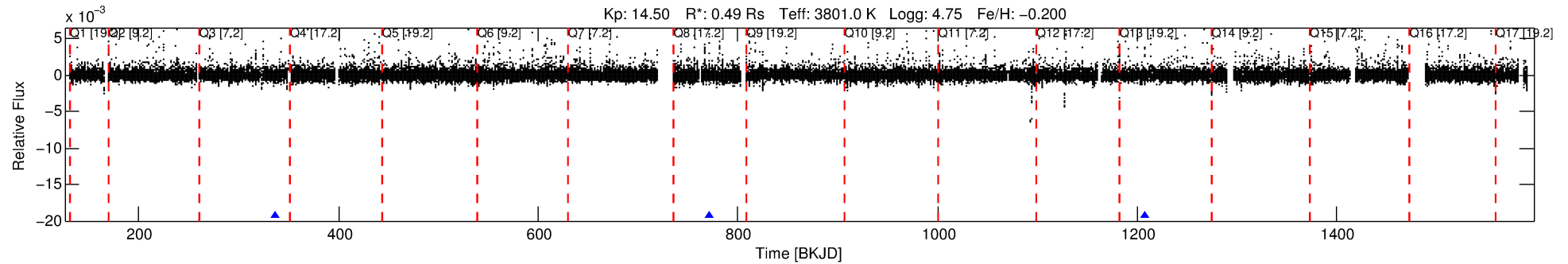
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-01

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 1 of 7 Period: 435.515 d



DV Fit Results:

Period = 435.51550 [0.00585] d
Epoch = 336.2619 [0.0070] BKJD
Rp/R* = 0.0349 [0.0333]
a/R* = 582.46 [2475.06]
b = 0.61 [4.46]
Seff = 0.06 [0.01]
Teq = 125 [5] K
Rp = 1.88 [1.80] Re
a = 0.8920 [0.0764] AU
Ag = 122900.30 [237474.44] [0.52 σ]
Teffp = 3605 [1741] K [2.00 σ]

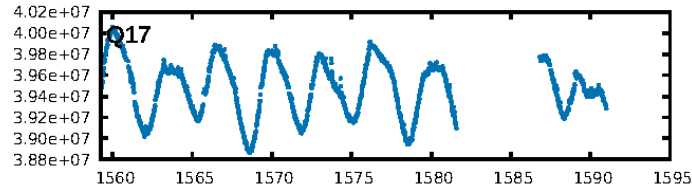
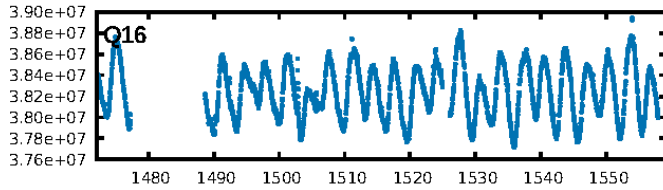
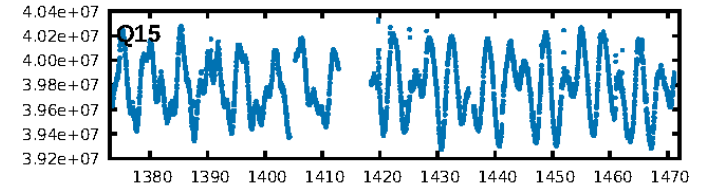
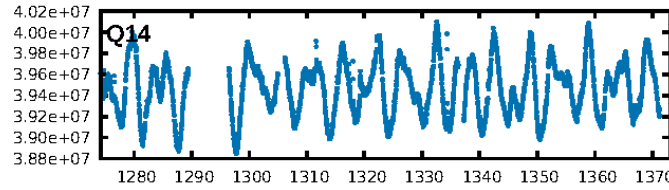
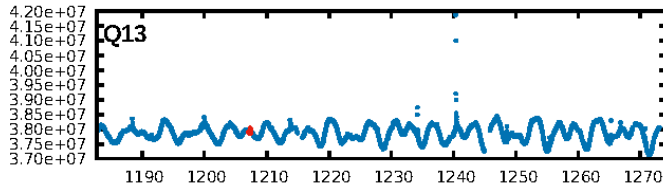
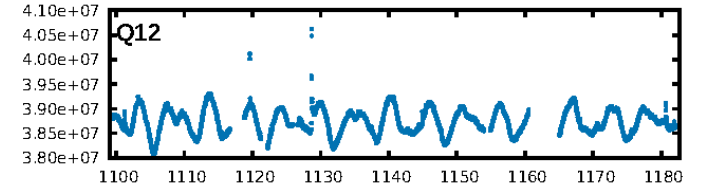
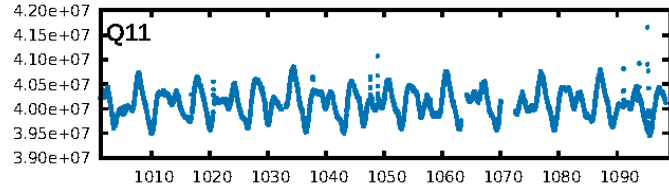
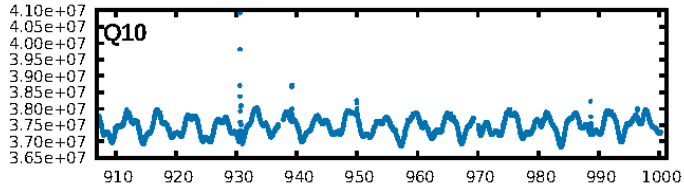
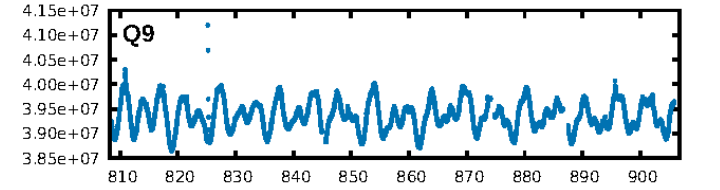
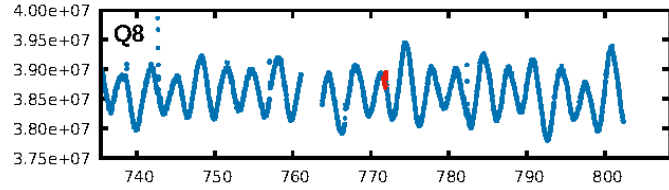
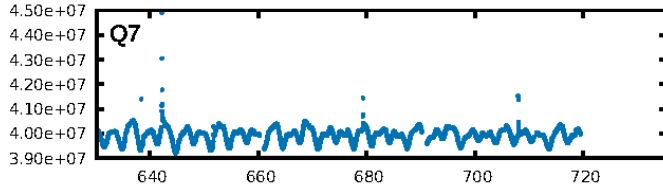
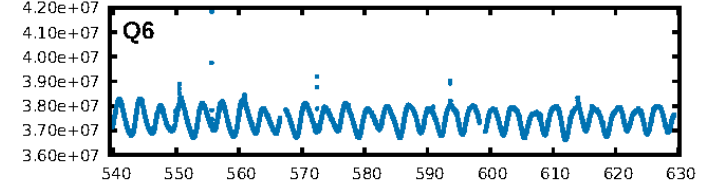
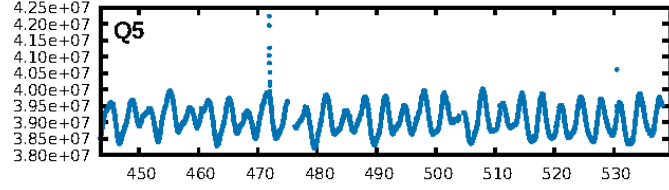
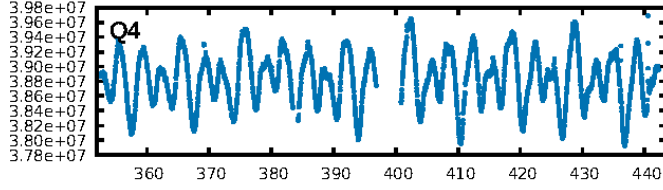
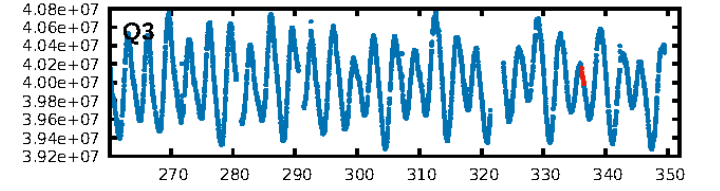
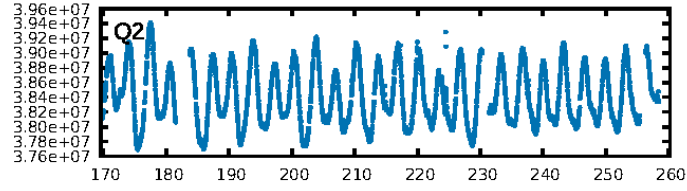
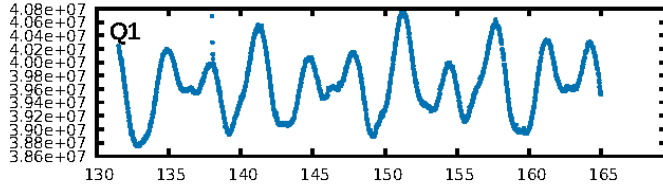
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [85.43 σ]
LongPeriod-sig: 100.0% [4.85 σ]
ModelChiSquare2-sig: 0.0%
a/R* = 582.46 [2475.06]
Bootstrap-pfa: 1.24e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5554
Centroid-sig: 5.9%
Centroid-so: 1.012 arcsec [1.22 σ]
OotOffset-rm: 0.269 arcsec [0.45 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 0.366 arcsec [0.57 σ]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

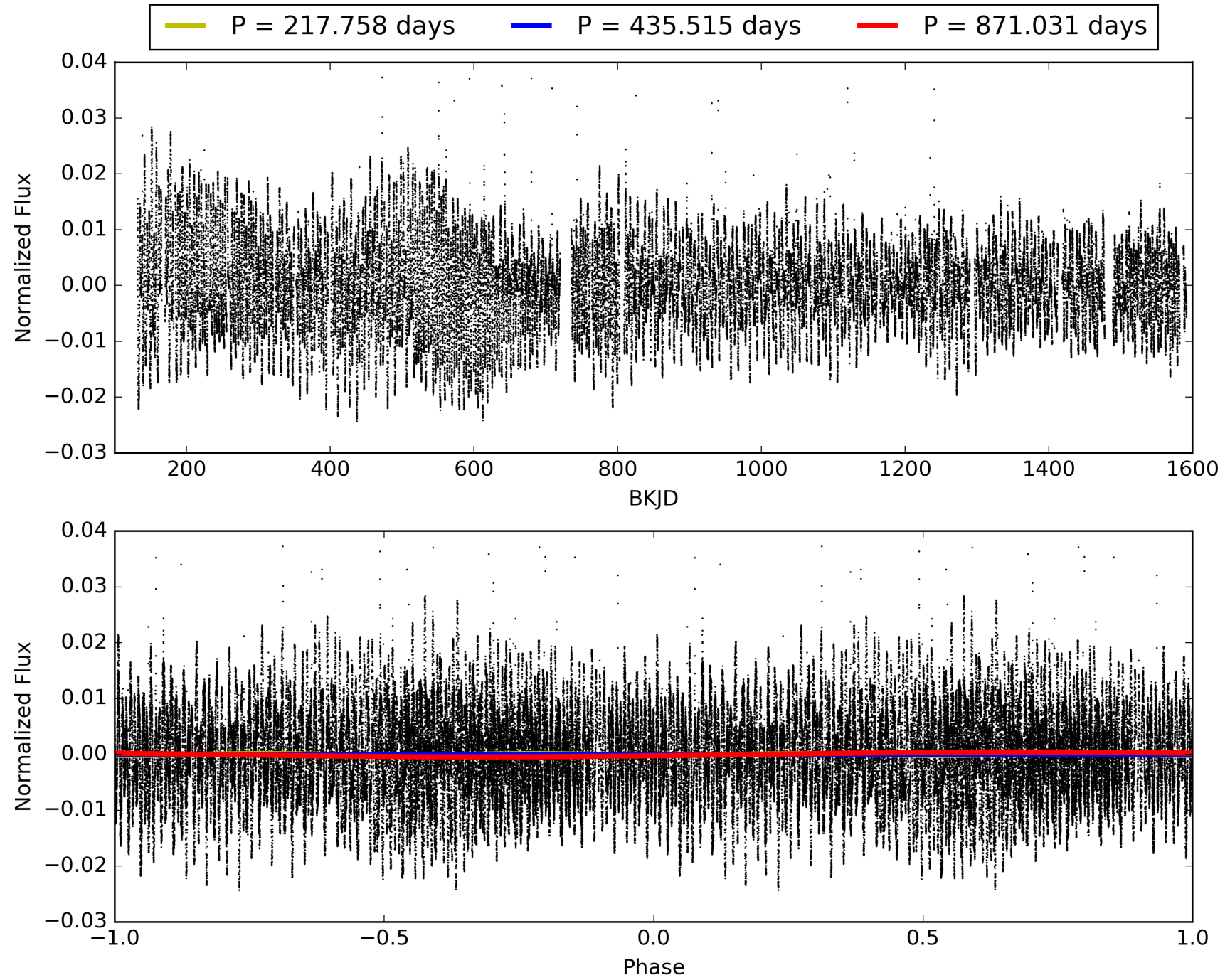
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:14:28 Z

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

TCE 007830341-01, PDC Light Curves

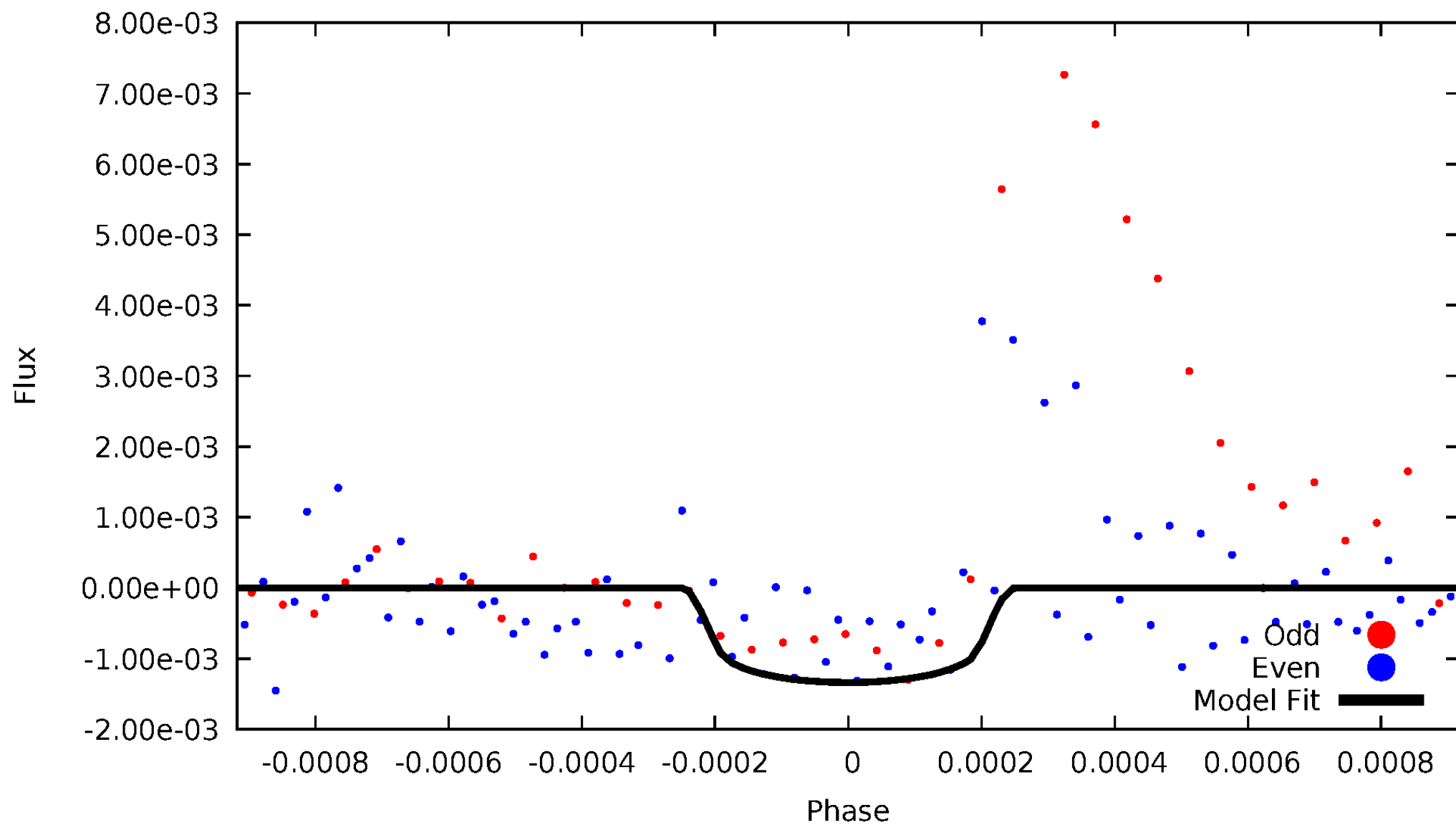


TCE 007830341-01



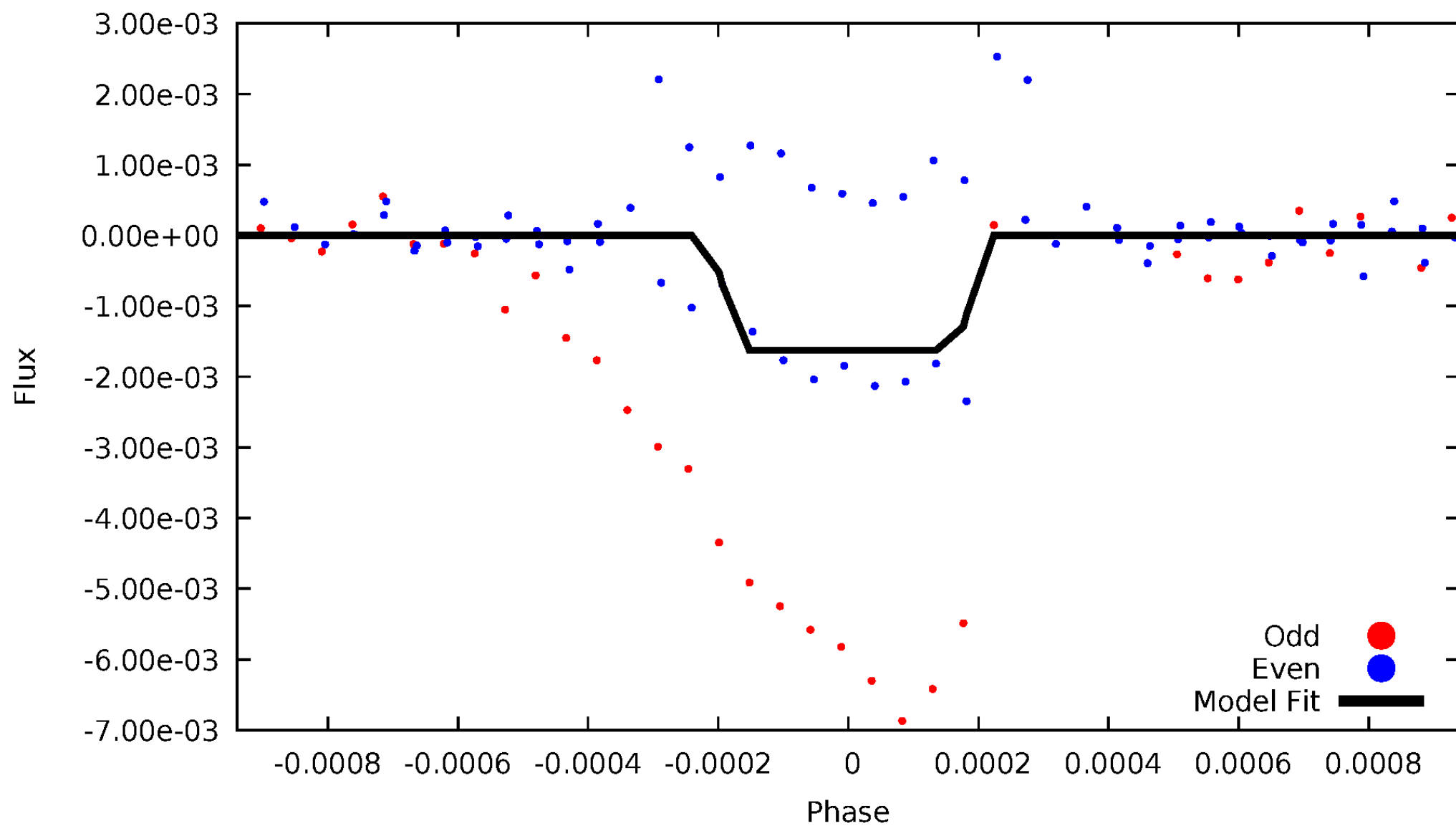
DV Odd/Even

TCE 007830341-01



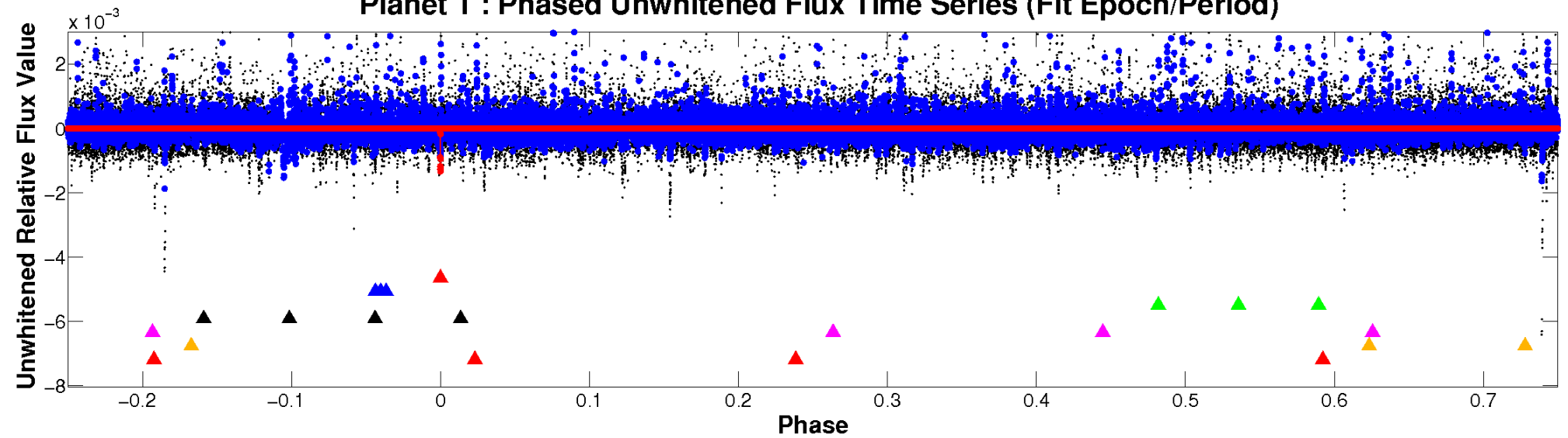
ALT Odd/Even

TCE 007830341-01

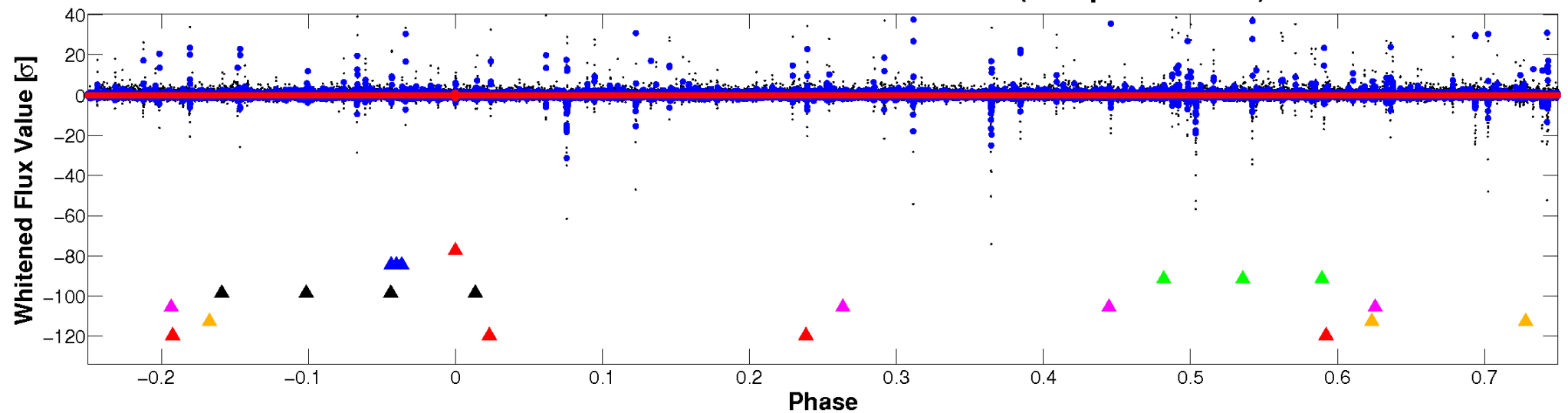


Non-Whitened Vs. Whitened Light Curve

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

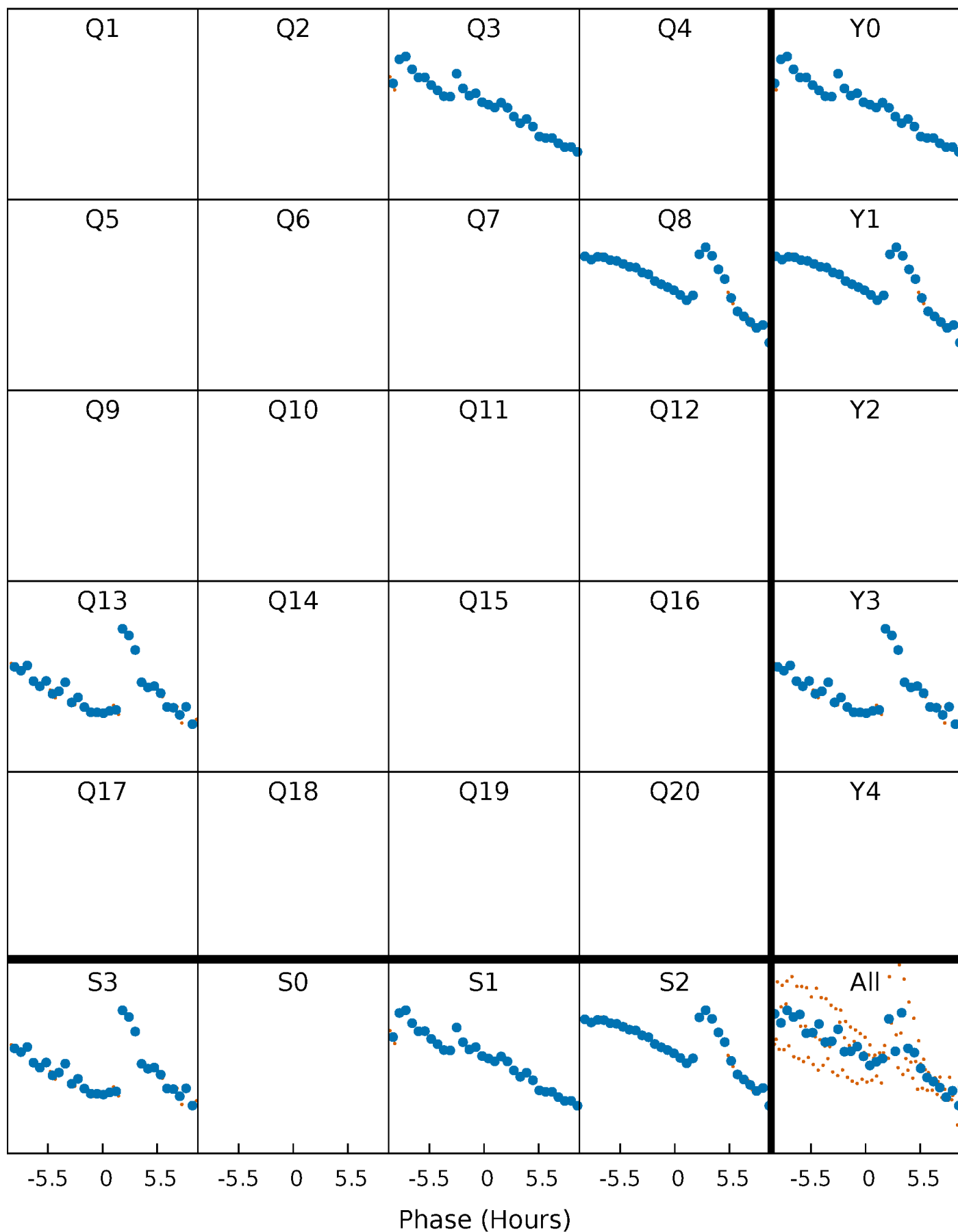


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



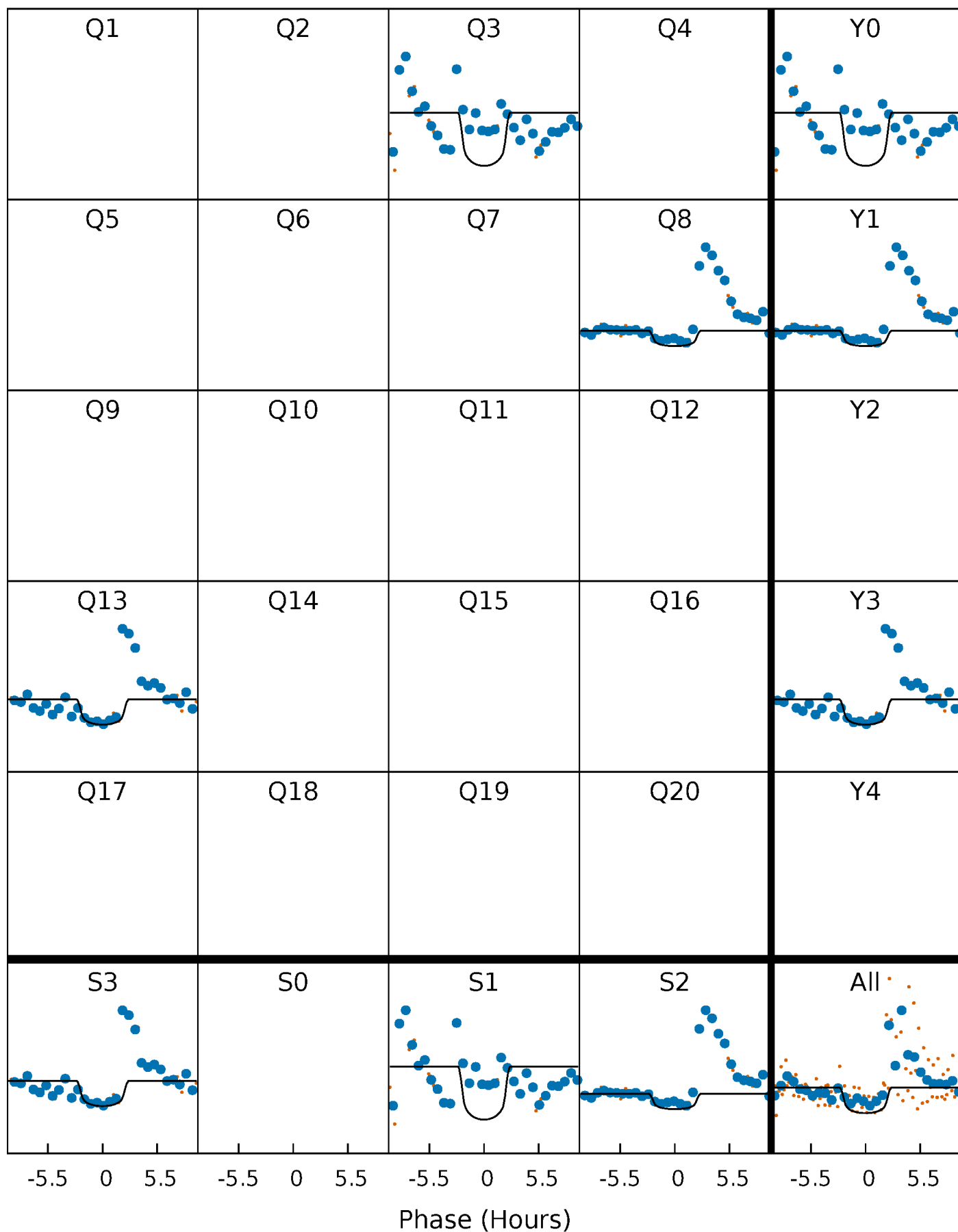
PDC Quarter-Phased Transit Curves

TCE 007830341-01 P=435.515497 Days $T_0=336.261915$ (BKJD)



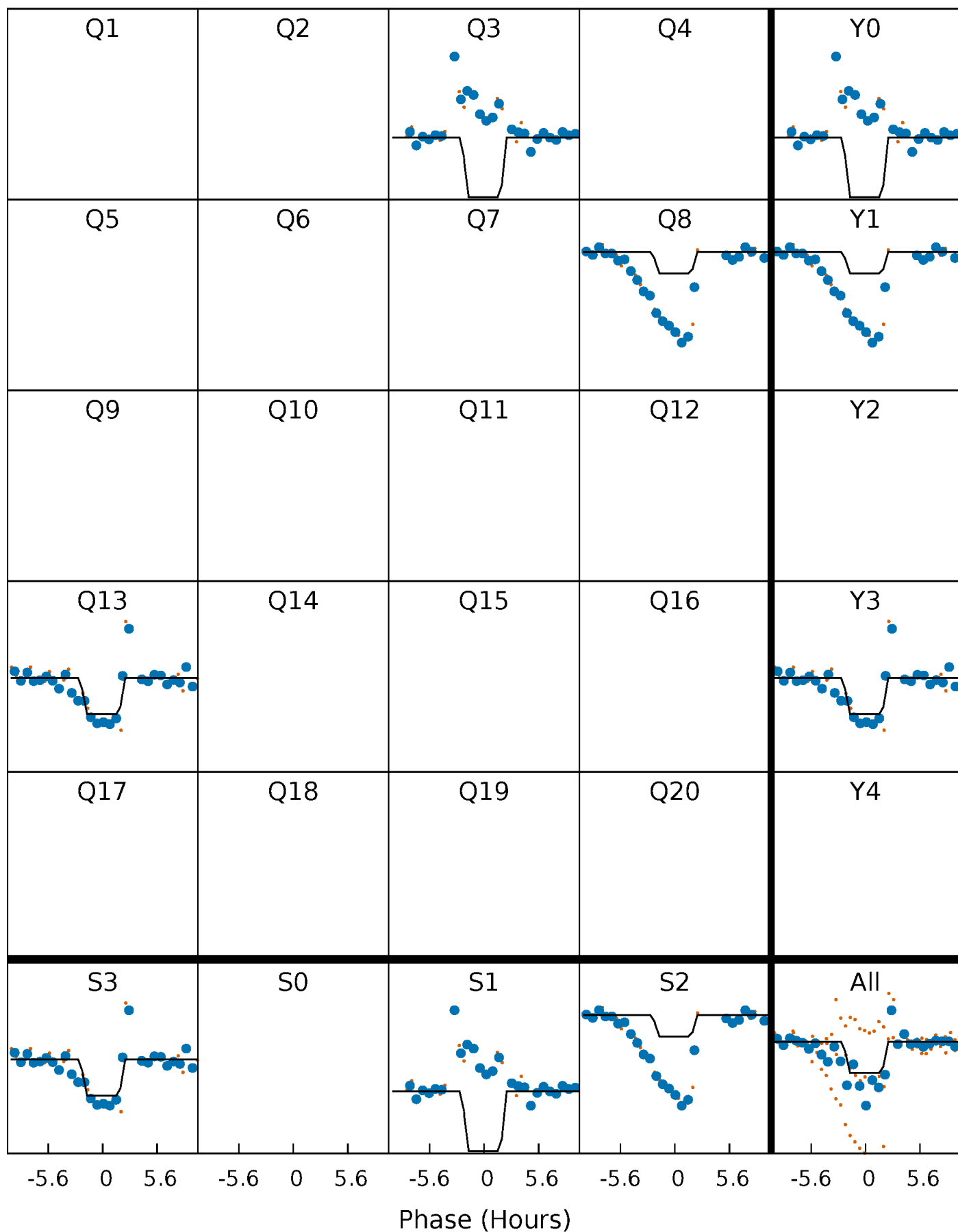
DV Quarter-Phased Transit Curves

TCE 007830341-01 P=435.515497 Days $T_0=336.261915$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

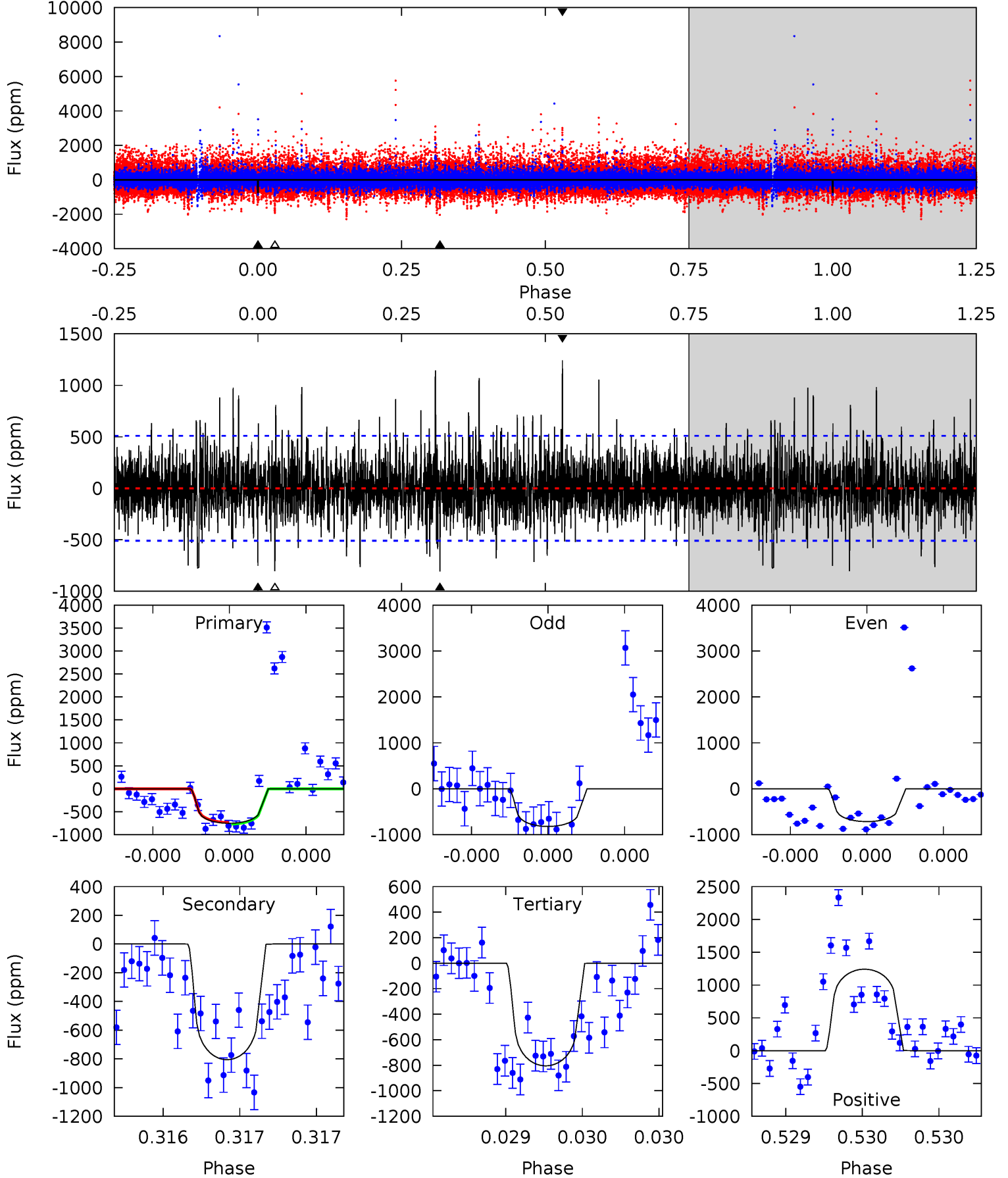
TCE 007830341-01 P=435.500464 Days $T_0=336.279897$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-01, P = 435.515497 Days, E = 336.261915 Days

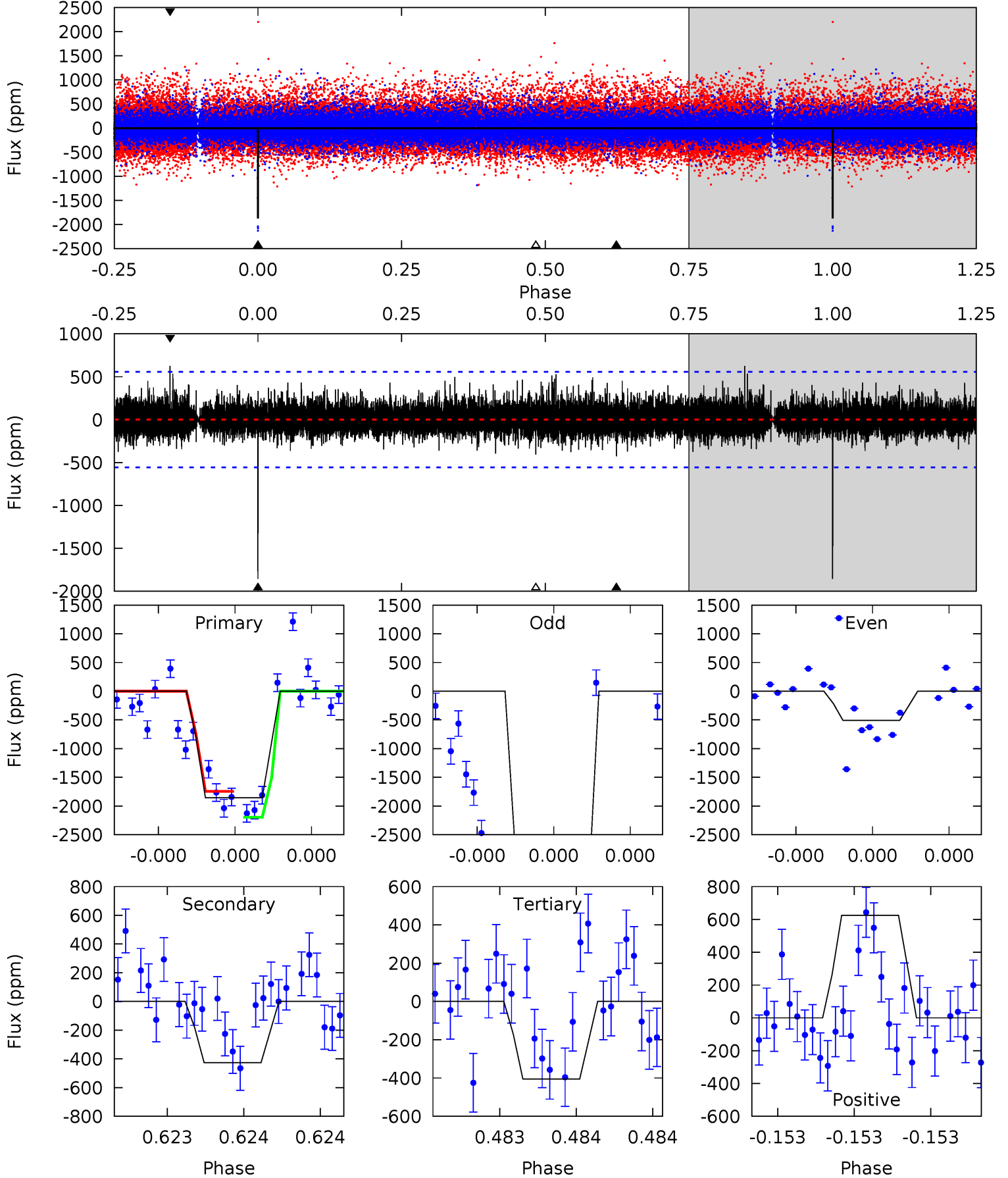
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.23	8.83	8.82	13.6	5.58	3.49	2.13	-0.59	-5.37	0.01	-4.78	0.29	0.84	0.61	0.18



Alt Model-Shift Uniqueness Test

007830341-01, P = 435.500464 Days, E = 336.279897 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	4.30	4.09	6.31	5.62	3.55	1.01	14.6	12.4	0.22	-2.00	41.5	1.22	0.25	2.21



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-806 ± 91	$2.30^{+1.62}_{-1.36}$	173^{+6}_{-6}	3306^{+1262}_{-455}	$66882^{+336969}_{-43667}$
Alt.	-427 ± 99	$2.45^{+1.64}_{-1.40}$	173^{+5}_{-6}	2972^{+917}_{-394}	$30816^{+147018}_{-19957}$

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

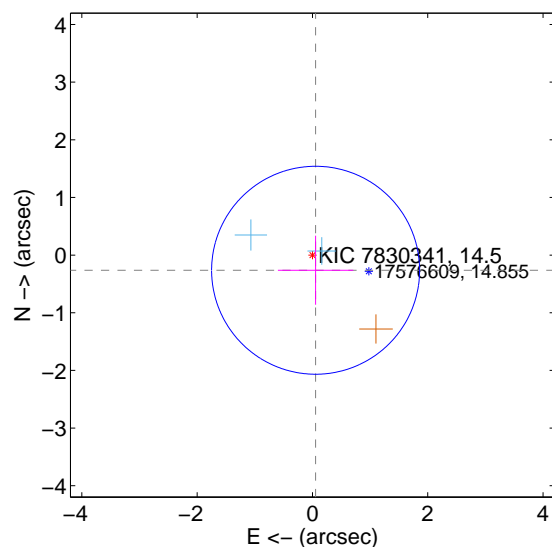
Supplemental centroid analysis for 007830341-01. Kepler magnitude: 14.50. Transit SNR 7.44

There are 2 quarters with good PRF difference image offsets

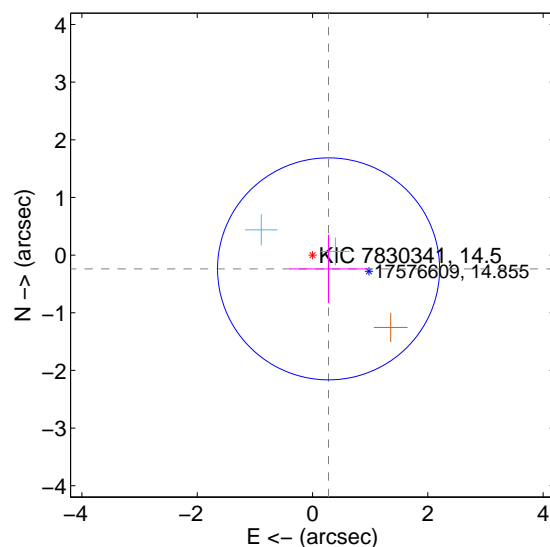
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.269 ± 0.601	0.45	-0.055 ± 0.653	-0.263 ± 0.599
PRF-fit source offset from KIC position	0.366 ± 0.642	0.57	-0.278 ± 0.677	-0.239 ± 0.590
photometric centroid source offset	1.01 ± 0.83	1.22	-0.01 ± 1.06	-1.01 ± 0.83

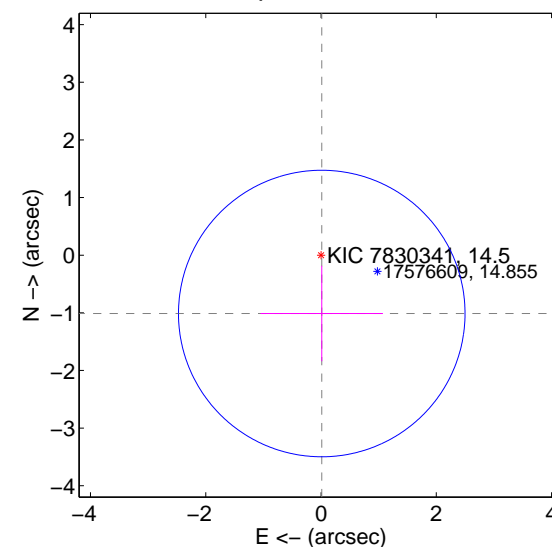
offset from difference PRF-fit to OOT PRF-fit



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

Q1 no difference image



Q1 no OOT image



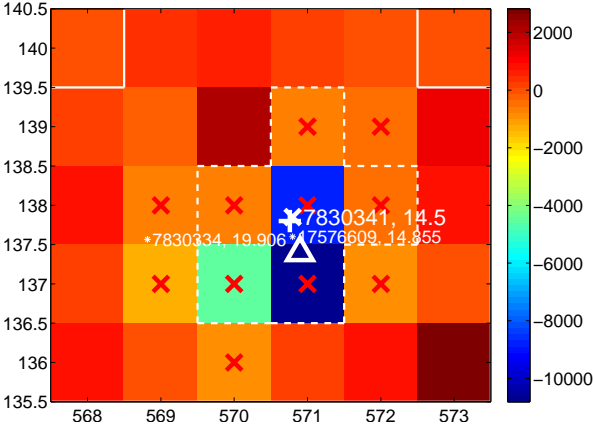
Q2 no difference image



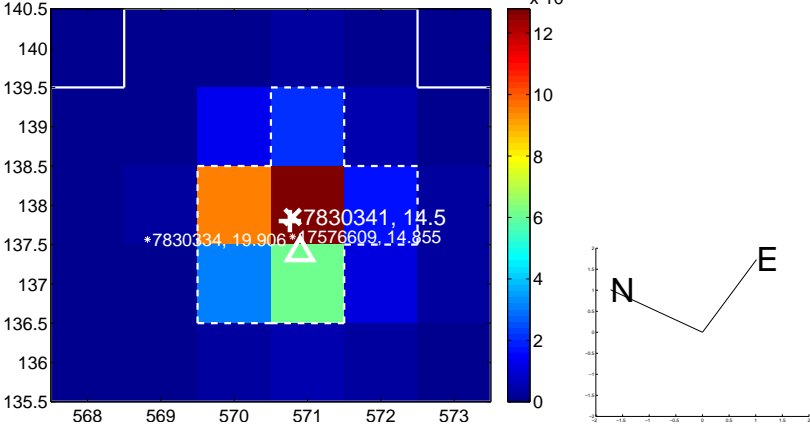
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



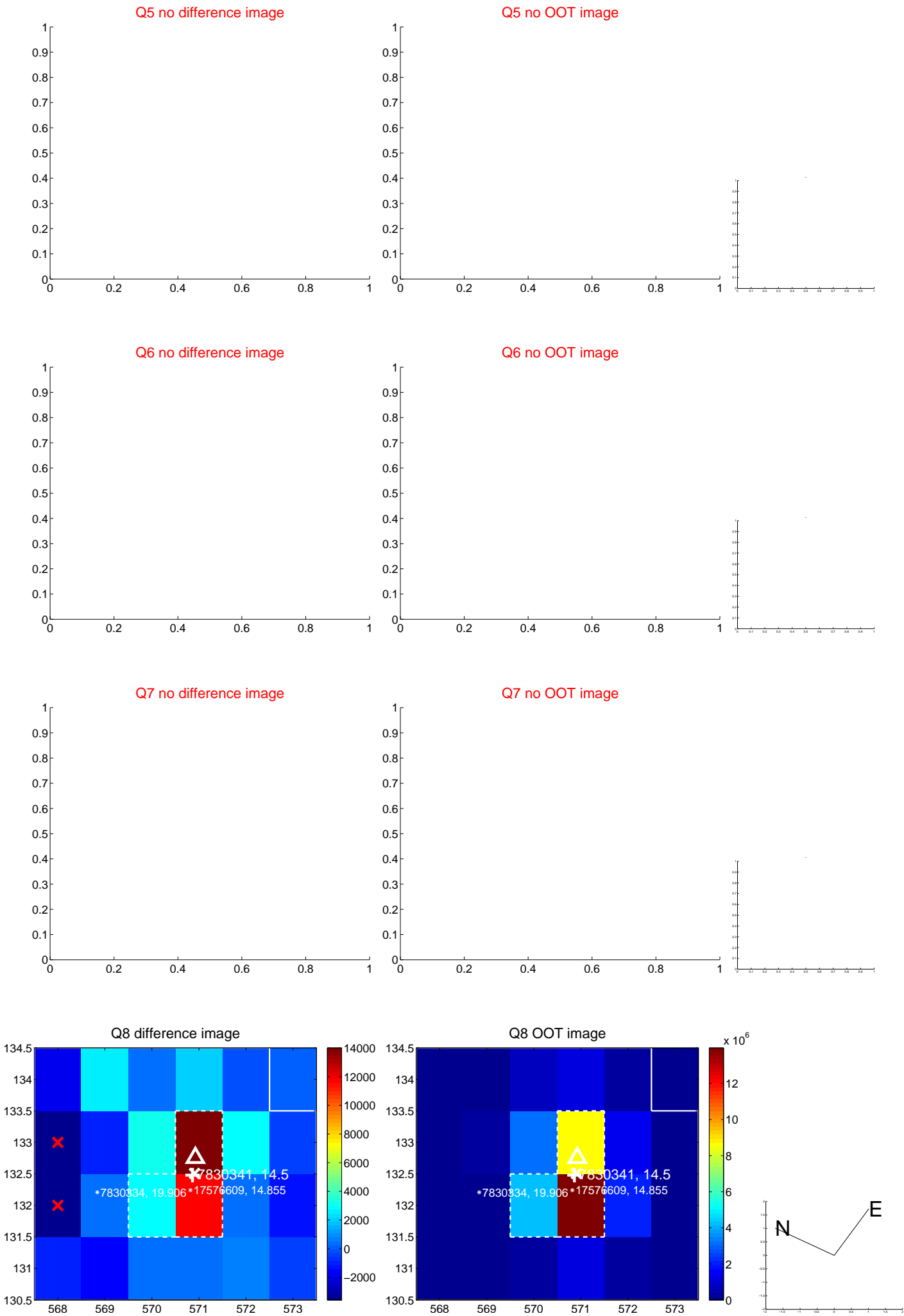
Q4 no difference image



Q4 no OOT image



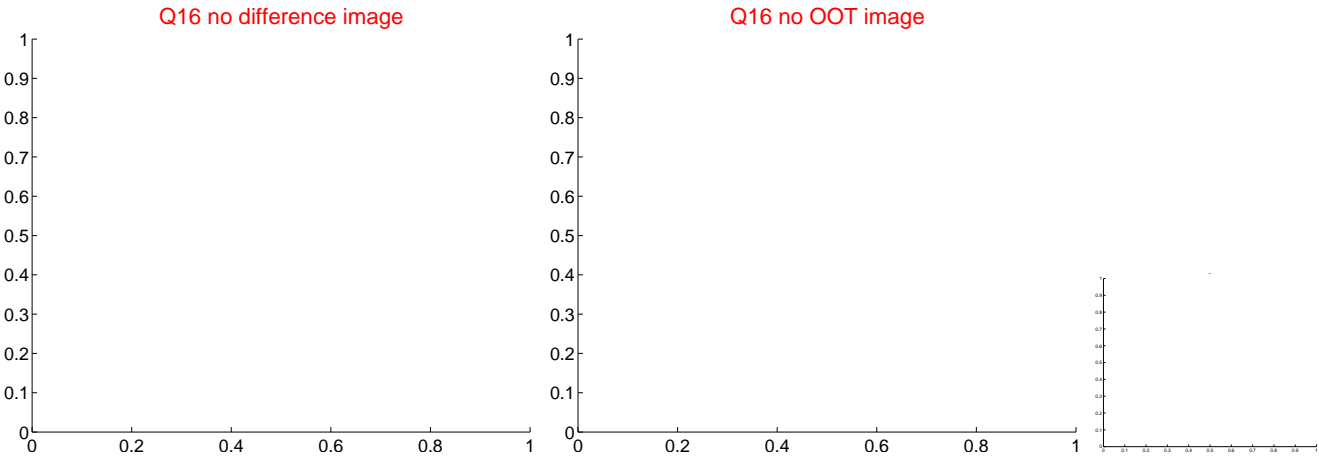
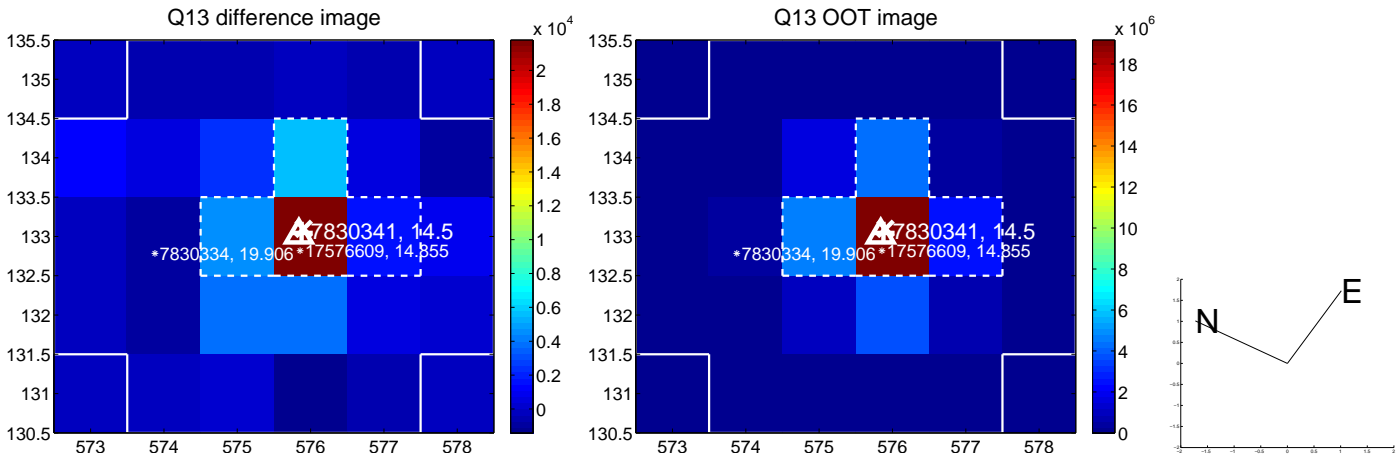
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



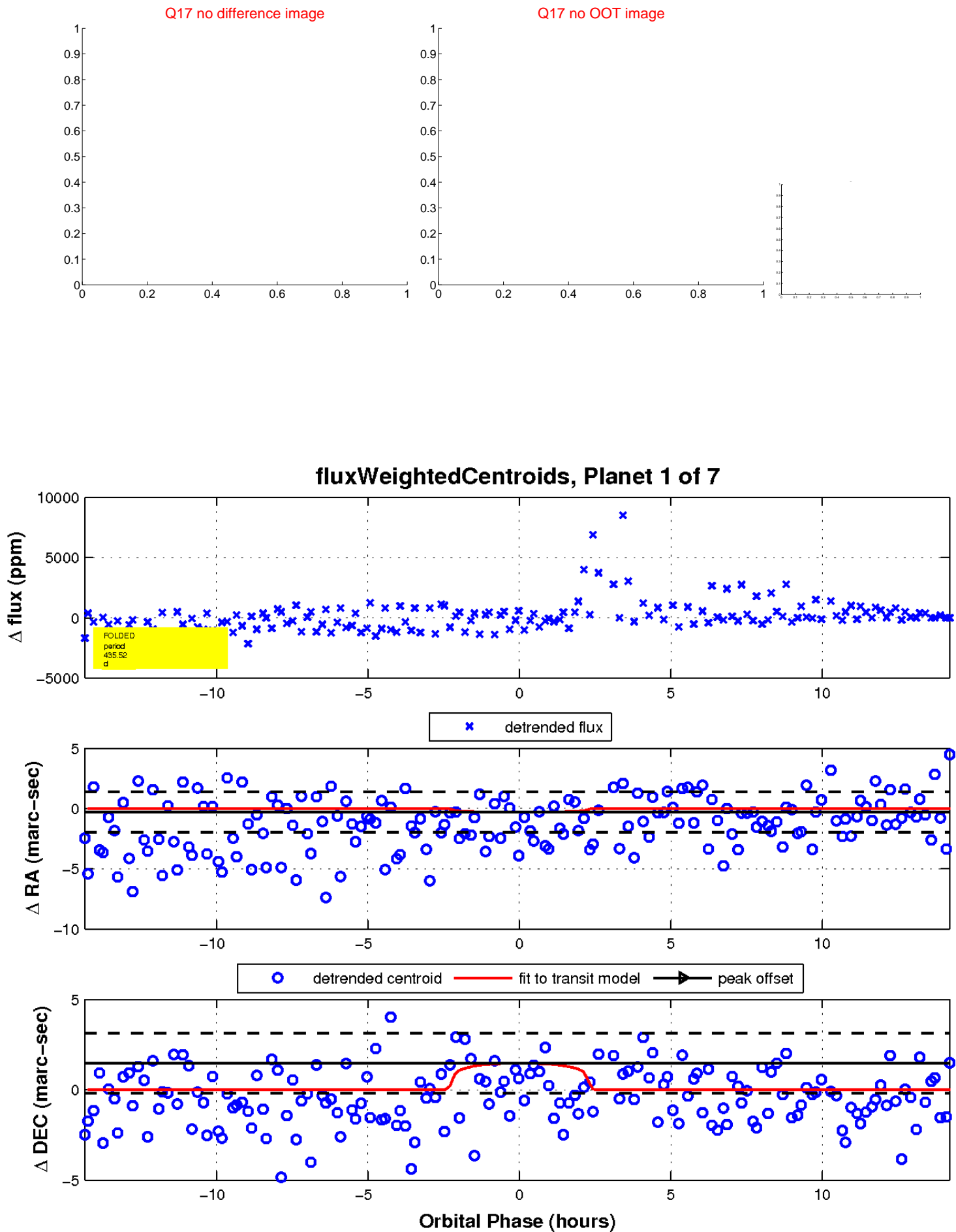
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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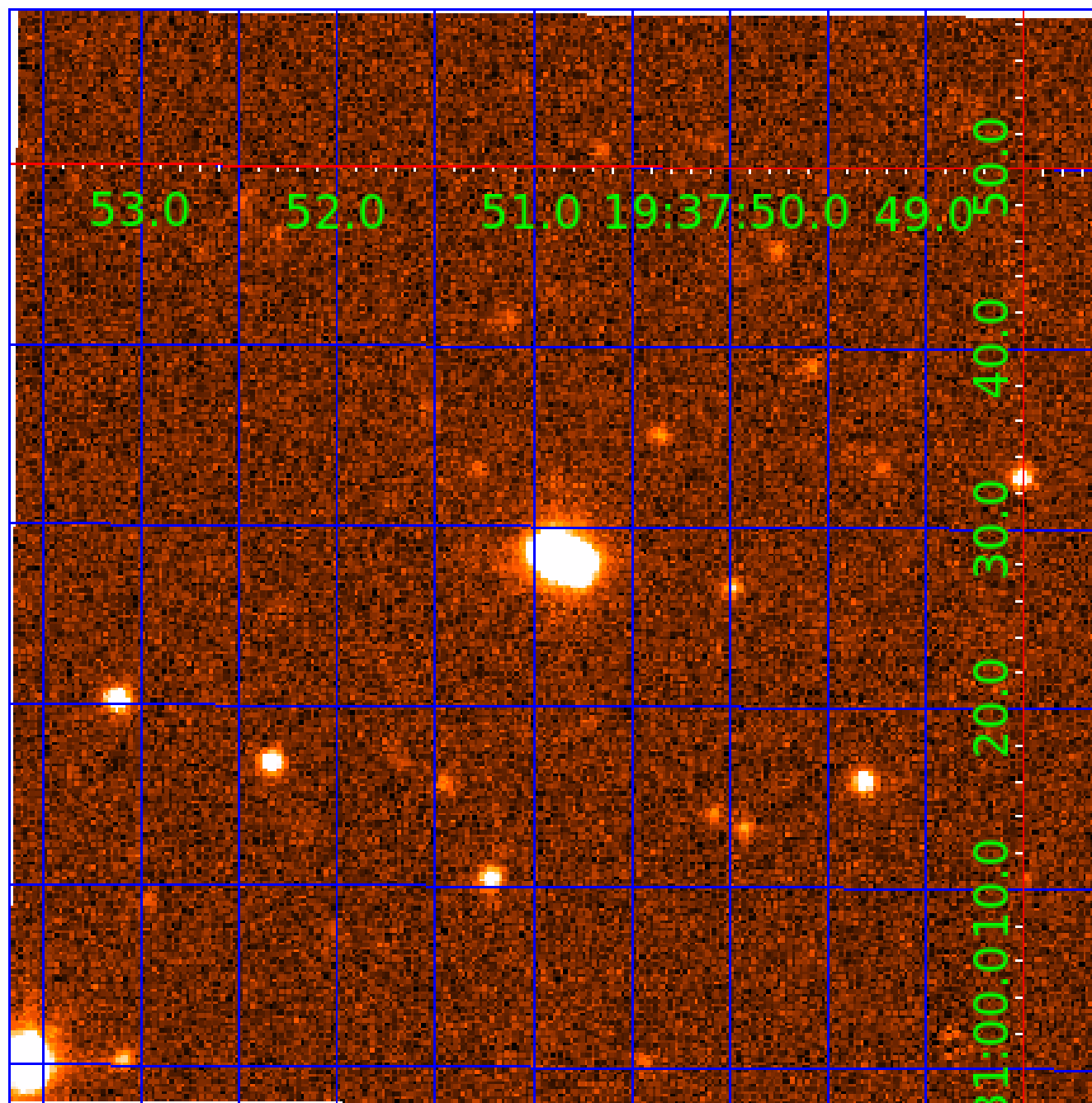


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UKIRT Image

Declination



KIC 007830341

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007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

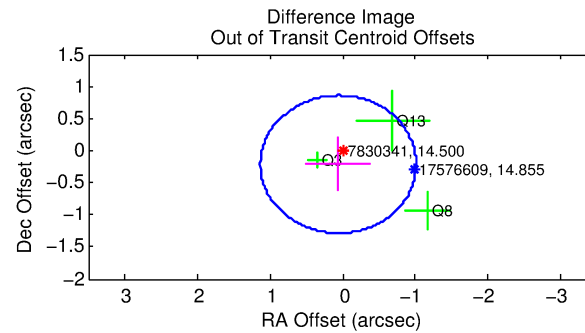
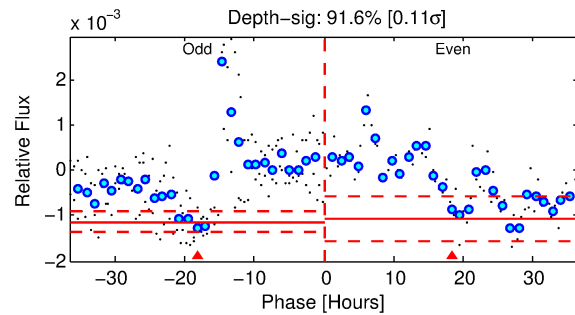
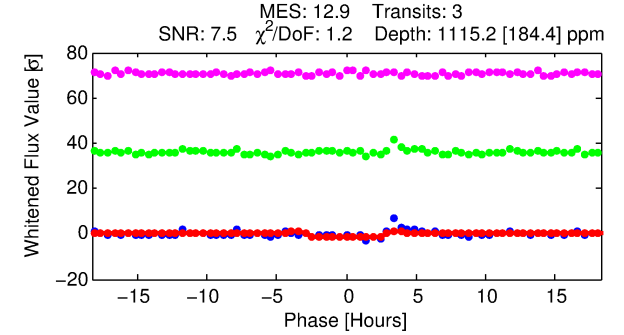
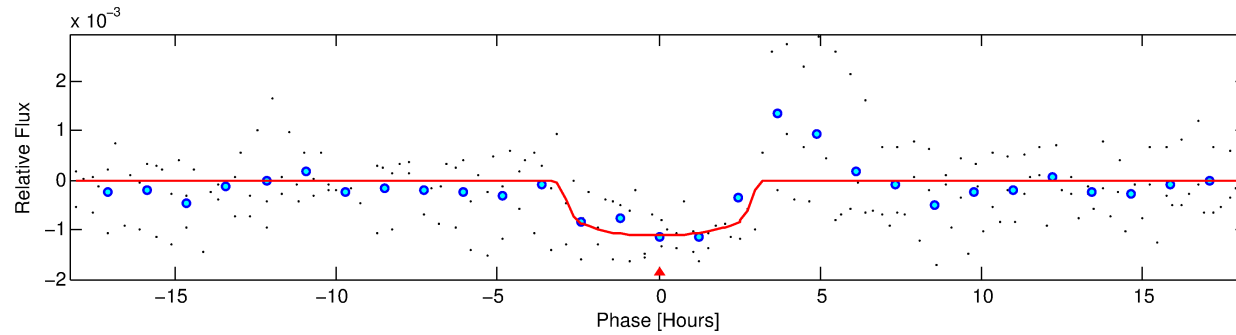
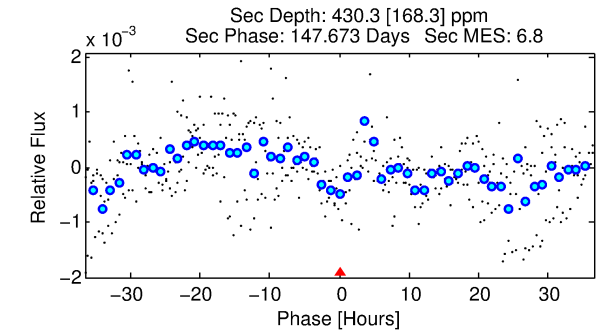
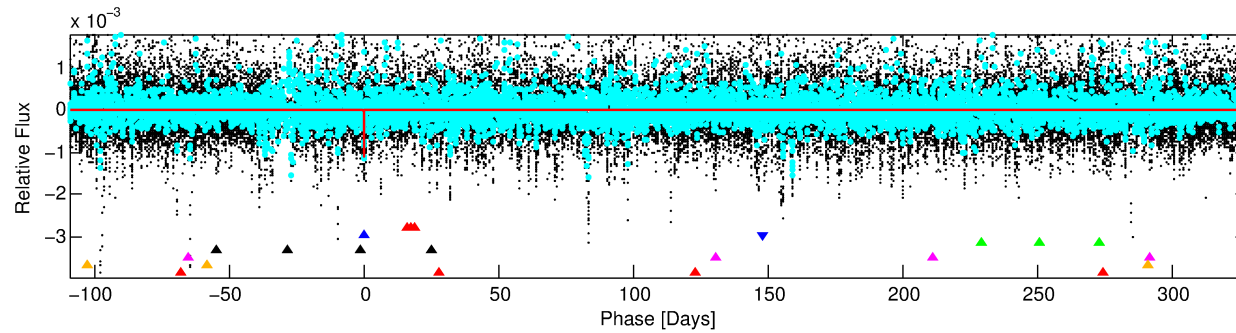
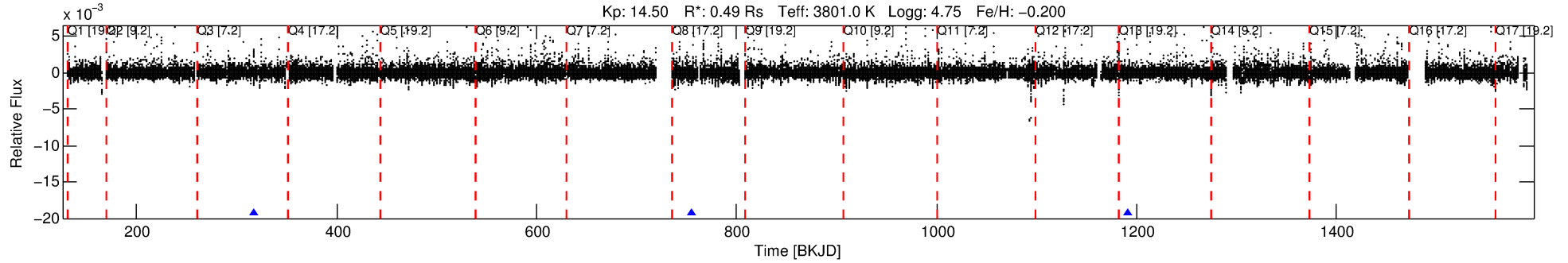
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-02

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 2 of 7 Period: 437.084 d



DV Fit Results:

Period = 437.08400 [0.00615] d
Epoch = 317.2297 [0.0077] BKJD
Rp/R* = 0.0314 [0.0248]
a/R* = 487.58 [1718.73]
b = 0.52 [4.96]
Seff = 0.06 [0.01]
Teq = 124 [5] K
Rp = 1.69 [1.34] Re
a = 0.8941 [0.0766] AU
Ag = 66599.40 [108475.86] [0.61 σ]
Teffp = 3090 [1258] K [2.36 σ]

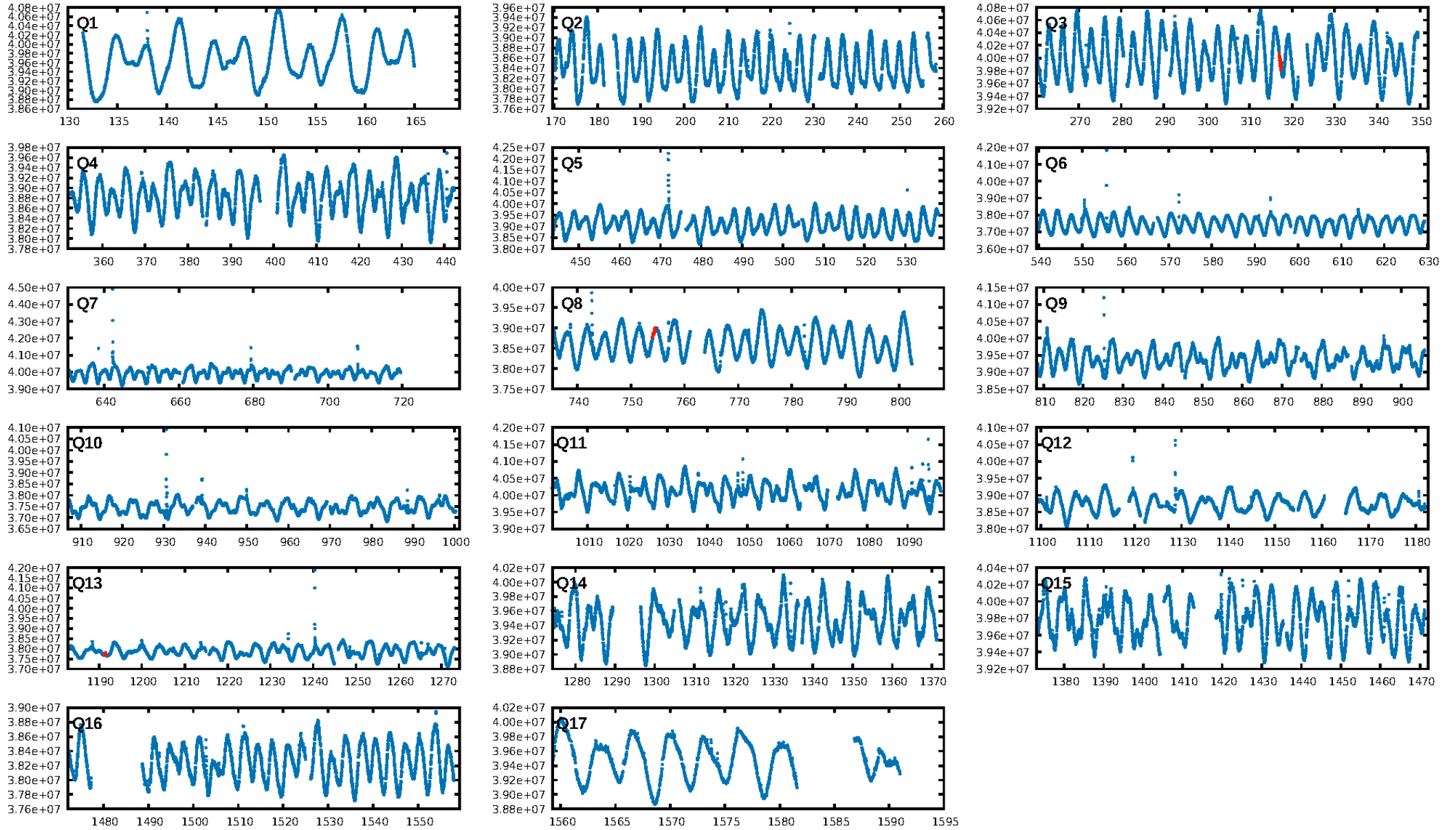
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.85 σ]
LongPeriod-sig: 100.0% [63.61 σ]
ModelChiSquare2-sig: 62.0%
ModelChiSquareGof-sig: 93.2%
Bootstrap-pfa: 3.46e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9225
Centroid-sig: 32.4%
Centroid-so: 1.323 arcsec [1.06 σ]
OotOffset-rm: 0.223 arcsec [0.62 σ]
KicOffset-rm: 0.242 arcsec [0.70 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

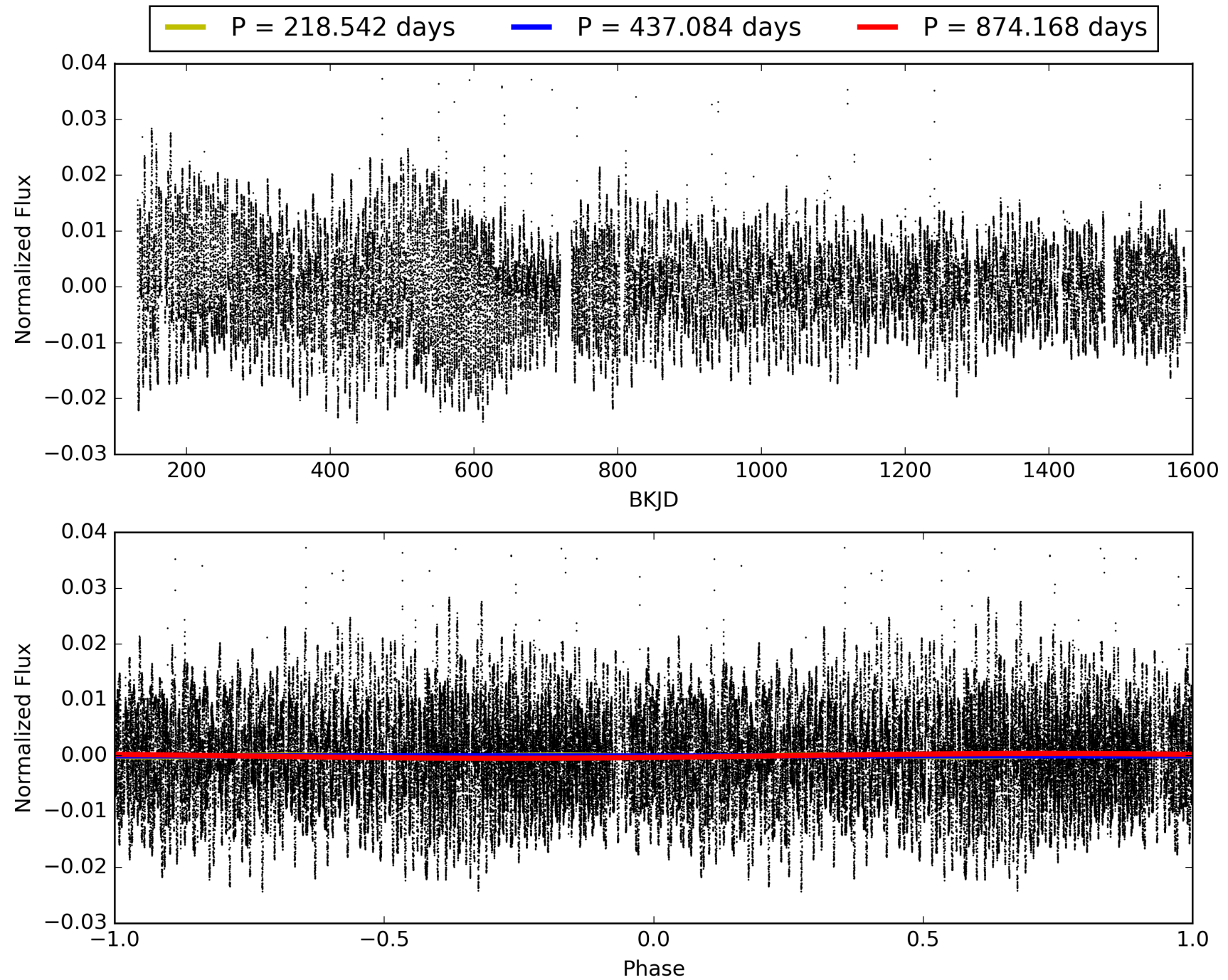
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:14:41 Z

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

TCE 007830341-02, PDC Light Curves

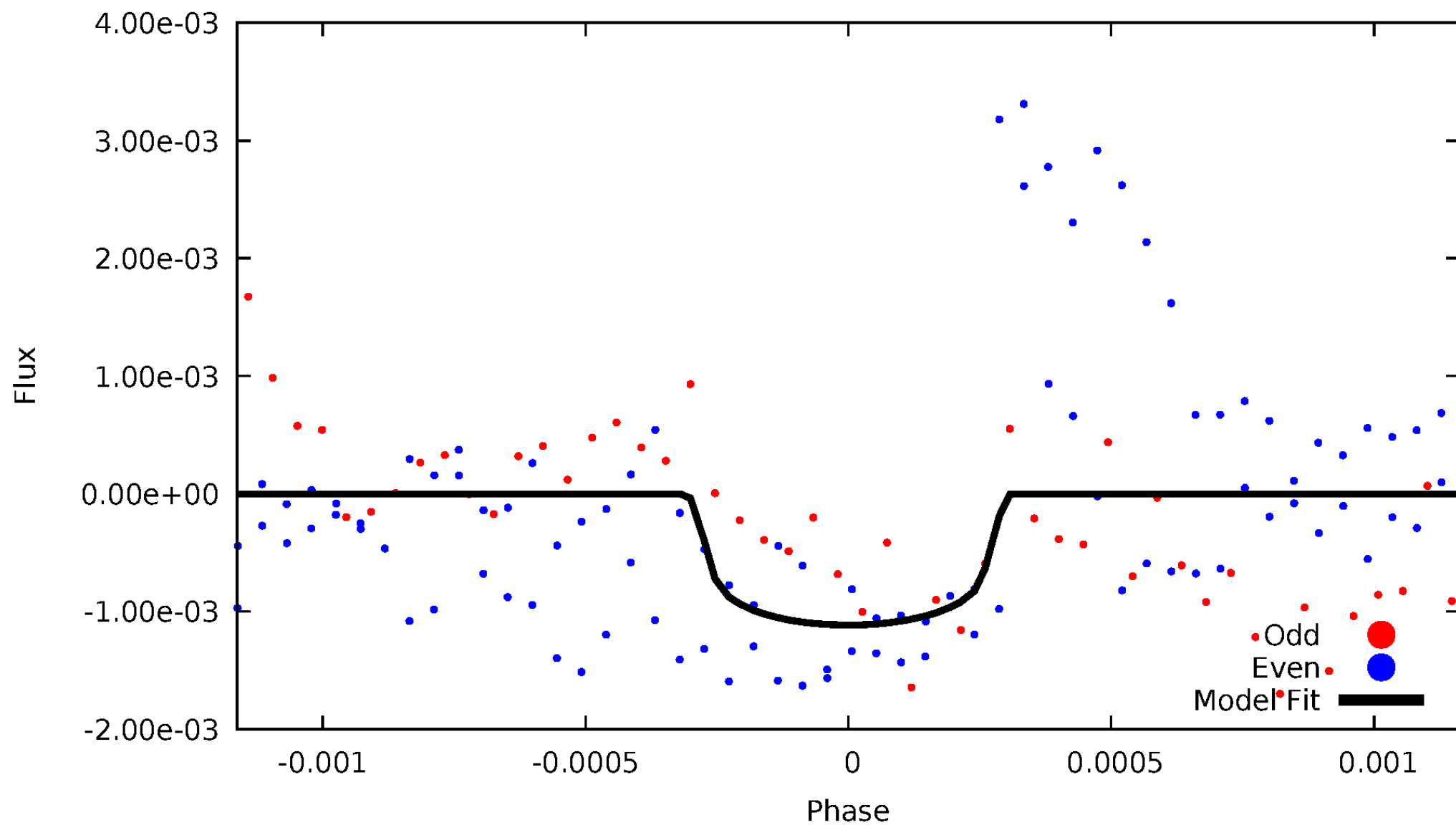


TCE 007830341-02



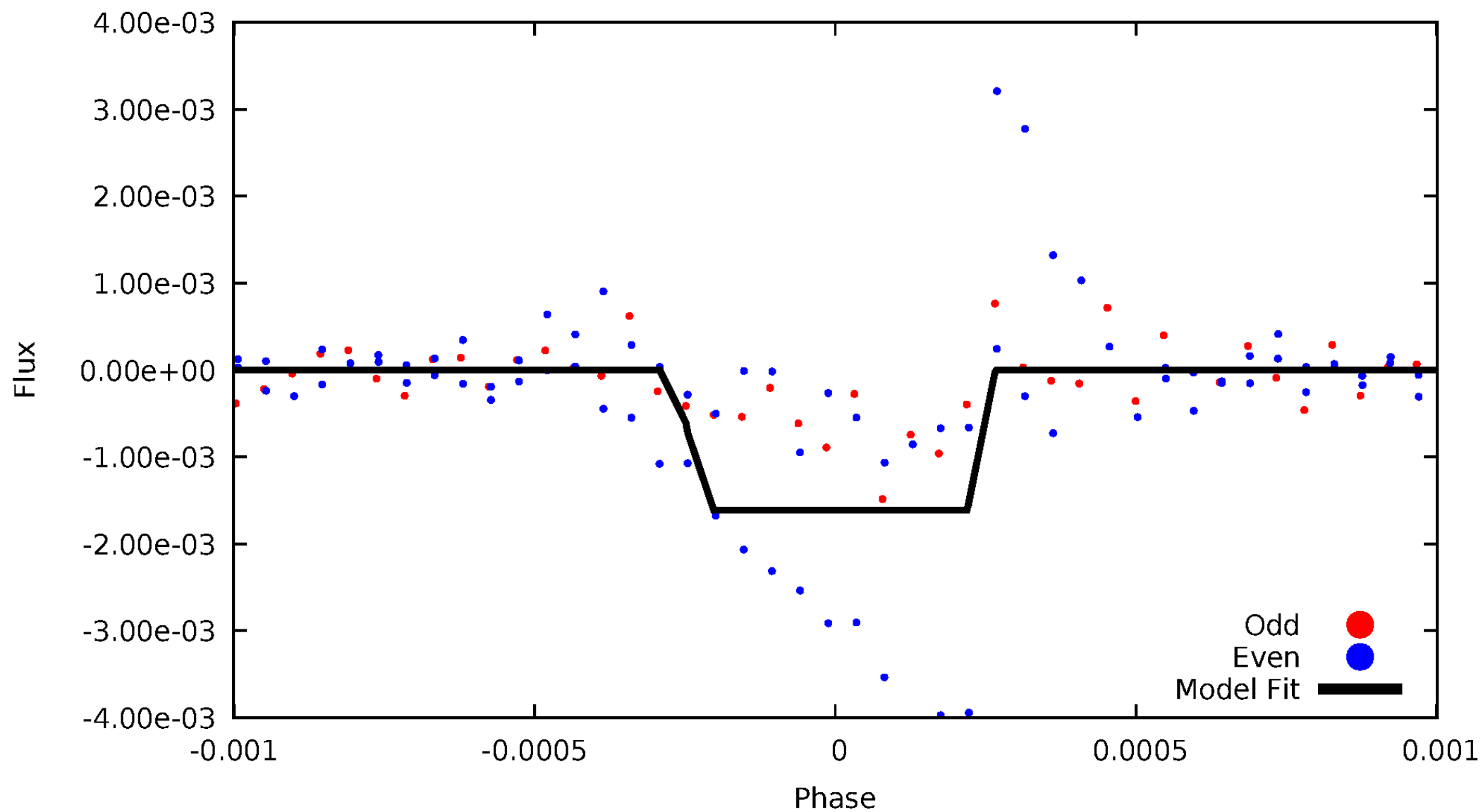
DV Odd/Even

TCE 007830341-02



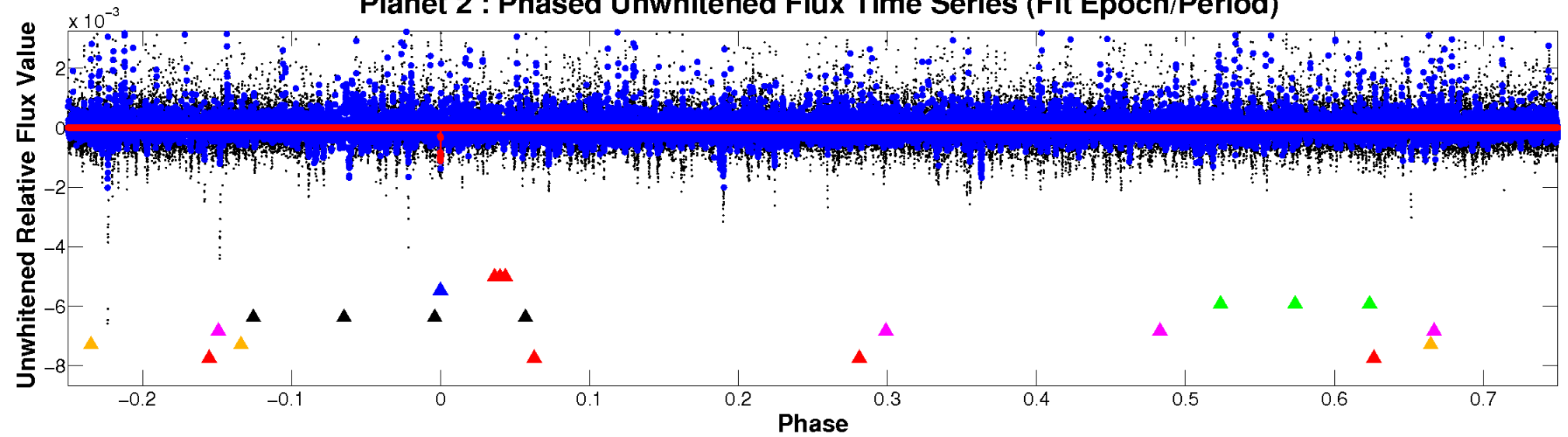
ALT Odd/Even

TCE 007830341-02

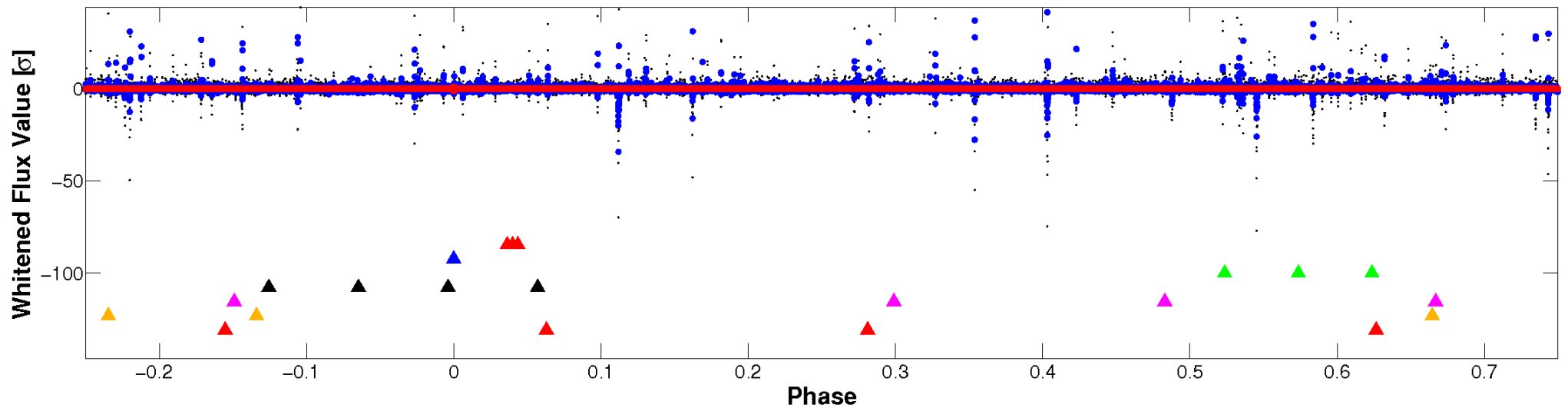


Non-Whitened Vs. Whitened Light Curve

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

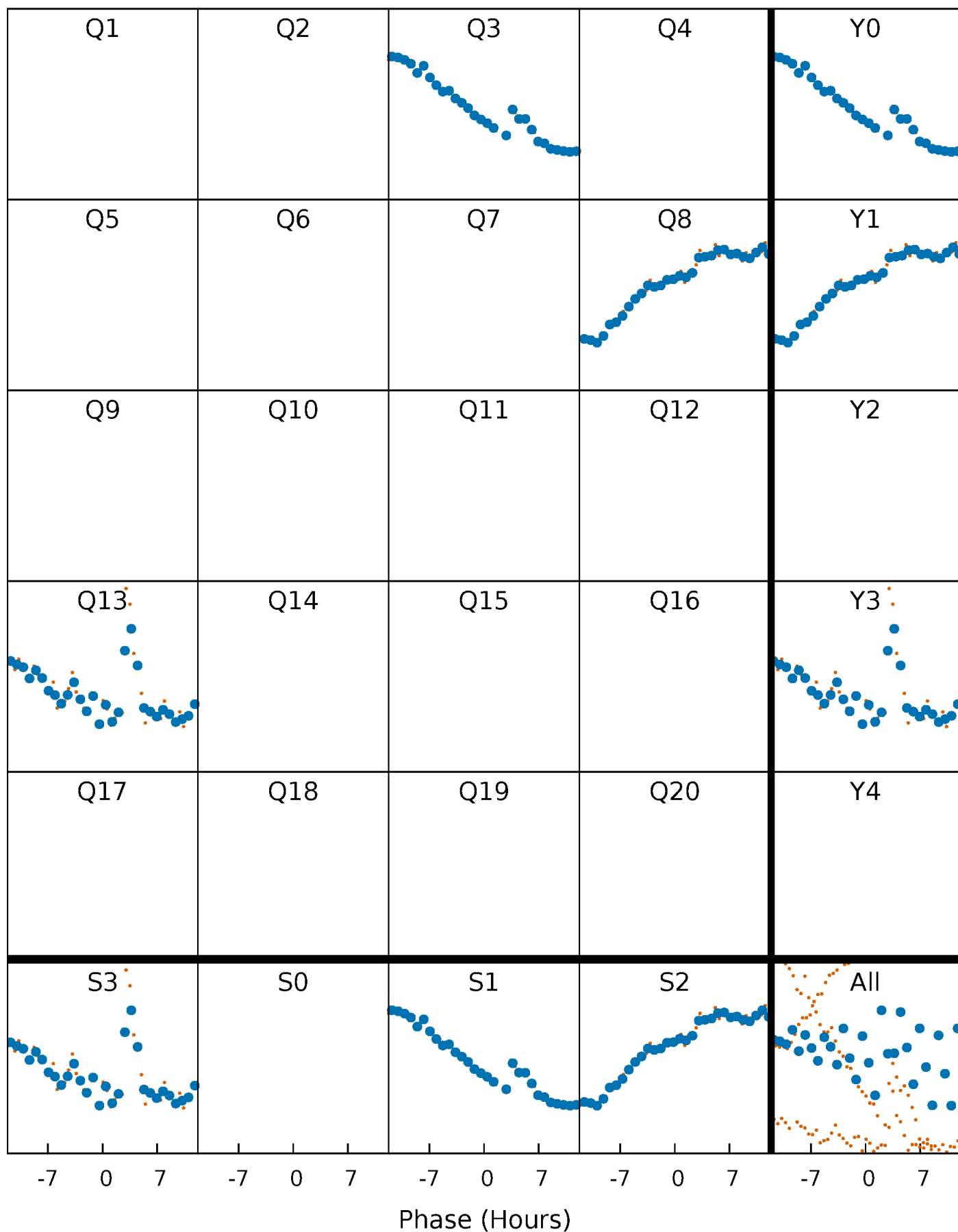


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



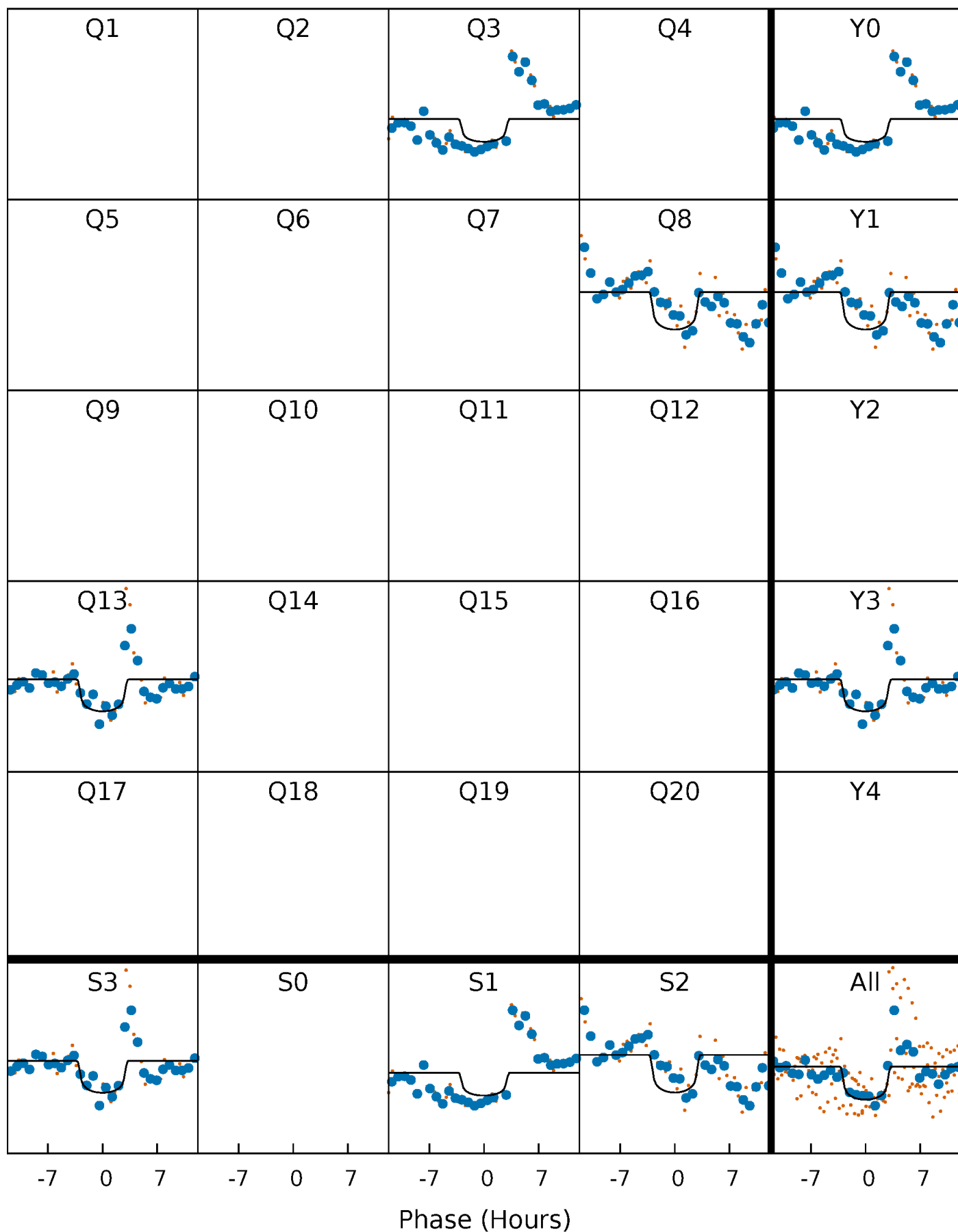
PDC Quarter-Phased Transit Curves

TCE 007830341-02 $P=437.083997$ Days $T_0=317.229705$ (BKJD)



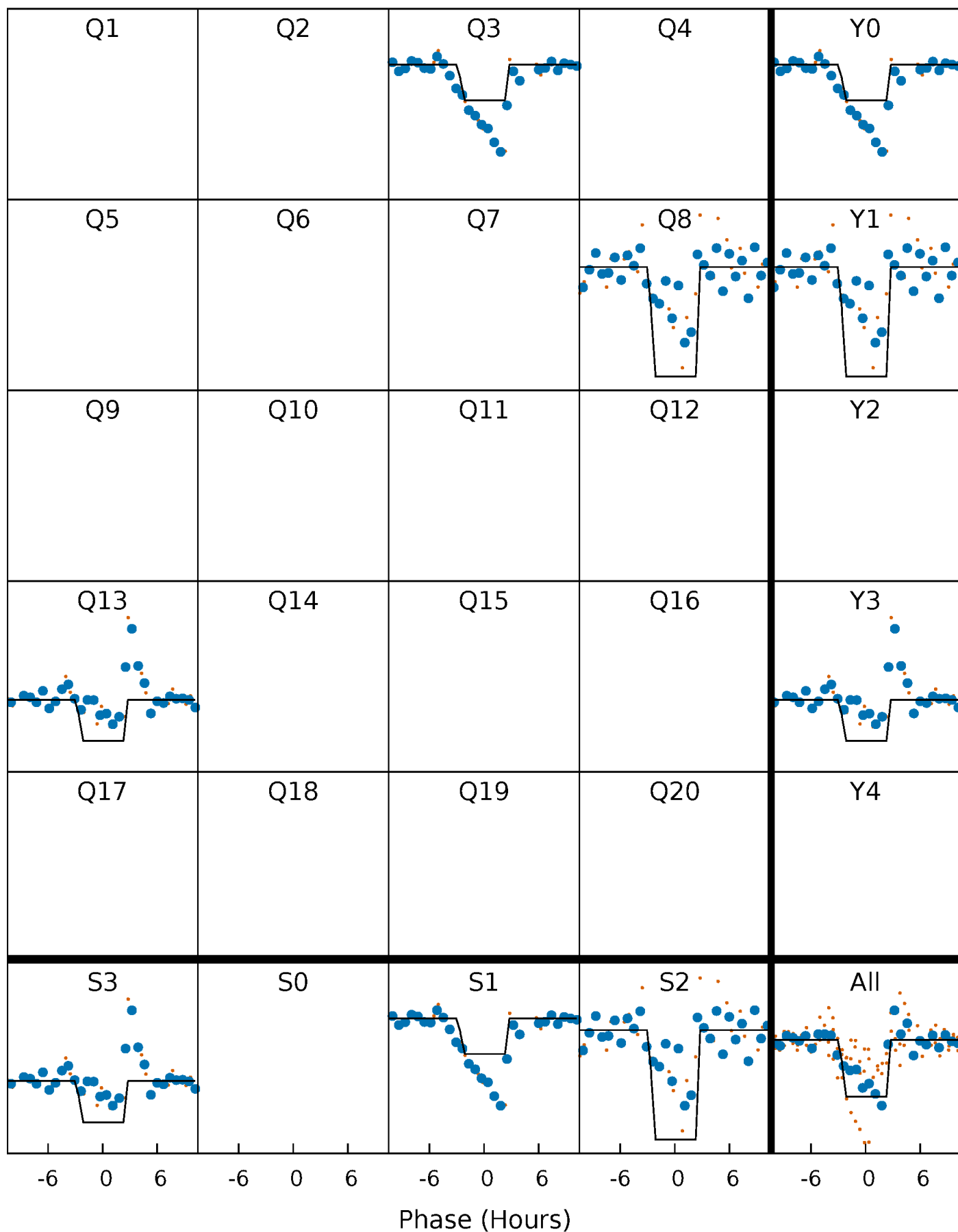
DV Quarter-Phased Transit Curves

TCE 007830341-02 $P=437.083997$ Days $T_0=317.229705$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

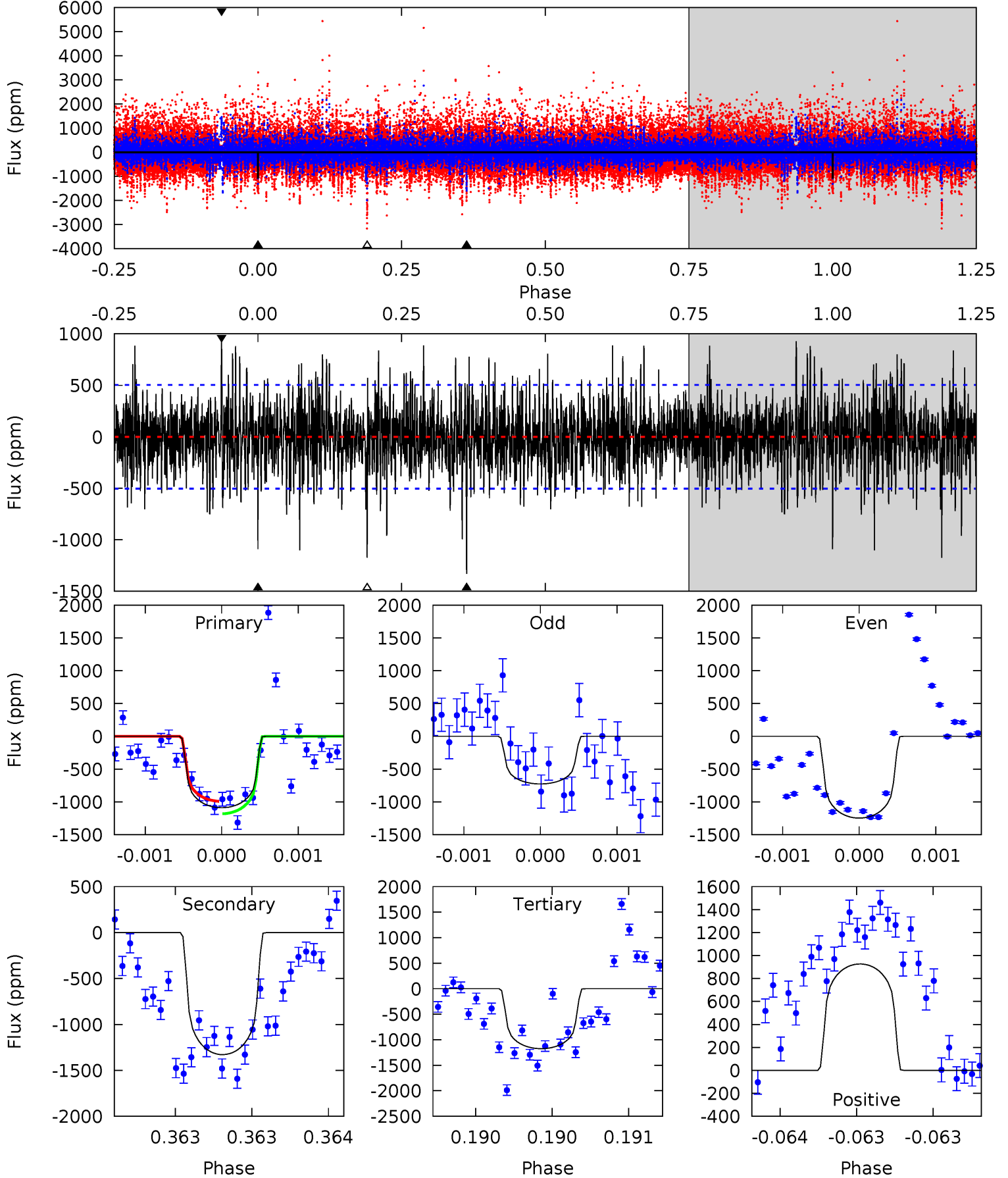
TCE 007830341-02 P=437.073848 Days $T_0=317.258070$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-02, P = 437.083997 Days, E = 317.229705 Days

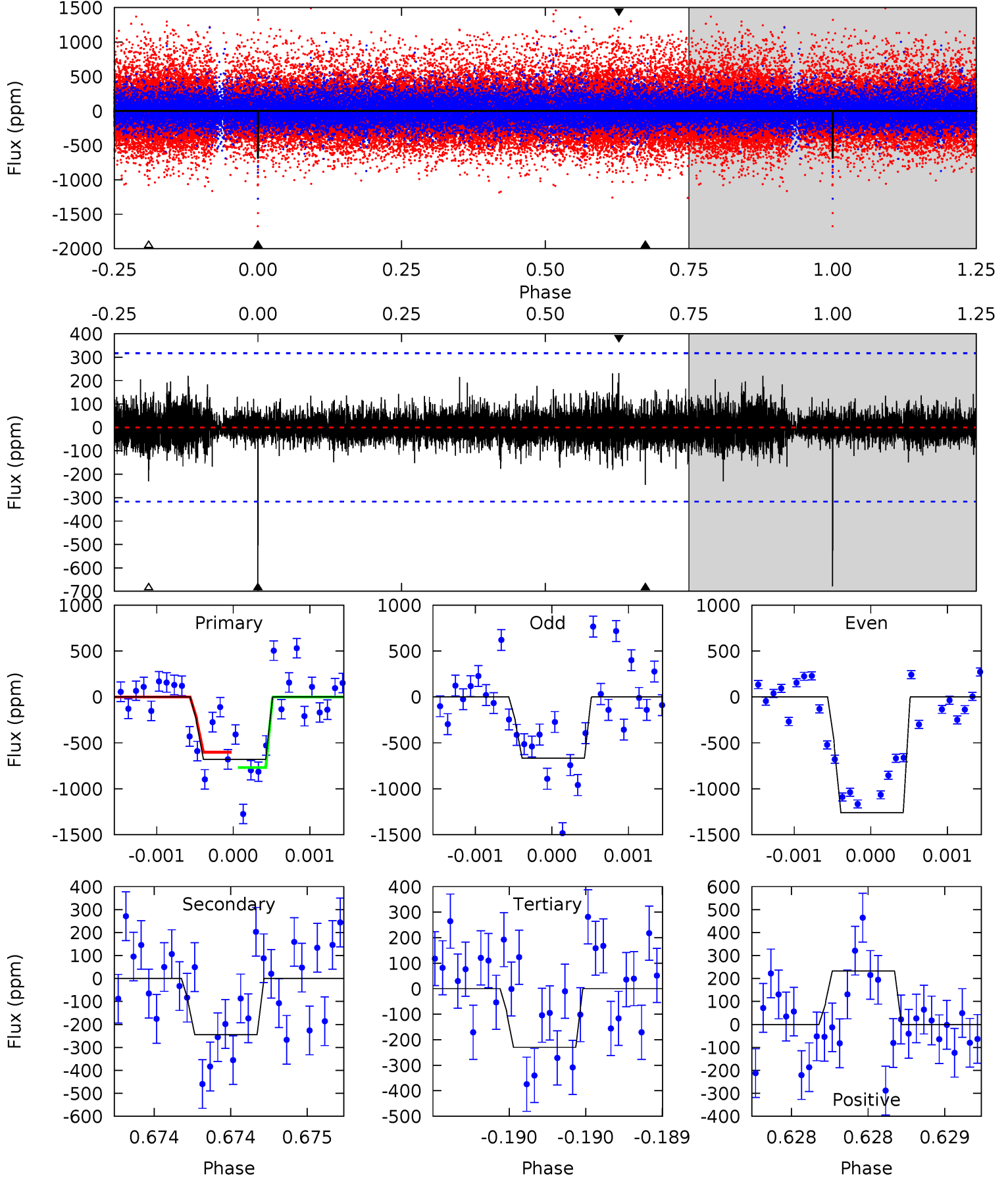
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	14.6	12.9	10.2	5.55	3.44	2.61	-0.95	1.79	1.70	4.43	1.54	1.11	0.41	1.05



Alt Model-Shift Uniqueness Test

007830341-02, P = 437.073848 Days, E = 317.258070 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	4.31	4.03	4.08	5.57	3.47	0.74	7.88	7.84	0.27	0.23	5.30	2.05	0.26	1.47



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1329 ± 91	$1.86^{+1.21}_{-1.10}$	173^{+6}_{-6}	3875^{+1586}_{-612}	$171520^{+840020}_{-109162}$
Alt.	-245 ± 57	$2.29^{+1.22}_{-1.20}$	173^{+5}_{-6}	2816^{+694}_{-318}	20583^{+74761}_{-12322}

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

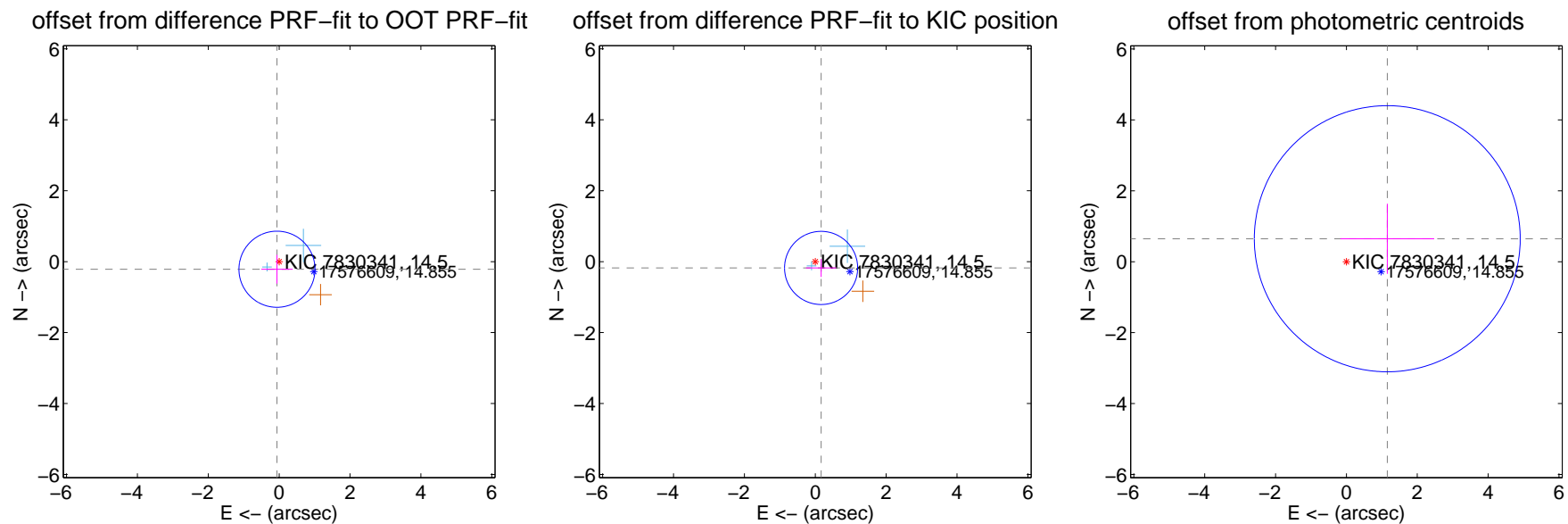
DV Centroid Data

Supplemental centroid analysis for 007830341-02. Kepler magnitude: 14.50. Transit SNR 7.54

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.223 ± 0.358	0.62	0.061 ± 0.443	-0.214 ± 0.404
PRF-fit source offset from KIC position	0.242 ± 0.344	0.70	-0.165 ± 0.425	-0.177 ± 0.253
photometric centroid source offset	1.32 ± 1.25	1.06	-1.15 ± 1.32	0.65 ± 0.99



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



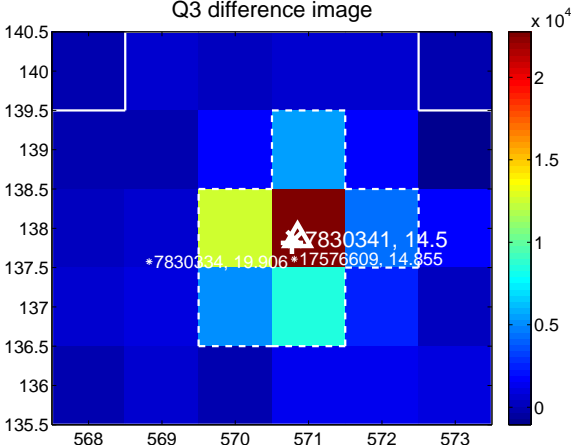
Q2 no difference image



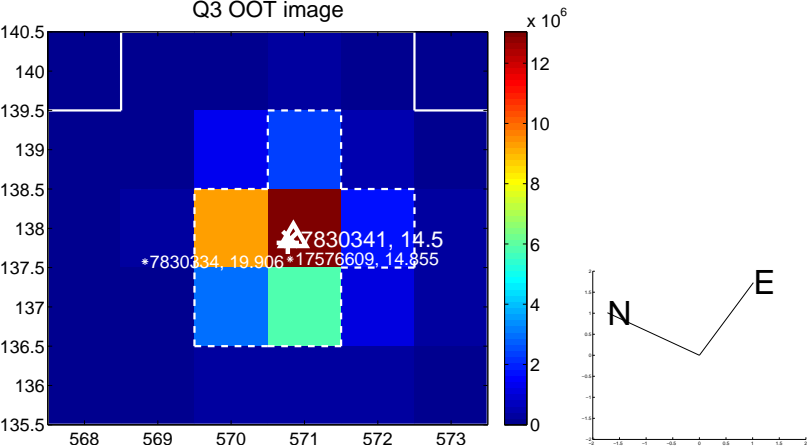
Q2 no OOT image



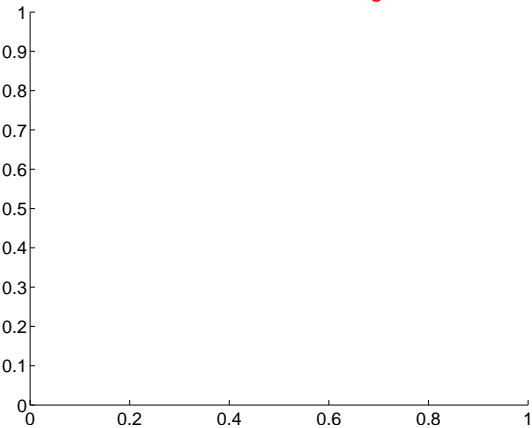
Q3 difference image



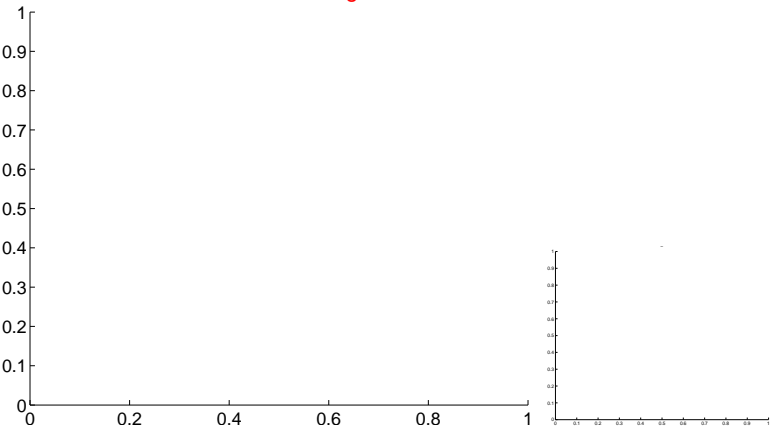
Q3 OOT image



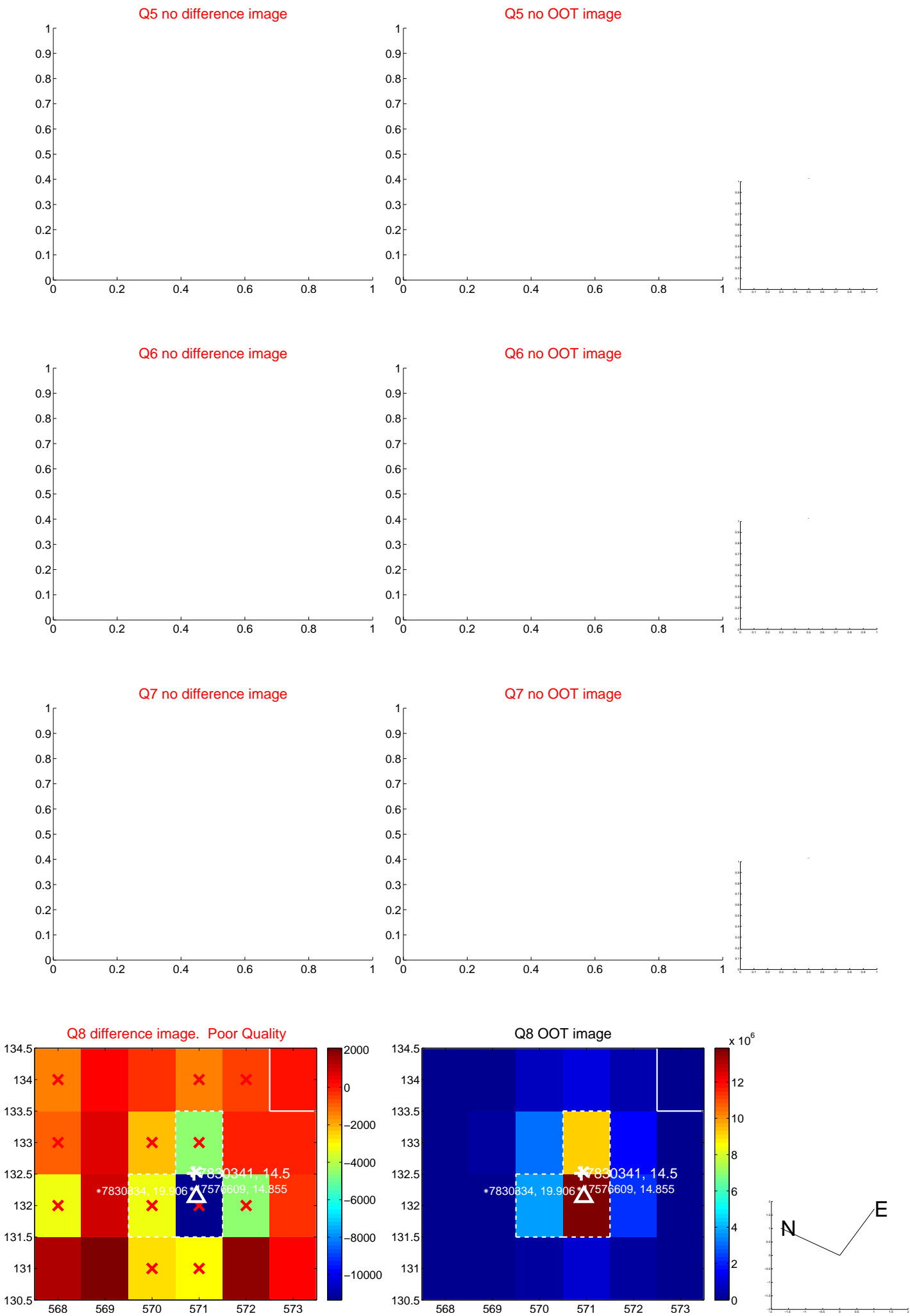
Q4 no difference image



Q4 no OOT image



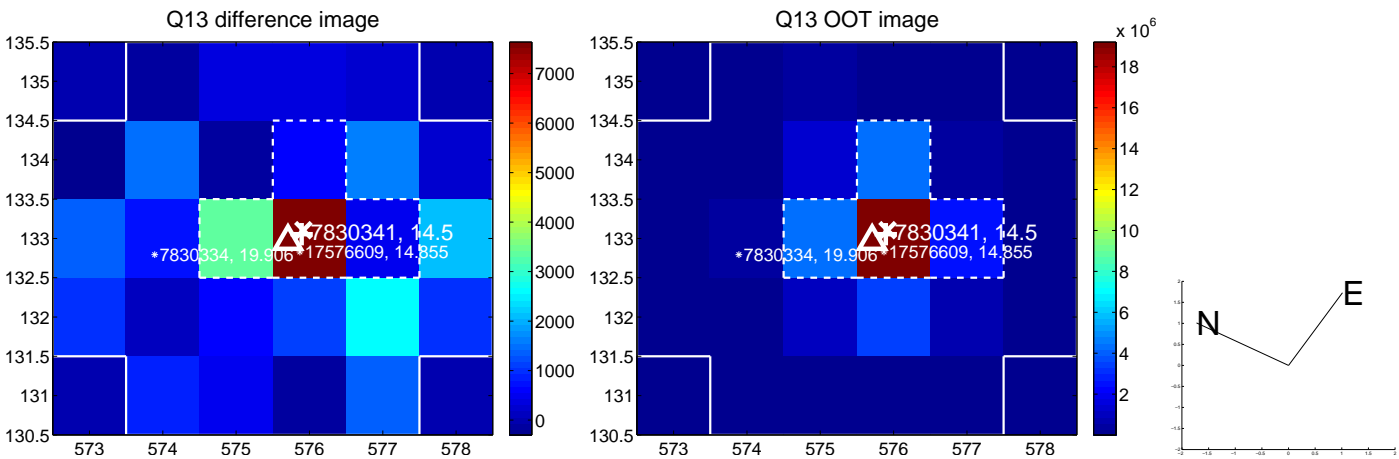
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



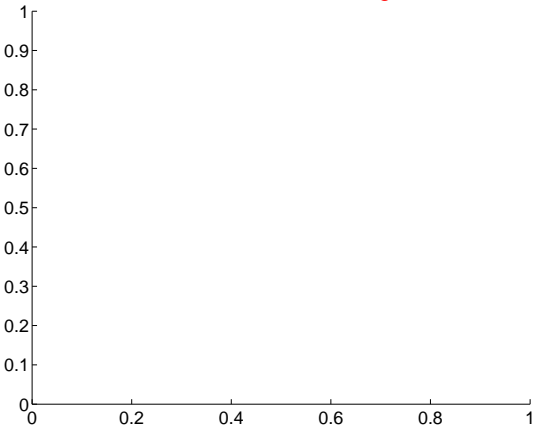
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



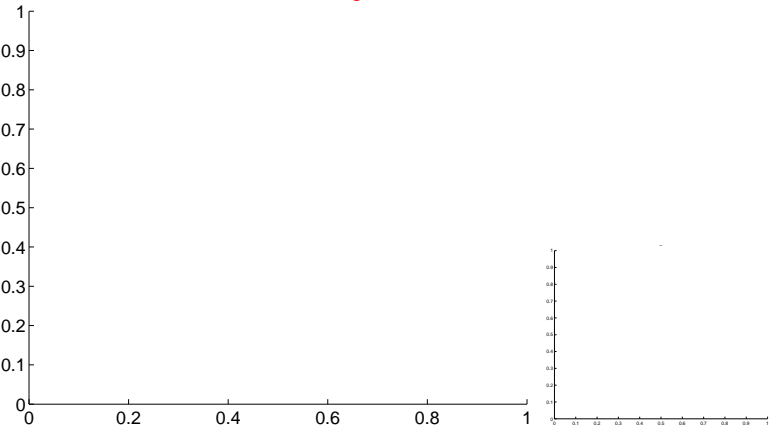
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



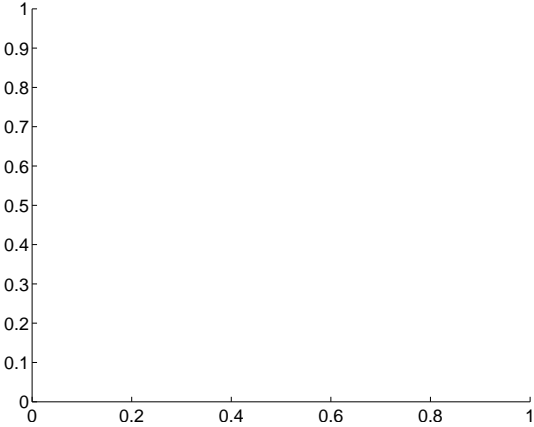
Q14 no difference image



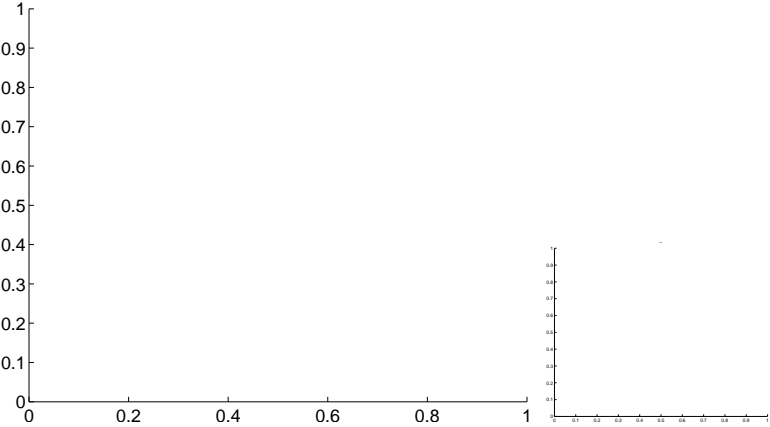
Q14 no OOT image



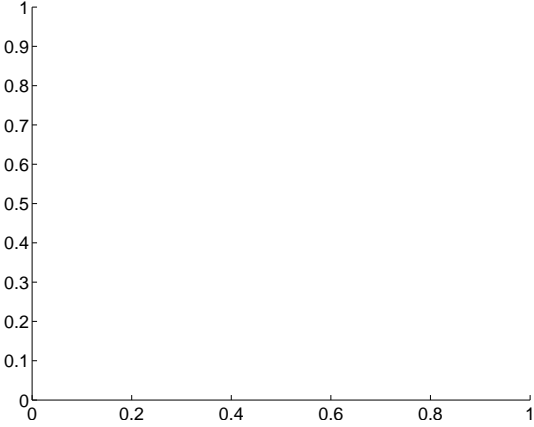
Q15 no difference image



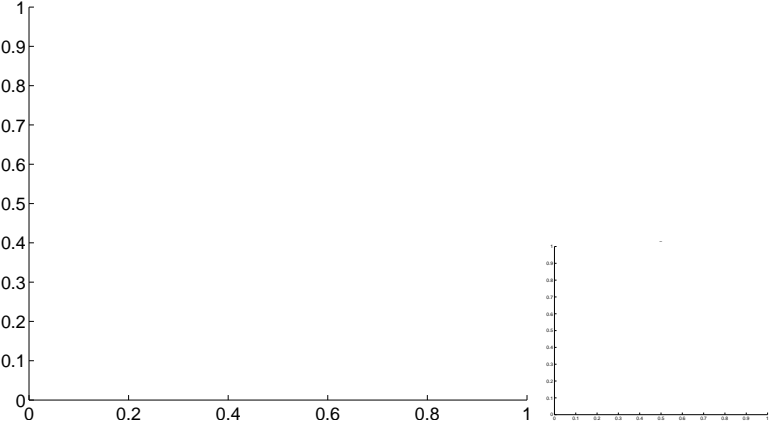
Q15 no OOT image



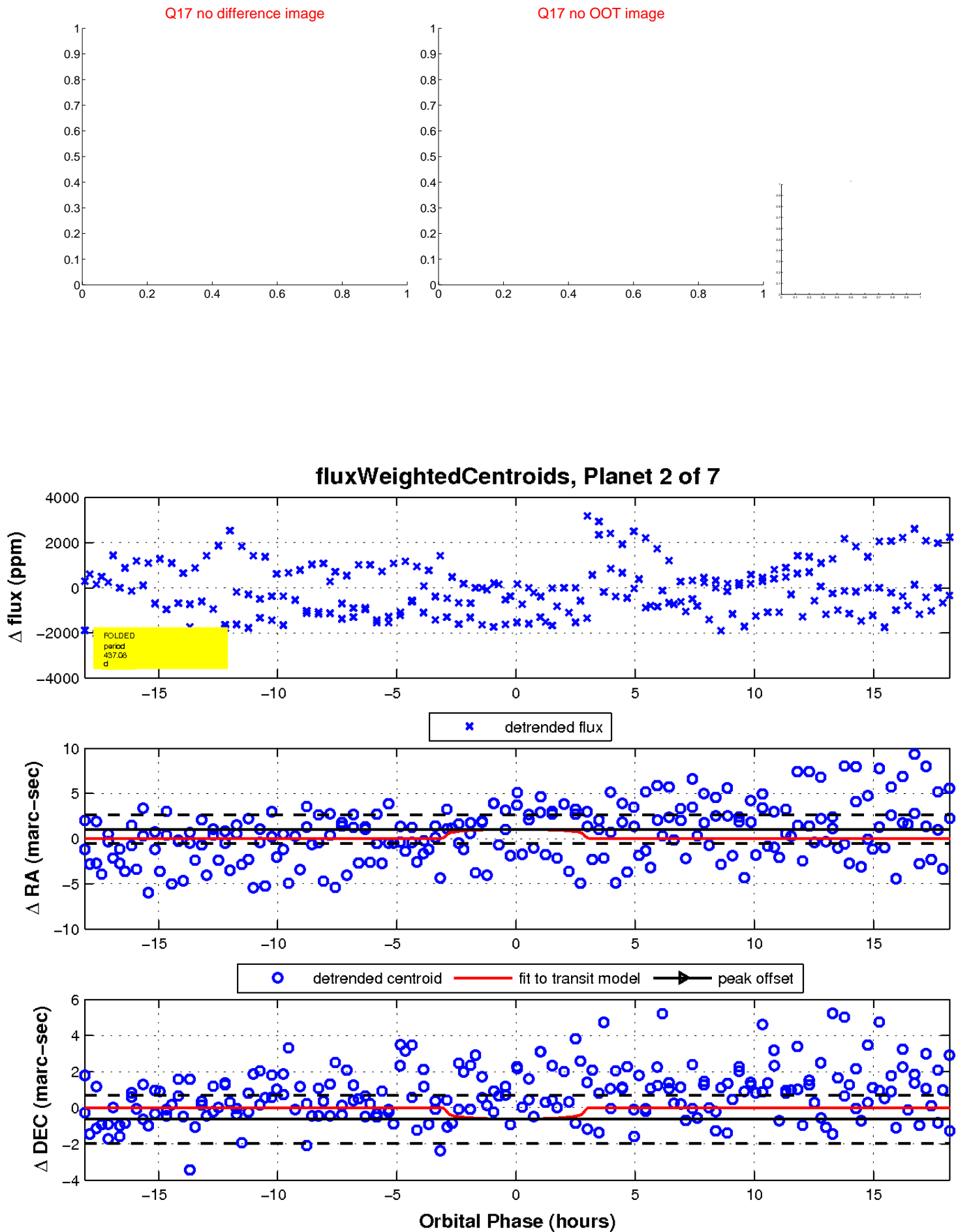
Q16 no difference image



Q16 no OOT image

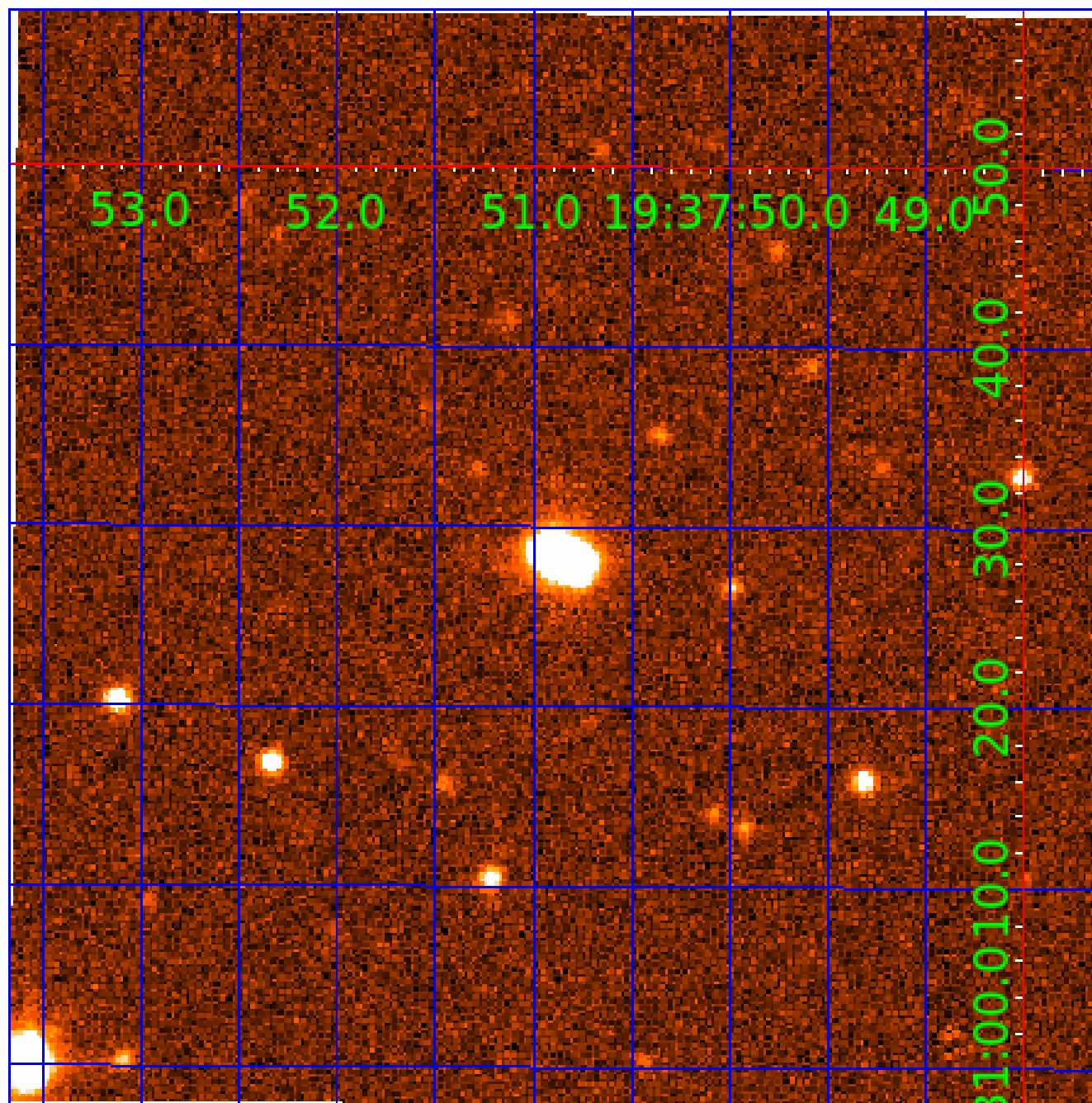


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830341

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})
007830341-01	OBS	No	435.515497	336.261915	1338.6	4.795	15.5	7.4	0.49	3801	1.88	0.06
007830341-02	OBS	No	437.083996	317.229705	1115.2	6.099	12.9	7.5	0.49	3801	1.69	0.06
007830341-03	OBS	No	458.950333	546.103220	1213.7	5.555	12.4	6.5	0.49	3801	1.83	0.05
007830341-04	OBS	No	410.474081	342.167943	970.9	5.148	12.1	5.6	0.49	3801	1.55	0.06
007830341-05	OBS	No	356.669107	252.078717	1092.7	3.440	12.4	7.2	0.49	3801	1.72	0.07
007830341-06	OBS	No	481.100093	607.751184	1625.6	11.546	11.5	7.9	0.49	3801	2.14	0.05
007830341-07	OBS	No	341.708181	440.121071	1529.2	15.825	11.5	7.4	0.49	3801	1.91	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

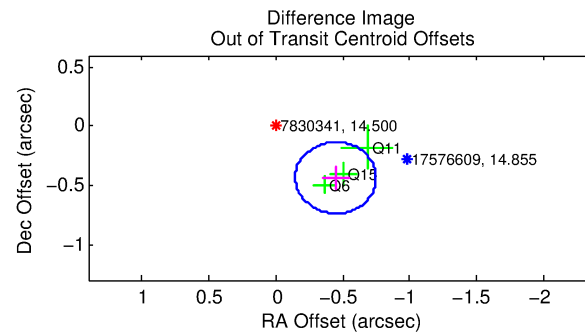
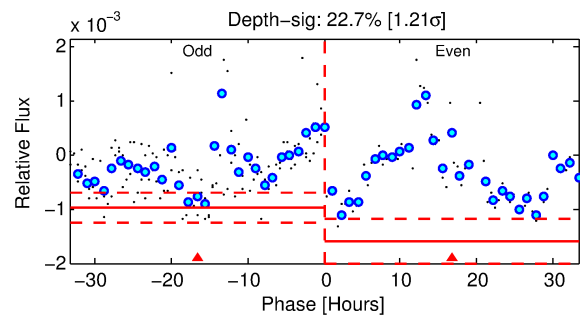
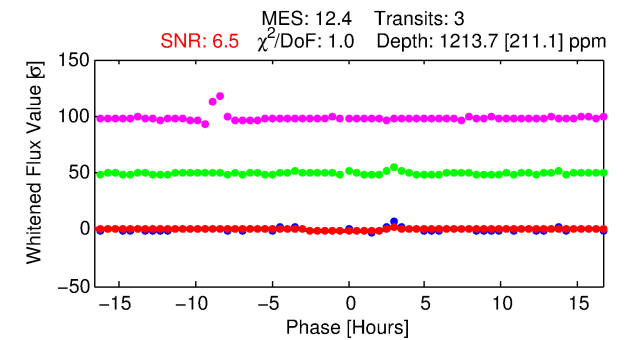
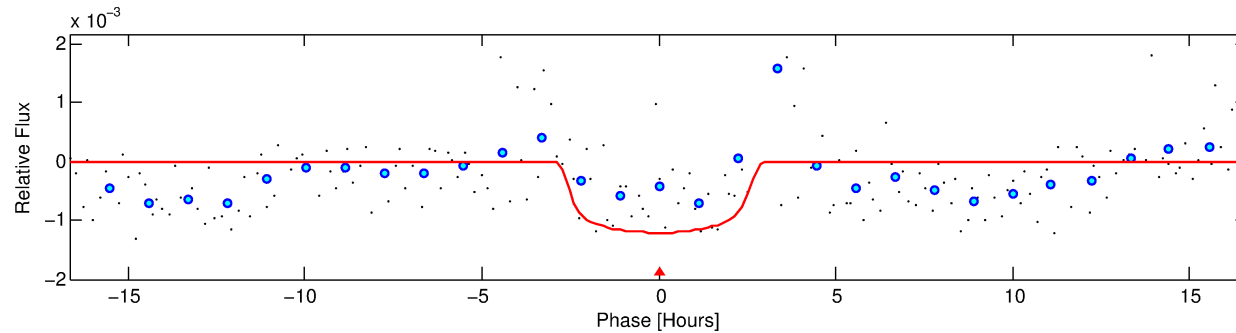
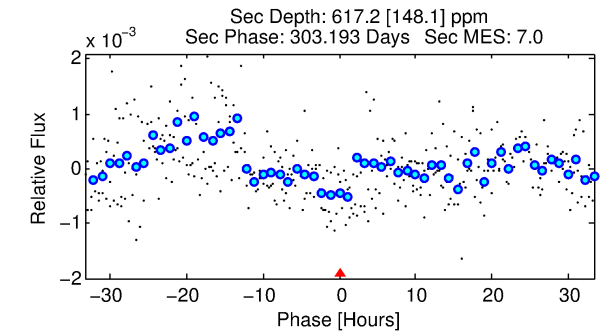
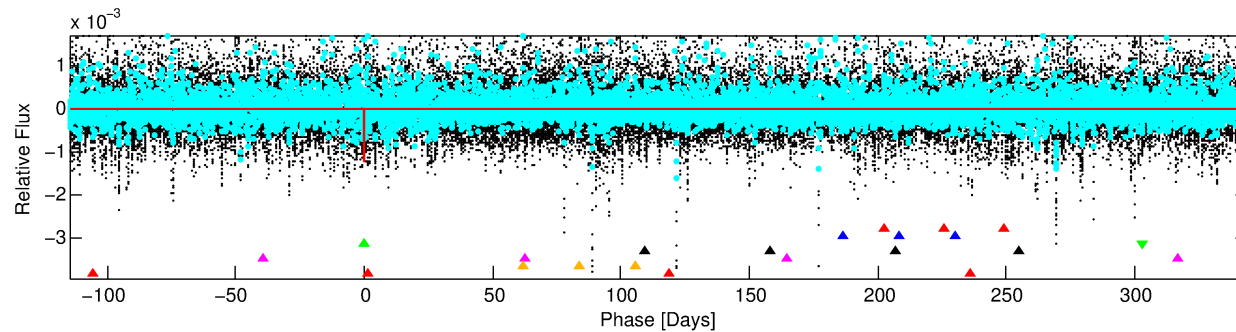
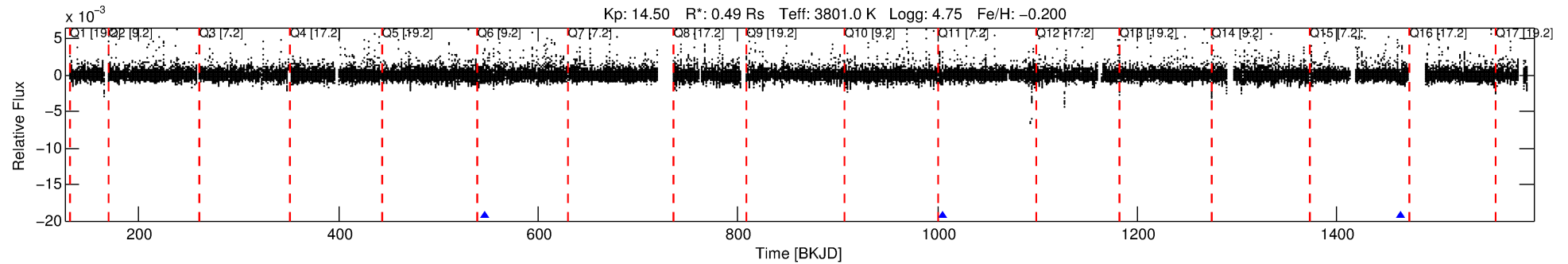
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-03

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 3 of 7 Period: 458.950 d



DV Fit Results:

Period = 458.95033 [0.00550] d
Epoch = 546.1032 [0.0073] BKJD
Rp/R* = 0.0340 [0.0116]
a/R* = 483.29 [685.25]
b = 0.69 [1.06]
Seff = 0.05 [0.01]
Teq = 122 [5] K
Rp = 1.83 [0.66] Re
a = 0.9237 [0.0791] AU
Ag = 86917.52 [63735.55] [1.36 σ]
Teffp = 3249 [595] K [5.26 σ]

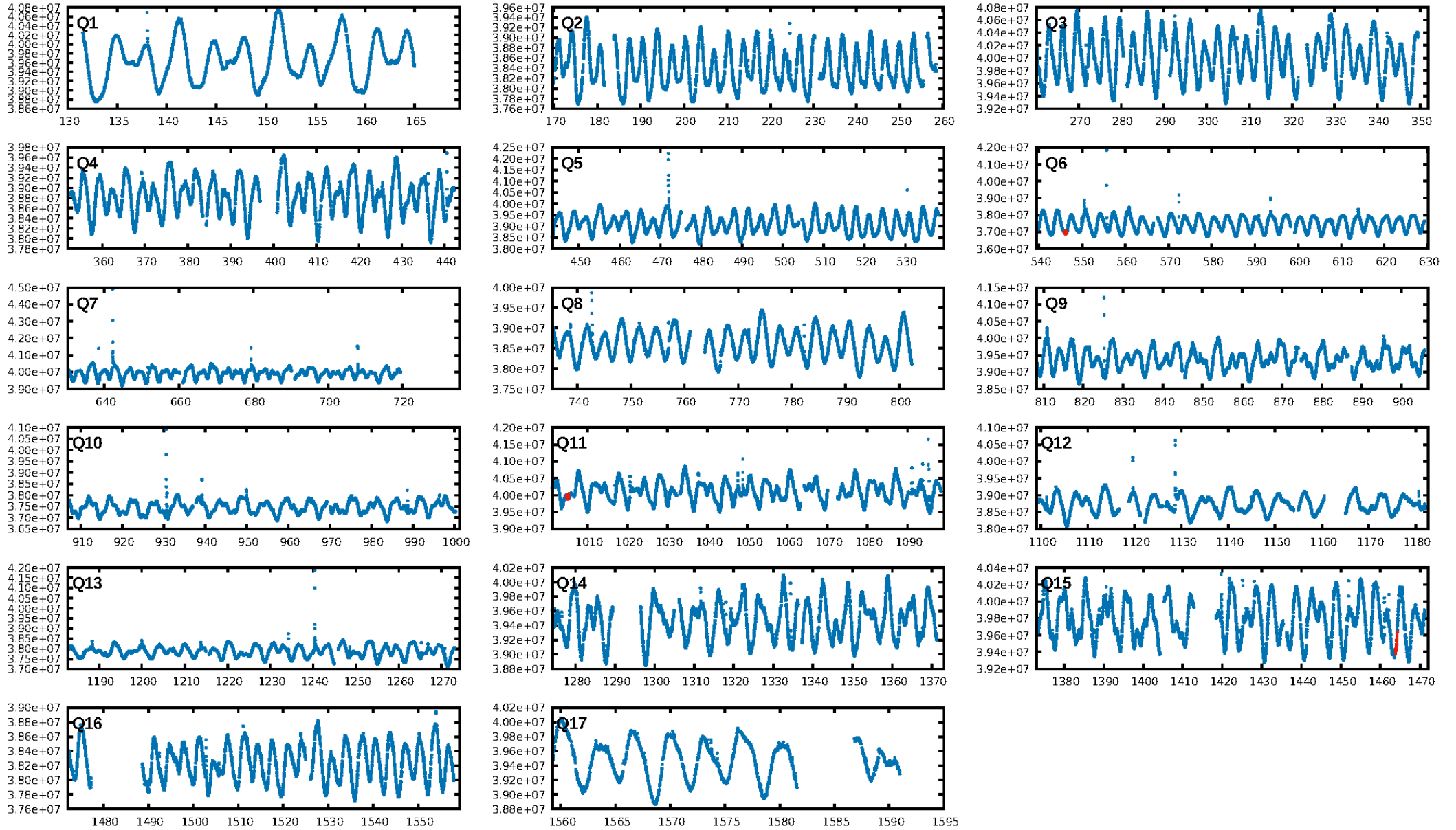
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [63.61 σ]
LongPeriod-sig: 100.0% [41.49 σ]
ModelChiSquare2-sig: 11.4%
ModelChiSquareGof-sig: 96.1%
Bootstrap-pfa: 7.19e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3892
Centroid-sig: 4.6%
Centroid-so: 1.911 arcsec [1.78 σ]
OotOffset-rm: 0.625 arcsec [6.22 σ]
KicOffset-rm: 0.844 arcsec [6.16 σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

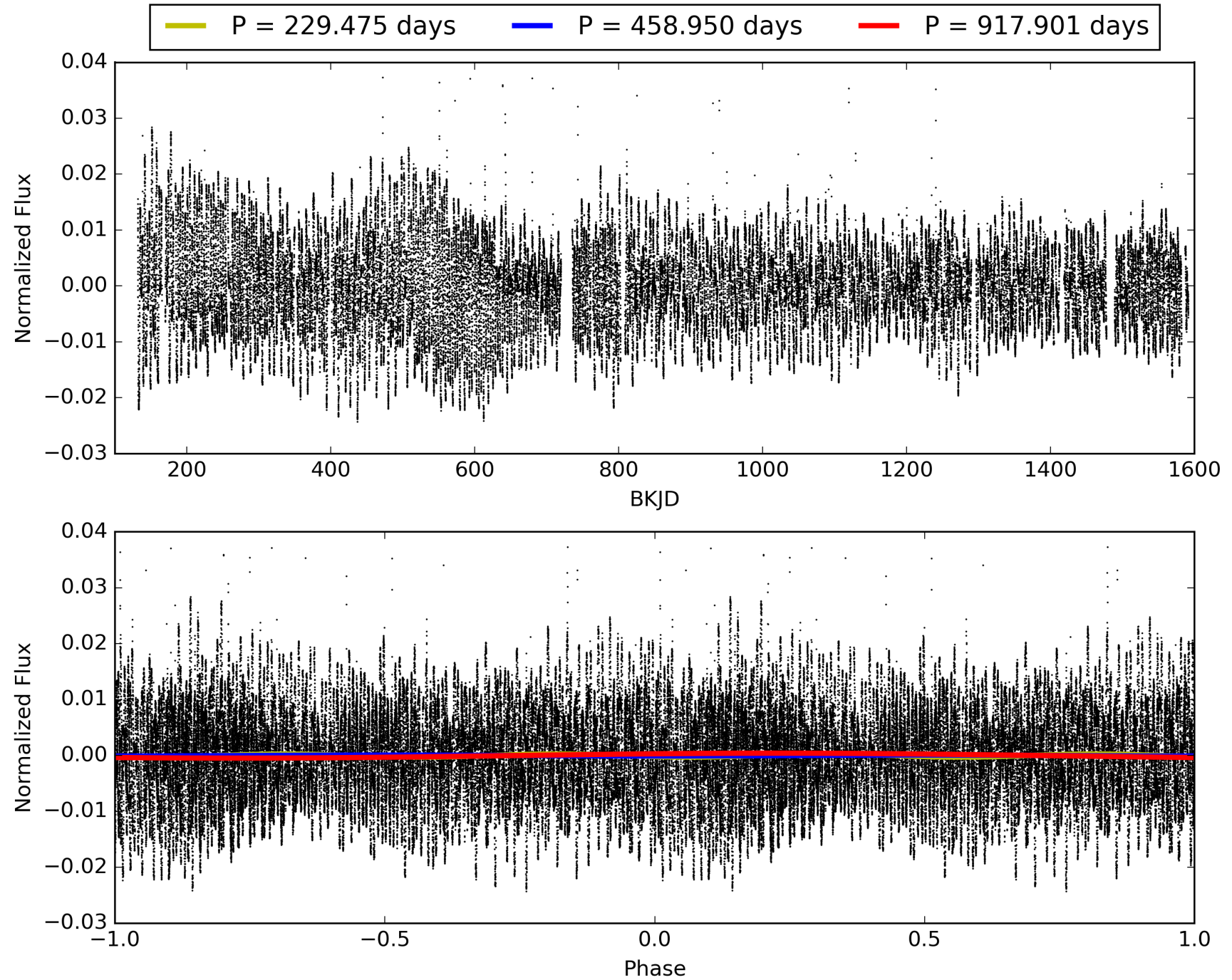
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:14:55 Z

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

TCE 007830341-03, PDC Light Curves

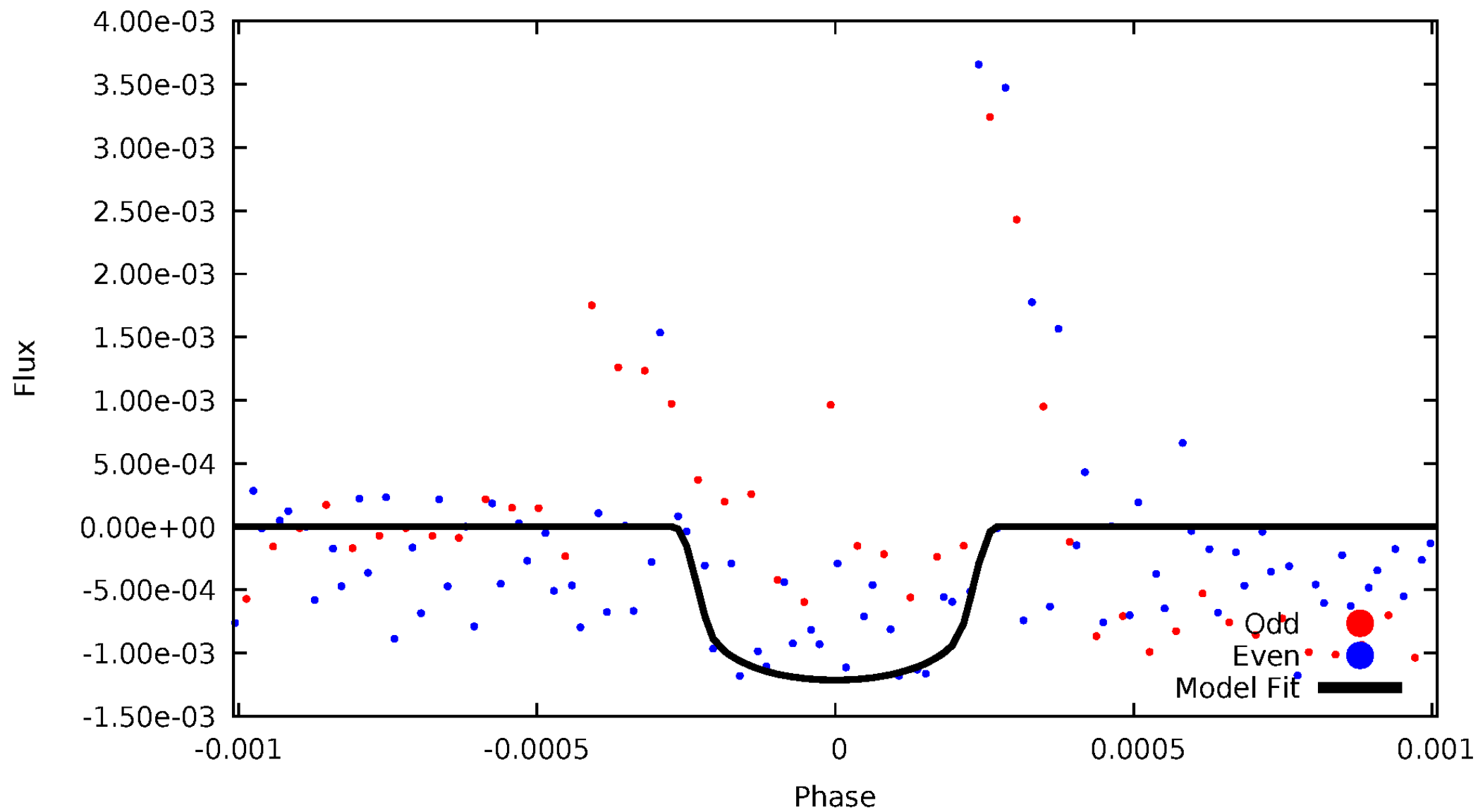


TCE 007830341-03



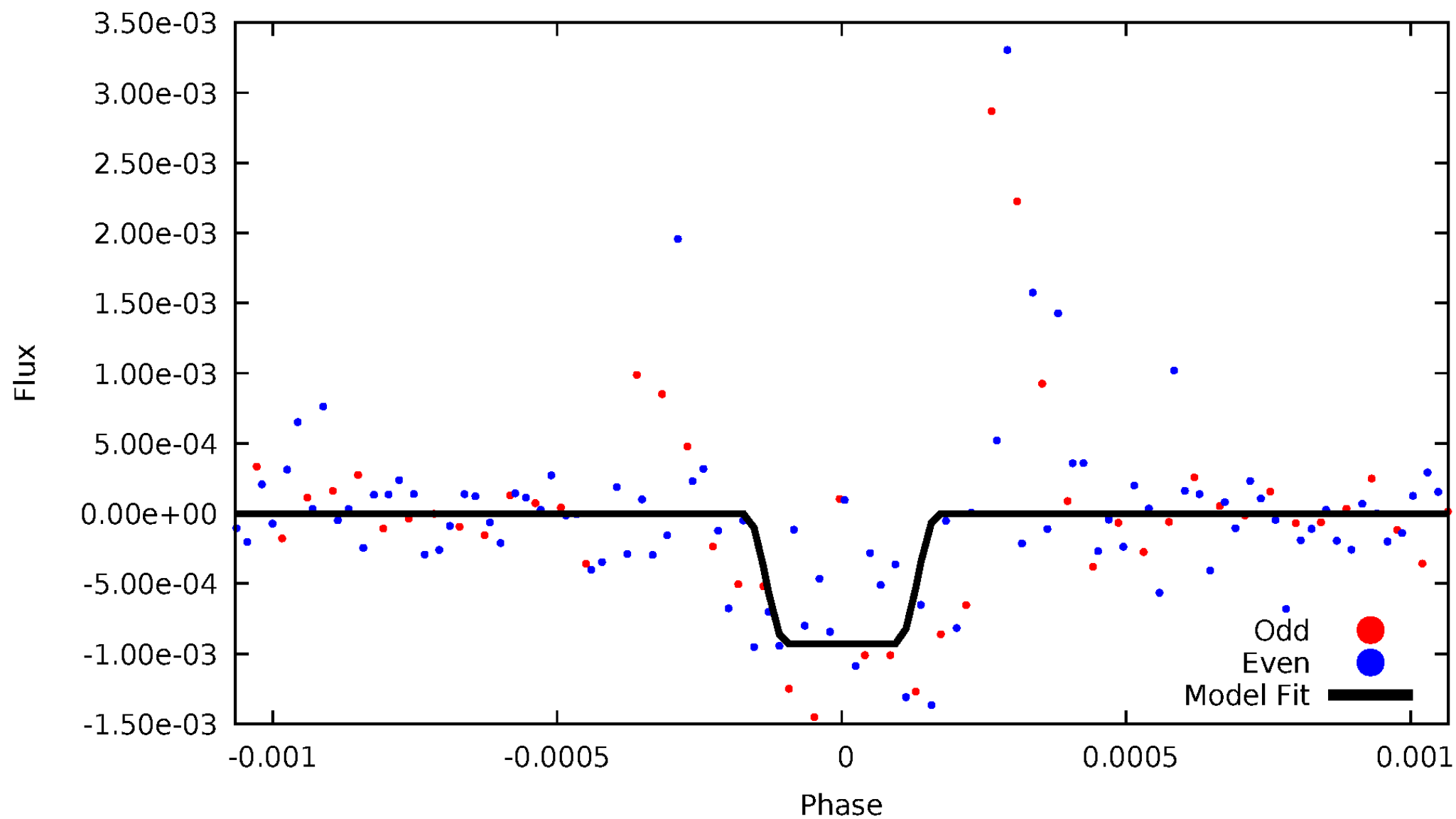
DV Odd/Even

TCE 007830341-03



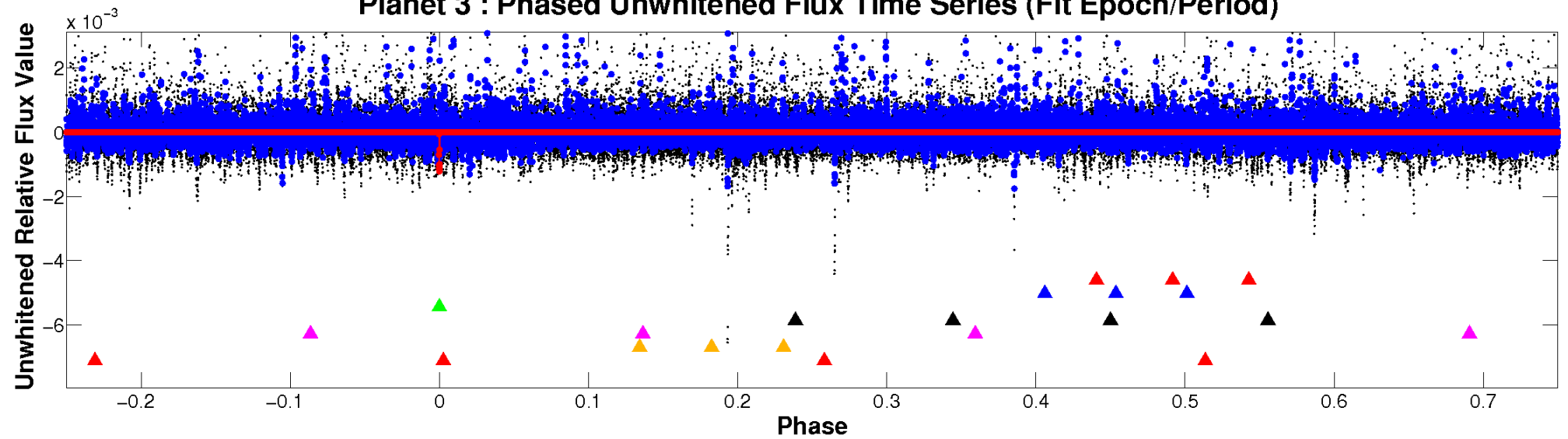
ALT Odd/Even

TCE 007830341-03

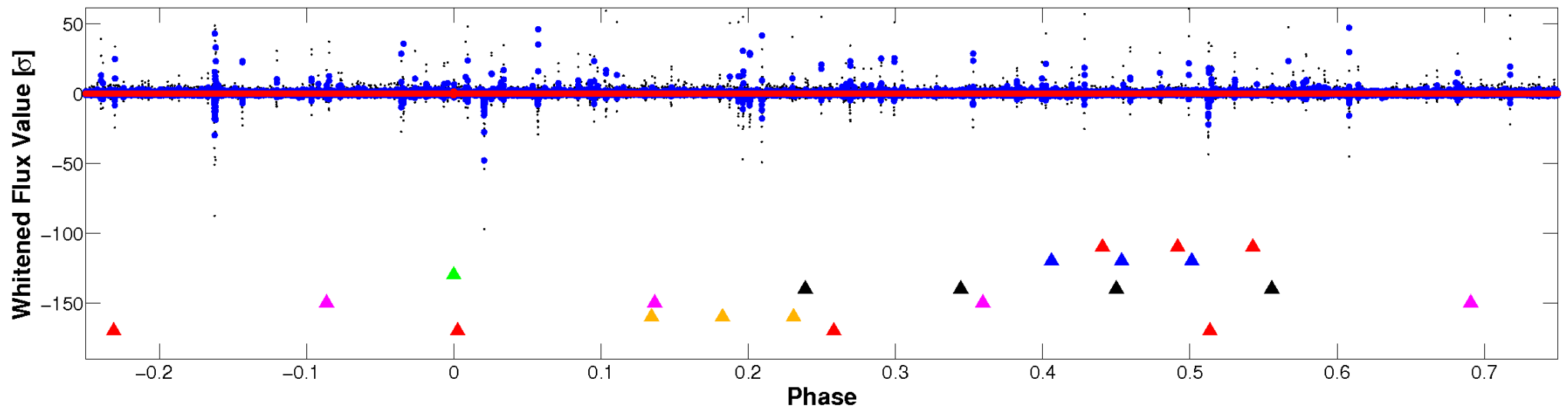


Non-Whitened Vs. Whitened Light Curve

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

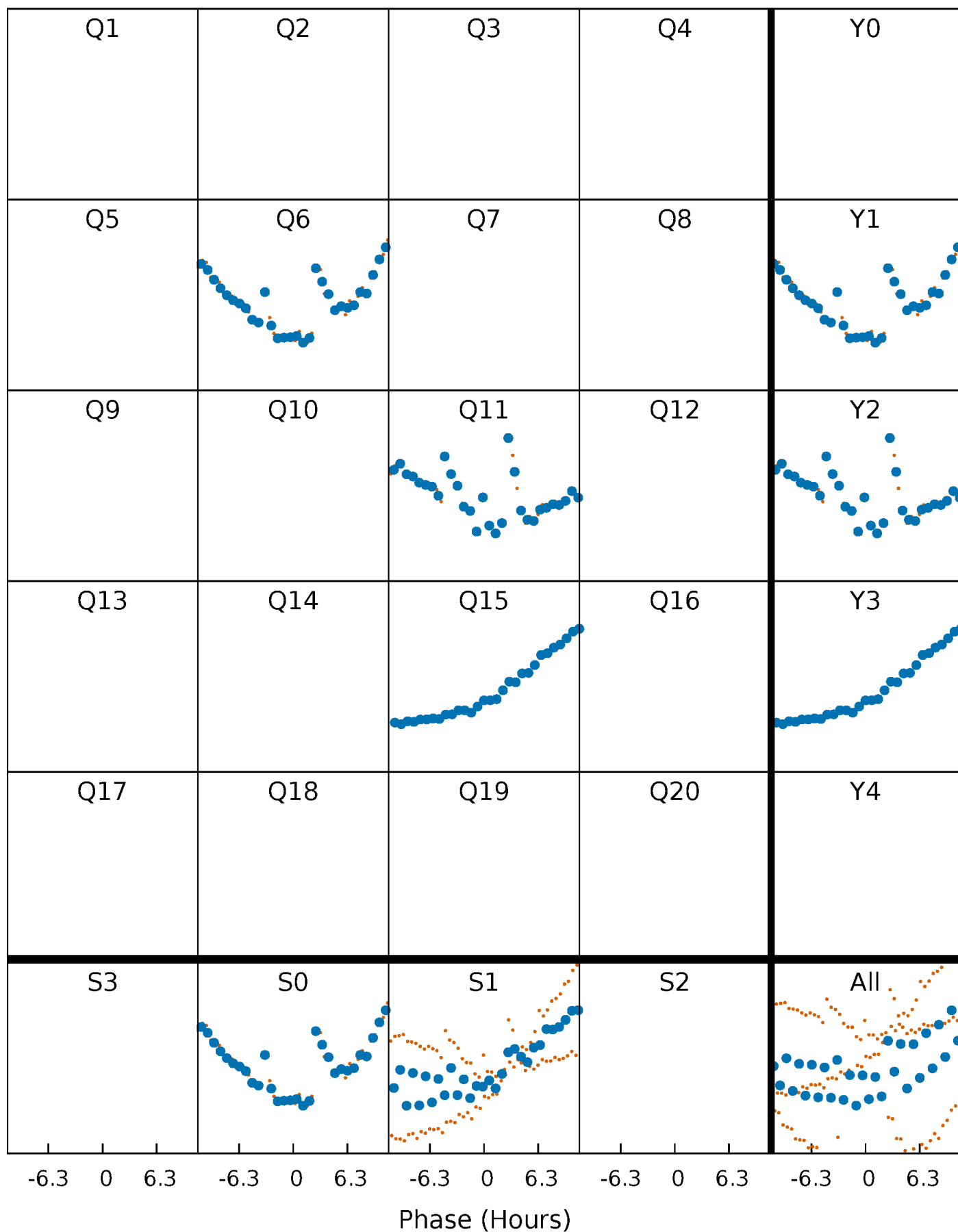


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



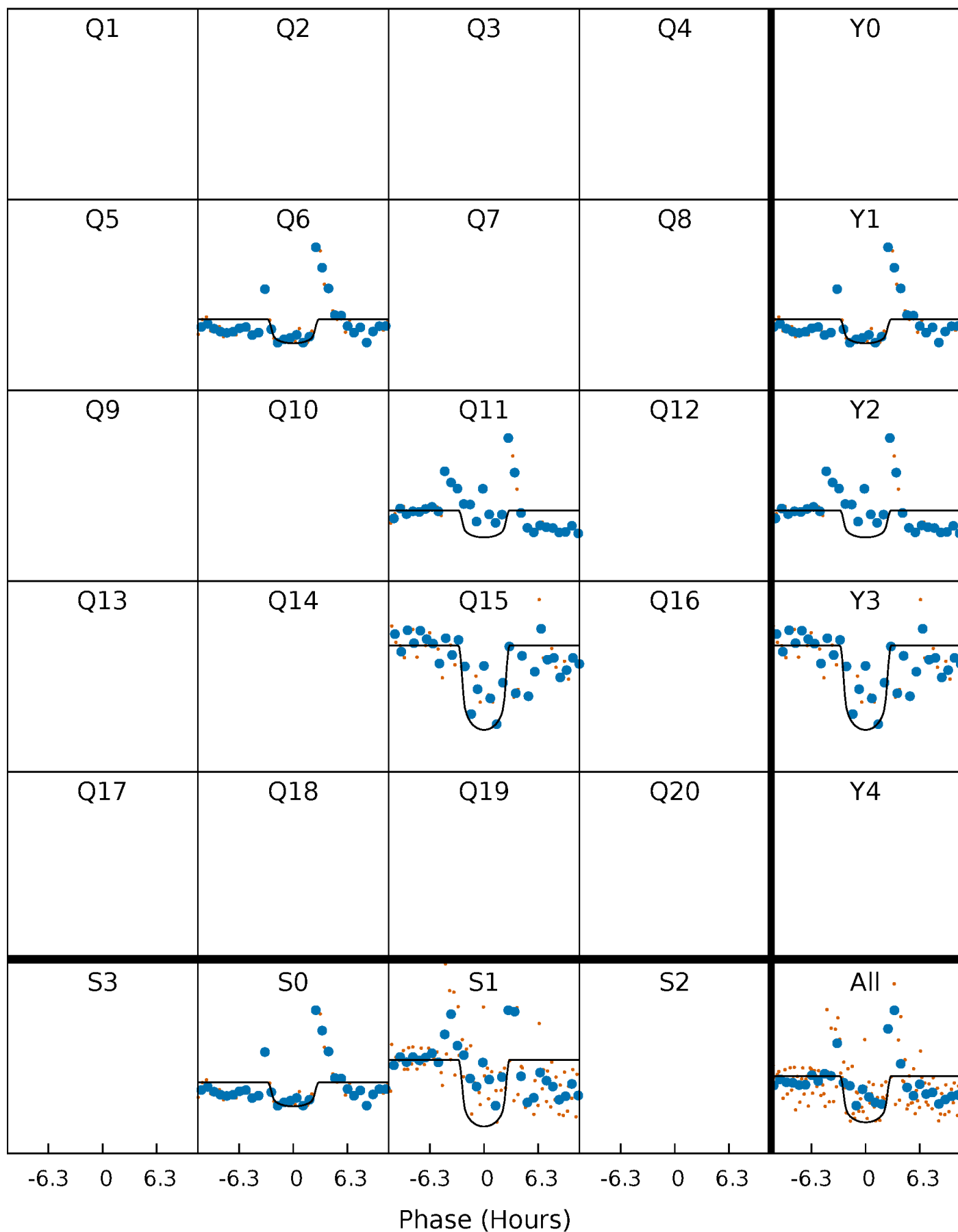
PDC Quarter-Phased Transit Curves

TCE 007830341-03 $P=458.950333$ Days $T_0=546.103220$ (BKJD)



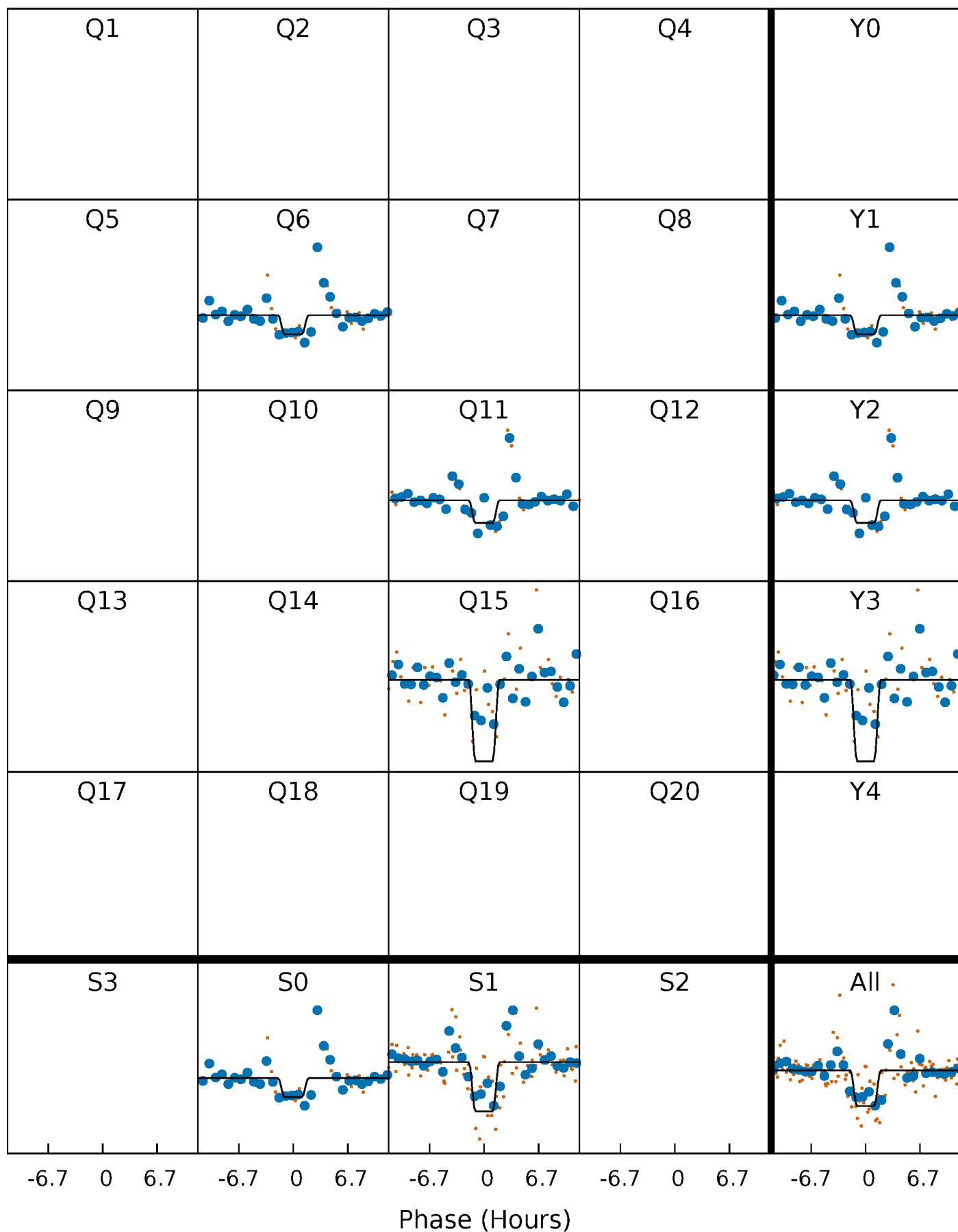
DV Quarter-Phased Transit Curves

TCE 007830341-03 P=458.950333 Days $T_0=546.103220$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

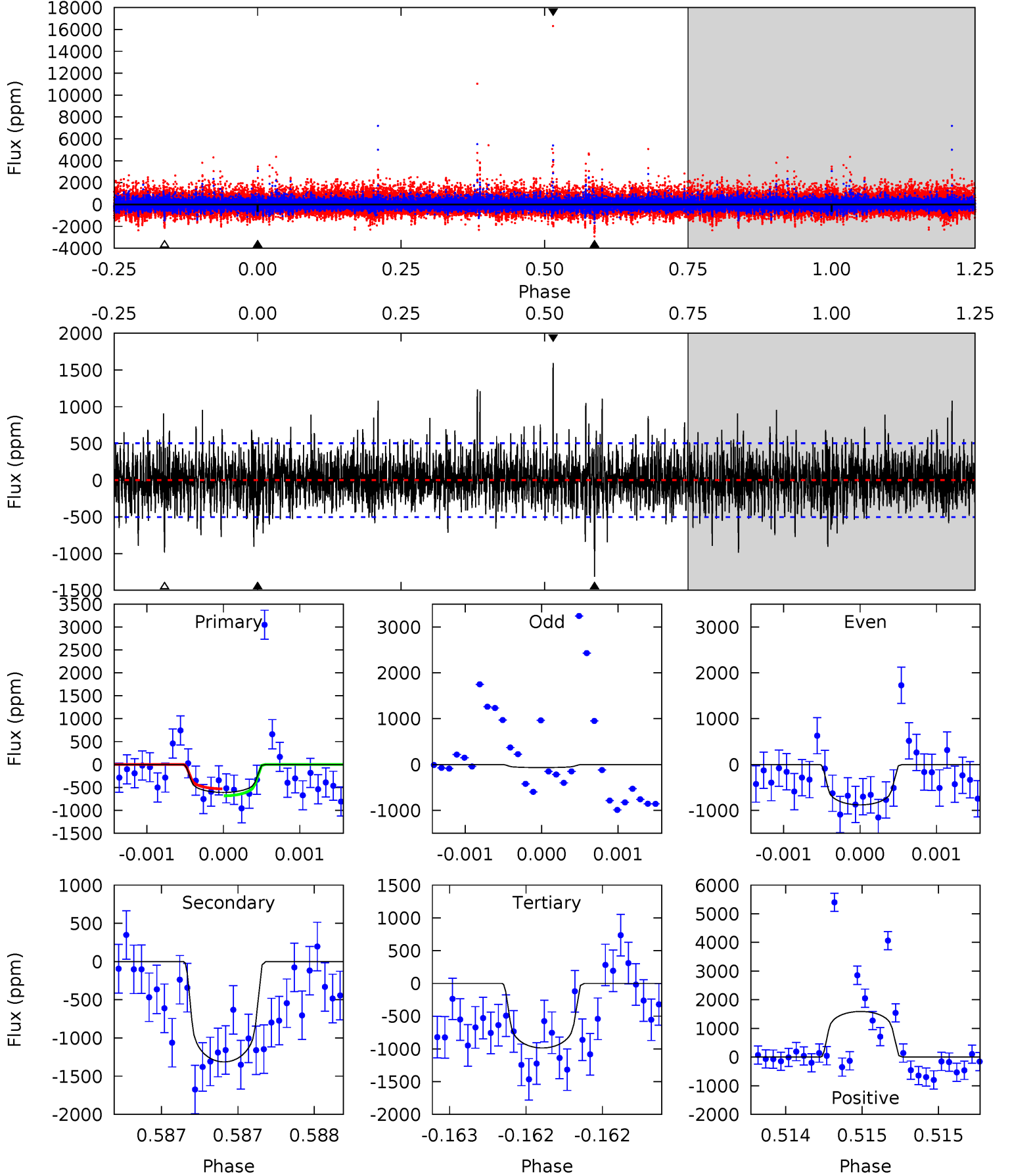
TCE 007830341-03 P=458.951380 Days $T_0=546.100464$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-03, P = 458.950333 Days, E = 87.152887 Days

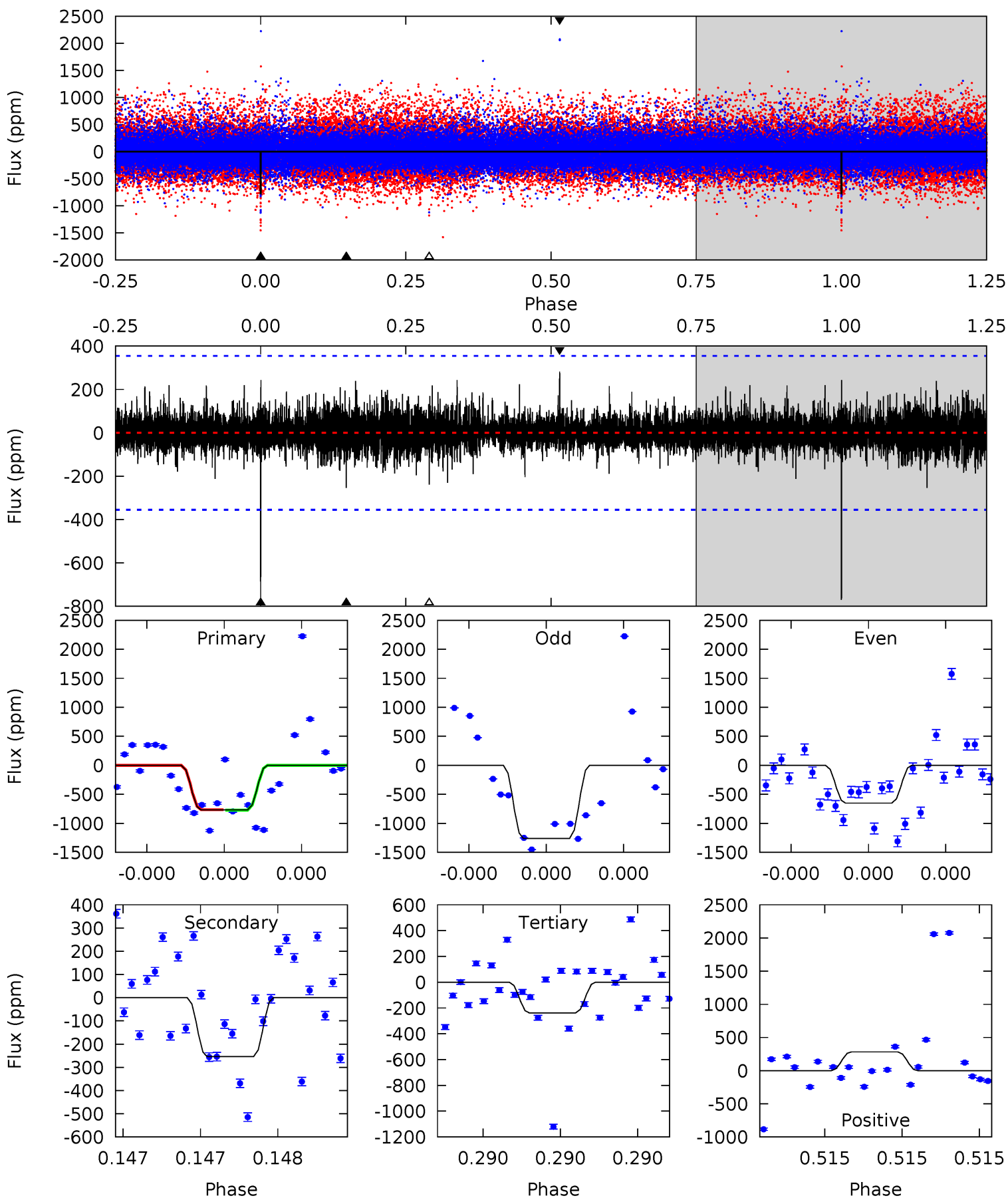
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.73	14.5	10.9	17.6	5.57	3.47	2.60	-4.18	-10.9	3.62	-3.09	2.37	0.80	0.55	0.84



Alt Model-Shift Uniqueness Test

007830341-03, P = 458.951380 Days, E = 87.149084 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	4.05	3.80	4.50	5.66	3.61	0.79	8.49	7.78	0.25	-0.45	4.35	0.79	0.27	0.07



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1313 ± 90	$1.81^{+0.62}_{-0.61}$	170^{+6}_{-6}	3911^{+636}_{-408}	$191966^{+234581}_{-86193}$
Alt.	-254 ± 63	$1.64^{+0.60}_{-0.58}$	170^{+5}_{-5}	3075^{+456}_{-273}	44024^{+66078}_{-21309}

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

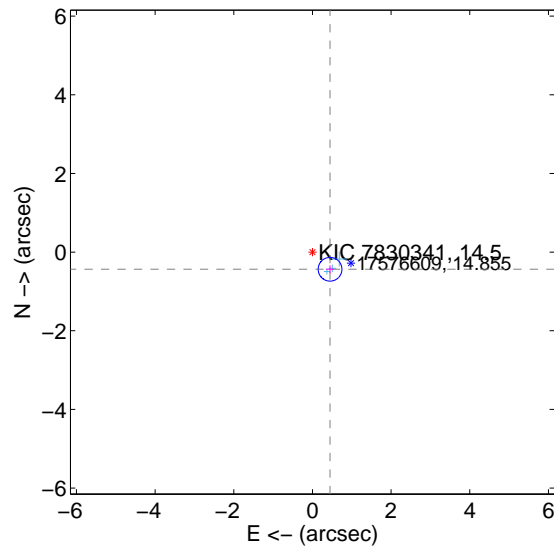
Supplemental centroid analysis for 007830341-03. Kepler magnitude: 14.50. Transit SNR 6.48

There are 3 quarters with good PRF difference image offsets

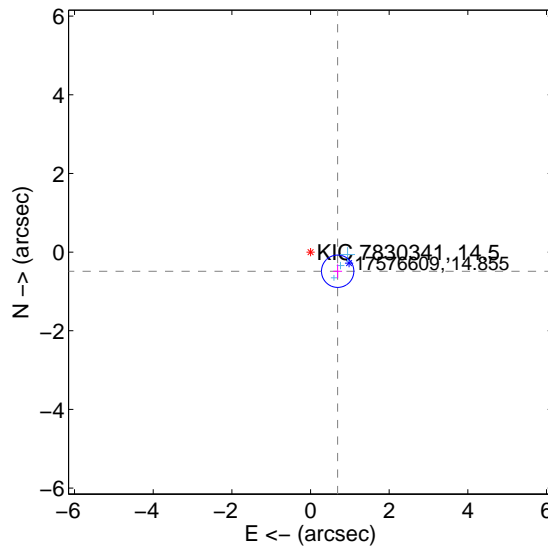
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.625 ± 0.101	6.22	-0.448 ± 0.101	-0.436 ± 0.100
PRF-fit source offset from KIC position	0.844 ± 0.137	6.16	-0.690 ± 0.112	-0.487 ± 0.177
photometric centroid source offset	1.91 ± 1.07	1.78	-1.85 ± 1.09	-0.47 ± 0.78

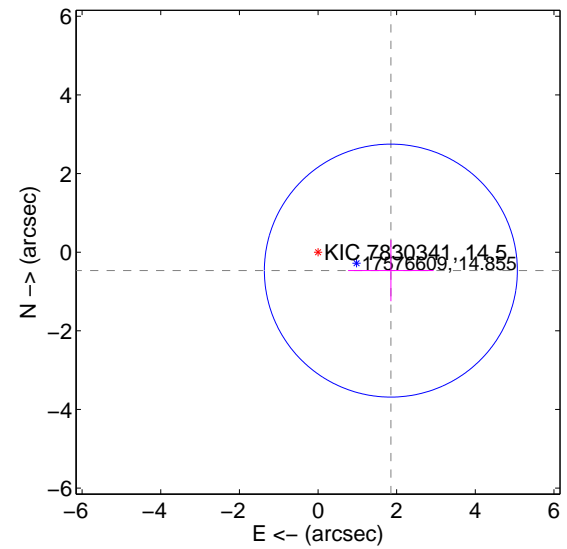
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

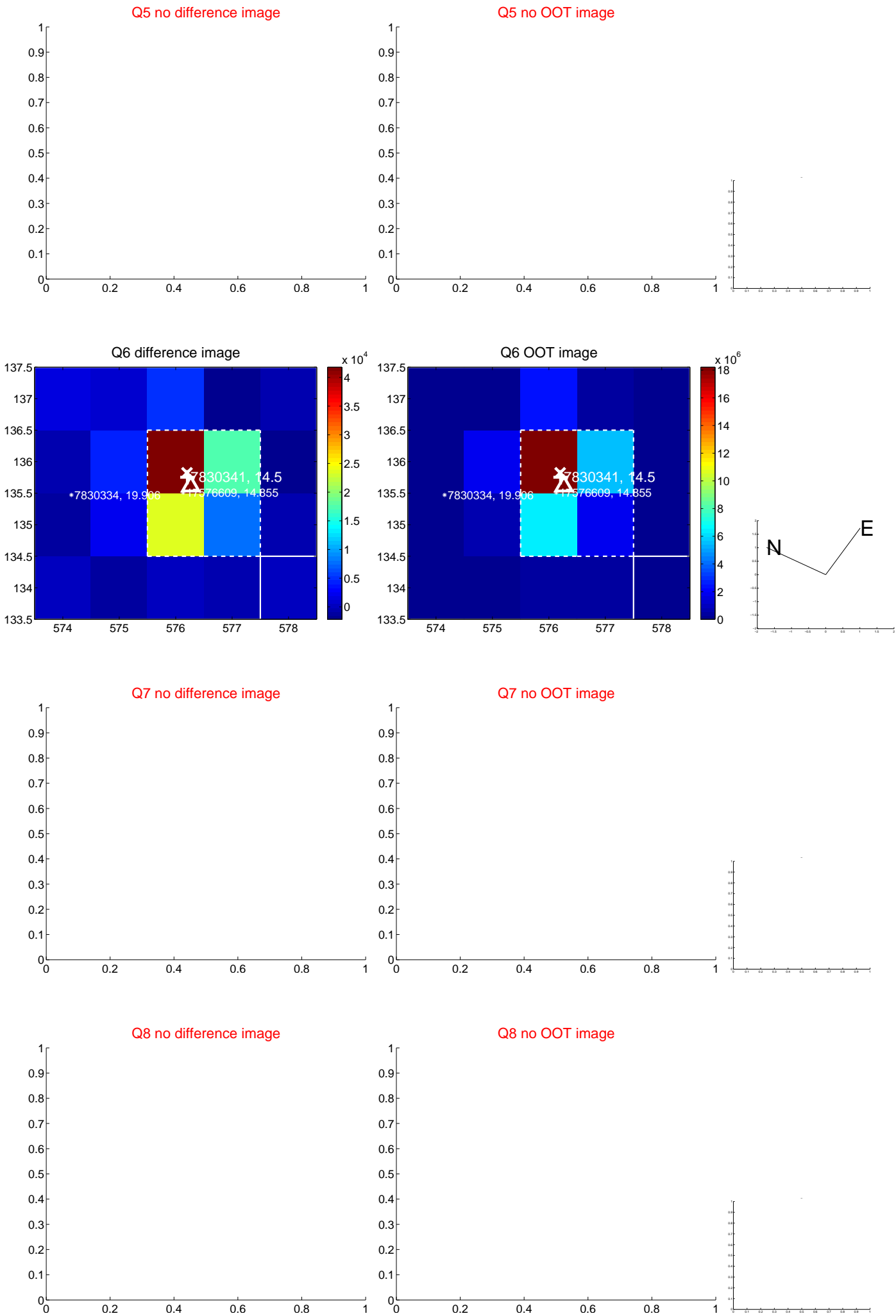


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

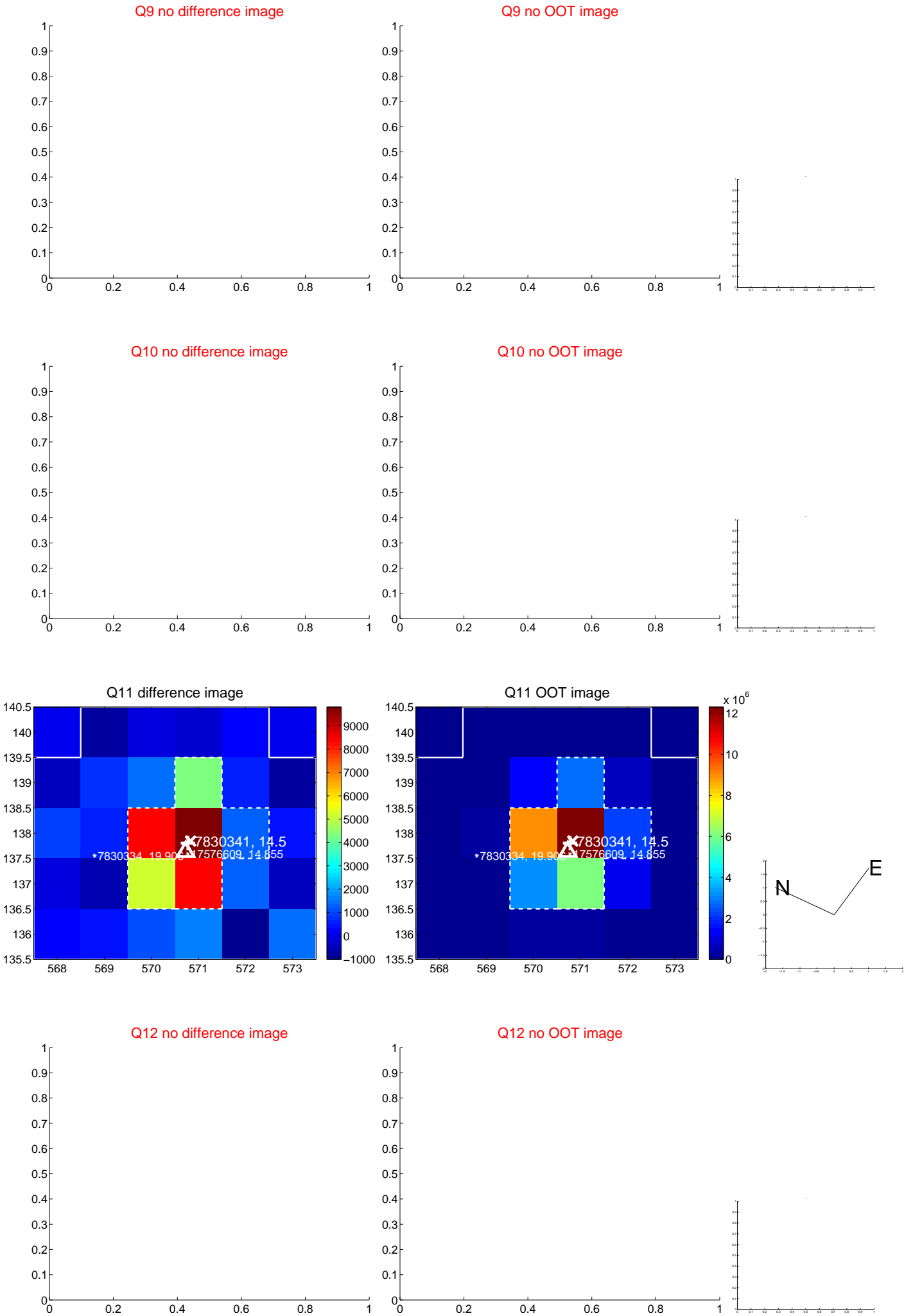
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



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

Q13 no difference image



Q13 no OOT image



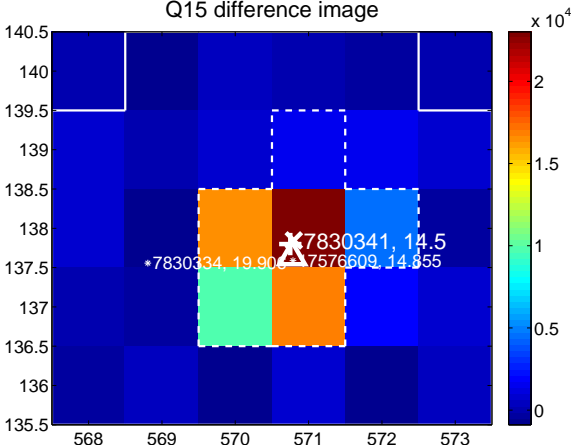
Q14 no difference image



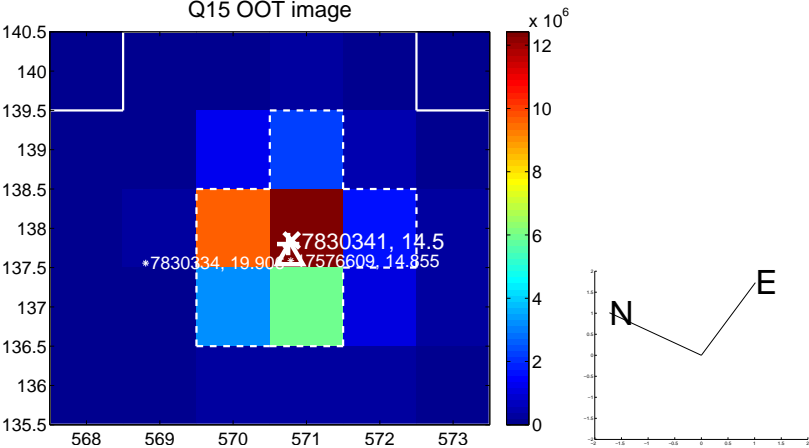
Q14 no OOT image



Q15 difference image



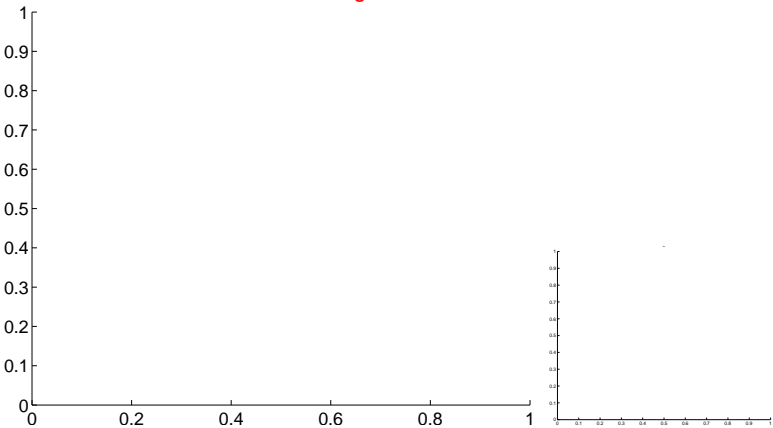
Q15 OOT image



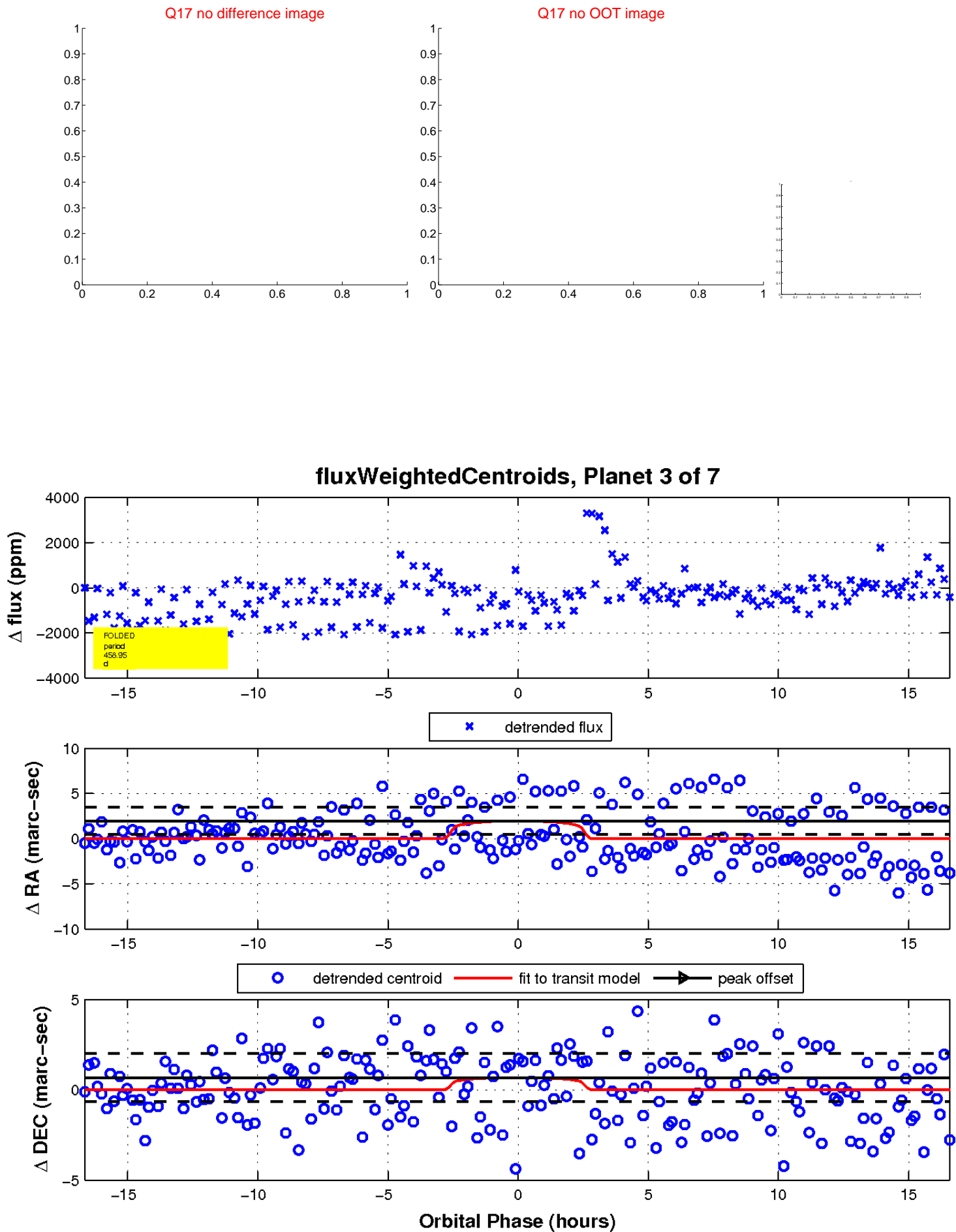
Q16 no difference image



Q16 no OOT image

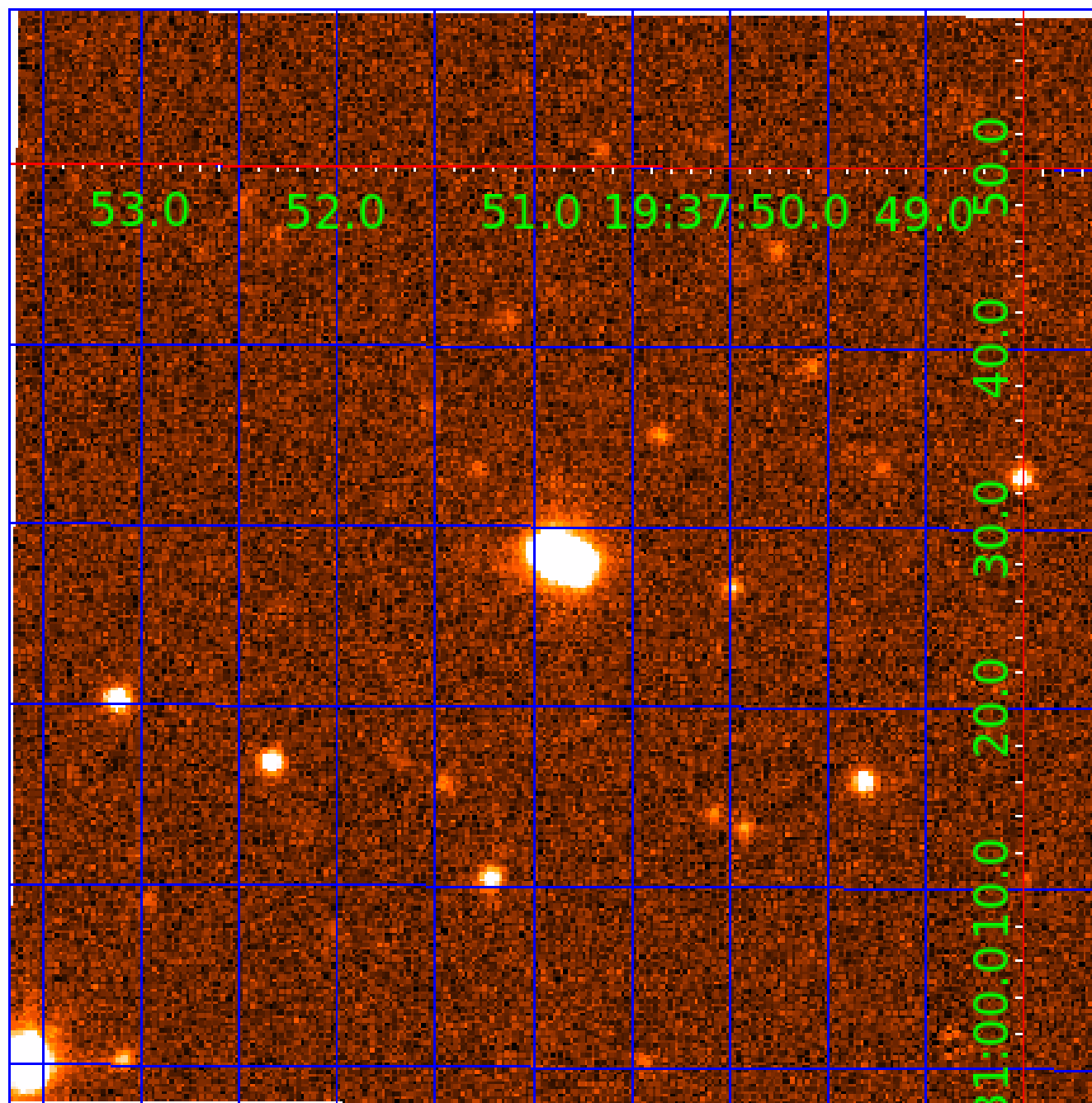


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830341

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})
007830341-01	OBS	No	435.515497	336.261915	1338.6	4.795	15.5	7.4	0.49	3801	1.88	0.06
007830341-02	OBS	No	437.083996	317.229705	1115.2	6.099	12.9	7.5	0.49	3801	1.69	0.06
007830341-03	OBS	No	458.950333	546.103220	1213.7	5.555	12.4	6.5	0.49	3801	1.83	0.05
007830341-04	OBS	No	410.474081	342.167943	970.9	5.148	12.1	5.6	0.49	3801	1.55	0.06
007830341-05	OBS	No	356.669107	252.078717	1092.7	3.440	12.4	7.2	0.49	3801	1.72	0.07
007830341-06	OBS	No	481.100093	607.751184	1625.6	11.546	11.5	7.9	0.49	3801	2.14	0.05
007830341-07	OBS	No	341.708181	440.121071	1529.2	15.825	11.5	7.4	0.49	3801	1.91	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

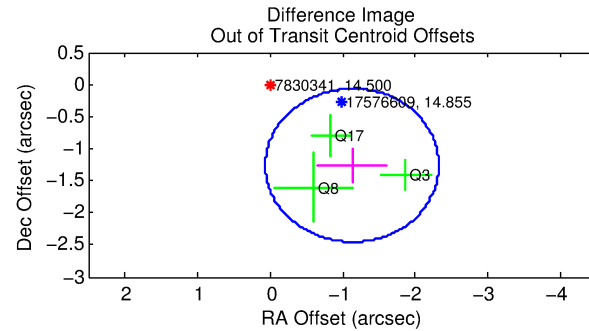
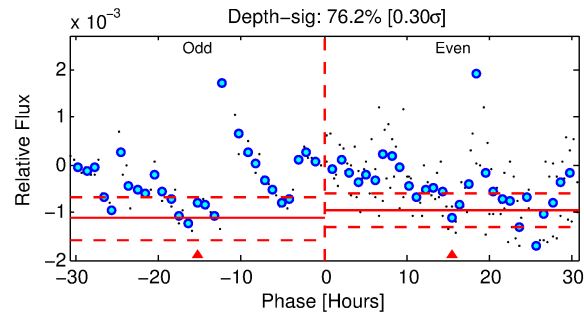
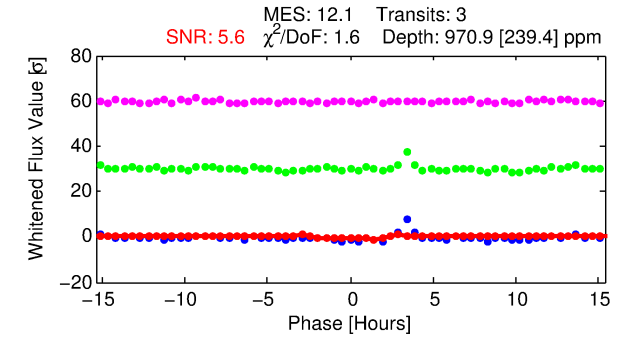
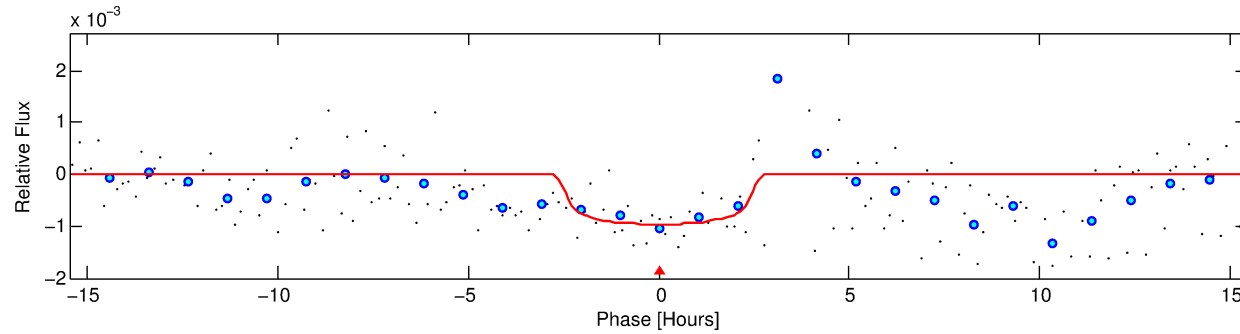
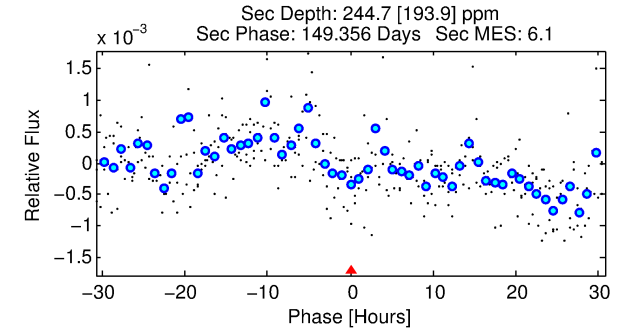
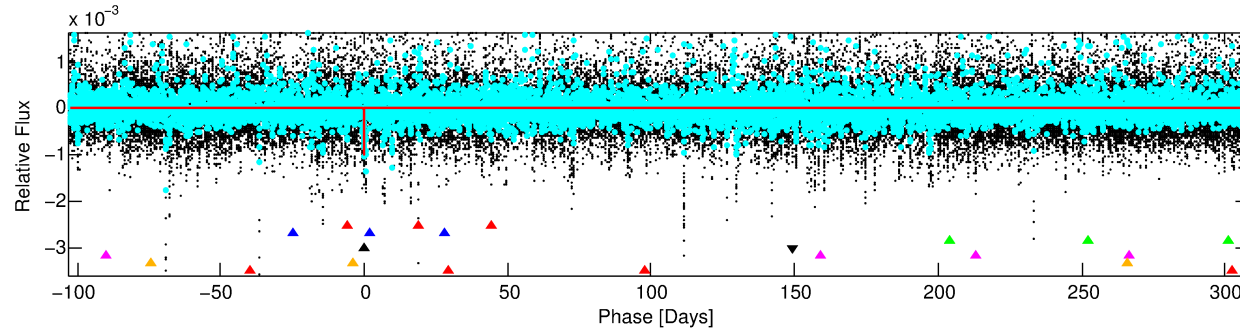
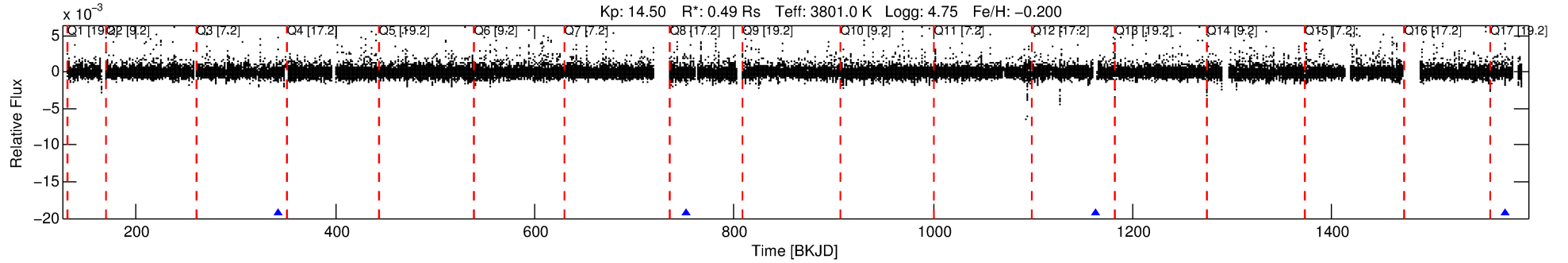
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-04

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 4 of 7 Period: 410.474 d



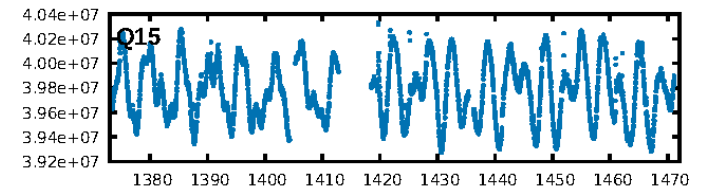
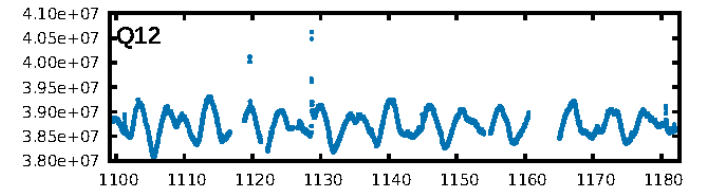
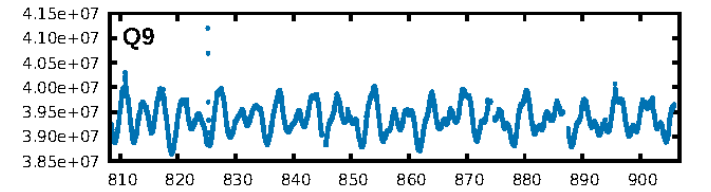
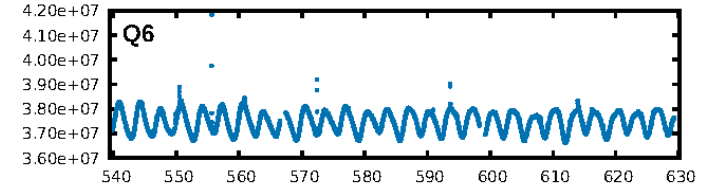
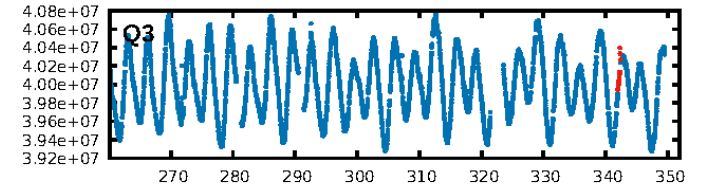
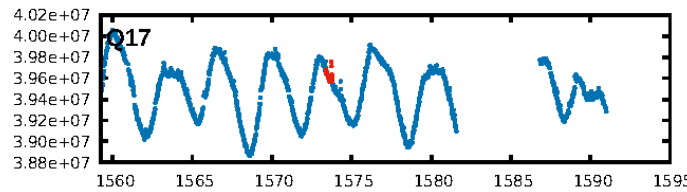
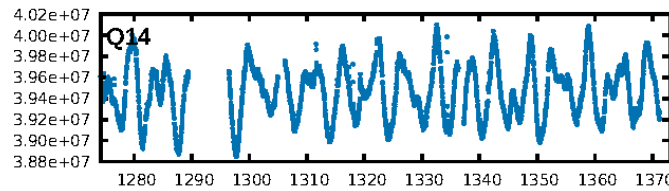
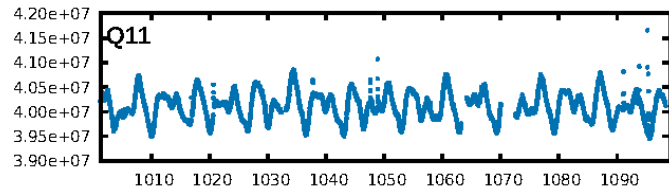
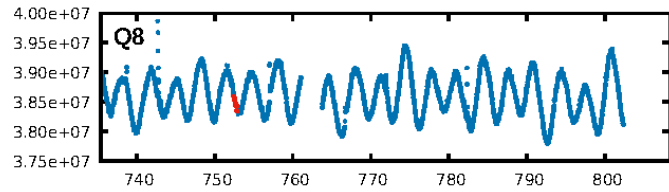
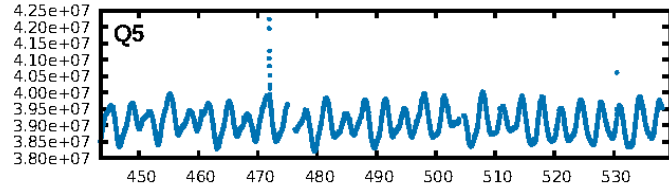
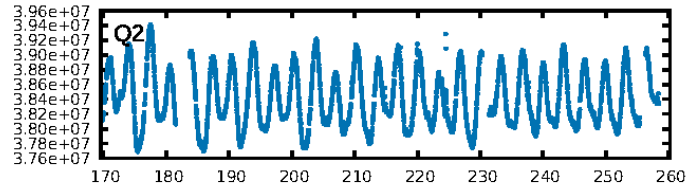
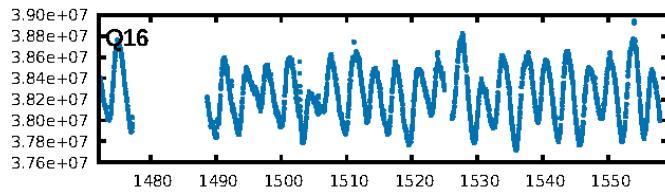
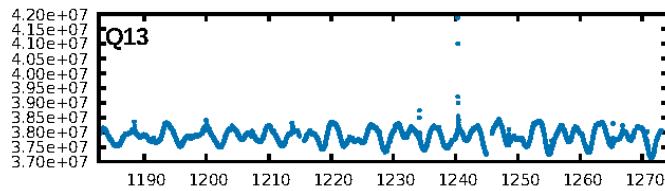
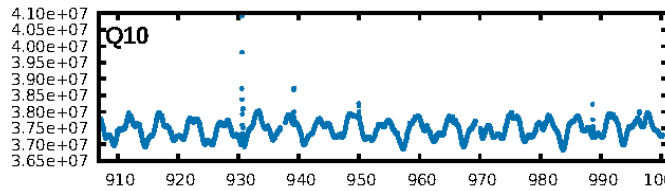
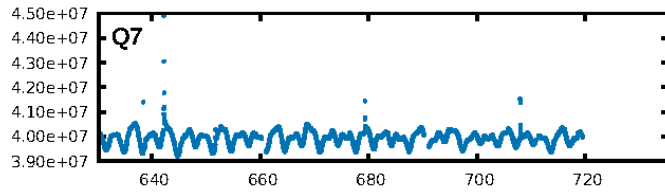
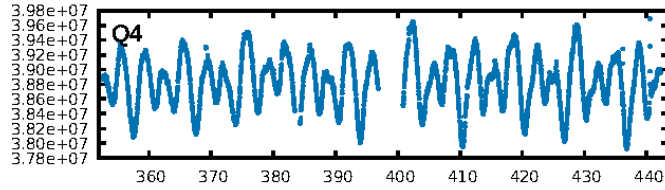
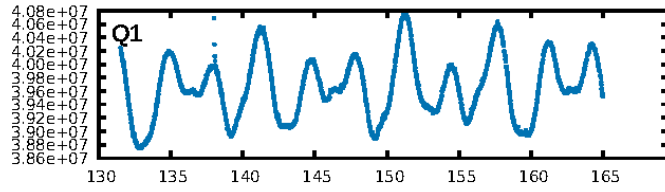
DV Fit Results:

Period = 410.47408 [0.00585] d
Epoch = 342.1679 [0.0120] BKJD
Rp/R* = 0.0288 [0.0540]
a/R* = 577.26 [4866.61]
b = 0.40 [17.71]
Seff = 0.06 [0.01]
Teq = 127 [5] K
Rp = 1.55 [2.90] Re
a = 0.8574 [0.0734] AU
Ag = 41259.02 [157991.06] [0.26 σ]
Teffp = 2799 [2679] K [1.00 σ]

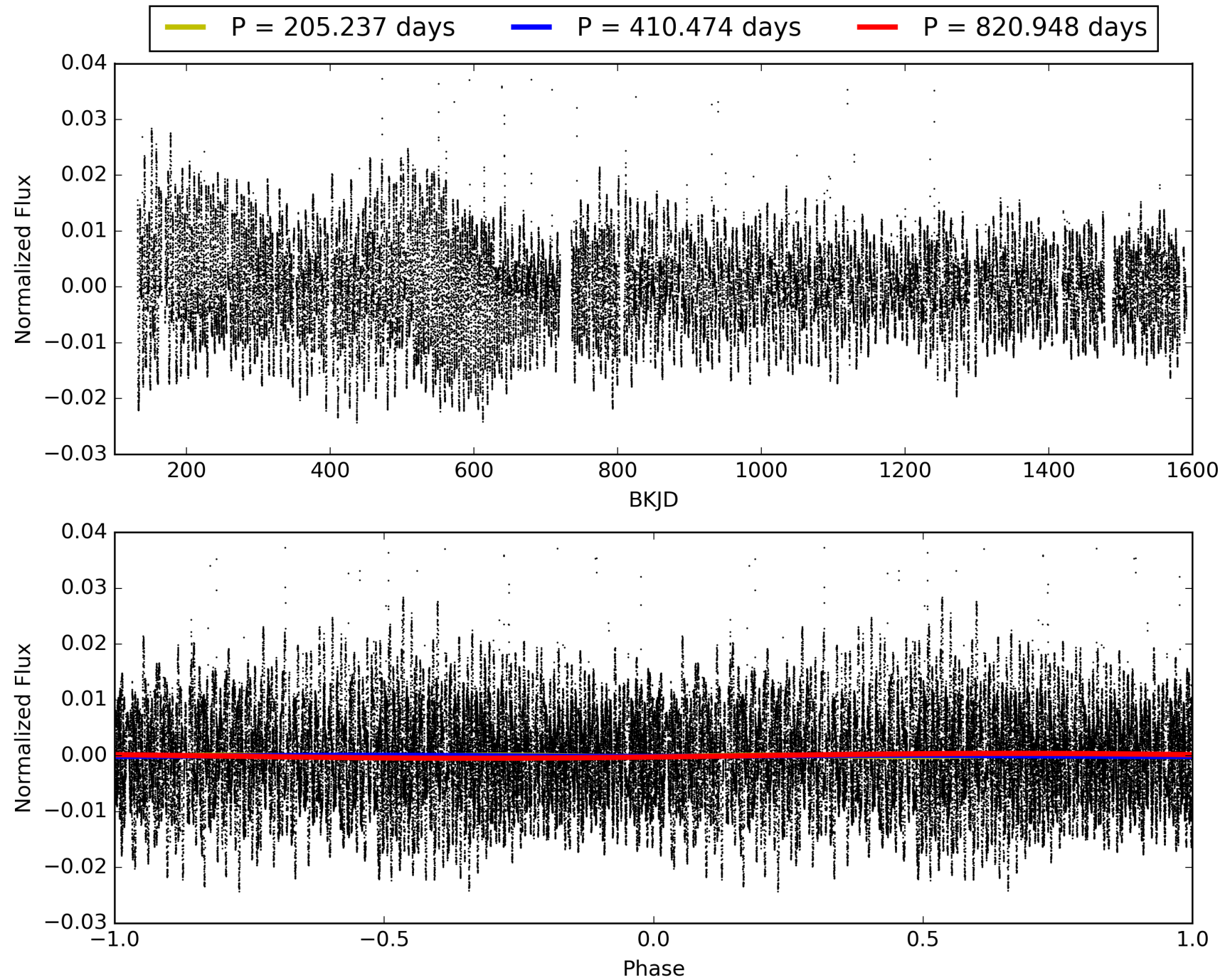
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [208.55 σ]
LongPeriod-sig: 100.0% [85.43 σ]
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 45.4%
Bootstrap-pfa: 6.35e-11
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -1.645
Centroid-sig: 86.0%
Centroid-so: 0.728 arcsec [0.46 σ]
OotOffset-rm: 1.693 arcsec [4.25 σ]
KicOffset-rm: 1.820 arcsec [4.78 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007830341-04, PDC Light Curves

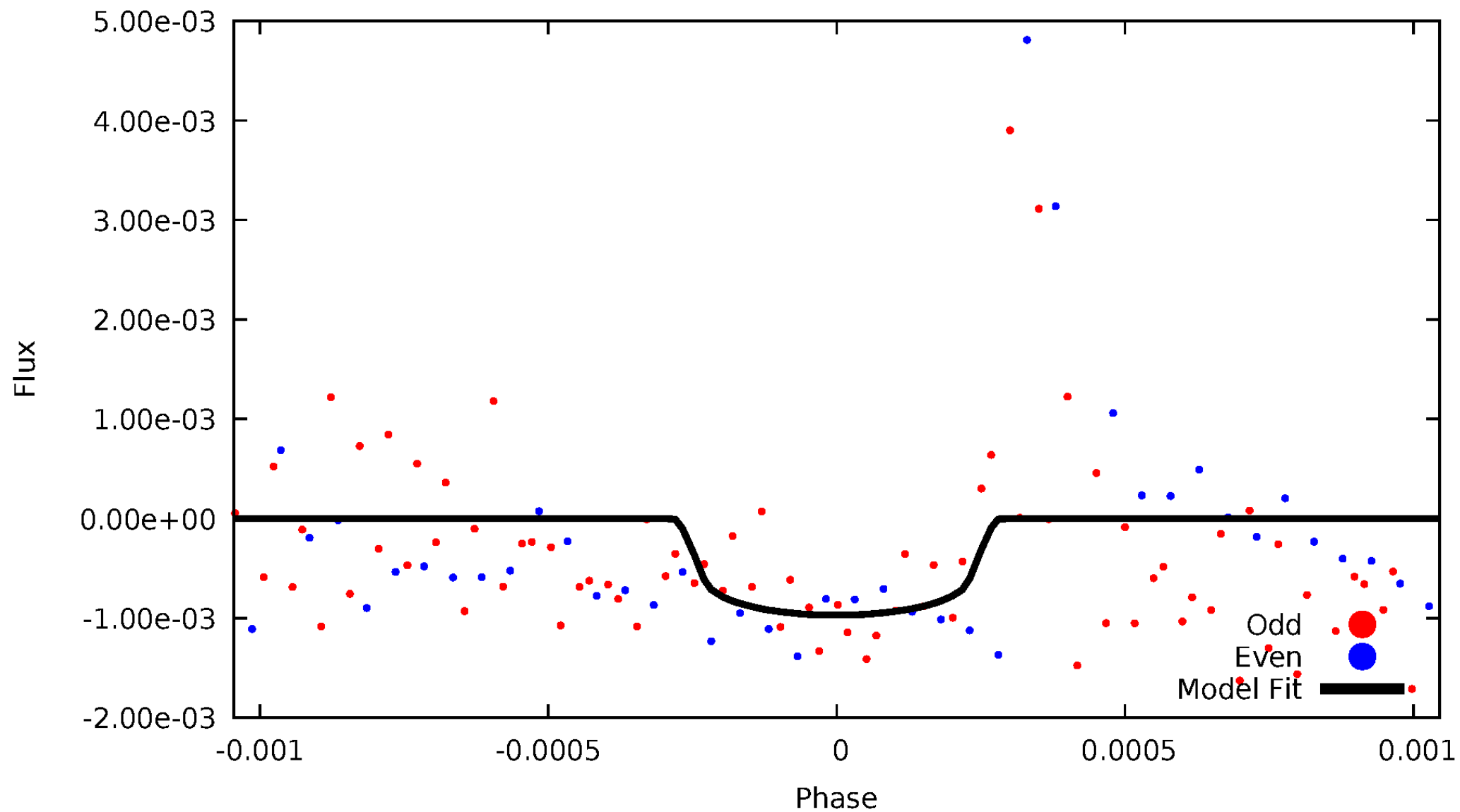


TCE 007830341-04



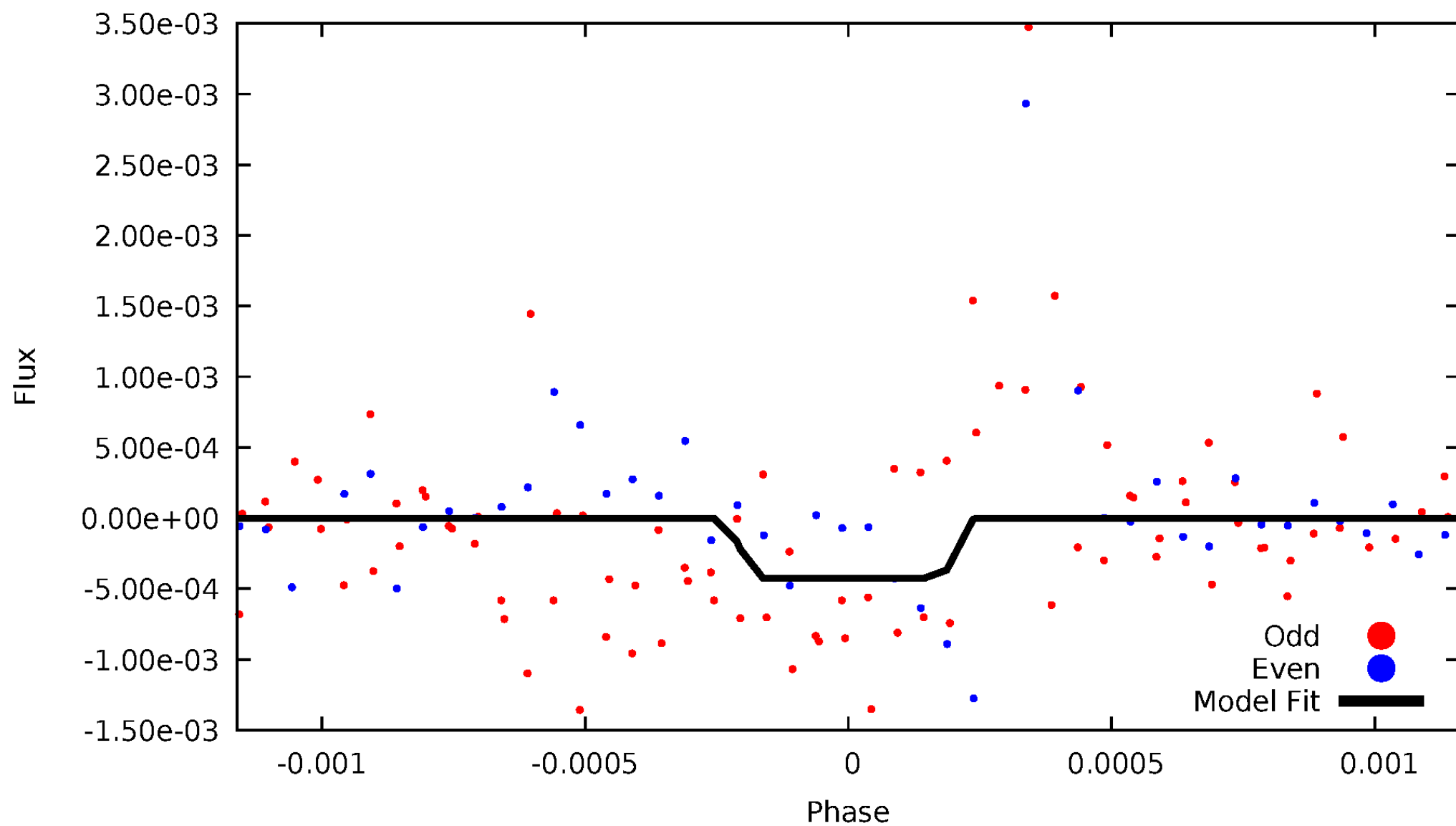
DV Odd/Even

TCE 007830341-04



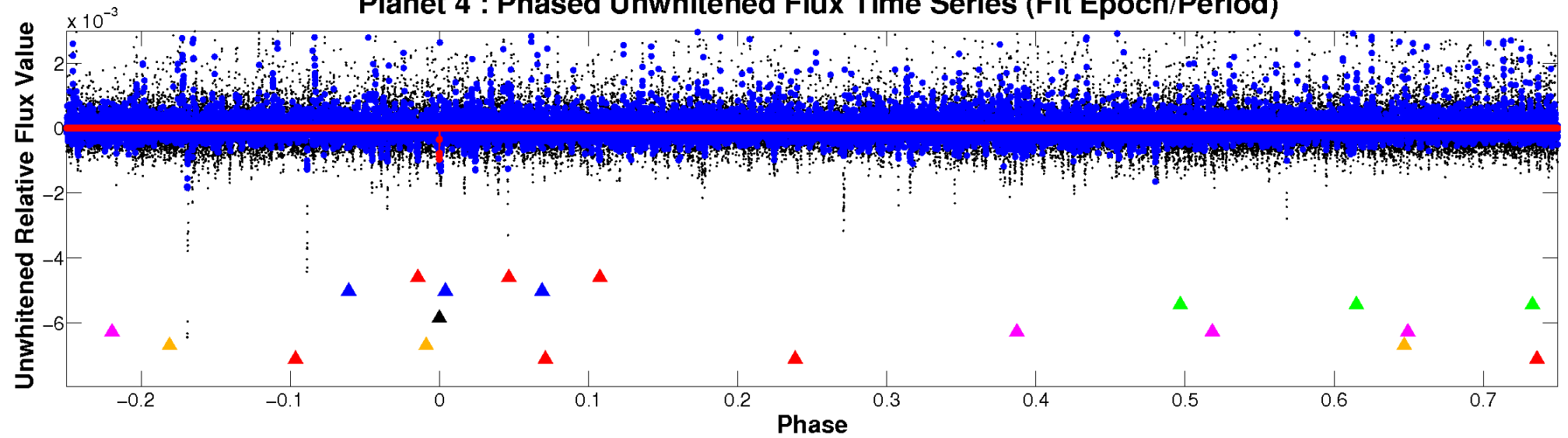
ALT Odd/Even

TCE 007830341-04

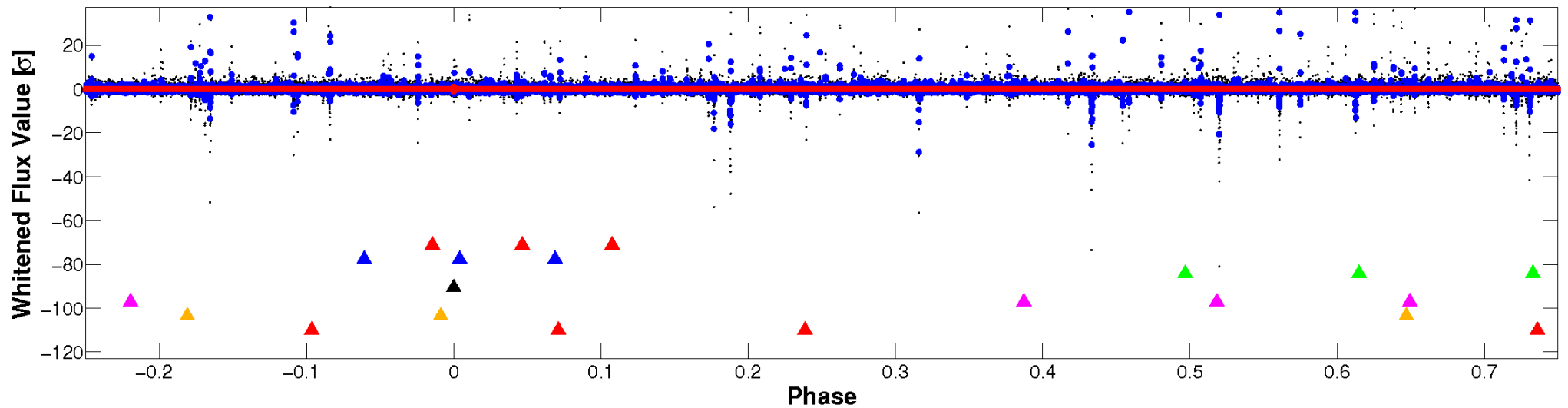


Non-Whitened Vs. Whitened Light Curve

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

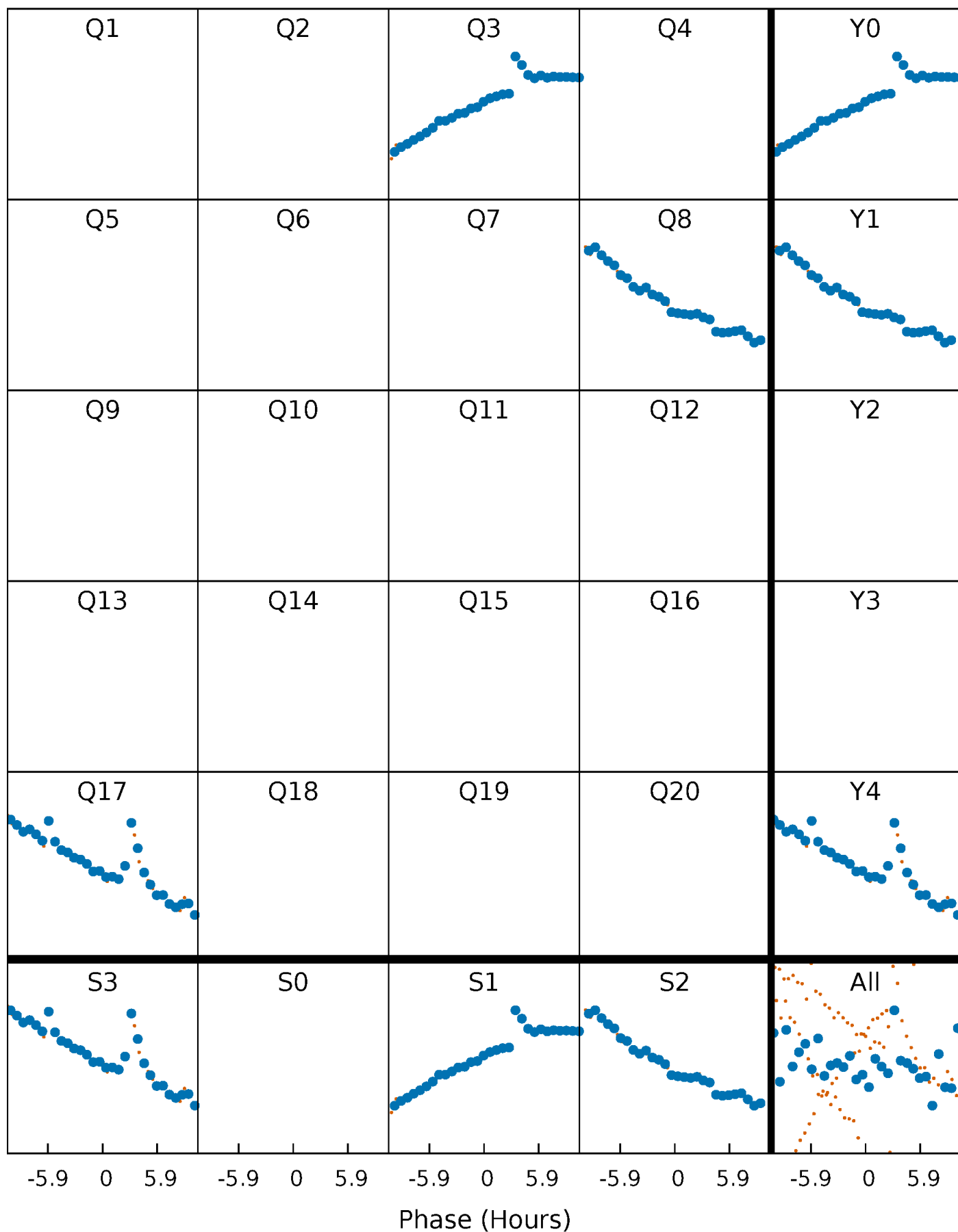


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



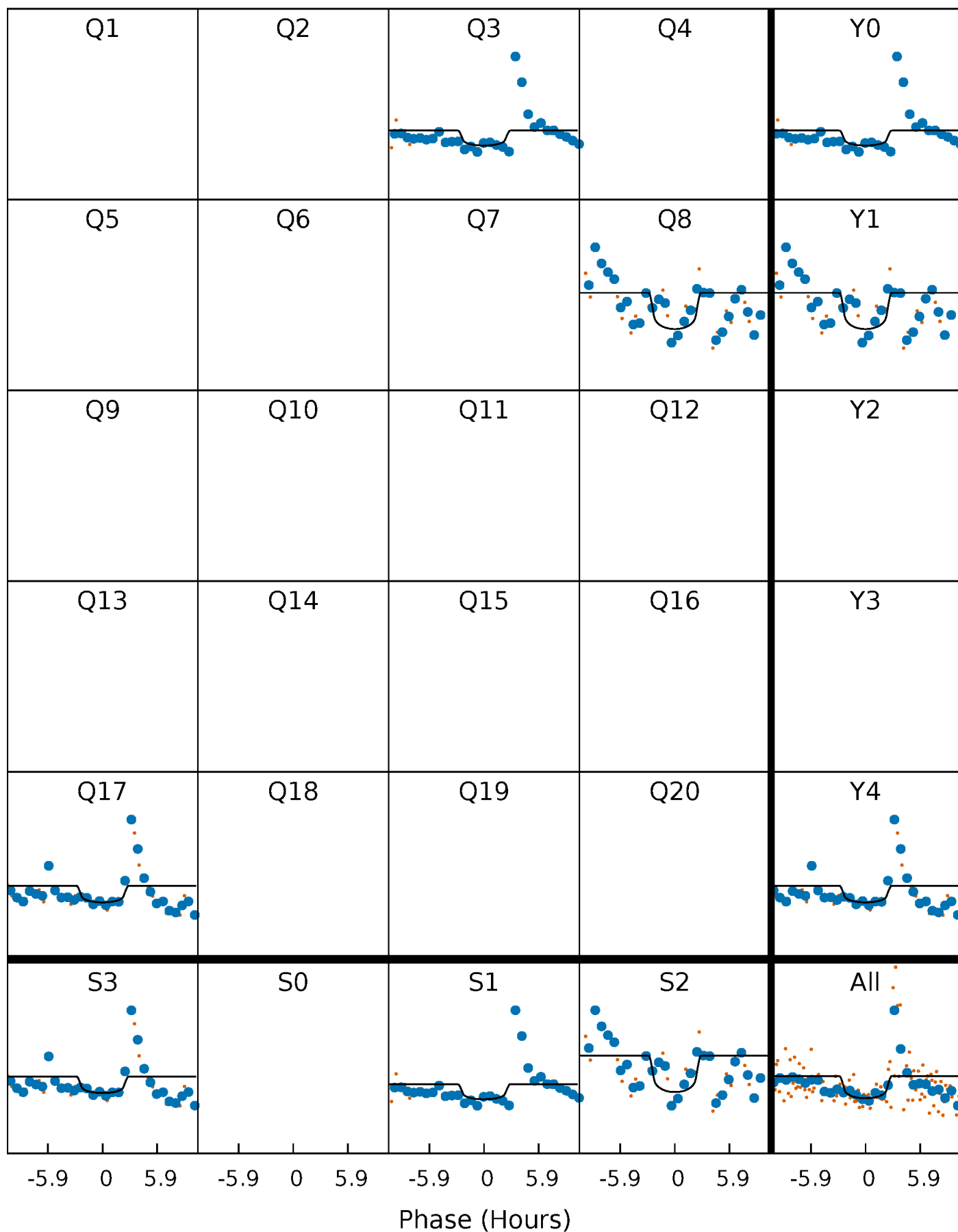
PDC Quarter-Phased Transit Curves

TCE 007830341-04 $P=410.474081$ Days $T_0=342.167942$ (BKJD)



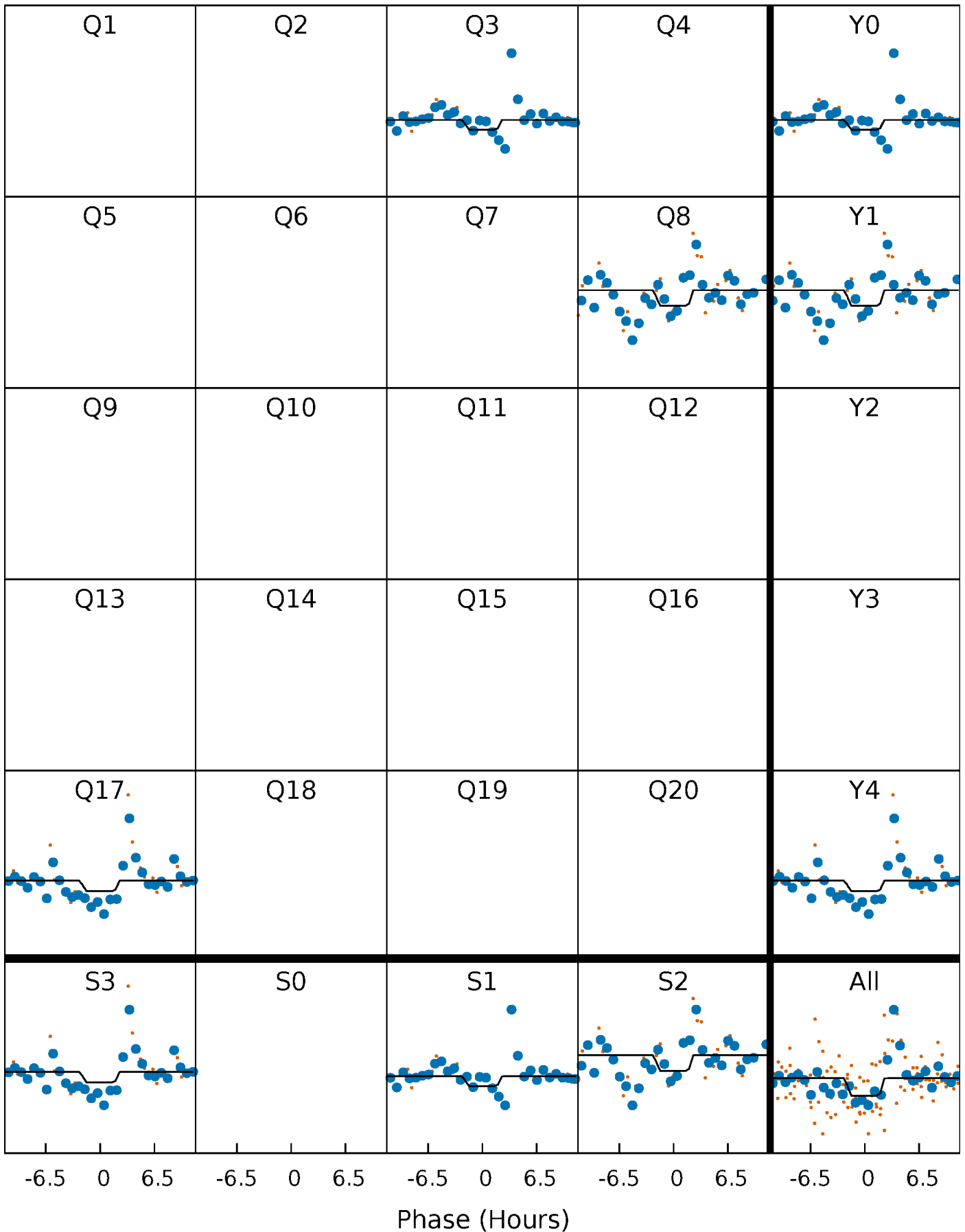
DV Quarter-Phased Transit Curves

TCE 007830341-04 $P=410.474081$ Days $T_0=342.167942$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

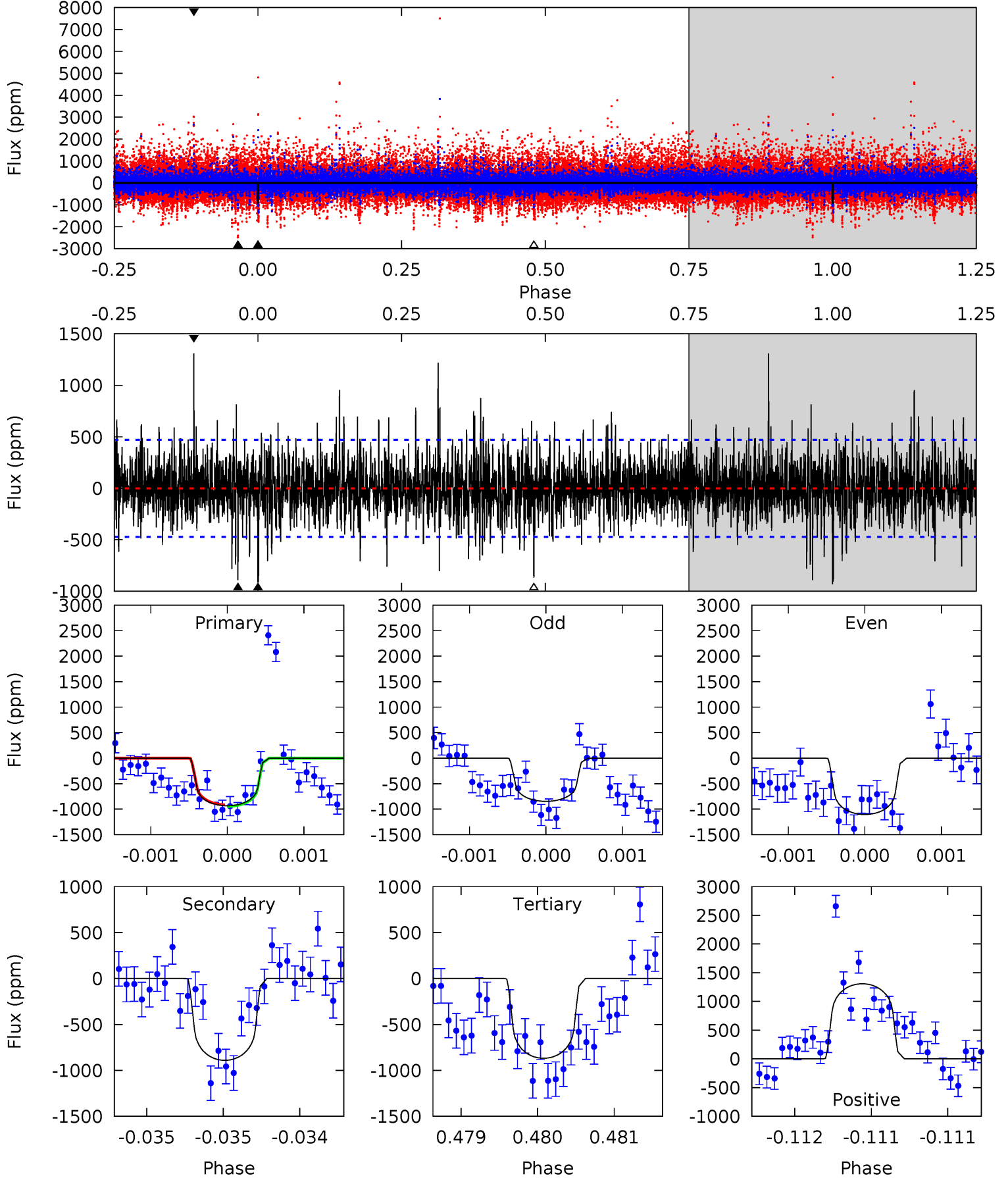
TCE 007830341-04 $P=410.469353$ Days $T_0=342.185523$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-04, P = 410.474081 Days, E = 342.167942 Days

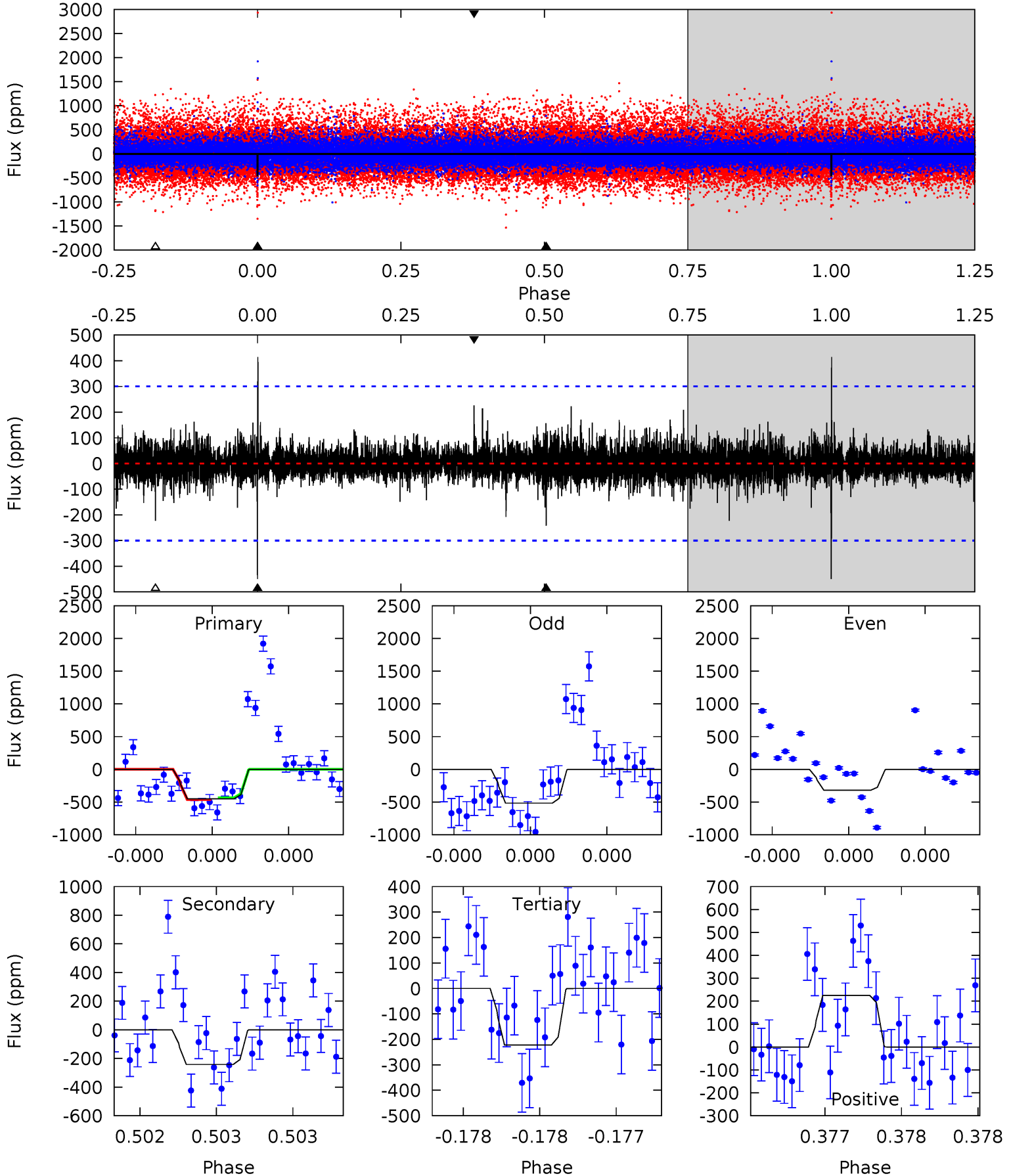
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	10.5	10.2	15.4	5.55	3.44	2.41	0.75	-4.42	0.26	-4.91	0.88	0.93	0.58	0.17



Alt Model-Shift Uniqueness Test

007830341-04, P = 410.469353 Days, E = 342.185523 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.35	4.49	4.13	4.19	5.57	3.48	0.74	4.22	4.16	0.36	0.30	1.72	1.42	0.48	0.24



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-891 ± 85	$2.71^{+2.27}_{-1.75}$	177^{+5}_{-6}	3221^{+1287}_{-514}	$50190^{+322048}_{-35730}$
Alt.	-242 ± 54	$2.46^{+2.34}_{-1.56}$	177^{+6}_{-6}	2733^{+914}_{-413}	$16068^{+100007}_{-11887}$

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

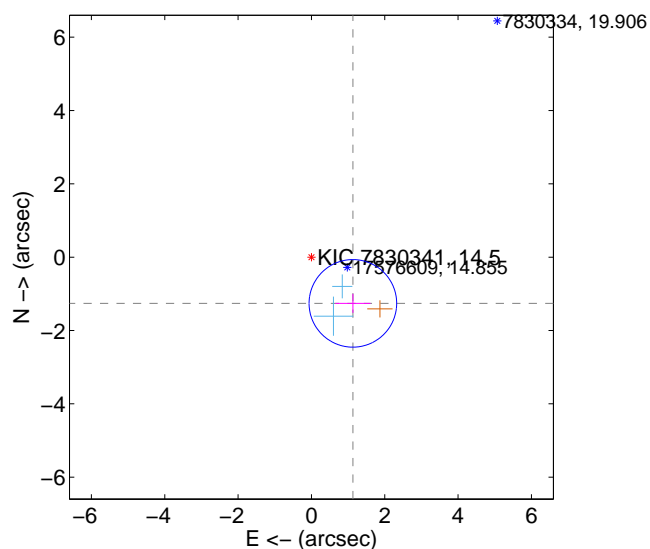
Supplemental centroid analysis for 007830341-04. Kepler magnitude: 14.50. Transit SNR 5.65

There are 2 quarters with good PRF difference image offsets

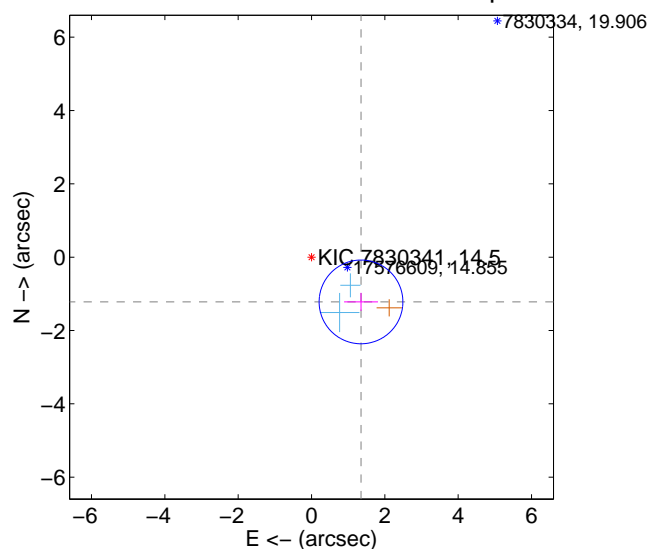
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.693 ± 0.398	4.25	-1.131 ± 0.480	-1.260 ± 0.259
PRF-fit source offset from KIC position	1.820 ± 0.381	4.78	-1.350 ± 0.462	-1.220 ± 0.247
photometric centroid source offset	0.73 ± 1.59	0.46	-0.72 ± 1.60	-0.14 ± 1.22

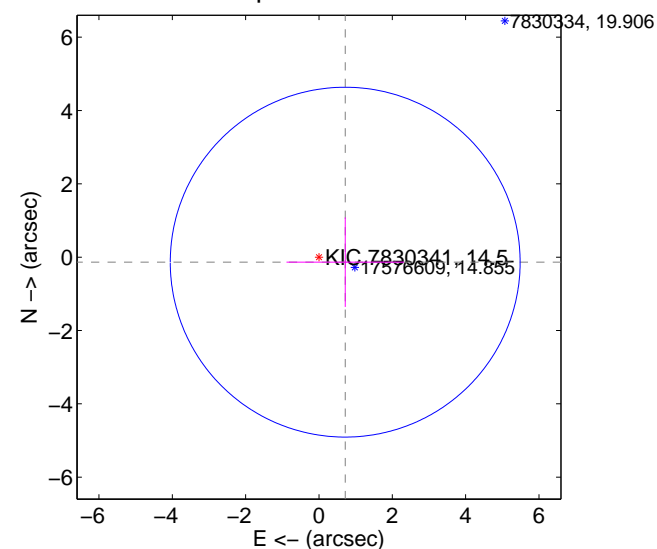
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

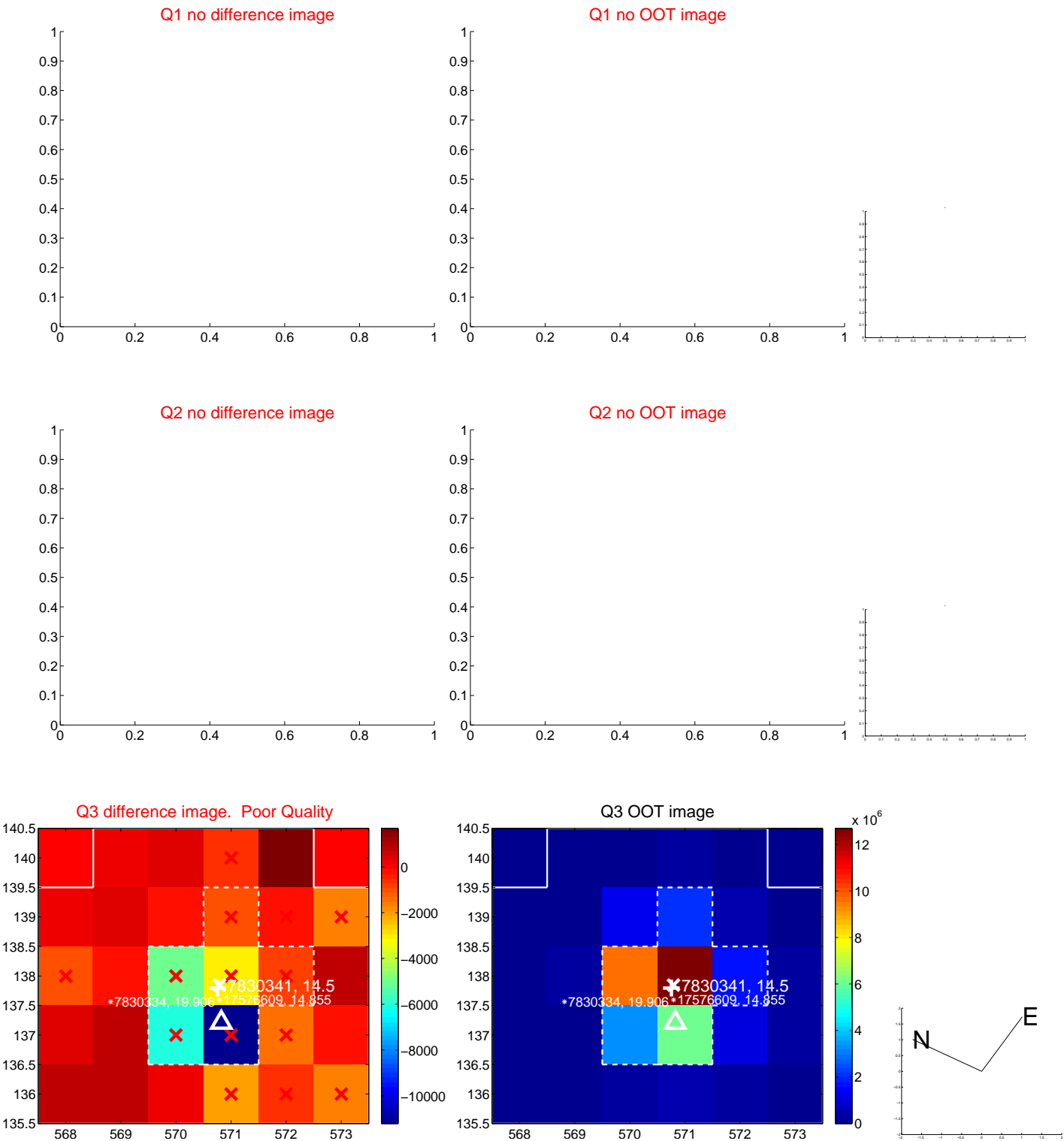


offset from photometric centroids

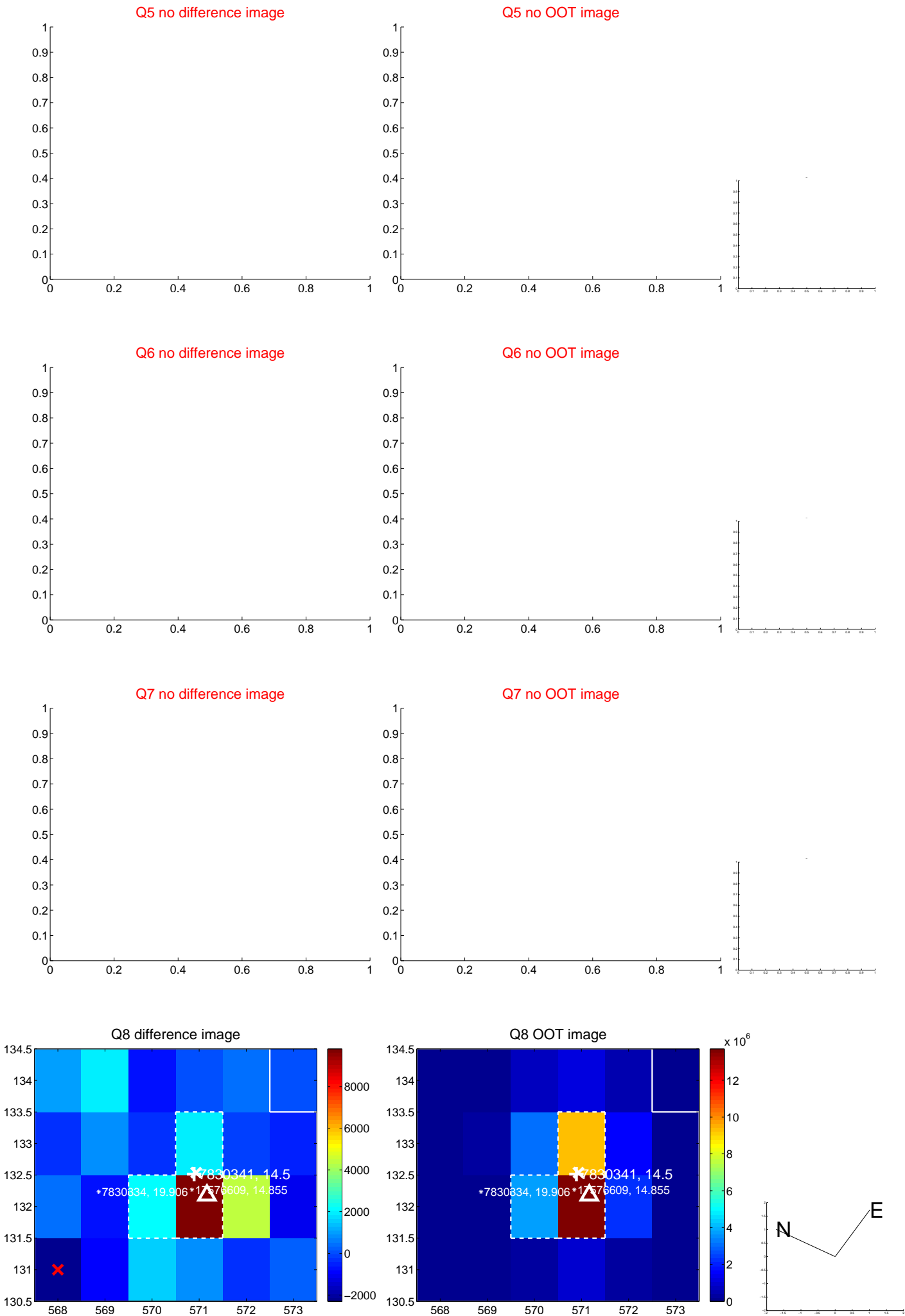


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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

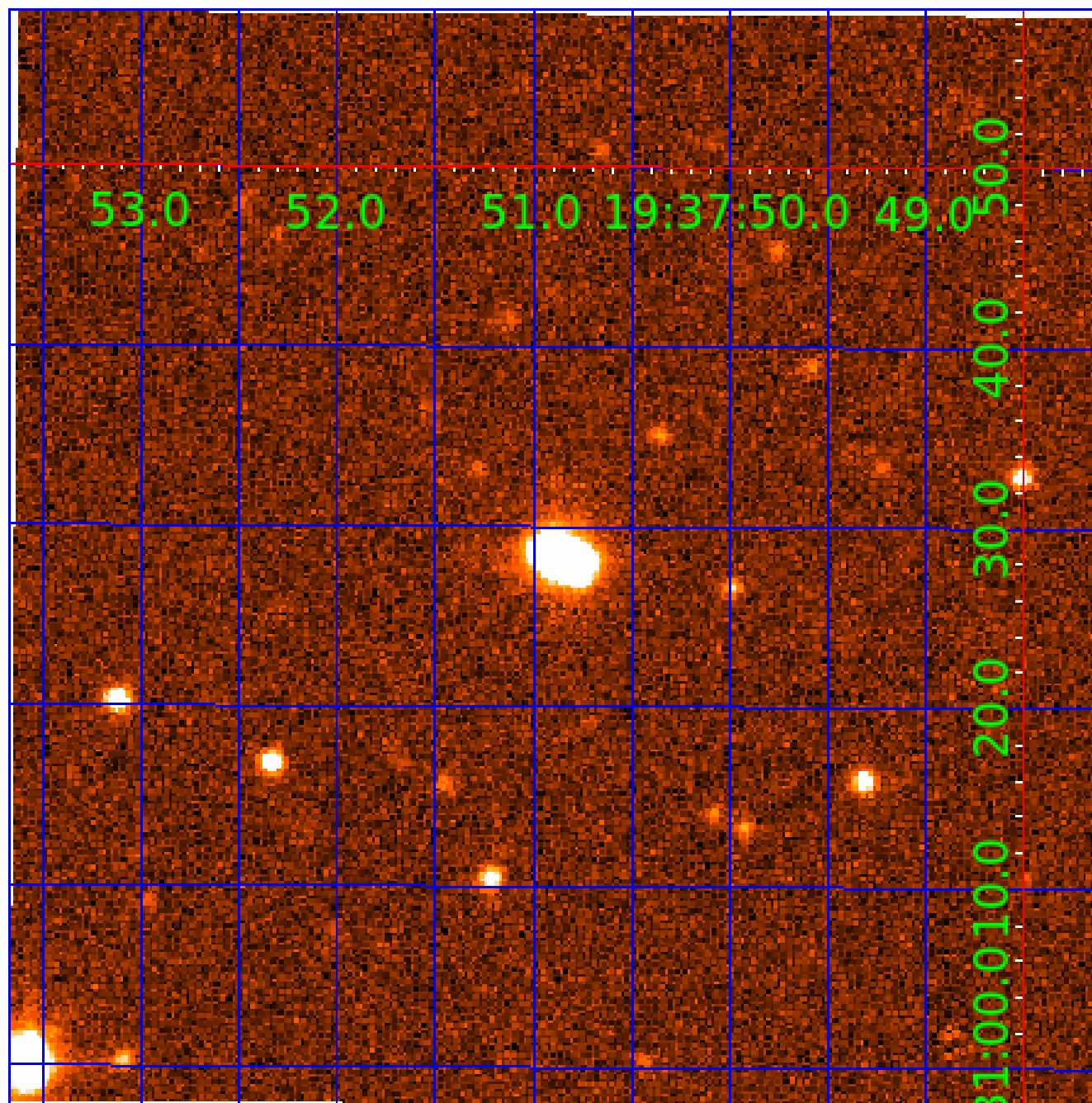


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830341

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})
007830341-01	OBS	No	435.515497	336.261915	1338.6	4.795	15.5	7.4	0.49	3801	1.88	0.06
007830341-02	OBS	No	437.083996	317.229705	1115.2	6.099	12.9	7.5	0.49	3801	1.69	0.06
007830341-03	OBS	No	458.950333	546.103220	1213.7	5.555	12.4	6.5	0.49	3801	1.83	0.05
007830341-04	OBS	No	410.474081	342.167943	970.9	5.148	12.1	5.6	0.49	3801	1.55	0.06
007830341-05	OBS	No	356.669107	252.078717	1092.7	3.440	12.4	7.2	0.49	3801	1.72	0.07
007830341-06	OBS	No	481.100093	607.751184	1625.6	11.546	11.5	7.9	0.49	3801	2.14	0.05
007830341-07	OBS	No	341.708181	440.121071	1529.2	15.825	11.5	7.4	0.49	3801	1.91	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

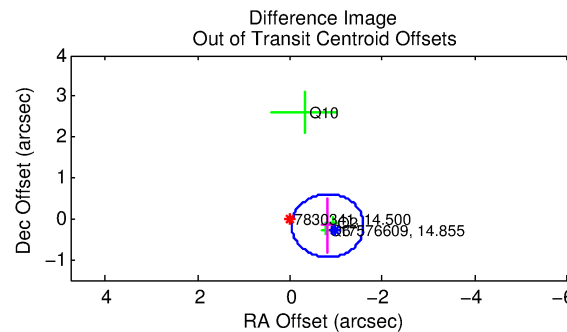
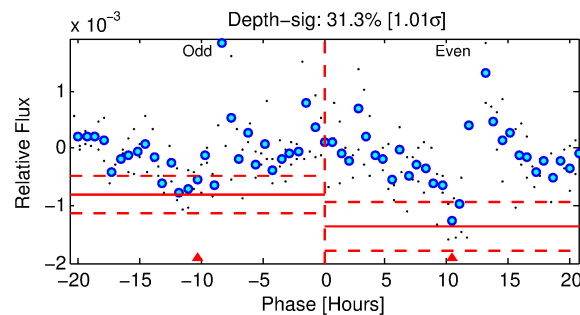
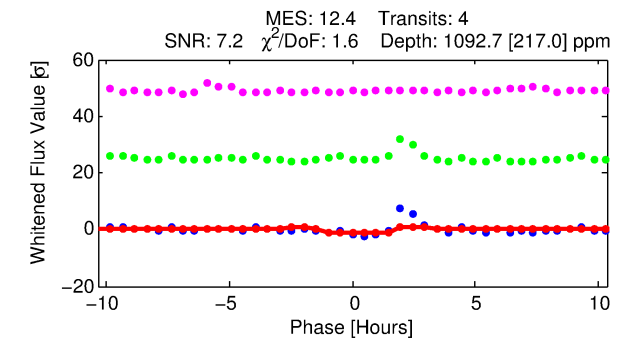
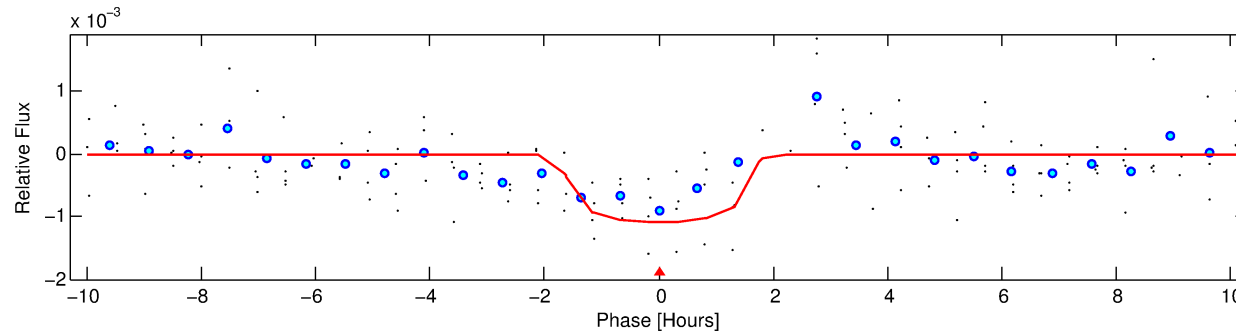
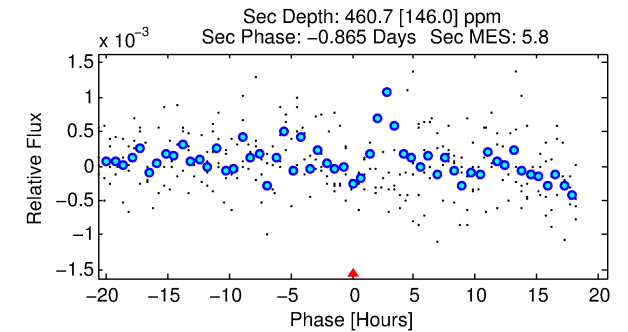
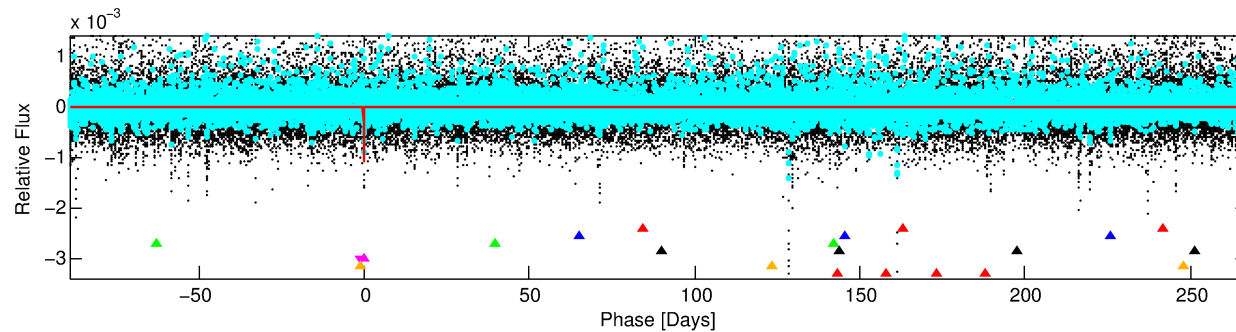
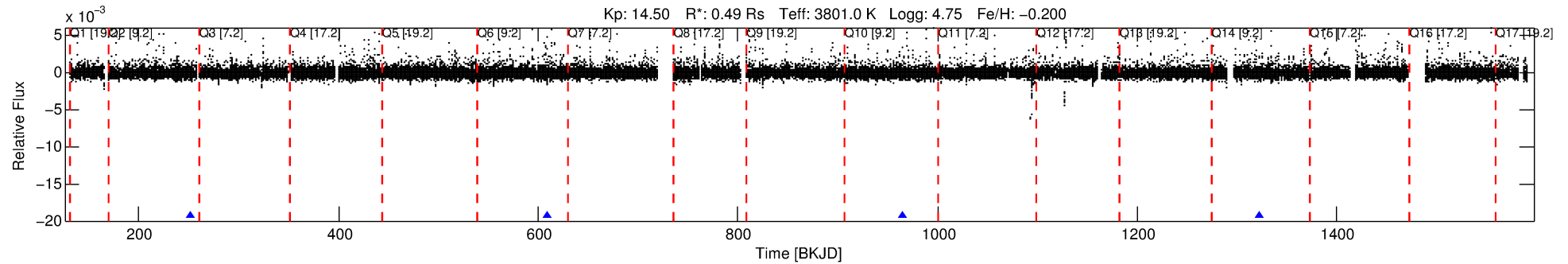
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-05

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 5 of 7 Period: 356.669 d



DV Fit Results:

Period = 356.66911 [0.00521] d
Epoch = 252.0787 [0.0102] BKJD
Rp/R* = 0.0320 [0.0557]
a/R* = 626.48 [4934.38]
b = 0.66 [6.73]
Seff = 0.07 [0.01]
Teq = 133 [5] K
Rp = 1.72 [2.99] Re
a = 0.7808 [0.0669] AU
Ag = 52242.25 [182433.47] [0.29 σ]
Teffp = 3111 [2716] K [1.10 σ]

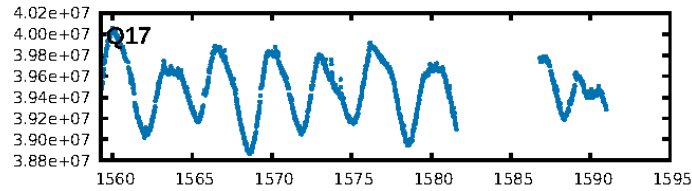
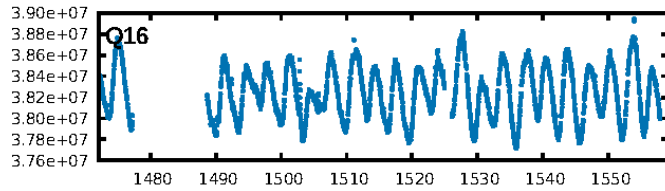
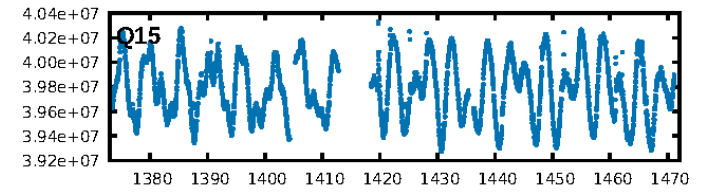
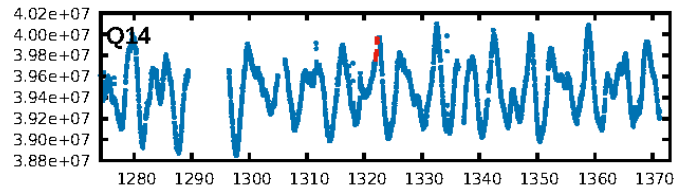
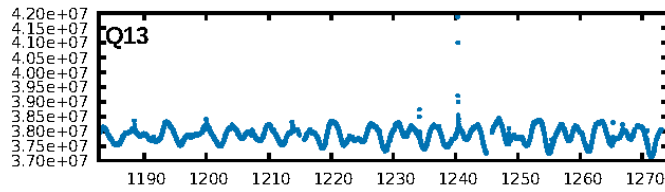
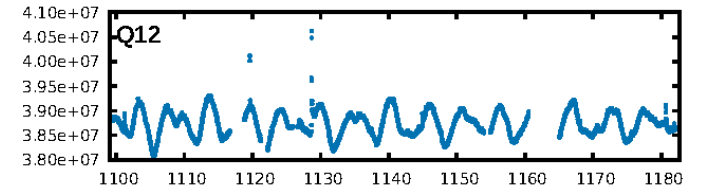
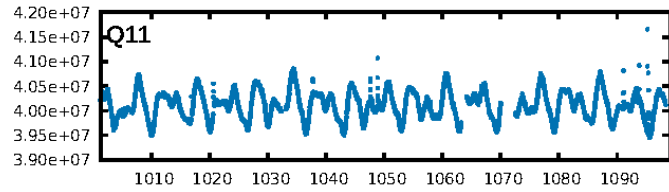
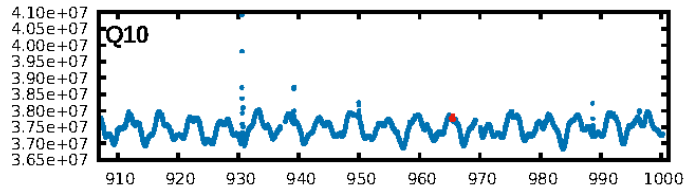
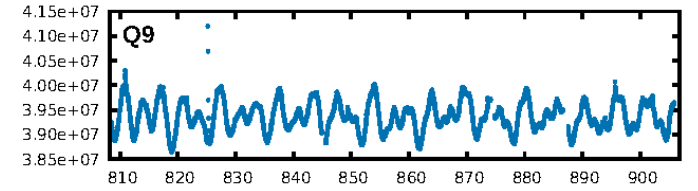
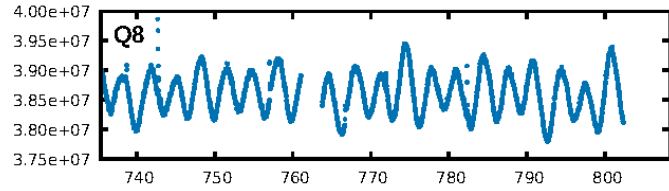
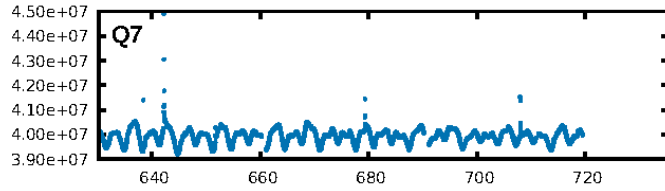
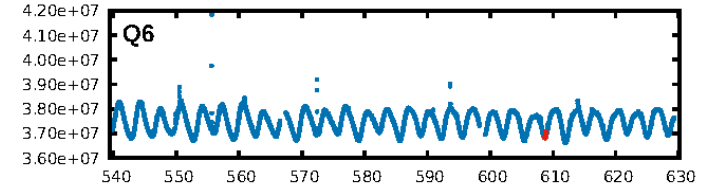
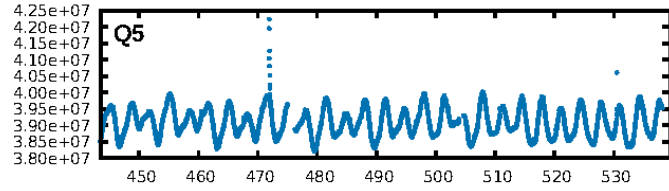
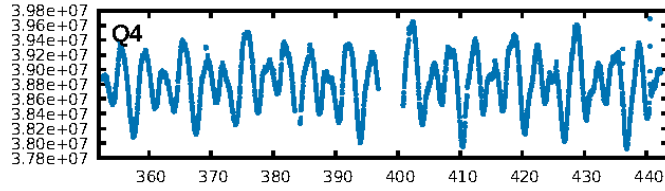
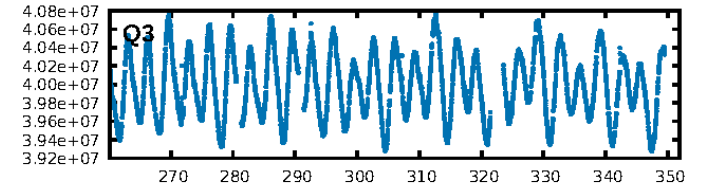
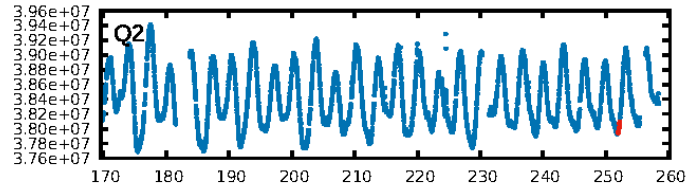
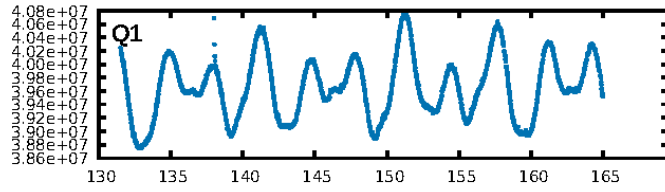
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.17 σ]
LongPeriod-sig: 100.0% [208.55 σ]
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 34.5%
Bootstrap-pfa: 9.61e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.16
Centroid-sig: 35.8%
Centroid-so: 1.285 arcsec [1.19 σ]
OotOffset-rm: 0.832 arcsec [3.20 σ]
KicOffset-rm: 1.114 arcsec [4.54 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [4/4]

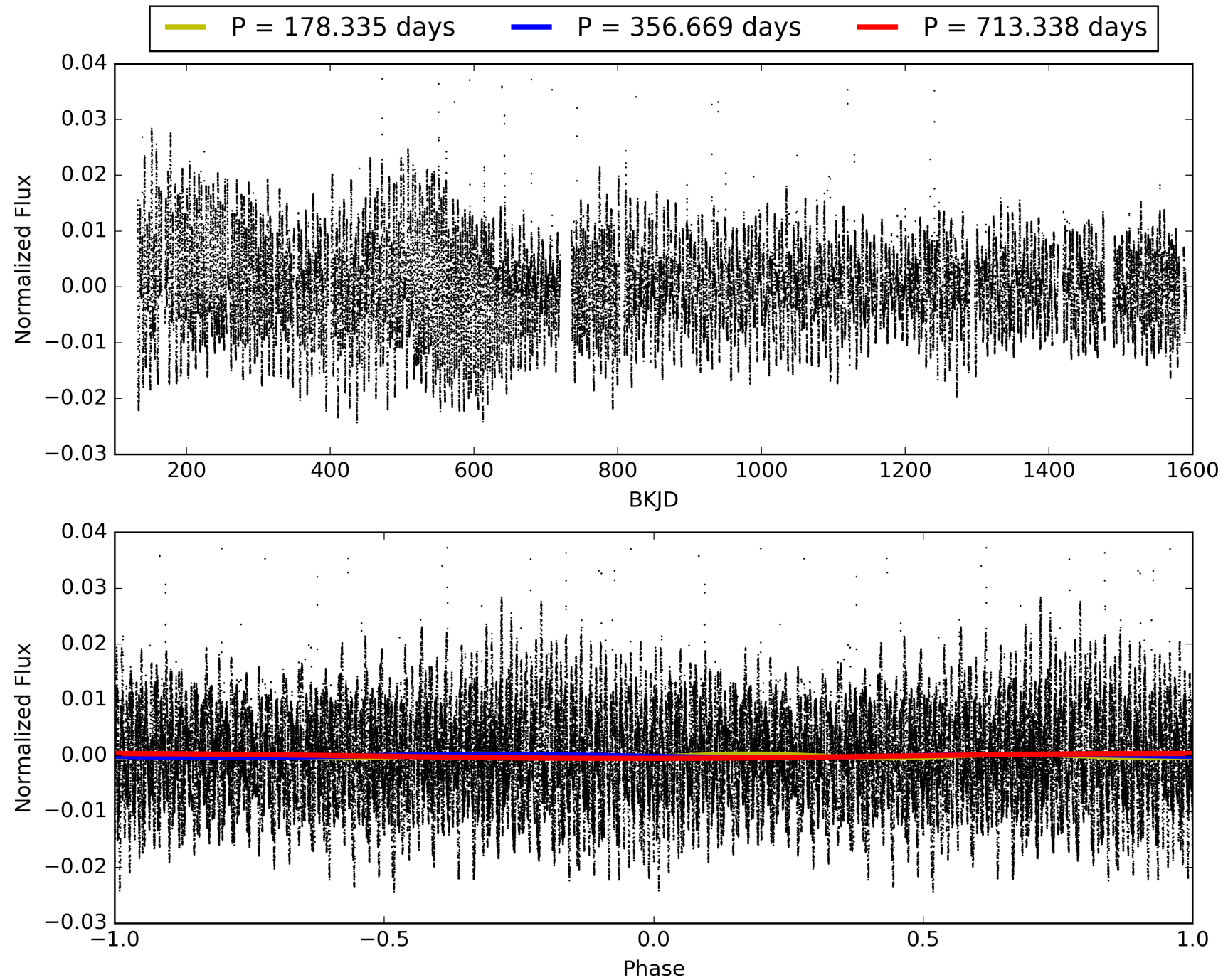
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:15:25 Z

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

TCE 007830341-05, PDC Light Curves

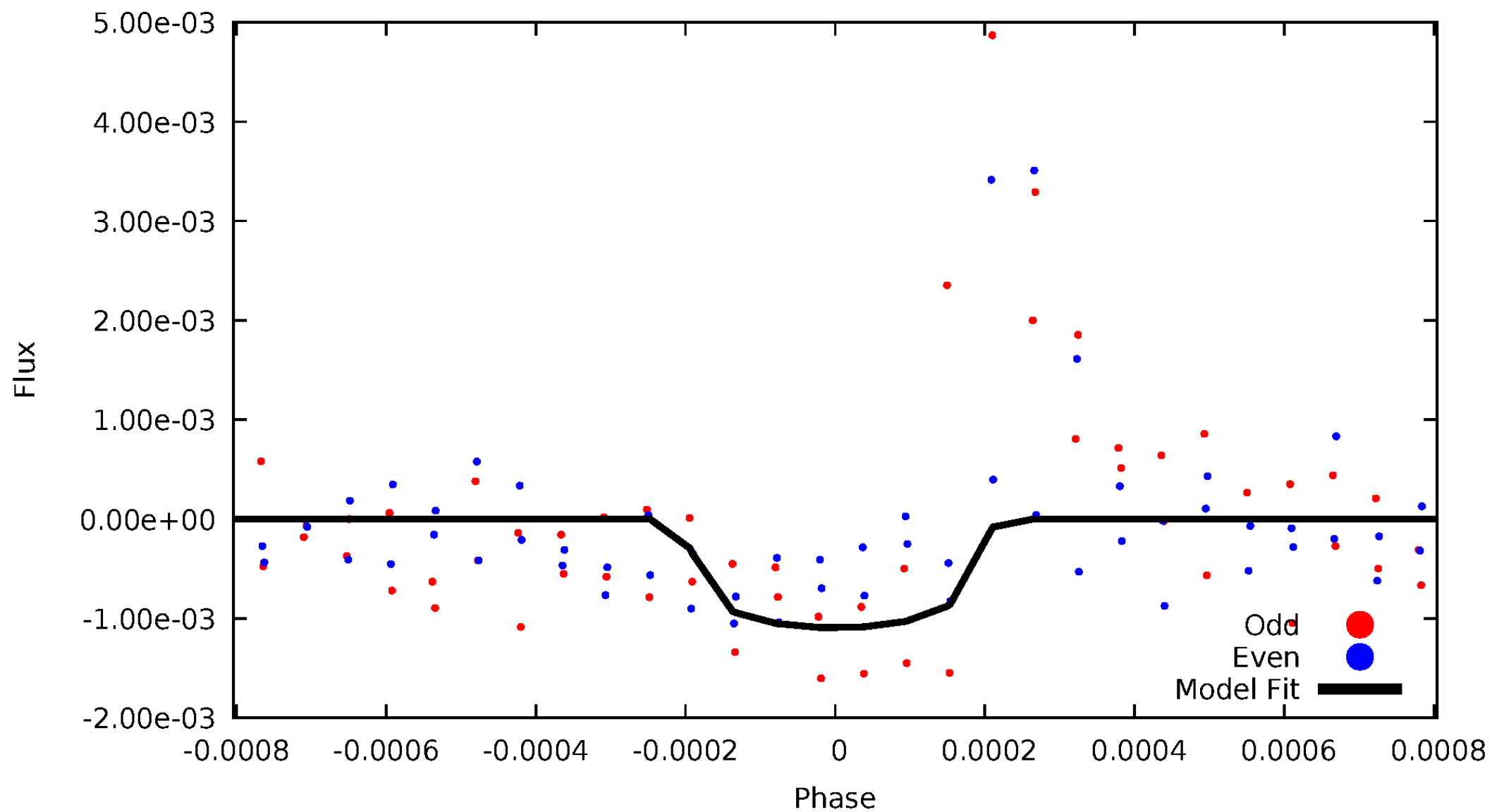


TCE 007830341-05



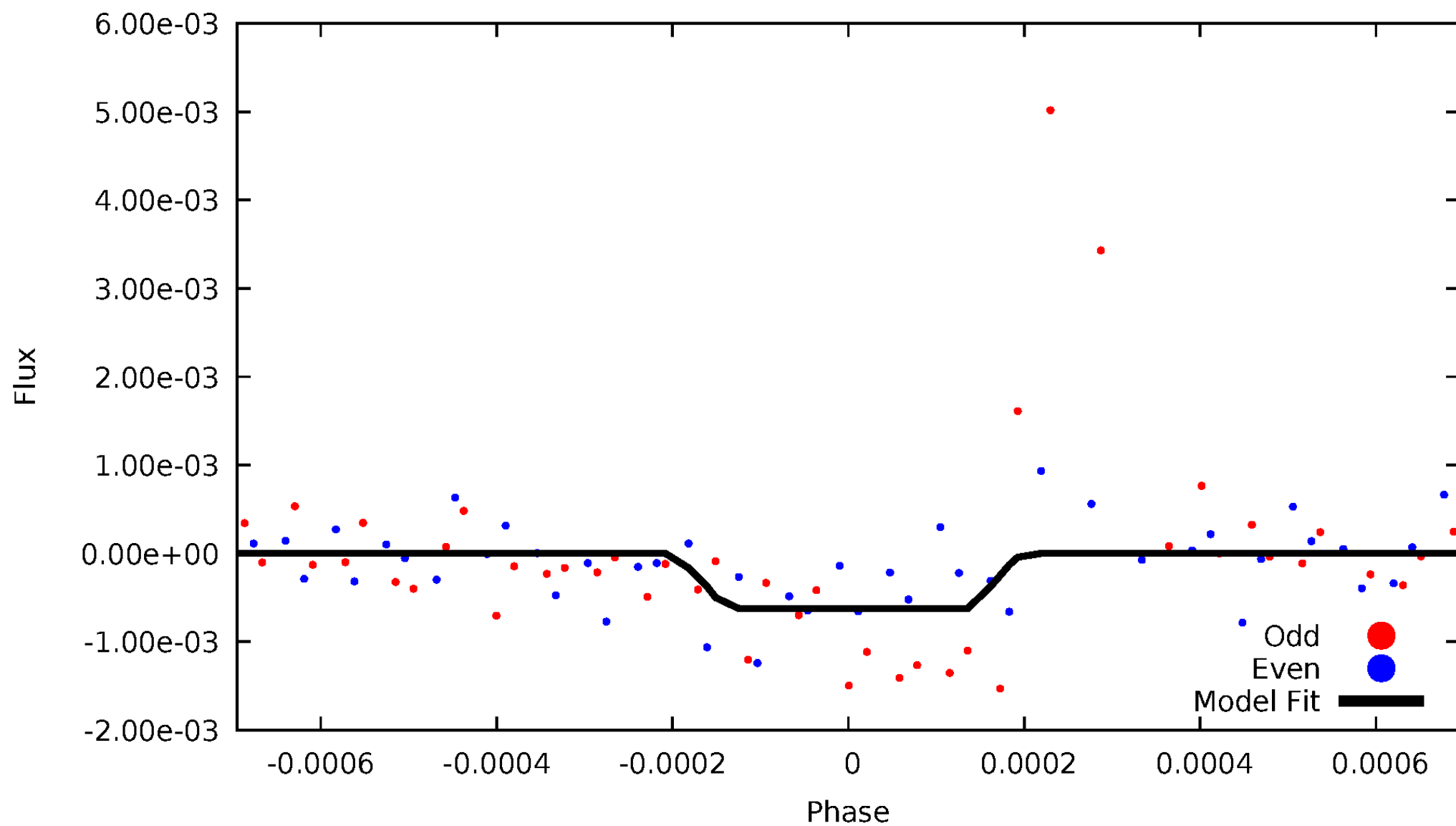
DV Odd/Even

TCE 007830341-05



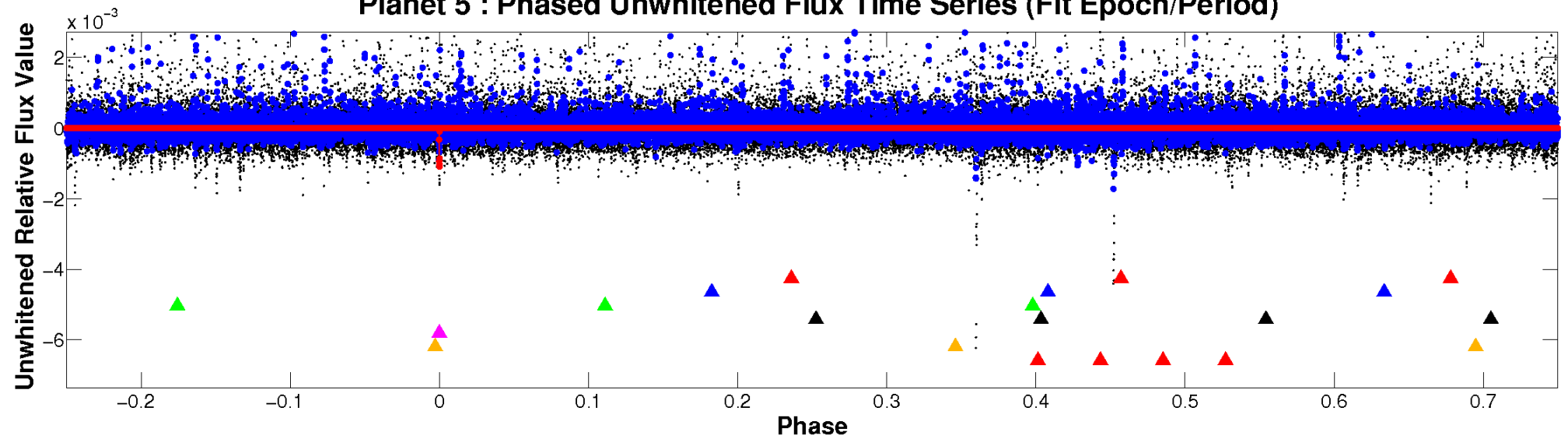
ALT Odd/Even

TCE 007830341-05

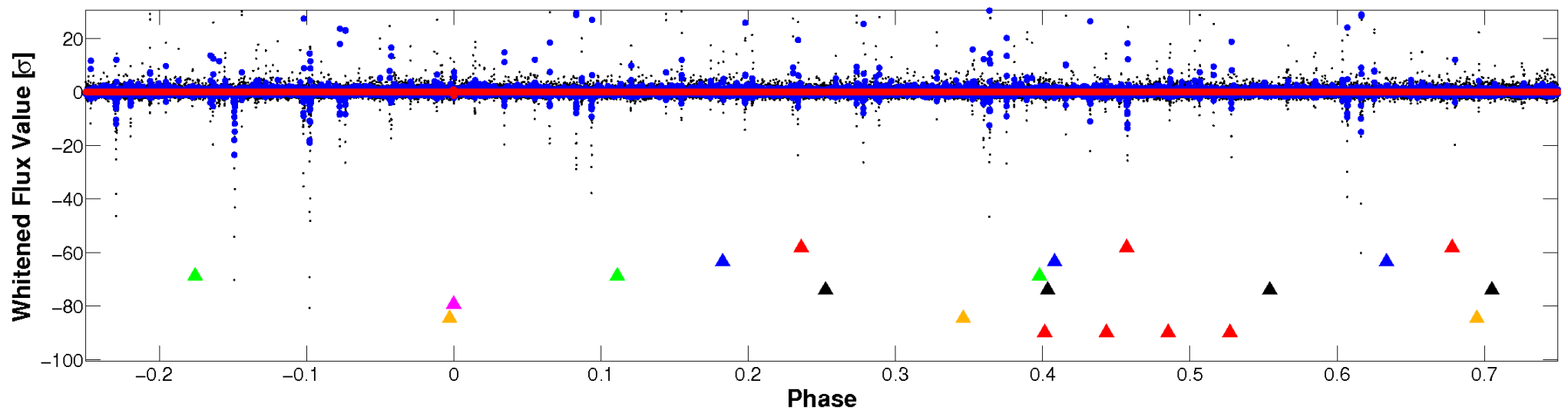


Non-Whitened Vs. Whitened Light Curve

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

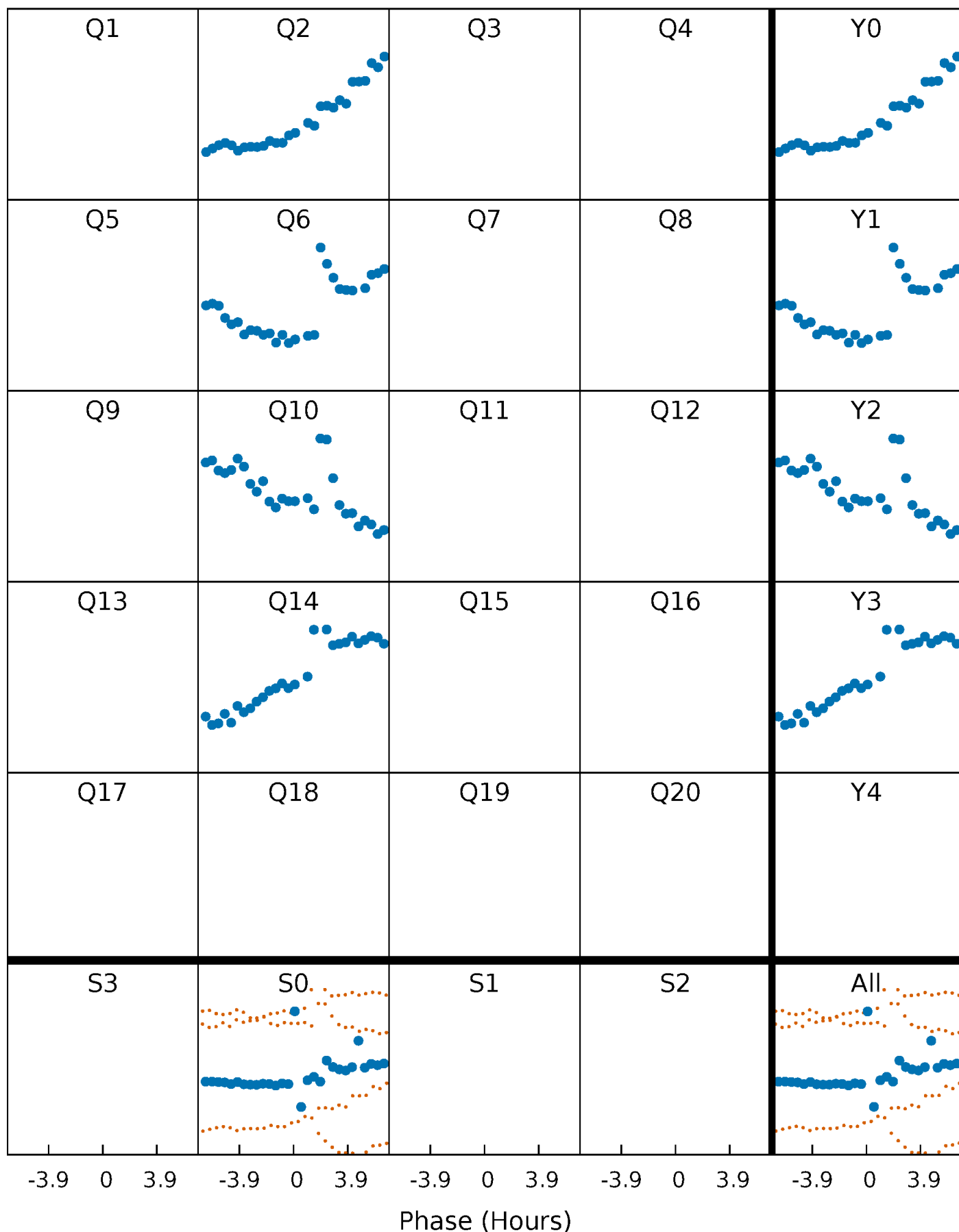


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



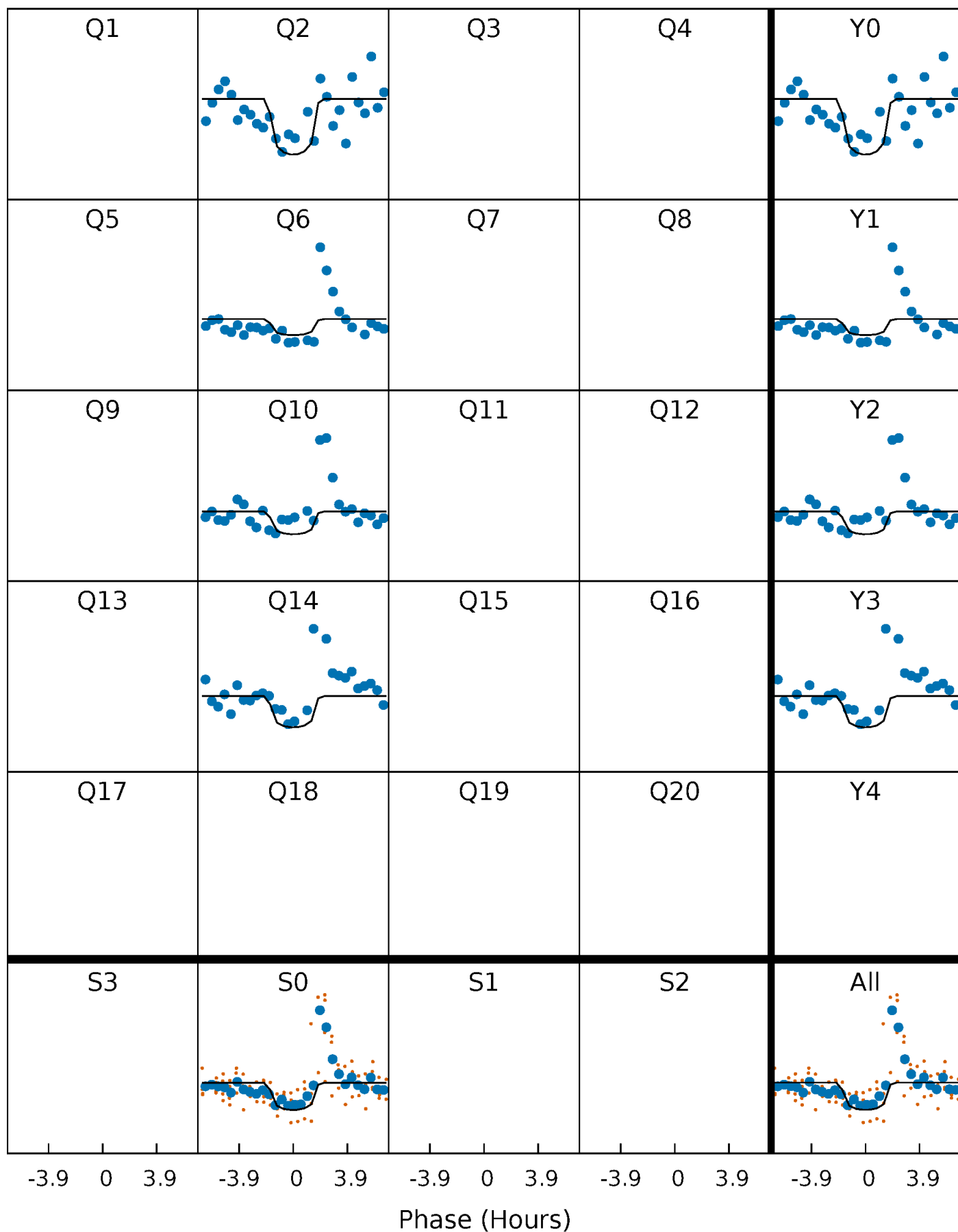
PDC Quarter-Phased Transit Curves

TCE 007830341-05 P=356.669107 Days $T_0=252.078717$ (BKJD)



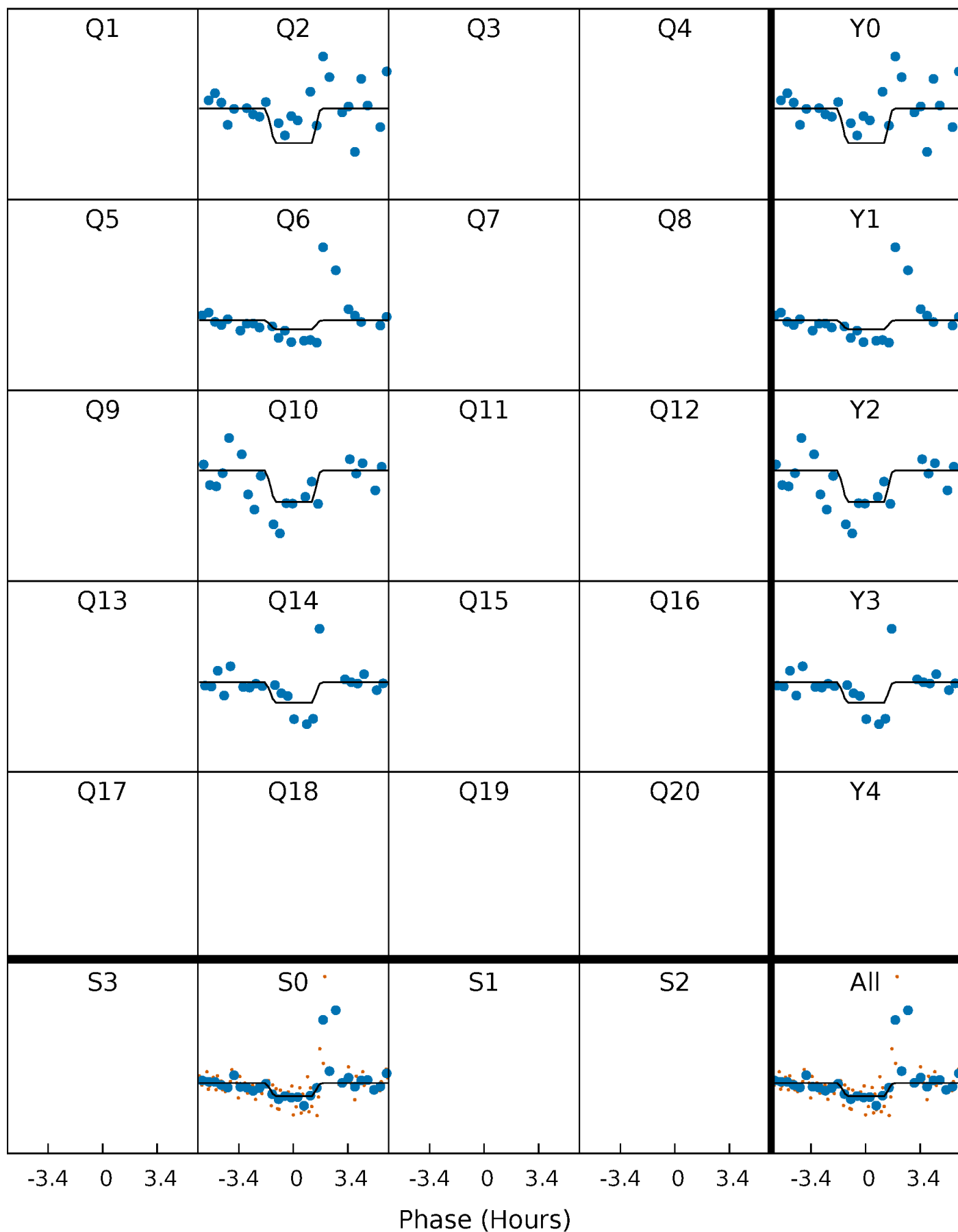
DV Quarter-Phased Transit Curves

TCE 007830341-05 $P=356.669107$ Days $T_0=252.078717$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

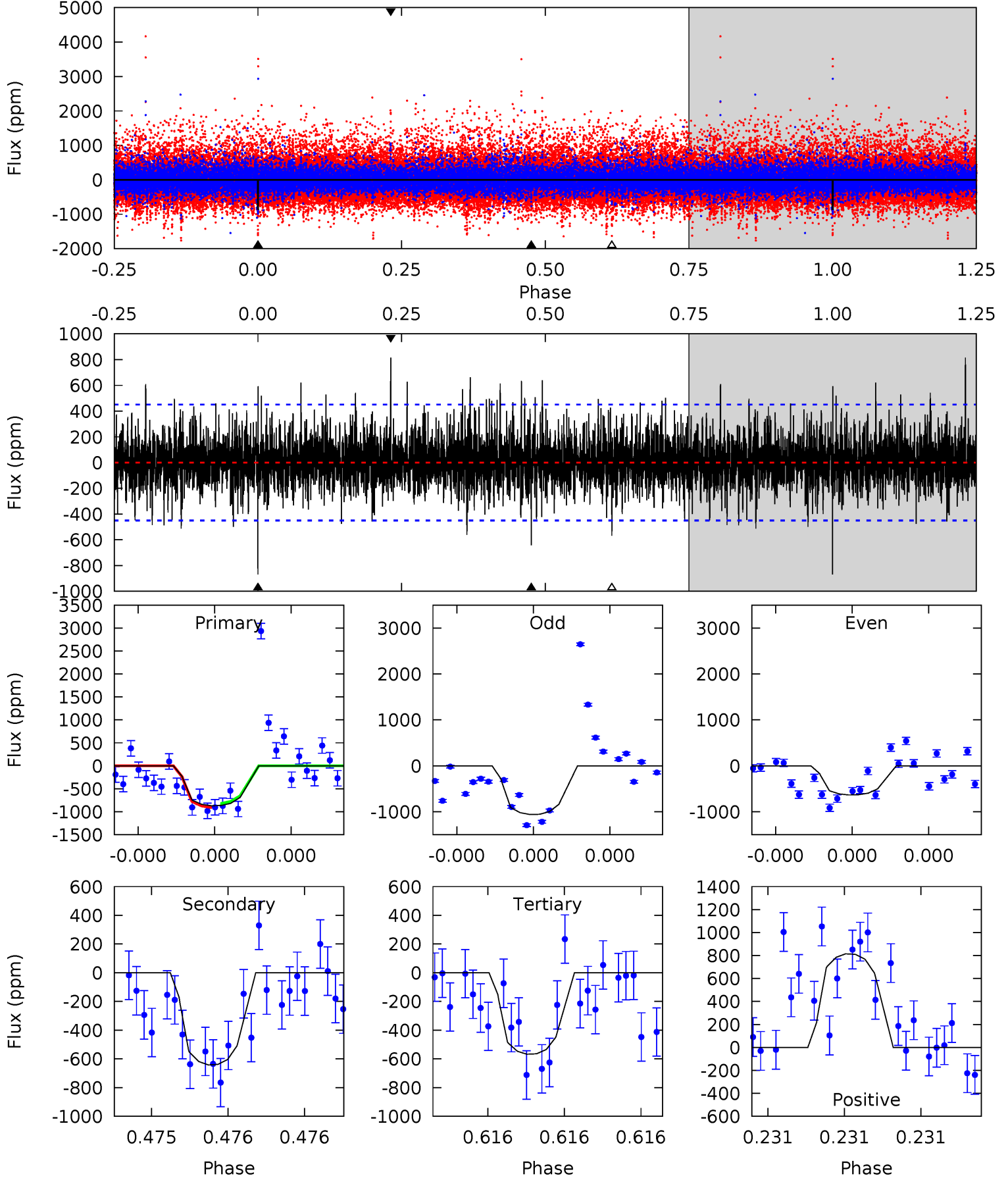
TCE 007830341-05 $P=356.664912$ Days $T_0=252.075783$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-05, P = 356.669107 Days, E = 252.078717 Days

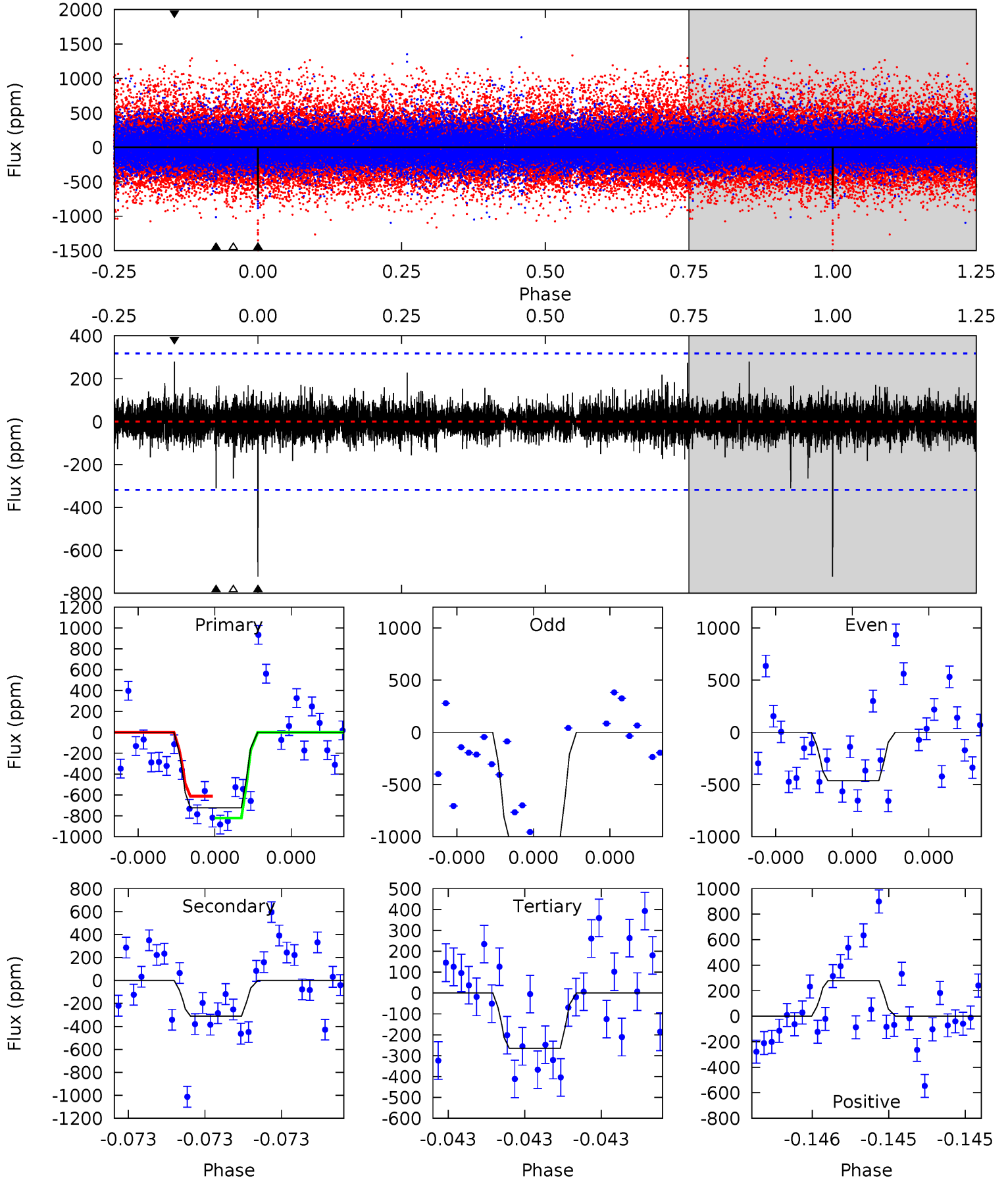
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	7.96	7.04	10.1	5.59	3.50	1.80	3.74	0.68	0.92	-2.14	2.23	1.19	0.48	0.52



Alt Model-Shift Uniqueness Test

007830341-05, P = 356.664912 Days, E = 252.075783 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	5.47	4.68	4.91	5.62	3.55	0.78	8.07	7.83	0.80	0.56	4.98	0.99	0.28	1.84



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-642 ± 81	$2.60^{+2.84}_{-1.76}$	185^{+6}_{-6}	3082^{+1374}_{-531}	$32174^{+273244}_{-24726}$
Alt.	-310 ± 57	$2.55^{+2.55}_{-1.70}$	185^{+6}_{-6}	2788^{+1136}_{-432}	$15355^{+130659}_{-11378}$

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 $A_{obs} \gg 1.0$

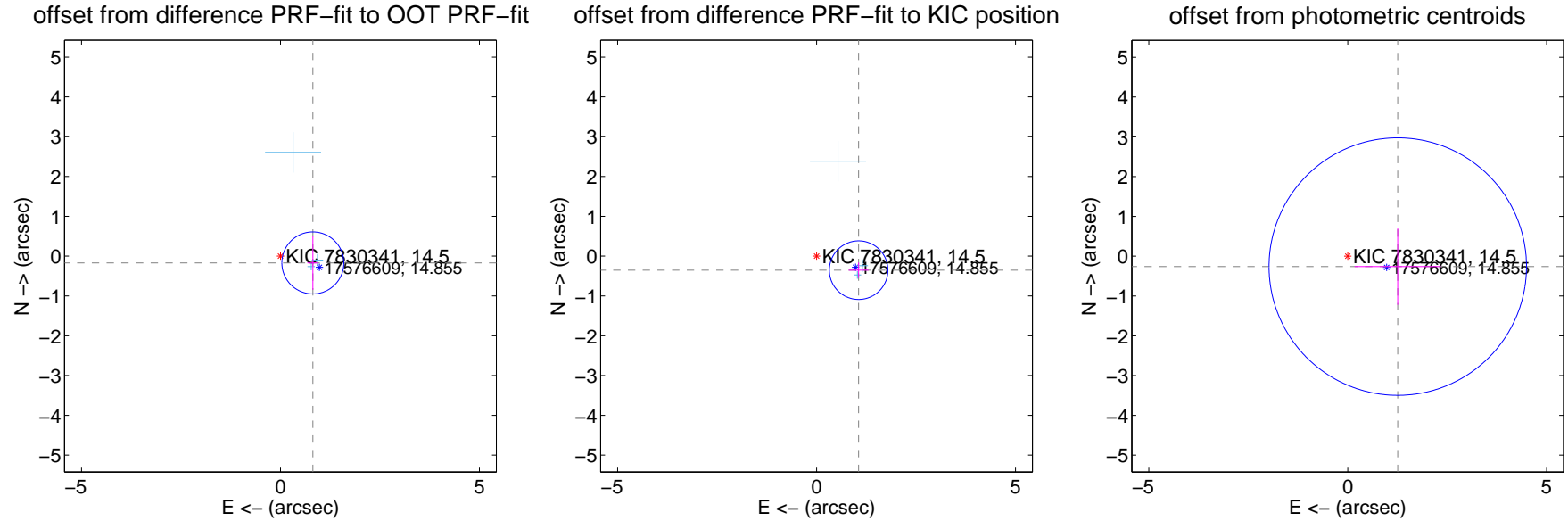
DV Centroid Data

Supplemental centroid analysis for 007830341-05. Kepler magnitude: 14.50. Transit SNR 7.24

There are 3 quarters with good PRF difference image offsets

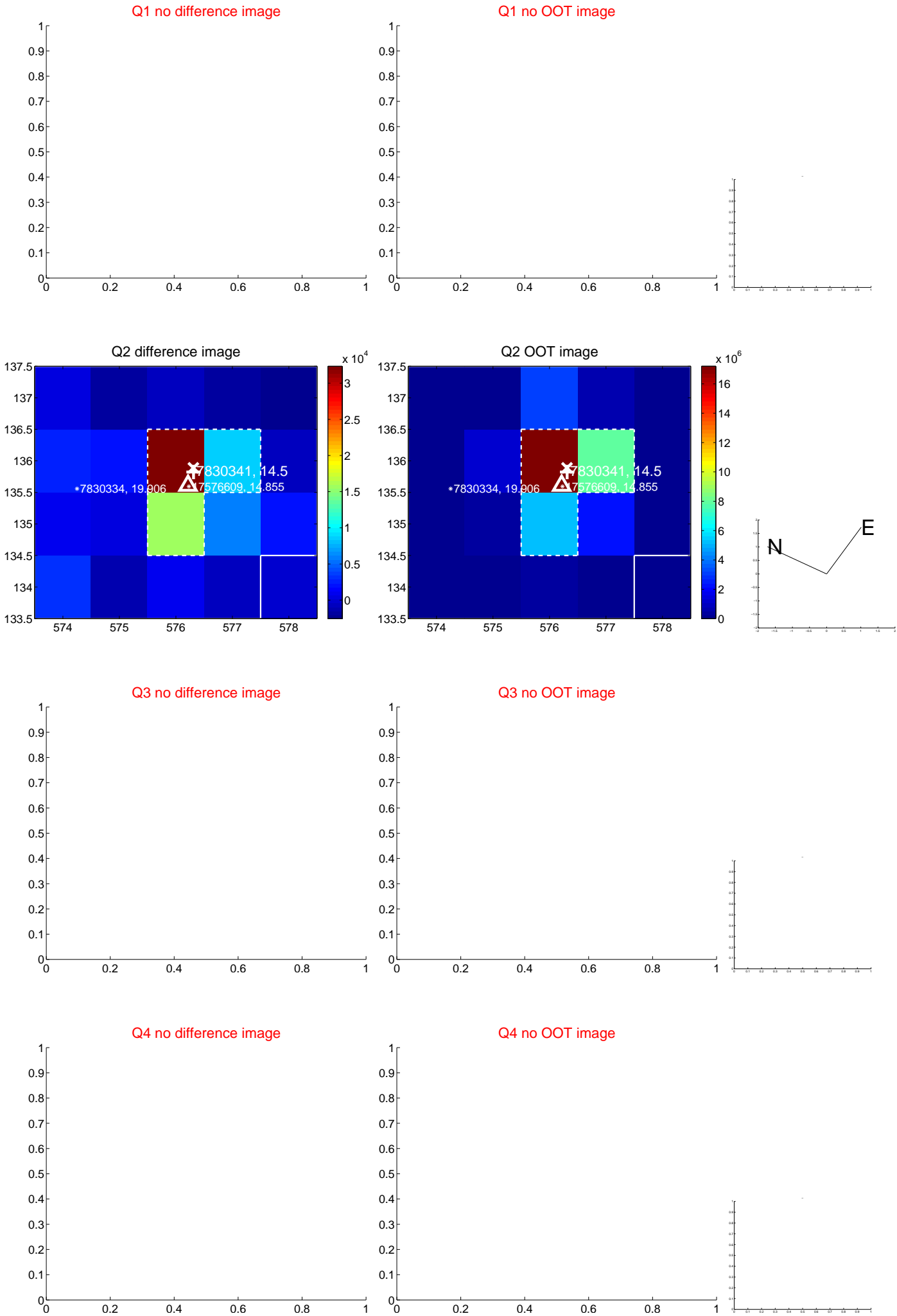
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.832 ± 0.259	3.20	-0.814 ± 0.138	-0.171 ± 0.674
PRF-fit source offset from KIC position	1.114 ± 0.245	4.54	-1.057 ± 0.251	-0.353 ± 0.192
photometric centroid source offset	1.28 ± 1.08	1.19	-1.26 ± 1.08	-0.26 ± 0.96



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.



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

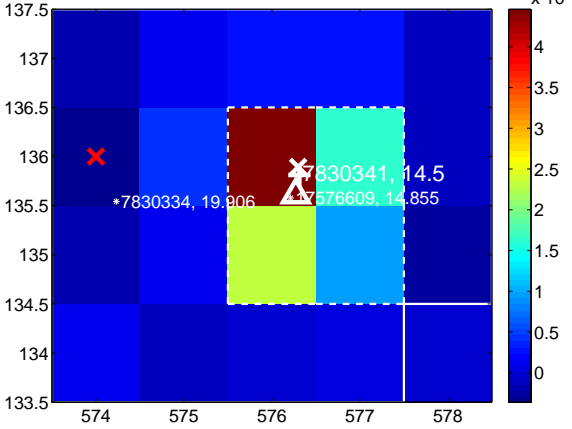
Q5 no difference image



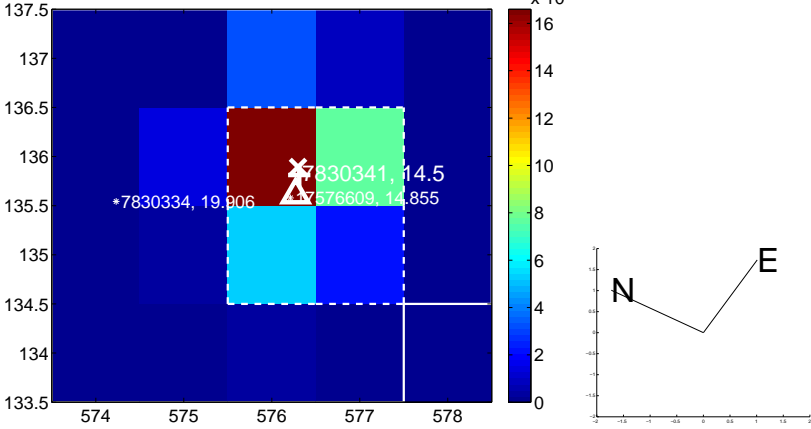
Q5 no OOT image



Q6 difference image



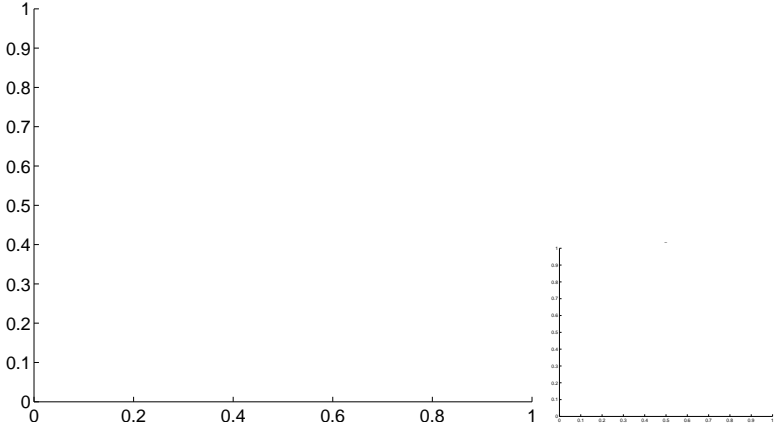
Q6 OOT image



Q7 no difference image



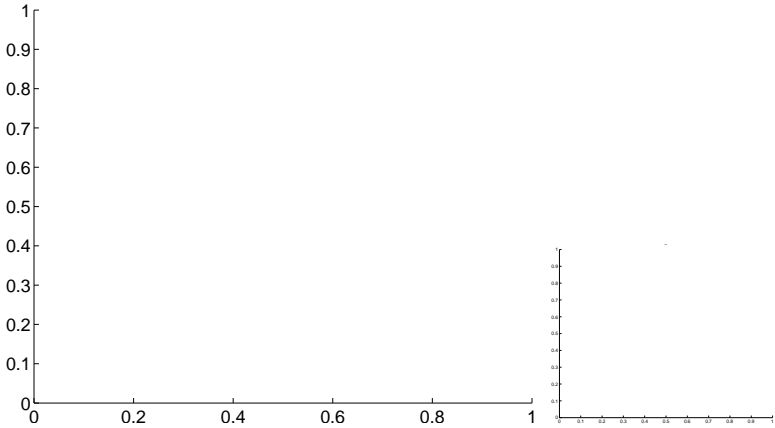
Q7 no OOT image



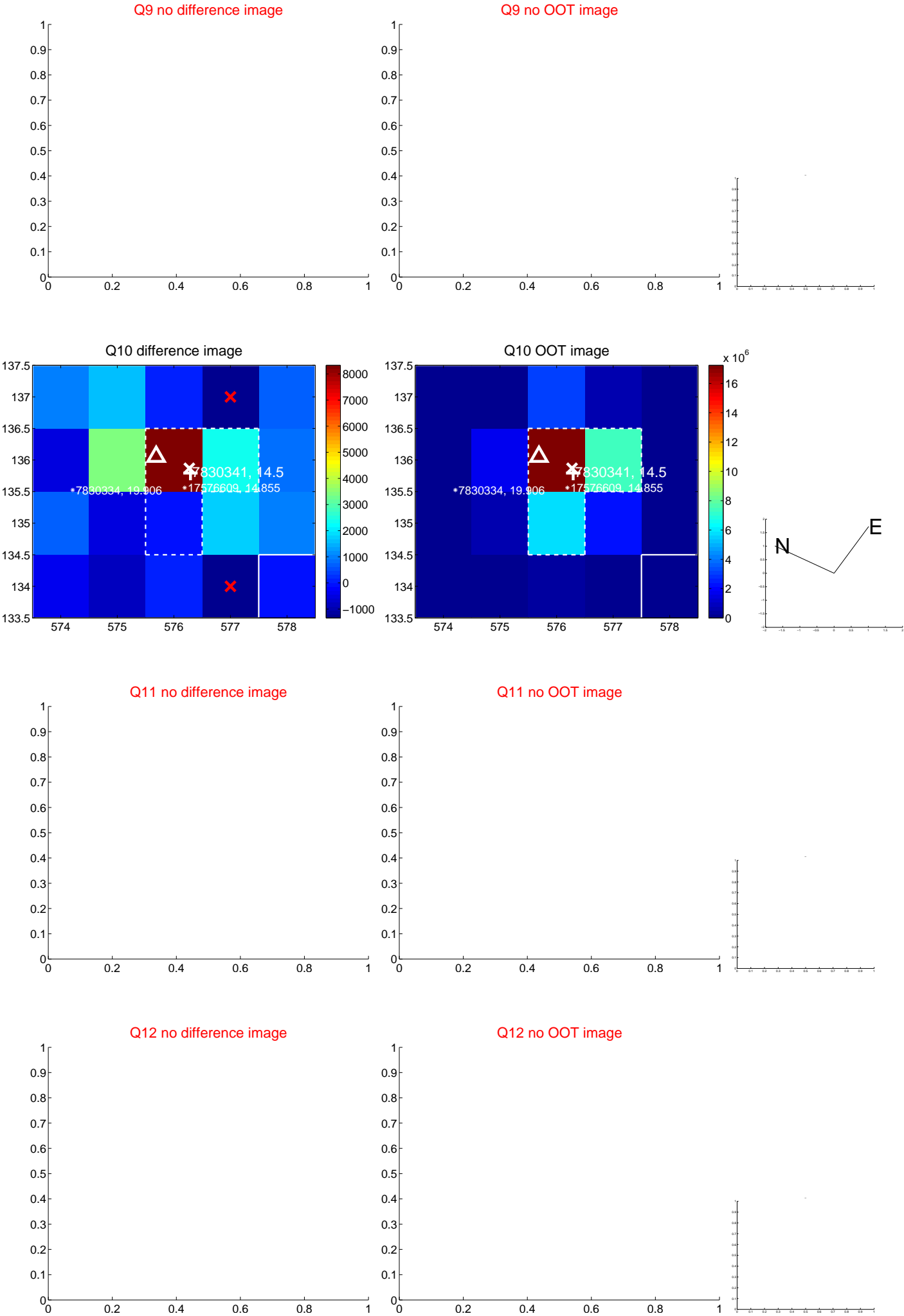
Q8 no difference image



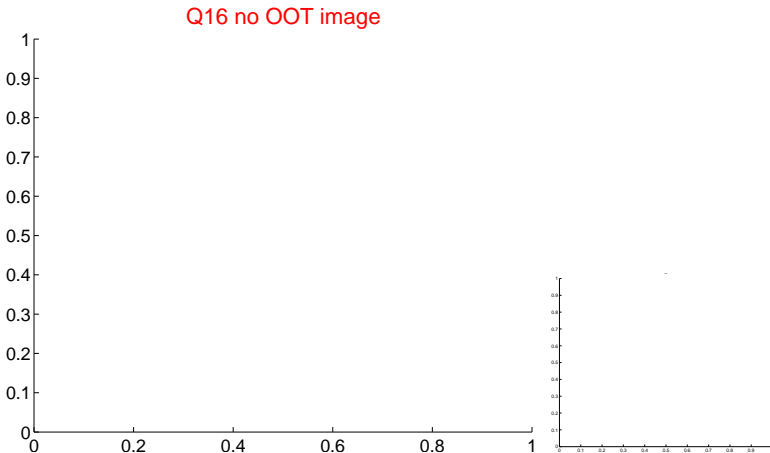
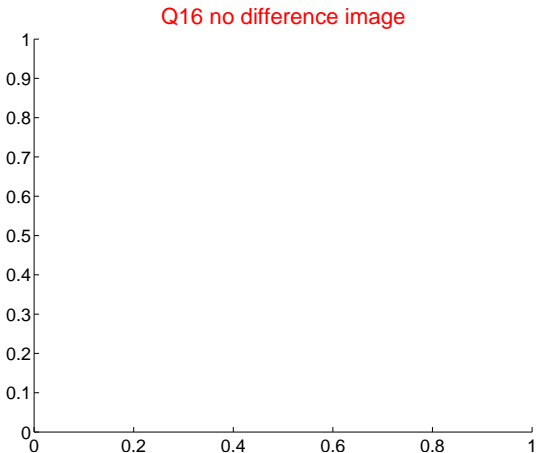
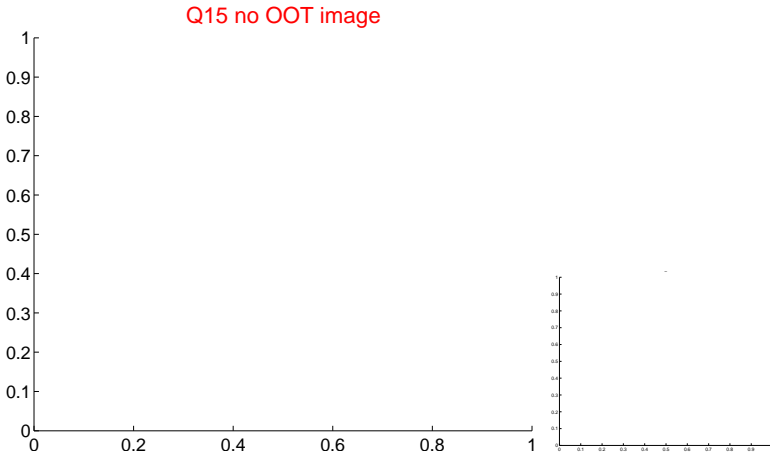
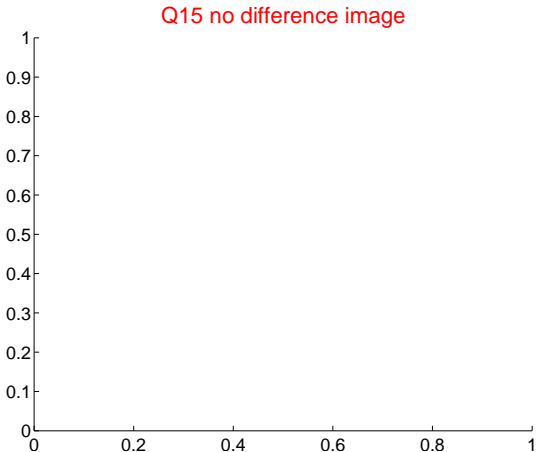
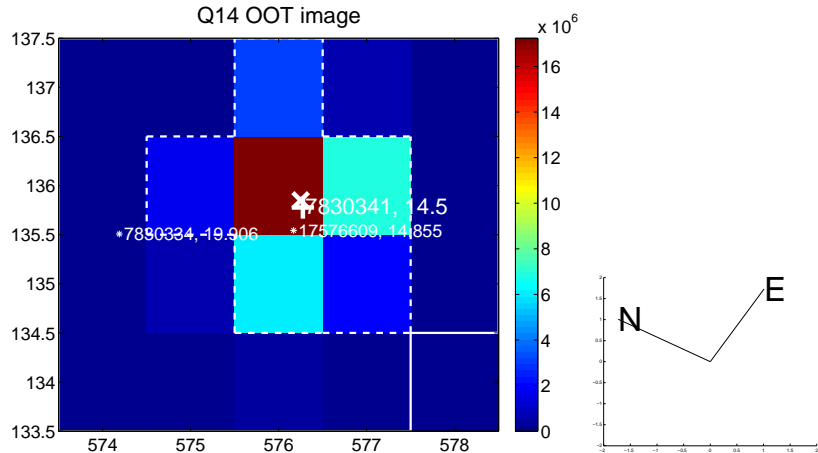
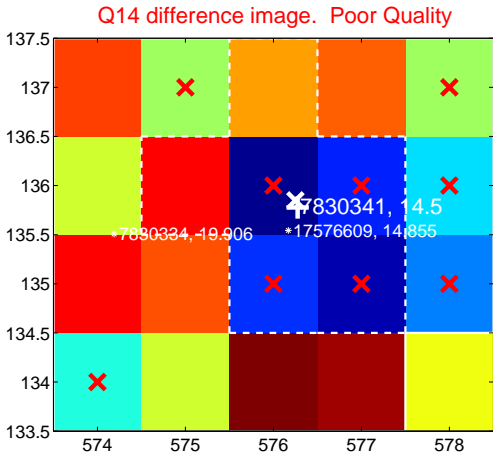
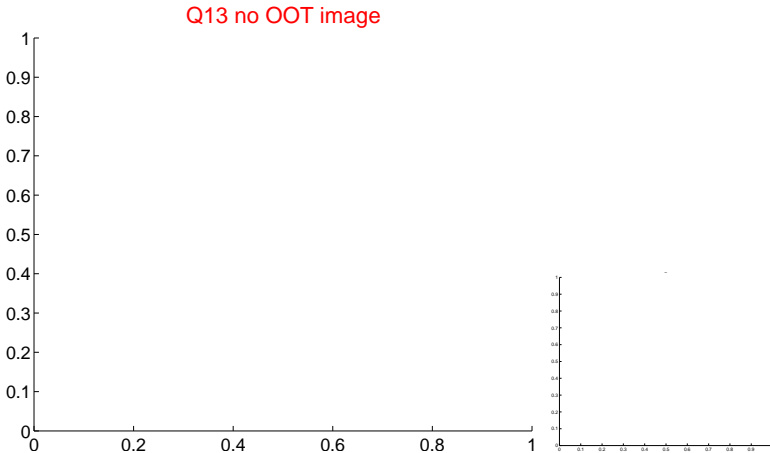
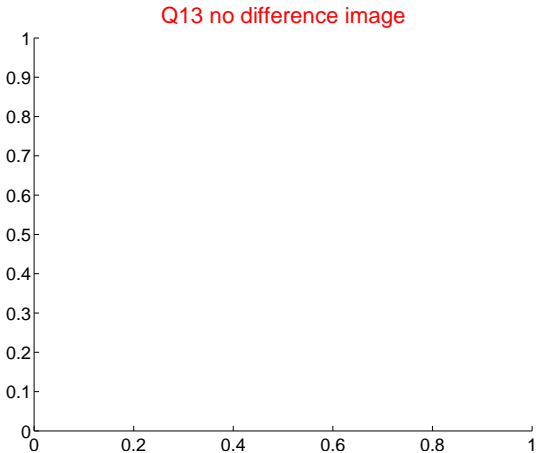
Q8 no OOT image



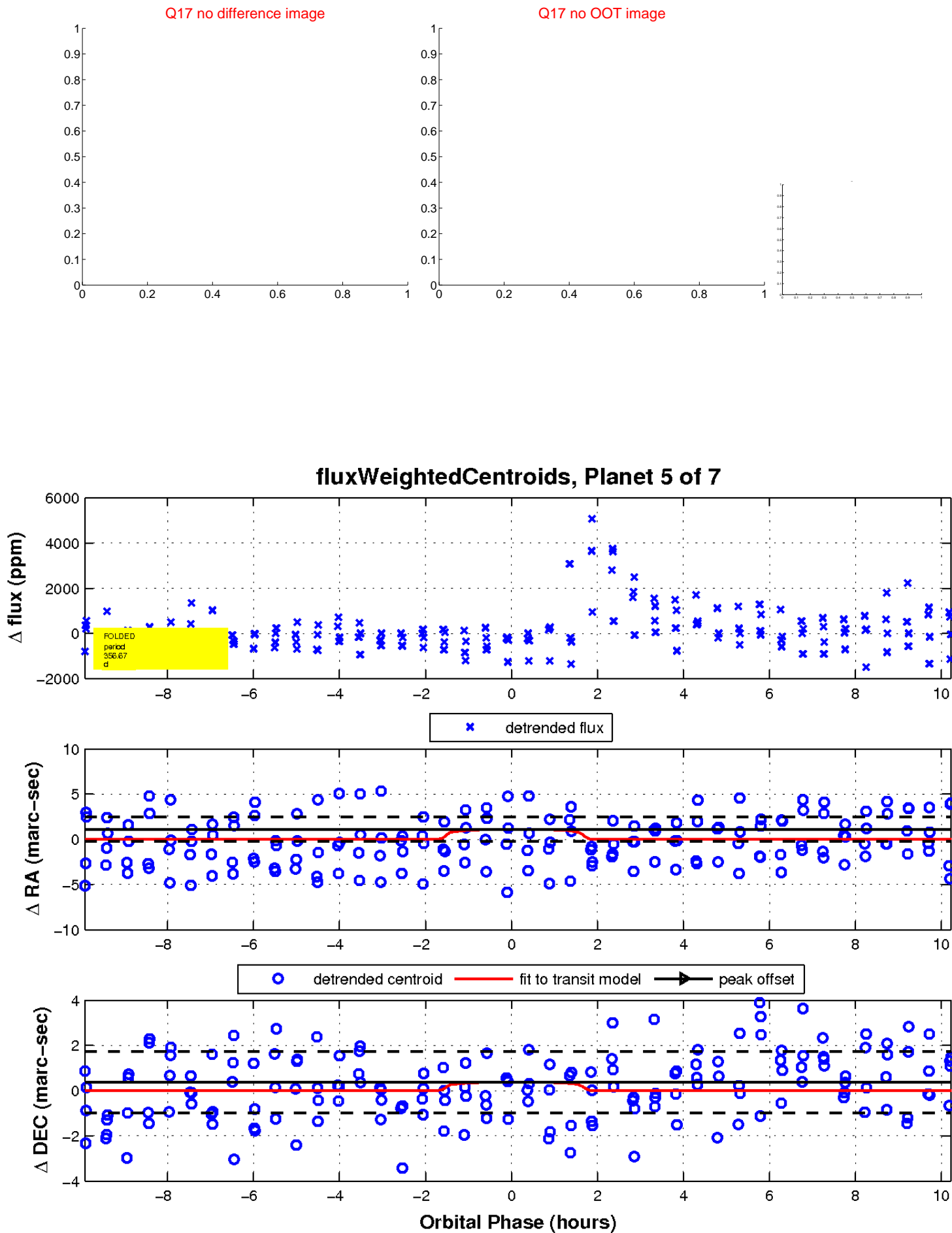
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

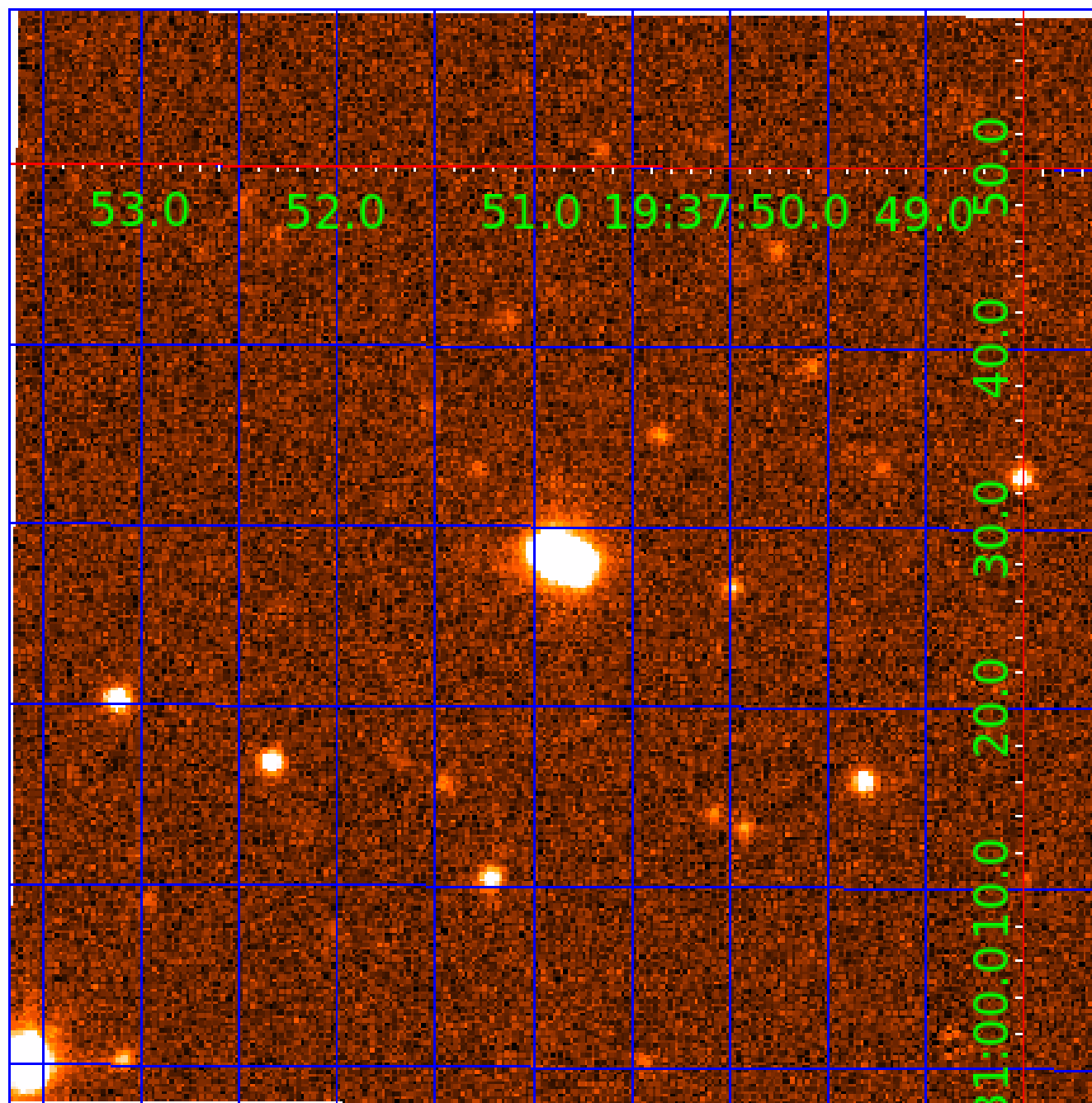


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830341

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})
007830341-01	OBS	No	435.515497	336.261915	1338.6	4.795	15.5	7.4	0.49	3801	1.88	0.06
007830341-02	OBS	No	437.083996	317.229705	1115.2	6.099	12.9	7.5	0.49	3801	1.69	0.06
007830341-03	OBS	No	458.950333	546.103220	1213.7	5.555	12.4	6.5	0.49	3801	1.83	0.05
007830341-04	OBS	No	410.474081	342.167943	970.9	5.148	12.1	5.6	0.49	3801	1.55	0.06
007830341-05	OBS	No	356.669107	252.078717	1092.7	3.440	12.4	7.2	0.49	3801	1.72	0.07
007830341-06	OBS	No	481.100093	607.751184	1625.6	11.546	11.5	7.9	0.49	3801	2.14	0.05
007830341-07	OBS	No	341.708181	440.121071	1529.2	15.825	11.5	7.4	0.49	3801	1.91	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

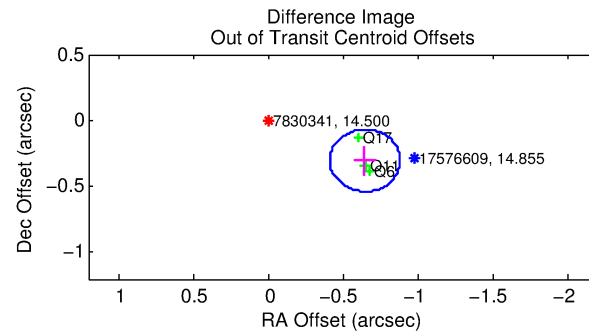
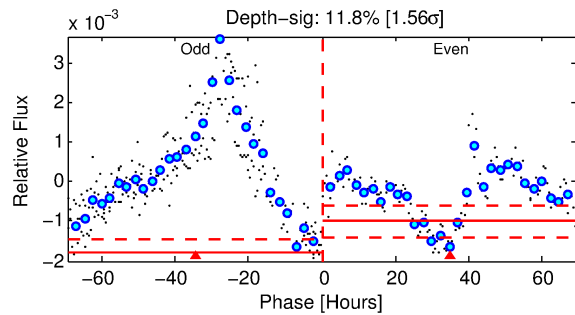
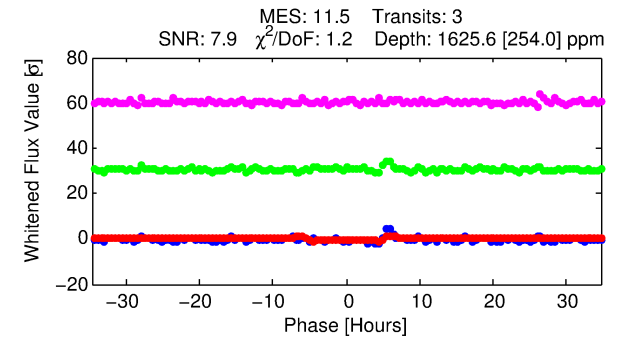
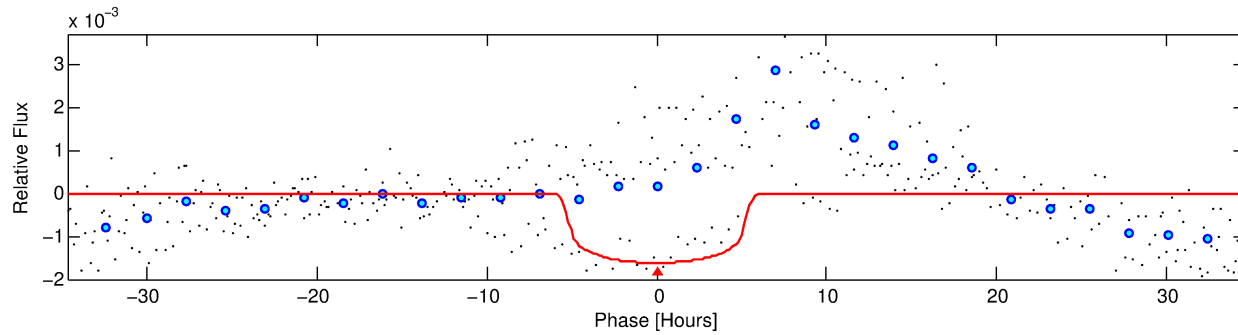
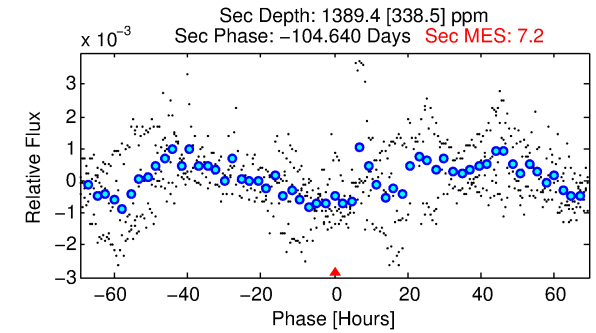
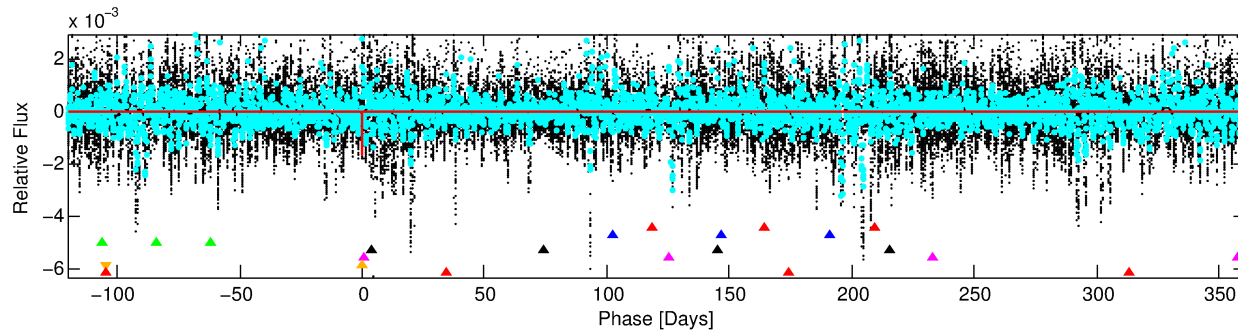
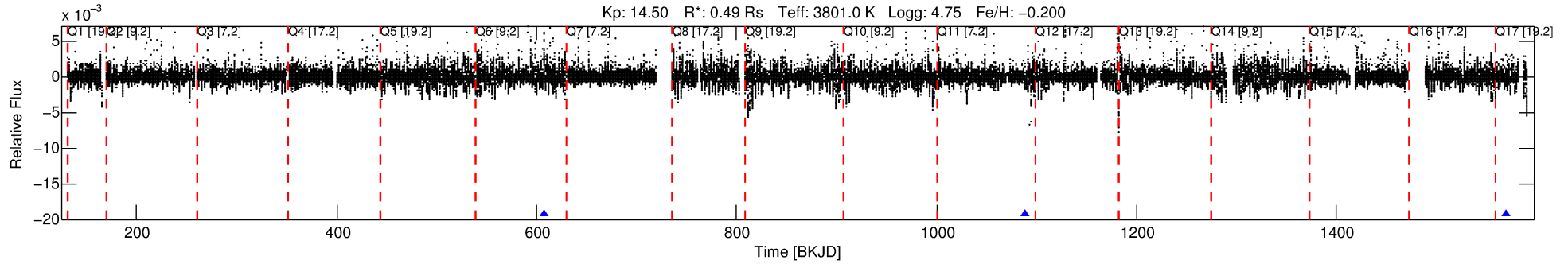
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-06

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 6 of 7 Period: 481.100 d



DV Fit Results:

Period = 481.10009 [0.00674] d
Epoch = 607.7512 [0.0093] BKJD
Rp/R* = 0.0398 [0.0047]
a/R* = 234.25 [78.54]
b = 0.73 [0.21]
Seff = 0.05 [0.01]
Teq = 120 [5] K
Rp = 2.14 [0.34] Re
a = 0.9532 [0.0816] AU
Ag = 151745.53 [54319.53] [2.79 σ]
Teffp = 3676 [327] K [10.86 σ]

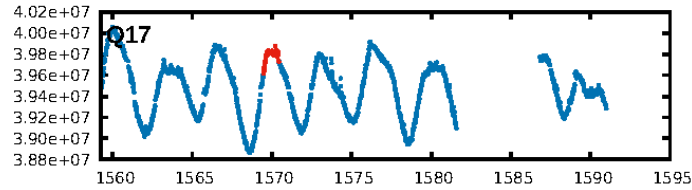
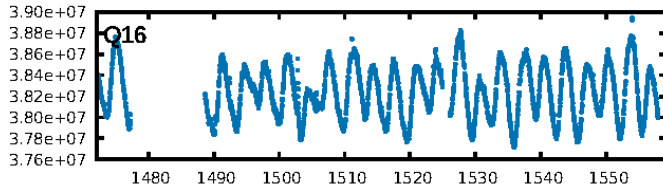
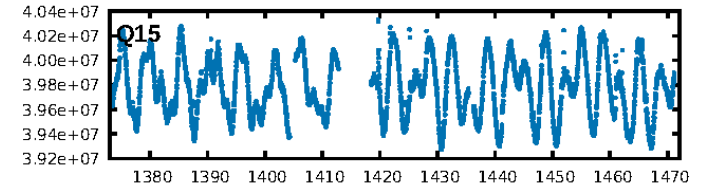
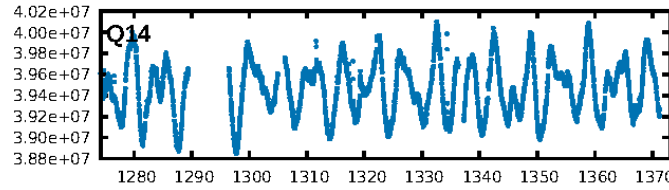
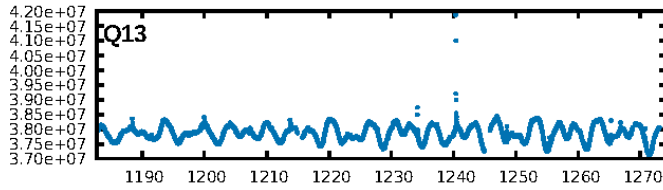
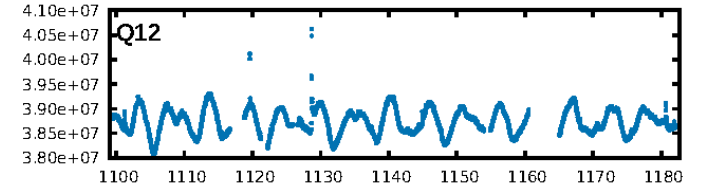
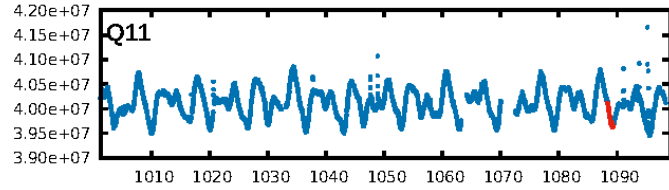
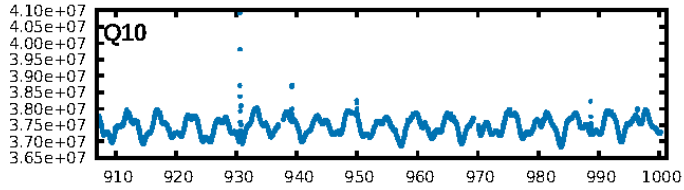
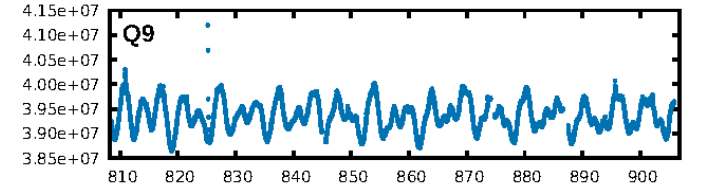
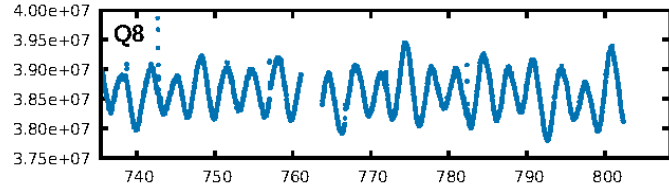
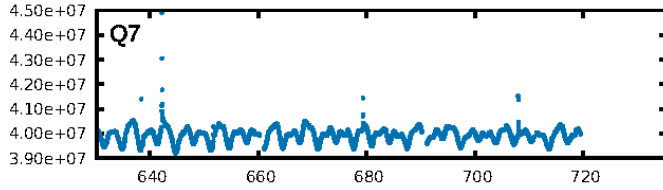
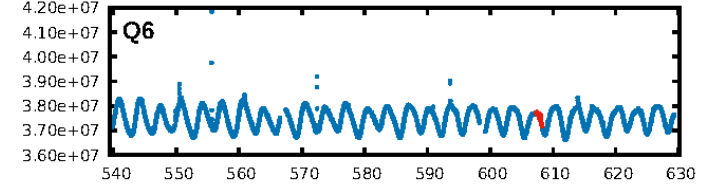
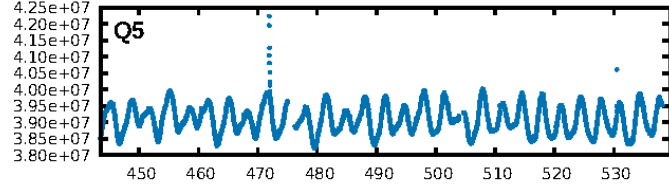
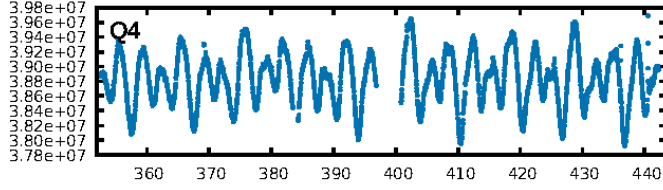
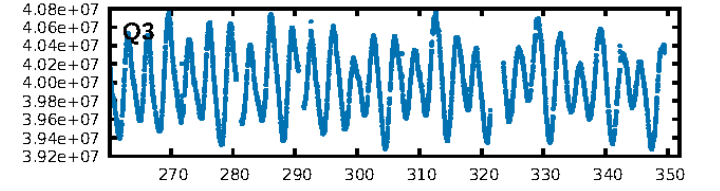
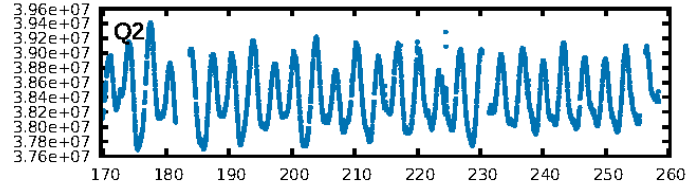
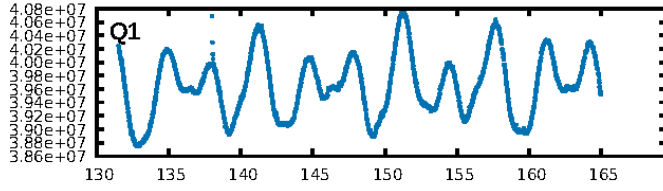
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [41.49 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.1%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 1.24e-09
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.3335
Centroid-sig: 9.3%
Centroid-so: 1.063 arcsec [1.35 σ]
OotOffset-rm: 0.715 arcsec [9.13 σ]
KicOffset-rm: 0.948 arcsec [9.52 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

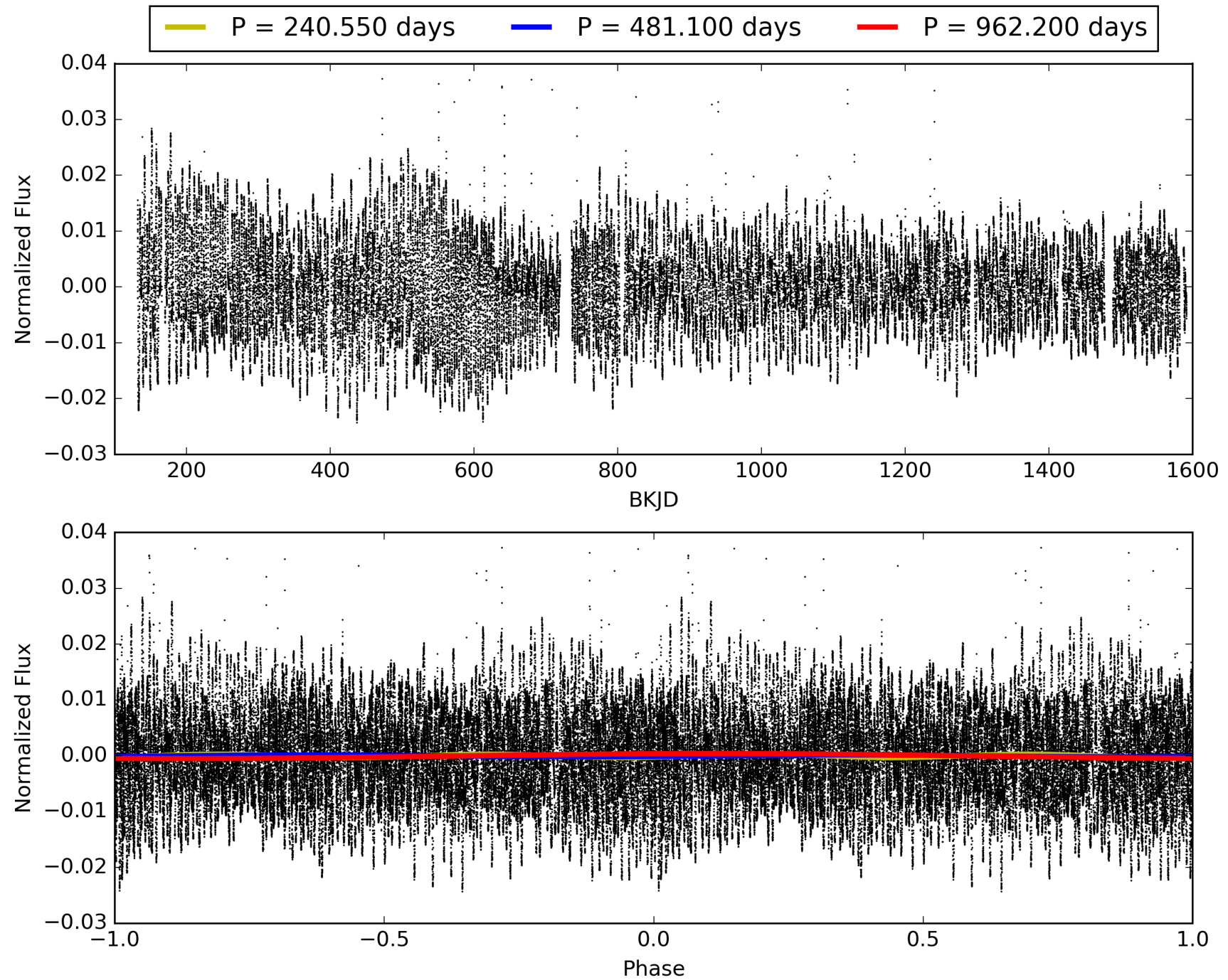
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:15:35 Z

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

TCE 007830341-06, PDC Light Curves

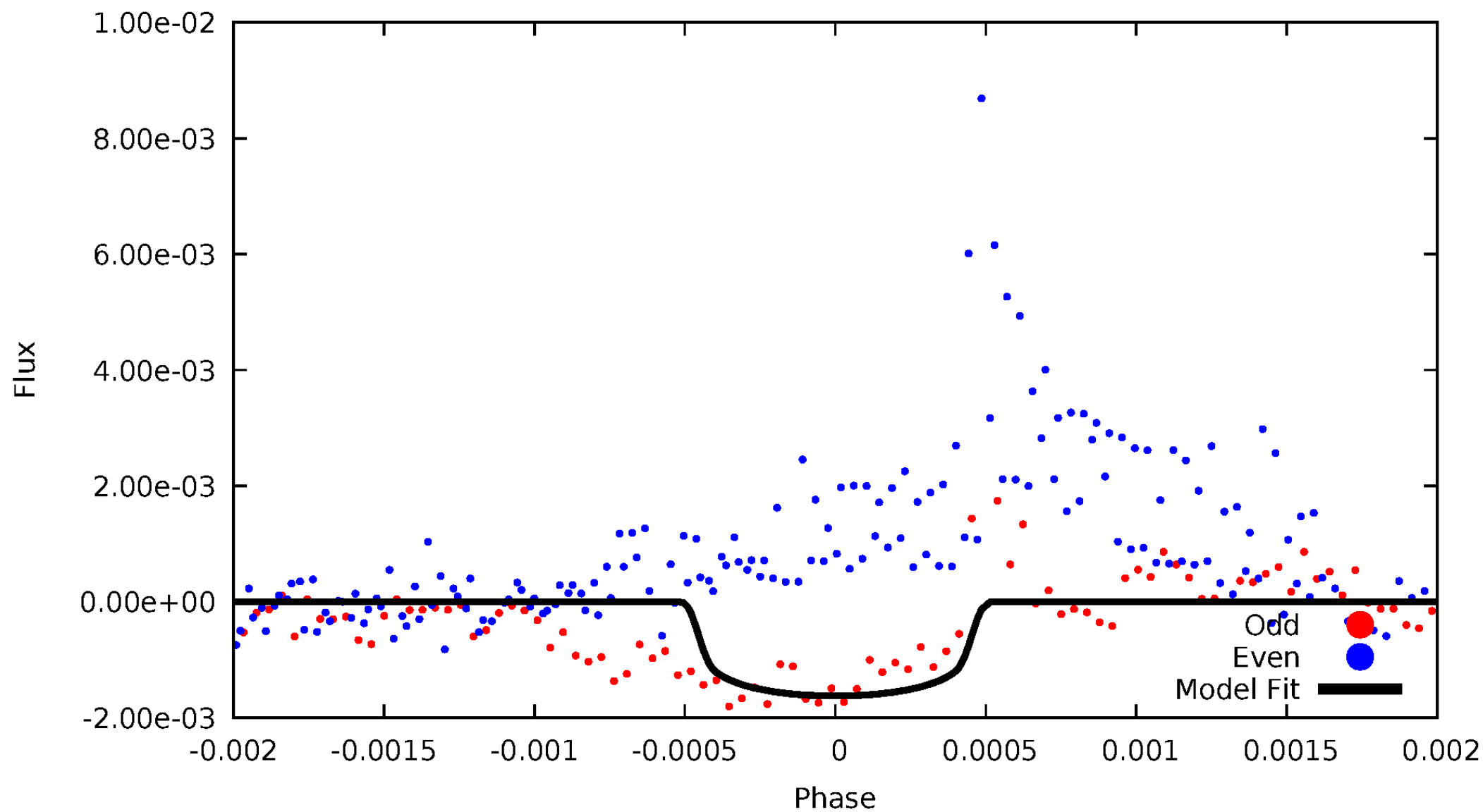


TCE 007830341-06



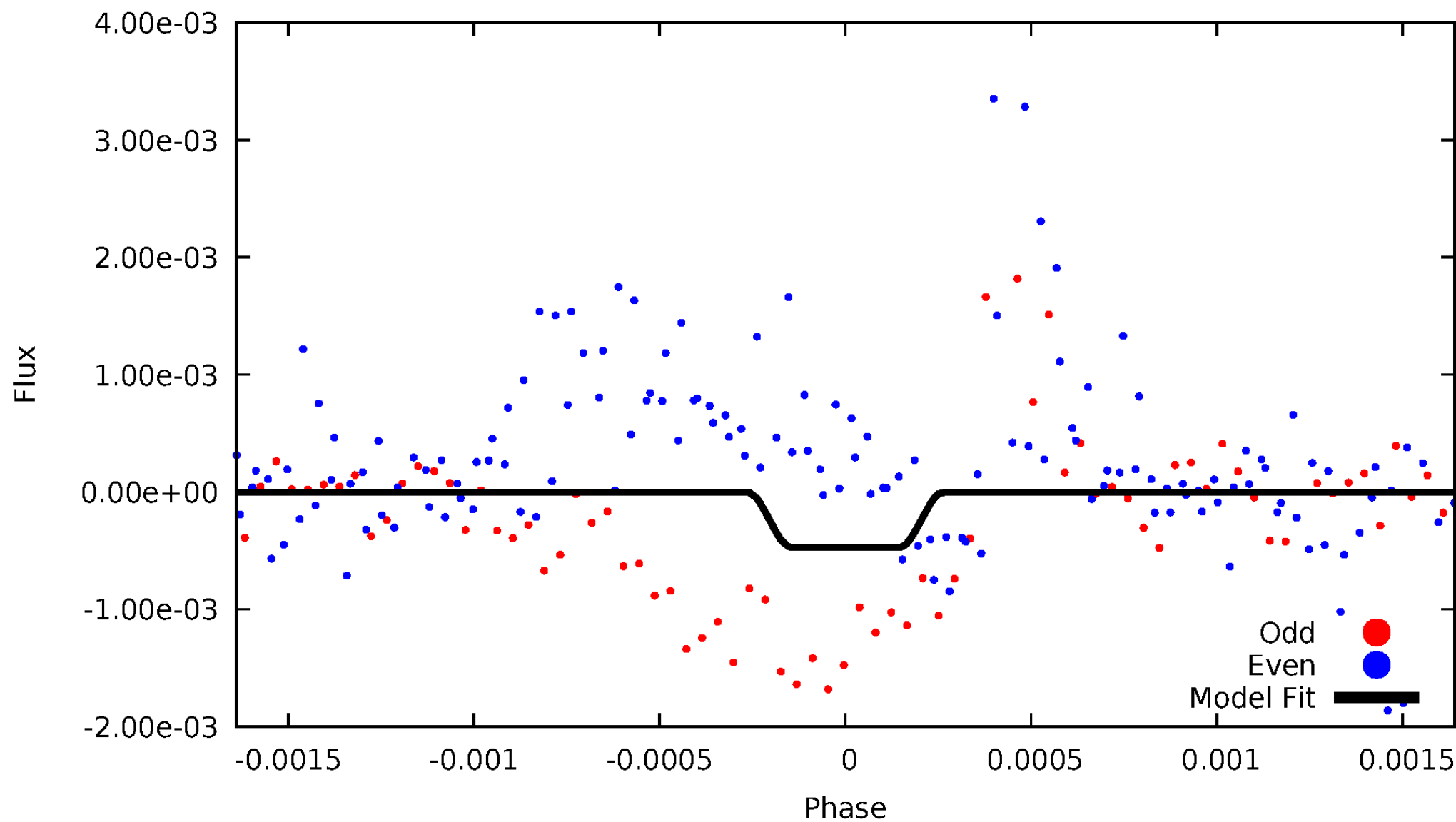
DV Odd/Even

TCE 007830341-06



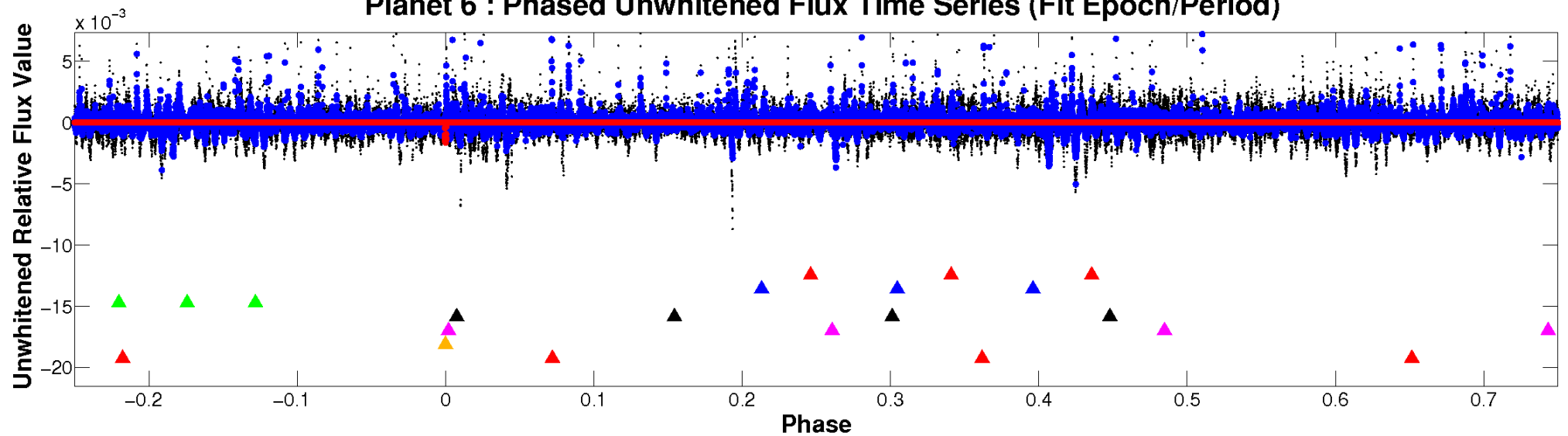
ALT Odd/Even

TCE 007830341-06

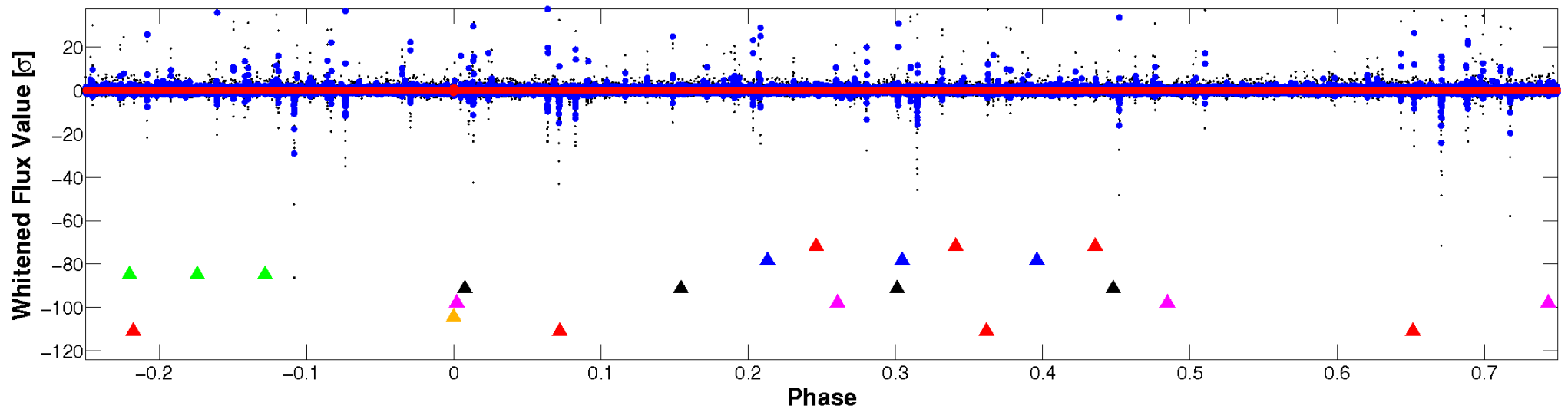


Non-Whitened Vs. Whitened Light Curve

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

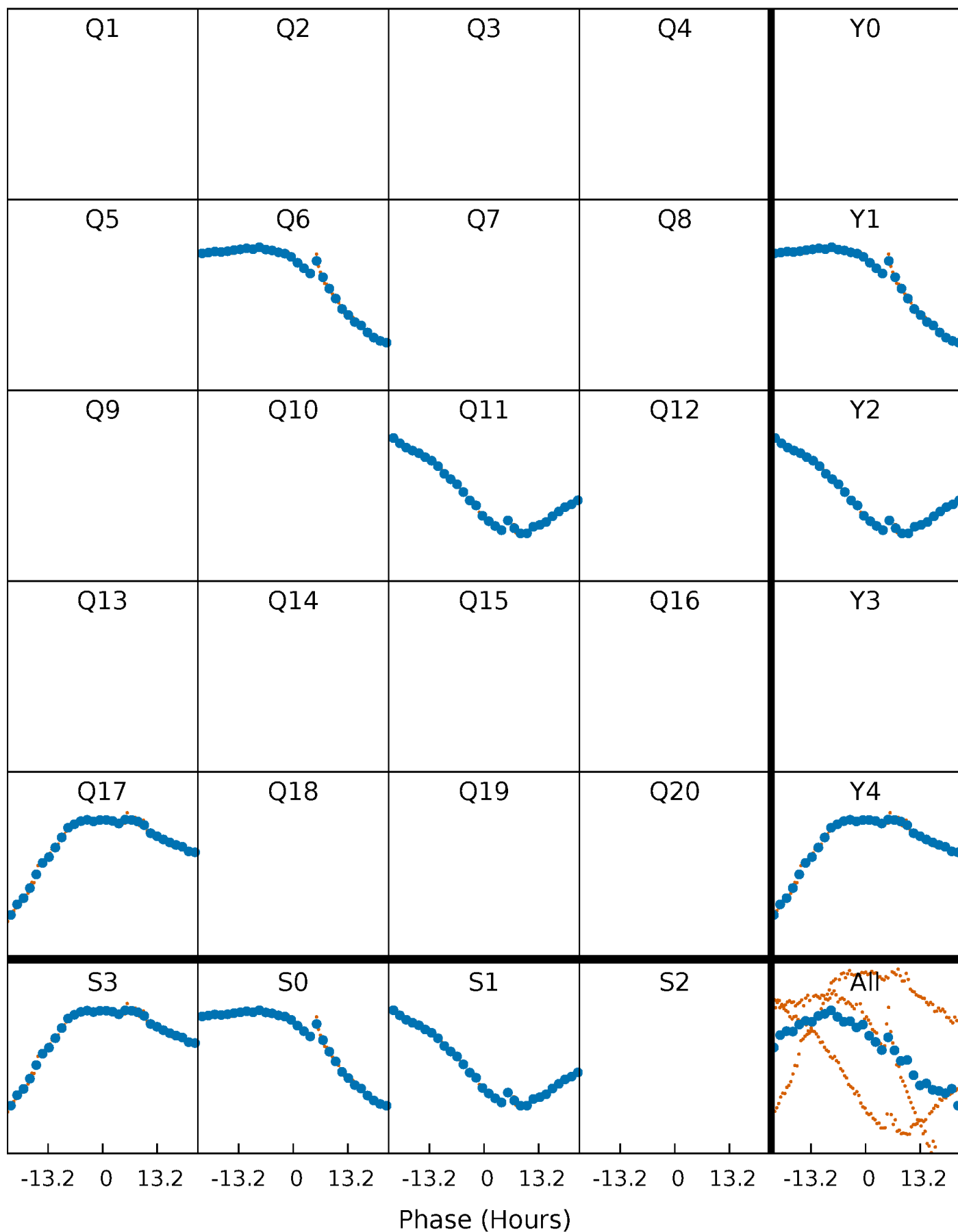


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007830341-06 P=481.100093 Days $T_0=607.751184$ (BKJD)



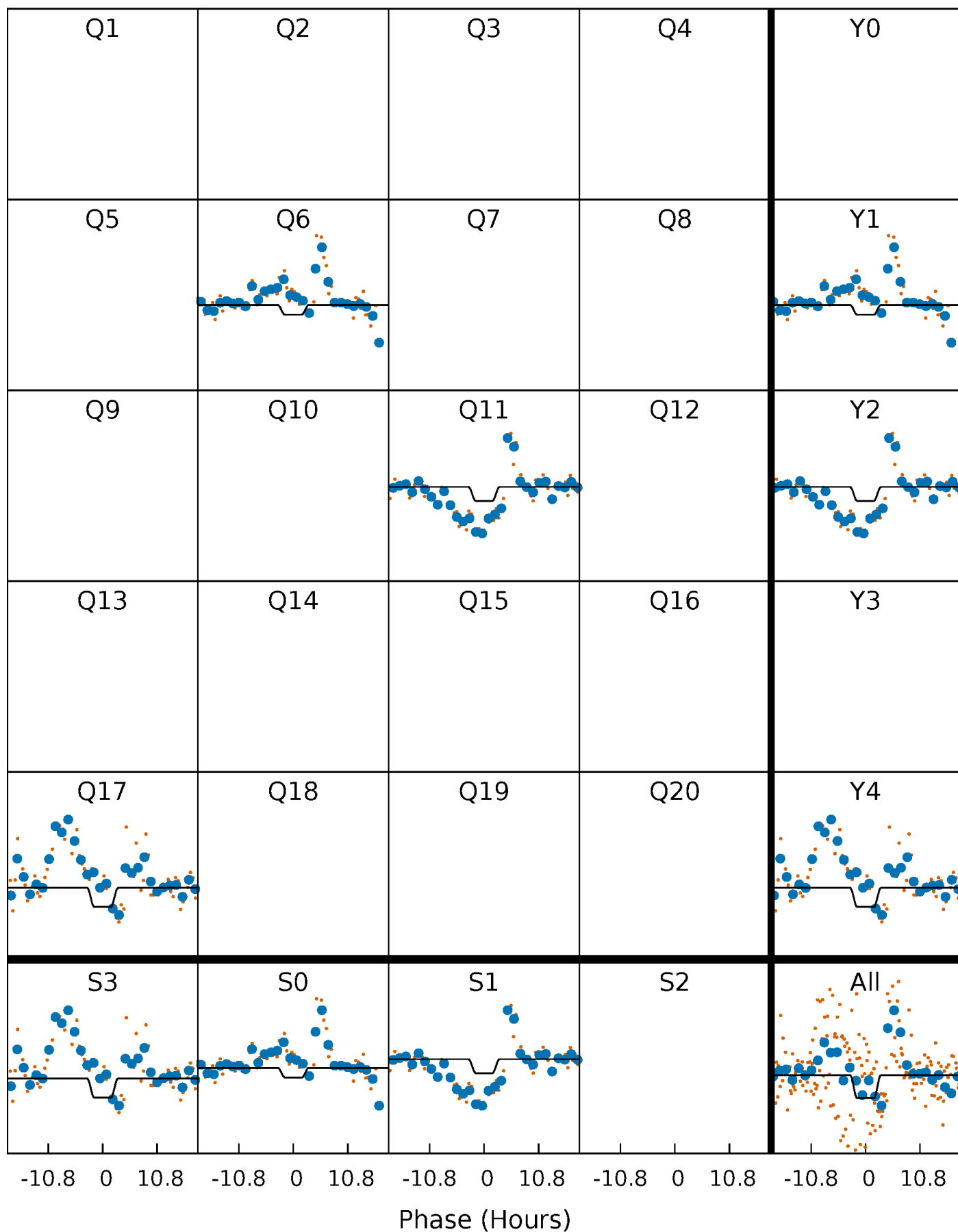
DV Quarter-Phased Transit Curves

TCE 007830341-06 P=481.100093 Days $T_0=607.751184$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

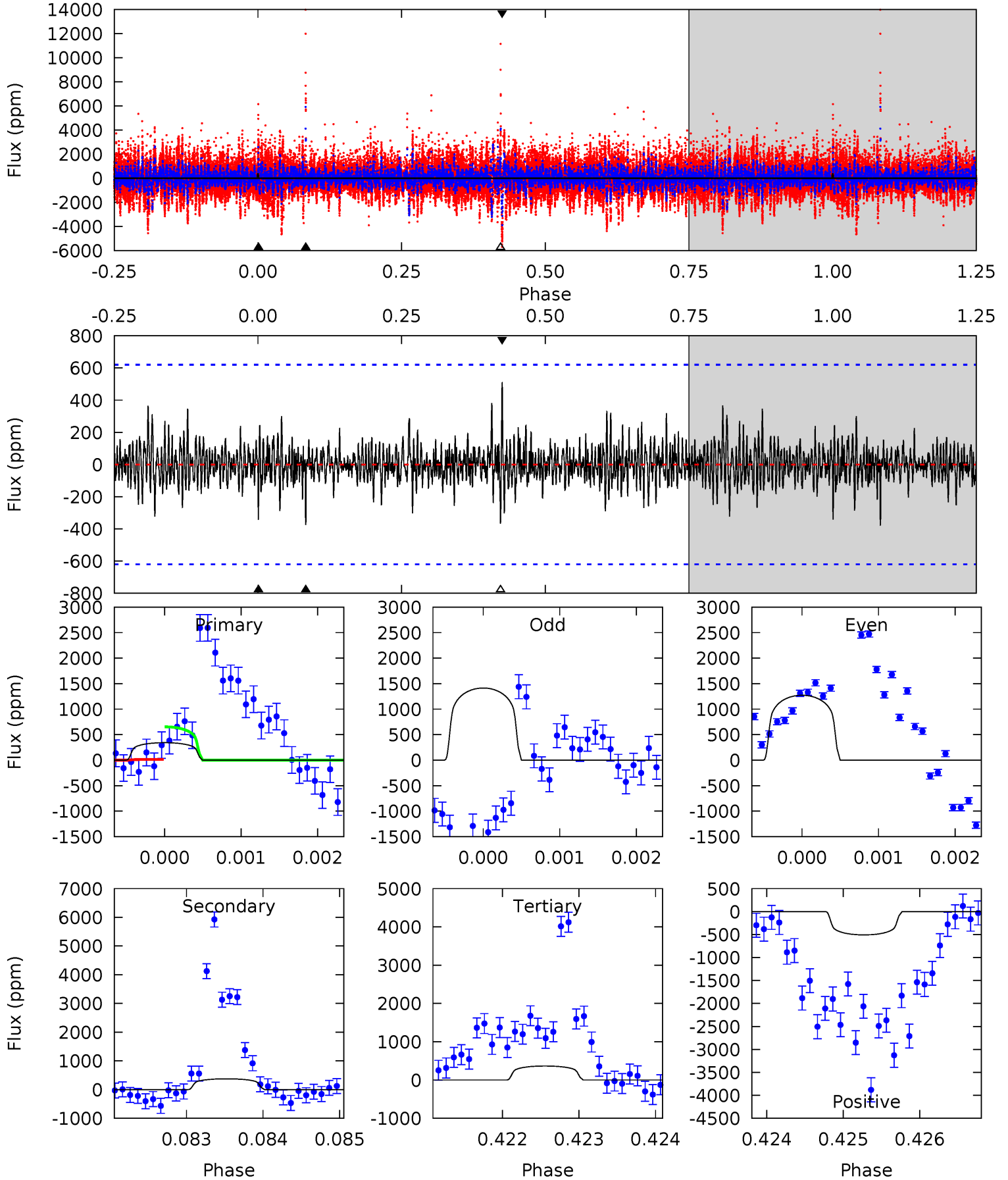
TCE 007830341-06 P=481.114981 Days $T_0=607.772617$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-06, P = 481.100093 Days, E = 126.651091 Days

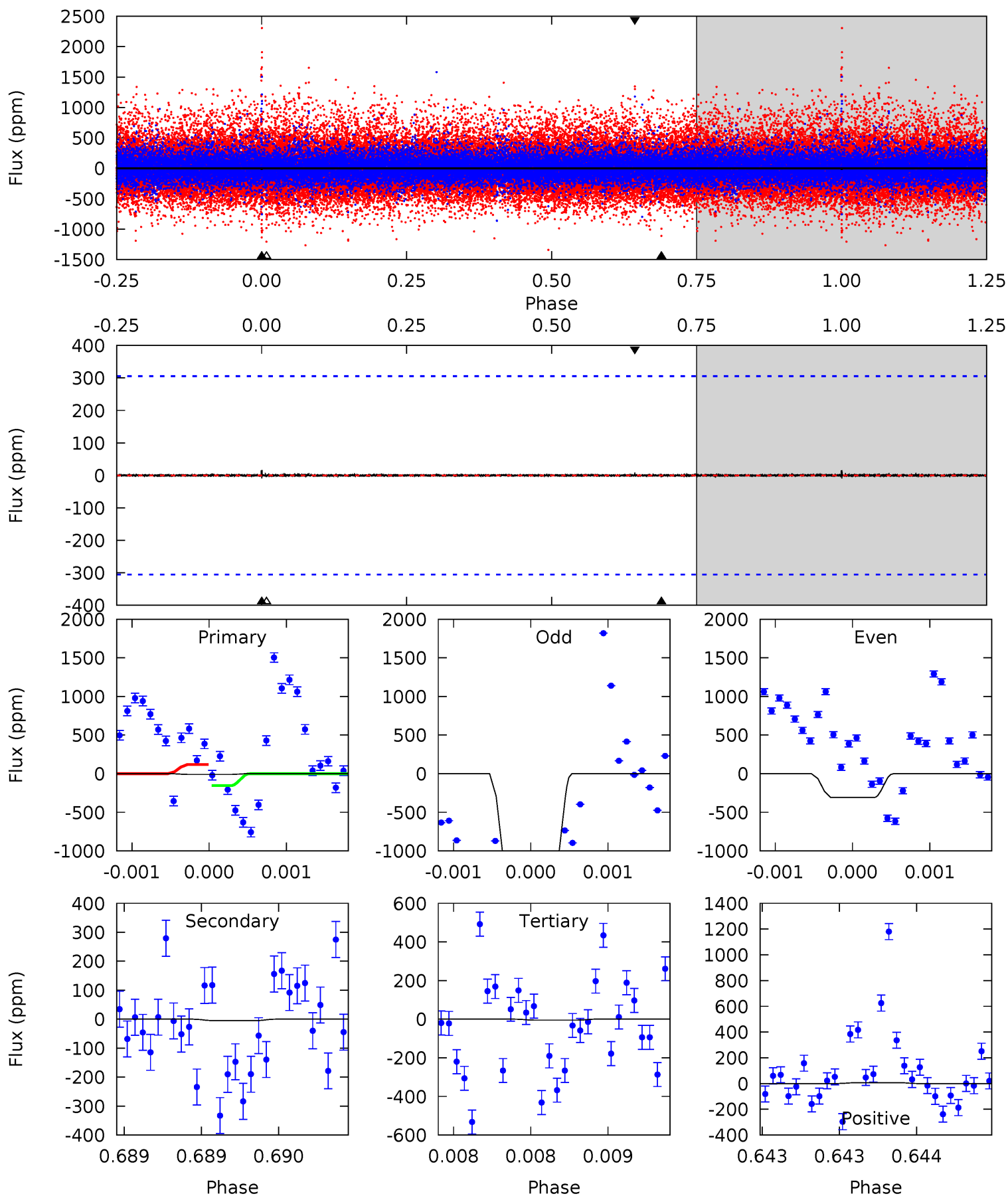
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.01	3.29	3.22	4.46	5.45	3.28	0.83	-0.21	-1.45	0.08	-1.17	0.45	0.55	0.58	2.82



Alt Model-Shift Uniqueness Test

007830341-06, P = 481.114981 Days, E = 126.657636 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.17	0.09	0.08	0.13	5.57	3.48	0.02	0.08	0.04	0.01	-0.04	10.3	-5.21	0.64	0.33



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-375 ± 114	$2.13^{+0.27}_{-0.29}$	168^{+6}_{-6}	3040^{+167}_{-195}	42343^{+18202}_{-15457}
Alt.	-5 ± 55	$1.15^{+0.27}_{-0.28}$	167^{+5}_{-5}	2133^{+717}_{-4922}	2240^{+24028}_{-23542}

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

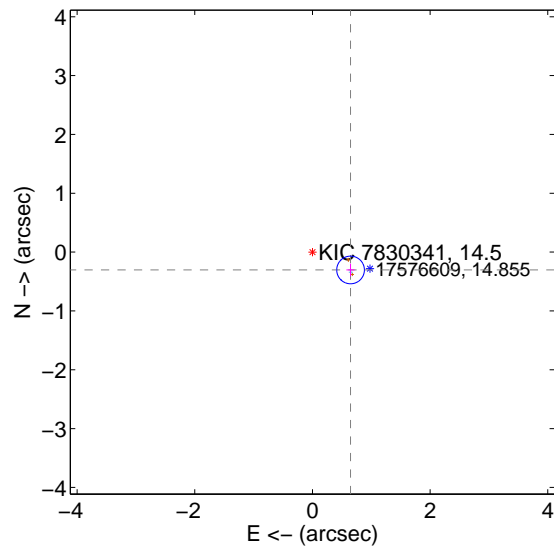
Supplemental centroid analysis for 007830341-06. Kepler magnitude: 14.50. Transit SNR 7.92

There are 1 quarters with good PRF difference image offsets

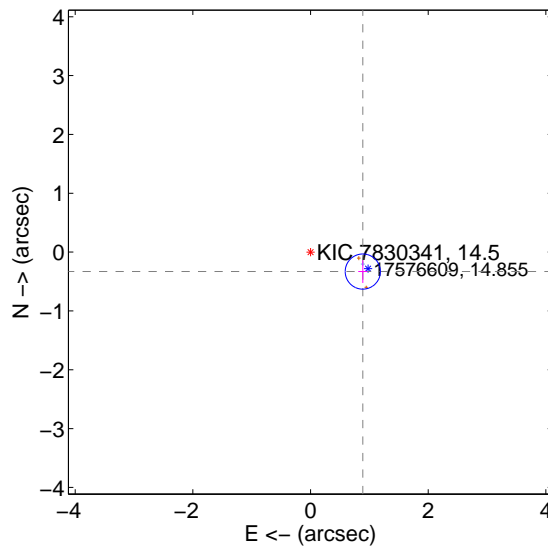
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.715 ± 0.078	9.13	-0.648 ± 0.070	-0.303 ± 0.108
PRF-fit source offset from KIC position	0.948 ± 0.100	9.52	-0.888 ± 0.078	-0.331 ± 0.194
photometric centroid source offset	1.06 ± 0.79	1.35	-0.94 ± 0.84	-0.51 ± 0.56

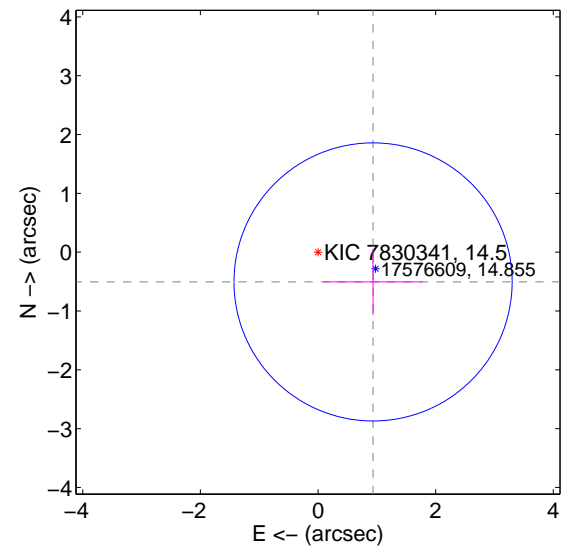
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

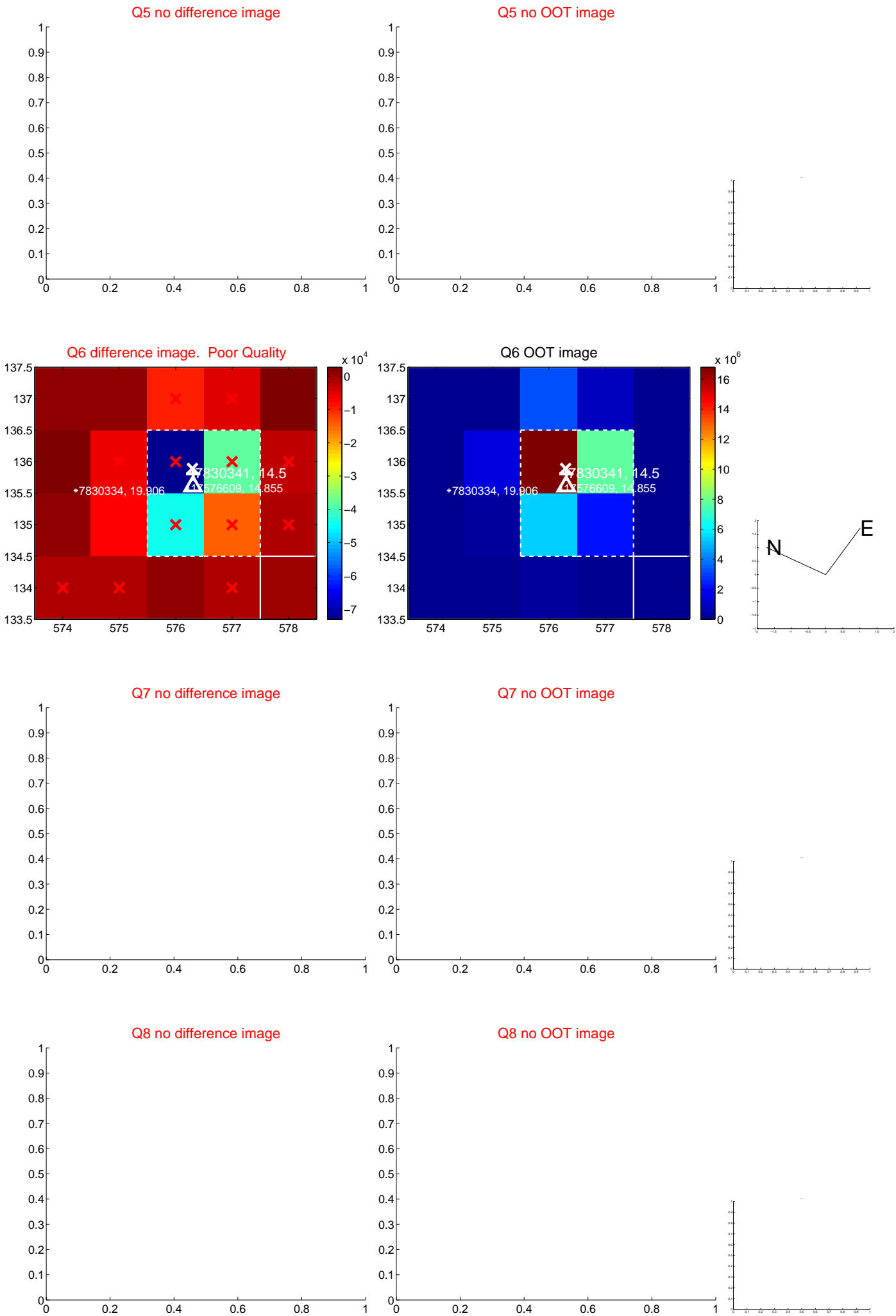


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



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

Q9 no difference image



Q9 no OOT image



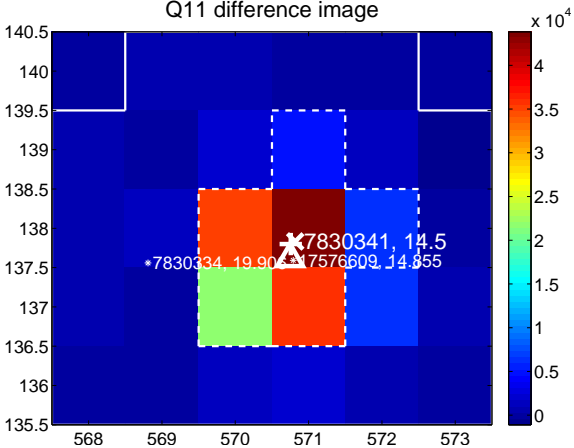
Q10 no difference image



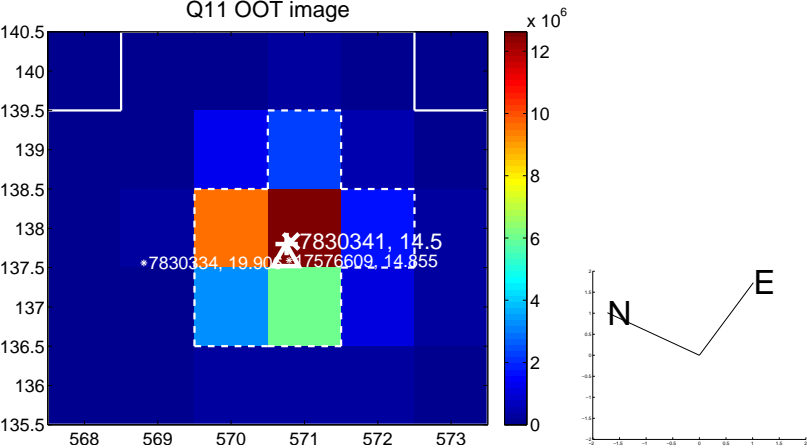
Q10 no OOT image



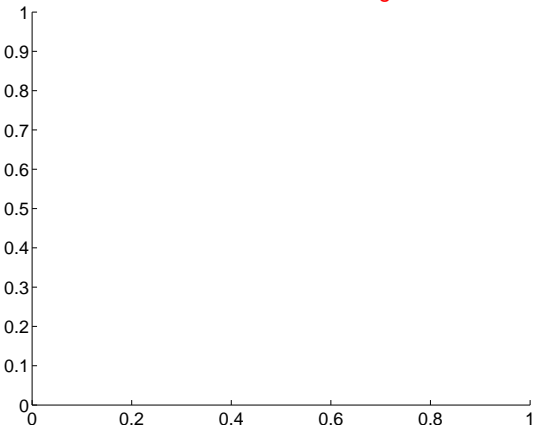
Q11 difference image



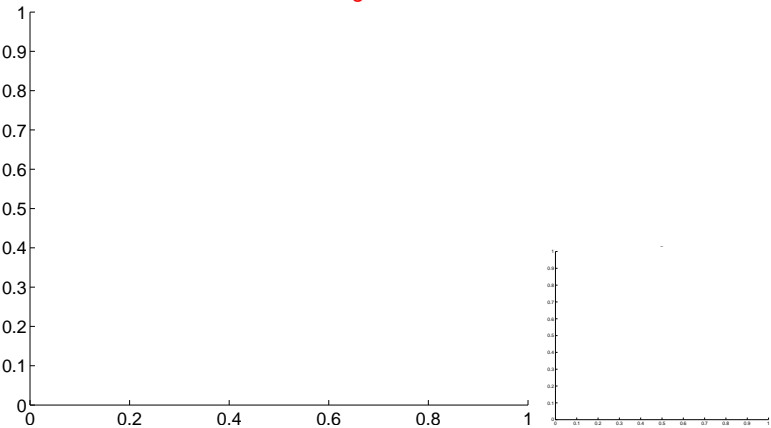
Q11 OOT image



Q12 no difference image



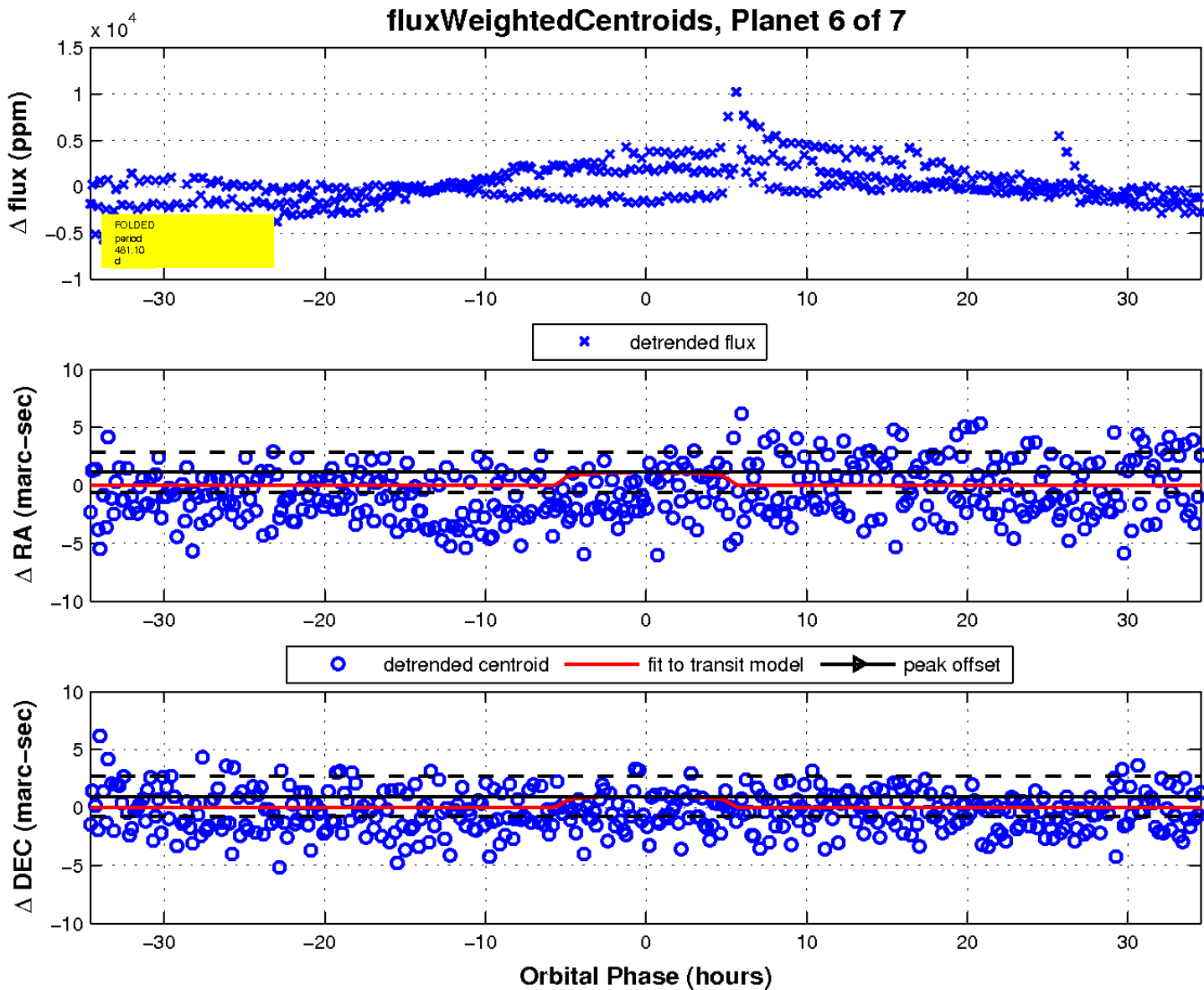
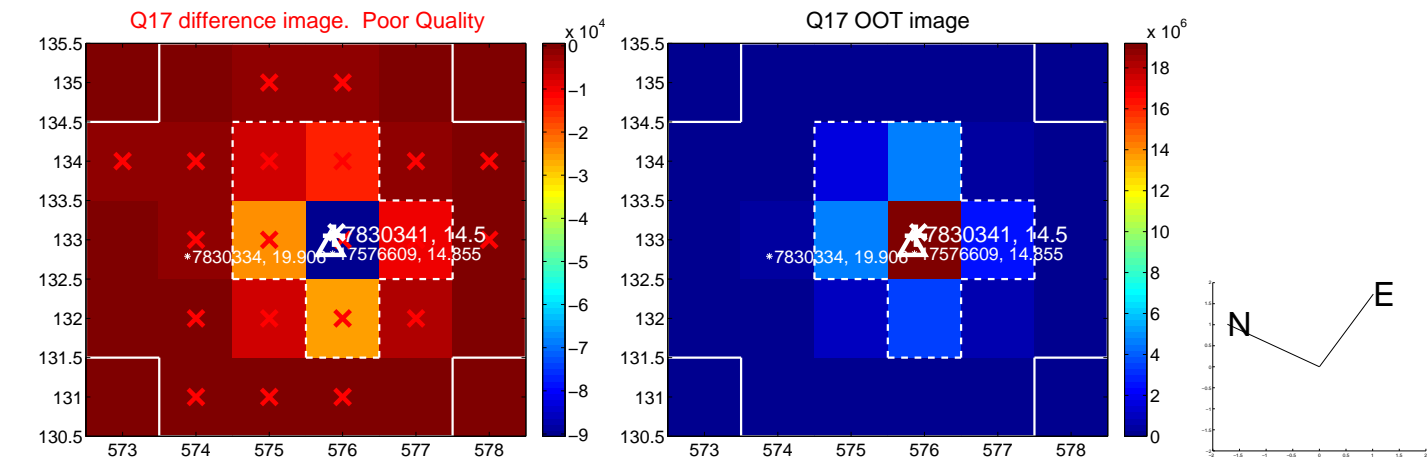
Q12 no OOT image



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

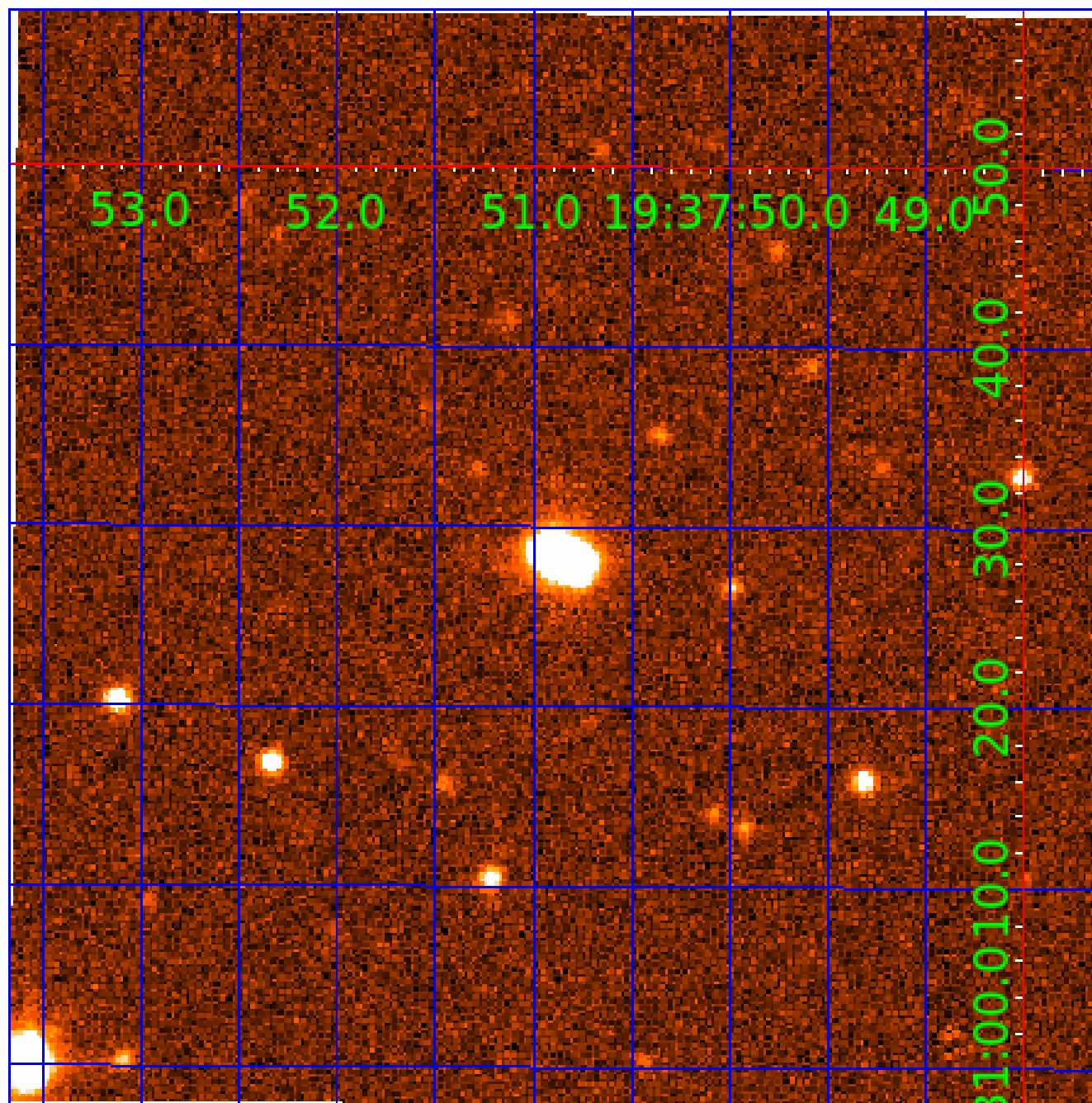


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007830341

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})
007830341-01	OBS	No	435.515497	336.261915	1338.6	4.795	15.5	7.4	0.49	3801	1.88	0.06
007830341-02	OBS	No	437.083996	317.229705	1115.2	6.099	12.9	7.5	0.49	3801	1.69	0.06
007830341-03	OBS	No	458.950333	546.103220	1213.7	5.555	12.4	6.5	0.49	3801	1.83	0.05
007830341-04	OBS	No	410.474081	342.167943	970.9	5.148	12.1	5.6	0.49	3801	1.55	0.06
007830341-05	OBS	No	356.669107	252.078717	1092.7	3.440	12.4	7.2	0.49	3801	1.72	0.07
007830341-06	OBS	No	481.100093	607.751184	1625.6	11.546	11.5	7.9	0.49	3801	2.14	0.05
007830341-07	OBS	No	341.708181	440.121071	1529.2	15.825	11.5	7.4	0.49	3801	1.91	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007830341-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
007830341-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007830341-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007830341-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES
007830341-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007830341-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

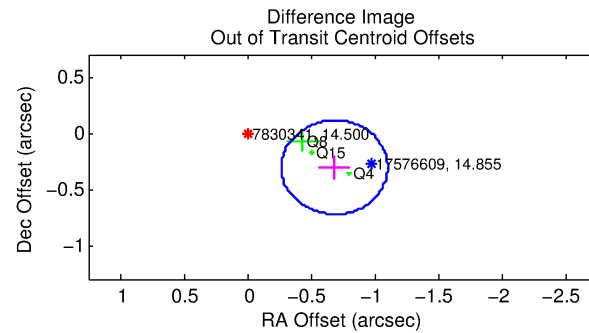
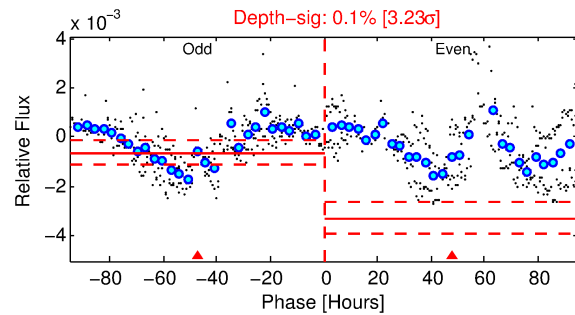
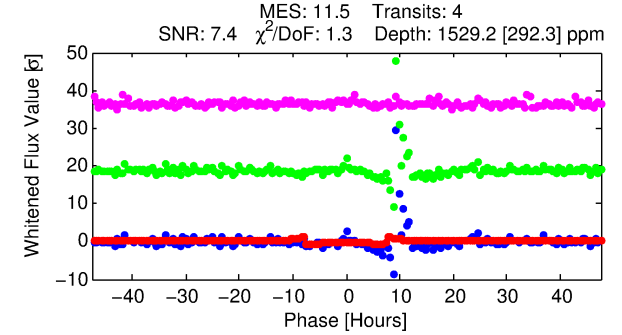
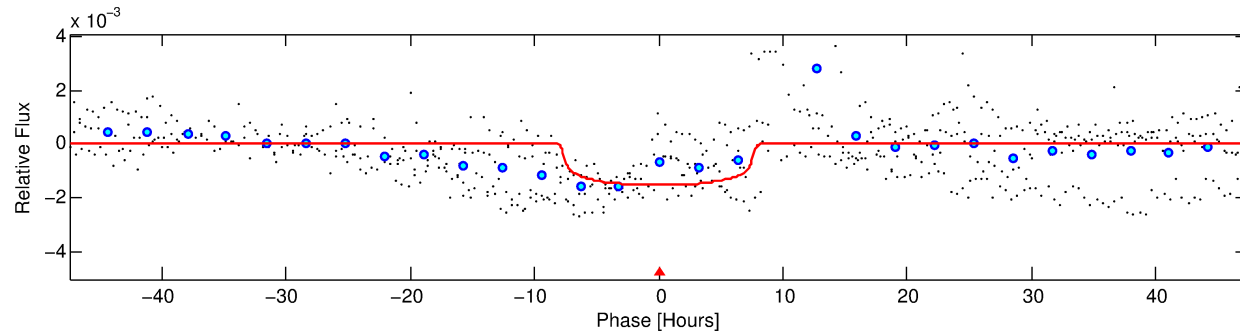
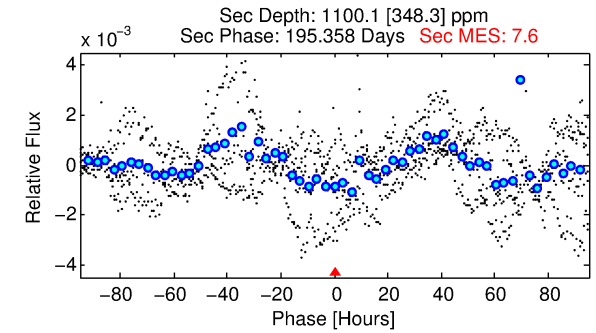
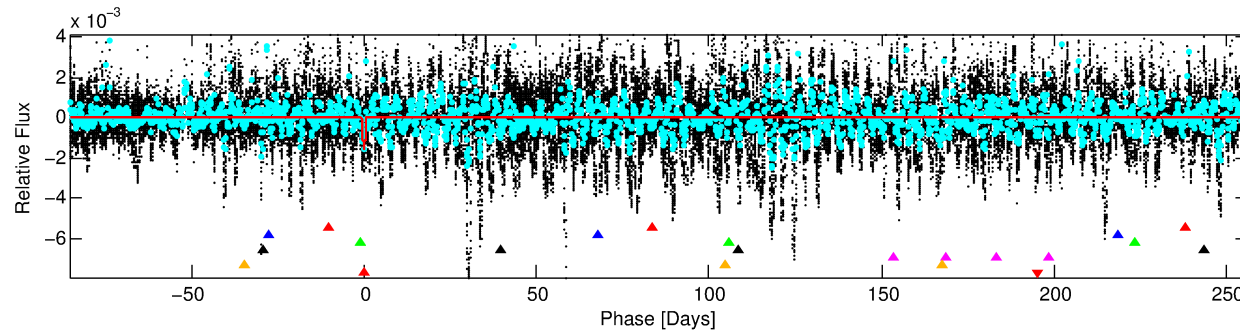
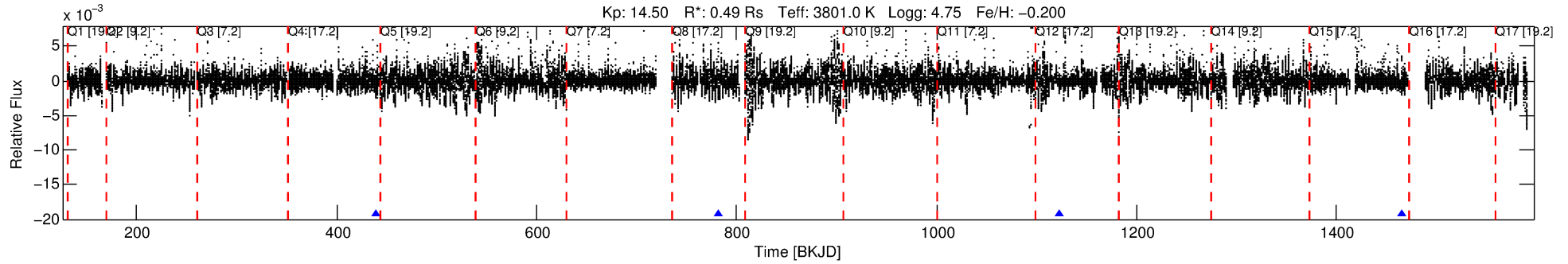
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007830341-07

No Significant Match Found

DV One-Page Summary

KIC: 7830341 Candidate: 7 of 7 Period: 341.708 d



DV Fit Results:

Period = 341.70818 [0.00541] d
Epoch = 440.1211 [0.0102] BKJD
Rp/R* = 0.0355 [0.0084]
a/R* = 170.74 [150.68]
b = 0.03 [28.76]
Seff = 0.08 [0.01]
Teq = 135 [5] K
Rp = 1.91 [0.50] Re
a = 0.7588 [0.0650] AU
Ag = 95897.18 [55761.59] [1.72 σ]
Teffp = 3674 [533] K [6.64 σ]

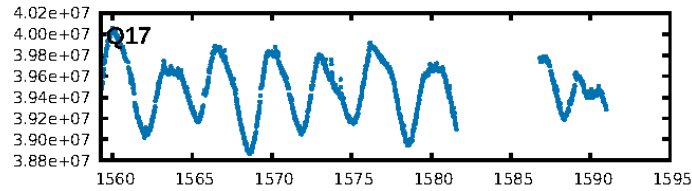
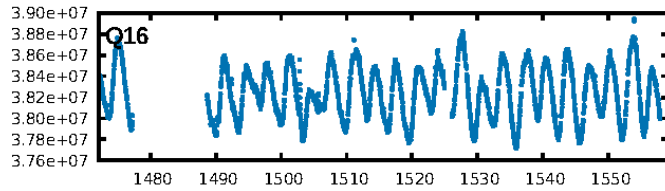
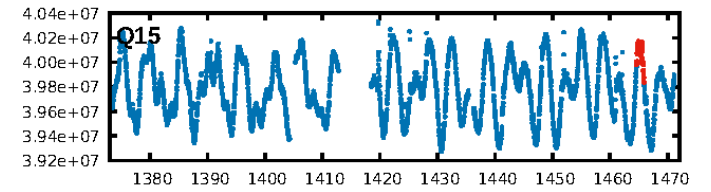
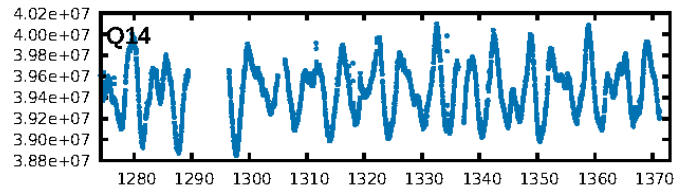
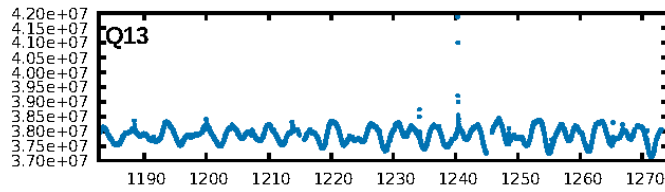
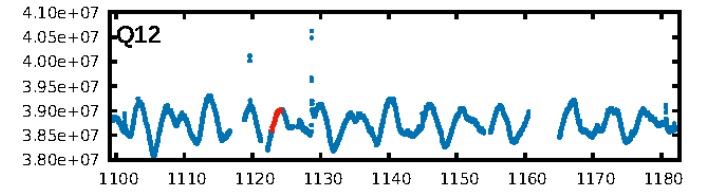
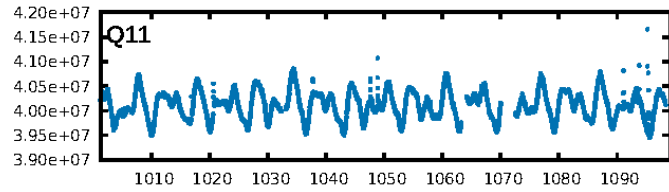
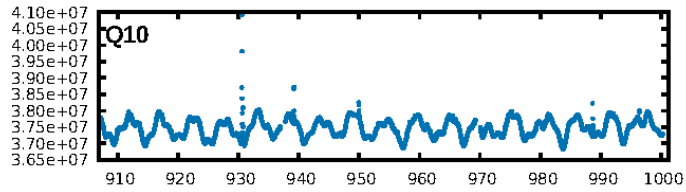
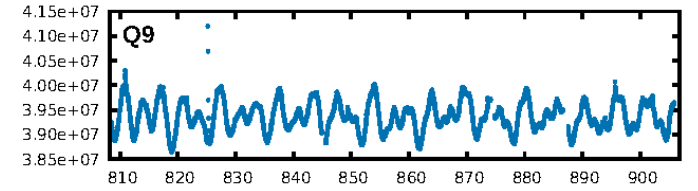
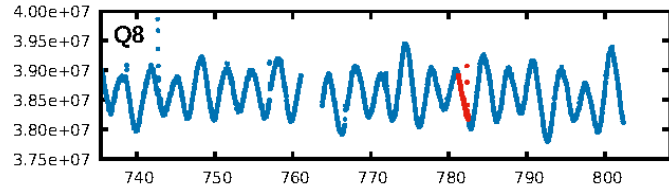
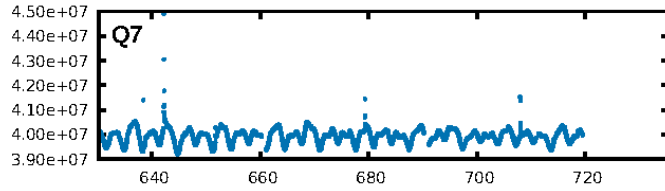
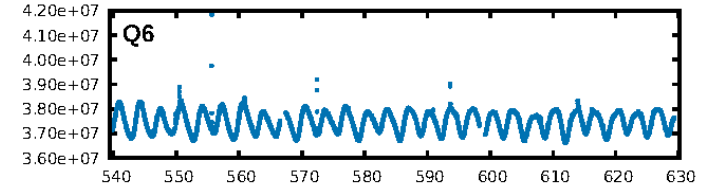
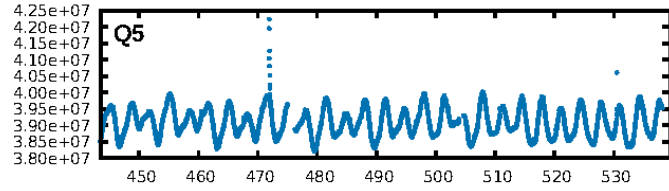
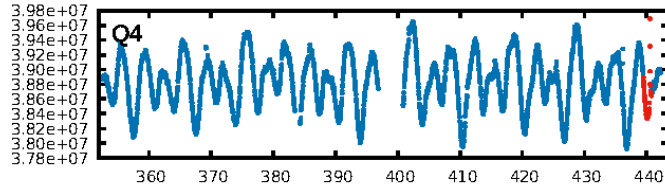
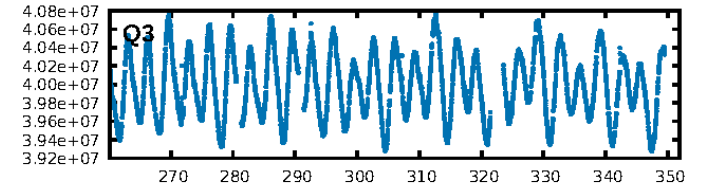
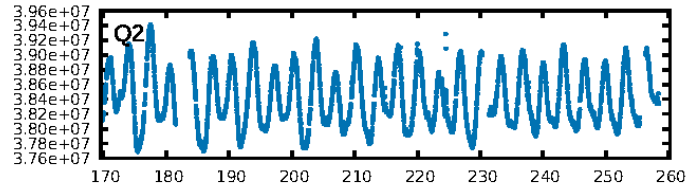
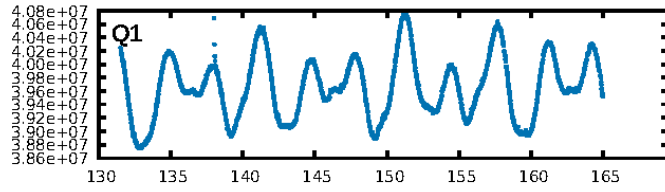
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [22.17 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 92.8%
Bootstrap-pfa: 4.11e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.217
Centroid-sig: 27.4%
Centroid-so: 1.314 arcsec [1.46 σ]
OotOffset-rm: 0.752 arcsec [5.39 σ]
OotOffset-st: 0.1/2/0 [3]
KicOffset-rm: 0.927 arcsec [6.93 σ]
KicOffset-st: 0.1/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

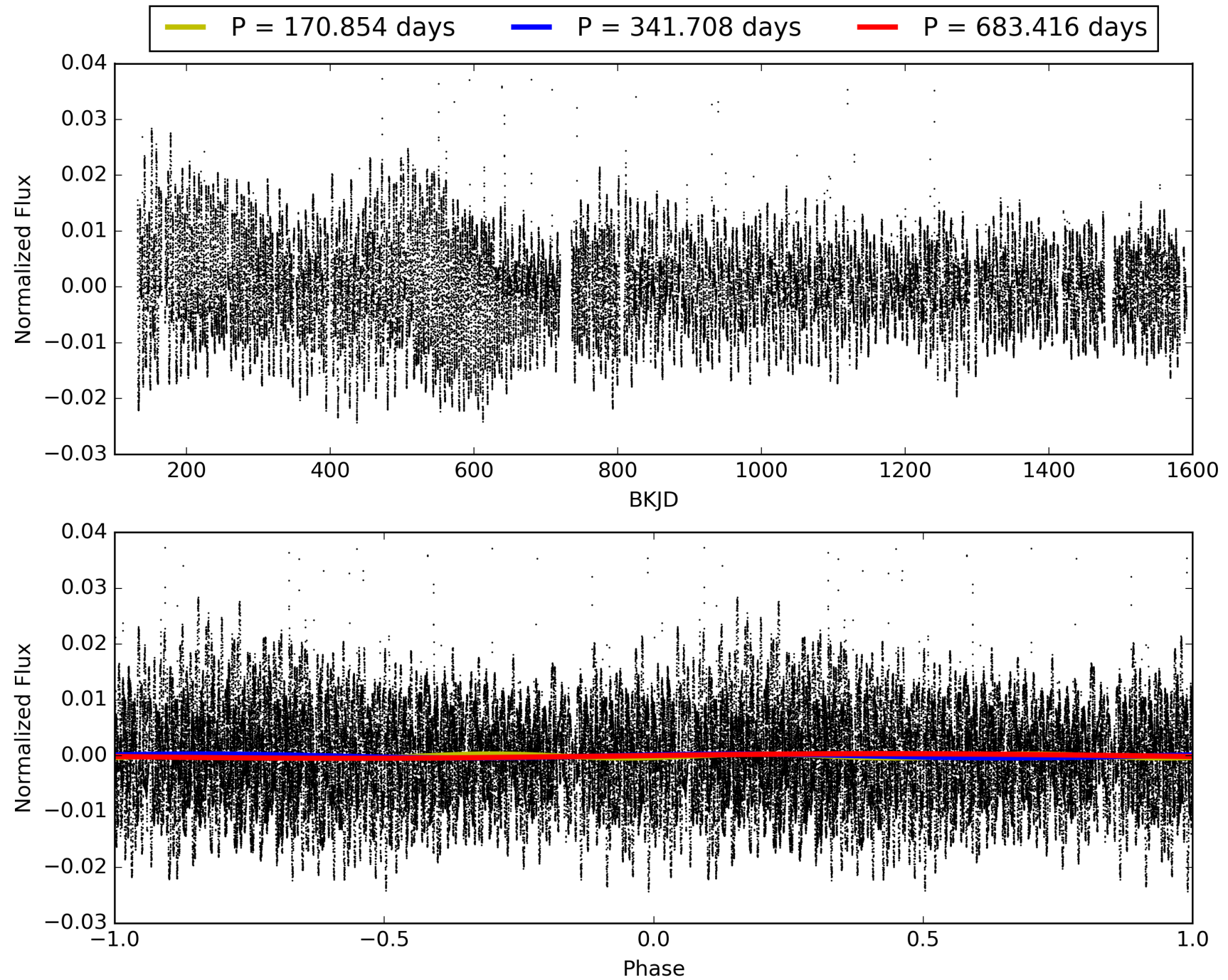
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:15:43 Z

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

TCE 007830341-07, PDC Light Curves

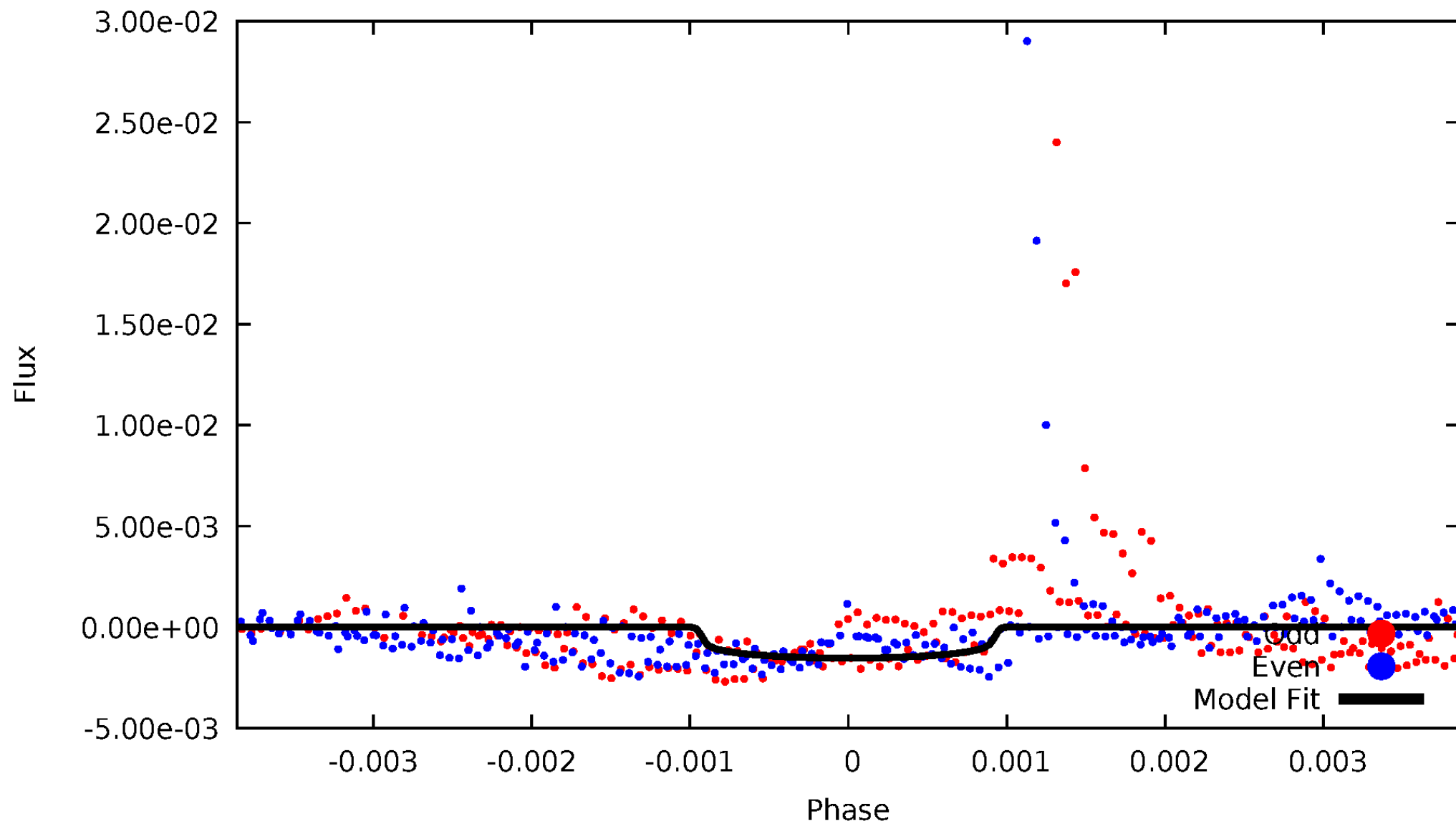


TCE 007830341-07



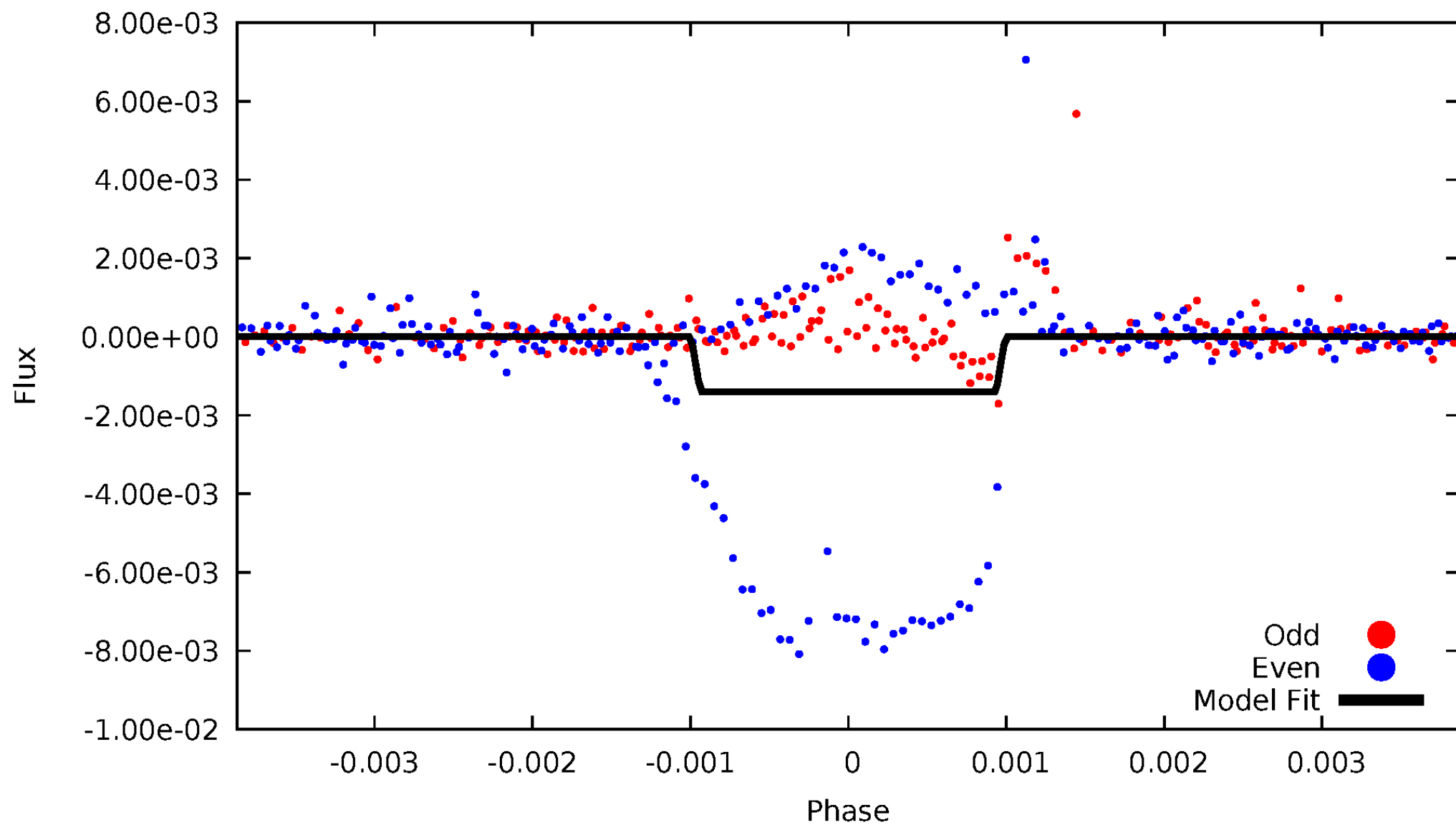
DV Odd/Even

TCE 007830341-07



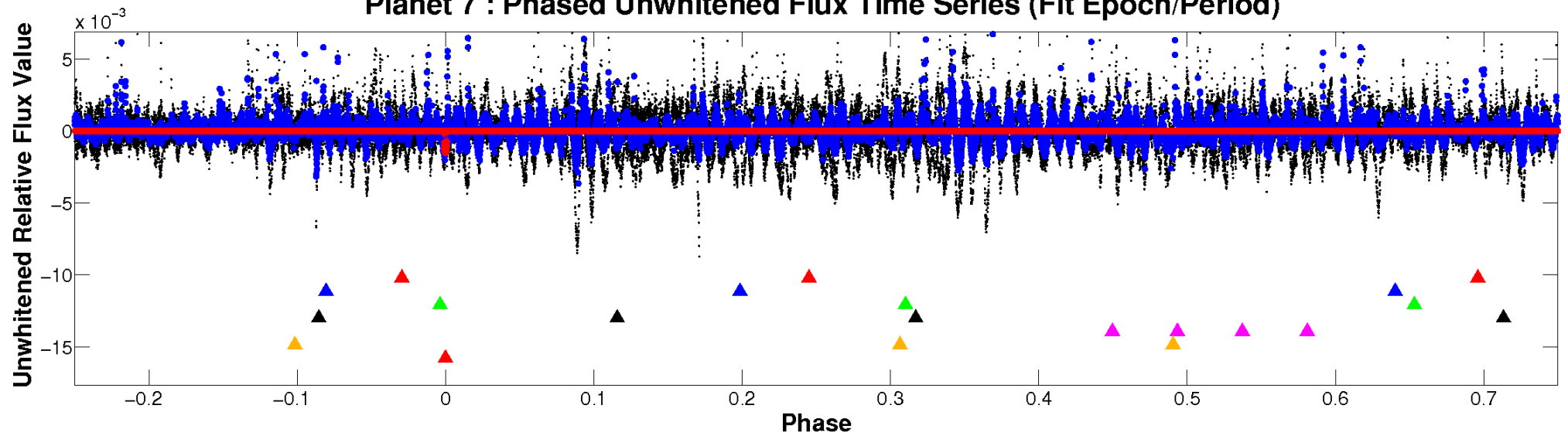
ALT Odd/Even

TCE 007830341-07

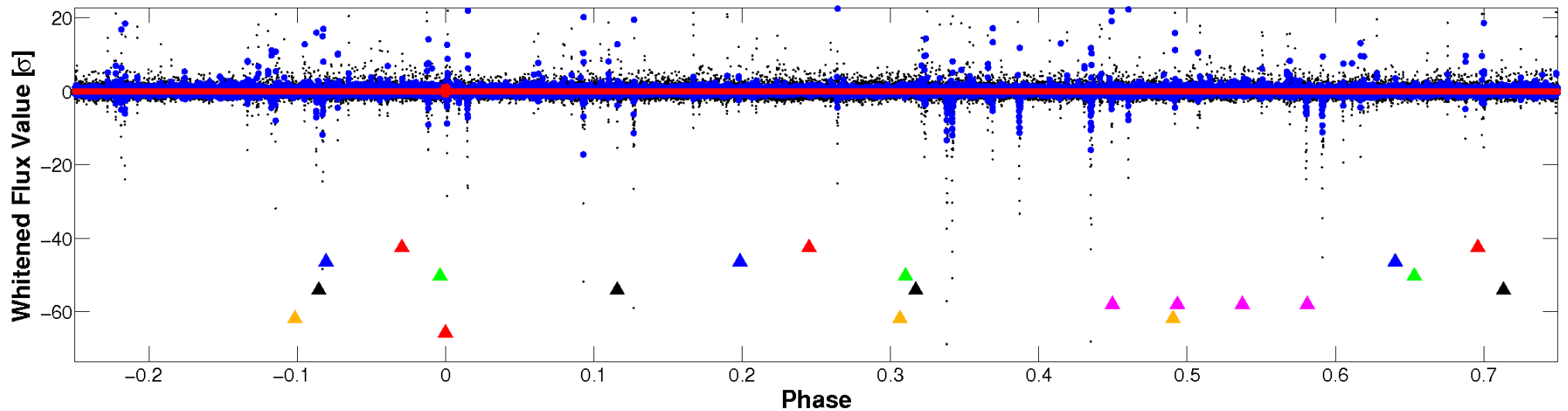


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

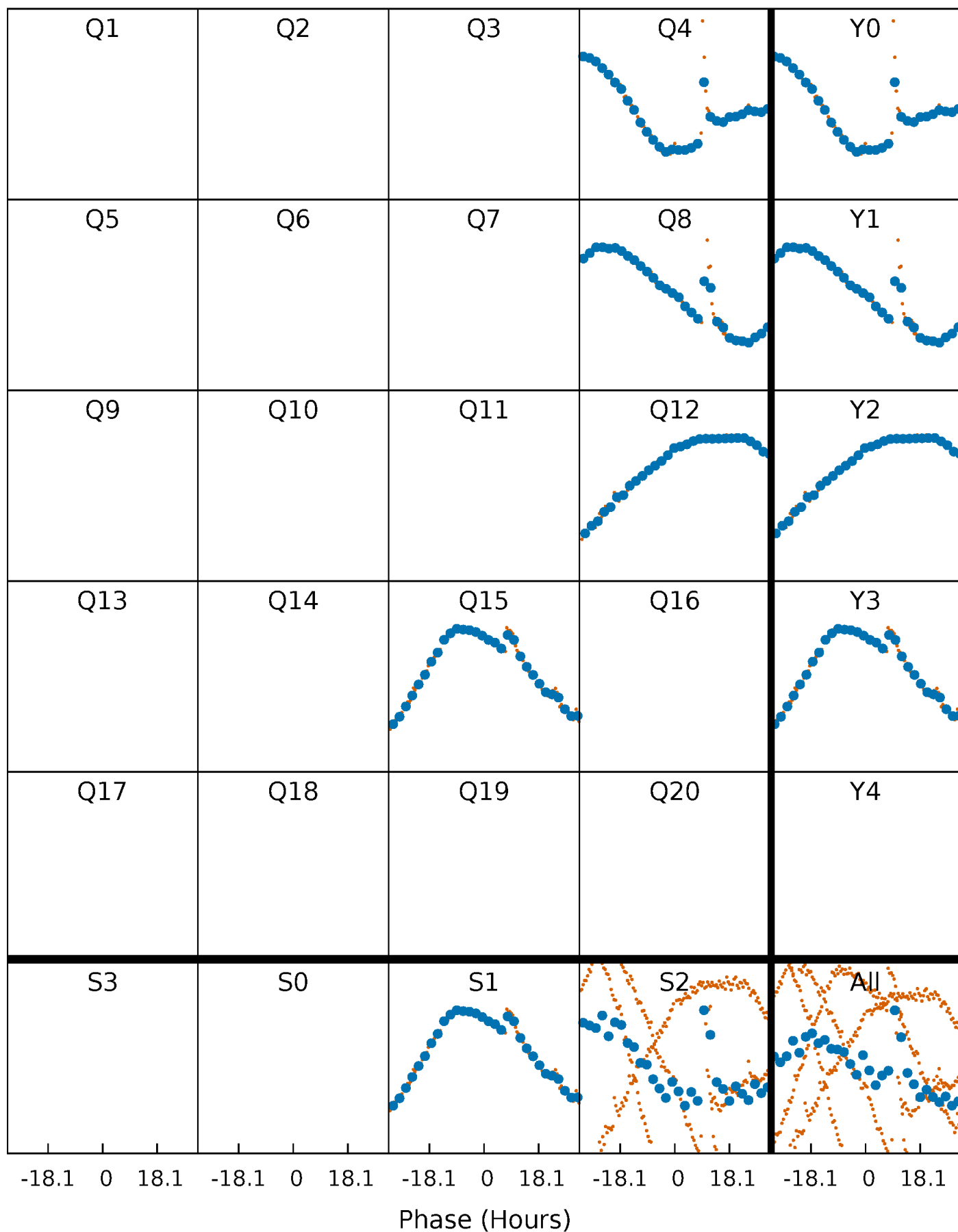


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



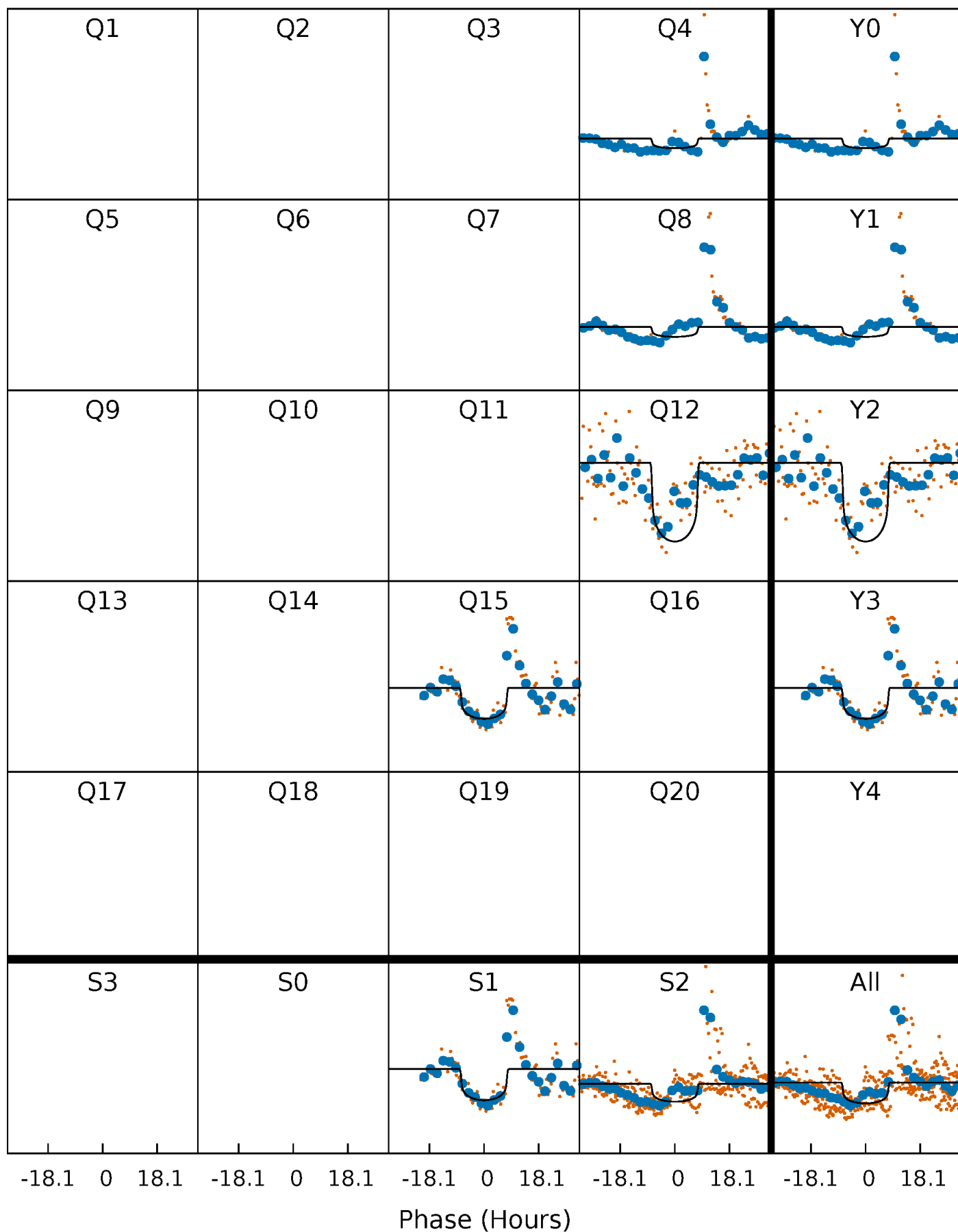
PDC Quarter-Phased Transit Curves

TCE 007830341-07 P=341.708181 Days $T_0=440.121071$ (BKJD)



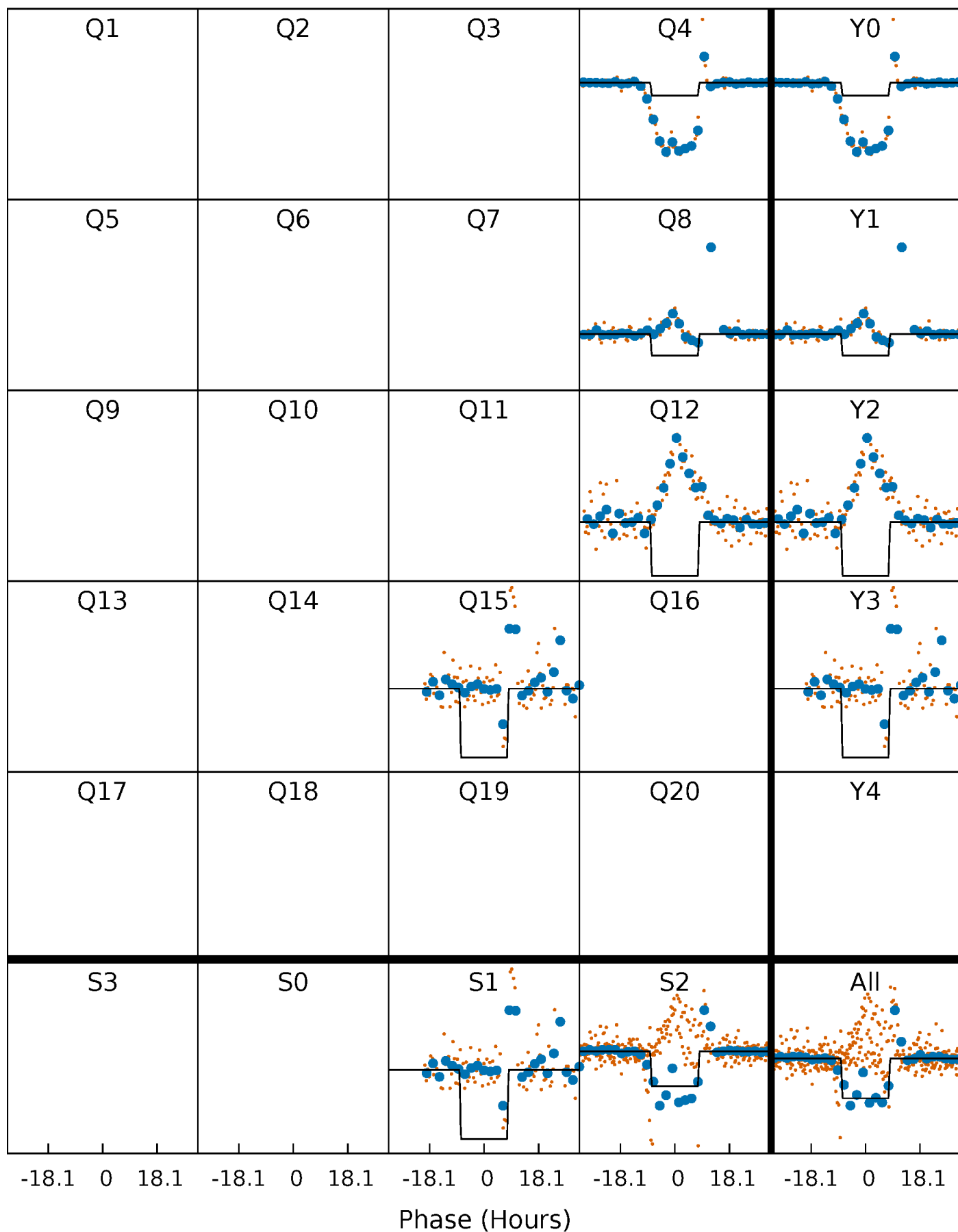
DV Quarter-Phased Transit Curves

TCE 007830341-07 $P=341.708181$ Days $T_0=440.121071$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

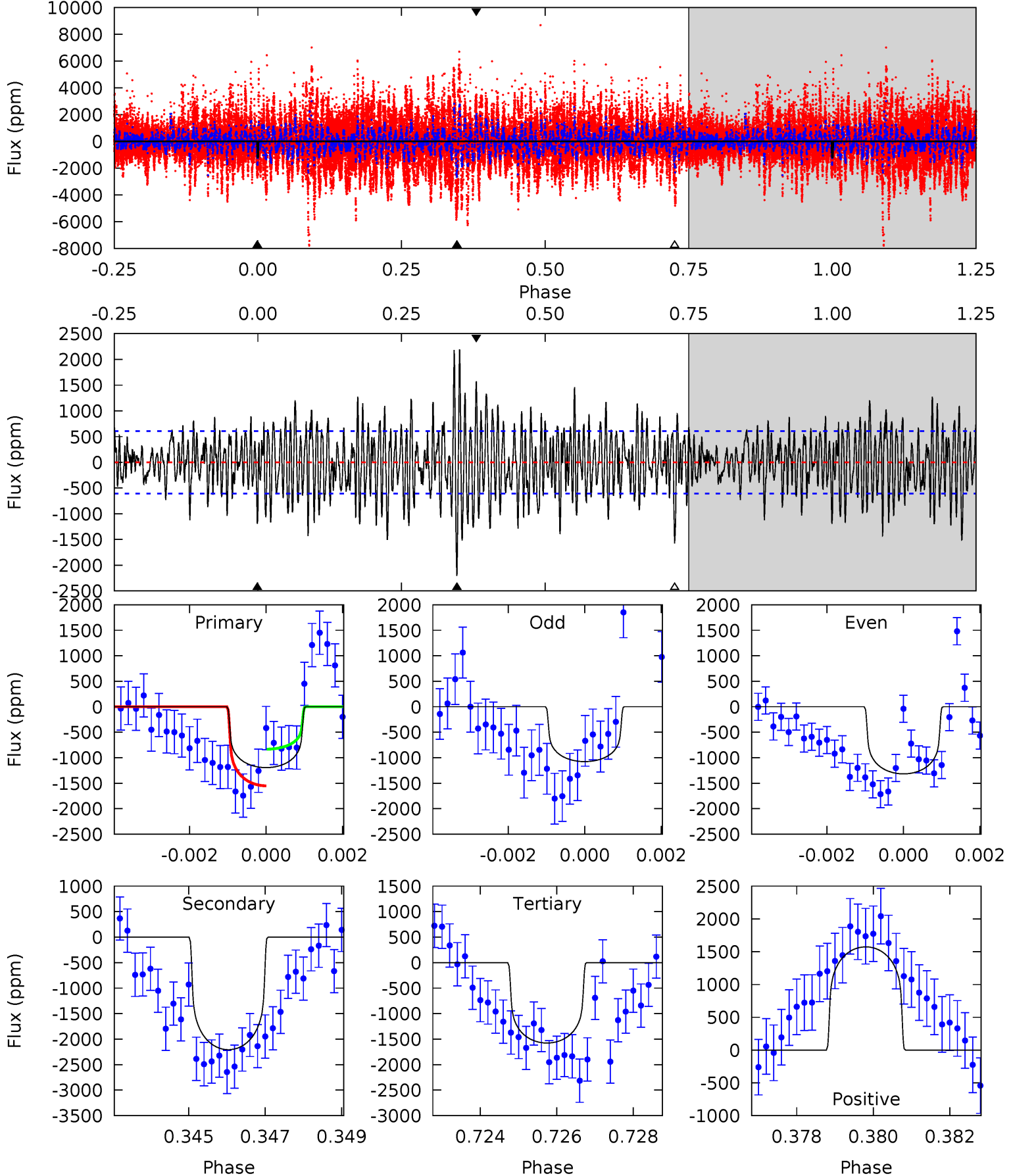
TCE 007830341-07 P=341.683179 Days $T_0=440.163448$ (BKJD)



DV Model-Shift Uniqueness Test

007830341-07, $P = 341.708181$ Days, $E = 98.412890$ Days

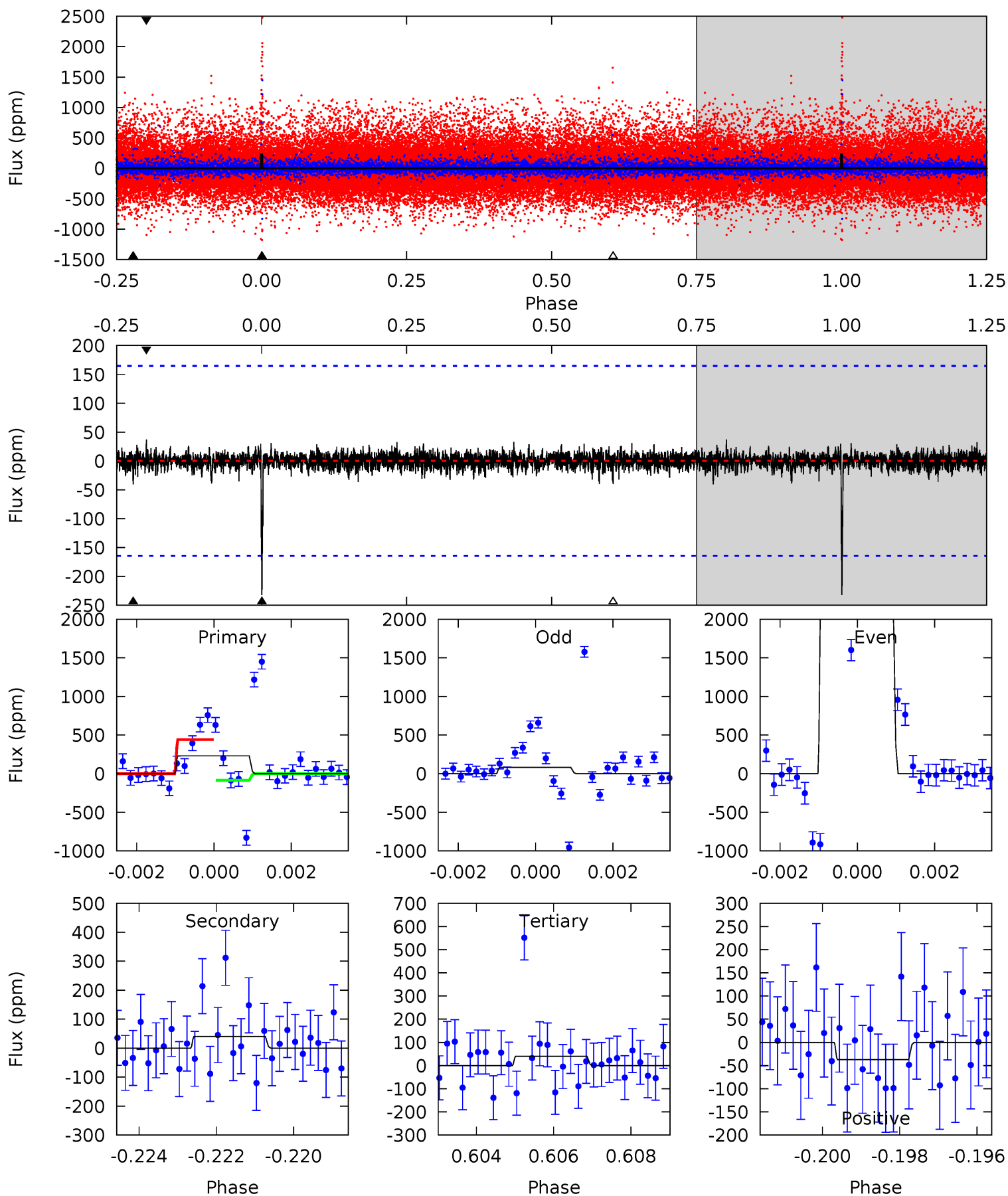
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	19.4	13.9	13.8	5.33	3.10	4.72	-3.36	-3.34	5.54	5.57	1.00	0.96	0.50	3.17



Alt Model-Shift Uniqueness Test

007830341-07, P = 341.683179 Days, E = 98.480269 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.52	1.30	1.30	1.20	5.33	3.09	0.28	6.22	6.31	0.01	0.10	49.1	-16.5	0.14	5.69



Stellar Parameters For KIC 007830341

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3801^{+95}_{-104}	$4.752^{+0.058}_{-0.036}$	$-0.200^{+0.200}_{-0.200}$	$0.492^{+0.044}_{-0.054}$	$0.499^{+0.046}_{-0.051}$	$5.898^{+1.808}_{-0.790}$
	+2%/-3%	+1%/-1%	+100%/-100%	+9%/-11%	+9%/-10%	+31%/-13%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007830341-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2207 ± 114	$1.88^{+0.46}_{-0.43}$	188^{+6}_{-6}	4196^{+443}_{-323}	$200384^{+130893}_{-72728}$
Alt.	-40 ± 31	$2.02^{+0.47}_{-0.47}$	188^{+6}_{-6}	2304^{+249}_{-313}	3016^{+3987}_{-2256}

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

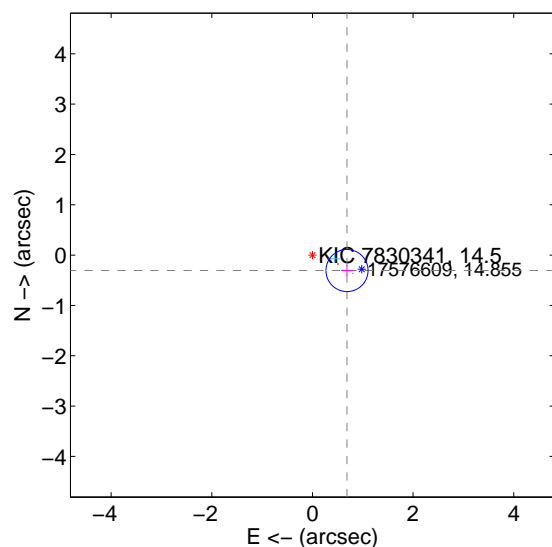
Supplemental centroid analysis for 007830341-07. Kepler magnitude: 14.50. Transit SNR 7.45

There are 2 quarters with good PRF difference image offsets

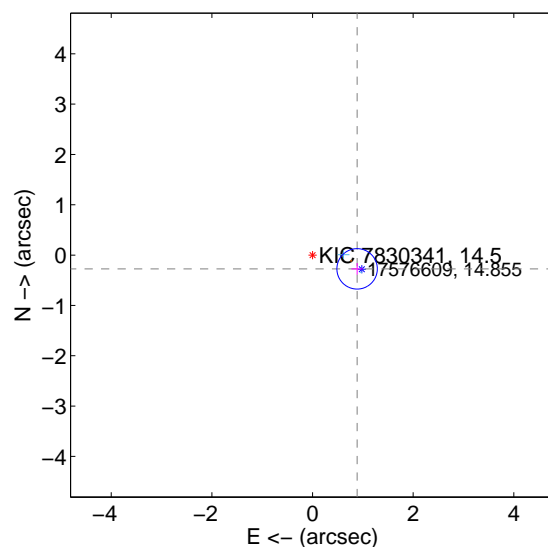
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.752 ± 0.139	5.39	-0.686 ± 0.119	-0.306 ± 0.105
PRF-fit source offset from KIC position	0.927 ± 0.134	6.93	-0.886 ± 0.114	-0.273 ± 0.115
photometric centroid source offset	1.31 ± 0.90	1.46	-1.31 ± 0.90	-0.06 ± 0.63

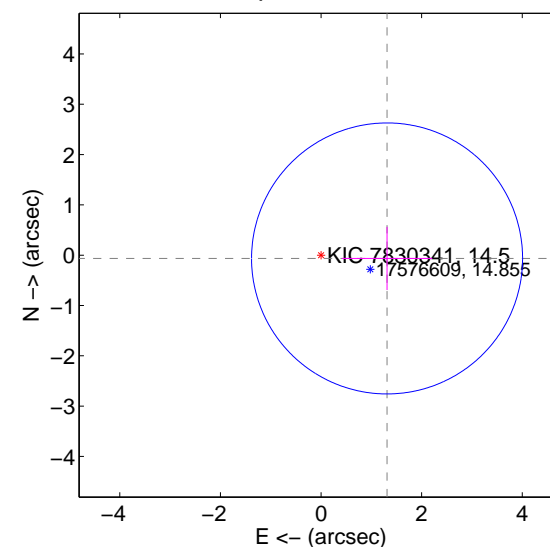
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

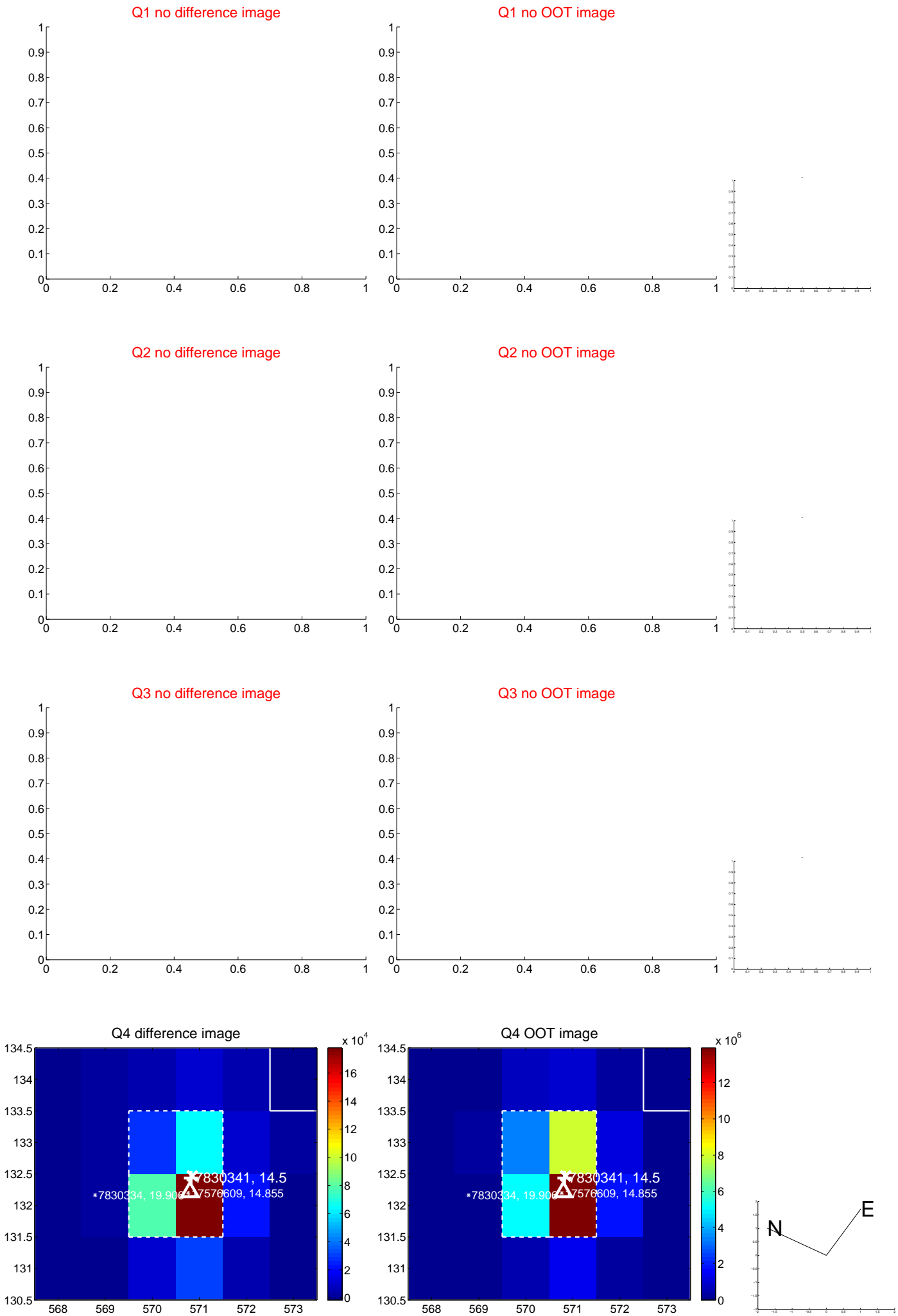


offset from photometric centroids

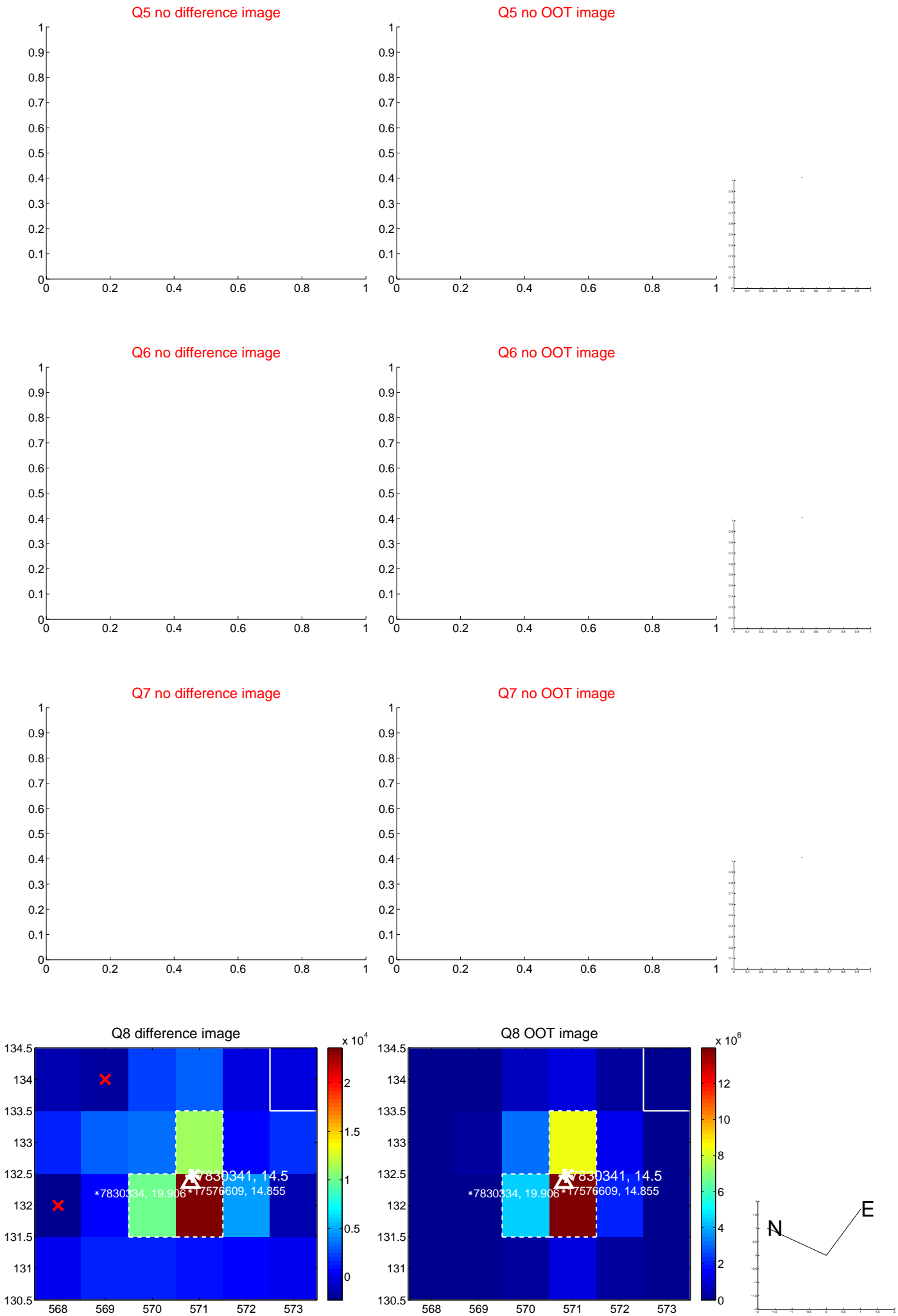


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



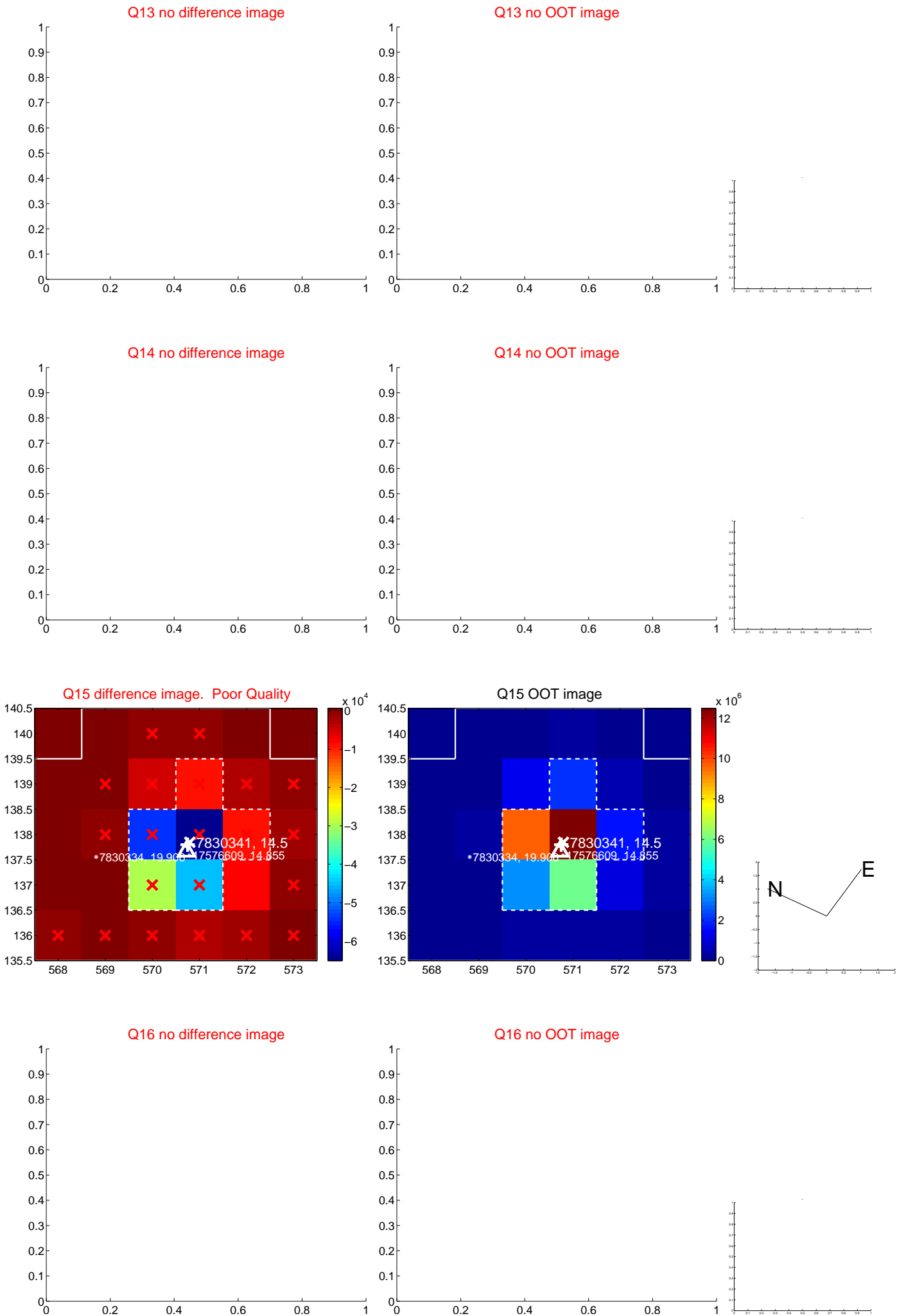
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



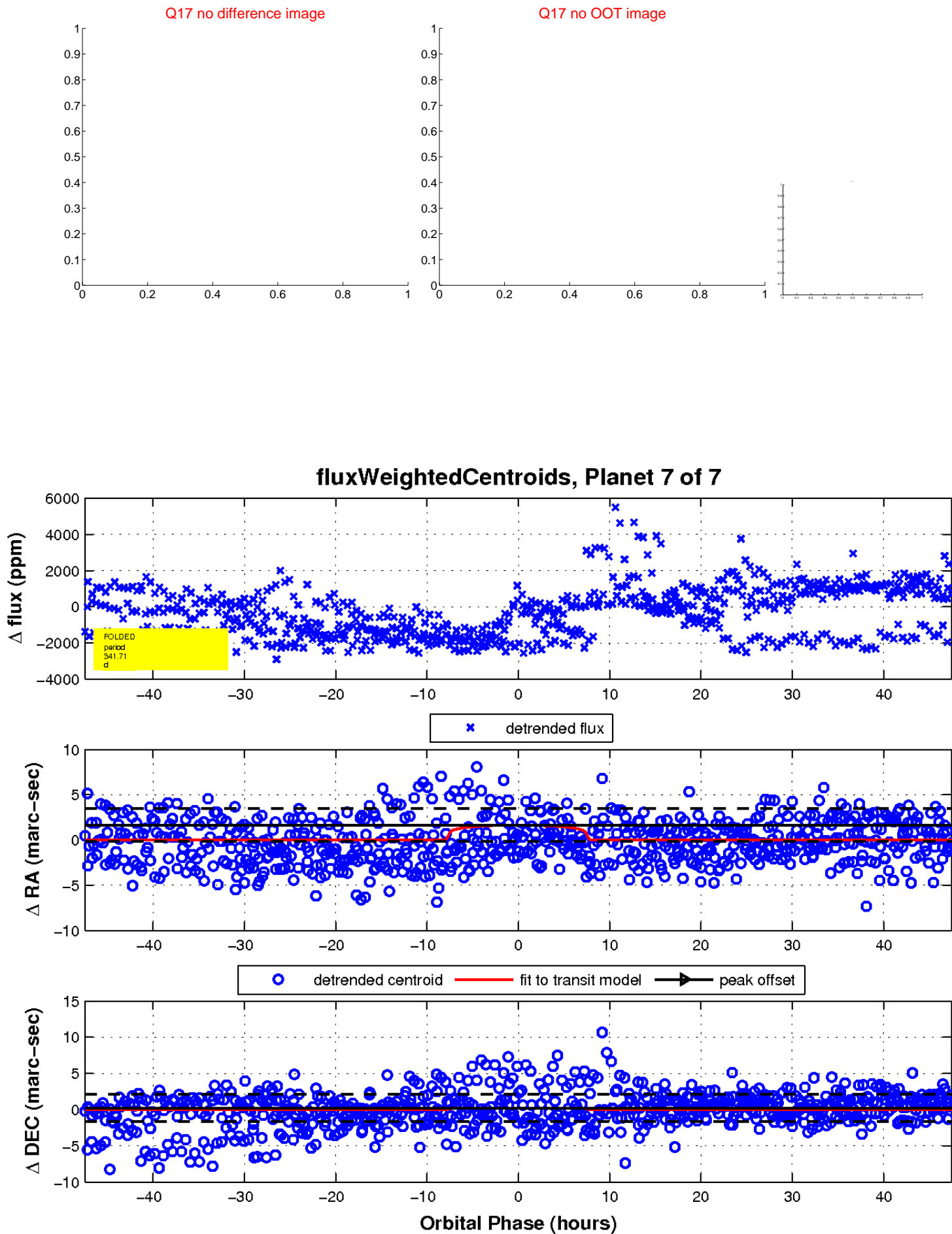
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

