

KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

Ephemeris Match Information For 011296045-01

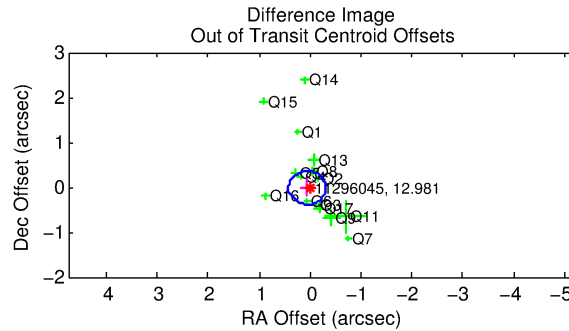
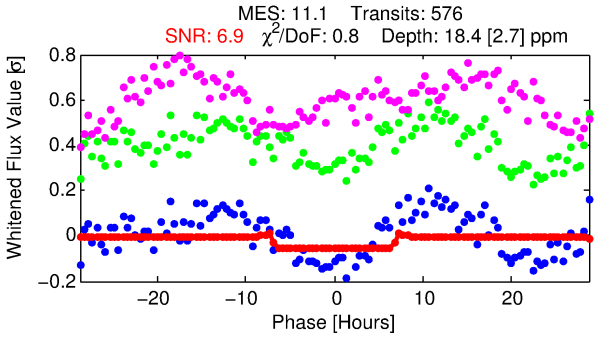
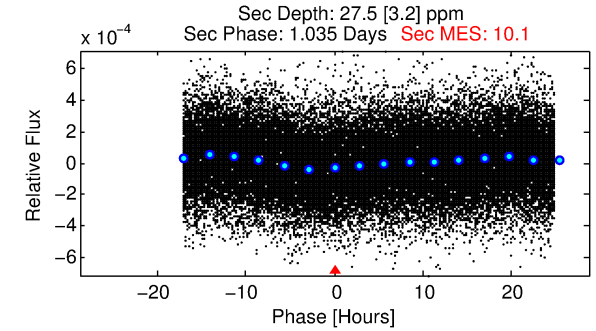
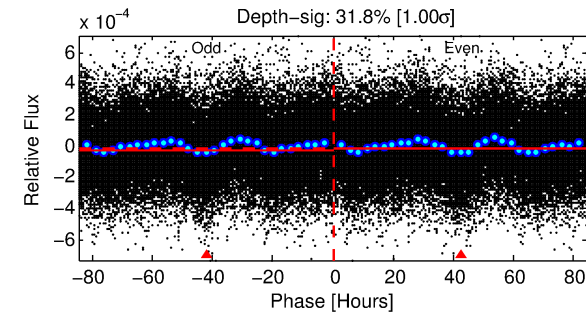
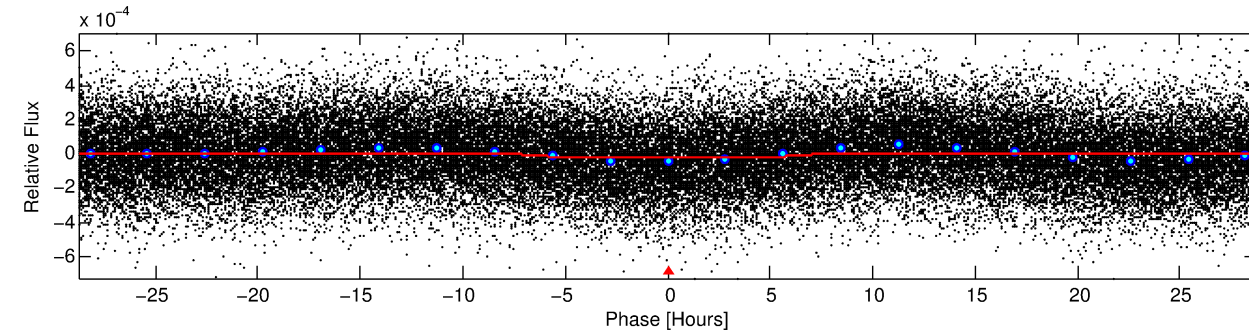
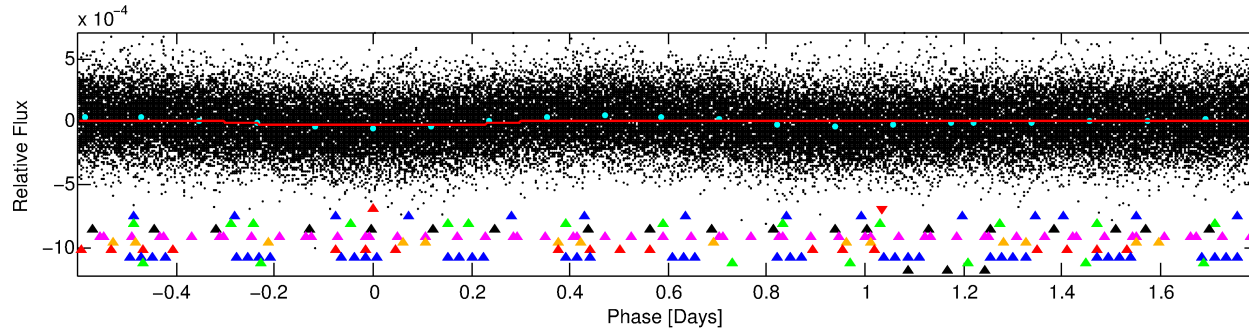
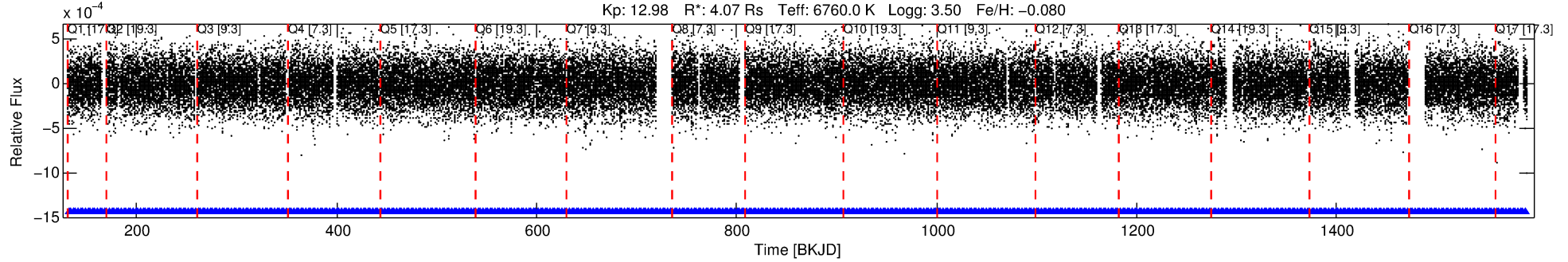
No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 1 of 10 Period: 2.396 d

KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 2.39560 [0.00005] d
Epoch = 132.1791 [0.0099] BKJD
Rp/R* = 0.0041 [0.0023]
a/R* = 1.31 [1.75]
b = 0.59 [3.59]
Seff = 16435.68 [9434.30]
Teq = 2887 [414] K
Rp = 1.83 [1.23] Re
a = 0.0434 [0.0154] AU
Ag = 8.56 [10.75] [0.70σ]
Teffp = 7635 [2157] K [2.16σ]

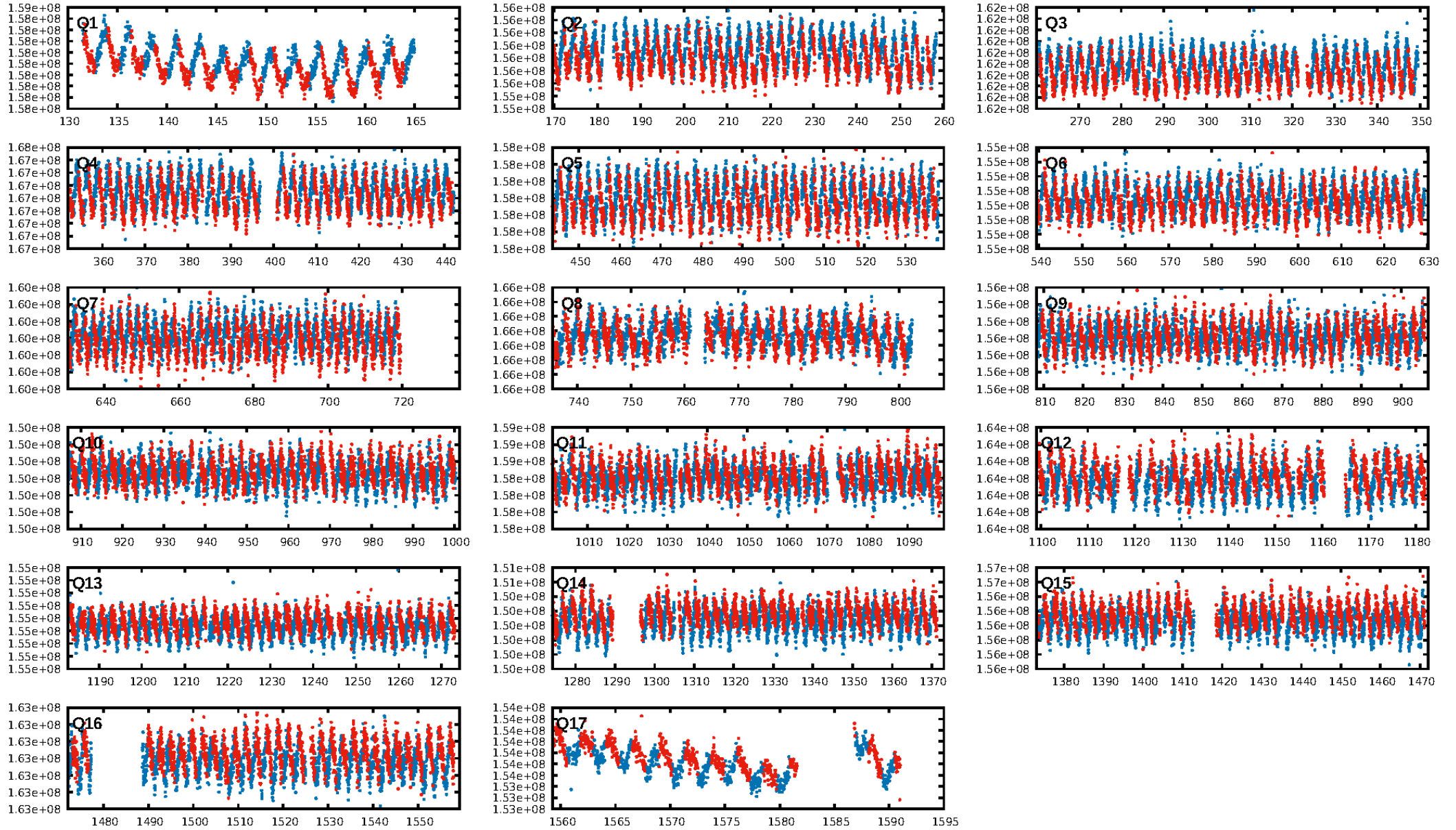
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [40.89σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [550/550]
GhostDiagnostic-chr: 1.902
Centroid-sig: 9.2%
Centroid-so: 0.843 arcsec [1.31σ]
OotOffset-rm: 0.056 arcsec [0.45σ]
OotOffset-st: 3/4/3/5 [15]
KicOffset-rm: 0.148 arcsec [0.85σ]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 1.00 [17/17]

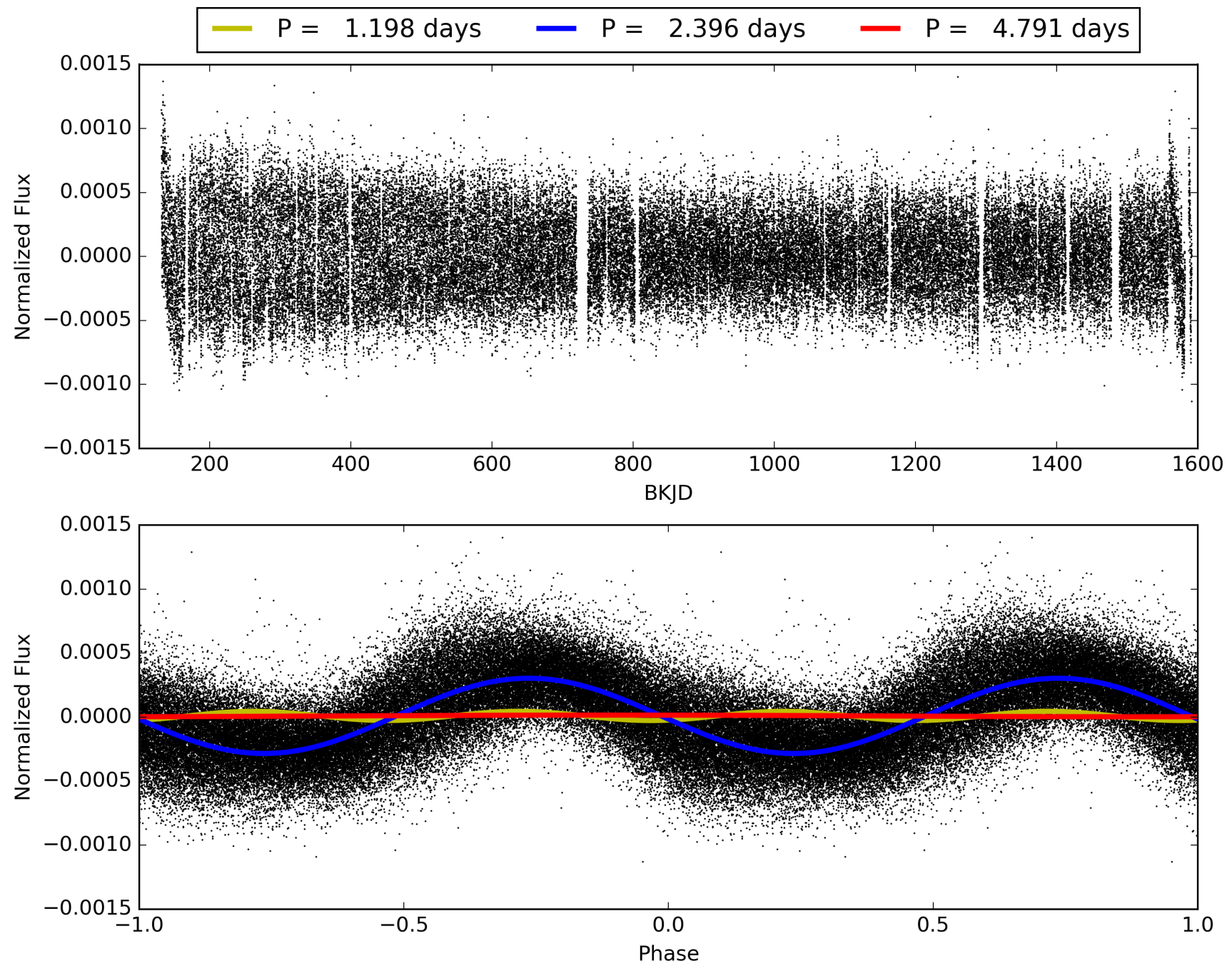
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:46:30 Z

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

TCE 011296045-01, PDC Light Curves

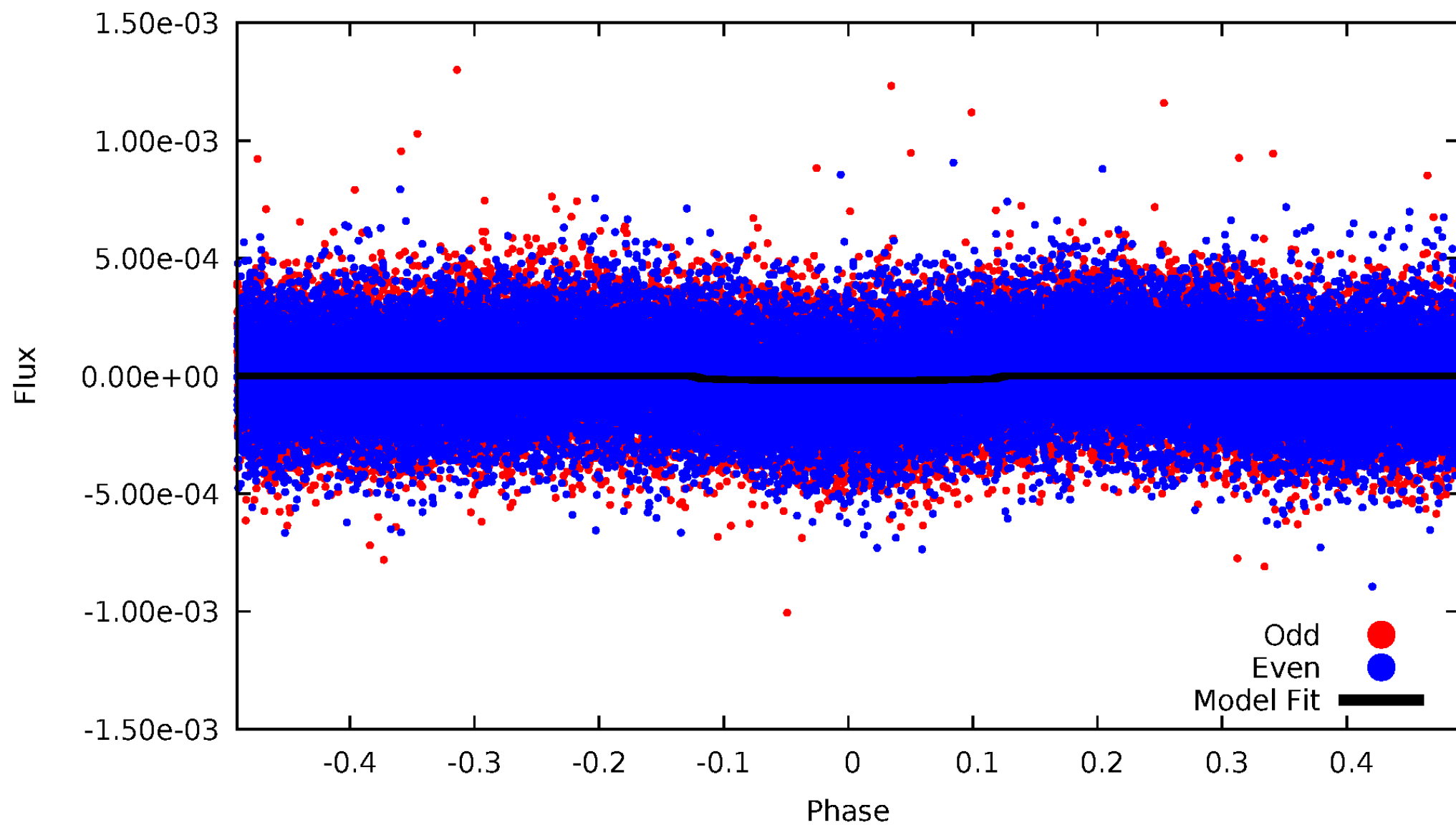


TCE 011296045-01



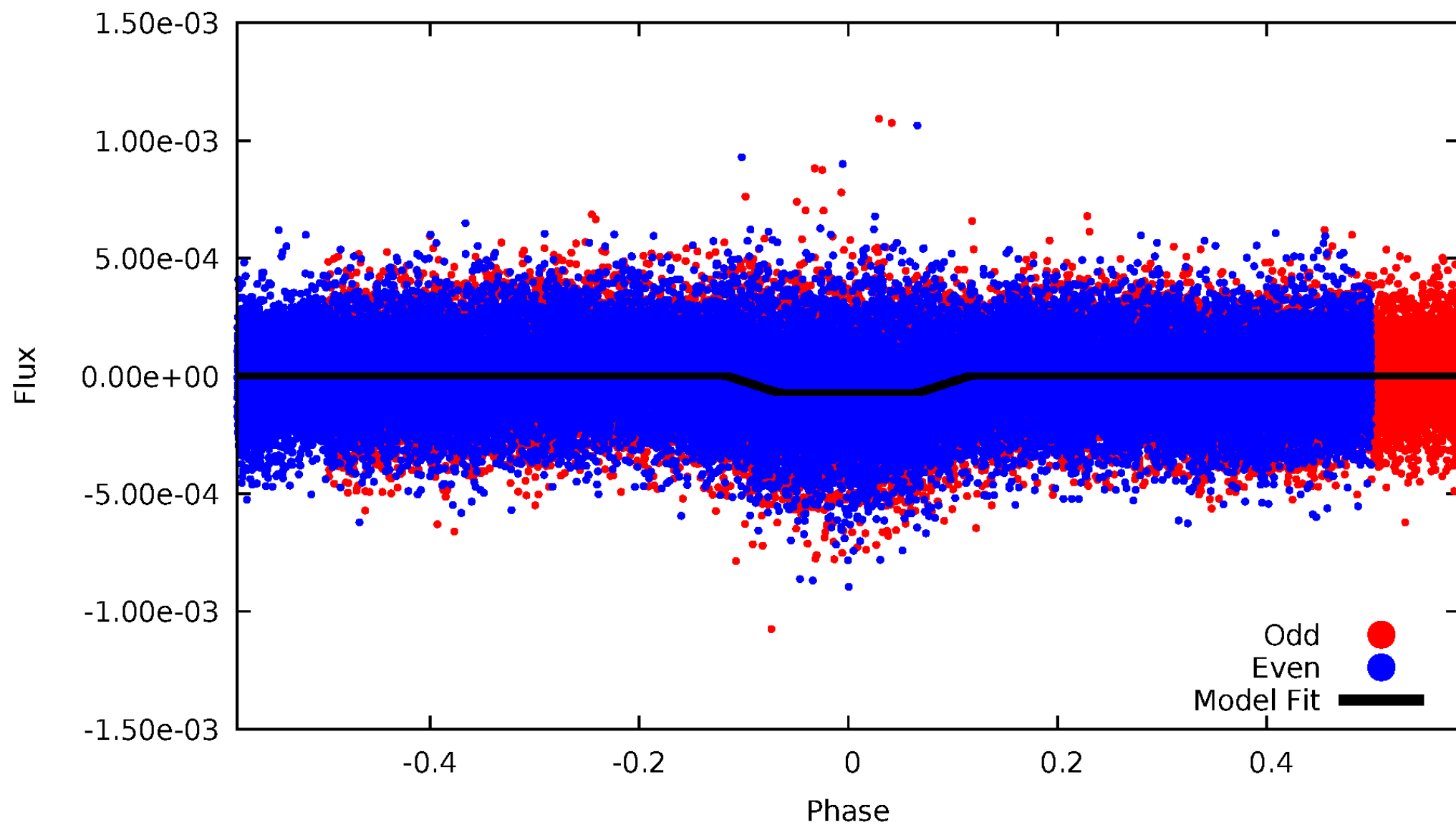
DV Odd/Even

TCE 011296045-01

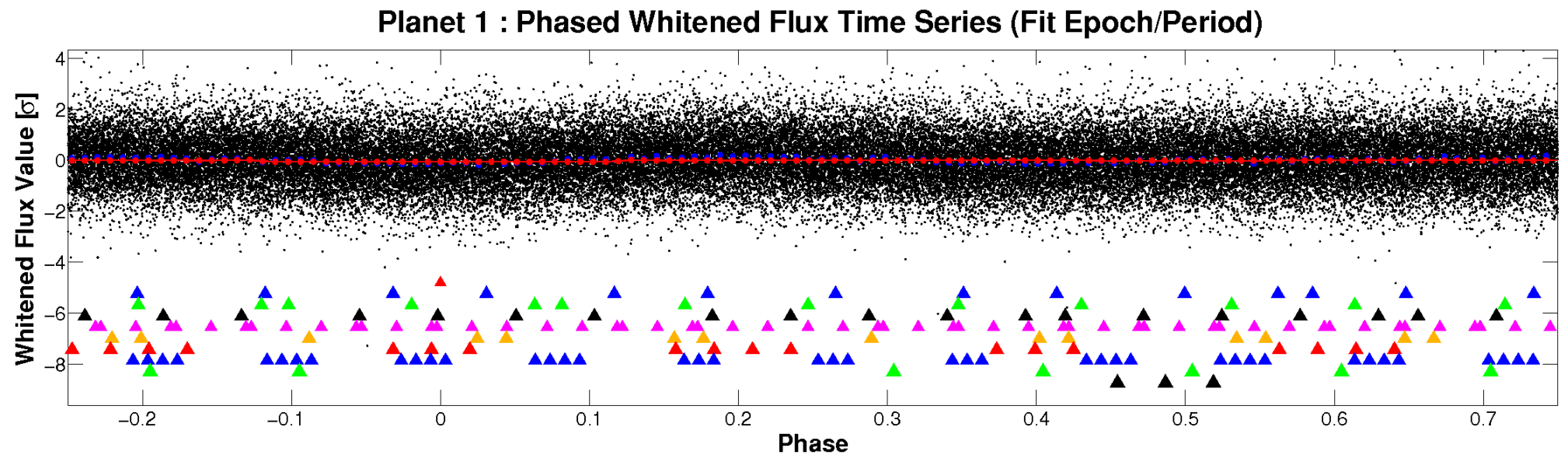
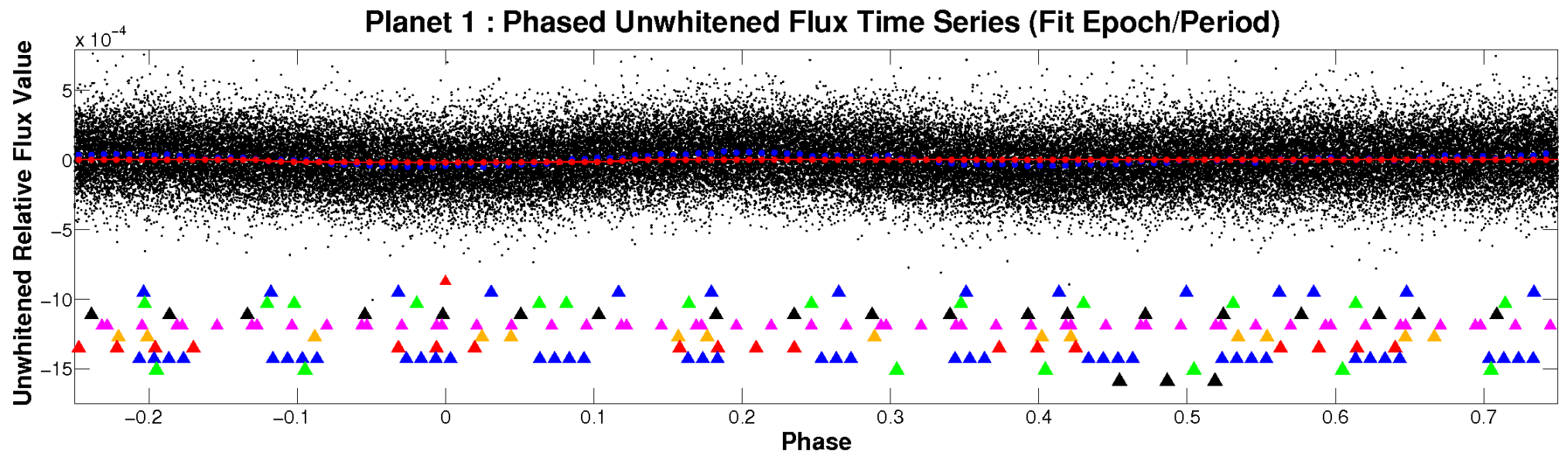


ALT Odd/Even

TCE 011296045-01

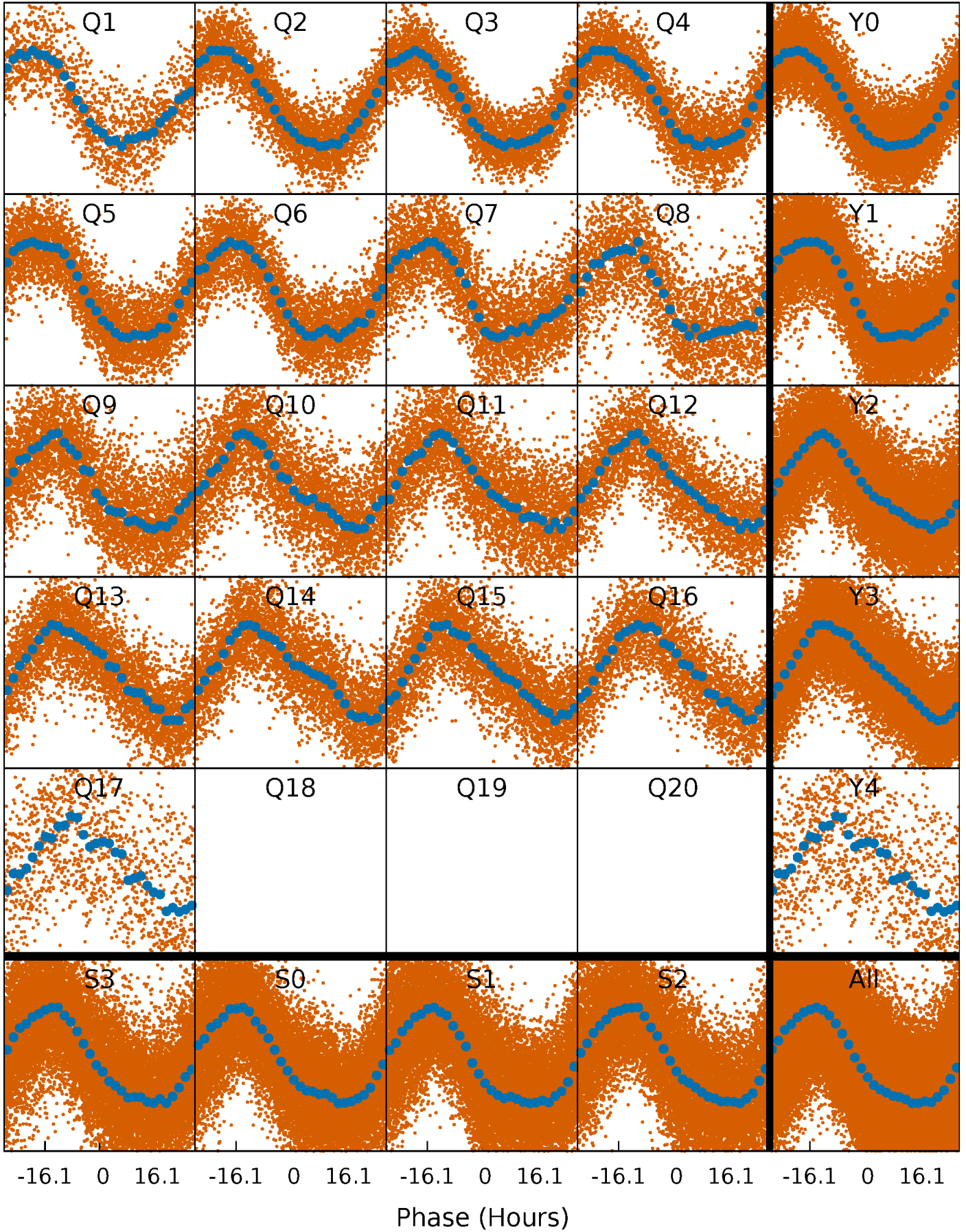


Non-Whitened Vs. Whitened Light Curve



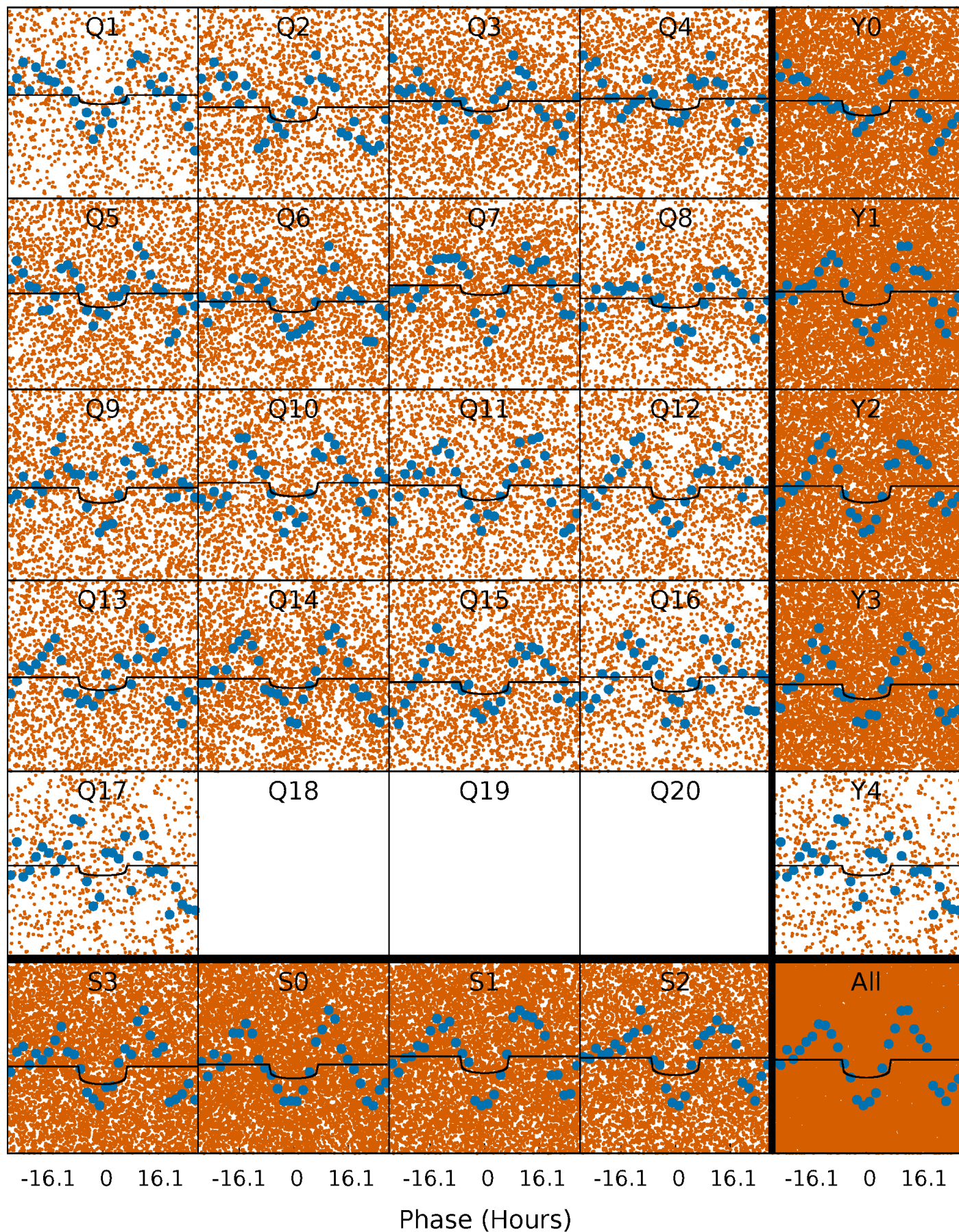
PDC Quarter-Phased Transit Curves

TCE 011296045-01 P= 2.395598 Days $T_0=132.179104$ (BKJD)



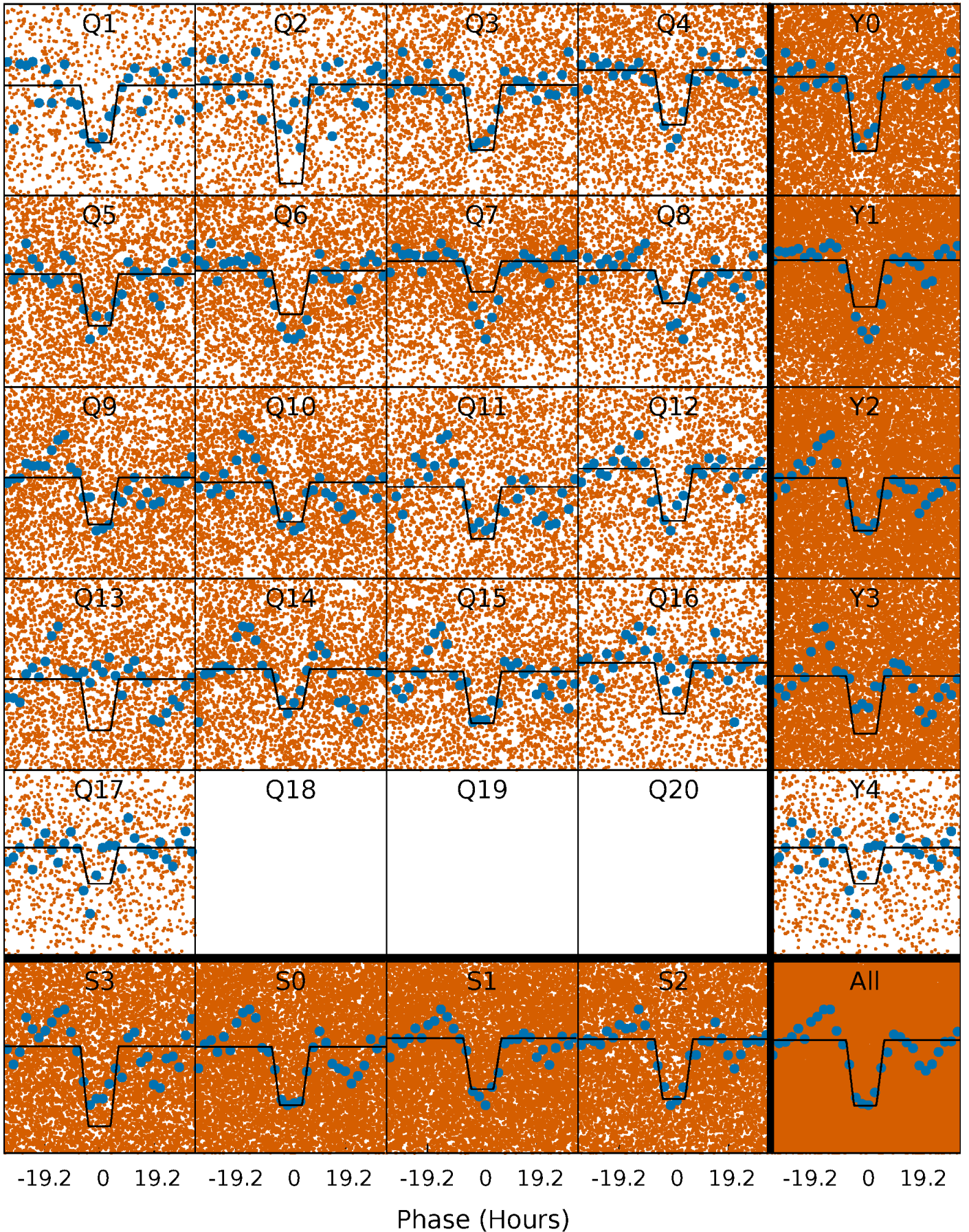
DV Quarter-Phased Transit Curves

TCE 011296045-01 P= 2.395598 Days $T_0=132.179104$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

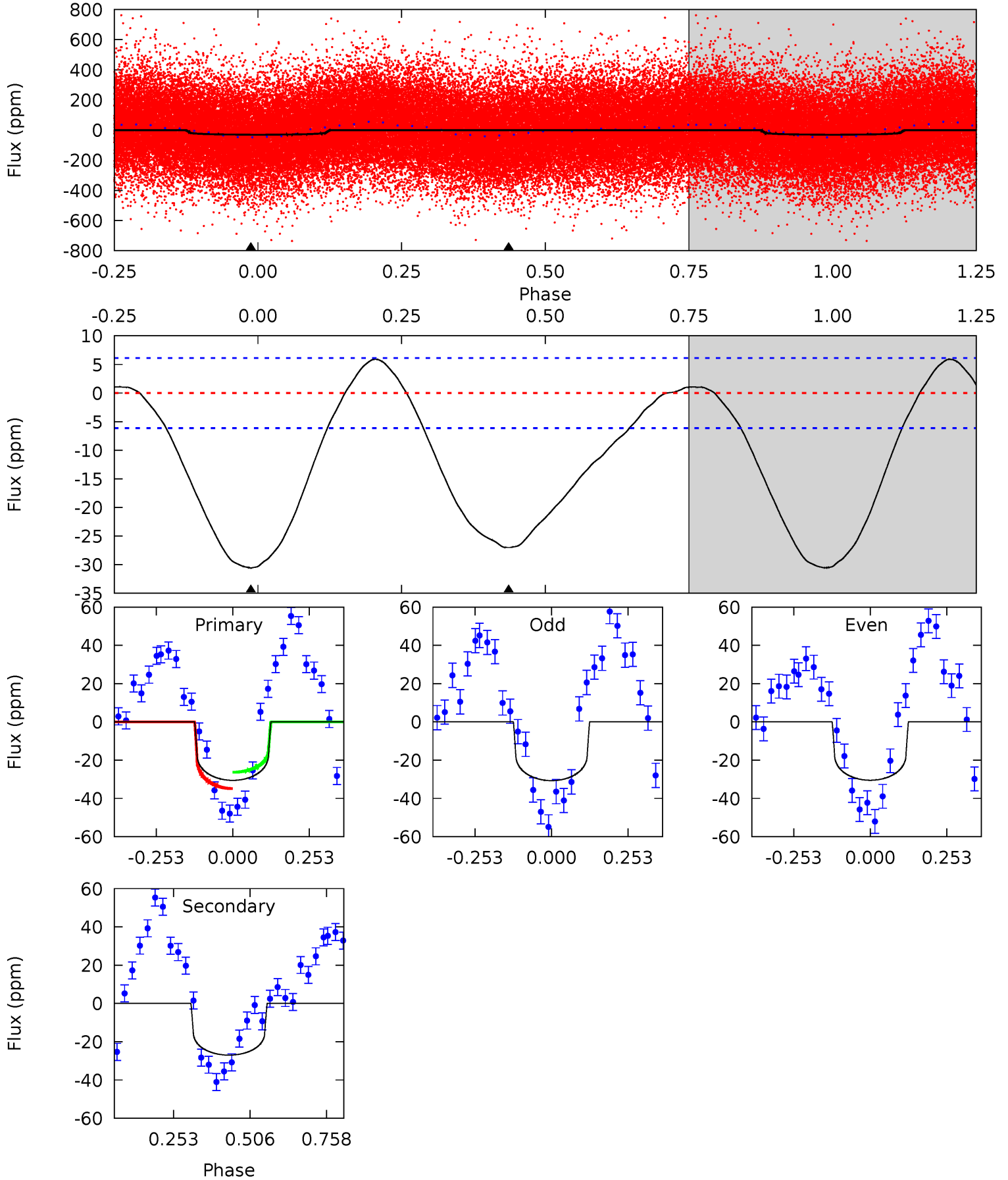
TCE 011296045-01 P= 2.395702 Days $T_0=132.174619$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-01, P = 2.395598 Days, E = 129.783506 Days

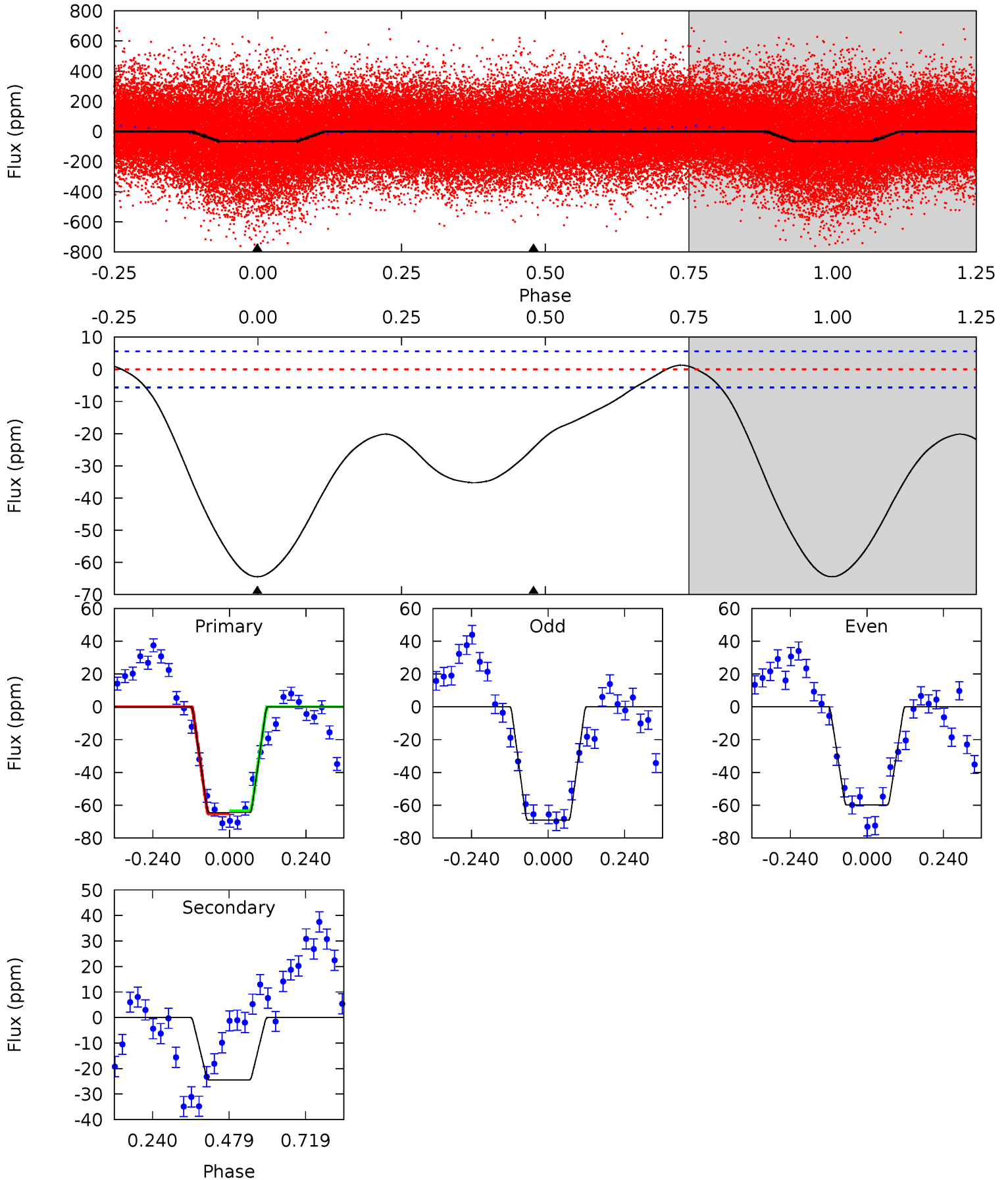
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	19.2	0	0	4.37	1.14	1.12	21.8	21.8	19.2	19.2	0.07	1.08	0.16	3.06



Alt Model-Shift Uniqueness Test

011296045-01, P = 2.395702 Days, E = 129.778917 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.2	19.0	0	0	4.38	1.18	7.77	50.2	50.2	19.0	19.0	3.61	1.04	0.02	0.71



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-27 ± 1	$1.71^{+1.04}_{-0.83}$	3971^{+192}_{-311}	7504^{+4698}_{-1551}	$9.589^{+25.999}_{-5.876}$
Alt.	-24 ± 1	$3.55^{+1.06}_{-1.19}$	3988^{+186}_{-356}	5033^{+940}_{-564}	$2.026^{+2.432}_{-0.842}$

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 $A_{obs} \gg 1.0$

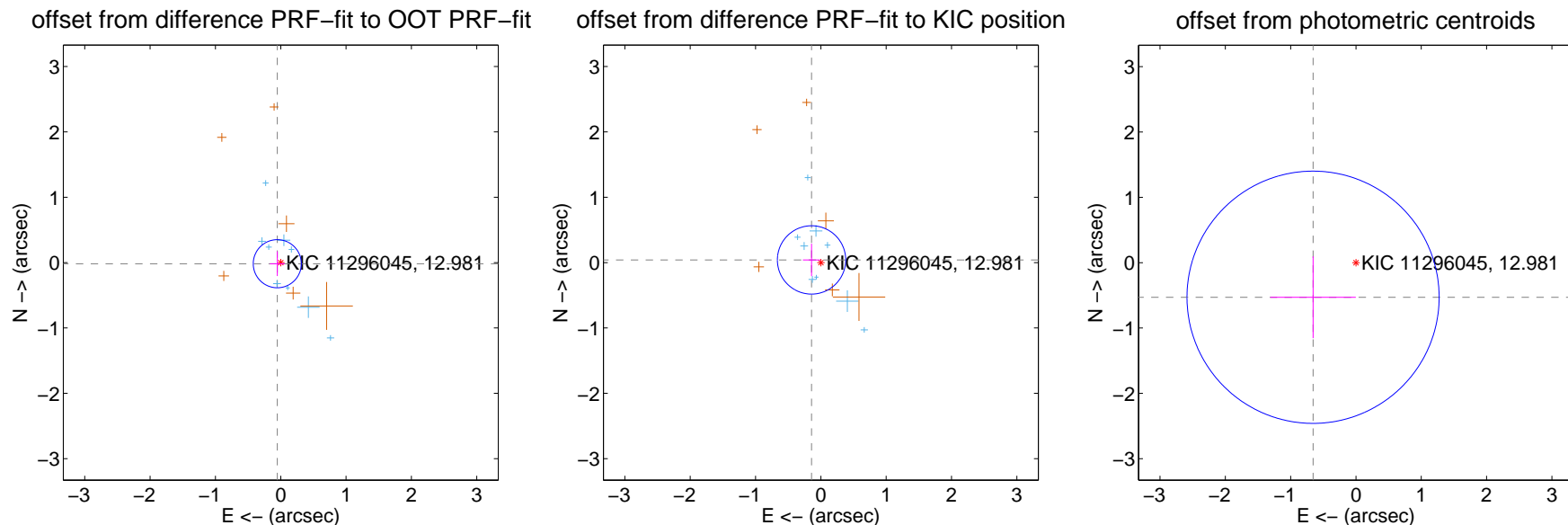
DV Centroid Data

Supplemental centroid analysis for 011296045-01. Kepler magnitude: 12.98. Transit SNR 6.90

There are 9 quarters with good PRF difference image offsets

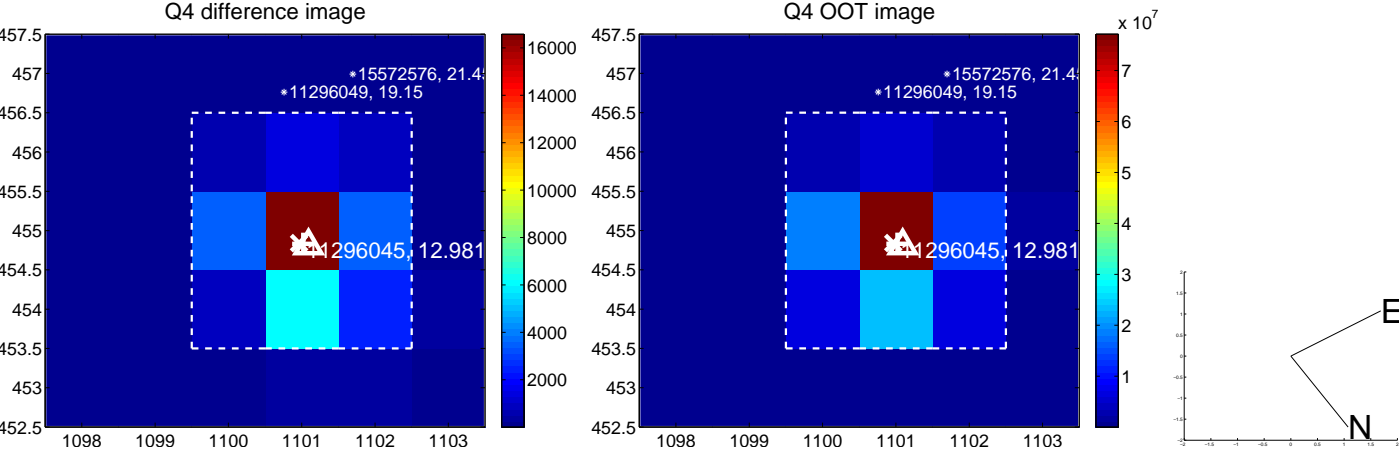
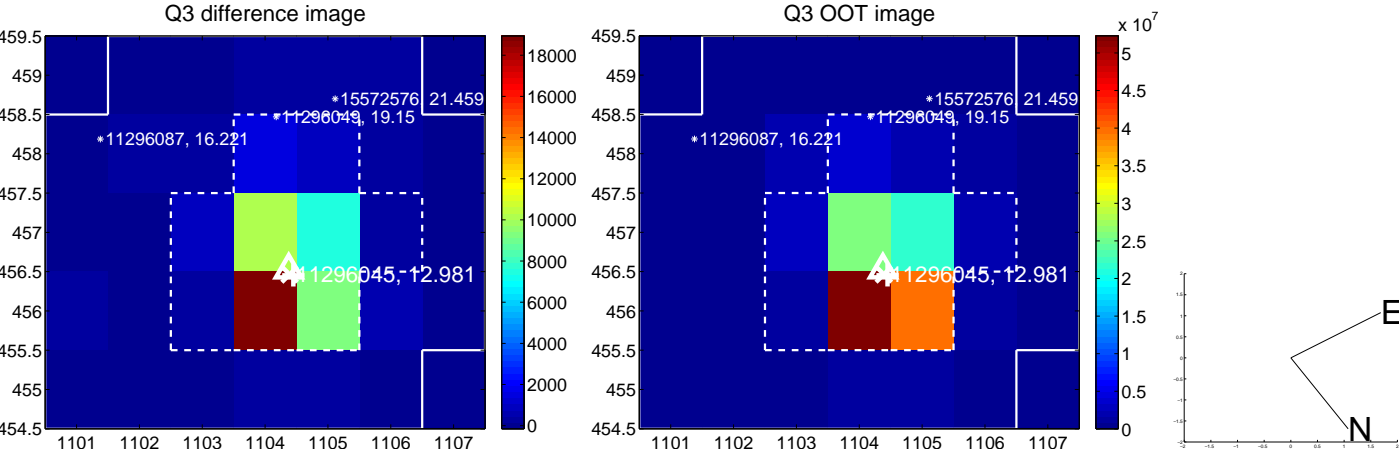
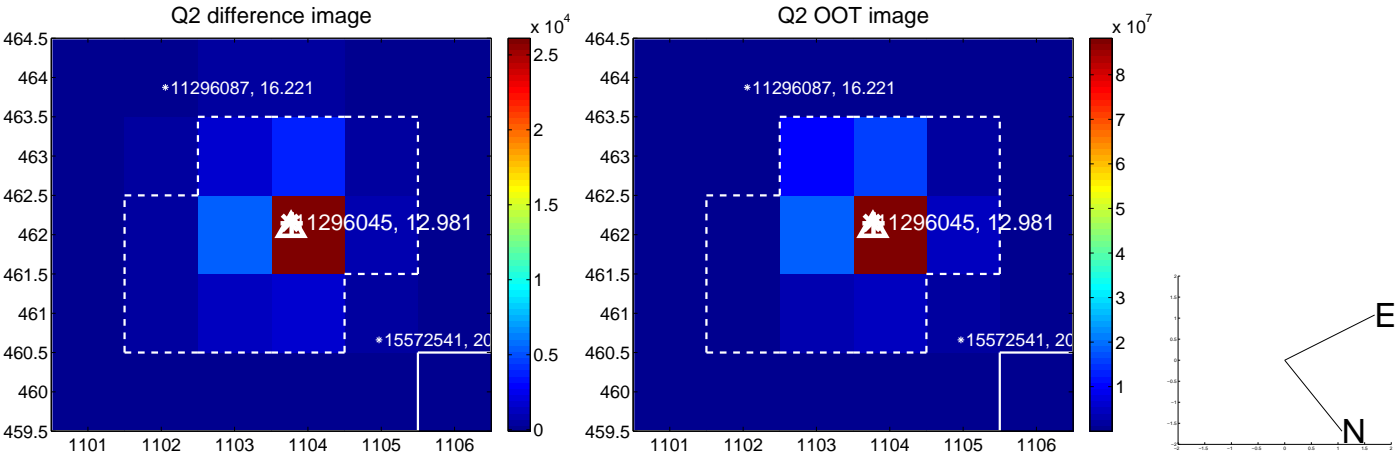
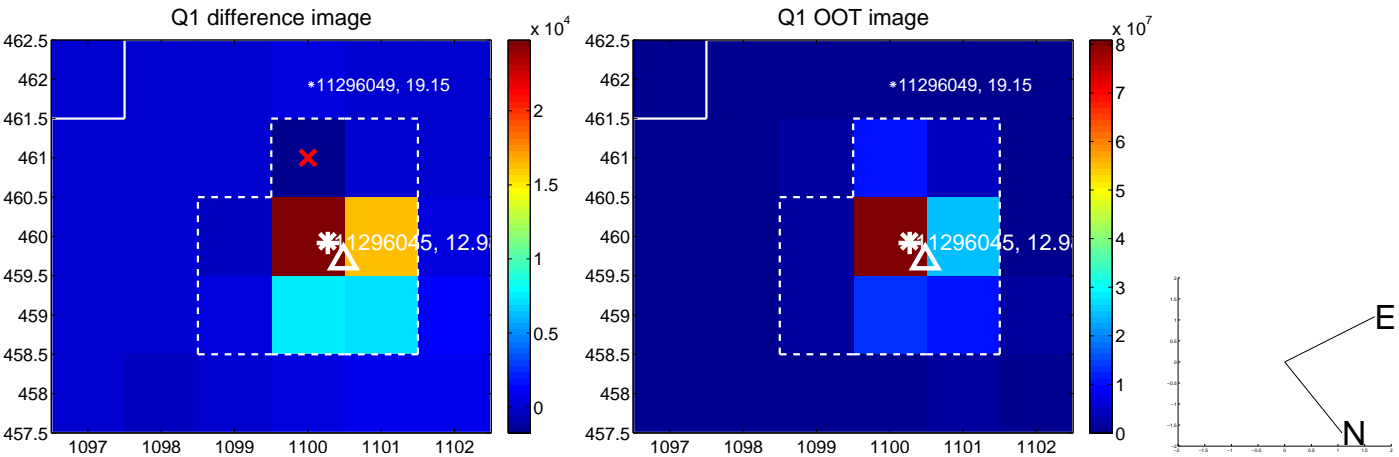
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.123	0.45	0.053 ± 0.113	-0.017 ± 0.188
PRF-fit source offset from KIC position	0.148 ± 0.174	0.85	0.143 ± 0.132	0.041 ± 0.248
photometric centroid source offset	0.84 ± 0.64	1.31	0.66 ± 0.65	-0.53 ± 0.63

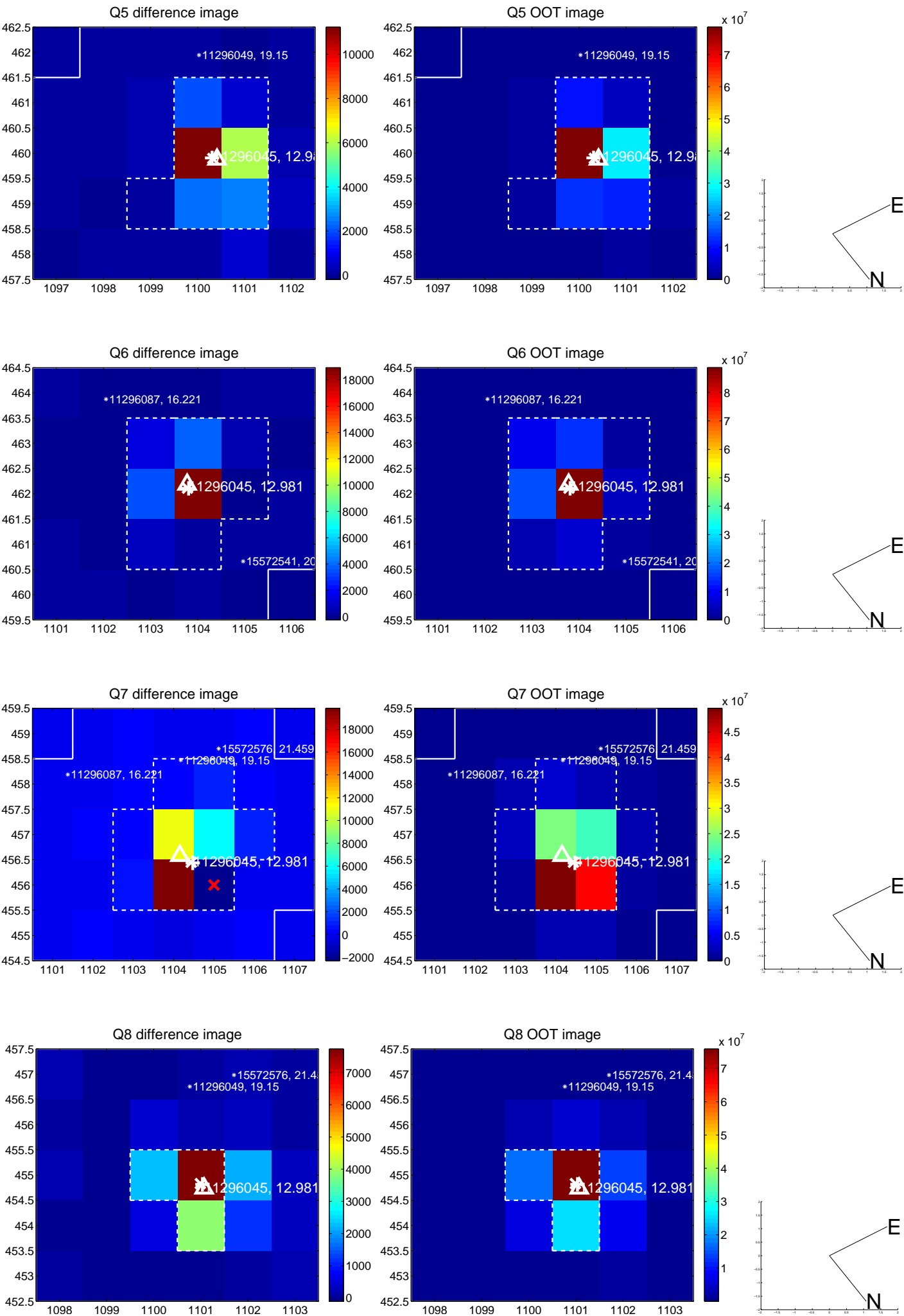


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

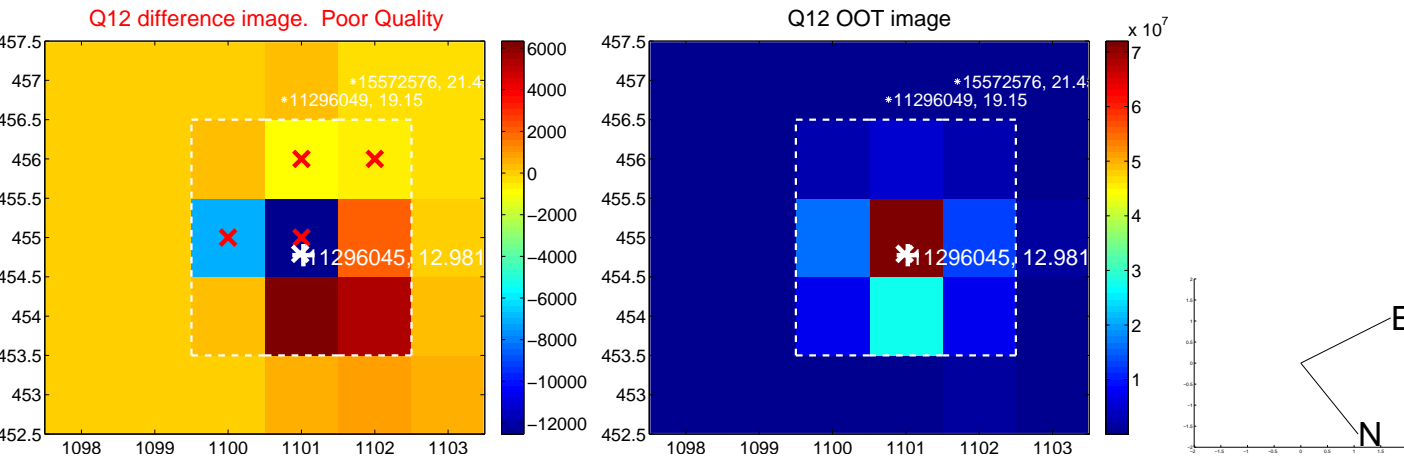
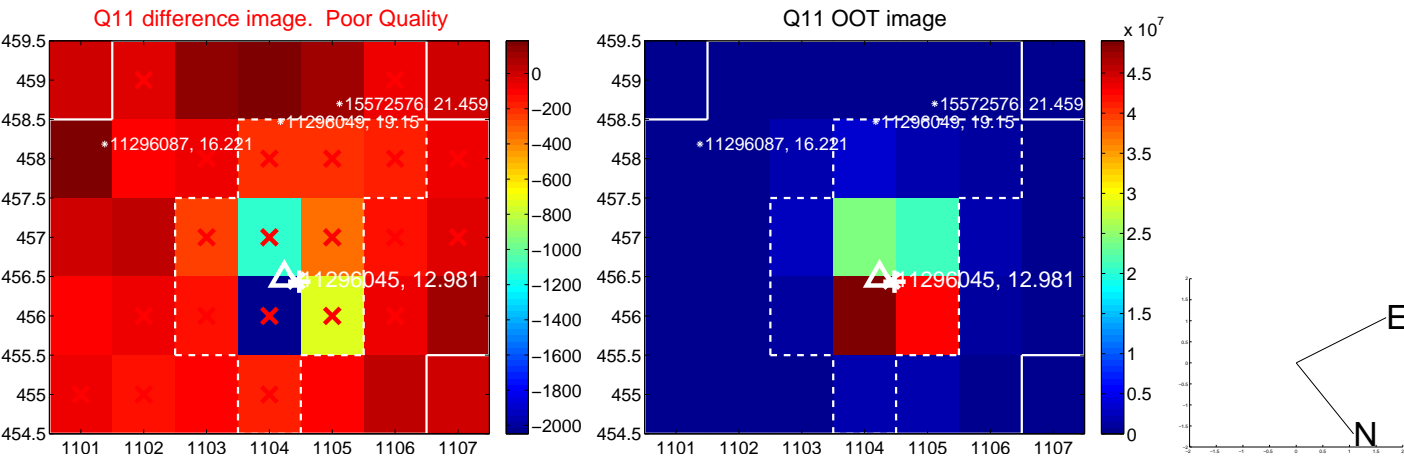
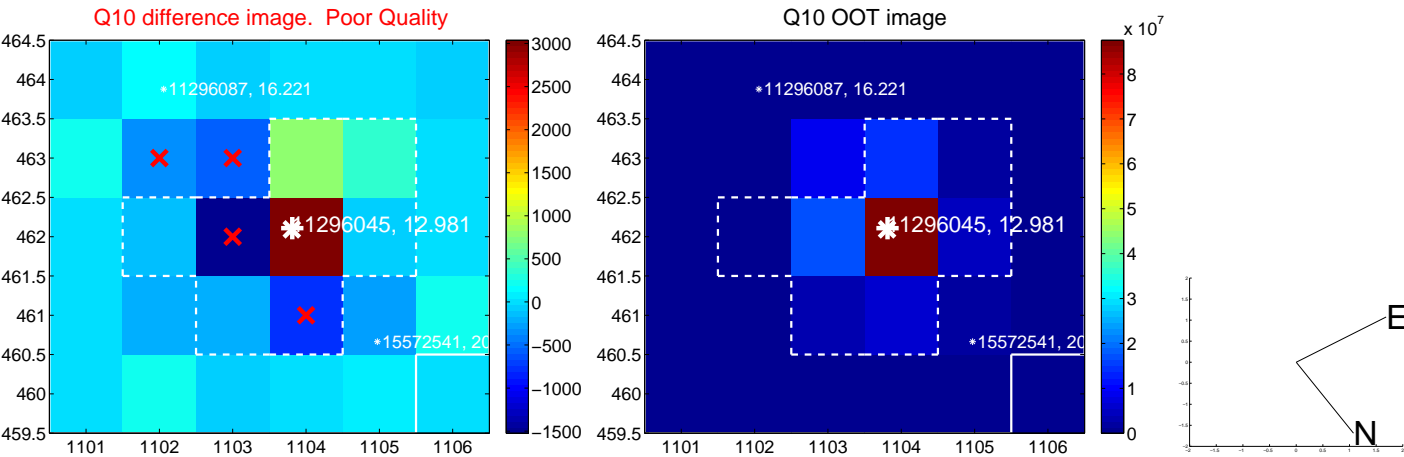
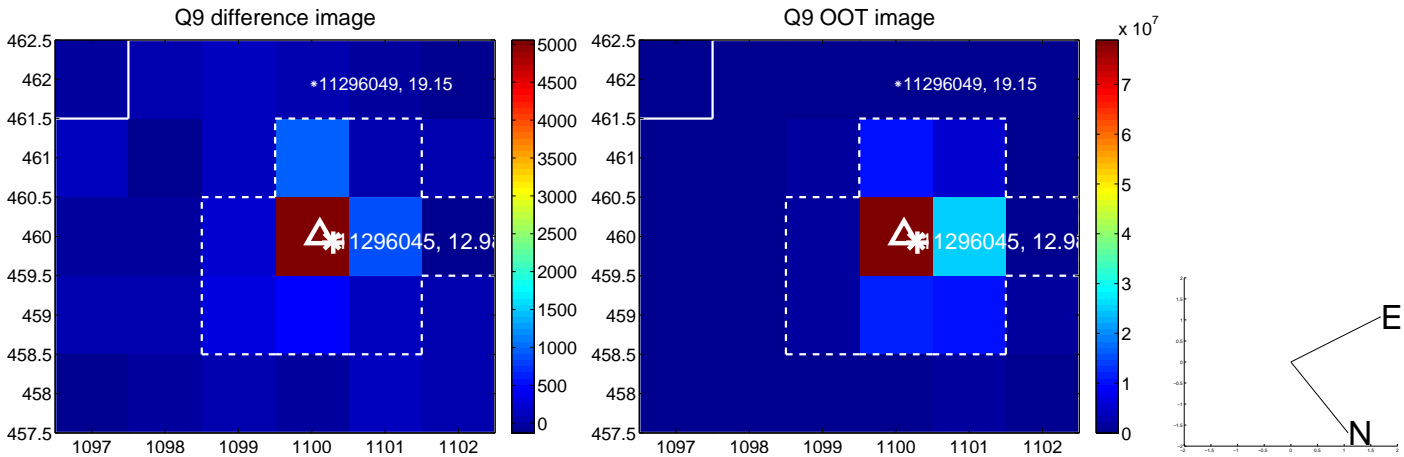
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



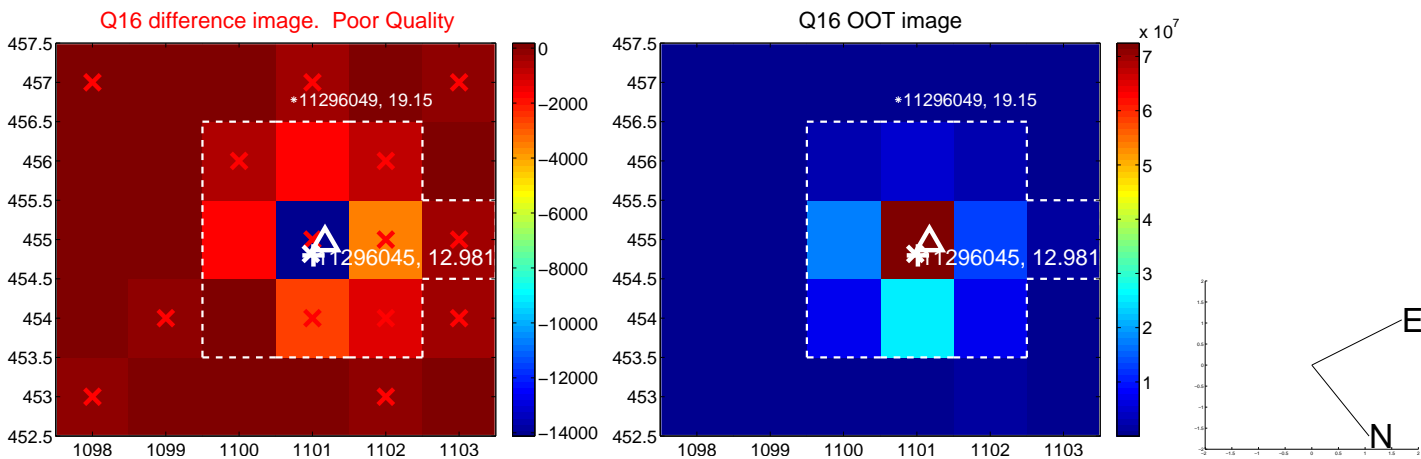
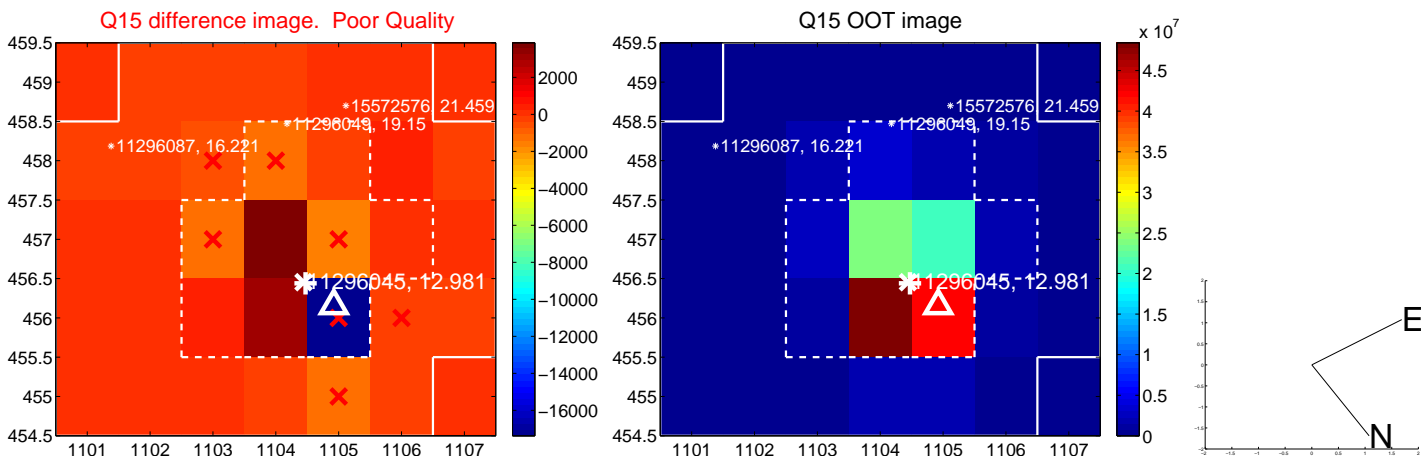
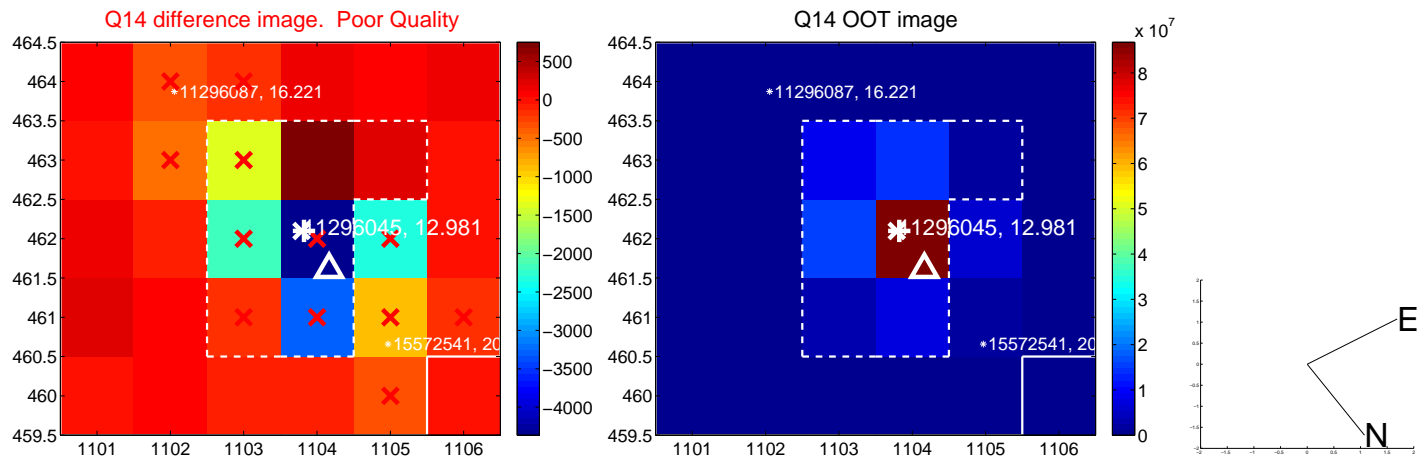
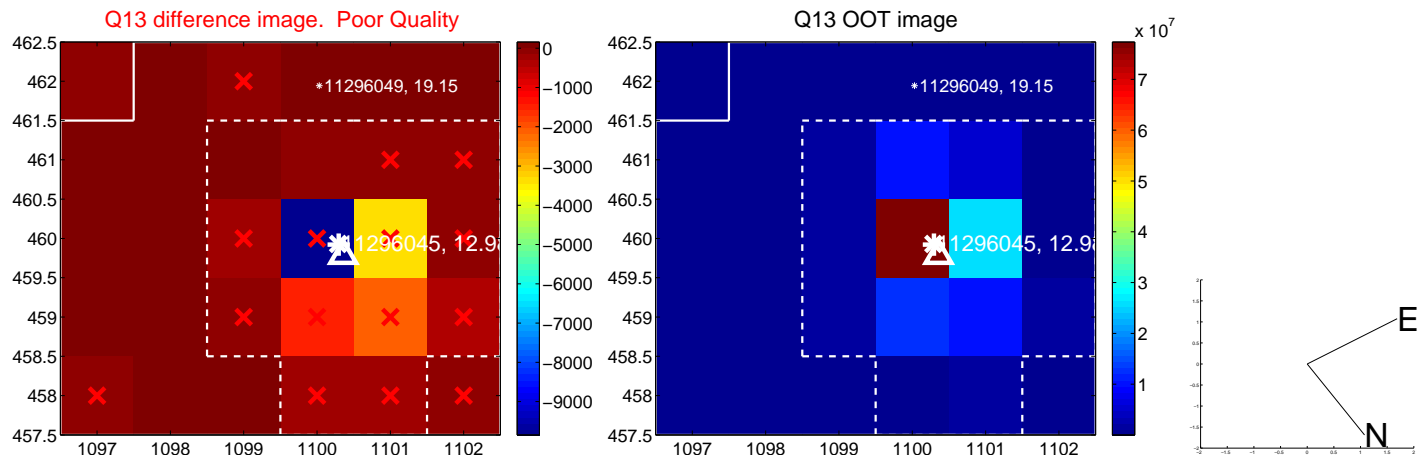
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



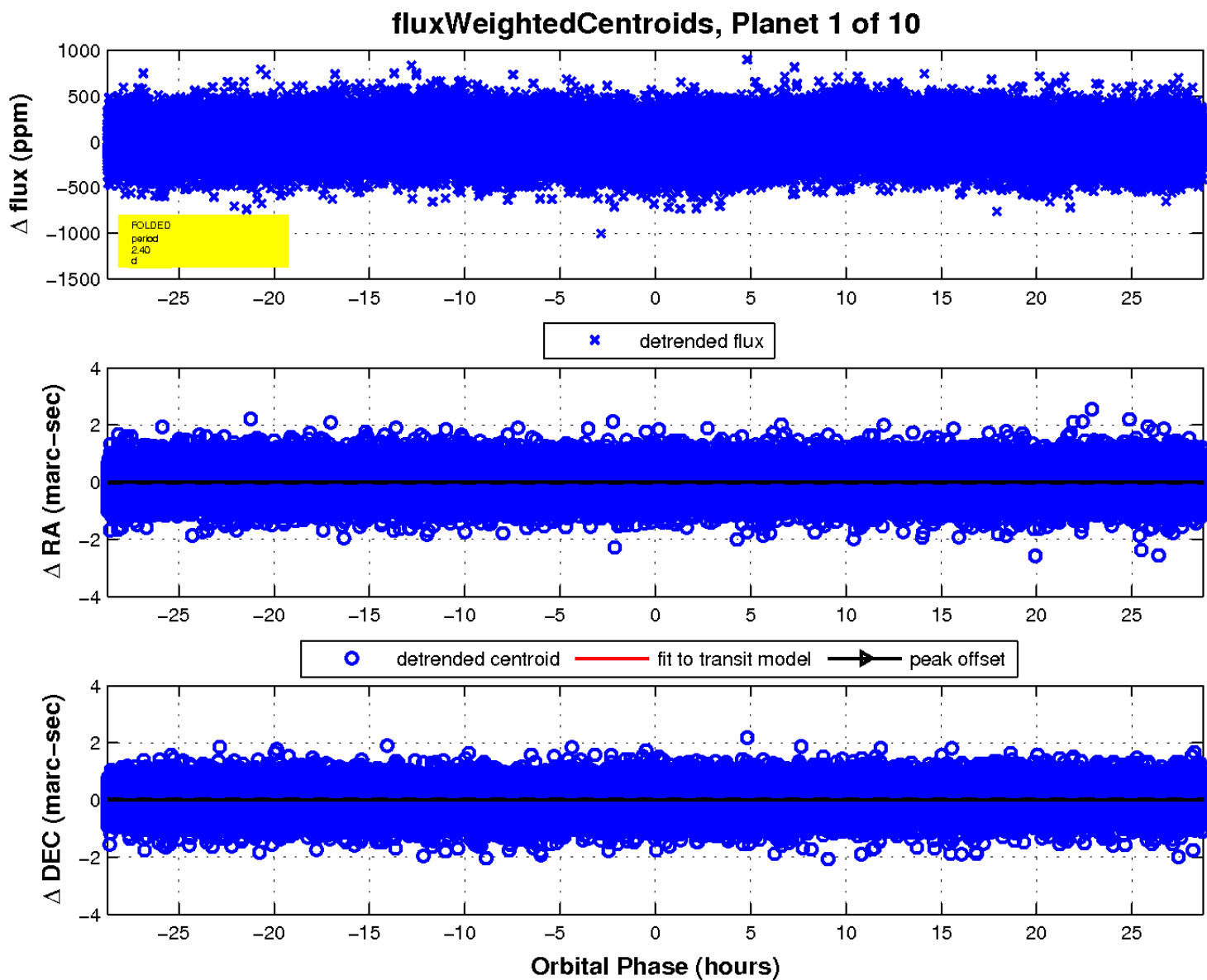
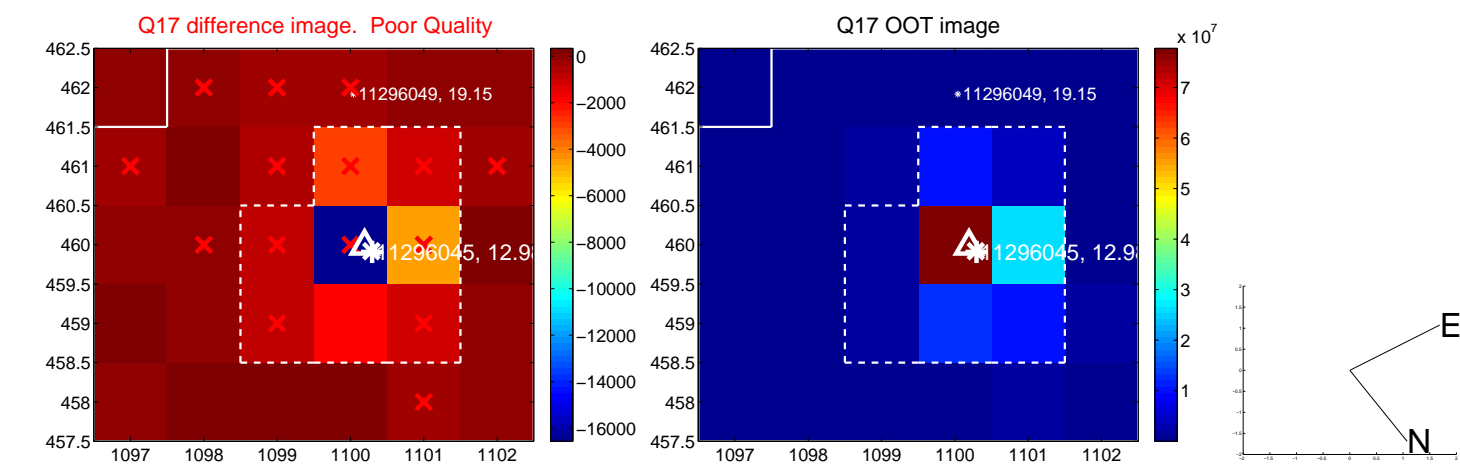
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

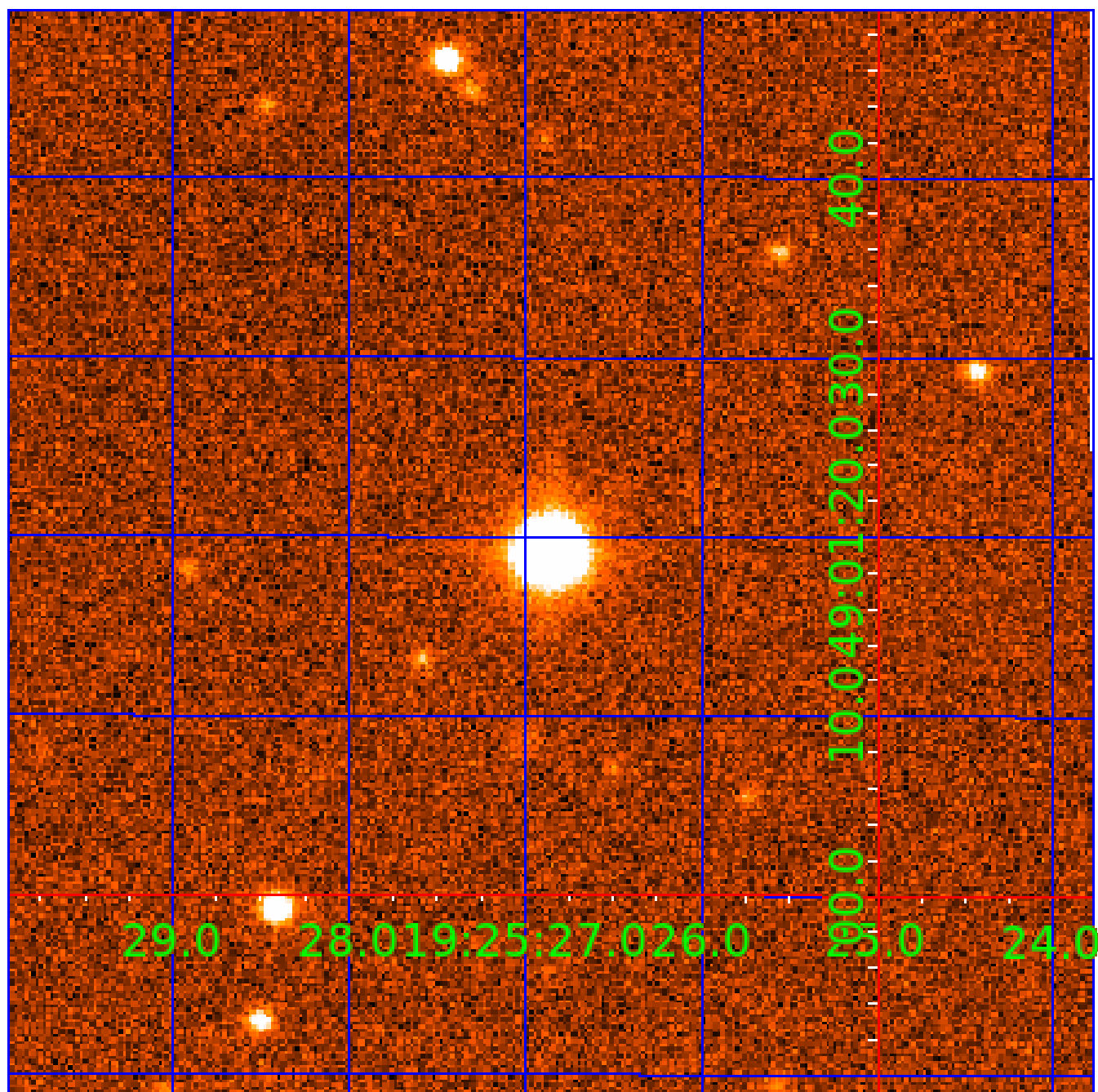


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

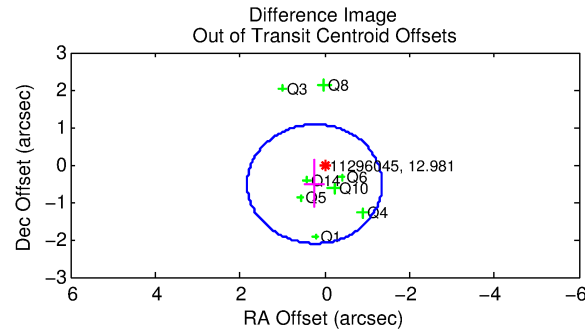
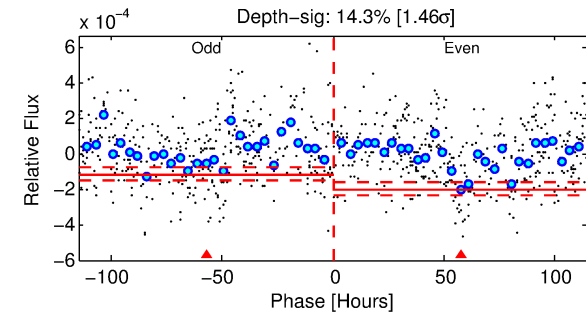
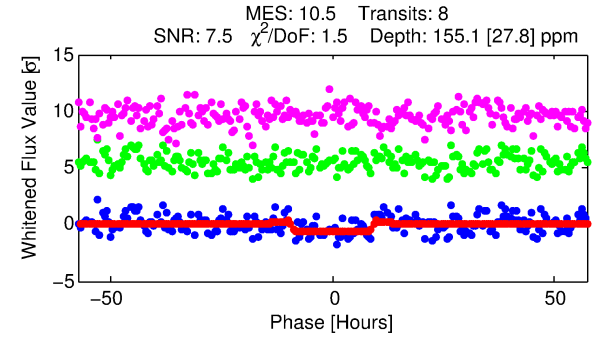
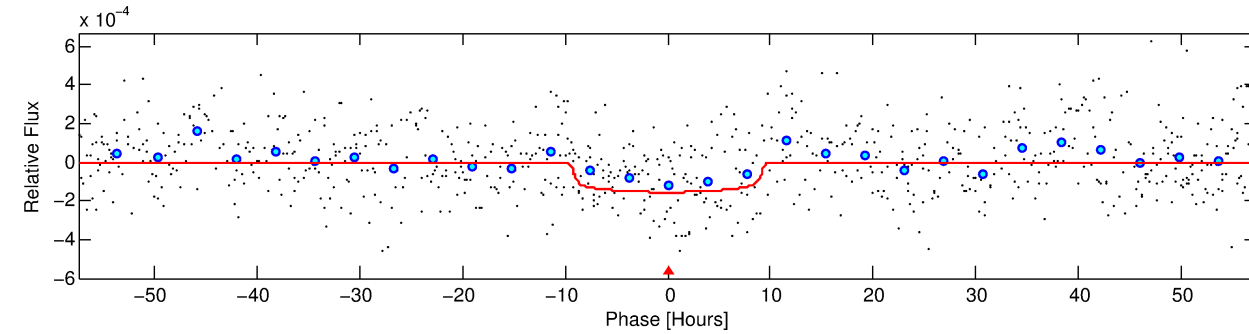
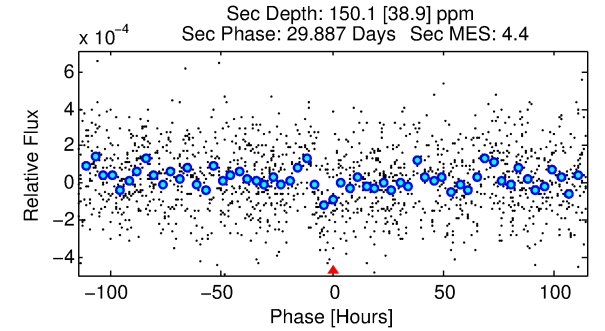
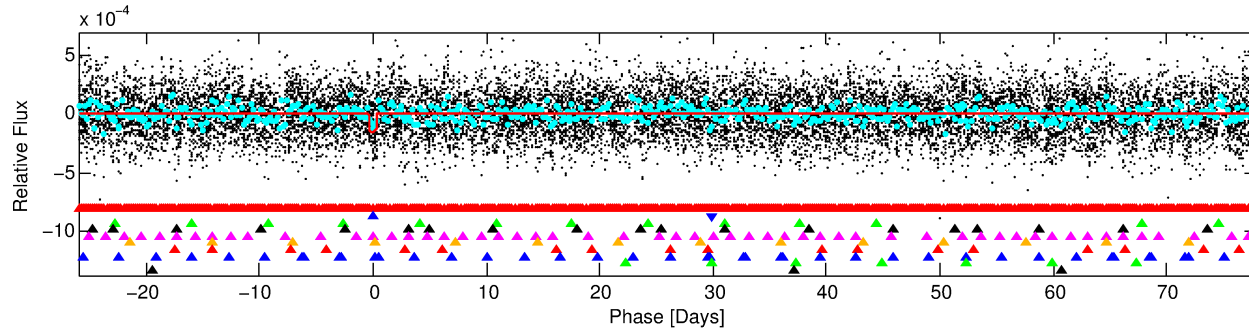
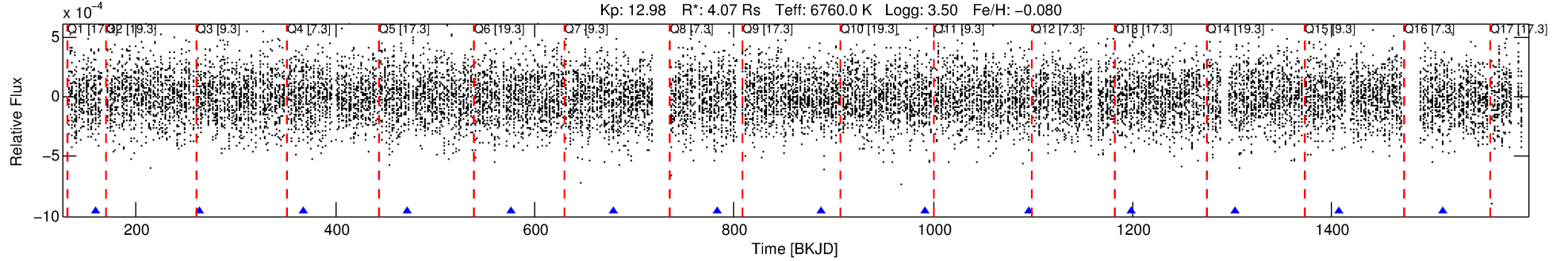
Ephemeris Match Information For 011296045-02

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 2 of 10 Period: 103.928 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 103.92783 [0.00358] d
Epoch = 159.9330 [0.0285] BKJD
Rp/R* = 0.0128 [0.0026]
a/R* = 23.90 [25.20]
b = 0.83 [0.39]
Seff = 107.82 [61.89]
Teq = 822 [118] K
Rp = 5.67 [2.42] Re
a = 0.5360 [0.1896] AU
Ag = 738.85 [550.24] [1.34σ]
Teffp = 6623 [834] K [6.89σ]

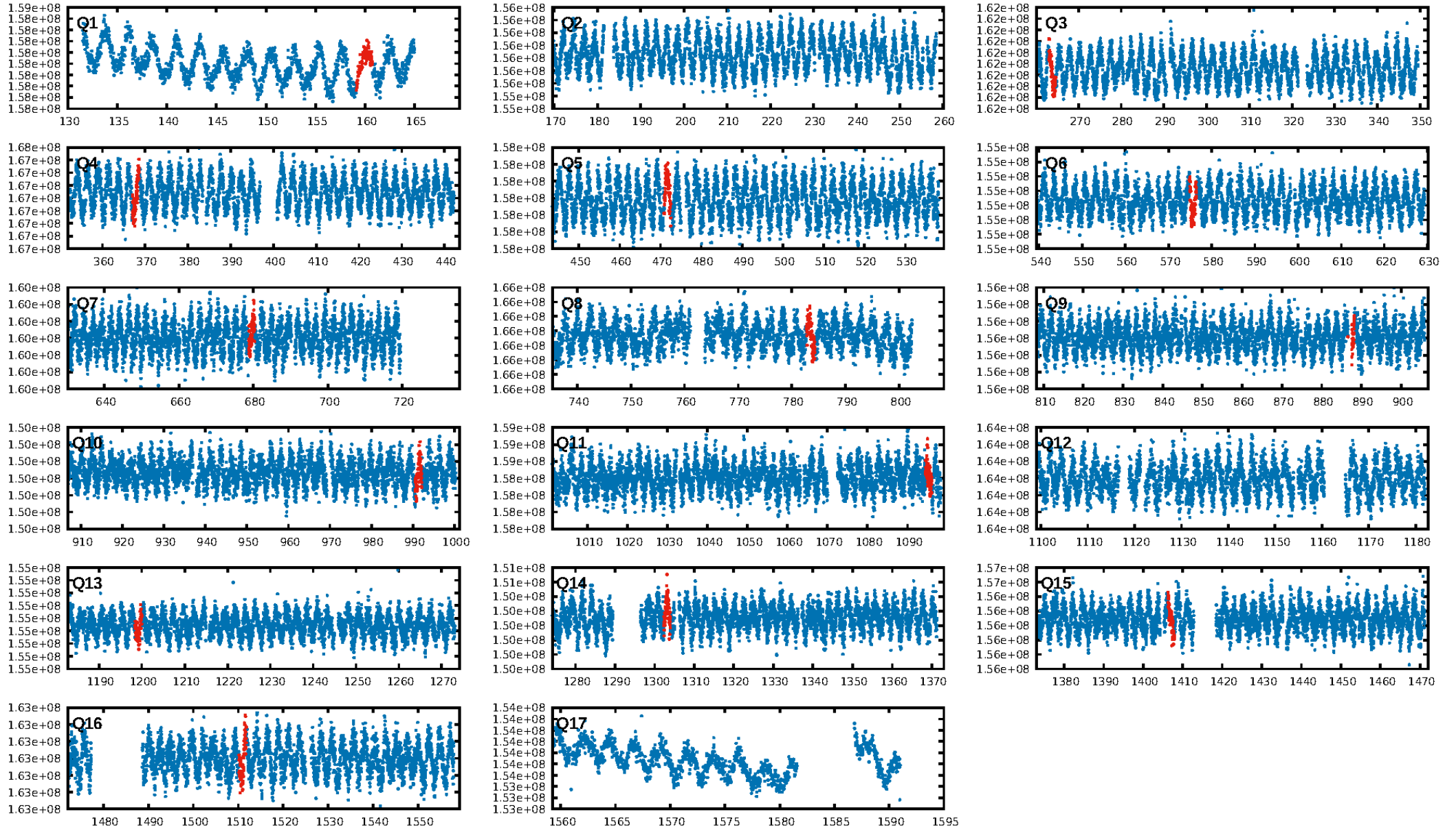
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.77σ]
LongPeriod-sig: 100.0% [8.01σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -3.973
Centroid-sig: 85.4%
Centroid-so: 0.234 arcsec [0.53σ]
OotOffset-rm: 0.568 arcsec [1.07σ]
OotOffset-st: 3/1/2/2 [8]
KicOffset-rm: 0.659 arcsec [1.29σ]
KicOffset-st: 3/1/2/2 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.00 [0/9]

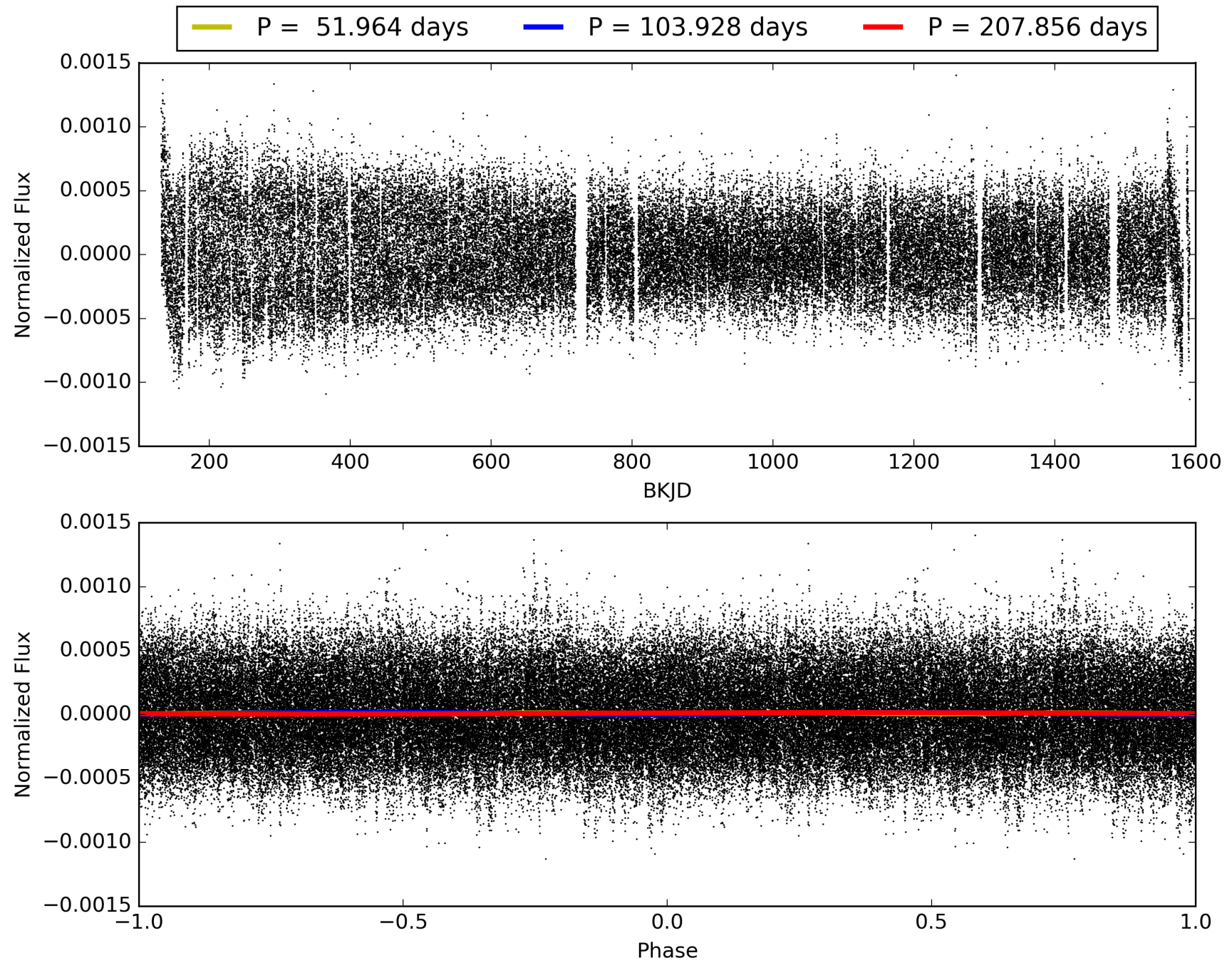
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:46:41 Z

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

TCE 011296045-02, PDC Light Curves

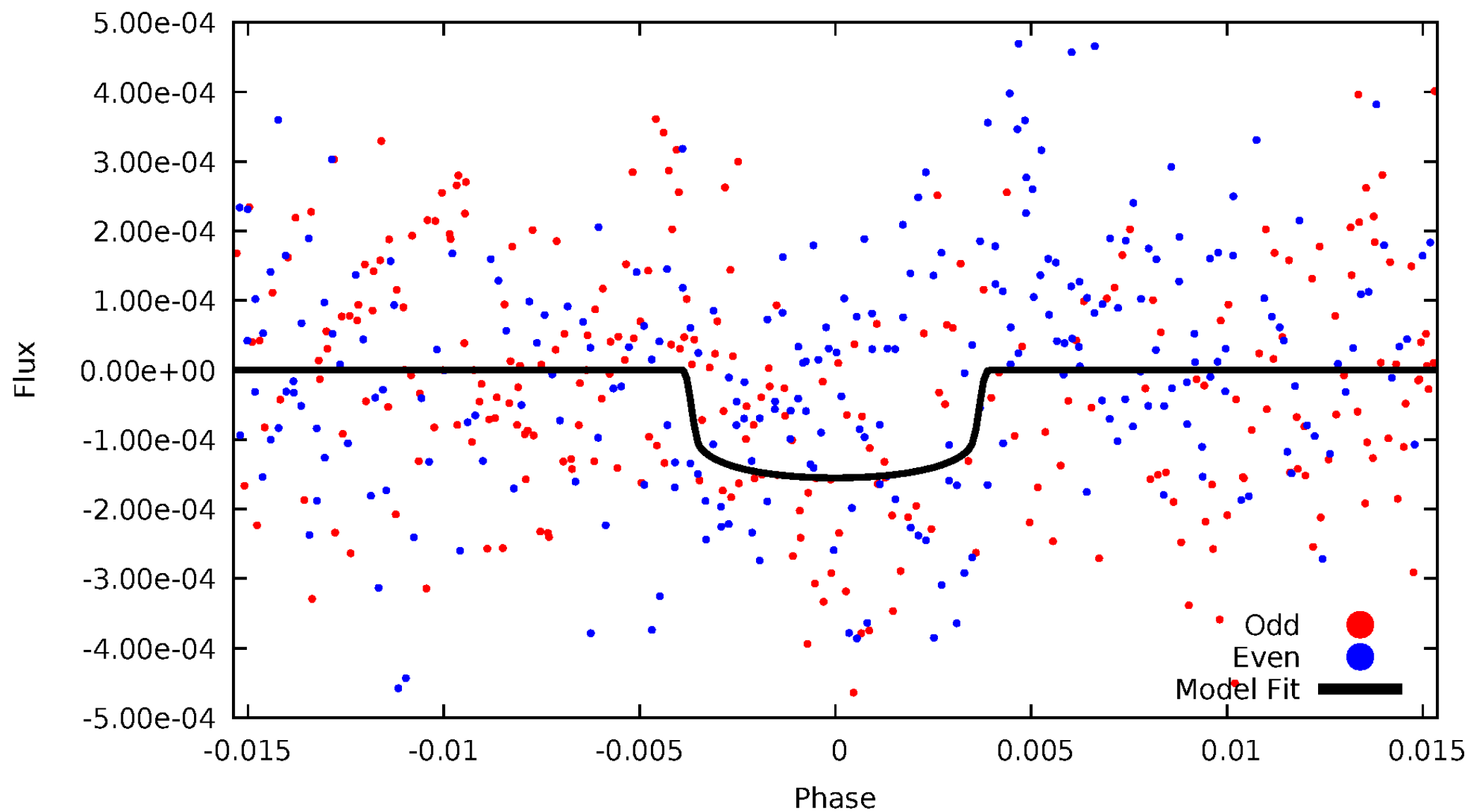


TCE 011296045-02



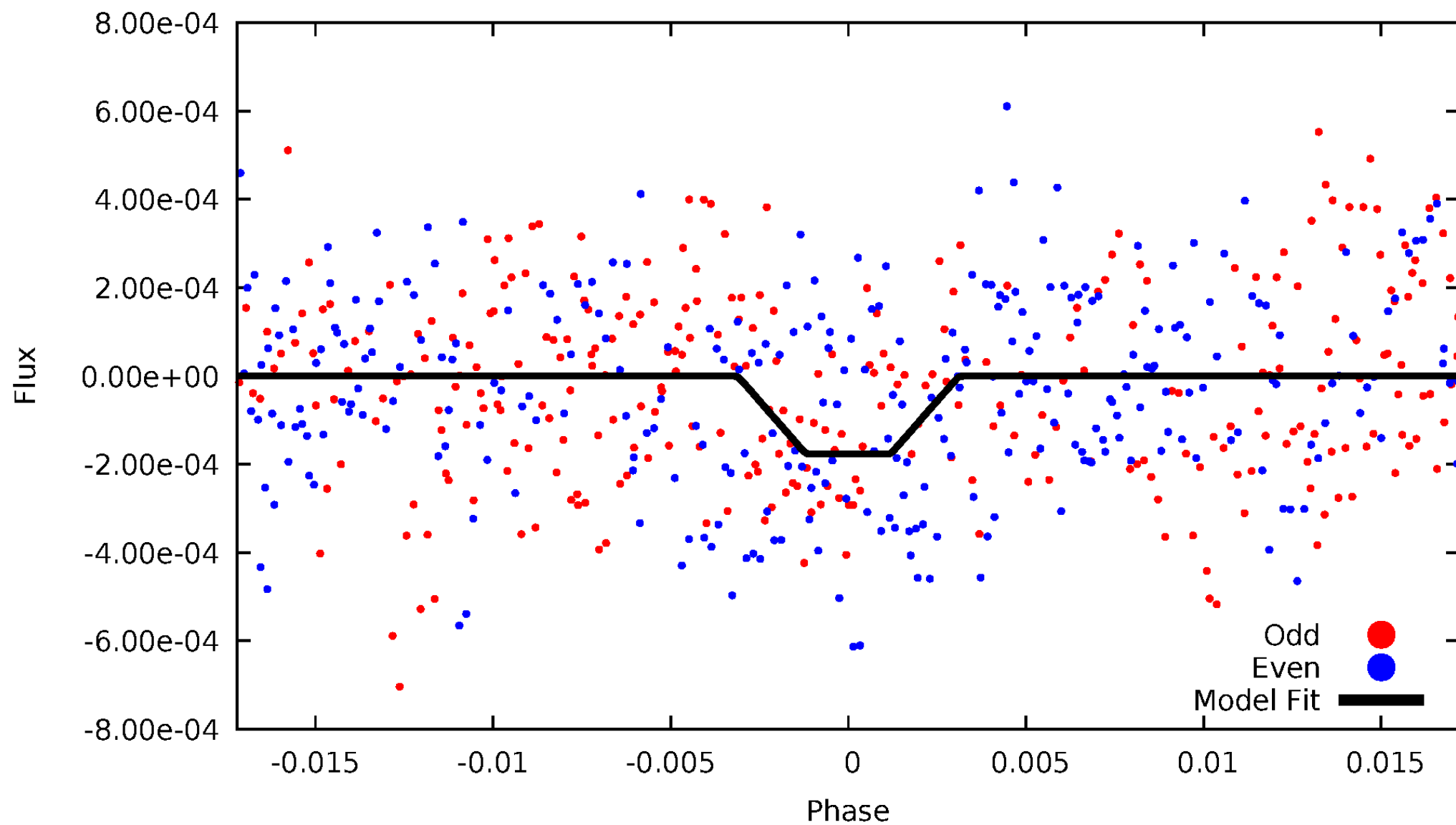
DV Odd/Even

TCE 011296045-02



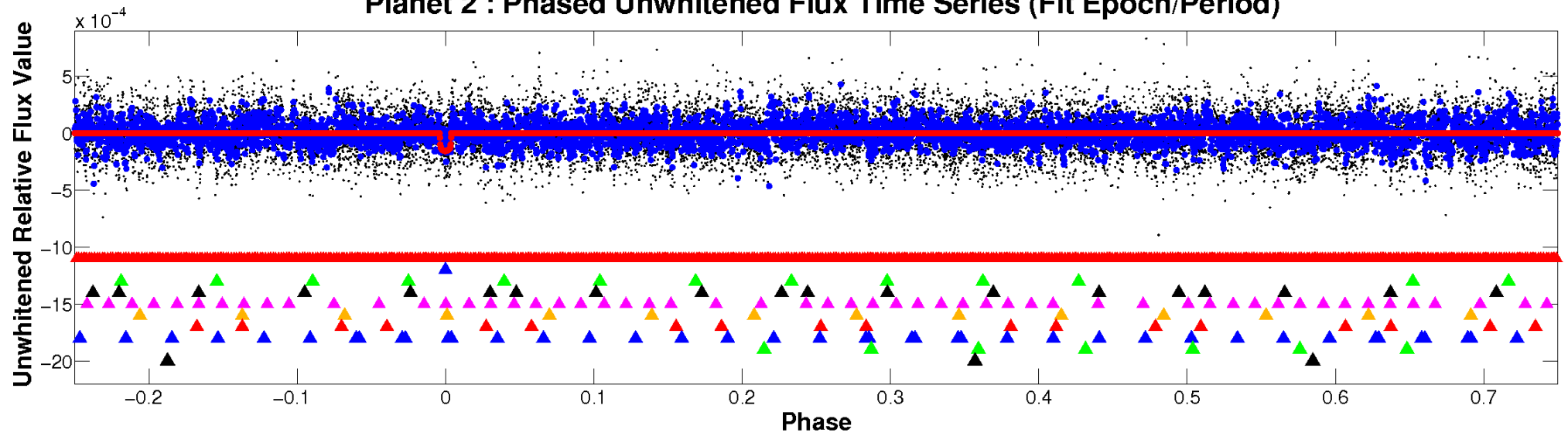
ALT Odd/Even

TCE 011296045-02

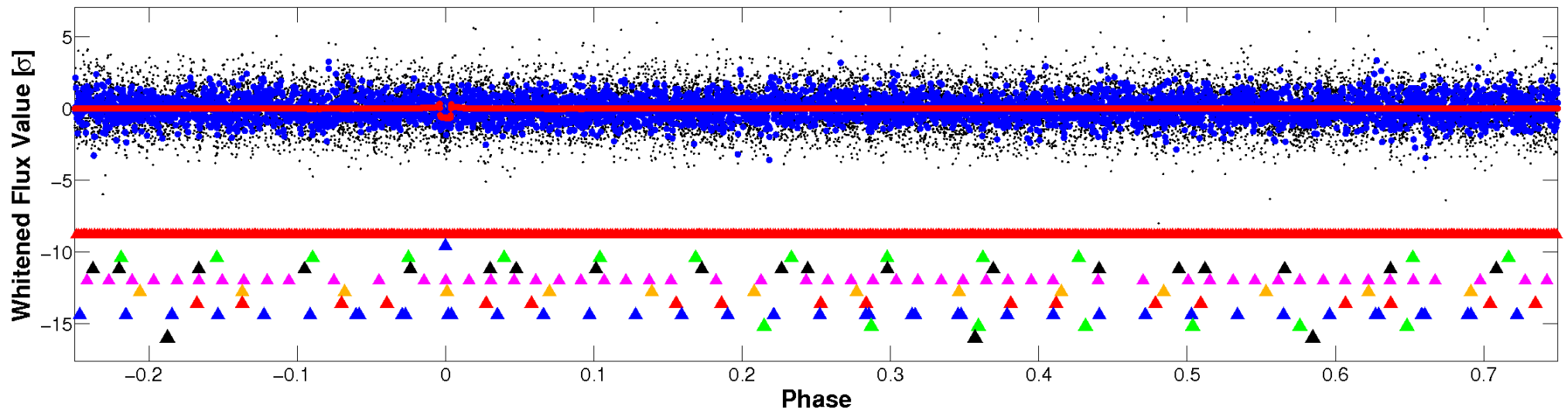


Non-Whitened Vs. Whitened Light Curve

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

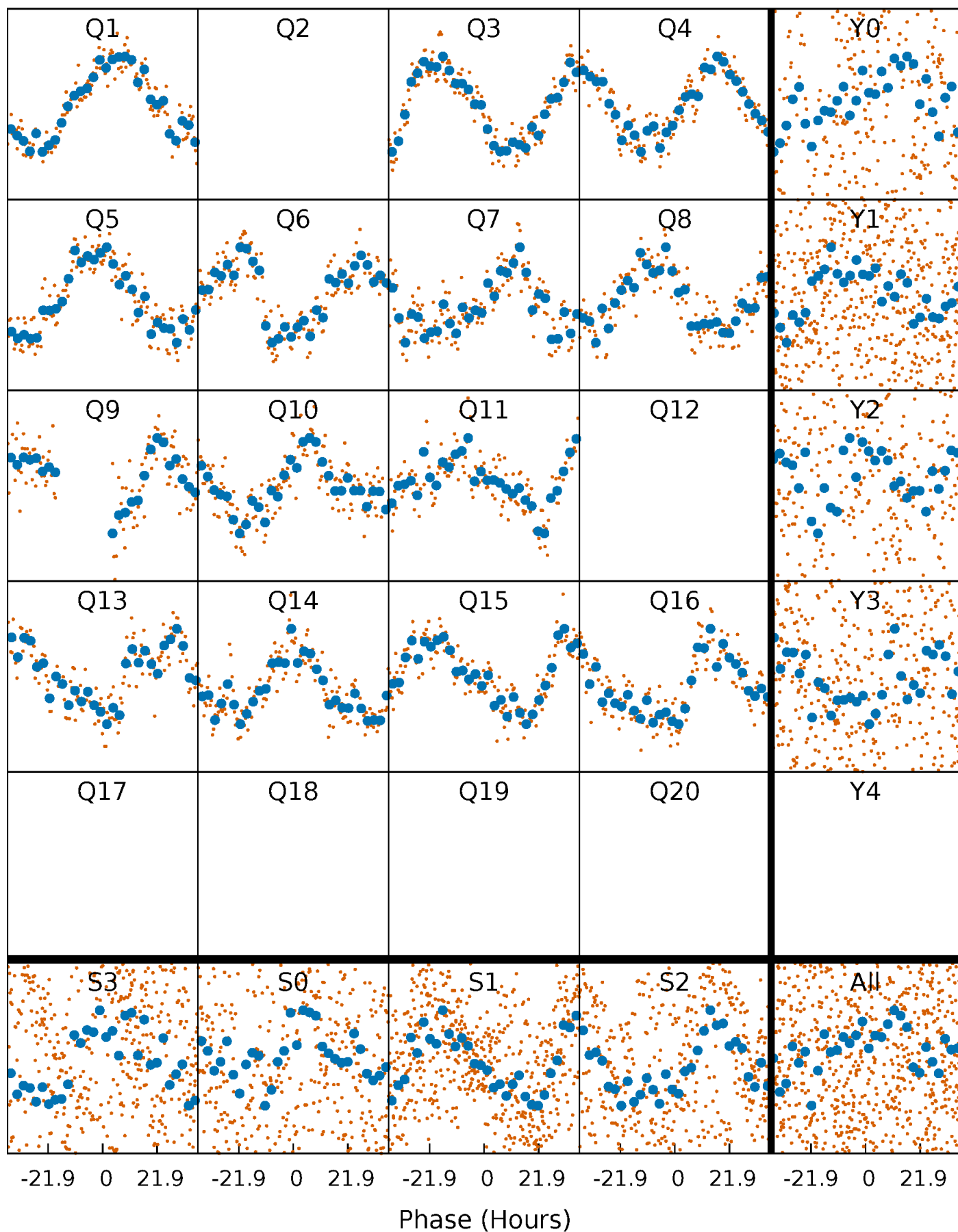


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



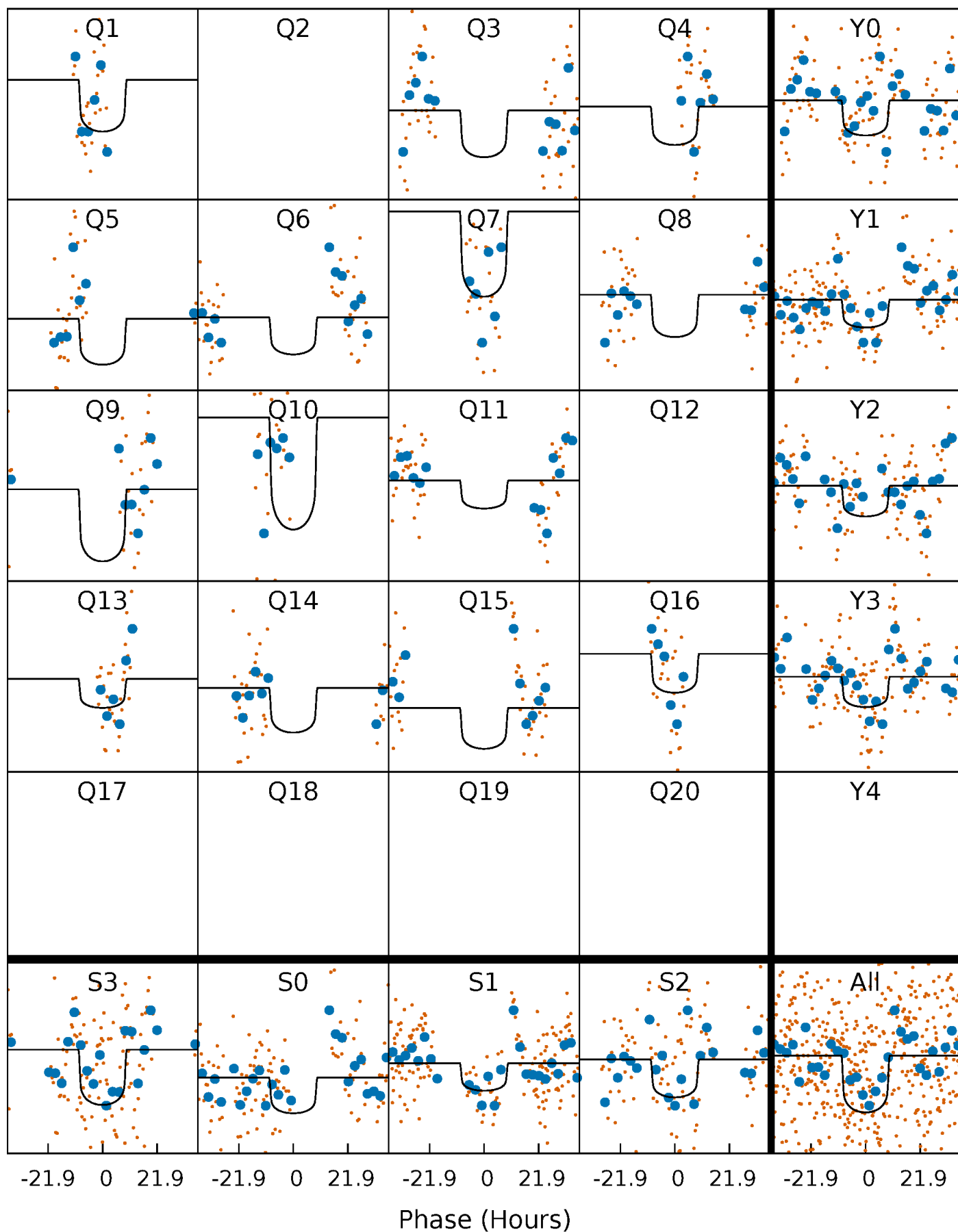
PDC Quarter-Phased Transit Curves

TCE 011296045-02 P=103.927826 Days $T_0=159.933029$ (BKJD)



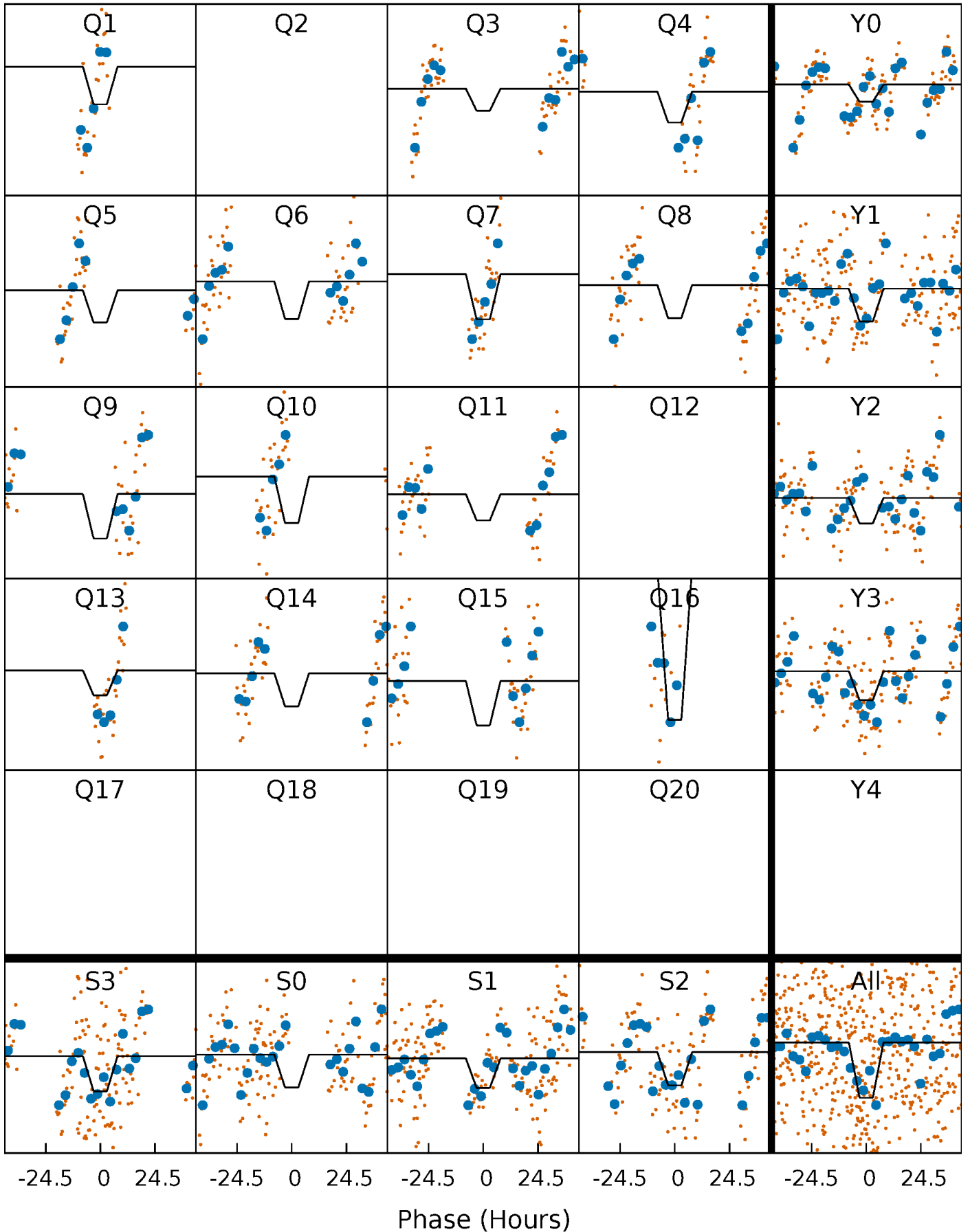
DV Quarter-Phased Transit Curves

TCE 011296045-02 P=103.927826 Days $T_0=159.933029$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

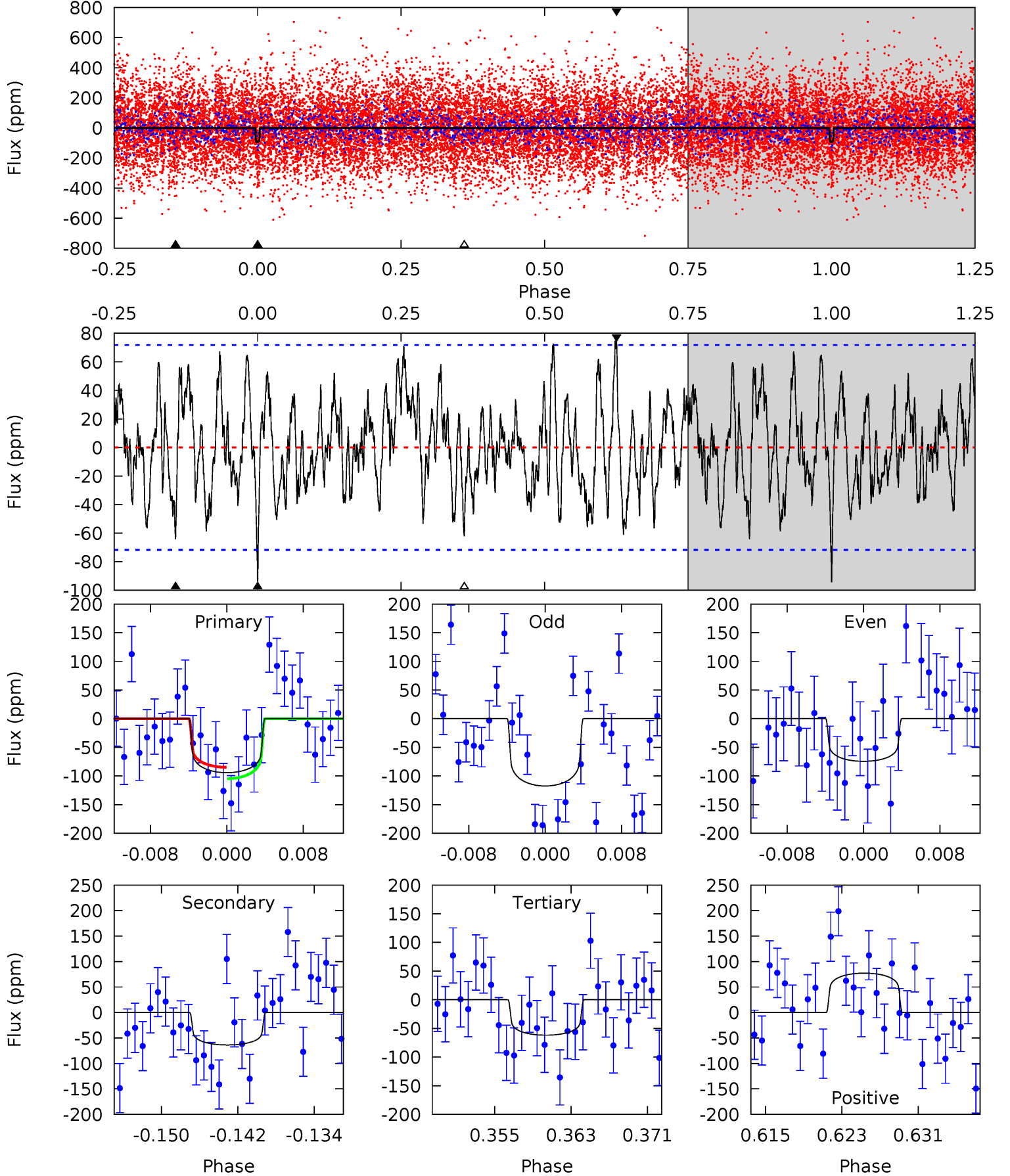
TCE 011296045-02 P=103.938709 Days $T_0=159.846427$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-02, $P = 103.927826$ Days, $E = 56.005203$ Days

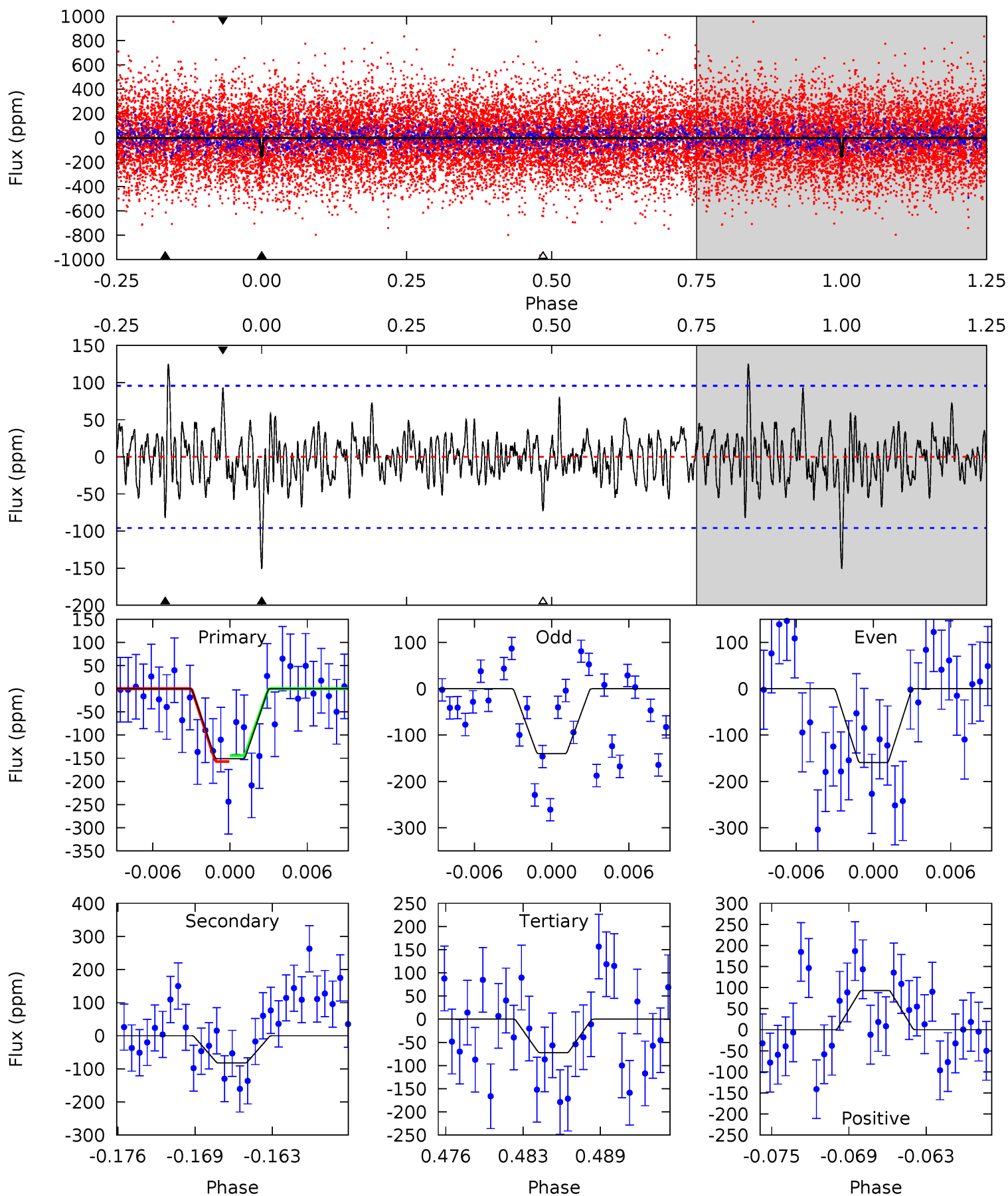
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.66	4.51	4.37	5.46	5.07	2.66	1.99	2.29	1.20	0.14	-0.96	1.52	0.74	0.45	0.70



Alt Model-Shift Uniqueness Test

011296045-02, P = 103.938709 Days, E = 55.907718 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.06	4.39	3.87	4.97	5.12	2.73	1.35	4.19	3.09	0.53	-0.58	0.51	0.50	0.45	0.34



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-64 ± 14	$5.28^{+1.41}_{-1.35}$	1127^{+60}_{-112}	5330^{+691}_{-523}	347^{+307}_{-143}
Alt.	-82 ± 19	$5.58^{+1.37}_{-1.31}$	1133^{+53}_{-106}	5569^{+670}_{-569}	410^{+331}_{-166}

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 $A_{obs} \gg 1.0$

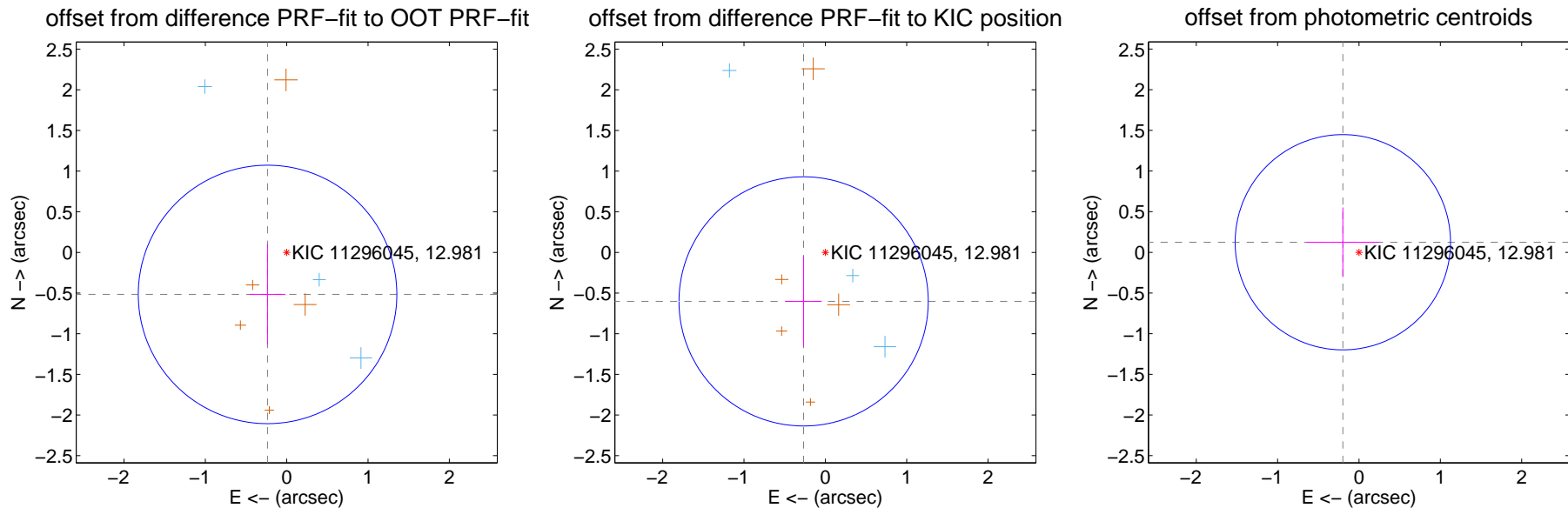
DV Centroid Data

Supplemental centroid analysis for 011296045-02. Kepler magnitude: 12.98. Transit SNR 7.46

There are 3 quarters with good PRF difference image offsets

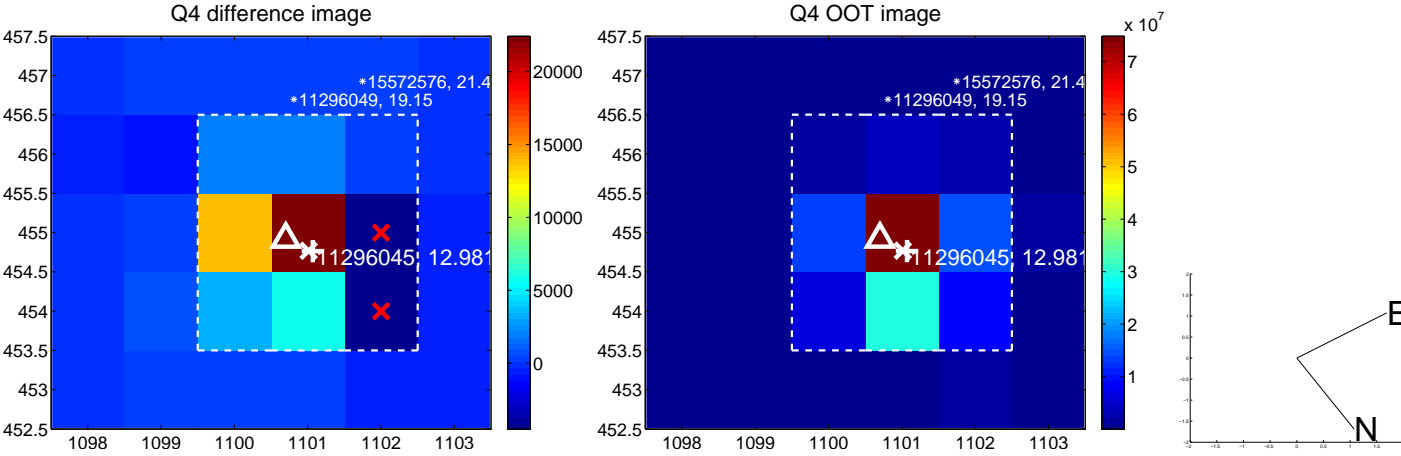
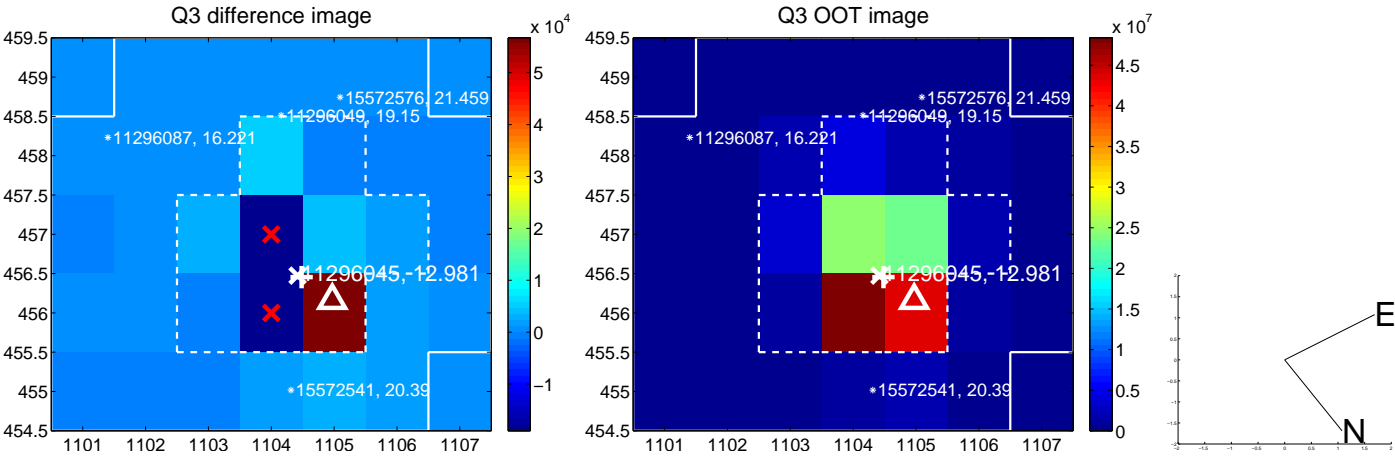
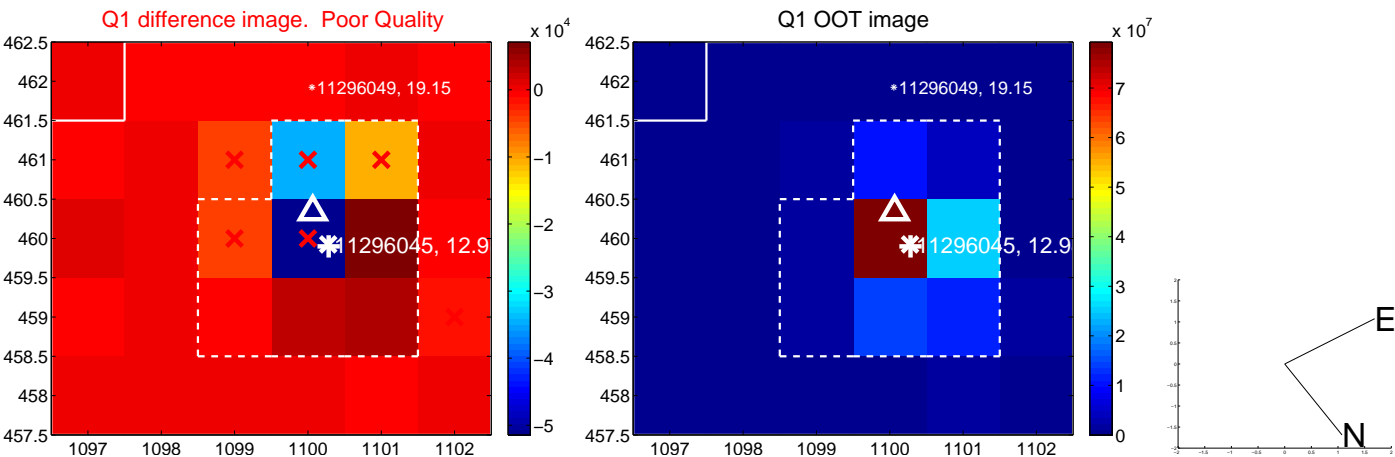
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.568 ± 0.530	1.07	0.235 ± 0.219	-0.517 ± 0.617
PRF-fit source offset from KIC position	0.659 ± 0.511	1.29	0.267 ± 0.221	-0.602 ± 0.550
photometric centroid source offset	0.23 ± 0.44	0.53	0.20 ± 0.45	0.12 ± 0.43

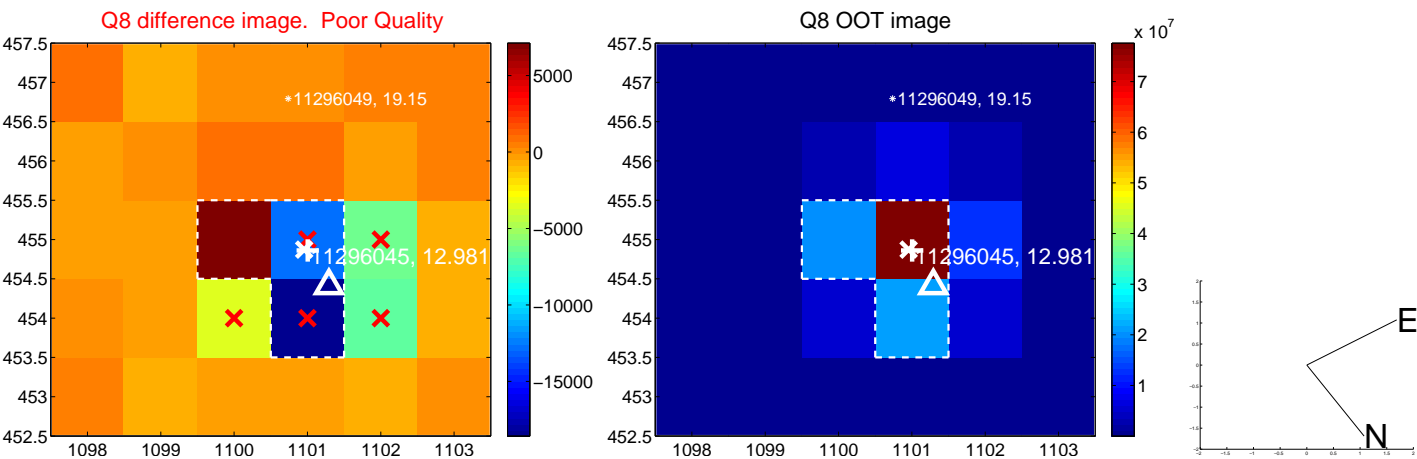
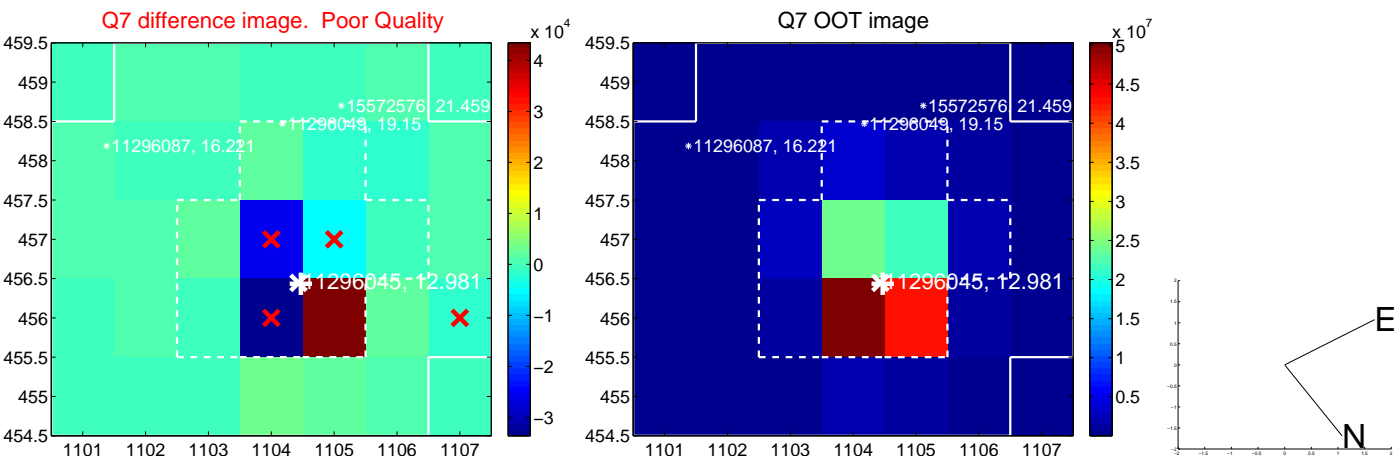
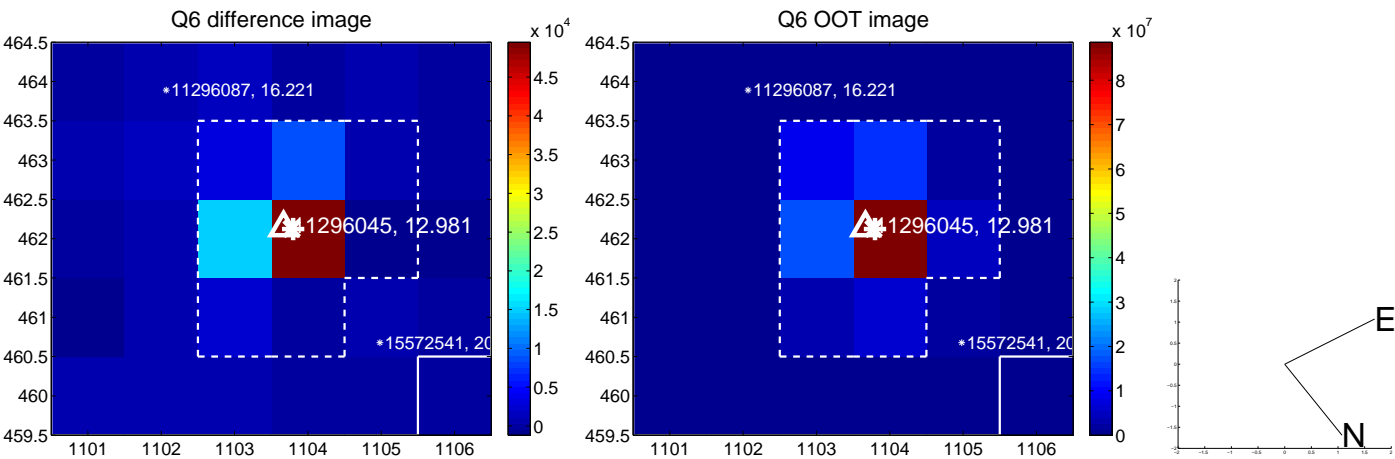
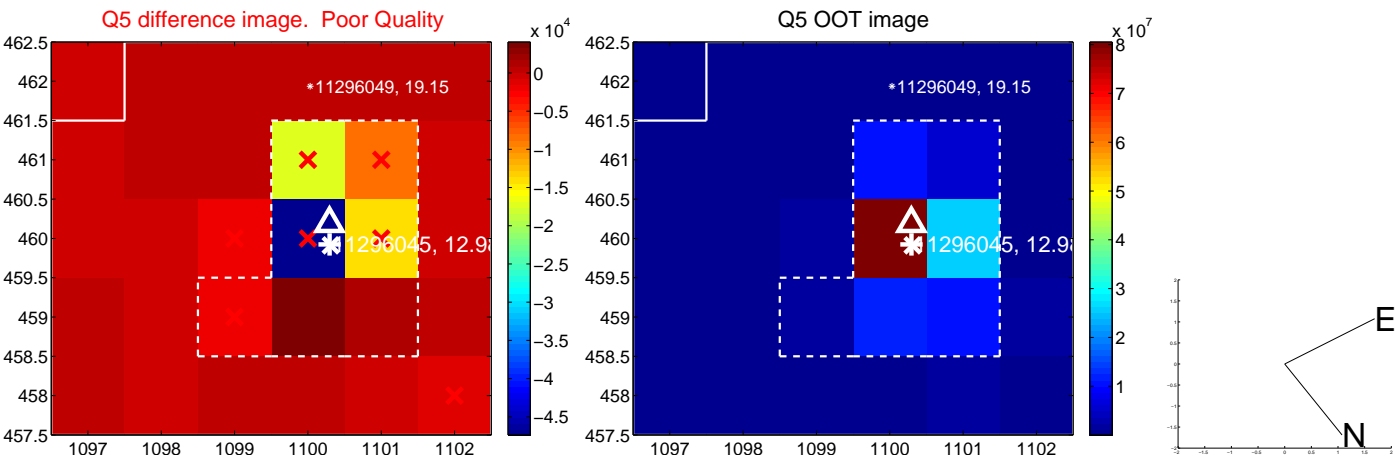


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

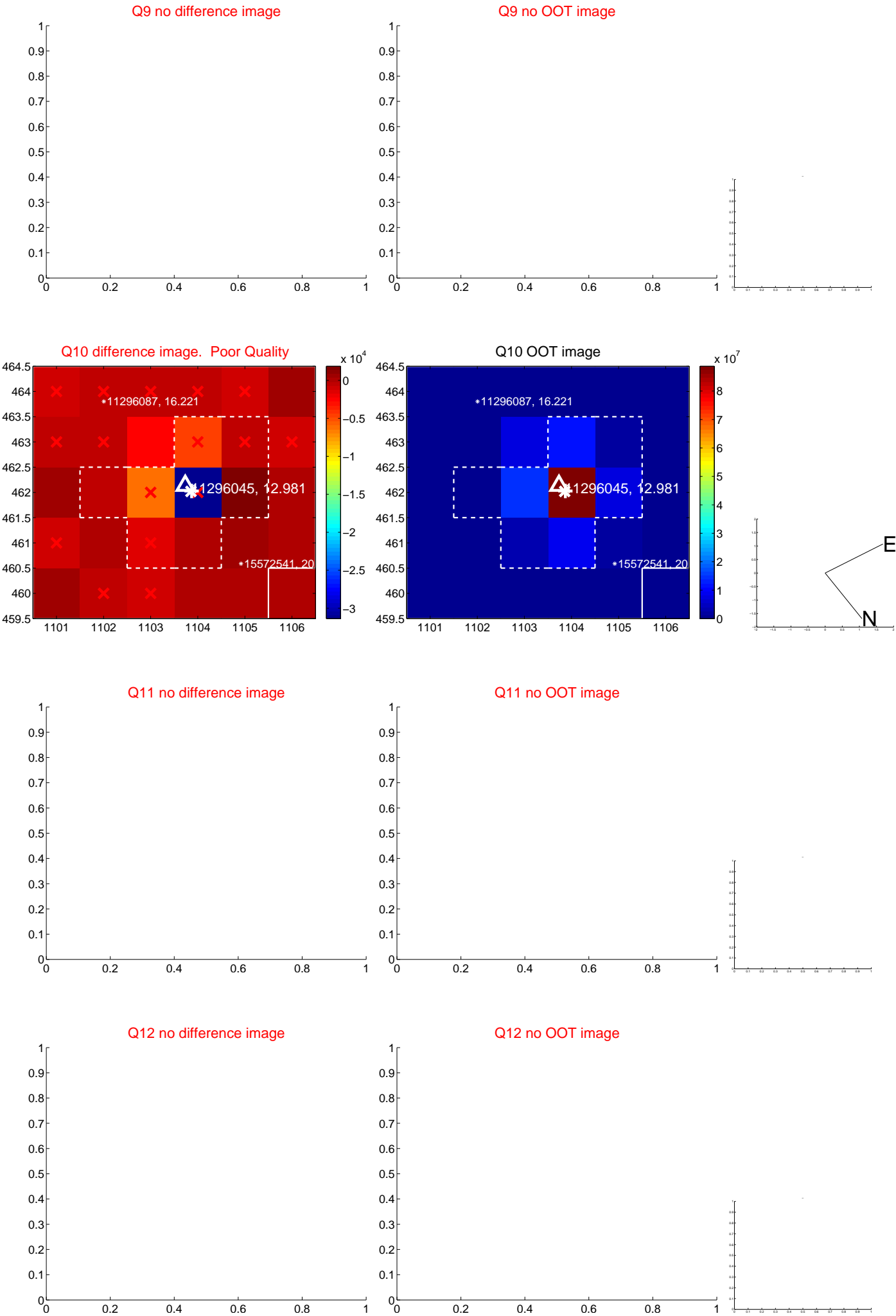
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



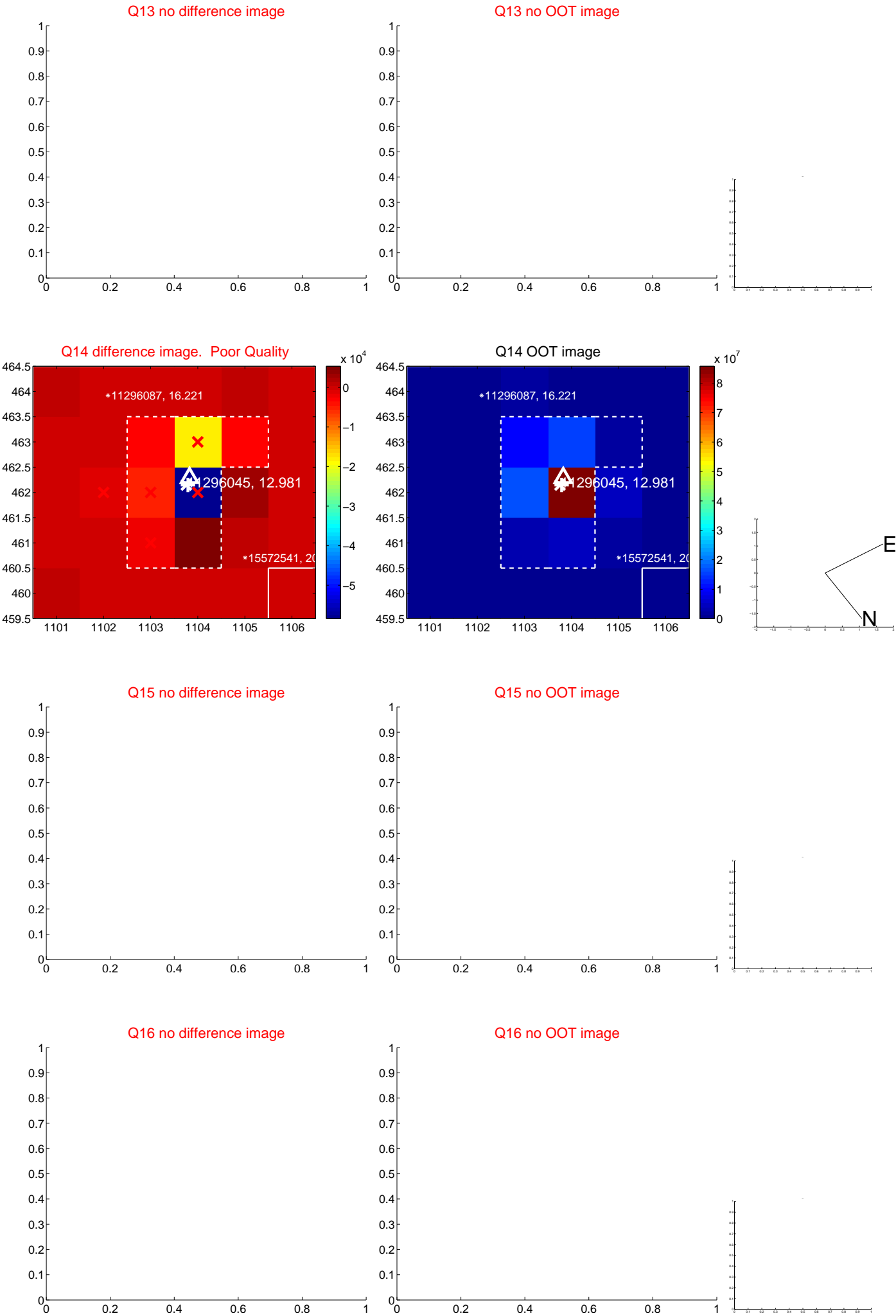
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



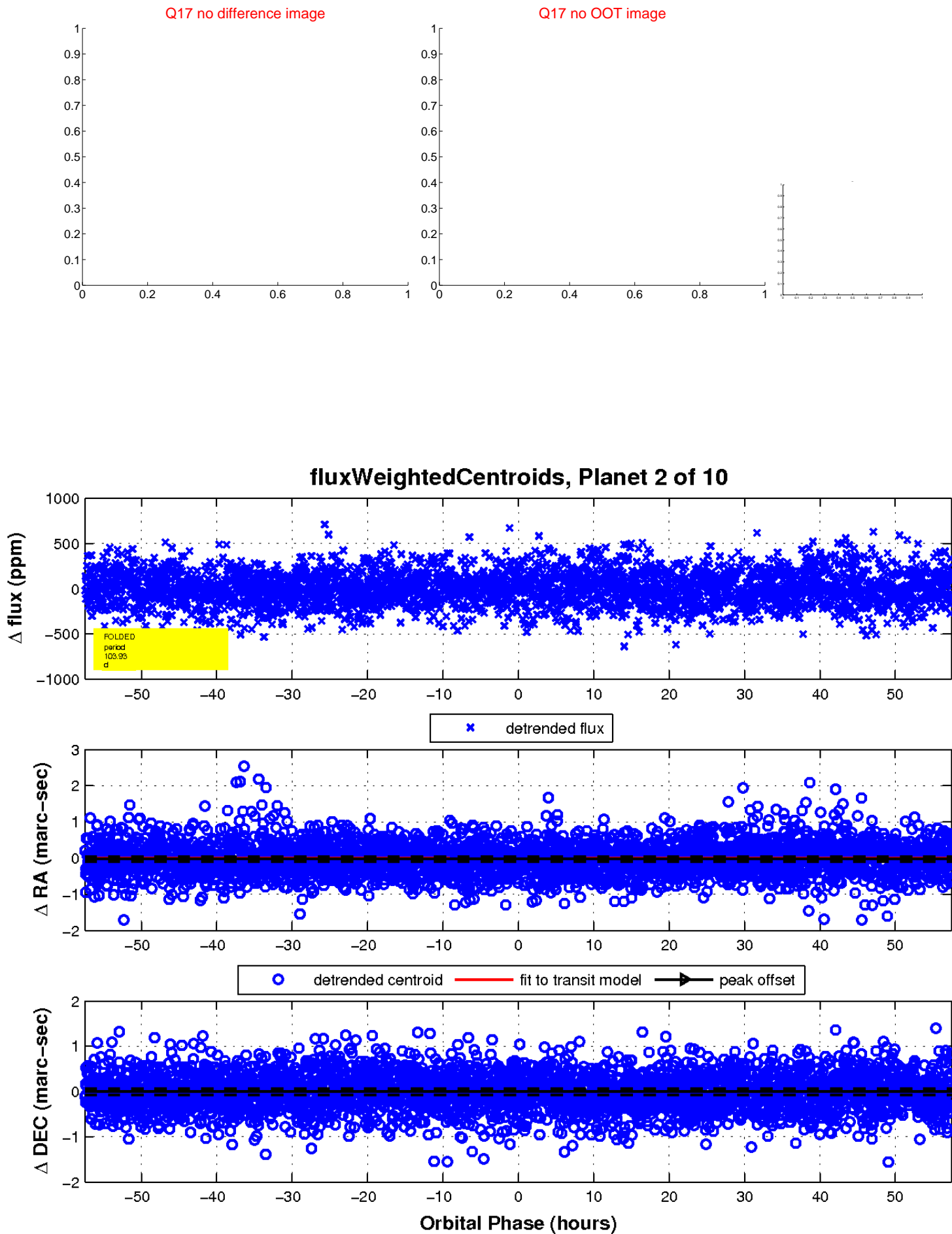
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

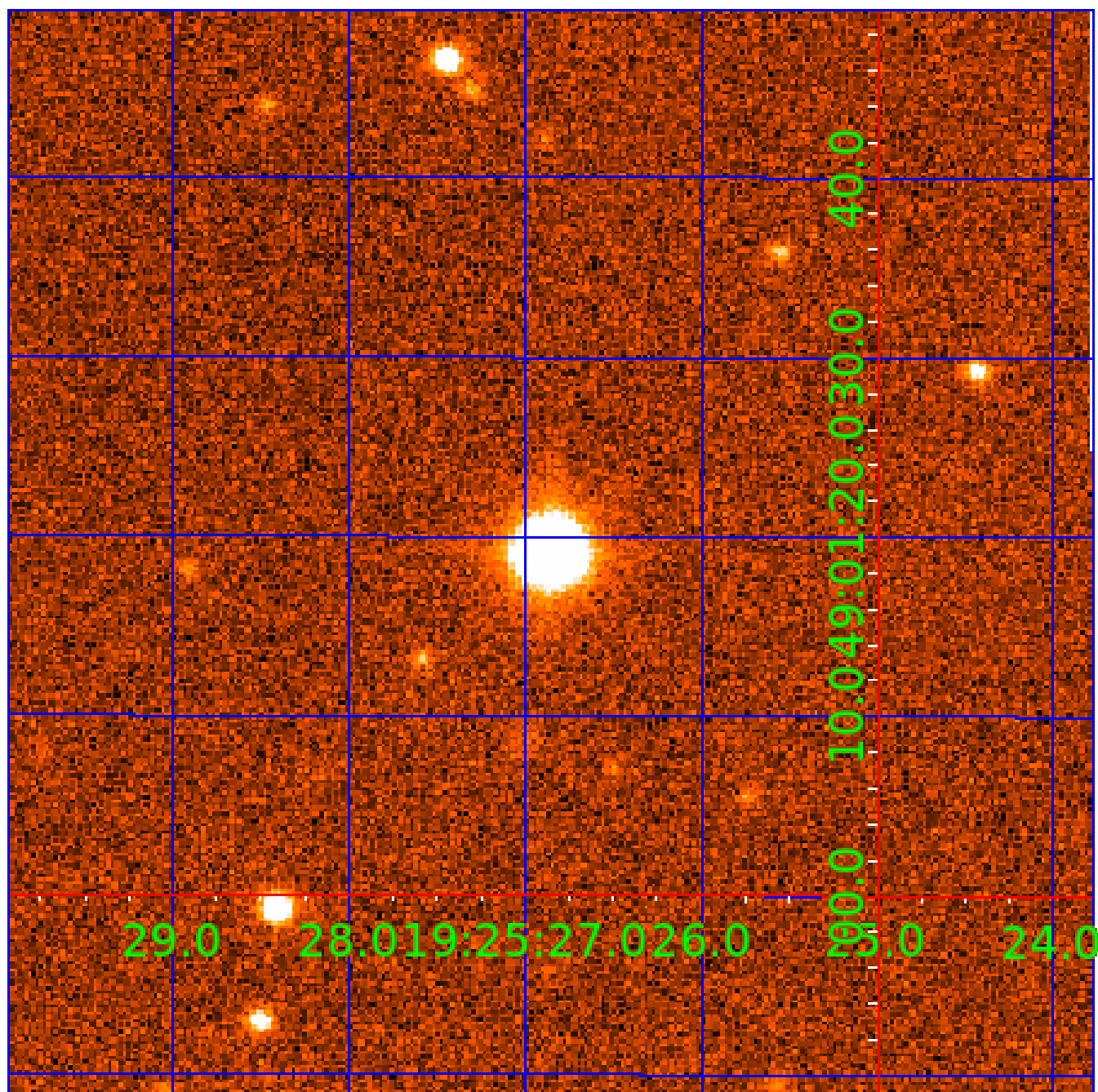


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

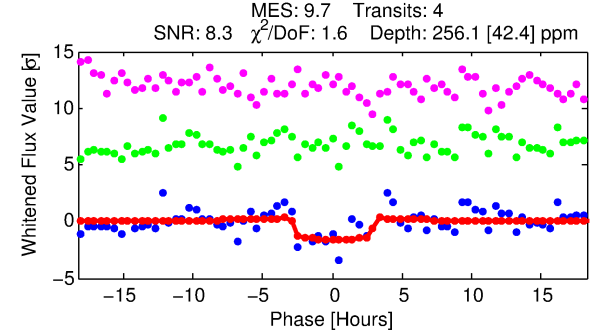
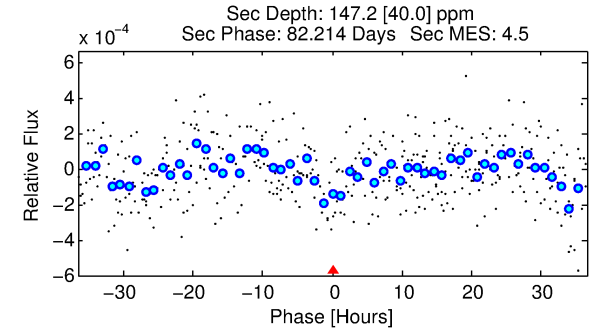
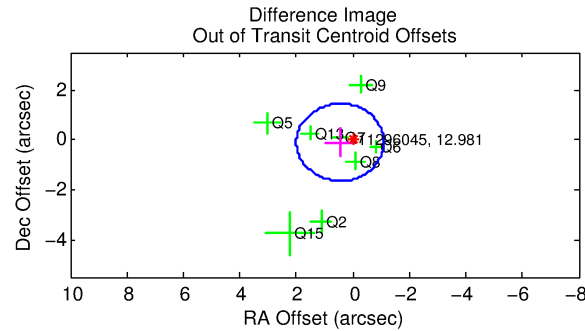
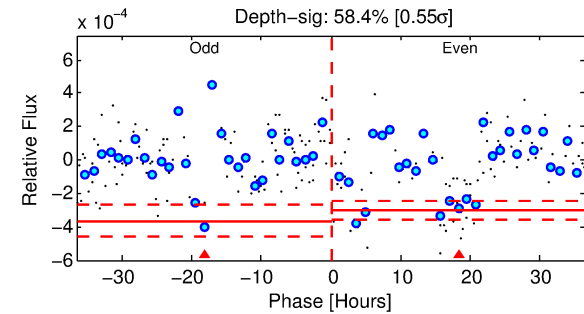
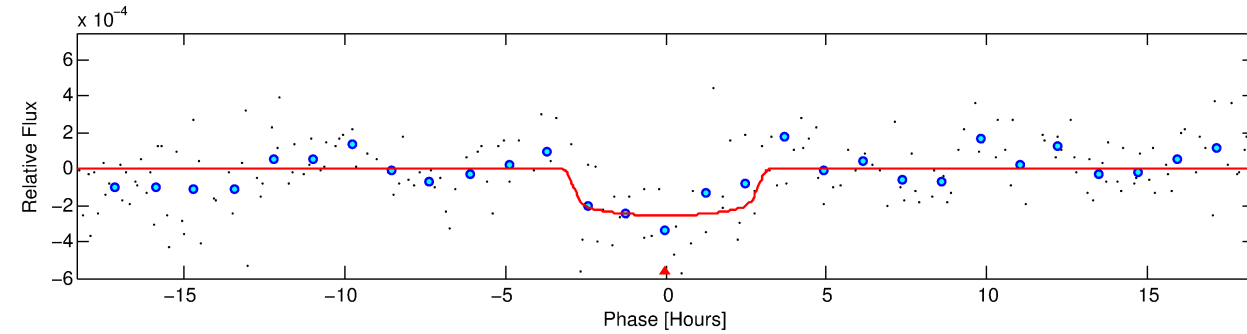
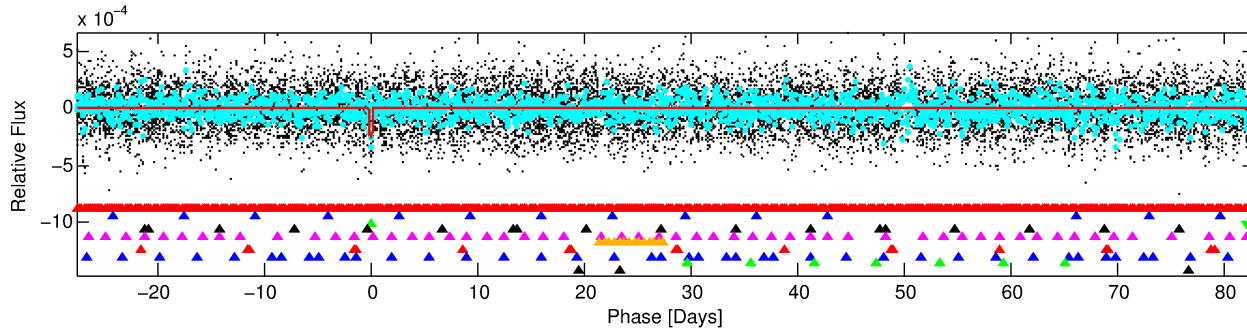
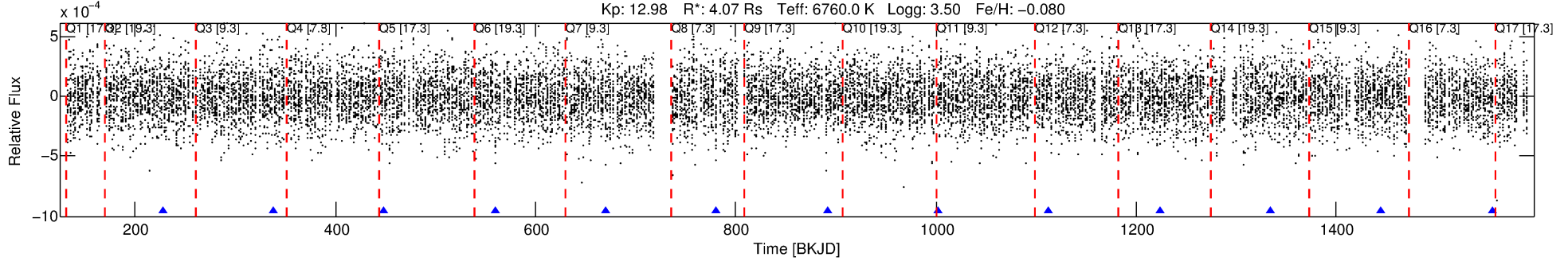
Ephemeris Match Information For 011296045-03

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 3 of 10 Period: 110.637 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 110.63705 [0.00298] d
Epoch = 227.7151 [0.0197] BKJD
Rp/R* = 0.0164 [0.0057]
a/R* = 80.34 [155.46]
b = 0.83 [0.71]
Seff = 99.19 [56.94]
Teq = 805 [115] K
Rp = 7.29 [3.71] Re
a = 0.5588 [0.1976] AU
Ag = 476.11 [444.39] [1.07σ]
Teffp = 5812 [1097] K [4.54σ]

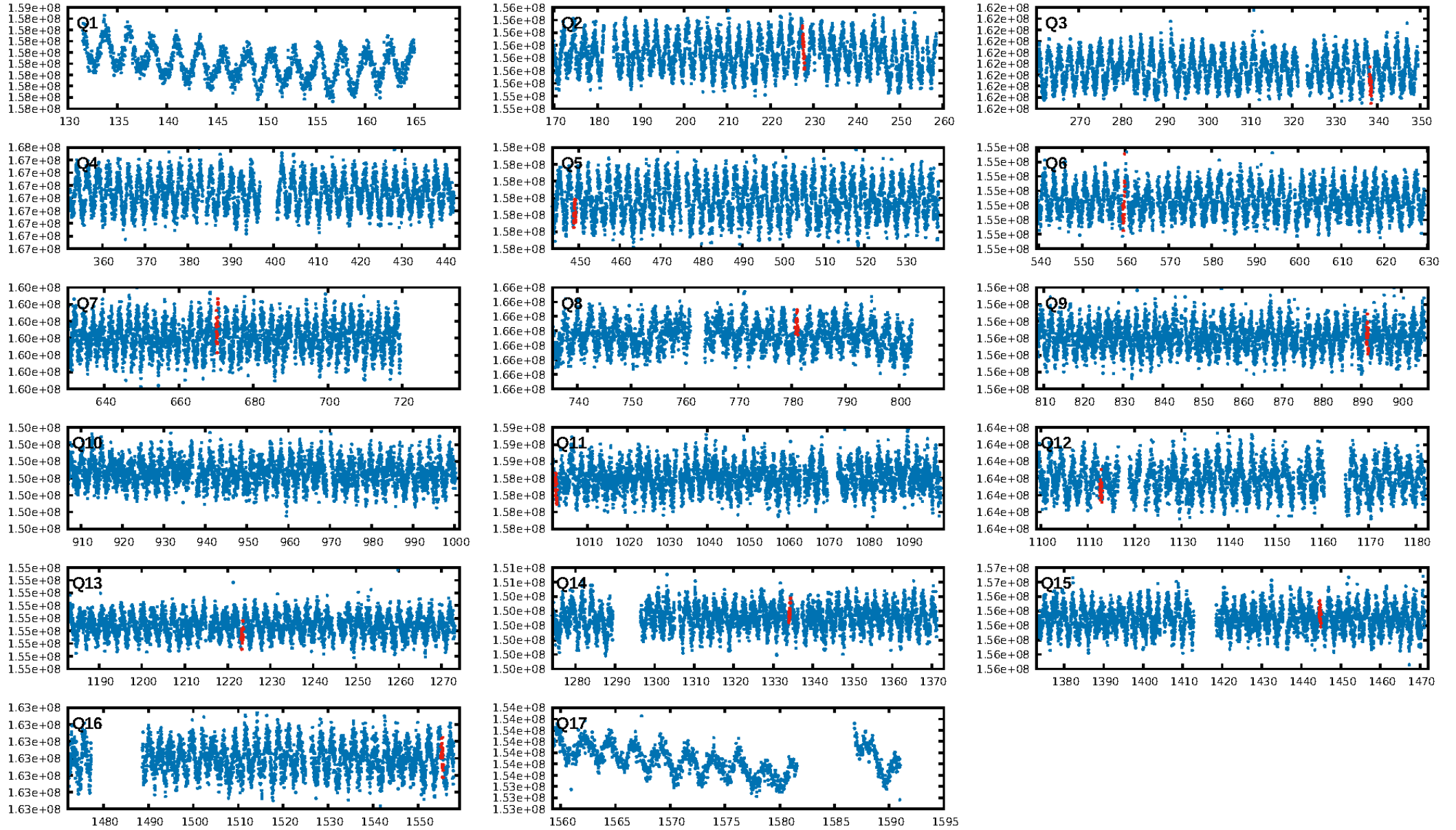
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.01σ]
LongPeriod-sig: 80.7% [1.30σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 80.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.7944
Centroid-sig: 8.9%
Centroid-so: 0.794 arcsec [1.73σ]
OotOffset-rm: 0.470 arcsec [0.91σ]
OotOffset-st: 2/2/1/3 [8]
KicOffset-rm: 0.517 arcsec [1.02σ]
KicOffset-st: 2/2/1/3 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.27 [3/11]

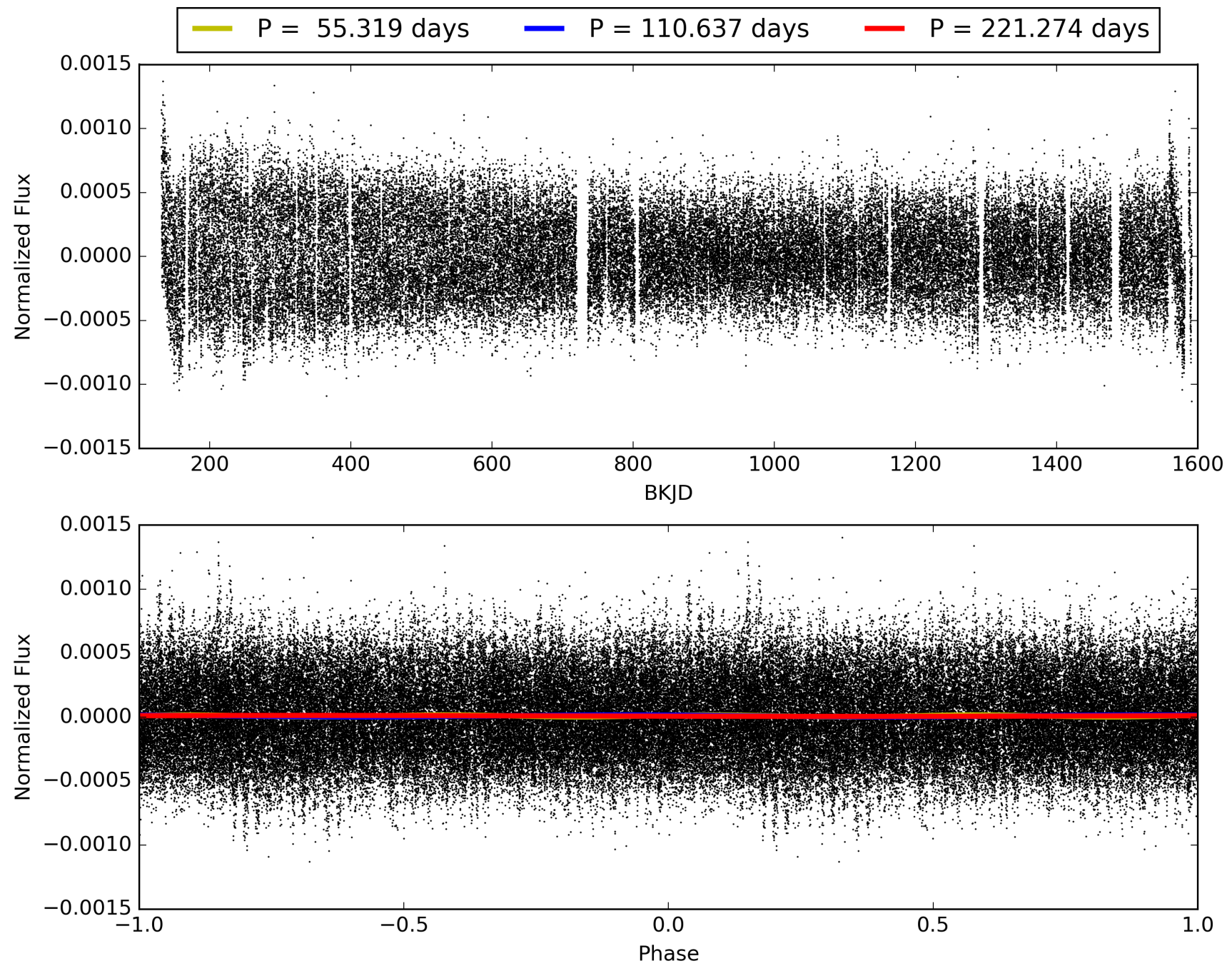
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:46:45 Z

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

TCE 011296045-03, PDC Light Curves

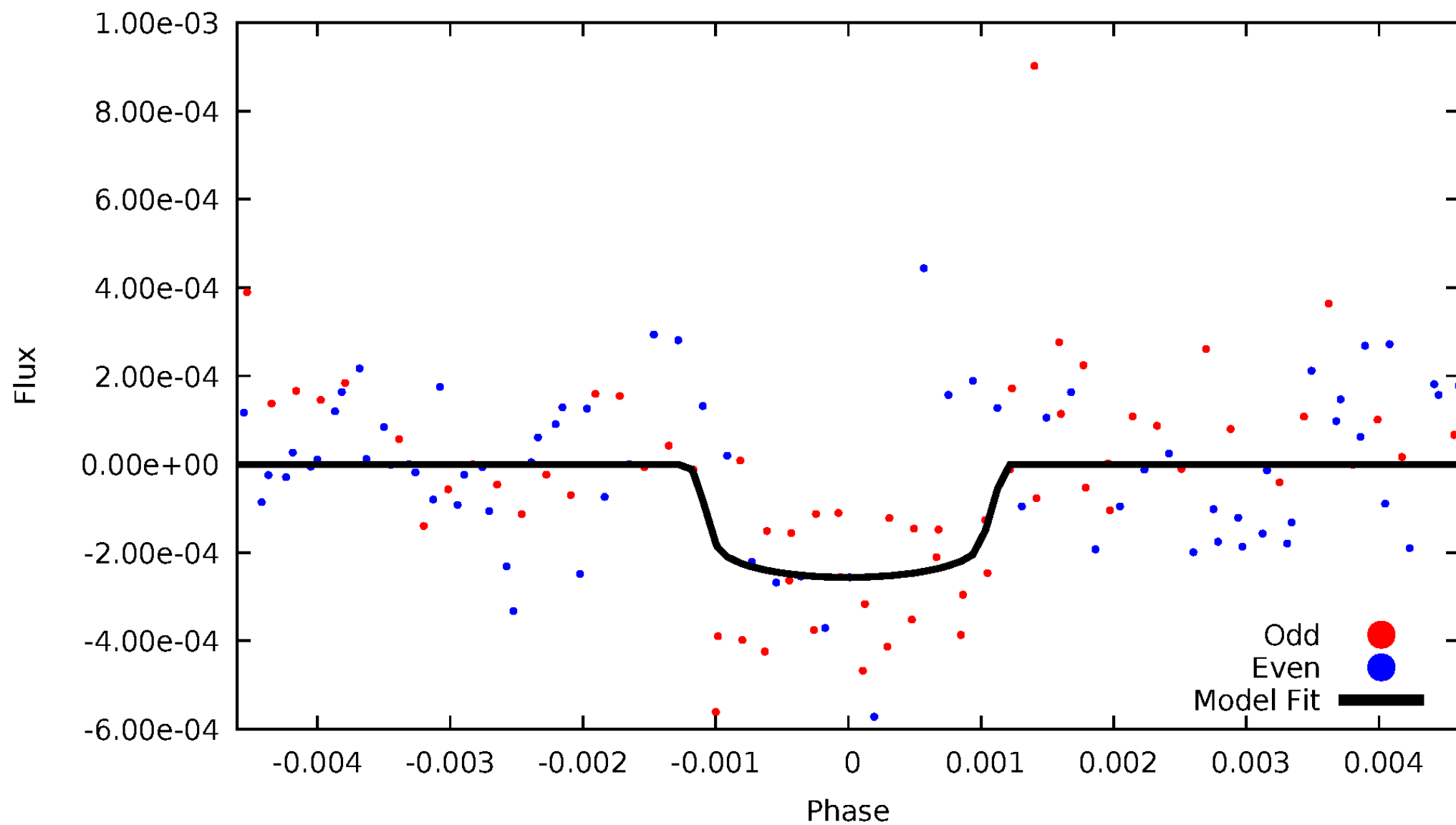


TCE 011296045-03



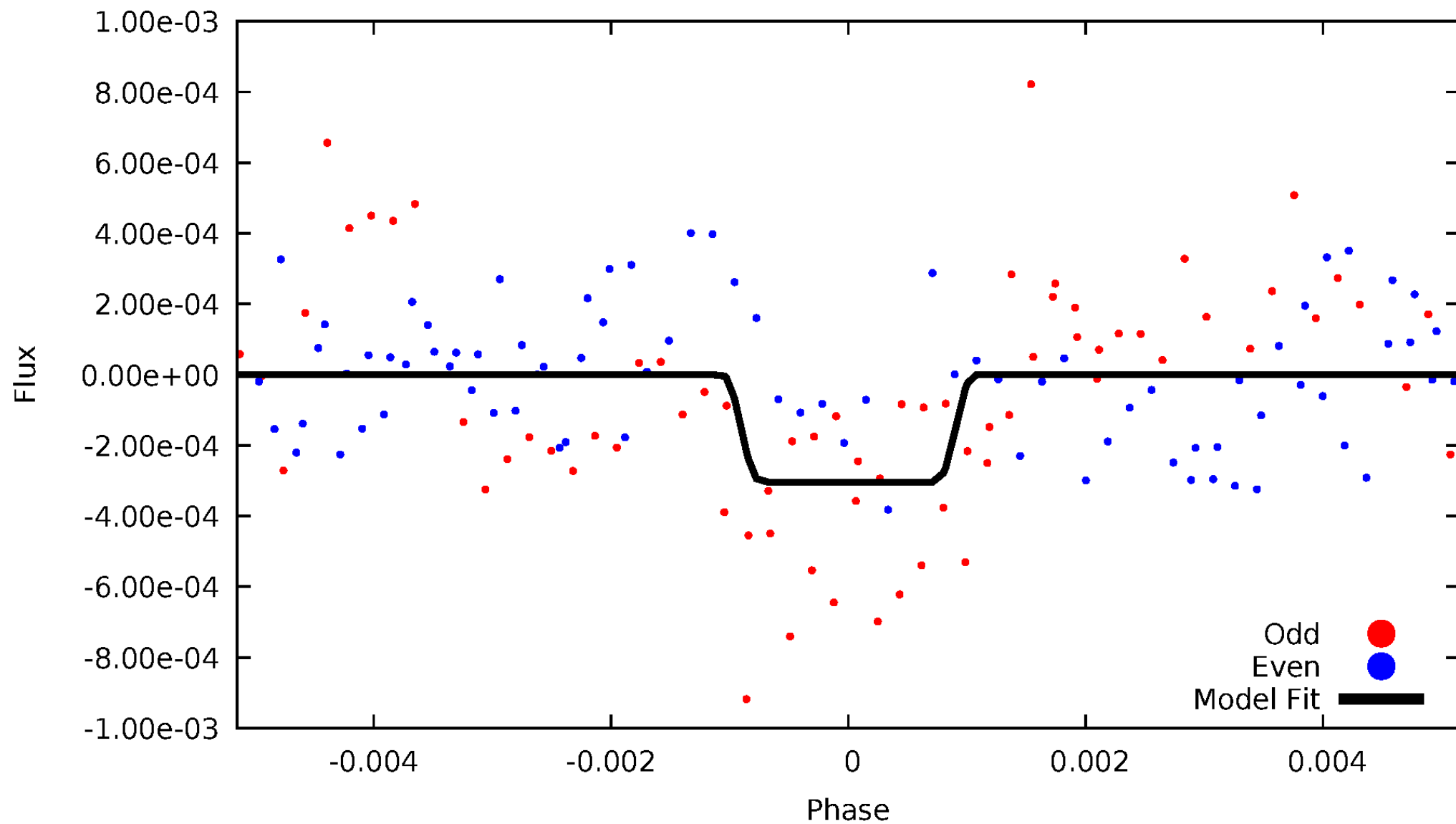
DV Odd/Even

TCE 011296045-03



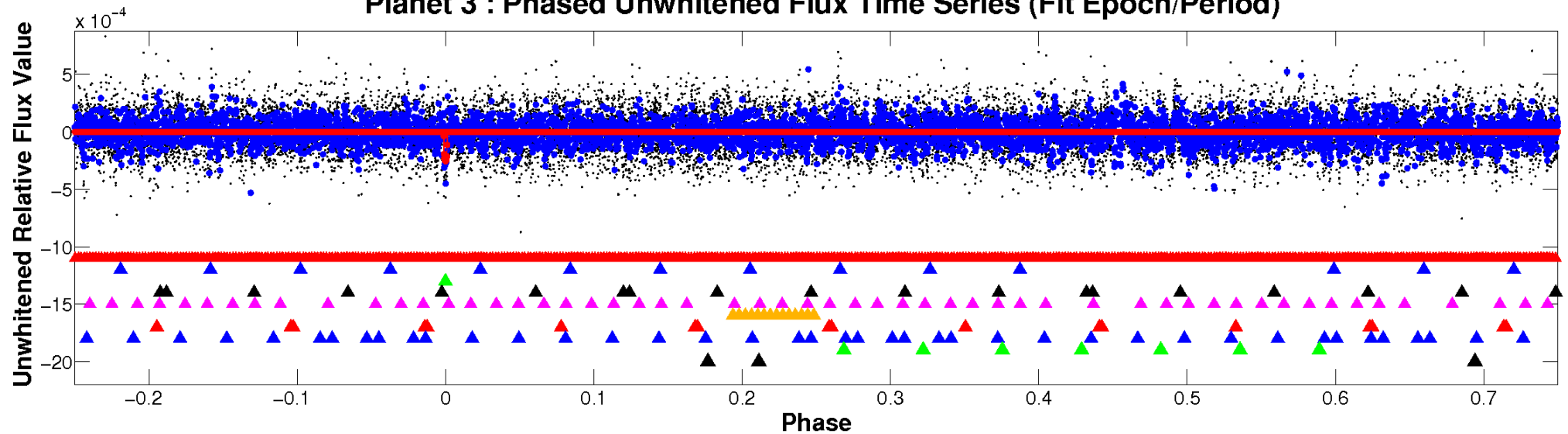
ALT Odd/Even

TCE 011296045-03

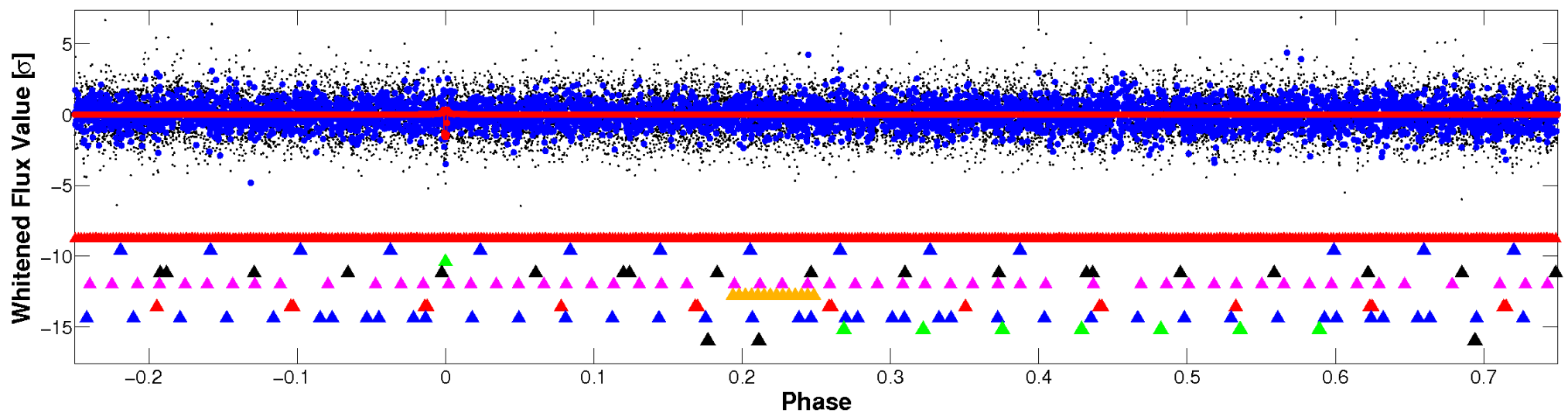


Non-Whitened Vs. Whitened Light Curve

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

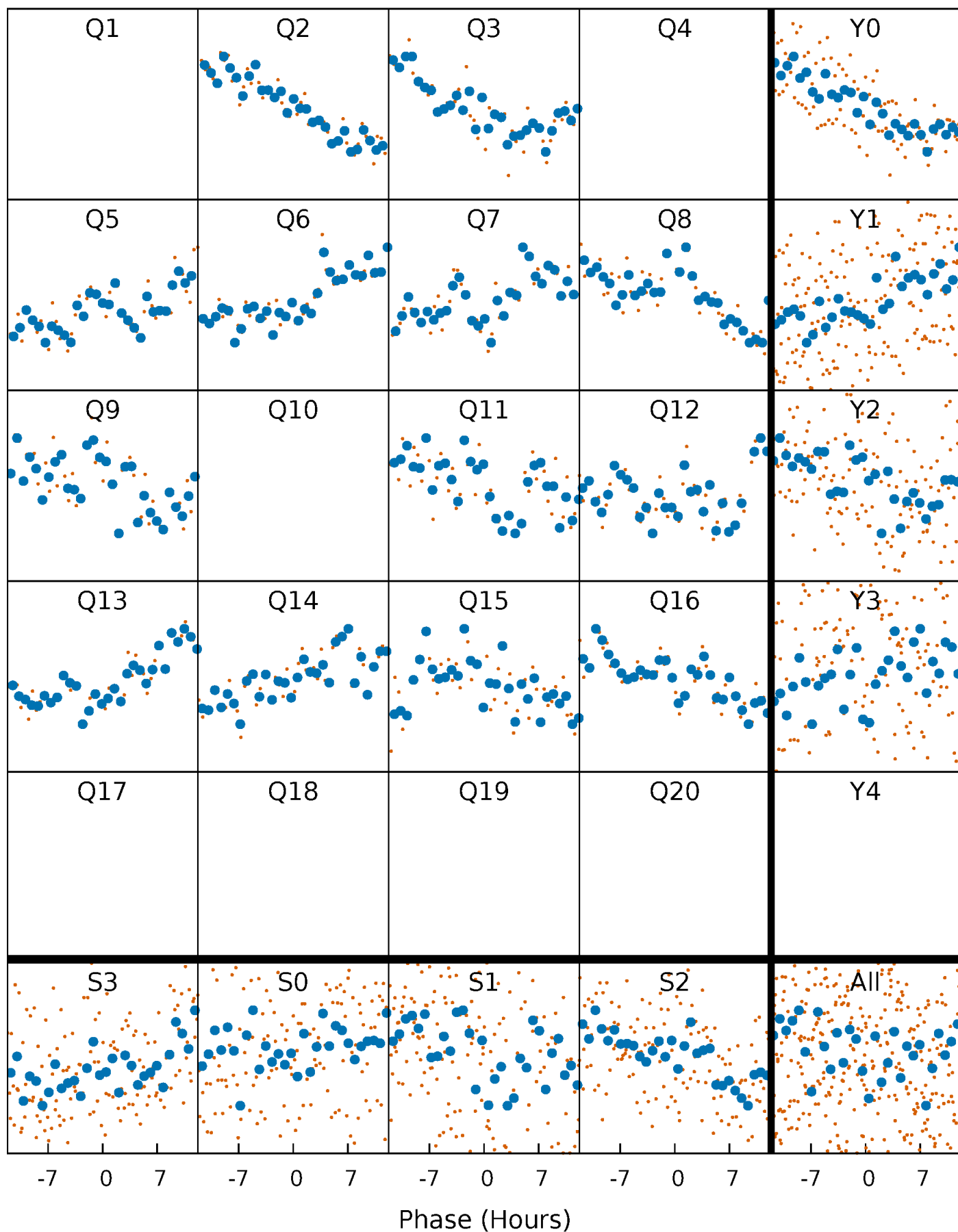


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



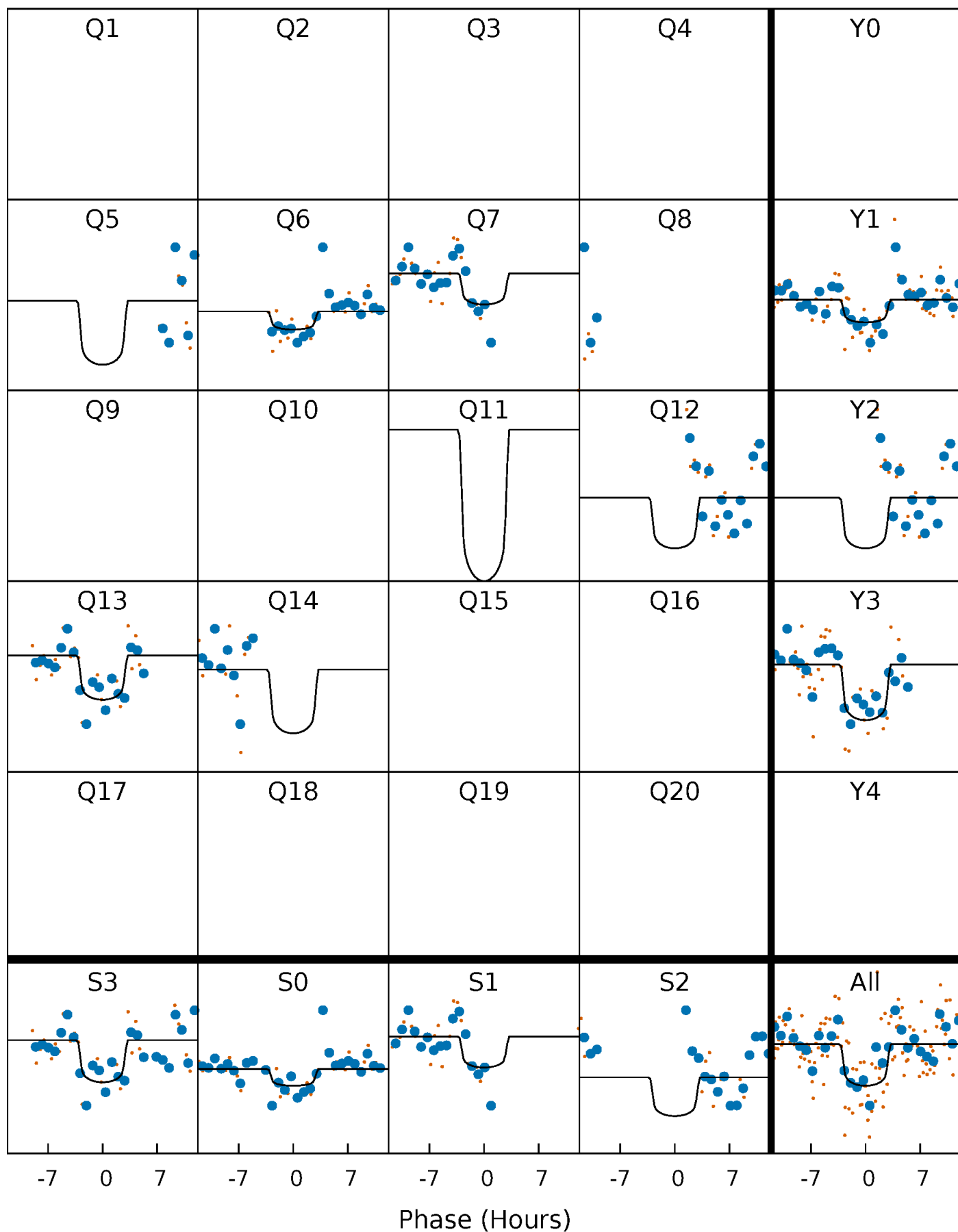
PDC Quarter-Phased Transit Curves

TCE 011296045-03 P=110.637050 Days $T_0=227.715070$ (BKJD)



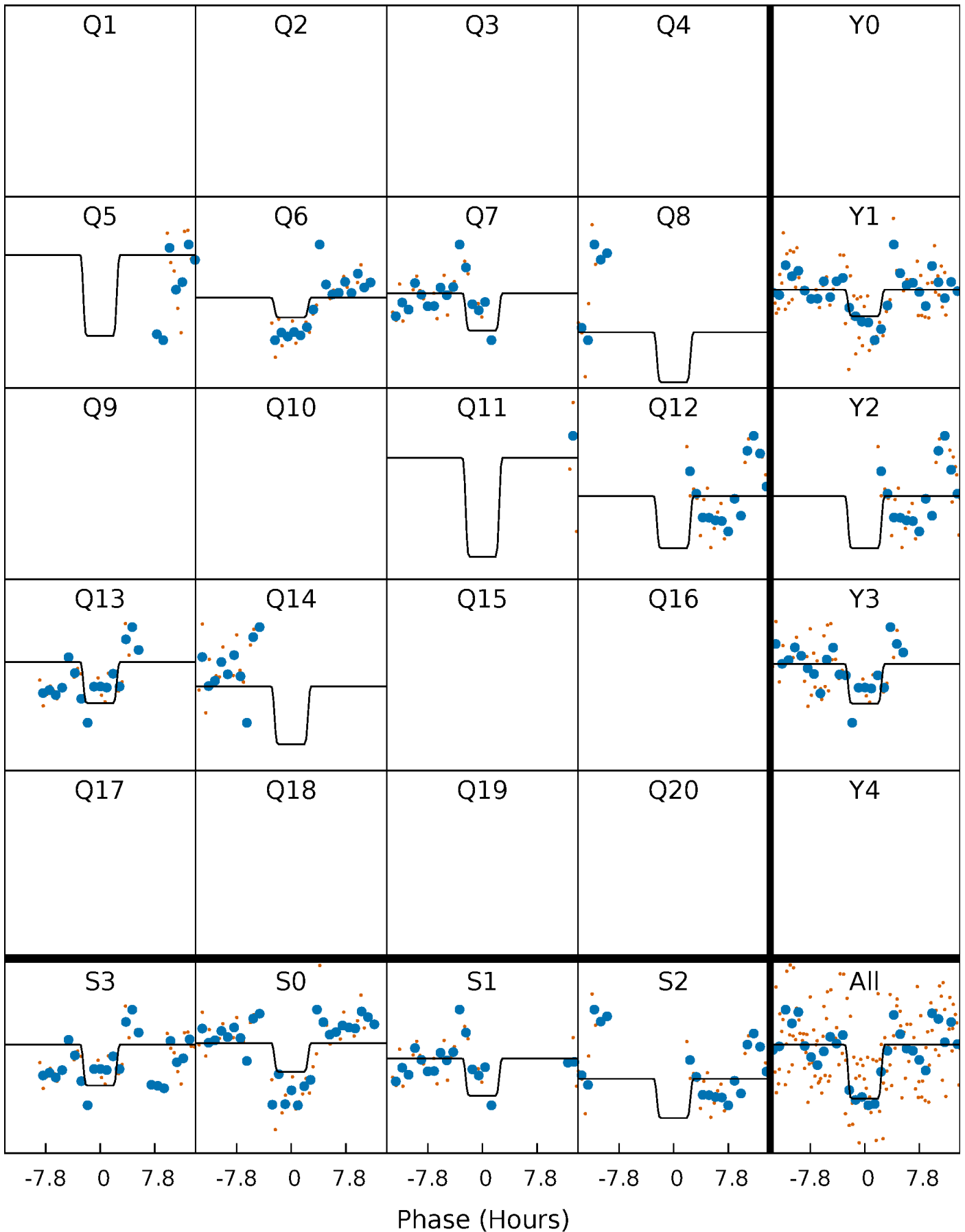
DV Quarter-Phased Transit Curves

TCE 011296045-03 P=110.637050 Days $T_0=227.715070$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

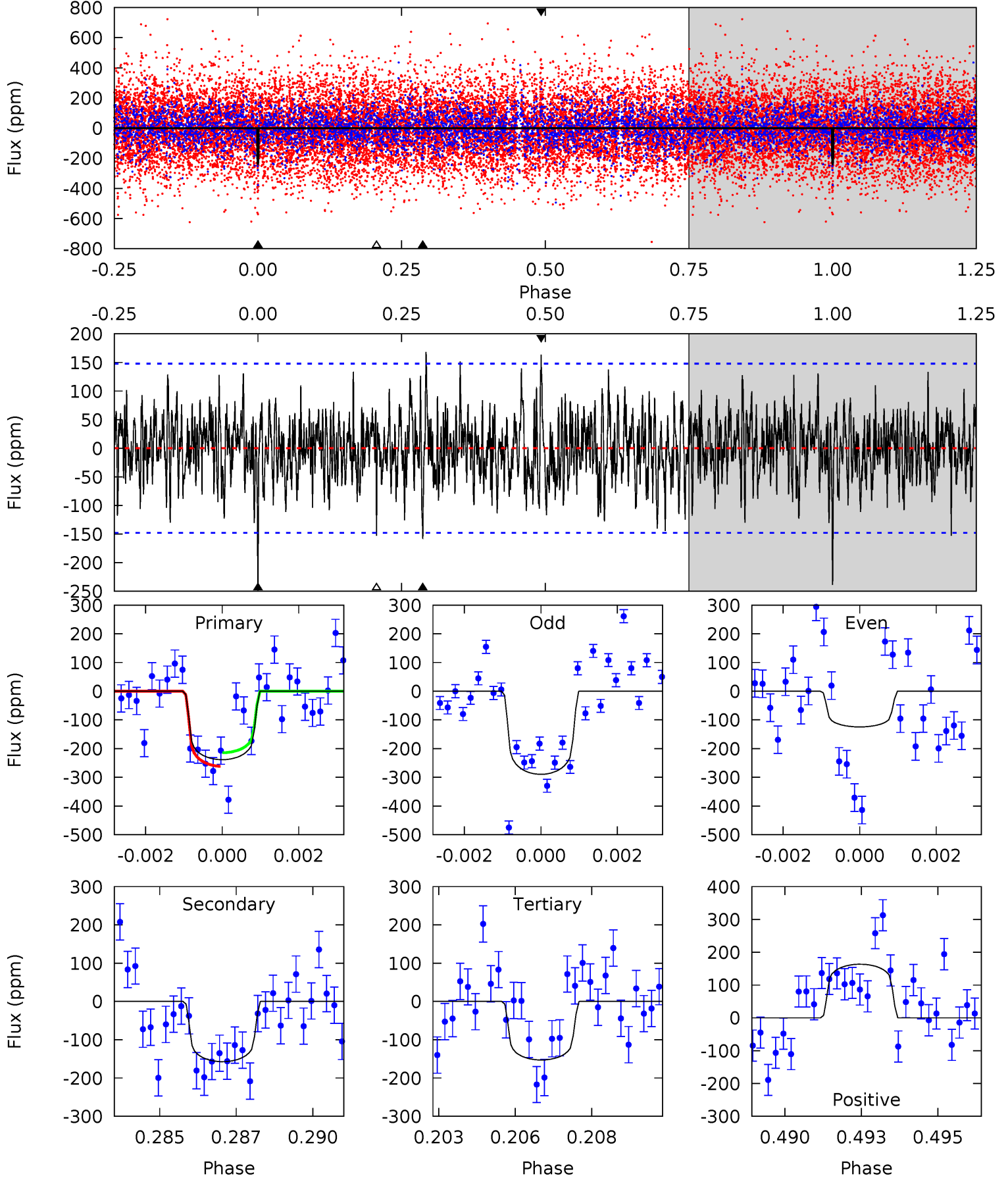
TCE 011296045-03 P=110.637002 Days $T_0=227.699933$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-03, P = 110.637050 Days, E = 117.078020 Days

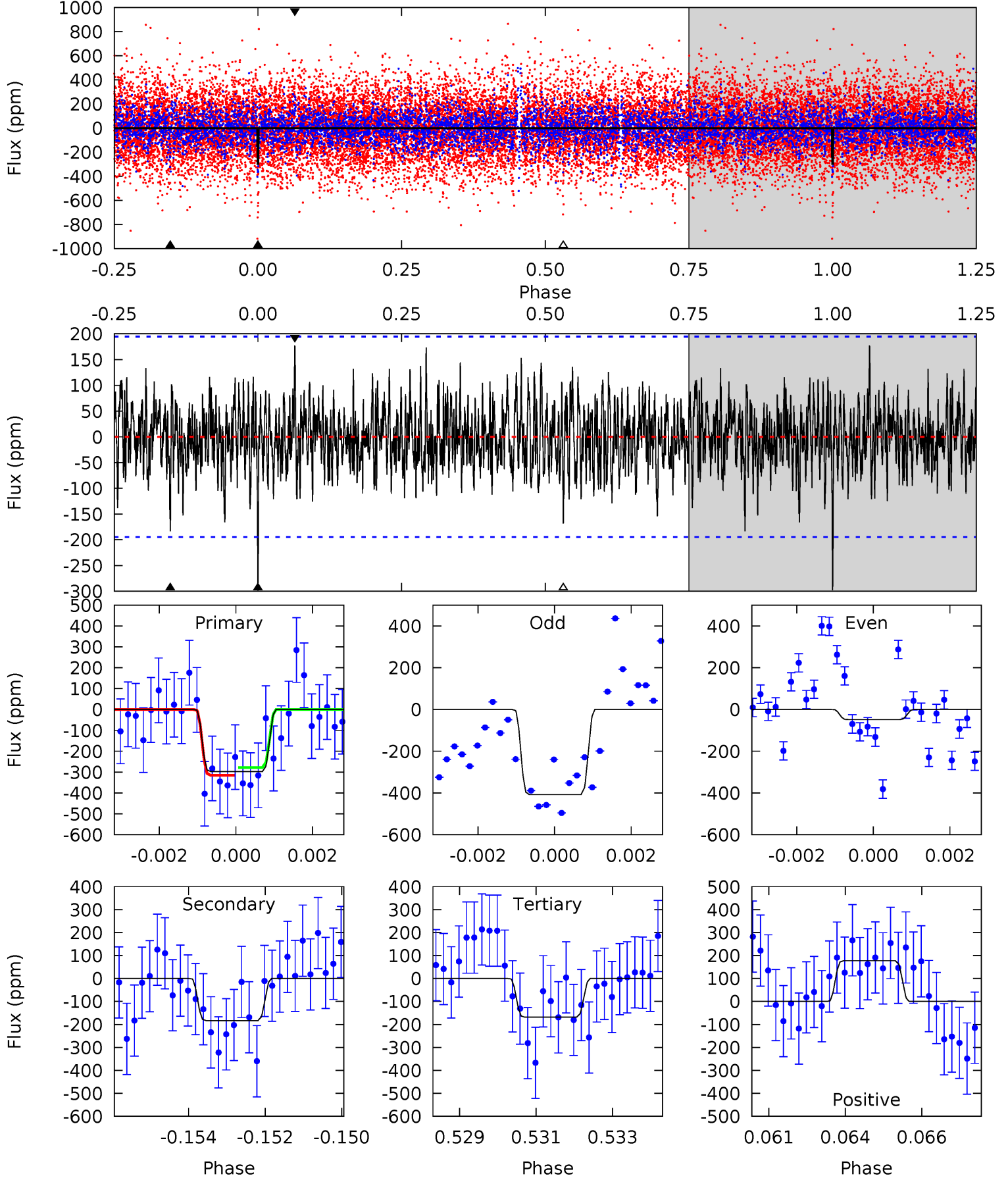
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.54	5.62	5.47	5.85	5.29	3.03	1.71	3.07	2.69	0.15	-0.22	2.76	0.53	0.41	0.85



Alt Model-Shift Uniqueness Test

011296045-03, P = 110.637002 Days, E = 117.062931 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.14	5.01	4.60	4.85	5.32	3.08	1.41	3.54	3.29	0.41	0.16	4.61	1.07	0.37	0.50



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-157 ± 28	$6.86^{+2.64}_{-2.45}$	1111^{+50}_{-86}	5907^{+1475}_{-819}	575^{+853}_{-284}
Alt.	-183 ± 37	$7.24^{+2.78}_{-2.55}$	1113^{+53}_{-98}	5982^{+1364}_{-819}	600^{+821}_{-293}

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

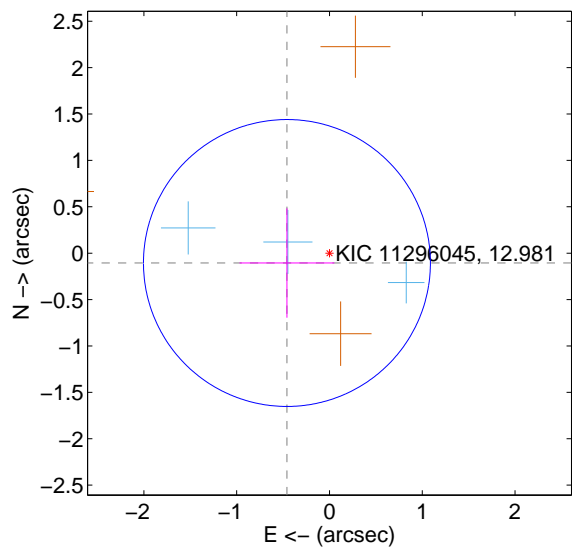
Supplemental centroid analysis for 011296045-03. Kepler magnitude: 12.98. Transit SNR 8.29

There are 3 quarters with good PRF difference image offsets

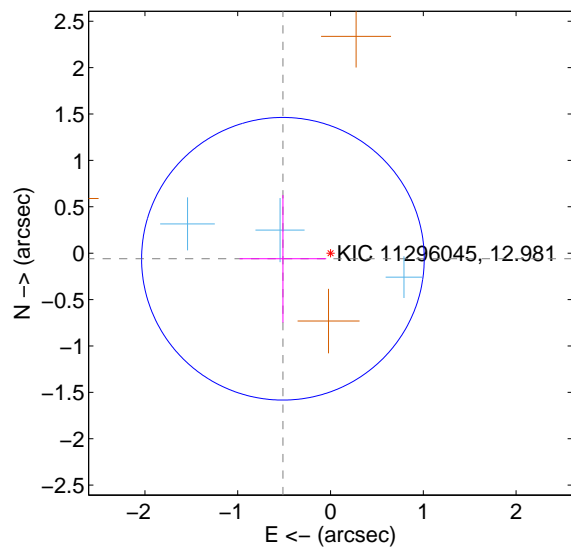
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.470 ± 0.515	0.91	0.458 ± 0.511	-0.106 ± 0.589
PRF-fit source offset from KIC position	0.517 ± 0.508	1.02	0.513 ± 0.467	-0.060 ± 0.686
photometric centroid source offset	0.79 ± 0.46	1.73	-0.78 ± 0.46	0.17 ± 0.43

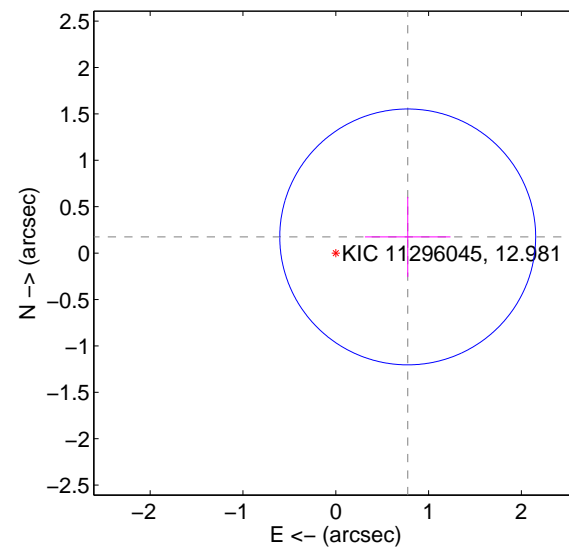
offset from difference PRF-fit to OOT PRF-fit



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.

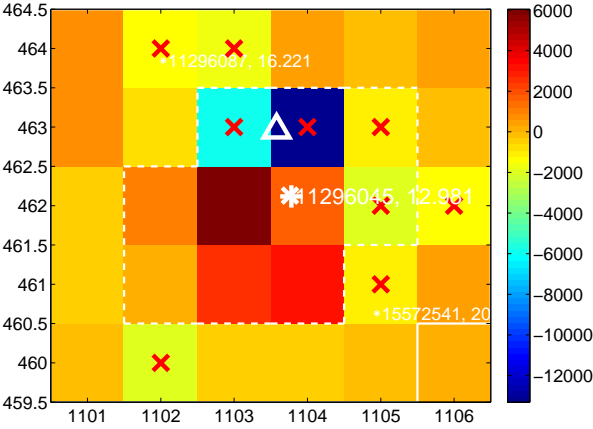
Q1 no difference image



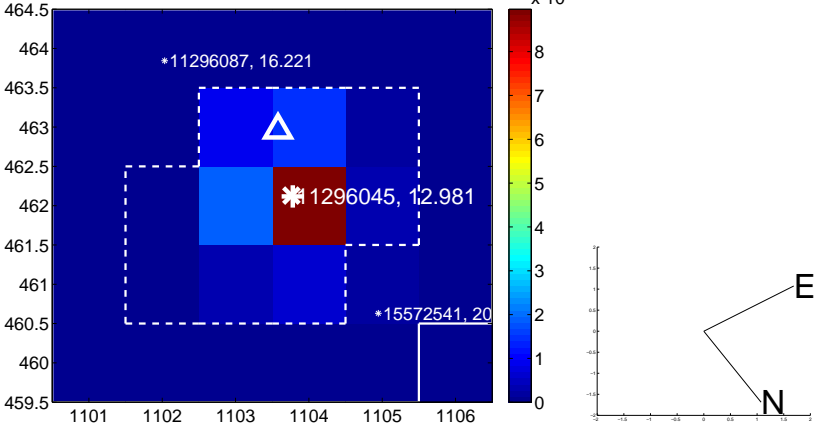
Q1 no OOT image



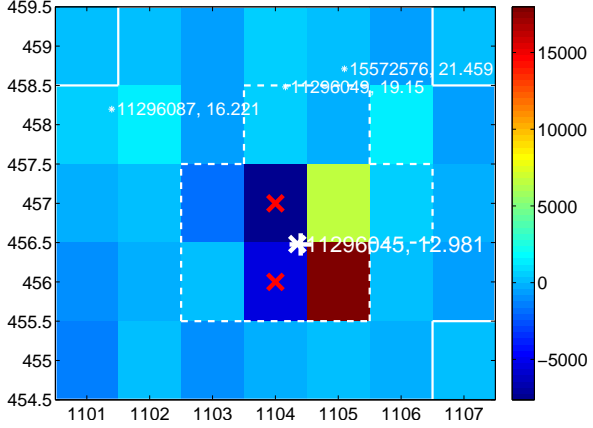
Q2 difference image. Poor Quality



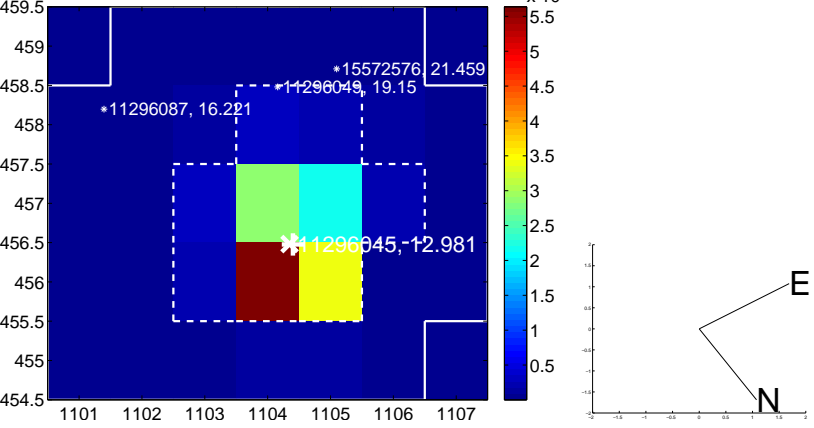
Q2 OOT image



Q3 difference image. Poor Quality



Q3 OOT image



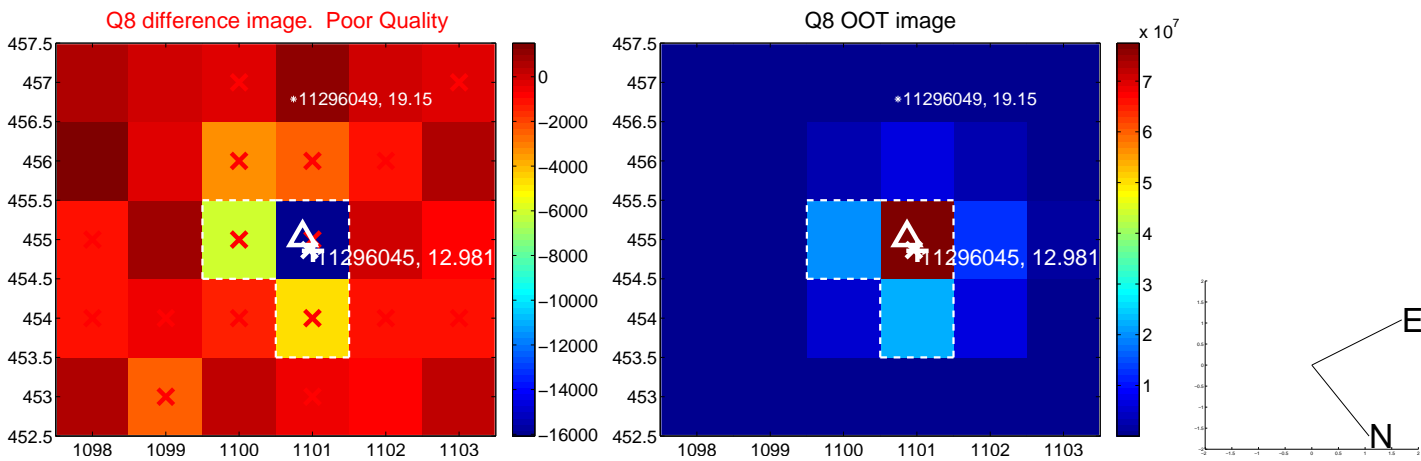
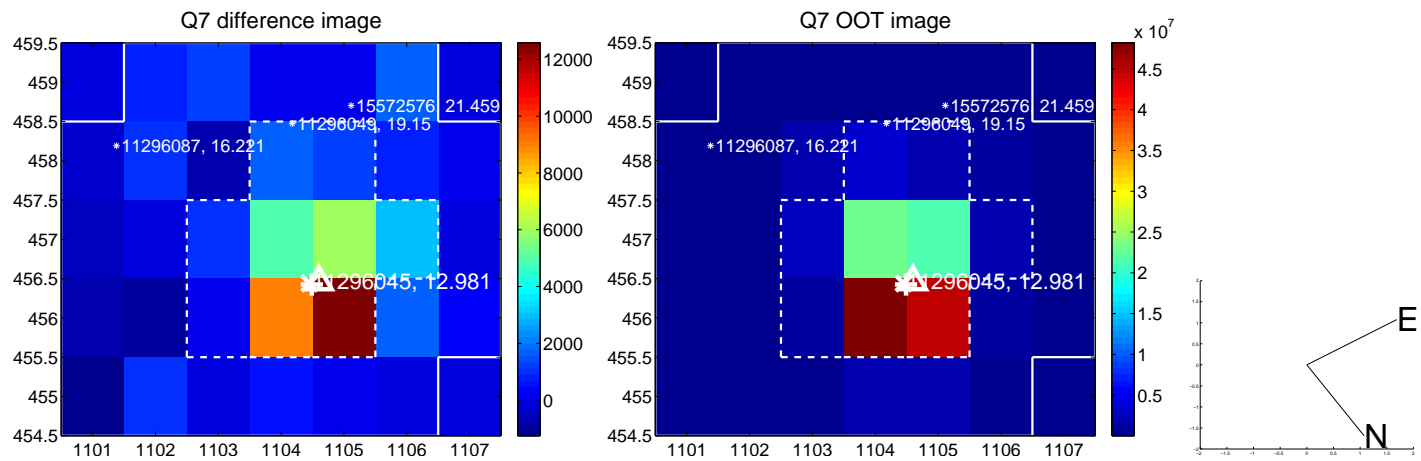
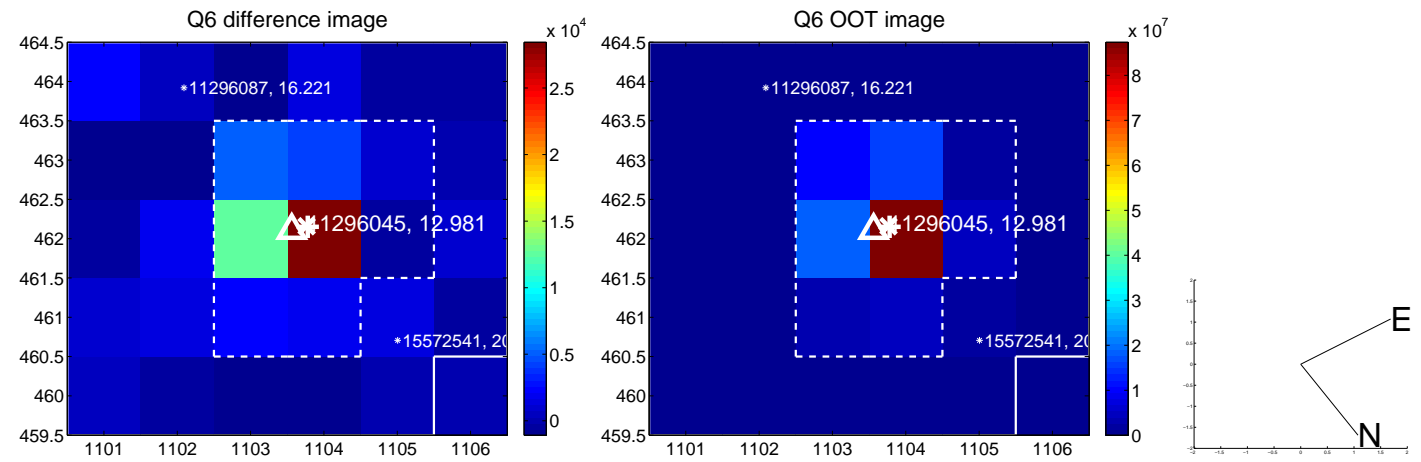
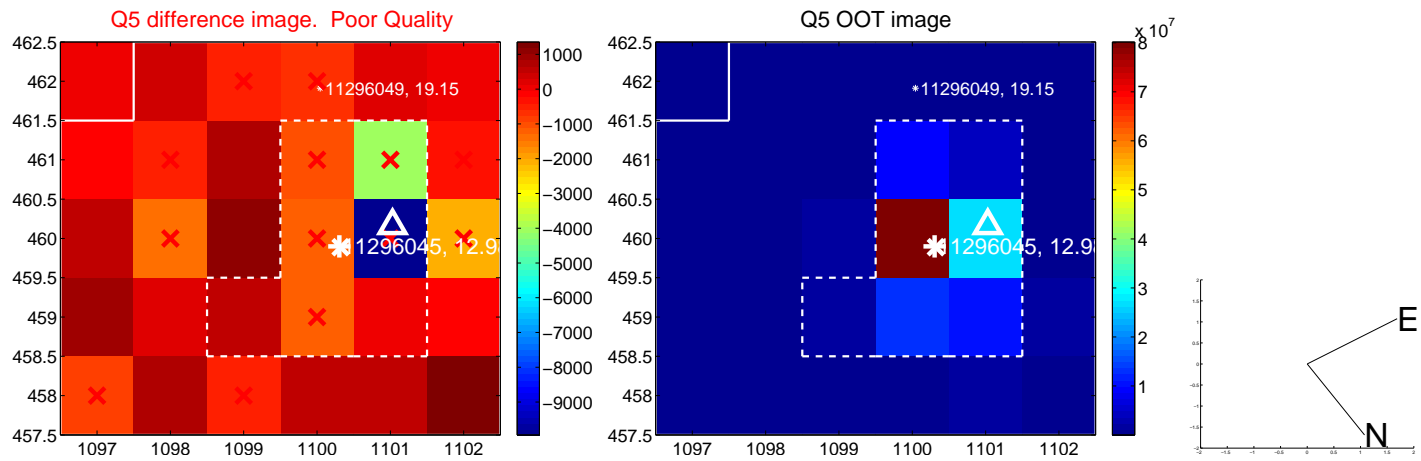
Q4 no difference image



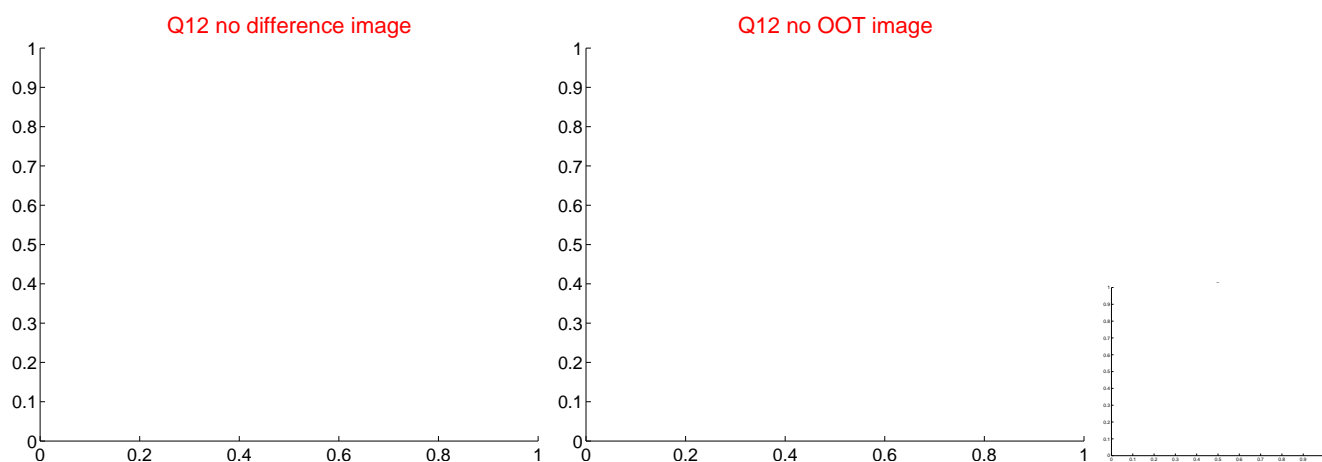
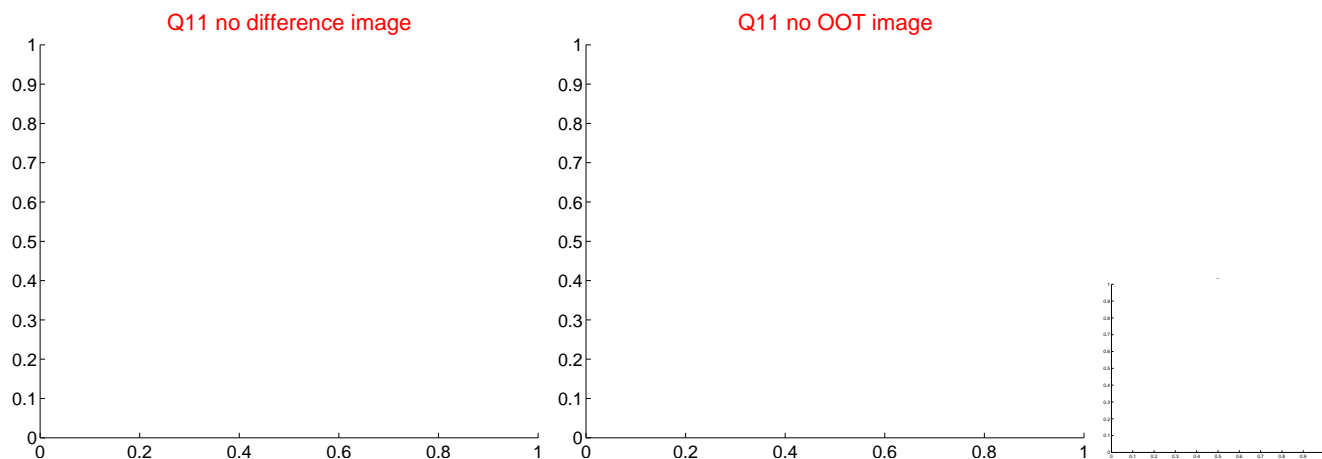
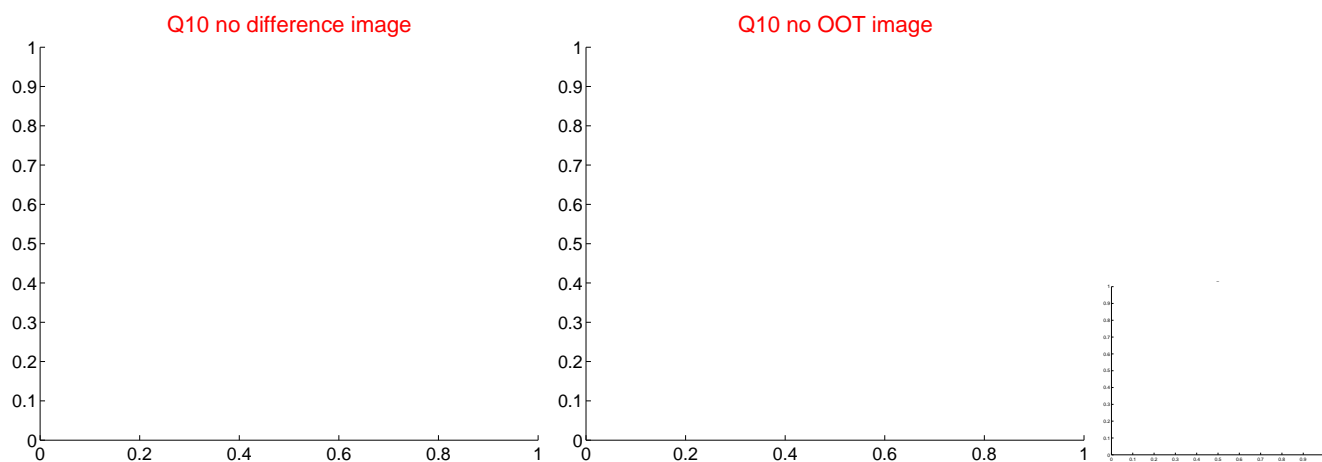
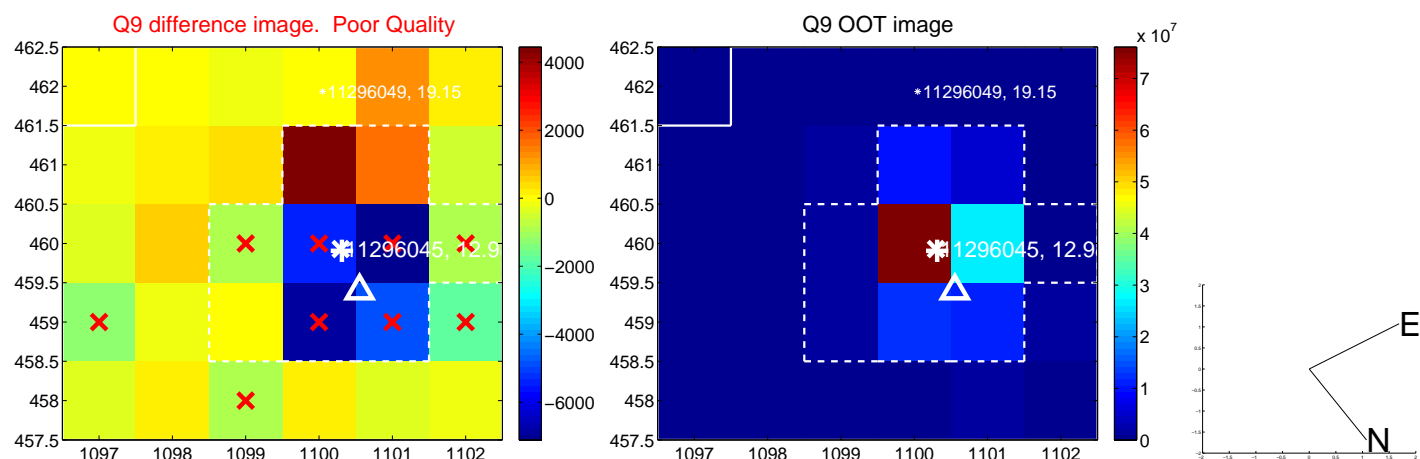
Q4 no OOT image



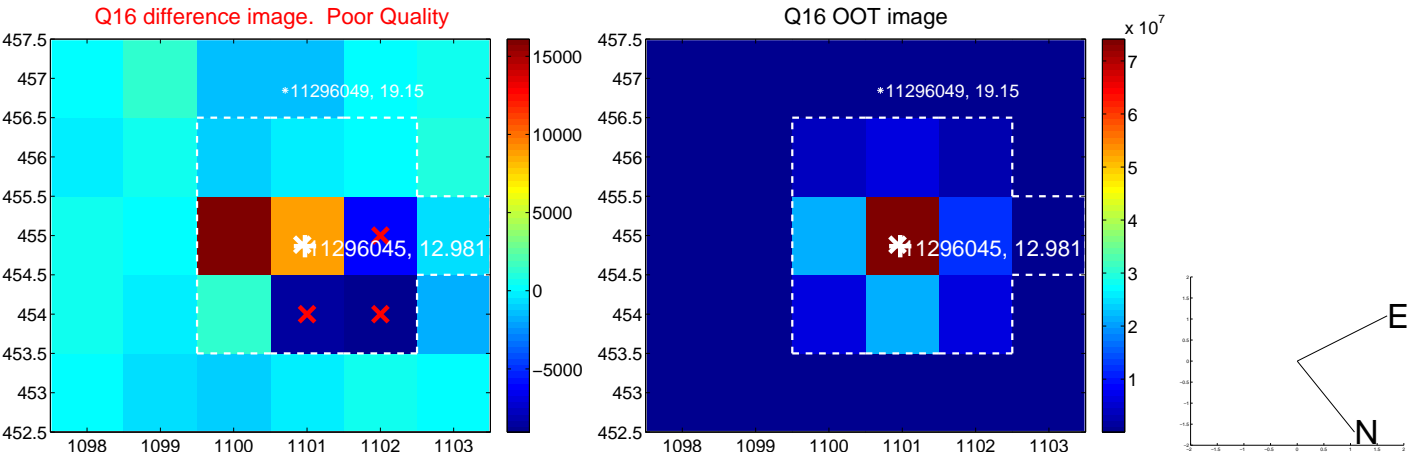
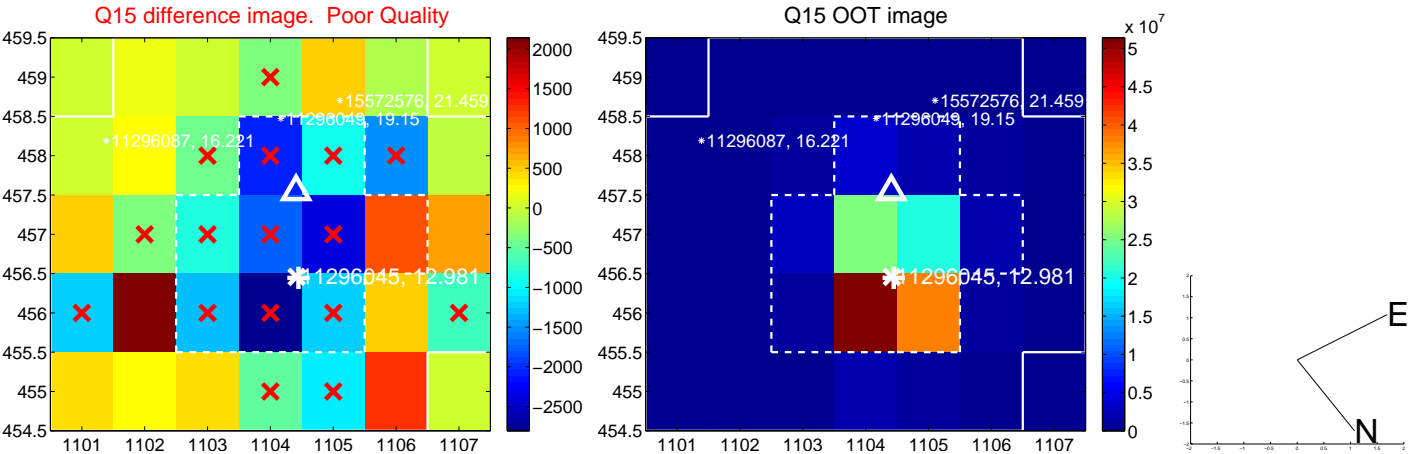
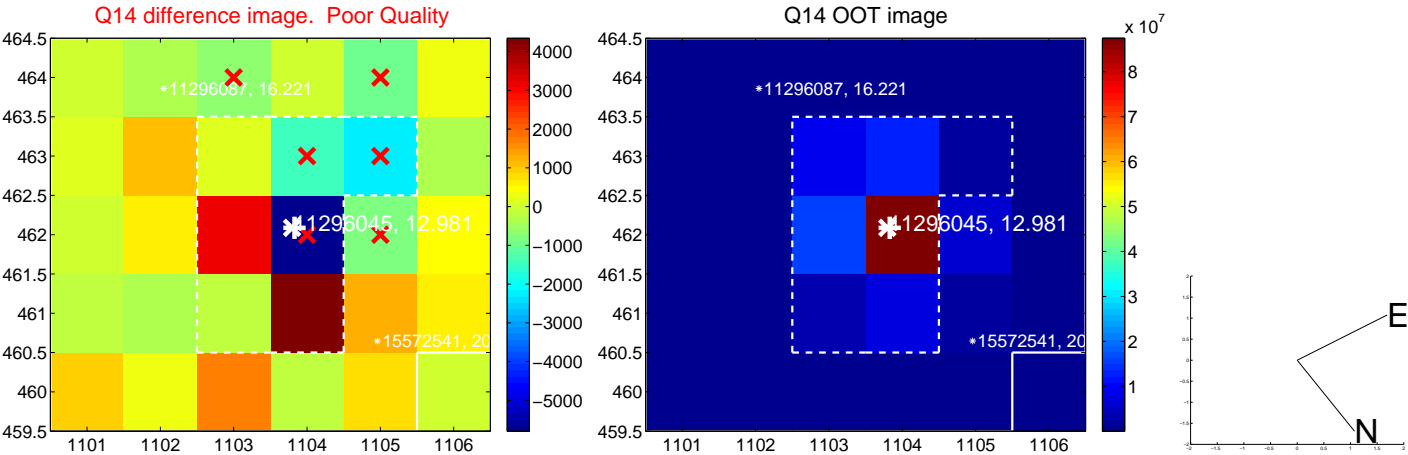
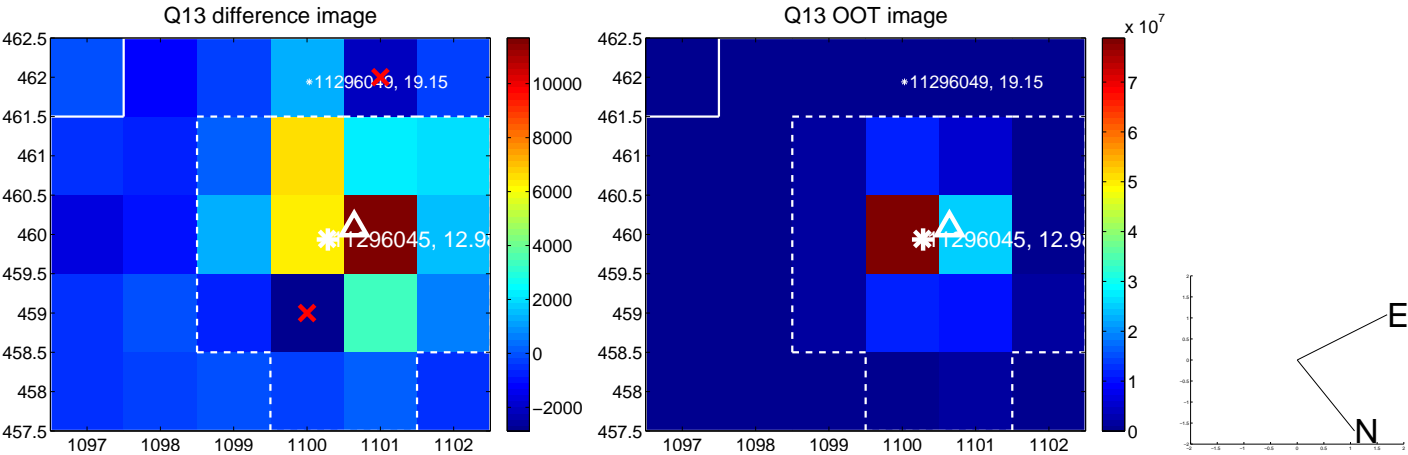
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



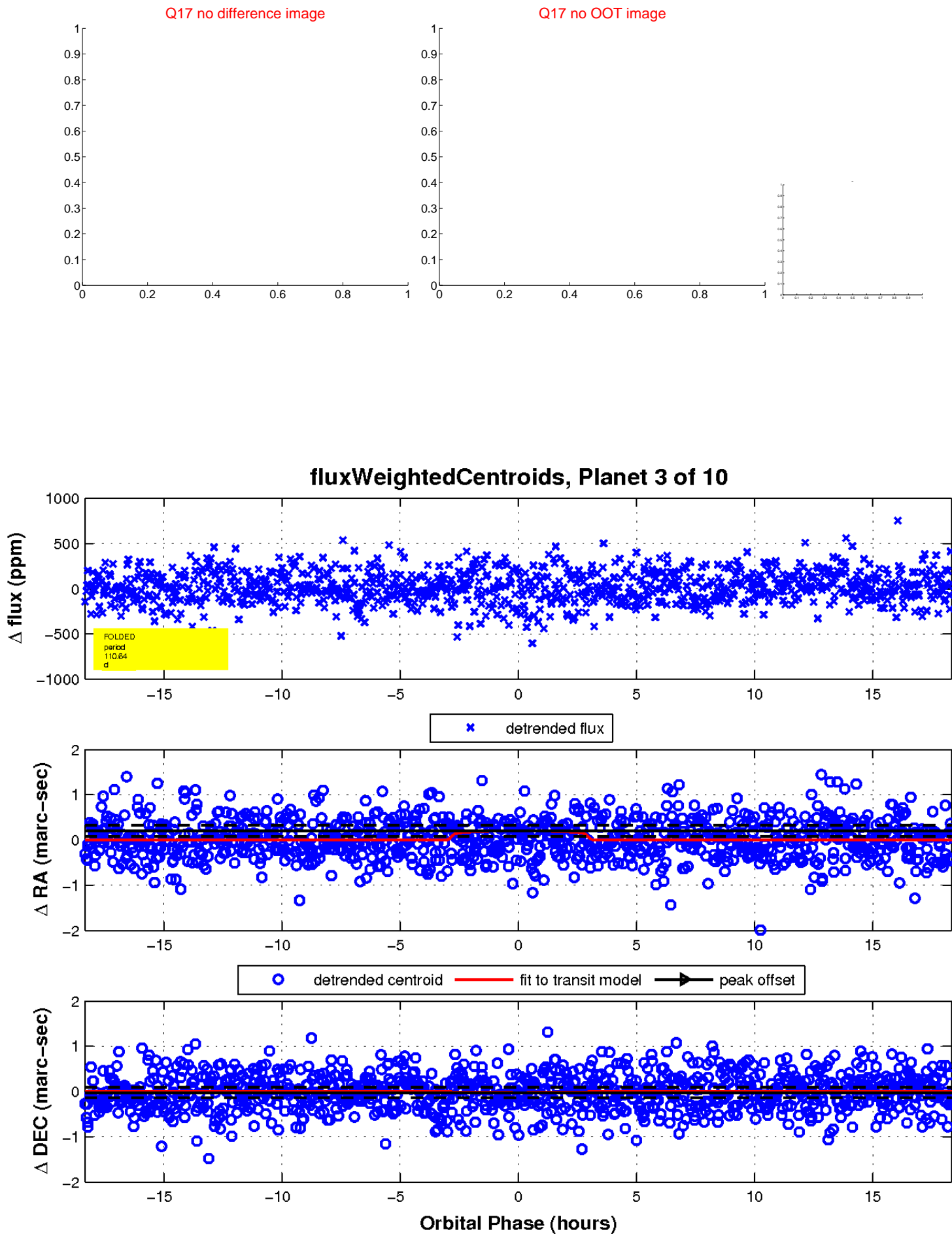
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

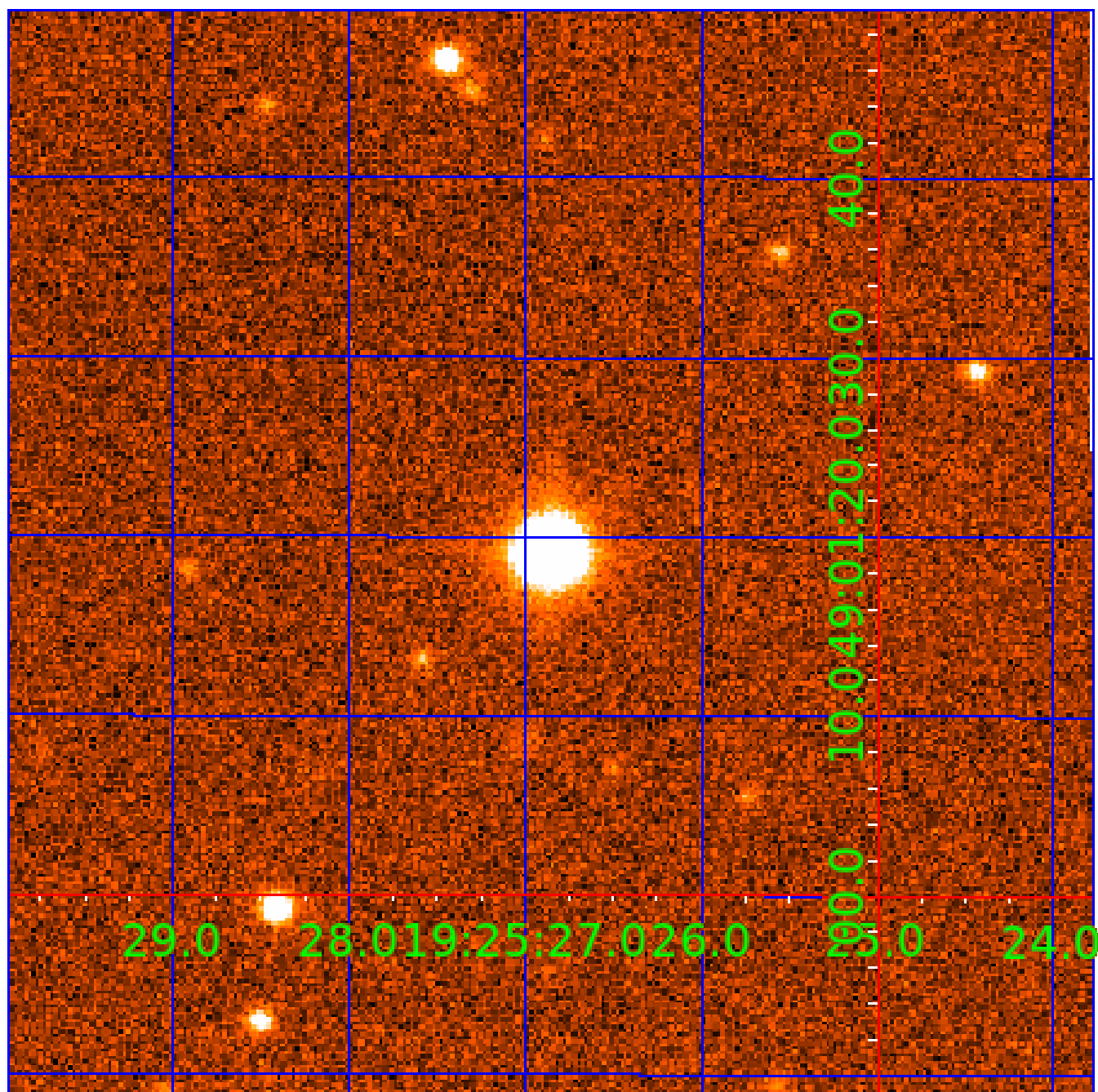


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

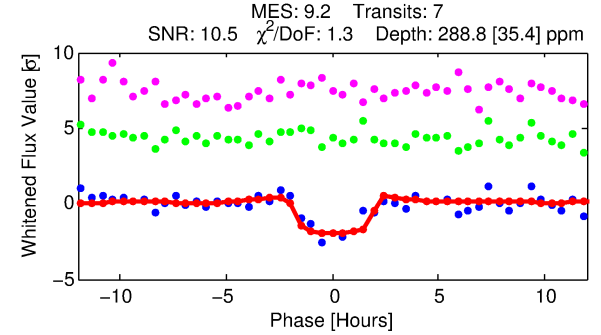
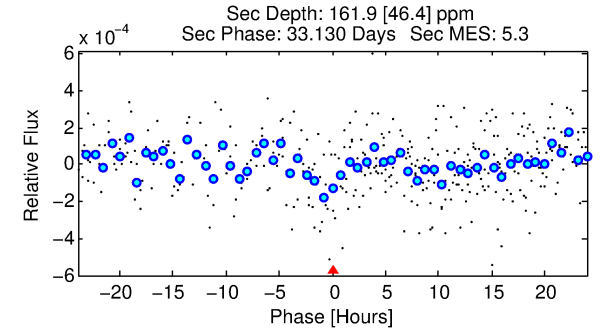
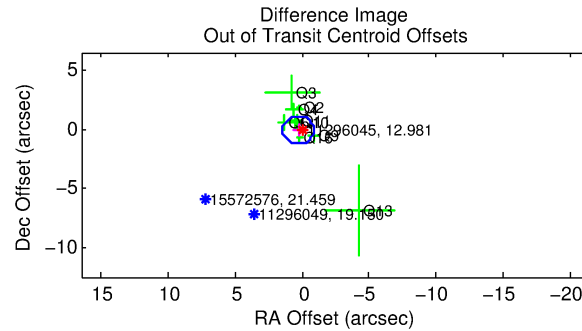
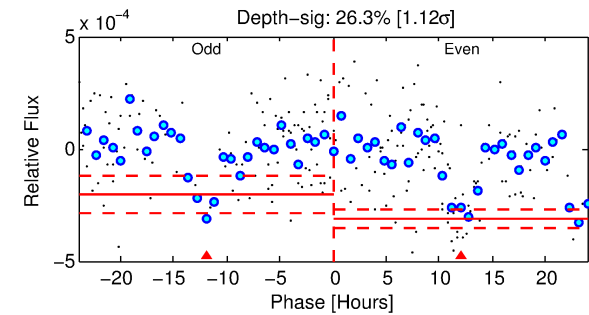
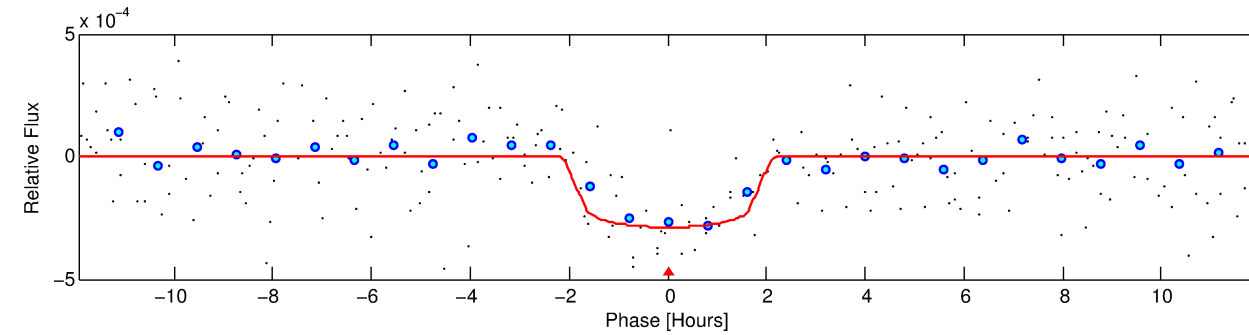
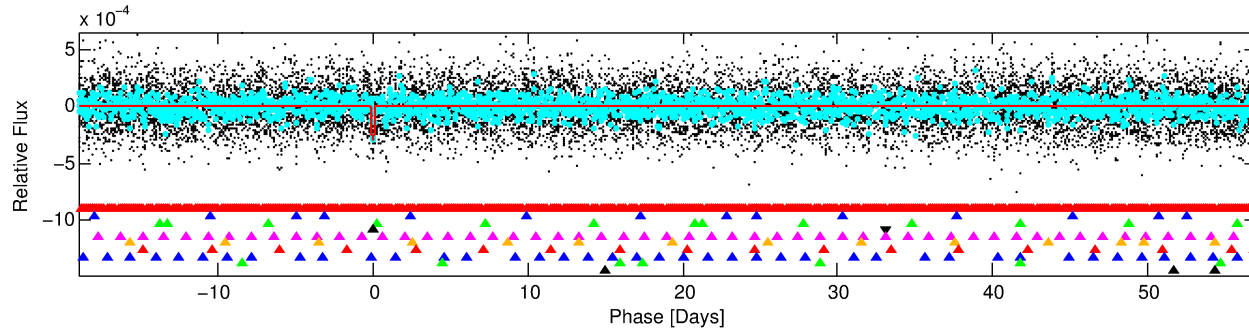
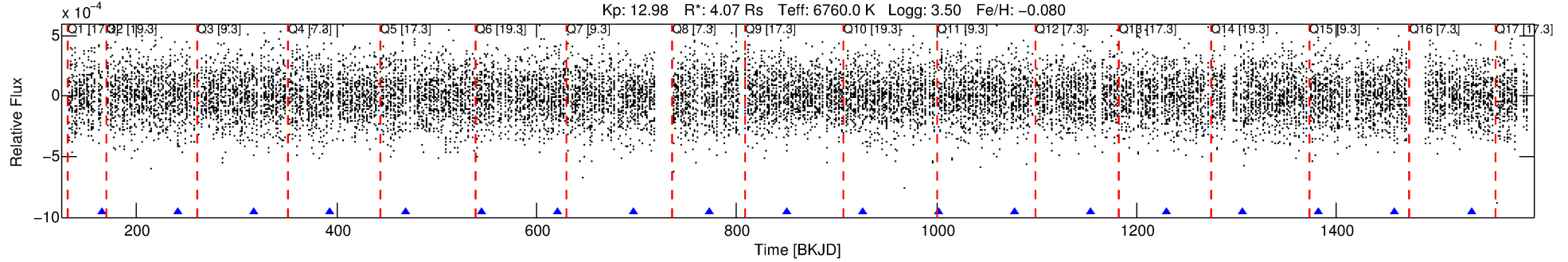
Ephemeris Match Information For 011296045-04

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 4 of 10 Period: 76.092 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 76.09172 [0.00066] d
Epoch = 164.8939 [0.0066] BKJD
Rp/R* = 0.0172 [0.0104]
a/R* = 91.50 [320.31]
b = 0.80 [1.57]
Seff = 163.39 [93.79]
Teq = 912 [131] K
Rp = 7.64 [5.43] Re
a = 0.4354 [0.1540] AU
Ag = 289.62 [395.36] [0.73σ]
Teffp = 5815 [1817] K [2.69σ]

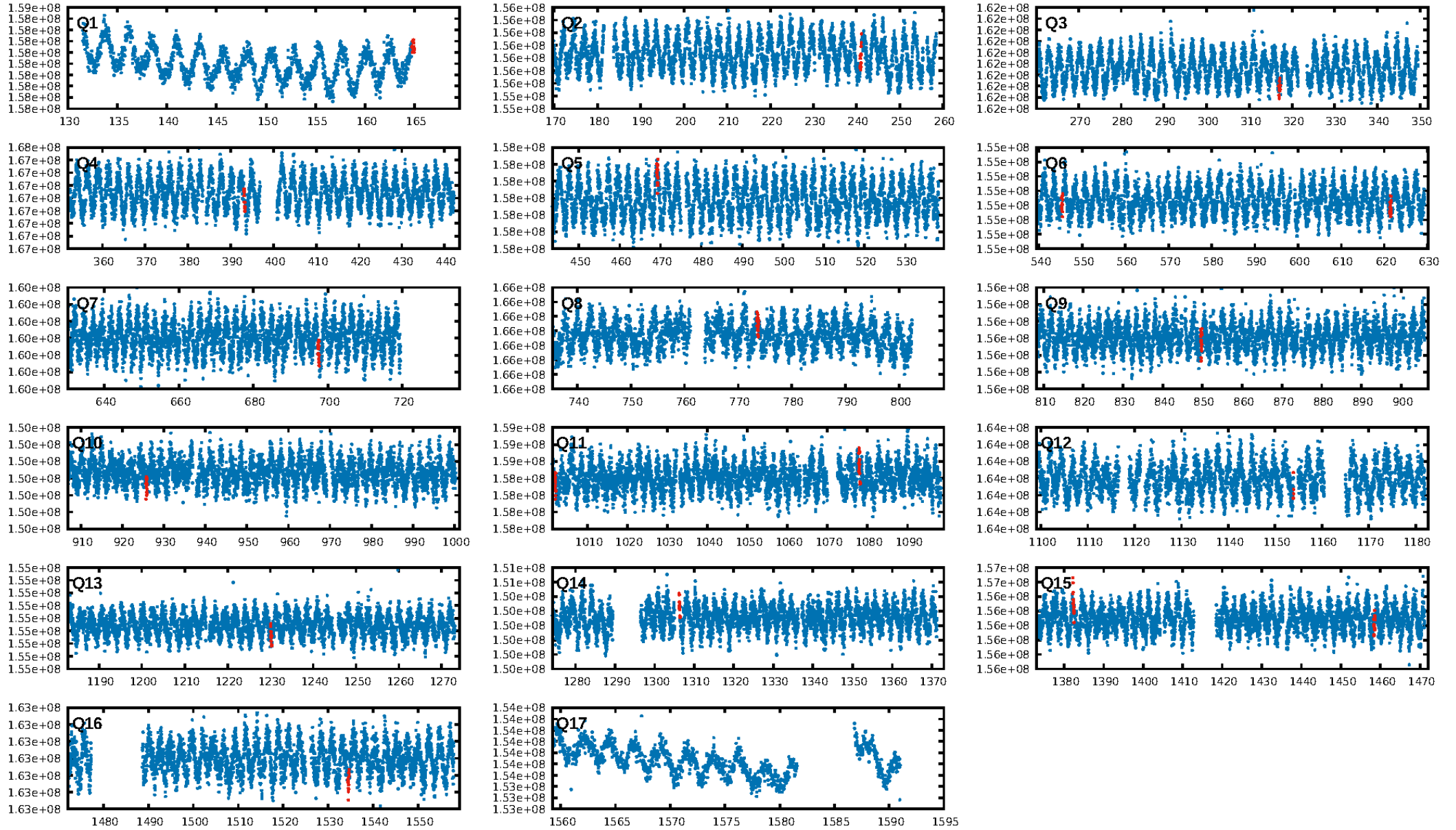
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [183.41σ]
LongPeriod-sig: 100.0% [13.67σ]
ModelChiSquare2-sig: 33.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.9977
Centroid-sig: 88.9%
Centroid-so: 0.191 arcsec [0.46σ]
OotOffset-rm: 0.299 arcsec [0.76σ]
KicOffset-rm: 0.355 arcsec [0.48σ]
OotOffset-st: 3/2/2/2 [9]
KicOffset-st: 3/2/2/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.62 [8/13]

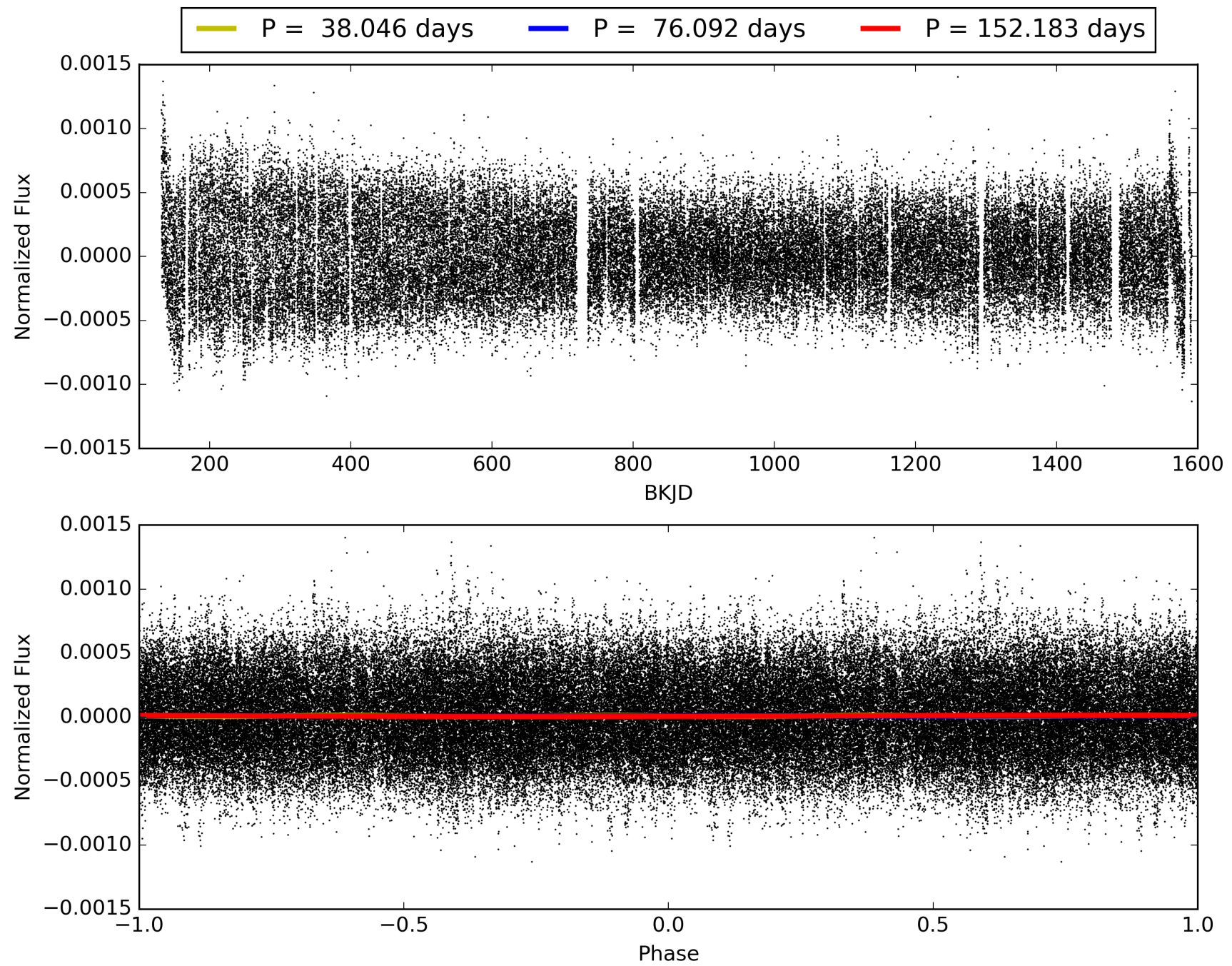
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:46:49 Z

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

TCE 011296045-04, PDC Light Curves

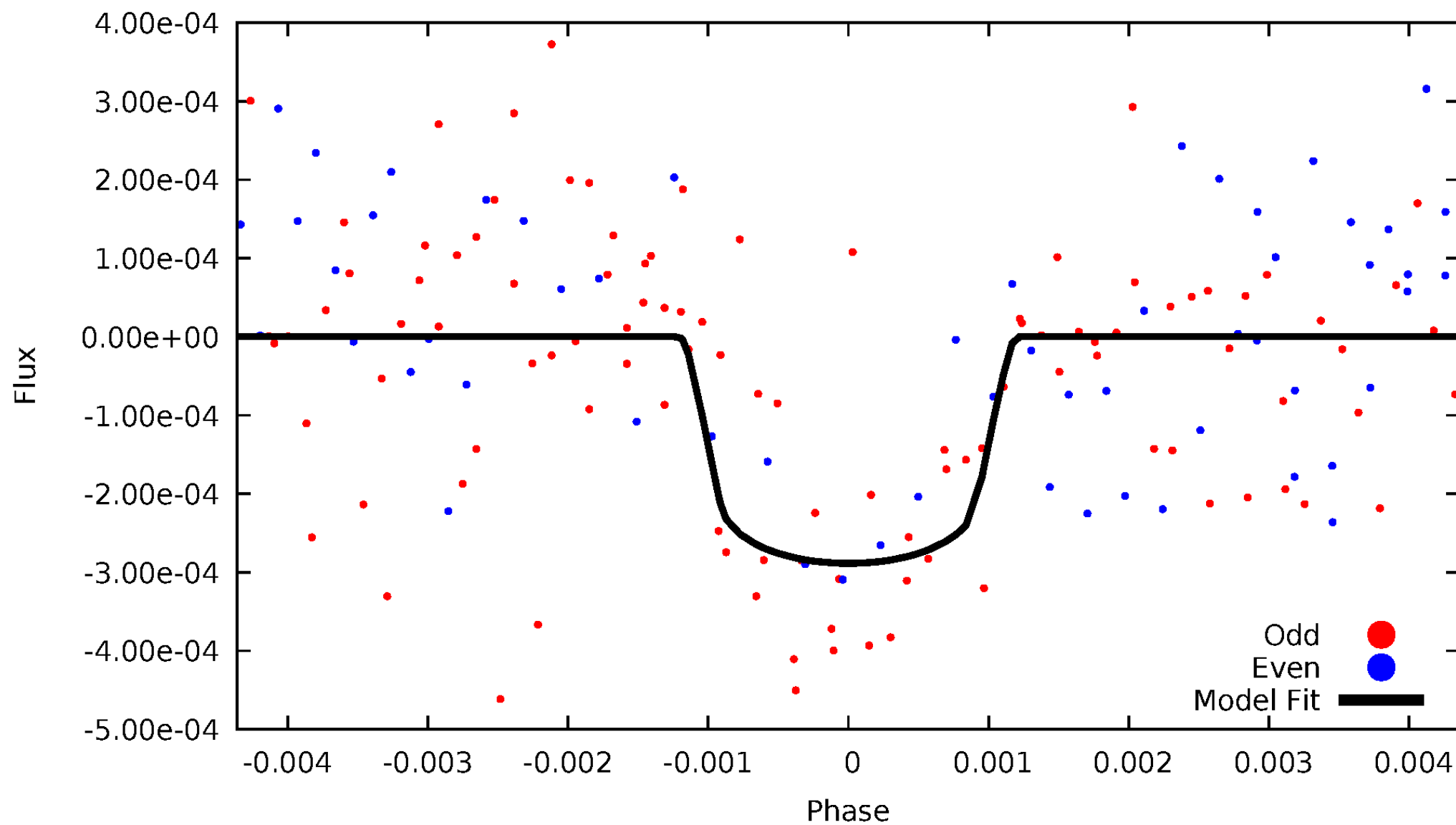


TCE 011296045-04



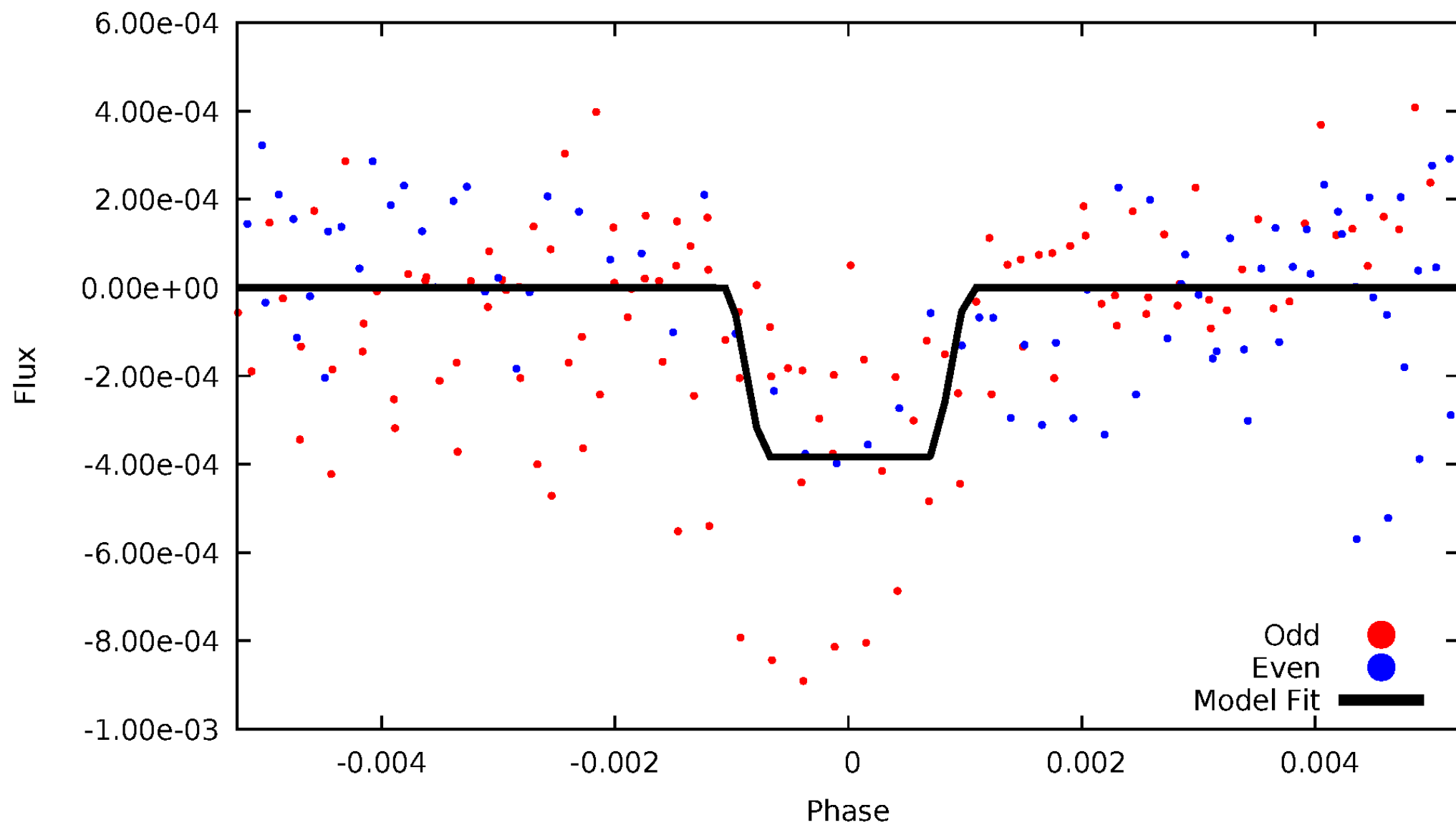
DV Odd/Even

TCE 011296045-04



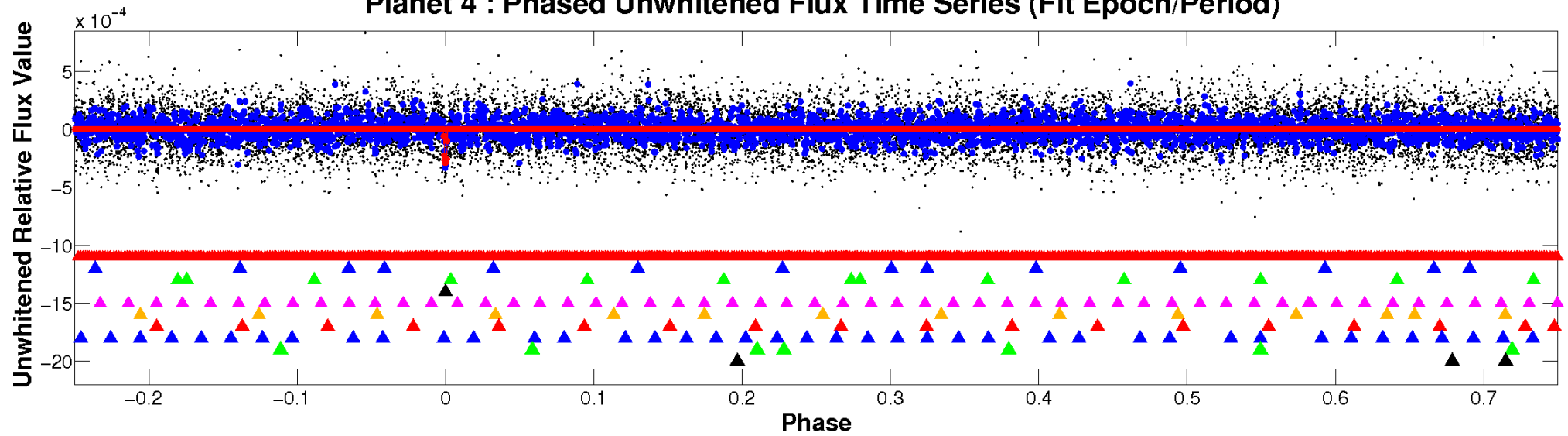
ALT Odd/Even

TCE 011296045-04

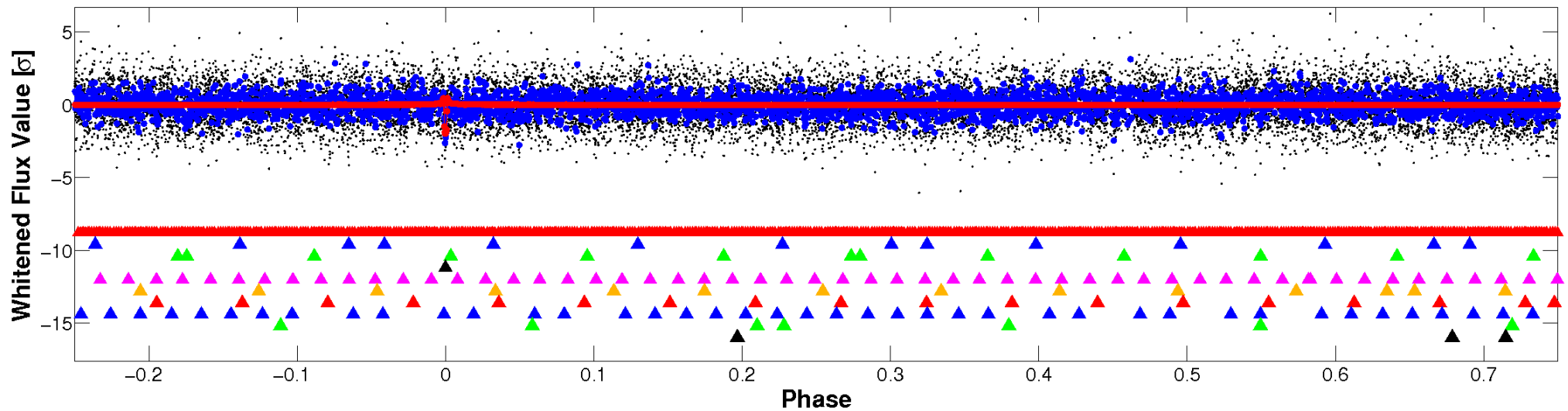


Non-Whitened Vs. Whitened Light Curve

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

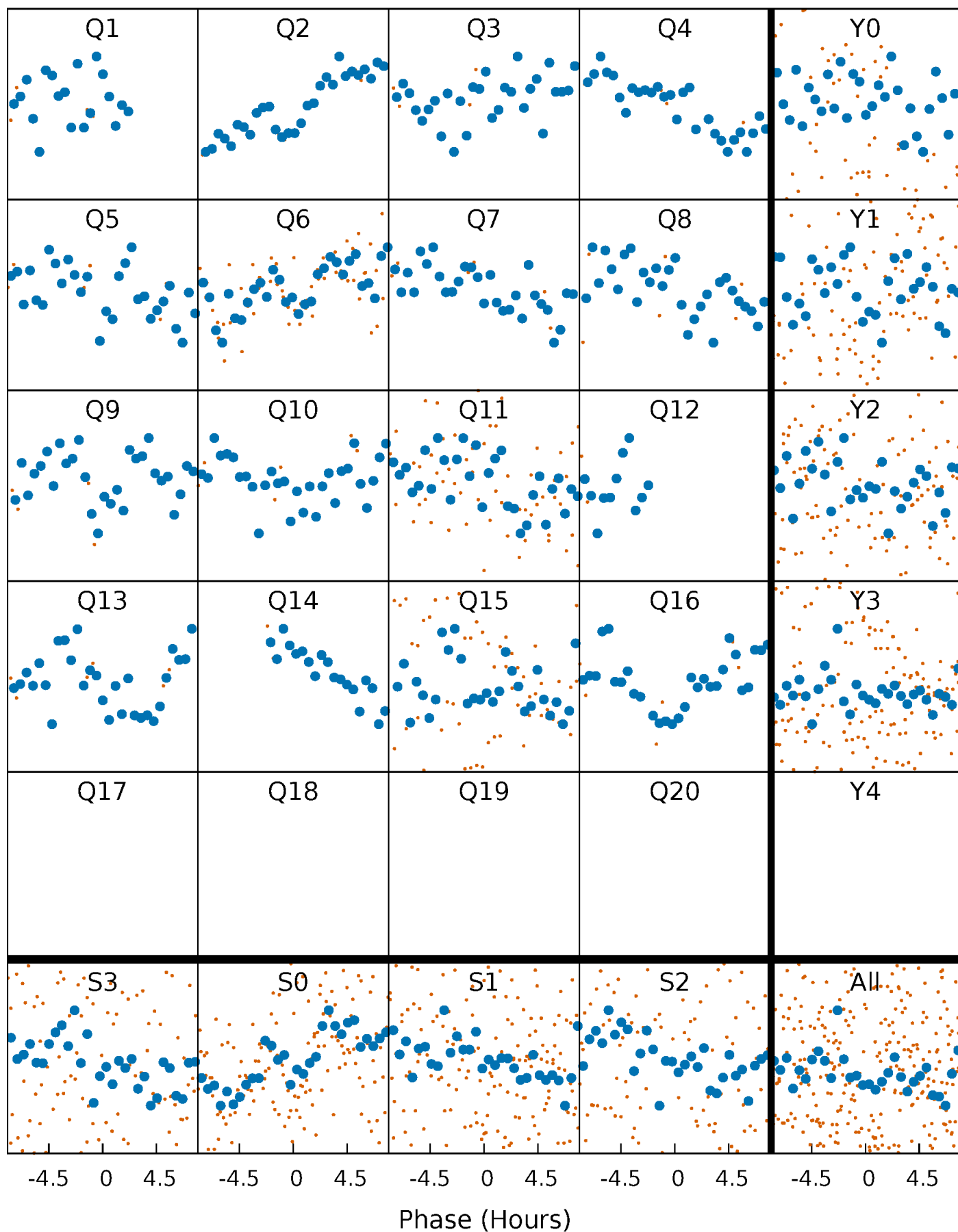


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



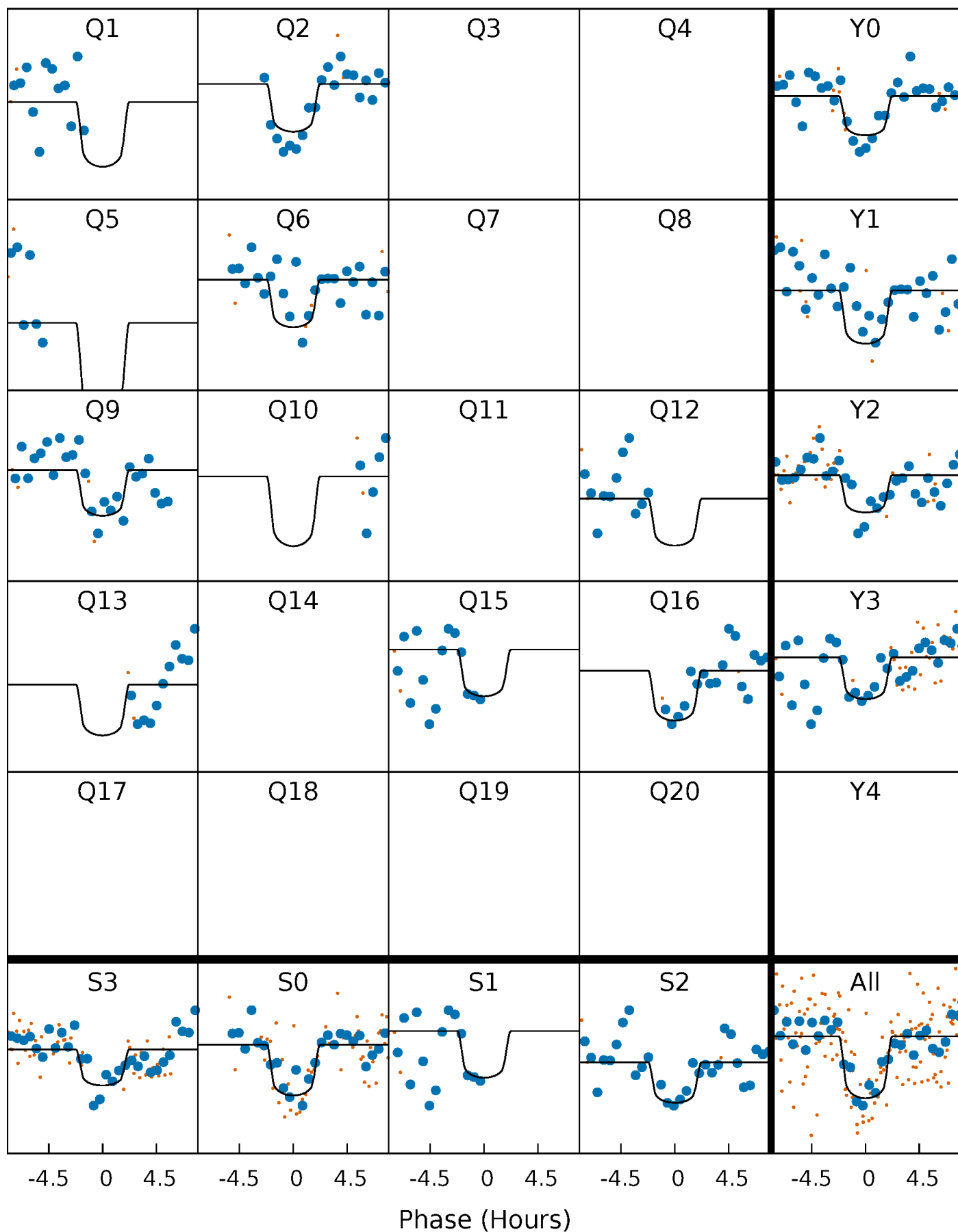
PDC Quarter-Phased Transit Curves

TCE 011296045-04 P= 76.091724 Days $T_0=164.893900$ (BKJD)



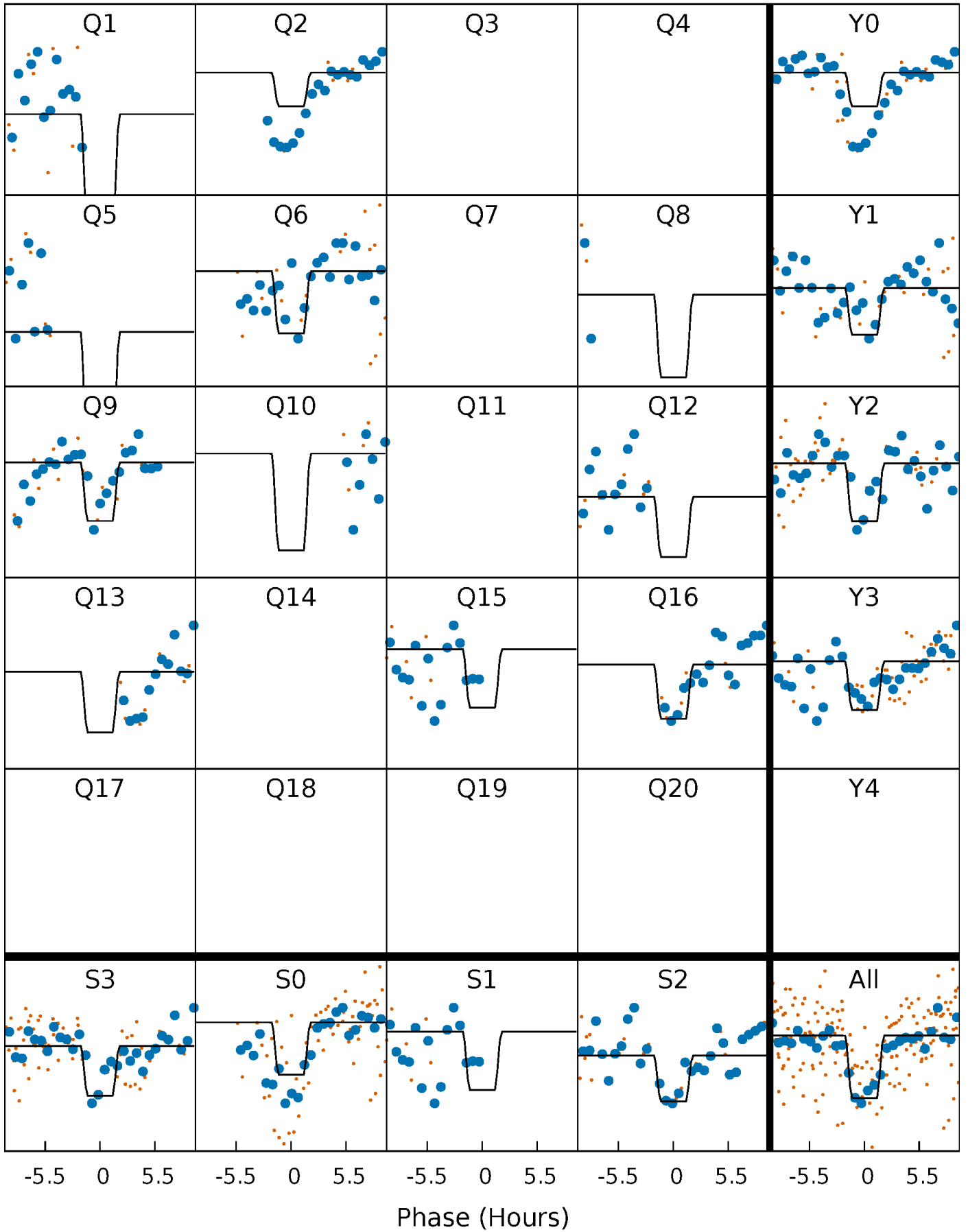
DV Quarter-Phased Transit Curves

TCE 011296045-04 P= 76.091724 Days $T_0=164.893900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

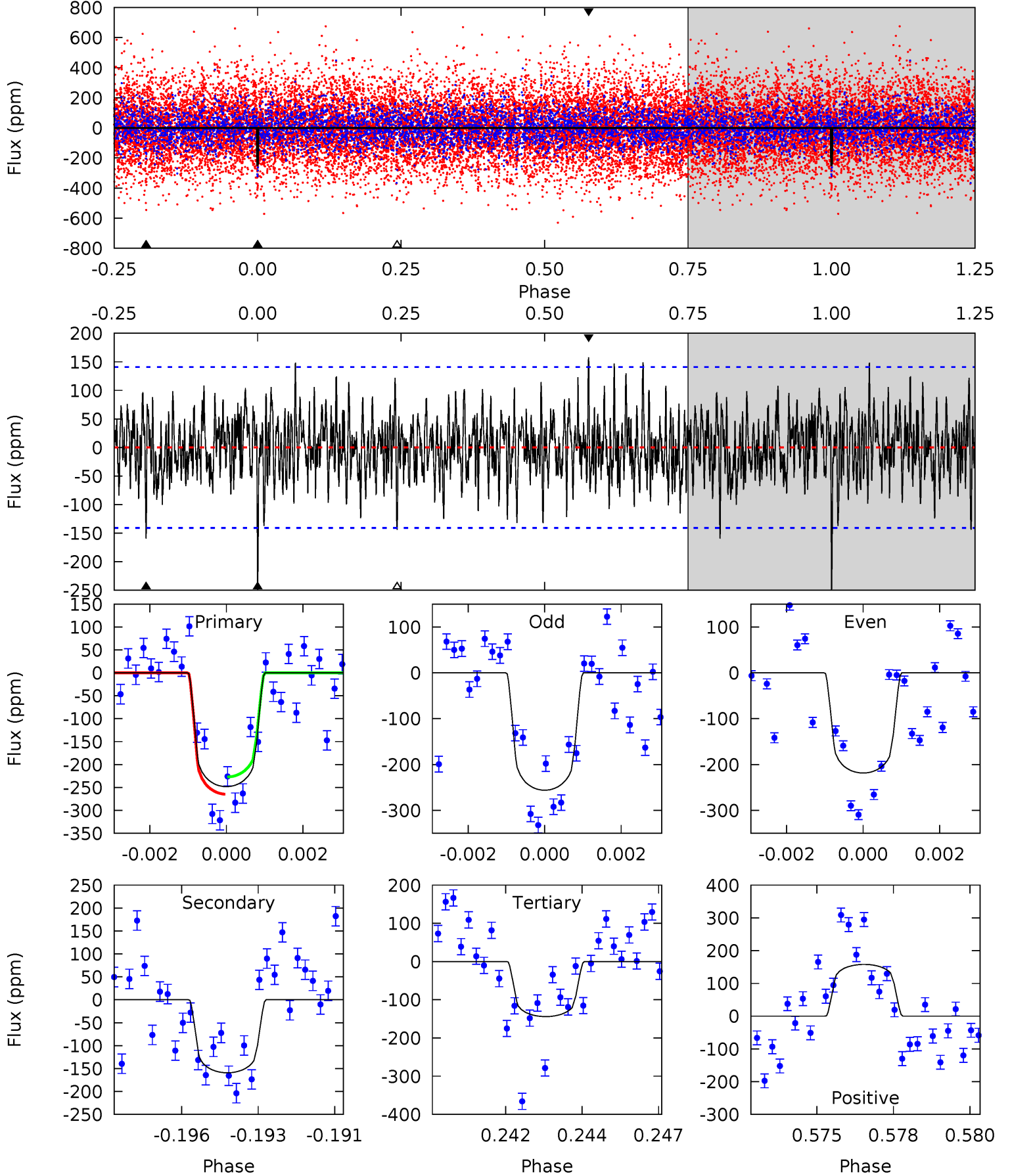
TCE 011296045-04 P= 76.092021 Days $T_0=164.893304$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-04, P = 76.091724 Days, E = 88.802176 Days

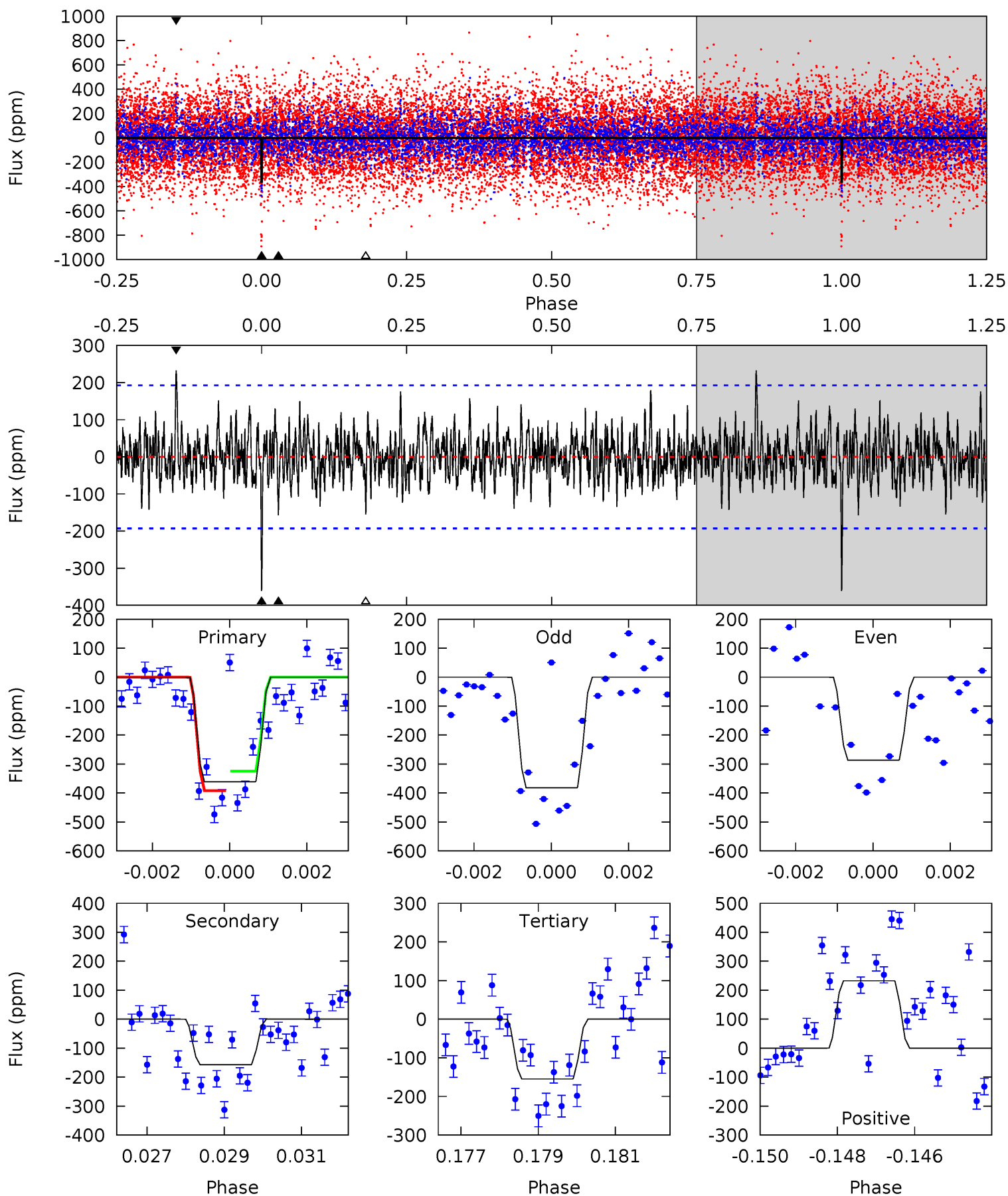
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	5.98	5.41	5.93	5.29	3.03	1.71	3.92	3.40	0.57	0.05	0.59	0.95	0.39	0.70



Alt Model-Shift Uniqueness Test

011296045-04, P = 76.092021 Days, E = 88.801283 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.97	4.34	4.27	6.42	5.32	3.08	1.41	5.70	3.56	0.06	-2.08	1.07	1.44	0.39	0.93



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-159 ± 27	$7.31^{+4.69}_{-3.96}$	1255^{+60}_{-107}	5686^{+2909}_{-1013}	315^{+1116}_{-198}
Alt.	-157 ± 36	$7.94^{+4.85}_{-3.86}$	1256^{+60}_{-111}	5389^{+2256}_{-866}	249^{+750}_{-150}

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 $A_{obs} \gg 1.0$

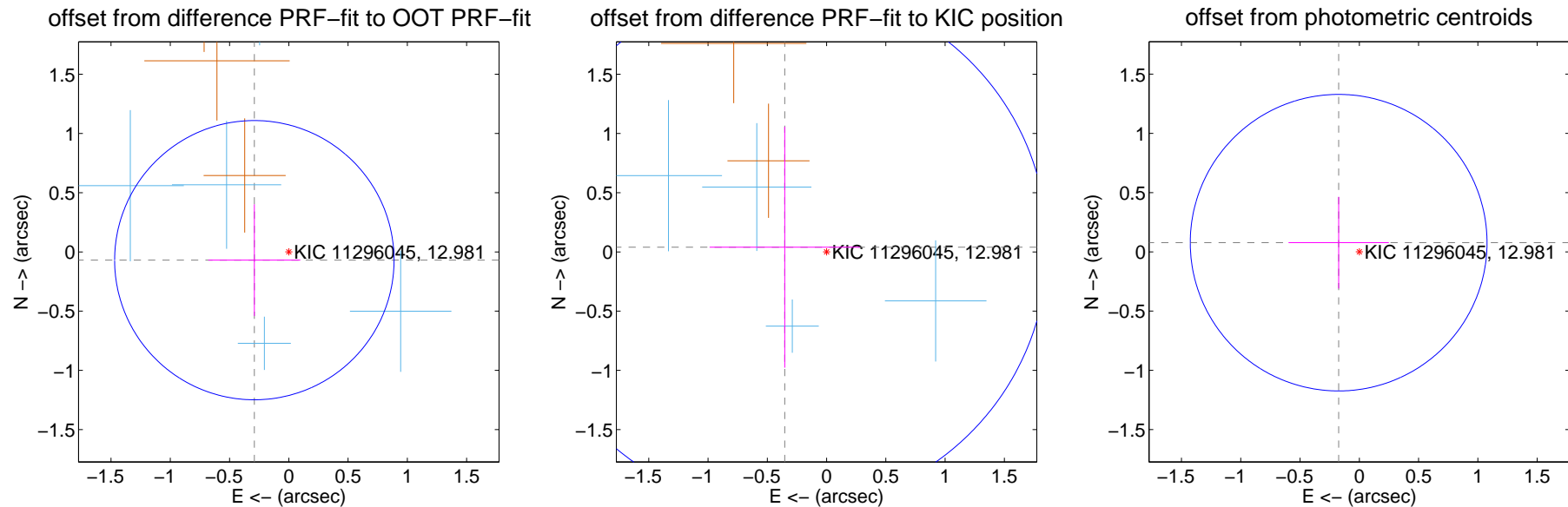
DV Centroid Data

Supplemental centroid analysis for 011296045-04. Kepler magnitude: 12.98. Transit SNR 10.48

There are 5 quarters with good PRF difference image offsets

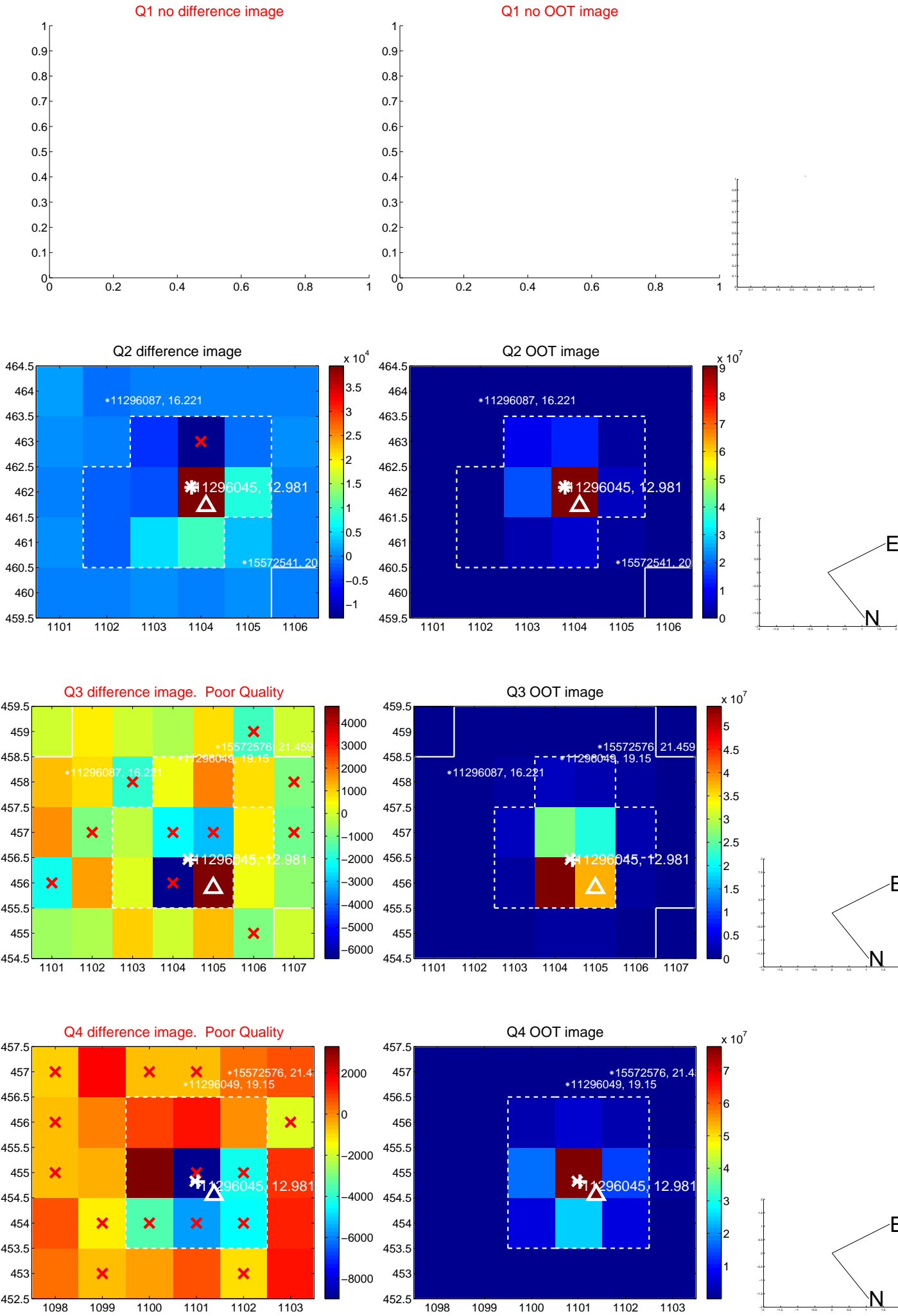
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.299 ± 0.393	0.76	0.291 ± 0.388	-0.070 ± 0.471
PRF-fit source offset from KIC position	0.355 ± 0.739	0.48	0.353 ± 0.634	0.040 ± 1.016
photometric centroid source offset	0.19 ± 0.42	0.46	0.17 ± 0.42	0.08 ± 0.39

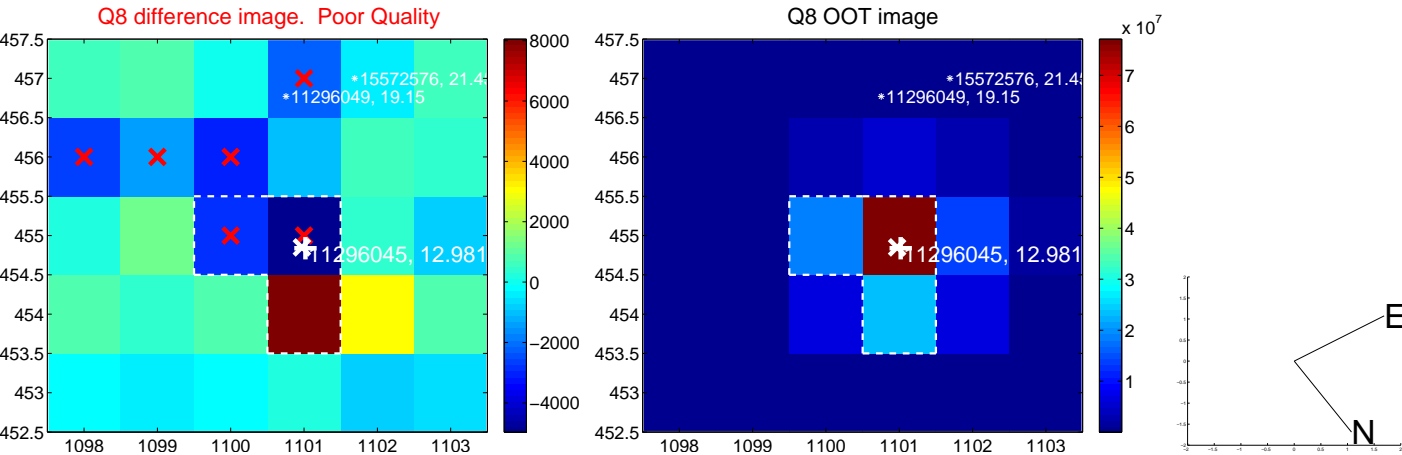
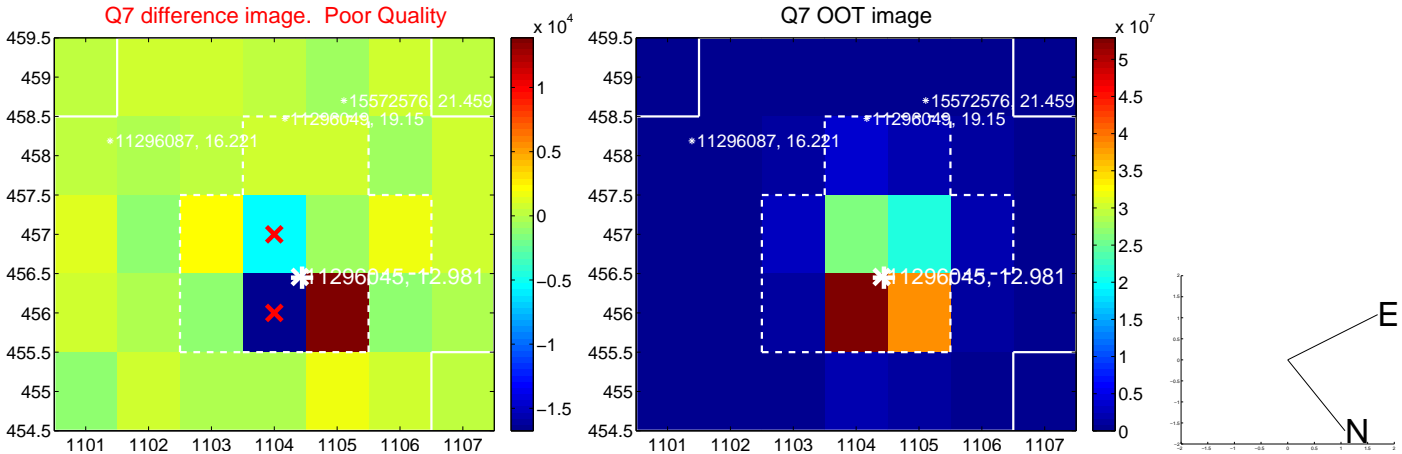
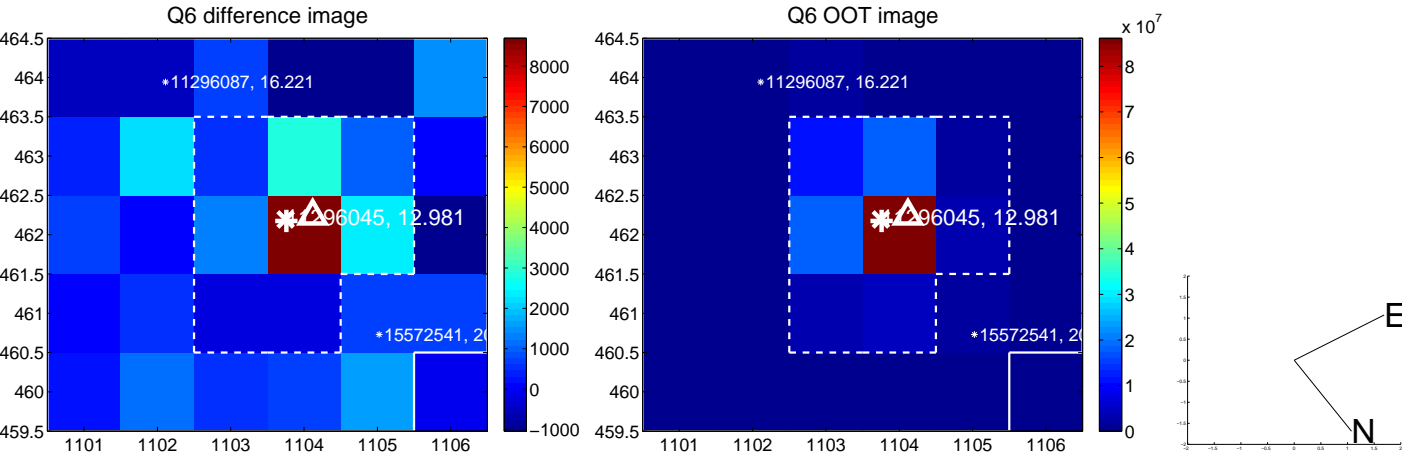
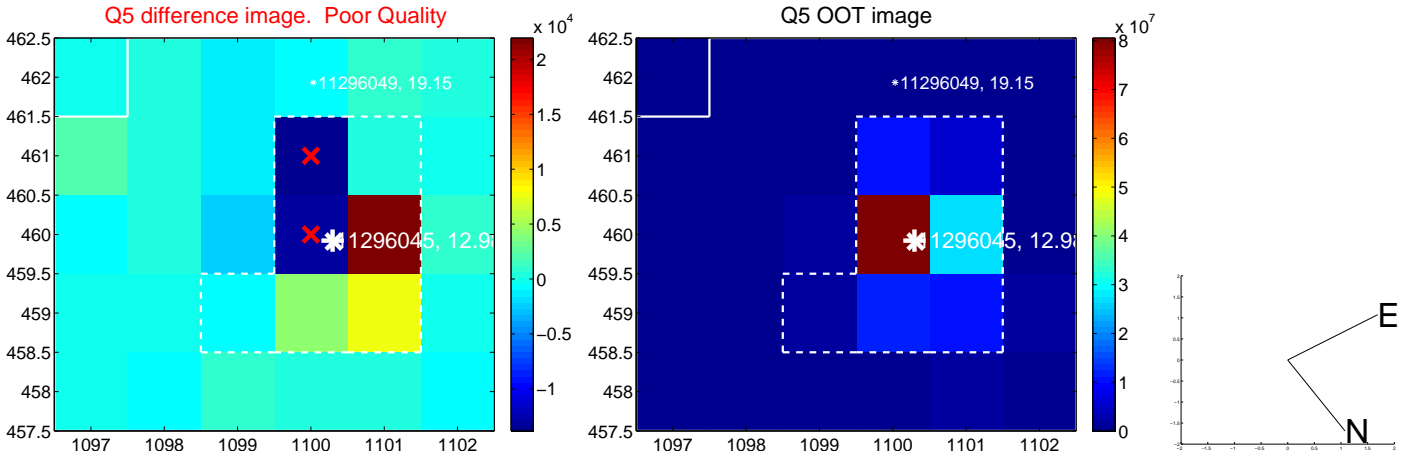


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

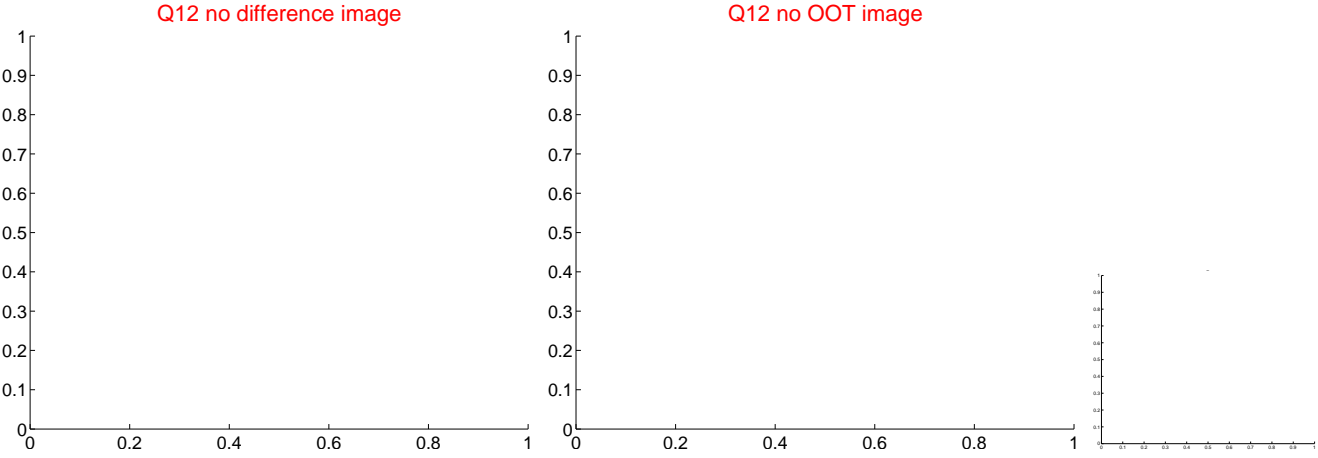
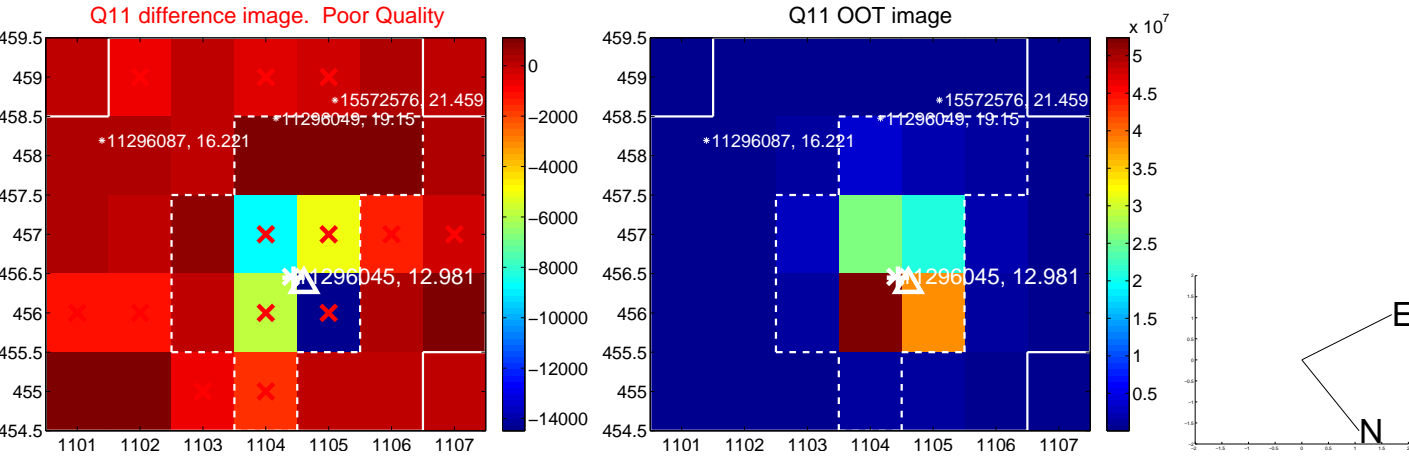
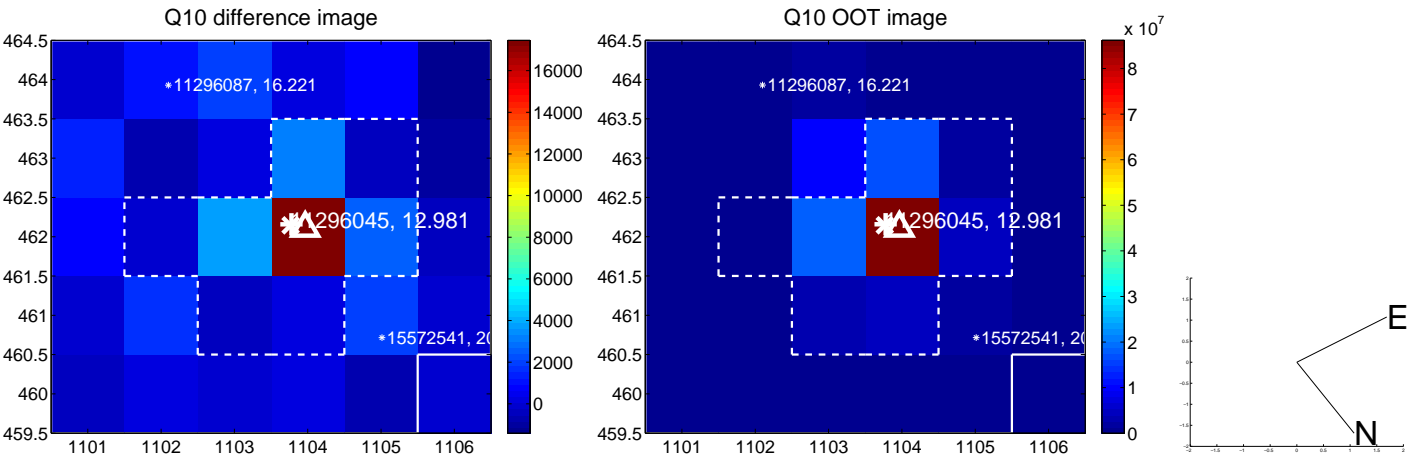
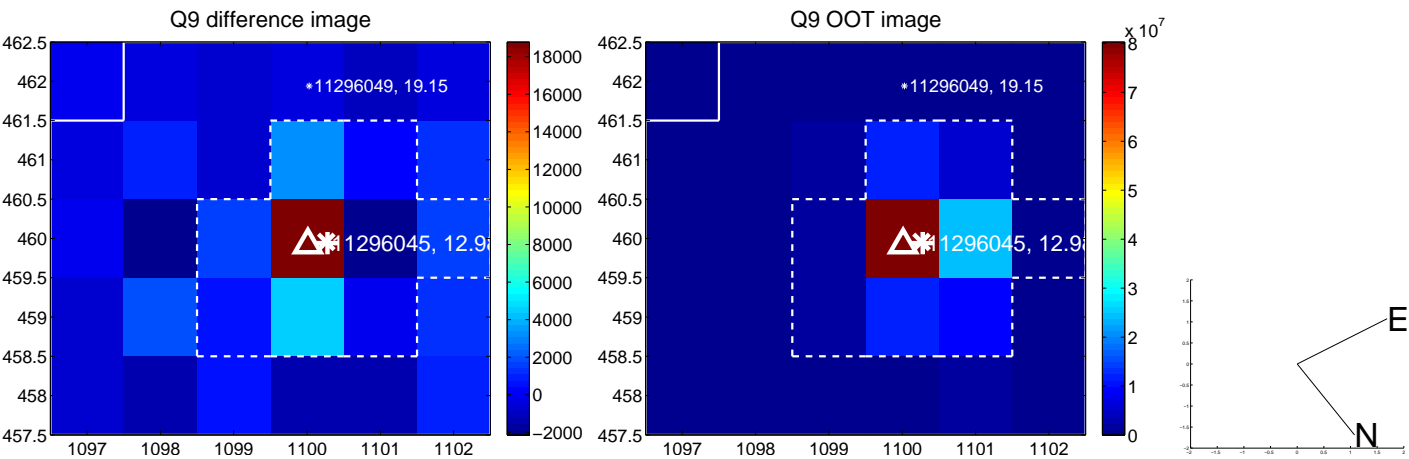
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



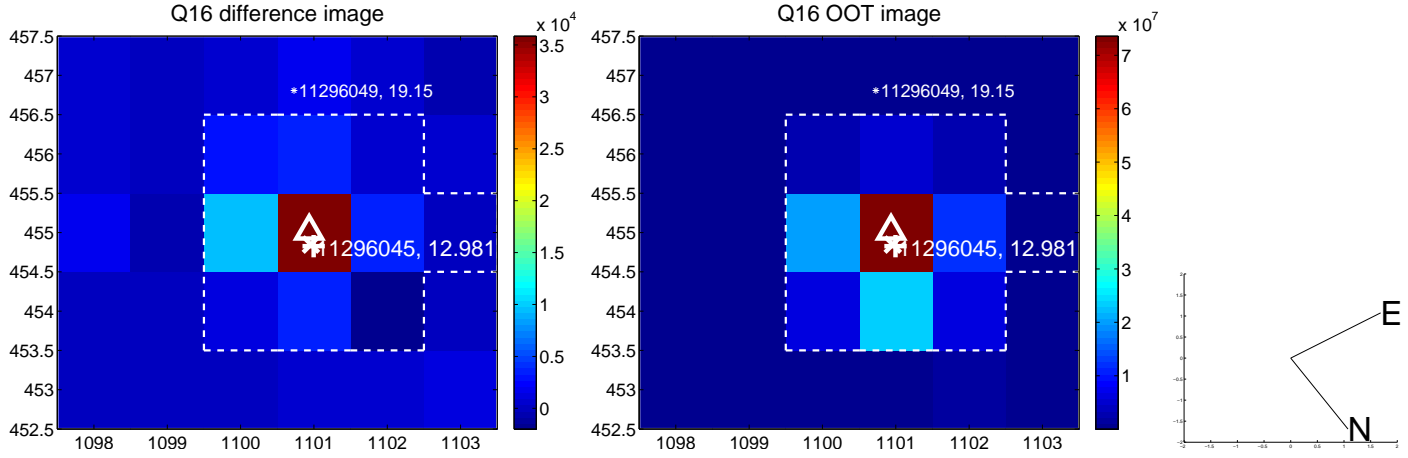
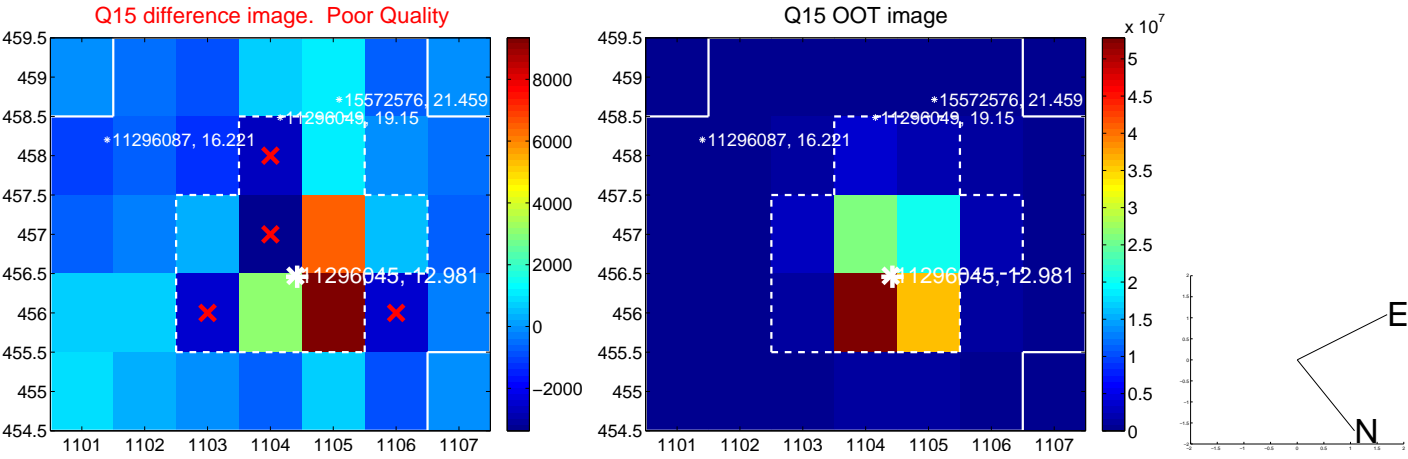
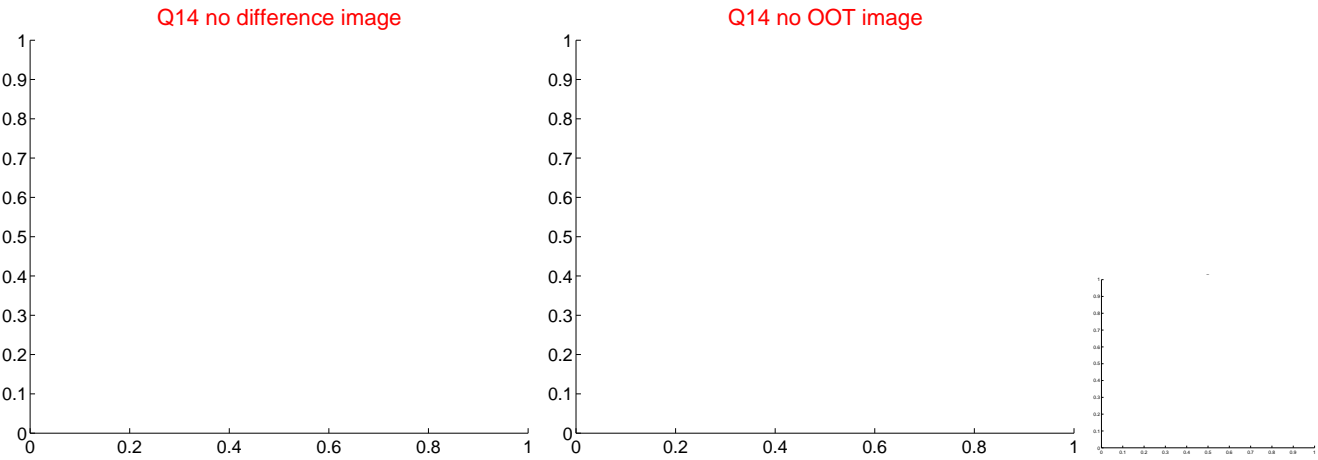
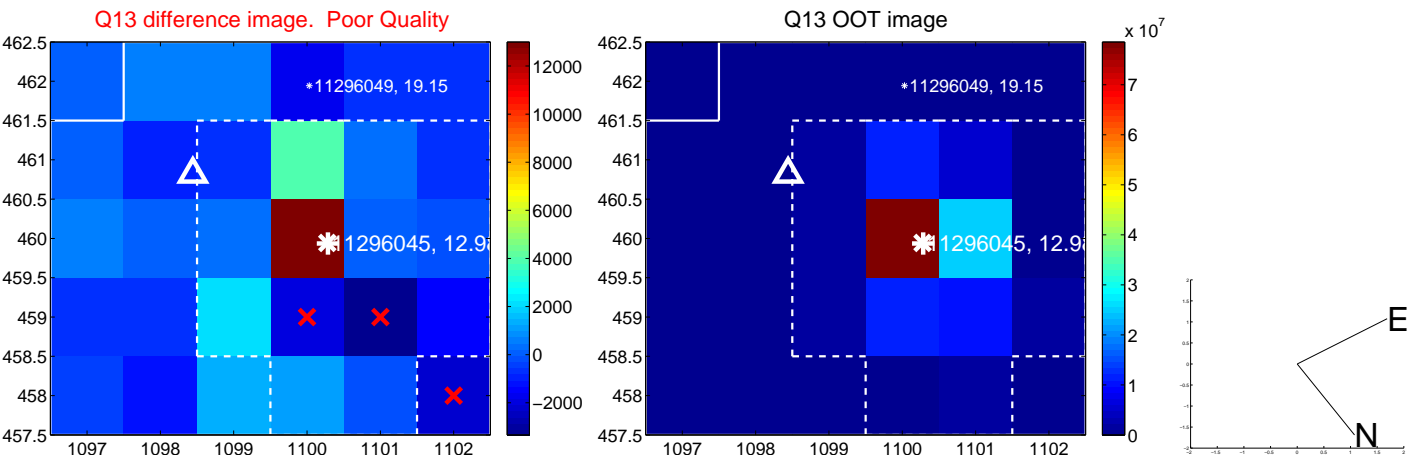
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



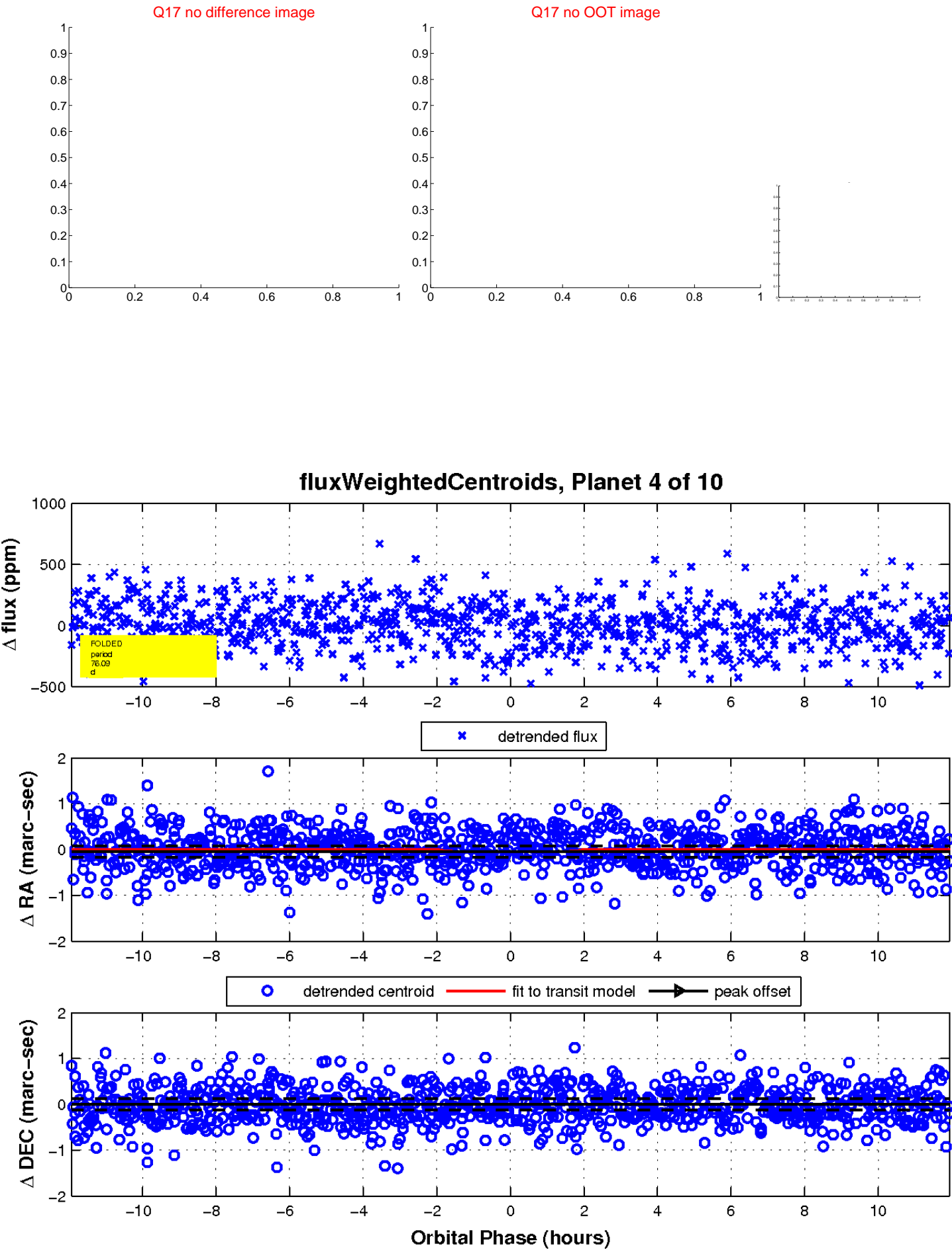
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

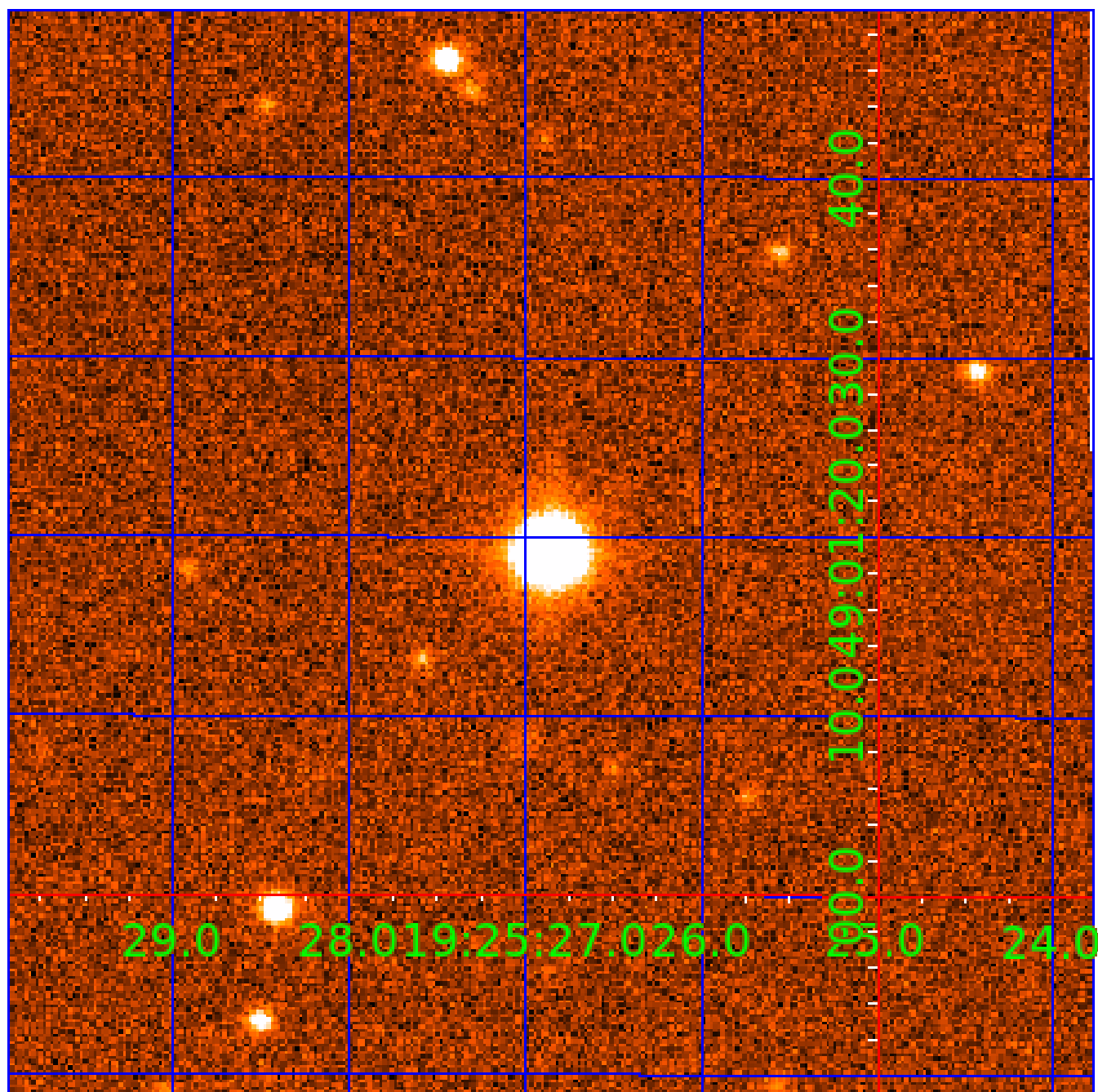


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

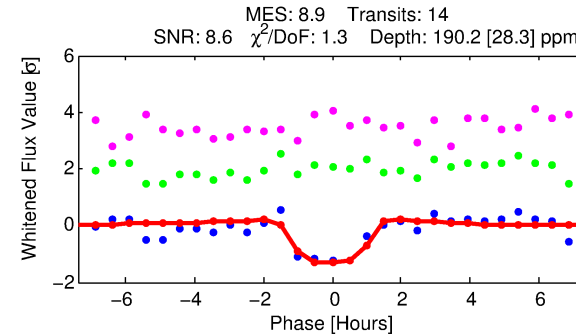
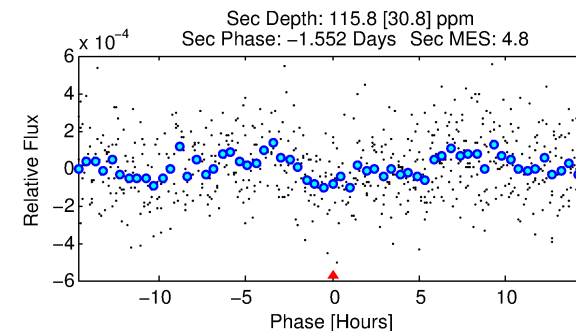
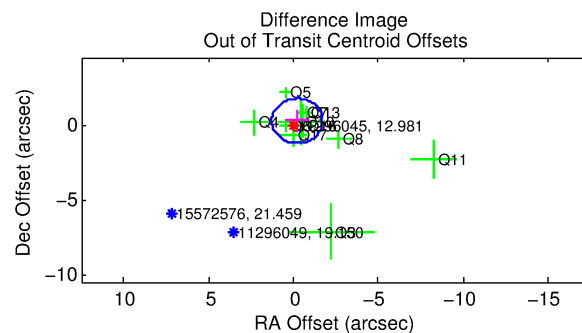
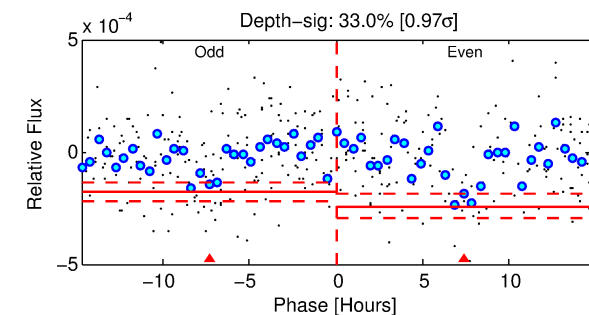
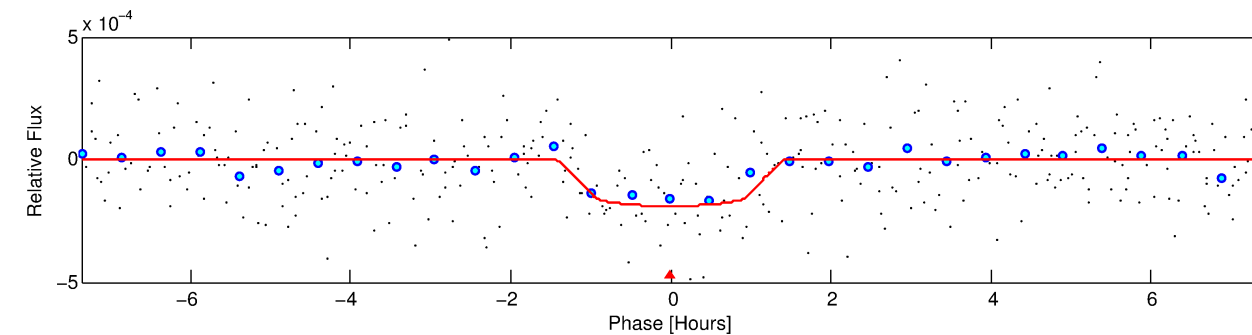
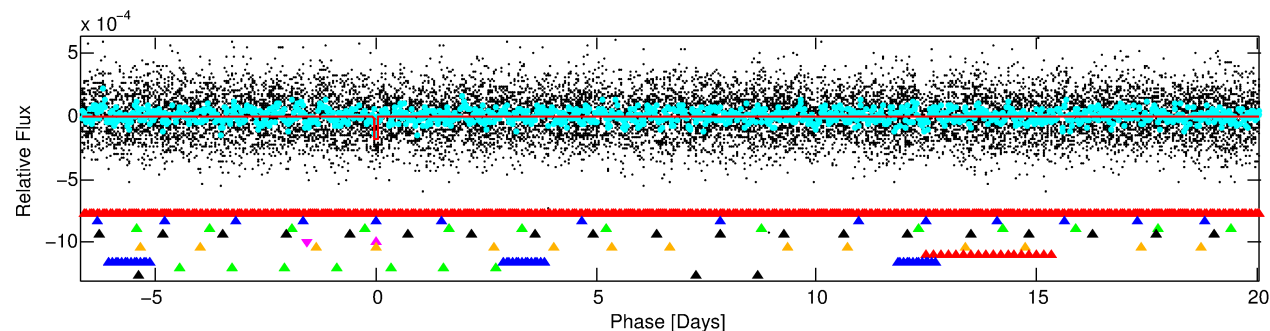
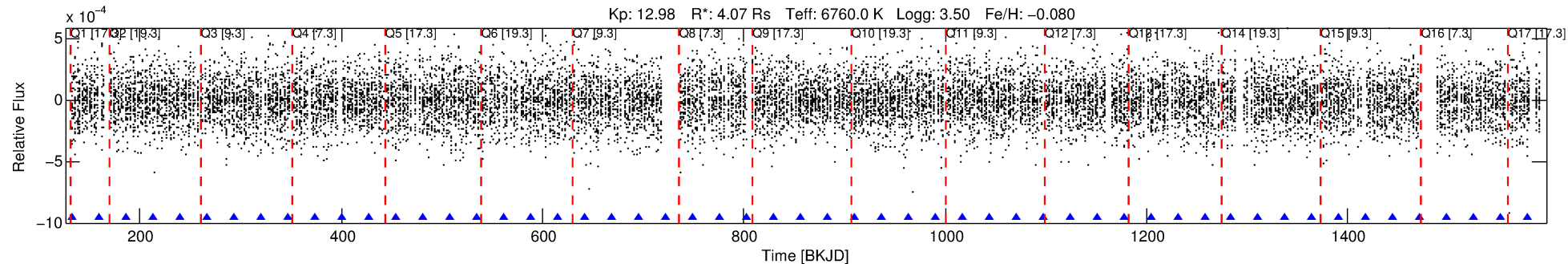
Ephemeris Match Information For 011296045-05

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 5 of 10 Period: 26.771 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 26.77102 [0.00030] d
Epoch = 133.1810 [0.0088] BKJD
Rp/R* = 0.0137 [0.0160]
a/R* = 56.65 [380.90]
b = 0.75 [3.90]
Seff = 657.84 [377.61]
Teq = 1291 [185] K
Rp = 6.10 [7.45] Re
a = 0.2170 [0.0767] AU
Ag = 80.62 [194.18] [0.41σ]
Teffp = 5983 [3508] K [1.34σ]

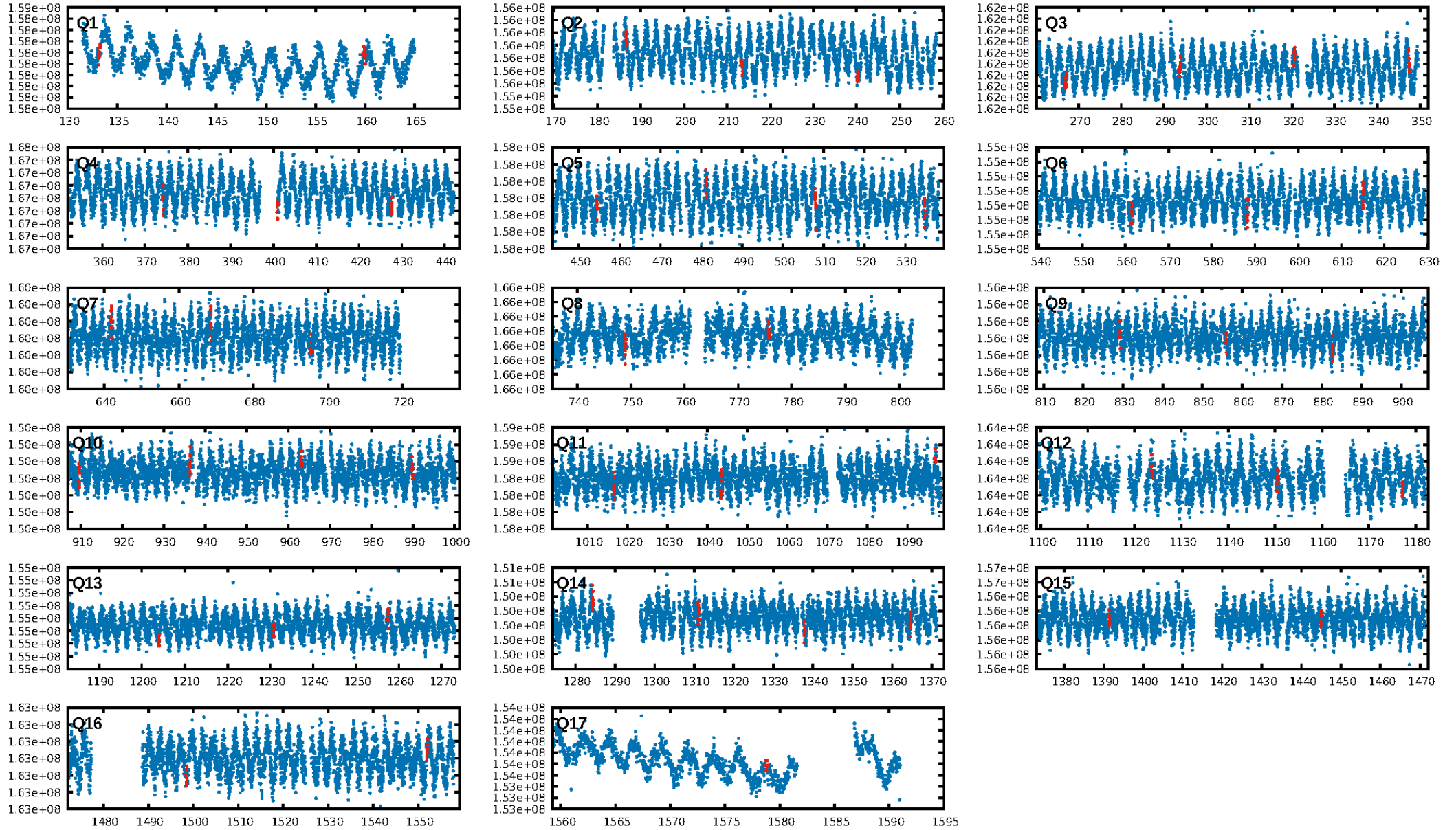
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [40.89σ]
LongPeriod-sig: 100.0% [50.50σ]
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 96.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 1.037
Centroid-sig: 1.2%
Centroid-so: 0.637 arcsec [1.41σ]
OotOffset-rm: 0.339 arcsec [0.68σ]
KicOffset-rm: 0.456 arcsec [0.75σ]
OotOffset-st: 2/3/3/3 [11]
KicOffset-st: 2/3/3/3 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 0.76 [13/17]

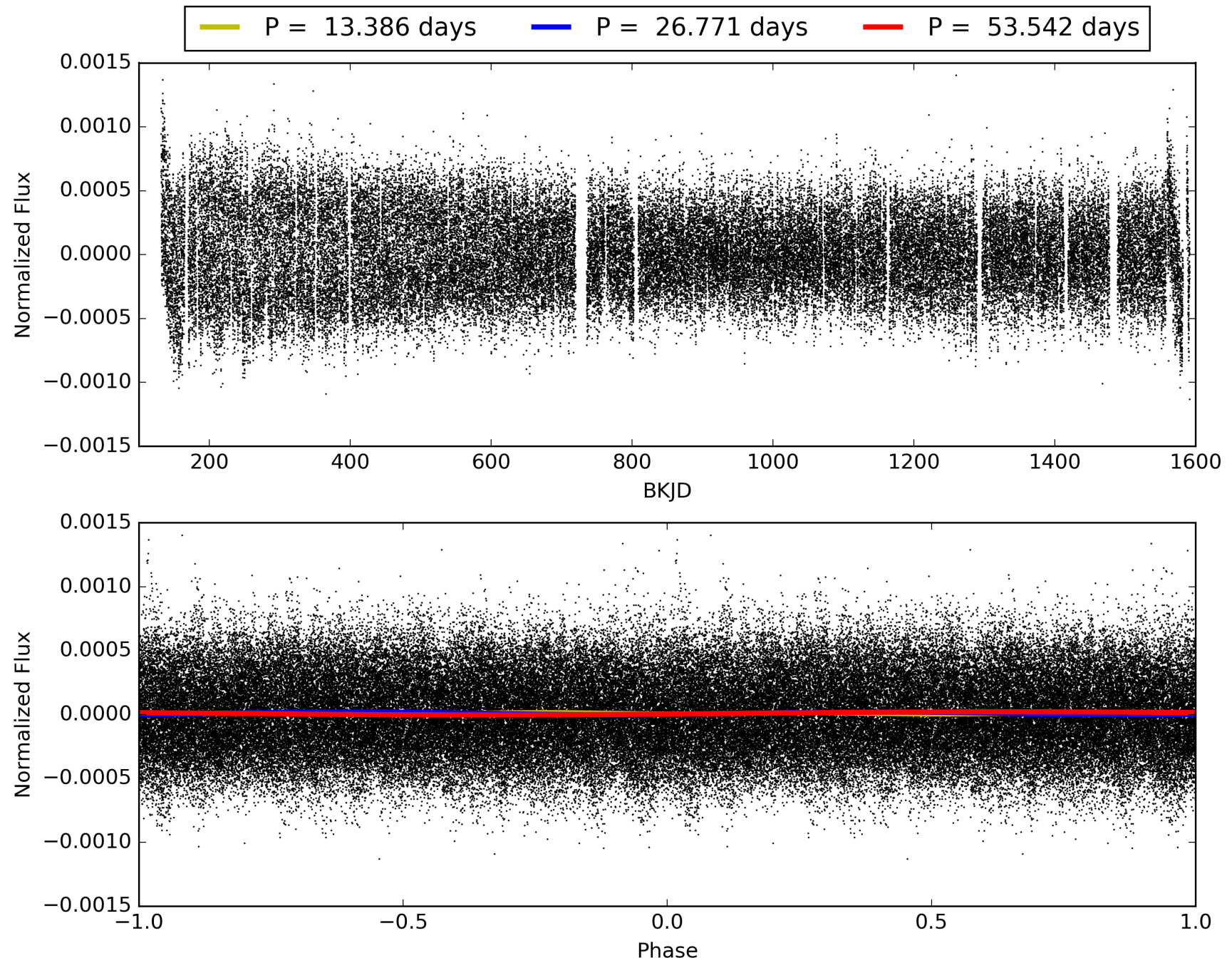
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:46:53 Z

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

TCE 011296045-05, PDC Light Curves

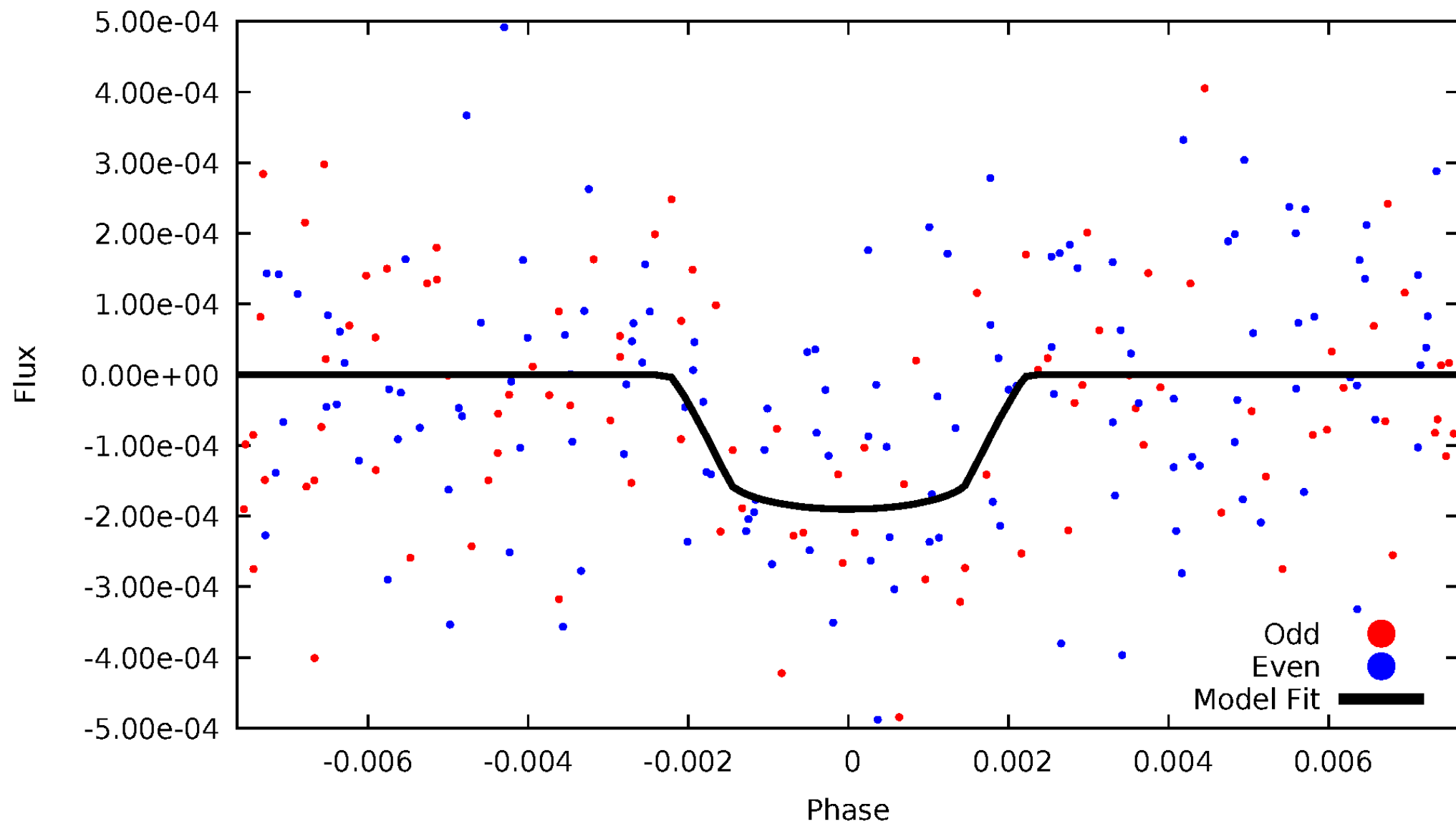


TCE 011296045-05



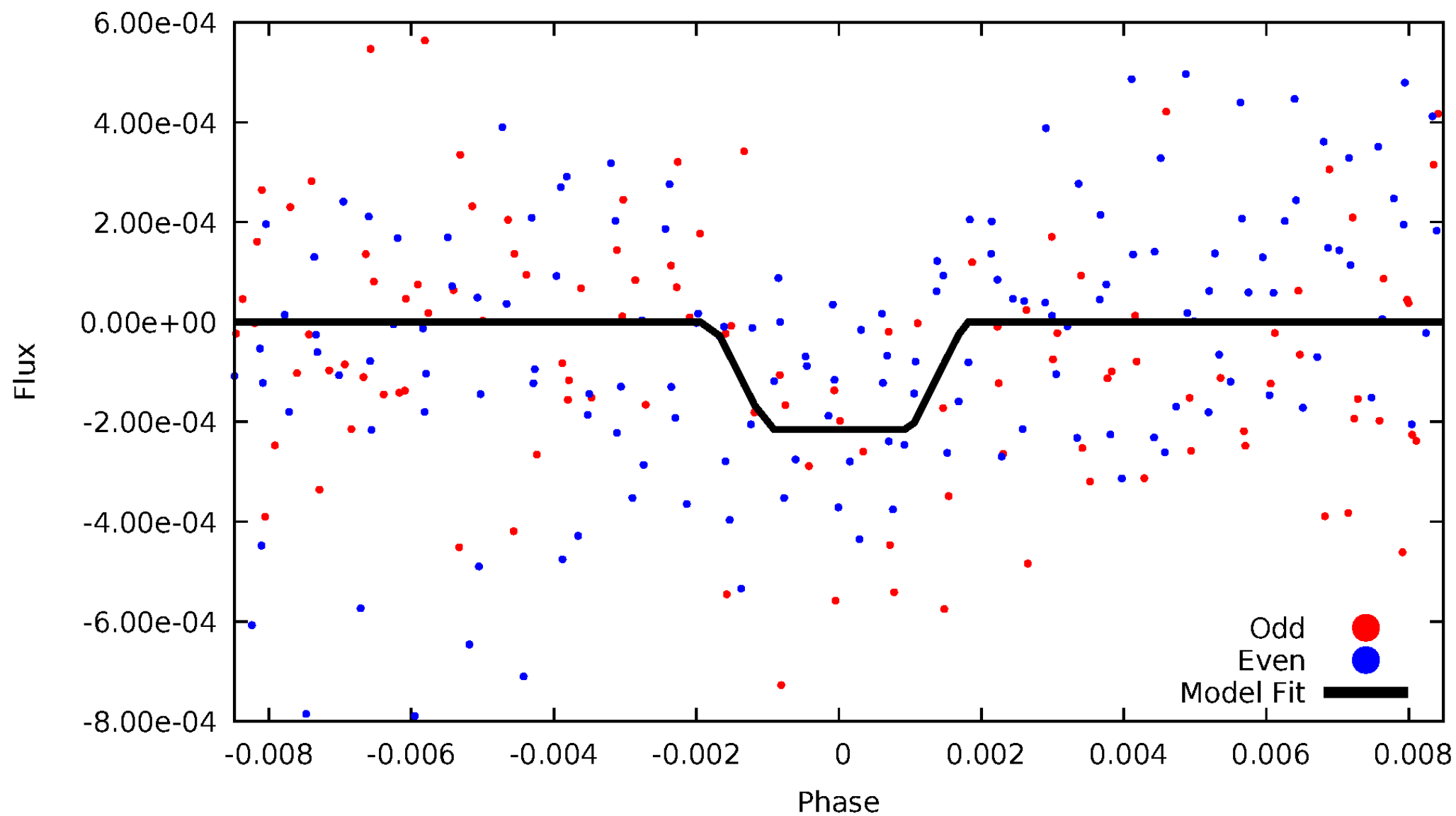
DV Odd/Even

TCE 011296045-05

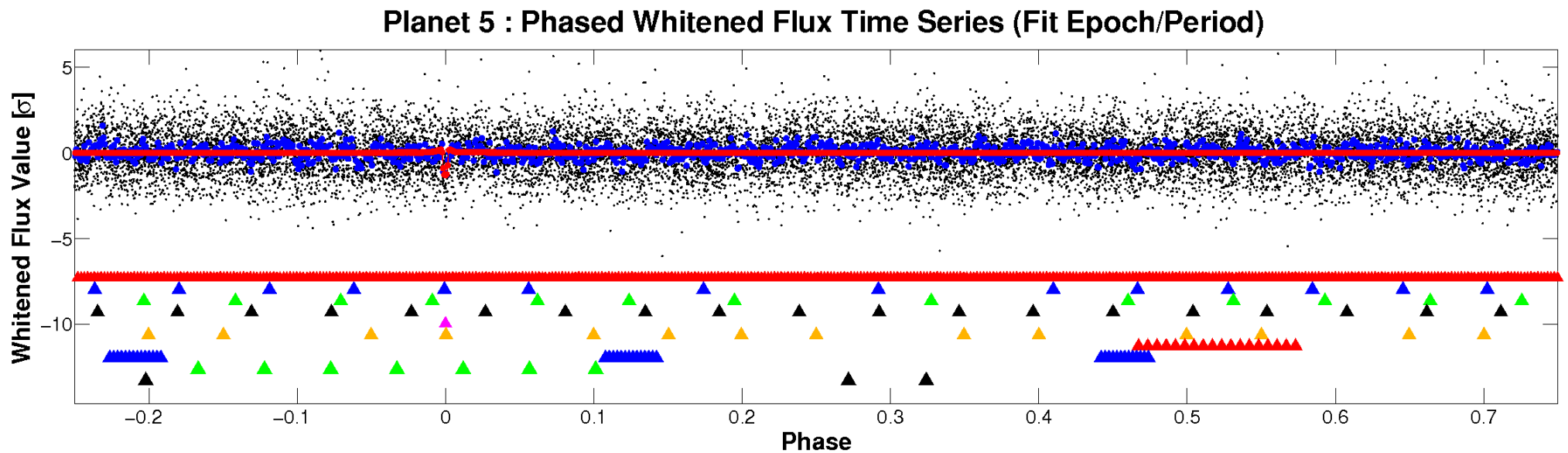
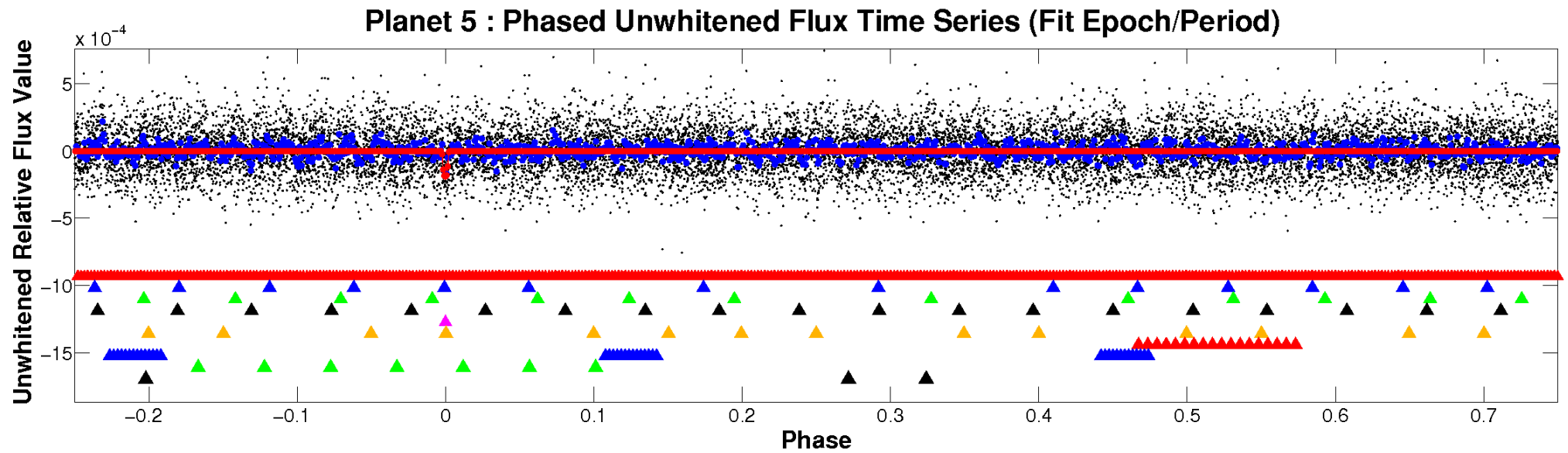


ALT Odd/Even

TCE 011296045-05

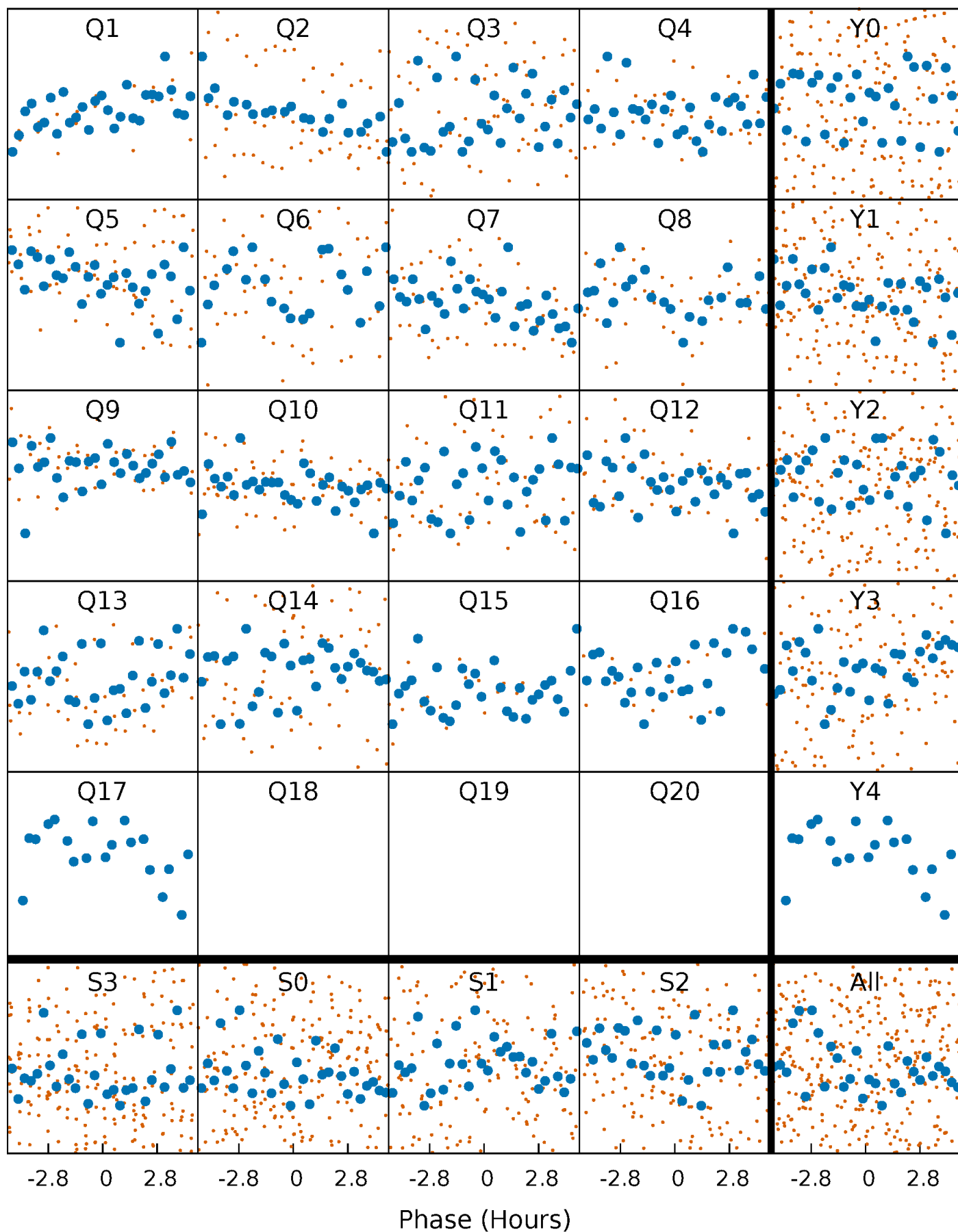


Non-Whitened Vs. Whitened Light Curve



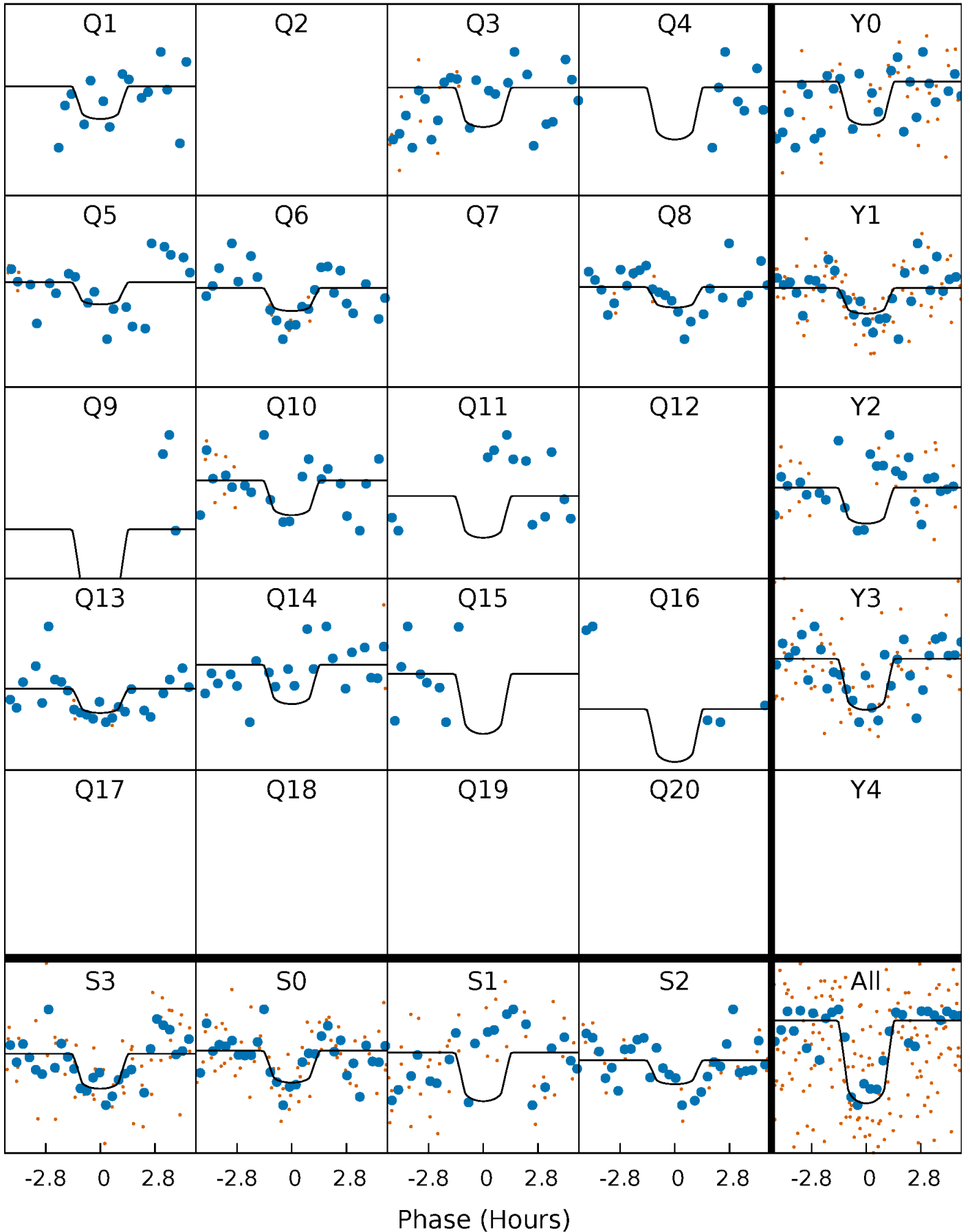
PDC Quarter-Phased Transit Curves

TCE 011296045-05 $P = 26.771024$ Days $T_0 = 133.180954$ (BKJD)



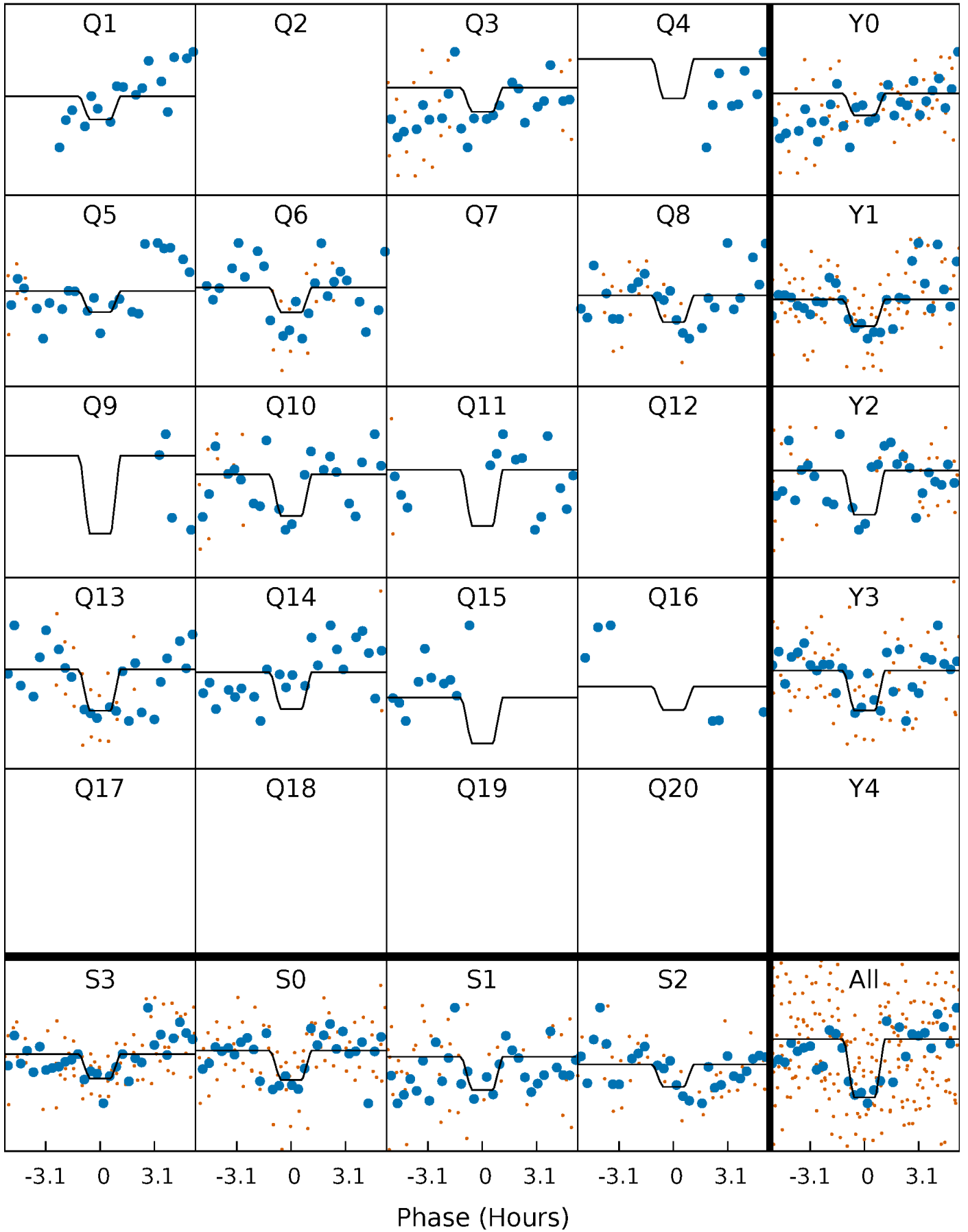
DV Quarter-Phased Transit Curves

TCE 011296045-05 P= 26.771024 Days $T_0=133.180954$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

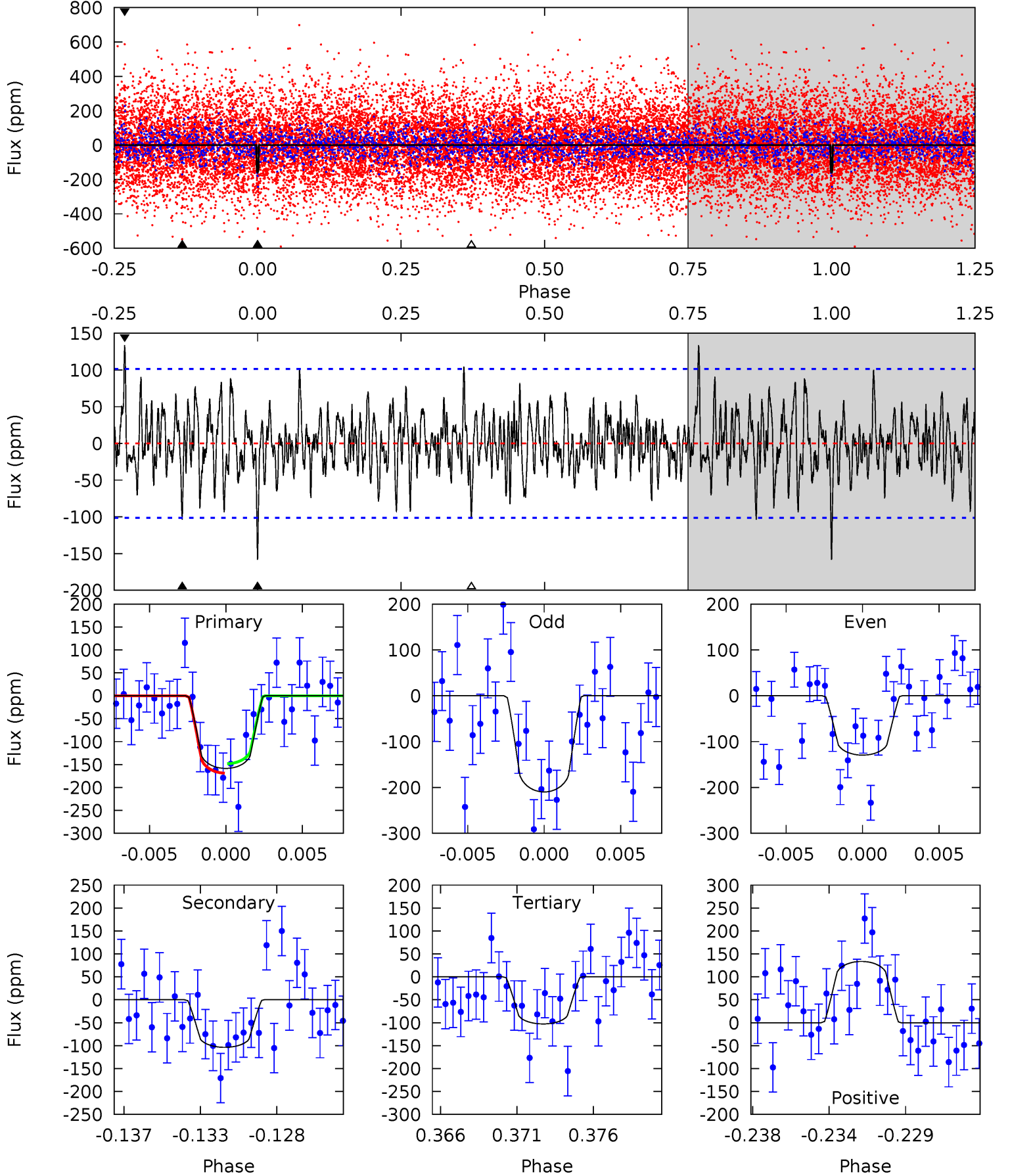
TCE 011296045-05 $P = 26.770493$ Days $T_0 = 133.189341$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-05, P = 26.771024 Days, E = 106.409930 Days

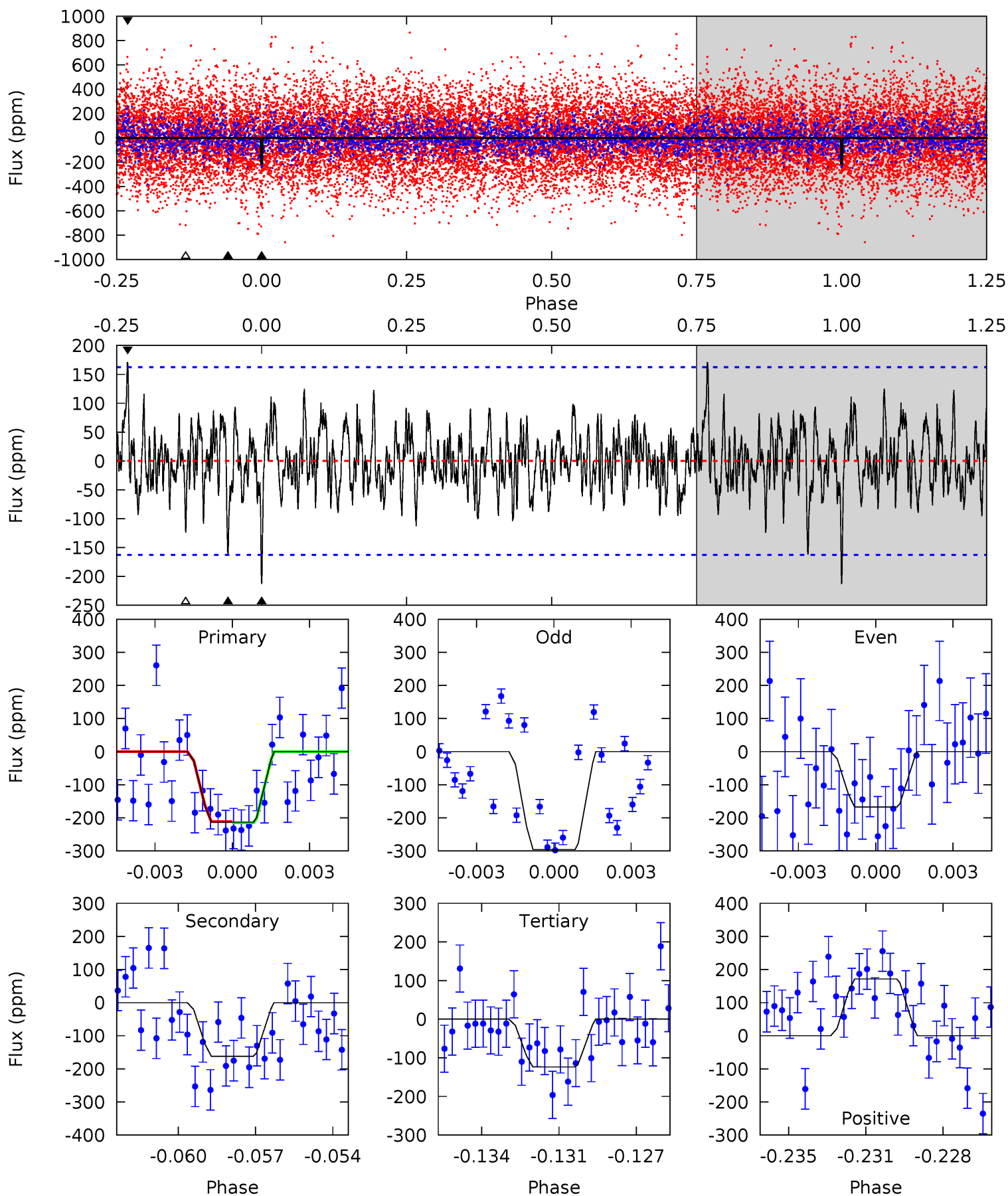
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.08	5.29	5.24	6.81	5.17	2.84	1.69	2.84	1.27	0.05	-1.52	1.98	0.79	0.46	0.52



Alt Model-Shift Uniqueness Test

011296045-05, P = 26.770493 Days, E = 106.418848 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.87	5.22	3.99	5.51	5.23	2.93	1.38	2.88	1.35	1.23	-0.29	2.01	1.27	0.45	0.06



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-104 ± 20	$7.09^{+6.13}_{-4.44}$	1780^{+84}_{-144}	5160^{+3548}_{-1059}	54^{+324}_{-39}
Alt.	-162 ± 31	$7.58^{+6.23}_{-4.83}$	1779^{+91}_{-157}	5586^{+4611}_{-1218}	73^{+491}_{-52}

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

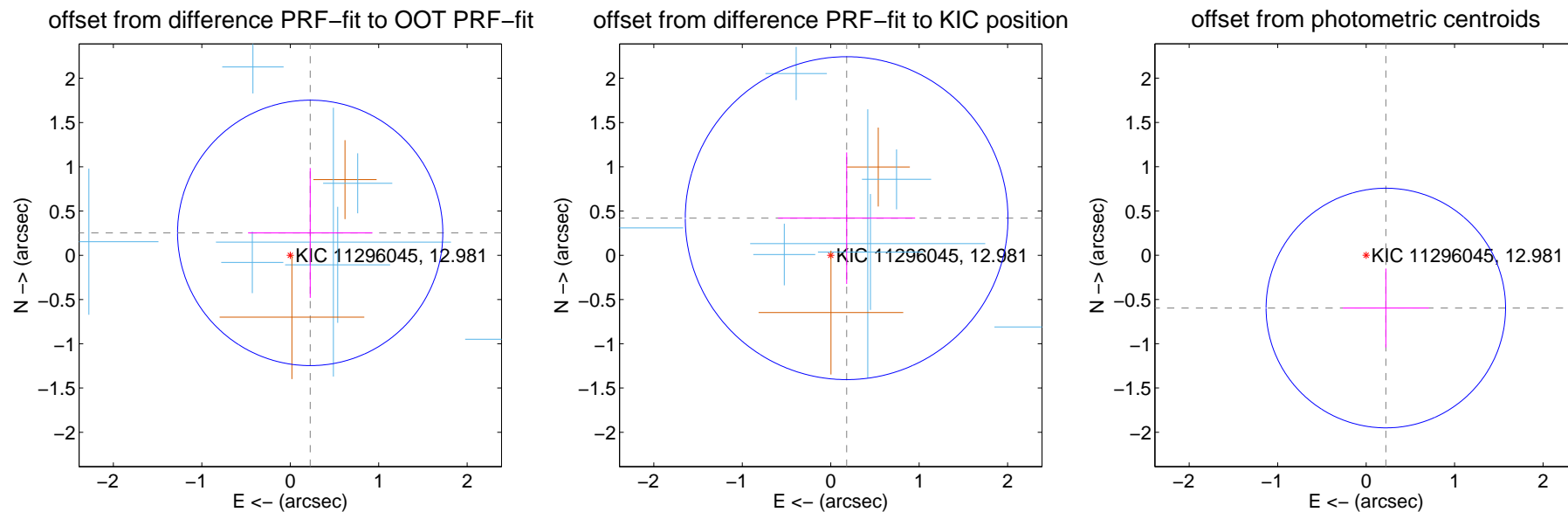
DV Centroid Data

Supplemental centroid analysis for 011296045-05. Kepler magnitude: 12.98. Transit SNR 8.59

There are 7 quarters with good PRF difference image offsets

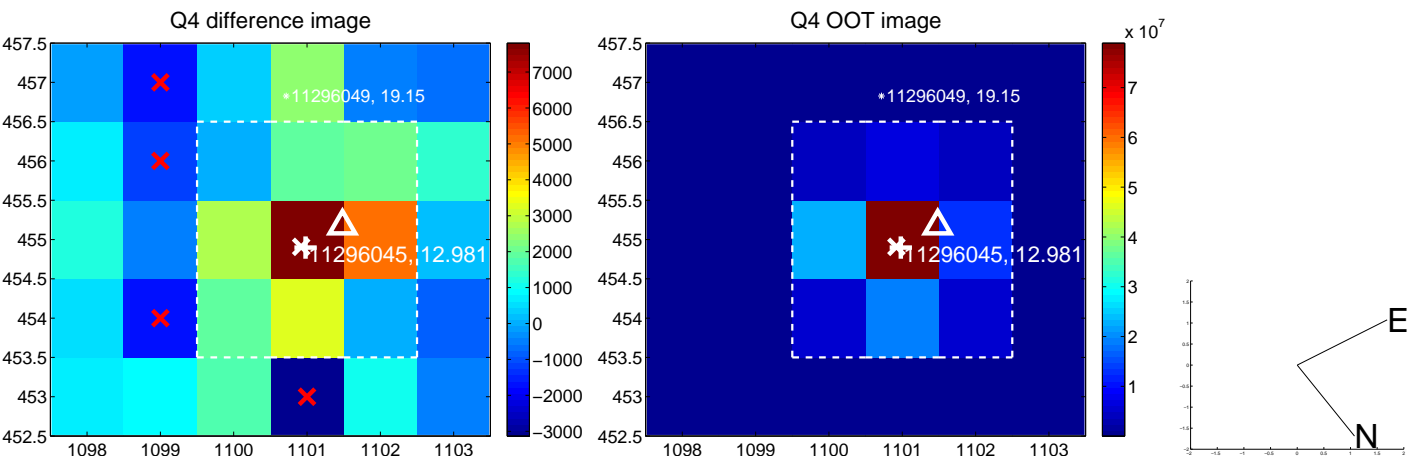
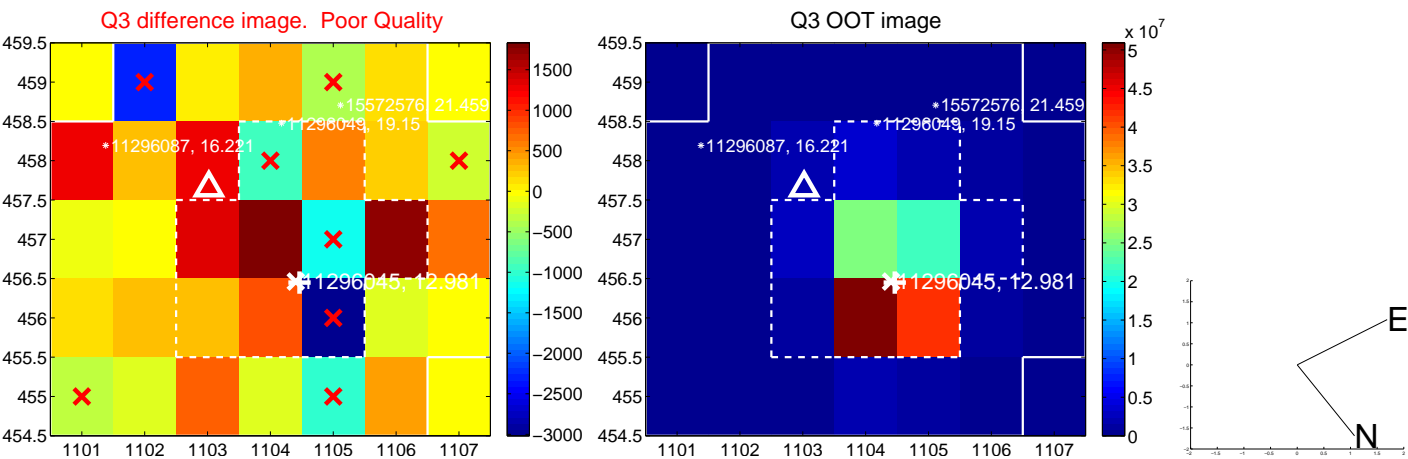
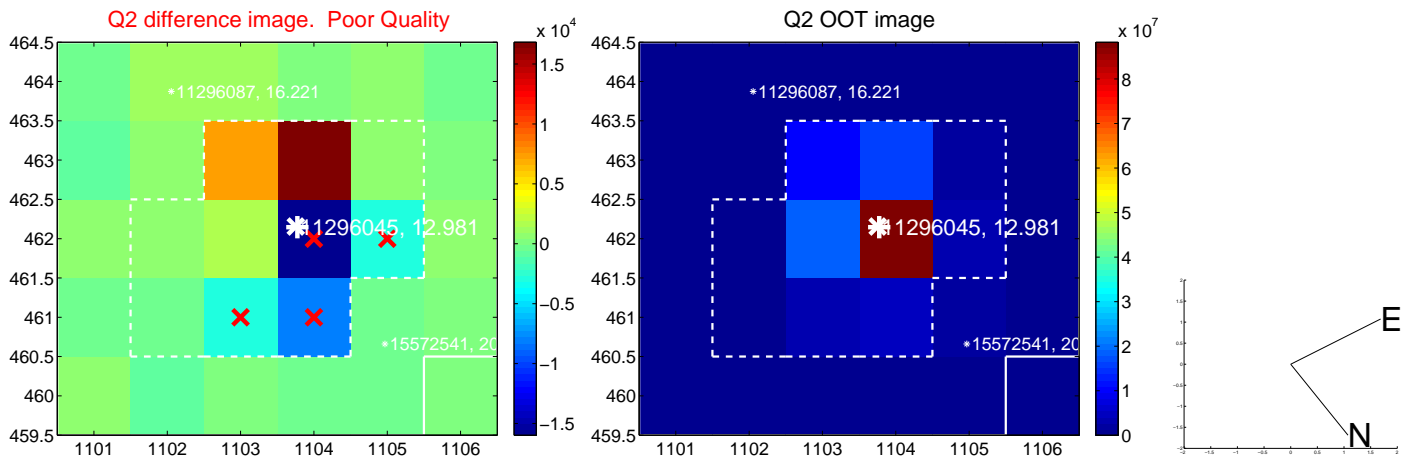
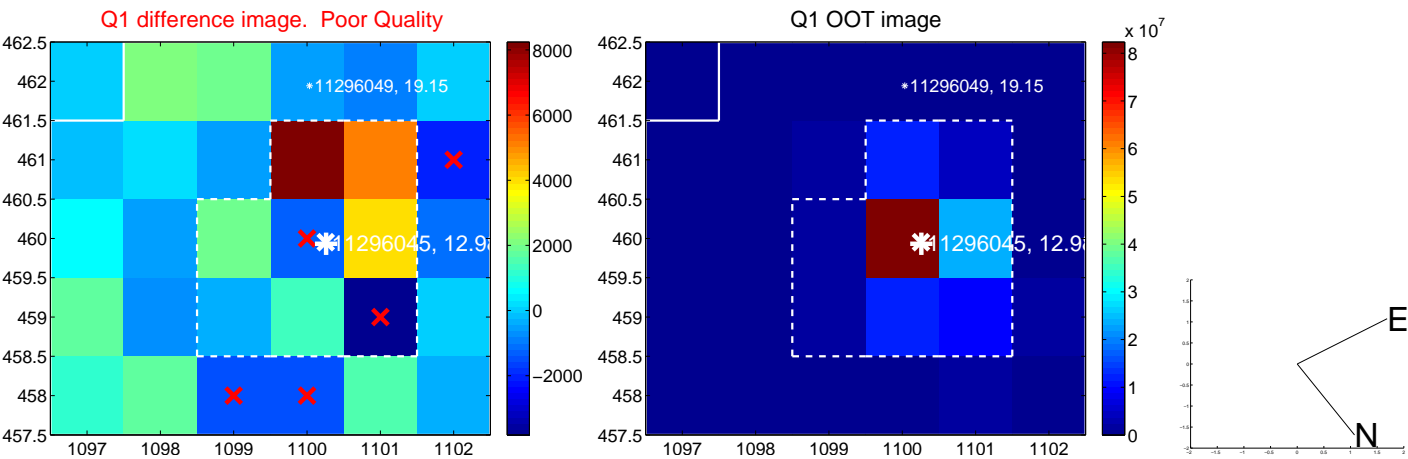
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.339 ± 0.500	0.68	-0.225 ± 0.703	0.253 ± 0.734
PRF-fit source offset from KIC position	0.456 ± 0.608	0.75	-0.180 ± 0.774	0.419 ± 0.743
photometric centroid source offset	0.64 ± 0.45	1.41	-0.22 ± 0.49	-0.60 ± 0.45

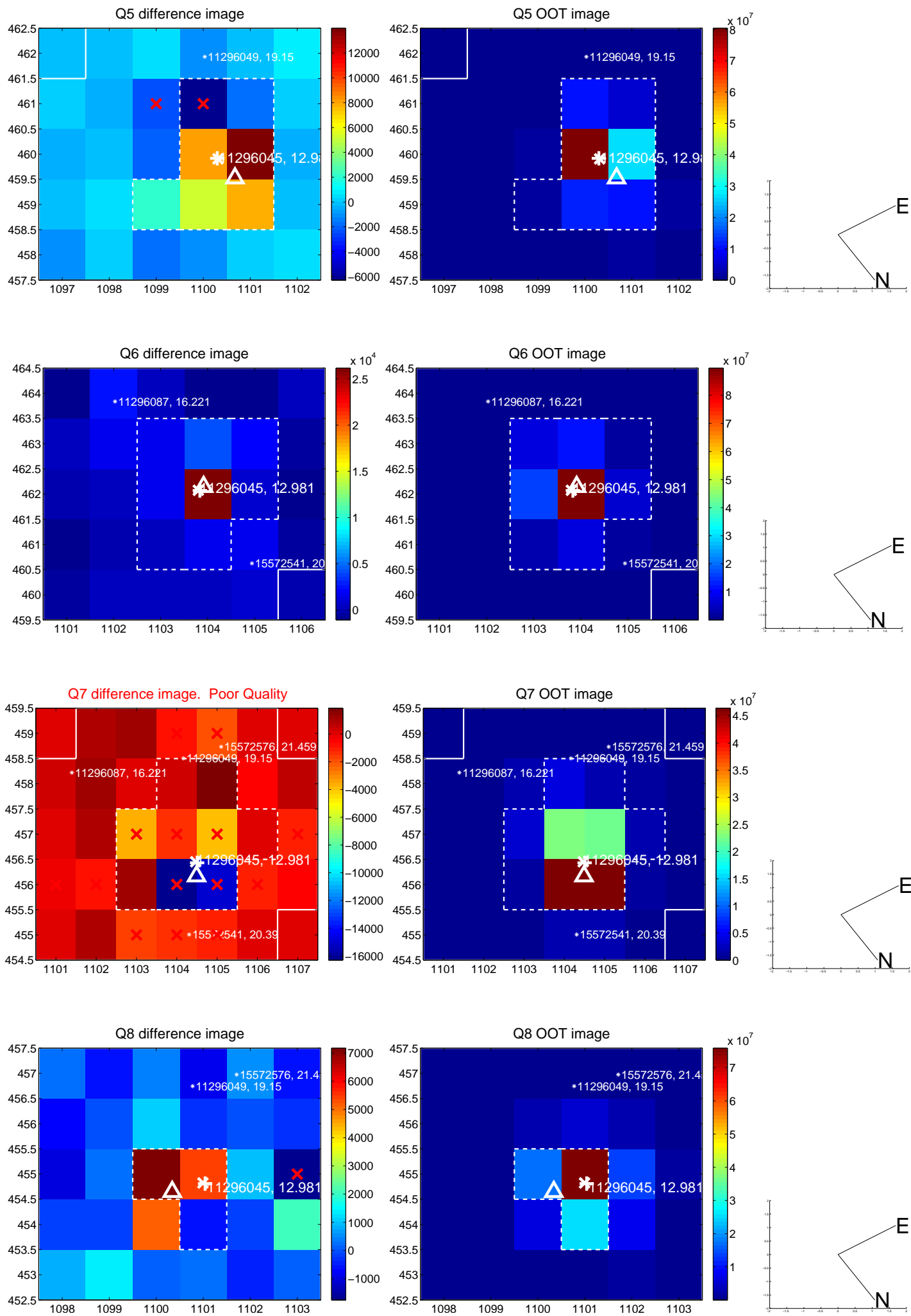


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

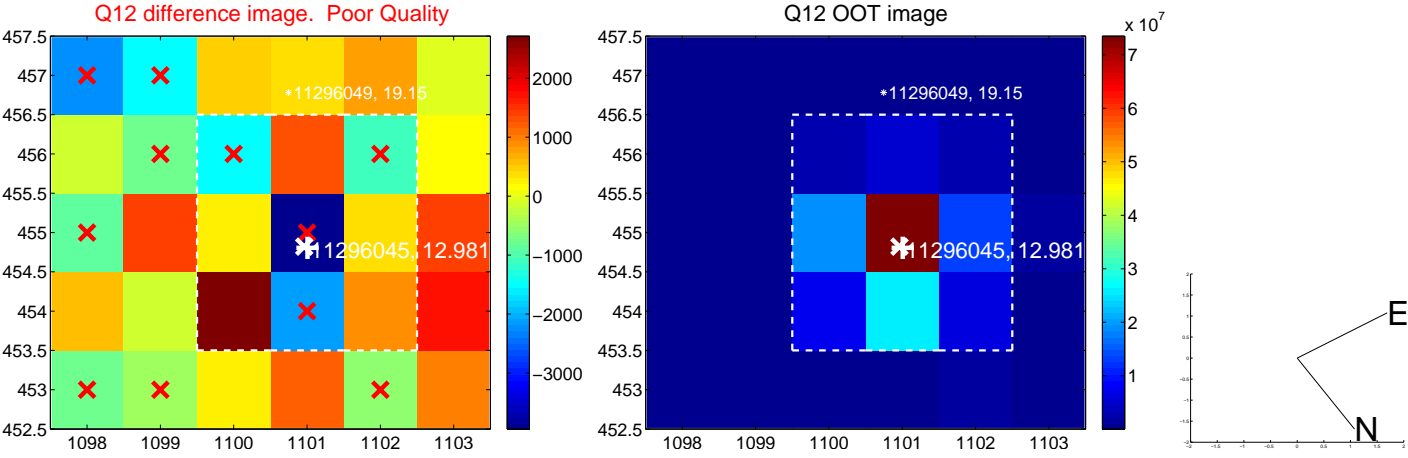
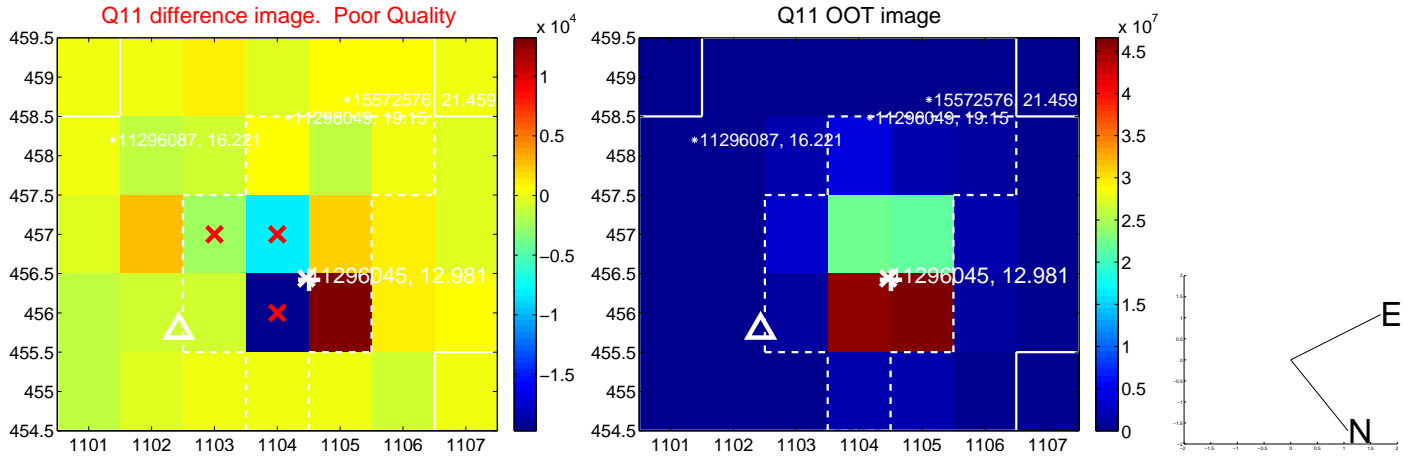
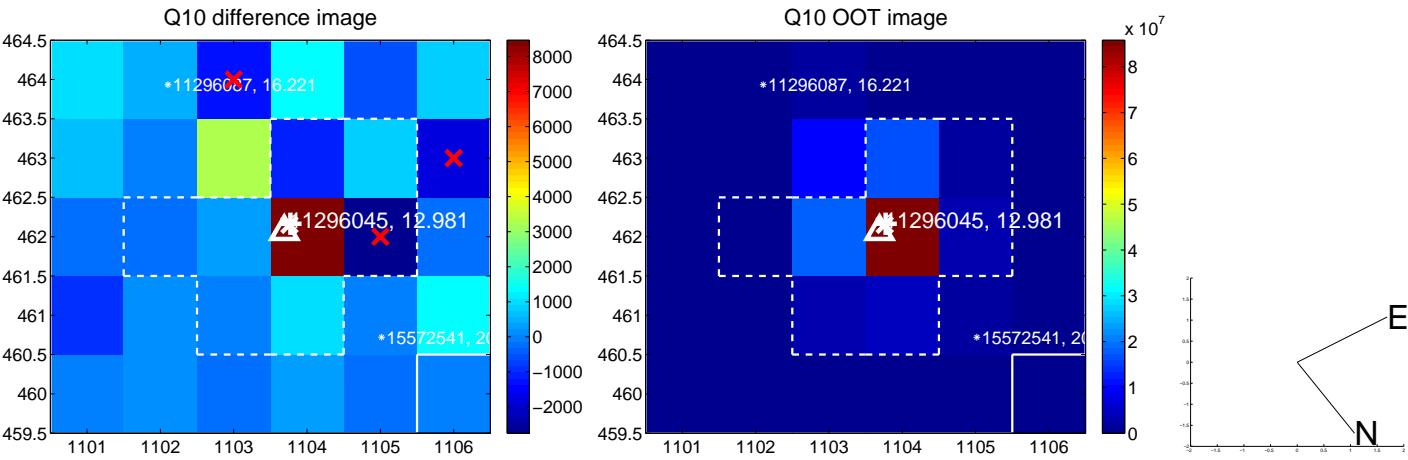
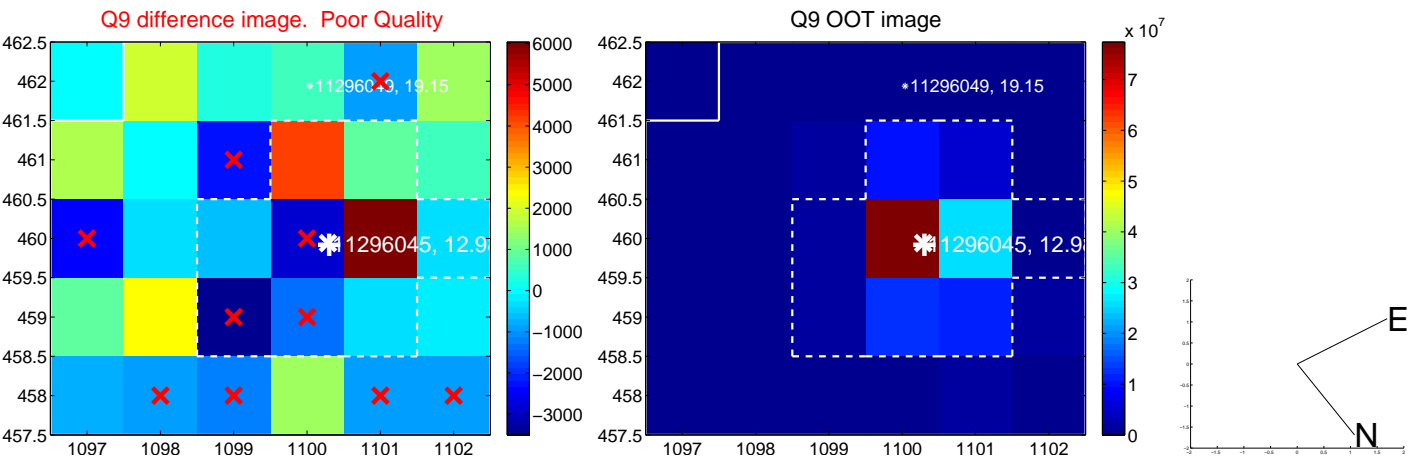
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



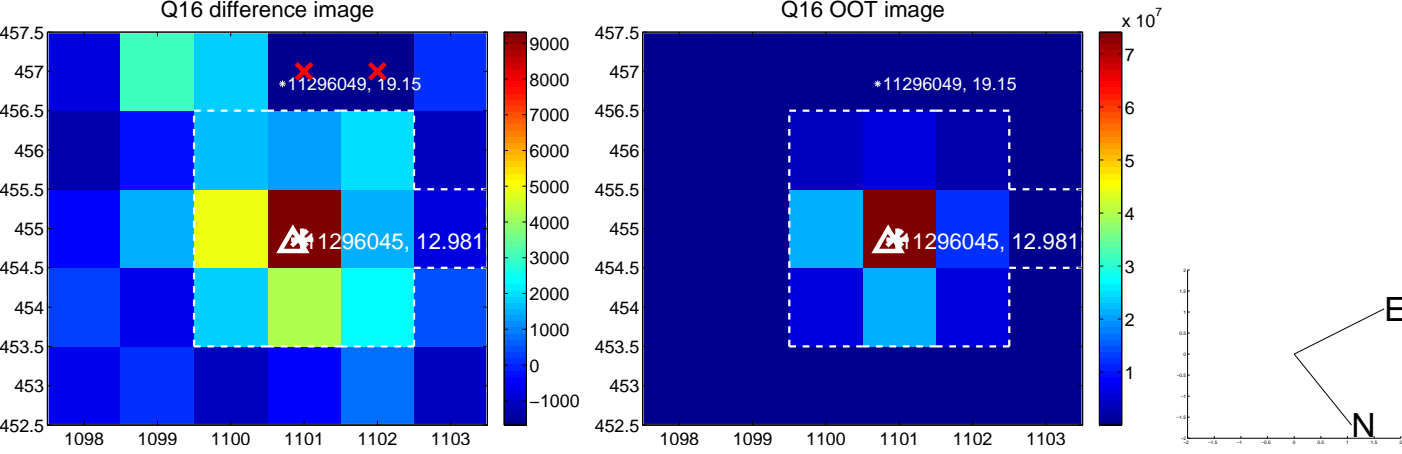
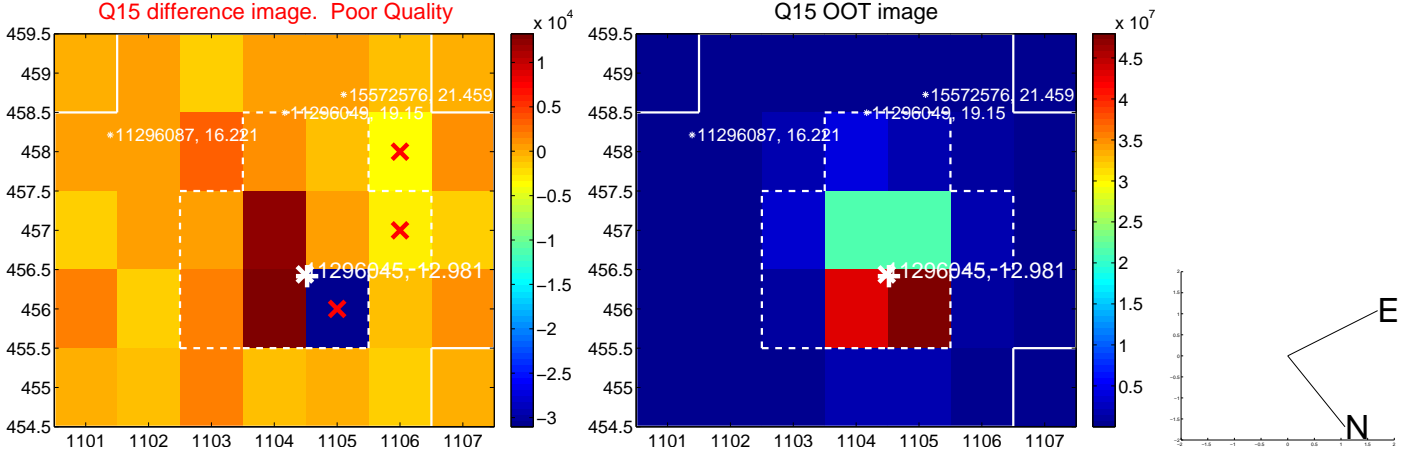
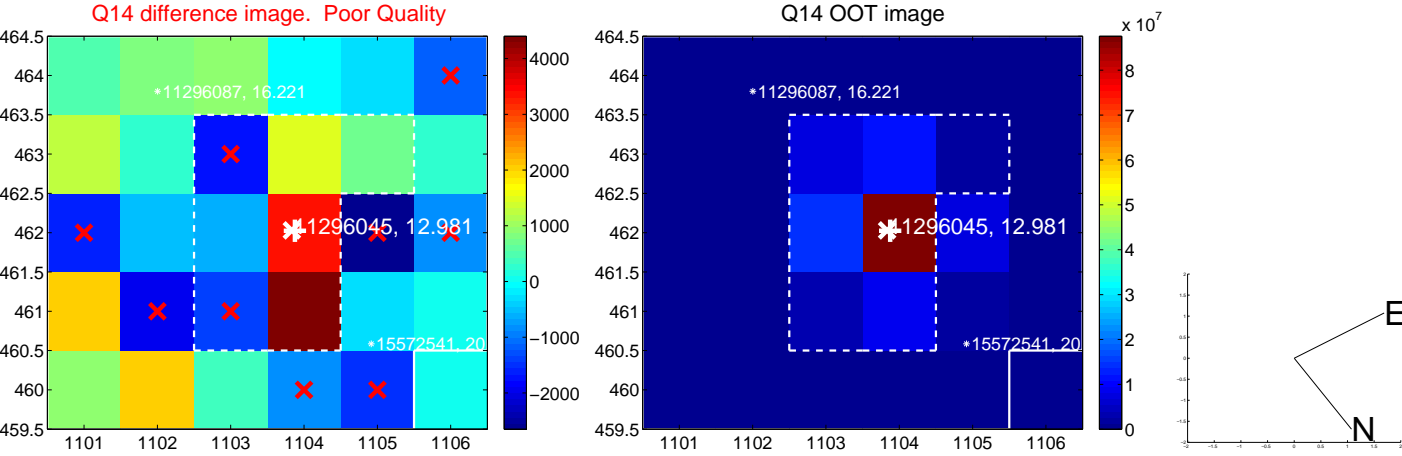
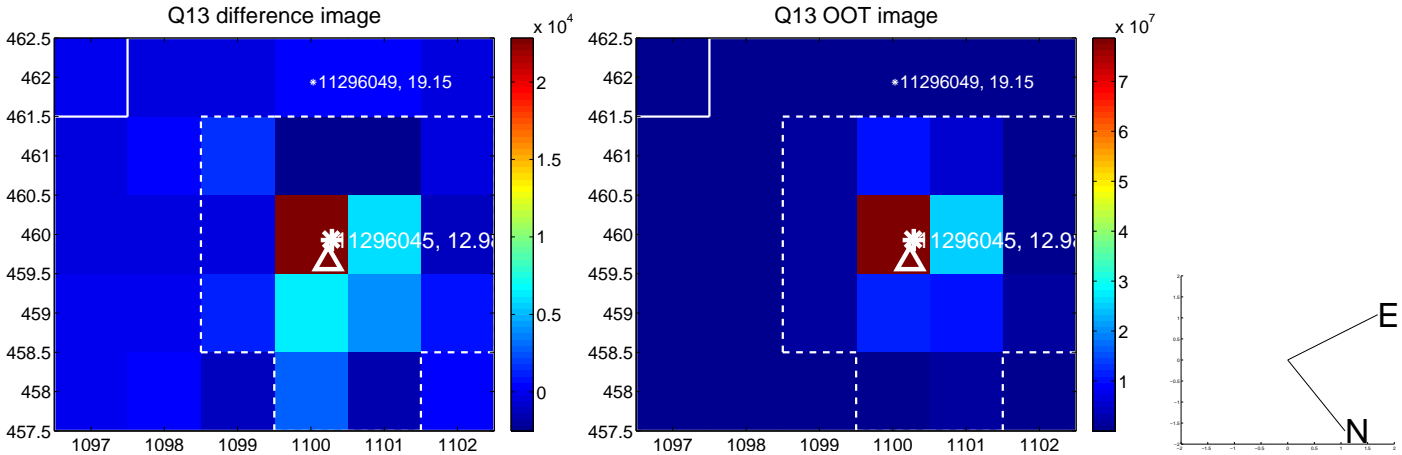
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



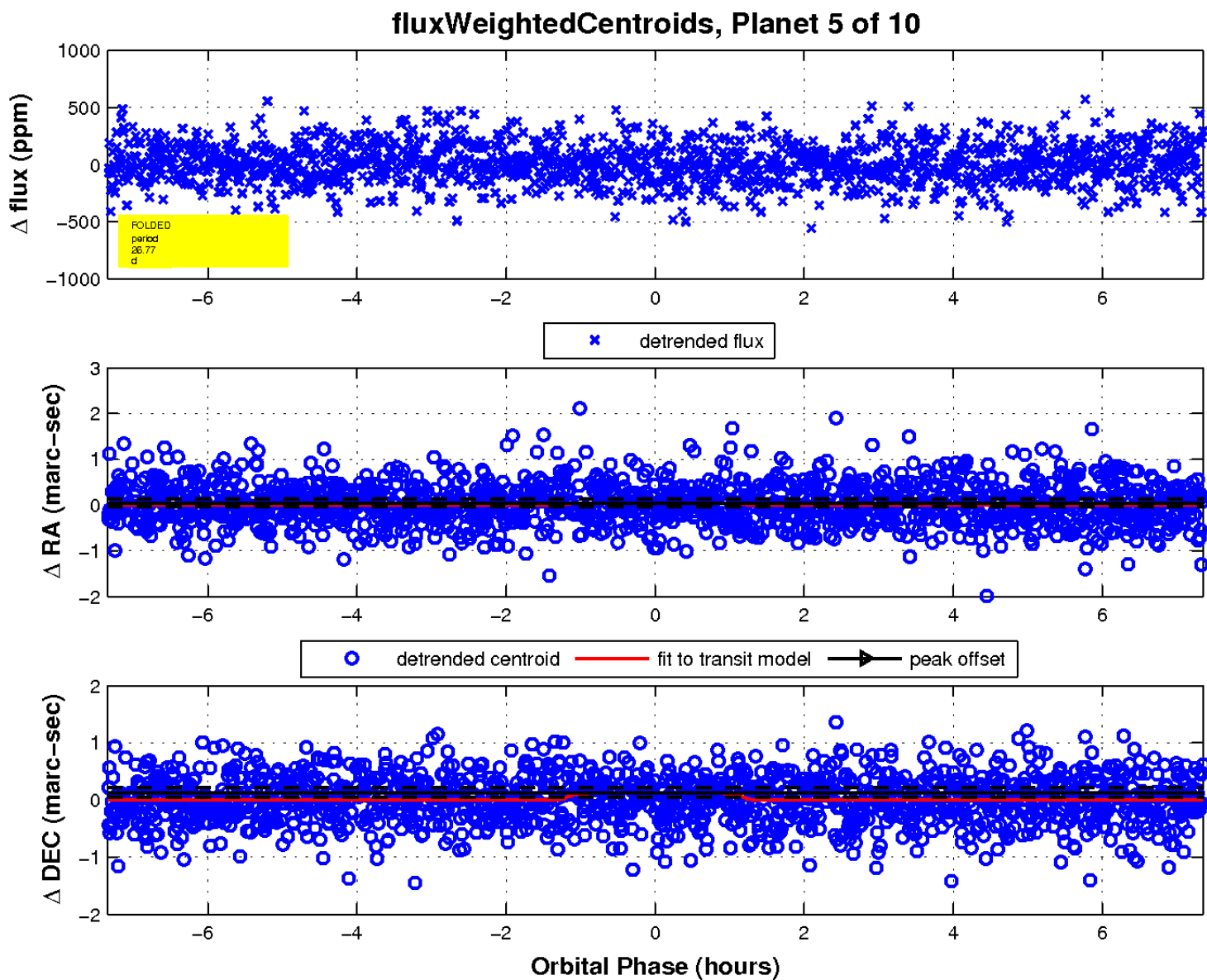
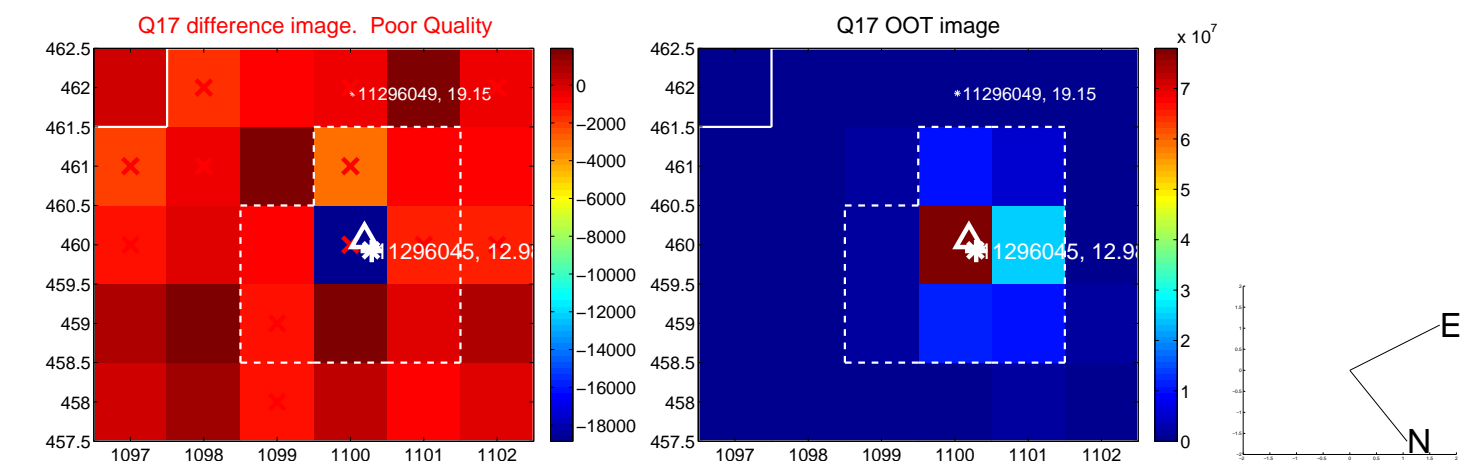
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

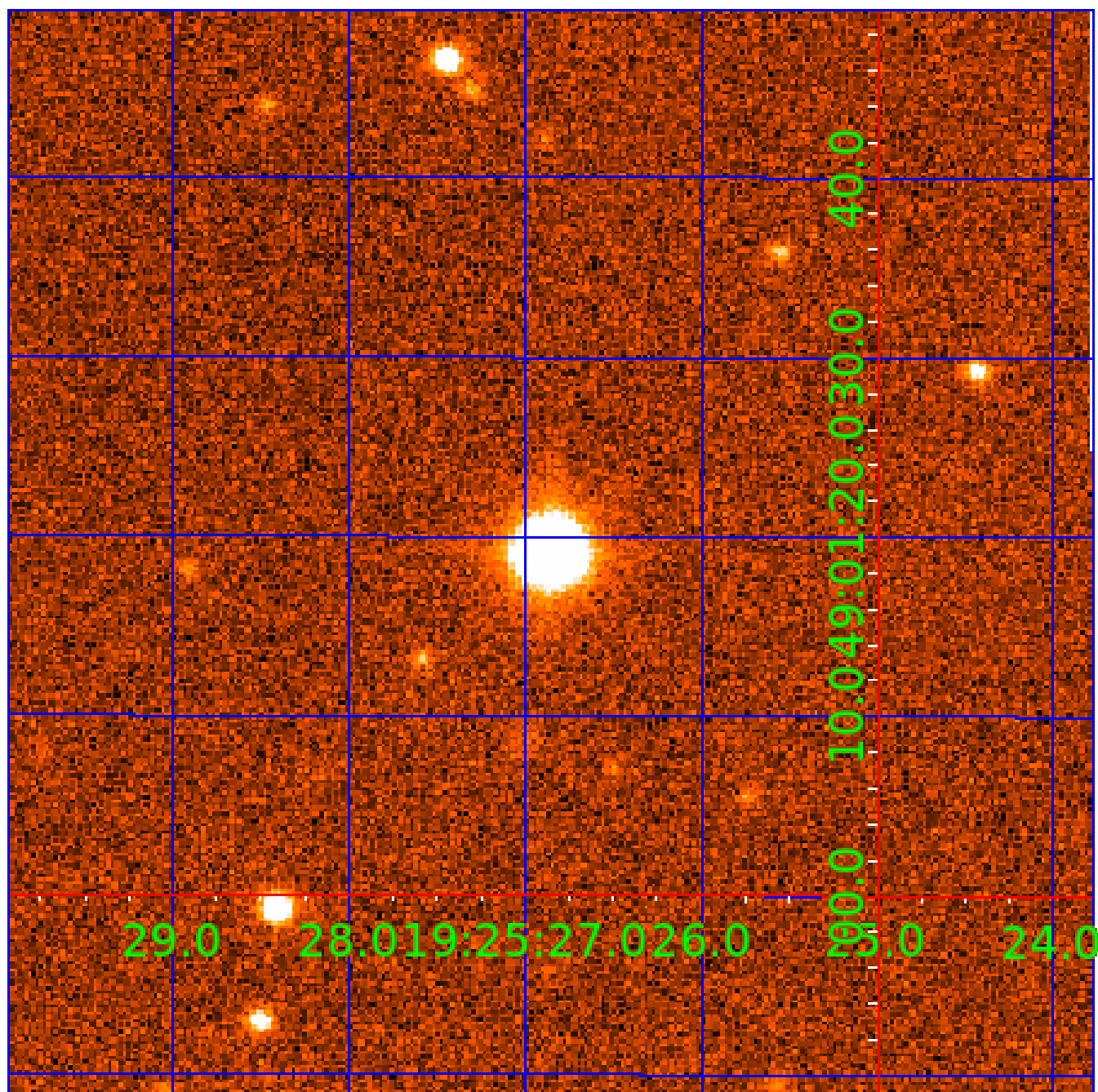


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

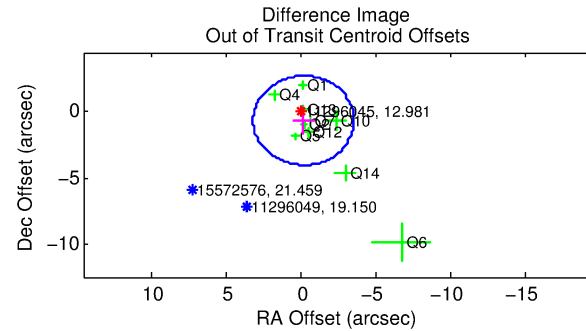
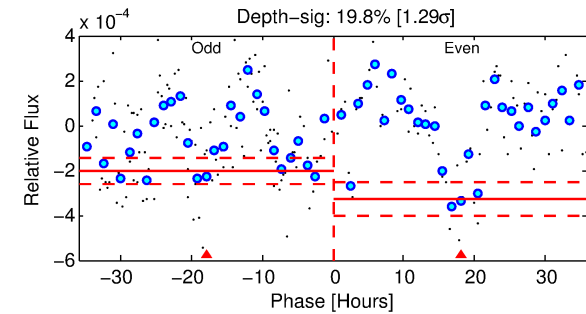
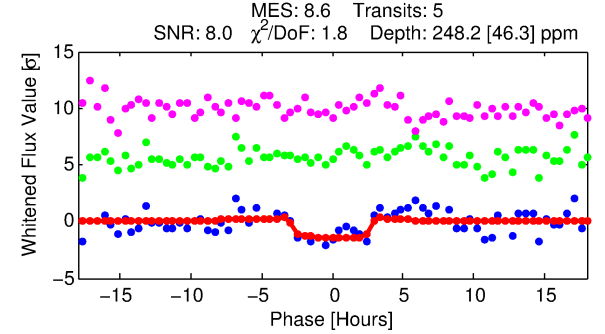
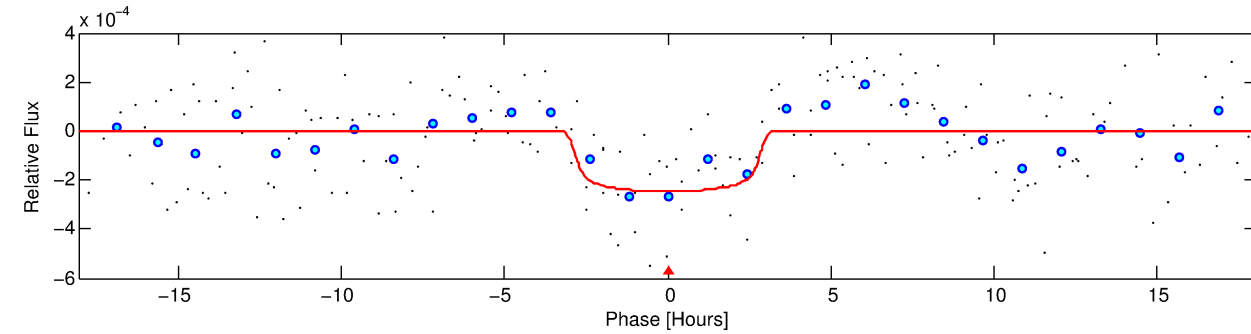
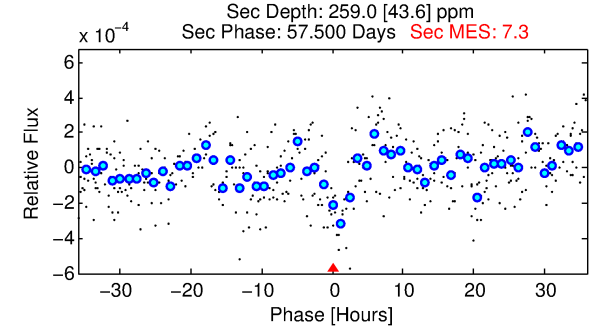
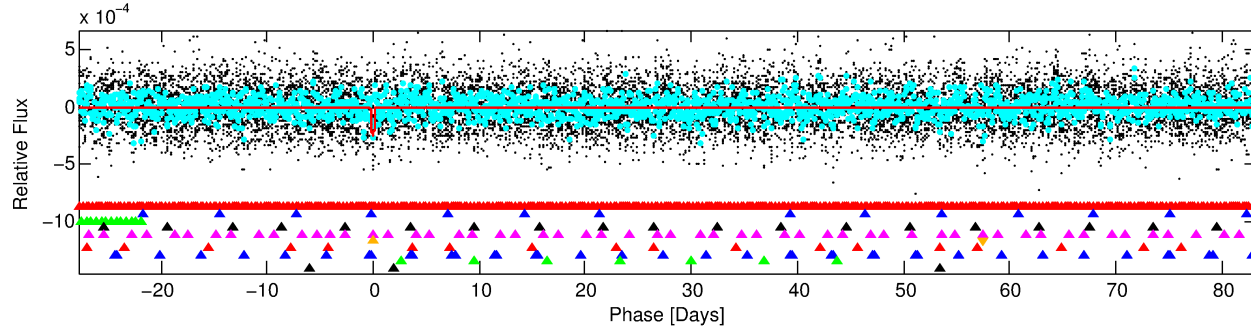
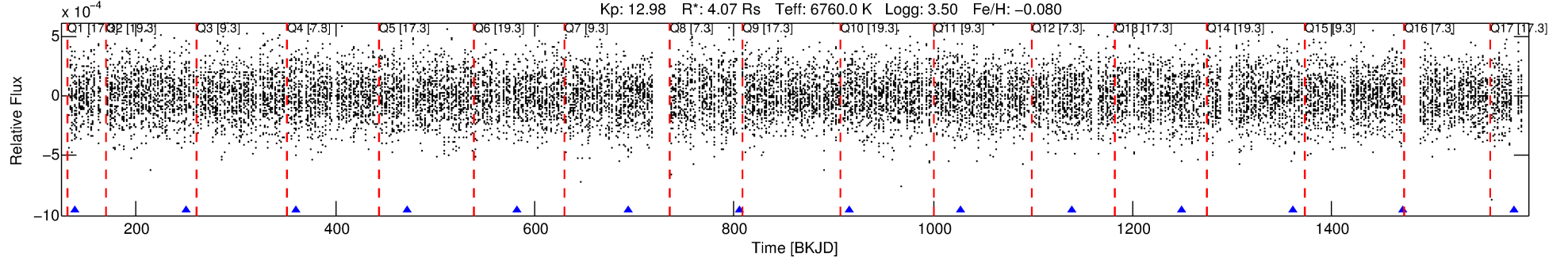
Ephemeris Match Information For 011296045-06

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 6 of 10 Period: 111.102 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 111.10172 [0.00273] d
Epoch = 138.5207 [0.0183] BKJD
Rp/R* = 0.0162 [0.0151]
a/R* = 80.75 [439.57]
b = 0.84 [1.93]
Seff = 98.64 [56.62]
Teq = 804 [115] K
Rp = 7.20 [7.23] Re
a = 0.5604 [0.1982] AU
Ag = 864.22 [1690.71] [0.51σ]
Teffp = 6736 [3163] K [1.87σ]

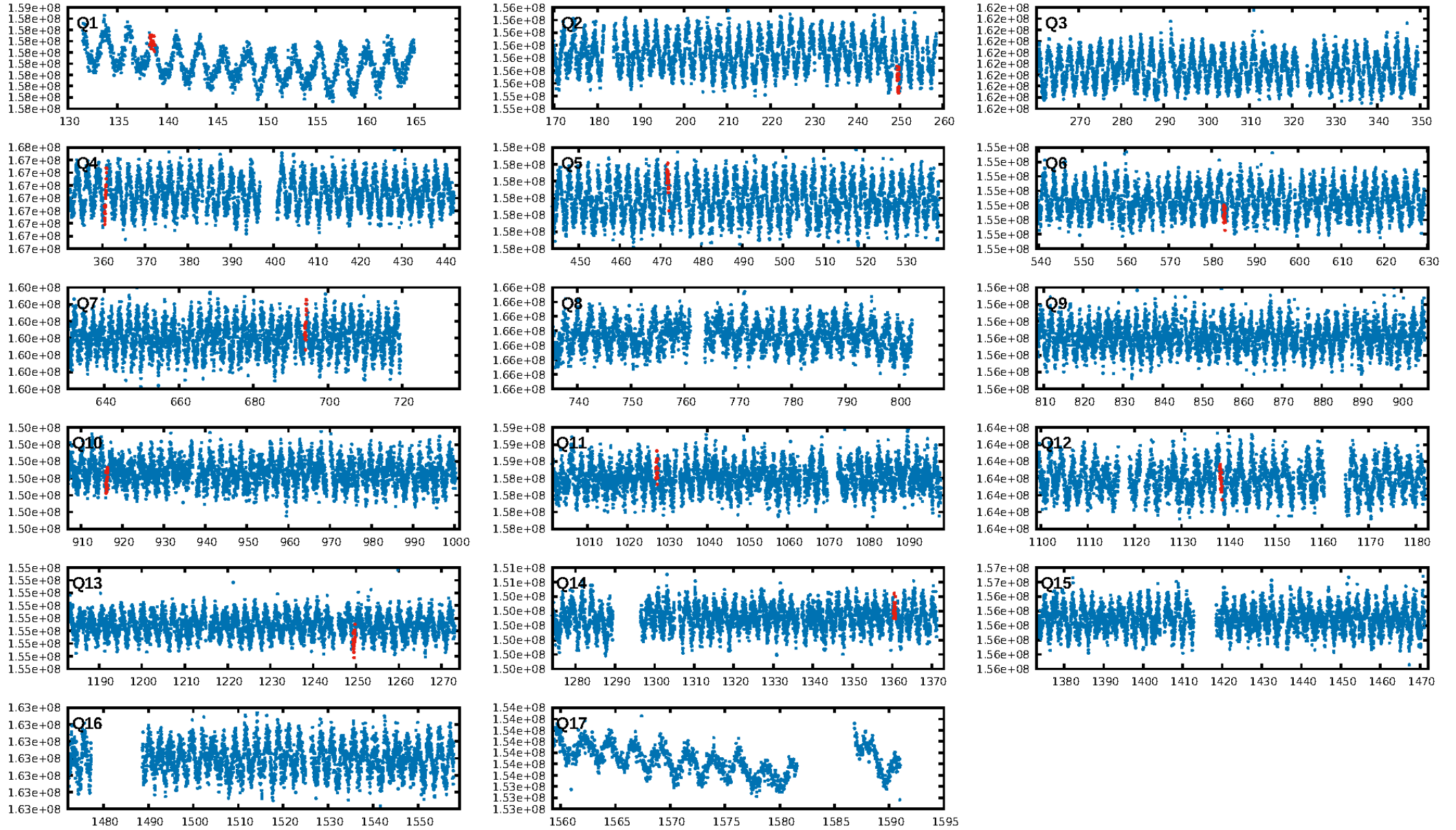
DV Diagnostic Results:

ShortPeriod-sig: 80.7% [1.30σ]
LongPeriod-sig: 100.0% [352.28σ]
ModelChiSquare2-sig: 30.6%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.247
Centroid-sig: 45.2%
Centroid-so: 0.411 arcsec [0.83σ]
OotOffset-rm: 0.695 arcsec [0.62σ]
OotOffset-st: 4/1/2/3 [10]
KicOffset-rm: 0.627 arcsec [0.50σ]
KicOffset-st: 4/1/2/3 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 0.40 [4/10]

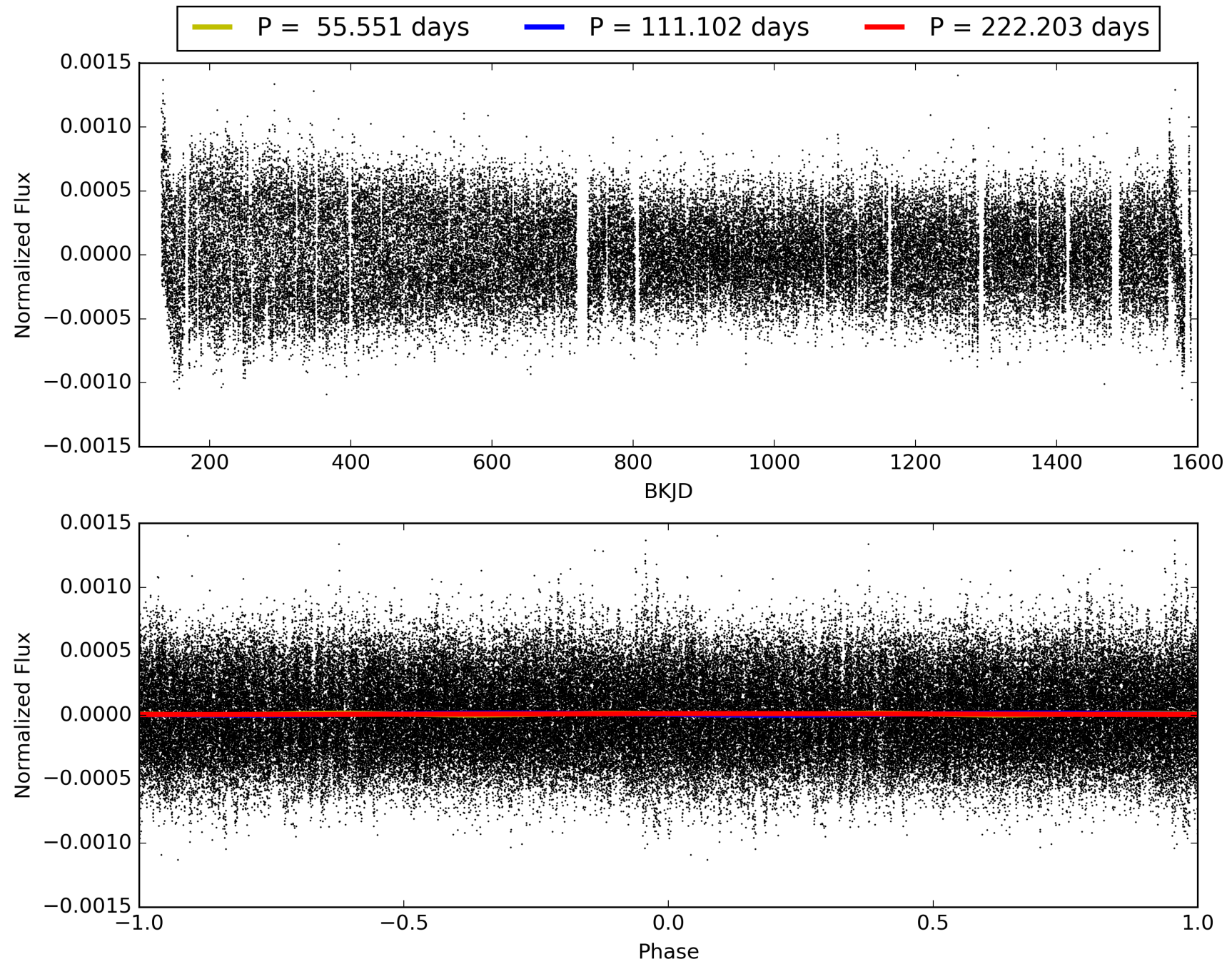
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:46:57 Z

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

TCE 011296045-06, PDC Light Curves

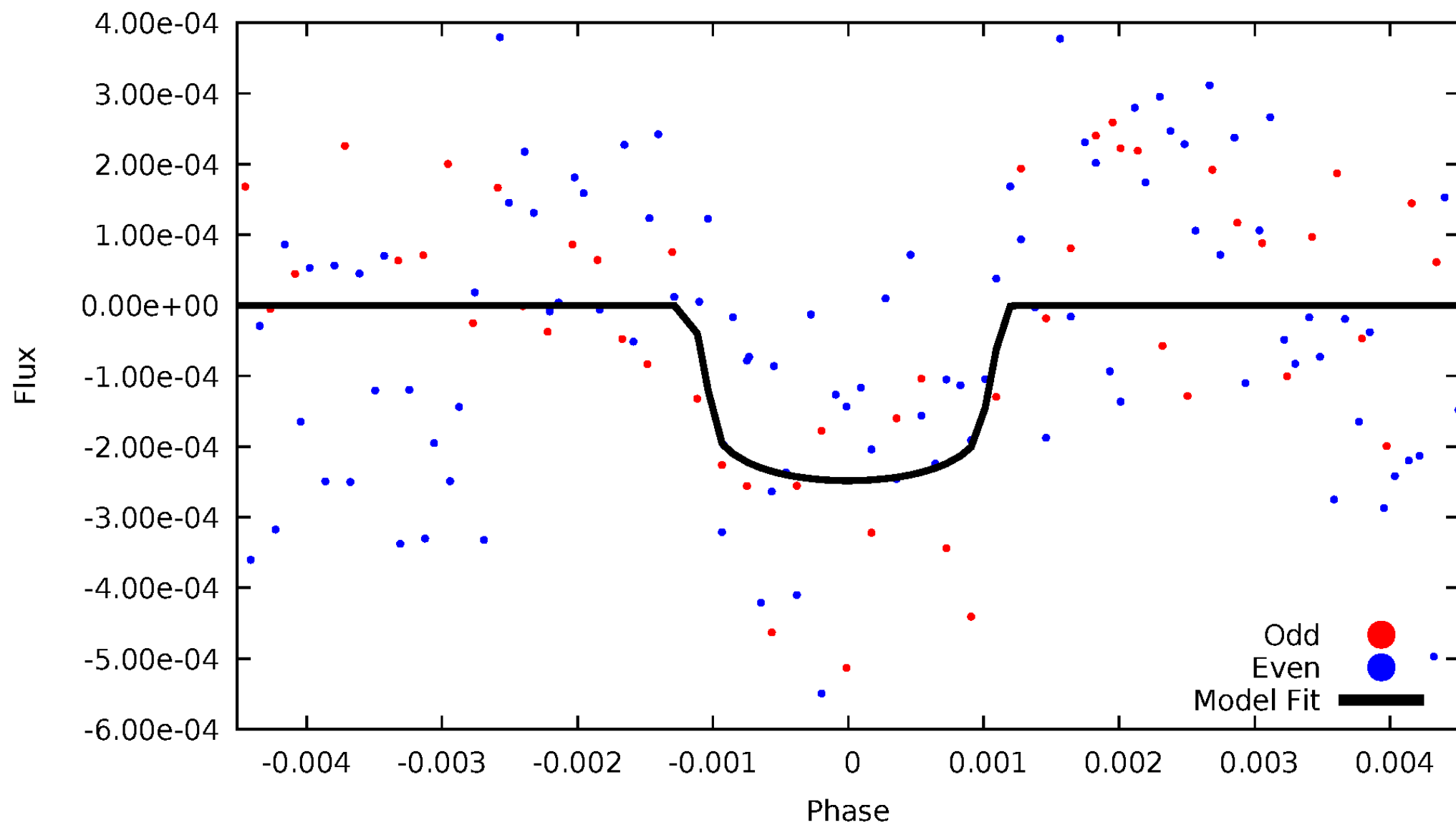


TCE 011296045-06



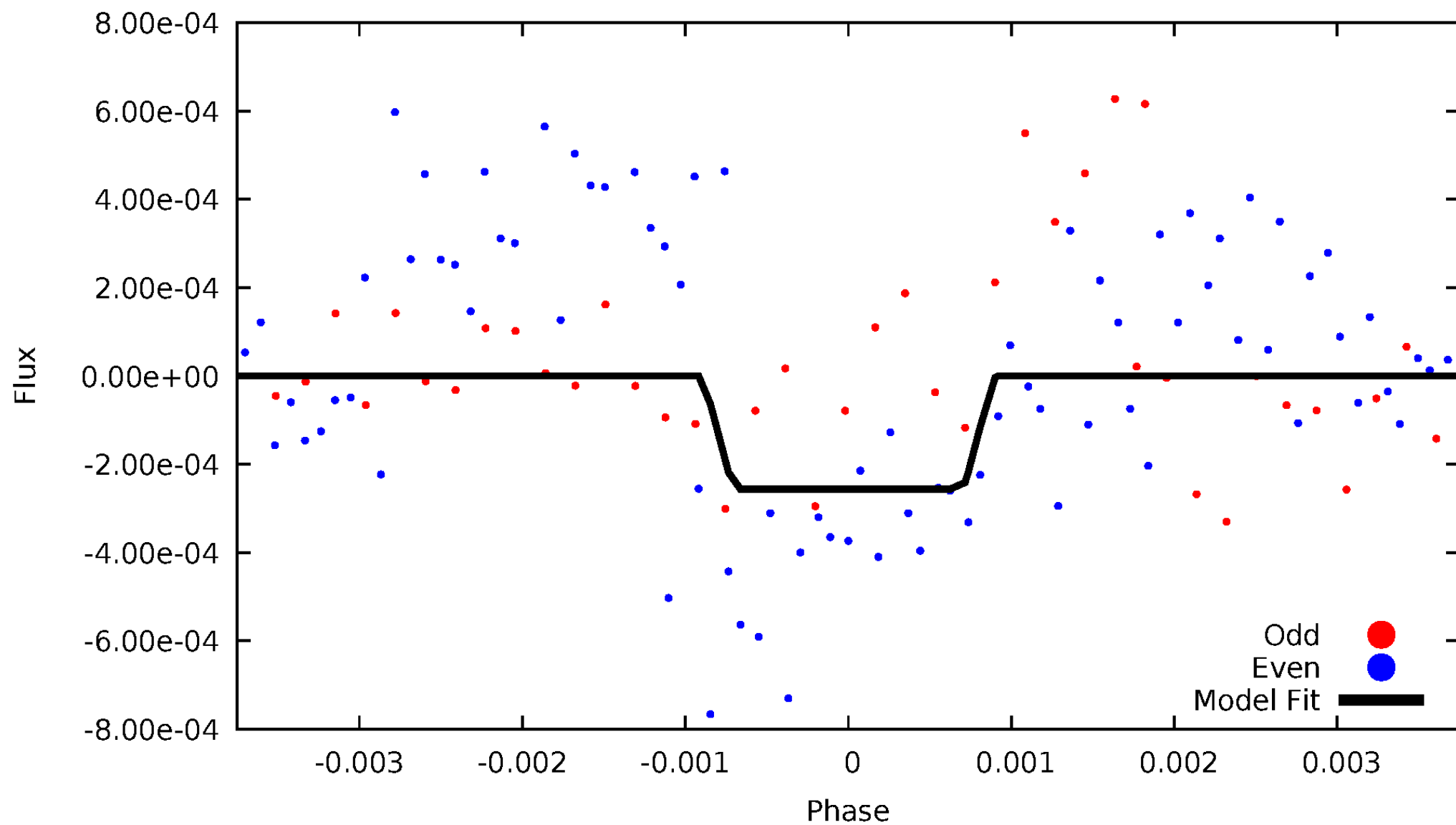
DV Odd/Even

TCE 011296045-06



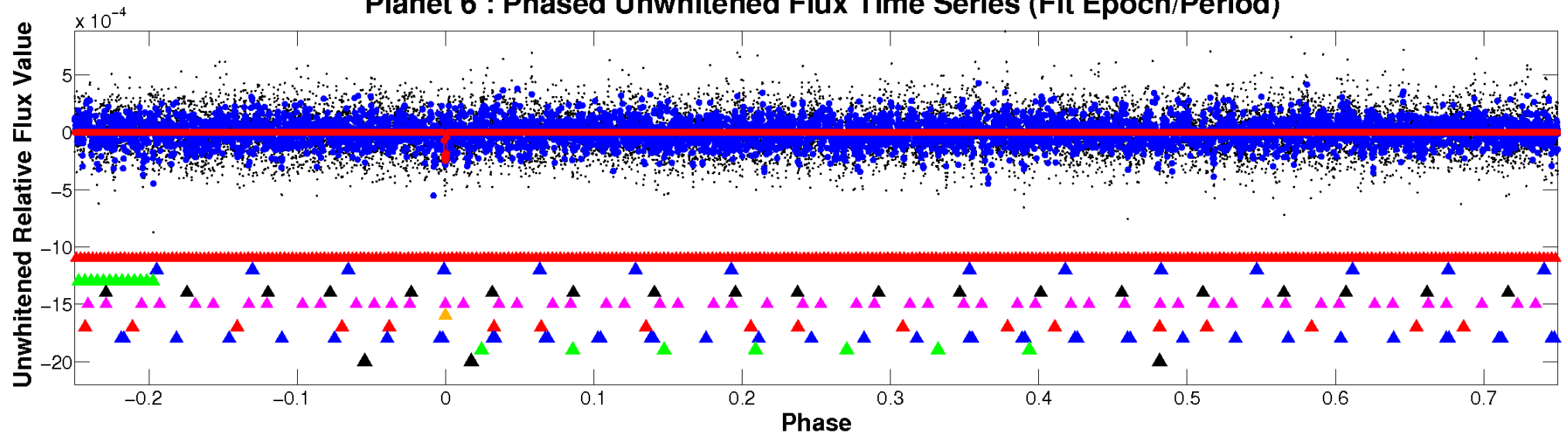
ALT Odd/Even

TCE 011296045-06

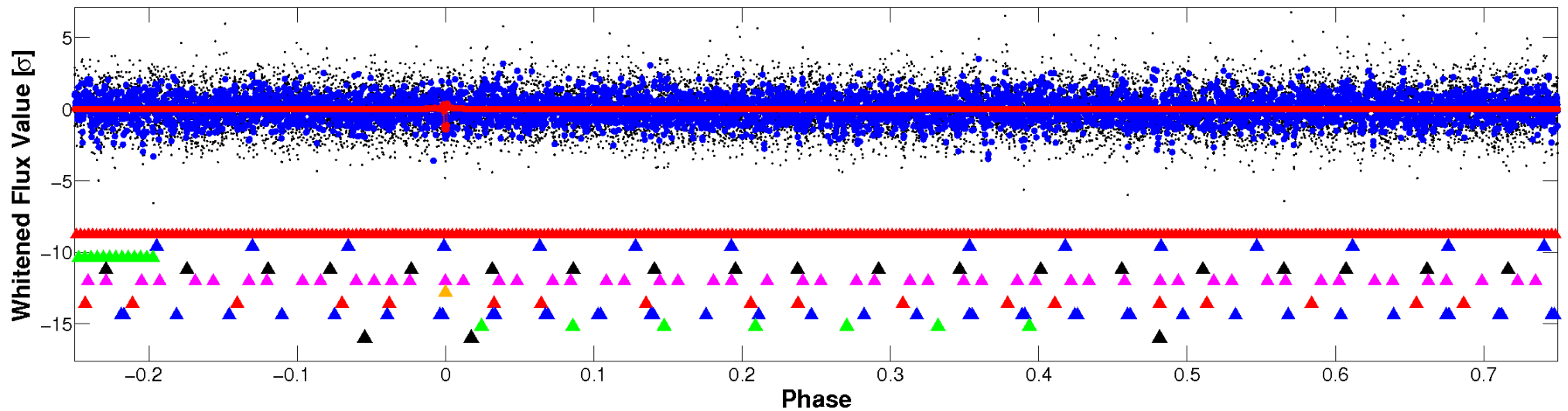


Non-Whitened Vs. Whitened Light Curve

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

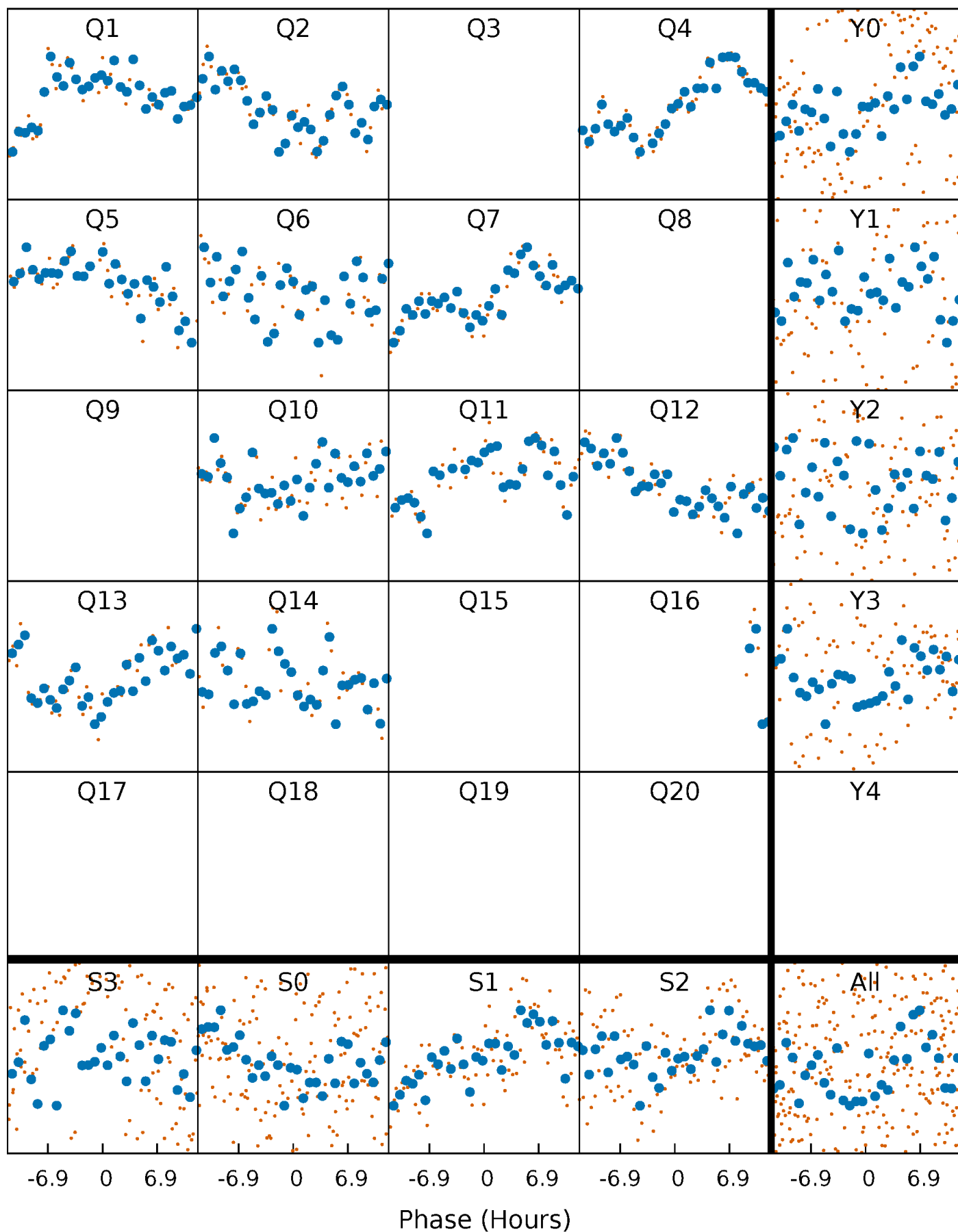


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



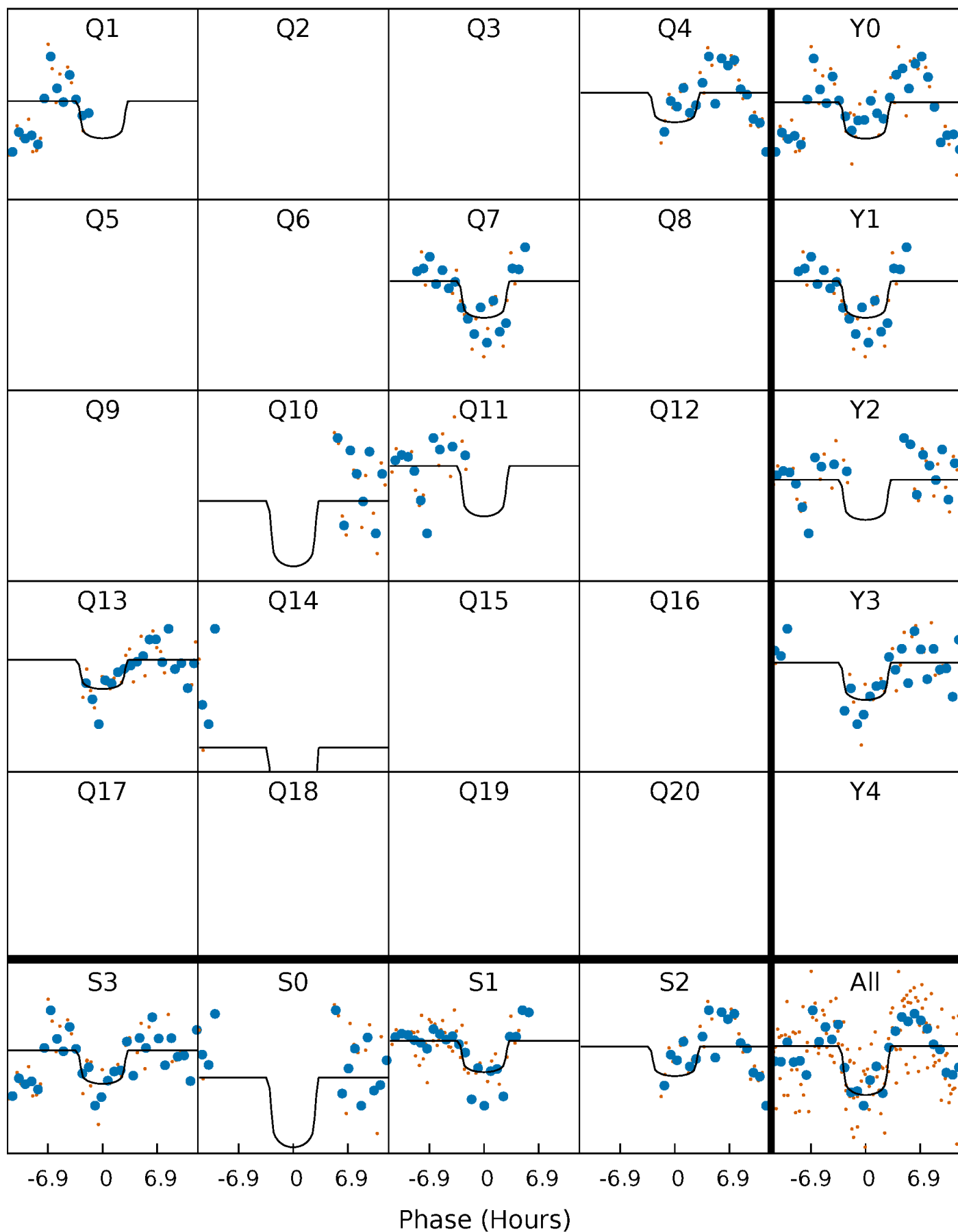
PDC Quarter-Phased Transit Curves

TCE 011296045-06 P=111.101719 Days $T_0=138.520726$ (BKJD)



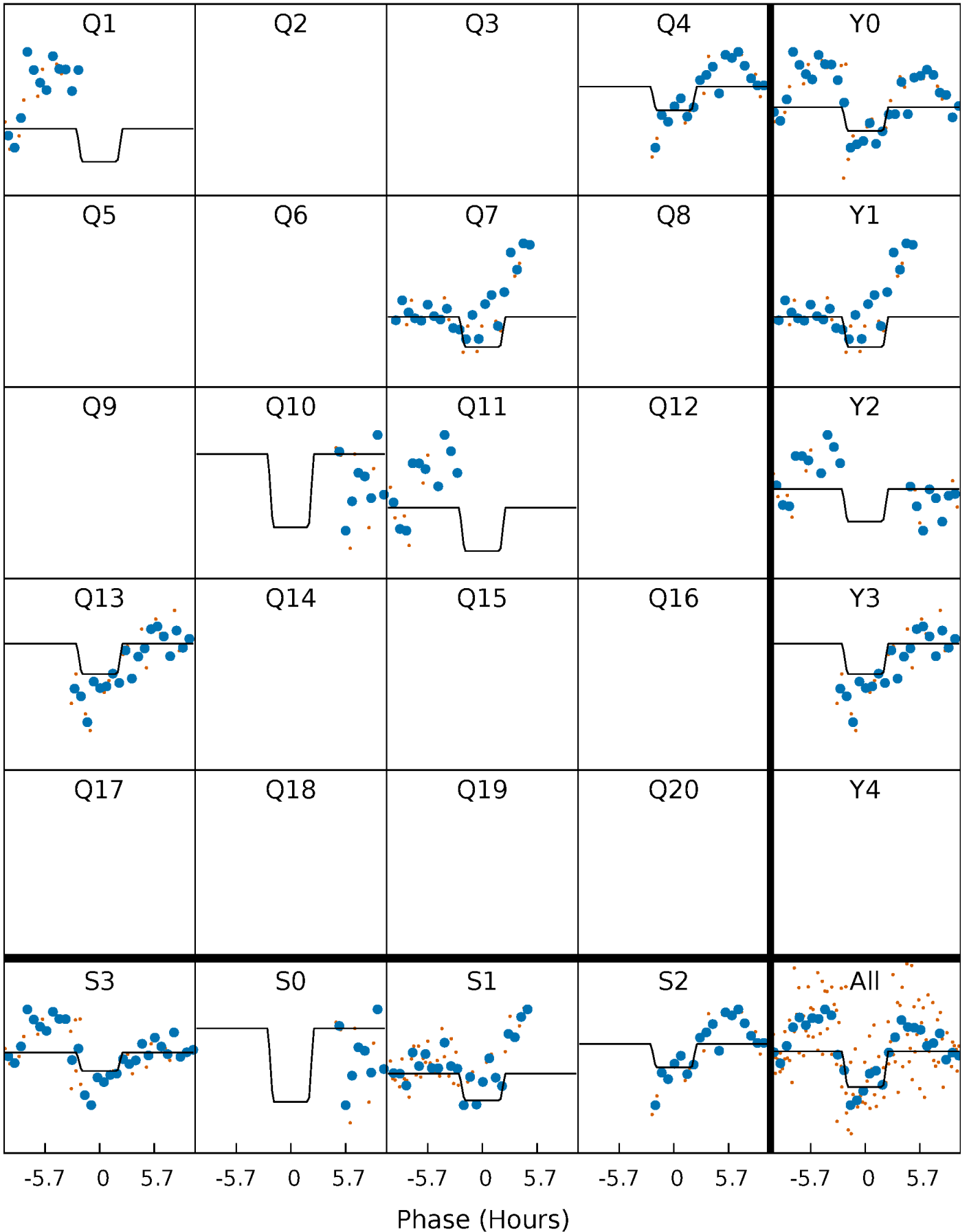
DV Quarter-Phased Transit Curves

TCE 011296045-06 P=111.101719 Days $T_0=138.520726$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

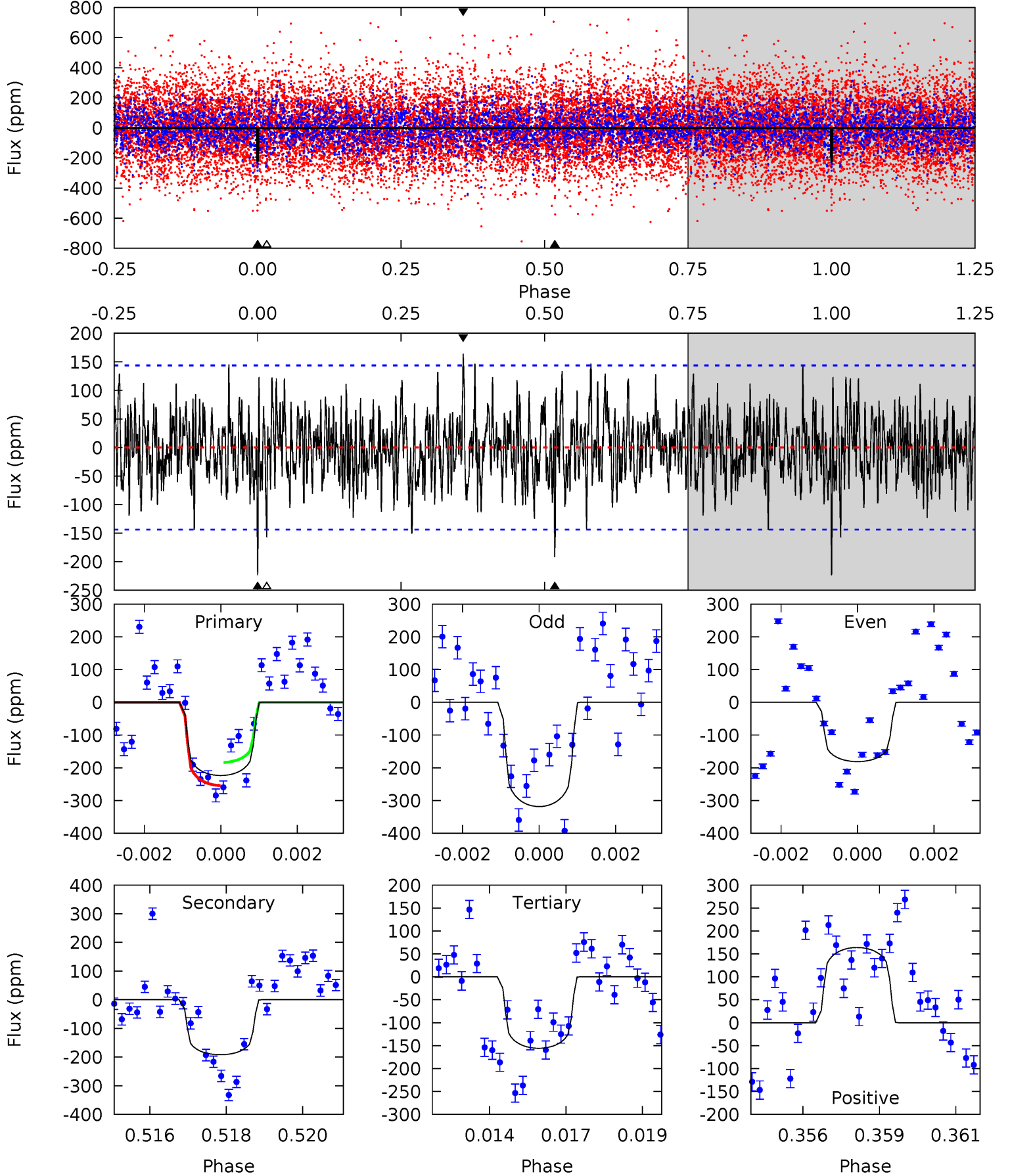
TCE 011296045-06 P=111.101288 Days $T_0=138.544024$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-06, P = 111.101719 Days, E = 27.419007 Days

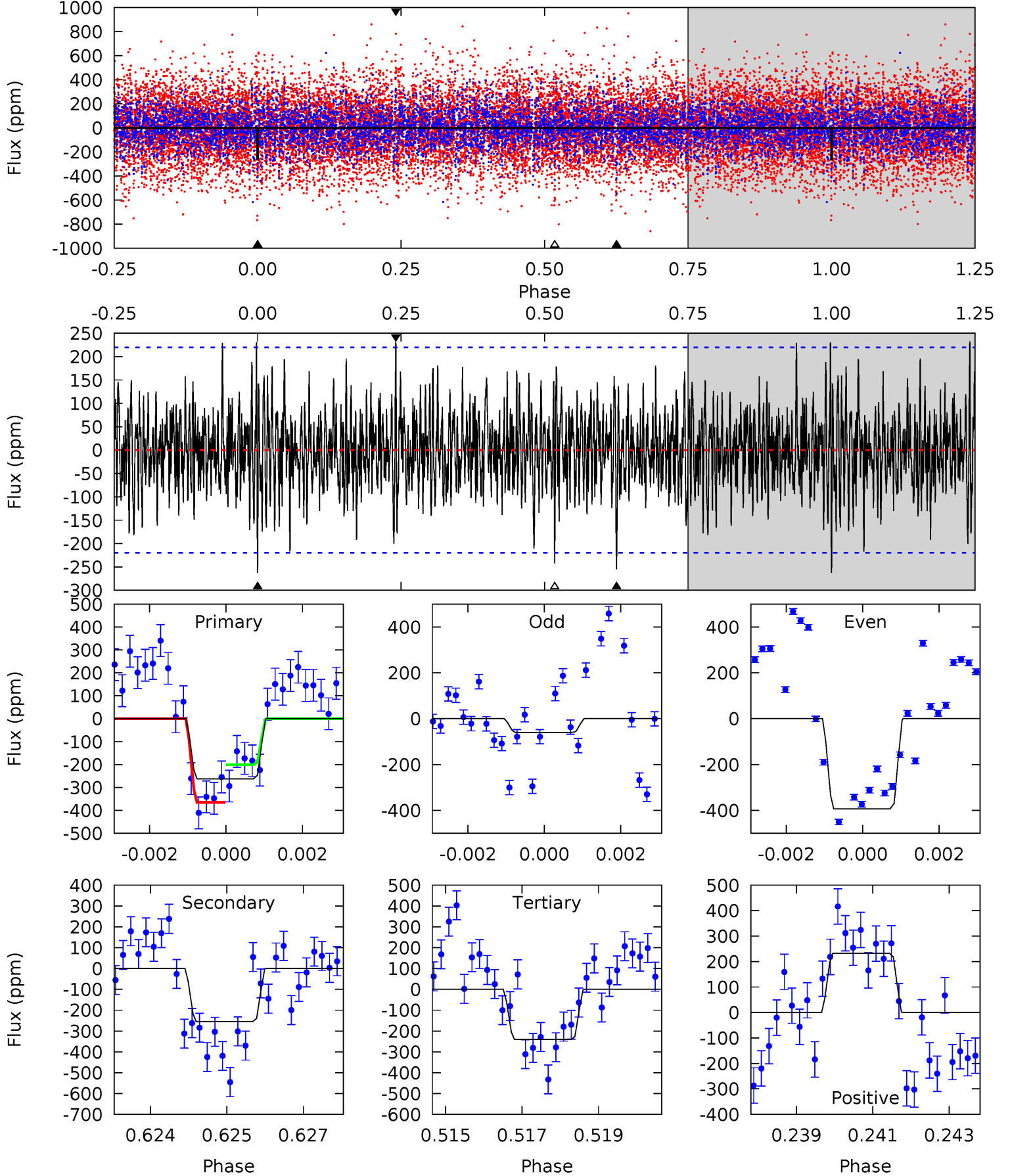
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.24	7.07	5.75	6.05	5.30	3.04	1.80	2.50	2.20	1.32	1.03	2.33	1.17	0.42	1.29



Alt Model-Shift Uniqueness Test

011296045-06, $P = 111.101288$ Days, $E = 27.442736$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.40	6.21	5.87	5.67	5.35	3.13	1.64	0.53	0.73	0.34	0.54	3.77	0.80	0.47	1.96



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-192 ± 27	$8.22^{+5.72}_{-5.01}$	1106^{+54}_{-92}	5655^{+4136}_{-1140}	485^{+2907}_{-316}
Alt.	-255 ± 41	$7.74^{+6.23}_{-4.80}$	1105^{+51}_{-90}	6181^{+5126}_{-1403}	743^{+4638}_{-516}

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 $A_{obs} \gg 1.0$

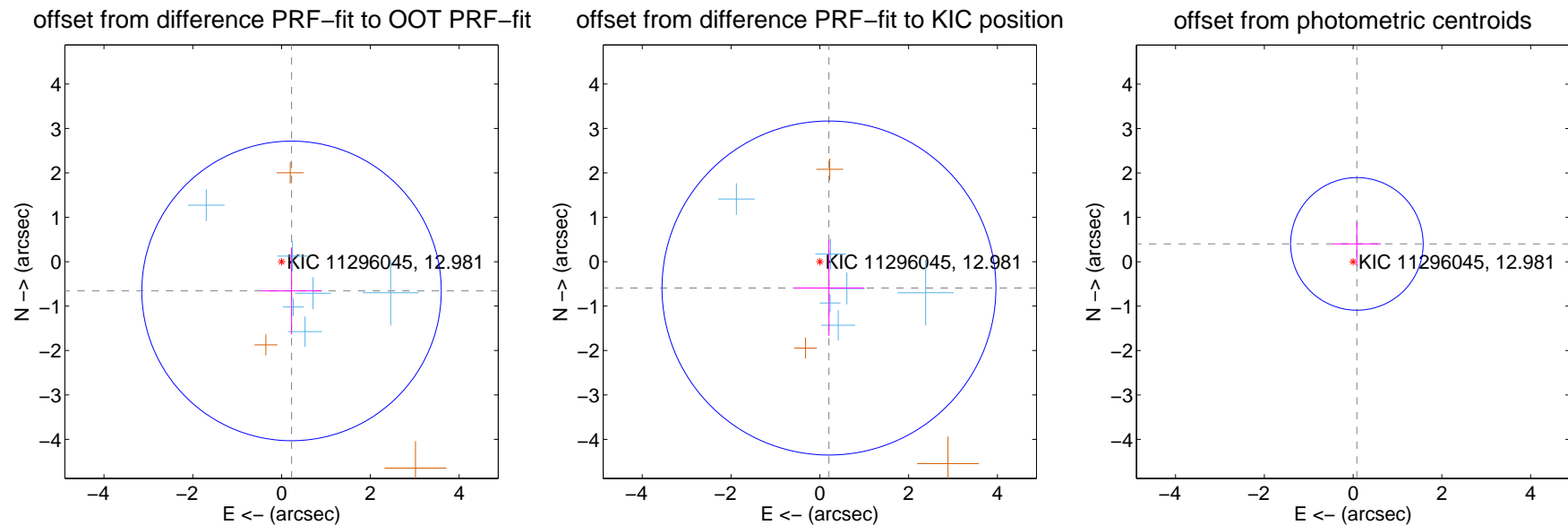
DV Centroid Data

Supplemental centroid analysis for 011296045-06. Kepler magnitude: 12.98. Transit SNR 8.03

There are 6 quarters with good PRF difference image offsets

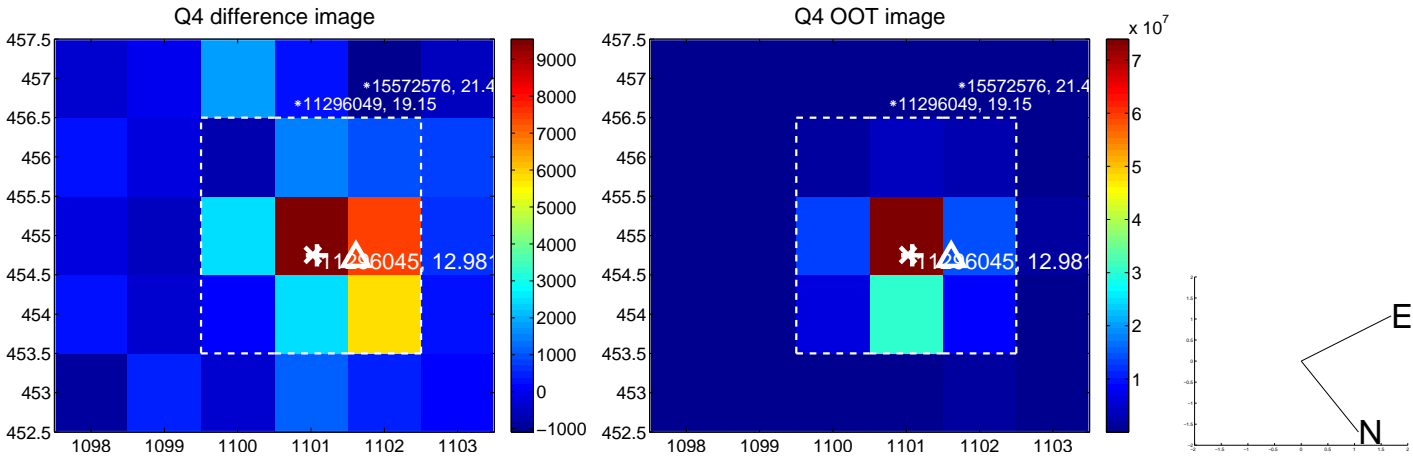
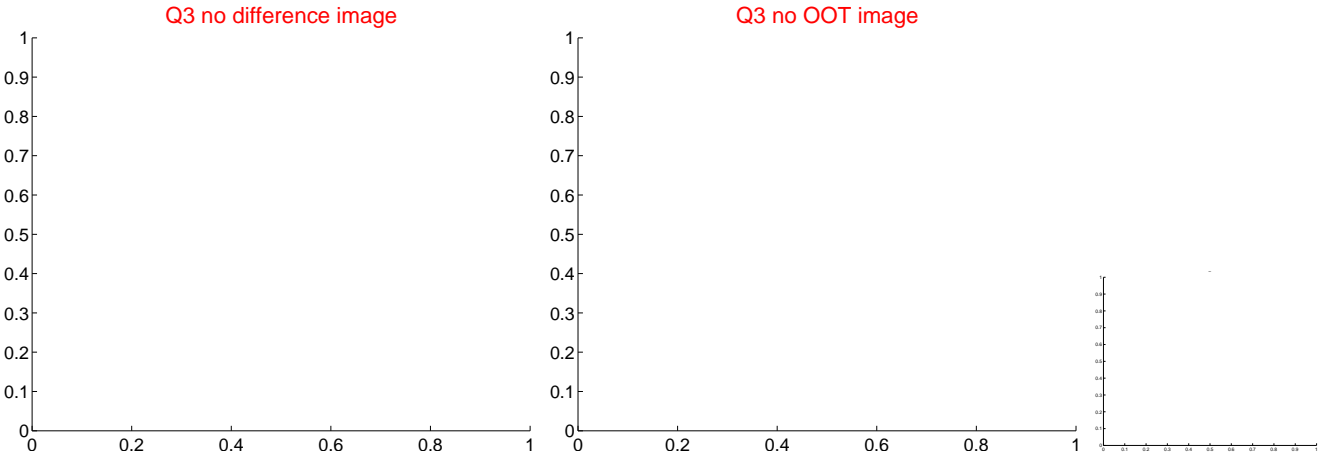
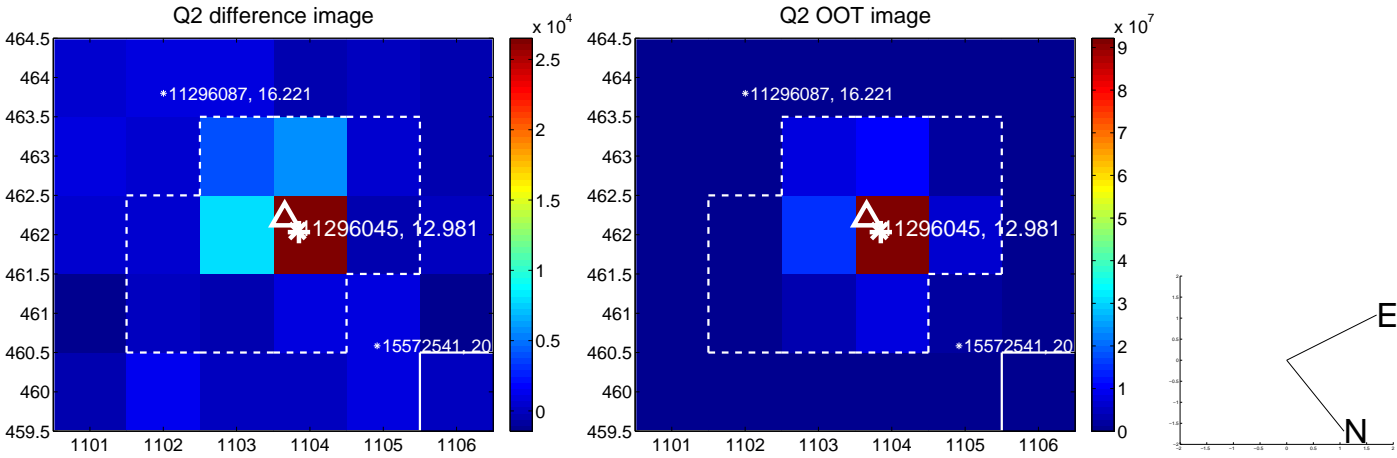
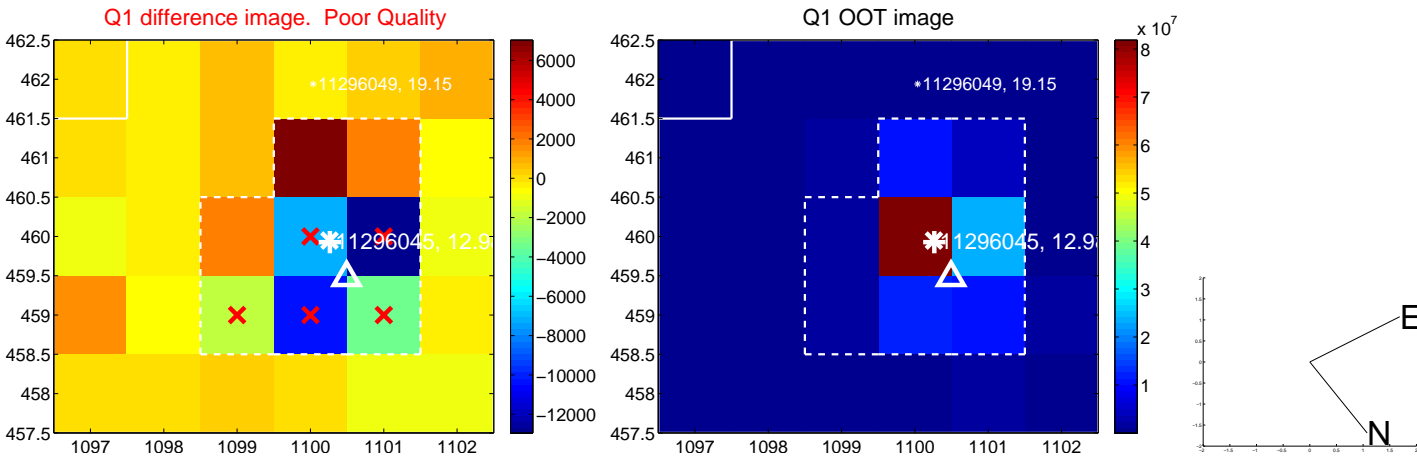
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.695 ± 1.124	0.62	-0.225 ± 0.681	-0.658 ± 0.976
PRF-fit source offset from KIC position	0.627 ± 1.253	0.50	-0.205 ± 0.785	-0.593 ± 1.073
photometric centroid source offset	0.41 ± 0.50	0.83	-0.09 ± 0.54	0.40 ± 0.50

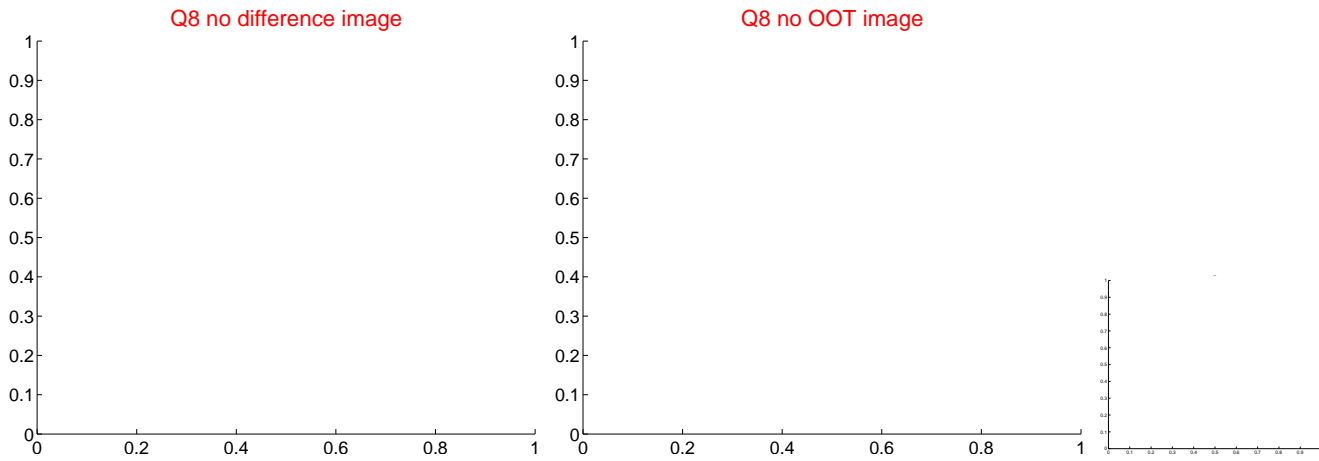
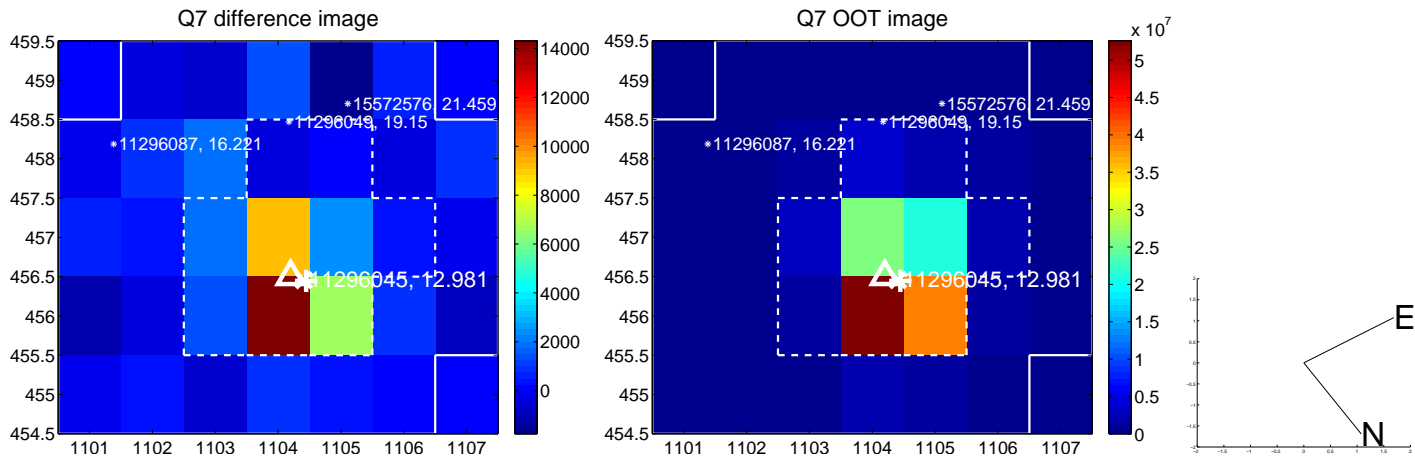
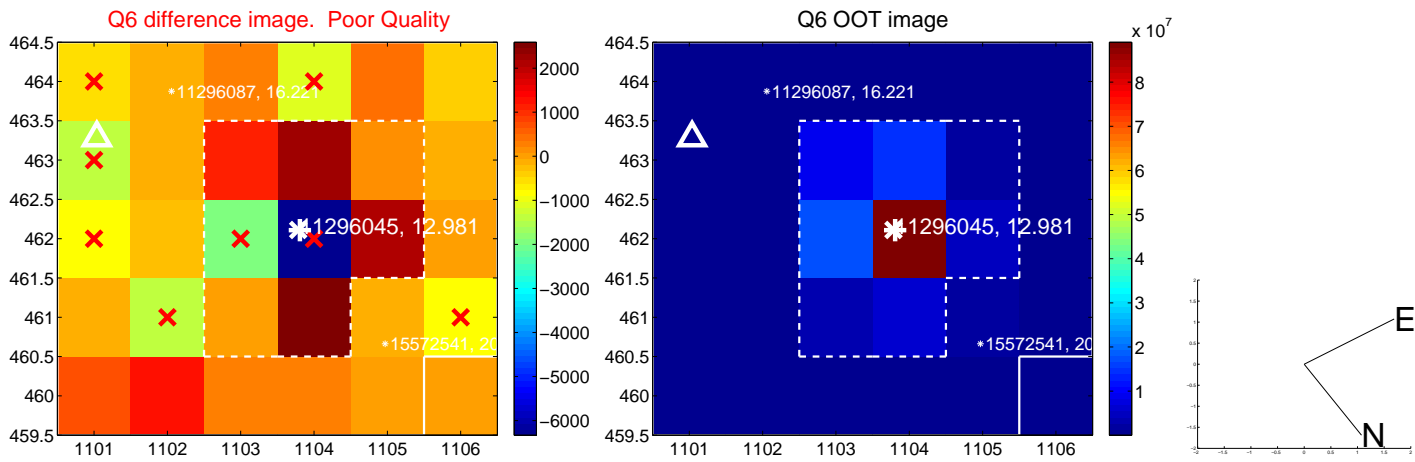
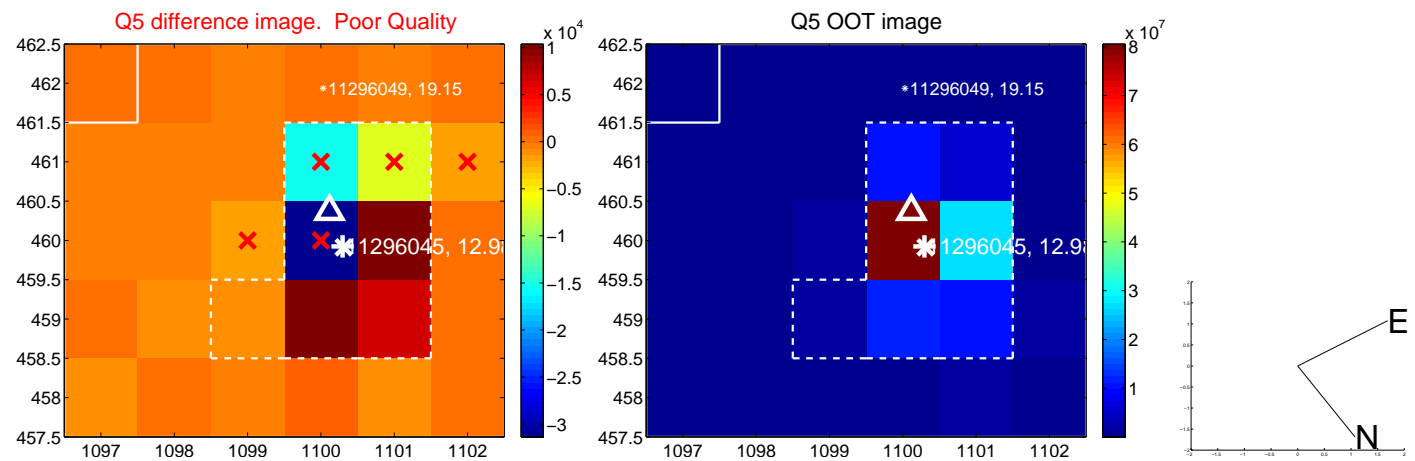


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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



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



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

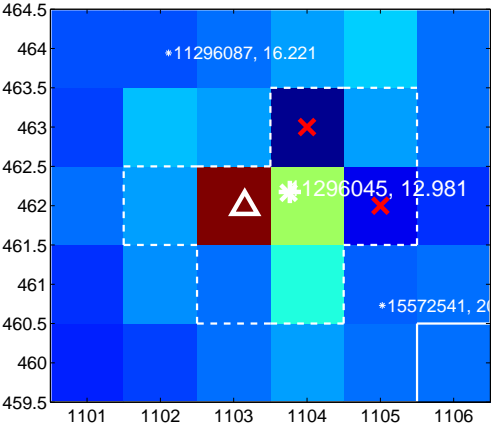
Q9 no difference image



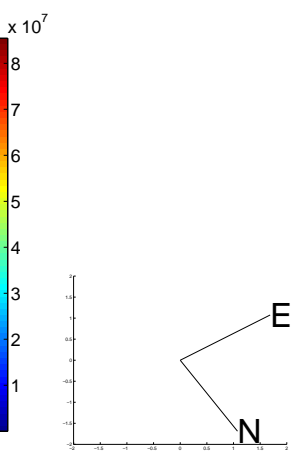
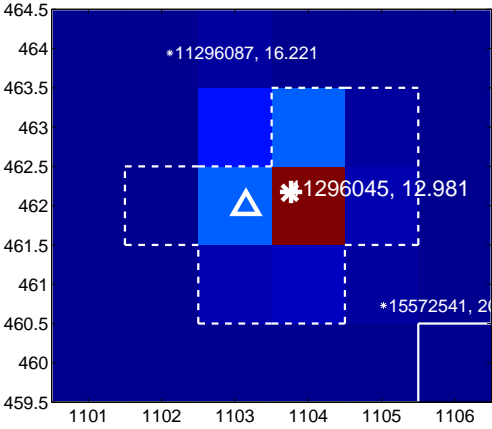
Q9 no OOT image



Q10 difference image



Q10 OOT image



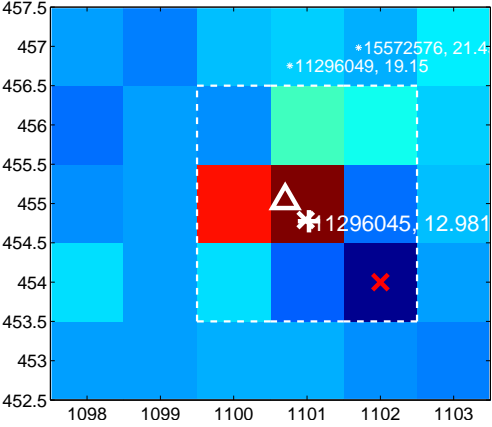
Q11 no difference image



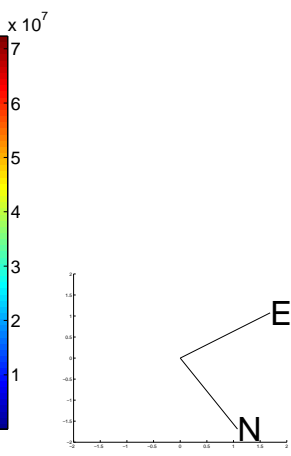
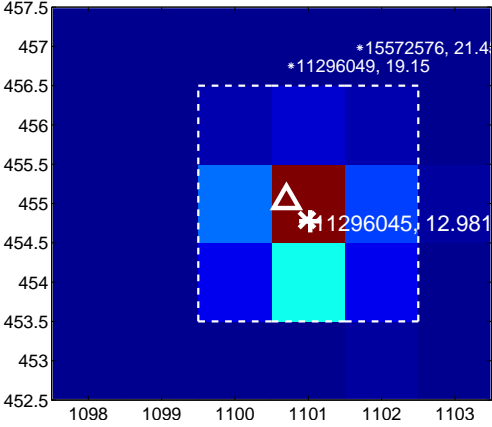
Q11 no OOT image



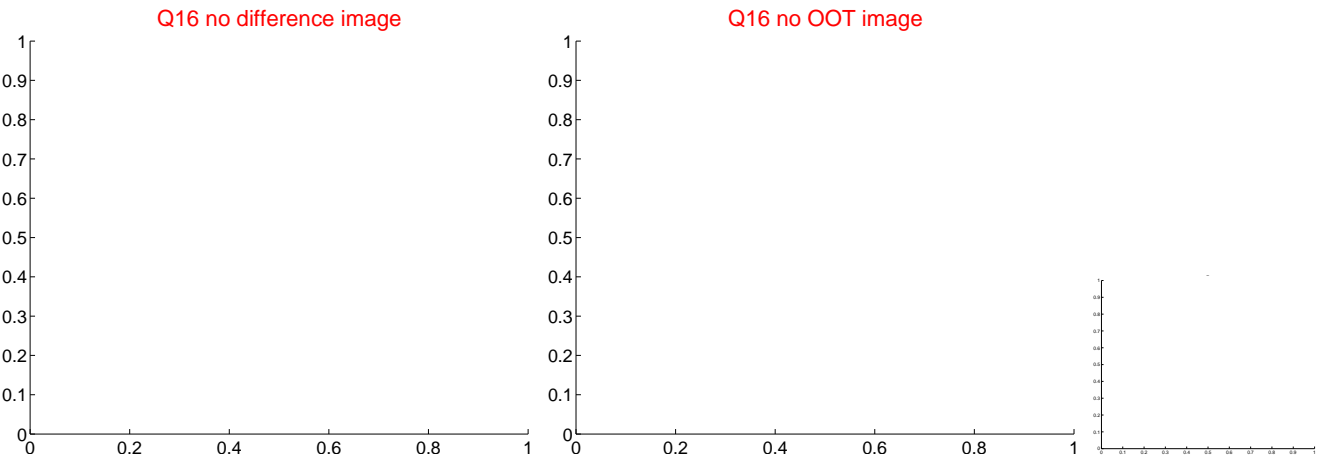
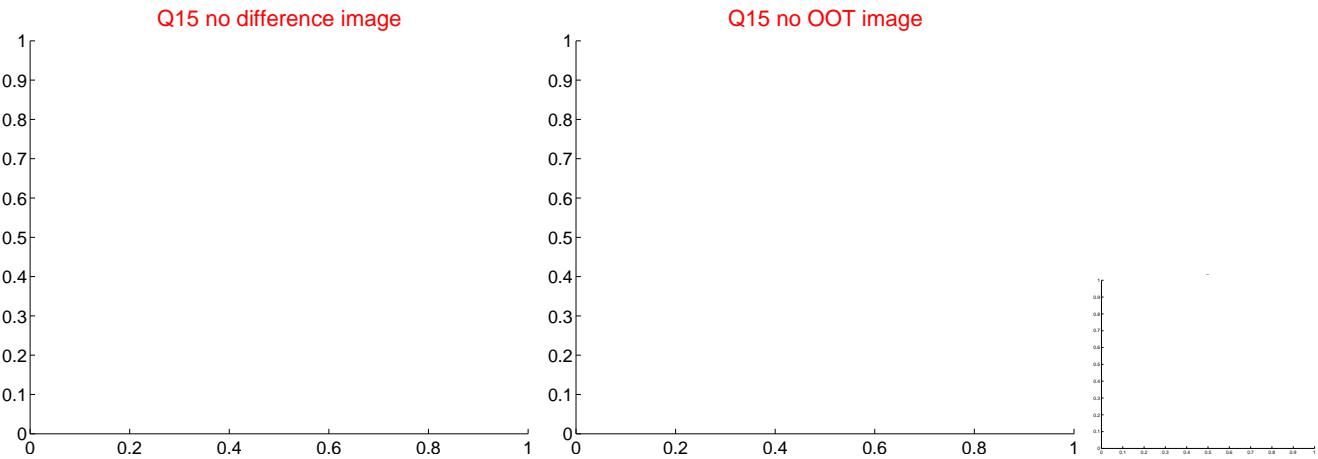
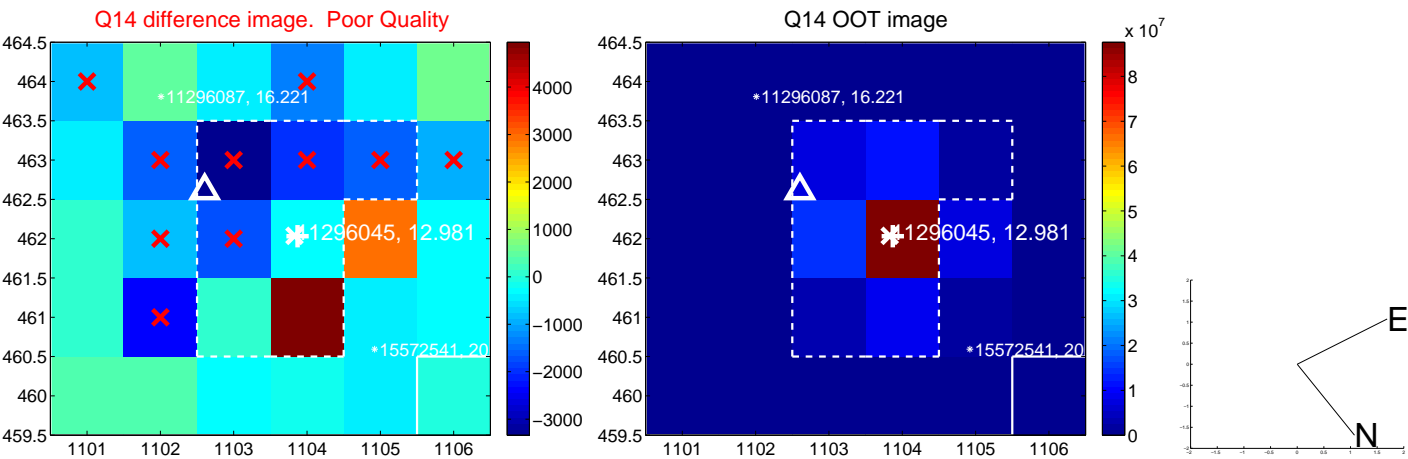
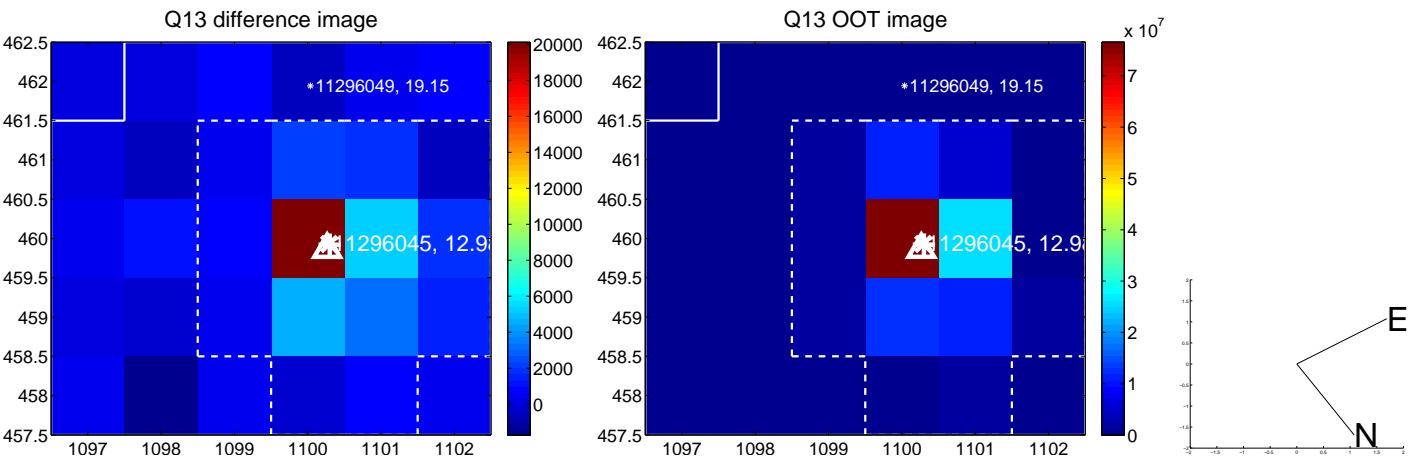
Q12 difference image



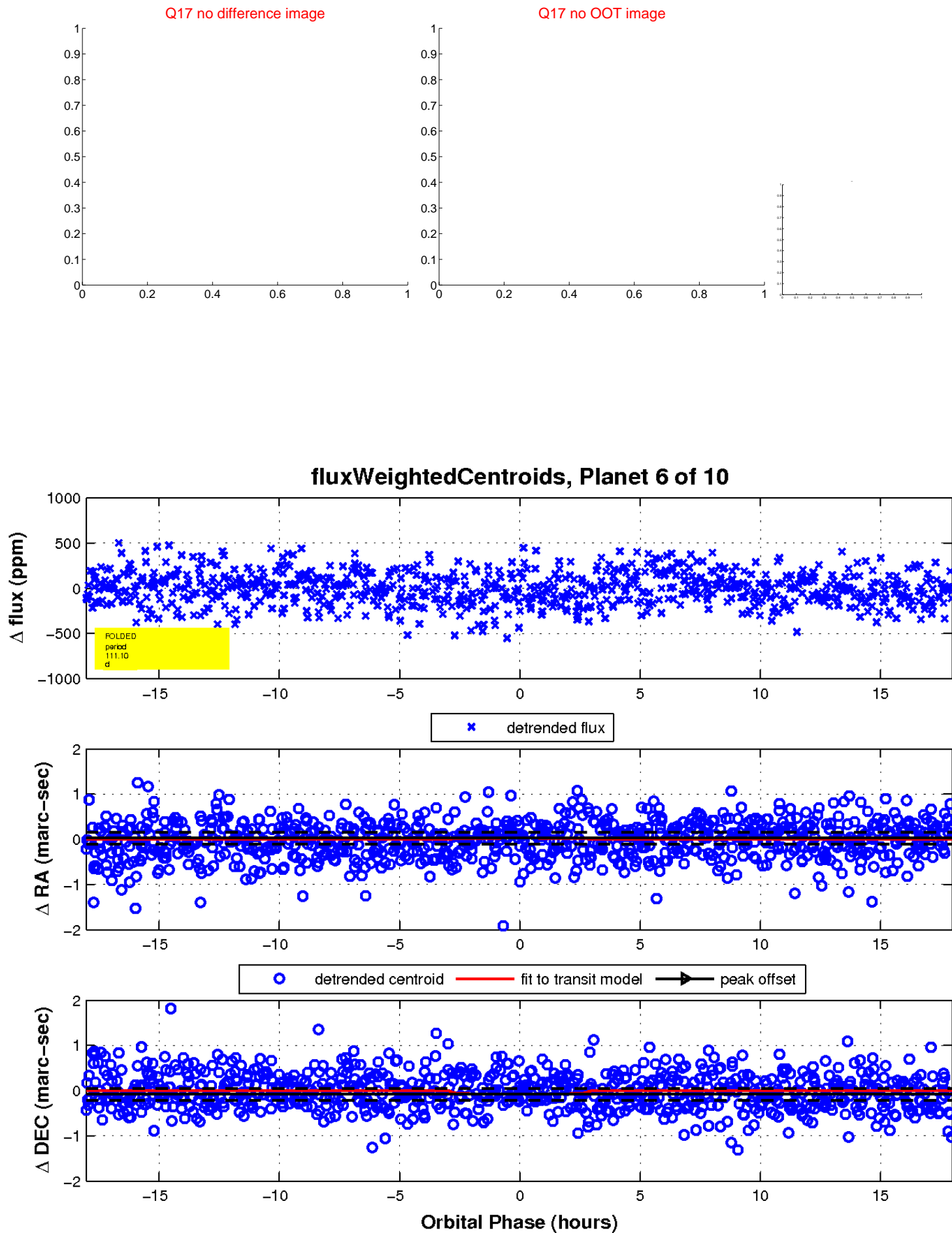
Q12 OOT image



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

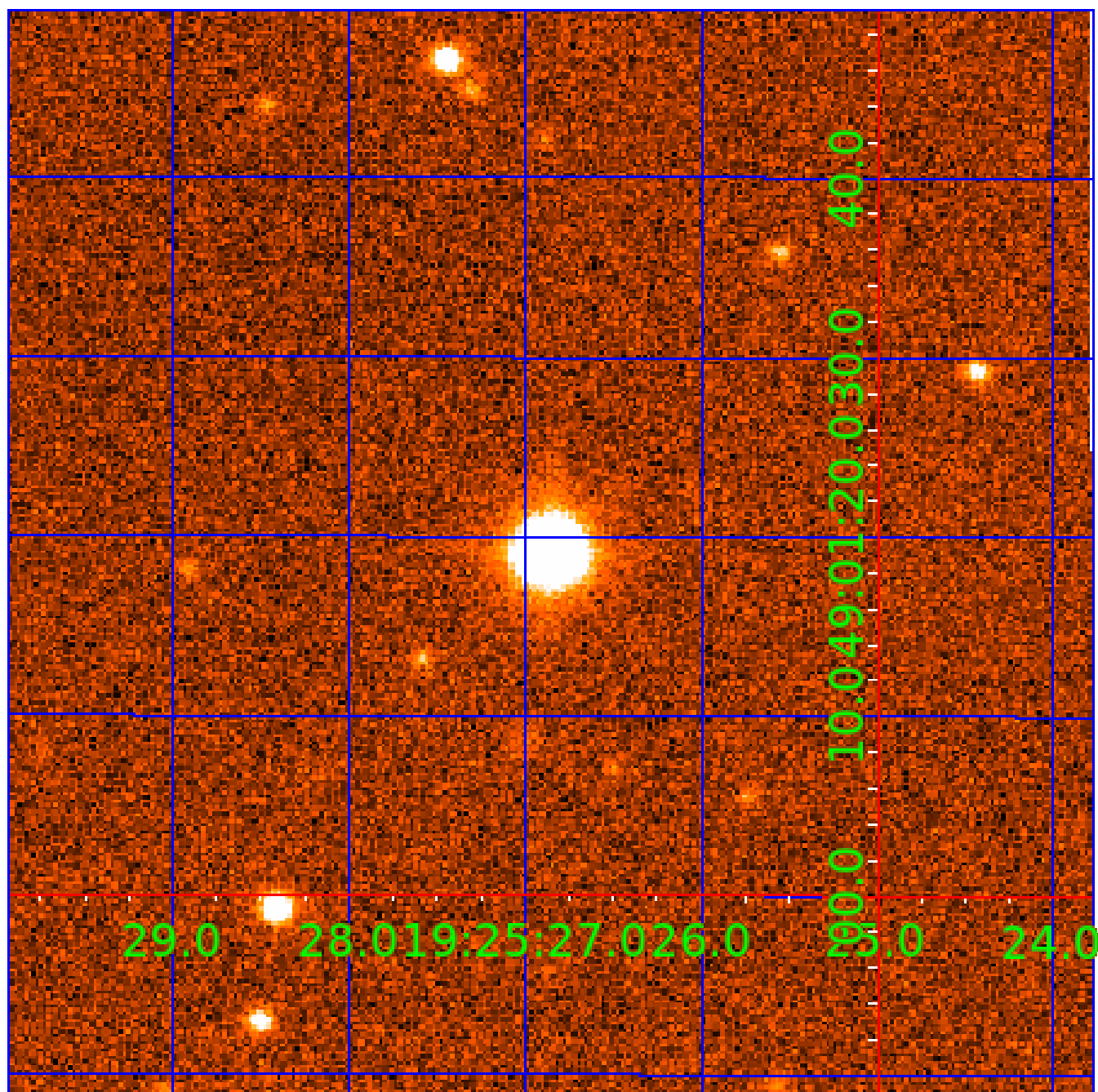


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

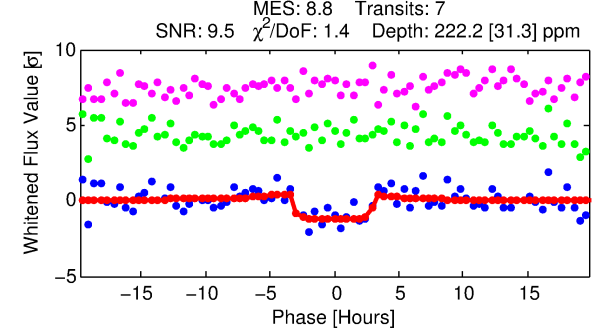
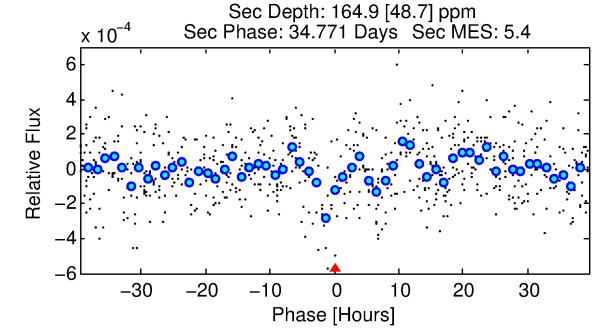
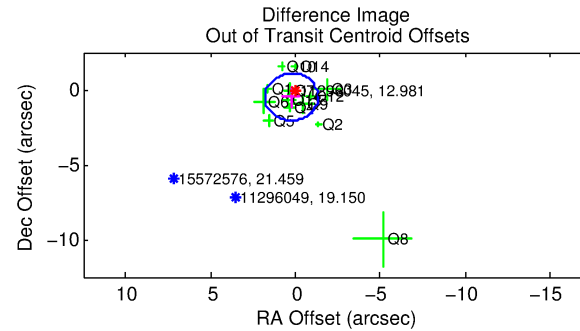
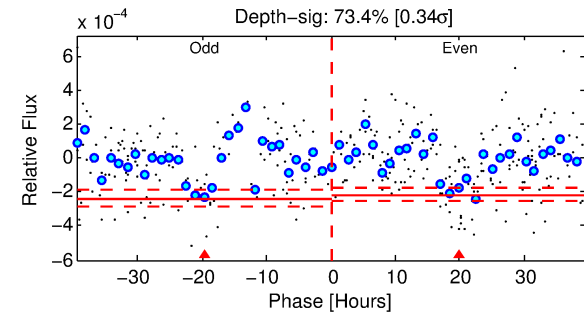
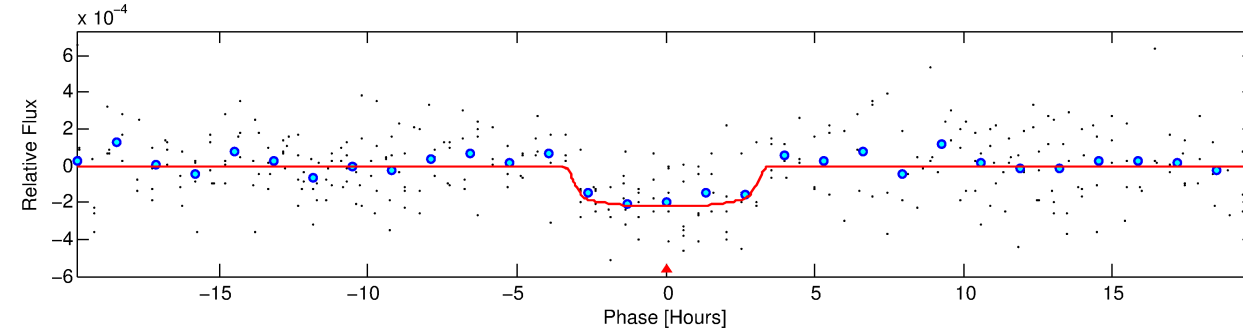
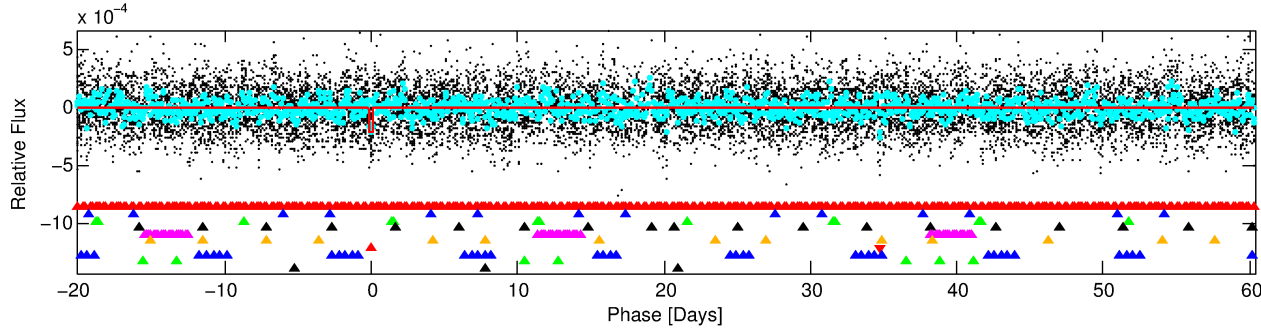
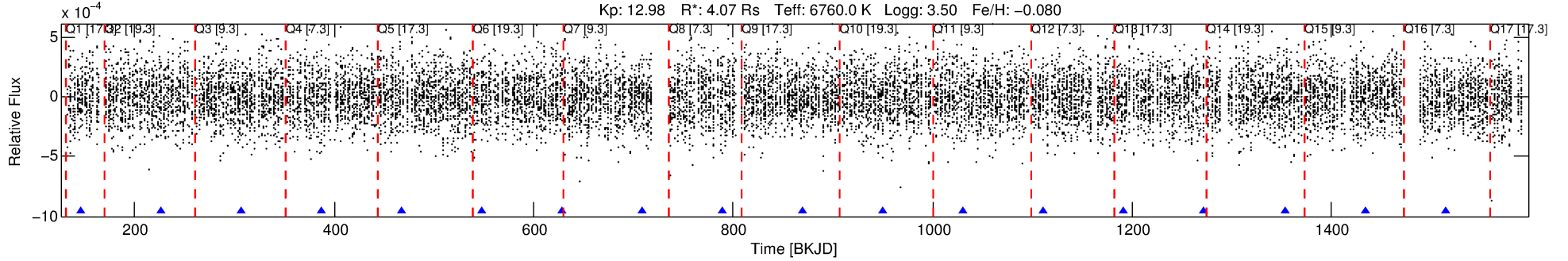
Ephemeris Match Information For 011296045-07

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 7 of 10 Period: 80.480 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 80.47976 [0.00145] d
Epoch = 145.6911 [0.0143] BKJD
Rp/R* = 0.0154 [0.0051]
a/R* = 51.59 [98.28]
b = 0.85 [0.62]
Seff = 151.62 [87.03]
Teq = 895 [128] K
Rp = 6.85 [3.42] Re
a = 0.4520 [0.1599] AU
Ag = 395.41 [364.05] [1.08σ]
Teffp = 6169 [1140] K [4.60σ]

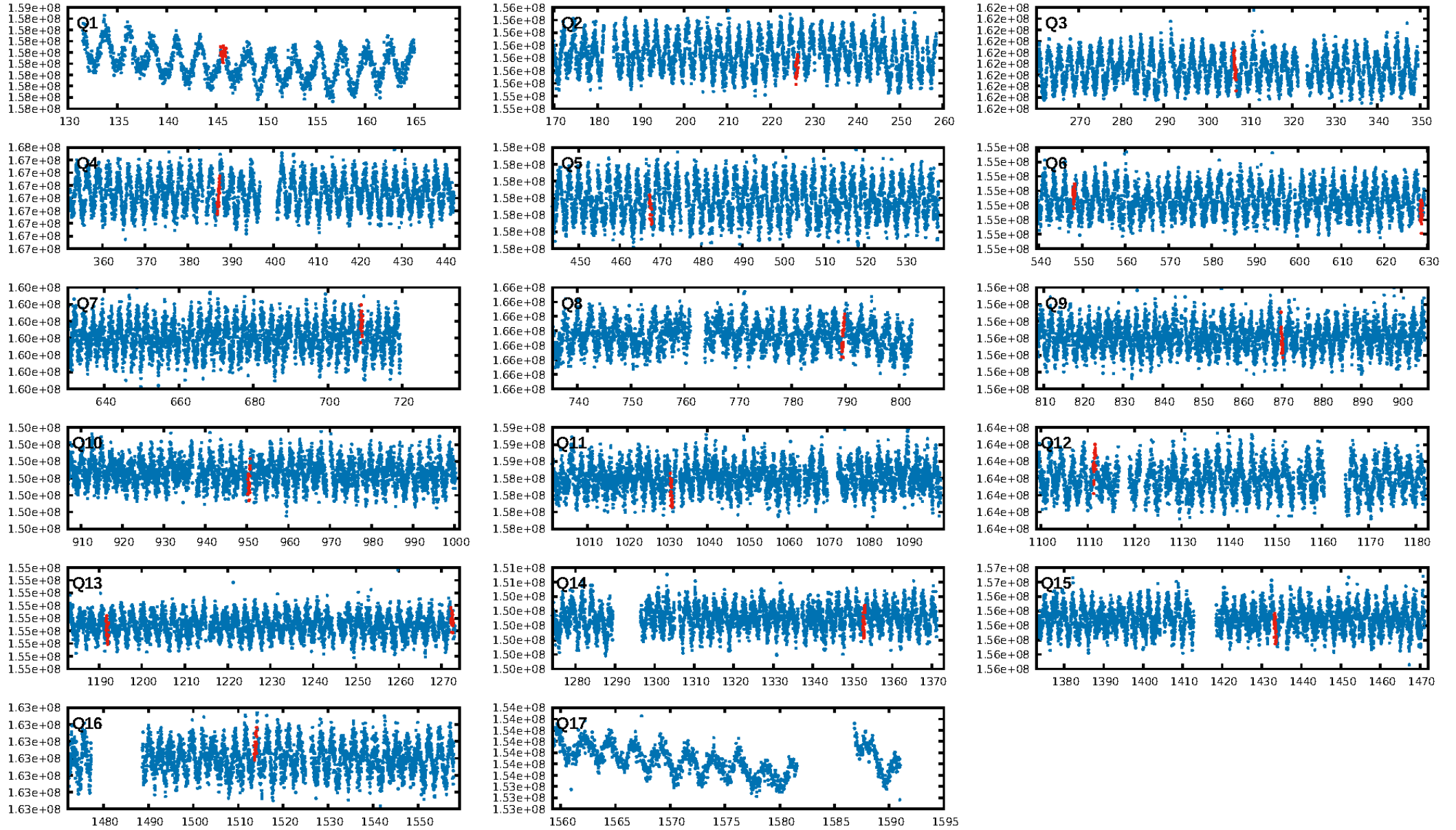
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.67σ]
LongPeriod-sig: 100.0% [27.77σ]
ModelChiSquare2-sig: 18.5%
ModelChiSquareGoF-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 4.476
Centroid-sig: 45.9%
Centroid-so: 0.199 arcsec [0.48σ]
OotOffset-rm: 0.529 arcsec [1.01σ]
KicOffset-rm: 0.417 arcsec [1.19σ]
OotOffset-st: 4/2/3/4 [13]
KicOffset-st: 4/2/3/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 0.44 [7/16]

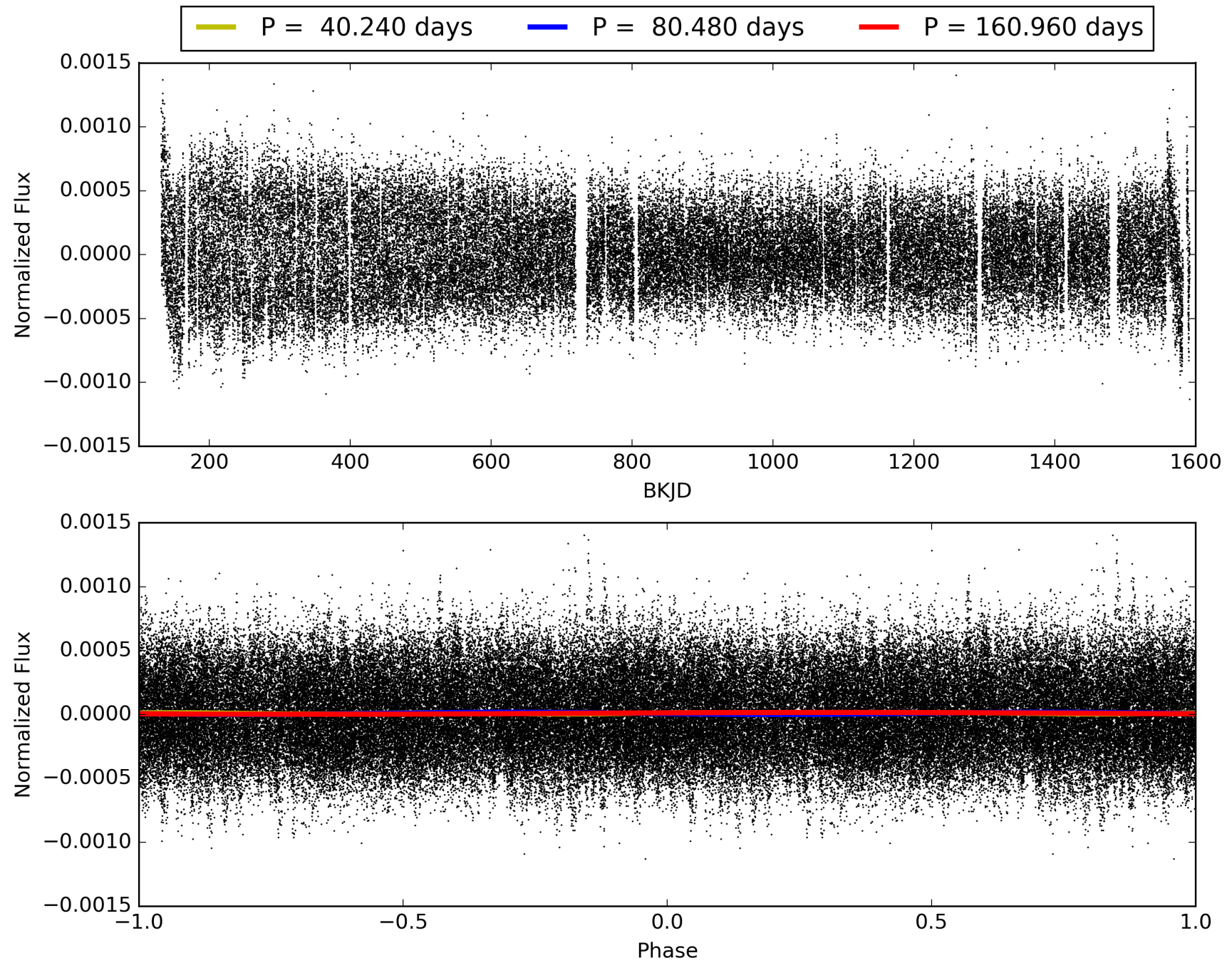
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:47:01 Z

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

TCE 011296045-07, PDC Light Curves

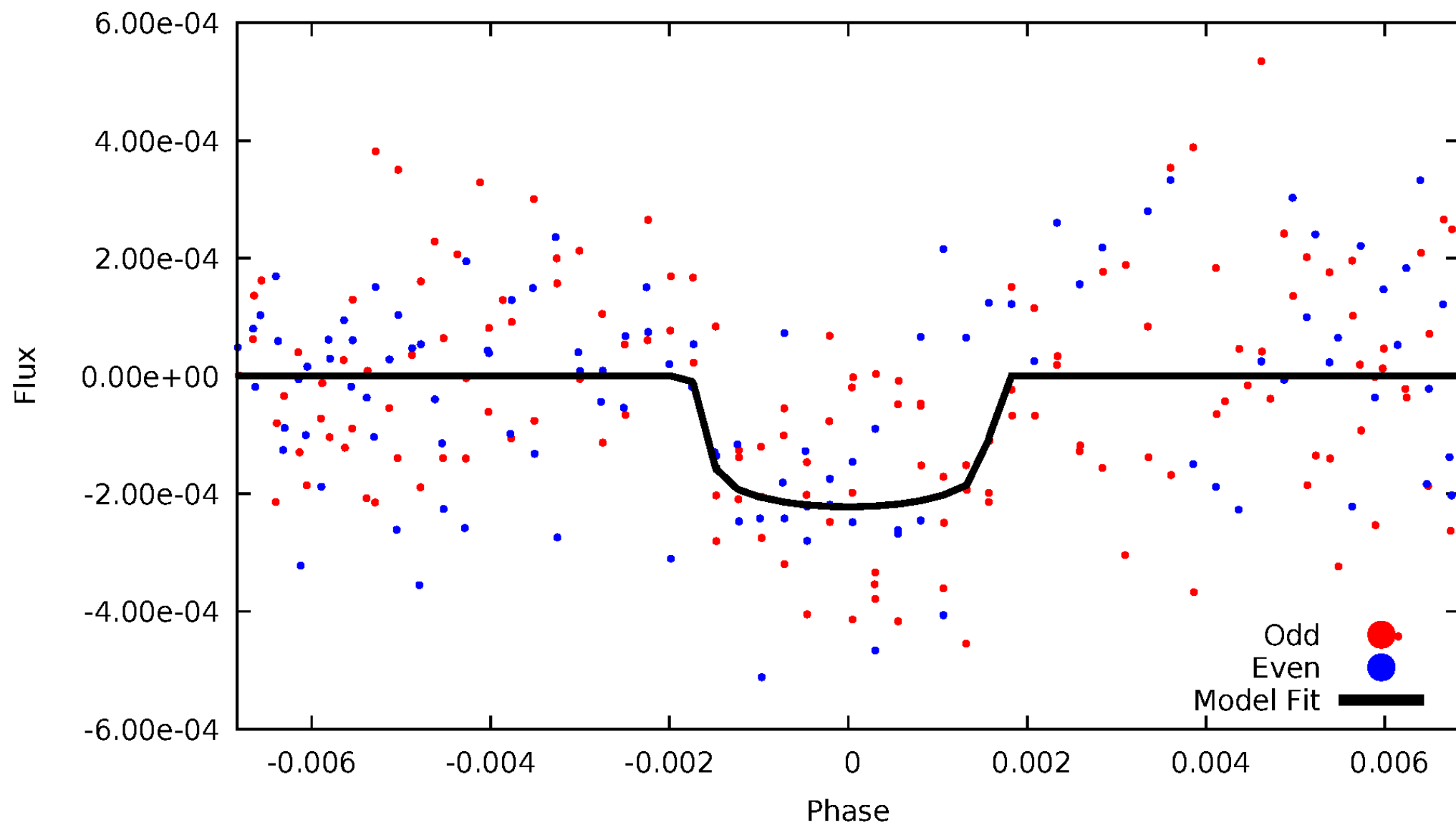


TCE 011296045-07



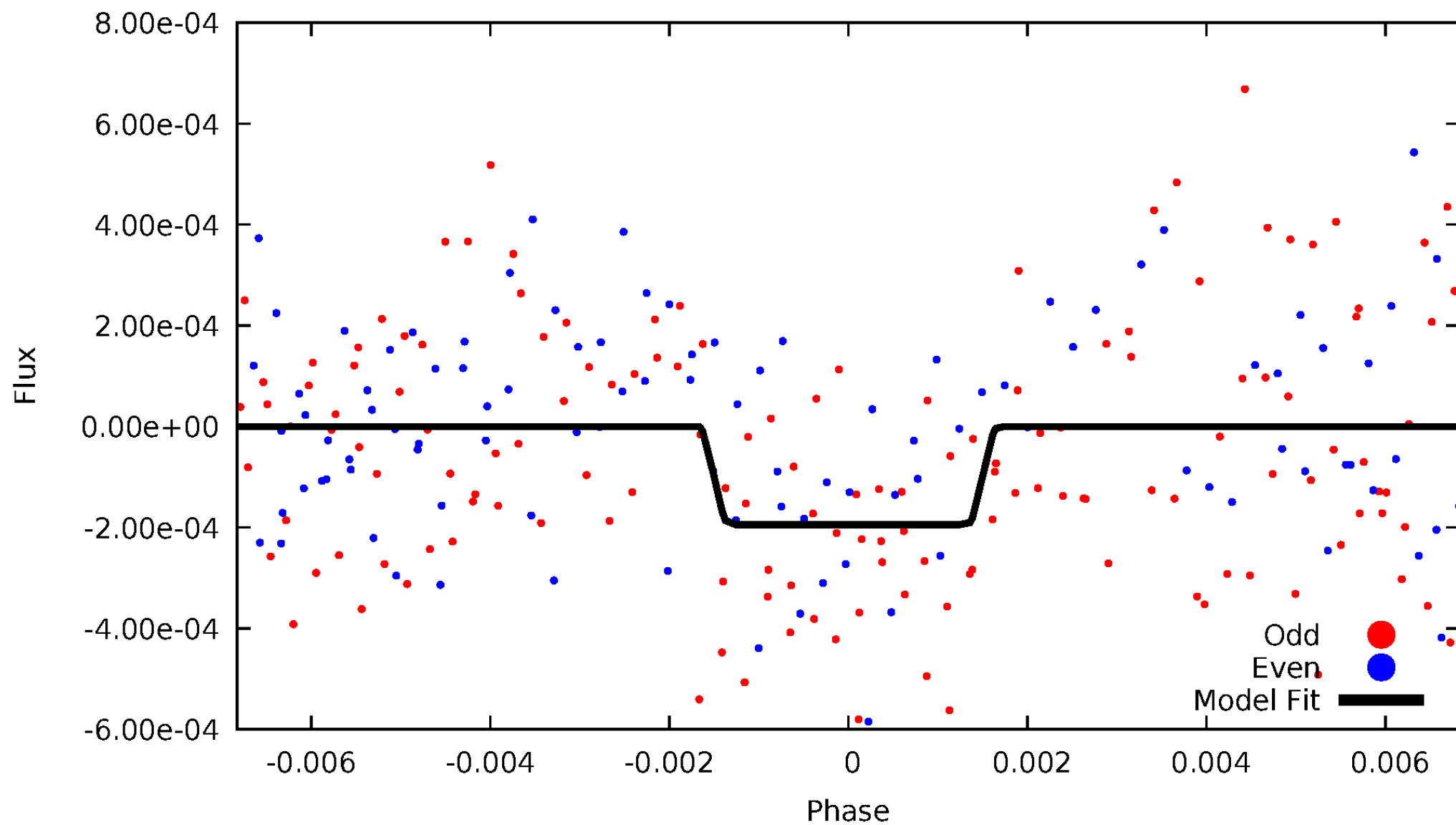
DV Odd/Even

TCE 011296045-07



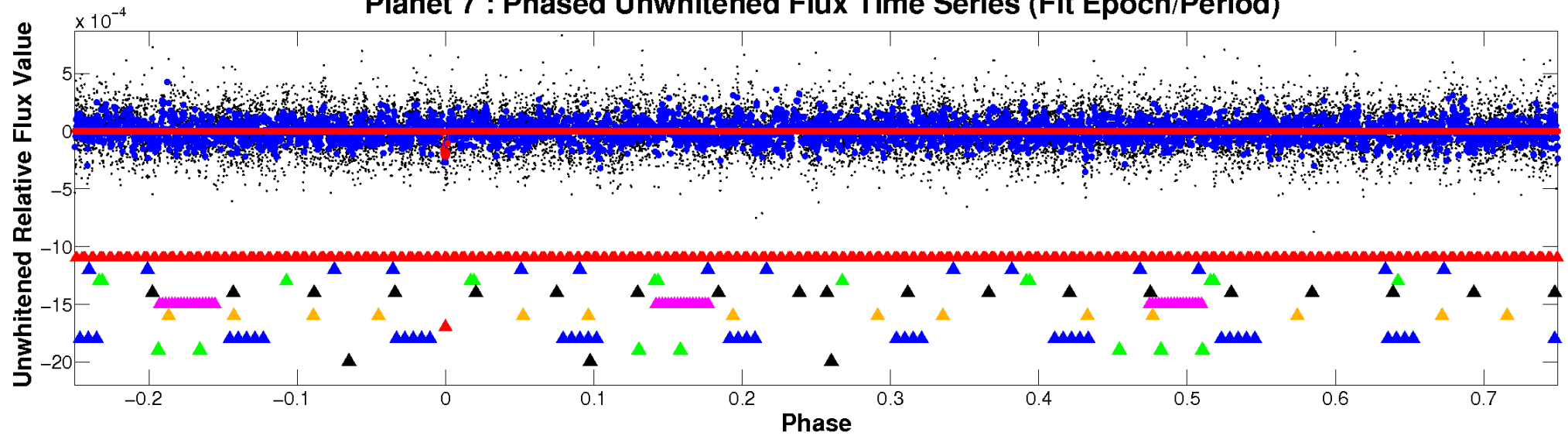
ALT Odd/Even

TCE 011296045-07

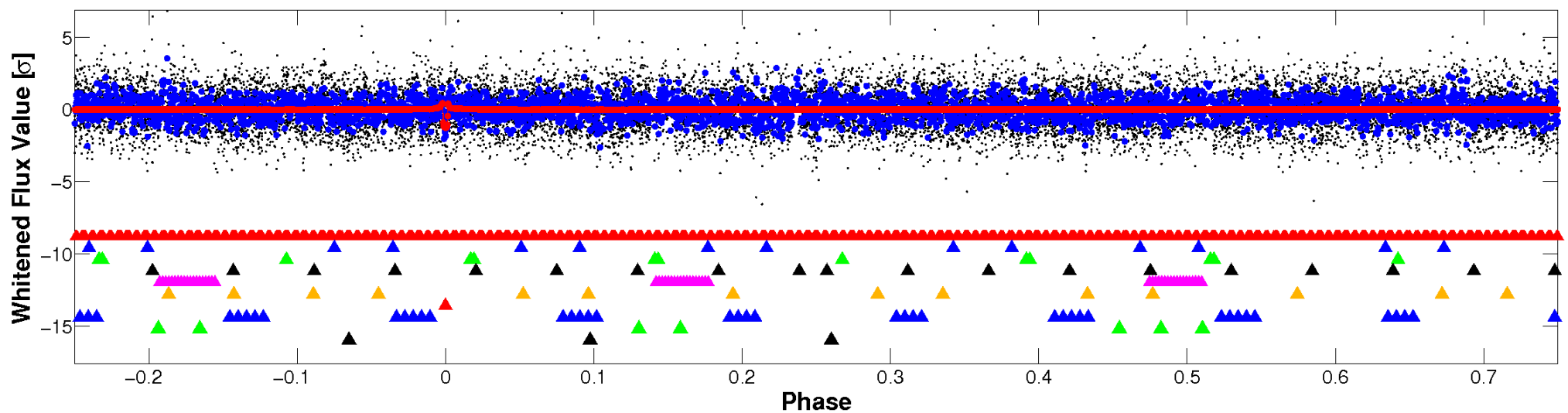


Non-Whitened Vs. Whitened Light Curve

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

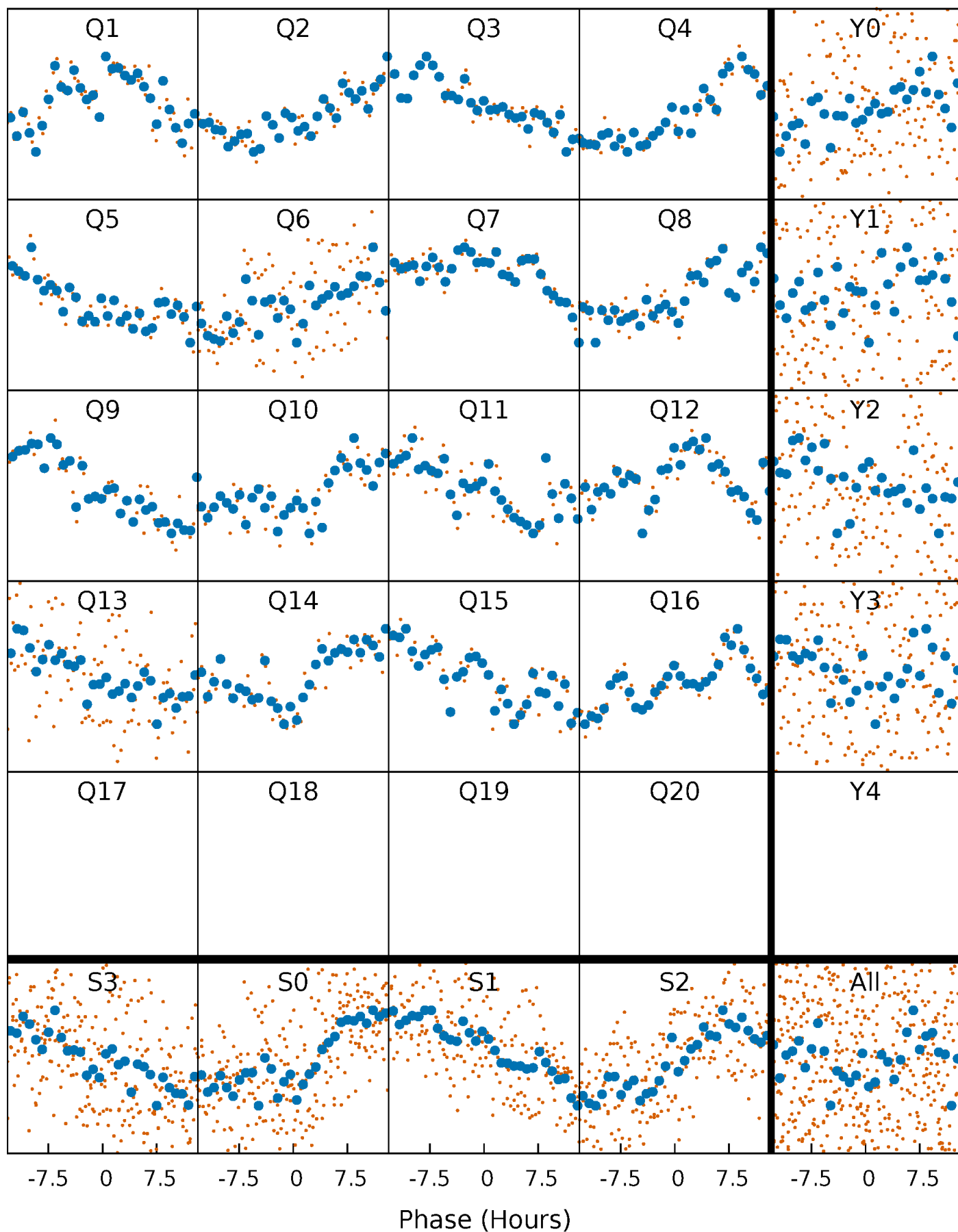


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



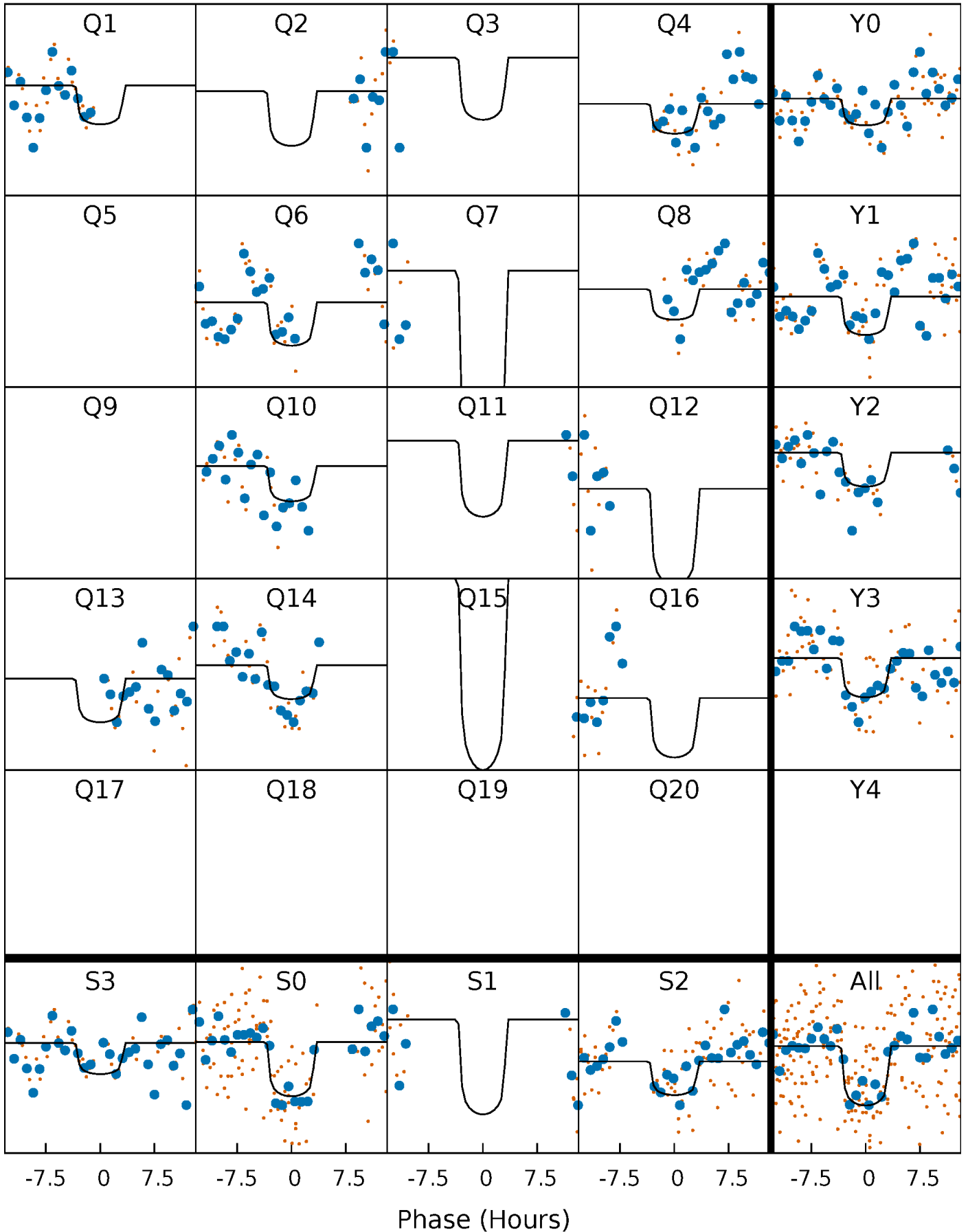
PDC Quarter-Phased Transit Curves

TCE 011296045-07 $P = 80.479761$ Days $T_0 = 145.691106$ (BKJD)



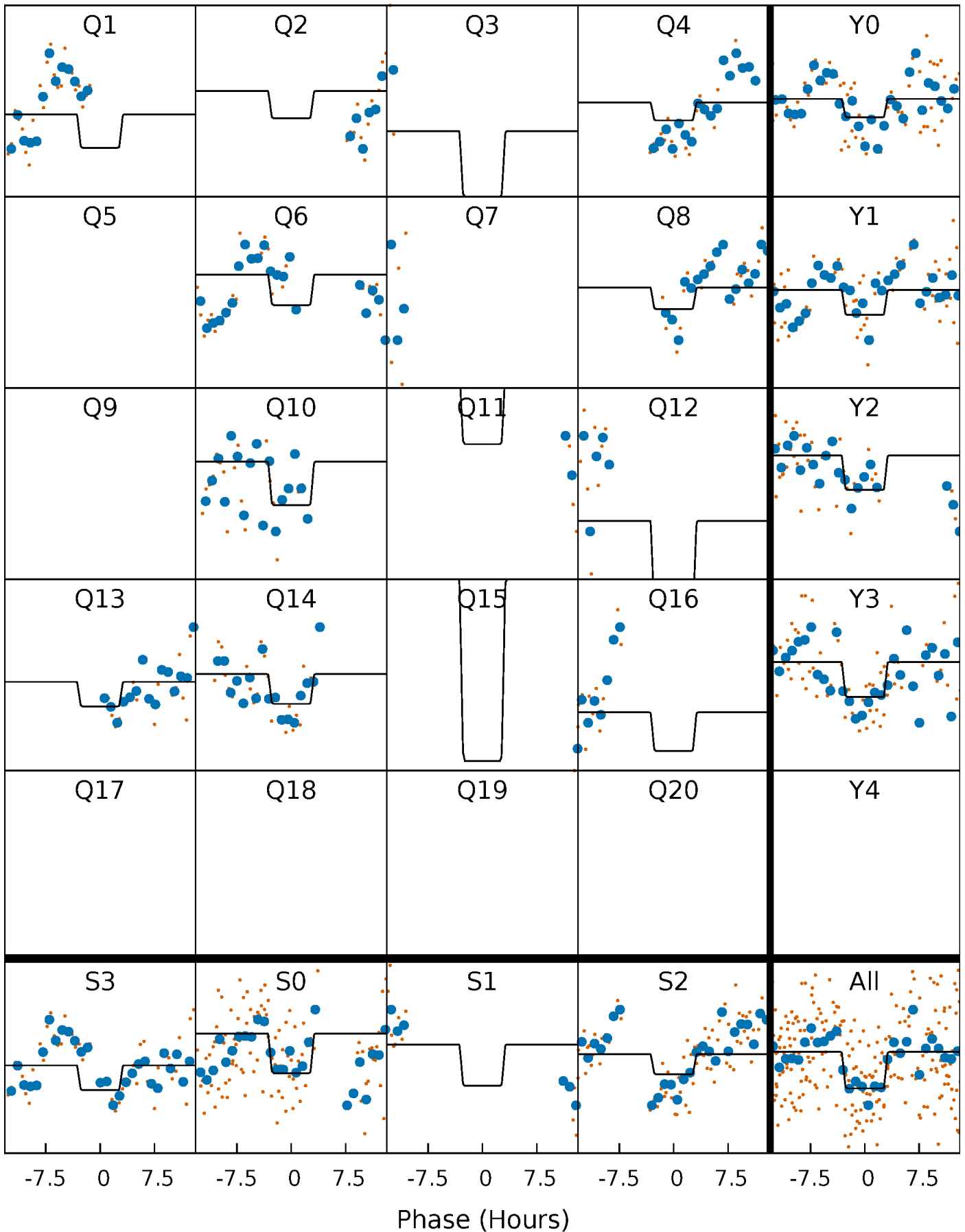
DV Quarter-Phased Transit Curves

TCE 011296045-07 $P = 80.479761$ Days $T_0 = 145.691106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

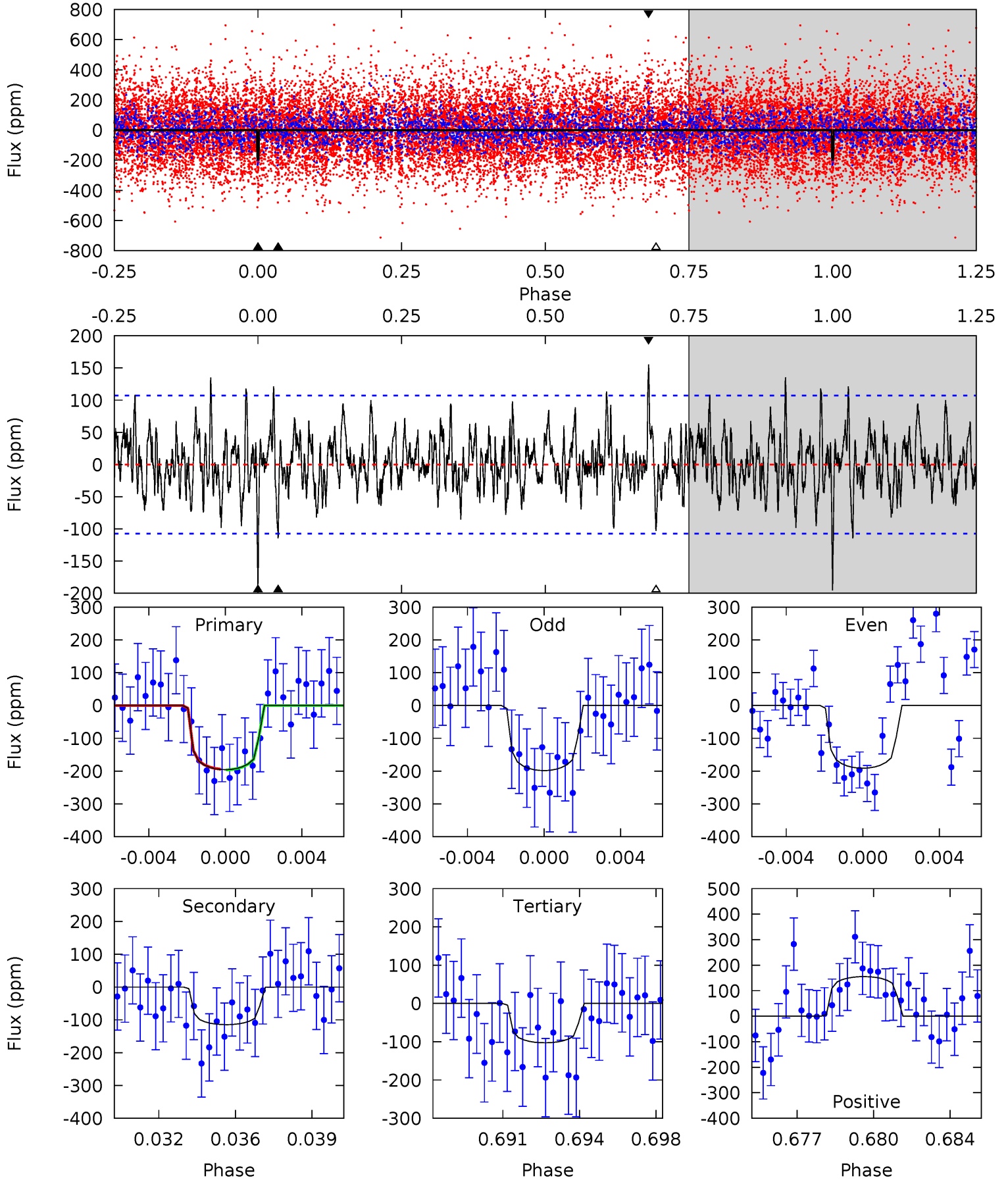
TCE 011296045-07 $P = 80.477986$ Days $T_0 = 145.711470$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-07, P = 80.479761 Days, E = 65.211345 Days

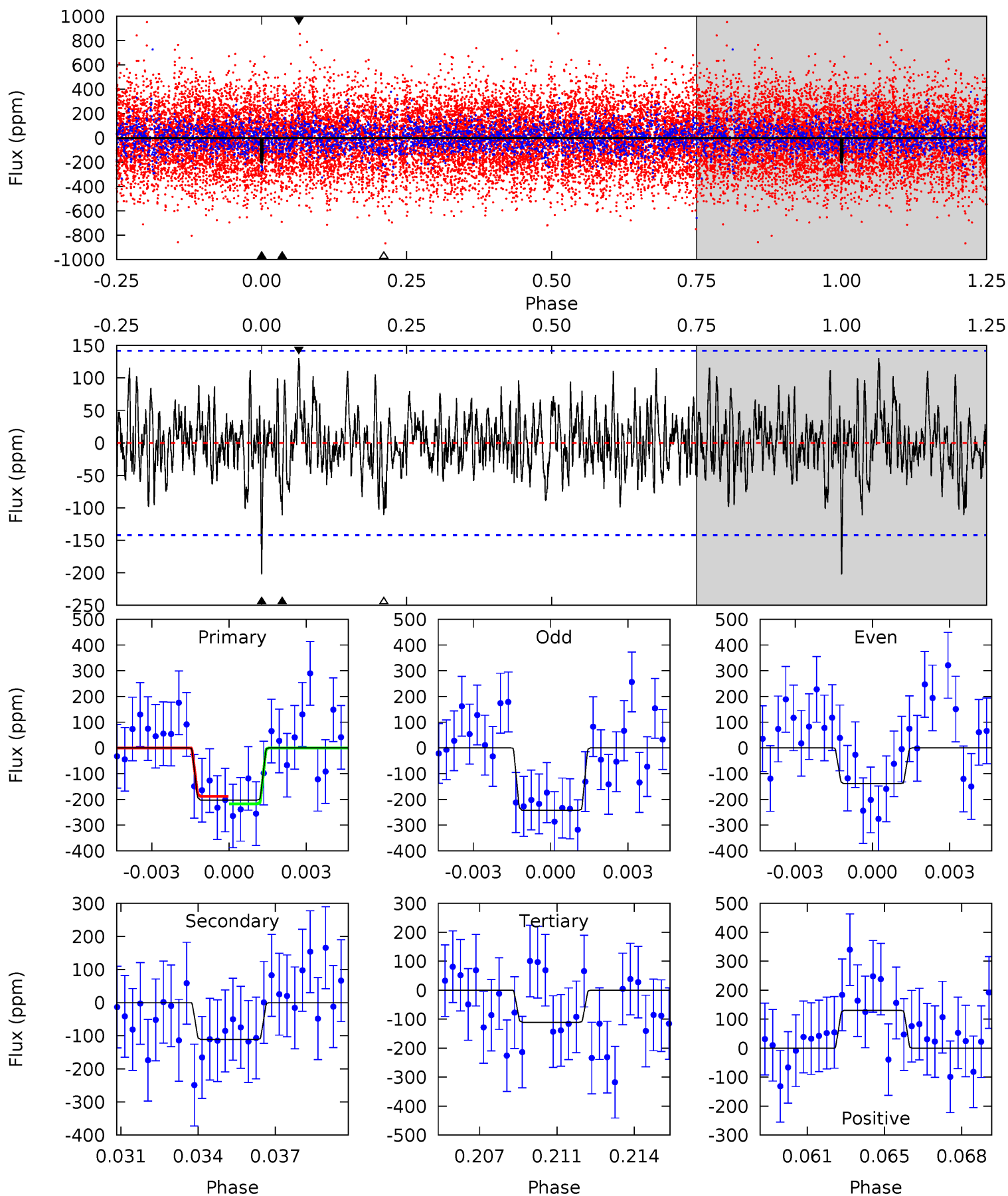
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.53	5.58	5.00	7.57	5.22	2.91	1.80	4.52	1.96	0.58	-1.98	0.17	1.02	0.44	0.05



Alt Model-Shift Uniqueness Test

011296045-07, P = 80.477986 Days, E = 65.233484 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.45	4.10	4.08	4.81	5.23	2.93	1.37	3.37	2.64	0.02	-0.71	1.86	0.80	0.39	0.54



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-115 ± 21	$6.65^{+2.33}_{-2.46}$	1228^{+59}_{-99}	5565^{+1251}_{-680}	298^{+415}_{-142}
Alt.	-111 ± 27	$5.67^{+2.42}_{-2.24}$	1231^{+60}_{-107}	5918^{+1747}_{-891}	375^{+710}_{-195}

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 $A_{obs} \gg 1.0$

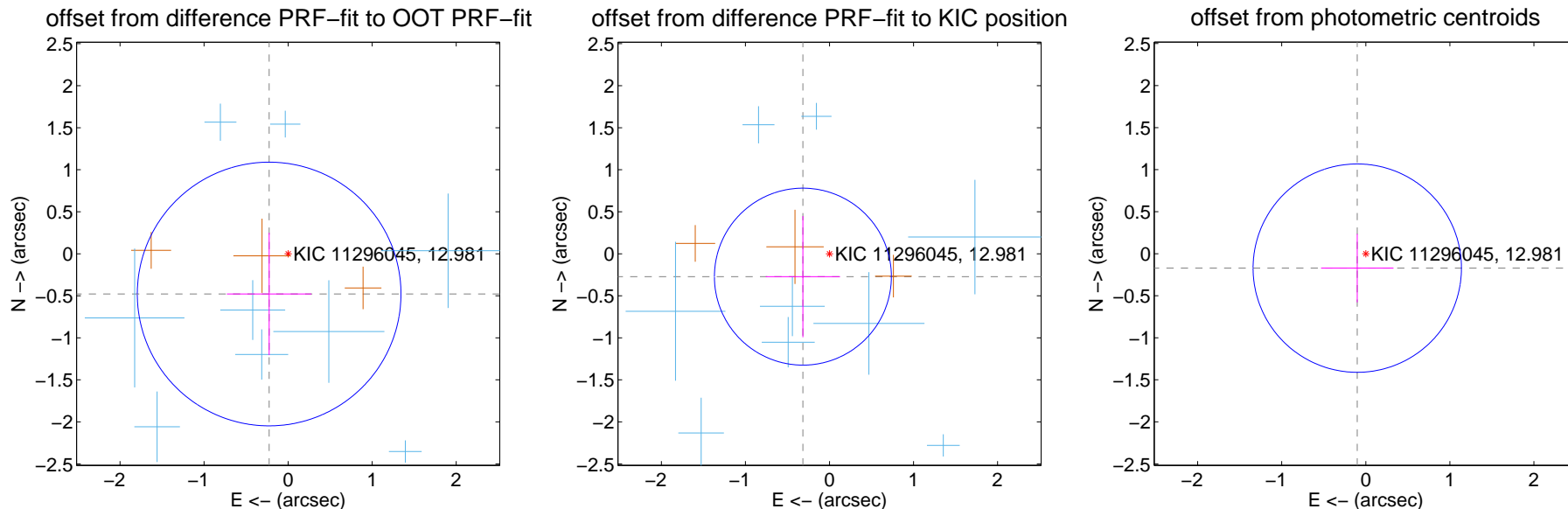
DV Centroid Data

Supplemental centroid analysis for 011296045-07. Kepler magnitude: 12.98. Transit SNR 9.51

There are 9 quarters with good PRF difference image offsets

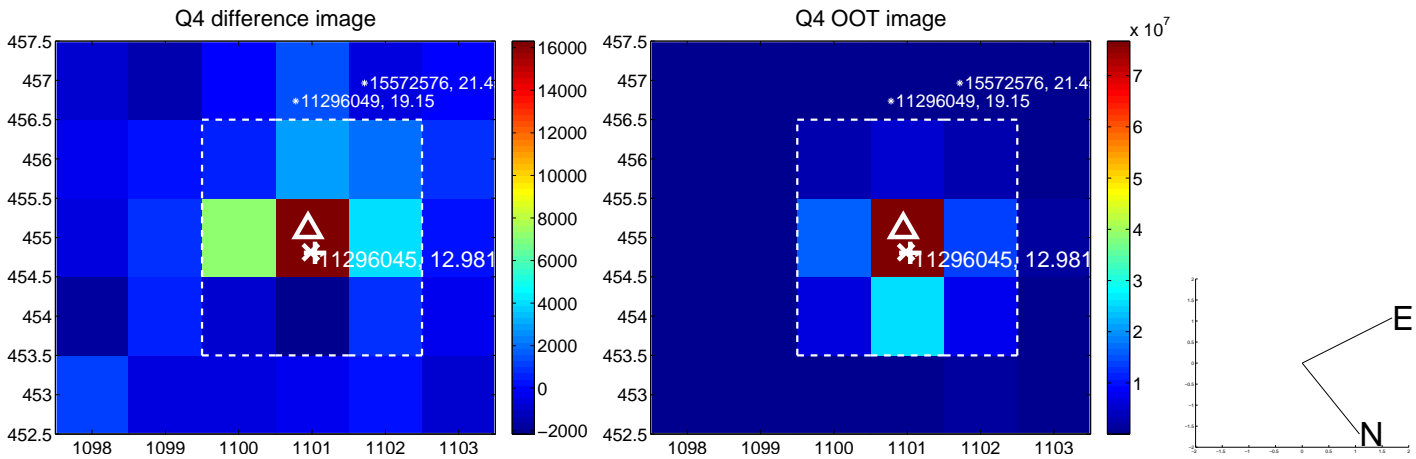
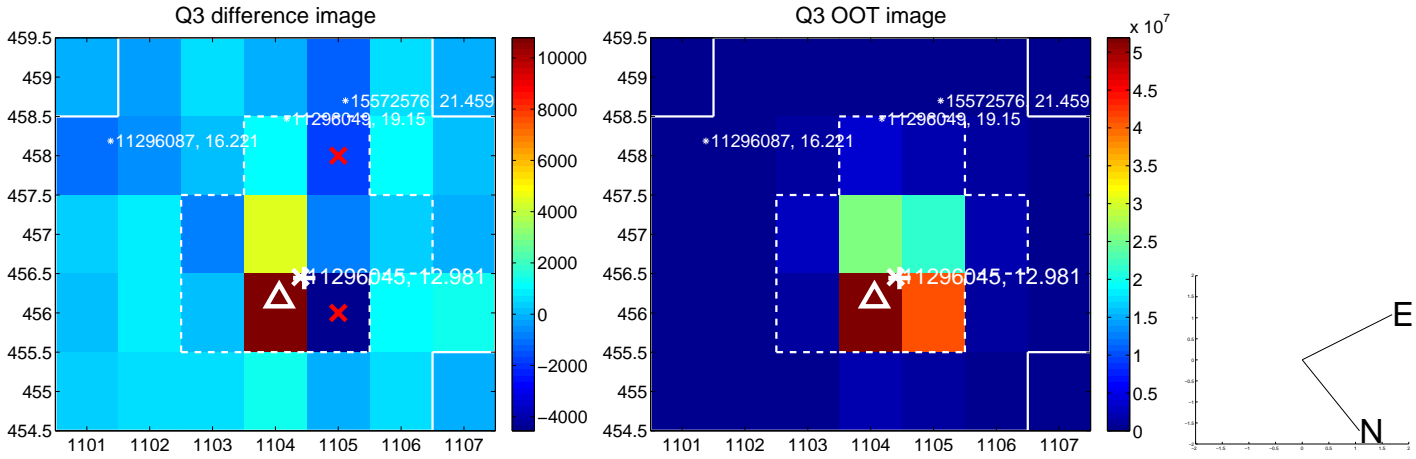
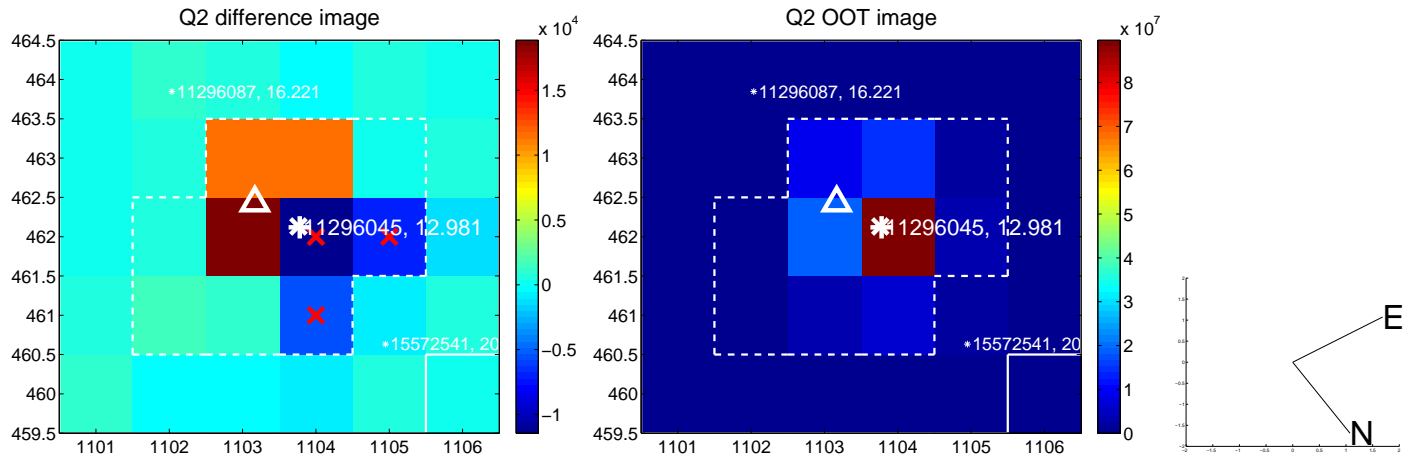
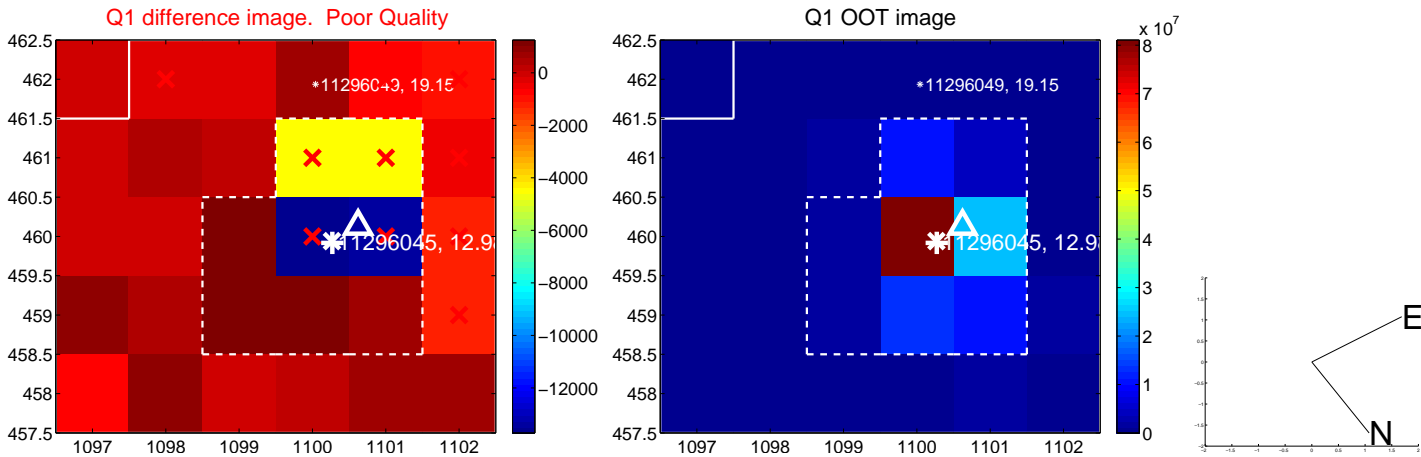
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.529 ± 0.523	1.01	0.226 ± 0.503	-0.479 ± 0.728
PRF-fit source offset from KIC position	0.417 ± 0.351	1.19	0.316 ± 0.442	-0.272 ± 0.721
photometric centroid source offset	0.20 ± 0.41	0.48	0.10 ± 0.43	-0.17 ± 0.41

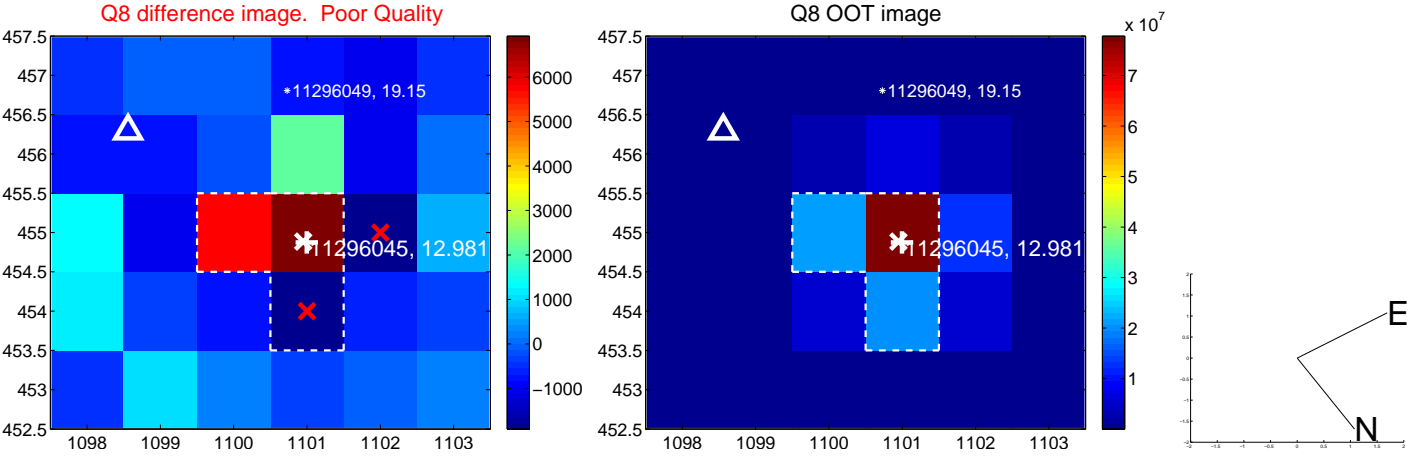
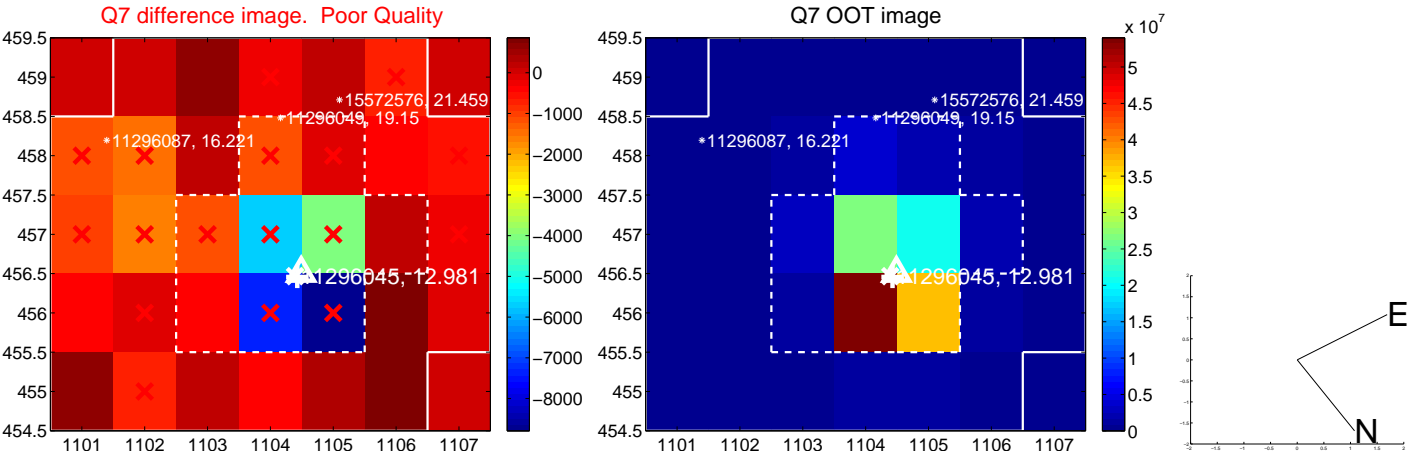
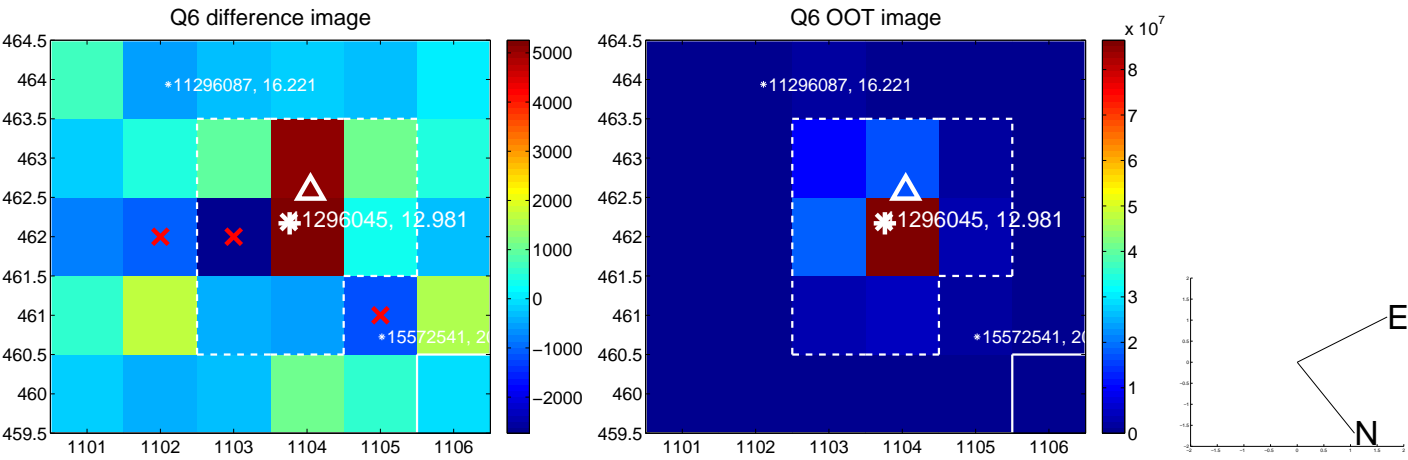
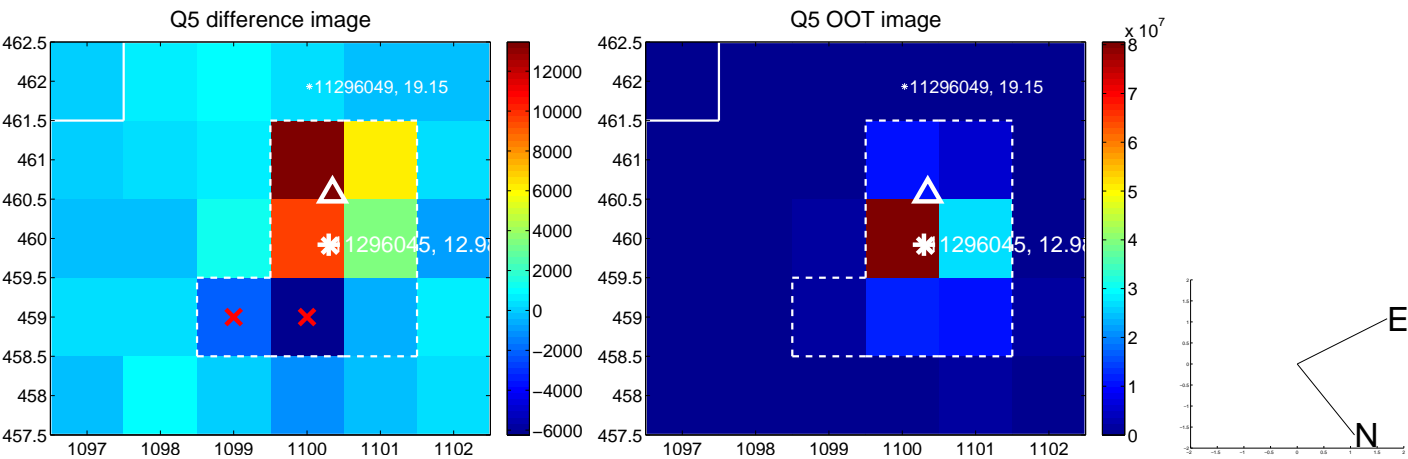


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

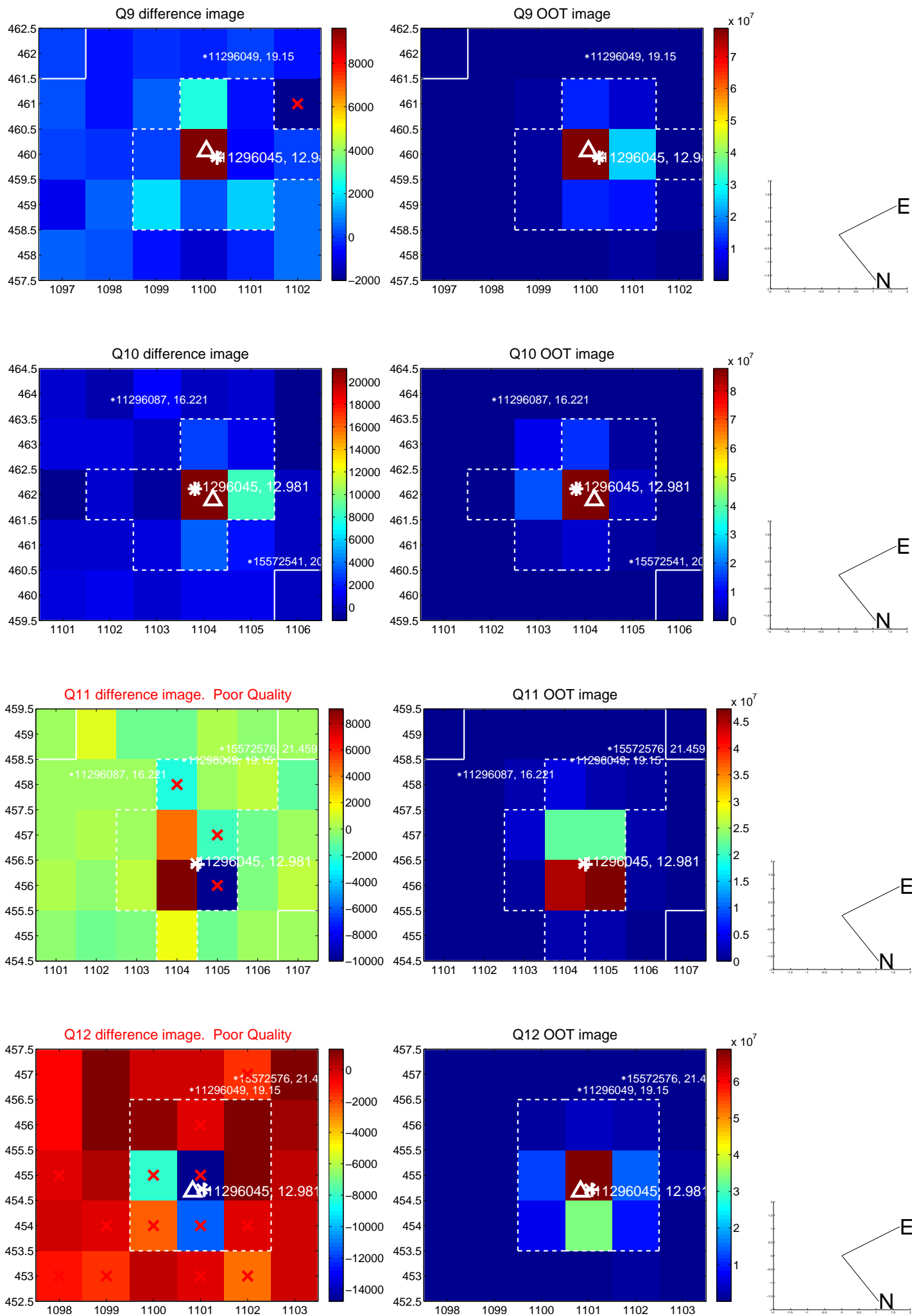
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



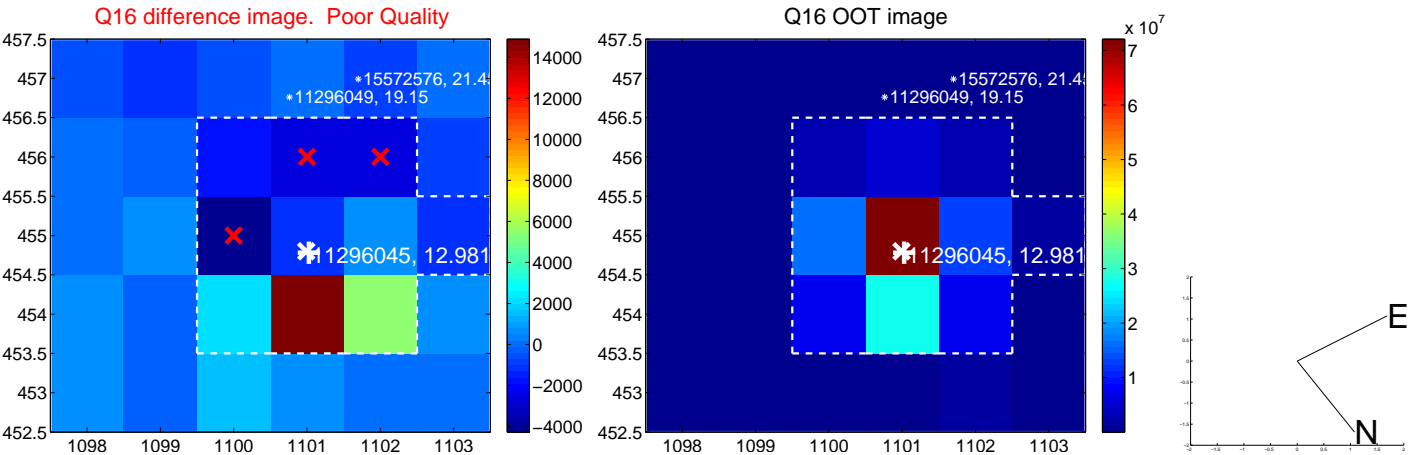
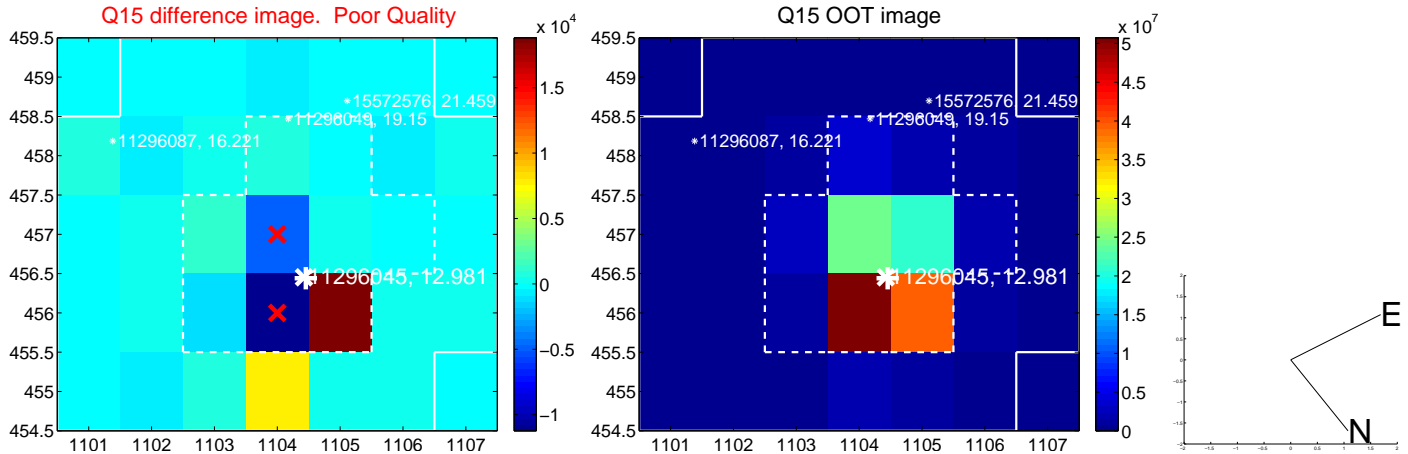
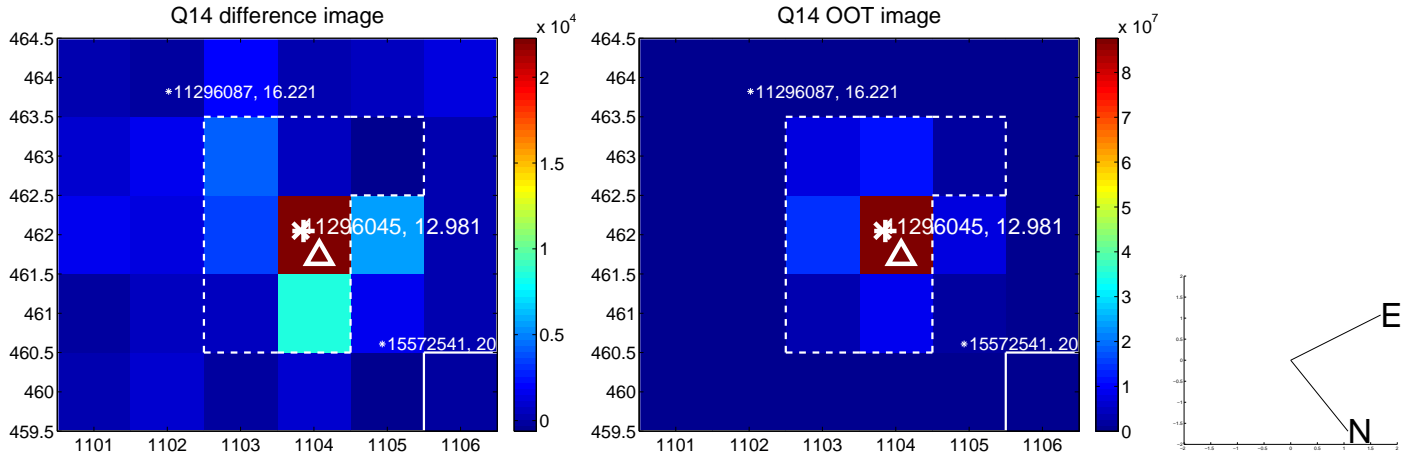
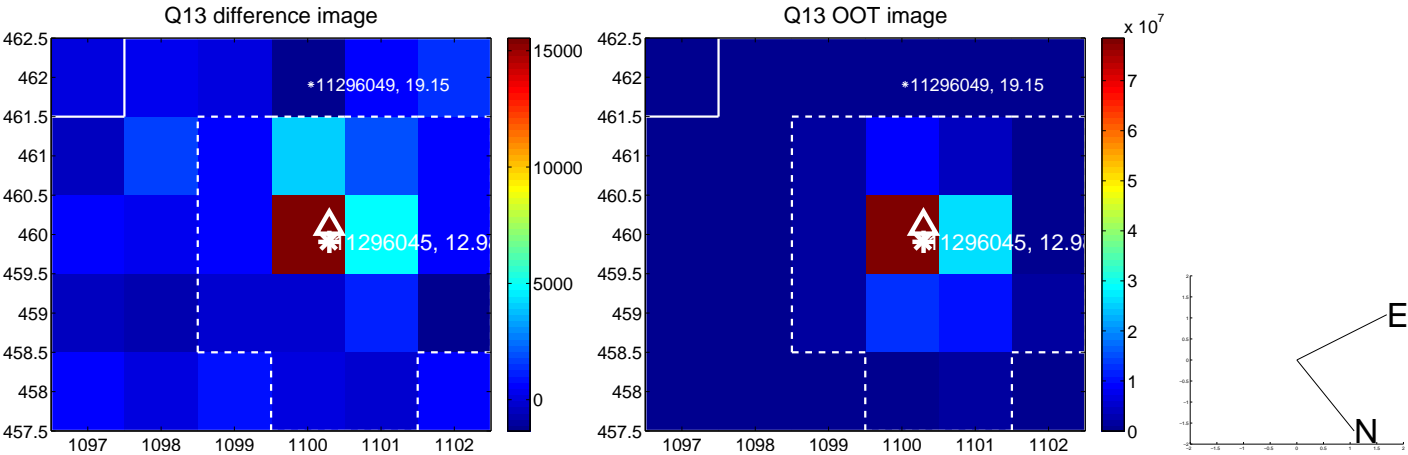
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



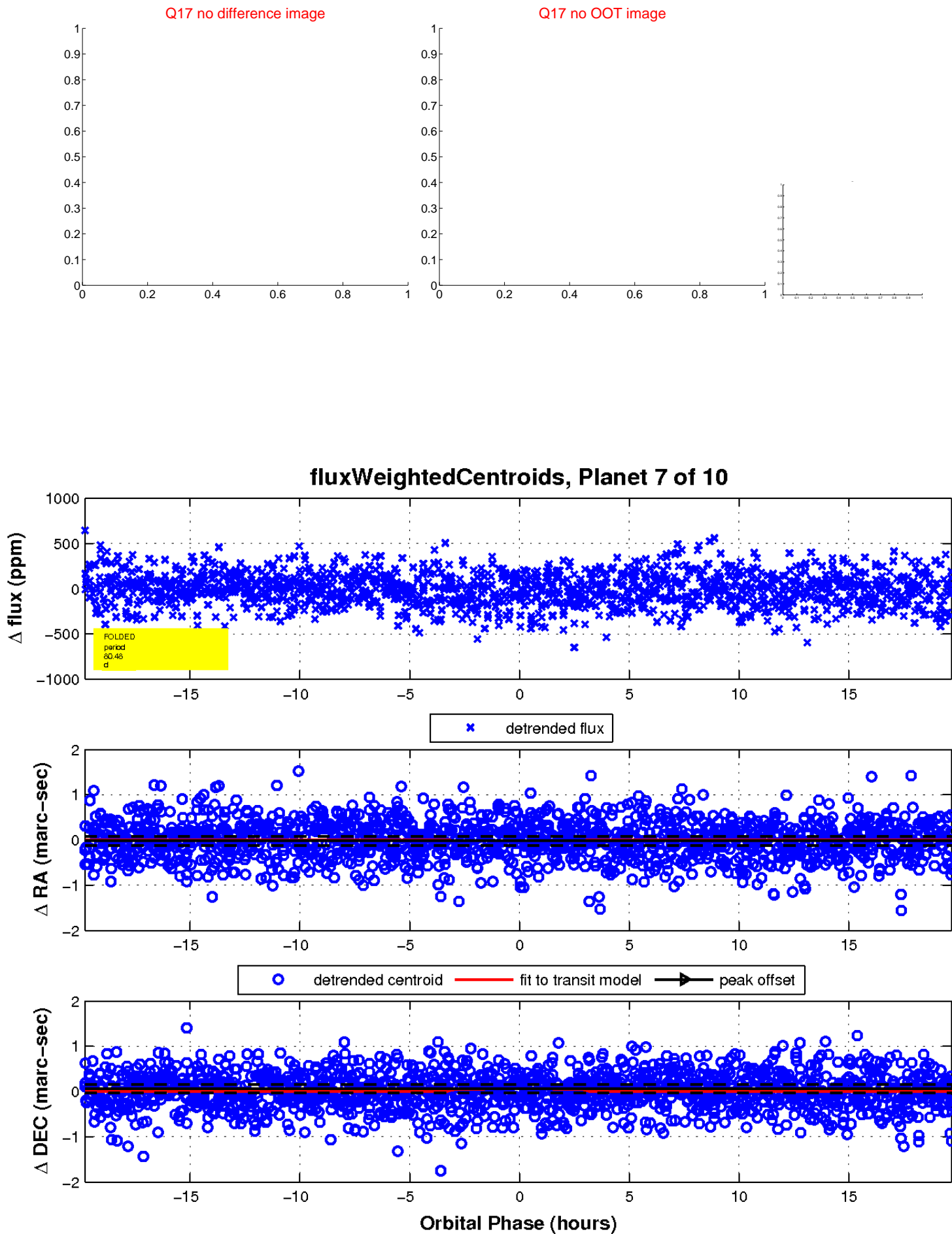
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

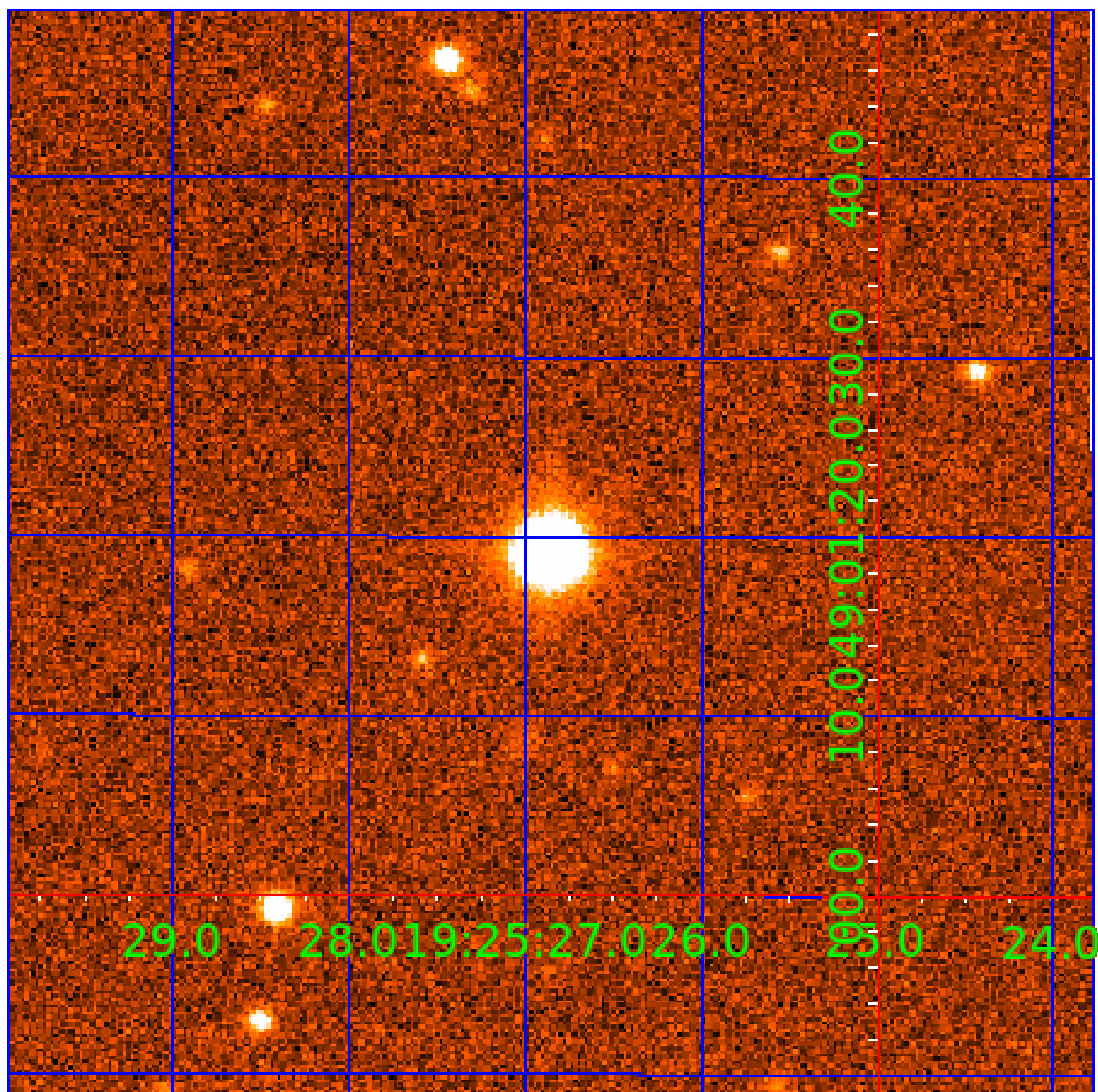


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

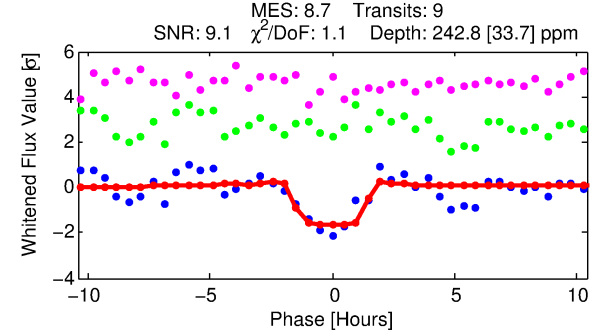
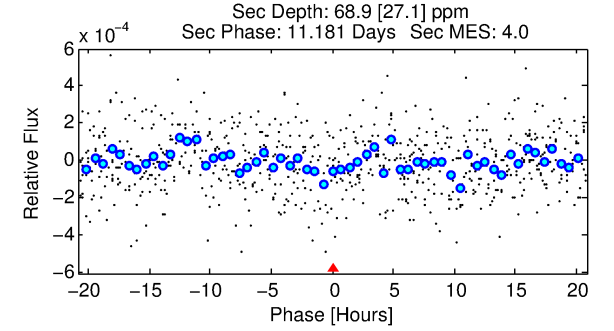
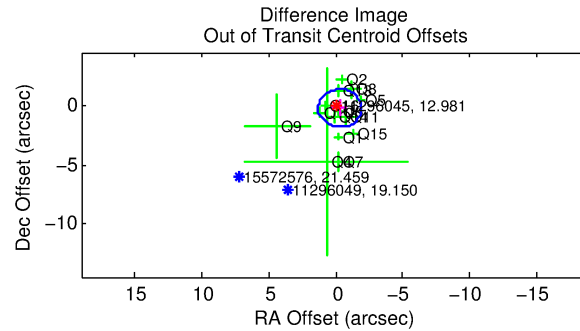
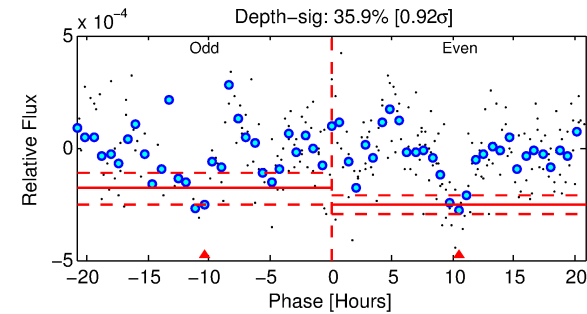
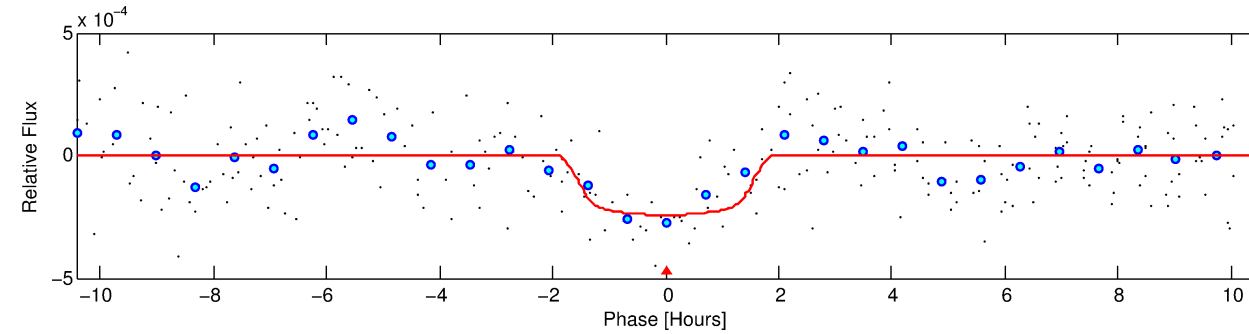
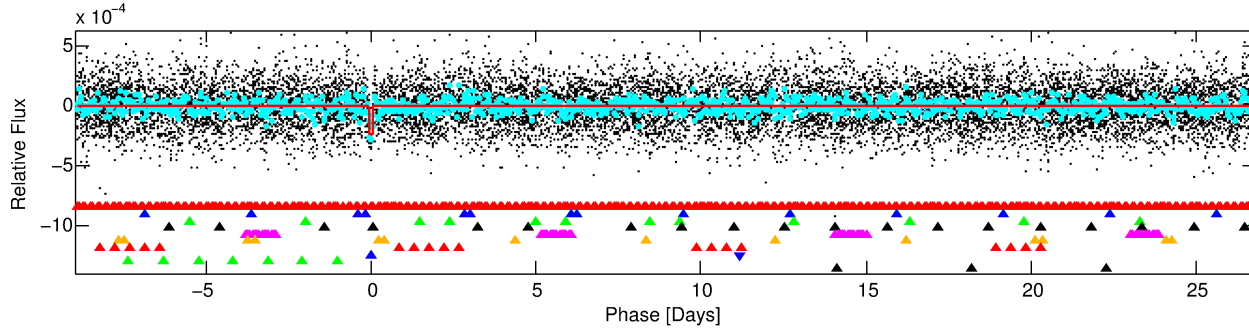
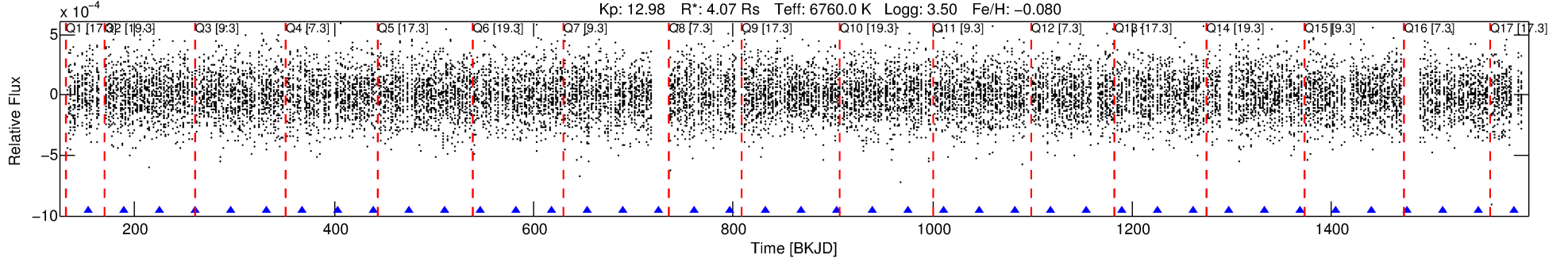
Ephemeris Match Information For 011296045-08

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 8 of 10 Period: 35.718 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 35.71835 [0.00036] d
Epoch = 153.8919 [0.0089] BKJD
Rp/R* = 0.0168 [0.0056]
a/R* = 34.82 [66.02]
b = 0.92 [0.34]
Seff = 447.87 [257.08]
Teq = 1173 [168] K
Rp = 7.48 [3.73] Re
a = 0.2630 [0.0930] AU
Ag = 46.87 [44.65] [1.03σ]
Teffp = 4745 [924] K [3.80σ]

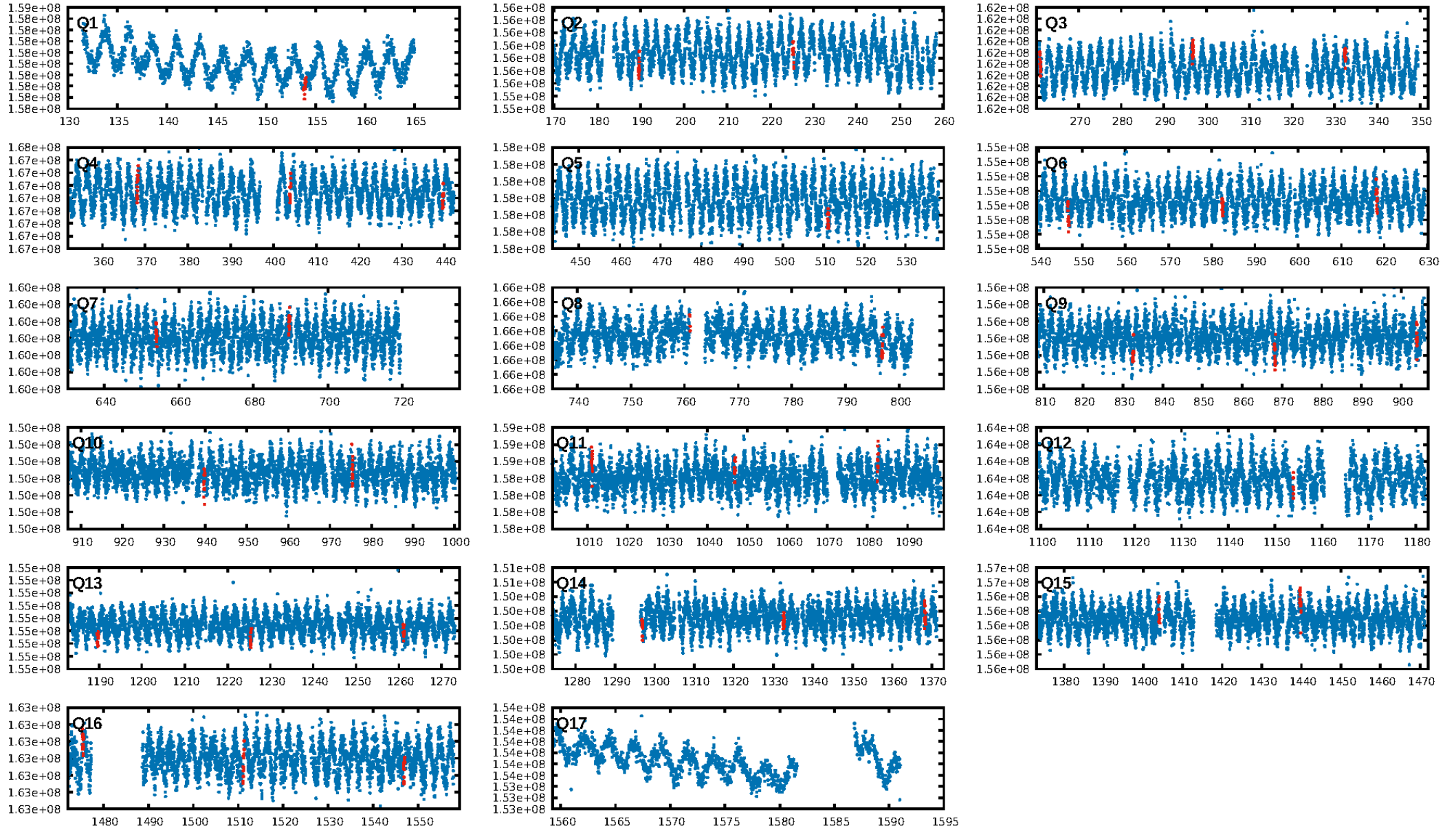
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [50.50σ]
LongPeriod-sig: 100.0% [183.41σ]
ModelChiSquare2-sig: 69.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: -26.18
Centroid-sig: 52.4%
Centroid-so: 0.221 arcsec [0.56σ]
OotOffset-rm: 0.380 arcsec [0.71σ]
KicOffset-rm: 0.325 arcsec [0.61σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.53 [8/15]

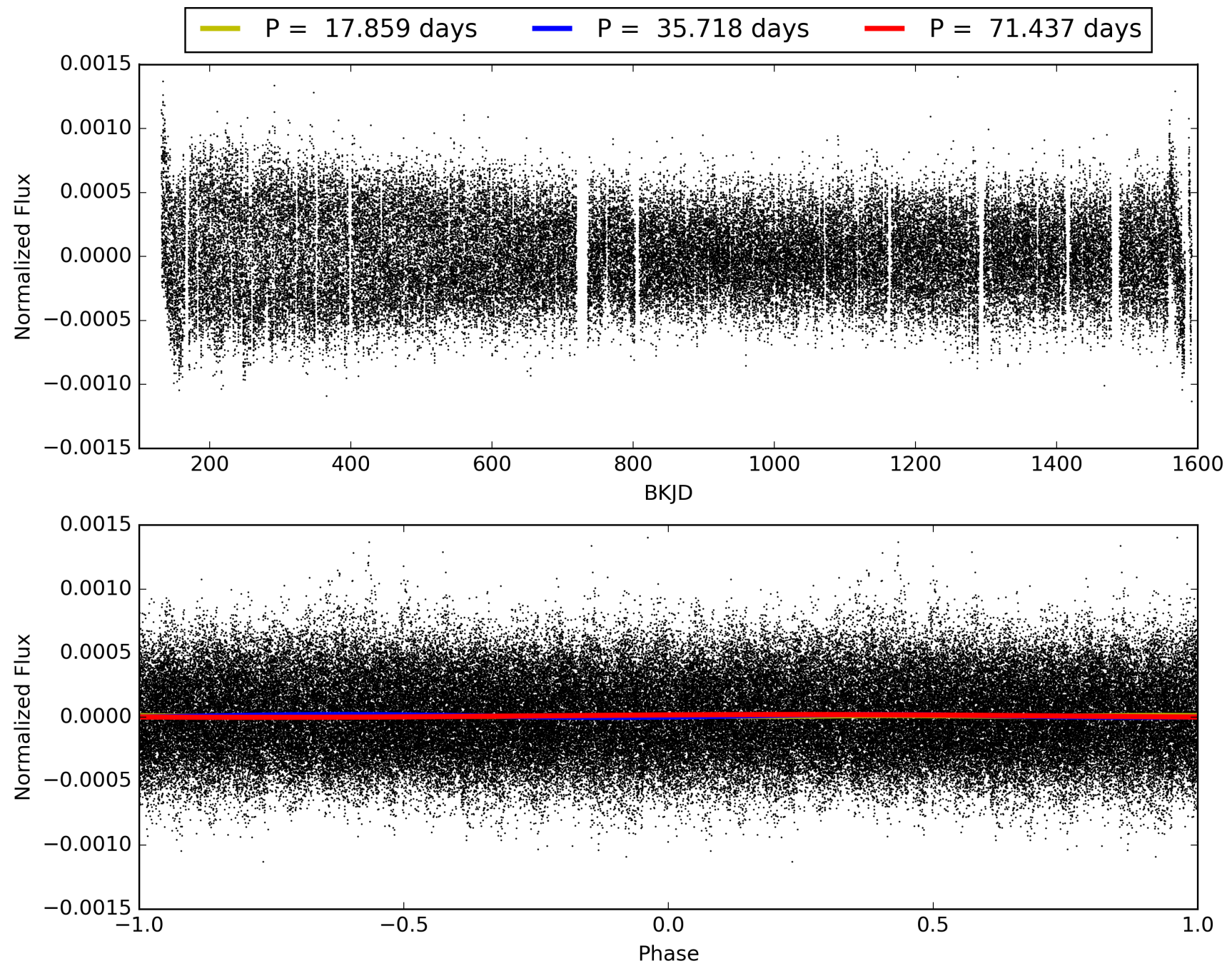
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:47:05 Z

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

TCE 011296045-08, PDC Light Curves

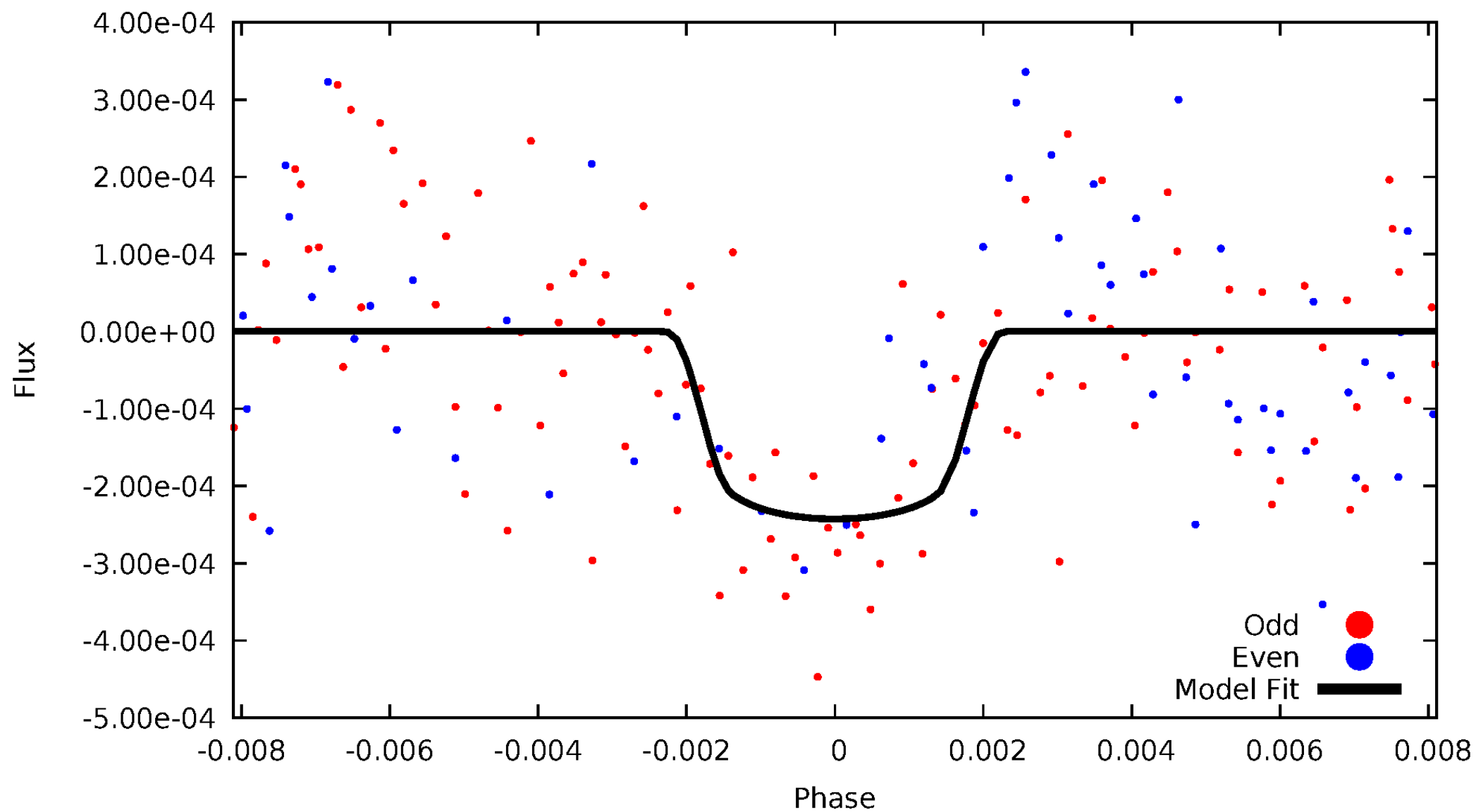


TCE 011296045-08



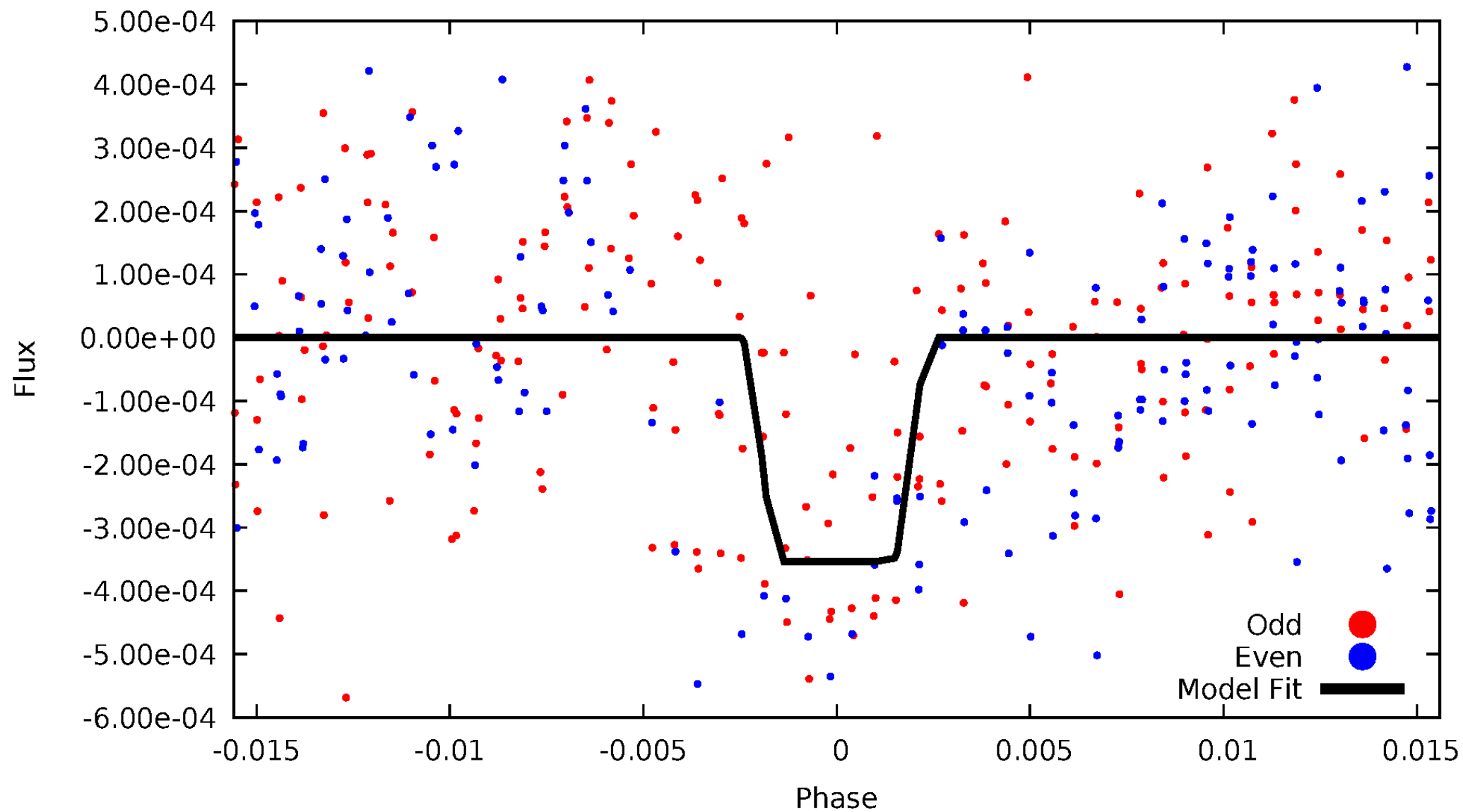
DV Odd/Even

TCE 011296045-08



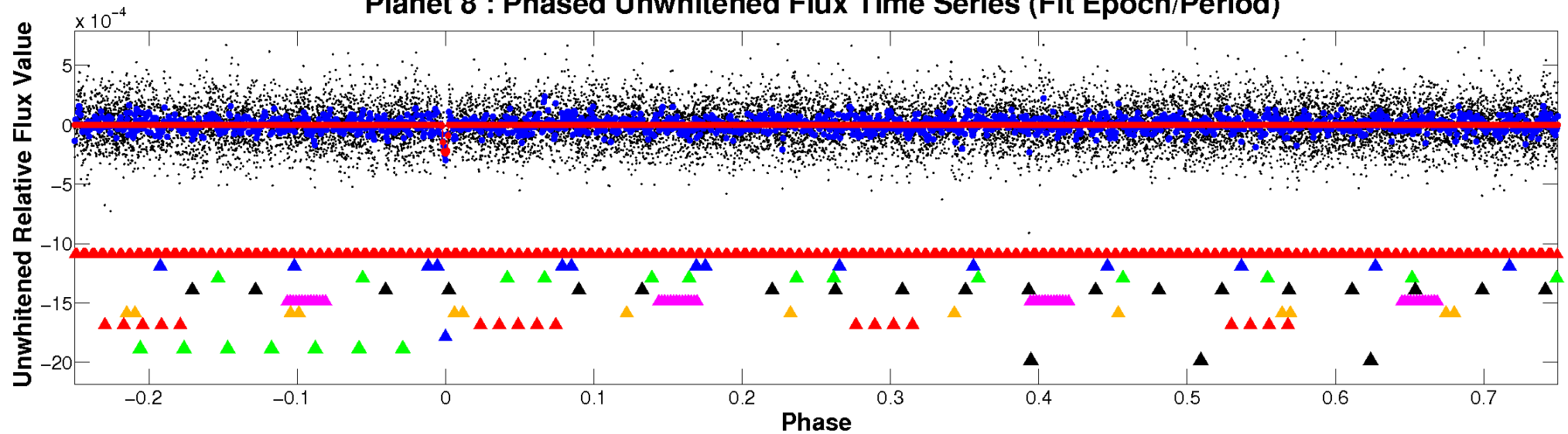
ALT Odd/Even

TCE 011296045-08

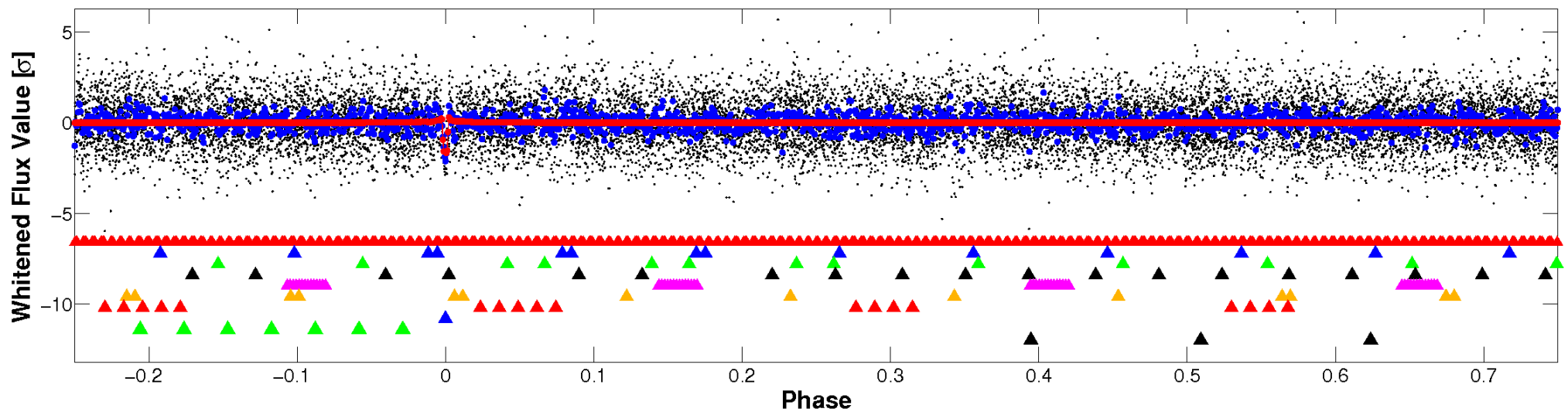


Non-Whitened Vs. Whitened Light Curve

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

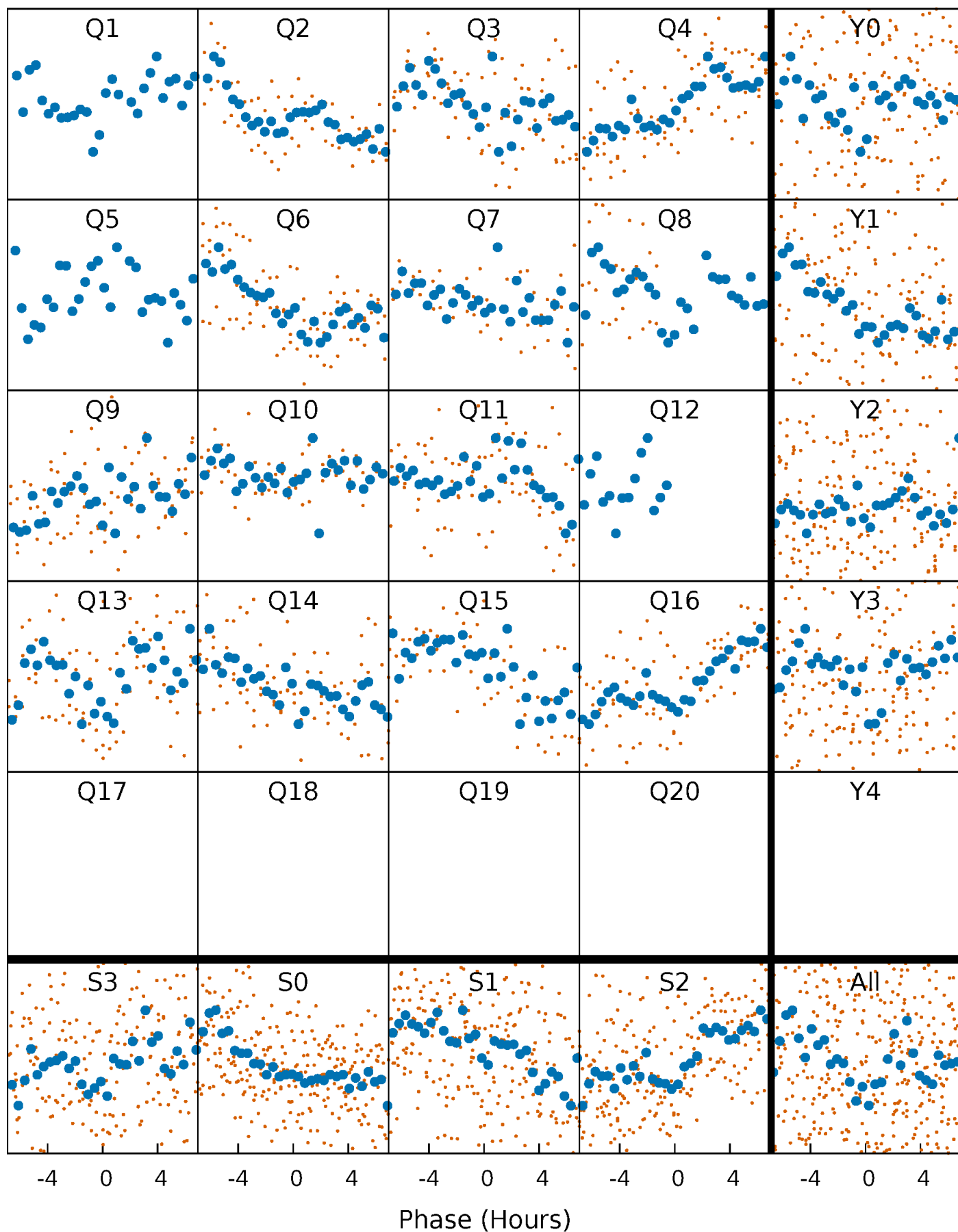


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



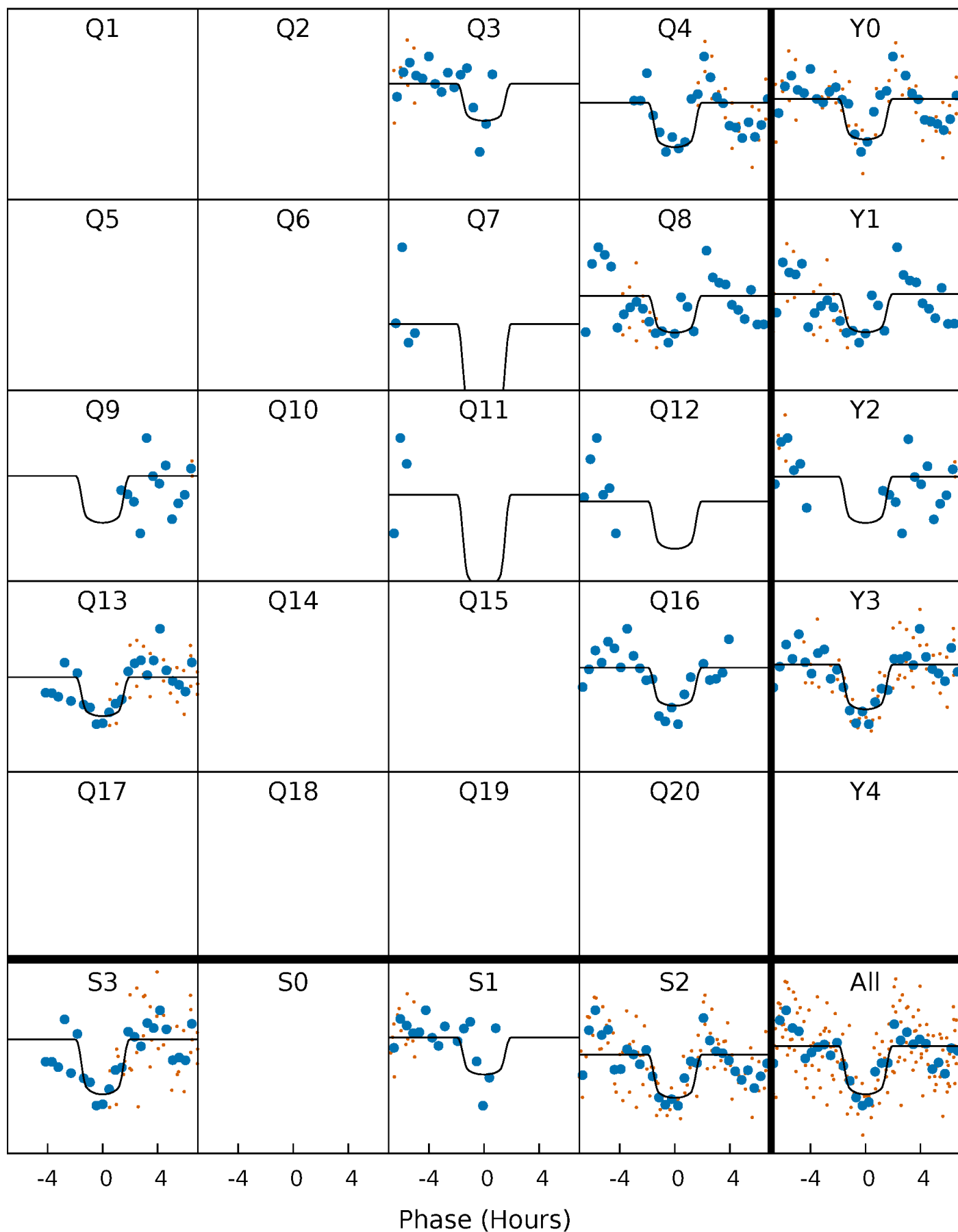
PDC Quarter-Phased Transit Curves

TCE 011296045-08 P= 35.718354 Days $T_0=153.891928$ (BKJD)



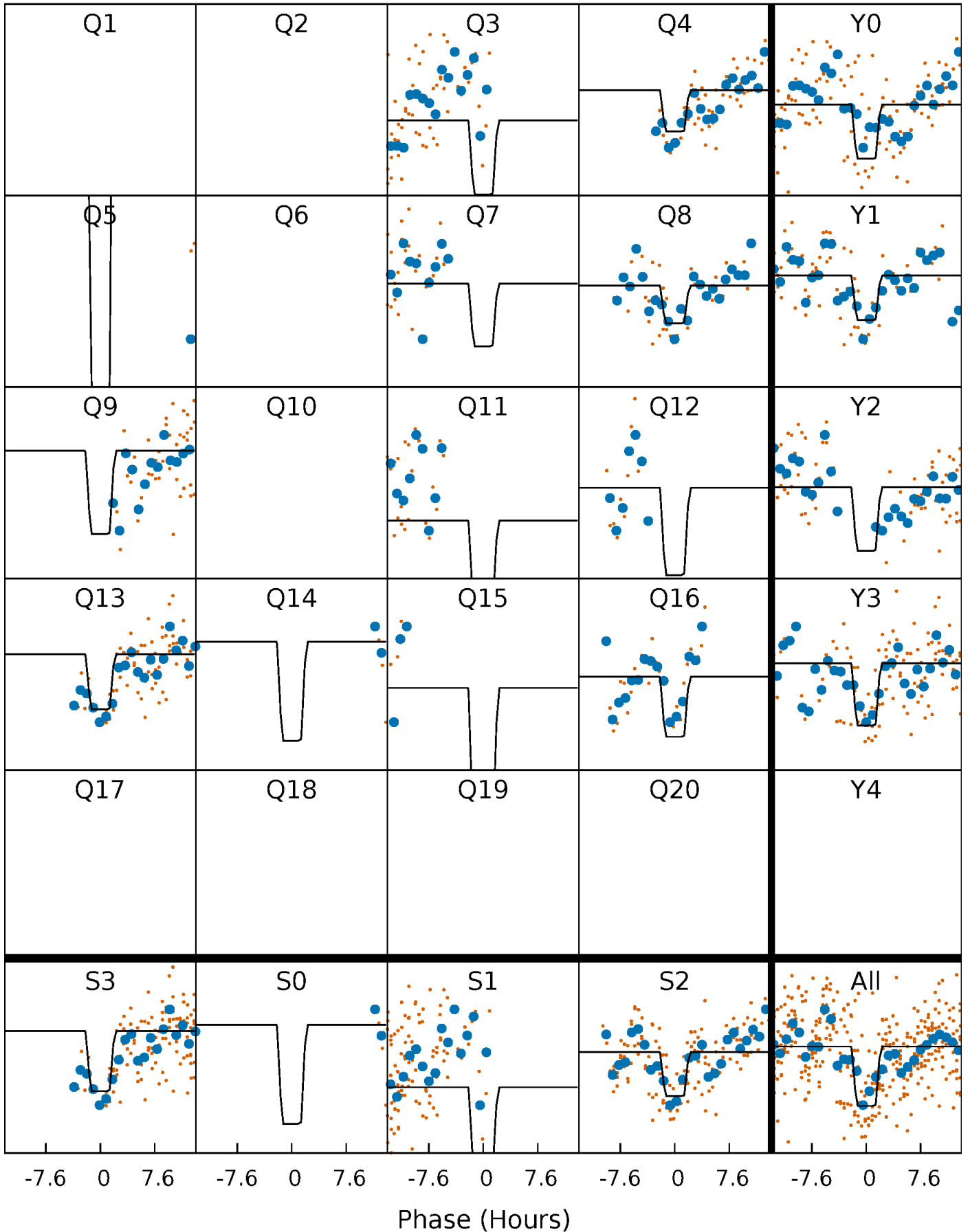
DV Quarter-Phased Transit Curves

TCE 011296045-08 P= 35.718354 Days $T_0=153.891928$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

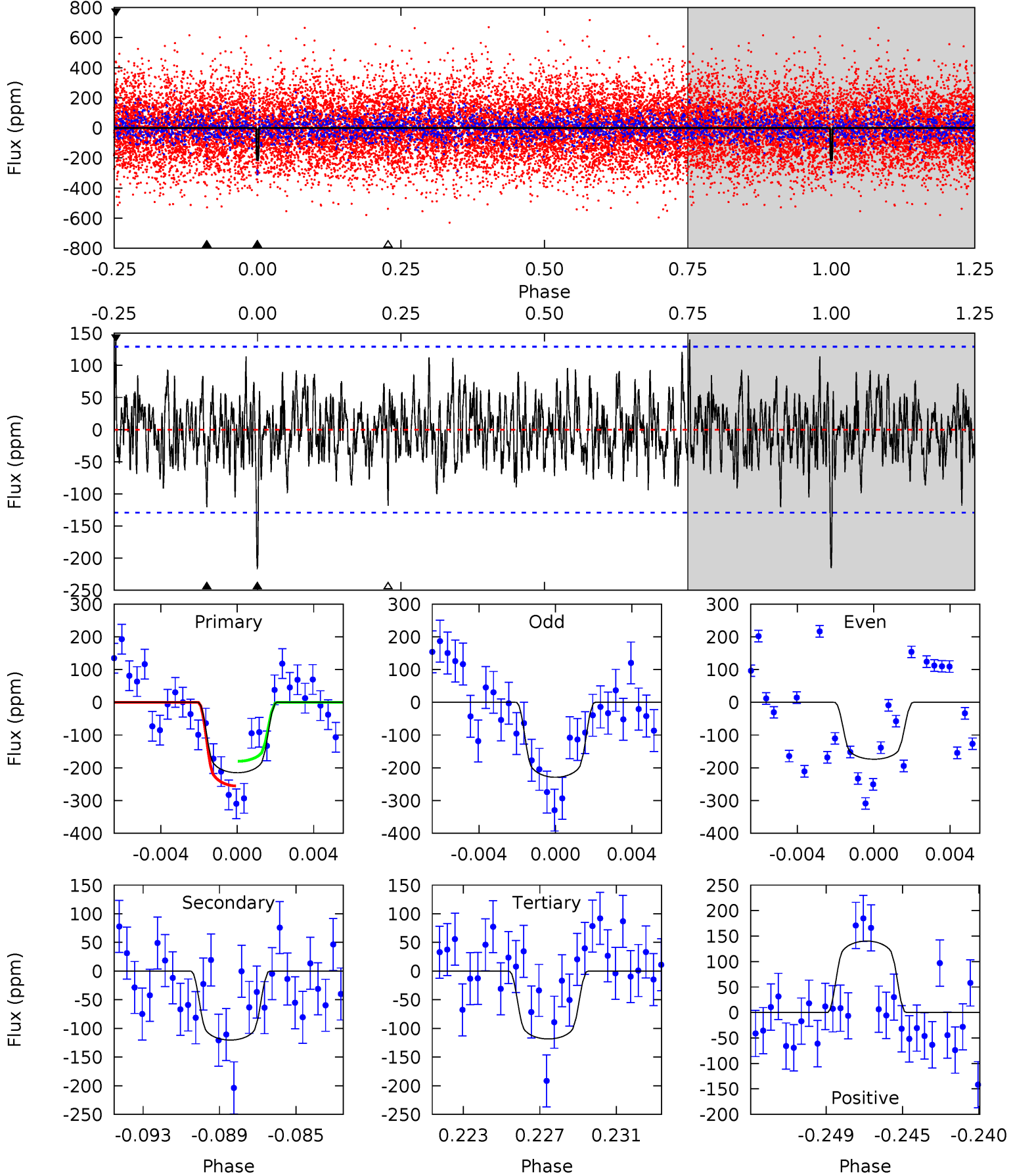
TCE 011296045-08 P= 35.718027 Days $T_0=153.888948$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-08, P = 35.718354 Days, E = 118.173574 Days

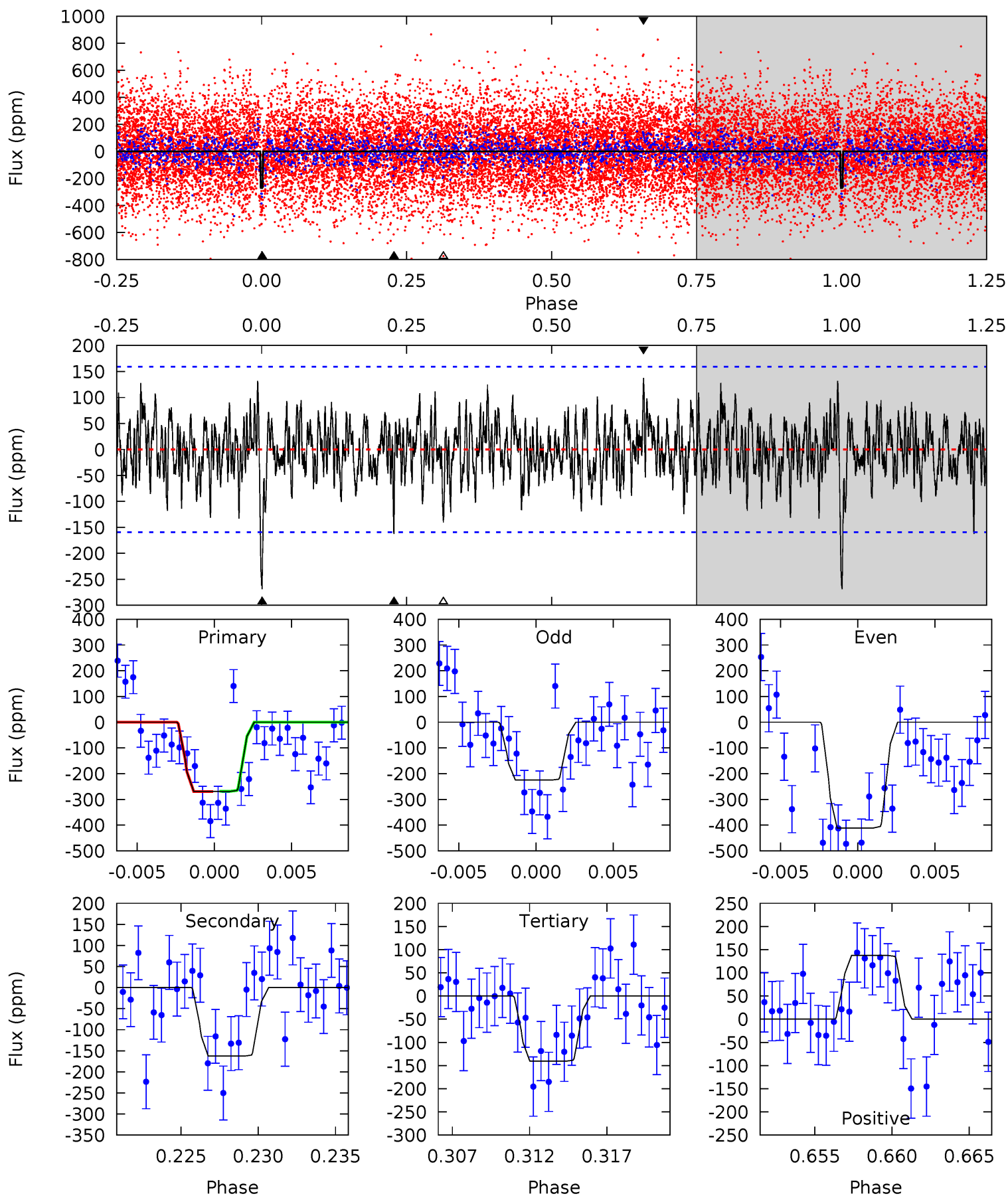
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.63	4.83	4.75	5.62	5.18	2.84	1.54	3.88	3.01	0.08	-0.79	0.99	1.15	0.39	1.51



Alt Model-Shift Uniqueness Test

011296045-08, P = 35.718027 Days, E = 118.170921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.70	5.26	4.55	4.45	5.15	2.80	1.43	4.15	4.25	0.71	0.81	2.64	0.81	0.34	0.01



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-120 ± 25	$6.81^{+2.81}_{-2.37}$	1610^{+82}_{-143}	5488^{+1250}_{-683}	99^{+124}_{-49}
Alt.	-163 ± 31	$7.72^{+2.67}_{-2.44}$	1618^{+75}_{-144}	5579^{+1096}_{-657}	103^{+119}_{-48}

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 $A_{obs} \gg 1.0$

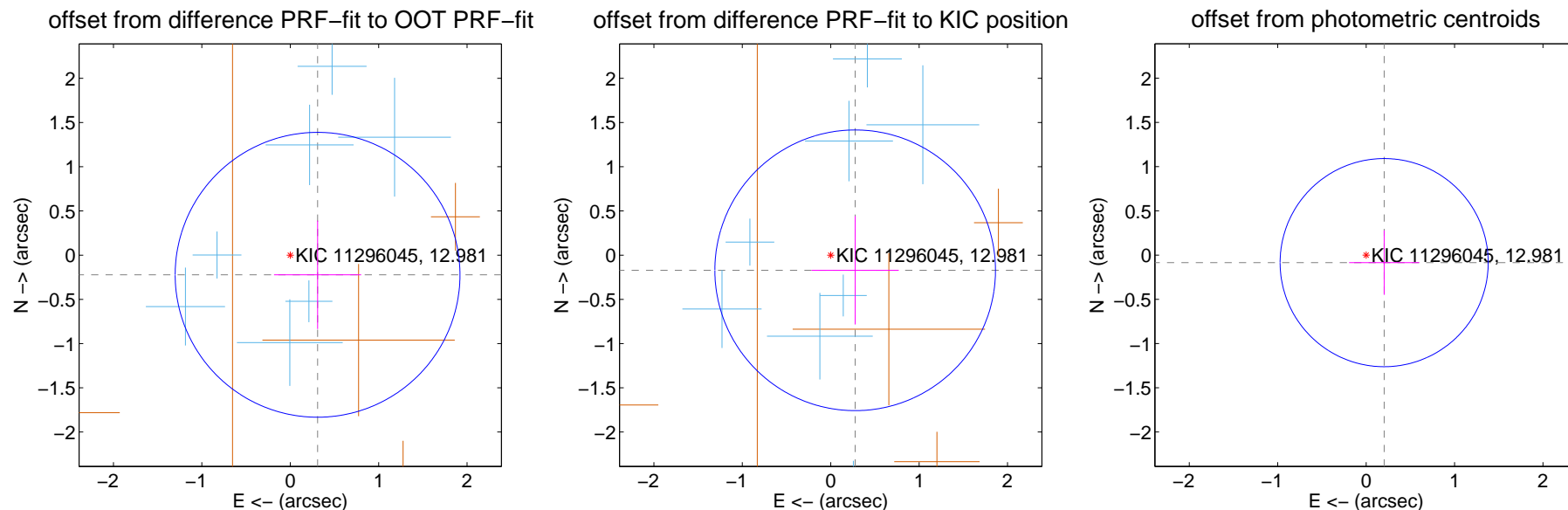
DV Centroid Data

Supplemental centroid analysis for 011296045-08. Kepler magnitude: 12.98. Transit SNR 9.14

There are 8 quarters with good PRF difference image offsets

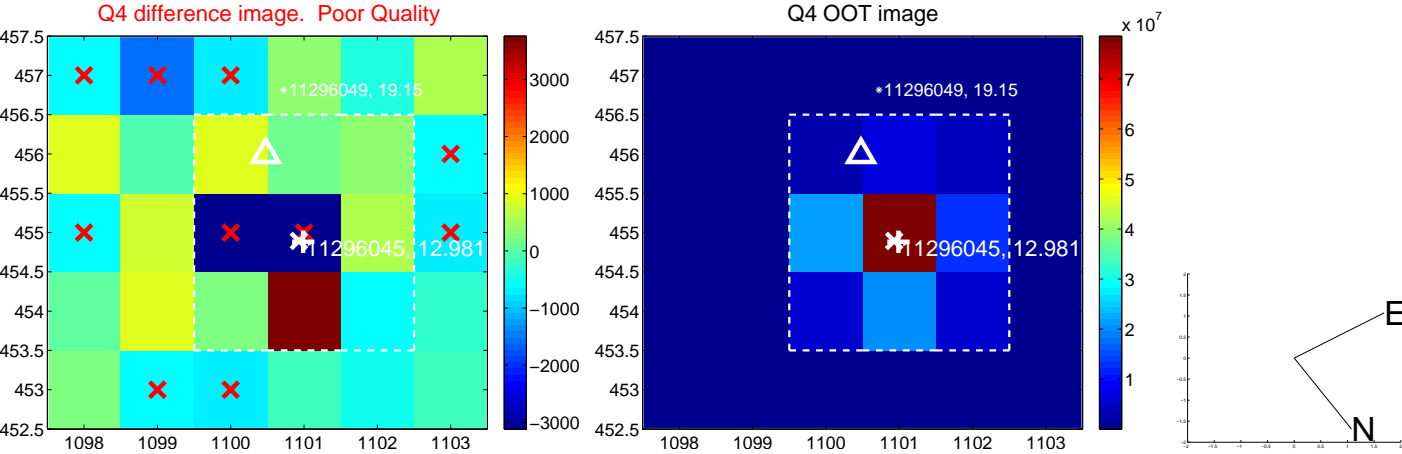
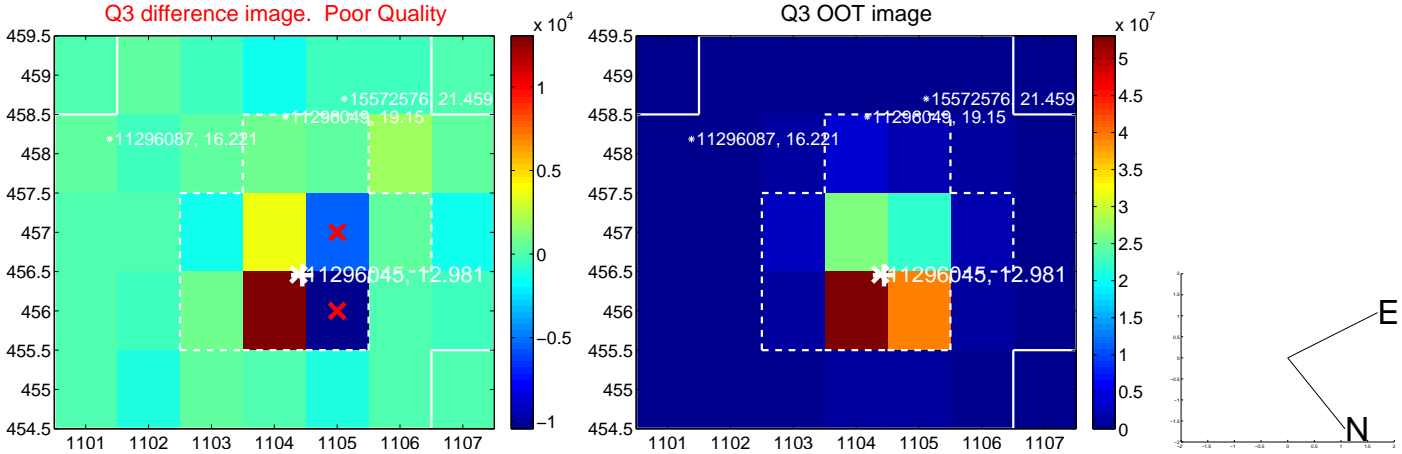
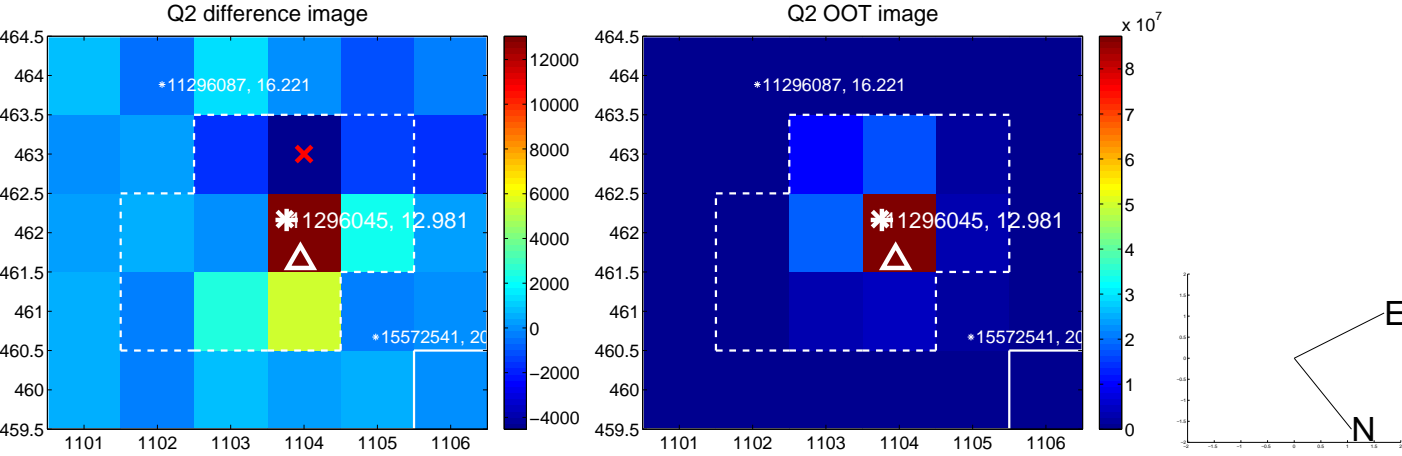
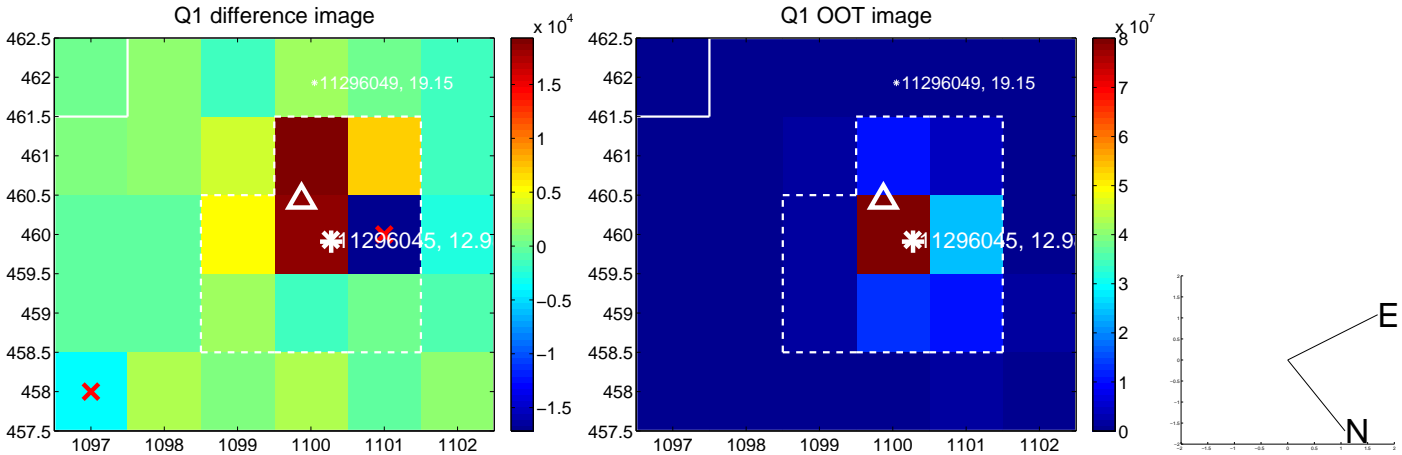
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.380 ± 0.537	0.71	-0.309 ± 0.493	-0.222 ± 0.613
PRF-fit source offset from KIC position	0.325 ± 0.529	0.61	-0.277 ± 0.493	-0.171 ± 0.613
photometric centroid source offset	0.22 ± 0.39	0.56	-0.20 ± 0.40	-0.09 ± 0.36

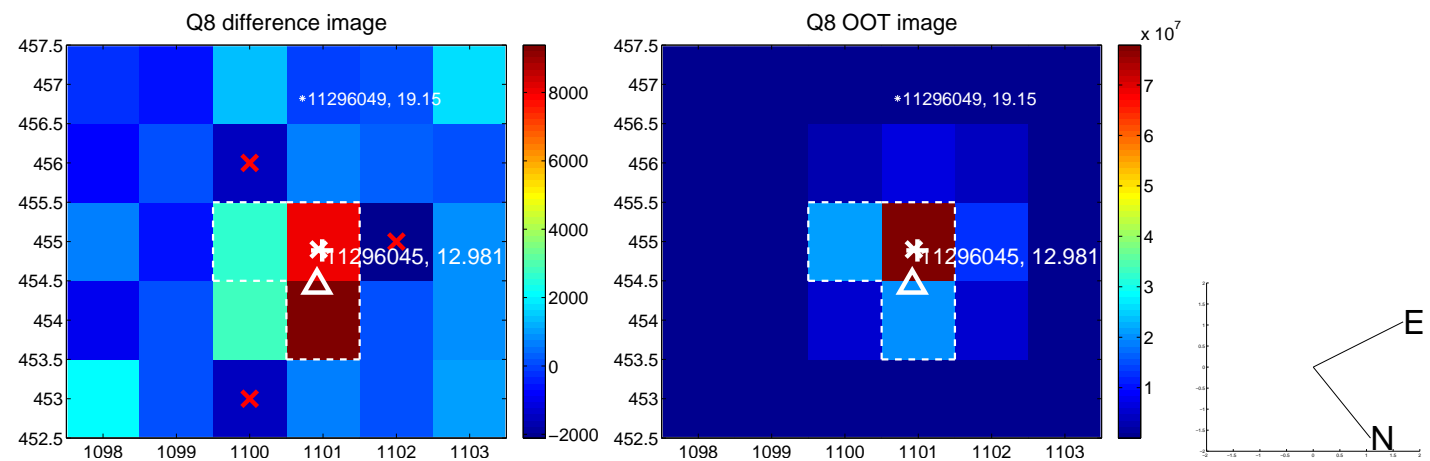
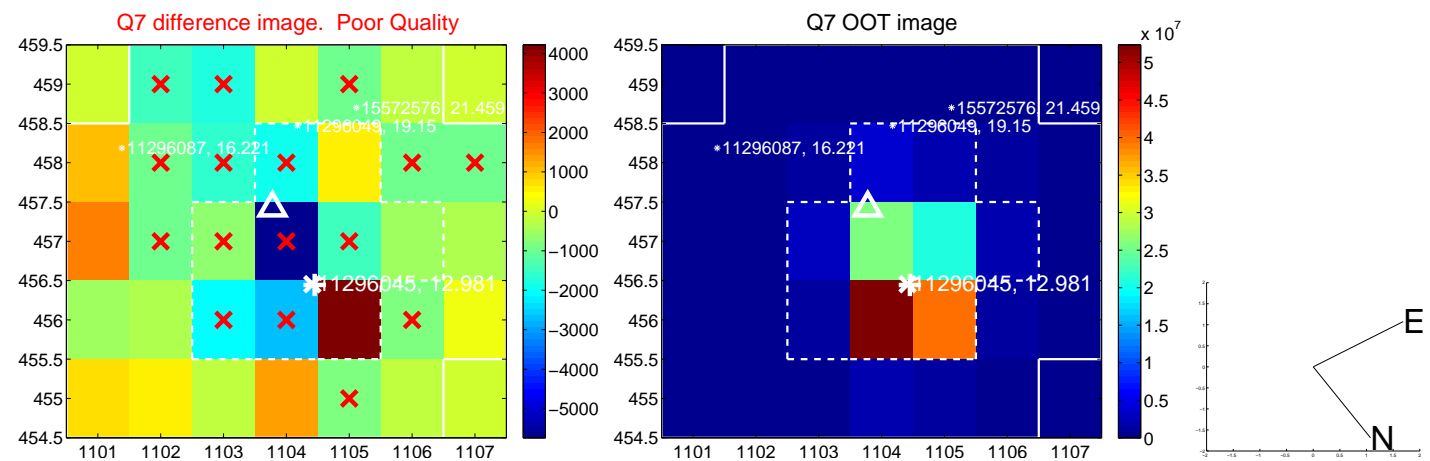
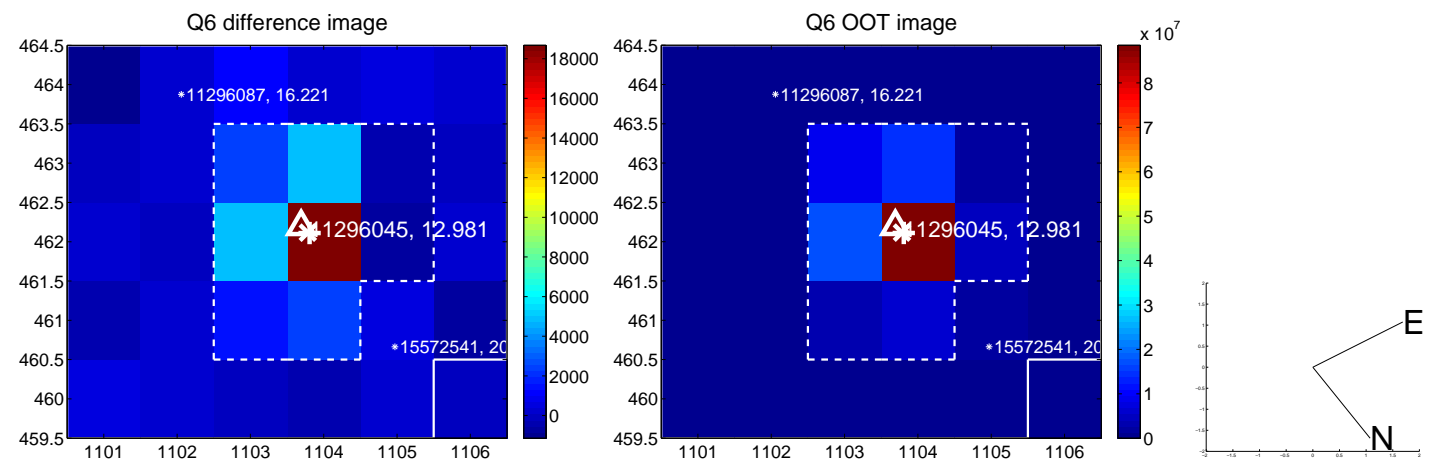
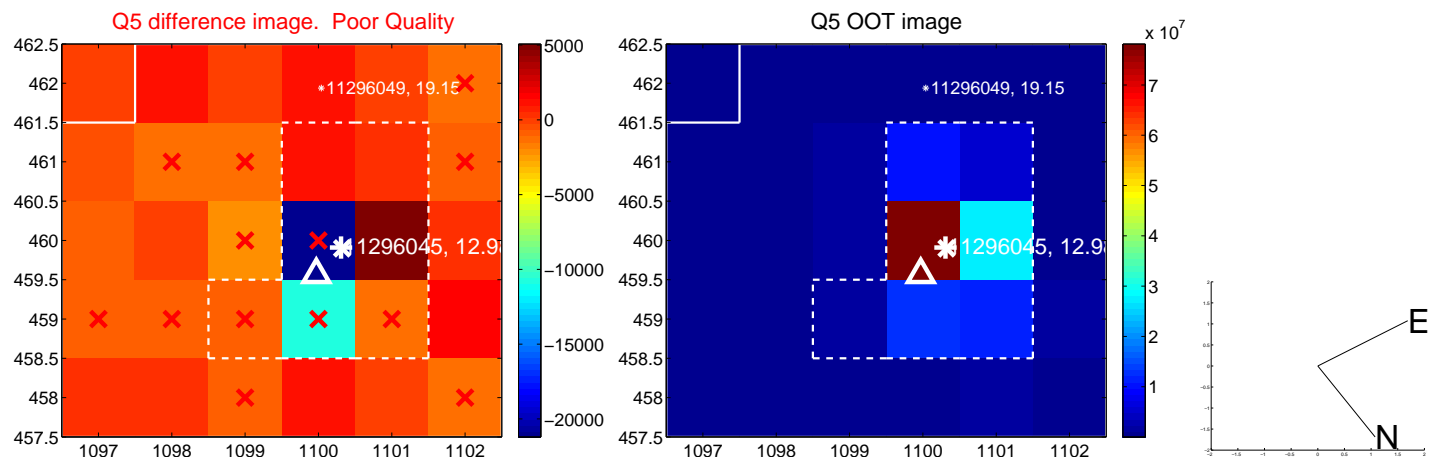


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

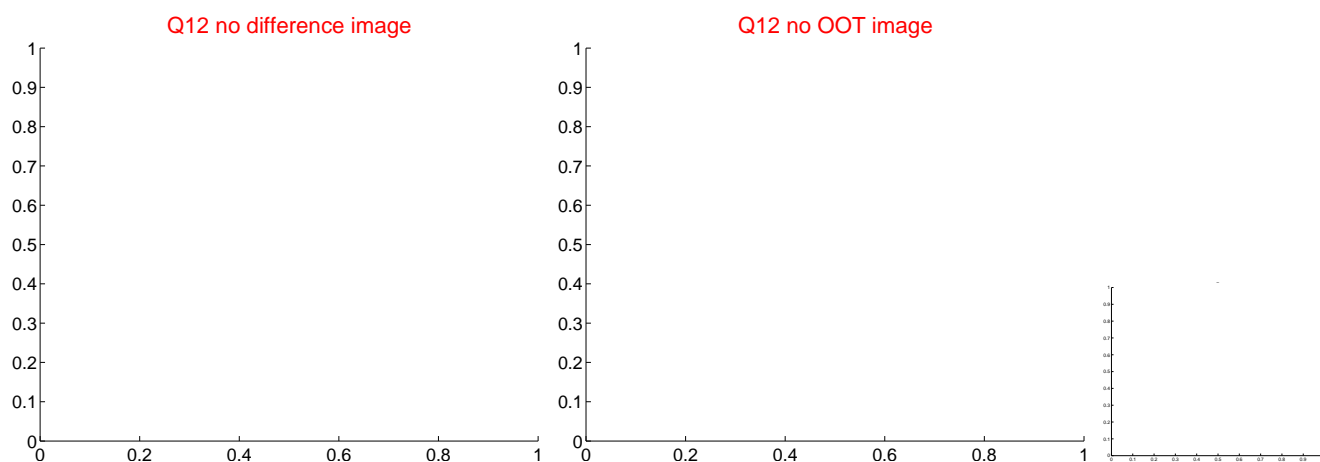
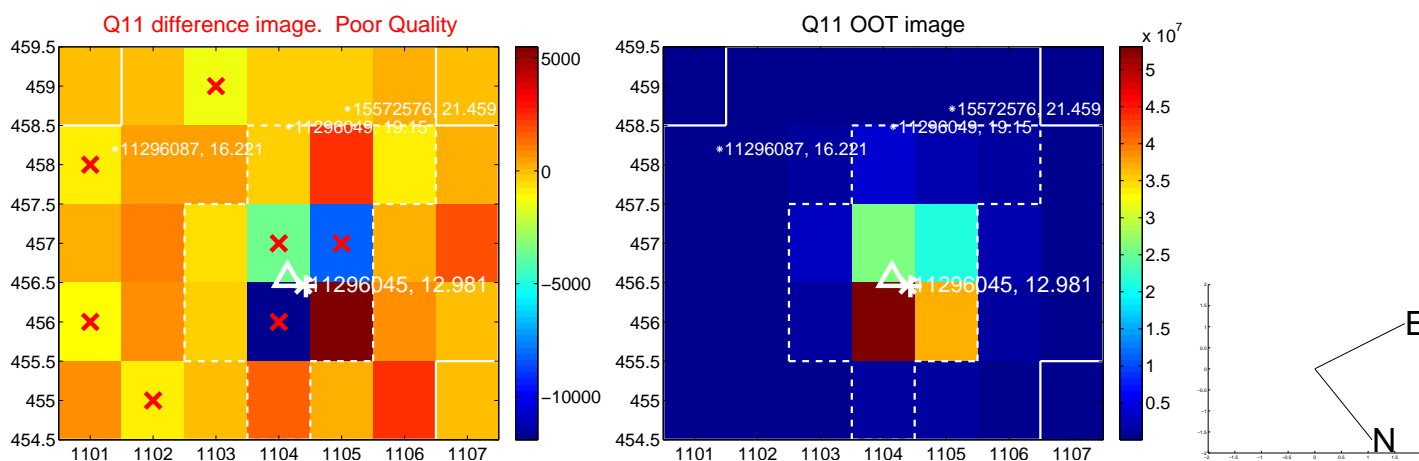
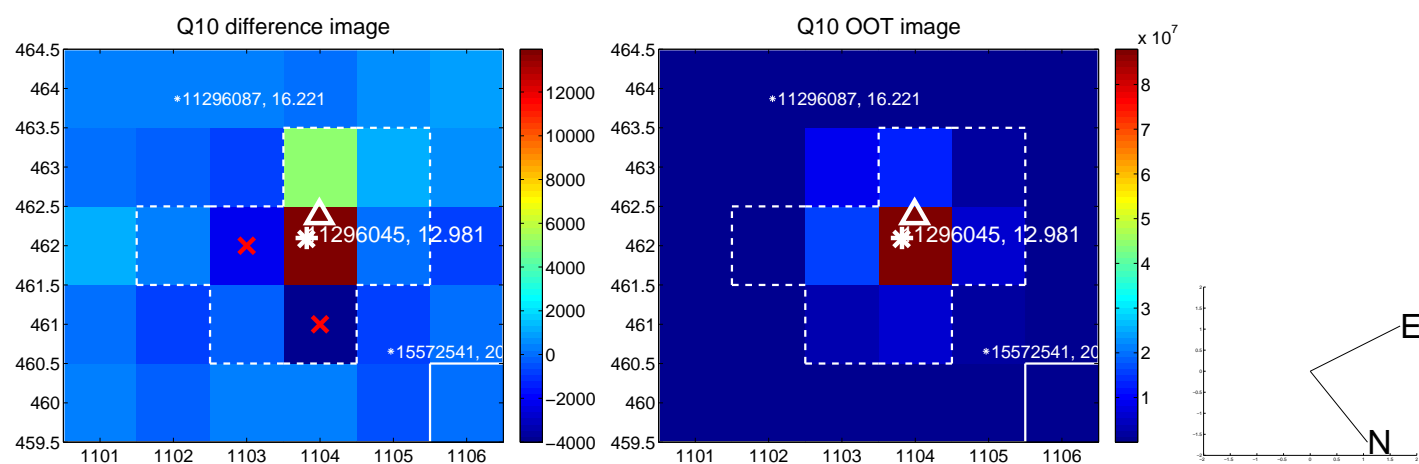
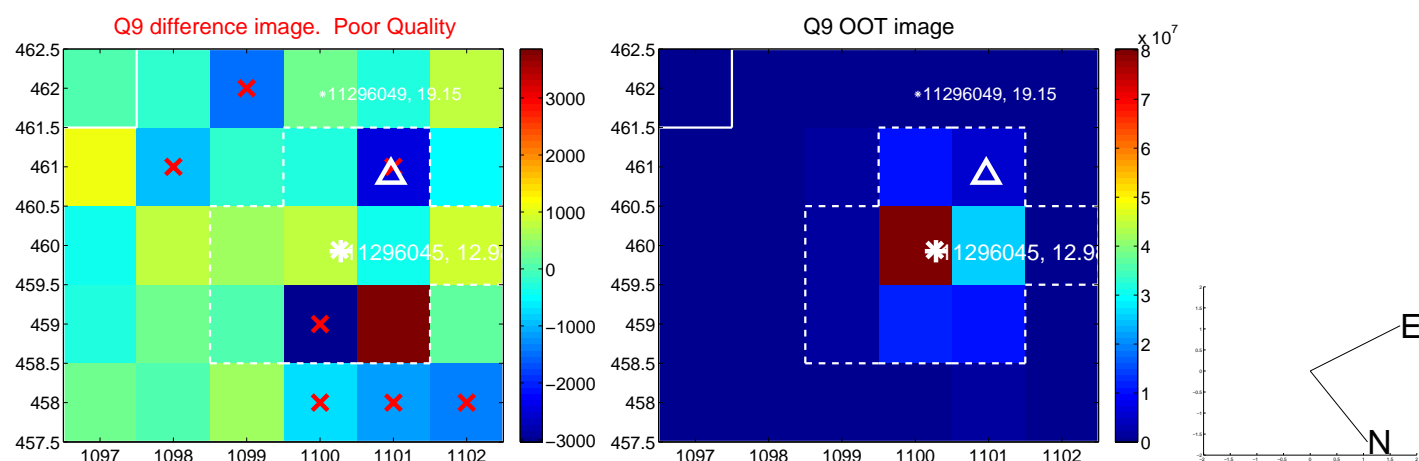
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



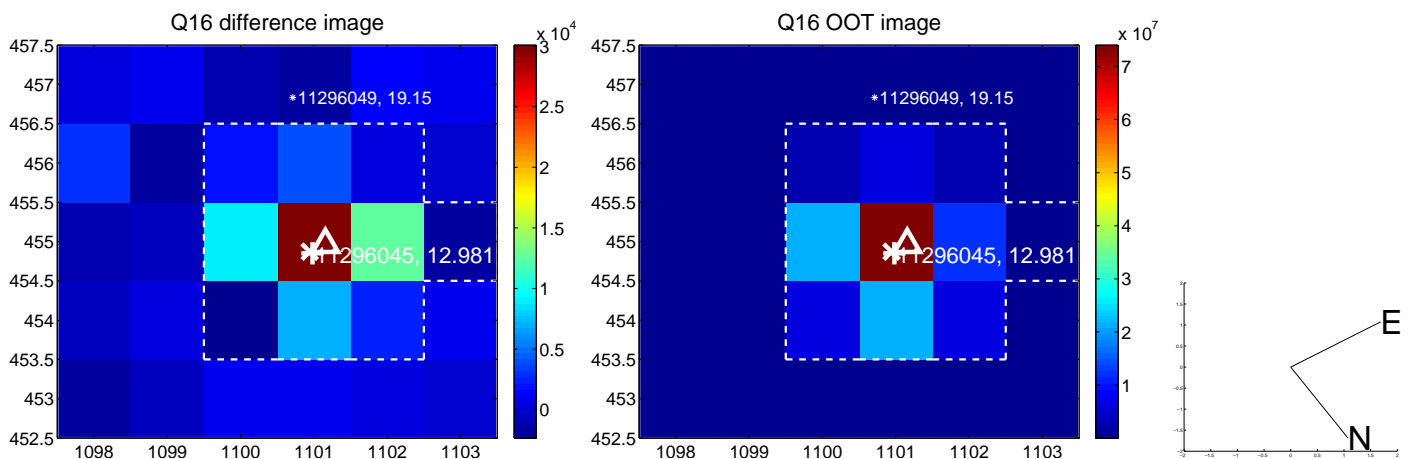
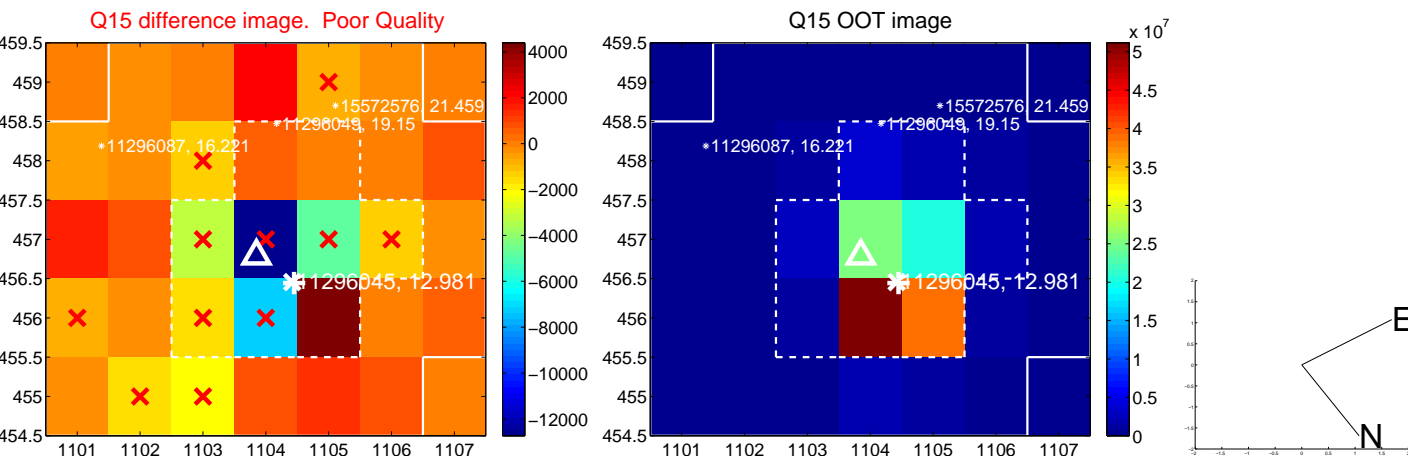
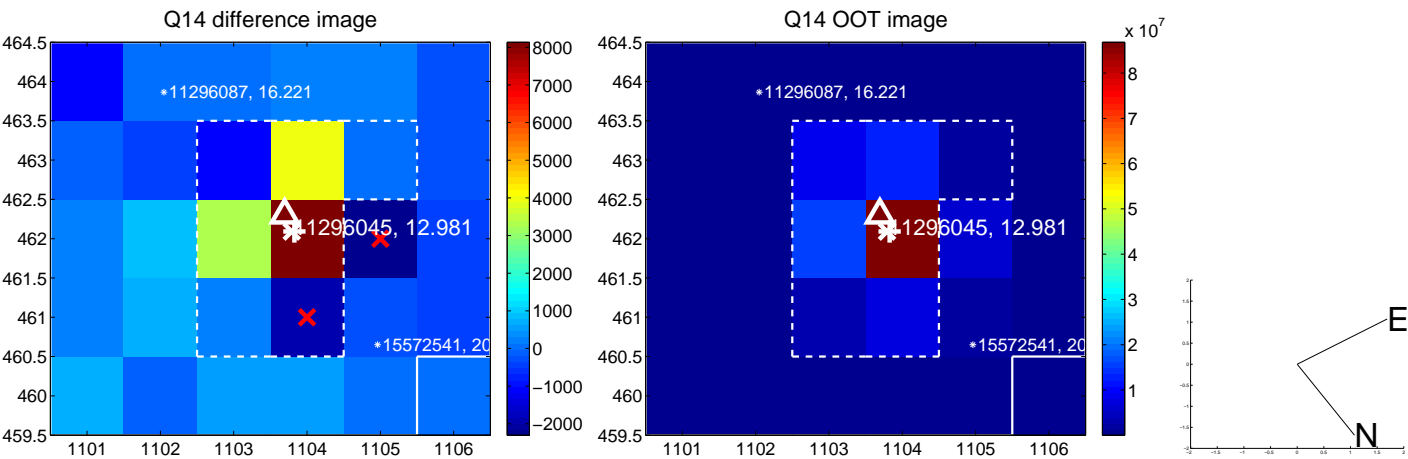
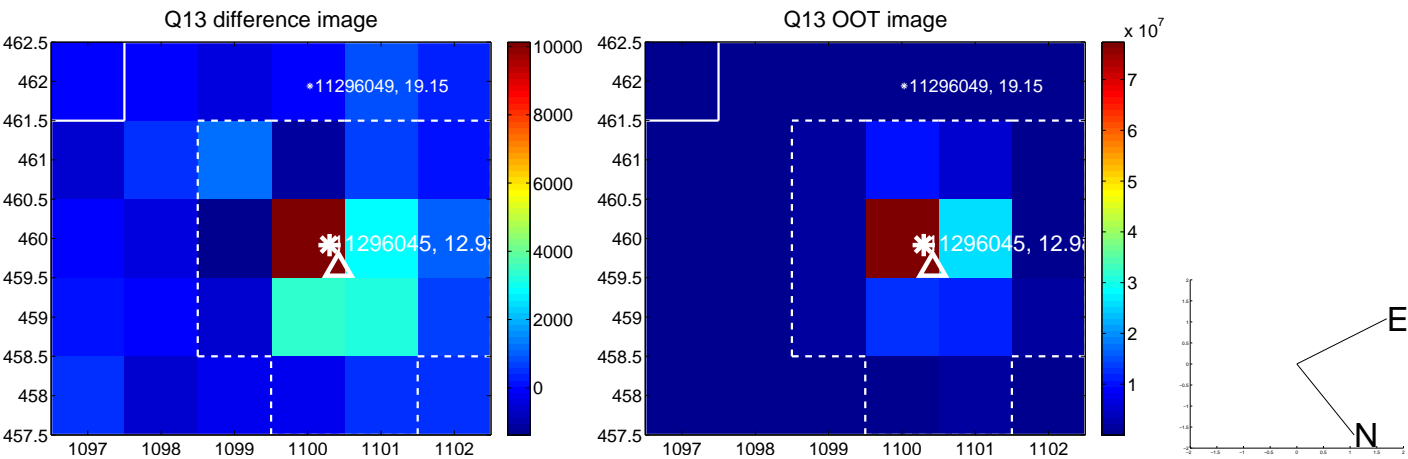
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



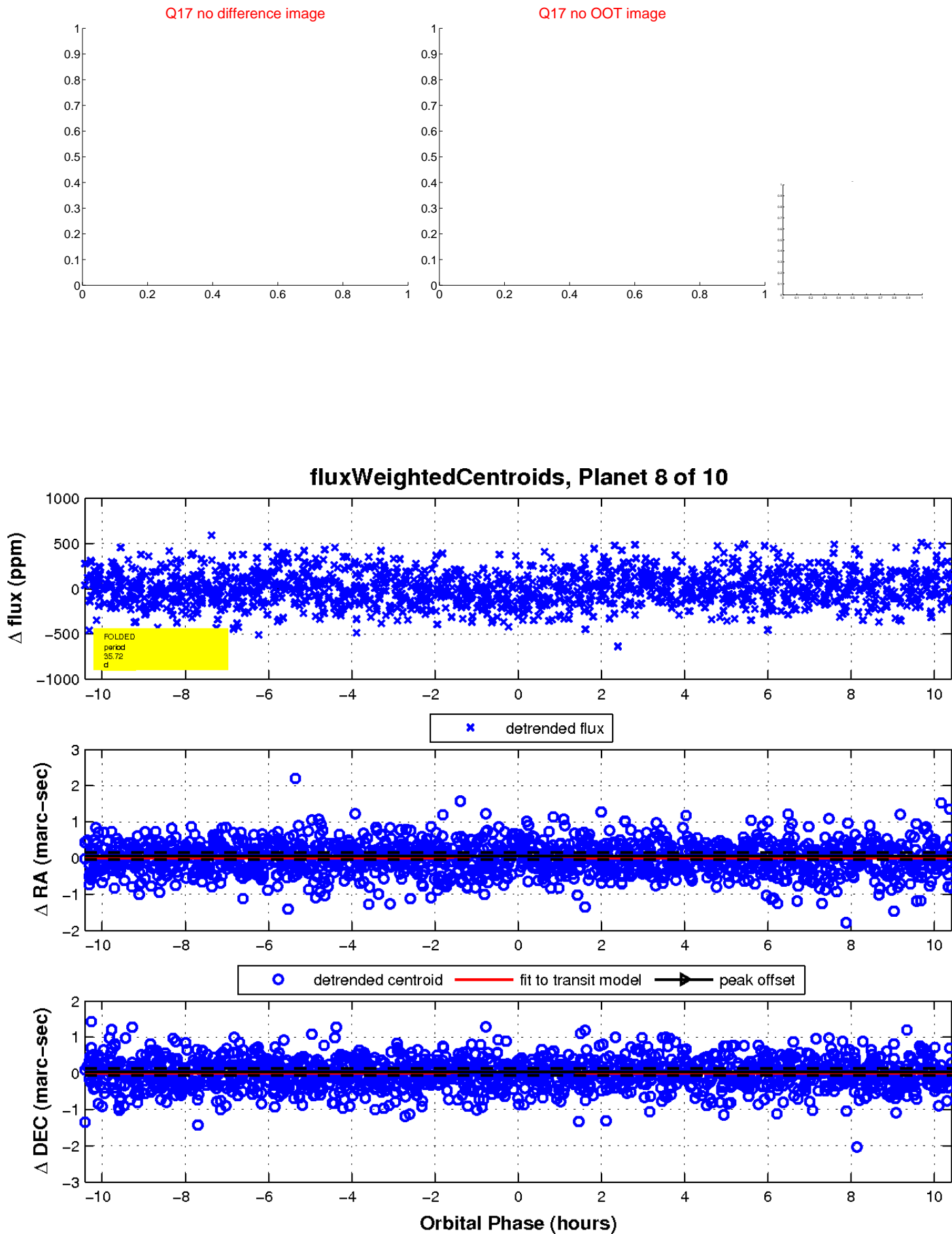
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

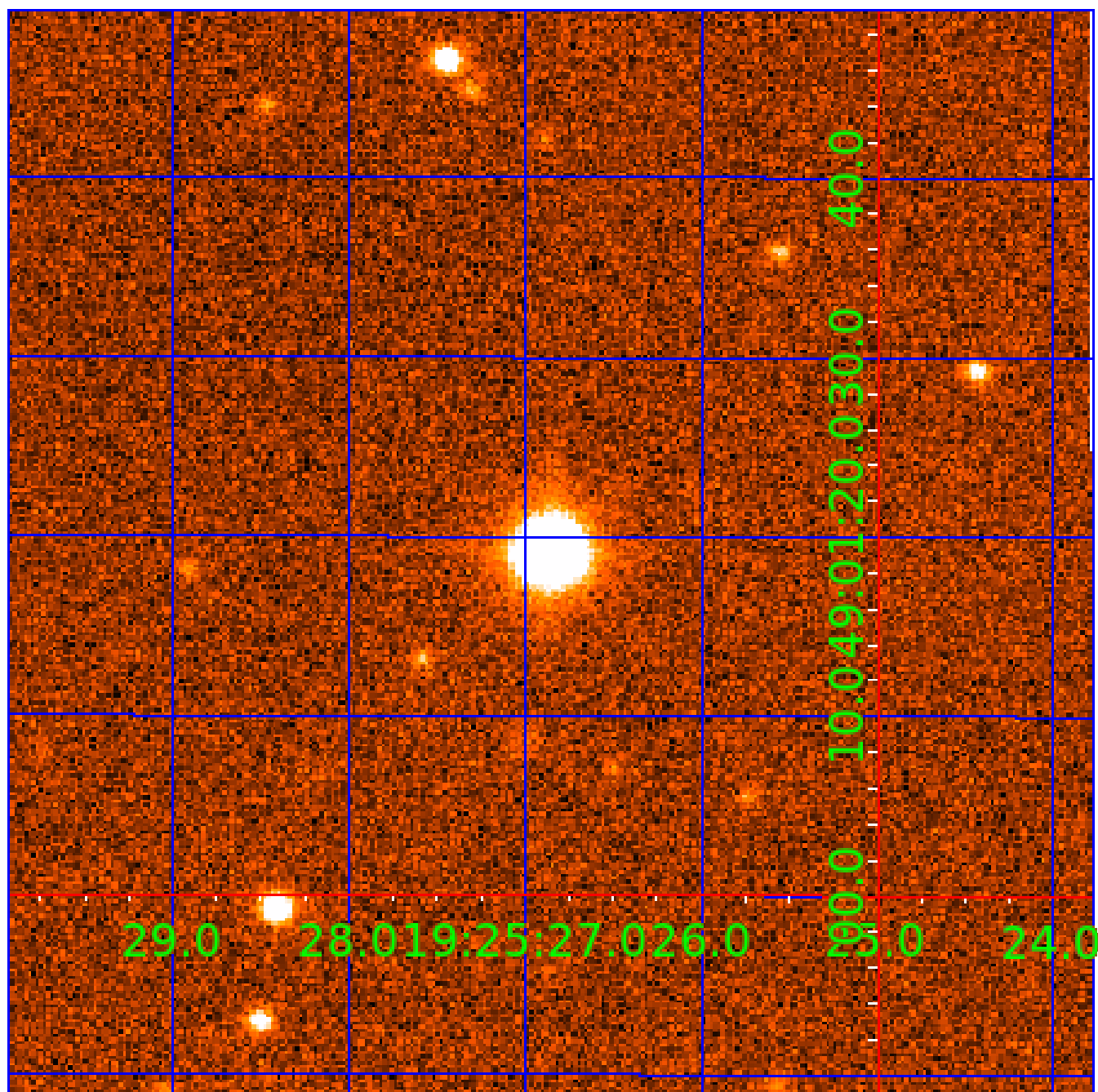


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

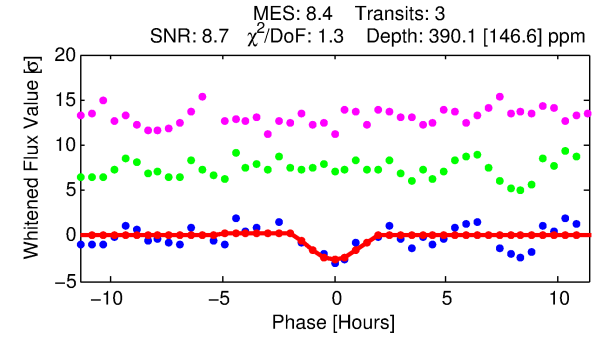
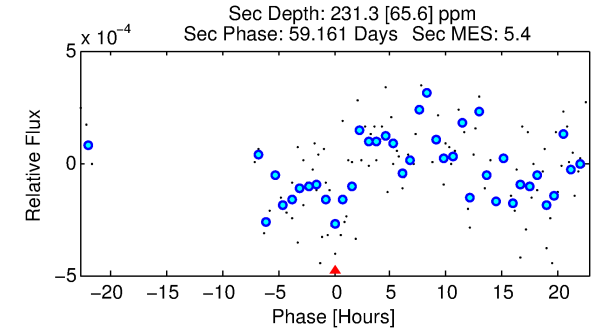
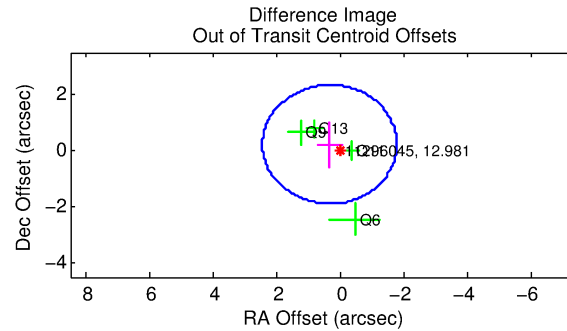
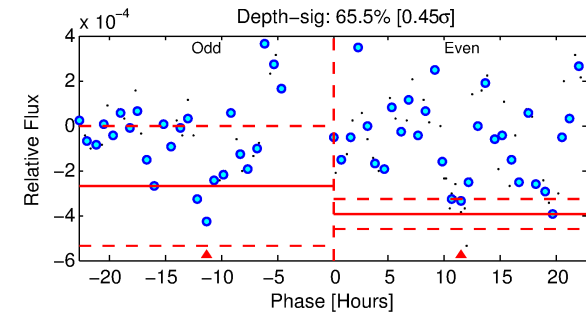
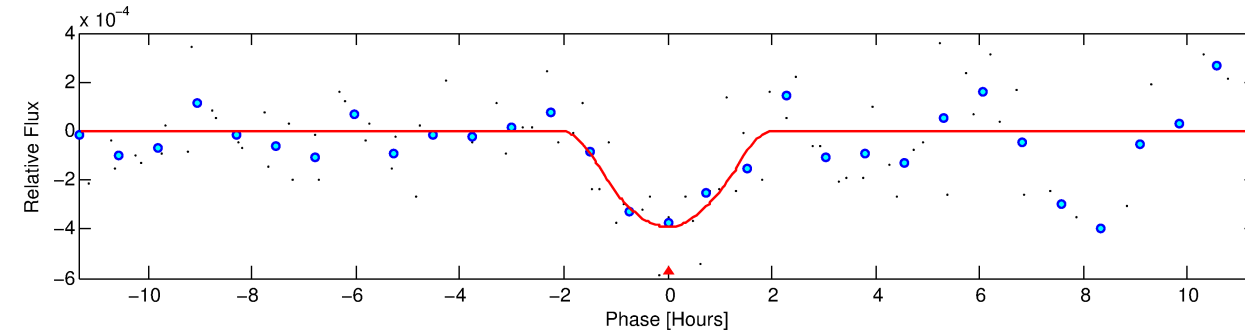
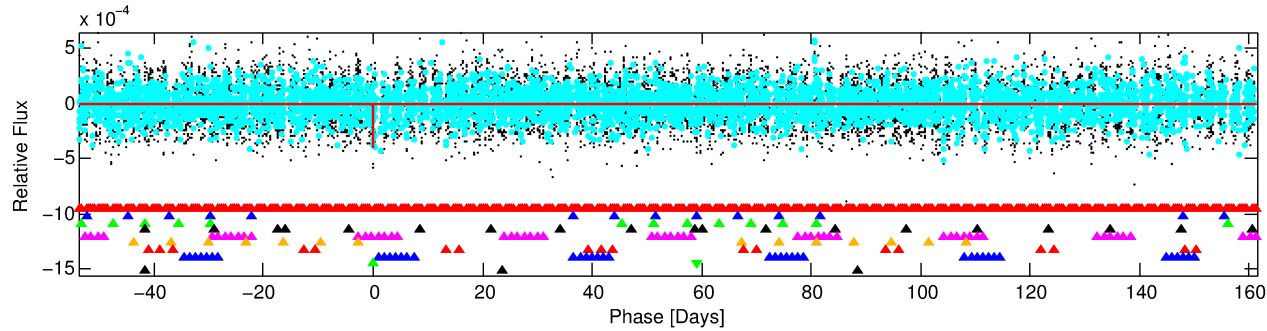
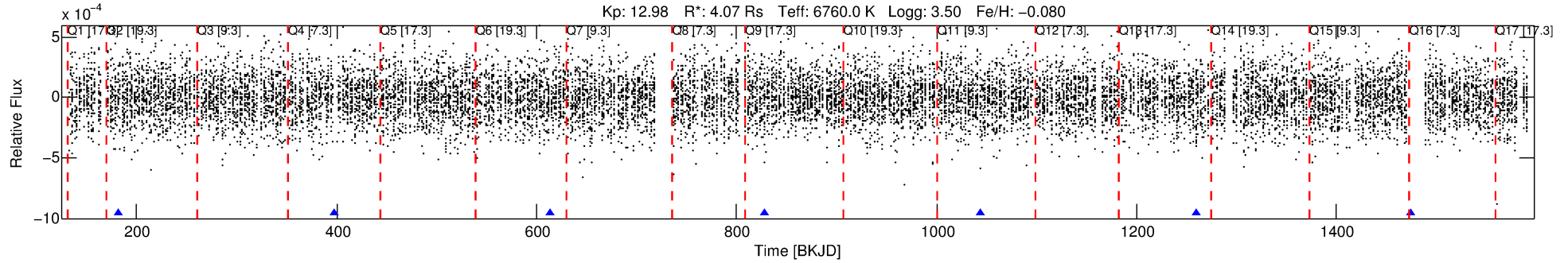
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011296045-09

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 9 of 10 Period: 215.364 d
KOI: K04396 Corr: No Ephemeris Match



DV Fit Results:

Period = 215.36387 [0.00832] d
Epoch = 182.2598 [0.0325] BKJD
Rp/R* = 0.0284 [0.0698]
a/R* = 122.58 [120.03]
b = 0.99 [0.13]
Seff = 40.81 [23.43]
Teq = 644 [92] K
Rp = 12.60 [31.35] Re
a = 0.8712 [0.3081] AU
Ag = 608.01 [3015.12] [0.20 σ]
Teffp = 4948 [6097] K [0.71 σ]

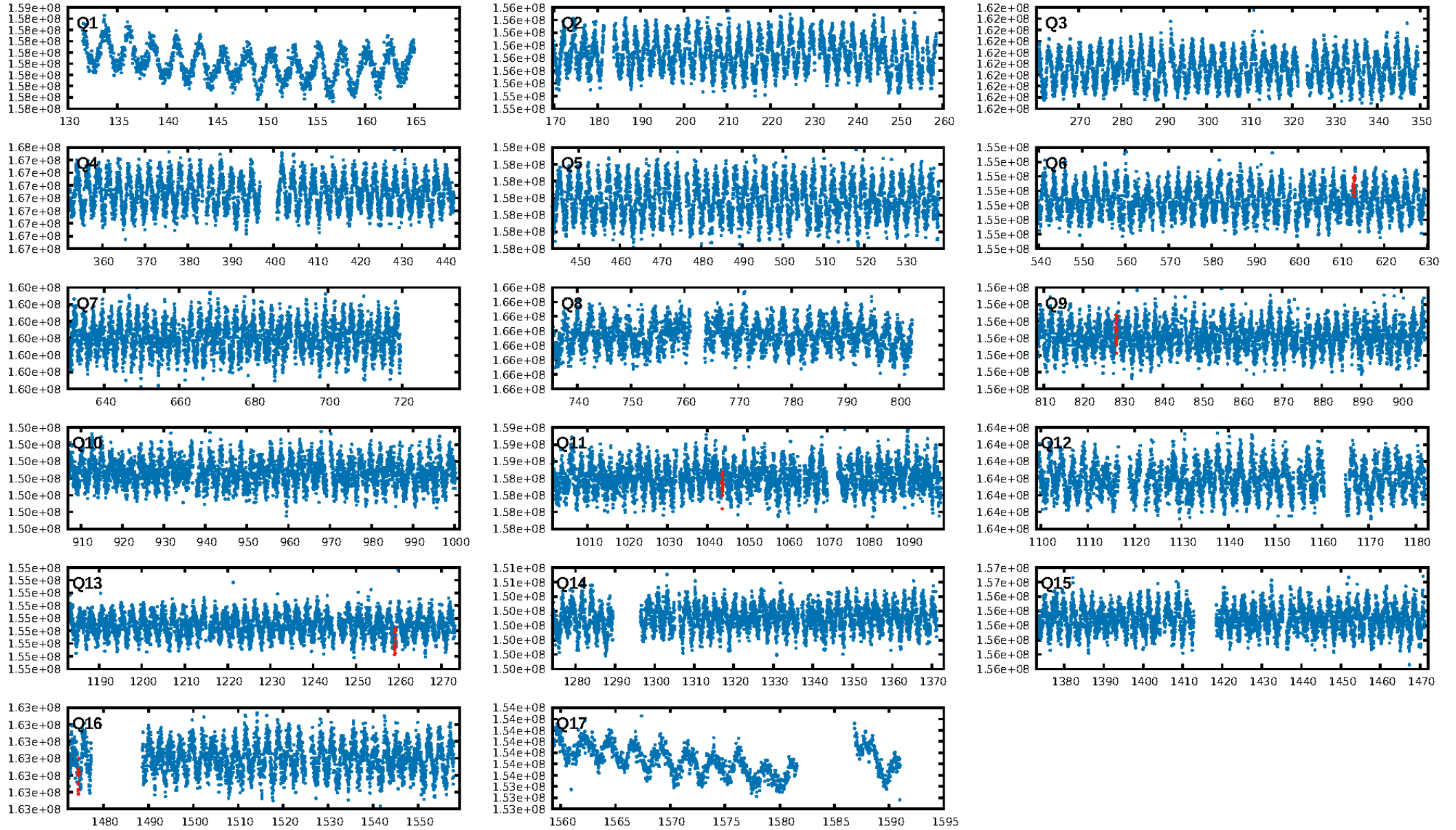
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [352.28 σ]
LongPeriod-sig: 100.0% [576.03 σ]
ModelChiSquare2-sig: 66.5%
ModelChiSquareGof-sig: 92.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.534
Centroid-sig: 89.7%
Centroid-so: 0.286 arcsec [0.33 σ]
OotOffset-rm: 0.407 arcsec [0.58 σ]
KicOffset-rm: 0.524 arcsec [0.91 σ]
OotOffset-st: 1/1/0/2 [4]
KicOffset-st: 1/1/0/2 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.75 [3/4]

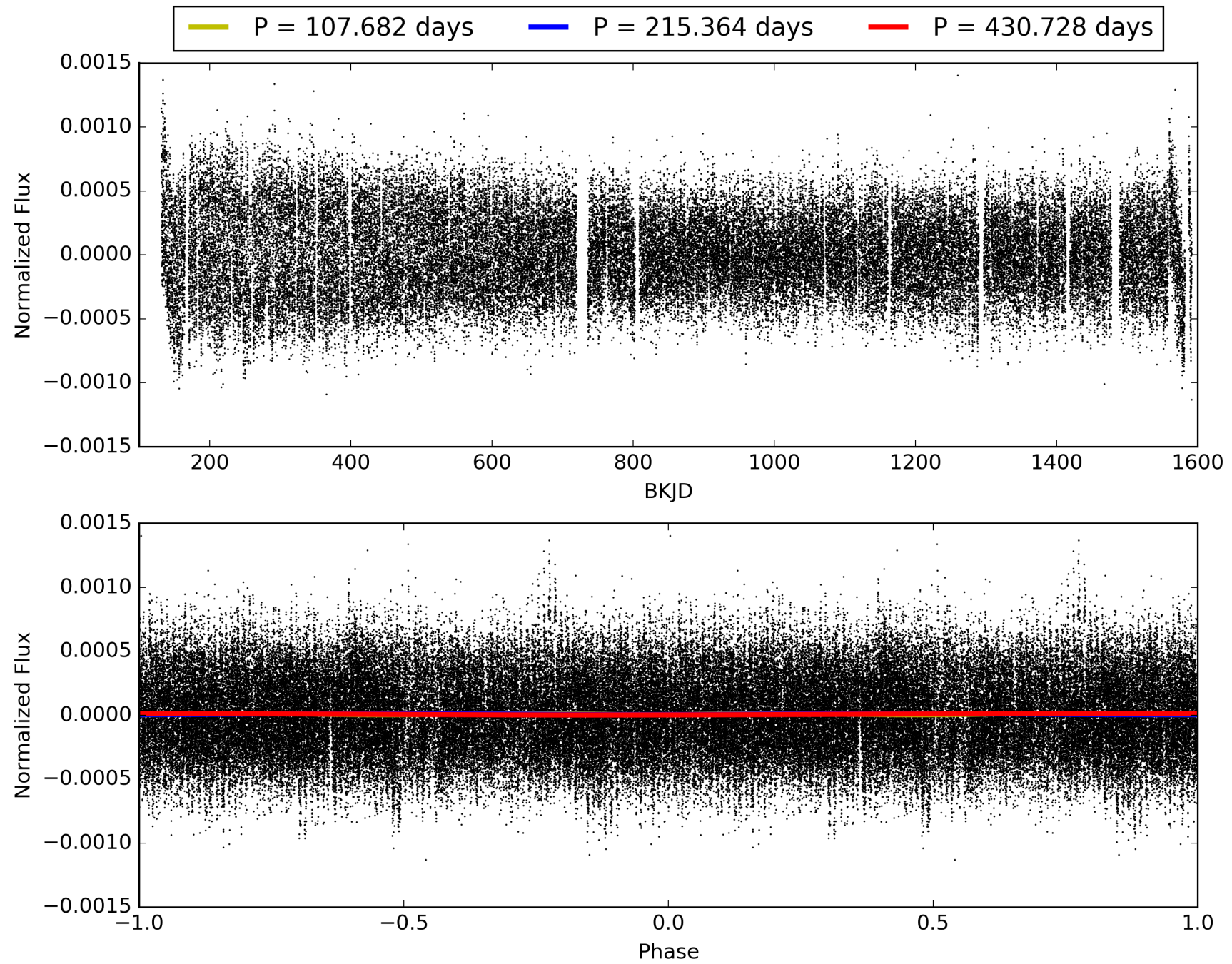
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:47:10 Z

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

TCE 011296045-09, PDC Light Curves

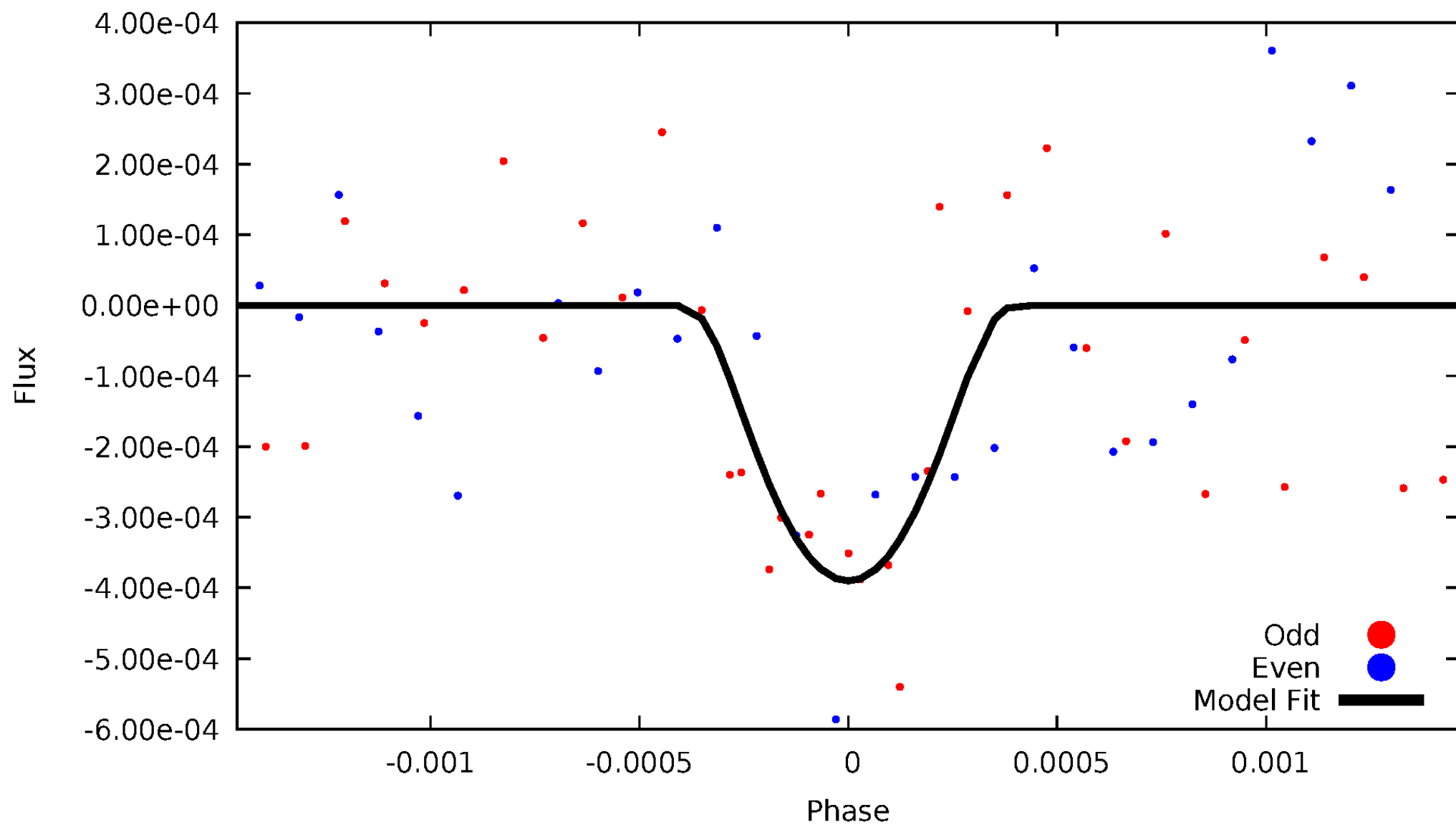


TCE 011296045-09



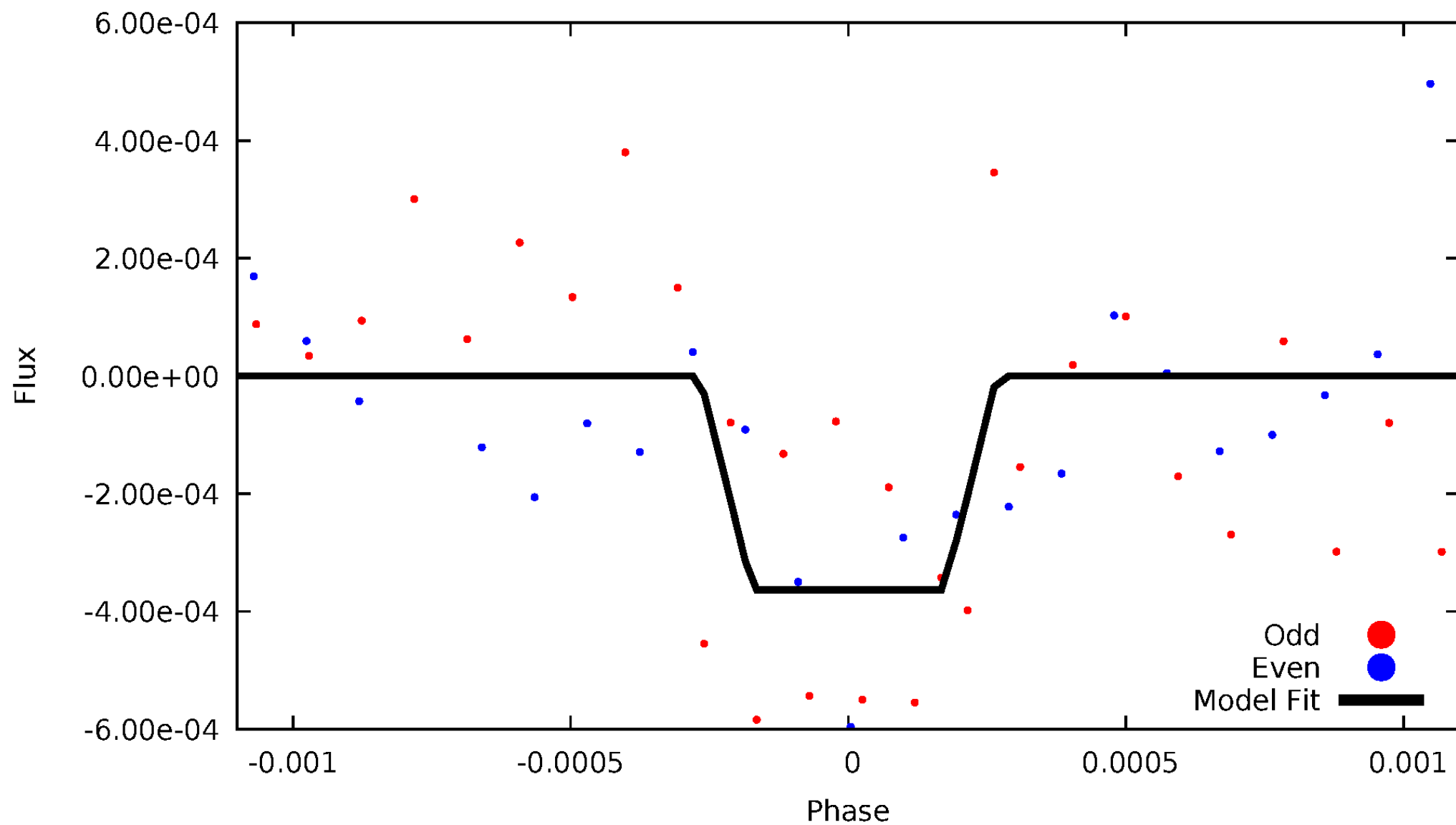
DV Odd/Even

TCE 011296045-09



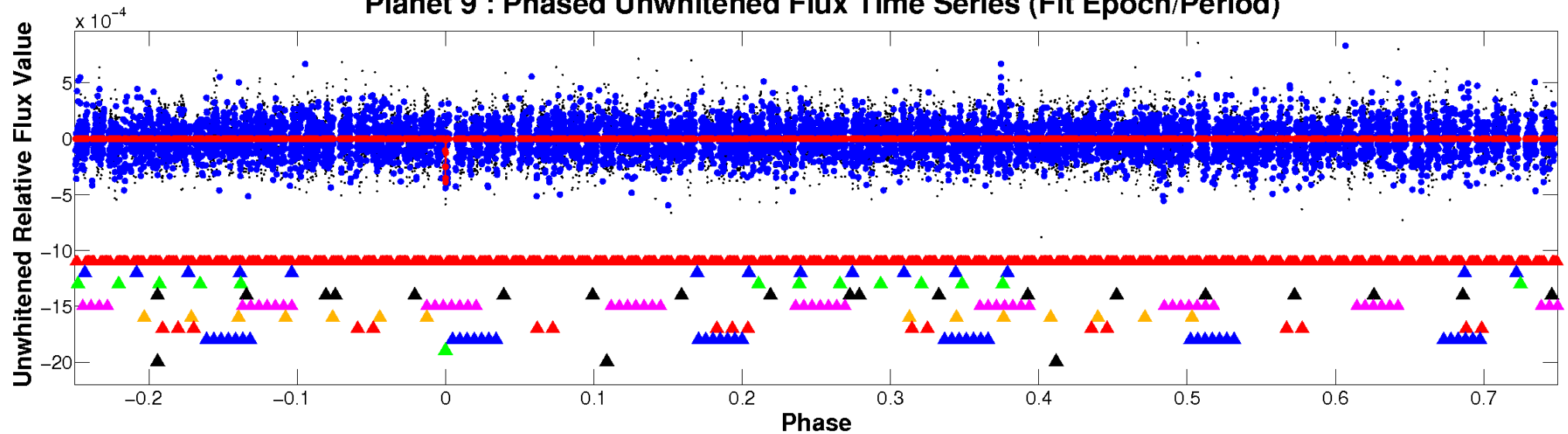
ALT Odd/Even

TCE 011296045-09

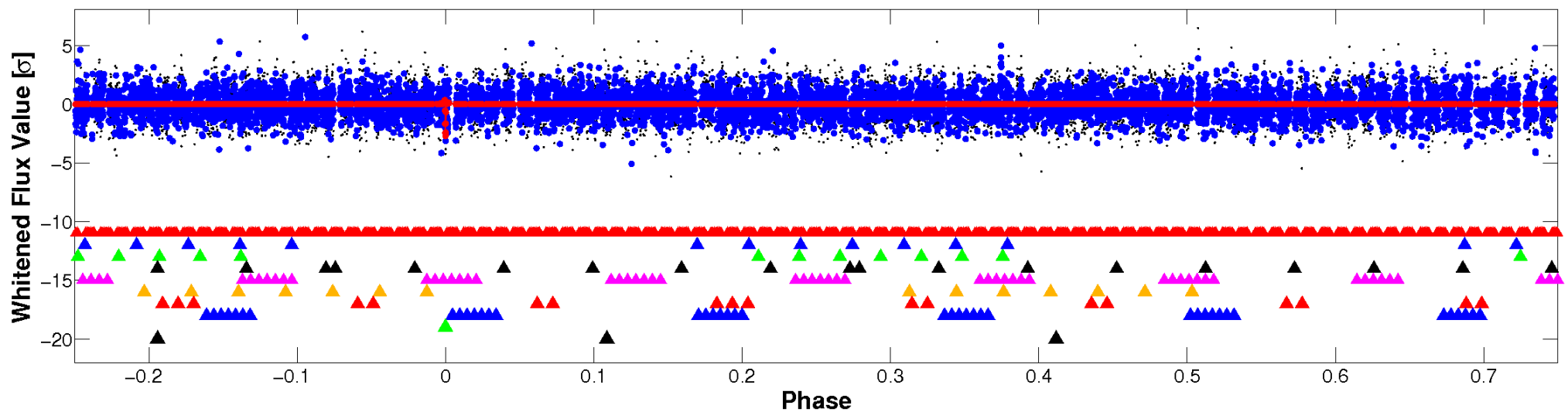


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

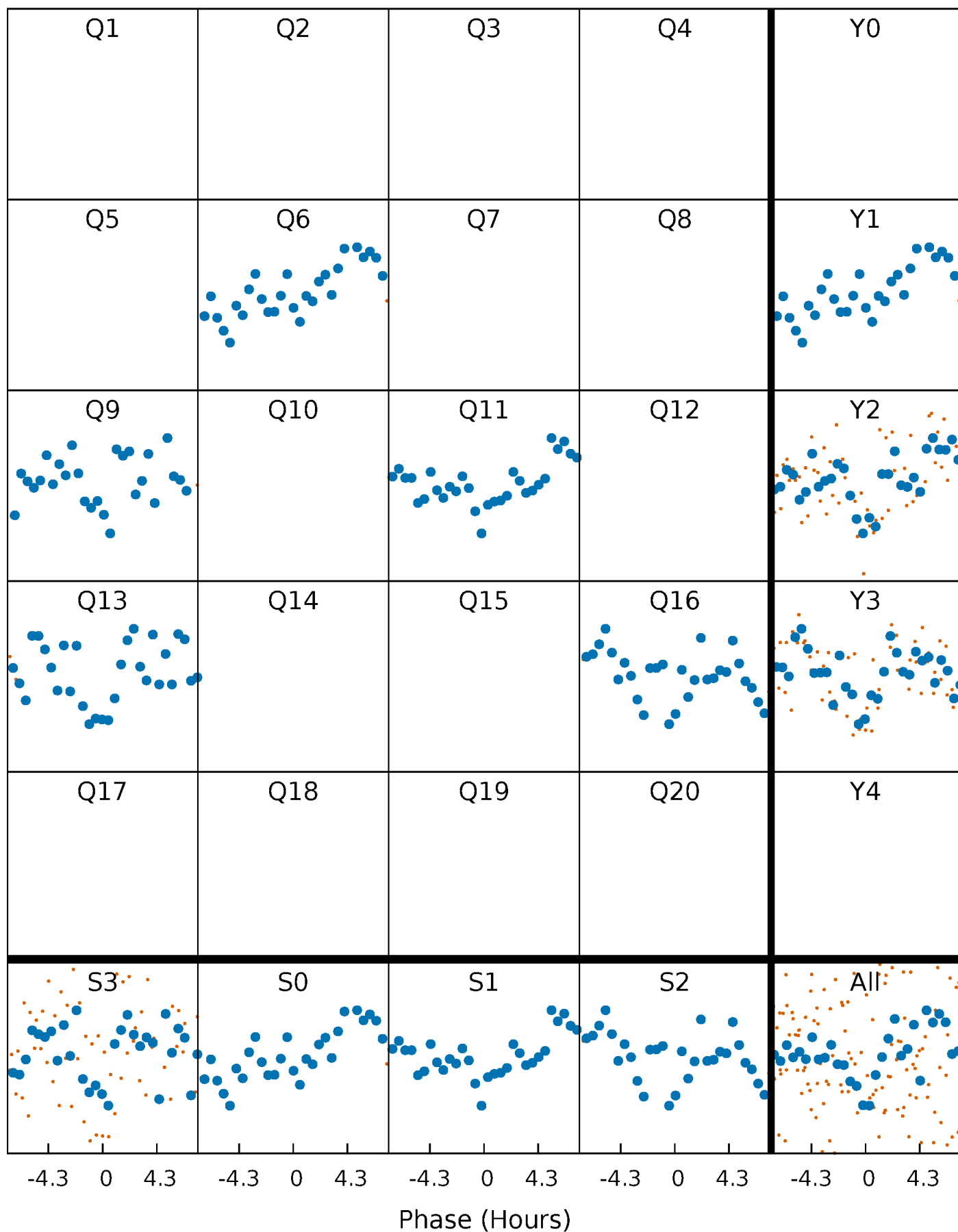


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



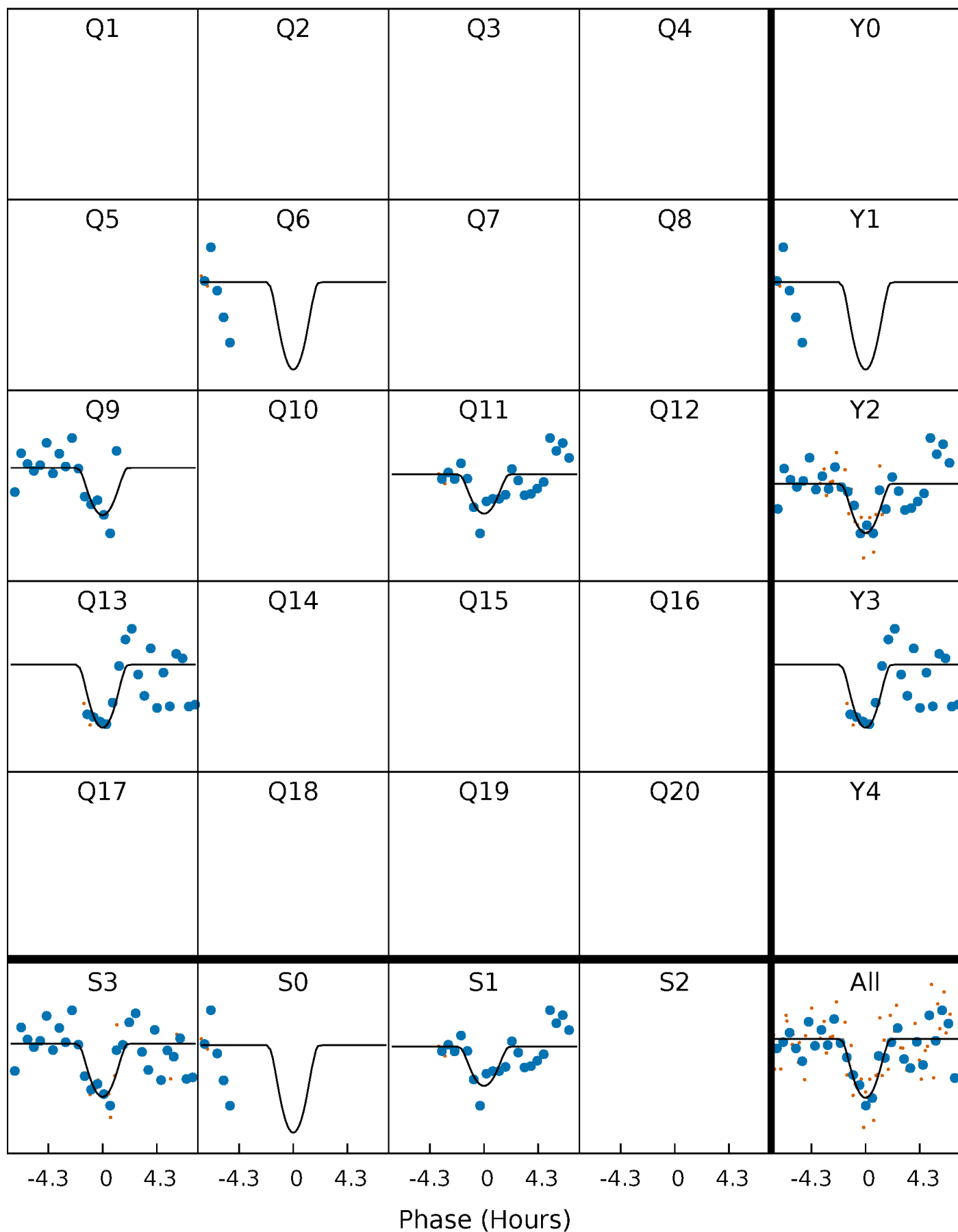
PDC Quarter-Phased Transit Curves

TCE 011296045-09 $P=215.363874$ Days $T_0=182.259821$ (BKJD)



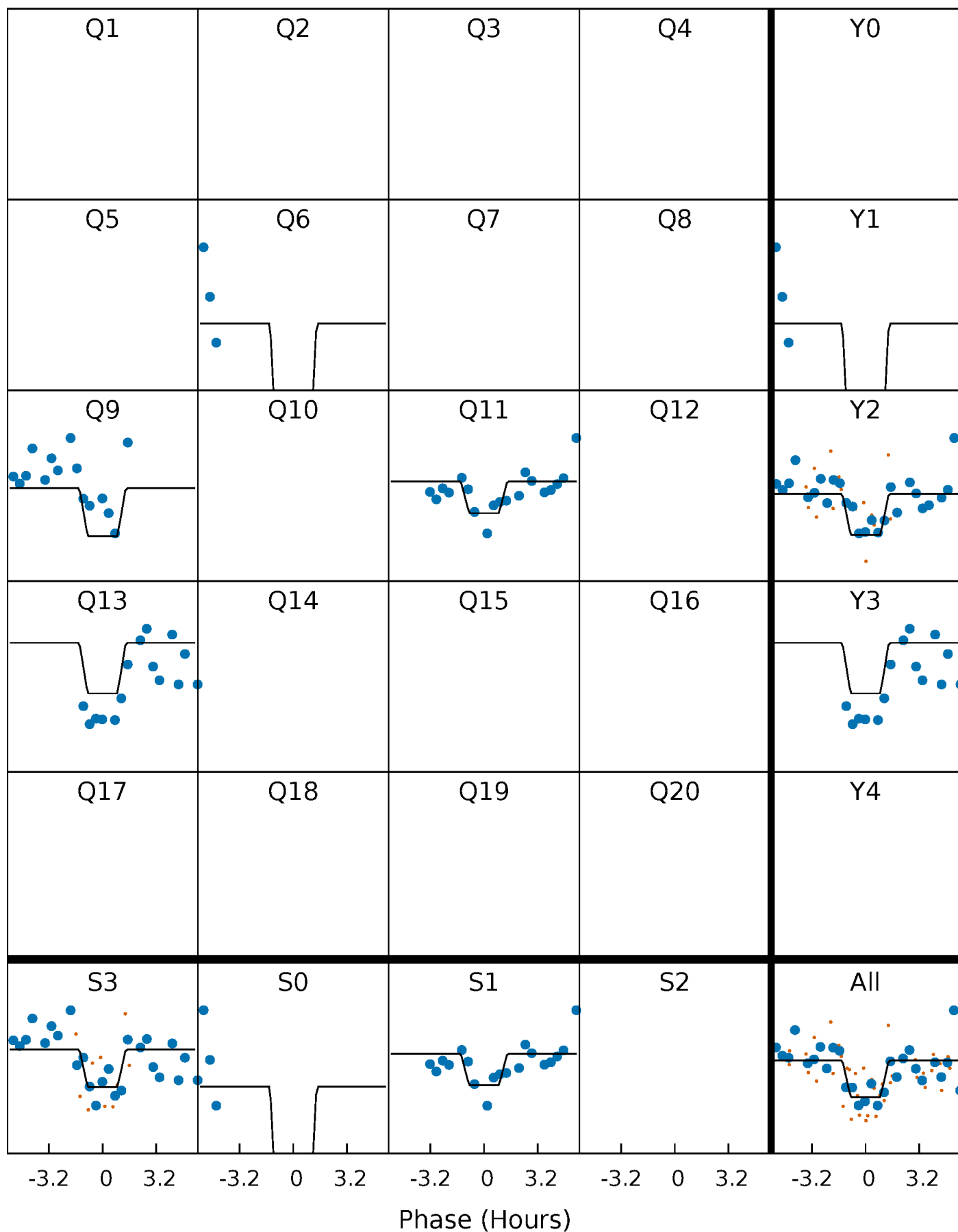
DV Quarter-Phased Transit Curves

TCE 011296045-09 $P=215.363874$ Days $T_0=182.259821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

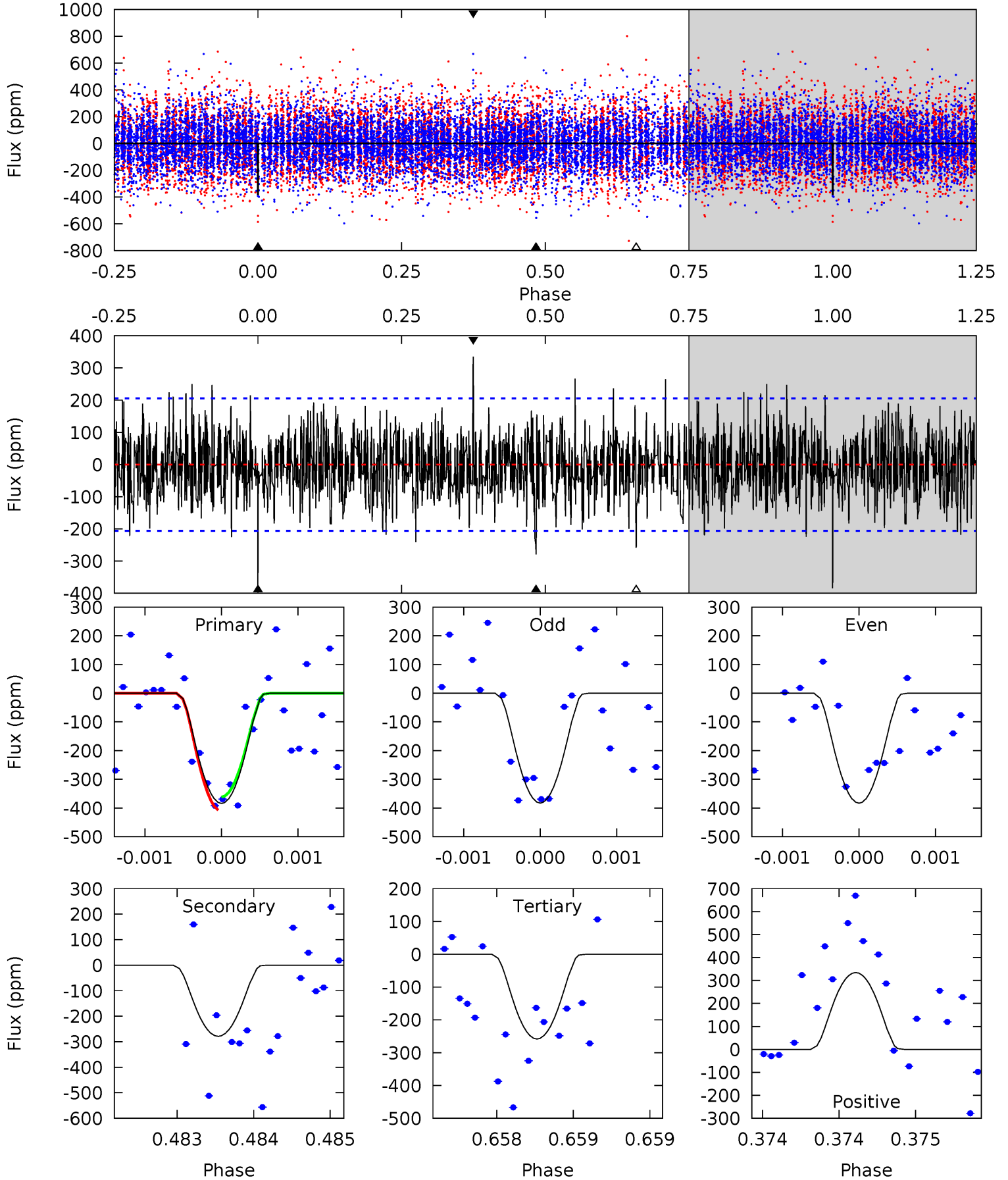
TCE 011296045-09 $P=215.366028$ Days $T_0=182.243845$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-09, P = 215.363874 Days, E = 182.259821 Days

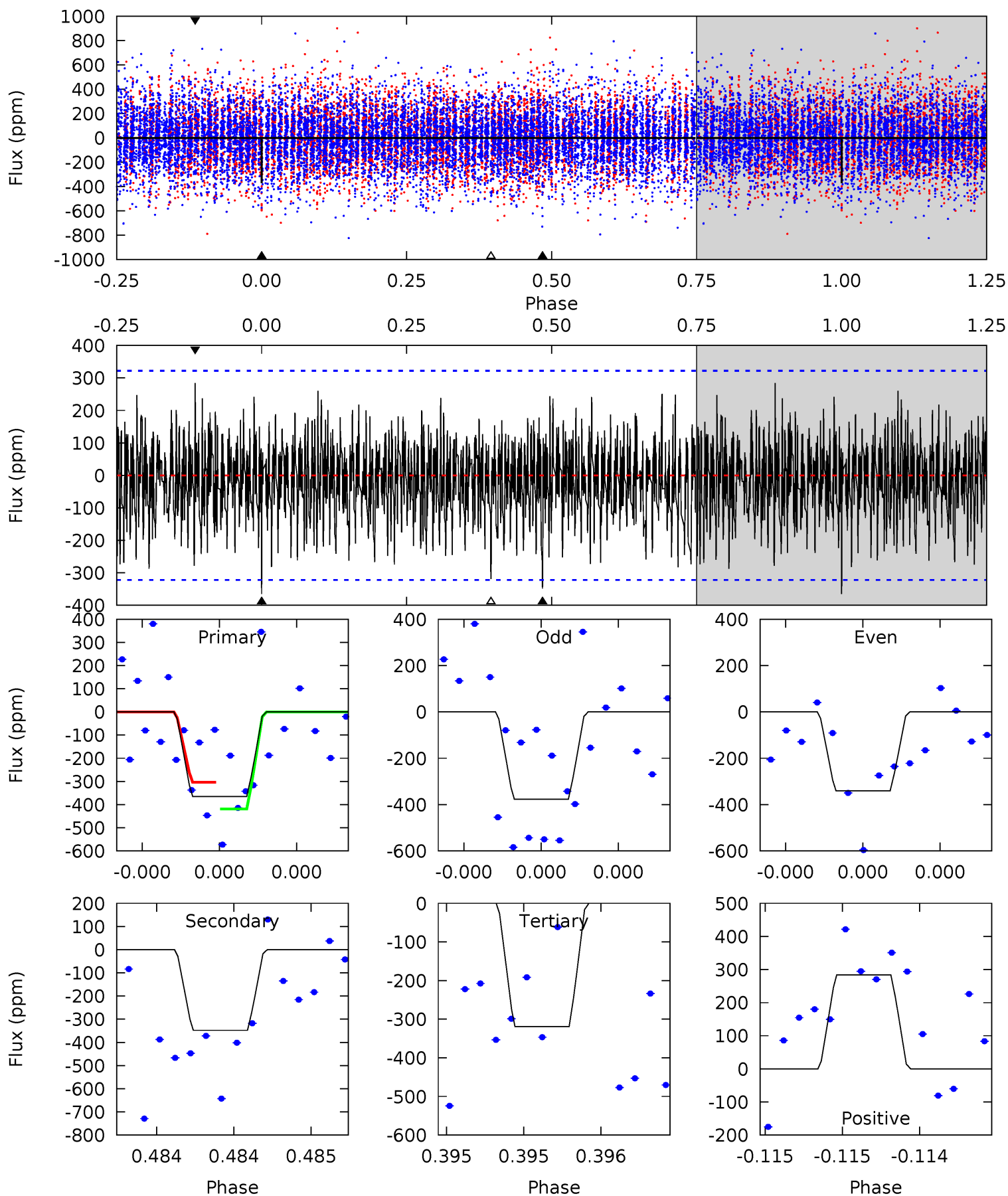
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.47	6.92	8.97	5.52	3.39	1.96	3.37	1.32	0.55	-1.50	0.00	0.99	0.47	0.61



Alt Model-Shift Uniqueness Test

011296045-09, P = 215.366028 Days, E = 182.243845 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.32	6.04	5.53	4.92	5.58	3.49	1.51	0.79	1.40	0.51	1.11	0.30	1.07	0.44	0.99



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-279 ± 37	$24.27^{+24.05}_{-16.65}$	887^{+43}_{-75}	3921^{+2442}_{-752}	191^{+1830}_{-142}
Alt.	-348 ± 58	$24.14^{+24.55}_{-16.52}$	887^{+45}_{-69}	4118^{+2646}_{-831}	257^{+2296}_{-197}

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 $A_{obs} \gg 1.0$

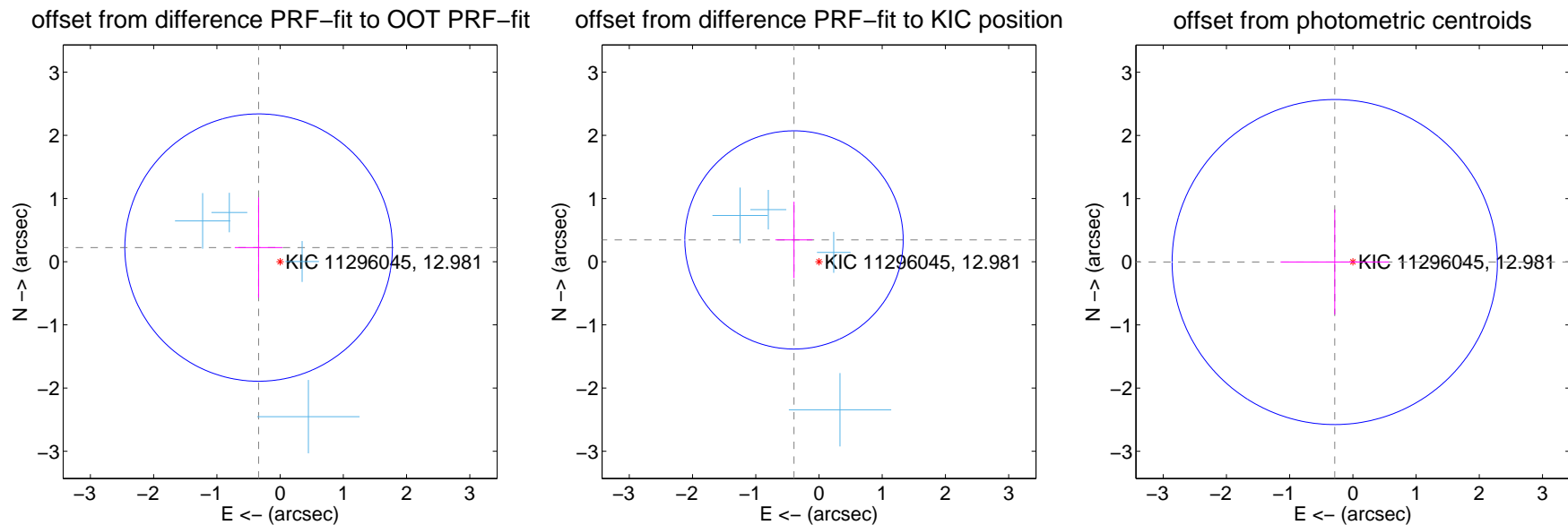
DV Centroid Data

Supplemental centroid analysis for 011296045-09. Kepler magnitude: 12.98. Transit SNR 8.71

There are 4 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.407 ± 0.705	0.58	0.340 ± 0.376	0.223 ± 0.792
PRF-fit source offset from KIC position	0.524 ± 0.575	0.91	0.395 ± 0.294	0.345 ± 0.605
photometric centroid source offset	0.29 ± 0.86	0.33	0.29 ± 0.86	-0.00 ± 0.83



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.

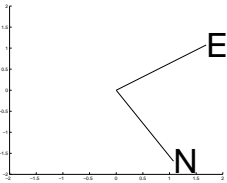
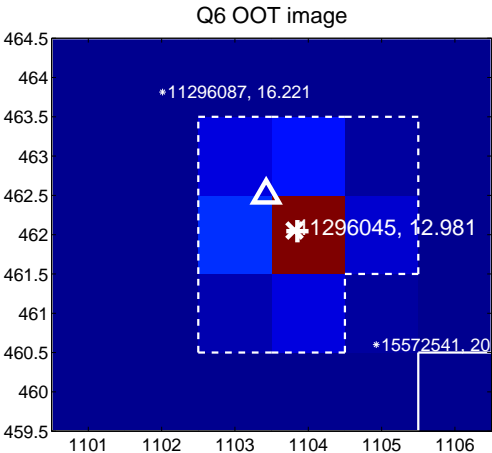
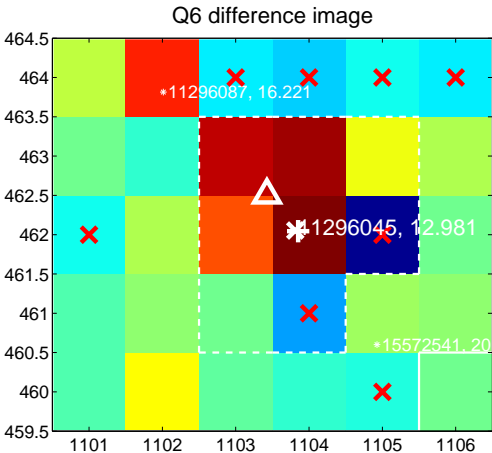


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

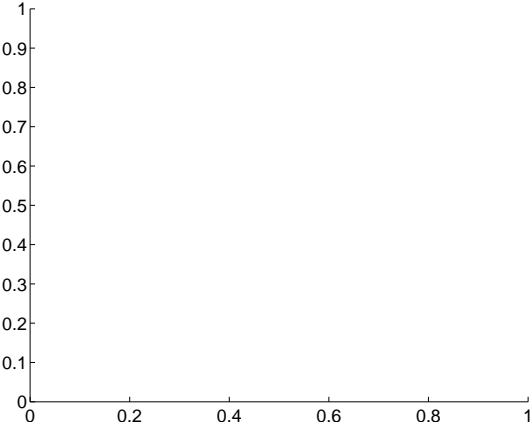
Q5 no difference image



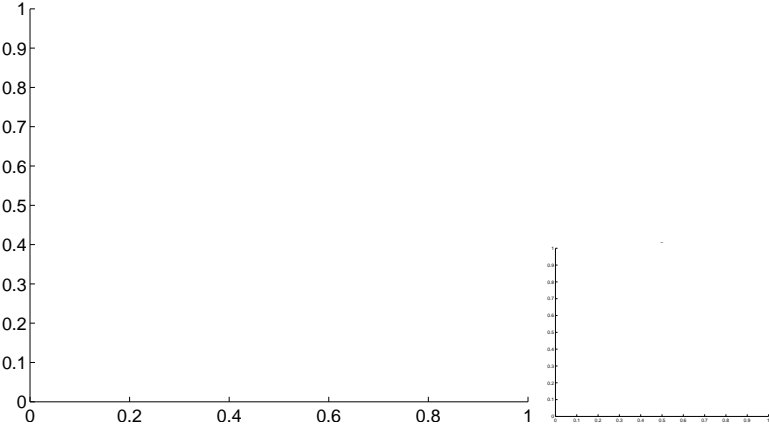
Q5 no OOT image



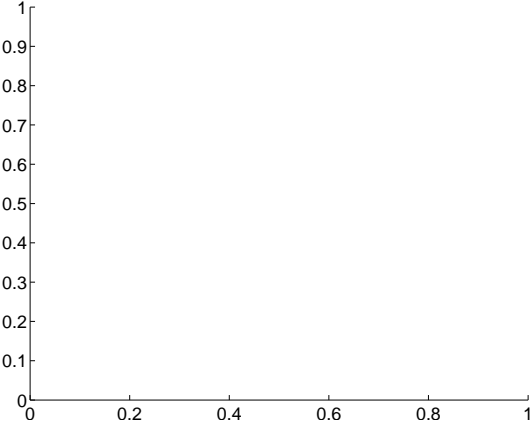
Q7 no difference image



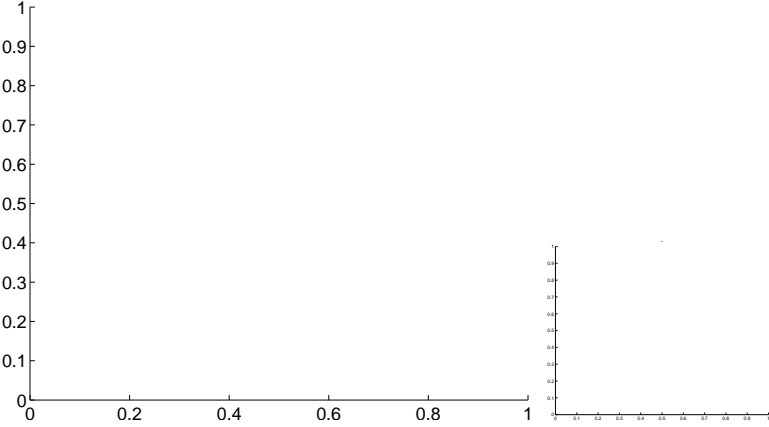
Q7 no OOT image



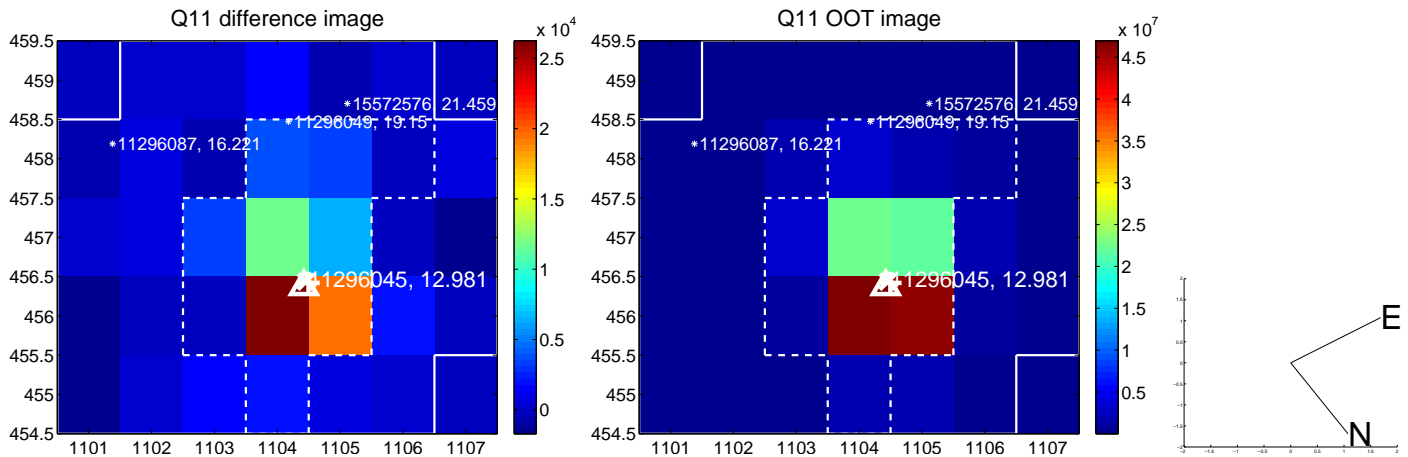
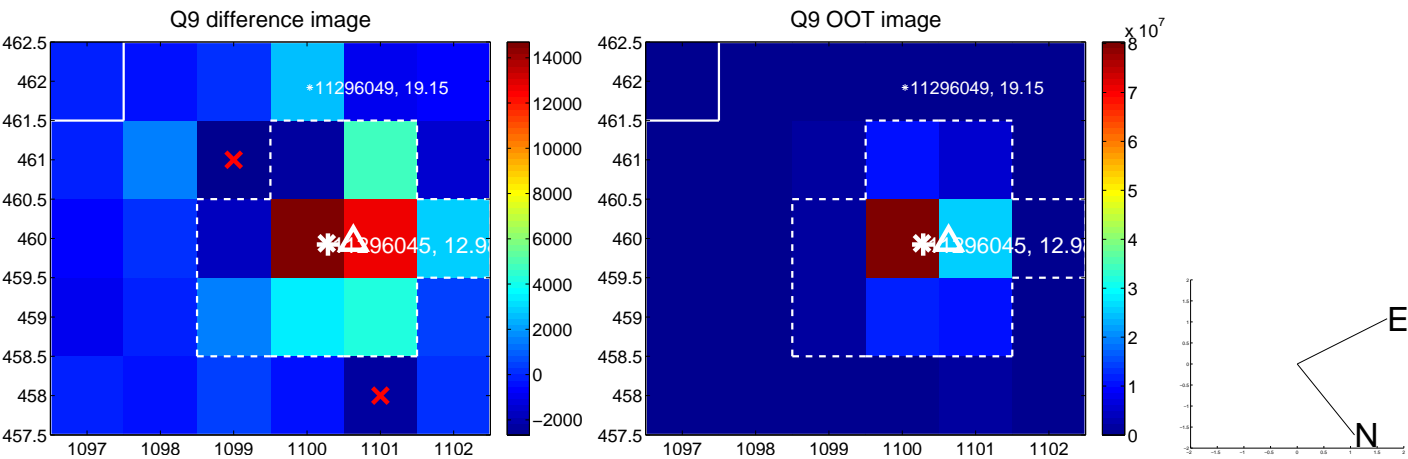
Q8 no difference image



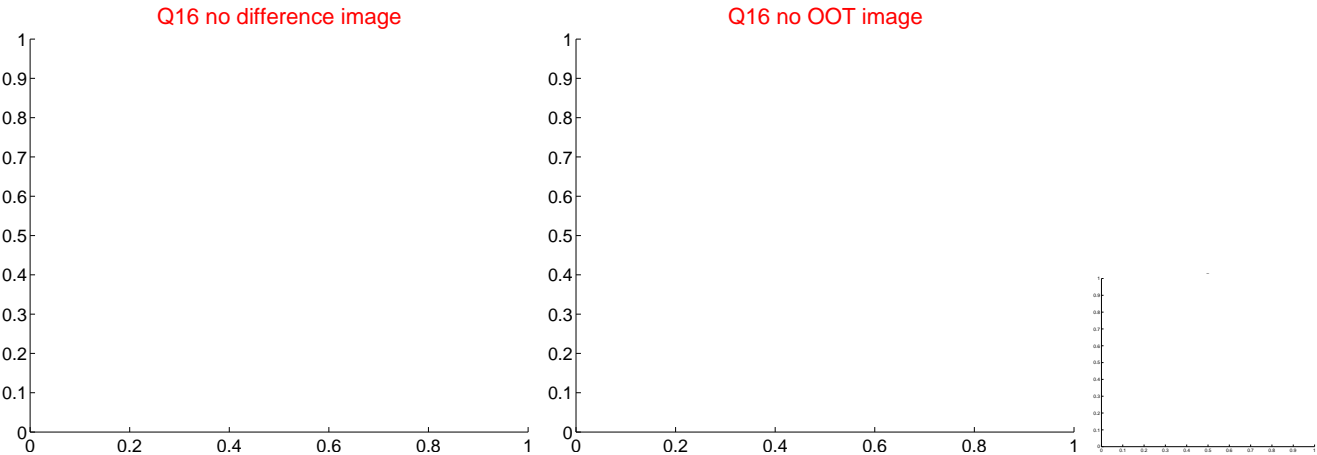
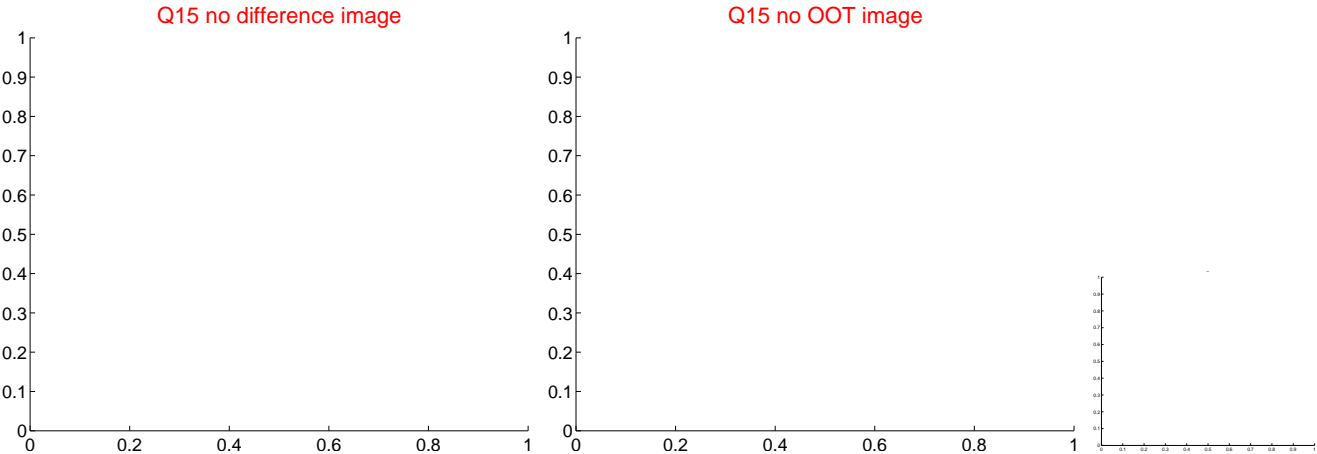
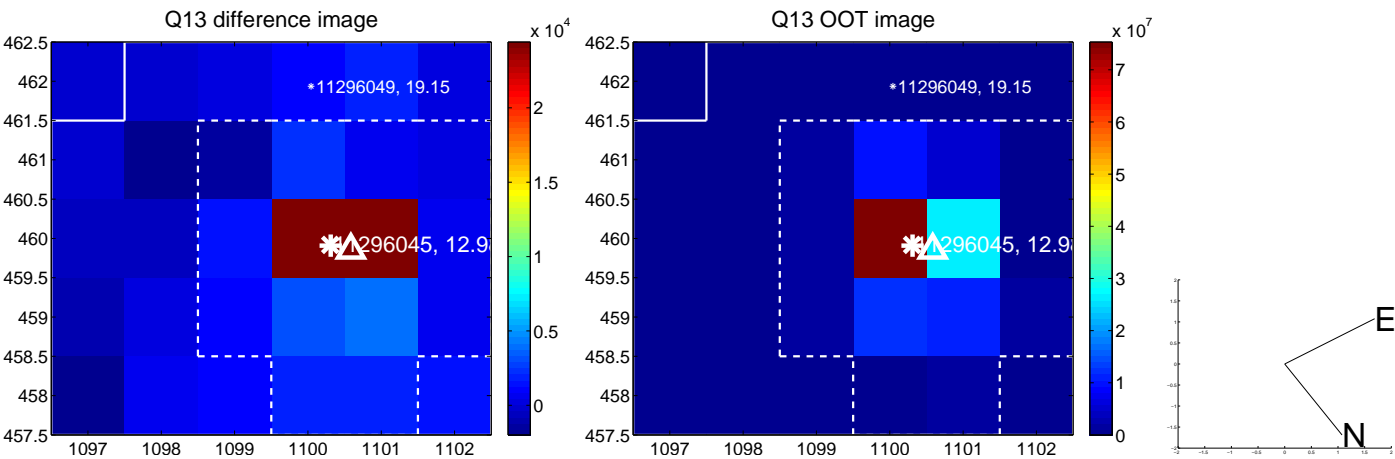
Q8 no OOT image



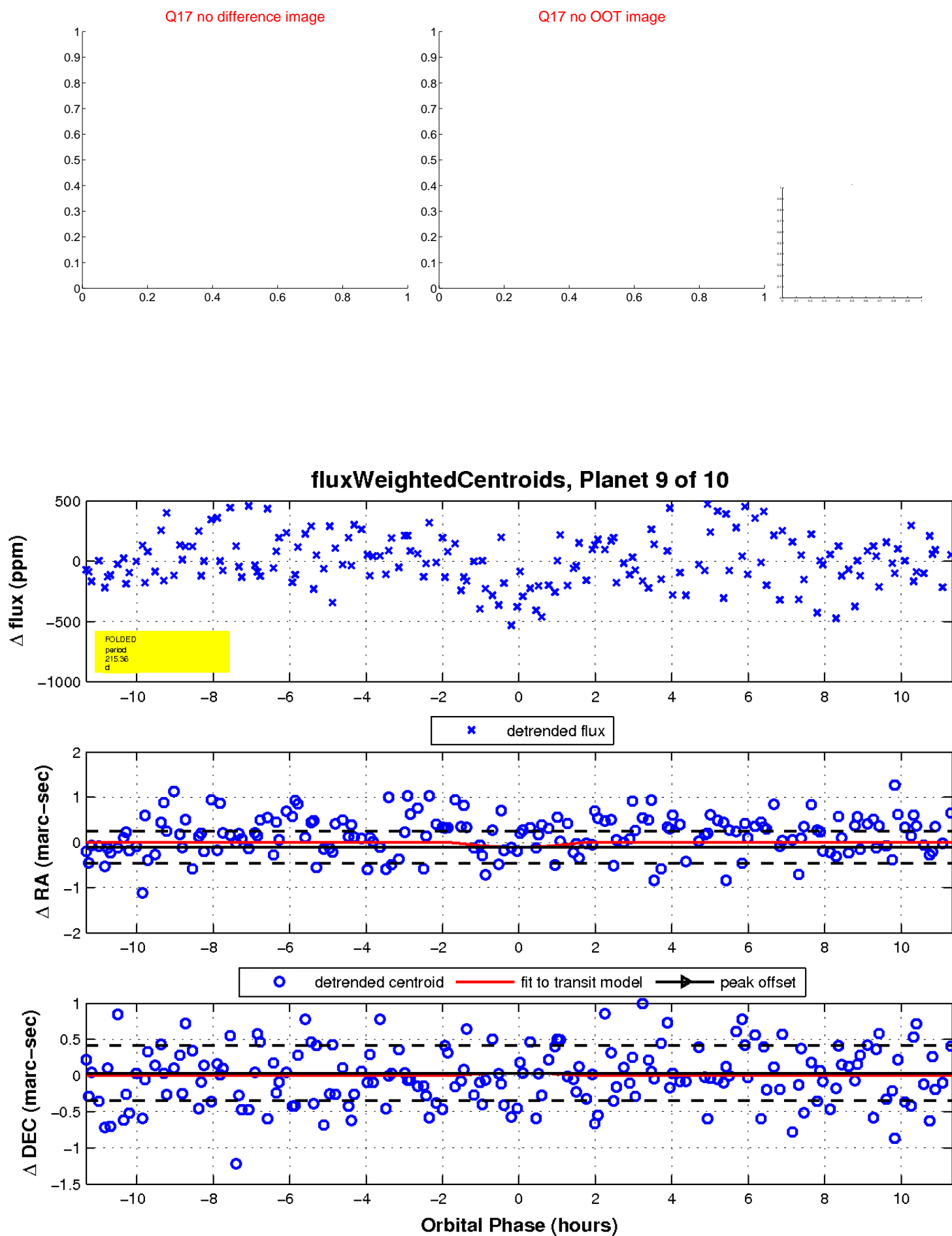
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

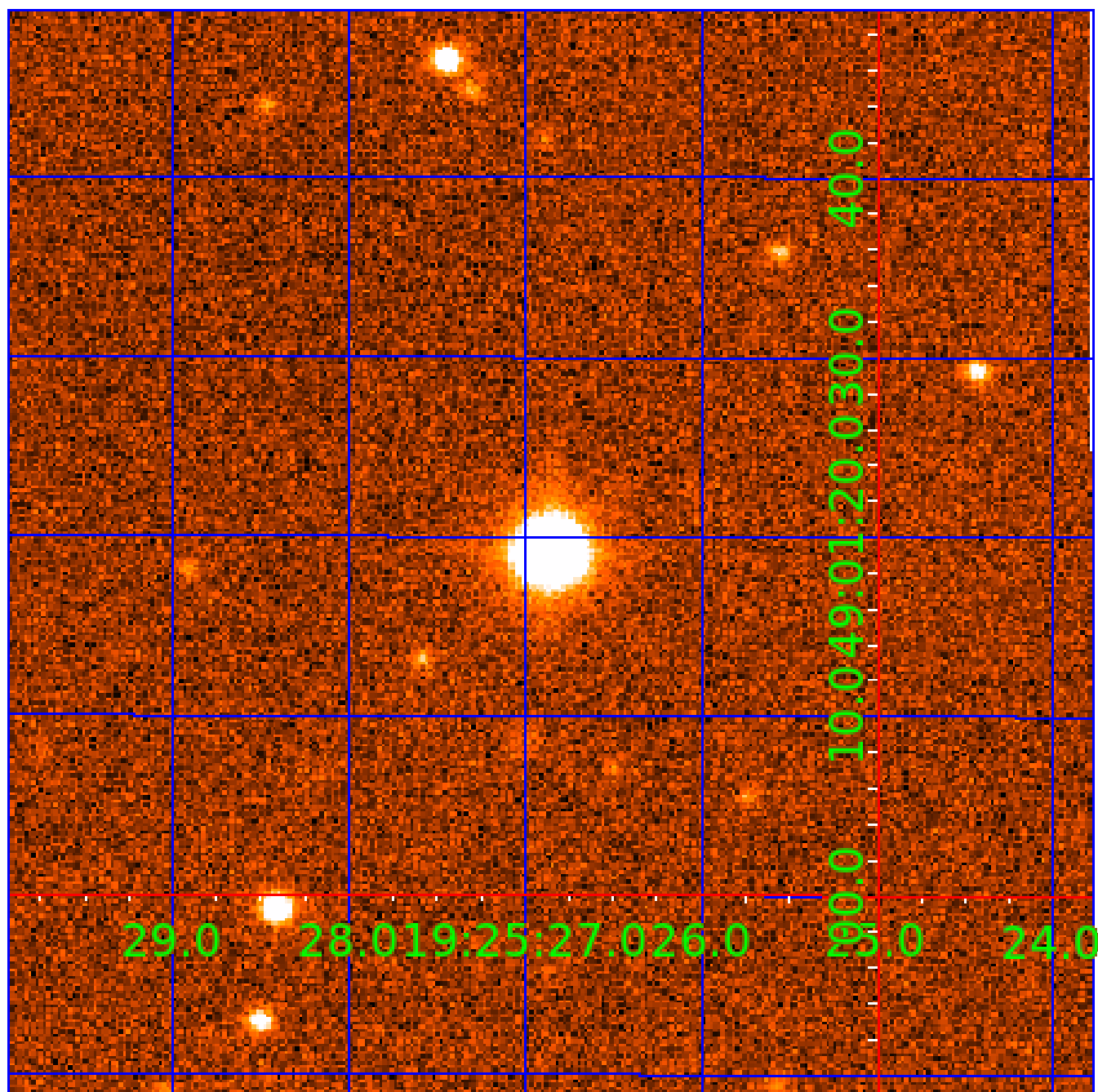


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011296045

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})
011296045-01	OBS	No	2.395598	132.179104	18.4	14.094	11.1	6.9	4.07	6760	1.83	16435.68
011296045-02	OBS	No	103.927826	159.933029	155.1	19.160	10.5	7.5	4.07	6760	5.67	107.82
011296045-03	OBS	No	110.637050	227.715070	256.1	6.113	9.7	8.3	4.07	6760	7.29	99.19
011296045-04	OBS	No	76.091724	164.893900	288.8	3.980	9.2	10.5	4.07	6760	7.64	163.39
011296045-05	OBS	No	26.771024	133.180954	190.2	2.453	8.9	8.6	4.07	6760	6.10	657.84
011296045-06	OBS	No	111.101719	138.520726	248.2	6.014	8.6	8.0	4.07	6760	7.20	98.64
011296045-07	OBS	No	80.479761	145.691106	222.2	6.597	8.8	9.5	4.07	6760	6.85	151.62
011296045-08	OBS	No	35.718354	153.891928	242.8	3.474	8.7	9.1	4.07	6760	7.48	447.87
011296045-09	OBS	No	215.363874	182.259821	390.1	3.780	8.4	8.7	4.07	6760	12.61	40.81
011296045-10	OBS	No	495.965950	140.454562	207.3	11.063	8.3	7.9	4.07	6760	6.81	13.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011296045-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011296045-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011296045-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
011296045-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011296045-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-08	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011296045-09	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
011296045-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

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

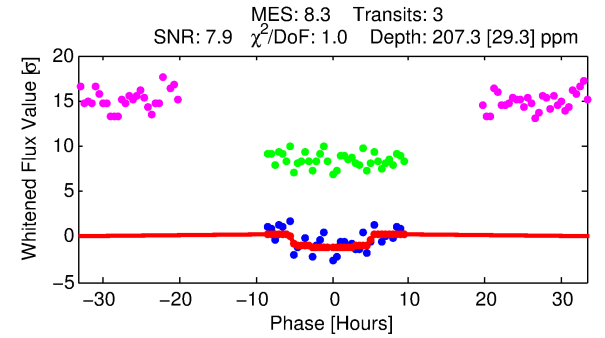
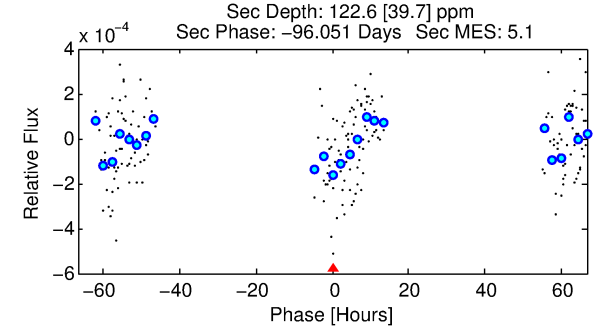
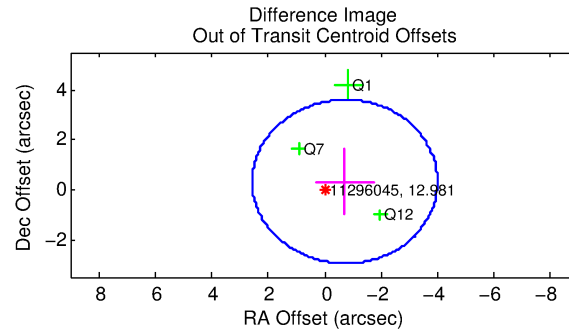
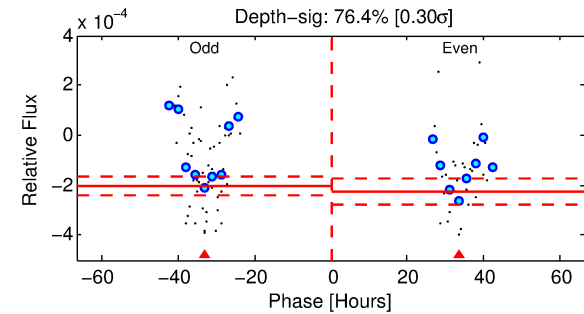
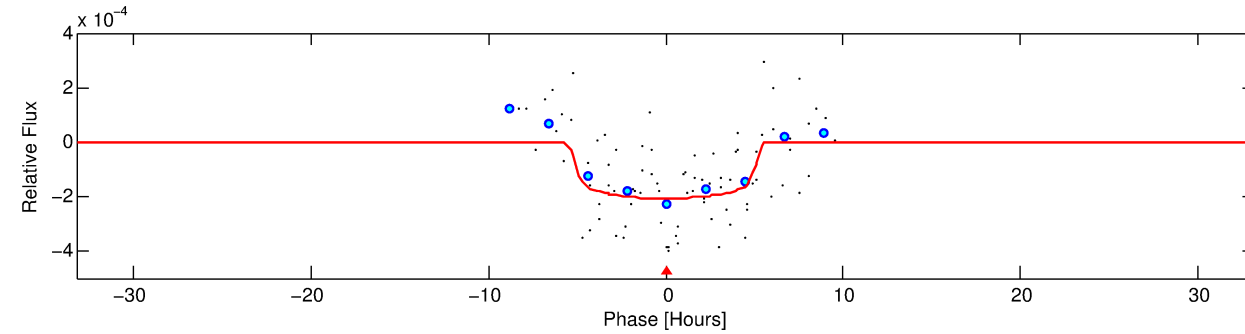
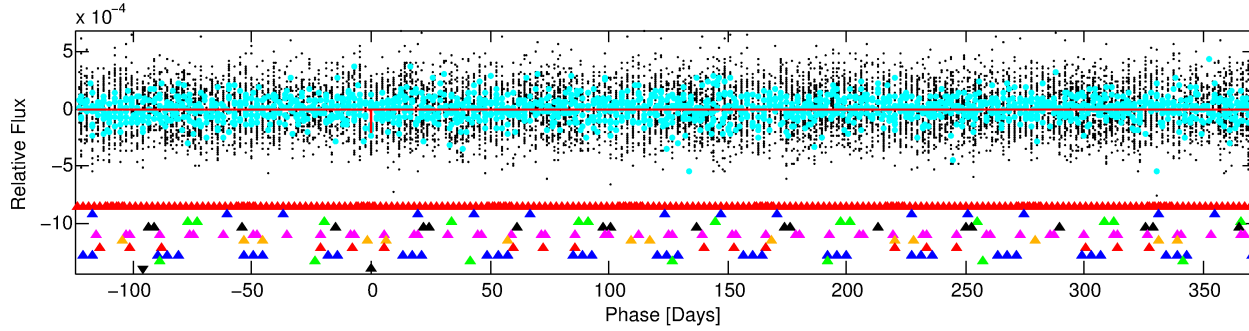
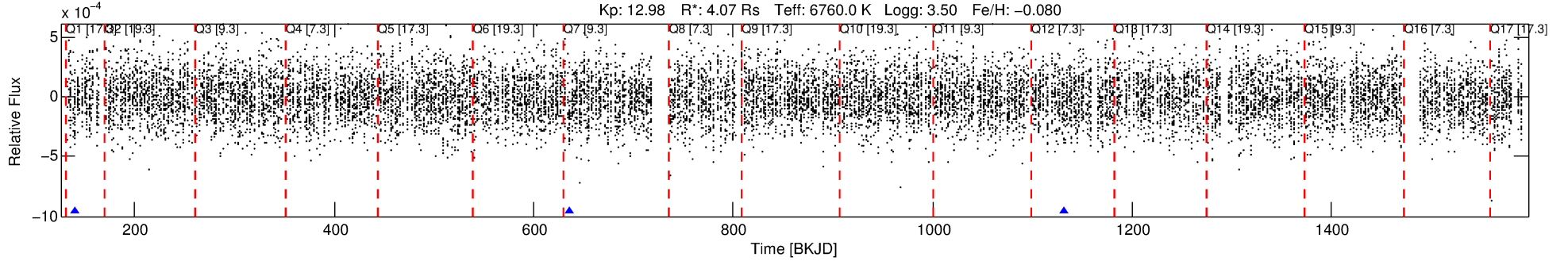
Ephemeris Match Information For 011296045-10

No Significant Match Found

DV One-Page Summary

KIC: 11296045 Candidate: 10 of 10 Period: 495.966 d
KOI: K04396 Corr: No Ephemeris Match

Kp: 12.98 R*: 4.07 Rs Teff: 6760.0 K Logg: 3.50 Fe/H: -0.080



DV Fit Results:

Period = 495.96595 [0.01432] d
Epoch = 140.4546 [0.0204] BKJD
Rp/R* = 0.0153 [0.0025]
a/R* = 161.71 [134.46]
b = 0.90 [0.18]
Seff = 13.42 [7.70]
Teq = 488 [70] K
Rp = 6.81 [2.76] Re
a = 1.5193 [0.5373] AU
Ag = 3355.59 [2426.91] [1.38σ]
Teffp = 5743 [677] K [7.72σ]

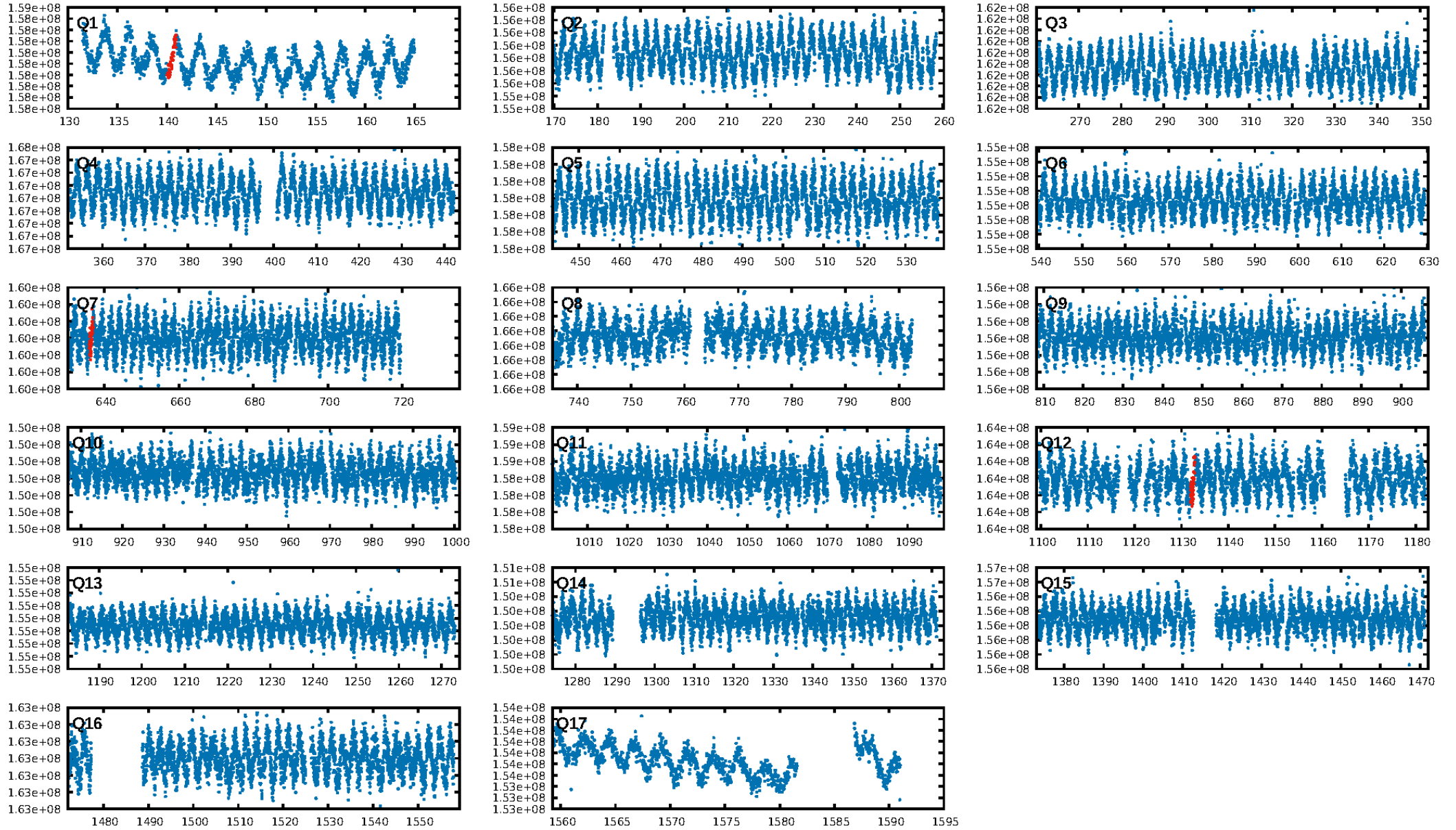
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [576.03σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.2%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.5846
Centroid-sig: 66.9%
Centroid-so: 0.613 arcsec [0.64σ]
OotOffset-rm: 0.785 arcsec [0.72σ]
KicOffset-rm: 0.779 arcsec [0.69σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

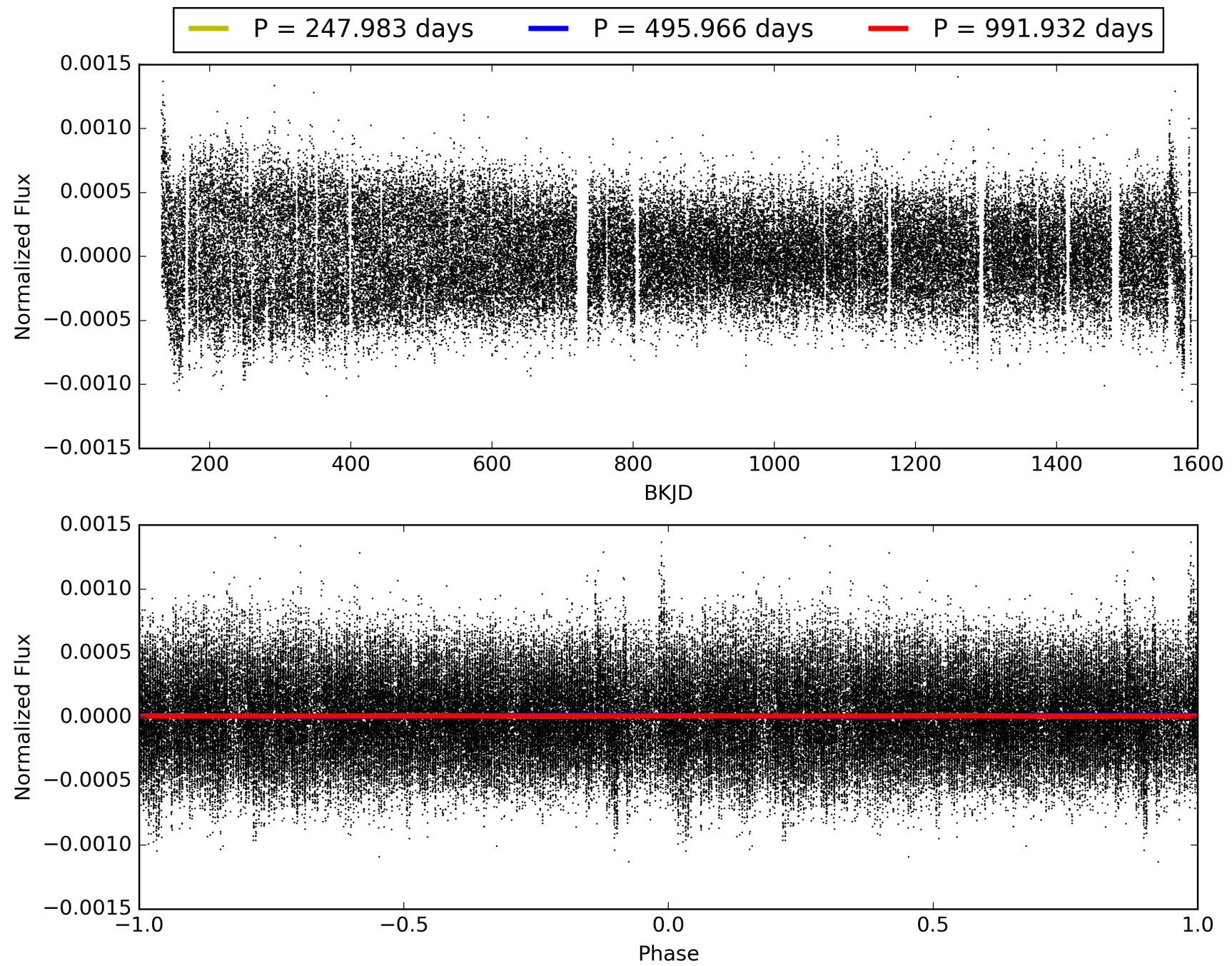
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:47:15 Z

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

TCE 011296045-10, PDC Light Curves

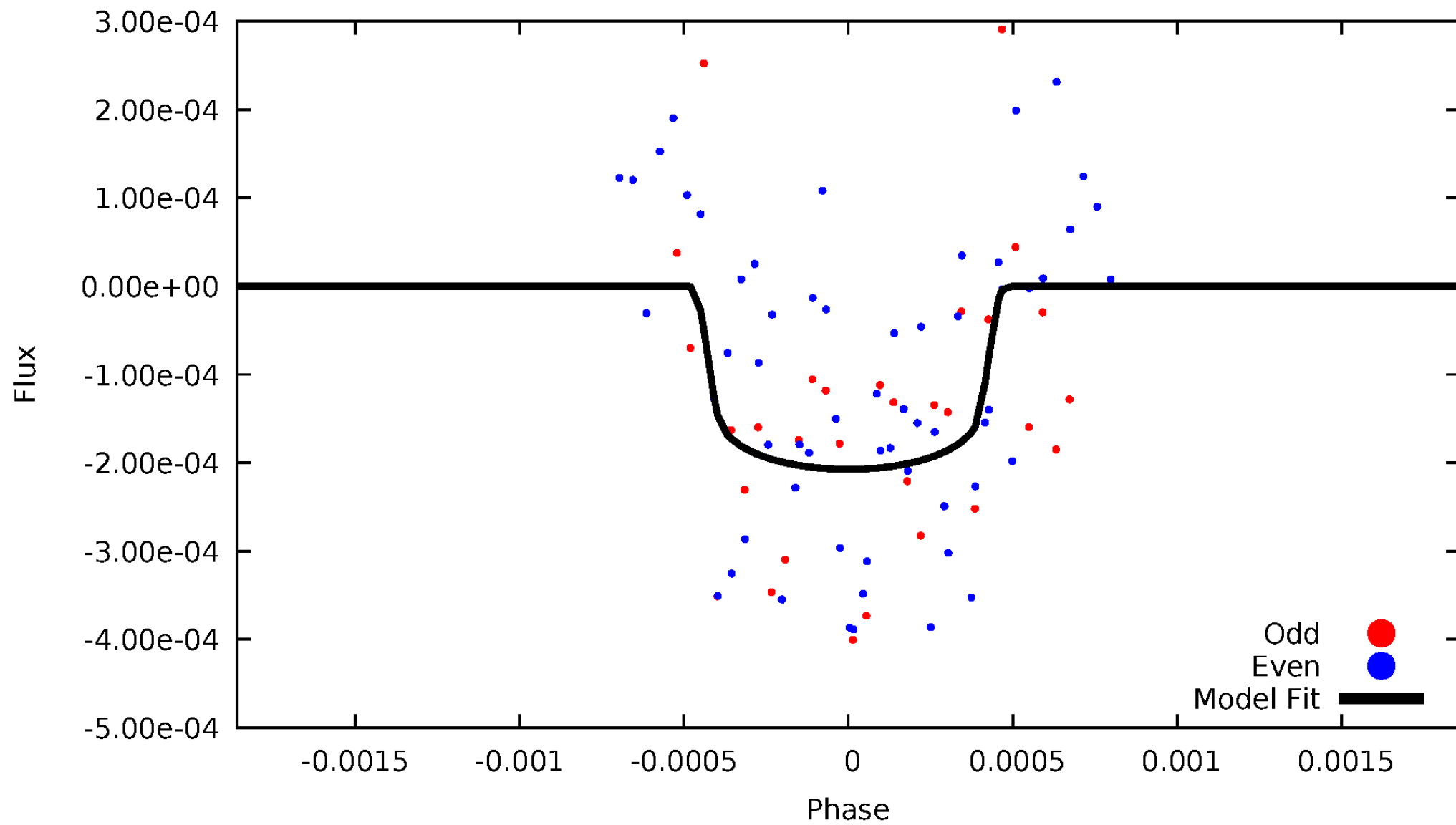


TCE 011296045-10



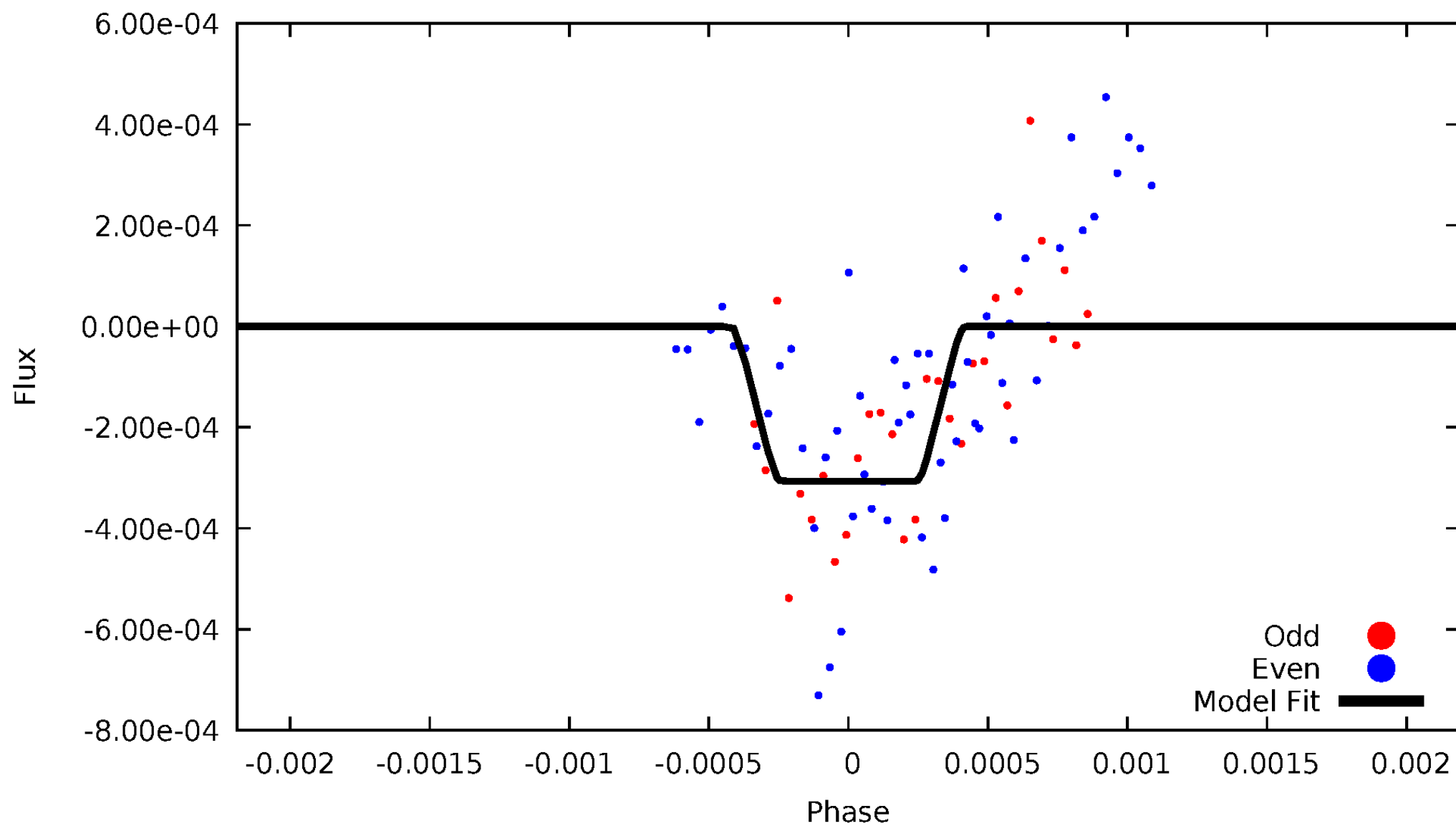
DV Odd/Even

TCE 011296045-10



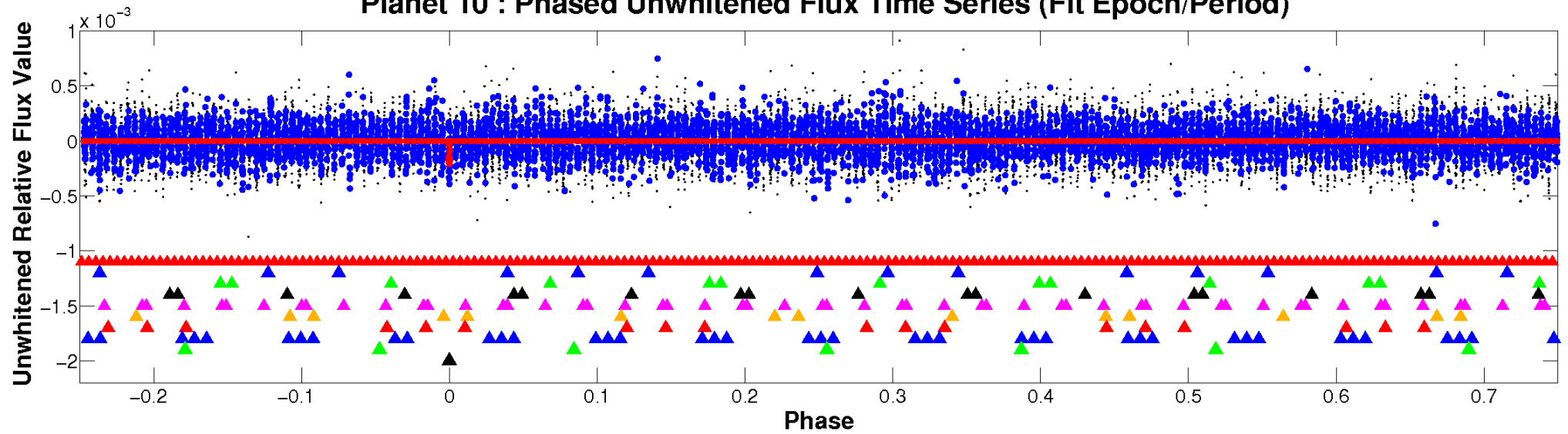
ALT Odd/Even

TCE 011296045-10

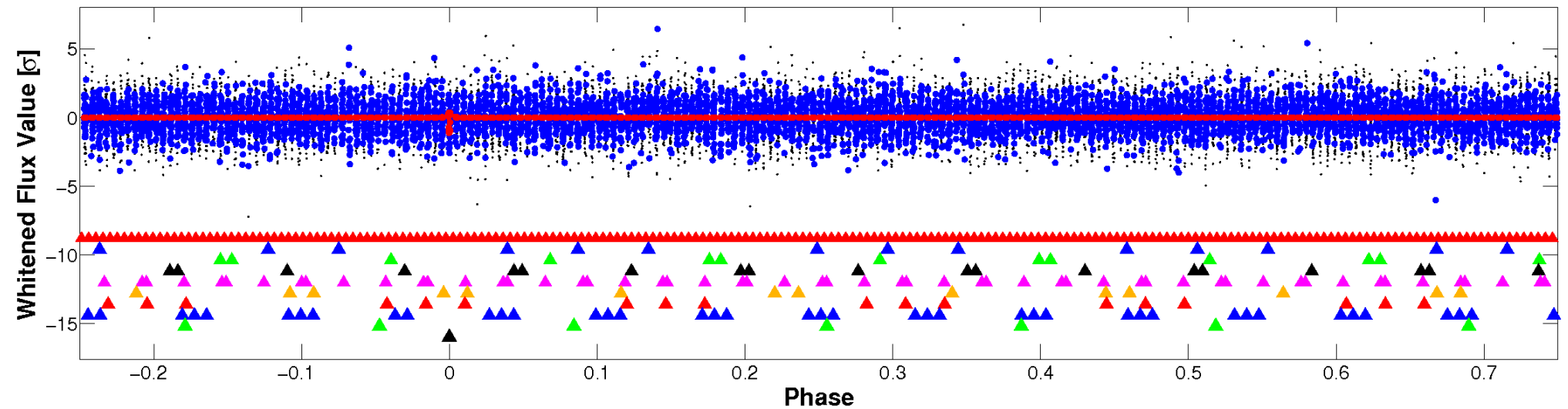


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

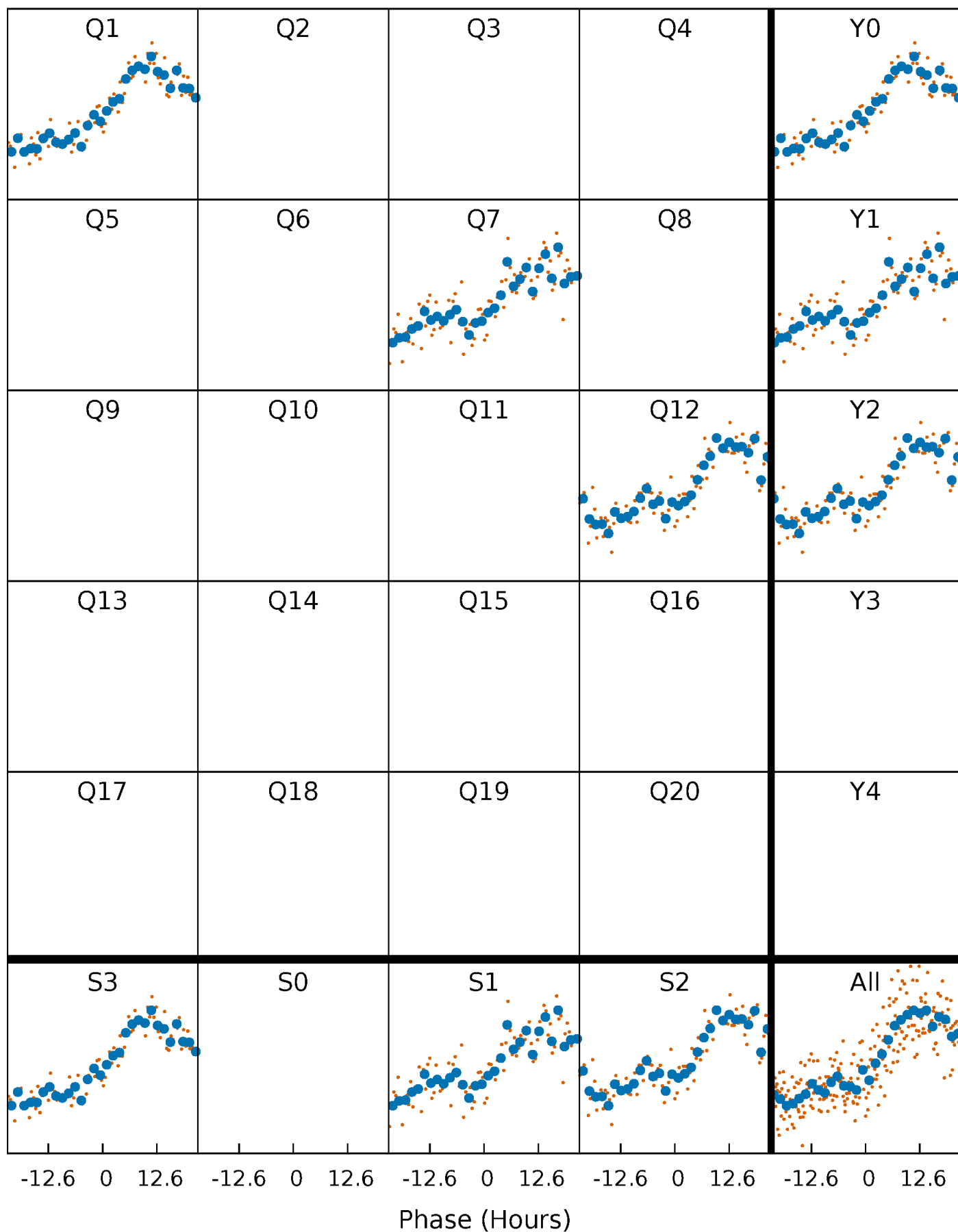


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



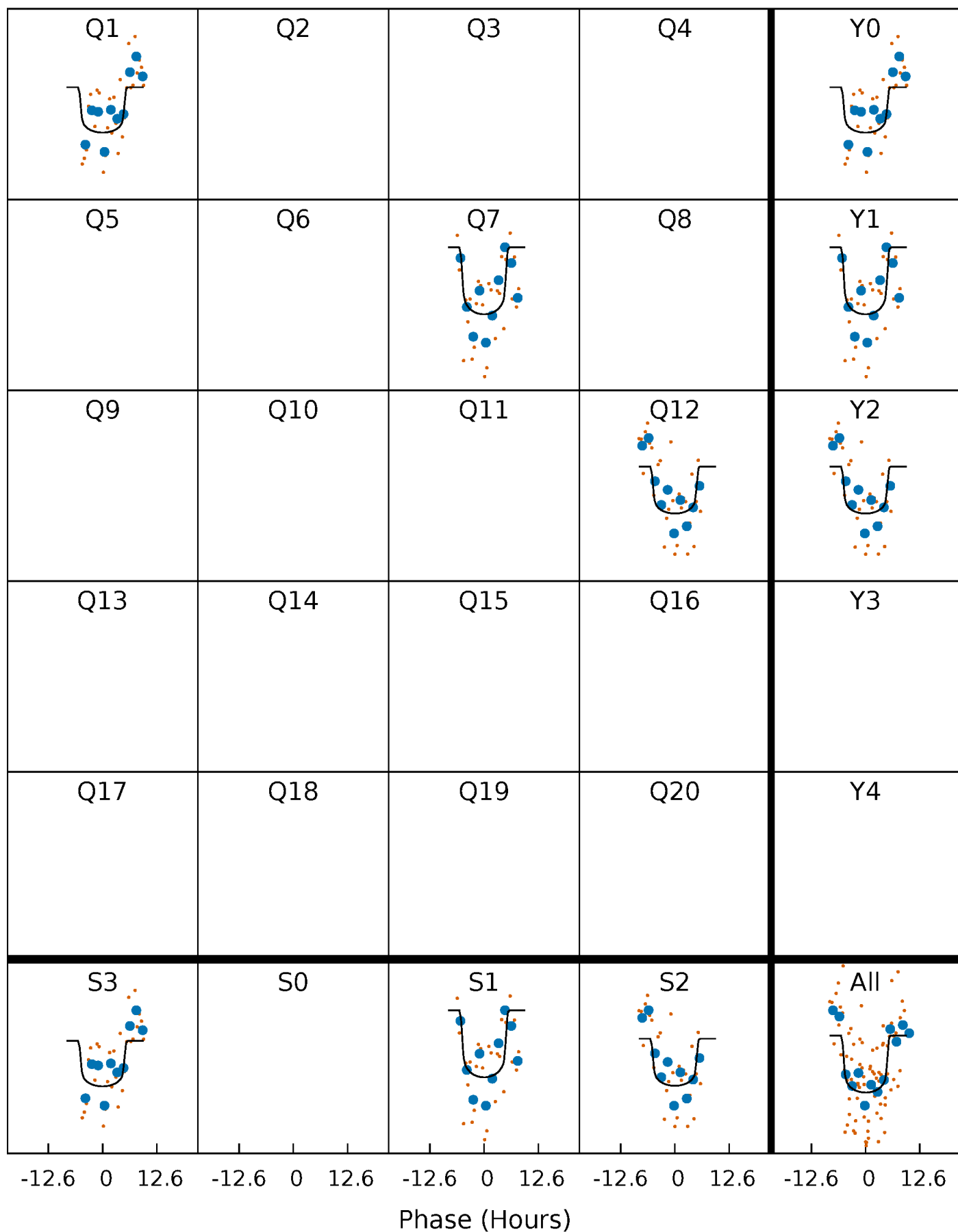
PDC Quarter-Phased Transit Curves

TCE 011296045-10 $P=495.965950$ Days $T_0=140.454562$ (BKJD)



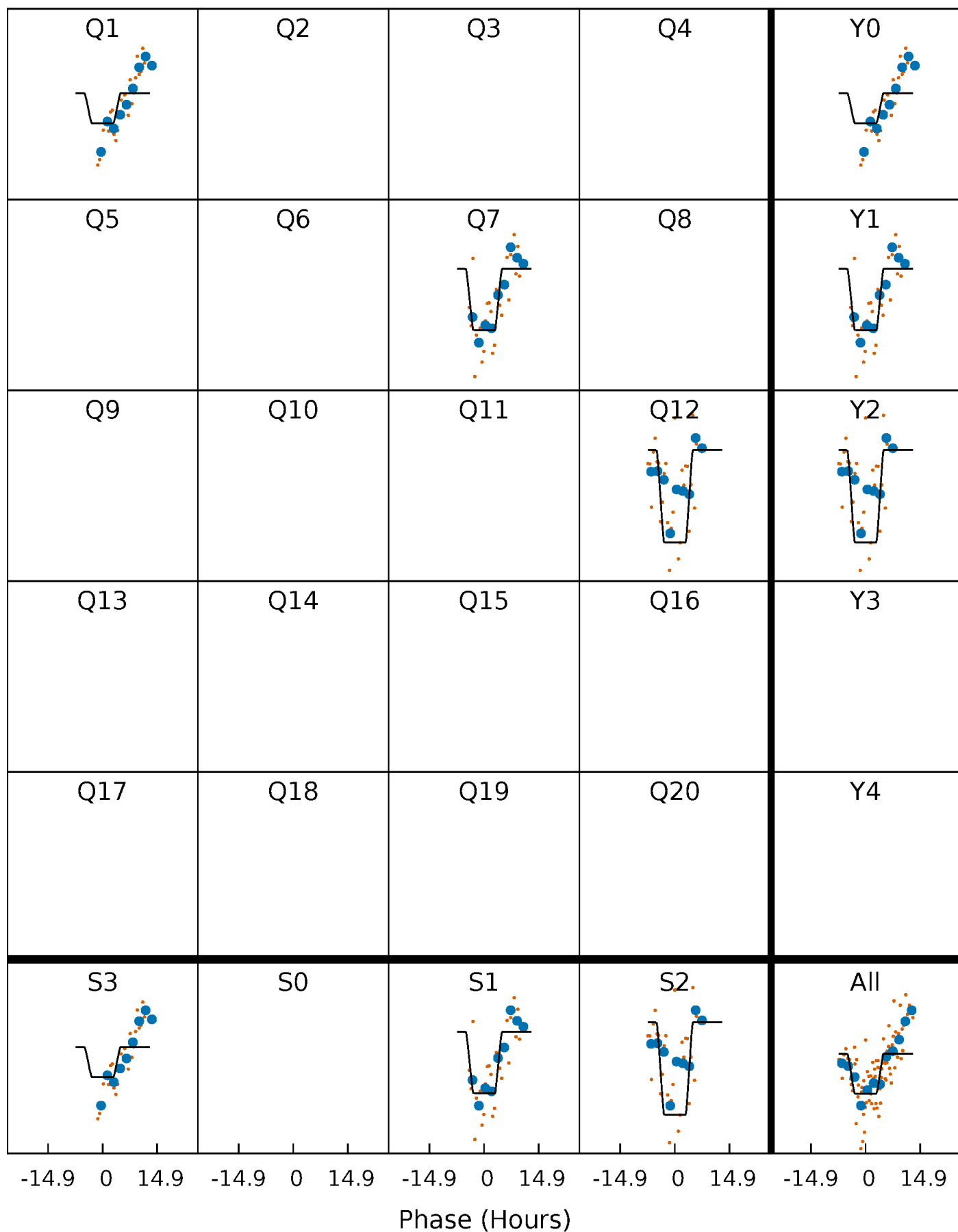
DV Quarter-Phased Transit Curves

TCE 011296045-10 $P=495.965950$ Days $T_0=140.454562$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

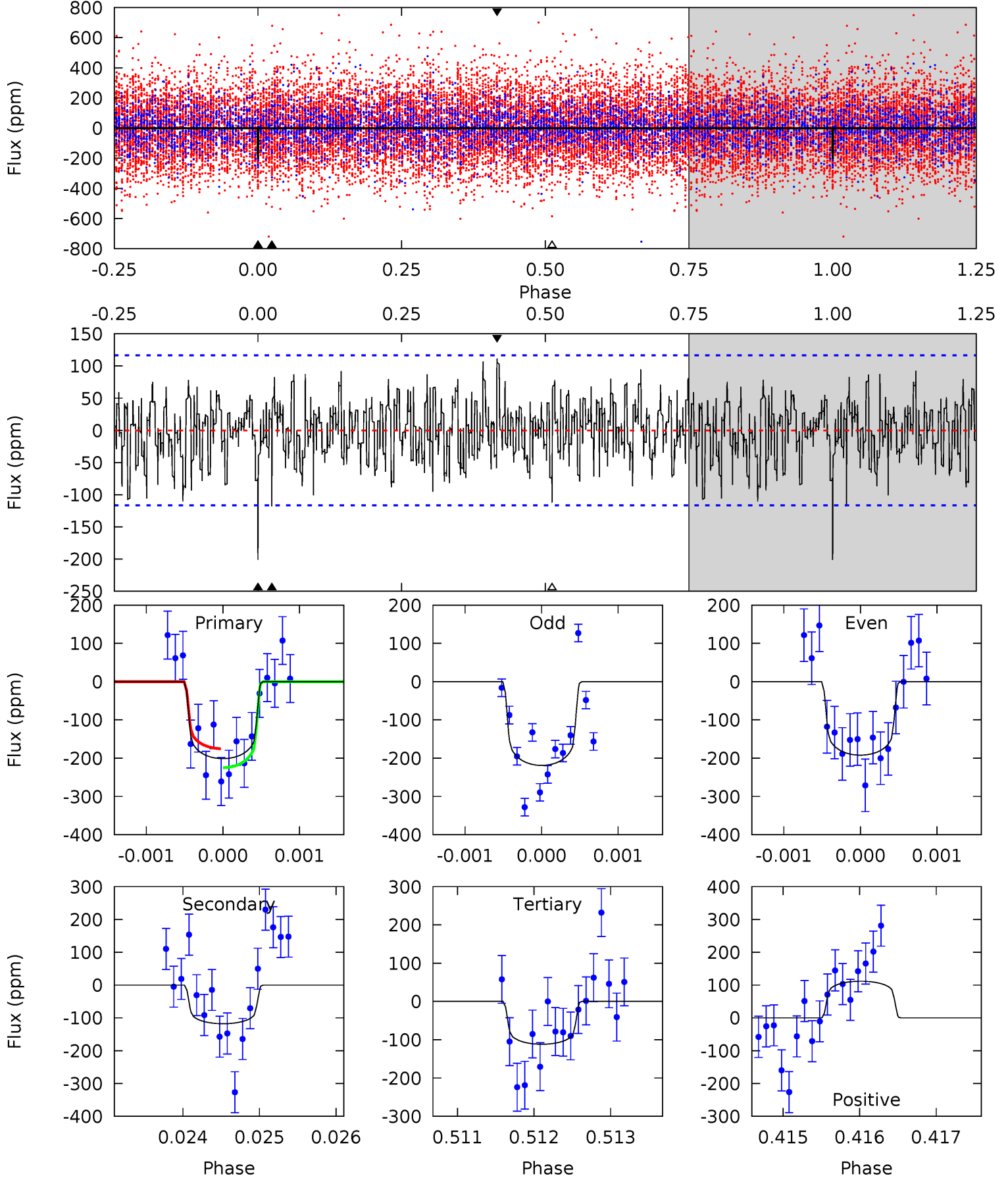
TCE 011296045-10 P=496.017858 Days $T_0=140.311113$ (BKJD)



DV Model-Shift Uniqueness Test

011296045-10, P = 495.965950 Days, E = 140.454562 Days

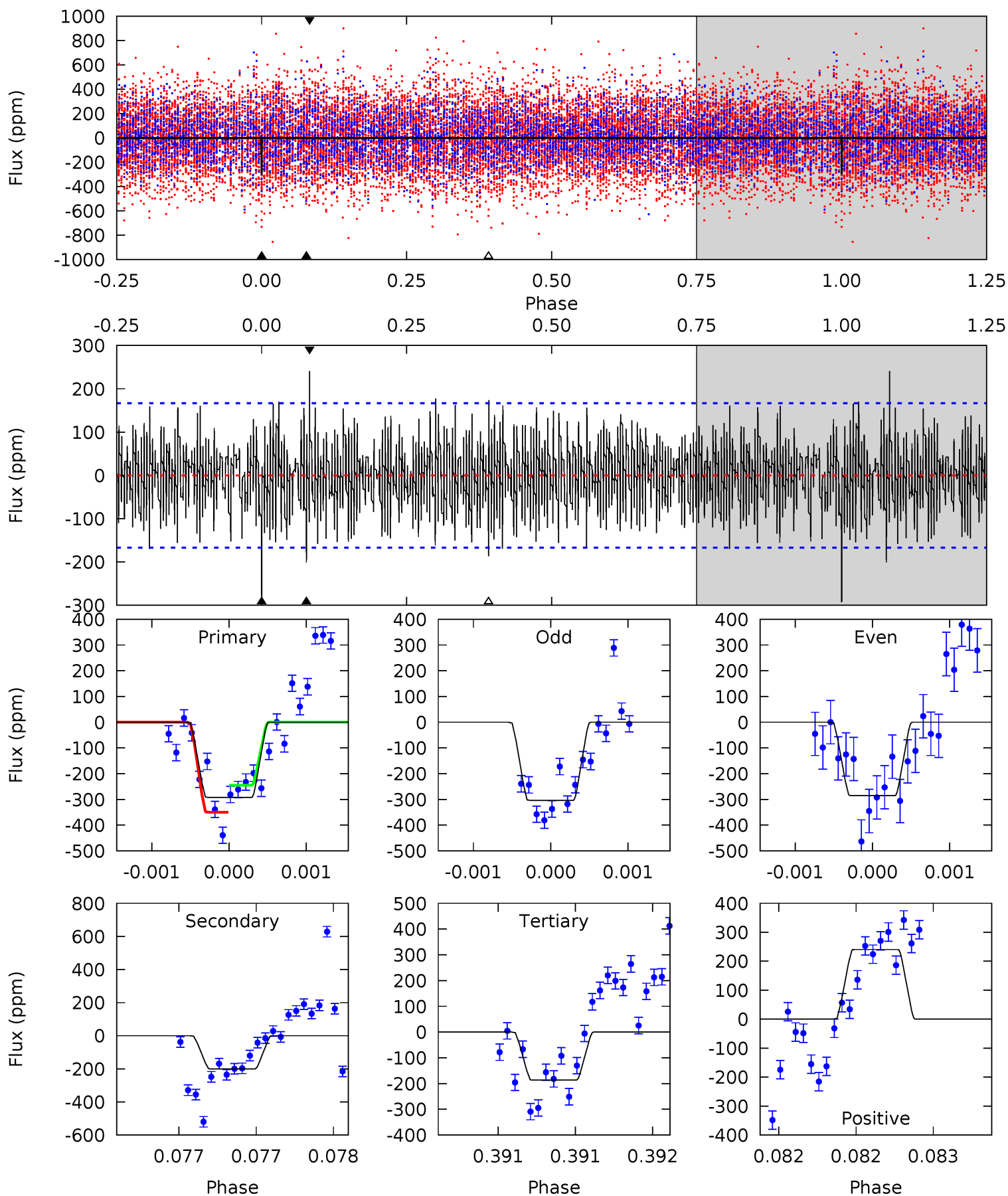
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.43	5.52	5.23	5.23	5.46	3.31	1.73	4.19	4.20	0.29	0.29	0.60	1.04	0.36	1.15



Alt Model-Shift Uniqueness Test

011296045-10, P = 496.017858 Days, E = 140.311113 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	6.60	6.13	7.91	5.49	3.34	2.31	3.48	1.70	0.47	-1.31	0.29	1.03	0.45	1.71



Stellar Parameters For KIC 011296045

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6760^{+182}_{-202}	$3.498^{+0.328}_{-0.082}$	$-0.080^{+0.300}_{-0.200}$	$4.069^{+0.268}_{-1.516}$	$1.900^{+0.186}_{-0.345}$	$0.040^{+0.094}_{-0.010}$
	+3%/-3%	+9%/-2%	+375%/-250%	+7%/-37%	+10%/-18%	+236%/-26%
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 011296045-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-118 ± 21	$6.52^{+1.23}_{-1.42}$	674^{+31}_{-59}	5673^{+571}_{-482}	3500^{+2334}_{-1149}
Alt.	-201 ± 30	$7.50^{+1.32}_{-1.54}$	673^{+33}_{-56}	6035^{+564}_{-451}	4583^{+2500}_{-1368}

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 $A_{obs} \gg 1.0$

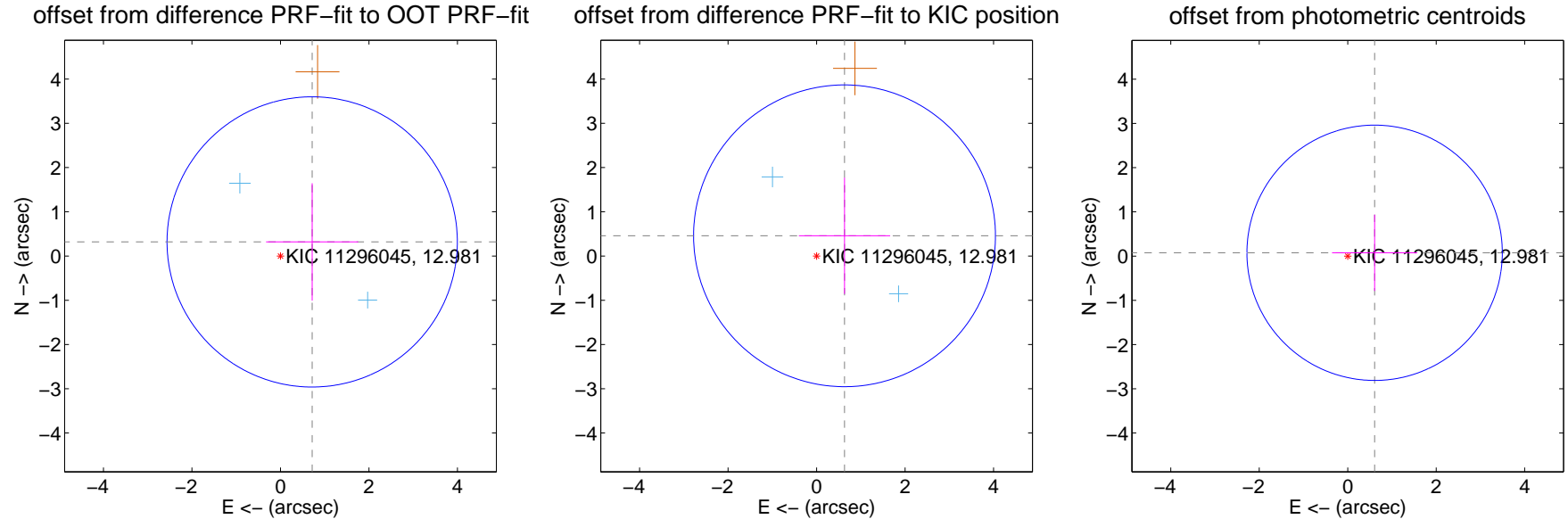
DV Centroid Data

Supplemental centroid analysis for 011296045-10. Kepler magnitude: 12.98. Transit SNR 7.90

There are 2 quarters with good PRF difference image offsets

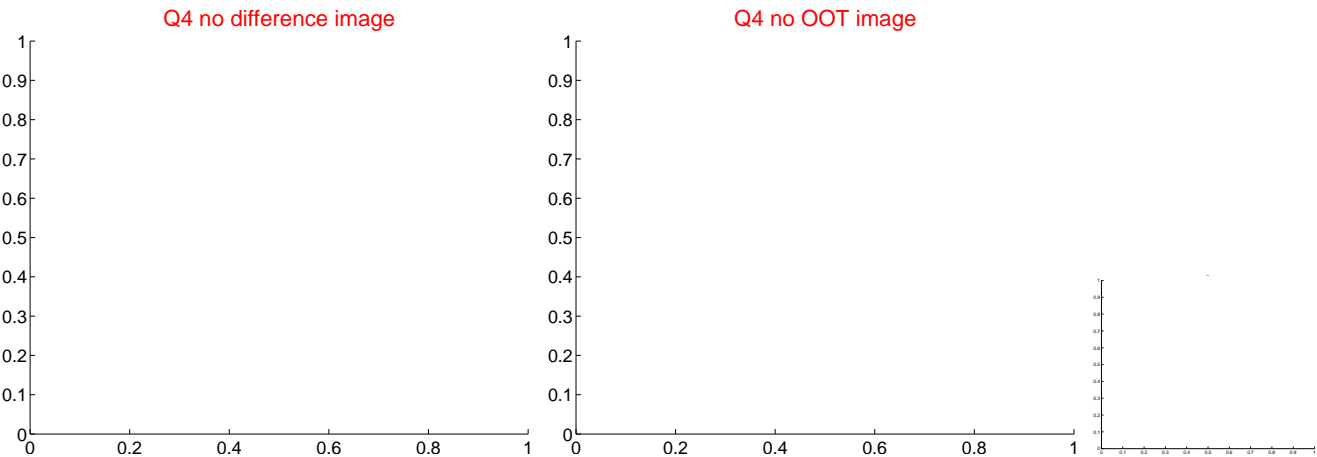
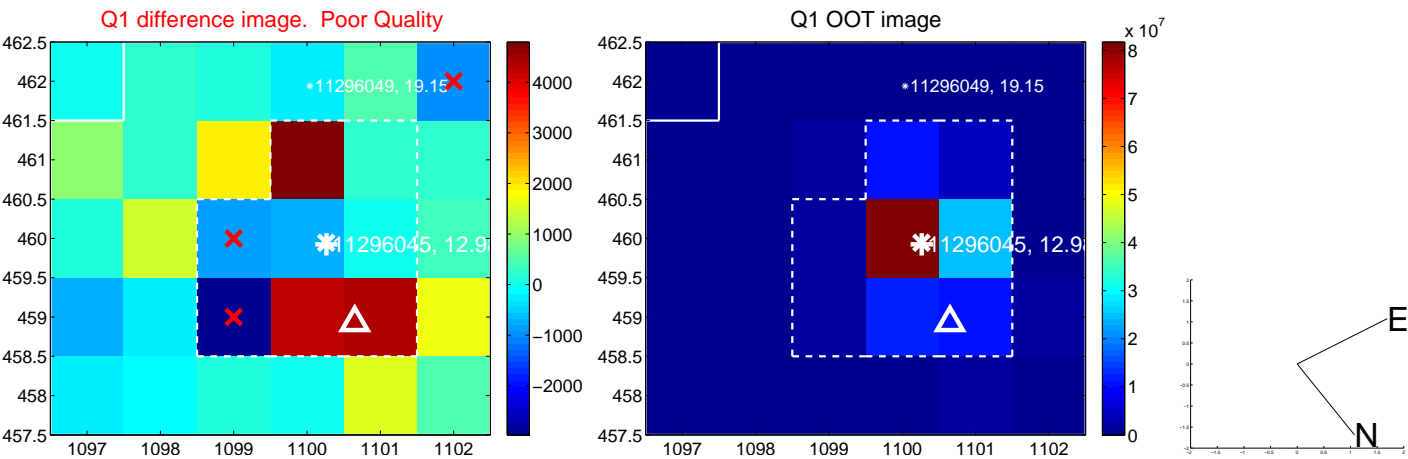
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.785 ± 1.093	0.72	-0.717 ± 1.041	0.319 ± 1.326
PRF-fit source offset from KIC position	0.779 ± 1.137	0.69	-0.631 ± 1.031	0.457 ± 1.314
photometric centroid source offset	0.61 ± 0.96	0.64	-0.61 ± 0.96	0.07 ± 0.86



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

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

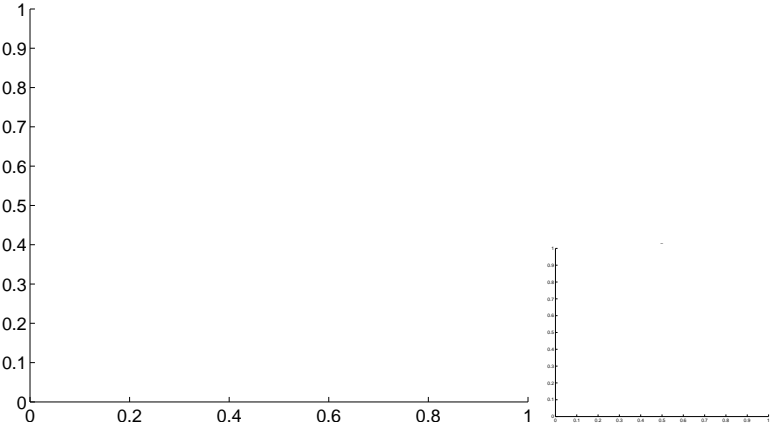


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

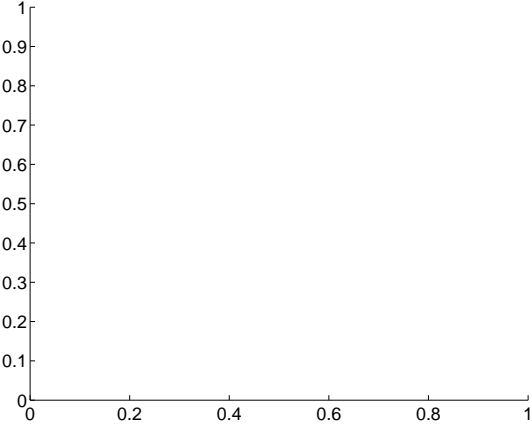
Q5 no difference image



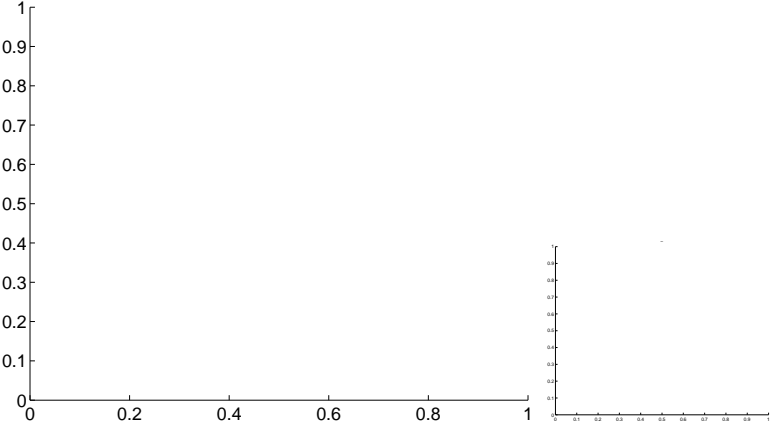
Q5 no OOT image



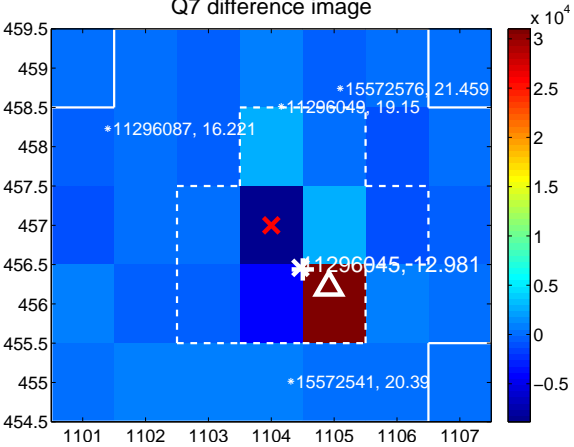
Q6 no difference image



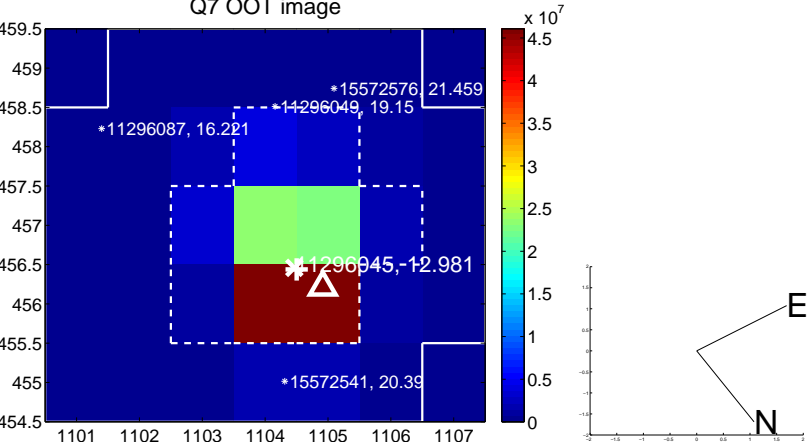
Q6 no OOT image



Q7 difference image



Q7 OOT image



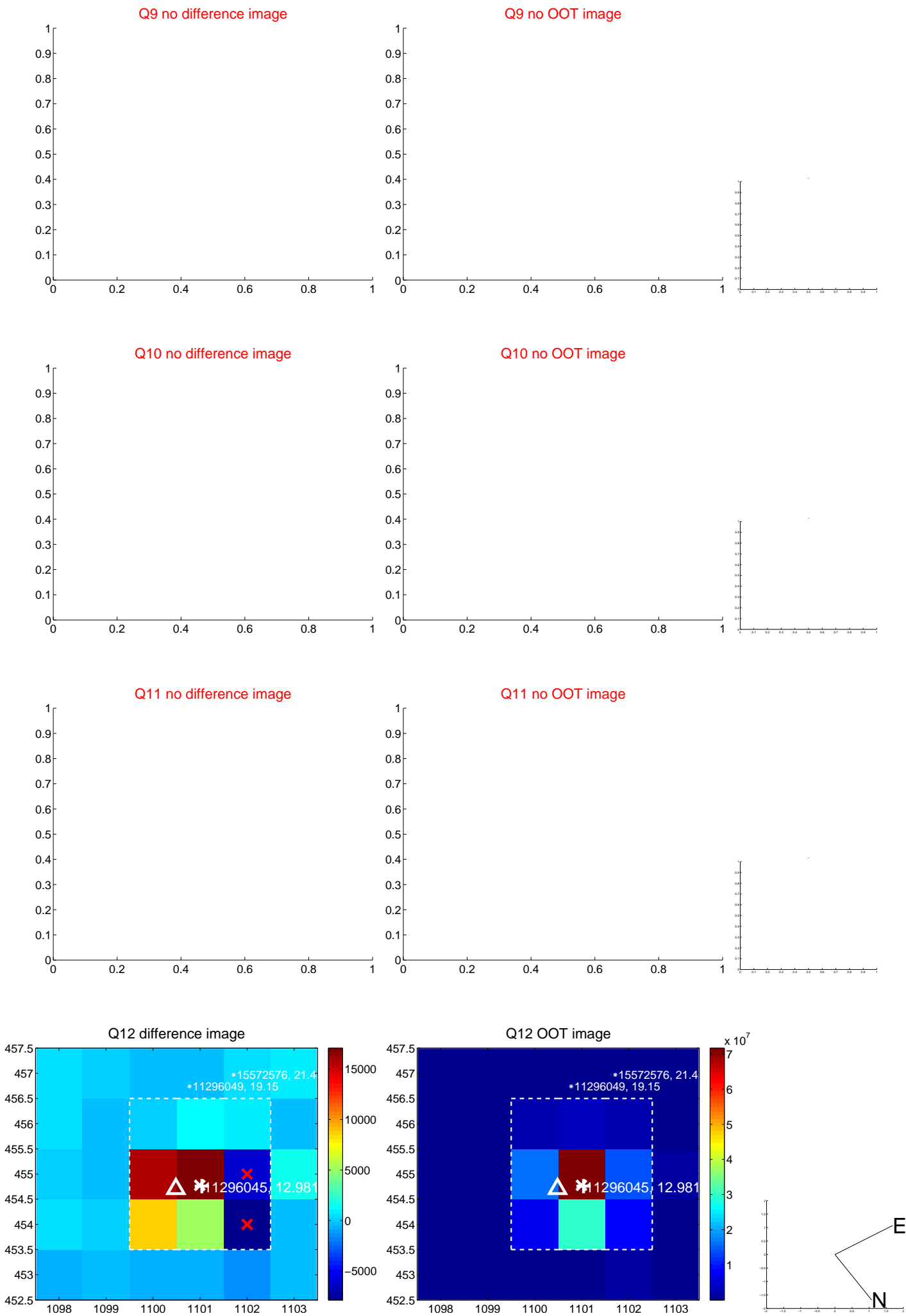
Q8 no difference image



Q8 no OOT image



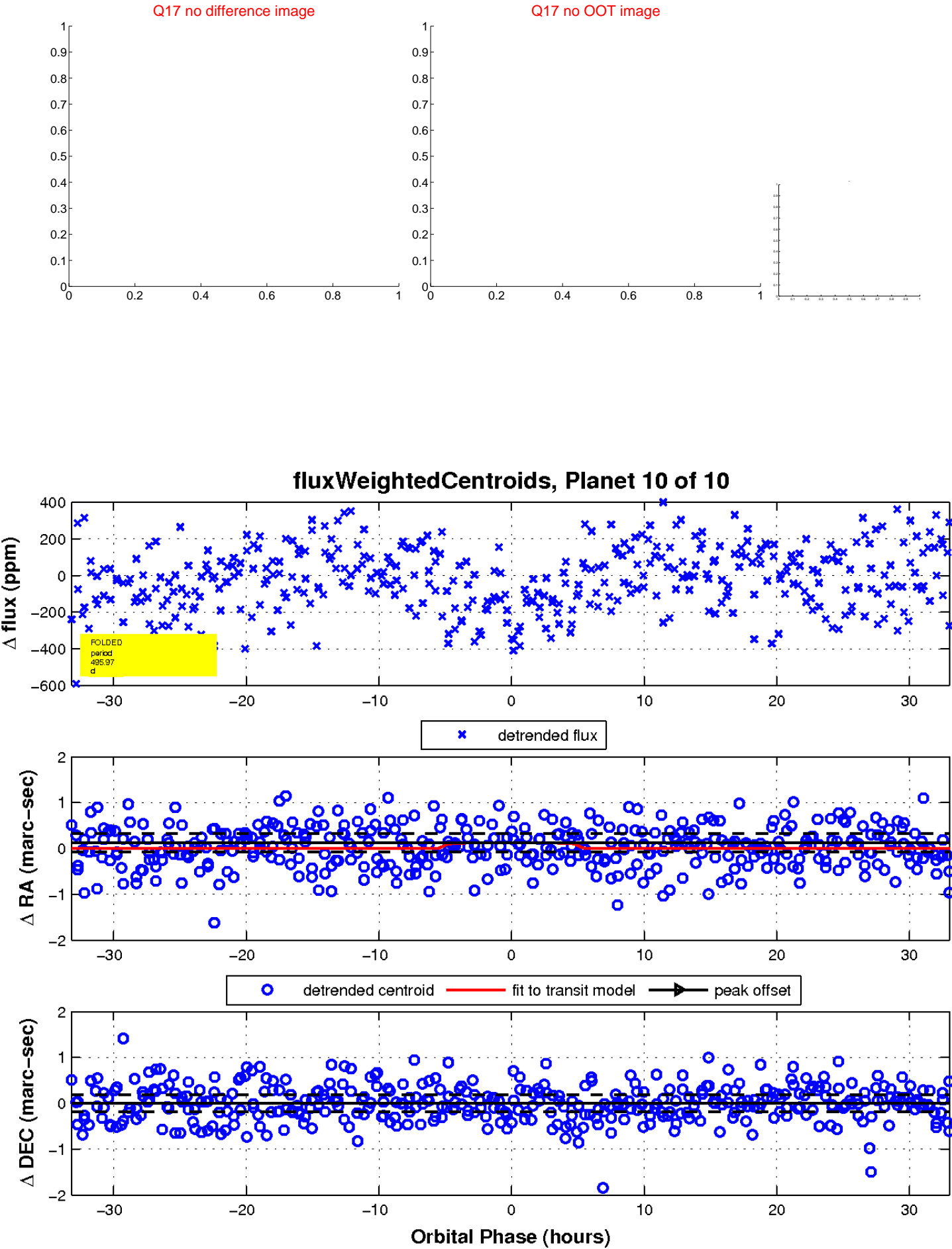
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

