

KIC 008751056

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})
008751056-01	OBS	No	3.964350	134.664693	20.0	18.578	9.3	9.1	2.11	7700	0.96	4107.90
008751056-02	OBS	No	150.768230	157.607125	127.9	43.834	23.9	5.2	2.11	7700	2.50	32.12
008751056-03	OBS	No	307.728341	251.334002	52.7	2.327	8.7	2.4	2.11	7700	1.55	12.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008751056-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008751056-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008751056-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

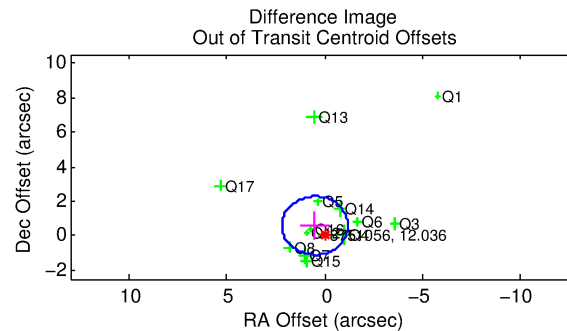
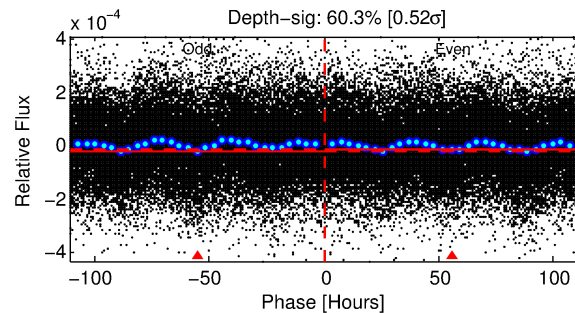
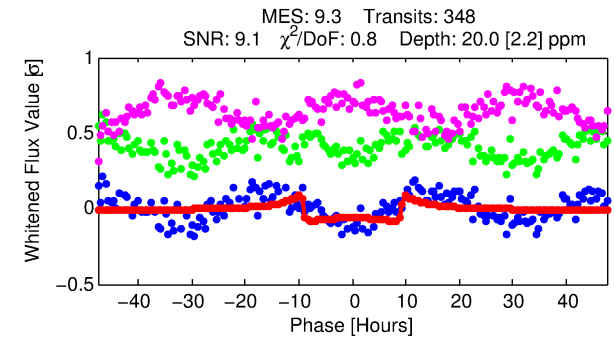
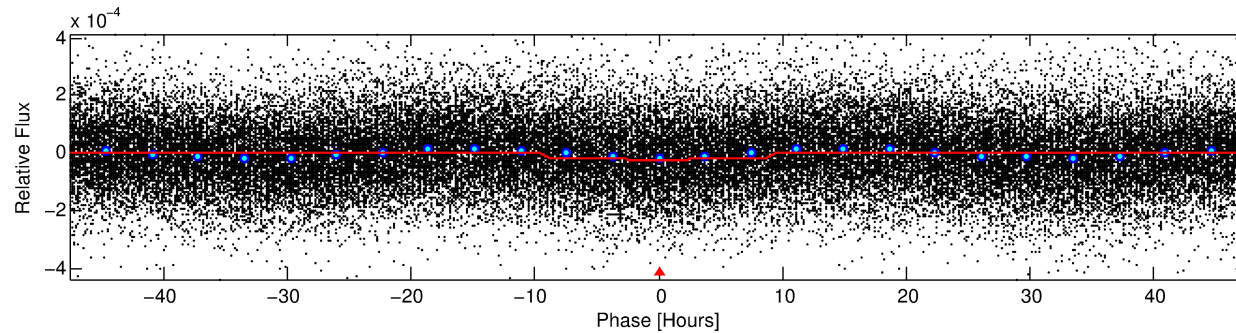
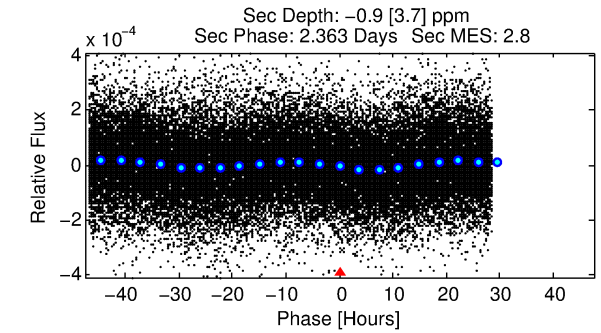
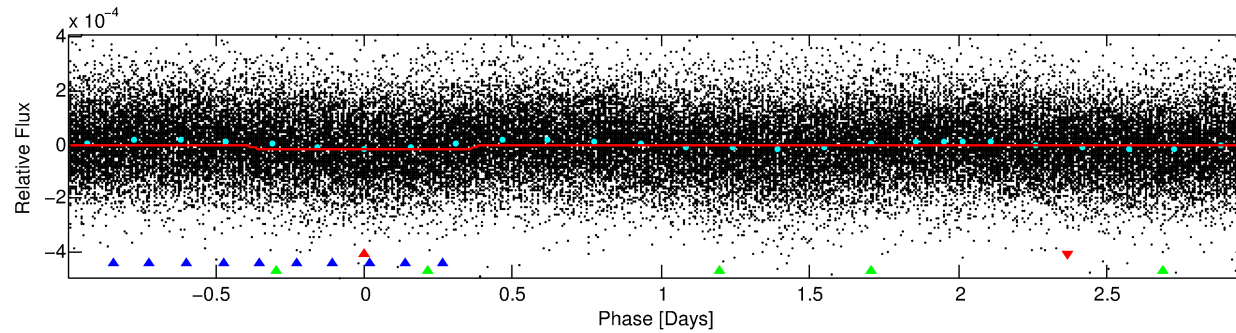
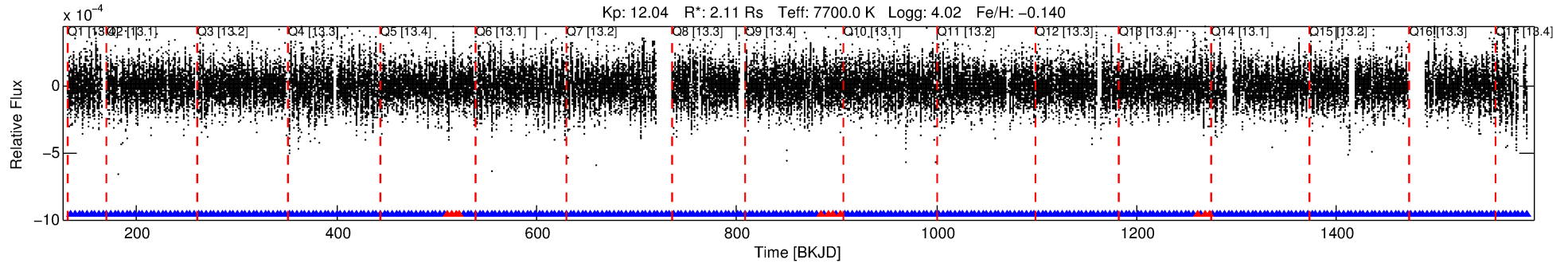
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008751056-01

No Significant Match Found

DV One-Page Summary

KIC: 8751056 Candidate: 1 of 3 Period: 3.964 d



DV Fit Results:

Period = 3.96435 [0.00004] d
Epoch = 134.6647 [0.0067] BKJD
Rp/R* = 0.0042 [0.0019]
a/R* = 1.70 [2.95]
b = 0.28 [8.76]
Seff = 4107.90 [1664.50]
Teq = 2041 [207] K
Rp = 0.96 [0.51] Re
a = 0.0585 [0.0142] AU
Ag = N/A
Teffp = N/A

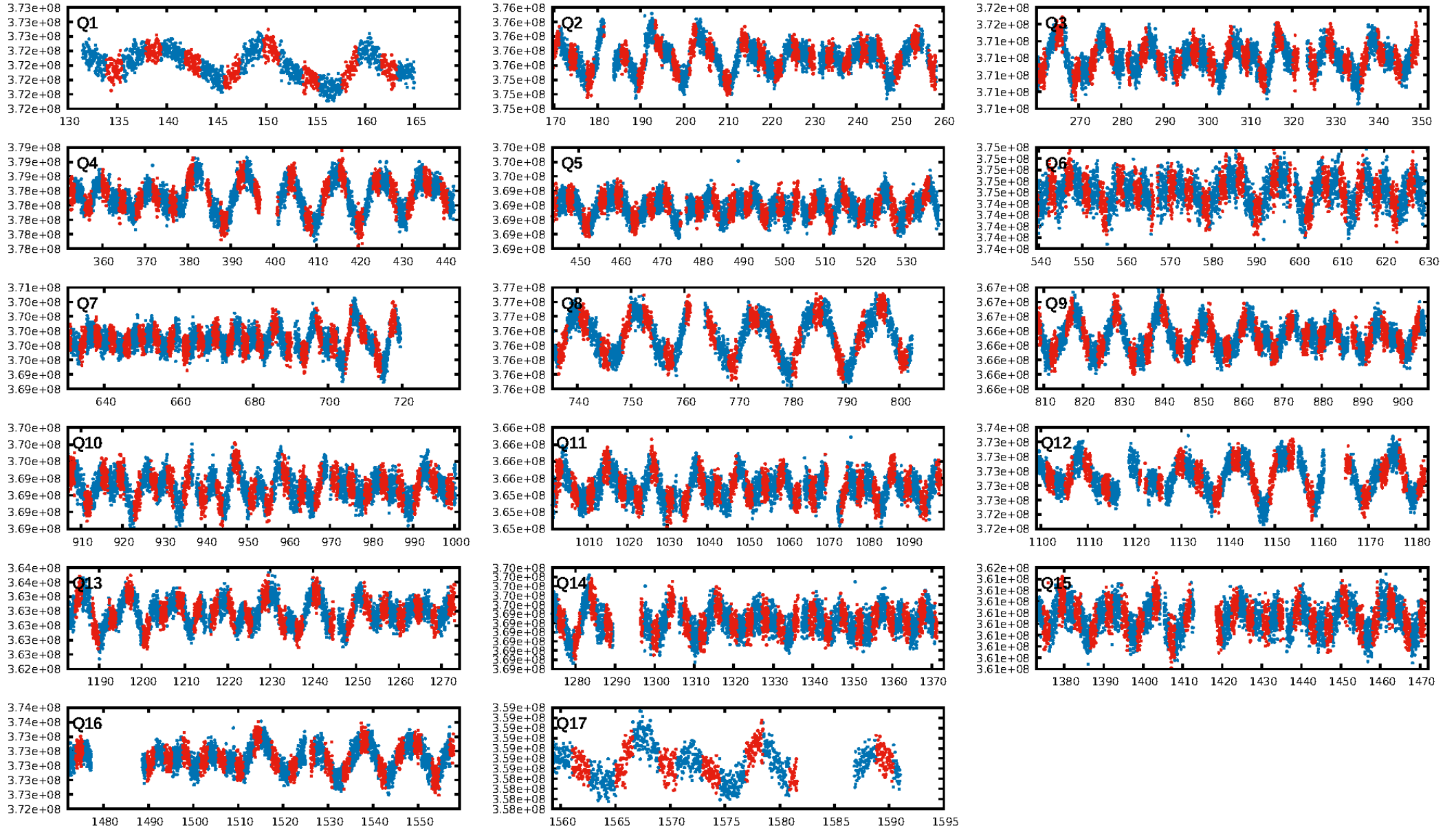
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [74.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.80e-13
RollingBand-fgt: 0.97 [322/333]
GhostDiagnostic-chr: 0.6749
Centroid-sig: 86.9%
Centroid-so: 0.116 arcsec [0.18σ]
OotOffset-rm: 0.778 arcsec [1.38σ]
KicOffset-rm: 0.786 arcsec [1.31σ]
OotOffset-st: 2/3/4/4 [13]
KicOffset-st: 2/3/4/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

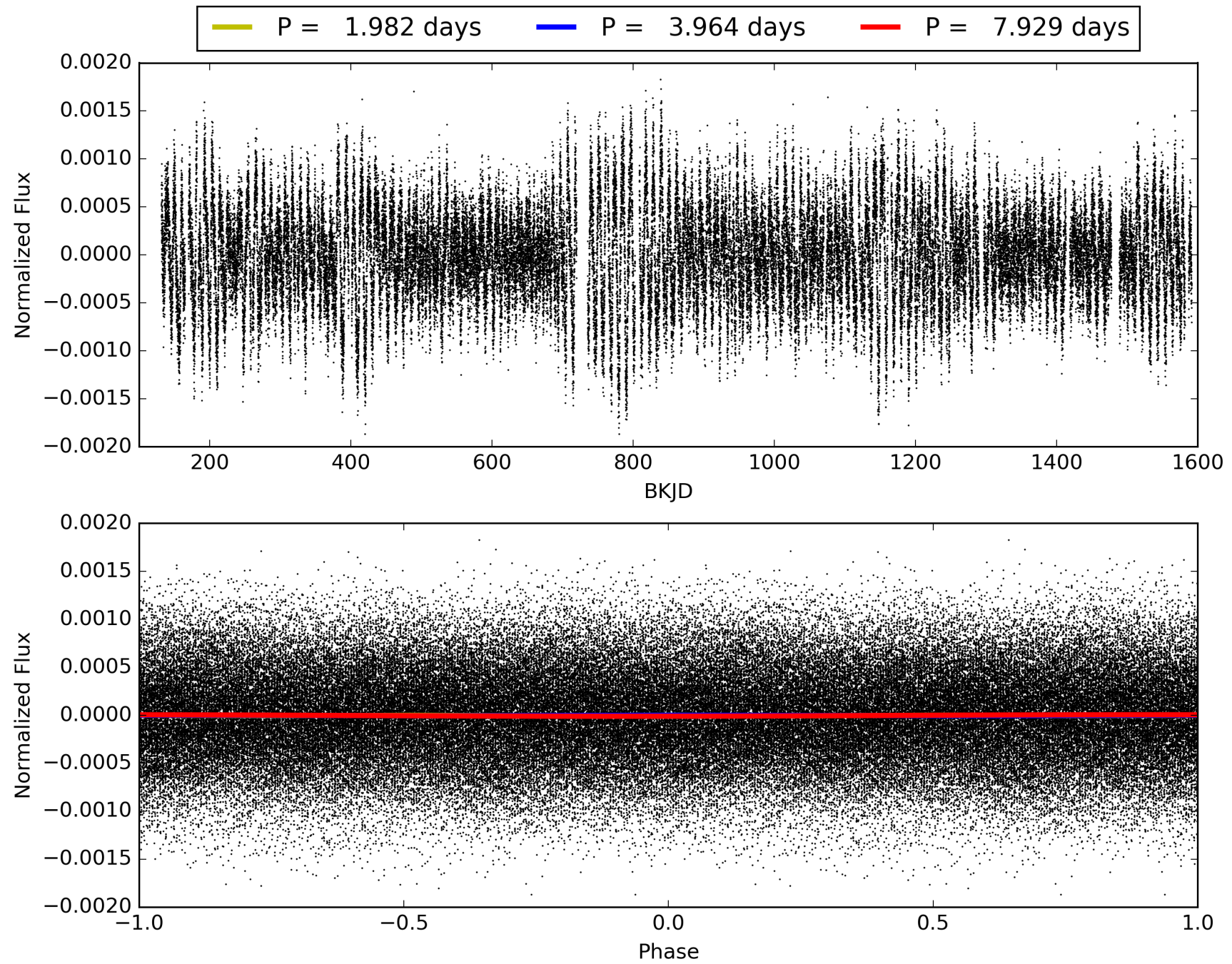
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:27:52 Z

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

TCE 008751056-01, PDC Light Curves

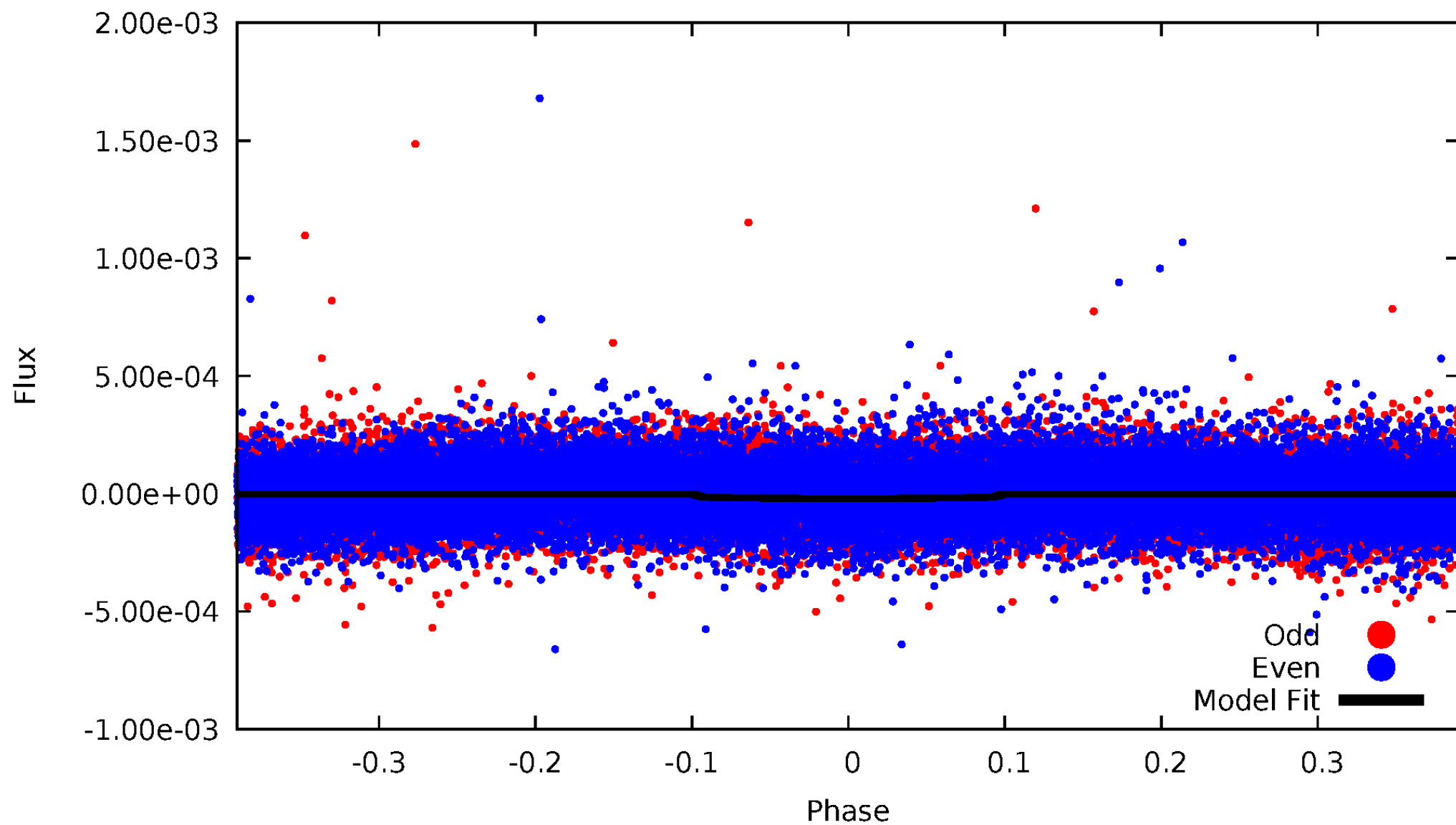


TCE 008751056-01



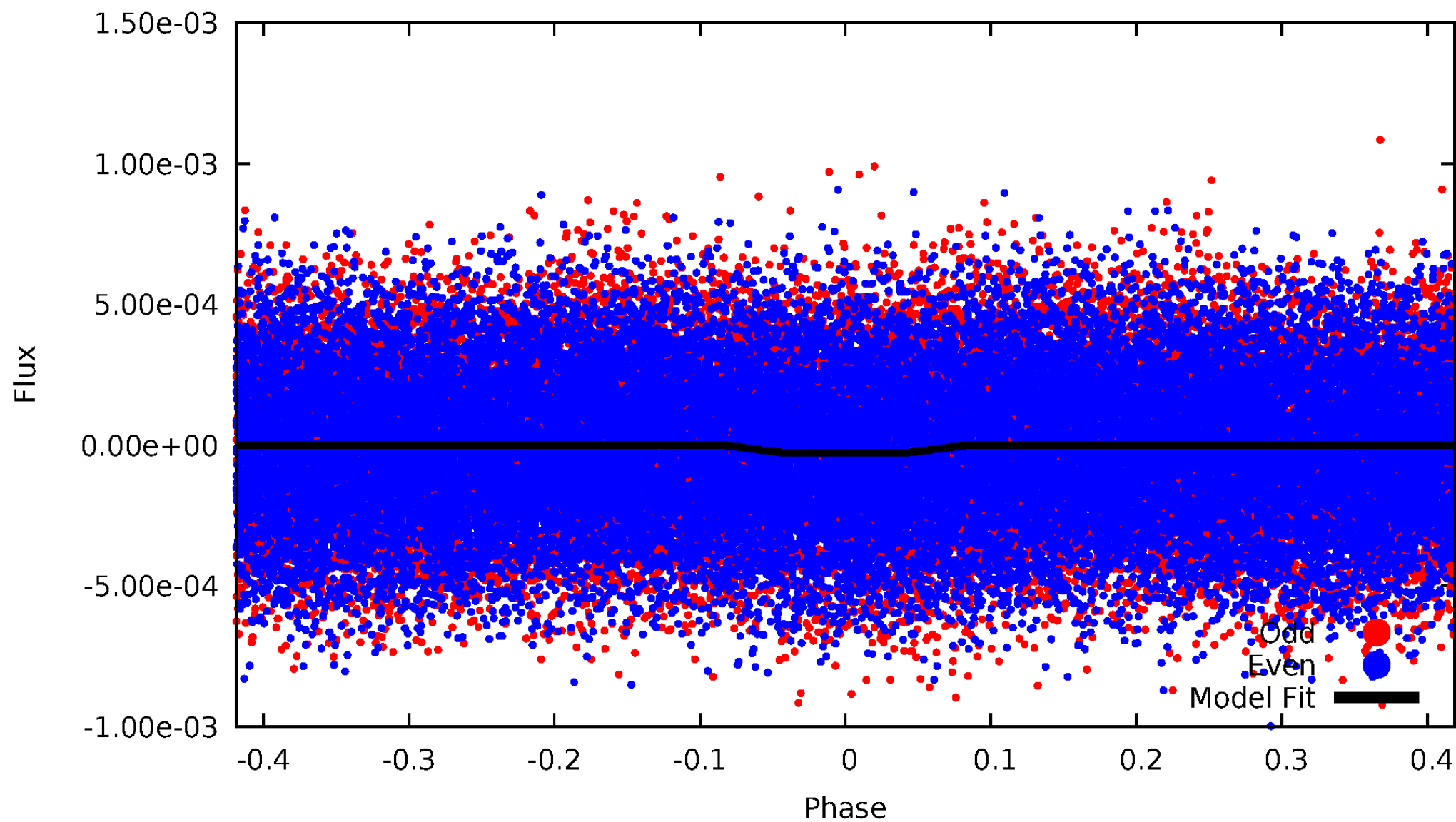
DV Odd/Even

TCE 008751056-01



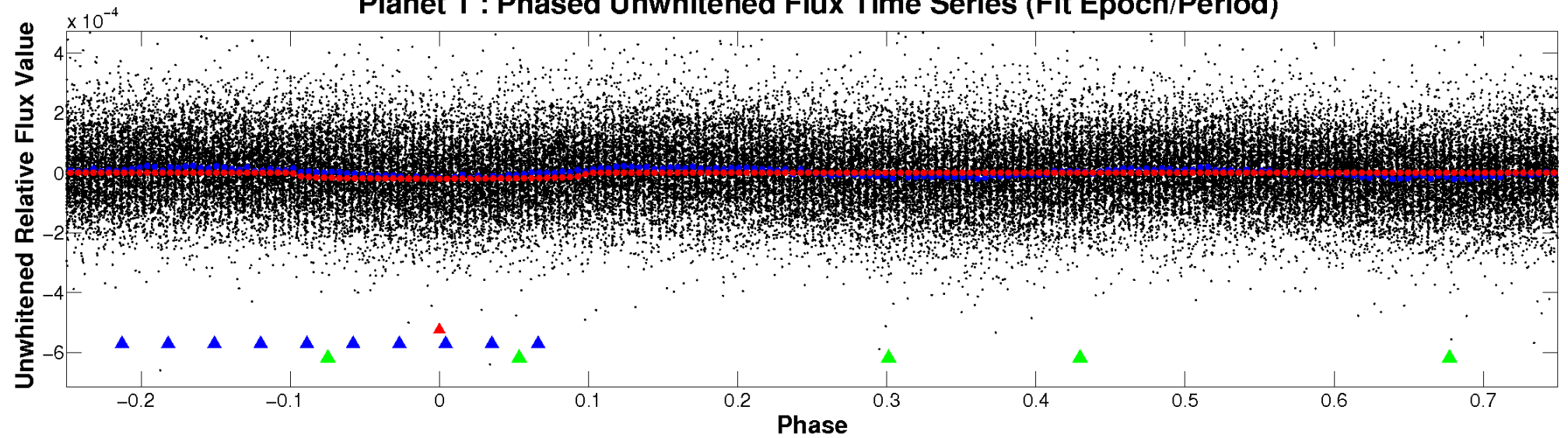
ALT Odd/Even

TCE 008751056-01

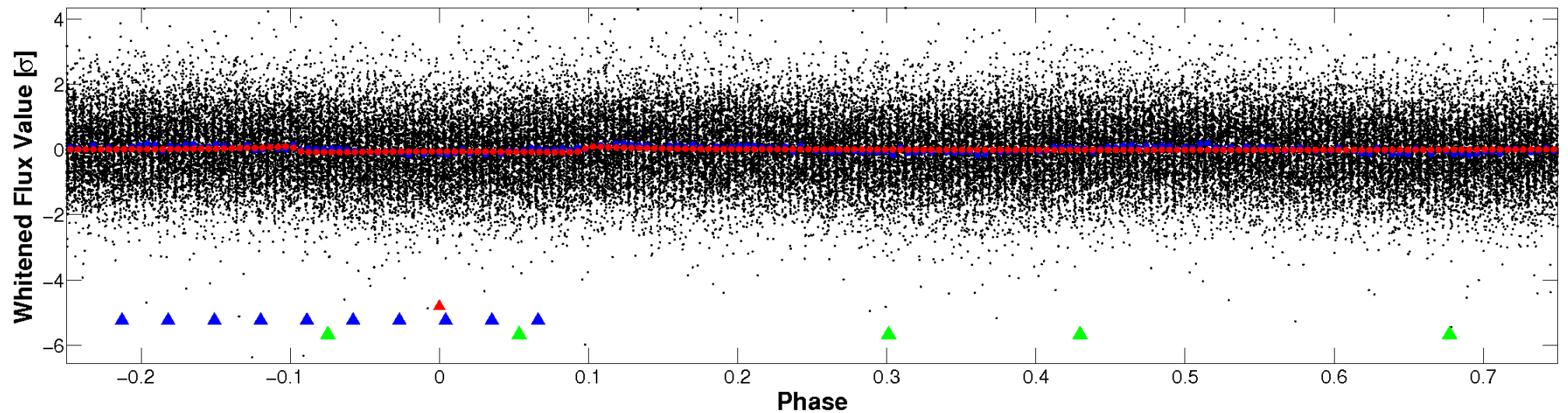


Non-Whitened Vs. Whitened Light Curve

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

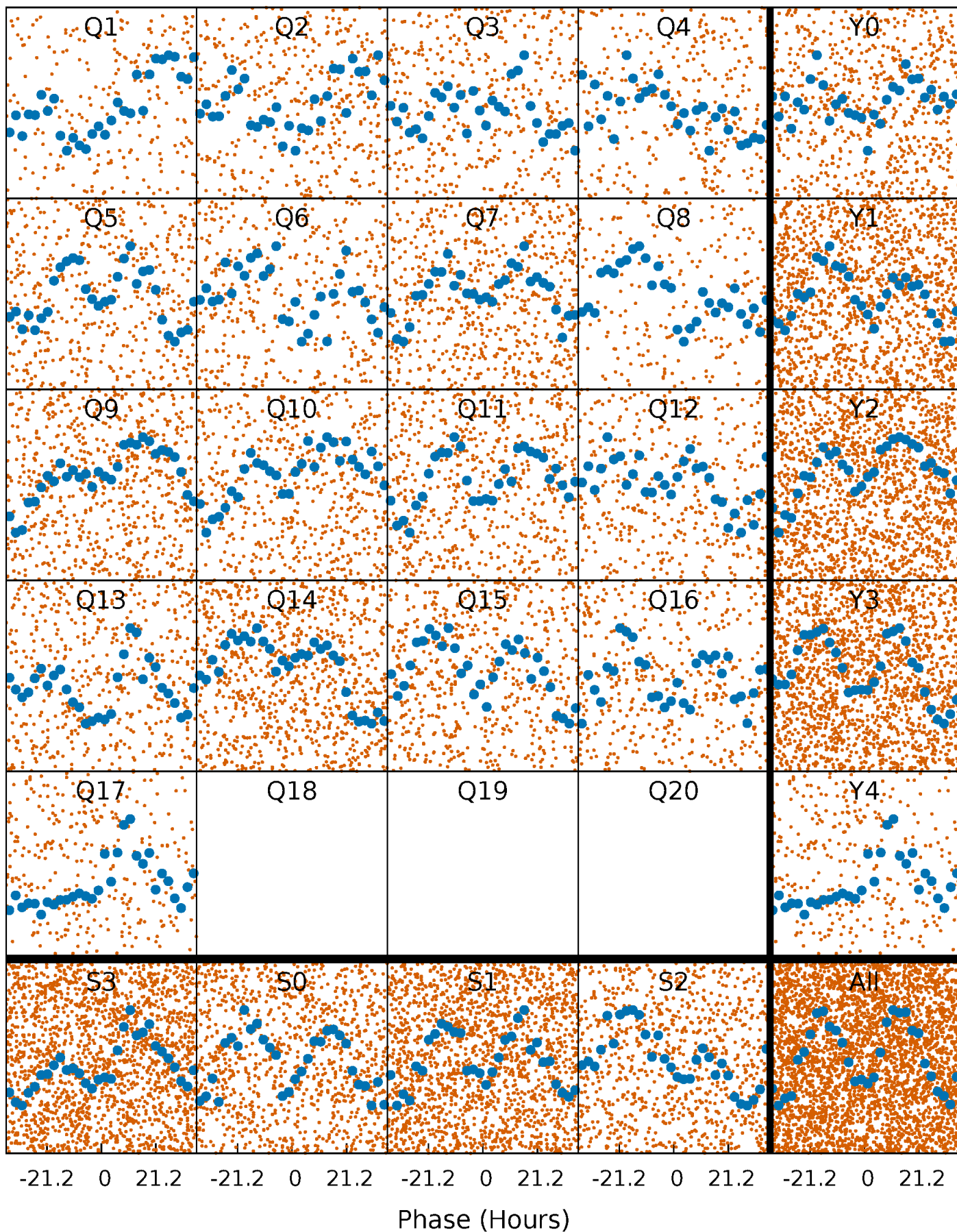


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



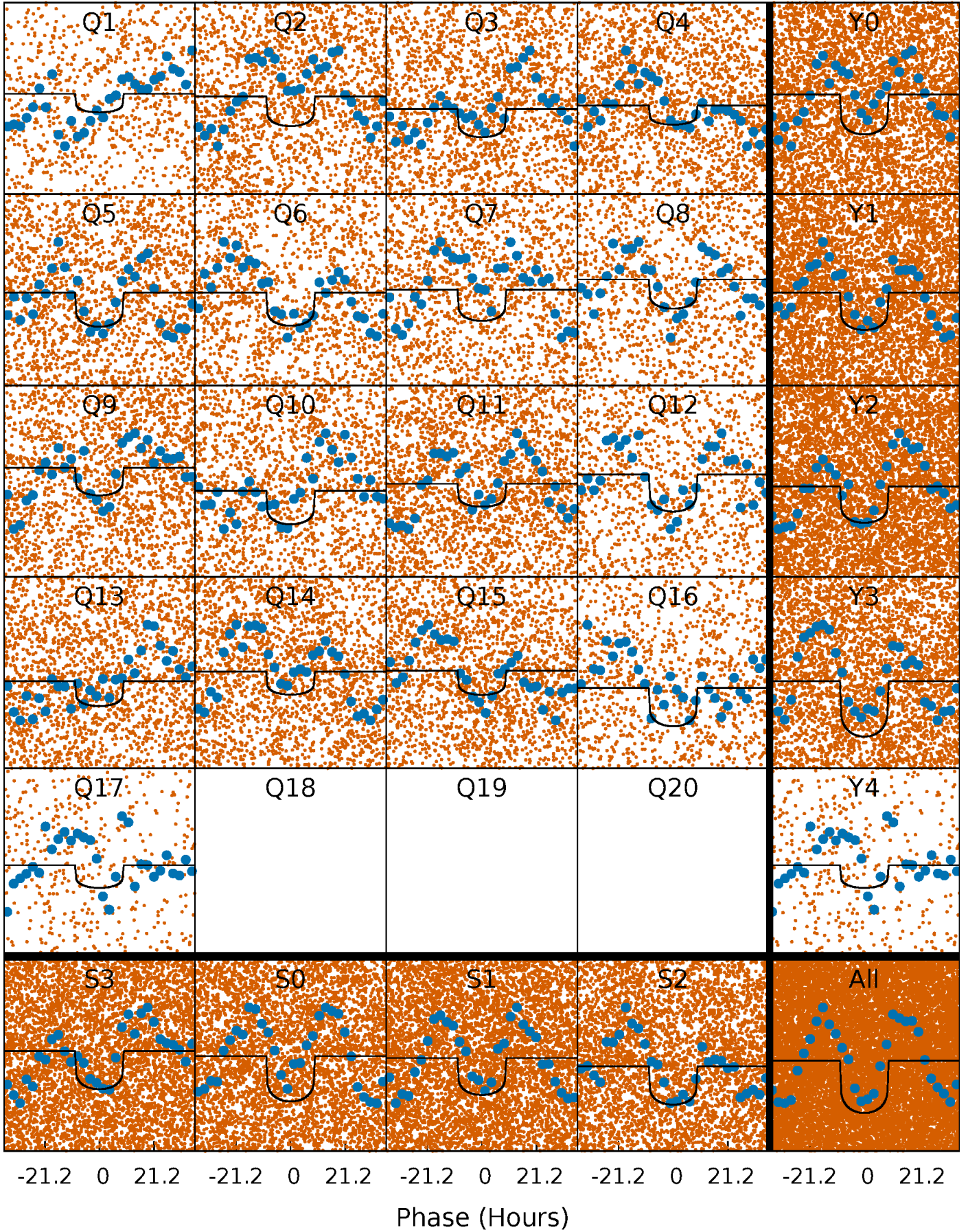
PDC Quarter-Phased Transit Curves

TCE 008751056-01 P= 3.964350 Days $T_0=134.664693$ (BKJD)



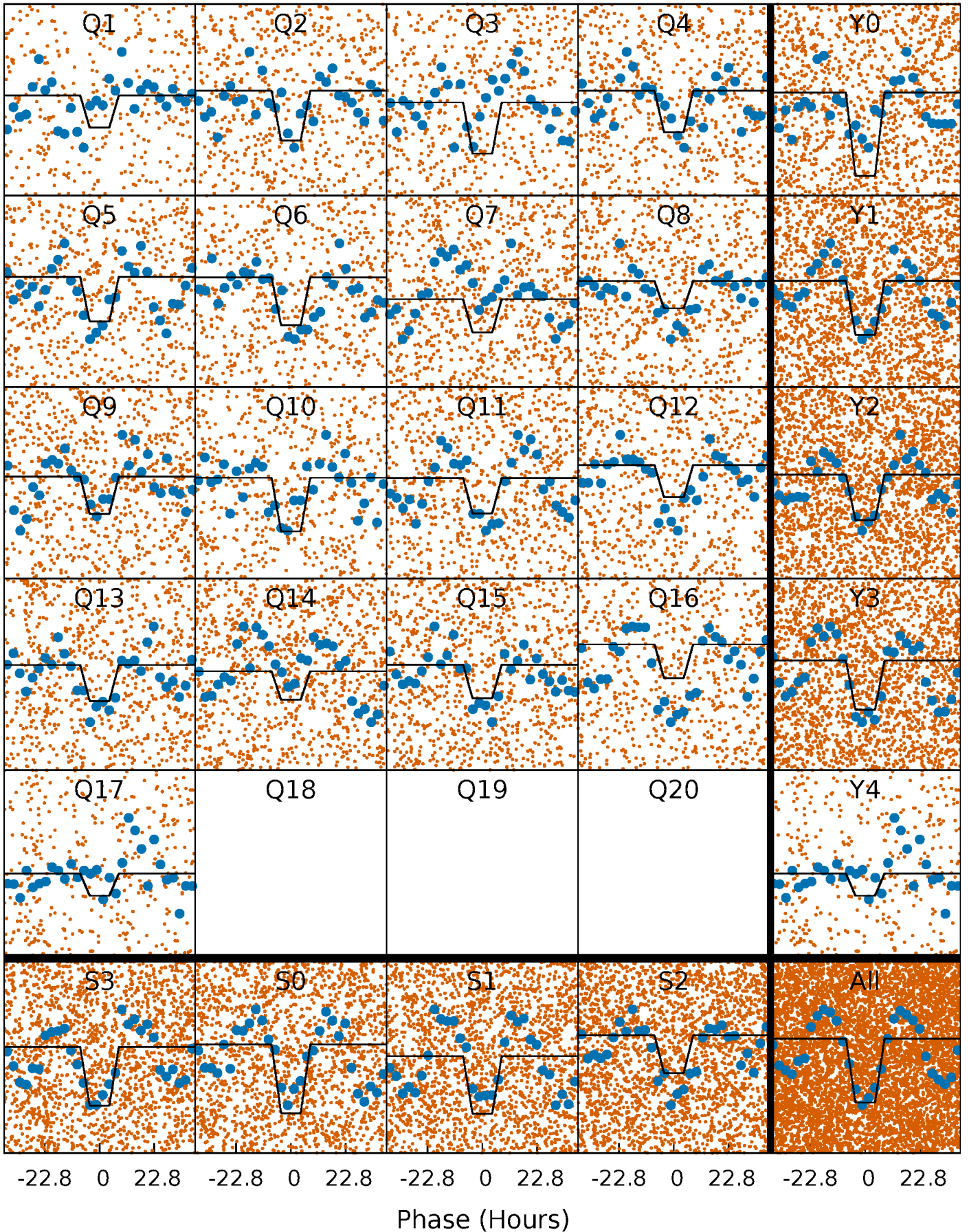
DV Quarter-Phased Transit Curves

TCE 008751056-01 P= 3.964350 Days $T_0=134.664693$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

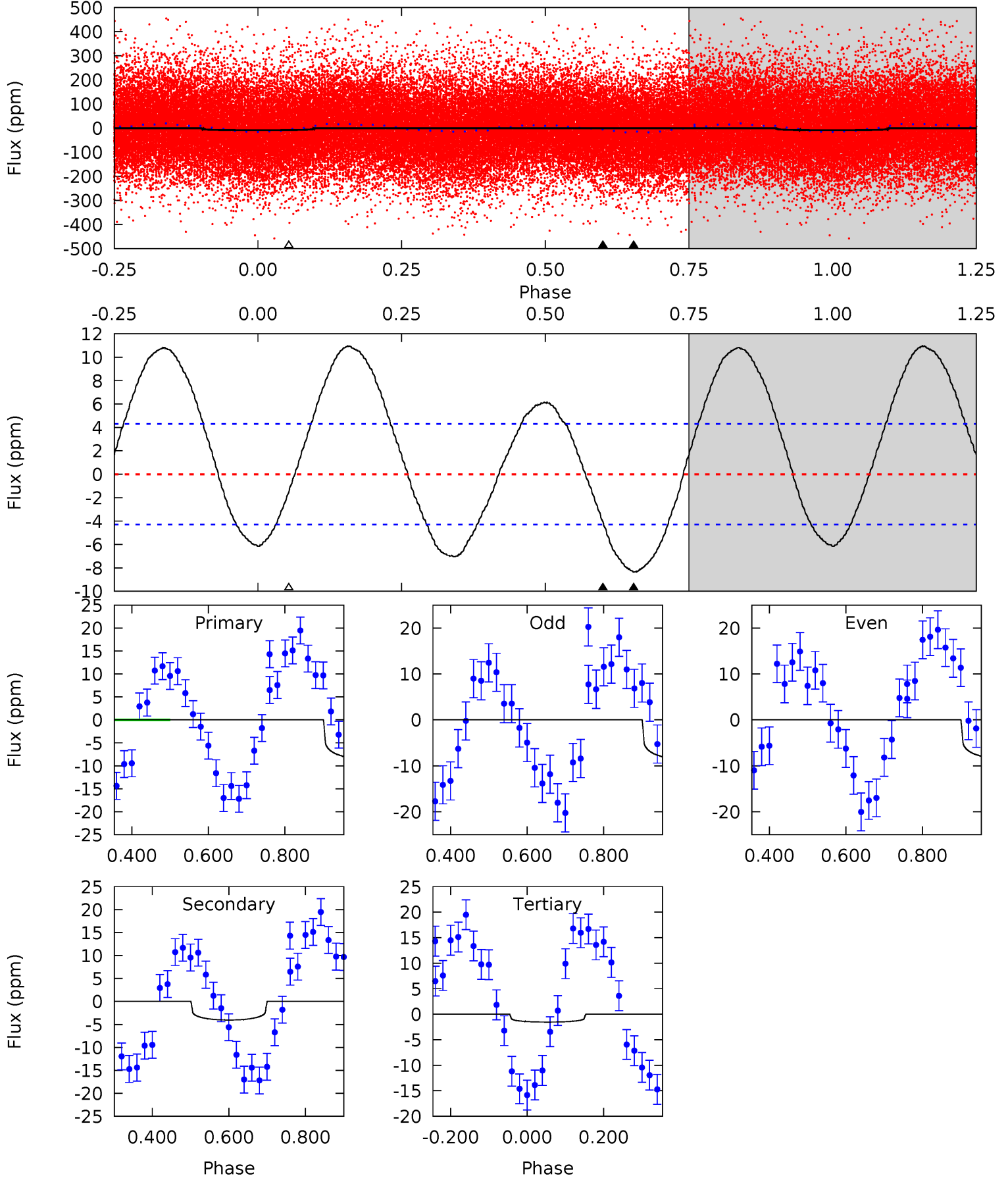
TCE 008751056-01 P= 3.963799 Days $T_0=134.747933$ (BKJD)



DV Model-Shift Uniqueness Test

008751056-01, P = 3.964350 Days, E = 130.700343 Days

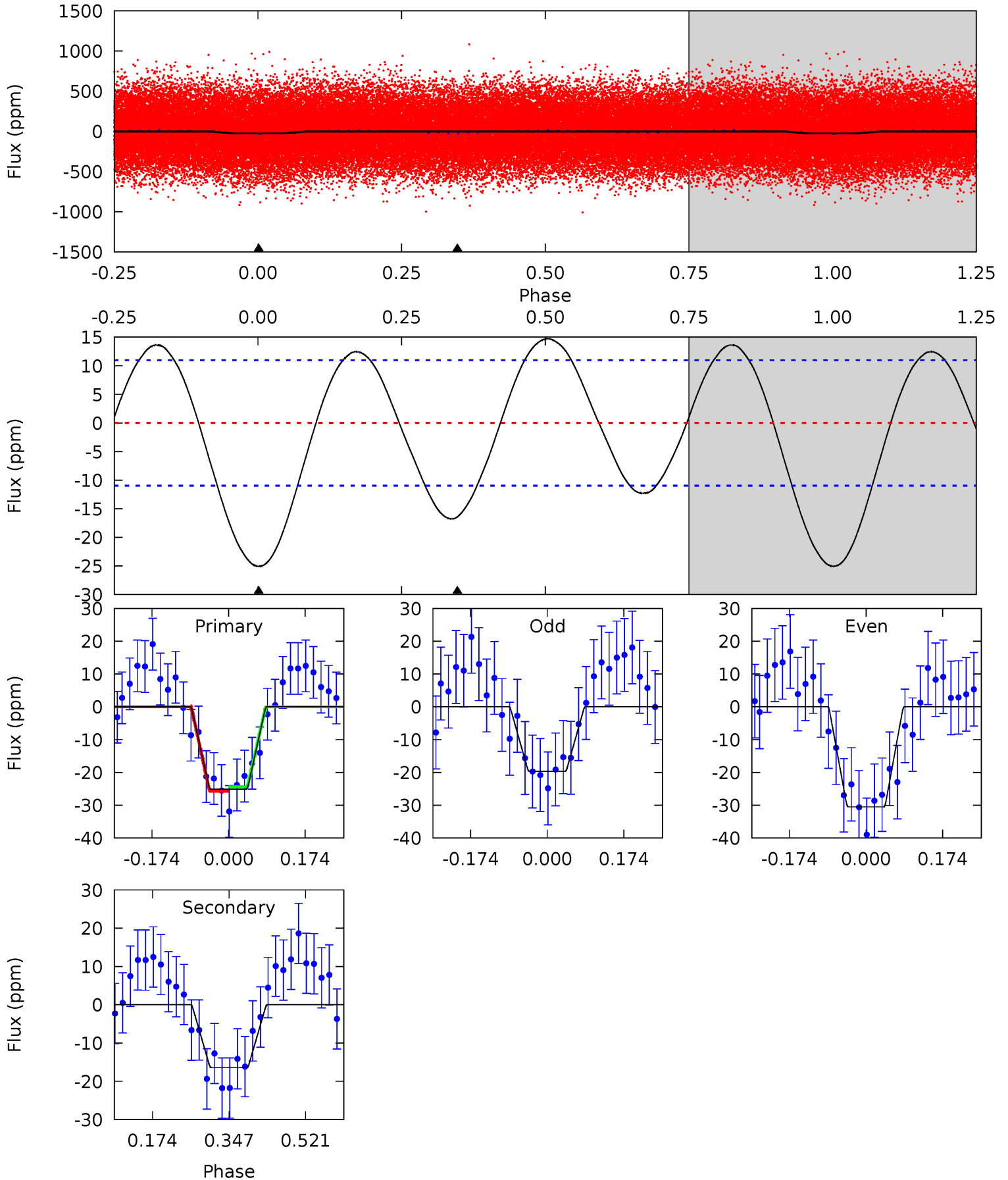
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.59	4.16	1.59	0	4.42	1.28	6.22	7.01	8.59	2.57	4.16	0.06	0.63	0.57	0.20



Alt Model-Shift Uniqueness Test

008751056-01, P = 3.963799 Days, E = 130.784134 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	6.65	0	0	4.45	1.36	3.69	10.2	10.2	6.65	6.65	2.19	0.84	0.37	0.27



Stellar Parameters For KIC 008751056

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7700^{+237}_{-316}	$4.018^{+0.210}_{-0.158}$	$-0.140^{+0.200}_{-0.350}$	$2.111^{+0.525}_{-0.578}$	$1.692^{+0.198}_{-0.298}$	$0.254^{+0.309}_{-0.104}$
	+3%/-4%	+5%/-4%	+143%/-250%	+25%/-27%	+12%/-18%	+122%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008751056-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$0.92^{+0.45}_{-0.41}$	2827^{+208}_{-219}	5231^{+1928}_{-797}	$8.526^{+21.203}_{-4.713}$
Alt.	-16 ± 2	$1.17^{+0.51}_{-0.45}$	2832^{+212}_{-204}	6612^{+1976}_{-1020}	22^{+36}_{-12}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

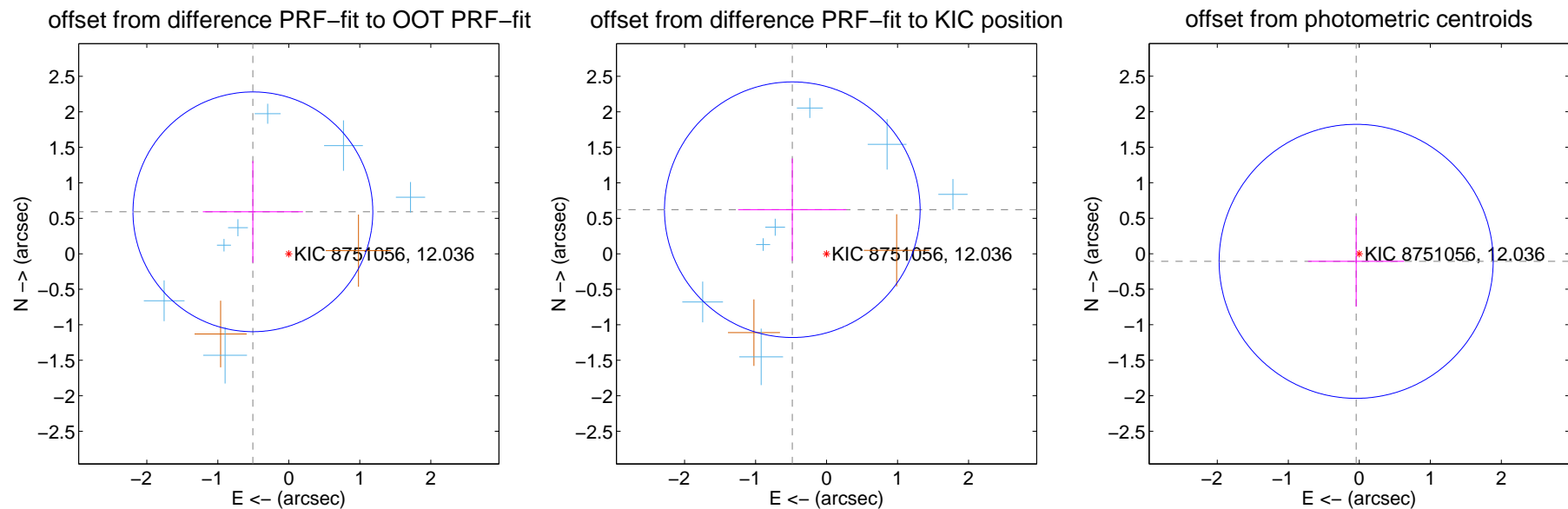
DV Centroid Data

Supplemental centroid analysis for 008751056-01. Kepler magnitude: 12.04. Transit SNR 9.09

There are 7 quarters with good PRF difference image offsets

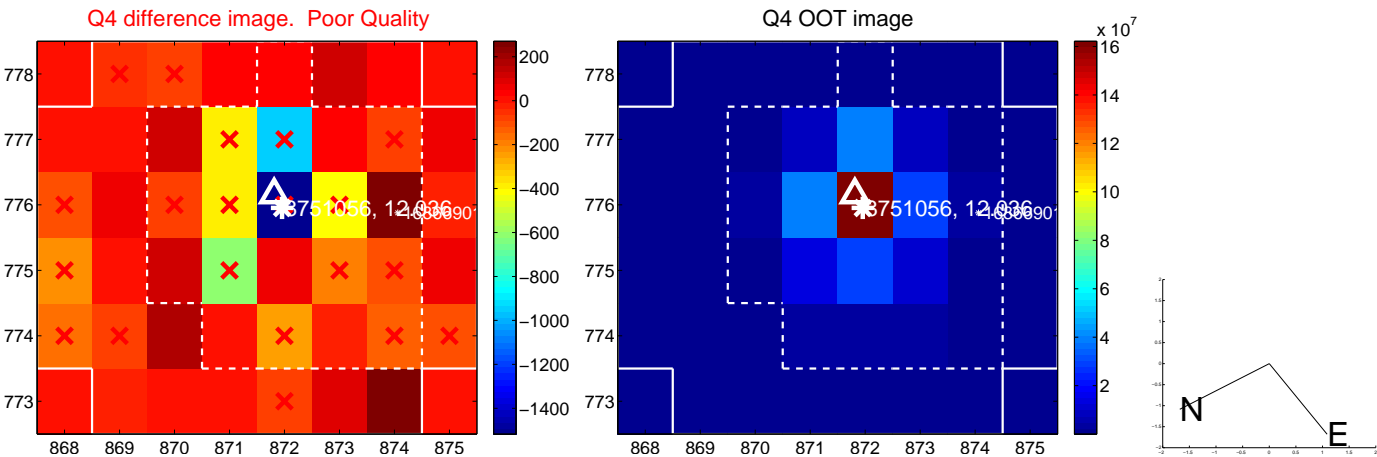
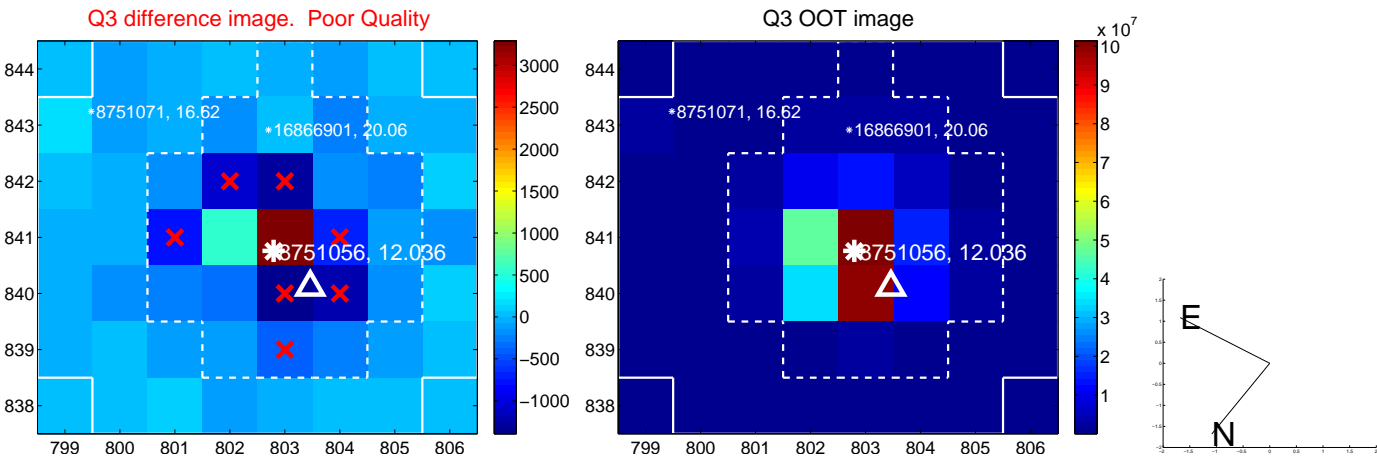
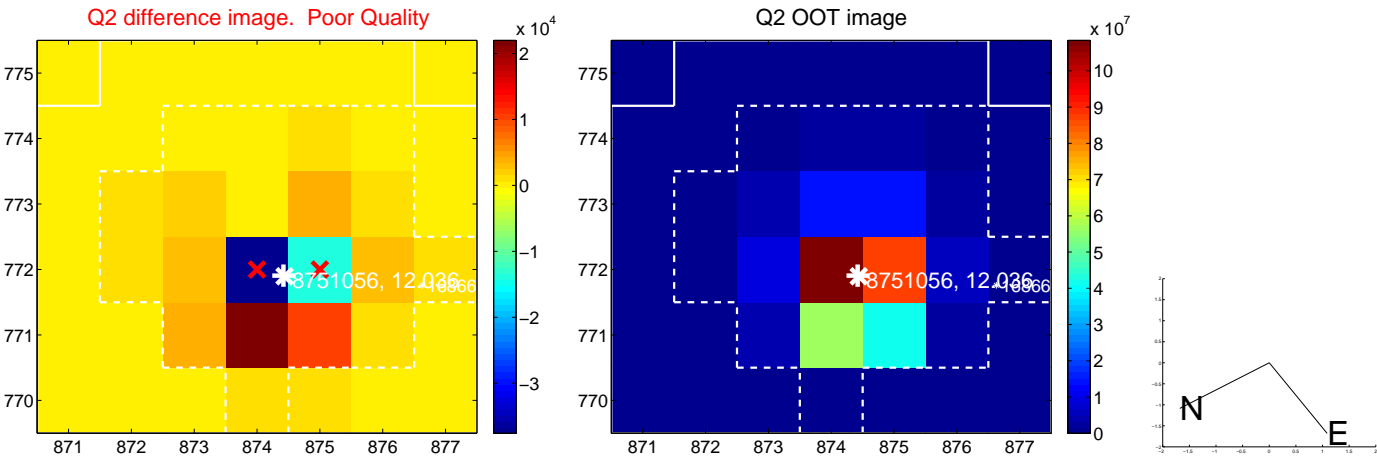
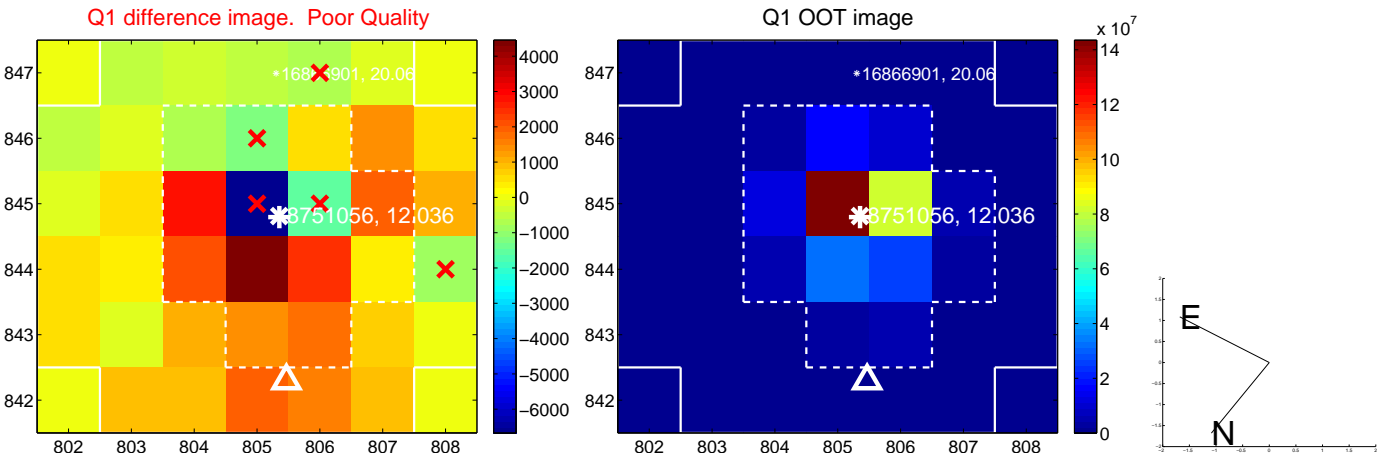
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.778 ± 0.563	1.38	0.506 ± 0.706	0.591 ± 0.717
PRF-fit source offset from KIC position	0.786 ± 0.600	1.31	0.483 ± 0.763	0.621 ± 0.722
photometric centroid source offset	0.12 ± 0.64	0.18	0.04 ± 0.68	-0.11 ± 0.64

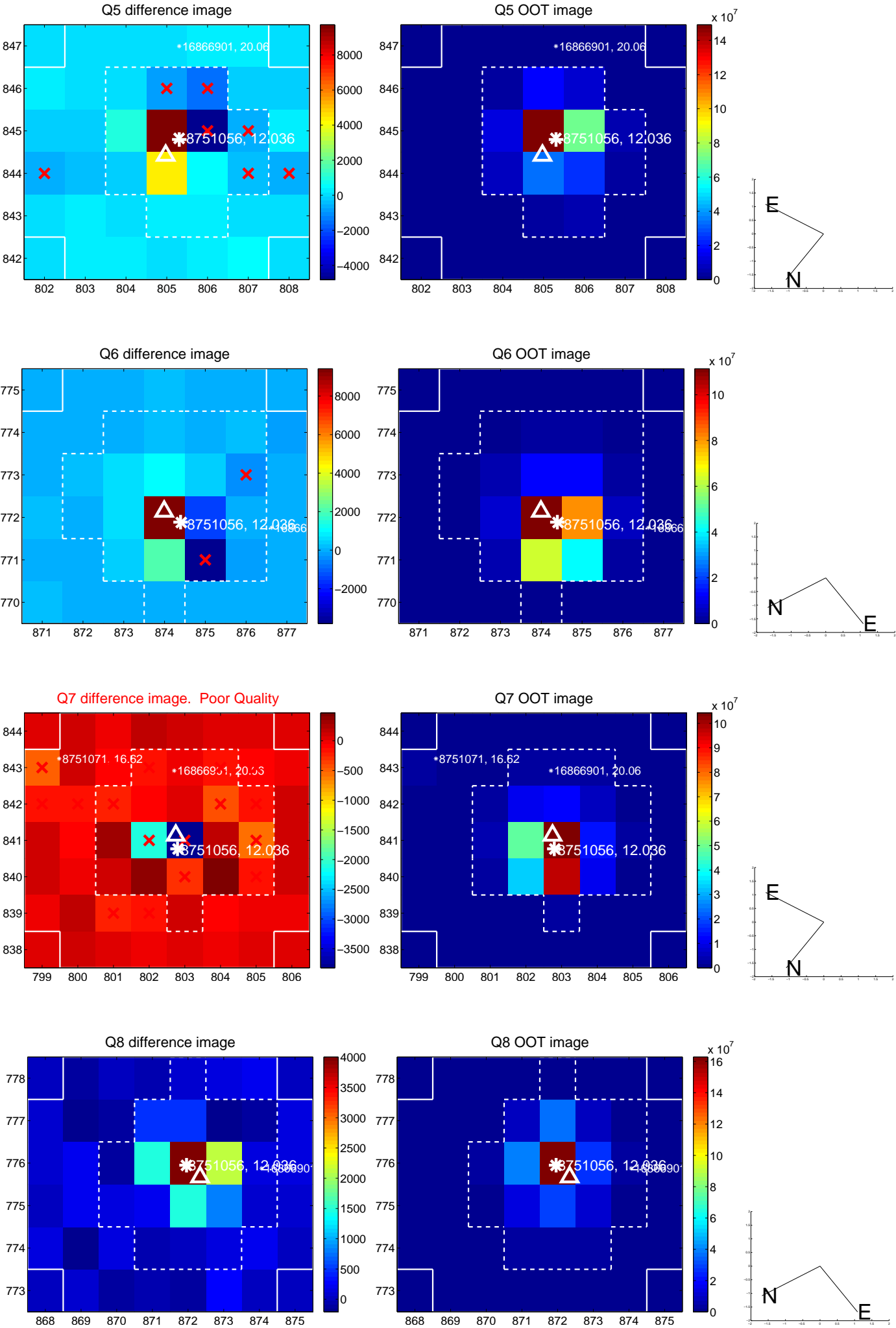


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

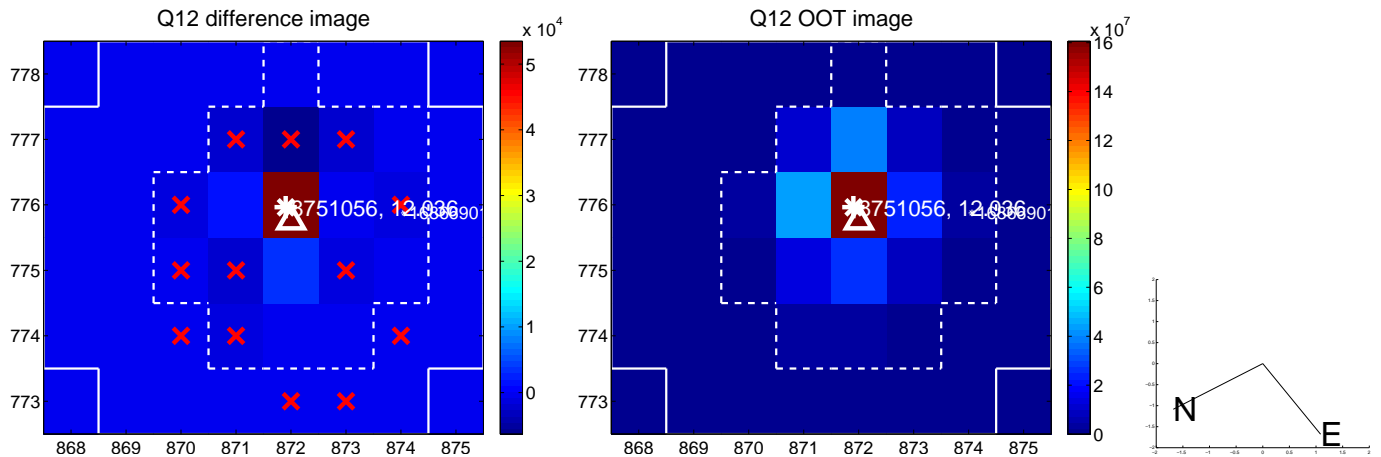
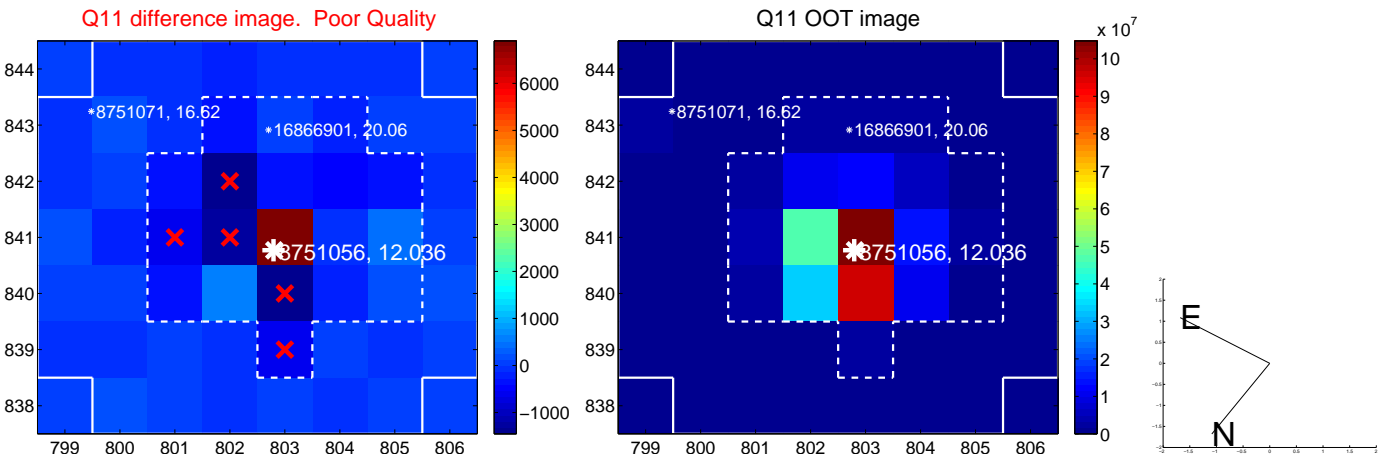
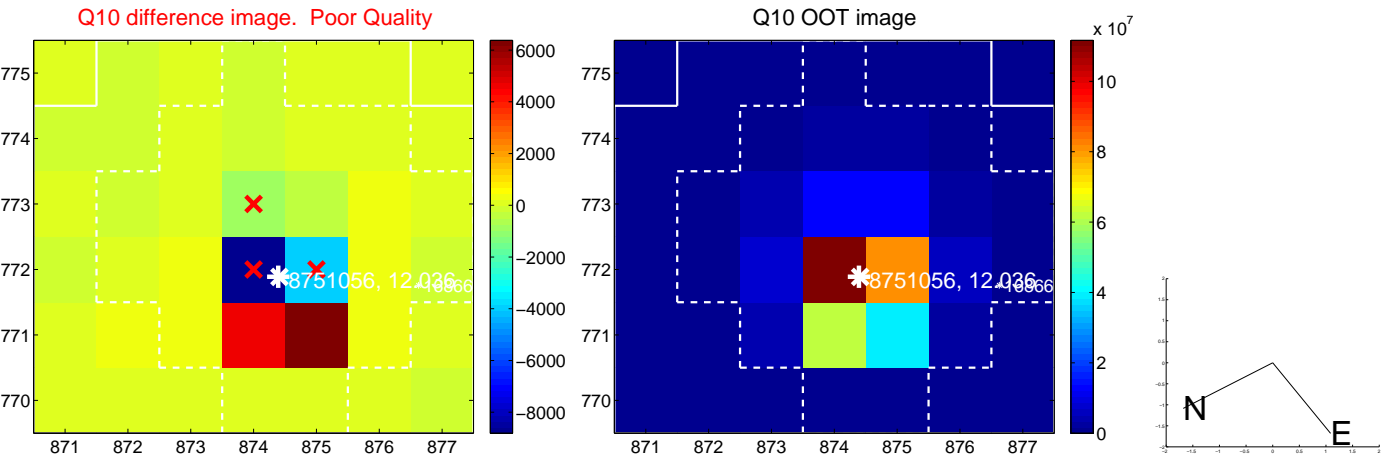
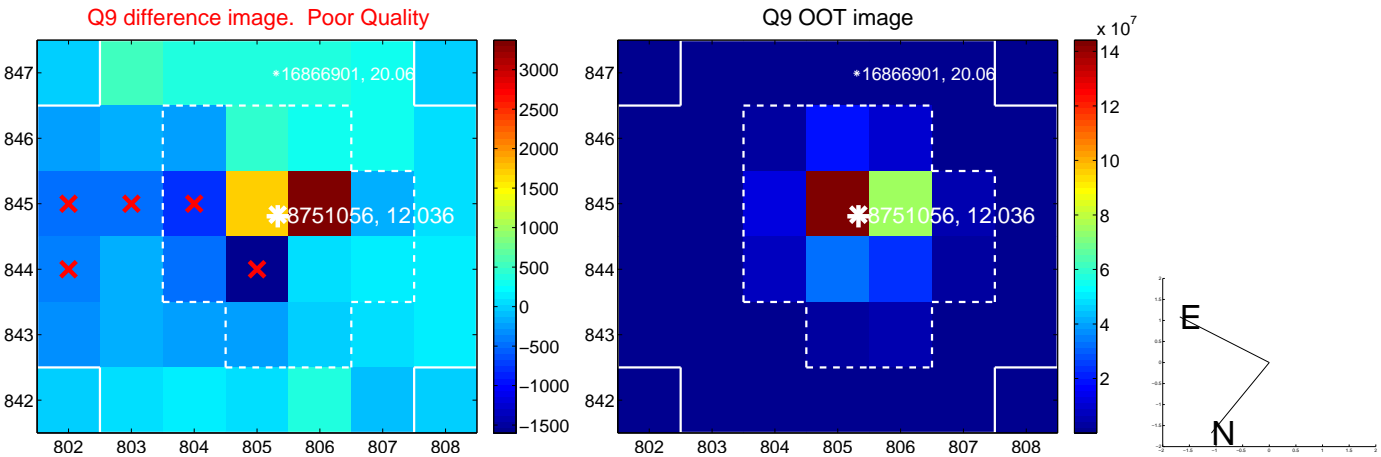
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



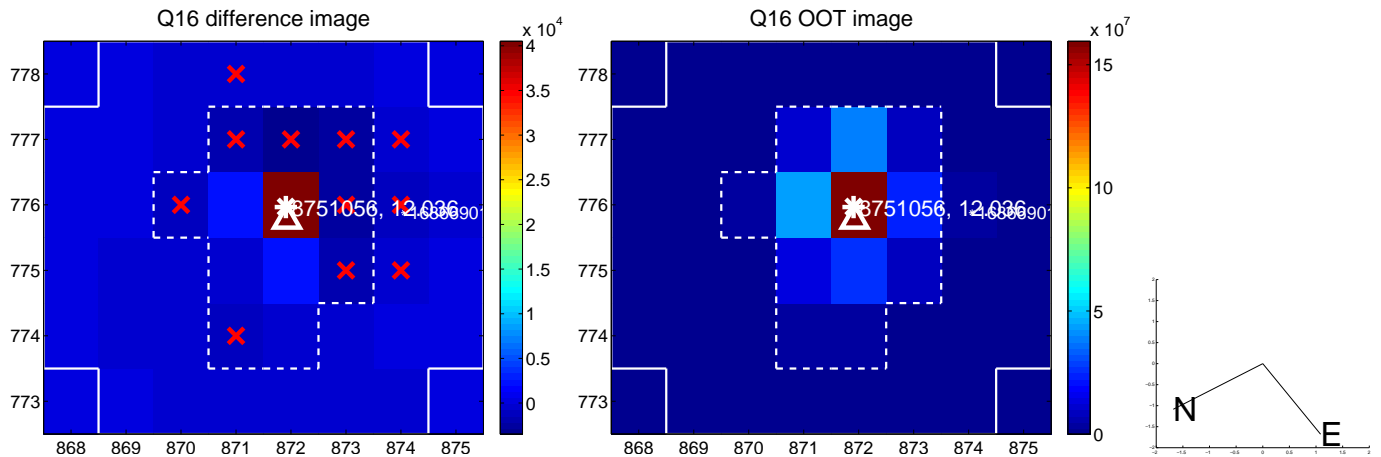
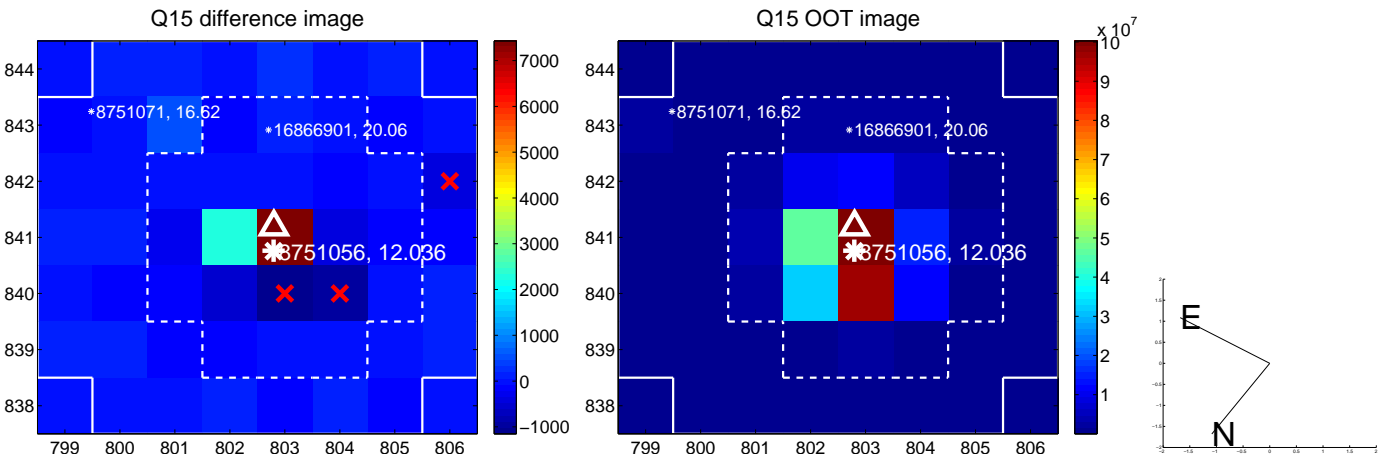
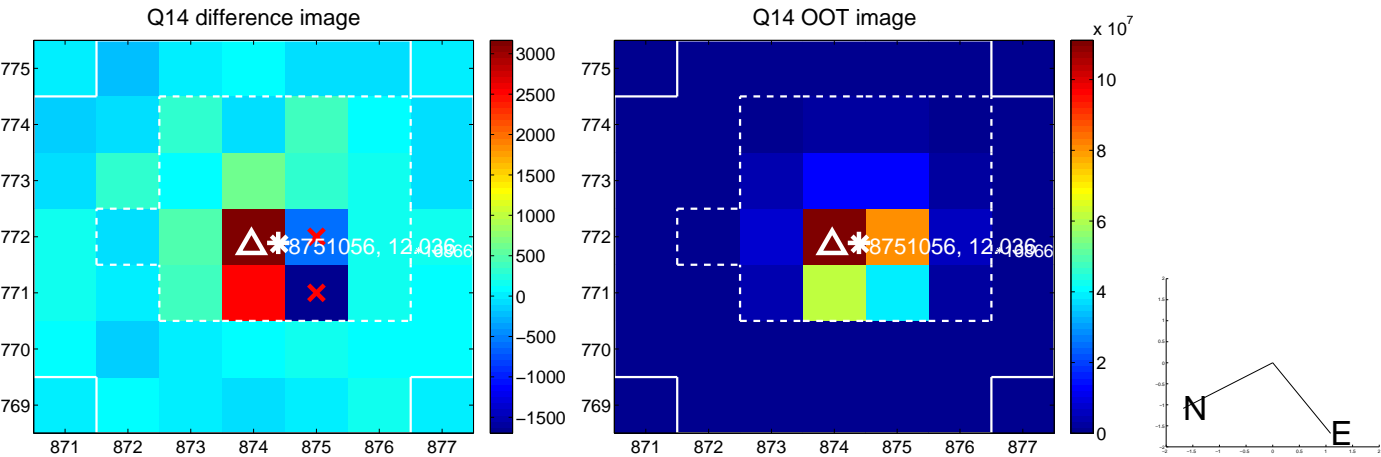
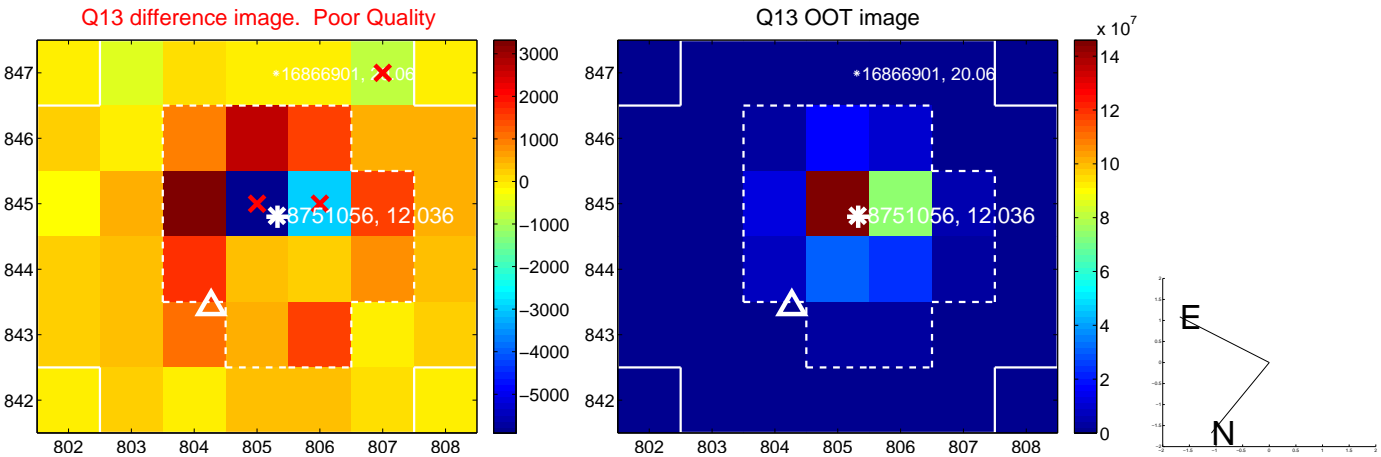
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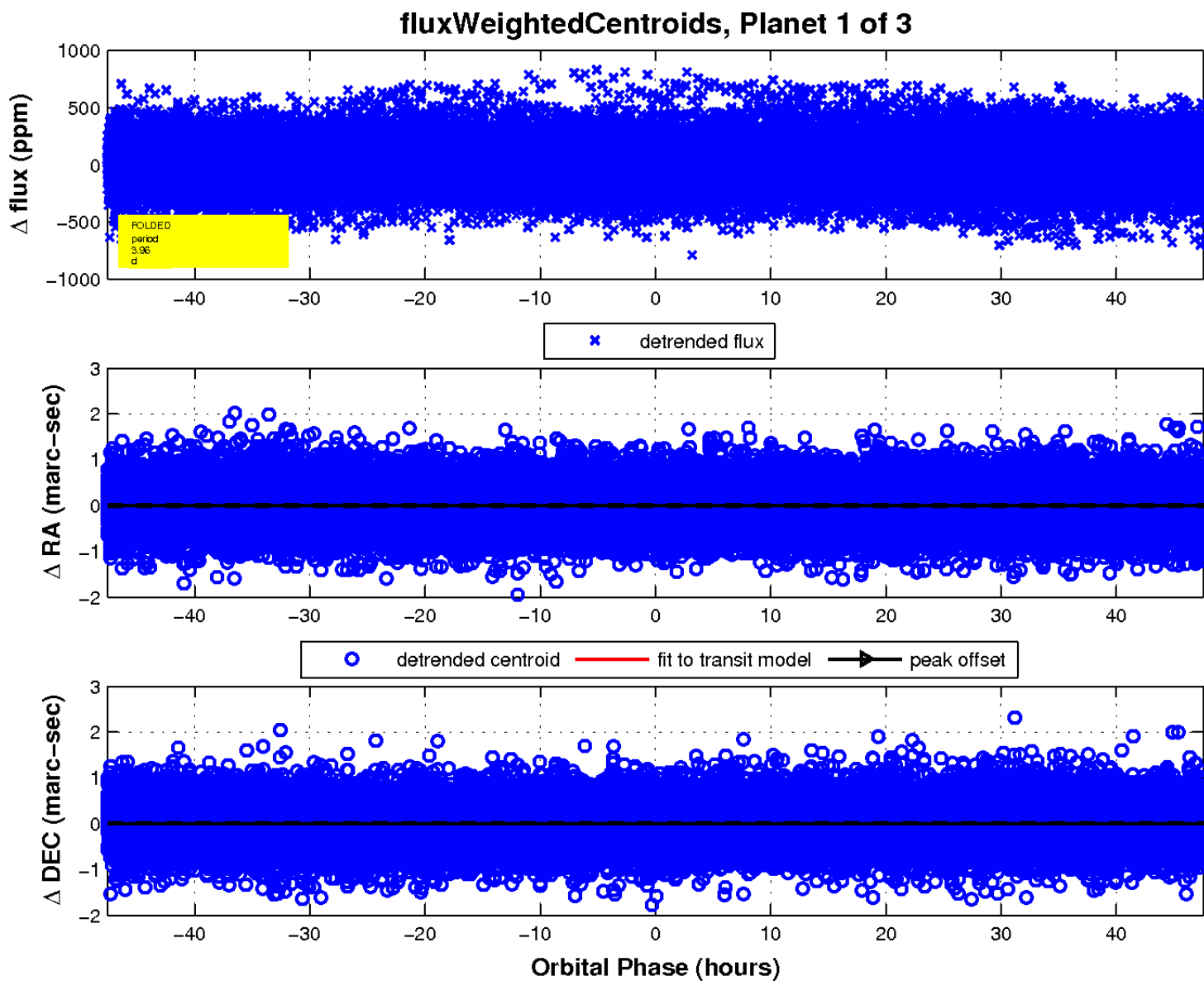
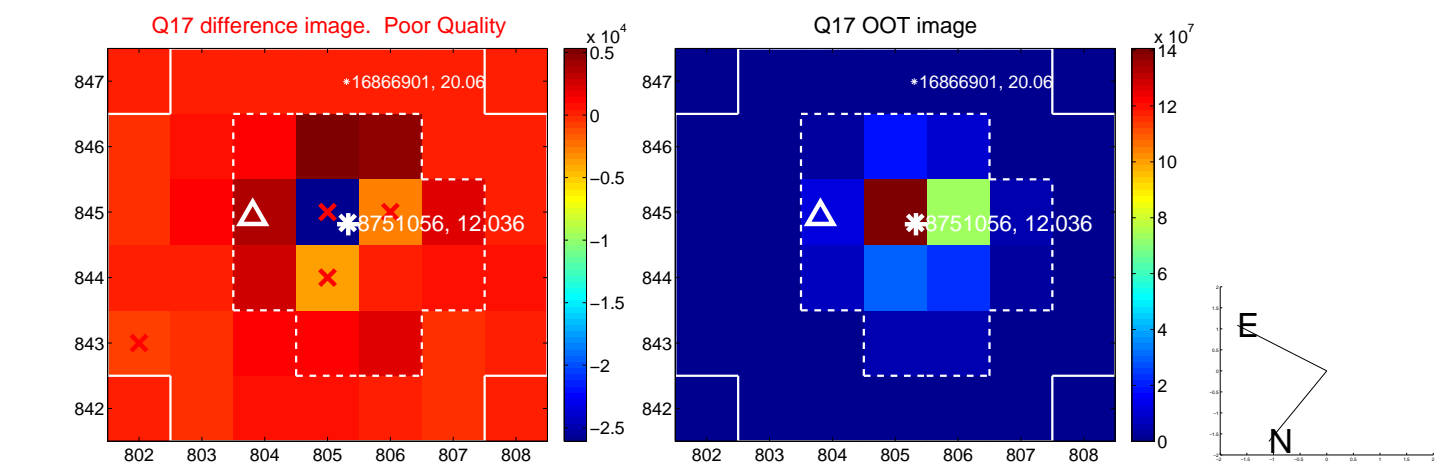
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

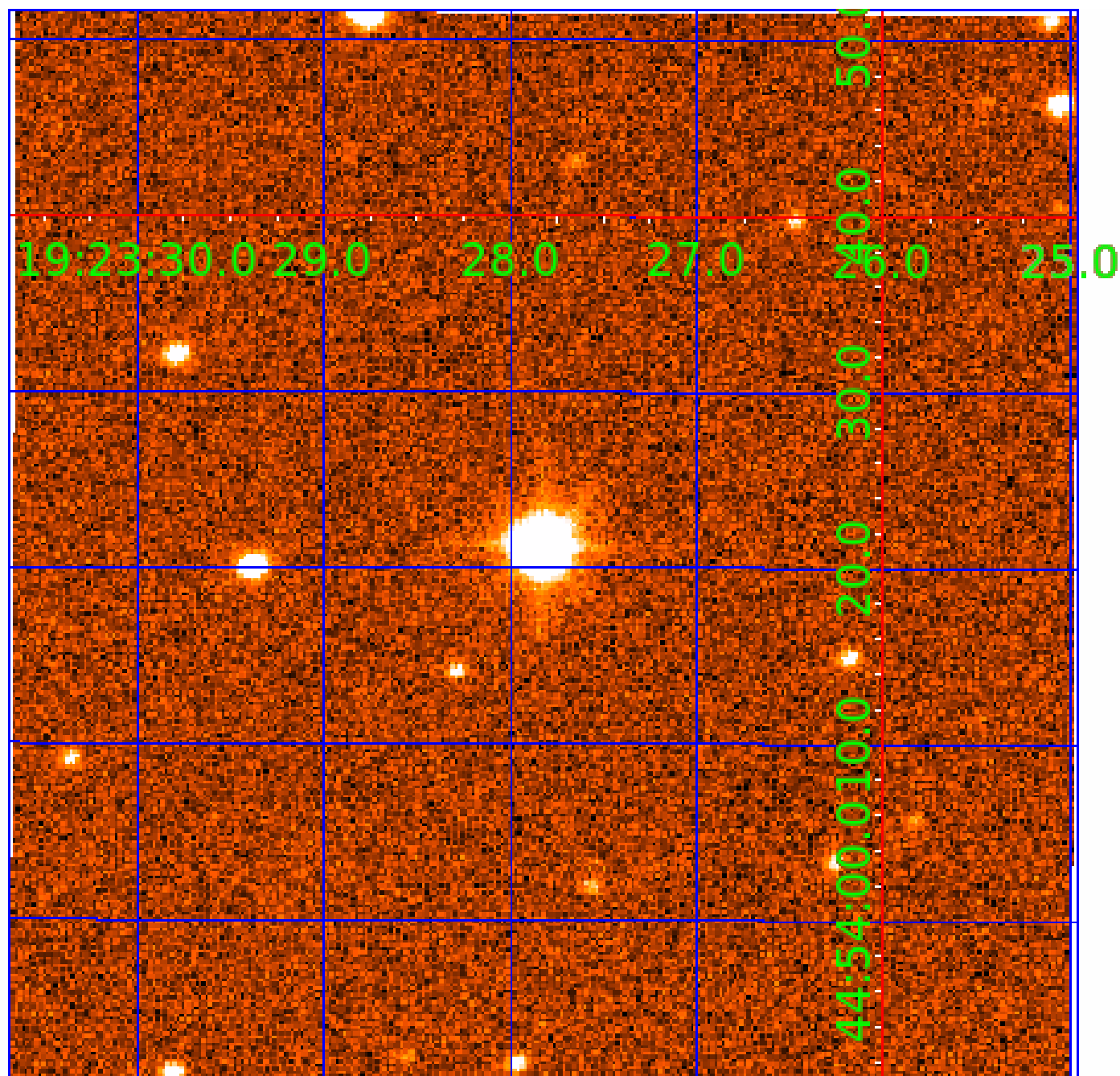


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008751056

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})
008751056-01	OBS	No	3.964350	134.664693	20.0	18.578	9.3	9.1	2.11	7700	0.96	4107.90
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008751056-03	OBS	No	307.728341	251.334002	52.7	2.327	8.7	2.4	2.11	7700	1.55	12.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008751056-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008751056-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008751056-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

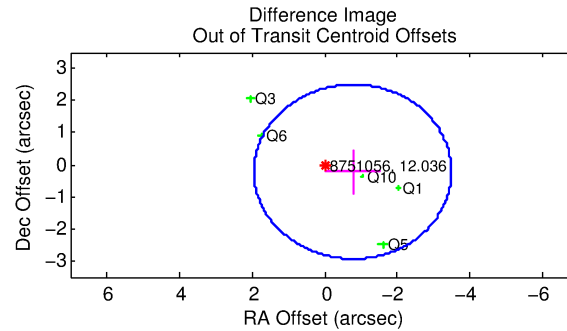
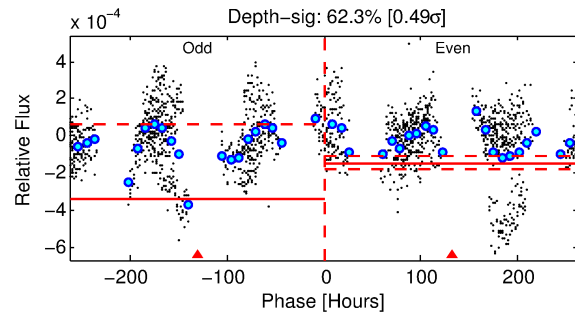
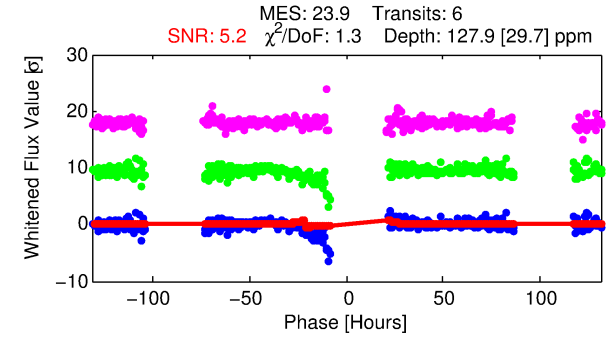
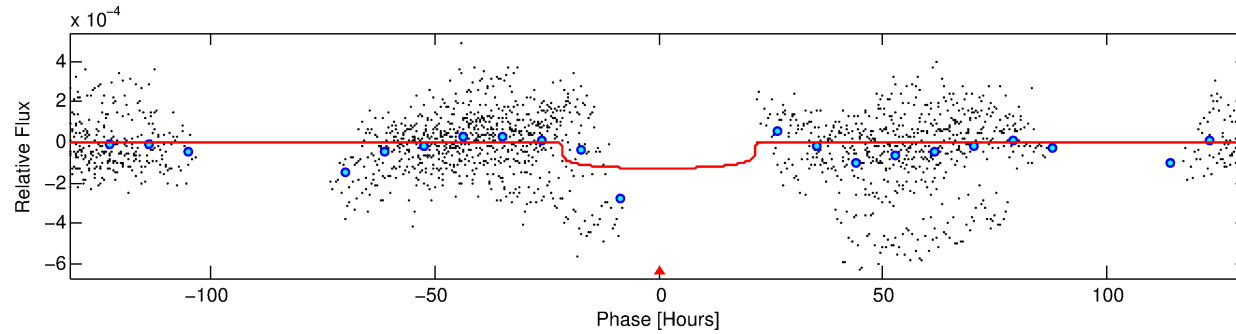
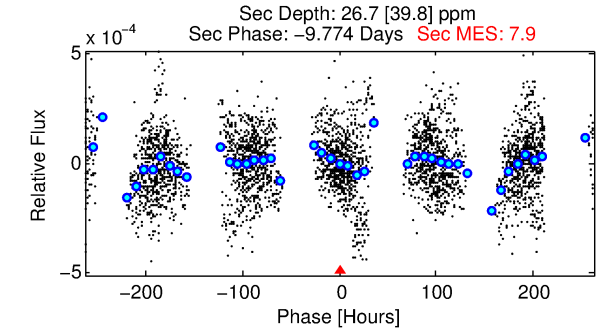
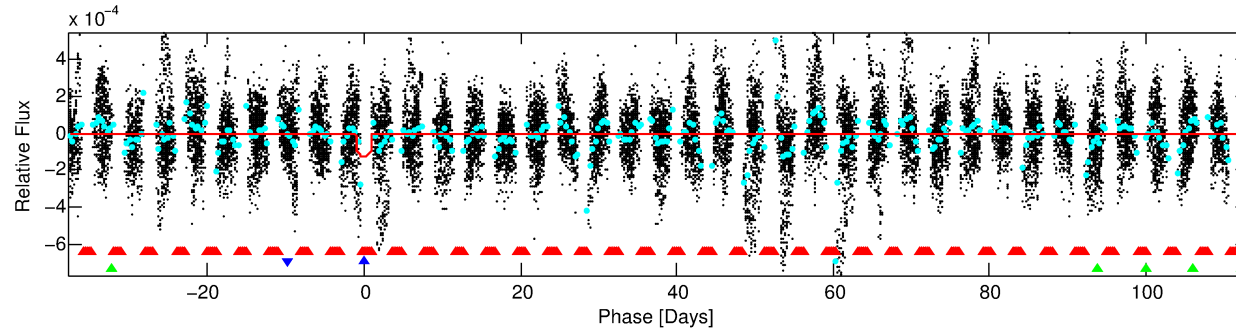
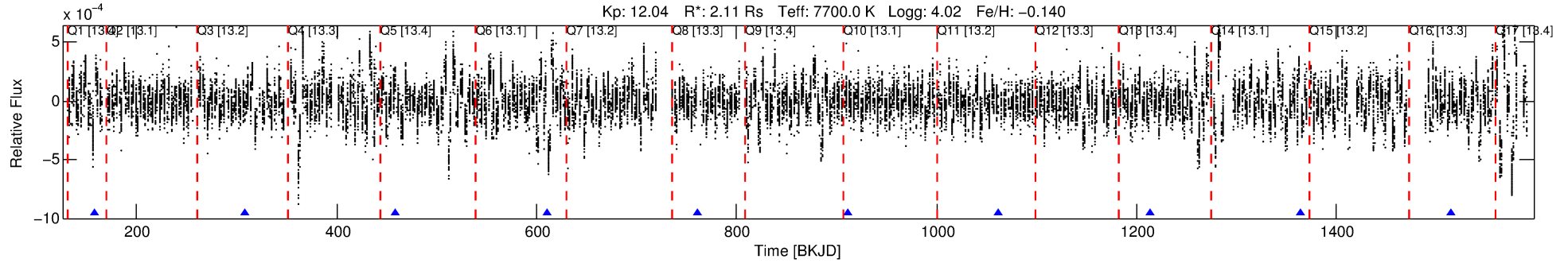
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008751056-02

No Significant Match Found

DV One-Page Summary

KIC: 8751056 Candidate: 2 of 3 Period: 150.768 d



DV Fit Results:

Period = 150.76823 [0.00853] d
Epoch = 157.6071 [0.0723] BKJD
Rp/R* = 0.0108 [0.0024]
a/R* = 21.96 [19.95]
b = 0.57 [1.14]
Seff = 32.12 [13.01]
Teq = 607 [61] K
Rp = 2.50 [0.88] Re
a = 0.6610 [0.1610] AU
Ag = 1032.24 [1645.79] [0.63 σ]
Teffp = 5320 [2074] K [2.27 σ]

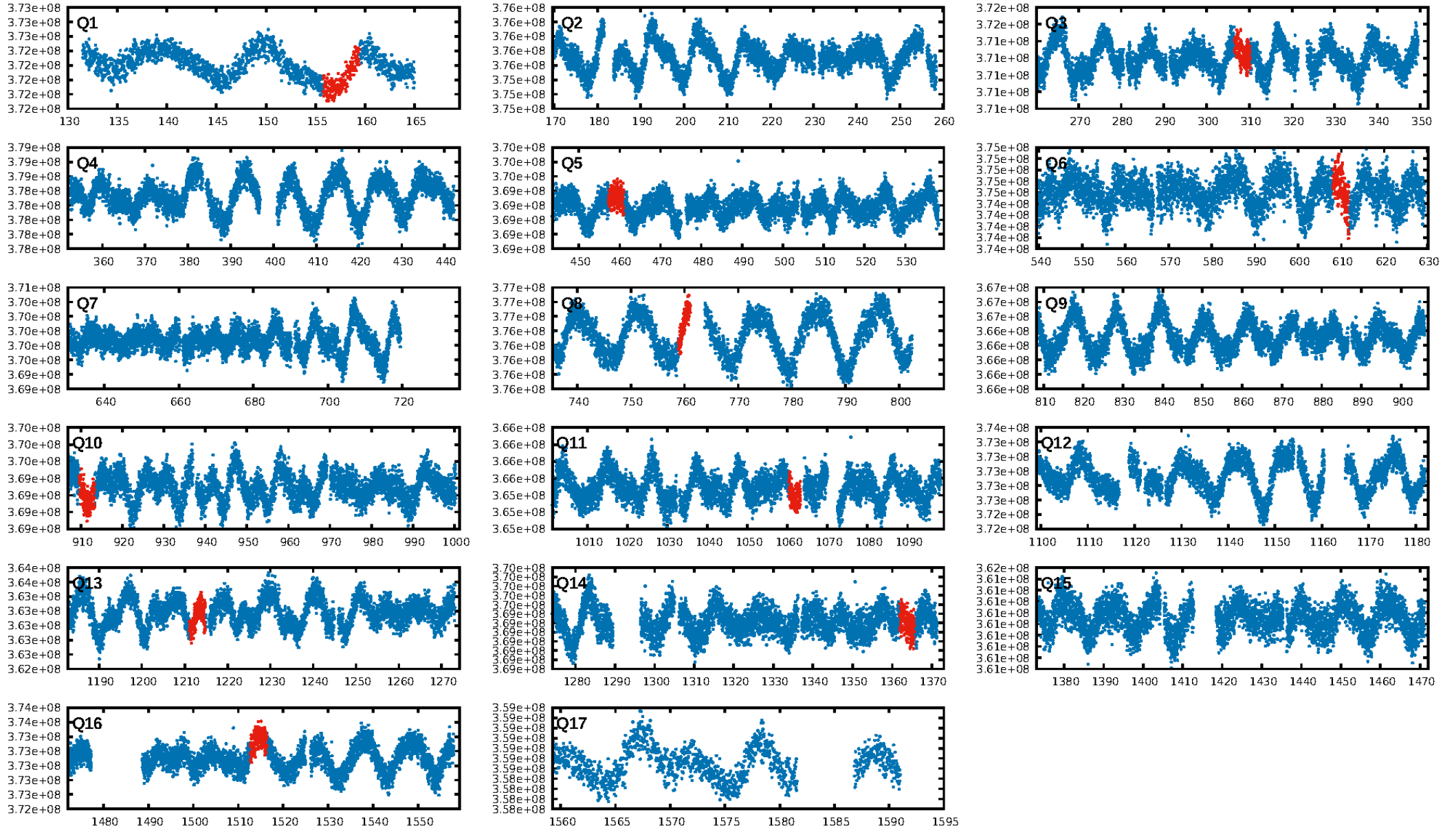
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [74.01 σ]
LongPeriod-sig: 100.0% [85.82 σ]
ModelChiSquare2-sig: 28.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.14e-53
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.007313
Centroid-sig: 99.3%
Centroid-so: 0.084 arcsec [0.20 σ]
OotOffset-rm: 0.804 arcsec [0.89 σ]
OotOffset-st: 2/1/0/2 [5]
KicOffset-rm: 0.836 arcsec [0.96 σ]
KicOffset-st: 2/1/0/2 [5]
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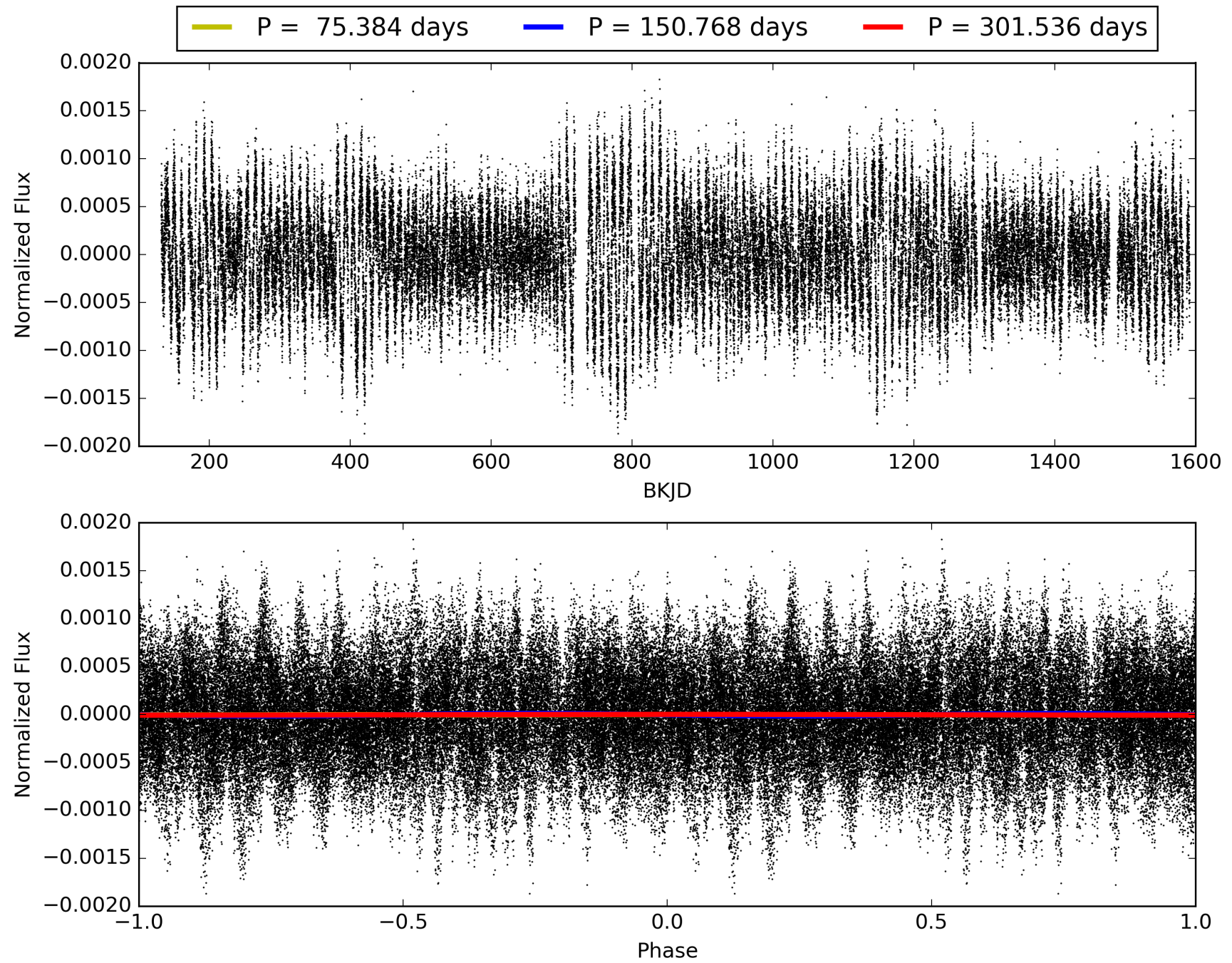
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:28:13 Z

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

TCE 008751056-02, PDC Light Curves

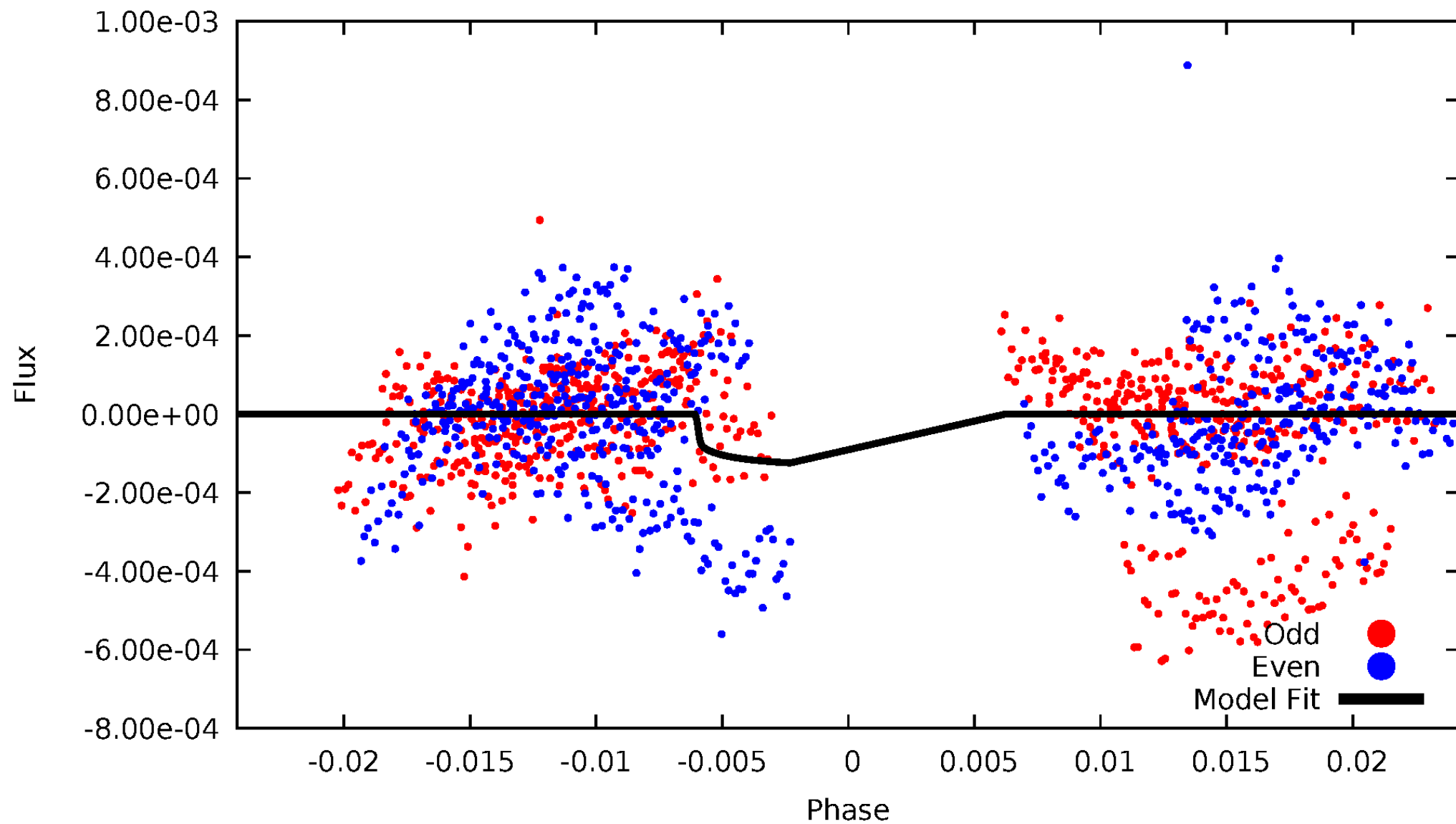


TCE 008751056-02



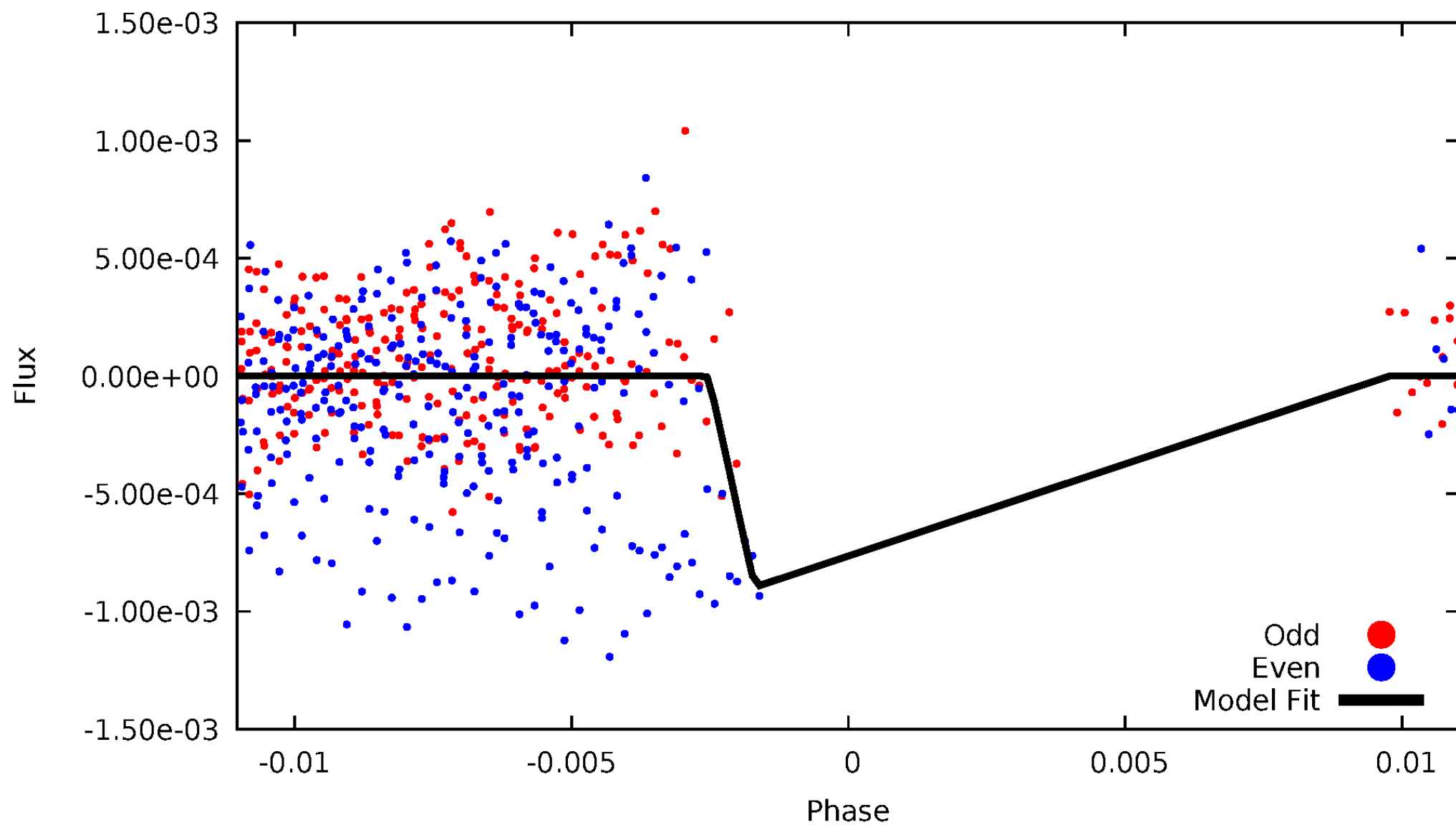
DV Odd/Even

TCE 008751056-02



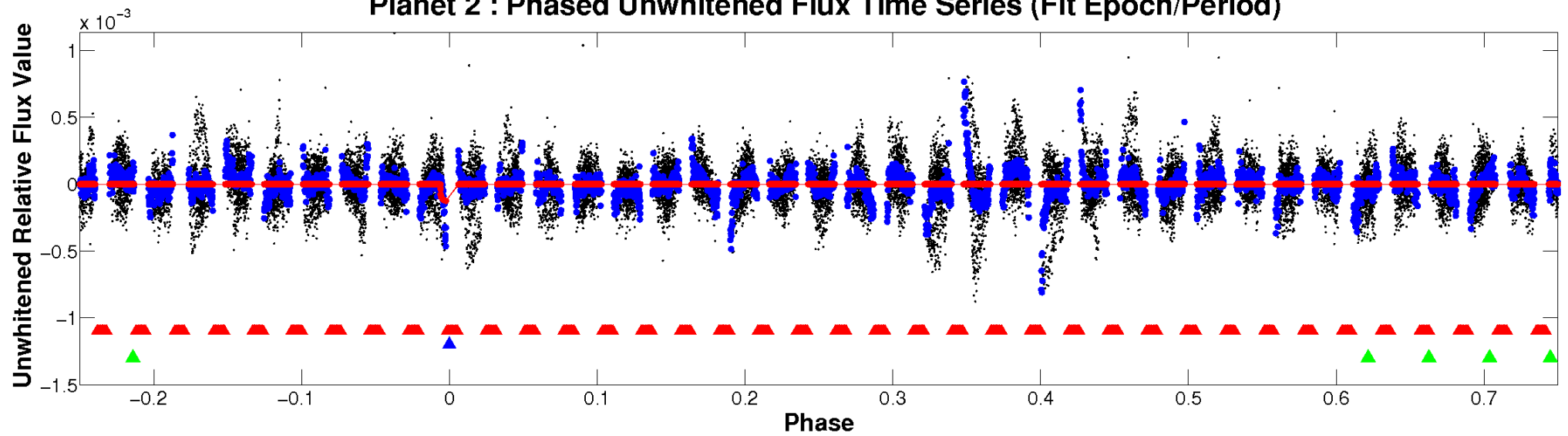
ALT Odd/Even

TCE 008751056-02

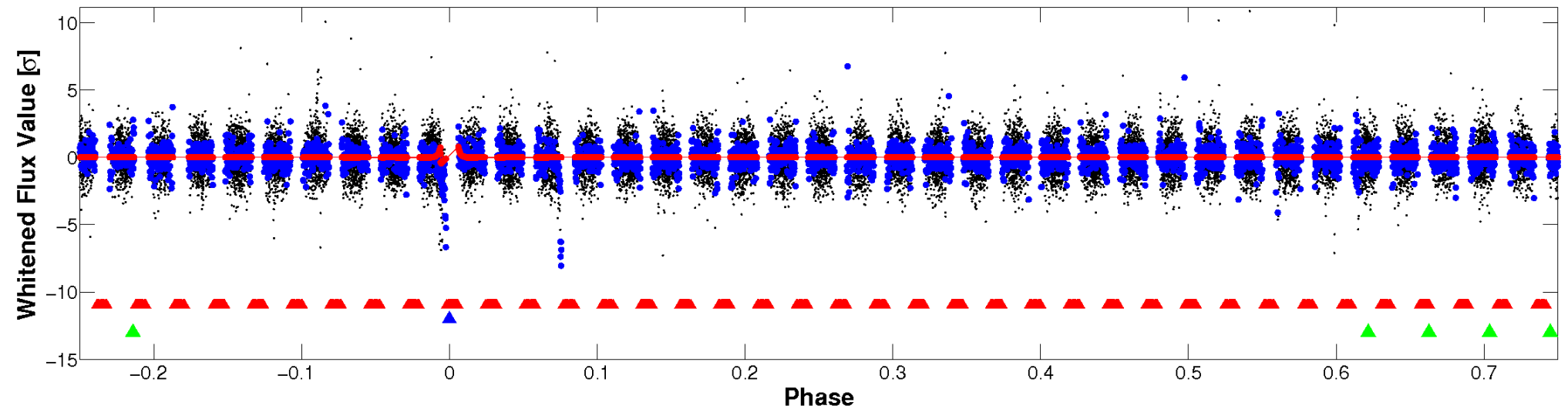


Non-Whitened Vs. Whitened Light Curve

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

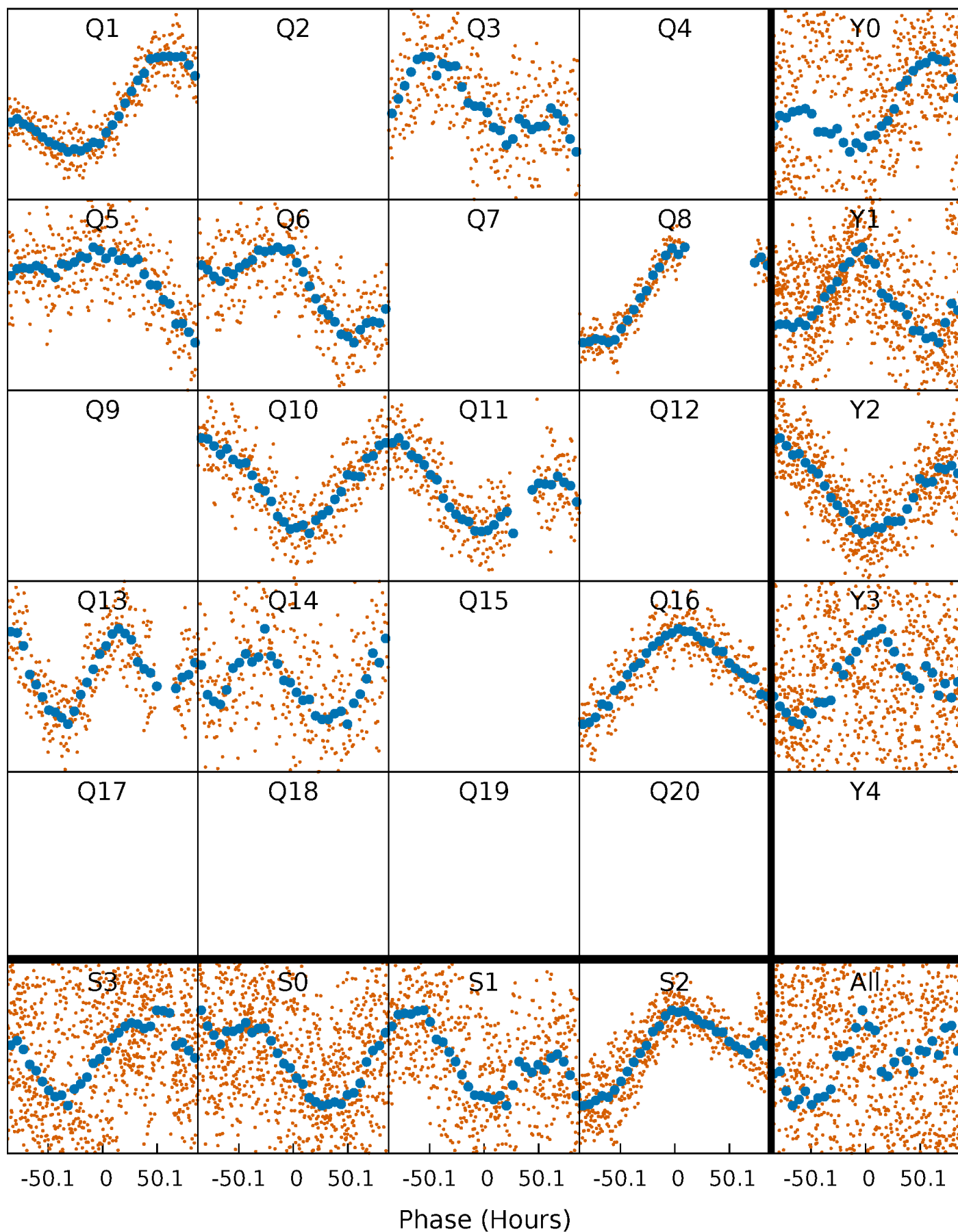


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



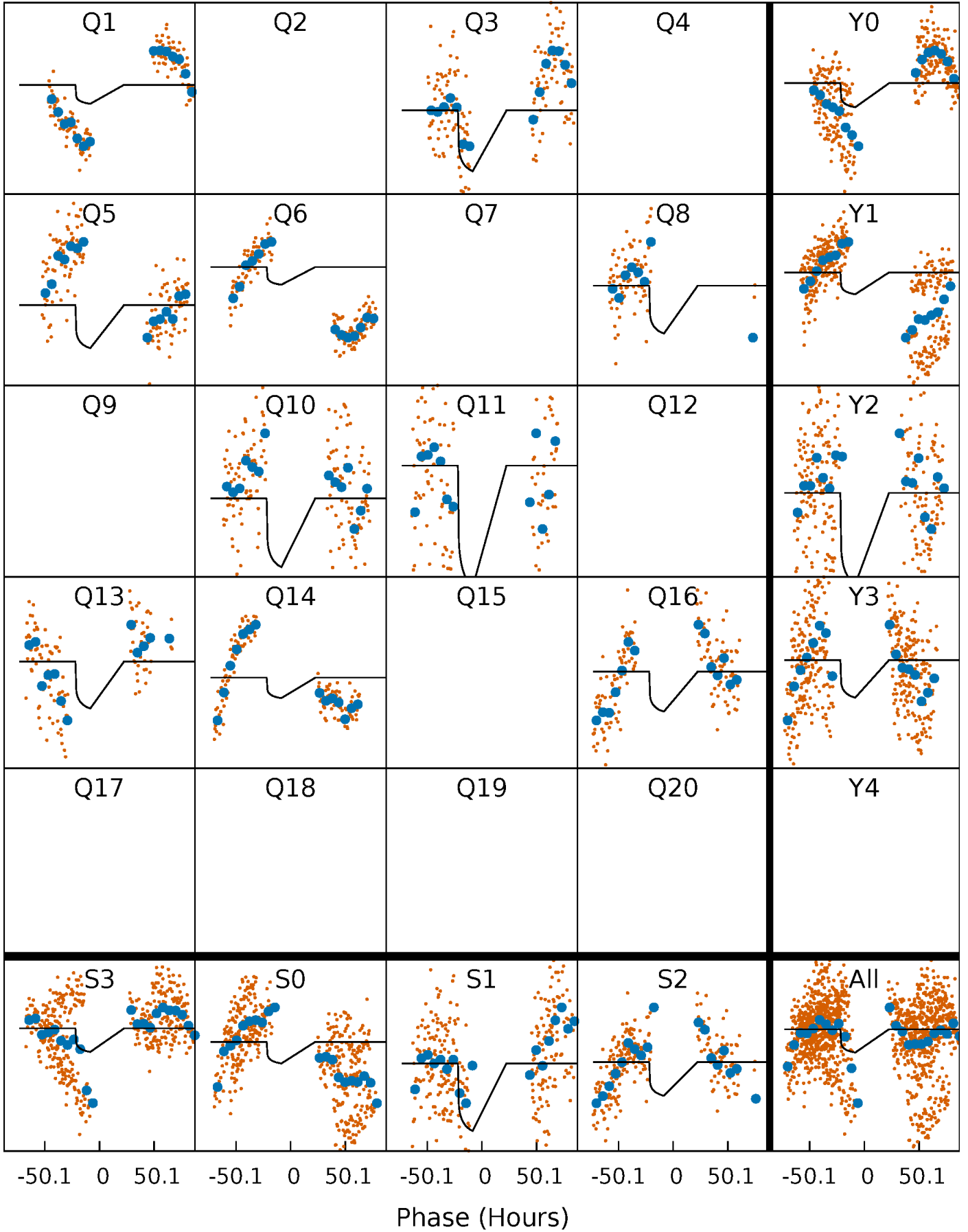
PDC Quarter-Phased Transit Curves

TCE 008751056-02 P=150.768230 Days $T_0=157.607125$ (BKJD)



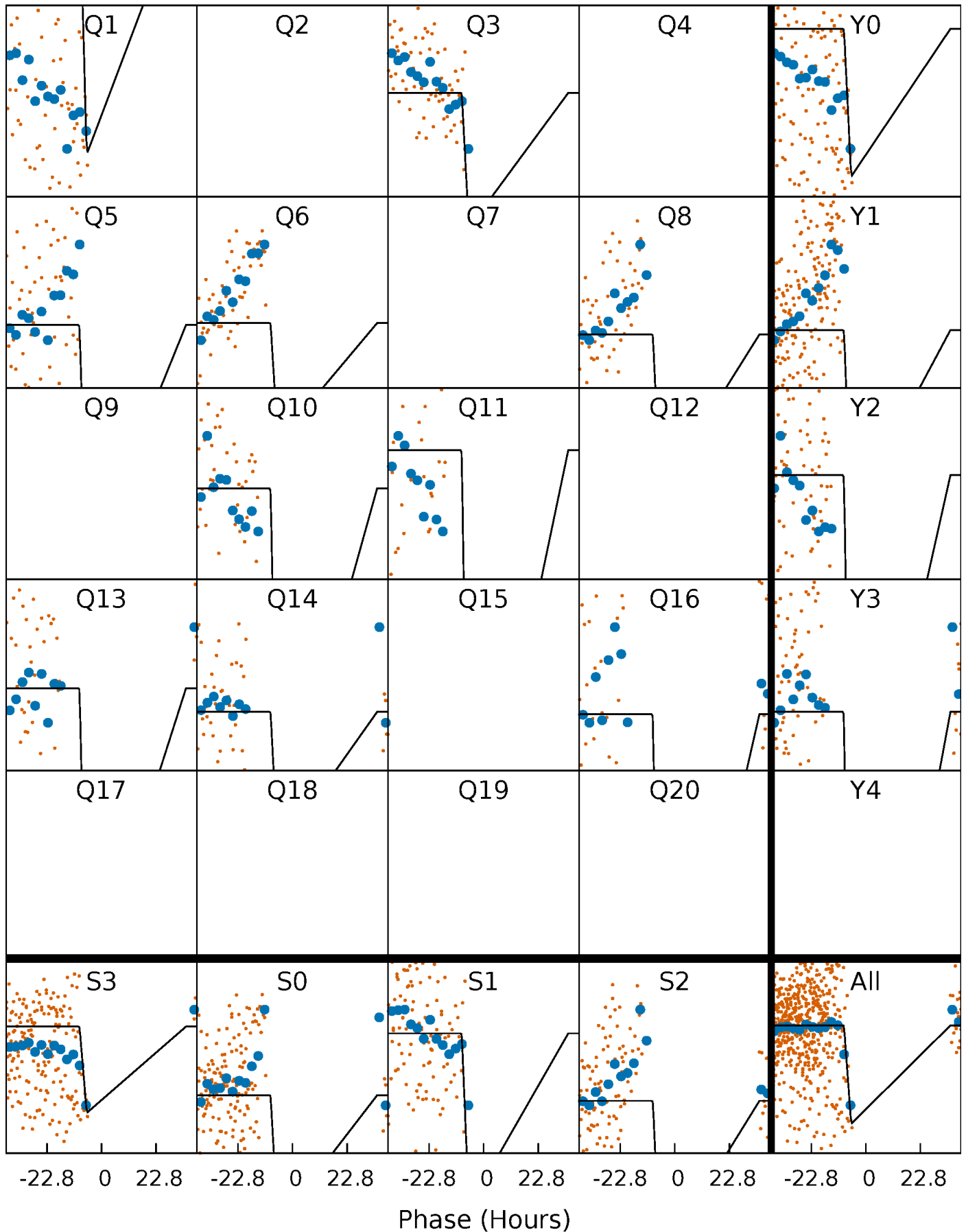
DV Quarter-Phased Transit Curves

TCE 008751056-02 $P=150.768230$ Days $T_0=157.607125$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

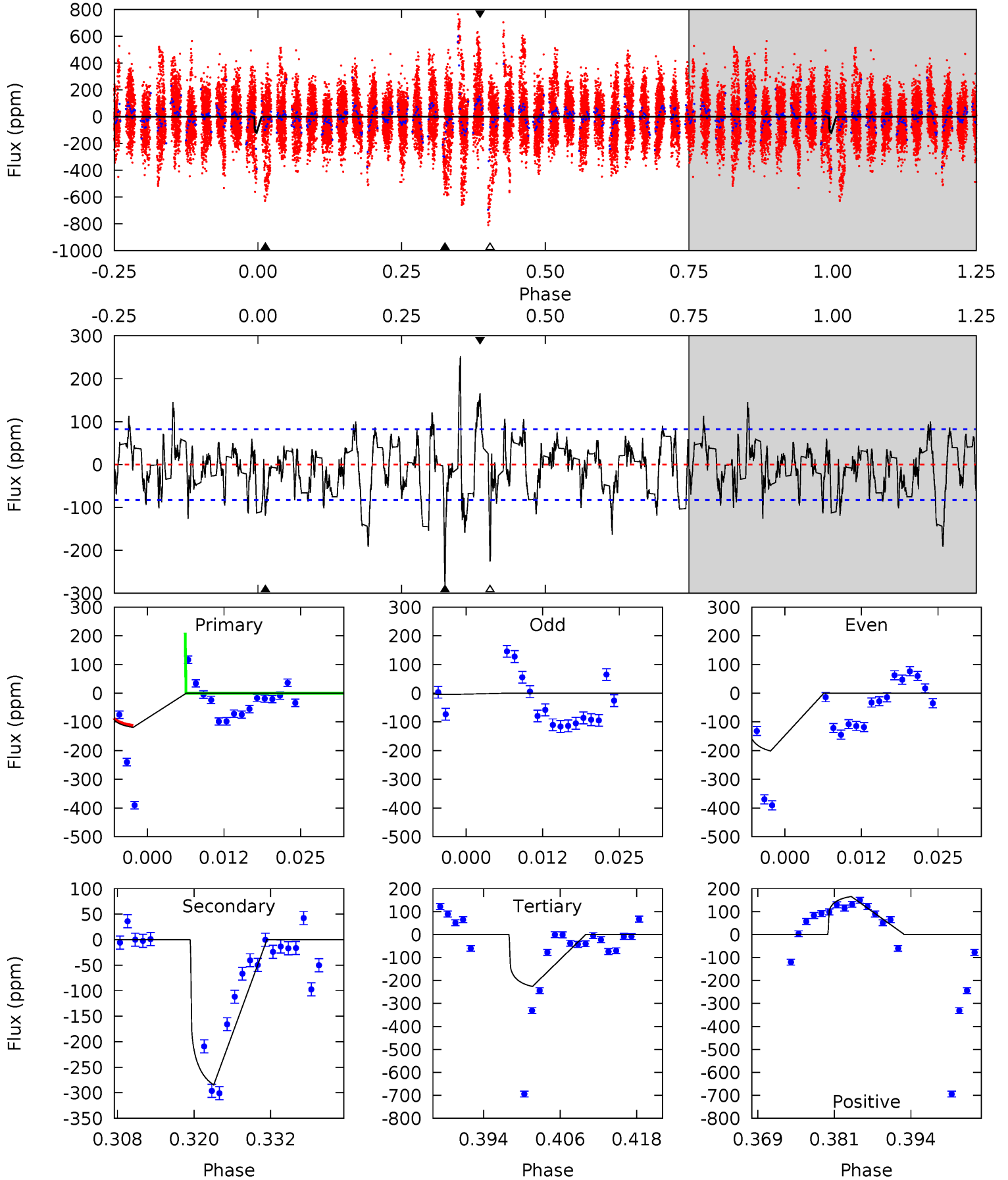
TCE 008751056-02 P=150.717939 Days $T_0=157.500898$ (BKJD)



DV Model-Shift Uniqueness Test

008751056-02, P = 150.768230 Days, E = 6.838895 Days

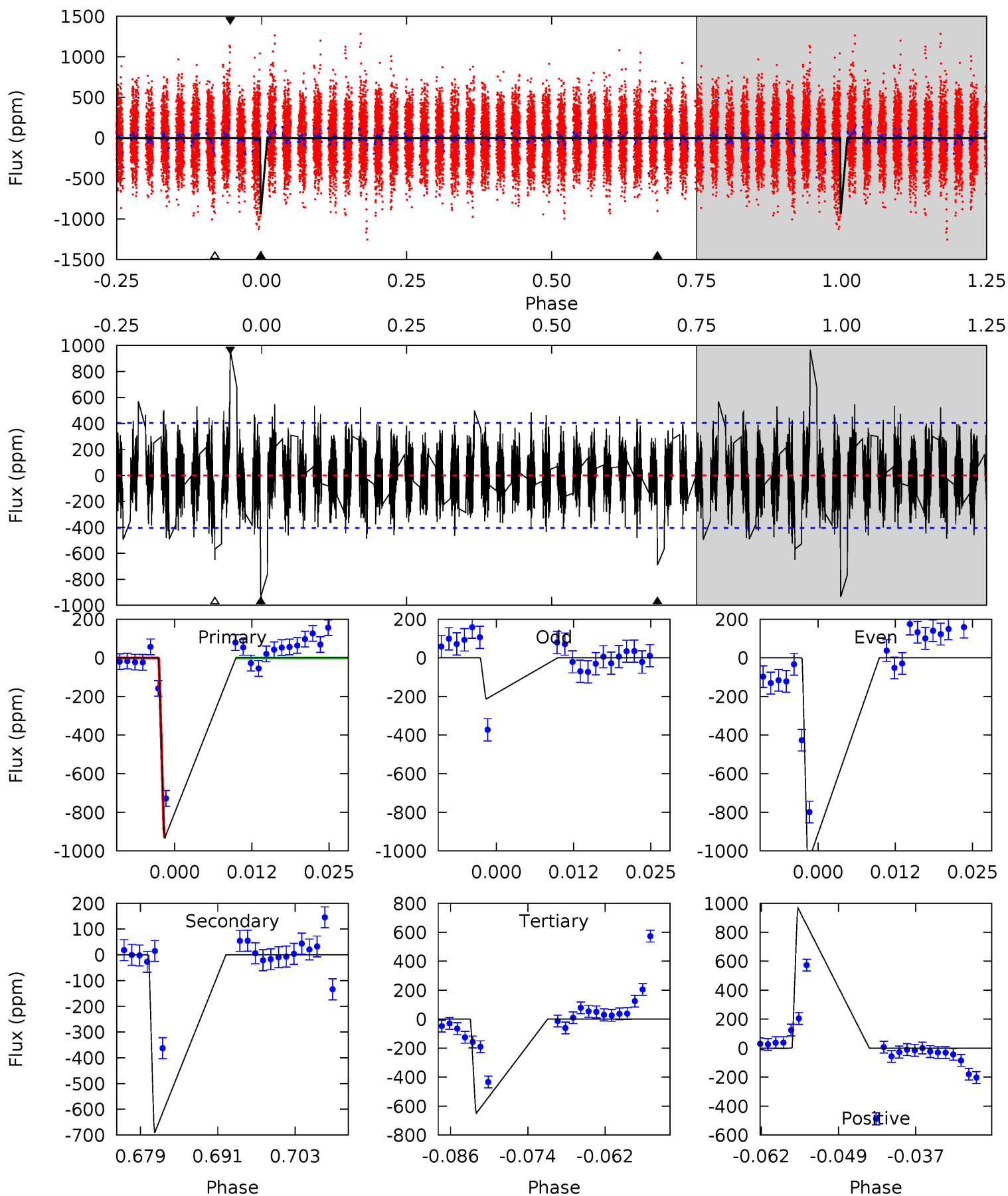
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.20	17.2	13.7	10.0	4.99	2.50	3.36	-6.48	-2.83	3.54	7.19	5.86	0.14	0.47	0.64



Alt Model-Shift Uniqueness Test

008751056-02, P = 150.717939 Days, E = 6.782959 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	8.51	8.00	11.9	4.99	2.50	1.69	3.51	-0.41	0.51	-3.40	4.98	0	0.51	0



Stellar Parameters For KIC 008751056

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7700^{+237}_{-316}	$4.018^{+0.210}_{-0.158}$	$-0.140^{+0.200}_{-0.350}$	$2.111^{+0.525}_{-0.578}$	$1.692^{+0.198}_{-0.298}$	$0.254^{+0.309}_{-0.104}$
	+3%/-4%	+5%/-4%	+143%/-250%	+25%/-27%	+12%/-18%	+122%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008751056-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-285 ± 17	$2.42^{+0.70}_{-0.59}$	843^{+67}_{-65}	10299^{+2396}_{-1380}	11443^{+8442}_{-4339}
Alt.	-691 ± 81	$6.74^{+1.22}_{-1.09}$	840^{+61}_{-67}	7117^{+501}_{-442}	3572^{+1497}_{-999}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

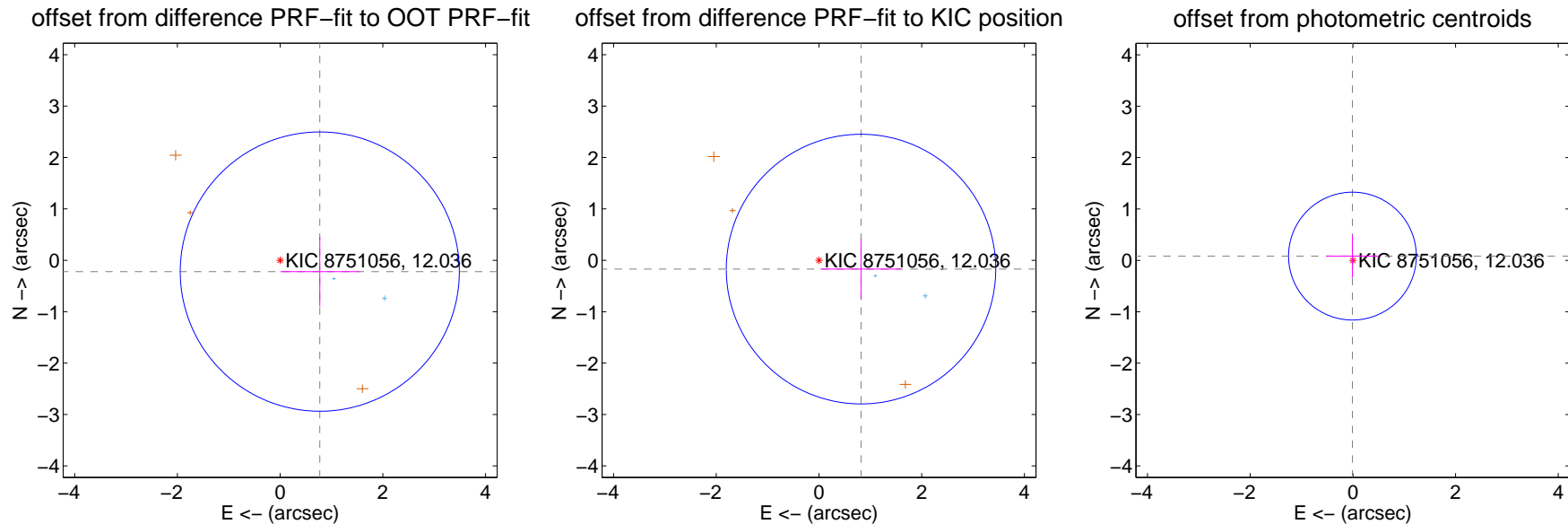
DV Centroid Data

Supplemental centroid analysis for 008751056-02. Kepler magnitude: 12.04. Transit SNR 5.16

There are 2 quarters with good PRF difference image offsets

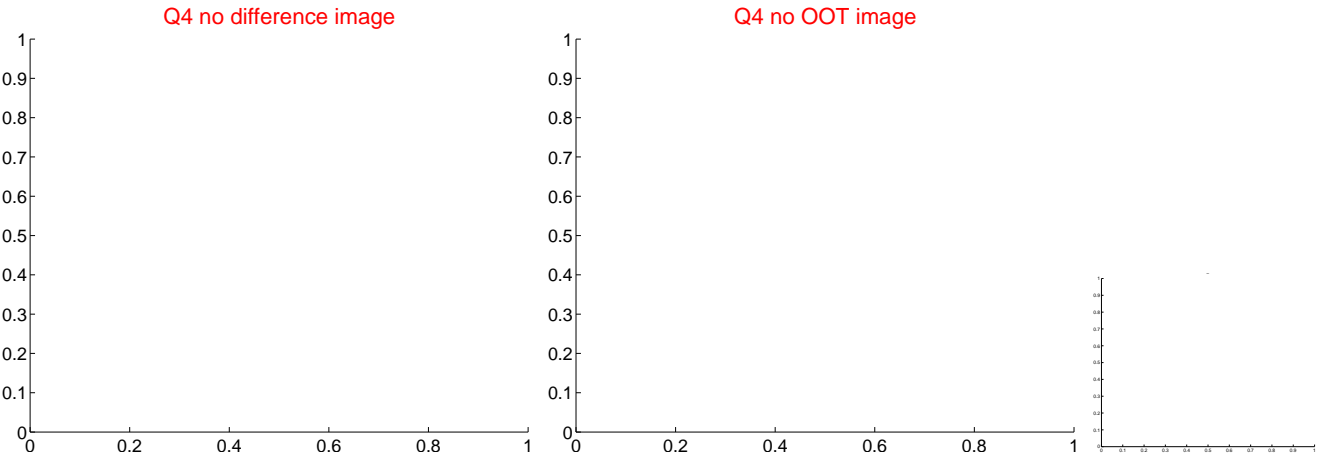
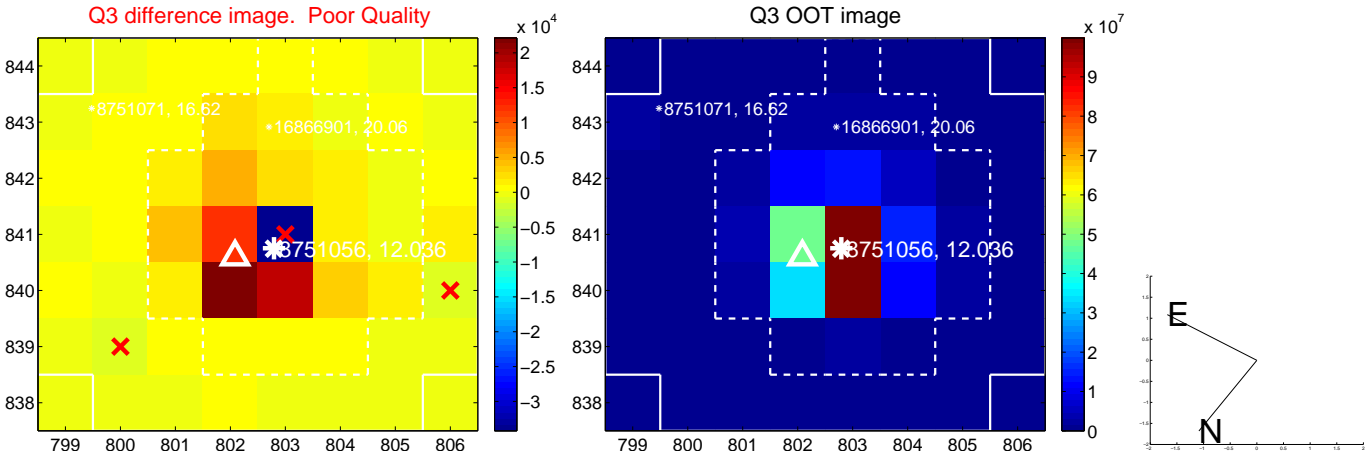
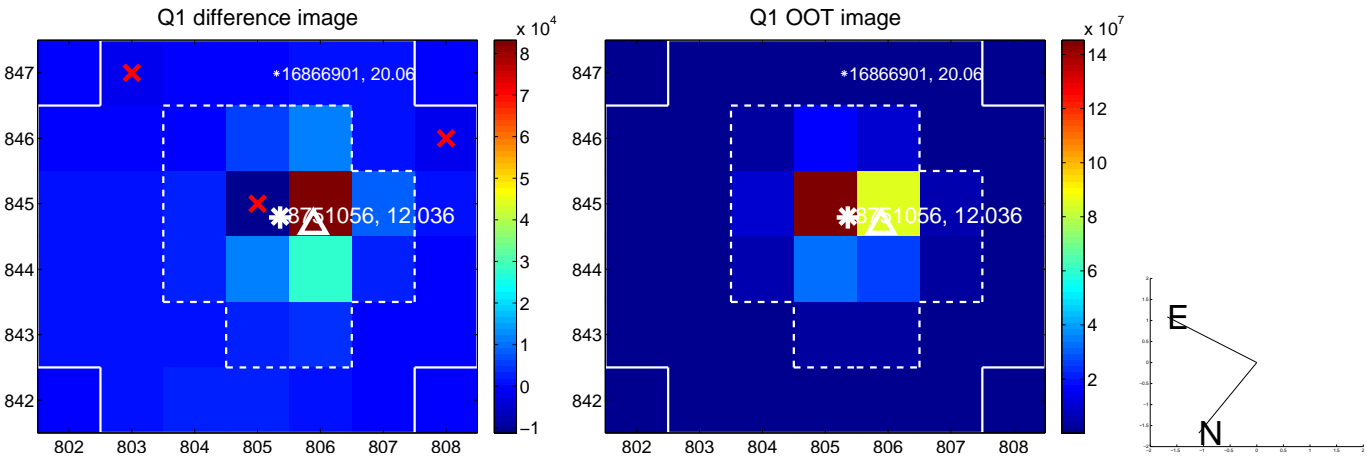
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.804 ± 0.906	0.89	-0.773 ± 0.767	-0.220 ± 0.676
PRF-fit source offset from KIC position	0.836 ± 0.874	0.96	-0.818 ± 0.785	-0.171 ± 0.585
photometric centroid source offset	0.08 ± 0.41	0.20	0.01 ± 0.51	0.08 ± 0.41

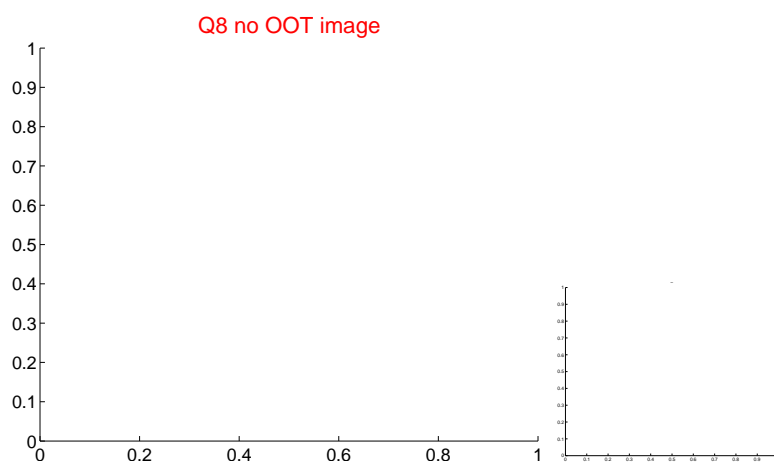
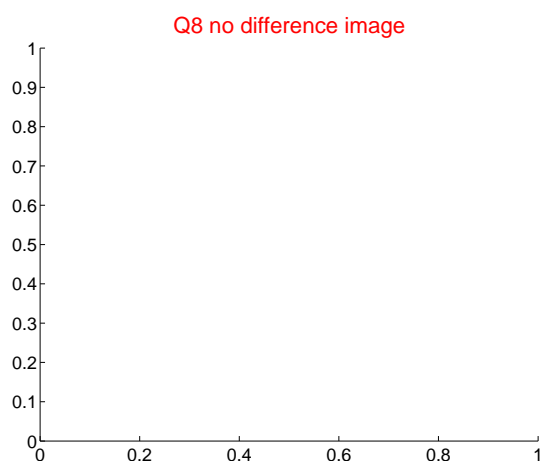
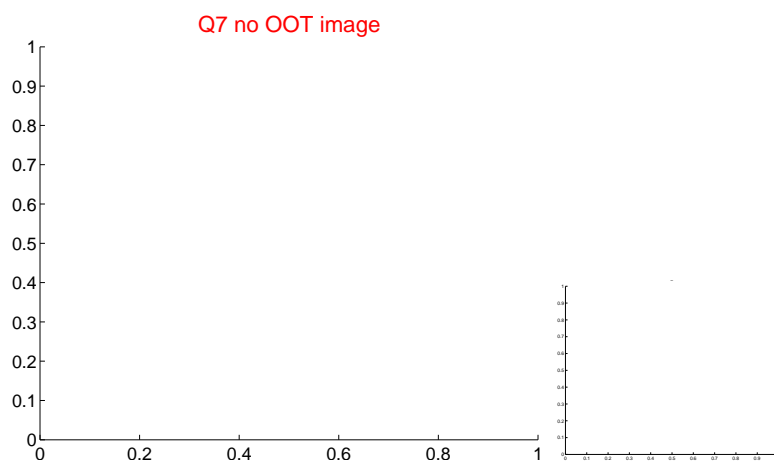
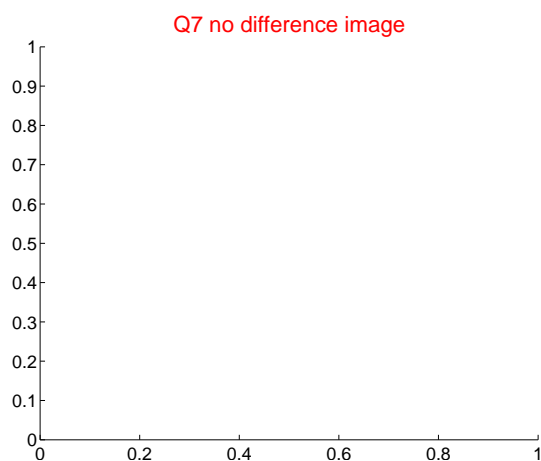
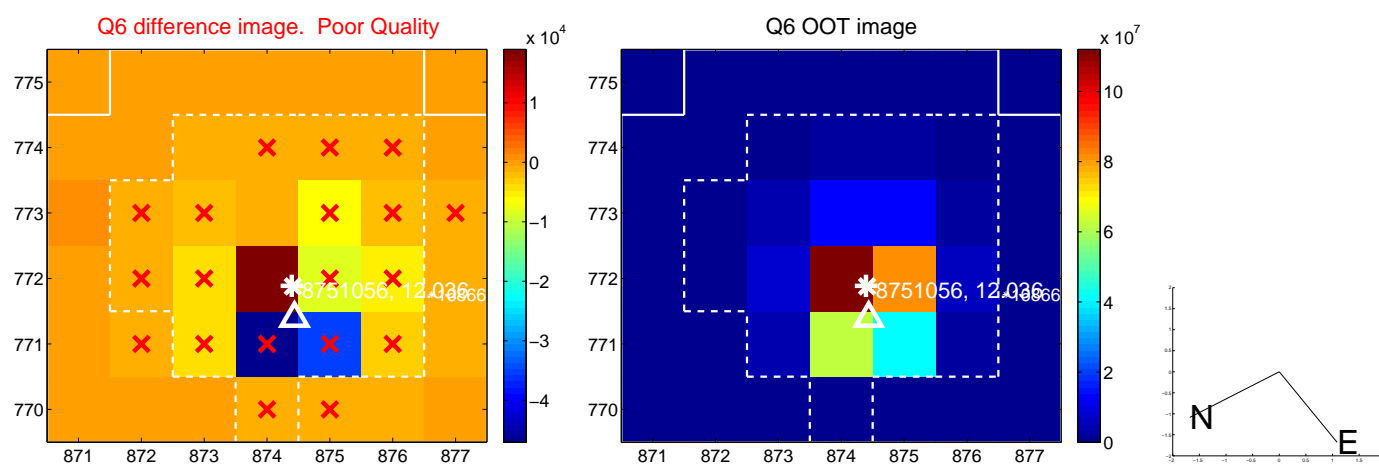
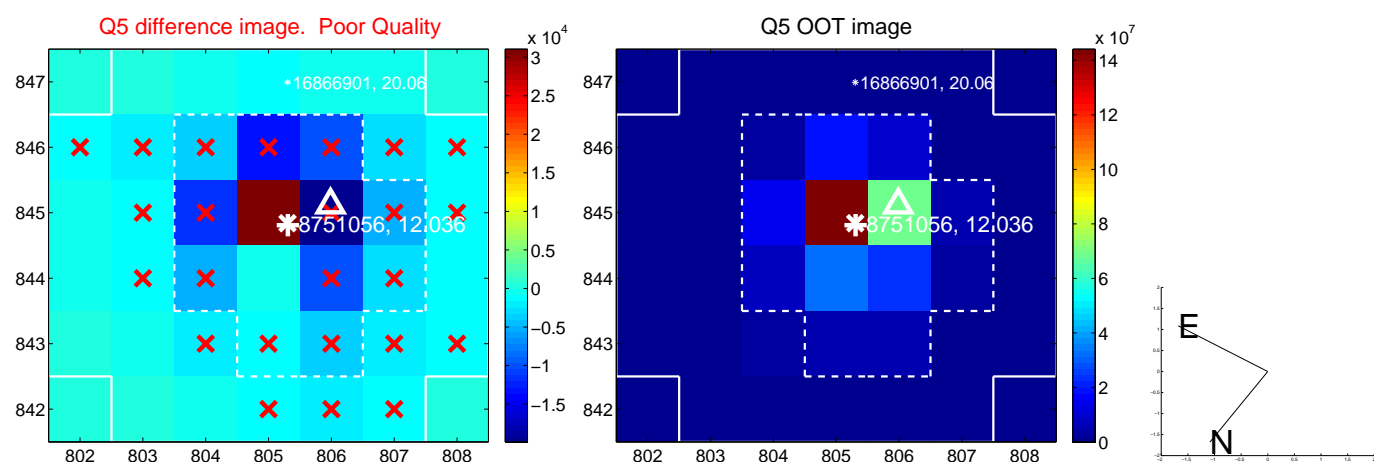


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

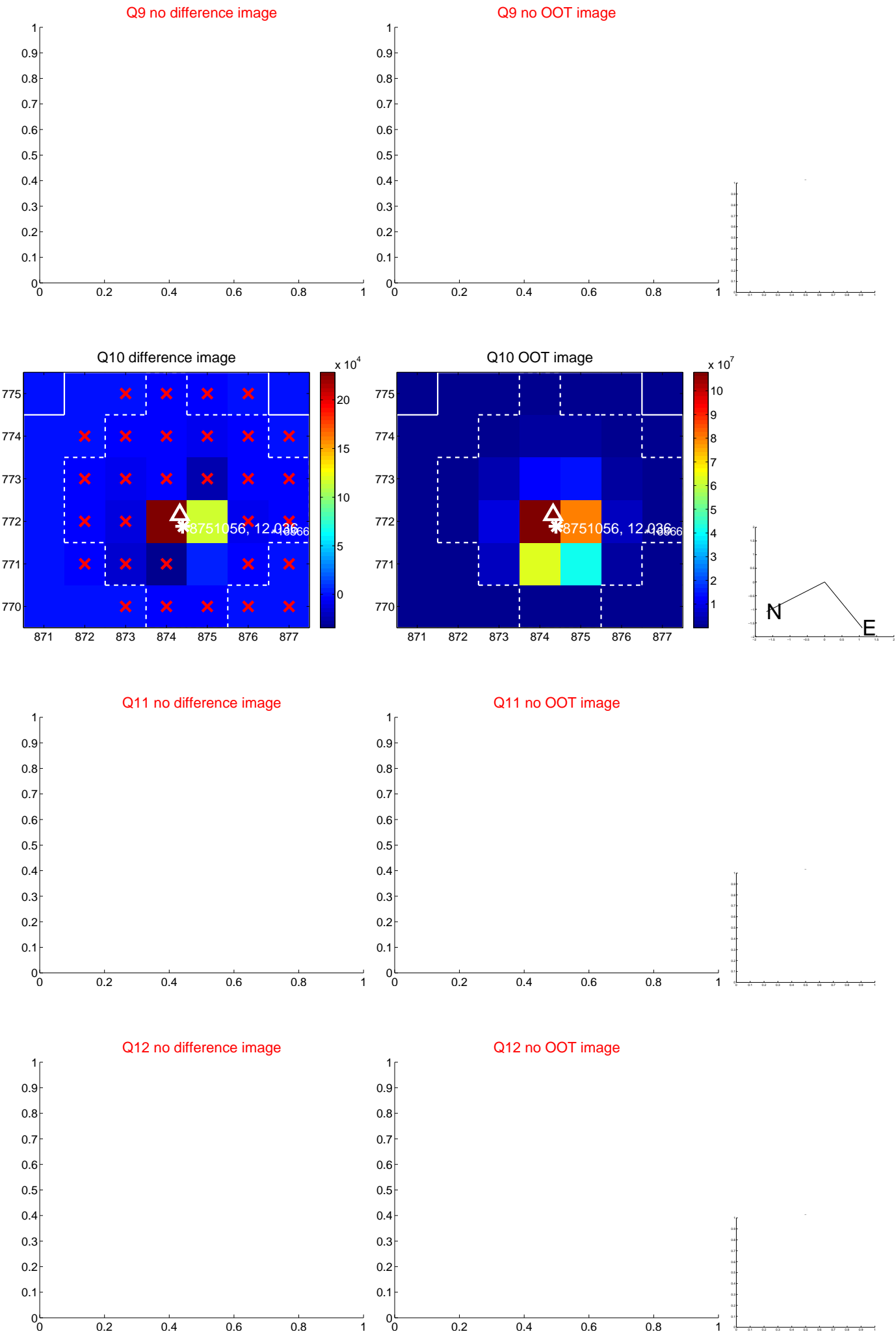
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



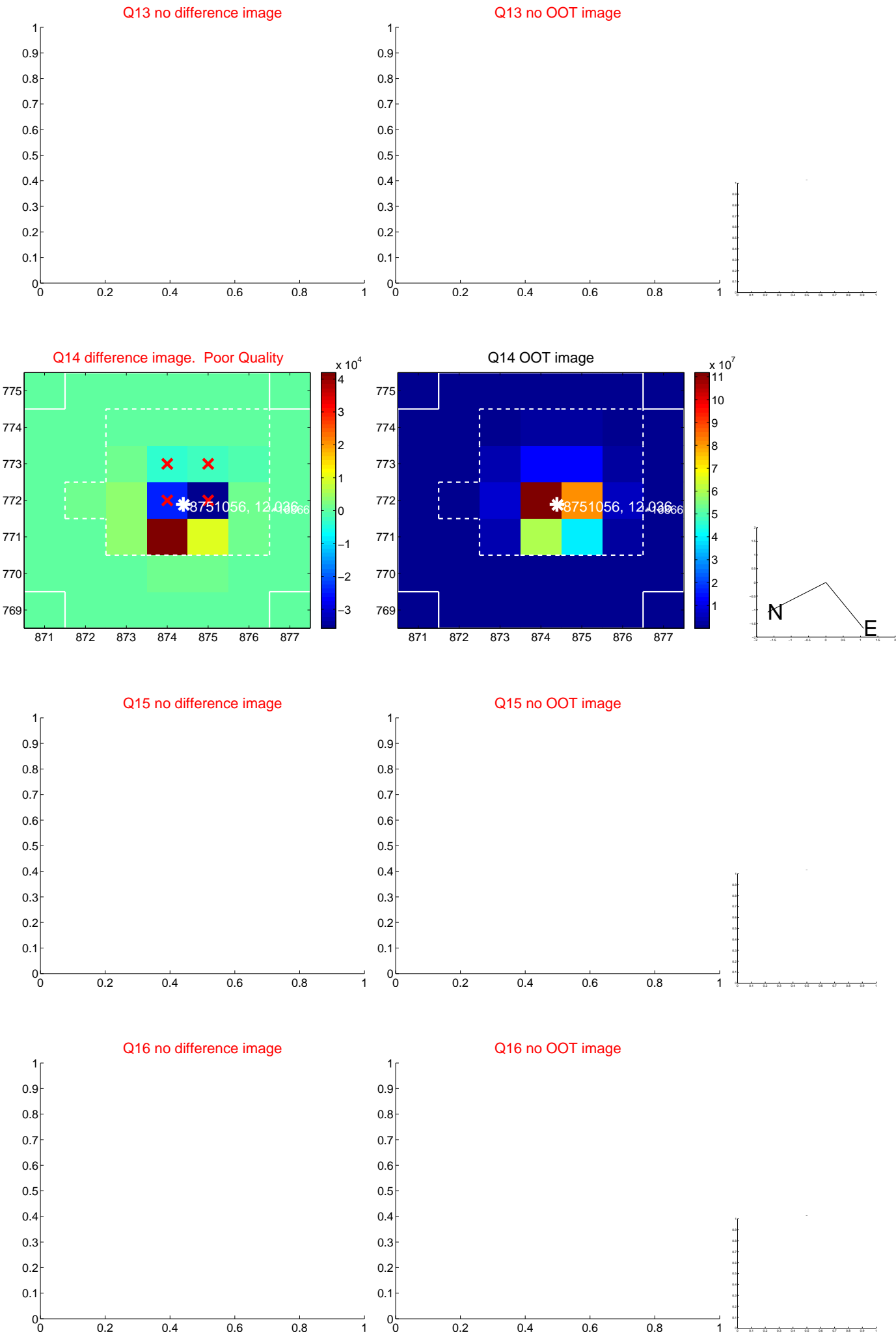
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



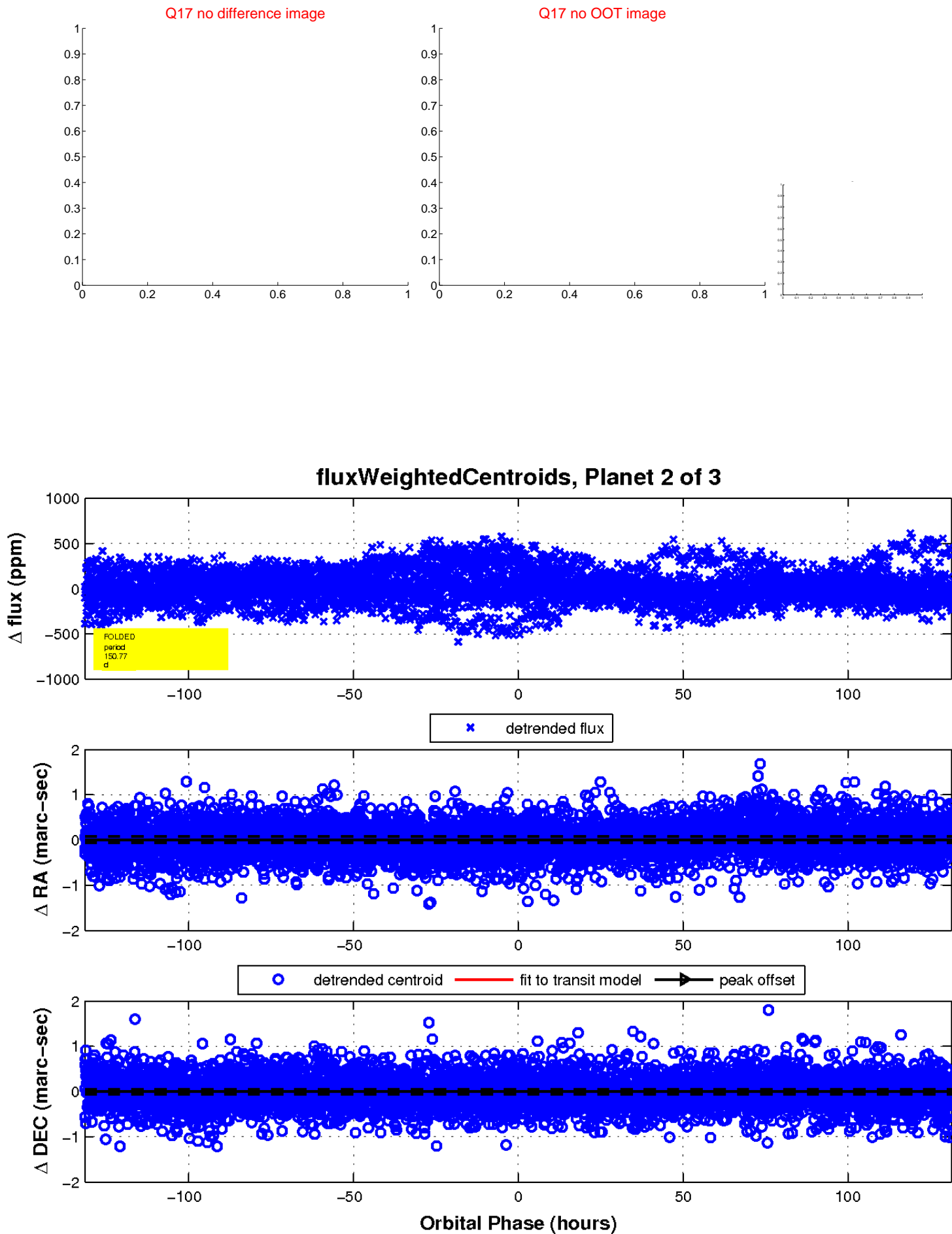
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

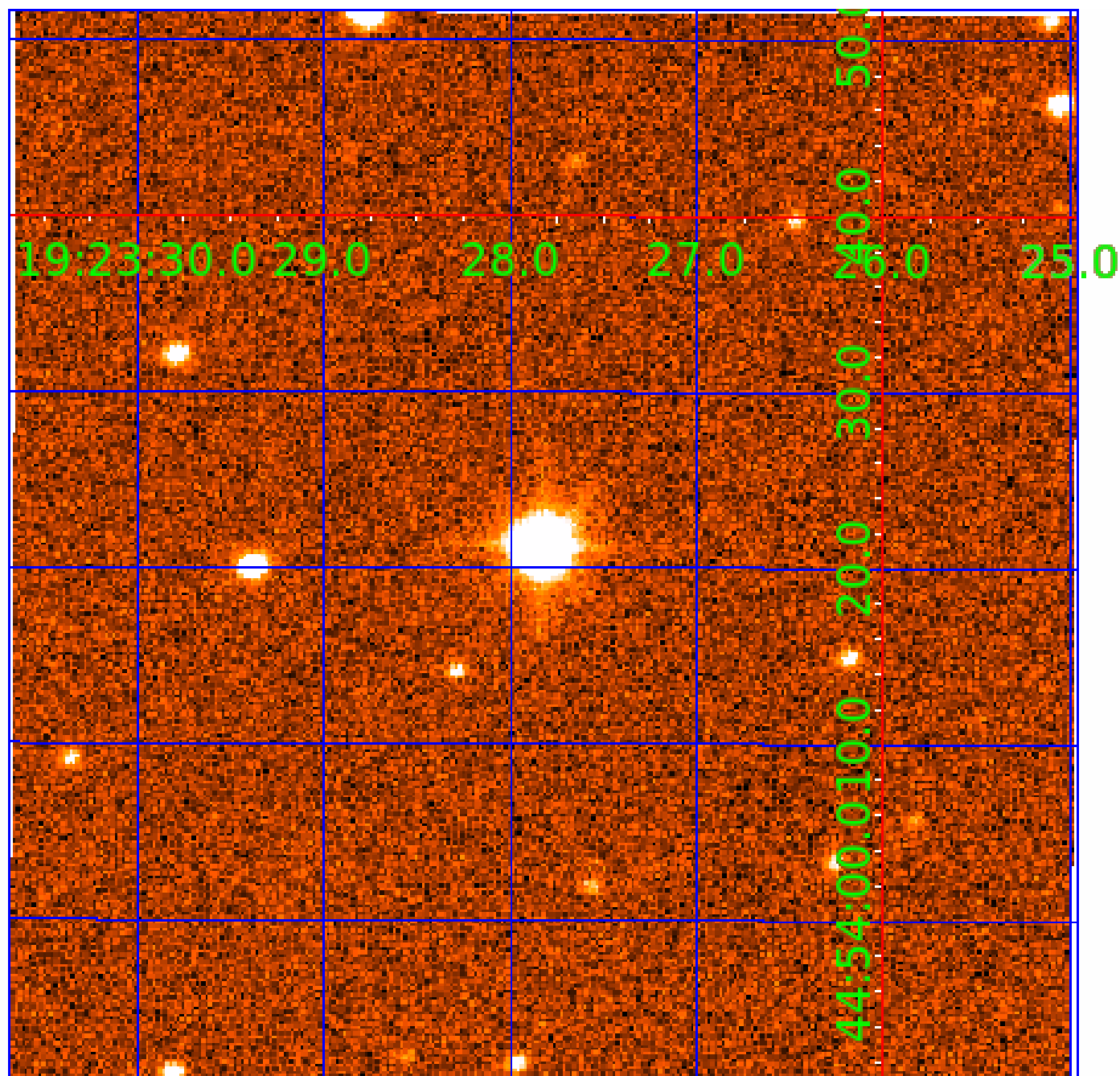


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008751056

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})
008751056-01	OBS	No	3.964350	134.664693	20.0	18.578	9.3	9.1	2.11	7700	0.96	4107.90
008751056-02	OBS	No	150.768230	157.607125	127.9	43.834	23.9	5.2	2.11	7700	2.50	32.12
008751056-03	OBS	No	307.728341	251.334002	52.7	2.327	8.7	2.4	2.11	7700	1.55	12.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008751056-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008751056-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST
008751056-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

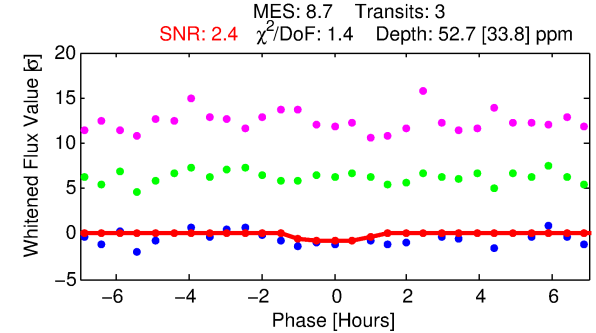
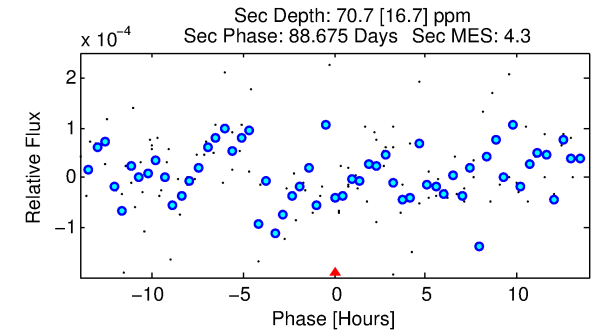
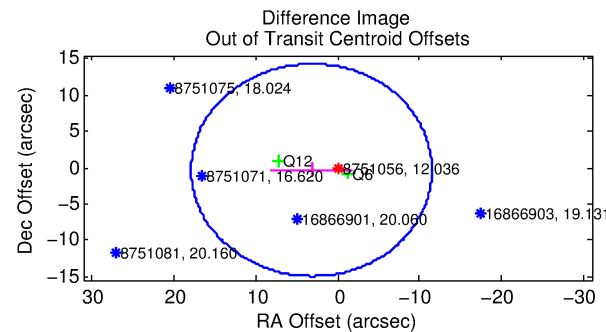
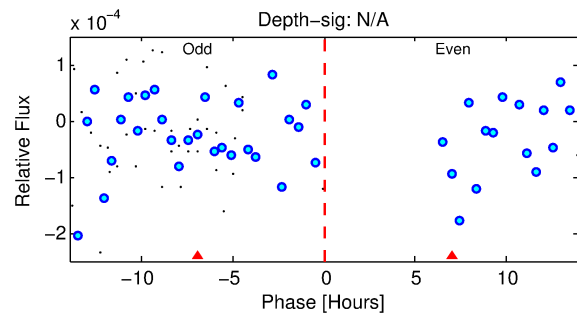
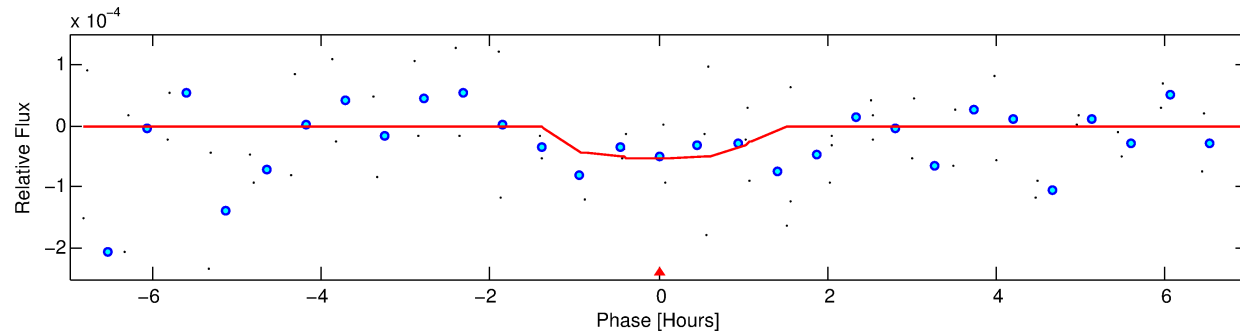
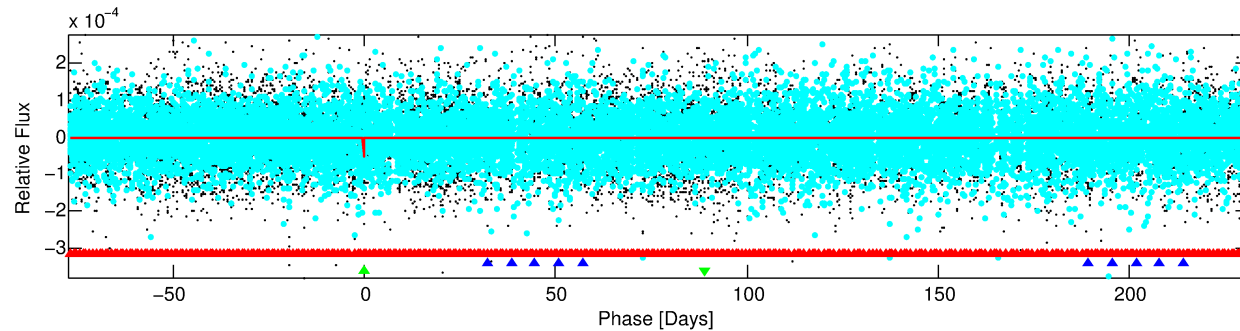
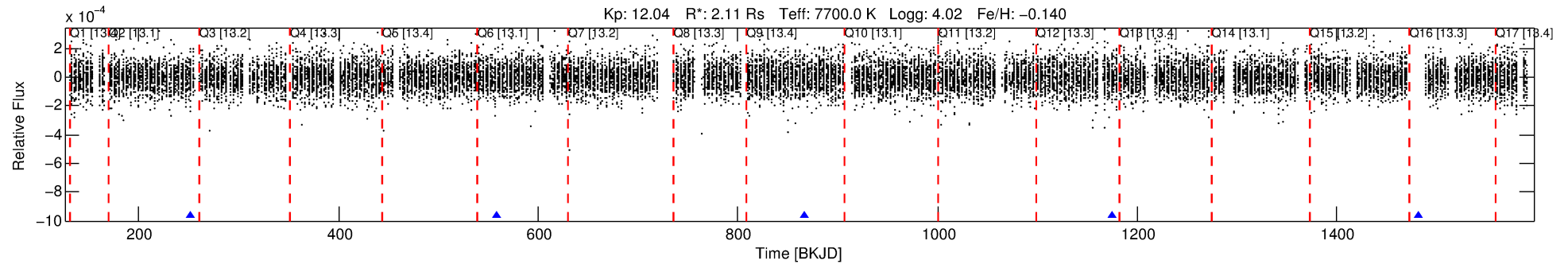
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008751056-03

No Significant Match Found

DV One-Page Summary

KIC: 8751056 Candidate: 3 of 3 Period: 307.728 d



DV Fit Results:

Period = 307.72834 [0.00997] d
Epoch = 251.3340 [0.0229] BKJD
Rp/R* = 0.0067 [0.0853]
a/R* = 1016.93 [74819.12]
b = 0.01 [13916.52]
Seff = 12.41 [5.03]
Teq = 479 [48] K
Rp = 1.55 [19.64] Re
a = 1.0637 [0.2590] AU
Ag = 18305.34 [463662.66] [0.04σ]
Teffp = 8606 [54493] K [0.15σ]

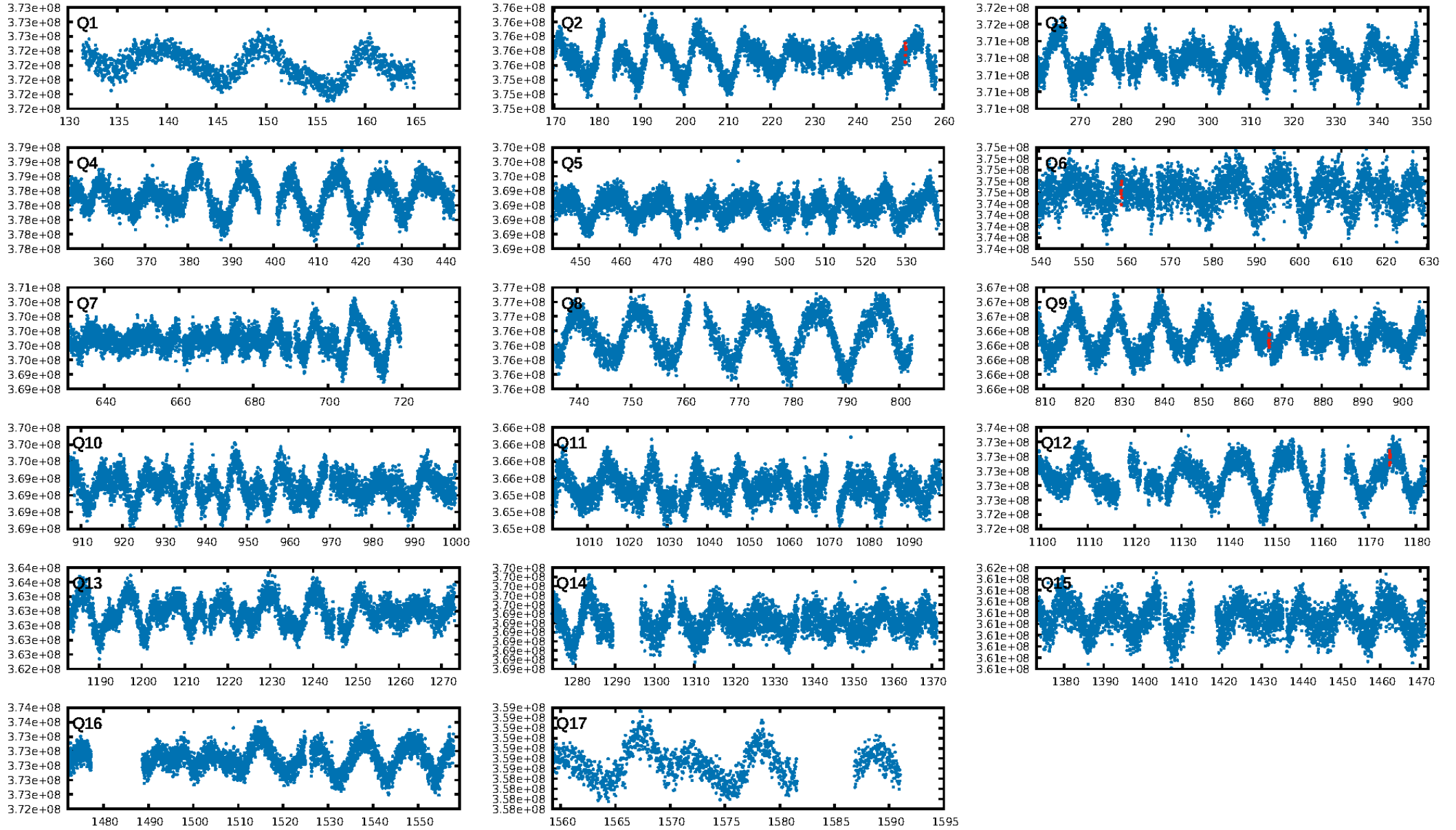
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [85.82σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.6%
ModelChiSquareGof-sig: 72.1%
Bootstrap-pfa: 3.95e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.3945
Centroid-sig: 43.0%
Centroid-so: 3.678 arcsec [0.71σ]
OotOffset-rm: 3.185 arcsec [0.65σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 3.139 arcsec [0.64σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.75 [3/4]

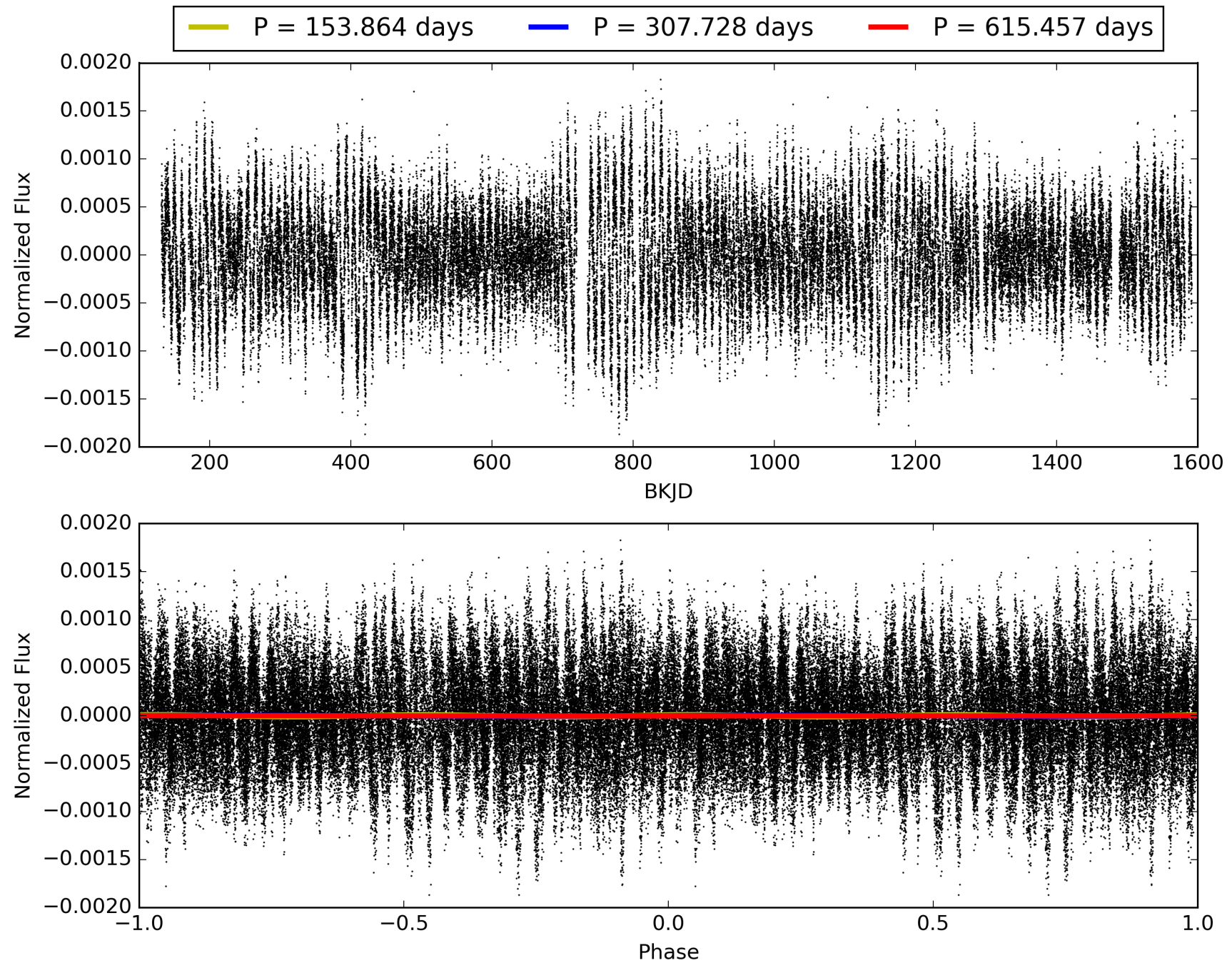
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:28:29 Z

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

TCE 008751056-03, PDC Light Curves

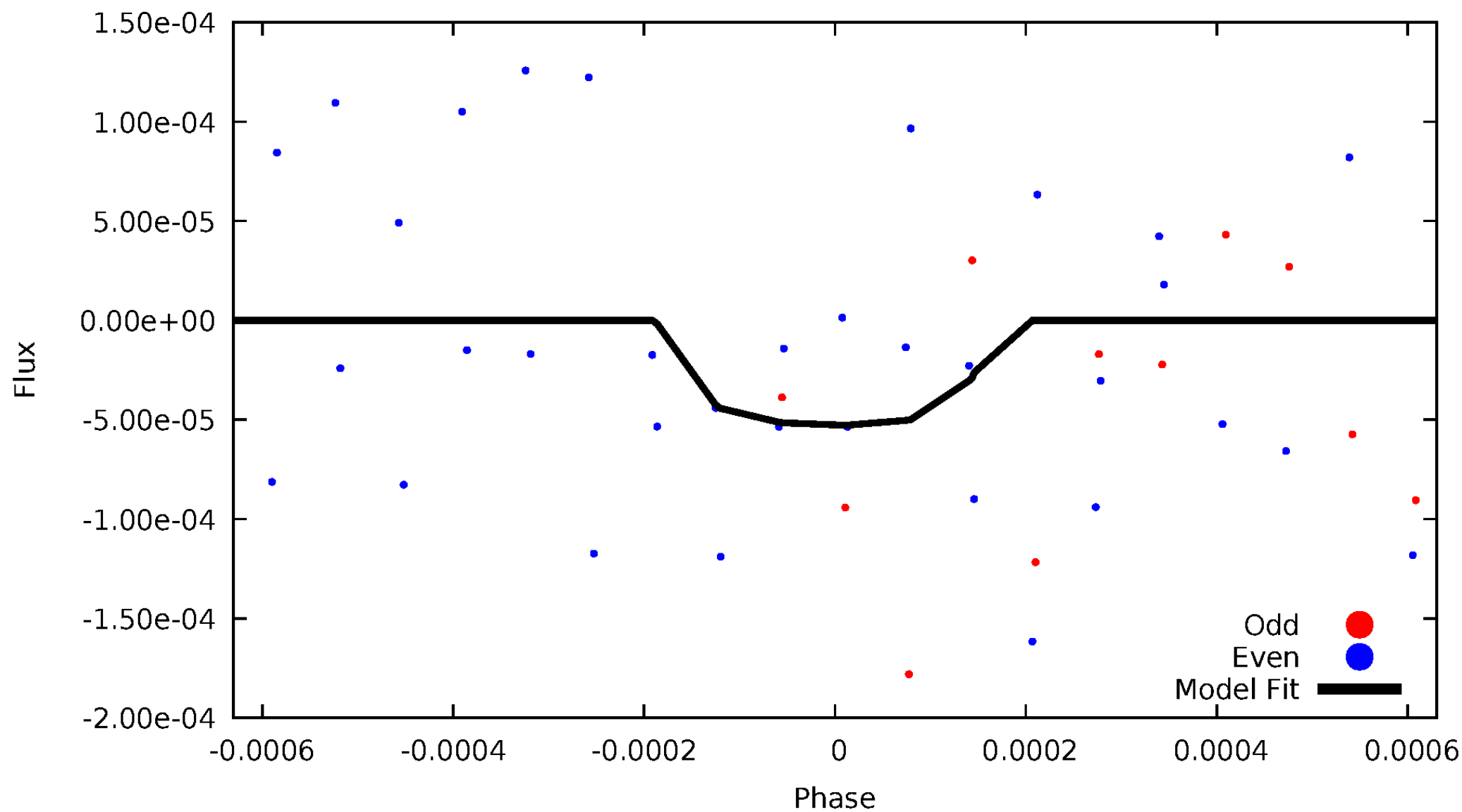


TCE 008751056-03



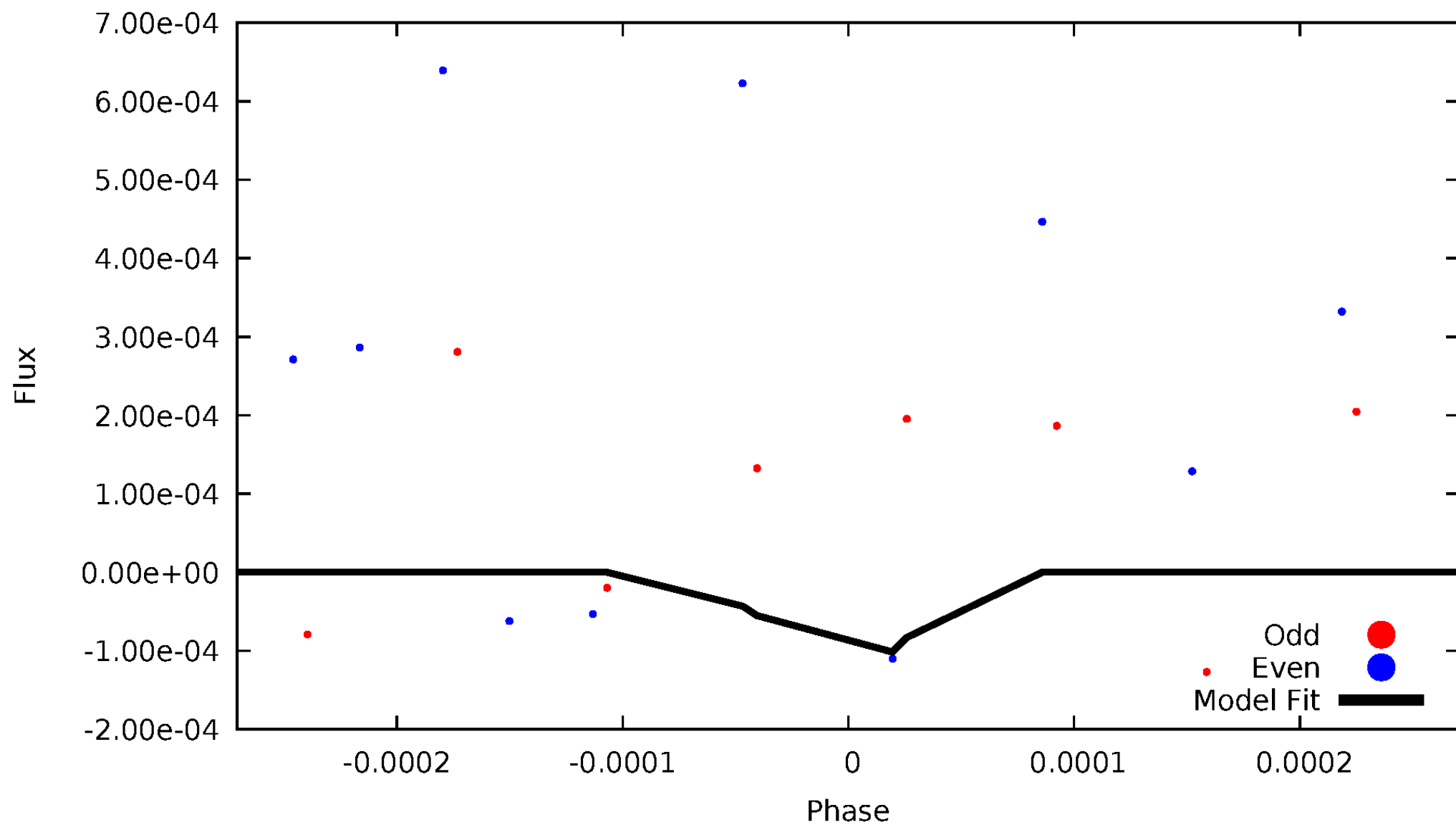
DV Odd/Even

TCE 008751056-03

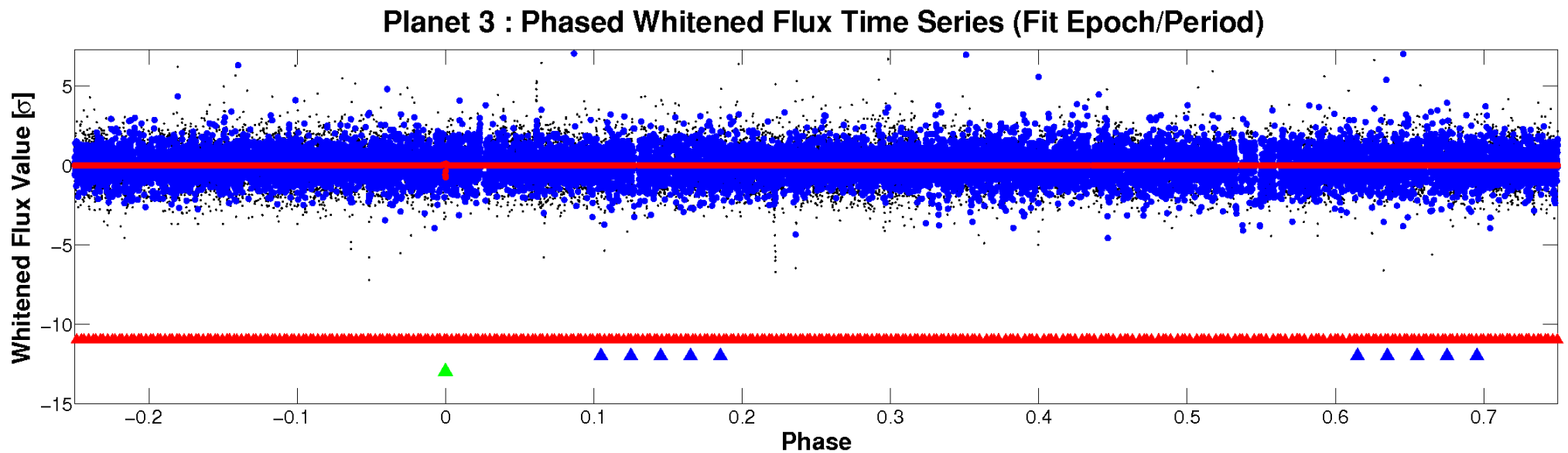
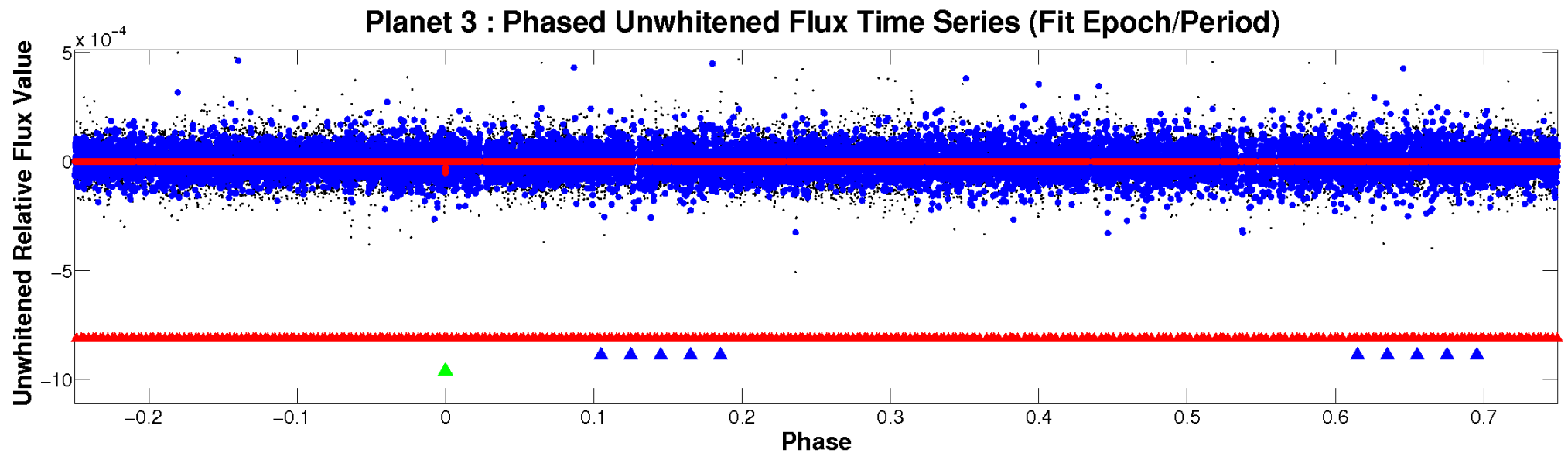


ALT Odd/Even

TCE 008751056-03

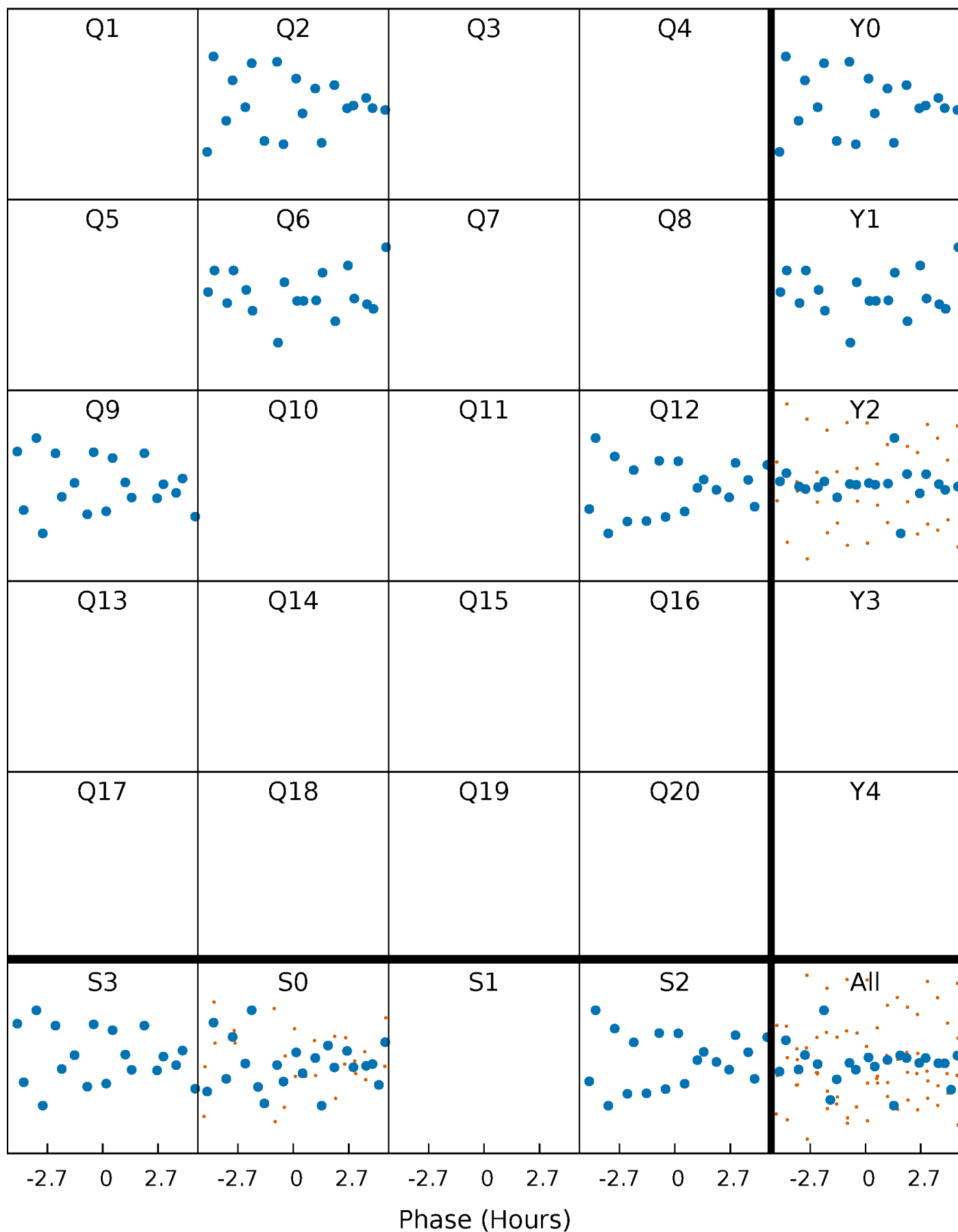


Non-Whitened Vs. Whitened Light Curve



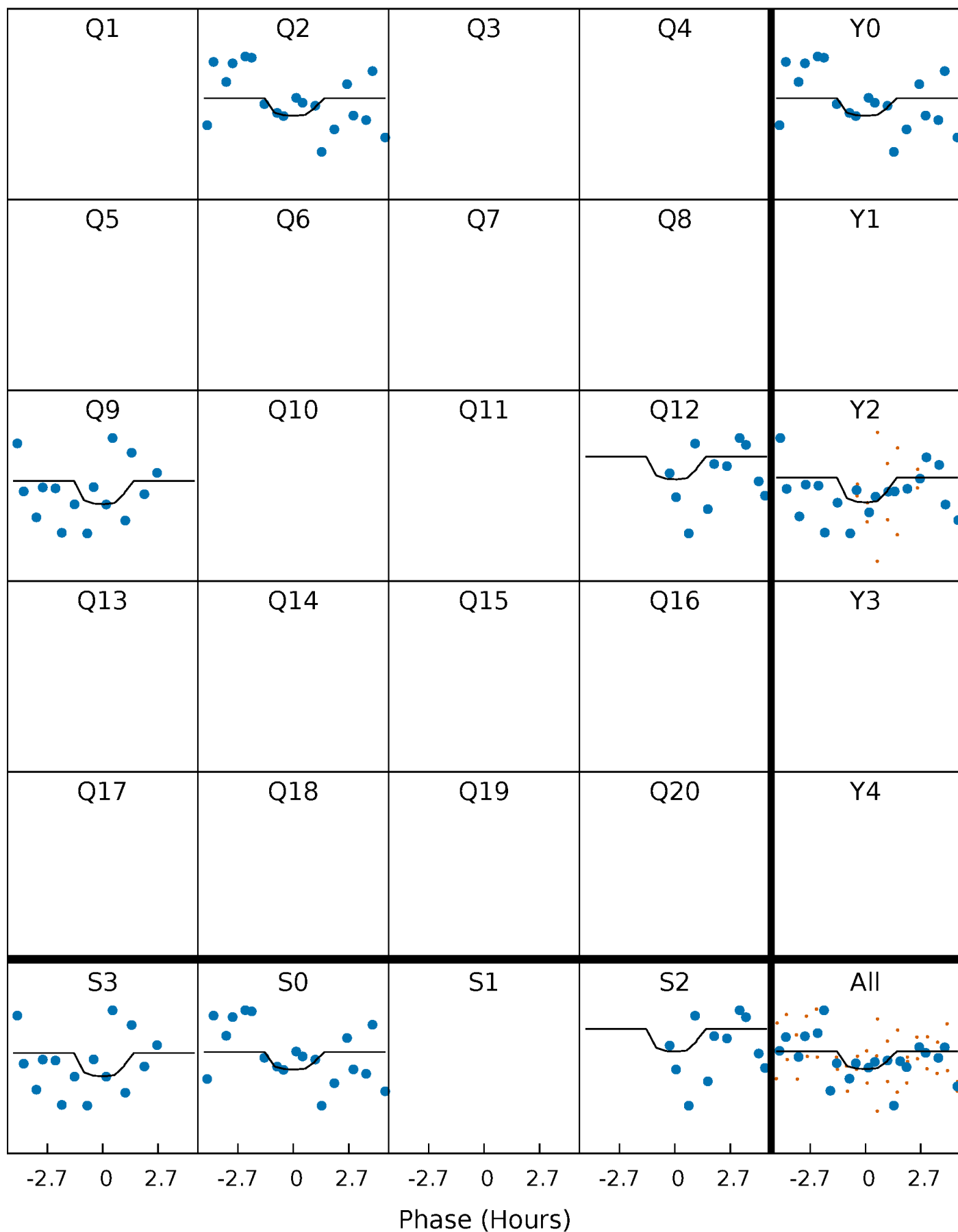
PDC Quarter-Phased Transit Curves

TCE 008751056-03 P=307.728341 Days $T_0=251.334002$ (BKJD)



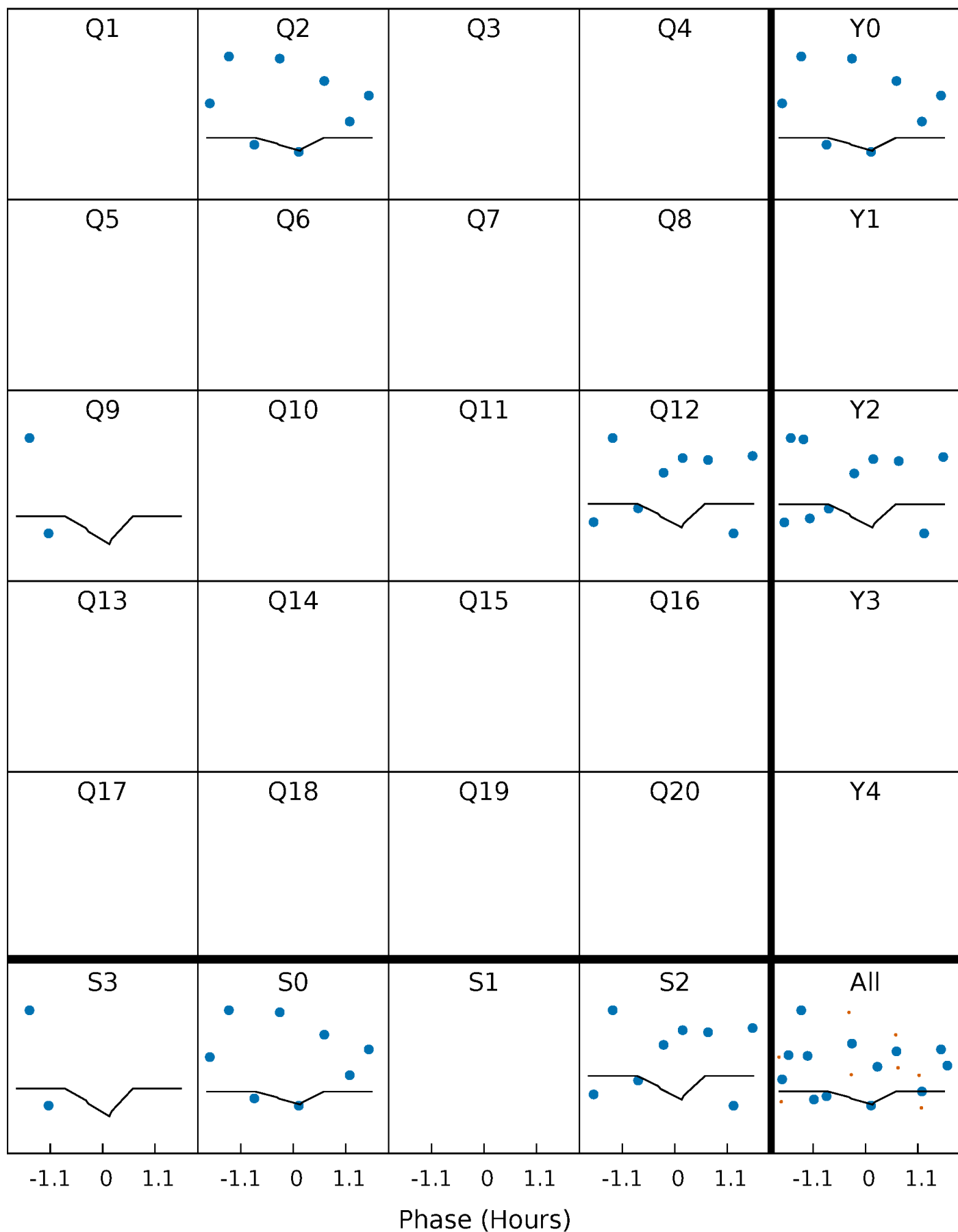
DV Quarter-Phased Transit Curves

TCE 008751056-03 P=307.728341 Days $T_0=251.334002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

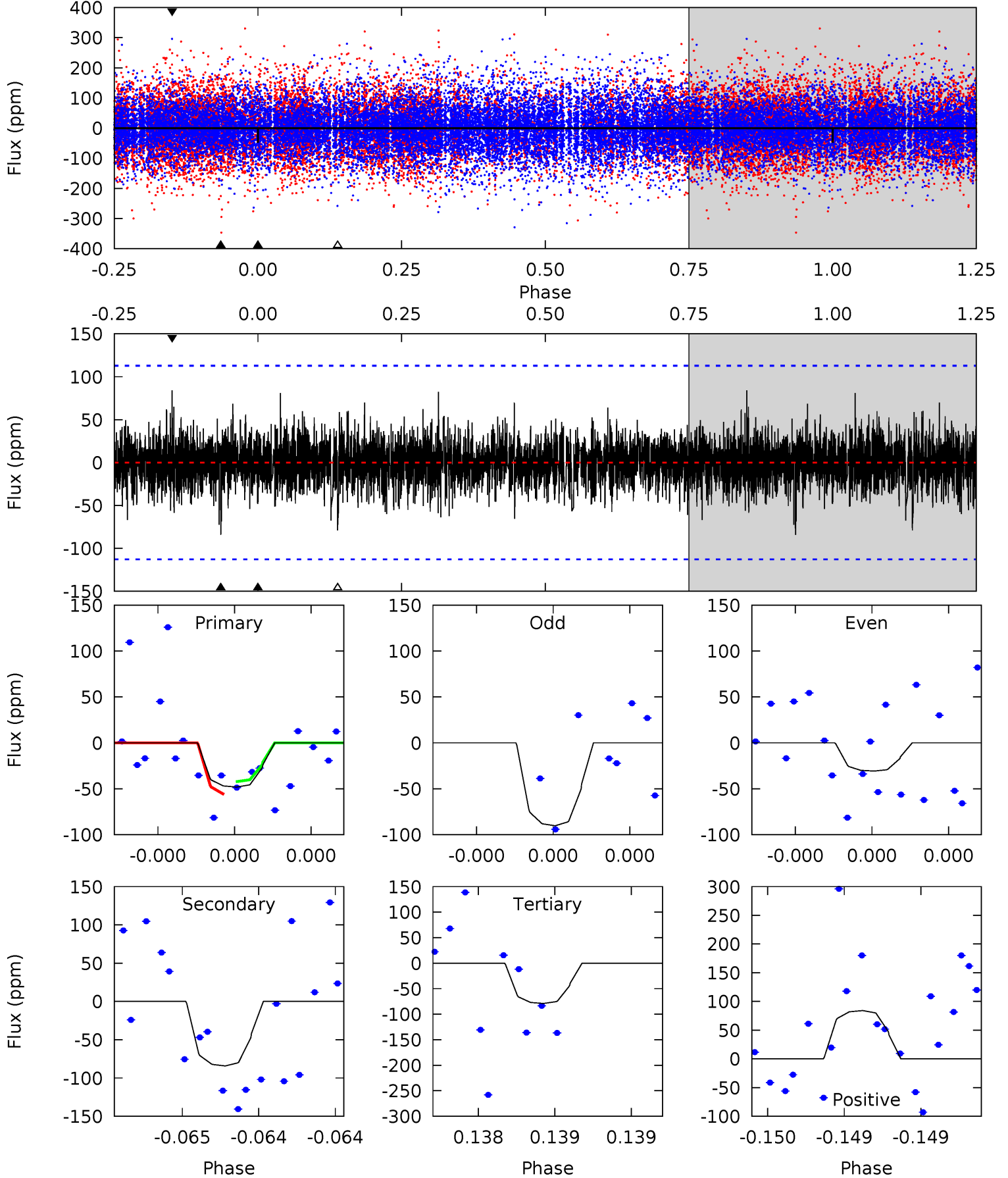
TCE 008751056-03 P=307.816567 Days $T_0=251.309917$ (BKJD)



DV Model-Shift Uniqueness Test

008751056-03, P = 307.728341 Days, E = 251.334002 Days

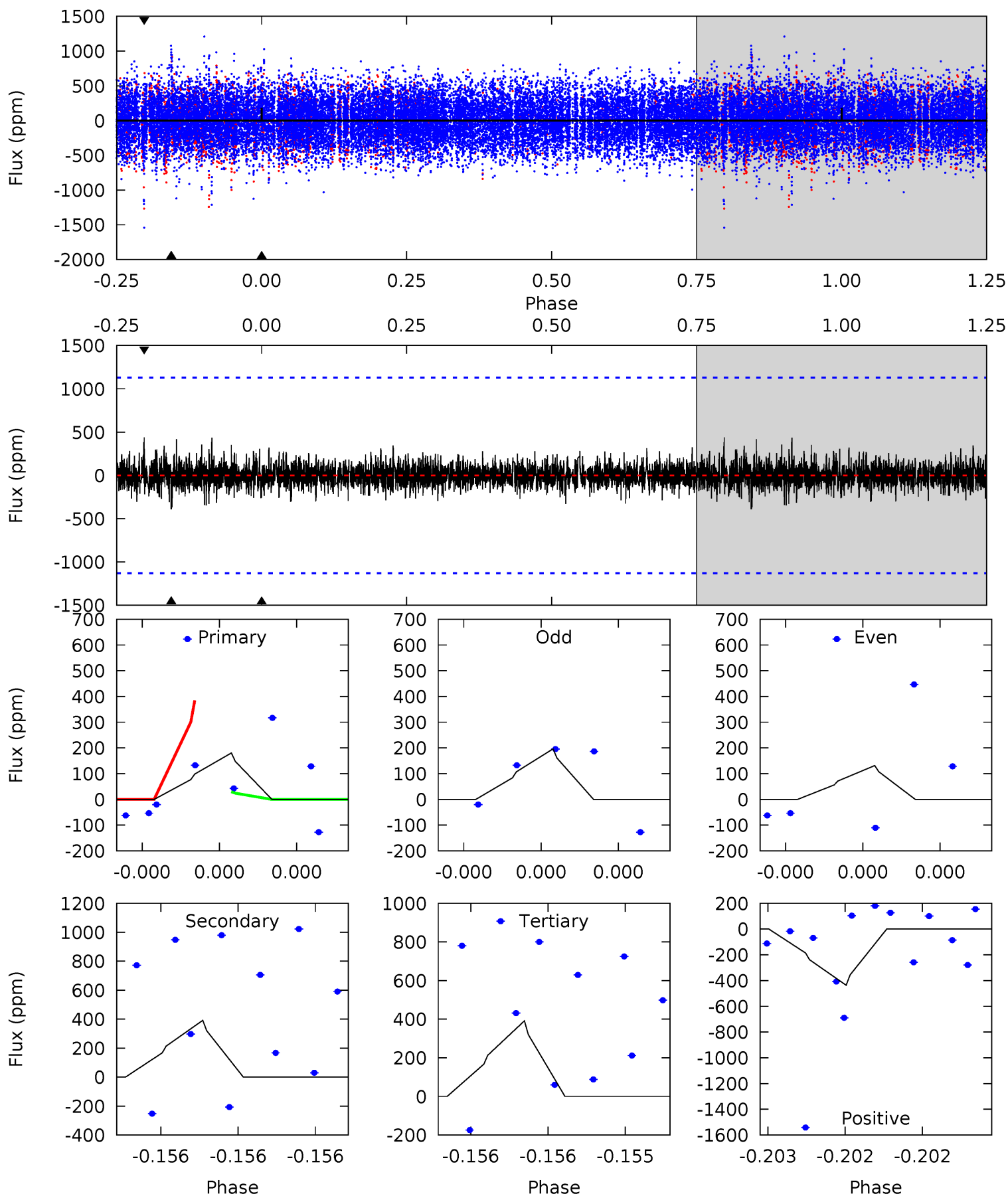
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.39	4.19	3.92	4.18	5.61	3.54	0.95	-1.53	-1.79	0.26	0.01	1.36	1.57	0.50	0.33



Alt Model-Shift Uniqueness Test

008751056-03, P = 307.816567 Days, E = 251.309917 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.93	2.02	2.01	2.24	5.81	3.83	0.41	-1.09	-1.32	0.00	-0.23	0.19	1.00	0.53	0.00



Stellar Parameters For KIC 008751056

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7700^{+237}_{-316}	$4.018^{+0.210}_{-0.158}$	$-0.140^{+0.200}_{-0.350}$	$2.111^{+0.525}_{-0.578}$	$1.692^{+0.198}_{-0.298}$	$0.254^{+0.309}_{-0.104}$
	+3%/-4%	+5%/-4%	+143%/-250%	+25%/-27%	+12%/-18%	+122%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008751056-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-84 ± 20	$13.94^{+15.26}_{-9.88}$	665^{+51}_{-47}	3433^{+1909}_{-671}	270^{+2625}_{-212}
Alt.	-392 ± 194	$14.23^{+16.01}_{-10.69}$	667^{+47}_{-49}	4365^{+4229}_{-1024}	1127^{+16373}_{-910}

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 $A_{obs} \gg 1.0$

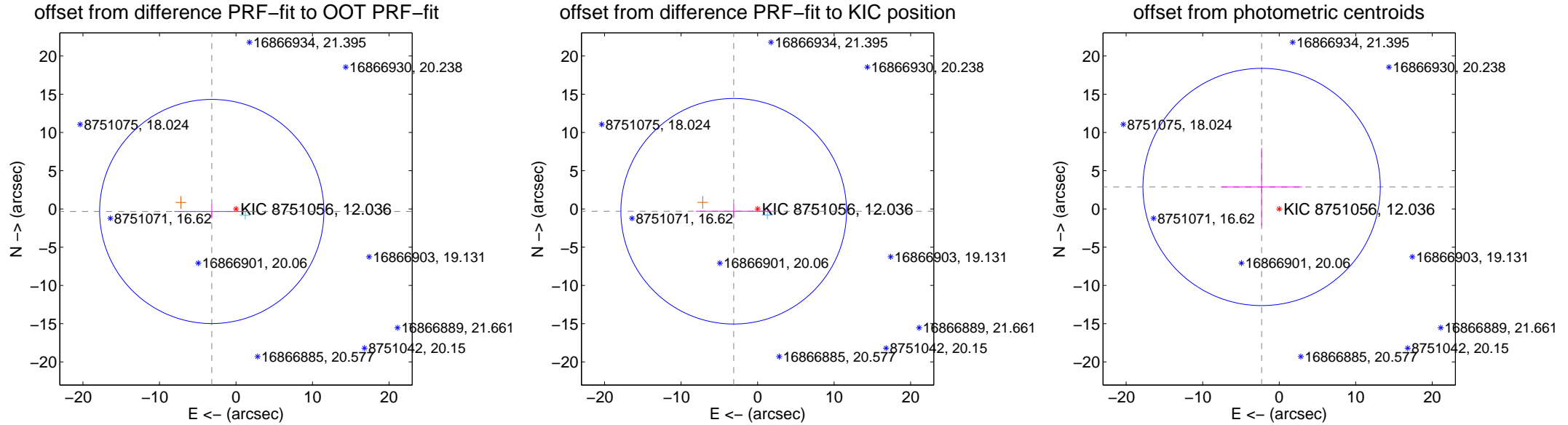
DV Centroid Data

Supplemental centroid analysis for 008751056-03. Kepler magnitude: 12.04. Transit SNR 2.36

There are 1 quarters with good PRF difference image offsets

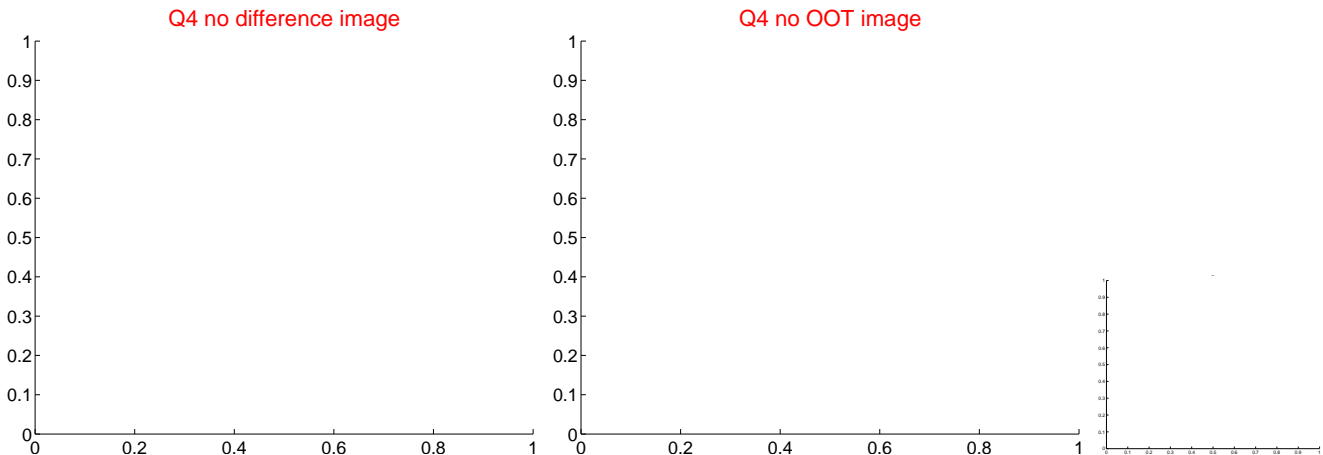
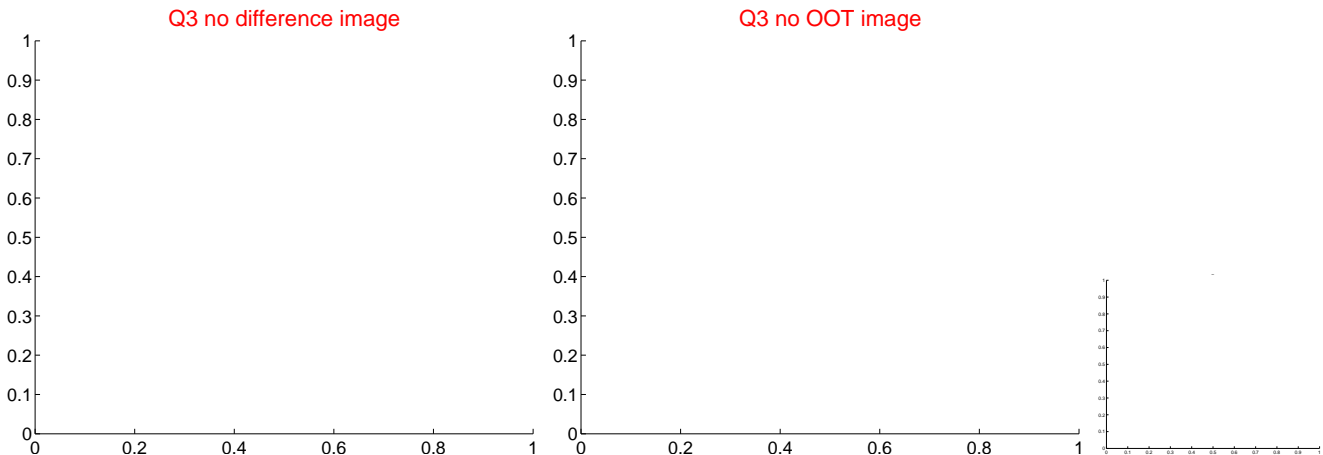
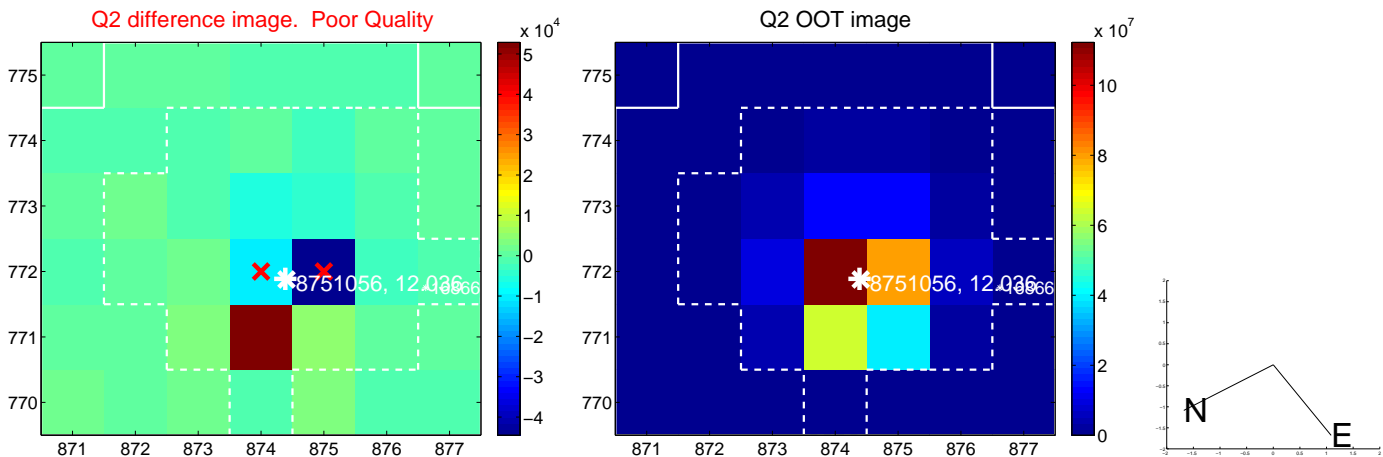
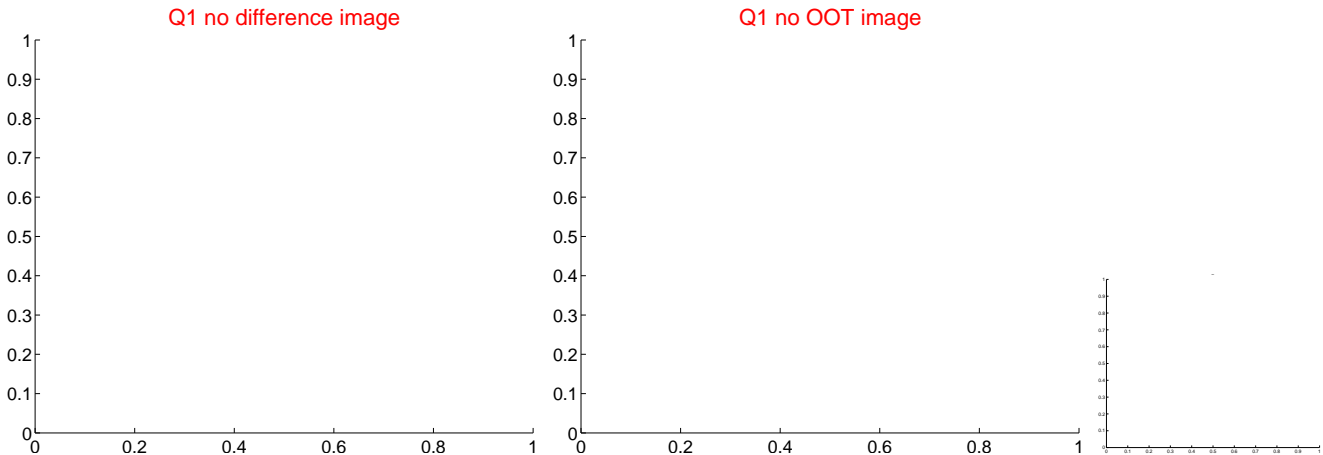
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.185 ± 4.885	0.65	3.167 ± 4.911	-0.333 ± 0.904
PRF-fit source offset from KIC position	3.139 ± 4.915	0.64	3.124 ± 4.937	-0.301 ± 0.886
photometric centroid source offset	3.68 ± 5.17	0.71	2.30 ± 5.29	2.87 ± 5.09

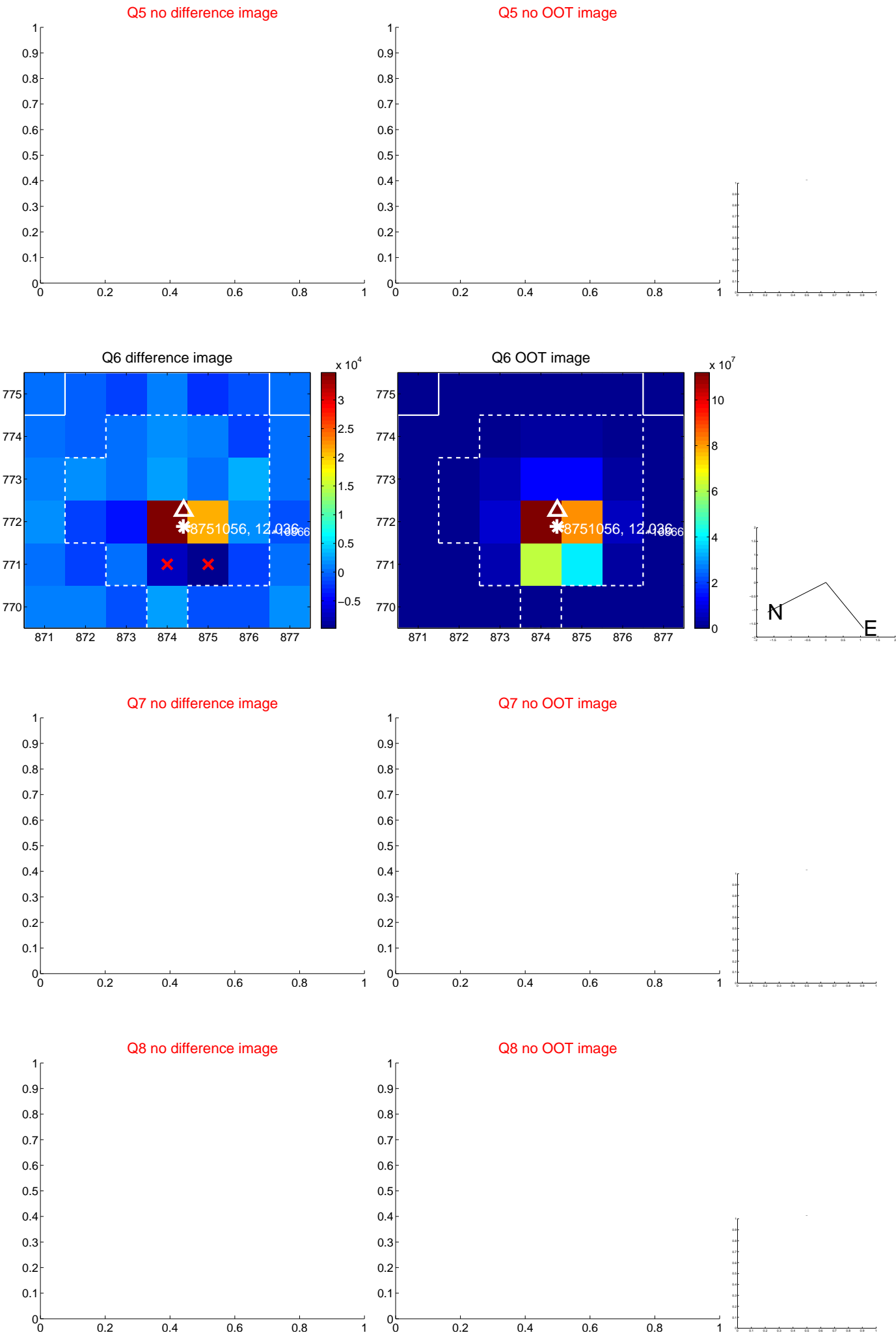


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

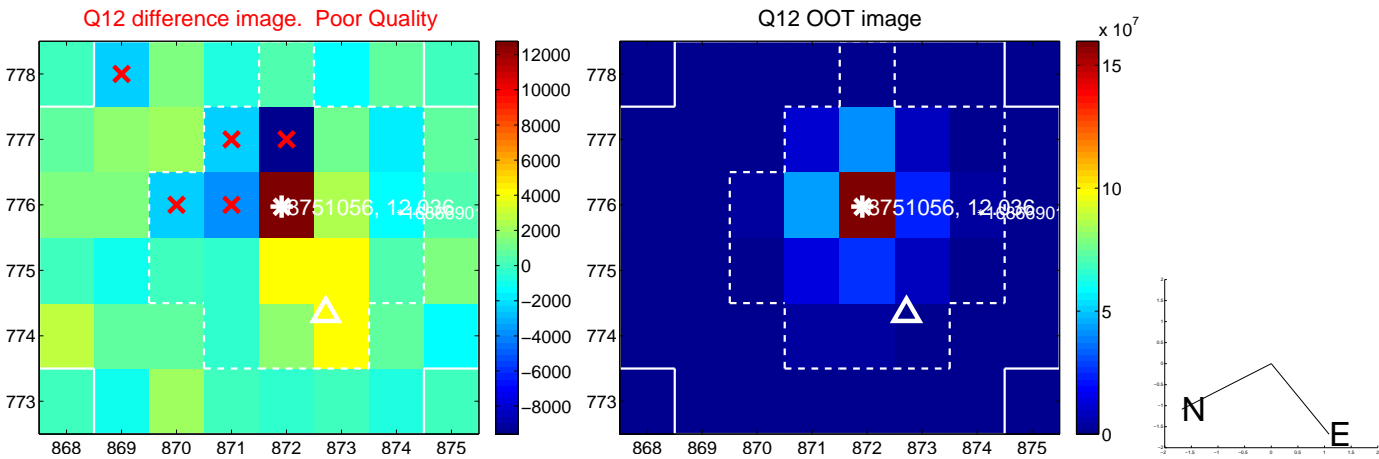
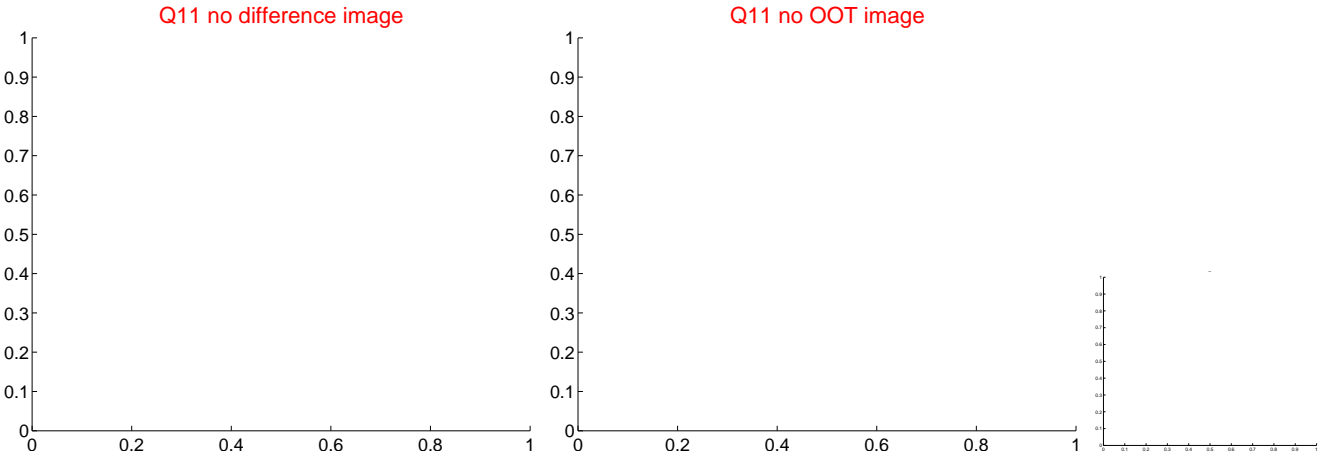
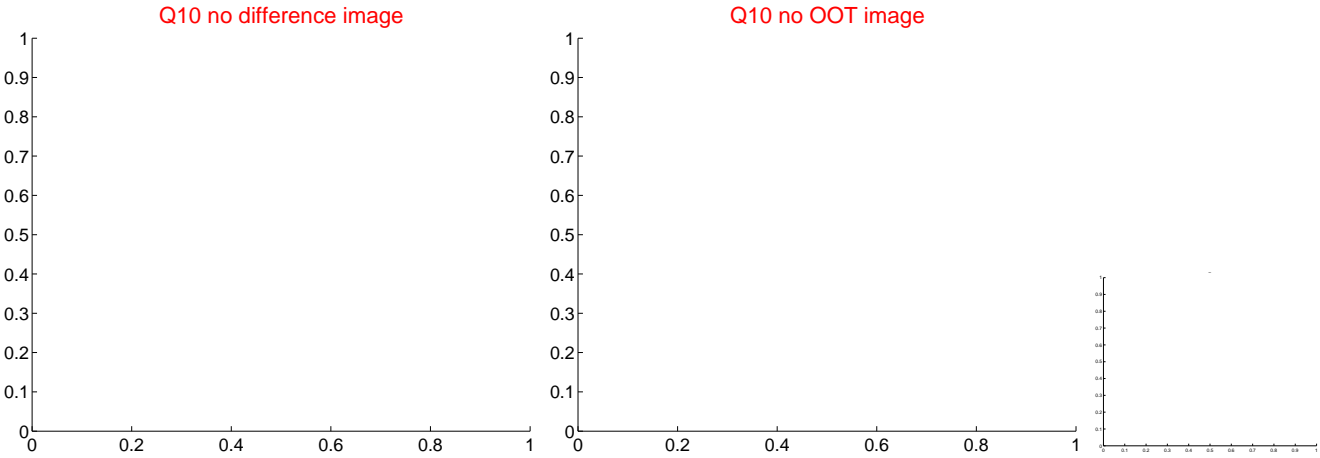
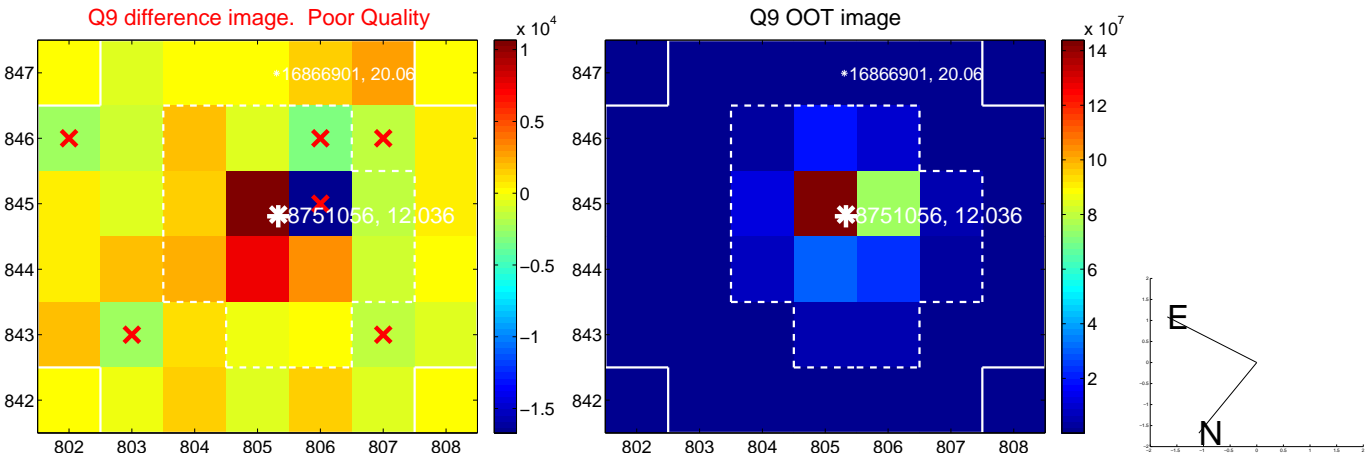
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



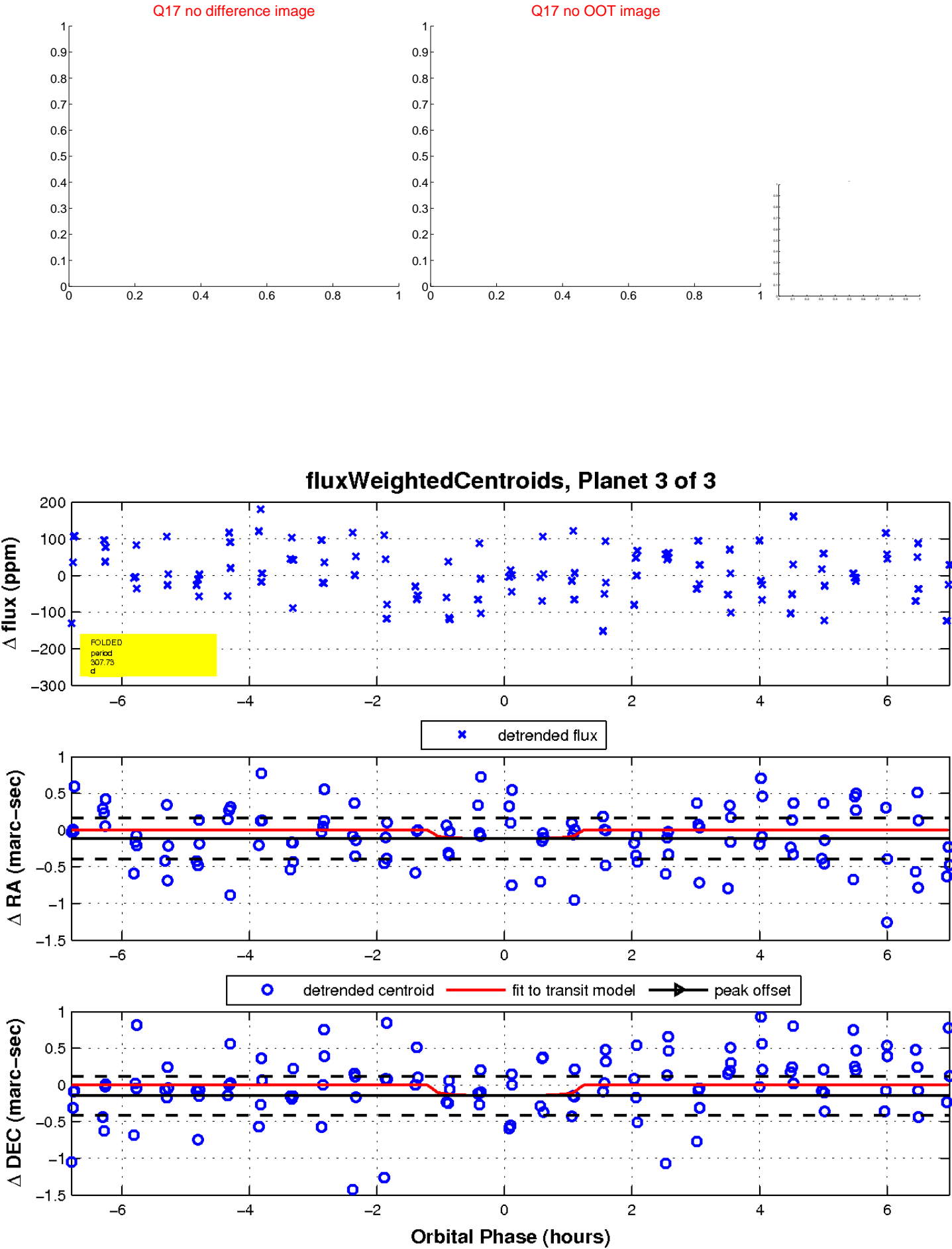
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

