

KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

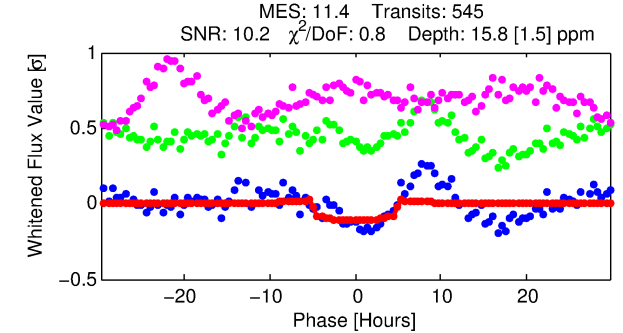
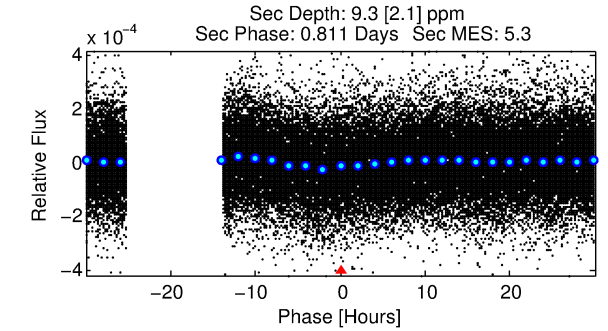
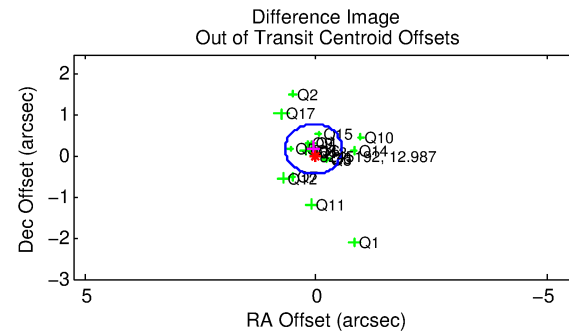
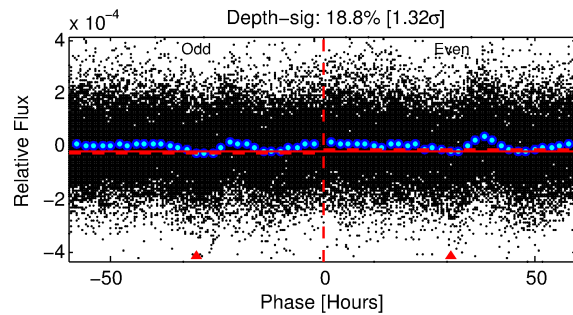
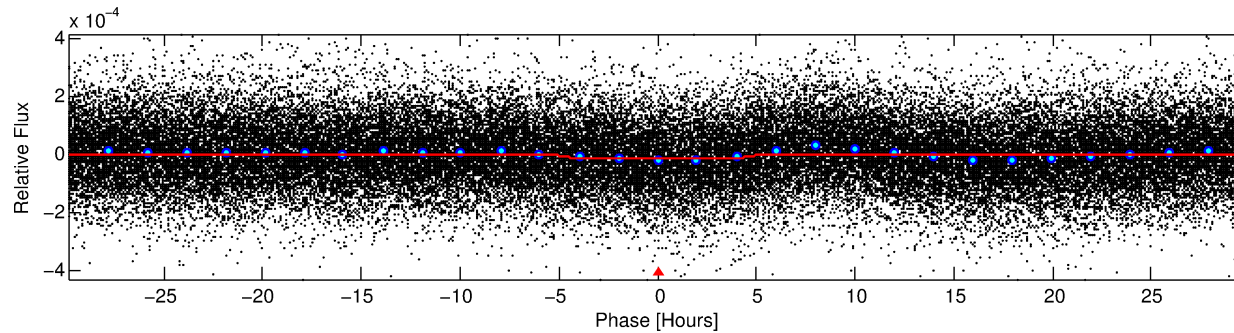
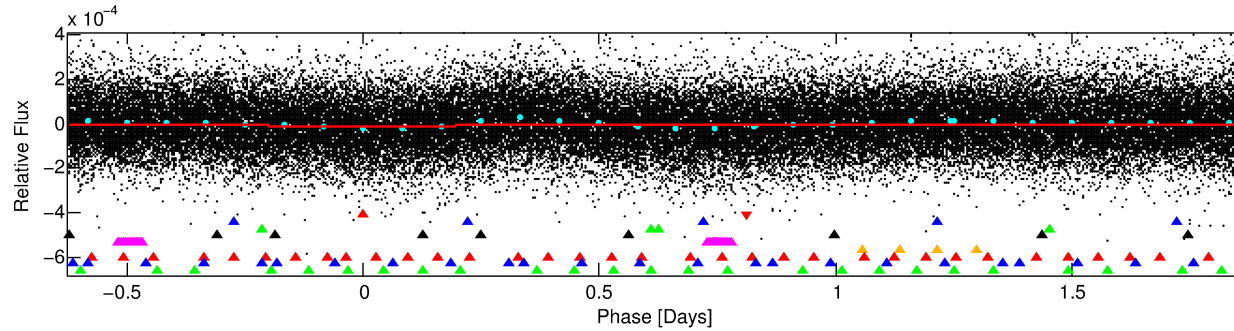
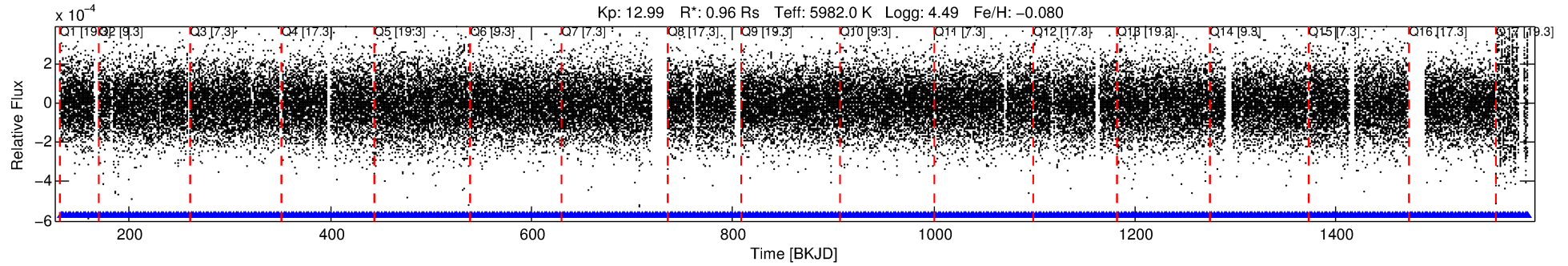
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-01

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 1 of 9 Period: 2.494 d



DV Fit Results:

Period = 2.49402 [0.00003] d
Epoch = 131.9869 [0.0082] BKJD
Rp/R* = 0.0037 [0.0019]
a/R* = 1.86 [3.27]
b = 0.44 [4.52]
Seff = 796.75 [240.81]
Teq = 1355 [102] K
Rp = 0.39 [0.22] Re
a = 0.0364 [0.0067] AU
Ag = 44.83 [49.56] [0.88 σ]
Teffp = 5420 [1463] K [2.77 σ]

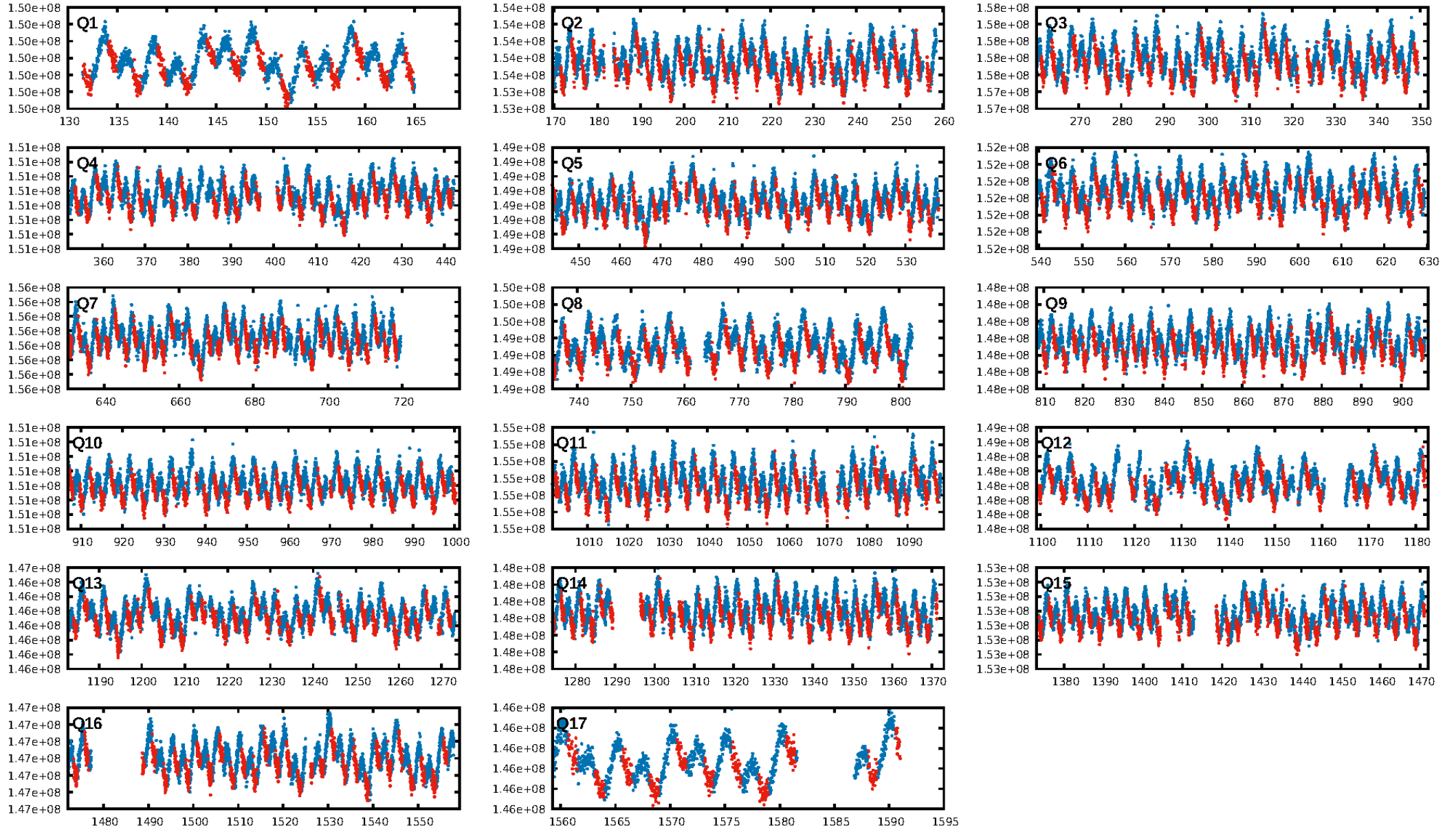
DV Diagnostic Results:

ShortPeriod-sig: 98.3% [2.38 σ]
LongPeriod-sig: 100.0% [92.10 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.05e-33
RollingBand-fgt: 1.00 [520/520]
GhostDiagnostic-chr: 0.6808
Centroid-sig: 3.8%
Centroid-so: 1.376 arcsec [1.46 σ]
OotOffset-rm: 0.190 arcsec [0.93 σ]
KicOffset-rm: 0.189 arcsec [0.84 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

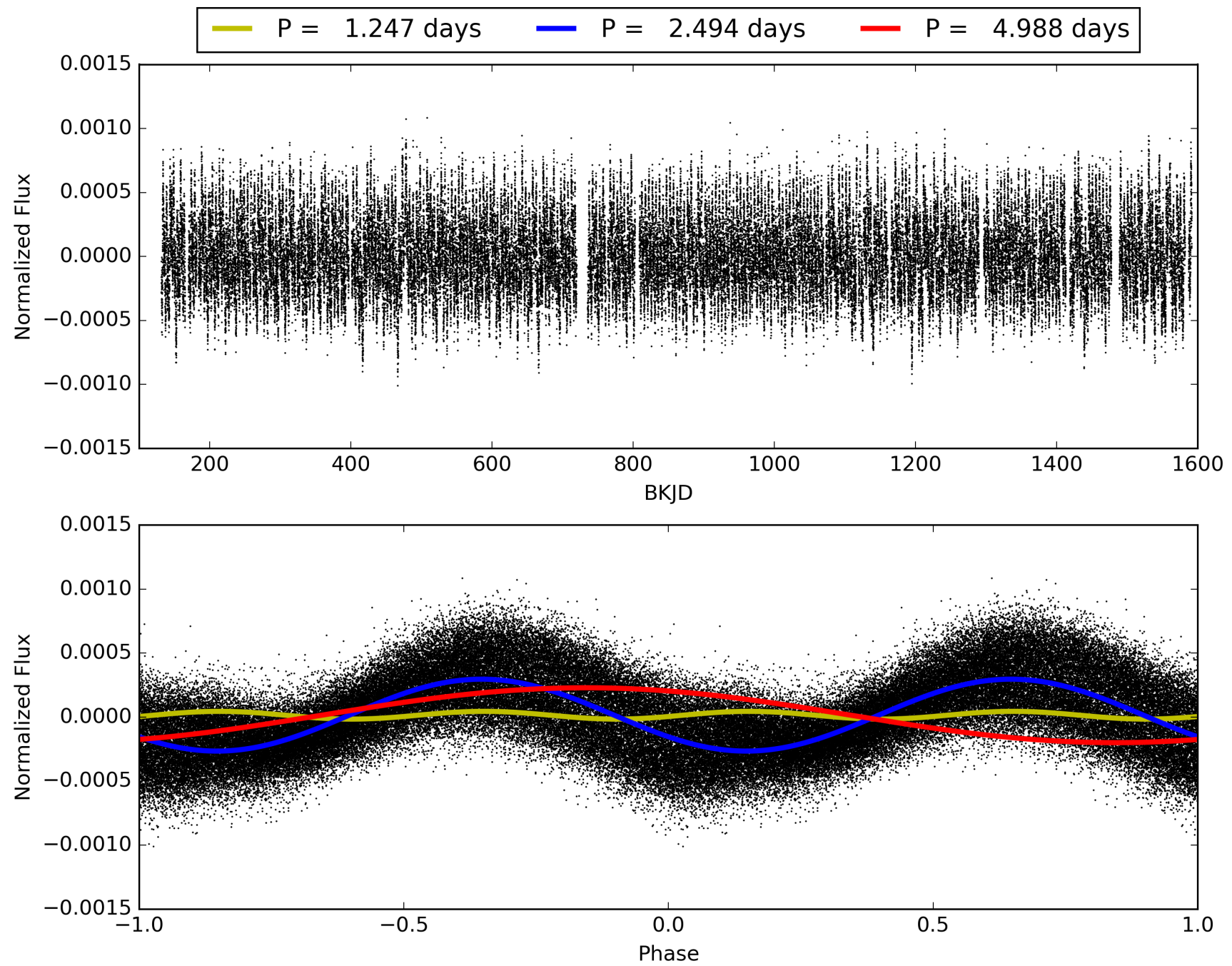
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:19 Z

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

TCE 008245192-01, PDC Light Curves

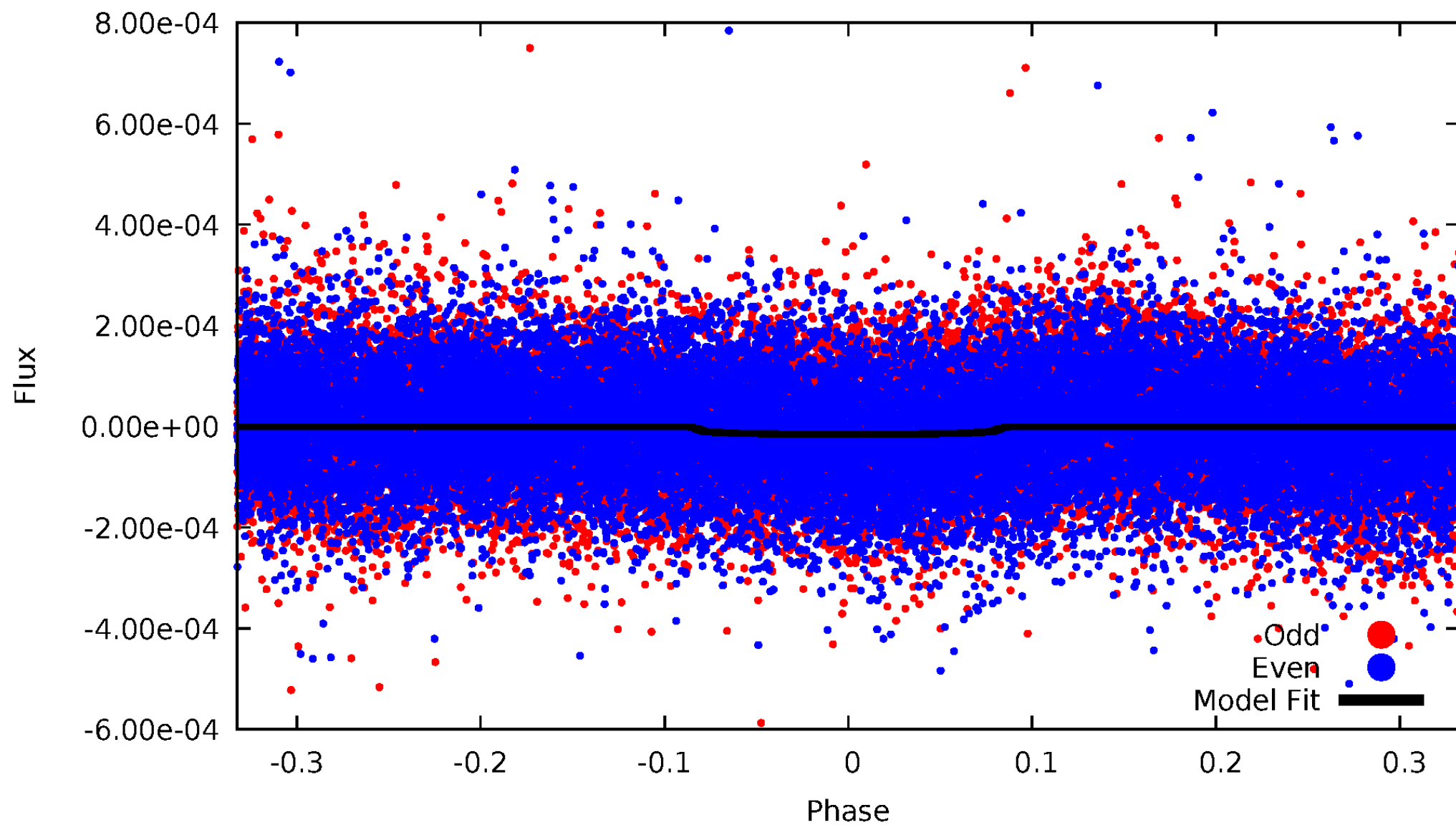


TCE 008245192-01



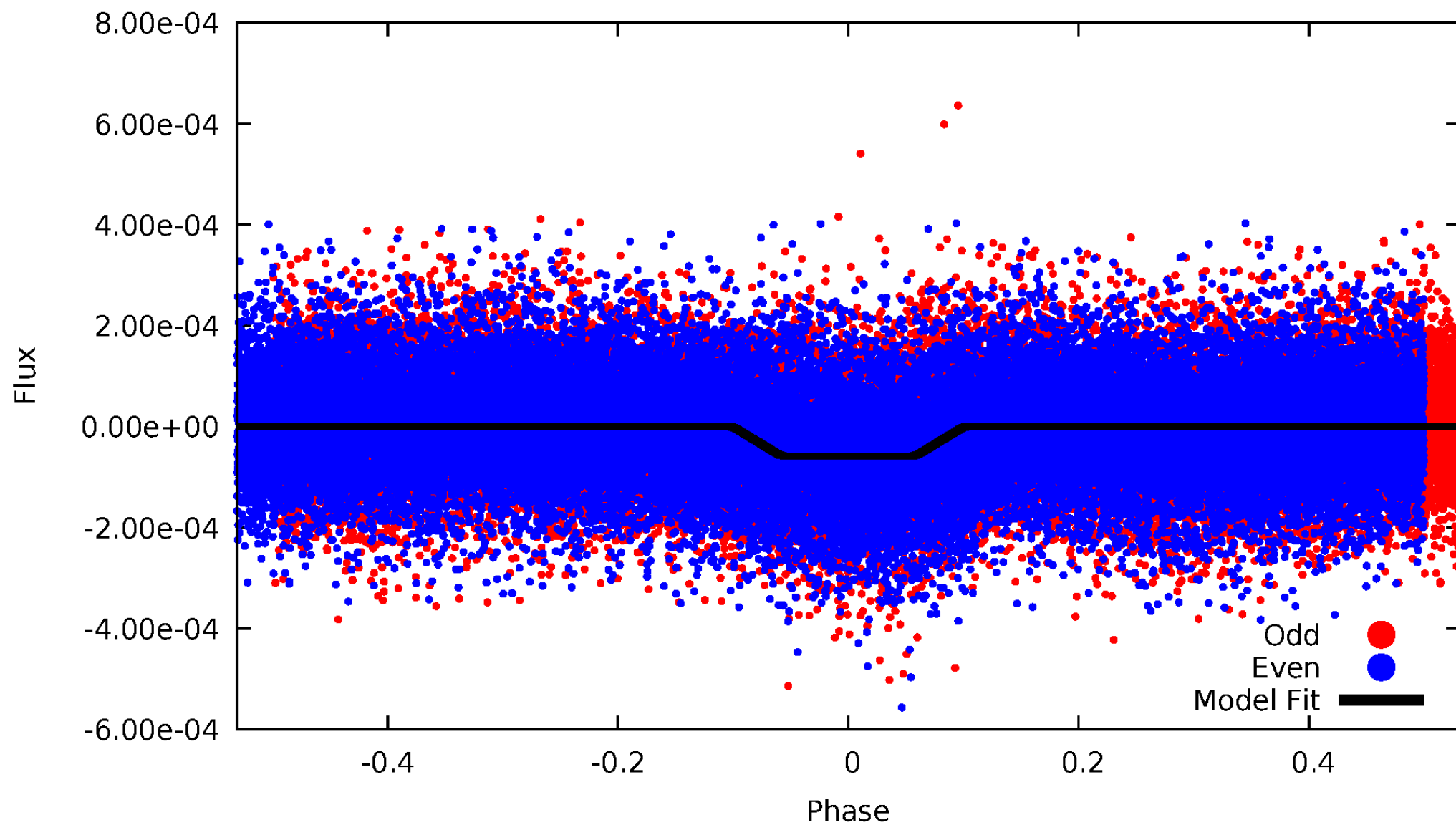
DV Odd/Even

TCE 008245192-01



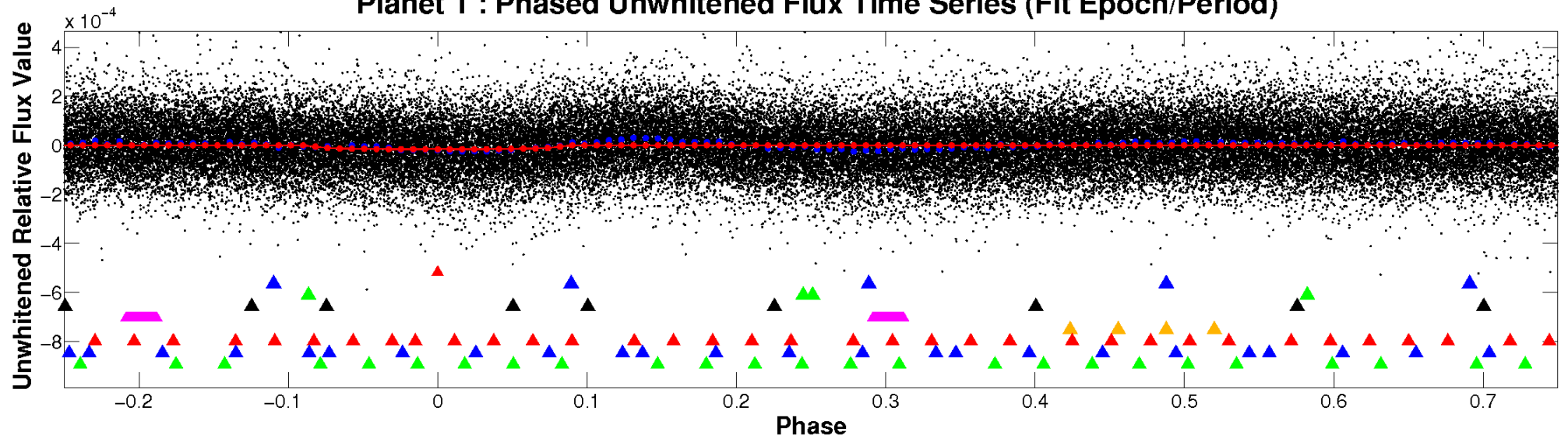
ALT Odd/Even

TCE 008245192-01

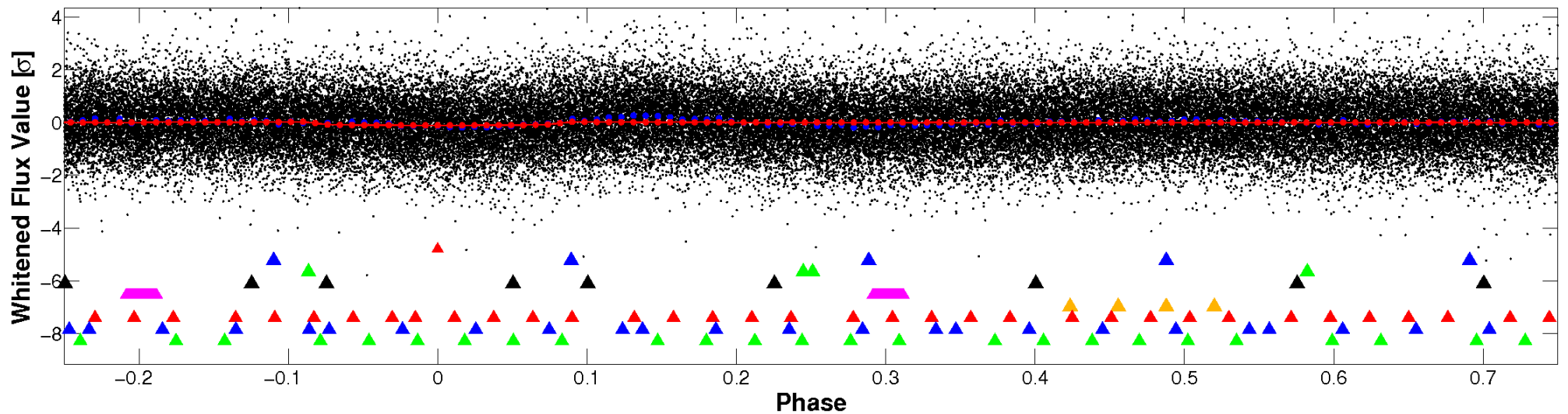


Non-Whitened Vs. Whitened Light Curve

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

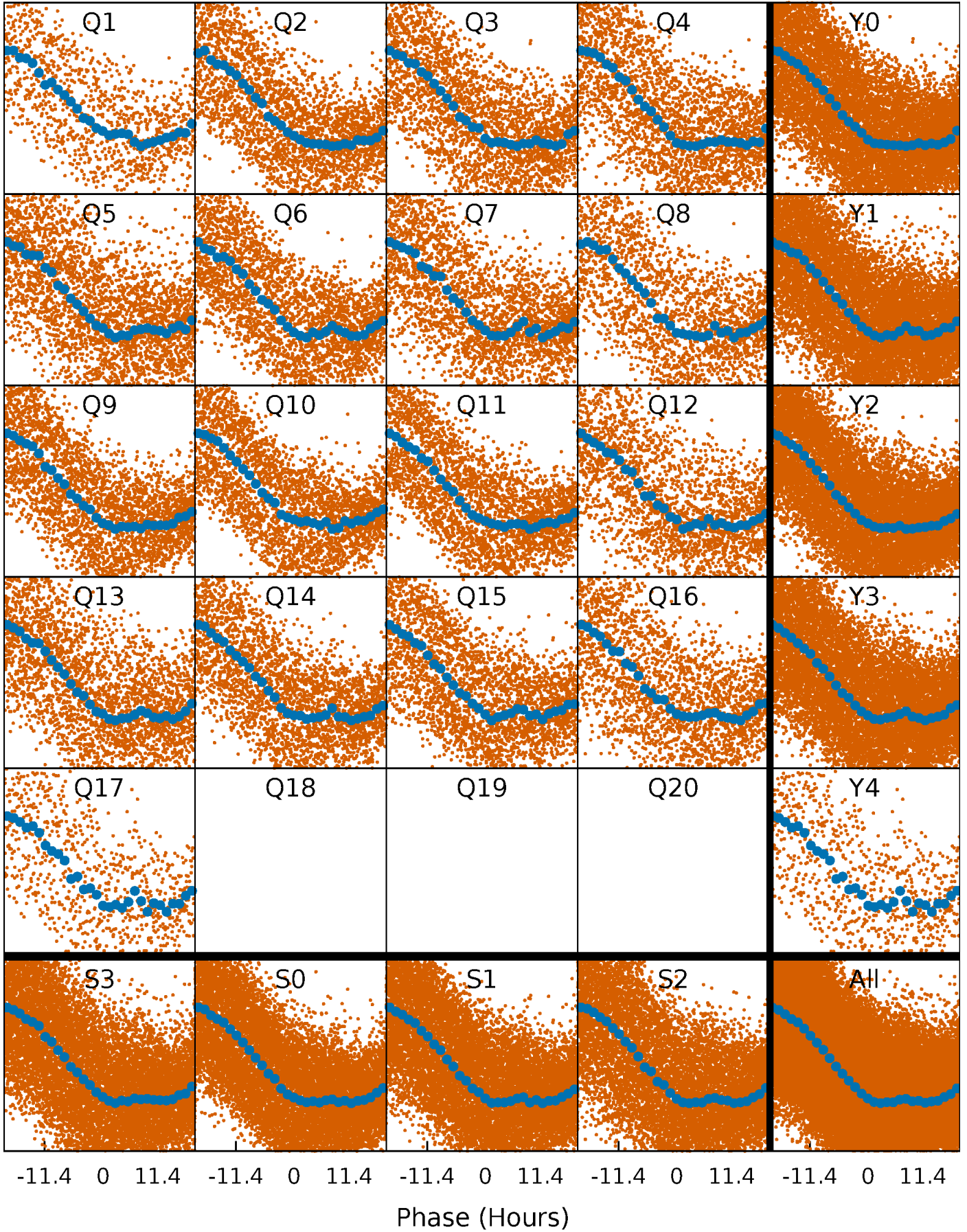


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



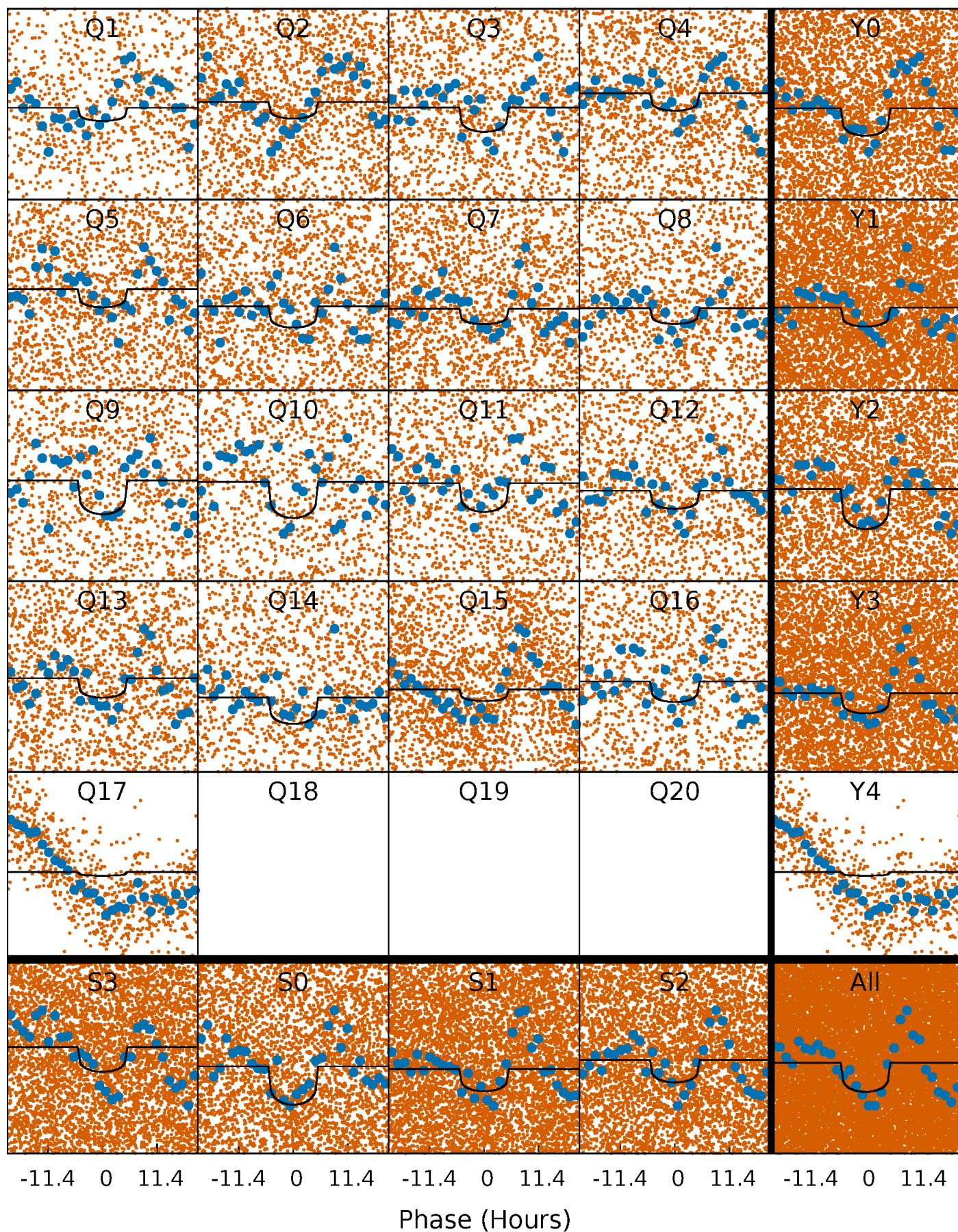
PDC Quarter-Phased Transit Curves

TCE 008245192-01 P= 2.494021 Days $T_0=131.986941$ (BKJD)



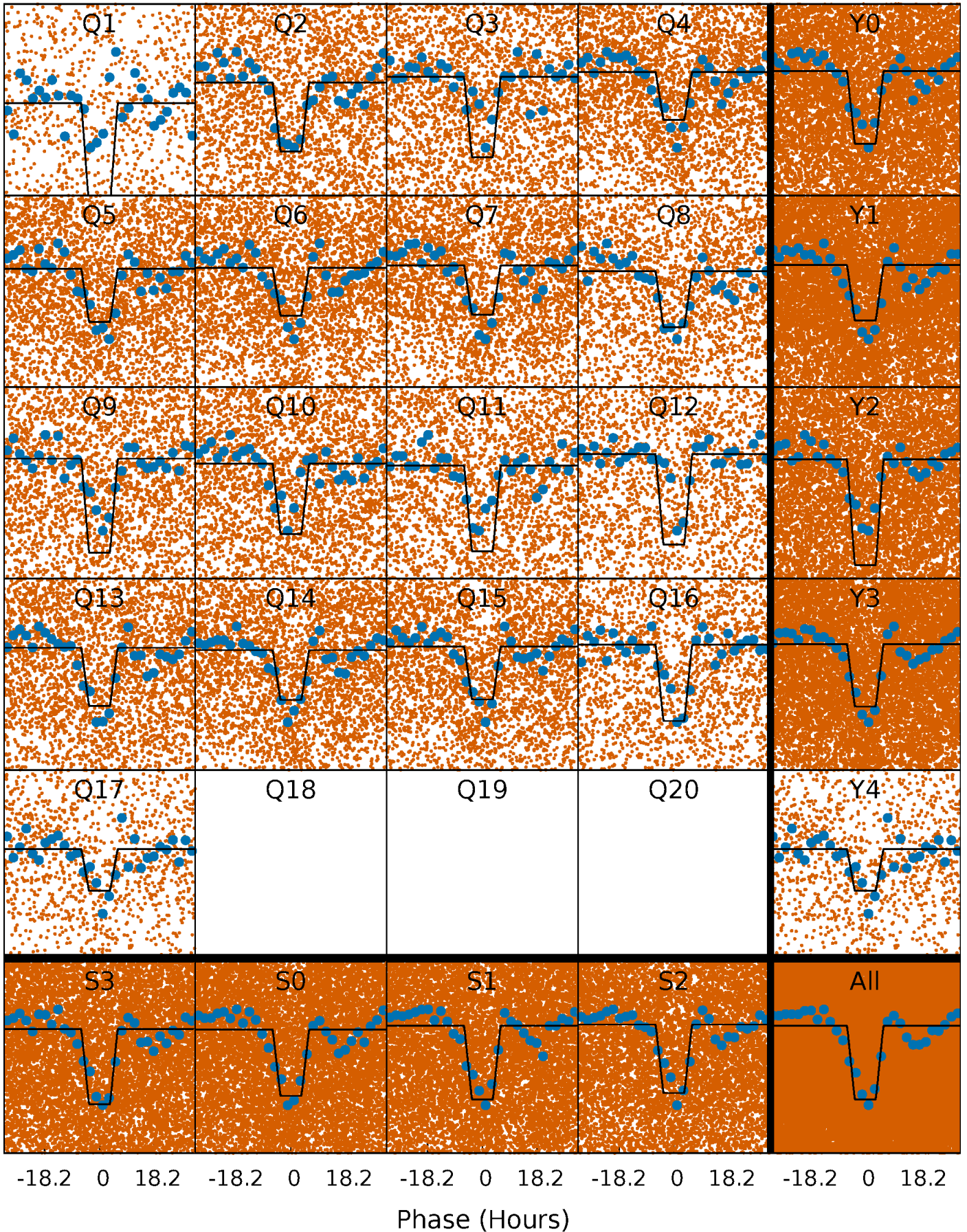
DV Quarter-Phased Transit Curves

TCE 008245192-01 P= 2.494021 Days $T_0=131.986941$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

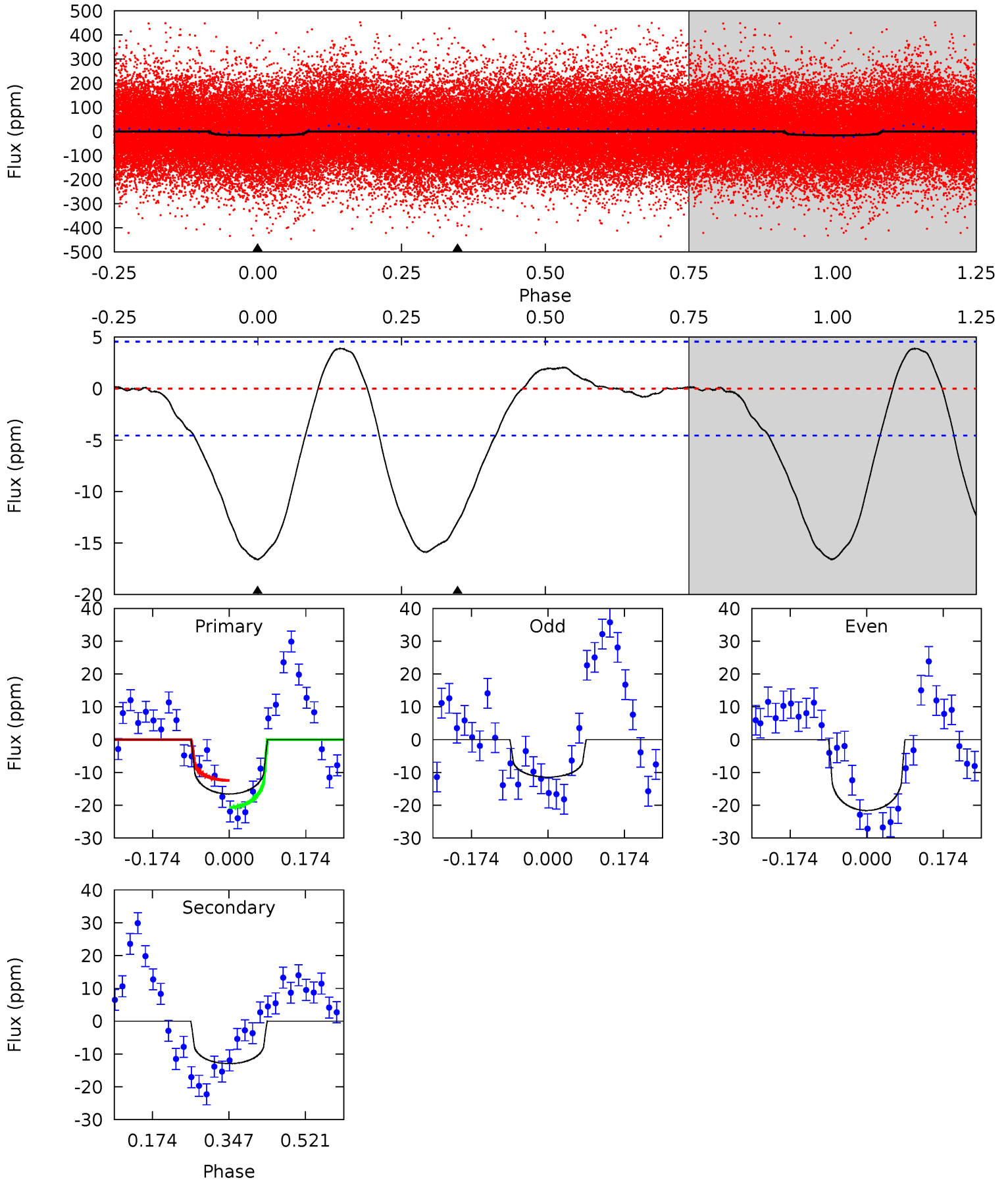
TCE 008245192-01 P= 2.493995 Days $T_0=131.999372$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-01, P = 2.494021 Days, E = 129.492920 Days

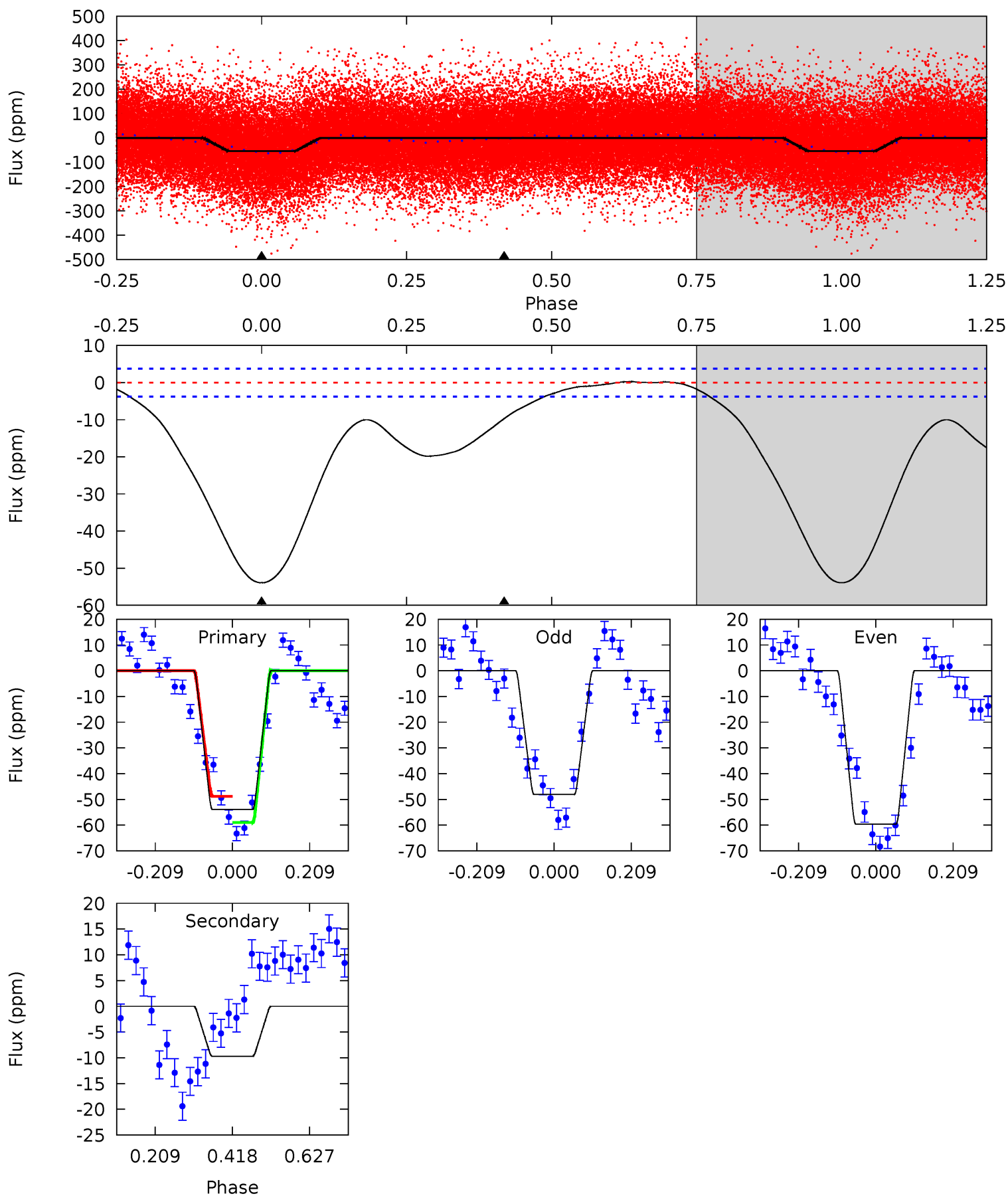
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	12.6	0	0	4.45	1.36	0.70	16.2	16.2	12.6	12.6	5.04	1.17	0.19	4.08



Alt Model-Shift Uniqueness Test

008245192-01, P = 2.493995 Days, E = 129.505377 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.9	11.3	0	0	4.41	1.26	2.06	62.9	62.9	11.3	11.3	6.70	1.03	0.00	5.97



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 1	$0.40^{+0.21}_{-0.18}$	1923^{+100}_{-85}	5867^{+2459}_{-1027}	57^{+146}_{-32}
Alt.	-10 ± 1	$0.83^{+0.21}_{-0.23}$	1924^{+97}_{-88}	4082^{+525}_{-347}	10^{+9}_{-4}

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 $A_{obs} \gg 1.0$

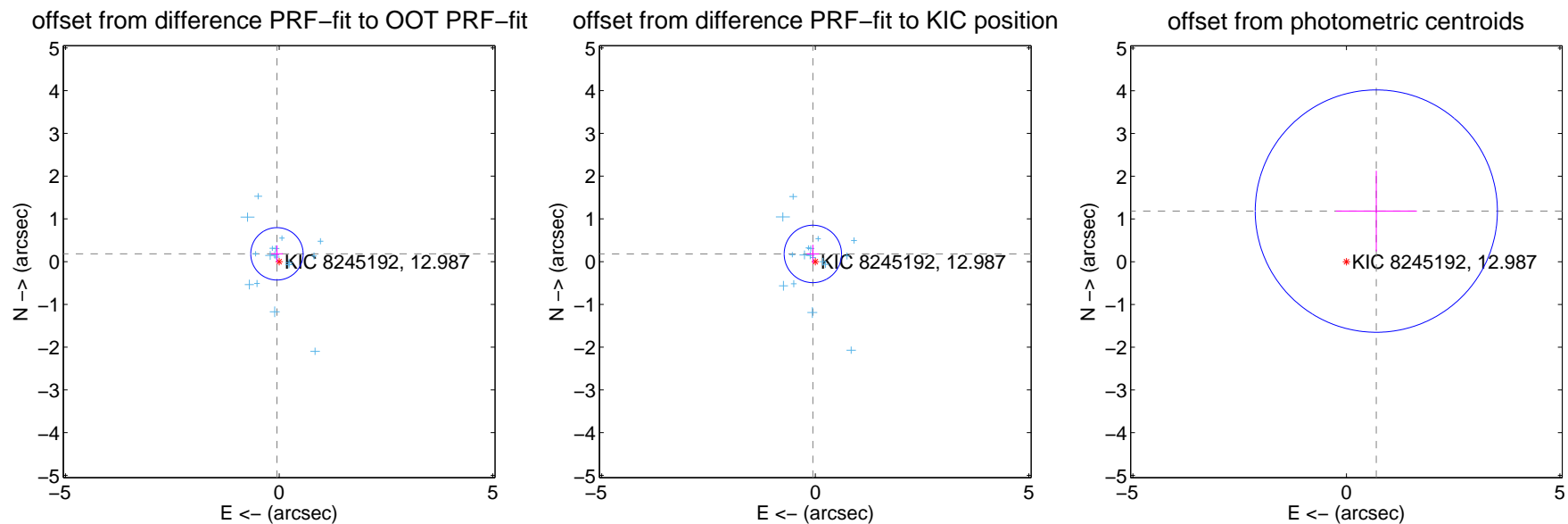
DV Centroid Data

Supplemental centroid analysis for 008245192-01. Kepler magnitude: 12.99. Transit SNR 10.17

There are 17 quarters with good PRF difference image offsets

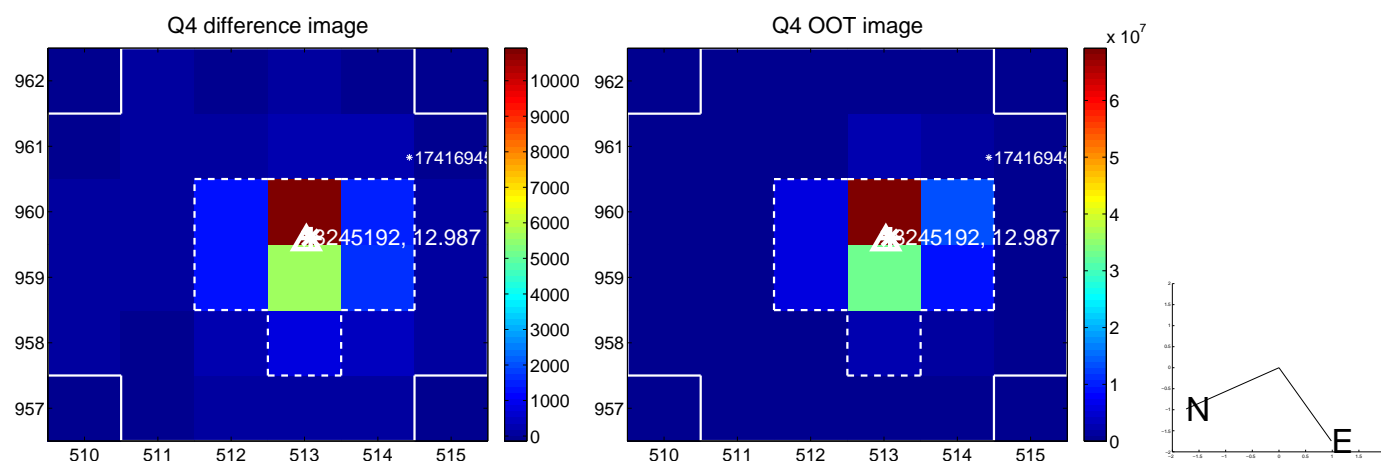
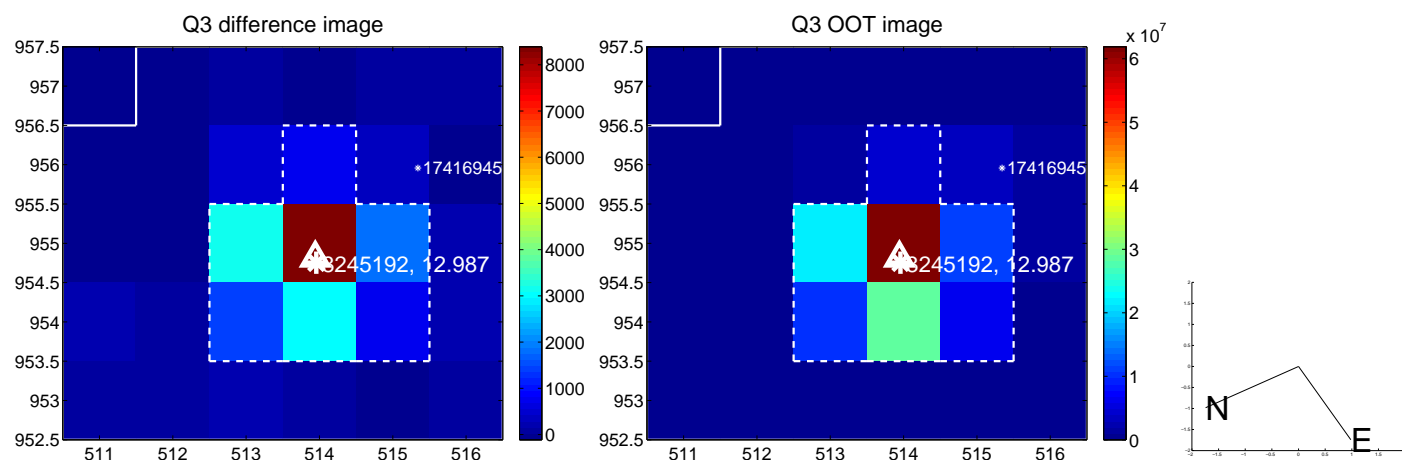
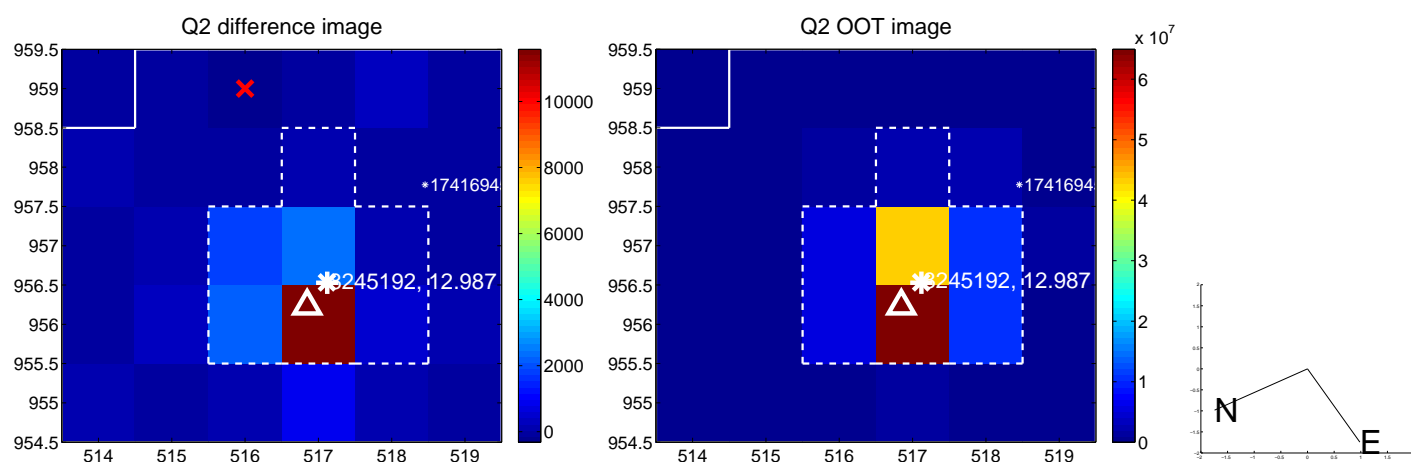
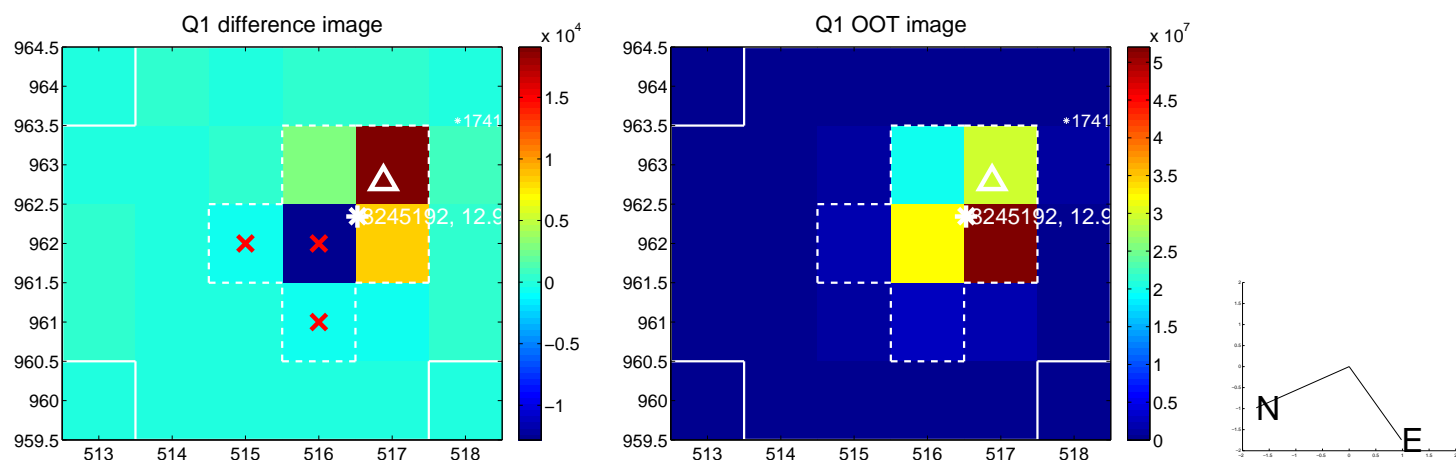
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.190 ± 0.204	0.93	0.052 ± 0.137	0.183 ± 0.198
PRF-fit source offset from KIC position	0.189 ± 0.224	0.84	0.057 ± 0.141	0.180 ± 0.215
photometric centroid source offset	1.38 ± 0.95	1.46	-0.70 ± 0.95	1.18 ± 0.94

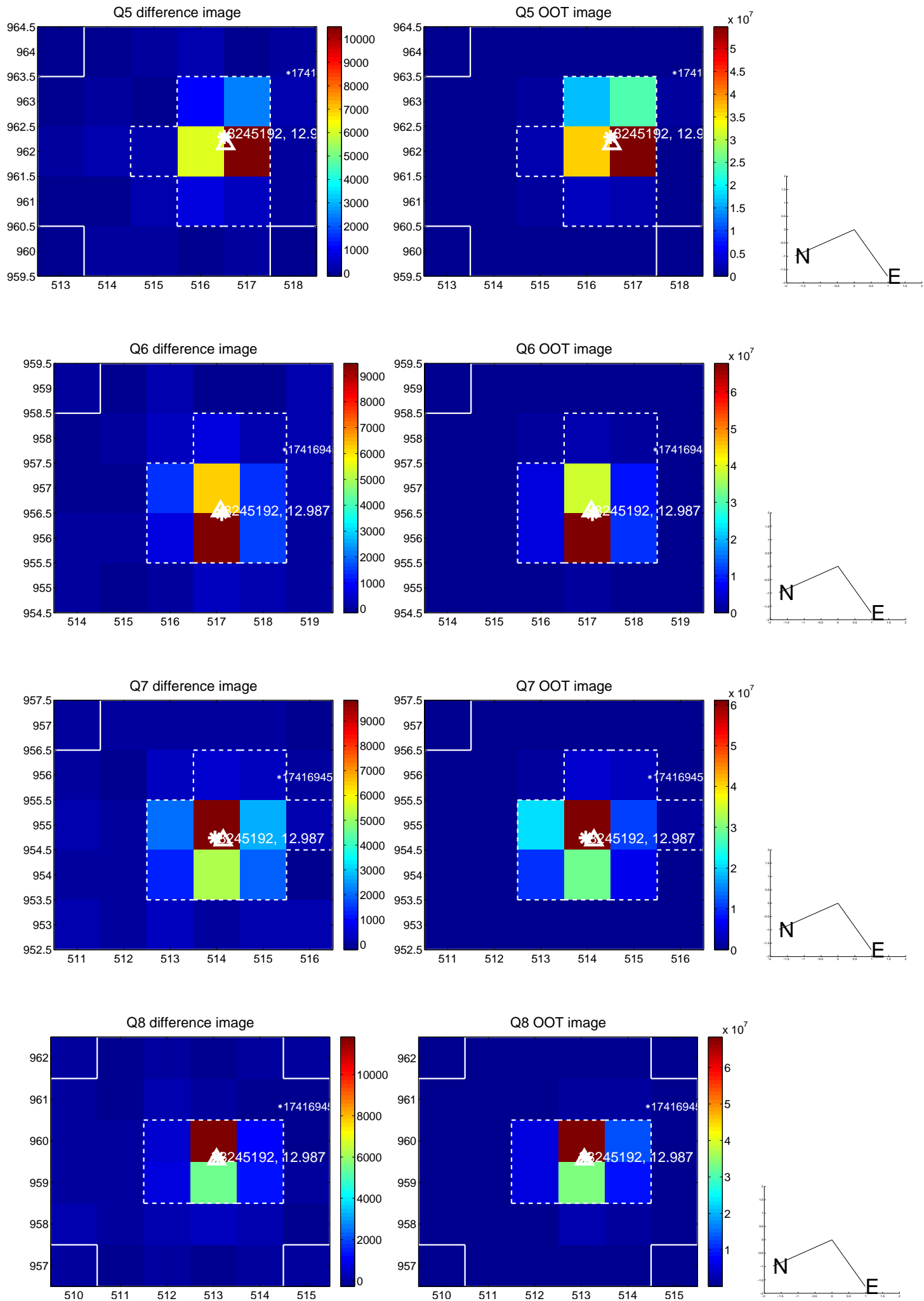


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

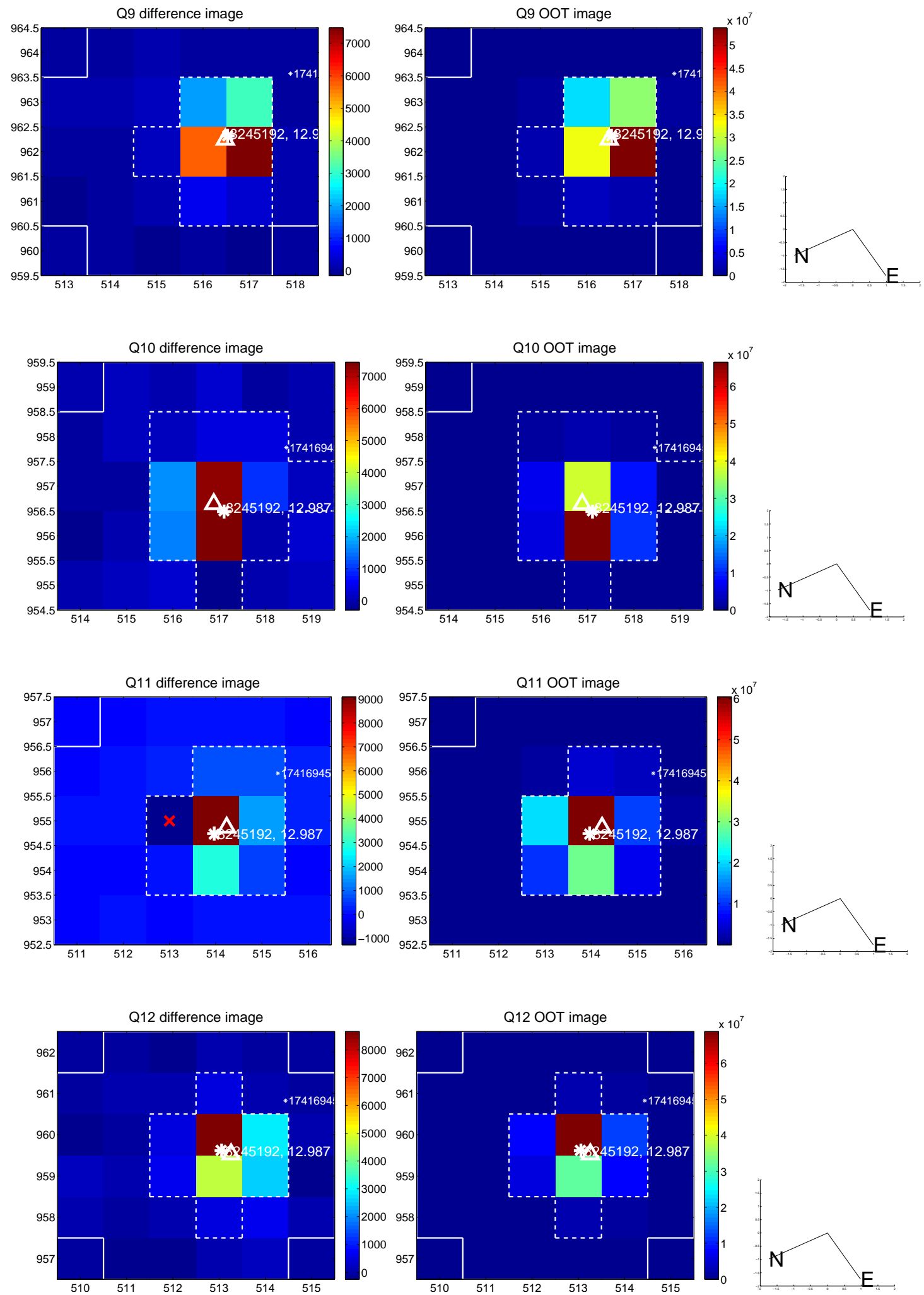
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



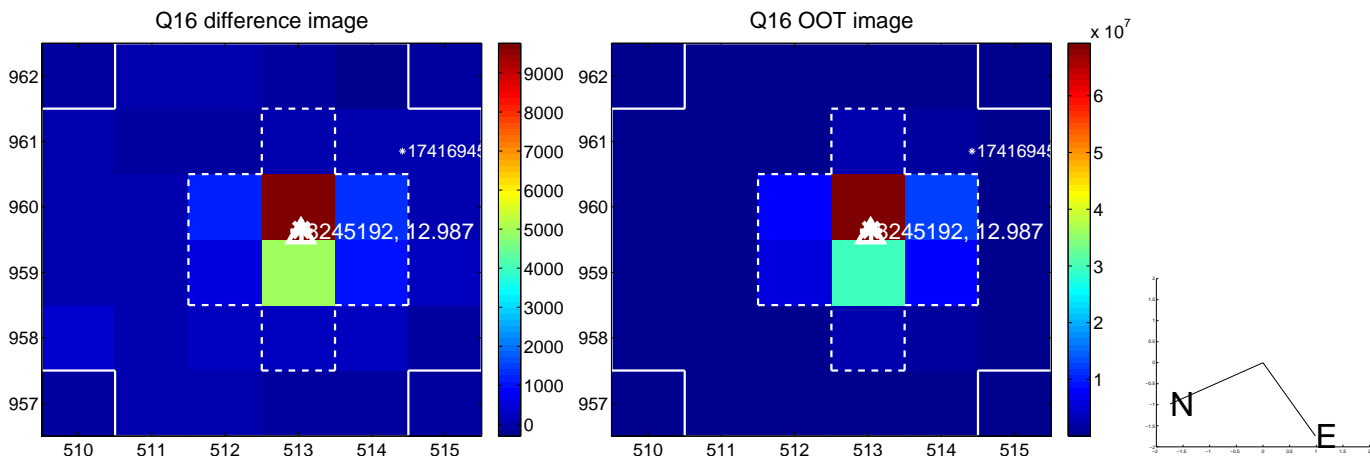
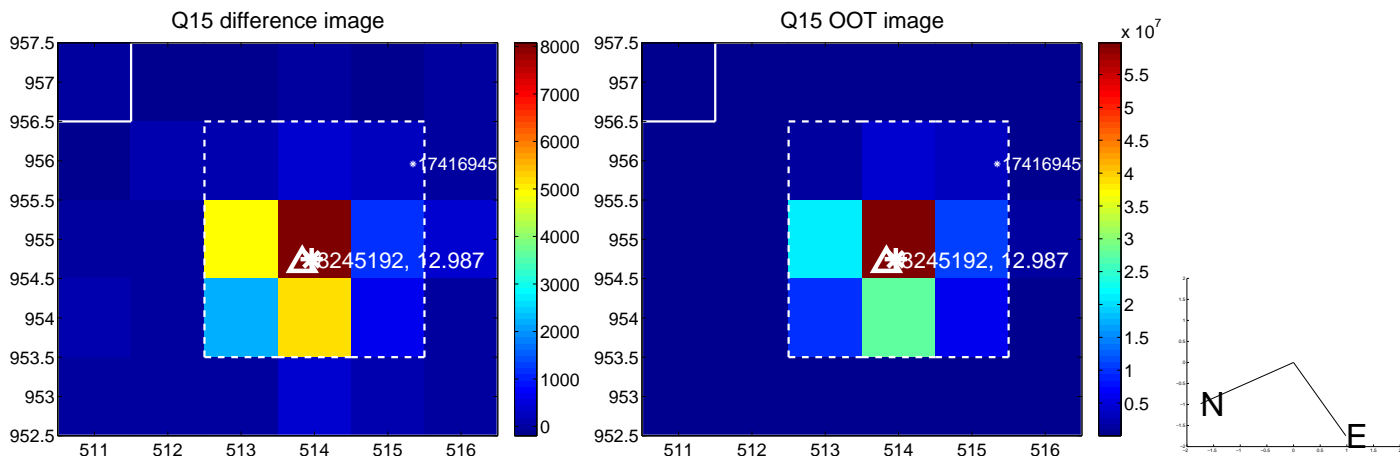
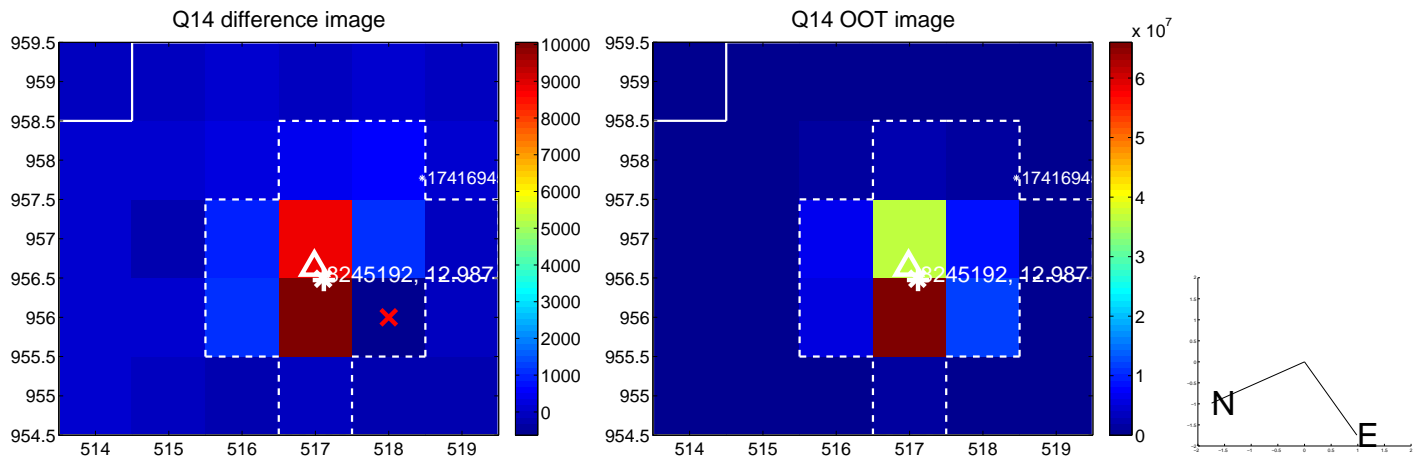
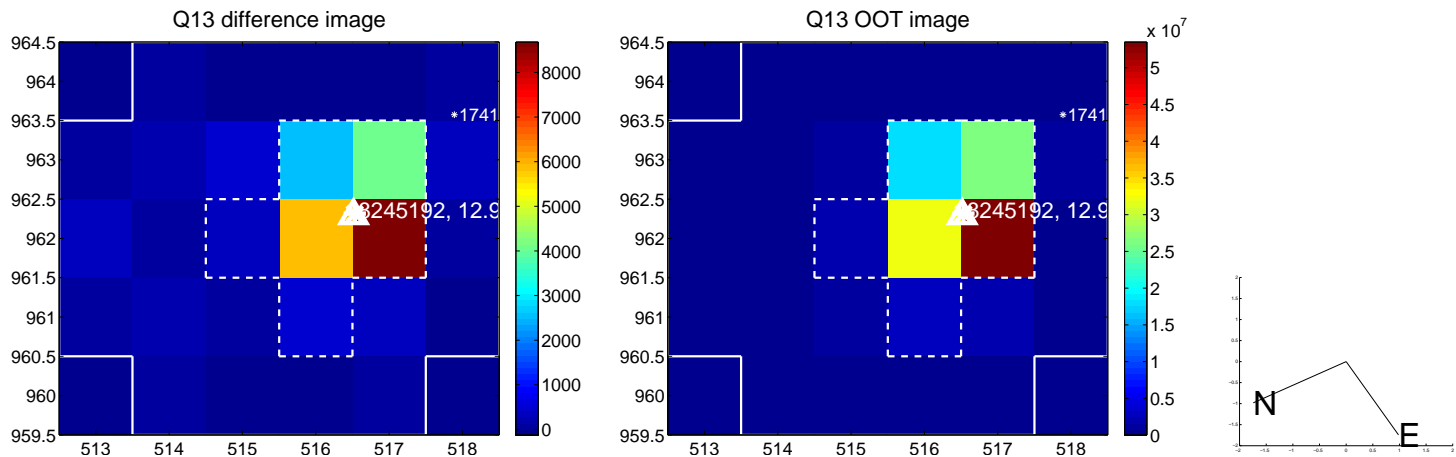
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



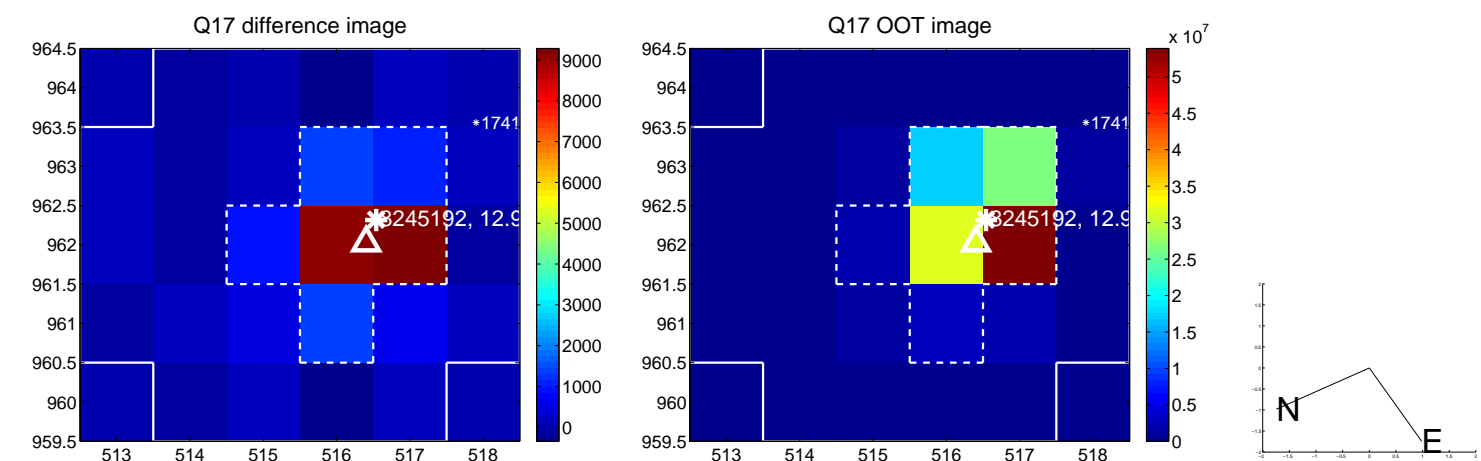
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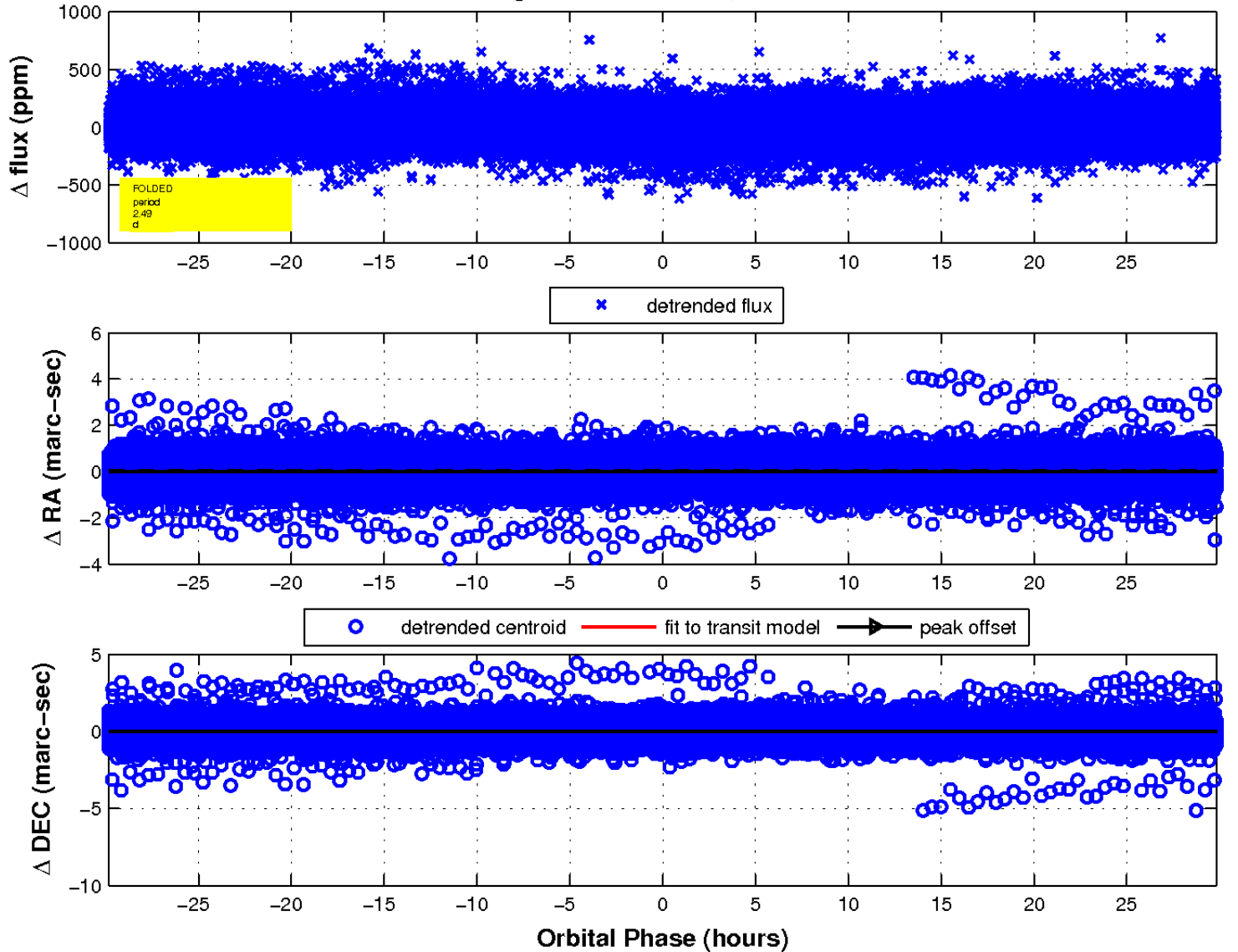
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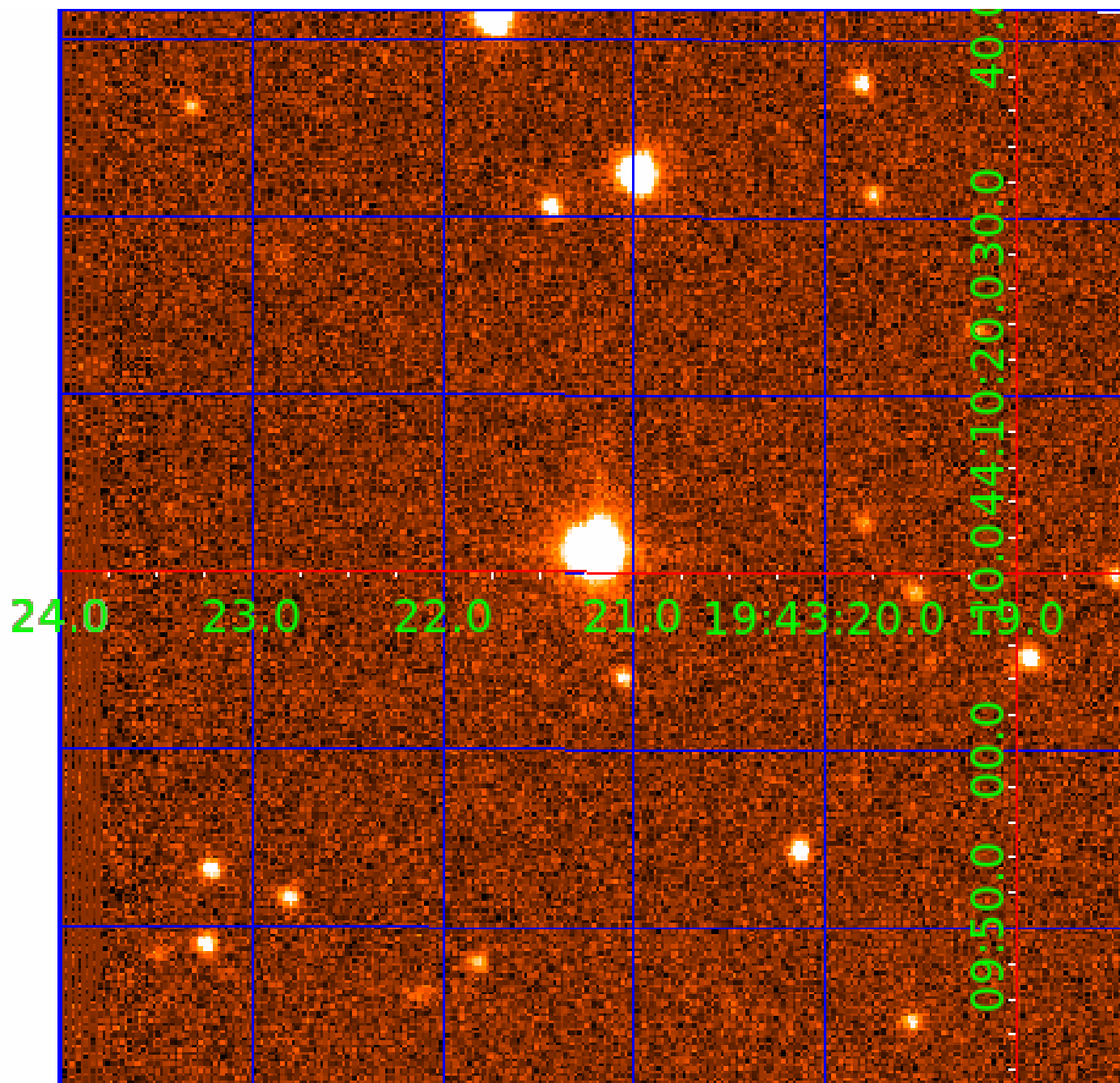


fluxWeightedCentroids, Planet 1 of 9



UKIRT Image

Declination



KIC 008245192

Q1-17 DR25 TCE Parameters

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Robovetter Results

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008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

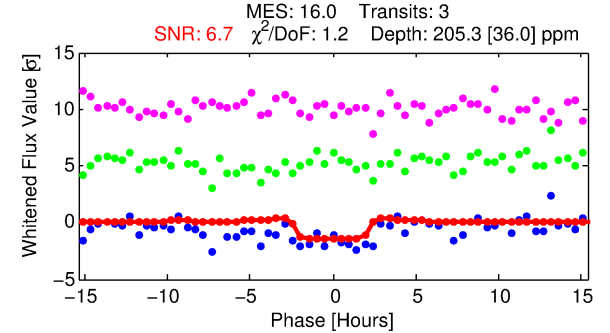
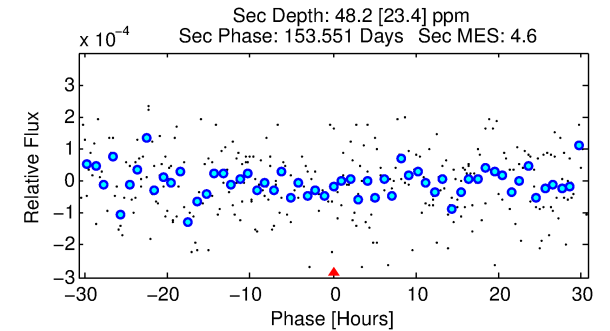
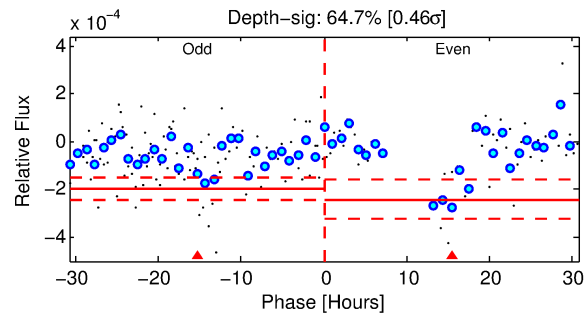
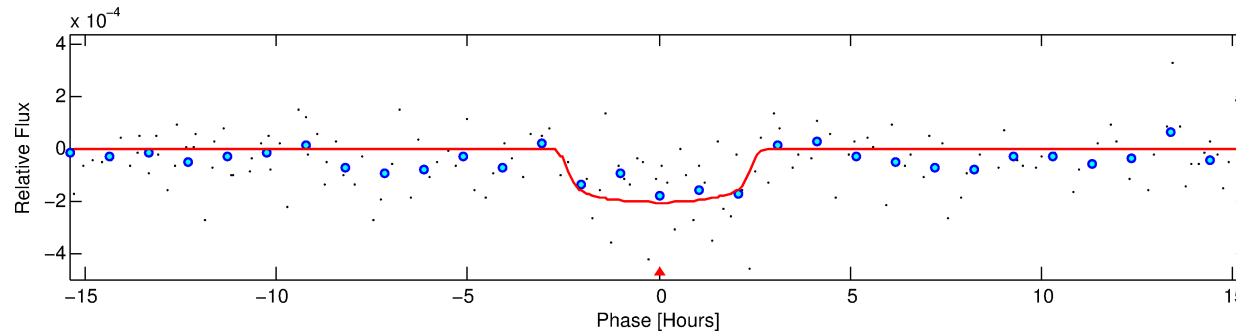
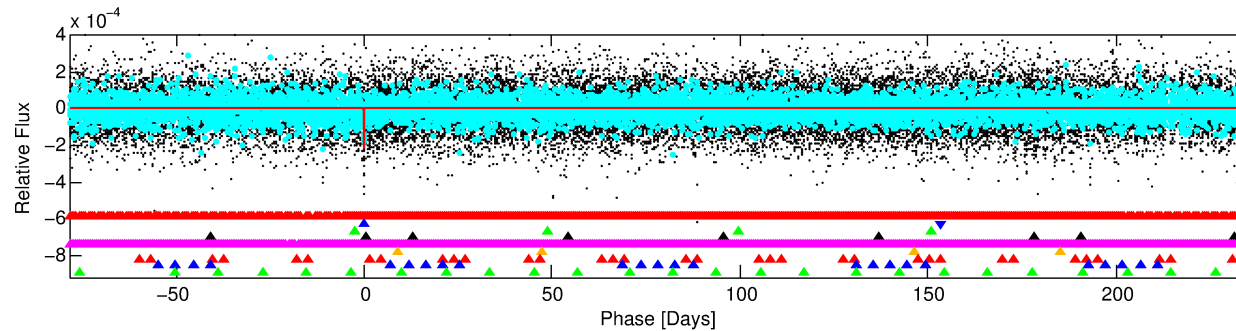
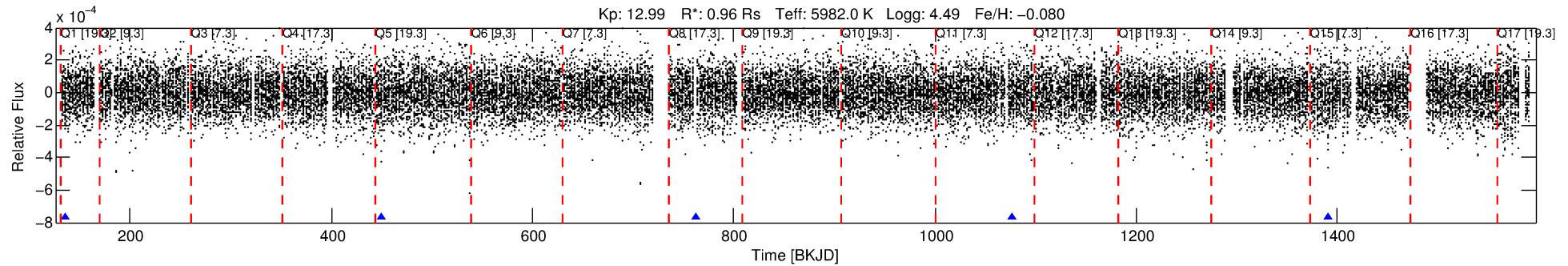
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-02

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 2 of 9 Period: 313.750 d



DV Fit Results:

Period = 313.74985 [0.00447] d
Epoch = 135.6977 [0.0131] BKJD
Rp/R* = 0.0152 [0.0092]
a/R* = 241.55 [728.26]
b = 0.87 [0.83]
Seff = 1.26 [0.38]
Teq = 270 [20] K
Rp = 1.59 [1.03] Re
a = 0.9127 [0.1693] AU
Ag = 8797.37 [11788.56] [0.75 σ]
Teffp = 4048 [1335] K [2.83 σ]

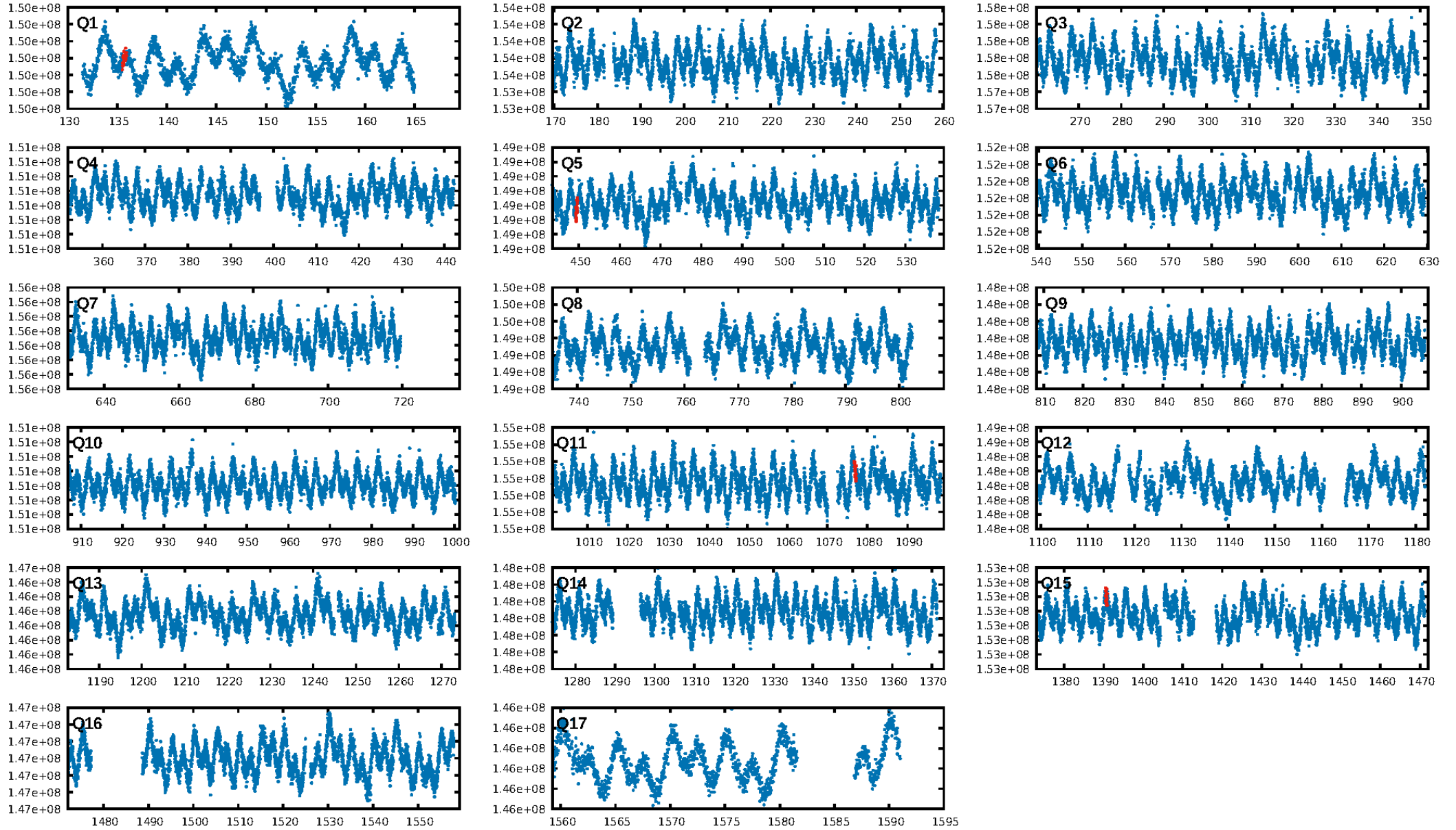
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [477.41 σ]
LongPeriod-sig: 100.0% [58.77 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 62.2%
Bootstrap-pfa: 3.74e-33
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.167
Centroid-sig: 84.8%
Centroid-so: 0.476 arcsec [0.43 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/4]

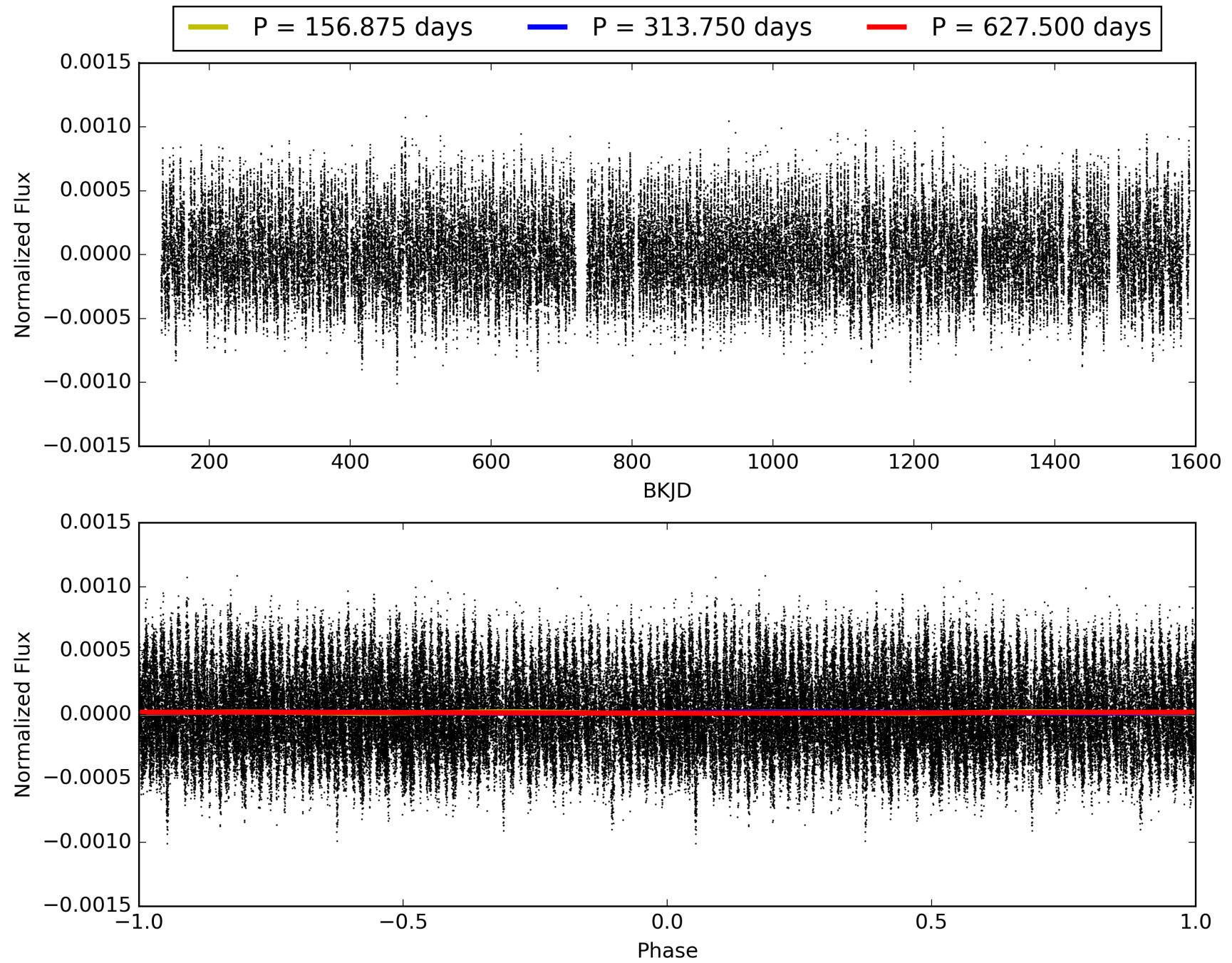
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:32 Z

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

TCE 008245192-02, PDC Light Curves

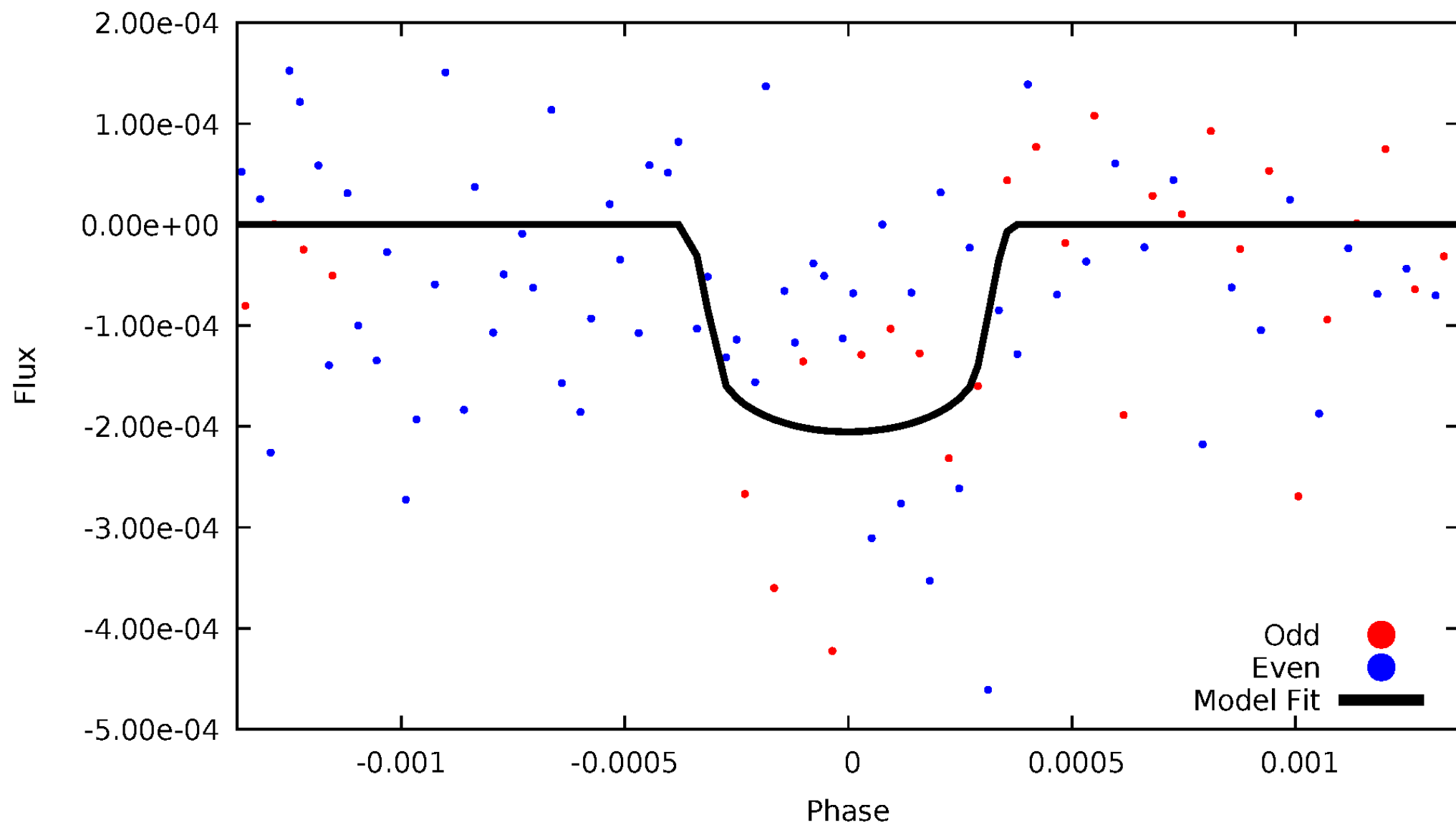


TCE 008245192-02



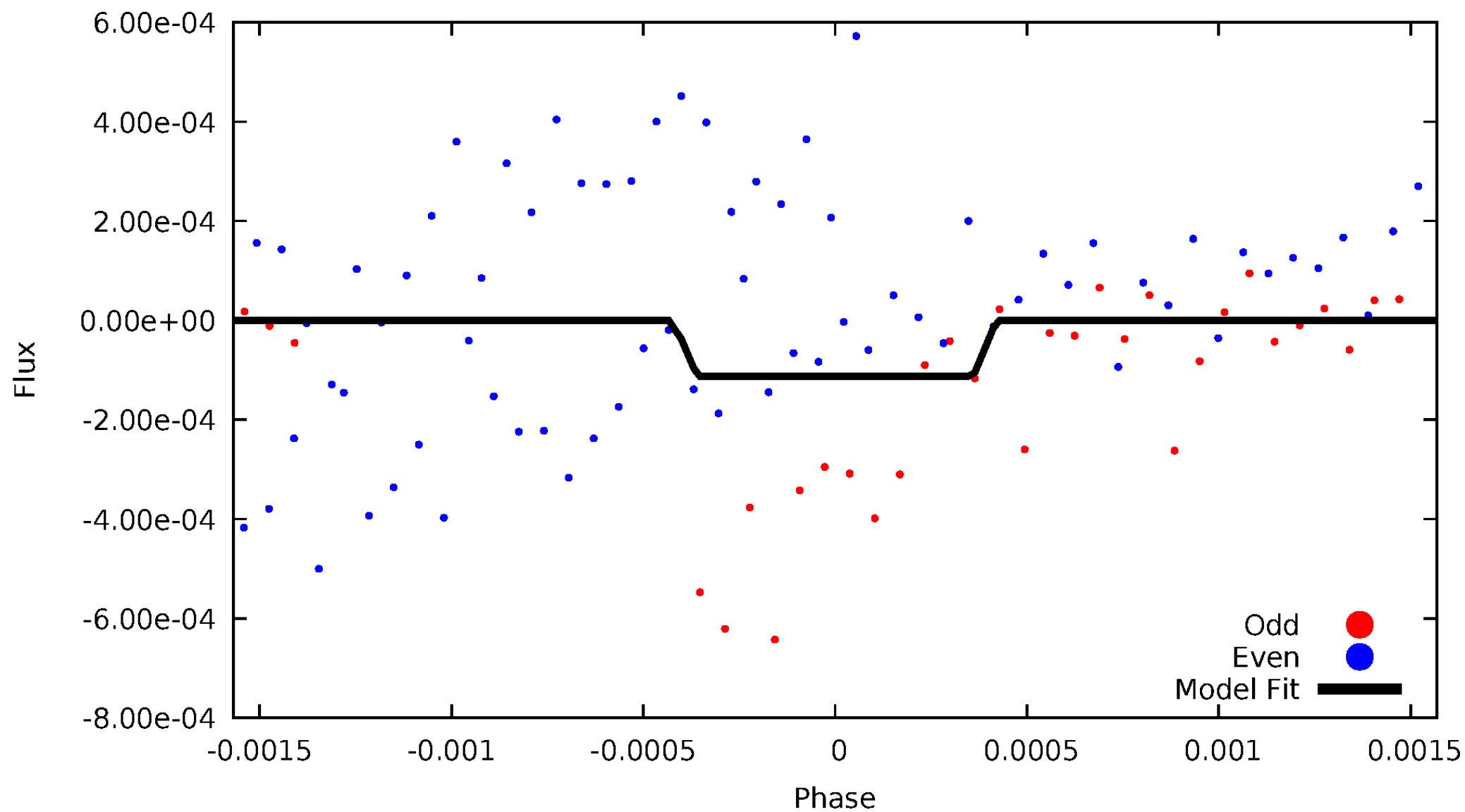
DV Odd/Even

TCE 008245192-02



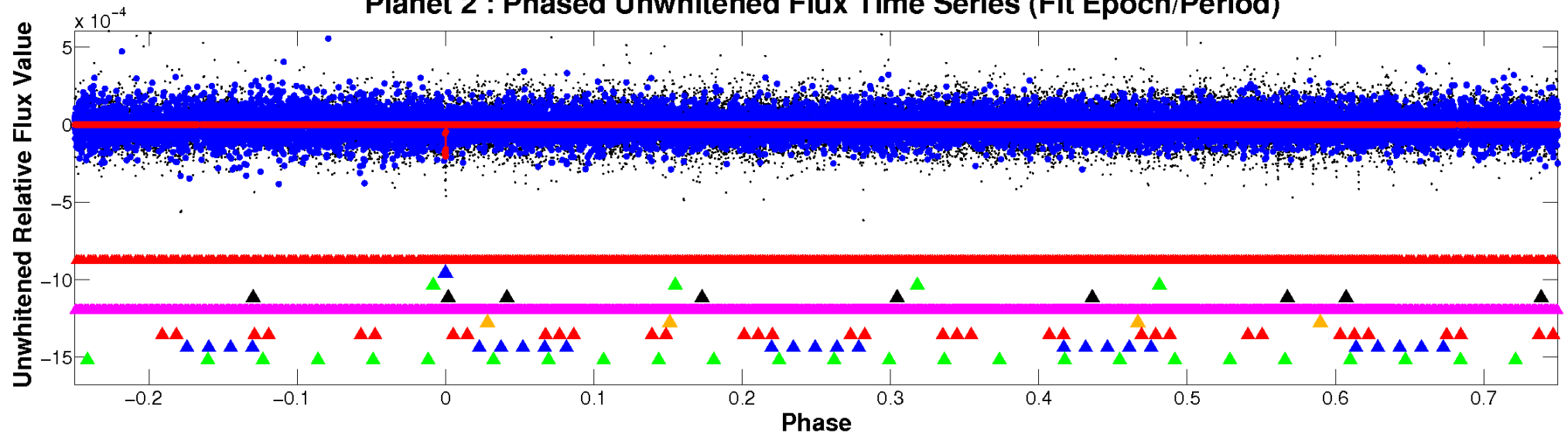
ALT Odd/Even

TCE 008245192-02

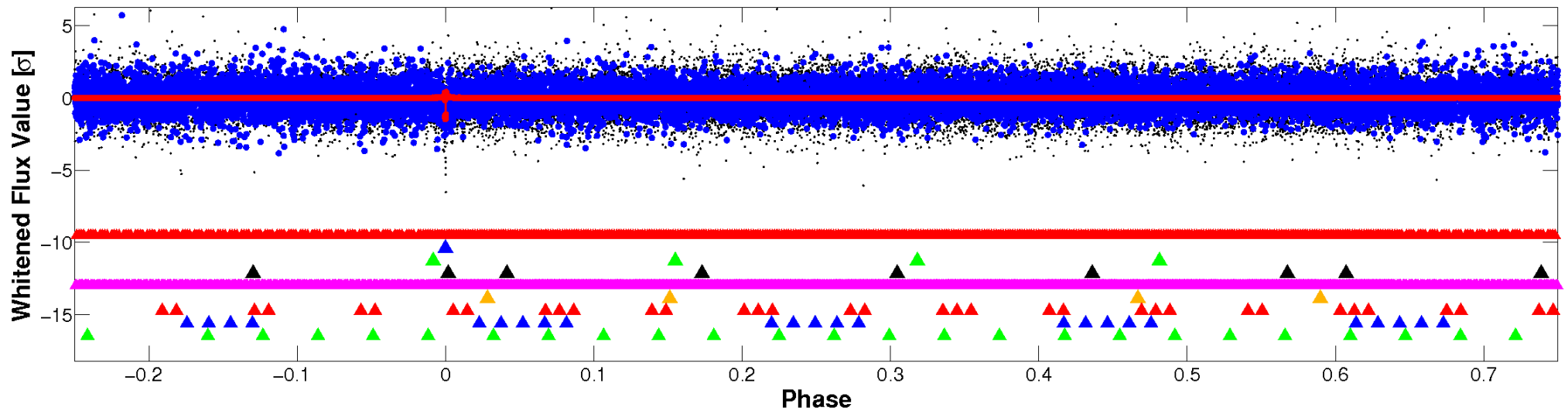


Non-Whitened Vs. Whitened Light Curve

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

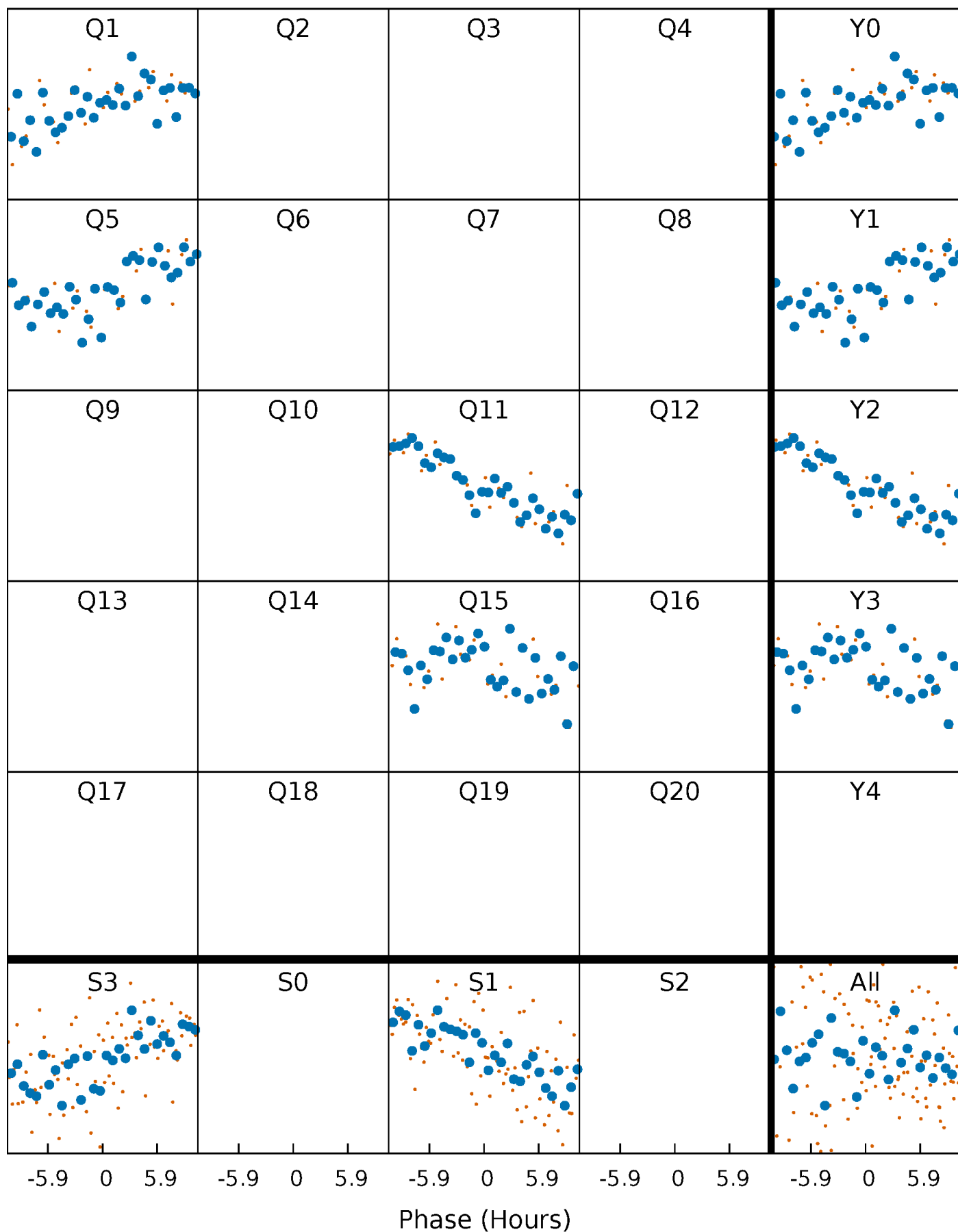


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



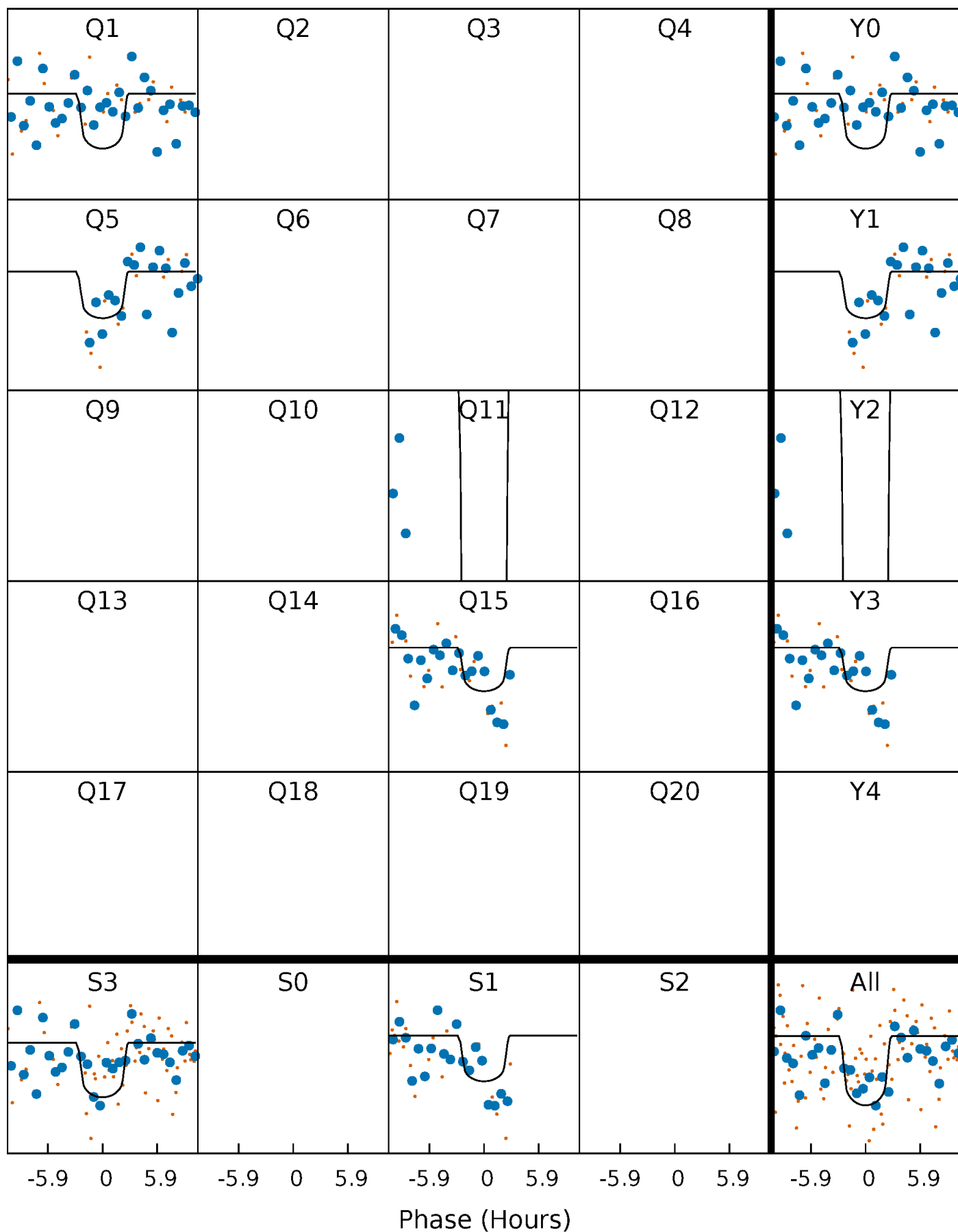
PDC Quarter-Phased Transit Curves

TCE 008245192-02 P=313.749853 Days $T_0=135.697673$ (BKJD)



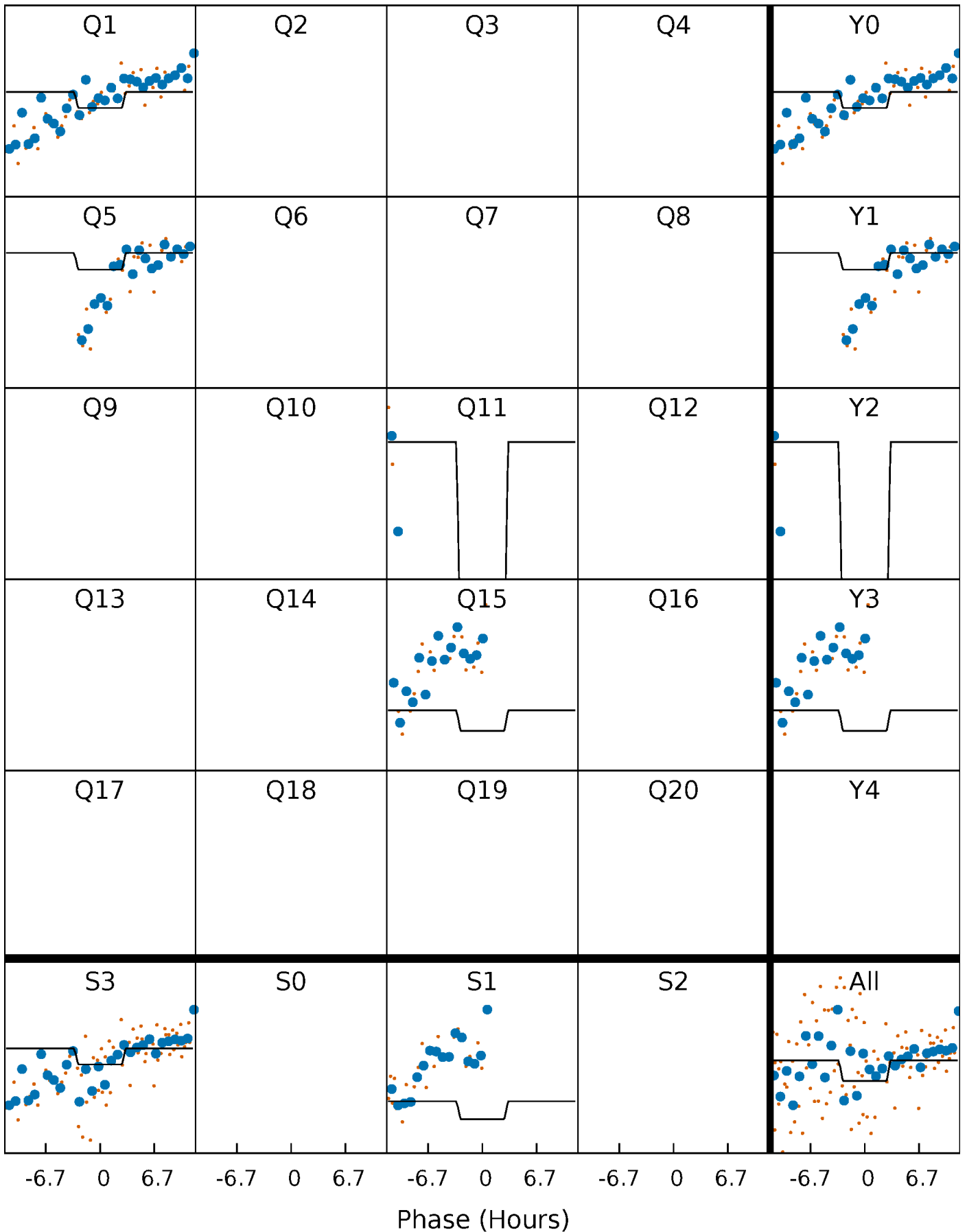
DV Quarter-Phased Transit Curves

TCE 008245192-02 $P=313.749853$ Days $T_0=135.697673$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

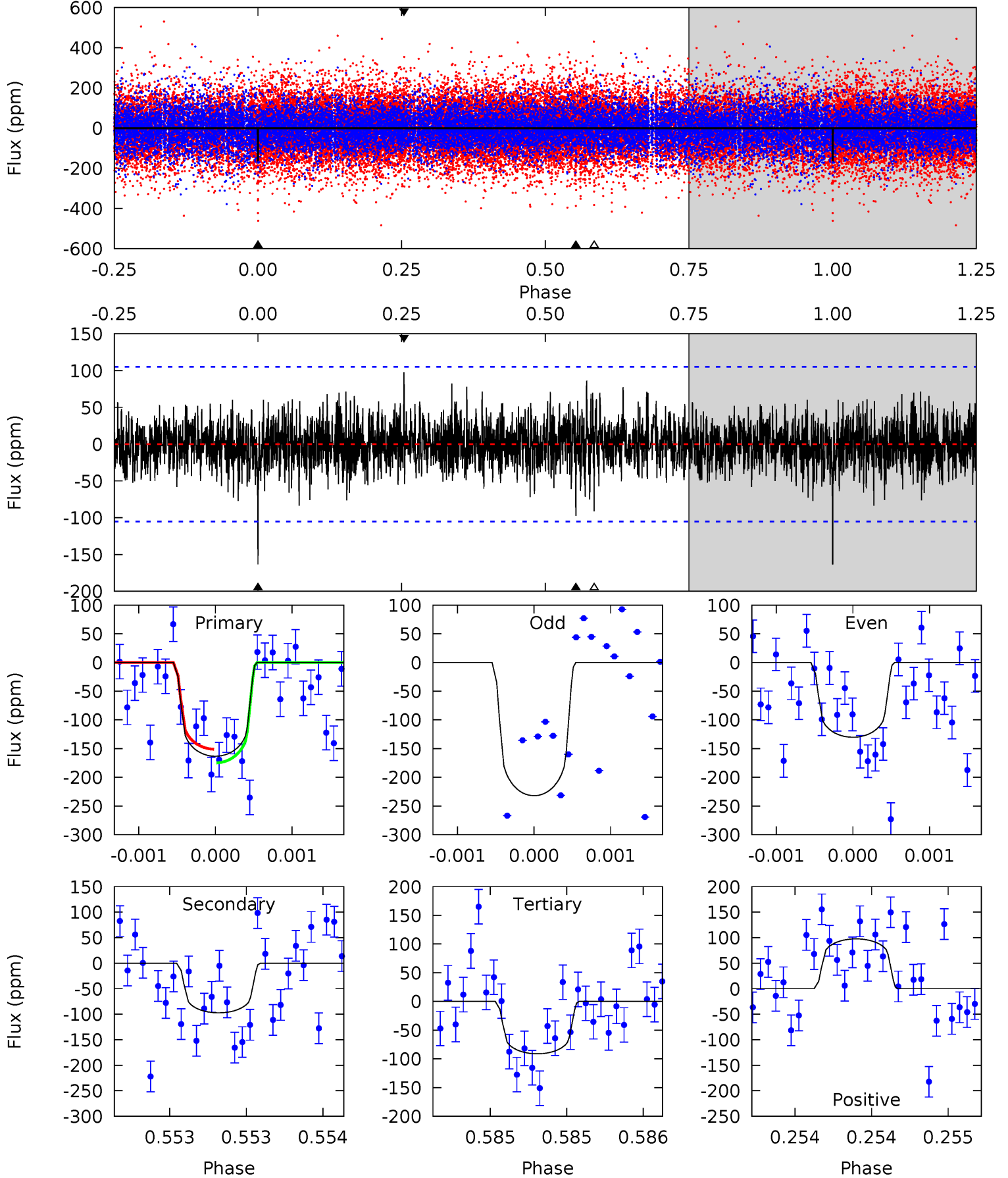
TCE 008245192-02 $P=313.770936$ Days $T_0=135.714603$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-02, P = 313.749853 Days, E = 135.697673 Days

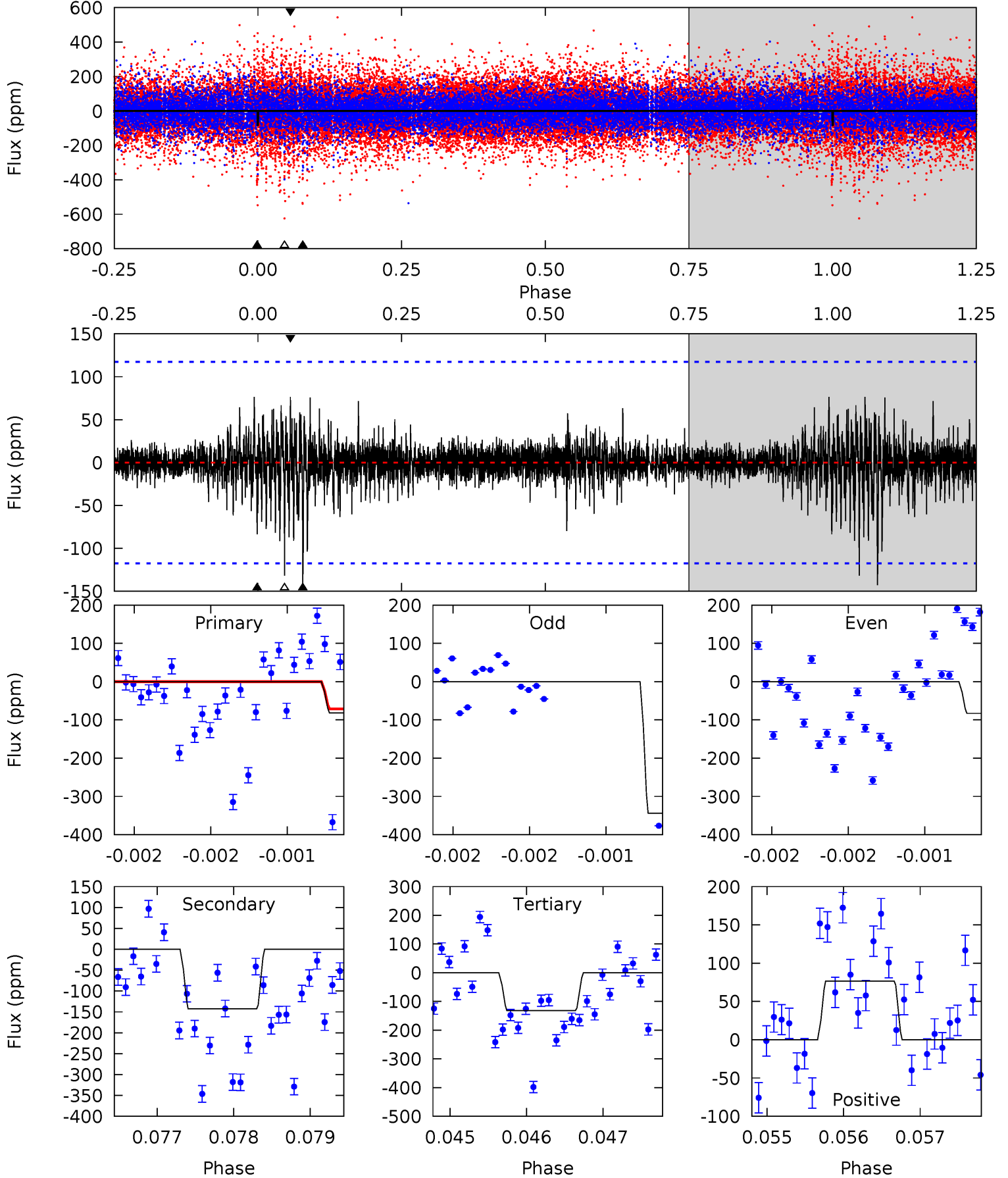
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.56	5.10	4.78	5.12	5.52	3.39	1.24	3.78	3.44	0.32	-0.02	2.49	0.73	0.37	0.62



Alt Model-Shift Uniqueness Test

008245192-02, P = 313.770936 Days, E = 135.714603 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.82	6.68	6.17	3.58	5.49	3.36	0.80	-2.35	0.24	0.51	3.10	6.58	0.36	0.35	0.52



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-97 ± 19	$1.64^{+0.99}_{-0.85}$	383^{+20}_{-17}	4916^{+2008}_{-859}	16514^{+56503}_{-10584}
Alt.	-143 ± 21	$1.30^{+0.96}_{-0.83}$	384^{+22}_{-18}	5864^{+5315}_{-1222}	$37347^{+243997}_{-25332}$

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

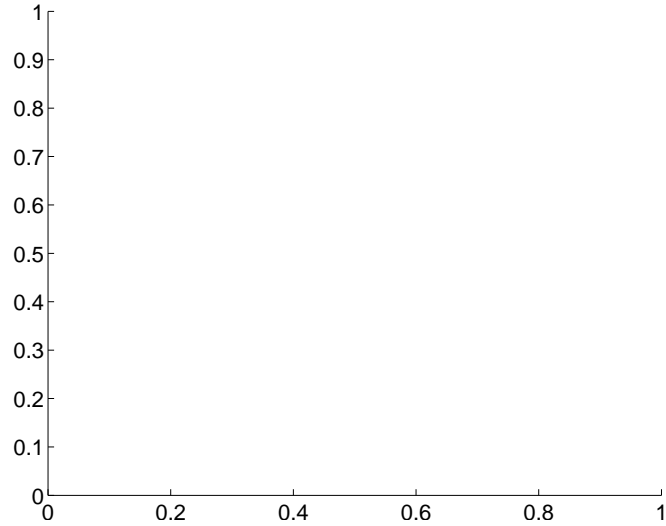
Supplemental centroid analysis for 008245192-02. Kepler magnitude: 12.99. Transit SNR 6.73

There are 0 quarters with good PRF difference image offsets

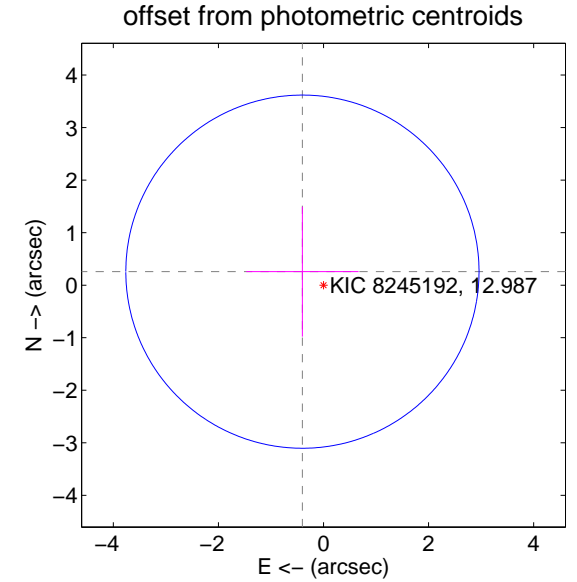
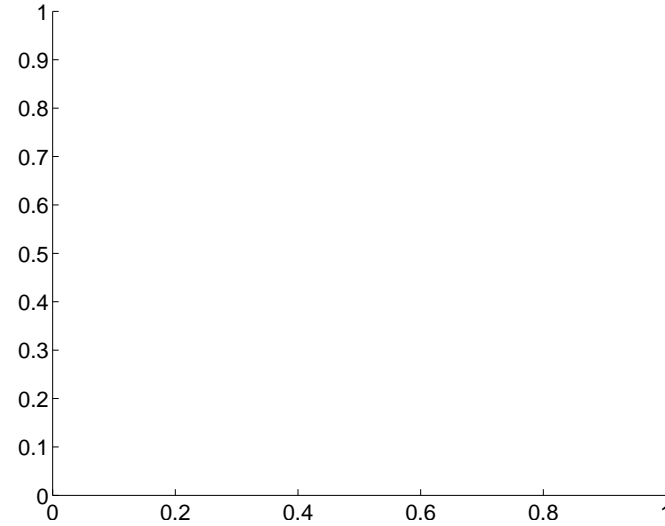
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	0.48 ± 1.12	0.43	0.40 ± 1.07	0.26 ± 1.24

There is no PRF-fit offset from OOT-fit

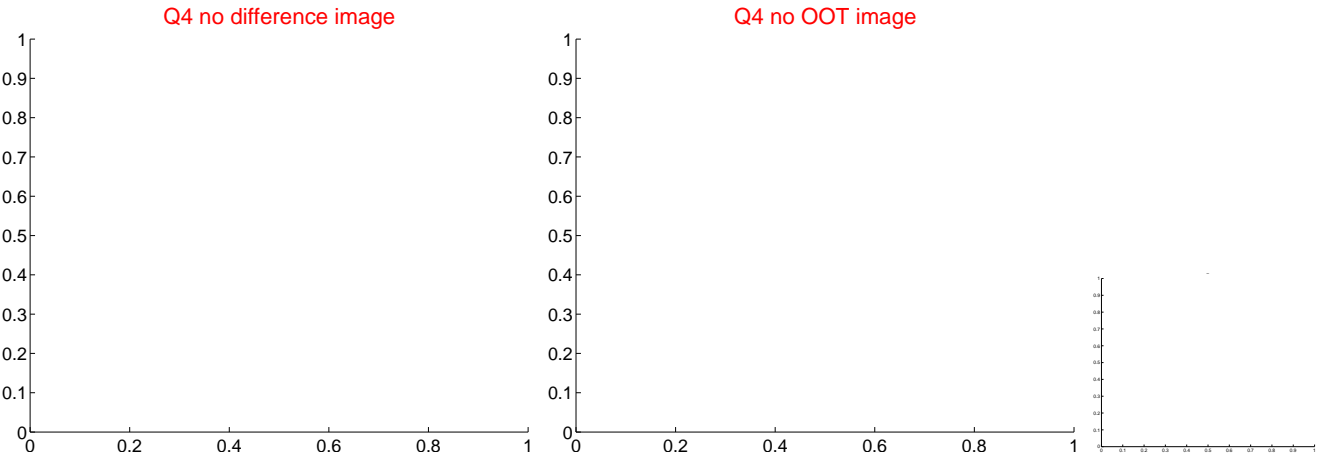
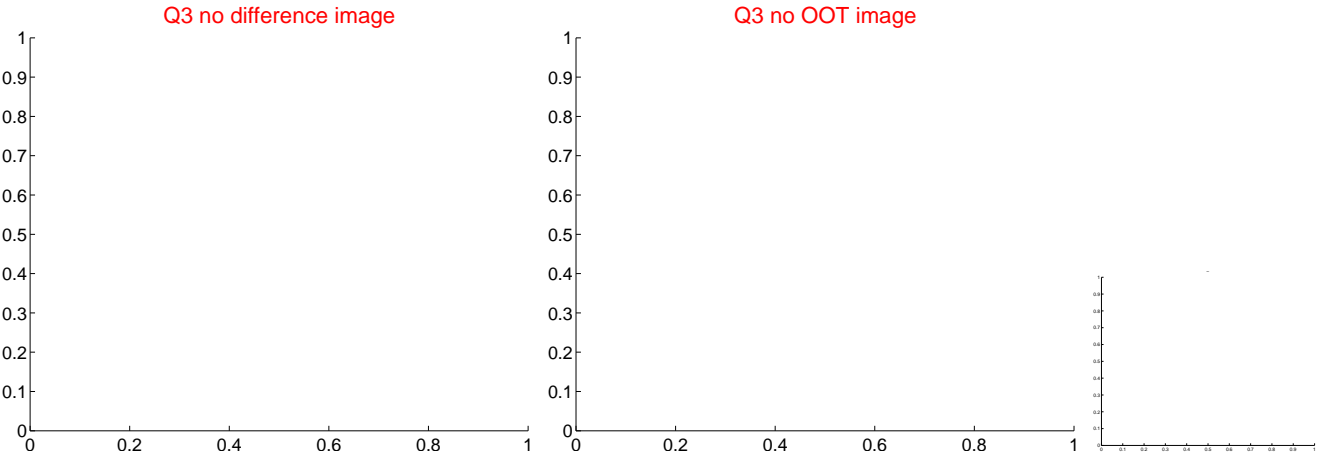
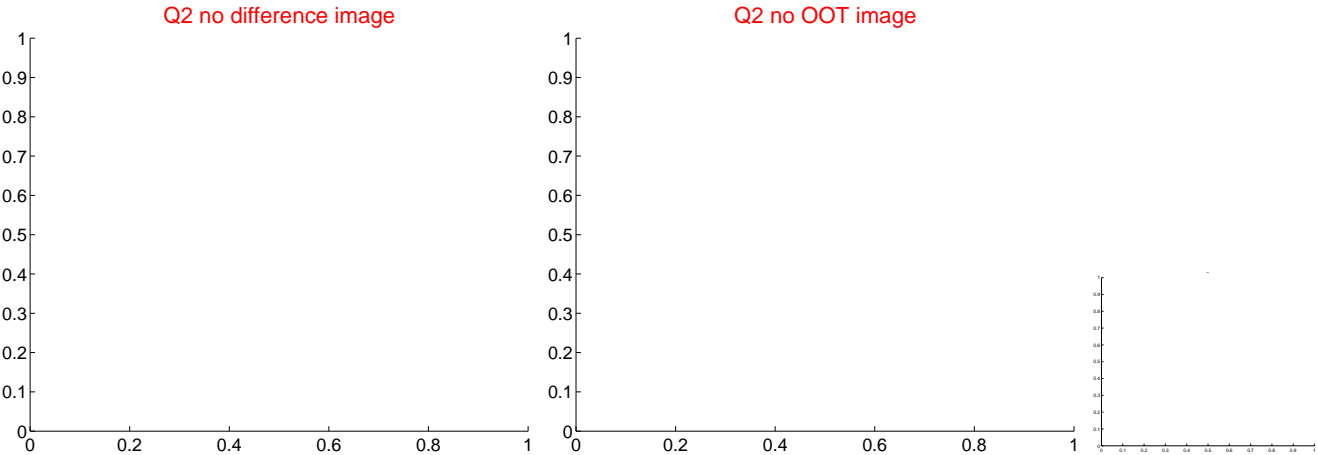
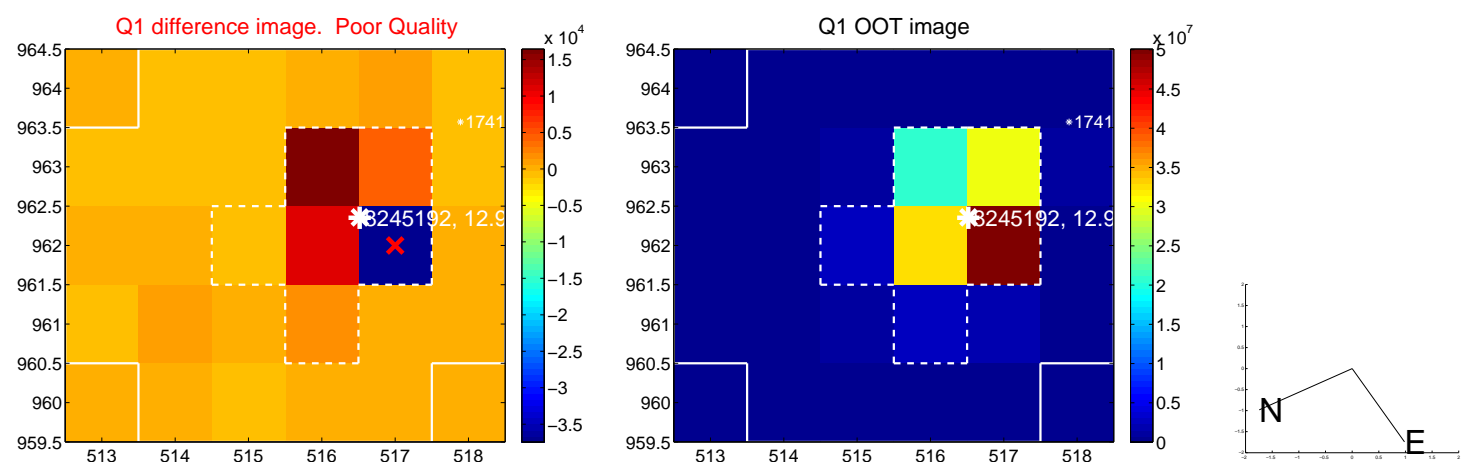


There is no PRF-fit offset from KIC

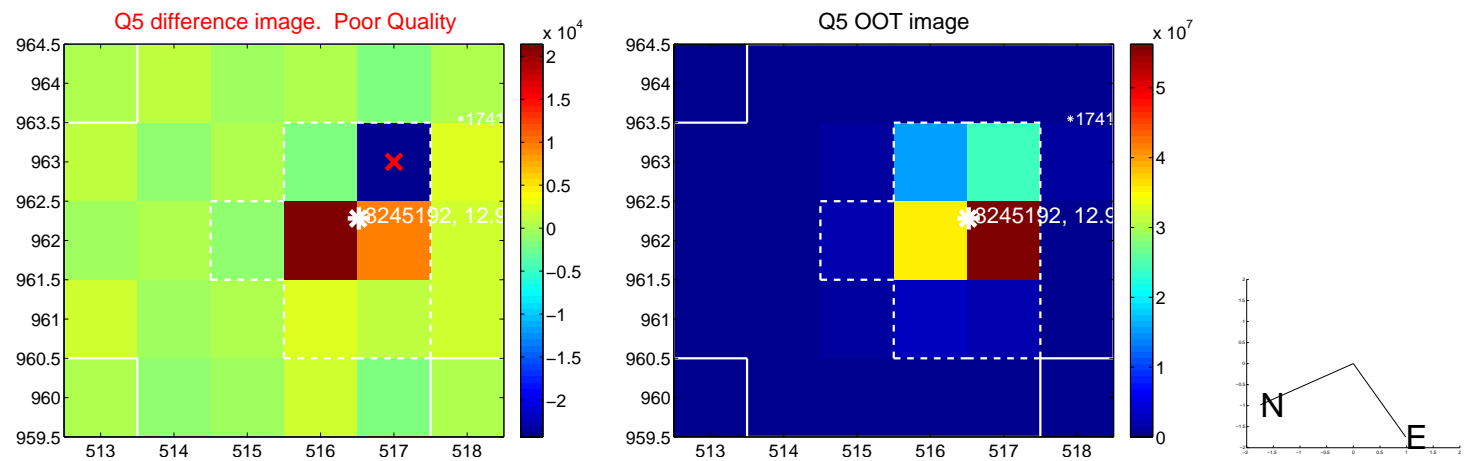


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

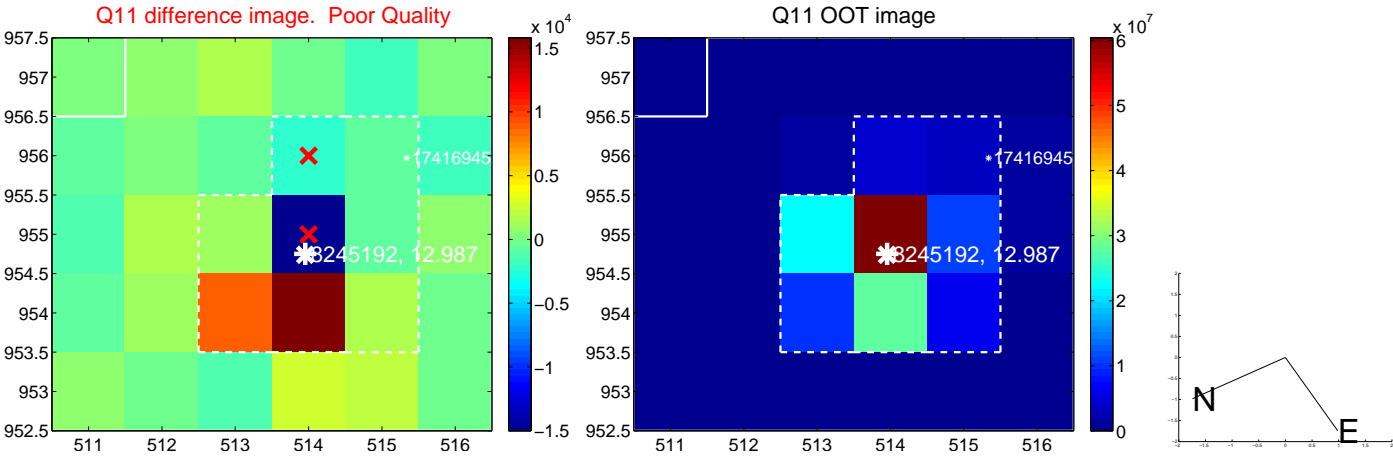
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



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

Q13 no difference image



Q13 no OOT image



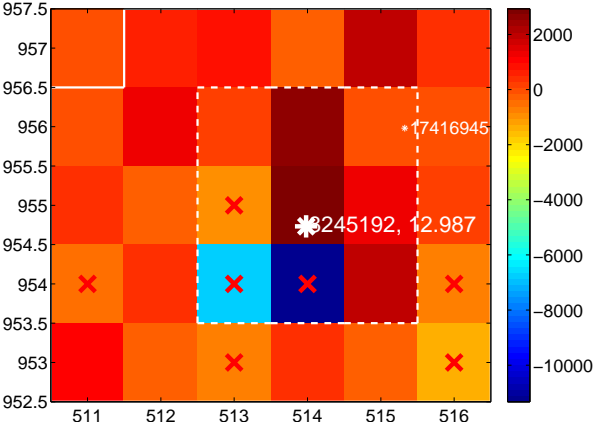
Q14 no difference image



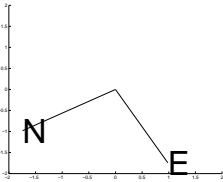
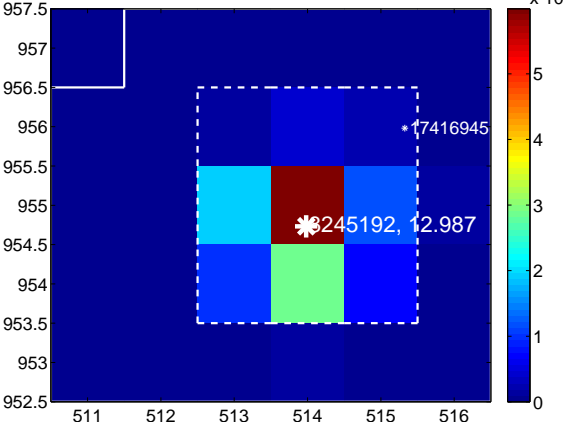
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



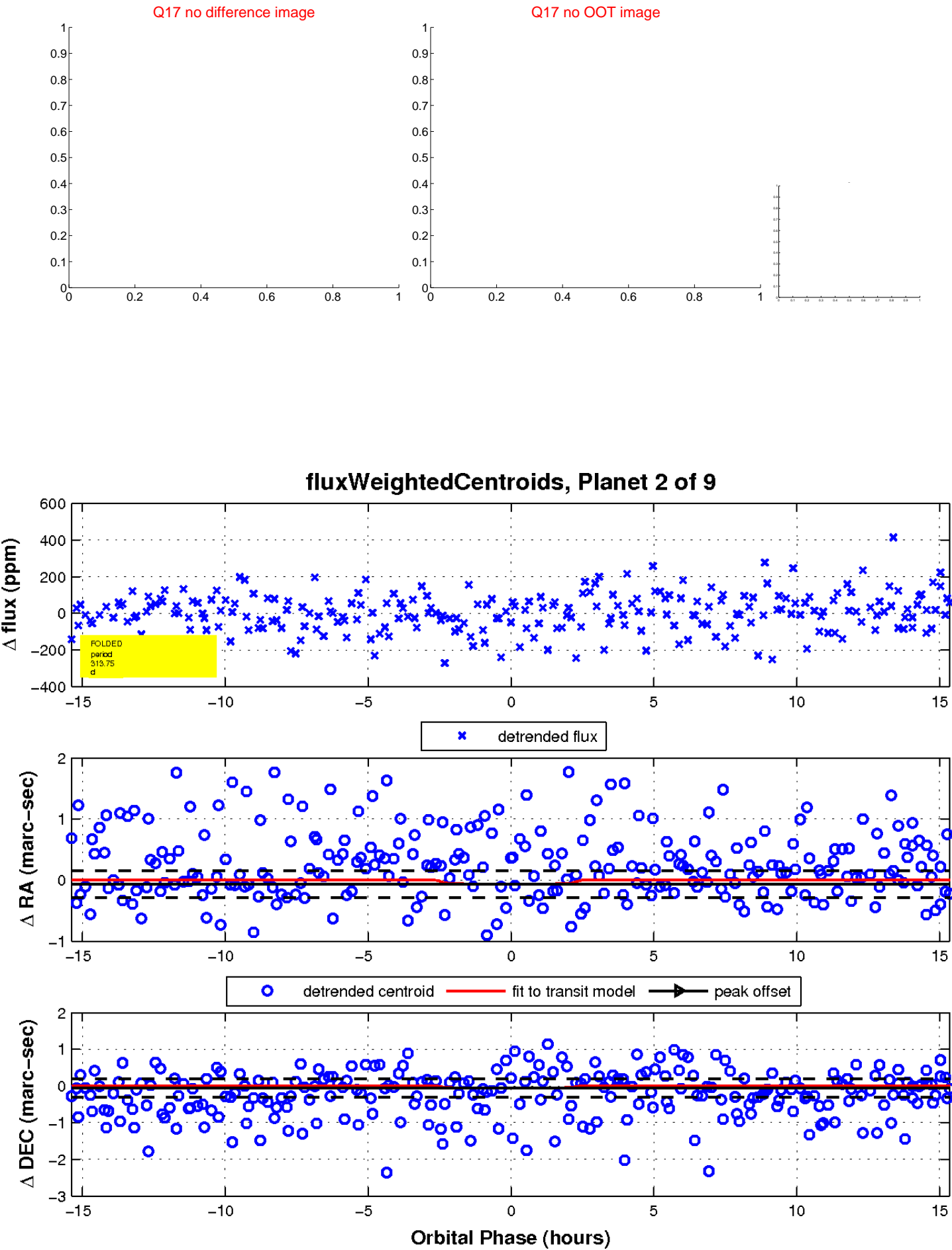
Q16 no difference image



Q16 no OOT image

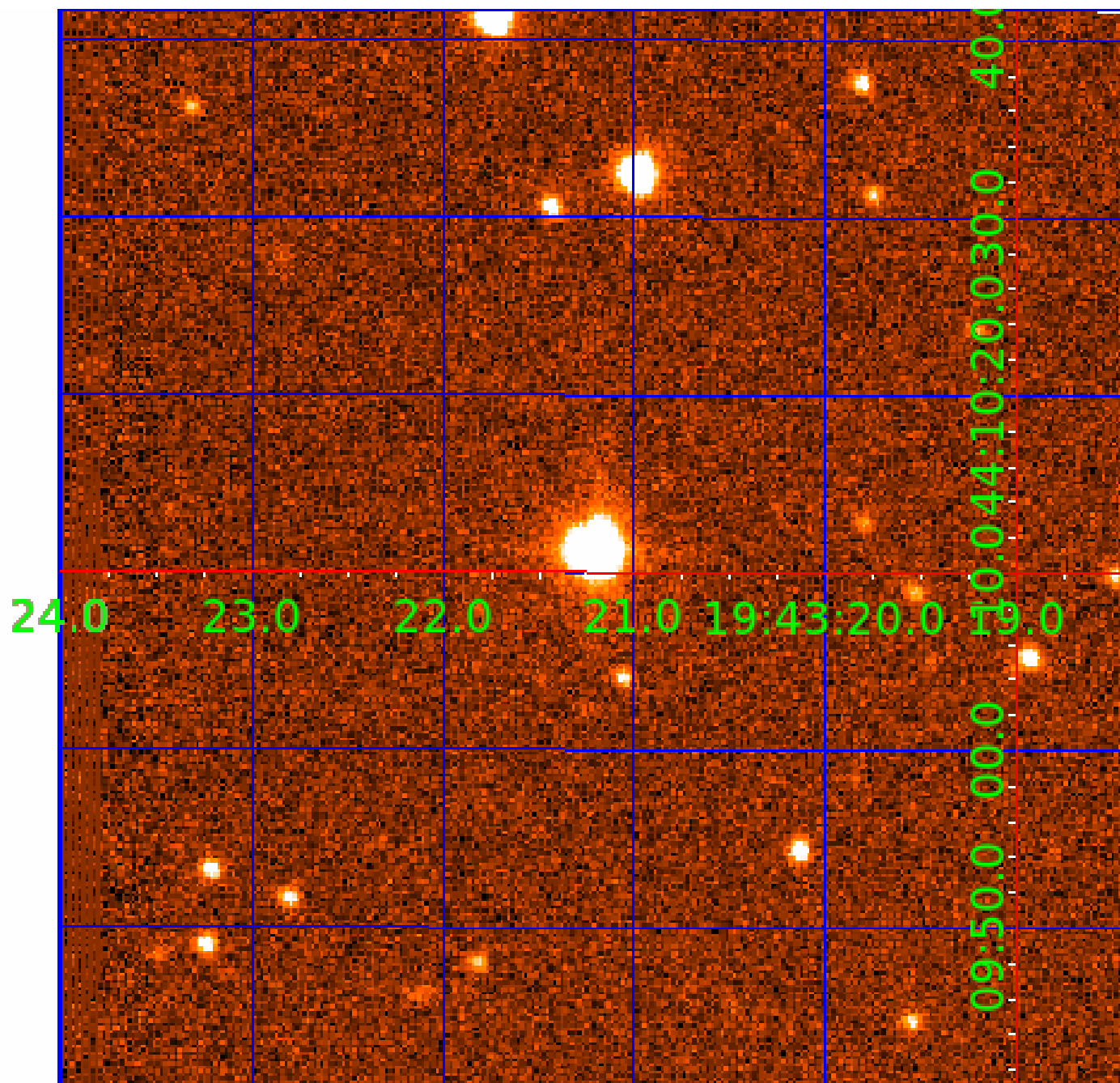


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

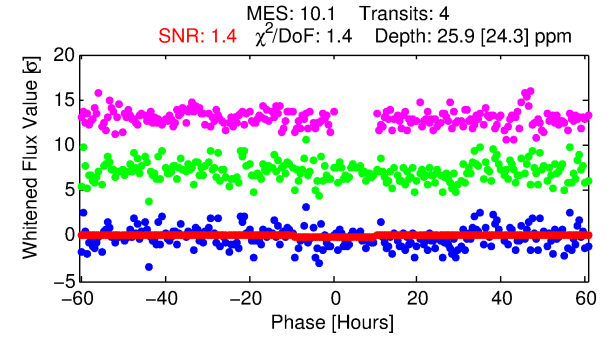
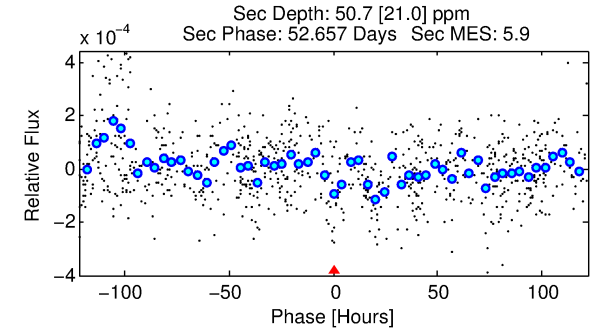
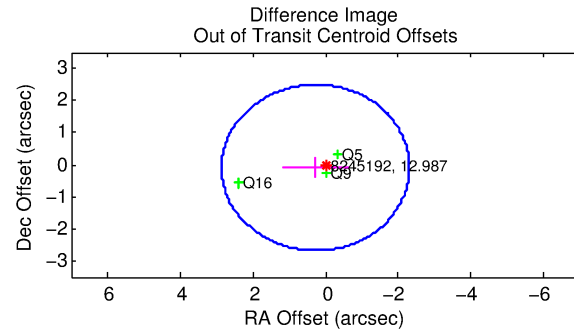
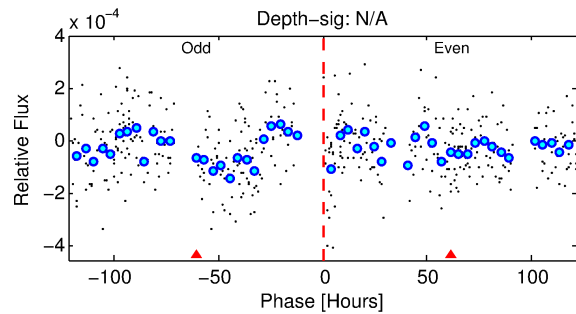
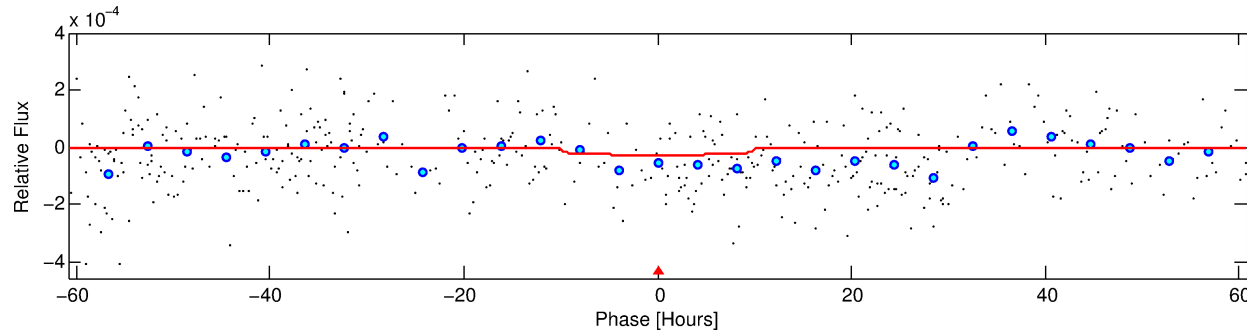
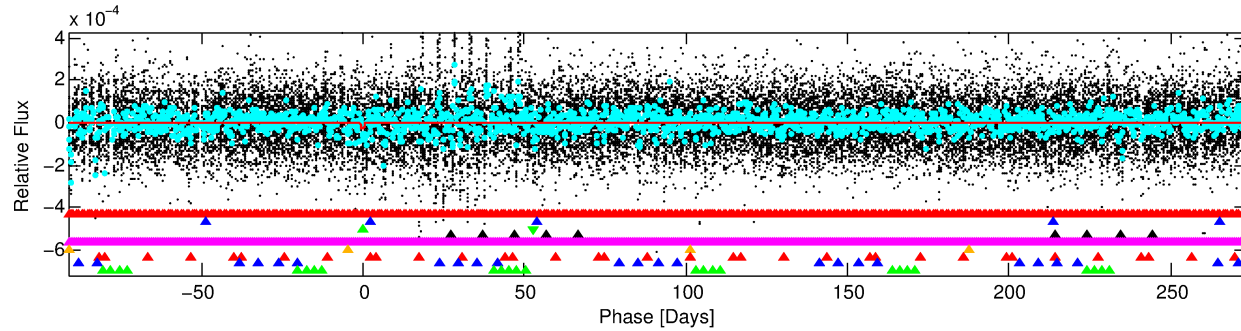
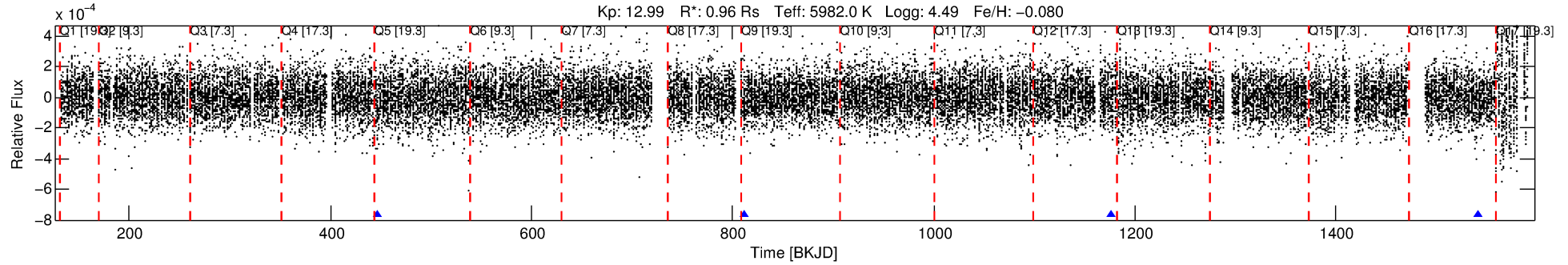
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-03

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 3 of 9 Period: 364.953 d



DV Fit Results:

Period = 364.95324 [0.07969] d
Epoch = 446.8597 [0.1580] BKJD
Rp/R* = 0.0050 [0.0118]
a/R* = 94.23 [1025.65]
b = 0.74 [6.90]
Seff = 1.03 [0.31]
Teq = 257 [19] K
Rp = 0.53 [1.24] Re
a = 1.0095 [0.1873] AU
Ag = 102668.24 [482670.27] [0.21σ]
Teffp = 7115 [8352] K [0.82σ]

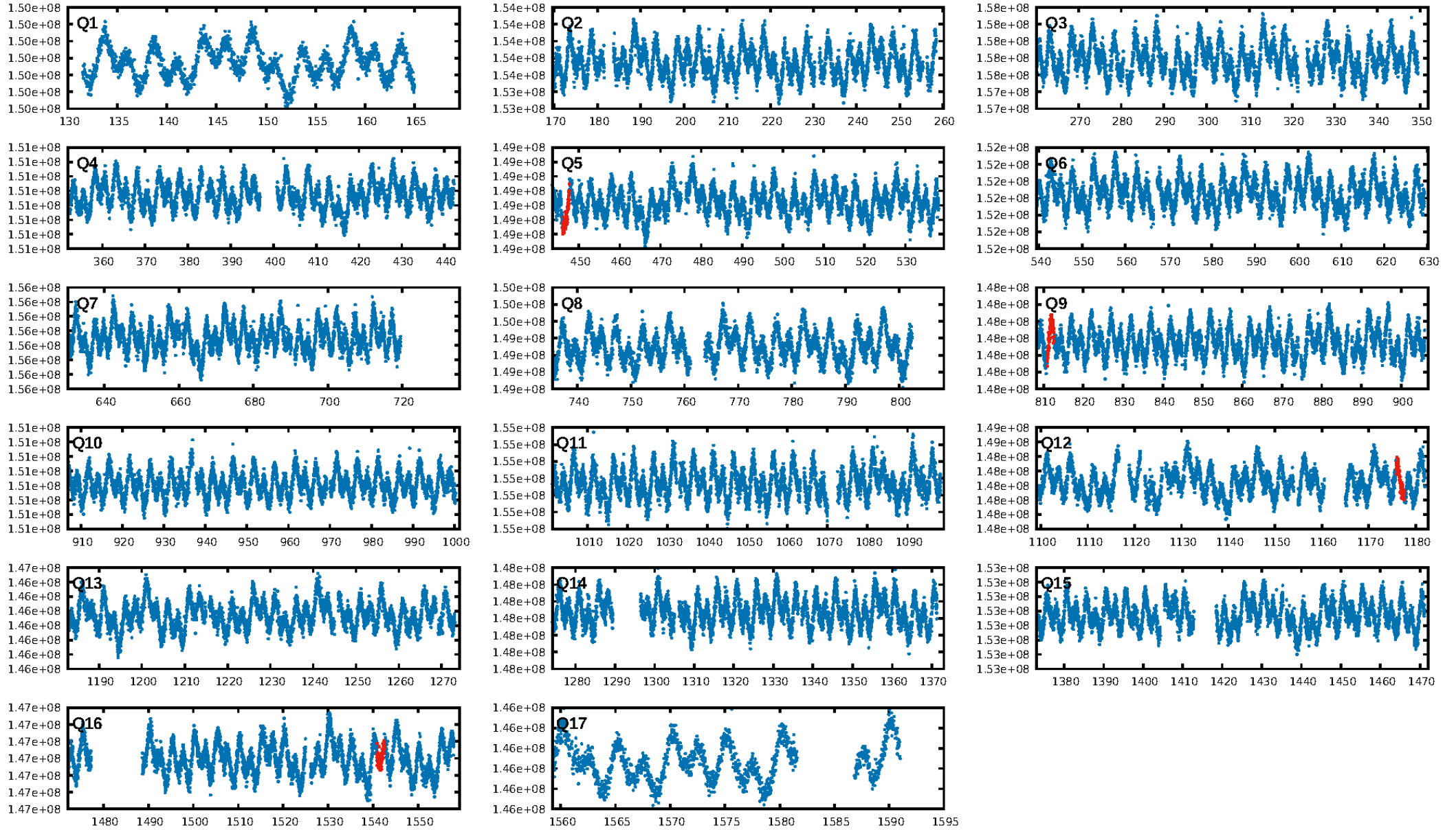
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [58.77σ]
LongPeriod-sig: 100.0% [64.98σ]
ModelChiSquare2-sig: 97.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.73e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.4678
Centroid-sig: 0.0%
Centroid-so: 12.988 arcsec [2.56σ]
OotOffset-rm: 0.293 arcsec [0.34σ]
KicOffset-rm: 0.318 arcsec [0.36σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

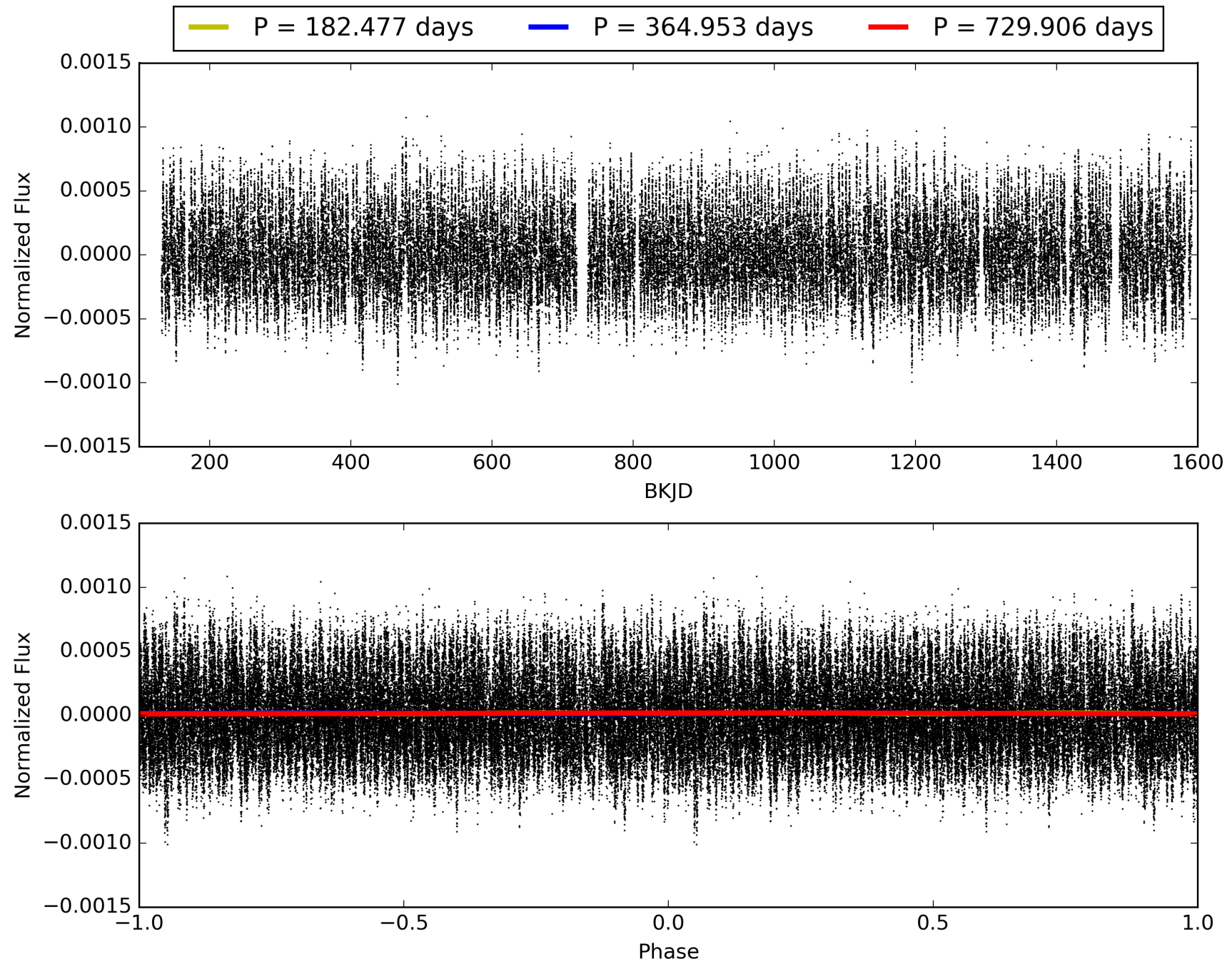
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:38 Z

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

TCE 008245192-03, PDC Light Curves

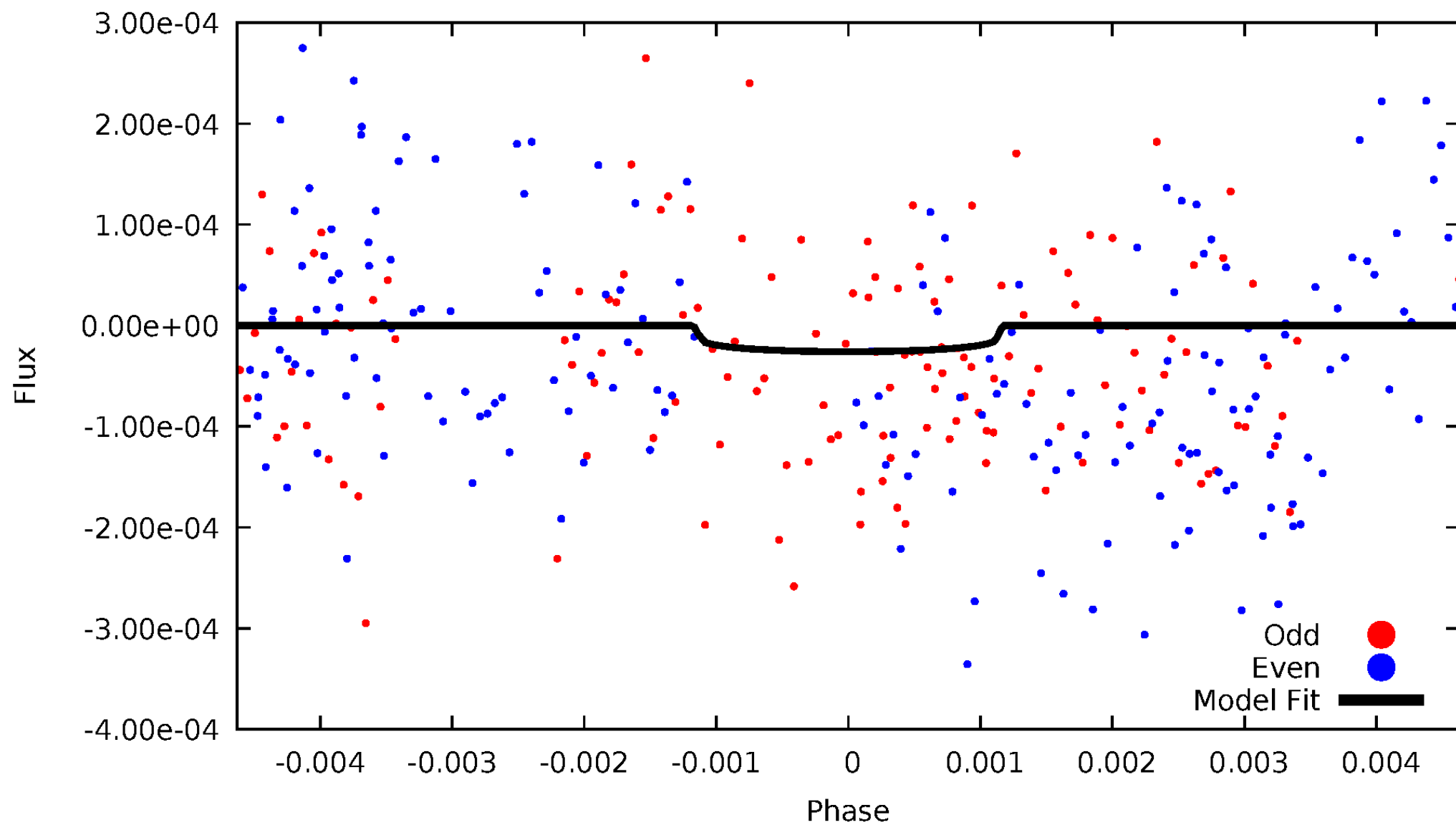


TCE 008245192-03



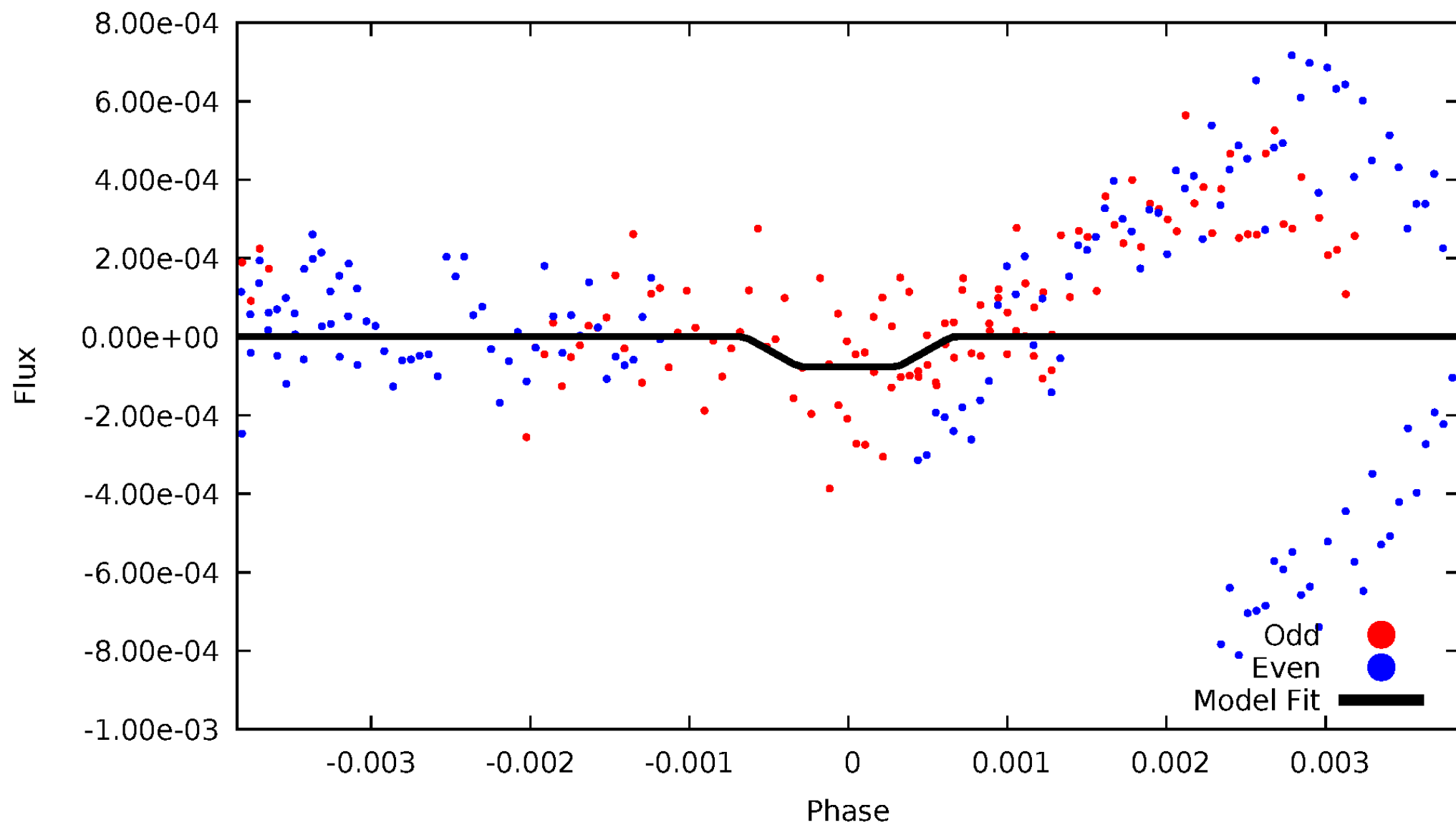
DV Odd/Even

TCE 008245192-03



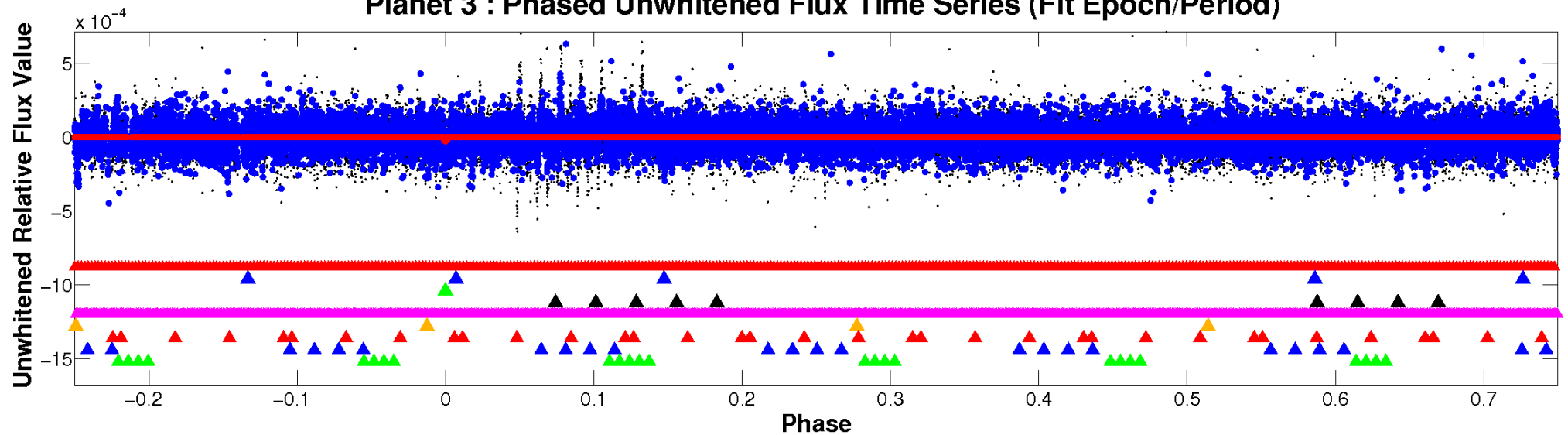
ALT Odd/Even

TCE 008245192-03

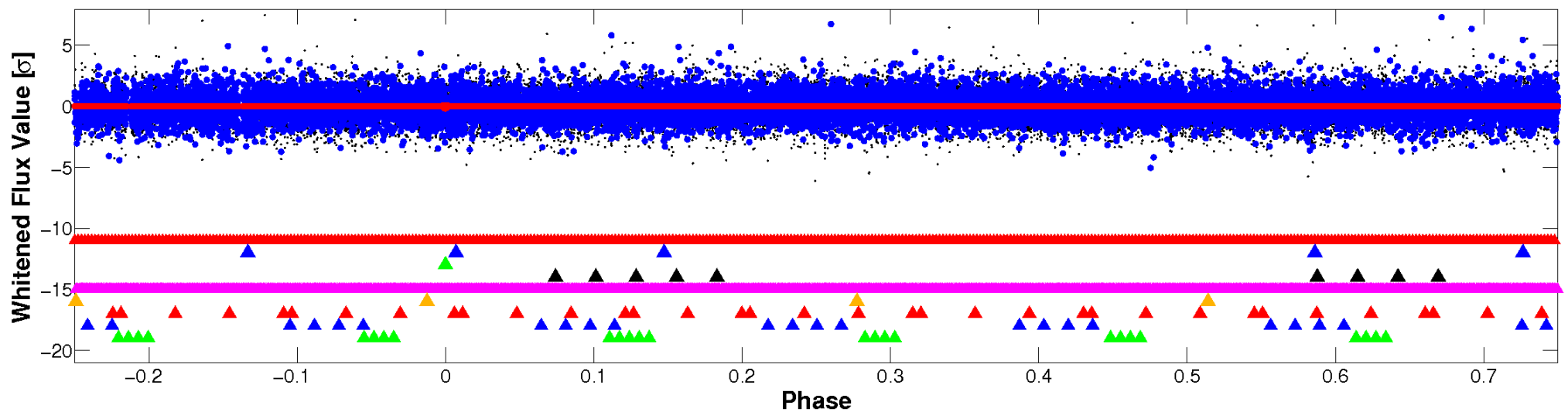


Non-Whitened Vs. Whitened Light Curve

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

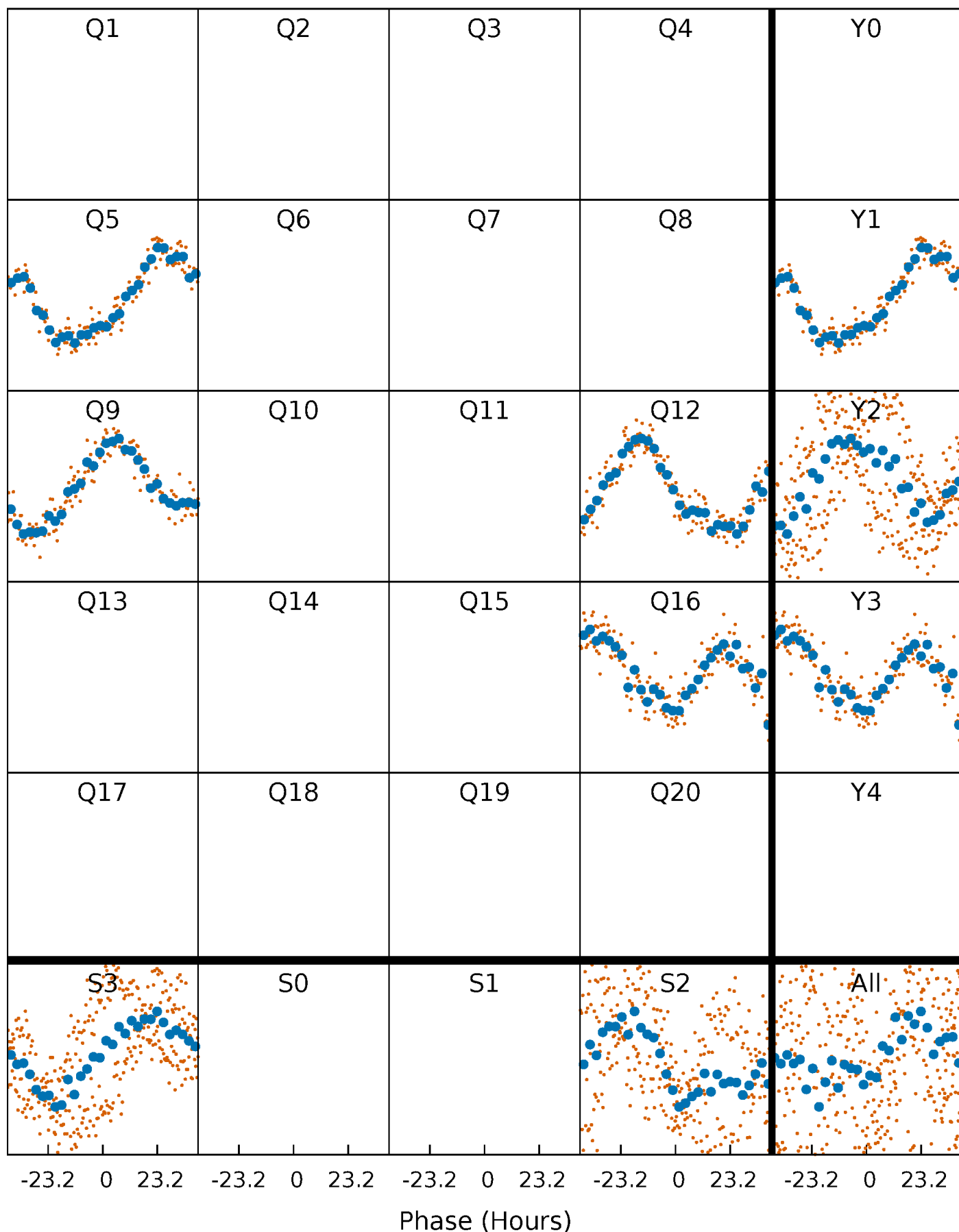


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008245192-03 $P=364.953235$ Days $T_0=446.859736$ (BKJD)



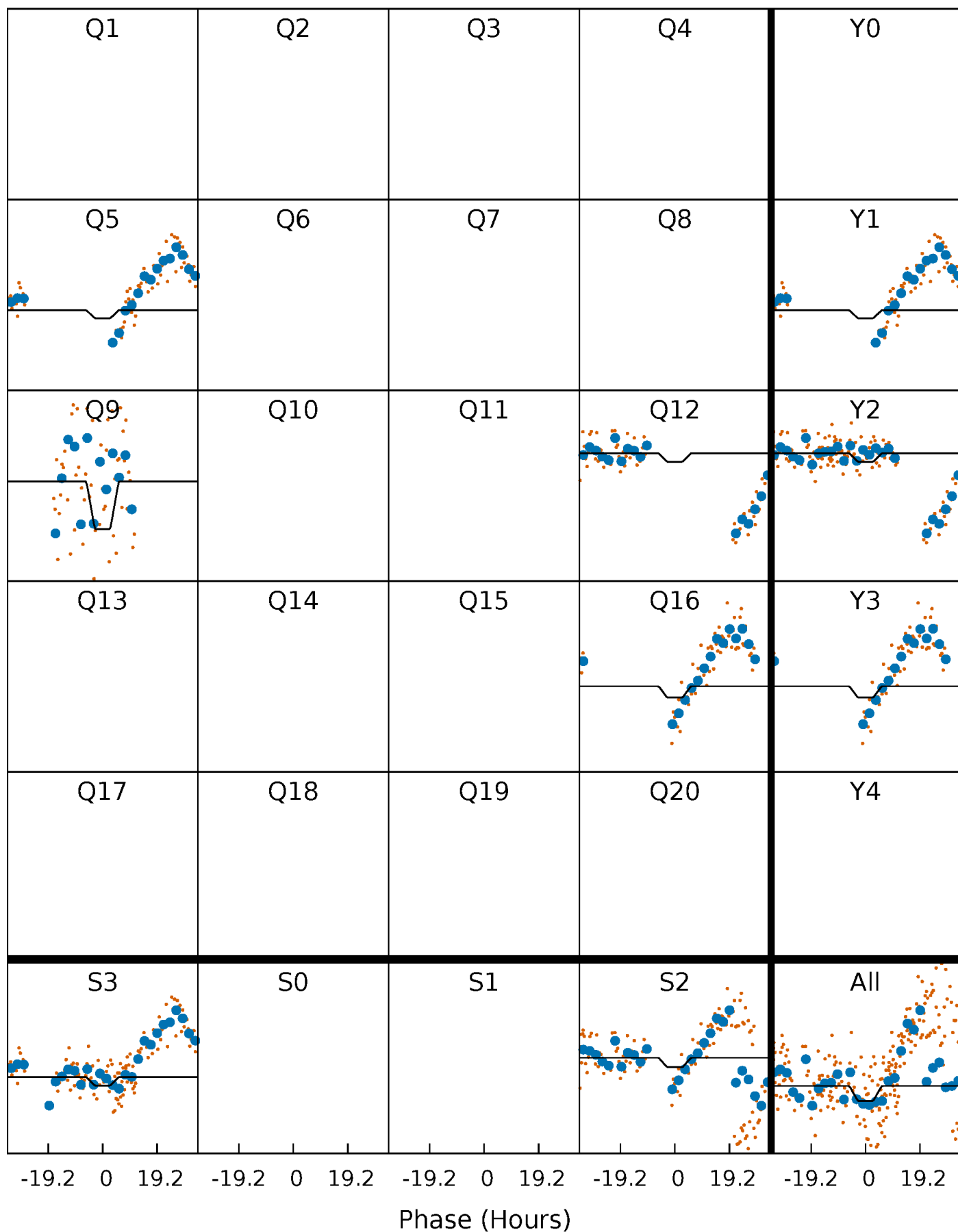
DV Quarter-Phased Transit Curves

TCE 008245192-03 $P=364.953235$ Days $T_0=446.859736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

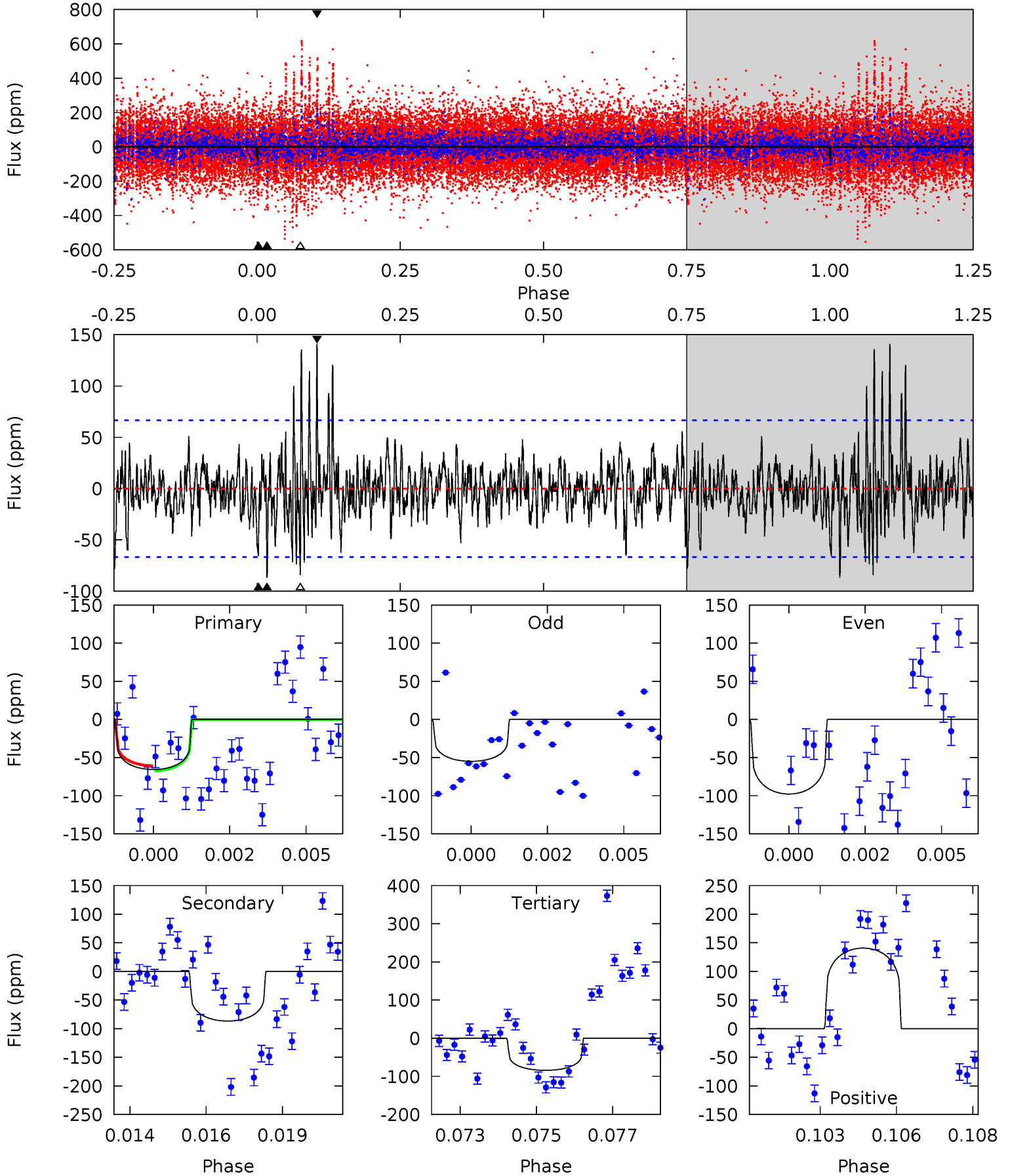
TCE 008245192-03 $P=365.025116$ Days $T_0=446.722391$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-03, P = 364.953235 Days, E = 81.906501 Days

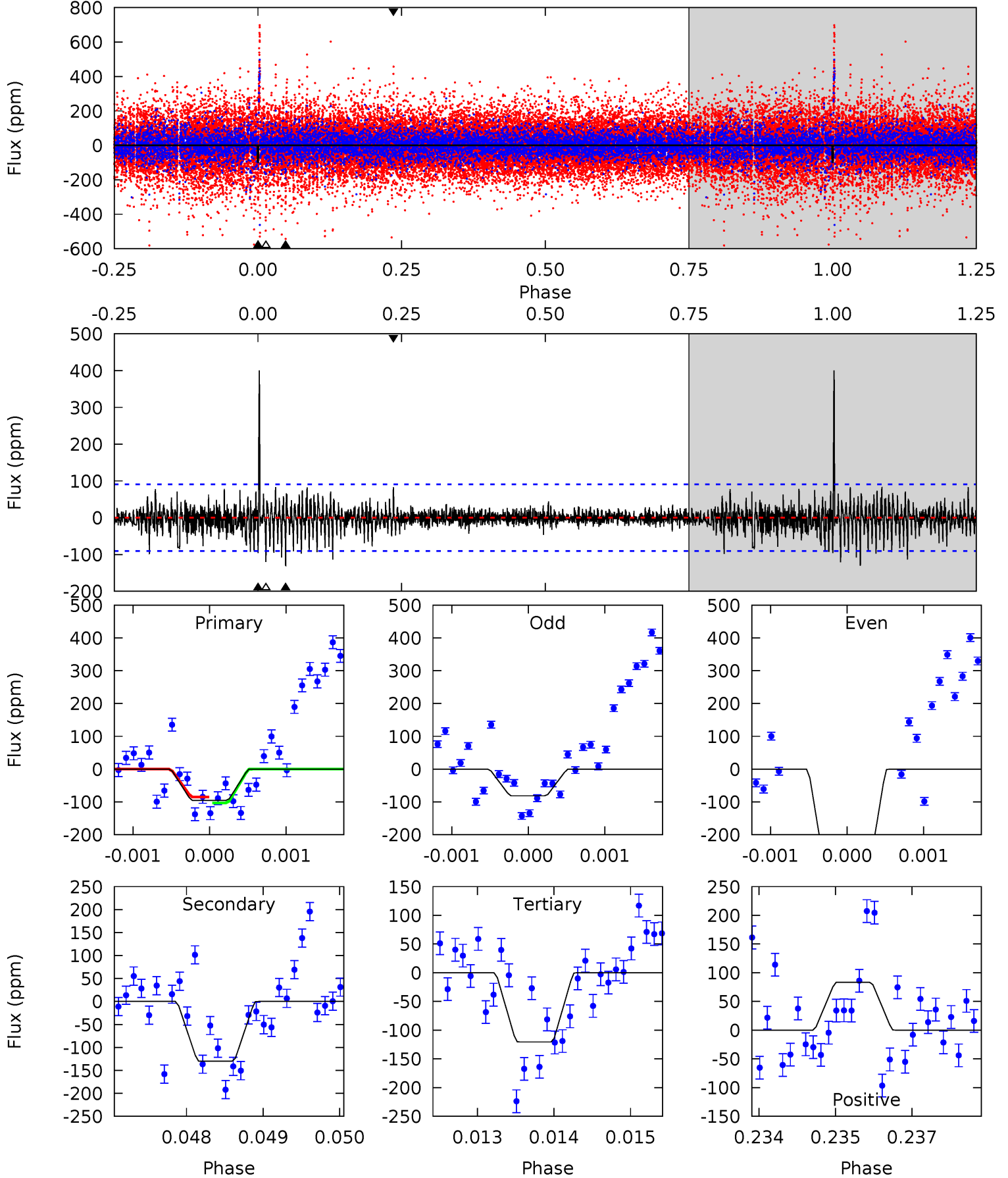
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.23	6.90	6.71	11.2	5.30	3.04	1.81	-1.48	-5.98	0.19	-4.31	1.49	1.23	0.62	0.24



Alt Model-Shift Uniqueness Test

008245192-03, P = 365.025116 Days, E = 81.697275 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.70	7.75	7.19	4.97	5.41	3.22	1.50	-1.49	0.73	0.56	2.79	6.13	1.35	0.75	0.50



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-87 ± 13	$1.12^{+1.09}_{-0.74}$	365^{+21}_{-15}	5715^{+5356}_{-1450}	$37971^{+294081}_{-28252}$
Alt.	-130 ± 17	$1.34^{+1.11}_{-0.89}$	364^{+19}_{-15}	5695^{+5288}_{-1274}	$39055^{+316902}_{-27074}$

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 $A_{obs} \gg 1.0$

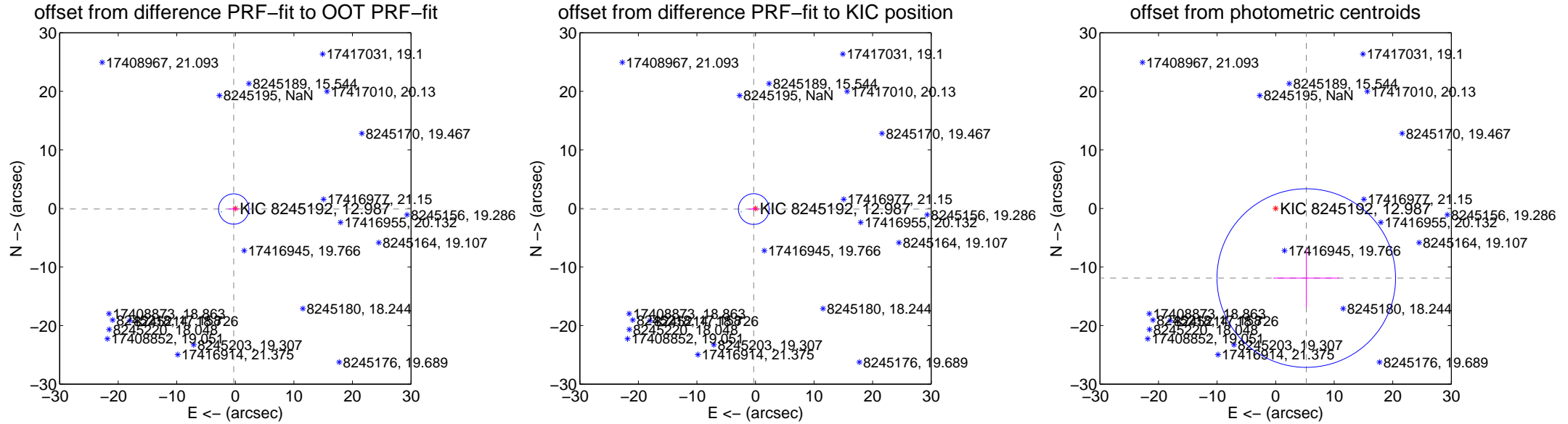
DV Centroid Data

Supplemental centroid analysis for 008245192-03. Kepler magnitude: 12.99. Transit SNR 1.36

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.293 ± 0.862	0.34	0.277 ± 0.905	-0.094 ± 0.296
PRF-fit source offset from KIC position	0.318 ± 0.874	0.36	0.300 ± 0.921	-0.106 ± 0.283
photometric centroid source offset	12.99 ± 5.08	2.56	-5.23 ± 5.63	-11.89 ± 4.97

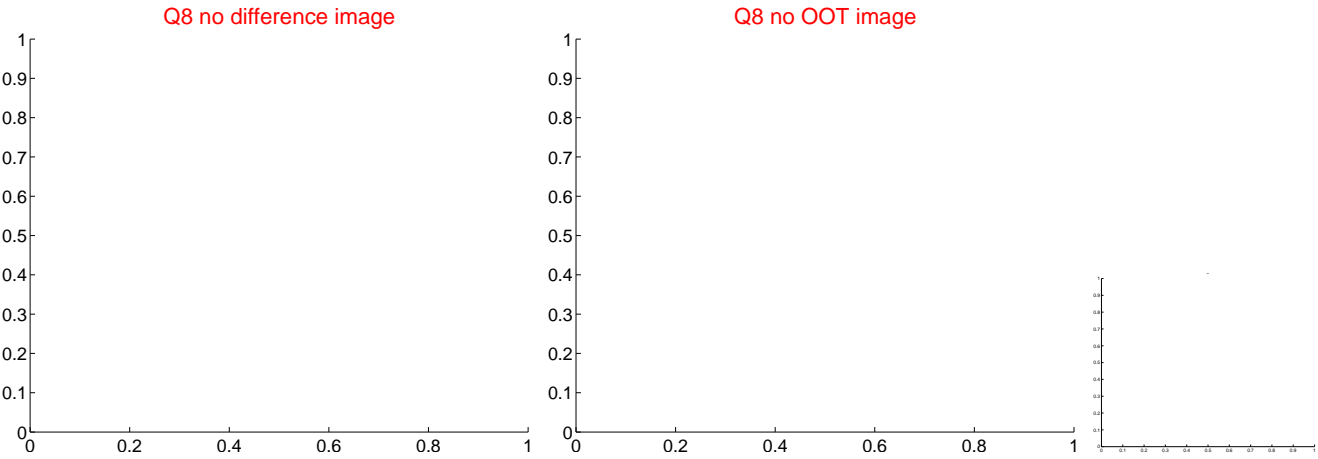
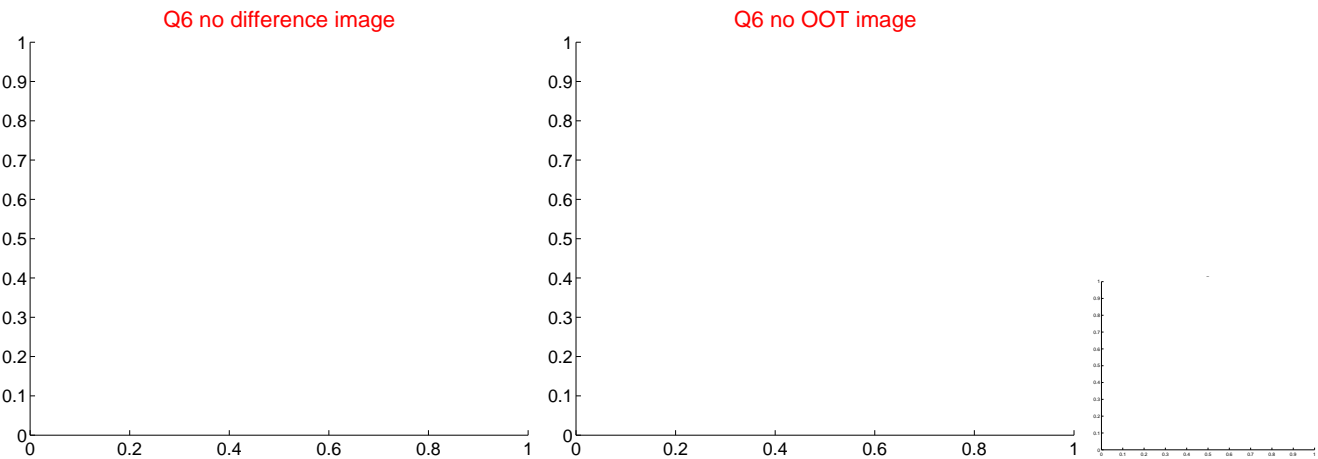
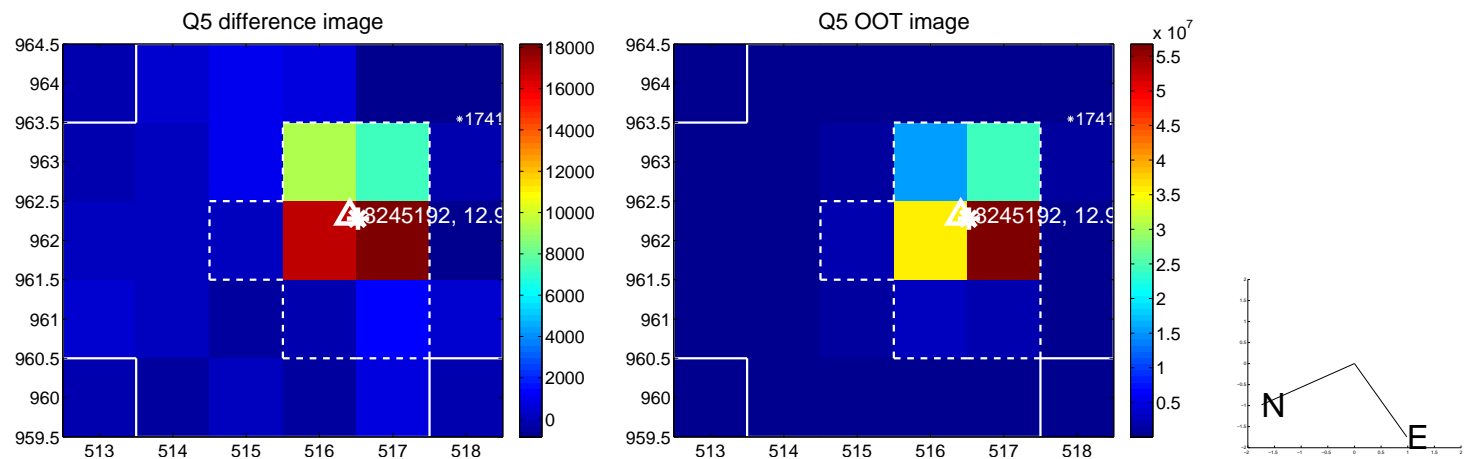


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

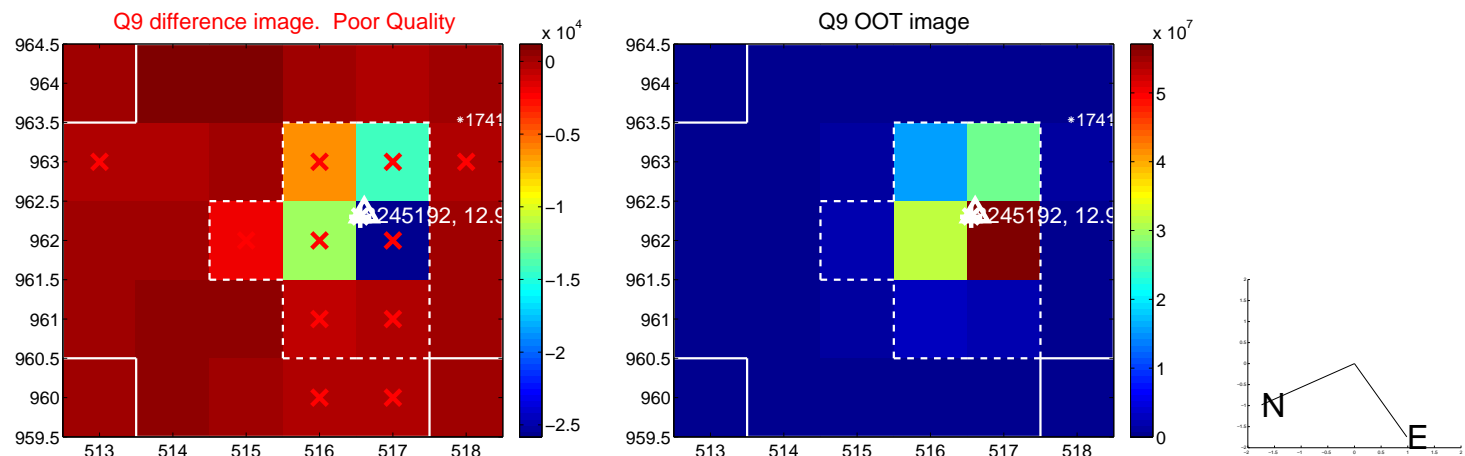
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



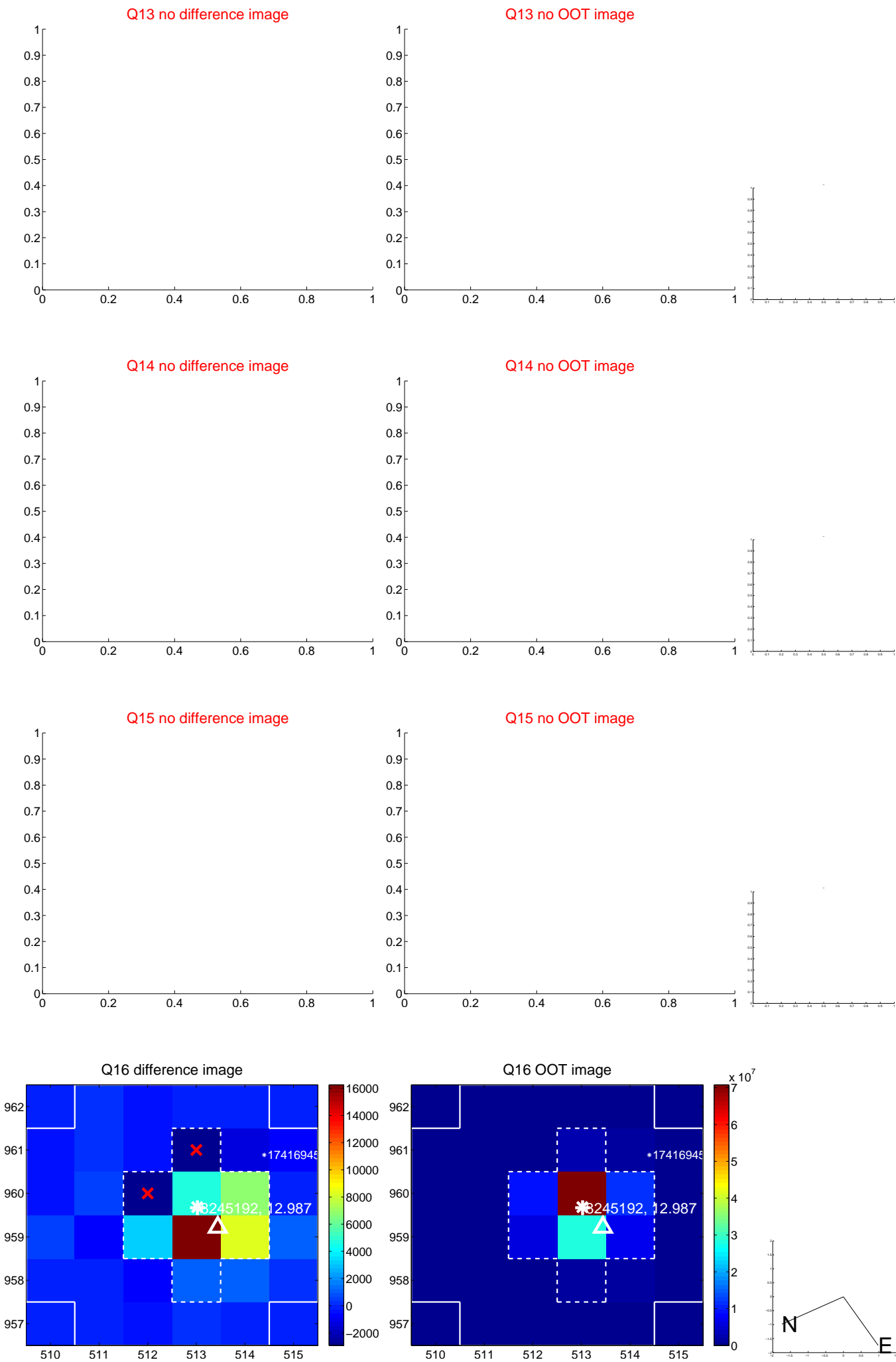
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



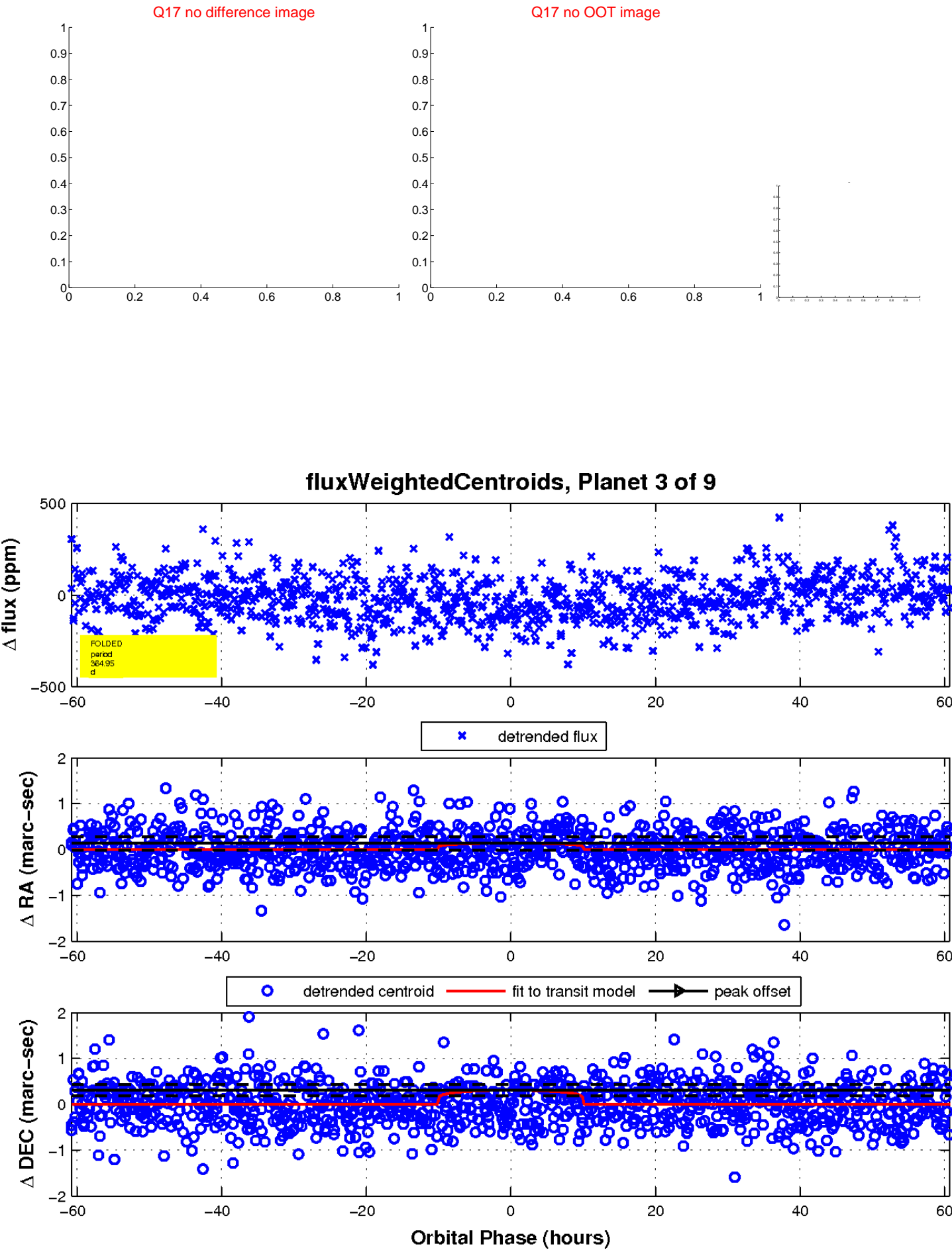
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

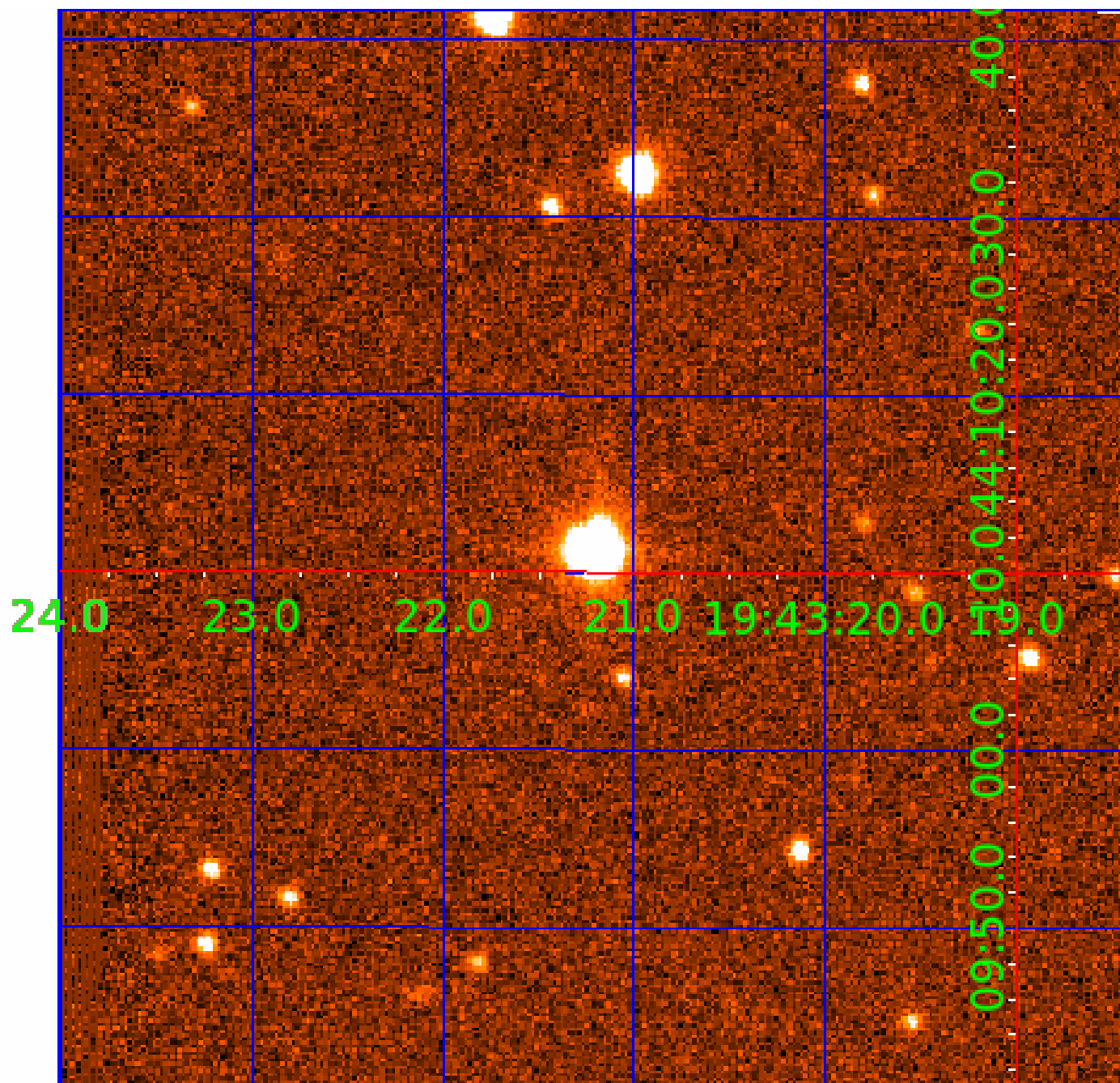


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

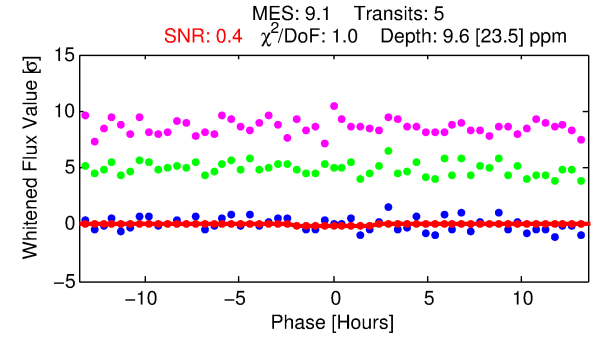
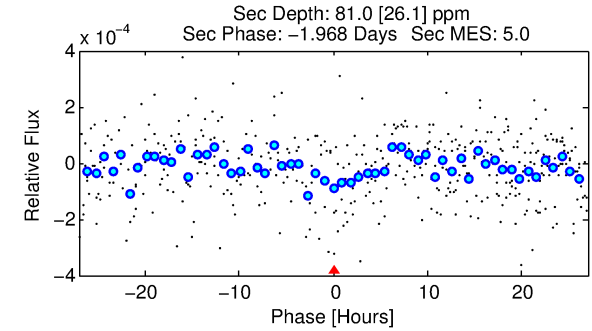
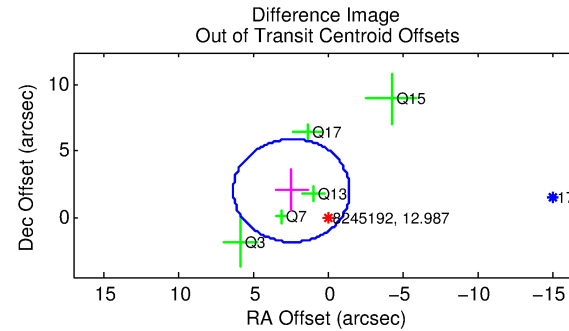
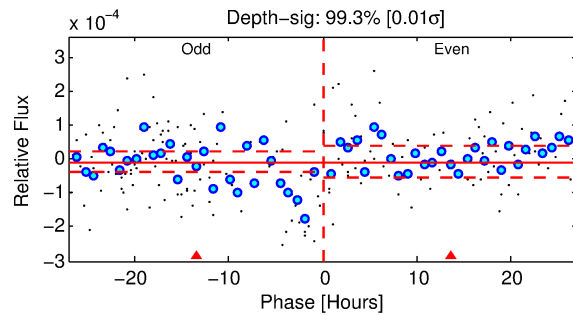
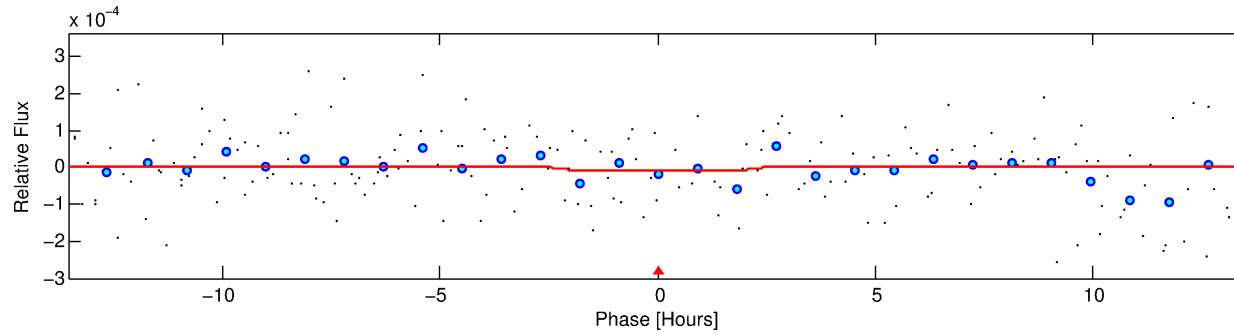
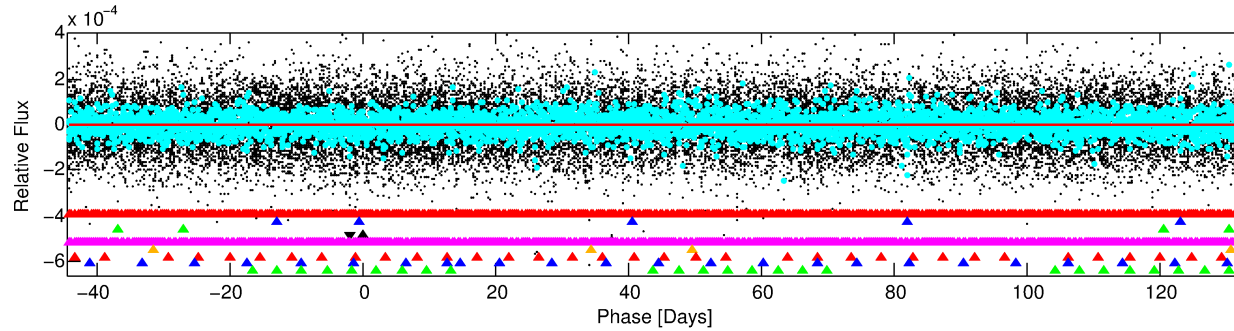
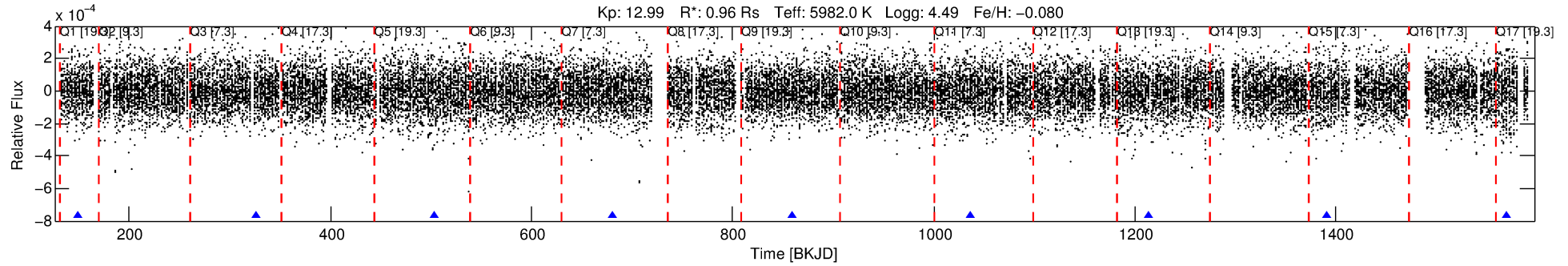
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-04

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 4 of 9 Period: 177.512 d



DV Fit Results:

Period = 177.51202 [0.05051] d
Epoch = 148.6980 [0.2122] BKJD
Rp/R* = 0.0033 [0.0156]
a/R* = 138.13 [3216.46]
b = 0.89 [5.59]
Seff = 2.70 [0.82]
Teff = 327 [25] K
Rp = 0.35 [1.63] Re
a = 0.6243 [0.1158] AU
Ag = 144200.87 [1355105.83] [0.11 σ]
Teffp = 9849 [23132] K [0.4 σ]

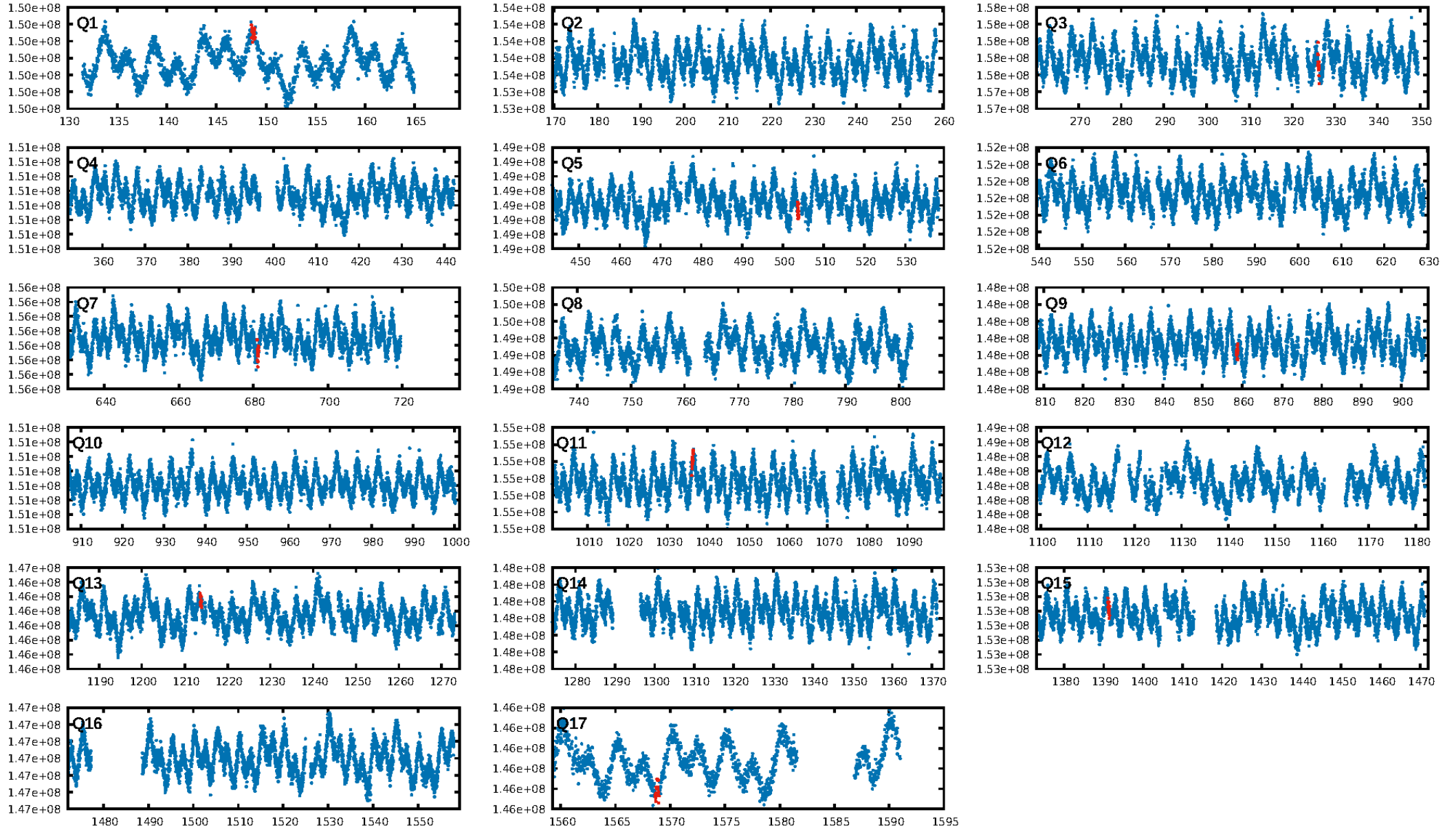
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [304.15 σ]
LongPeriod-sig: 100.0% [477.41 σ]
ModelChiSquare2-sig: 54.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.81e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.853
Centroid-sig: 2.3%
Centroid-so: 28.778 arcsec [1.75 σ]
OotOffset-rm: 3.148 arcsec [2.42 σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-rm: 3.139 arcsec [2.42 σ]
KicOffset-st: 0/3/0/2 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.00 [0/8]

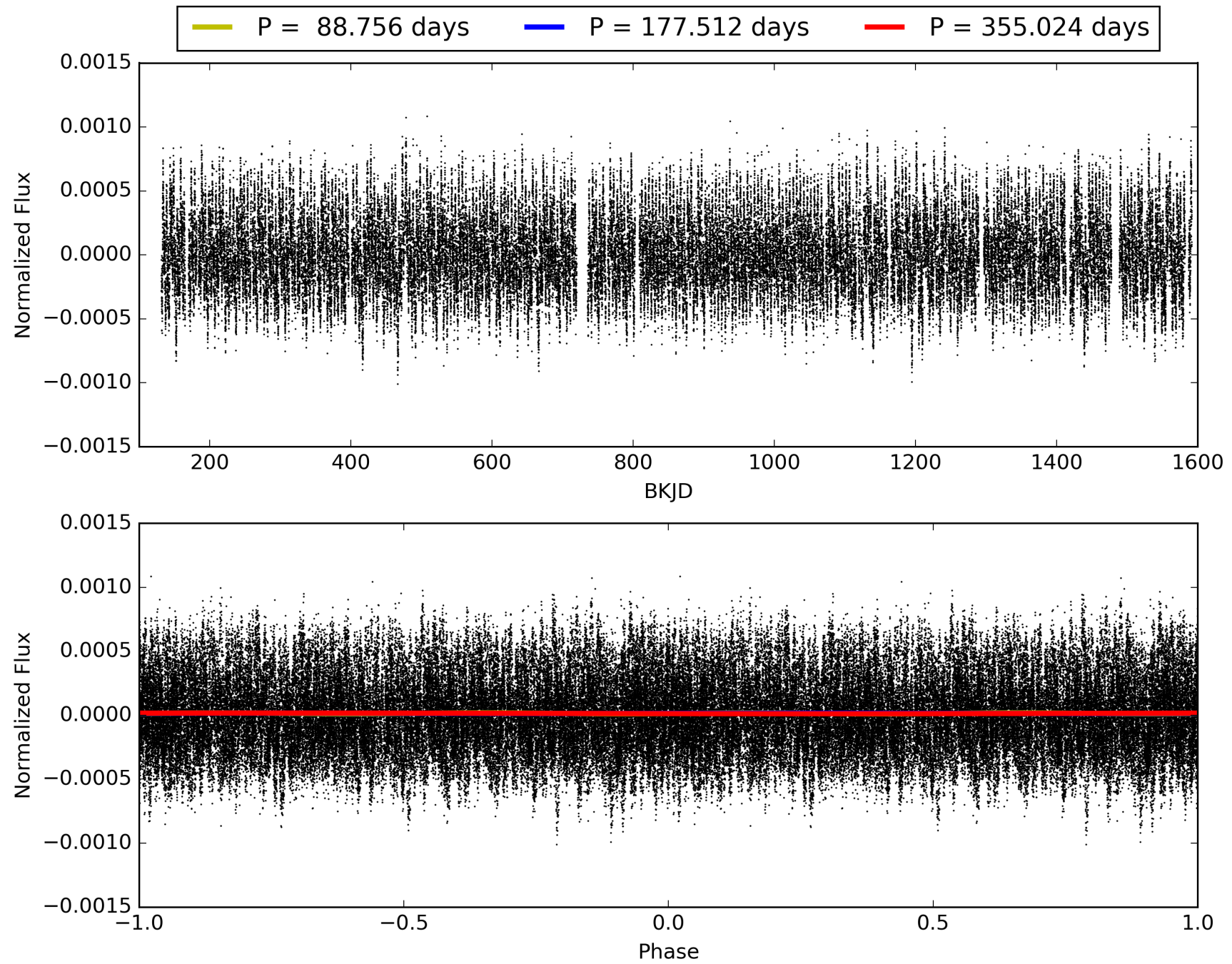
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:44 Z

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

TCE 008245192-04, PDC Light Curves

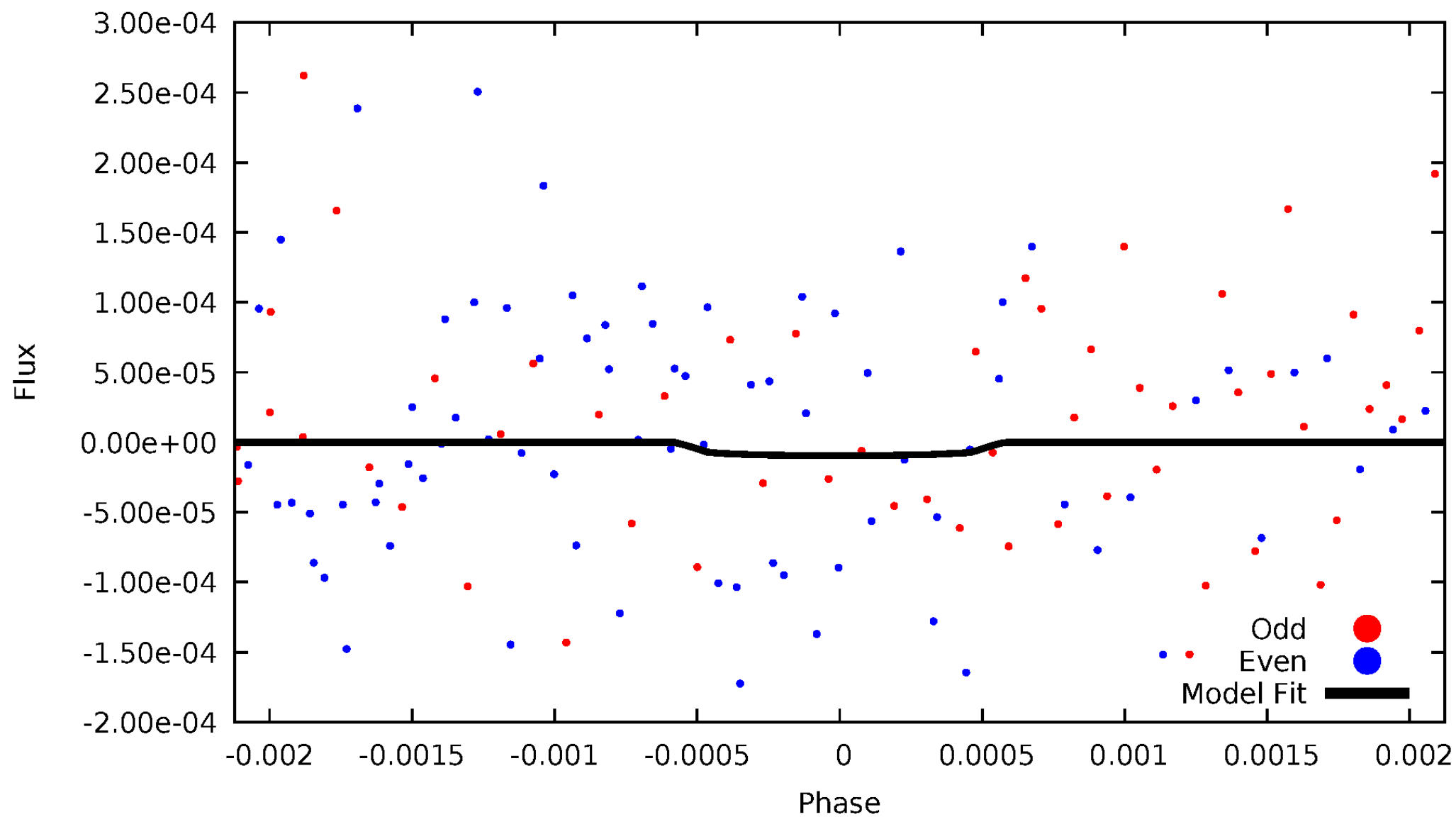


TCE 008245192-04



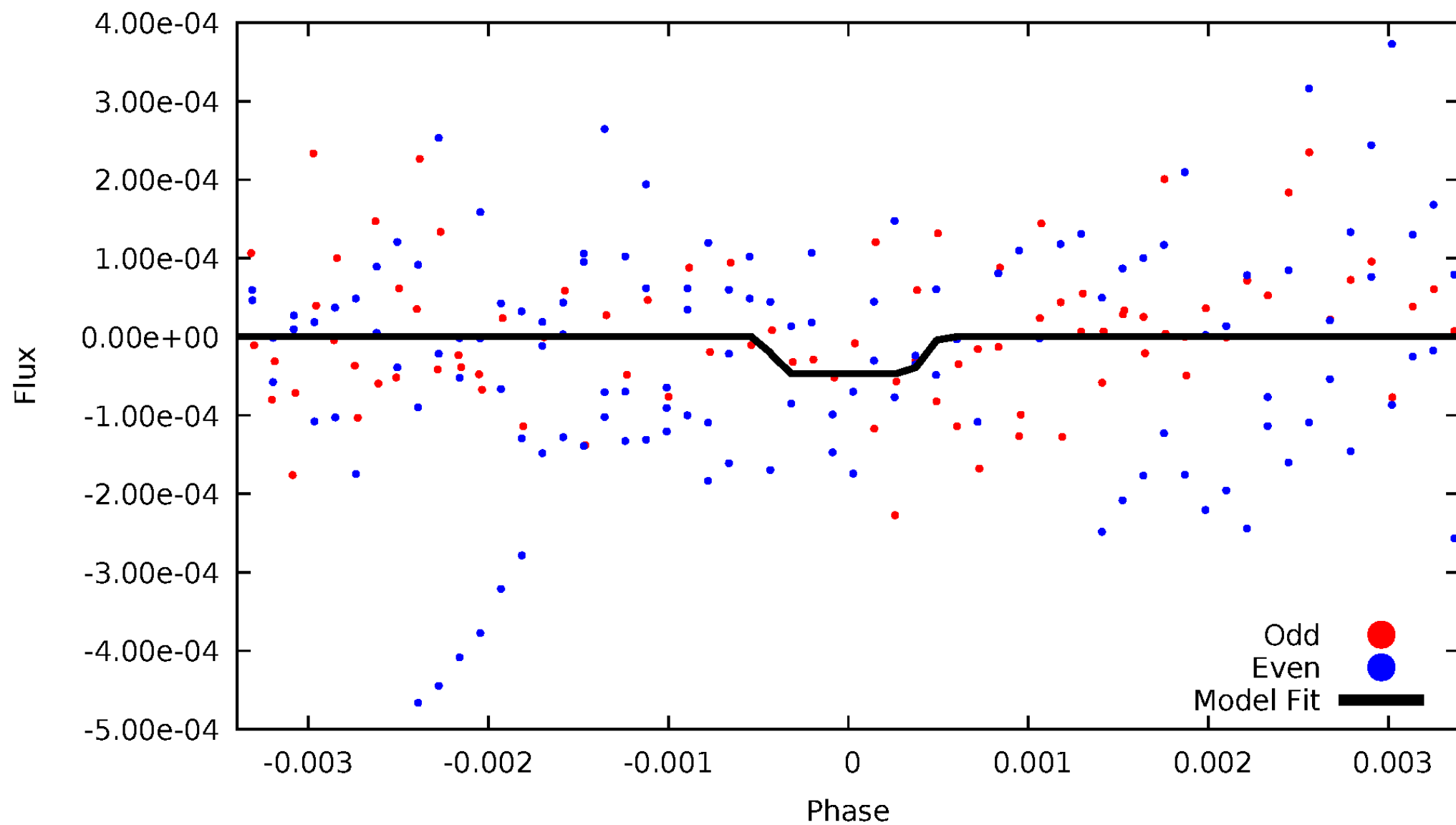
DV Odd/Even

TCE 008245192-04



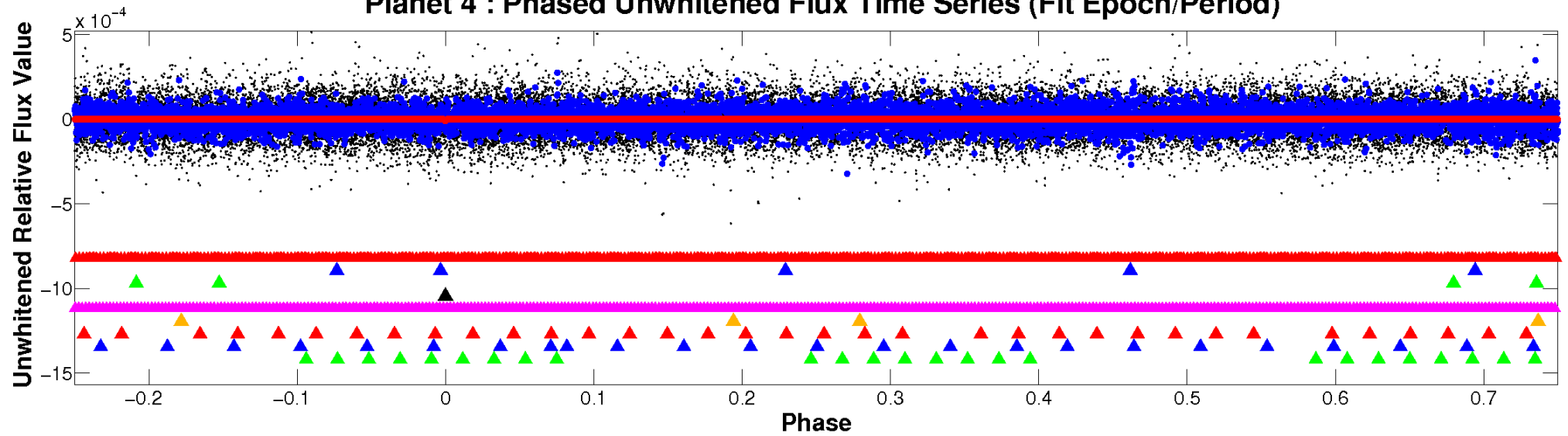
ALT Odd/Even

TCE 008245192-04

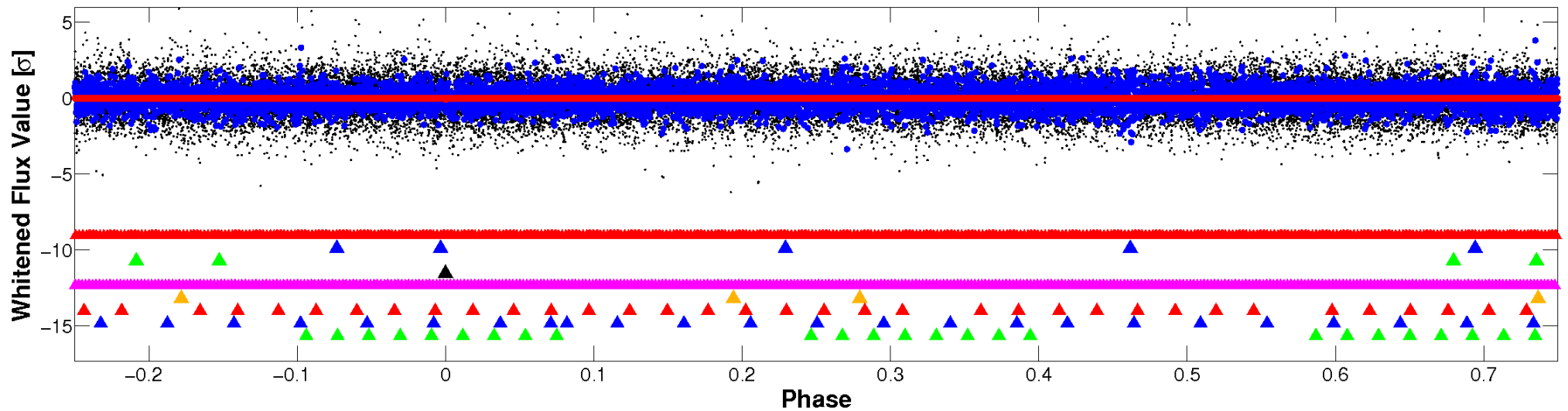


Non-Whitened Vs. Whitened Light Curve

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

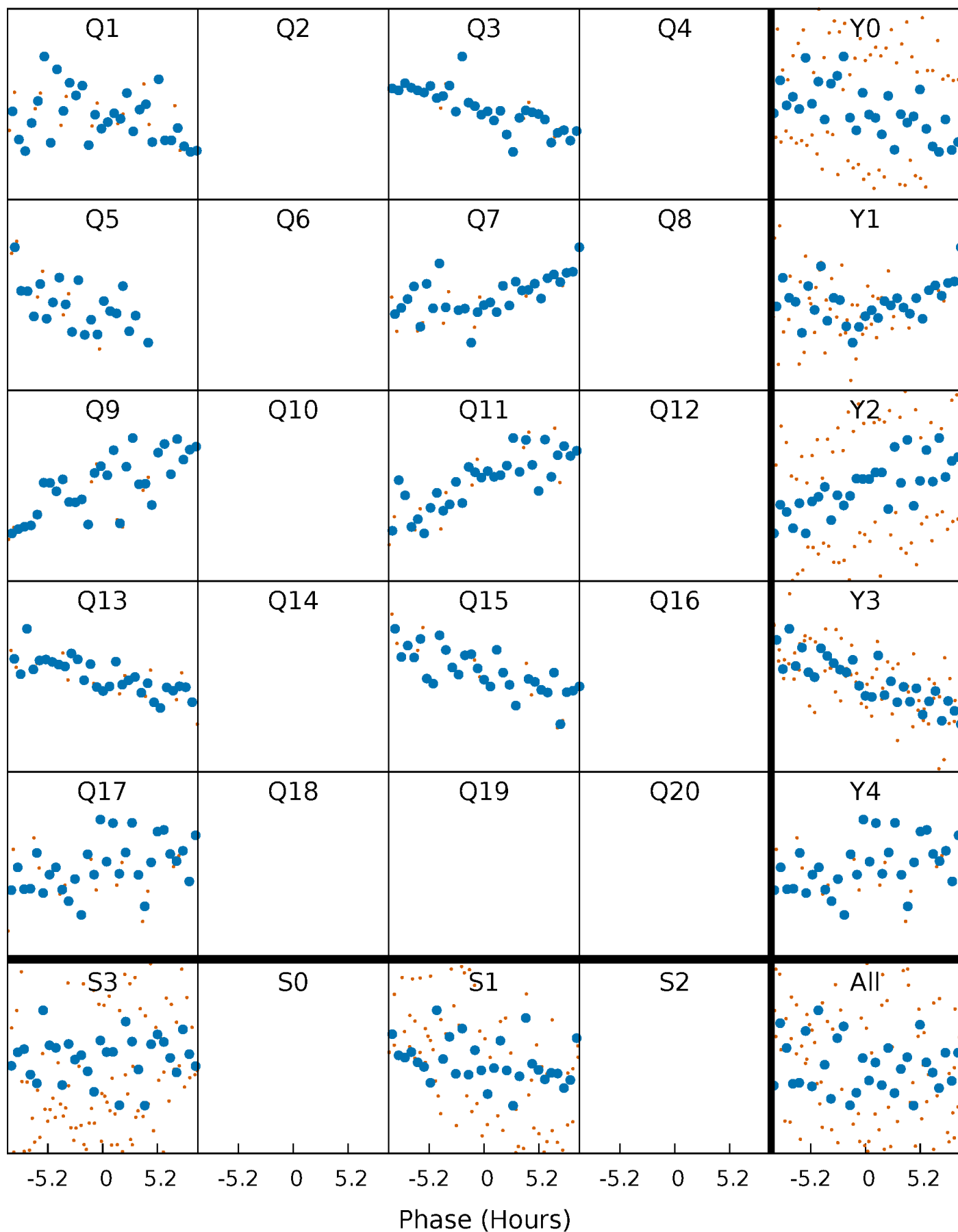


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



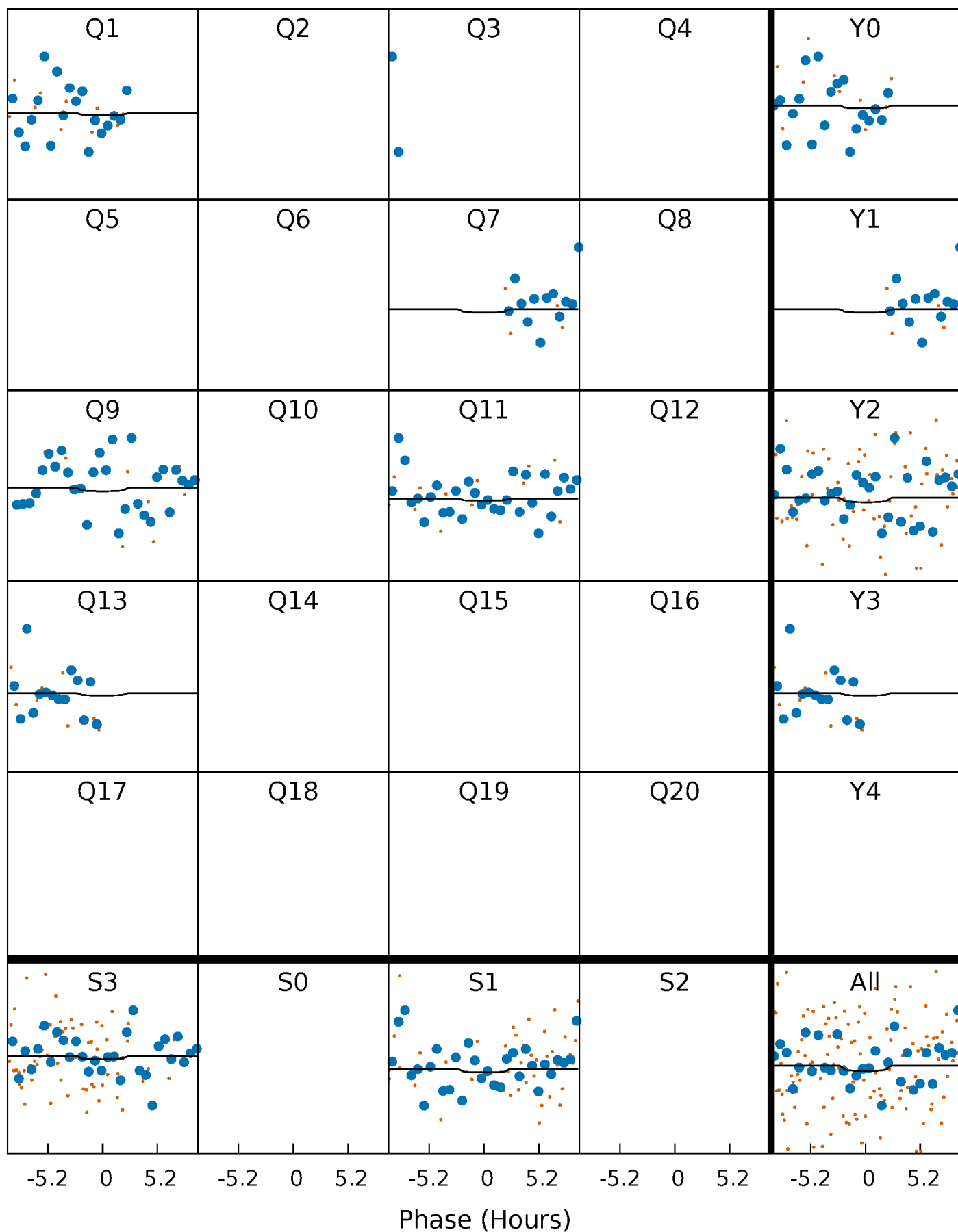
PDC Quarter-Phased Transit Curves

TCE 008245192-04 P=177.512016 Days $T_0=148.697973$ (BKJD)



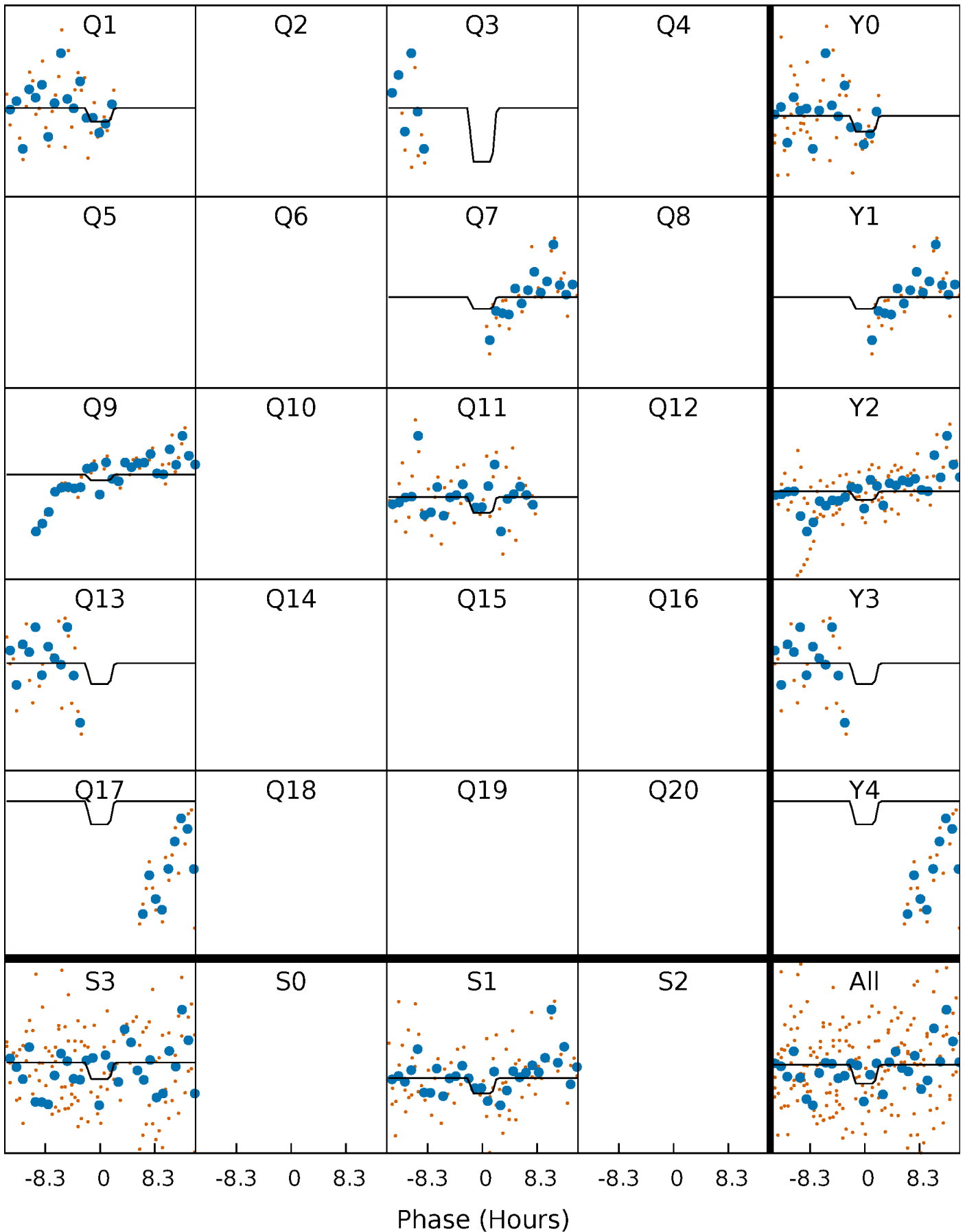
DV Quarter-Phased Transit Curves

TCE 008245192-04 P=177.512016 Days $T_0=148.697973$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

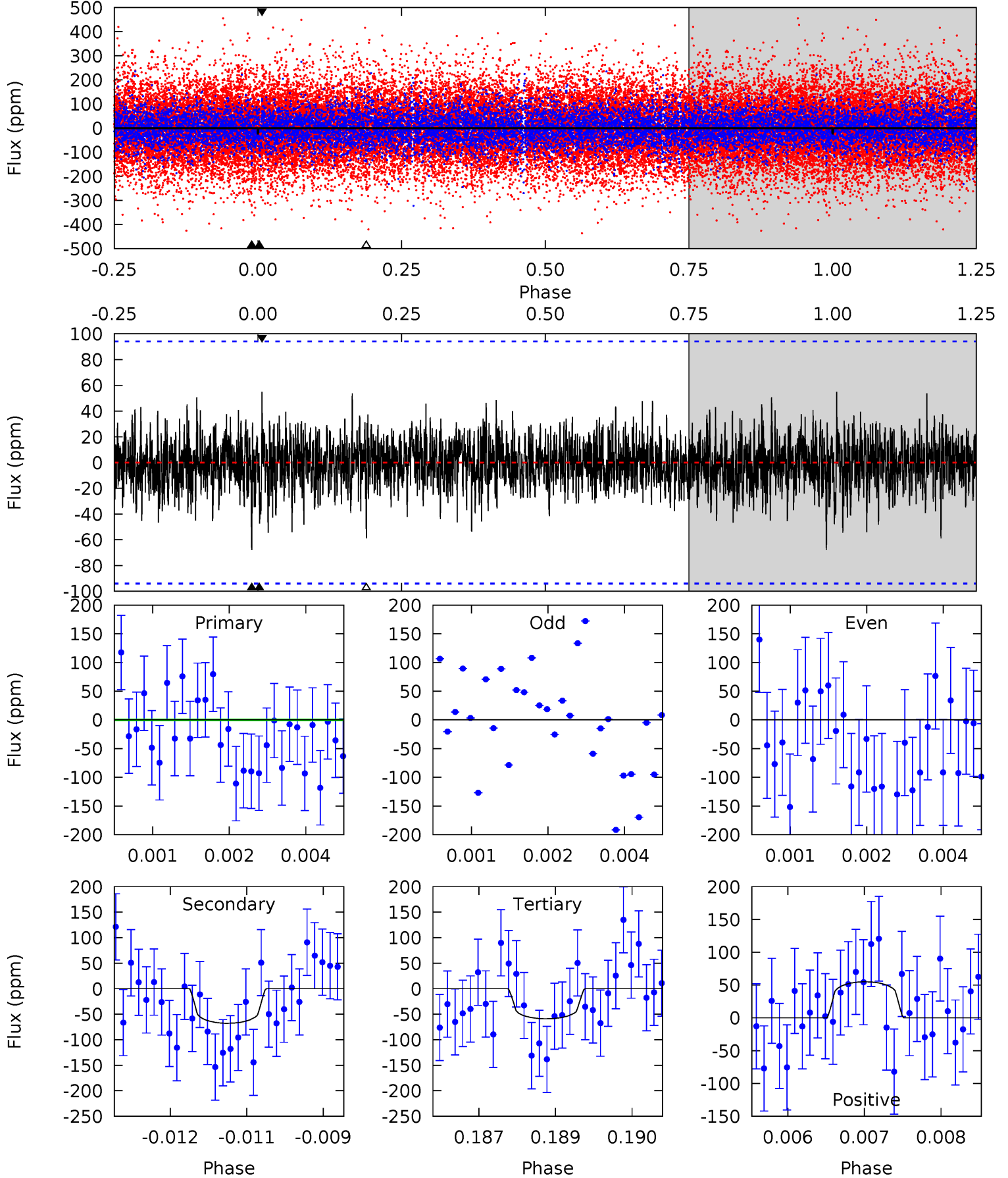
TCE 008245192-04 P=177.526769 Days $T_0=148.712973$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-04, P = 177.512016 Days, E = 148.697973 Days

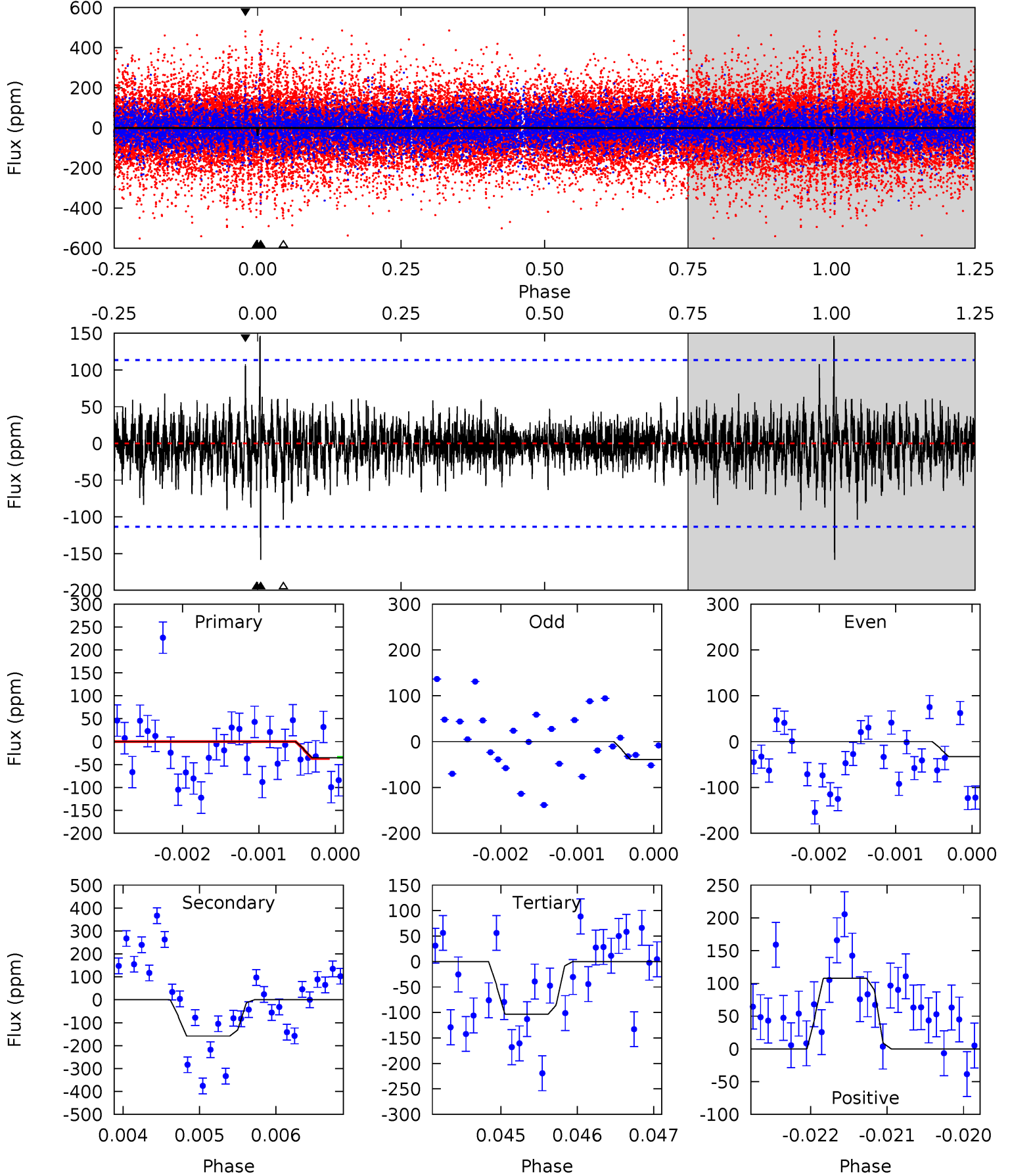
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.29	3.91	3.40	3.17	5.42	3.25	0.88	-2.11	-1.89	0.51	0.74	0.57	1.03	0.45	0.17



Alt Model-Shift Uniqueness Test

008245192-04, P = 177.526769 Days, E = 148.712973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.70	7.60	4.96	5.18	5.45	3.28	1.05	-3.26	-3.47	2.64	2.43	0.15	1.56	0.48	0.06



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-68 ± 17	$1.24^{+1.28}_{-0.81}$	463^{+27}_{-20}	5076^{+3737}_{-1184}	8858^{+64400}_{-6703}
Alt.	-159 ± 21	$1.50^{+1.35}_{-1.04}$	463^{+24}_{-20}	5684^{+6494}_{-1360}	$14546^{+148250}_{-10438}$

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 $A_{obs} \gg 1.0$

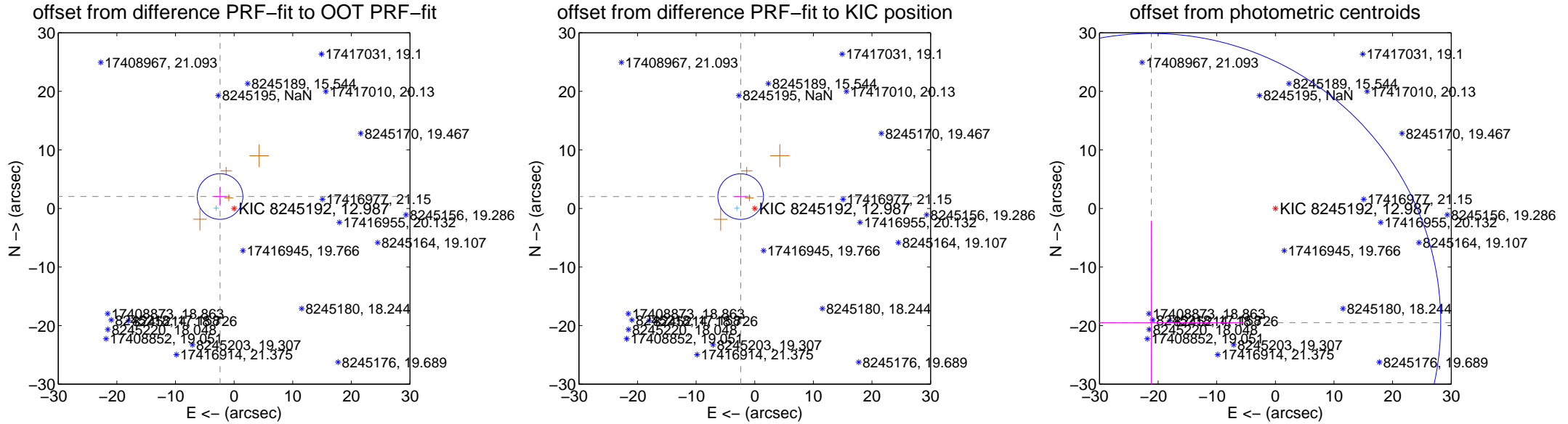
DV Centroid Data

Supplemental centroid analysis for 008245192-04. Kepler magnitude: 12.99. Transit SNR 0.44

There are 1 quarters with good PRF difference image offsets

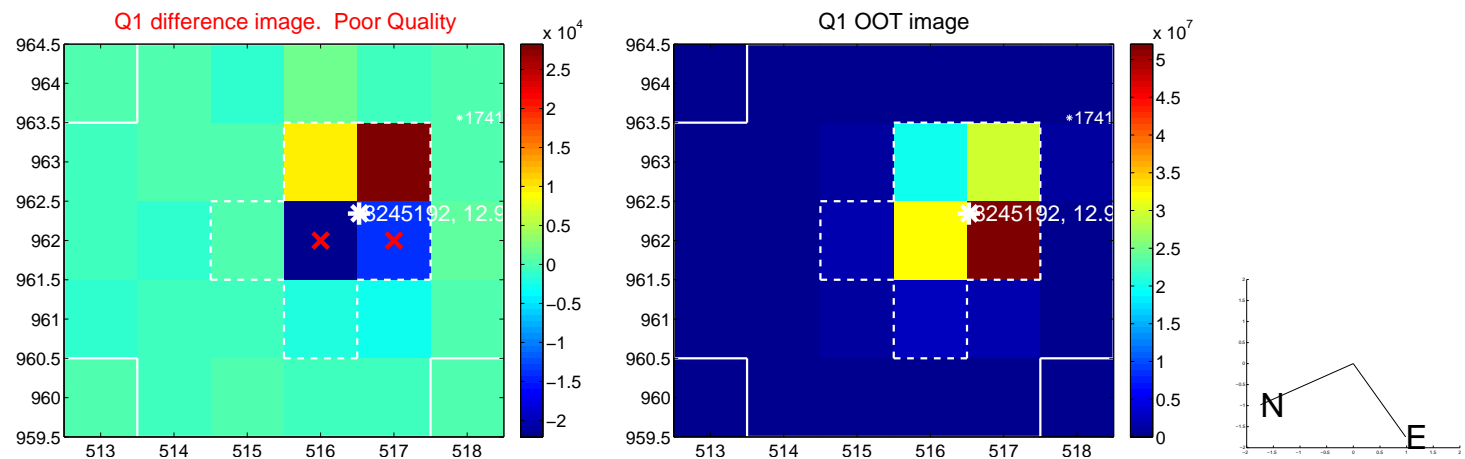
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.148 ± 1.298	2.42	2.399 ± 1.065	2.038 ± 1.565
PRF-fit source offset from KIC position	3.139 ± 1.297	2.42	2.398 ± 1.062	2.025 ± 1.569
photometric centroid source offset	28.78 ± 16.46	1.75	21.17 ± 15.63	-19.50 ± 17.39



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

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



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

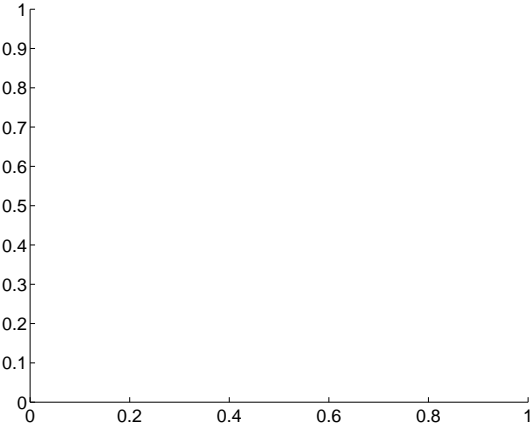
Q5 no difference image



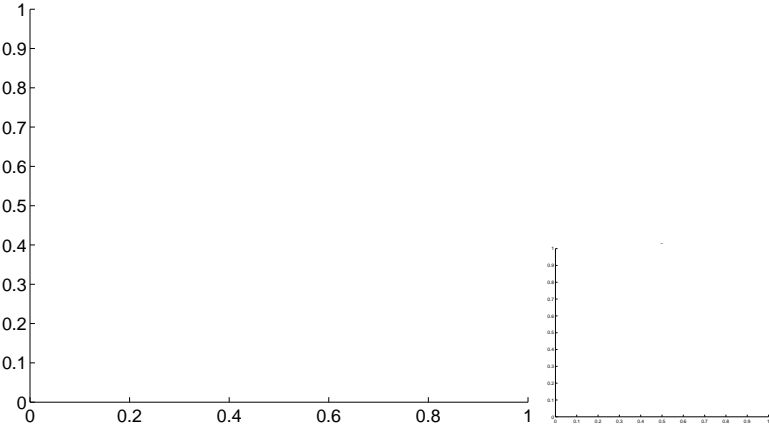
Q5 no OOT image



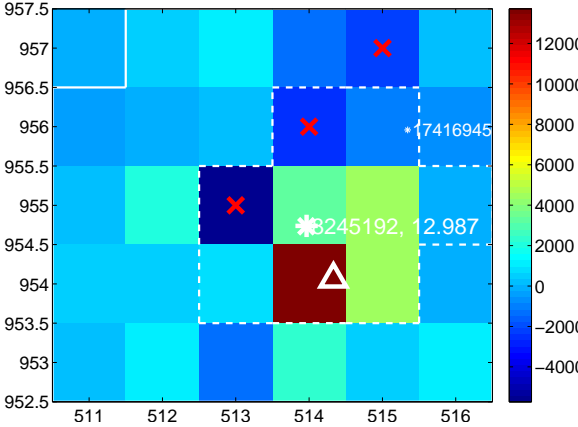
Q6 no difference image



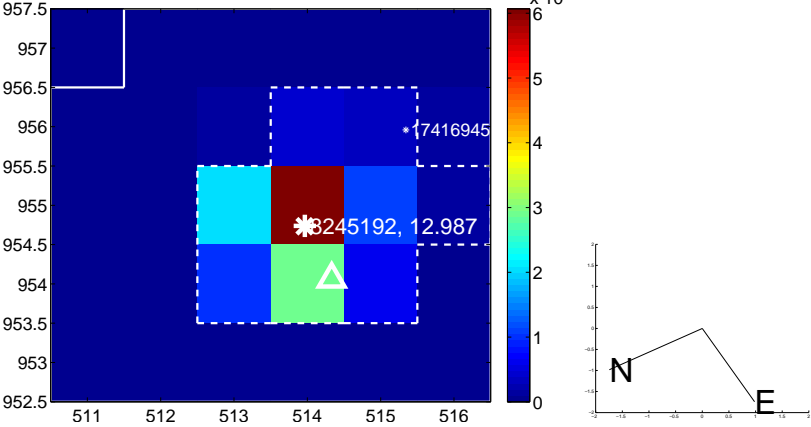
Q6 no OOT image



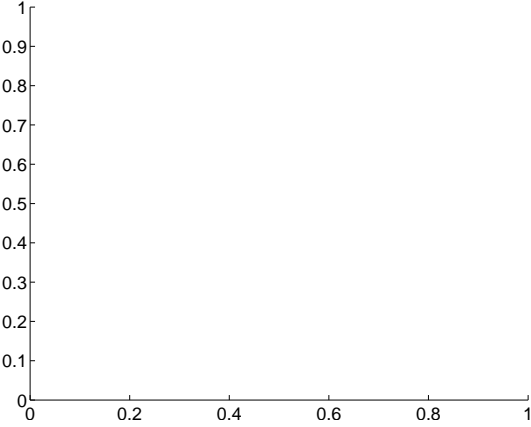
Q7 difference image



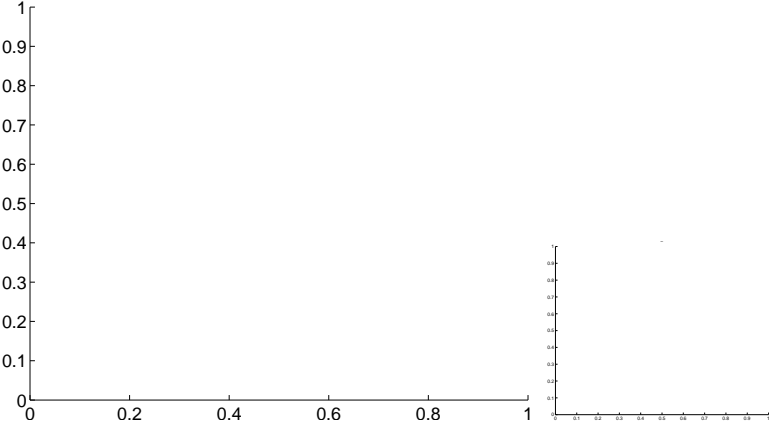
Q7 OOT image



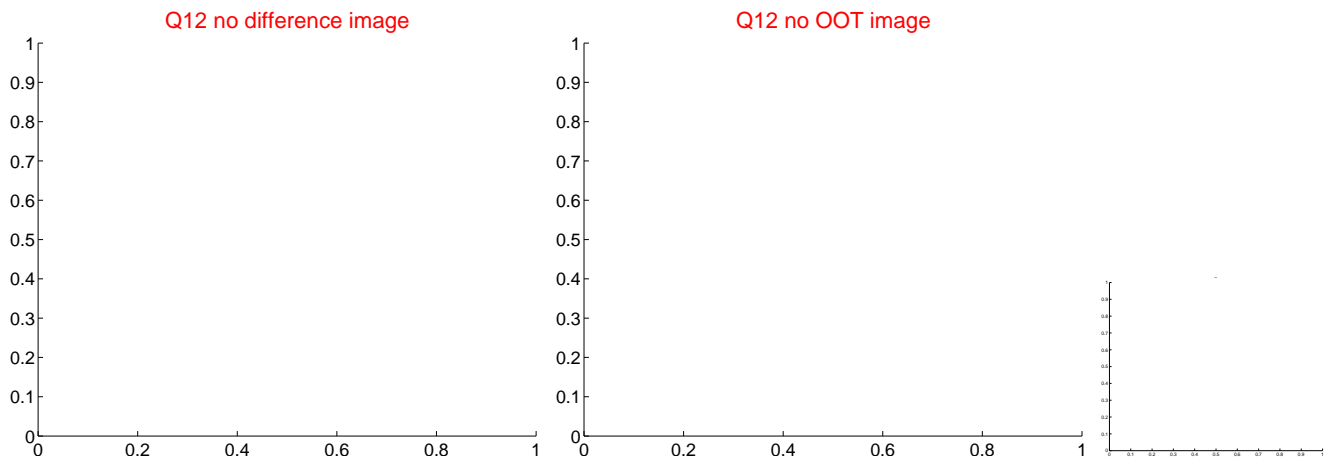
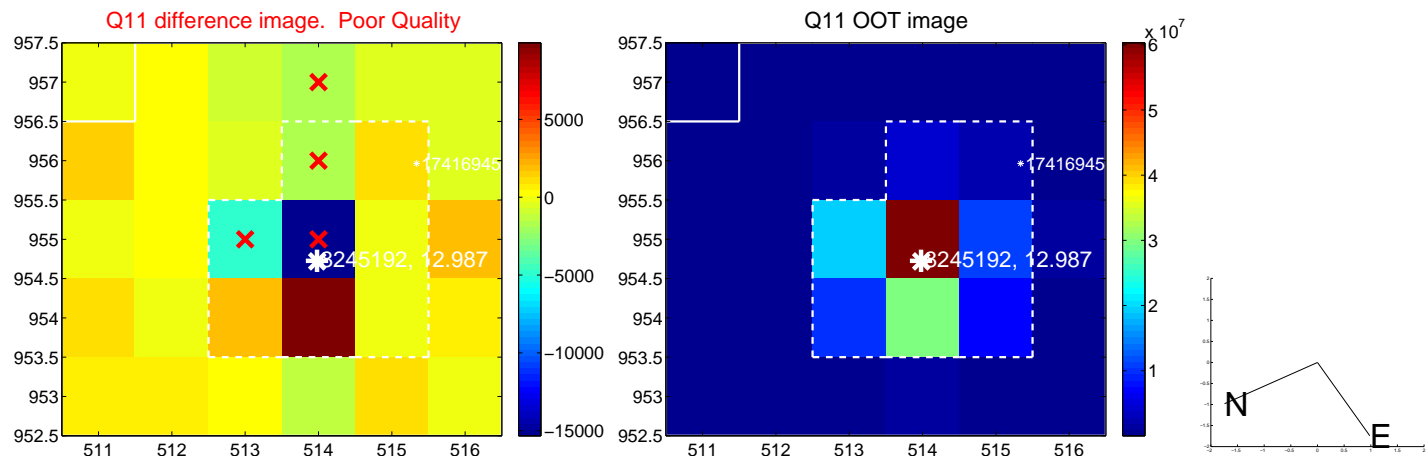
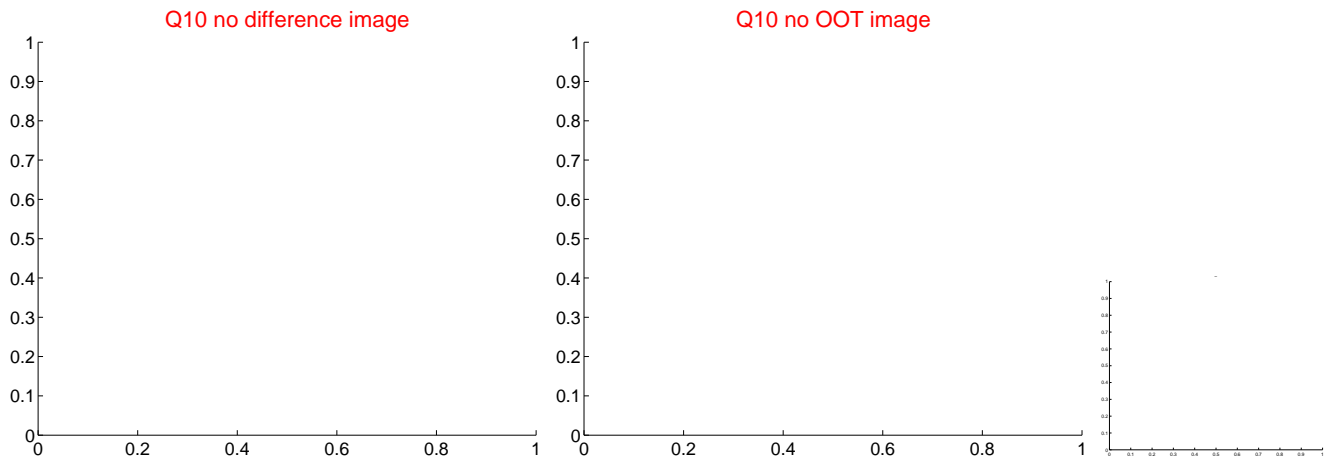
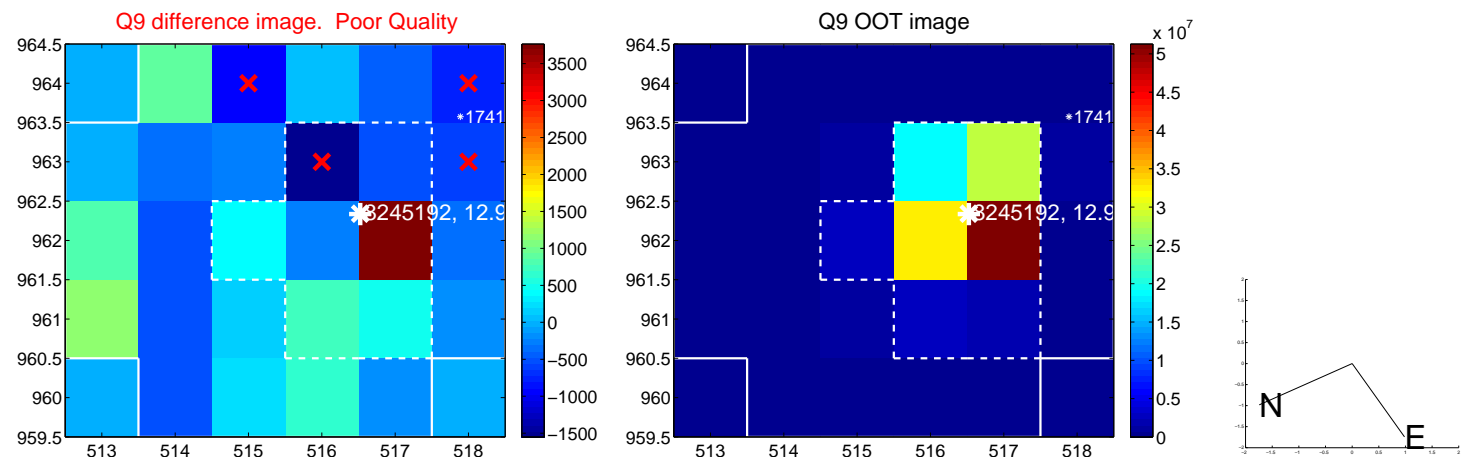
Q8 no difference image



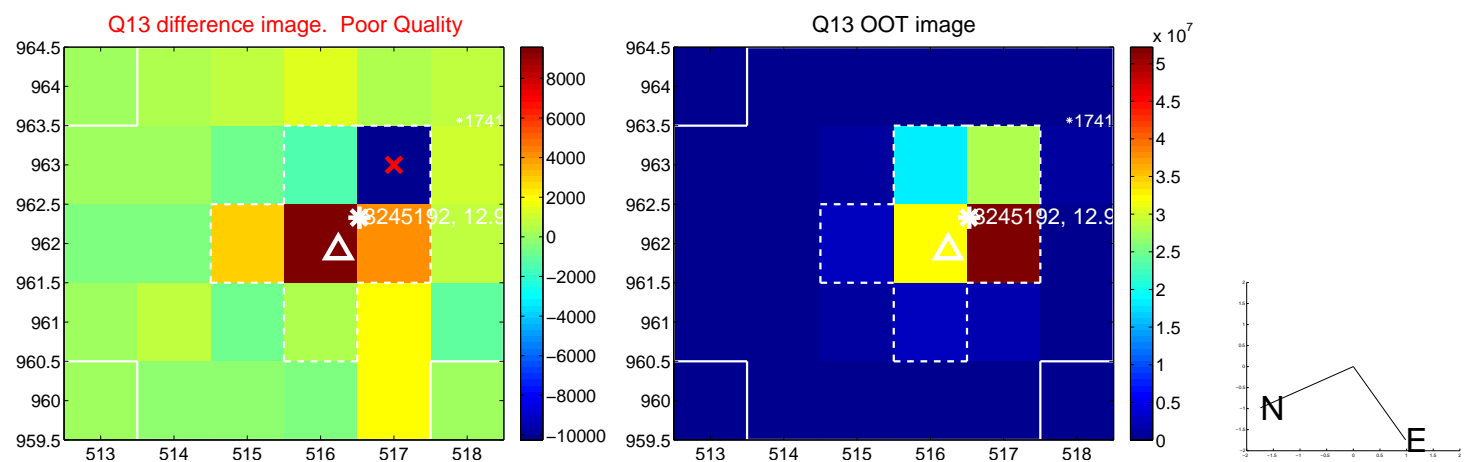
Q8 no OOT image



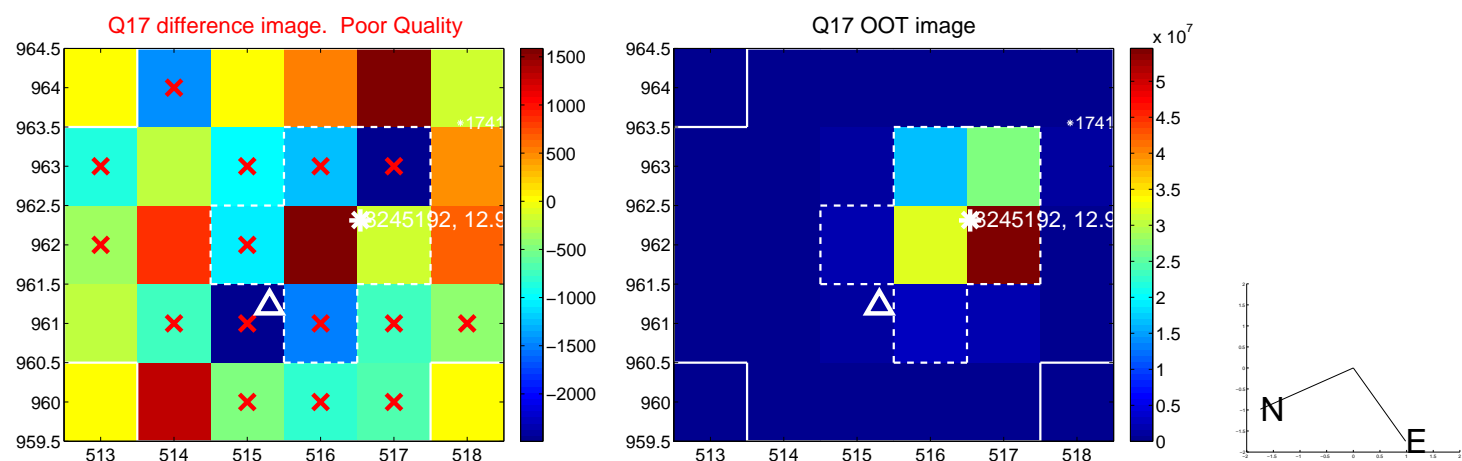
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



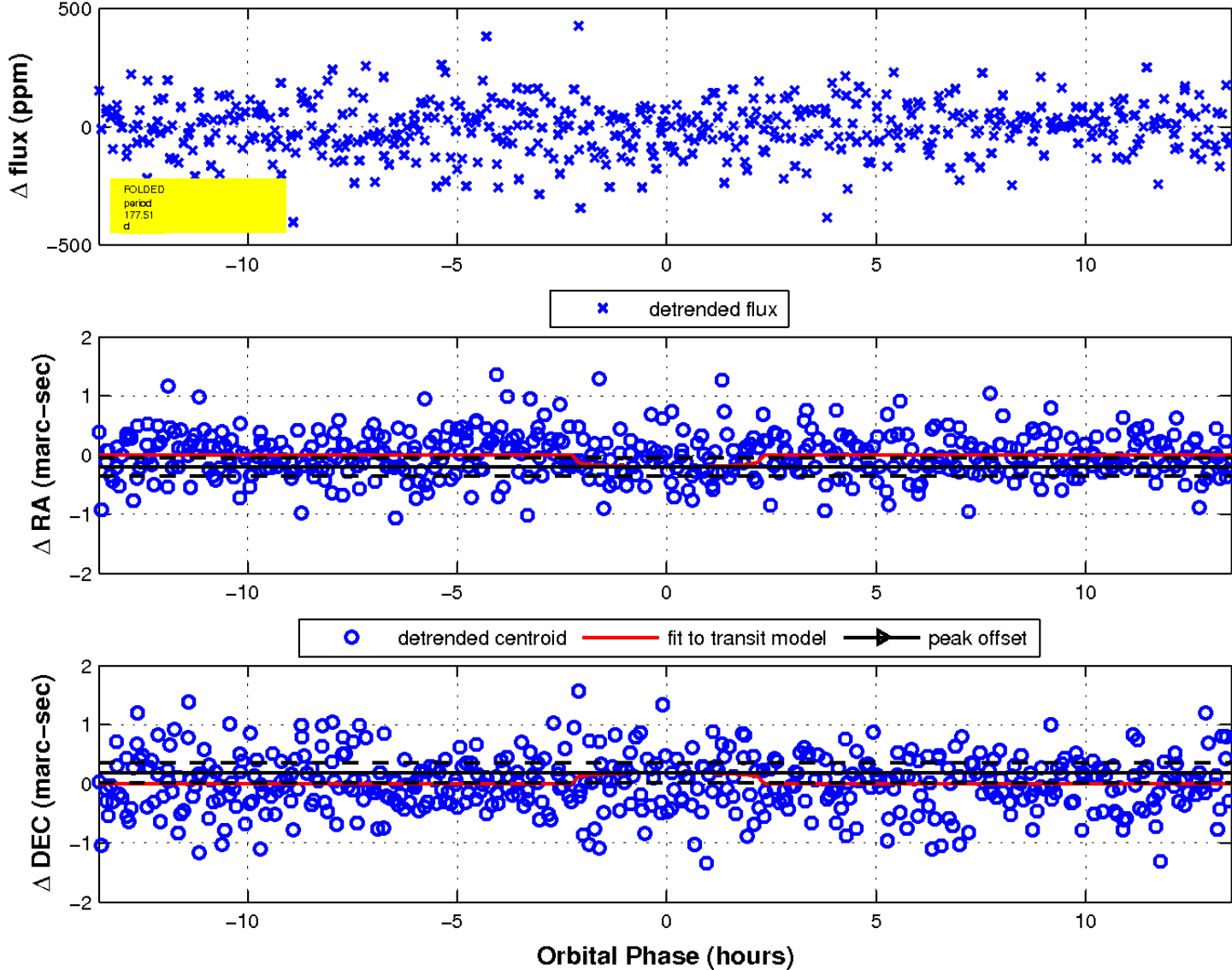
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

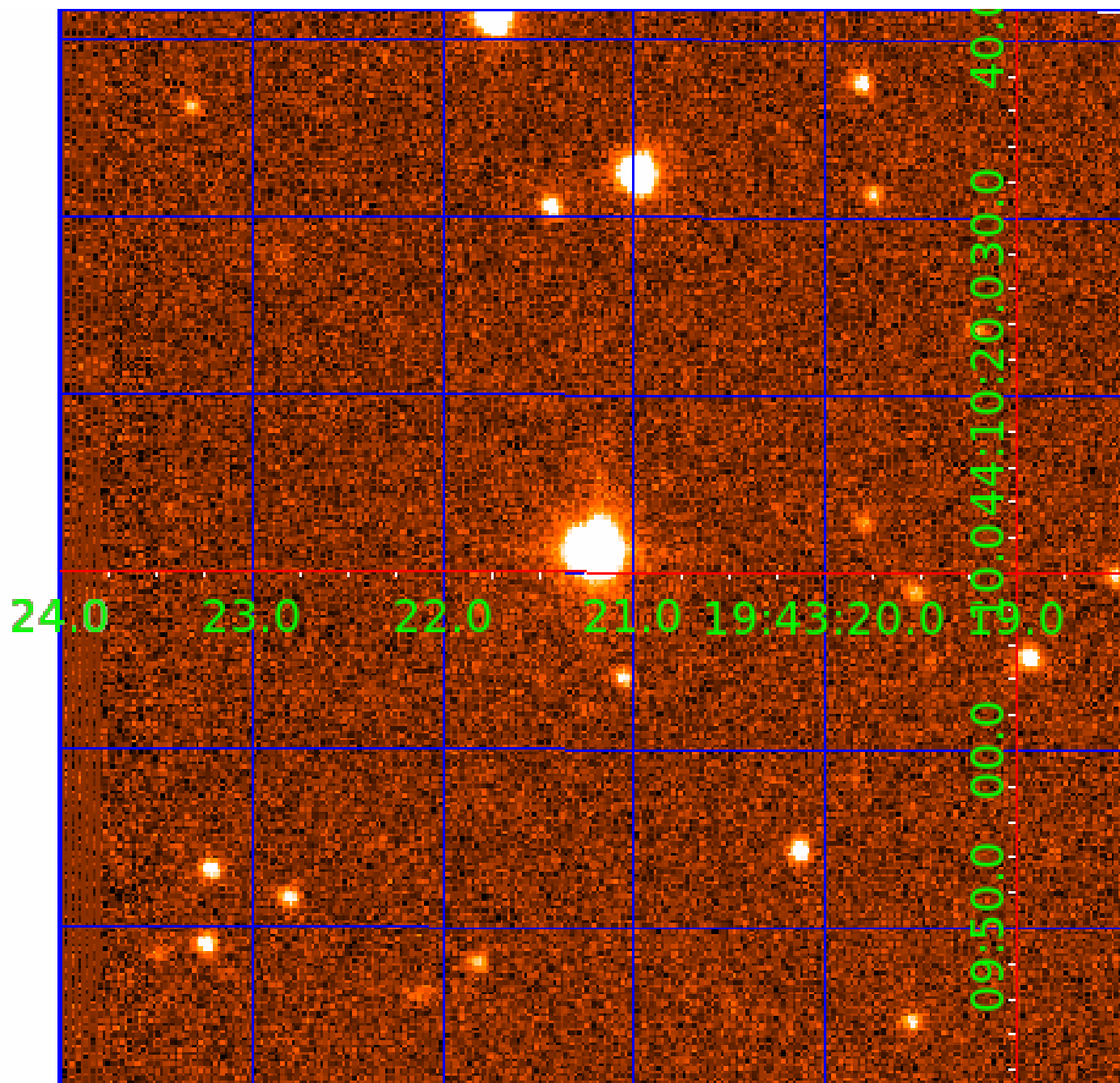


fluxWeightedCentroids, Planet 4 of 9



UKIRT Image

Declination



KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

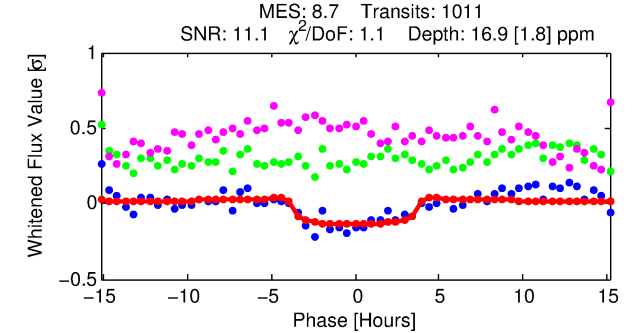
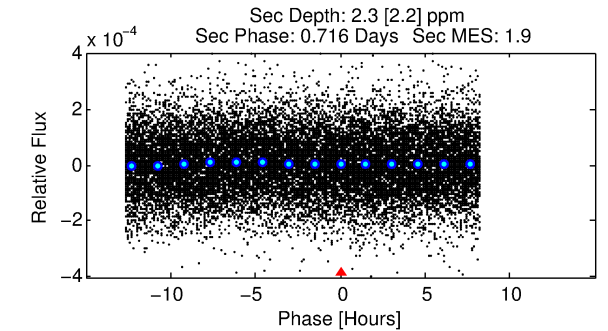
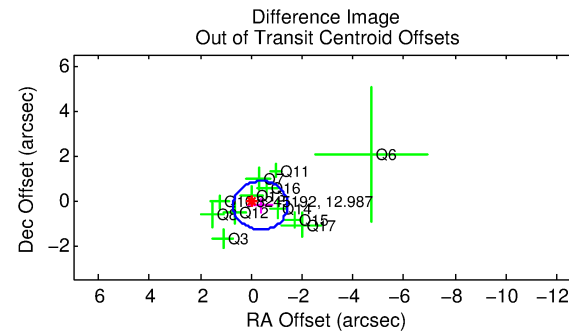
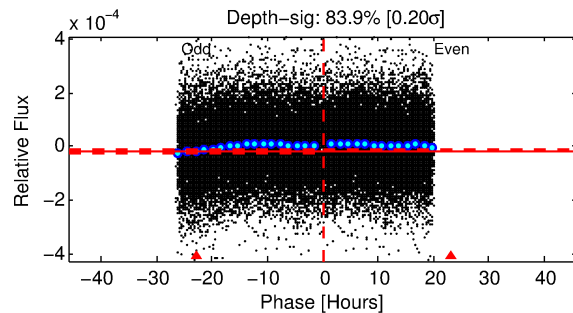
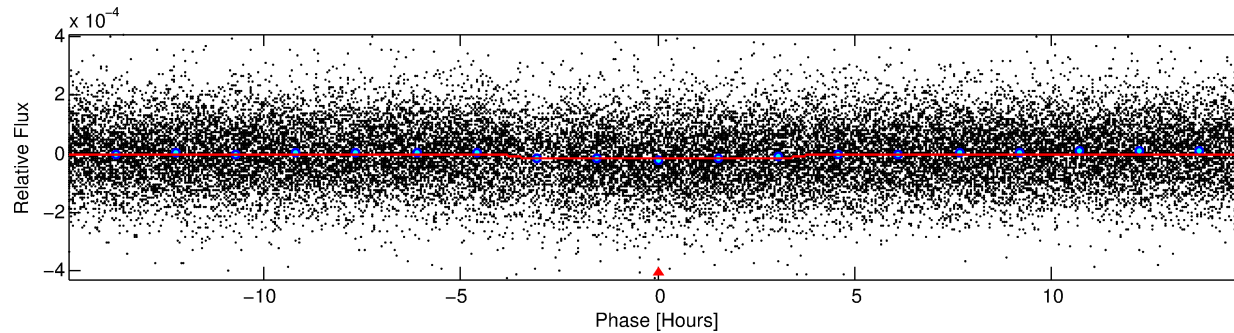
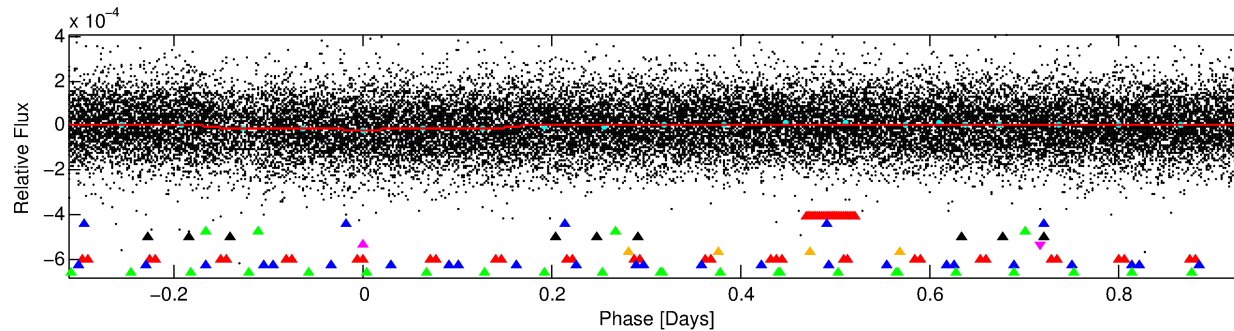
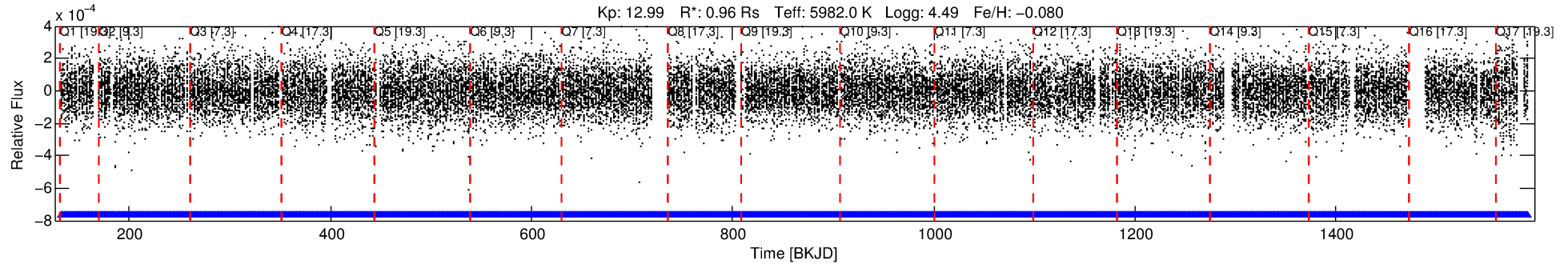
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-05

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 5 of 9 Period: 1.247 d



DV Fit Results:

Period = 1.24705 [0.00002] d
Epoch = 132.7135 [0.0068] BKJD
Rp/R* = 0.0041 [0.0021]
a/R* = 1.20 [0.91]
b = 0.74 [1.56]
Seff = 2007.60 [606.78]
Teq = 1707 [129] K
Rp = 0.43 [0.24] Re
a = 0.0229 [0.0042] AU
Ag = 3.61 [5.22] [0.50 σ]
Teffp = 3638 [1297] K [1.48 σ]

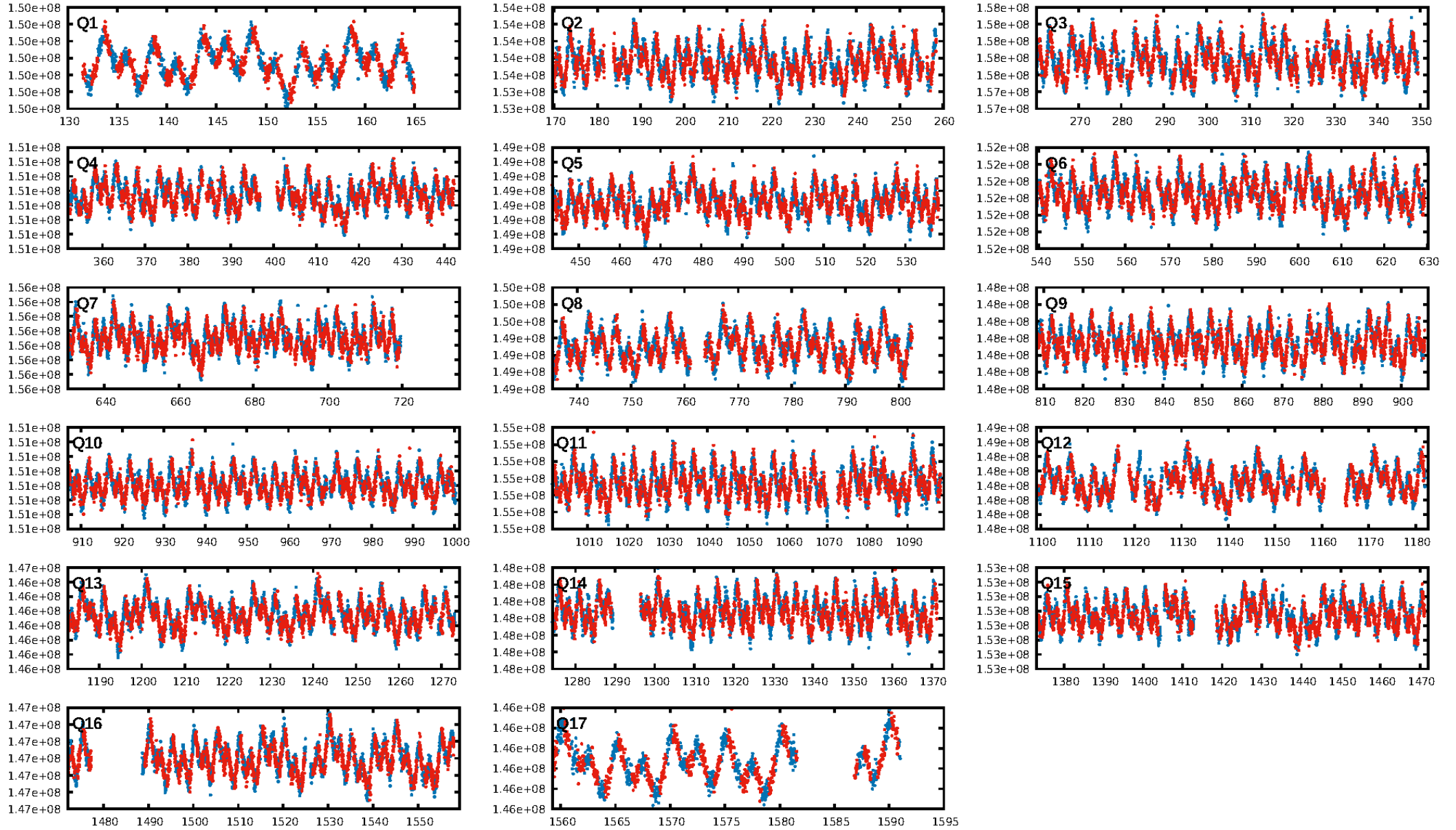
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 98.3% [2.38 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.66e-21
RollingBand-fgt: 1.00 [968/968]
GhostDiagnostic-chr: 1.761
Centroid-sig: 2.2%
Centroid-so: 1.135 arcsec [1.64 σ]
OotOffset-rm: 0.422 arcsec [1.17 σ]
KicOffset-rm: 0.414 arcsec [1.06 σ]
OotOffset-st: 3/4/3/2 [12]
KicOffset-st: 3/4/3/2 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 0.00 [0/17]

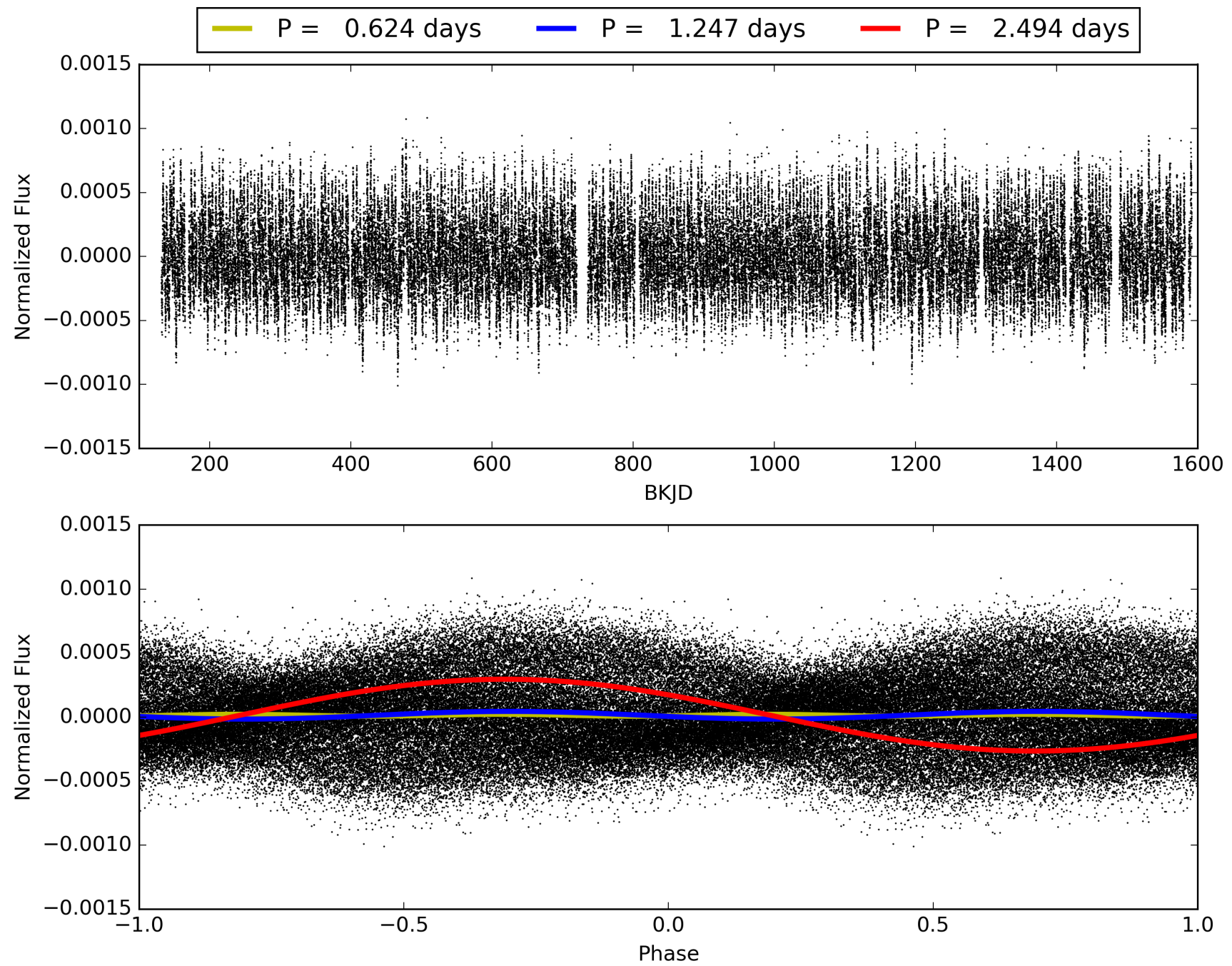
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:53 Z

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

TCE 008245192-05, PDC Light Curves

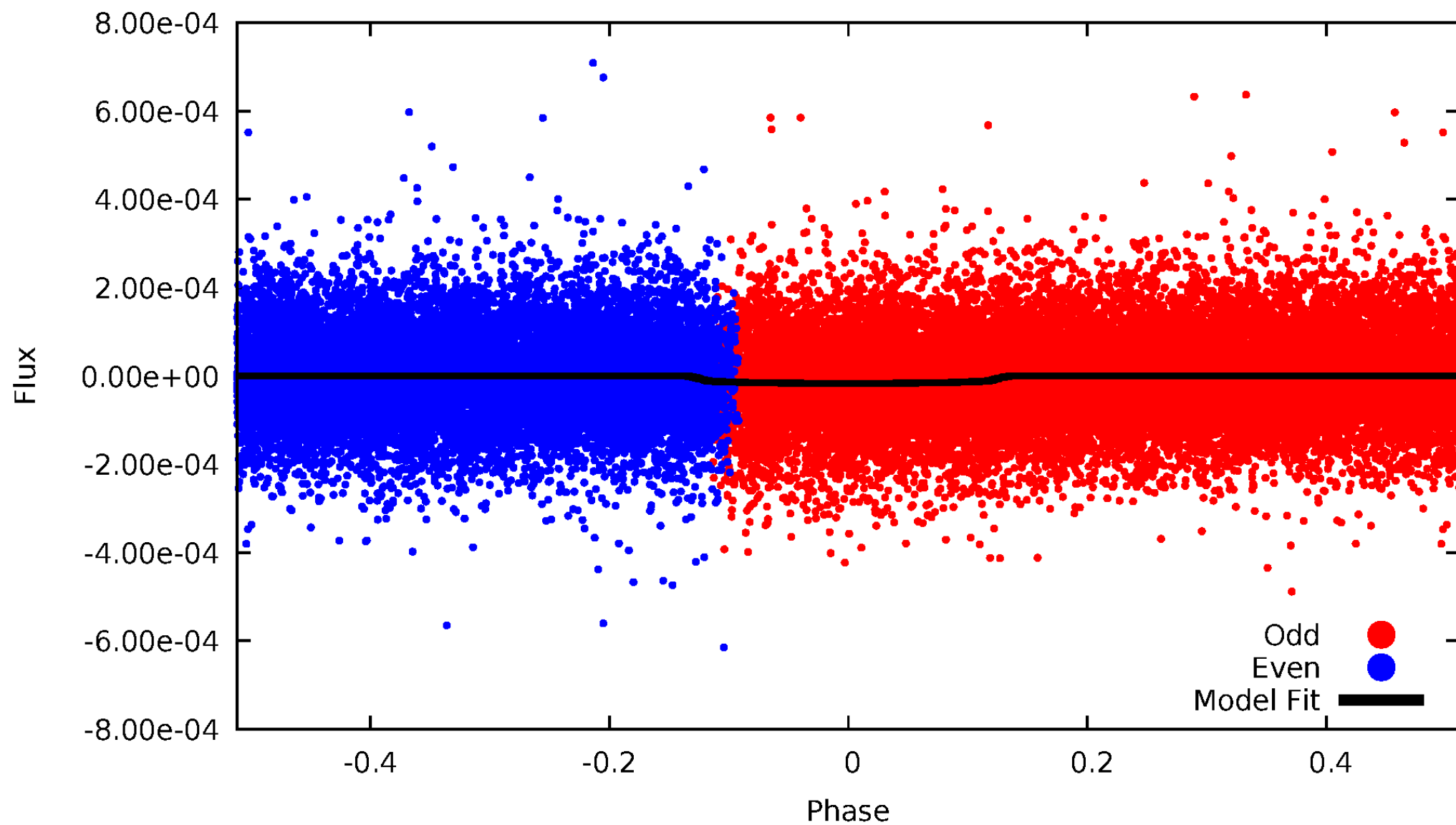


TCE 008245192-05



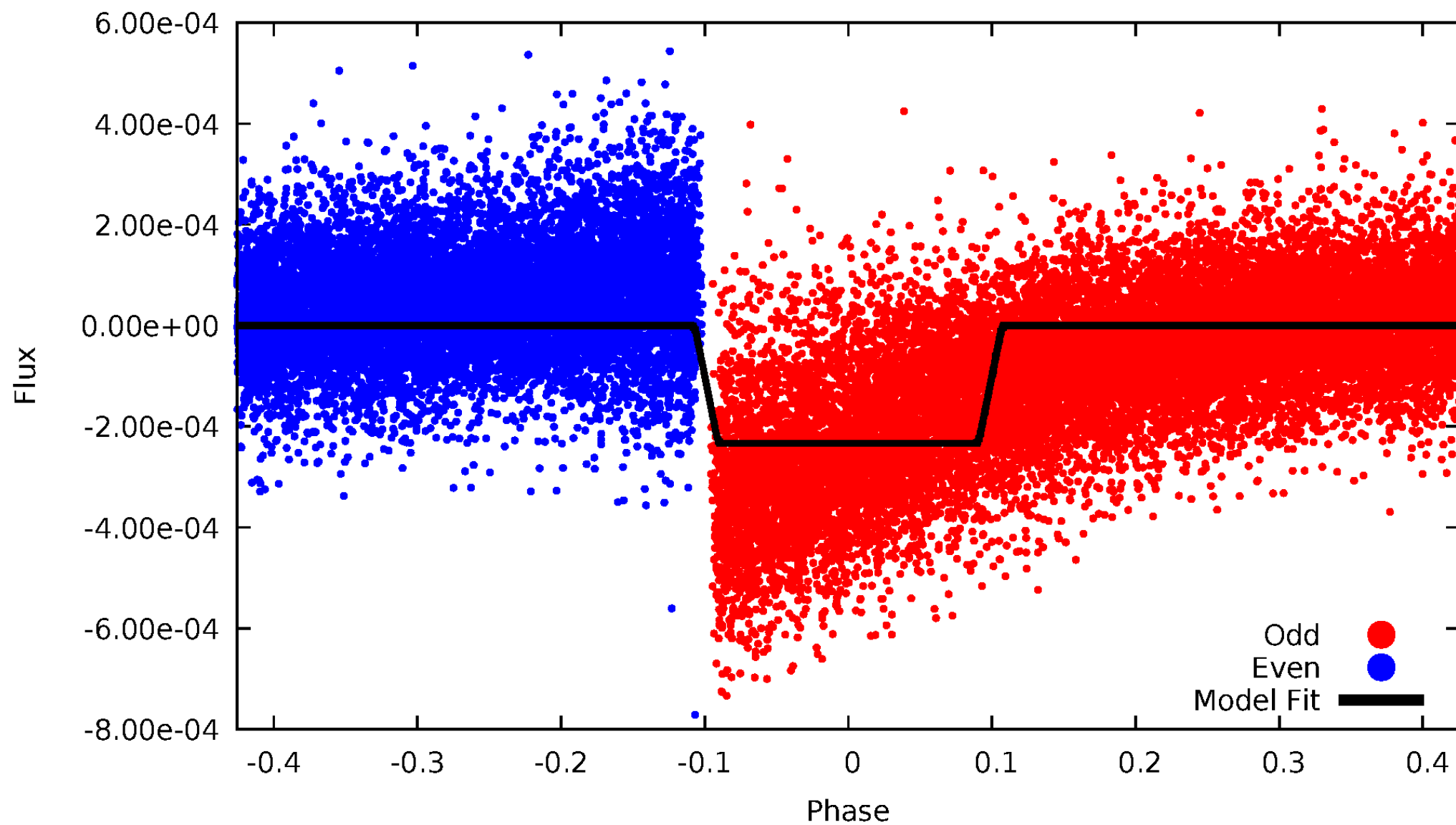
DV Odd/Even

TCE 008245192-05



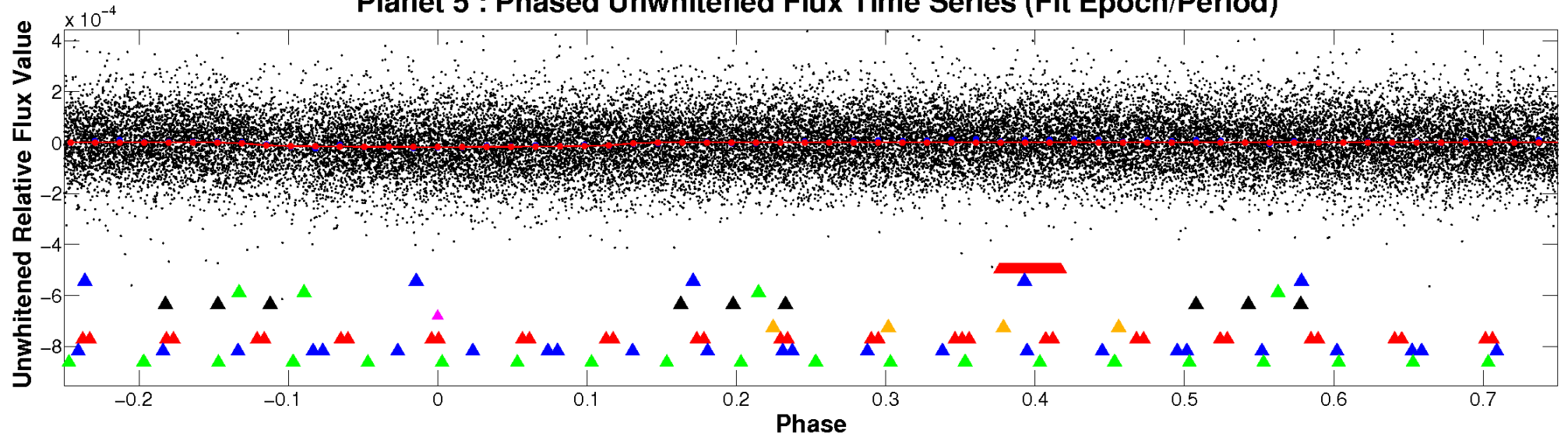
ALT Odd/Even

TCE 008245192-05

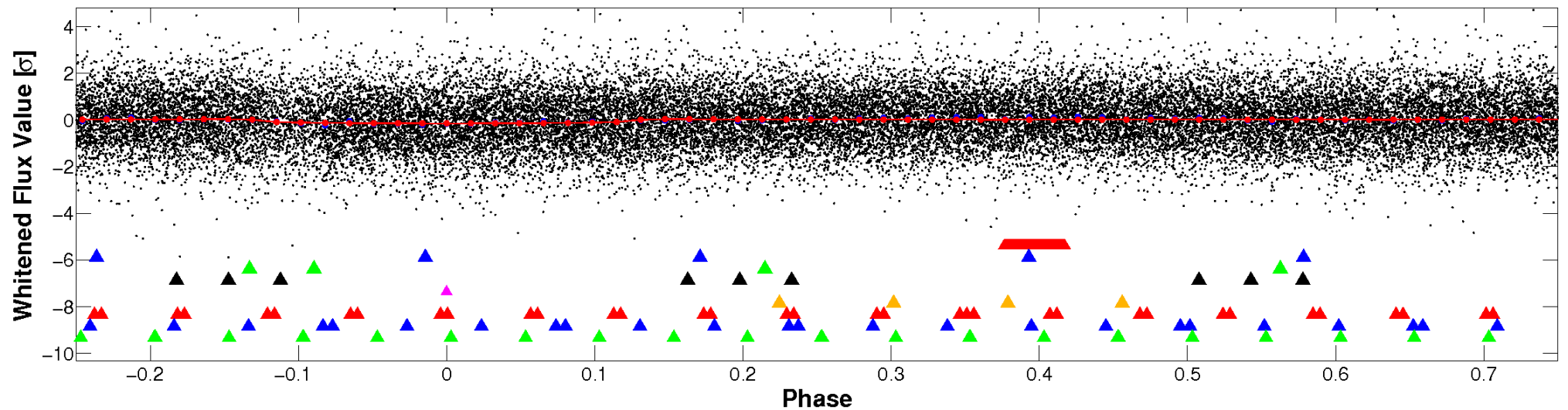


Non-Whitened Vs. Whitened Light Curve

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

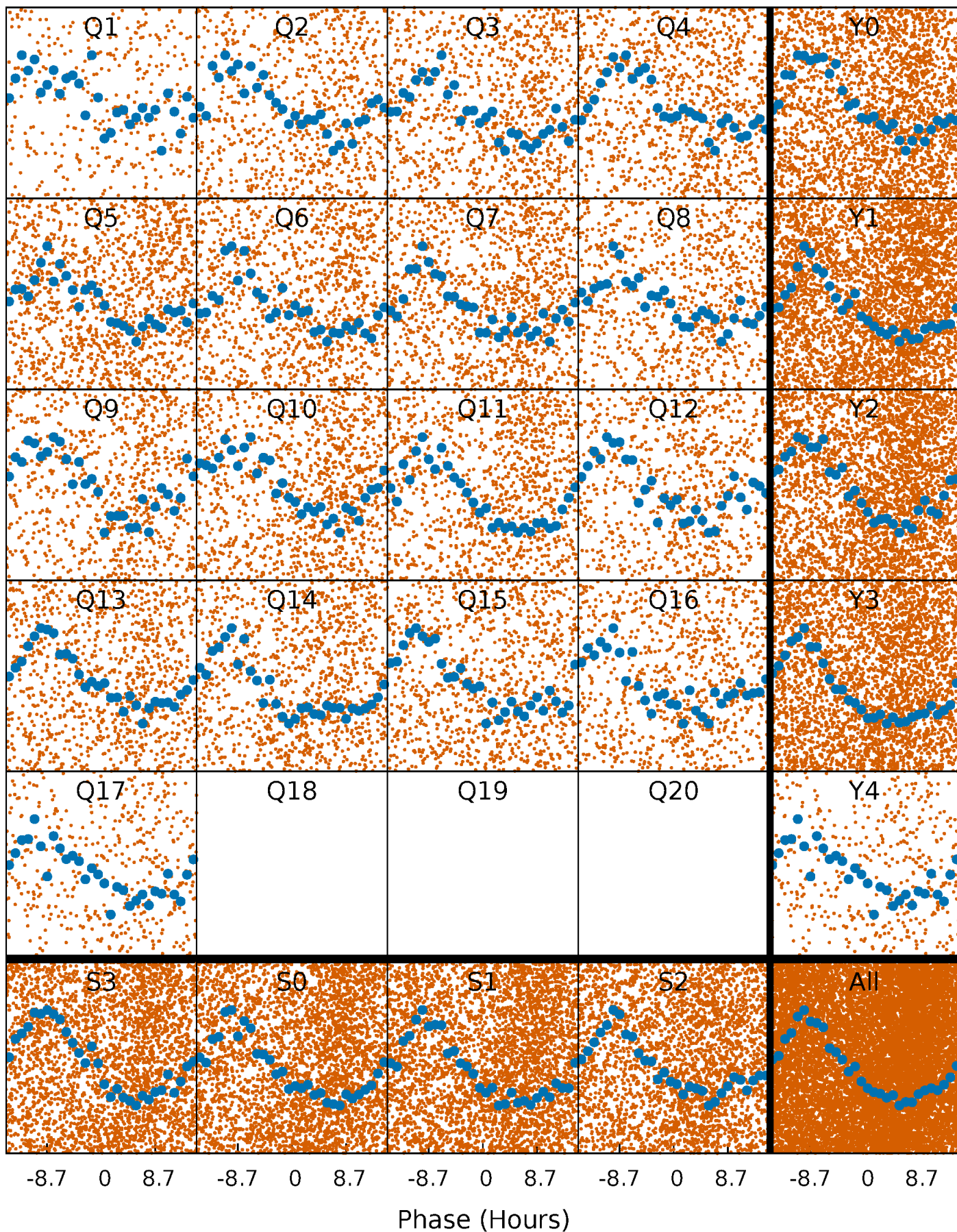


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



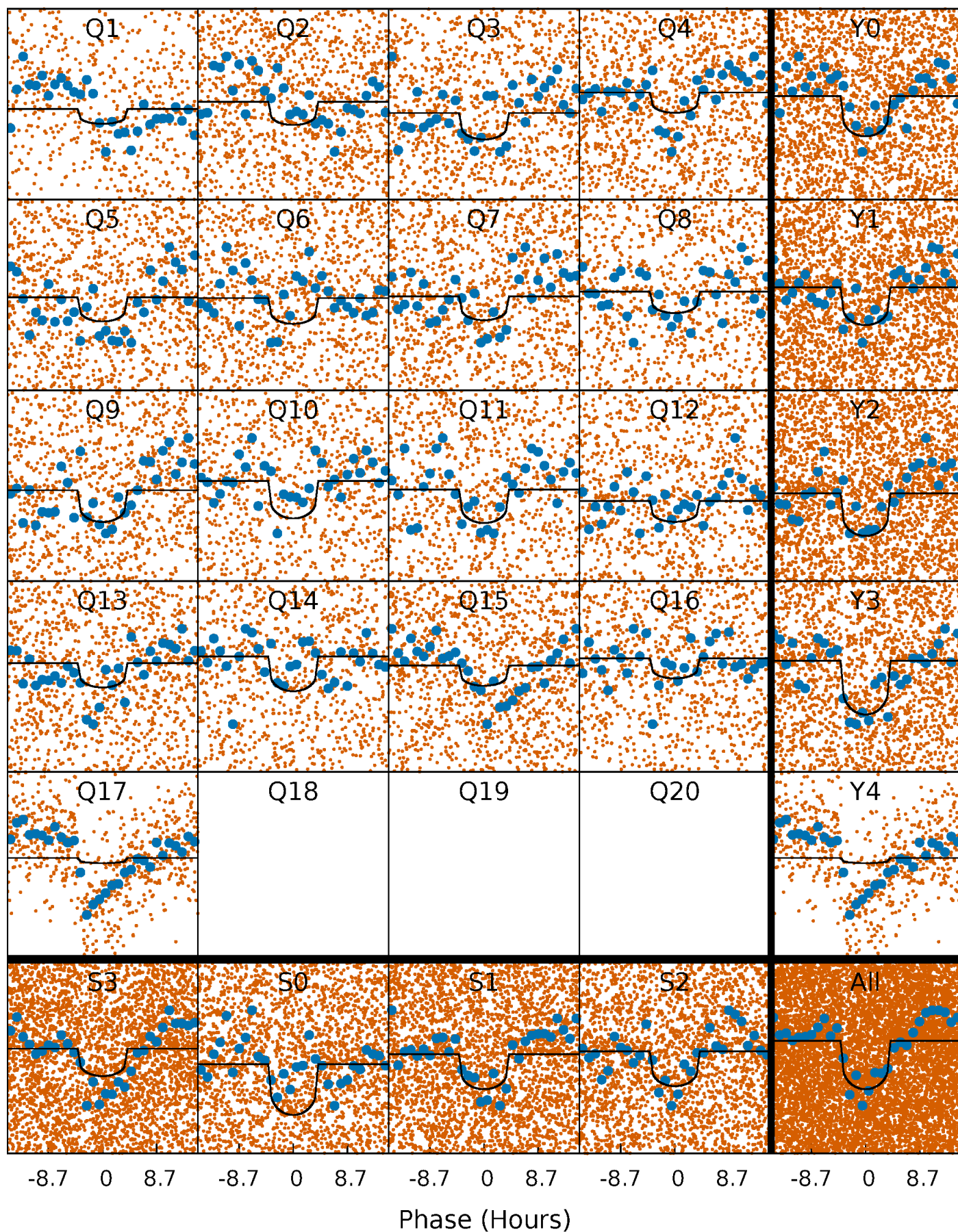
PDC Quarter-Phased Transit Curves

TCE 008245192-05 P= 1.247055 Days $T_0=132.713531$ (BKJD)



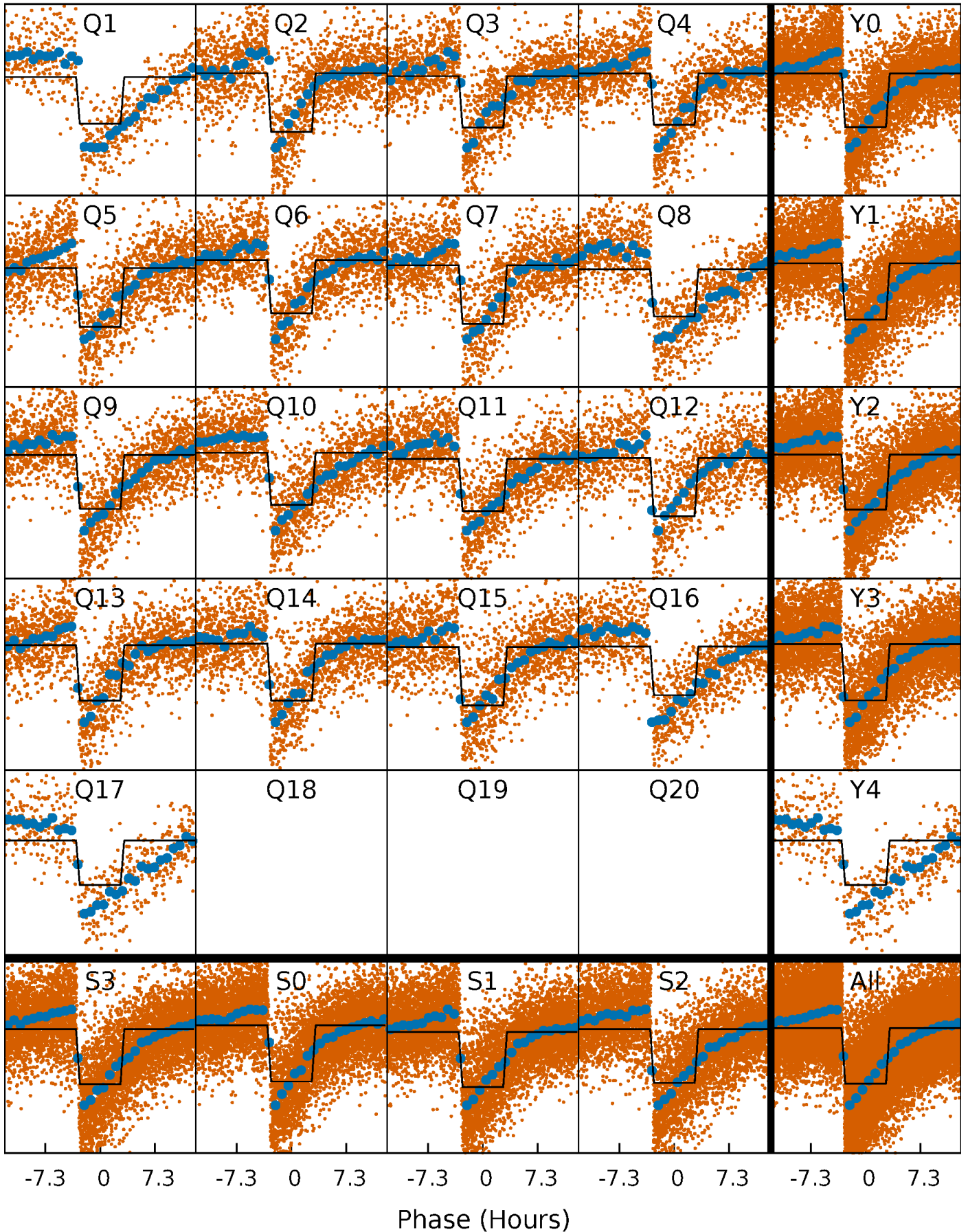
DV Quarter-Phased Transit Curves

TCE 008245192-05 P= 1.247055 Days $T_0=132.713531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

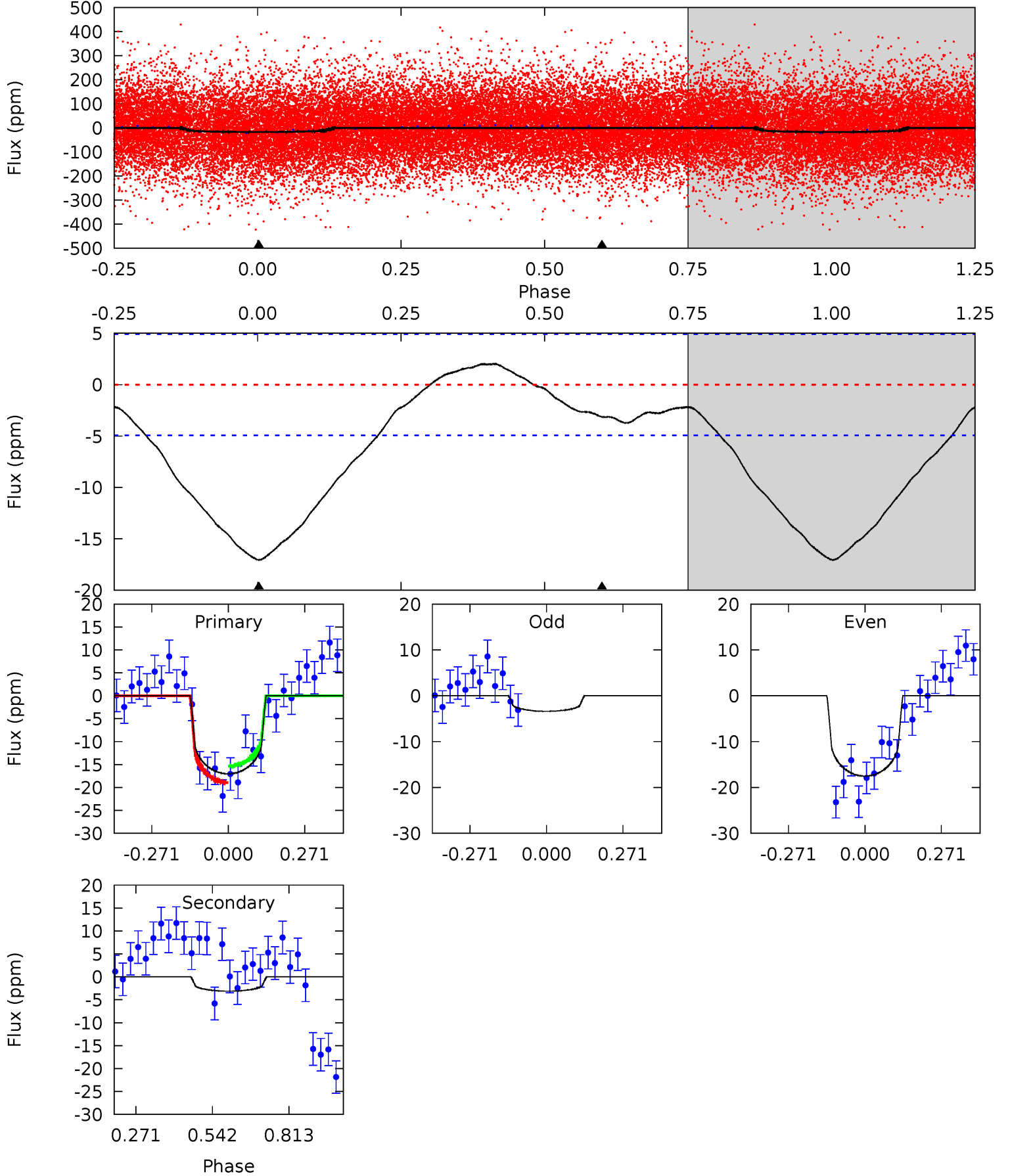
TCE 008245192-05 $P = 1.247021$ Days $T_0 = 132.727709$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-05, P = 1.247055 Days, E = 131.466476 Days

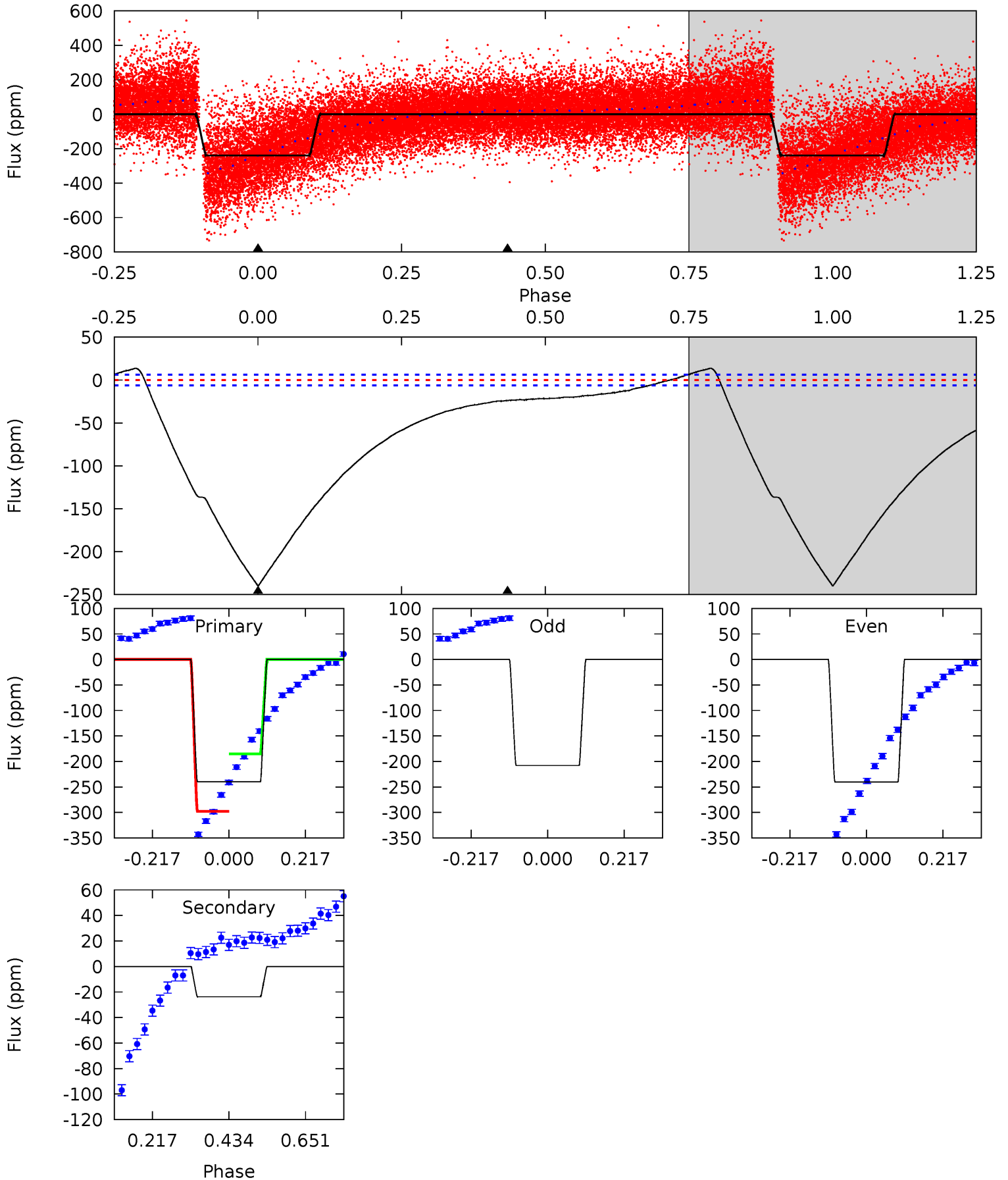
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	2.76	0	0	4.35	1.10	0.99	15.0	15.0	2.76	2.76	3.59	1.10	0.11	1.58



Alt Model-Shift Uniqueness Test

008245192-05, P = 1.247021 Days, E = 131.480688 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
168.5	16.7	0	0	4.40	1.23	4.95	168.5	168.5	16.7	16.7	2.88	0.98	0.05	40.7



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$0.45^{+0.22}_{-0.22}$	2417^{+132}_{-102}	4065^{+1325}_{-676}	$4.236^{+12.701}_{-2.637}$
Alt.	-24 ± 1	$1.63^{+0.32}_{-0.25}$	2420^{+131}_{-104}	3692^{+226}_{-213}	$2.524^{+1.014}_{-0.730}$

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

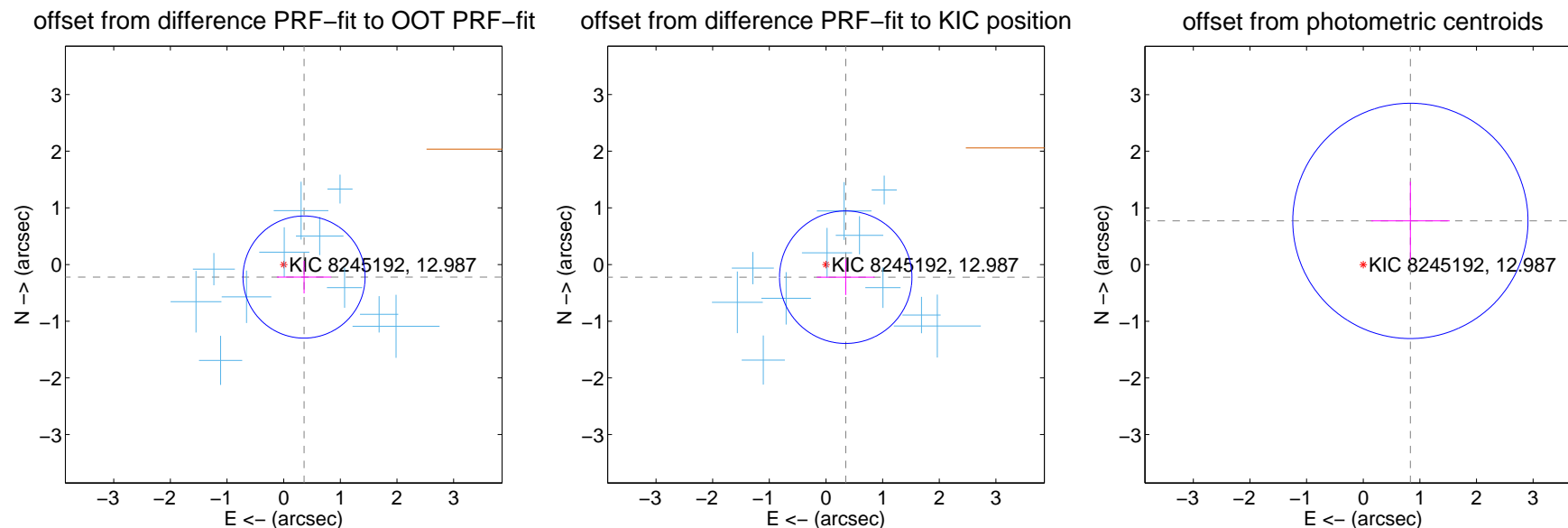
DV Centroid Data

Supplemental centroid analysis for 008245192-05. Kepler magnitude: 12.99. Transit SNR 11.08

There are 11 quarters with good PRF difference image offsets

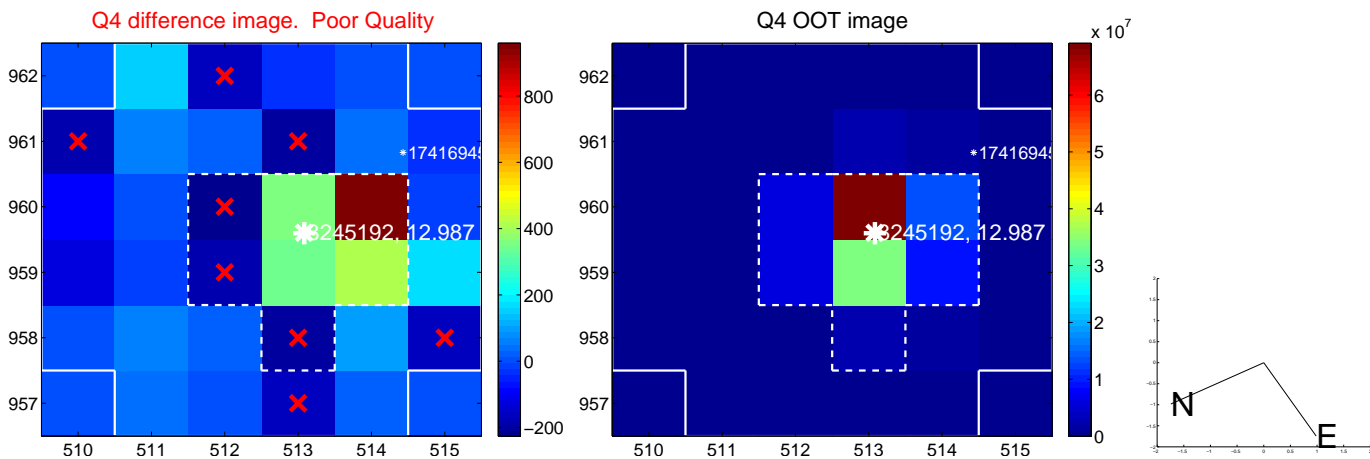
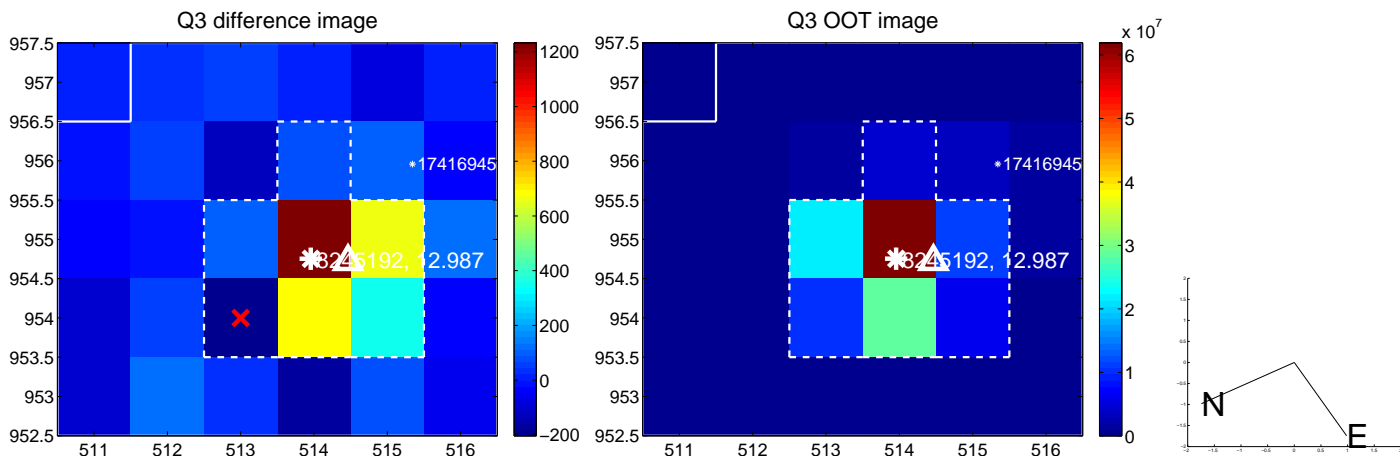
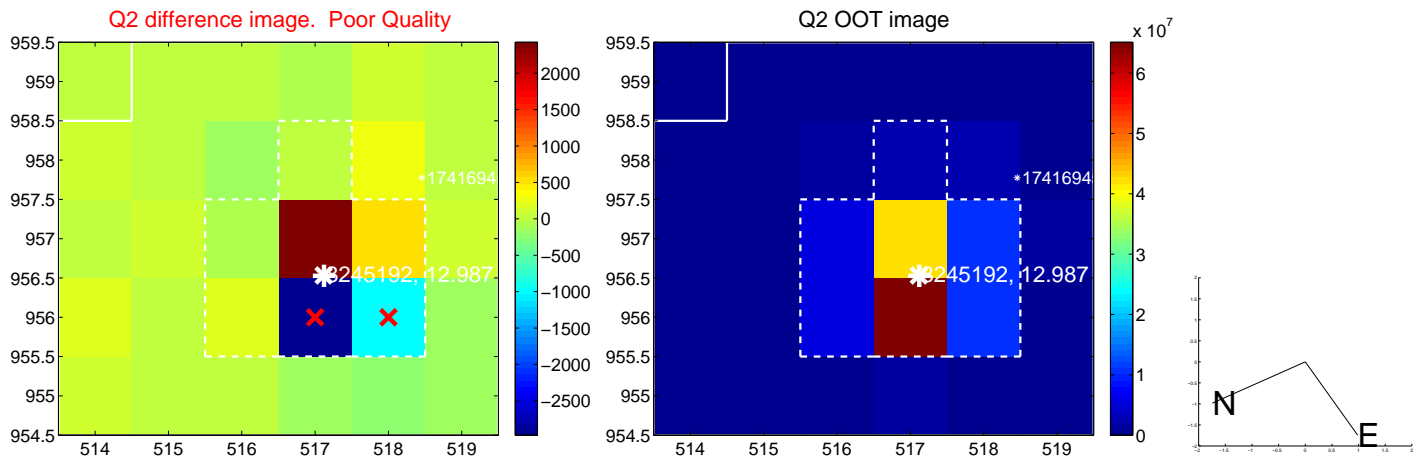
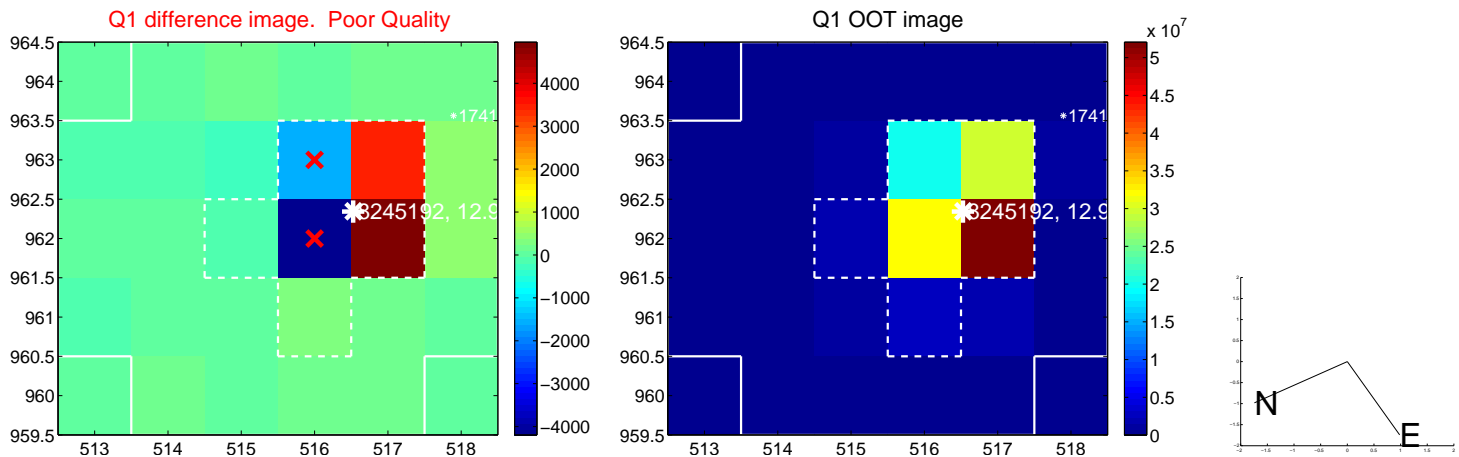
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.422 ± 0.359	1.17	-0.360 ± 0.480	-0.221 ± 0.290
PRF-fit source offset from KIC position	0.414 ± 0.390	1.06	-0.349 ± 0.510	-0.223 ± 0.314
photometric centroid source offset	1.14 ± 0.69	1.64	-0.83 ± 0.69	0.77 ± 0.69

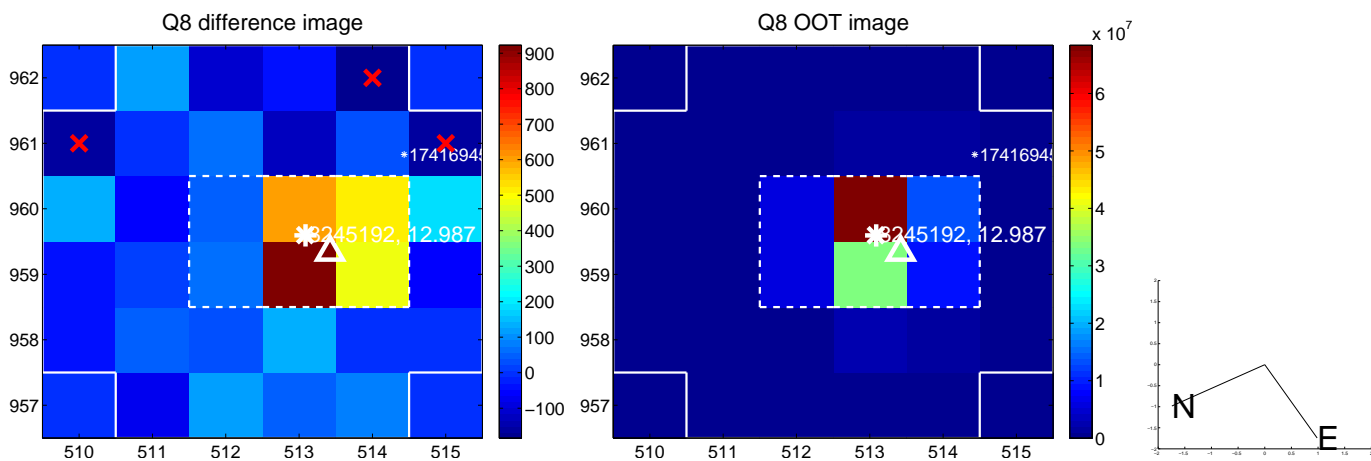
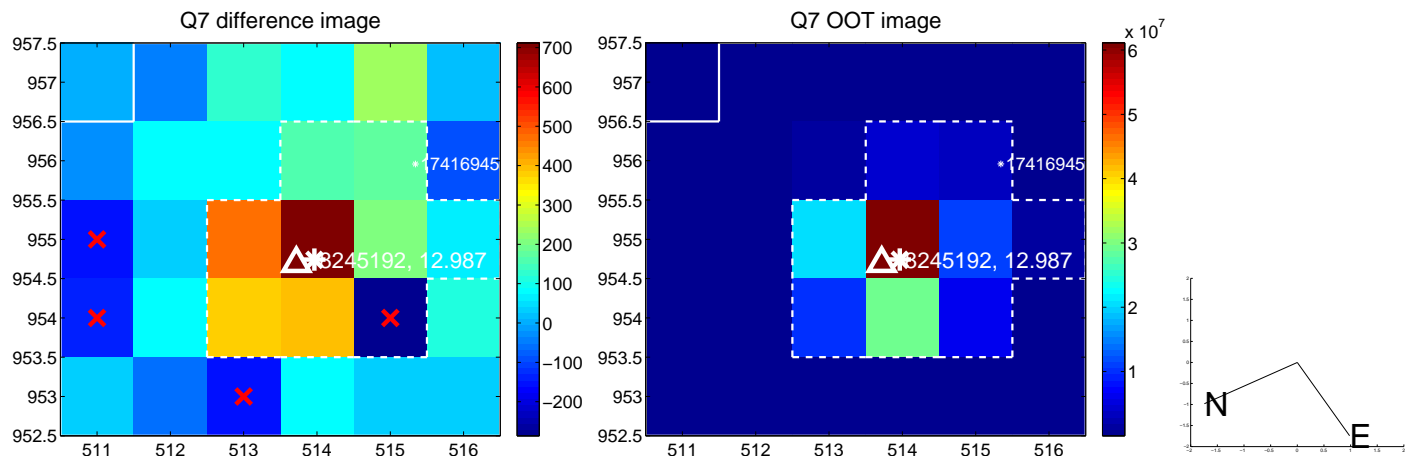
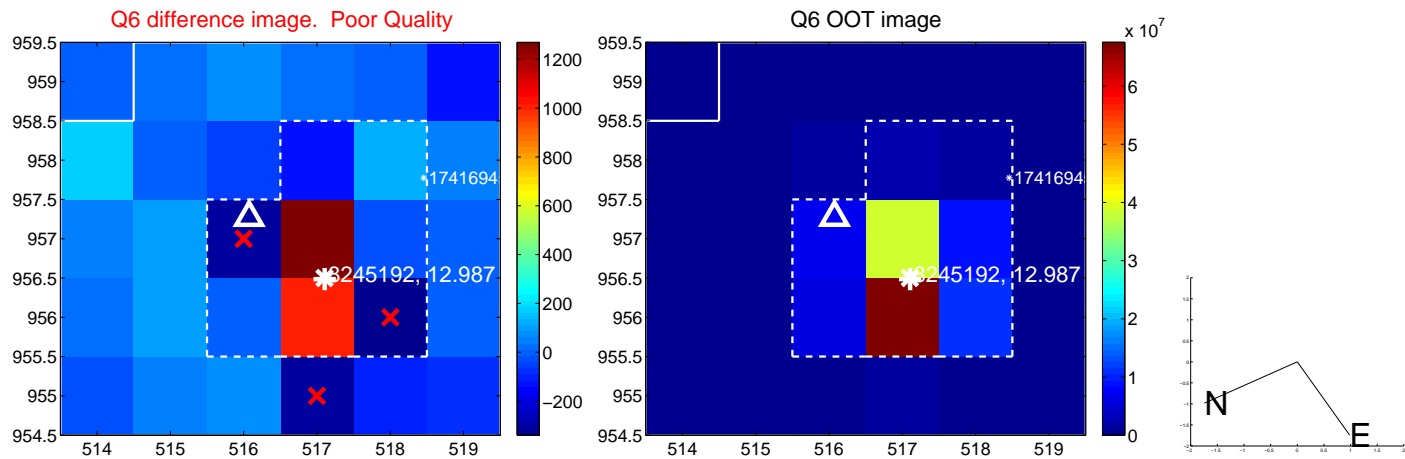
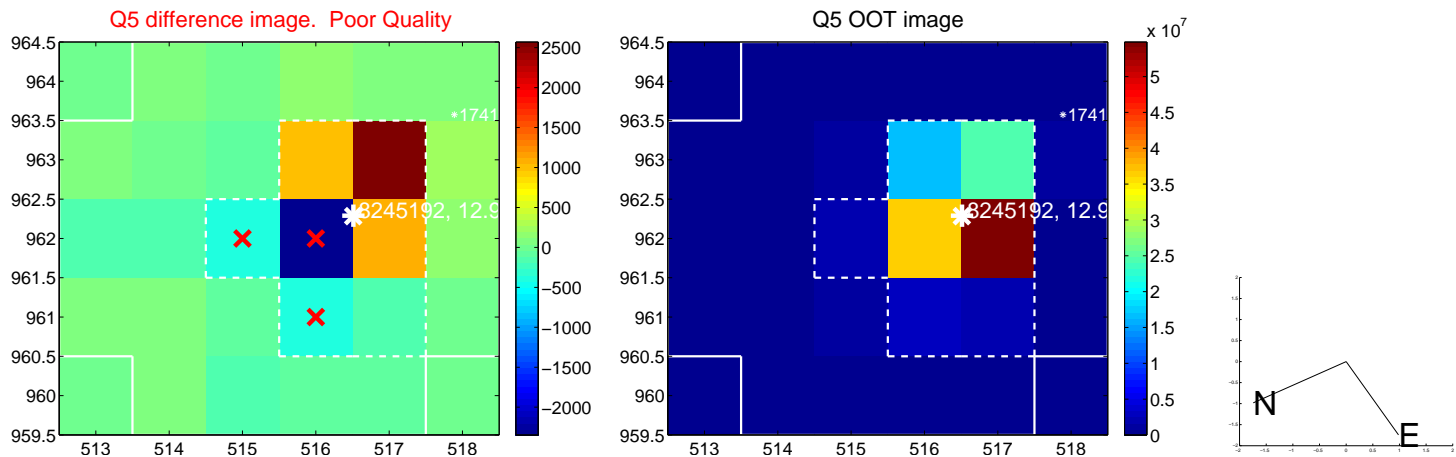


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

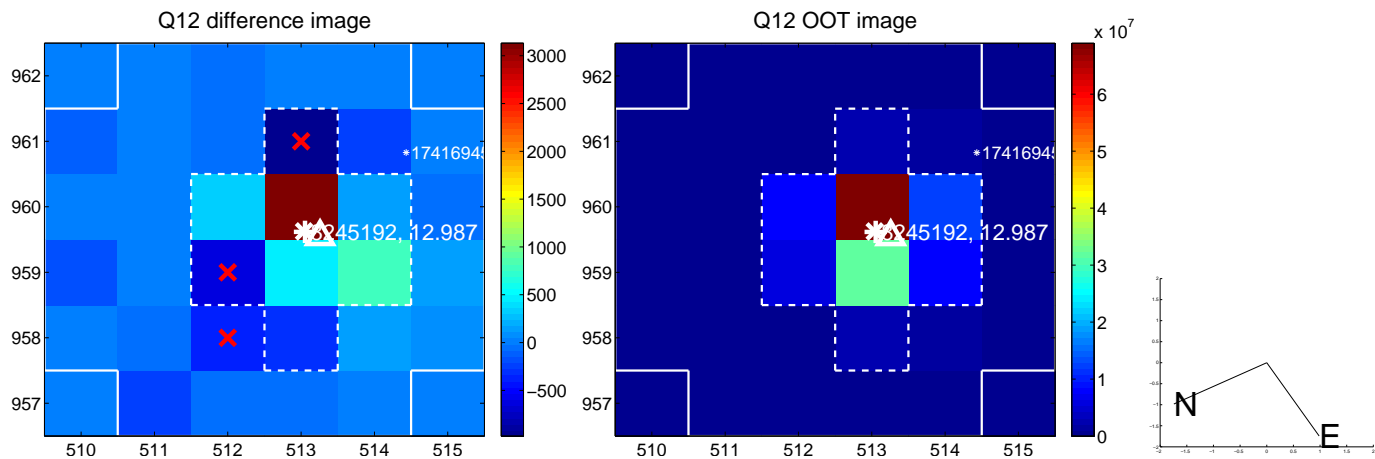
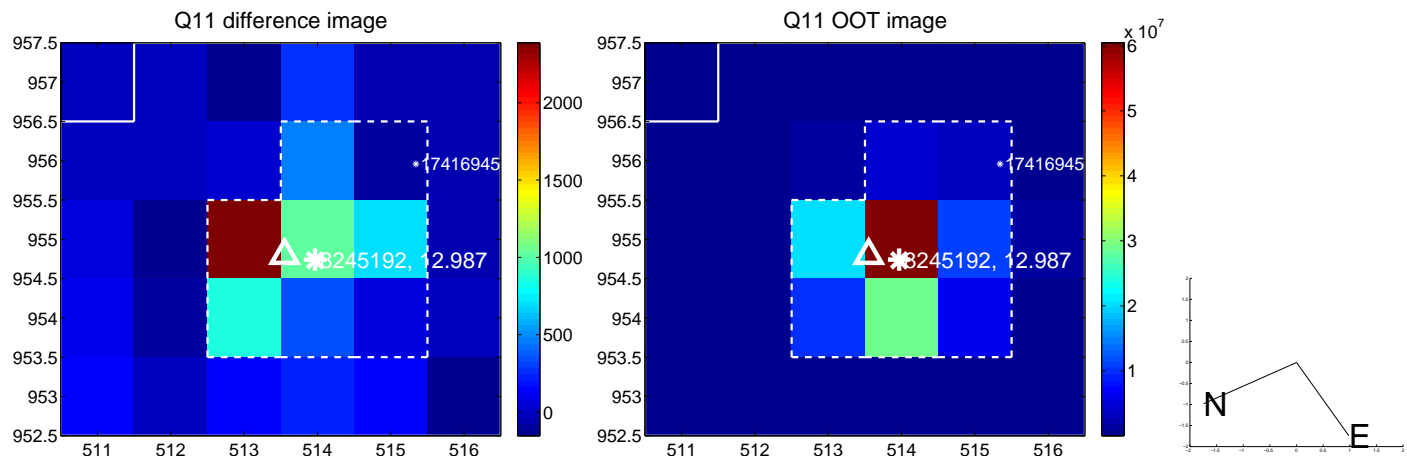
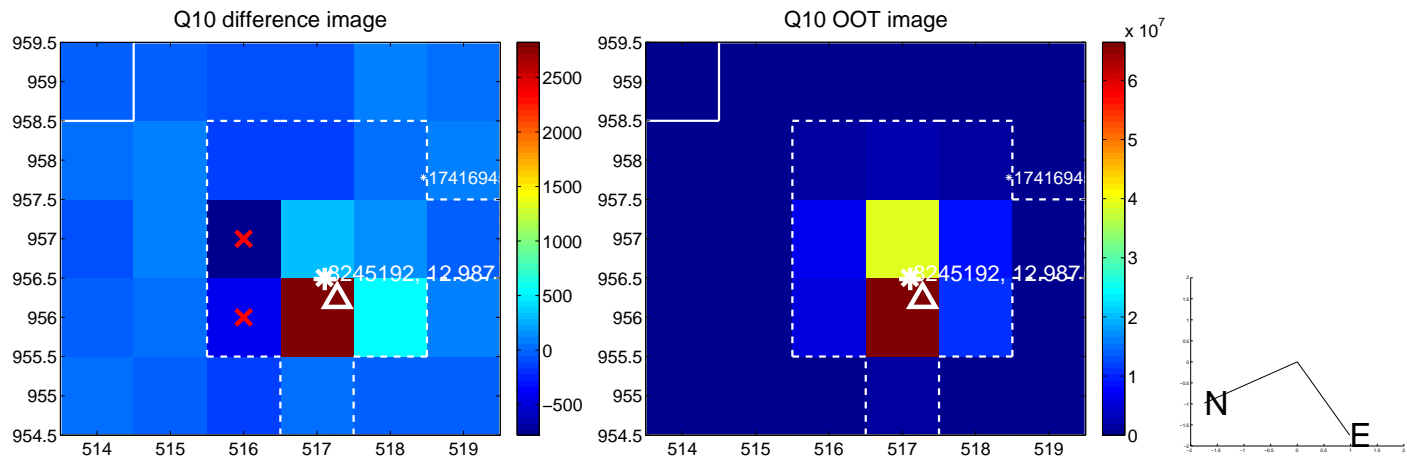
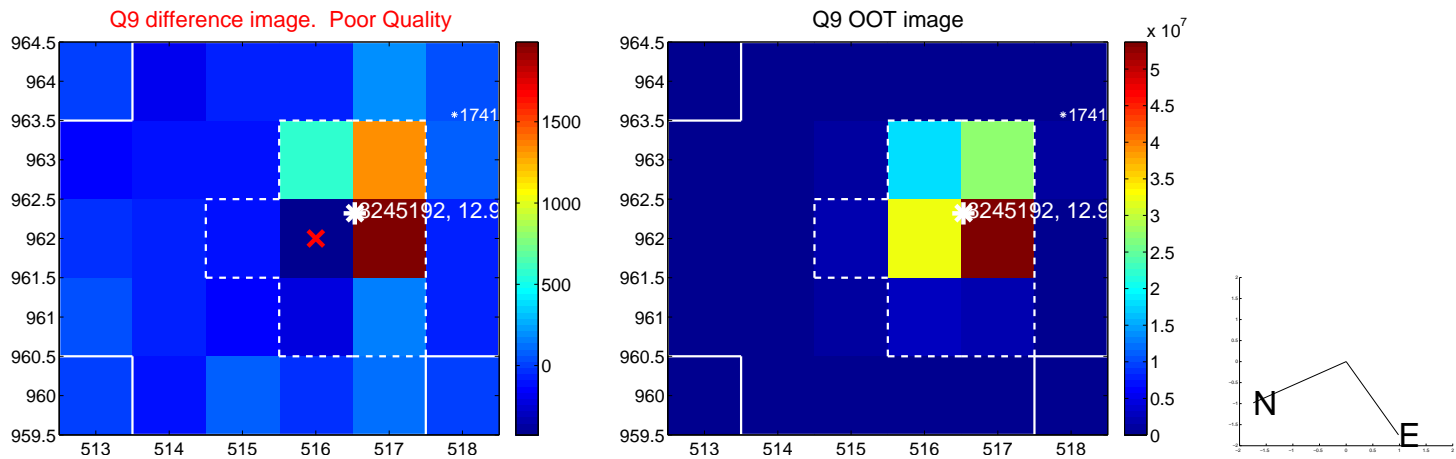
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



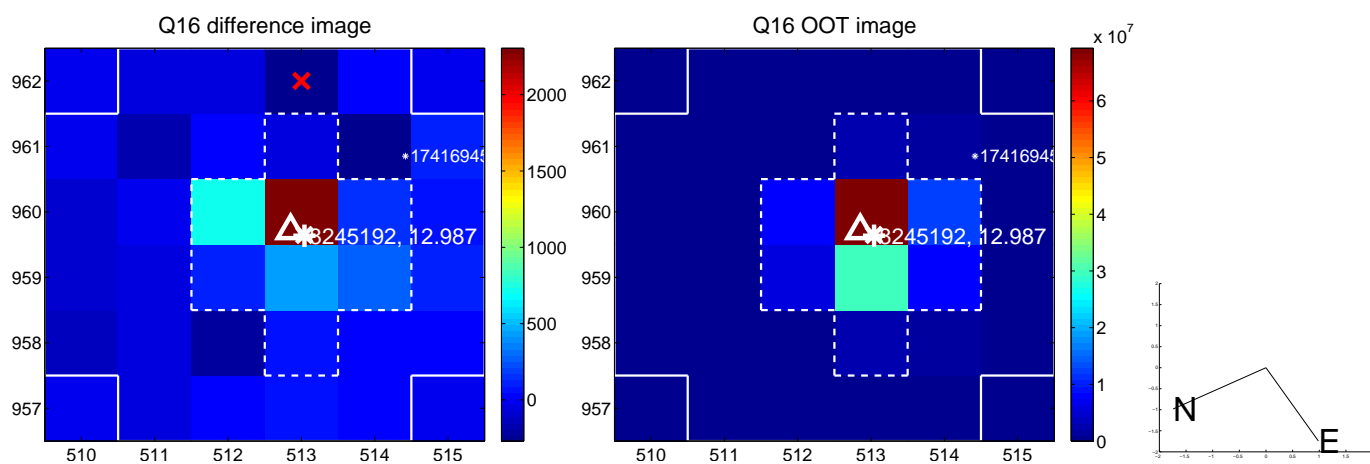
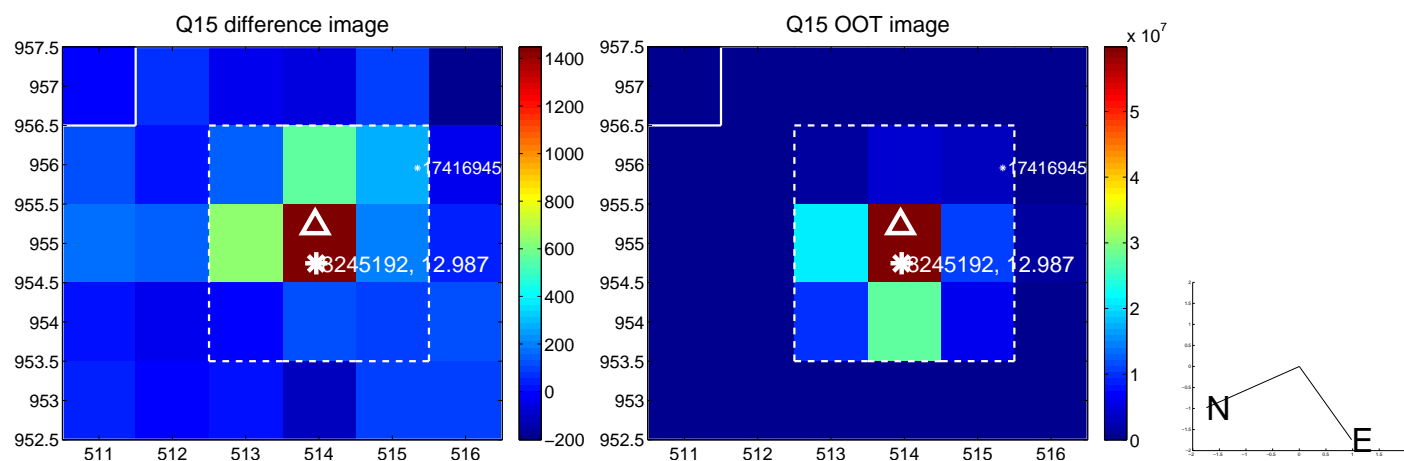
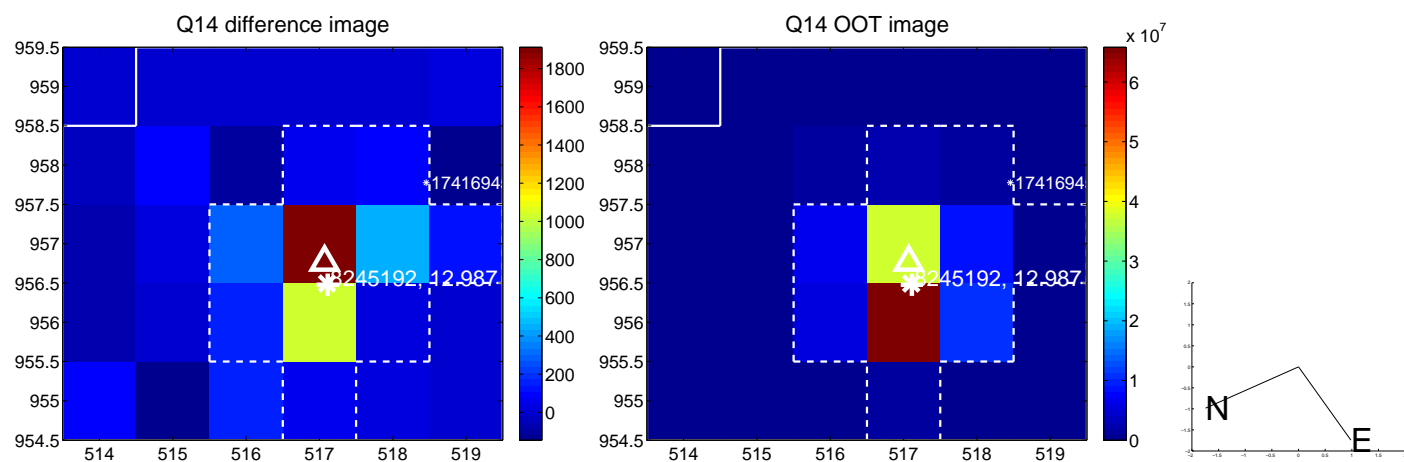
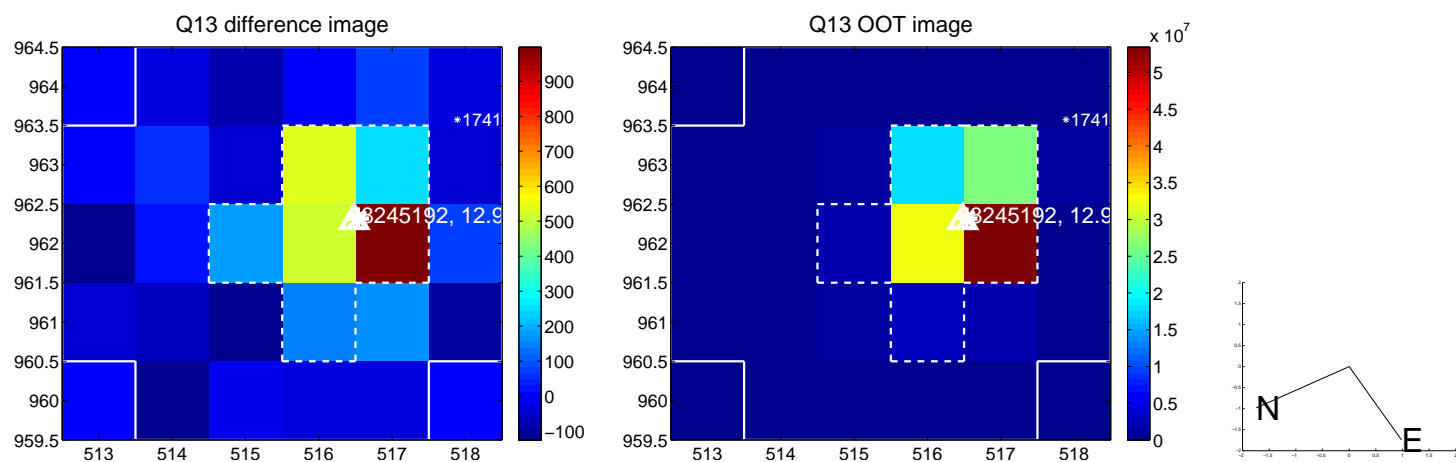
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



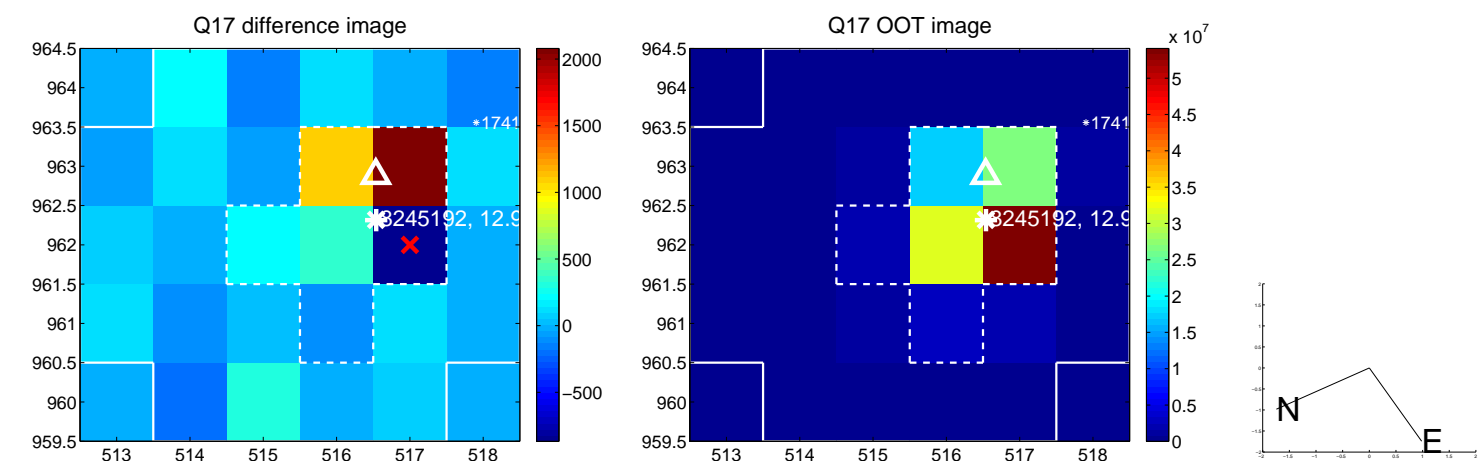
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



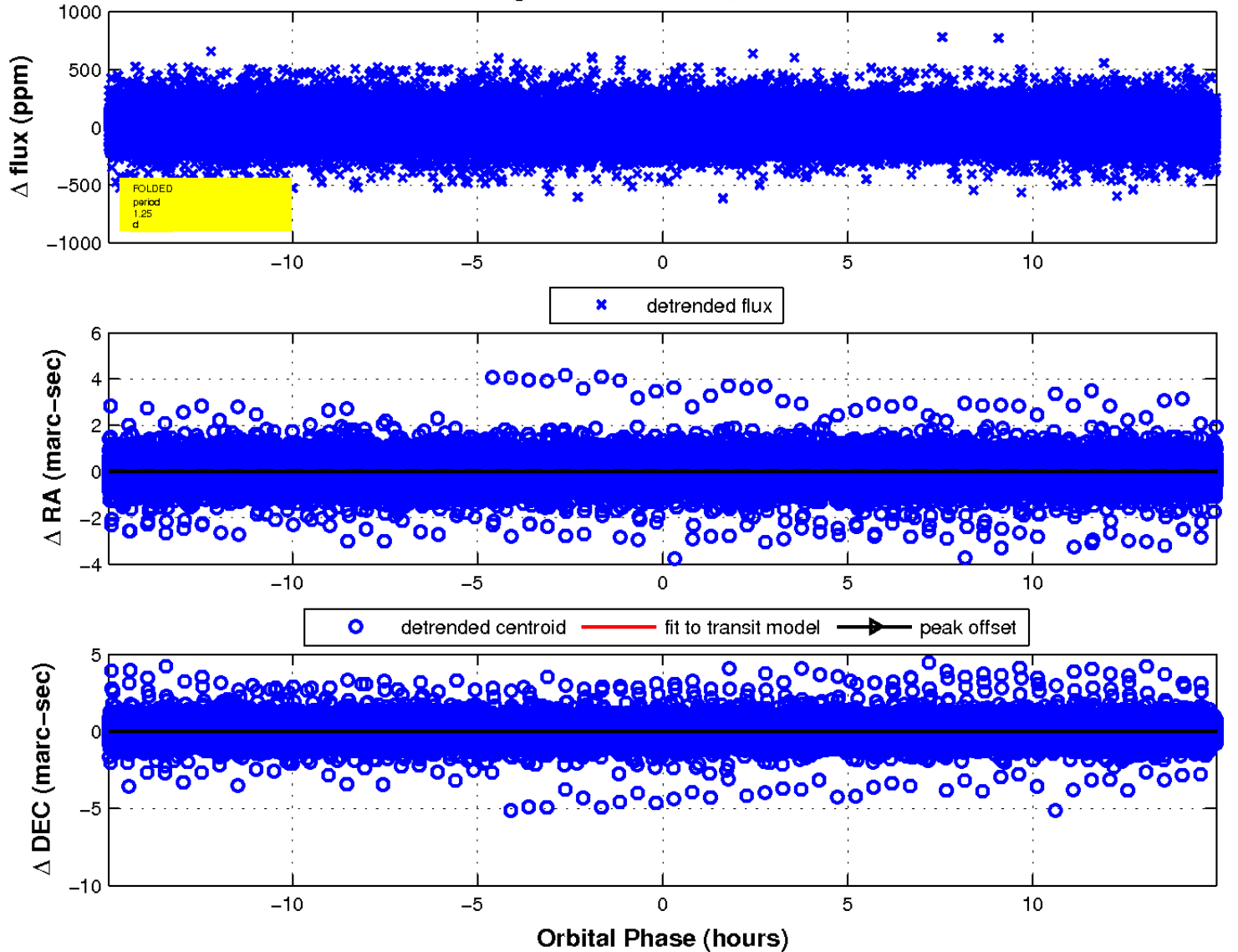
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

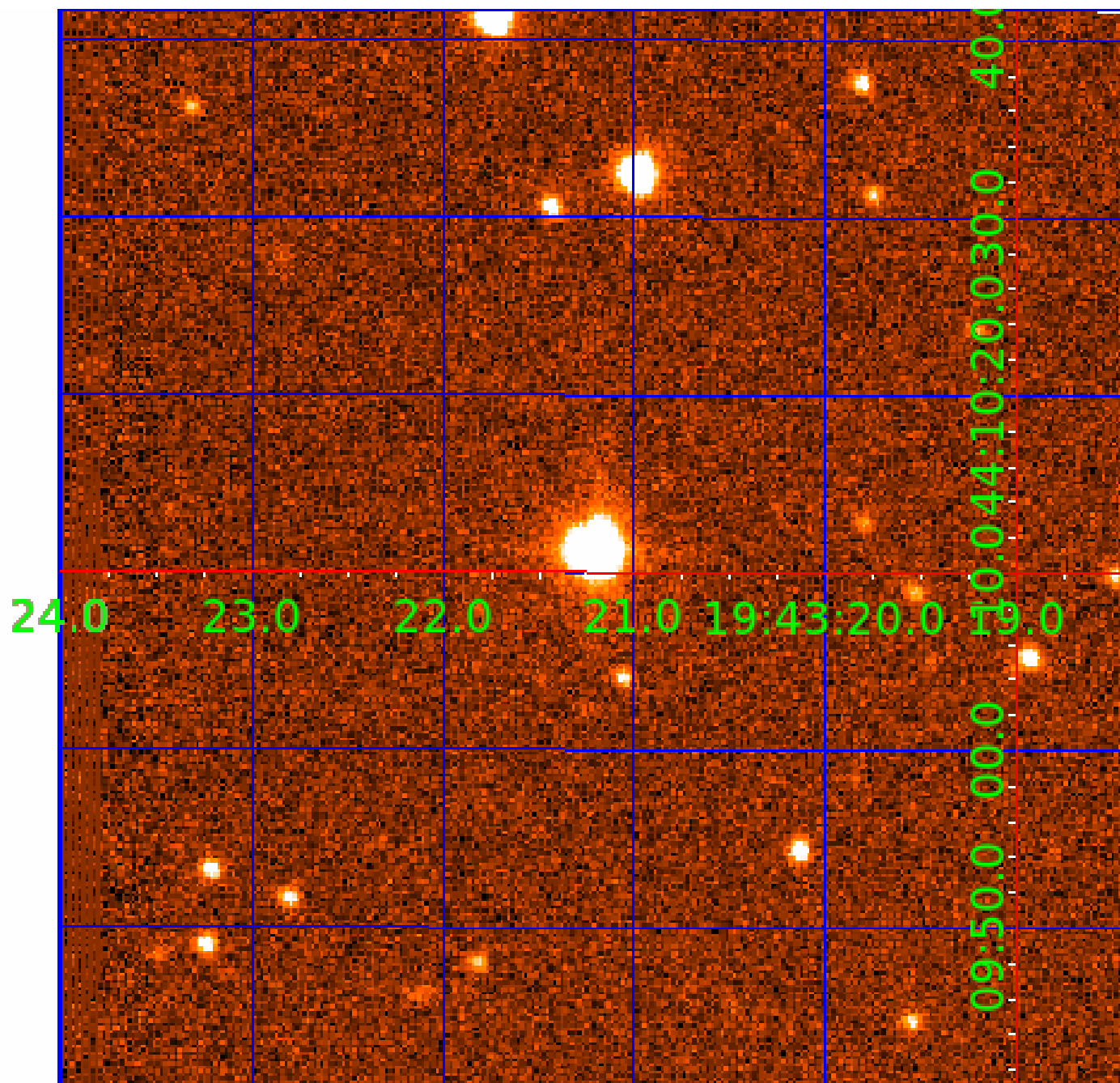


fluxWeightedCentroids, Planet 5 of 9



UKIRT Image

Declination



KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

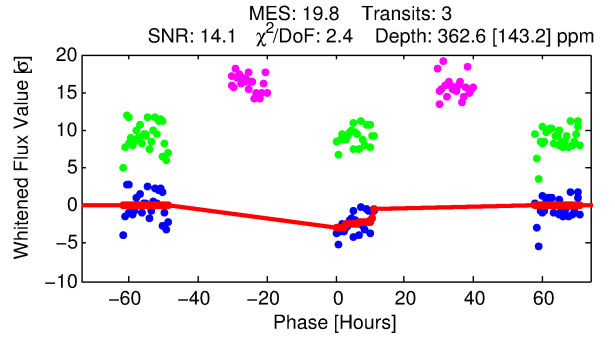
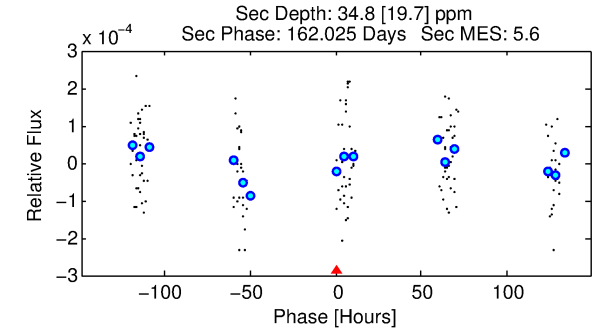
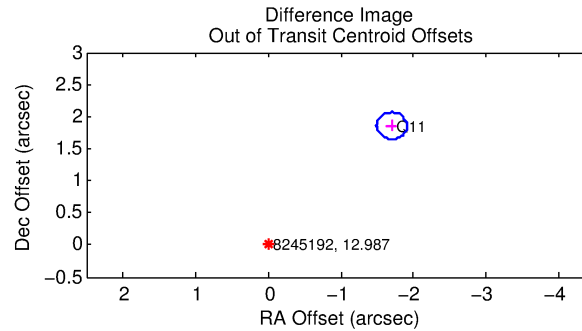
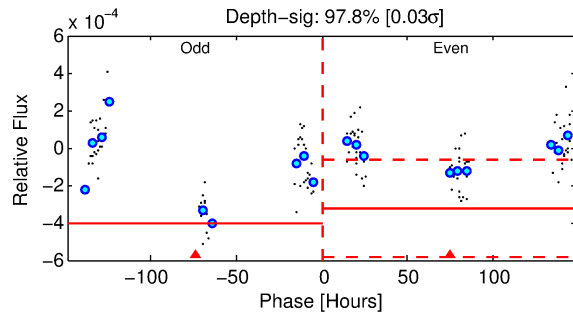
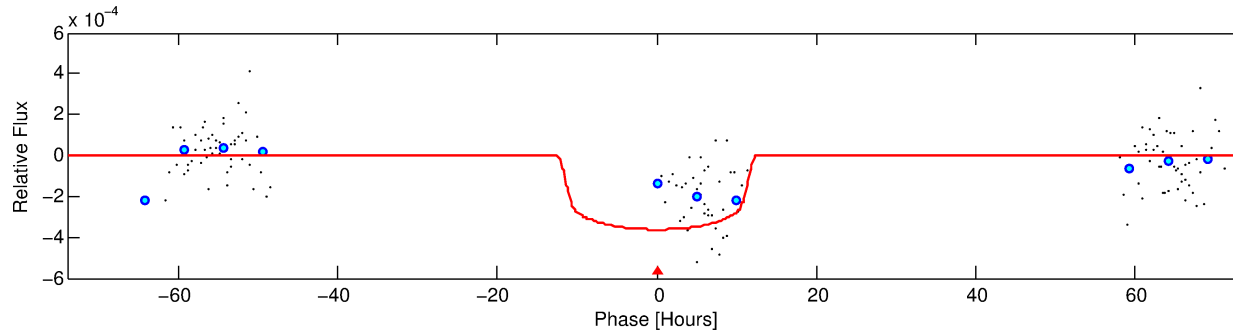
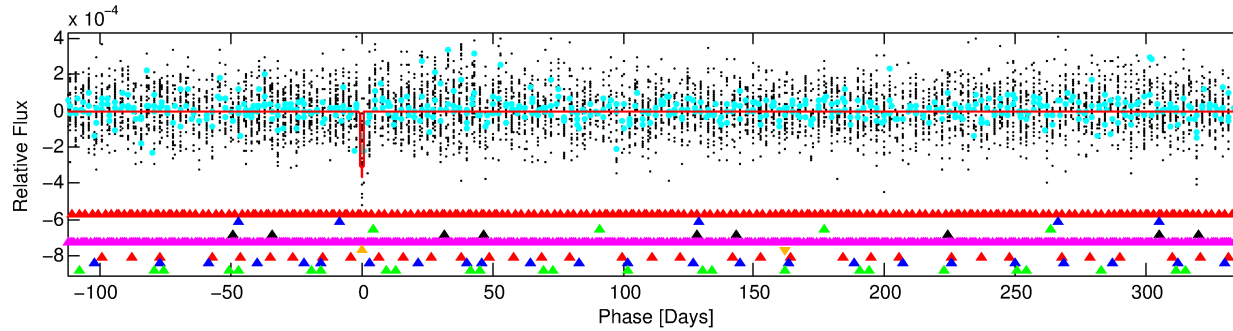
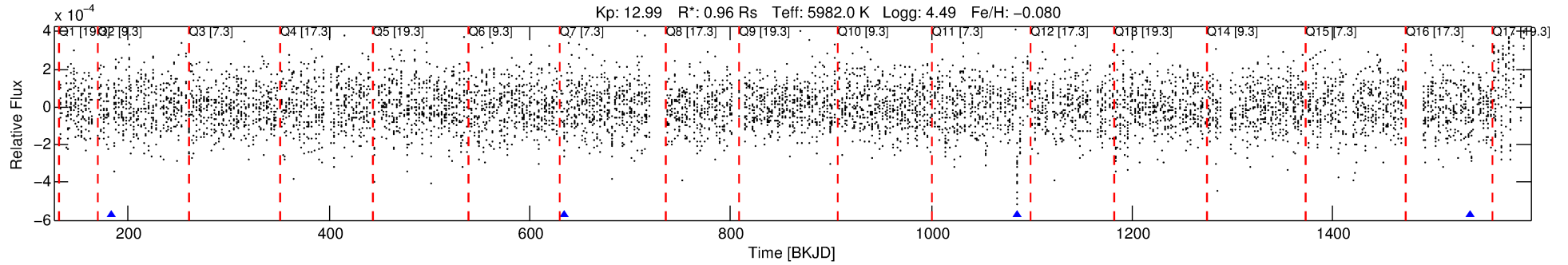
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-06

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 6 of 9 Period: 451.338 d



DV Fit Results:

Period = 451.33760 [0.36168] d
Epoch = 183.1644 [1.1481] BKJD
Rp/R* = 0.0199 [0.0128]
a/R* = 77.51 [239.07]
b = 0.86 [0.84]
Seff = 0.78 [0.24]
Teq = 240 [18] K
Rp = 2.08 [1.41] Re
a = 1.1631 [0.2157] AU
Ag = 5968.83 [8509.03] [0.70σ]
Teff = 3255 [1144] K [2.63σ]

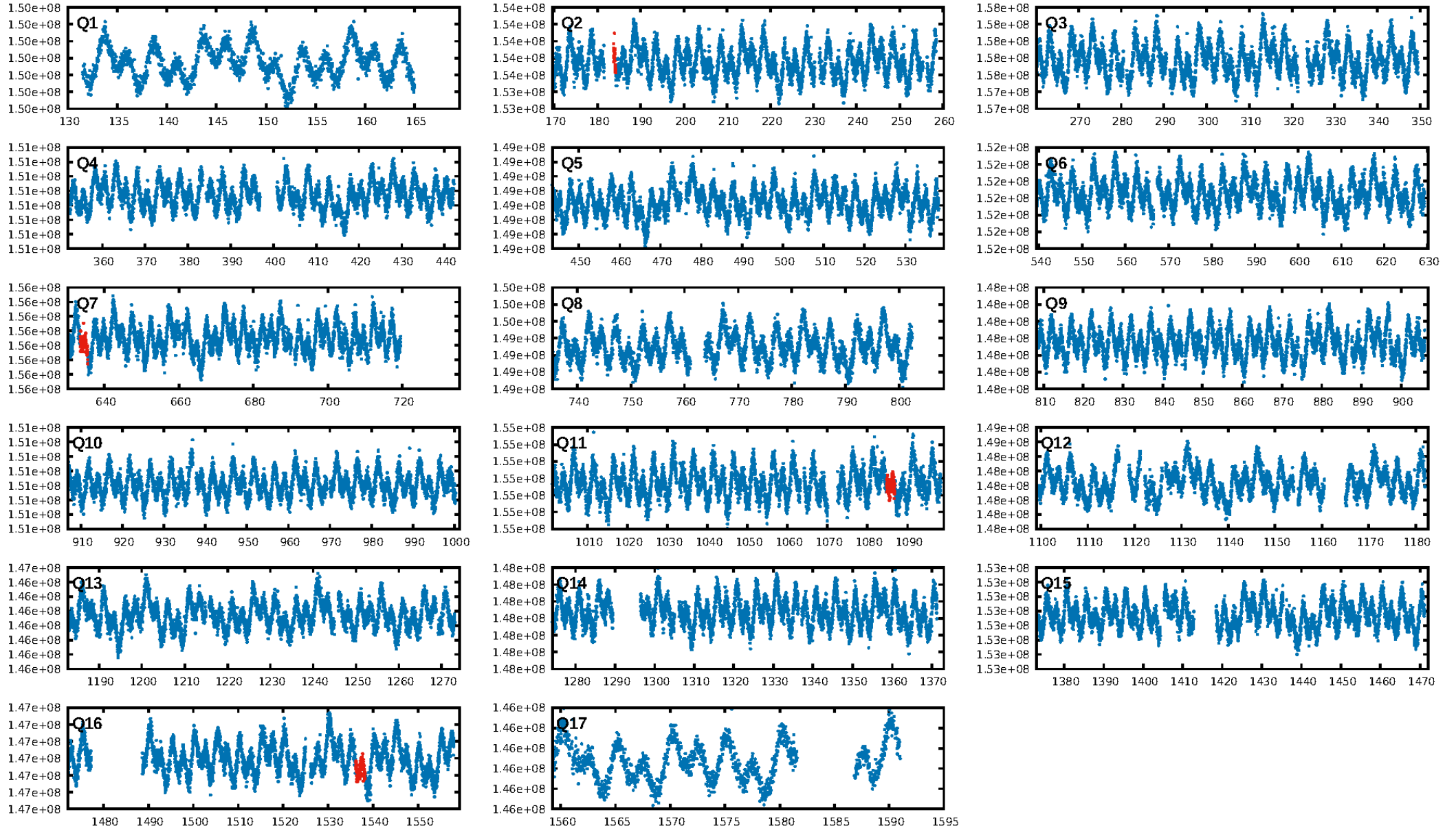
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [64.98σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.8%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 4.69e-116
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7205
Centroid-sig: 27.8%
Centroid-so: 0.449 arcsec [0.95σ]
OotOffset-rm: 2.517 arcsec [35.86σ]
KicOffset-rm: 2.513 arcsec [35.81σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/2]

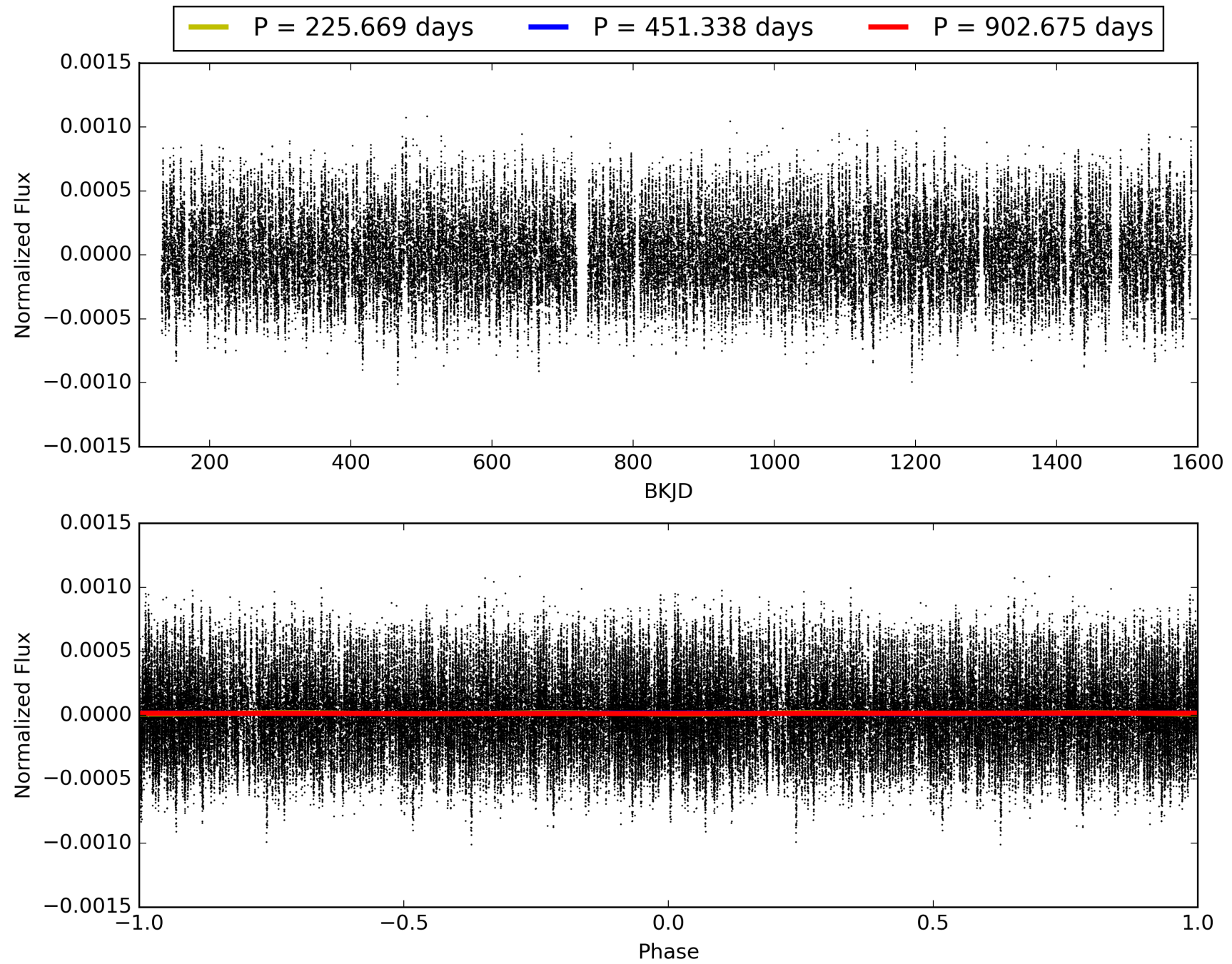
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:50:01 Z

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

TCE 008245192-06, PDC Light Curves

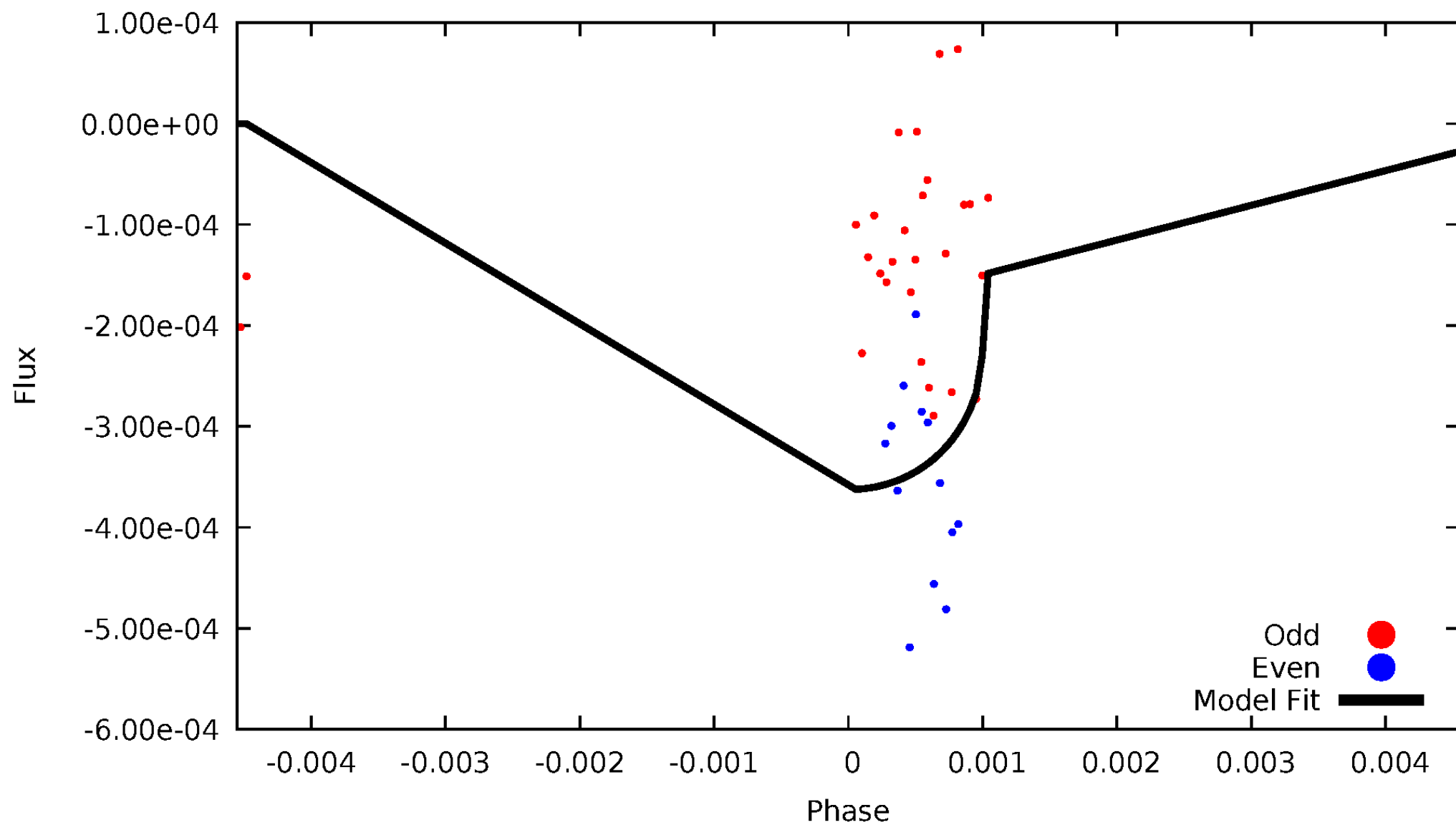


TCE 008245192-06



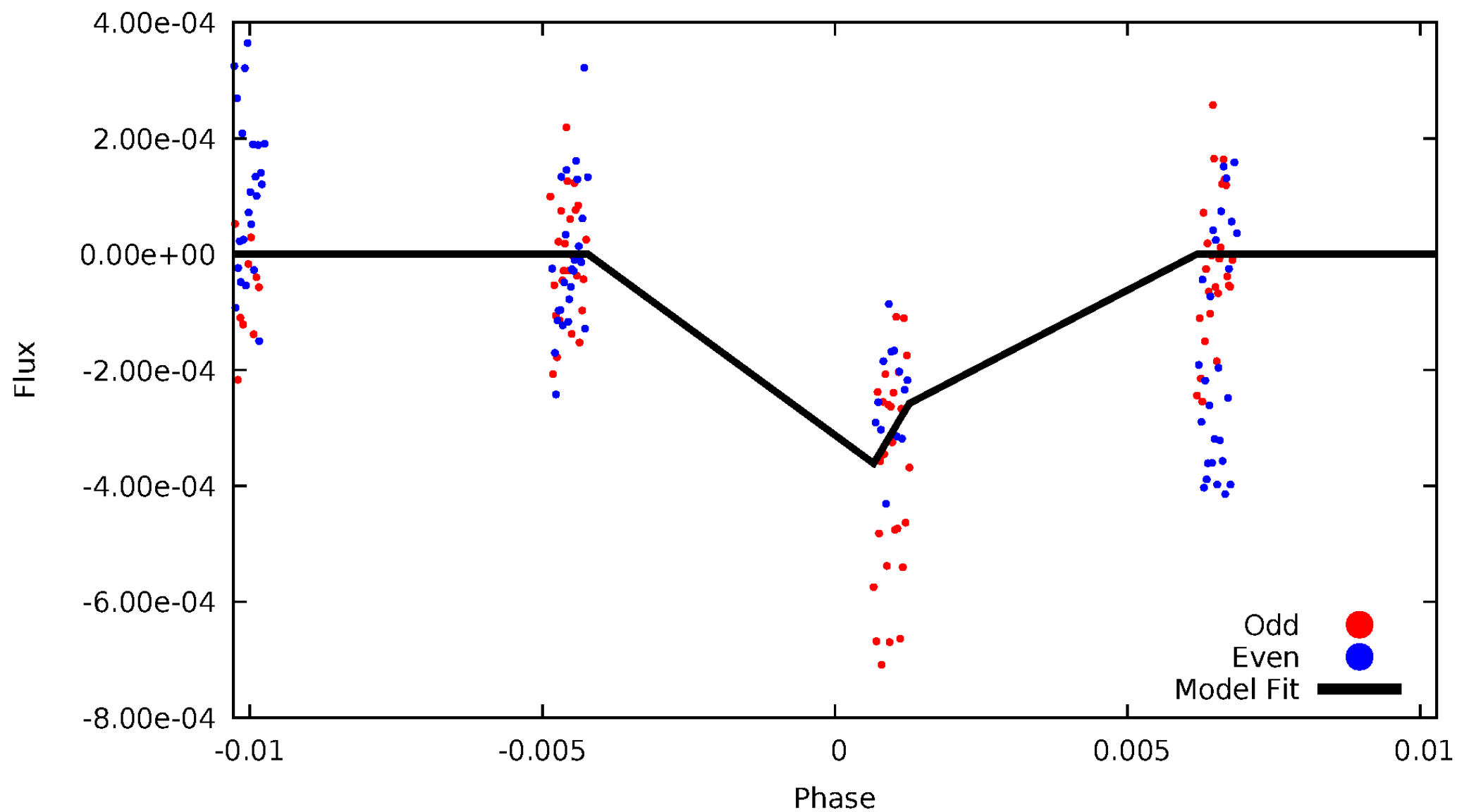
DV Odd/Even

TCE 008245192-06



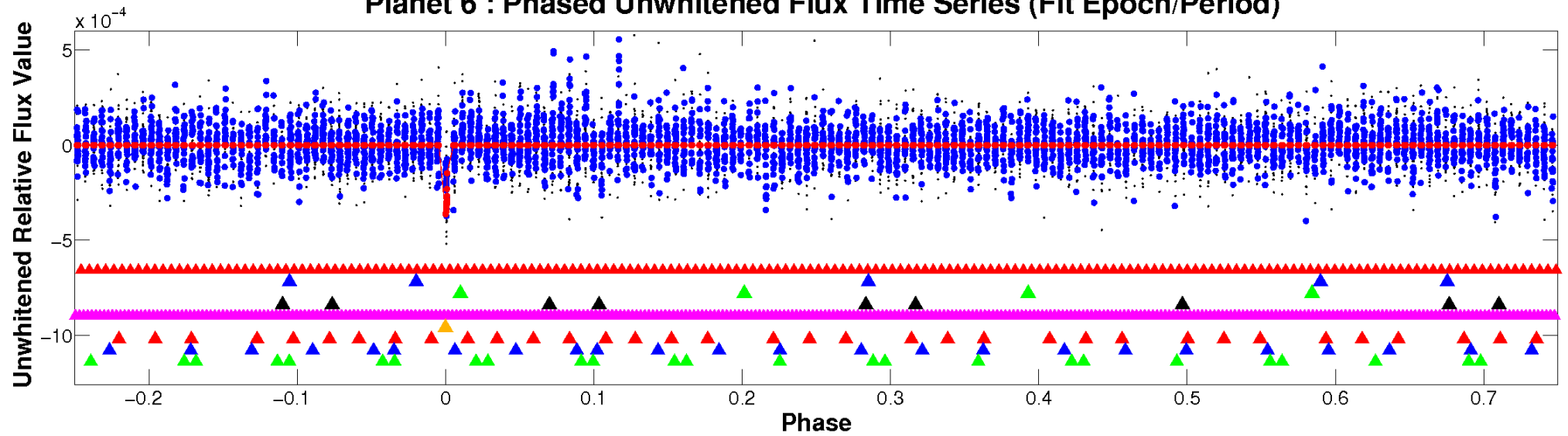
ALT Odd/Even

TCE 008245192-06

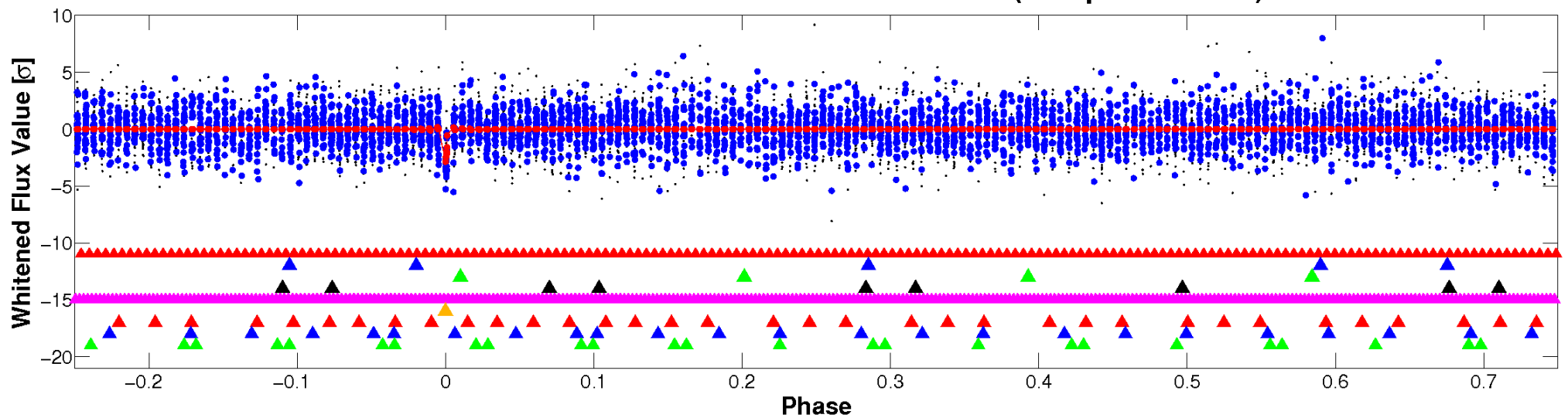


Non-Whitened Vs. Whitened Light Curve

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

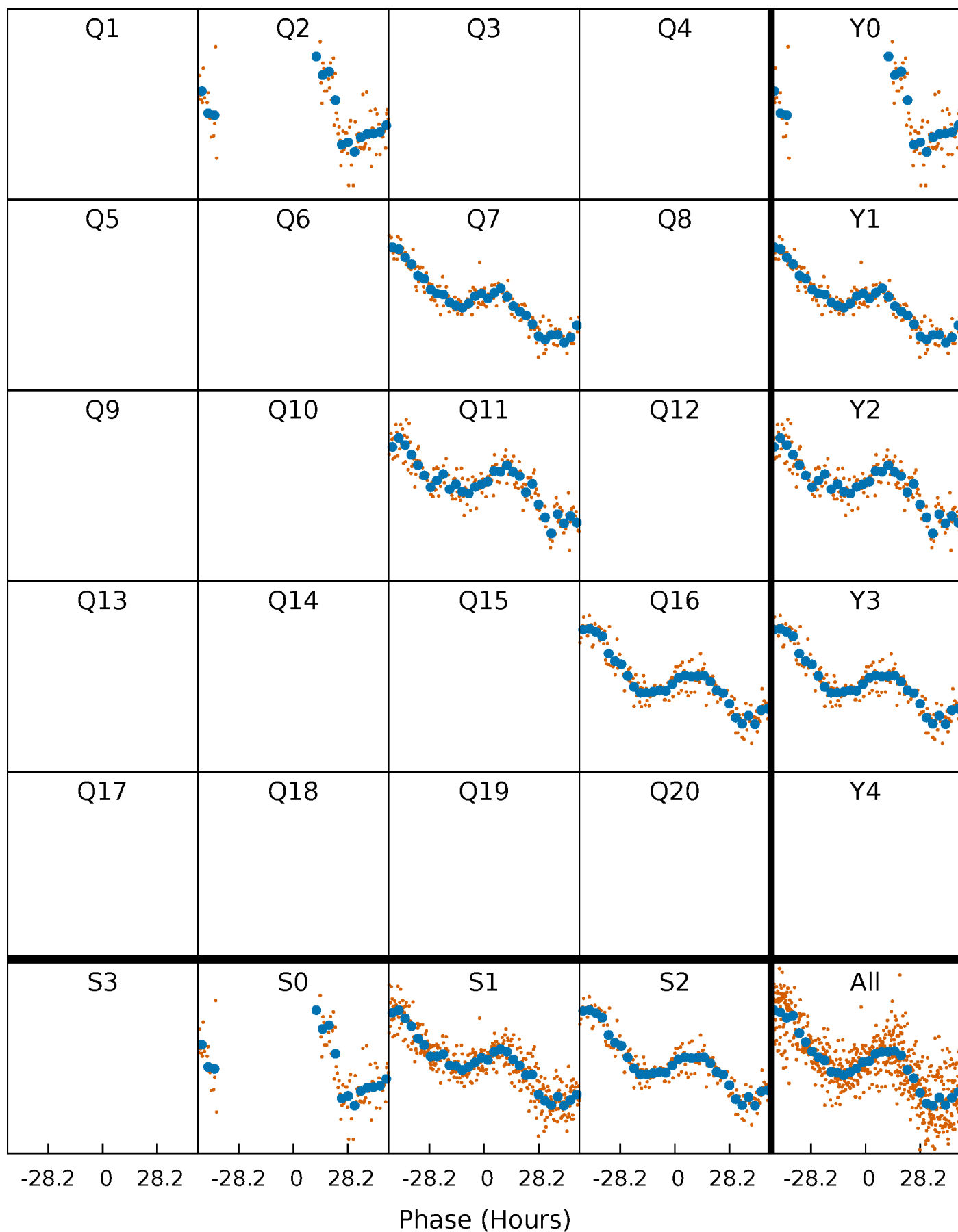


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008245192-06 P=451.337604 Days $T_0=183.164351$ (BKJD)



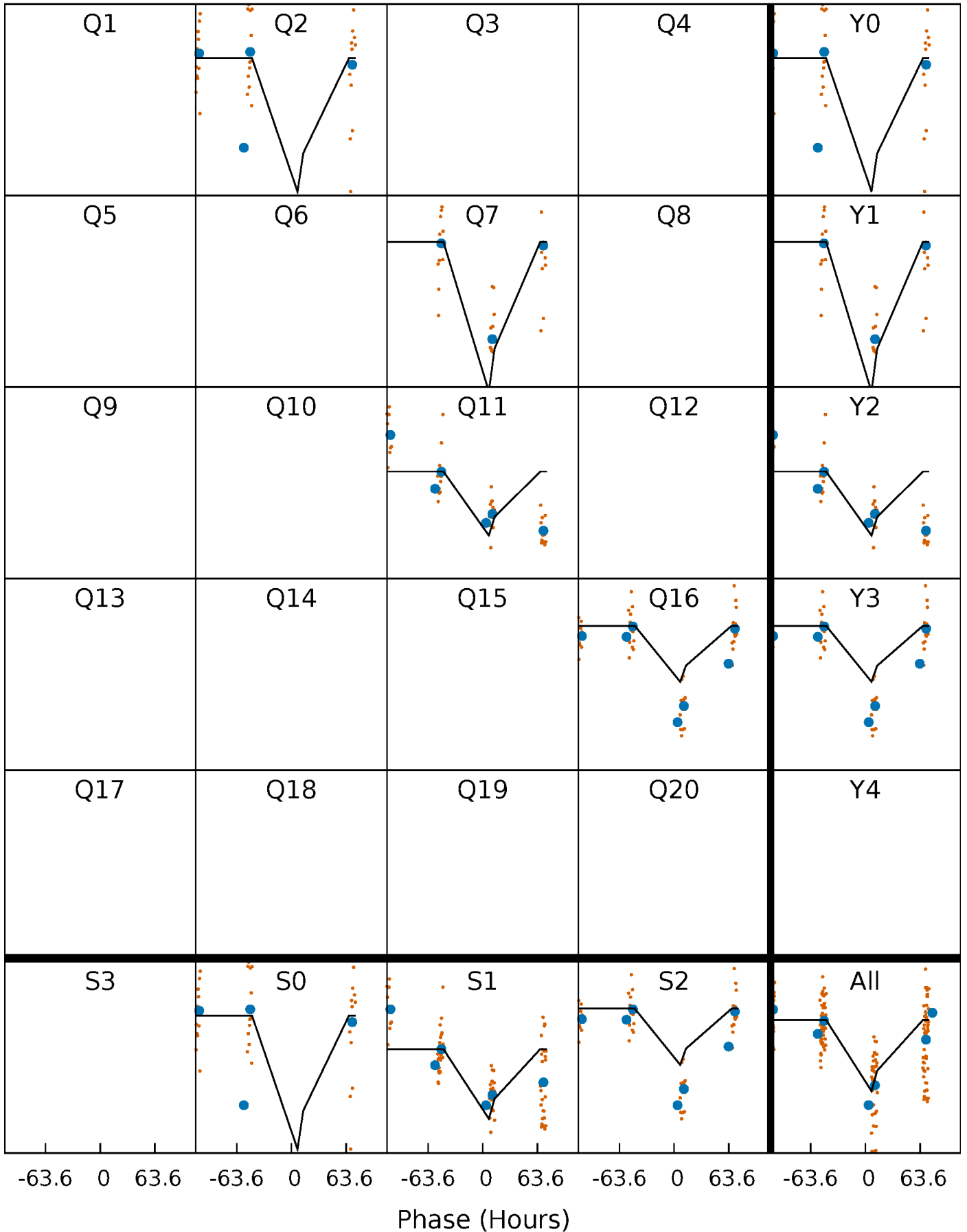
DV Quarter-Phased Transit Curves

TCE 008245192-06 P=451.337604 Days $T_0=183.164351$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

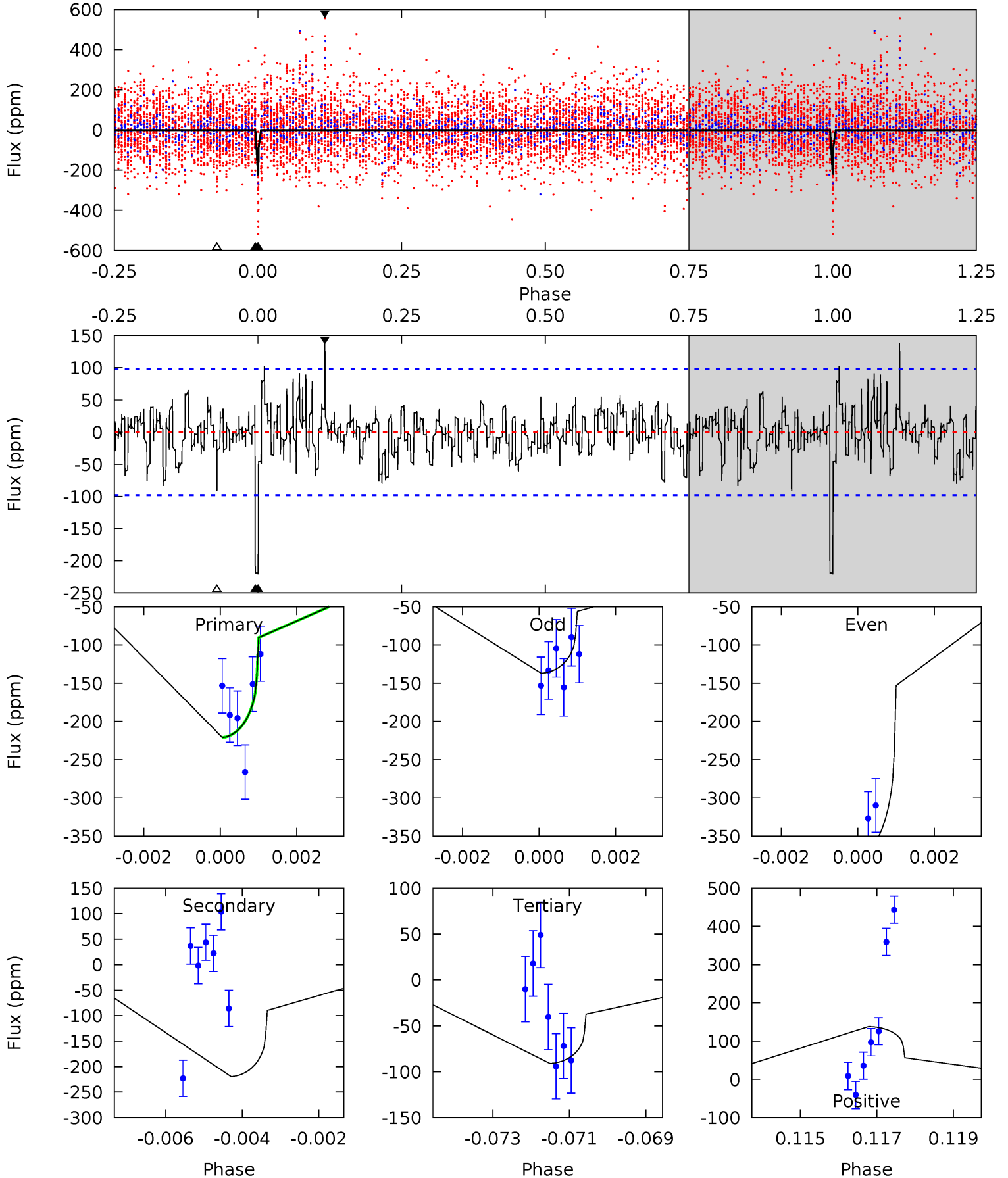
TCE 008245192-06 P=451.452263 Days $T_0=182.746580$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-06, P = 451.337604 Days, E = 183.164351 Days

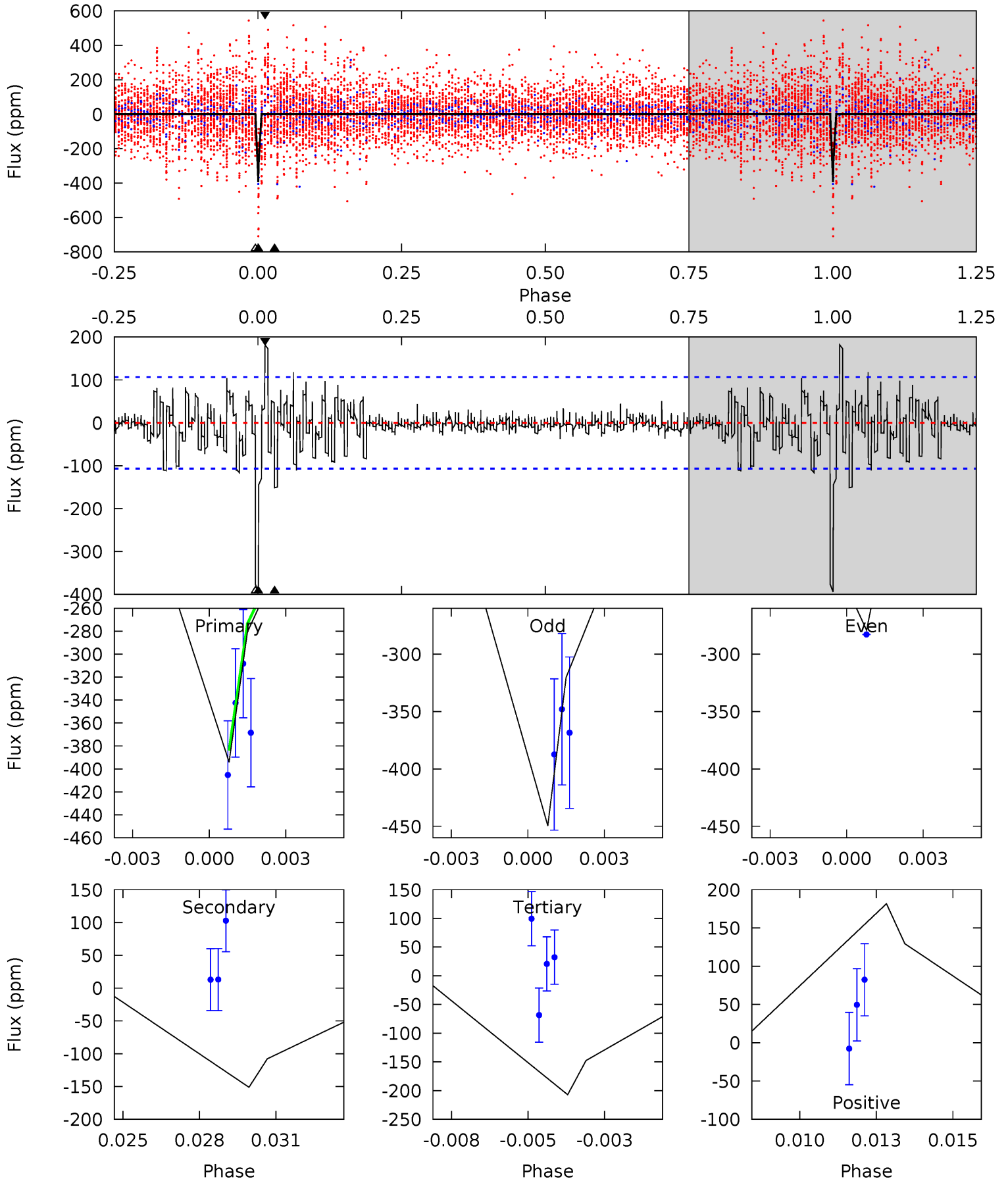
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	11.9	4.94	7.50	5.32	3.08	1.64	7.06	4.50	6.98	4.42	6.16	1.46	0.38	0



Alt Model-Shift Uniqueness Test

008245192-06, P = 451.452263 Days, E = 182.746580 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	7.50	10.3	9.01	5.28	3.02	1.74	9.28	10.5	-2.77	-1.51	4.08	1.38	0.32	0



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-219±18	$2.26^{+1.40}_{-1.18}$	339^{+20}_{-15}	5087^{+2269}_{-886}	$31395^{+100923}_{-19578}$
Alt.	-151±20	$2.57^{+1.30}_{-1.31}$	340^{+18}_{-15}	4483^{+1701}_{-606}	17173^{+53449}_{-10105}

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

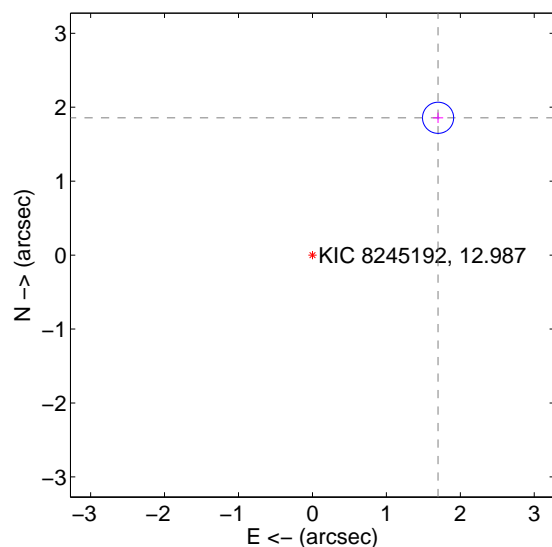
Supplemental centroid analysis for 008245192-06. Kepler magnitude: 12.99. Transit SNR 14.09

There are 1 quarters with good PRF difference image offsets

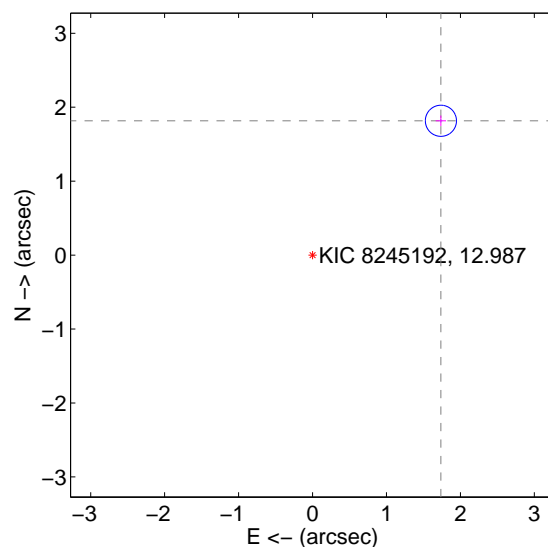
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.517 ± 0.070	35.86	-1.699 ± 0.070	1.857 ± 0.071
PRF-fit source offset from KIC position	2.513 ± 0.070	35.81	-1.736 ± 0.070	1.816 ± 0.071
photometric centroid source offset	0.45 ± 0.48	0.95	0.28 ± 0.49	0.35 ± 0.46

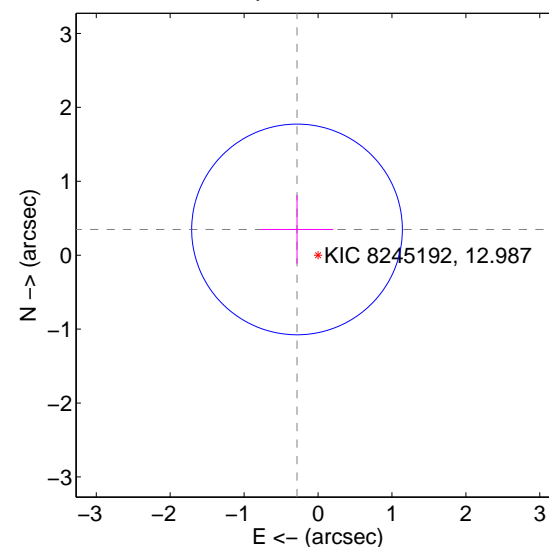
offset from difference PRF-fit to OOT PRF-fit



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.

Q9 no difference image



Q9 no OOT image



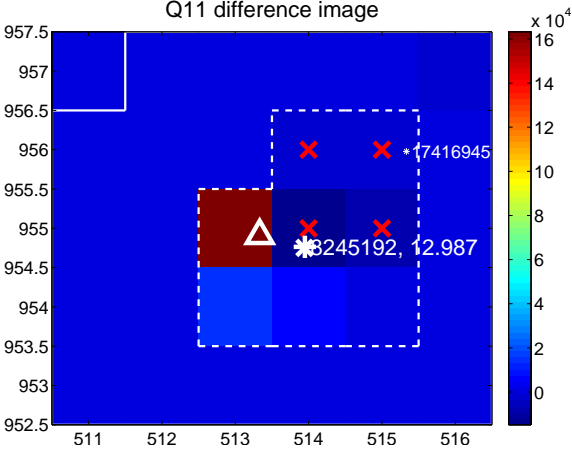
Q10 no difference image



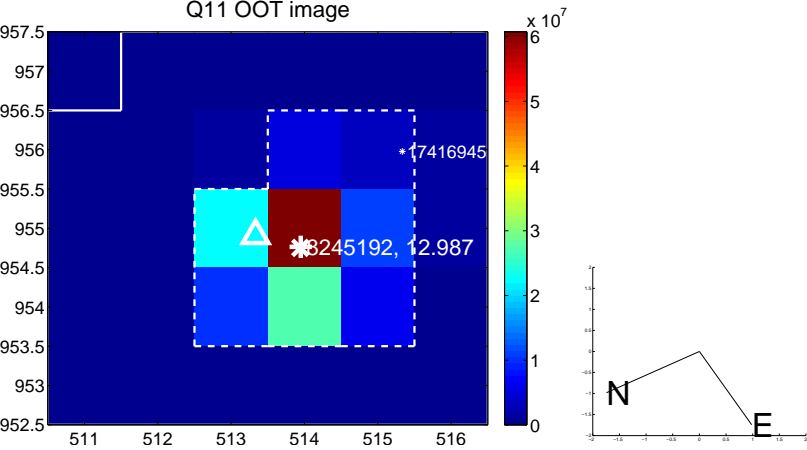
Q10 no OOT image



Q11 difference image



Q11 OOT image



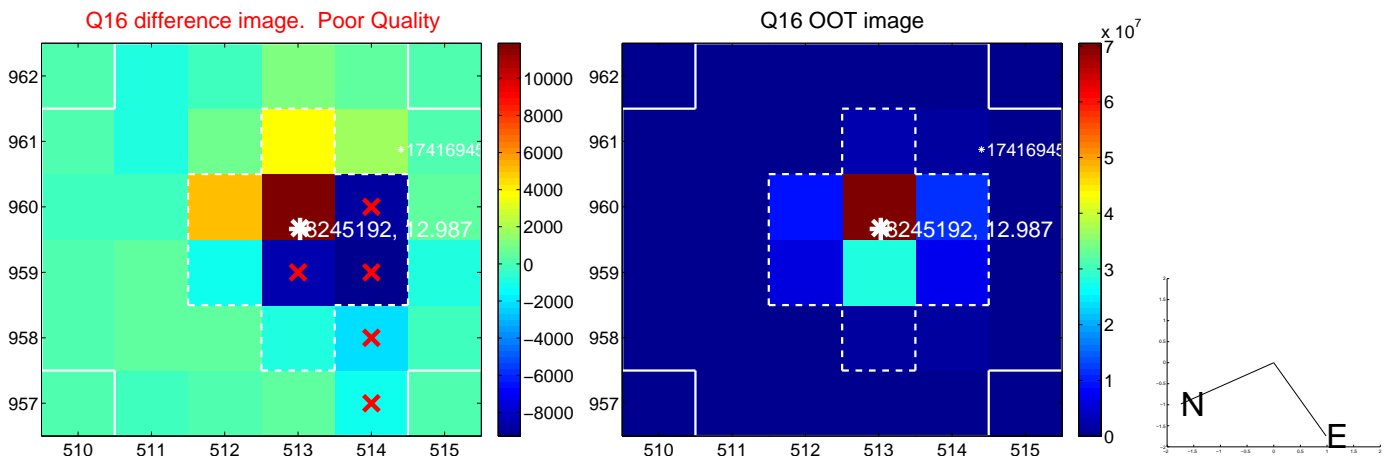
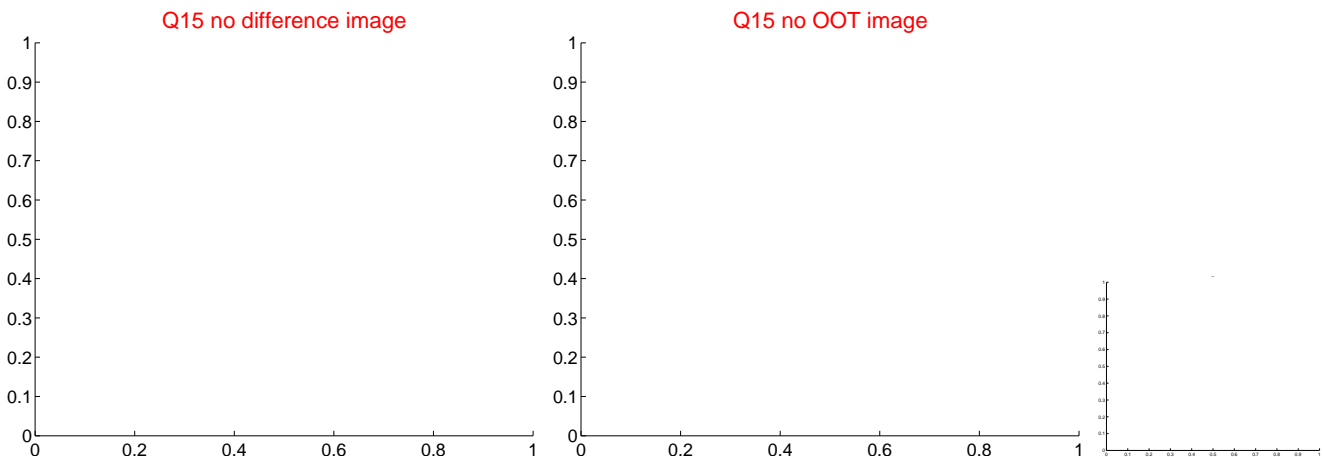
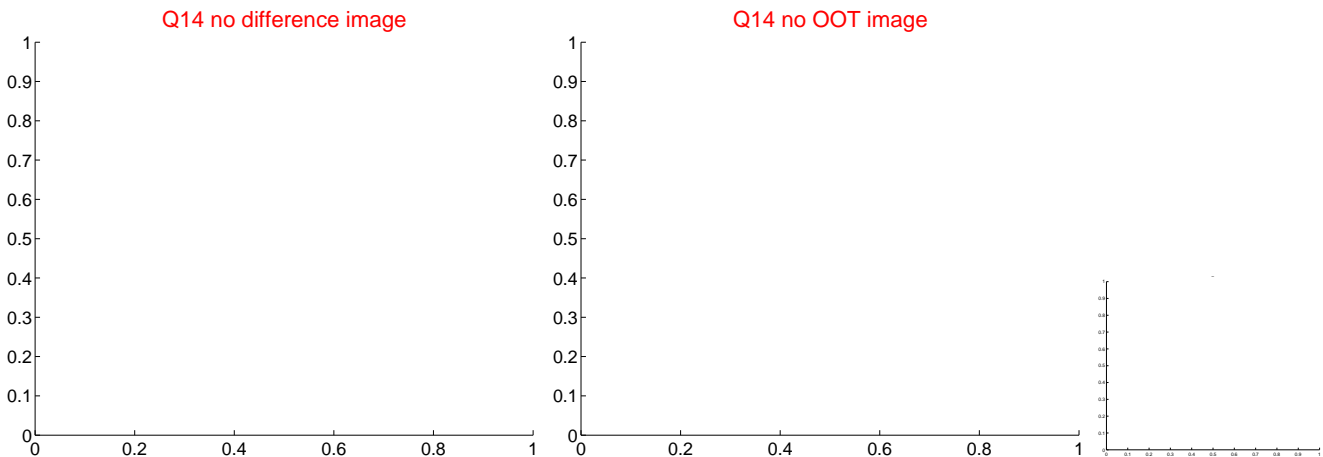
Q12 no difference image



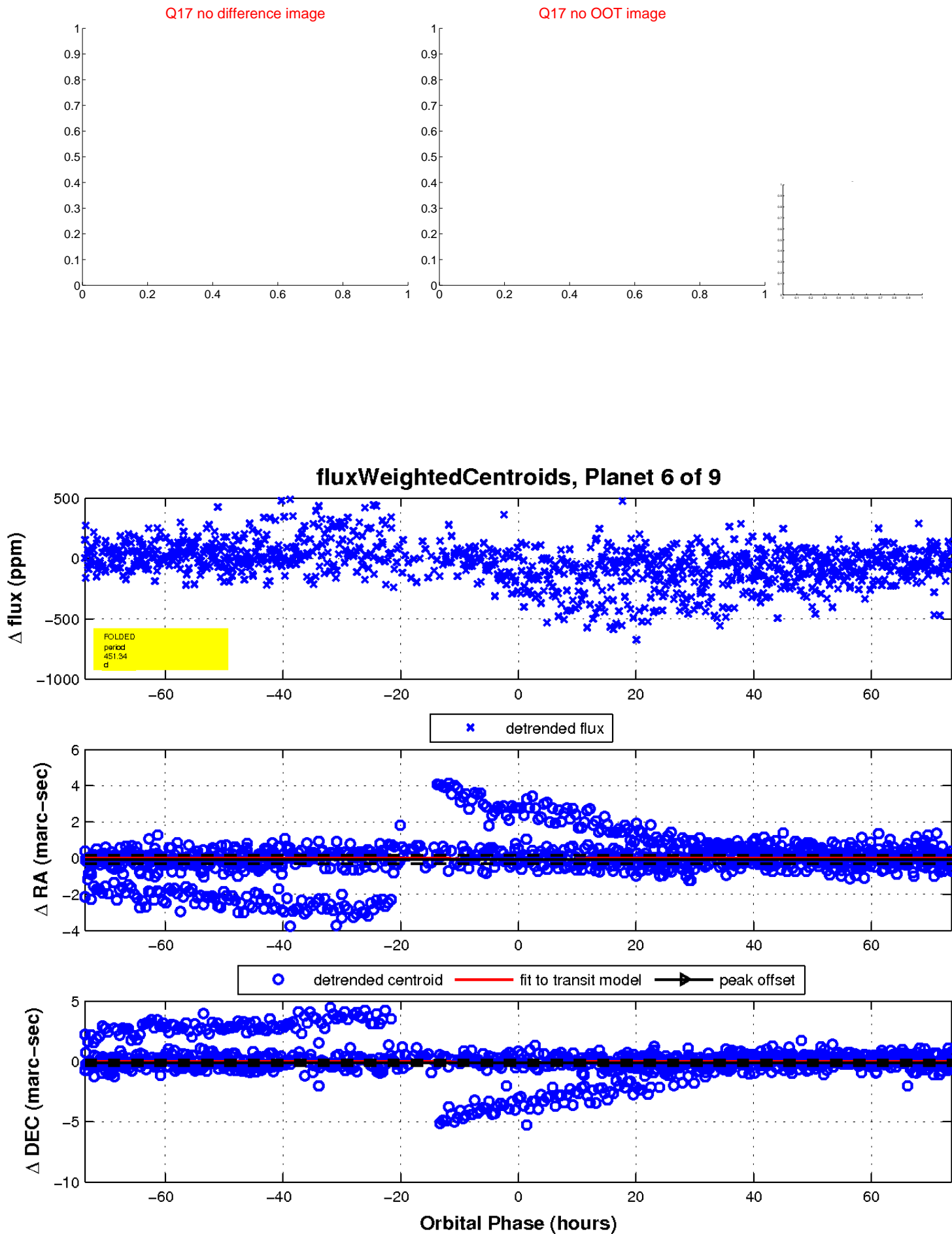
Q12 no OOT image



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

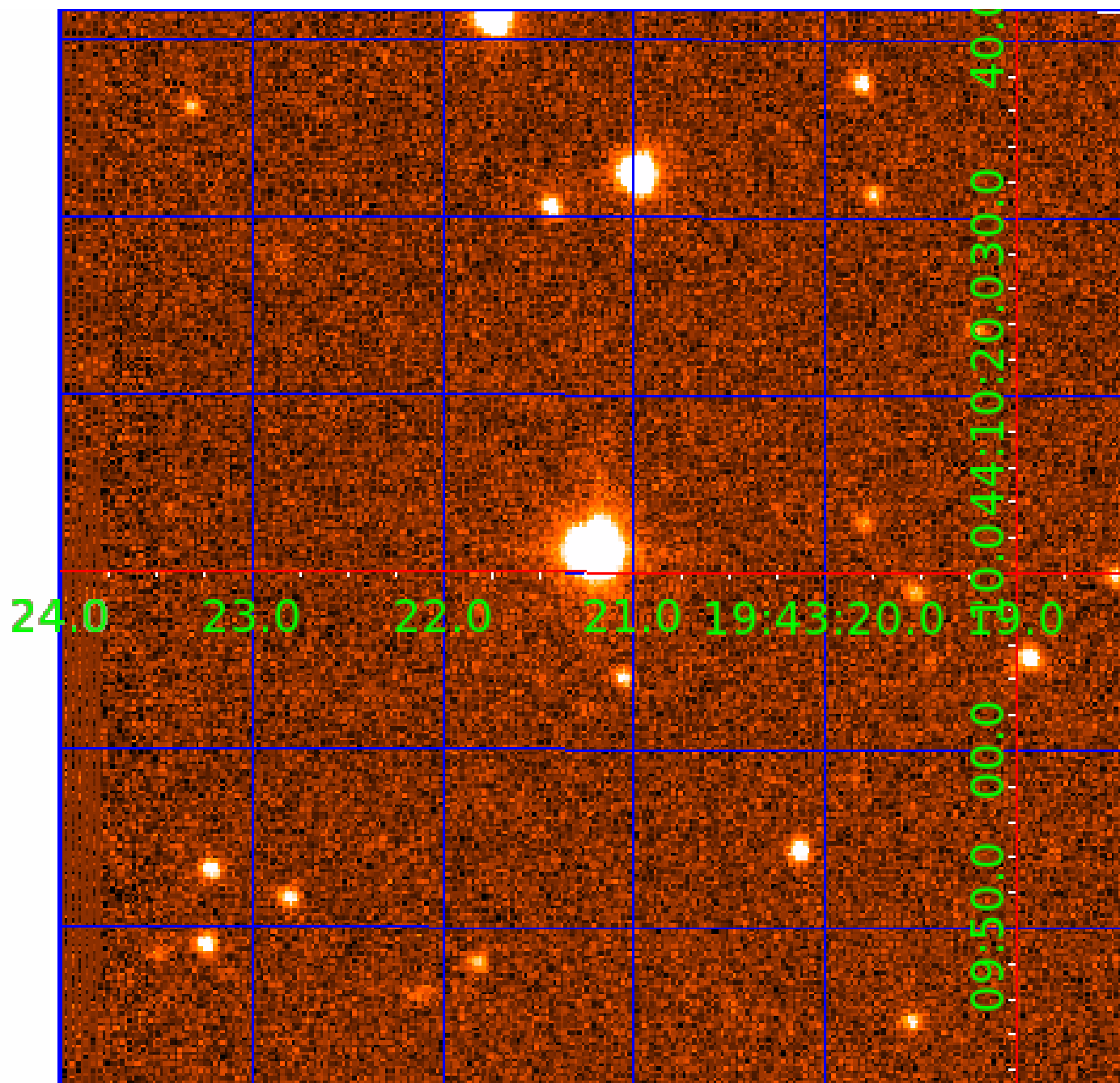


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

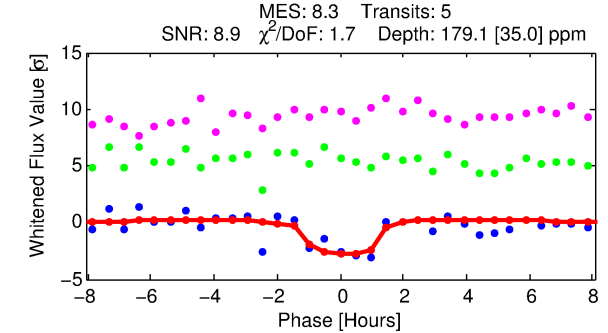
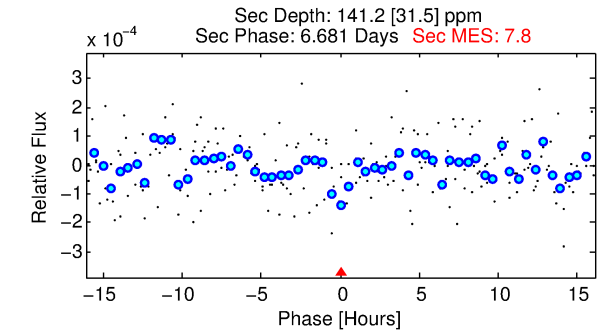
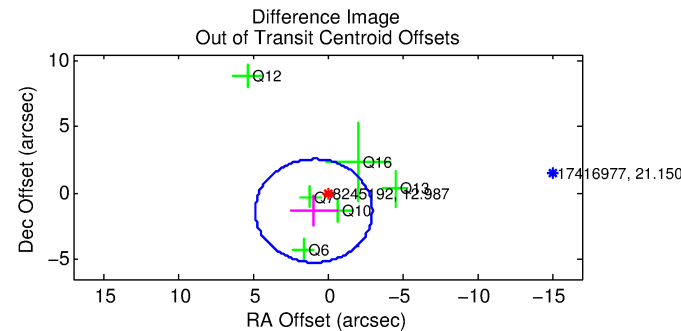
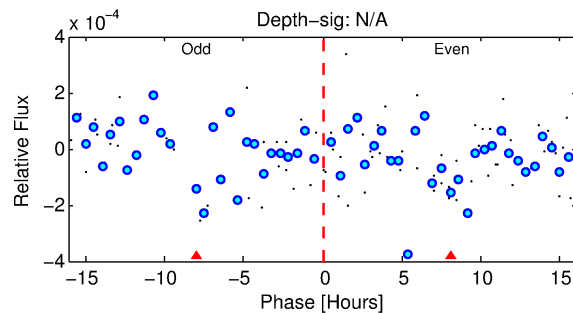
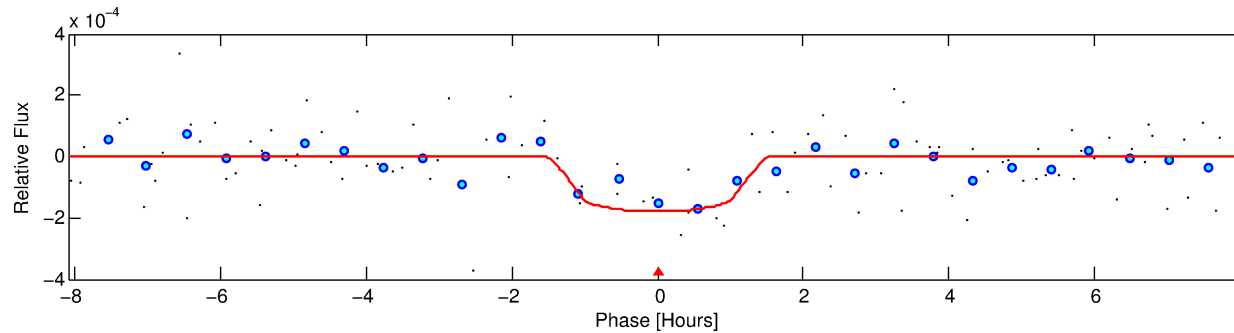
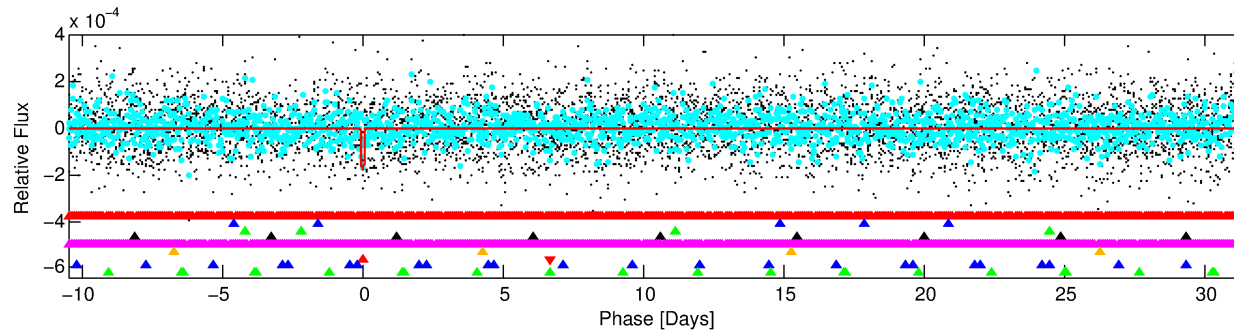
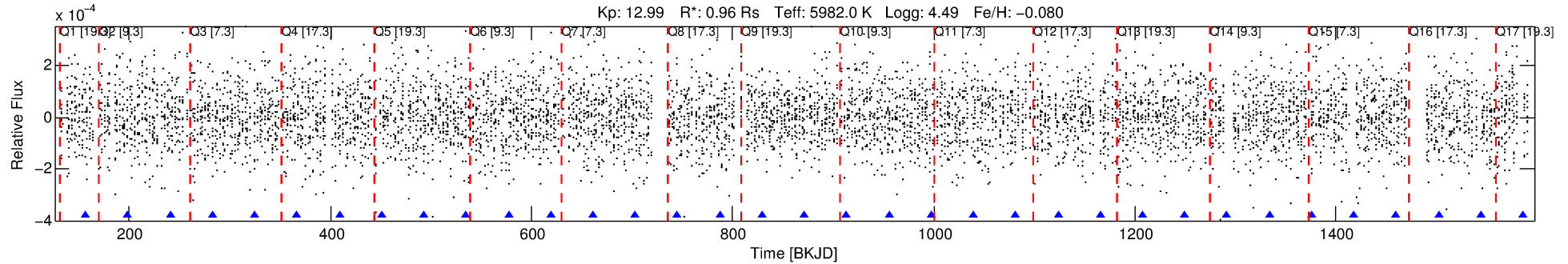
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-07

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 7 of 9 Period: 42.033 d



DV Fit Results:

Period = 42.03273 [0.00098] d
Epoch = 156.8513 [0.0122] BKJD
Rp/R* = 0.0145 [0.0337]
a/R* = 55.75 [669.57]
b = 0.90 [2.56]
Seff = 18.44 [5.57]
Teq = 528 [40] K
Rp = 1.52 [3.54] Re
a = 0.2390 [0.0443] AU
Ag = 1930.57 [9008.63] [0.21σ]
Teffp = 5415 [6309] K [0.77σ]

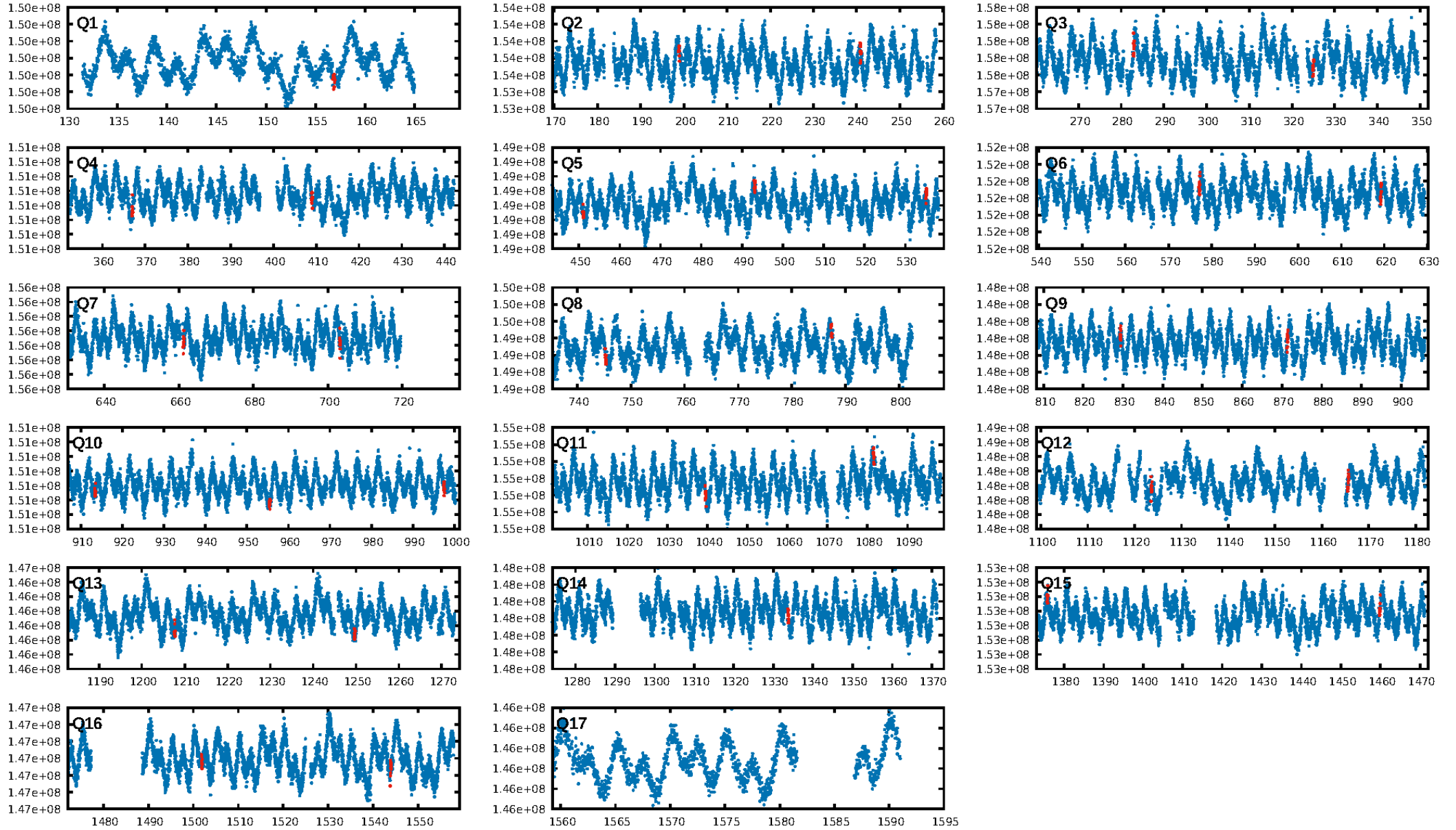
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [92.10σ]
LongPeriod-sig: 100.0% [122.36σ]
ModelChiSquare2-sig: 85.4%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 3.66e-08
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -1.557
Centroid-sig: 16.1%
Centroid-so: 0.851 arcsec [1.35σ]
OotOffset-rm: 1.621 arcsec [1.24σ]
KicOffset-rm: 1.636 arcsec [1.25σ]
OotOffset-st: 2/1/2/1 [6]
KicOffset-st: 2/1/2/1 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.12 [2/16]

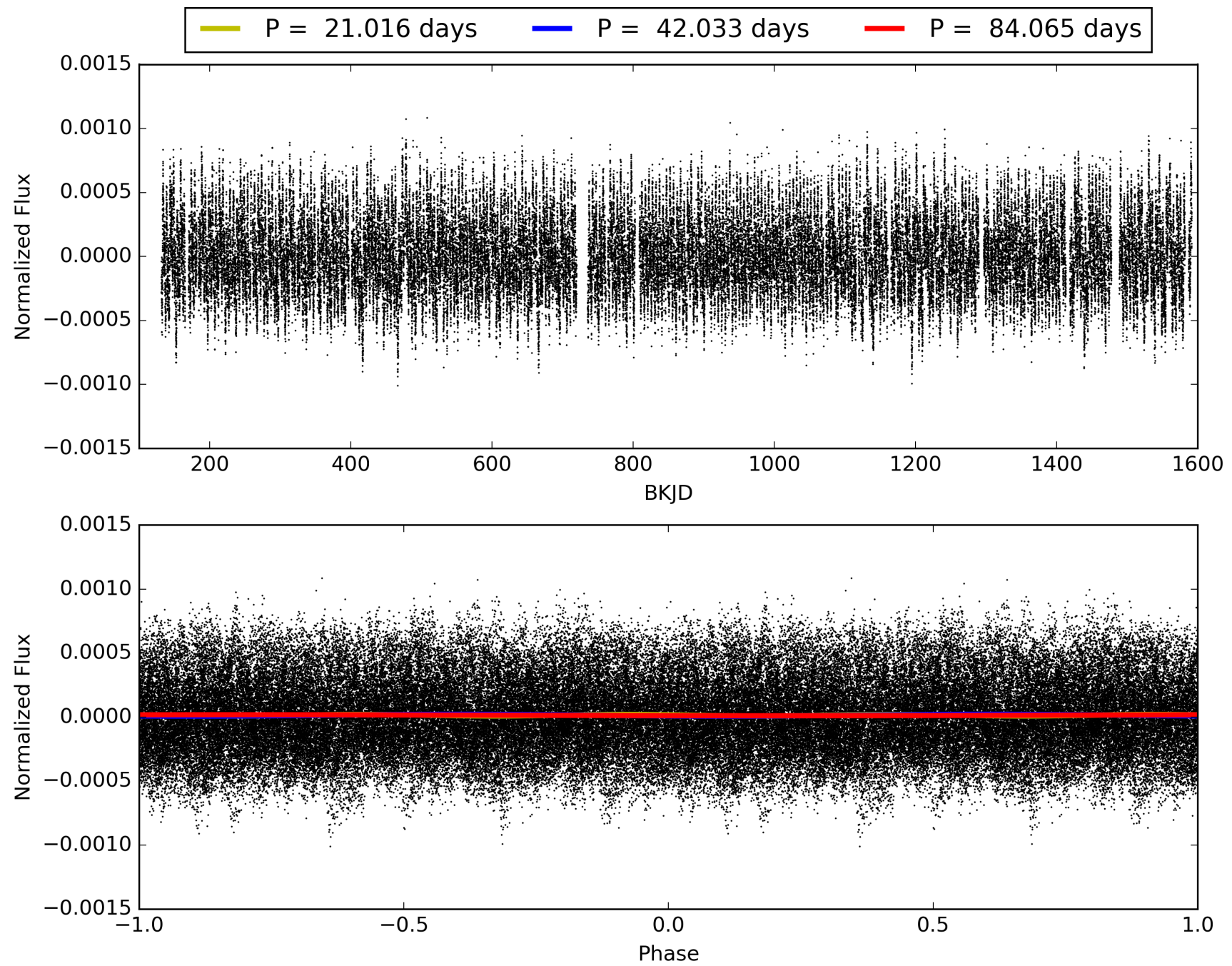
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:50:04 Z

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

TCE 008245192-07, PDC Light Curves

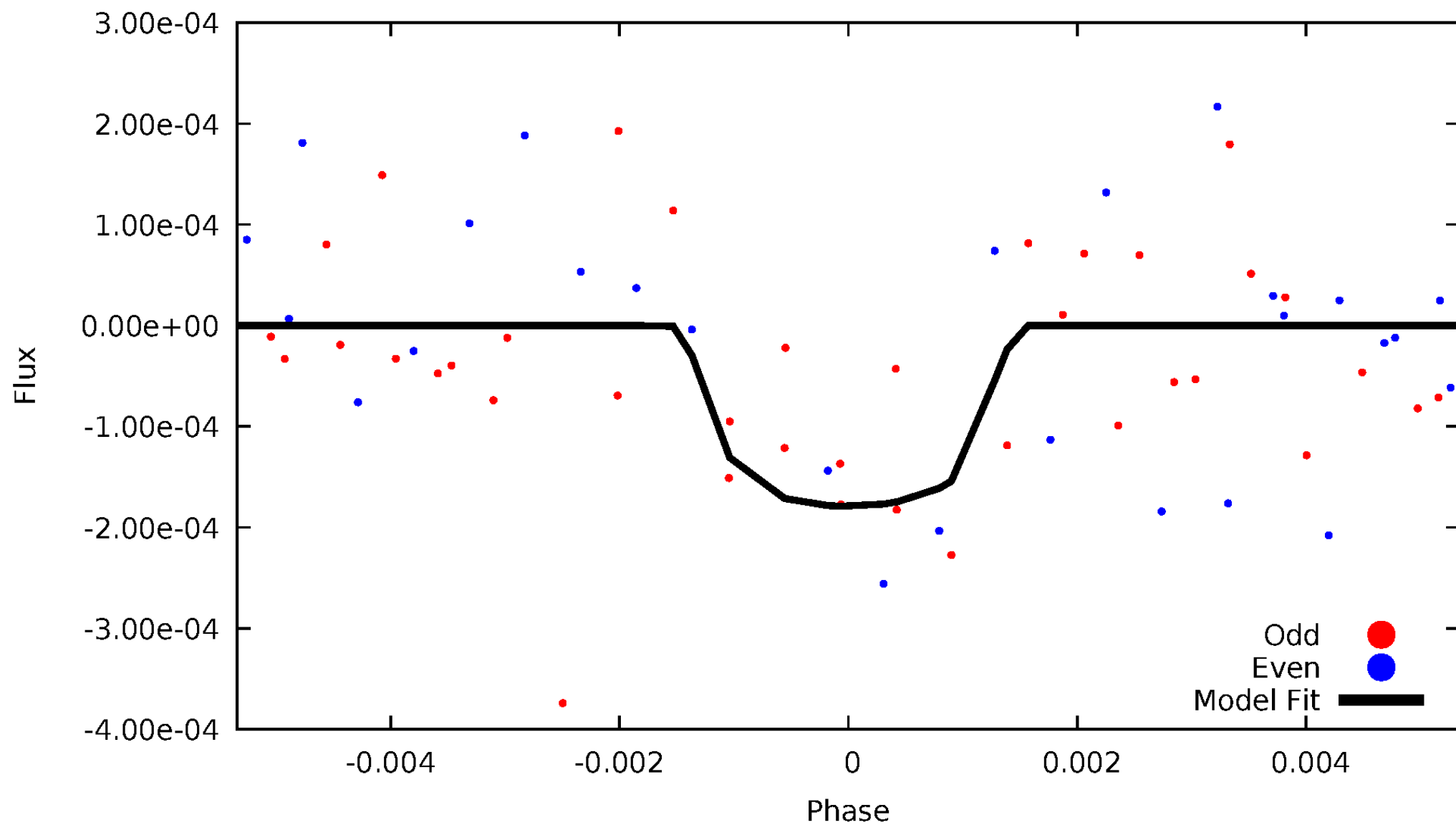


TCE 008245192-07



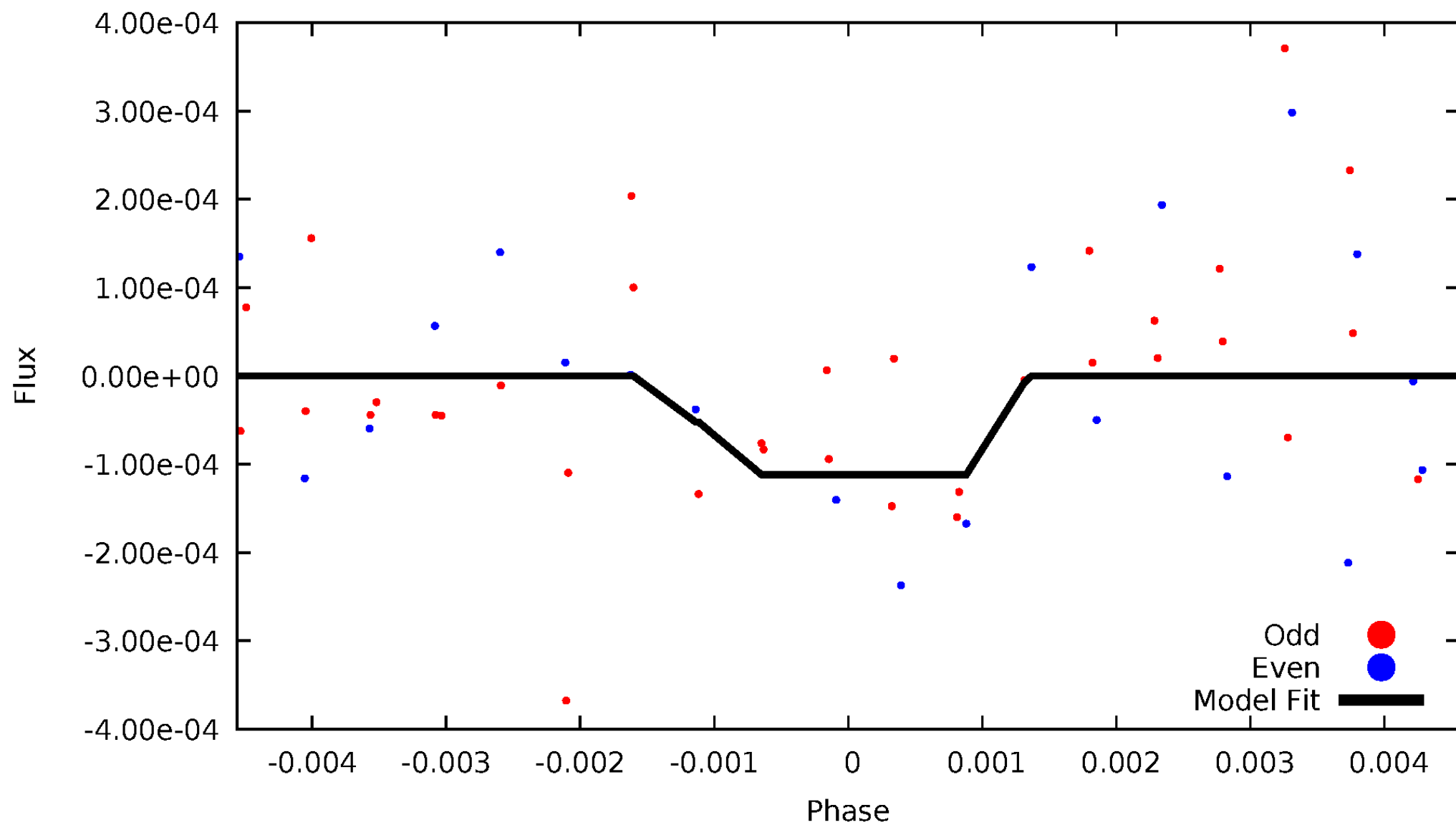
DV Odd/Even

TCE 008245192-07



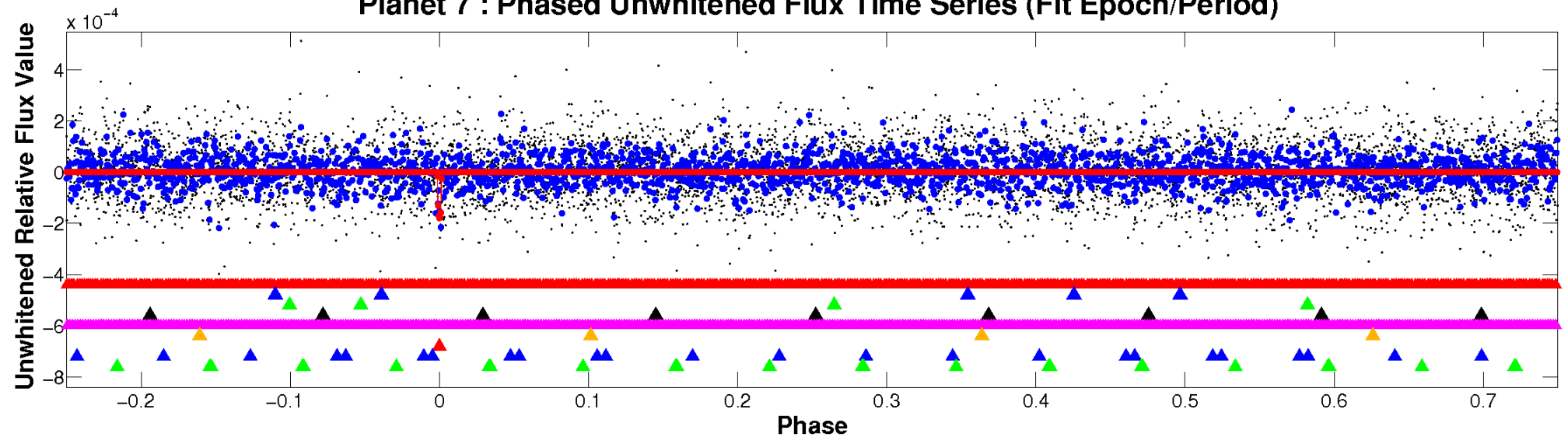
ALT Odd/Even

TCE 008245192-07

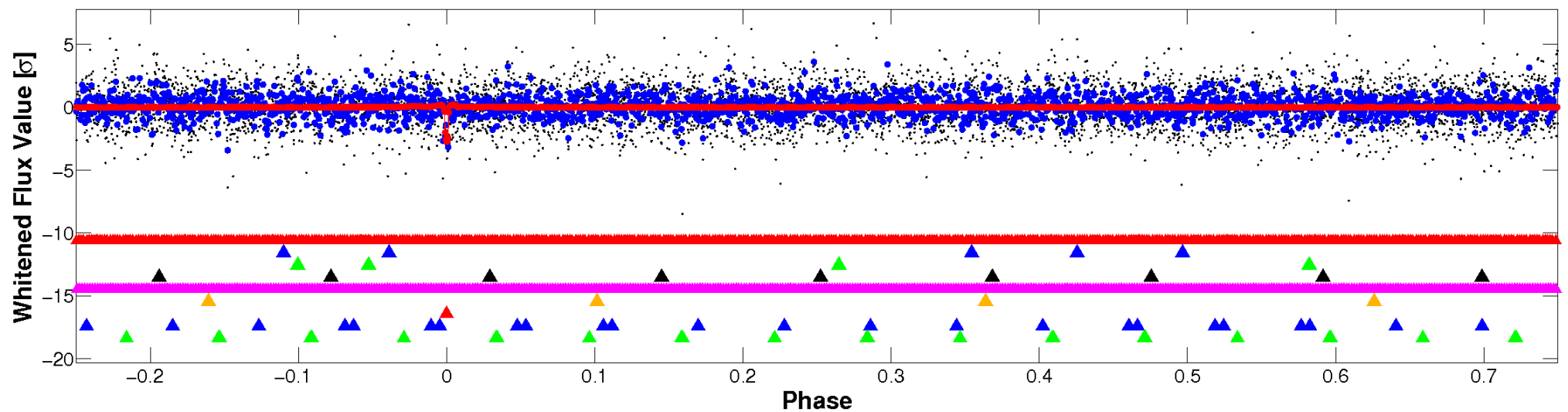


Non-Whitened Vs. Whitened Light Curve

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

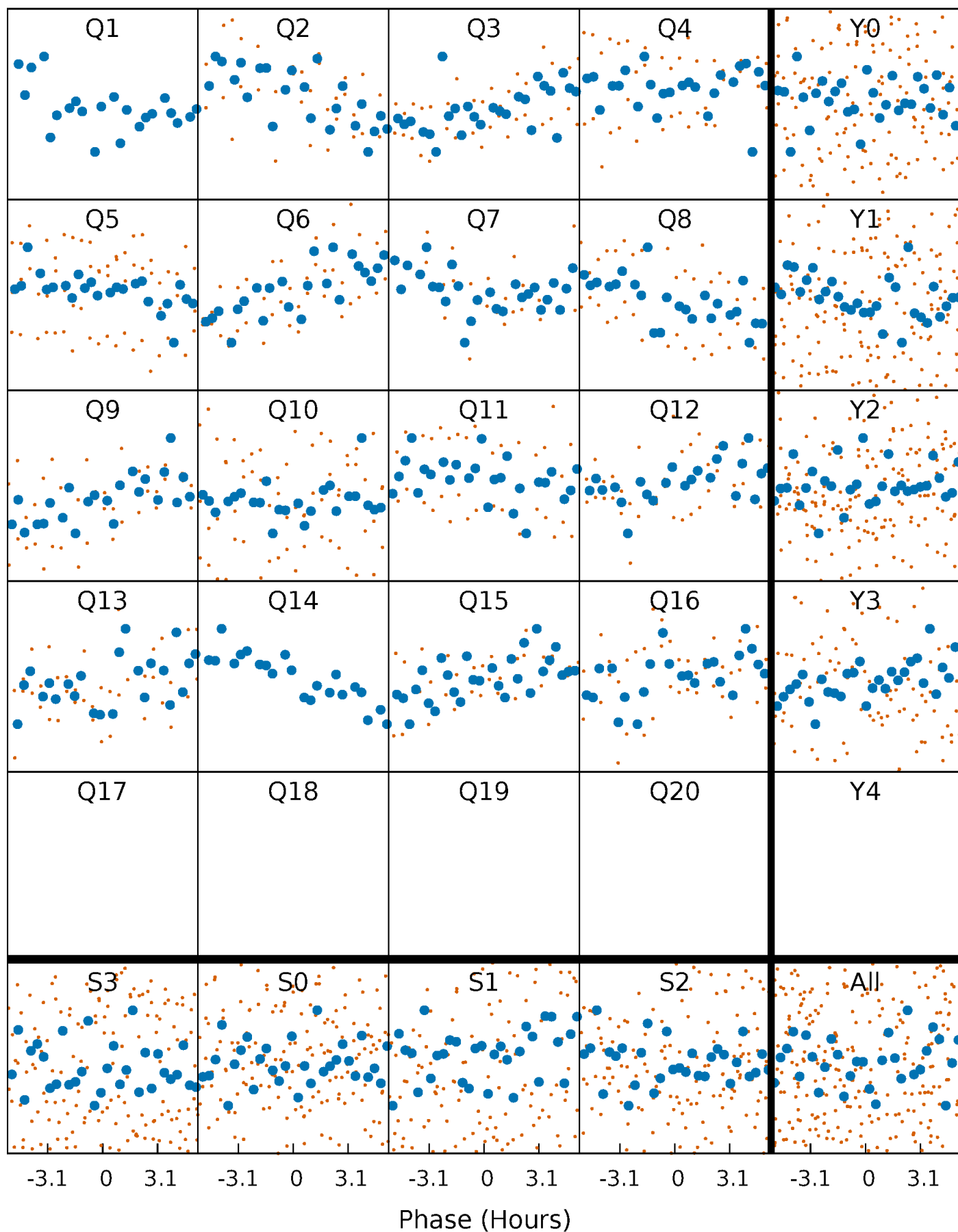


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



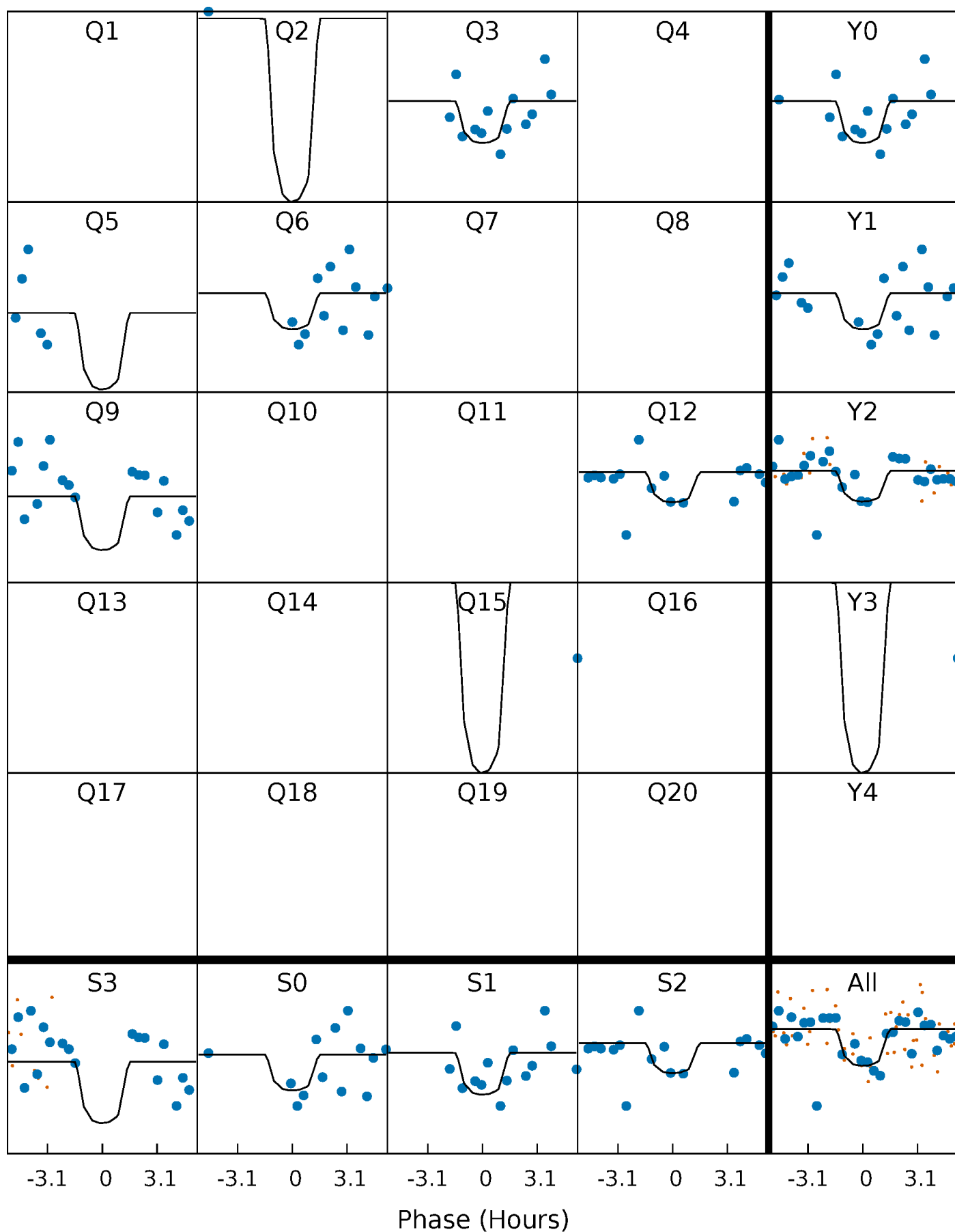
PDC Quarter-Phased Transit Curves

TCE 008245192-07 P= 42.032731 Days $T_0=156.851307$ (BKJD)



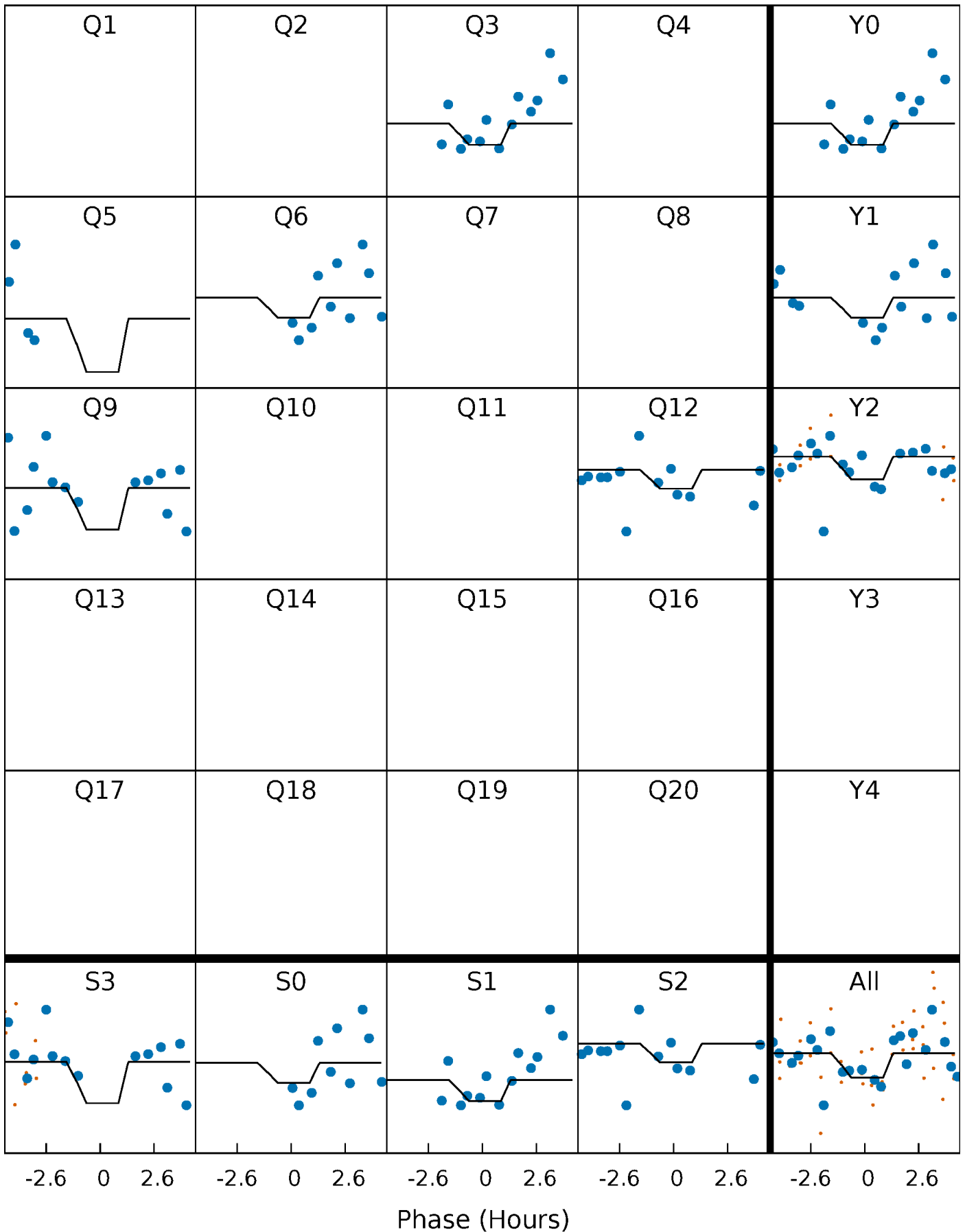
DV Quarter-Phased Transit Curves

TCE 008245192-07 P= 42.032731 Days $T_0=156.851307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

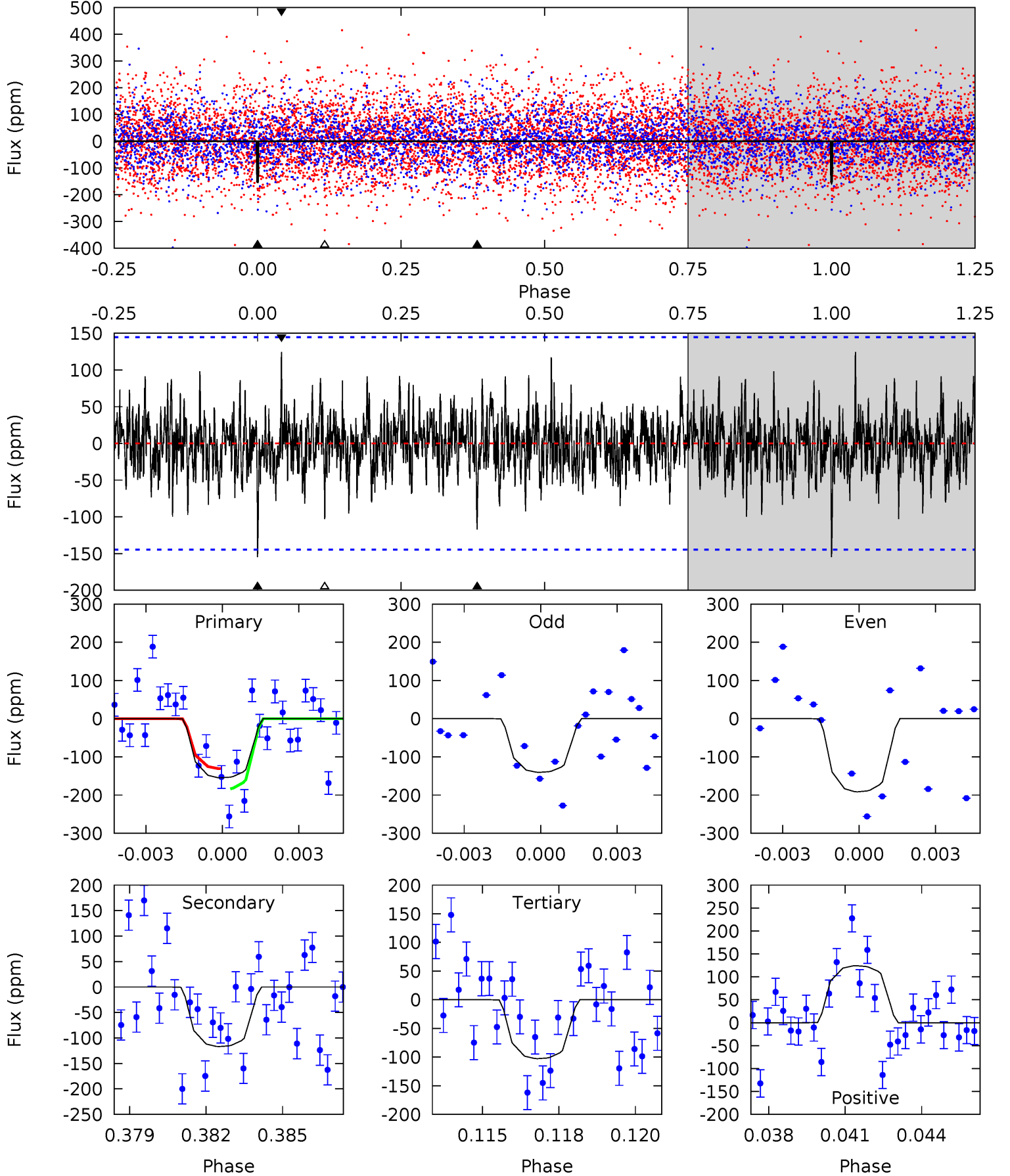
TCE 008245192-07 P= 42.031760 Days $T_0=156.857349$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-07, $P = 42.032731$ Days, $E = 114.818576$ Days

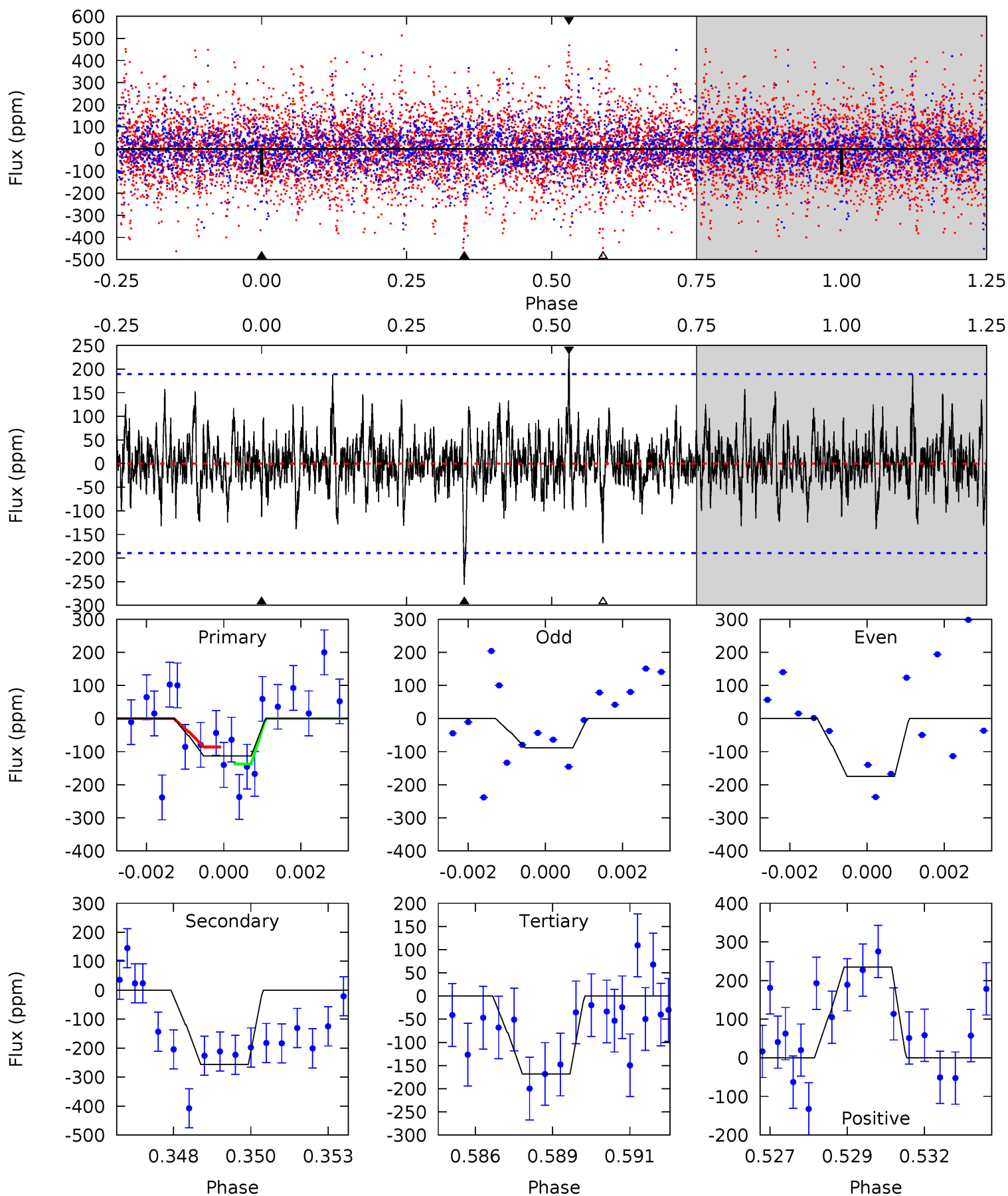
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.63	4.25	3.73	4.51	5.26	2.97	1.15	1.89	1.11	0.51	-0.27	0.84	1.06	0.45	0.96



Alt Model-Shift Uniqueness Test

008245192-07, P = 42.031760 Days, E = 114.825589 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.15	7.14	4.70	6.55	5.29	3.03	1.24	-1.55	-3.40	2.45	0.59	1.04	1.27	0.48	0.71



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-117 ± 28	$3.06^{+2.94}_{-2.12}$	751^{+43}_{-34}	3965^{+2510}_{-743}	366^{+3407}_{-266}
Alt.	-256 ± 36	$3.03^{+2.94}_{-2.04}$	749^{+41}_{-36}	4657^{+3535}_{-1024}	896^{+6932}_{-680}

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 $A_{obs} \gg 1.0$

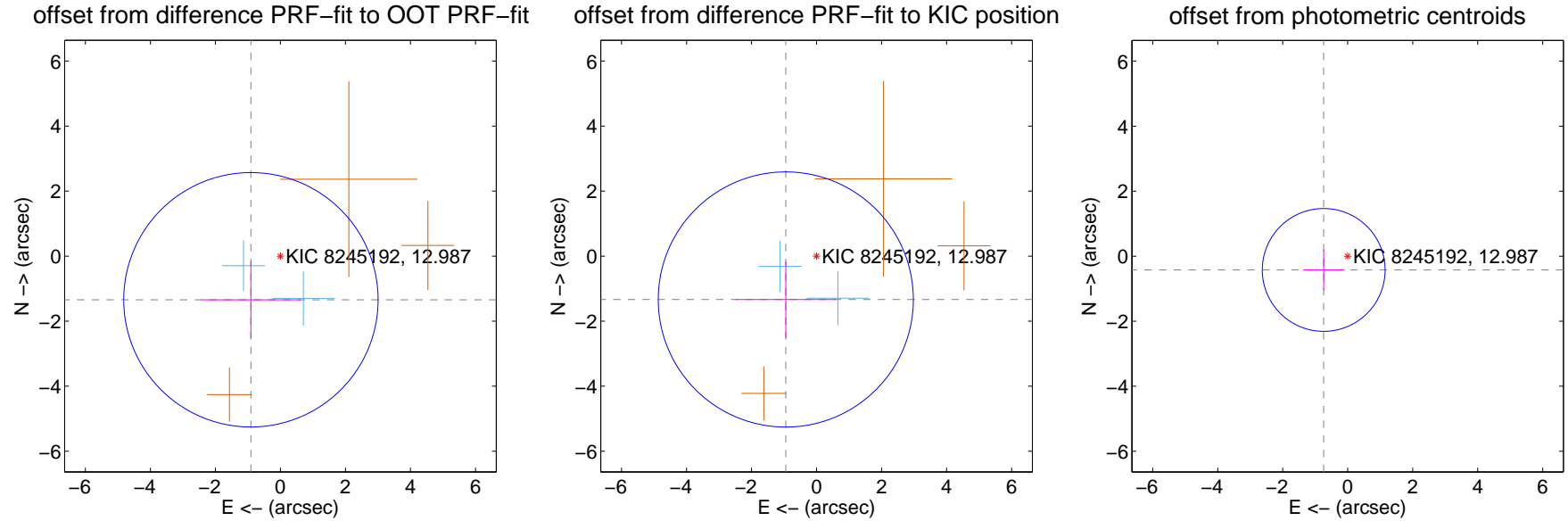
DV Centroid Data

Supplemental centroid analysis for 008245192-07. Kepler magnitude: 12.99. Transit SNR 8.86

There are 2 quarters with good PRF difference image offsets

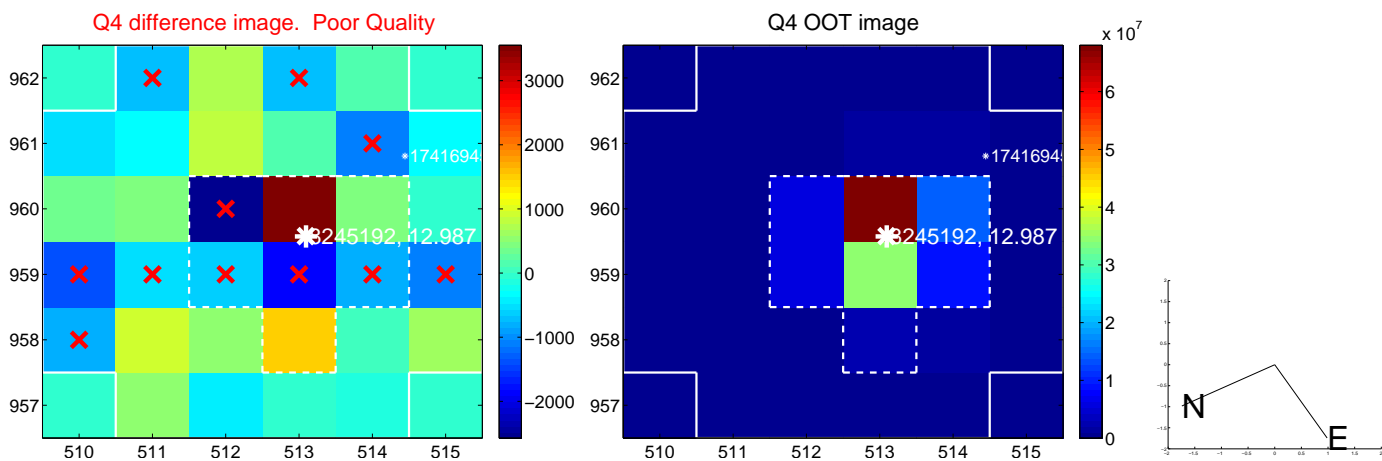
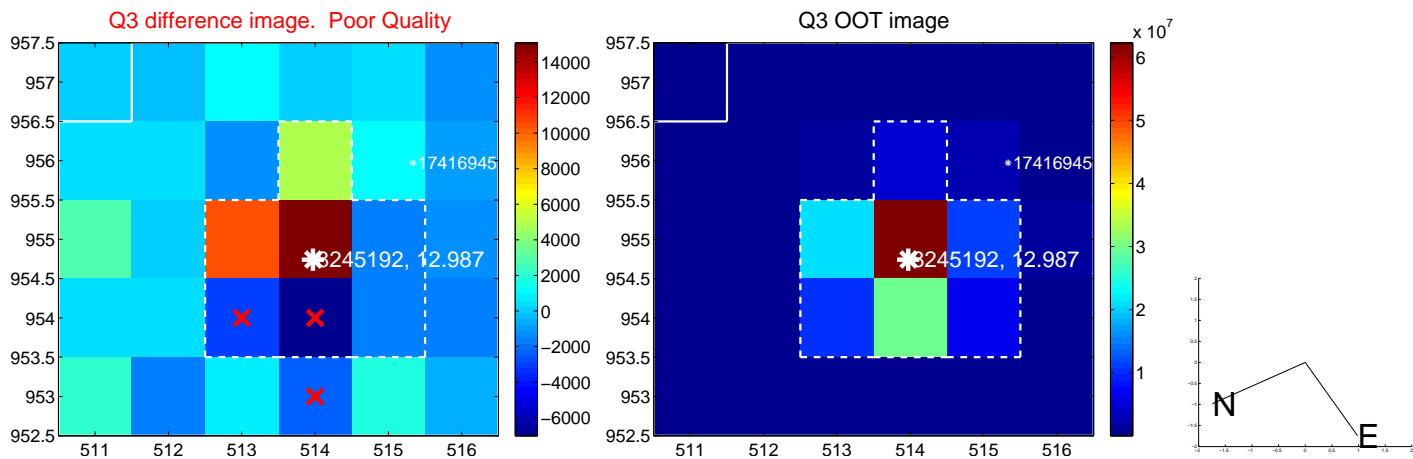
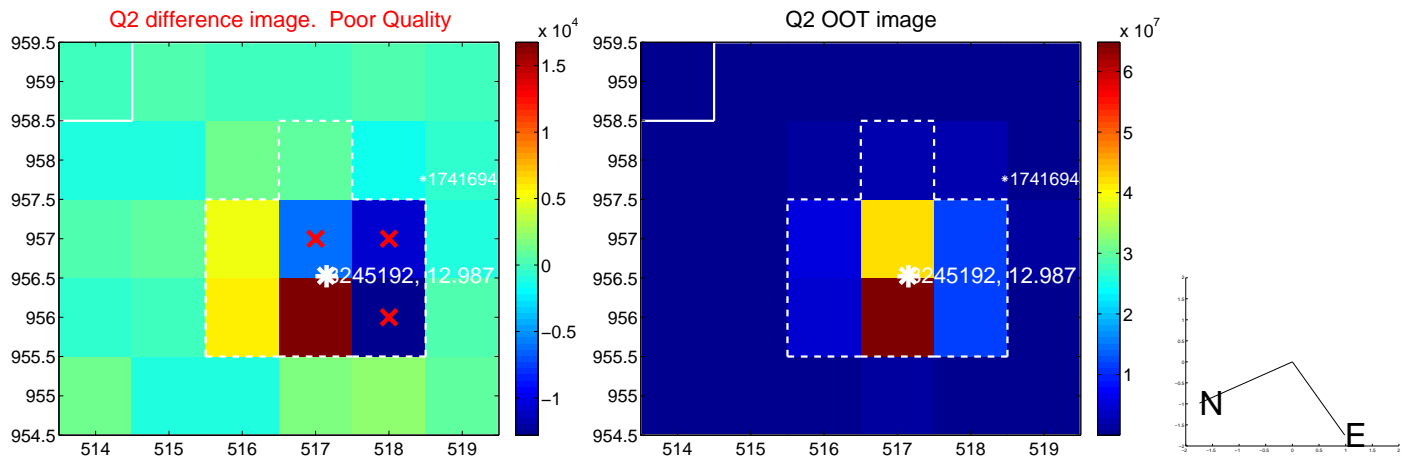
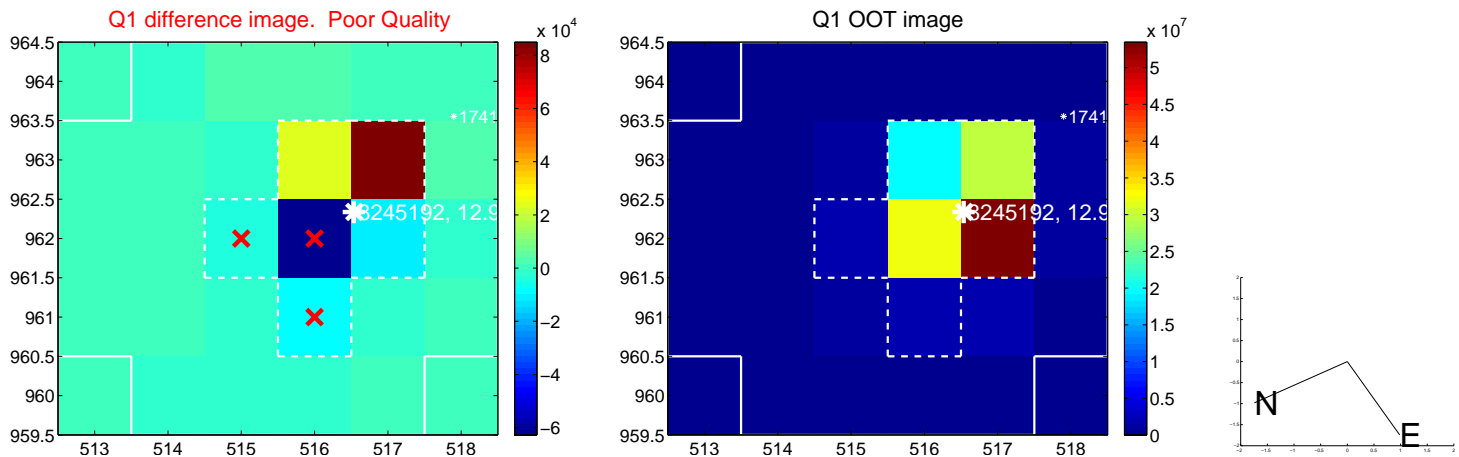
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.621 ± 1.304	1.24	0.909 ± 1.538	-1.342 ± 1.182
PRF-fit source offset from KIC position	1.636 ± 1.308	1.25	0.947 ± 1.543	-1.334 ± 1.172
photometric centroid source offset	0.85 ± 0.63	1.35	0.74 ± 0.63	-0.42 ± 0.62

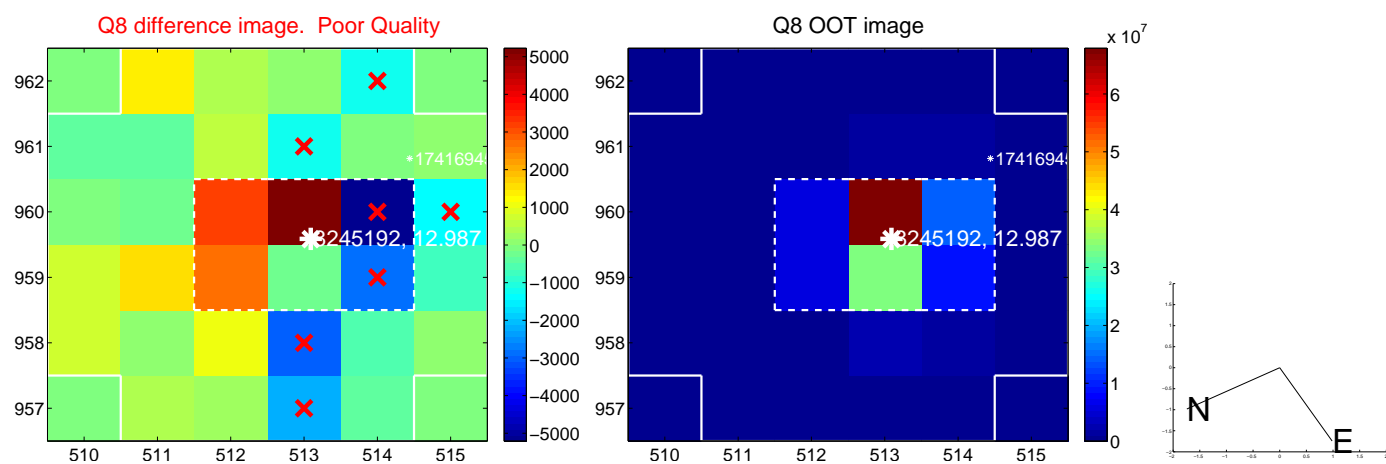
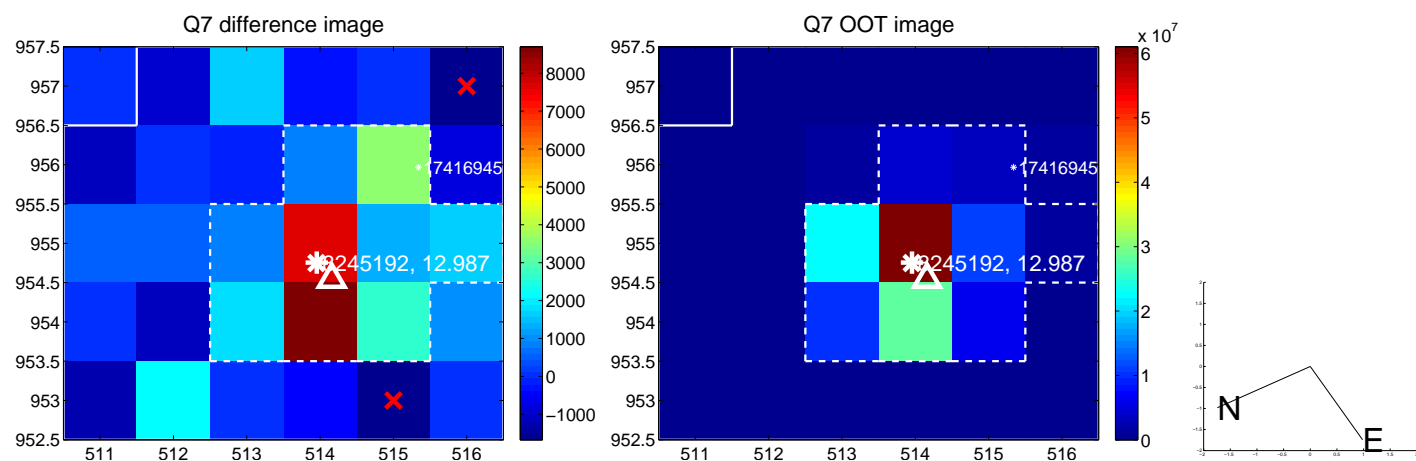
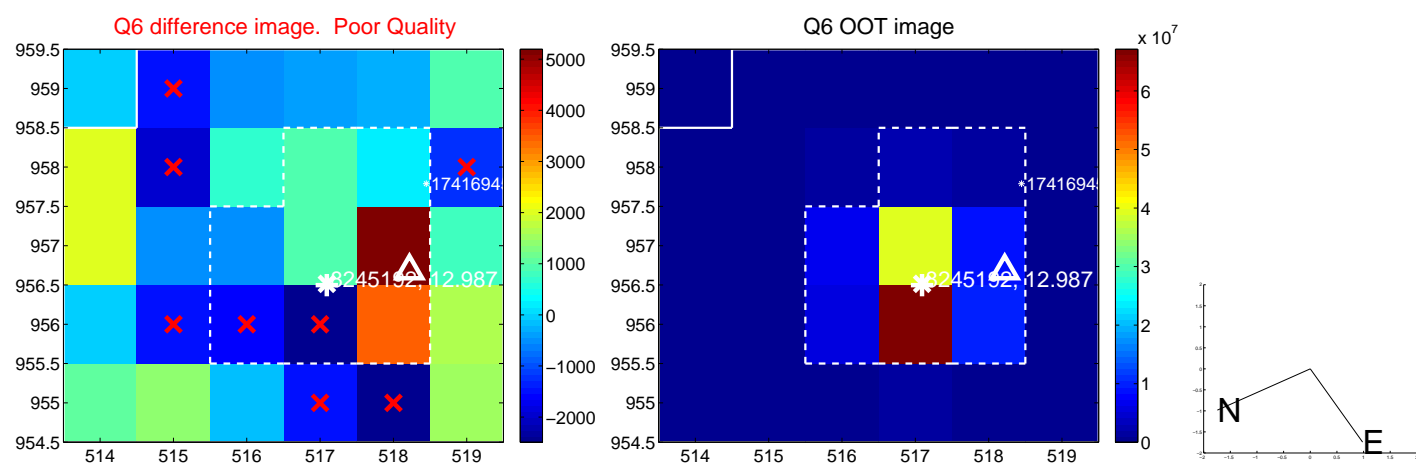
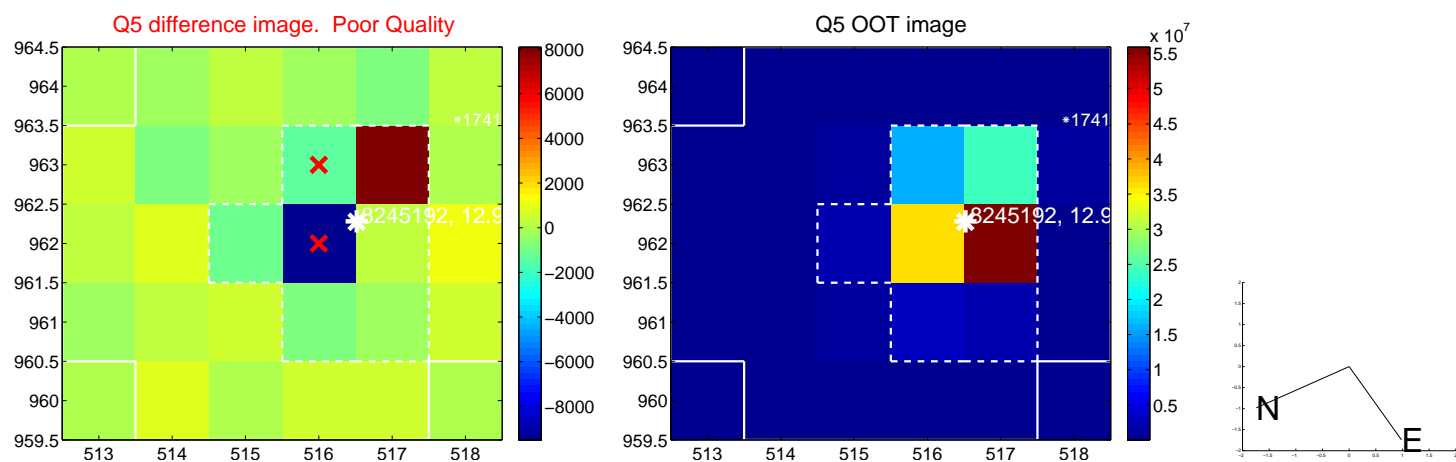


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

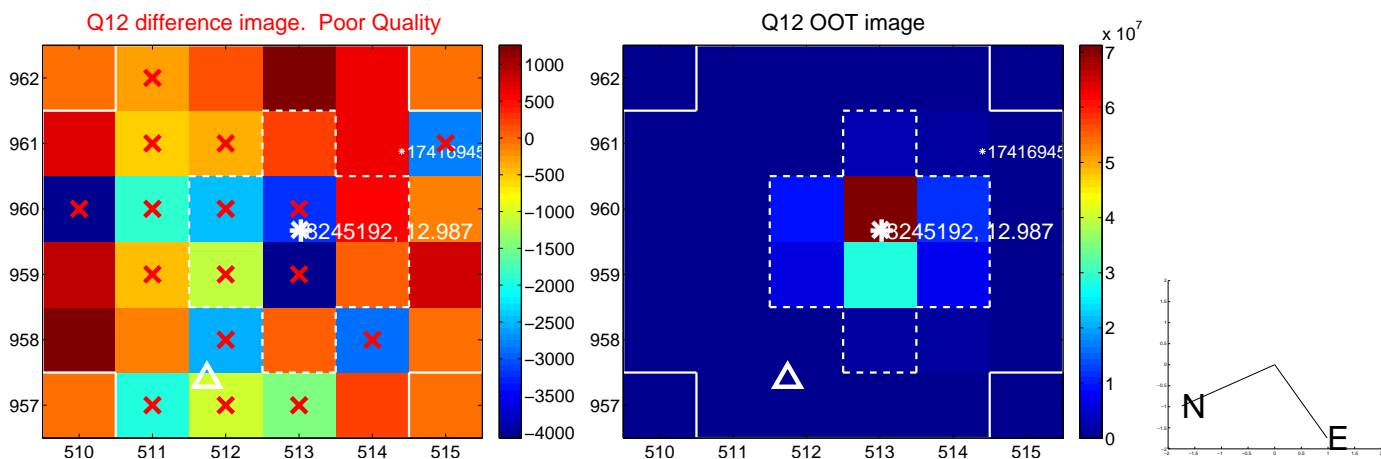
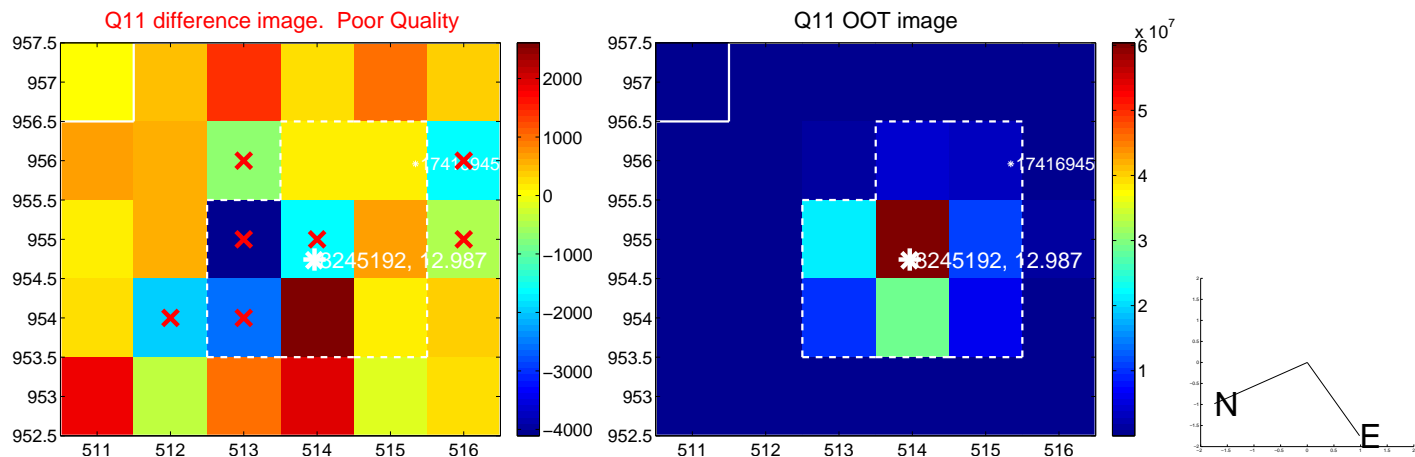
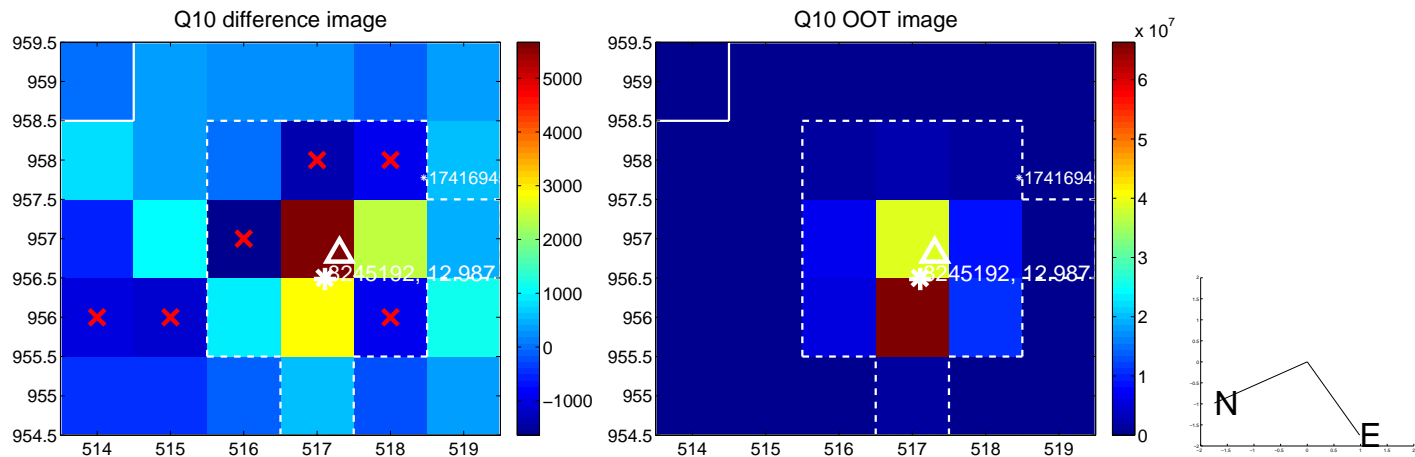
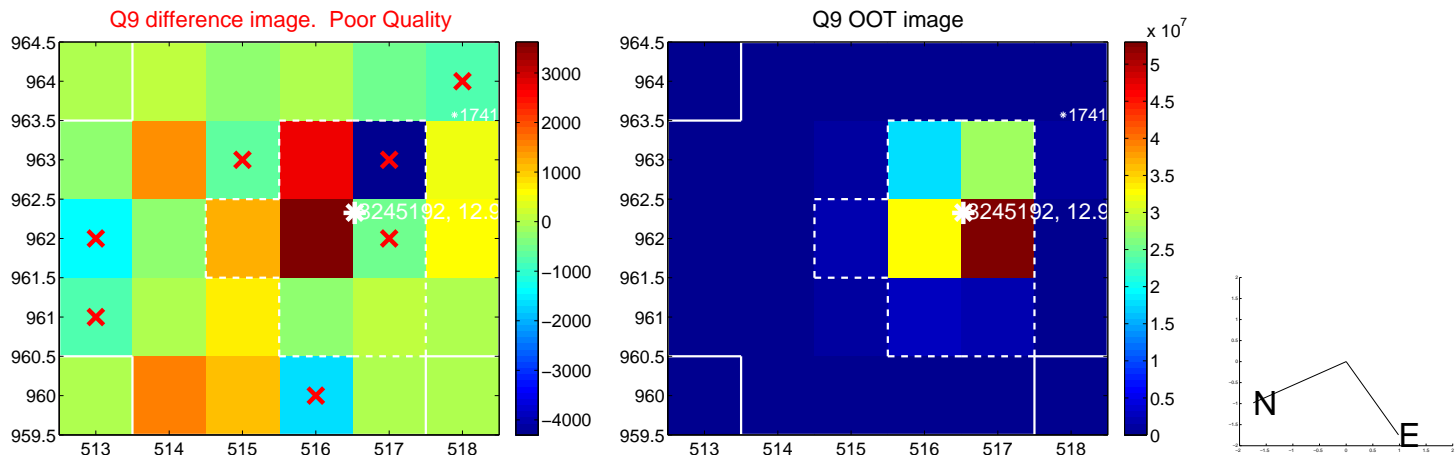
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



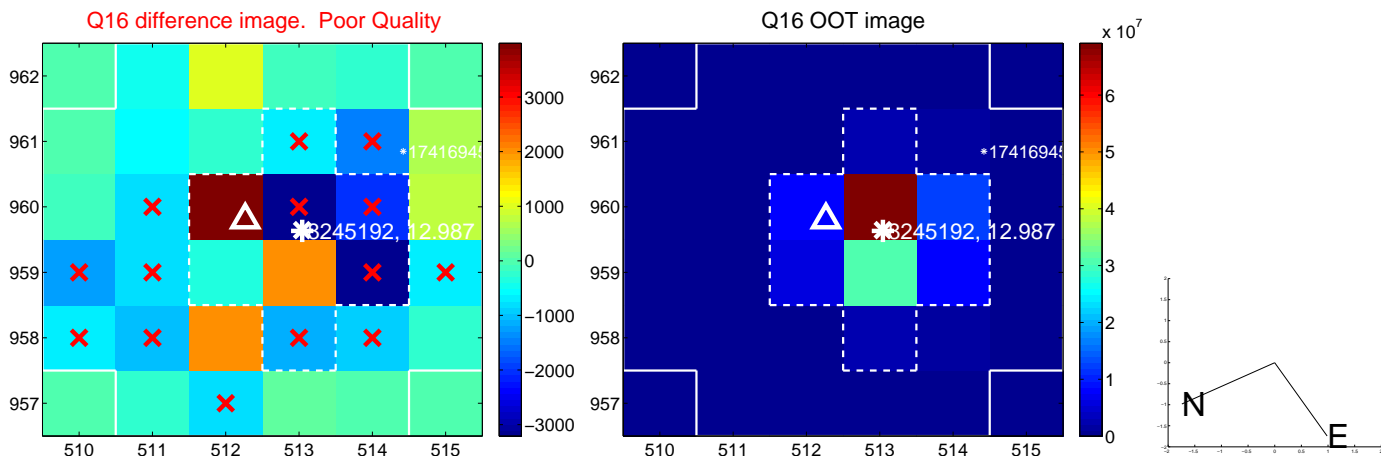
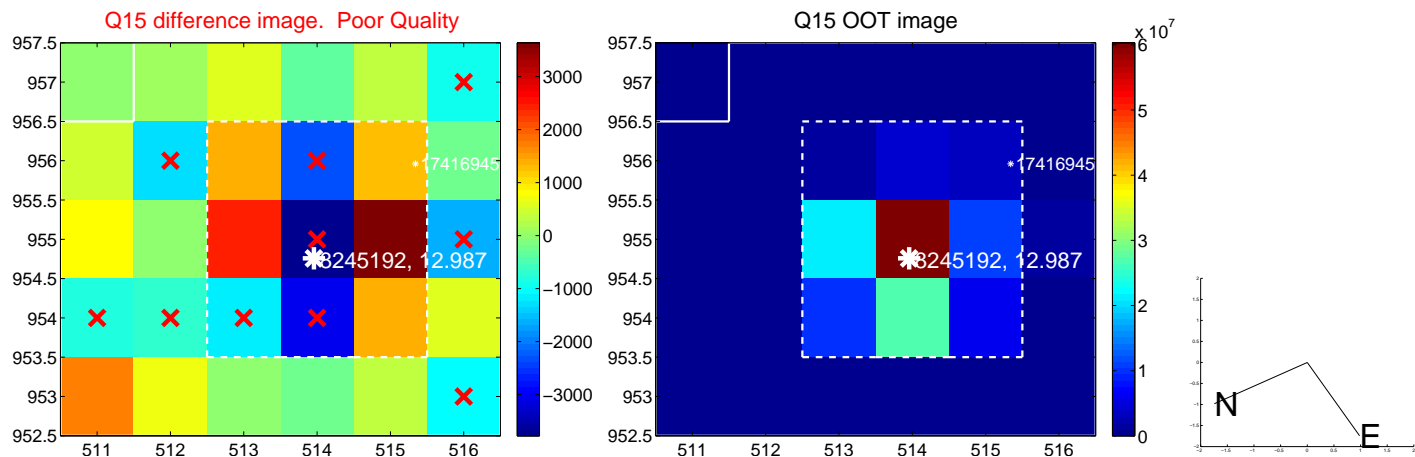
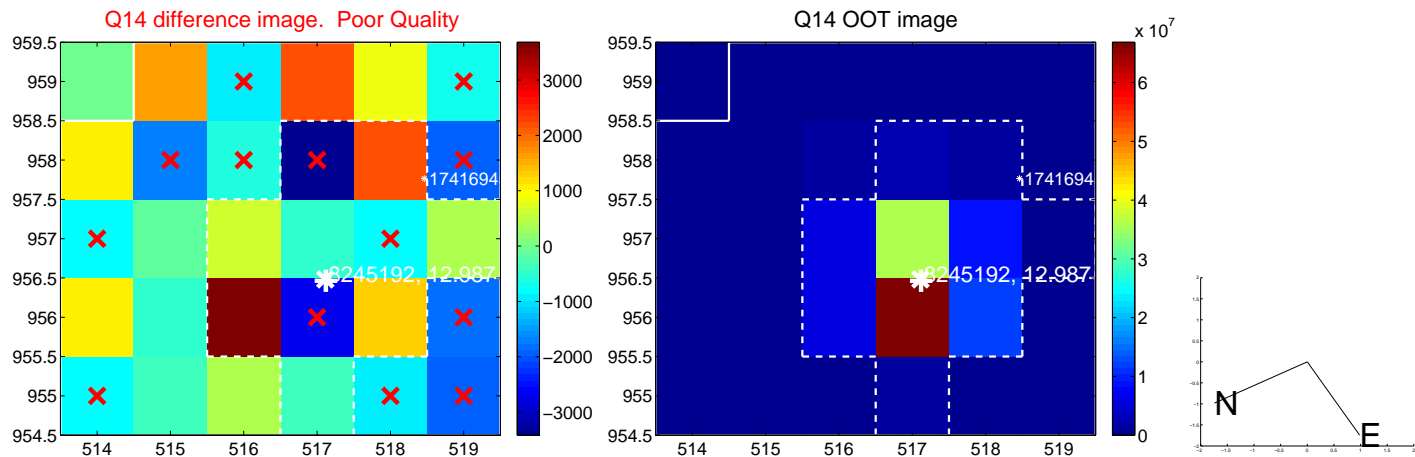
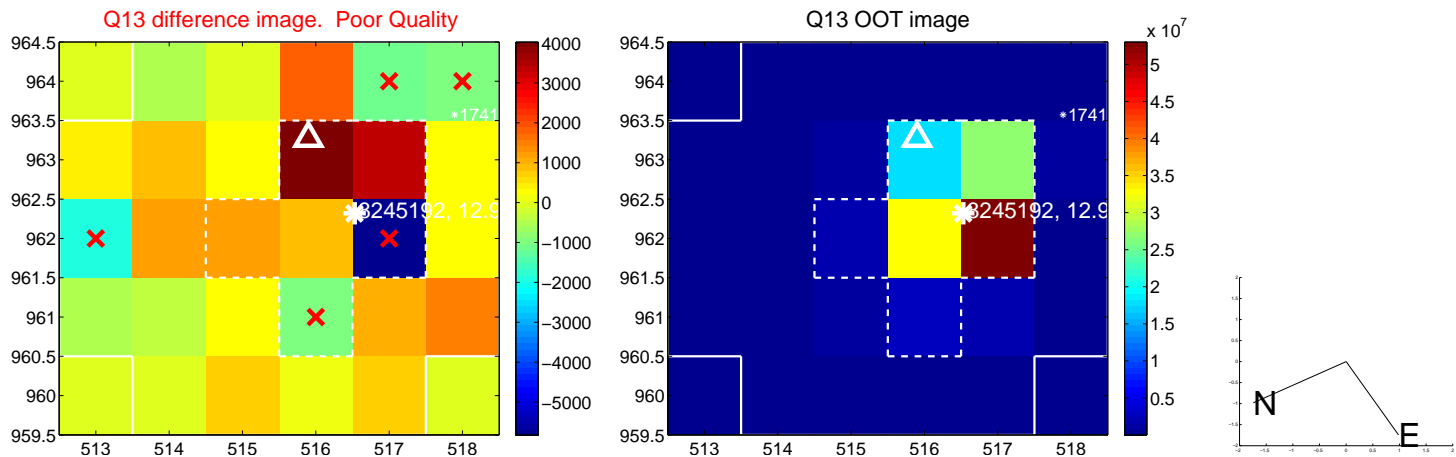
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



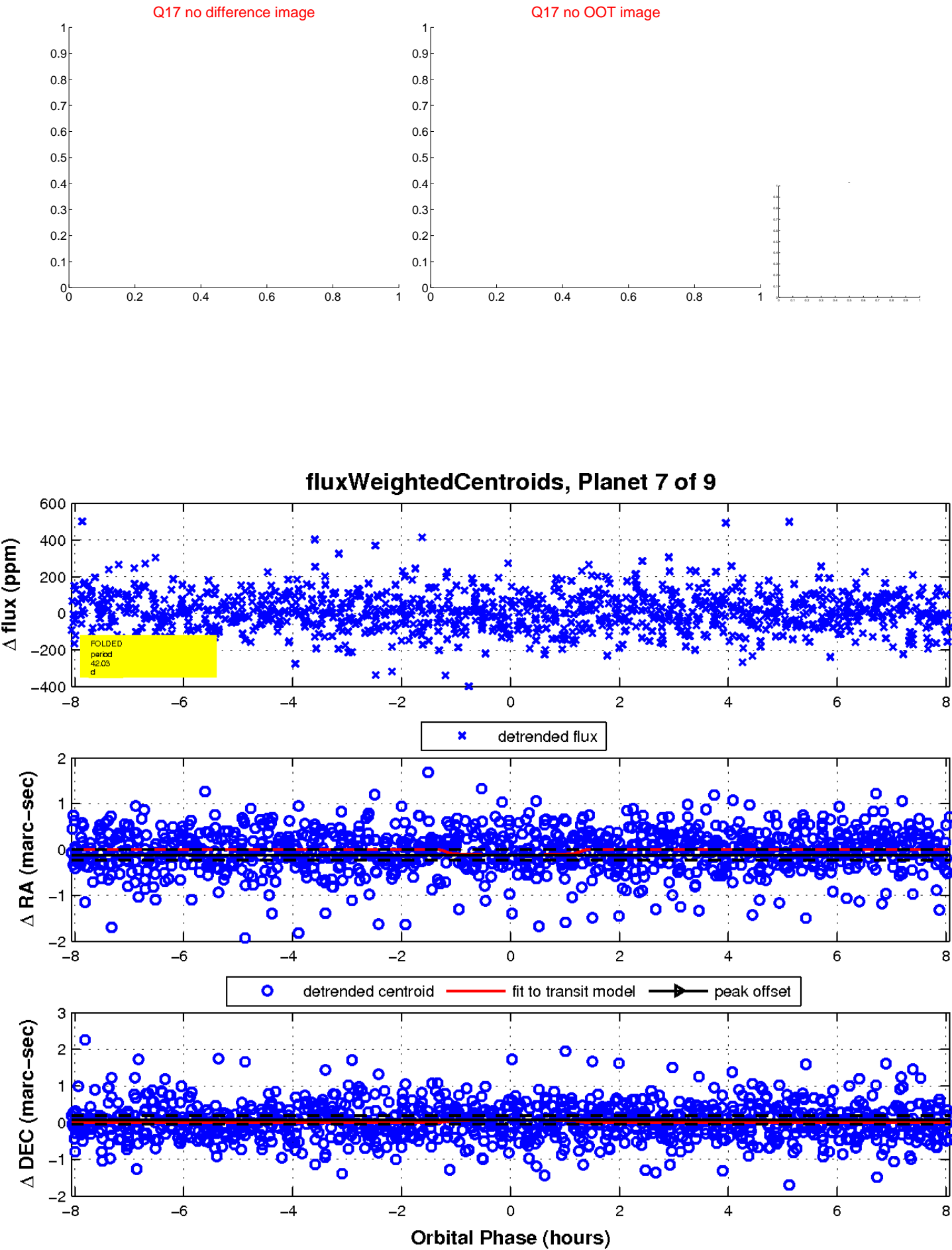
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



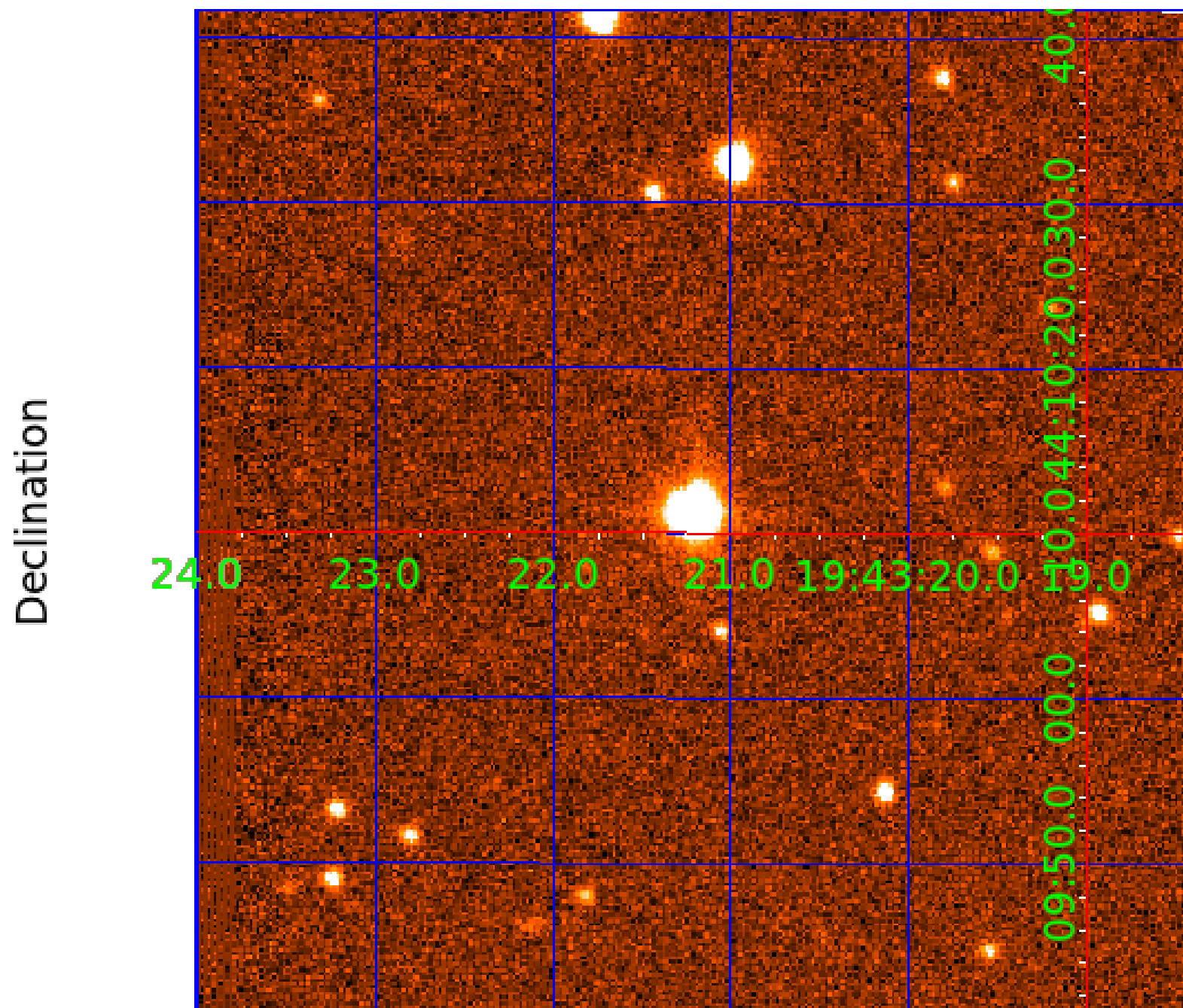
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008245192

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})
008245192-01	OBS	No	2.494021	131.986941	15.8	9.946	11.4	10.2	0.96	5982	0.39	796.75
008245192-02	OBS	No	313.749853	135.697673	205.3	5.145	16.0	6.7	0.96	5982	1.58	1.26
008245192-03	OBS	No	364.953235	446.859736	25.9	20.268	10.1	1.4	0.96	5982	0.53	1.03
008245192-04	OBS	No	177.512016	148.697973	9.6	4.520	9.1	0.4	0.96	5982	0.35	2.70
008245192-05	OBS	No	1.247055	132.713531	16.9	7.652	8.7	11.1	0.96	5982	0.43	2007.60
008245192-06	OBS	No	451.337604	183.164351	362.6	24.642	19.8	14.1	0.96	5982	2.08	0.78
008245192-07	OBS	No	42.032731	156.851307	179.1	2.693	8.3	8.9	0.96	5982	1.52	18.44
008245192-08	OBS	No	61.827234	161.299798	81.2	7.931	7.7	5.3	0.96	5982	1.03	11.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245192-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
008245192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
008245192-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008245192-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008245192-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

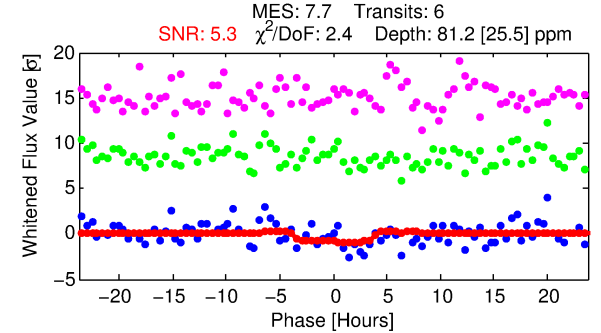
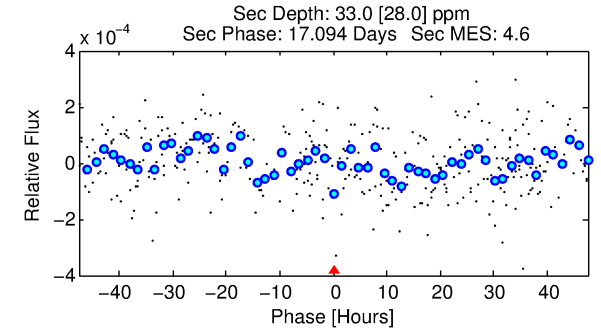
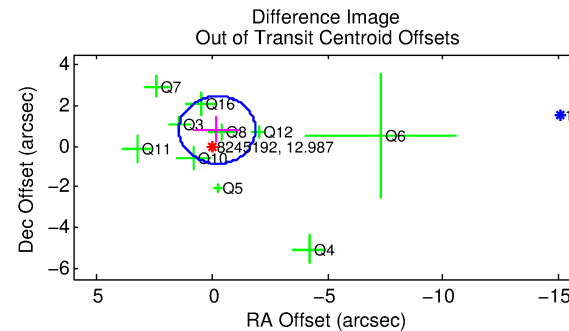
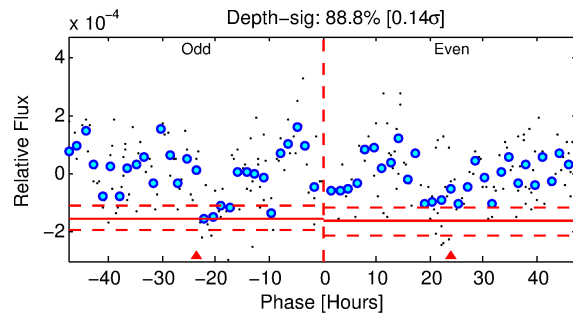
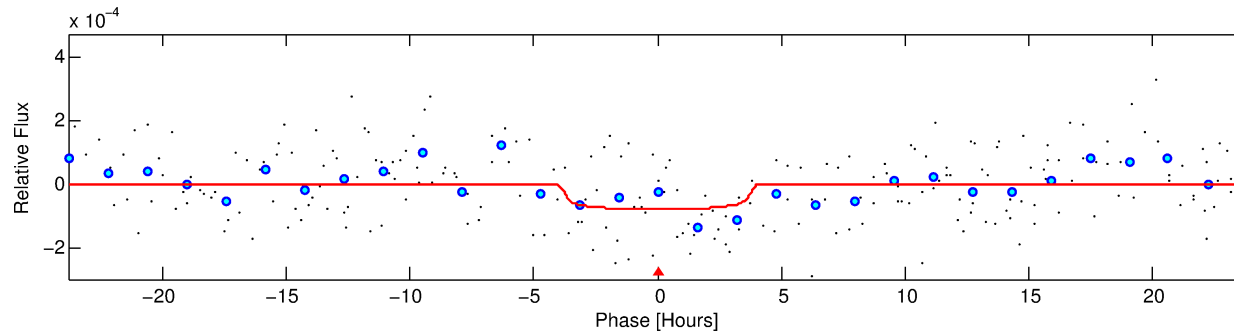
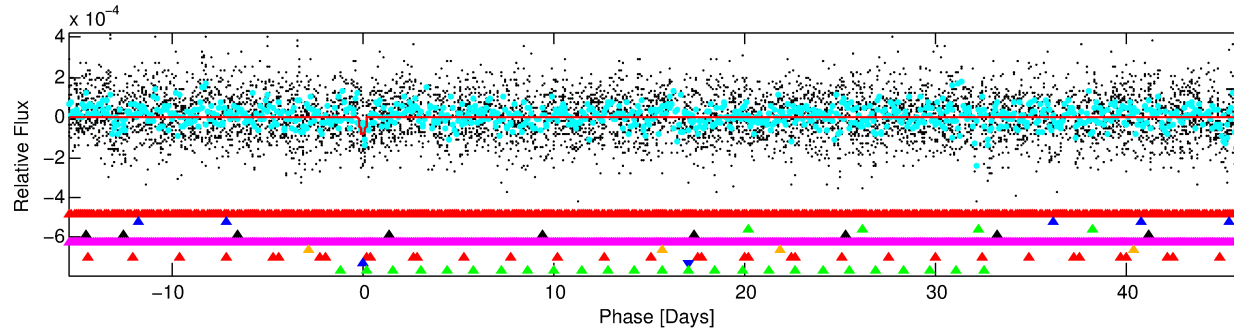
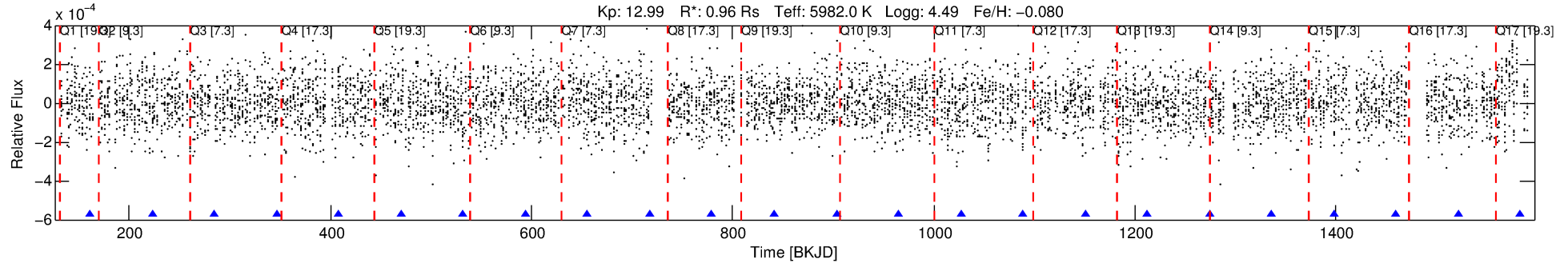
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008245192-08

No Significant Match Found

DV One-Page Summary

KIC: 8245192 Candidate: 8 of 9 Period: 61.827 d



DV Fit Results:

Period = 61.82723 [0.00689] d
Epoch = 161.2998 [0.0717] BKJD
Rp/R* = 0.0098 [0.0158]
a/R* = 26.39 [221.34]
b = 0.91 [1.66]
Seff = 11.02 [3.33]
Teq = 465 [35] K
Rp = 1.03 [1.66] Re
a = 0.3091 [0.0573] AU
Ag = 1643.52 [5480.80] [0.30 σ]
Teffp = 4574 [3803] K [1.08 σ]

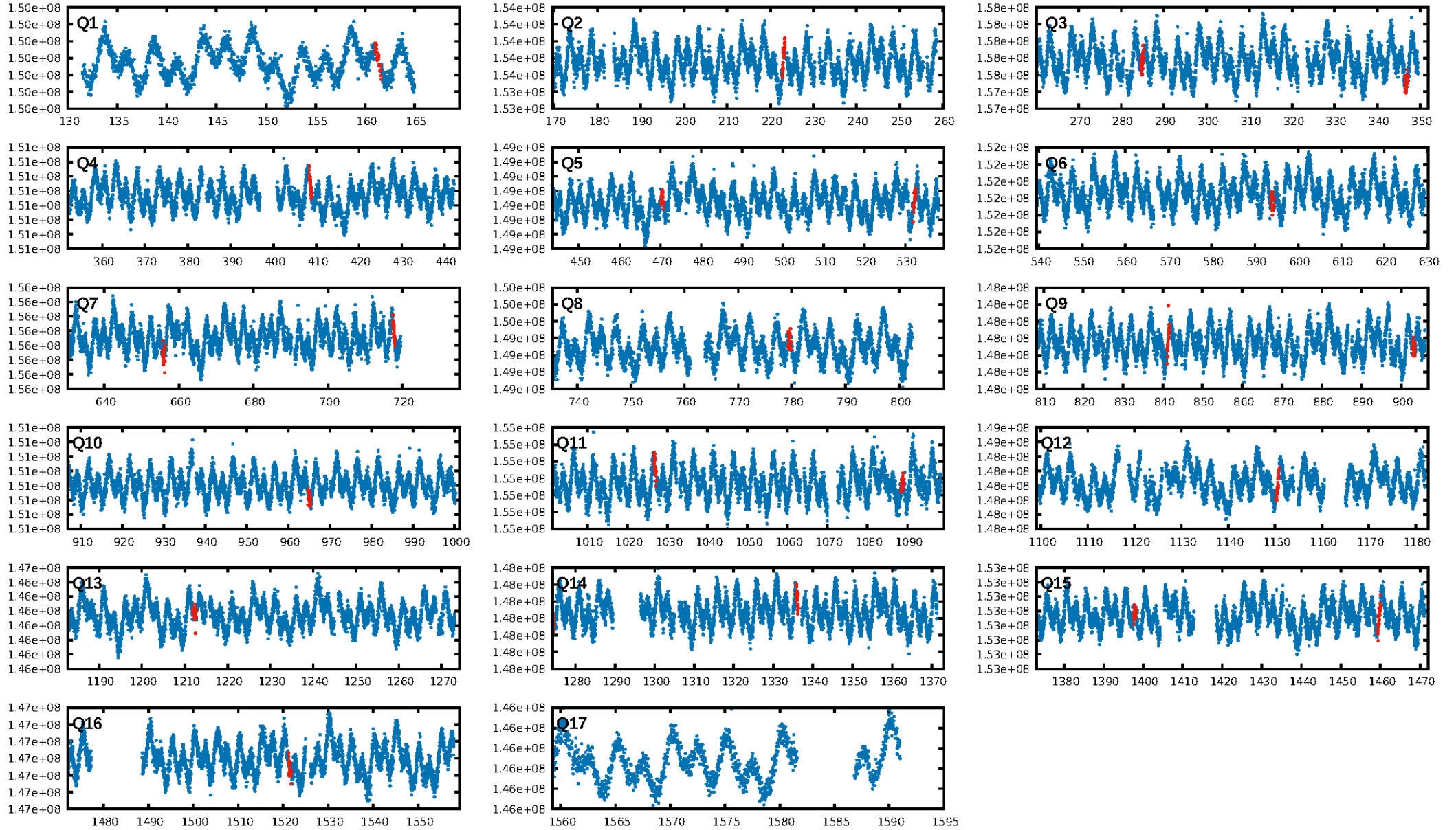
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.08 σ]
LongPeriod-sig: 100.0% [304.15 σ]
ModelChiSquare2-sig: 4.2%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 1.56e-07
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 2.091
Centroid-sig: 15.7%
Centroid-so: 1.203 arcsec [1.17 σ]
OotOffset-rm: 0.831 arcsec [1.51 σ]
KicOffset-rm: 0.817 arcsec [1.31 σ]
OotOffset-st: 2/3/4/1 [10]
KicOffset-st: 2/3/4/1 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.00 [0/14]

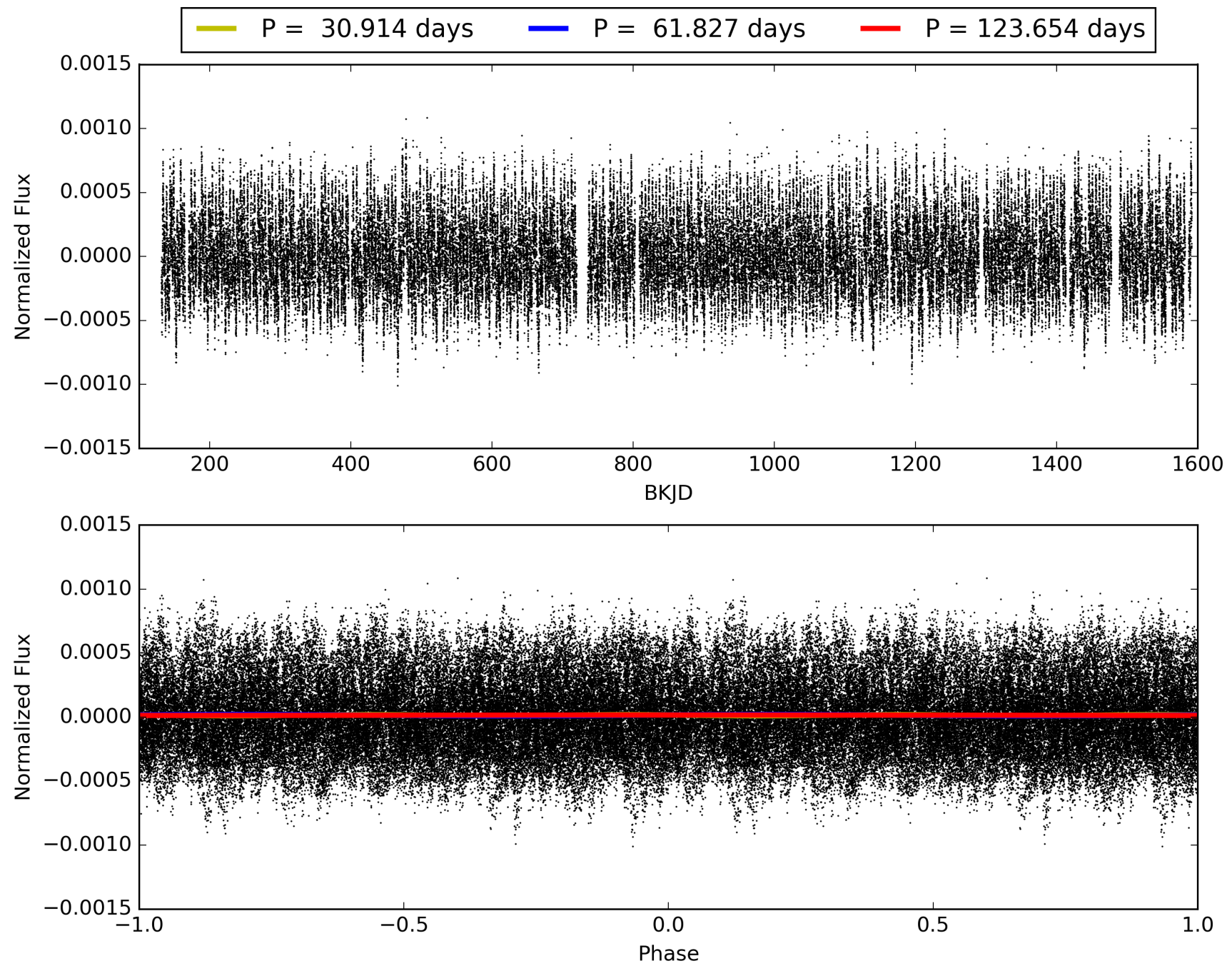
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:50:07 Z

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

TCE 008245192-08, PDC Light Curves

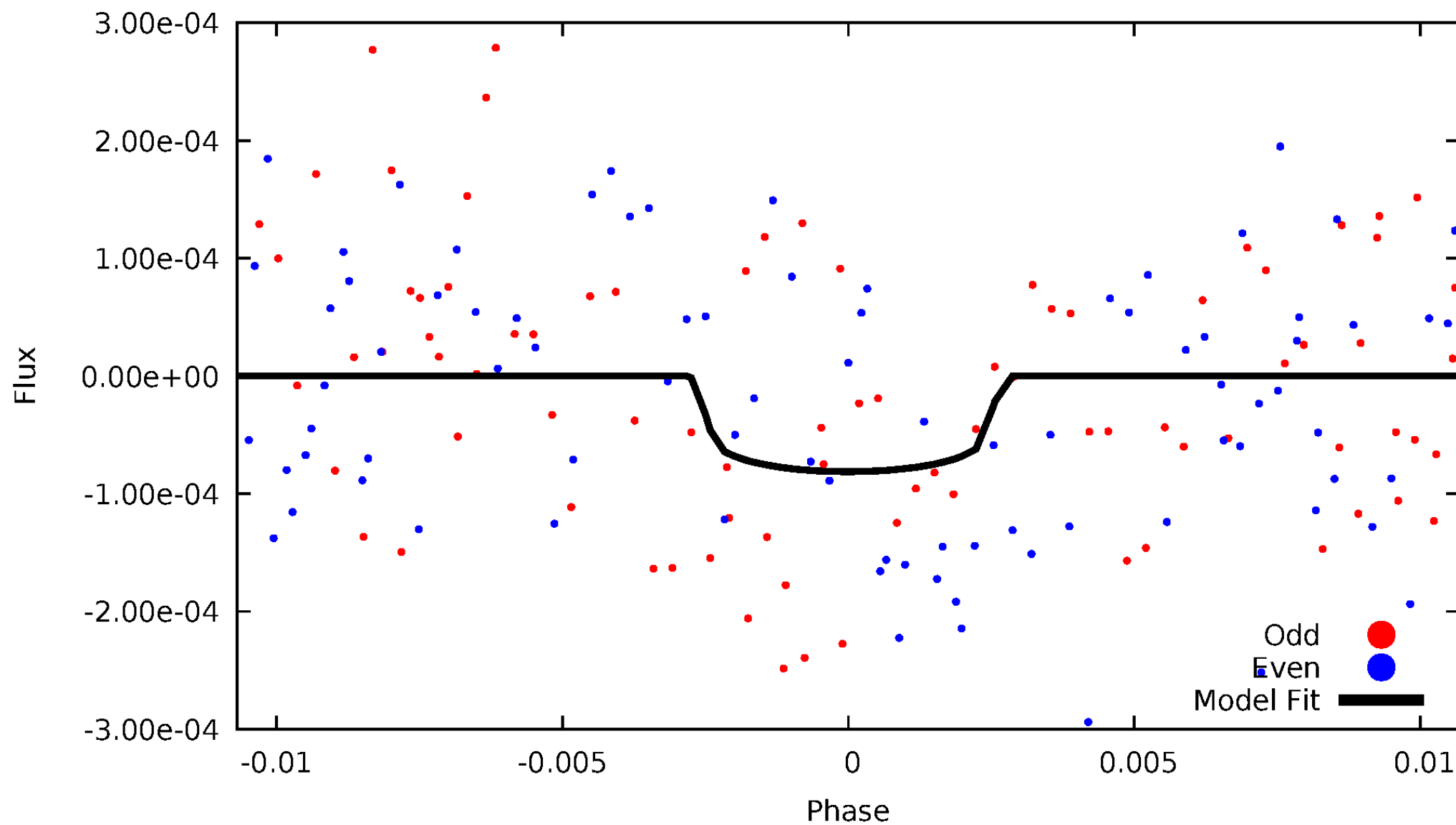


TCE 008245192-08



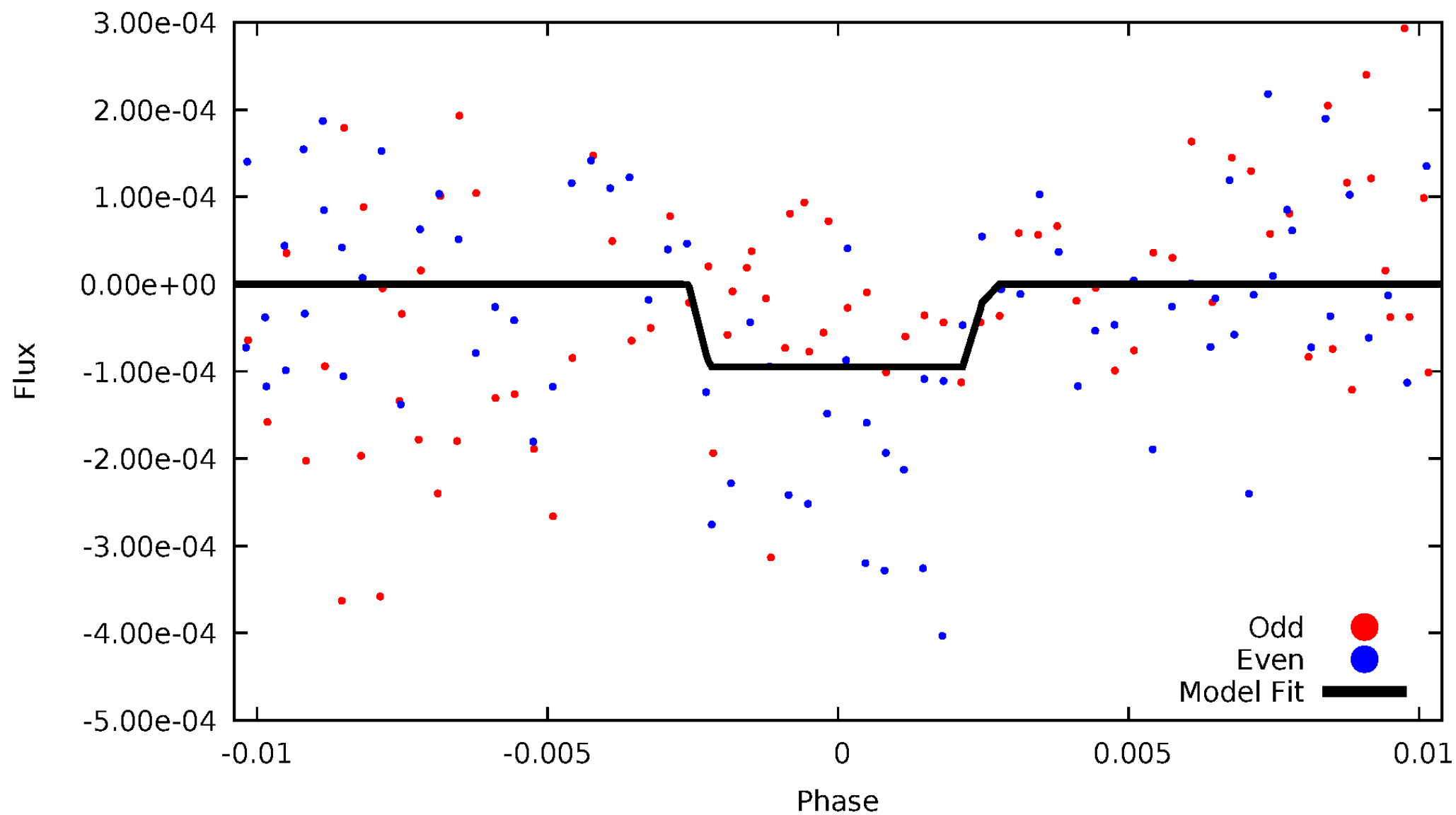
DV Odd/Even

TCE 008245192-08



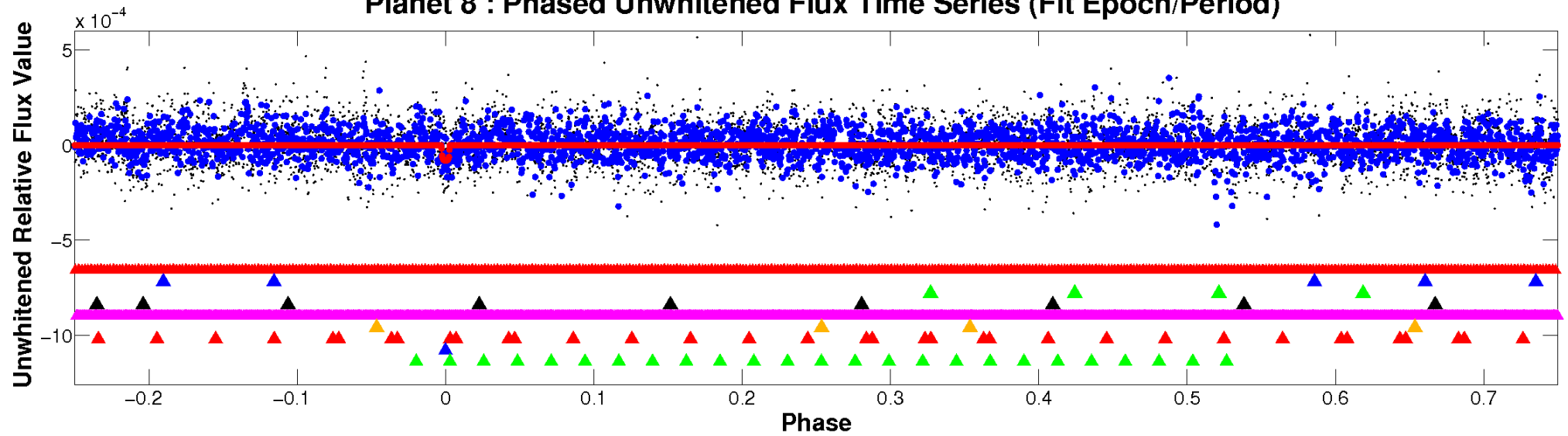
ALT Odd/Even

TCE 008245192-08

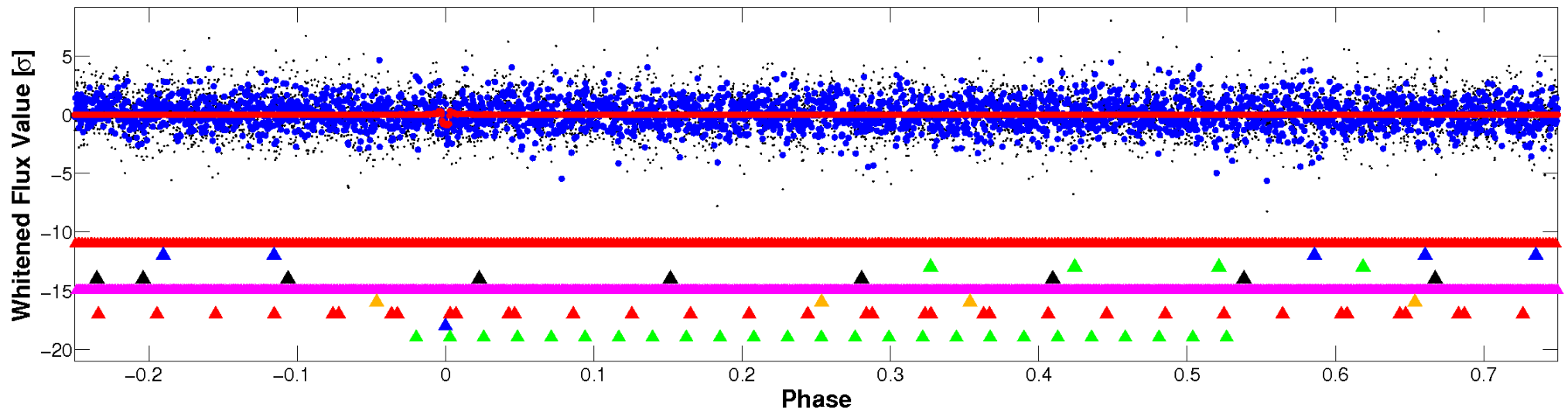


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

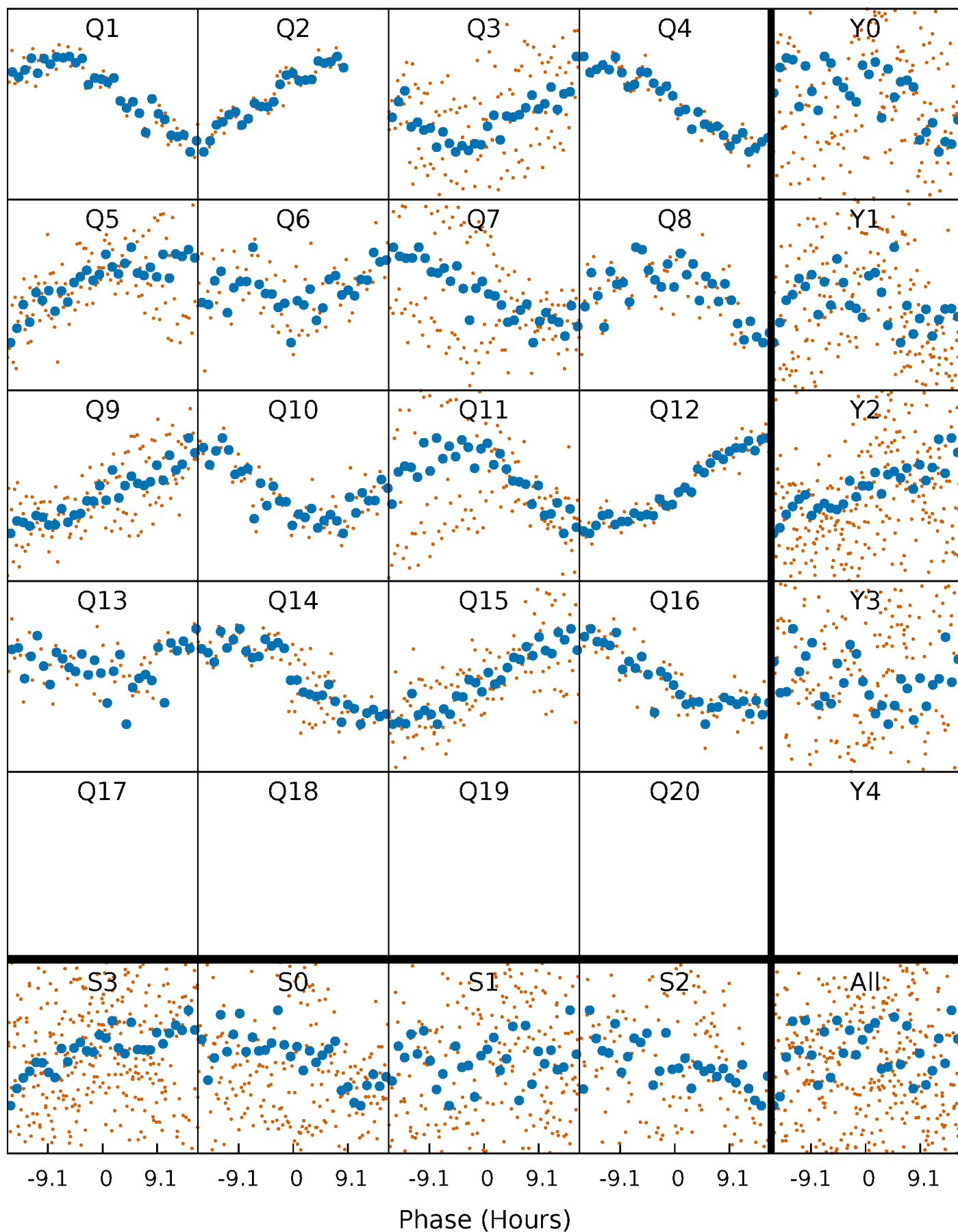


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



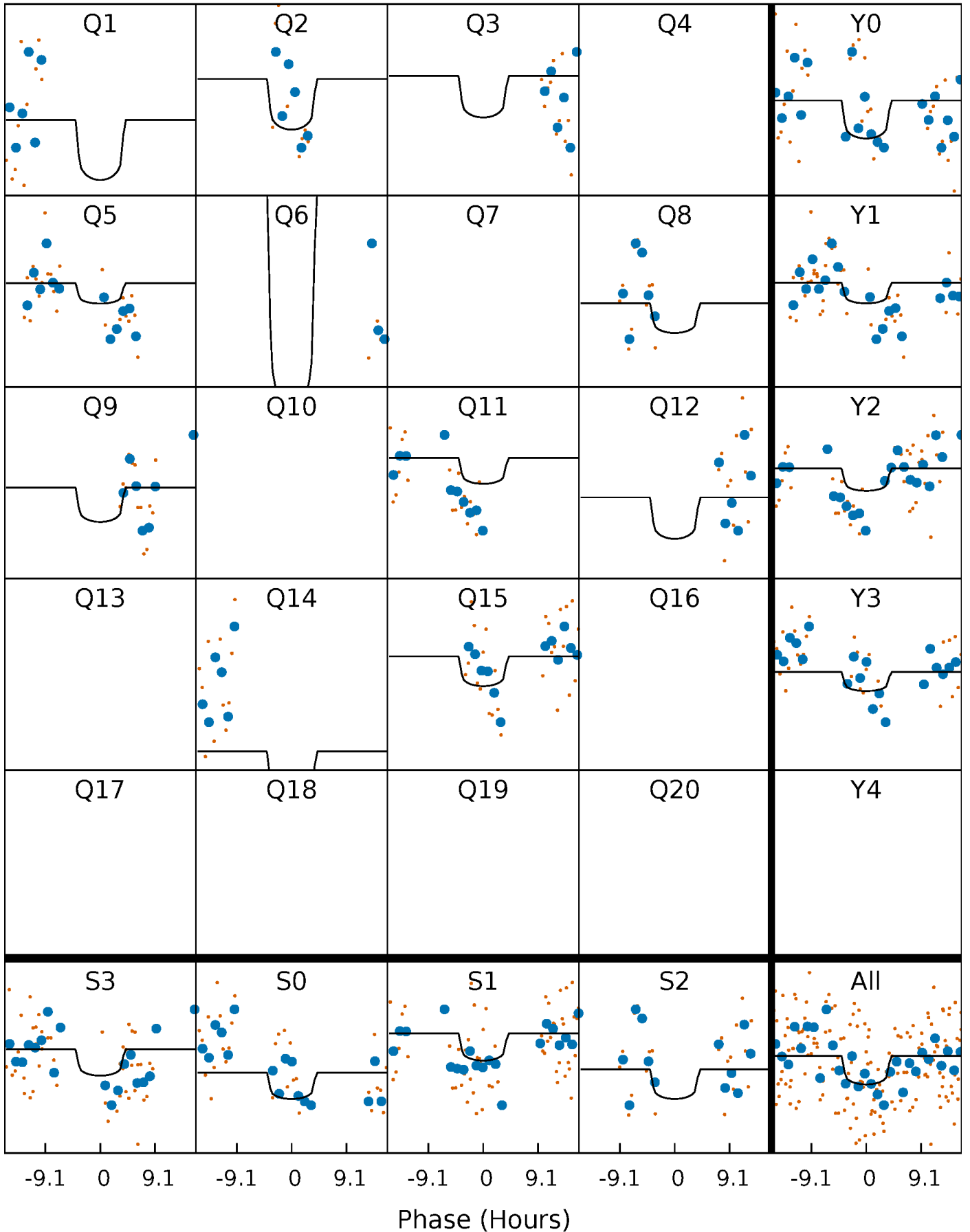
PDC Quarter-Phased Transit Curves

TCE 008245192-08 $P = 61.827234$ Days $T_0 = 161.299798$ (BKJD)



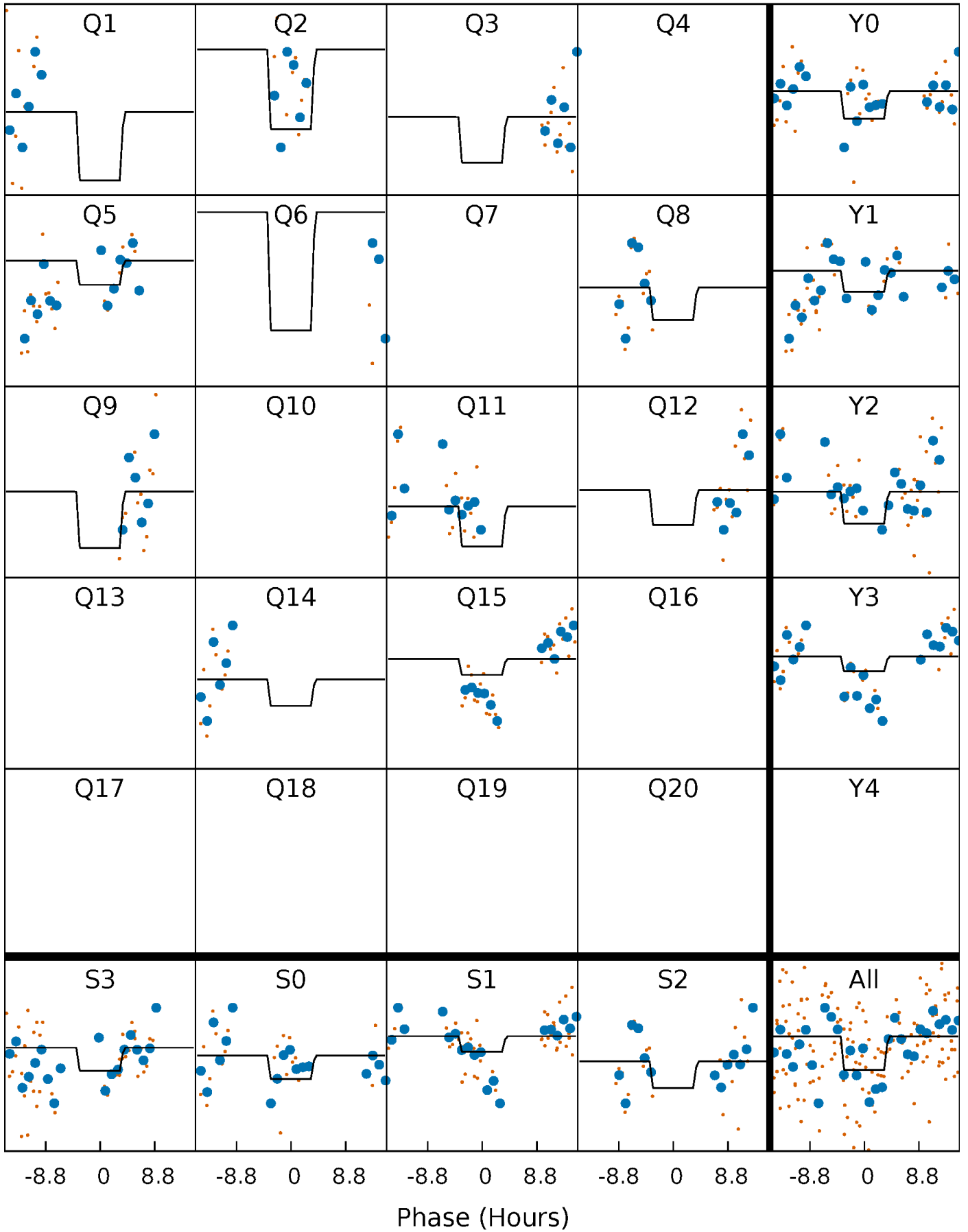
DV Quarter-Phased Transit Curves

TCE 008245192-08 P= 61.827234 Days $T_0=161.299798$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

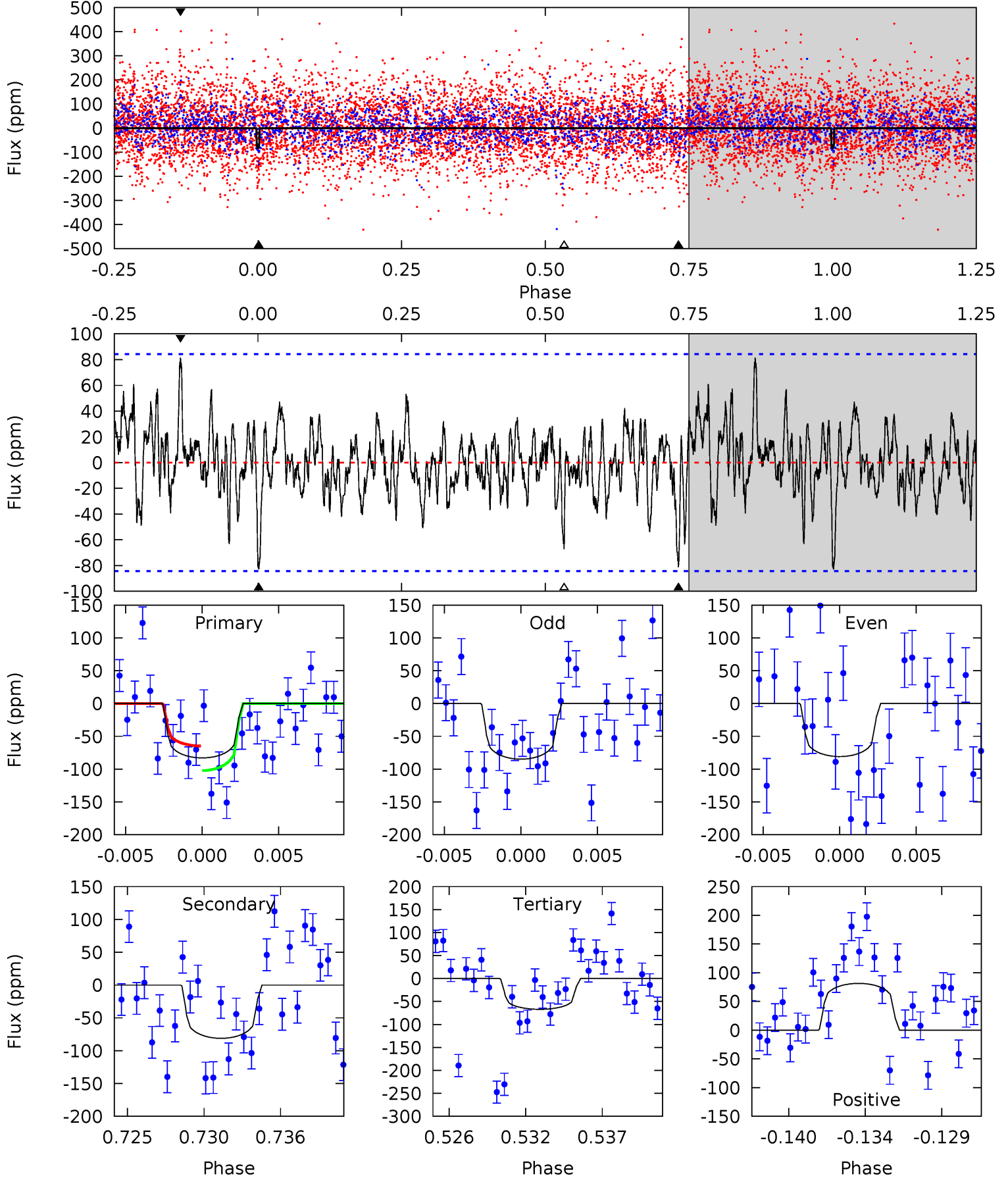
TCE 008245192-08 P= 61.827782 Days $T_0=161.300614$ (BKJD)



DV Model-Shift Uniqueness Test

008245192-08, P = 61.827234 Days, E = 99.472564 Days

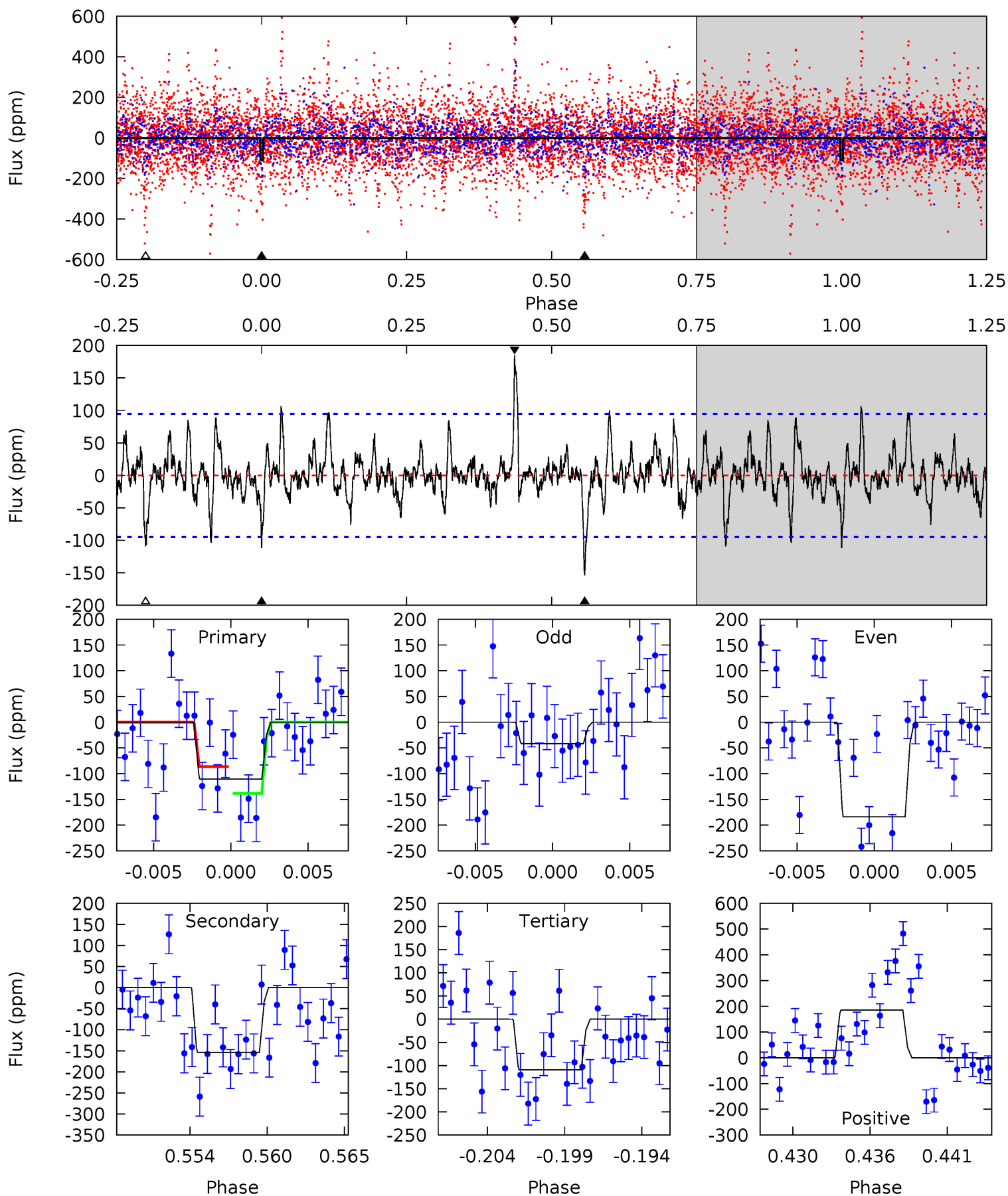
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.06	4.95	4.10	4.97	5.14	2.78	1.32	0.97	0.09	0.86	-0.02	0.12	1.28	0.50	1.15



Alt Model-Shift Uniqueness Test

008245192-08, P = 61.827782 Days, E = 99.472832 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.02	8.36	5.94	10.1	5.14	2.78	1.66	0.08	-4.05	2.42	-1.72	3.91	1.03	0.55	1.42



Stellar Parameters For KIC 008245192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+160}_{-196}	$4.488^{+0.050}_{-0.150}$	$-0.080^{+0.250}_{-0.350}$	$0.958^{+0.209}_{-0.105}$	$1.030^{+0.110}_{-0.134}$	$1.651^{+0.430}_{-0.693}$
	+3%/-3%	+1%/-3%	+312%/-438%	+22%/-11%	+11%/-13%	+26%/-42%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008245192-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-81 ± 16	$1.62^{+1.49}_{-1.05}$	657^{+36}_{-30}	4738^{+3247}_{-986}	1624^{+11808}_{-1194}
Alt.	-154 ± 18	$1.60^{+1.49}_{-1.02}$	659^{+38}_{-29}	5489^{+4302}_{-1287}	3120^{+20699}_{-2279}

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 $A_{obs} \gg 1.0$

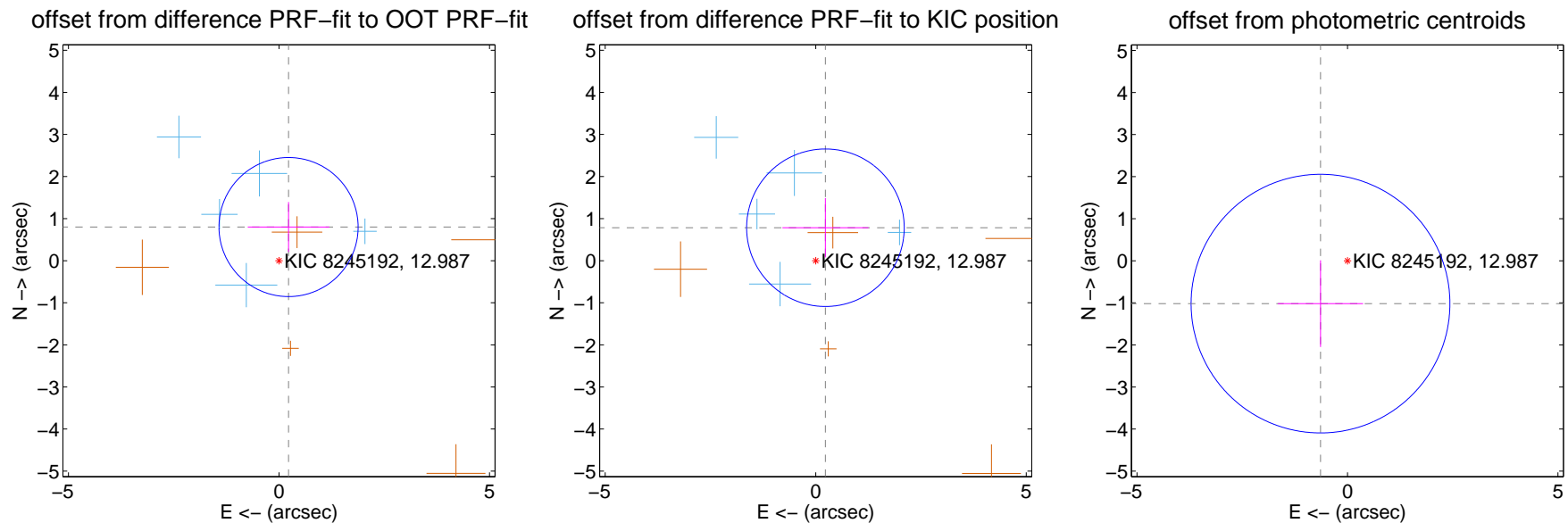
DV Centroid Data

Supplemental centroid analysis for 008245192-08. Kepler magnitude: 12.99. Transit SNR 5.34

There are 5 quarters with good PRF difference image offsets

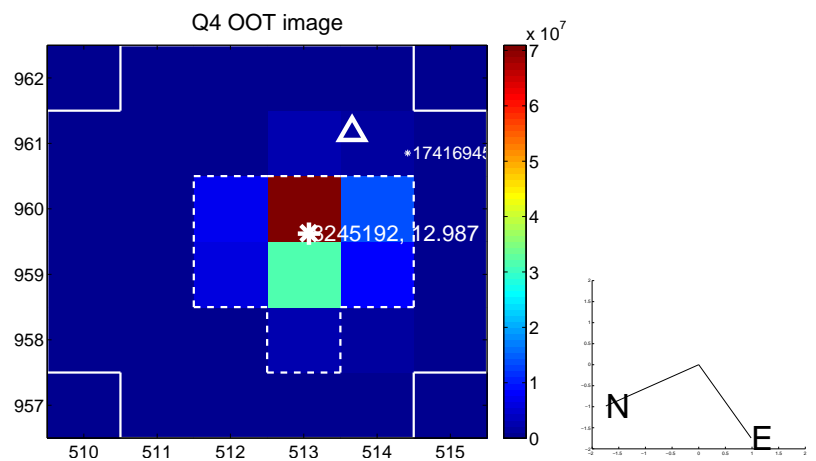
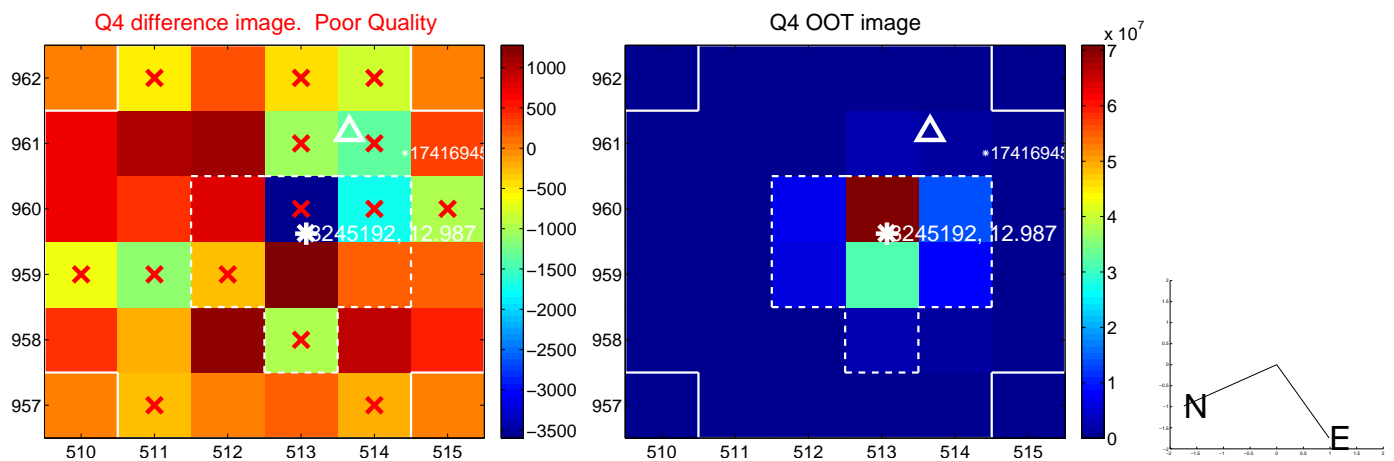
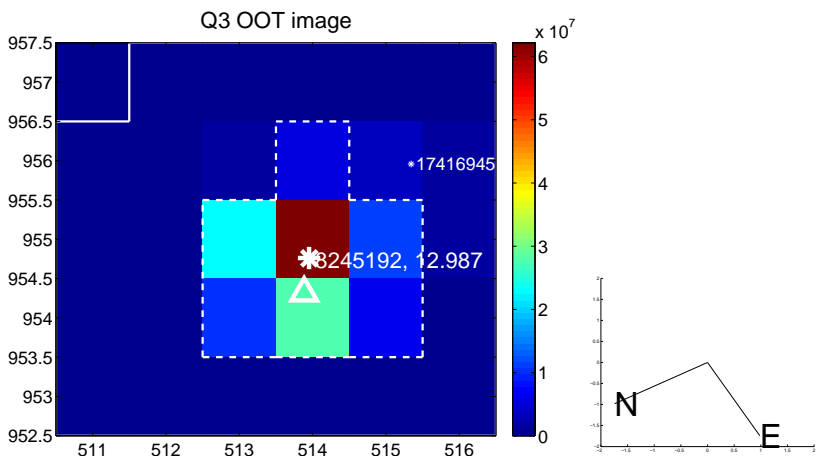
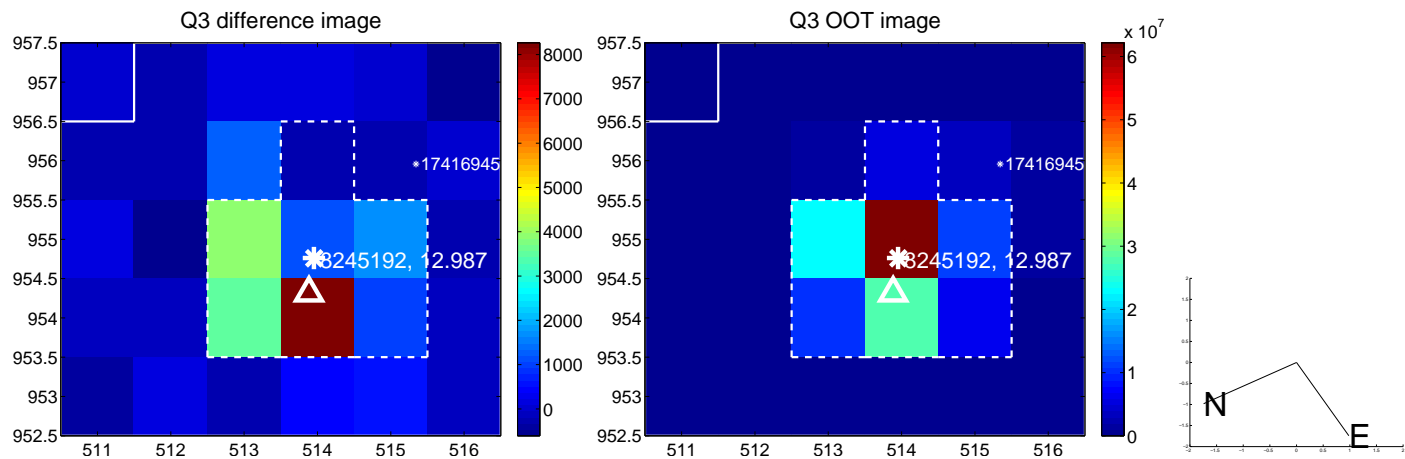
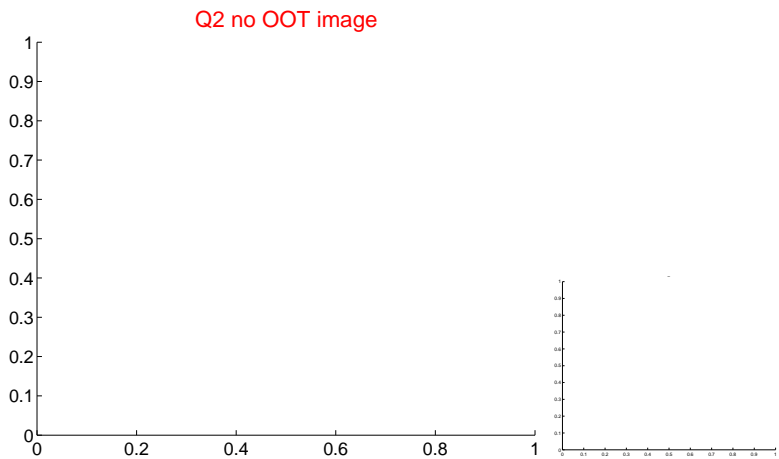
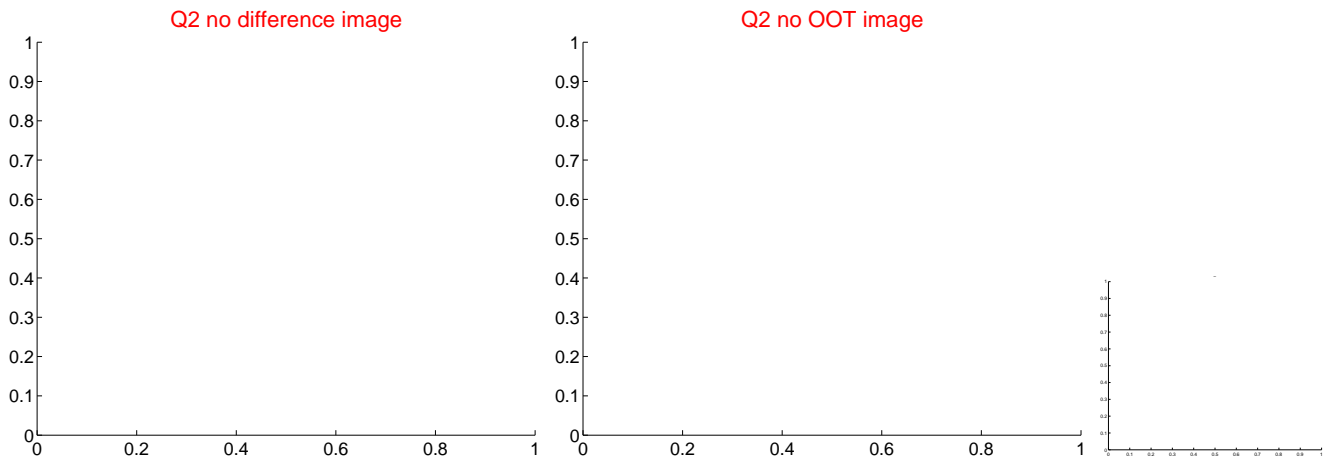
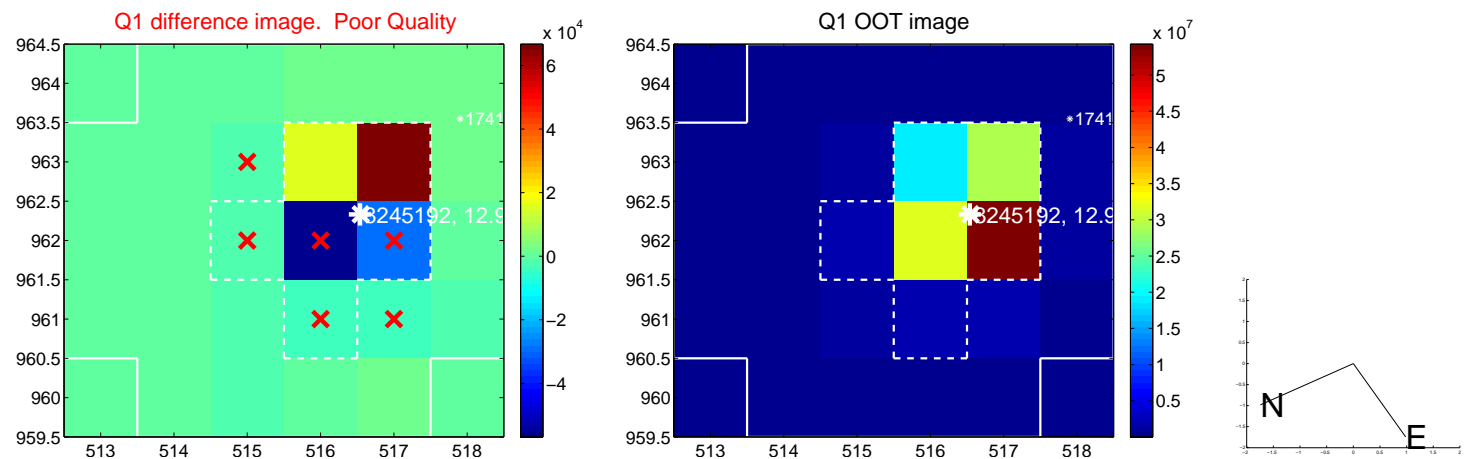
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.831 ± 0.551	1.51	-0.227 ± 0.969	0.800 ± 0.593
PRF-fit source offset from KIC position	0.817 ± 0.624	1.31	-0.230 ± 1.021	0.784 ± 0.705
photometric centroid source offset	1.20 ± 1.02	1.17	0.64 ± 1.01	-1.02 ± 1.03

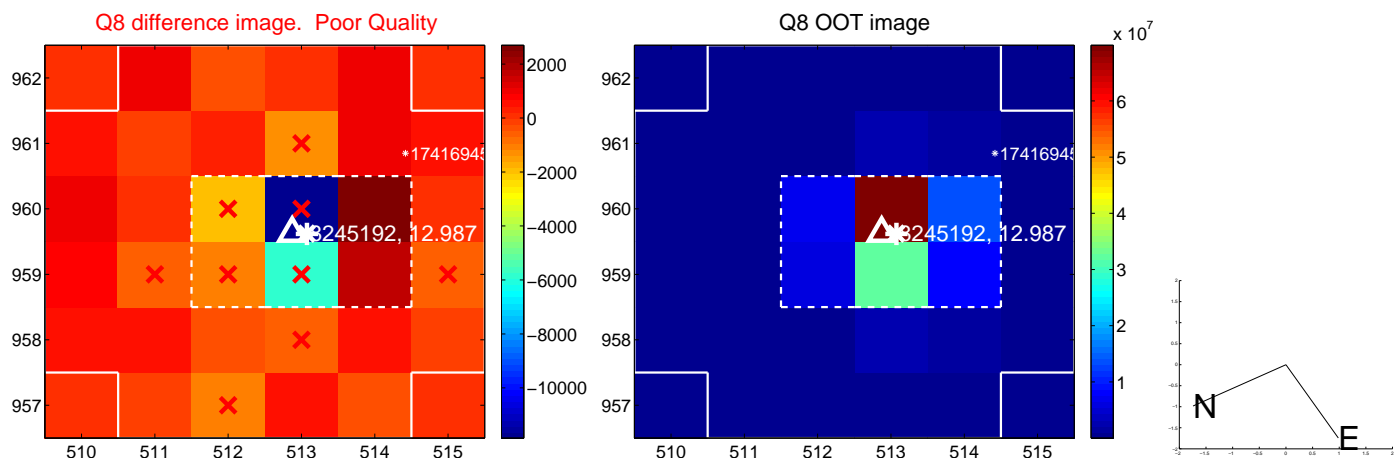
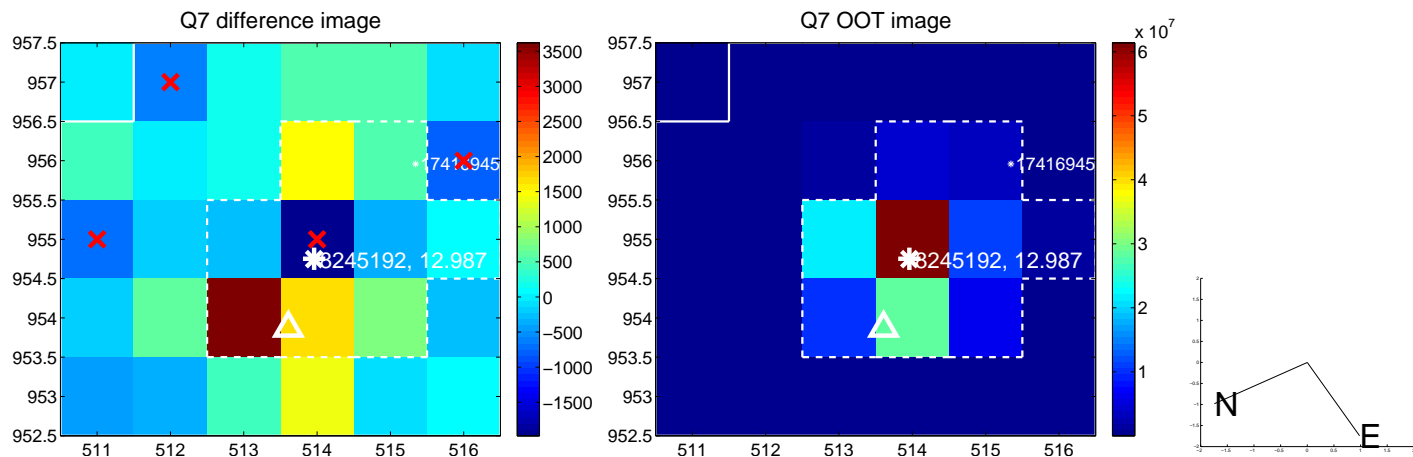
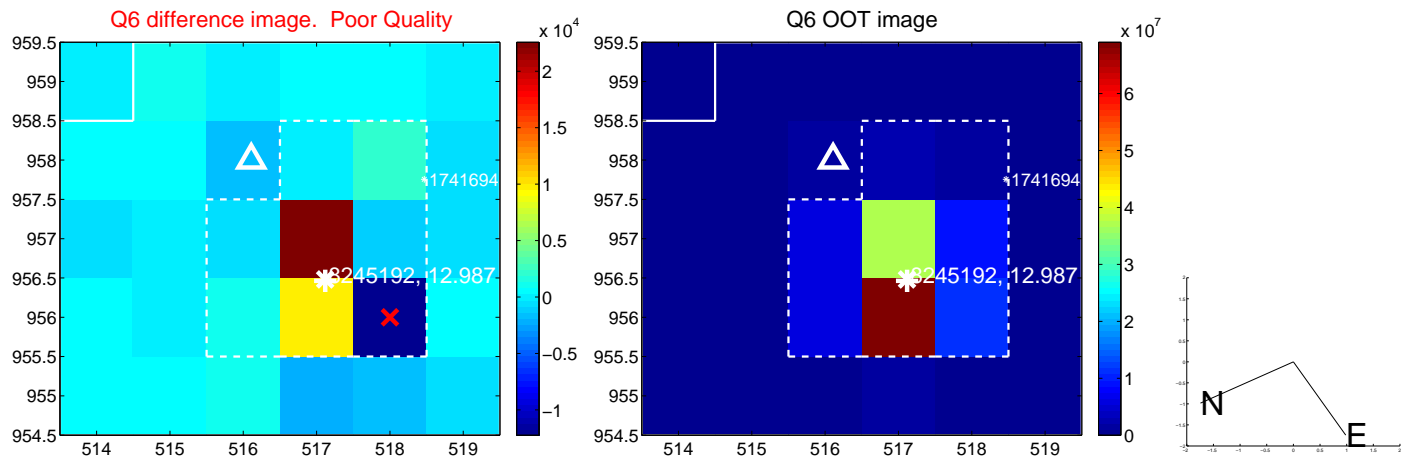
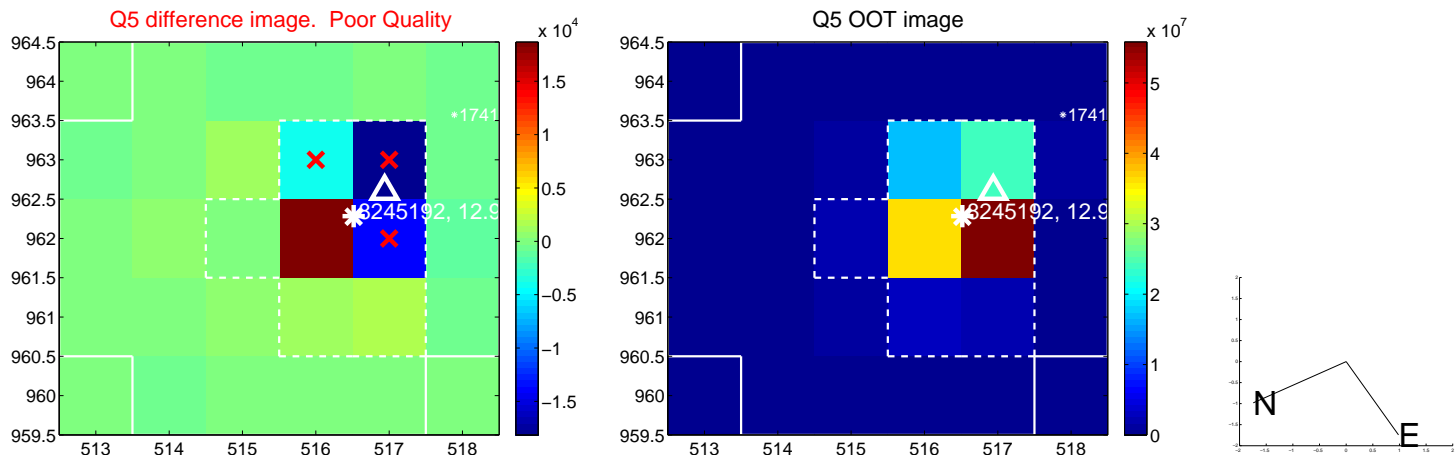


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

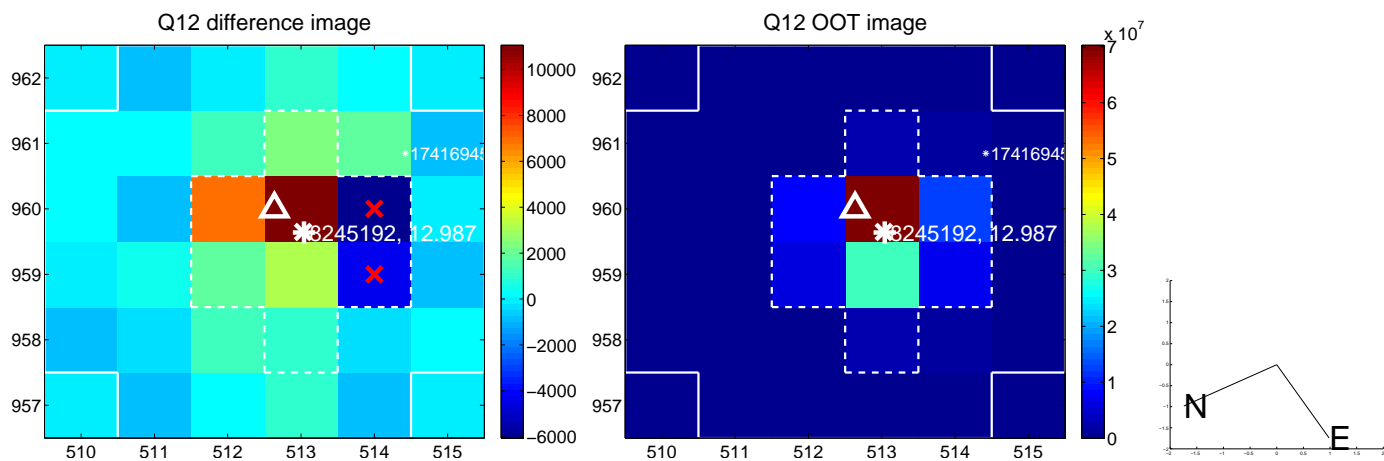
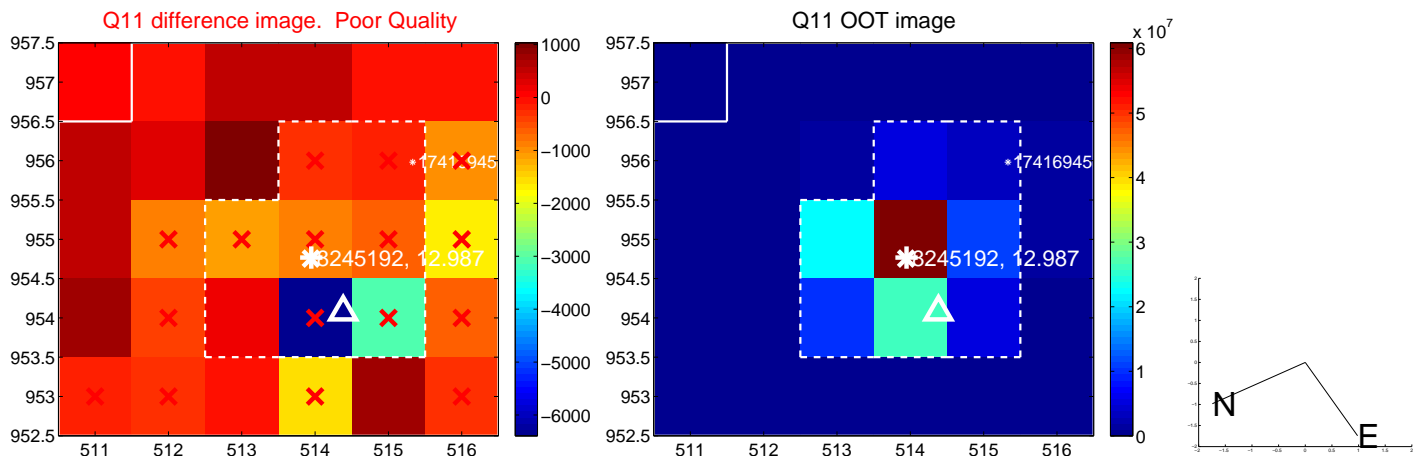
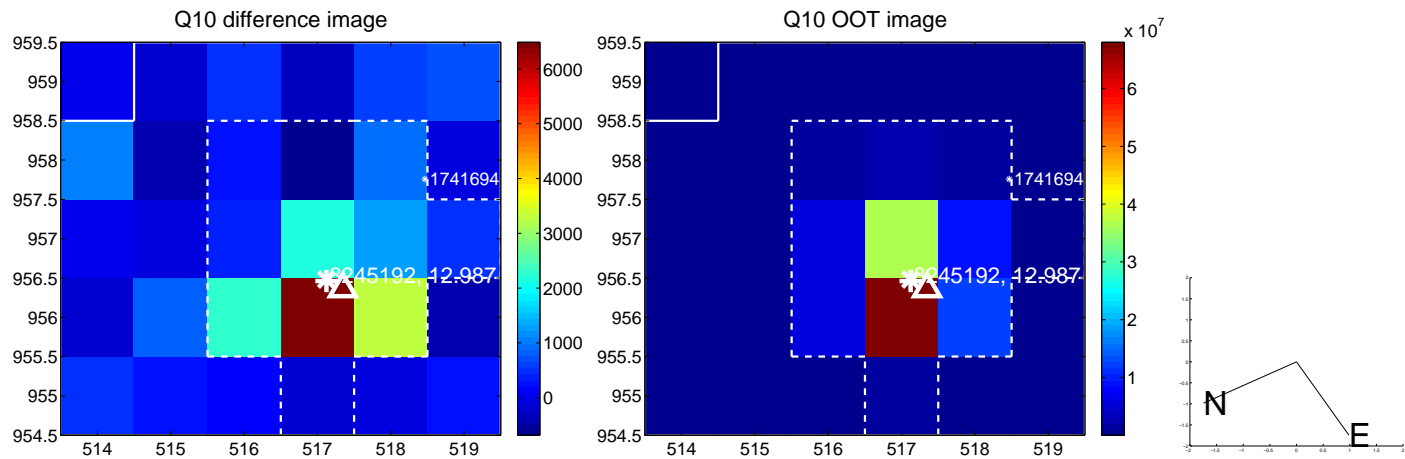
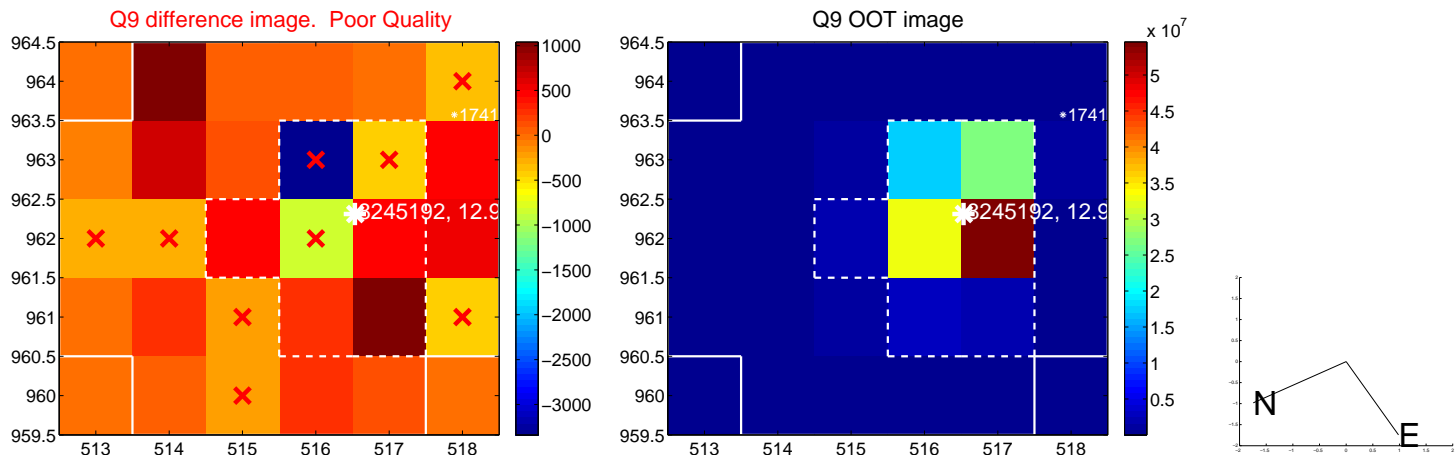
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



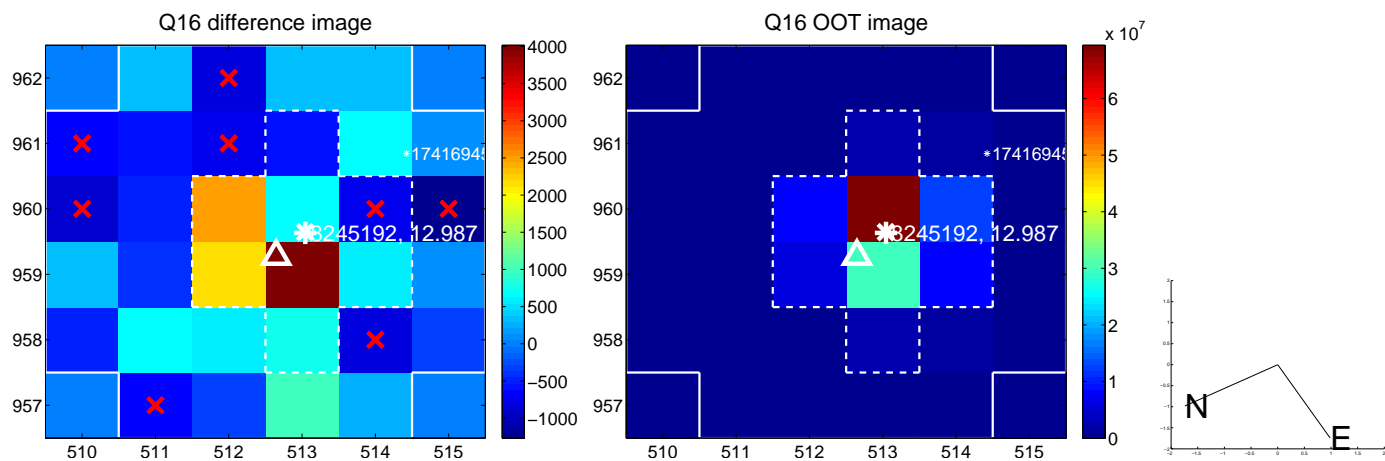
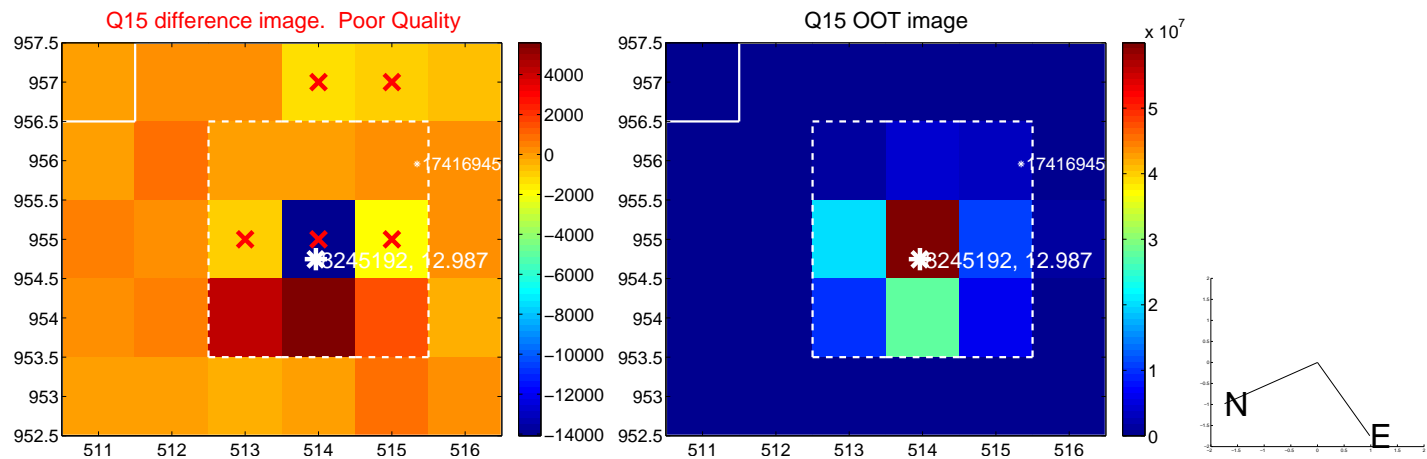
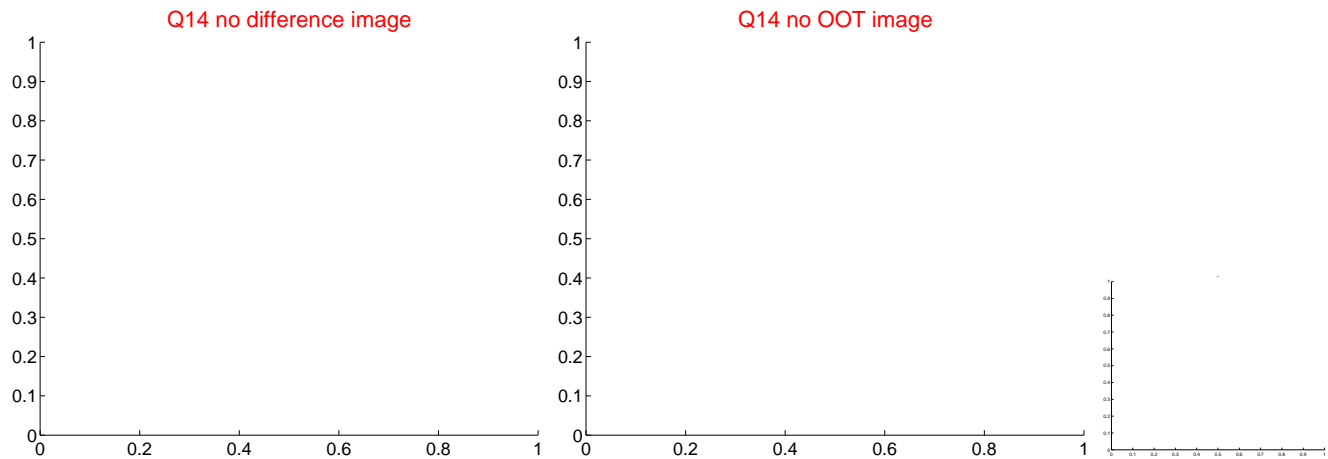
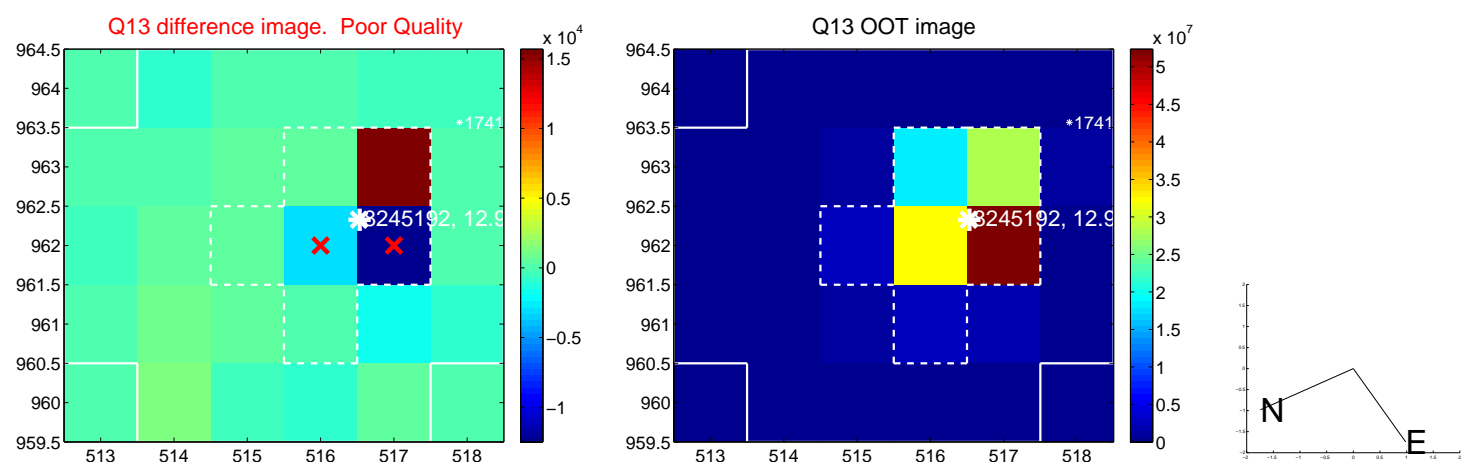
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



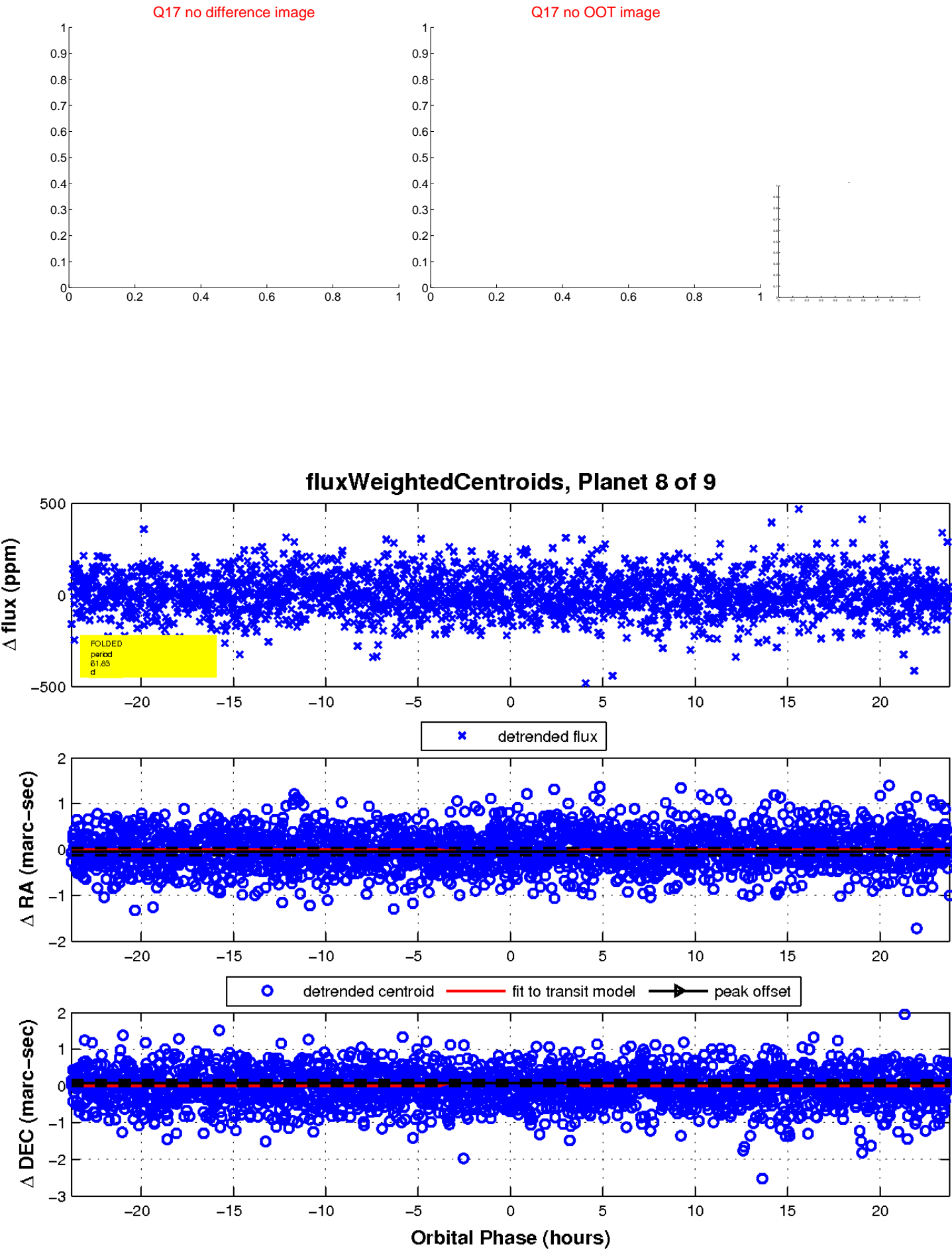
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

