

KIC 010360907

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})
010360907-01	OBS	No	3.873257	135.086308	52.7	16.557	9.5	6.7	2.11	6425	1.55	2508.39
010360907-02	OBS	No	67.100448	193.425634	383.0	4.095	9.0	9.1	2.11	6425	5.22	55.96
010360907-03	OBS	No	88.117686	217.990806	410.4	5.976	8.9	9.4	2.11	6425	5.20	38.91
010360907-04	OBS	No	294.071670	268.732724	561.7	10.375	8.3	9.0	2.11	6425	5.41	7.80
010360907-05	OBS	No	312.364930	265.438787	410.2	7.825	8.5	6.7	2.11	6425	4.49	7.20
010360907-06	OBS	No	198.384581	321.823097	483.3	5.768	7.9	7.0	2.11	6425	4.90	13.19
010360907-07	OBS	No	87.813516	162.219229	218.0	9.000	7.7	-1.0	2.11	6425	3.13	39.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010360907-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
010360907-02	OBS	FP	0.01	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
010360907-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
010360907-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010360907-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—MOD_NONUNIQ_ALT—HALO_GHOST
010360907-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

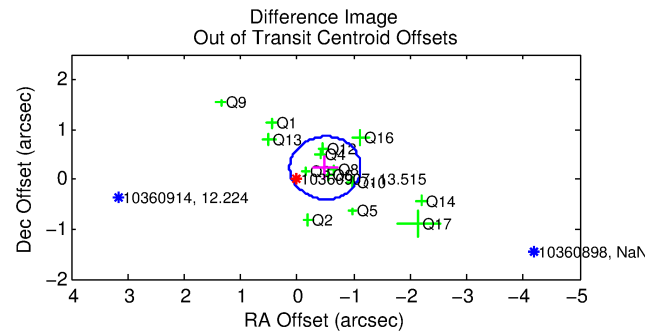
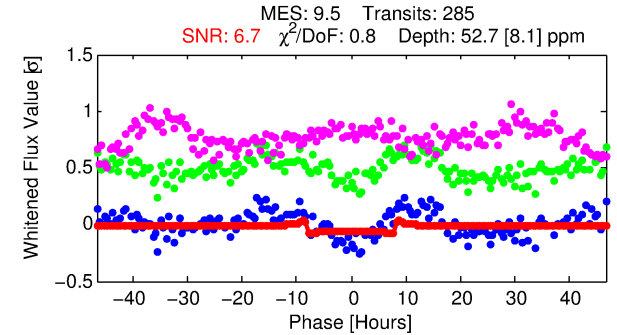
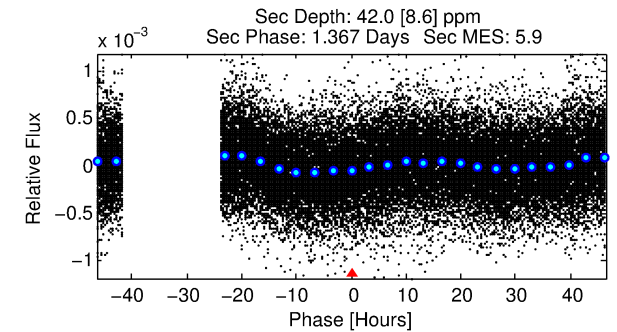
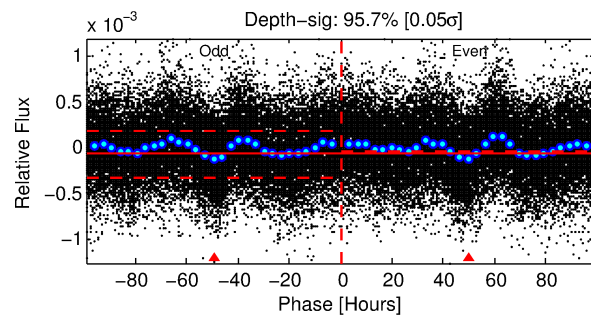
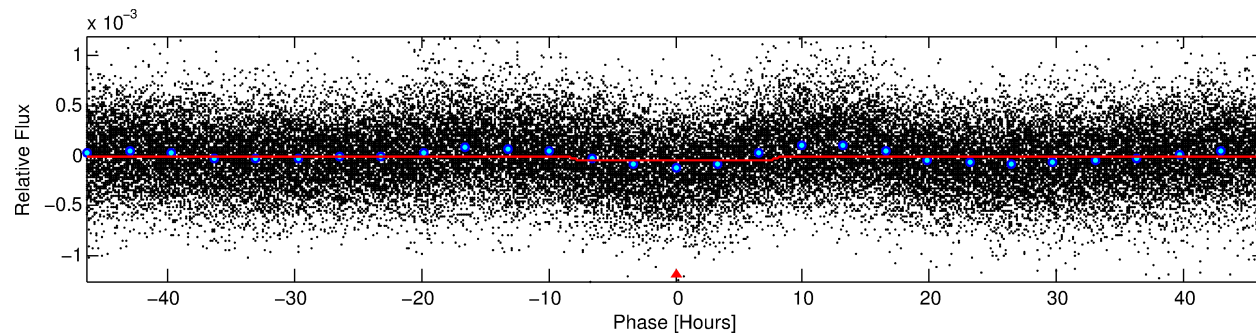
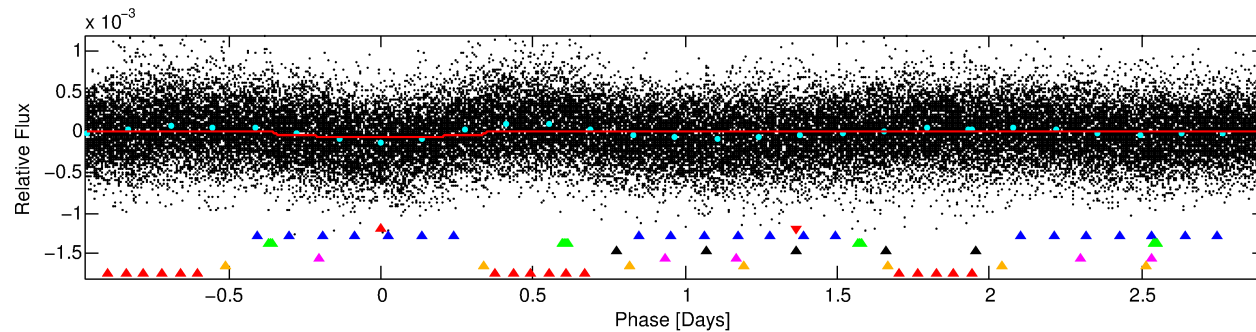
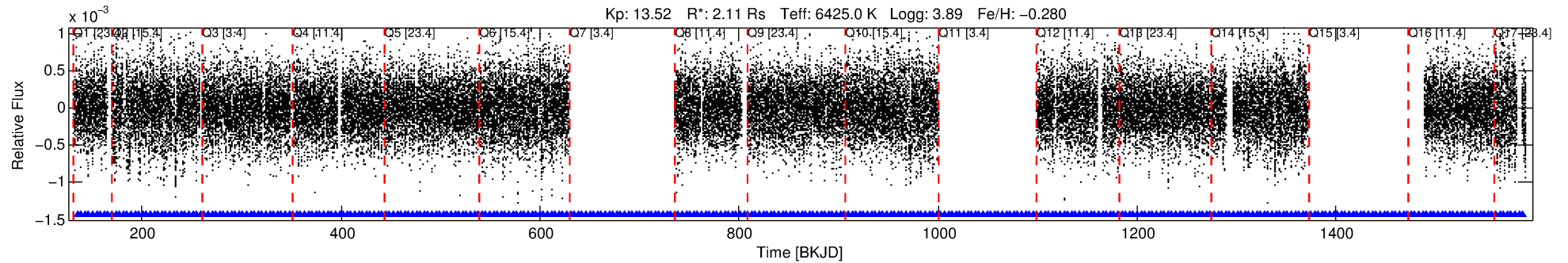
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-01

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 1 of 7 Period: 3.873 d



DV Fit Results:

Period = 3.87326 [0.00005] d
Epoch = 135.0863 [0.0082] BKJD
Rp/R* = 0.0068 [0.0045]
a/R* = 1.82 [4.54]
b = 0.33 [9.66]
Seff = 2508.39 [1807.87]
Teff = 1805 [325] K
Rp = 1.55 [1.24] Re
a = 0.0520 [0.0227] AU
Ag = 25.86 [39.33] [0.63 σ]
Teffp = 6292 [2128] K [2.08 σ]

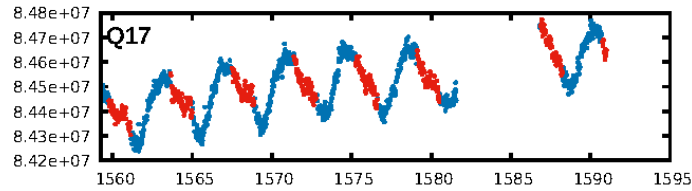
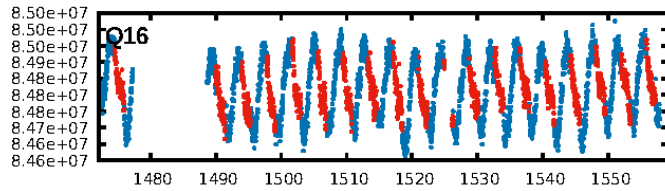
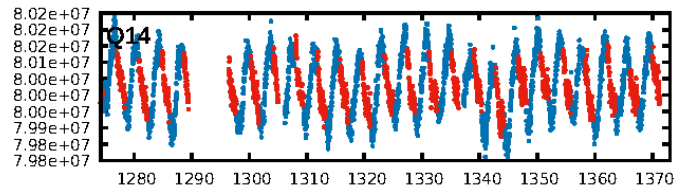
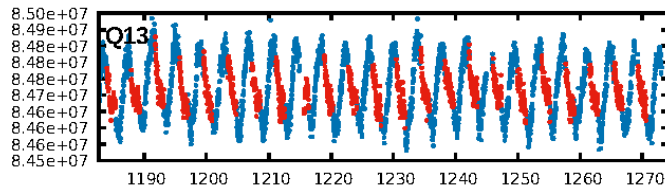
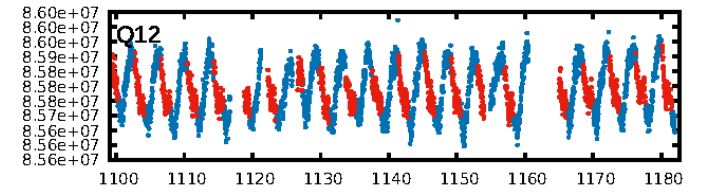
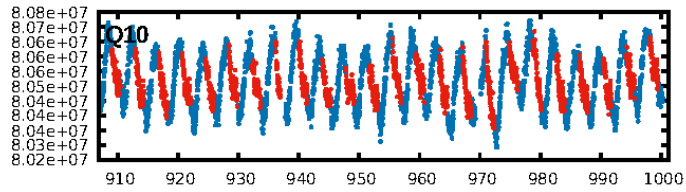
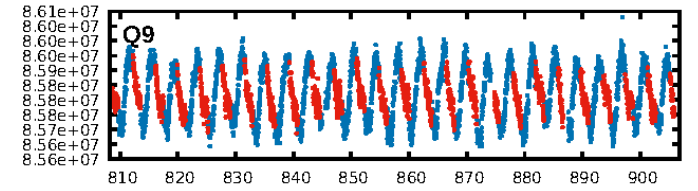
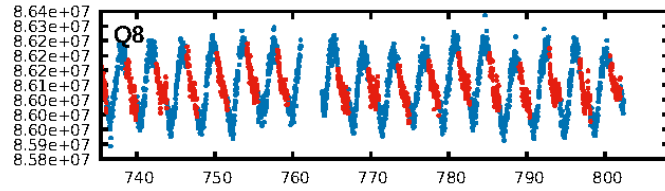
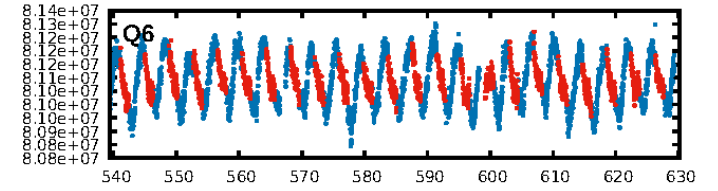
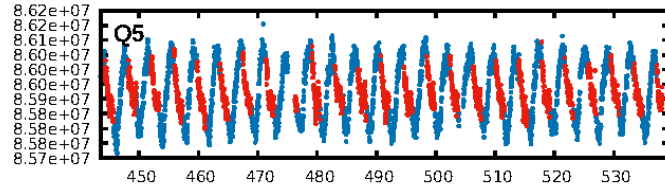
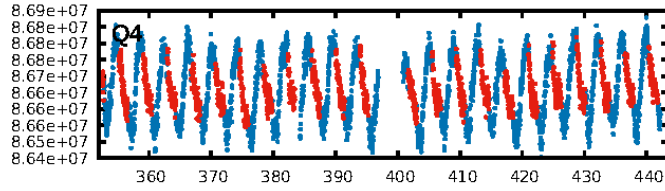
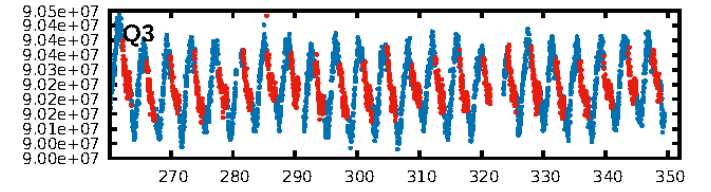
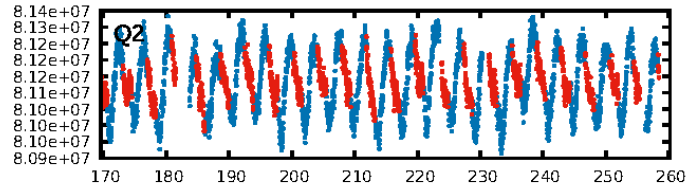
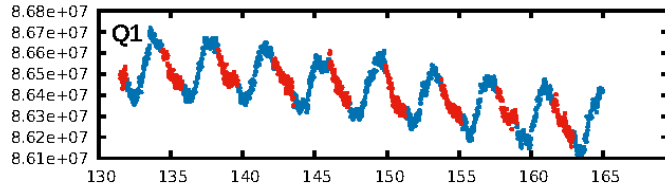
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [88.97 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.83e-10
RollingBand-fgt: 1.00 [269/269]
GhostDiagnostic-chr: 1.493
Centroid-sig: 0.0%
Centroid-so: 2.392 arcsec [2.29 σ]
OotOffset-rm: 0.547 arcsec [2.61 σ]
KicOffset-rm: 0.372 arcsec [1.33 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

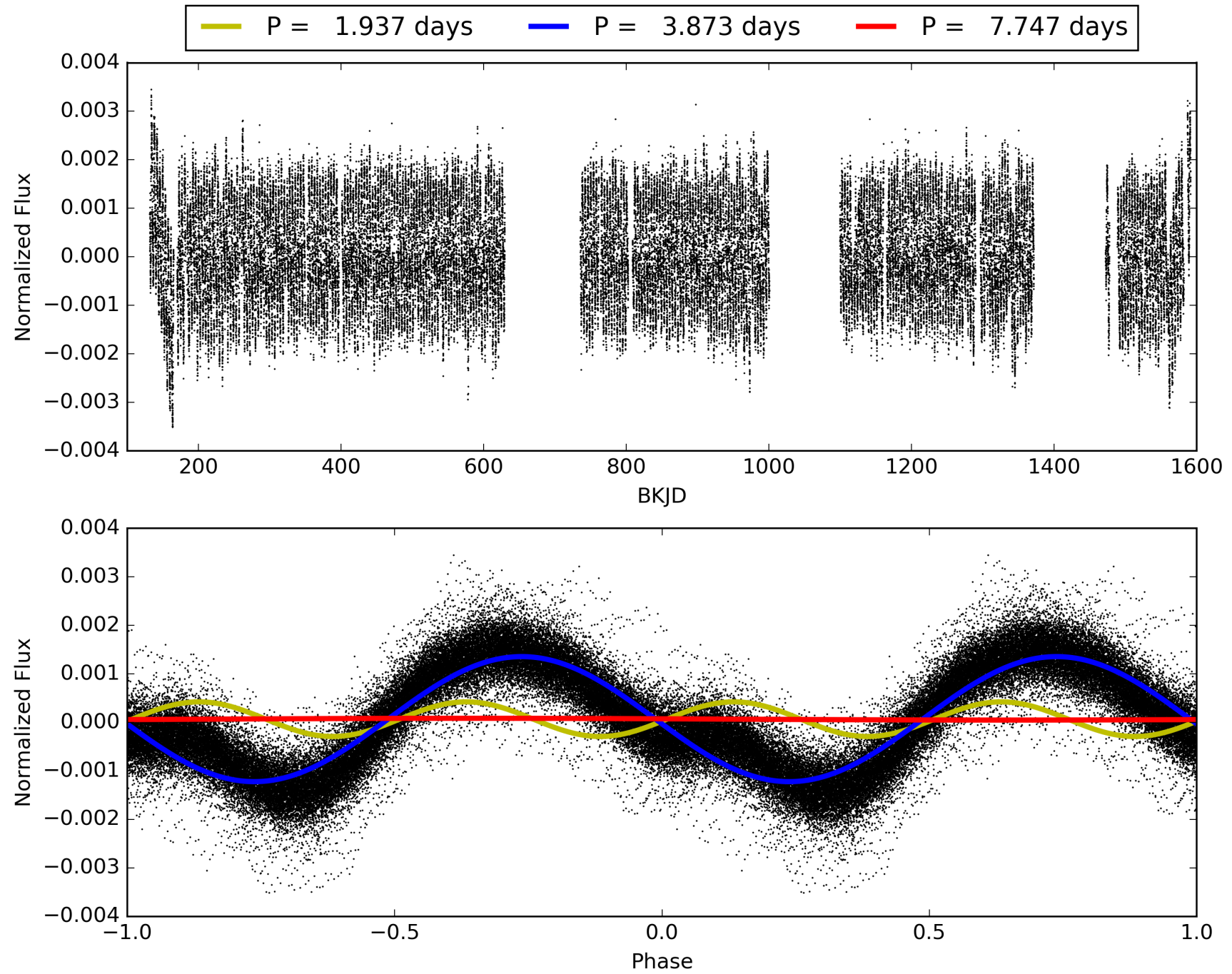
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010360907-01, PDC Light Curves

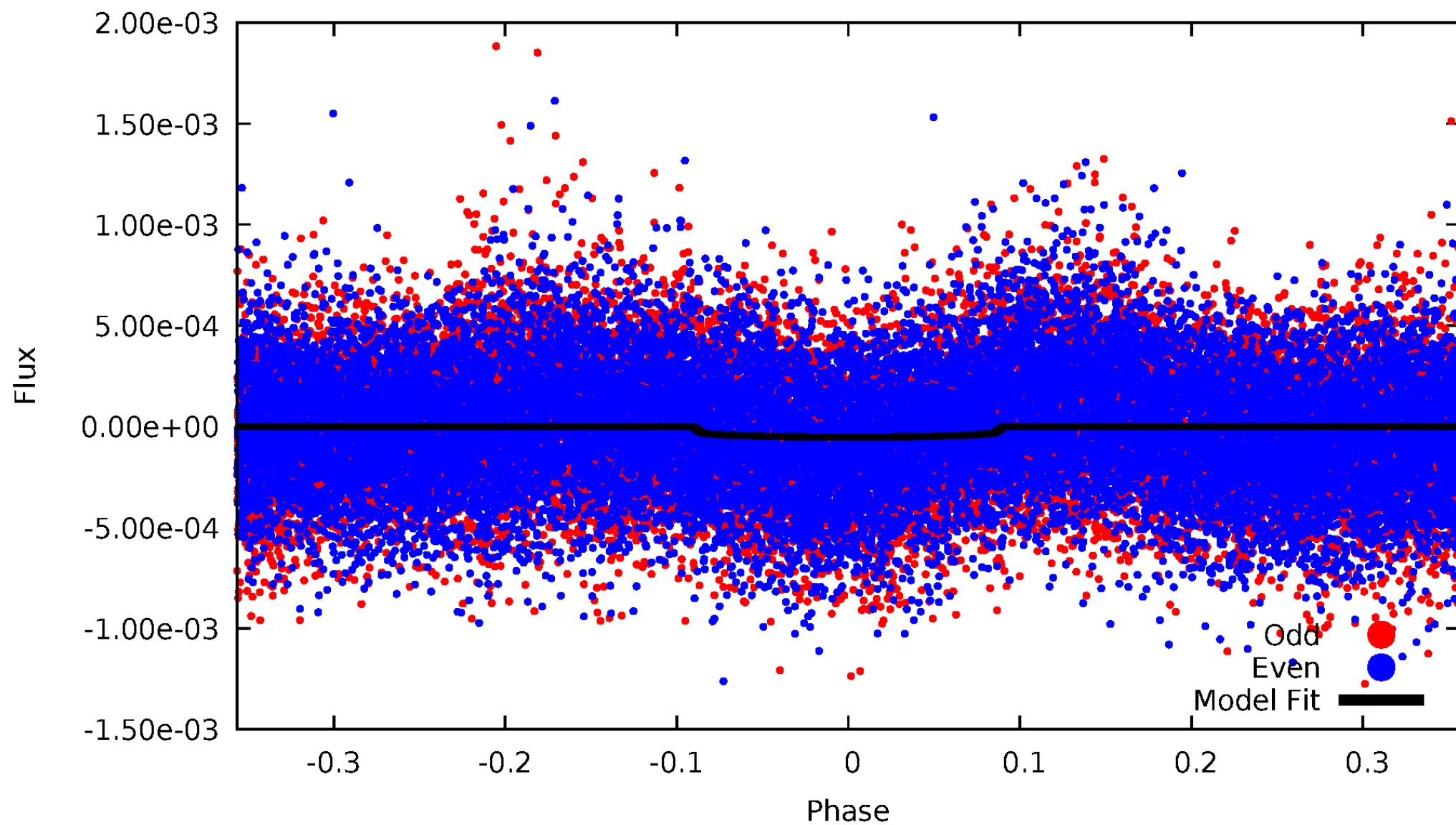


TCE 010360907-01



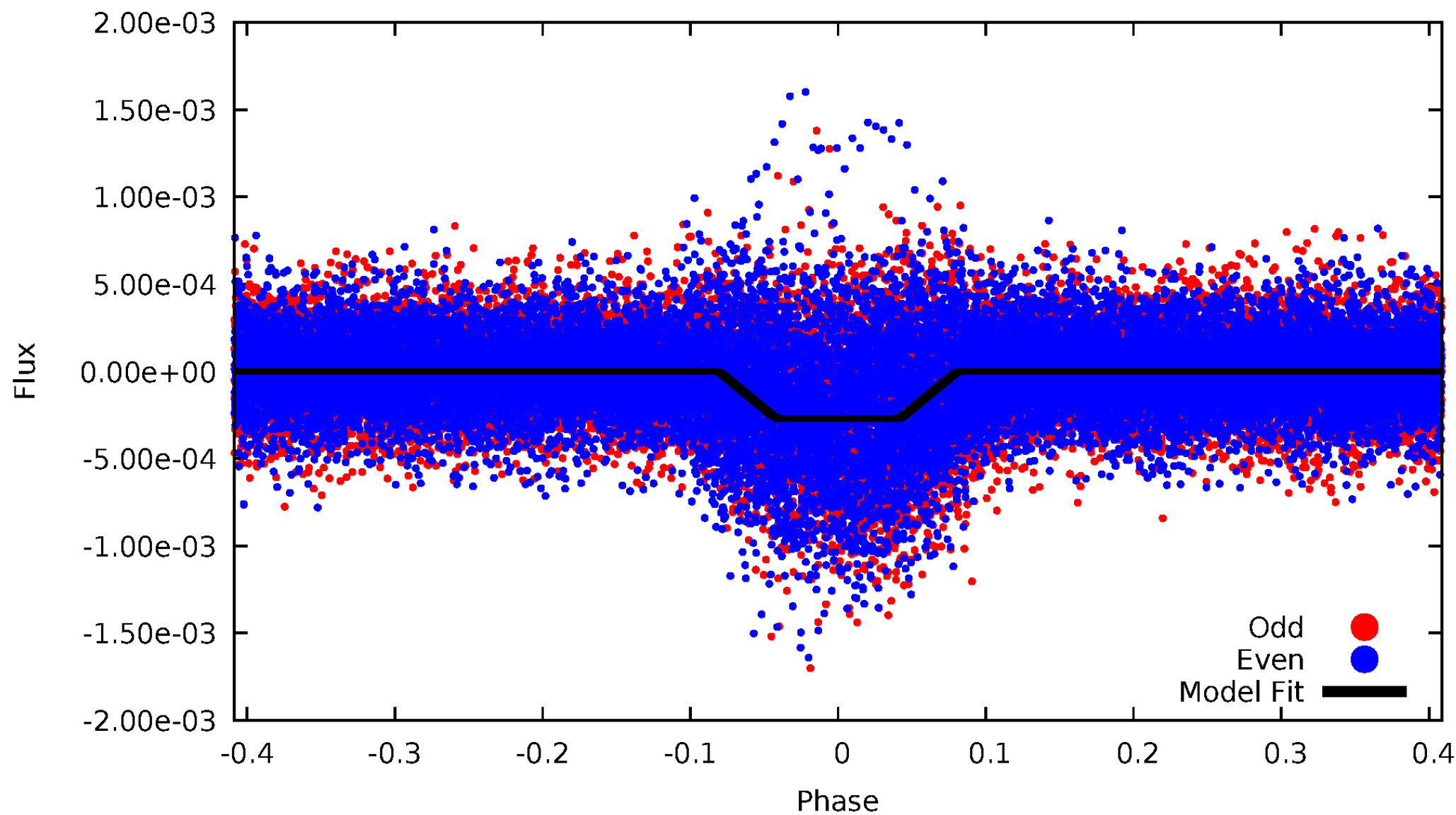
DV Odd/Even

TCE 010360907-01

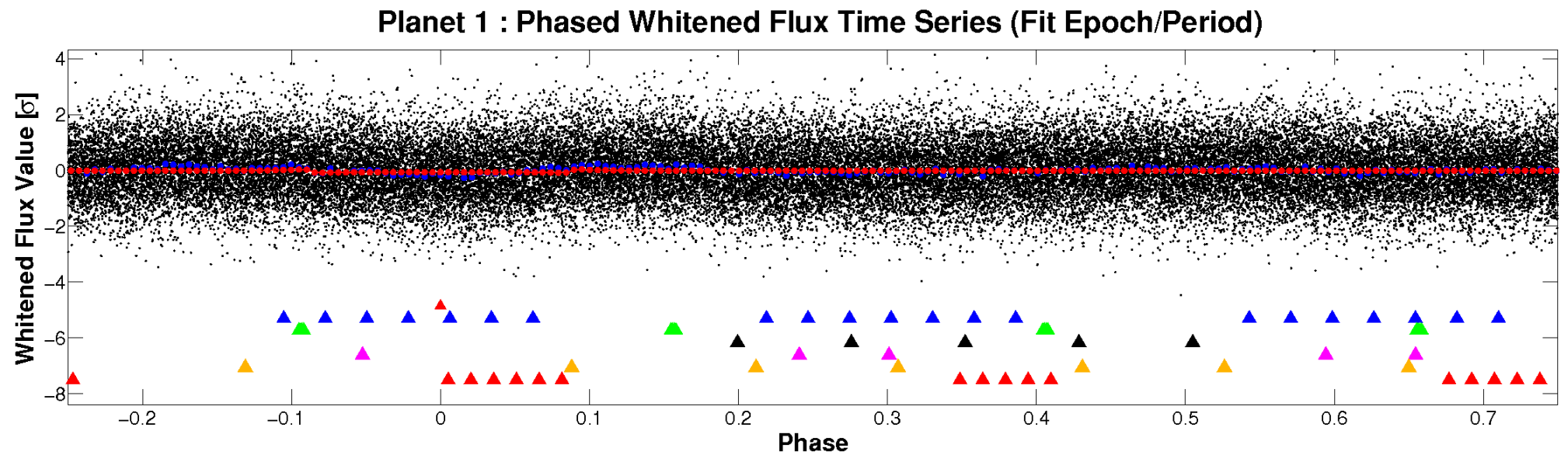
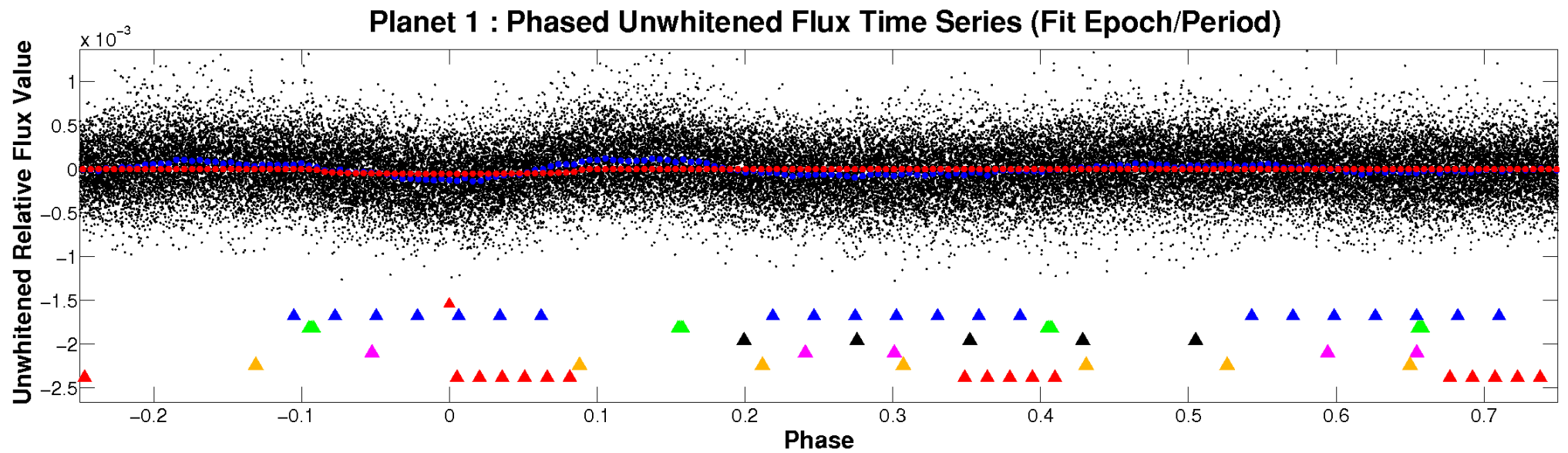


ALT Odd/Even

TCE 010360907-01

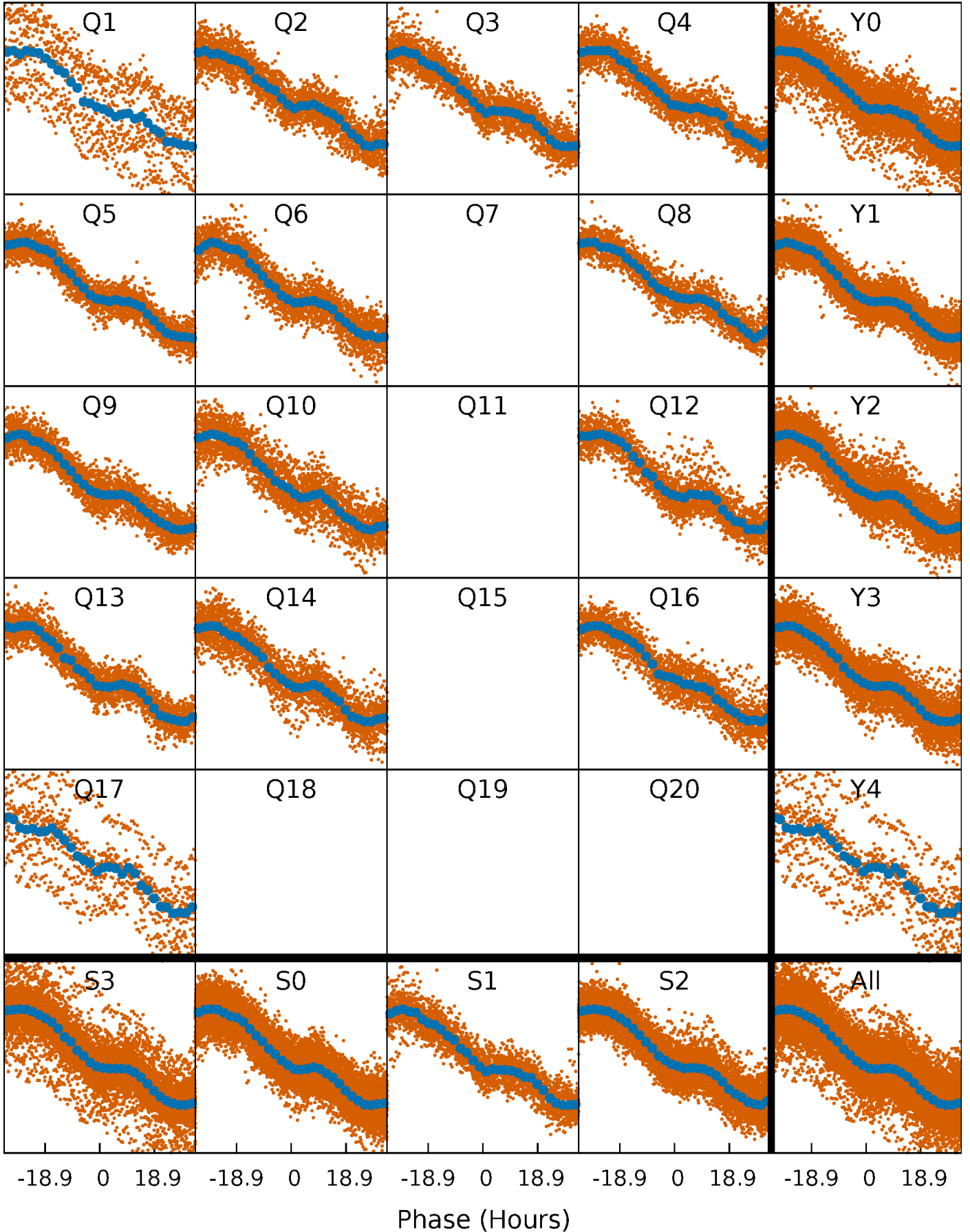


Non-Whitened Vs. Whitened Light Curve



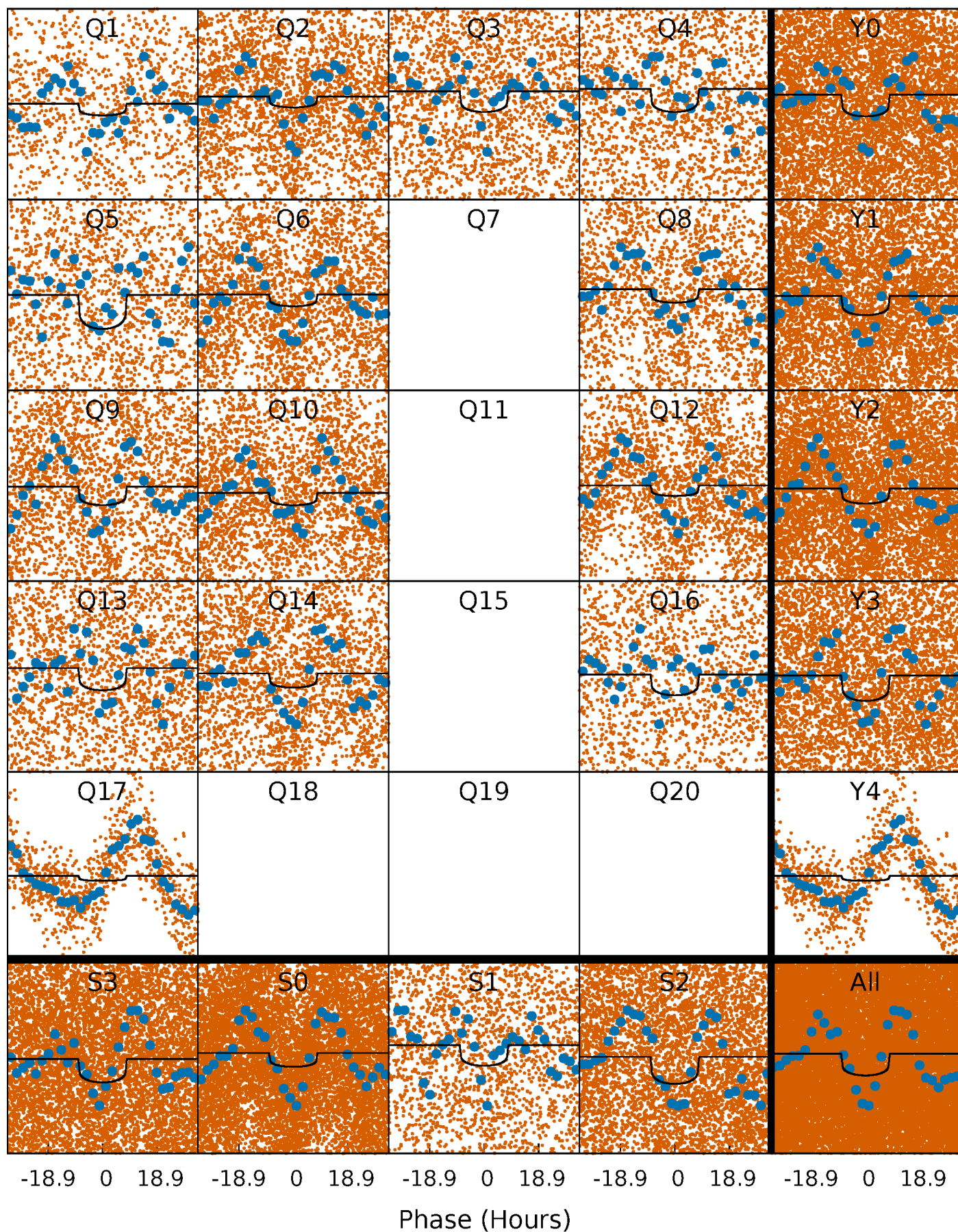
PDC Quarter-Phased Transit Curves

TCE 010360907-01 P= 3.873257 Days $T_0=135.086308$ (BKJD)



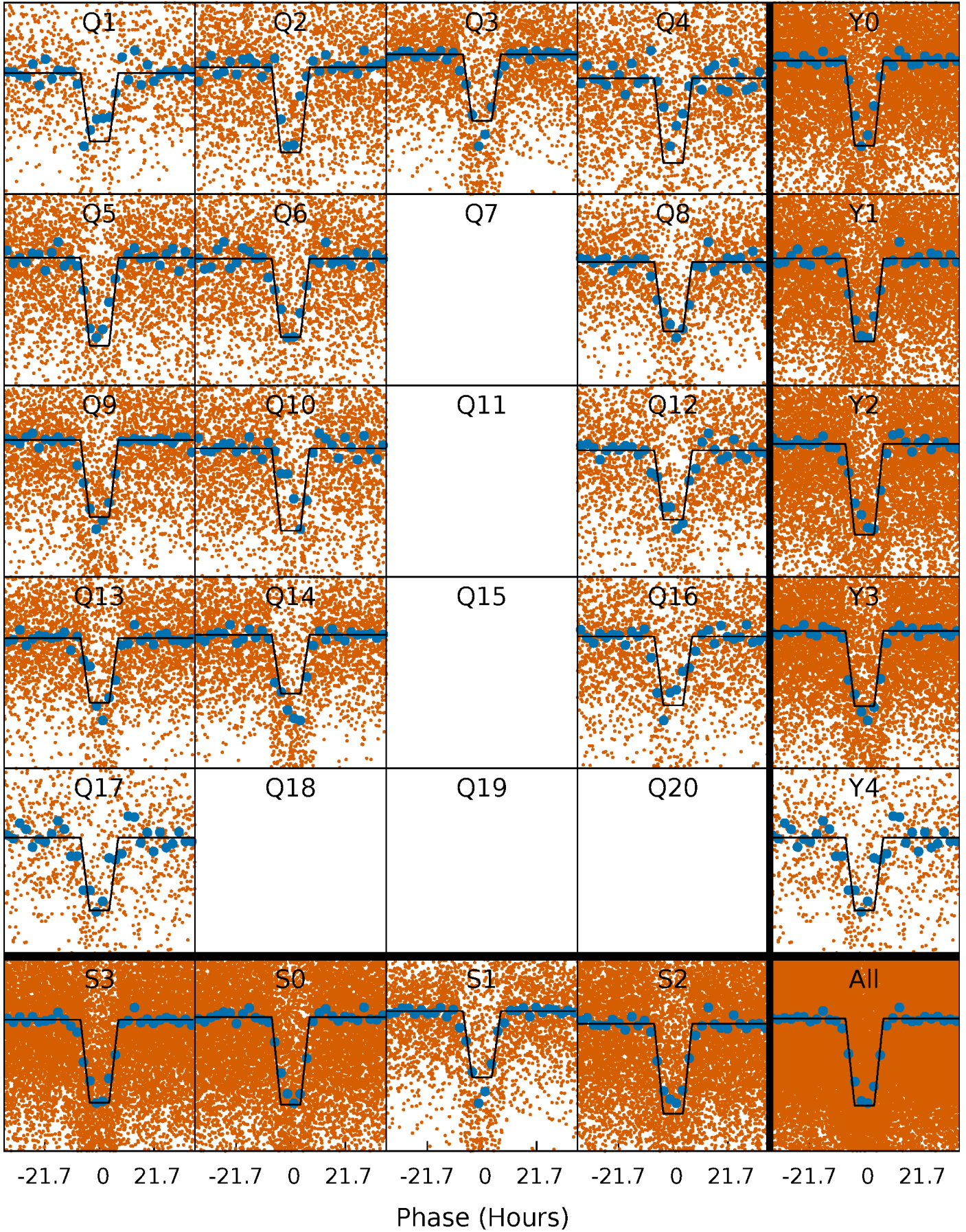
DV Quarter-Phased Transit Curves

TCE 010360907-01 P= 3.873257 Days $T_0=135.086308$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

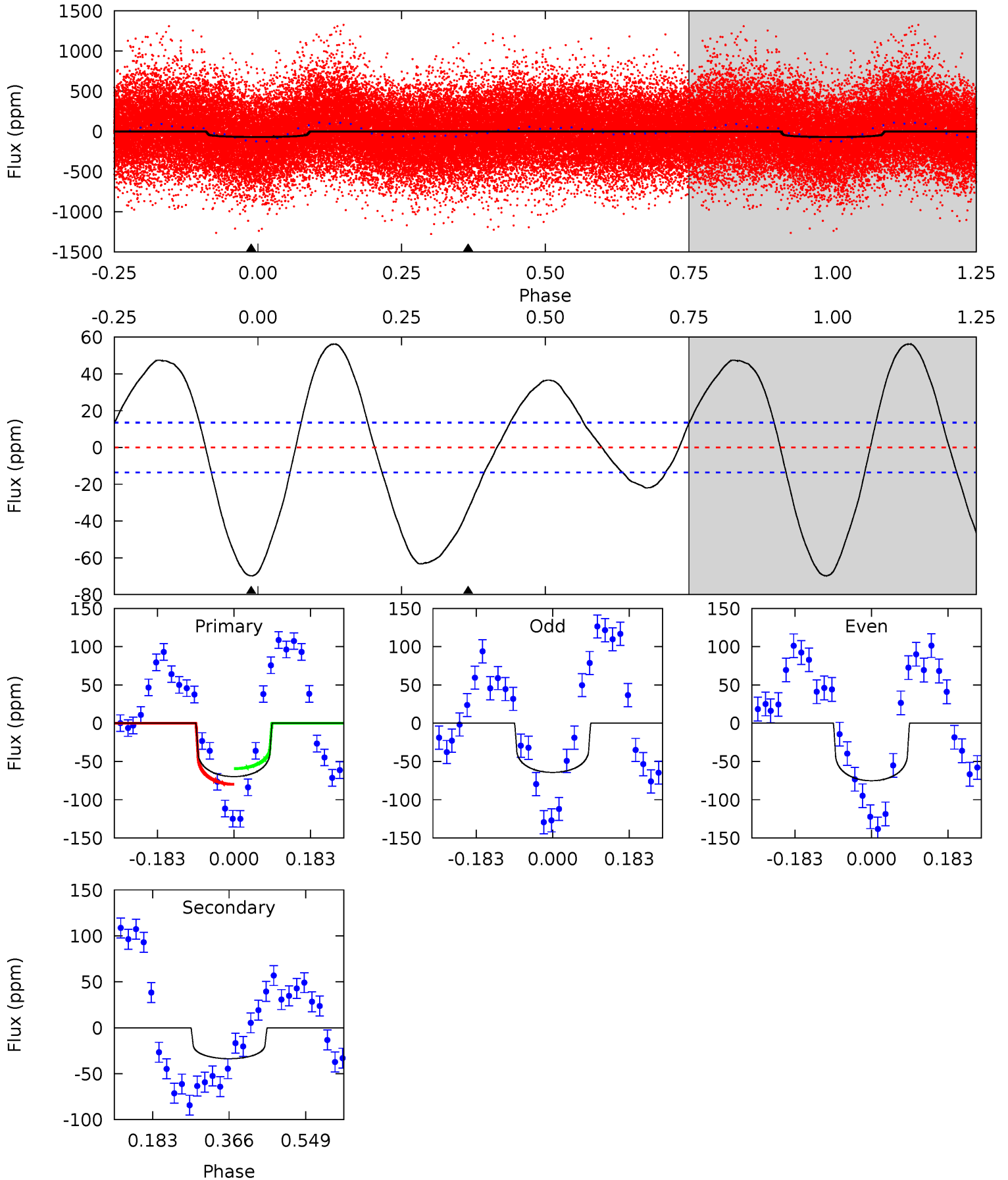
TCE 010360907-01 P= 3.873032 Days $T_0=135.117326$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-01, P = 3.873257 Days, E = 131.213051 Days

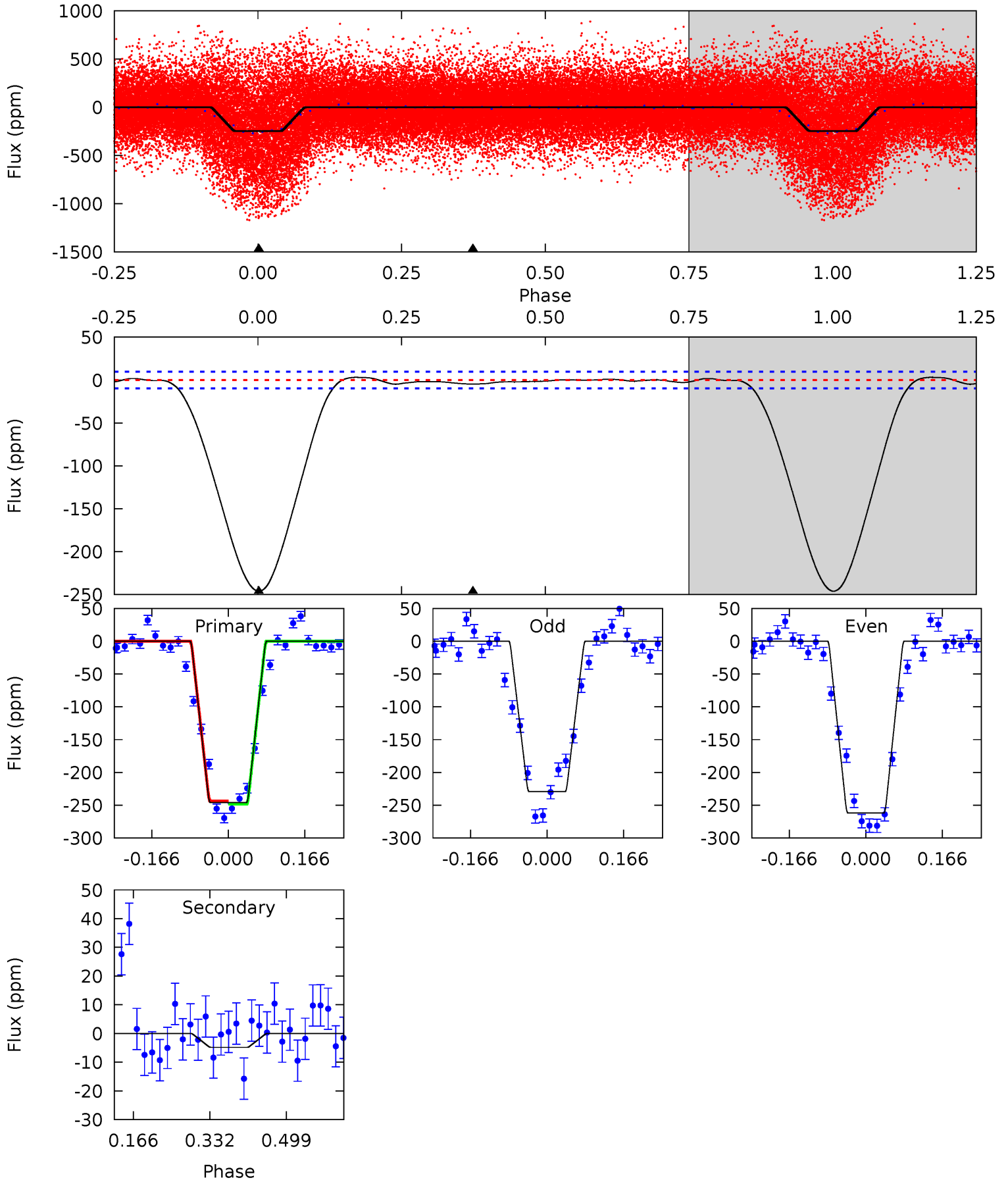
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	11.0	0	0	4.44	1.33	6.27	22.8	22.8	11.0	11.0	1.78	1.35	0.45	3.33



Alt Model-Shift Uniqueness Test

010360907-01, P = 3.873032 Days, E = 131.244294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
112.3	2.21	0	0	4.46	1.38	0.63	112.3	112.3	2.21	2.21	7.39	1.01	0.01	1.08



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-34 ± 3	$1.55^{+0.98}_{-0.83}$	2462^{+200}_{-289}	5678^{+3039}_{-1043}	21^{+74}_{-14}
Alt.	-5 ± 2	$3.50^{+1.28}_{-1.12}$	2469^{+197}_{-290}	2680^{+501}_{-5044}	$0.548^{+0.807}_{-0.326}$

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 $A_{obs} \gg 1.0$

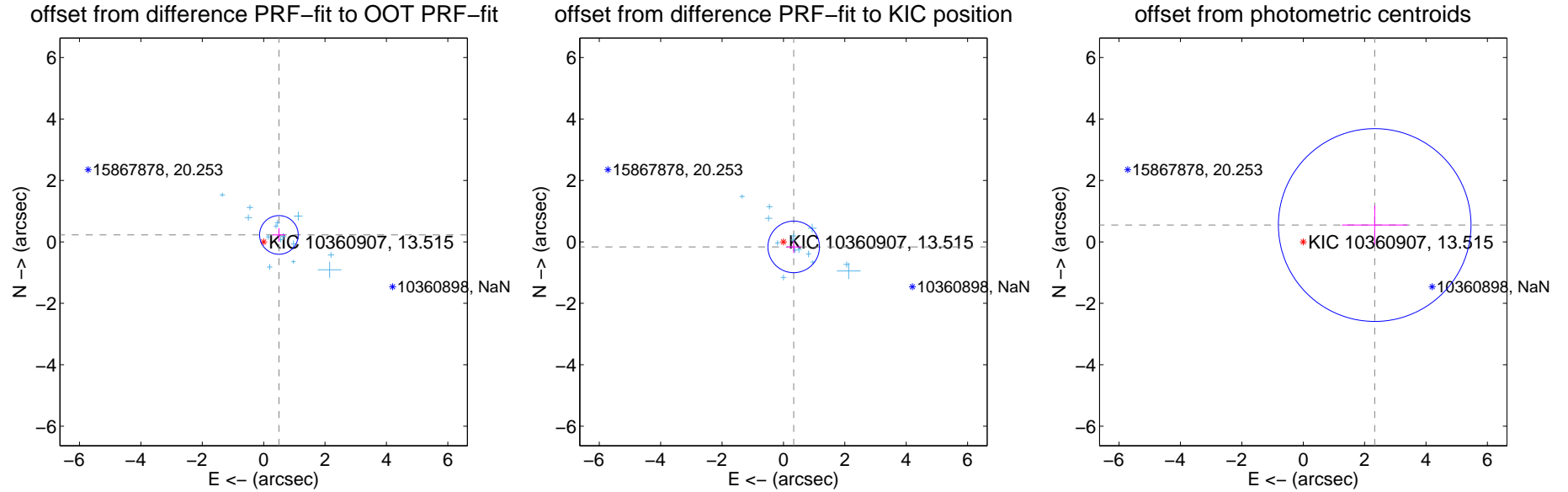
DV Centroid Data

Supplemental centroid analysis for 010360907-01. Kepler magnitude: 13.52. Transit SNR 6.70

There are 14 quarters with good PRF difference image offsets

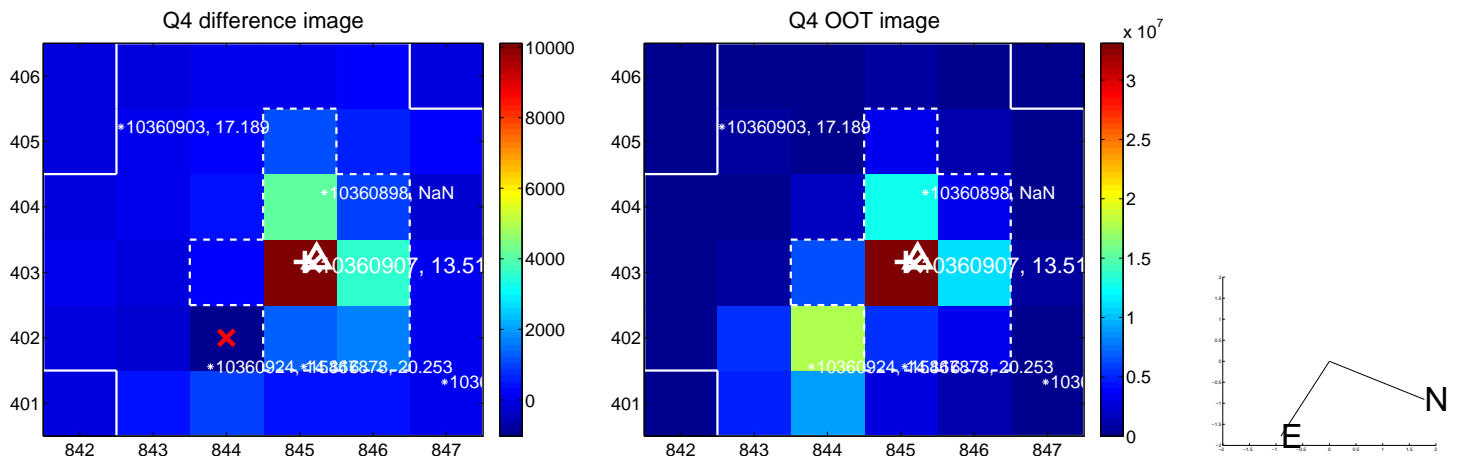
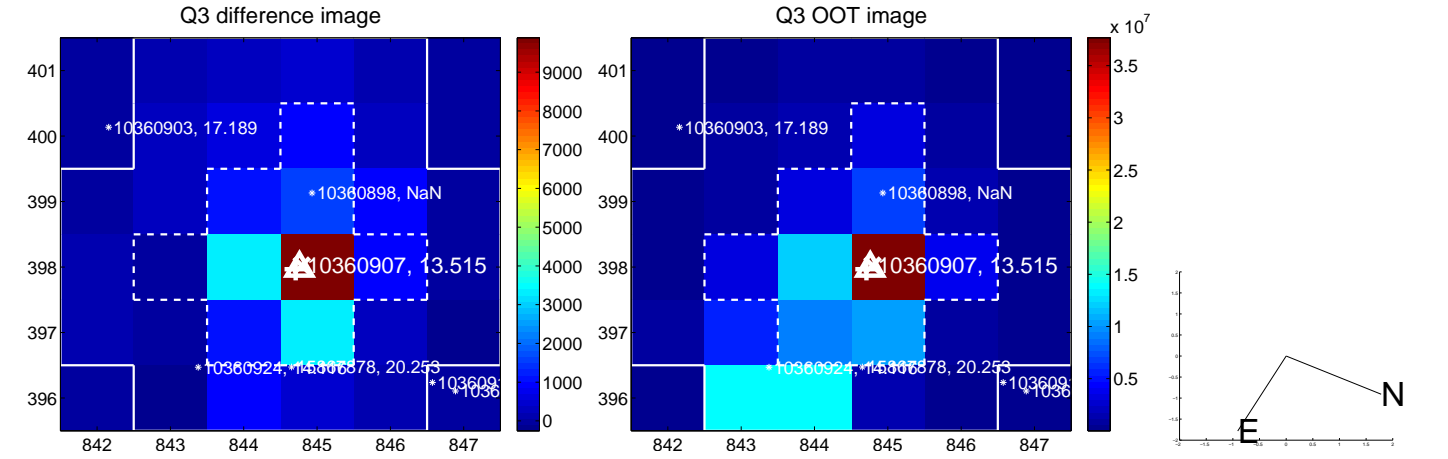
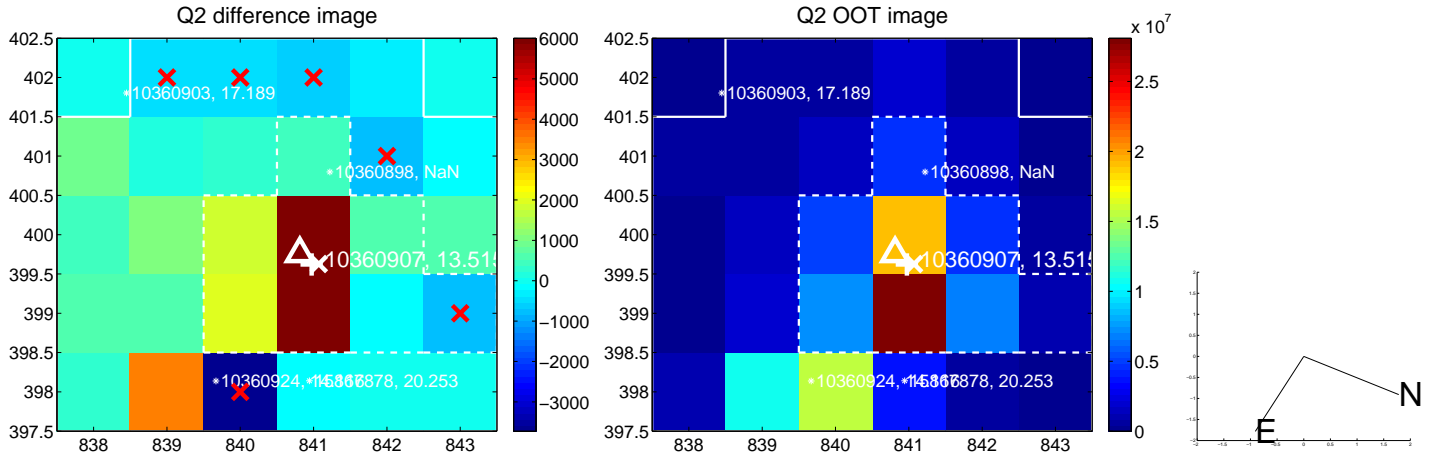
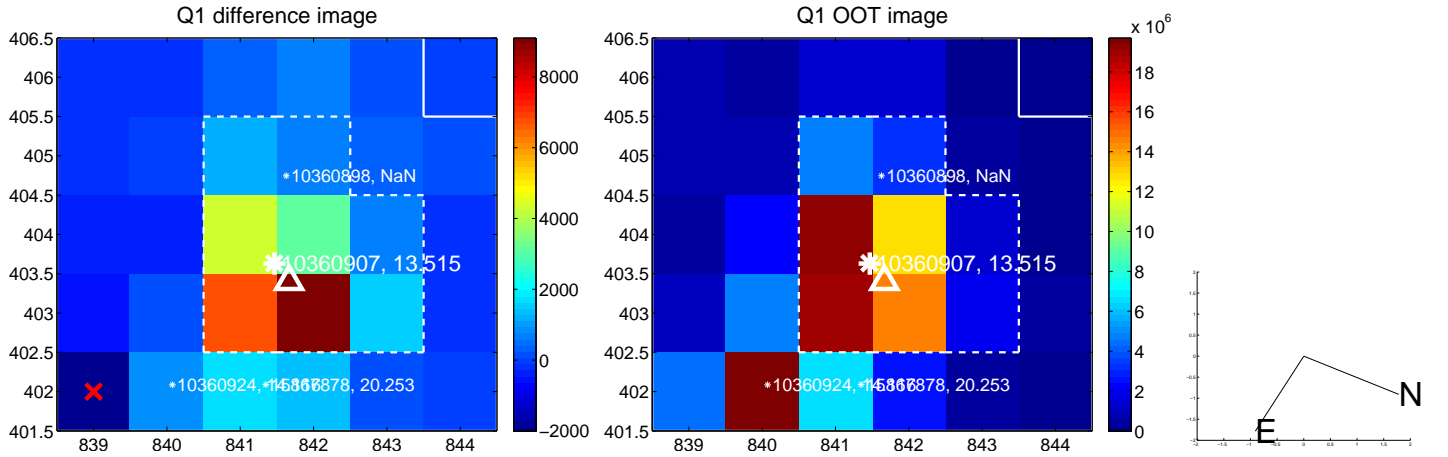
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.547 ± 0.210	2.61	-0.497 ± 0.207	0.226 ± 0.223
PRF-fit source offset from KIC position	0.372 ± 0.280	1.33	-0.334 ± 0.237	-0.163 ± 0.200
photometric centroid source offset	2.39 ± 1.05	2.29	-2.33 ± 1.06	0.55 ± 0.63

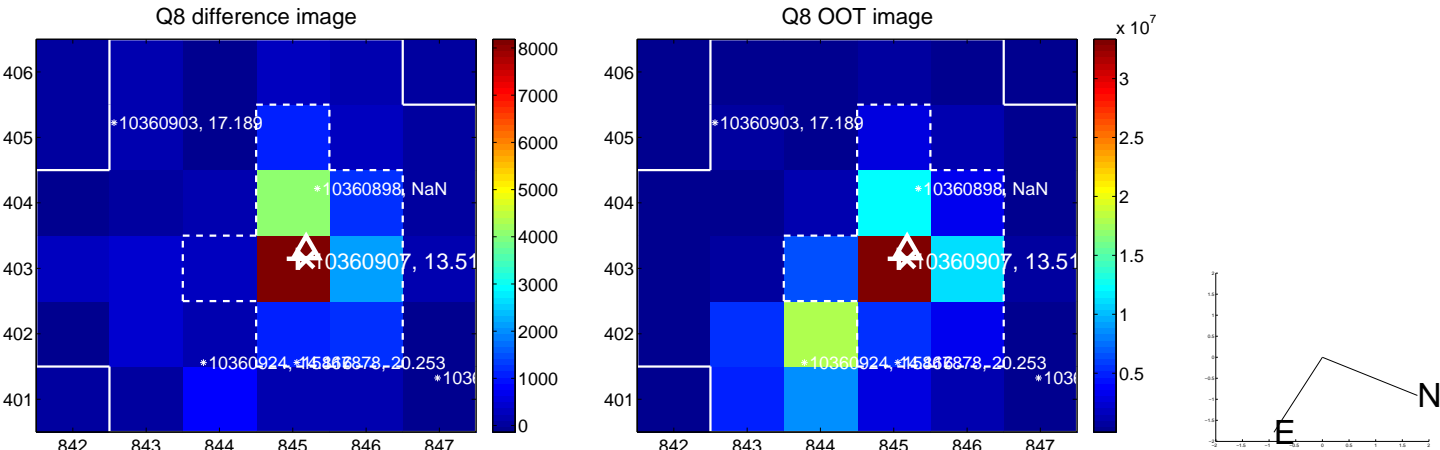
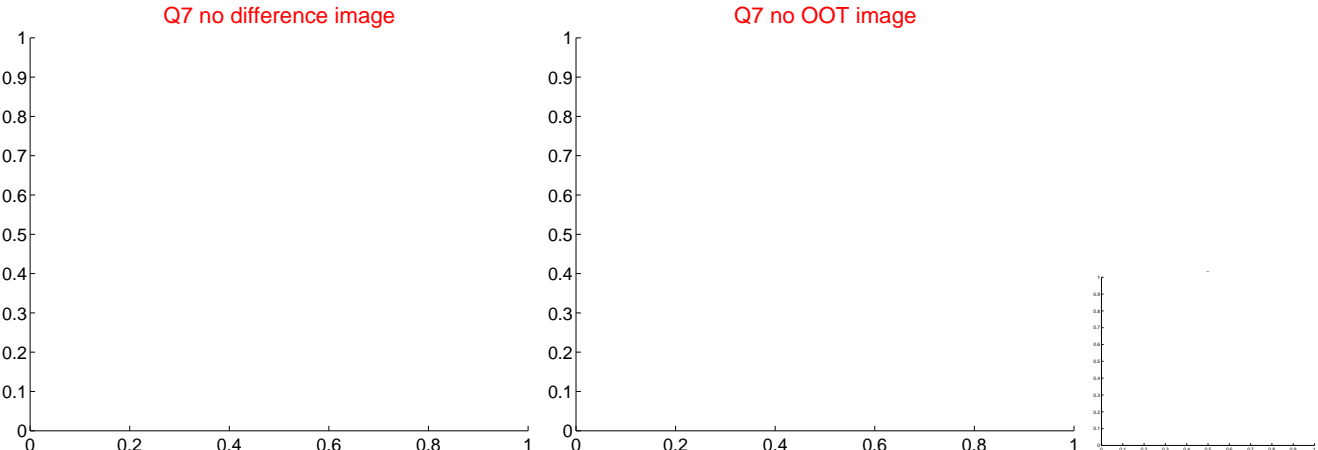
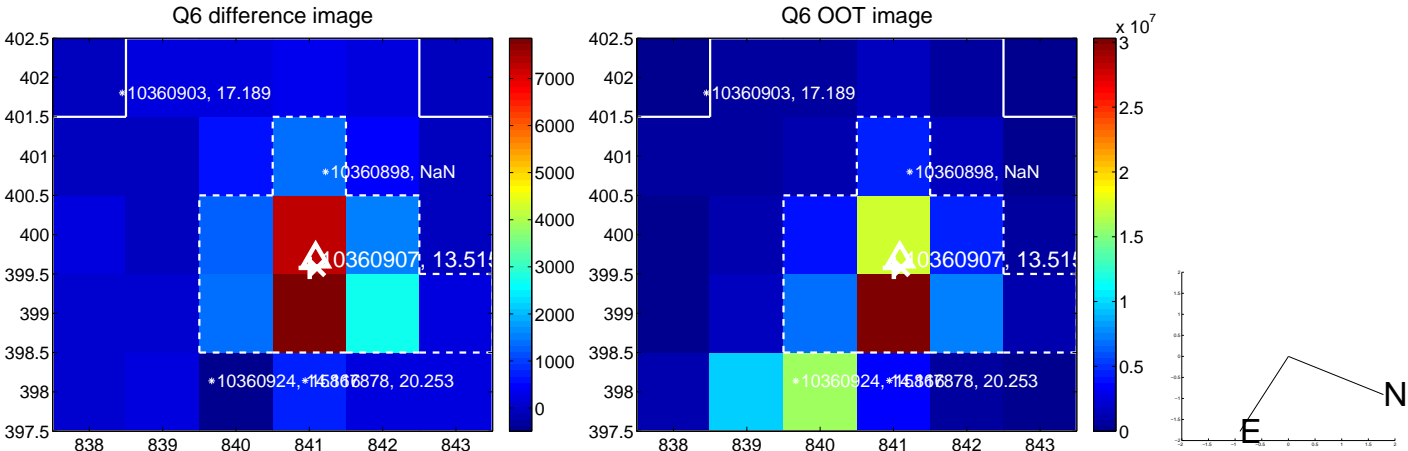
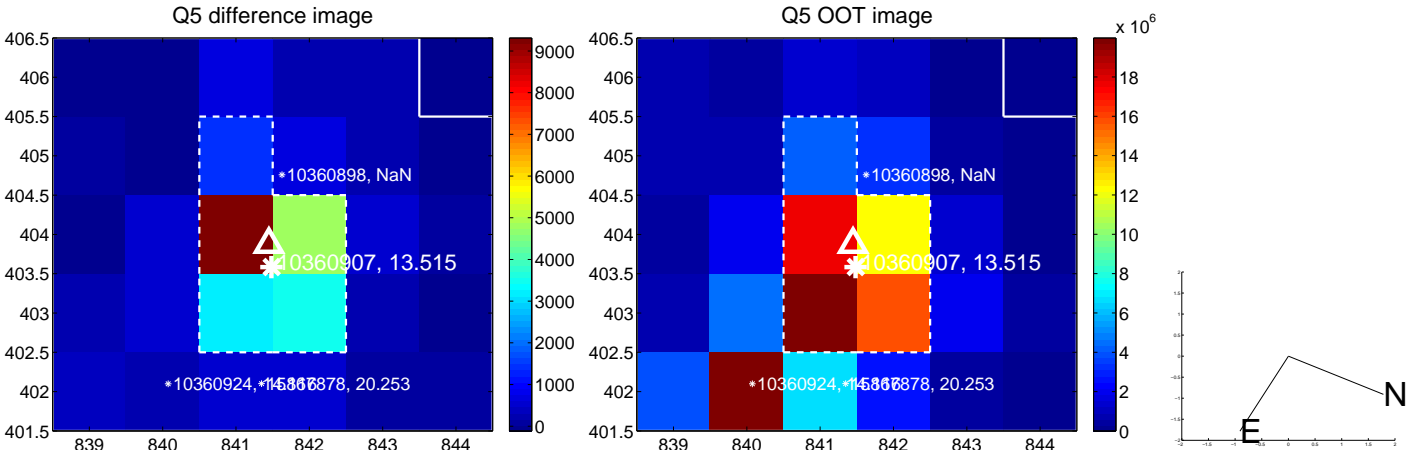


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

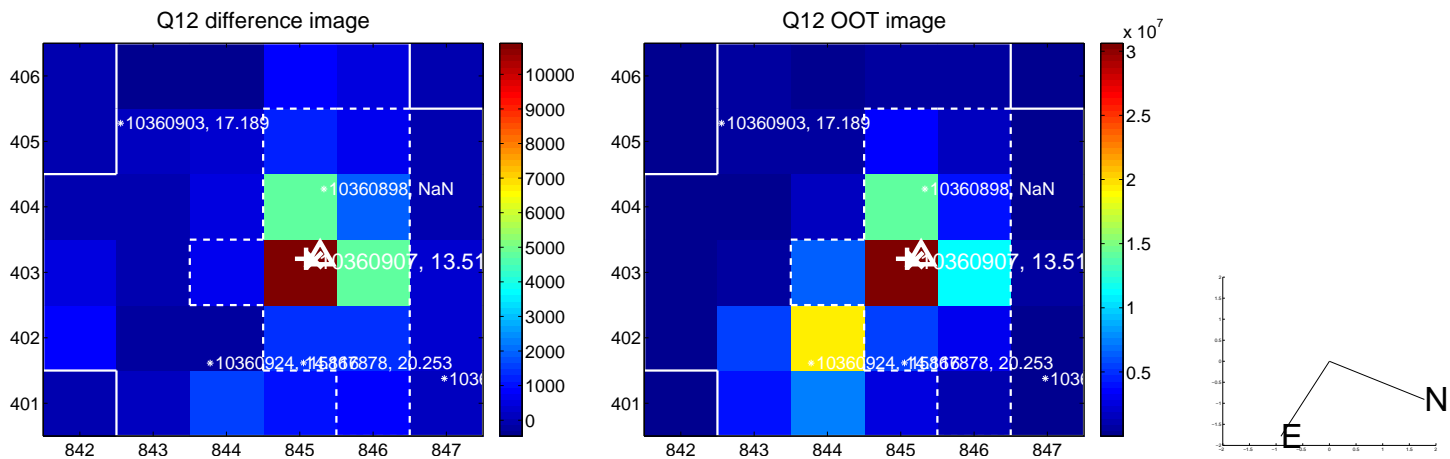
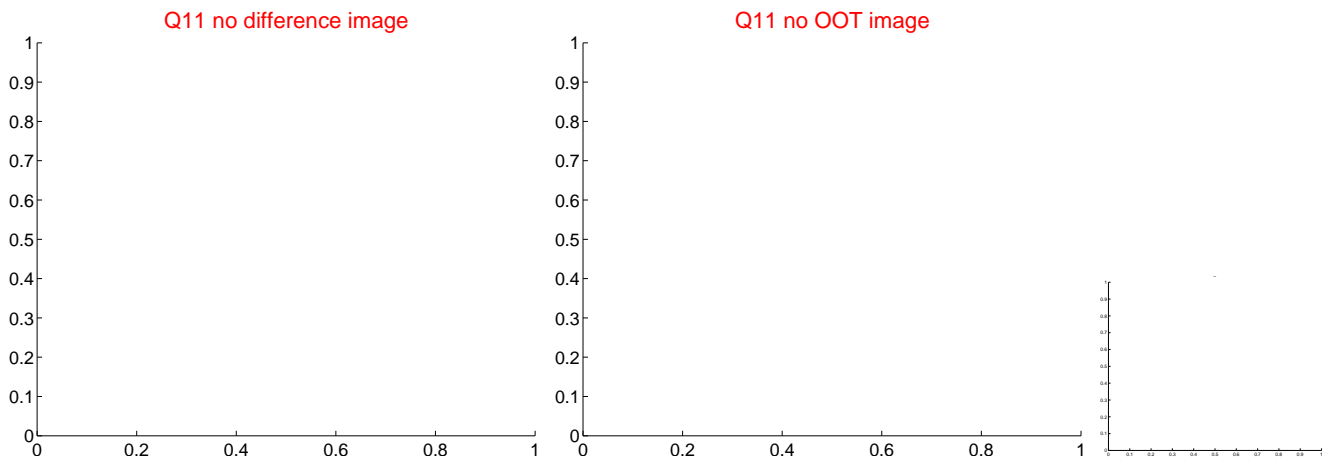
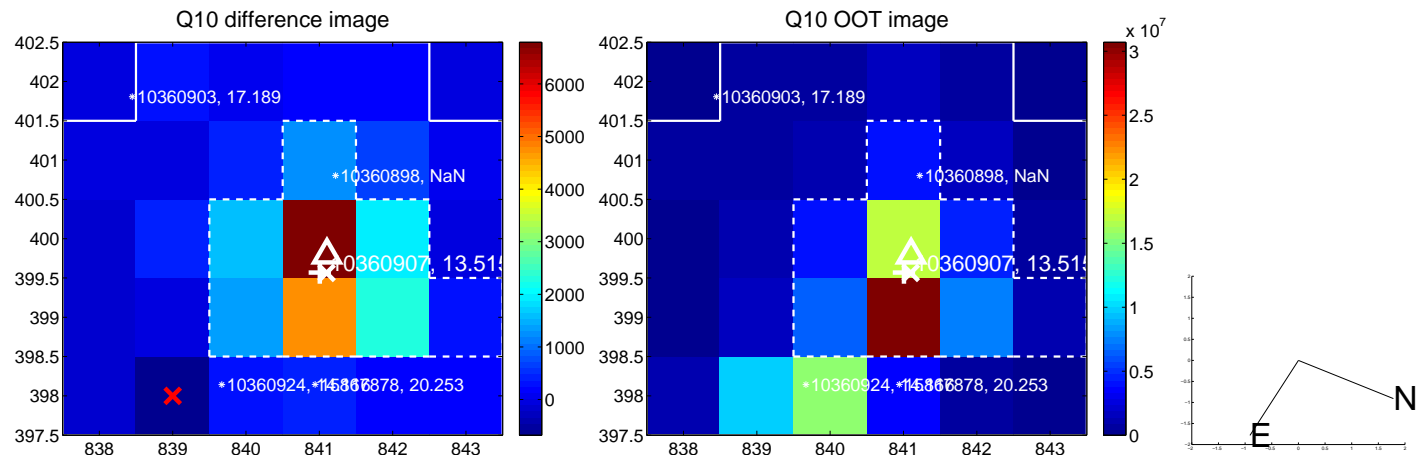
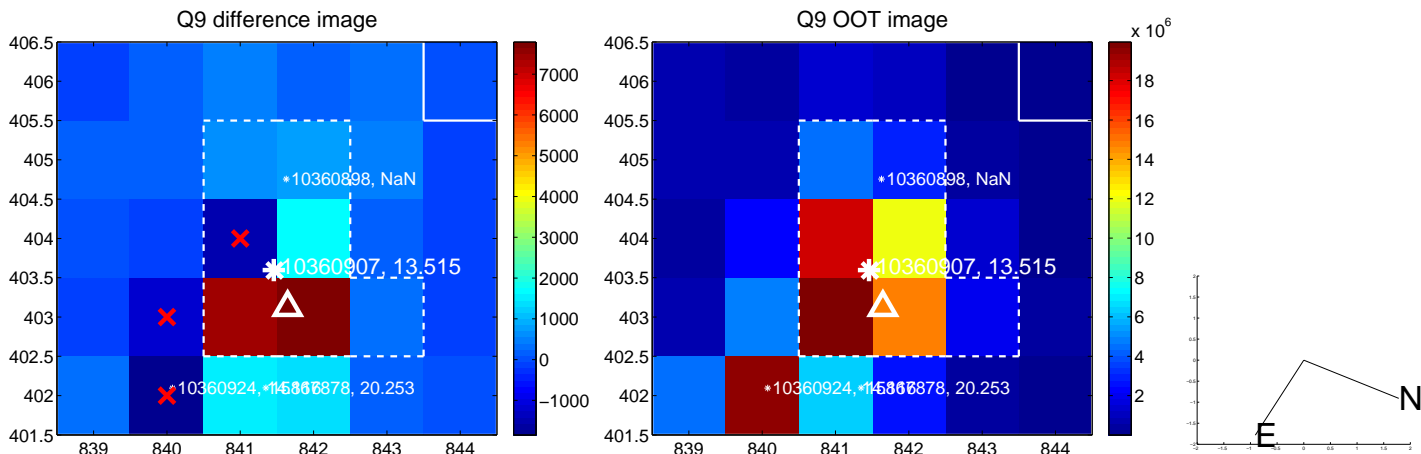
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



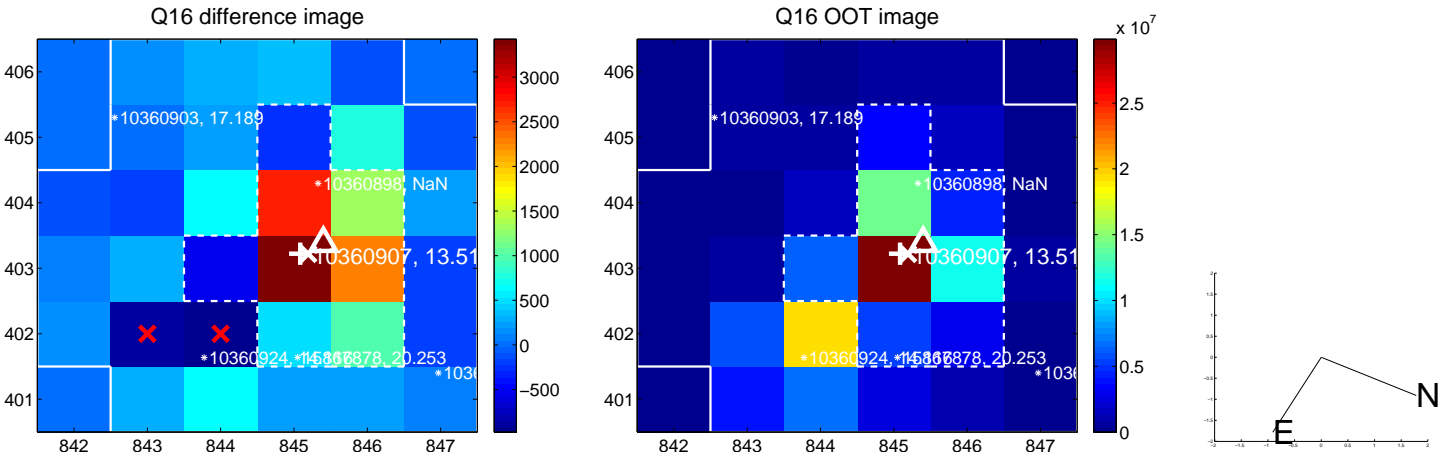
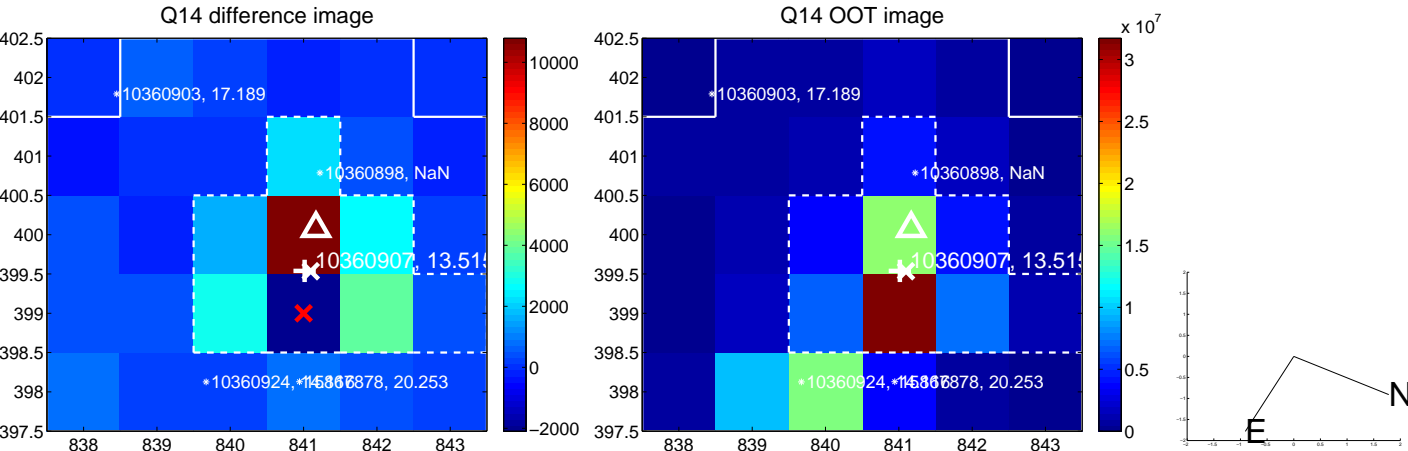
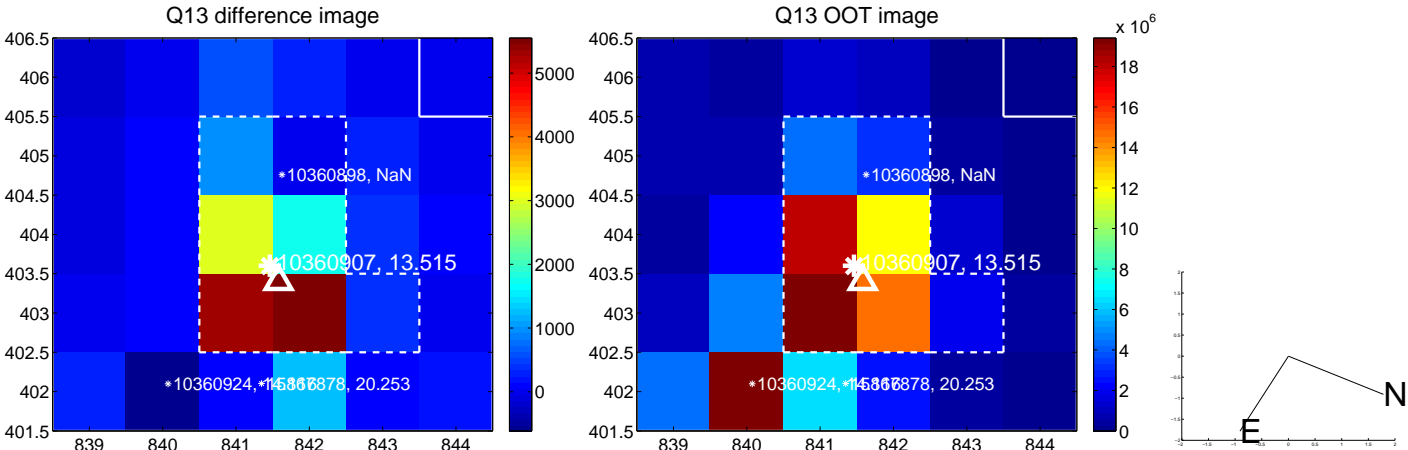
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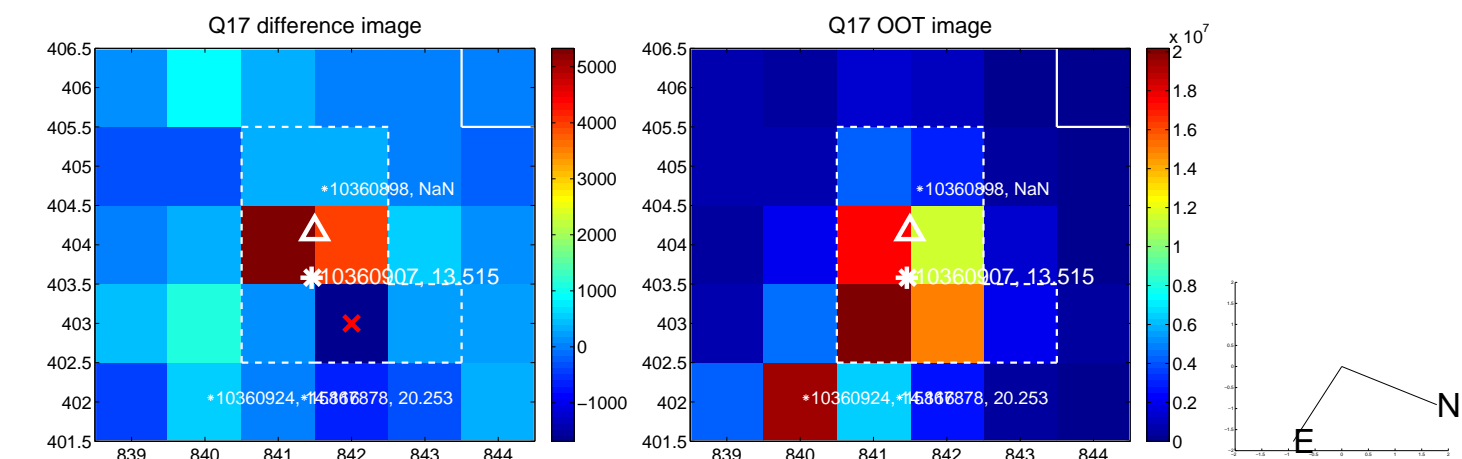
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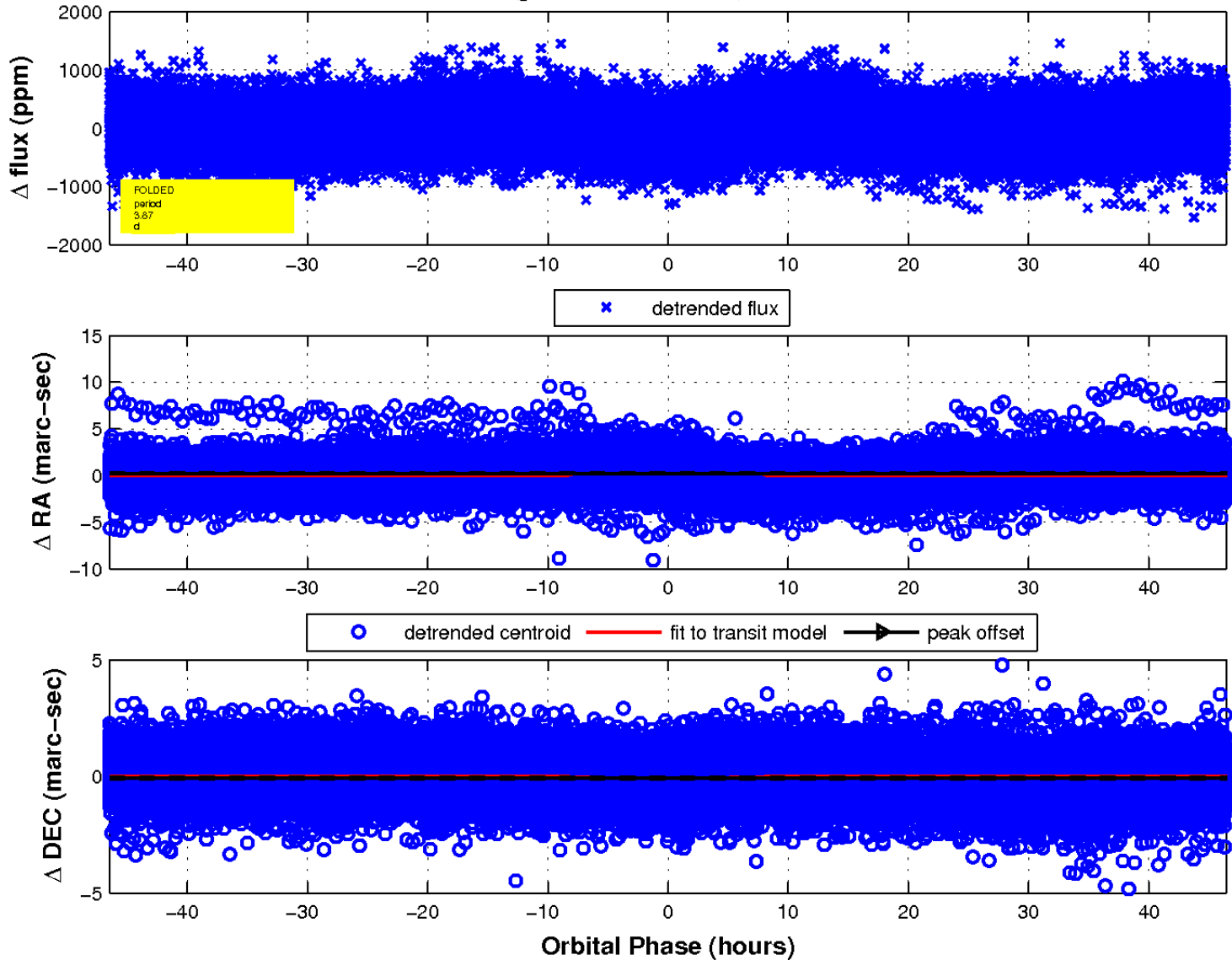
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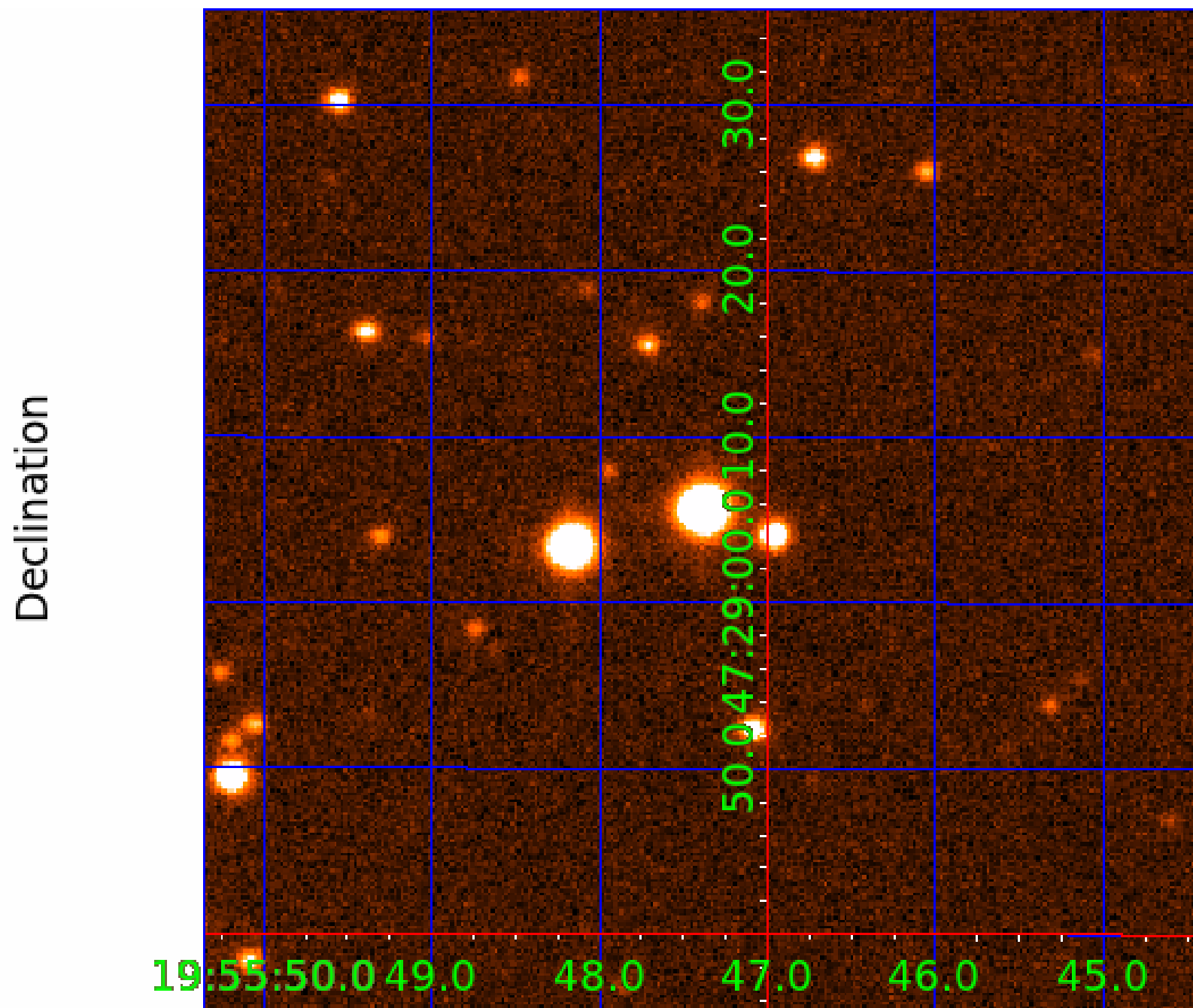
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 7



UKIRT Image



KIC 010360907

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010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
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Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

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

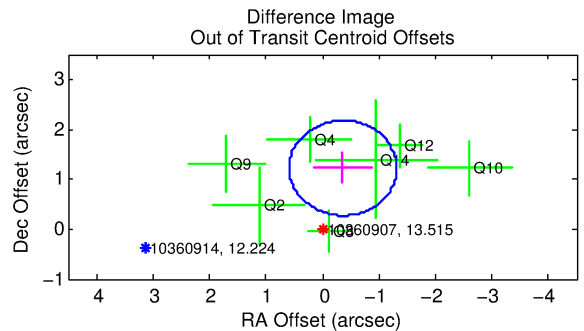
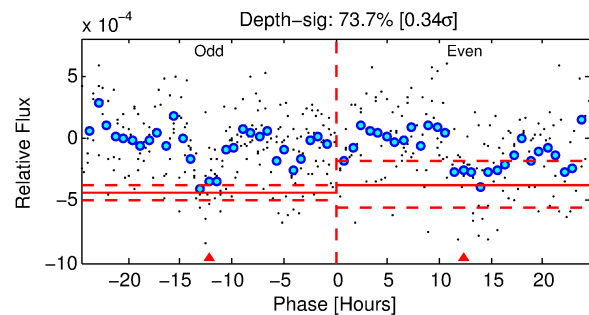
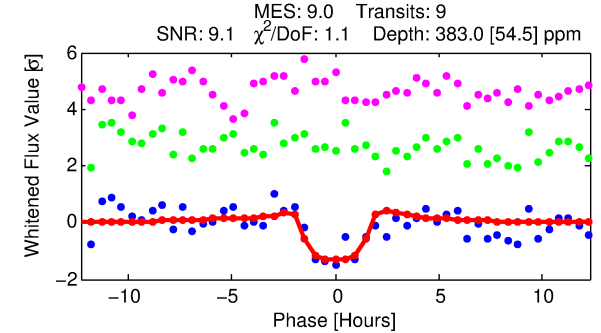
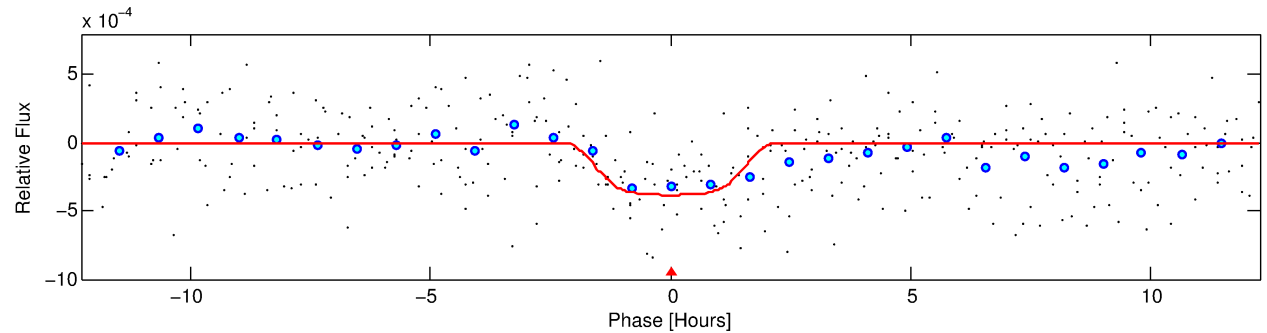
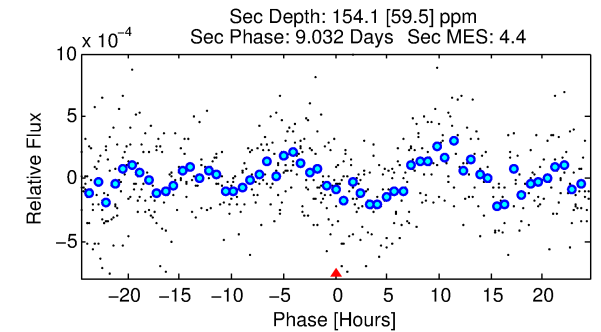
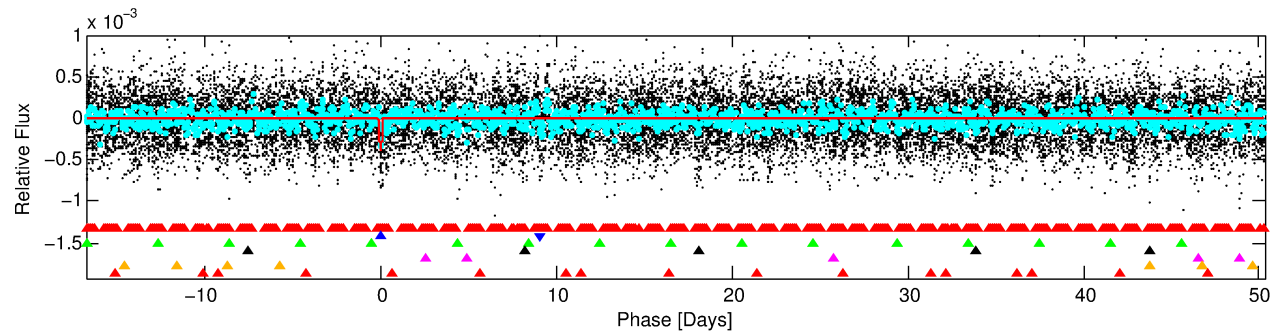
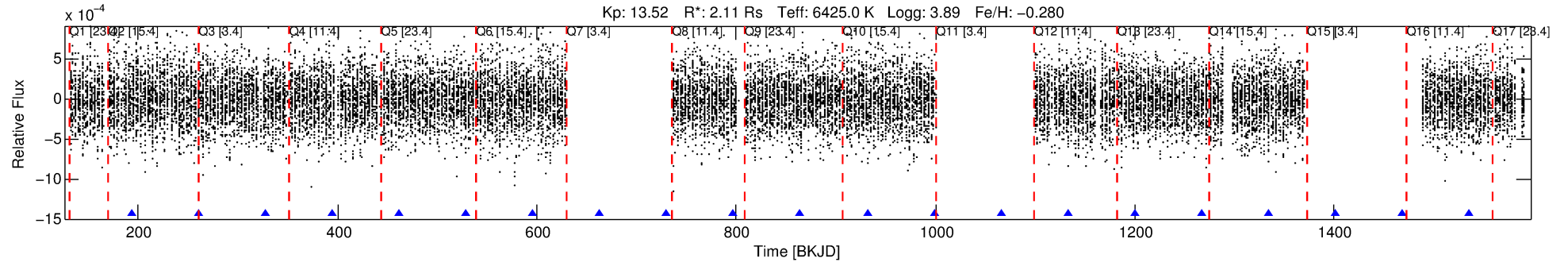
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-02

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 2 of 7 Period: 67.100 d



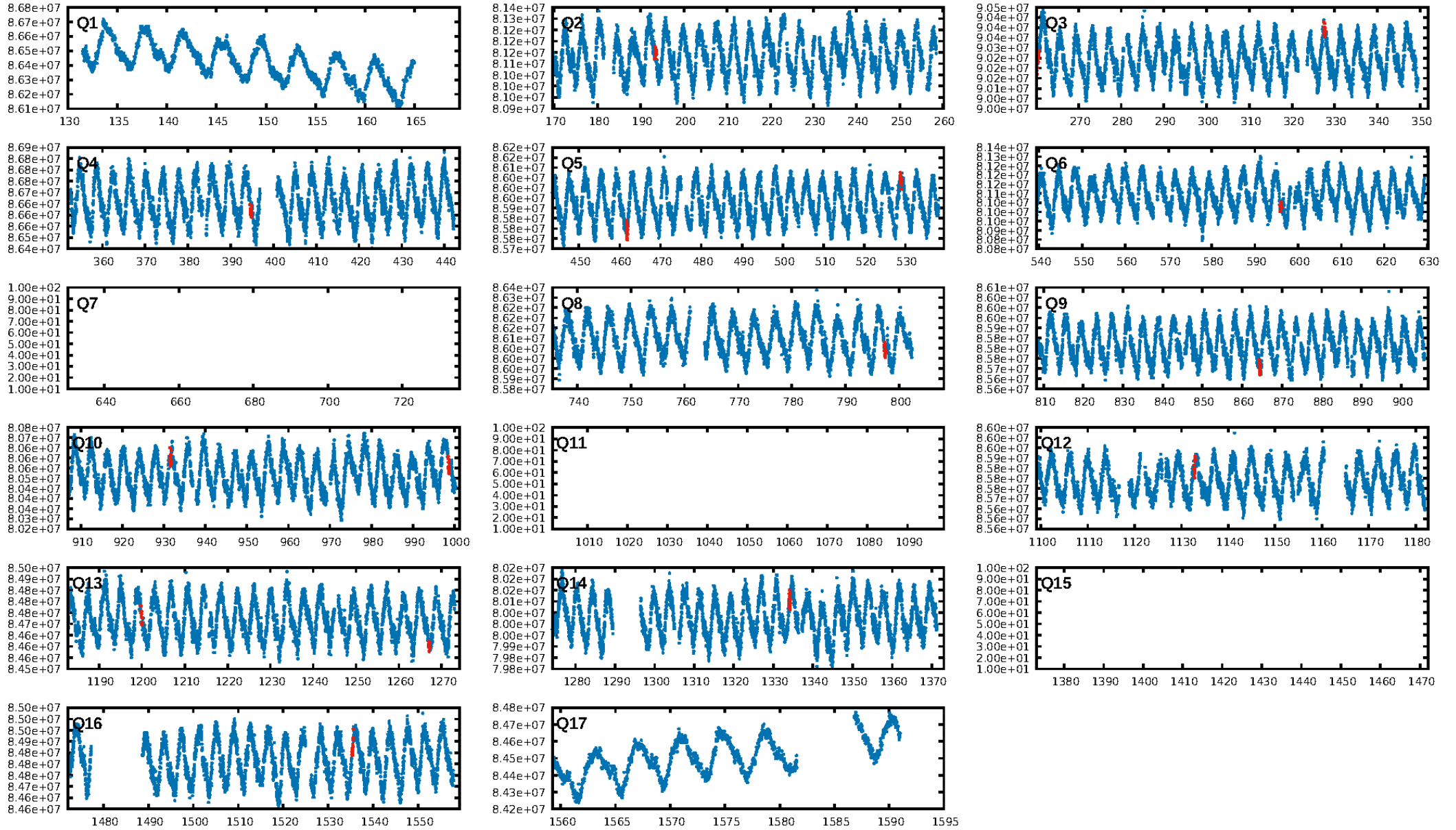
DV Fit Results:

Period = 67.10045 [0.00088] d
Epoch = 193.4256 [0.0098] BKJD
Rp/R* = 0.0227 [0.0023]
a/R* = 43.28 [13.29]
b = 0.96 [0.02]
Seff = 55.96 [40.33]
Teff = 697 [126] K
Rp = 5.22 [2.36] Re
a = 0.3480 [0.1517] AU
Ag = 376.33 [312.97] [1.20σ]
Teffp = 4749 [541] K [7.29σ]

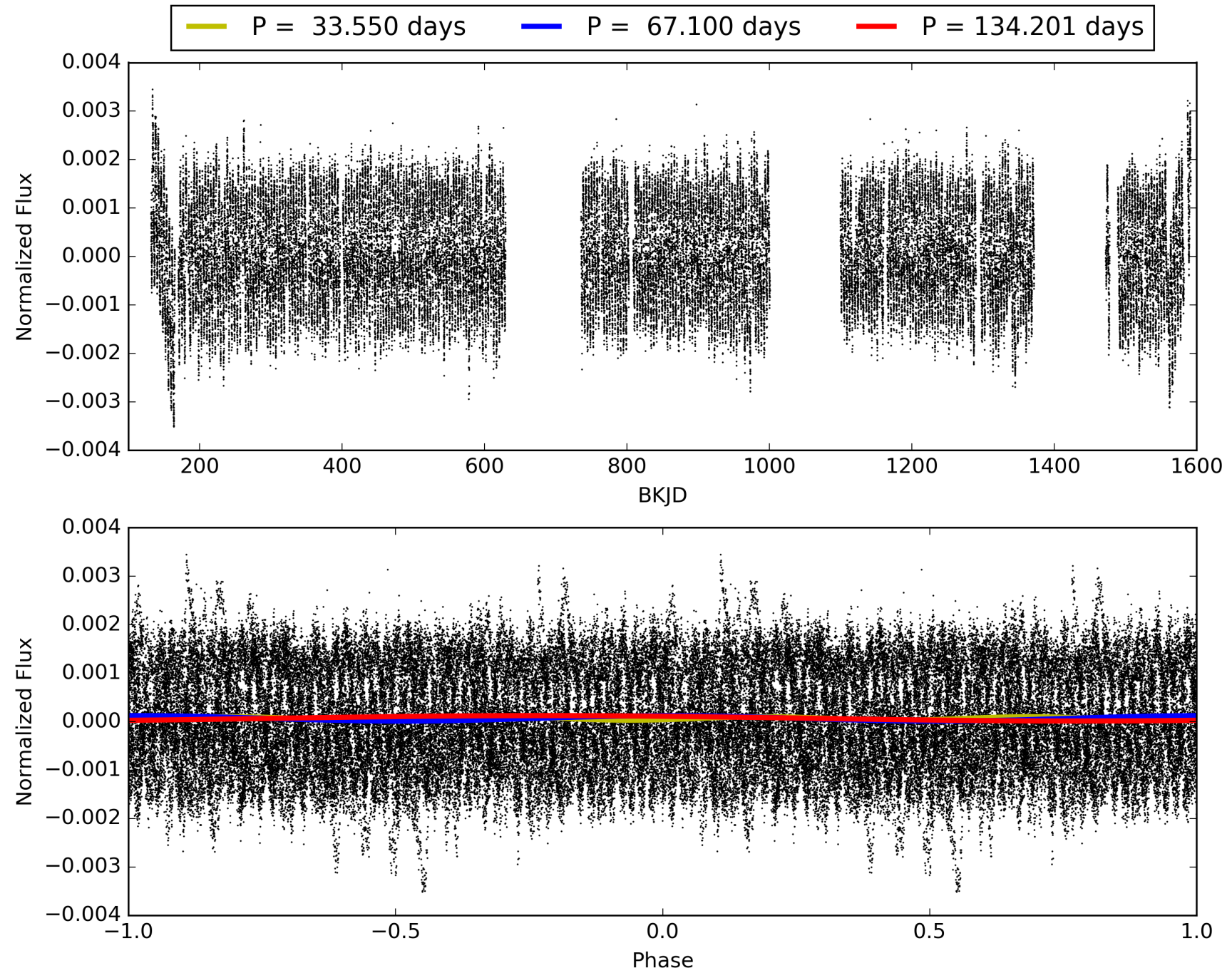
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [88.97σ]
LongPeriod-sig: 100.0% [50.28σ]
ModelChiSquare2-sig: 39.2%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 3.88e-10
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 0.7808
Centroid-sig: 35.4%
Centroid-so: 1.035 arcsec [1.20σ]
OotOffset-rm: 1.273 arcsec [4.01σ]
KicOffset-rm: 1.150 arcsec [4.37σ]
OotOffset-st: 3/0/3/1 [7]
KicOffset-st: 3/0/3/1 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 0.64 [7/11]

TCE 010360907-02, PDC Light Curves

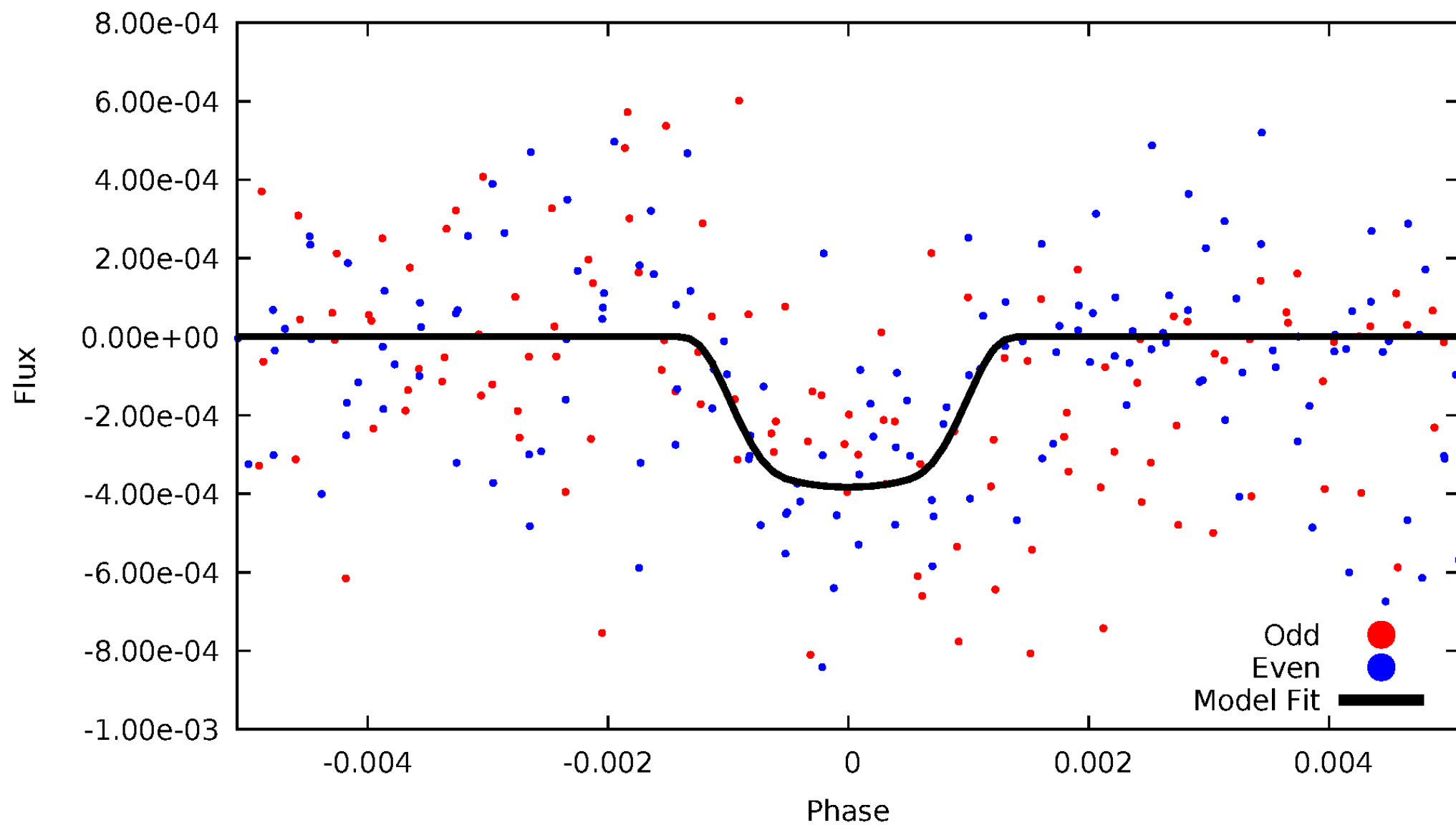


TCE 010360907-02



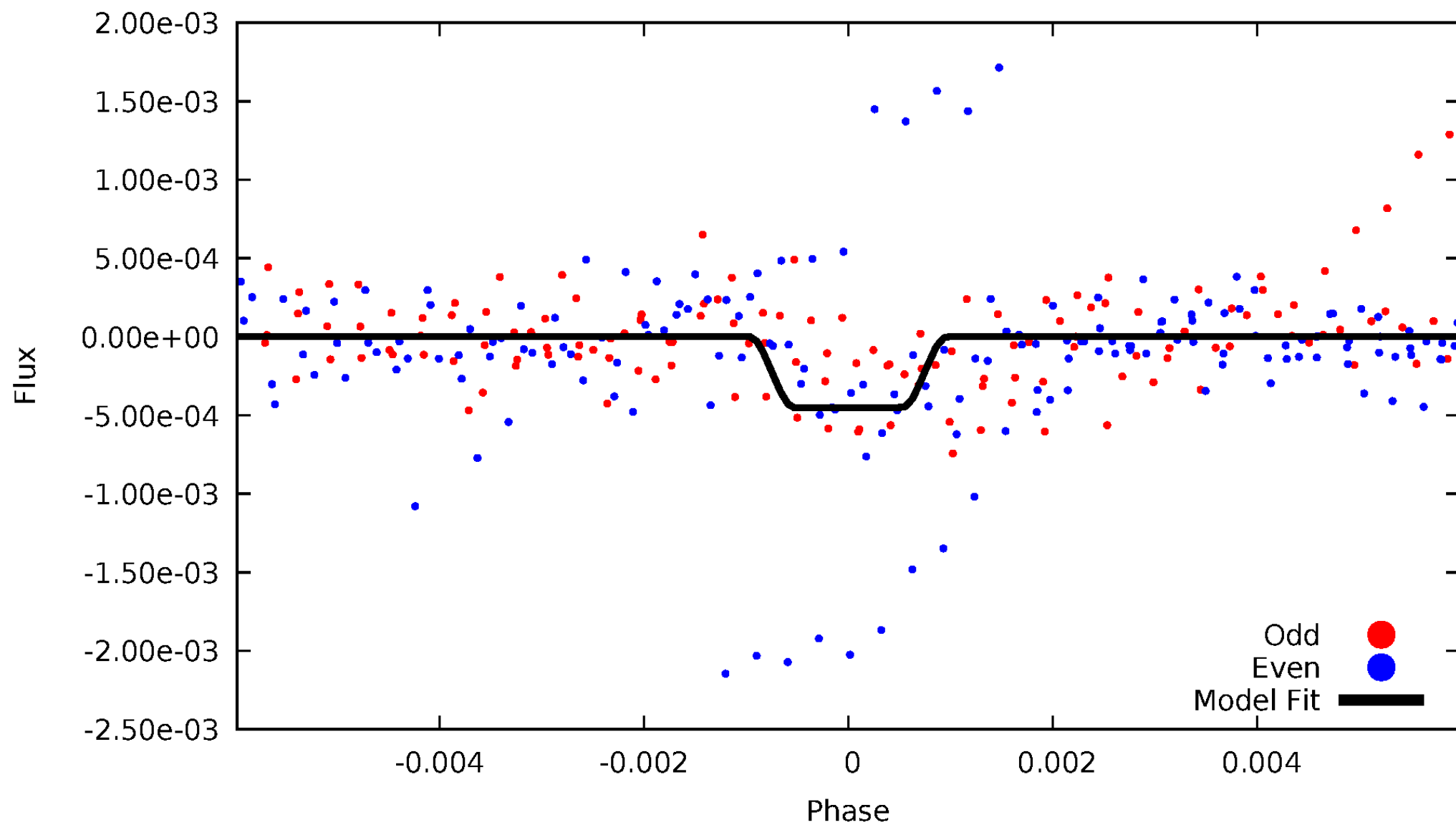
DV Odd/Even

TCE 010360907-02



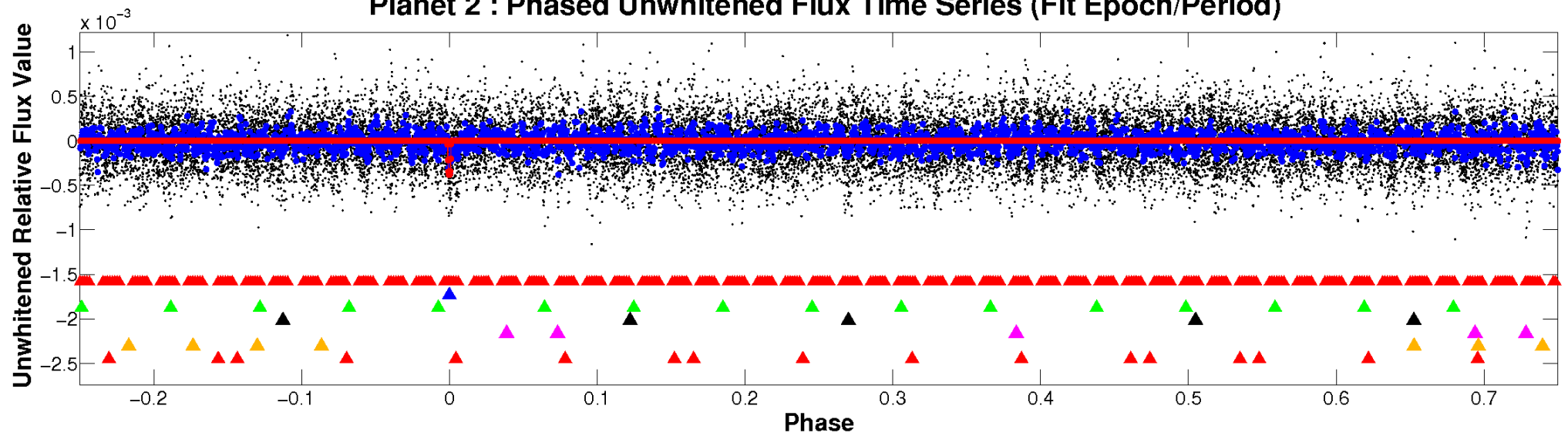
ALT Odd/Even

TCE 010360907-02

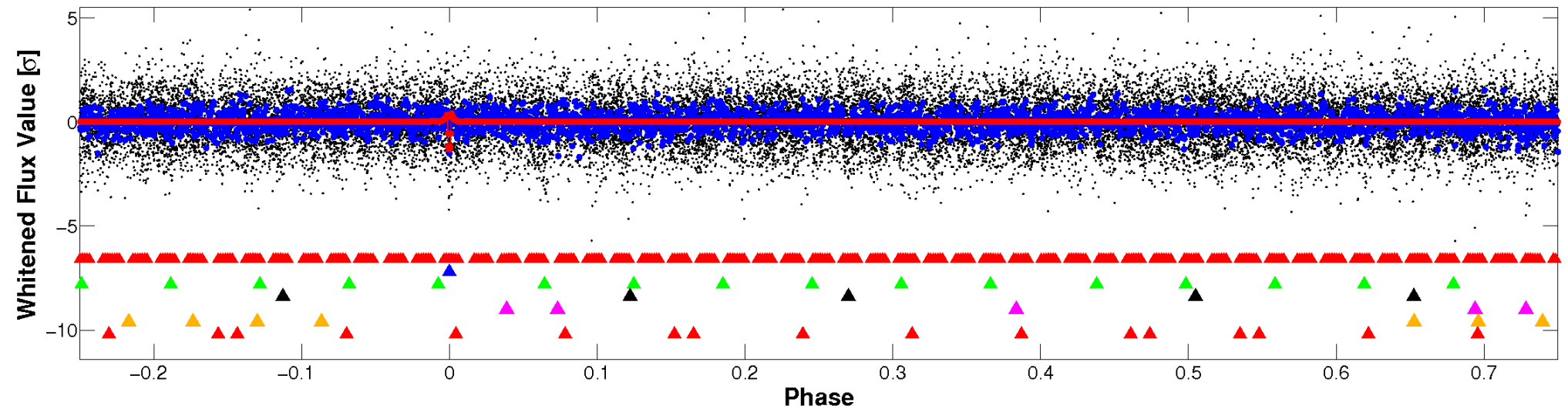


Non-Whitened Vs. Whitened Light Curve

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

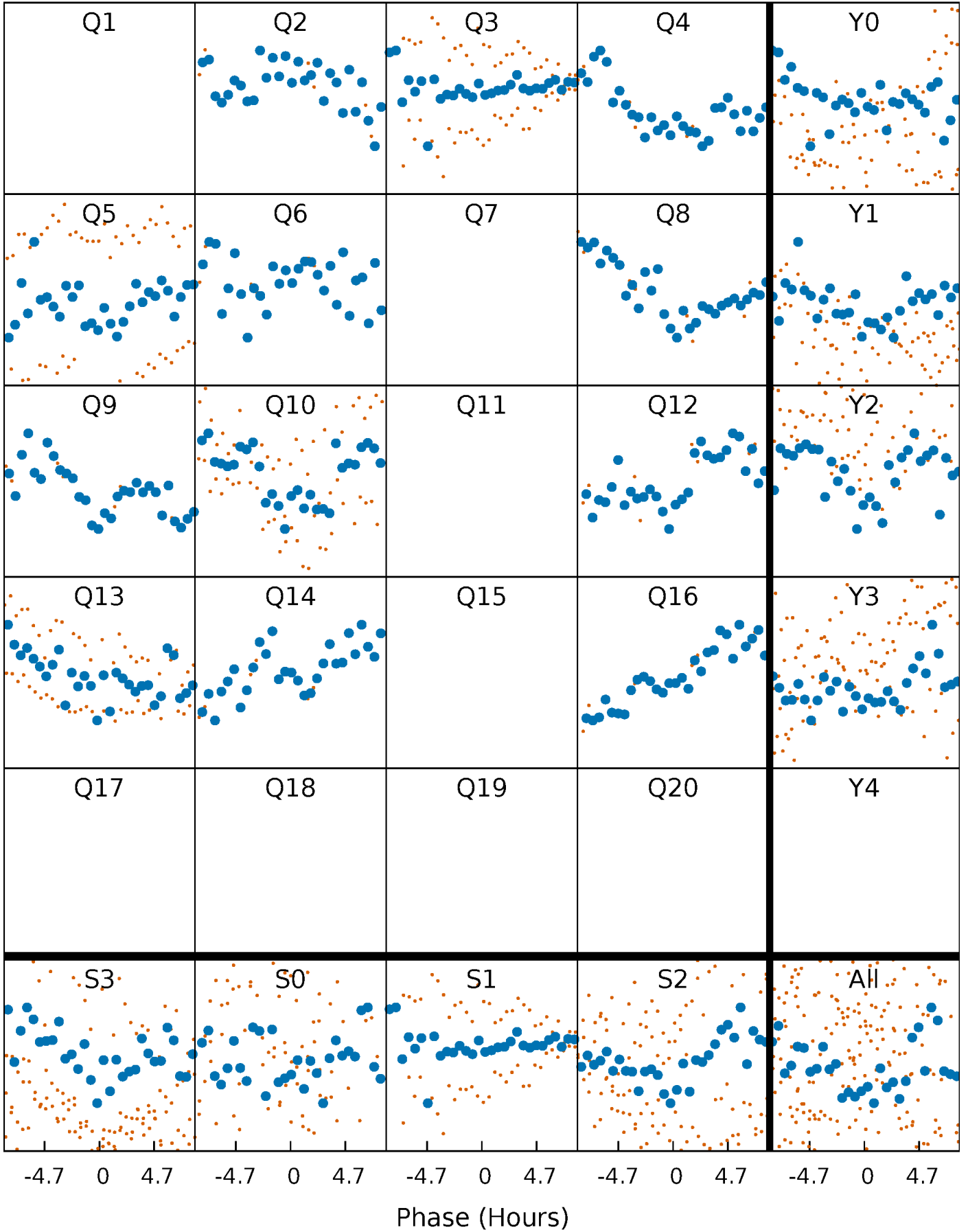


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



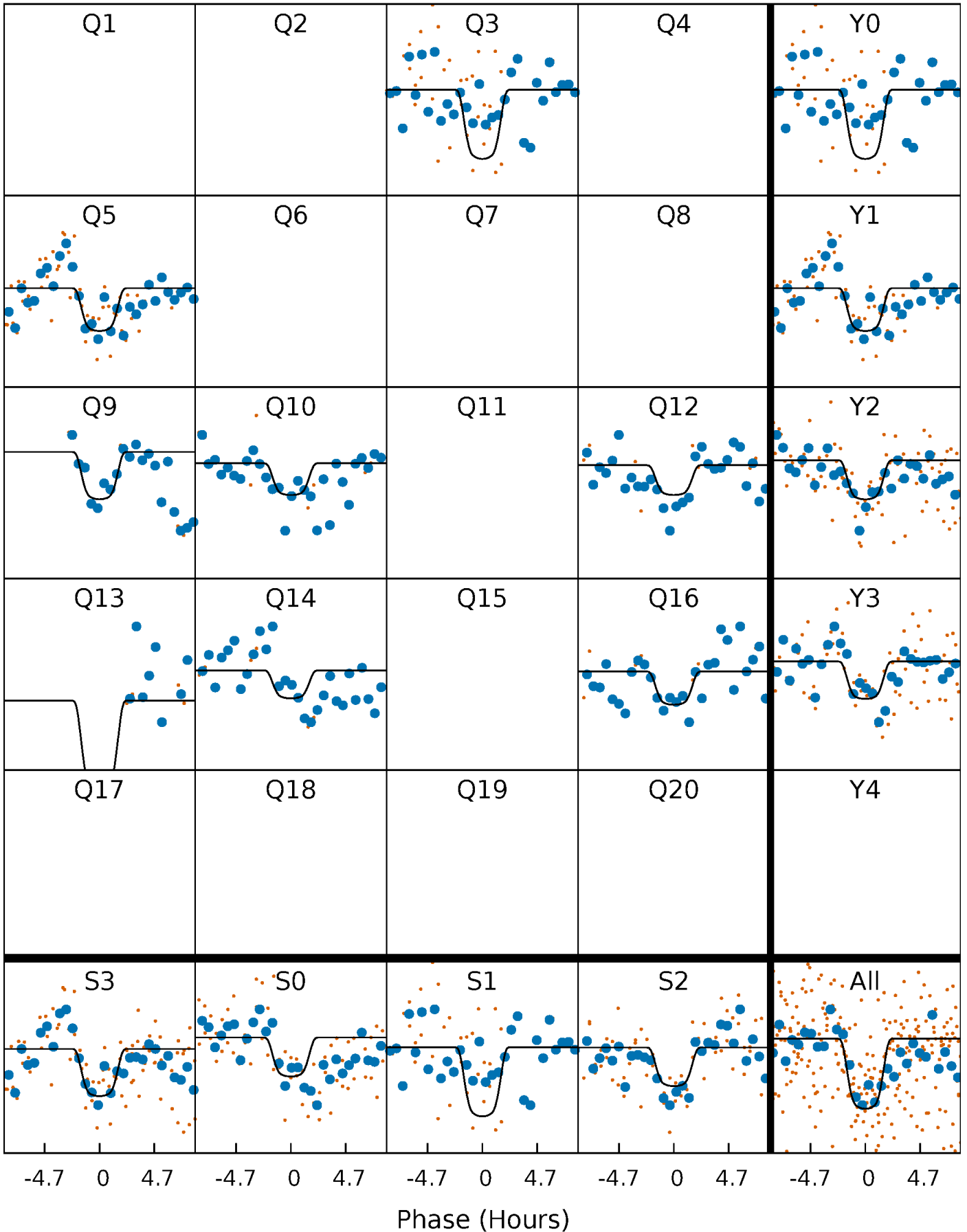
PDC Quarter-Phased Transit Curves

TCE 010360907-02 P= 67.100448 Days $T_0=193.425634$ (BKJD)



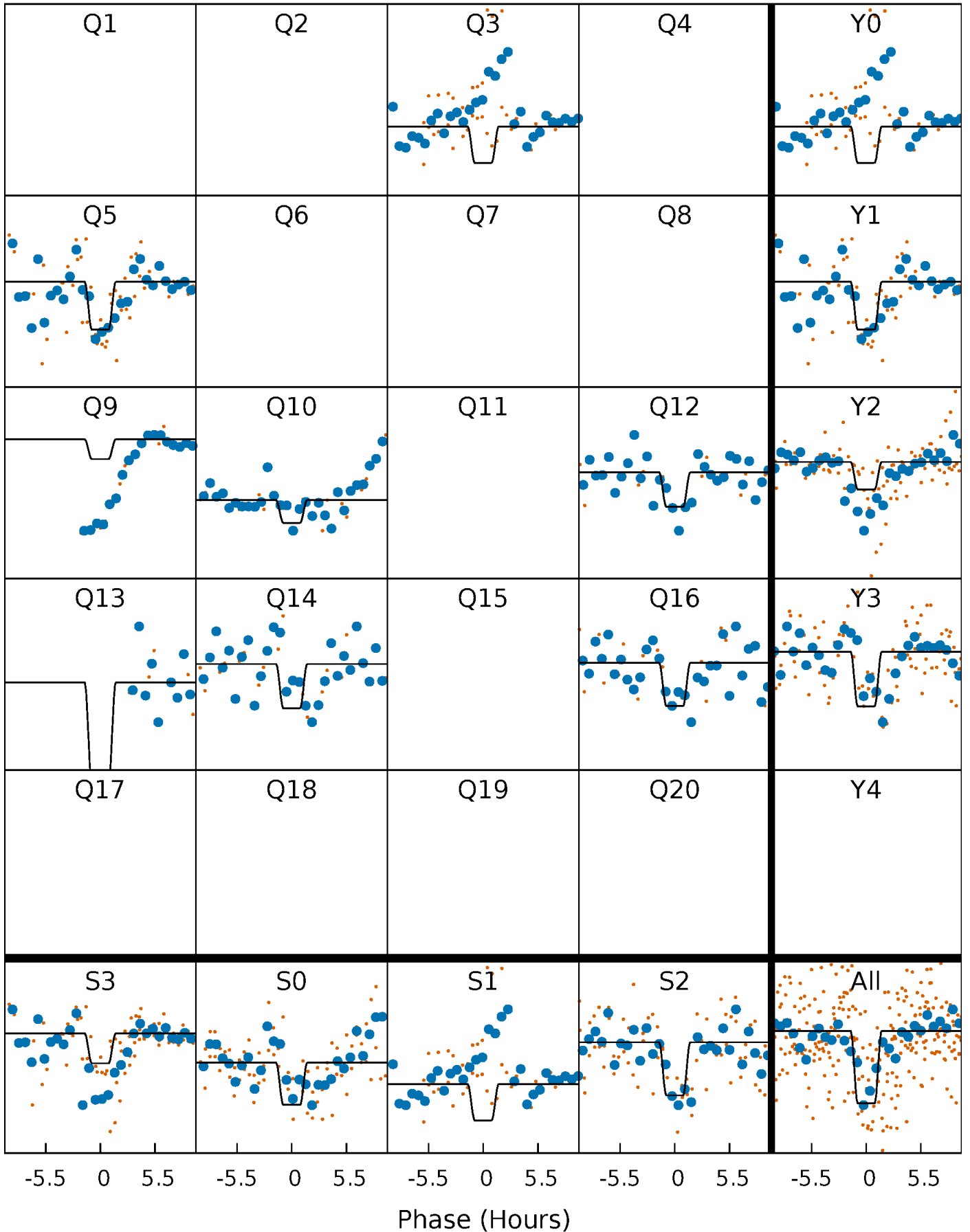
DV Quarter-Phased Transit Curves

TCE 010360907-02 $P = 67.100448$ Days $T_0 = 193.425634$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

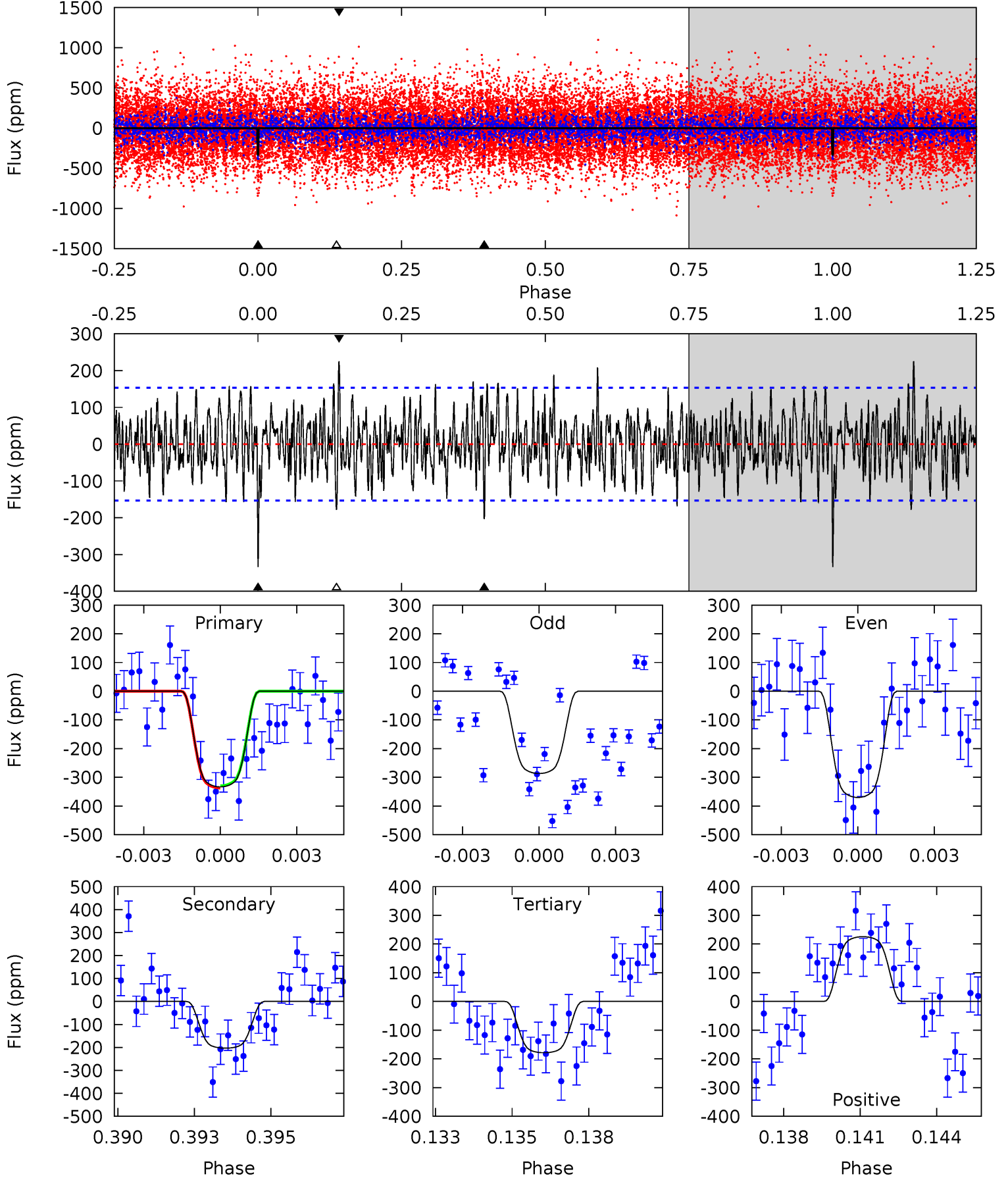
TCE 010360907-02 P= 67.100823 Days $T_0=193.393883$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-02, P = 67.100448 Days, E = 126.325186 Days

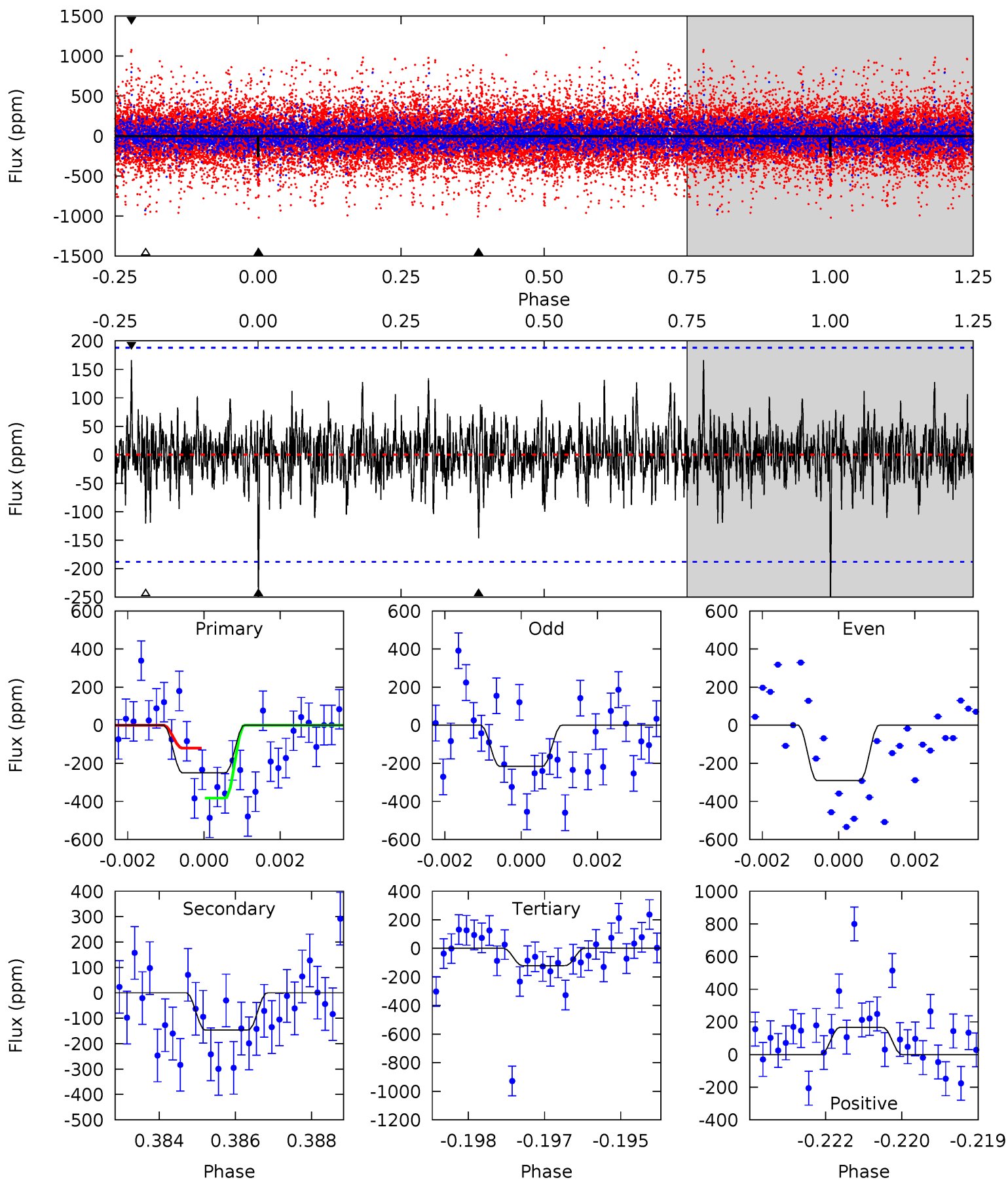
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	6.99	6.14	7.75	5.27	2.99	2.23	5.31	3.70	0.85	-0.76	1.43	1.04	0.40	0.13



Alt Model-Shift Uniqueness Test

010360907-02, P = 67.100823 Days, E = 126.293060 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.09	4.15	3.42	4.72	5.34	3.12	1.04	3.67	2.38	0.73	-0.56	1.05	1.00	0.40	0



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-204 ± 29	$4.98^{+1.06}_{-1.12}$	951^{+79}_{-108}	5143^{+350}_{-307}	556^{+347}_{-182}
Alt.	-146 ± 35	$4.66^{+0.96}_{-1.10}$	953^{+75}_{-112}	4917^{+367}_{-355}	452^{+323}_{-164}

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 $A_{obs} \gg 1.0$

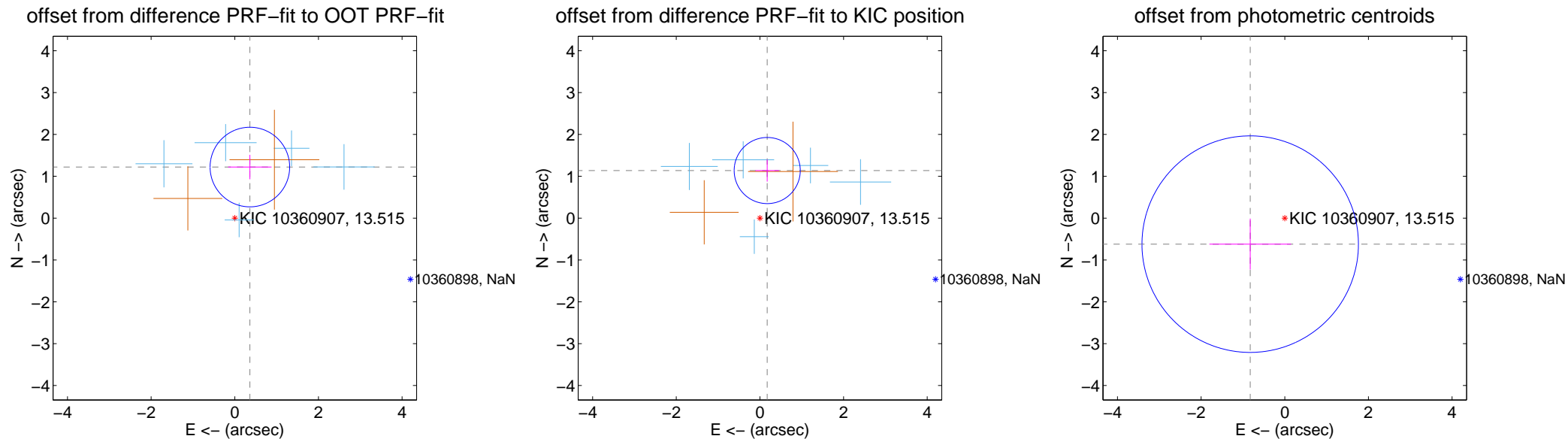
DV Centroid Data

Supplemental centroid analysis for 010360907-02. Kepler magnitude: 13.52. Transit SNR 9.13

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.273 ± 0.317	4.01	-0.360 ± 0.520	1.221 ± 0.293
PRF-fit source offset from KIC position	1.150 ± 0.263	4.37	-0.174 ± 0.282	1.137 ± 0.263
photometric centroid source offset	1.03 ± 0.86	1.20	0.83 ± 0.98	-0.62 ± 0.61



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

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

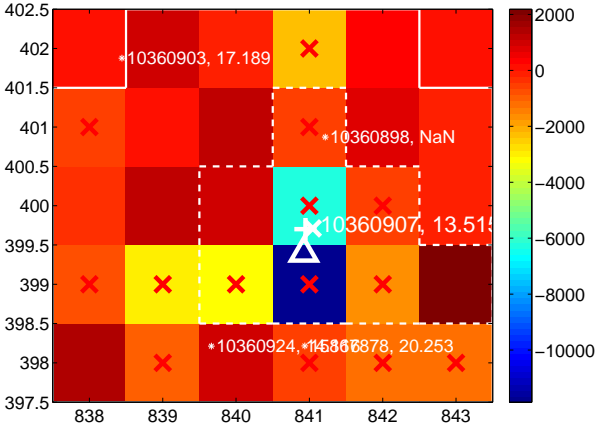
Q1 no difference image



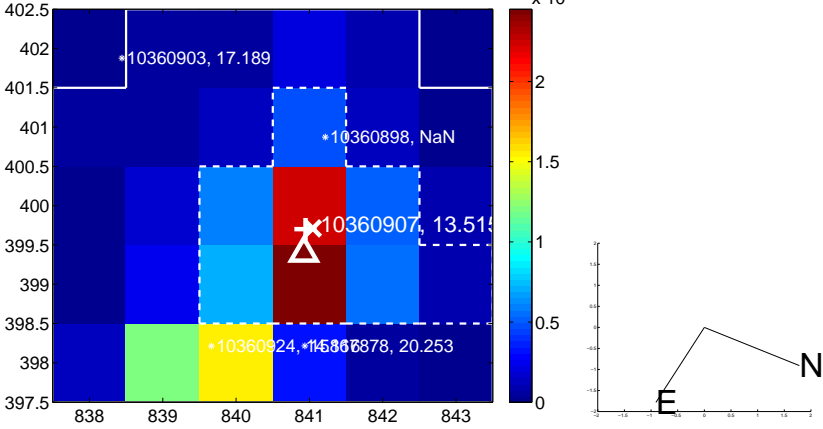
Q1 no OOT image



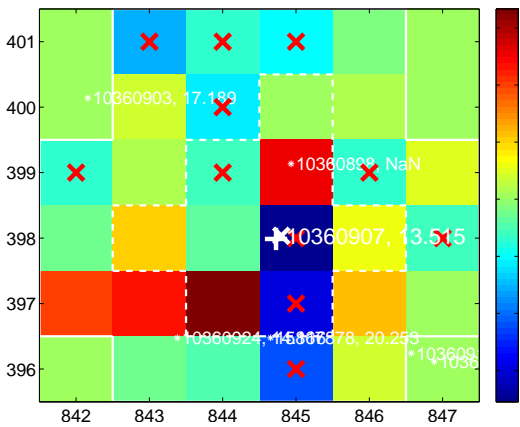
Q2 difference image. Poor Quality



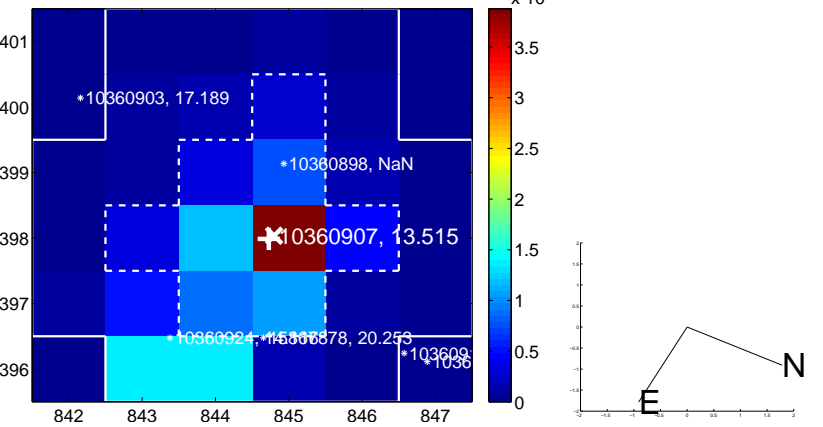
Q2 OOT image



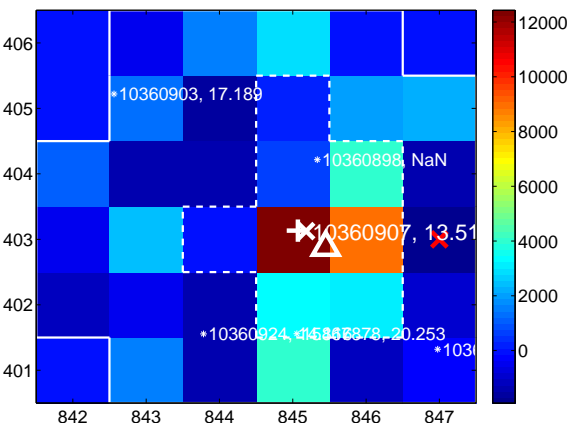
Q3 difference image. Poor Quality



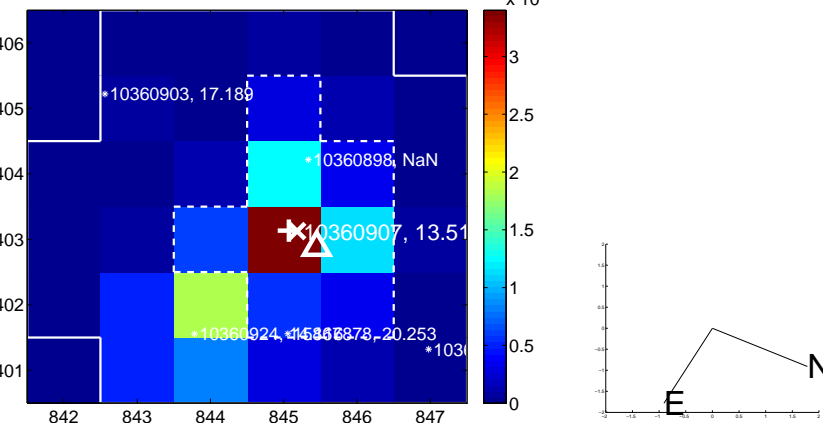
Q3 OOT image



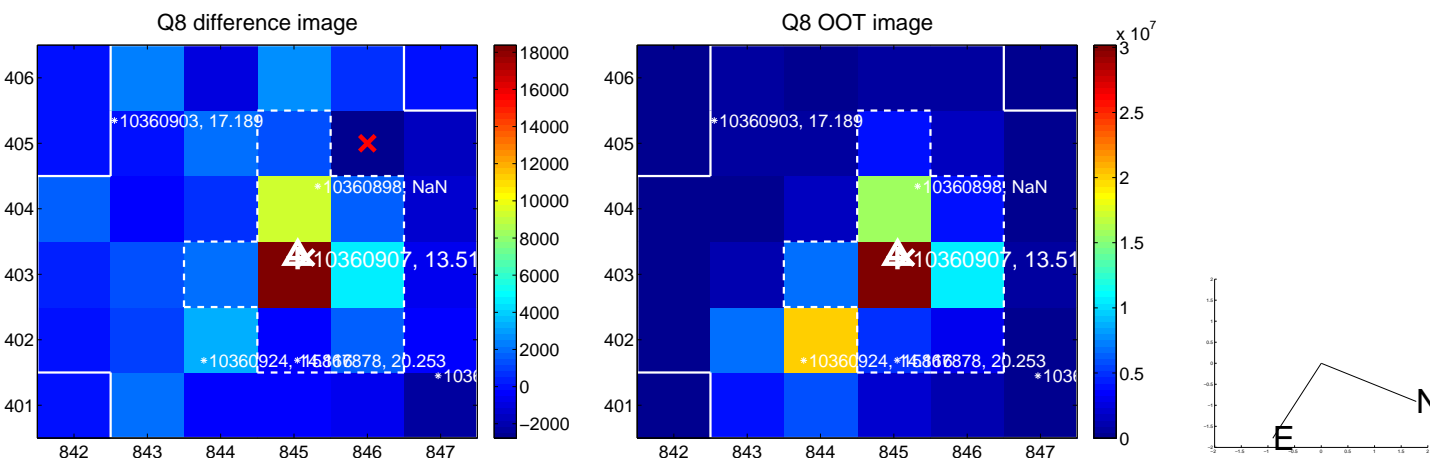
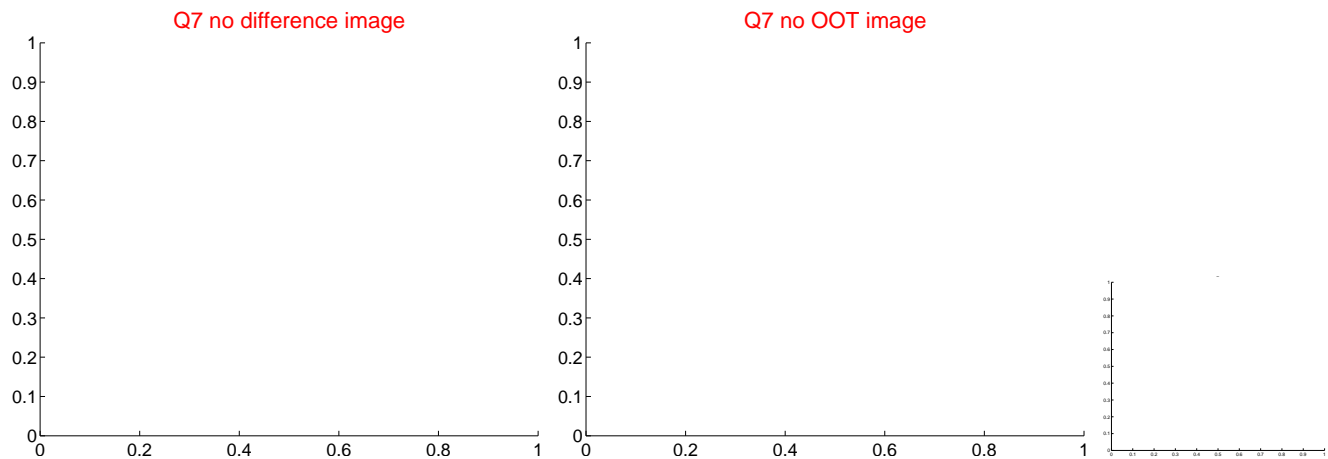
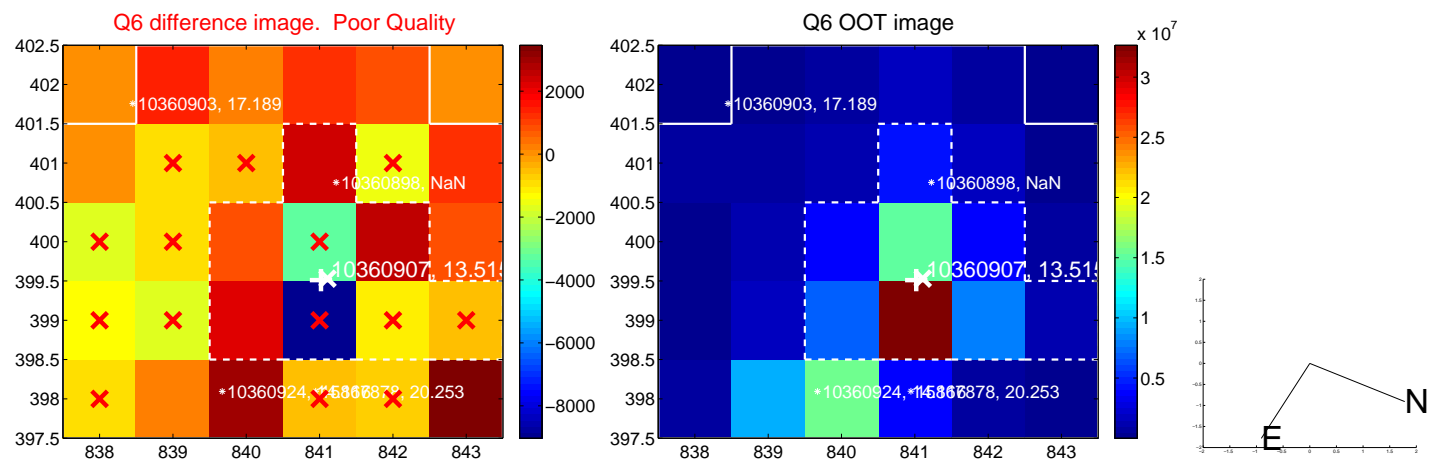
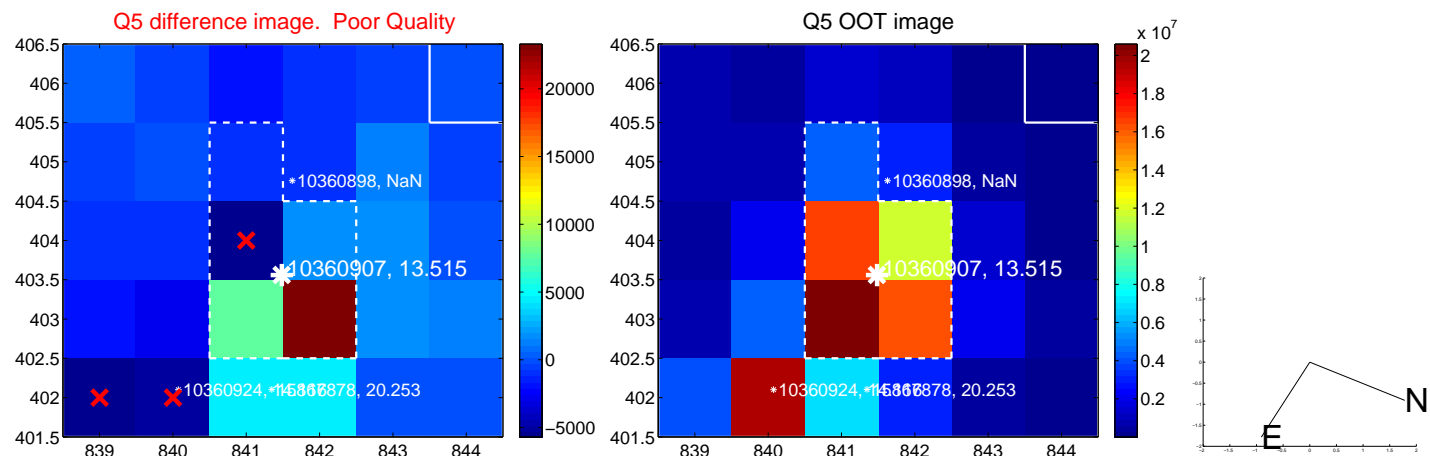
Q4 difference image



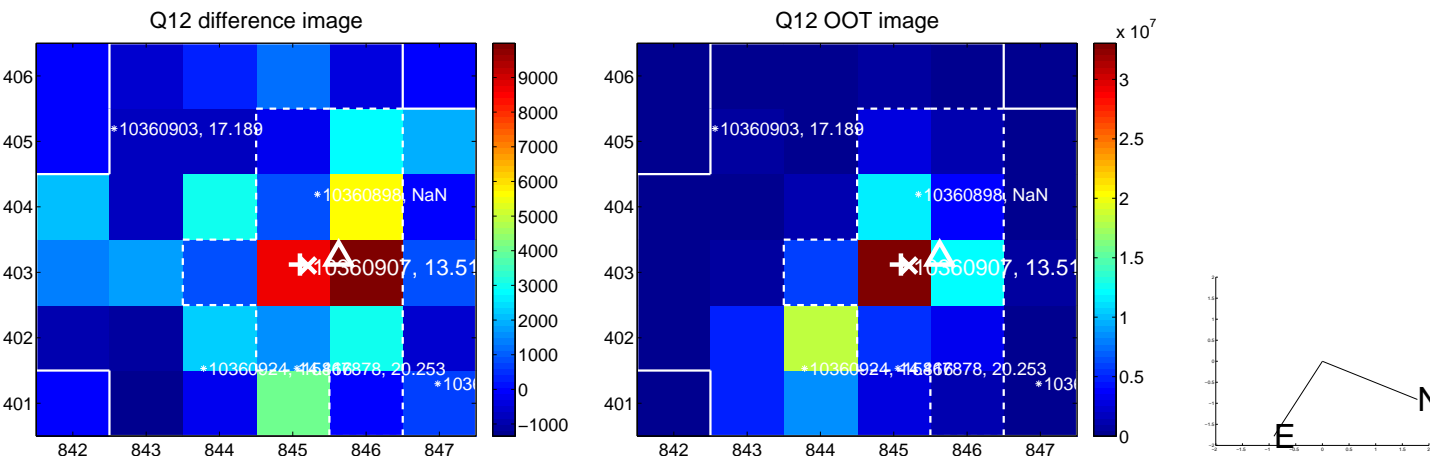
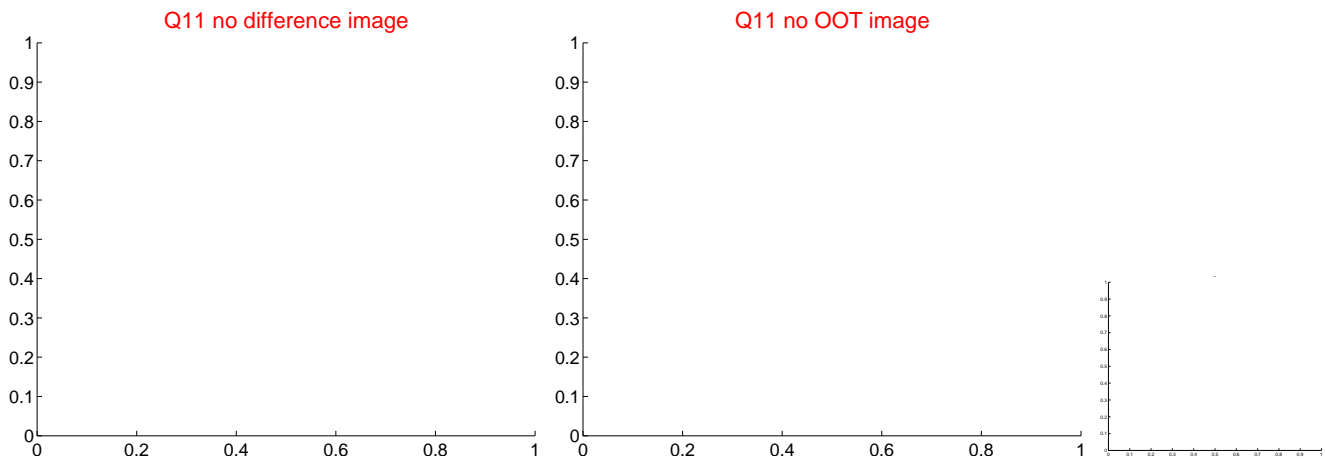
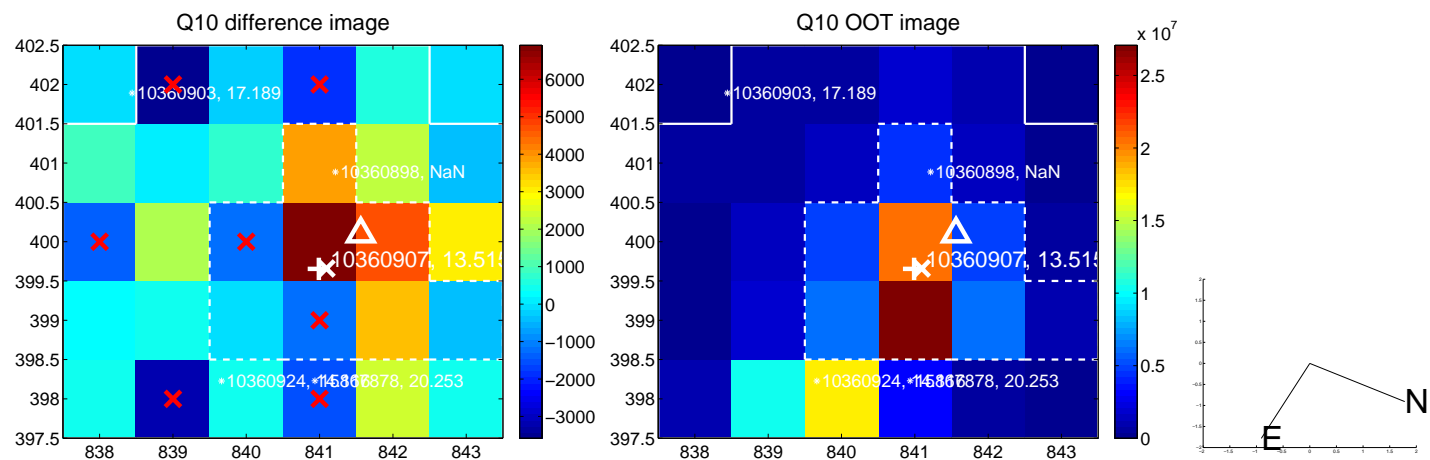
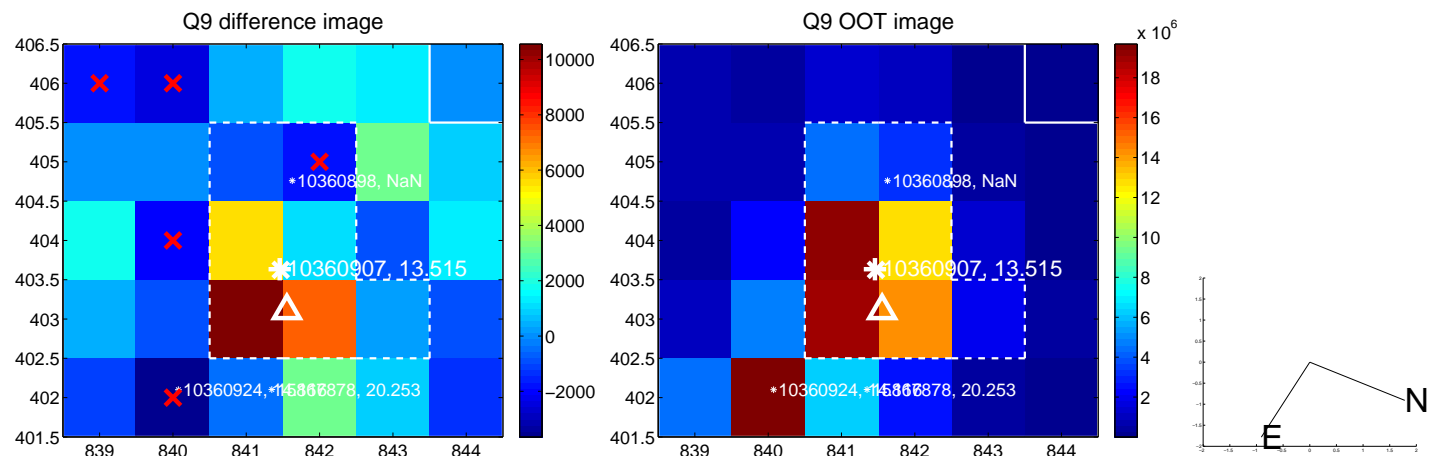
Q4 OOT image



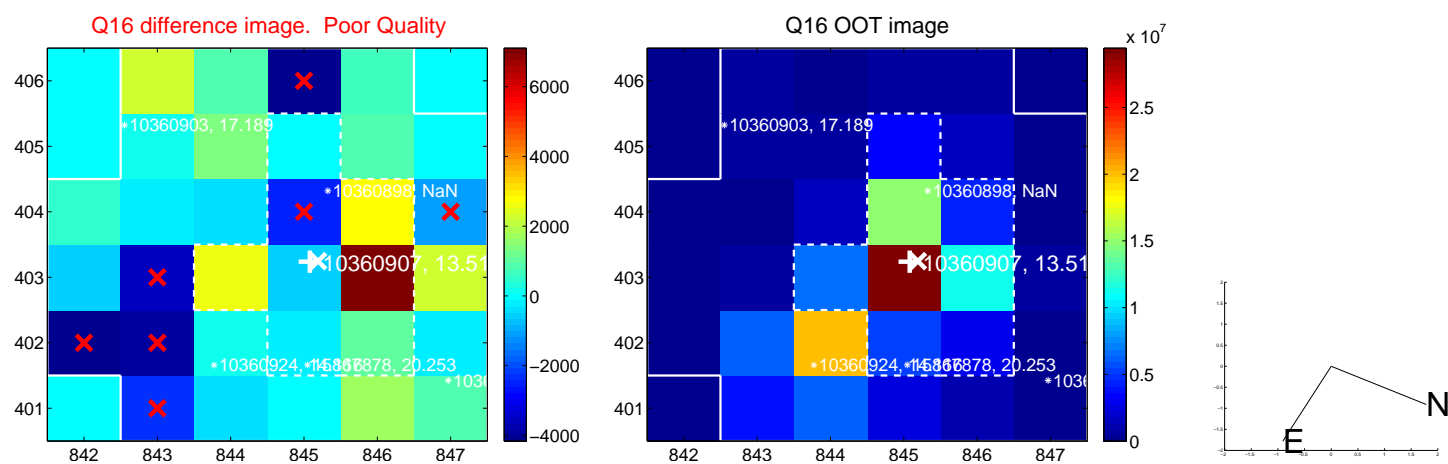
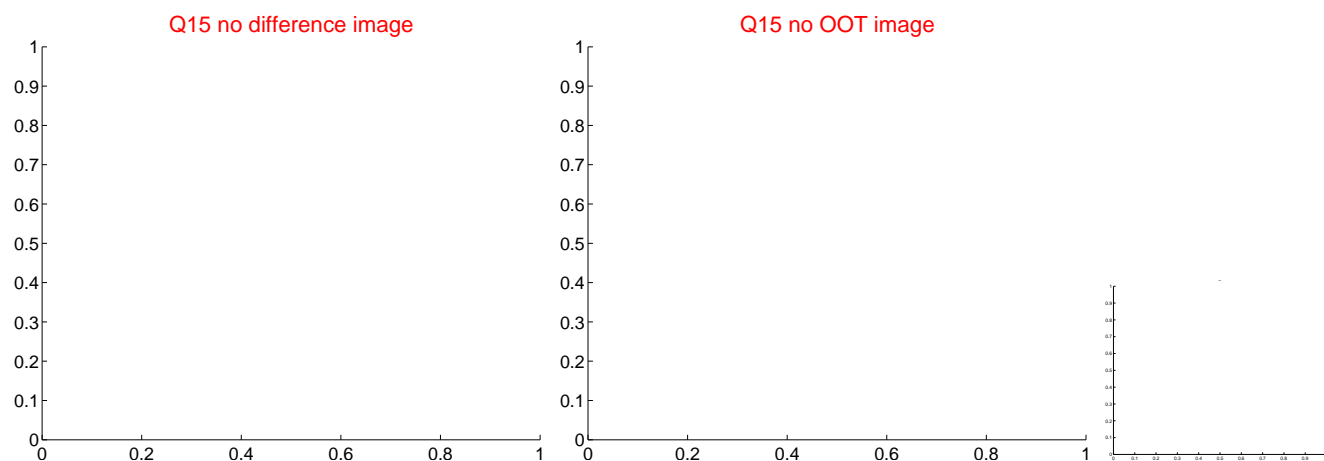
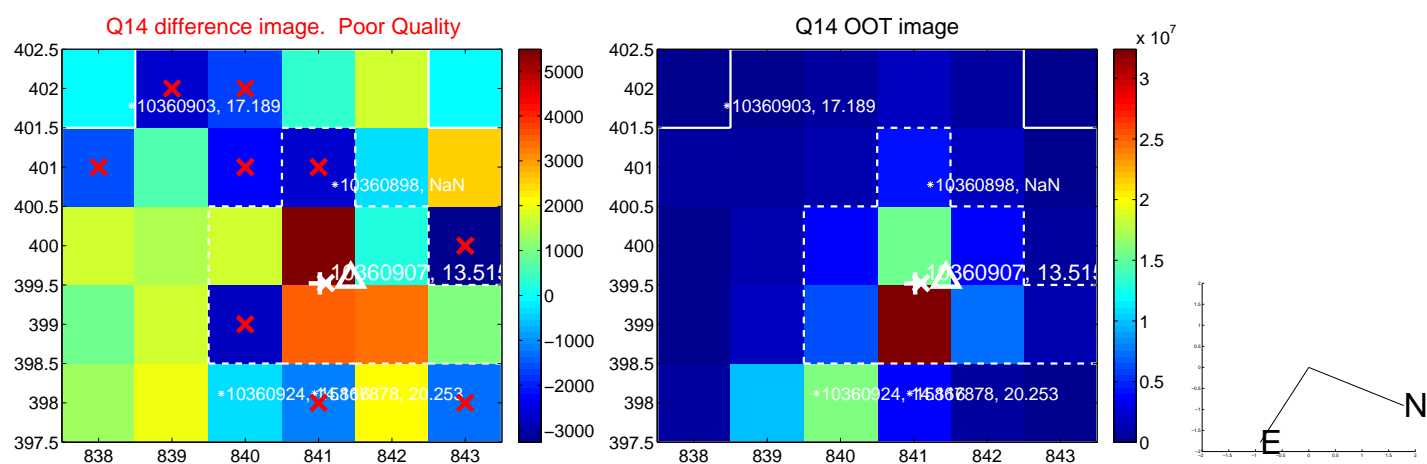
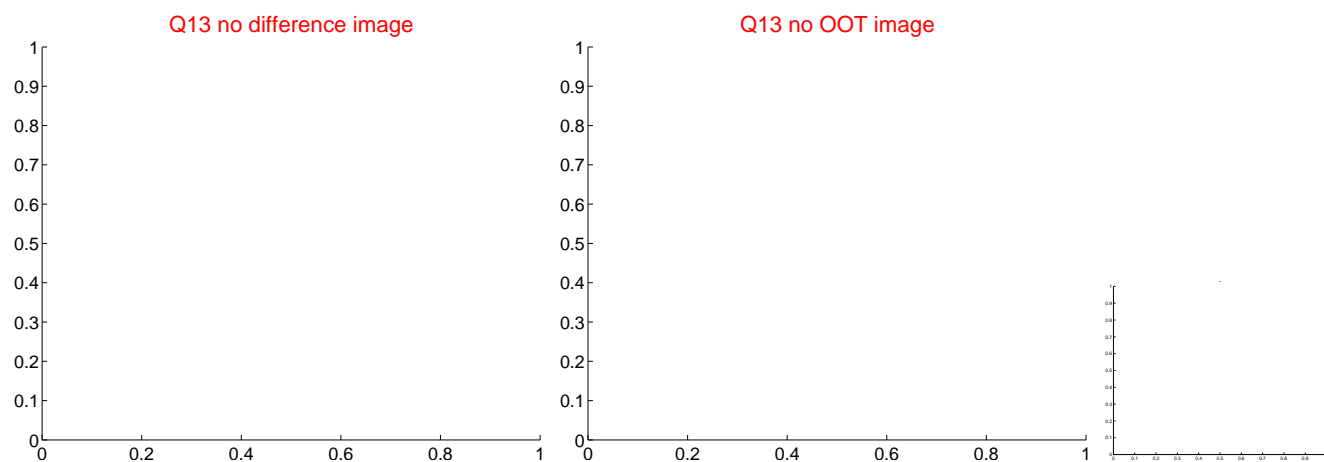
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



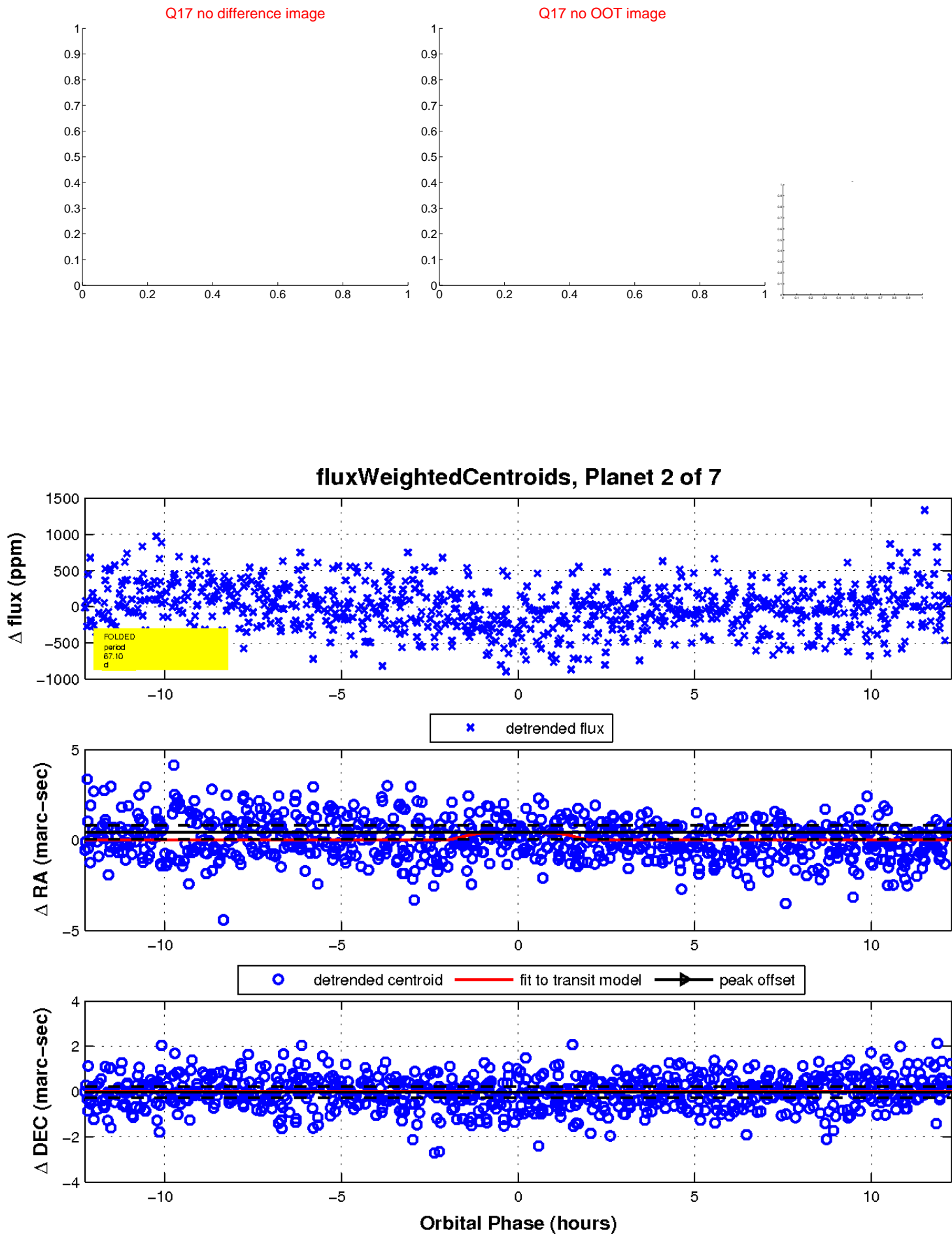
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



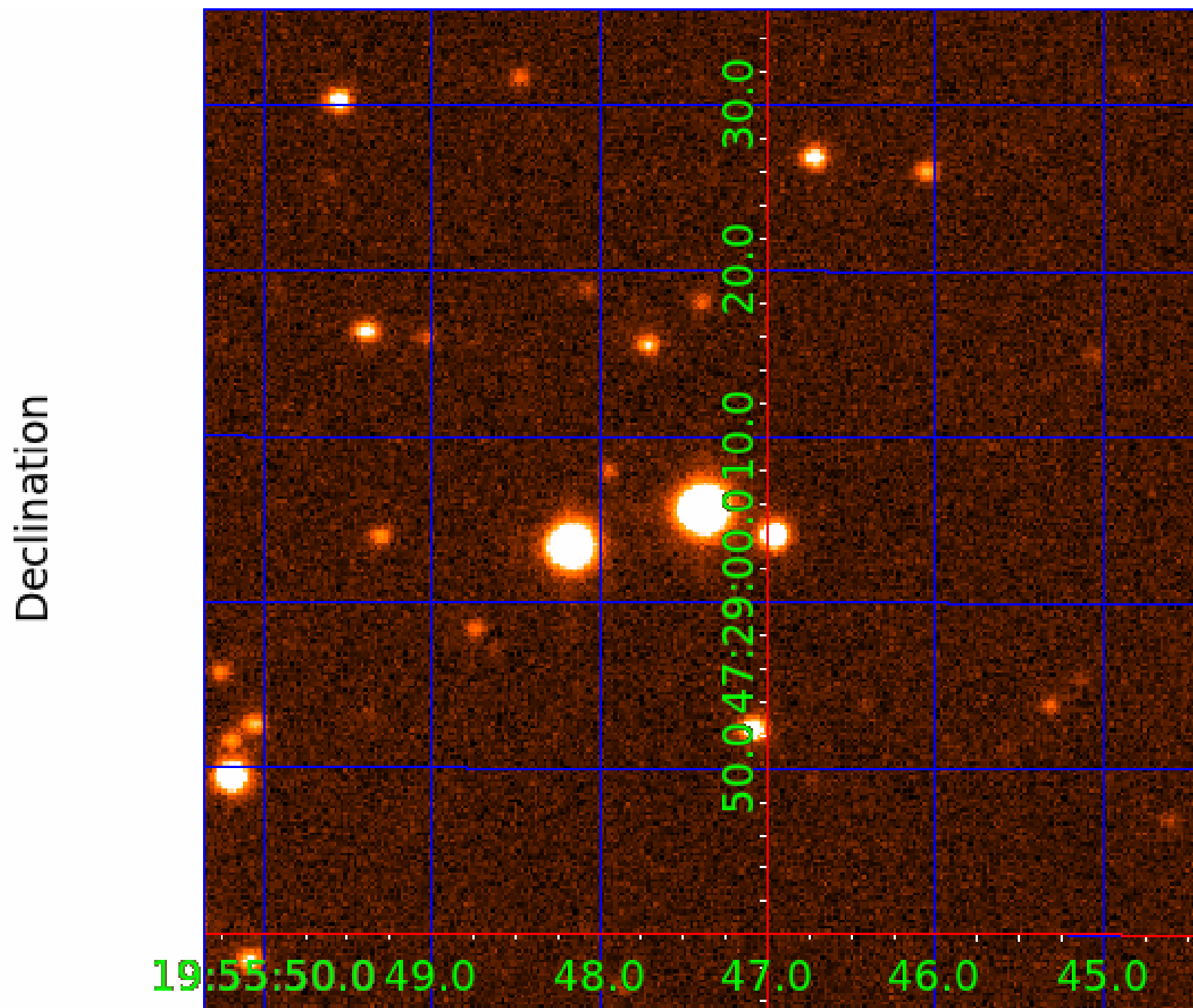
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 010360907

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})
010360907-01	OBS	No	3.873257	135.086308	52.7	16.557	9.5	6.7	2.11	6425	1.55	2508.39
010360907-02	OBS	No	67.100448	193.425634	383.0	4.095	9.0	9.1	2.11	6425	5.22	55.96
010360907-03	OBS	No	88.117686	217.990806	410.4	5.976	8.9	9.4	2.11	6425	5.20	38.91
010360907-04	OBS	No	294.071670	268.732724	561.7	10.375	8.3	9.0	2.11	6425	5.41	7.80
010360907-05	OBS	No	312.364930	265.438787	410.2	7.825	8.5	6.7	2.11	6425	4.49	7.20
010360907-06	OBS	No	198.384581	321.823097	483.3	5.768	7.9	7.0	2.11	6425	4.90	13.19
010360907-07	OBS	No	87.813516	162.219229	218.0	9.000	7.7	-1.0	2.11	6425	3.13	39.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010360907-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
010360907-02	OBS	FP	0.01	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
010360907-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
010360907-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010360907-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—MOD_NONUNIQ_ALT—HALO_GHOST
010360907-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

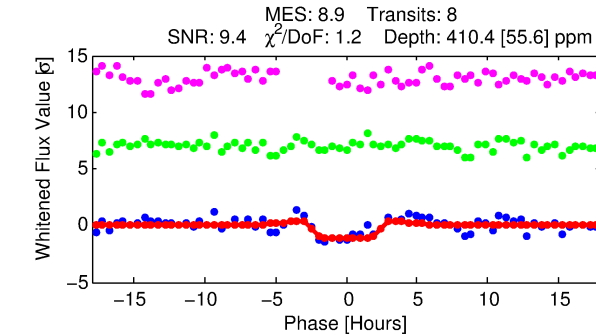
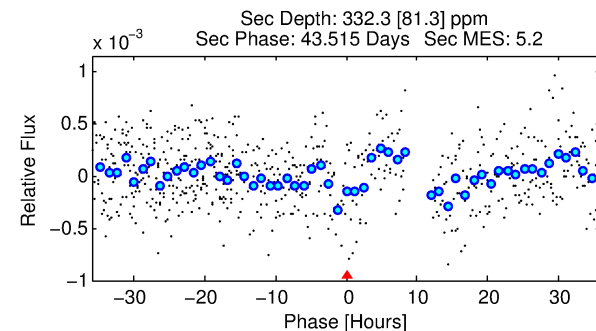
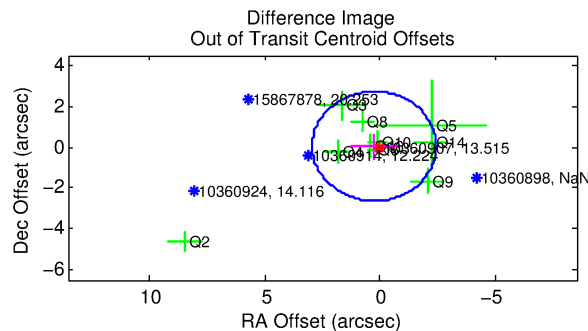
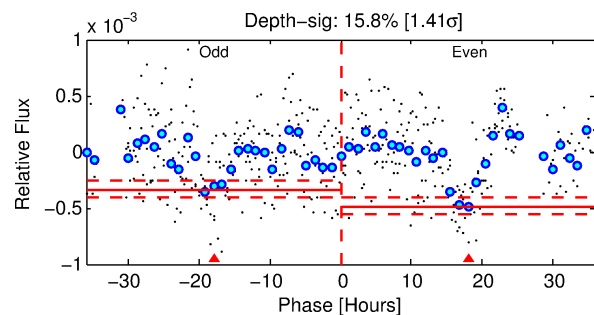
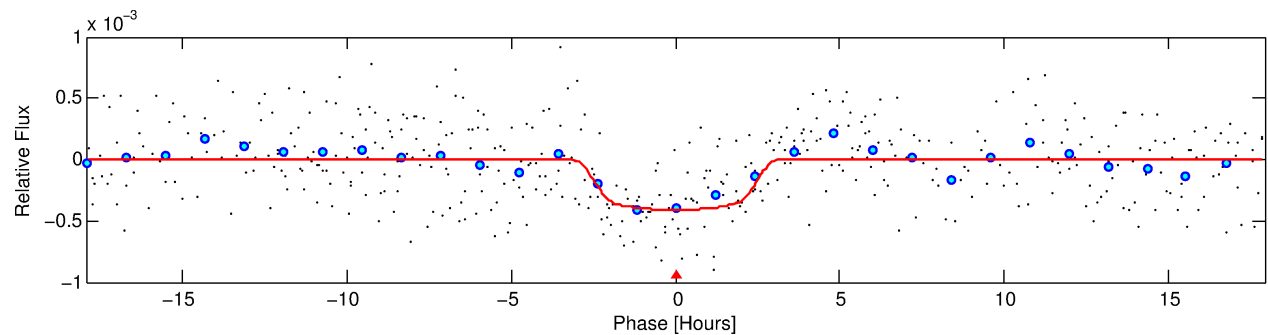
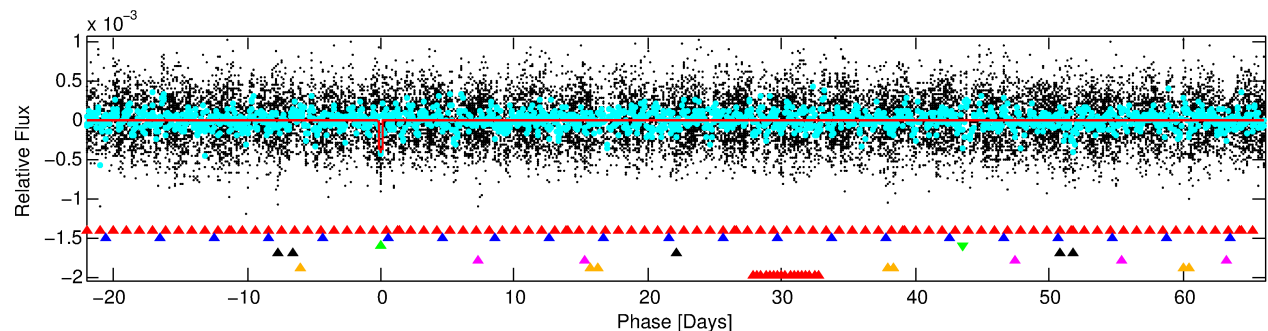
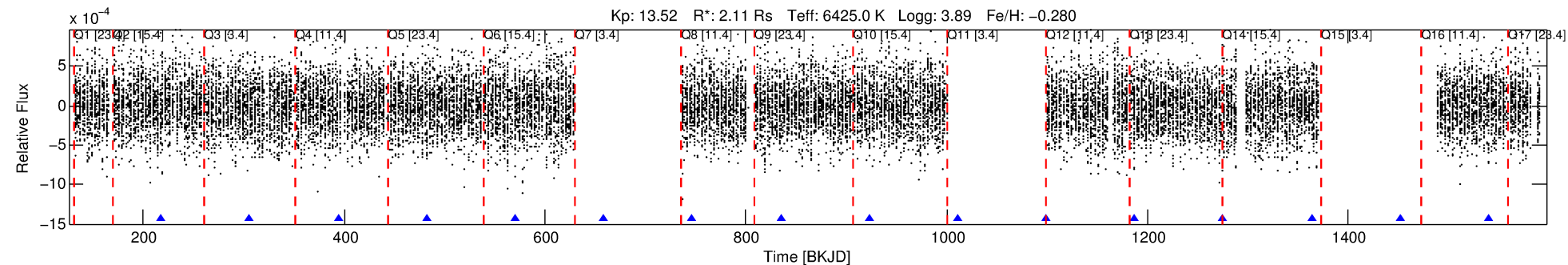
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-03

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 3 of 7 Period: 88.118 d



DV Fit Results:

Period = 88.11769 [0.00135] d
Epoch = 217.9908 [0.0124] BKJD
Rp/R* = 0.0226 [0.0023]
a/R* = 45.43 [16.76]
b = 0.94 [0.05]
Seff = 38.91 [28.04]
Teff = 637 [115] K
Rp = 5.20 [2.35] Re
a = 0.4174 [0.1819] AU
Ag = 1177.57 [914.57] [1.29 σ]
Teffp = 5768 [498] K [10.04 σ]

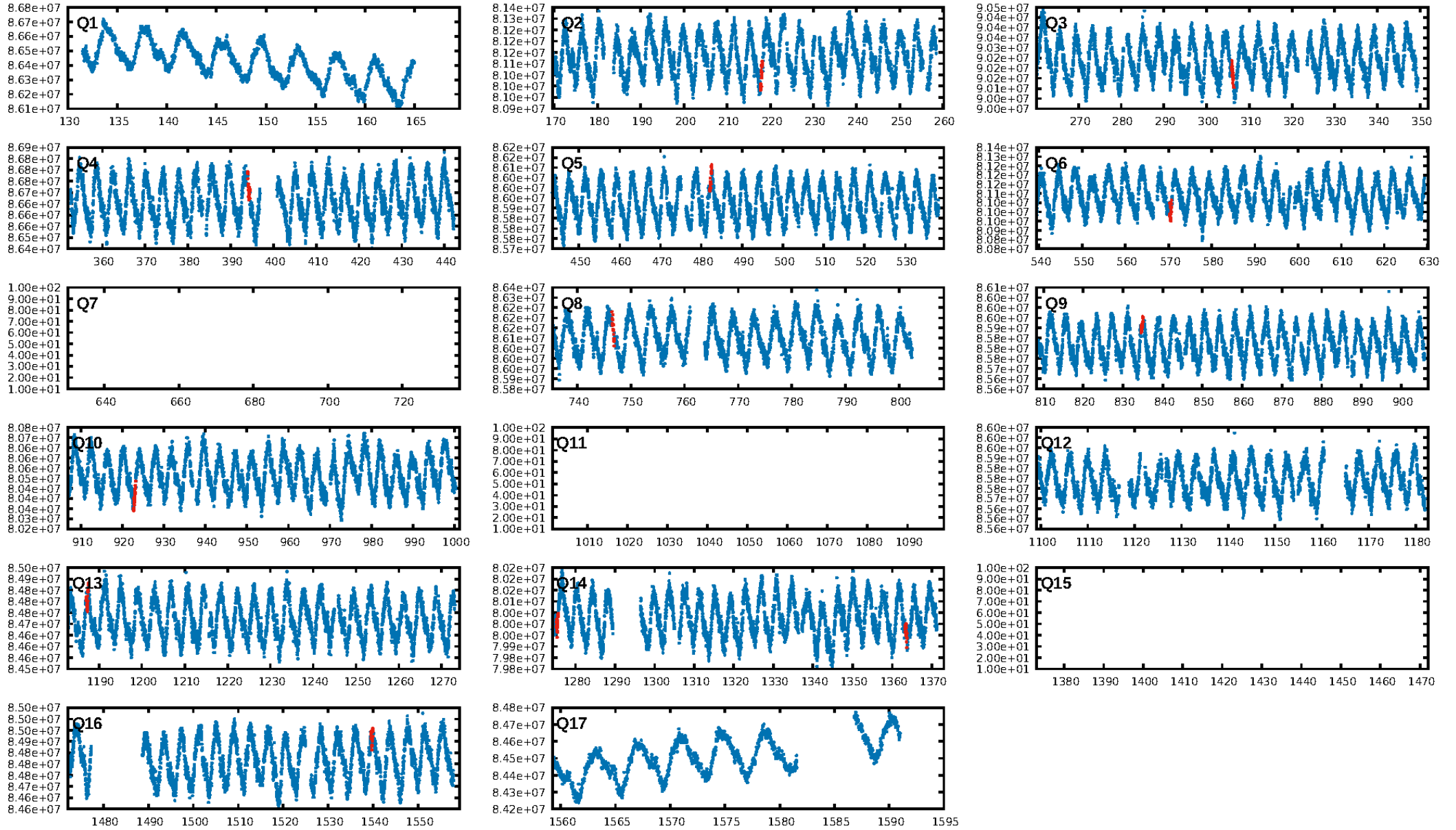
DV Diagnostic Results:

ShortPeriod-sig: 50.1% [0.68 σ]
LongPeriod-sig: 100.0% [318.65 σ]
ModelChiSquare2-sig: 21.4%
ModelChiSquareGof-sig: 96.4%
Bootstrap-pfa: 4.57e-09
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 2.903
Centroid-sig: 0.1%
Centroid-so: 0.710 arcsec [0.81 σ]
OotOffset-rm: 0.272 arcsec [0.30 σ]
KicOffset-rm: 0.573 arcsec [0.59 σ]
OotOffset-st: 4/1/3/2 [10]
KicOffset-st: 4/1/3/2 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.60 [6/10]

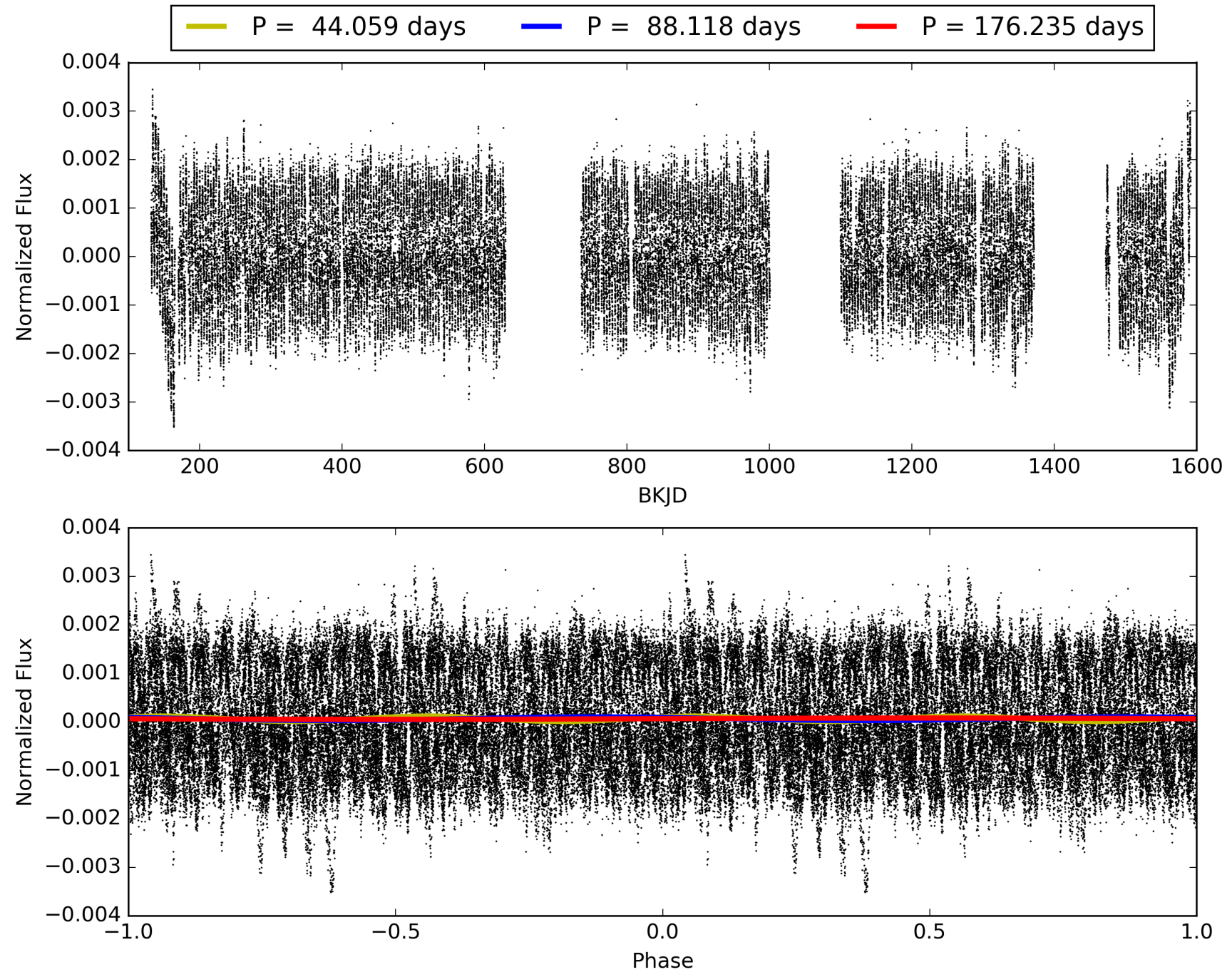
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:19:05 Z

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

TCE 010360907-03, PDC Light Curves

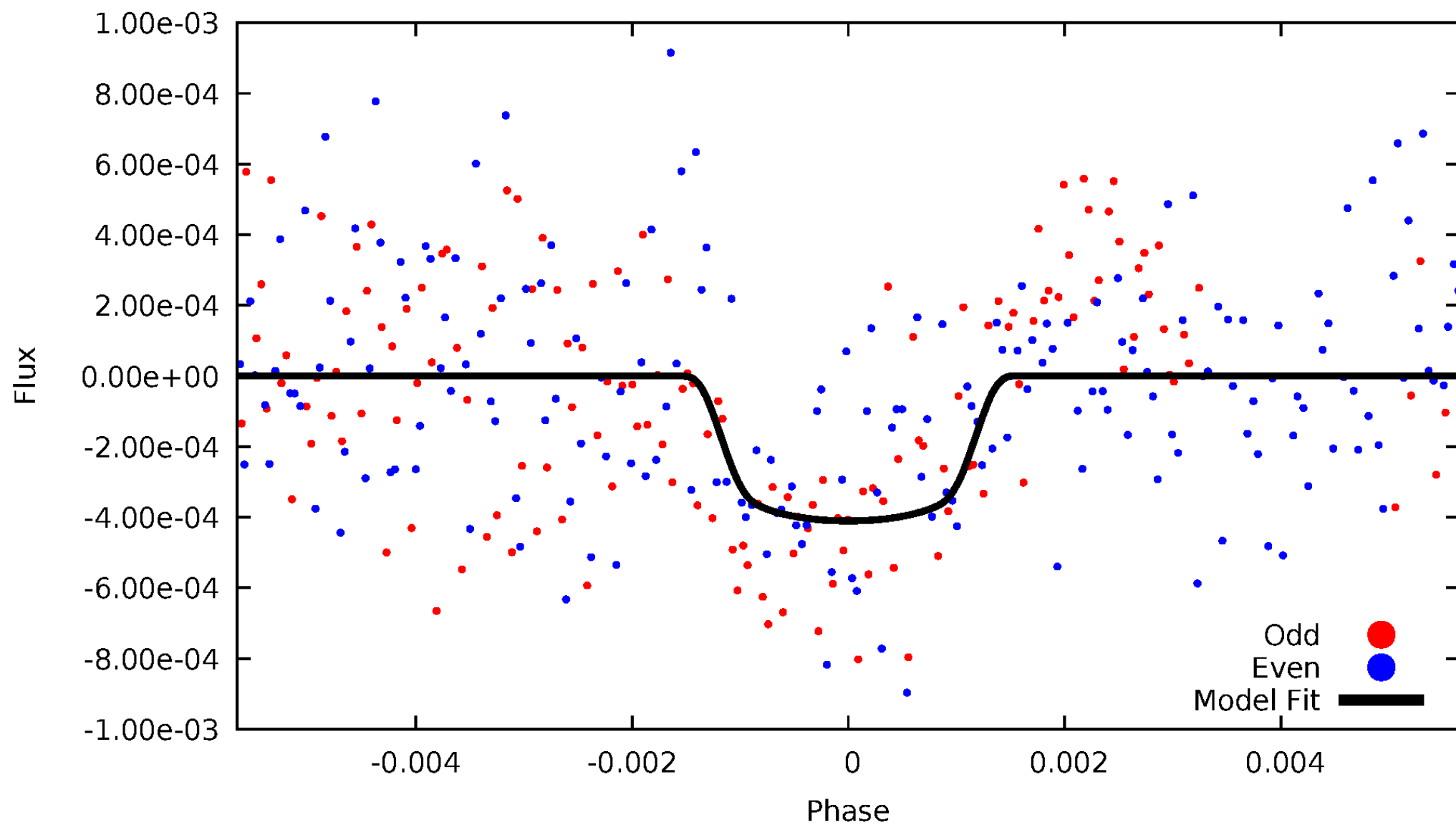


TCE 010360907-03



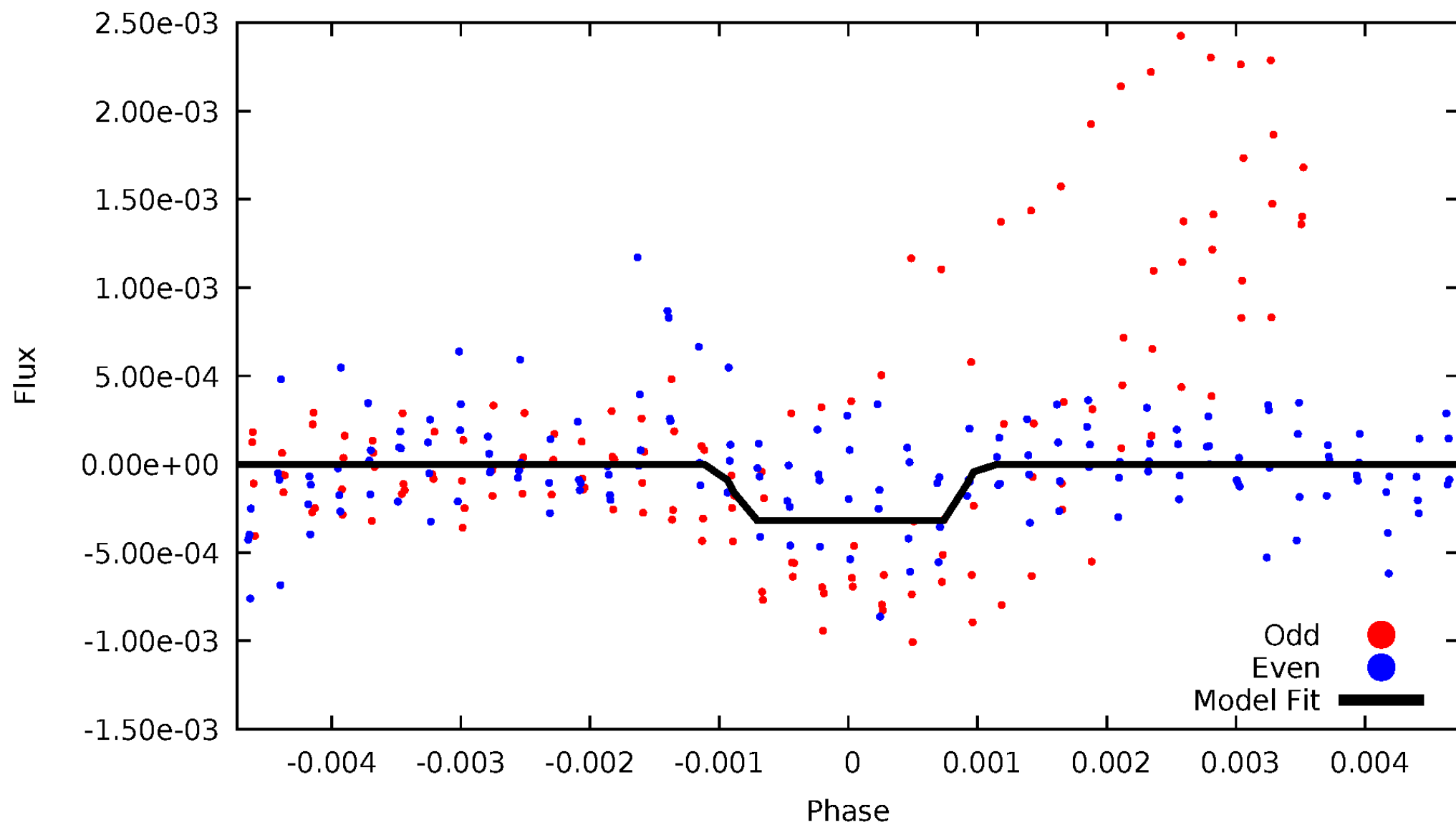
DV Odd/Even

TCE 010360907-03



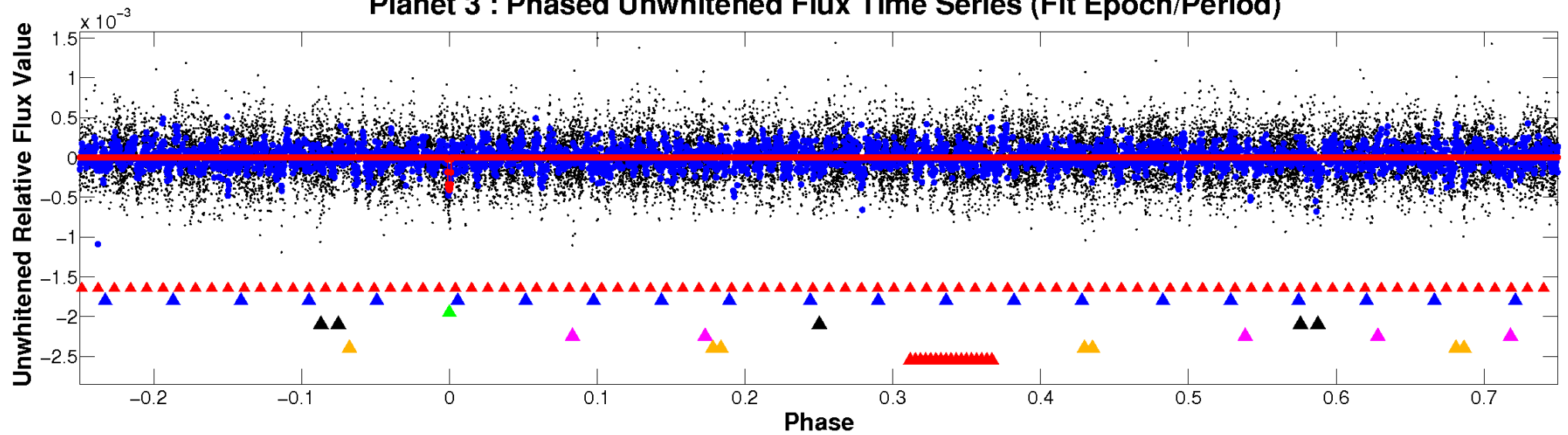
ALT Odd/Even

TCE 010360907-03

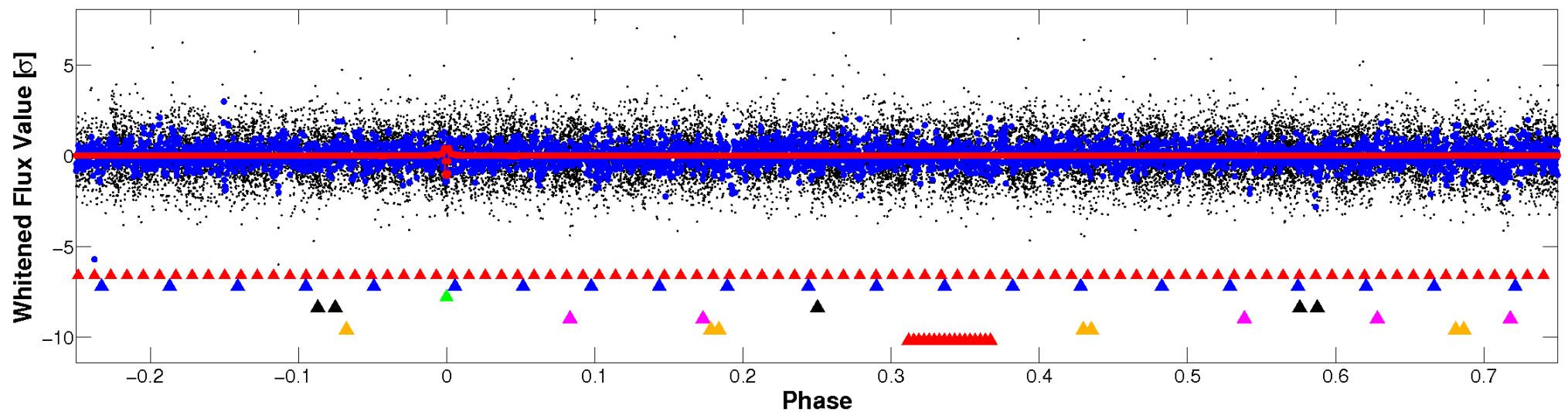


Non-Whitened Vs. Whitened Light Curve

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

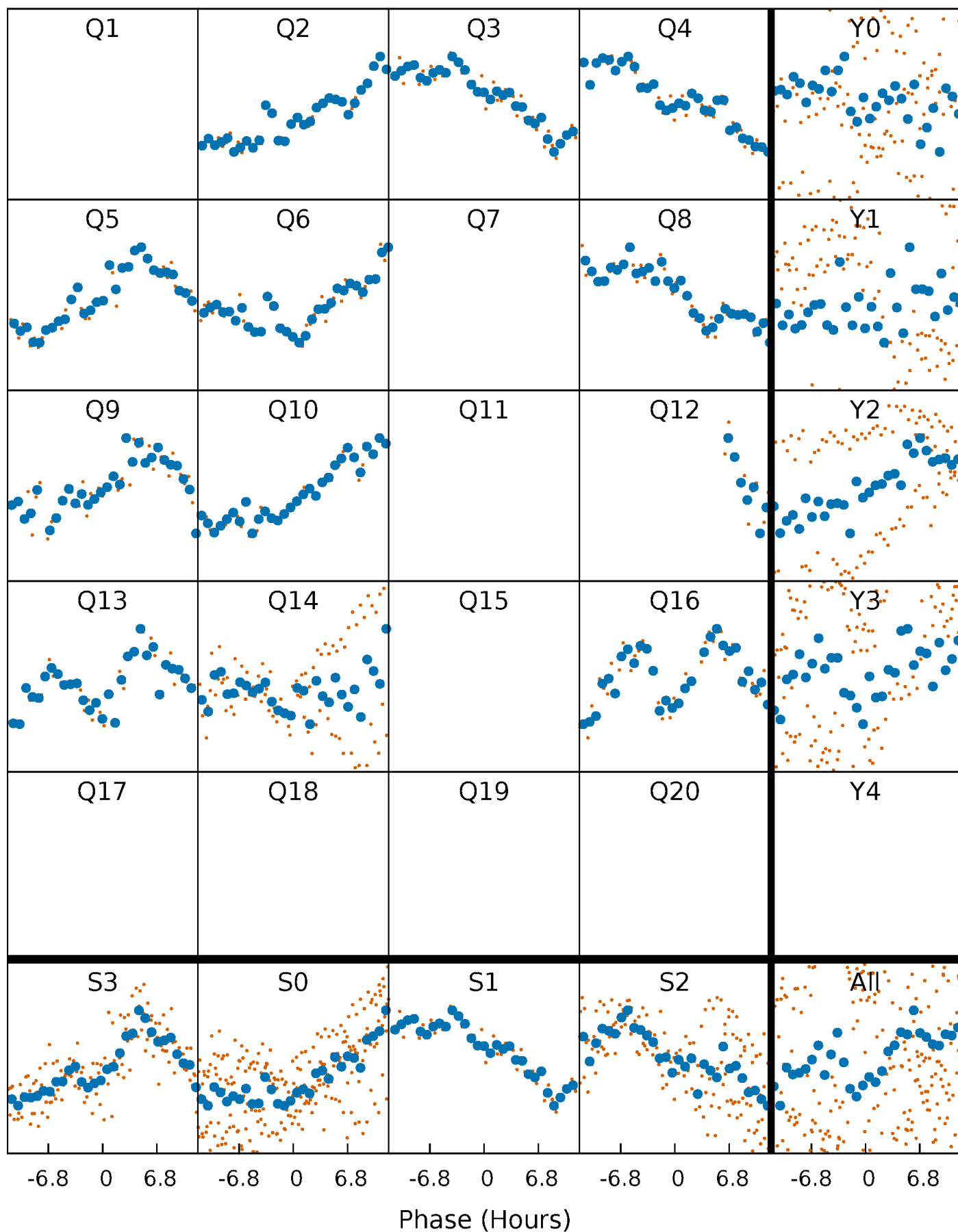


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



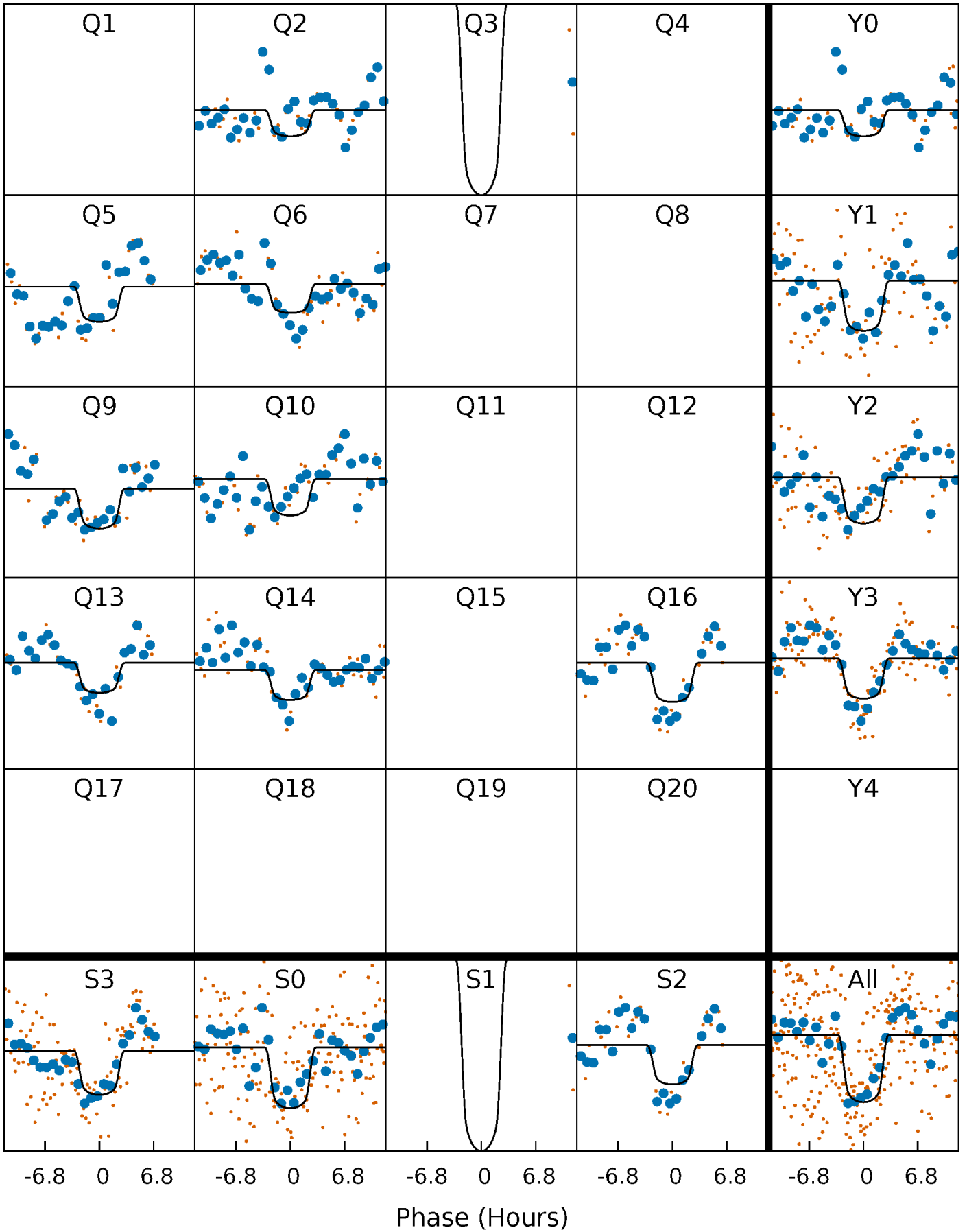
PDC Quarter-Phased Transit Curves

TCE 010360907-03 P= 88.117686 Days $T_0=217.990806$ (BKJD)



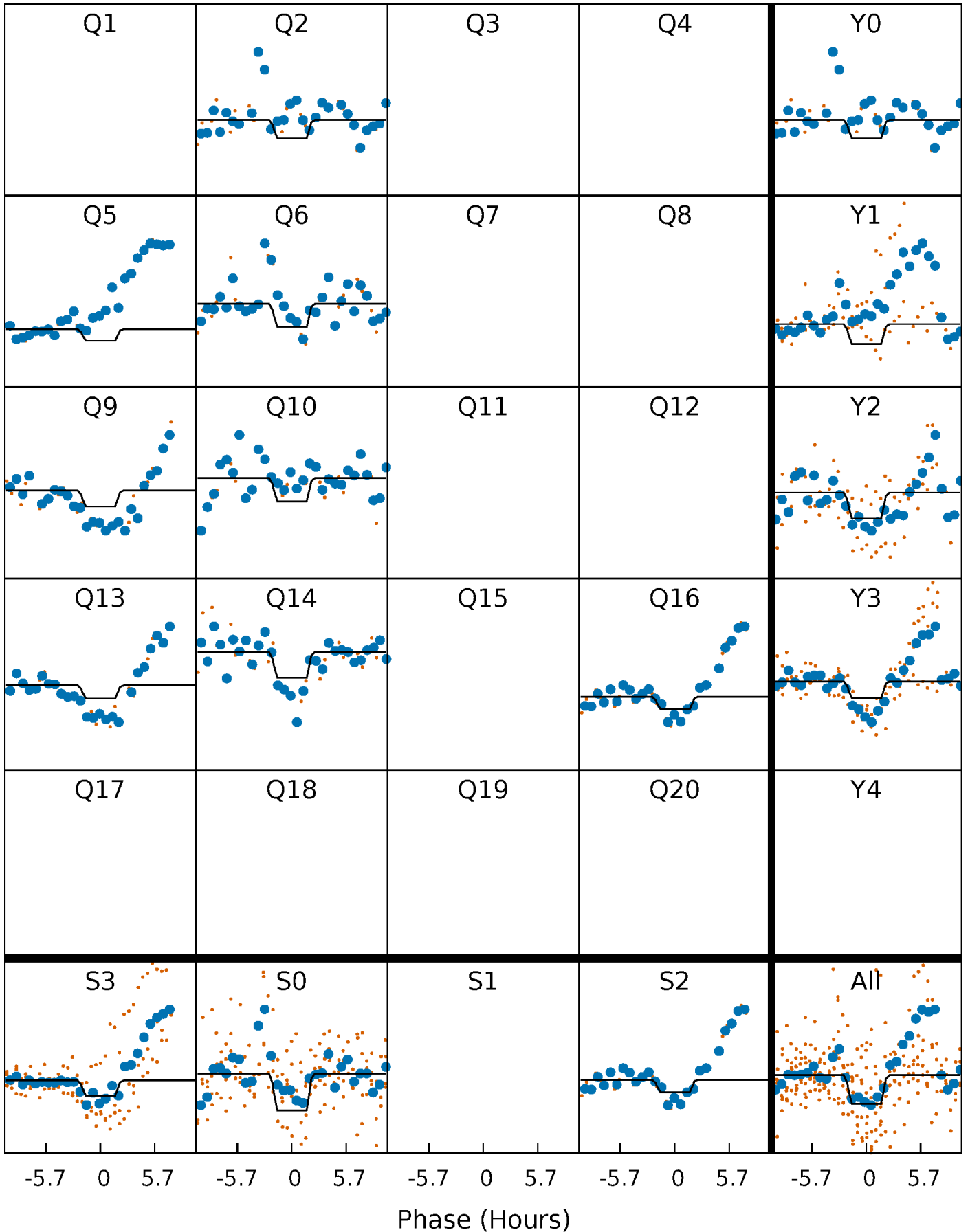
DV Quarter-Phased Transit Curves

TCE 010360907-03 P= 88.117686 Days $T_0=217.990806$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

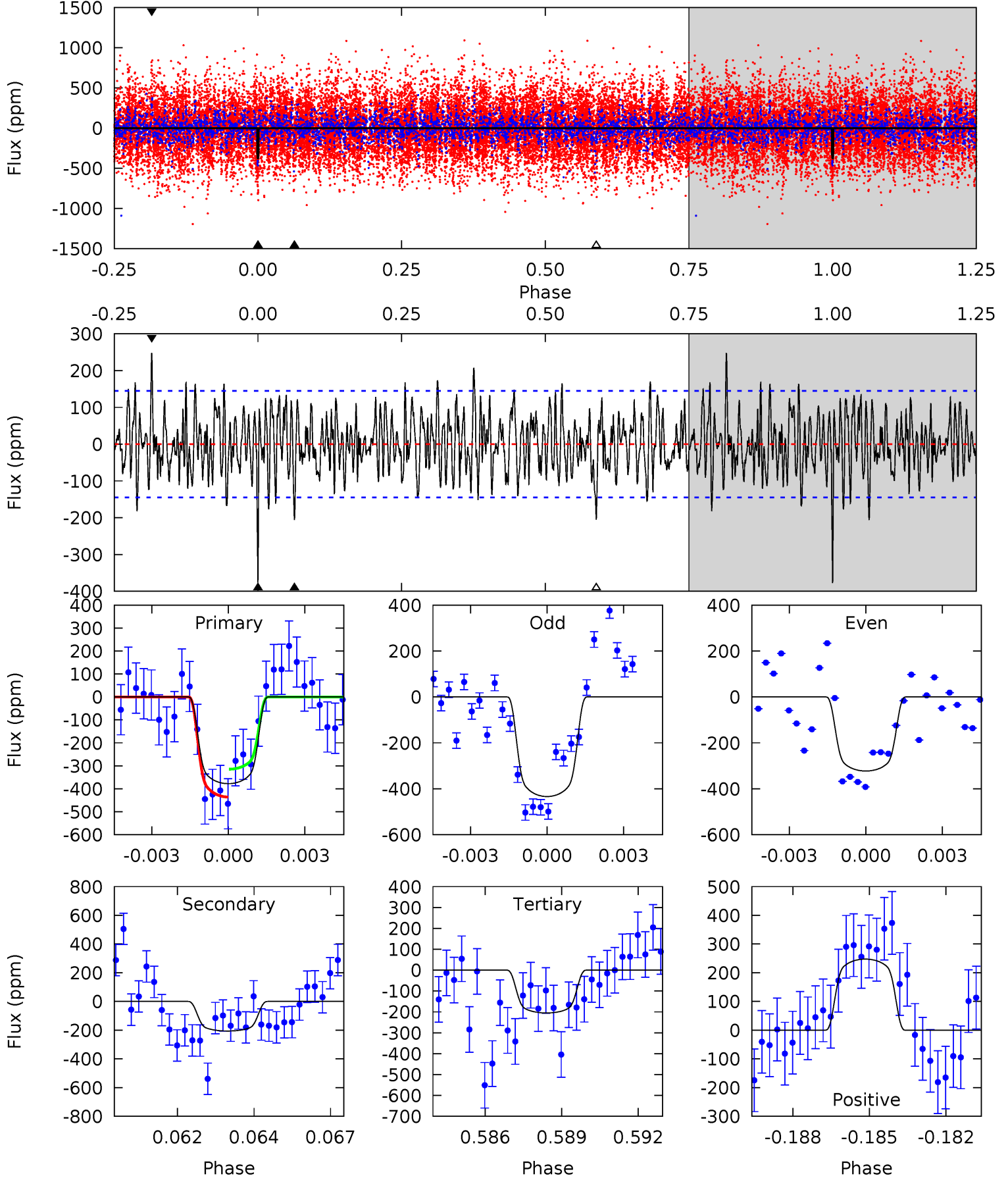
TCE 010360907-03 $P = 88.114509$ Days $T_0 = 217.989804$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-03, P = 88.117686 Days, E = 129.873120 Days

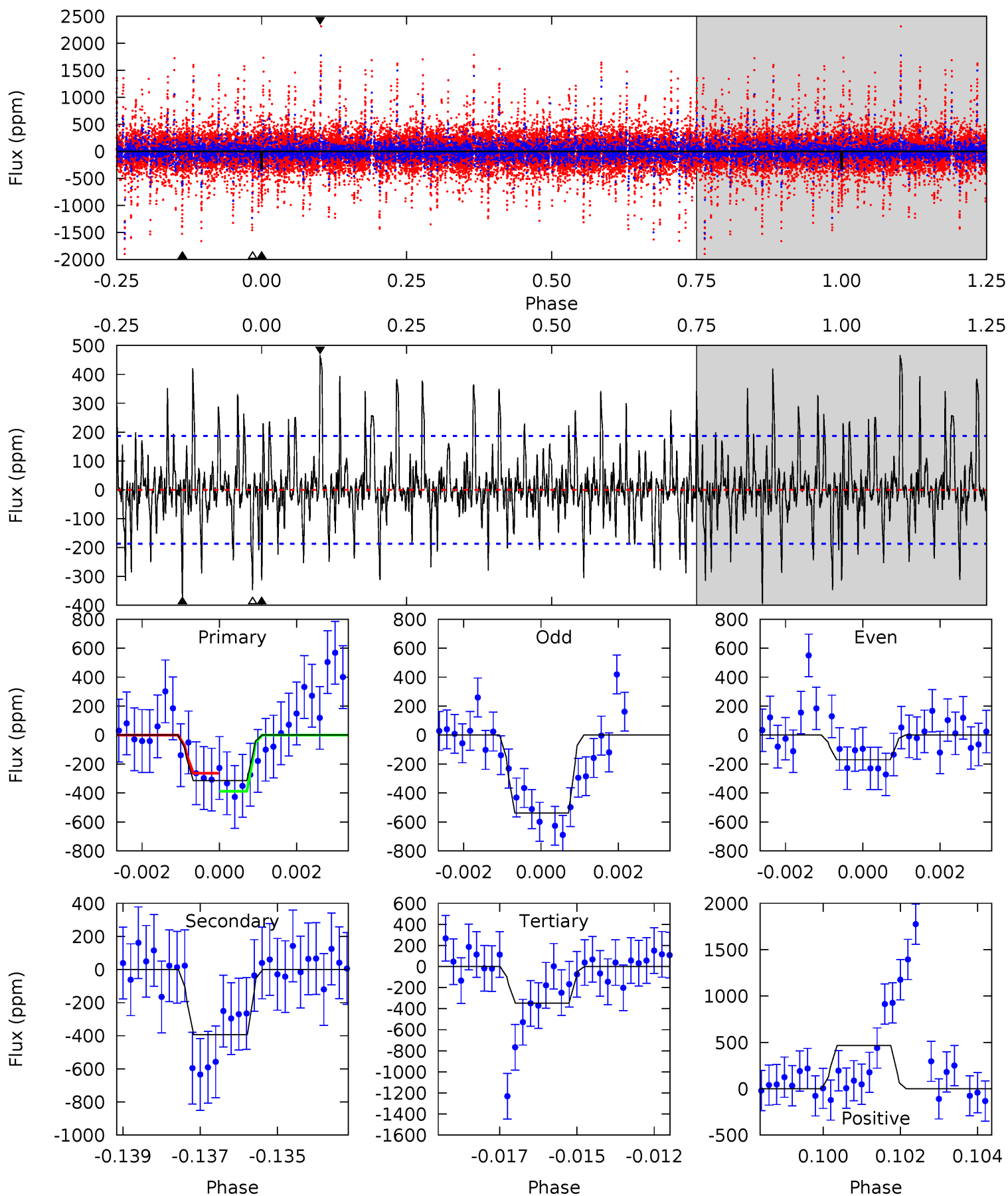
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	7.47	7.44	8.98	5.26	2.97	2.43	6.26	4.72	0.03	-1.51	2.02	0.97	0.40	2.20



Alt Model-Shift Uniqueness Test

010360907-03, P = 88.114509 Days, E = 129.875295 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.93	11.2	9.88	13.3	5.32	3.08	2.74	-0.95	-4.36	1.35	-2.06	4.62	0.84	0.54	1.79



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-206 ± 28	$4.98^{+1.04}_{-1.22}$	866^{+73}_{-98}	5161^{+323}_{-295}	794^{+601}_{-256}
Alt.	-394 ± 35	$3.90^{+0.98}_{-1.01}$	874^{+66}_{-103}	6752^{+612}_{-467}	2462^{+1814}_{-837}

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

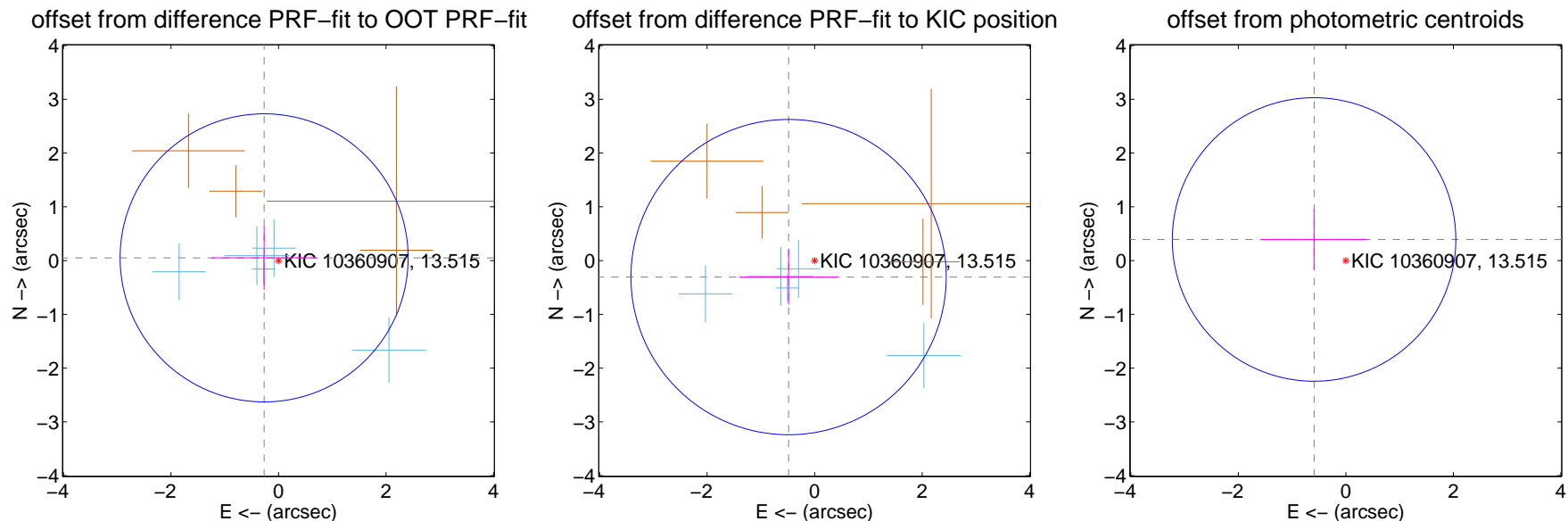
DV Centroid Data

Supplemental centroid analysis for 010360907-03. Kepler magnitude: 13.52. Transit SNR 9.43

There are 5 quarters with good PRF difference image offsets

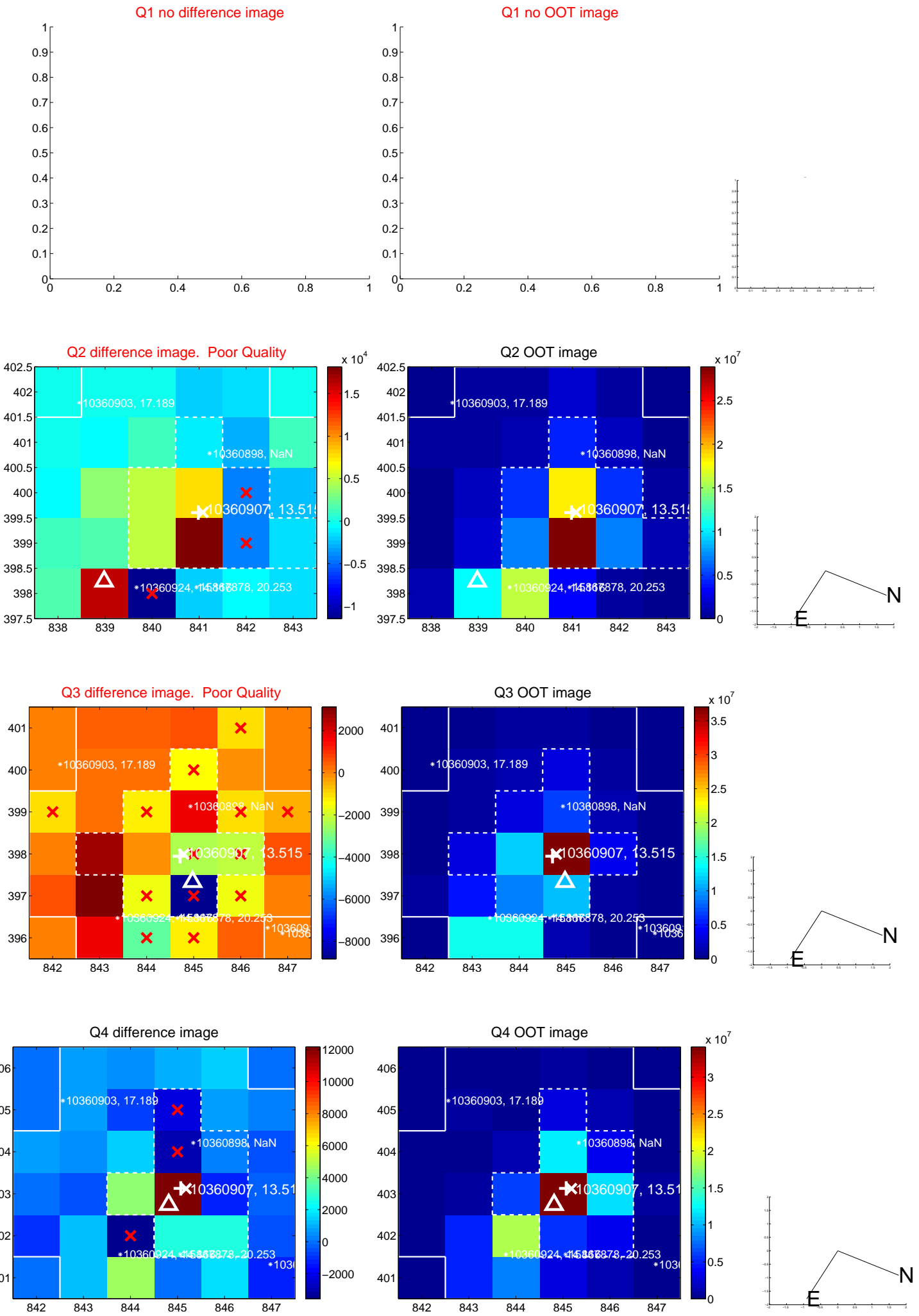
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.272 ± 0.893	0.30	0.267 ± 0.983	0.051 ± 0.595
PRF-fit source offset from KIC position	0.573 ± 0.978	0.59	0.484 ± 0.918	-0.307 ± 0.510
photometric centroid source offset	0.71 ± 0.88	0.81	0.59 ± 0.99	0.39 ± 0.57

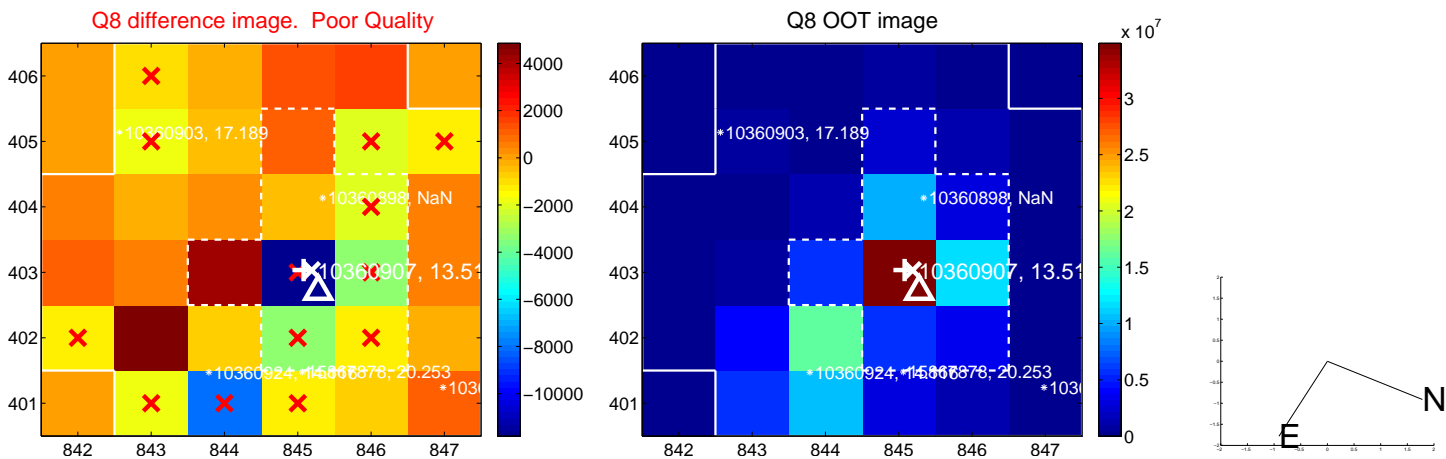
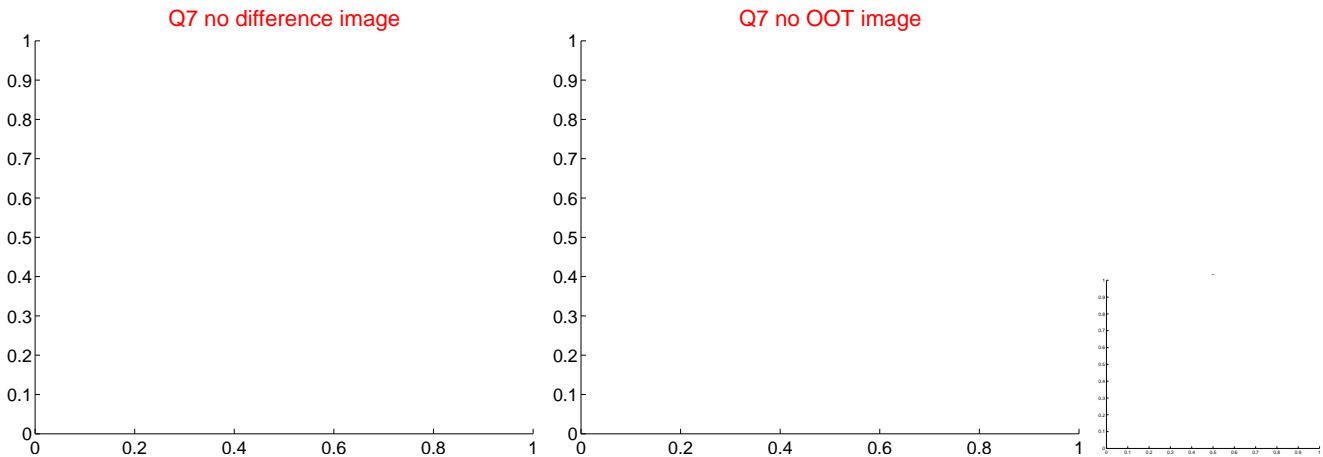
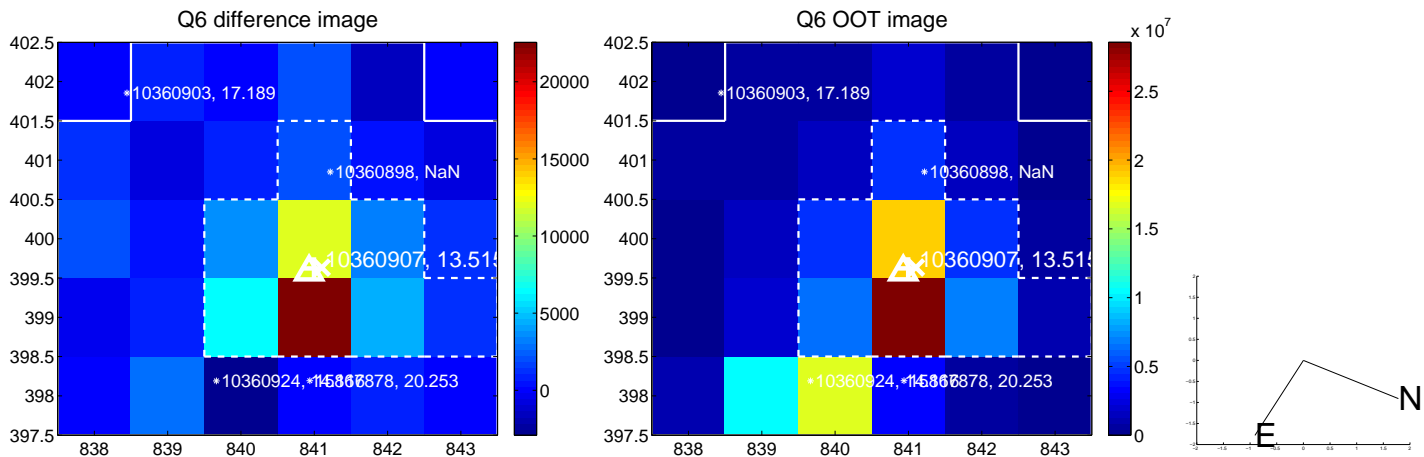
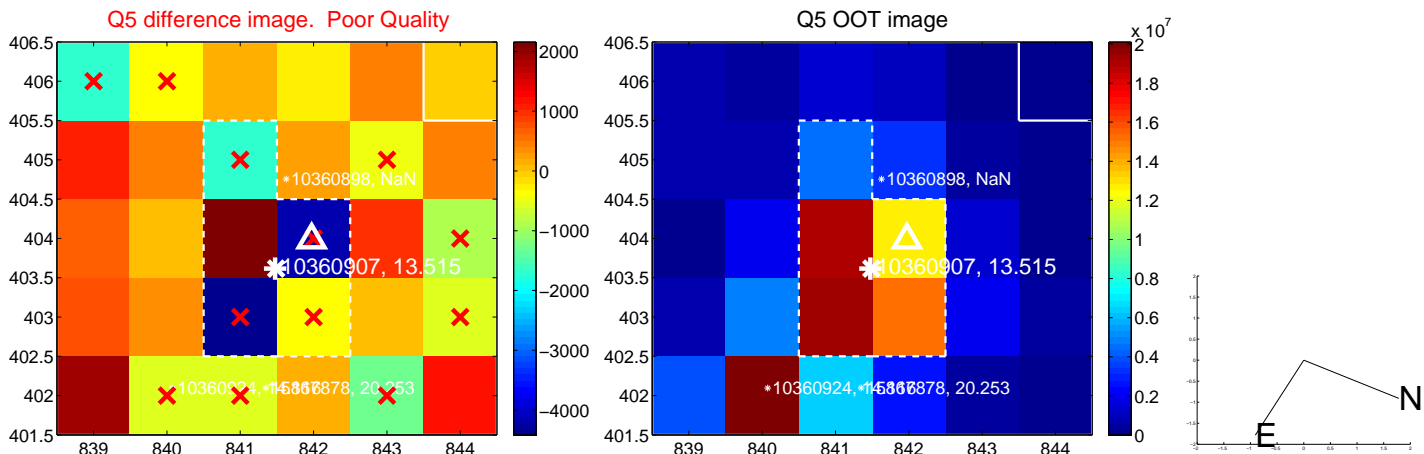


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

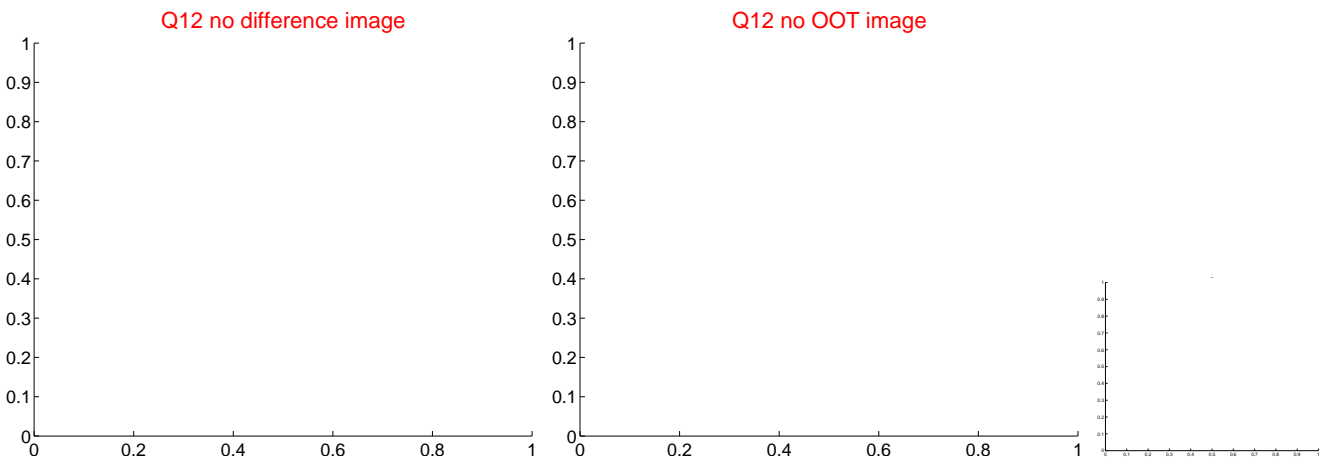
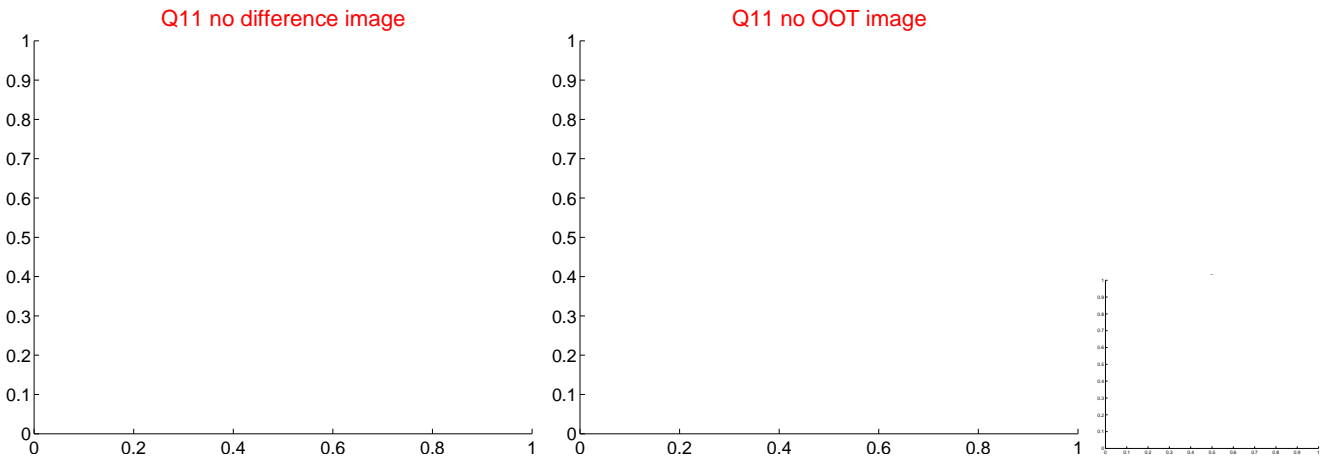
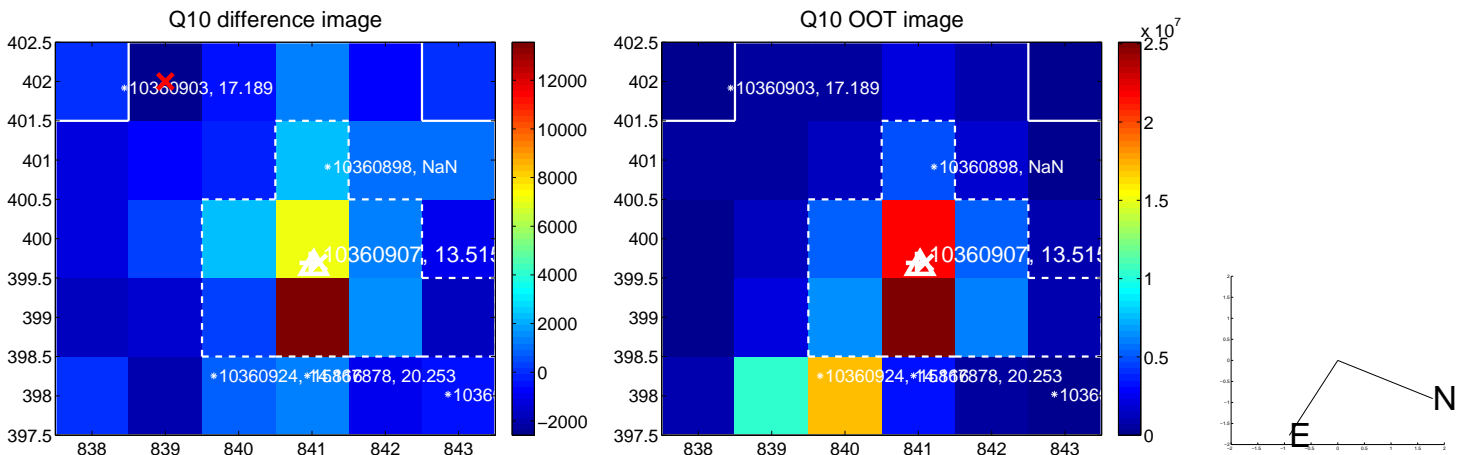
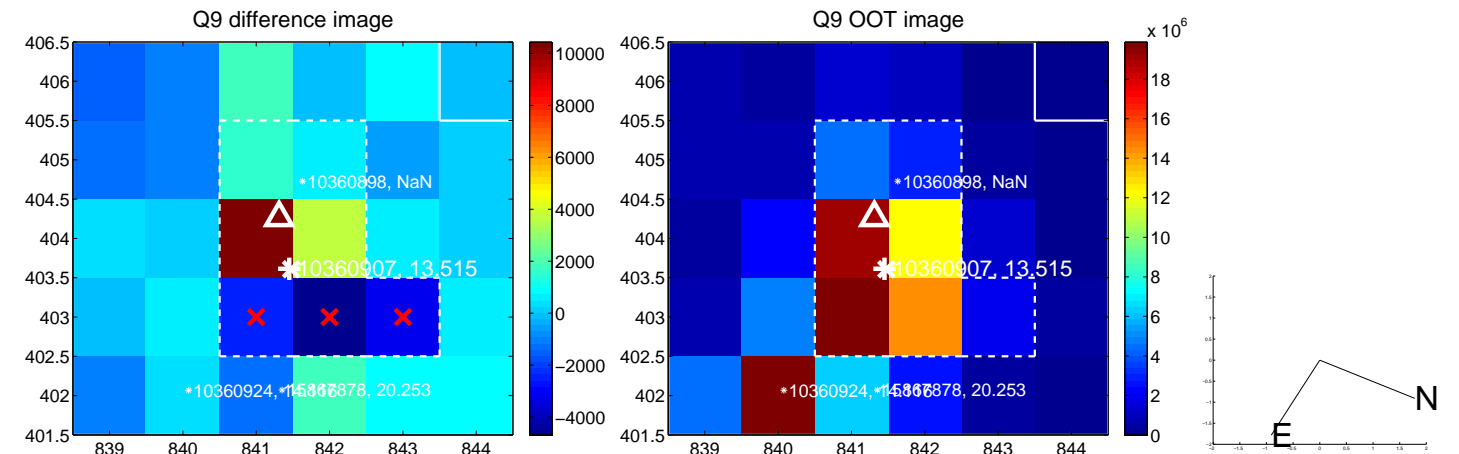
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

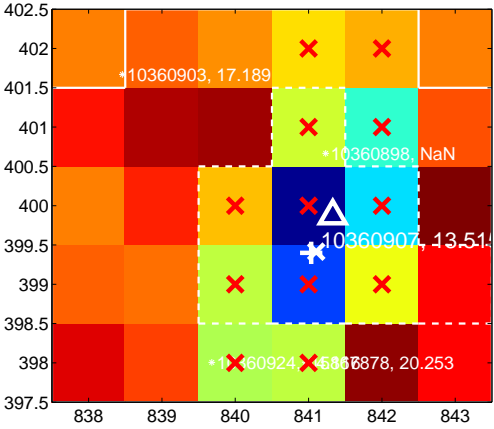
Q13 no difference image



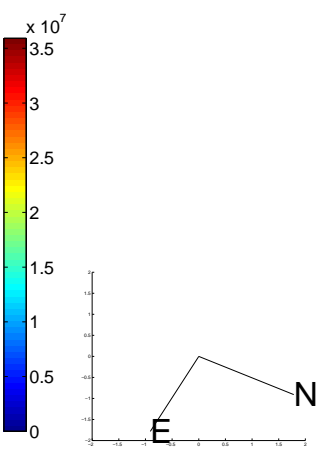
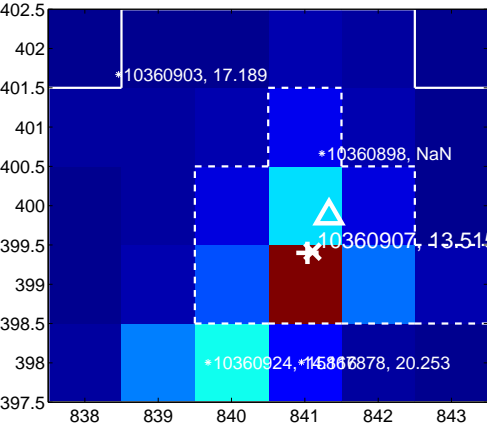
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



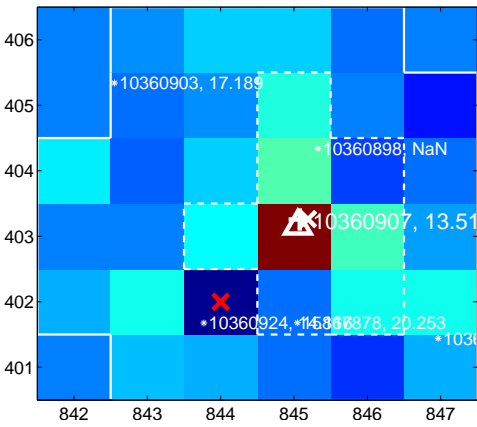
Q15 no difference image



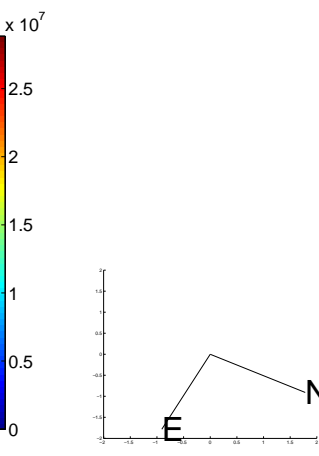
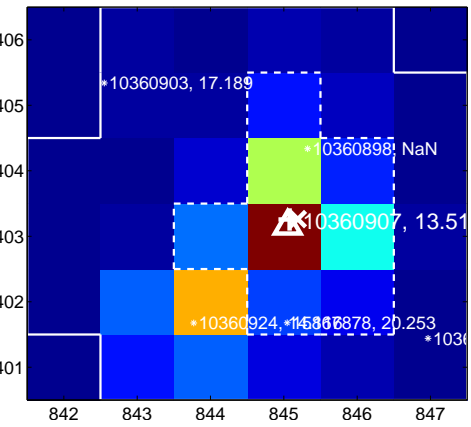
Q15 no OOT image



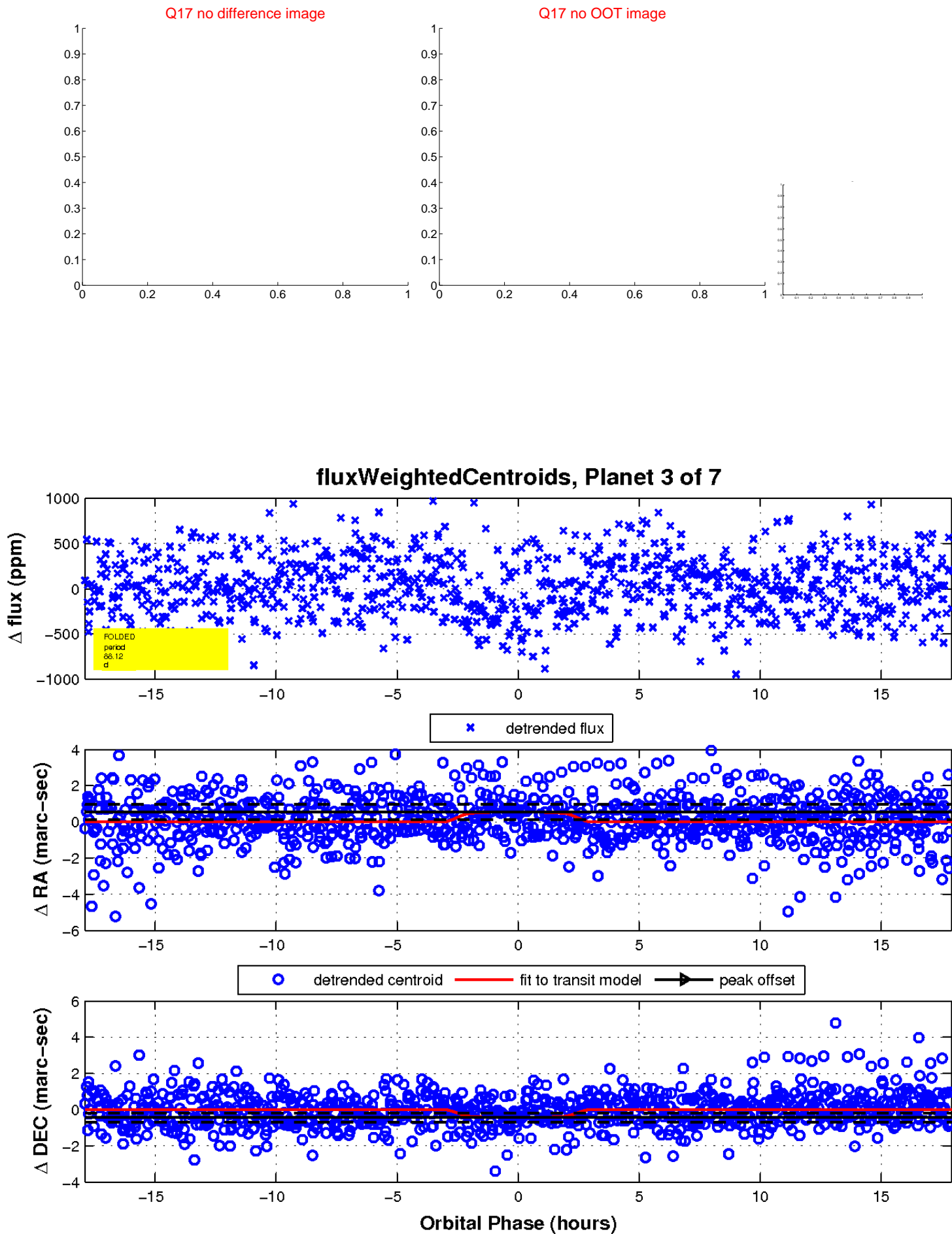
Q16 difference image



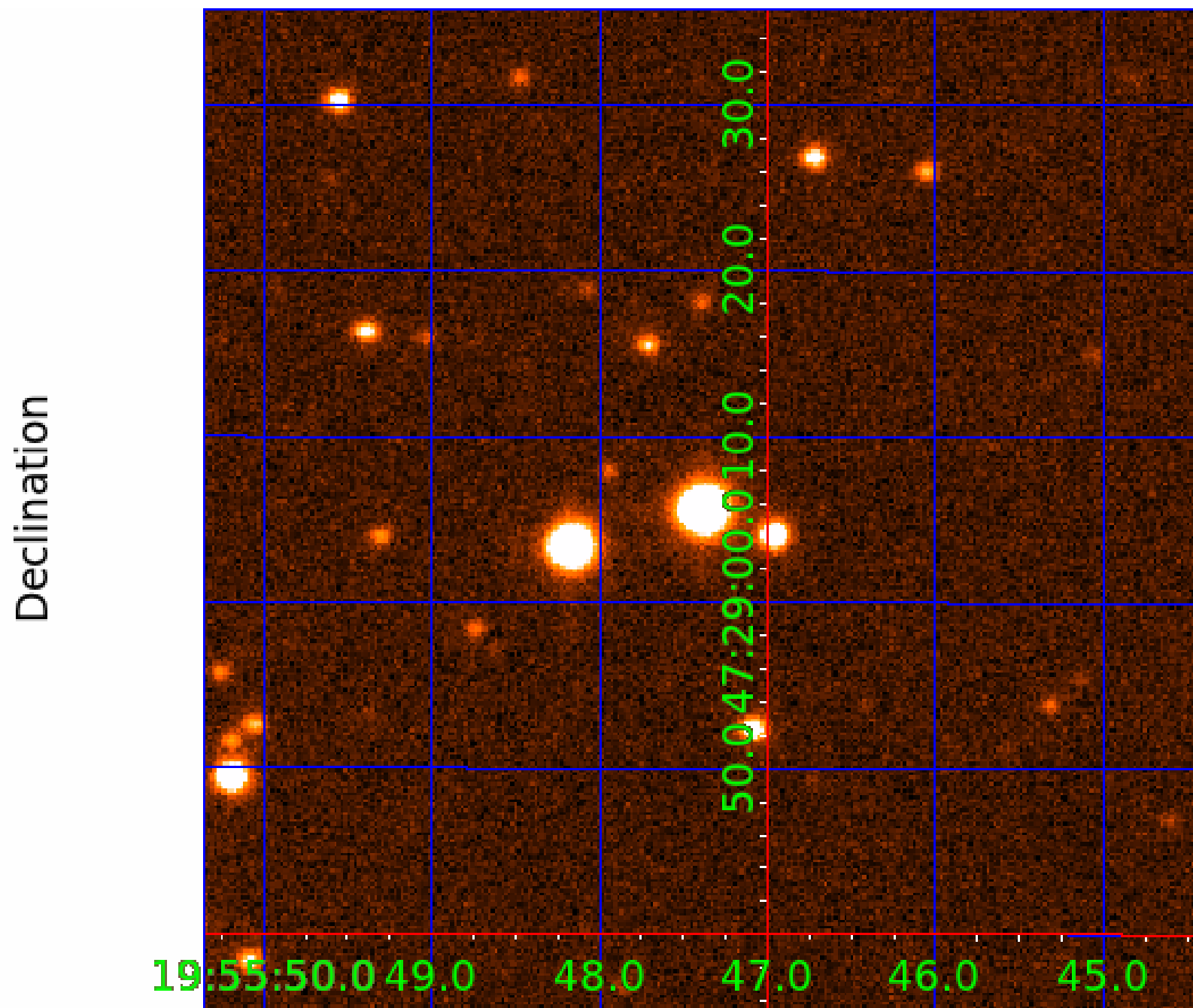
Q16 OOT image



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



UKIRT Image



KIC 010360907

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})
010360907-01	OBS	No	3.873257	135.086308	52.7	16.557	9.5	6.7	2.11	6425	1.55	2508.39
010360907-02	OBS	No	67.100448	193.425634	383.0	4.095	9.0	9.1	2.11	6425	5.22	55.96
010360907-03	OBS	No	88.117686	217.990806	410.4	5.976	8.9	9.4	2.11	6425	5.20	38.91
010360907-04	OBS	No	294.071670	268.732724	561.7	10.375	8.3	9.0	2.11	6425	5.41	7.80
010360907-05	OBS	No	312.364930	265.438787	410.2	7.825	8.5	6.7	2.11	6425	4.49	7.20
010360907-06	OBS	No	198.384581	321.823097	483.3	5.768	7.9	7.0	2.11	6425	4.90	13.19
010360907-07	OBS	No	87.813516	162.219229	218.0	9.000	7.7	-1.0	2.11	6425	3.13	39.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010360907-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
010360907-02	OBS	FP	0.01	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
010360907-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
010360907-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010360907-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—MOD_NONUNIQ_ALT—HALO_GHOST
010360907-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

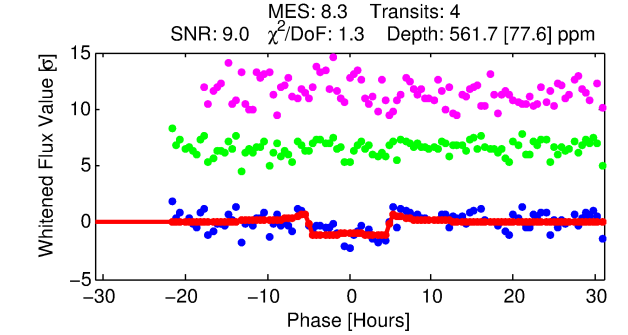
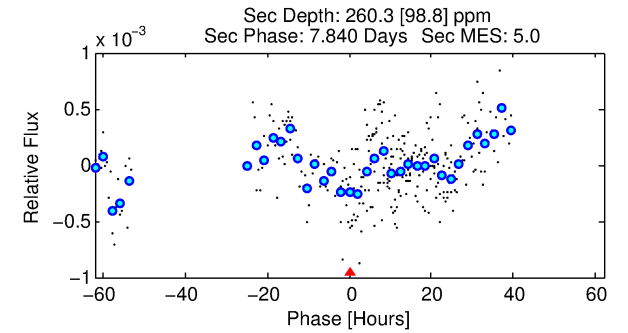
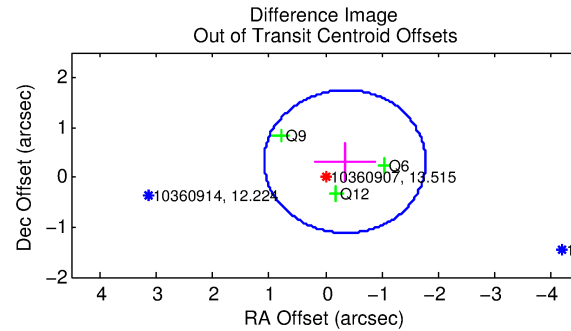
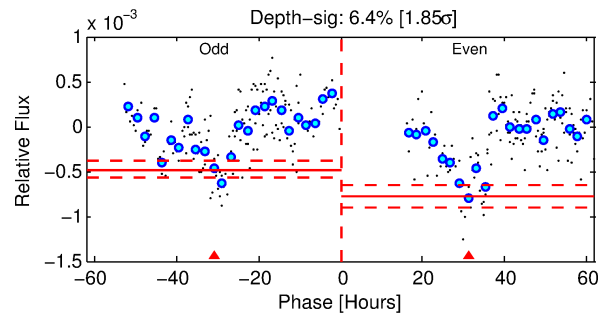
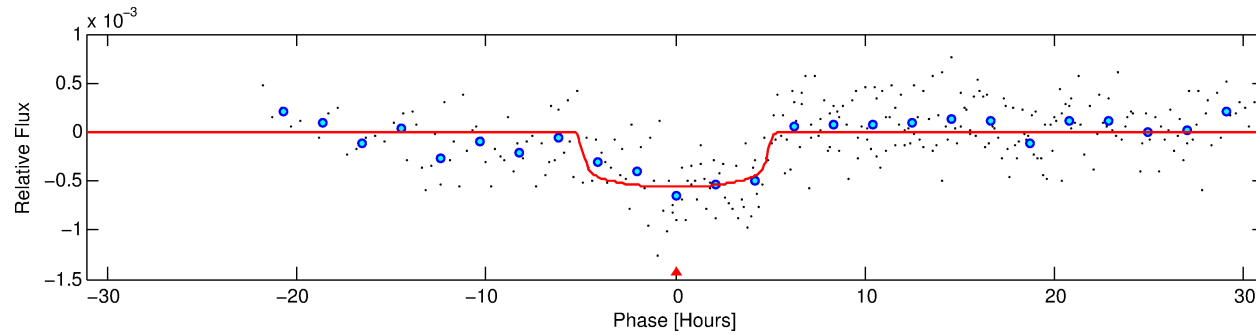
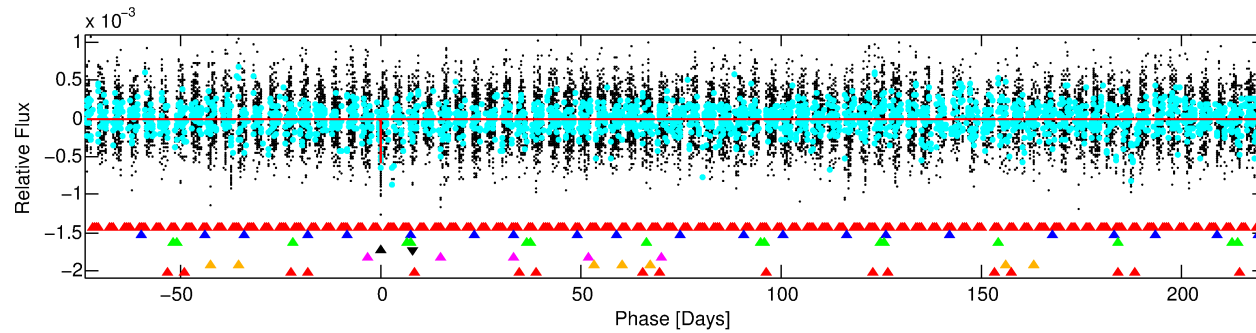
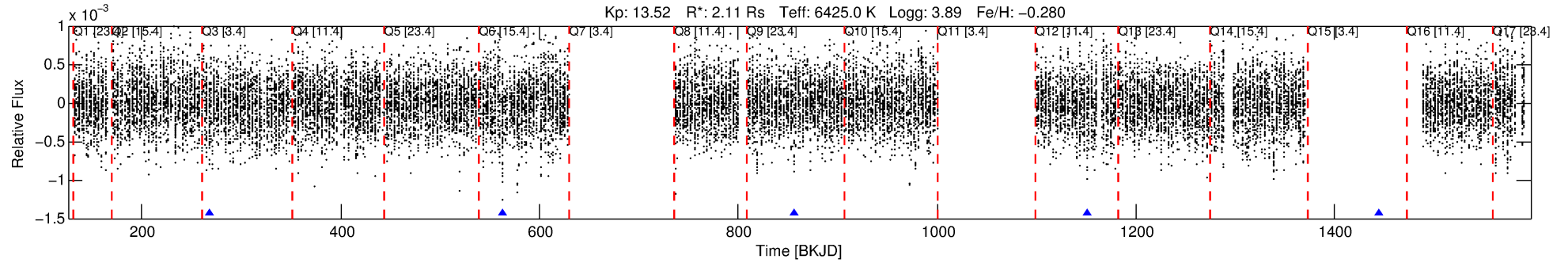
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-04

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 4 of 7 Period: 294.072 d



DV Fit Results:

Period = 294.07167 [0.00673] d
Epoch = 268.7327 [0.0108] BKJD
Rp/R* = 0.0235 [0.0042]
a/R* = 152.72 [129.58]
b = 0.74 [0.52]
Seff = 7.80 [5.62]
Teff = 426 [77] K
Rp = 5.41 [2.57] Re
a = 0.9321 [0.4062] AU
Ag = 4257.03 [3747.88] [1.14σ]
Teffp = 5322 [718] K [6.78σ]

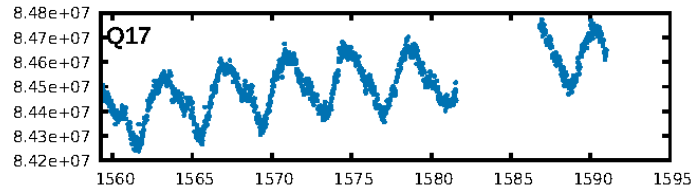
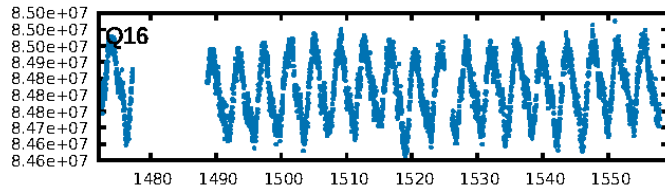
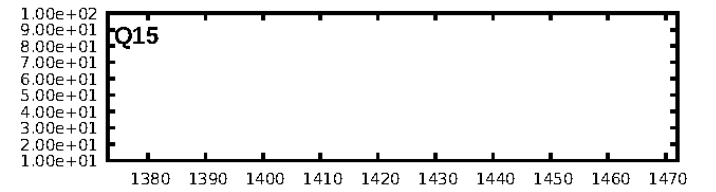
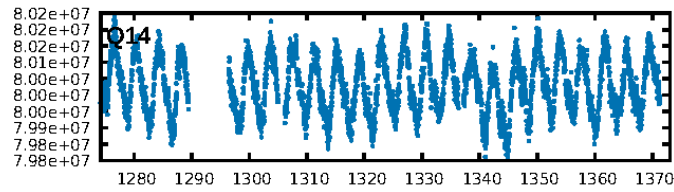
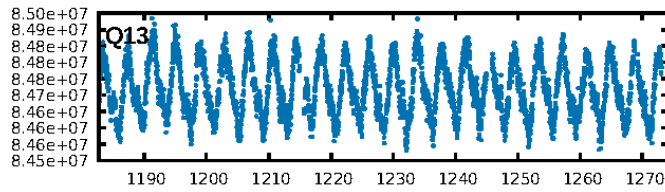
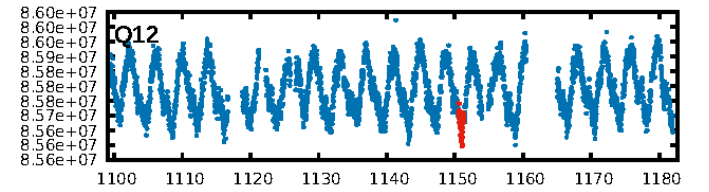
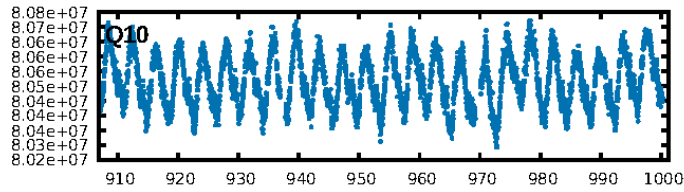
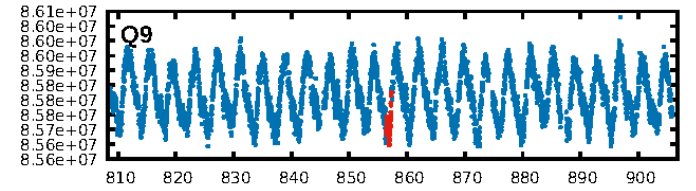
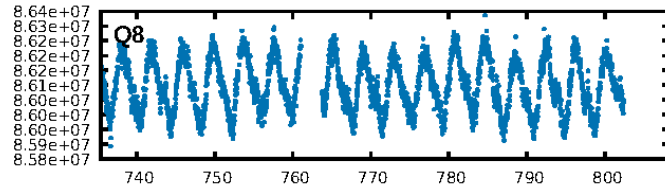
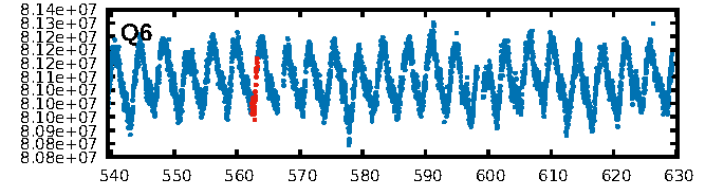
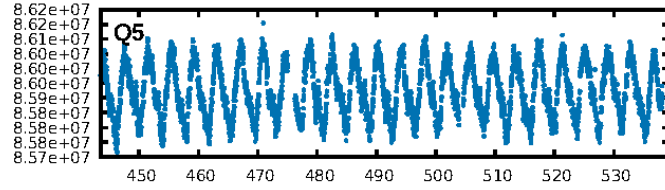
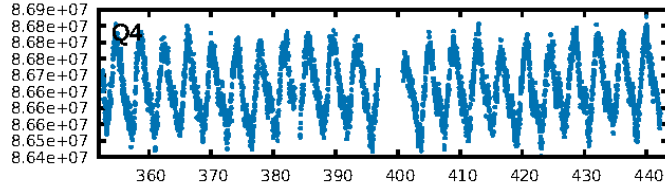
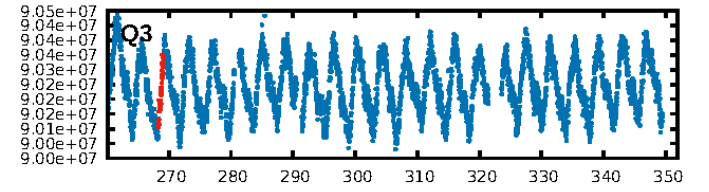
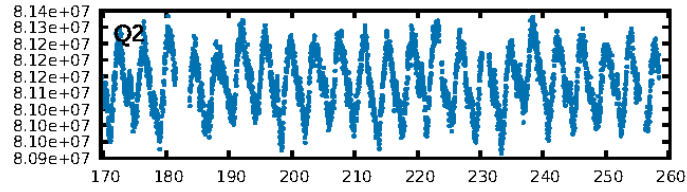
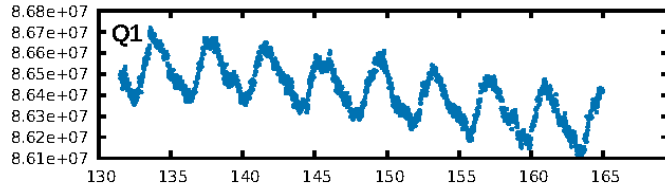
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [193.47σ]
LongPeriod-sig: 100.0% [33.79σ]
ModelChiSquare2-sig: 52.2%
ModelChiSquareGof-sig: 94.4%
Bootstrap-pfa: 1.79e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -5.986
Centroid-sig: 1.7%
Centroid-so: 0.556 arcsec [0.52σ]
OotOffset-rm: 0.465 arcsec [0.97σ]
KicOffset-rm: 0.185 arcsec [0.38σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.75 [3/4]

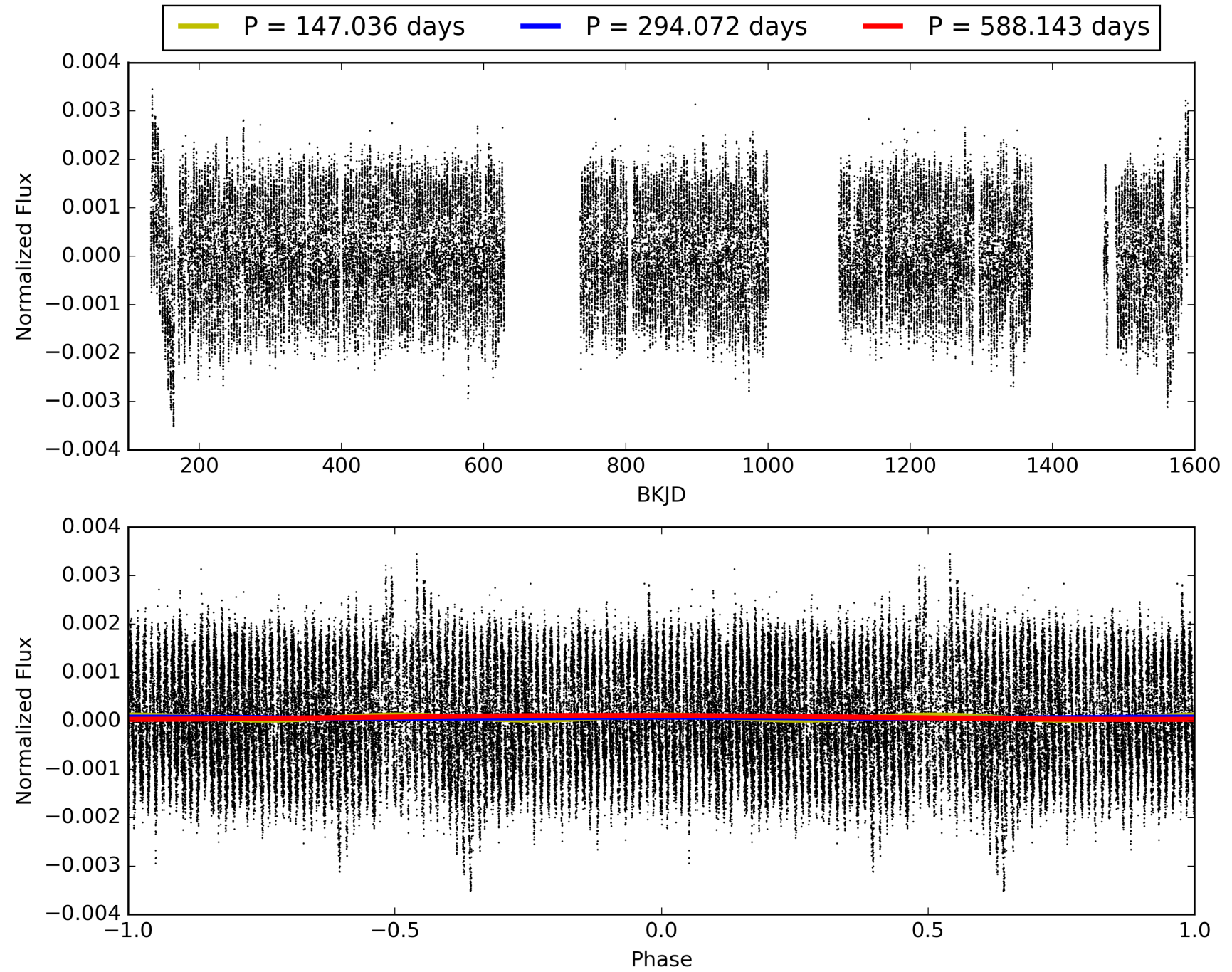
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:19:11 Z

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

TCE 010360907-04, PDC Light Curves

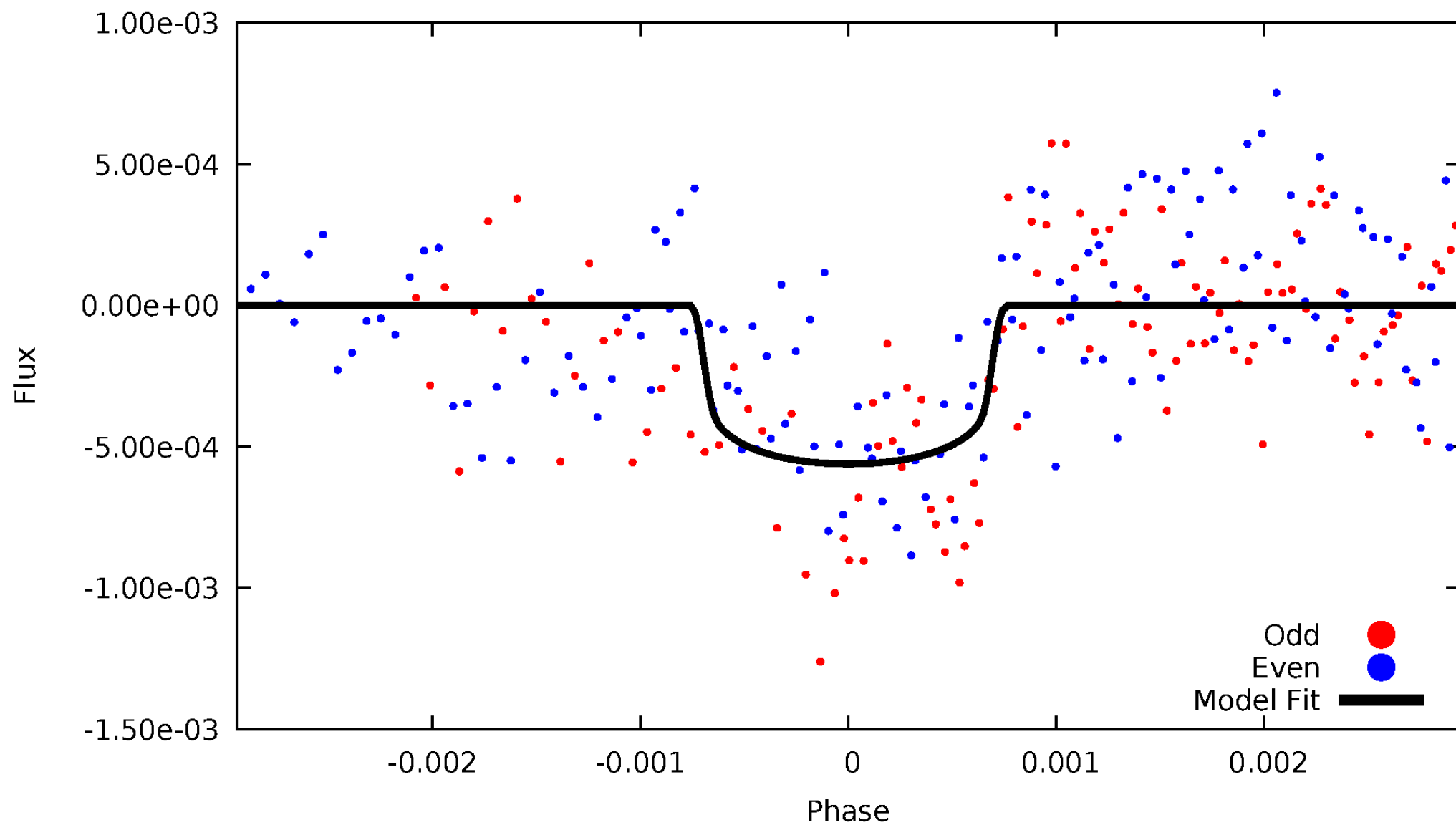


TCE 010360907-04



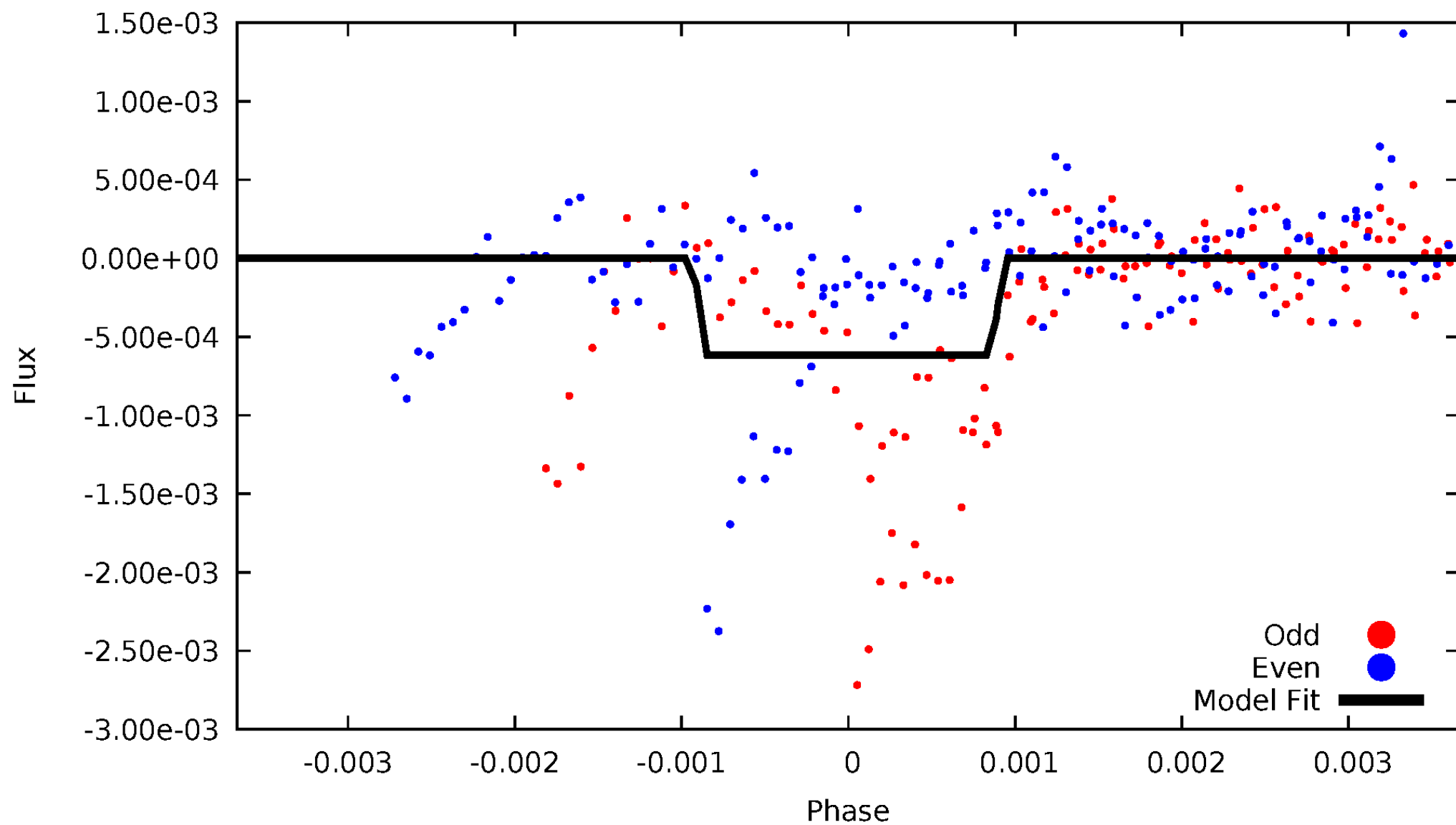
DV Odd/Even

TCE 010360907-04



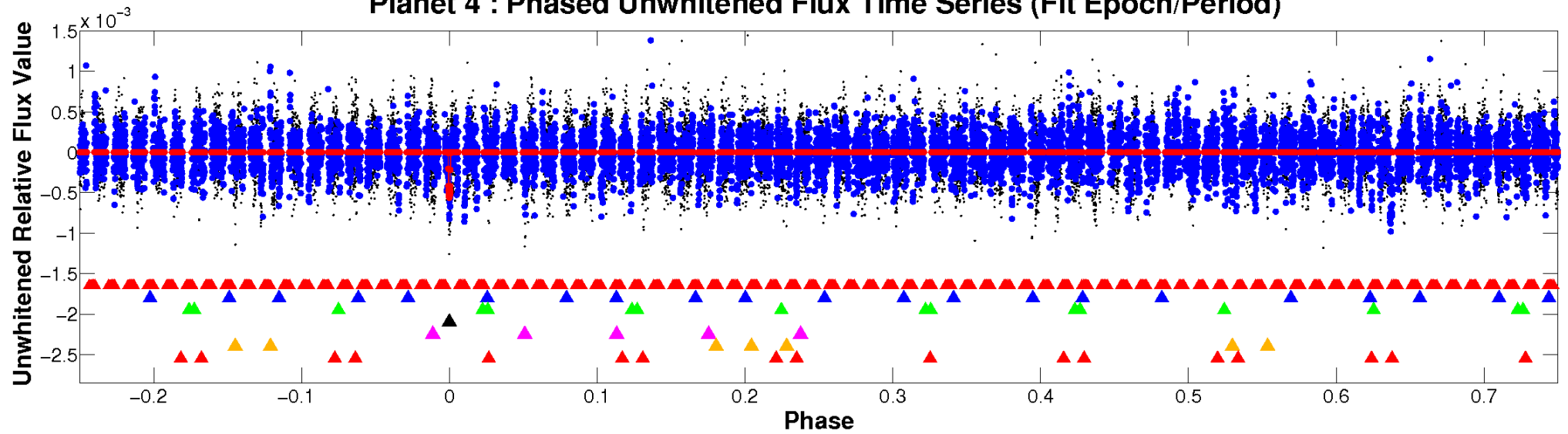
ALT Odd/Even

TCE 010360907-04

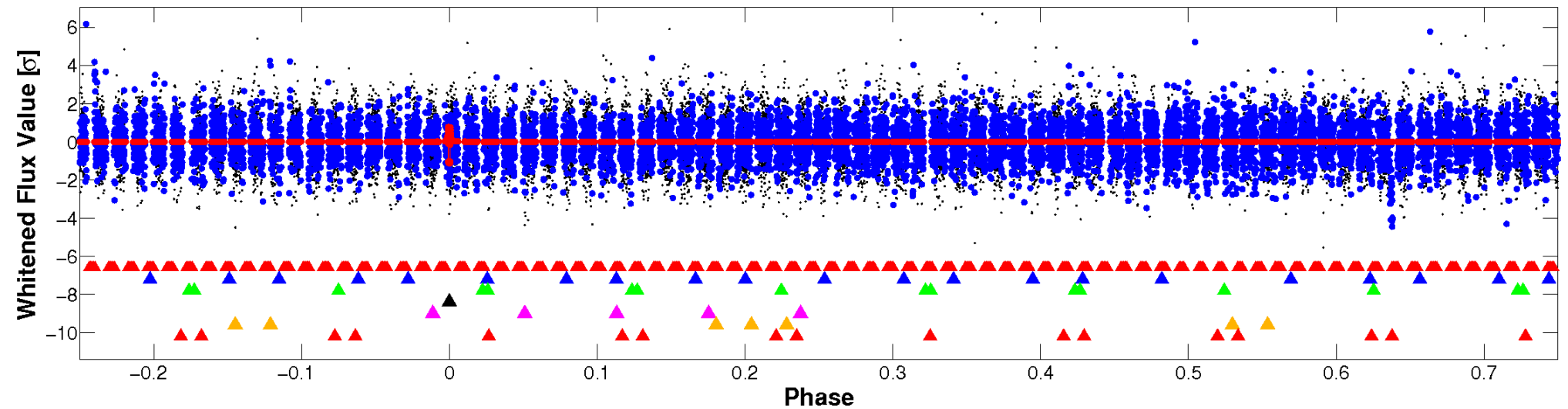


Non-Whitened Vs. Whitened Light Curve

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

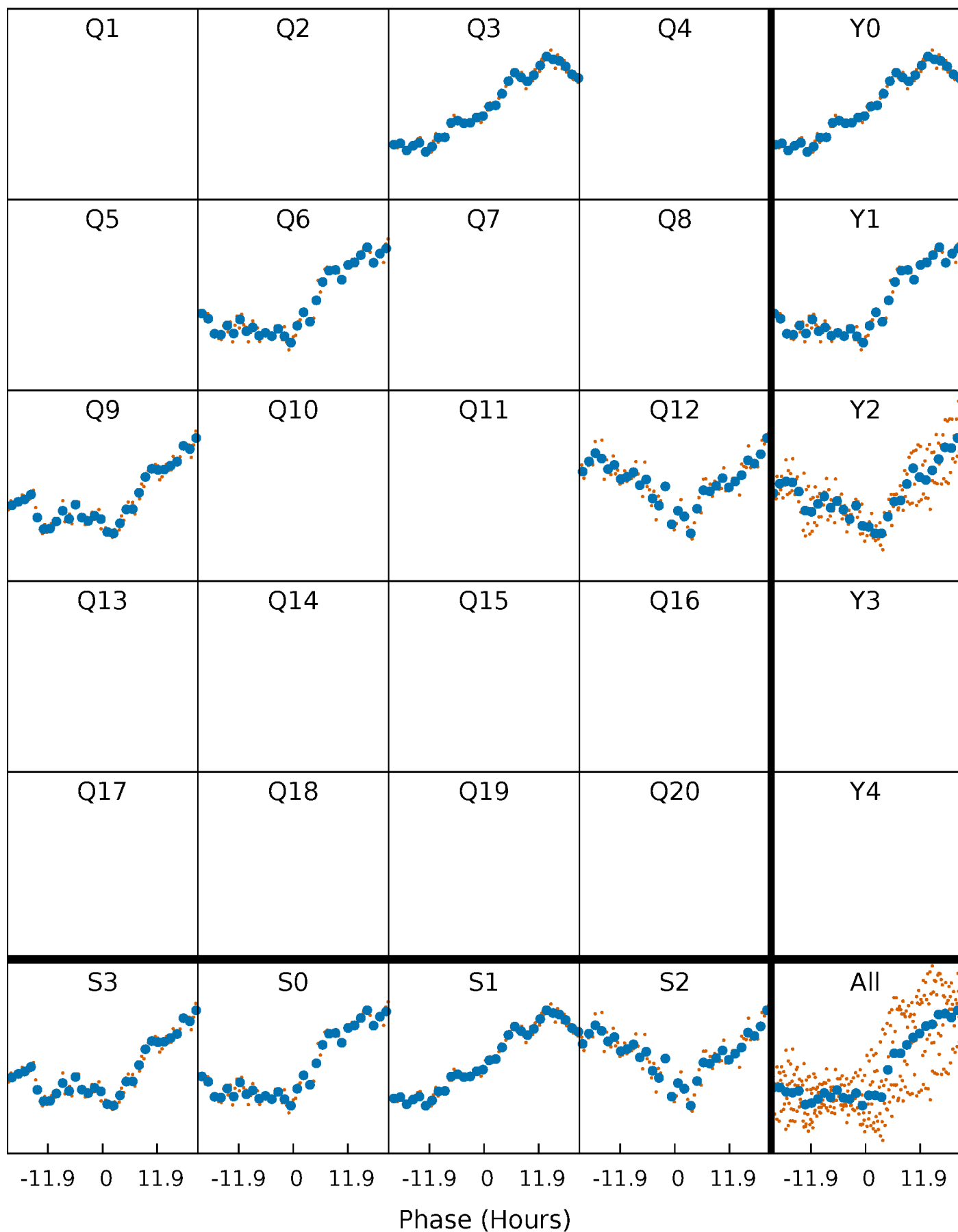


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



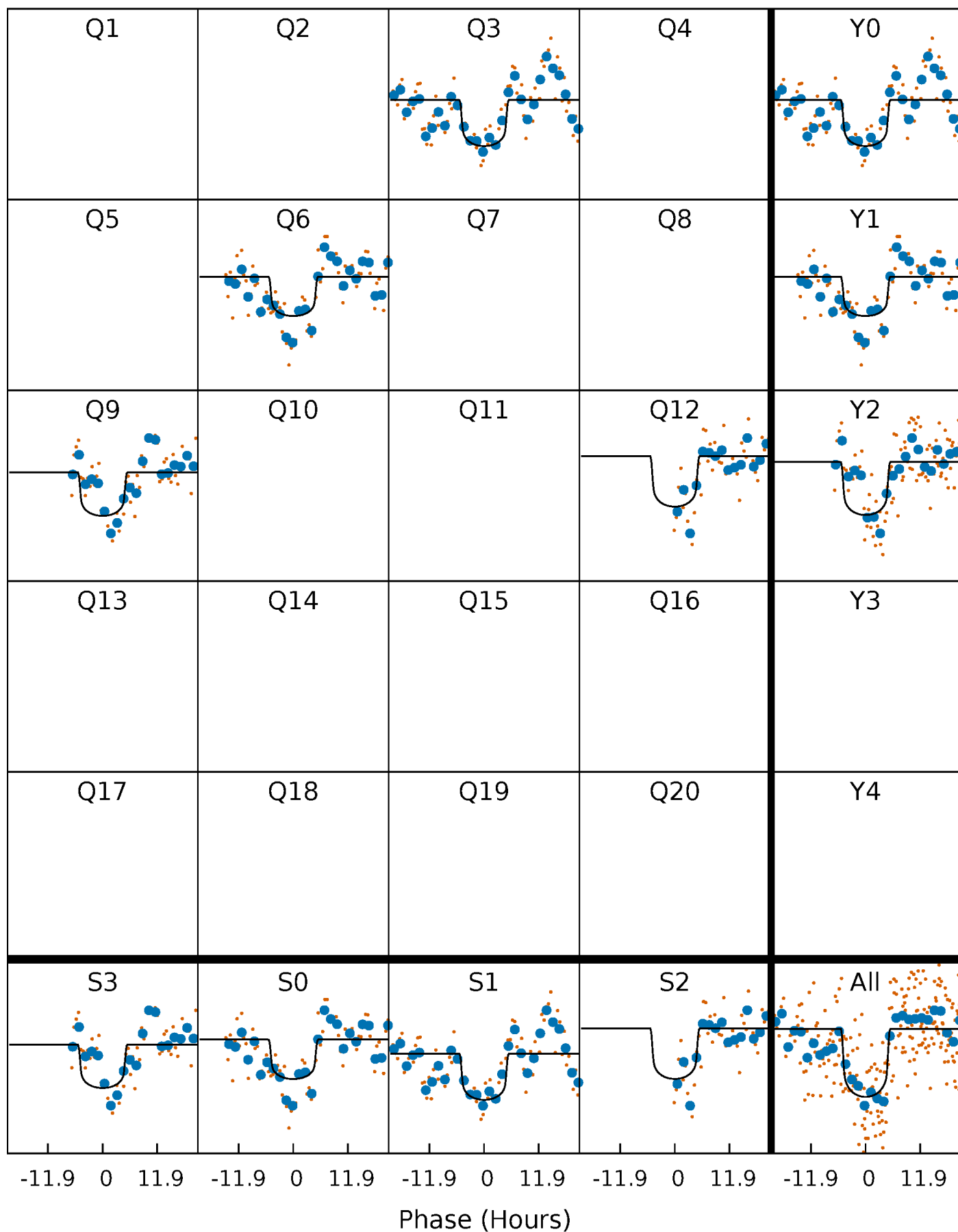
PDC Quarter-Phased Transit Curves

TCE 010360907-04 $P=294.071670$ Days $T_0=268.732725$ (BKJD)



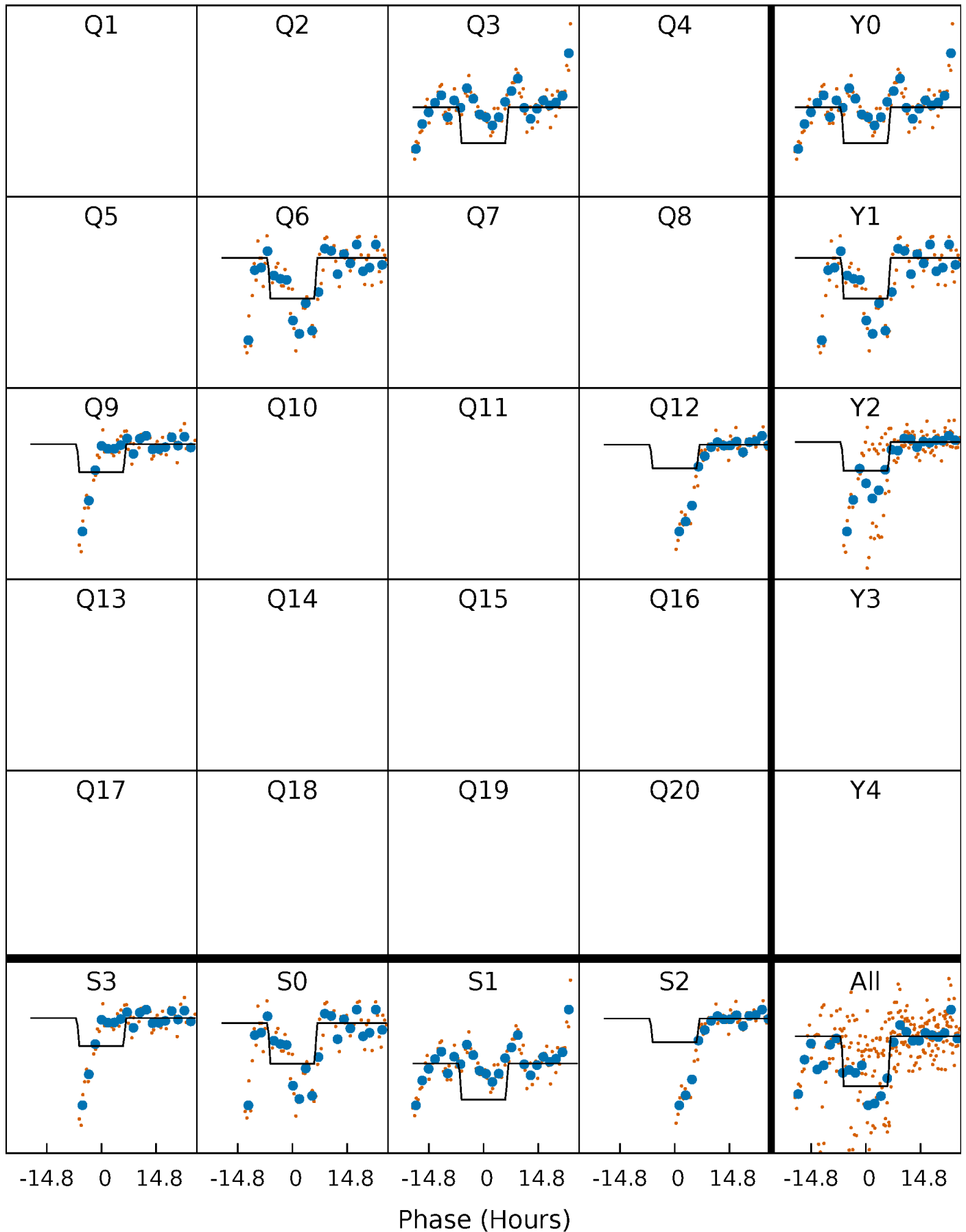
DV Quarter-Phased Transit Curves

TCE 010360907-04 $P=294.071670$ Days $T_0=268.732725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

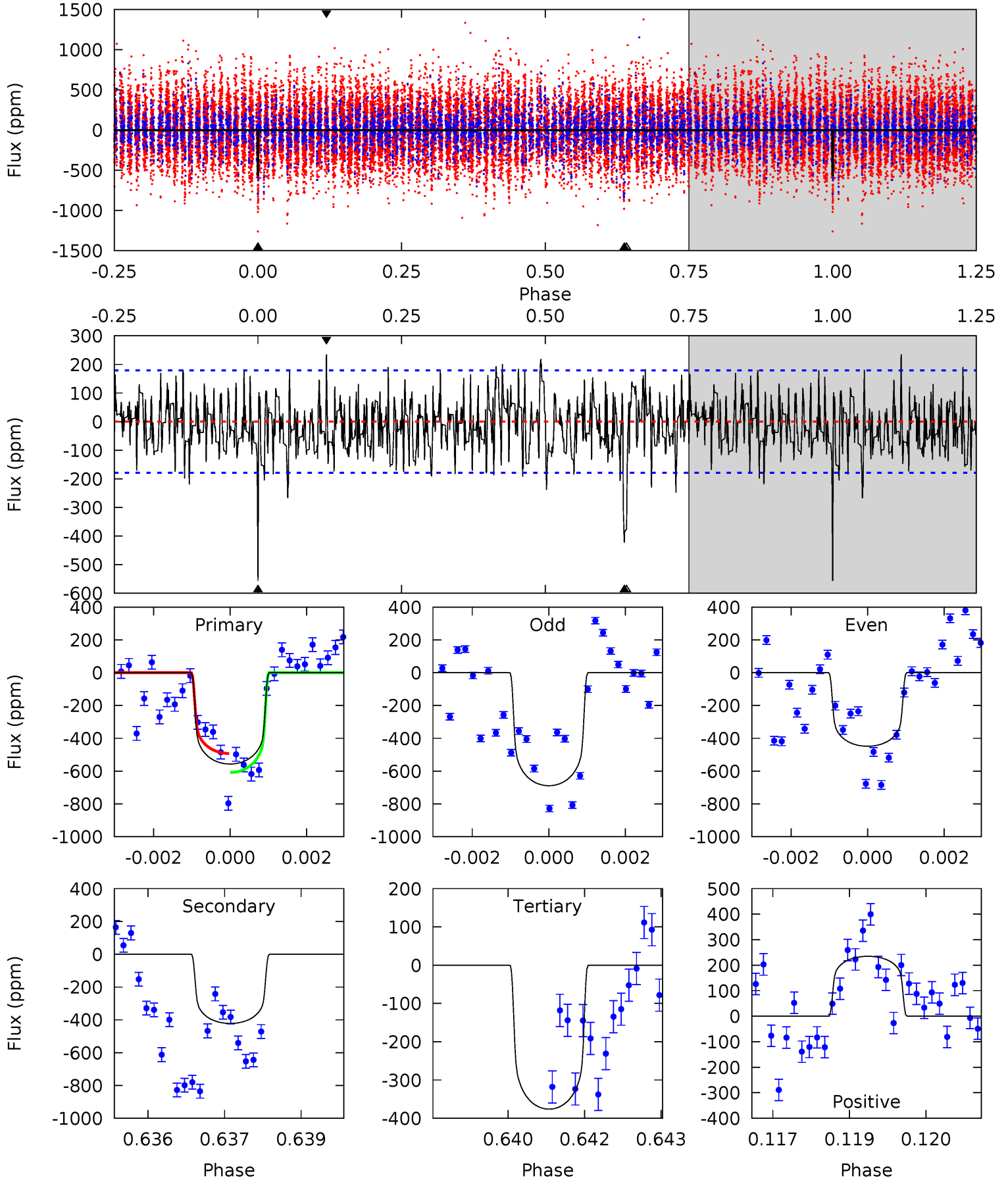
TCE 010360907-04 $P=294.100229$ Days $T_0=268.625502$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-04, P = 294.071670 Days, E = 268.732725 Days

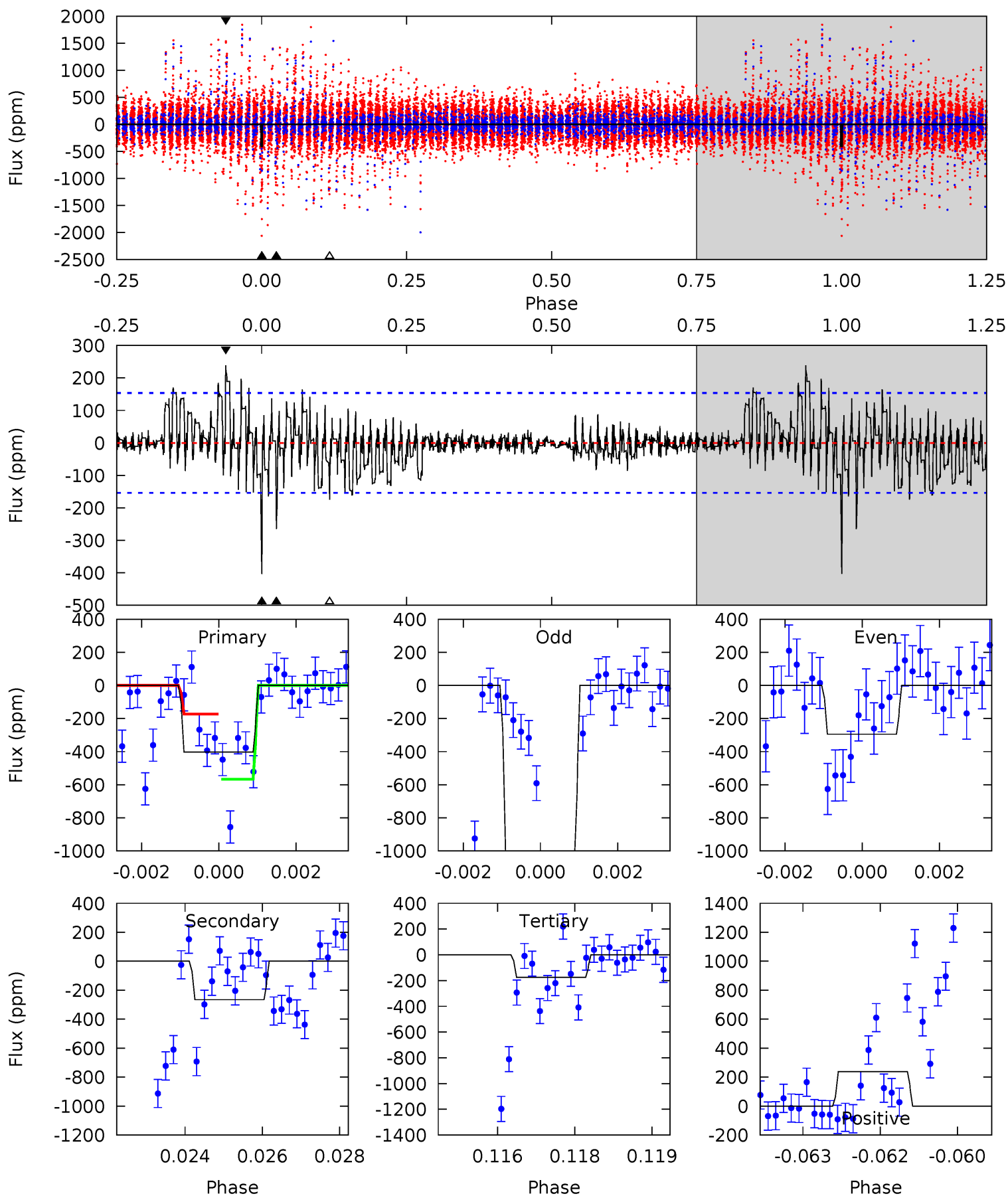
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	12.7	11.3	7.06	5.38	3.17	2.36	5.43	9.68	1.38	5.62	3.59	0.99	0.30	1.72



Alt Model-Shift Uniqueness Test

010360907-04, P = 294.100229 Days, E = 268.625502 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	9.22	6.07	8.29	5.34	3.11	1.42	7.94	5.73	3.15	0.94	12.5	1.25	0.37	6.74



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-422 ± 33	$5.10^{+1.39}_{-1.34}$	584^{+46}_{-66}	5980^{+653}_{-488}	7903^{+6244}_{-3067}
Alt.	-265 ± 29	$5.48^{+1.45}_{-1.48}$	584^{+47}_{-69}	5235^{+507}_{-372}	4258^{+3610}_{-1540}

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 $A_{obs} \gg 1.0$

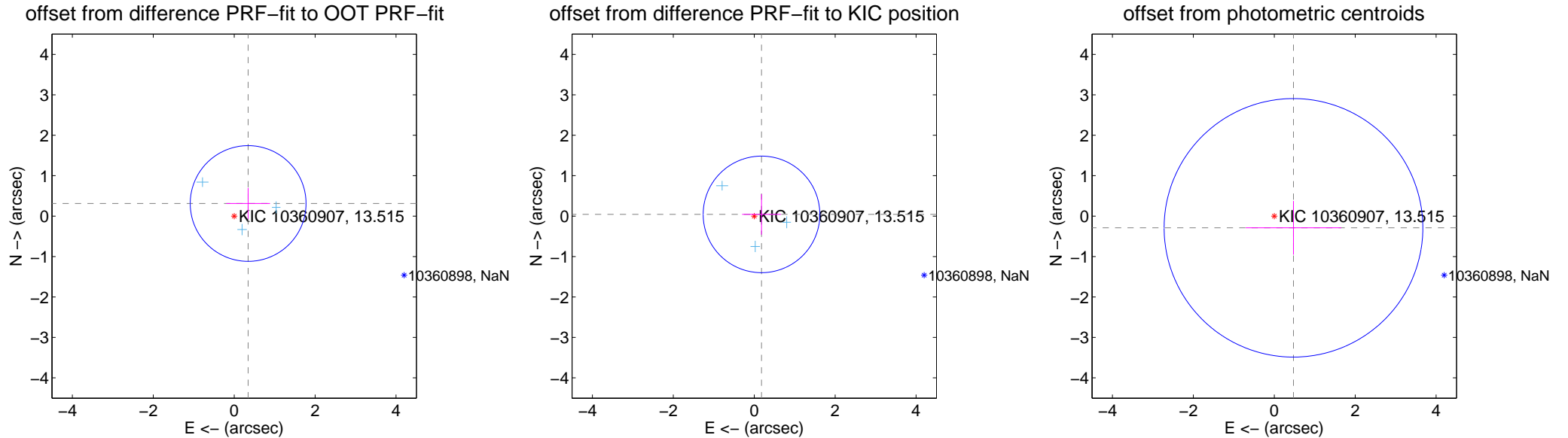
DV Centroid Data

Supplemental centroid analysis for 010360907-04. Kepler magnitude: 13.52. Transit SNR 8.99

There are 3 quarters with good PRF difference image offsets

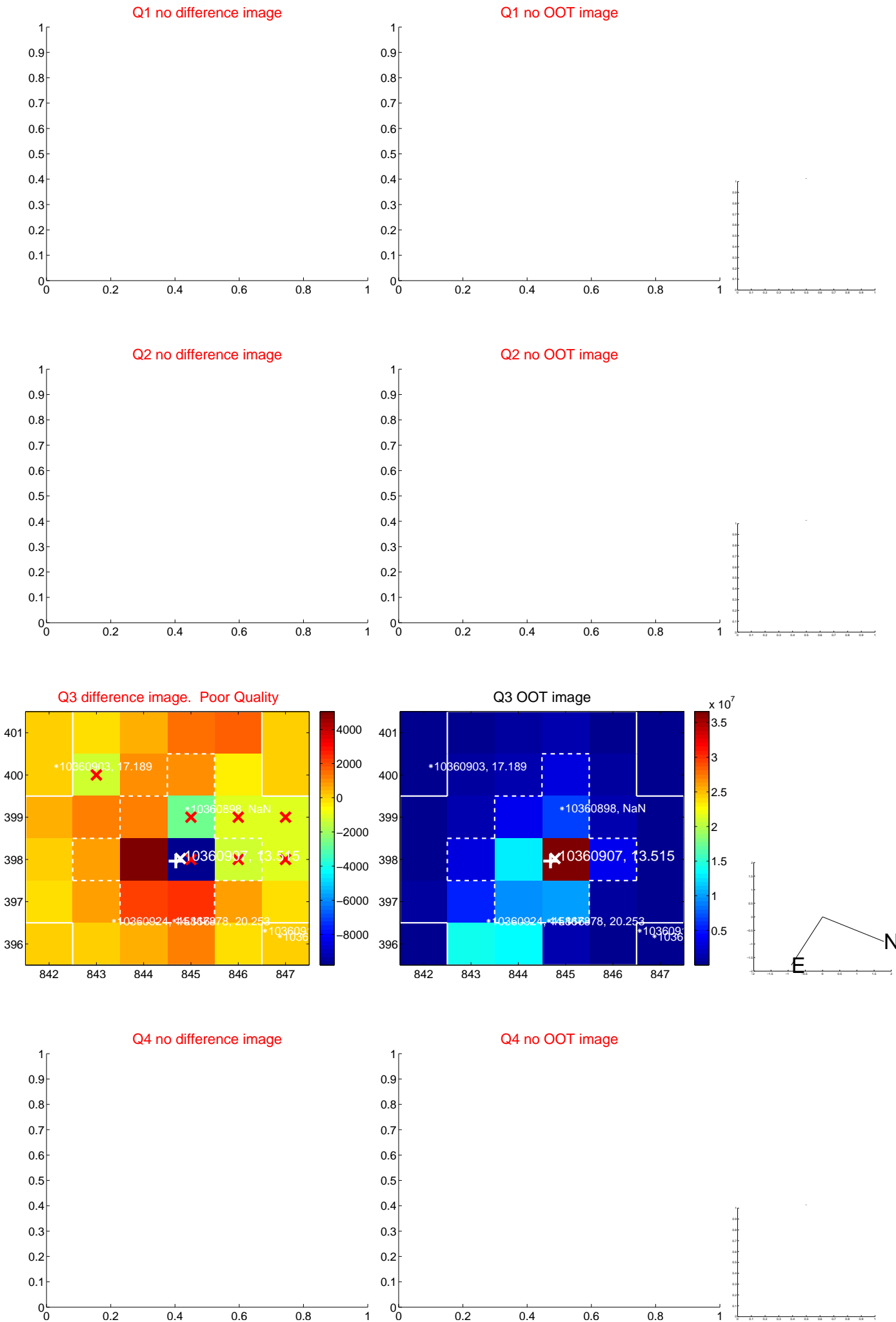
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.465 ± 0.477	0.97	-0.344 ± 0.540	0.312 ± 0.386
PRF-fit source offset from KIC position	0.185 ± 0.480	0.38	-0.180 ± 0.479	0.043 ± 0.502
photometric centroid source offset	0.56 ± 1.07	0.52	-0.47 ± 1.18	-0.29 ± 0.66

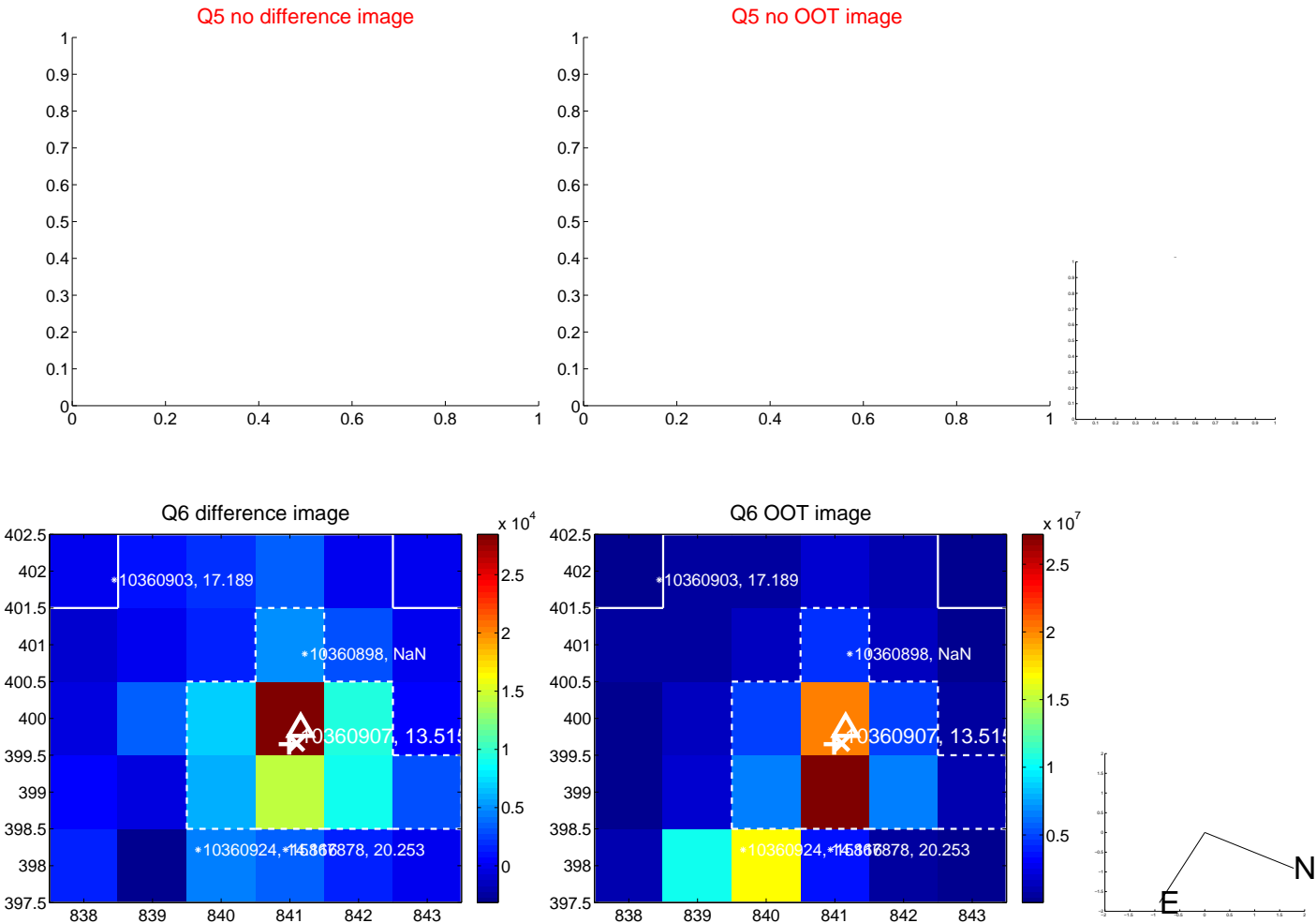


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

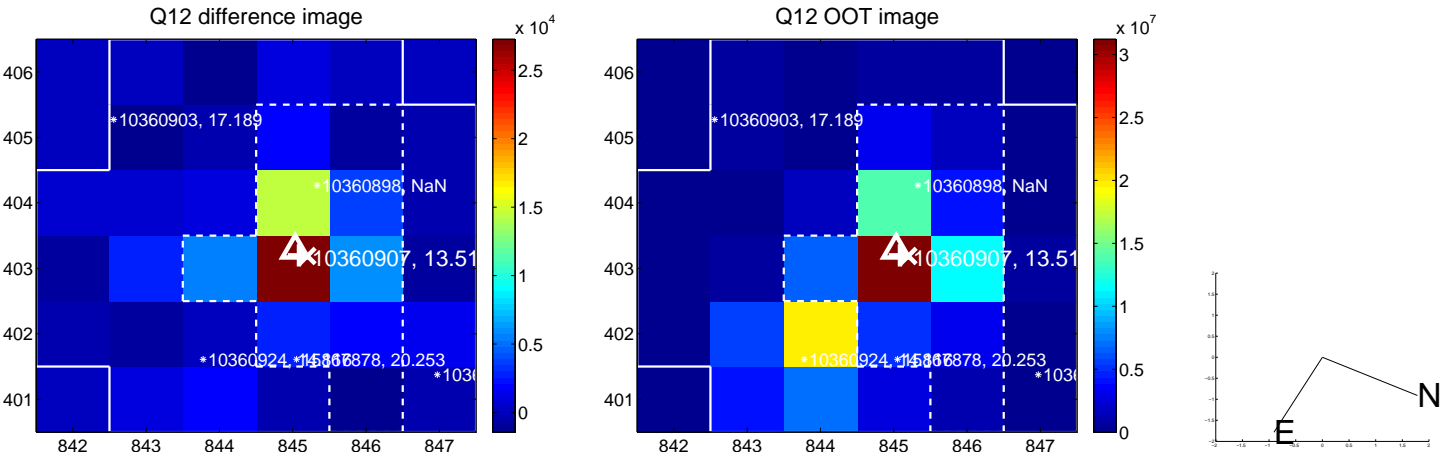
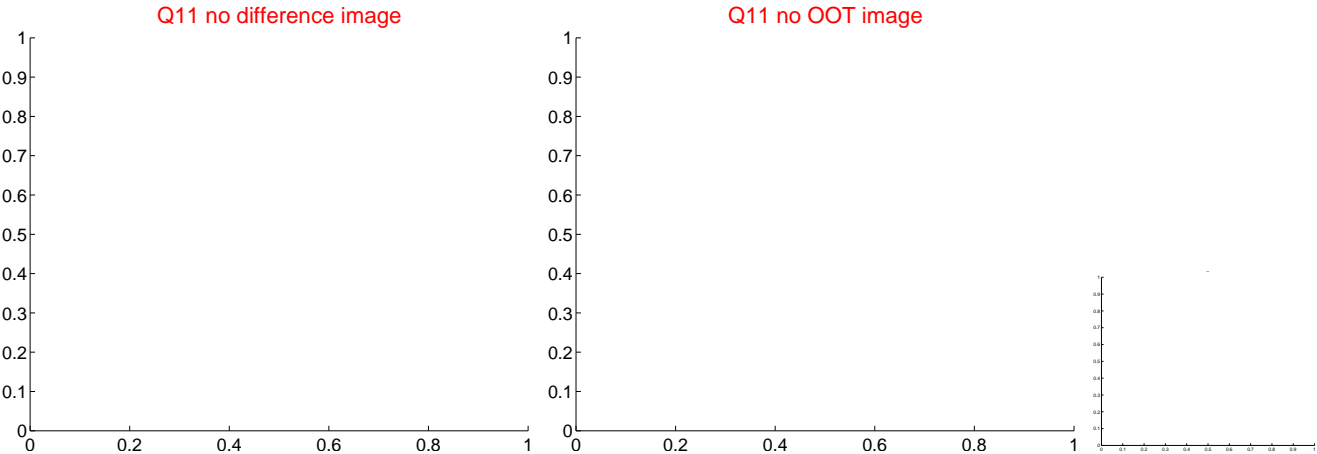
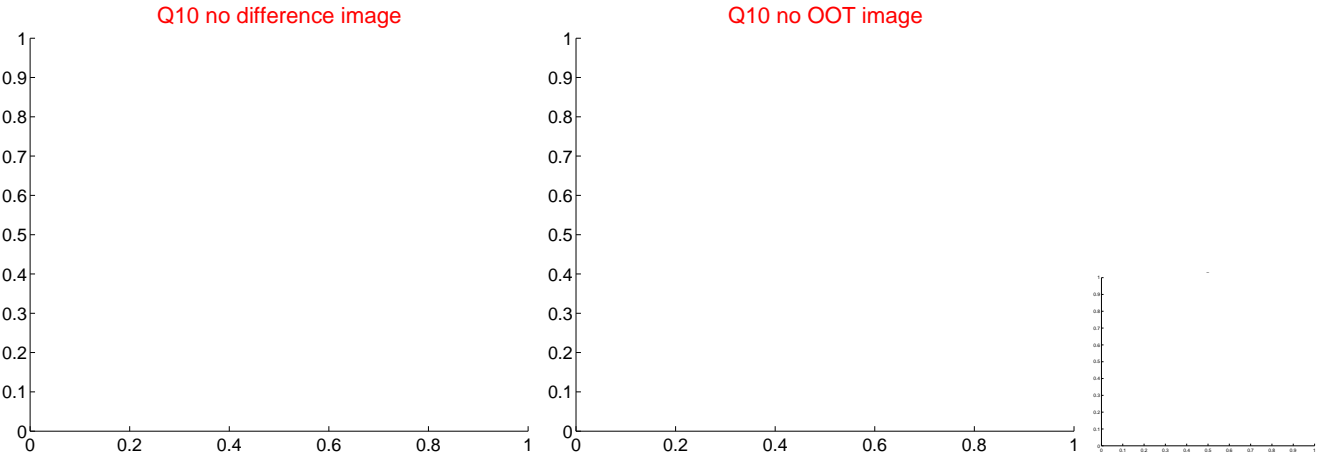
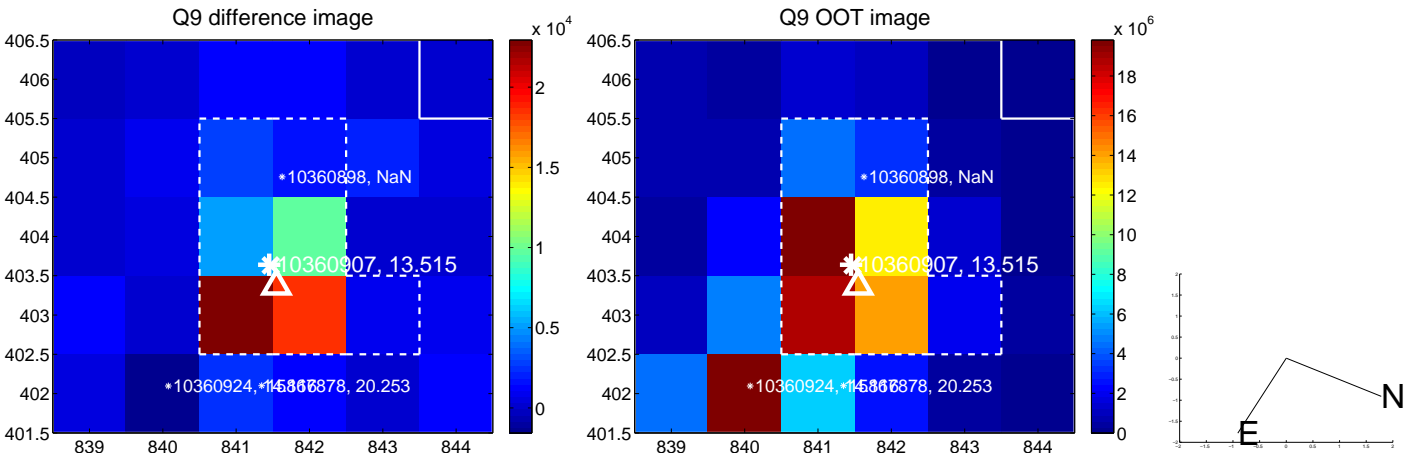
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



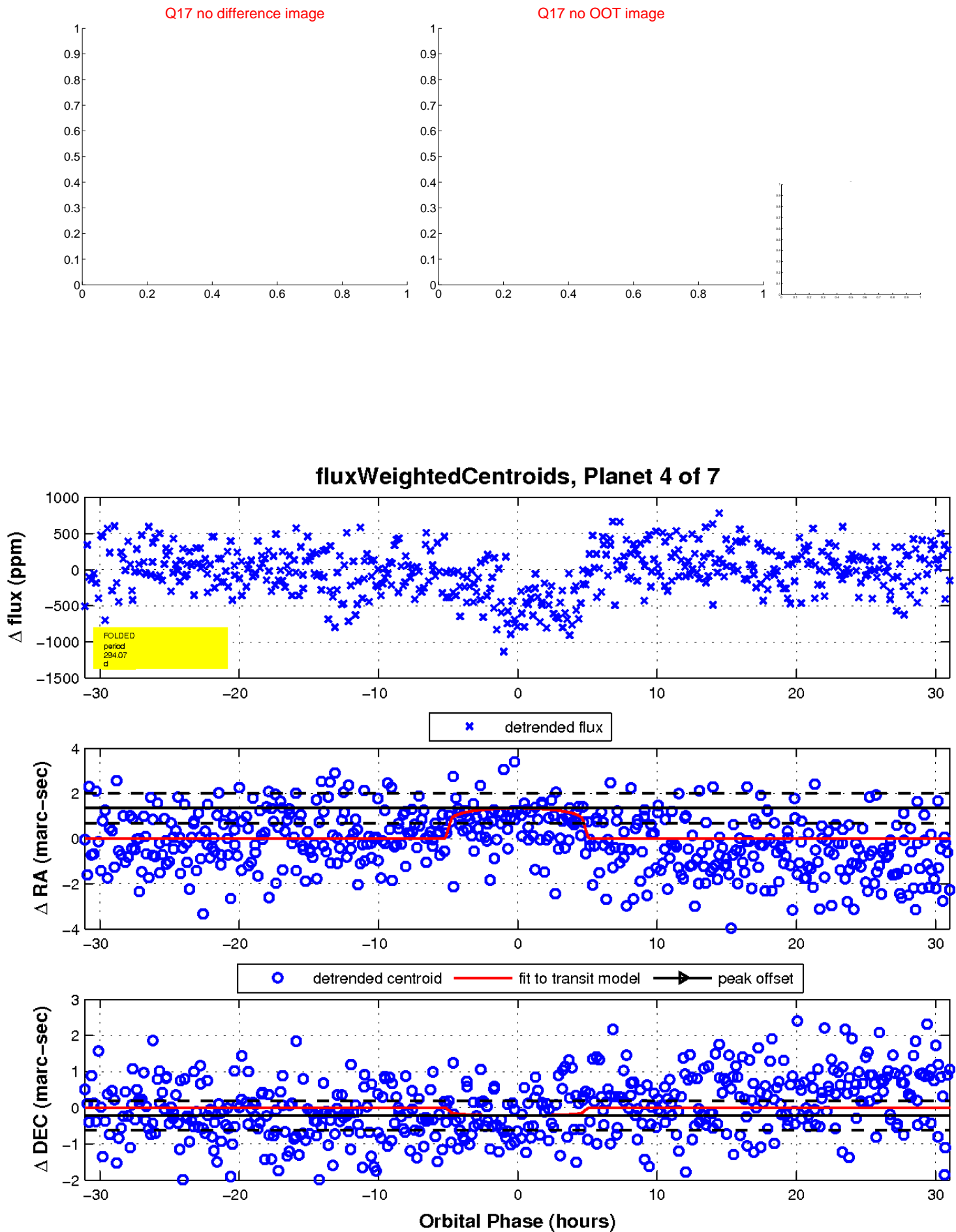
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



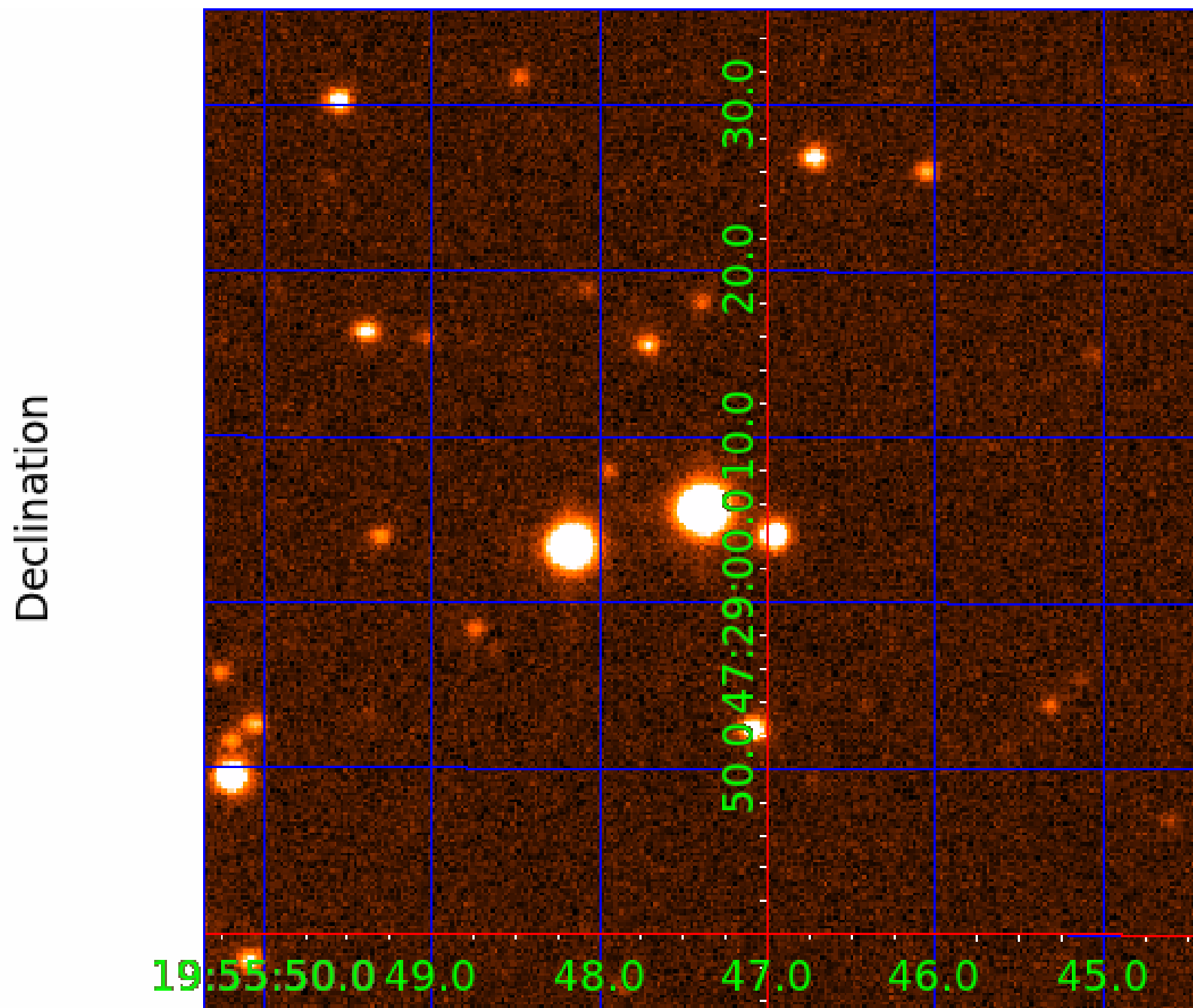
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 010360907

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})
010360907-01	OBS	No	3.873257	135.086308	52.7	16.557	9.5	6.7	2.11	6425	1.55	2508.39
010360907-02	OBS	No	67.100448	193.425634	383.0	4.095	9.0	9.1	2.11	6425	5.22	55.96
010360907-03	OBS	No	88.117686	217.990806	410.4	5.976	8.9	9.4	2.11	6425	5.20	38.91
010360907-04	OBS	No	294.071670	268.732724	561.7	10.375	8.3	9.0	2.11	6425	5.41	7.80
010360907-05	OBS	No	312.364930	265.438787	410.2	7.825	8.5	6.7	2.11	6425	4.49	7.20
010360907-06	OBS	No	198.384581	321.823097	483.3	5.768	7.9	7.0	2.11	6425	4.90	13.19
010360907-07	OBS	No	87.813516	162.219229	218.0	9.000	7.7	-1.0	2.11	6425	3.13	39.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010360907-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
010360907-02	OBS	FP	0.01	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
010360907-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
010360907-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010360907-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—MOD_NONUNIQ_ALT—HALO_GHOST
010360907-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

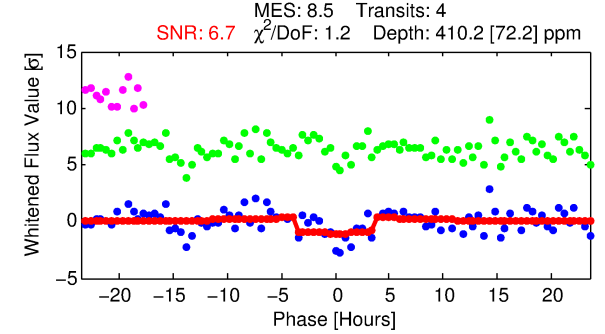
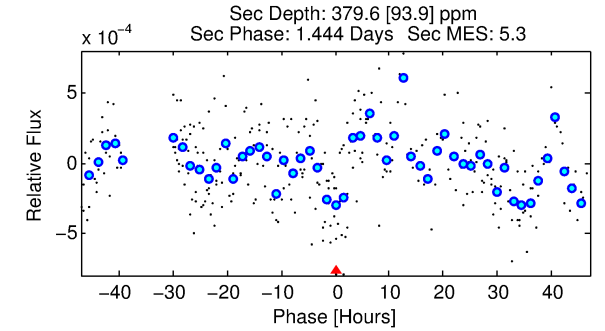
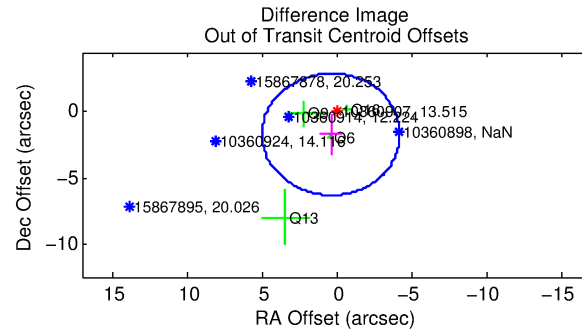
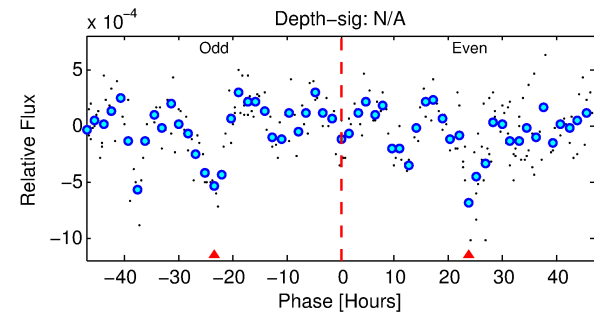
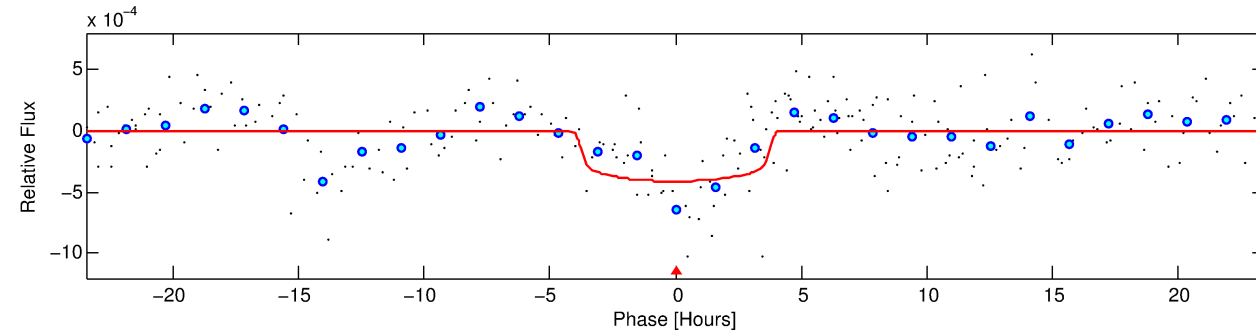
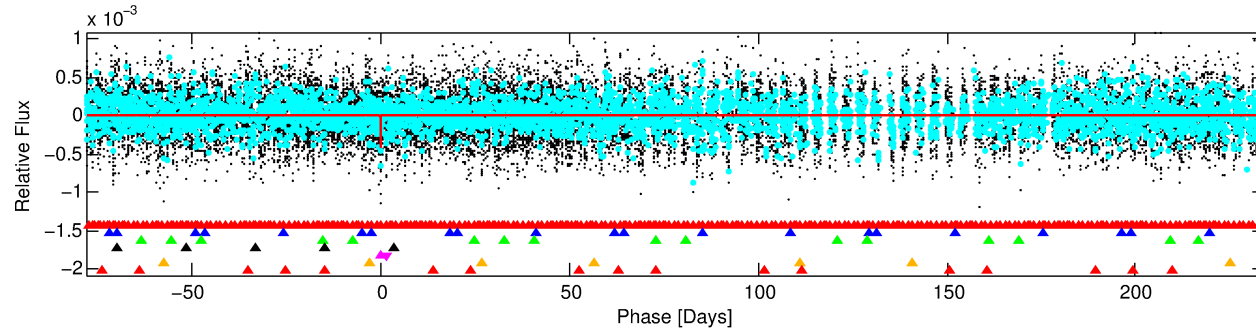
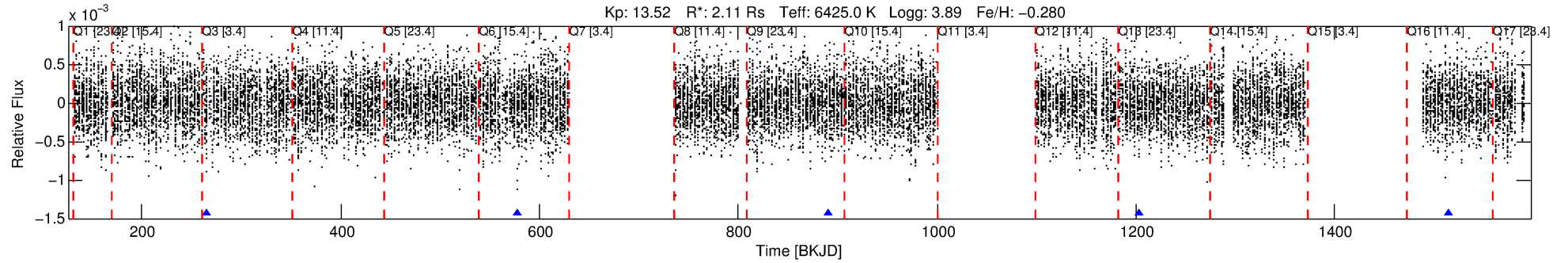
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-05

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 5 of 7 Period: 312.365 d



DV Fit Results:

Period = 312.36493 [0.00498] d
Epoch = 265.4388 [0.0127] BKJD
Rp/R* = 0.0195 [0.0108]
a/R* = 246.47 [714.46]
b = 0.62 [2.87]
Seff = 7.20 [5.19]
Teff = 418 [75] K
Rp = 4.49 [3.17] Re
a = 0.9703 [0.4229] AU
Ag = 9757.68 [13050.77] [0.75 σ]
Teffp = 6418 [1833] K [3.27 σ]

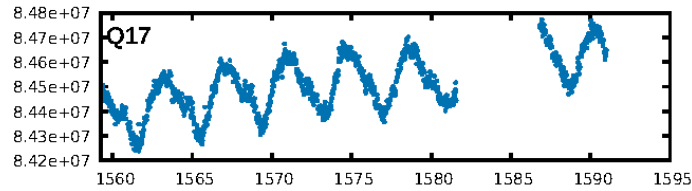
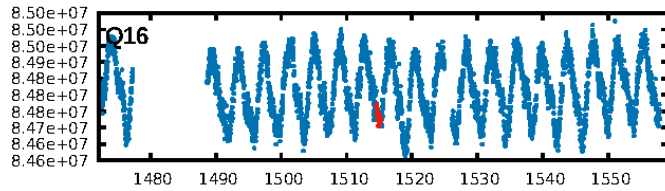
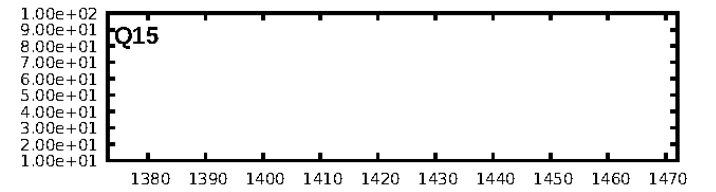
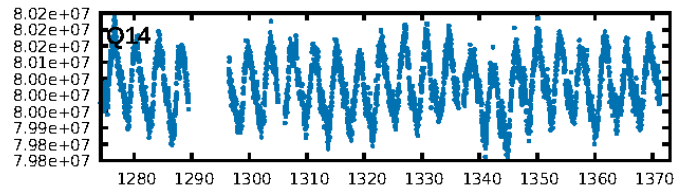
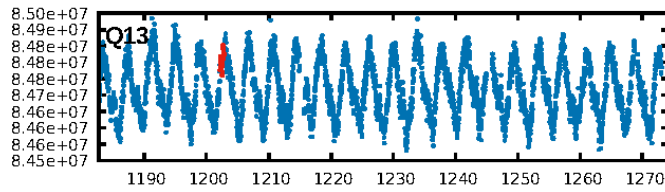
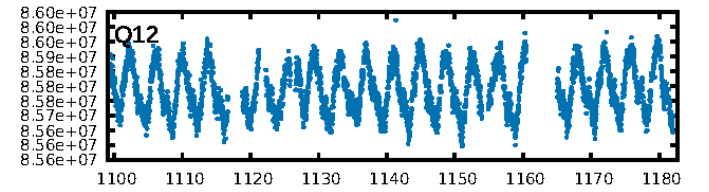
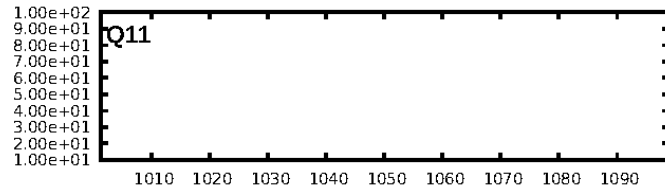
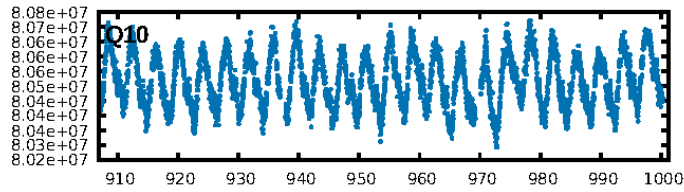
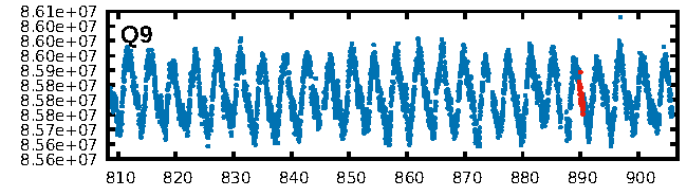
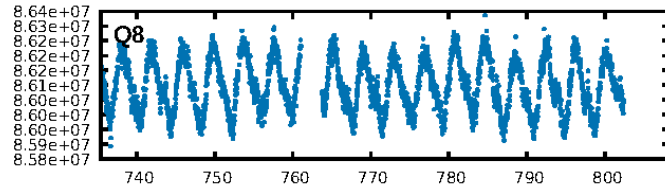
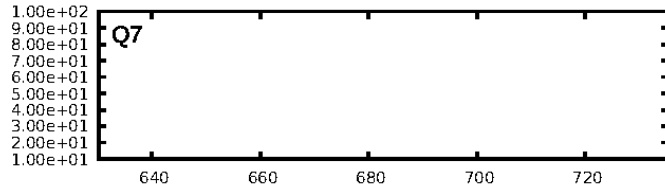
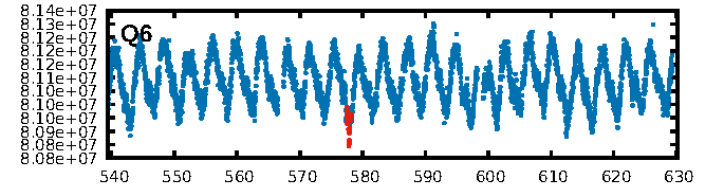
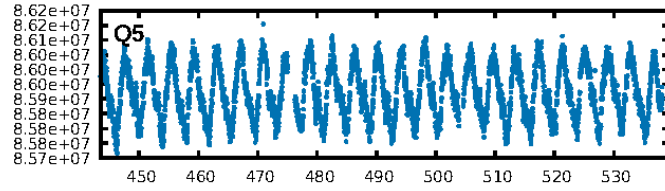
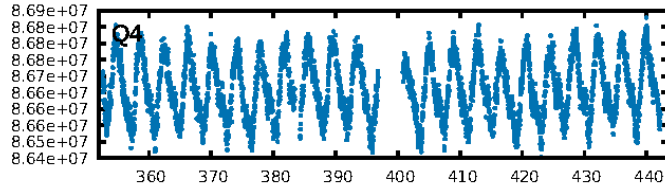
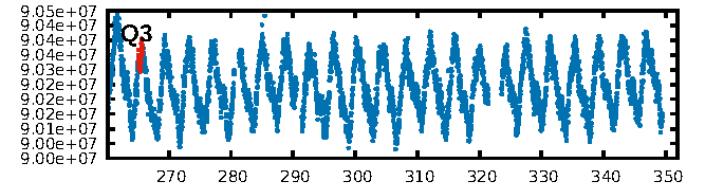
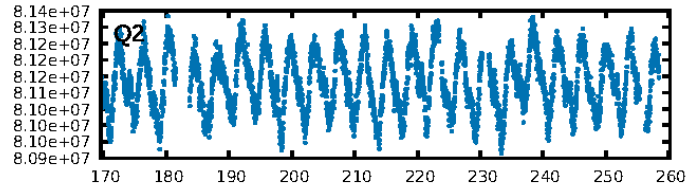
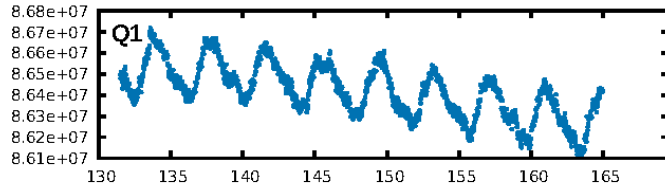
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.79 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.8%
ModelChiSquareGof-sig: 84.1%
Bootstrap-pfa: 3.50e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6138
Centroid-sig: 38.6%
Centroid-so: 0.624 arcsec [0.55 σ]
OotOffset-rm: 1.749 arcsec [1.14 σ]
KicOffset-rm: 2.126 arcsec [1.81 σ]
OotOffset-st: 1/0/1/2 [4]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.60 [3/5]

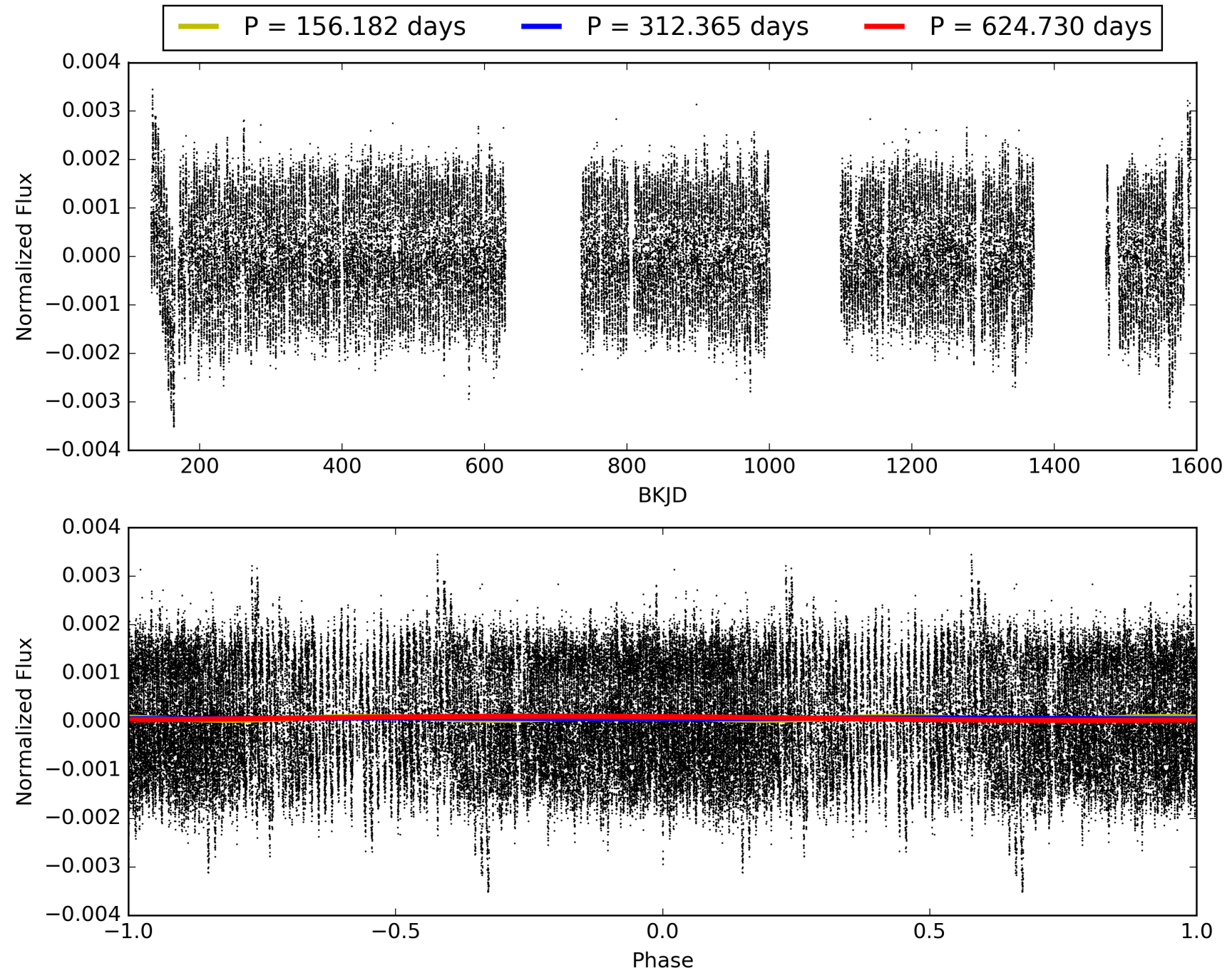
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:19:16 Z

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

TCE 010360907-05, PDC Light Curves

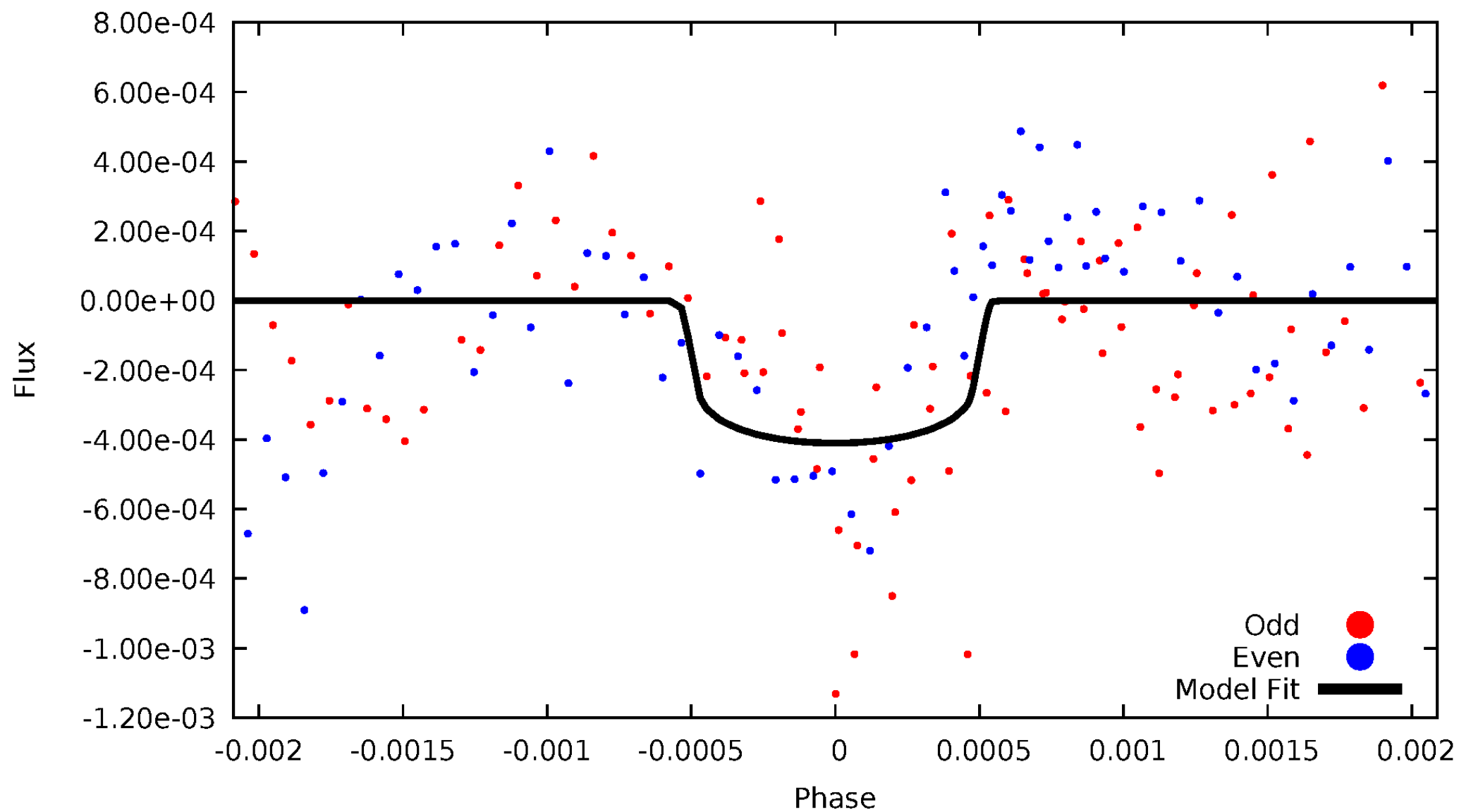


TCE 010360907-05



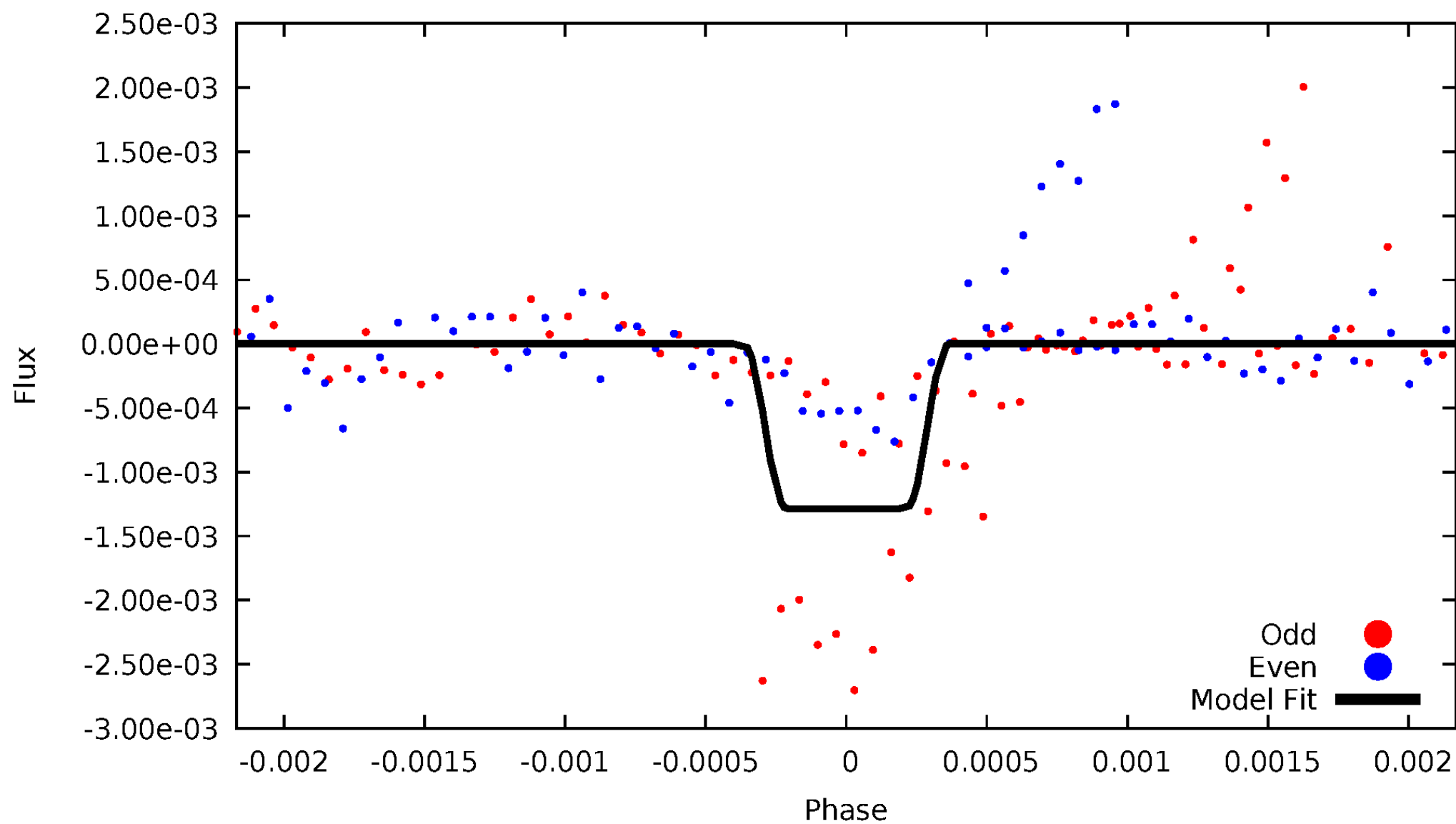
DV Odd/Even

TCE 010360907-05



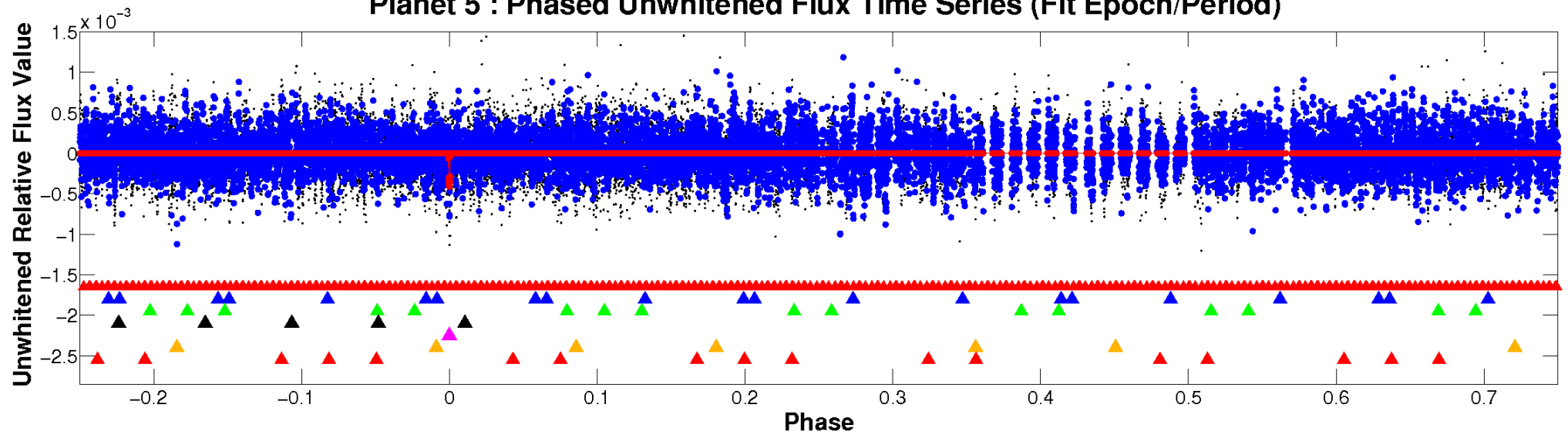
ALT Odd/Even

TCE 010360907-05

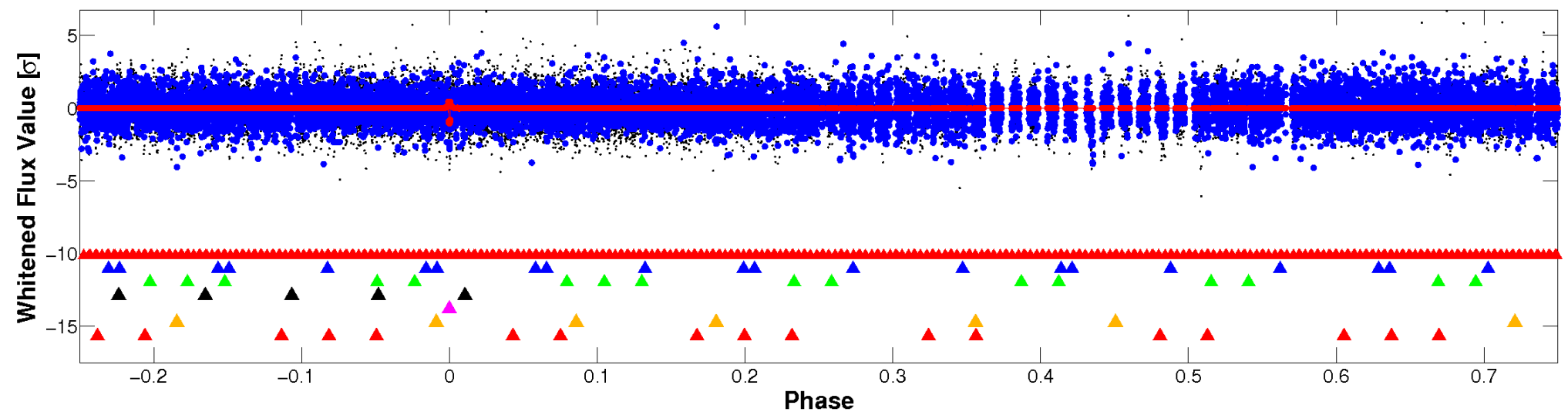


Non-Whitened Vs. Whitened Light Curve

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

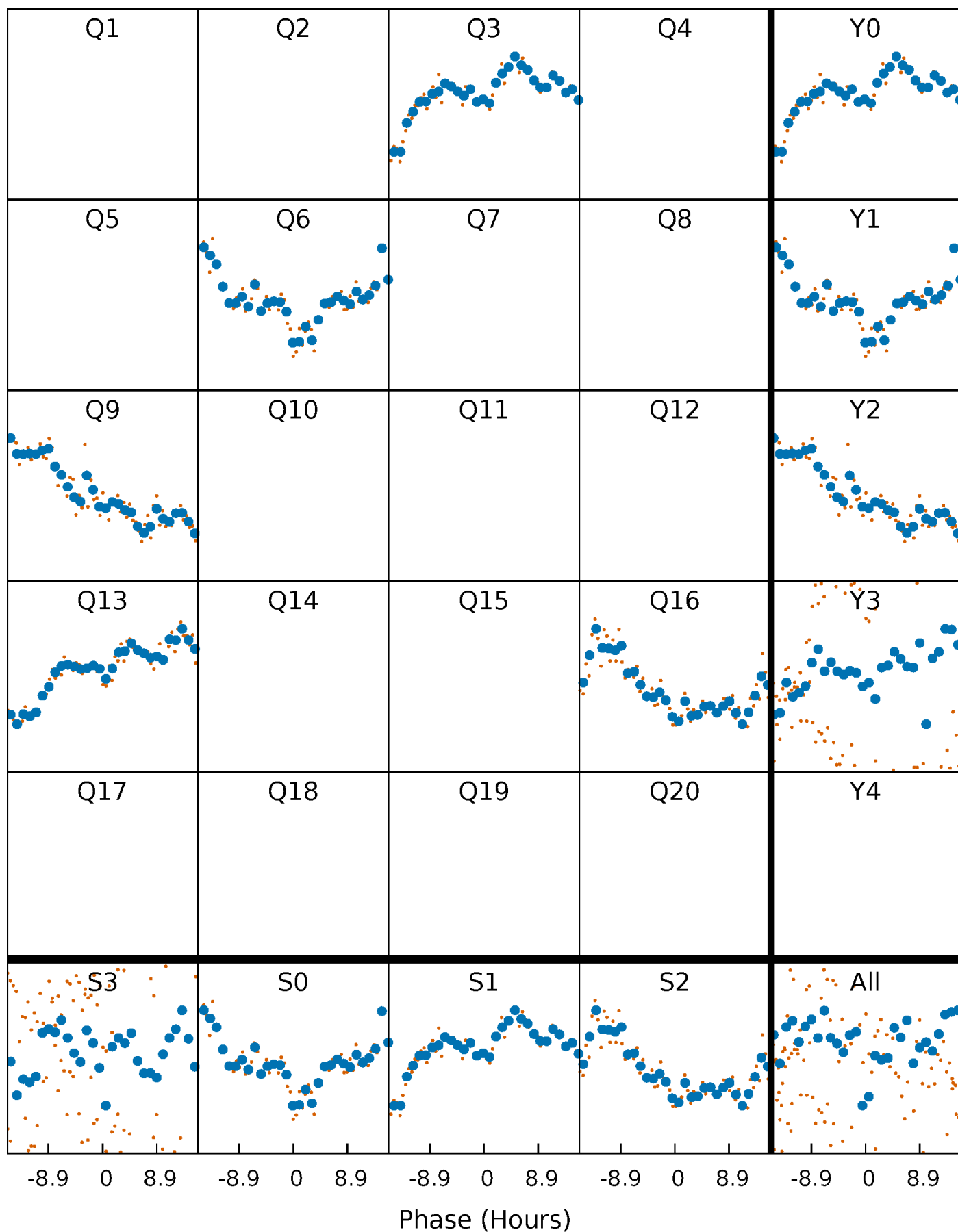


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



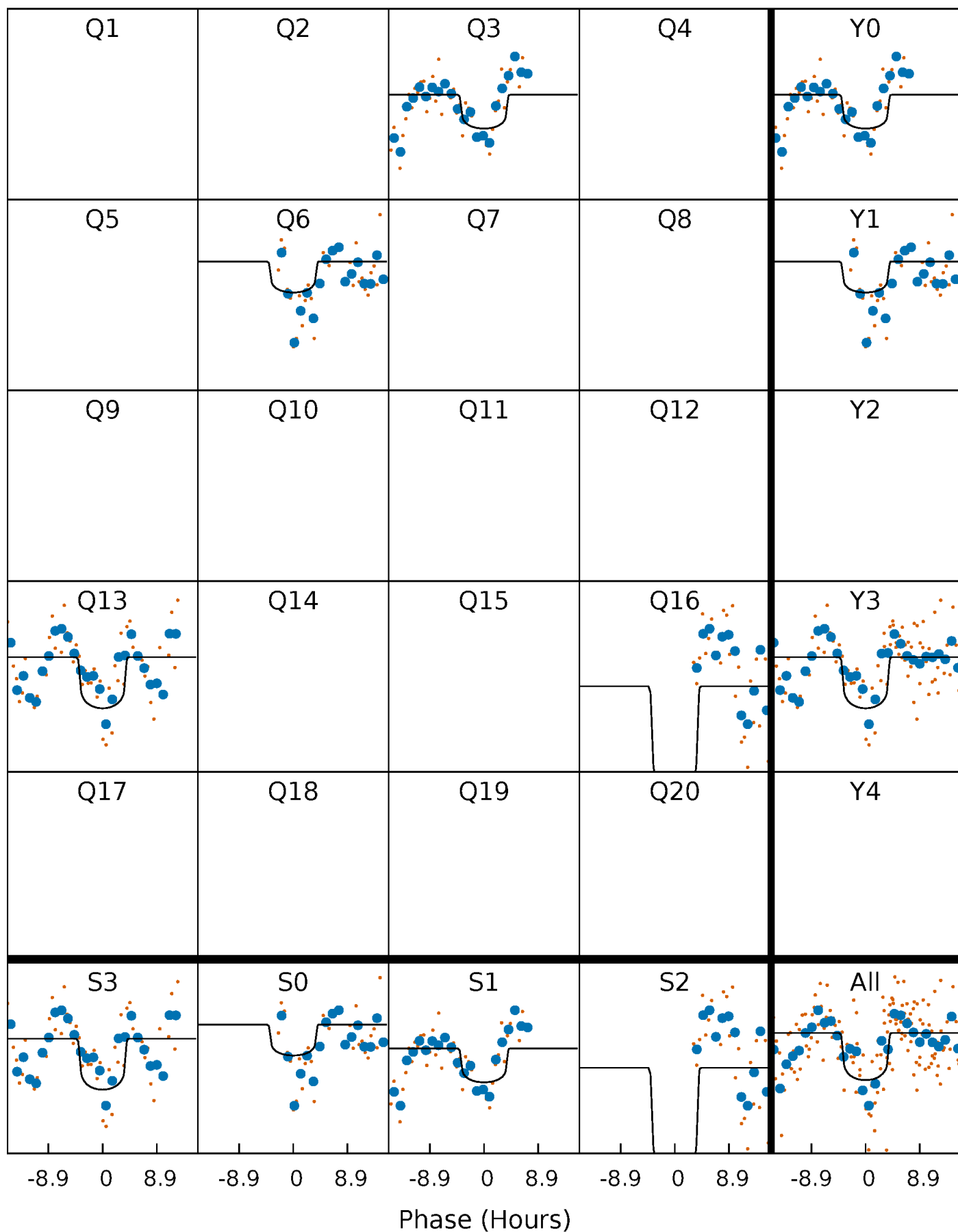
PDC Quarter-Phased Transit Curves

TCE 010360907-05 $P=312.364930$ Days $T_0=265.438787$ (BKJD)



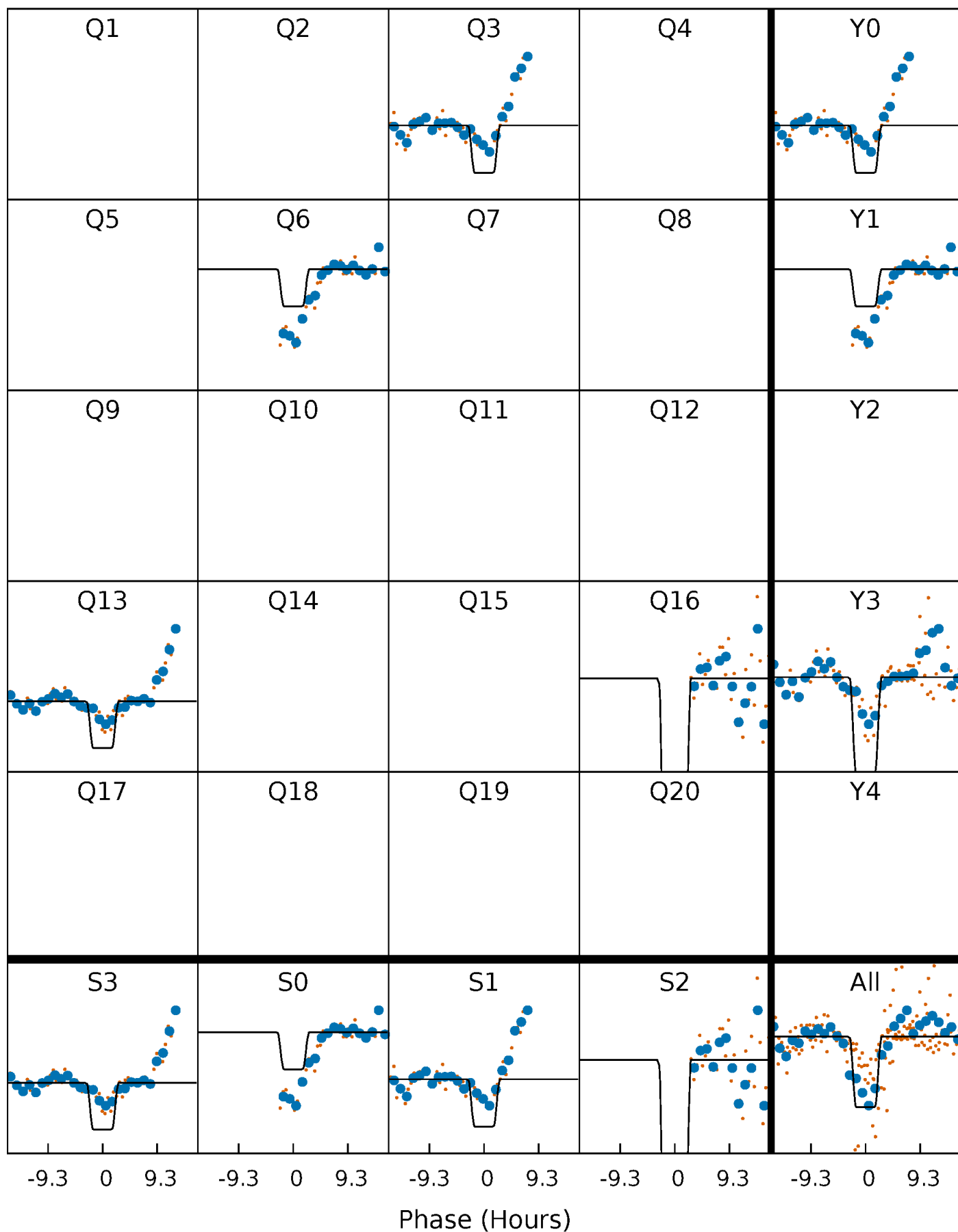
DV Quarter-Phased Transit Curves

TCE 010360907-05 $P=312.364930$ Days $T_0=265.438787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

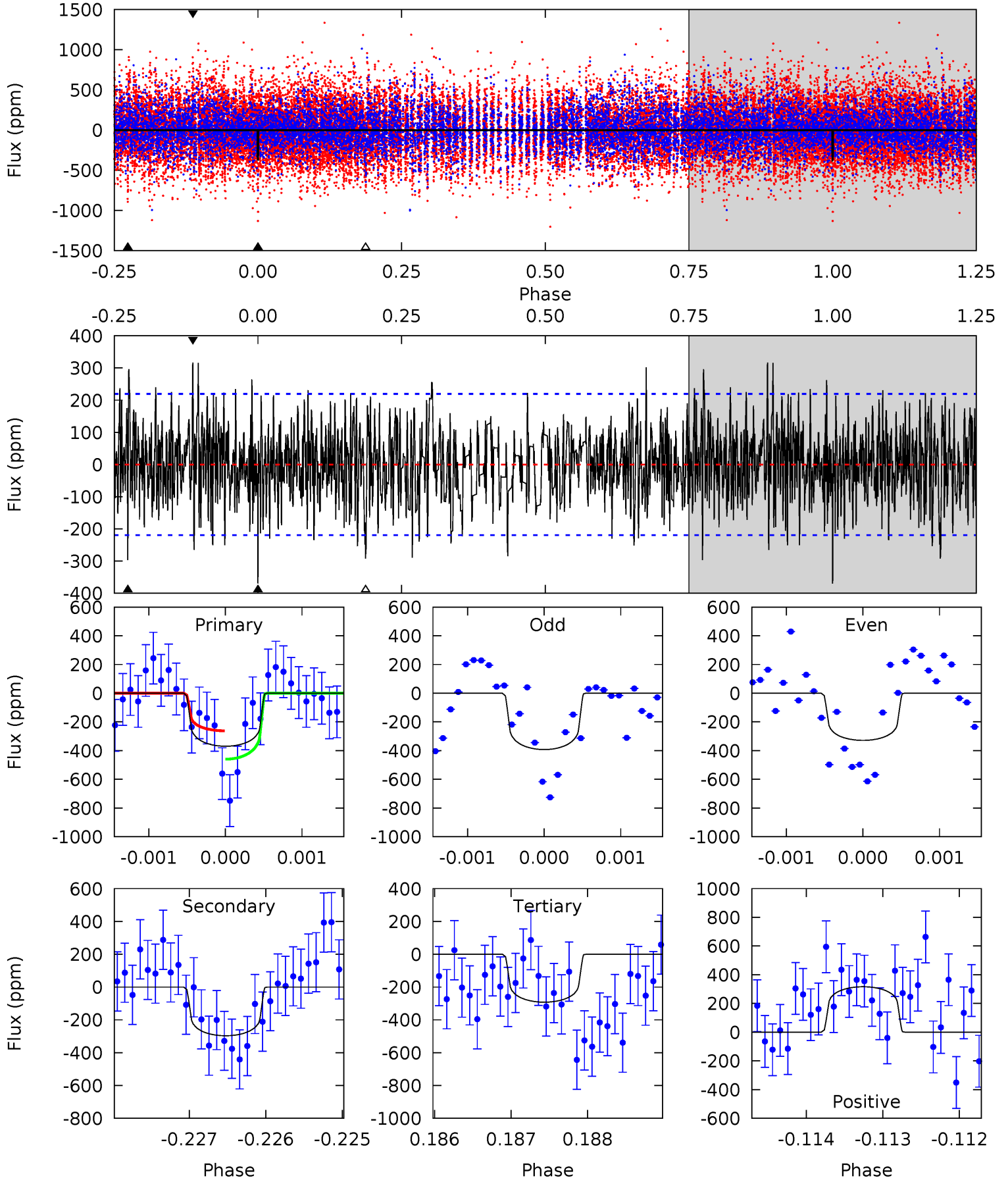
TCE 010360907-05 $P=312.372401$ Days $T_0=265.422688$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-05, P = 312.364930 Days, E = 265.438787 Days

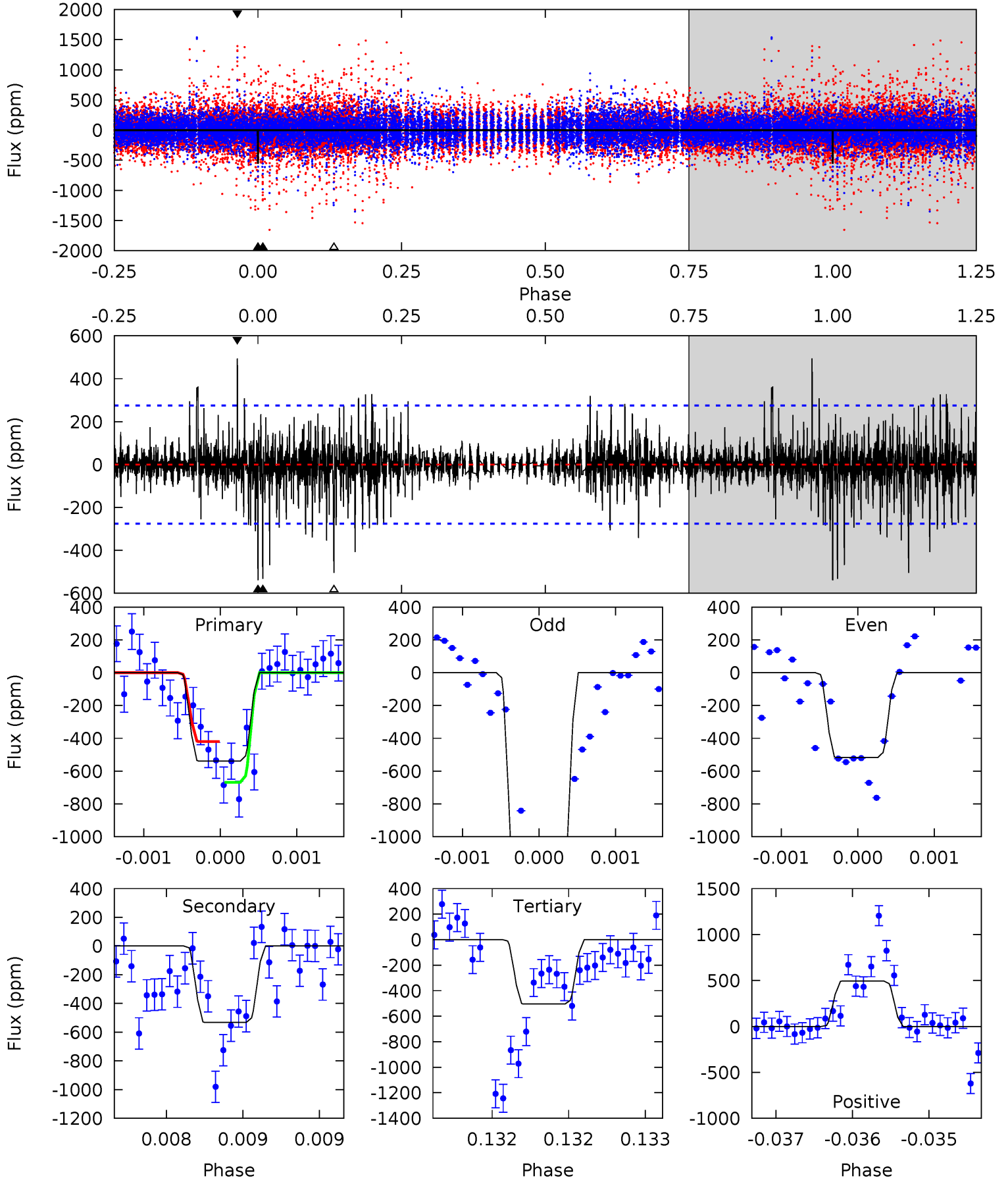
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.17	7.36	7.25	7.85	5.44	3.28	2.31	1.92	1.32	0.12	-0.48	0.77	0.84	0.46	2.42



Alt Model-Shift Uniqueness Test

010360907-05, P = 312.372401 Days, E = 265.422688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	10.6	10.1	9.88	5.51	3.38	1.49	0.68	0.90	0.54	0.76	9.32	2.12	0.48	2.49



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-297 ± 40	$4.17^{+2.69}_{-2.05}$	572^{+45}_{-71}	5954^{+2953}_{-1077}	8913^{+25948}_{-5563}
Alt.	-532 ± 50	$7.68^{+2.93}_{-3.00}$	570^{+47}_{-67}	5208^{+976}_{-602}	4673^{+7274}_{-2248}

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

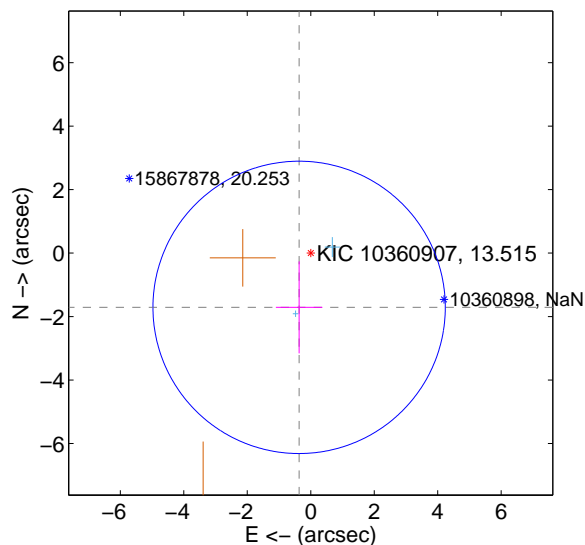
Supplemental centroid analysis for 010360907-05. Kepler magnitude: 13.52. Transit SNR 6.71

There are 2 quarters with good PRF difference image offsets

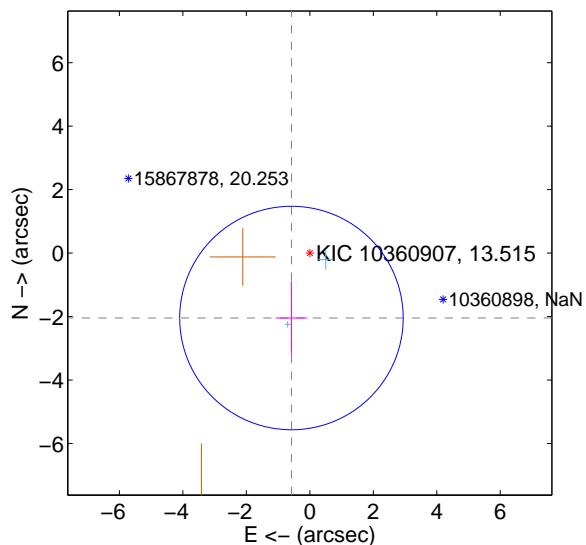
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.749 ± 1.535	1.14	0.366 ± 0.732	-1.710 ± 1.450
PRF-fit source offset from KIC position	2.126 ± 1.174	1.81	0.580 ± 0.499	-2.046 ± 1.160
photometric centroid source offset	0.62 ± 1.14	0.55	0.46 ± 1.39	-0.43 ± 0.76

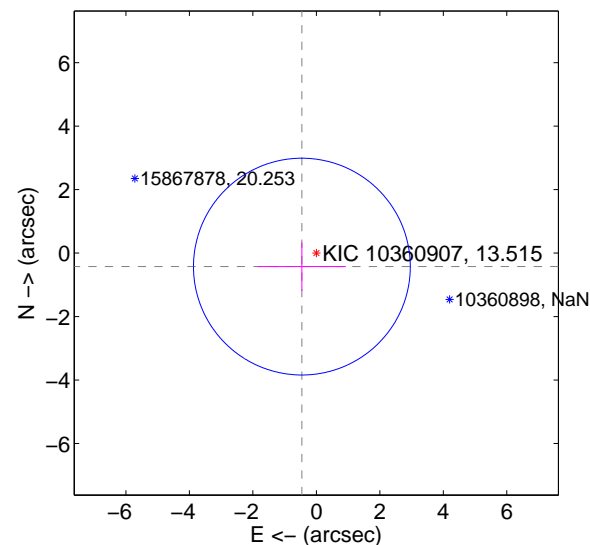
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

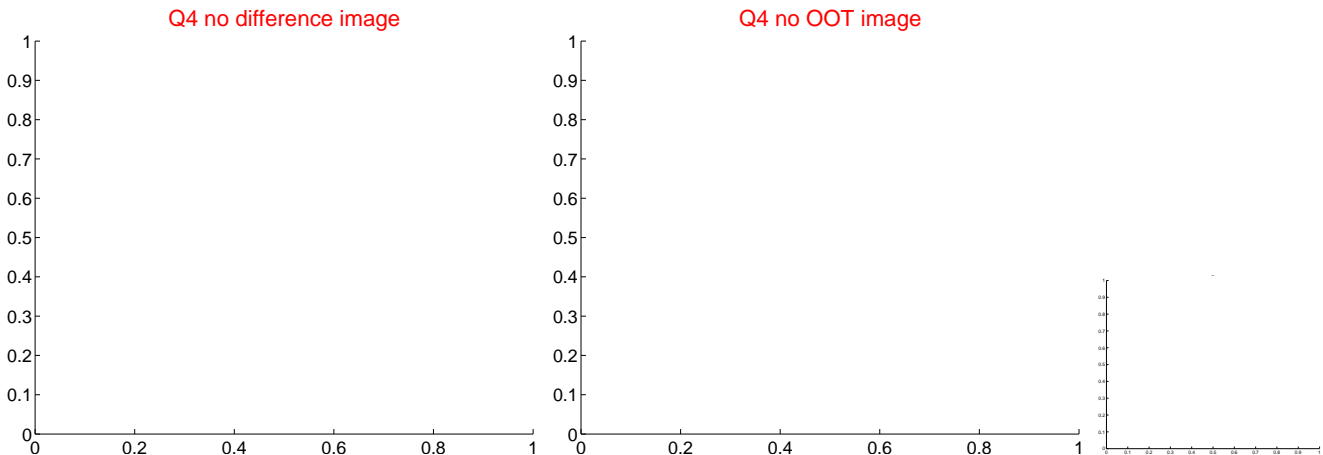
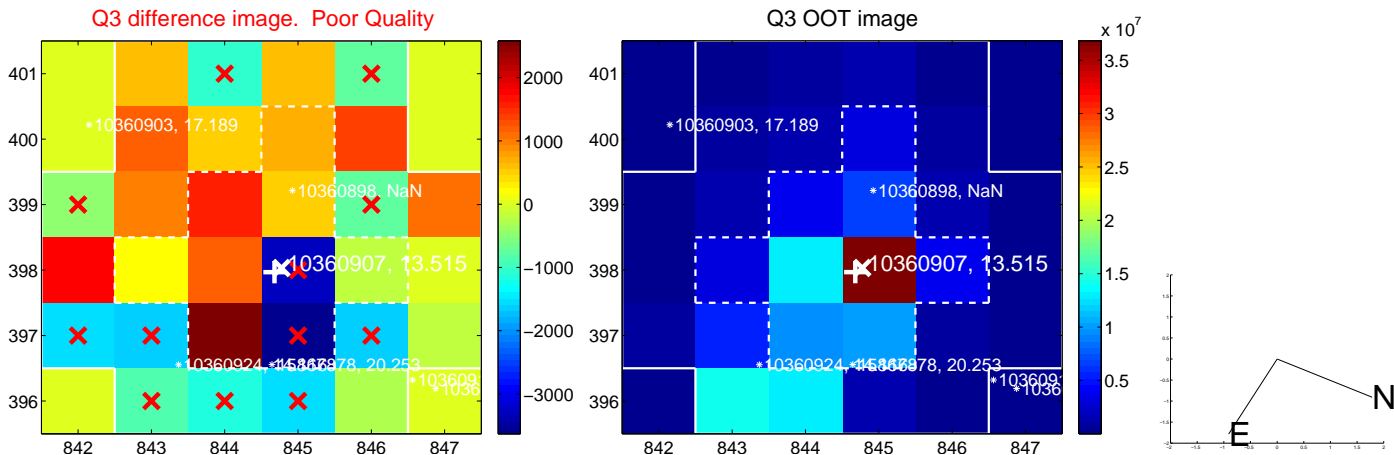
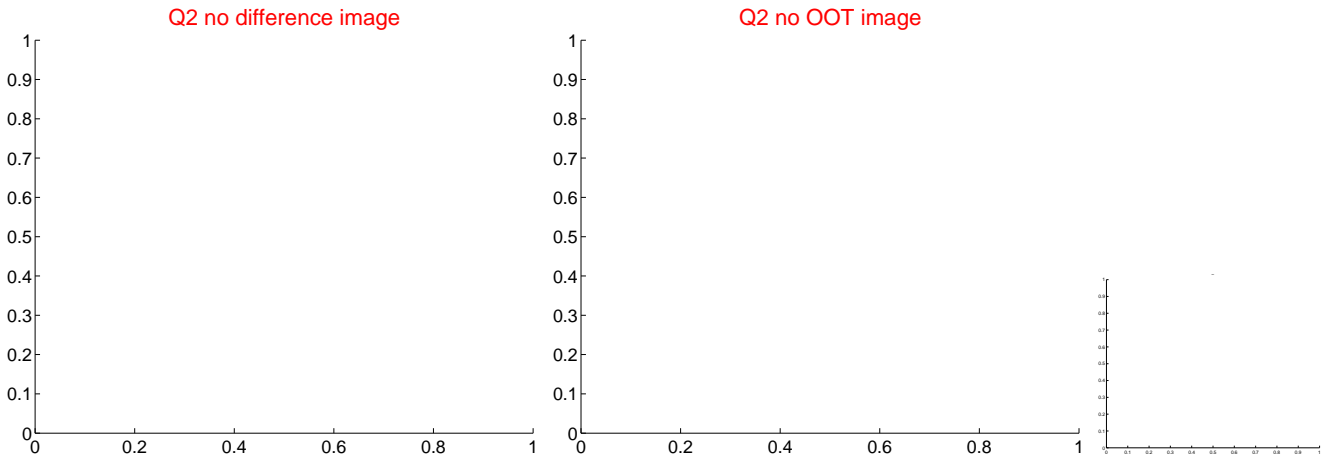
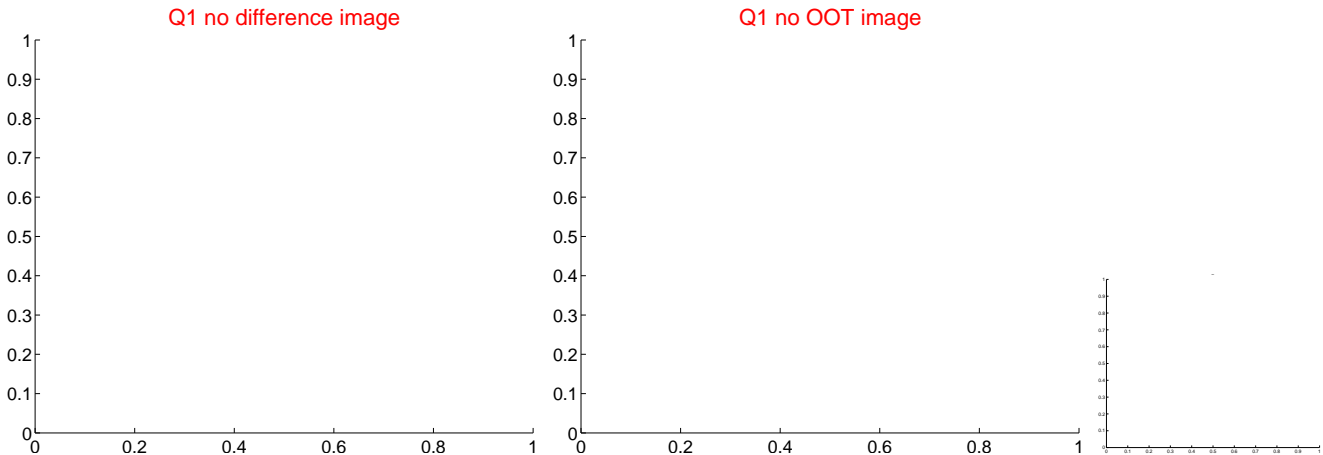


offset from photometric centroids

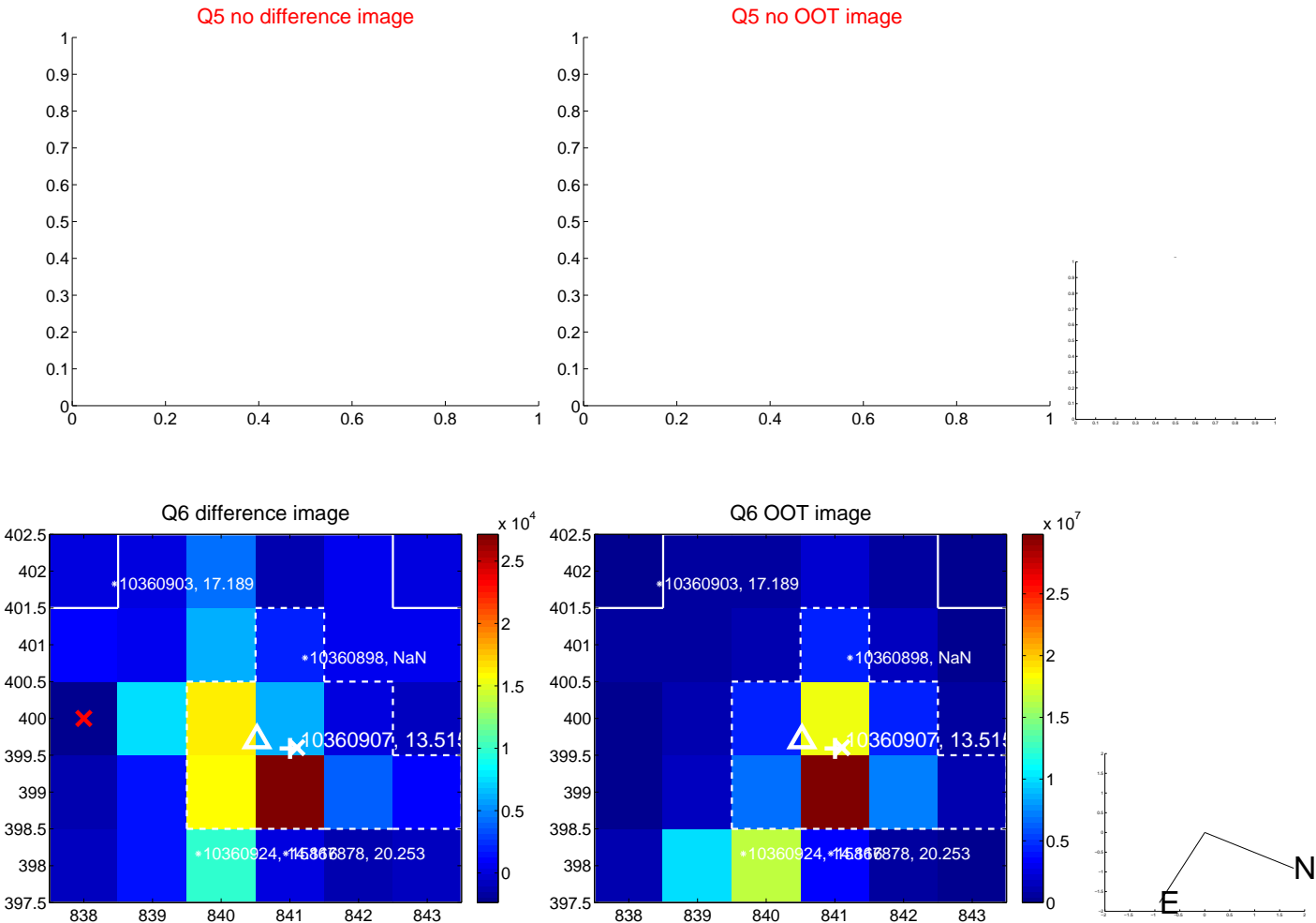


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

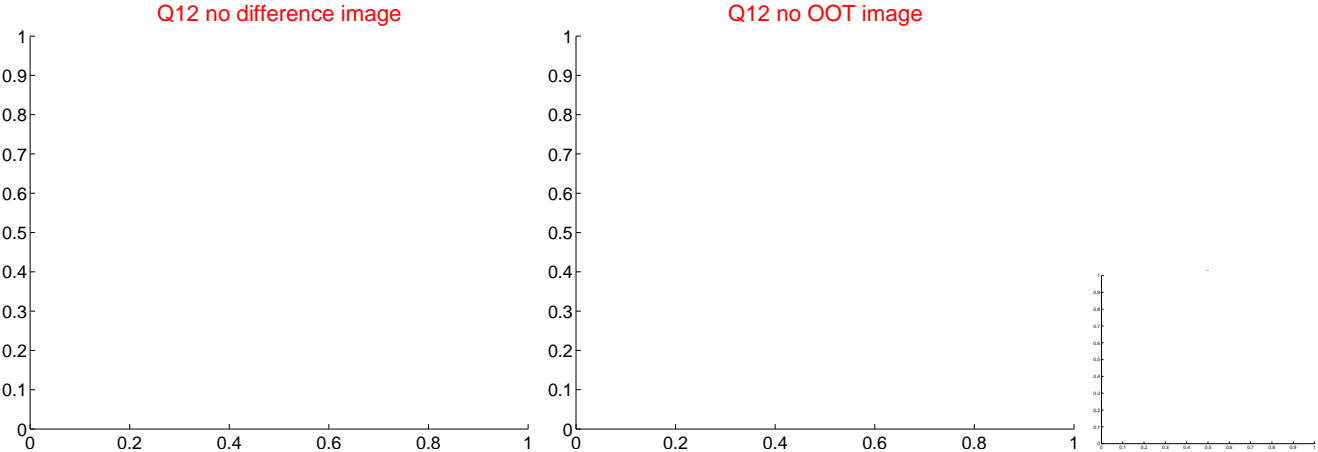
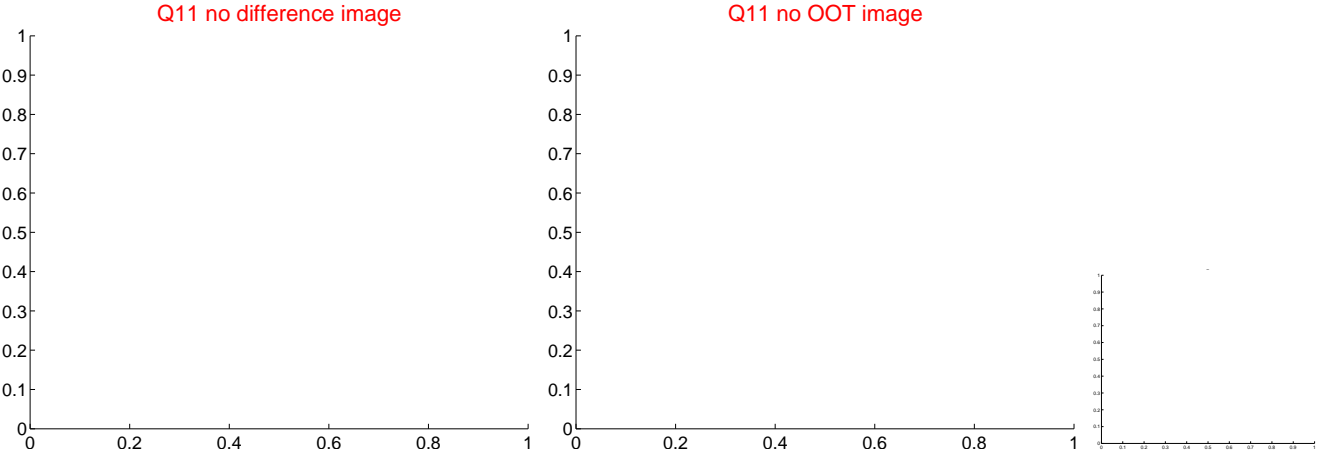
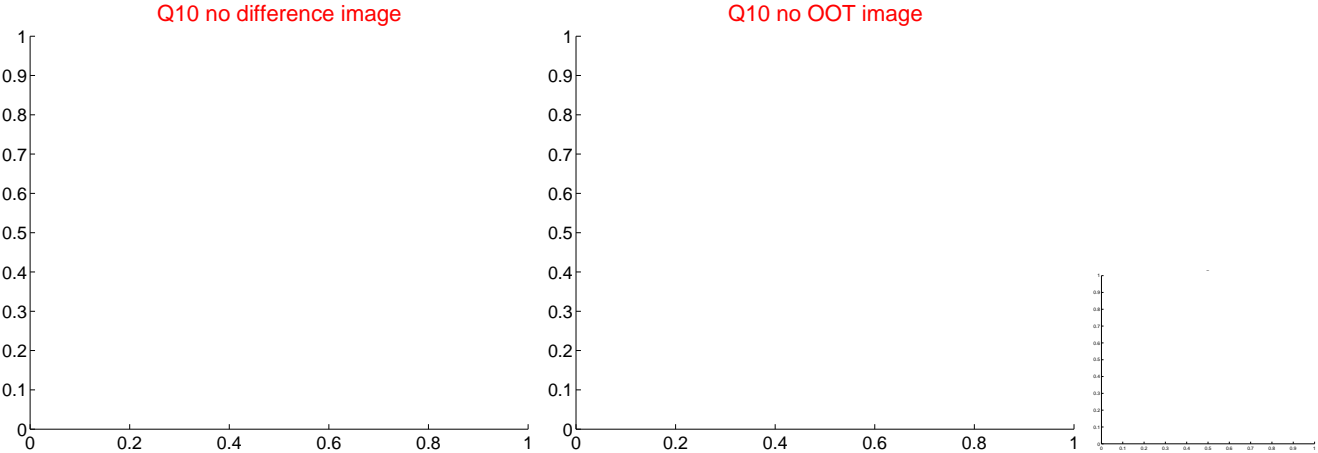
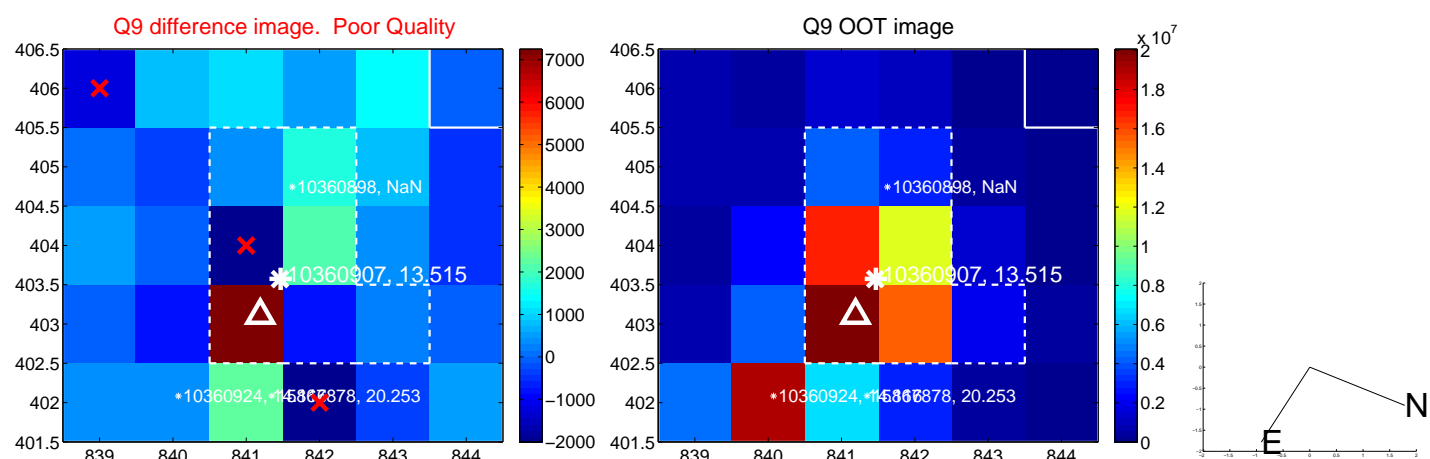
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



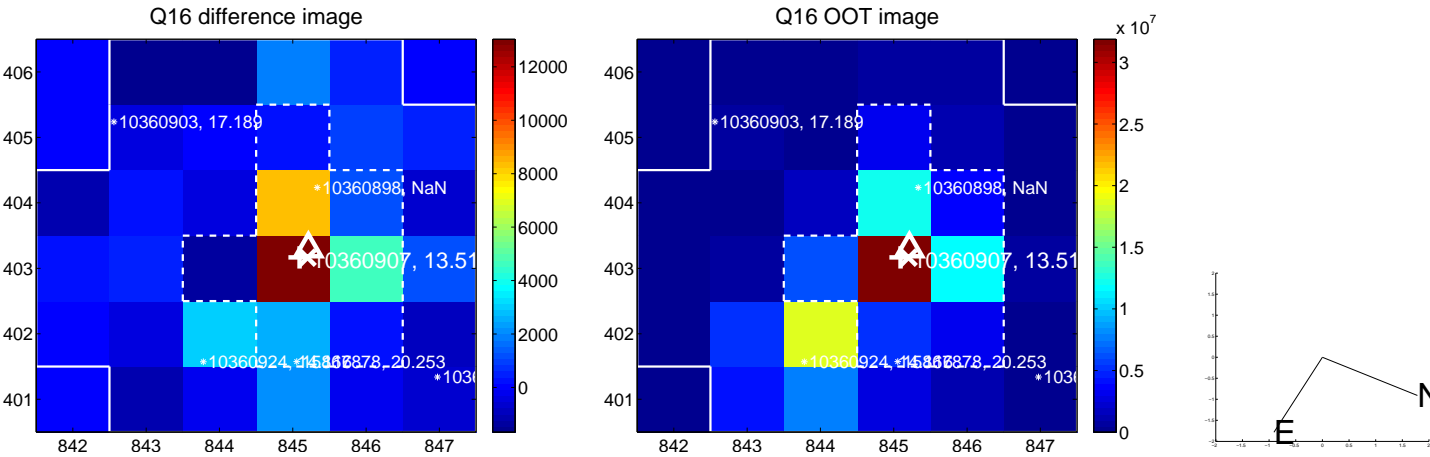
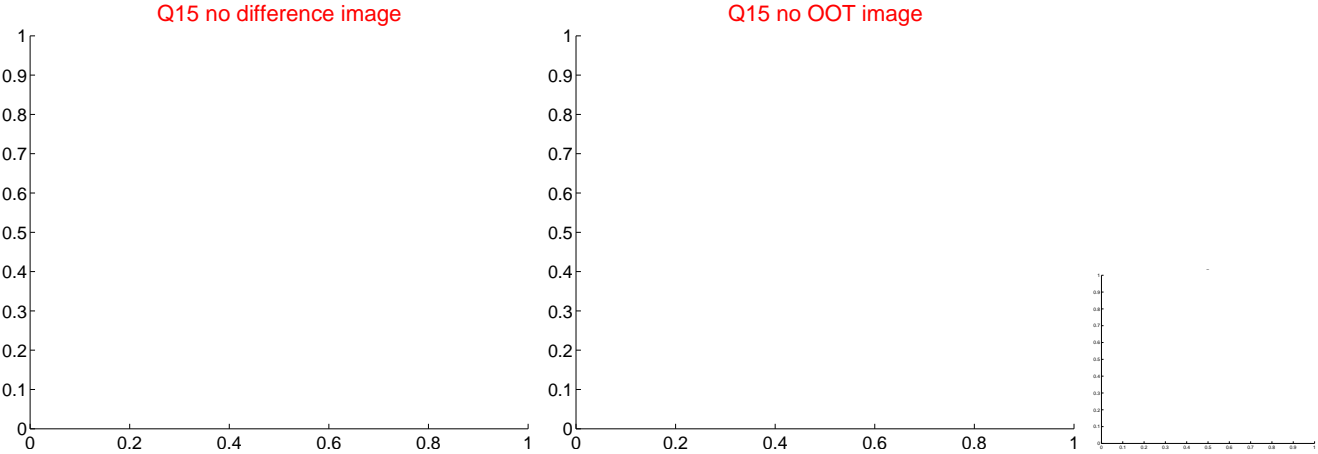
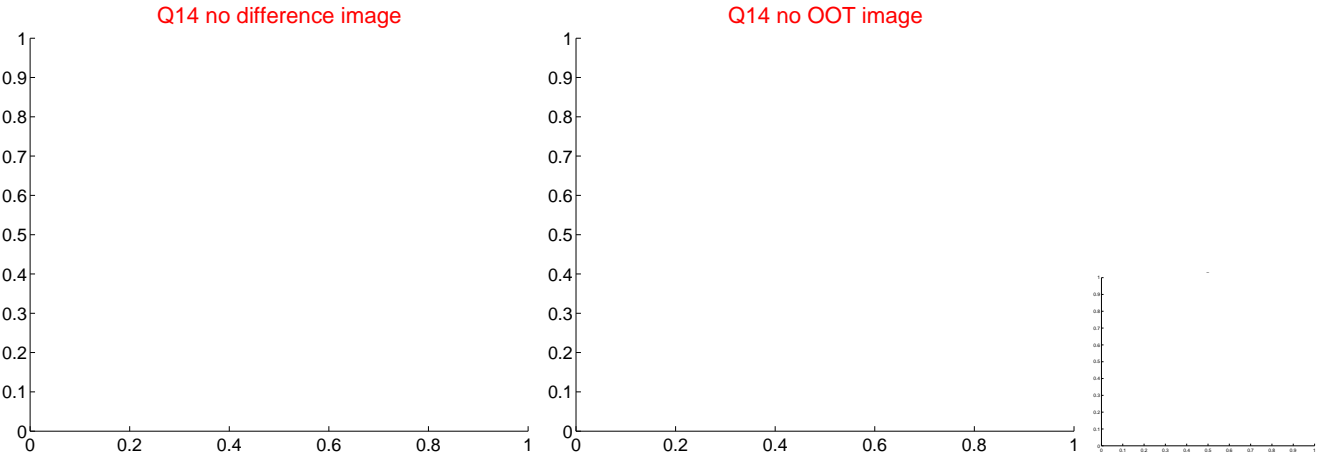
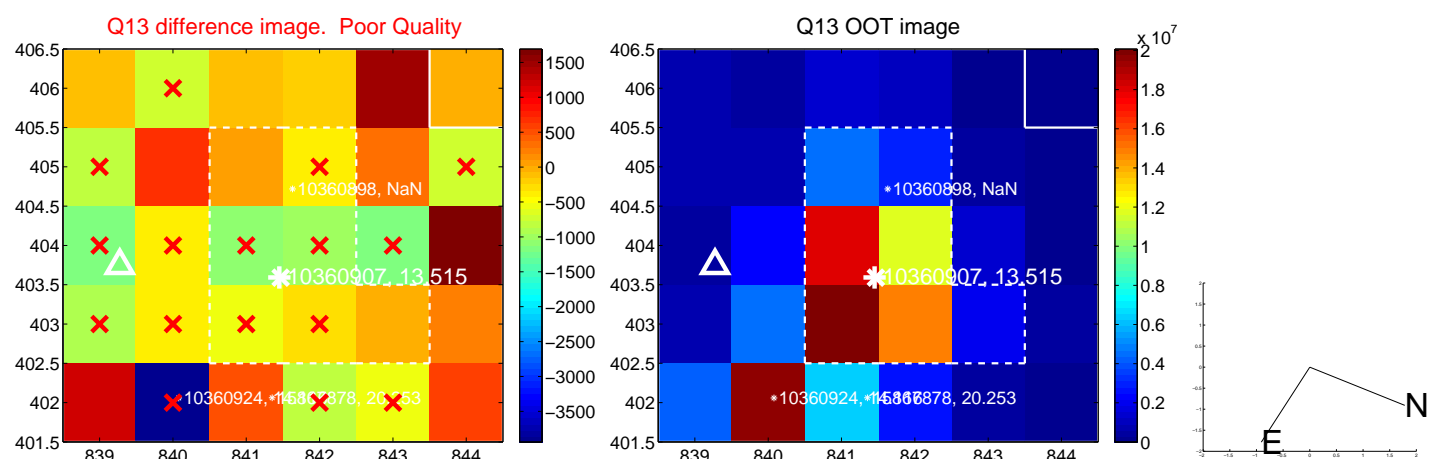
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



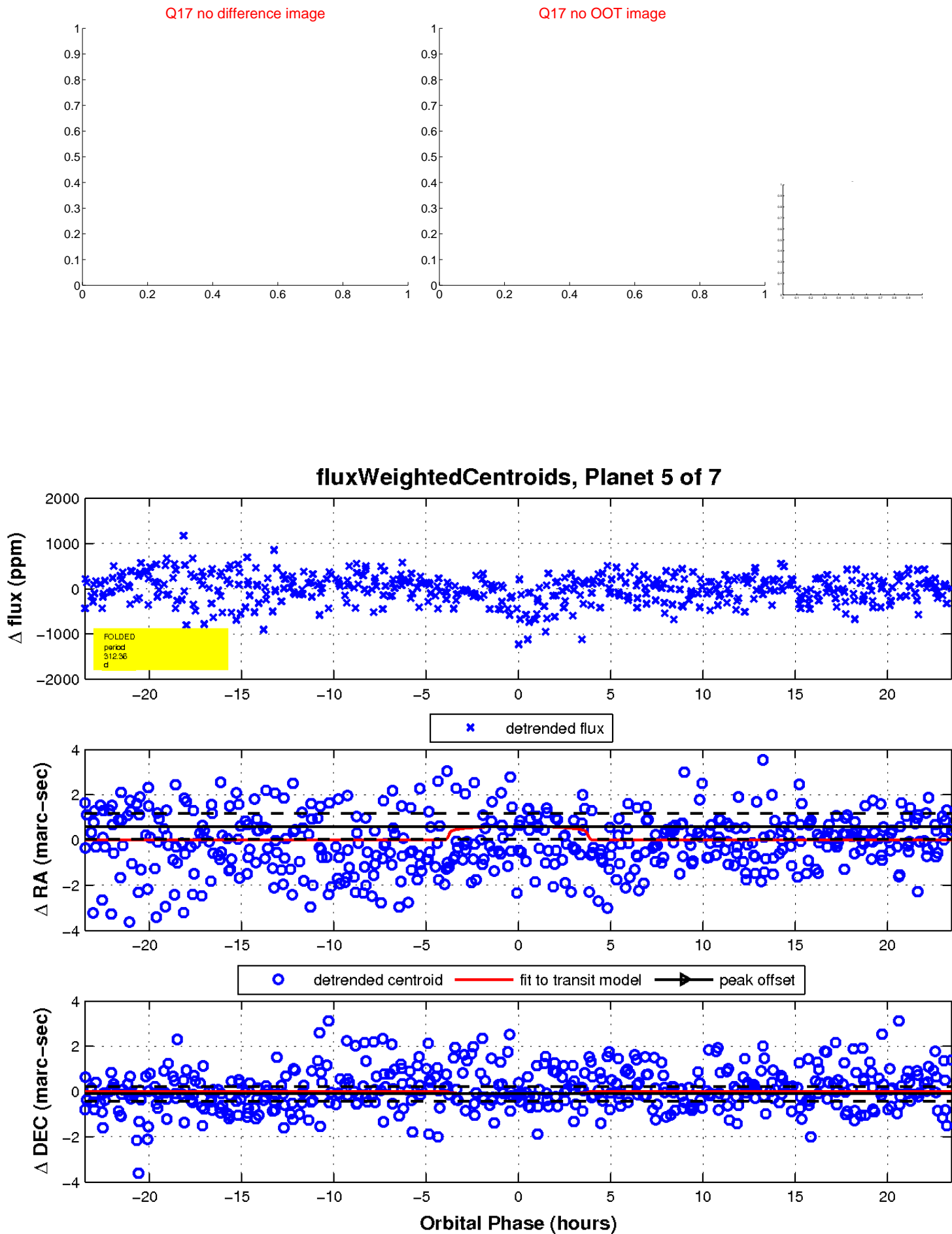
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



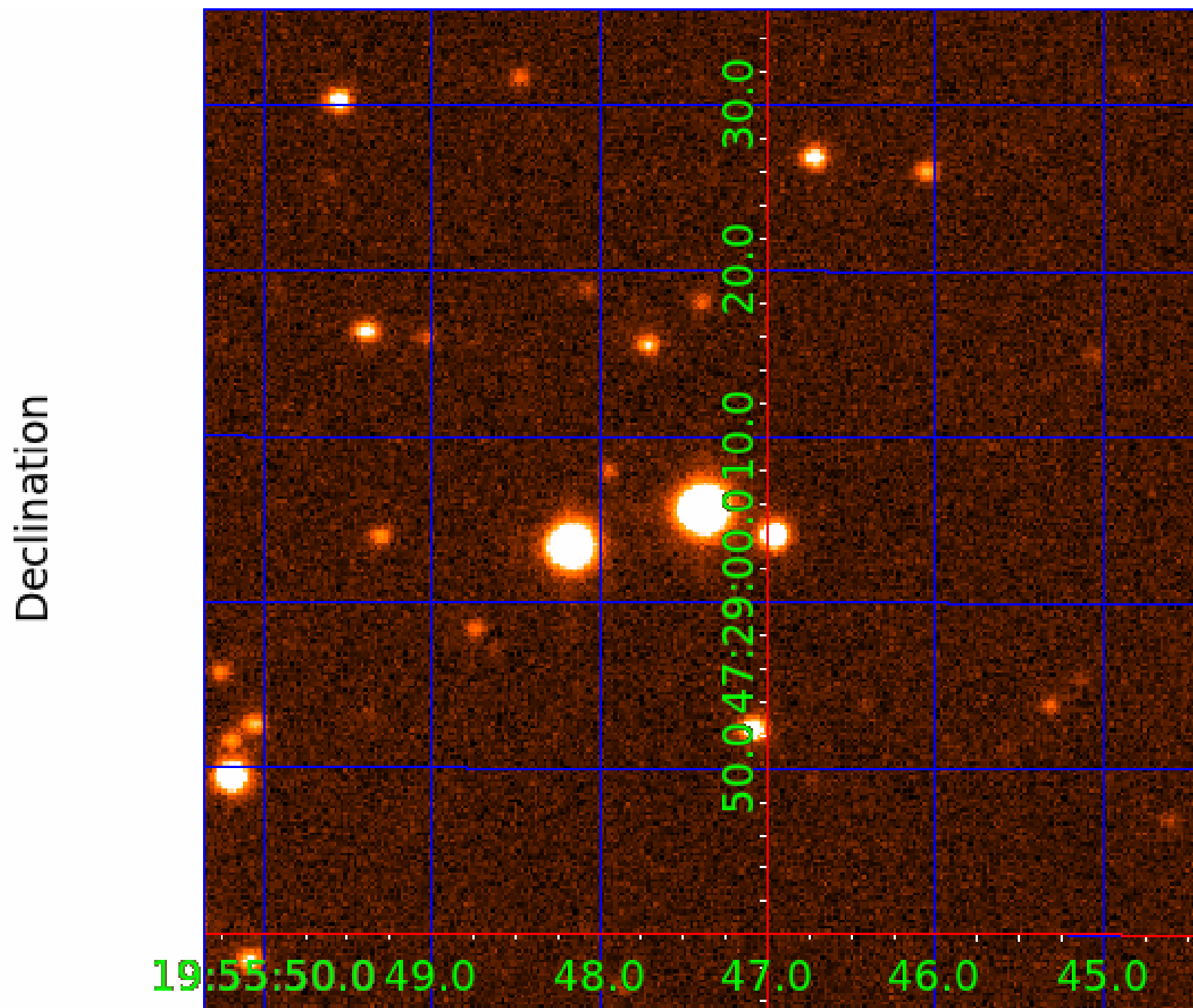
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 010360907

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})
010360907-01	OBS	No	3.873257	135.086308	52.7	16.557	9.5	6.7	2.11	6425	1.55	2508.39
010360907-02	OBS	No	67.100448	193.425634	383.0	4.095	9.0	9.1	2.11	6425	5.22	55.96
010360907-03	OBS	No	88.117686	217.990806	410.4	5.976	8.9	9.4	2.11	6425	5.20	38.91
010360907-04	OBS	No	294.071670	268.732724	561.7	10.375	8.3	9.0	2.11	6425	5.41	7.80
010360907-05	OBS	No	312.364930	265.438787	410.2	7.825	8.5	6.7	2.11	6425	4.49	7.20
010360907-06	OBS	No	198.384581	321.823097	483.3	5.768	7.9	7.0	2.11	6425	4.90	13.19
010360907-07	OBS	No	87.813516	162.219229	218.0	9.000	7.7	-1.0	2.11	6425	3.13	39.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010360907-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
010360907-02	OBS	FP	0.01	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
010360907-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
010360907-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010360907-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—MOD_NONUNIQ_ALT—HALO_GHOST
010360907-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

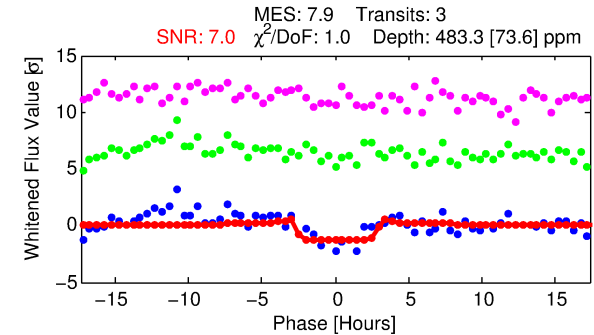
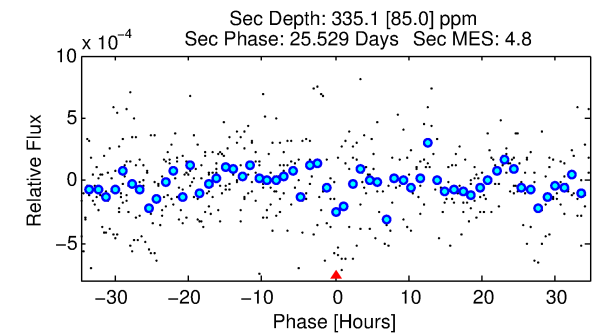
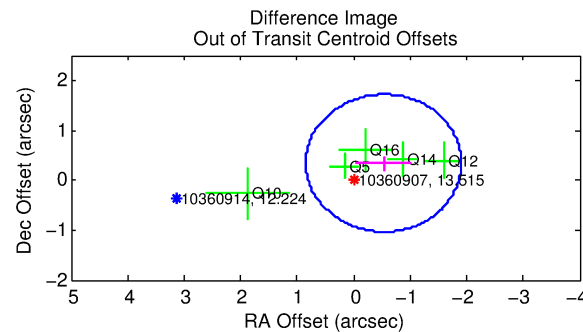
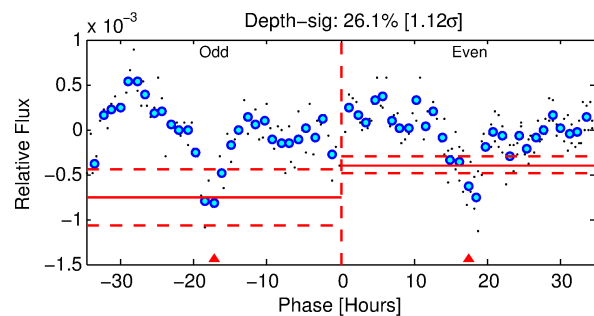
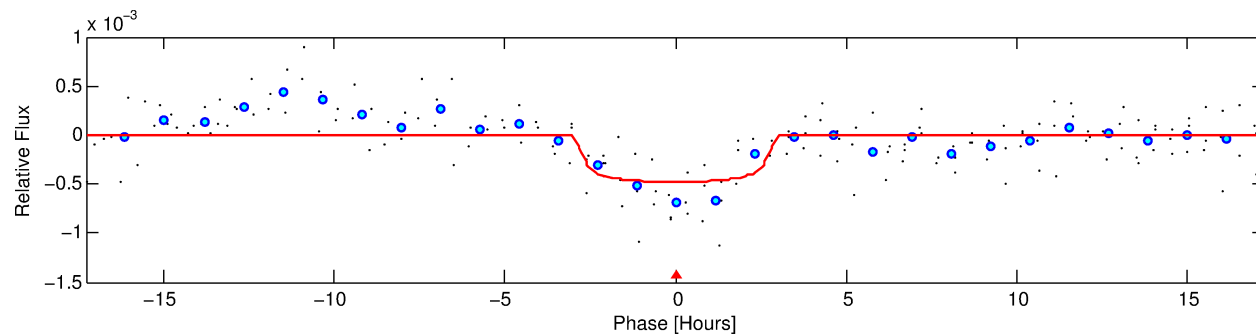
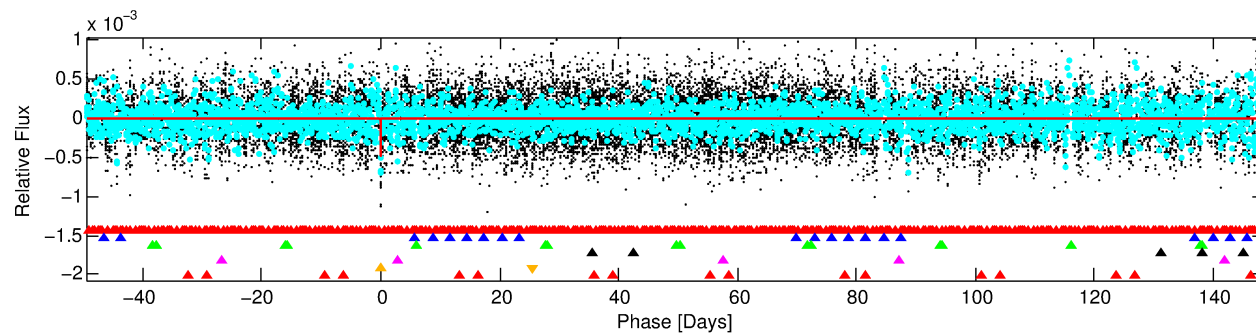
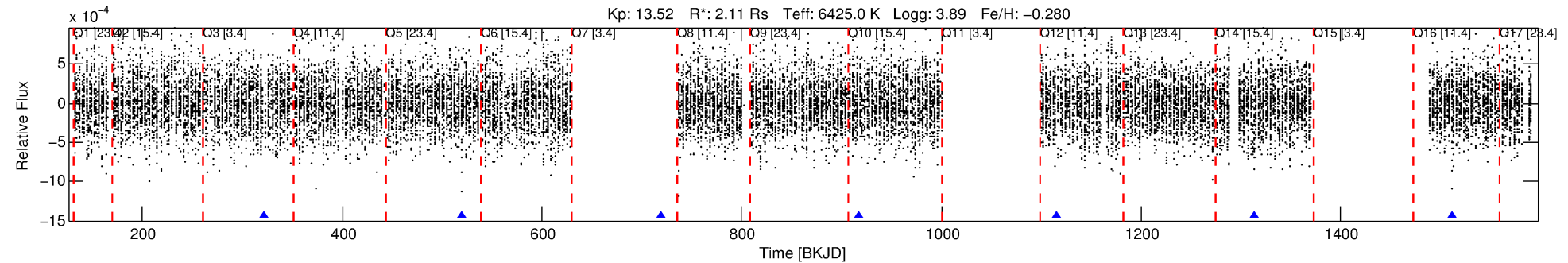
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-06

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 6 of 7 Period: 198.385 d



DV Fit Results:

Period = 198.38458 [0.00263] d
Epoch = 321.8231 [0.0107] BKJD
Rp/R* = 0.0213 [0.0195]
a/R* = 206.75 [1020.14]
b = 0.65 [4.38]
Seff = 13.19 [9.50]
Teff = 486 [88] K
Rp = 4.90 [4.98] Re
a = 0.7169 [0.3125] AU
Ag = 3942.63 [7802.10] [0.51 σ]
Teffp = 5953 [2757] K [1.98 σ]

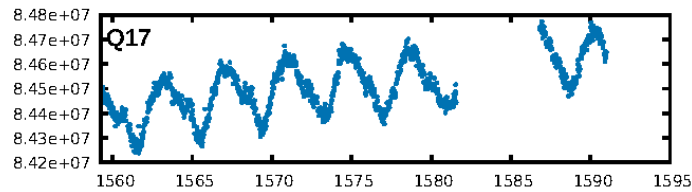
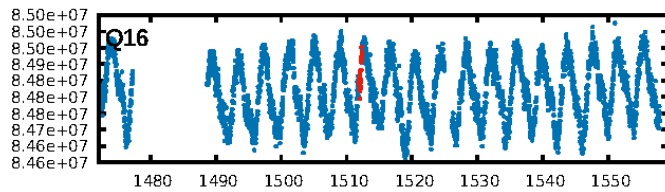
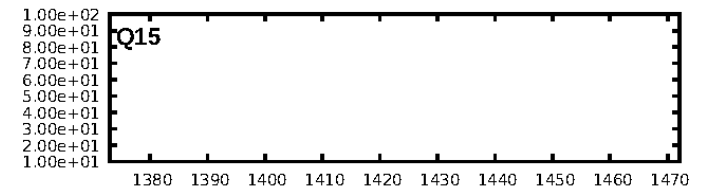
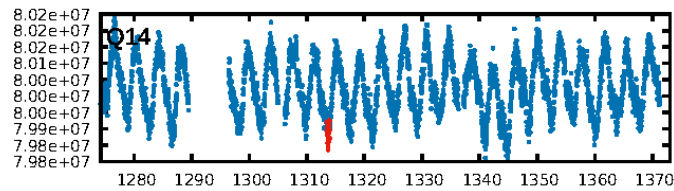
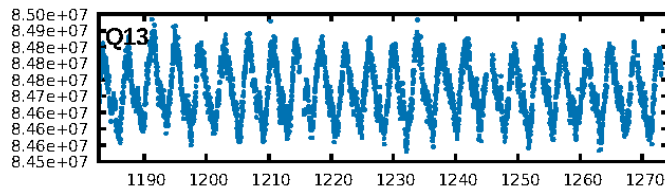
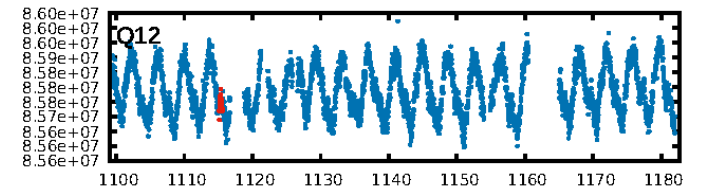
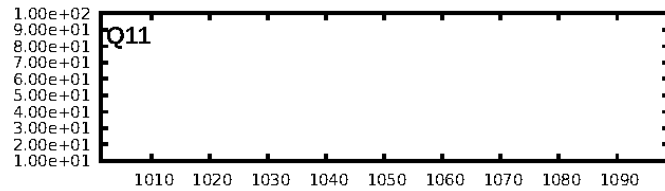
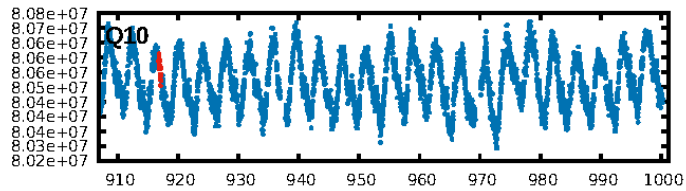
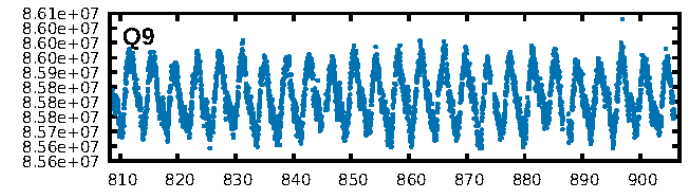
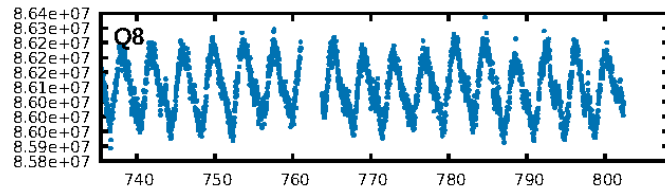
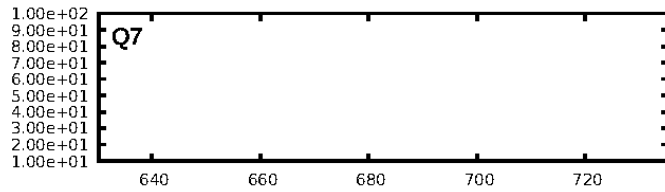
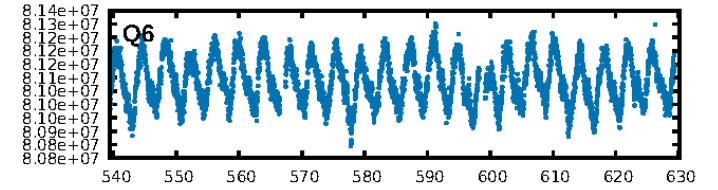
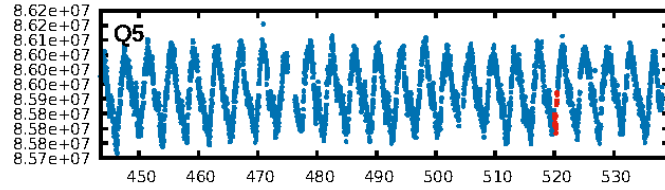
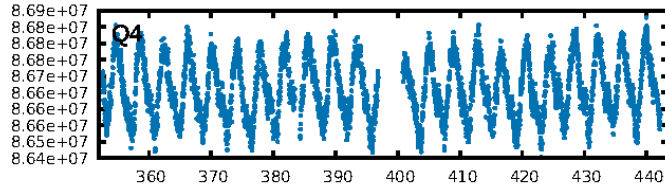
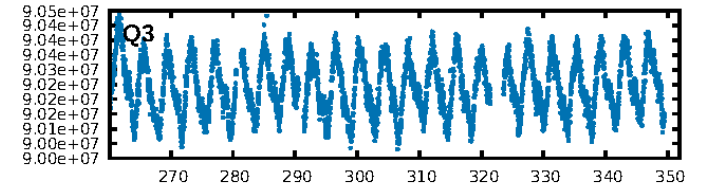
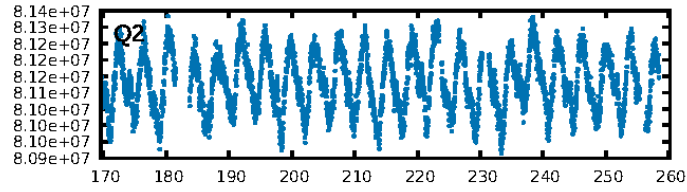
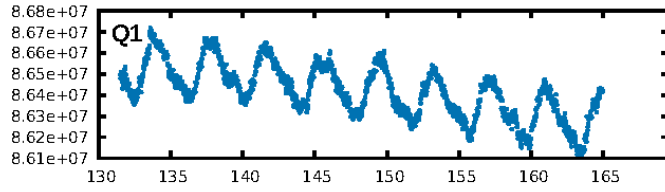
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [318.65 σ]
LongPeriod-sig: 100.0% [193.47 σ]
ModelChiSquare2-sig: 97.3%
ModelChiSquareGof-sig: 85.9%
Bootstrap-pfa: 7.82e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.157
Centroid-sig: 51.0%
Centroid-so: 3.050 arcsec [2.63 σ]
OotOffset-rm: 0.628 arcsec [1.37 σ]
OotOffset-st: 2/0/2/1 [5]
KicOffset-rm: 0.445 arcsec [1.10 σ]
KicOffset-st: 2/0/2/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.60 [3/5]

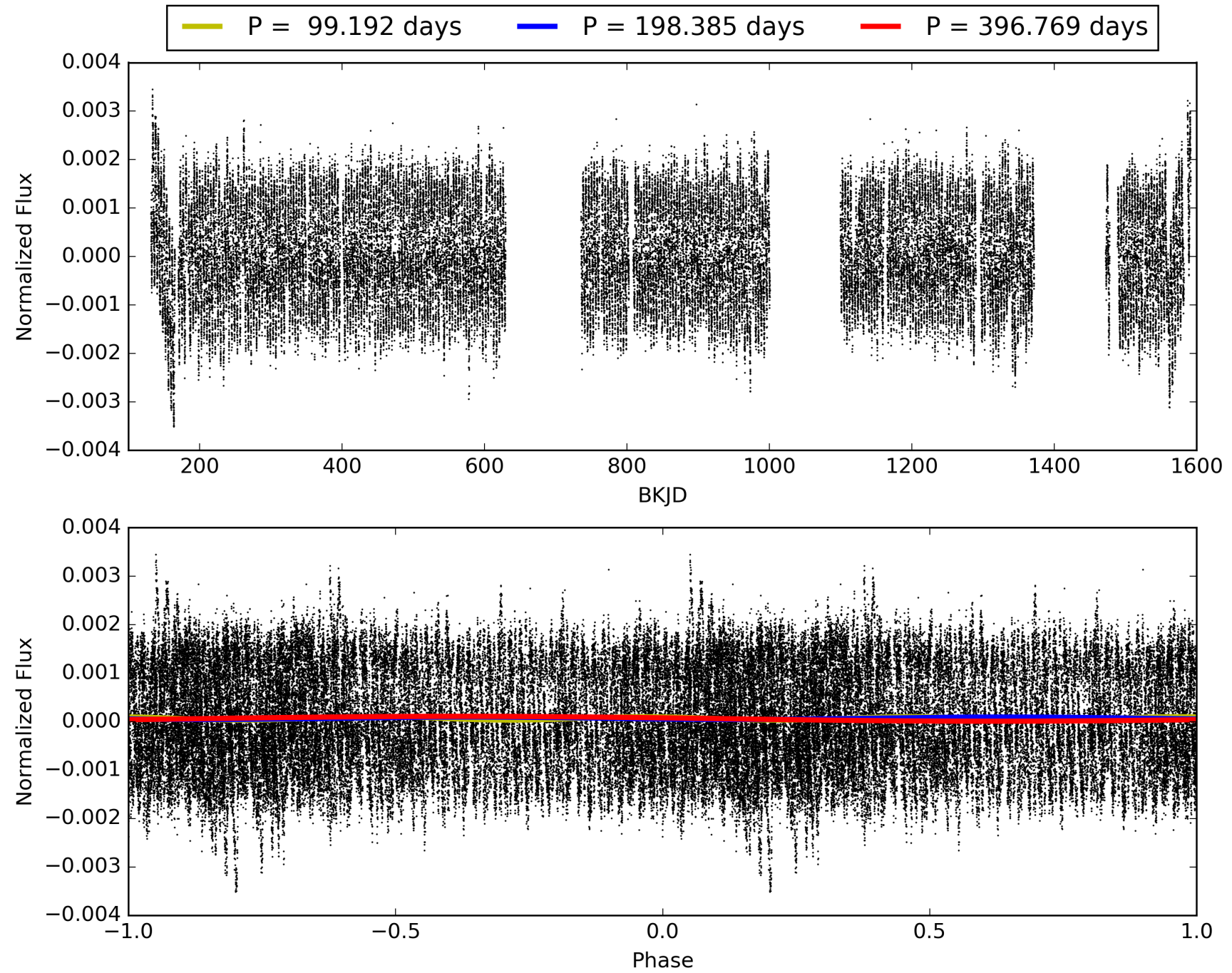
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:19:22 Z

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

TCE 010360907-06, PDC Light Curves

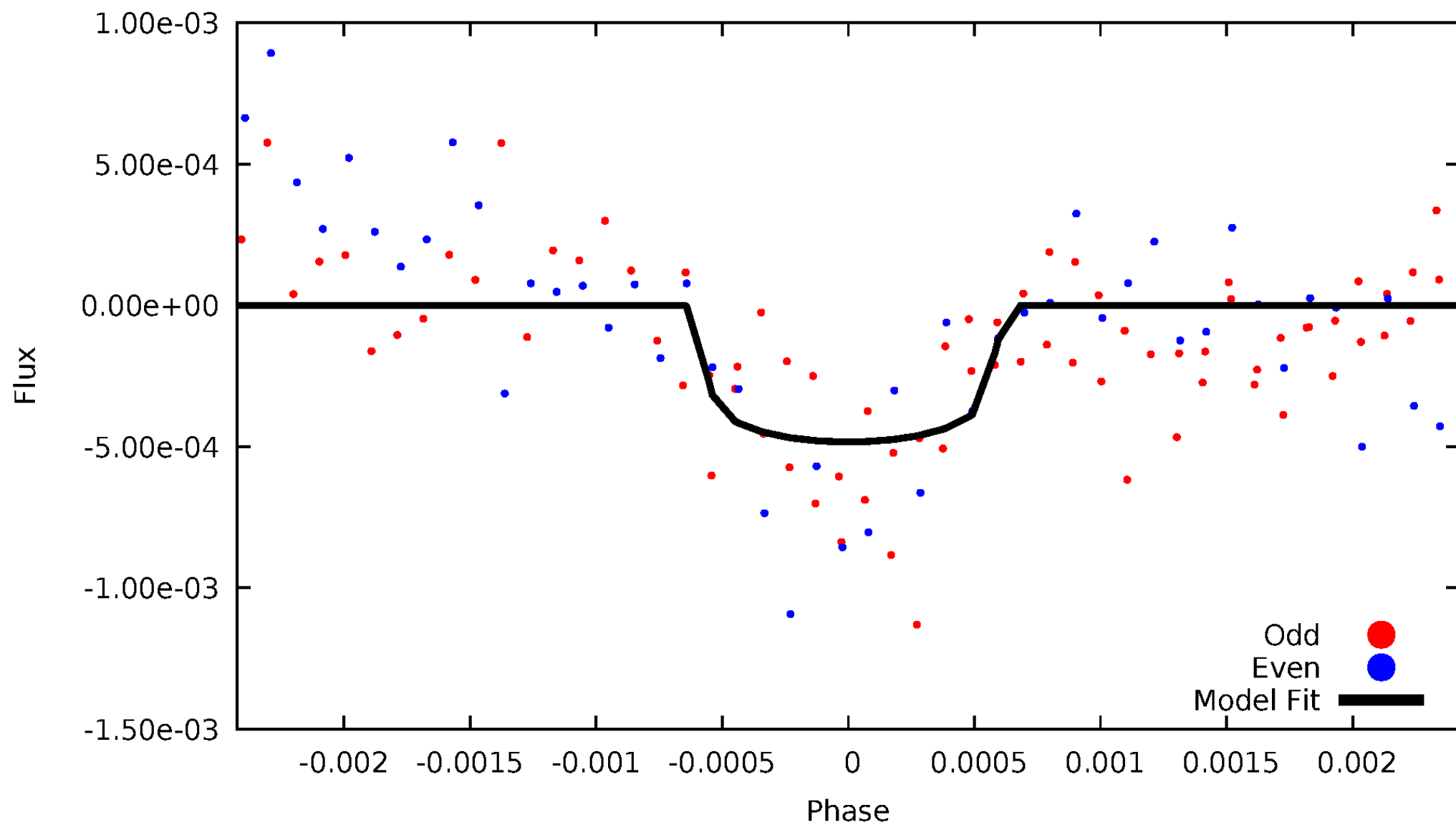


TCE 010360907-06



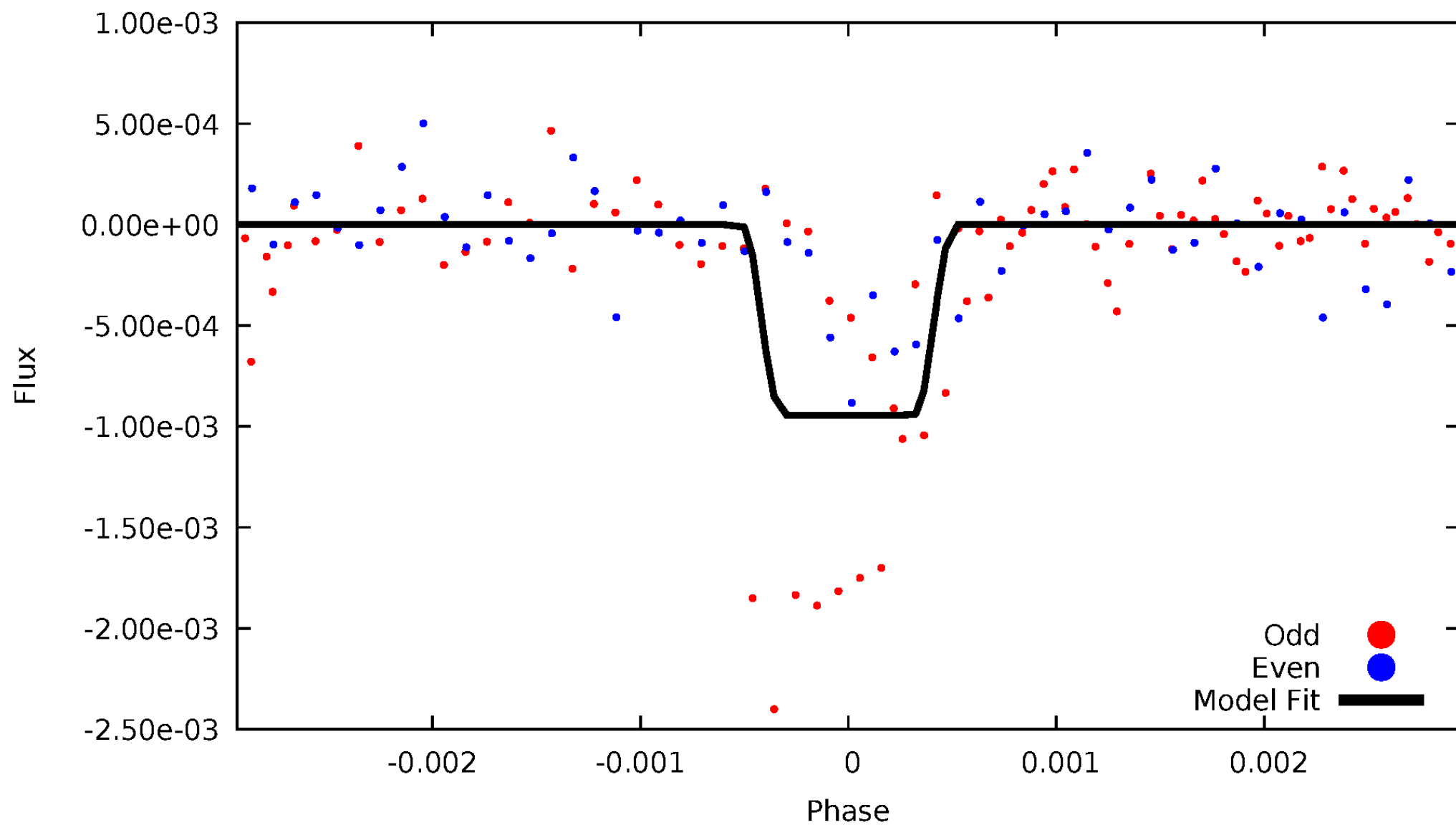
DV Odd/Even

TCE 010360907-06



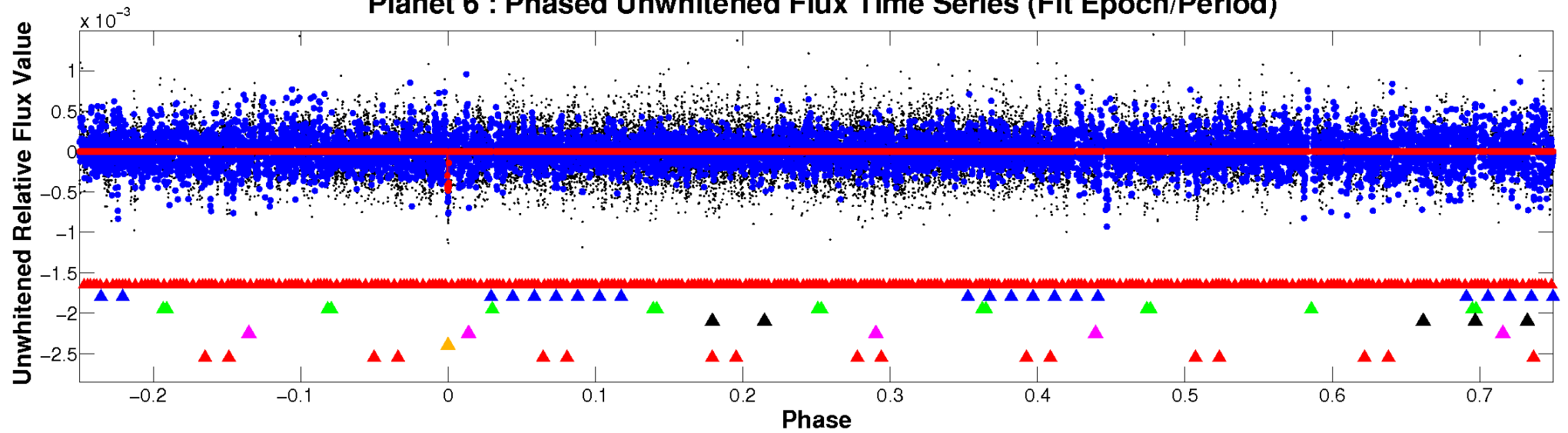
ALT Odd/Even

TCE 010360907-06

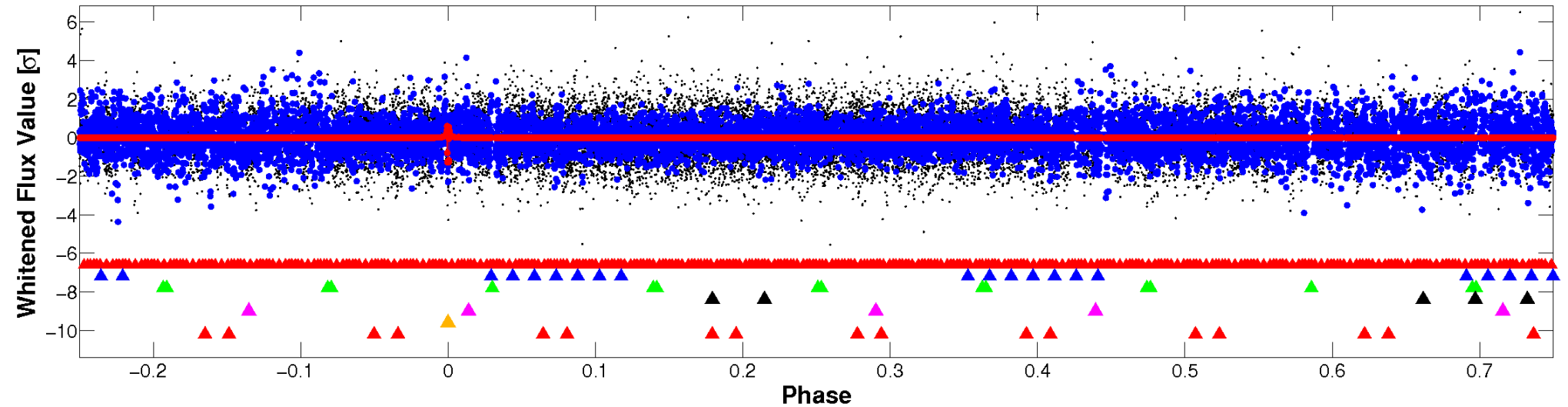


Non-Whitened Vs. Whitened Light Curve

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

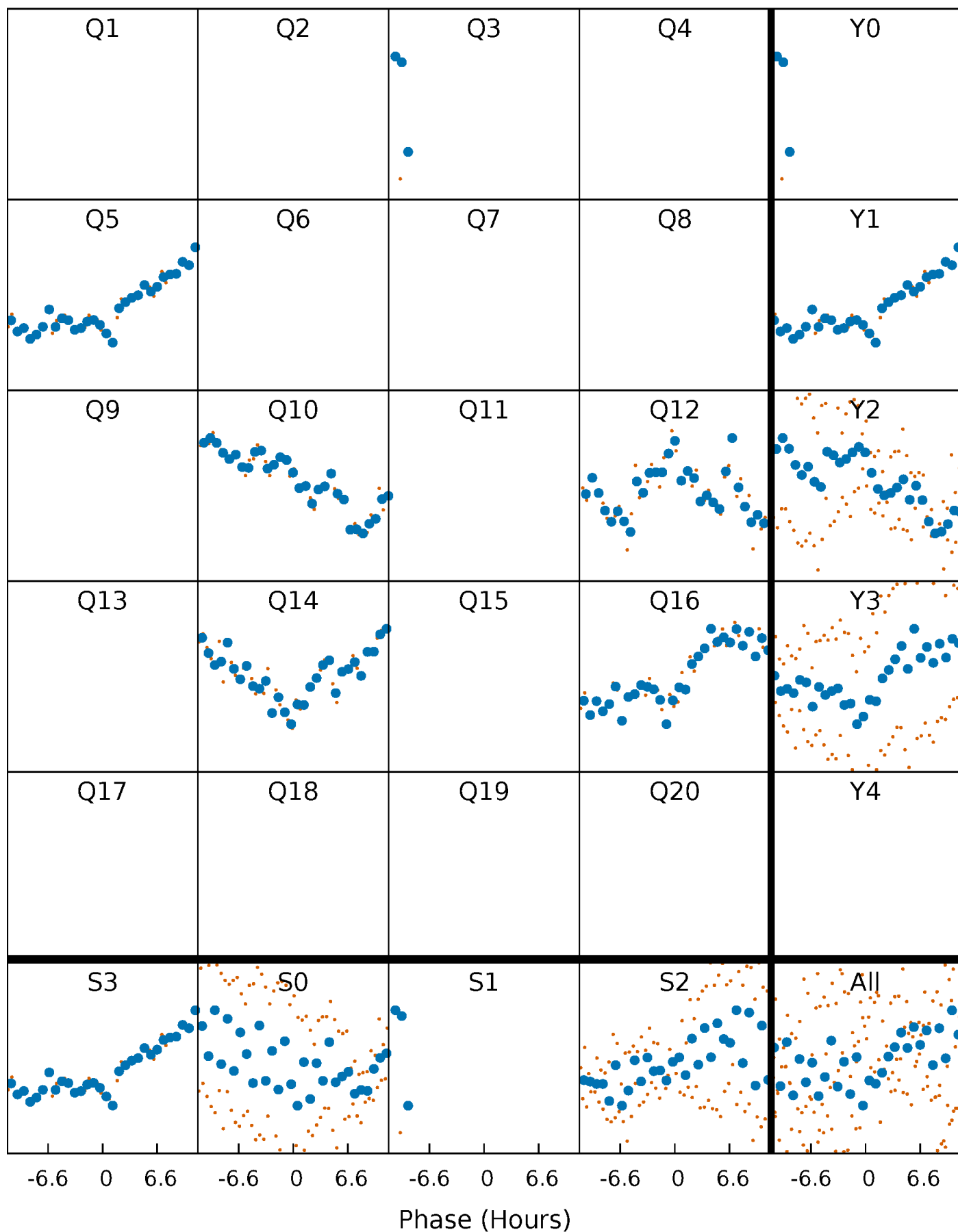


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



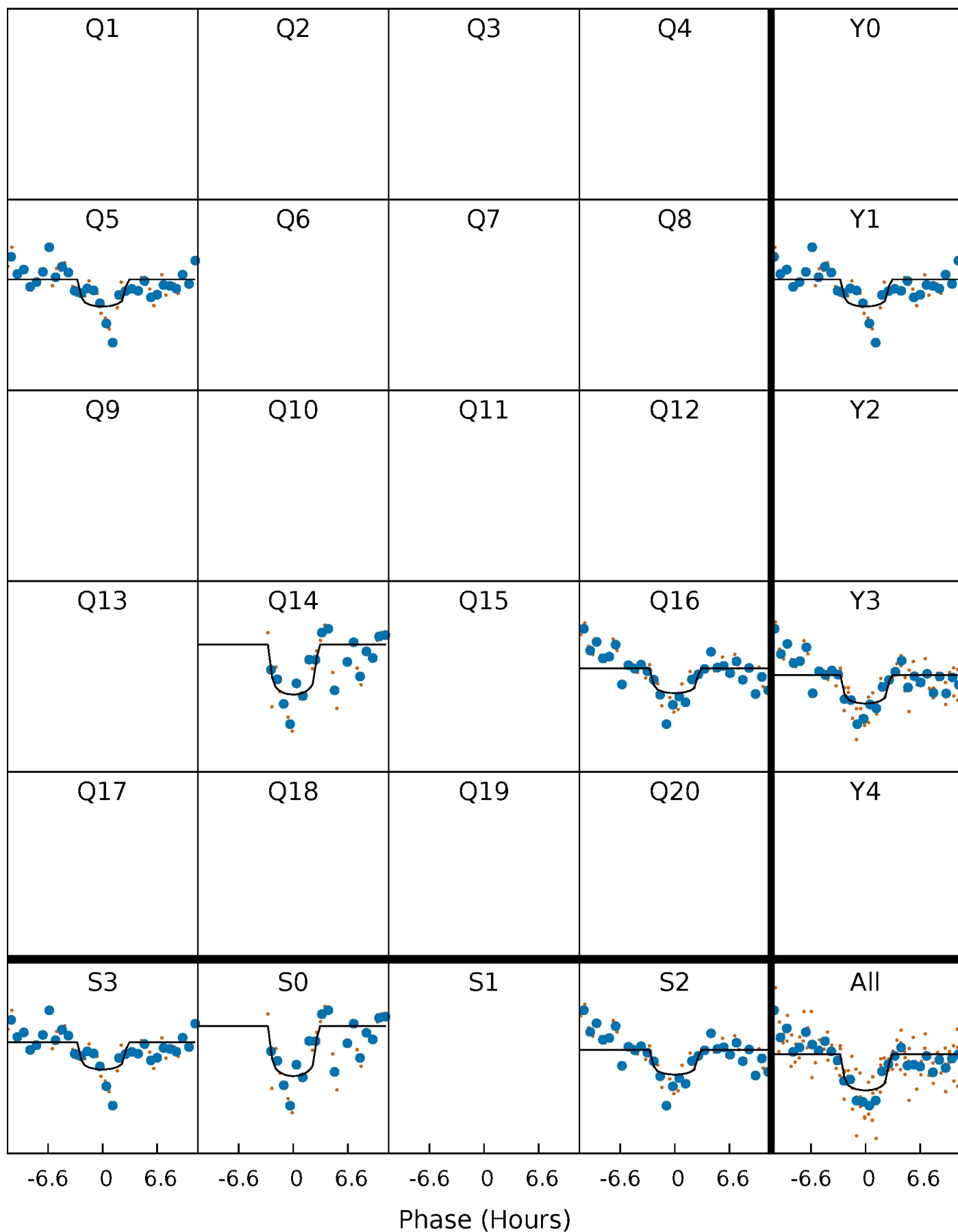
PDC Quarter-Phased Transit Curves

TCE 010360907-06 $P=198.384581$ Days $T_0=321.823097$ (BKJD)



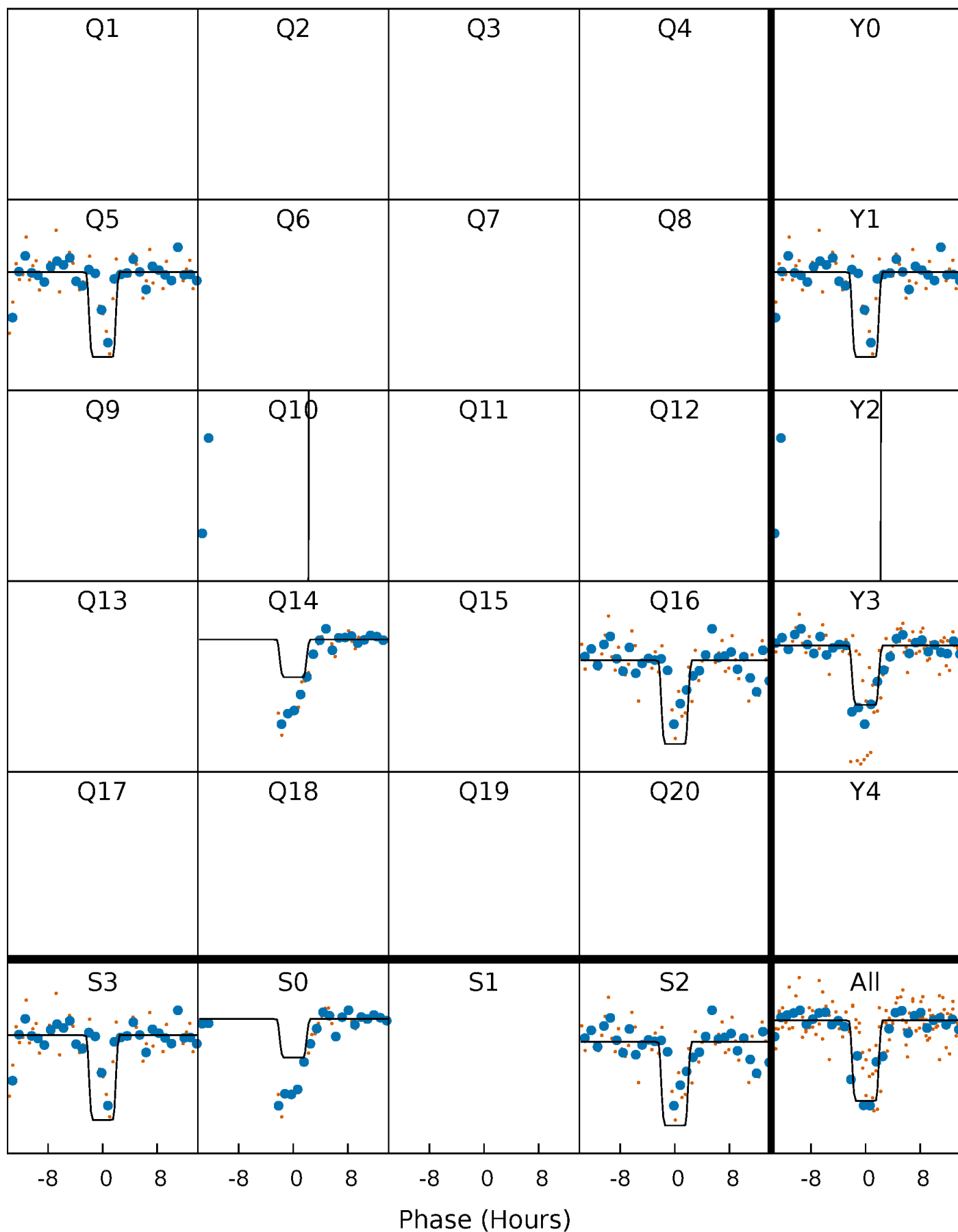
DV Quarter-Phased Transit Curves

TCE 010360907-06 $P=198.384581$ Days $T_0=321.823097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

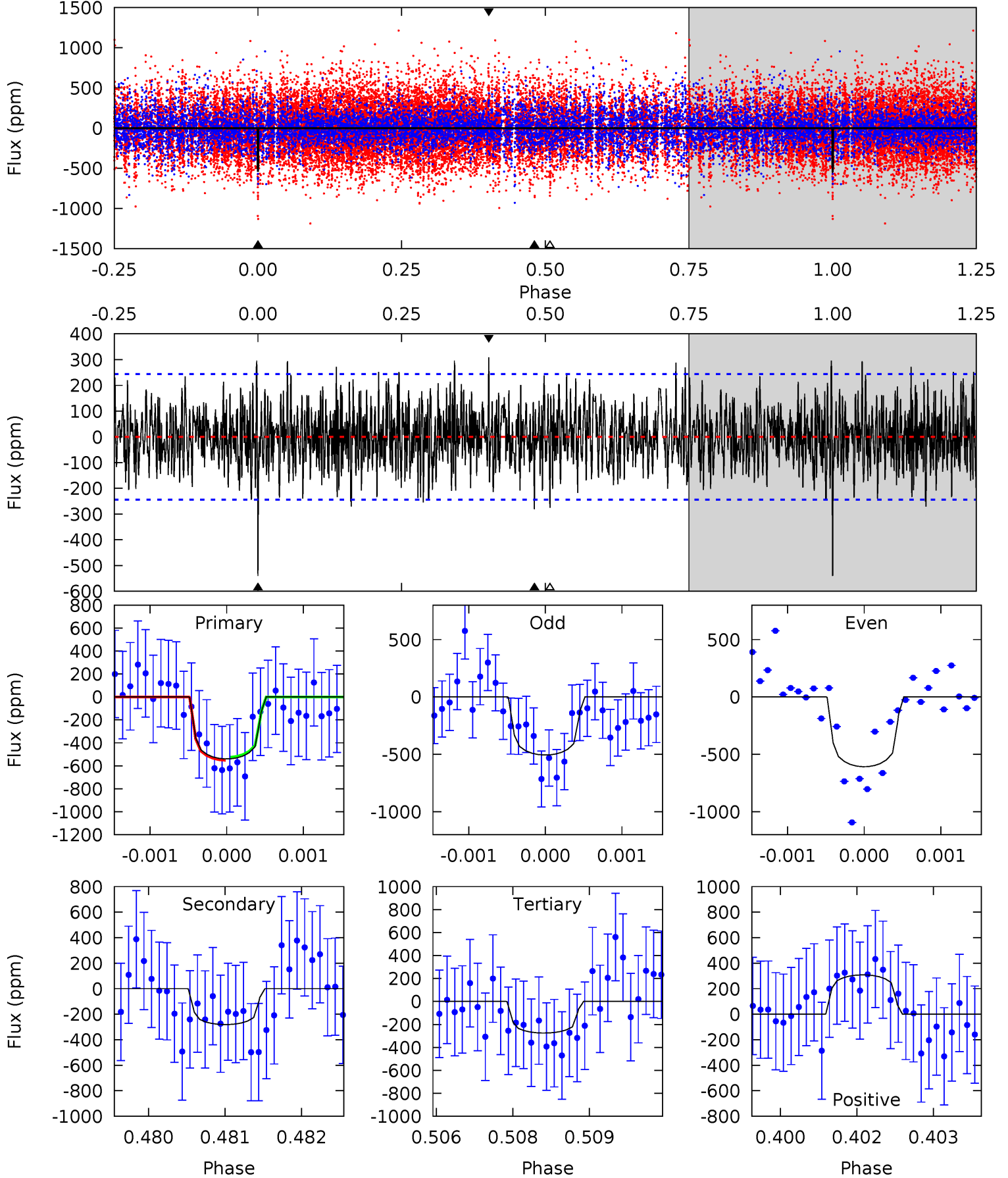
TCE 010360907-06 $P=198.372720$ Days $T_0=321.845562$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-06, P = 198.384581 Days, E = 123.438516 Days

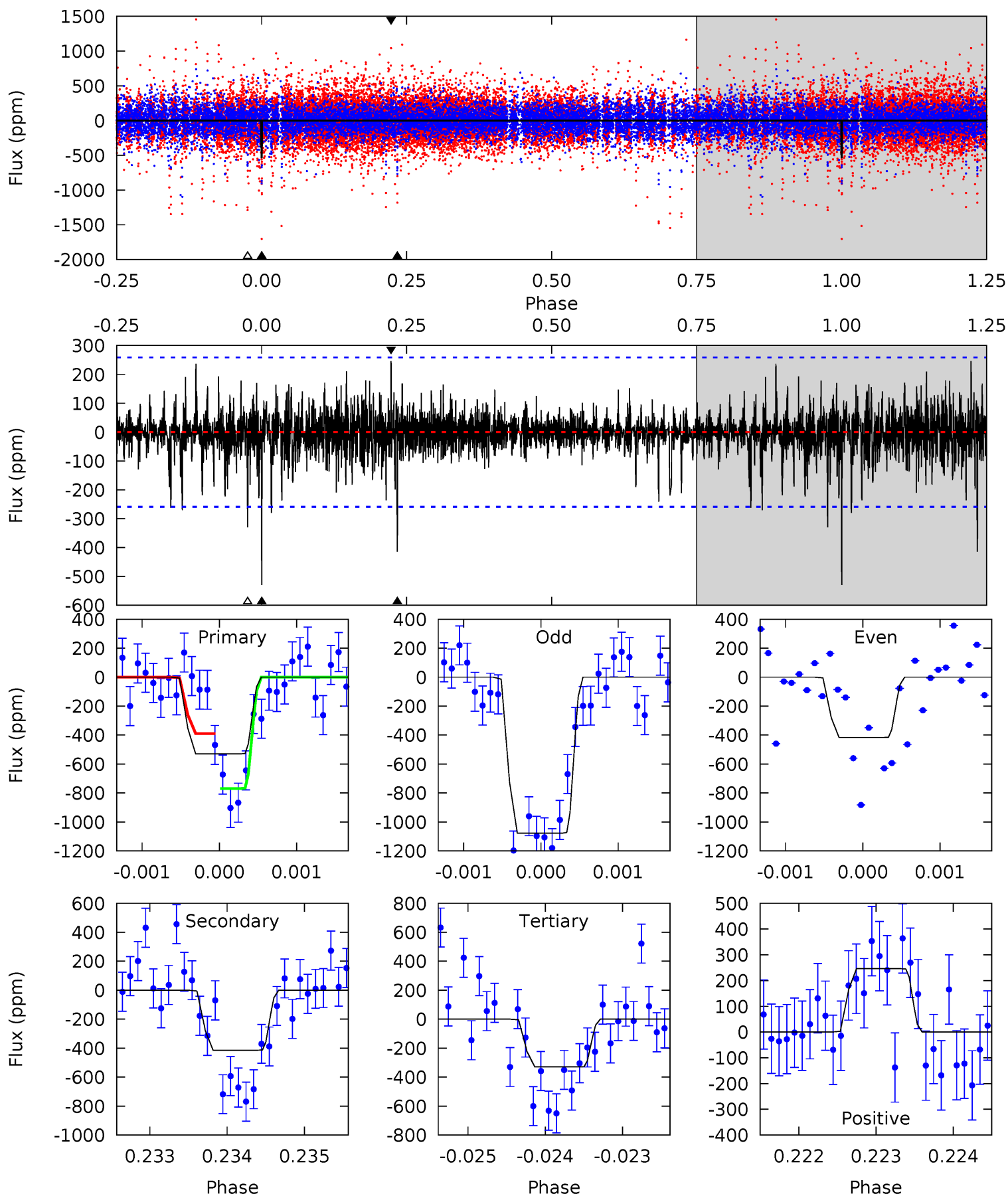
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	6.23	6.09	6.82	5.40	3.21	2.04	5.87	5.13	0.14	-0.60	1.07	1.06	0.36	0.28



Alt Model-Shift Uniqueness Test

010360907-06, P = 198.372720 Days, E = 123.472842 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	8.73	6.94	5.18	5.46	3.30	1.15	4.22	5.98	1.79	3.55	6.98	2.02	0.32	4.00



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-281 ± 45	$5.21^{+4.41}_{-3.11}$	665^{+53}_{-76}	5290^{+3282}_{-1075}	2853^{+15076}_{-1972}
Alt.	-414 ± 47	$7.05^{+4.36}_{-3.69}$	663^{+48}_{-74}	5003^{+2359}_{-747}	2363^{+7430}_{-1483}

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 $A_{obs} \gg 1.0$

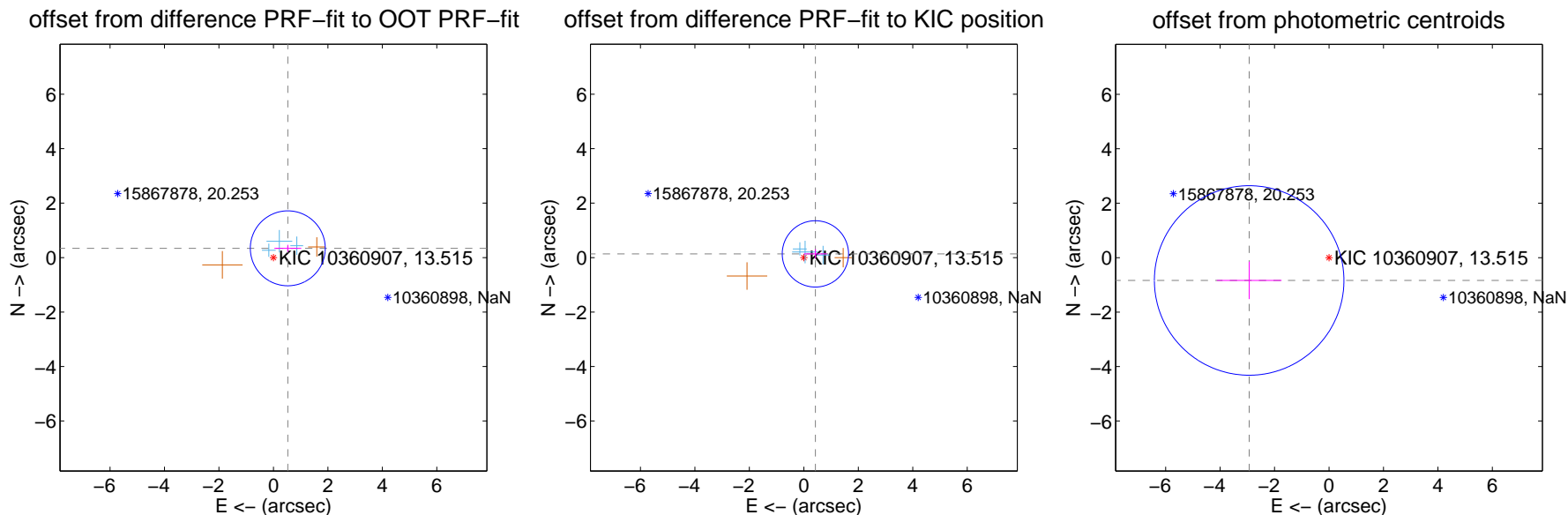
DV Centroid Data

Supplemental centroid analysis for 010360907-06. Kepler magnitude: 13.52. Transit SNR 6.96

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.628 ± 0.459	1.37	-0.528 ± 0.493	0.340 ± 0.130
PRF-fit source offset from KIC position	0.445 ± 0.406	1.10	-0.424 ± 0.422	0.136 ± 0.173
photometric centroid source offset	3.05 ± 1.16	2.63	2.93 ± 1.19	-0.84 ± 0.69

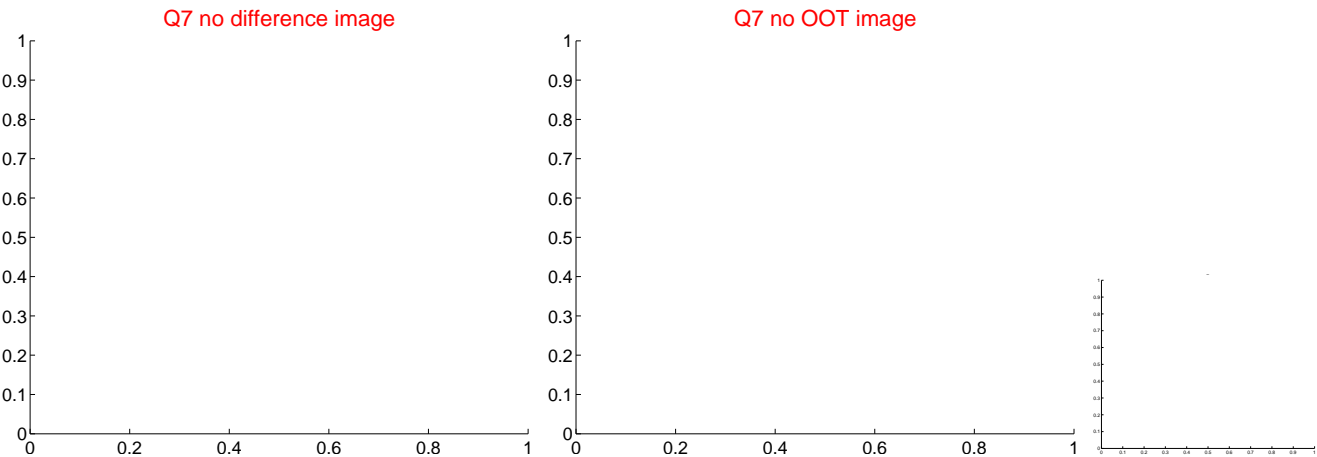
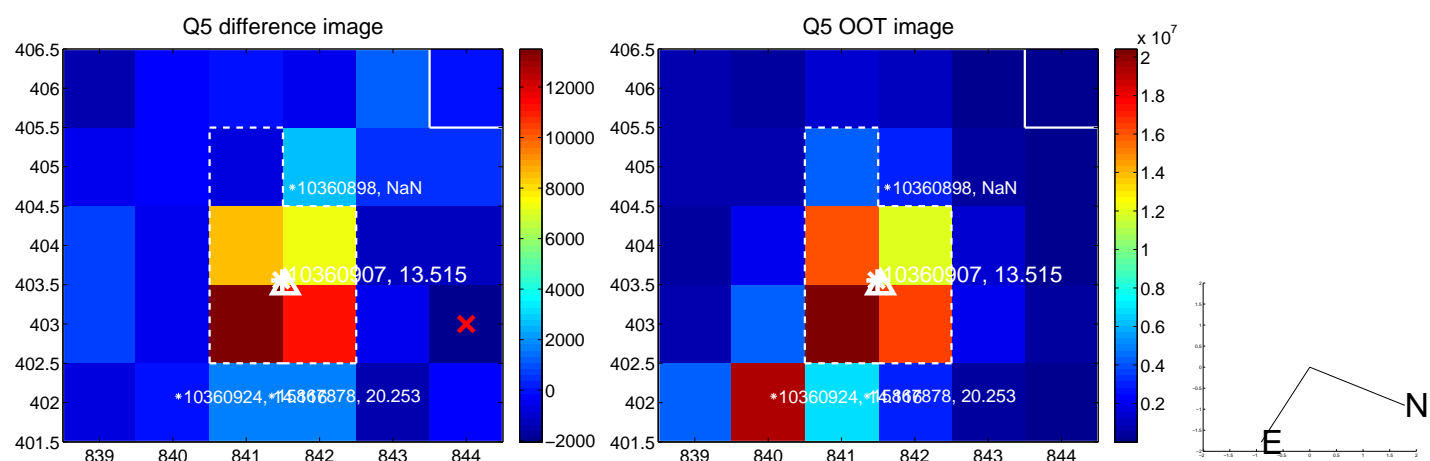


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

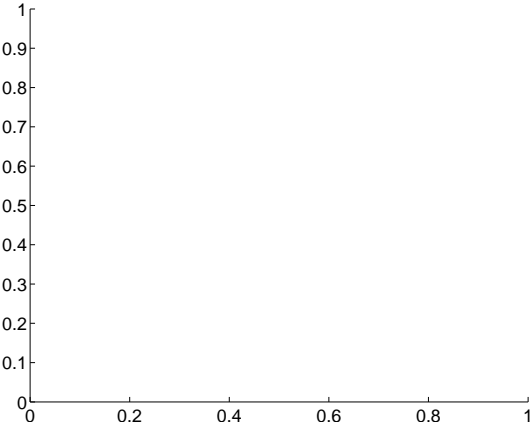


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

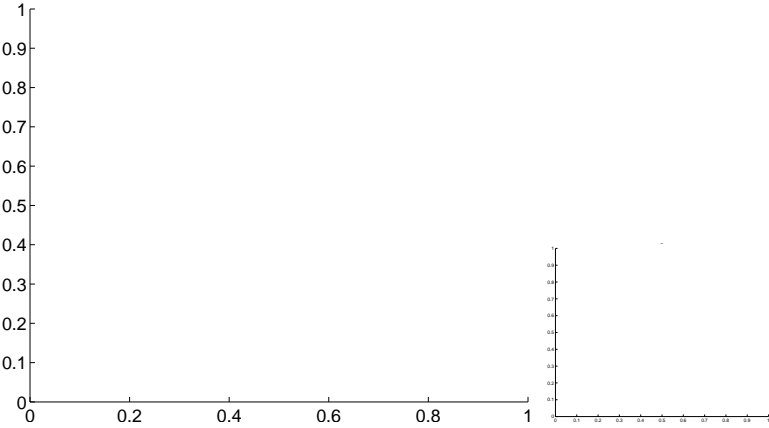


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

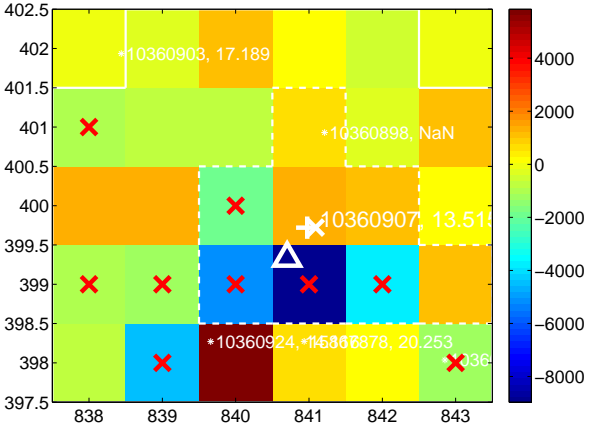
Q9 no difference image



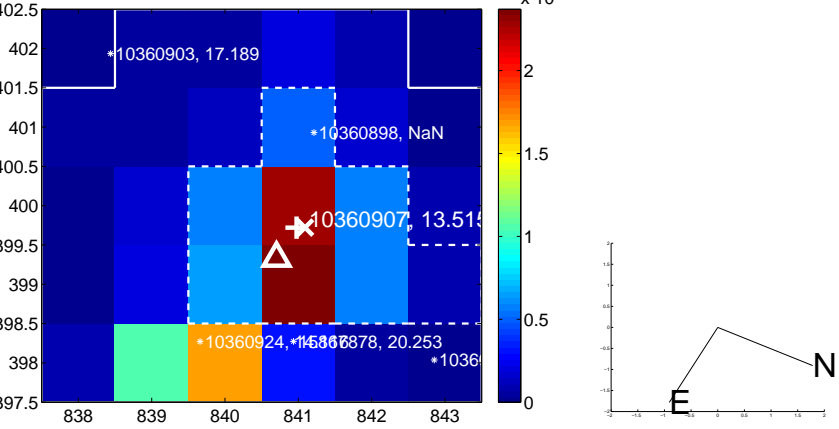
Q9 no OOT image



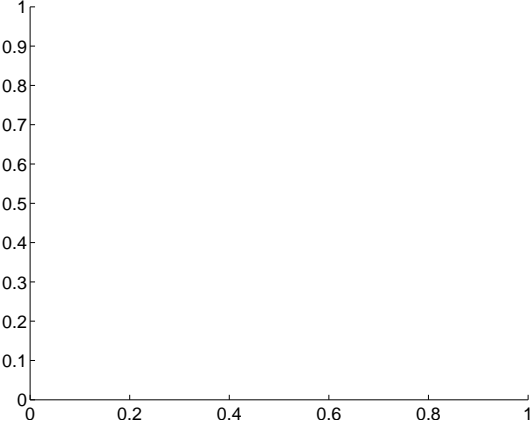
Q10 difference image. Poor Quality



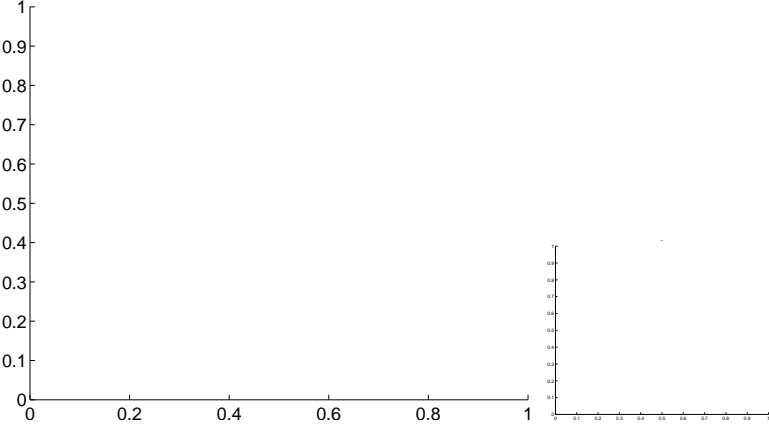
Q10 OOT image



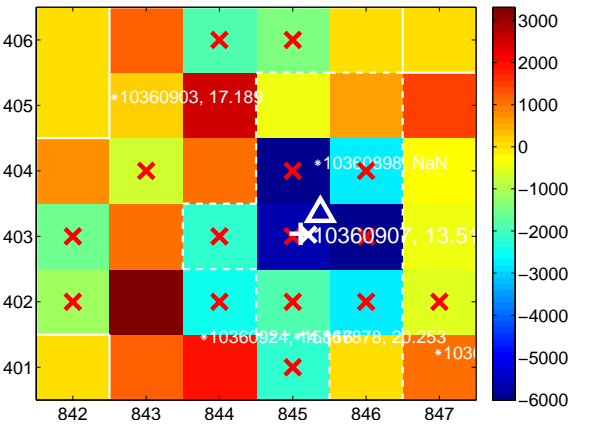
Q11 no difference image



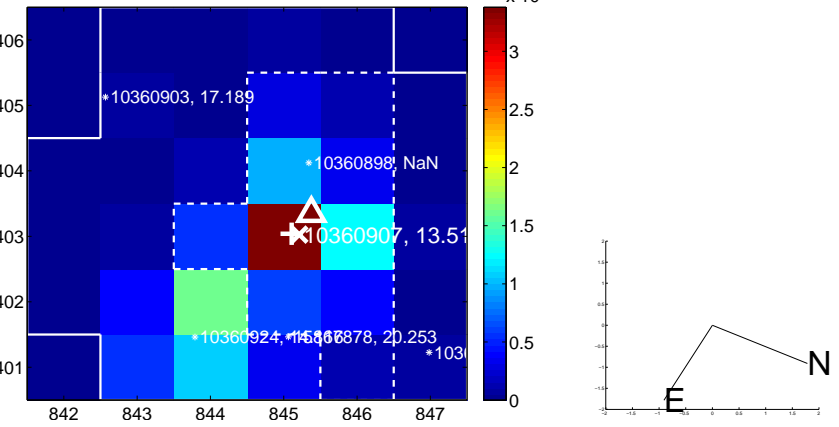
Q11 no OOT image



Q12 difference image. Poor Quality



Q12 OOT image

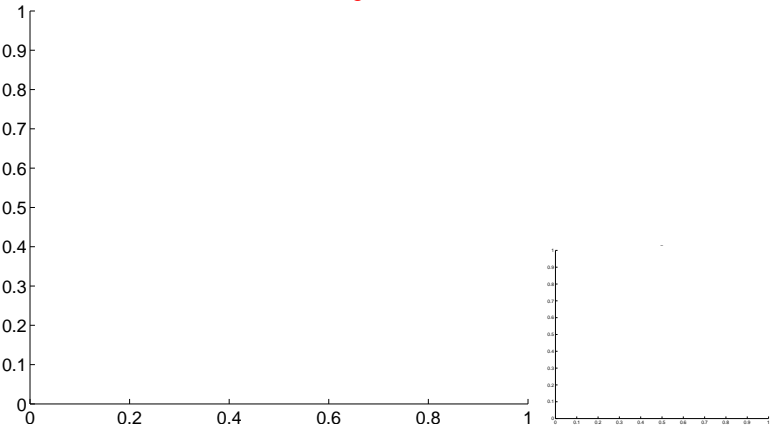


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

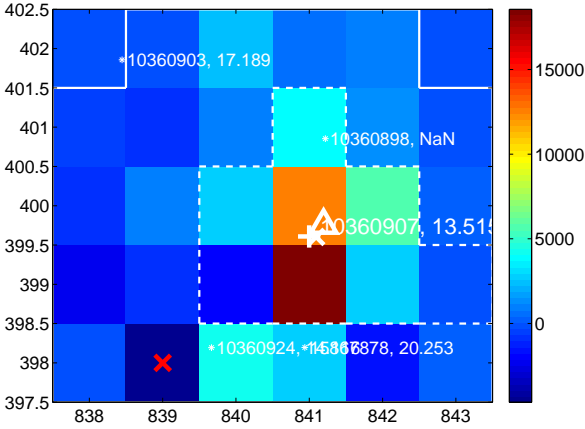
Q13 no difference image



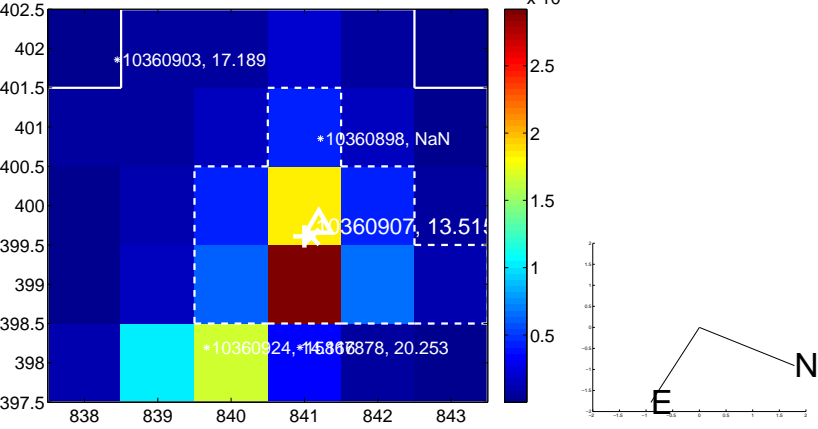
Q13 no OOT image



Q14 difference image



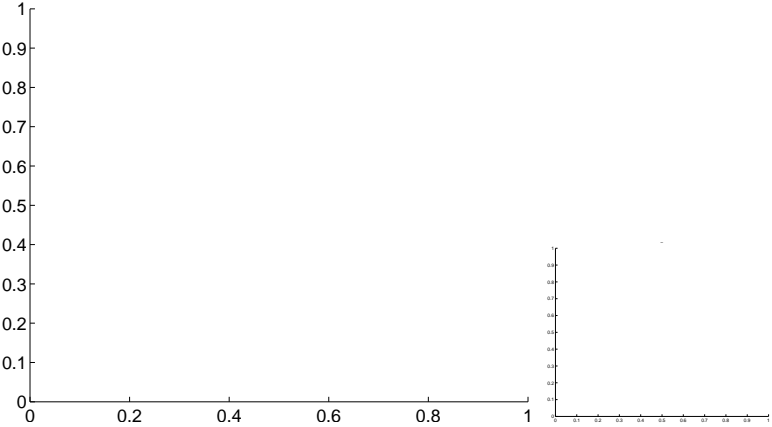
Q14 OOT image



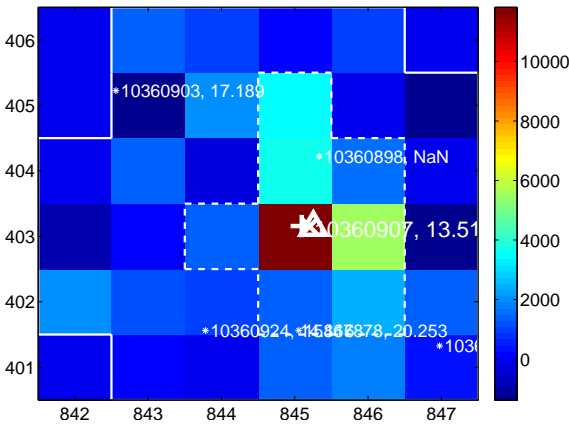
Q15 no difference image



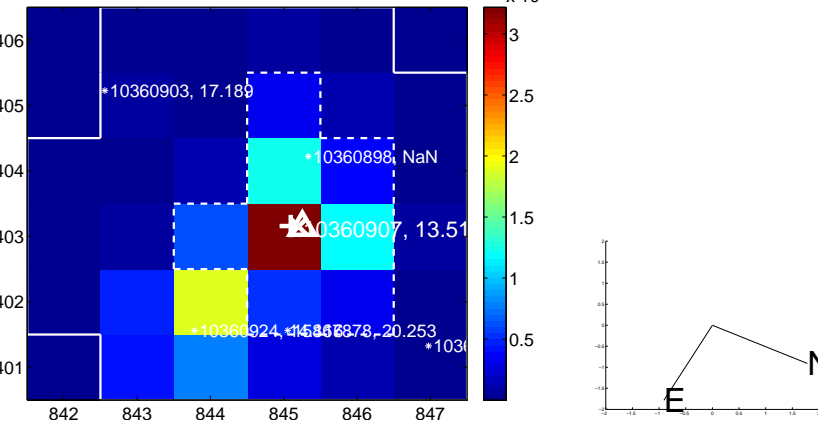
Q15 no OOT image



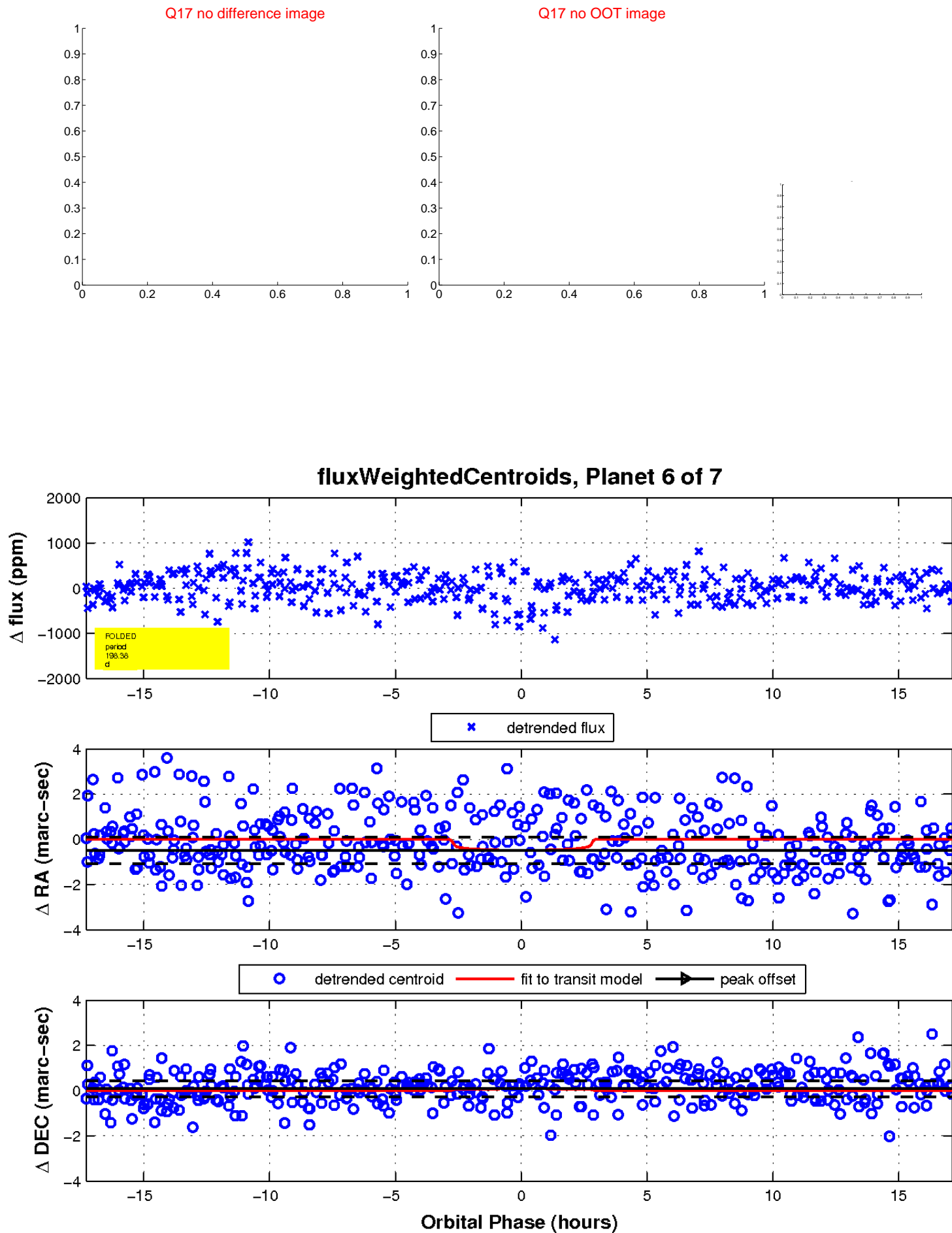
Q16 difference image



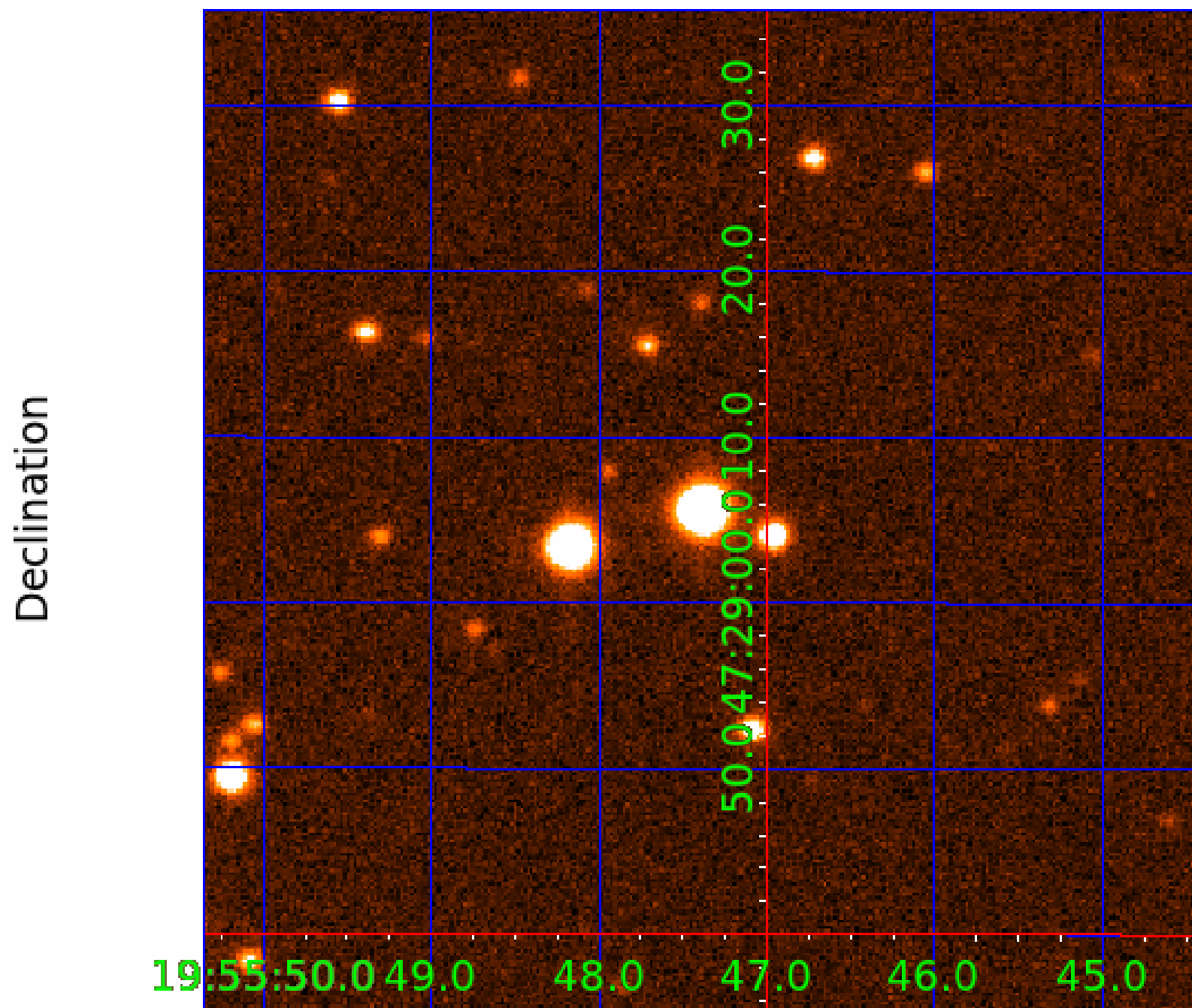
Q16 OOT image



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



UKIRT Image



KIC 010360907

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})
010360907-01	OBS	No	3.873257	135.086308	52.7	16.557	9.5	6.7	2.11	6425	1.55	2508.39
010360907-02	OBS	No	67.100448	193.425634	383.0	4.095	9.0	9.1	2.11	6425	5.22	55.96
010360907-03	OBS	No	88.117686	217.990806	410.4	5.976	8.9	9.4	2.11	6425	5.20	38.91
010360907-04	OBS	No	294.071670	268.732724	561.7	10.375	8.3	9.0	2.11	6425	5.41	7.80
010360907-05	OBS	No	312.364930	265.438787	410.2	7.825	8.5	6.7	2.11	6425	4.49	7.20
010360907-06	OBS	No	198.384581	321.823097	483.3	5.768	7.9	7.0	2.11	6425	4.90	13.19
010360907-07	OBS	No	87.813516	162.219229	218.0	9.000	7.7	-1.0	2.11	6425	3.13	39.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010360907-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
010360907-02	OBS	FP	0.01	1	0	1	0	MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
010360907-03	OBS	FP	0.00	1	0	0	0	LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
010360907-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
010360907-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS
010360907-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES—TRANS_GAPPED—MOD_NONUNIQ_ALT—HALO_GHOST
010360907-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

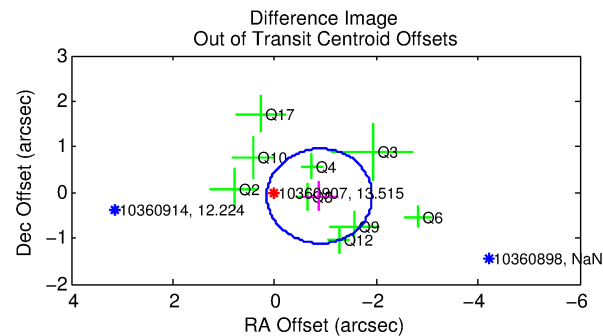
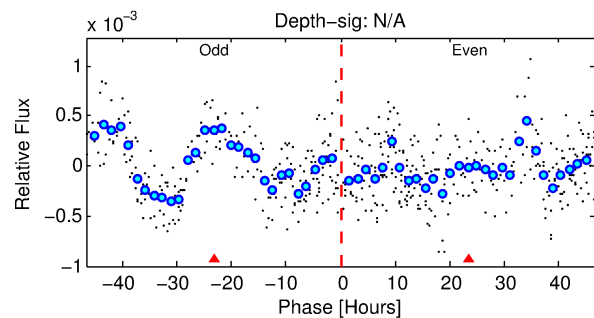
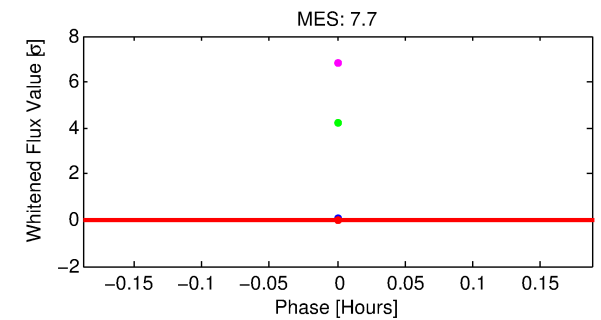
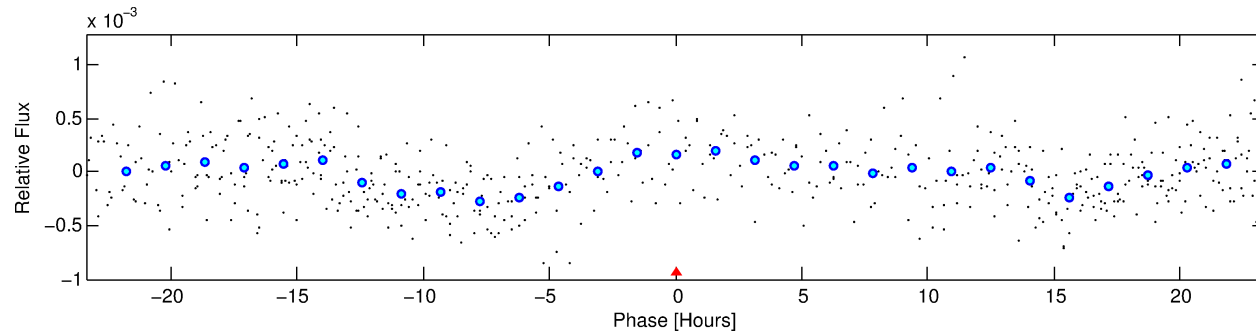
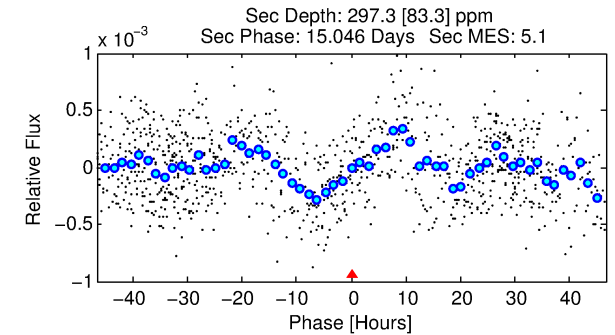
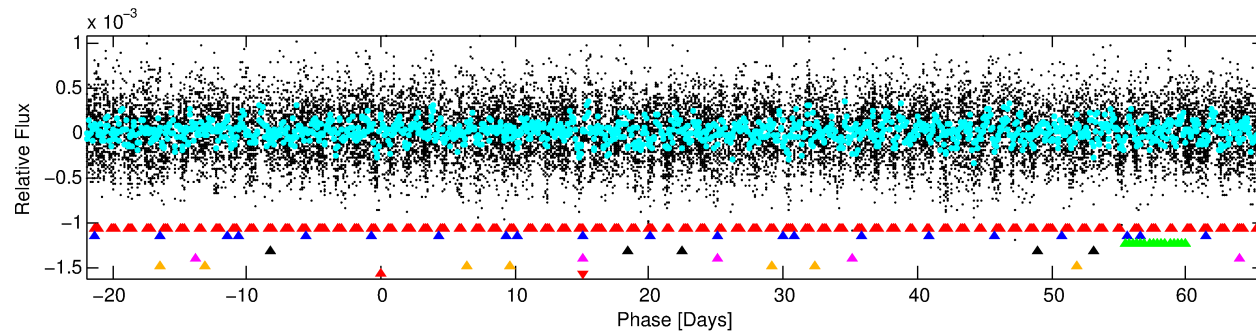
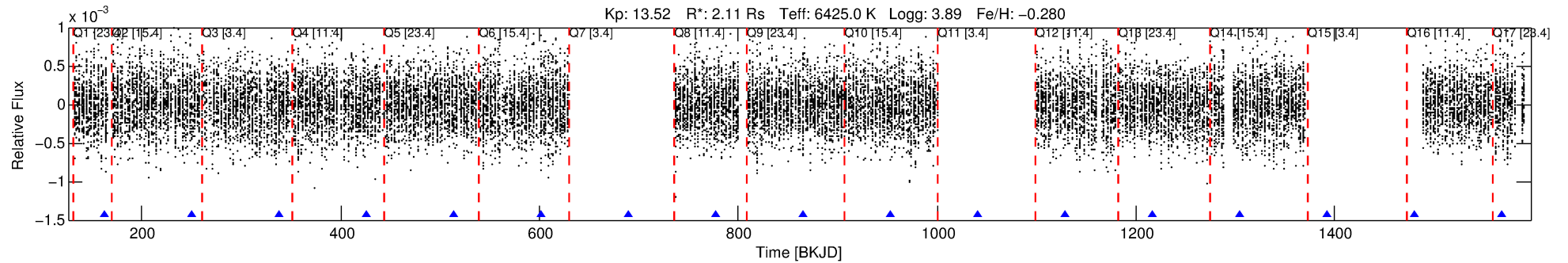
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010360907-07

No Significant Match Found

DV One-Page Summary

KIC: 10360907 Candidate: 7 of 7 Period: 87.814 d



TPS TCE Results:

Period = 87.81352 d
Epoch = 162.2192 BKJD

DV fit results are unavailable

DV Diagnostic Results:

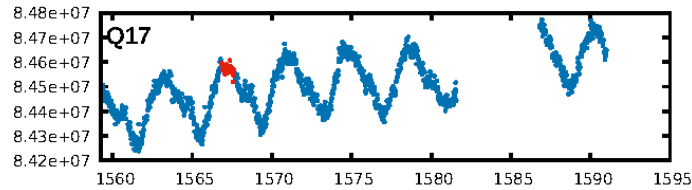
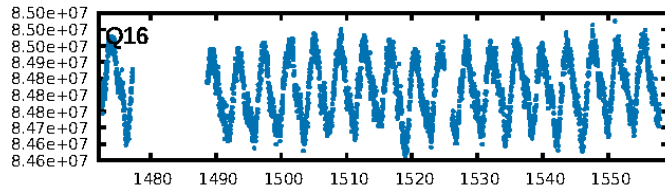
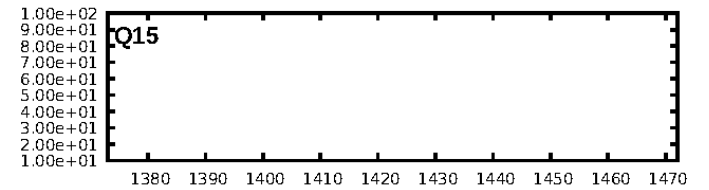
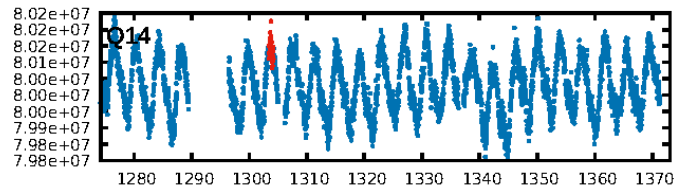
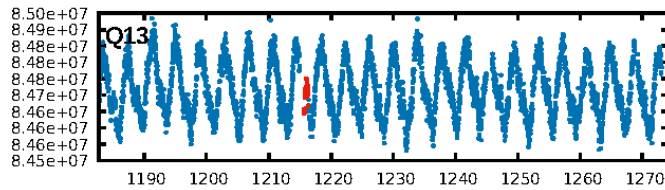
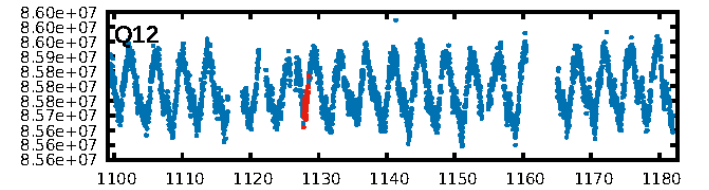
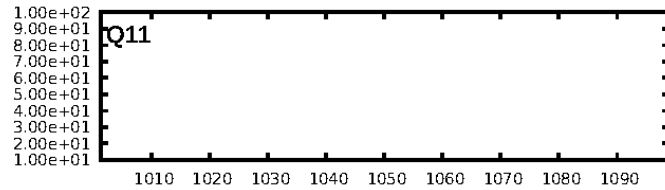
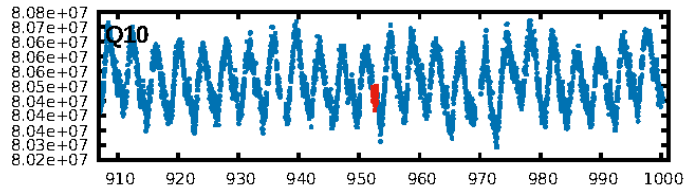
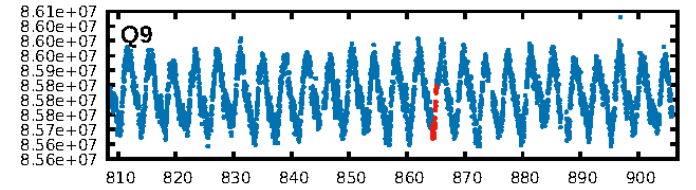
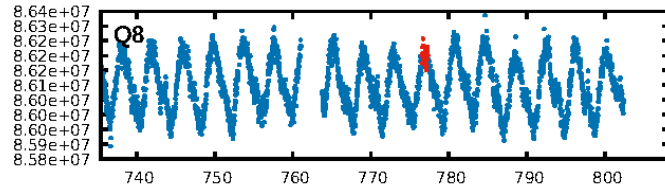
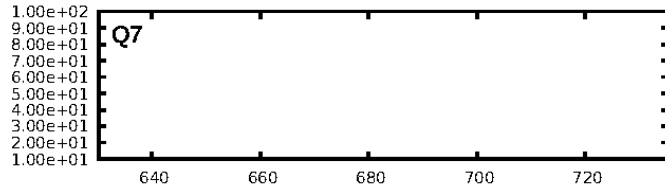
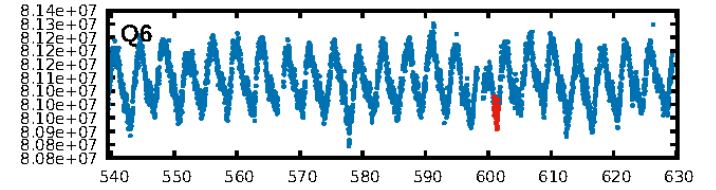
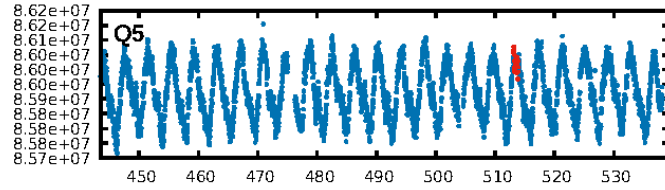
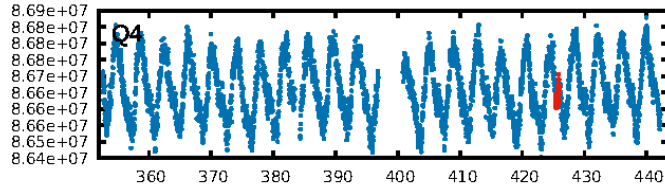
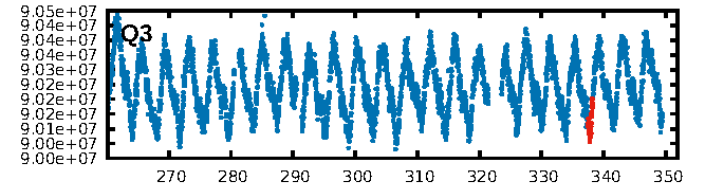
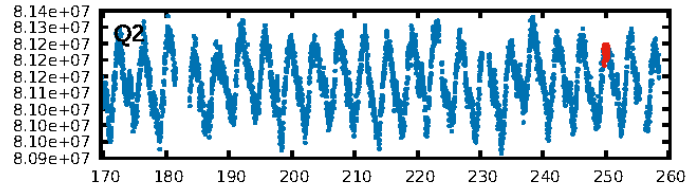
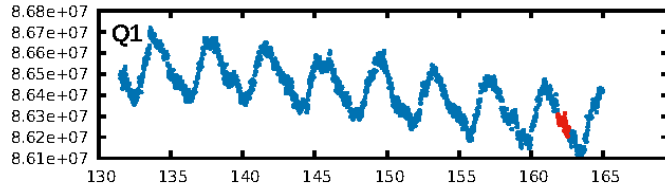
ShortPeriod-sig: 100.0% [50.28σ]
LongPeriod-sig: 50.1% [0.68σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.25e-07
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.6868

Centroid-sig: 91.0%
Centroid-so: 4.494 arcsec [0.54σ]
OotOffset-rm: 0.888 arcsec [2.57σ]
KicOffset-rm: 0.791 arcsec [1.98σ]
OotOffset-st: 3/1/3/2 [9]
KicOffset-st: 3/1/3/2 [9]
DiffImageQuality-fgm: 0.11 [1/9]
DiffImageOverlap-fno: 0.25 [3/12]

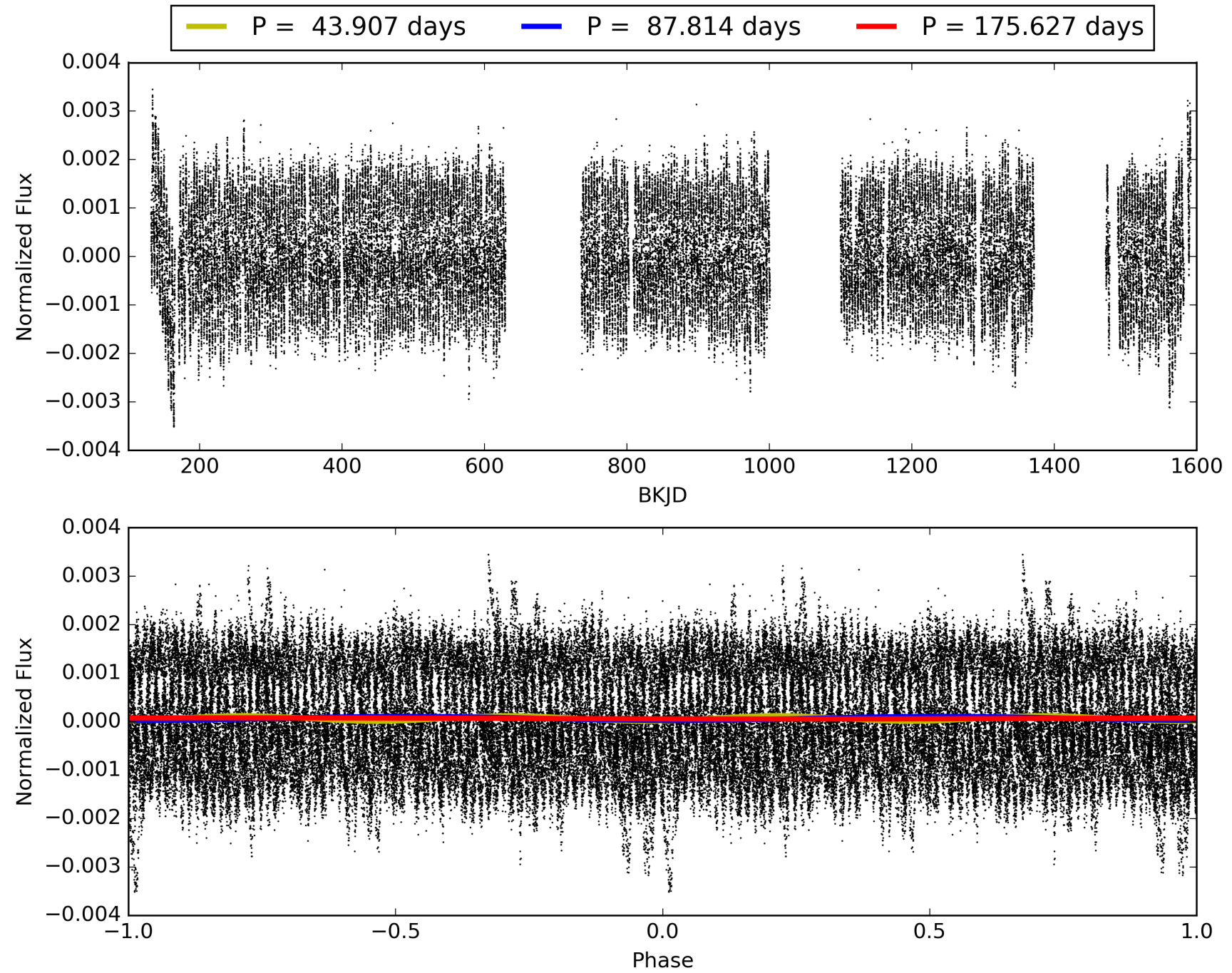
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:19:27 Z

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

TCE 010360907-07, PDC Light Curves

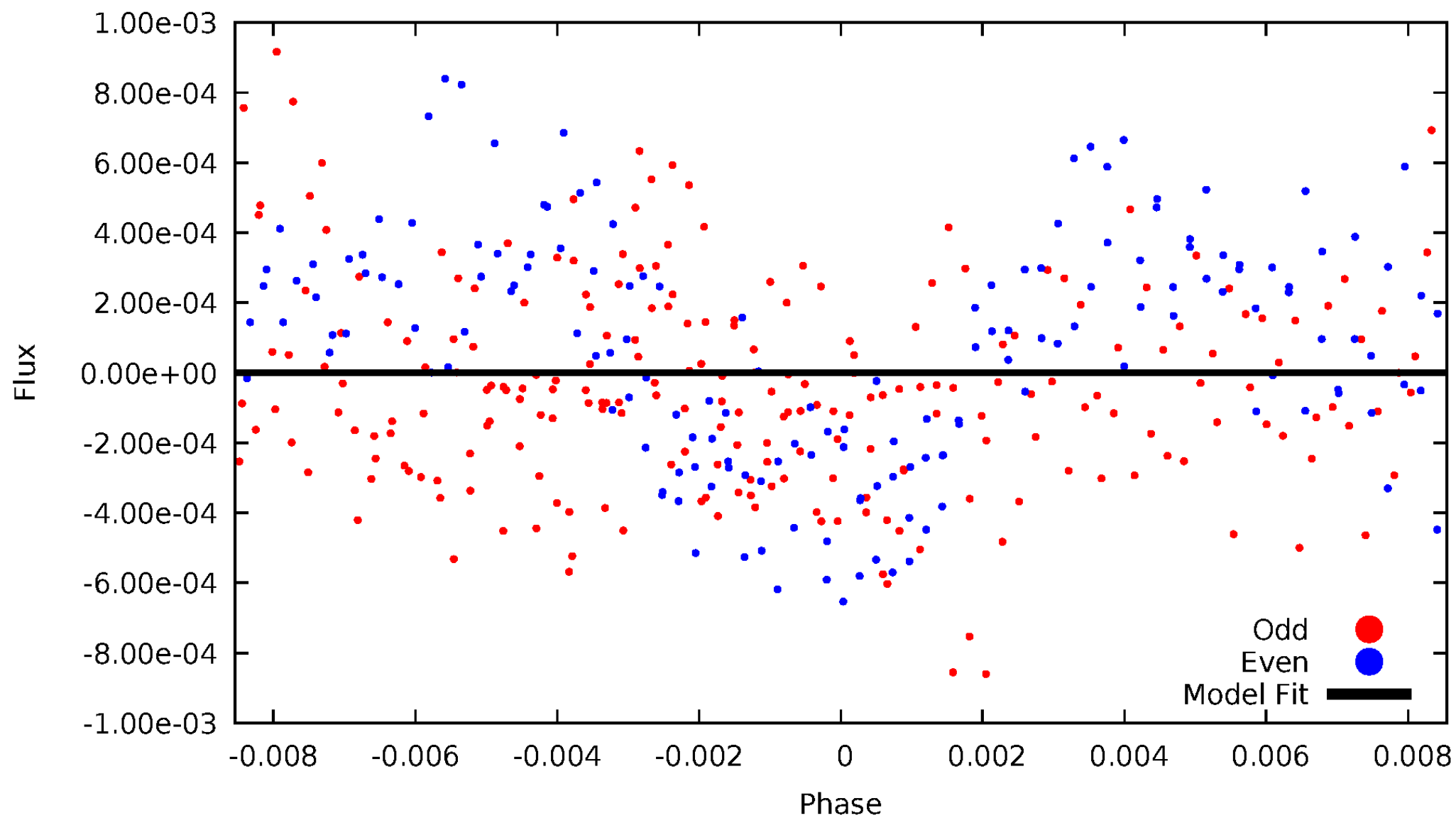


TCE 010360907-07



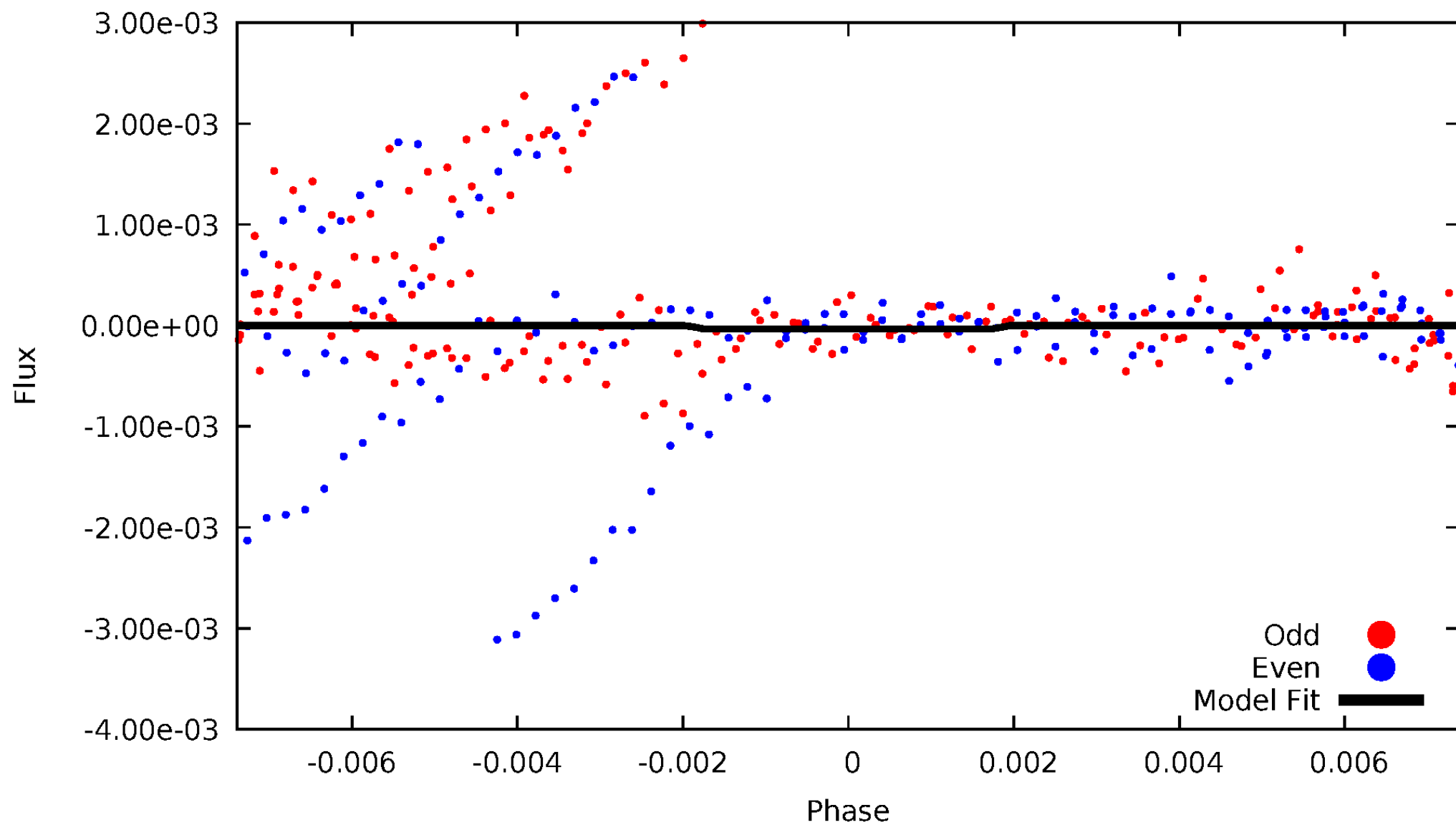
DV Odd/Even

TCE 010360907-07

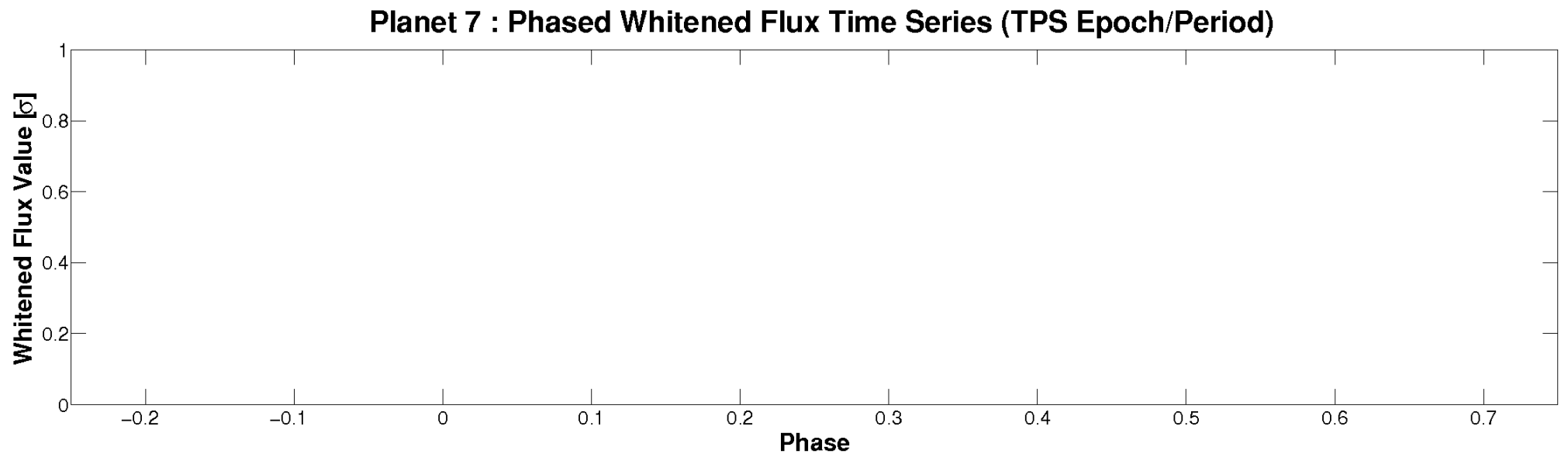
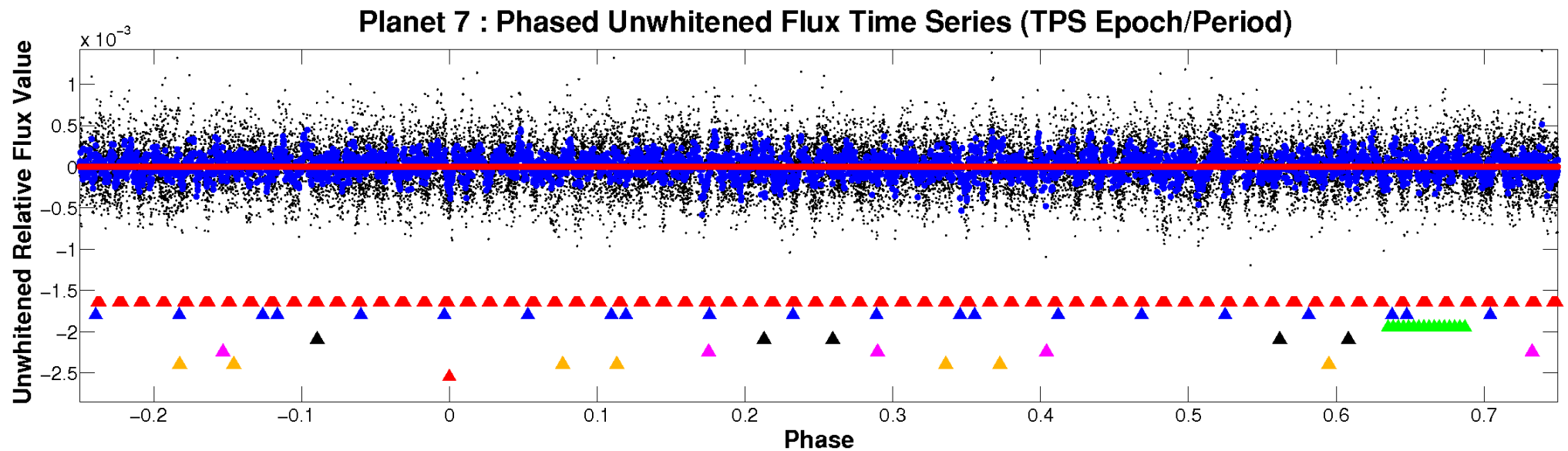


ALT Odd/Even

TCE 010360907-07

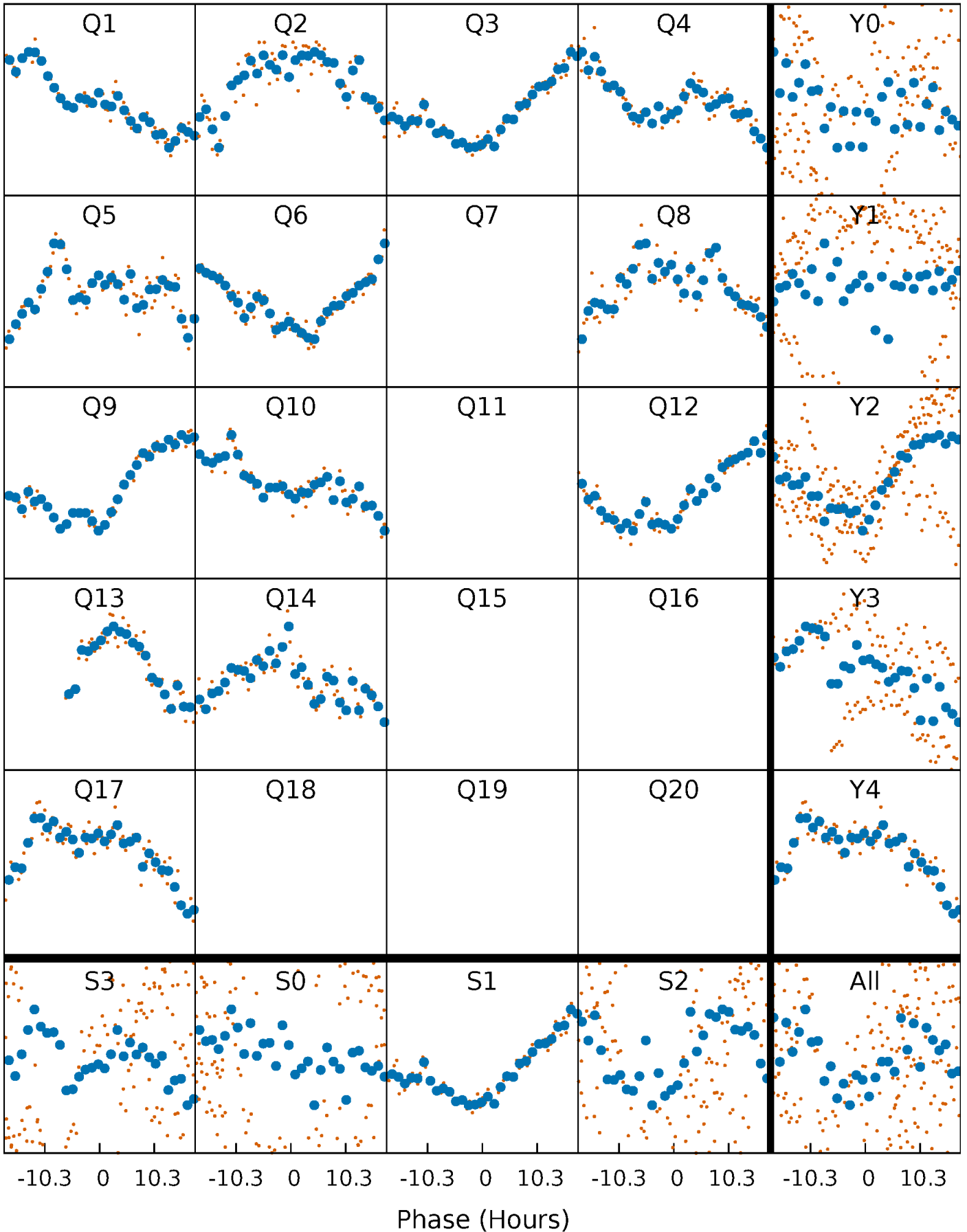


Non-Whitened Vs. Whitened Light Curve



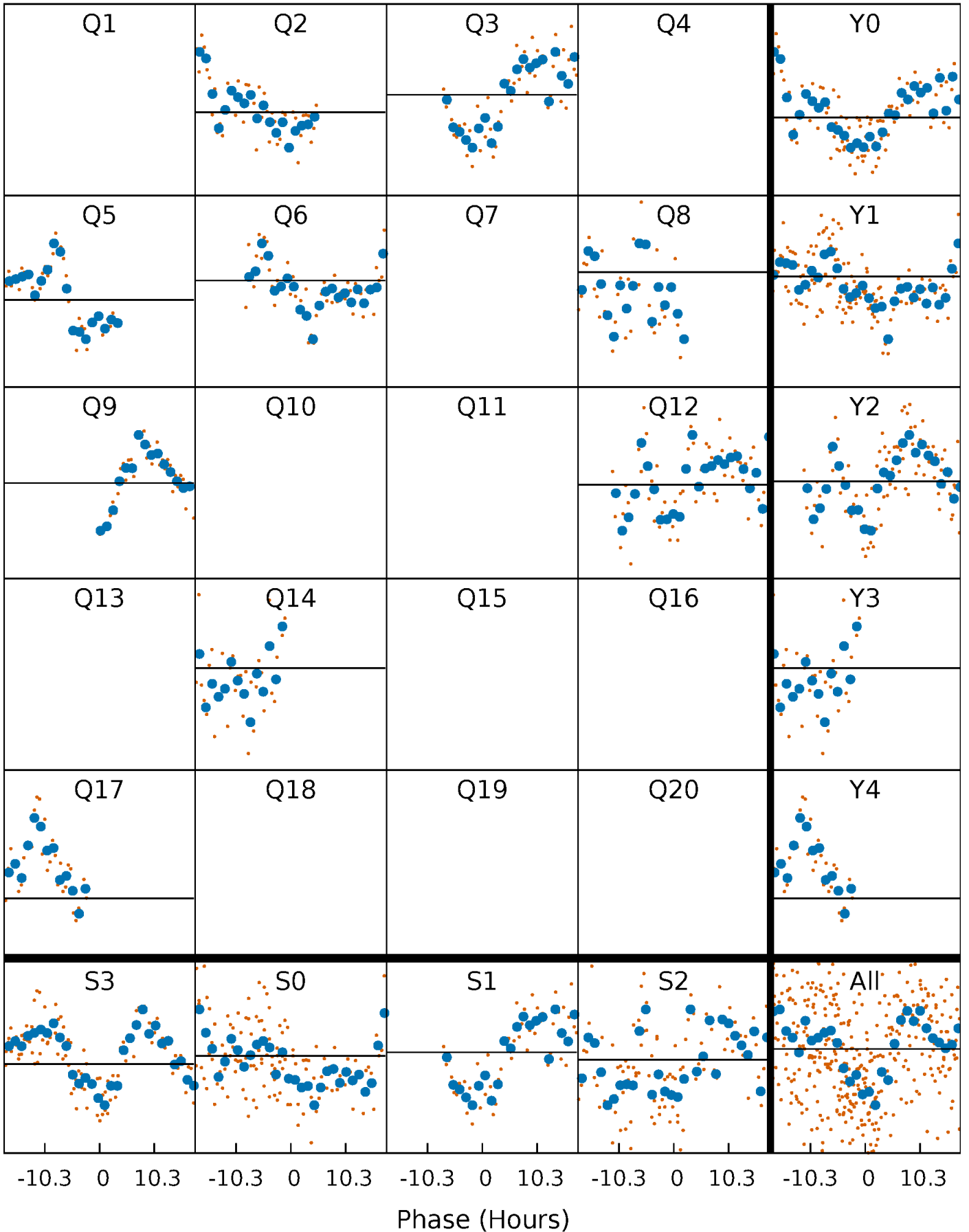
PDC Quarter-Phased Transit Curves

TCE 010360907-07 $P = 87.813516$ Days $T_0 = 162.219229$ (BKJD)



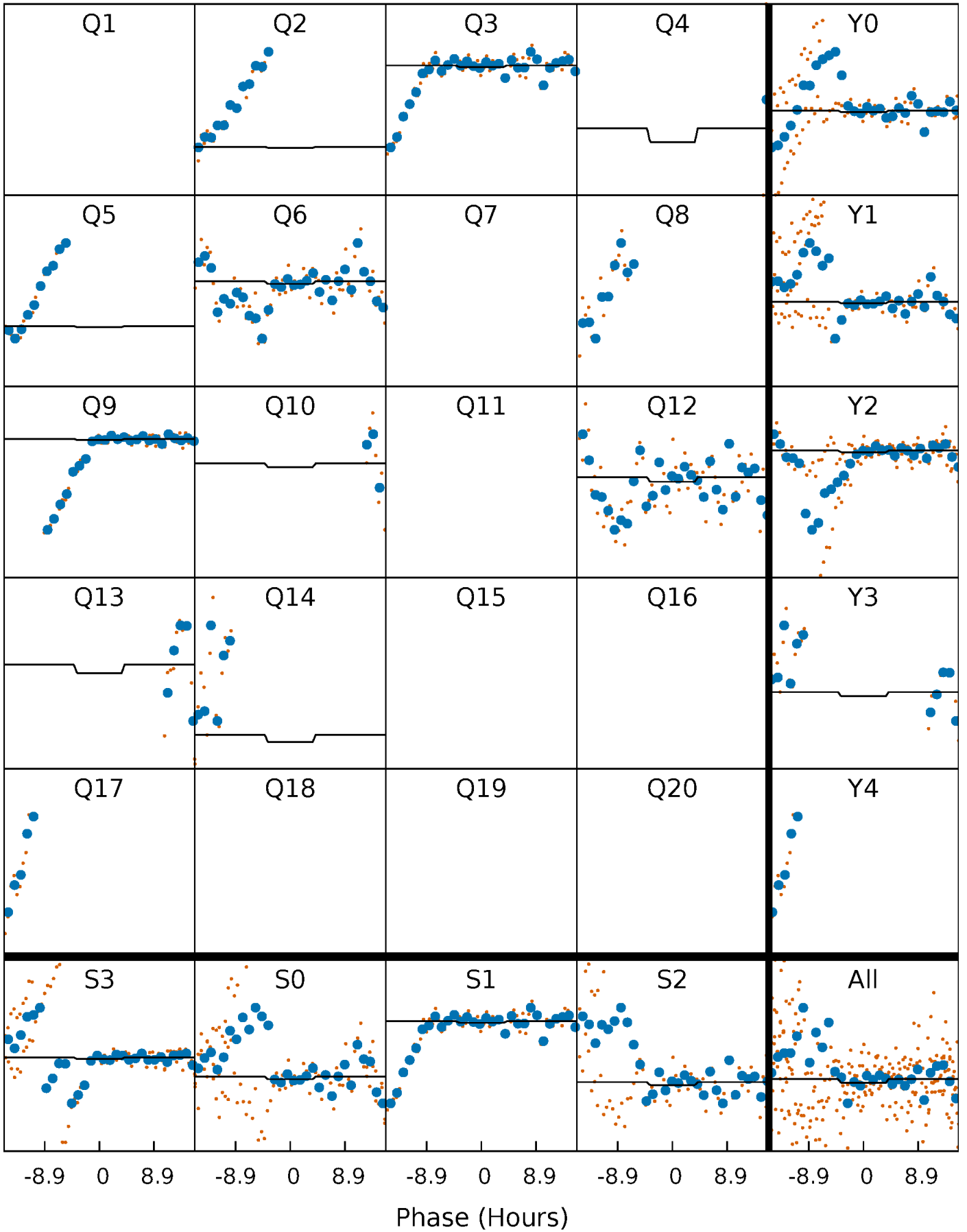
DV Quarter-Phased Transit Curves

TCE 010360907-07 $P = 87.813516$ Days $T_0 = 162.219229$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

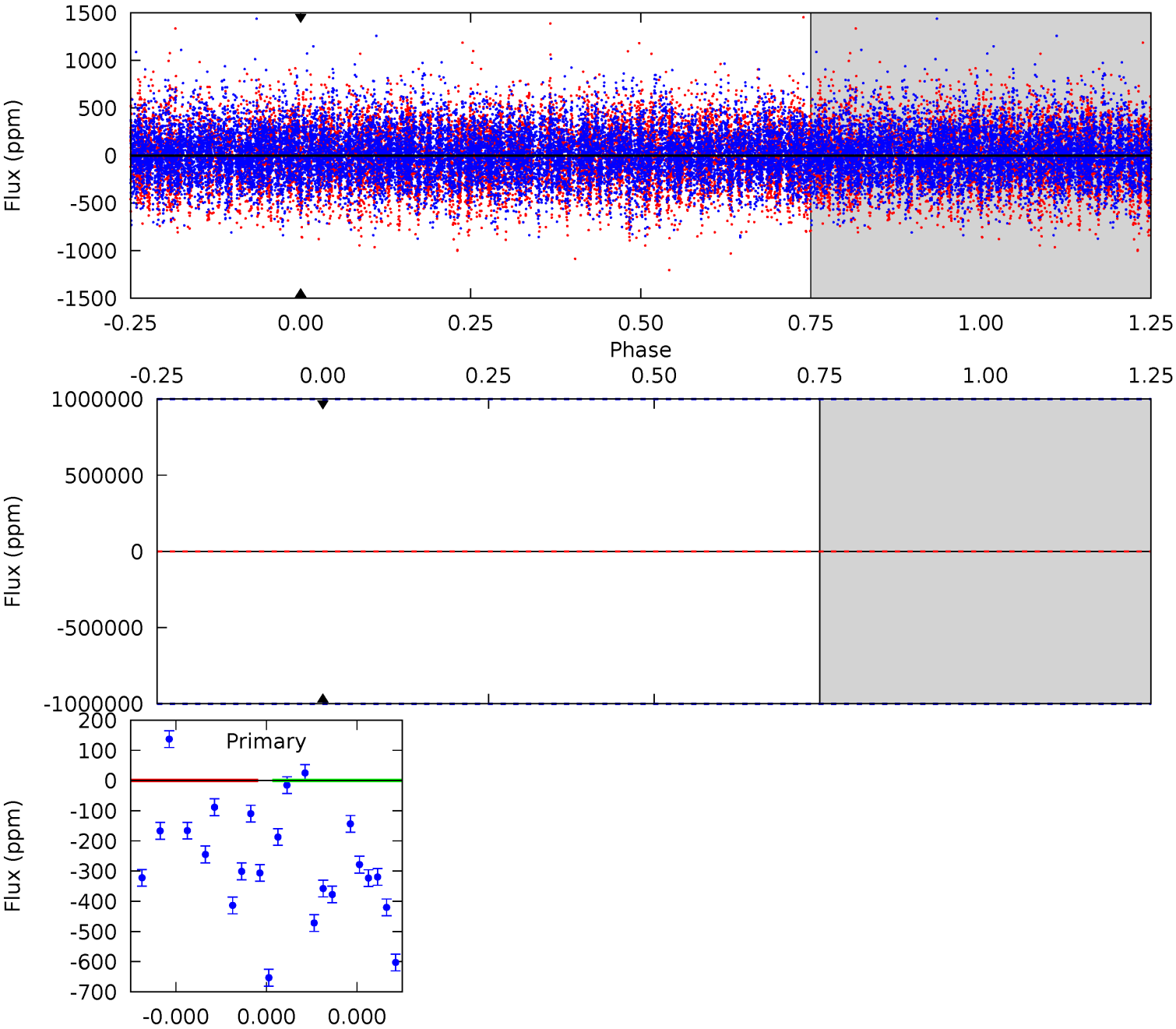
TCE 010360907-07 $P = 87.813516$ Days $T_0 = 162.574325$ (BKJD)



DV Model-Shift Uniqueness Test

010360907-07, P = 87.813516 Days, E = 74.405713 Days

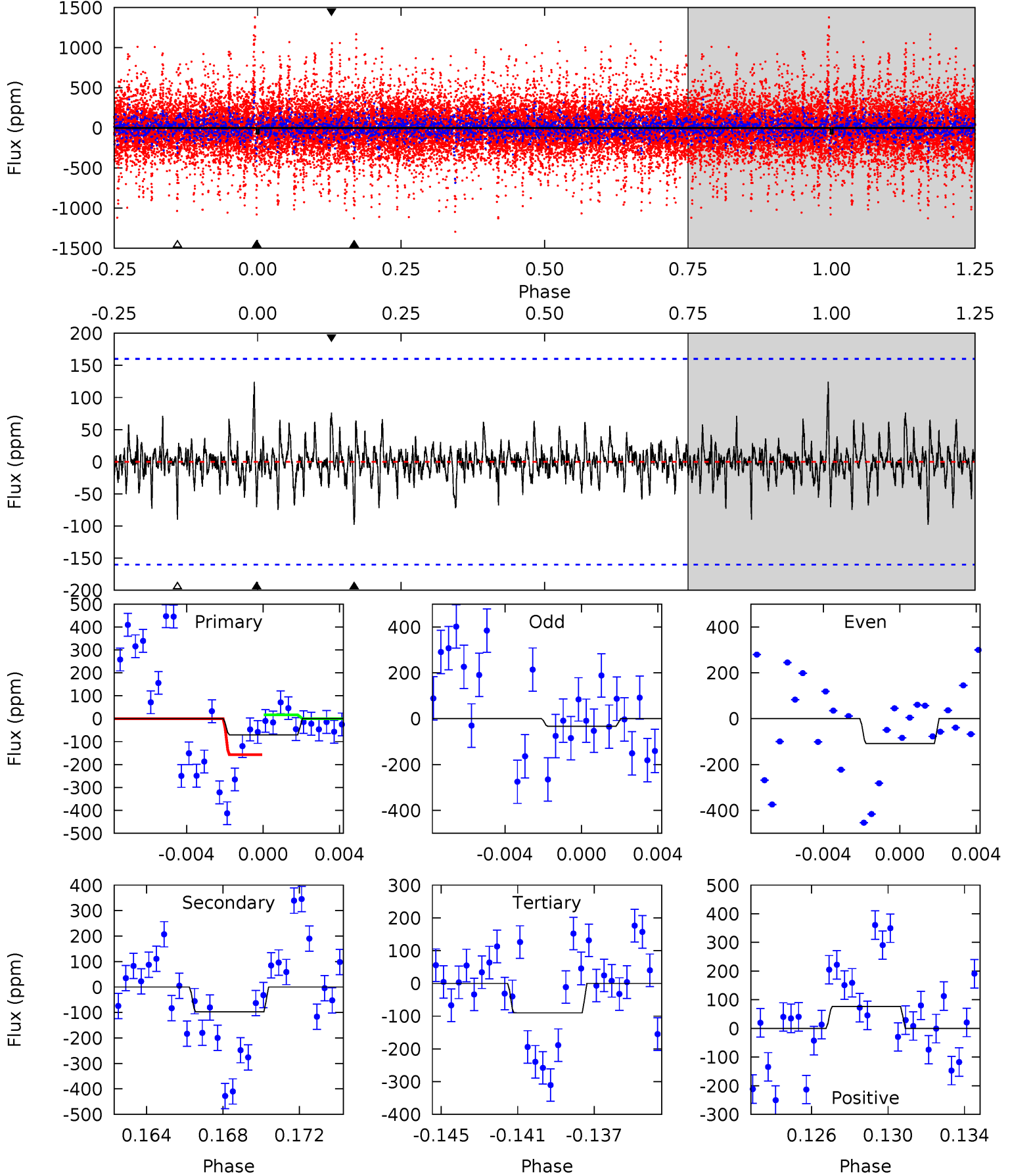
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010360907-07, P = 87.813516 Days, E = 74.760809 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.30	3.18	2.93	2.48	5.21	2.89	0.72	-0.63	-0.18	0.25	0.70	1.16	2.15	0.56	2.31



Stellar Parameters For KIC 010360907

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6425^{+175}_{-214}	$3.887^{+0.420}_{-0.140}$	$-0.280^{+0.250}_{-0.300}$	$2.107^{+0.499}_{-0.927}$	$1.248^{+0.193}_{-0.257}$	$0.188^{+0.718}_{-0.077}$
	+3%/-3%	+11%/-4%	+89%/-107%	+24%/-44%	+15%/-21%	+383%/-41%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010360907-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$15.20^{+17.13}_{-10.00}$	873^{+68}_{-94}	4532^{+27960}_{-29268}	437^{+94541}_{-62565}
Alt.	-98 ± 31	$14.37^{+16.46}_{-9.87}$	869^{+72}_{-95}	3036^{+1473}_{-551}	42^{+365}_{-33}

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 $A_{obs} \gg 1.0$

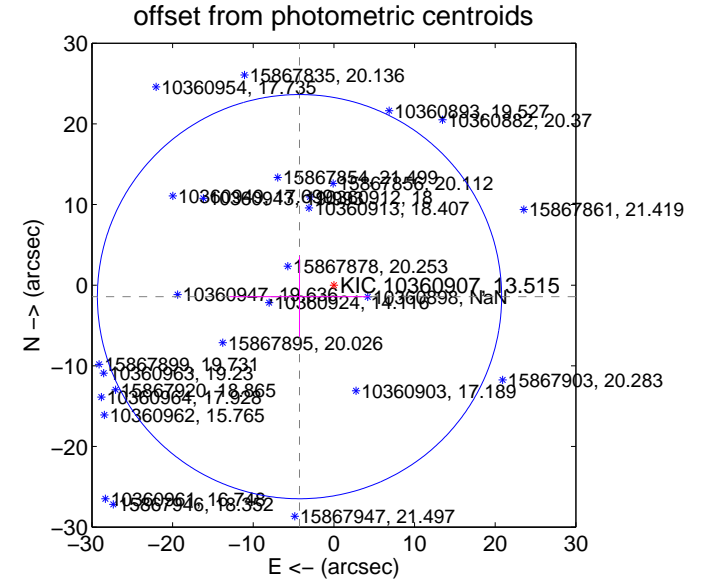
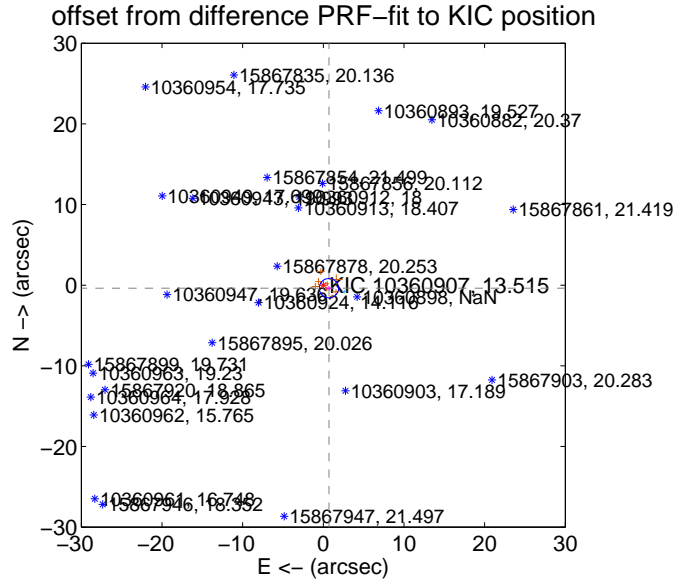
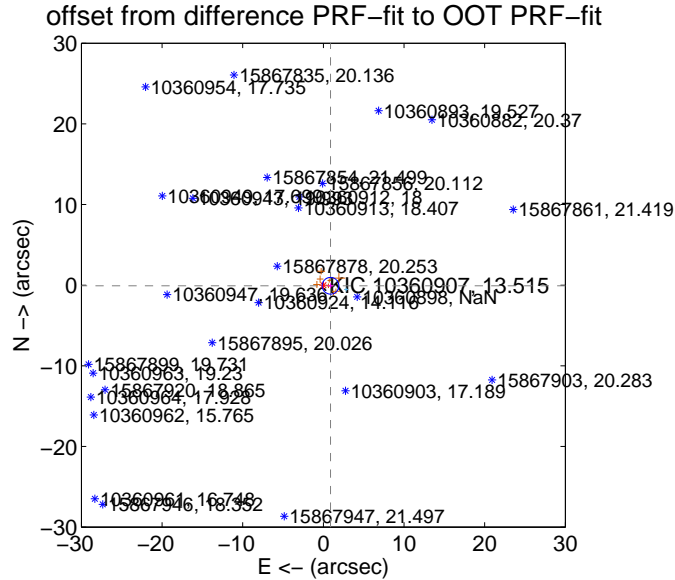
DV Centroid Data

Supplemental centroid analysis for 010360907-07. Kepler magnitude: 13.52. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

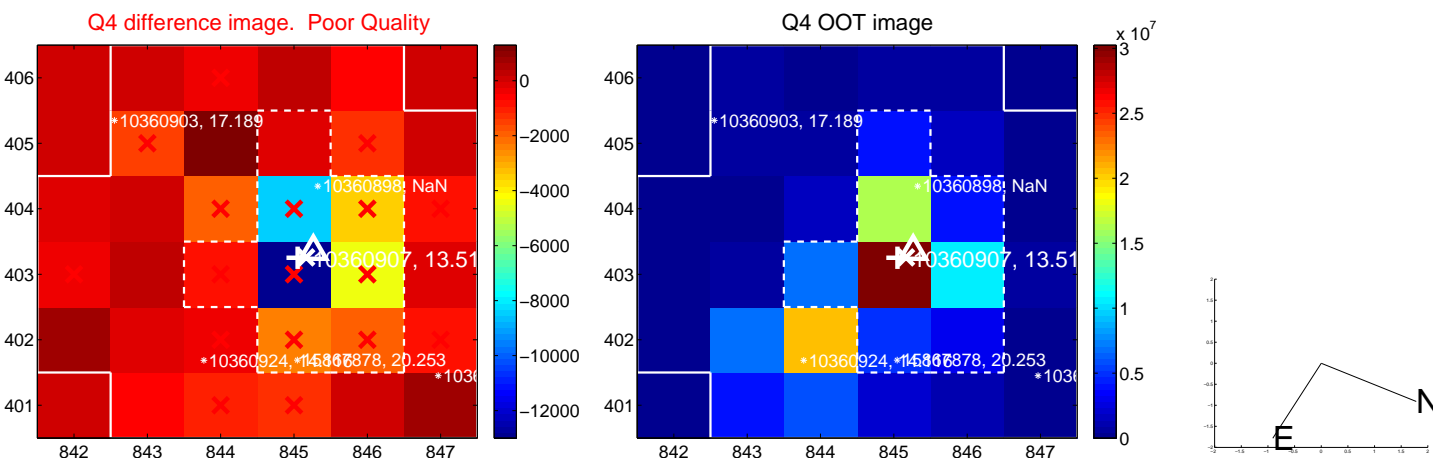
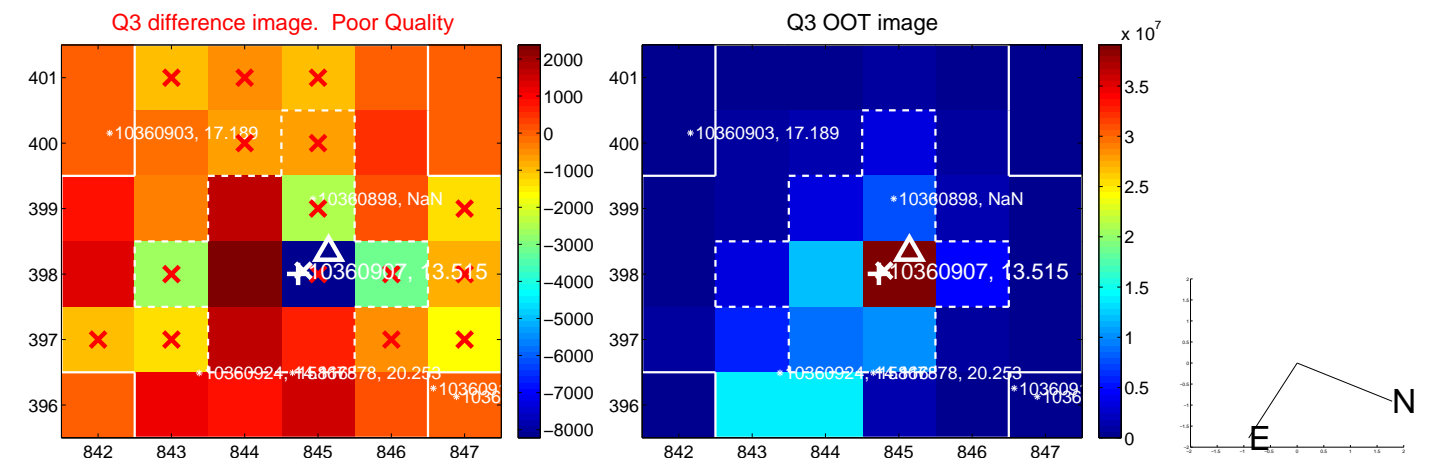
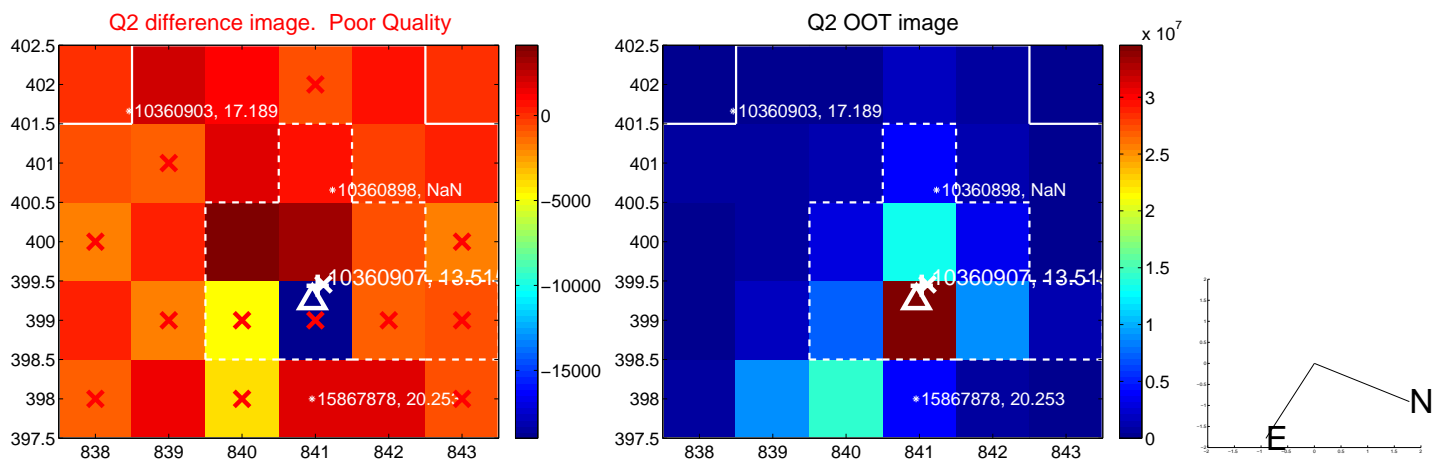
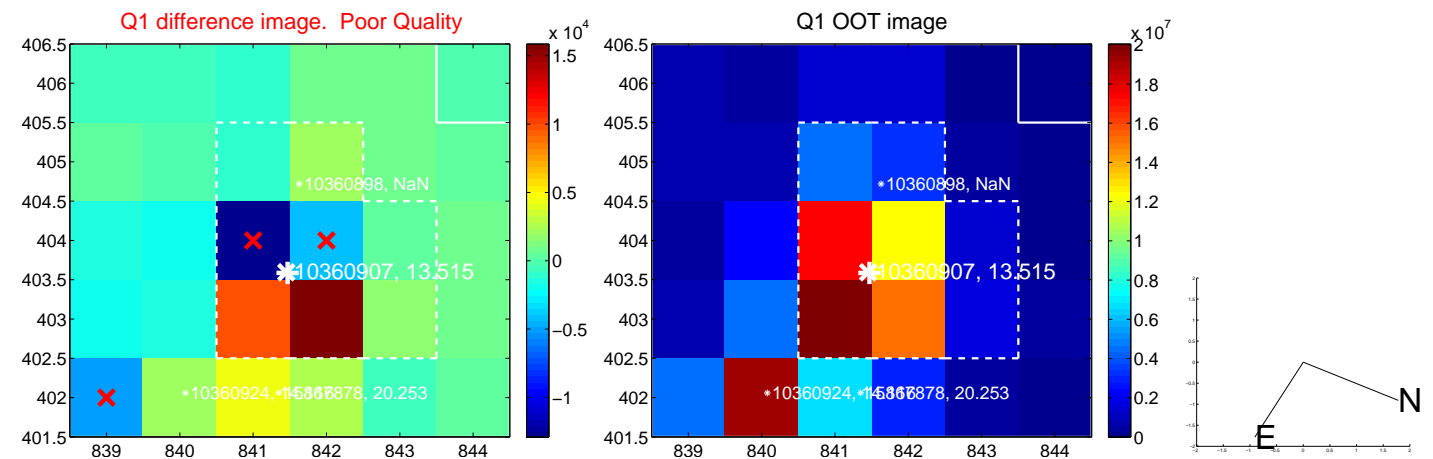
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.888 ± 0.345	2.57	-0.885 ± 0.346	-0.076 ± 0.308
PRF-fit source offset from KIC position	0.791 ± 0.399	1.98	-0.698 ± 0.374	-0.371 ± 0.268
photometric centroid source offset	4.49 ± 8.35	0.54	4.26 ± 8.65	-1.42 ± 4.99

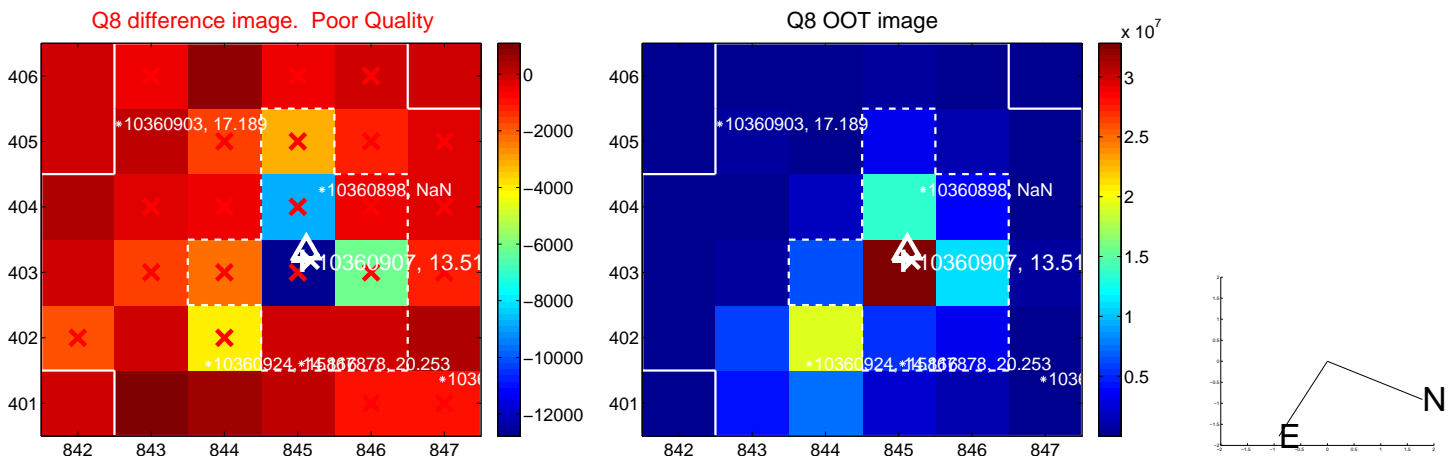
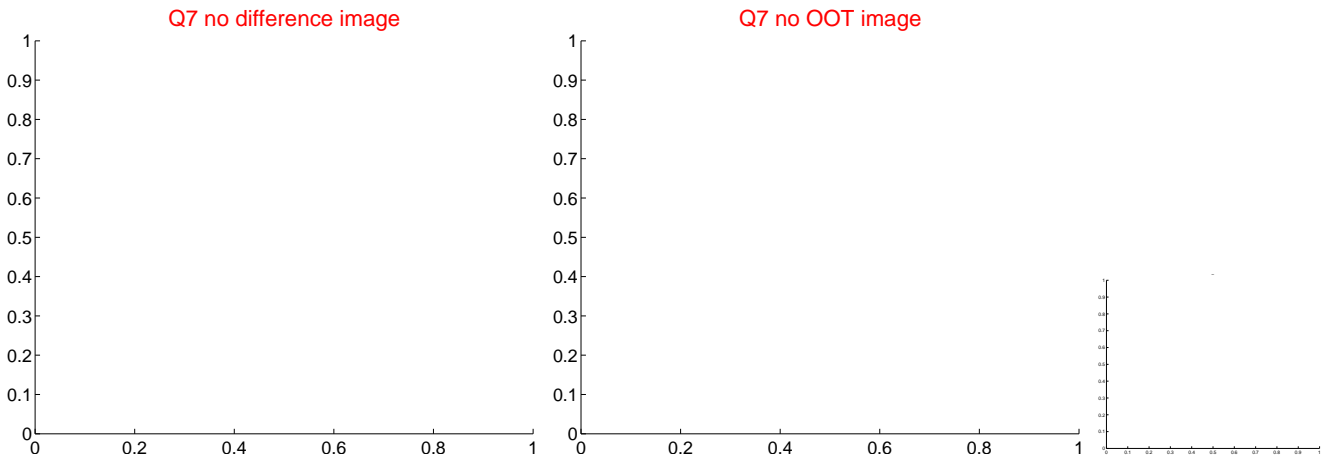
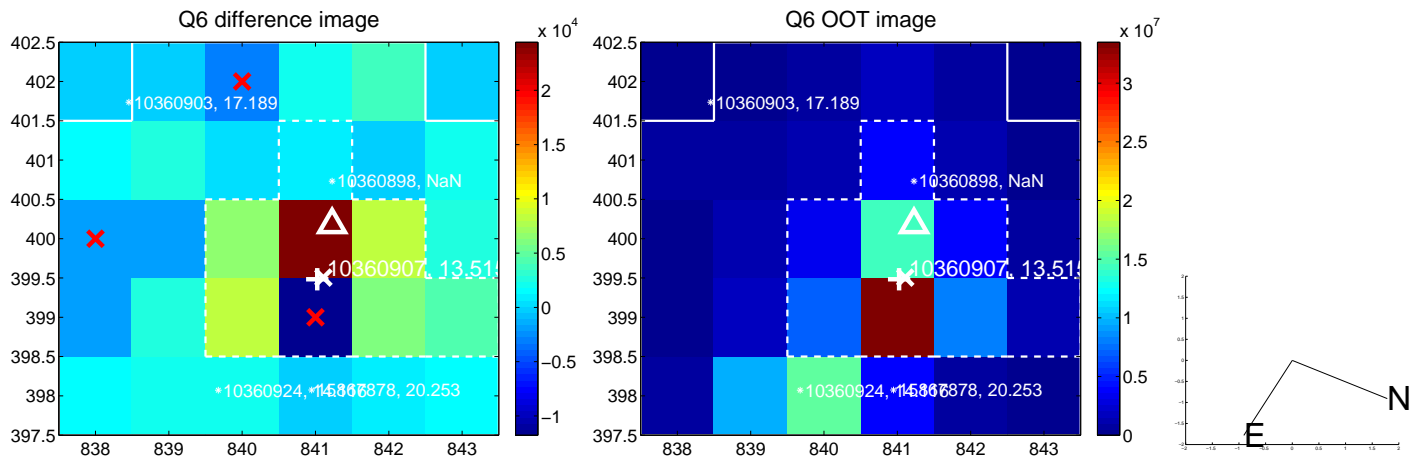
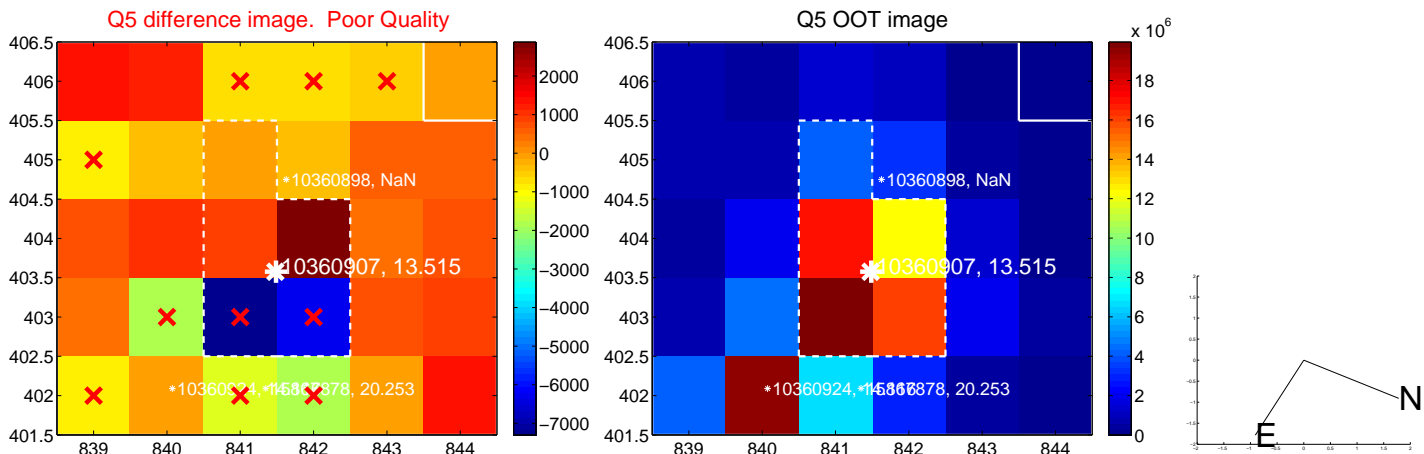


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

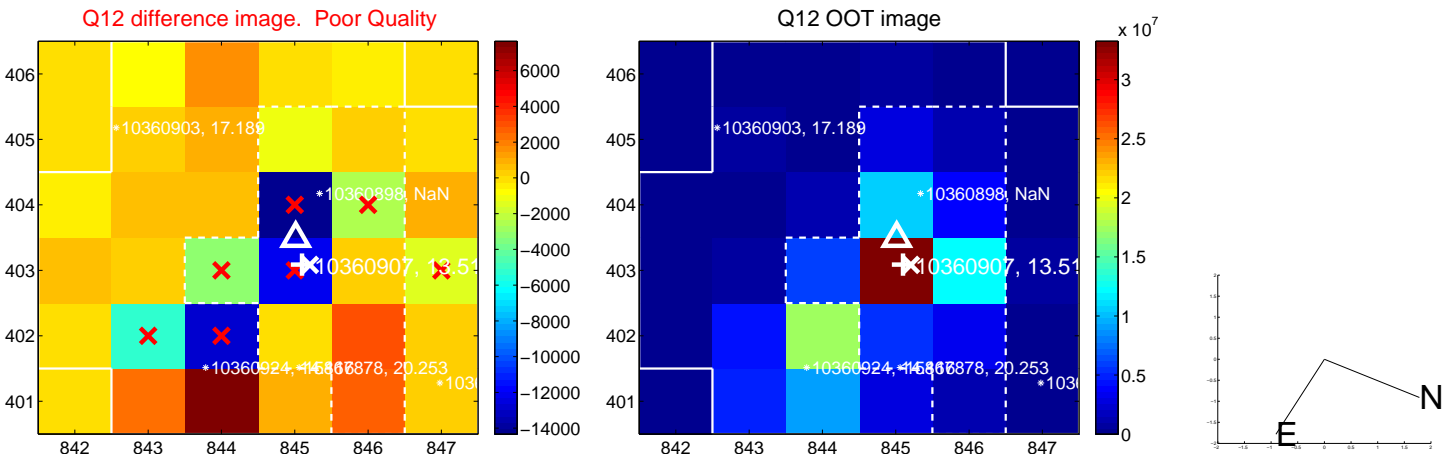
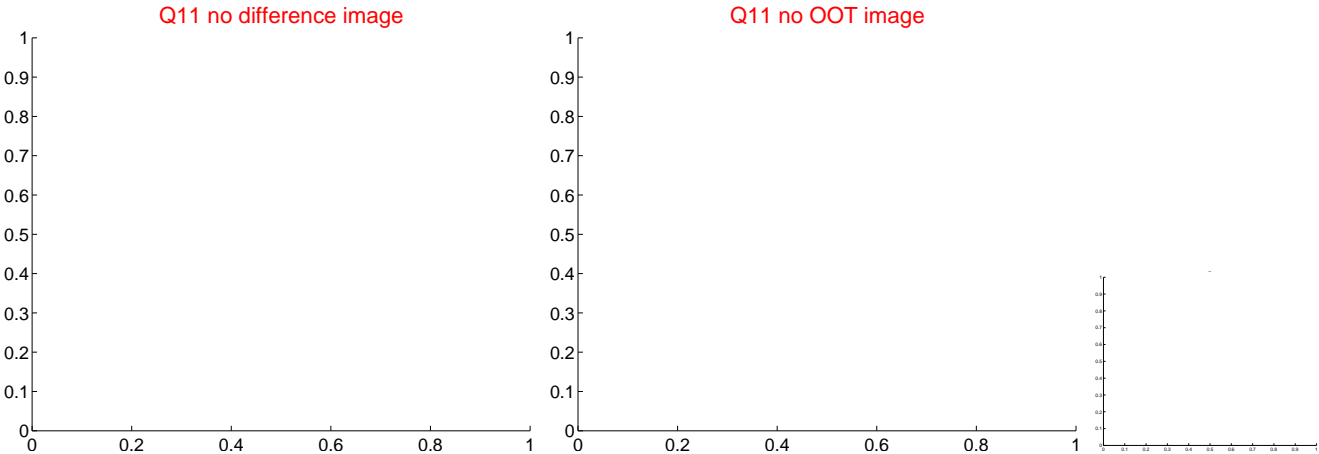
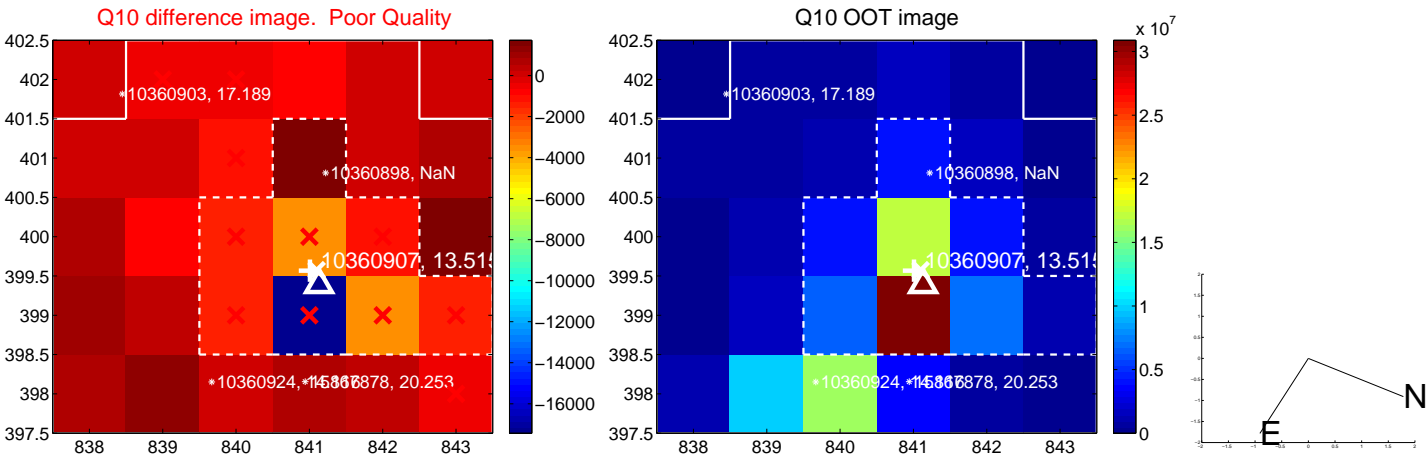
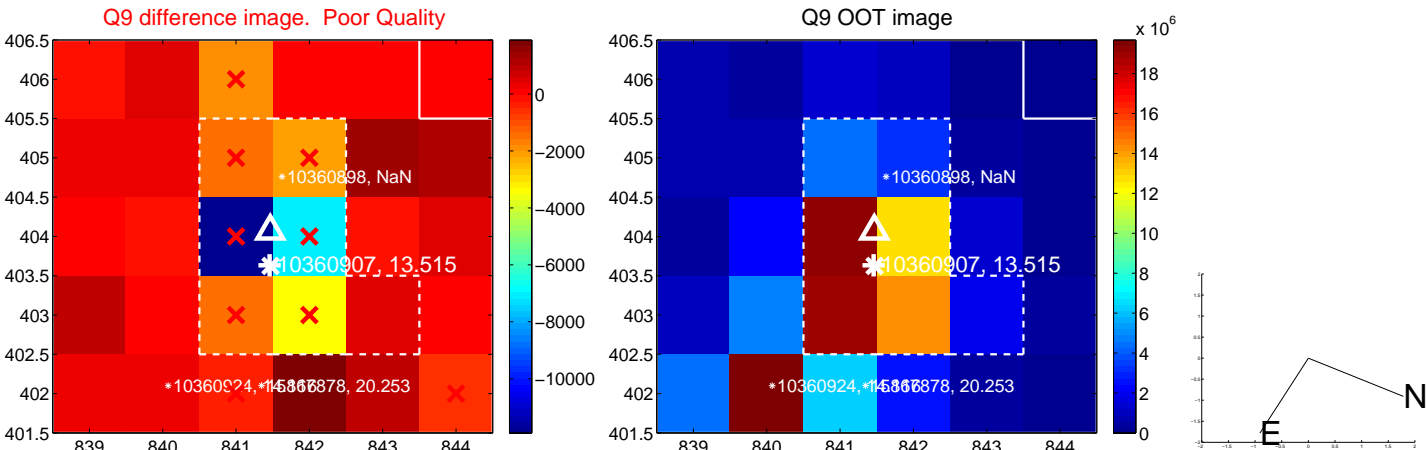
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



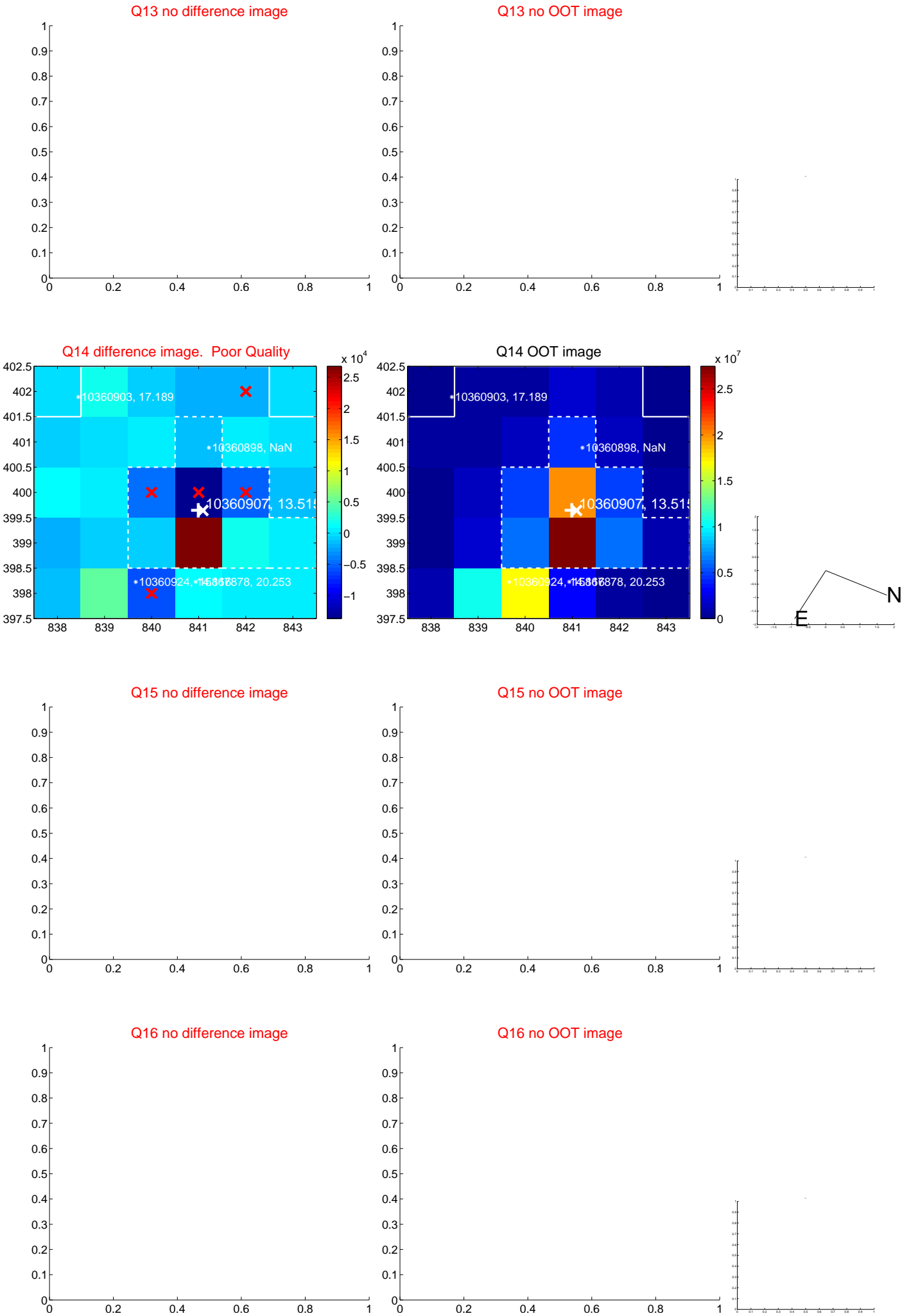
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



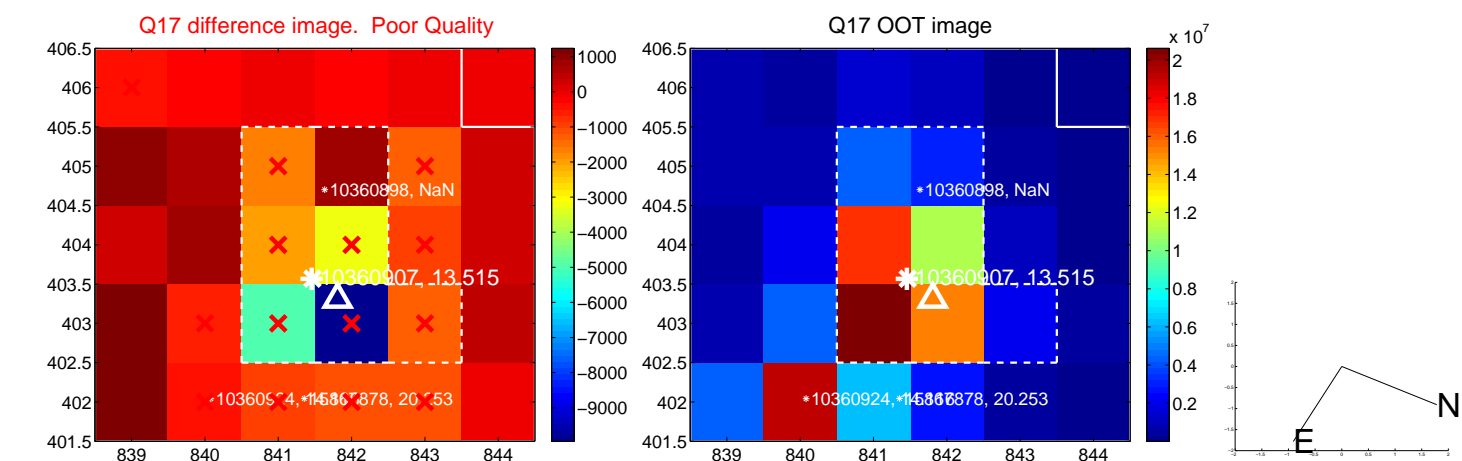
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



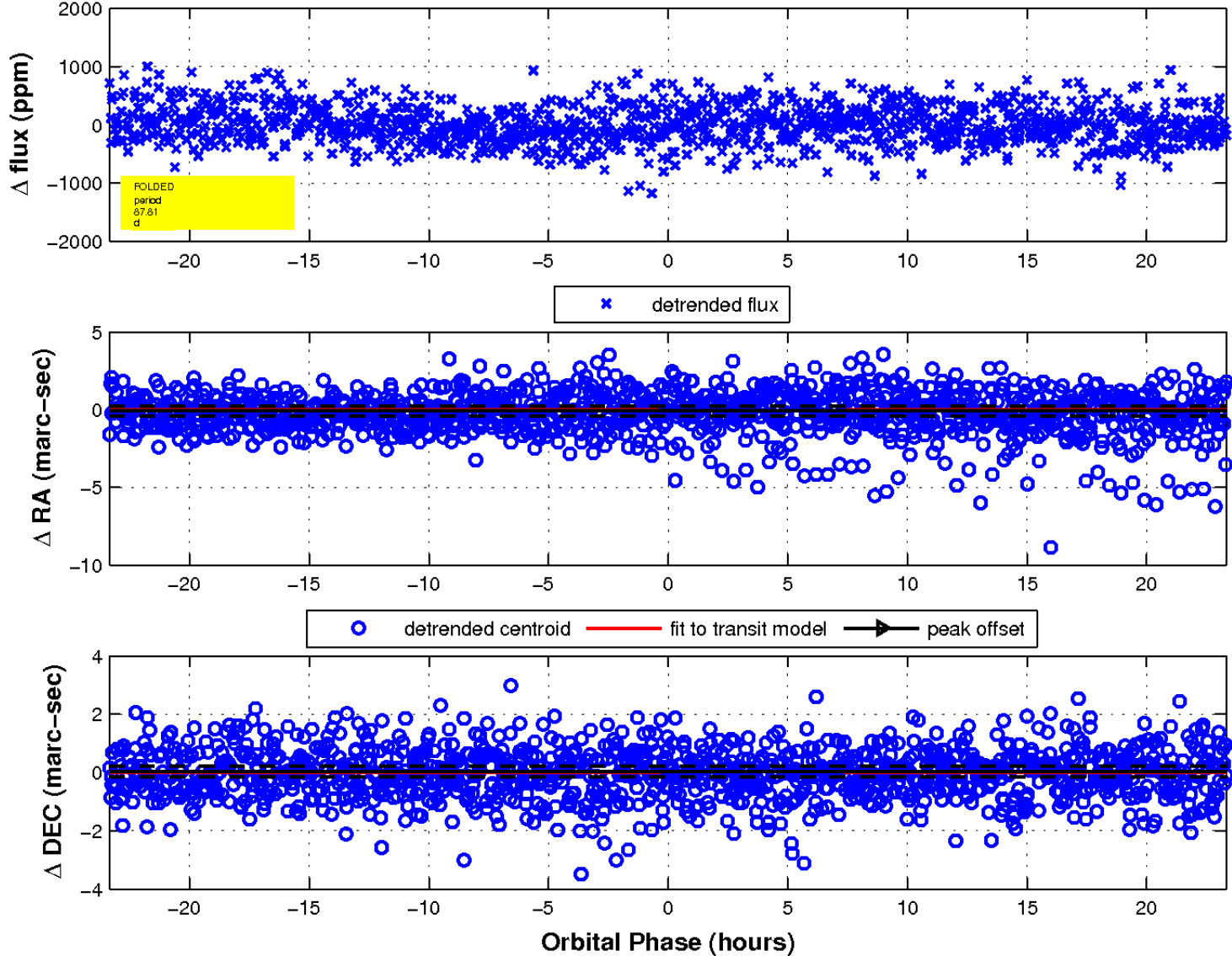
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 7 of 7



UKIRT Image

