

KIC 008056313

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})
008056313-01	OBS	No	387.075870	448.584170	109.7	52.470	523.0	5.6	0.93	6946	1.10	1.67
008056313-02	OBS	No	2.548349	133.561024	6.6	2.253	7.4	7.3	0.93	6946	0.26	1355.43
008056313-03	OBS	No	487.487076	209.852706	86.6	11.674	7.8	7.1	0.93	6946	0.97	1.23
008056313-04	OBS	No	2.548076	132.561245	6.3	7.085	7.9	8.3	0.93	6946	0.27	1355.62
008056313-05	OBS	No	470.118077	571.463056	146.3	13.078	15.4	10.1	0.93	6946	1.43	1.29
008056313-06	OBS	No	529.959353	462.025336	94.7	11.829	10.1	6.8	0.93	6946	1.05	1.10
008056313-07	OBS	No	560.562110	223.545976	155.1	28.534	8.4	6.9	0.93	6946	1.52	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008056313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

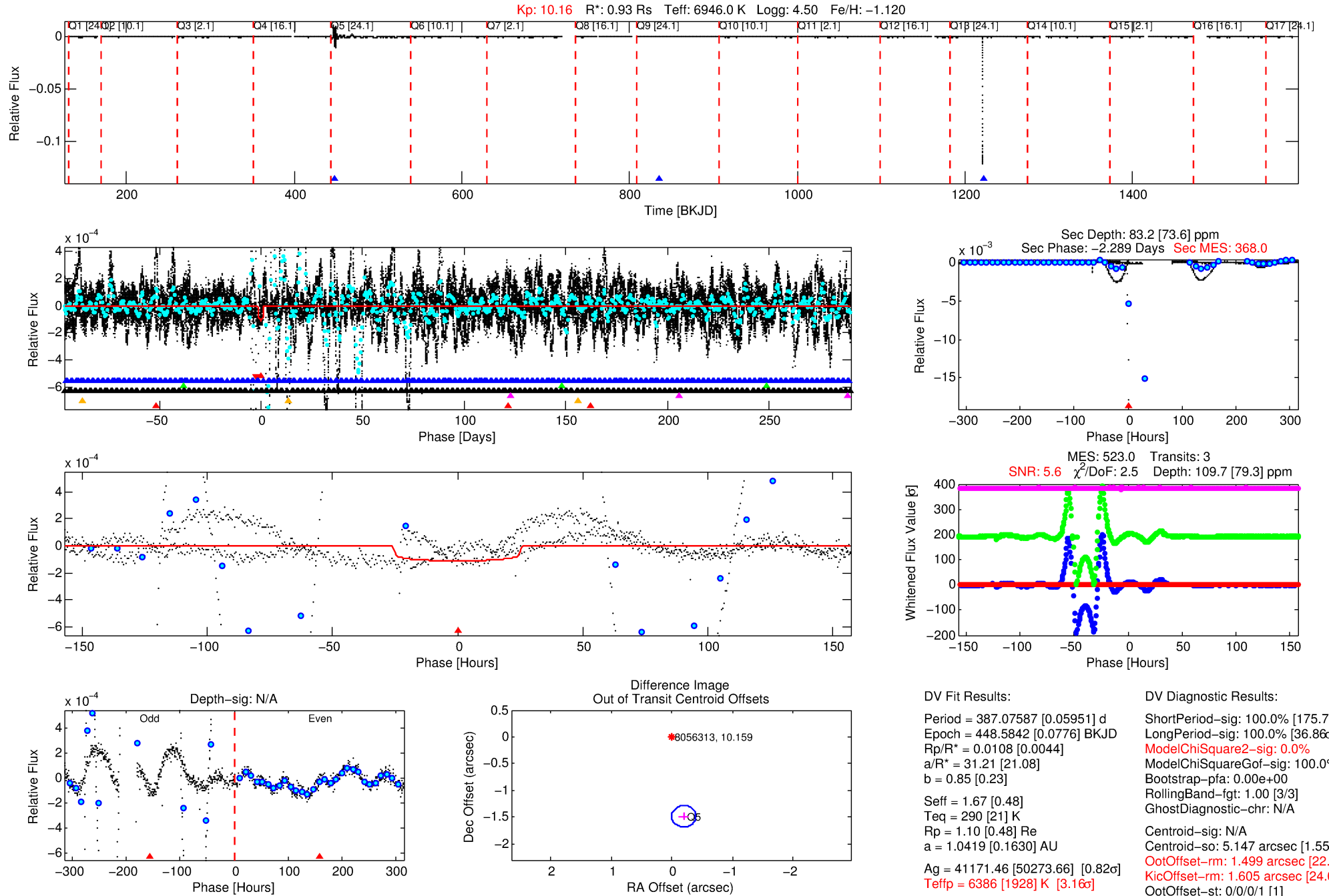
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-01

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 1 of 7 Period: 387.076 d



DV Fit Results:

Period = 387.07587 [0.05951] d
Epoch = 448.5842 [0.0776] BKJD
Rp/R* = 0.0108 [0.0044]
a/R* = 31.21 [21.08]
b = 0.85 [0.23]
Seff = 1.67 [0.48]
Teq = 290 [21] K
Rp = 1.10 [0.48] Re
a = 1.0419 [0.1630] AU
Ag = 41171.46 [50273.66] [0.82σ]
Teff = 6386 [1928] K [3.16σ]

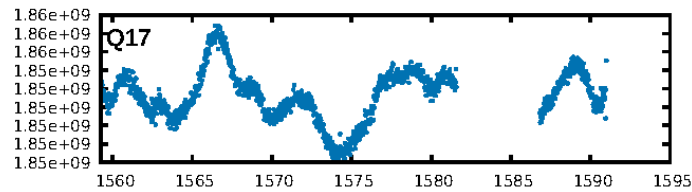
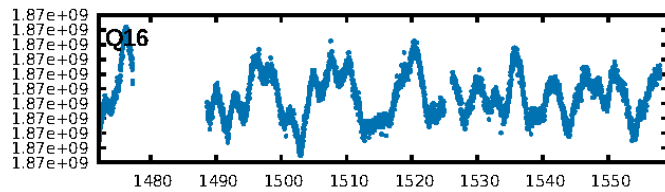
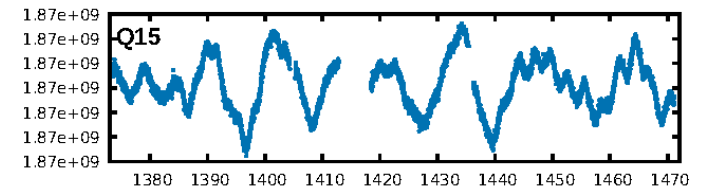
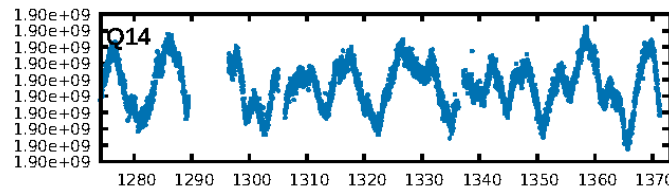
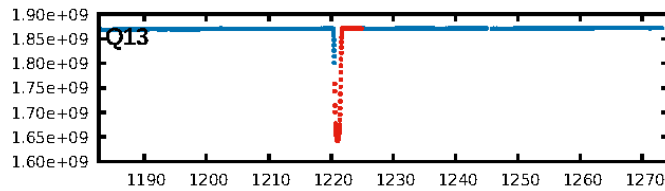
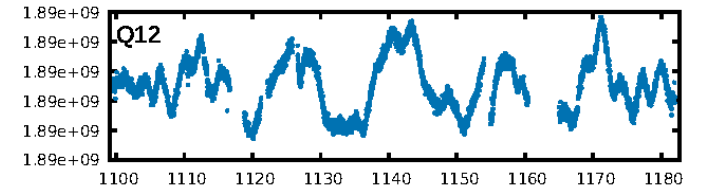
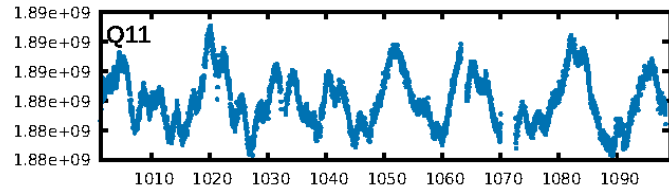
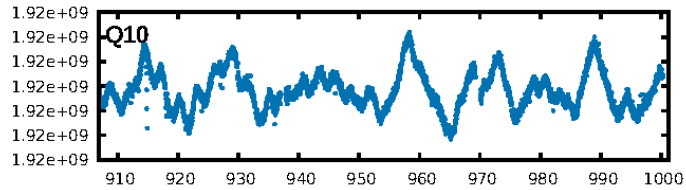
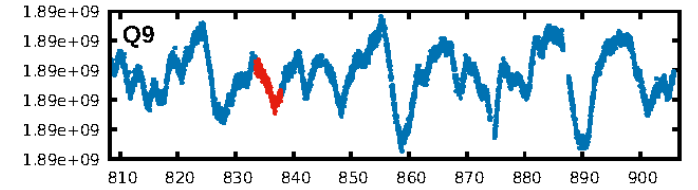
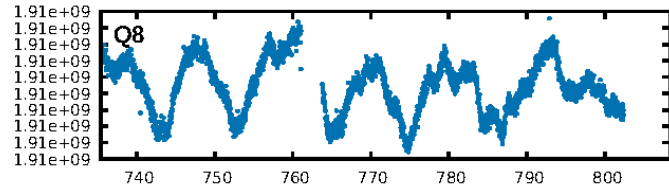
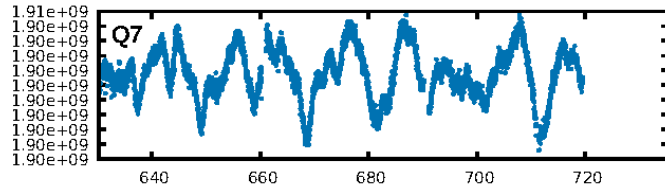
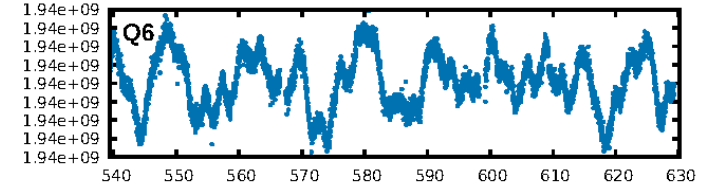
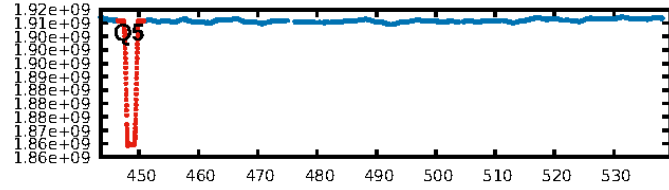
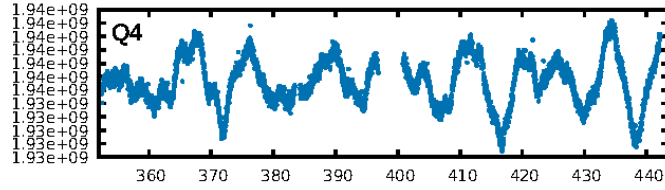
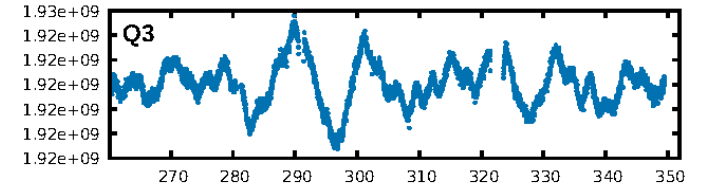
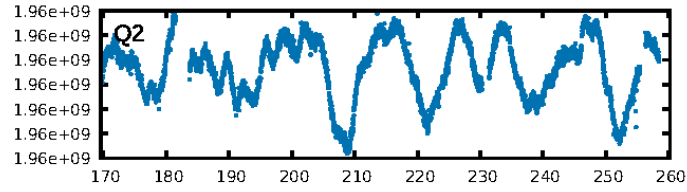
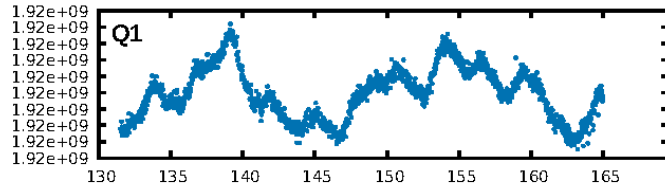
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [175.72σ]
LongPeriod-sig: 100.0% [36.86σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 5.147 arcsec [1.55σ]
OotOffset-rm: 1.499 arcsec [22.47σ]
KicOffset-rm: 1.605 arcsec [24.06σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/2]

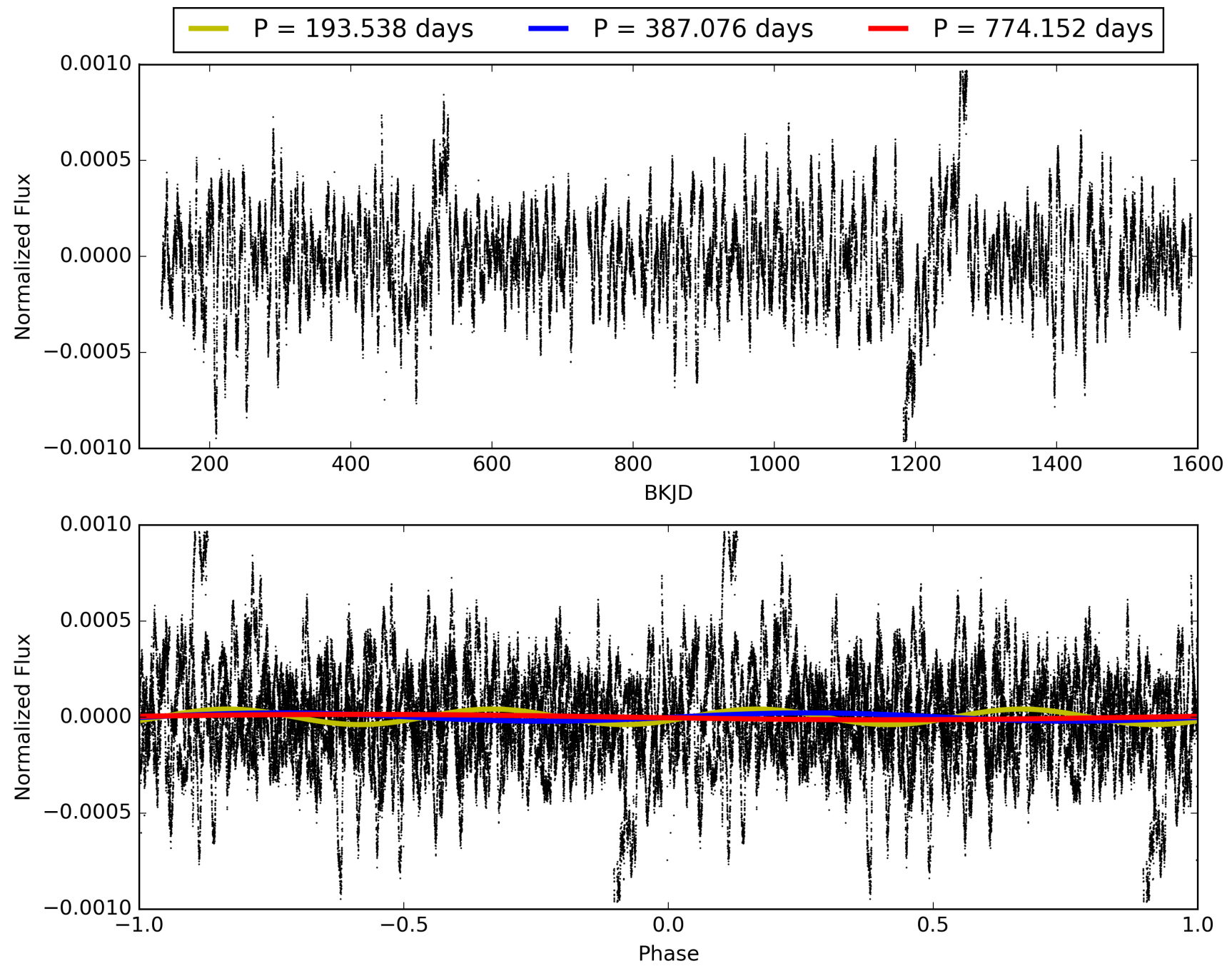
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008056313-01, PDC Light Curves

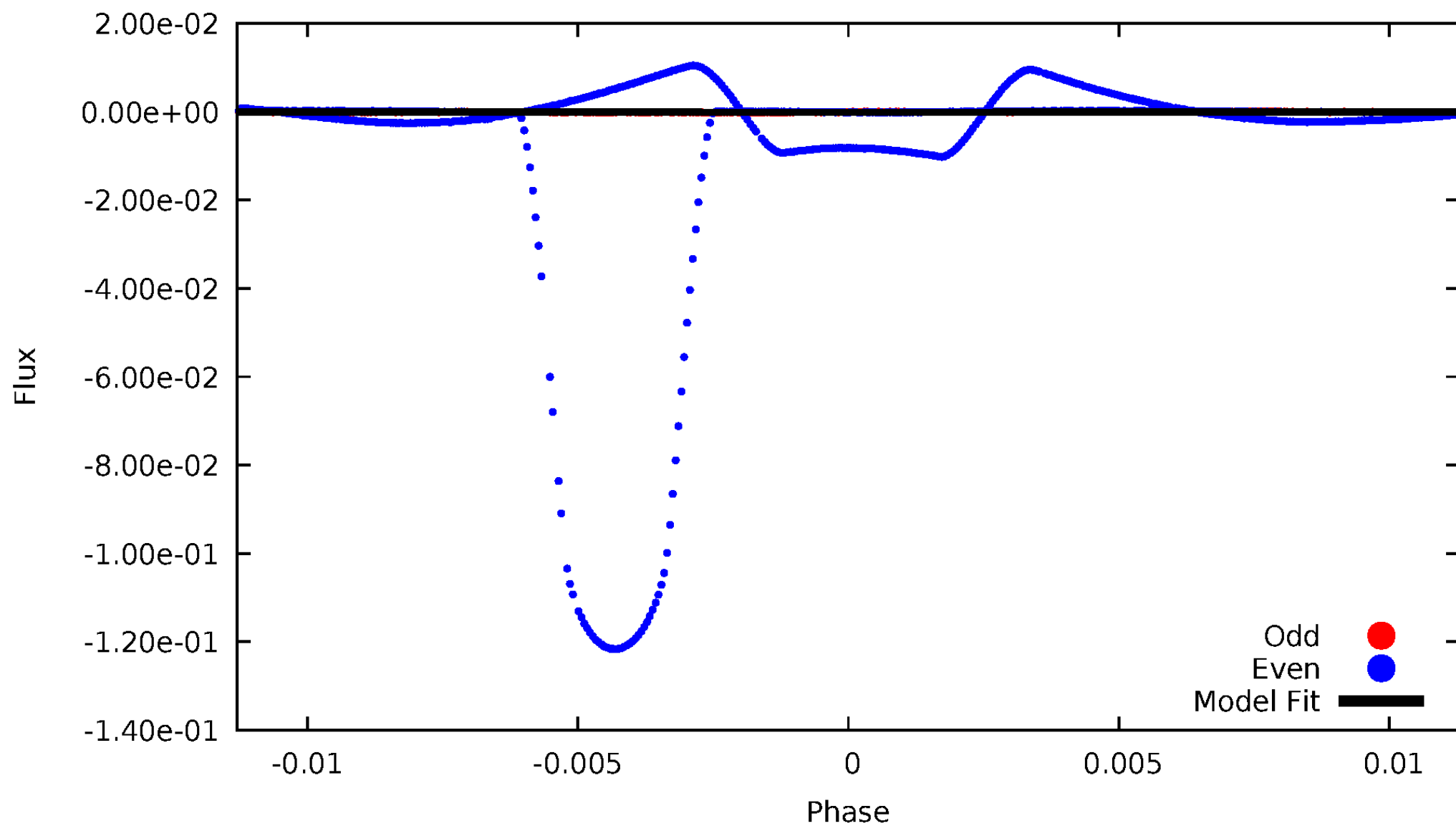


TCE 008056313-01



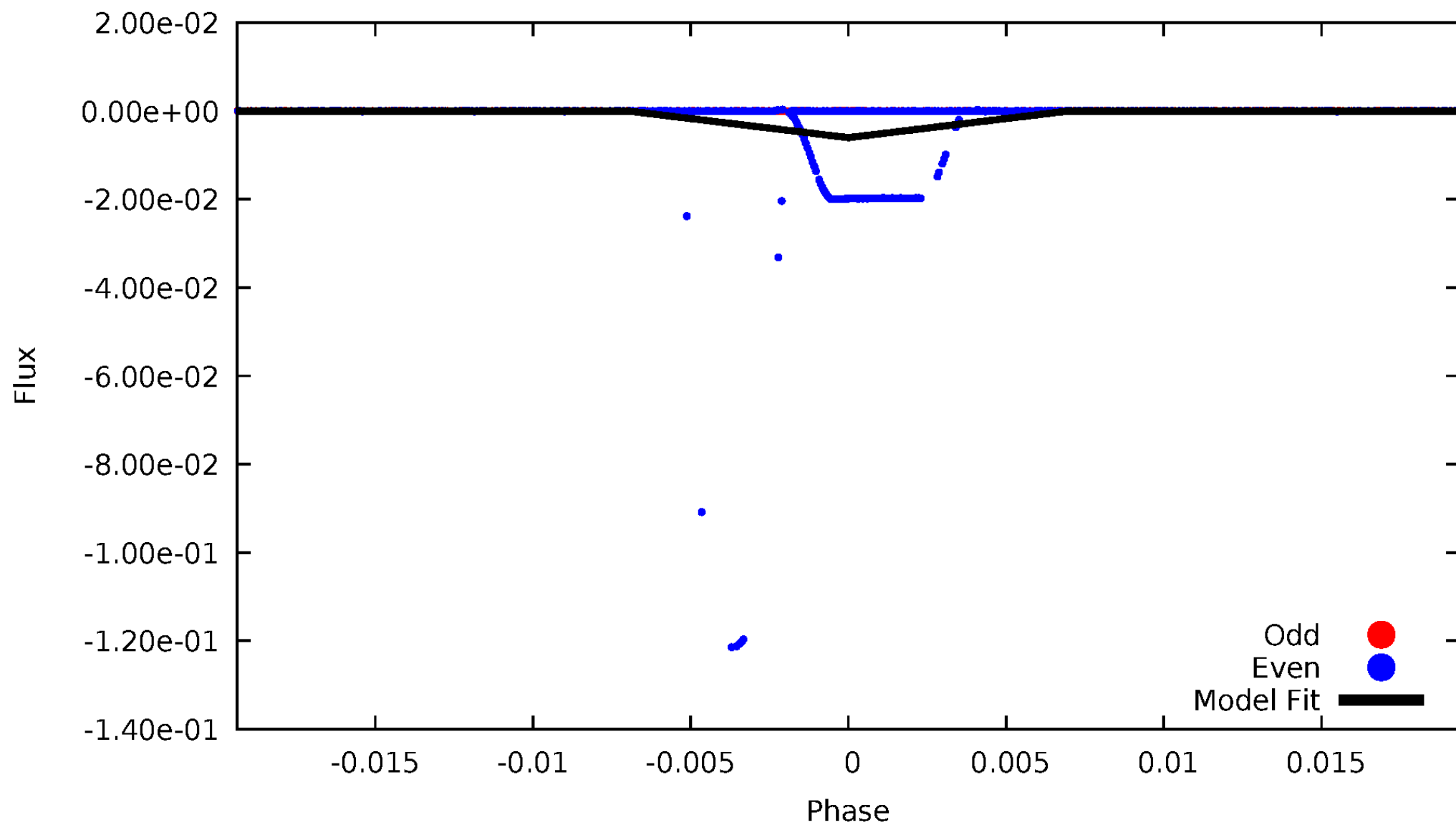
DV Odd/Even

TCE 008056313-01



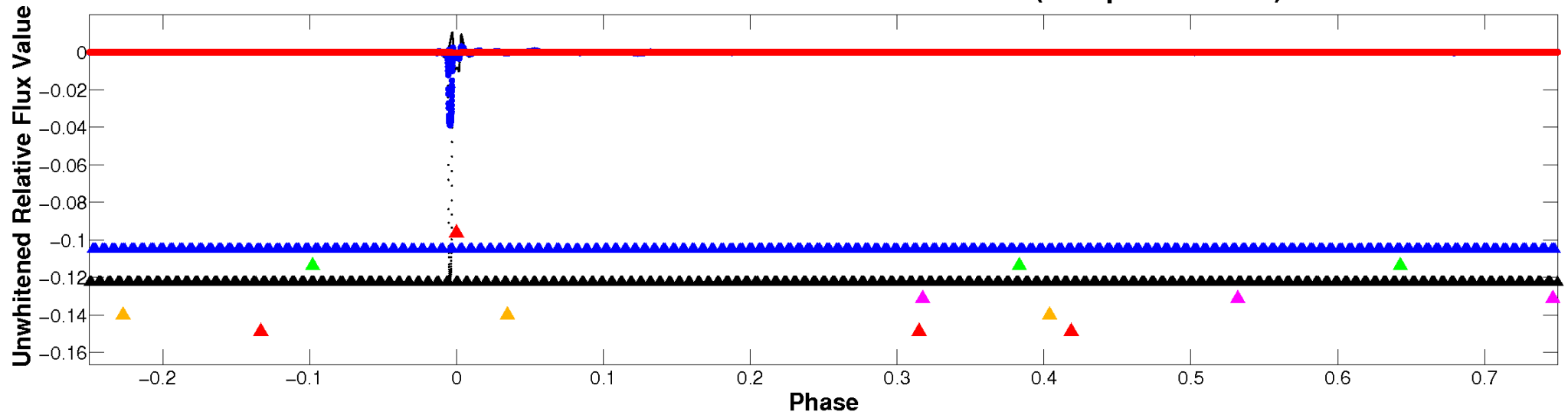
ALT Odd/Even

TCE 008056313-01

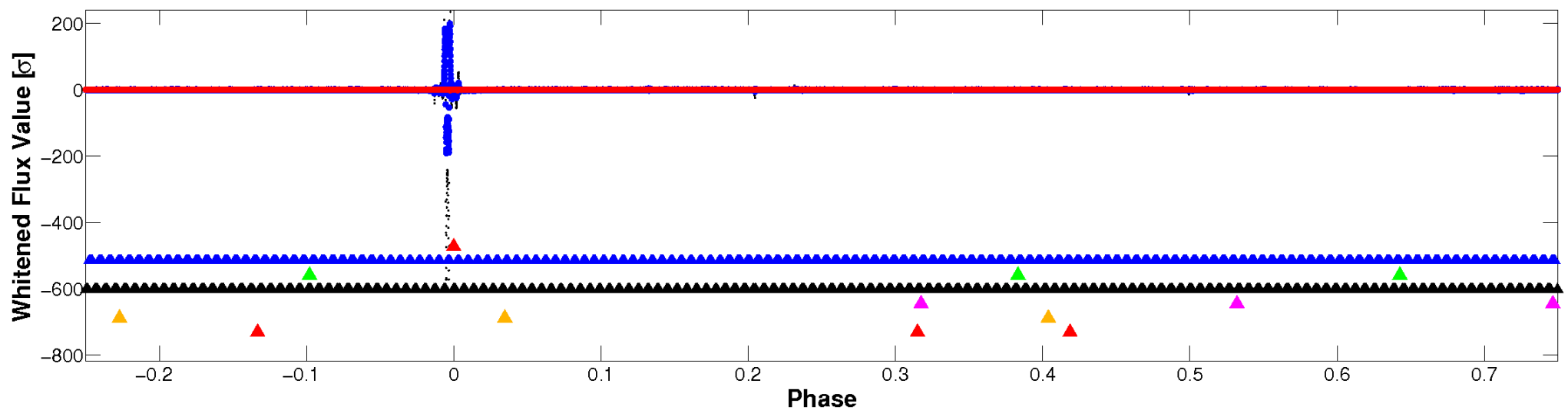


Non-Whitened Vs. Whitened Light Curve

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

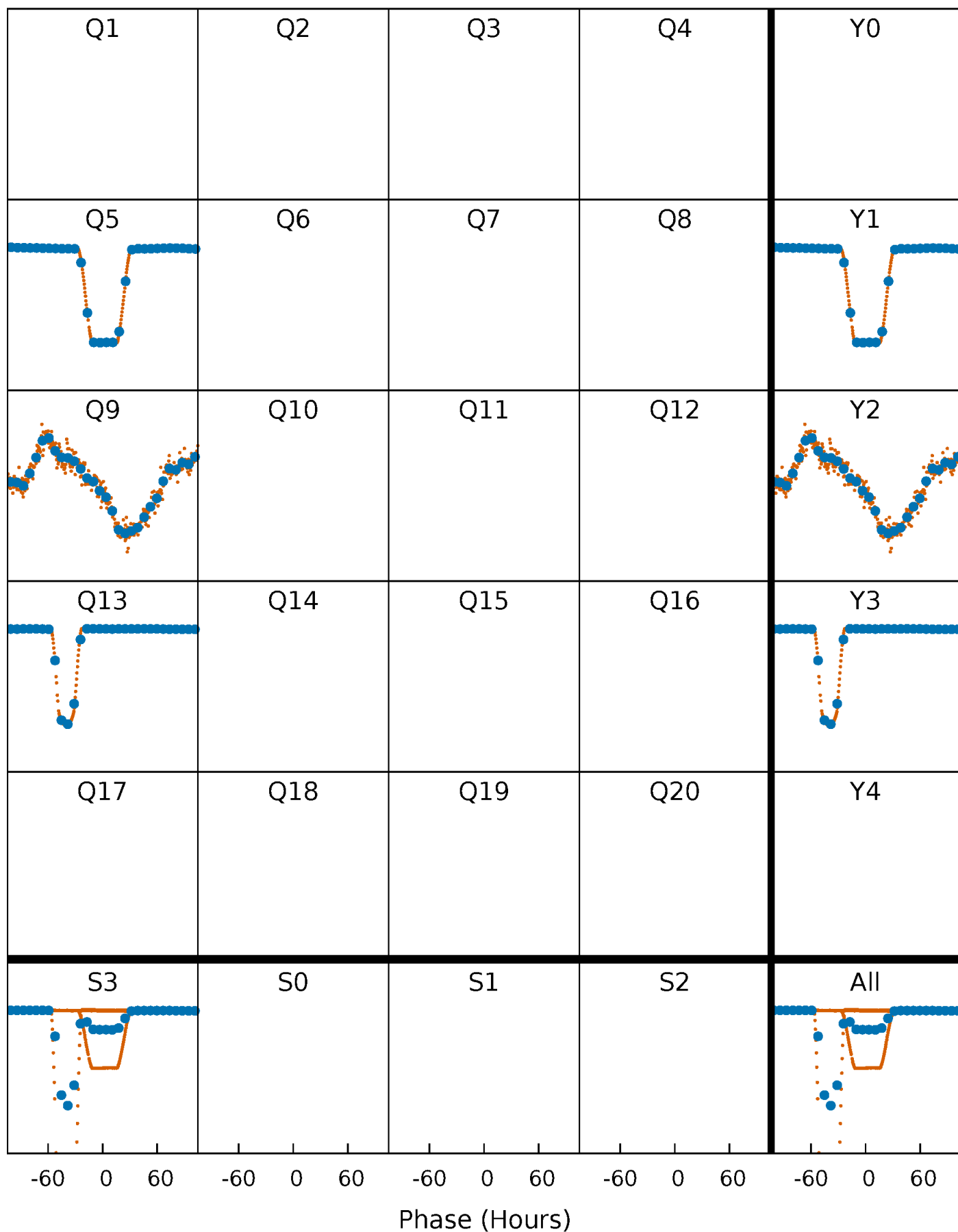


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



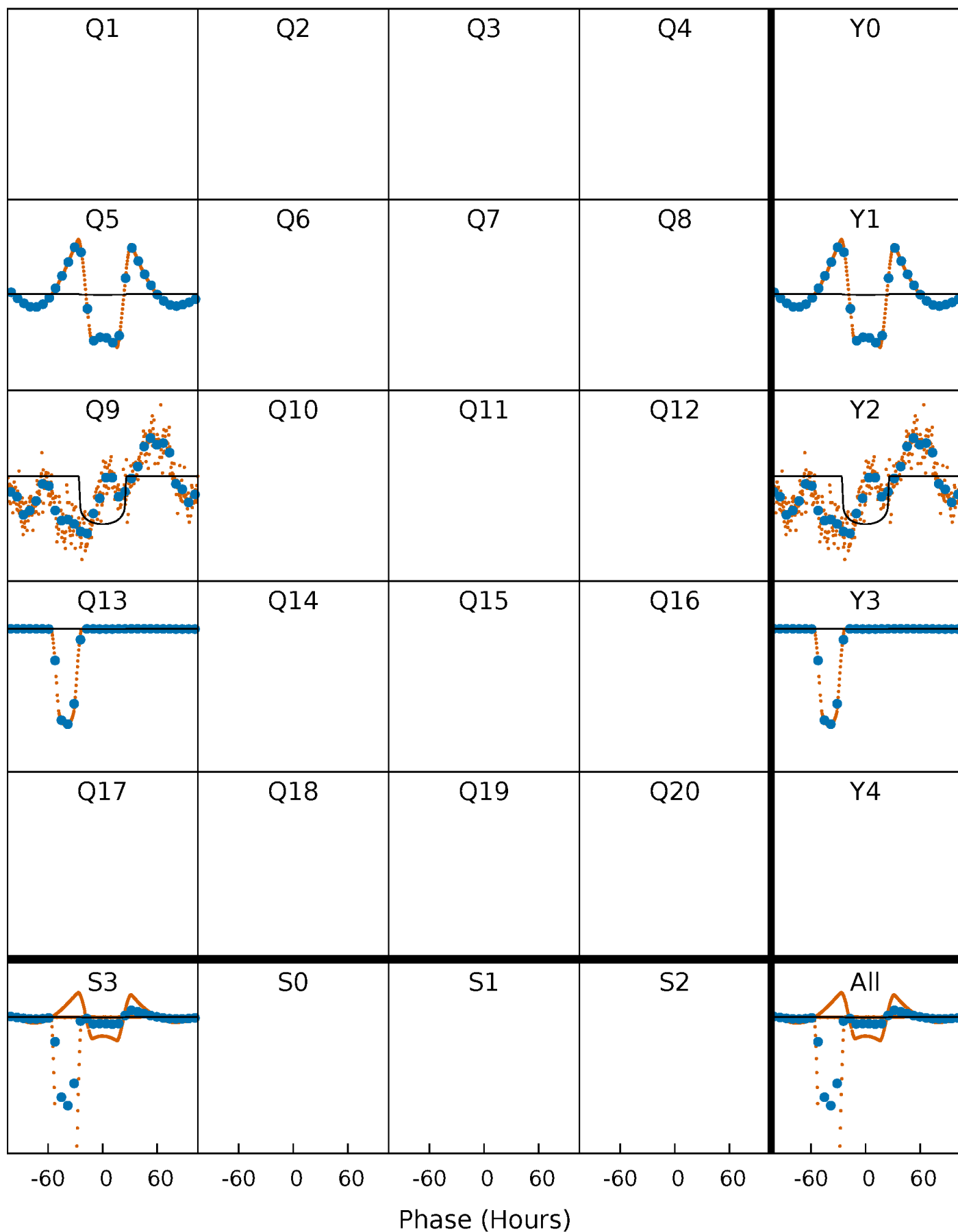
PDC Quarter-Phased Transit Curves

TCE 008056313-01 P=387.075870 Days $T_0=448.584170$ (BKJD)



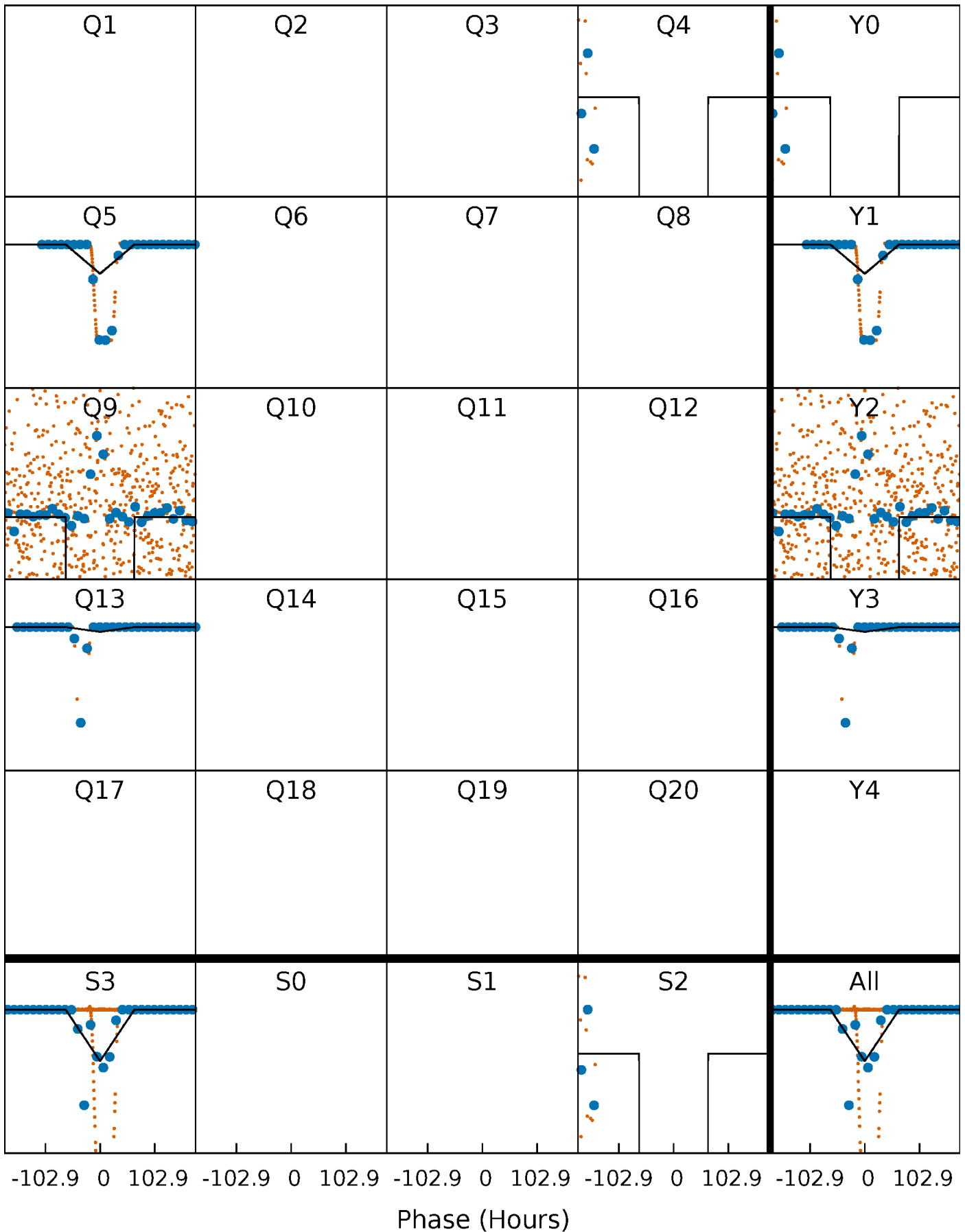
DV Quarter-Phased Transit Curves

TCE 008056313-01 P=387.075870 Days $T_0=448.584170$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

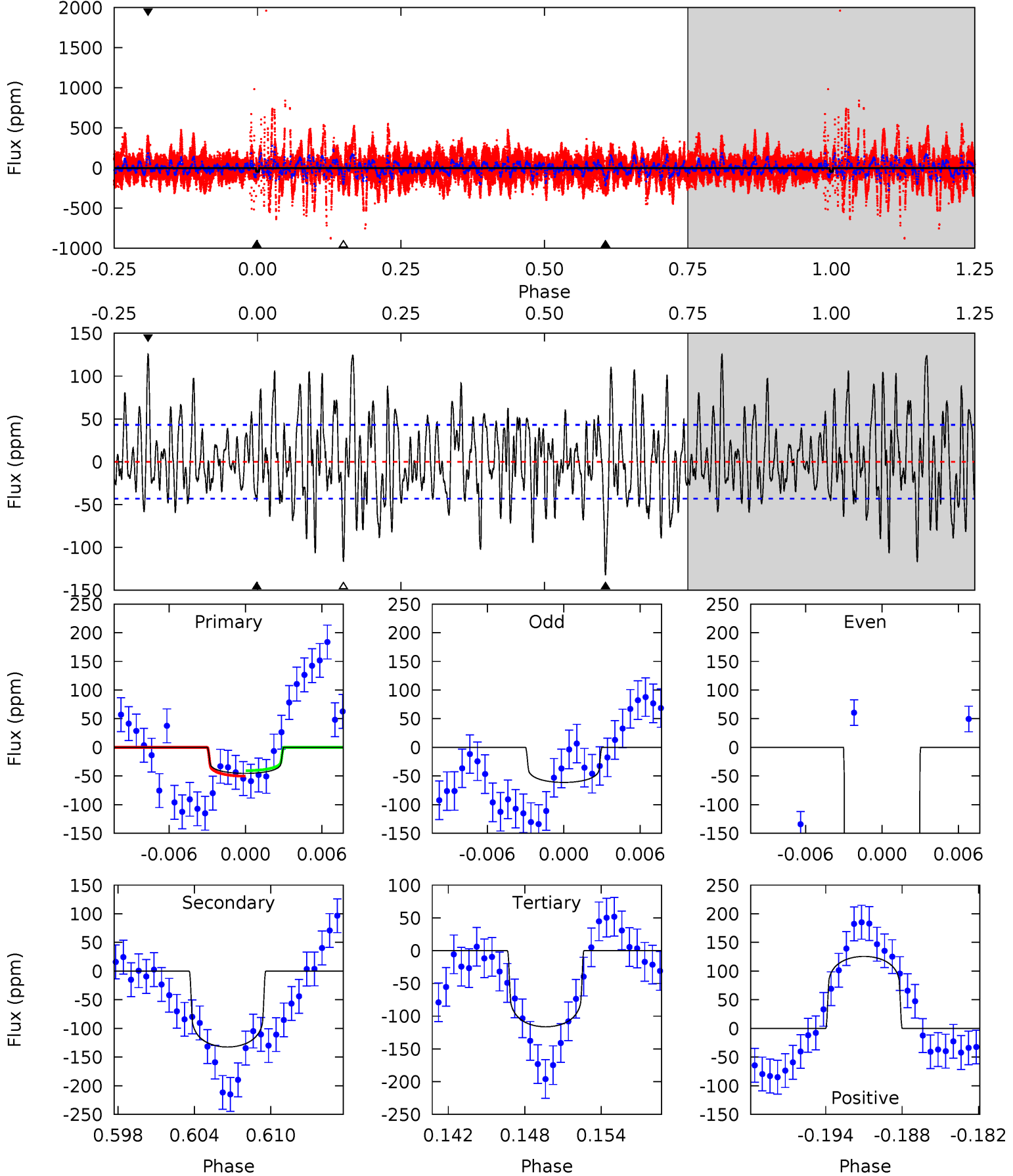
TCE 008056313-01 P=387.079738 Days $T_0=448.322446$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-01, $P = 387.075870$ Days, $E = 61.508300$ Days

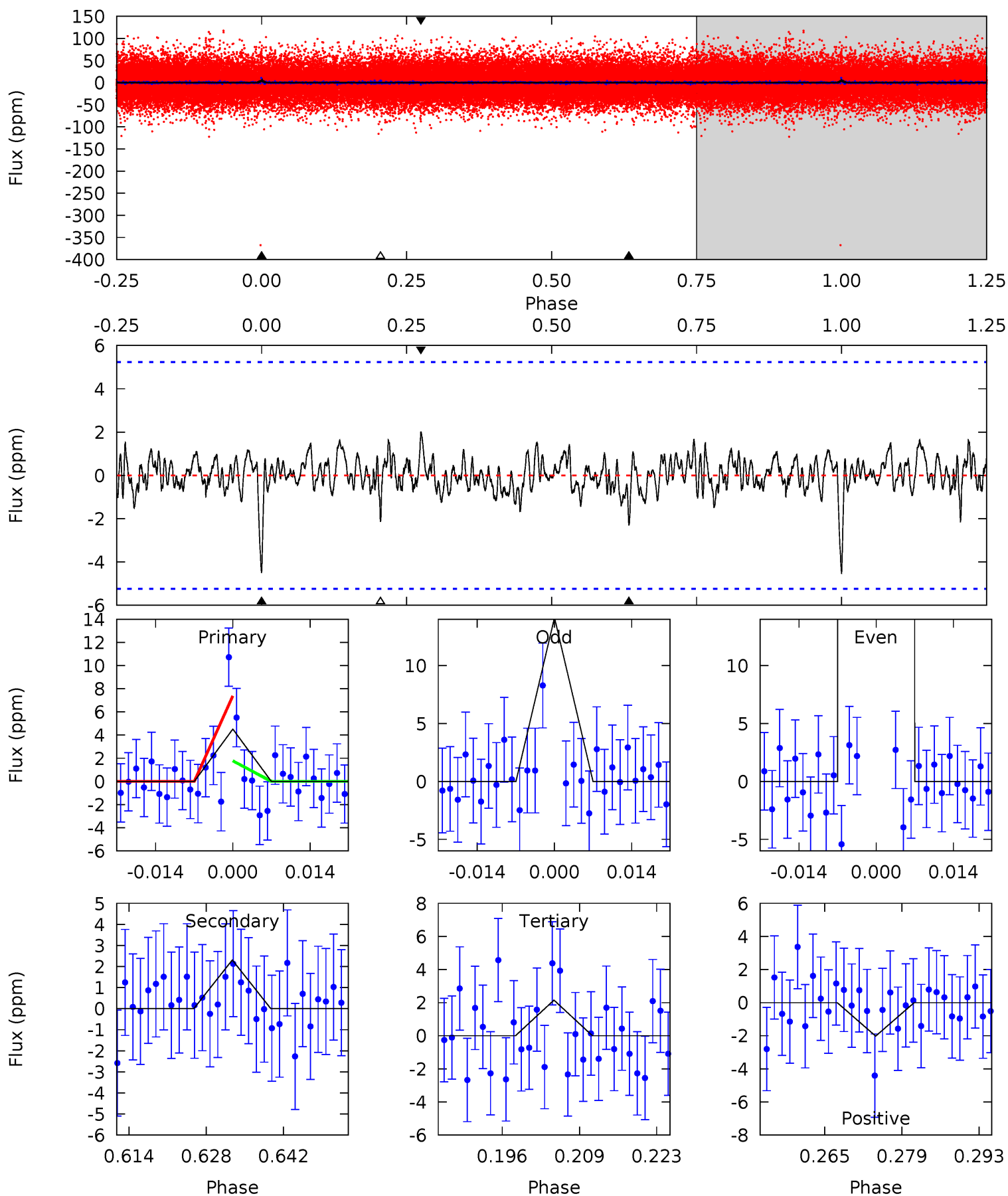
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	15.8	13.8	15.0	5.13	2.76	4.69	-8.43	-9.54	1.92	0.81	151.4	9.43	0.49	0



Alt Model-Shift Uniqueness Test

008056313-01, P = 387.079738 Days, E = 61.242708 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.27	2.18	2.03	1.91	4.96	2.46	0.60	2.24	2.36	0.15	0.27	3066	1.33	0.31	2.66



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-132 ± 8	$1.10^{+0.48}_{-0.41}$	412^{+20}_{-20}	7311^{+2667}_{-1330}	$63395^{+104143}_{-32375}$
Alt.	-2 ± 1	$9.26^{+0.96}_{-0.73}$	411^{+19}_{-18}	1916^{+85}_{-104}	15^{+9}_{-6}

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 $A_{obs} \gg 1.0$

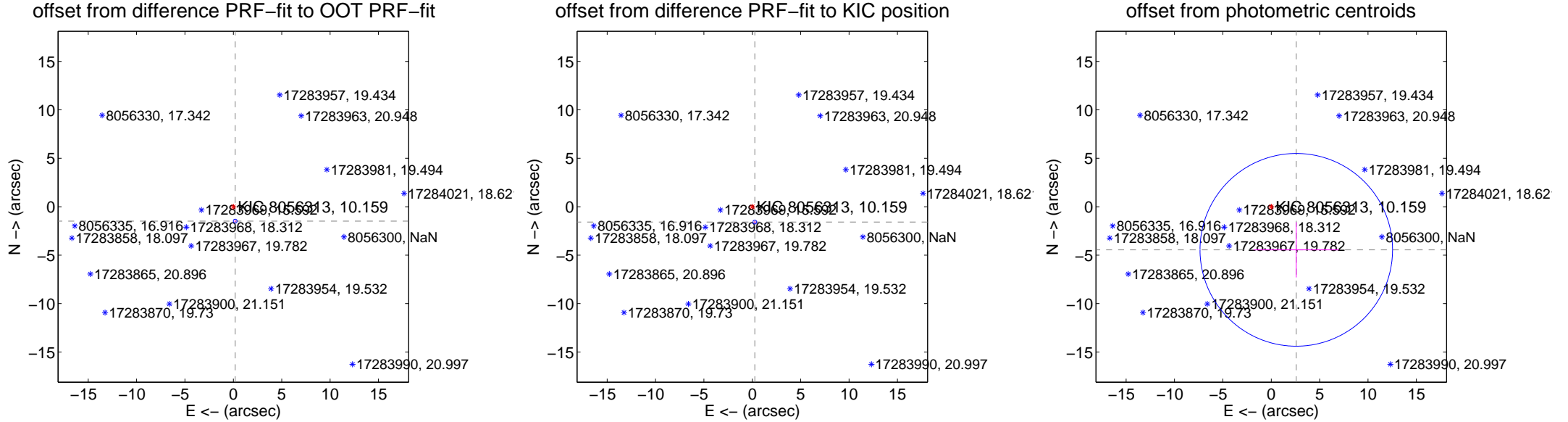
DV Centroid Data

Supplemental centroid analysis for 008056313-01. **Kepler magnitude: 10.16.** Transit SNR 5.60

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.499 ± 0.067	22.47	-0.192 ± 0.067	-1.486 ± 0.067
PRF-fit source offset from KIC position	1.605 ± 0.067	24.06	-0.261 ± 0.067	-1.583 ± 0.067
photometric centroid source offset	5.15 ± 3.32	1.55	-2.59 ± 4.41	-4.45 ± 2.85

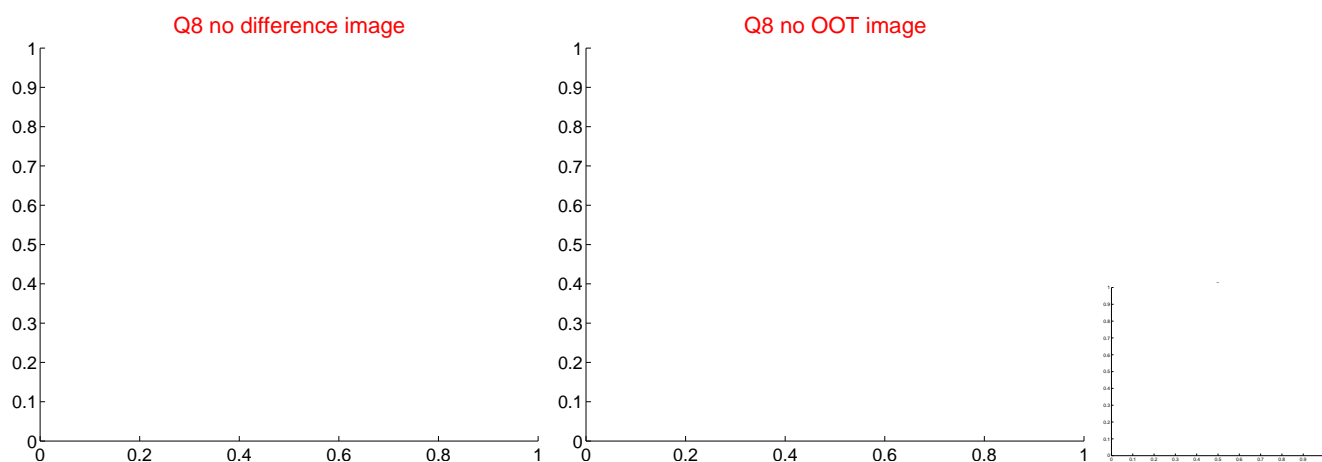
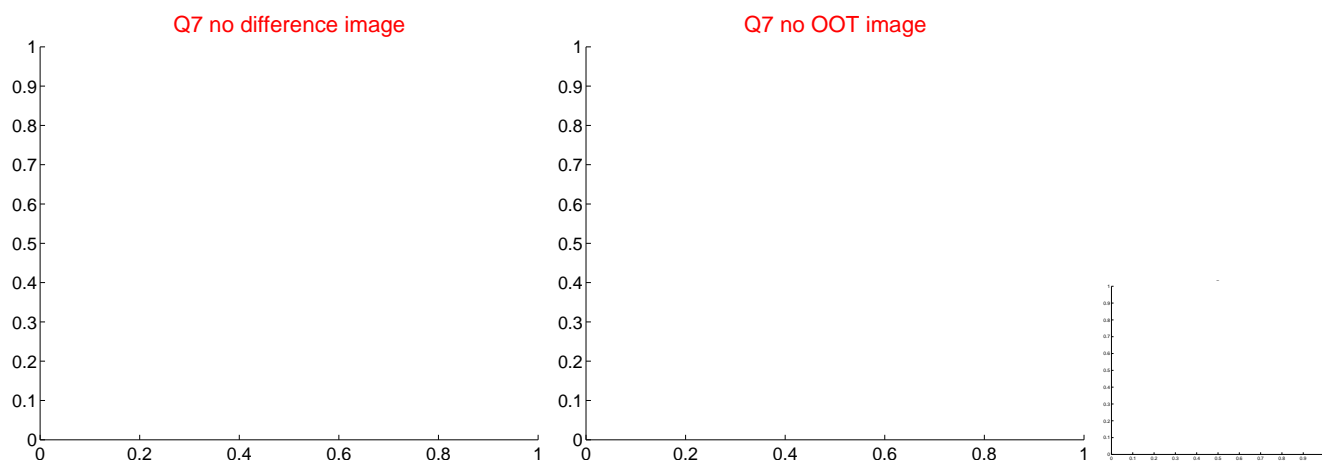
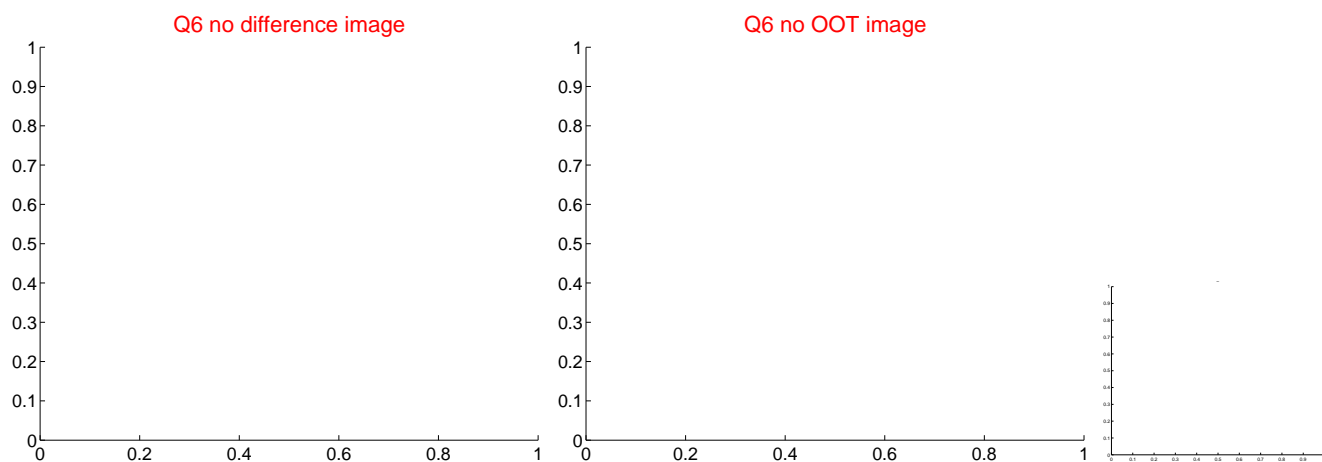
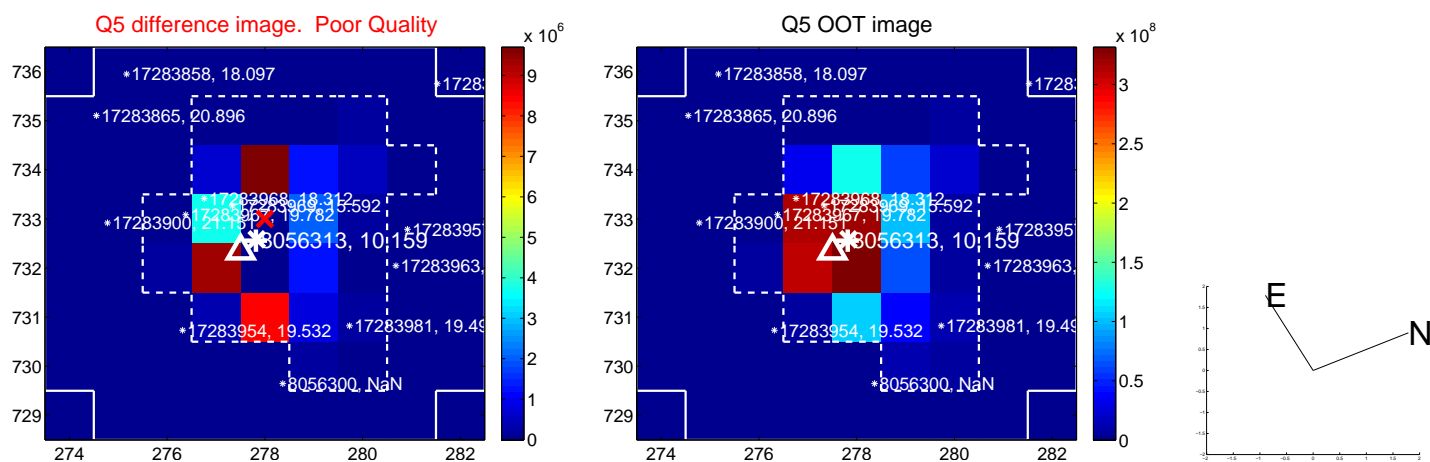


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

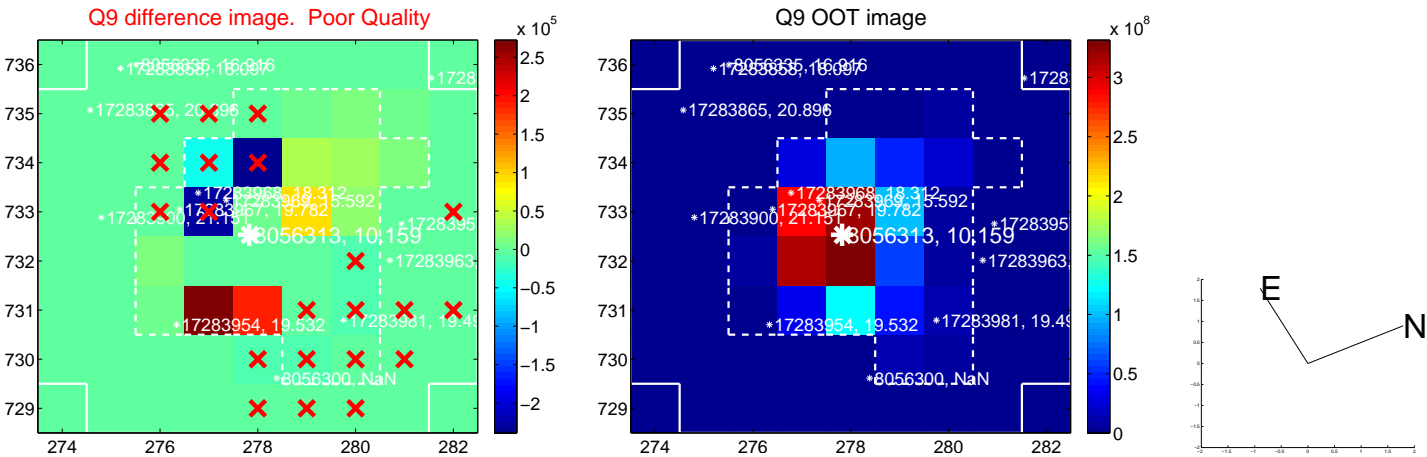
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



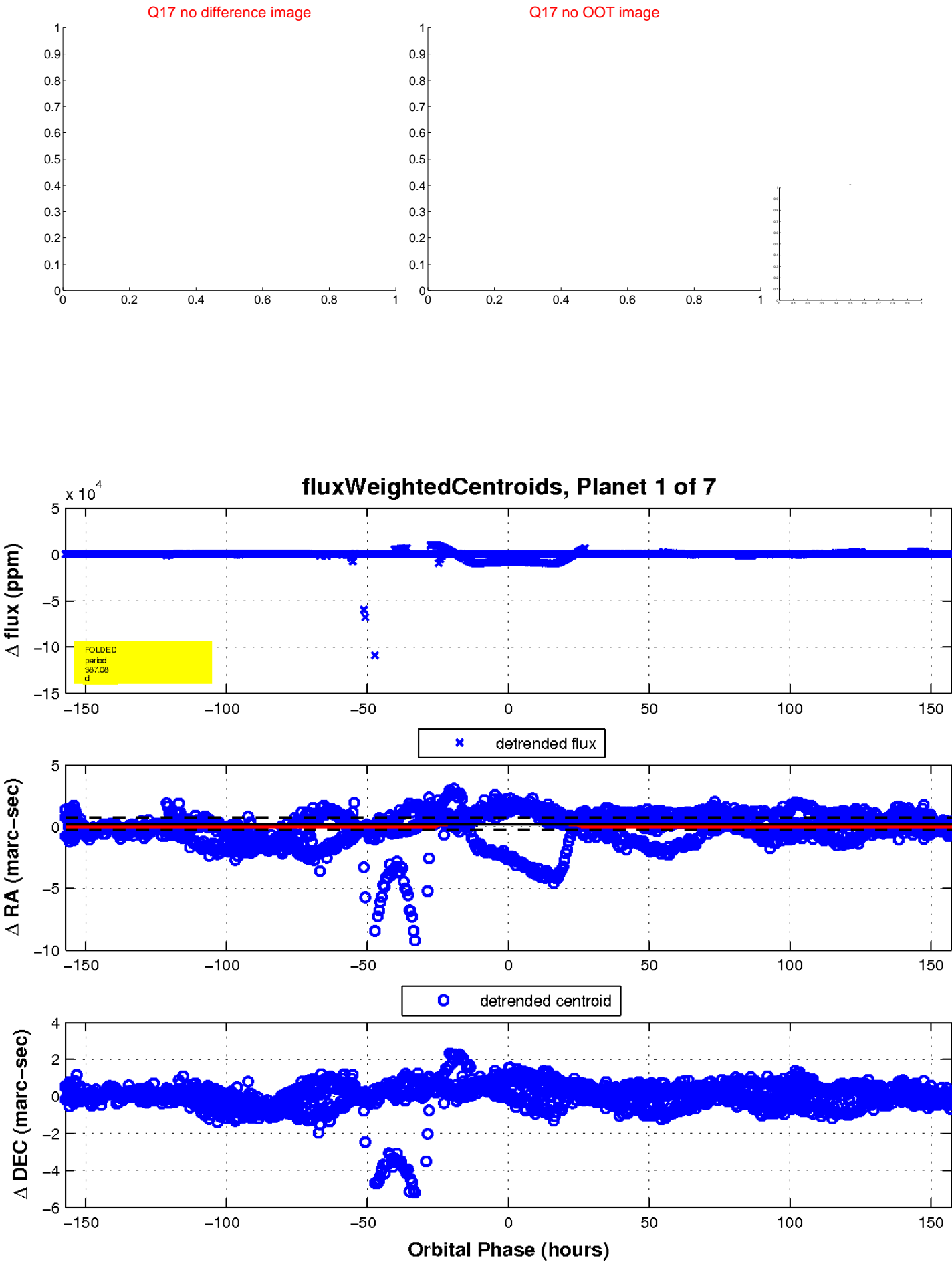
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



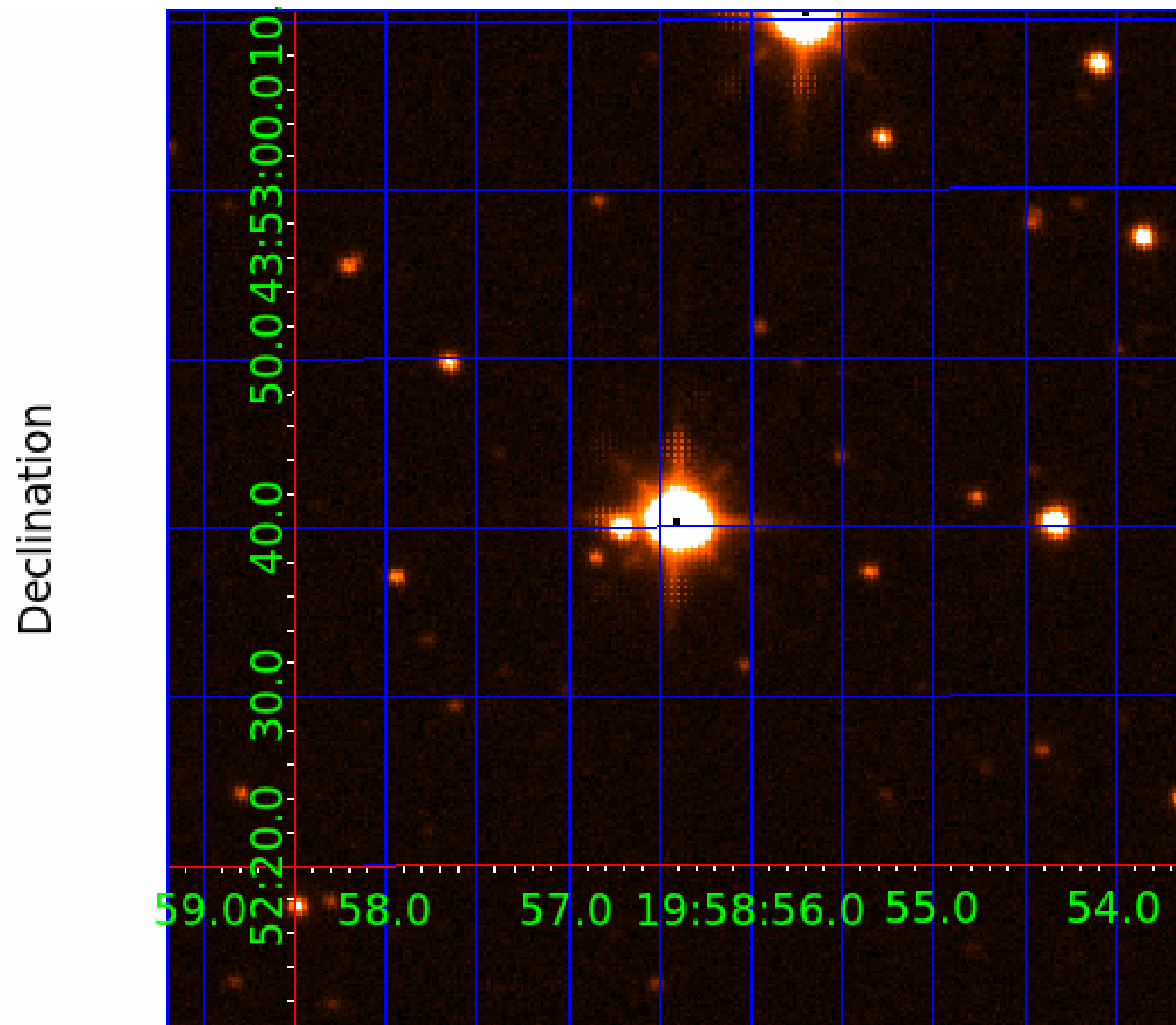
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056313

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

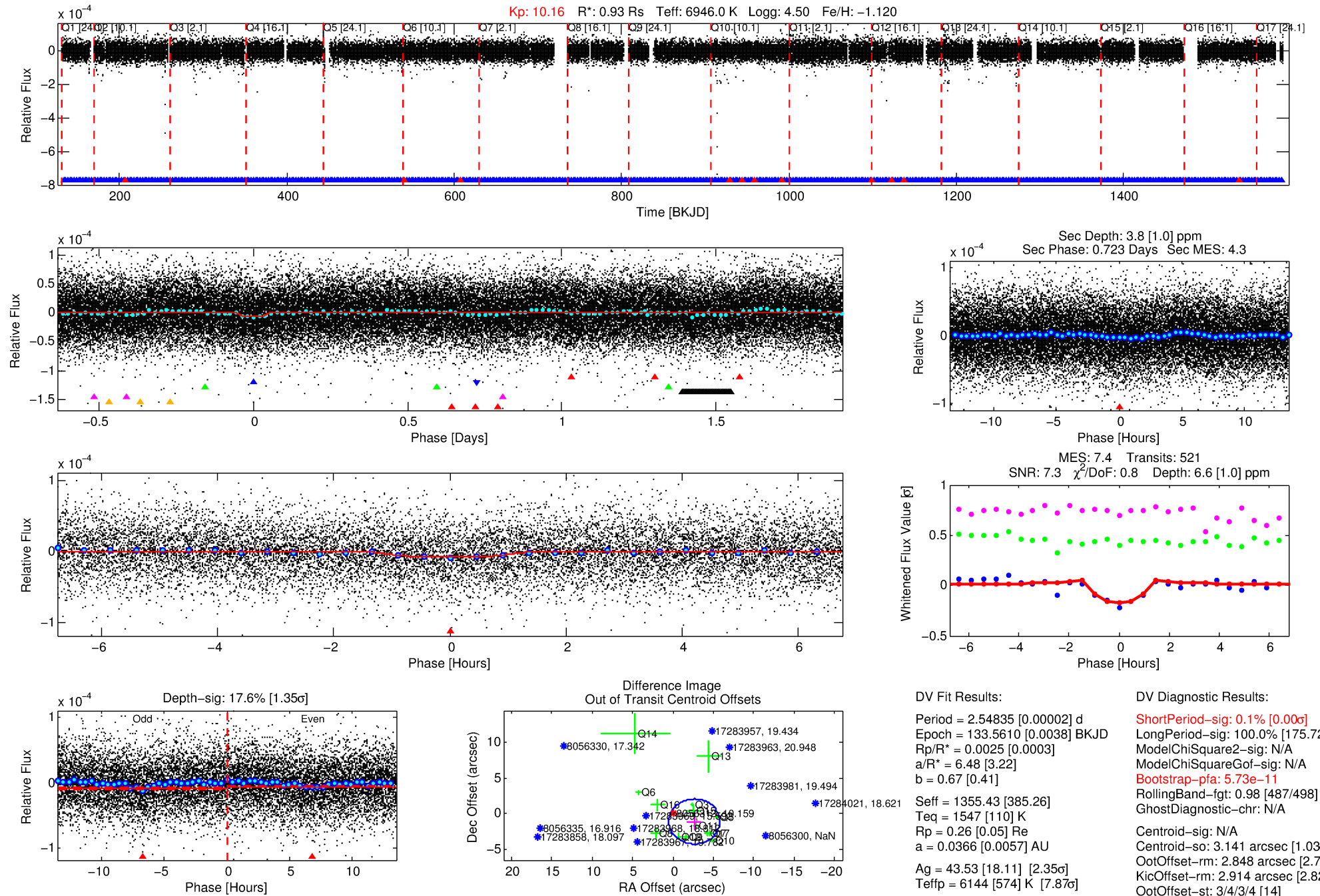
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-02

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 2 of 7 Period: 2.548 d



DV Fit Results:

Period = 2.54835 [0.00002] d
Epoch = 133.5610 [0.0038] BKJD
Rp/R* = 0.0025 [0.0003]
a/R* = 6.48 [3.22]
b = 0.67 [0.41]
Seff = 1355.43 [385.26]
Teff = 1547 [110] K
Rp = 0.26 [0.05] Re
a = 0.0366 [0.0057] AU
Ag = 43.53 [18.11] [2.35 σ]
Teffp = 6144 [574] K [7.87 σ]

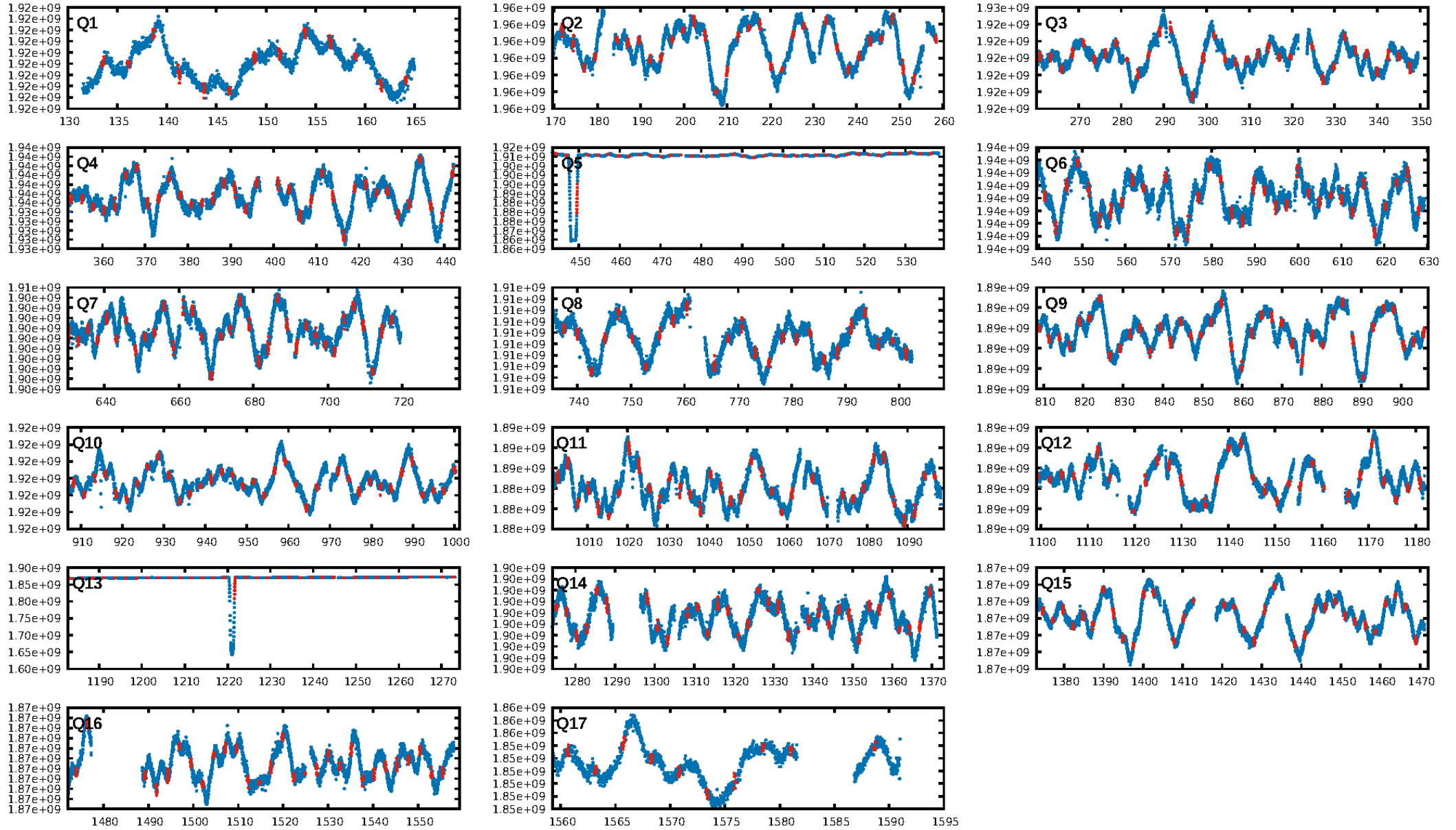
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: 100.0% [175.72 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.73e-11
RollingBand-fgt: 0.98 [487/498]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 3.141 arcsec [1.03 σ]
OotOffset-rm: 2.848 arcsec [2.70 σ]
KicOffset-rm: 2.914 arcsec [2.82 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 1.00 [17/17]

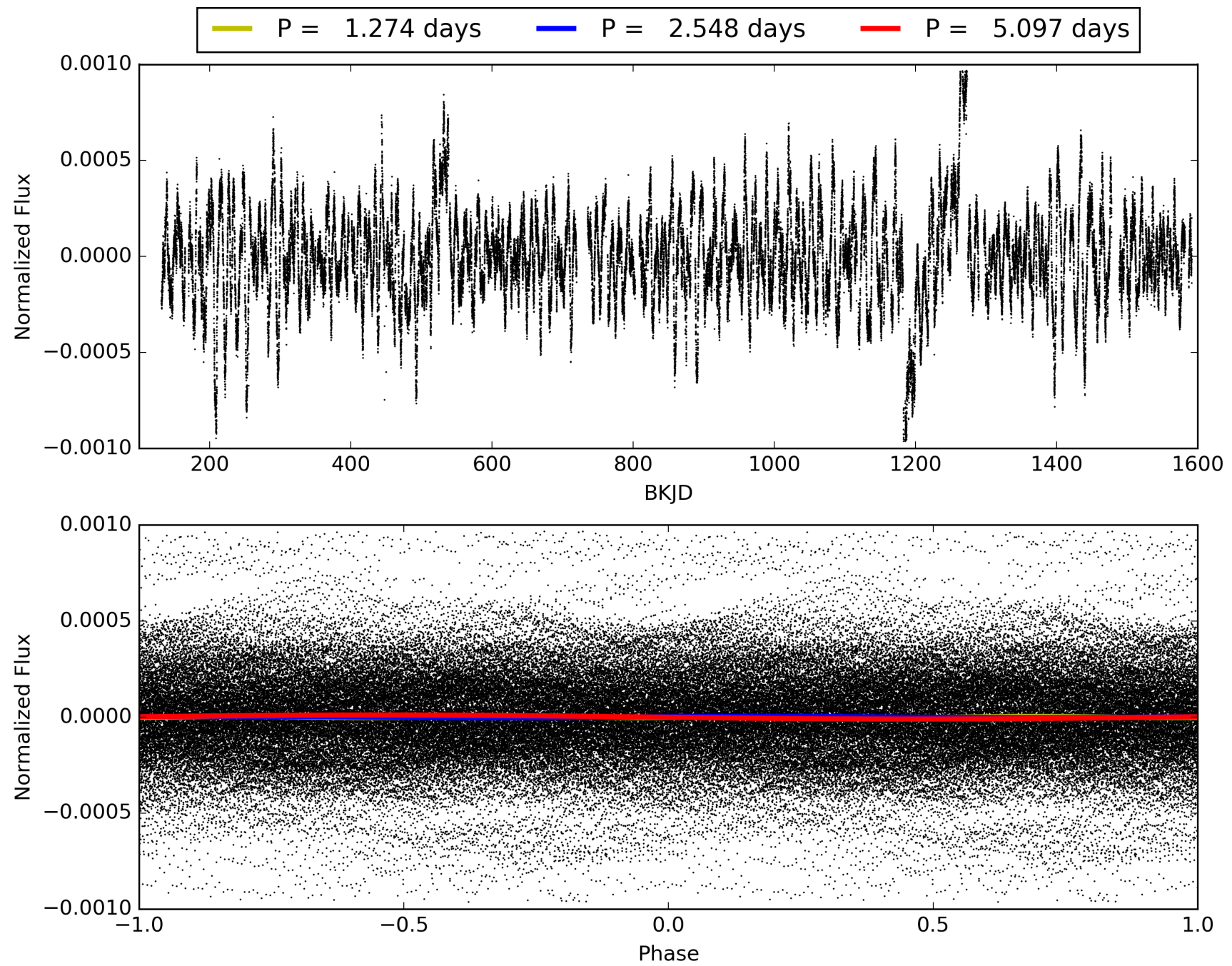
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:08 Z

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

TCE 008056313-02, PDC Light Curves

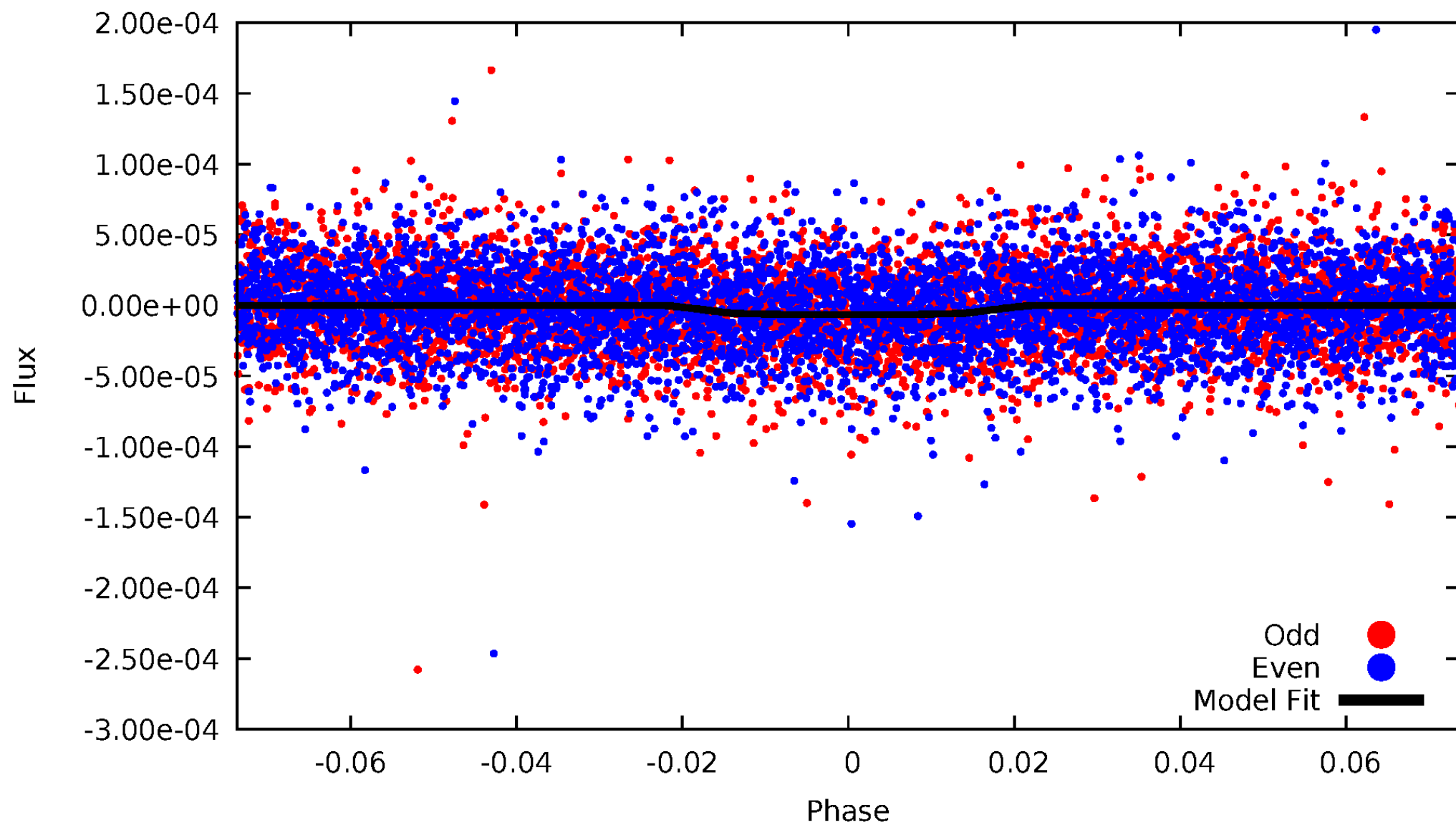


TCE 008056313-02



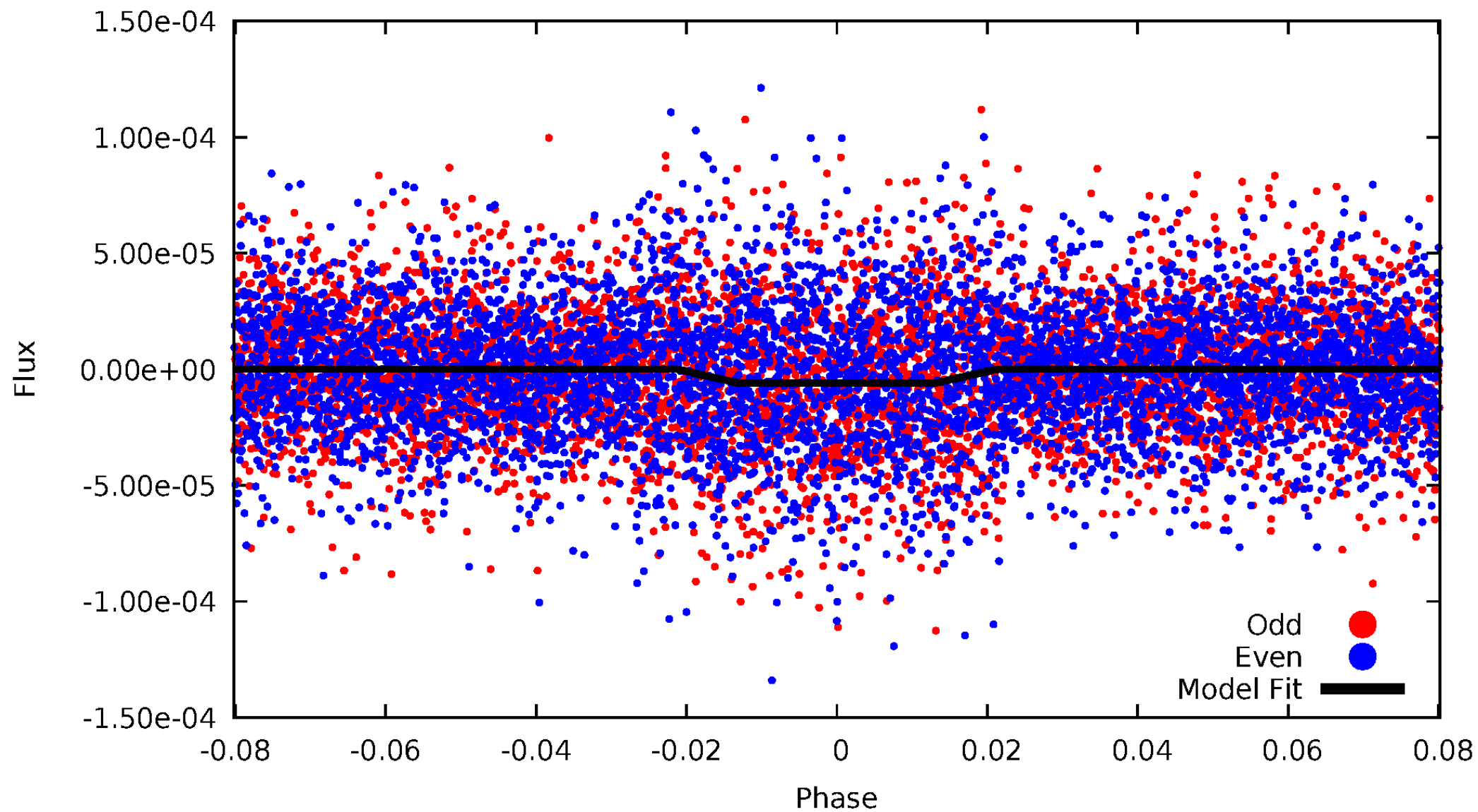
DV Odd/Even

TCE 008056313-02



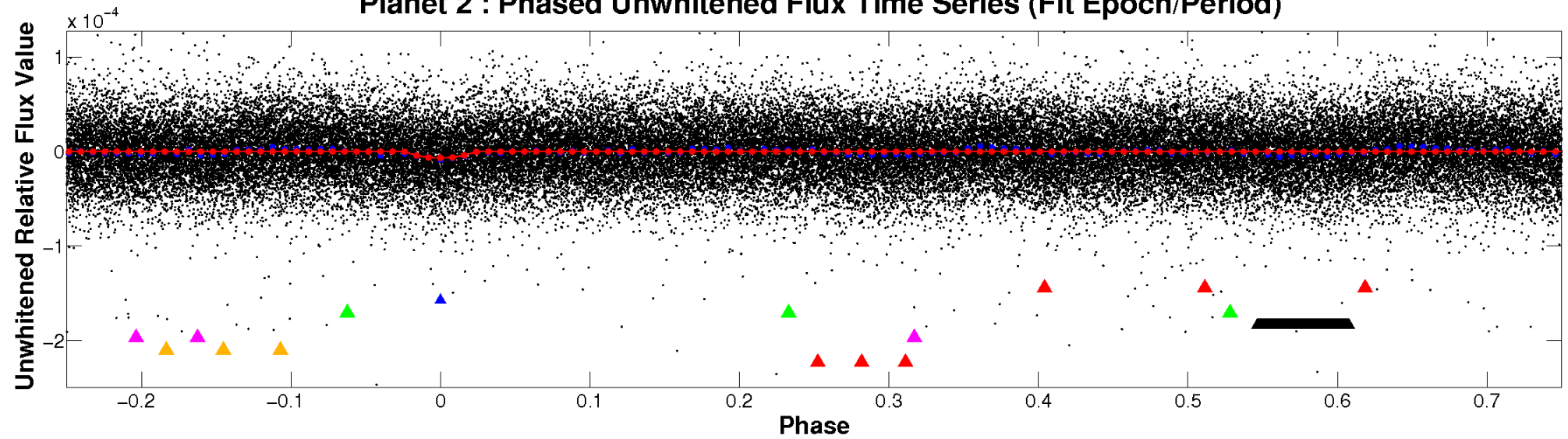
ALT Odd/Even

TCE 008056313-02

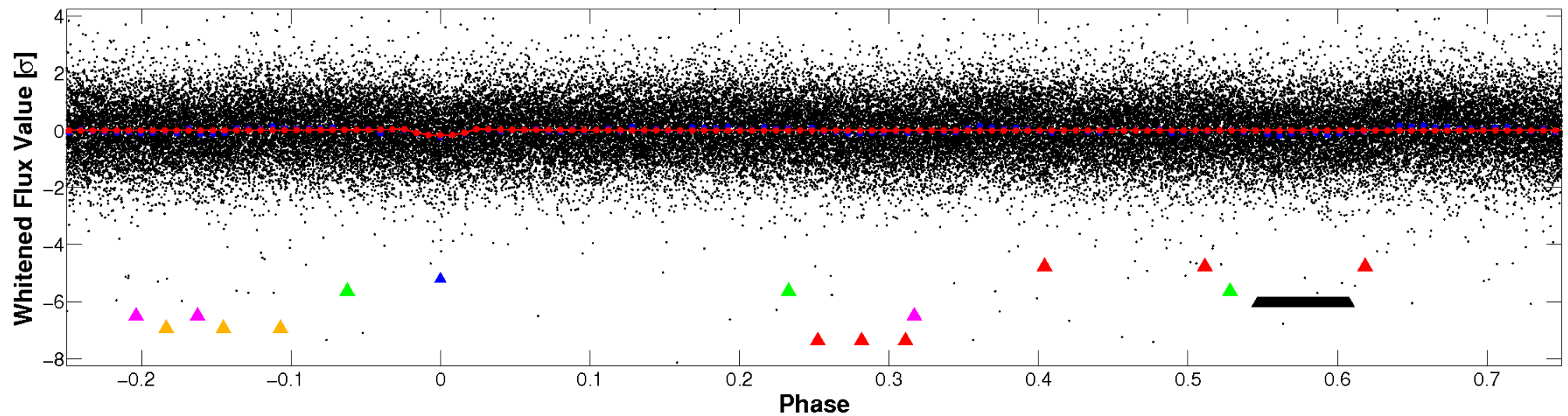


Non-Whitened Vs. Whitened Light Curve

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

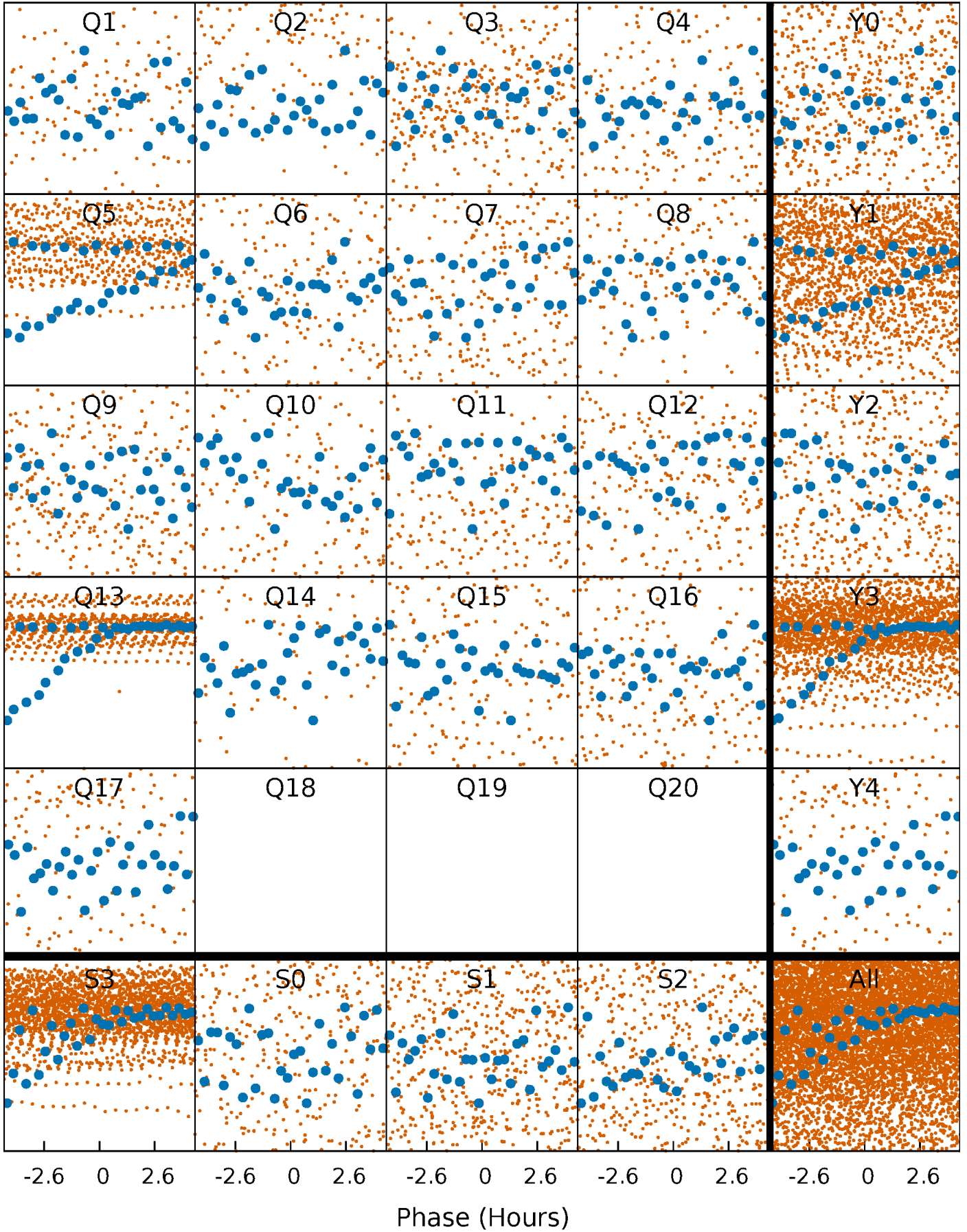


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



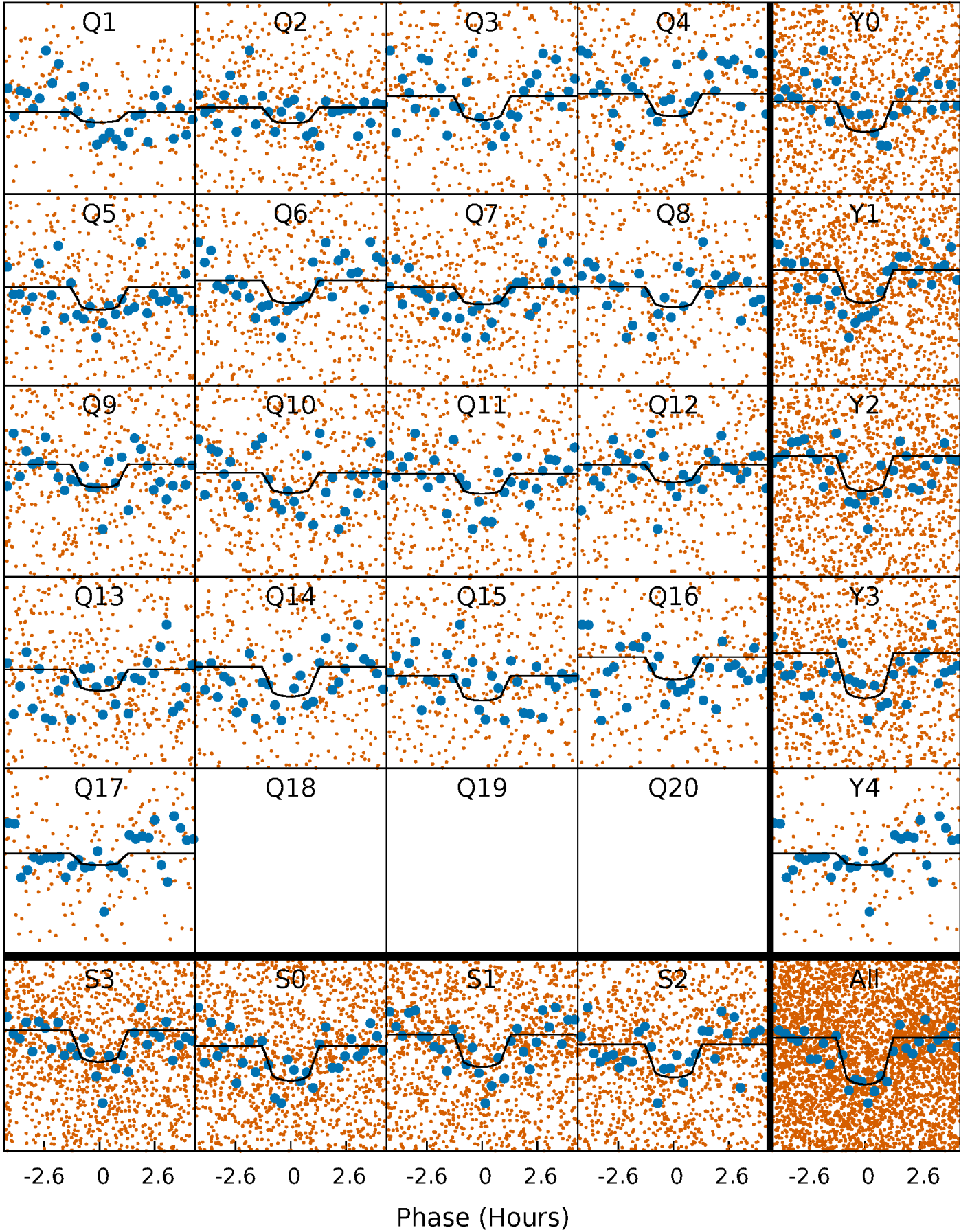
PDC Quarter-Phased Transit Curves

TCE 008056313-02 P= 2.548349 Days $T_0=133.561024$ (BKJD)



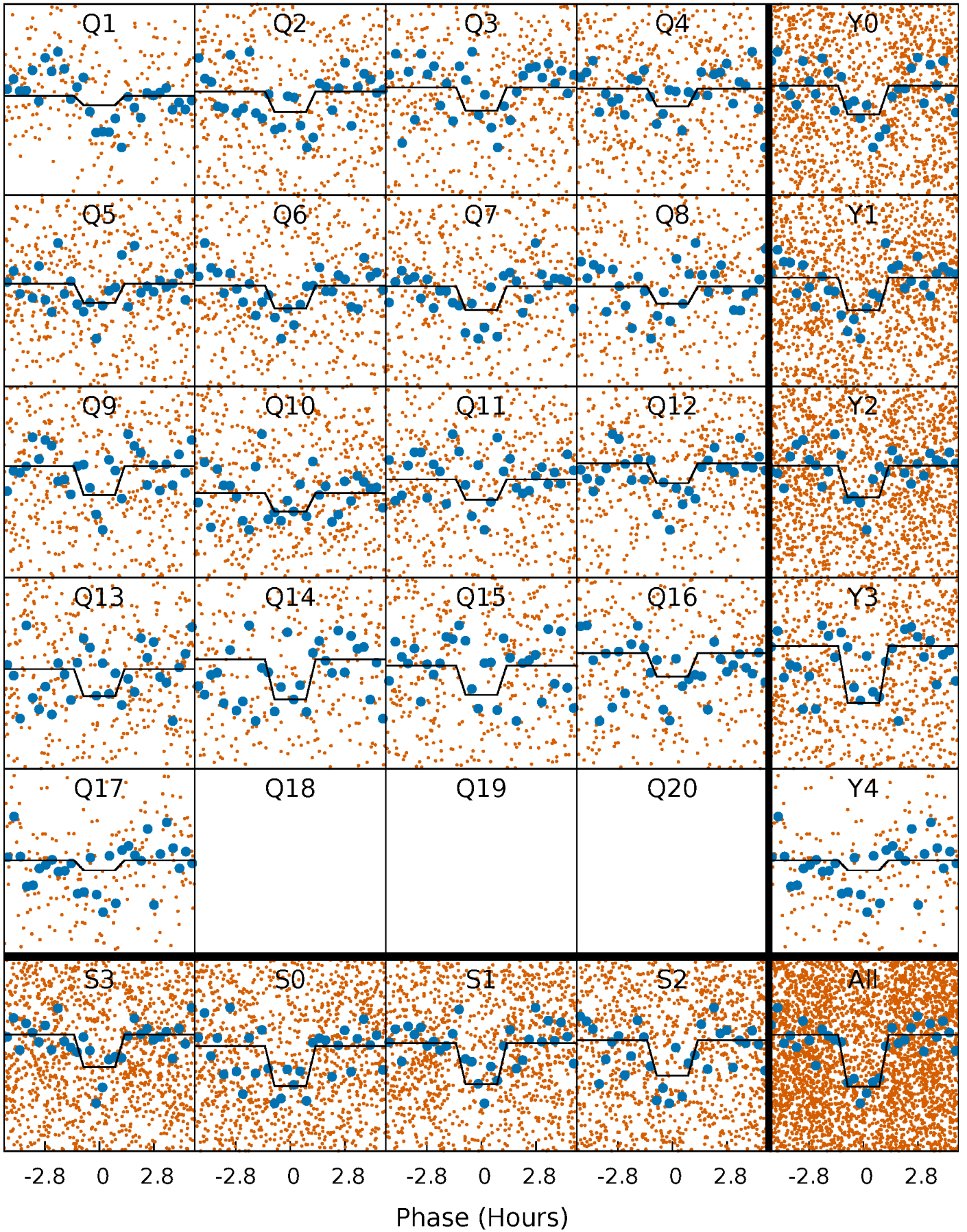
DV Quarter-Phased Transit Curves

TCE 008056313-02 P= 2.548349 Days $T_0=133.561024$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

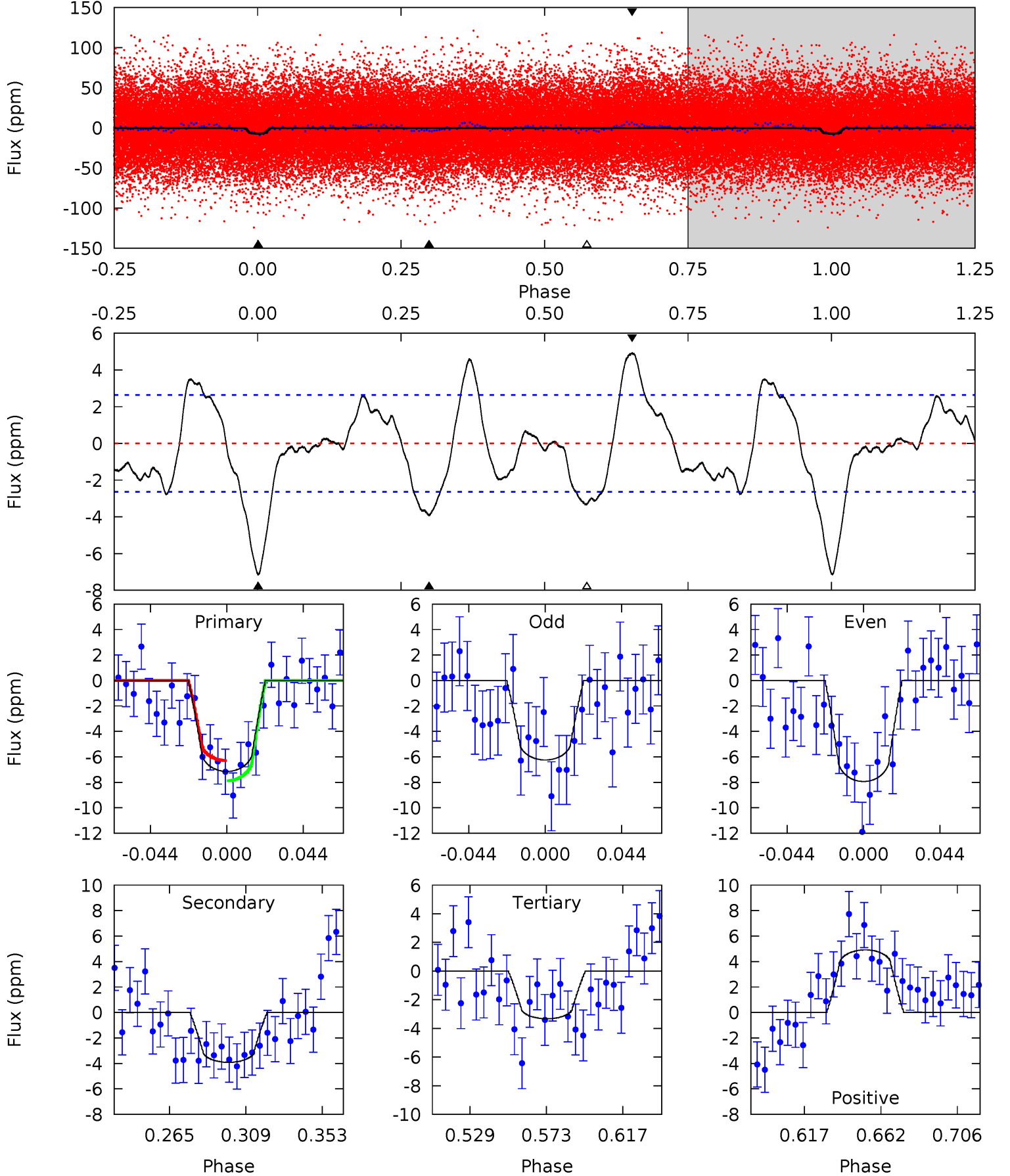
TCE 008056313-02 P= 2.548366 Days $T_0=133.560902$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-02, P = 2.548349 Days, E = 131.012675 Days

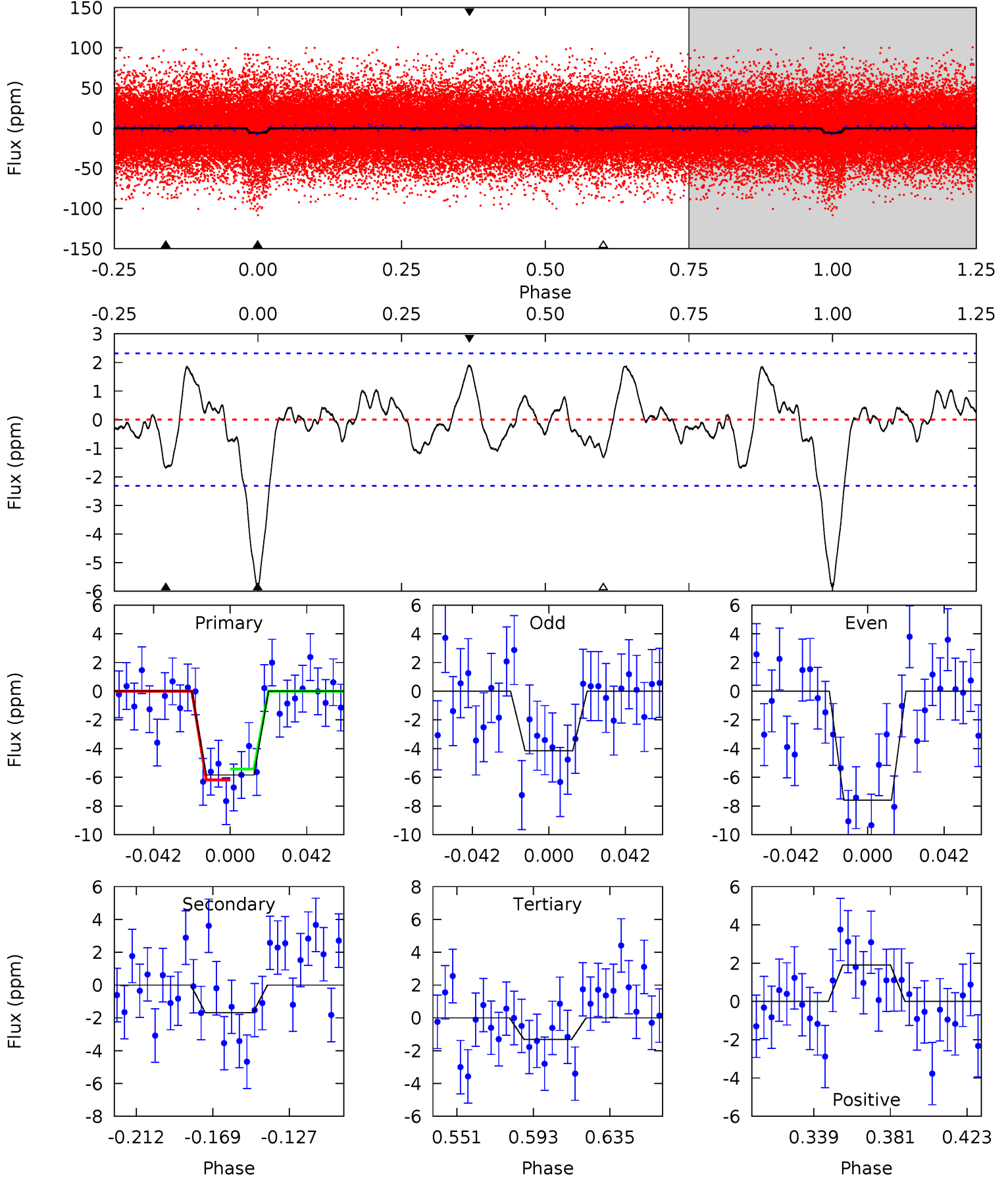
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	7.03	5.98	8.83	4.73	2.01	3.54	6.85	4.00	1.06	-1.80	1.53	1.00	0.41	1.42



Alt Model-Shift Uniqueness Test

008056313-02, P = 2.548366 Days, E = 131.012536 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	3.46	2.69	3.90	4.74	2.03	1.40	9.28	8.07	0.77	-0.44	3.53	1.06	0.25	0



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$0.26^{+0.04}_{-0.03}$	2192^{+115}_{-96}	6112^{+547}_{-432}	41^{+15}_{-11}
Alt.	-2 ± 0	$0.25^{+0.04}_{-0.03}$	2196^{+108}_{-101}	5115^{+458}_{-449}	19^{+10}_{-7}

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 $A_{obs} \gg 1.0$

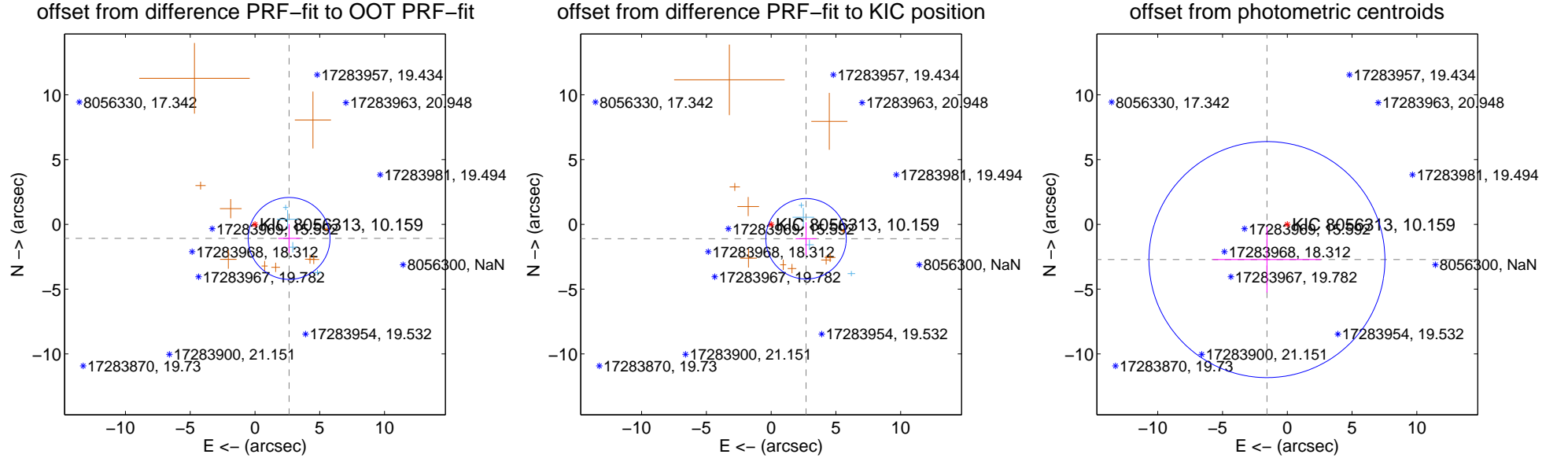
DV Centroid Data

Supplemental centroid analysis for 008056313-02. **Kepler magnitude: 10.16.** Transit SNR 7.33

There are 4 quarters with good PRF difference image offsets

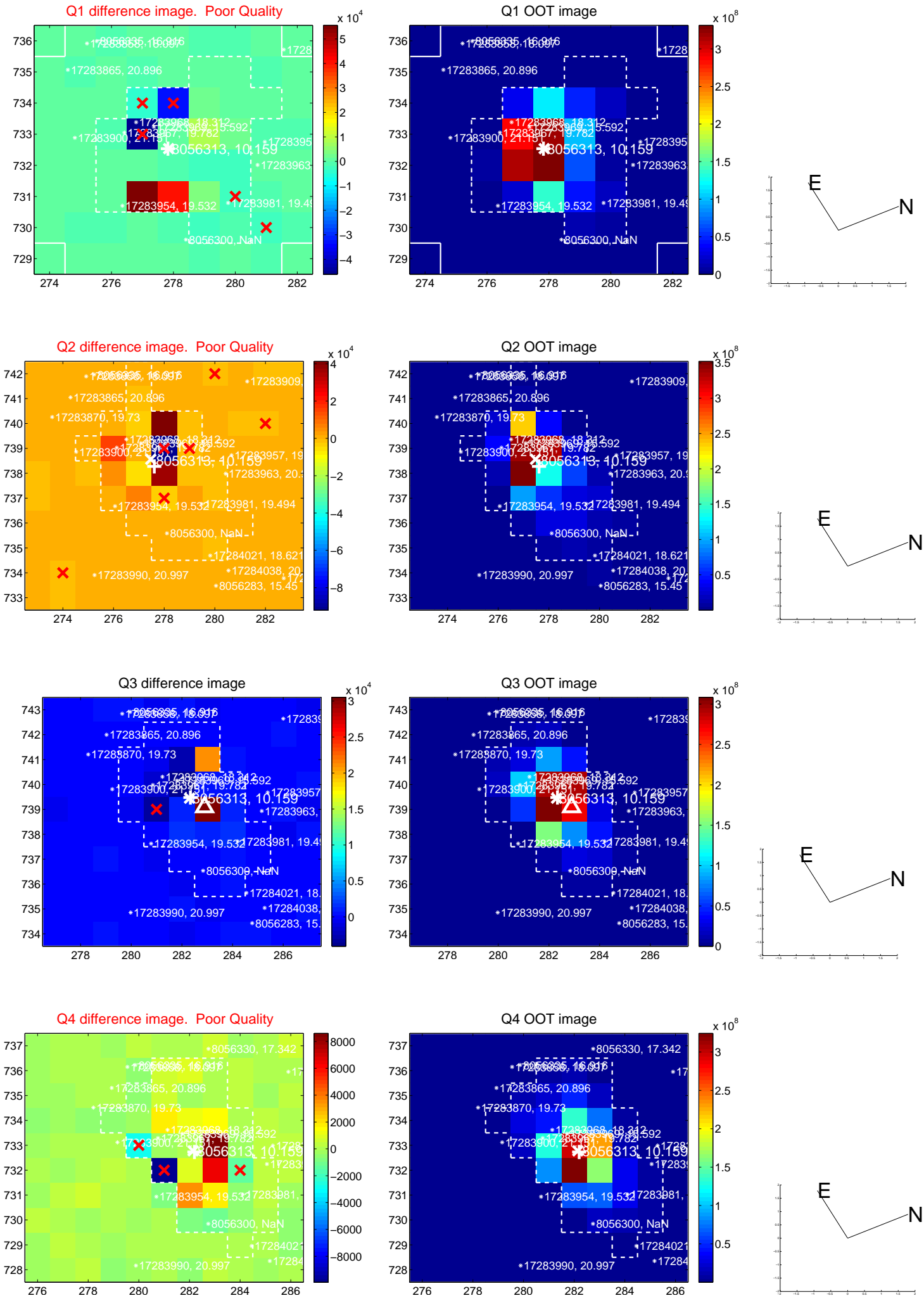
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.848 ± 1.053	2.70	-2.634 ± 0.844	-1.085 ± 1.112
PRF-fit source offset from KIC position	2.914 ± 1.035	2.82	-2.694 ± 0.803	-1.112 ± 1.274
photometric centroid source offset	3.14 ± 3.04	1.03	1.57 ± 4.17	-2.72 ± 2.55

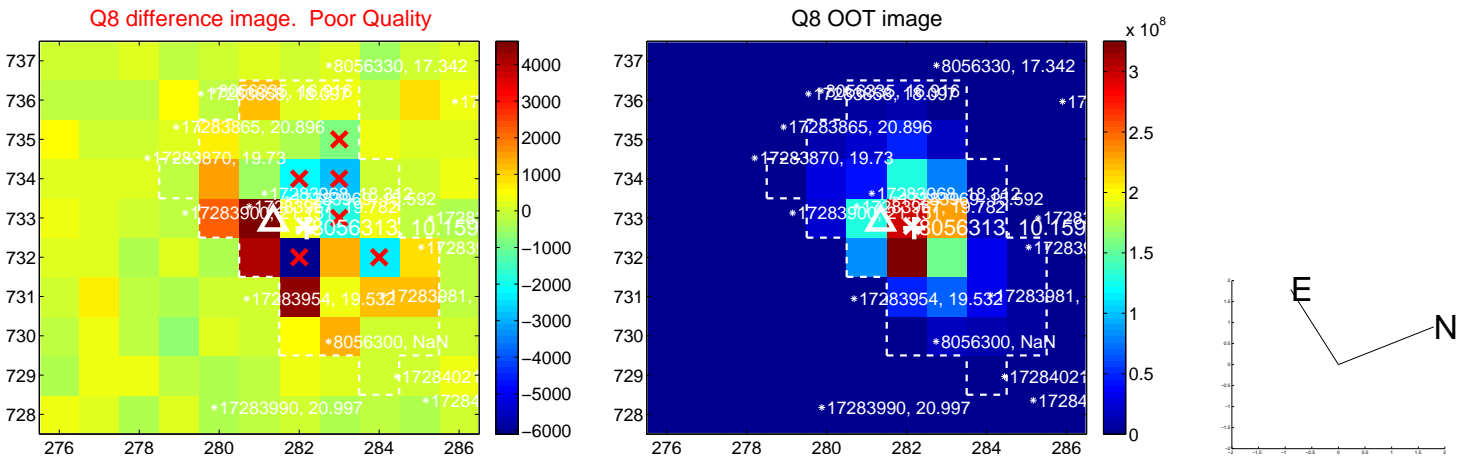
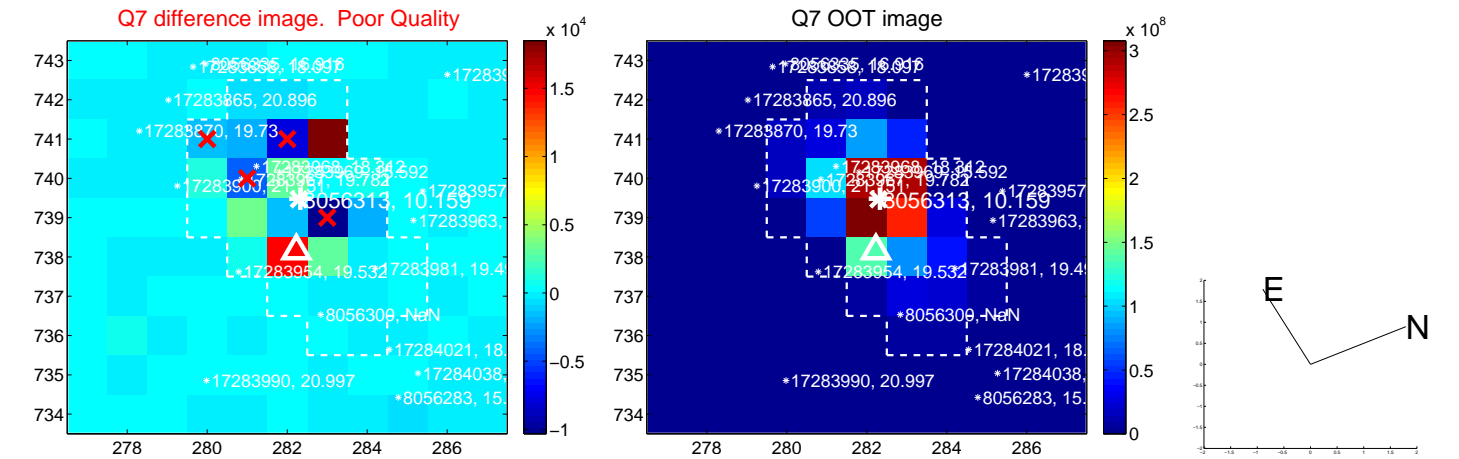
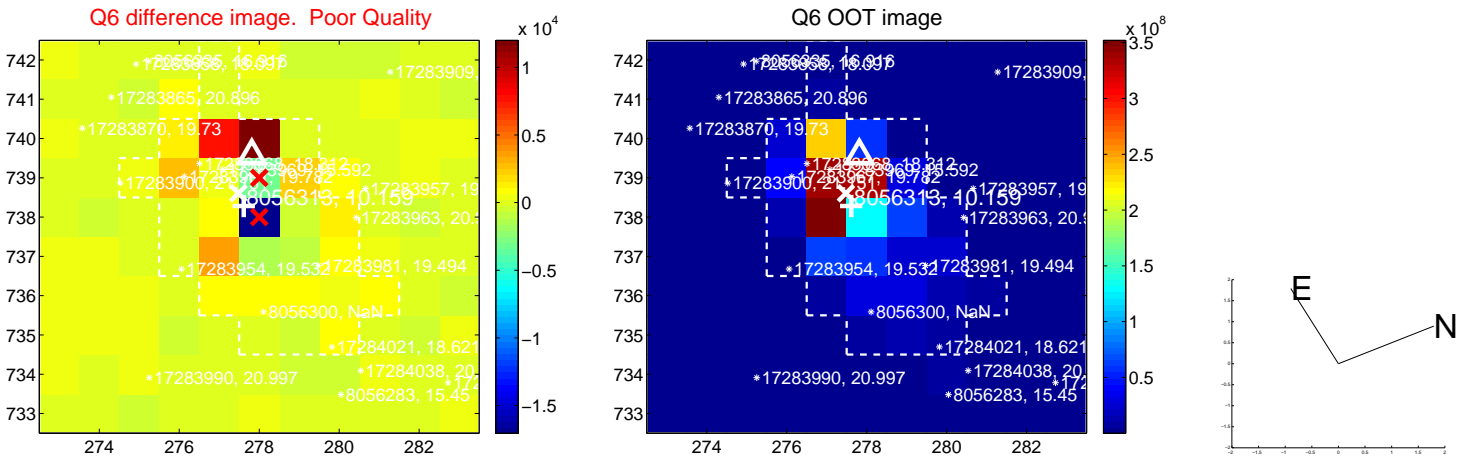
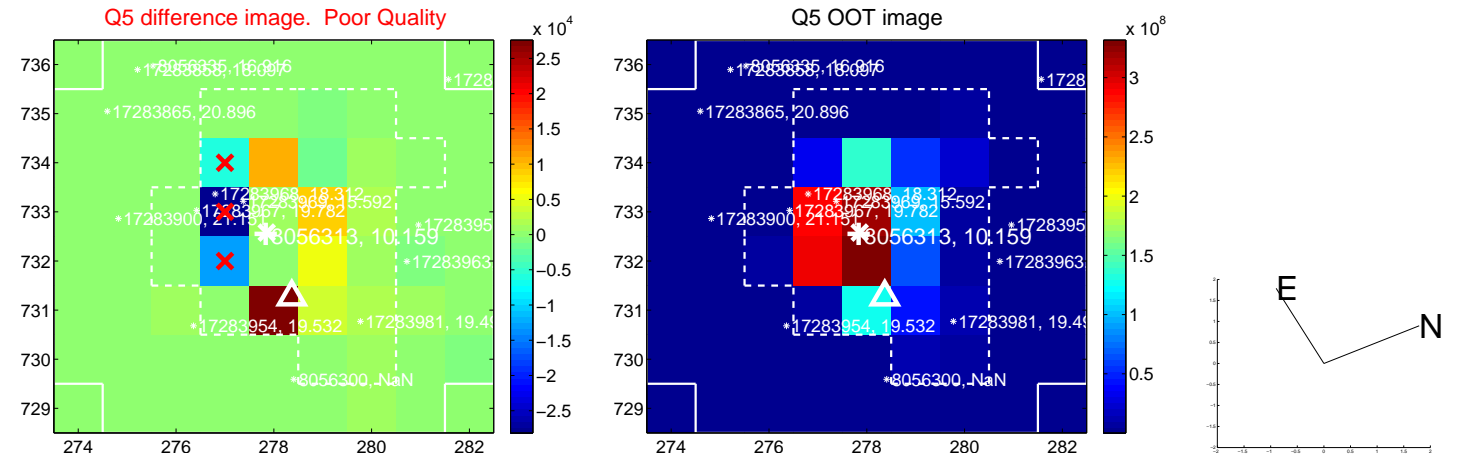


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

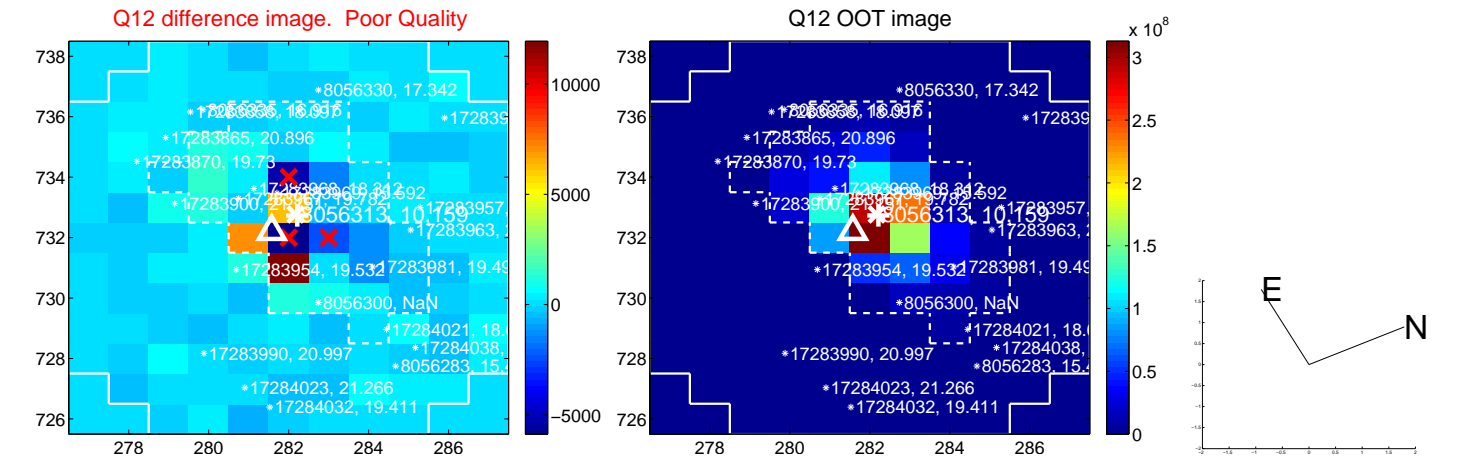
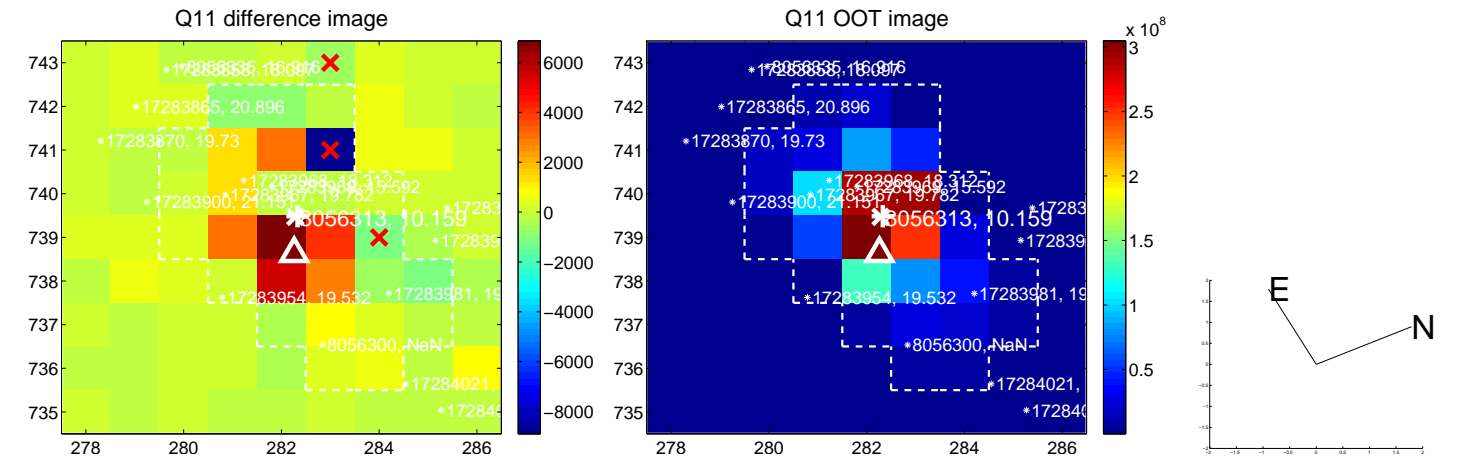
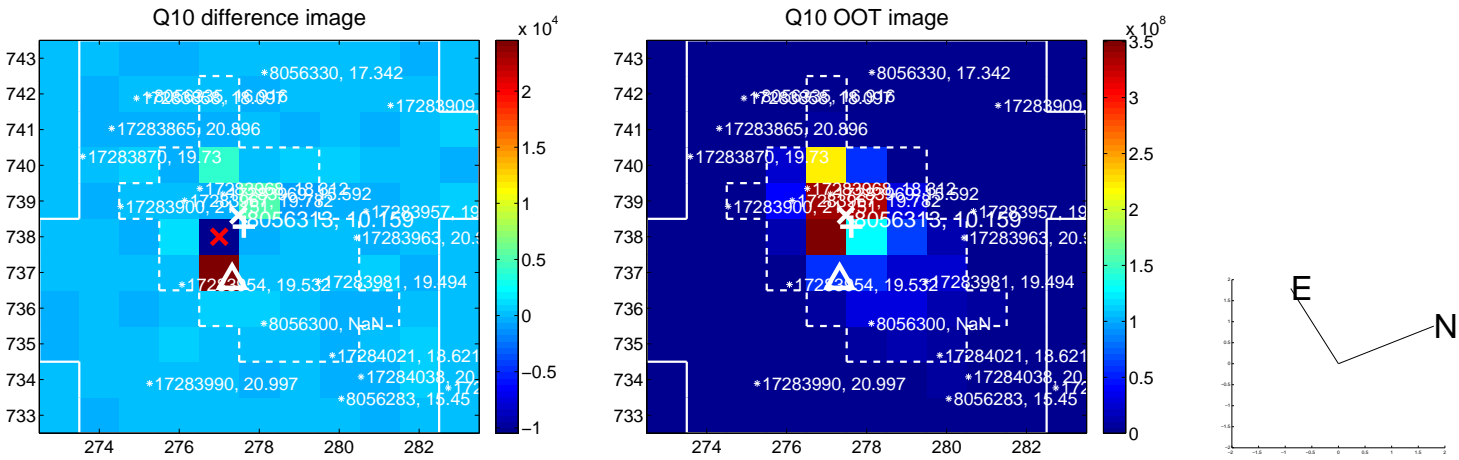
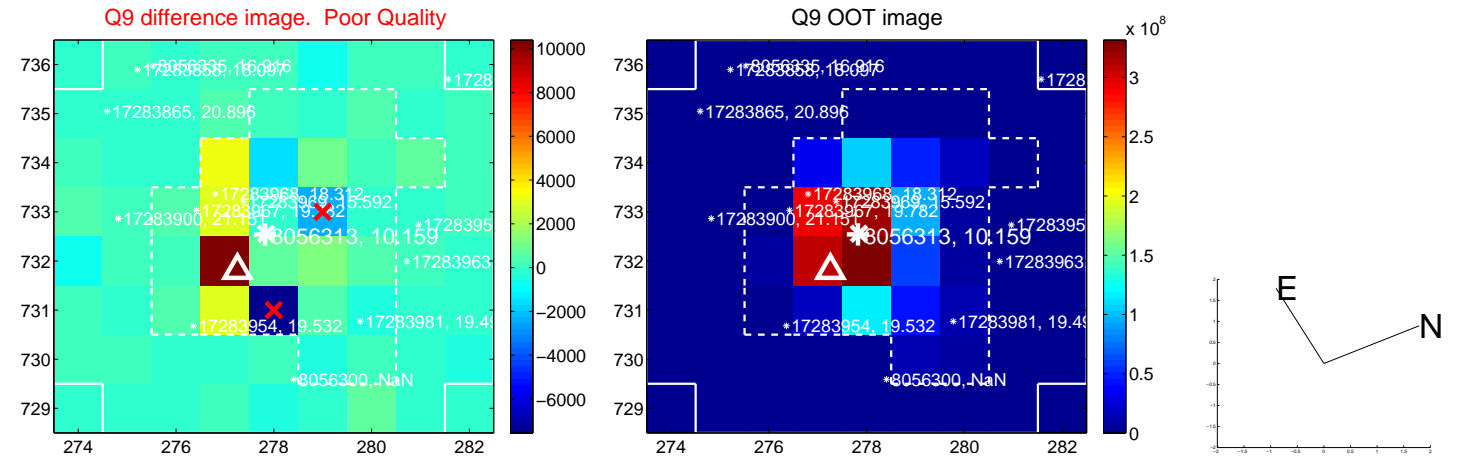
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



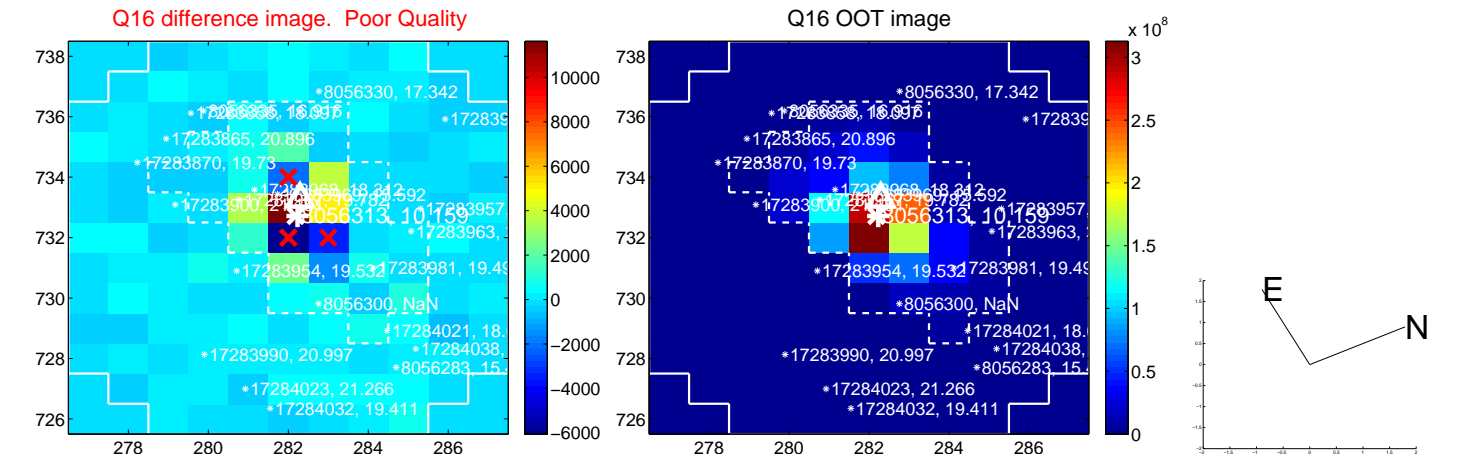
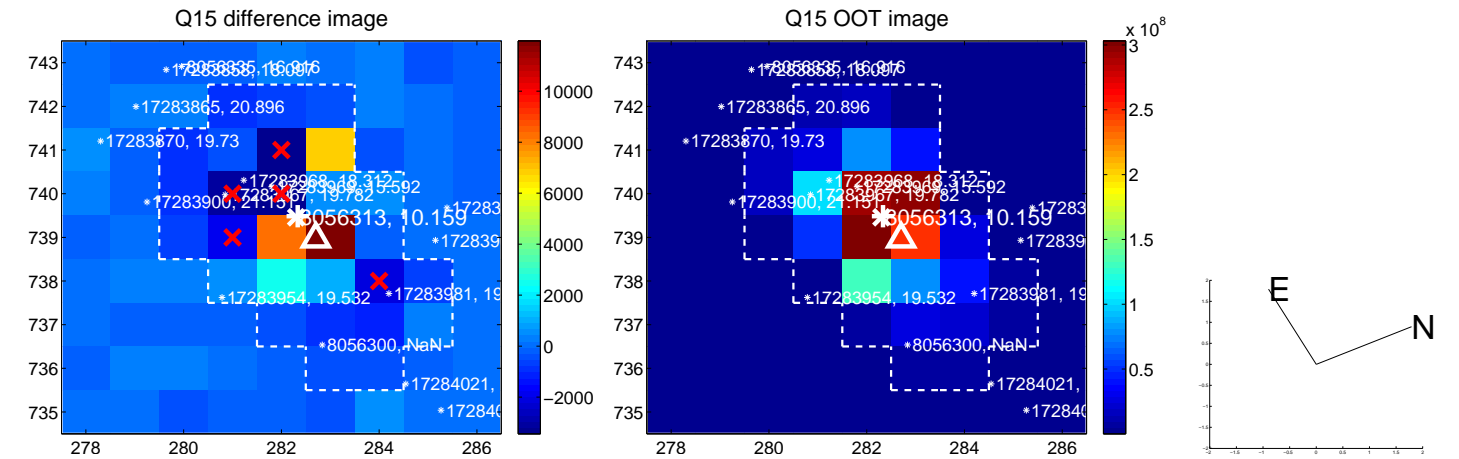
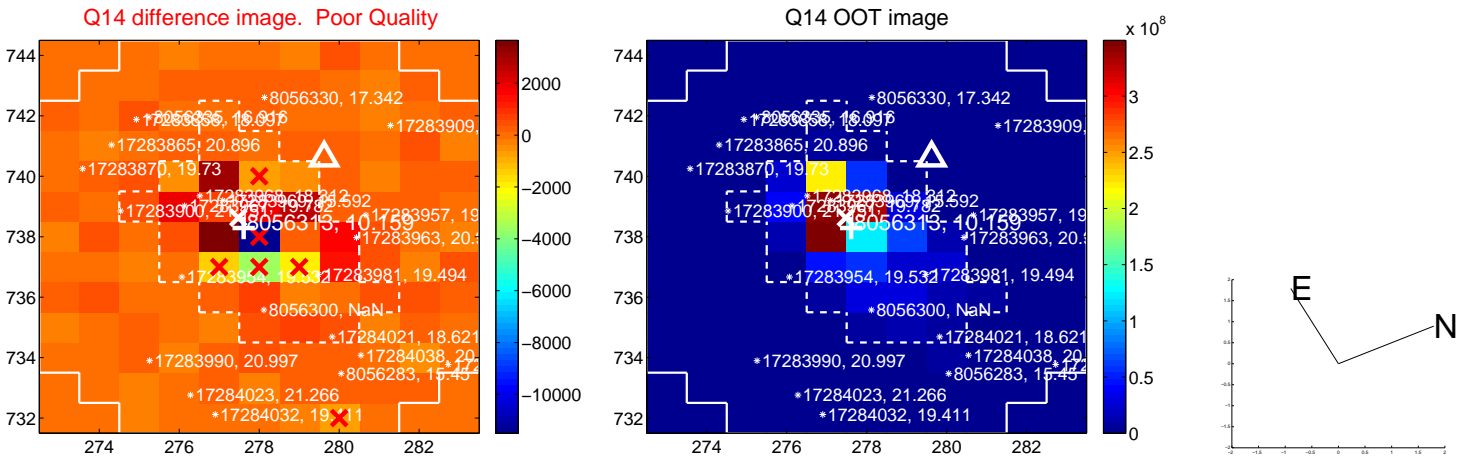
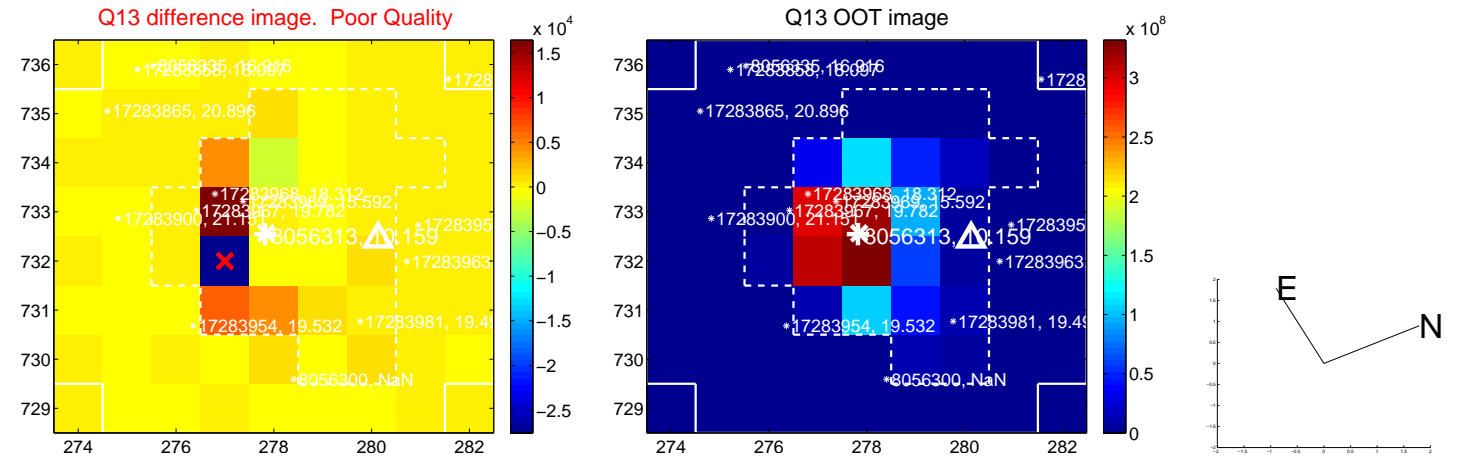
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



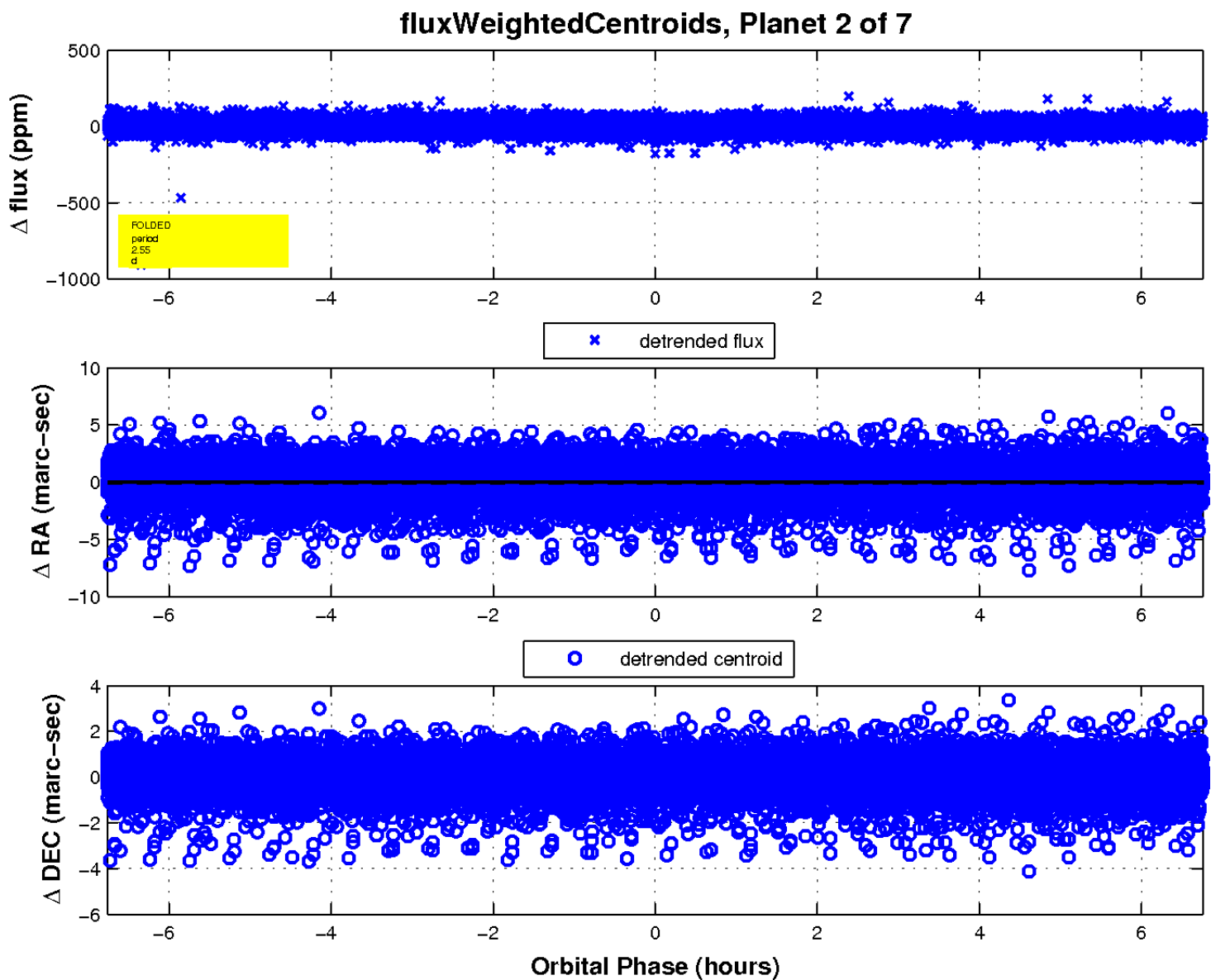
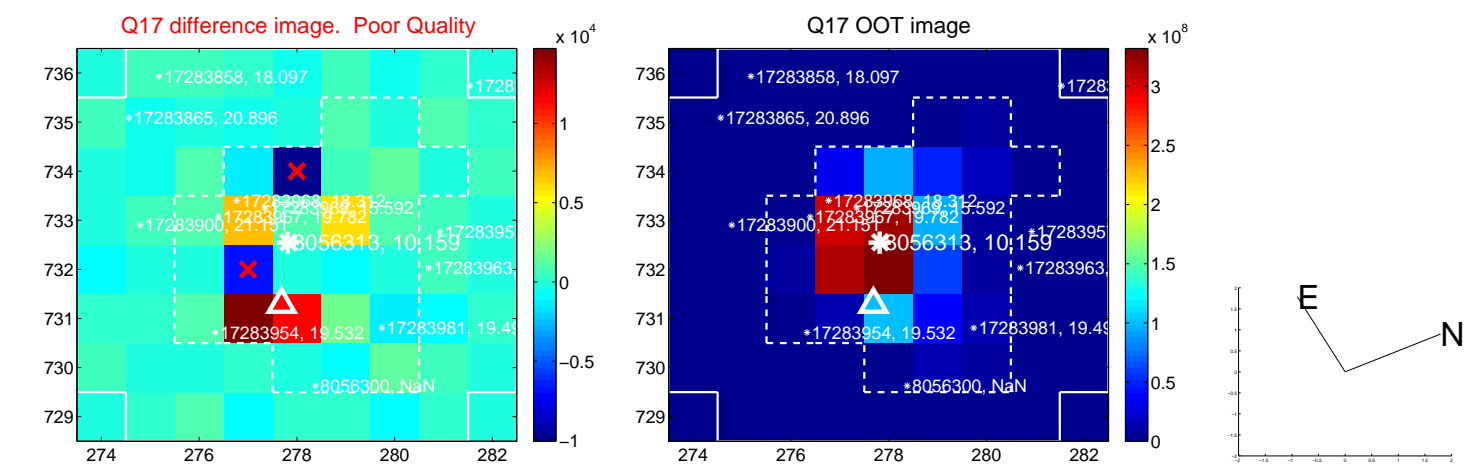
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



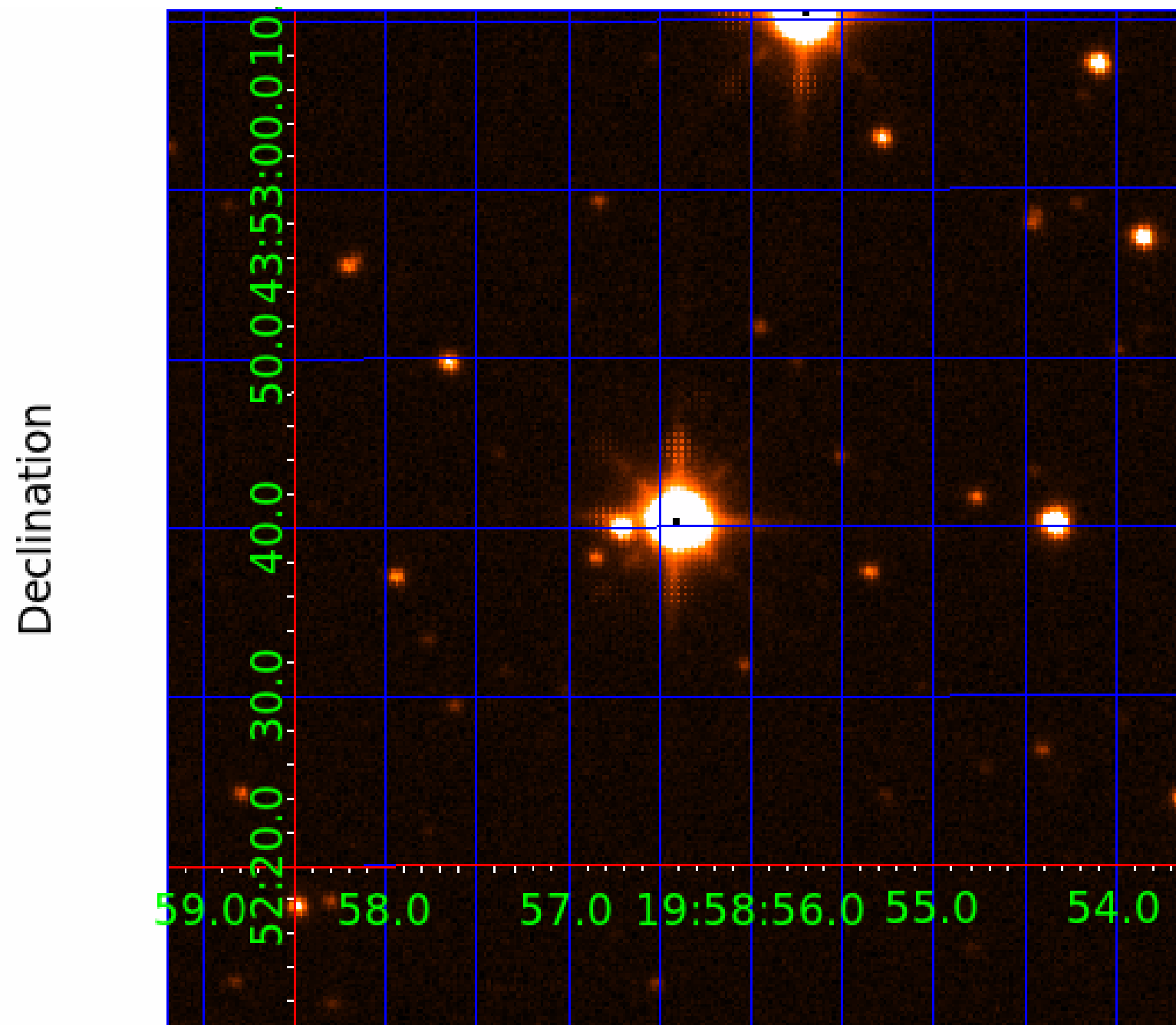
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056313

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})
008056313-01	OBS	No	387.075870	448.584170	109.7	52.470	523.0	5.6	0.93	6946	1.10	1.67
008056313-02	OBS	No	2.548349	133.561024	6.6	2.253	7.4	7.3	0.93	6946	0.26	1355.43
008056313-03	OBS	No	487.487076	209.852706	86.6	11.674	7.8	7.1	0.93	6946	0.97	1.23
008056313-04	OBS	No	2.548076	132.561245	6.3	7.085	7.9	8.3	0.93	6946	0.27	1355.62
008056313-05	OBS	No	470.118077	571.463056	146.3	13.078	15.4	10.1	0.93	6946	1.43	1.29
008056313-06	OBS	No	529.959353	462.025336	94.7	11.829	10.1	6.8	0.93	6946	1.05	1.10
008056313-07	OBS	No	560.562110	223.545976	155.1	28.534	8.4	6.9	0.93	6946	1.52	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008056313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

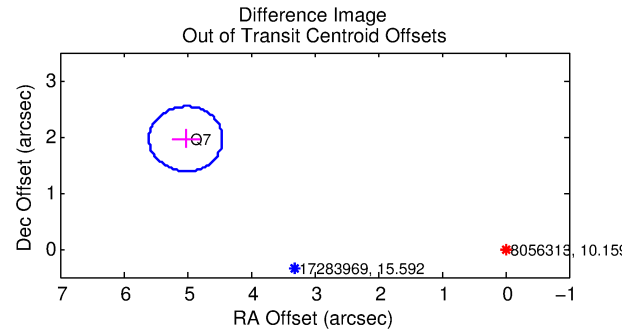
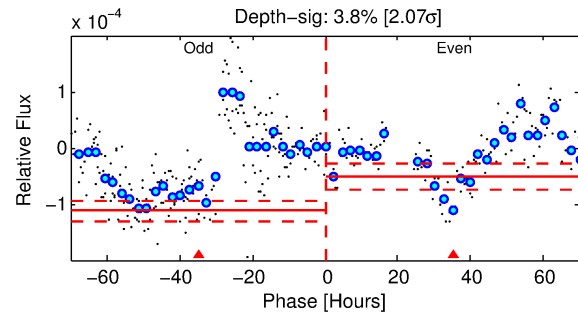
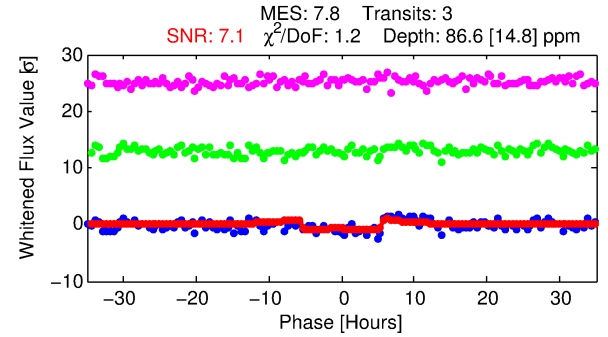
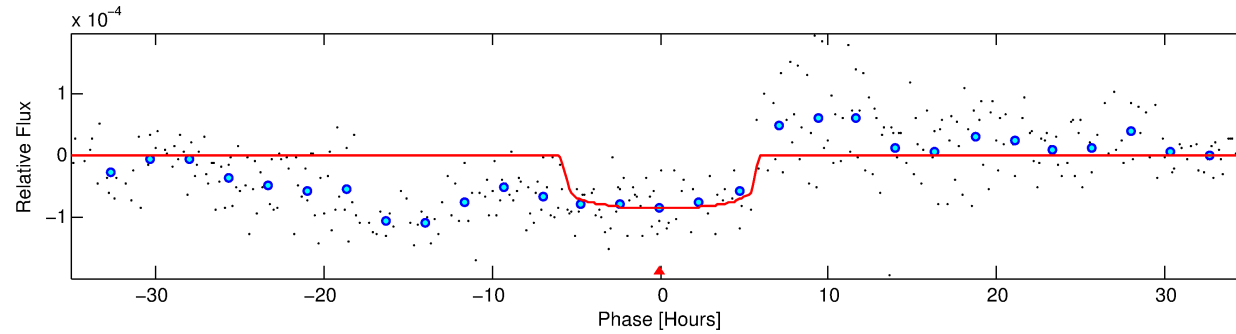
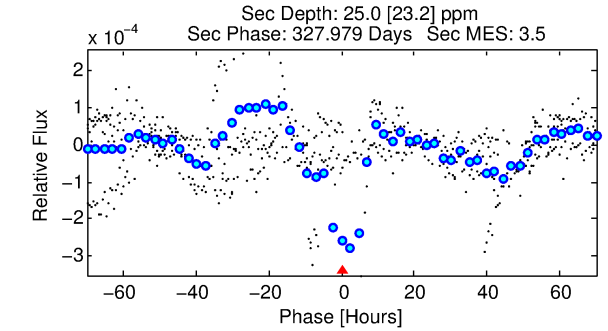
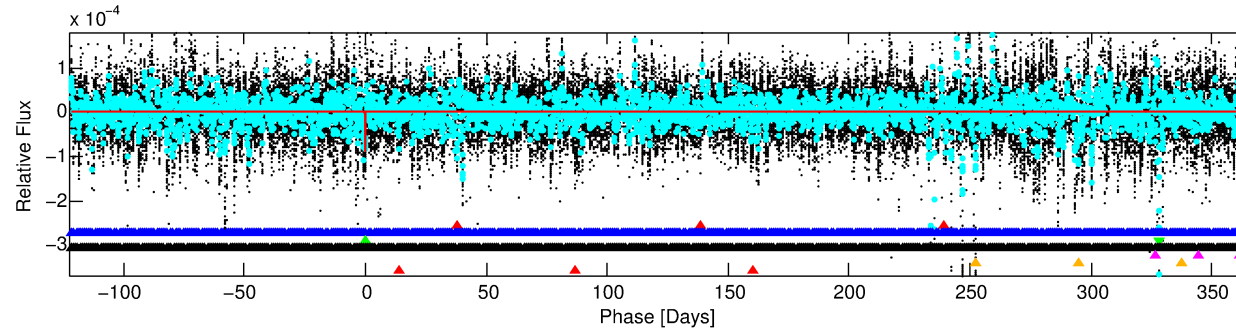
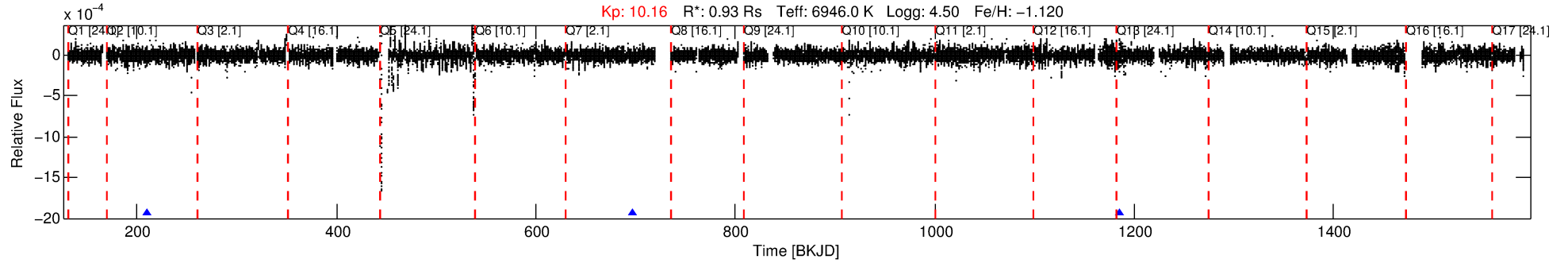
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-03

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 3 of 7 Period: 487.487 d



DV Fit Results:

Period = 487.48708 [0.01012] d
Epoch = 209.8527 [0.0149] BKJD
Rp/R* = 0.0095 [0.0017]
a/R* = 183.35 [162.45]
b = 0.83 [0.34]
Seff = 1.23 [0.35]
Teq = 269 [19] K
Rp = 0.97 [0.25] Re
a = 1.2150 [0.1900] AU
Ag = 21590.72 [22152.65] [0.97σ]
Teffp = 5033 [1270] K [3.75σ]

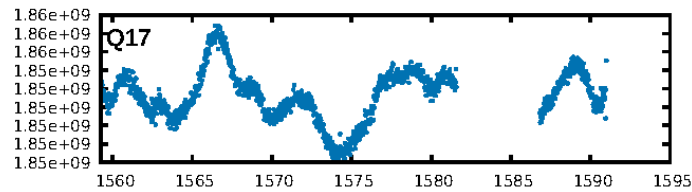
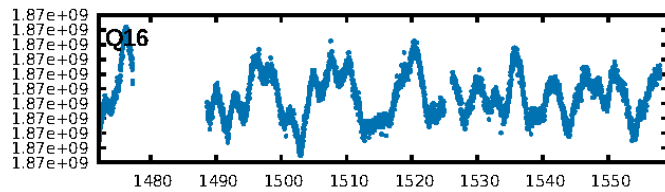
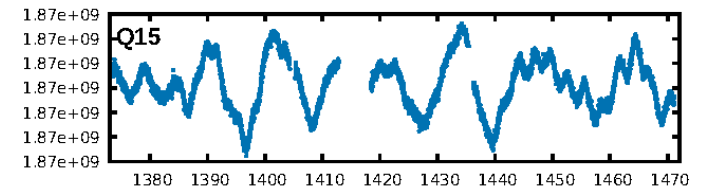
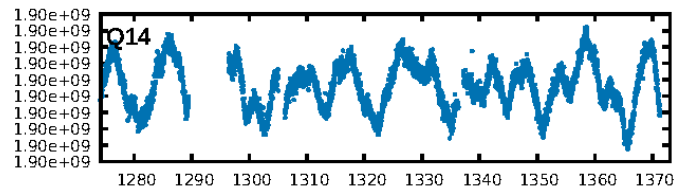
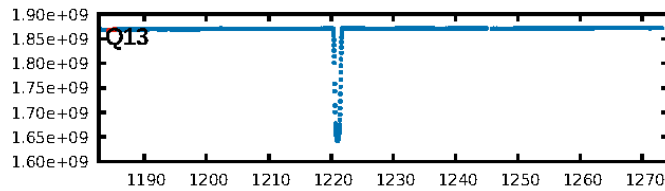
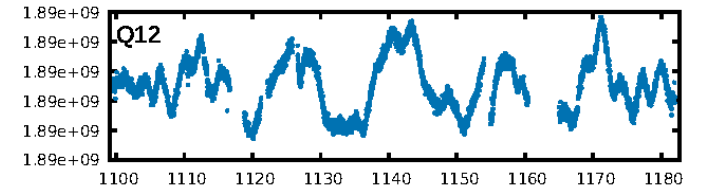
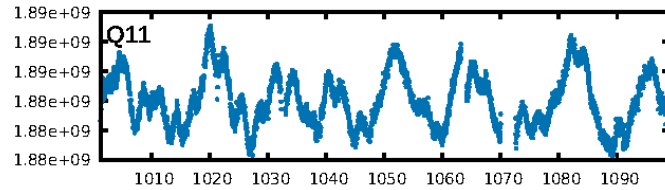
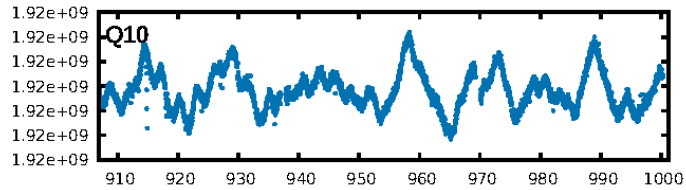
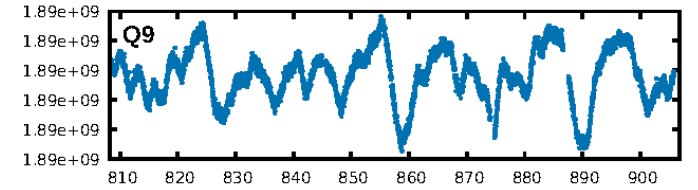
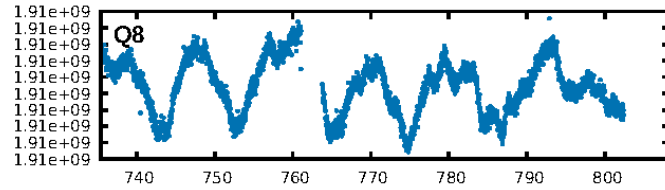
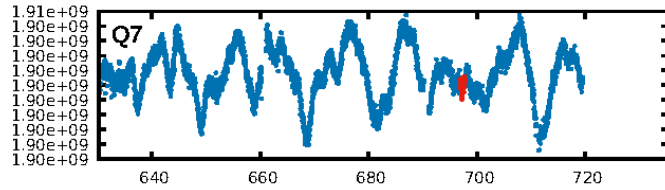
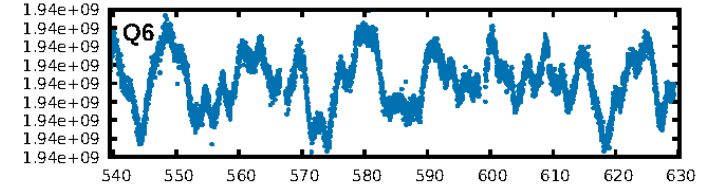
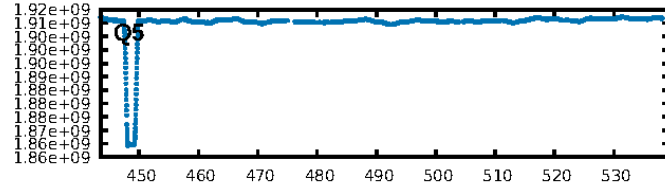
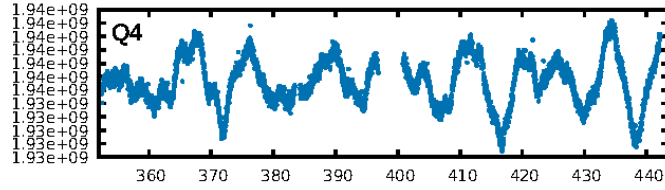
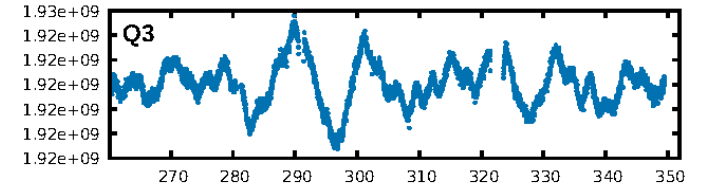
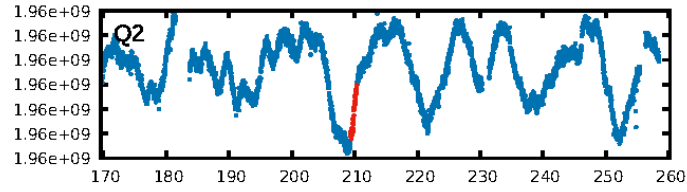
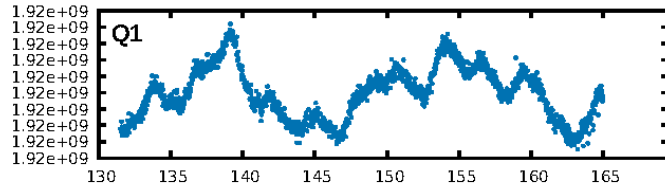
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.78σ]
LongPeriod-sig: 100.0% [61.33σ]
ModelChiSquare2-sig: 34.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 2.75e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 9.272 arcsec [1.77σ]
OotOffset-rm: 5.390 arcsec [28.01σ]
KicOffset-rm: 5.436 arcsec [28.38σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/2]

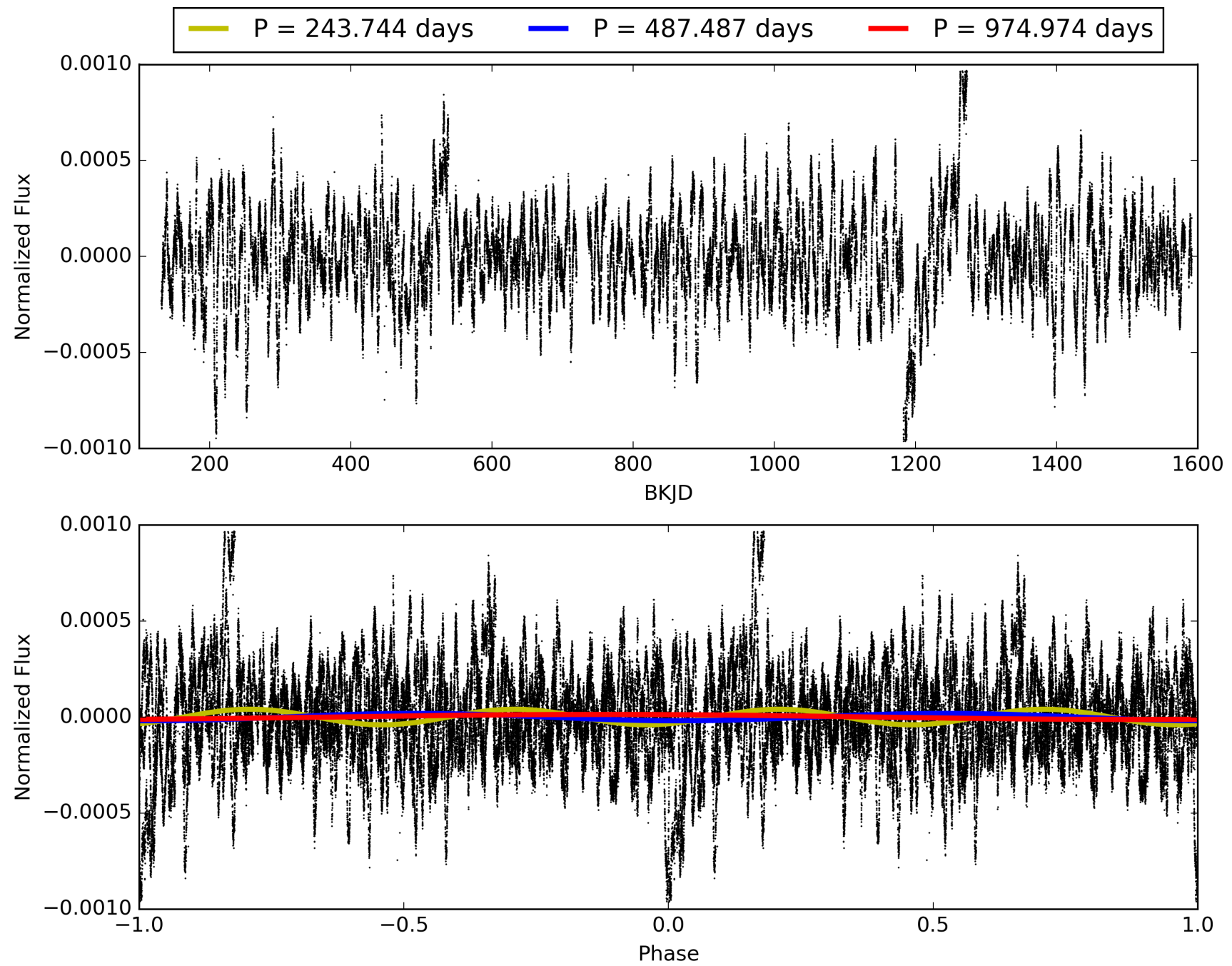
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:19 Z

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

TCE 008056313-03, PDC Light Curves

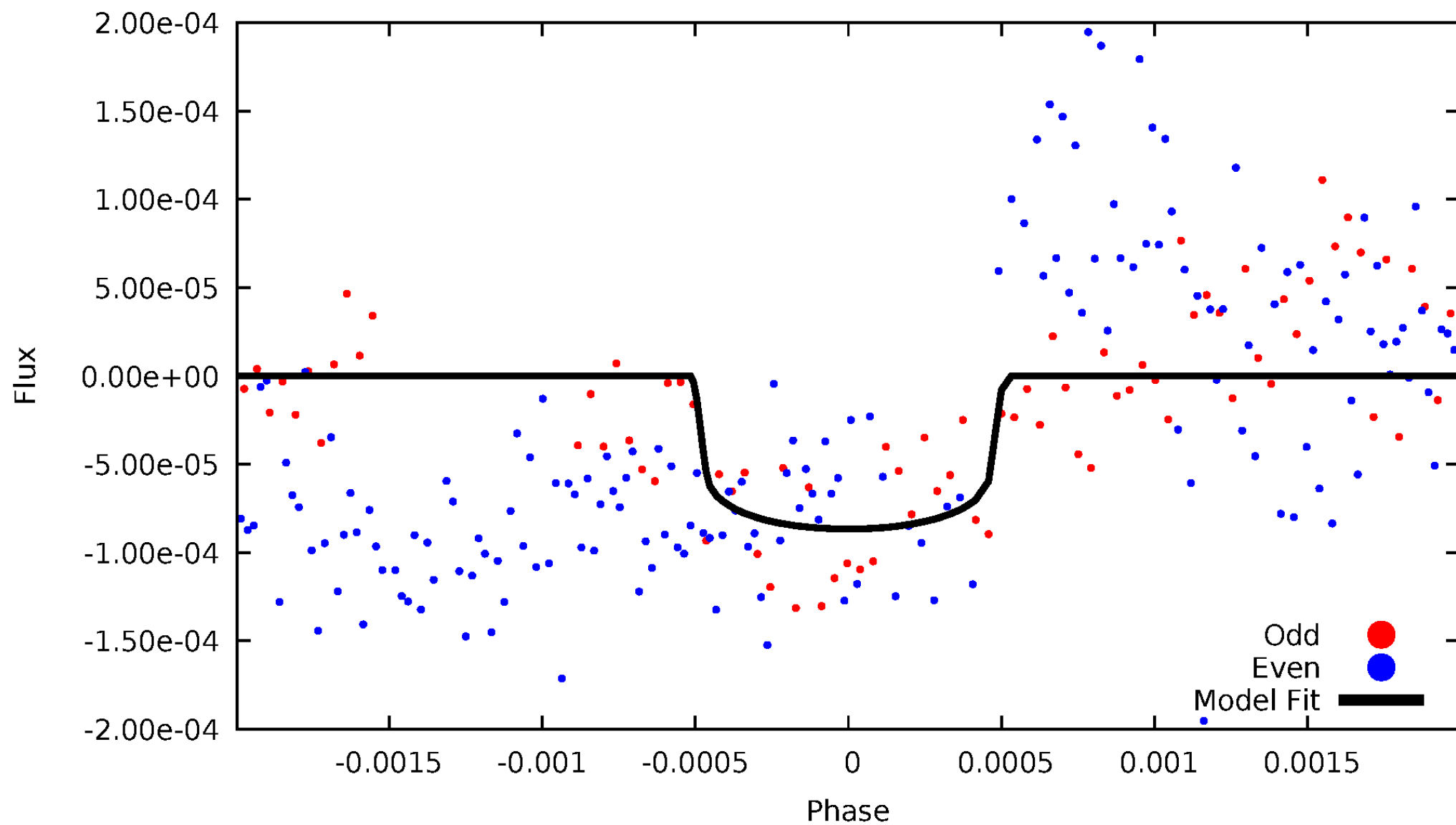


TCE 008056313-03



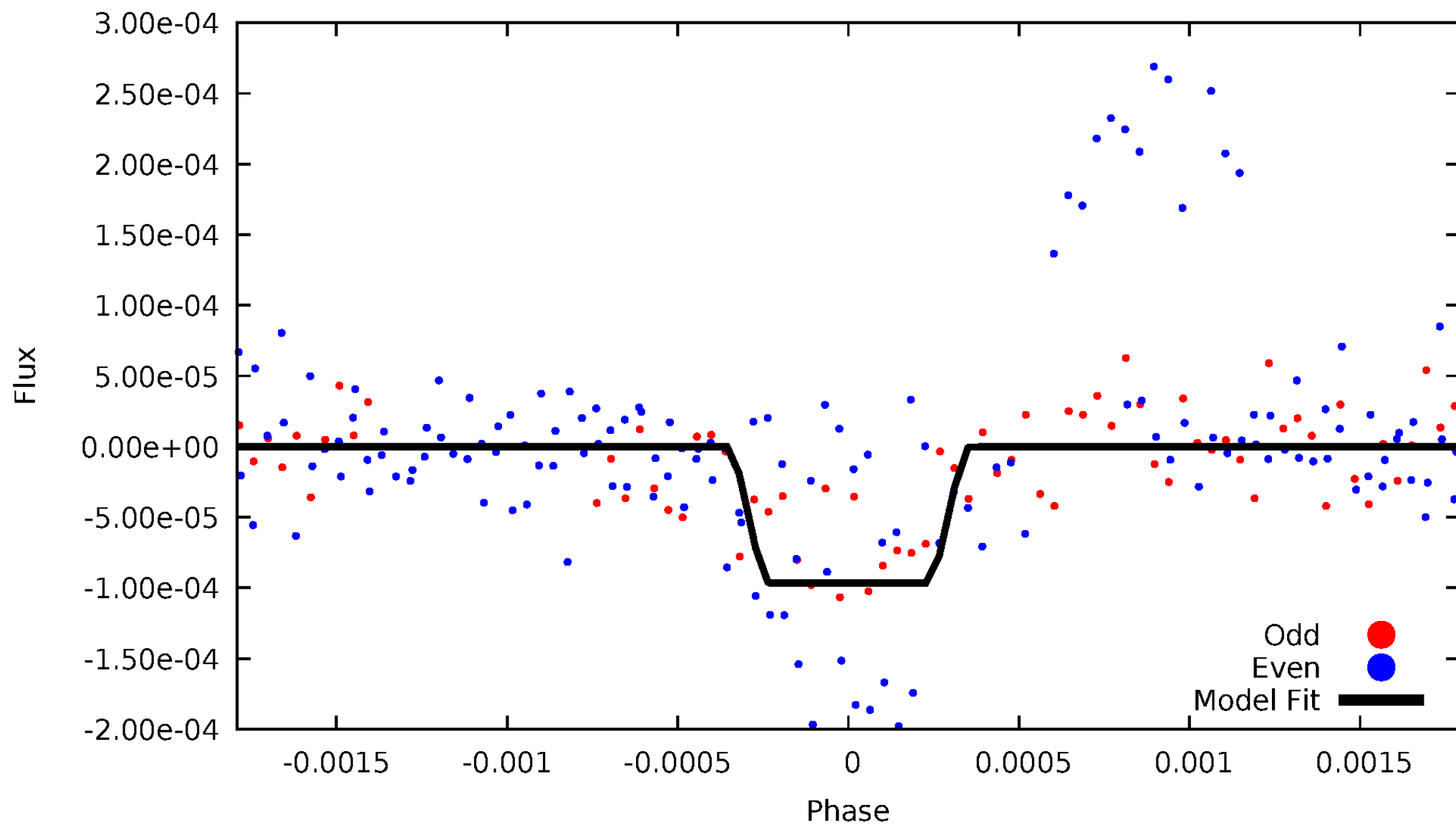
DV Odd/Even

TCE 008056313-03



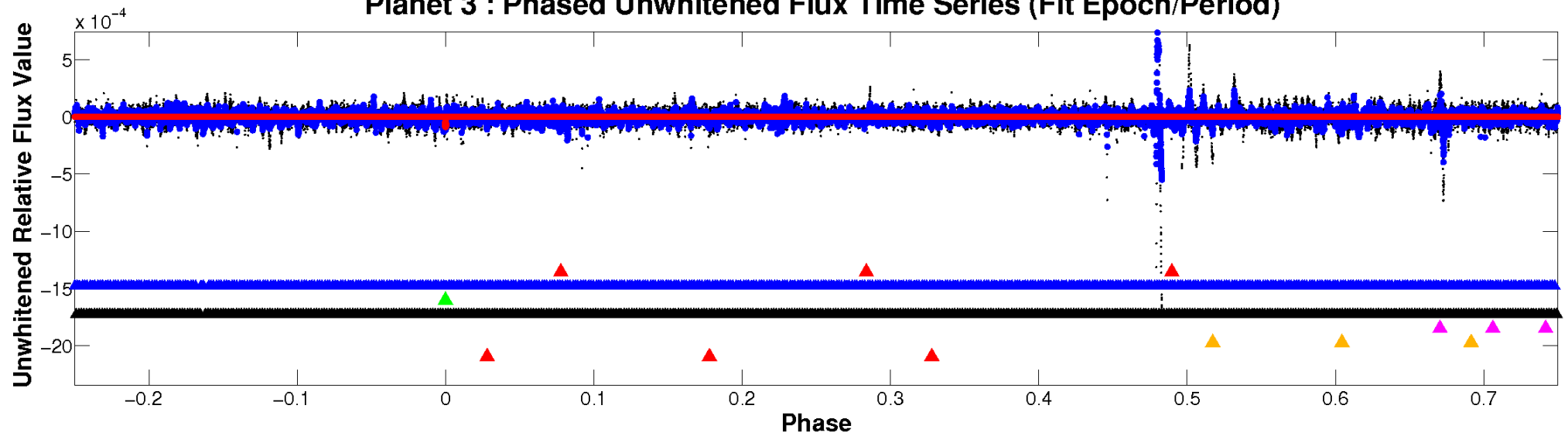
ALT Odd/Even

TCE 008056313-03

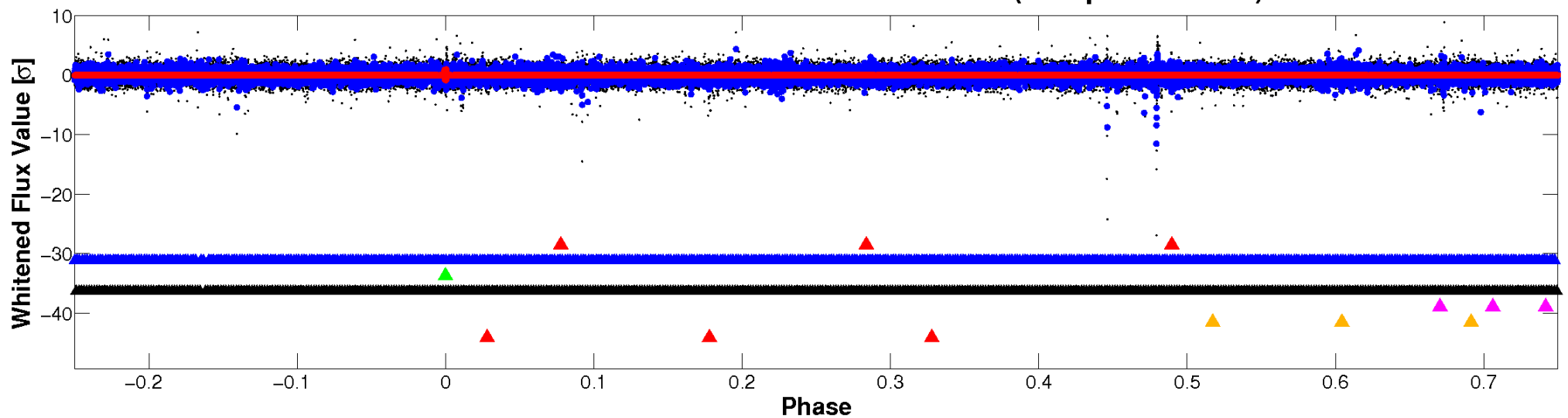


Non-Whitened Vs. Whitened Light Curve

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

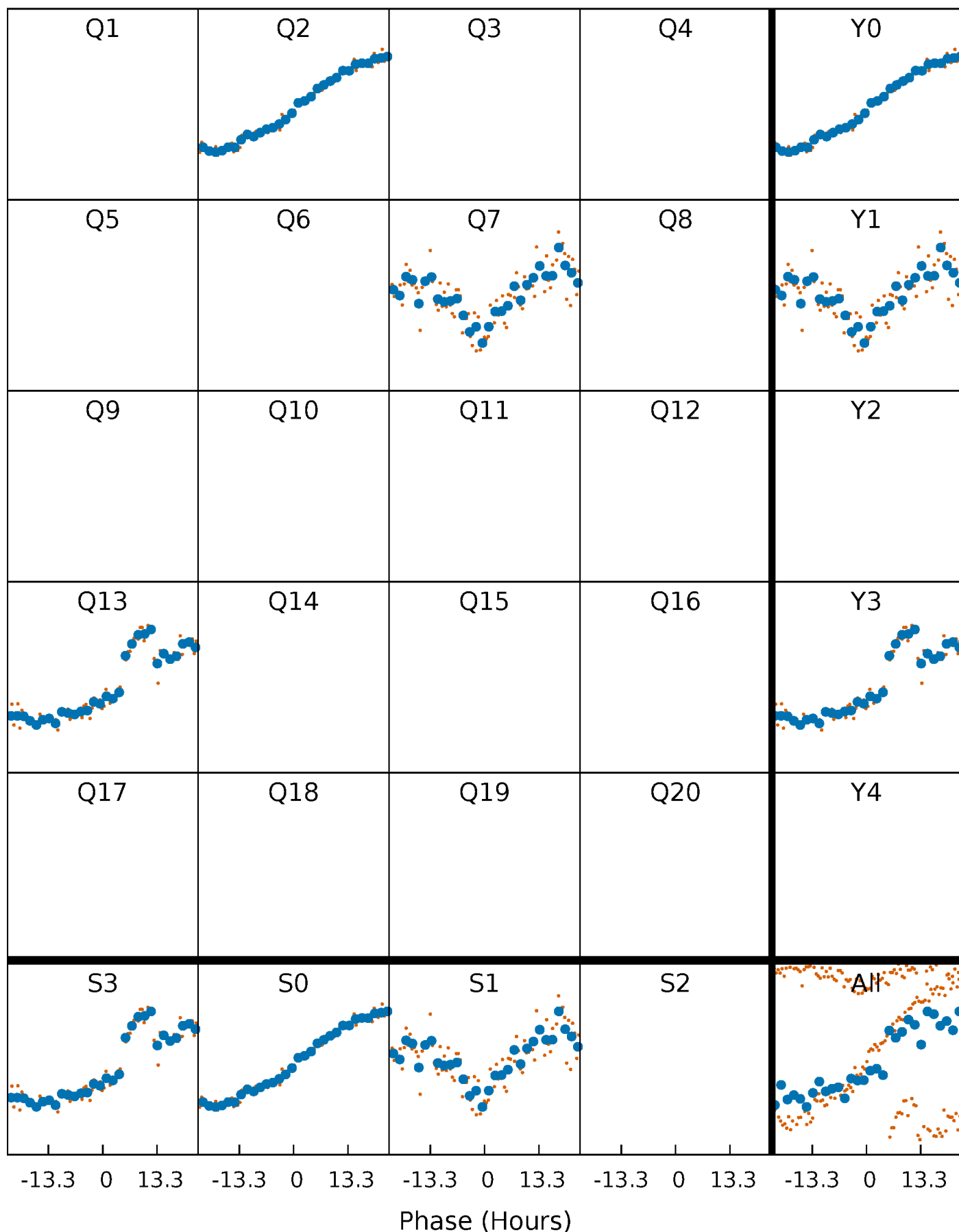


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



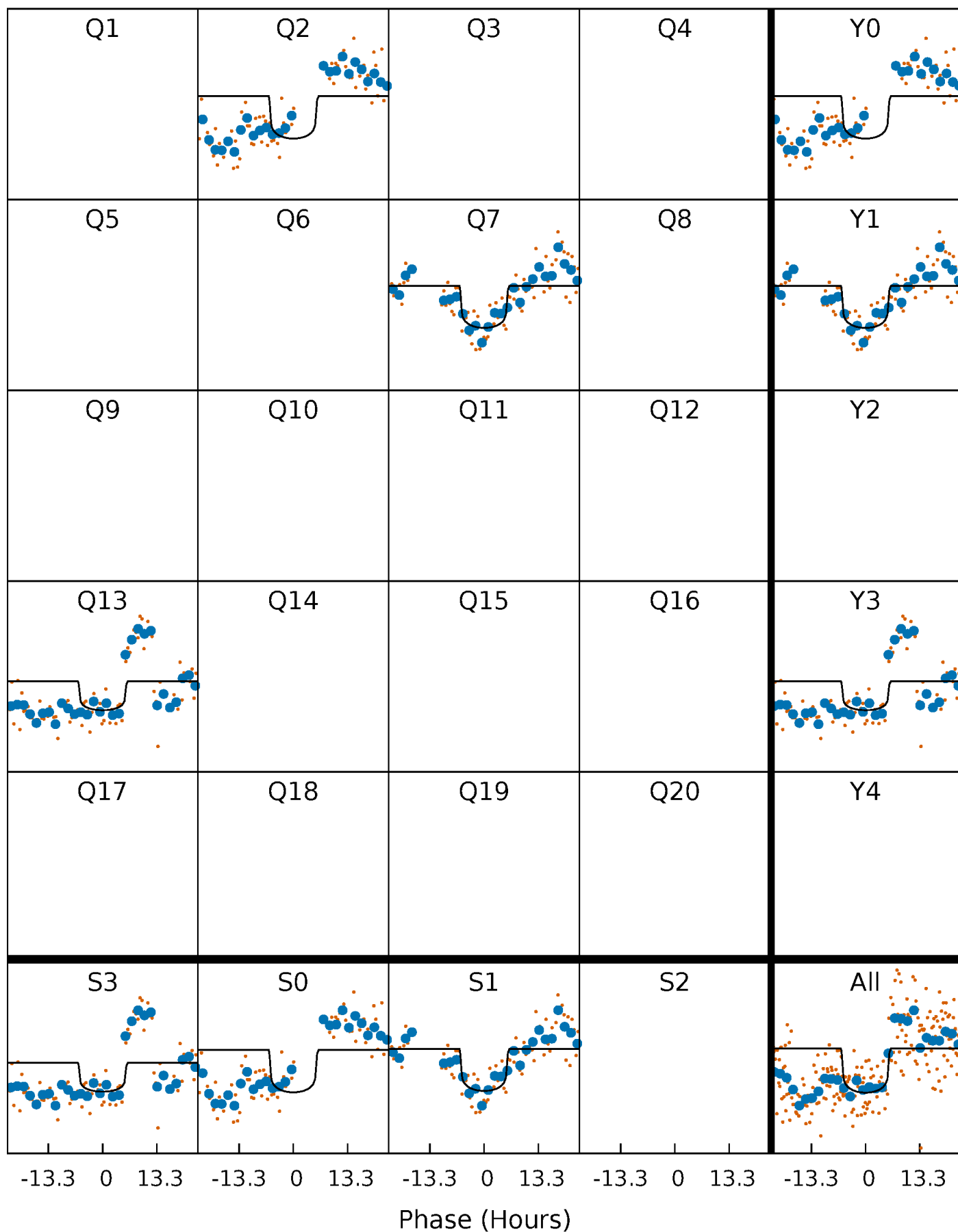
PDC Quarter-Phased Transit Curves

TCE 008056313-03 P=487.487076 Days $T_0=209.852706$ (BKJD)



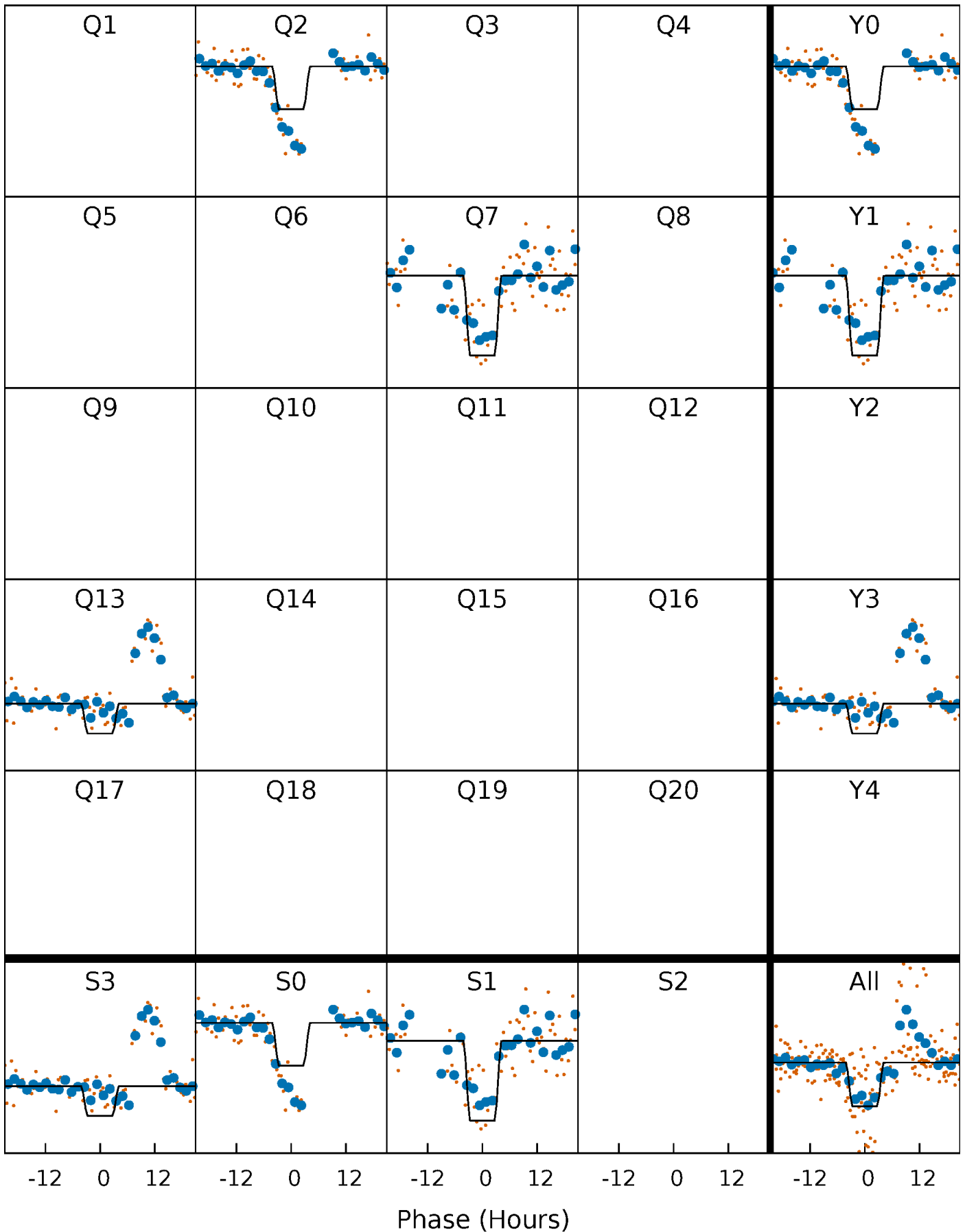
DV Quarter-Phased Transit Curves

TCE 008056313-03 $P=487.487076$ Days $T_0=209.852706$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

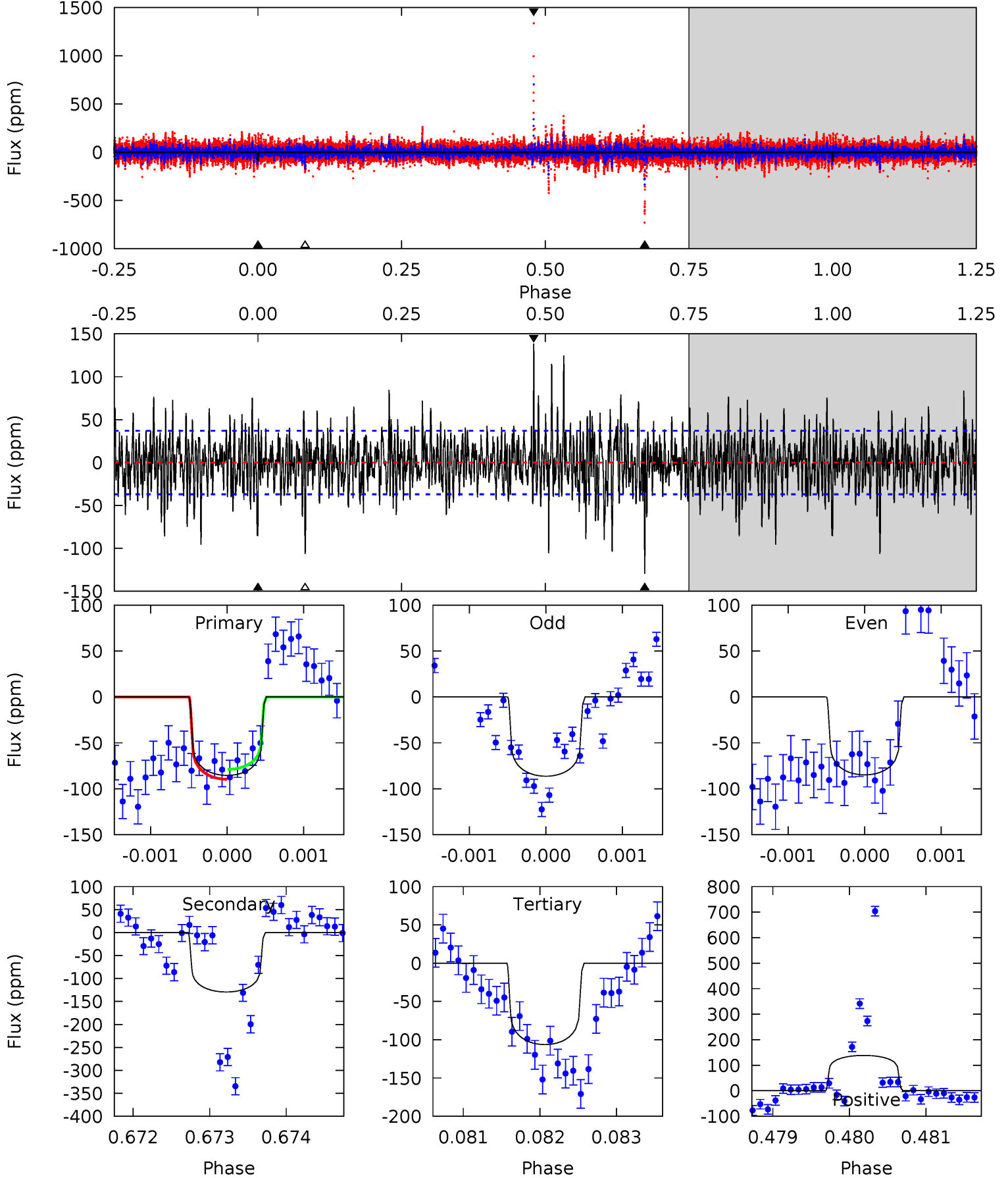
TCE 008056313-03 $P=487.503874$ Days $T_0=209.764535$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-03, P = 487.487076 Days, E = 209.852706 Days

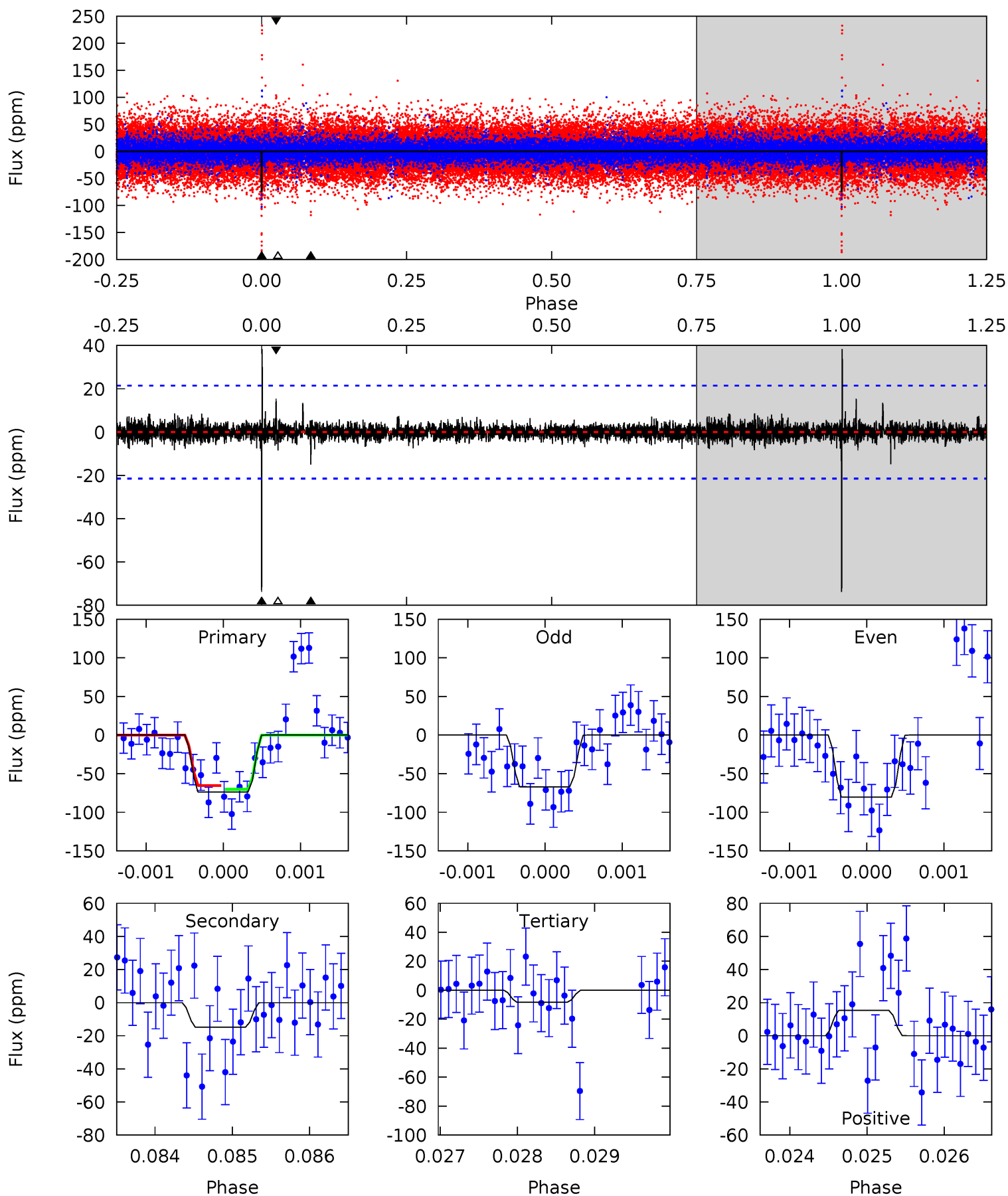
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	19.1	15.7	20.4	5.44	3.28	3.79	-3.08	-7.83	3.39	-1.35	0.09	0.96	0.52	0.79



Alt Model-Shift Uniqueness Test

008056313-03, P = 487.503874 Days, E = 209.764535 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	3.82	2.15	3.94	5.51	3.38	0.53	16.8	15.0	1.67	-0.12	1.67	1.20	0.34	0.64



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-129 ± 7	$0.99^{+0.20}_{-0.18}$	380^{+18}_{-17}	7670^{+1038}_{-741}	104031^{+52976}_{-31700}
Alt.	-15 ± 4	$1.02^{+0.20}_{-0.18}$	381^{+18}_{-18}	4483^{+458}_{-370}	10984^{+6626}_{-4087}

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 $A_{obs} \gg 1.0$

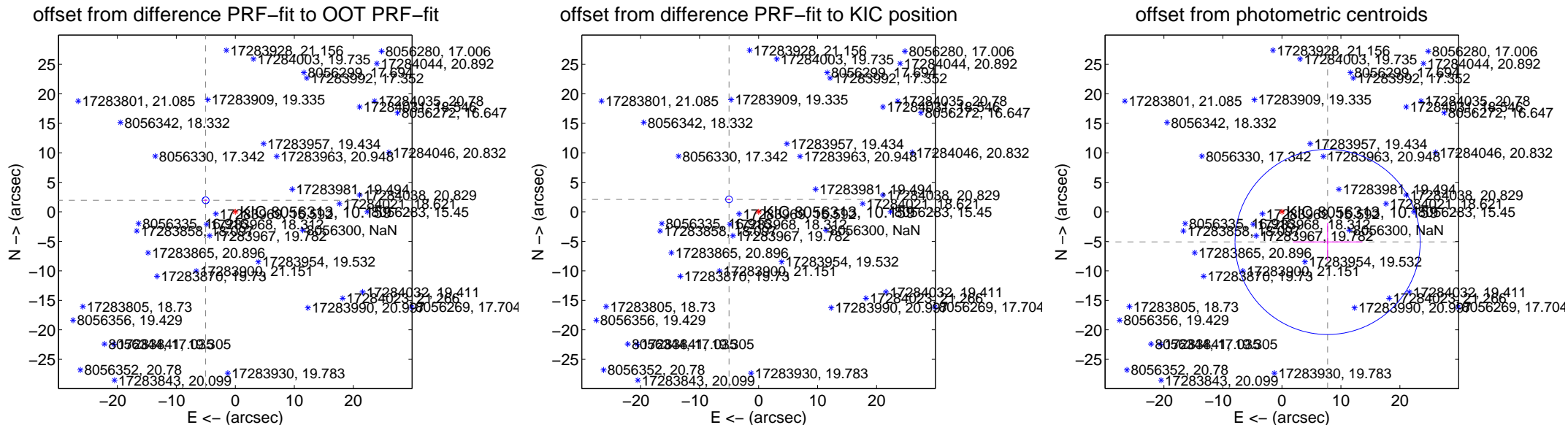
DV Centroid Data

Supplemental centroid analysis for 008056313-03. **Kepler magnitude: 10.16.** Transit SNR 7.09

There are 1 quarters with good PRF difference image offsets

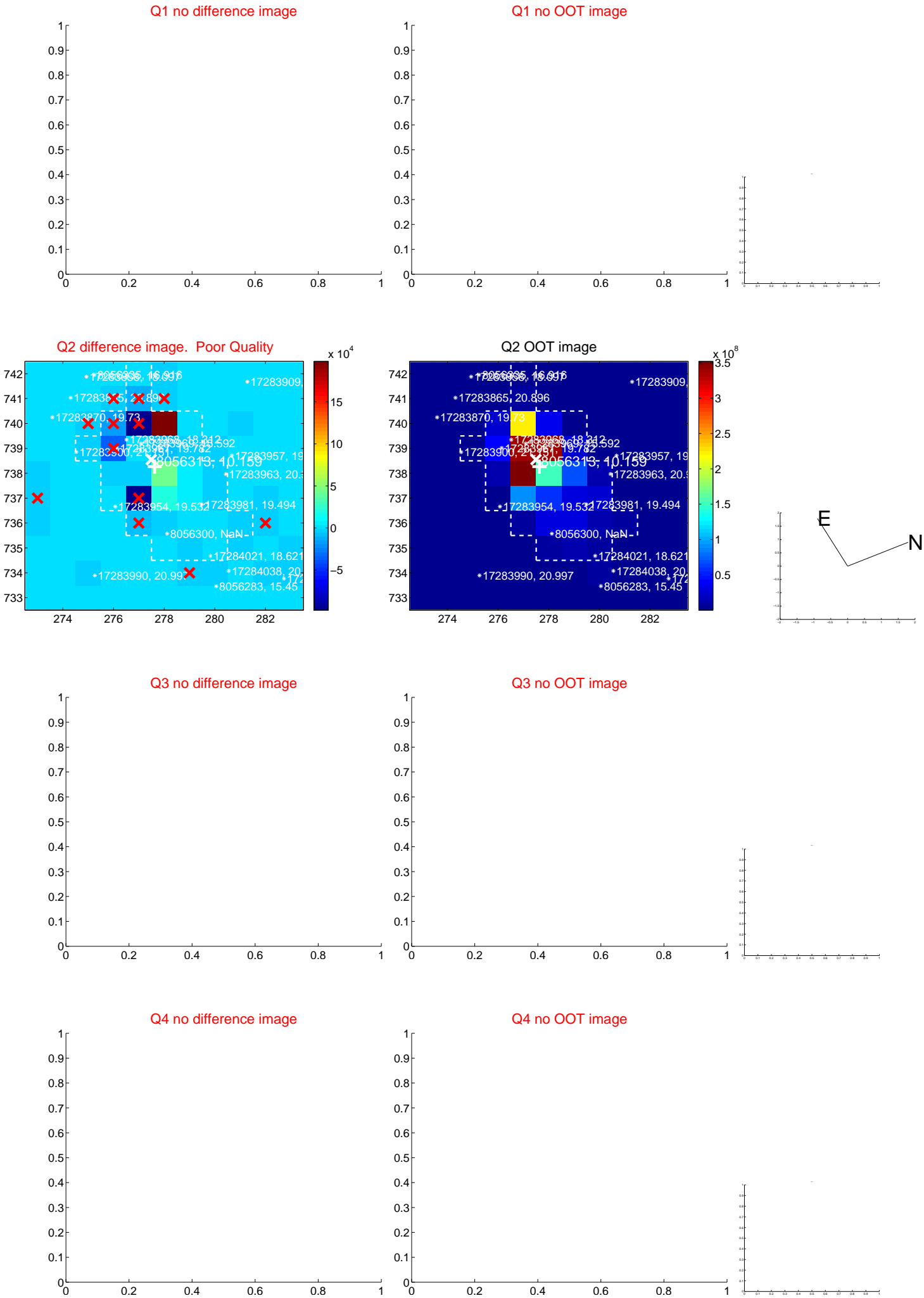
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.390 \pm 0.192	28.01	5.021 \pm 0.199	1.960 \pm 0.146
PRF-fit source offset from KIC position	5.436 \pm 0.192	28.38	5.010 \pm 0.199	2.109 \pm 0.146
photometric centroid source offset	9.27 \pm 5.23	1.77	-7.74 \pm 5.89	-5.10 \pm 3.24

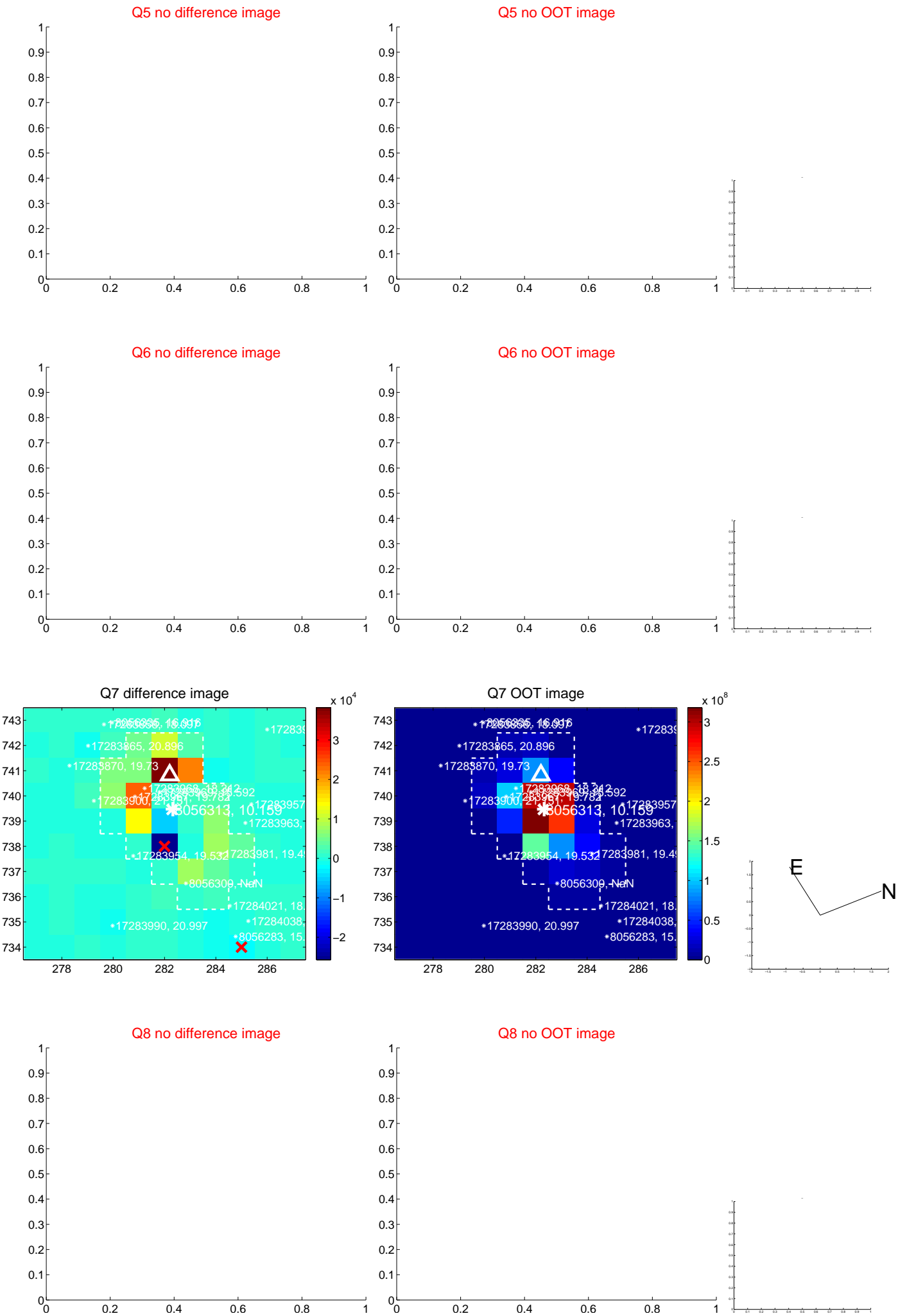


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



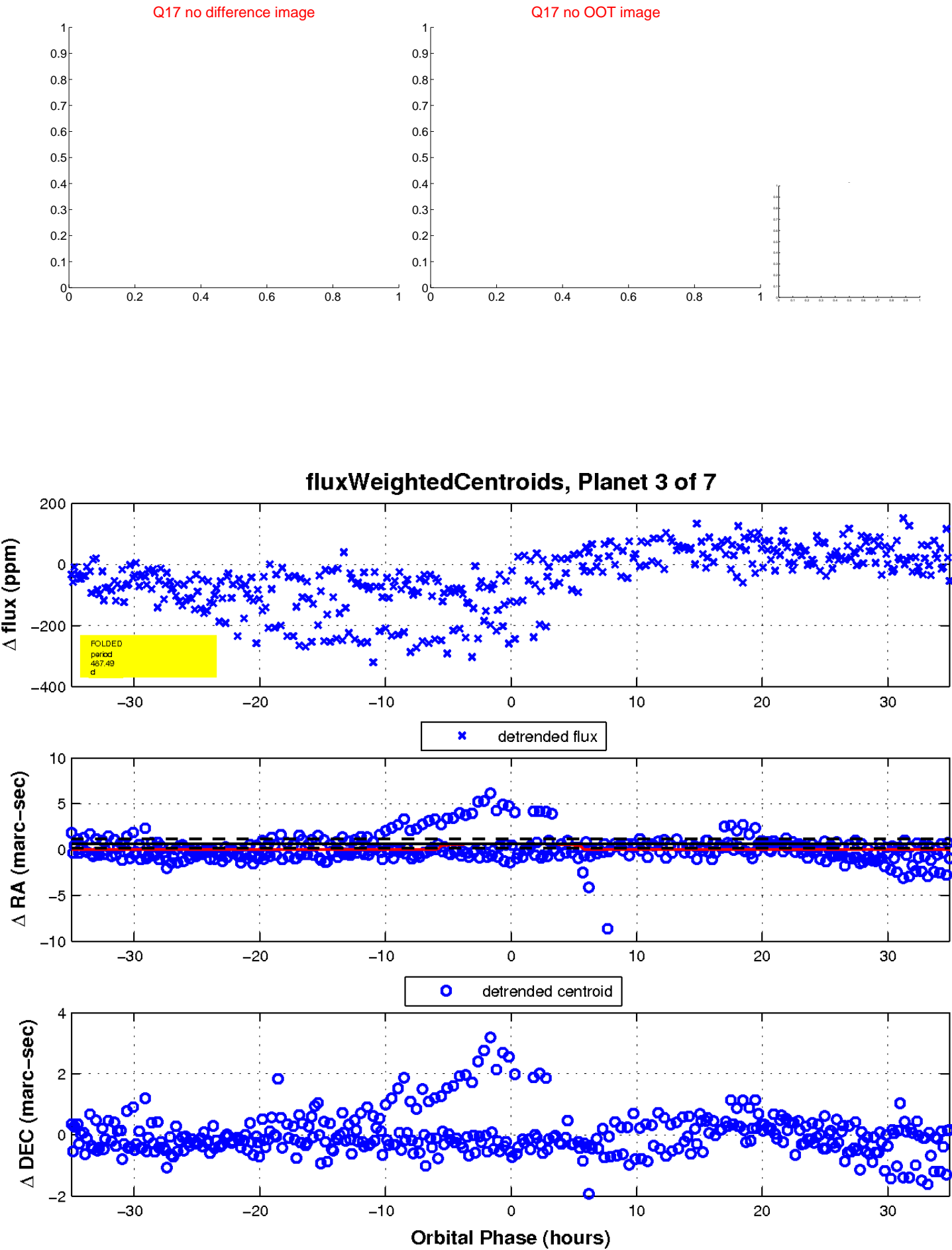
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



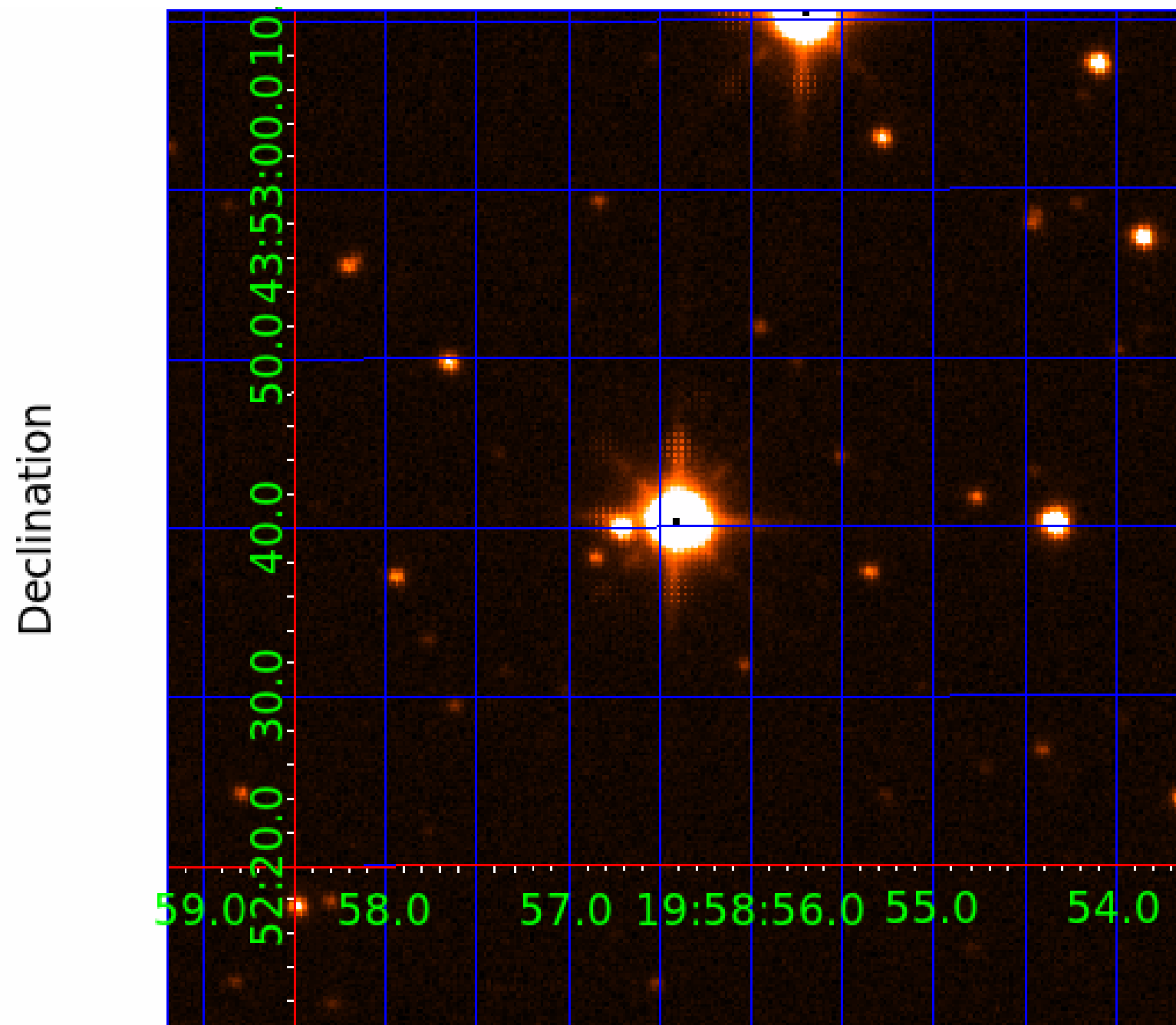
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056313

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})
008056313-01	OBS	No	387.075870	448.584170	109.7	52.470	523.0	5.6	0.93	6946	1.10	1.67
008056313-02	OBS	No	2.548349	133.561024	6.6	2.253	7.4	7.3	0.93	6946	0.26	1355.43
008056313-03	OBS	No	487.487076	209.852706	86.6	11.674	7.8	7.1	0.93	6946	0.97	1.23
008056313-04	OBS	No	2.548076	132.561245	6.3	7.085	7.9	8.3	0.93	6946	0.27	1355.62
008056313-05	OBS	No	470.118077	571.463056	146.3	13.078	15.4	10.1	0.93	6946	1.43	1.29
008056313-06	OBS	No	529.959353	462.025336	94.7	11.829	10.1	6.8	0.93	6946	1.05	1.10
008056313-07	OBS	No	560.562110	223.545976	155.1	28.534	8.4	6.9	0.93	6946	1.52	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008056313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

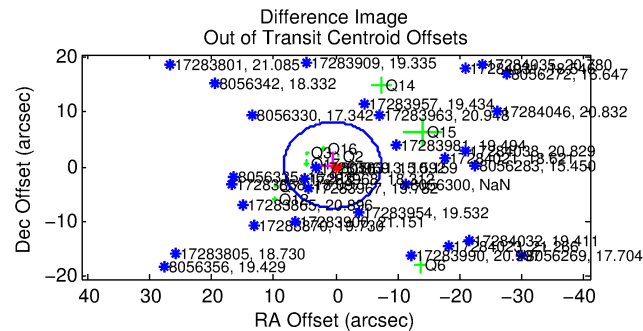
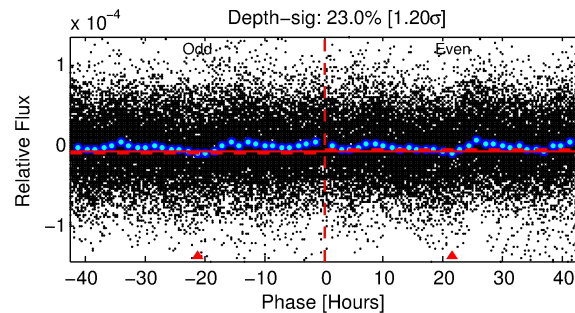
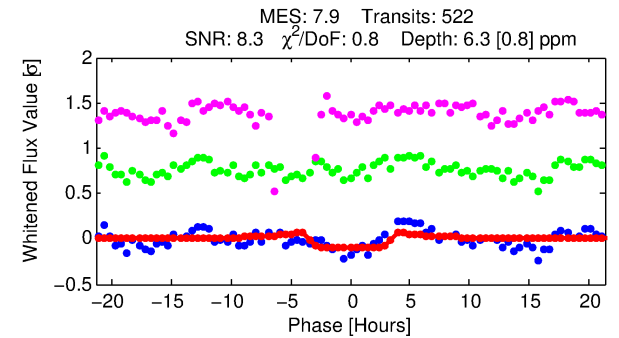
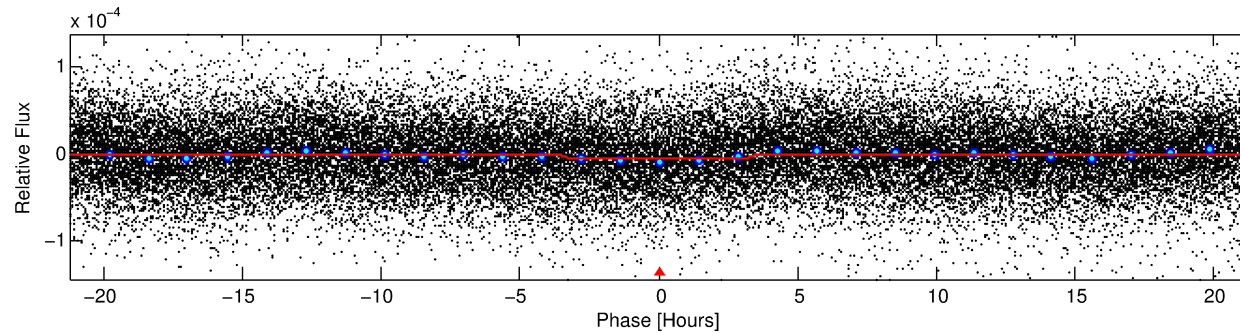
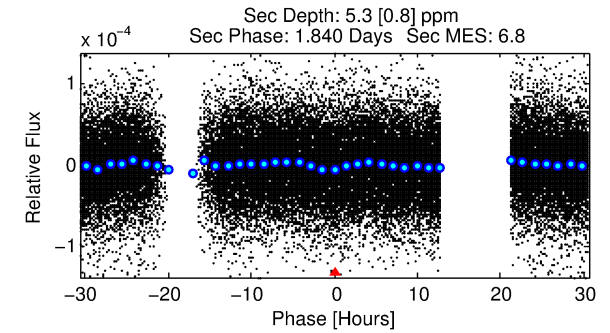
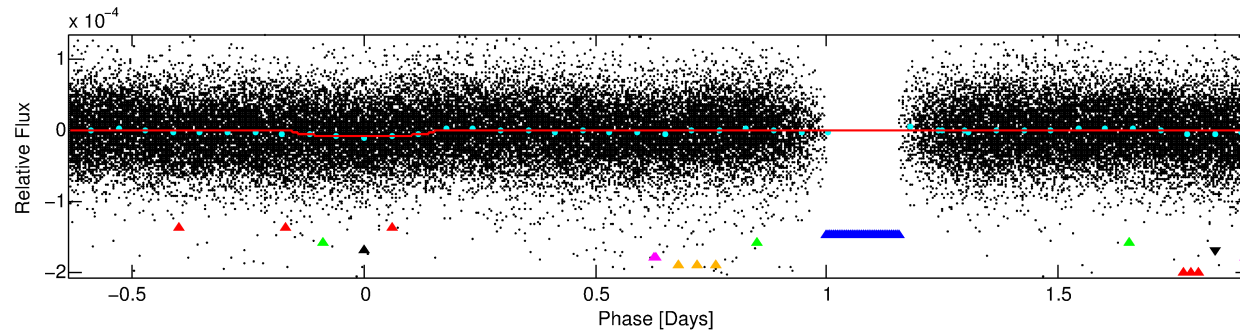
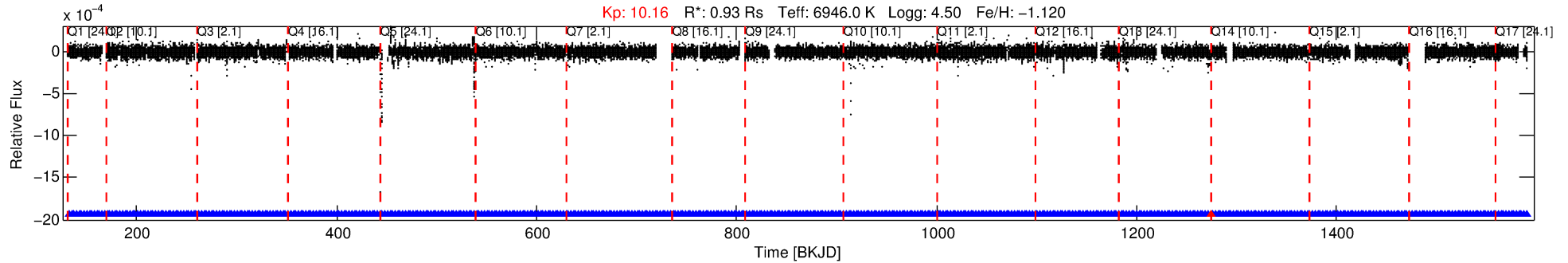
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-04

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 4 of 7 Period: 2.548 d



DV Fit Results:

Period = 2.54808 [0.00002] d
Epoch = 132.5612 [0.0050] BKJD
Rp/R* = 0.0026 [0.0003]
a/R* = 1.62 [0.50]
b = 0.88 [0.13]
Seff = 1355.62 [385.32]
Teq = 1547 [110] K
Rp = 0.27 [0.05] Re
a = 0.0366 [0.0057] AU
Ag = 54.83 [19.20] [2.80σ]
Teffp = 6510 [486] K [9.96σ]

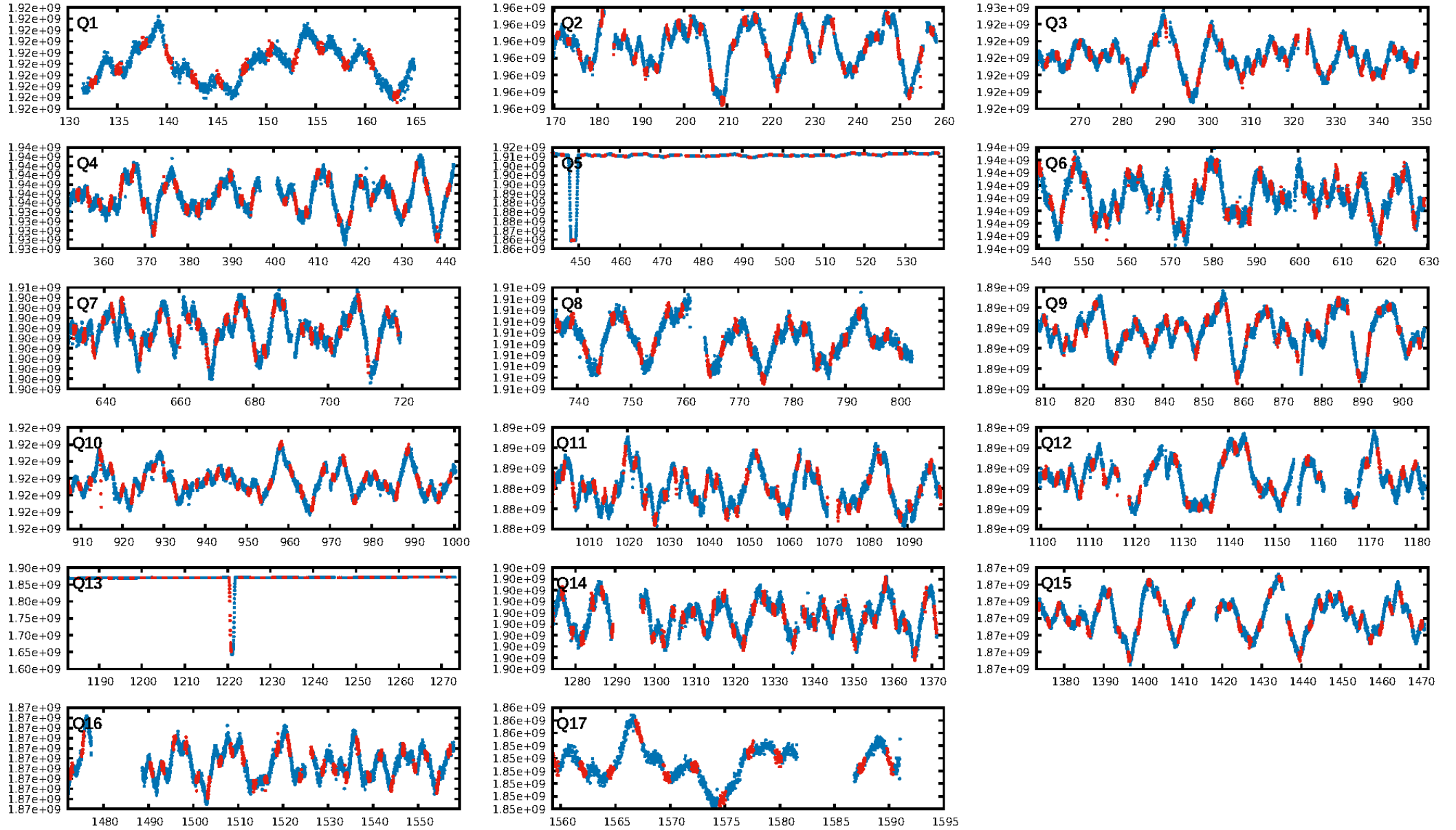
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.73e-12
RollingBand-fgt: 1.00 [497/498]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 5.393 arcsec [1.43σ]
OotOffset-rm: 0.586 arcsec [0.22σ]
KicOffset-rm: 0.621 arcsec [0.26σ]
OotOffset-st: 4/3/2/1 [10]
KicOffset-st: 4/3/2/1 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [17/17]

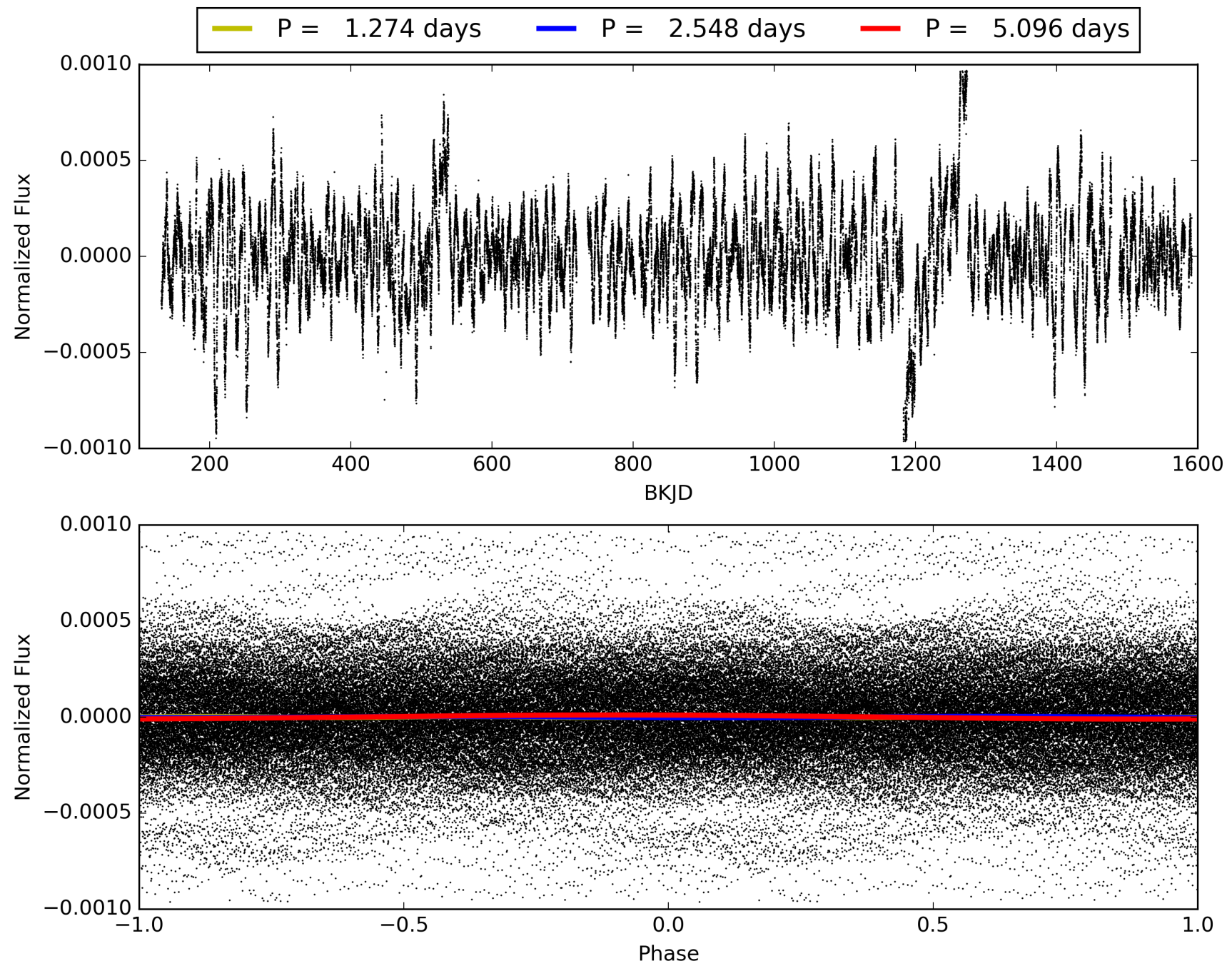
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:26 Z

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

TCE 008056313-04, PDC Light Curves

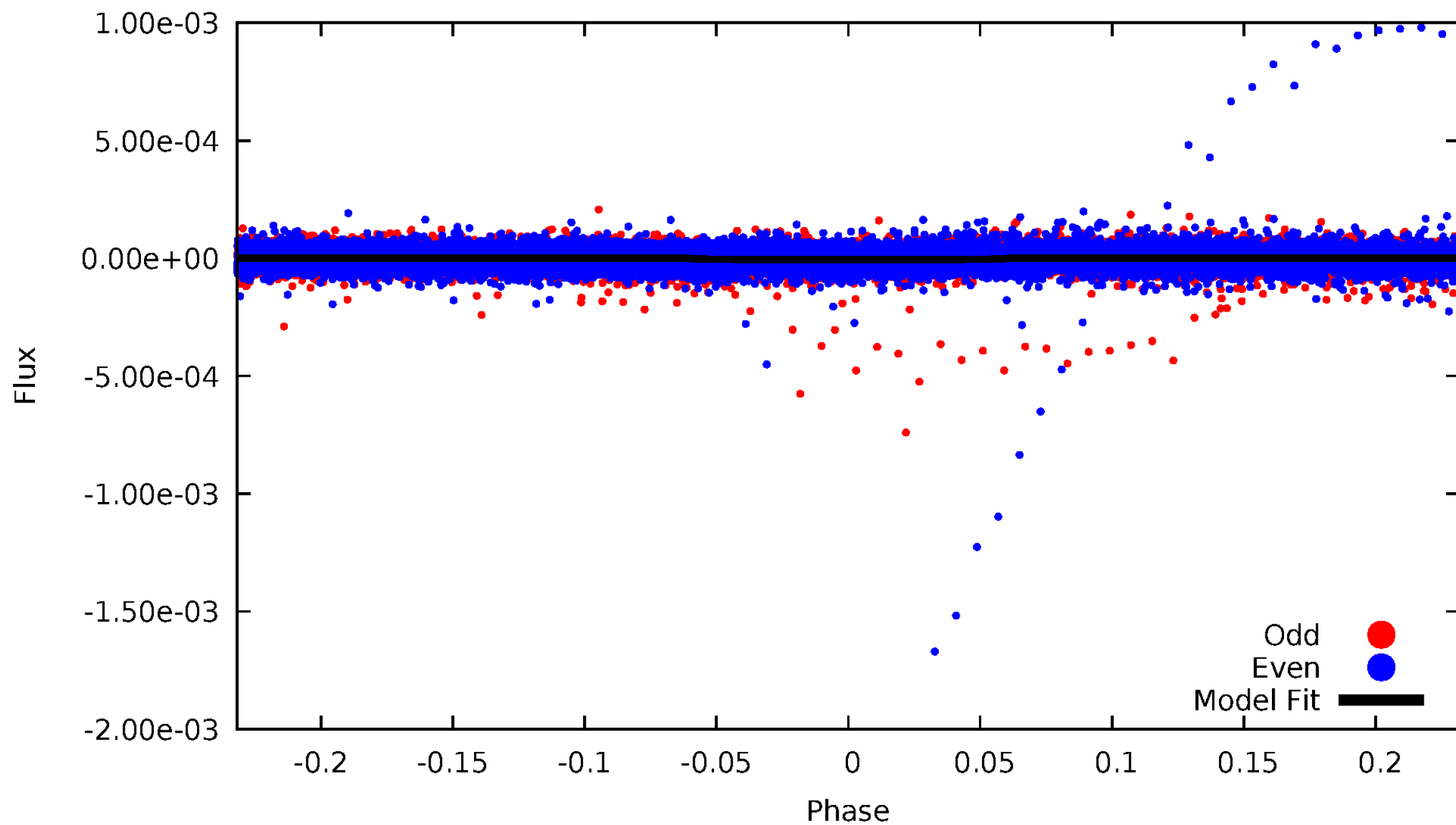


TCE 008056313-04



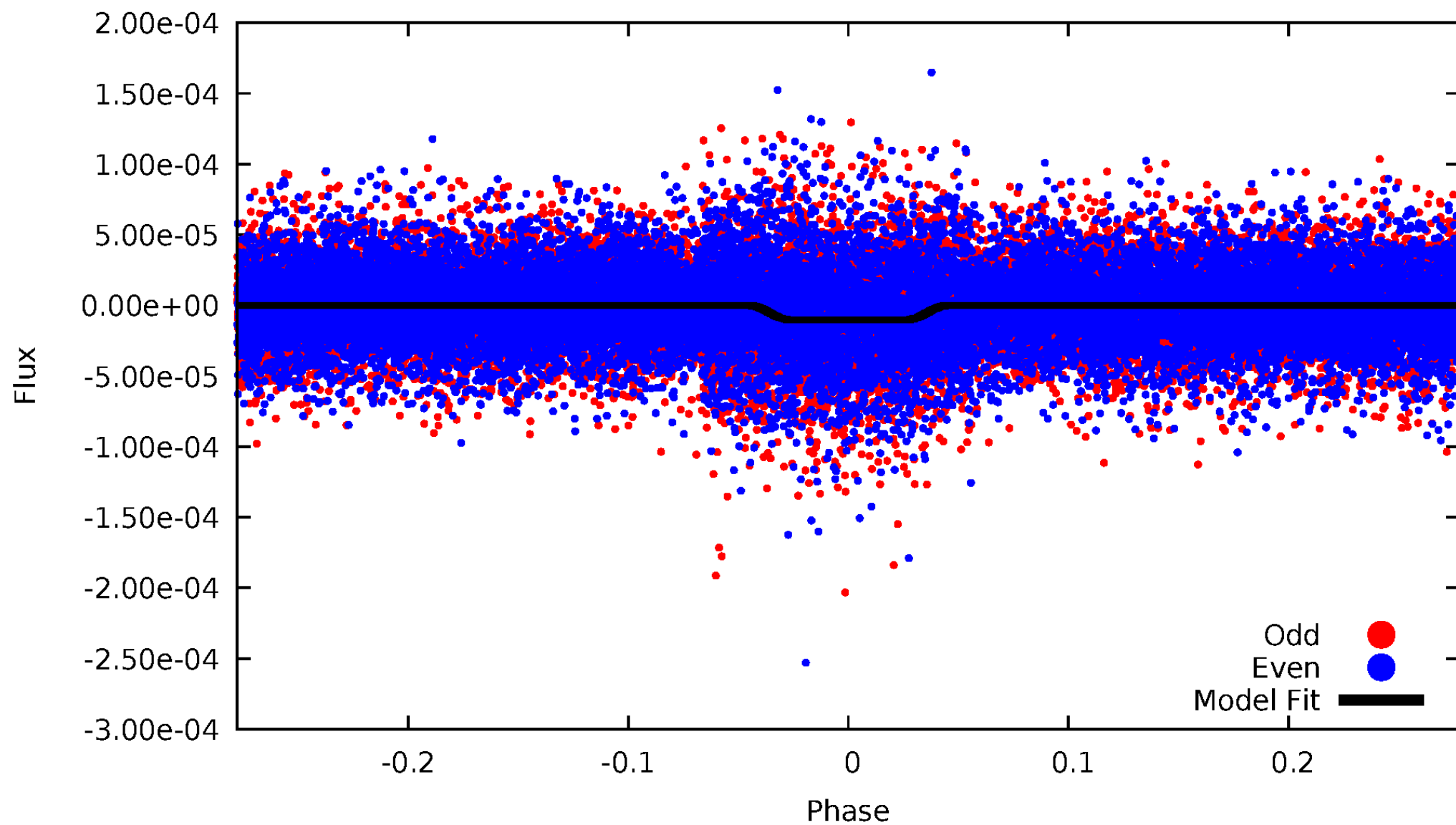
DV Odd/Even

TCE 008056313-04



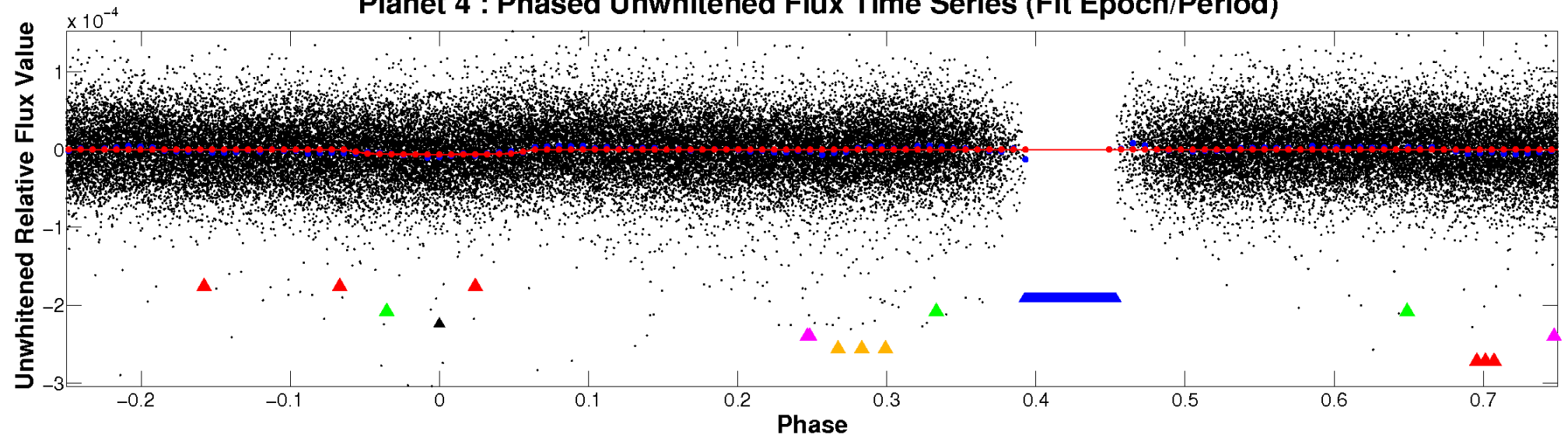
ALT Odd/Even

TCE 008056313-04

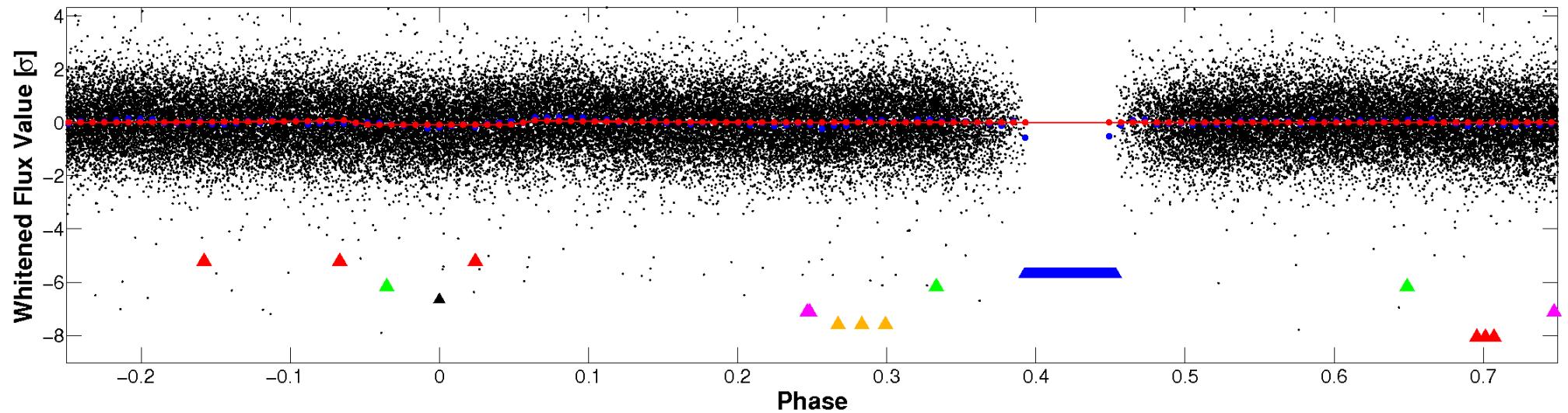


Non-Whitened Vs. Whitened Light Curve

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

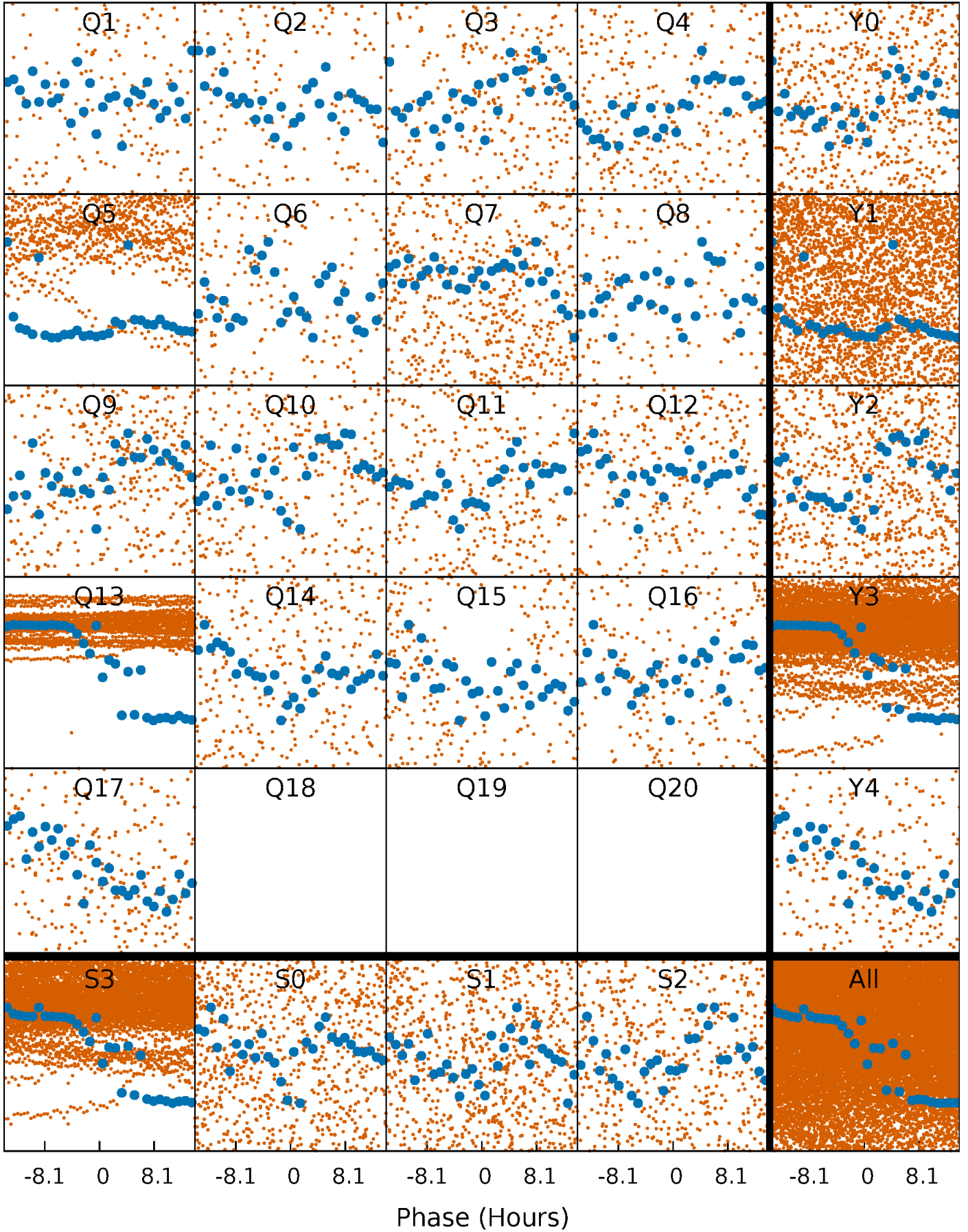


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



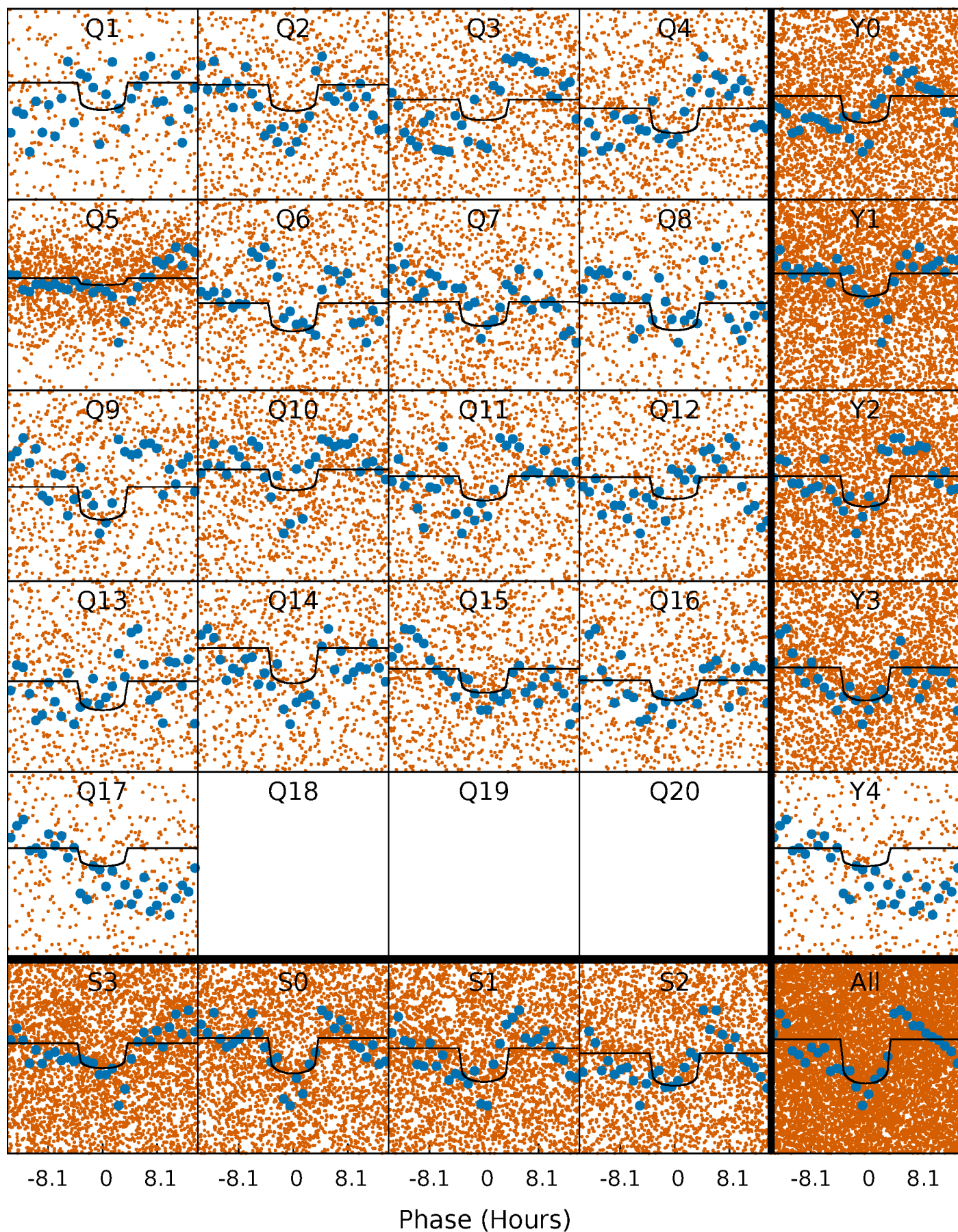
PDC Quarter-Phased Transit Curves

TCE 008056313-04 P= 2.548076 Days $T_0=132.561245$ (BKJD)



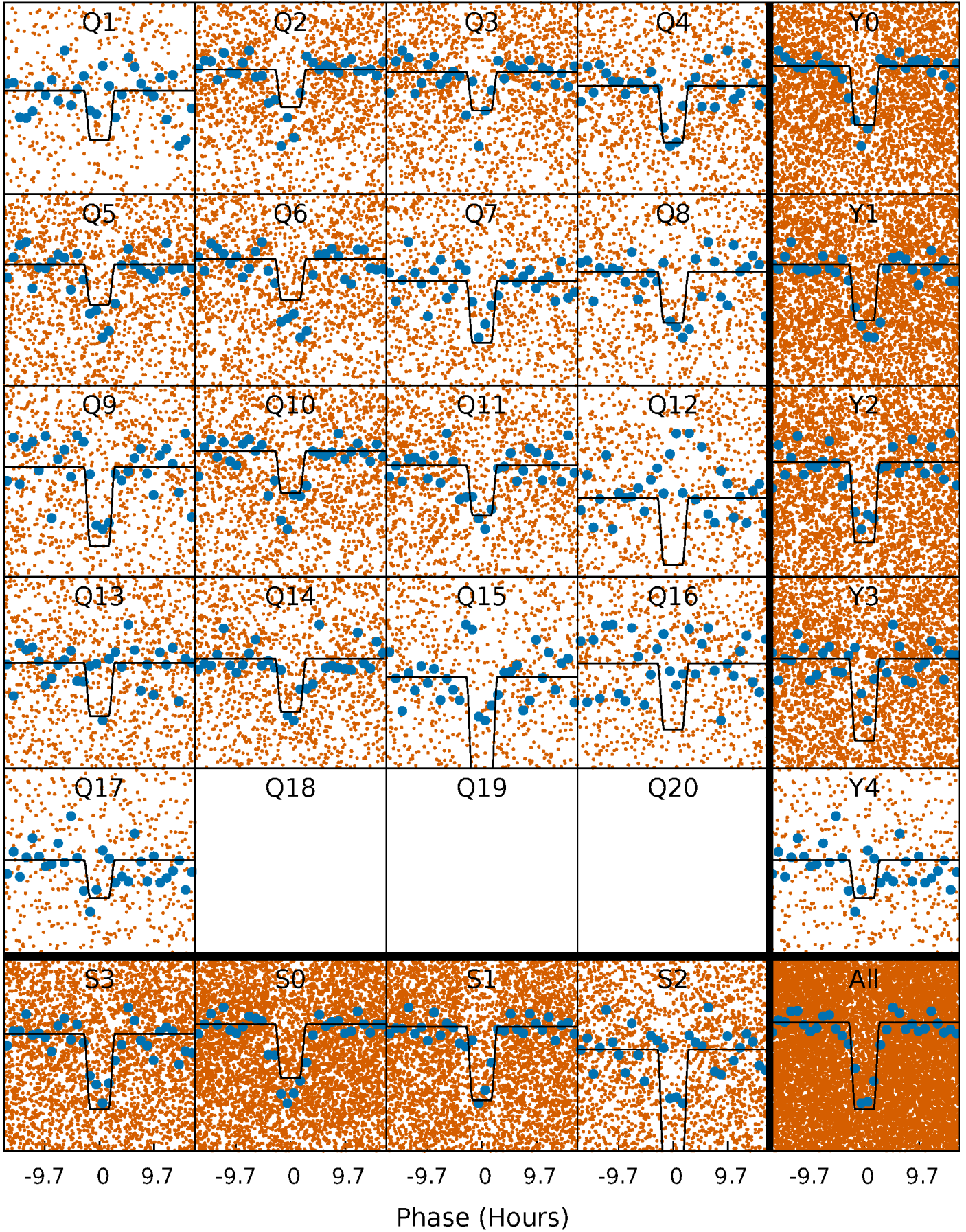
DV Quarter-Phased Transit Curves

TCE 008056313-04 P= 2.548076 Days $T_0=132.561245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

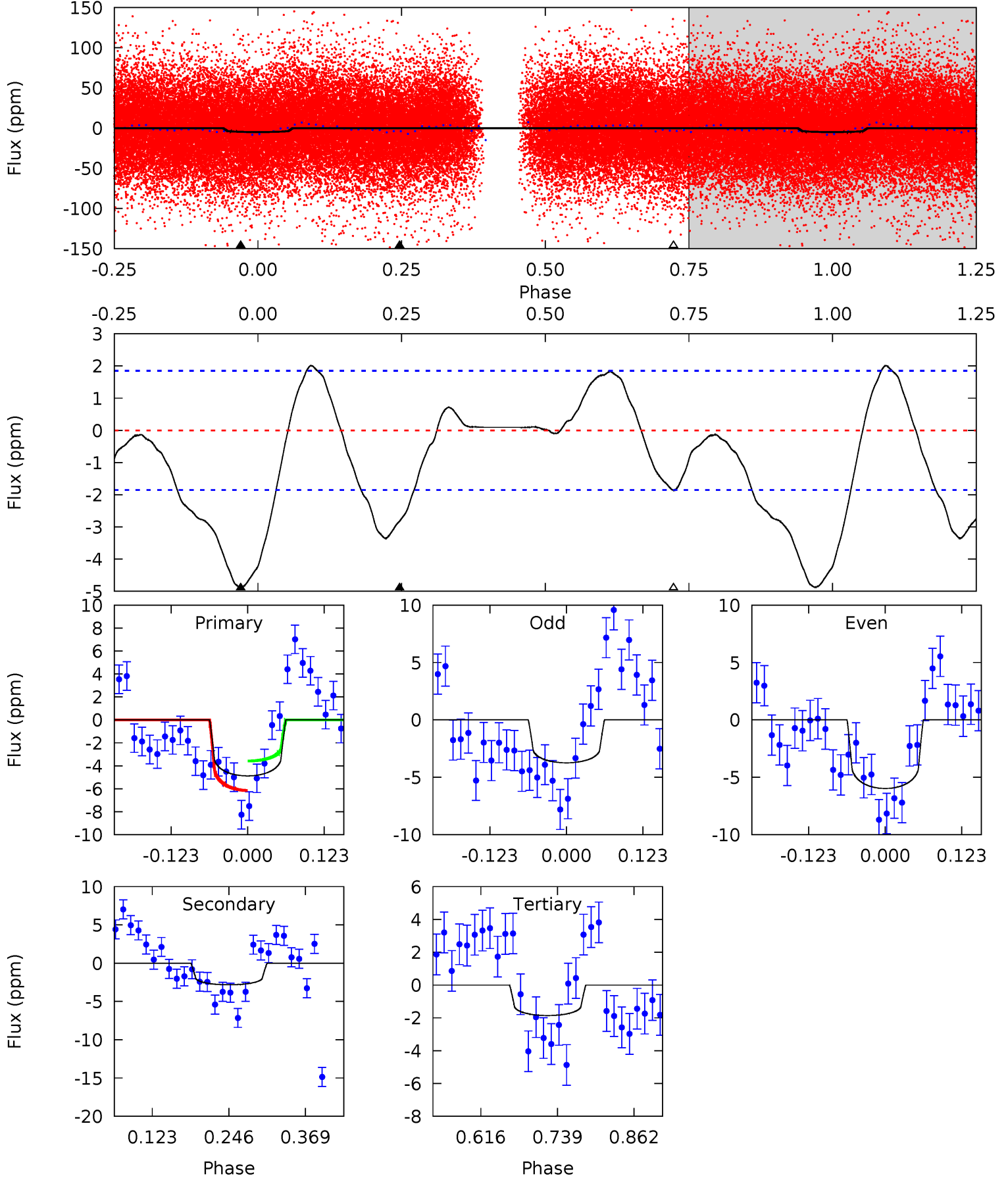
TCE 008056313-04 P= 2.547983 Days $T_0=132.587824$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-04, P = 2.548076 Days, E = 130.013169 Days

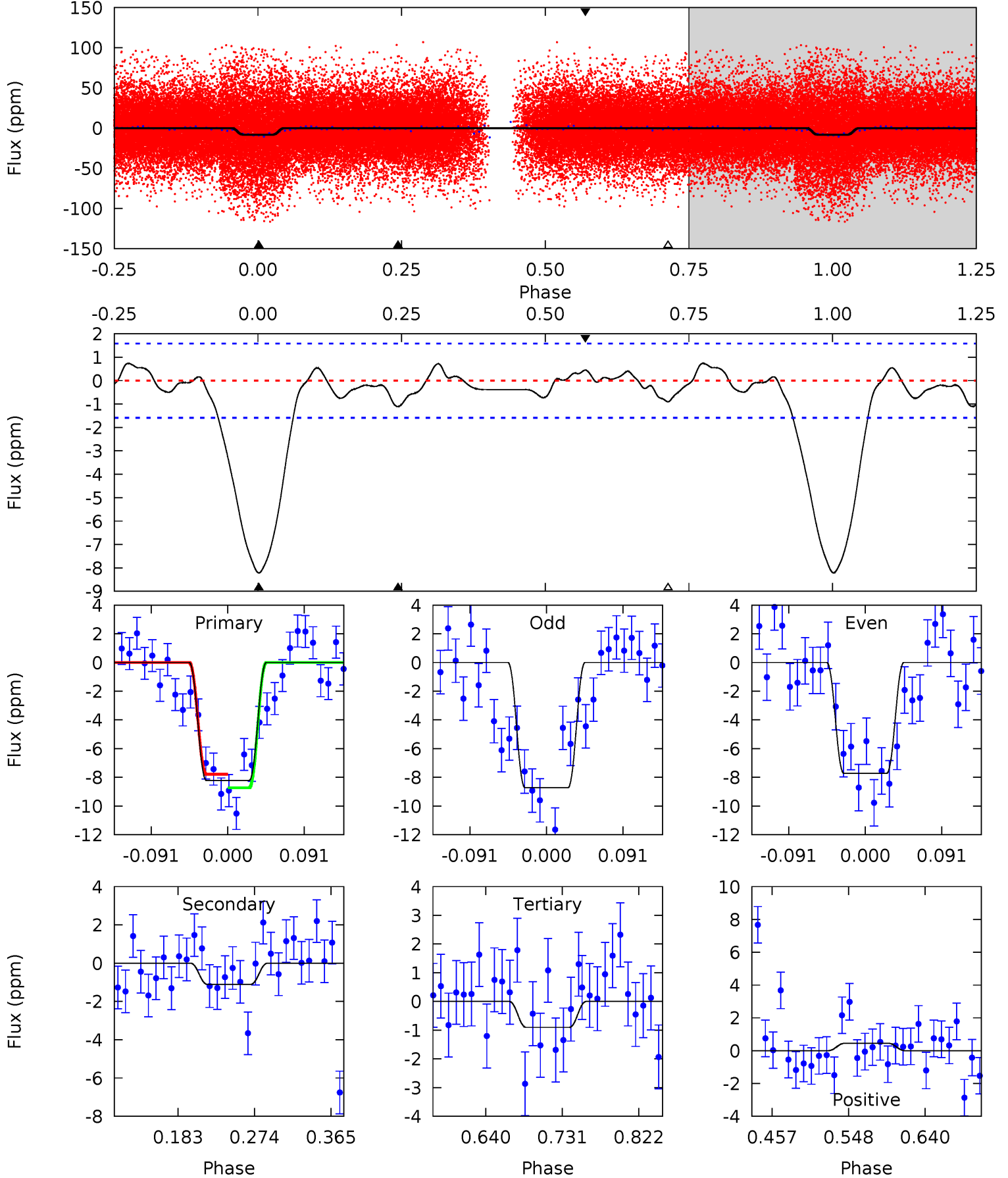
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	6.89	4.54	0	4.52	1.54	2.68	7.36	11.9	2.35	6.89	2.73	2.44	0.29	3.13



Alt Model-Shift Uniqueness Test

008056313-04, P = 2.547983 Days, E = 130.039841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	3.21	2.61	1.30	4.58	1.69	1.15	21.2	22.5	0.59	1.90	1.46	1.02	0.08	1.37



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 0	$0.27^{+0.04}_{-0.03}$	2188^{+114}_{-91}	5514^{+395}_{-353}	27^{+9}_{-6}
Alt.	-1 ± 0	$0.34^{+0.04}_{-0.04}$	2196^{+107}_{-95}	4145^{+293}_{-302}	$6.863^{+2.988}_{-2.326}$

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 $A_{obs} \gg 1.0$

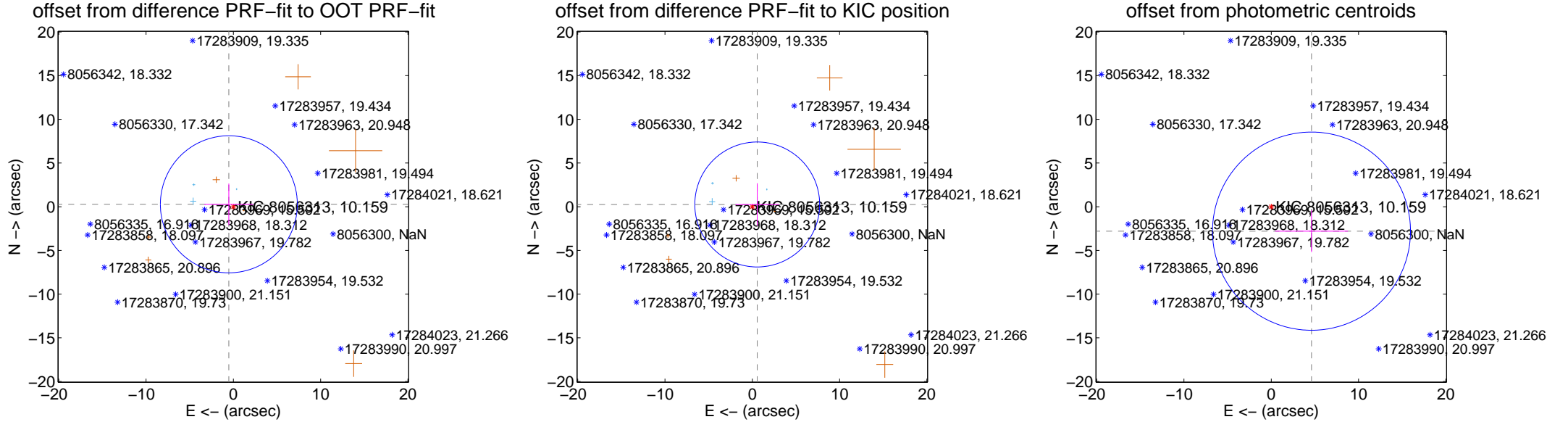
DV Centroid Data

Supplemental centroid analysis for 008056313-04. **Kepler magnitude: 10.16.** Transit SNR 8.32

There are 3 quarters with good PRF difference image offsets

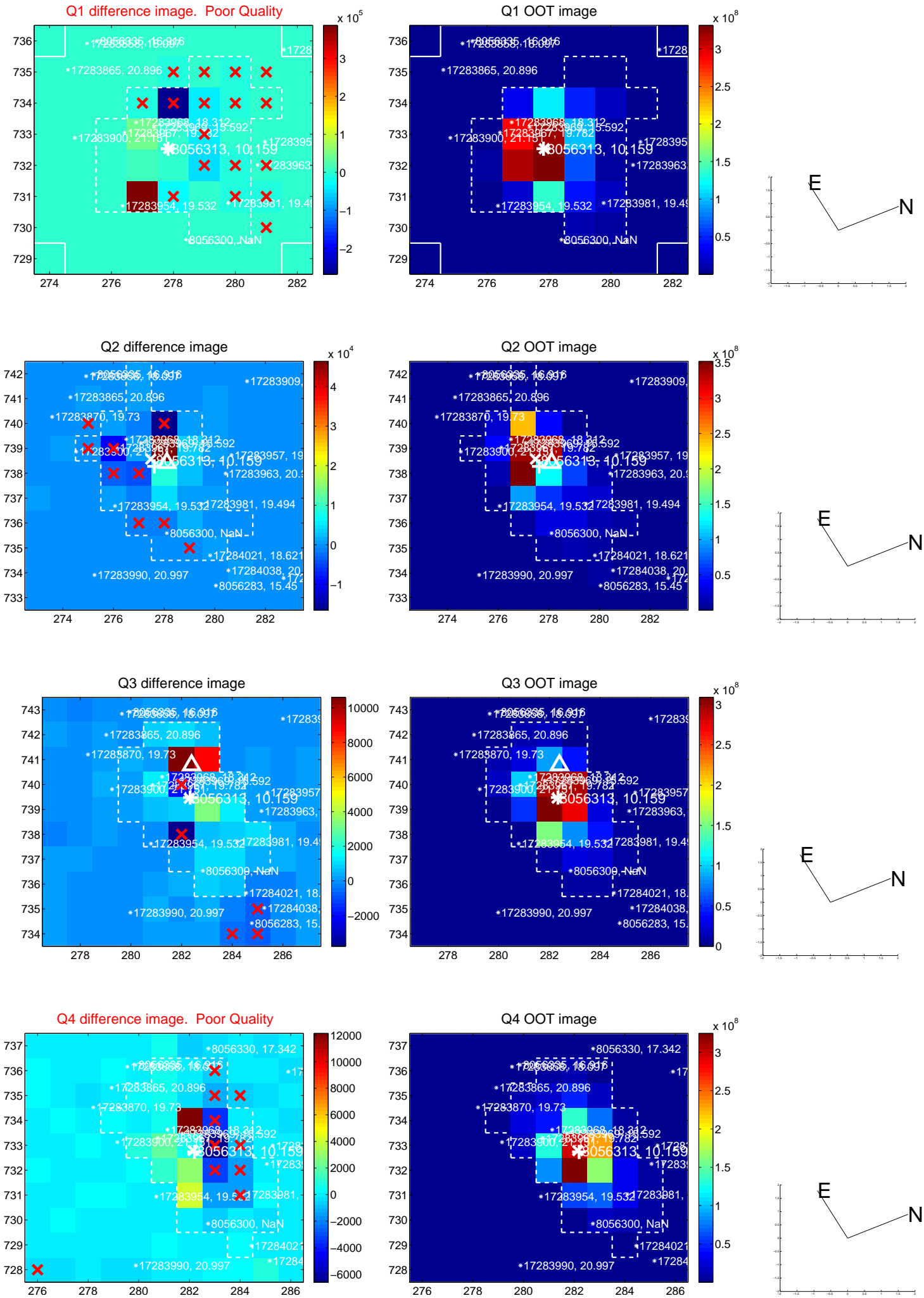
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.586 ± 2.615	0.22	0.515 ± 2.808	0.279 ± 2.366
PRF-fit source offset from KIC position	0.621 ± 2.384	0.26	-0.565 ± 2.491	0.256 ± 2.427
photometric centroid source offset	5.39 ± 3.78	1.43	-4.61 ± 4.18	-2.80 ± 2.39

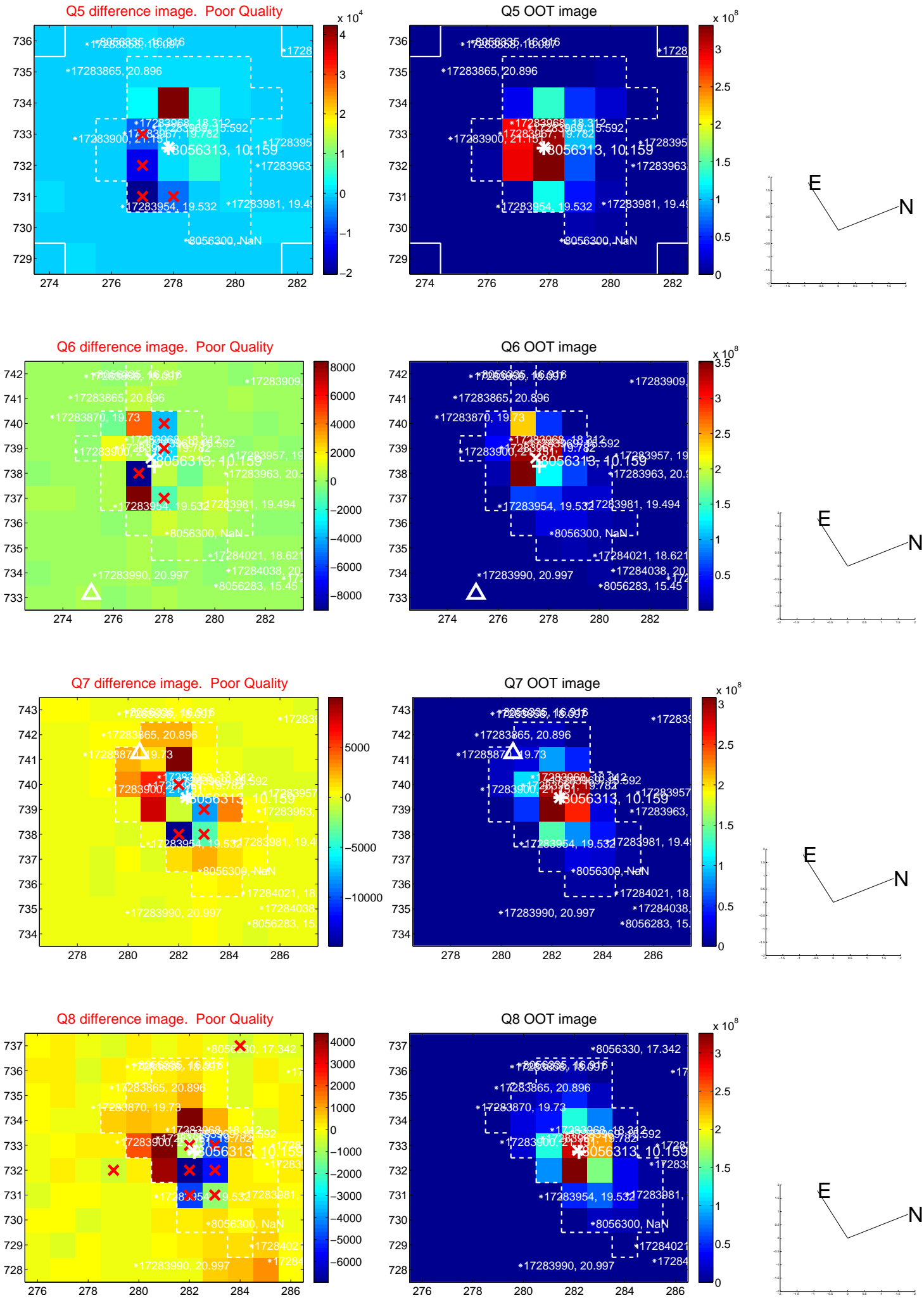


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

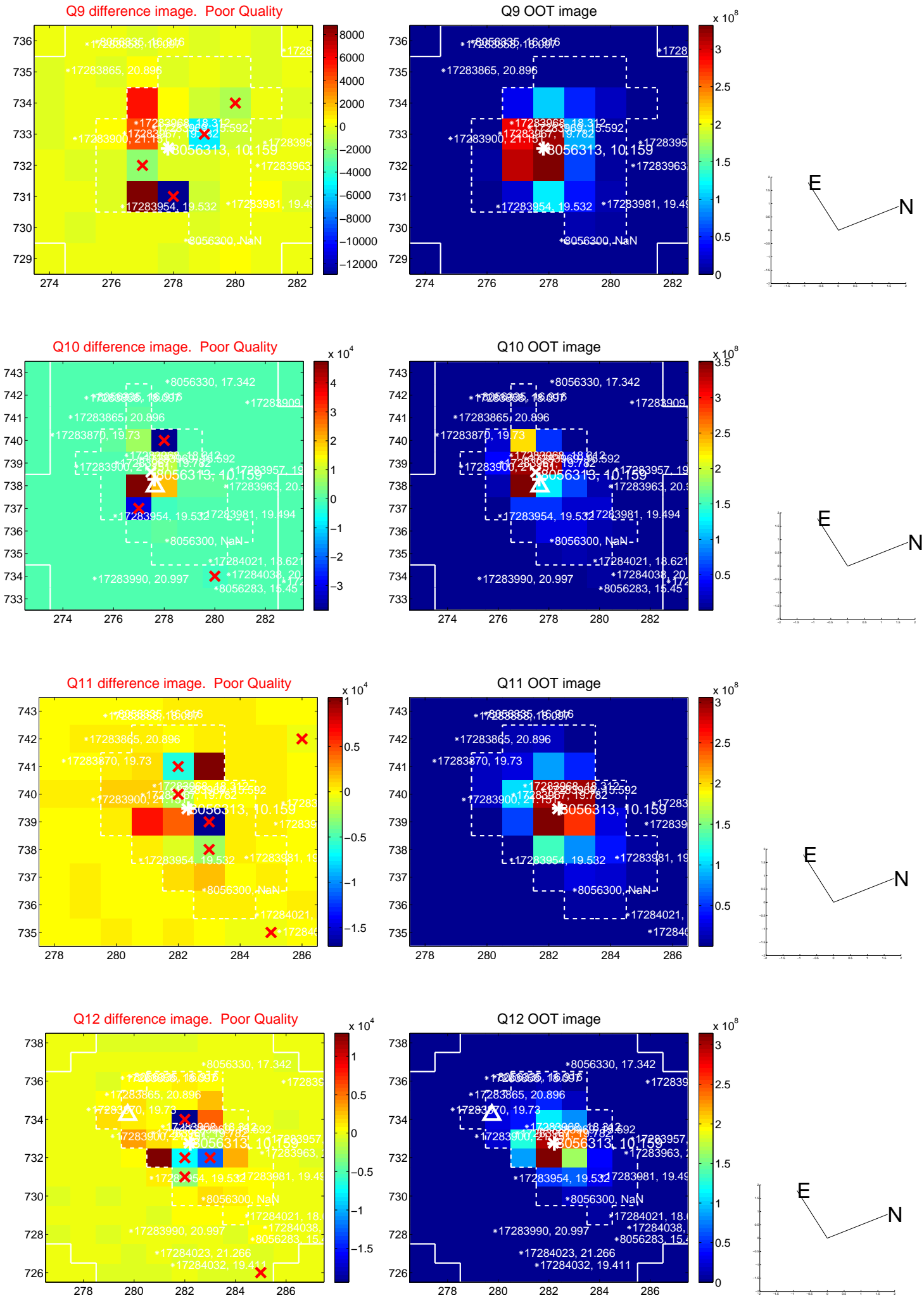
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



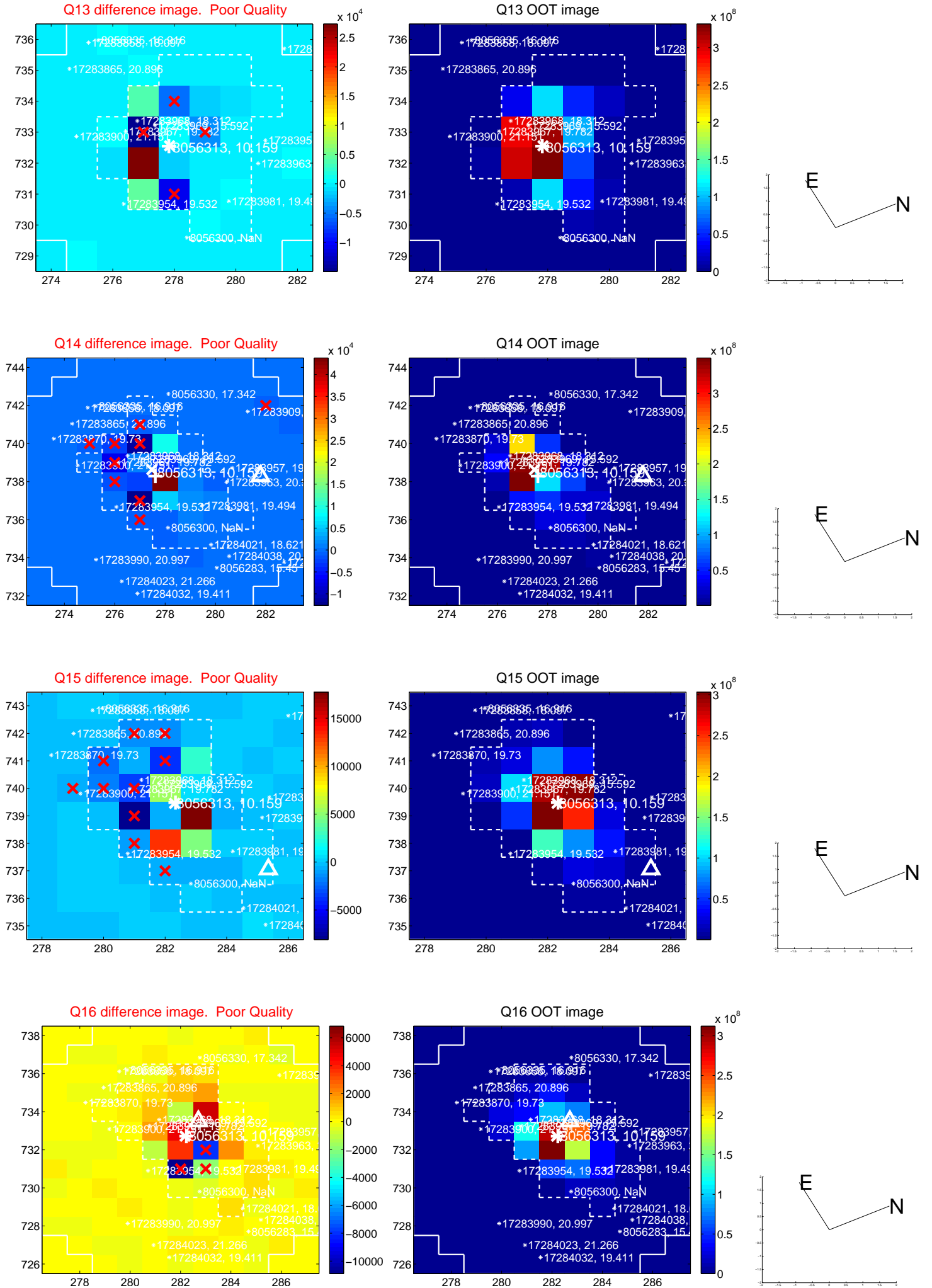
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



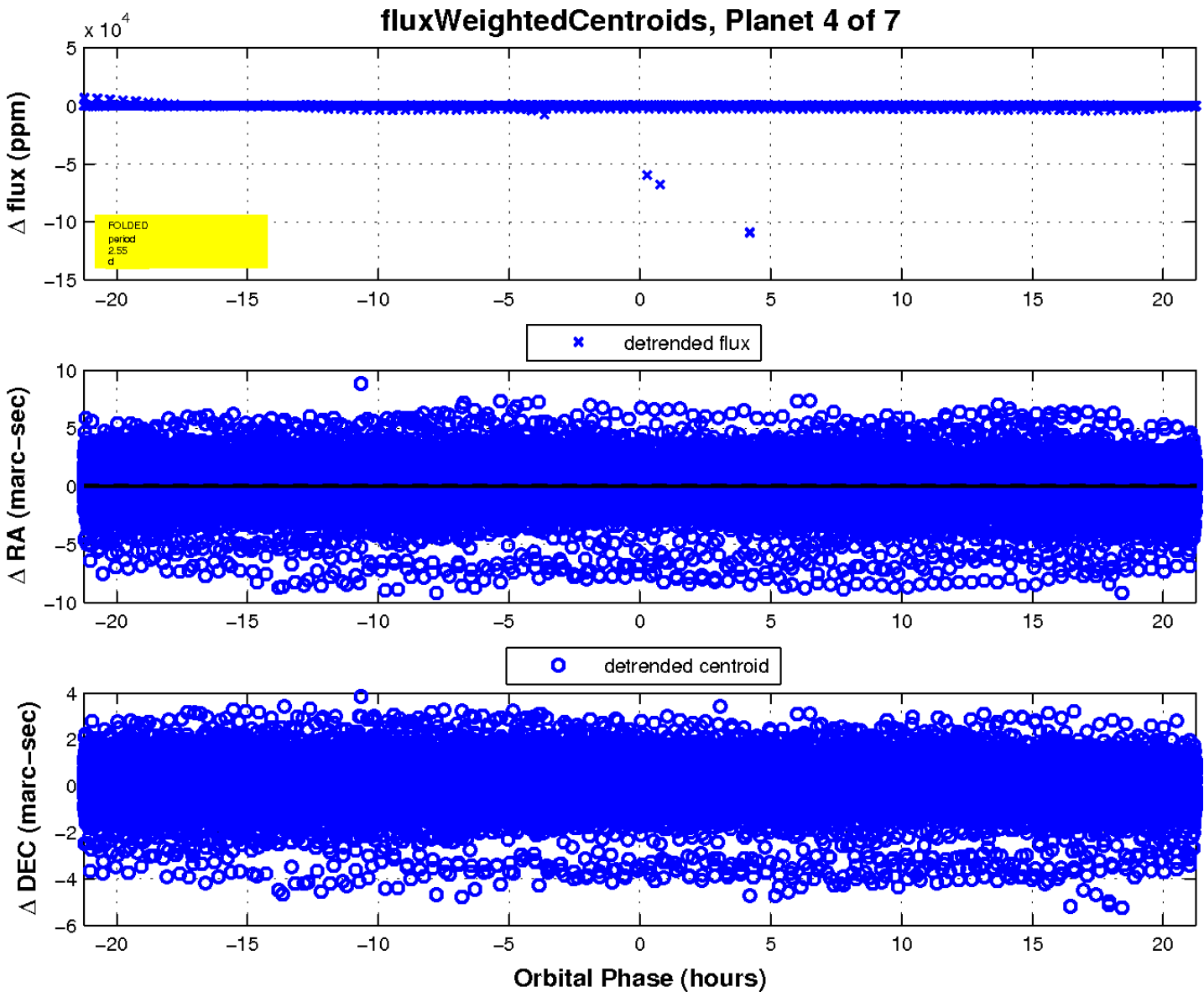
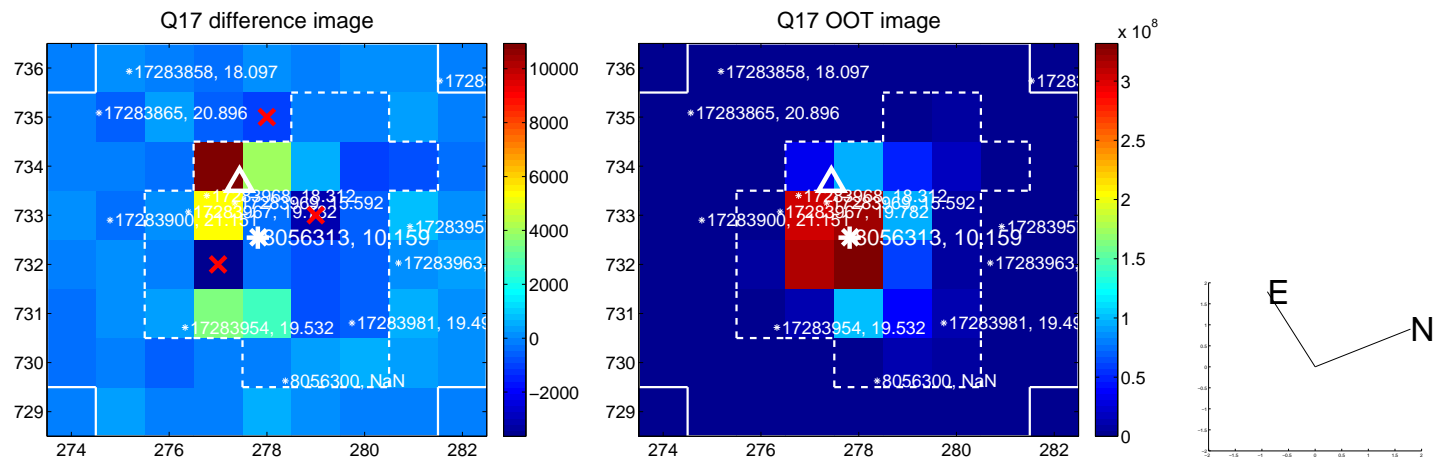
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



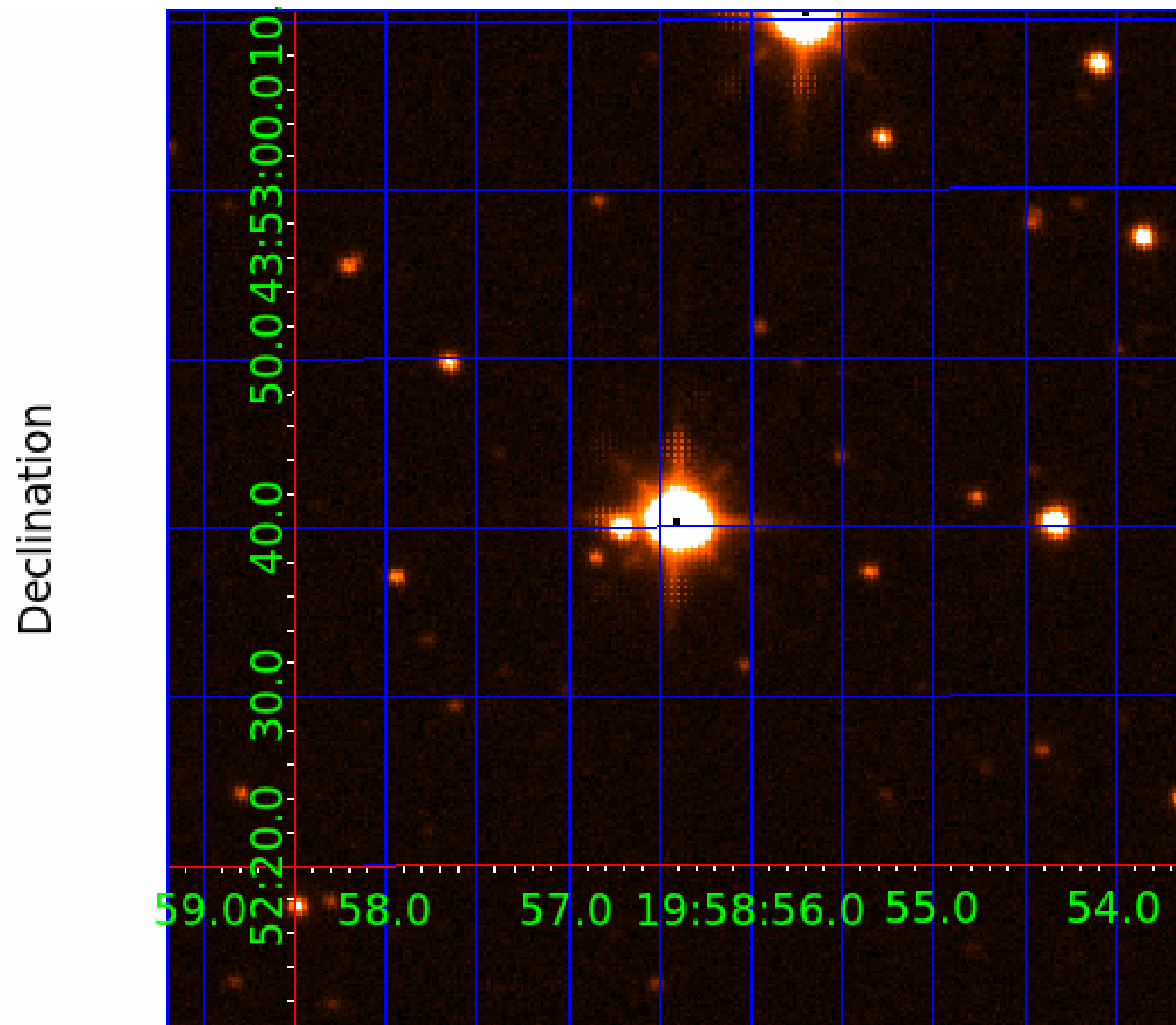
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056313

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})
008056313-01	OBS	No	387.075870	448.584170	109.7	52.470	523.0	5.6	0.93	6946	1.10	1.67
008056313-02	OBS	No	2.548349	133.561024	6.6	2.253	7.4	7.3	0.93	6946	0.26	1355.43
008056313-03	OBS	No	487.487076	209.852706	86.6	11.674	7.8	7.1	0.93	6946	0.97	1.23
008056313-04	OBS	No	2.548076	132.561245	6.3	7.085	7.9	8.3	0.93	6946	0.27	1355.62
008056313-05	OBS	No	470.118077	571.463056	146.3	13.078	15.4	10.1	0.93	6946	1.43	1.29
008056313-06	OBS	No	529.959353	462.025336	94.7	11.829	10.1	6.8	0.93	6946	1.05	1.10
008056313-07	OBS	No	560.562110	223.545976	155.1	28.534	8.4	6.9	0.93	6946	1.52	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008056313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

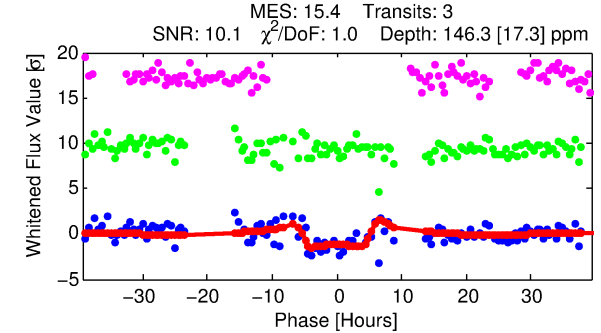
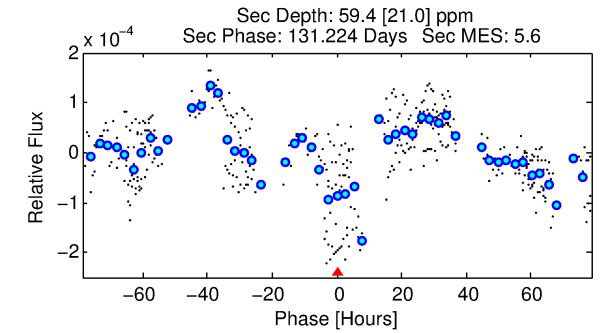
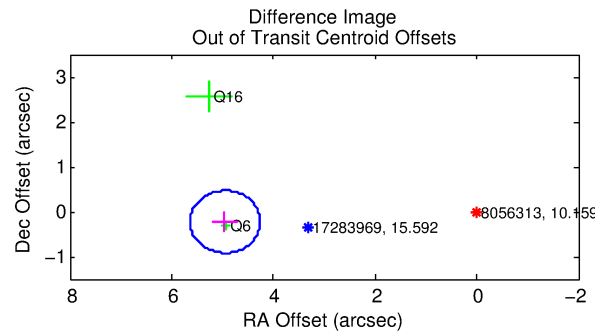
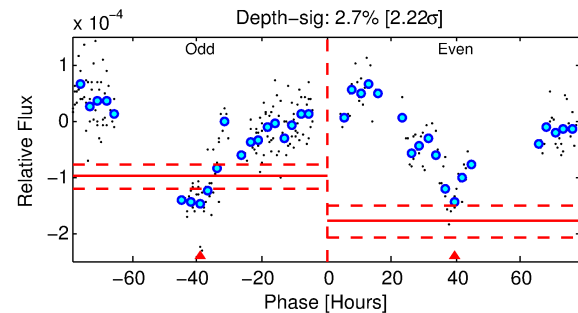
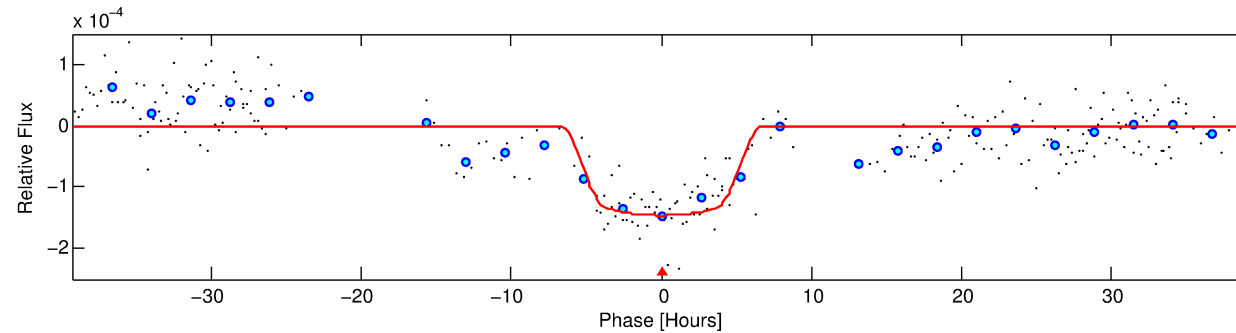
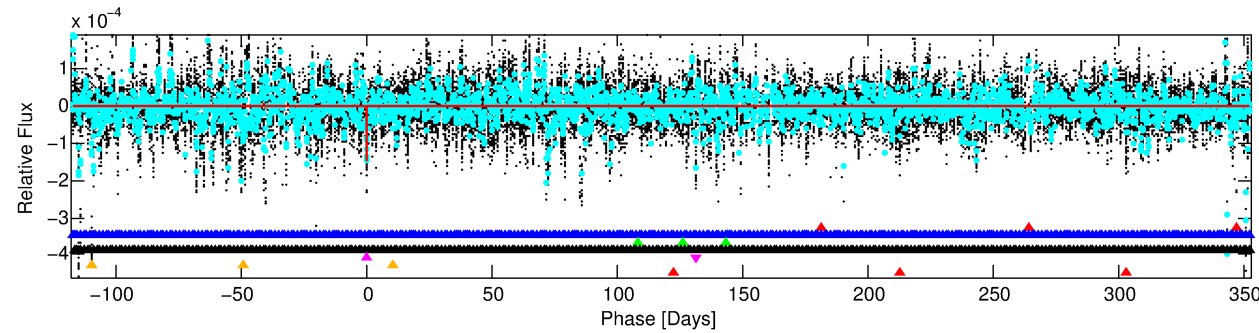
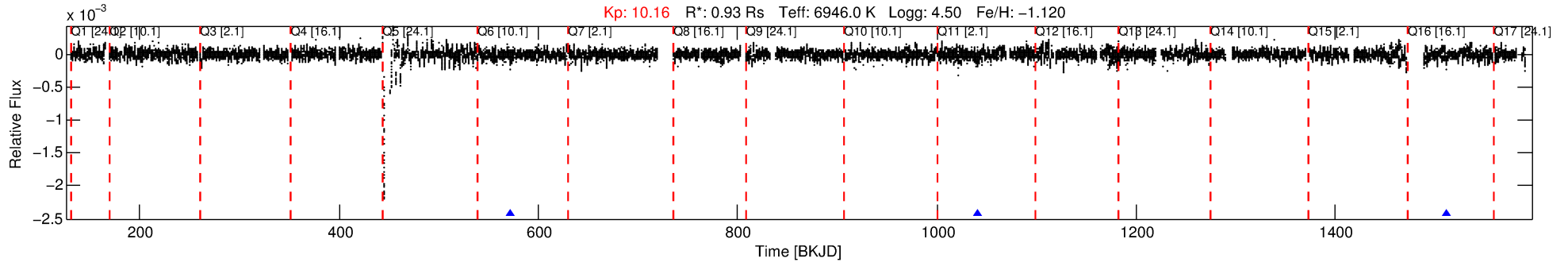
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-05

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 5 of 7 Period: 470.118 d



DV Fit Results:

Period = 470.11808 [0.01062] d
Epoch = 571.4631 [0.0144] BKJD
Rp/R* = 0.0141 [0.0009]
a/R* = 81.52 [12.58]
b = 0.97 [0.01]
Seff = 1.29 [0.37]
Teq = 272 [19] K
Rp = 1.43 [0.27] Re
a = 1.1860 [0.1855] AU
Ag = 22398.47 [10022.08] [2.23σ]
Teffp = 5141 [525] K [9.27σ]

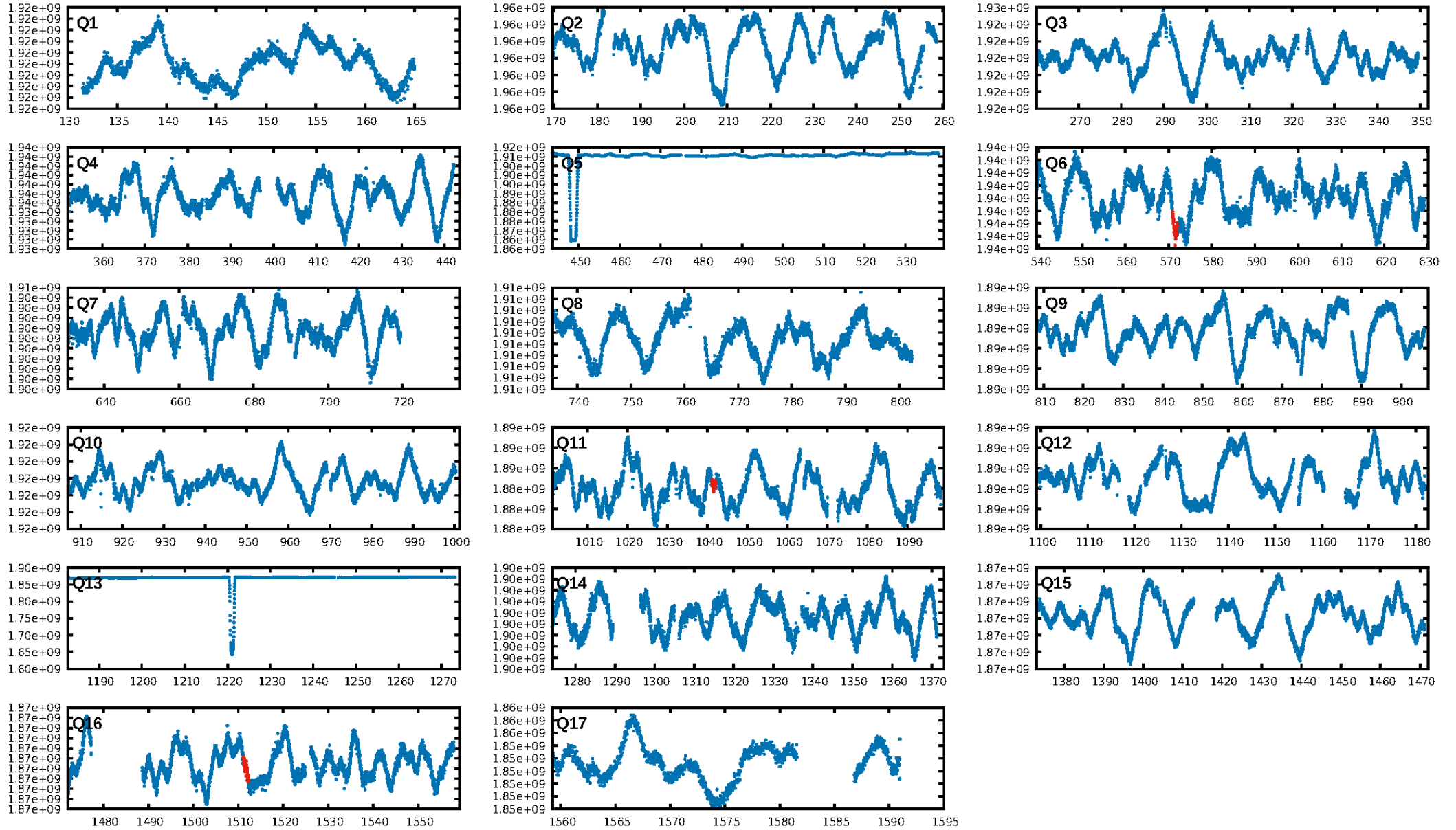
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [36.86σ]
LongPeriod-sig: 100.0% [23.78σ]
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 2.51e-21
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 6.551 arcsec [2.26σ]
OotOffset-rm: 4.959 arcsec [21.47σ]
KicOffset-rm: 3.760 arcsec [7.07σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/2]

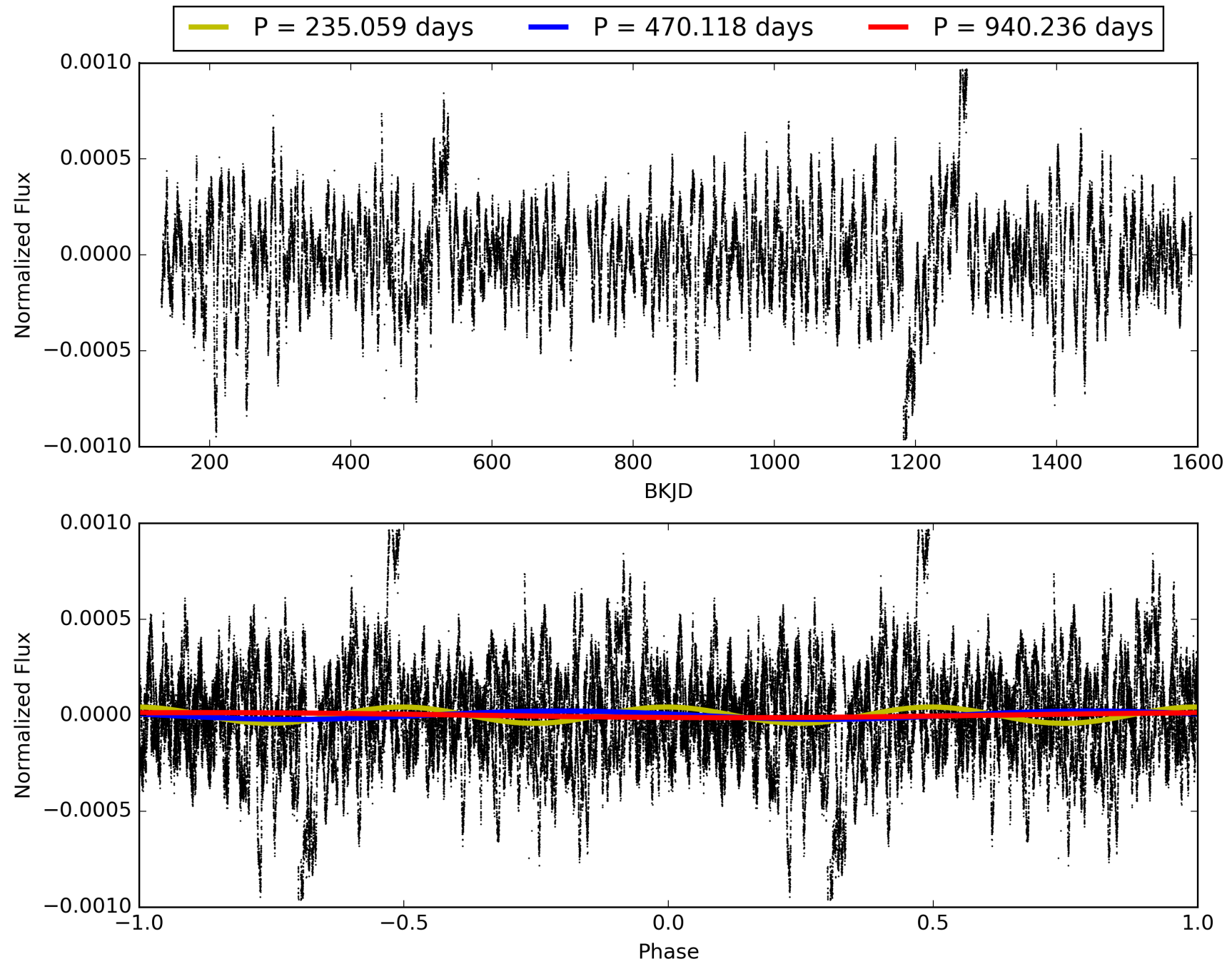
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:37 Z

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

TCE 008056313-05, PDC Light Curves

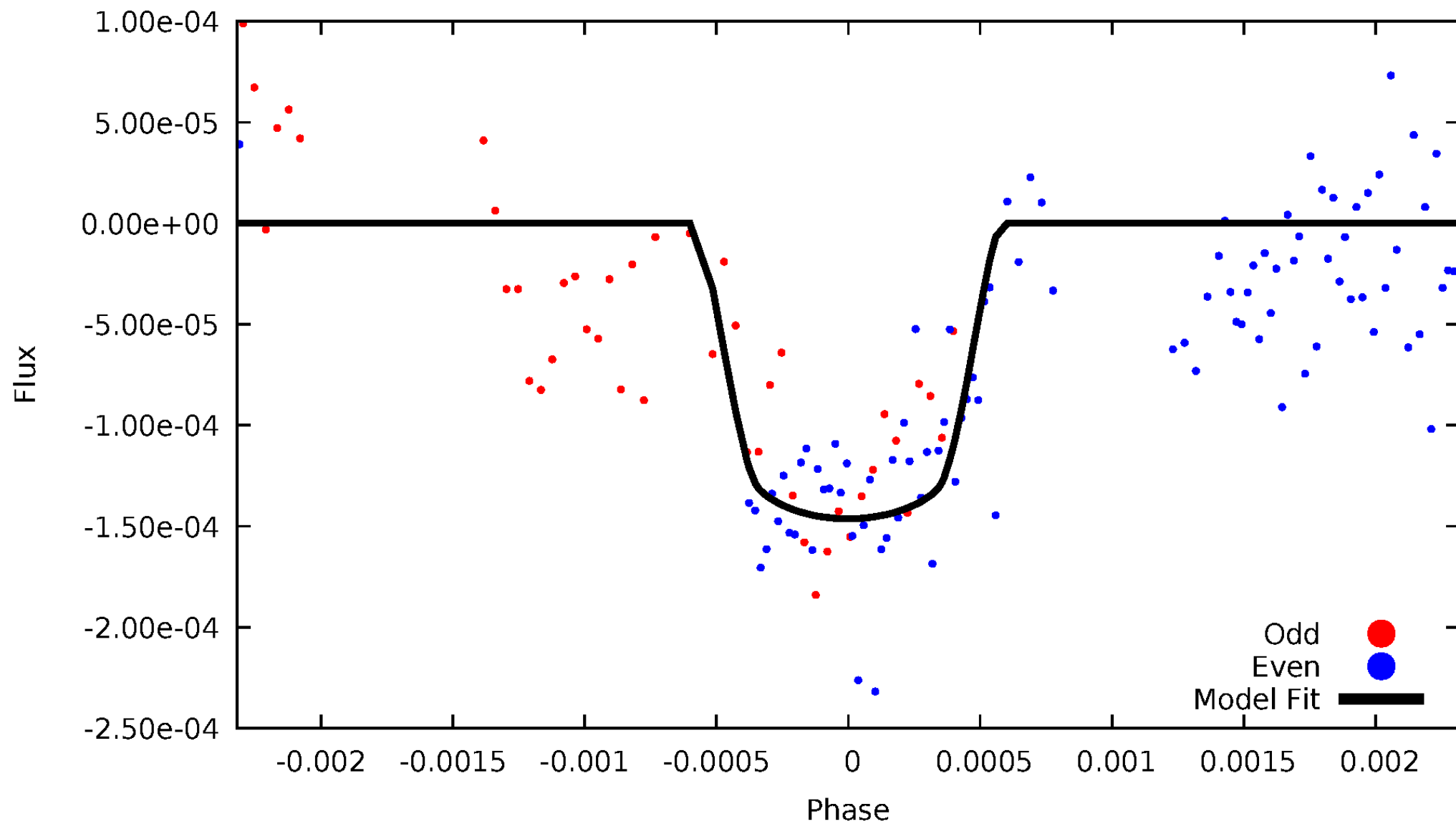


TCE 008056313-05



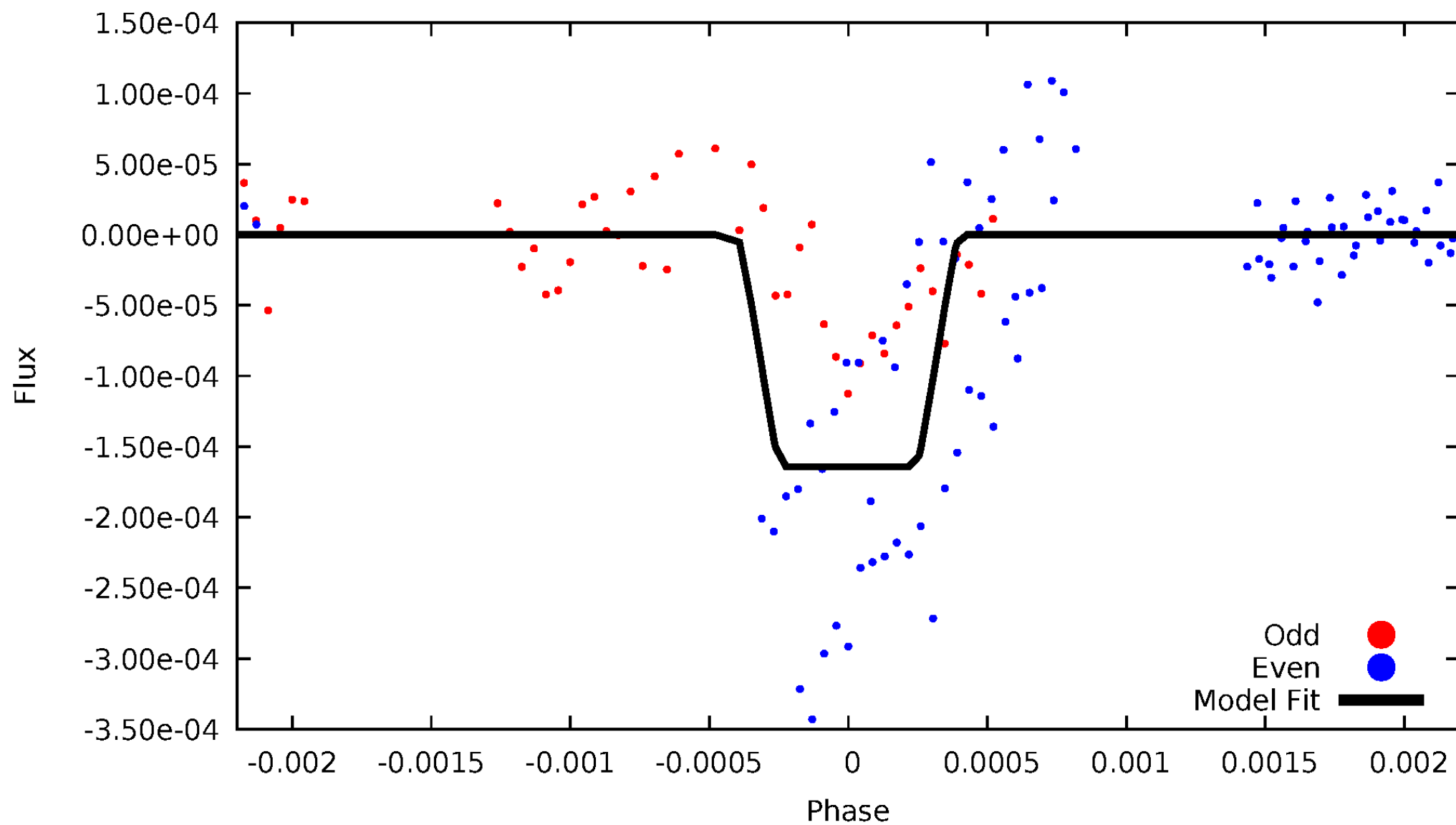
DV Odd/Even

TCE 008056313-05



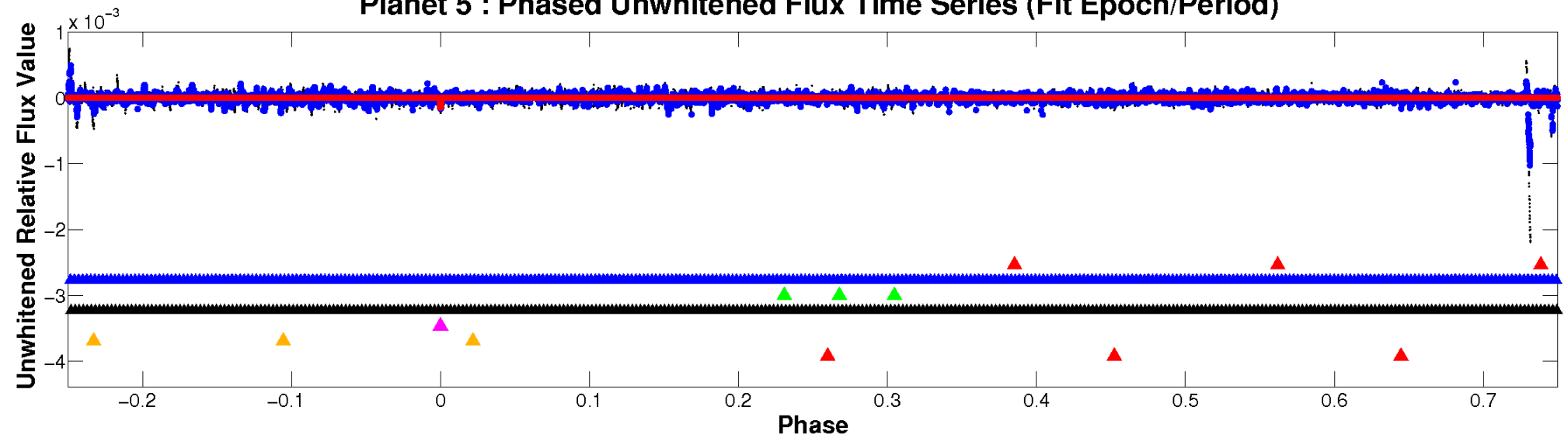
ALT Odd/Even

TCE 008056313-05

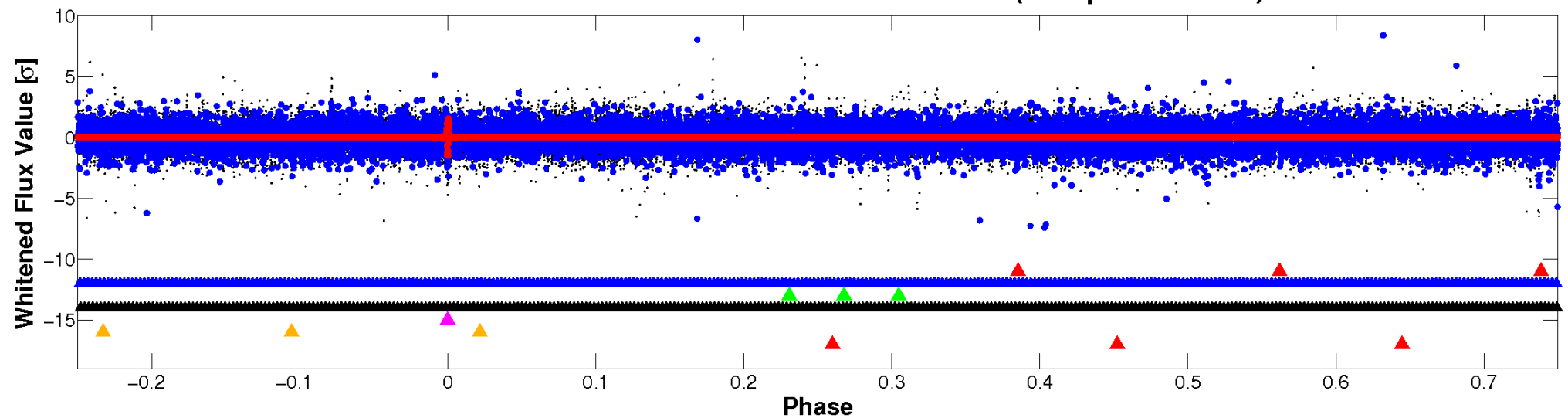


Non-Whitened Vs. Whitened Light Curve

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

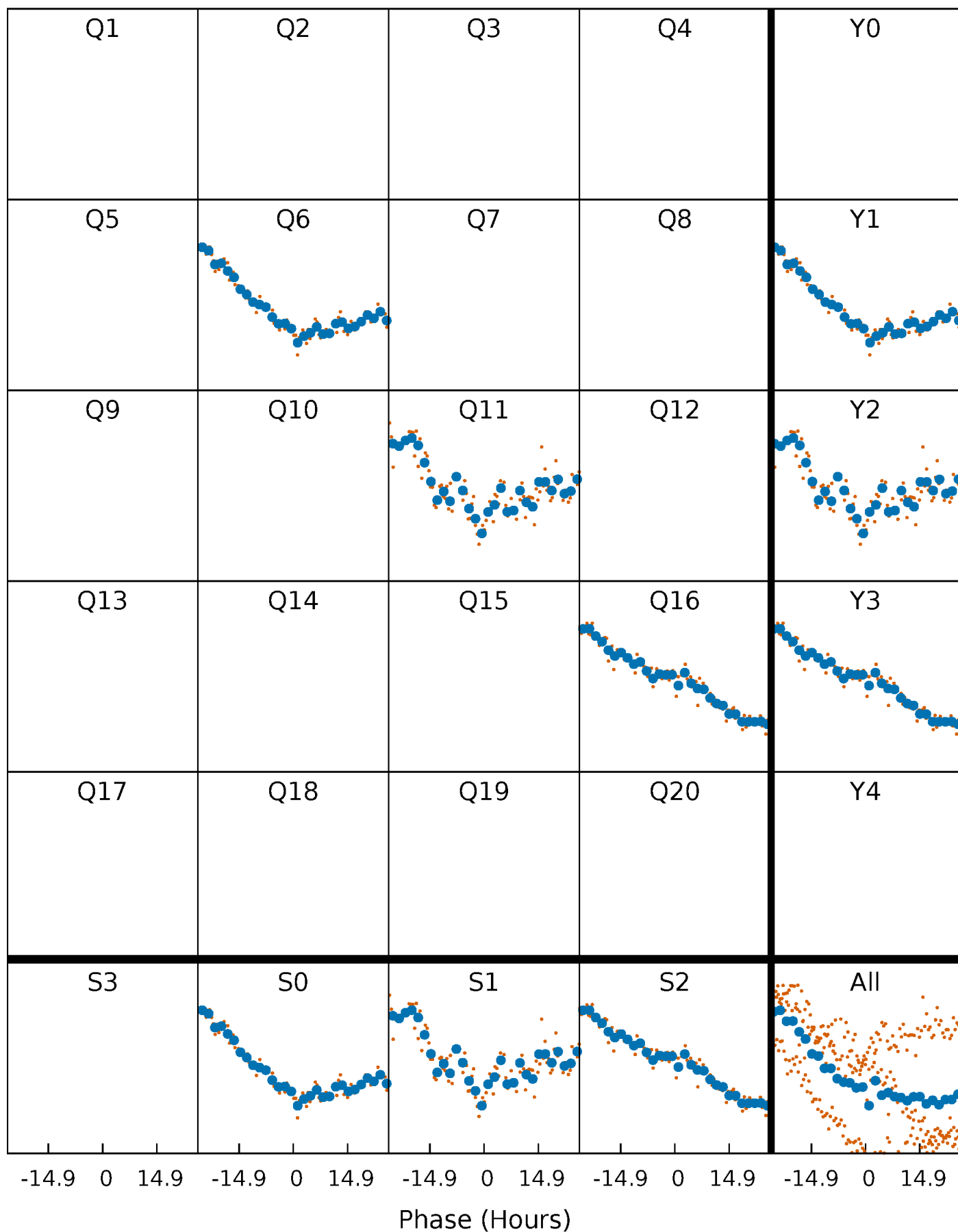


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



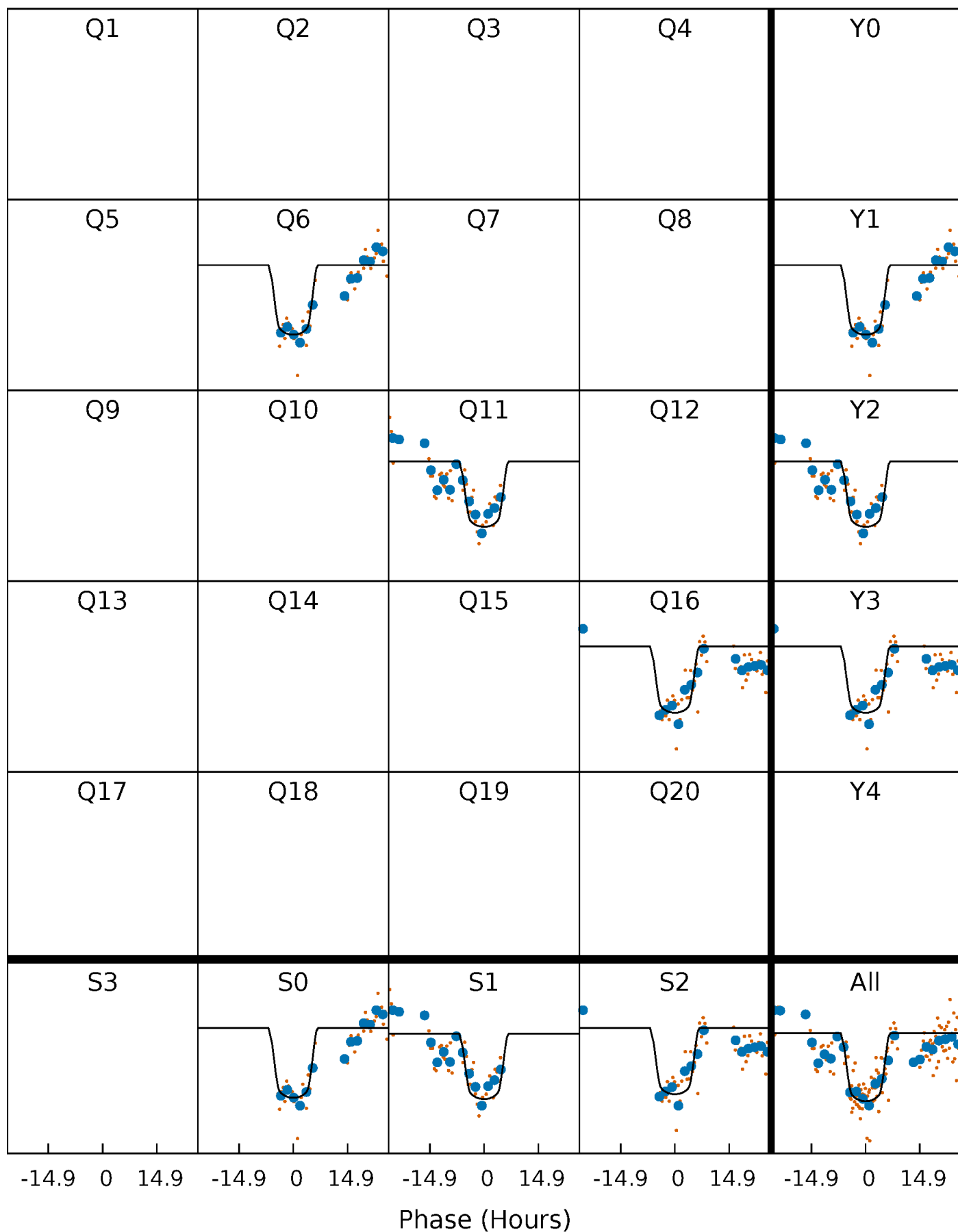
PDC Quarter-Phased Transit Curves

TCE 008056313-05 $P=470.118077$ Days $T_0=571.463056$ (BKJD)



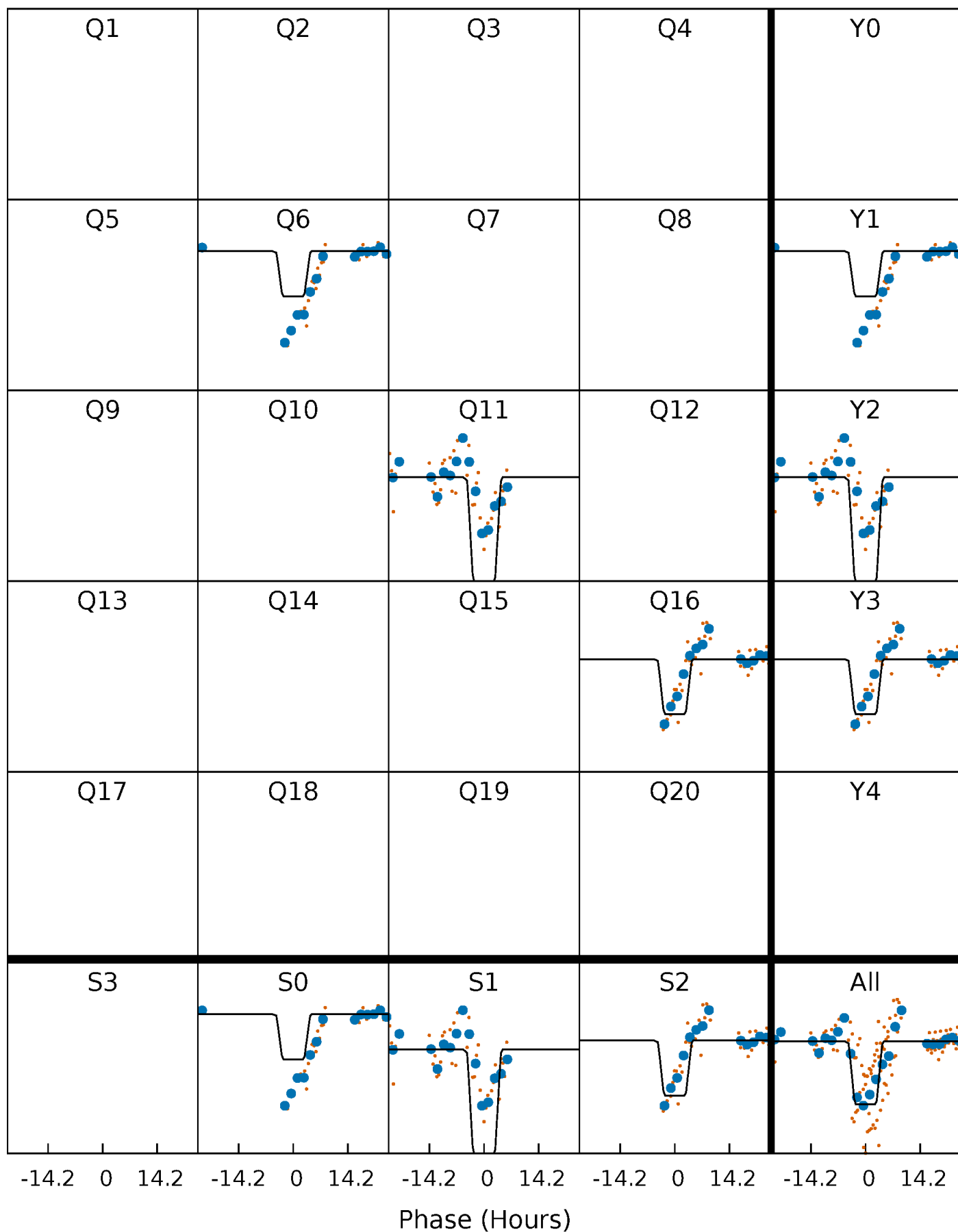
DV Quarter-Phased Transit Curves

TCE 008056313-05 $P=470.118077$ Days $T_0=571.463056$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

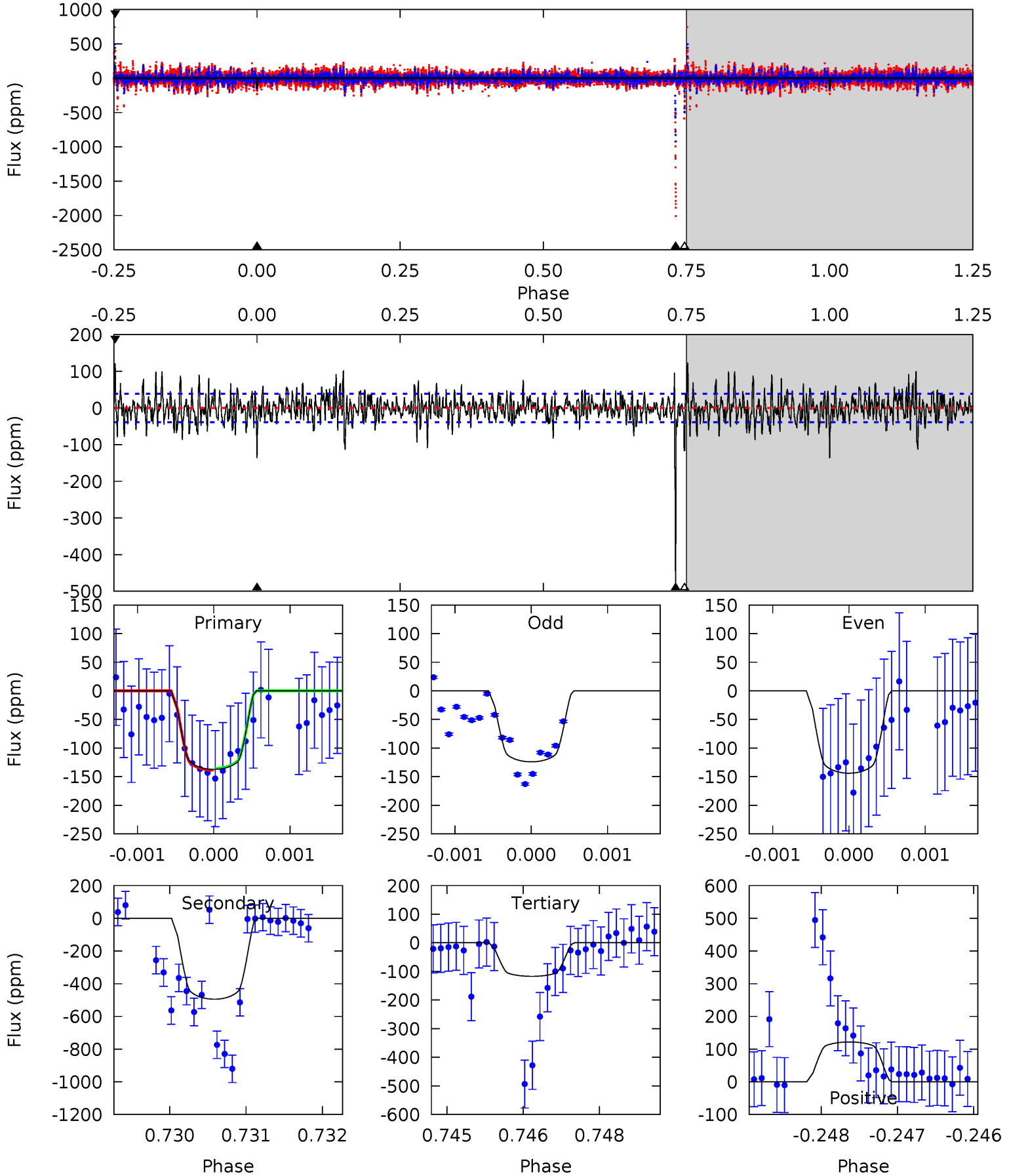
TCE 008056313-05 $P=470.155782$ Days $T_0=571.367758$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-05, P = 470.118077 Days, E = 101.344979 Days

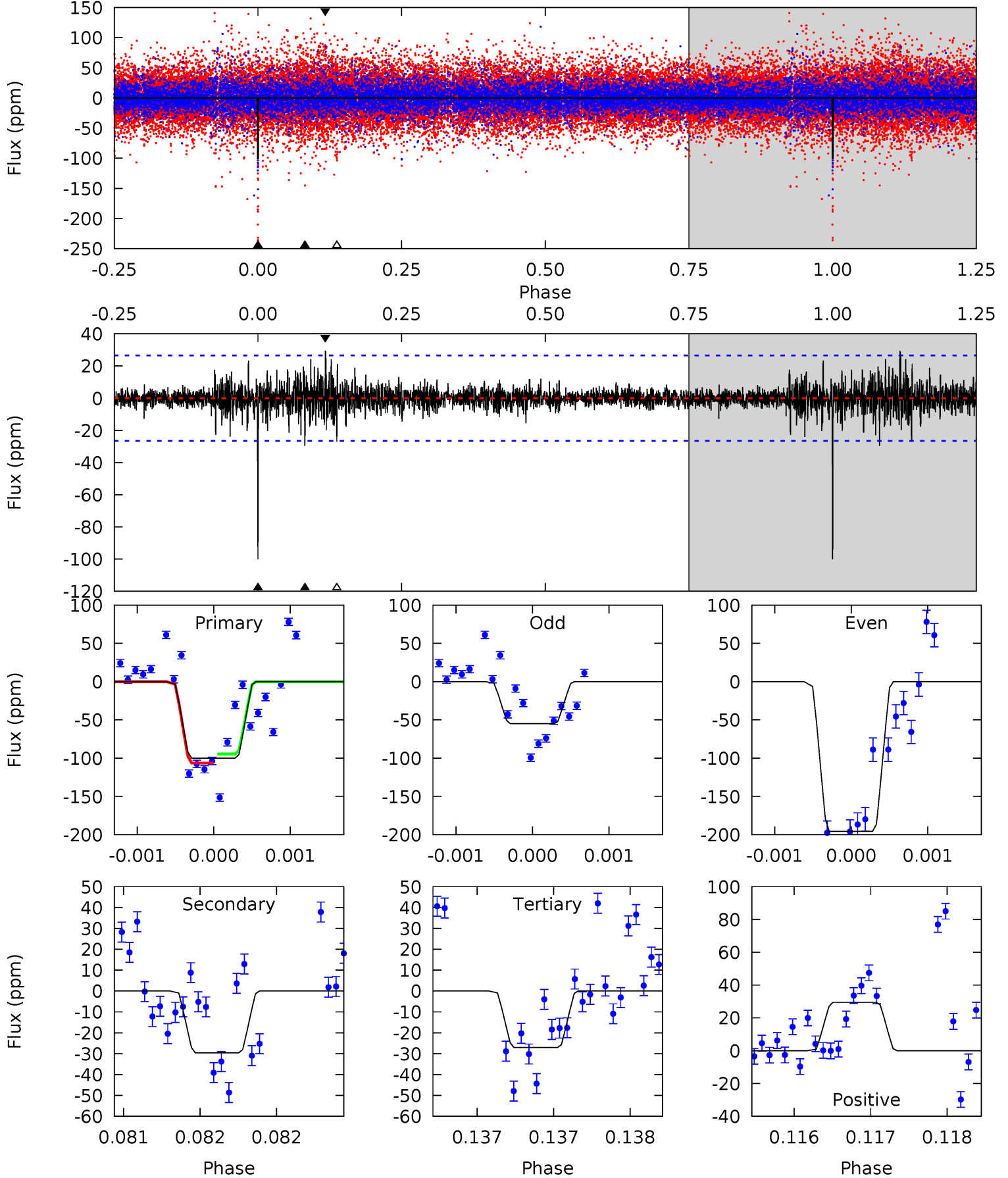
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	69.4	16.4	17.1	5.44	3.27	4.01	2.83	2.16	52.9	52.3	1.27	1.01	0.20	0.21



Alt Model-Shift Uniqueness Test

008056313-05, P = 470.155782 Days, E = 101.211976 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	6.13	5.61	6.10	5.50	3.36	1.01	15.1	14.6	0.52	0.03	16.0	1.24	0.23	1.22



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-495 ± 7	$1.47^{+0.16}_{-0.13}$	384^{+19}_{-17}	9146^{+550}_{-526}	174313^{+32718}_{-30952}
Alt.	-30 ± 5	$1.35^{+0.15}_{-0.14}$	386^{+19}_{-17}	4642^{+241}_{-223}	12365^{+3668}_{-2795}

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 $A_{obs} \gg 1.0$

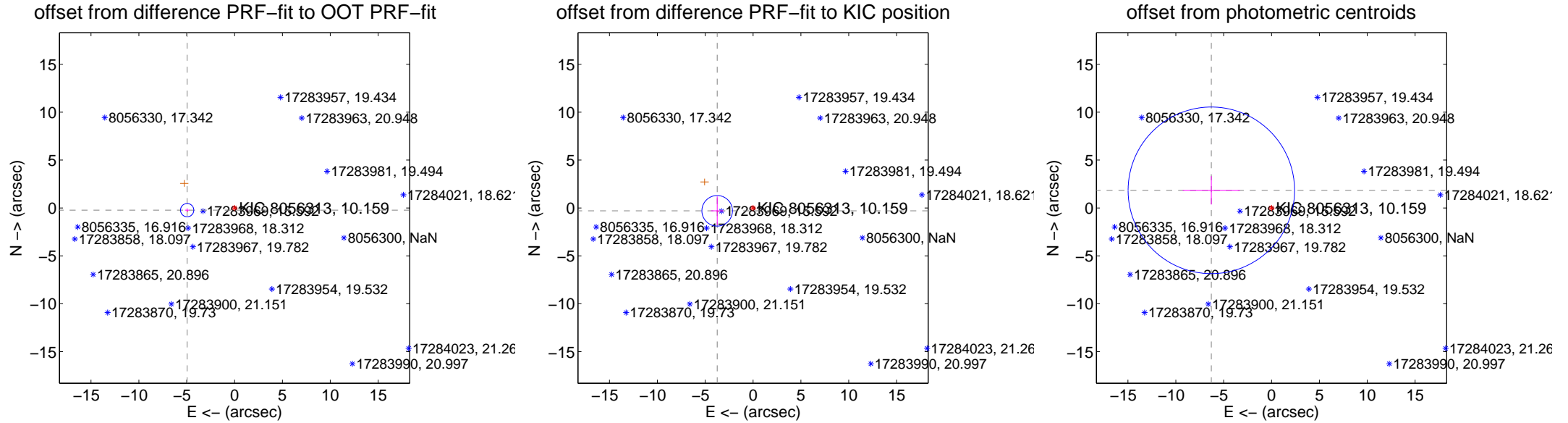
DV Centroid Data

Supplemental centroid analysis for 008056313-05. **Kepler magnitude: 10.16.** Transit SNR 10.07

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.959 \pm 0.231	21.47	4.954 \pm 0.231	-0.228 \pm 0.189
PRF-fit source offset from KIC position	3.760 \pm 0.532	7.07	3.748 \pm 0.651	-0.298 \pm 1.495
photometric centroid source offset	6.55 \pm 2.90	2.26	6.29 \pm 2.99	1.84 \pm 1.48

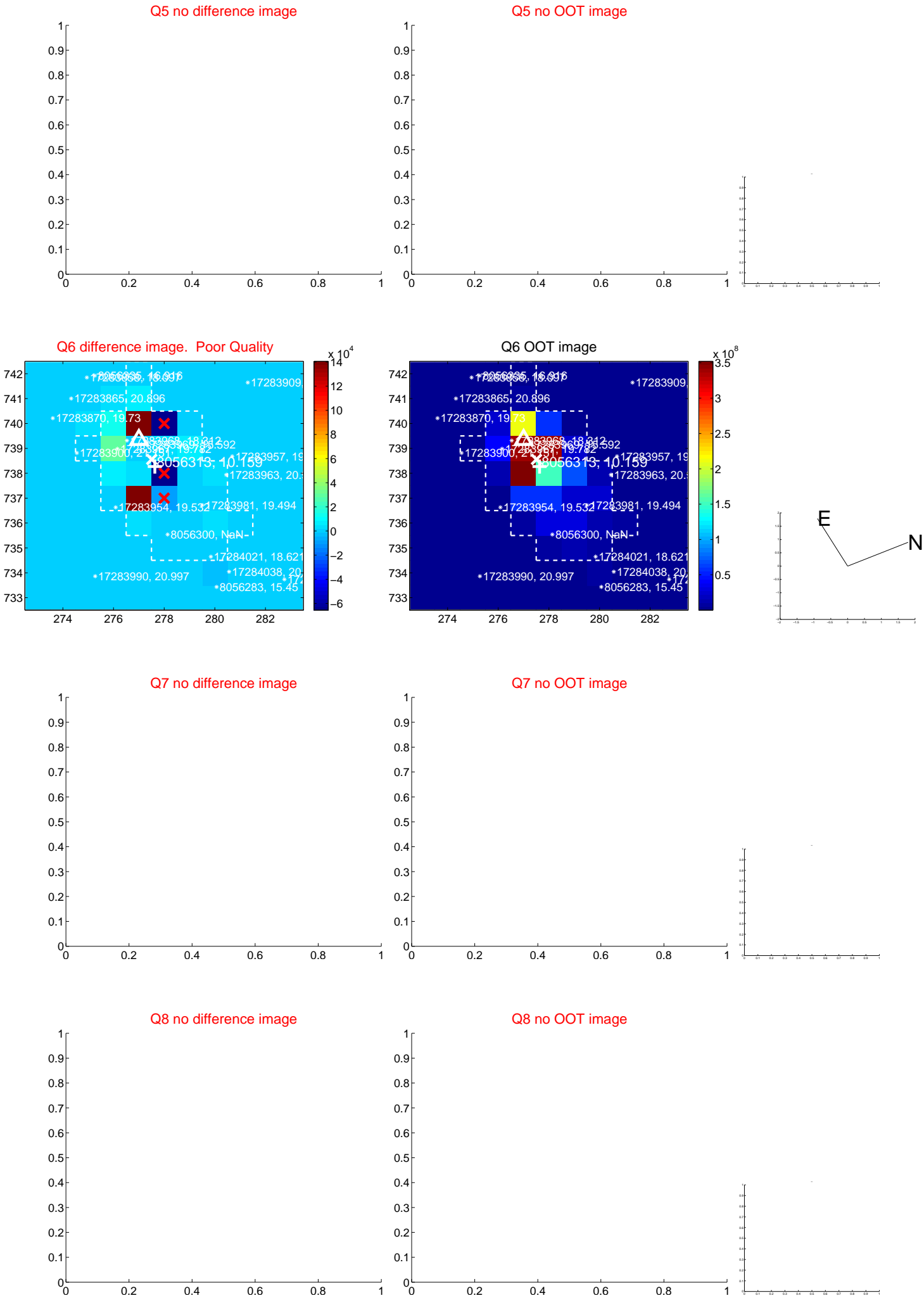


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



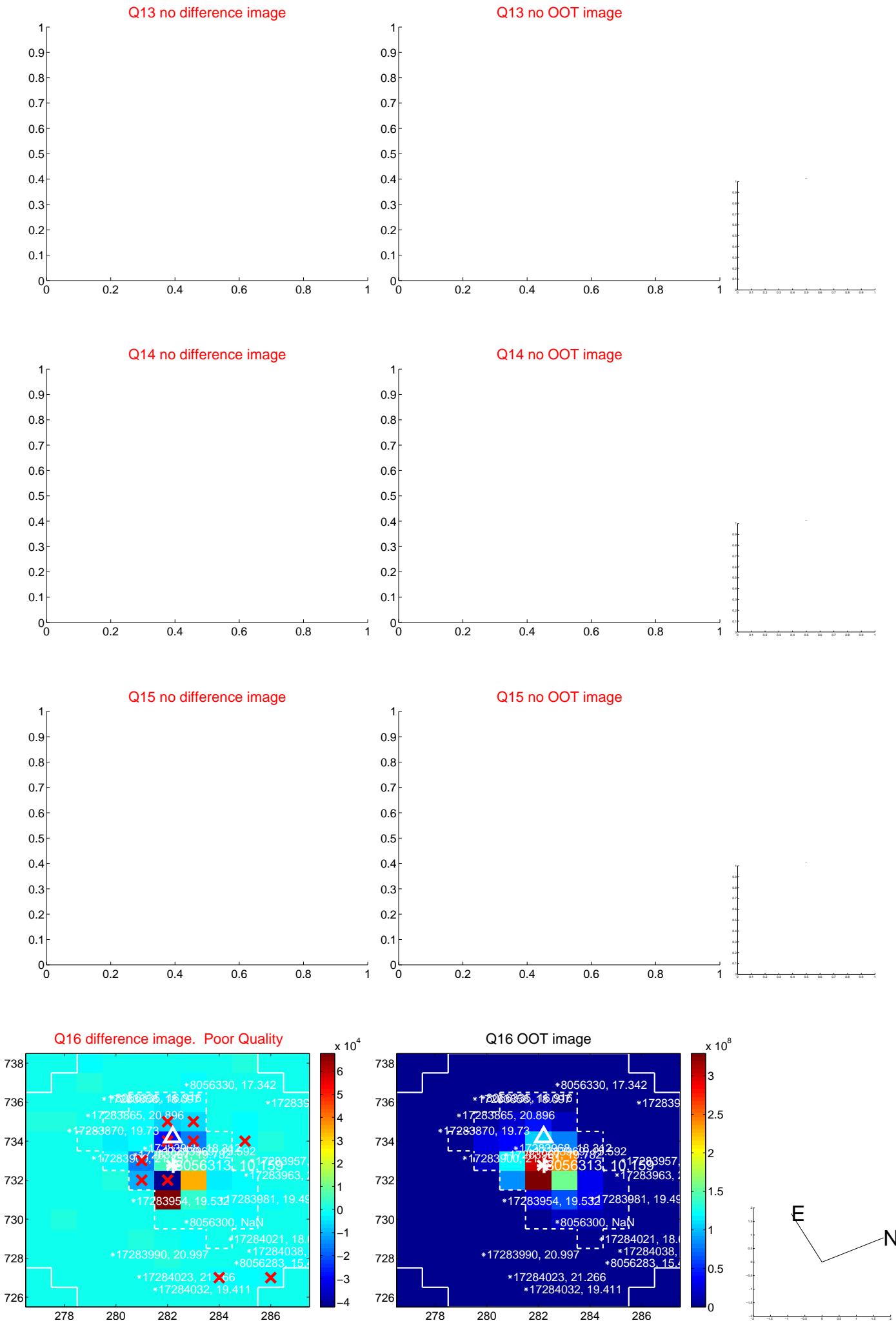
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



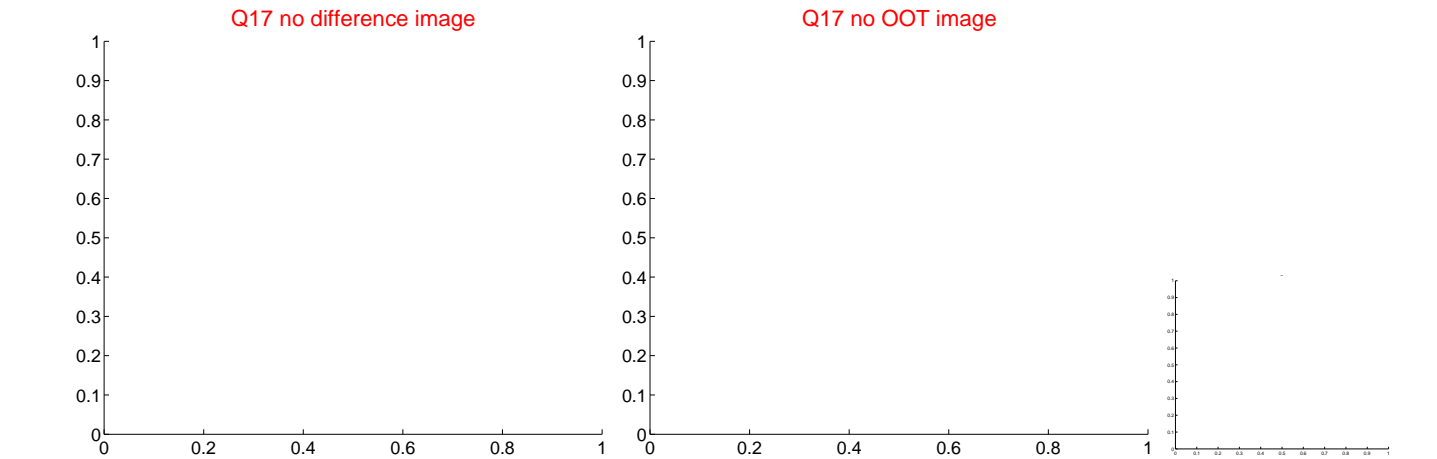
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



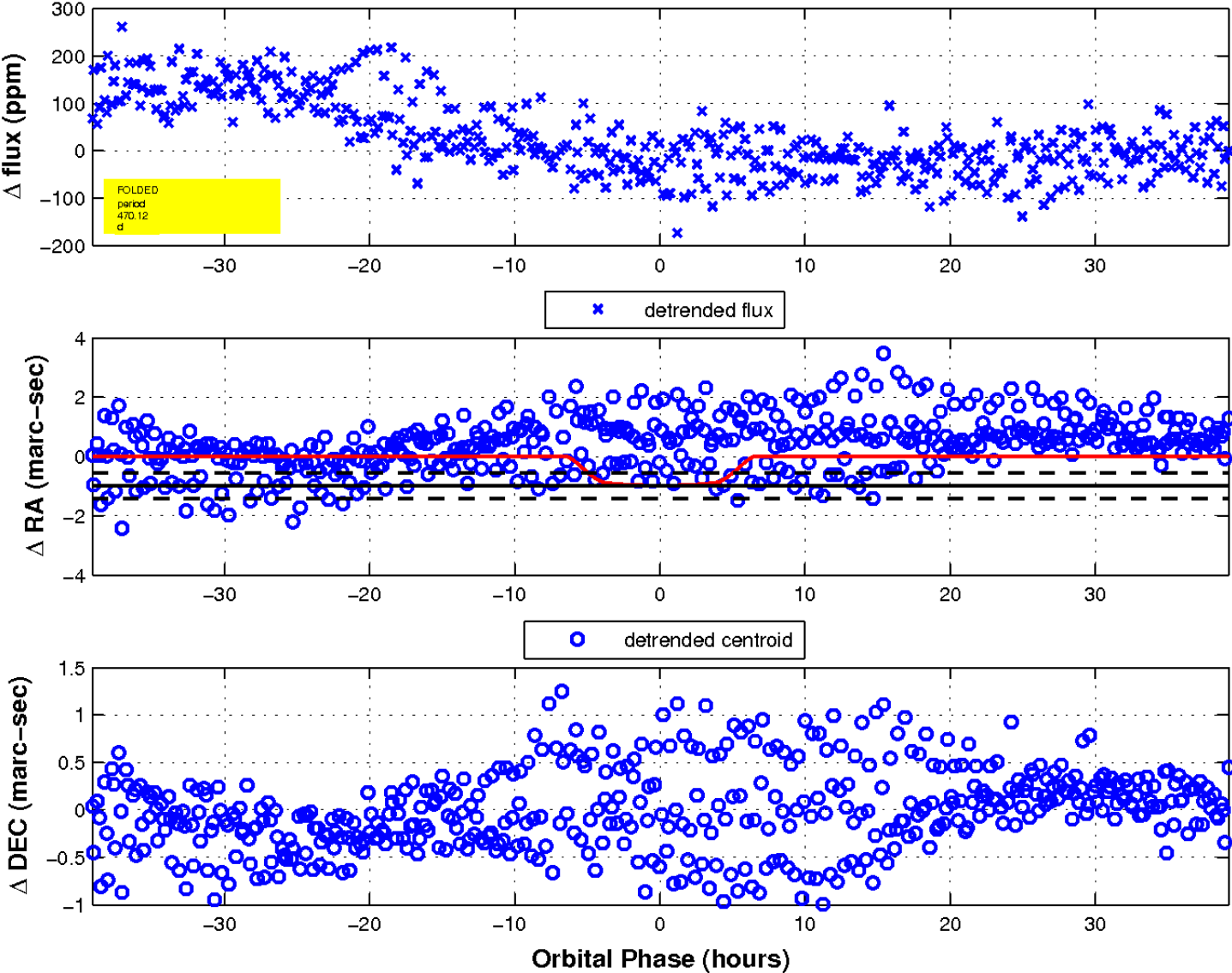
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



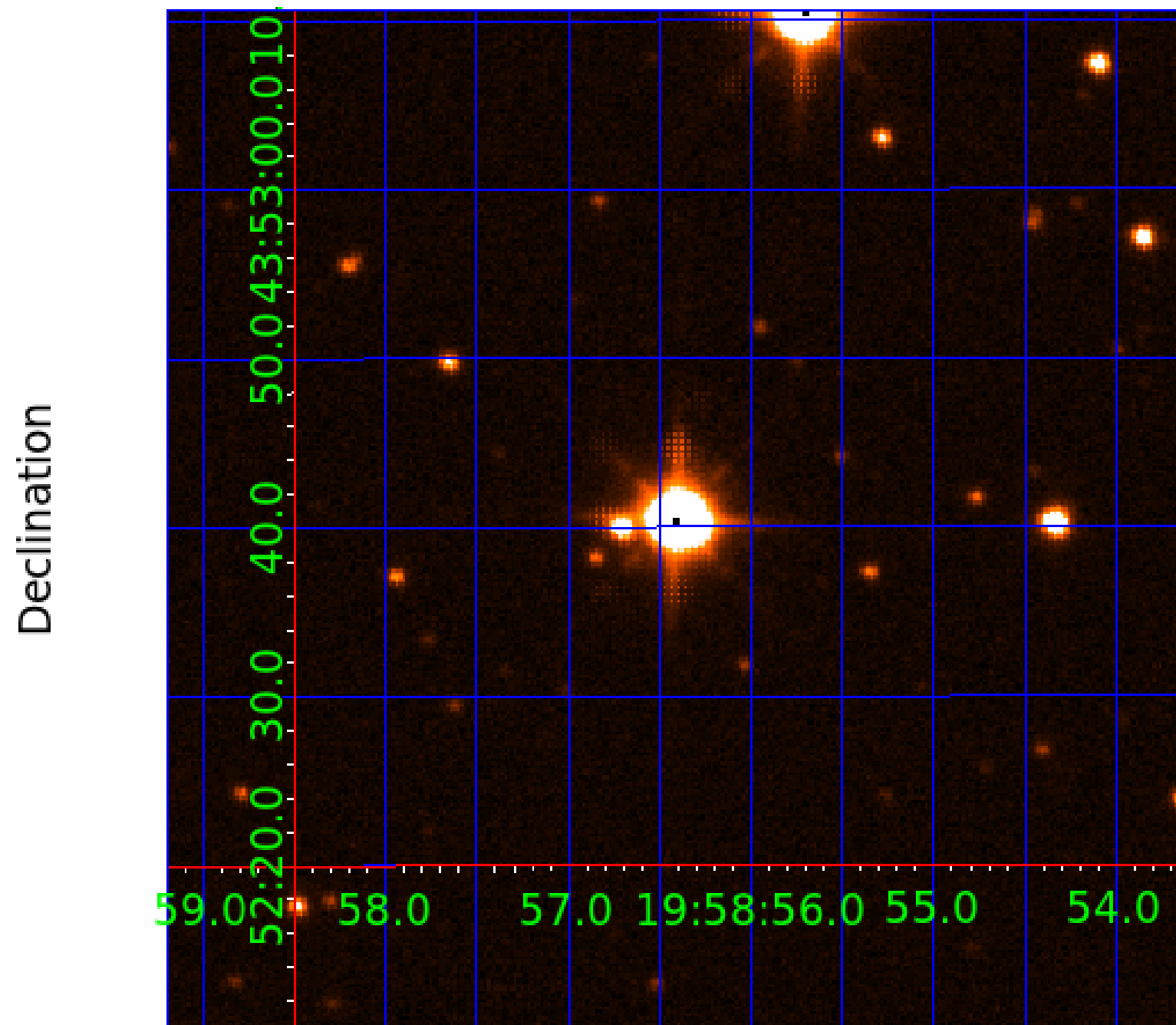
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 5 of 7



UKIRT Image



KIC 008056313

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})
008056313-01	OBS	No	387.075870	448.584170	109.7	52.470	523.0	5.6	0.93	6946	1.10	1.67
008056313-02	OBS	No	2.548349	133.561024	6.6	2.253	7.4	7.3	0.93	6946	0.26	1355.43
008056313-03	OBS	No	487.487076	209.852706	86.6	11.674	7.8	7.1	0.93	6946	0.97	1.23
008056313-04	OBS	No	2.548076	132.561245	6.3	7.085	7.9	8.3	0.93	6946	0.27	1355.62
008056313-05	OBS	No	470.118077	571.463056	146.3	13.078	15.4	10.1	0.93	6946	1.43	1.29
008056313-06	OBS	No	529.959353	462.025336	94.7	11.829	10.1	6.8	0.93	6946	1.05	1.10
008056313-07	OBS	No	560.562110	223.545976	155.1	28.534	8.4	6.9	0.93	6946	1.52	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008056313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

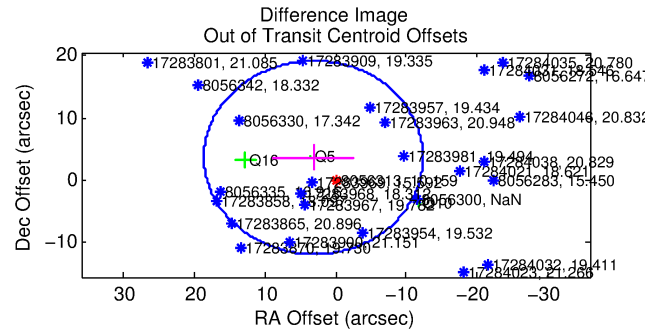
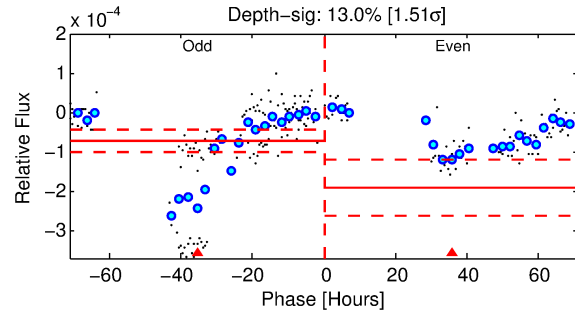
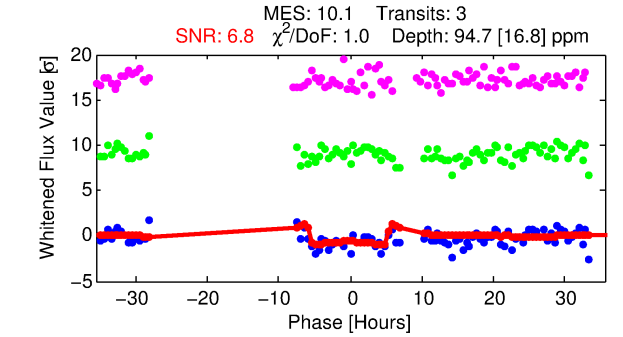
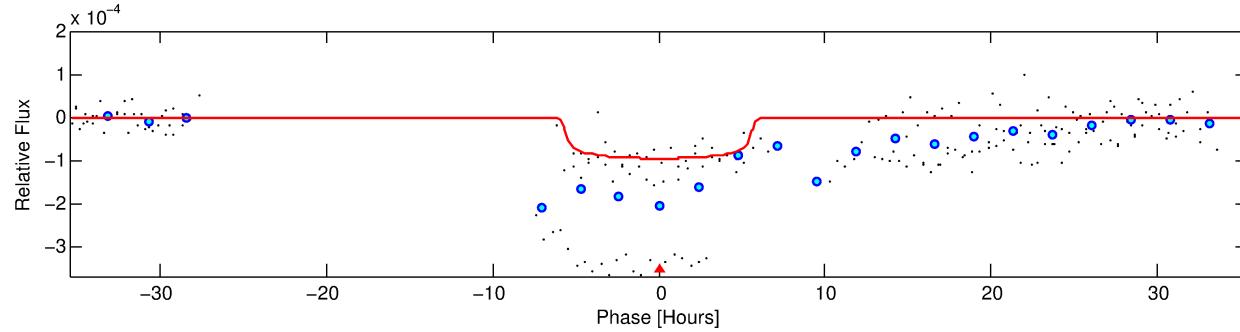
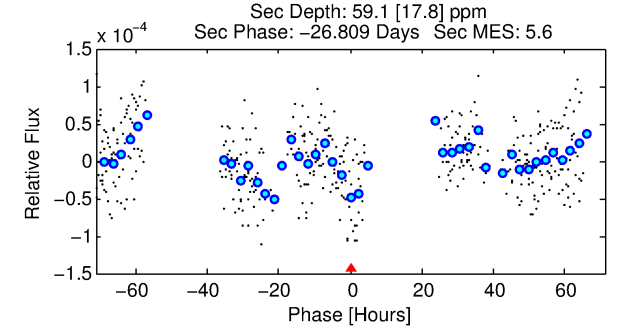
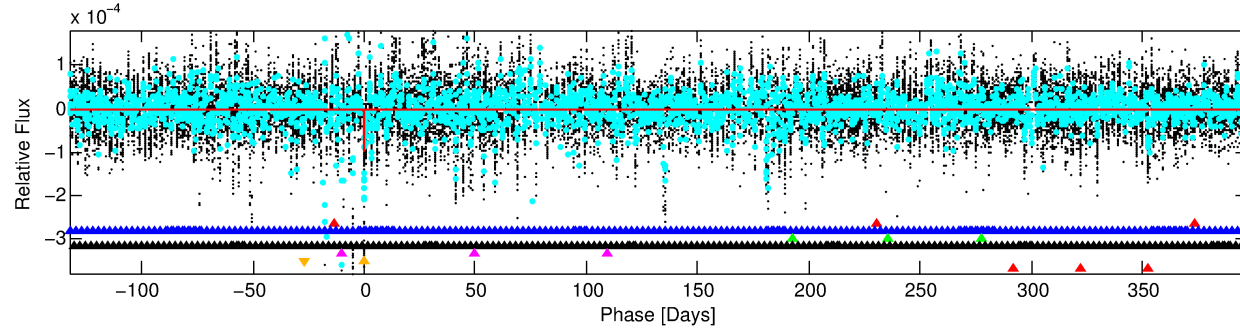
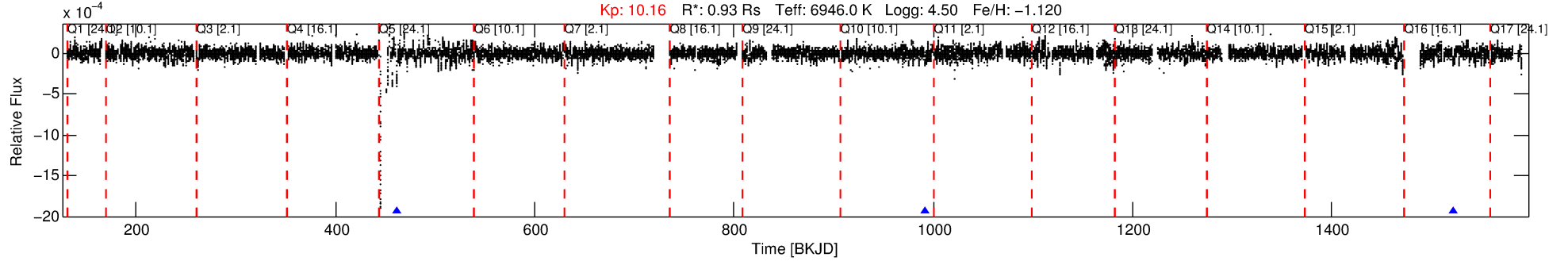
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-06

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 6 of 7 Period: 529.959 d



DV Fit Results:

Period = 529.95935 [0.01627] d
Epoch = 462.0253 [0.0221] BKJD
Rp/R* = 0.0104 [0.0017]
a/R* = 156.68 [122.00]
b = 0.90 [0.17]
Seff = 1.10 [0.31]
Teq = 261 [19] K
Rp = 1.06 [0.25] Re
a = 1.2846 [0.2009] AU
Ag = 48155.75 [24352.75] [1.98σ]
Teffp = 5981 [705] K [8.11σ]

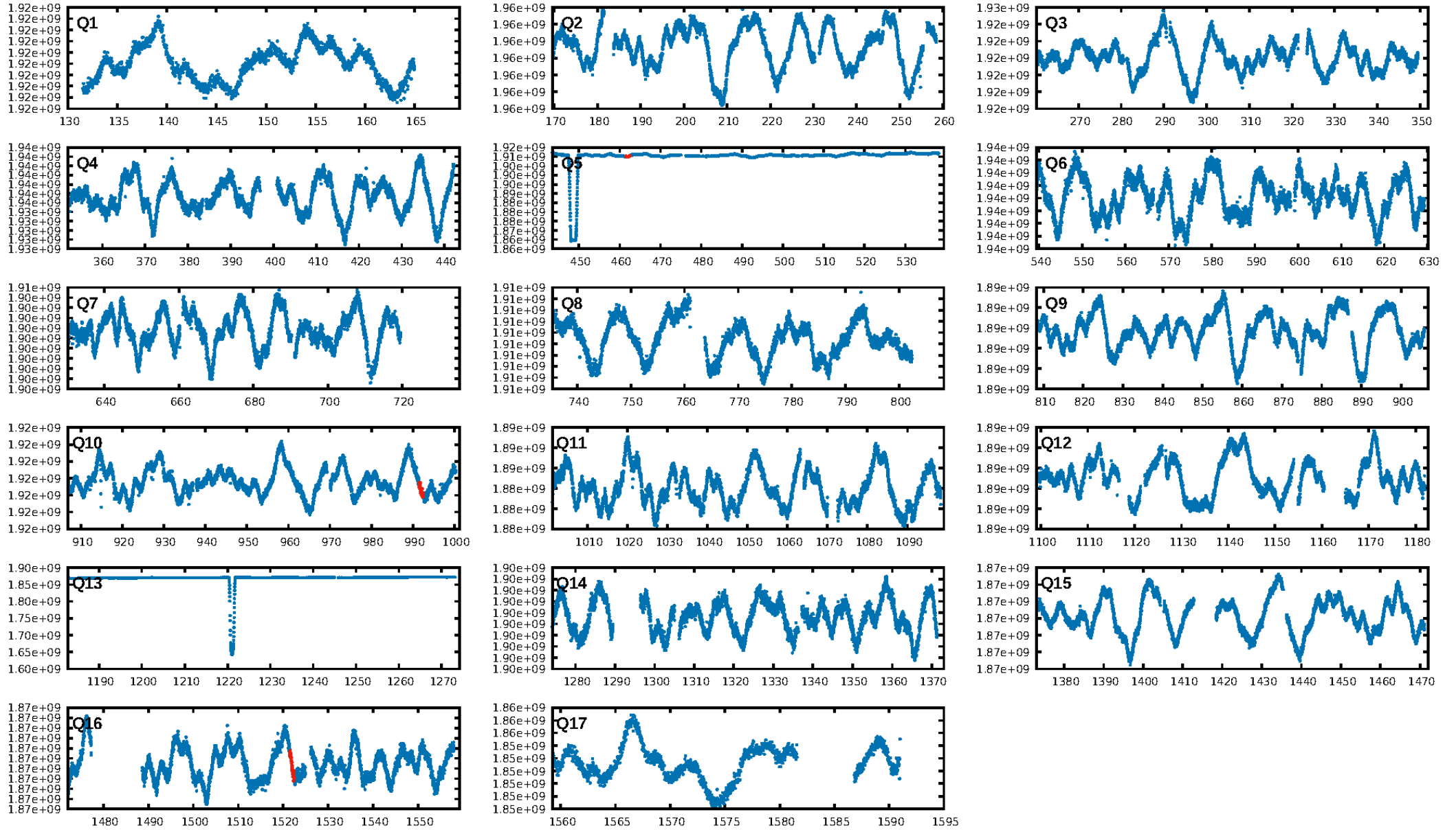
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [61.33σ]
LongPeriod-sig: 100.0% [23.78σ]
ModelChiSquare2-sig: 34.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.79e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 3.049 arcsec [0.93σ]
OotOffset-rm: 4.810 arcsec [0.93σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 4.699 arcsec [0.76σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/3]

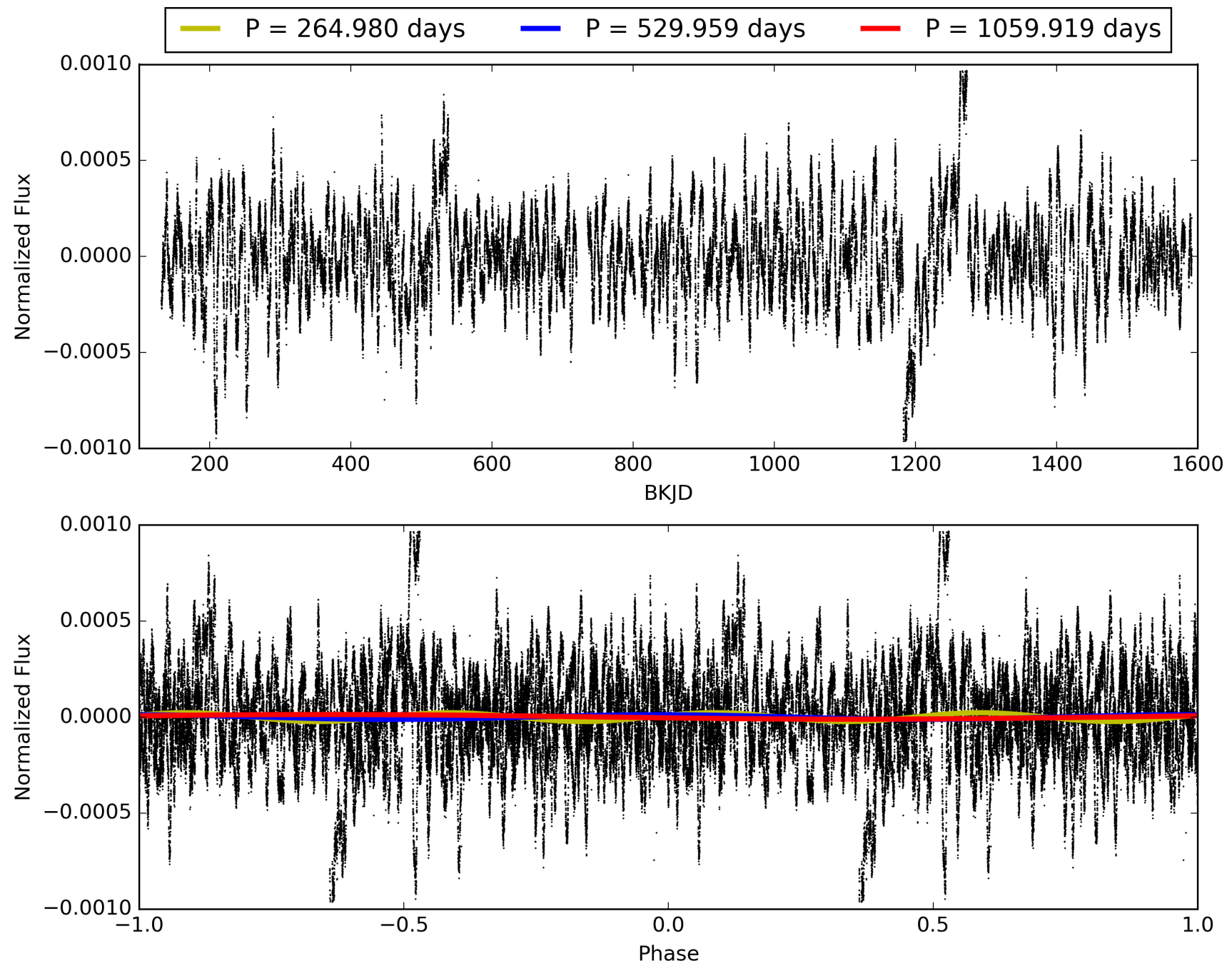
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:44 Z

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

TCE 008056313-06, PDC Light Curves

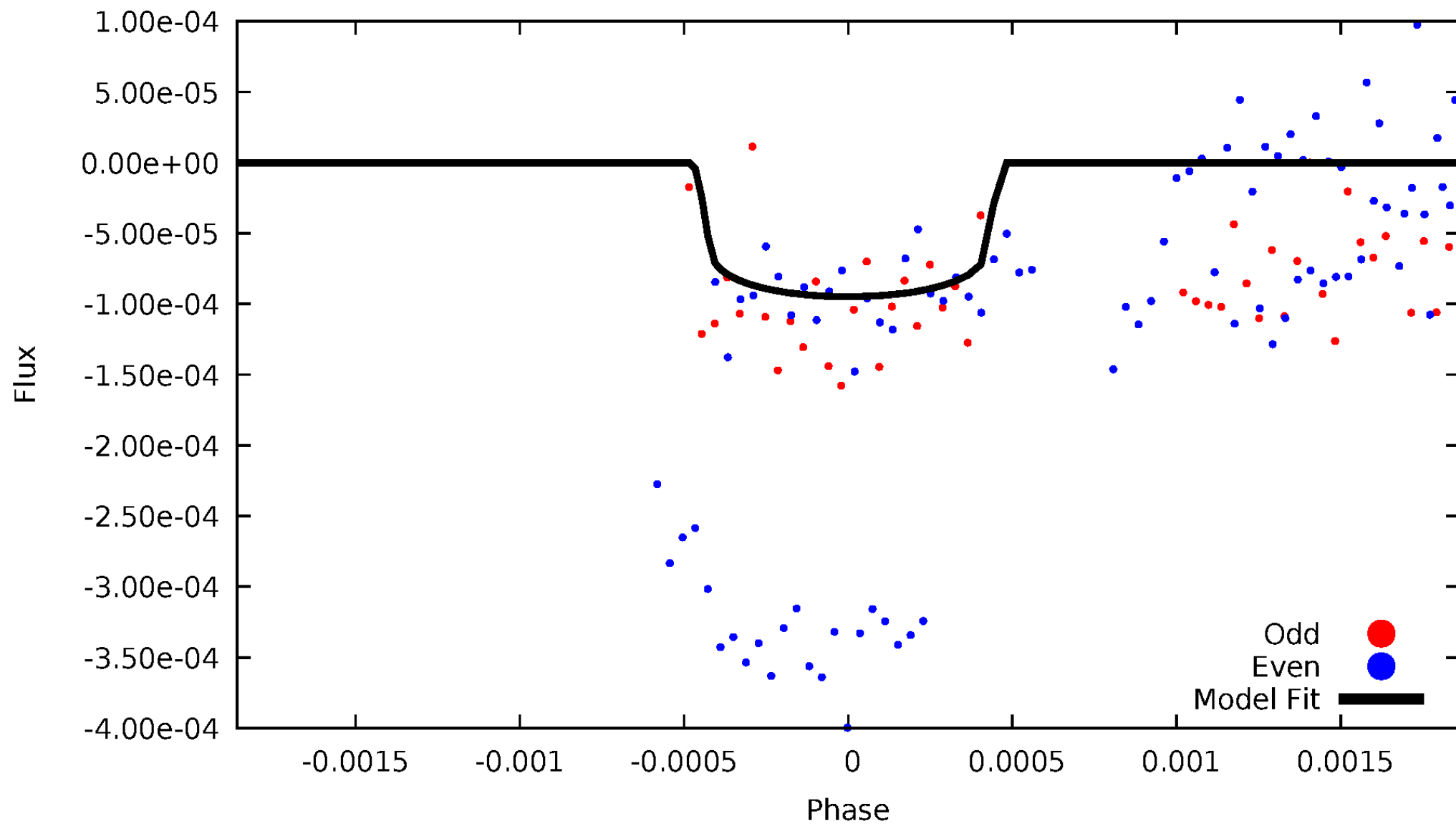


TCE 008056313-06



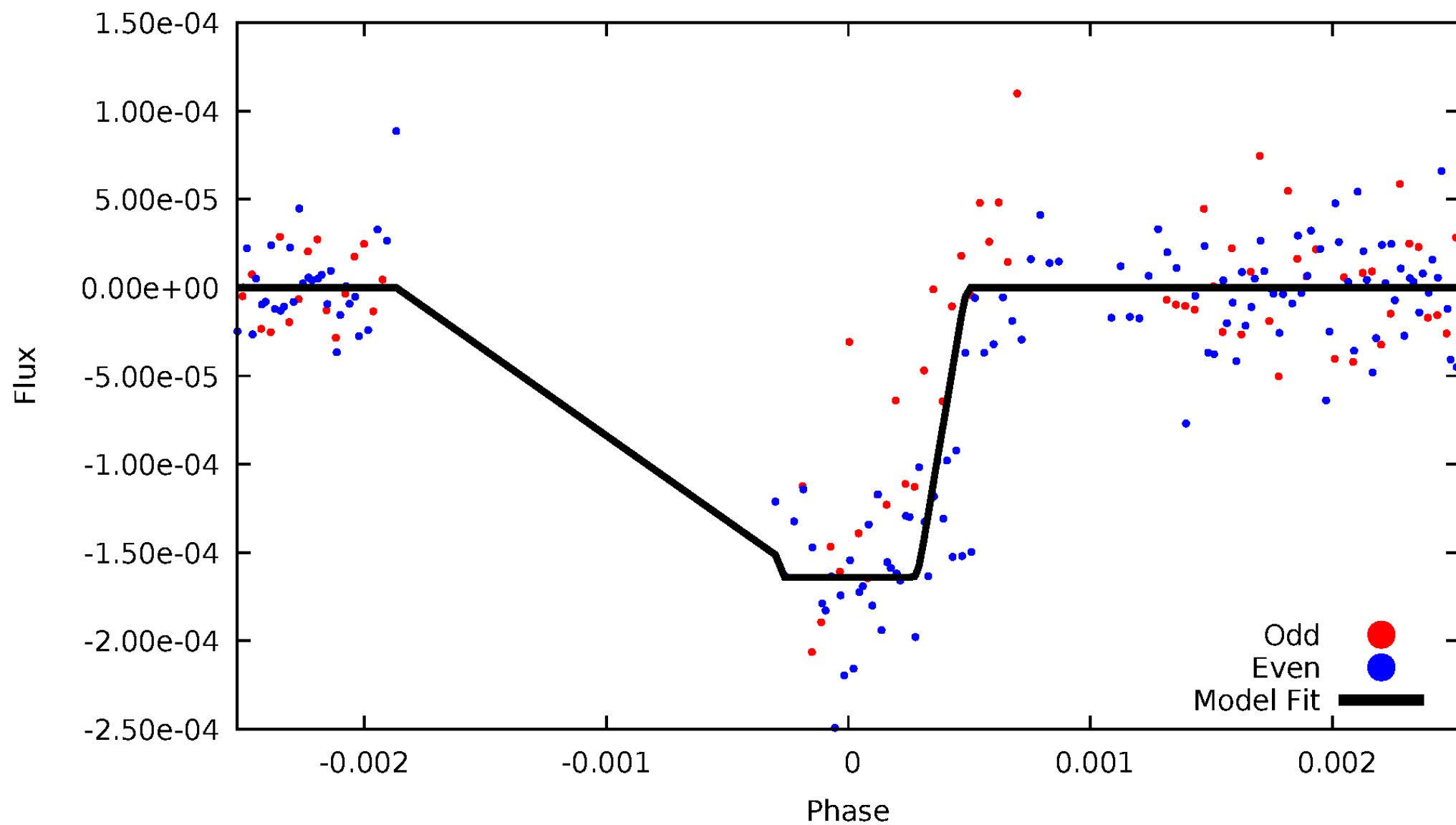
DV Odd/Even

TCE 008056313-06



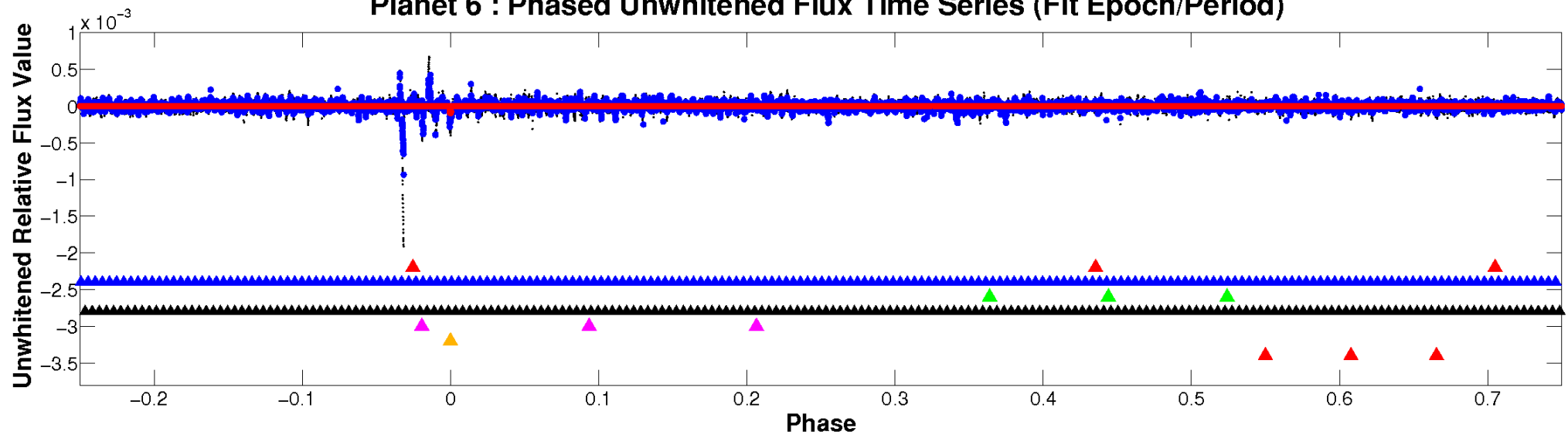
ALT Odd/Even

TCE 008056313-06

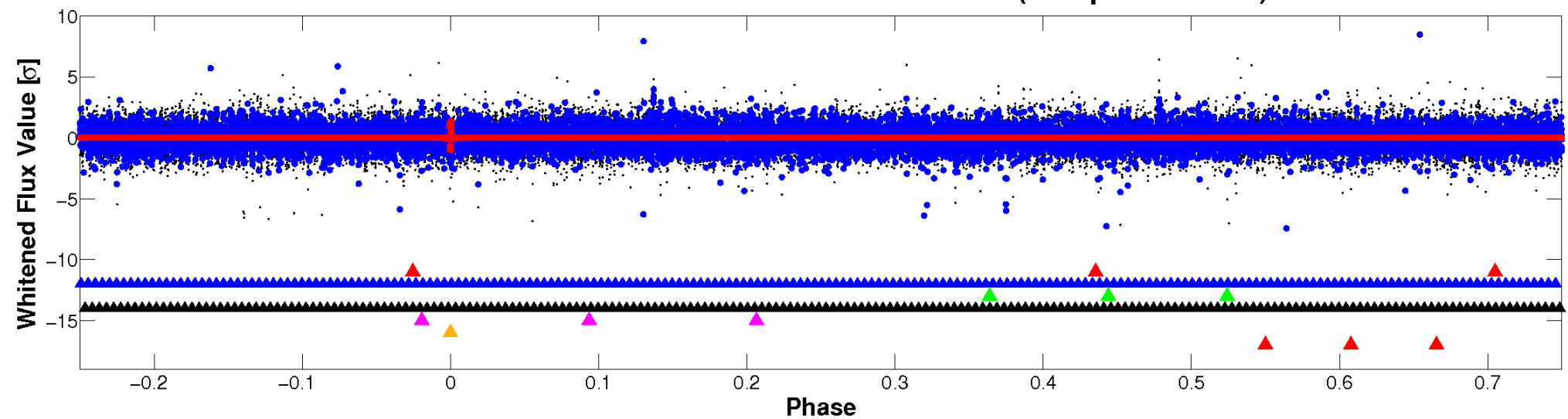


Non-Whitened Vs. Whitened Light Curve

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

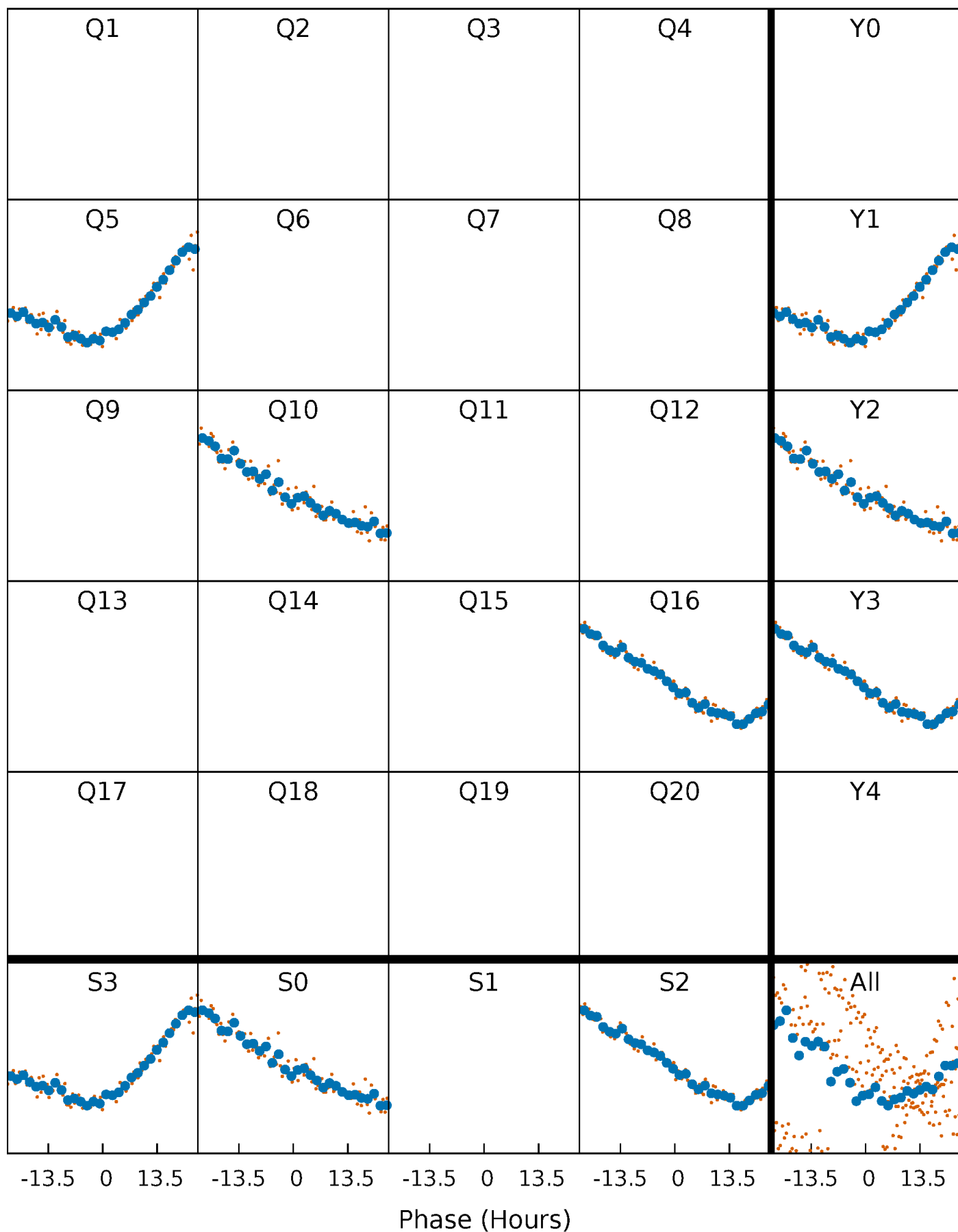


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



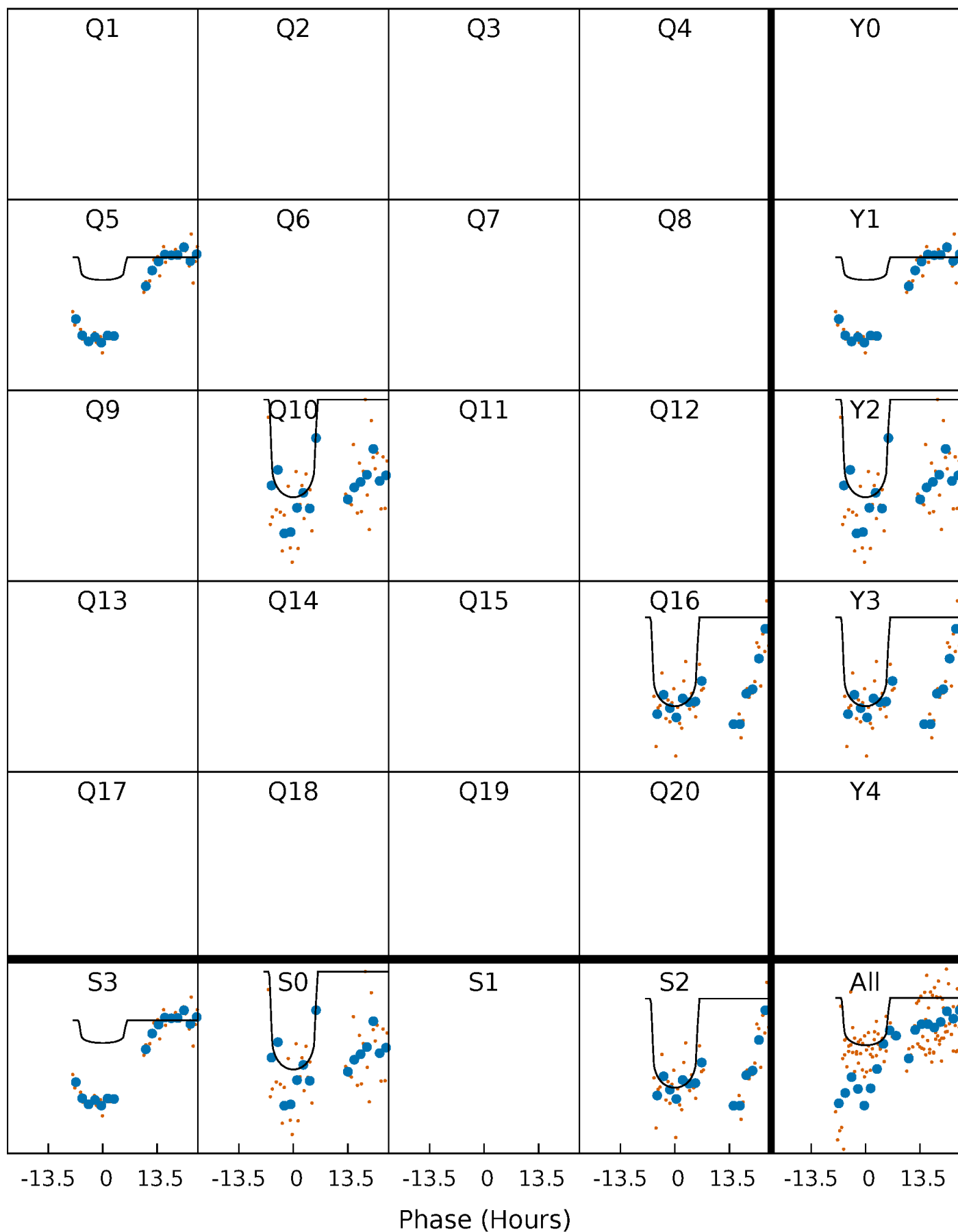
PDC Quarter-Phased Transit Curves

TCE 008056313-06 P=529.959353 Days $T_0=462.025336$ (BKJD)



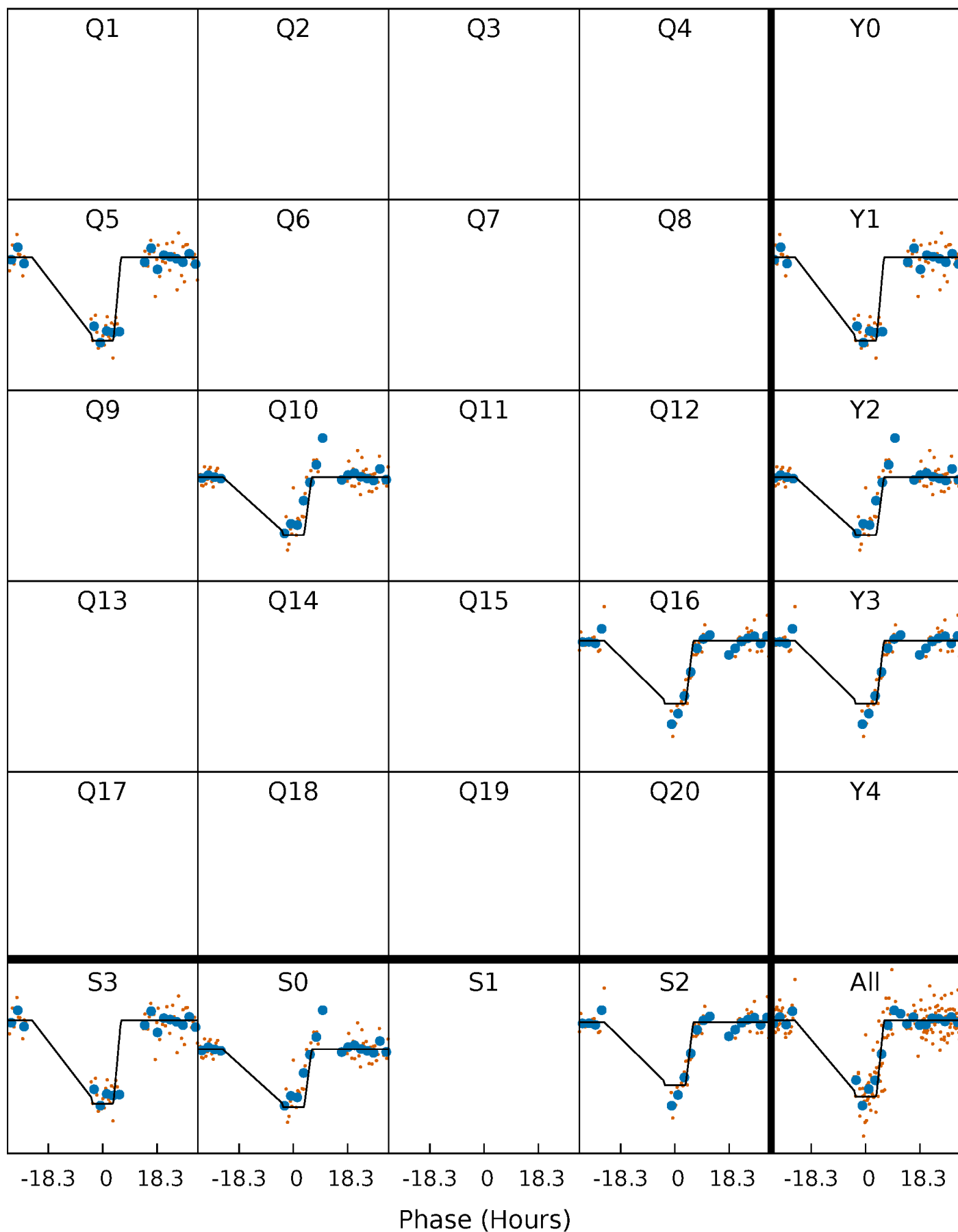
DV Quarter-Phased Transit Curves

TCE 008056313-06 P=529.959353 Days $T_0=462.025336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

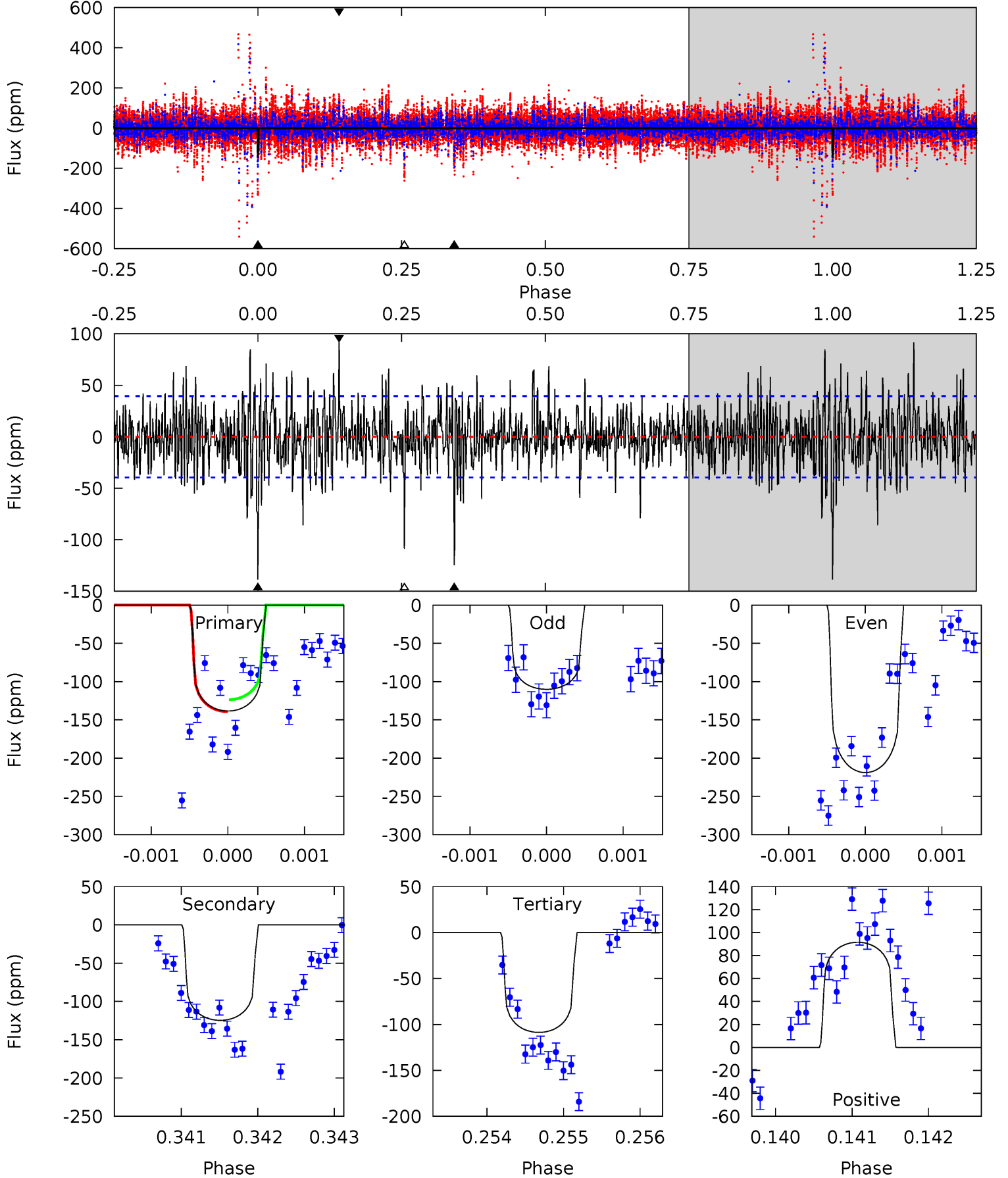
TCE 008056313-06 P=529.951190 Days $T_0=461.876873$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-06, P = 529.959353 Days, E = 462.025336 Days

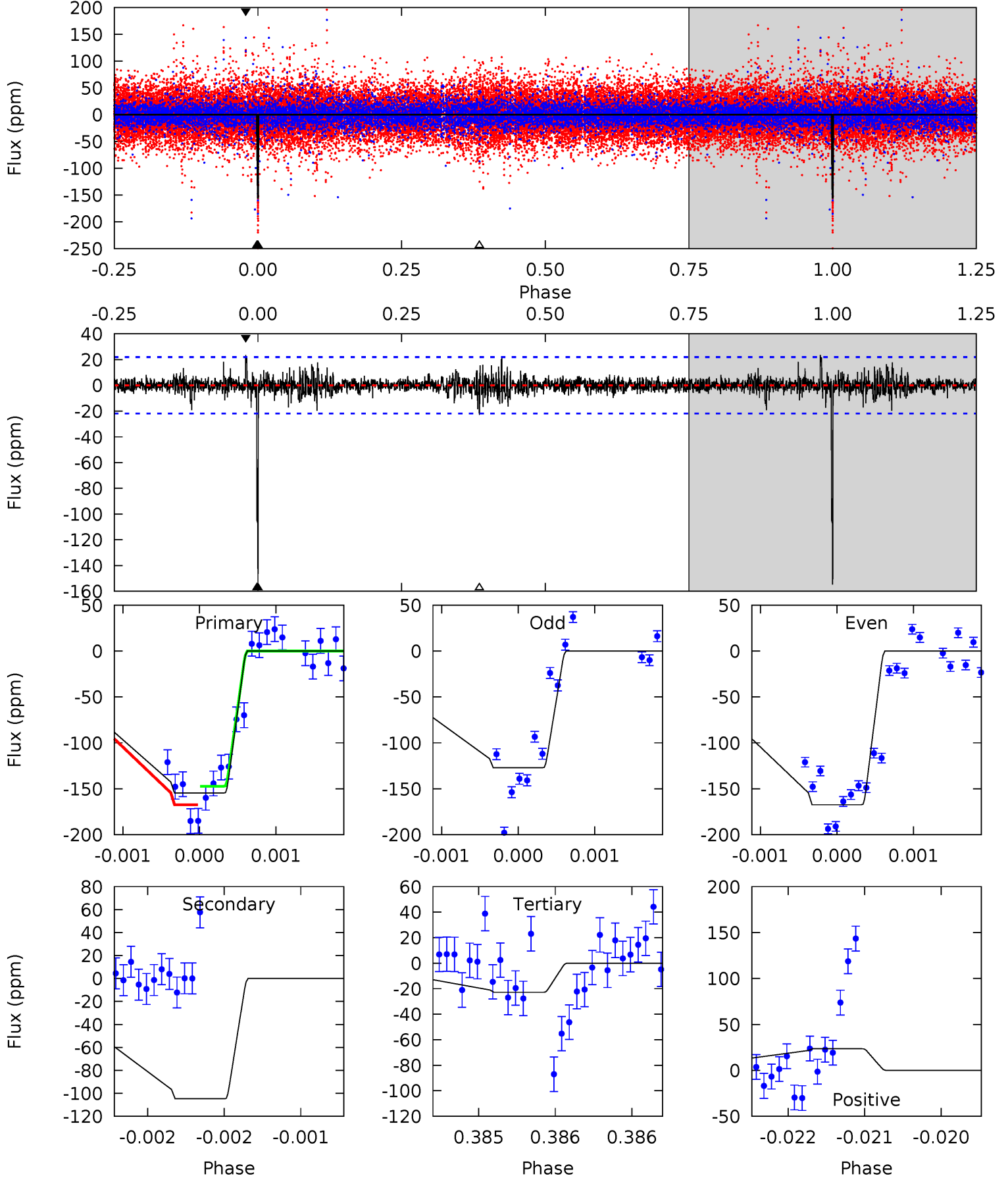
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	17.3	15.0	12.7	5.46	3.30	3.15	4.12	6.49	2.21	4.59	7.86	1.73	0.40	1.06



Alt Model-Shift Uniqueness Test

008056313-06, P = 529.951190 Days, E = 461.876873 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.7	26.2	5.71	5.88	5.49	3.35	0.95	33.0	32.8	20.5	20.3	4.73	0.98	0.13	2.29



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-125 ± 7	$1.09^{+0.20}_{-0.18}$	371^{+19}_{-17}	7202^{+858}_{-612}	92995^{+41846}_{-25538}
Alt.	-105 ± 4	$1.35^{+0.20}_{-0.19}$	371^{+18}_{-17}	6129^{+529}_{-388}	51535^{+18075}_{-12658}

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 $A_{obs} \gg 1.0$

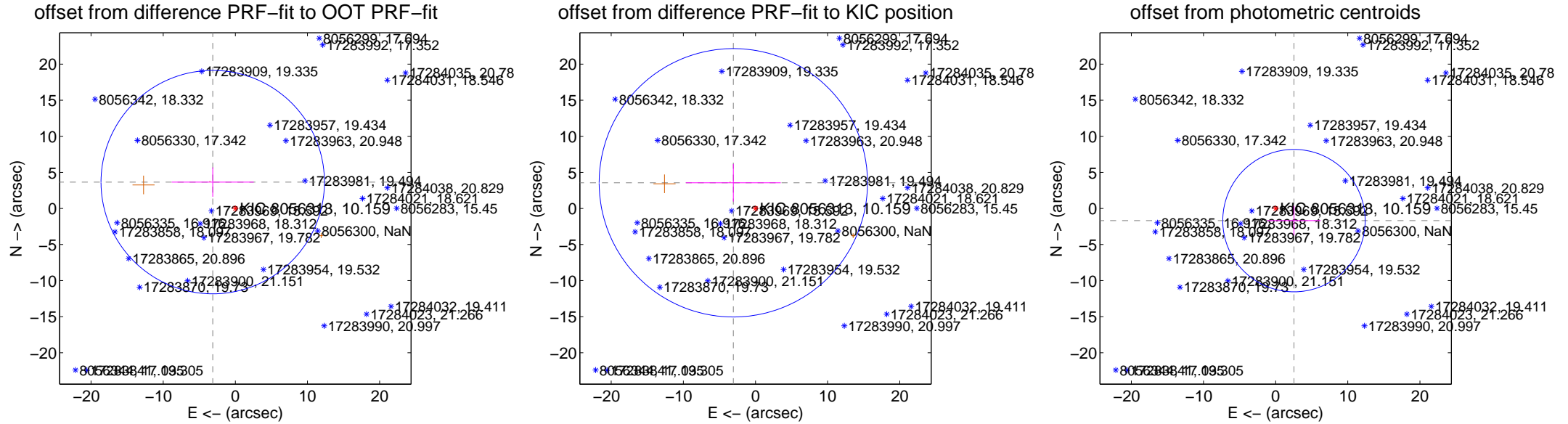
DV Centroid Data

Supplemental centroid analysis for 008056313-06. **Kepler magnitude: 10.16.** Transit SNR 6.79

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.810 ± 5.161	0.93	3.133 ± 5.681	3.650 ± 2.033
PRF-fit source offset from KIC position	4.699 ± 6.199	0.76	3.072 ± 6.583	3.555 ± 2.602
photometric centroid source offset	3.05 ± 3.29	0.93	-2.54 ± 3.71	-1.69 ± 2.06

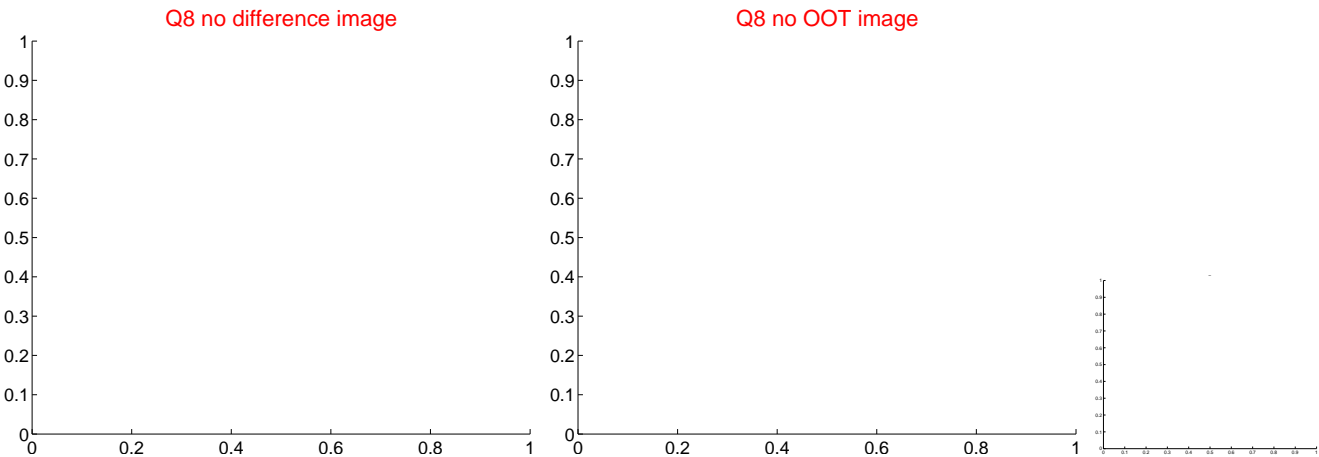
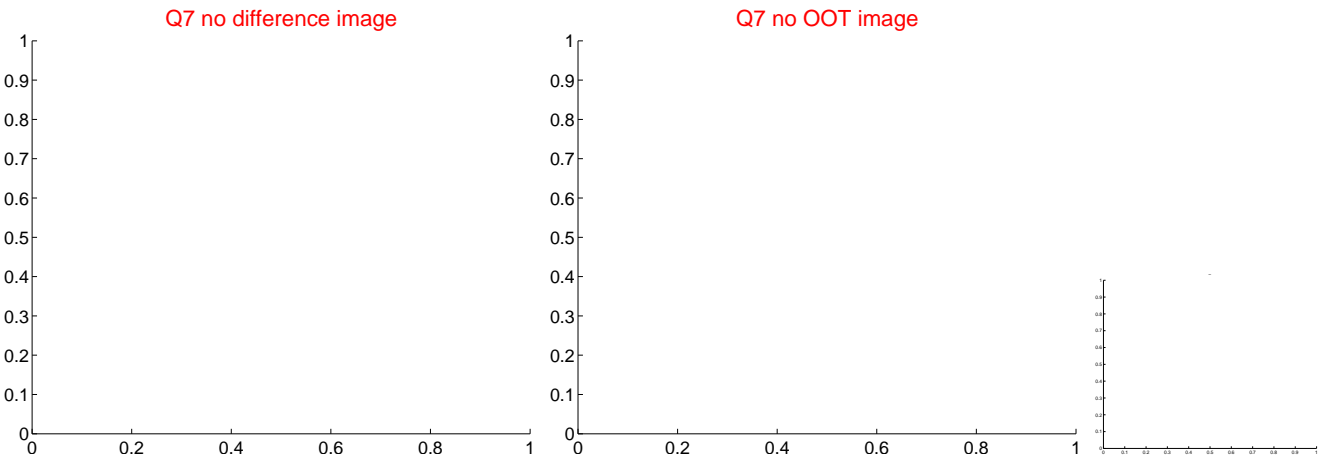
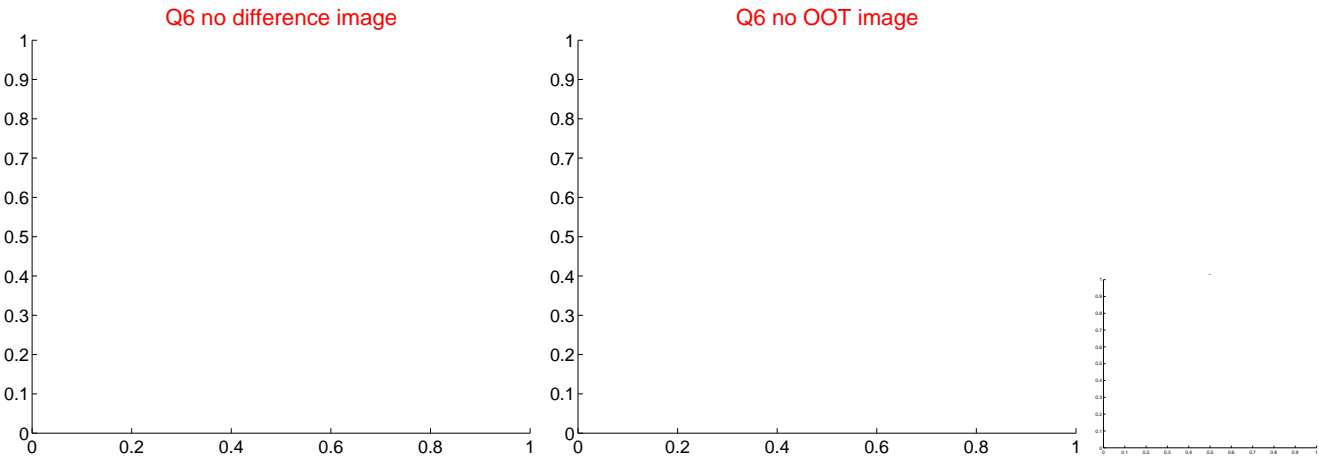
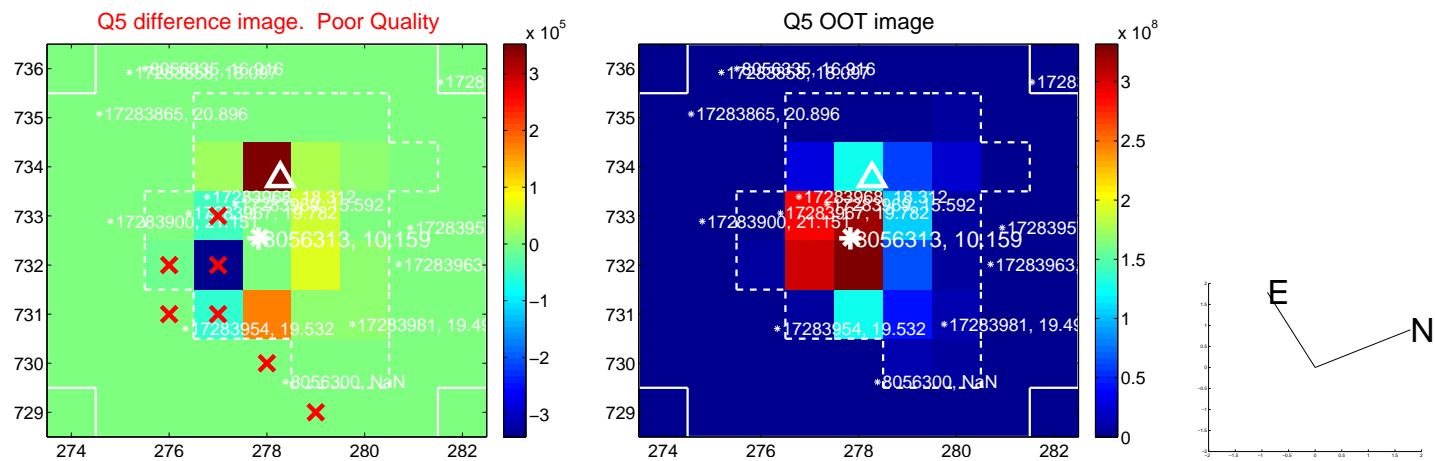


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

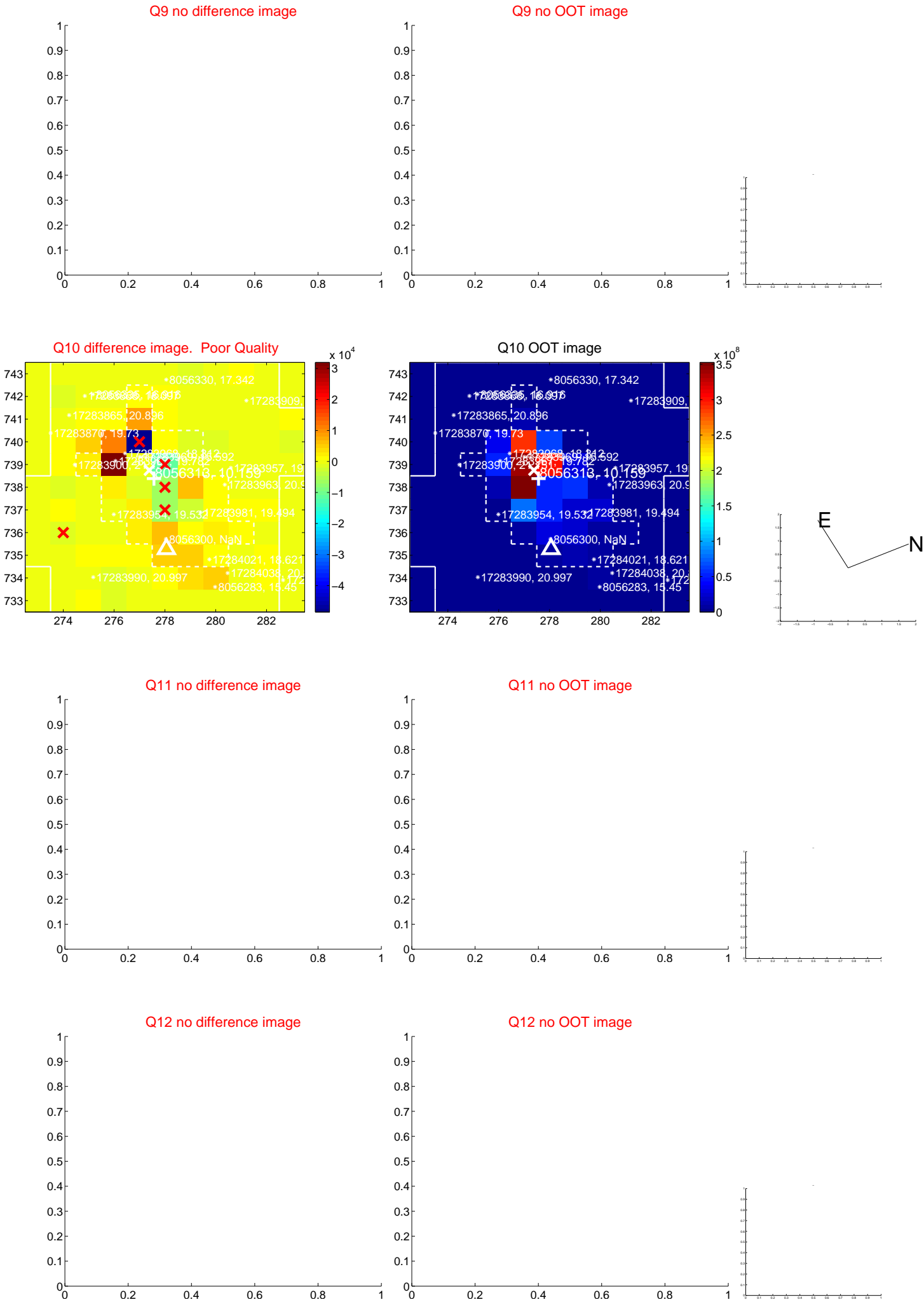
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



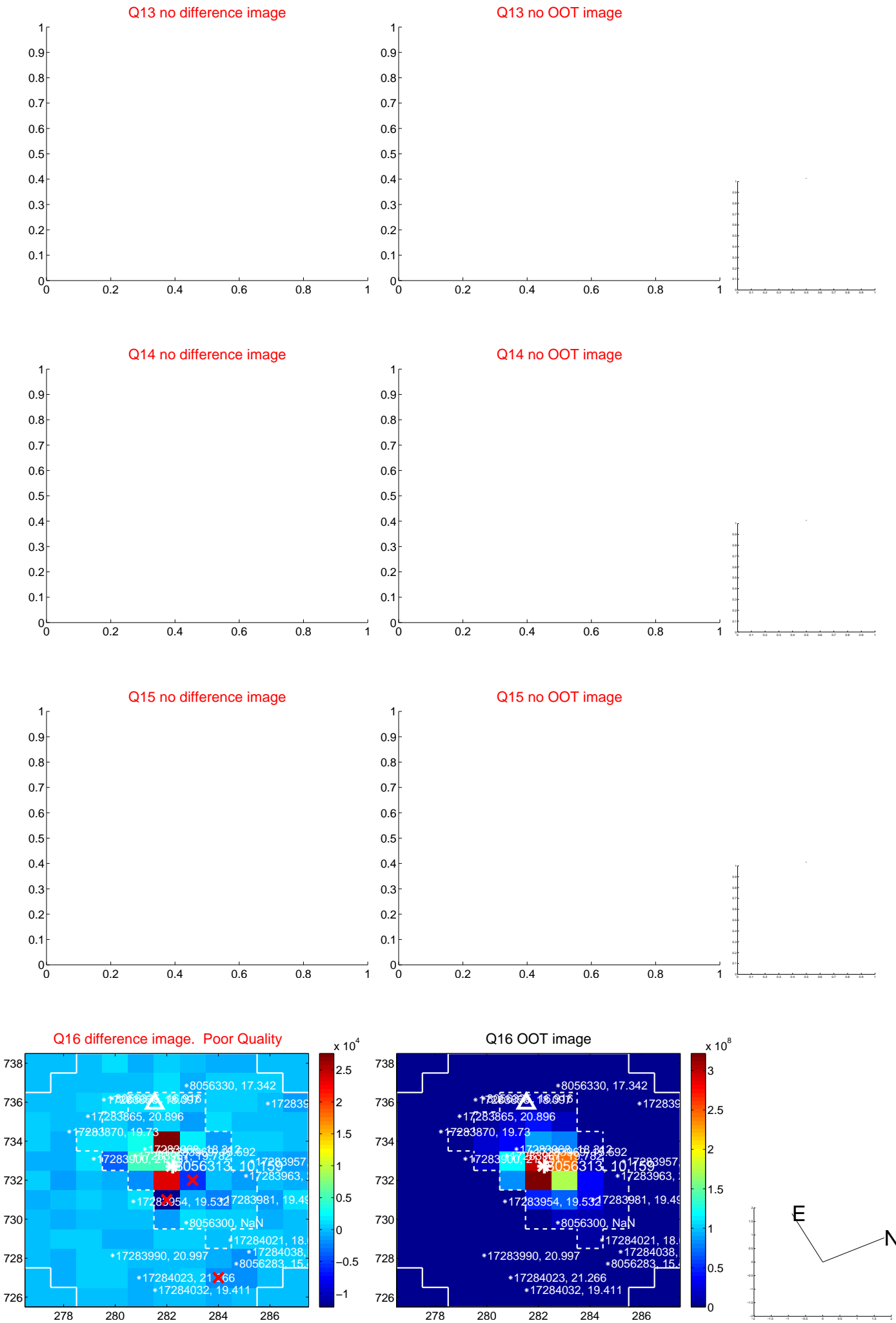
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



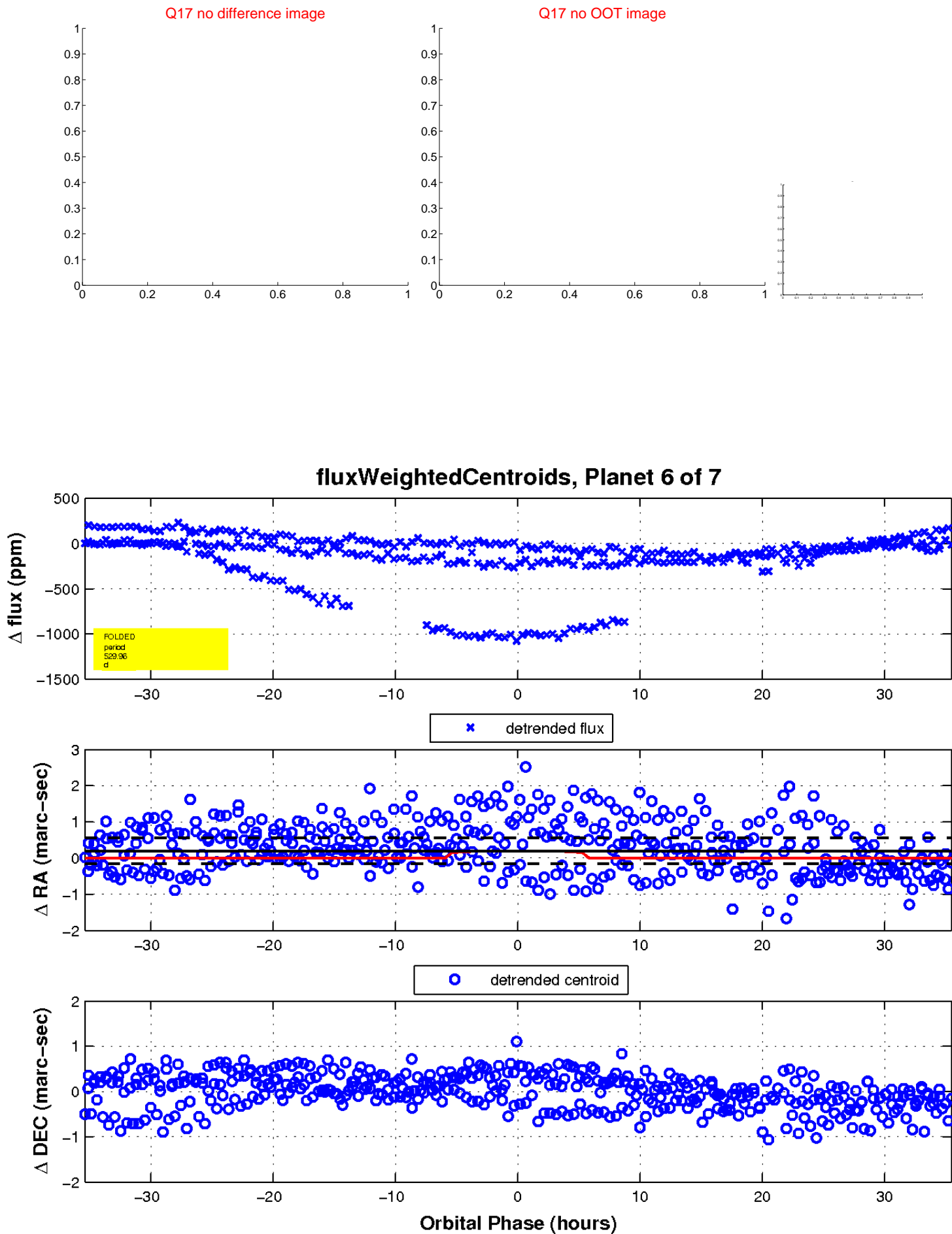
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



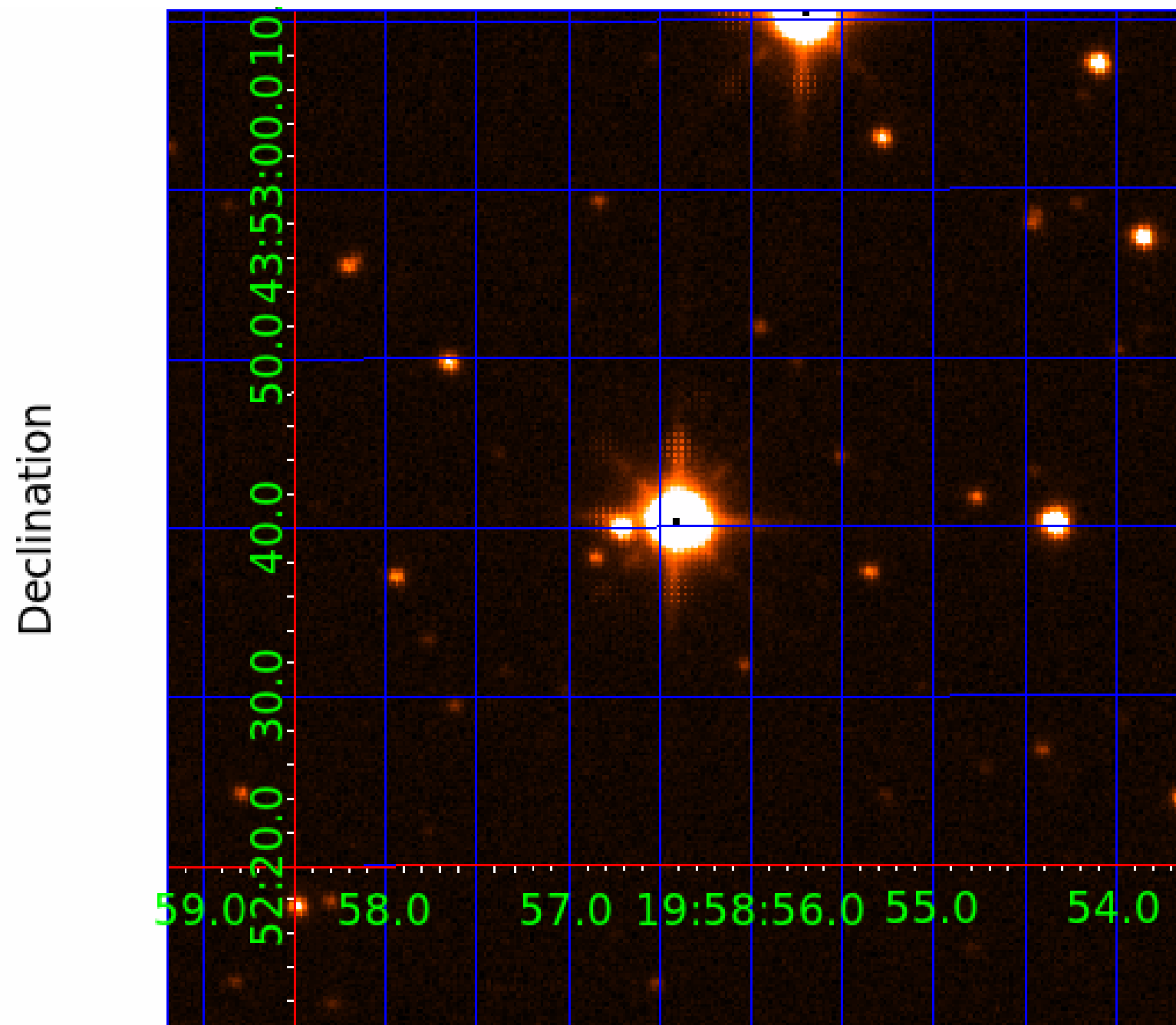
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008056313

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})
008056313-01	OBS	No	387.075870	448.584170	109.7	52.470	523.0	5.6	0.93	6946	1.10	1.67
008056313-02	OBS	No	2.548349	133.561024	6.6	2.253	7.4	7.3	0.93	6946	0.26	1355.43
008056313-03	OBS	No	487.487076	209.852706	86.6	11.674	7.8	7.1	0.93	6946	0.97	1.23
008056313-04	OBS	No	2.548076	132.561245	6.3	7.085	7.9	8.3	0.93	6946	0.27	1355.62
008056313-05	OBS	No	470.118077	571.463056	146.3	13.078	15.4	10.1	0.93	6946	1.43	1.29
008056313-06	OBS	No	529.959353	462.025336	94.7	11.829	10.1	6.8	0.93	6946	1.05	1.10
008056313-07	OBS	No	560.562110	223.545976	155.1	28.534	8.4	6.9	0.93	6946	1.52	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008056313-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008056313-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
008056313-04	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED
008056313-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
008056313-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
008056313-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_SATURATED

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

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

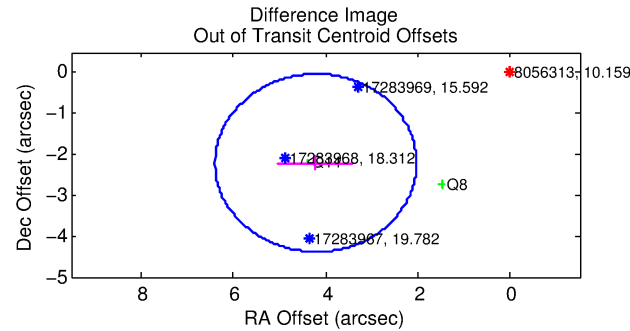
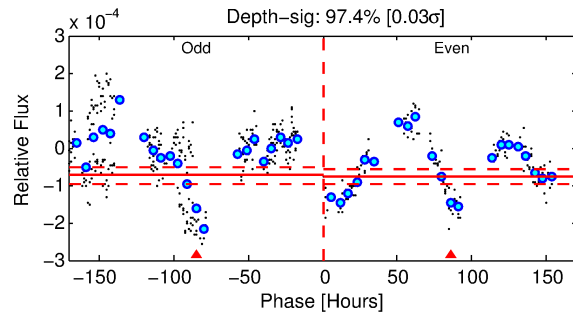
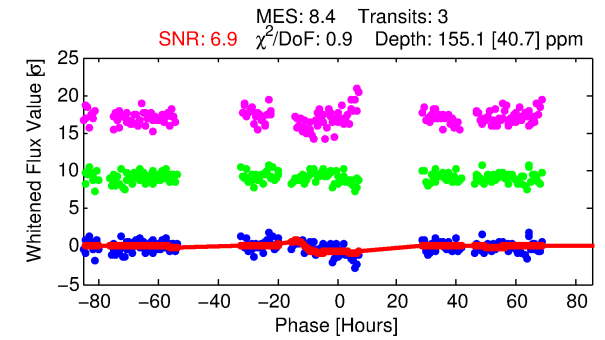
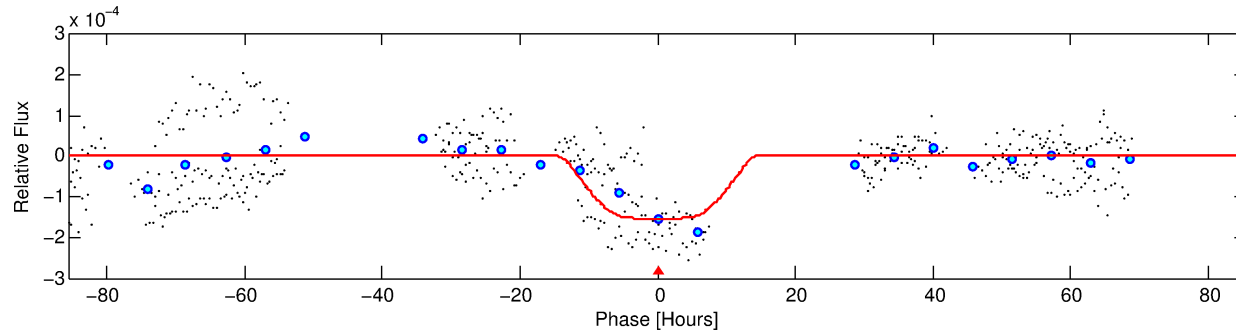
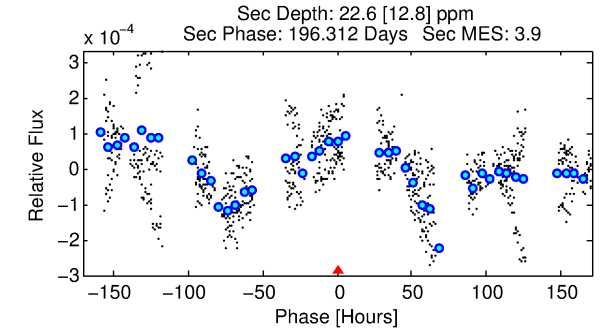
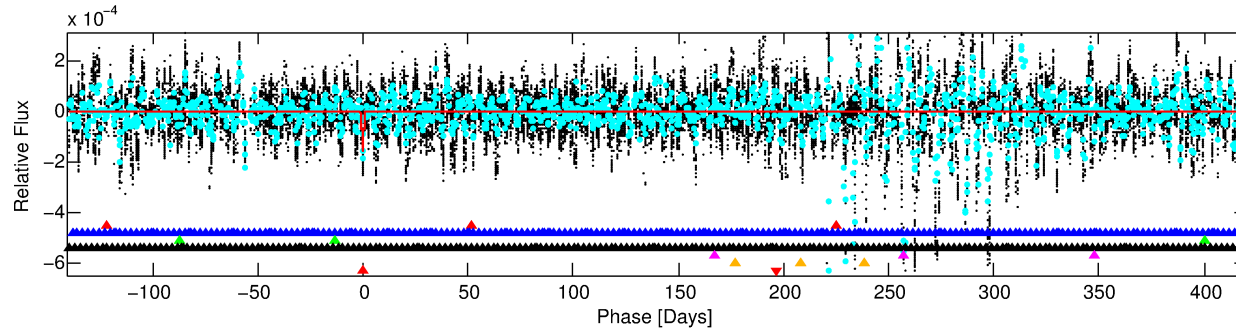
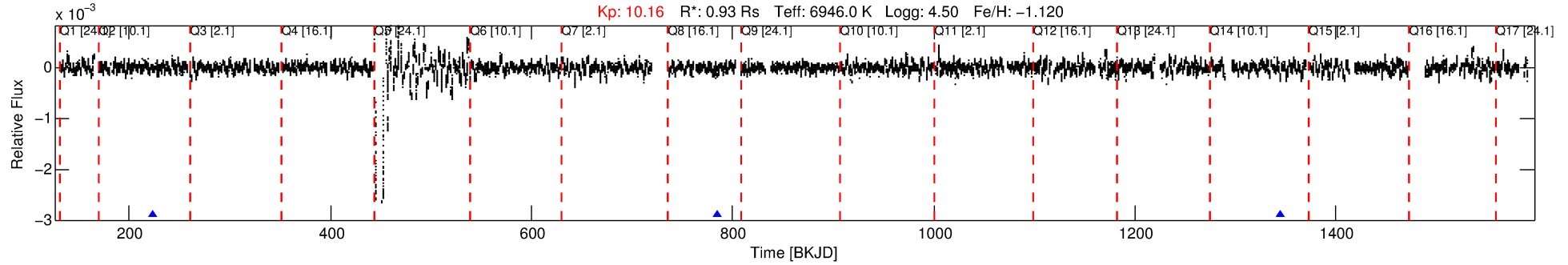
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008056313-07

No Significant Match Found

DV One-Page Summary

KIC: 8056313 Candidate: 7 of 7 Period: 560.562 d



DV Fit Results:

Period = 560.56211 [0.03435] d
Epoch = 223.5460 [0.0787] BKJD
Rp/R* = 0.0150 [0.0020]
a/R* = 39.48 [5.41]
b = 0.98 [0.00]
Seff = 1.02 [0.29]
Teq = 256 [18] K
Rp = 1.52 [0.33] Re
a = 1.3336 [0.2086] AU
Ag = 9529.22 [6389.93] [1.49σ]
Teffp = 3915 [631] K [5.79σ]

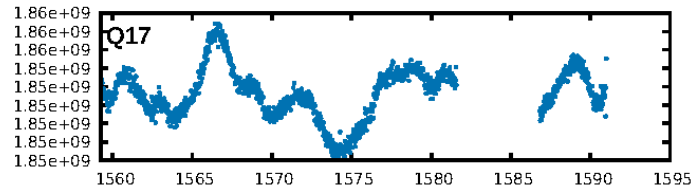
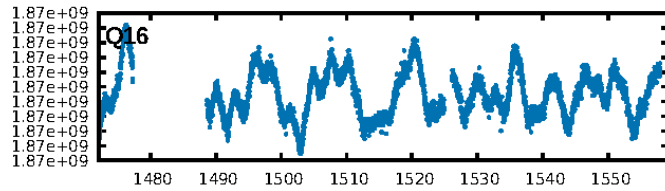
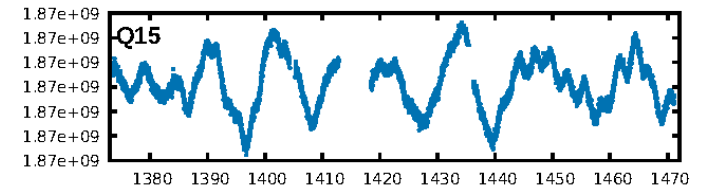
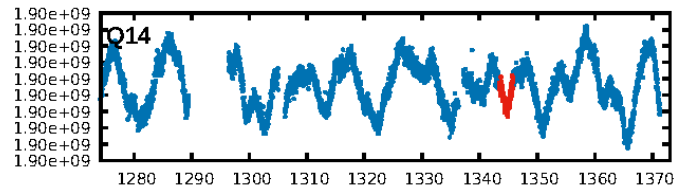
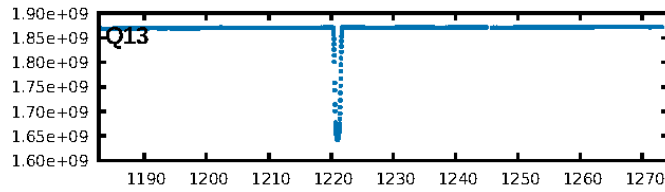
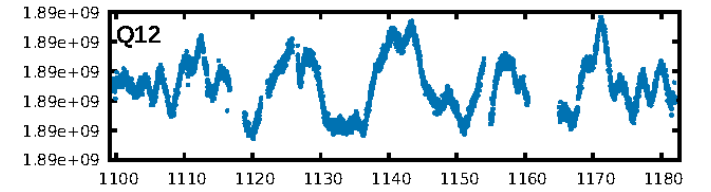
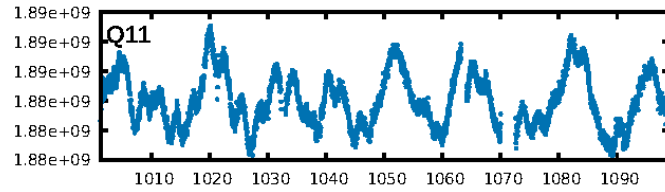
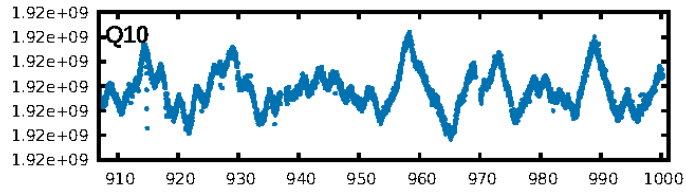
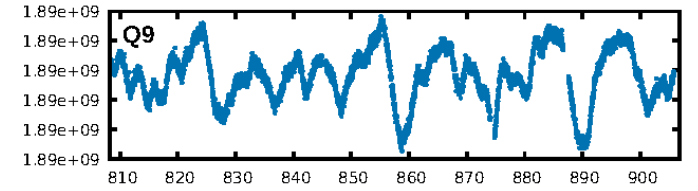
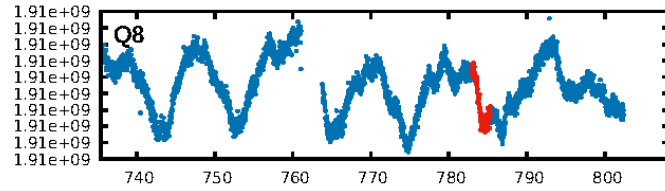
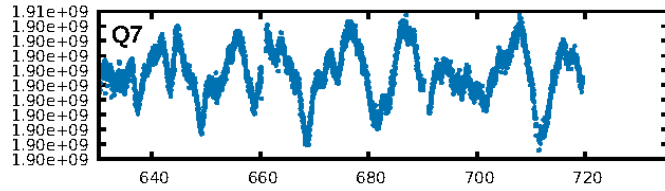
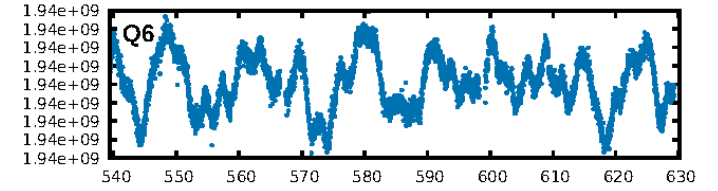
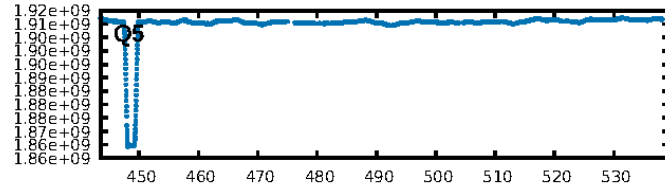
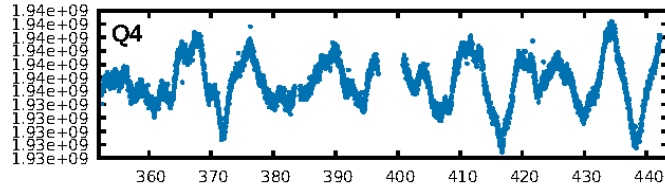
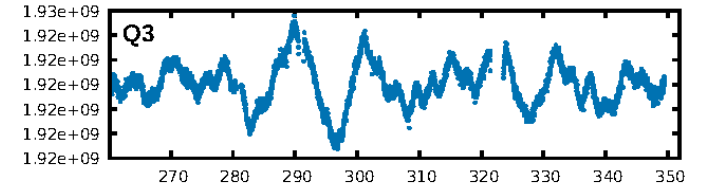
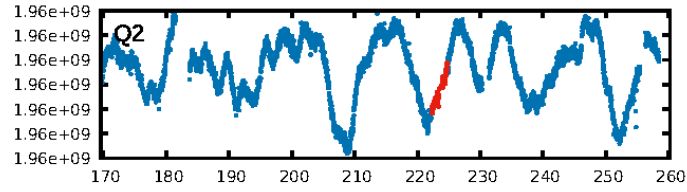
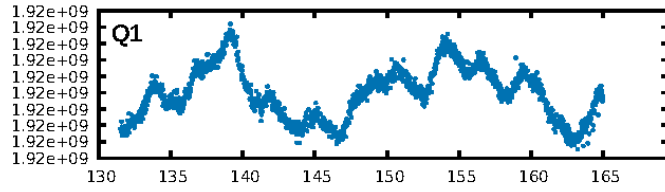
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [23.78σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.05e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 6.107 arcsec [1.04σ]
OotOffset-rm: 4.754 arcsec [6.55σ]
KicOffset-rm: 3.560 arcsec [7.41σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/2]

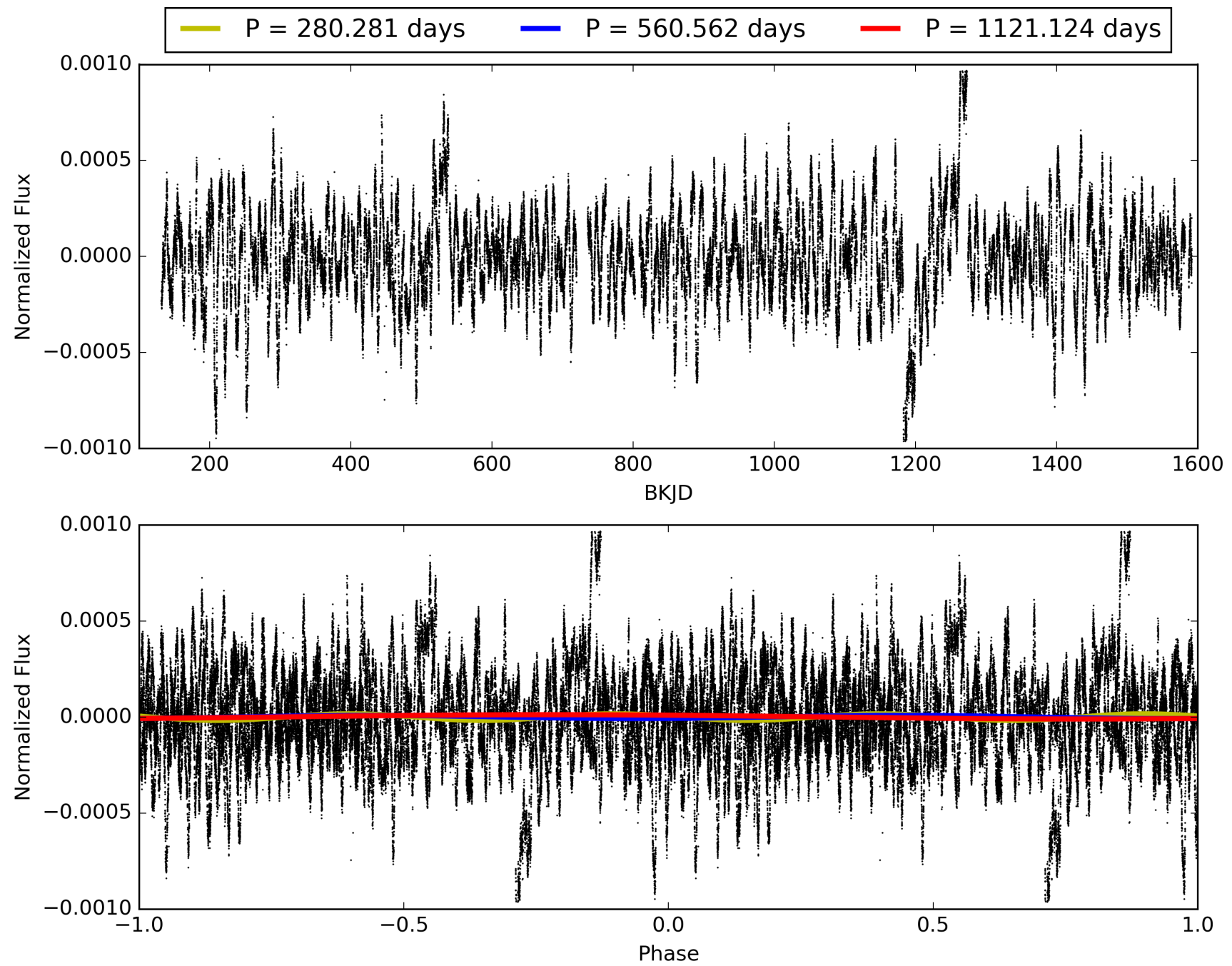
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:29:50 Z

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

TCE 008056313-07, PDC Light Curves

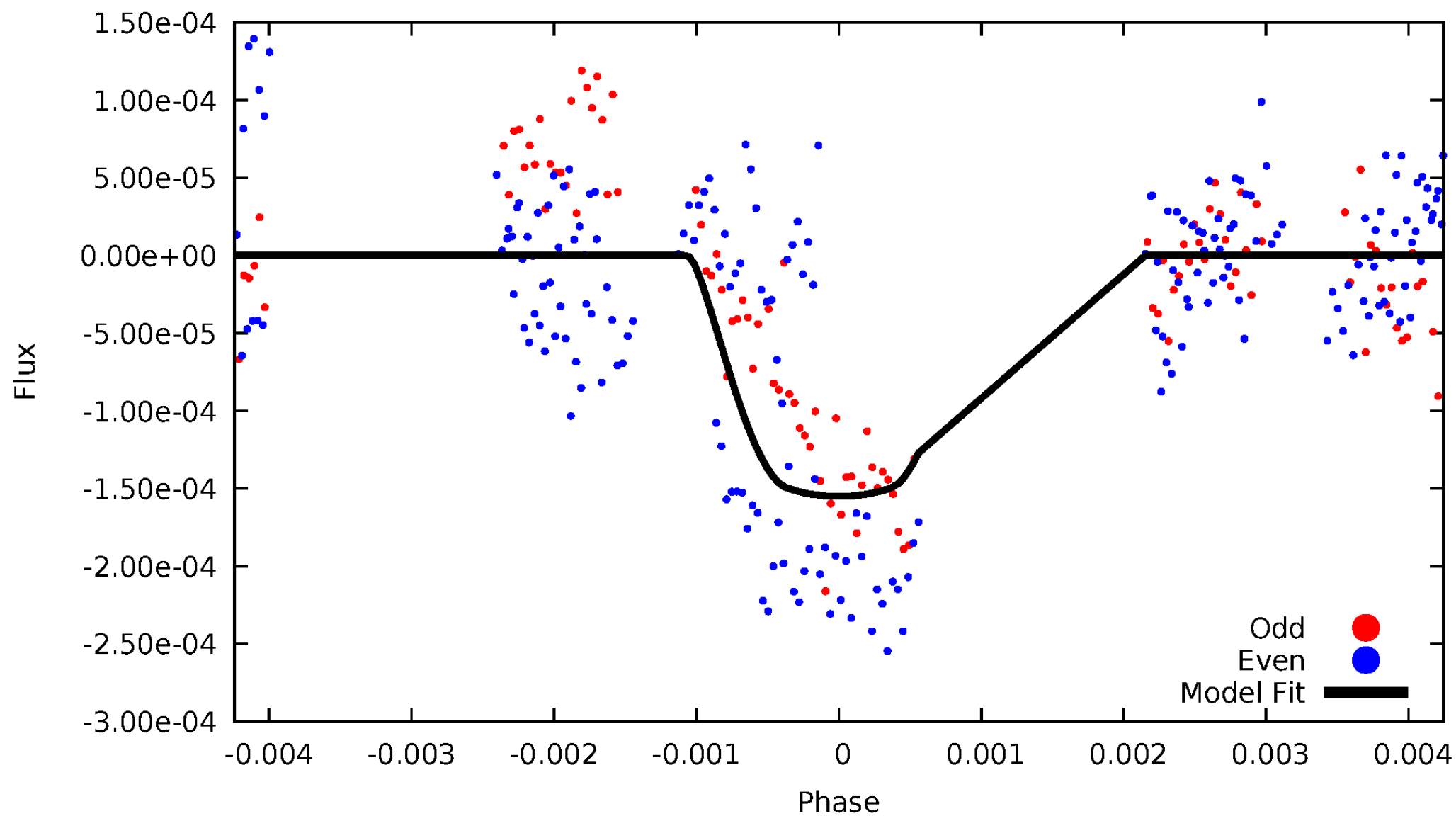


TCE 008056313-07



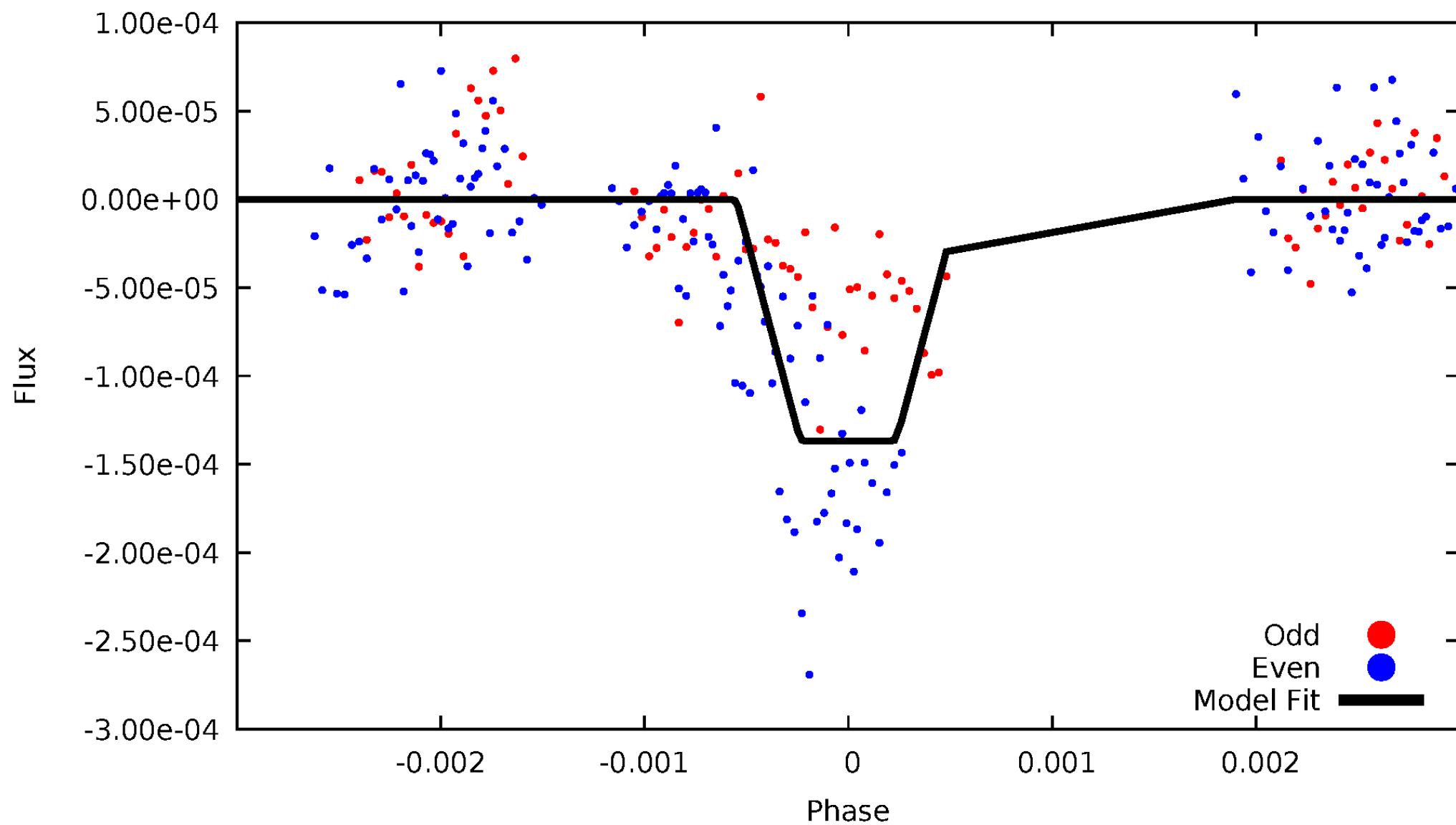
DV Odd/Even

TCE 008056313-07



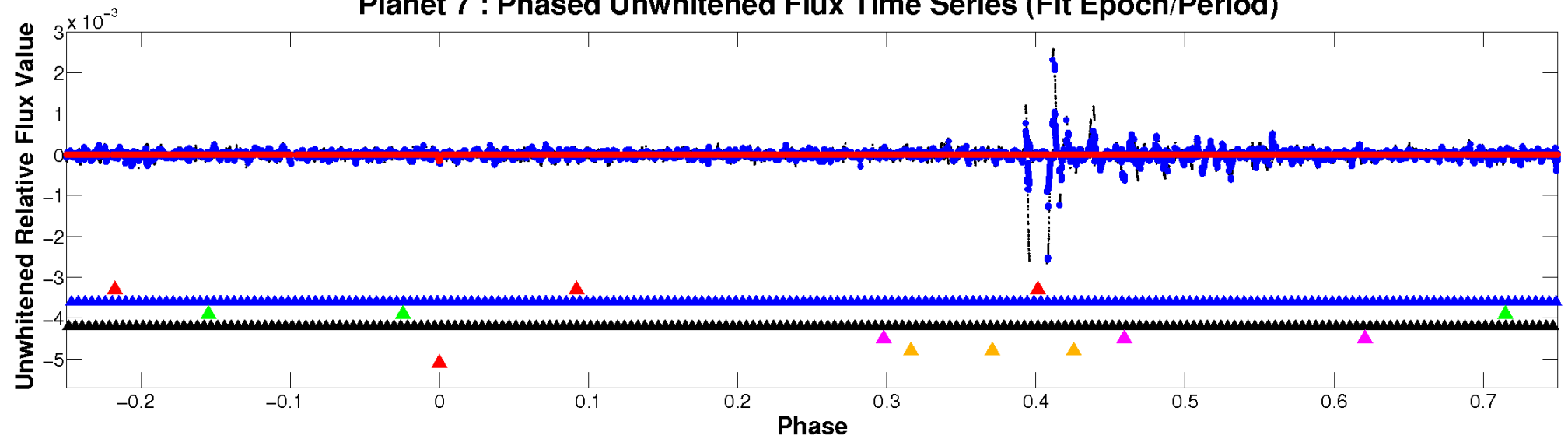
ALT Odd/Even

TCE 008056313-07

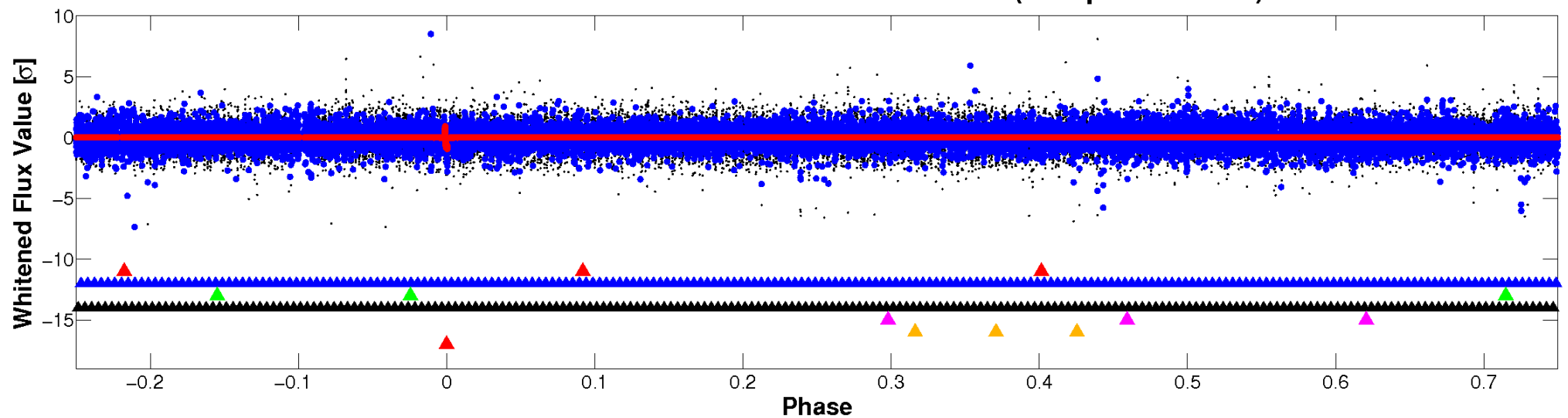


Non-Whitened Vs. Whitened Light Curve

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

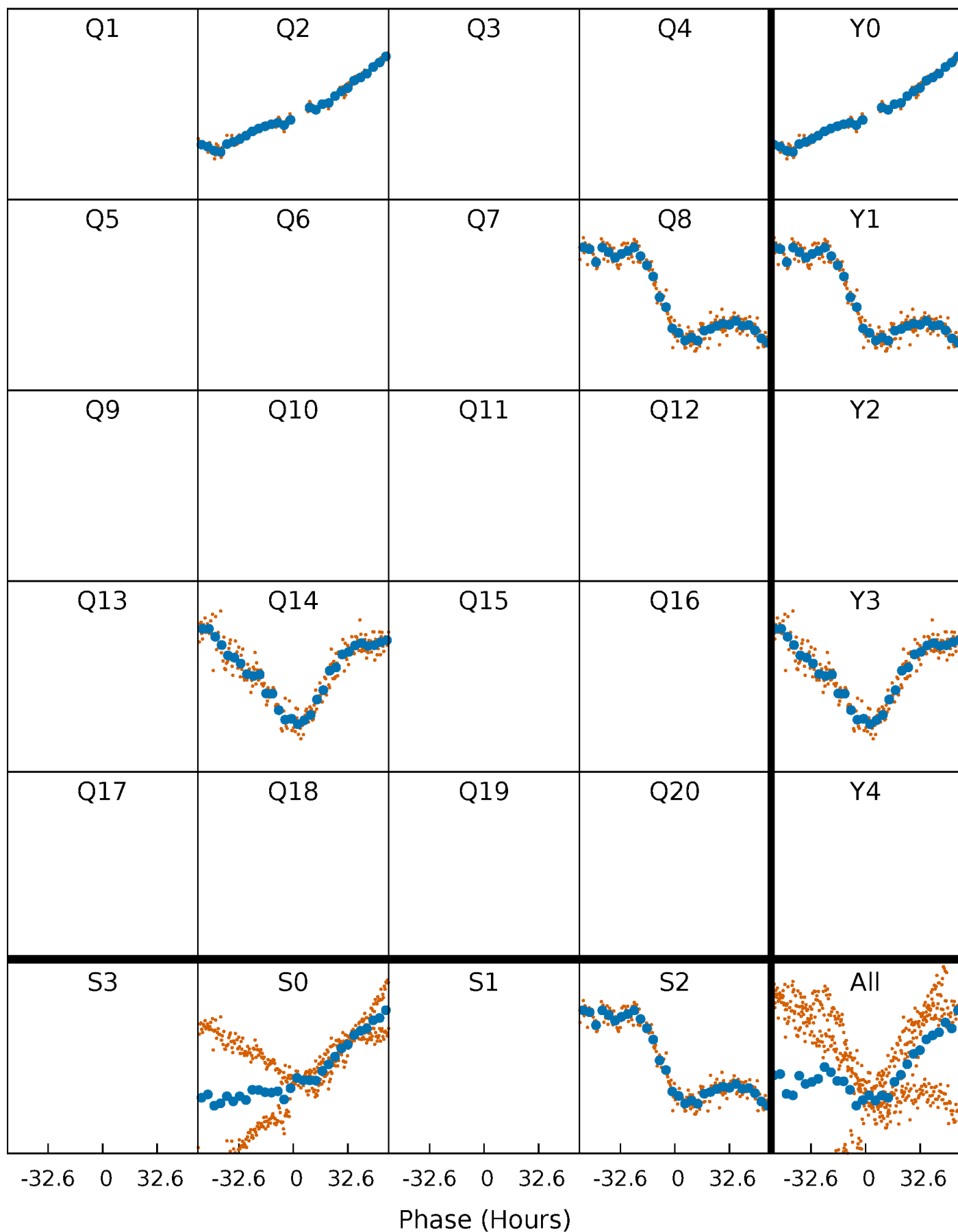


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



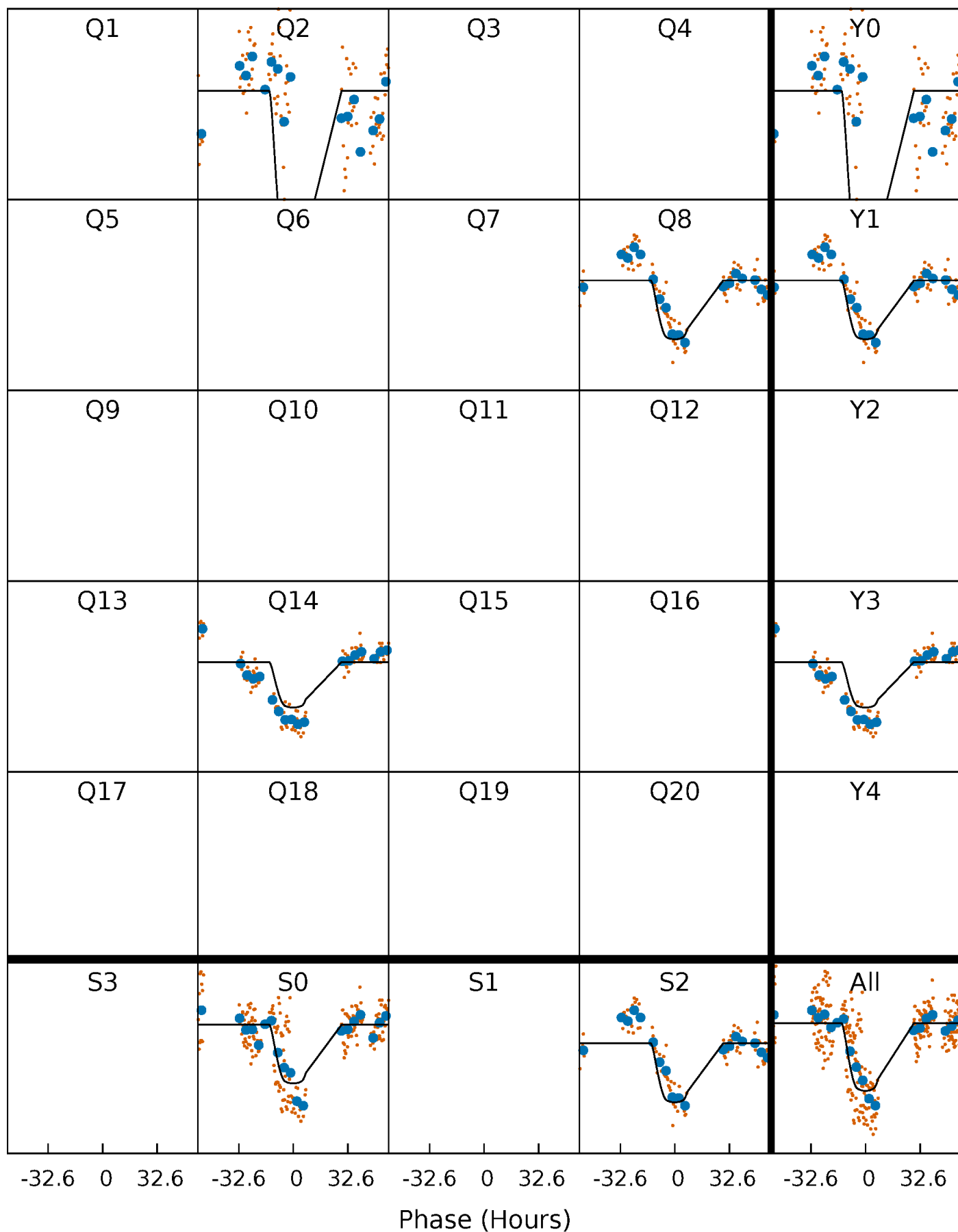
PDC Quarter-Phased Transit Curves

TCE 008056313-07 $P=560.562110$ Days $T_0=223.545976$ (BKJD)



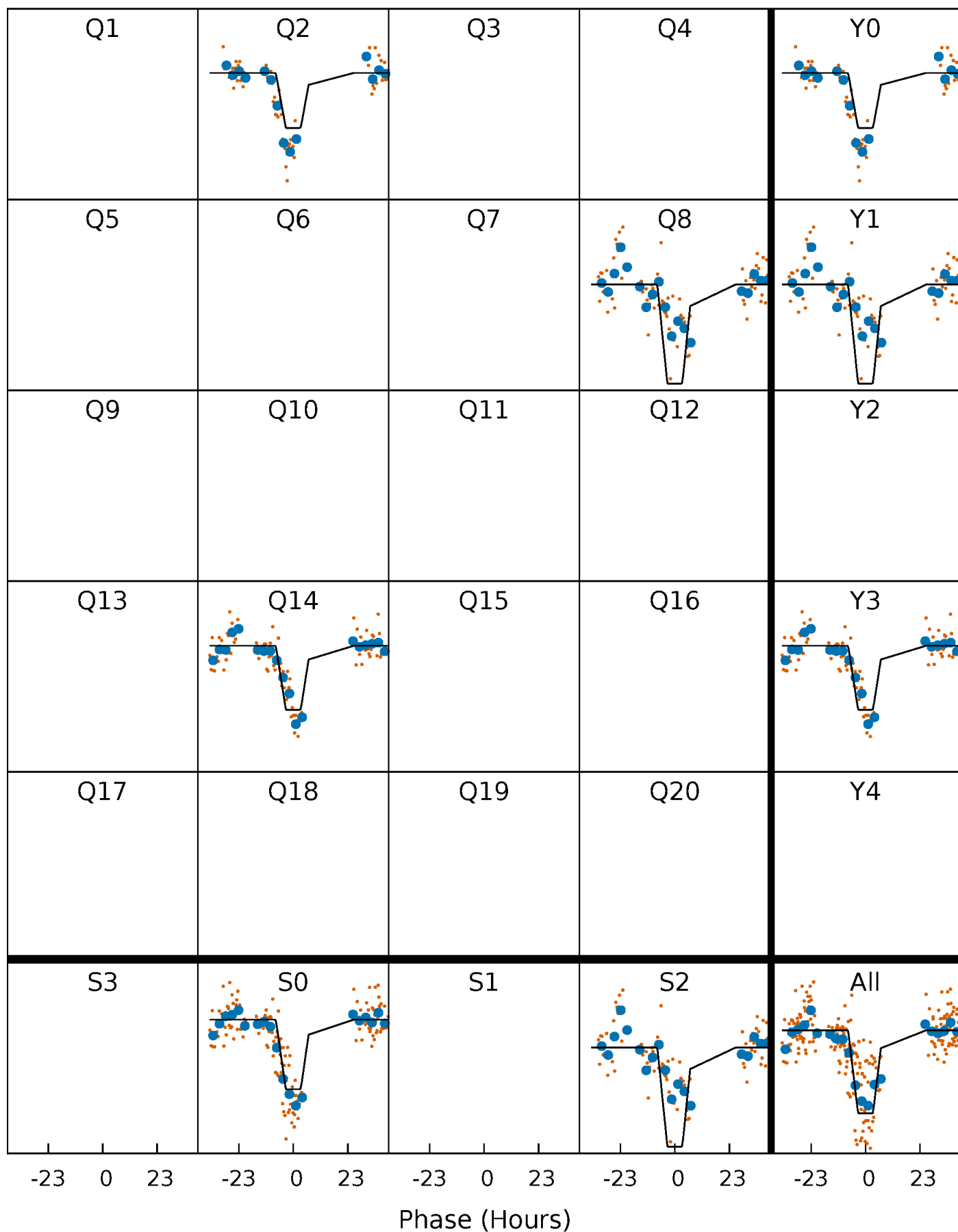
DV Quarter-Phased Transit Curves

TCE 008056313-07 $P=560.562110$ Days $T_0=223.545976$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

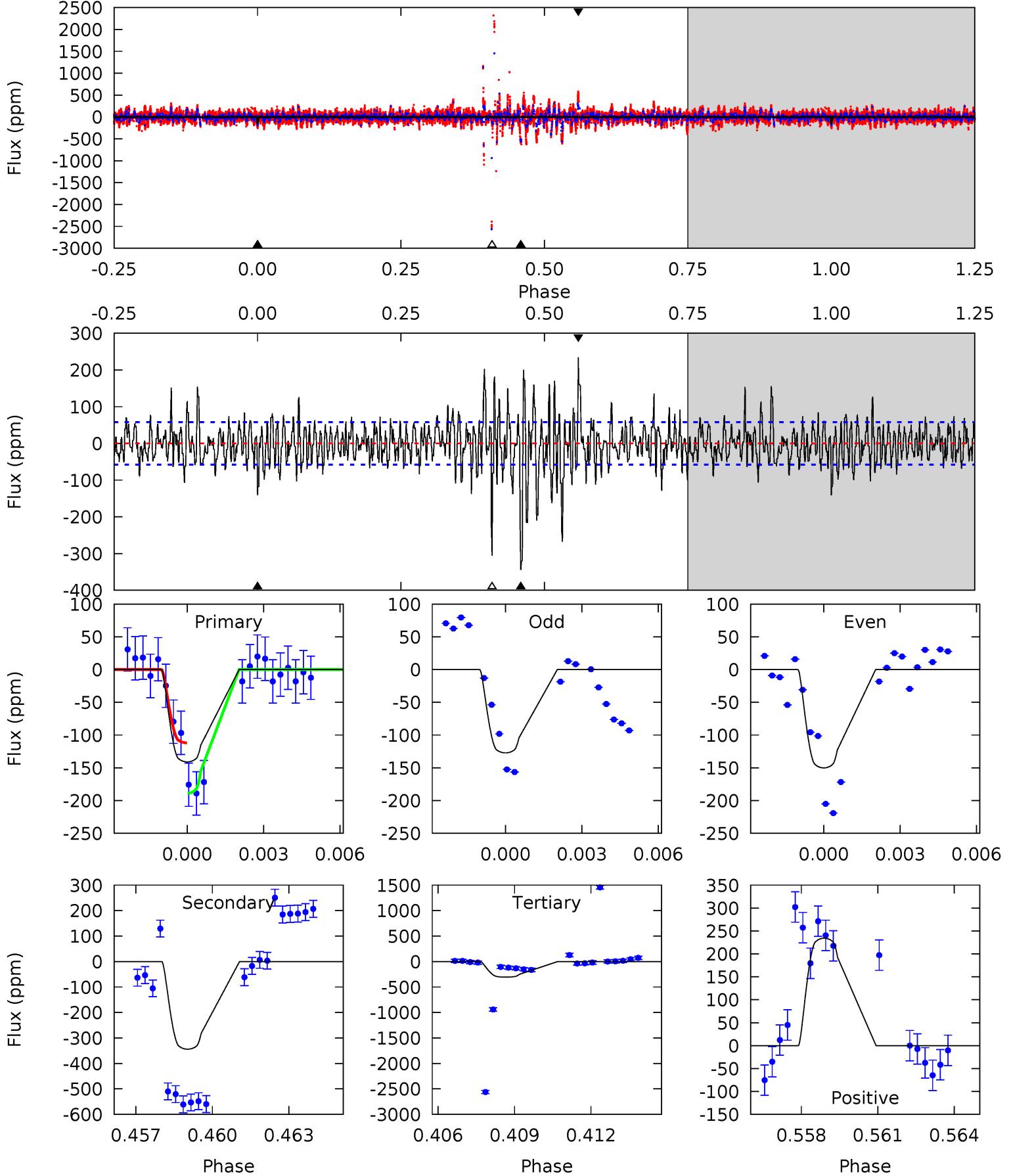
TCE 008056313-07 P=560.703698 Days $T_0=223.429961$ (BKJD)



DV Model-Shift Uniqueness Test

008056313-07, P = 560.562110 Days, E = 223.545976 Days

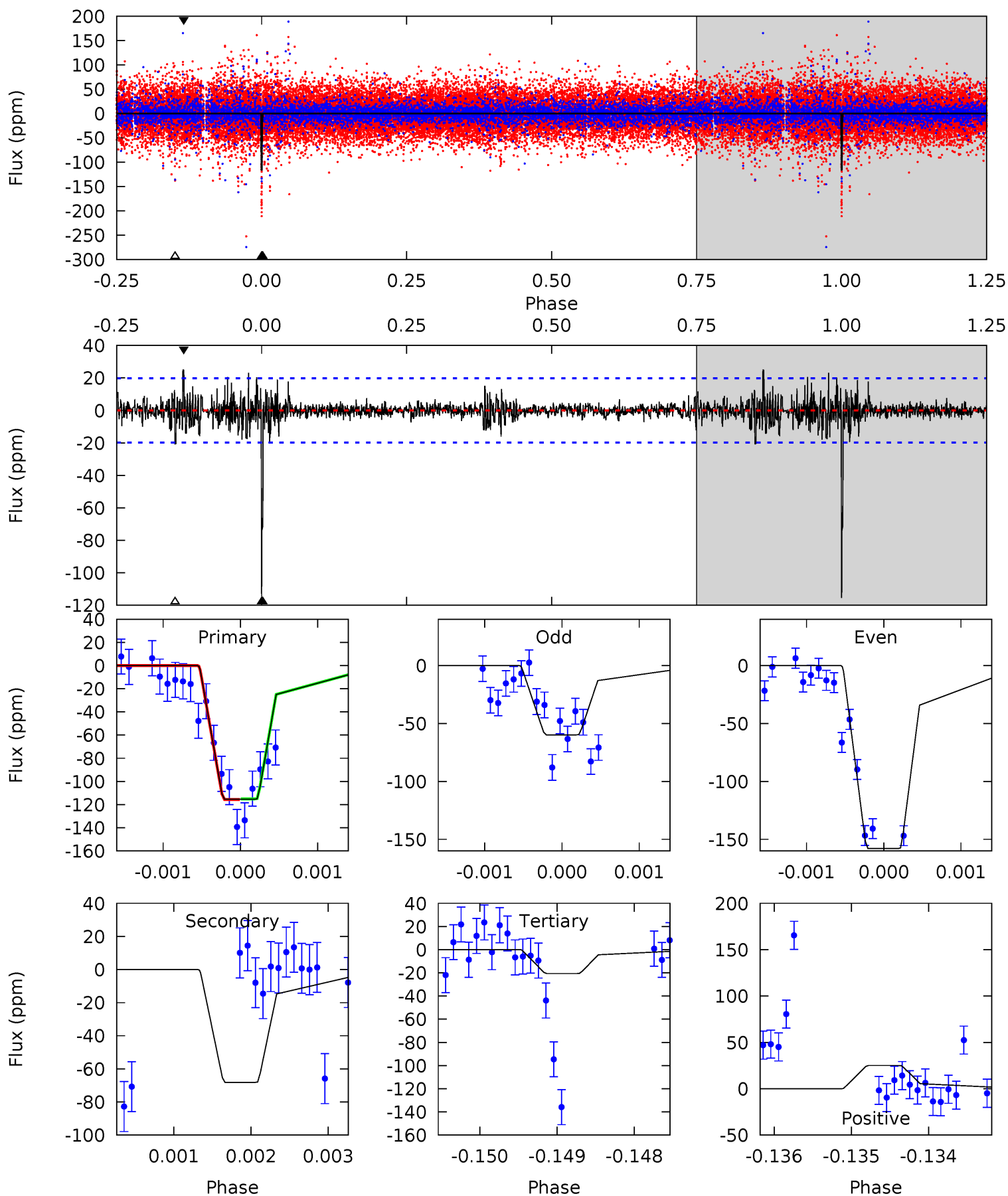
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	31.2	27.7	21.2	5.24	2.95	5.07	-14.9	-8.46	3.47	9.94	0.98	0.90	0.41	3.30



Alt Model-Shift Uniqueness Test

008056313-07, P = 560.703698 Days, E = 223.429961 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.8	18.8	5.68	6.90	5.44	3.28	1.09	26.2	24.9	13.1	11.9	13.7	1.00	0.18	0.06



Stellar Parameters For KIC 008056313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6946^{+194}_{-267}	$4.501^{+0.034}_{-0.136}$	$-1.120^{+0.250}_{-0.300}$	$0.933^{+0.163}_{-0.070}$	$1.007^{+0.064}_{-0.104}$	$1.747^{+0.298}_{-0.660}$
	+3%/-4%	+1%/-3%	+22%/-27%	+17%/-8%	+6%/-10%	+17%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008056313-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-344 ± 11	$1.56^{+0.27}_{-0.22}$	364^{+16}_{-16}	7837^{+801}_{-607}	136125^{+47401}_{-36078}
Alt.	-68 ± 4	$1.22^{+0.24}_{-0.22}$	362^{+19}_{-15}	5789^{+604}_{-462}	43970^{+20270}_{-13369}

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 $A_{obs} \gg 1.0$

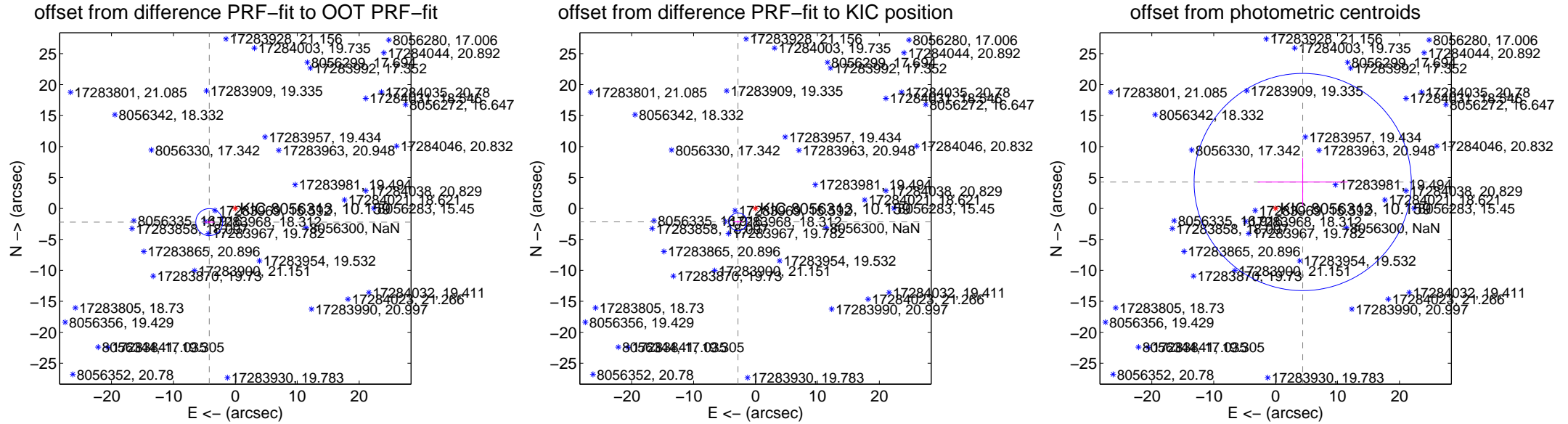
DV Centroid Data

Supplemental centroid analysis for 008056313-07. **Kepler magnitude: 10.16**. Transit SNR 6.86

There are 0 quarters with good PRF difference image offsets

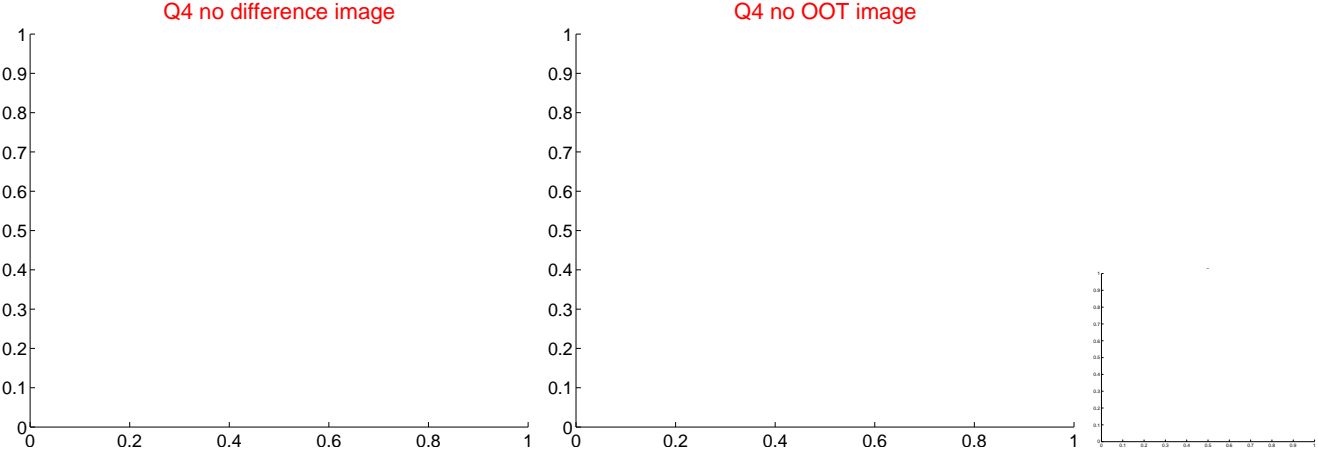
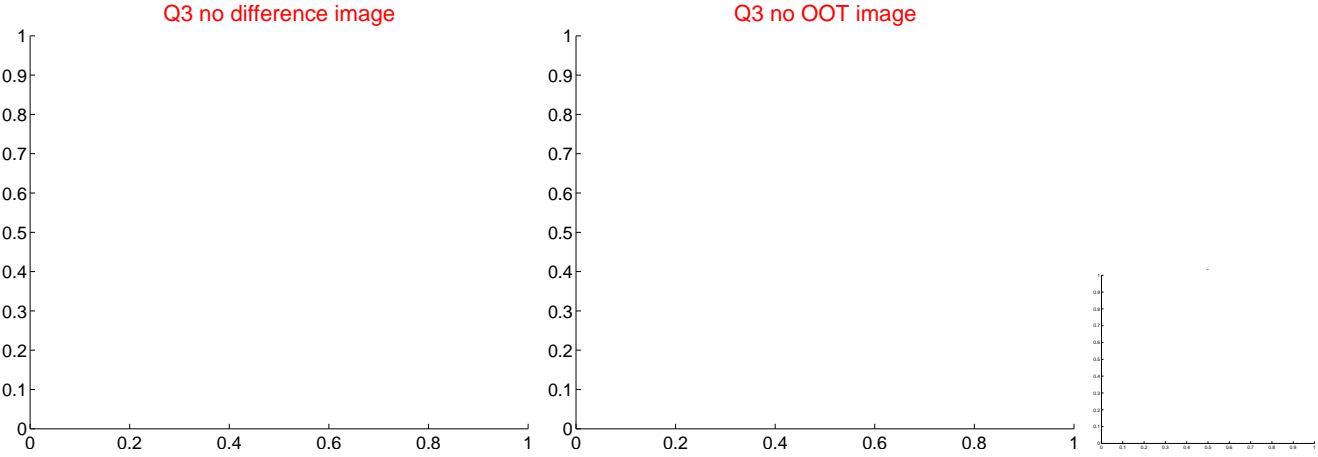
The direct PRF centroid is offset from the target star catalog position by about 1.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.754 \pm 0.726	6.55	4.210 \pm 0.815	-2.207 \pm 0.168
PRF-fit source offset from KIC position	3.560 \pm 0.480	7.41	2.825 \pm 0.778	-2.166 \pm 0.239
photometric centroid source offset	6.11 \pm 5.85	1.04	-4.37 \pm 7.26	4.27 \pm 3.85



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

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



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

Q5 no difference image



Q5 no OOT image



Q6 no difference image



Q6 no OOT image



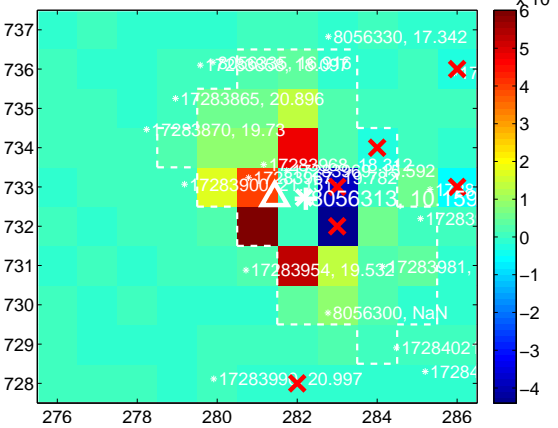
Q7 no difference image



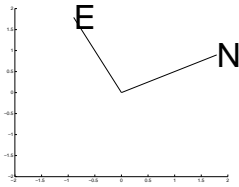
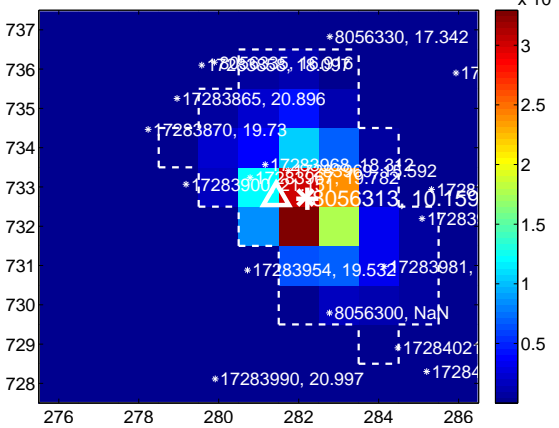
Q7 no OOT image



Q8 difference image. Poor Quality



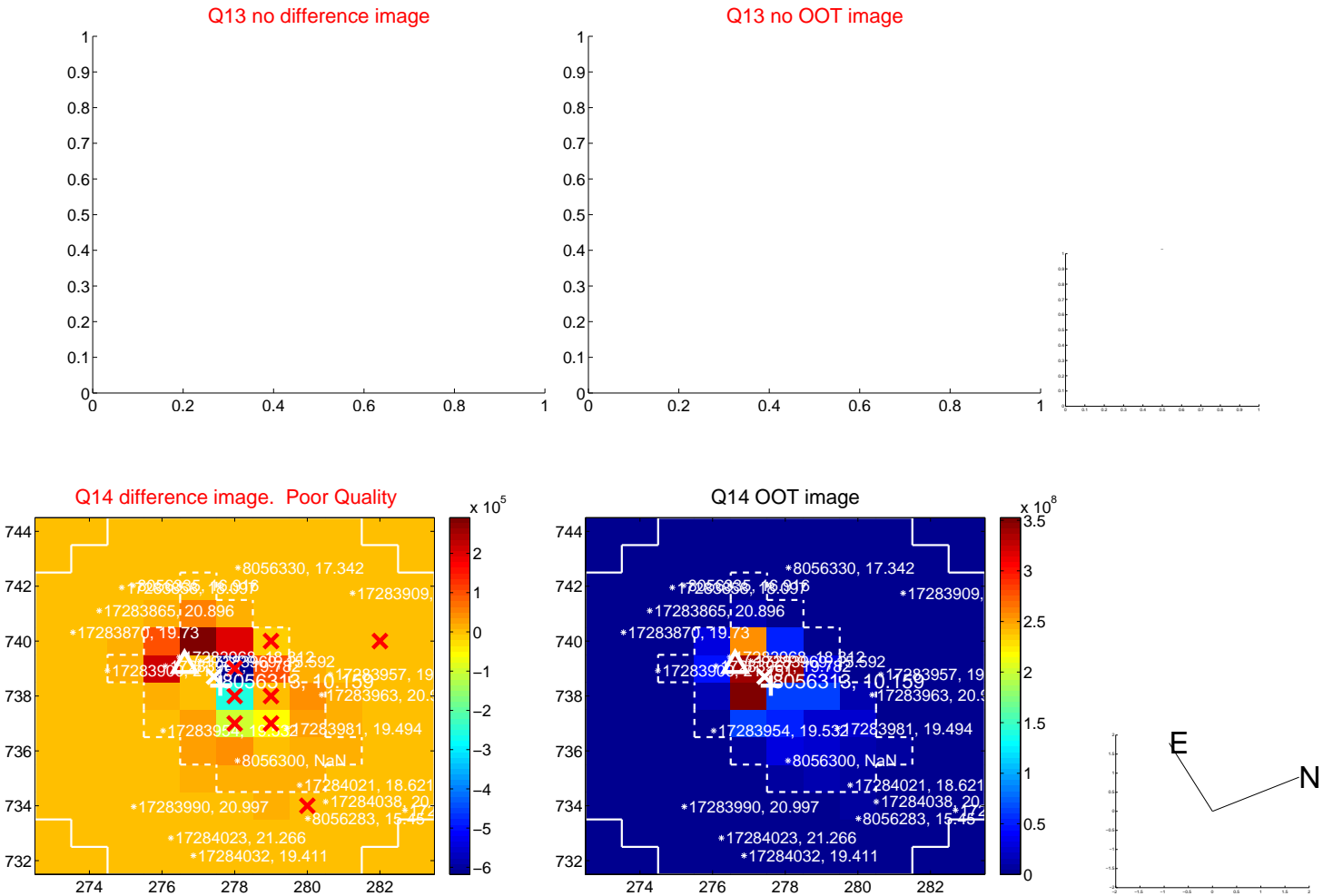
Q8 OOT image



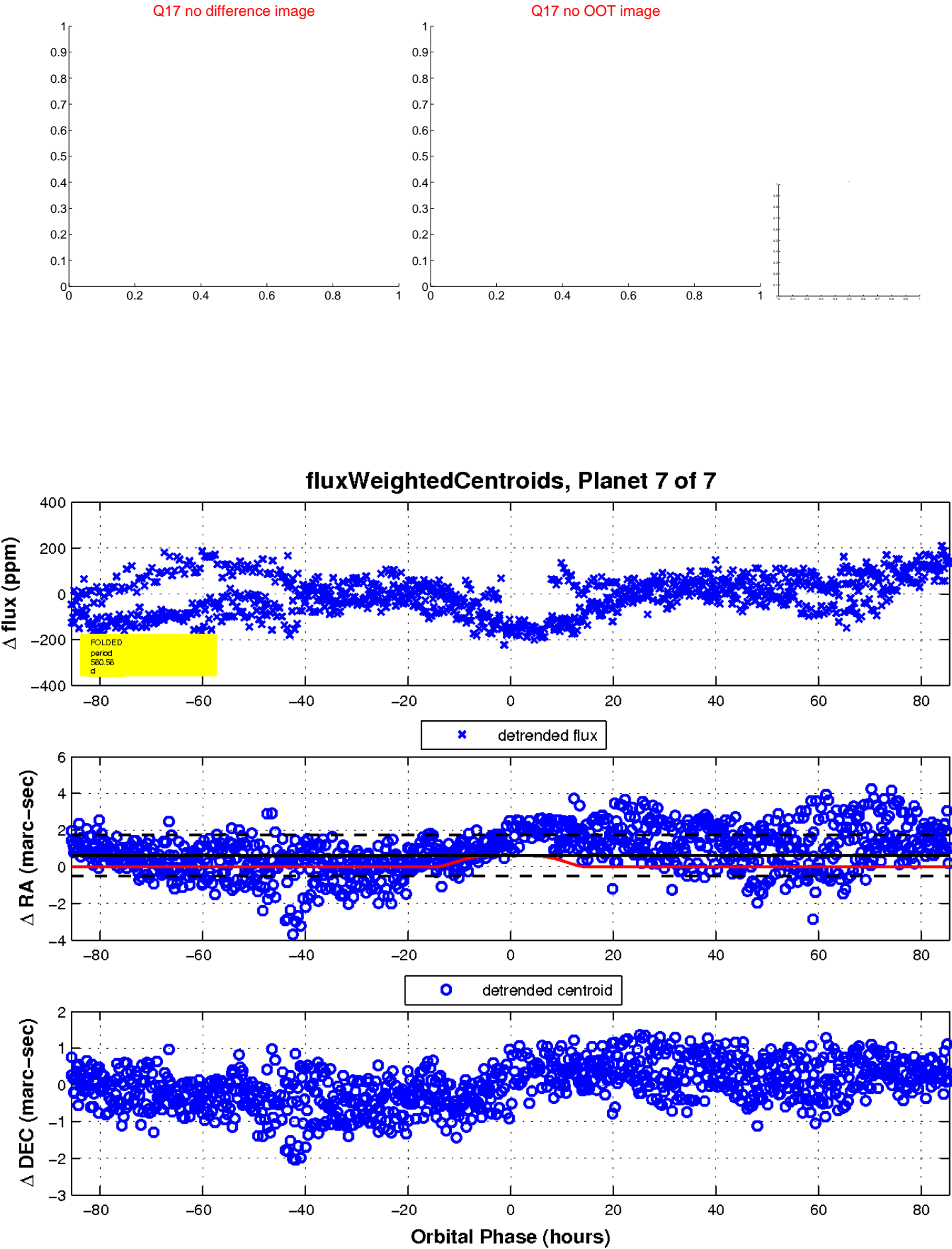
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

