

KIC 006471229

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})
006471229-01	OBS	6719.01	1.752431	132.800709	82.7	3.379	13.1	12.4	0.84	5952	0.90	1038.13
006471229-02	OBS	No	381.043705	425.074202	830.1	9.875	12.8	4.7	0.84	5952	2.58	0.79
006471229-03	OBS	No	501.134573	175.601699	330.4	0.577	9.9	1.3	0.84	5952	1.60	0.55
006471229-04	OBS	No	501.197594	175.187760	1030.1	5.957	10.1	6.3	0.84	5952	2.81	0.55
006471229-06	OBS	No	321.089157	266.463399	719.2	4.363	10.6	7.0	0.84	5952	2.37	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471229-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH
006471229-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006471229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006471229-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006471229-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

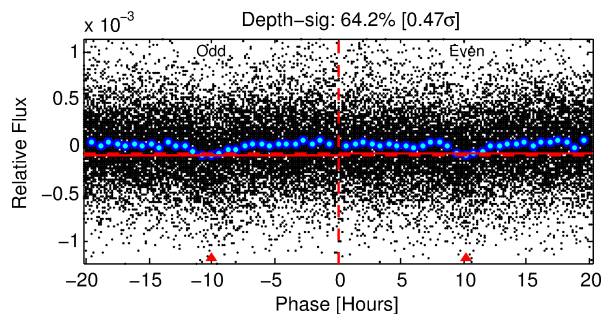
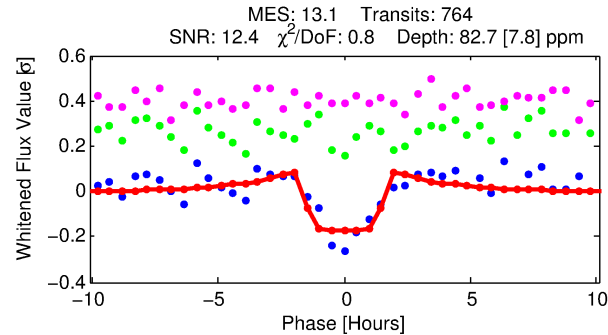
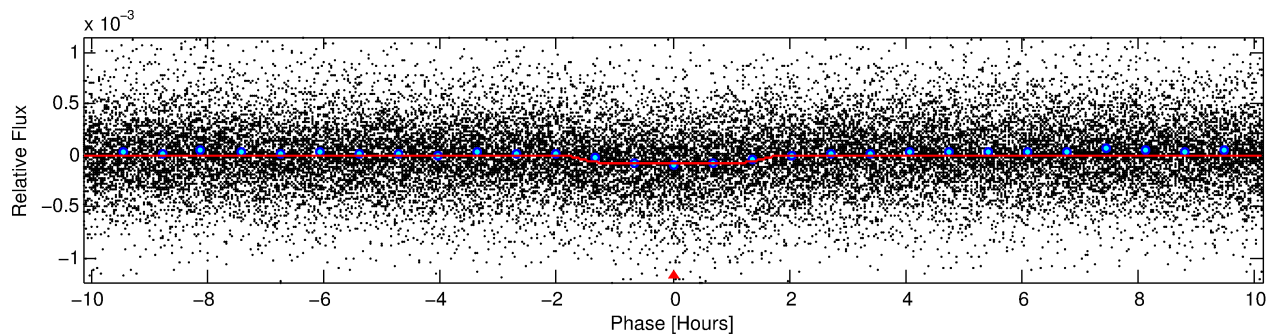
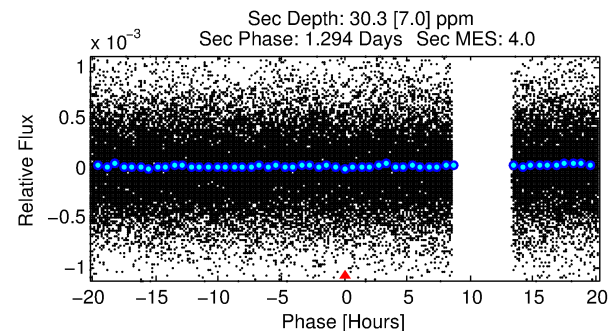
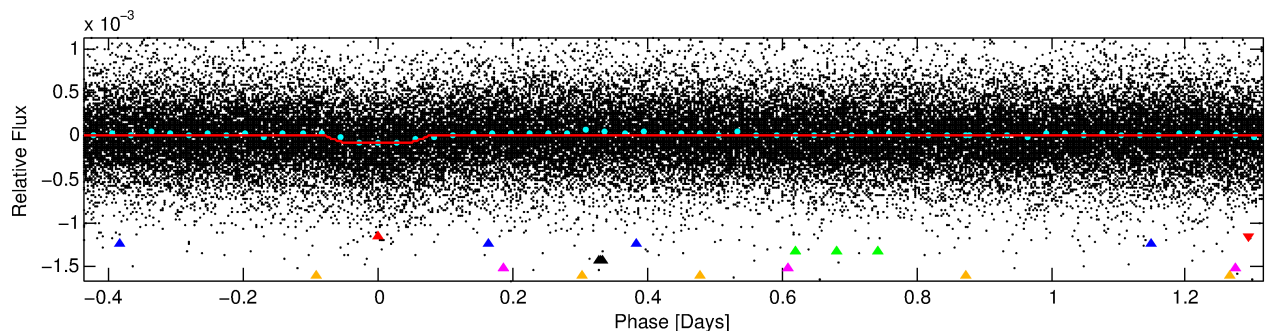
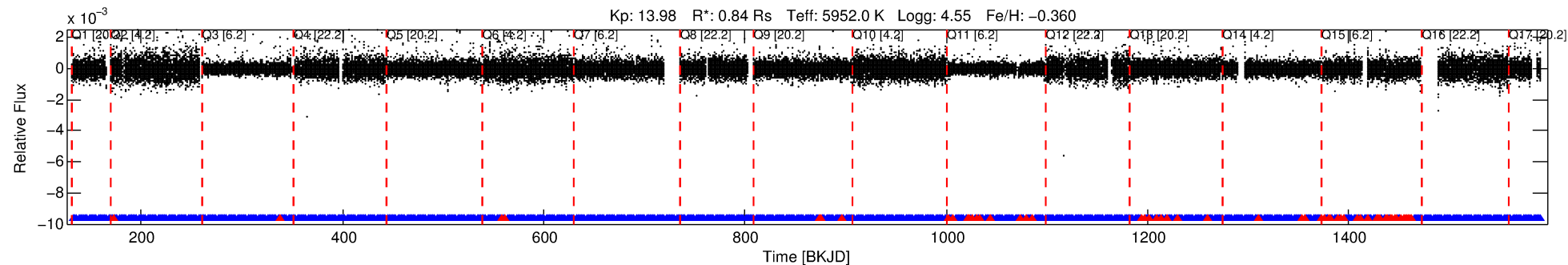
Ephemeris Match Information For 006471229-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006471229-01	6471229	6720.01	6471230	1:1	4.1	-1	-1	13.29	13.97	4.51	Direct-PRF	0	0.38	0.59

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6471229 Candidate: 1 of 6 Period: 1.752 d
KOI: K06719.01 Corr: 0.956



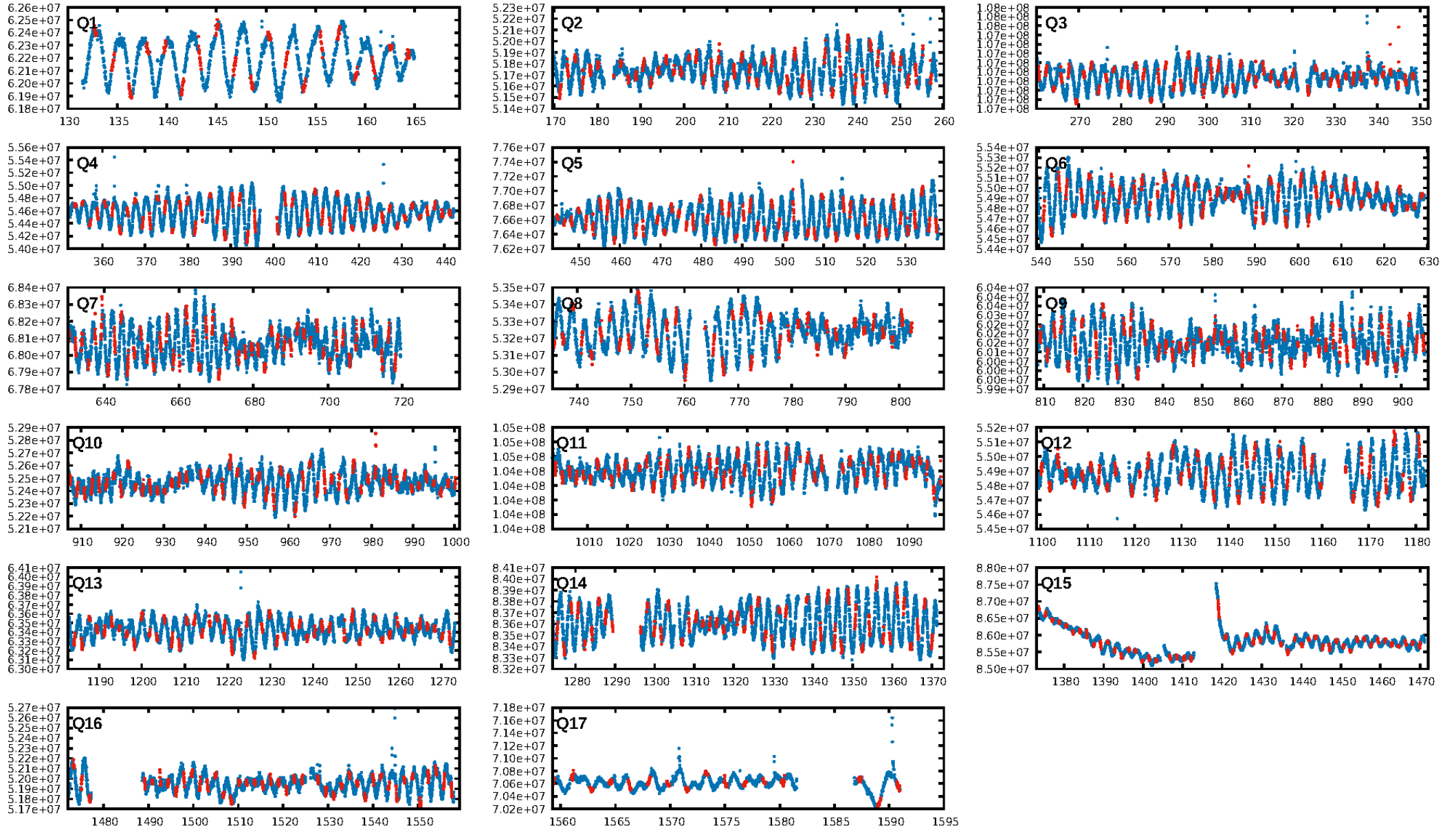
DV Fit Results:

Period = 1.75243 [0.00001] d
Epoch = 132.8007 [0.0025] BKJD
Rp/R* = 0.0098 [0.0032]
a/R* = 2.06 [2.63]
b = 0.90 [0.37]
Seff = 1038.13 [354.22]
Teq = 1447 [123] K
Rp = 0.90 [0.38] Re
a = 0.0278 [0.0062] AU
Ag = 15.82 [11.99] [1.24σ]
Teffp = 4463 [774] K [3.85σ]

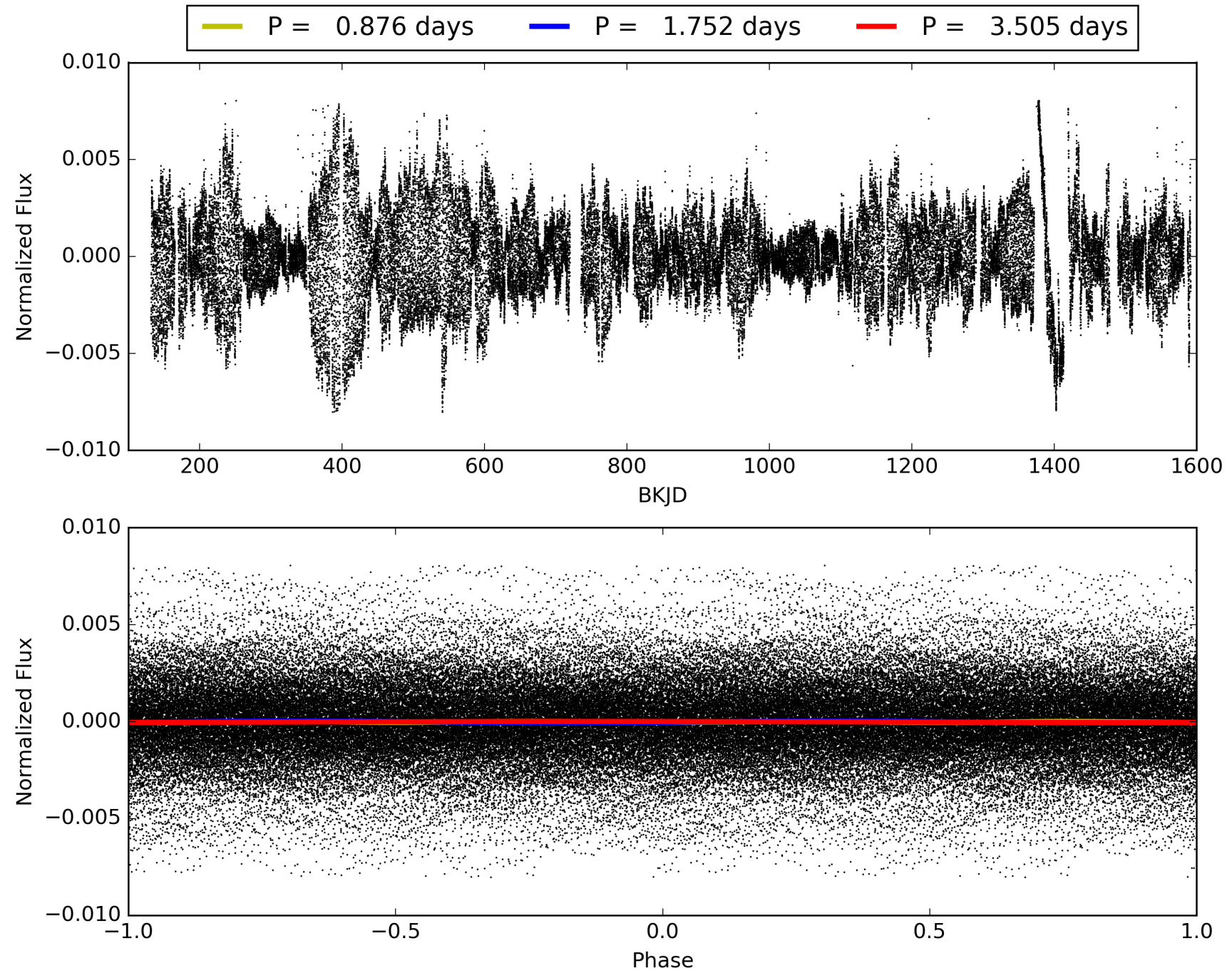
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [1388.83σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.00e-32
RollingBand-fgt: 0.92 [674/729]
GhostDiagnostic-chr: 8.741
Centroid-sig: 53.0%
Centroid-so: 0.918 arcsec [2.06σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006471229-01, PDC Light Curves

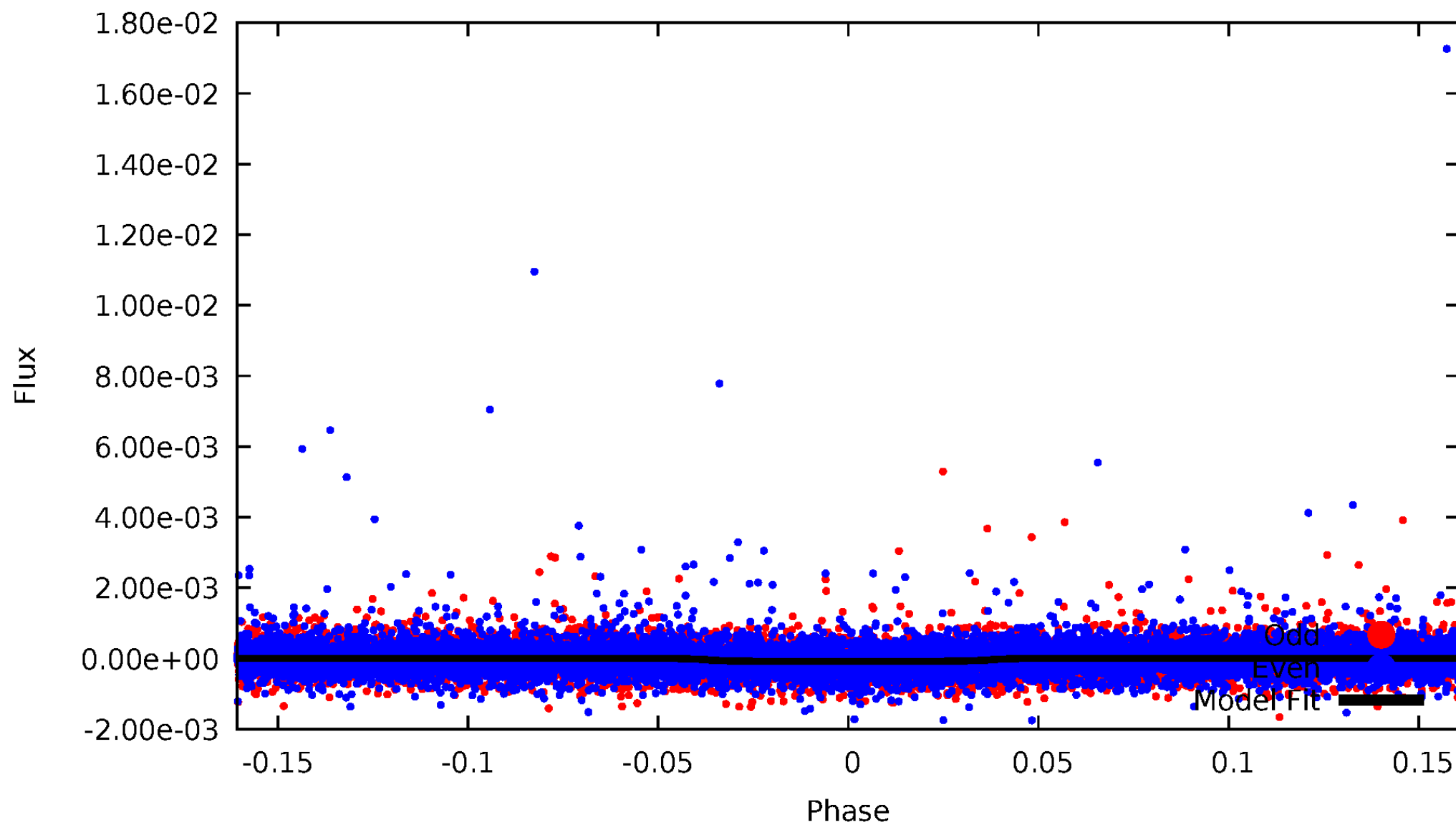


TCE 006471229-01



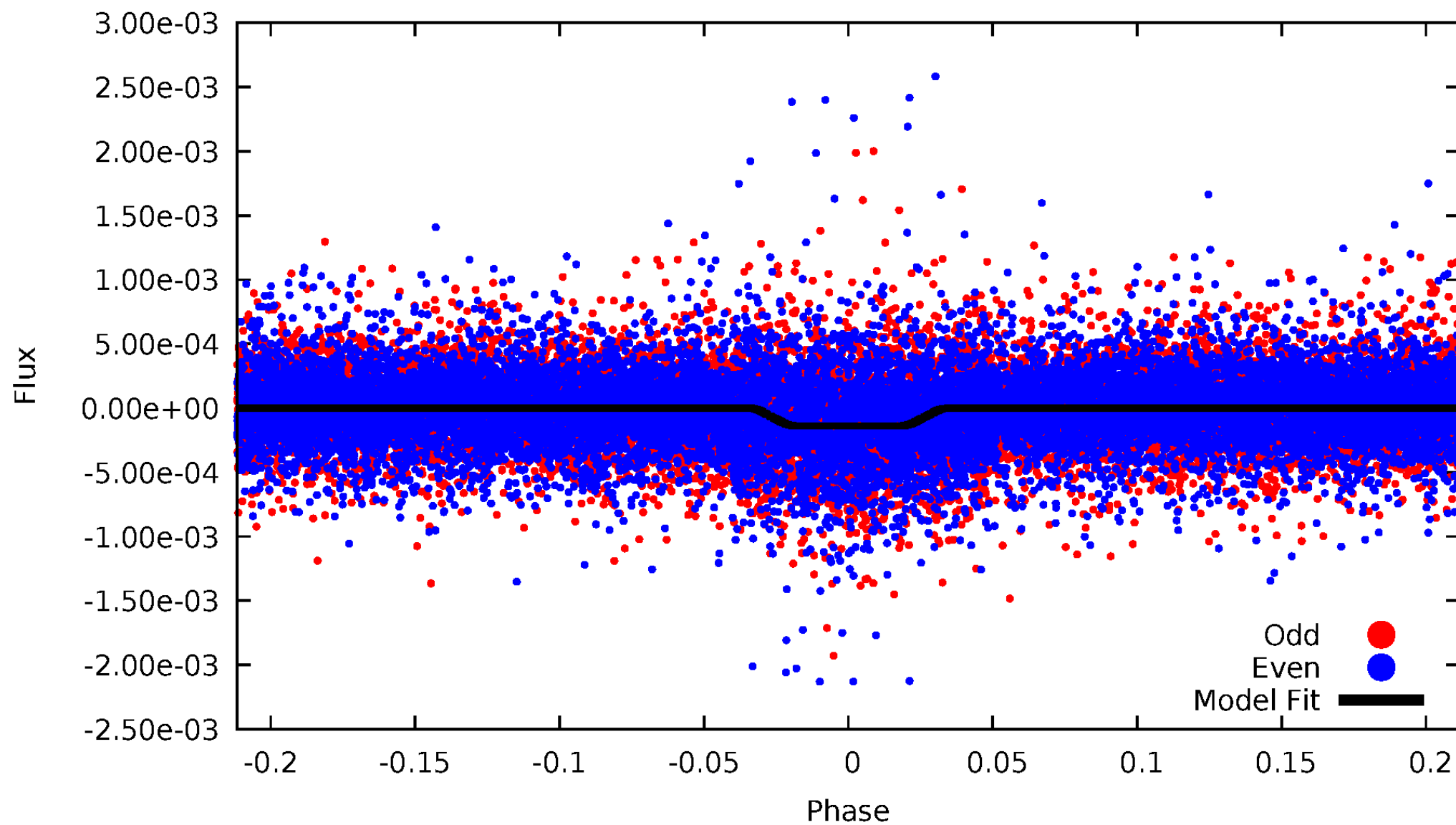
DV Odd/Even

TCE 006471229-01

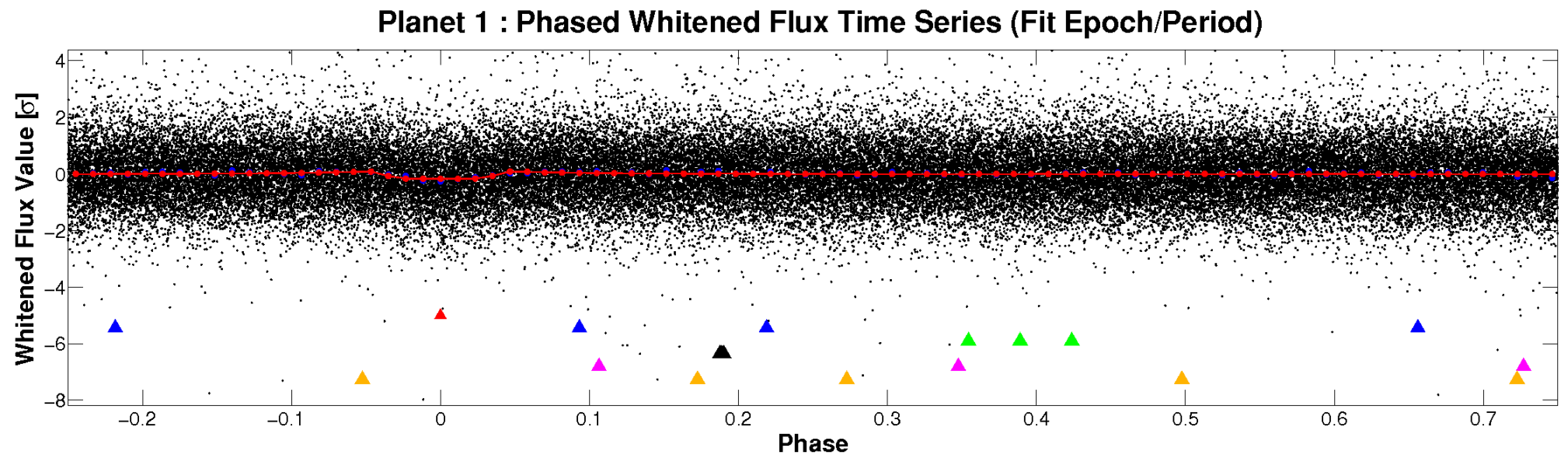
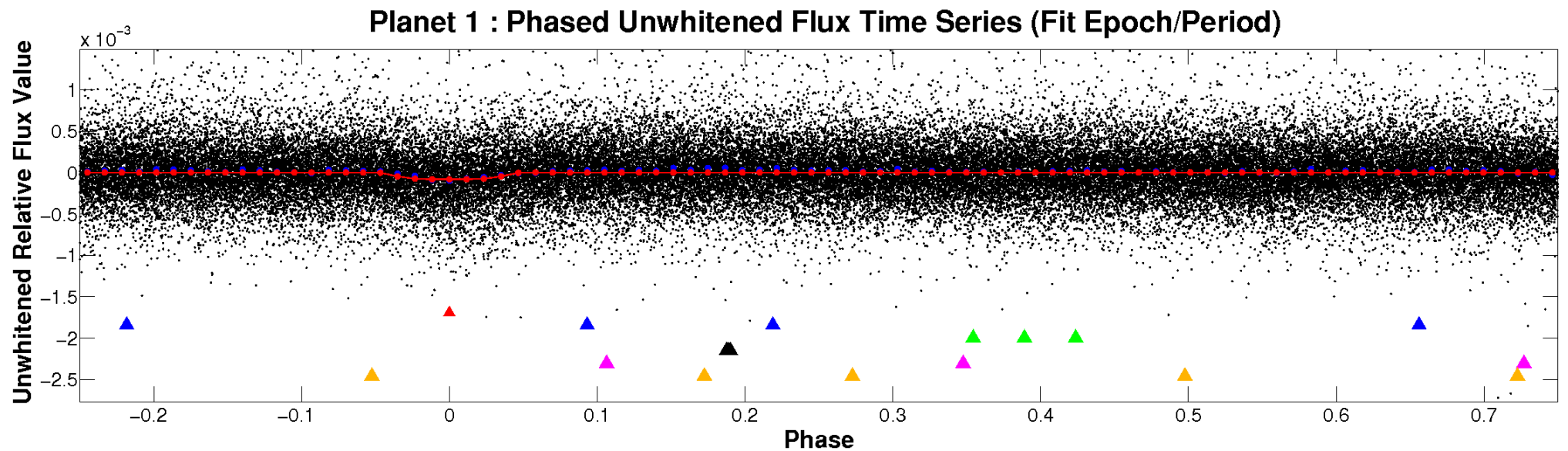


ALT Odd/Even

TCE 006471229-01

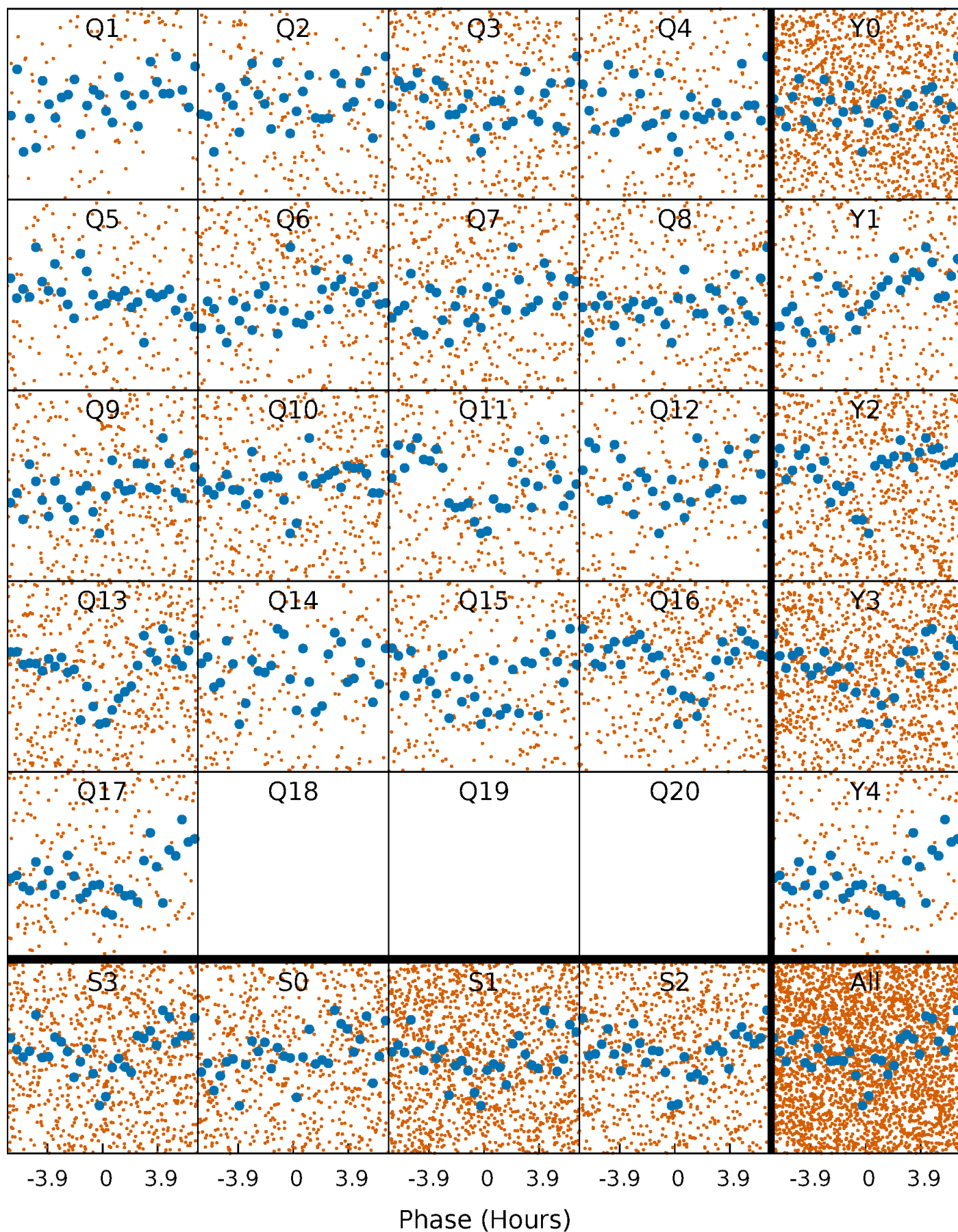


Non-Whitened Vs. Whitened Light Curve



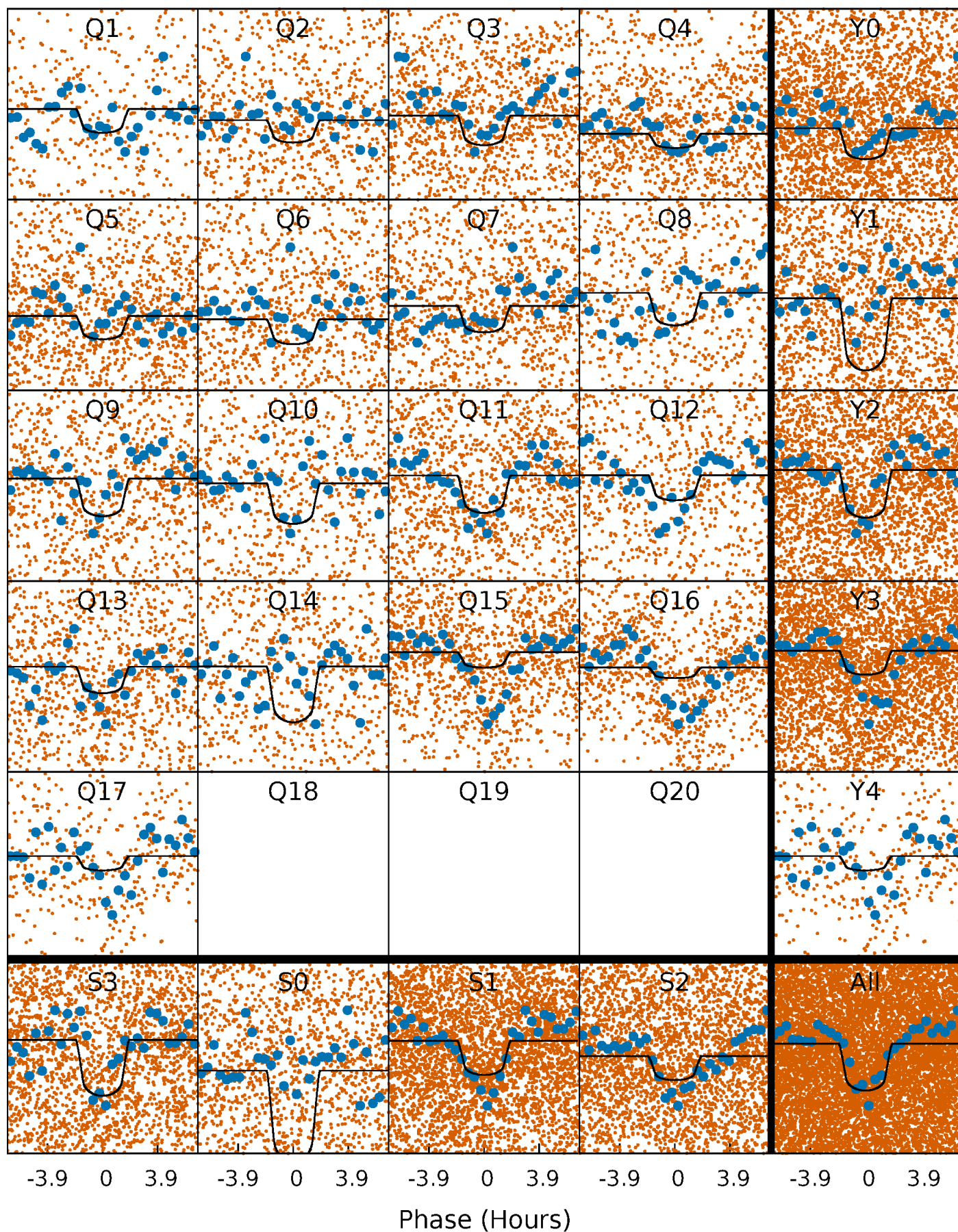
PDC Quarter-Phased Transit Curves

TCE 006471229-01 P= 1.752431 Days $T_0=132.800709$ (BKJD)



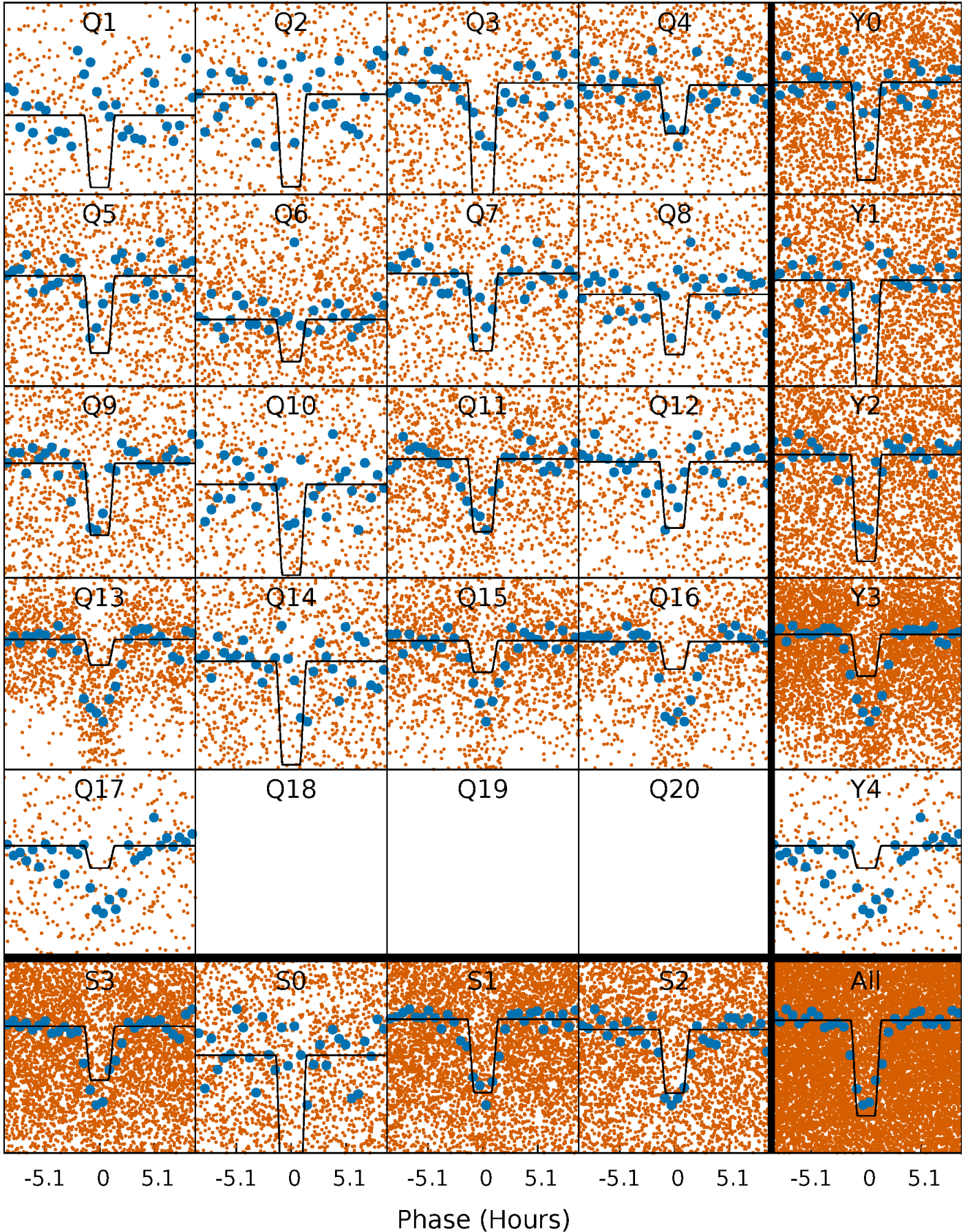
DV Quarter-Phased Transit Curves

TCE 006471229-01 P= 1.752431 Days $T_0=132.800709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

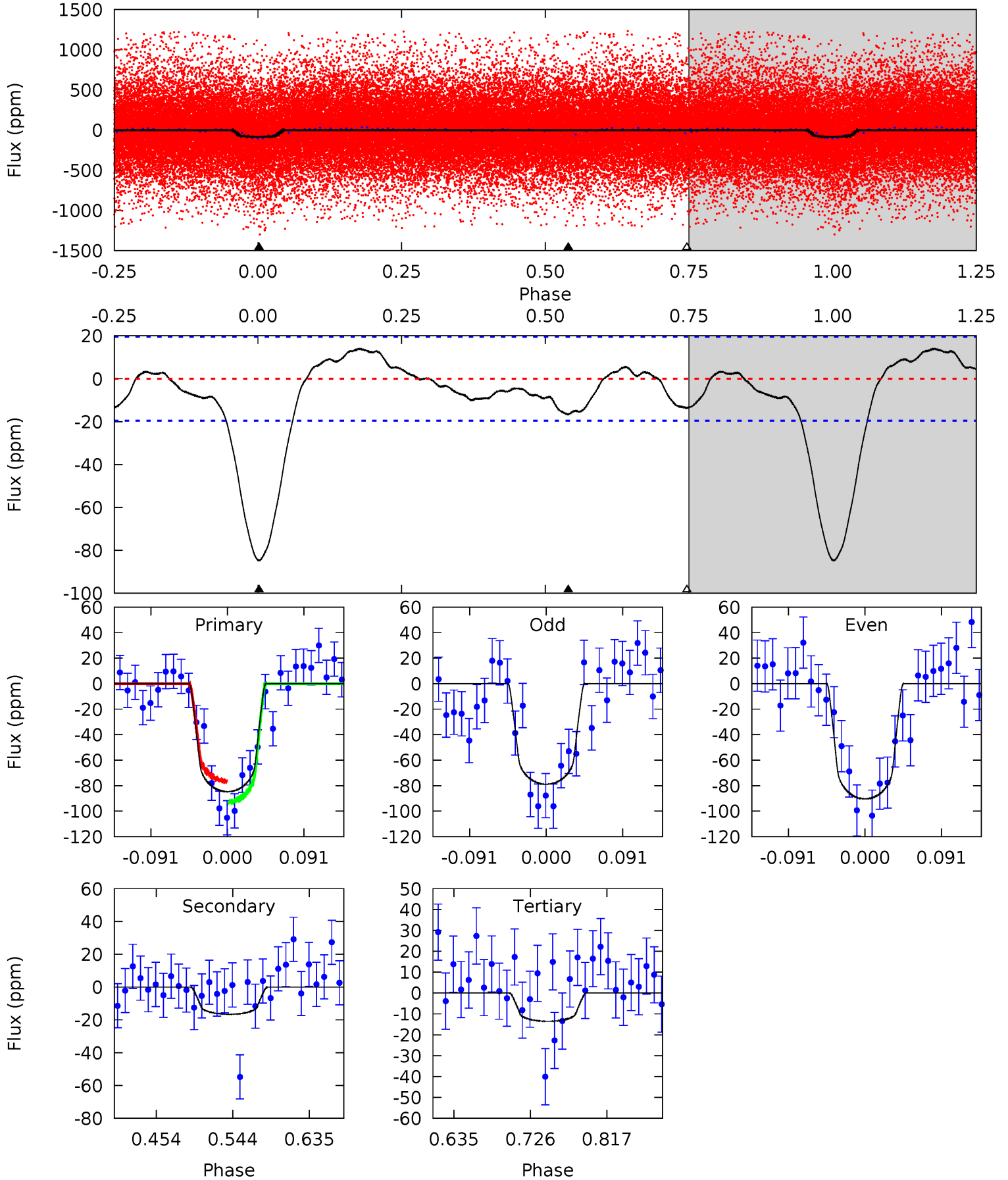
TCE 006471229-01 P= 1.752488 Days $T_0=132.771582$ (BKJD)



DV Model-Shift Uniqueness Test

006471229-01, P = 1.752431 Days, E = 131.048278 Days

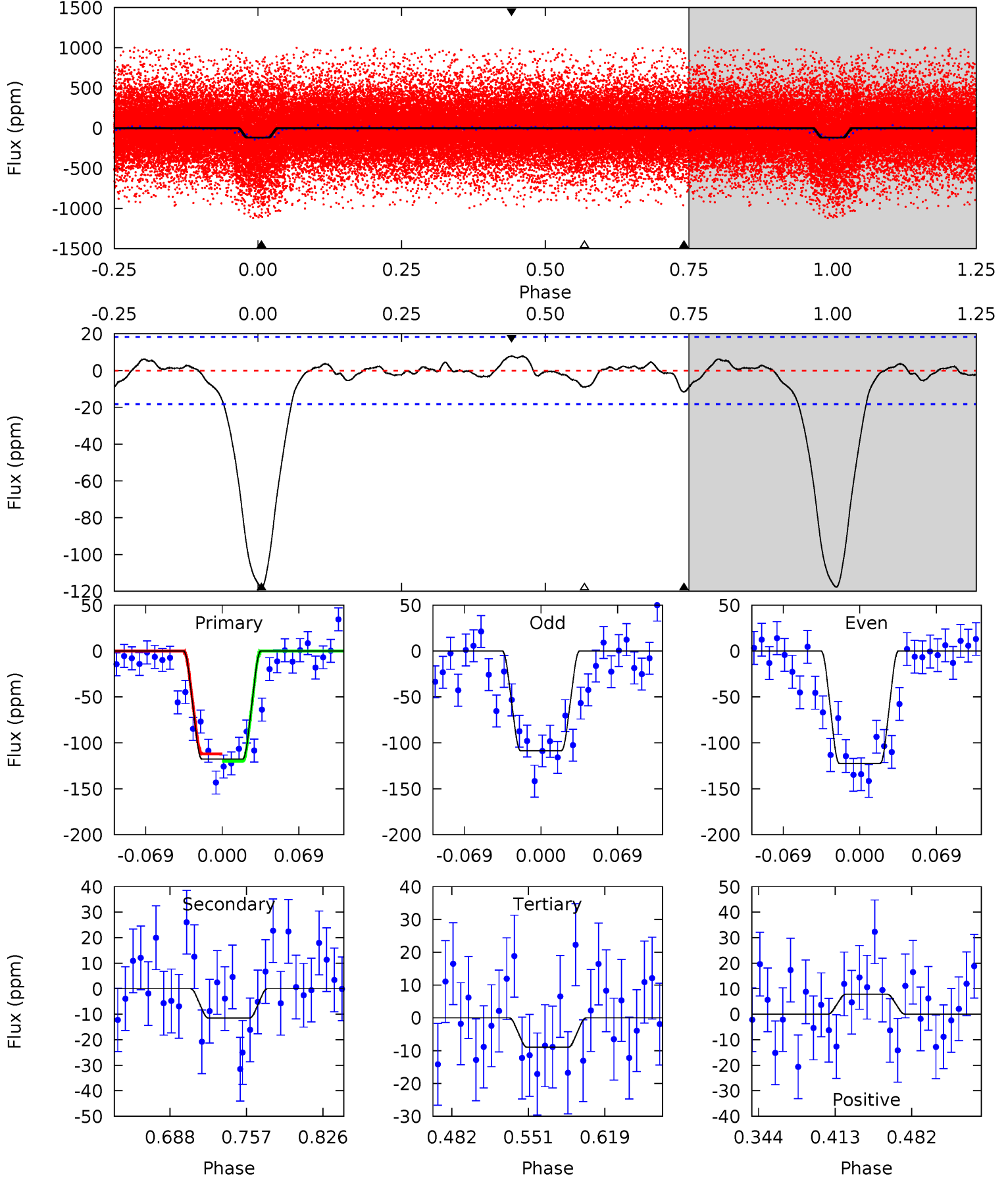
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	3.89	3.18	0	4.59	1.69	1.75	16.7	19.9	0.71	3.89	1.36	0.86	0.14	1.94



Alt Model-Shift Uniqueness Test

006471229-01, P = 1.752488 Days, E = 131.019094 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	2.92	2.28	2.00	4.64	1.82	0.95	27.6	27.9	0.65	0.93	1.77	1.19	0.06	1.01



Stellar Parameters For KIC 006471229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5952^{+160}_{-160}	$4.554^{+0.033}_{-0.176}$	$-0.360^{+0.300}_{-0.300}$	$0.844^{+0.226}_{-0.071}$	$0.932^{+0.098}_{-0.109}$	$2.183^{+0.388}_{-1.055}$
	+3%/-3%	+1%/-4%	+83%/-83%	+27%/-8%	+11%/-12%	+18%/-48%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006471229-01 / KOI 6719.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 4	$0.93^{+0.32}_{-0.30}$	2080^{+116}_{-90}	4109^{+691}_{-445}	$7.699^{+9.470}_{-3.632}$
Alt.	-12 ± 4	$1.14^{+0.33}_{-0.31}$	2072^{+129}_{-92}	3578^{+516}_{-364}	$3.700^{+3.874}_{-1.819}$

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

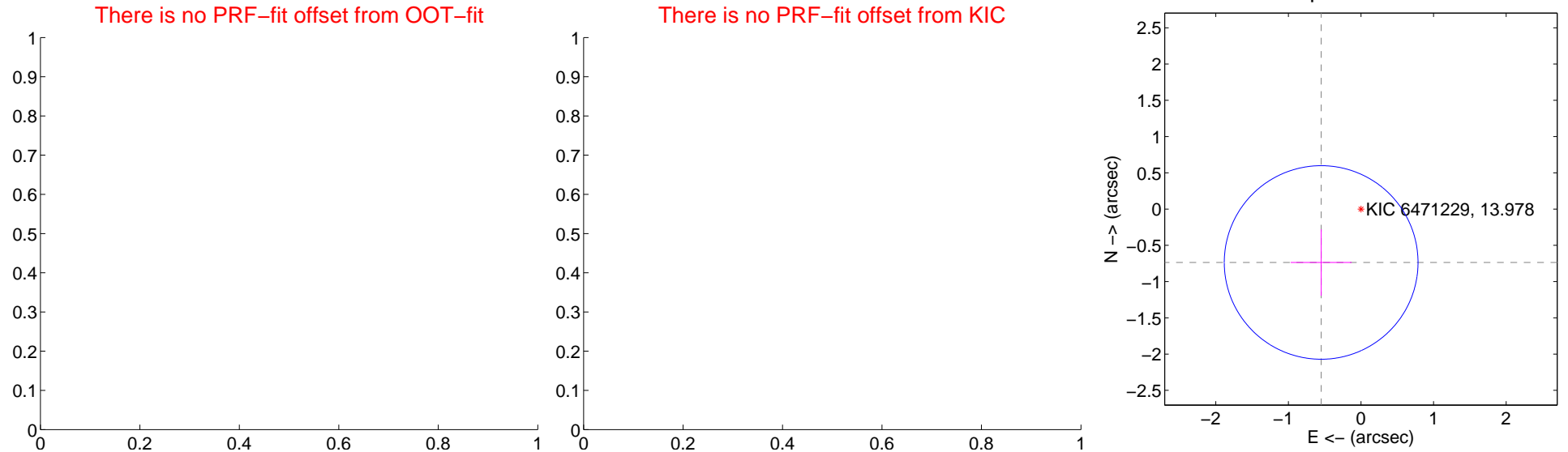
DV Centroid Data

Supplemental centroid analysis for 006471229-01. Kepler magnitude: 13.98. Transit SNR 12.40

There are 0 quarters with good PRF difference image offsets

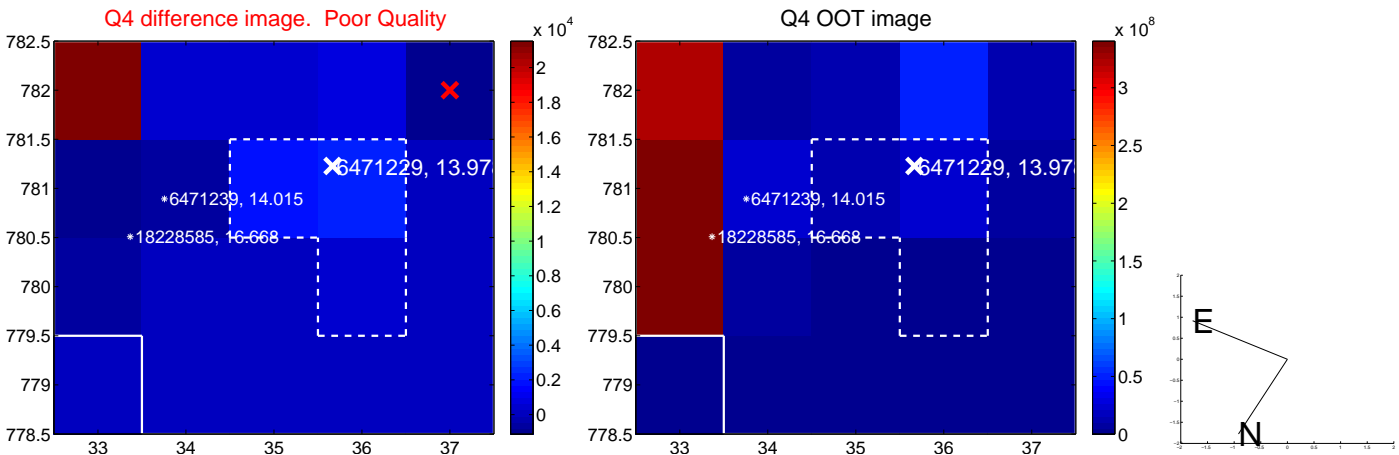
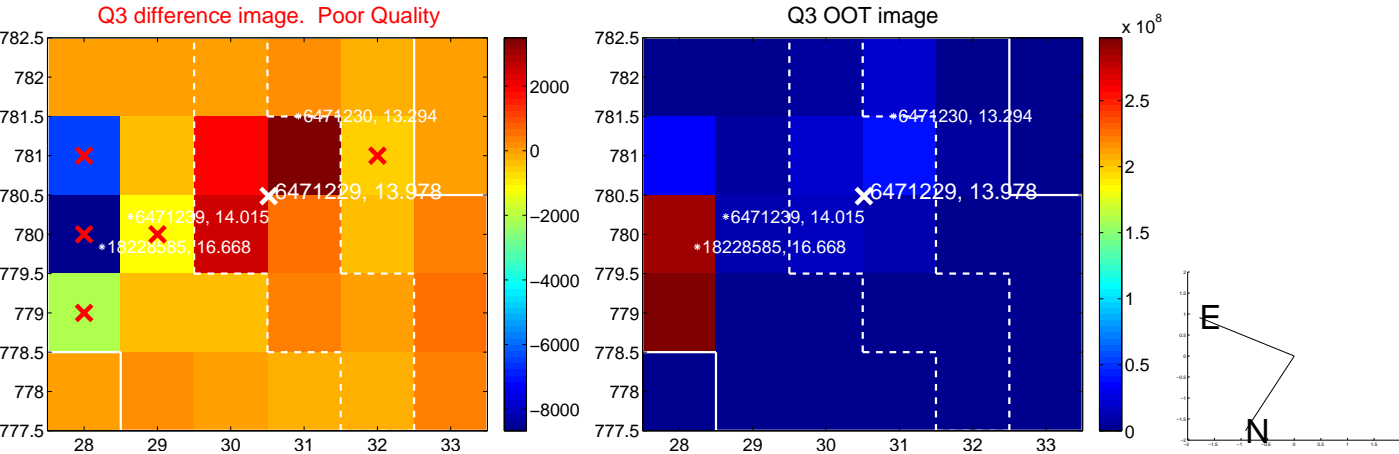
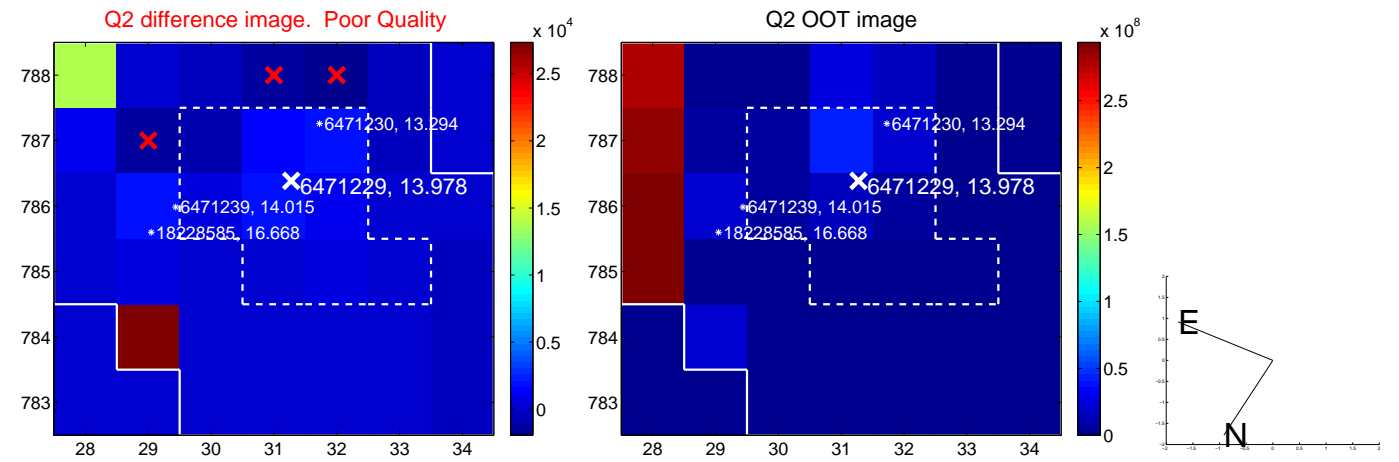
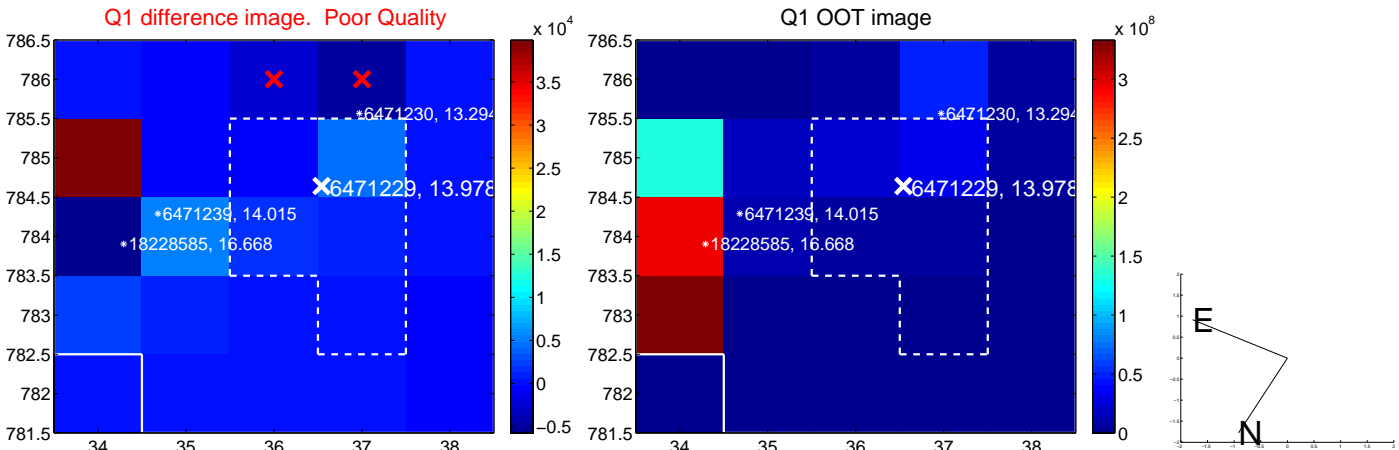
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	0.92 ± 0.44	2.06	0.55 ± 0.42	-0.74 ± 0.46

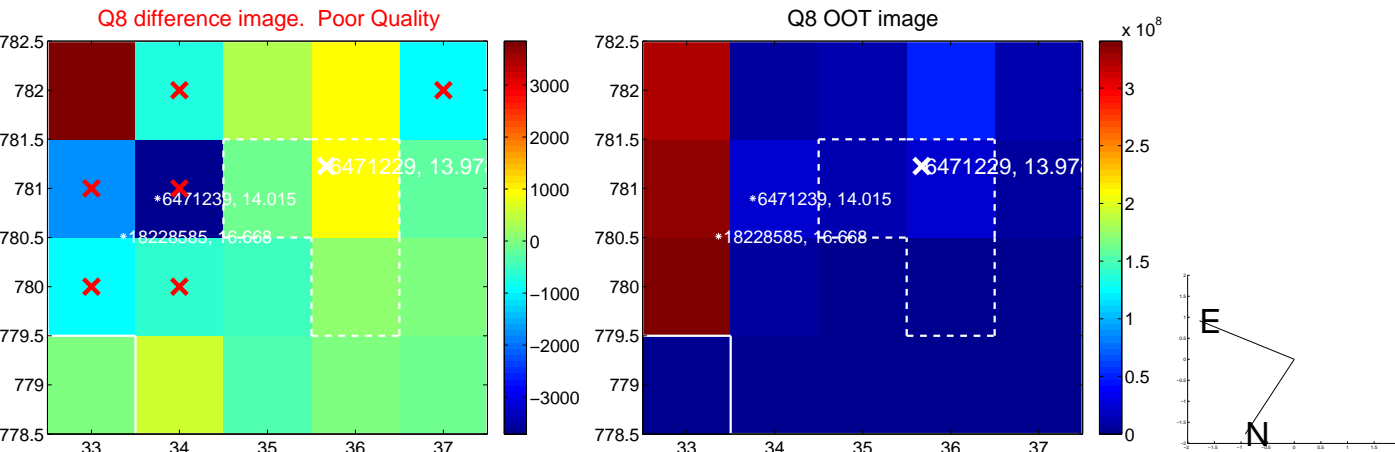
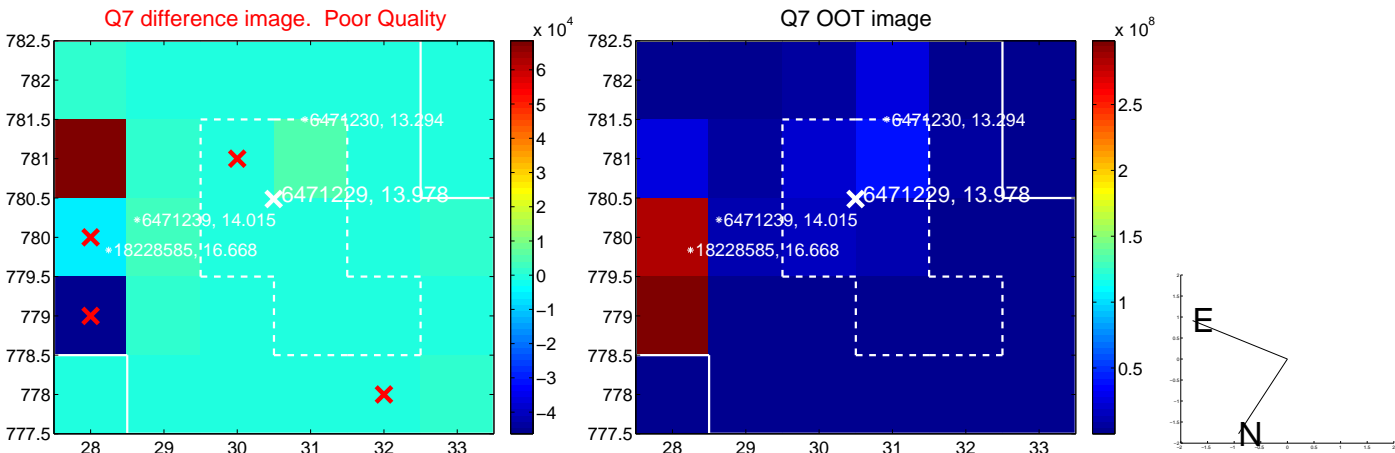
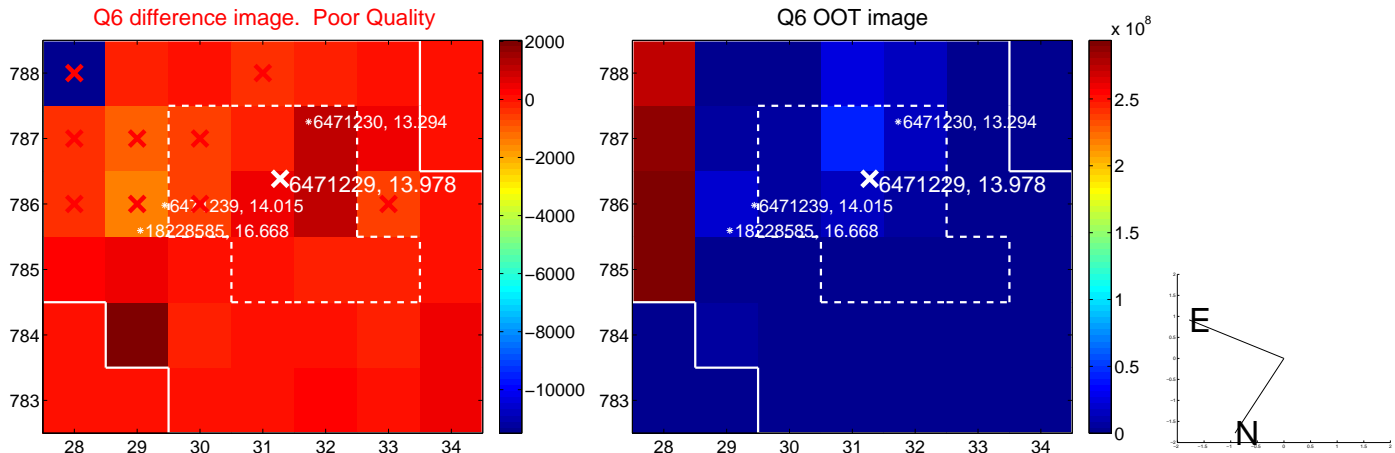
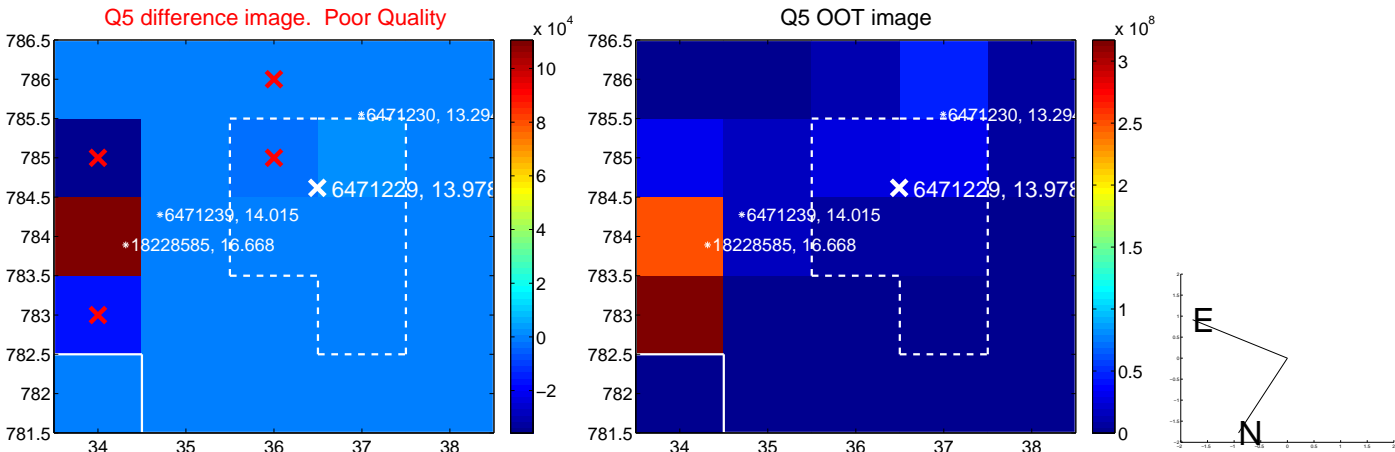


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

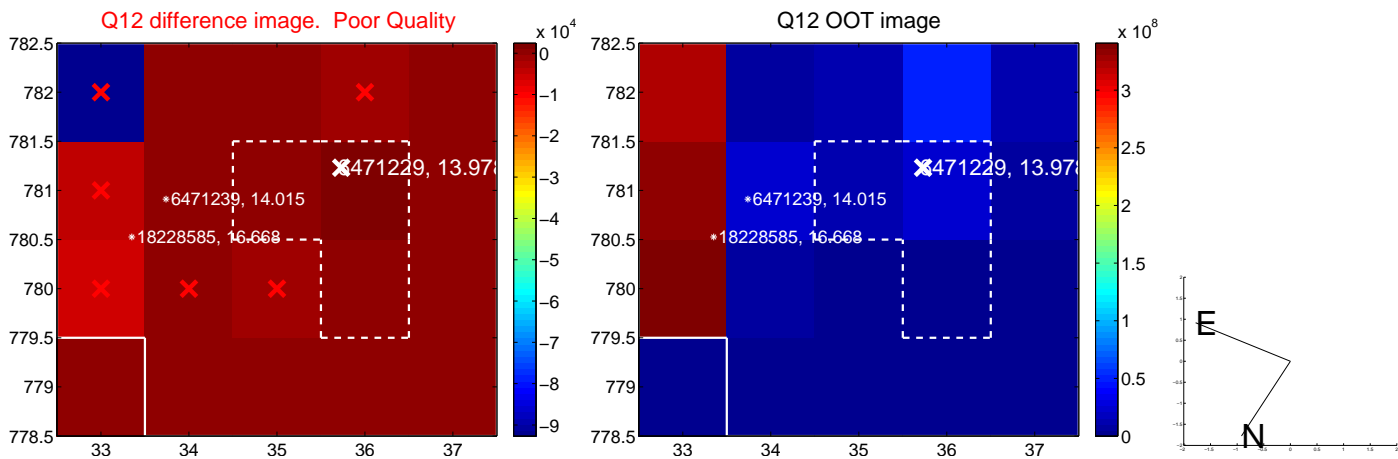
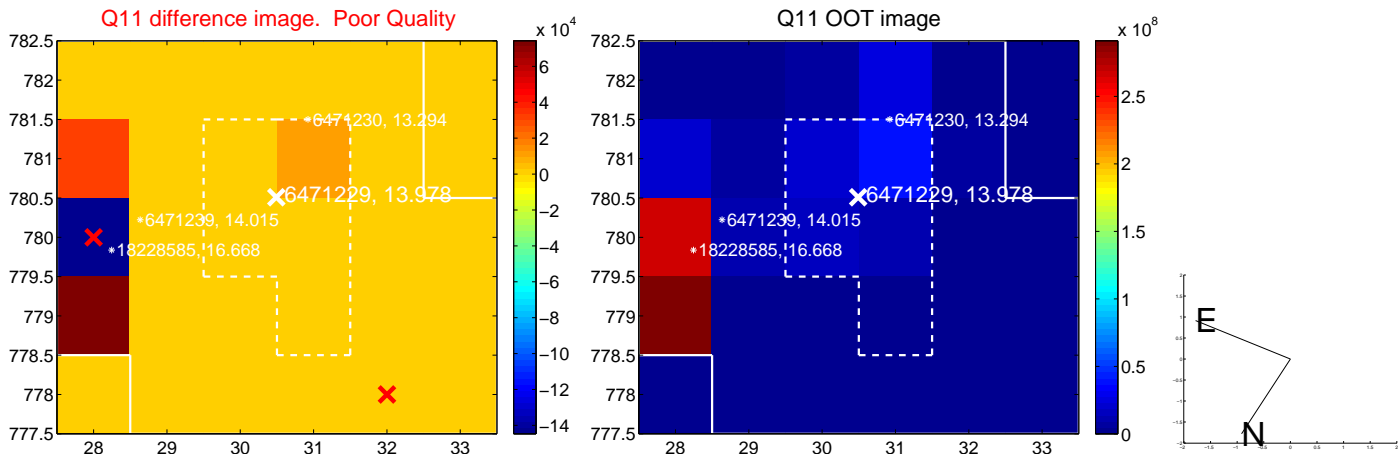
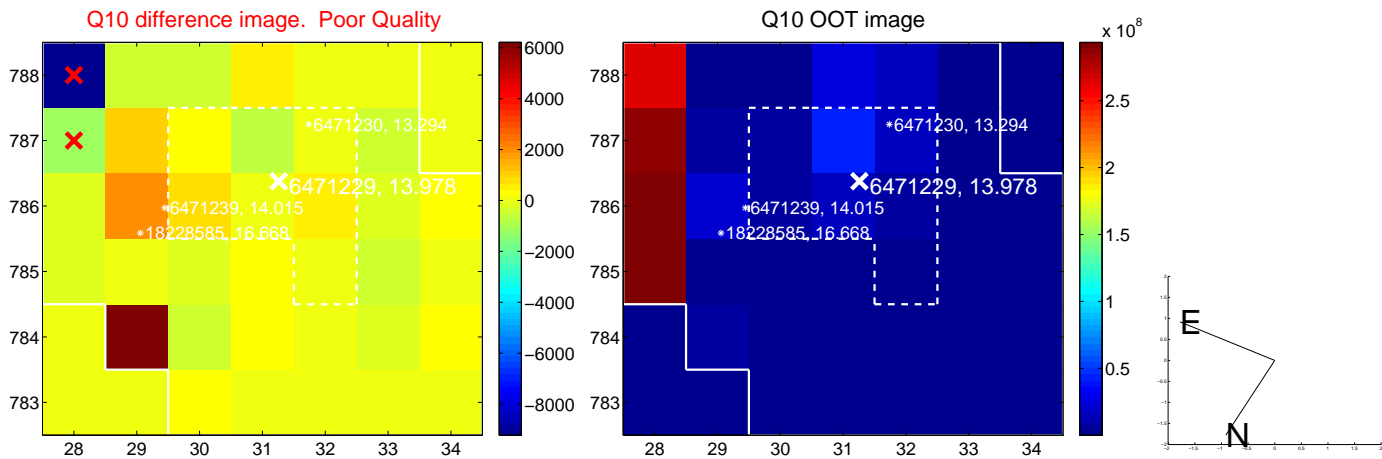
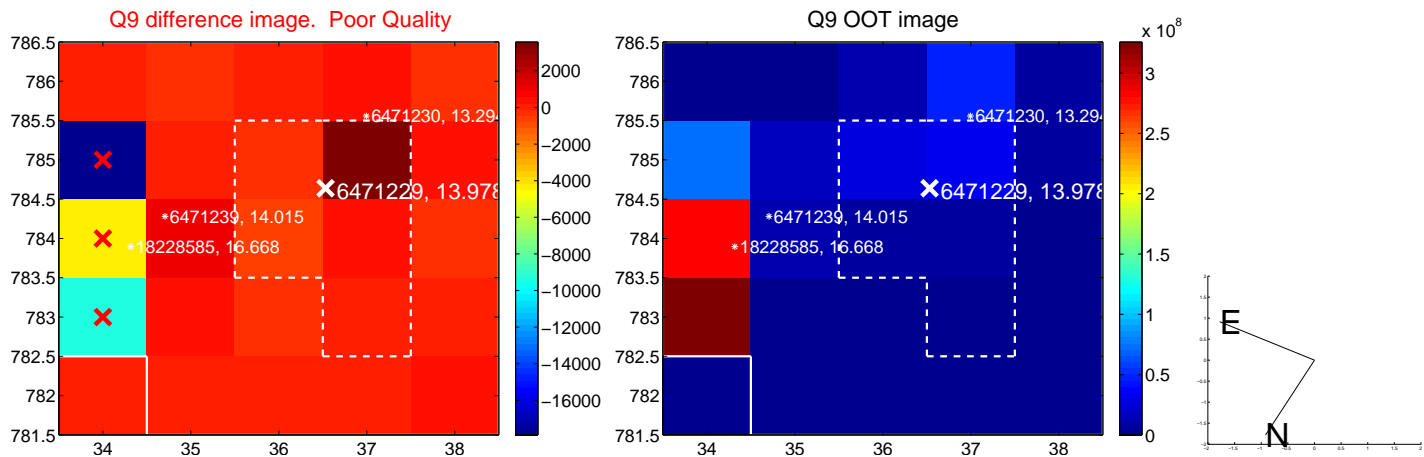
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



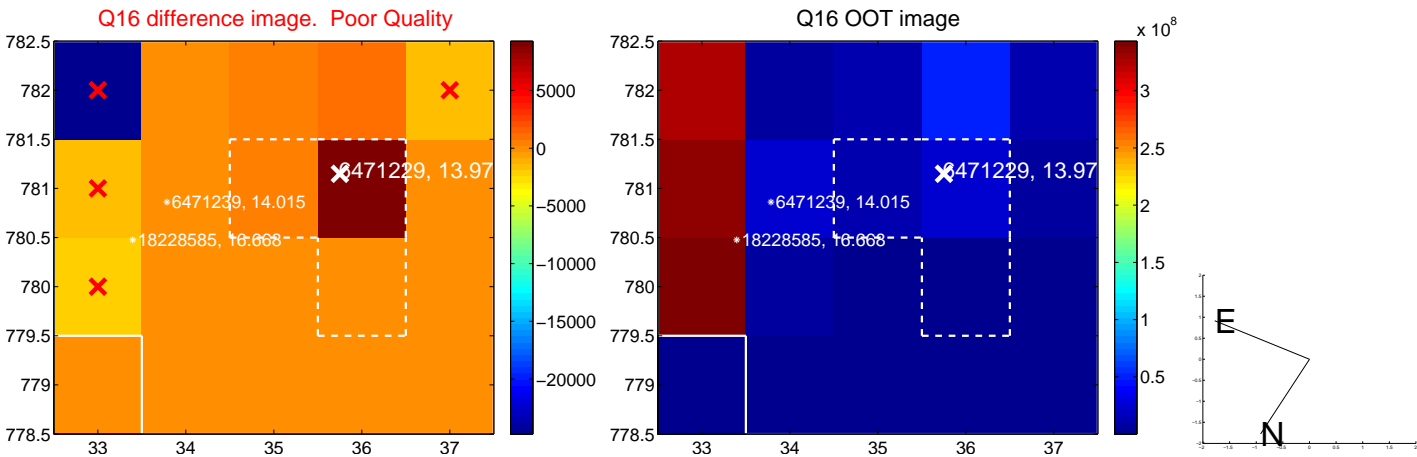
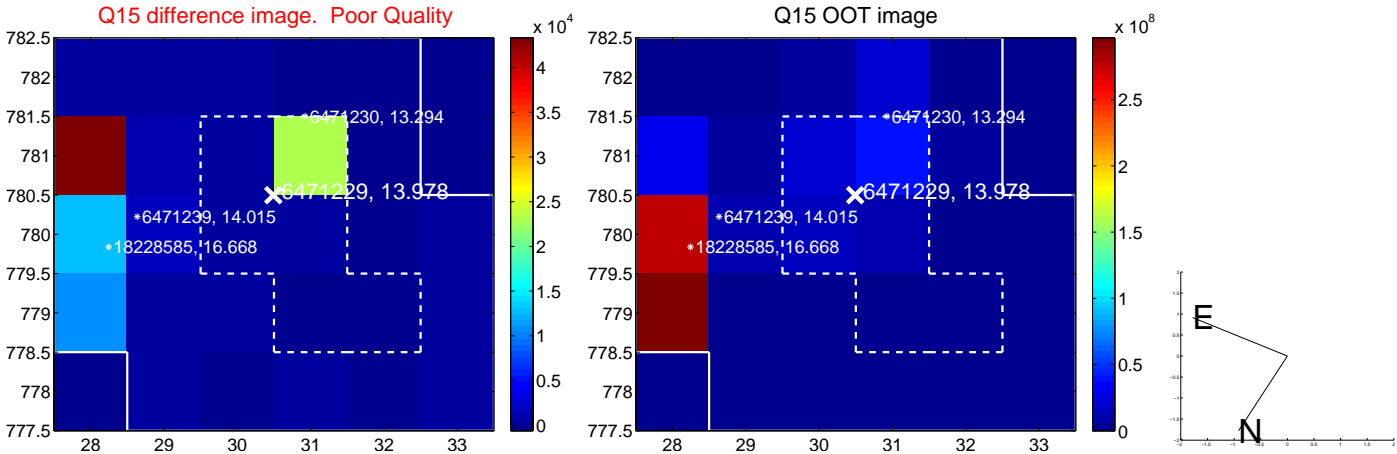
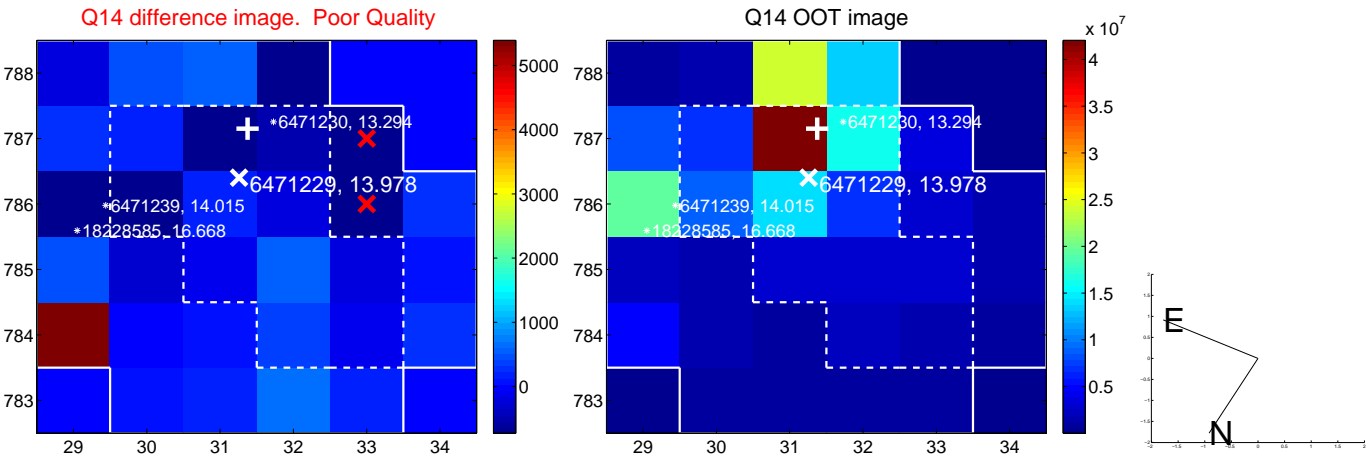
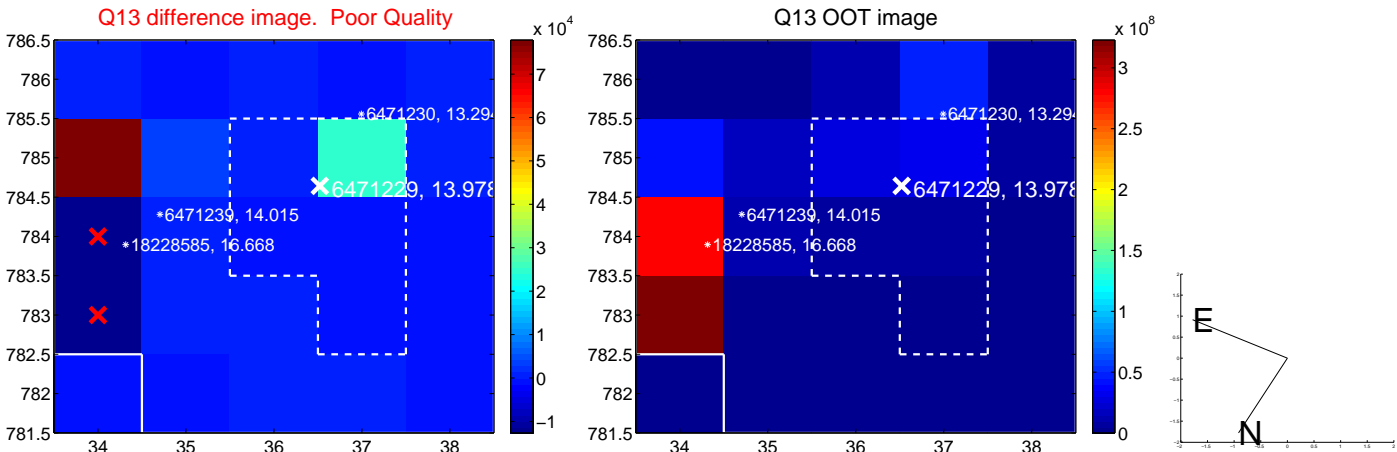
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



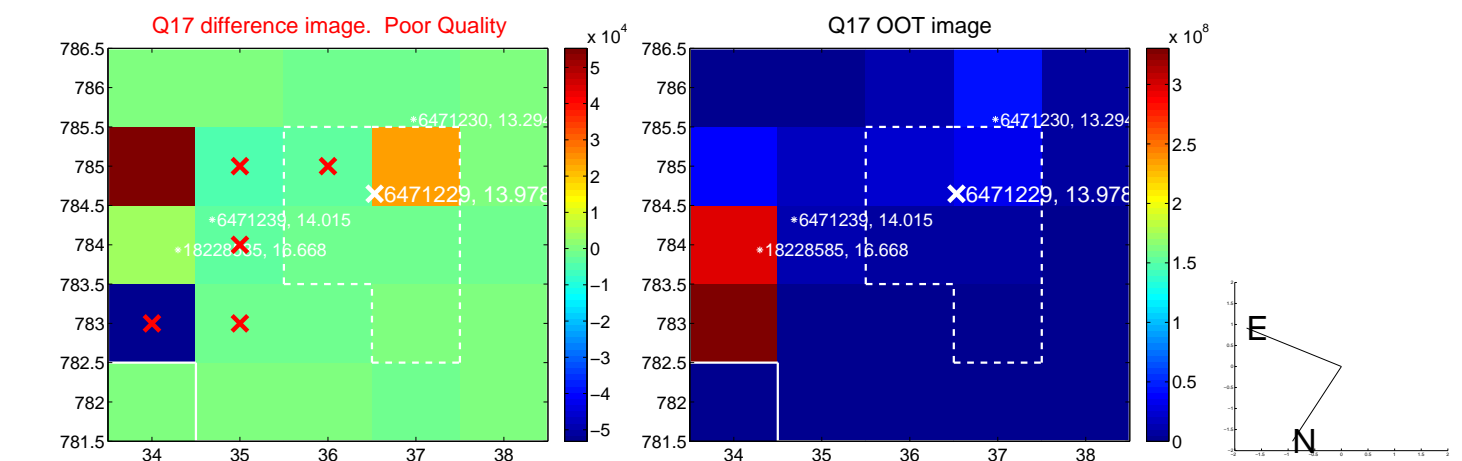
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



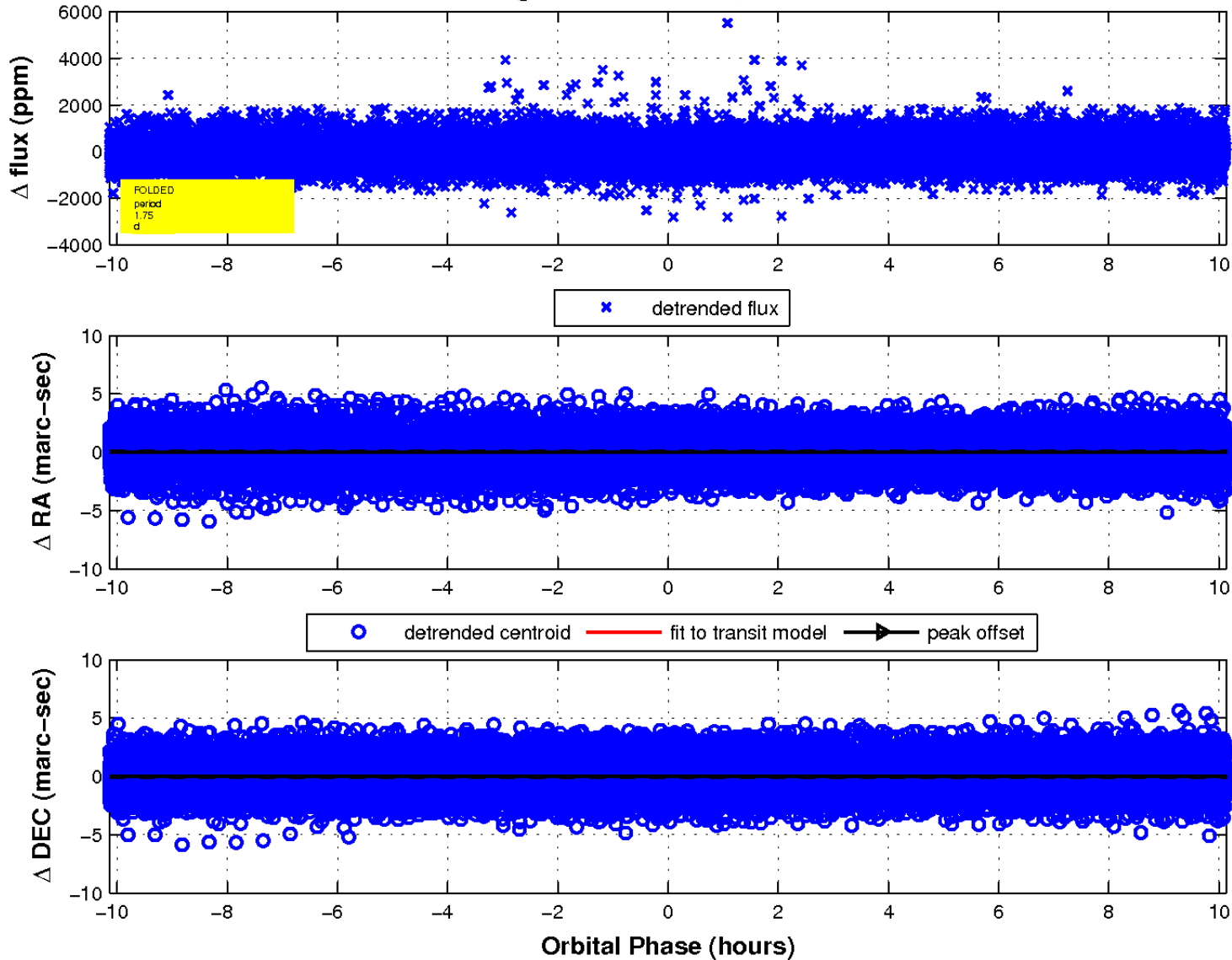
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

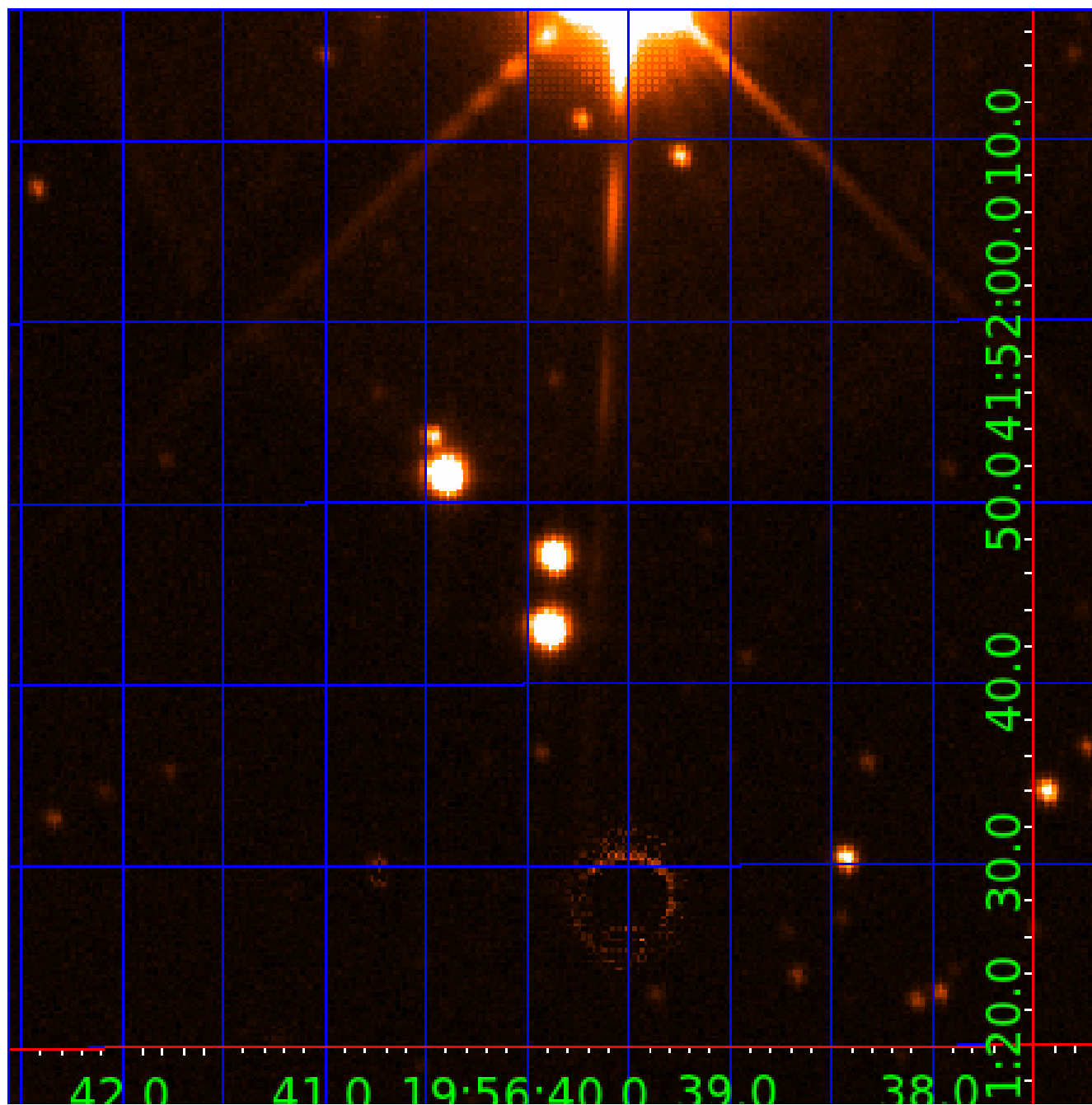


fluxWeightedCentroids, Planet 1 of 6



UKIRT Image

Declination



KIC 006471229

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})
006471229-01	OBS	6719.01	1.752431	132.800709	82.7	3.379	13.1	12.4	0.84	5952	0.90	1038.13
006471229-02	OBS	No	381.043705	425.074202	830.1	9.875	12.8	4.7	0.84	5952	2.58	0.79
006471229-03	OBS	No	501.134573	175.601699	330.4	0.577	9.9	1.3	0.84	5952	1.60	0.55
006471229-04	OBS	No	501.197594	175.187760	1030.1	5.957	10.1	6.3	0.84	5952	2.81	0.55
006471229-06	OBS	No	321.089157	266.463399	719.2	4.363	10.6	7.0	0.84	5952	2.37	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471229-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH
006471229-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006471229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006471229-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006471229-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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 006471229-02

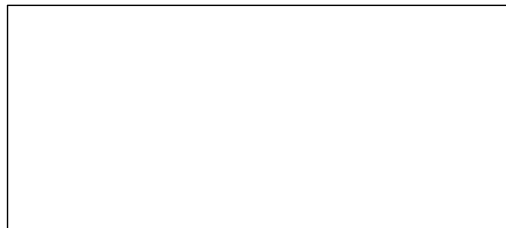
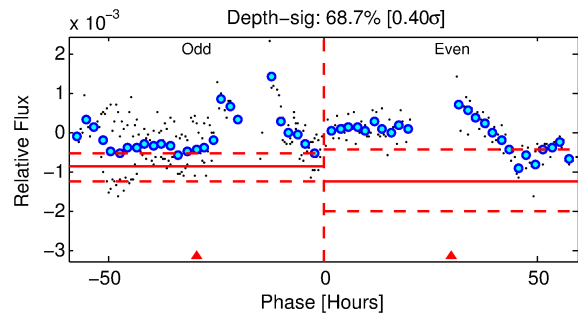
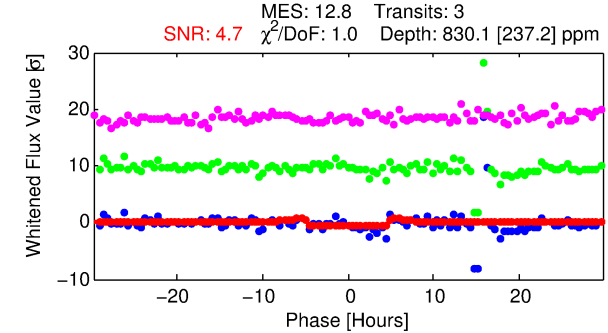
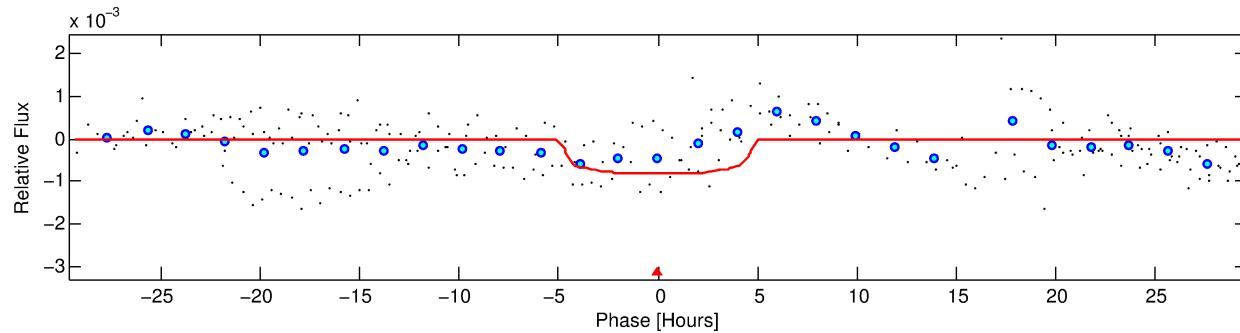
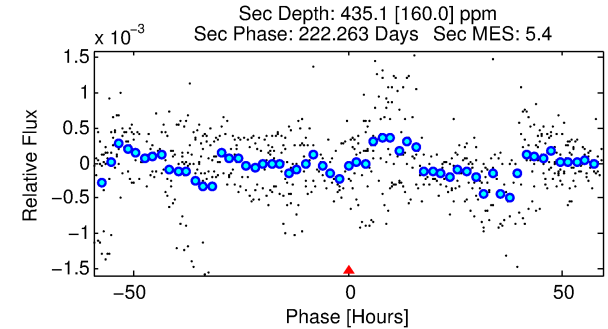
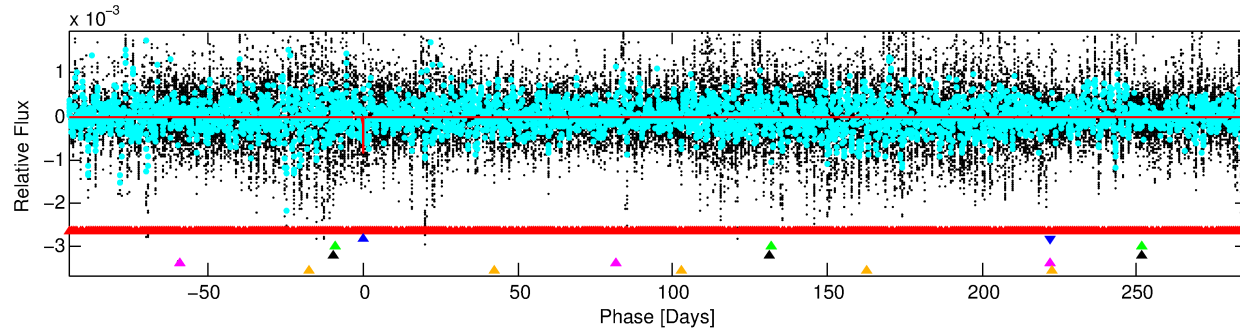
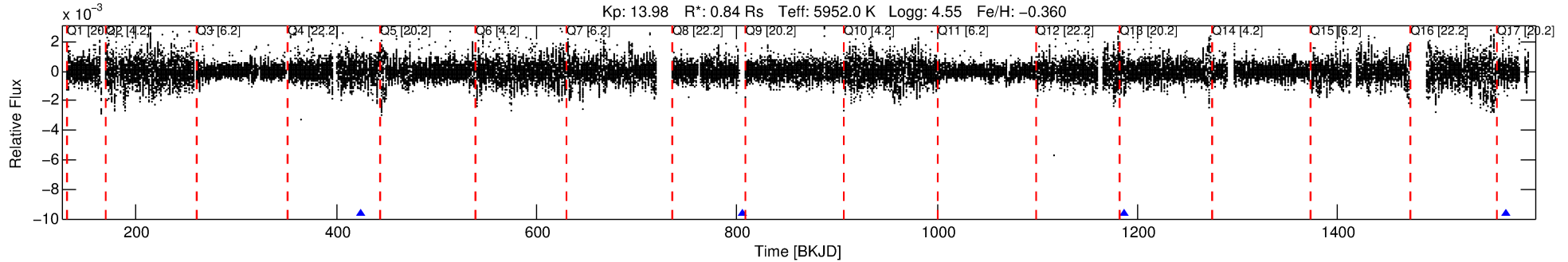
No Significant Match Found

DV One-Page Summary

KIC: 6471229 Candidate: 2 of 6 Period: 381.044 d

KOI: K06719 Corr: No Ephemeris Match

Kp: 13.98 R*: 0.84 Rs Teff: 5952.0 K Logg: 4.55 Fe/H: -0.360



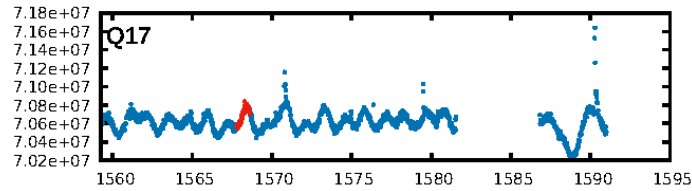
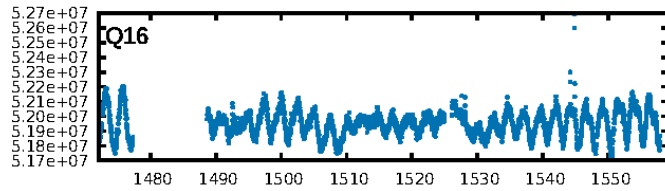
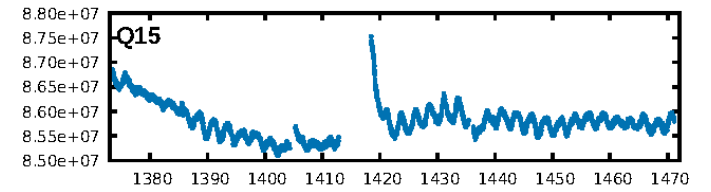
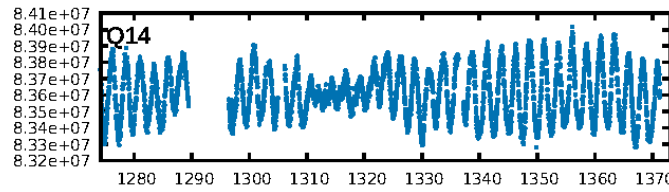
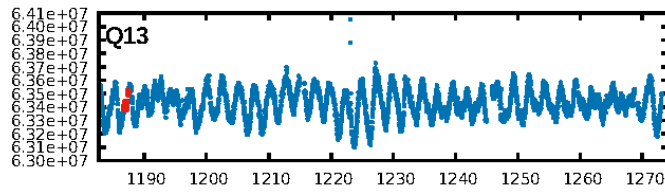
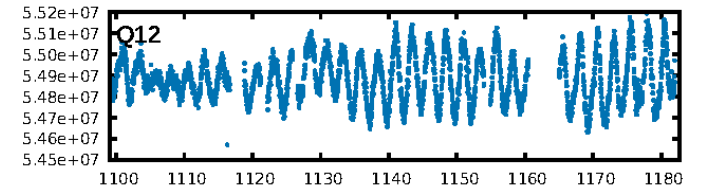
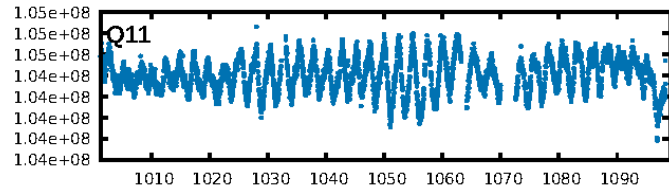
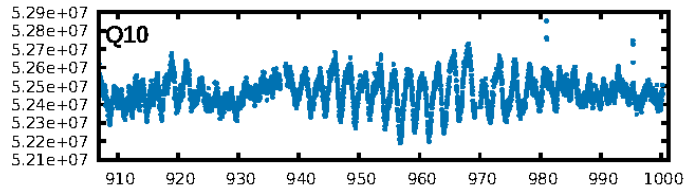
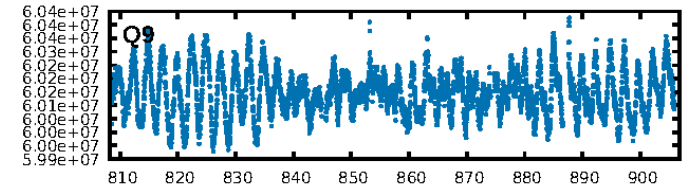
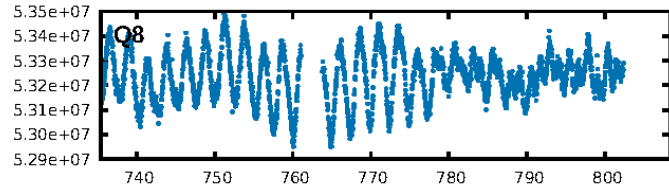
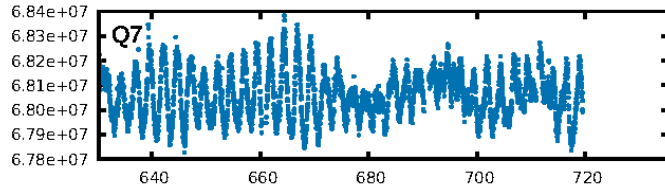
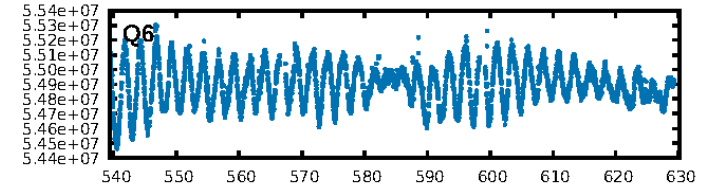
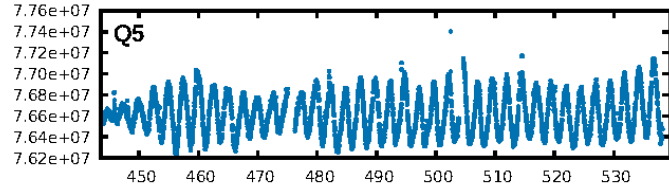
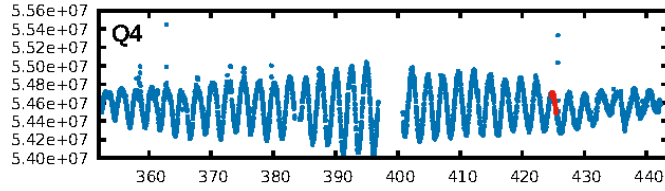
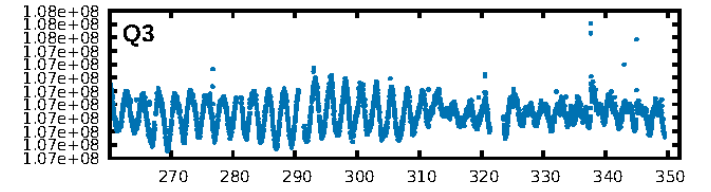
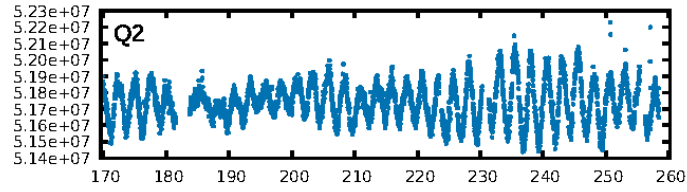
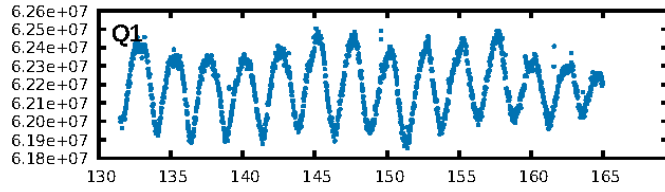
DV Fit Results:

Period = 381.04370 [0.01388] d
Epoch = 425.0742 [0.0327] BKJD
Rp/R* = 0.0280 [0.0224]
a/R* = 230.50 [875.31]
b = 0.67 [3.19]
Seff = 0.79 [0.27]
Teq = 241 [21] K
Rp = 2.58 [2.18] Re
a = 1.0044 [0.2249] AU
Ag = 36370.90 [61017.49] [0.60σ]
Teffp = 5139 [2119] K [2.31σ]

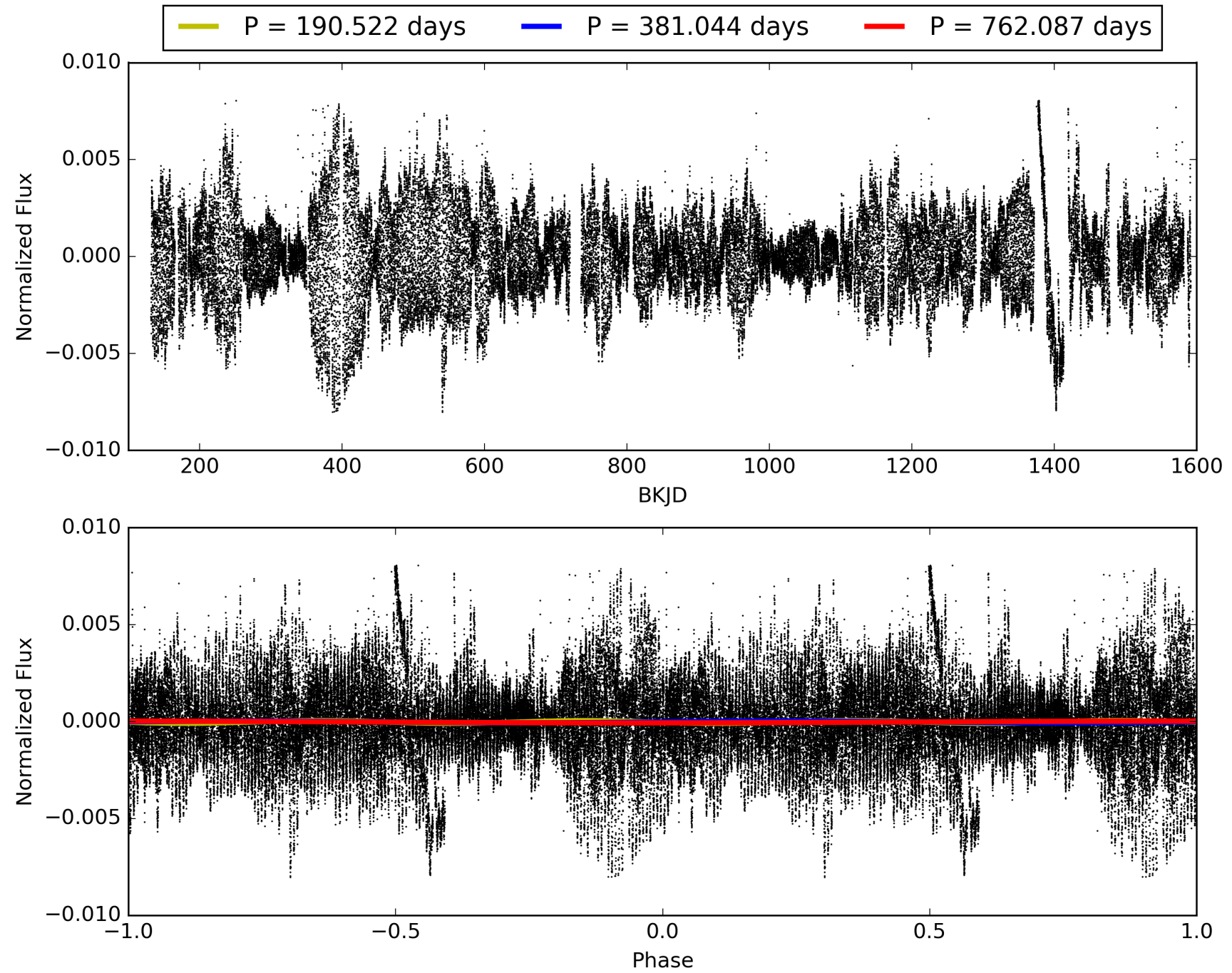
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [133.28σ]
LongPeriod-sig: 100.0% [291.38σ]
ModelChiSquare2-sig: 2.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.76e-17
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.7309
Centroid-sig: 59.2%
Centroid-so: 1.424 arcsec [1.95σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/2]

TCE 006471229-02, PDC Light Curves

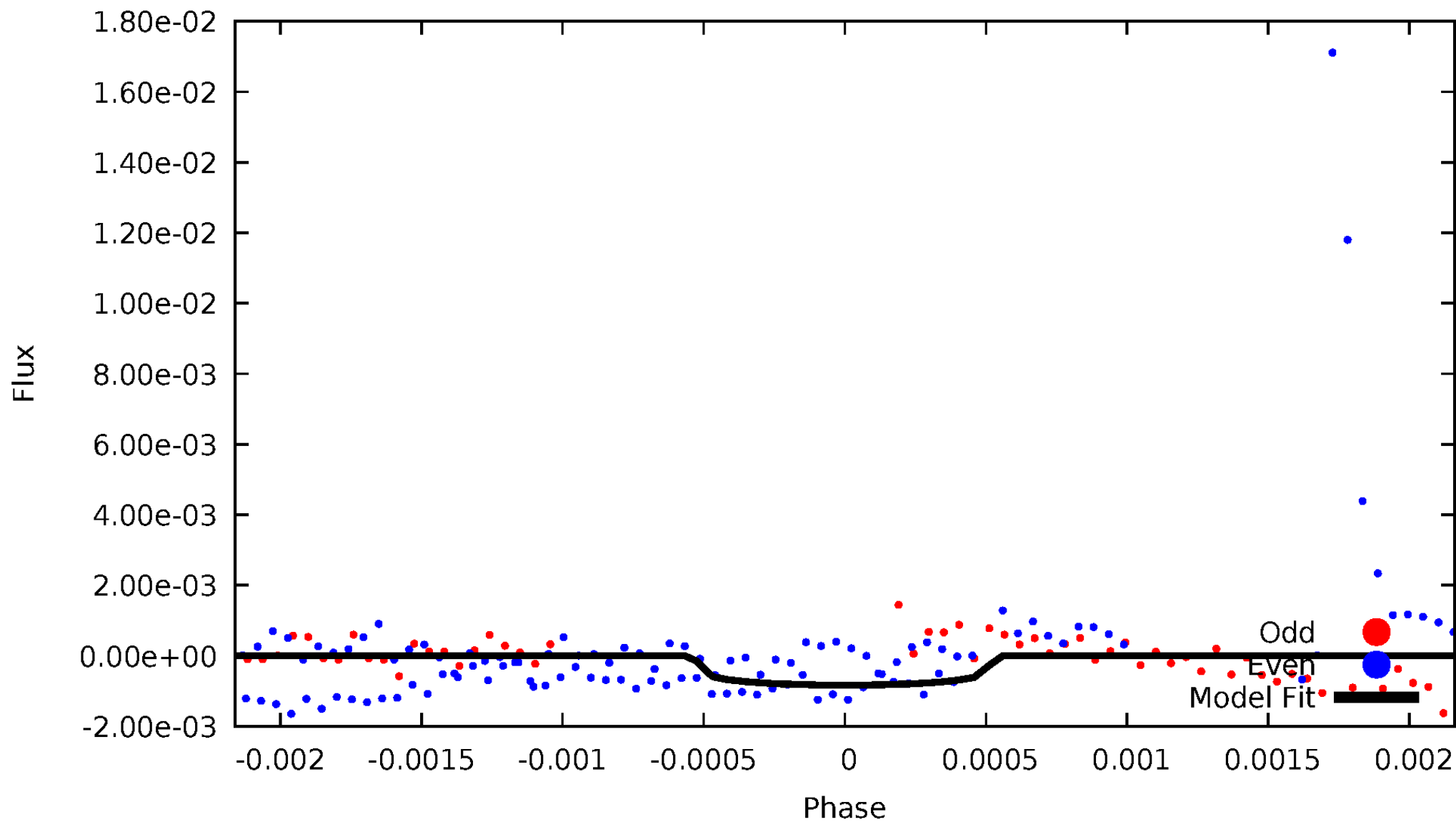


TCE 006471229-02



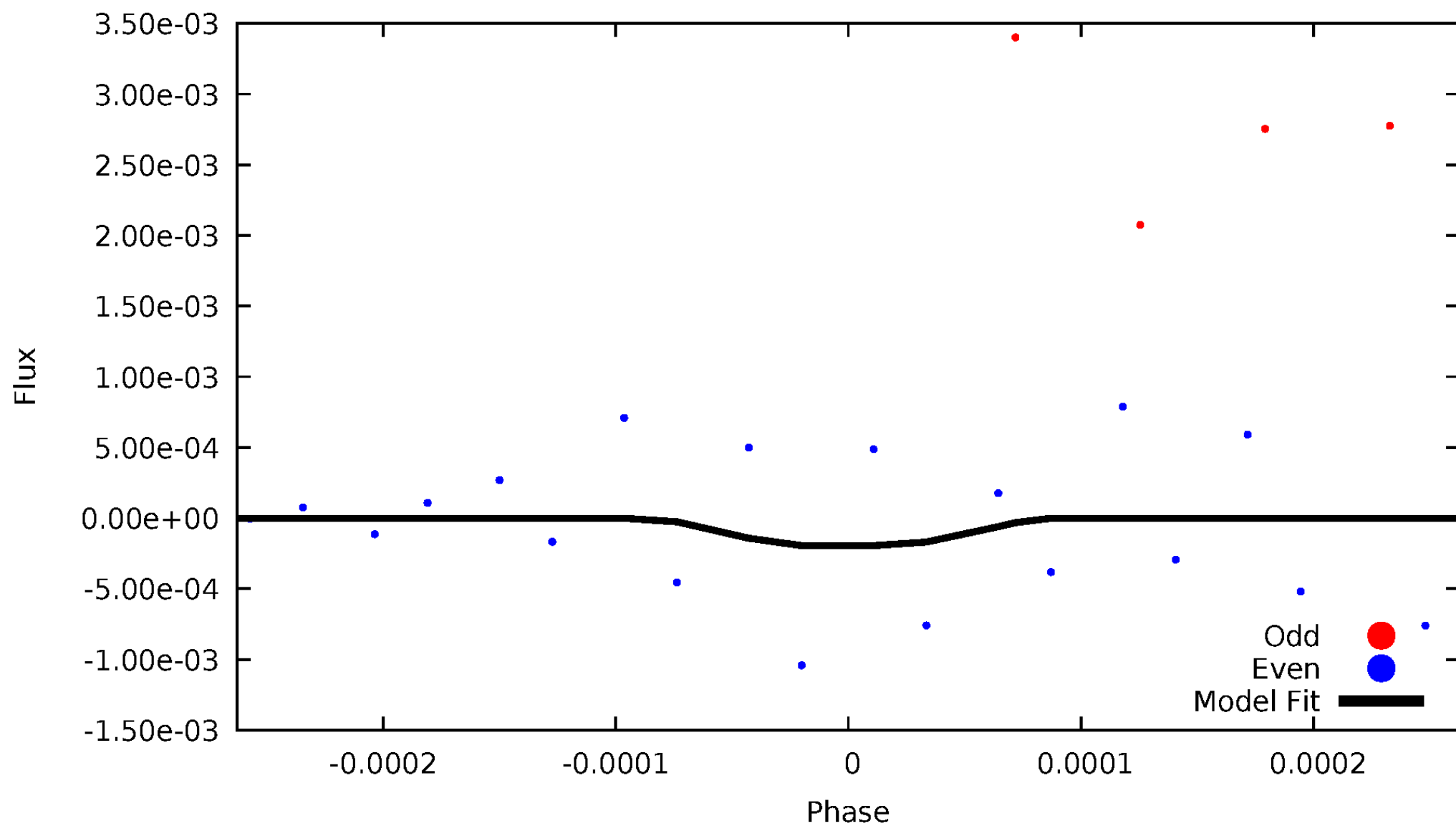
DV Odd/Even

TCE 006471229-02



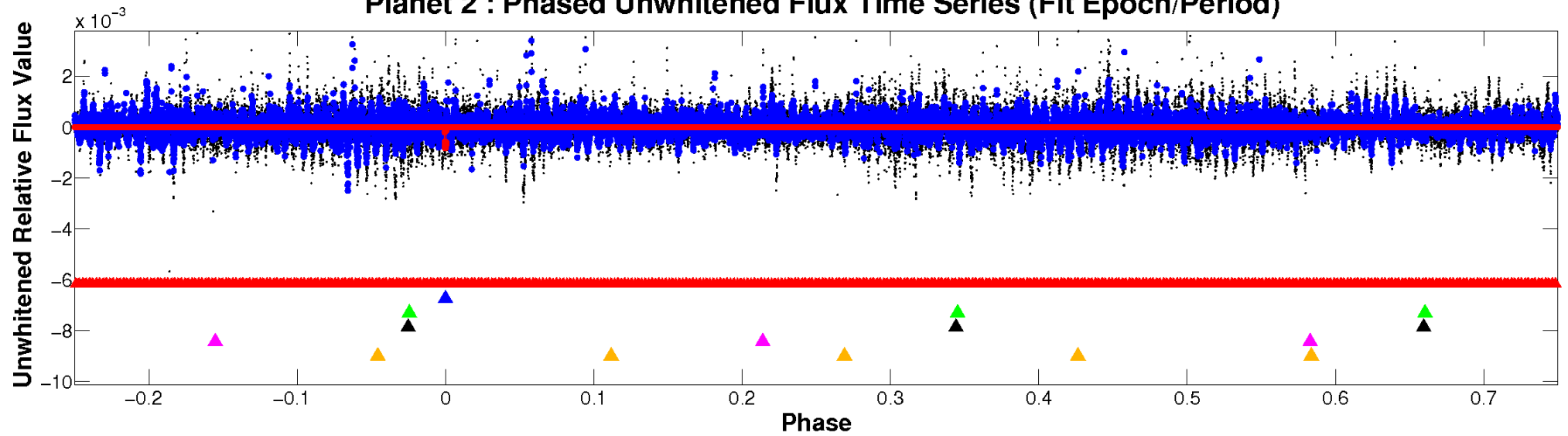
ALT Odd/Even

TCE 006471229-02

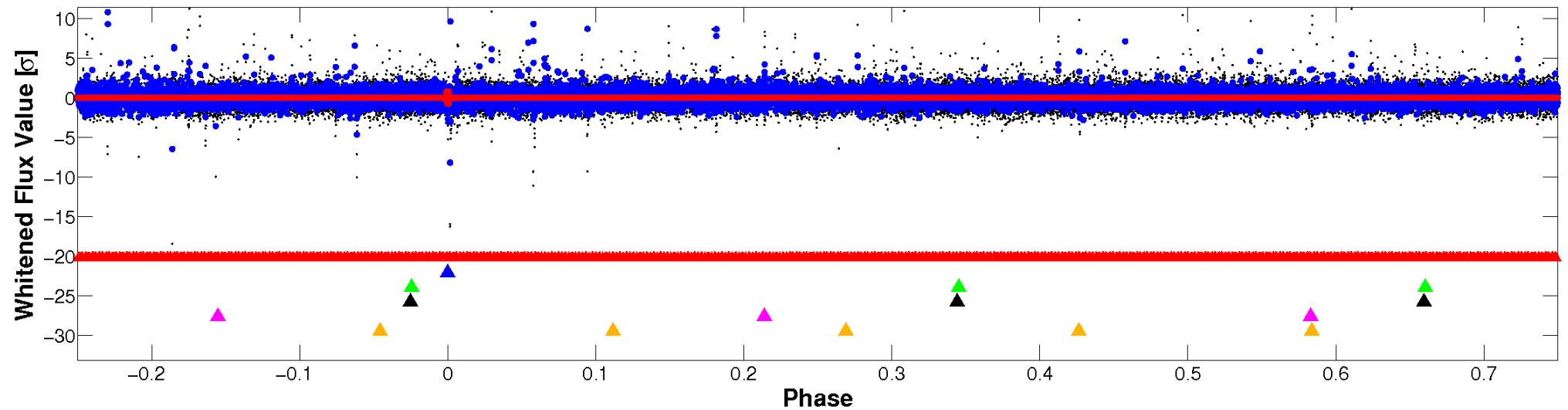


Non-Whitened Vs. Whitened Light Curve

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

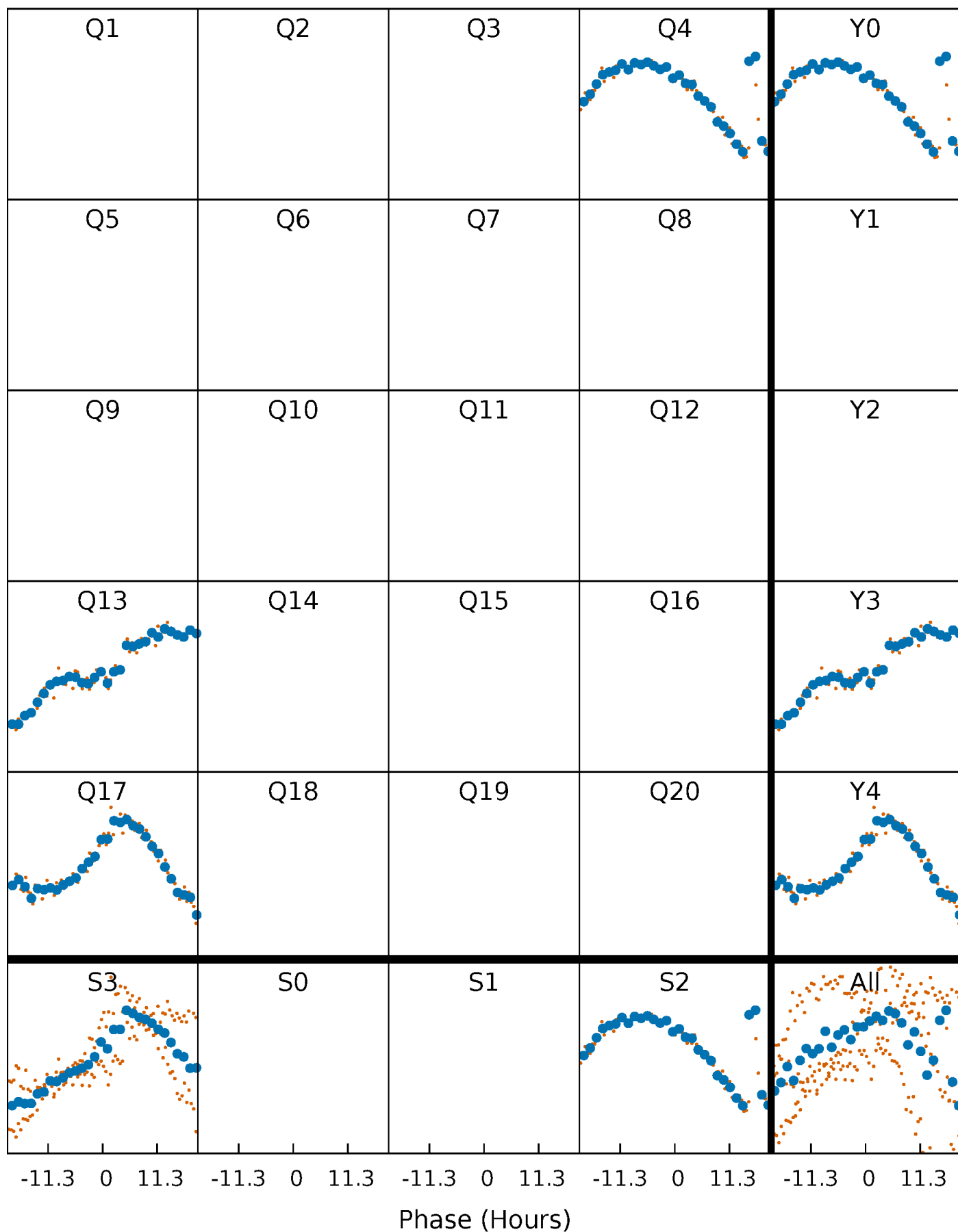


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



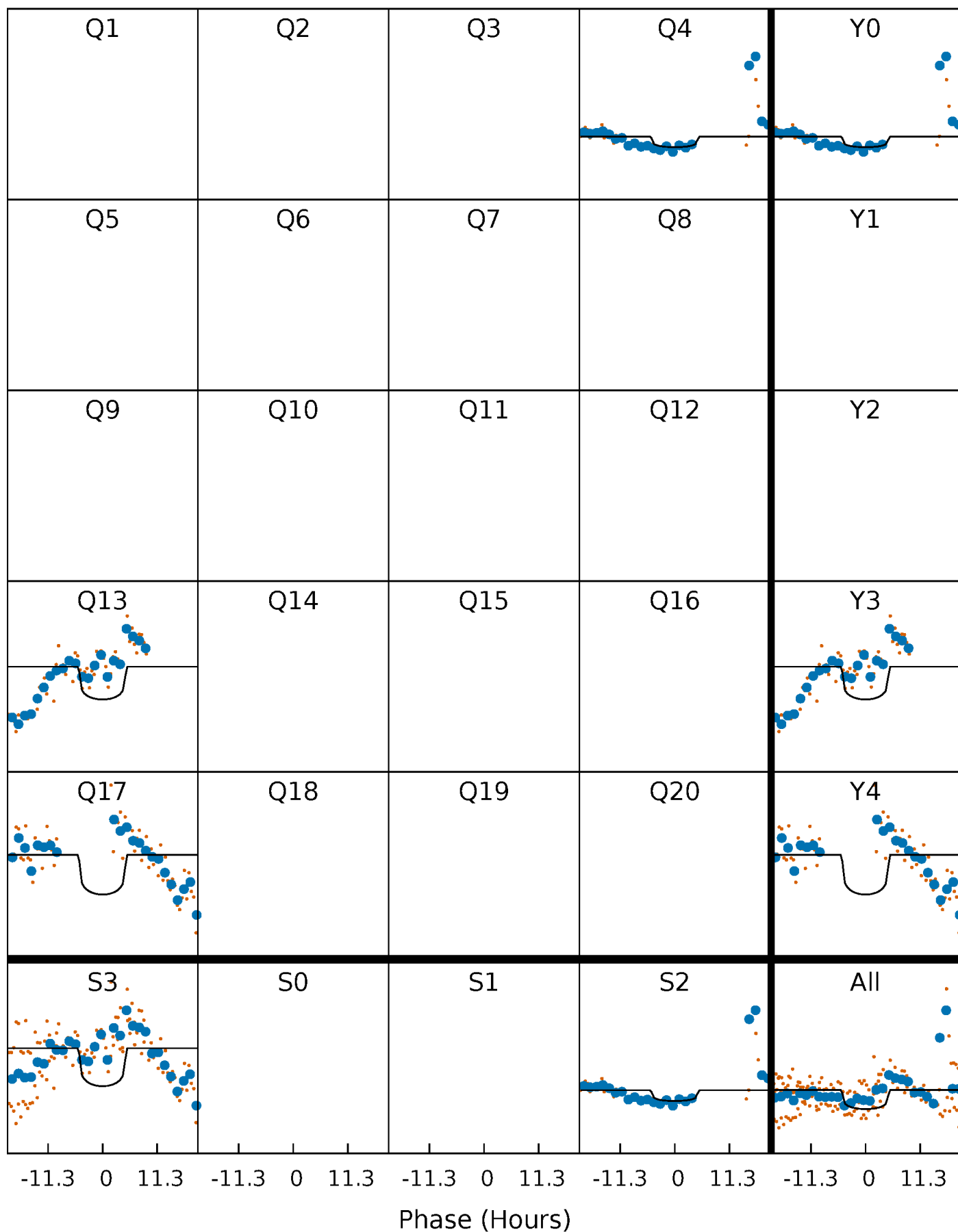
PDC Quarter-Phased Transit Curves

TCE 006471229-02 P=381.043705 Days $T_0=425.074203$ (BKJD)



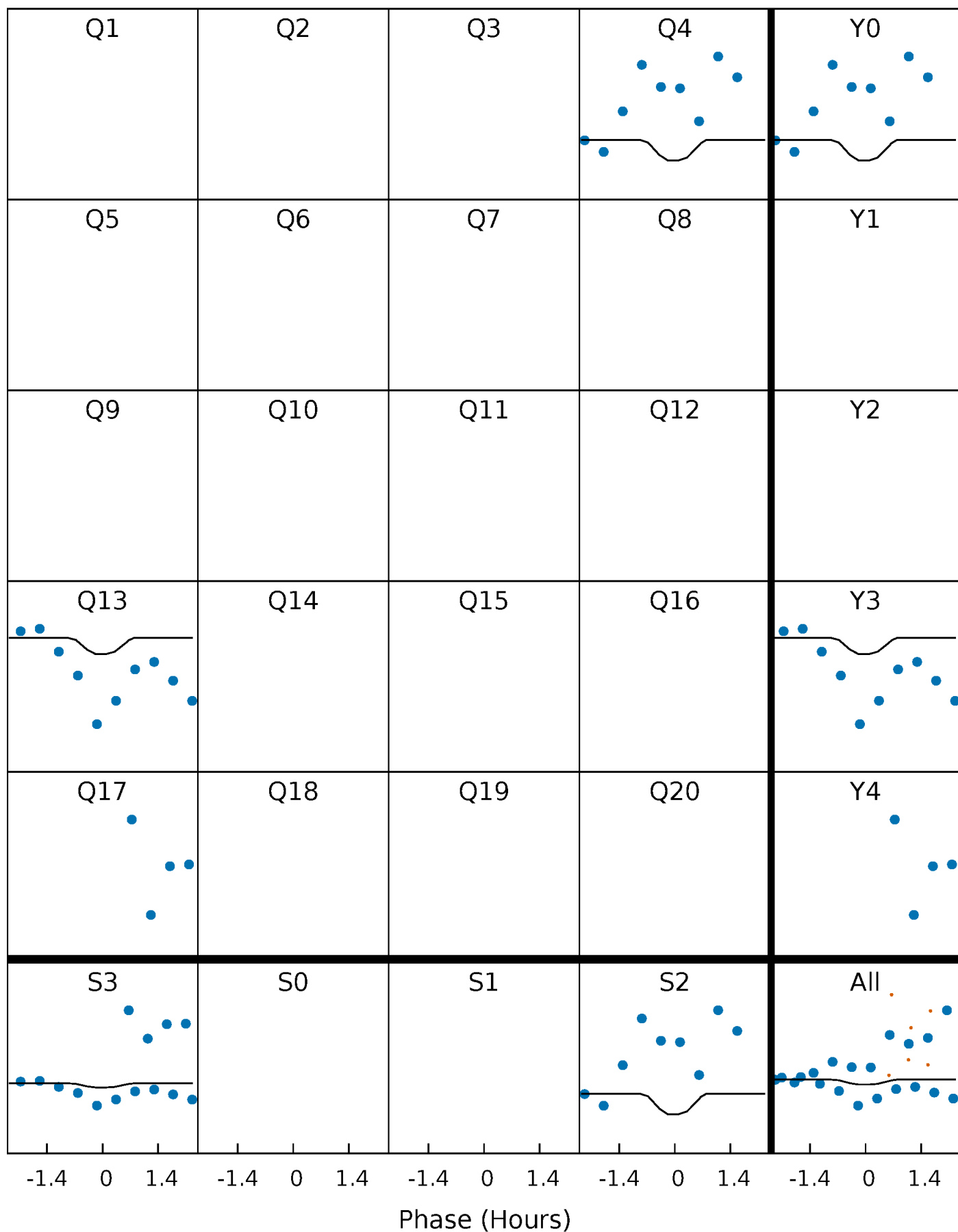
DV Quarter-Phased Transit Curves

TCE 006471229-02 $P=381.043705$ Days $T_0=425.074203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

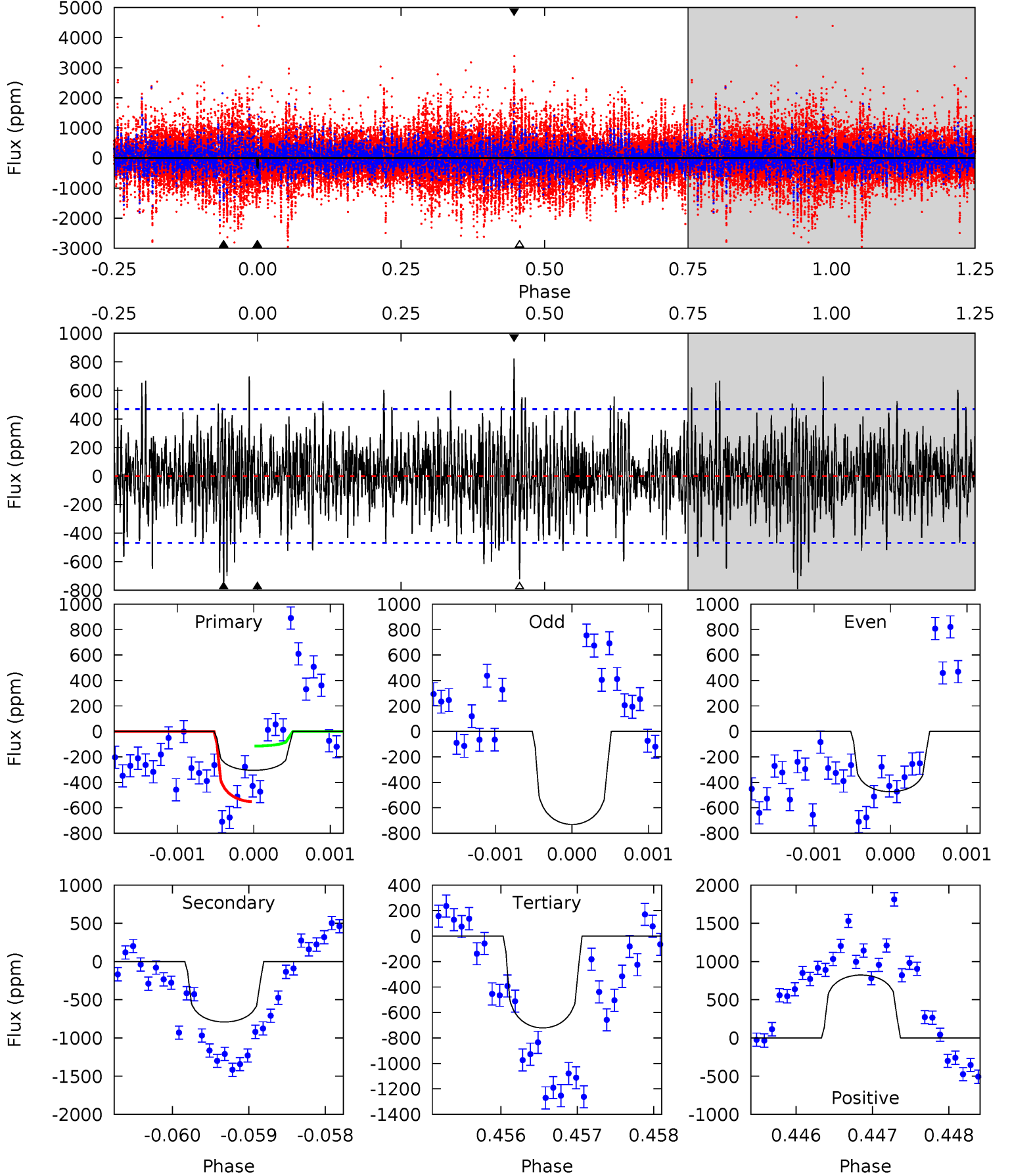
TCE 006471229-02 P=381.031405 Days $T_0=425.156148$ (BKJD)



DV Model-Shift Uniqueness Test

006471229-02, $P = 381.043705$ Days, $E = 44.030498$ Days

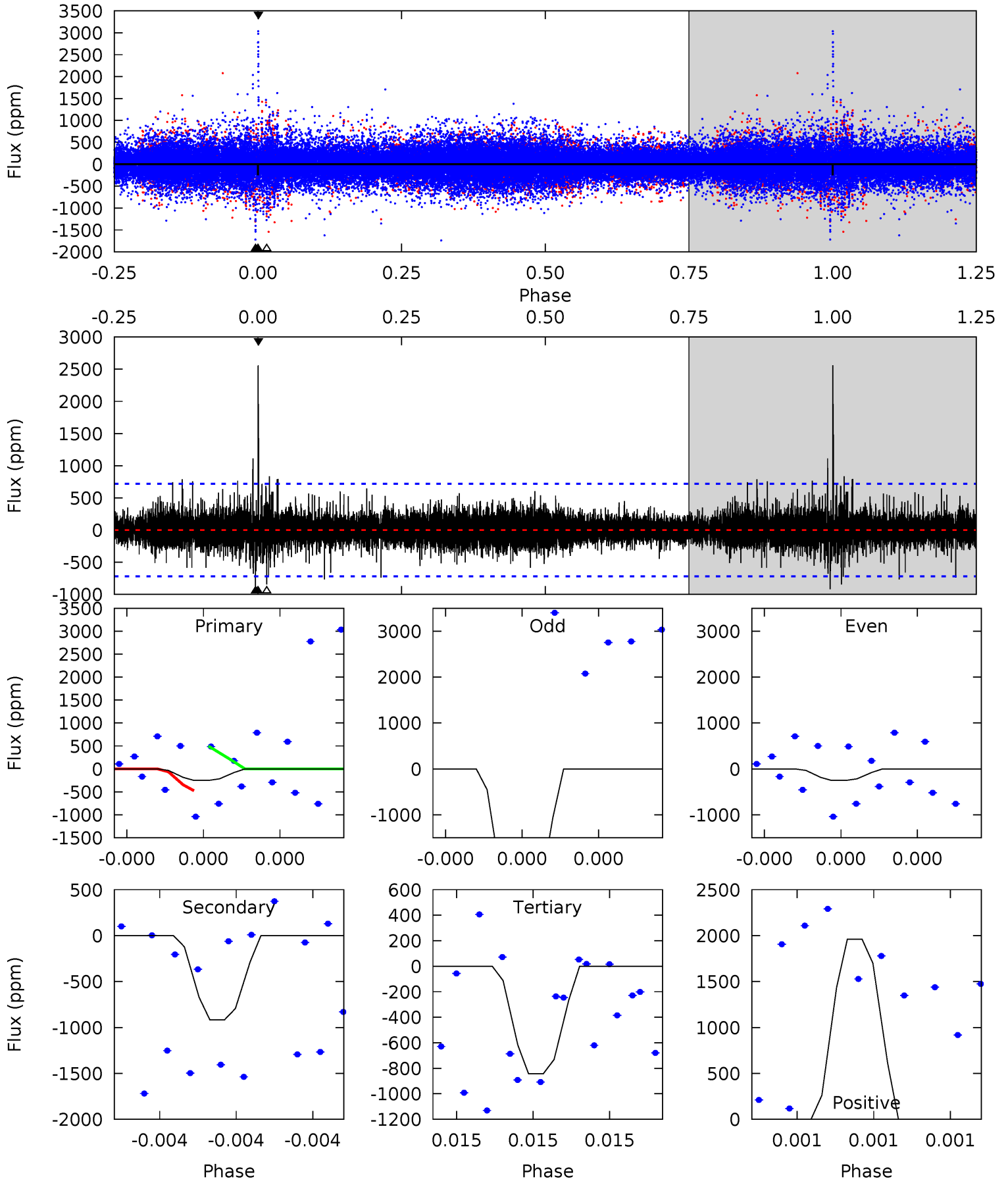
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.55	9.18	8.37	9.55	5.44	3.27	2.26	-4.82	-6.01	0.81	-0.38	0.99	-171.2	0.51	2.52



Alt Model-Shift Uniqueness Test

006471229-02, P = 381.031405 Days, E = 44.124743 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.00	7.35	6.76	15.7	5.77	3.77	1.15	-4.76	-13.7	0.59	-8.37	8.92	1.00	0.74	0.08



Stellar Parameters For KIC 006471229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5952^{+160}_{-160}	$4.554^{+0.033}_{-0.176}$	$-0.360^{+0.300}_{-0.300}$	$0.844^{+0.226}_{-0.071}$	$0.932^{+0.098}_{-0.109}$	$2.183^{+0.388}_{-1.055}$
	+3%/-3%	+1%/-4%	+83%/-83%	+27%/-8%	+11%/-12%	+18%/-48%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006471229-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-791 ± 86	$2.97^{+2.12}_{-1.73}$	344^{+21}_{-14}	5659^{+3652}_{-1110}	$47642^{+230709}_{-31130}$
Alt.	-917 ± 125	$2.04^{+1.89}_{-1.41}$	344^{+19}_{-13}	7312^{+9773}_{-2128}	$121528^{+1098528}_{-90537}$

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

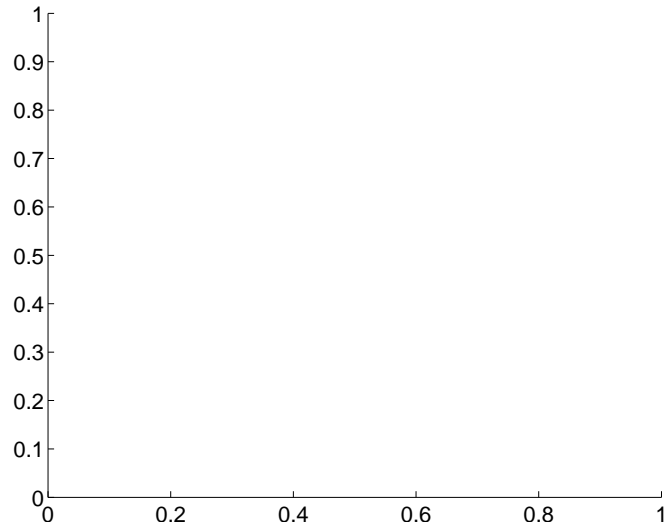
Supplemental centroid analysis for 006471229-02. Kepler magnitude: 13.98. Transit SNR 4.72

There are 0 quarters with good PRF difference image offsets

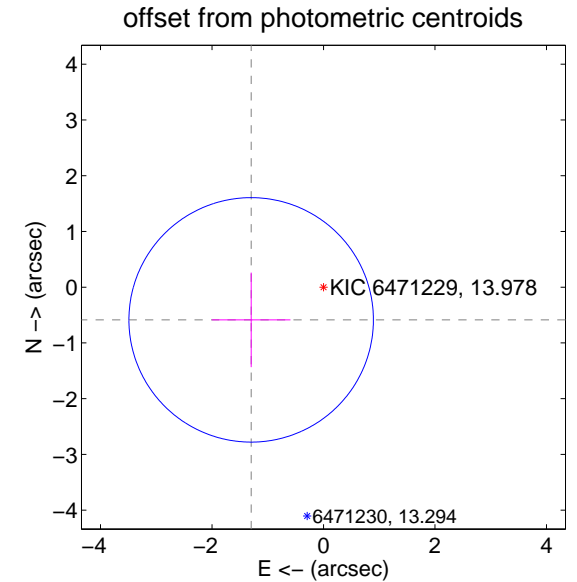
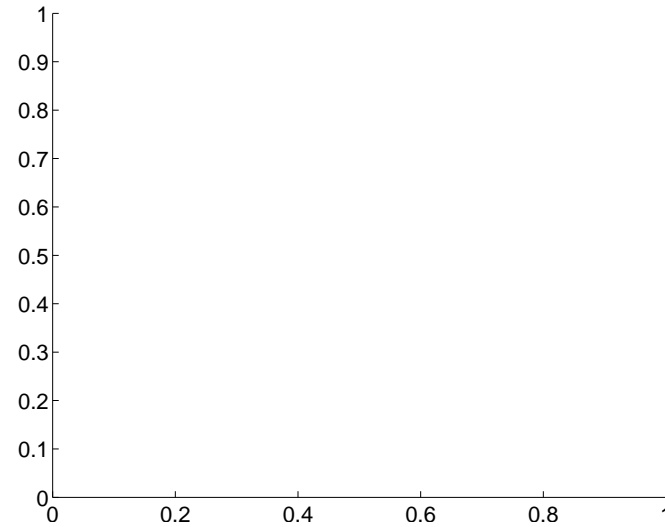
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.42 ± 0.73	1.95	1.30 ± 0.70	-0.59 ± 0.85

There is no PRF-fit offset from OOT-fit

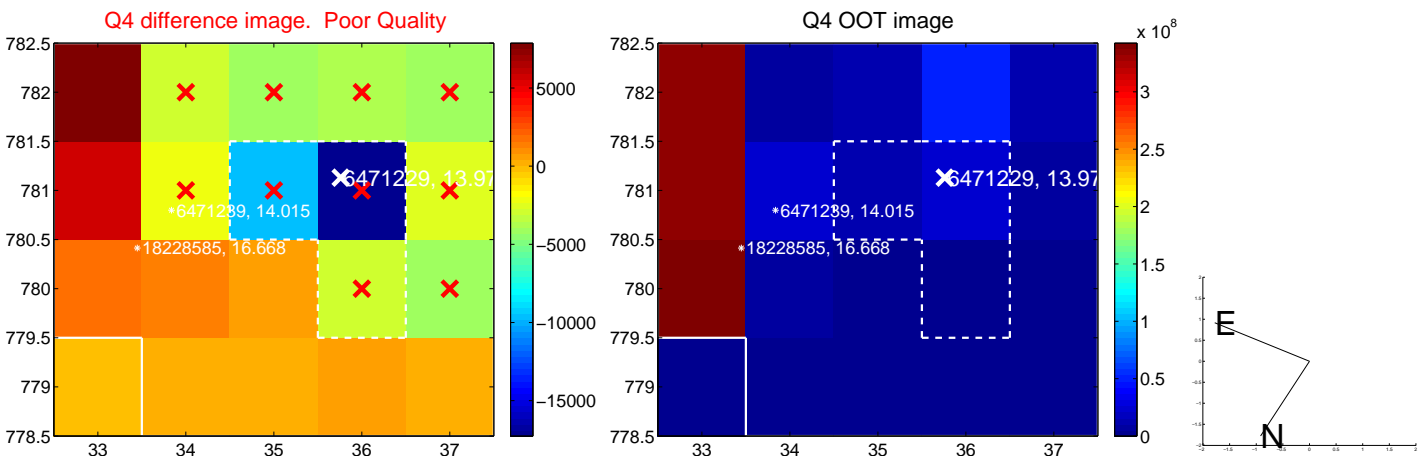
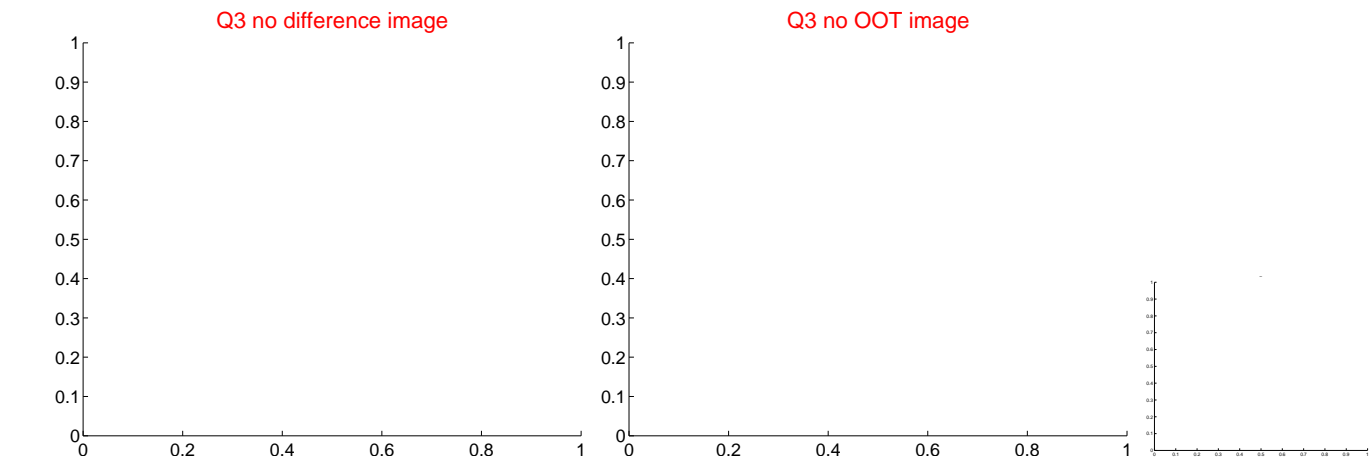
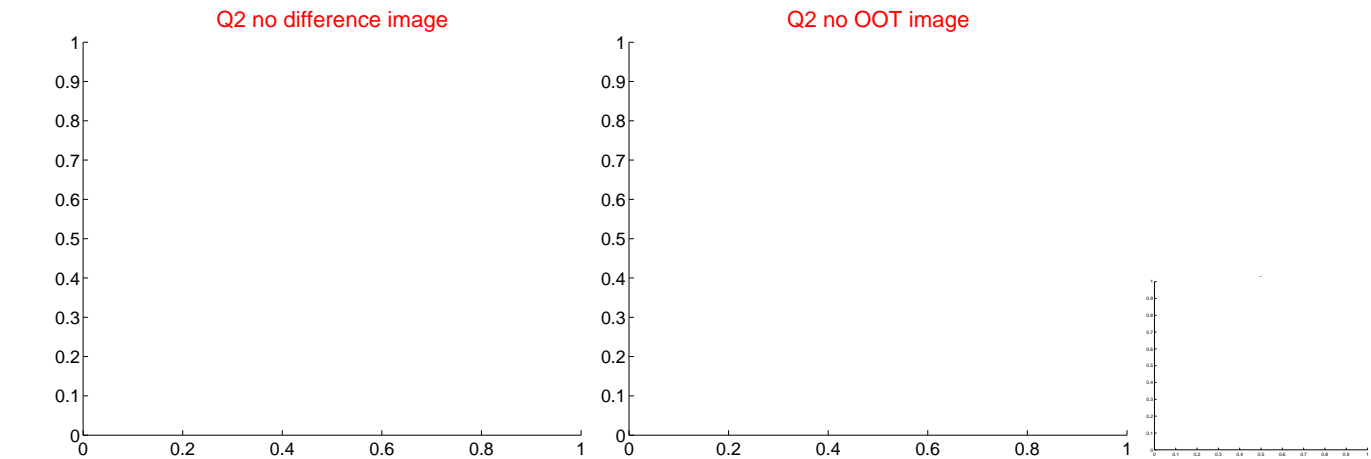
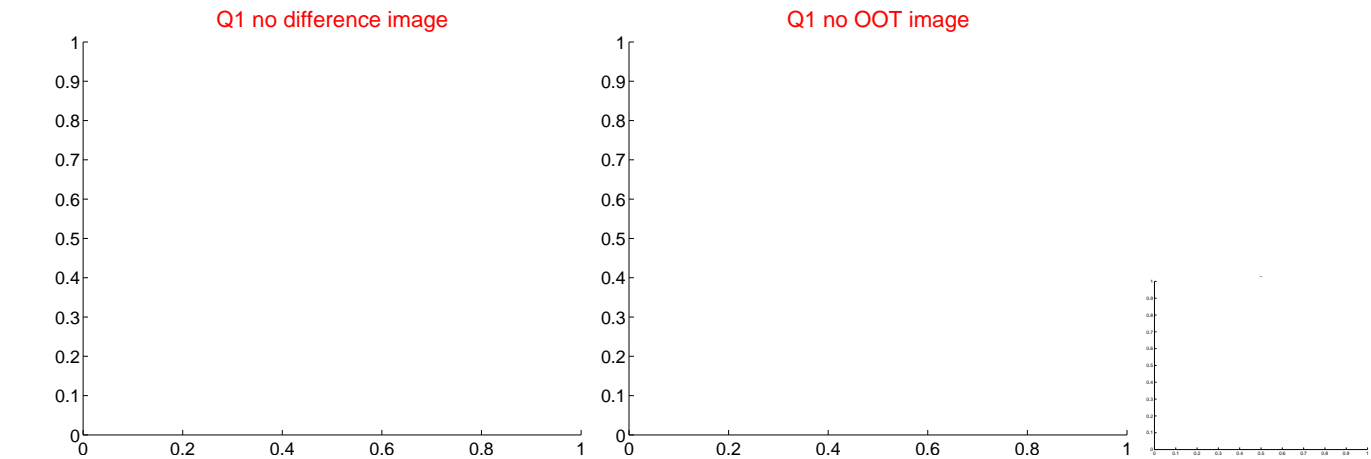


There is no PRF-fit offset from KIC



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

white \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.



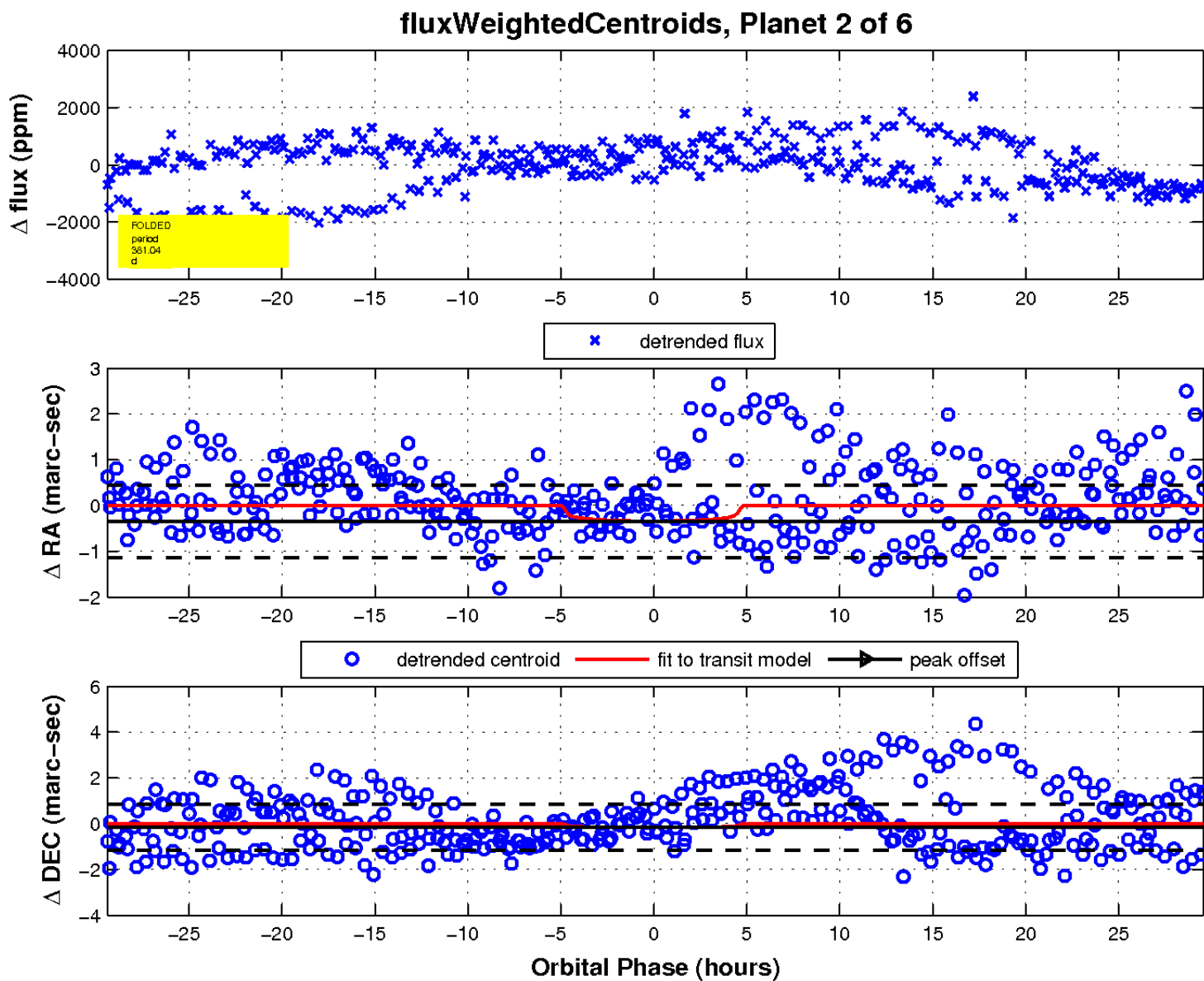
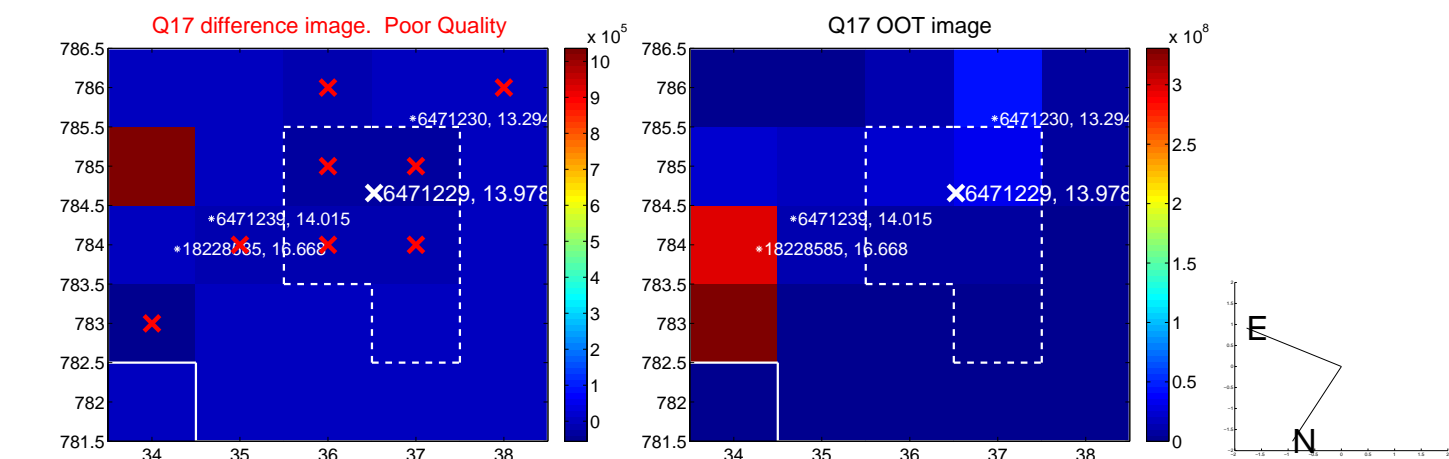
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

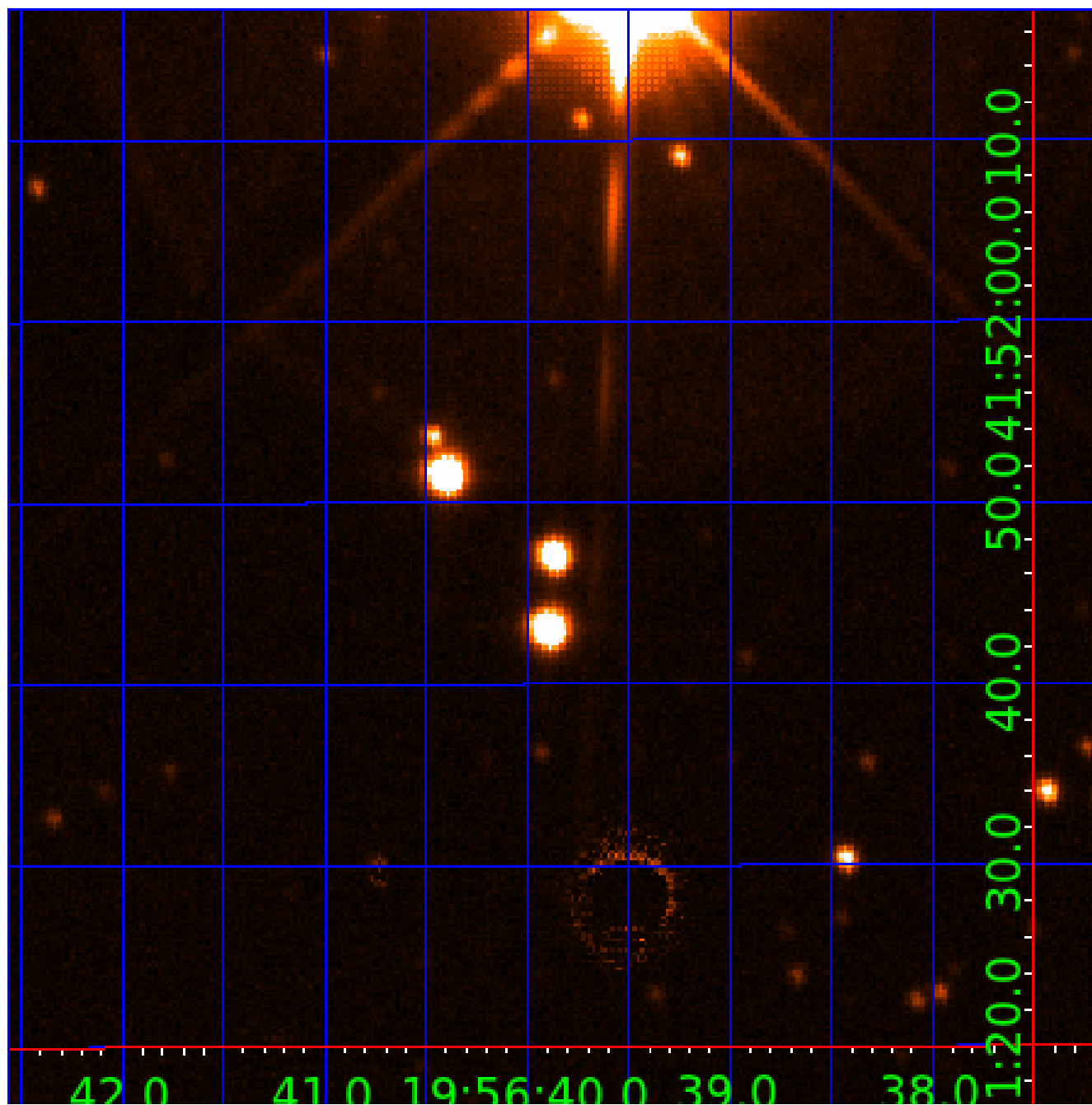


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006471229

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})
006471229-01	OBS	6719.01	1.752431	132.800709	82.7	3.379	13.1	12.4	0.84	5952	0.90	1038.13
006471229-02	OBS	No	381.043705	425.074202	830.1	9.875	12.8	4.7	0.84	5952	2.58	0.79
006471229-03	OBS	No	501.134573	175.601699	330.4	0.577	9.9	1.3	0.84	5952	1.60	0.55
006471229-04	OBS	No	501.197594	175.187760	1030.1	5.957	10.1	6.3	0.84	5952	2.81	0.55
006471229-06	OBS	No	321.089157	266.463399	719.2	4.363	10.6	7.0	0.84	5952	2.37	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471229-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH
006471229-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006471229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006471229-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006471229-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

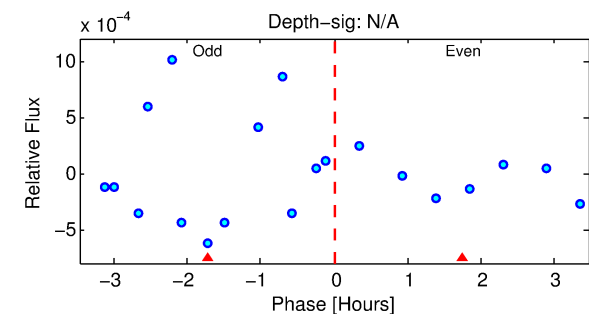
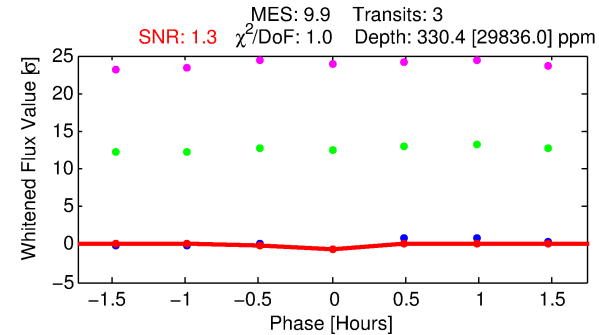
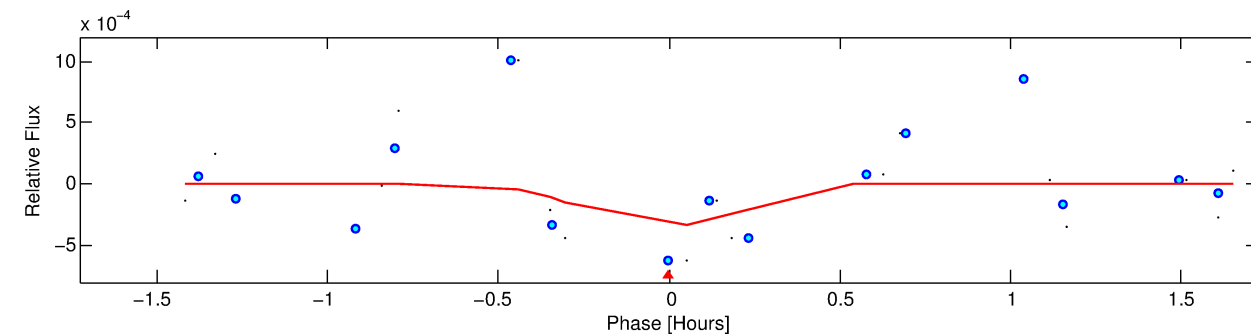
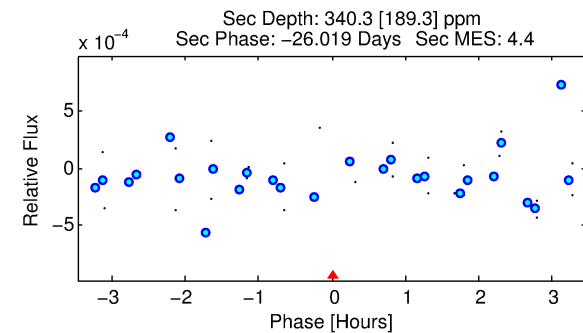
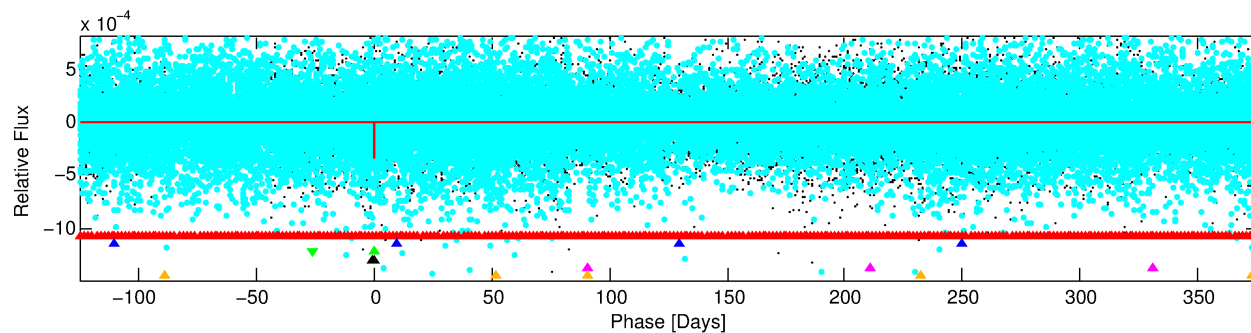
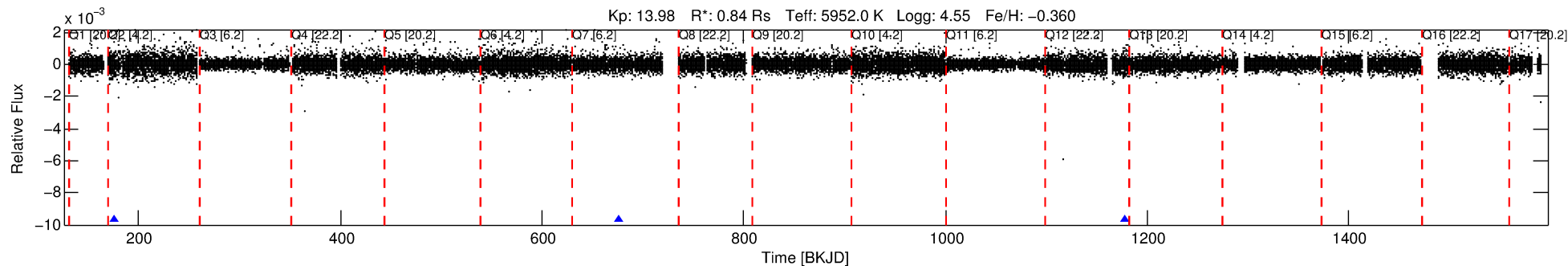
Ephemeris Match Information For 006471229-03

No Significant Match Found

DV One-Page Summary

KIC: 6471229 Candidate: 3 of 6 Period: 501.135 d
KOI: K06719 Corr: No Ephemeris Match

Kp: 13.98 R*: 0.84 Rs Teff: 5952.0 K Logg: 4.55 Fe/H: -0.360



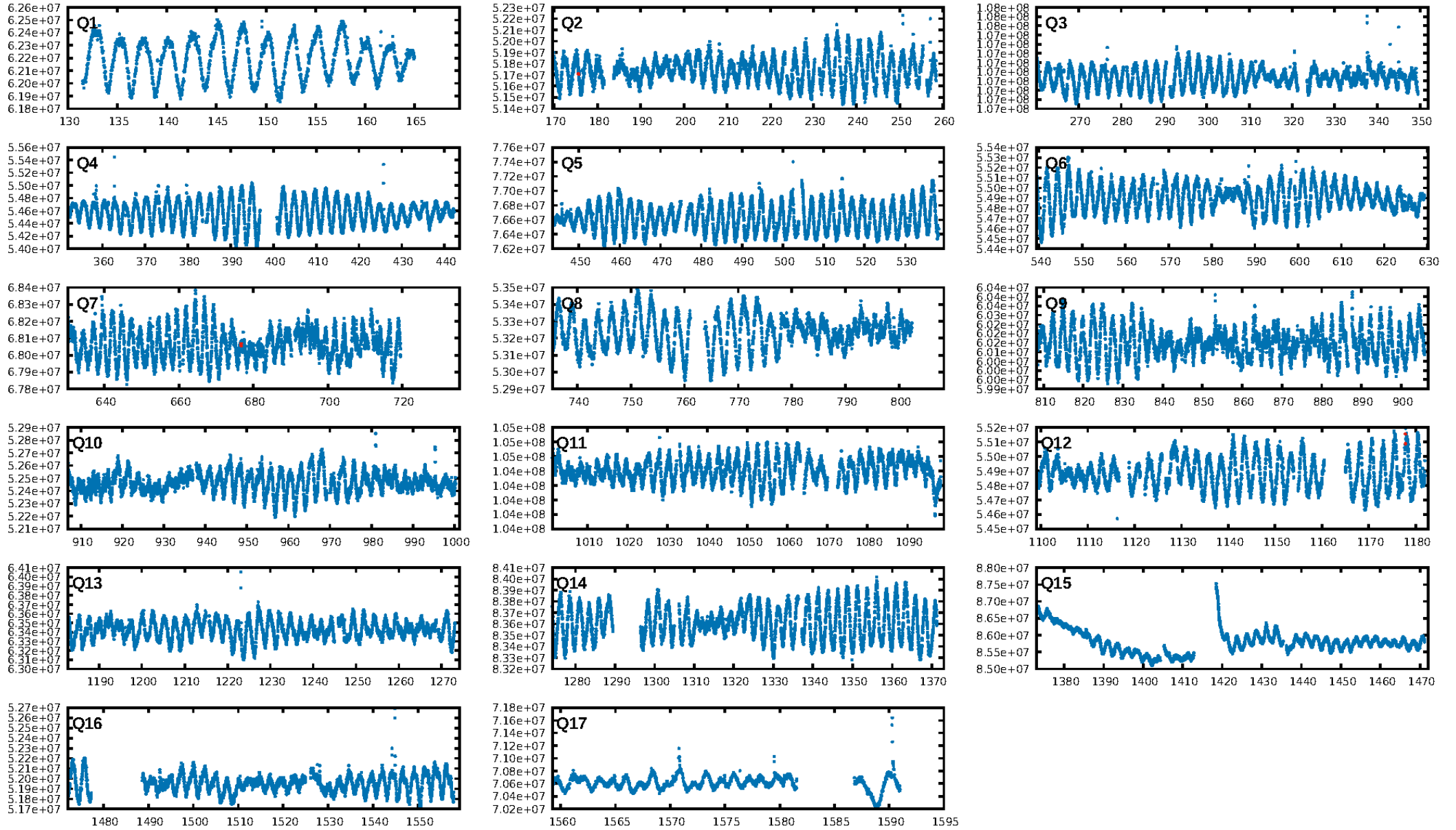
DV Fit Results:

Period = 501.13457 [0.12418] d
Epoch = 175.6017 [0.0311] BKJD
Rp/R* = 0.0174 [8.1189]
a/R* = 6743.08 [15553340.72]
b = 0.05 [44286.61]
Seff = 0.55 [0.19]
Teq = 220 [19] K
Rp = 1.60 [747.75] Re
a = 1.2057 [0.2699] AU
Ag = 106184.10 [99193123.95] [0.00σ]
Teffp = 6132 [1431976] K [0.00σ]

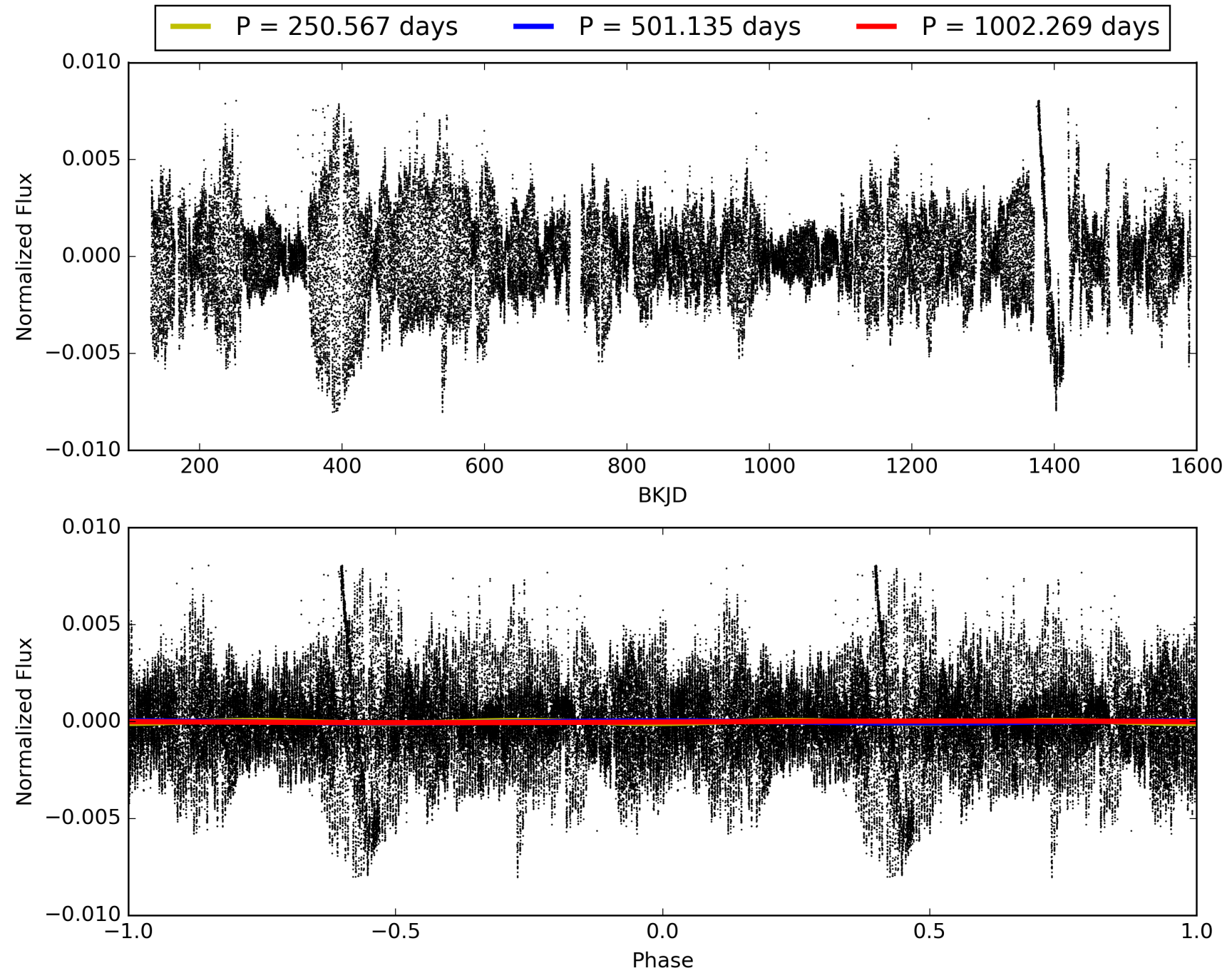
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [291.38σ]
LongPeriod-sig: 20.0% [0.25σ]
ModelChiSquare2-sig: 60.1%
ModelChiSquareGof-sig: 91.6%
Bootstrap-pfa: 1.06e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7354
Centroid-sig: 14.7%
Centroid-so: 3.853 arcsec [1.30σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/2]

TCE 006471229-03, PDC Light Curves

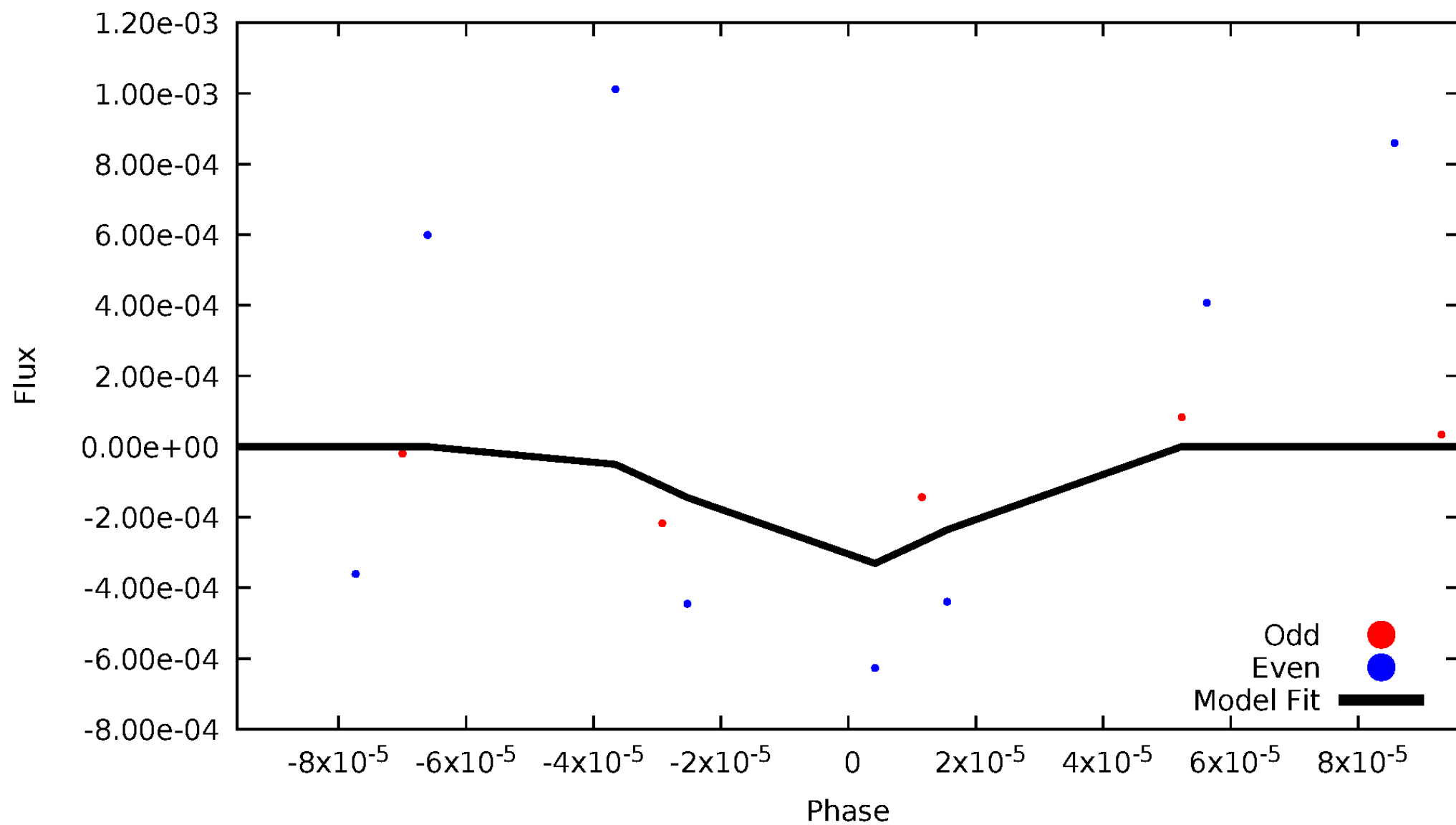


TCE 006471229-03



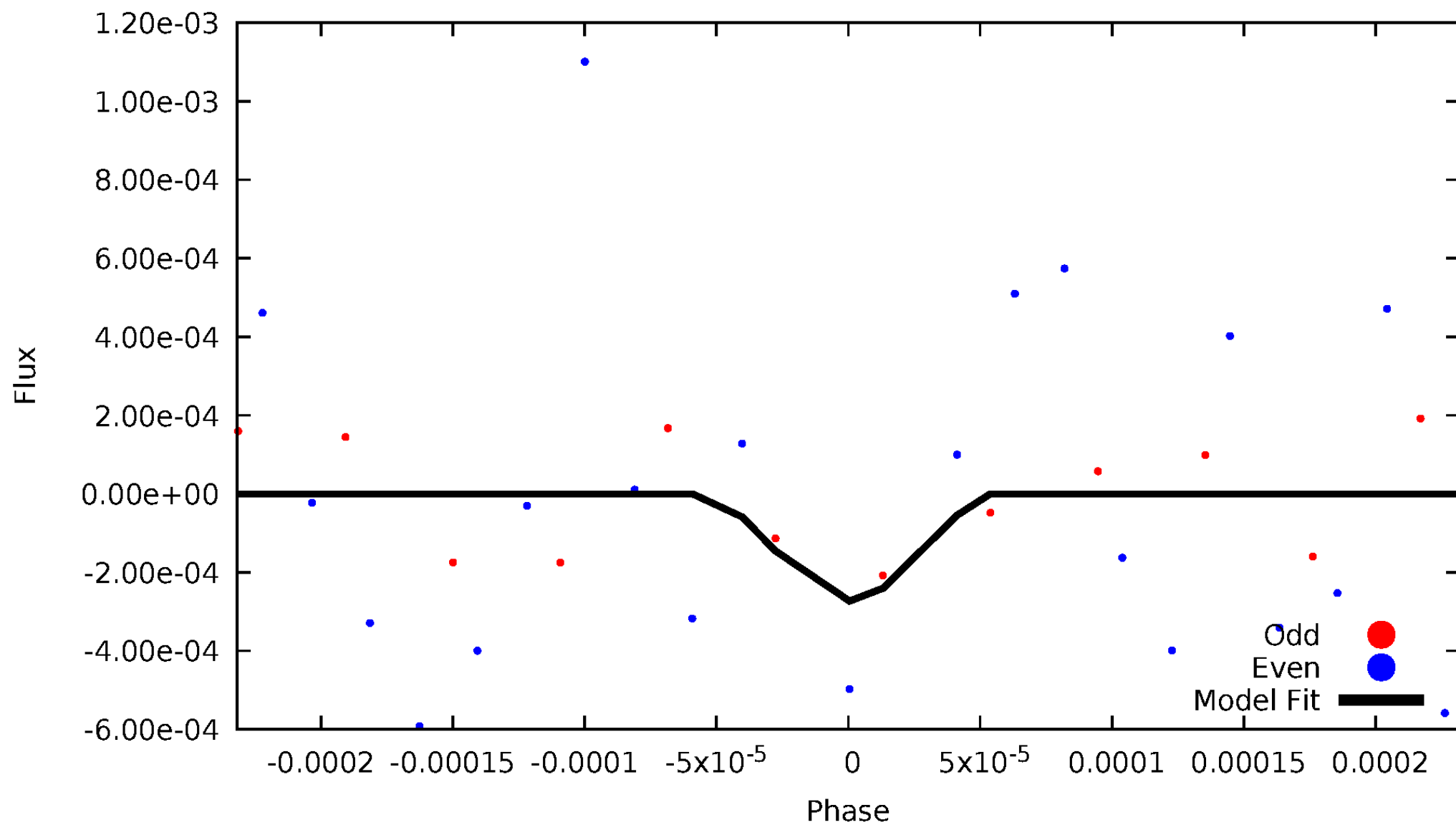
DV Odd/Even

TCE 006471229-03



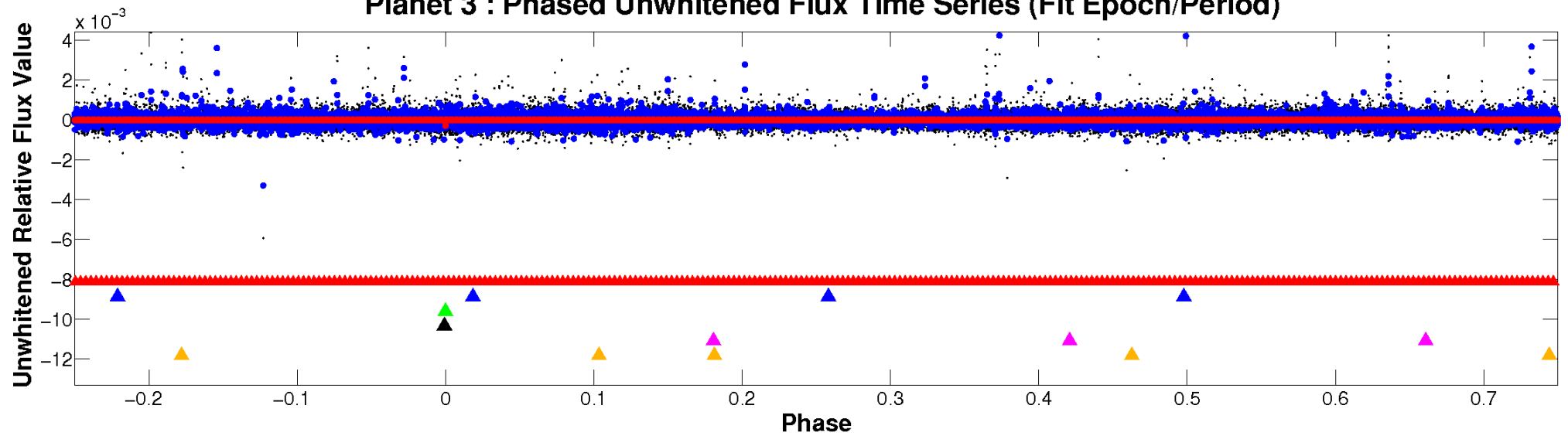
ALT Odd/Even

TCE 006471229-03

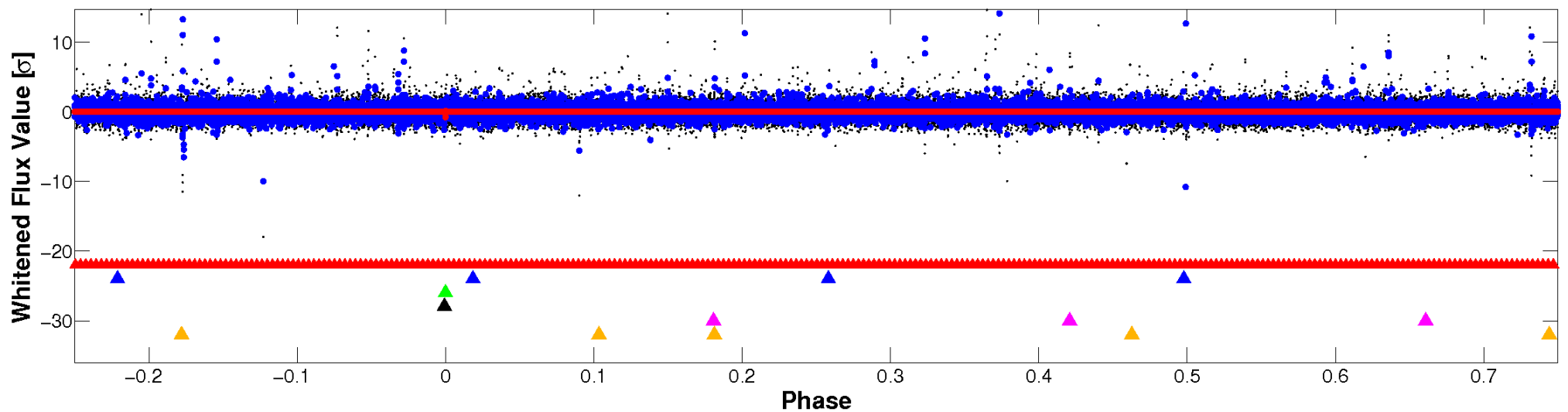


Non-Whitened Vs. Whitened Light Curve

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

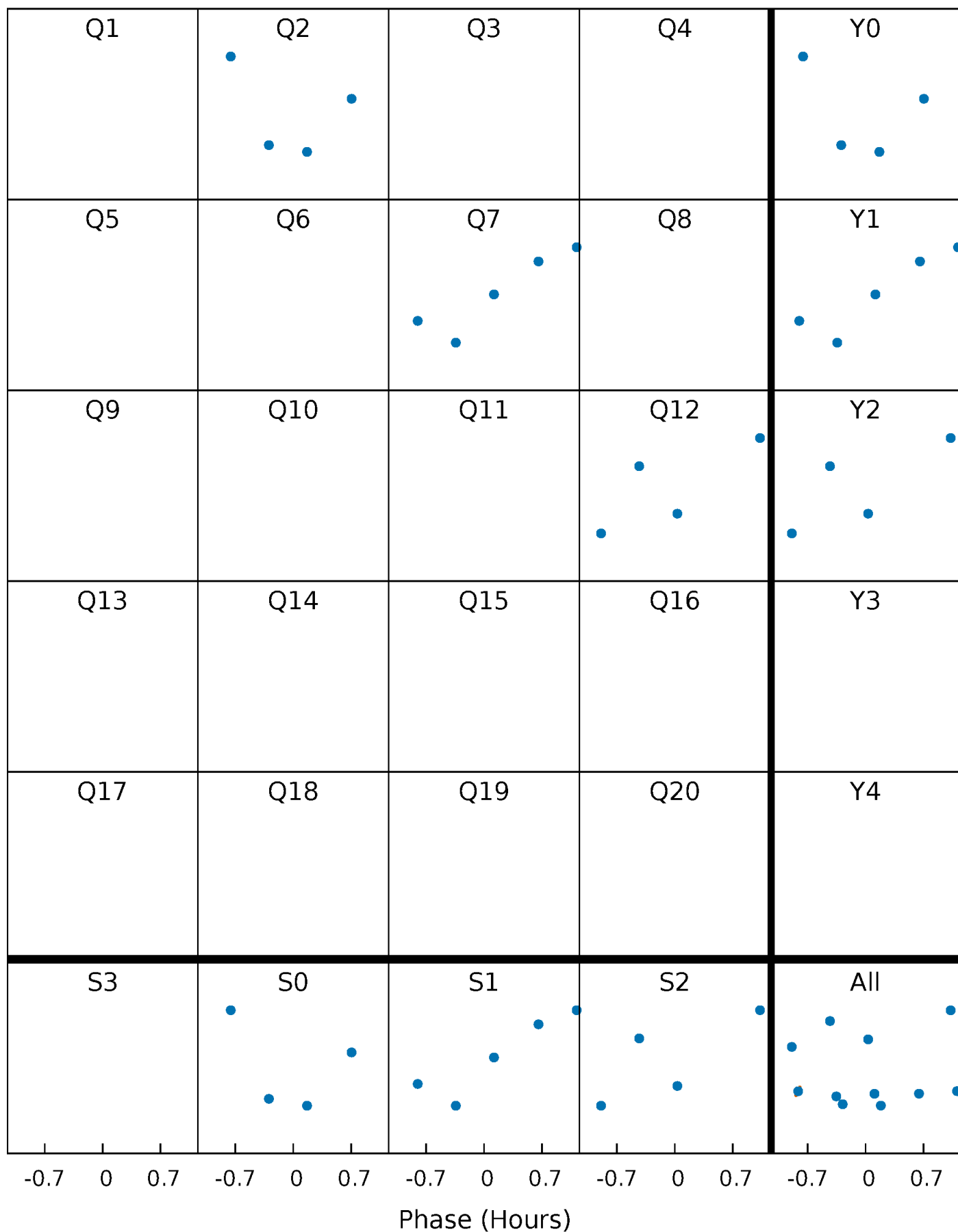


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



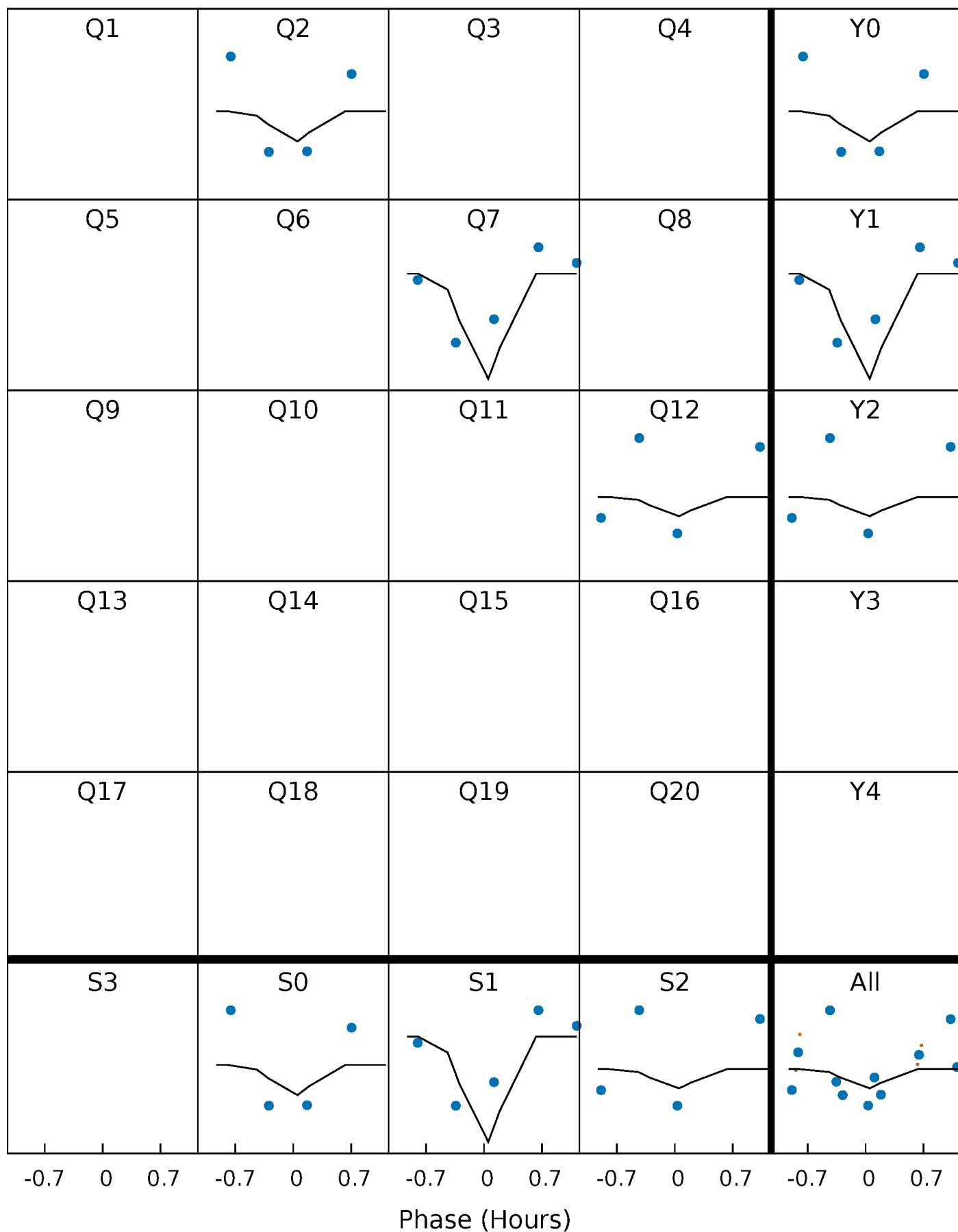
PDC Quarter-Phased Transit Curves

TCE 006471229-03 P=501.134573 Days $T_0=175.601699$ (BKJD)



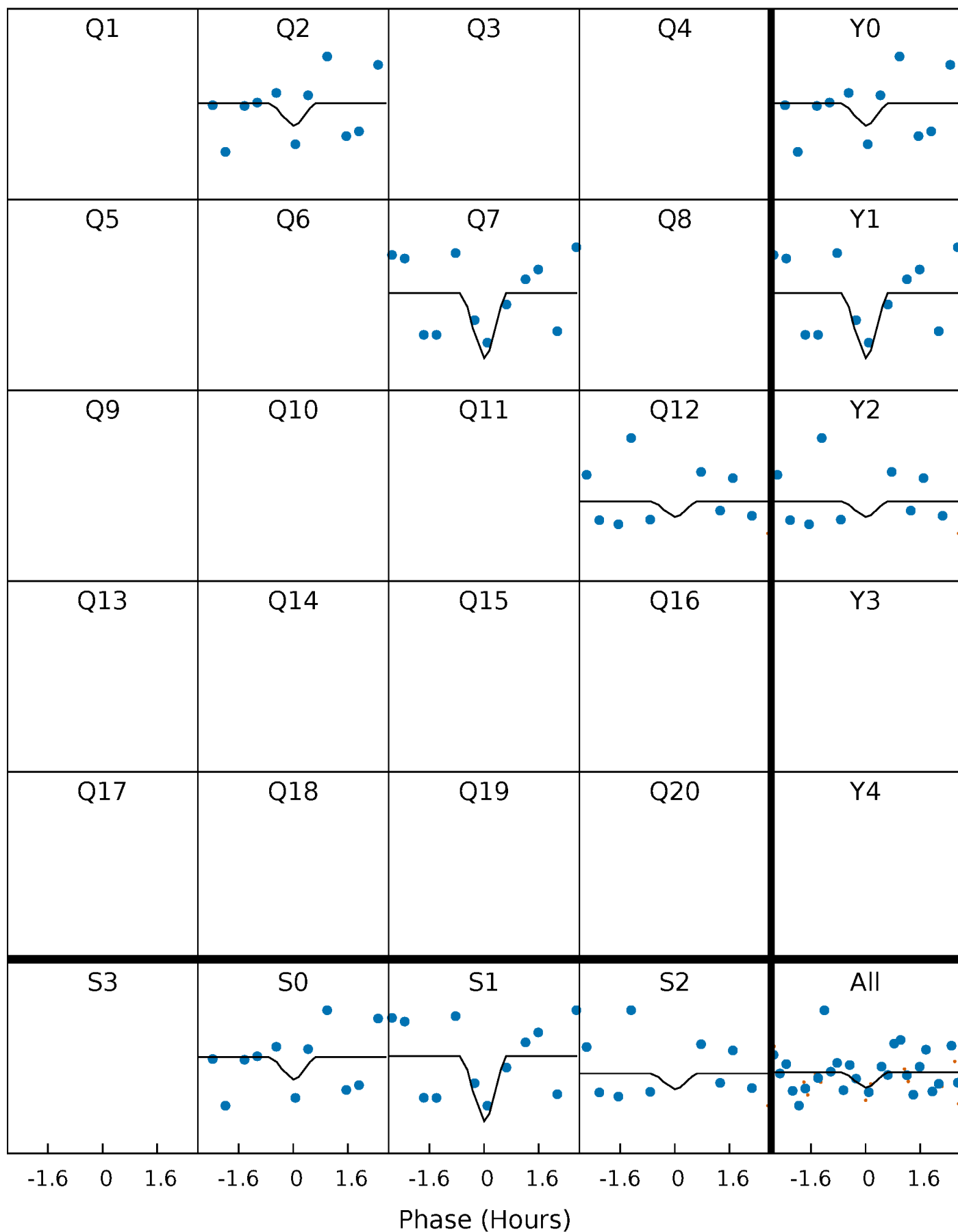
DV Quarter-Phased Transit Curves

TCE 006471229-03 P=501.134573 Days $T_0=175.601699$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

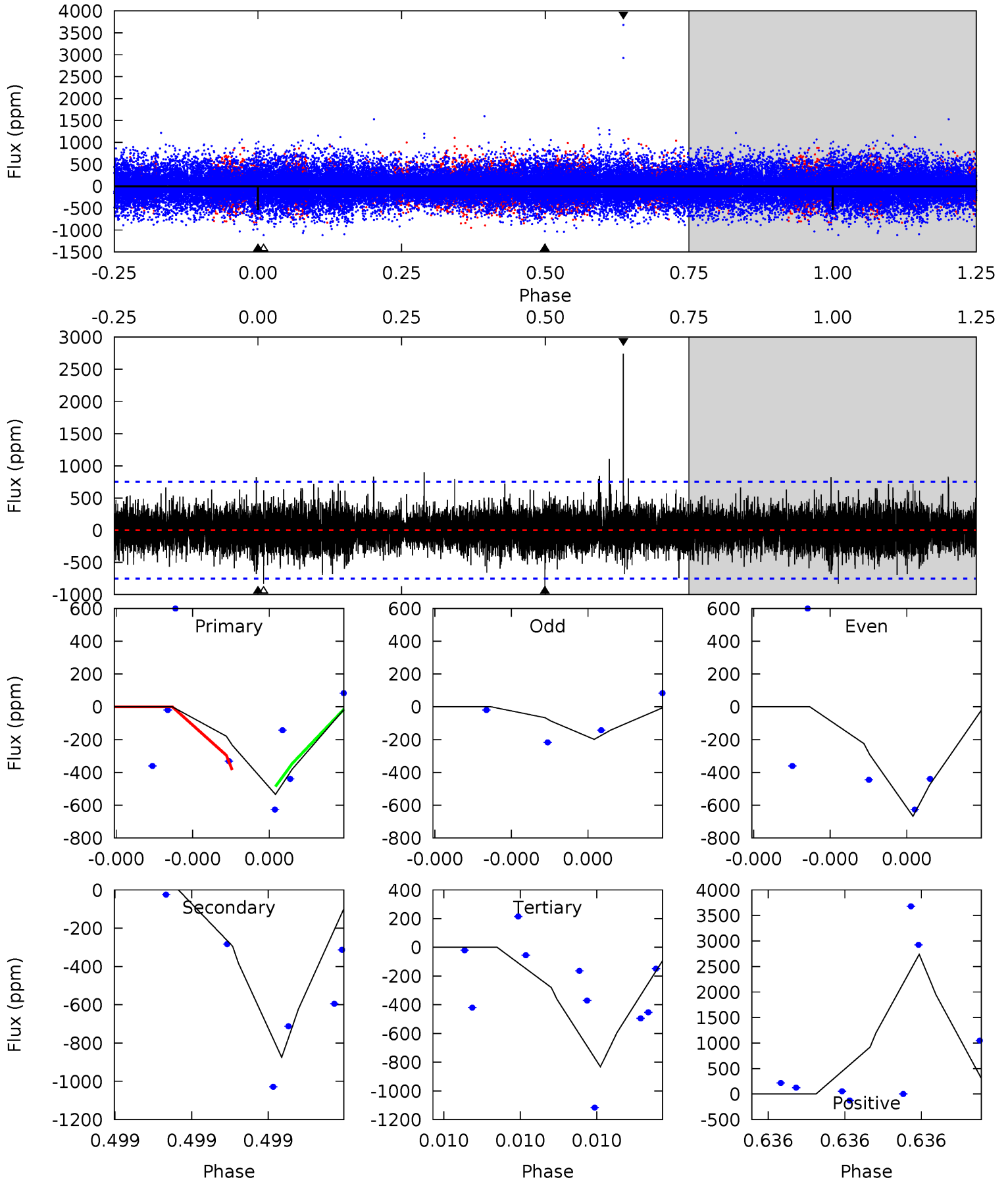
TCE 006471229-03 P=501.187548 Days $T_0=175.527496$ (BKJD)



DV Model-Shift Uniqueness Test

006471229-03, P = 501.134573 Days, E = 175.601699 Days

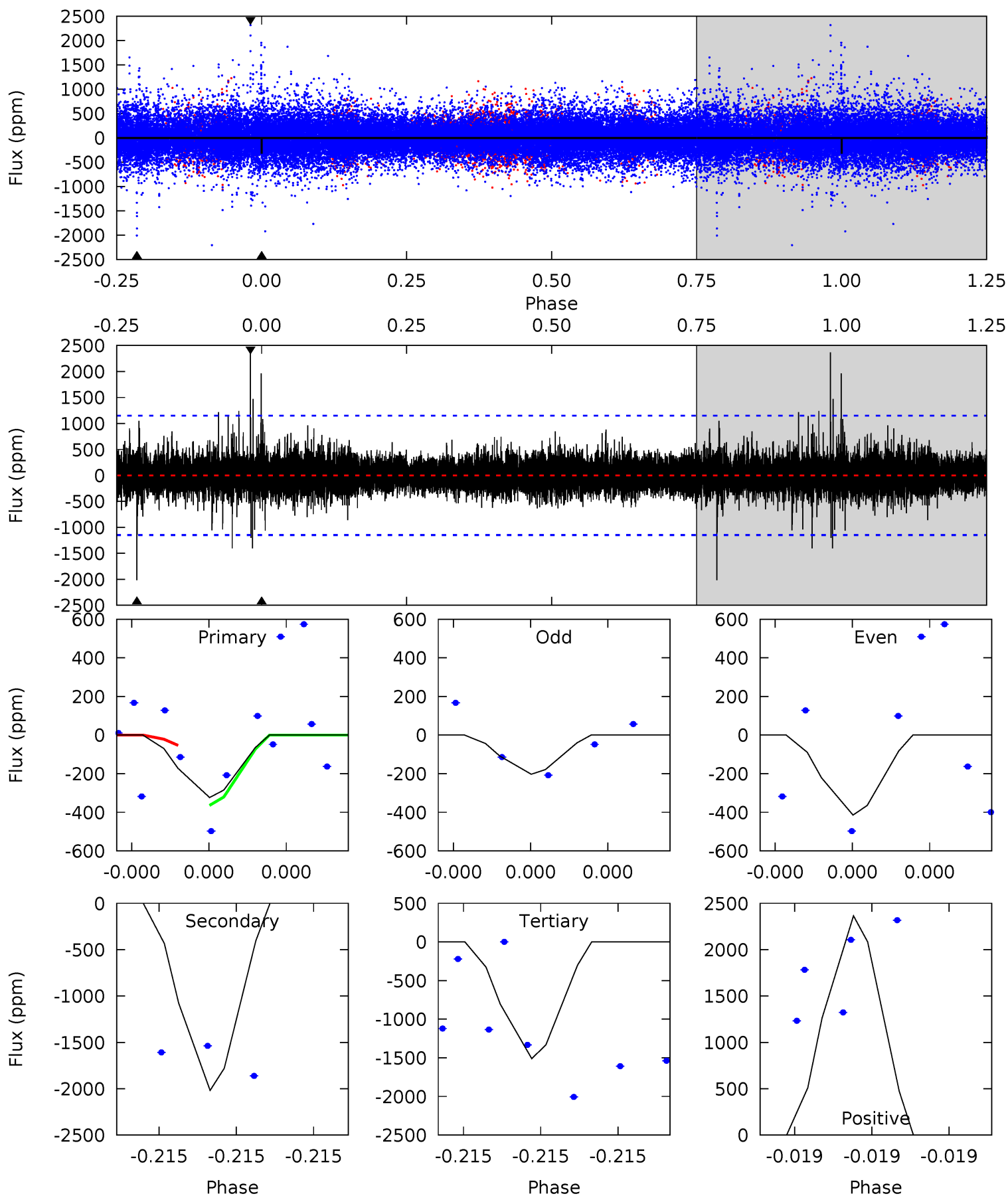
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.24	6.94	6.60	21.7	5.95	4.05	1.23	-2.36	-17.5	0.34	-14.8	1.80	1.03	0.76	0.41



Alt Model-Shift Uniqueness Test

006471229-03, P = 501.187548 Days, E = 175.527496 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.66	10.4	7.76	12.2	5.91	3.98	0.96	-6.10	-10.5	2.61	-1.78	0.53	1.00	0.54	0.00



Stellar Parameters For KIC 006471229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5952^{+160}_{-160}	$4.554^{+0.033}_{-0.176}$	$-0.360^{+0.300}_{-0.300}$	$0.844^{+0.226}_{-0.071}$	$0.932^{+0.098}_{-0.109}$	$2.183^{+0.388}_{-1.055}$
	+3%/-3%	+1%/-4%	+83%/-83%	+27%/-8%	+11%/-12%	+18%/-48%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006471229-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-875 ± 126	$554.06^{+582.74}_{-395.95}$	314^{+18}_{-14}	1459^{+365}_{-212}	$2.242^{+25.420}_{-1.725}$
Alt.	-2019 ± 195	$504.67^{+554.88}_{-350.21}$	315^{+22}_{-14}	1605^{+396}_{-209}	$6.471^{+57.678}_{-5.067}$

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

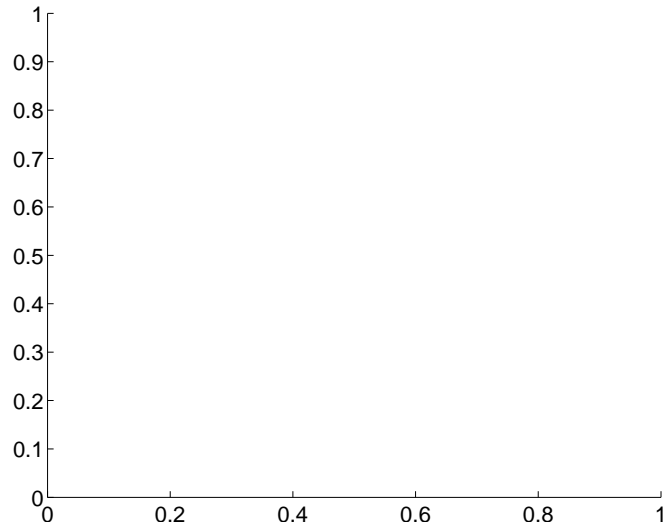
Supplemental centroid analysis for 006471229-03. Kepler magnitude: 13.98. Transit SNR 1.26

There are 0 quarters with good PRF difference image offsets

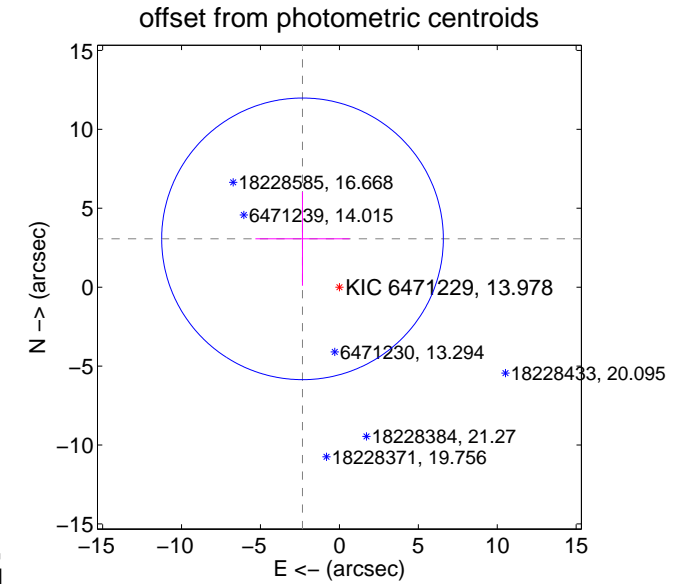
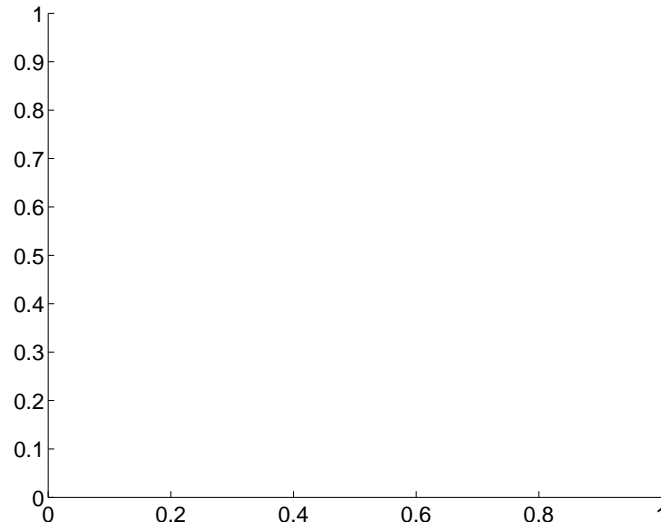
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	3.85 ± 2.97	1.30	2.34 ± 2.98	3.06 ± 2.97

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

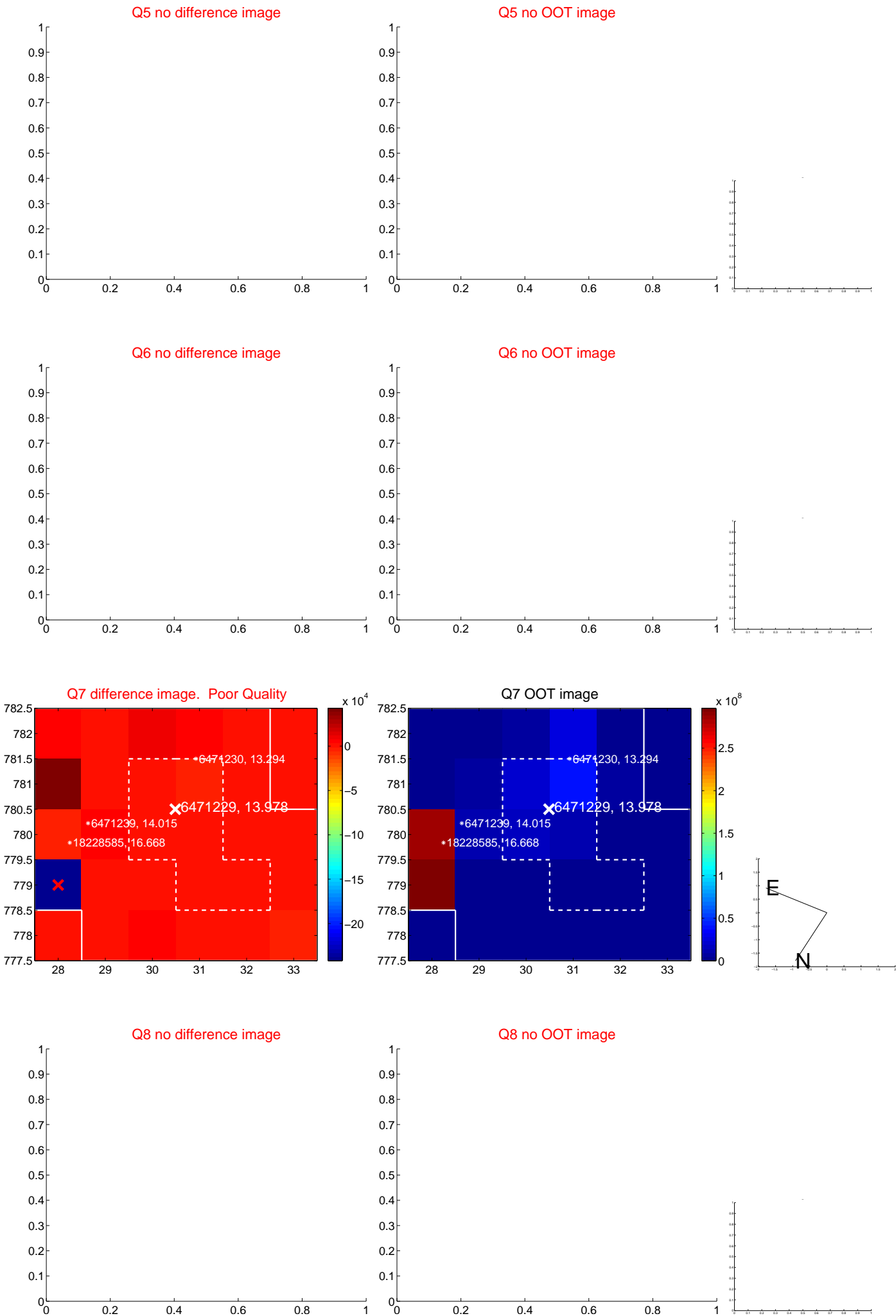


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

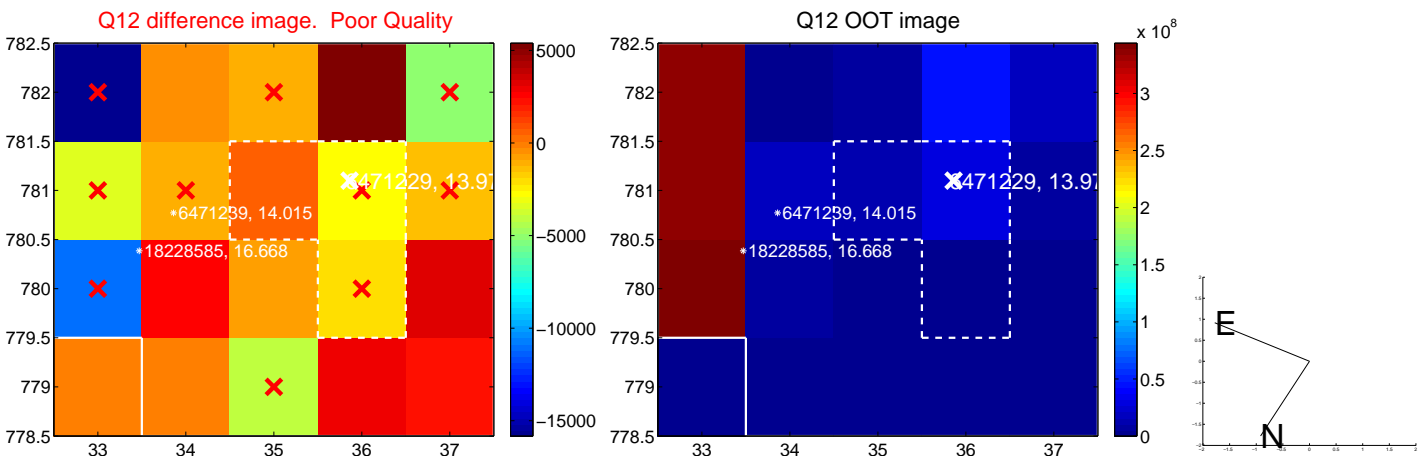
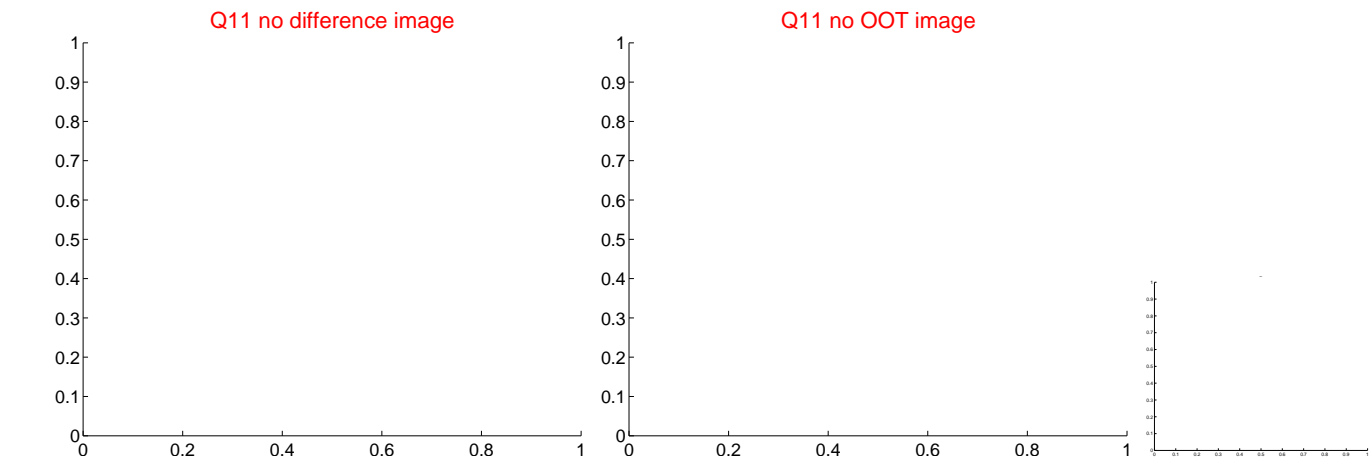
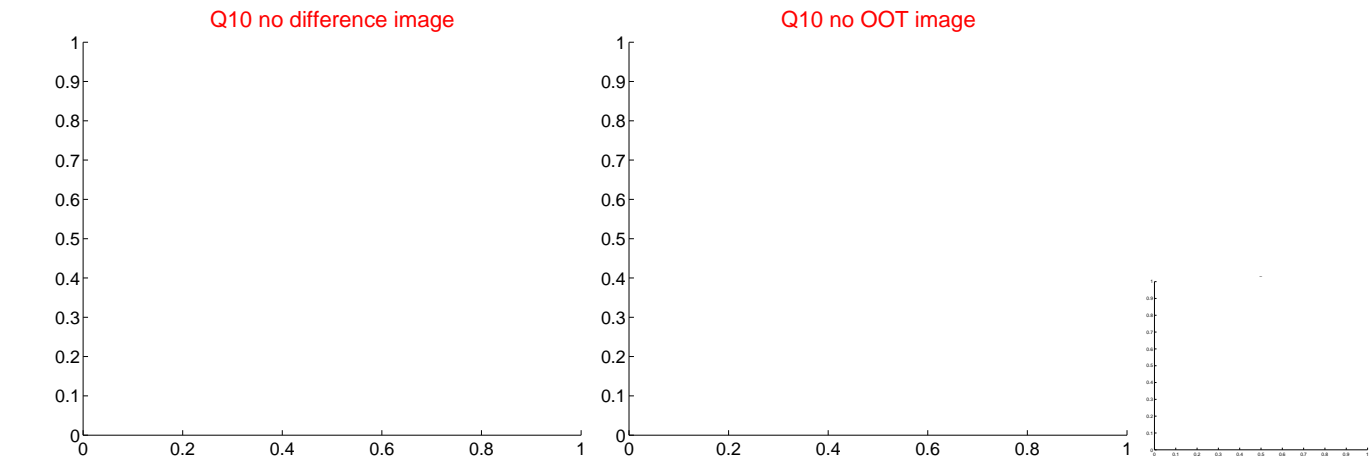
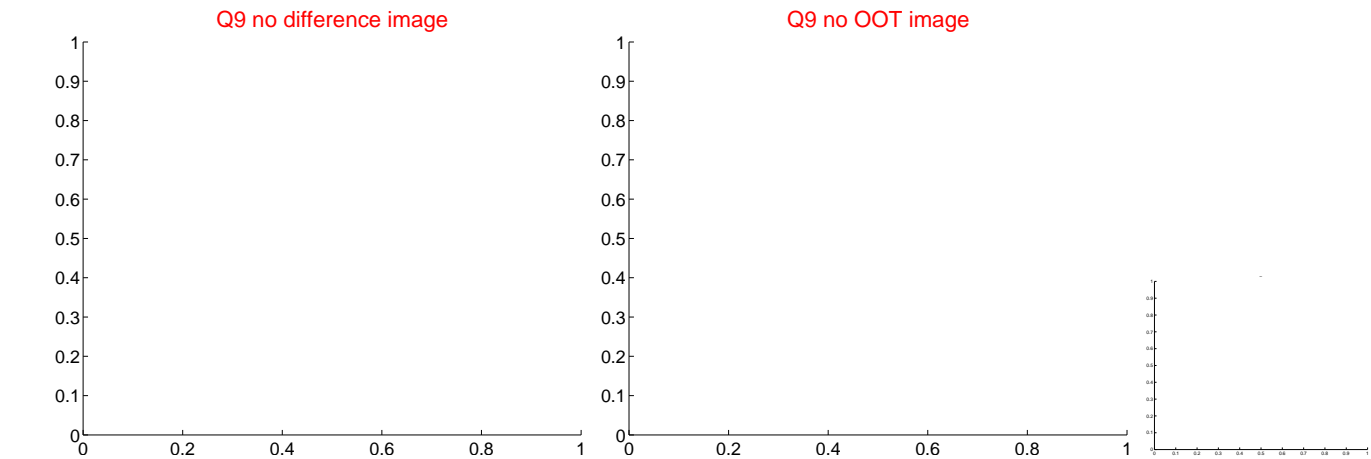
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



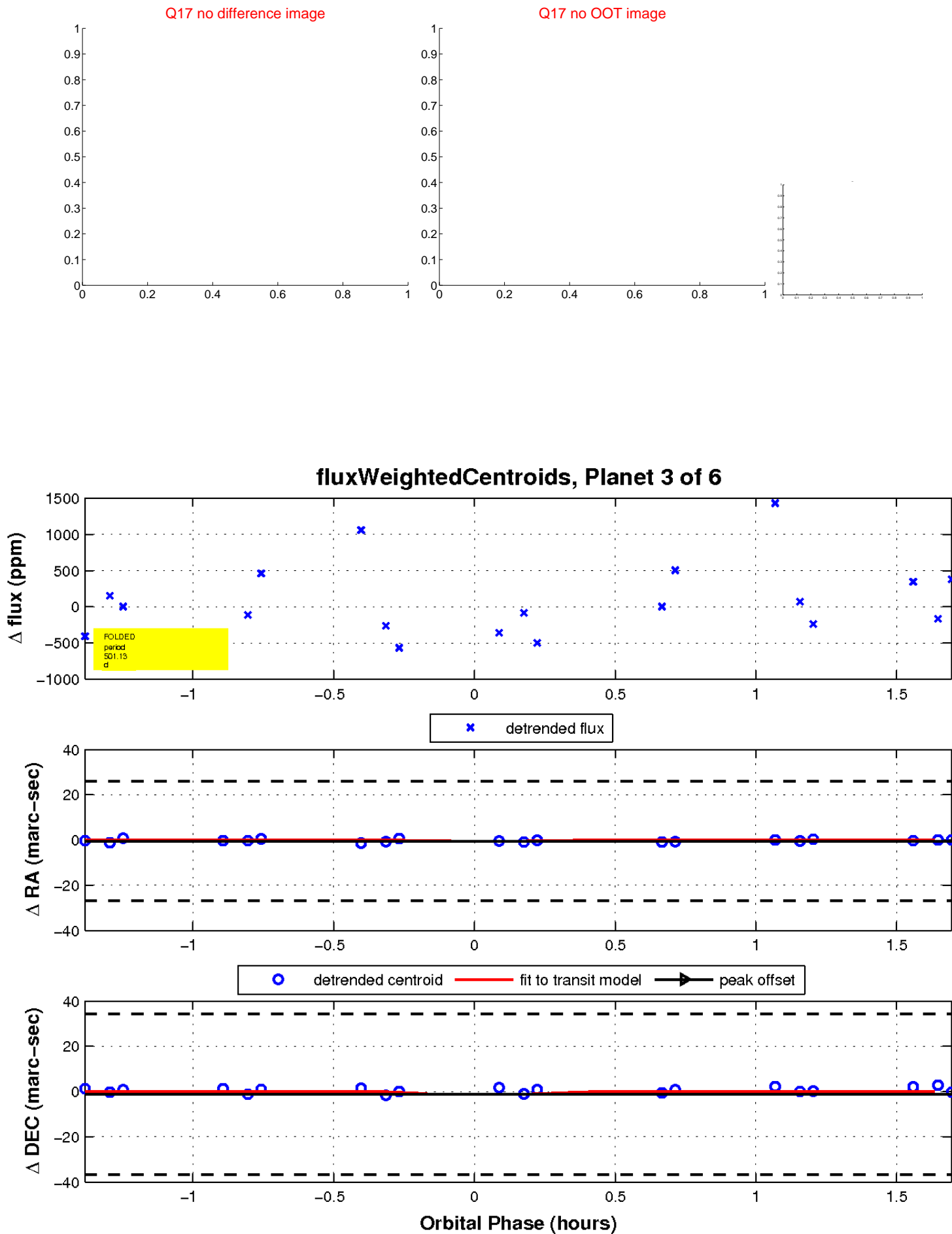
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

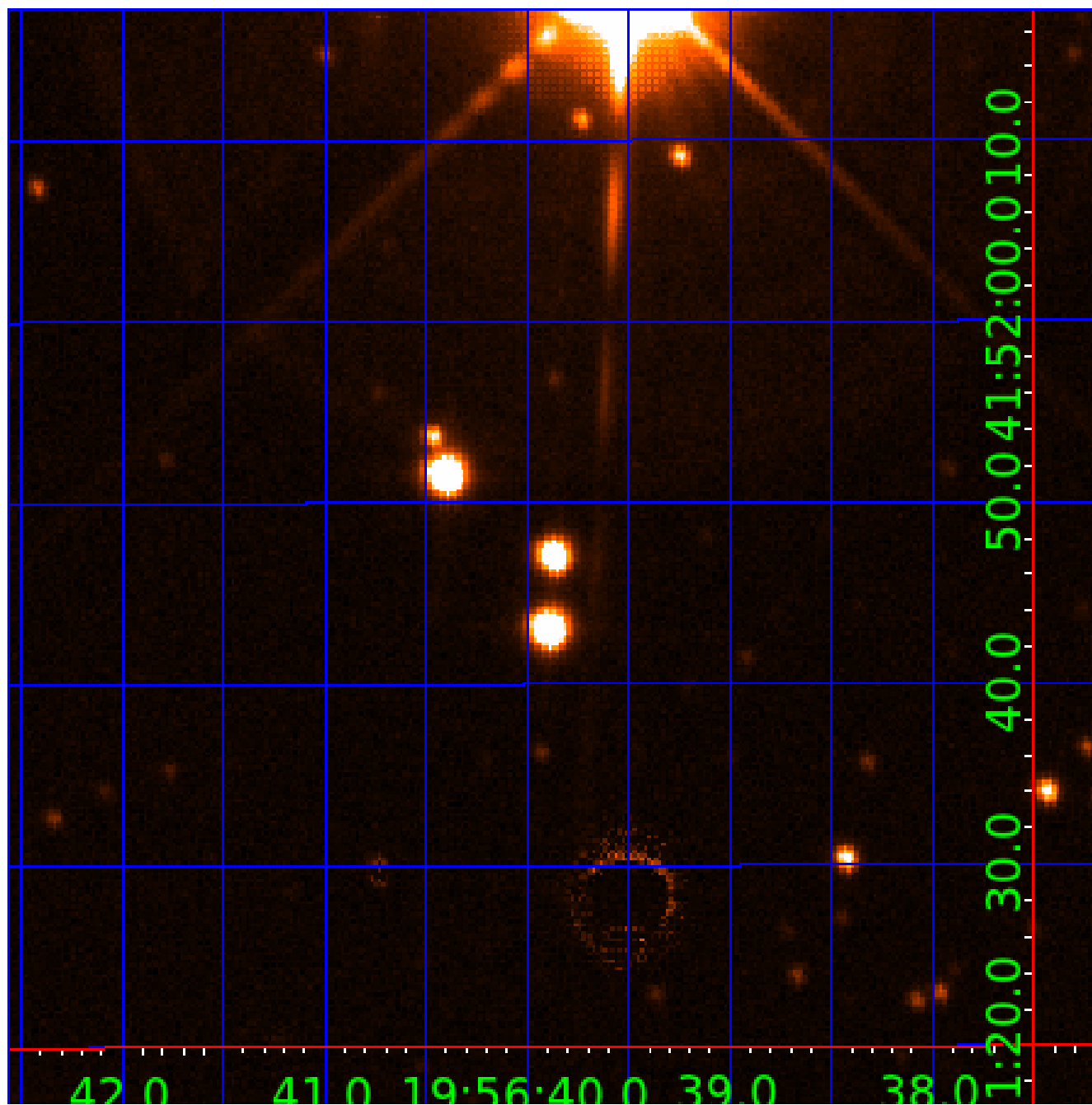


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006471229

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})
006471229-01	OBS	6719.01	1.752431	132.800709	82.7	3.379	13.1	12.4	0.84	5952	0.90	1038.13
006471229-02	OBS	No	381.043705	425.074202	830.1	9.875	12.8	4.7	0.84	5952	2.58	0.79
006471229-03	OBS	No	501.134573	175.601699	330.4	0.577	9.9	1.3	0.84	5952	1.60	0.55
006471229-04	OBS	No	501.197594	175.187760	1030.1	5.957	10.1	6.3	0.84	5952	2.81	0.55
006471229-06	OBS	No	321.089157	266.463399	719.2	4.363	10.6	7.0	0.84	5952	2.37	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471229-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH
006471229-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006471229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006471229-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006471229-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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 006471229-04

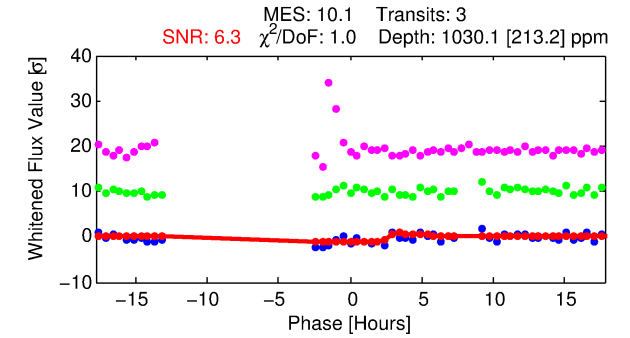
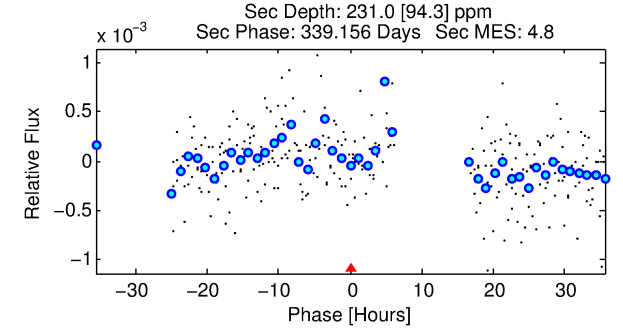
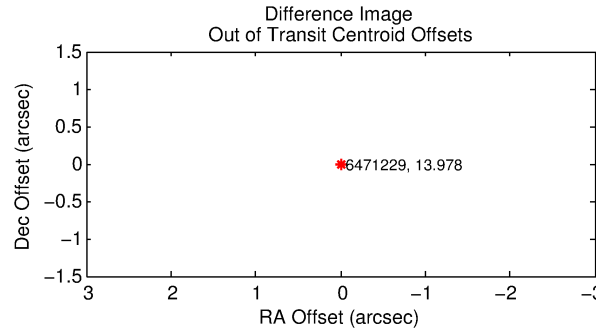
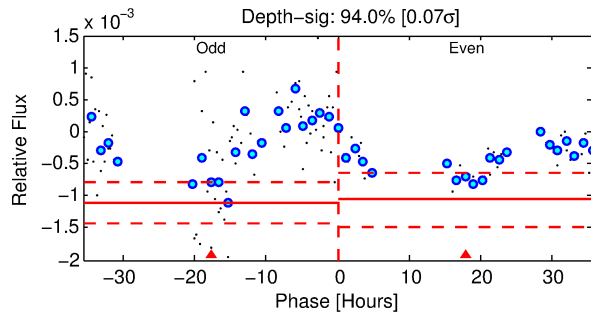
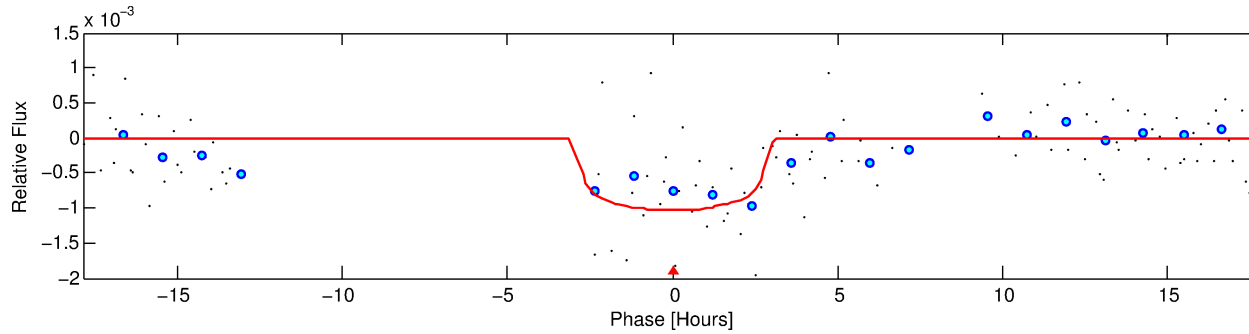
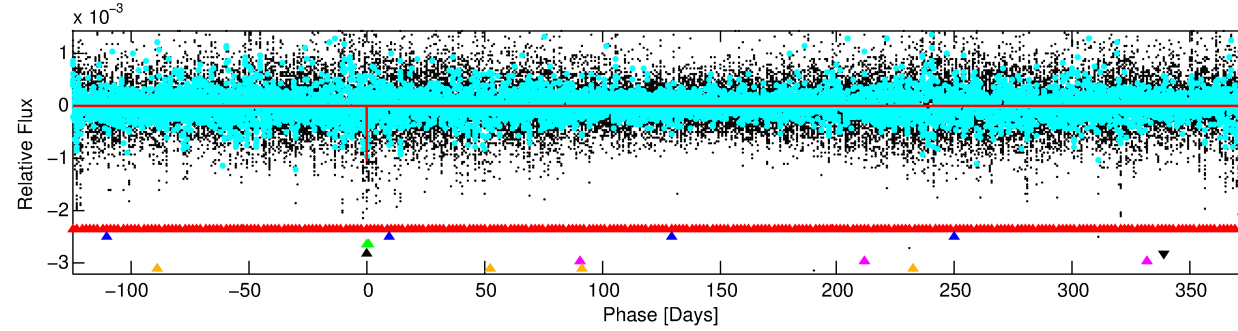
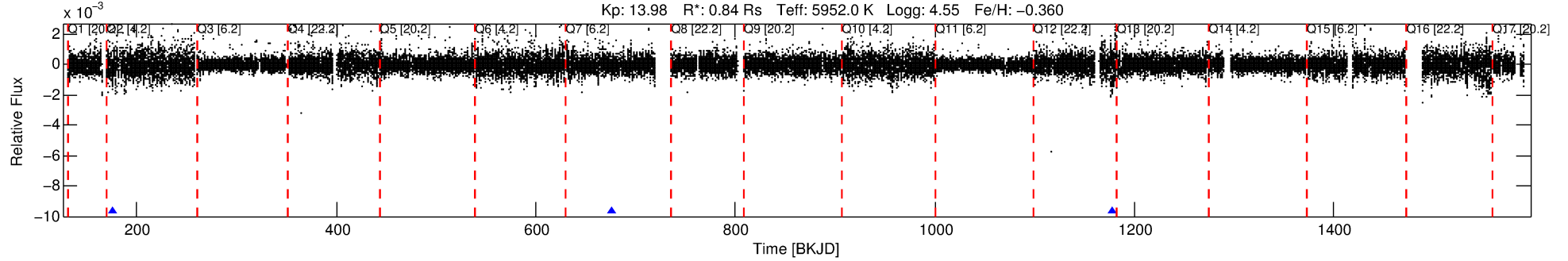
No Significant Match Found

DV One-Page Summary

KIC: 6471229 Candidate: 4 of 6 Period: 501.198 d

KOI: K06719 Corr: No Ephemeris Match

Kp: 13.98 R*: 0.84 Rs Teff: 5952.0 K Logg: 4.55 Fe/H: -0.360



DV Fit Results:

Period = 501.19759 [0.01120] d
Epoch = 175.1878 [0.0323] BKJD
Rp/R* = 0.0305 [0.0352]
a/R* = 555.75 [3083.44]
b = 0.56 [6.62]
Seff = 0.55 [0.19]
Teq = 220 [19] K
Rp = 2.81 [3.33] Re
a = 1.2058 [0.2699] AU
Ag = 23399.47 [55422.48] [0.42σ]
Teff = 4201 [2467] K [1.61σ]

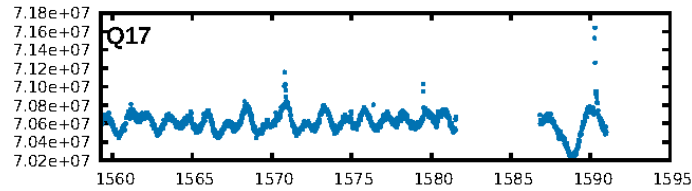
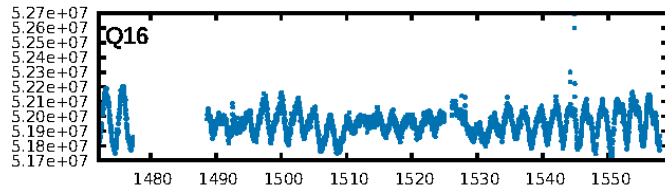
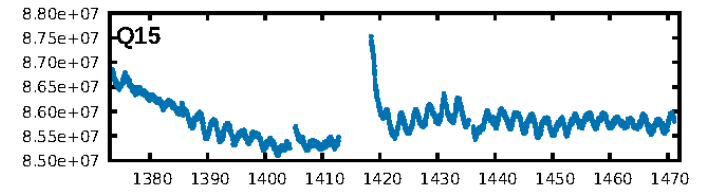
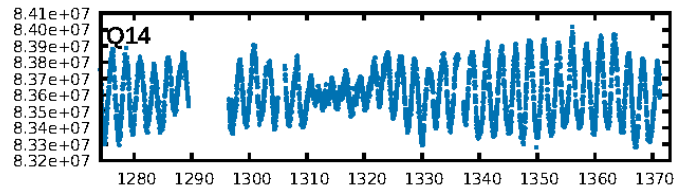
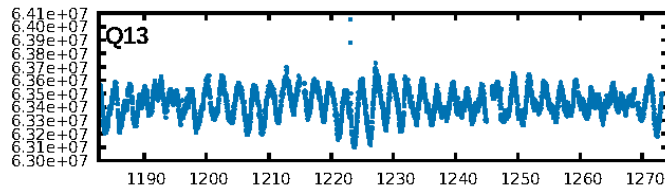
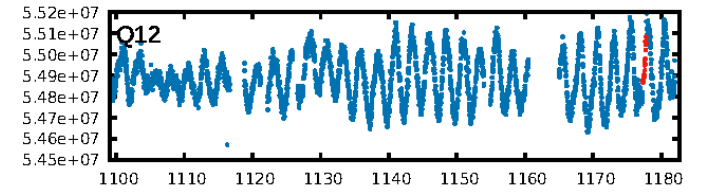
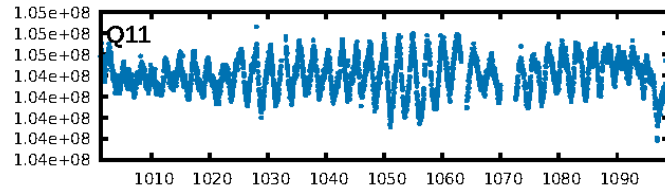
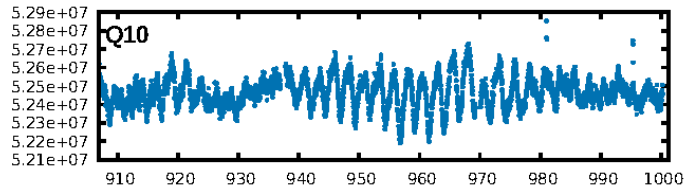
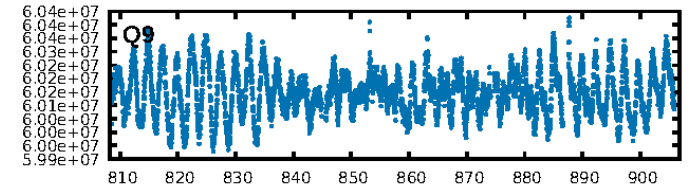
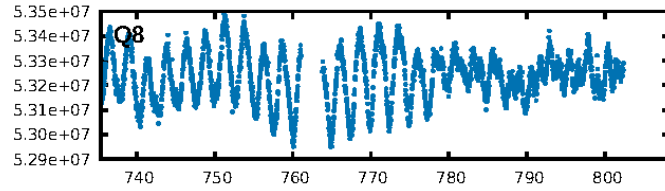
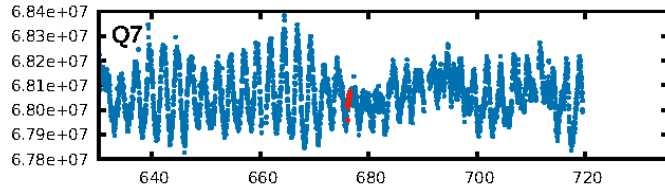
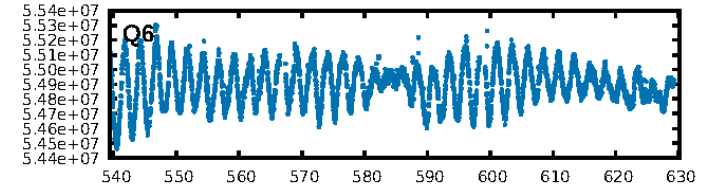
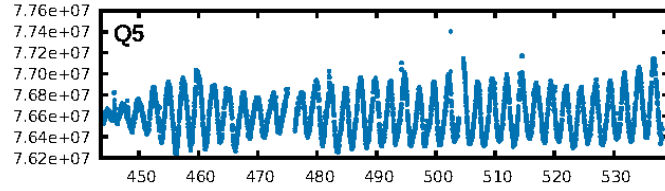
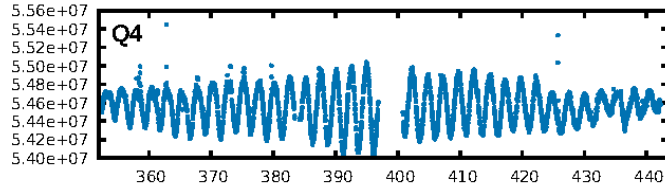
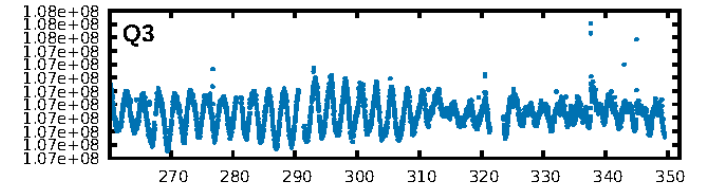
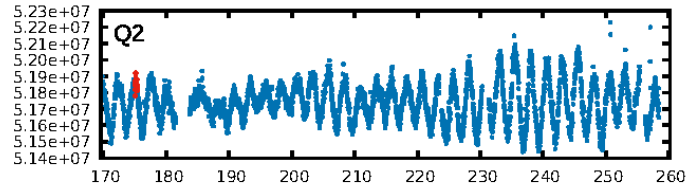
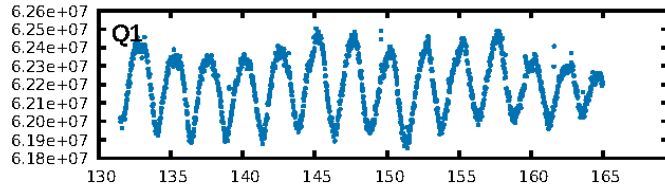
DV Diagnostic Results:

ShortPeriod-sig: 20.0% [0.25σ]
LongPeriod-sig: 100.0% [427.92σ]
ModelChiSquare2-sig: 66.7%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 1.14e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.682
Centroid-sig: 6.6%
Centroid-so: 0.825 arcsec [1.26σ]
OotOffset-rm: N/A
KicOffset-rm: 16.781 arcsec [229.41σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/2]

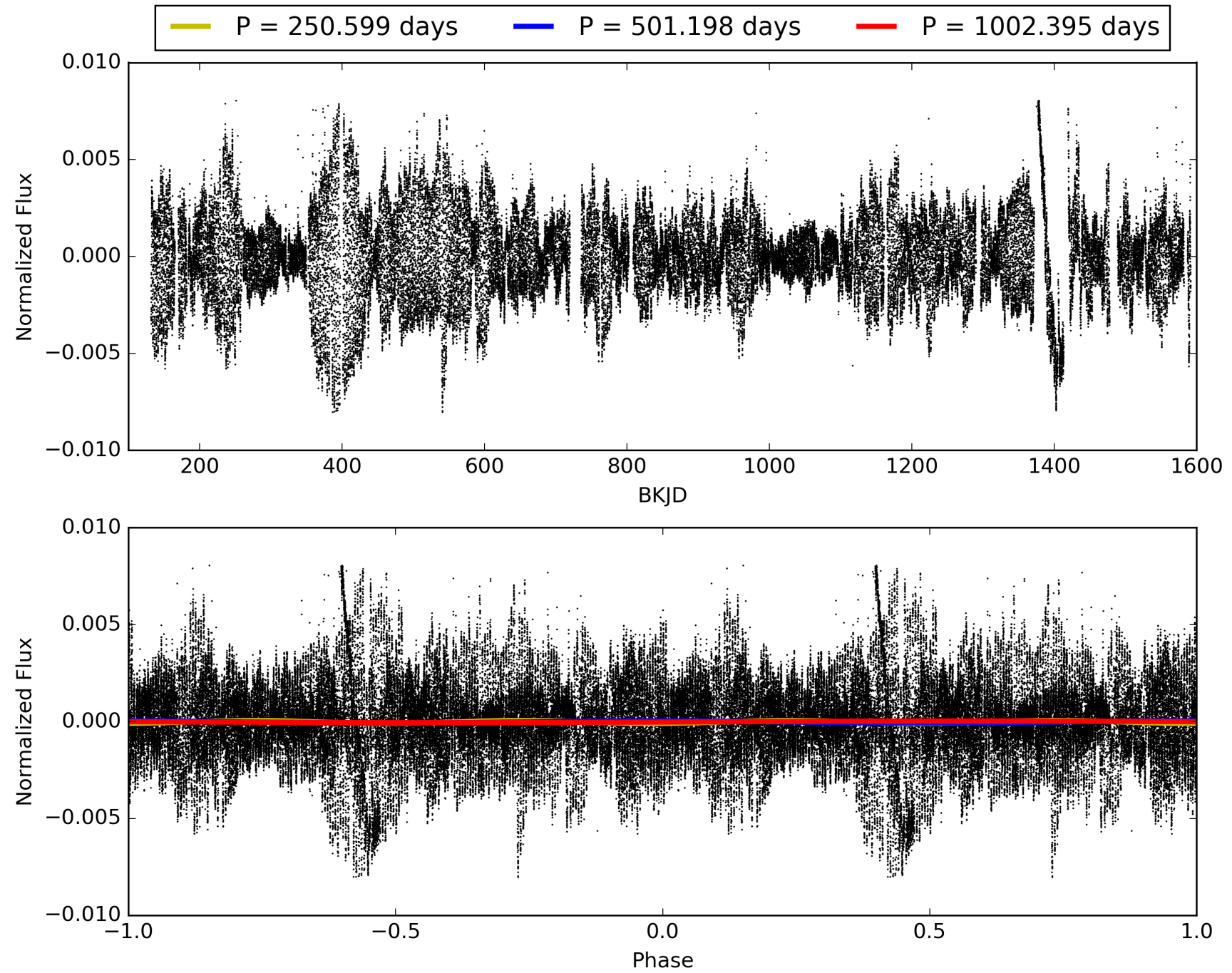
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:55:49 Z

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

TCE 006471229-04, PDC Light Curves

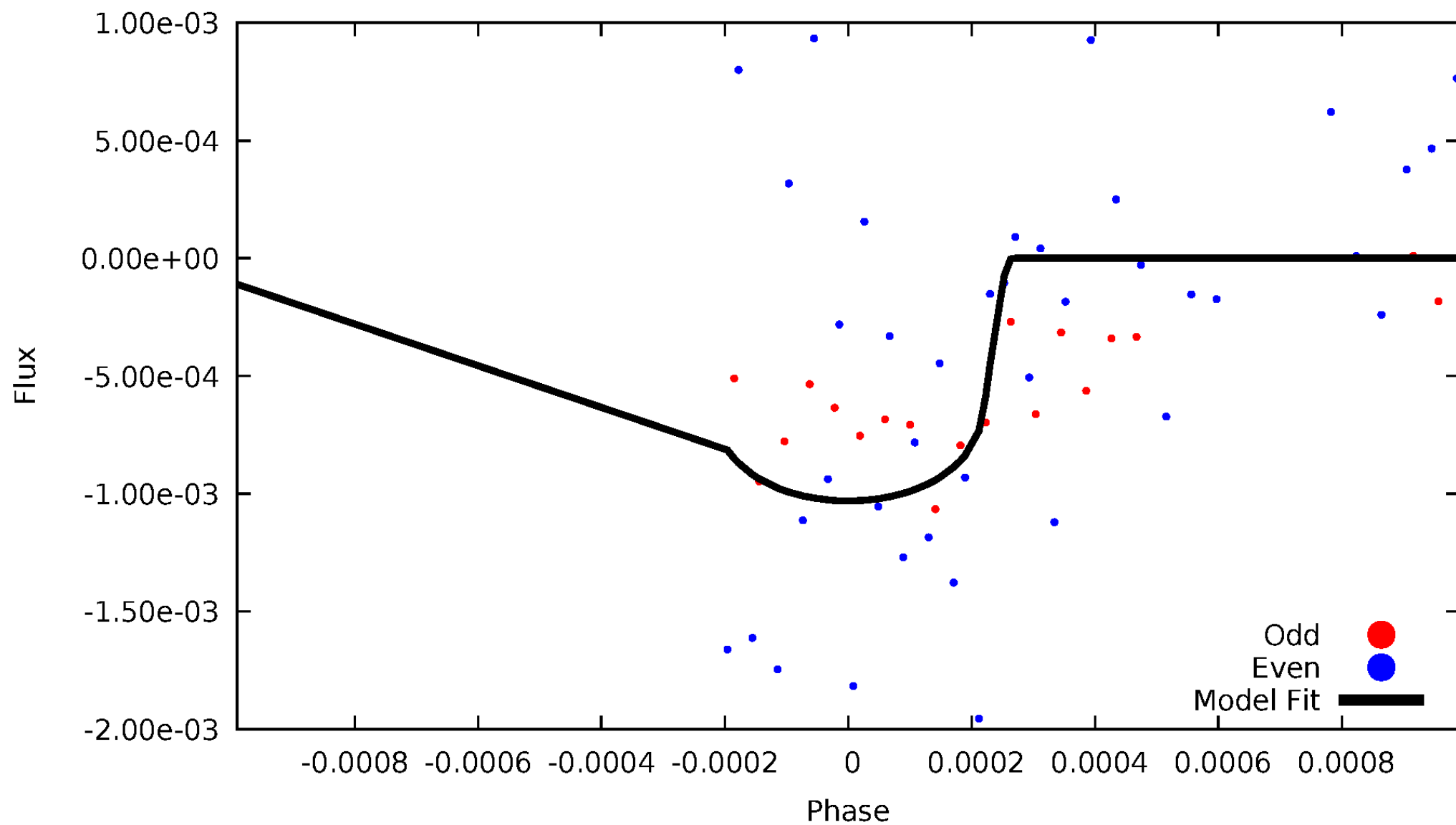


TCE 006471229-04



DV Odd/Even

TCE 006471229-04

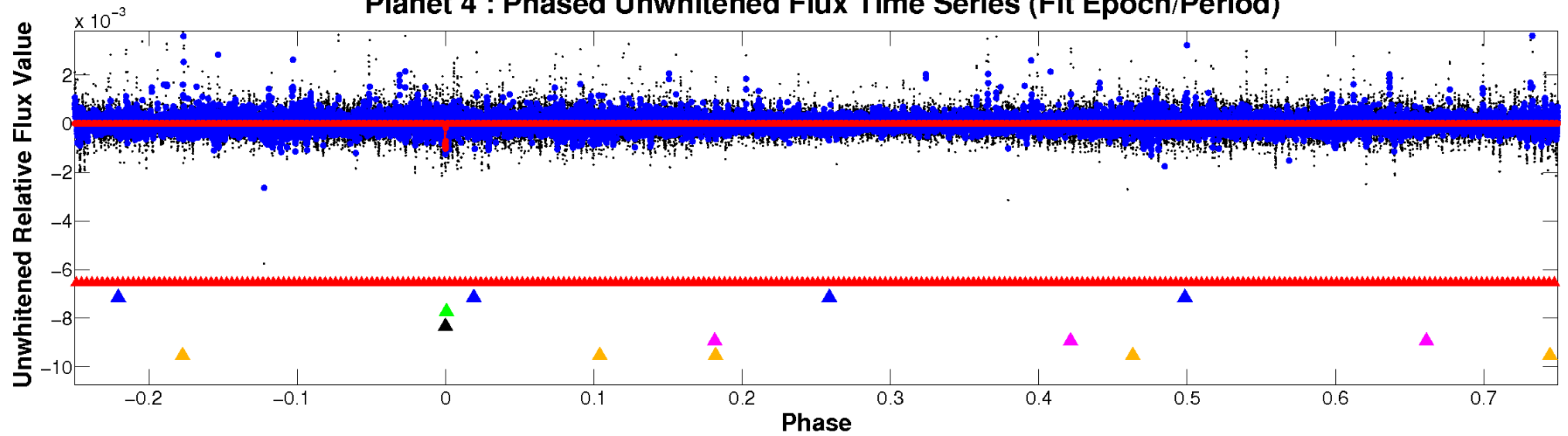


ALT Odd/Even

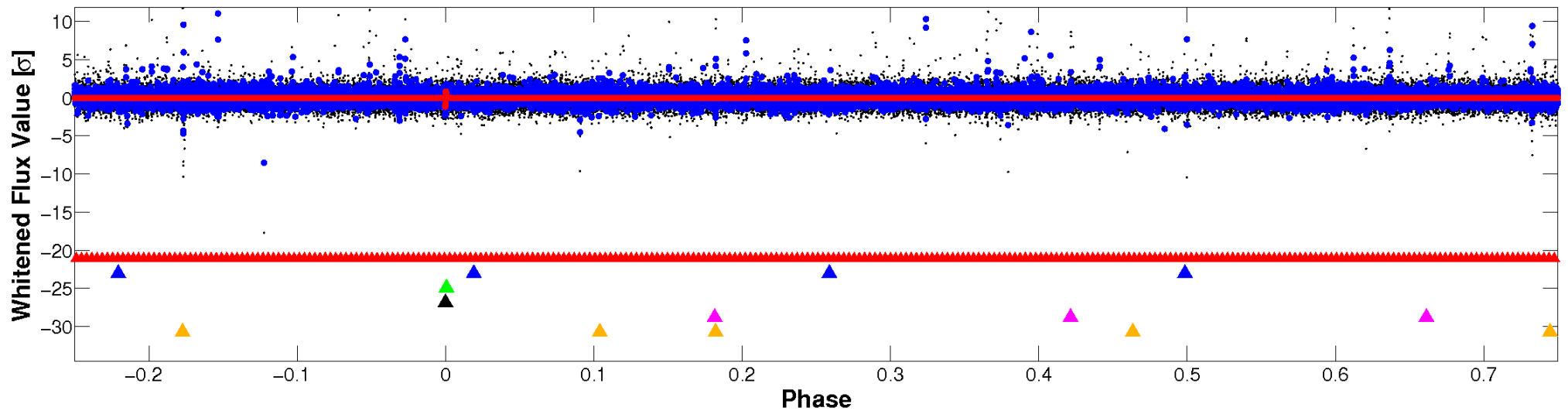
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

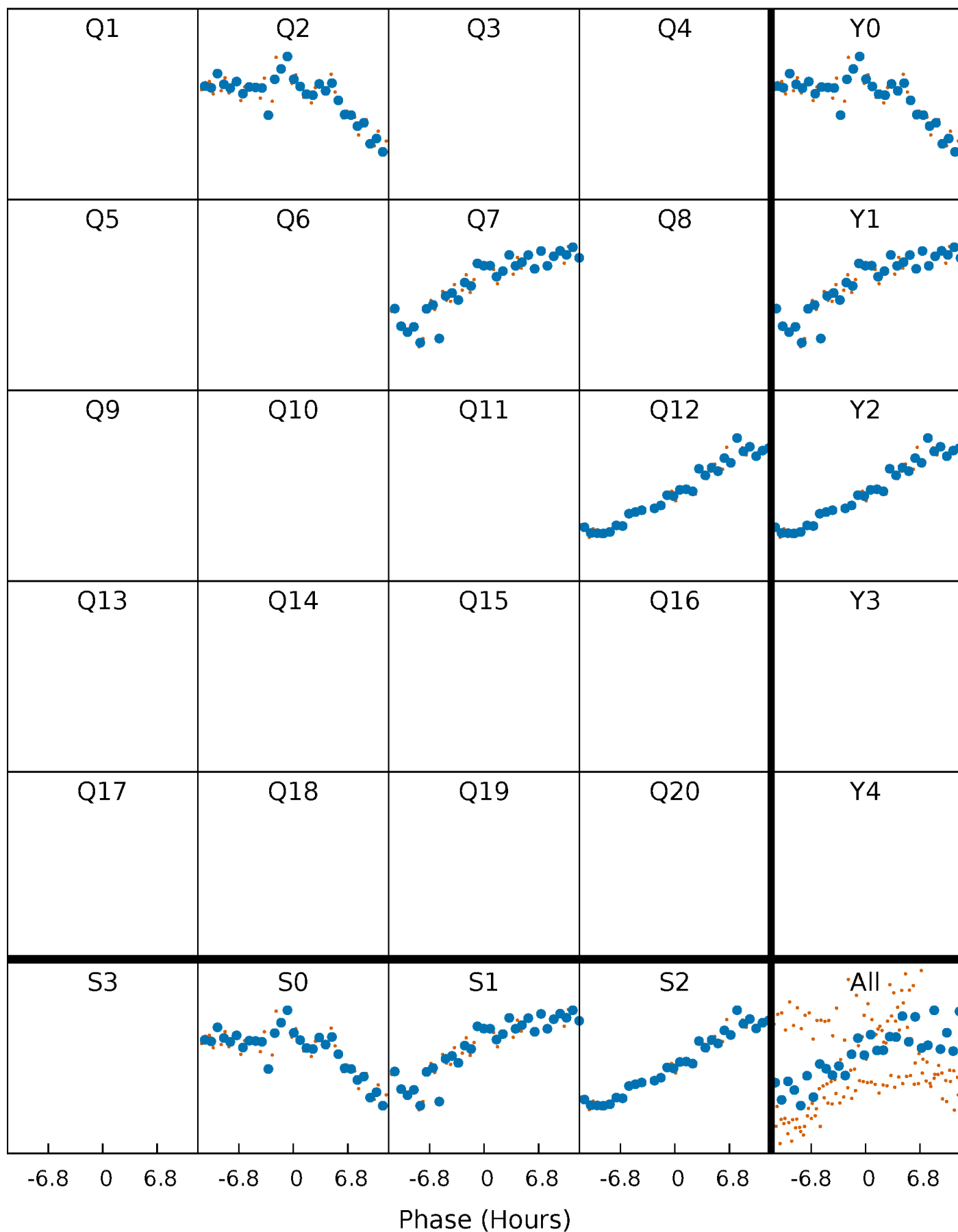


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



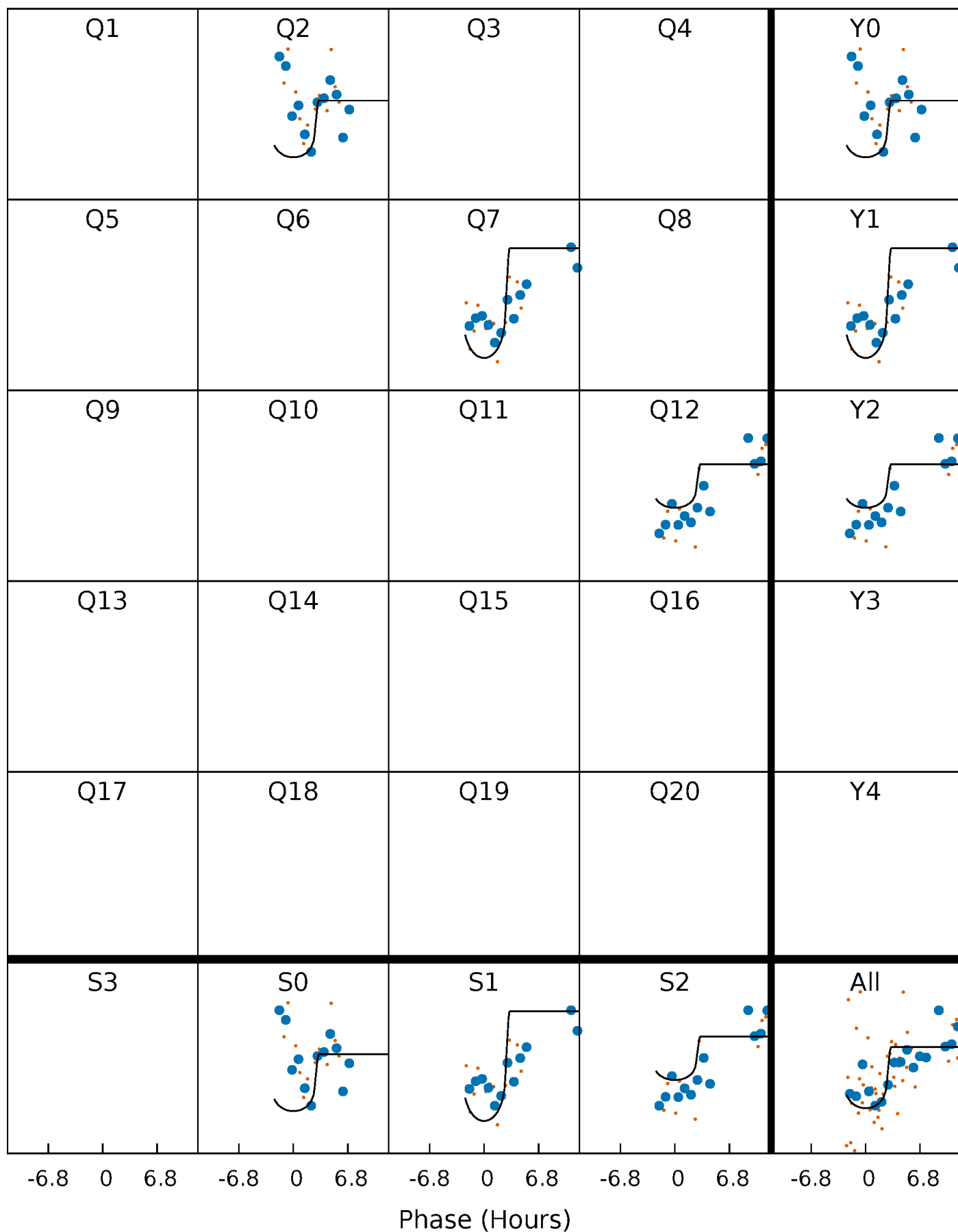
PDC Quarter-Phased Transit Curves

TCE 006471229-04 P=501.197594 Days $T_0=175.187760$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006471229-04 P=501.197594 Days $T_0=175.187760$ (BKJD)

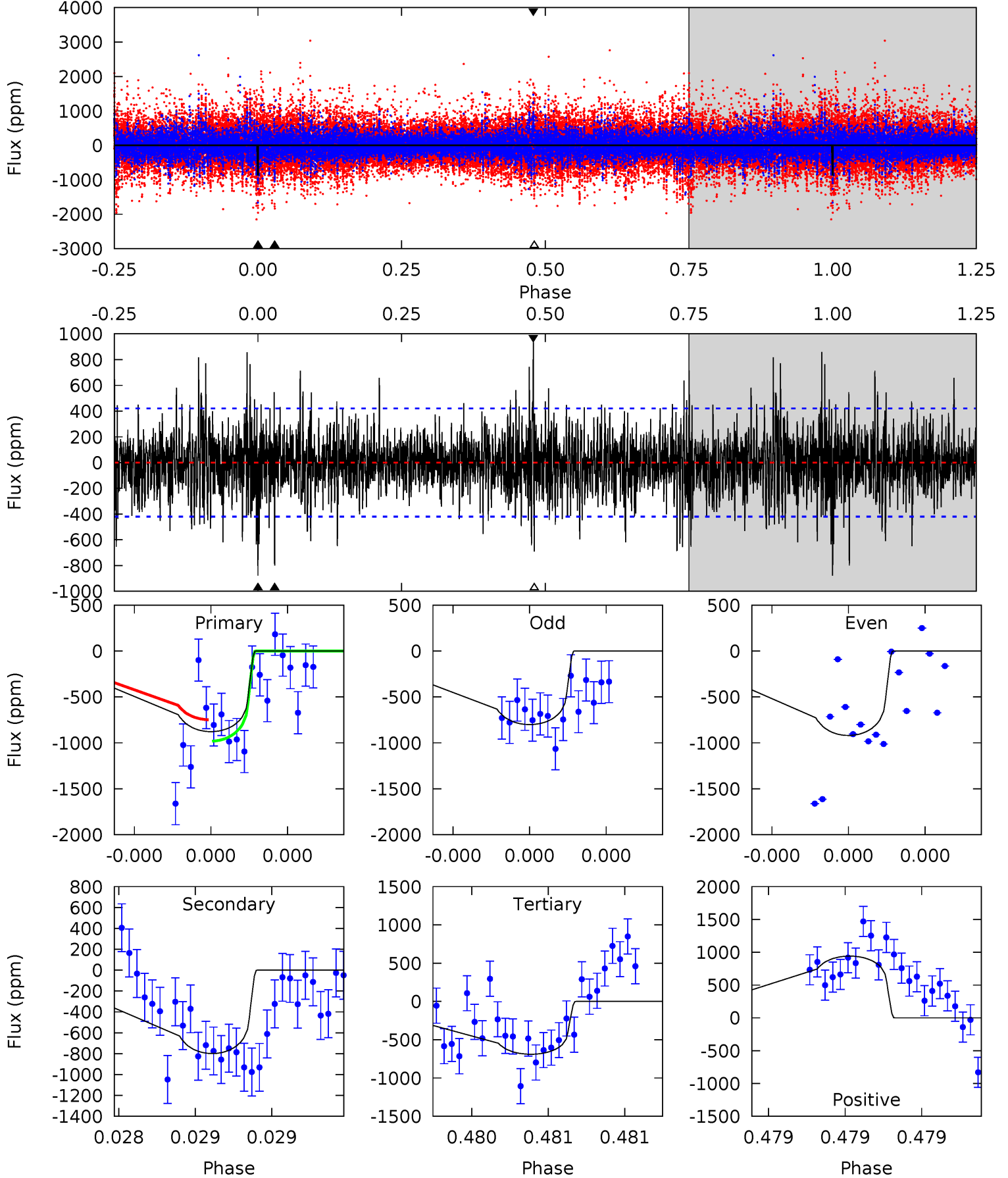


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006471229-04, P = 501.197594 Days, E = 175.187760 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	10.6	9.17	12.5	5.59	3.50	2.40	2.50	-0.84	1.45	-1.89	0.72	0.99	0.52	1.50



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006471229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5952^{+160}_{-160}	$4.554^{+0.033}_{-0.176}$	$-0.360^{+0.300}_{-0.300}$	$0.844^{+0.226}_{-0.071}$	$0.932^{+0.098}_{-0.109}$	$2.183^{+0.388}_{-1.055}$
	+3%/-3%	+1%/-4%	+83%/-83%	+27%/-8%	+11%/-12%	+18%/-48%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006471229-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-799 ± 75	$3.88^{+3.19}_{-2.53}$	314^{+17}_{-13}	5070^{+3810}_{-1063}	$41735^{+293020}_{-29123}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

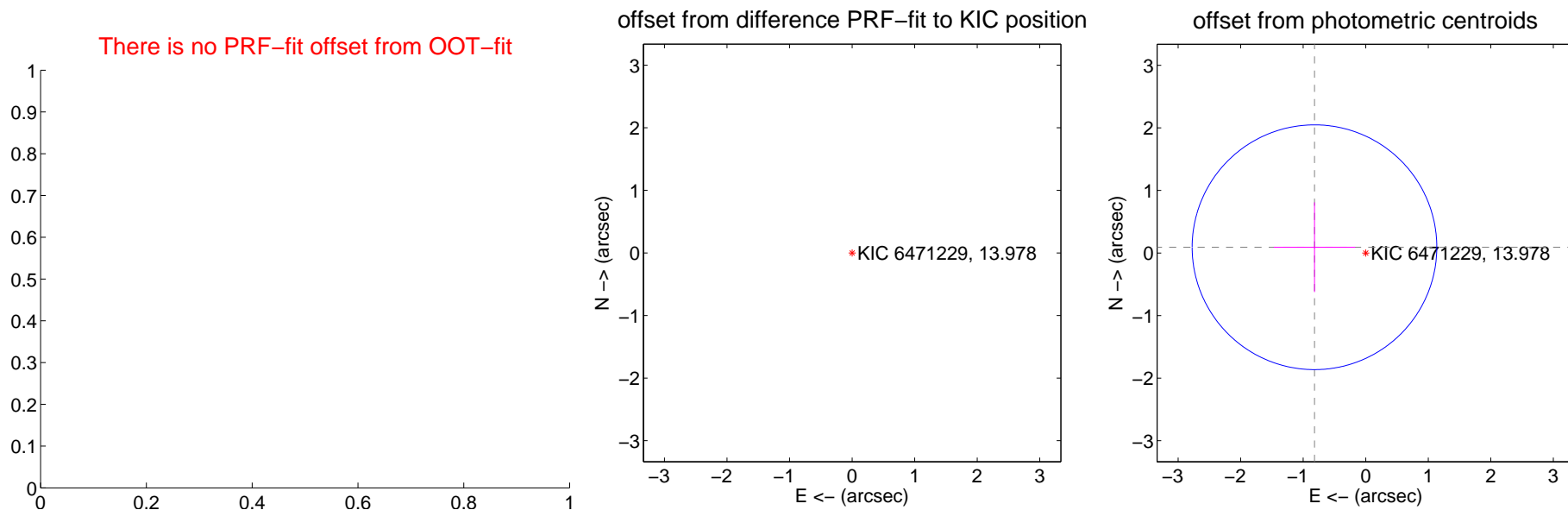
DV Centroid Data

Supplemental centroid analysis for 006471229-04. Kepler magnitude: 13.98. Transit SNR 6.27

There are 0 quarters with good PRF difference image offsets

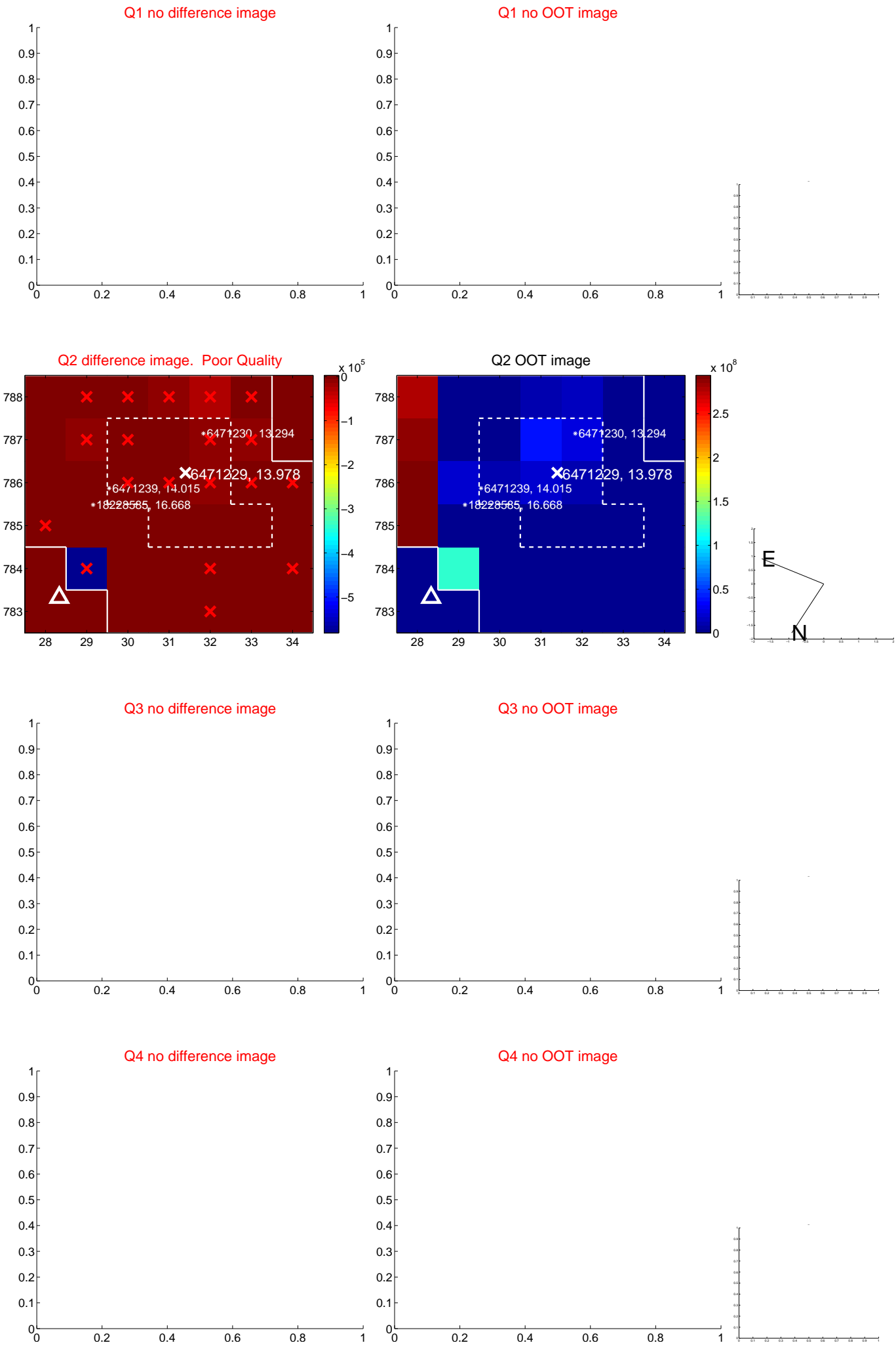
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	16.781 \pm 0.073	229.41	5.526 \pm 0.093	15.845 \pm 0.070
photometric centroid source offset	0.82 \pm 0.65	1.26	0.82 \pm 0.65	0.09 \pm 0.72

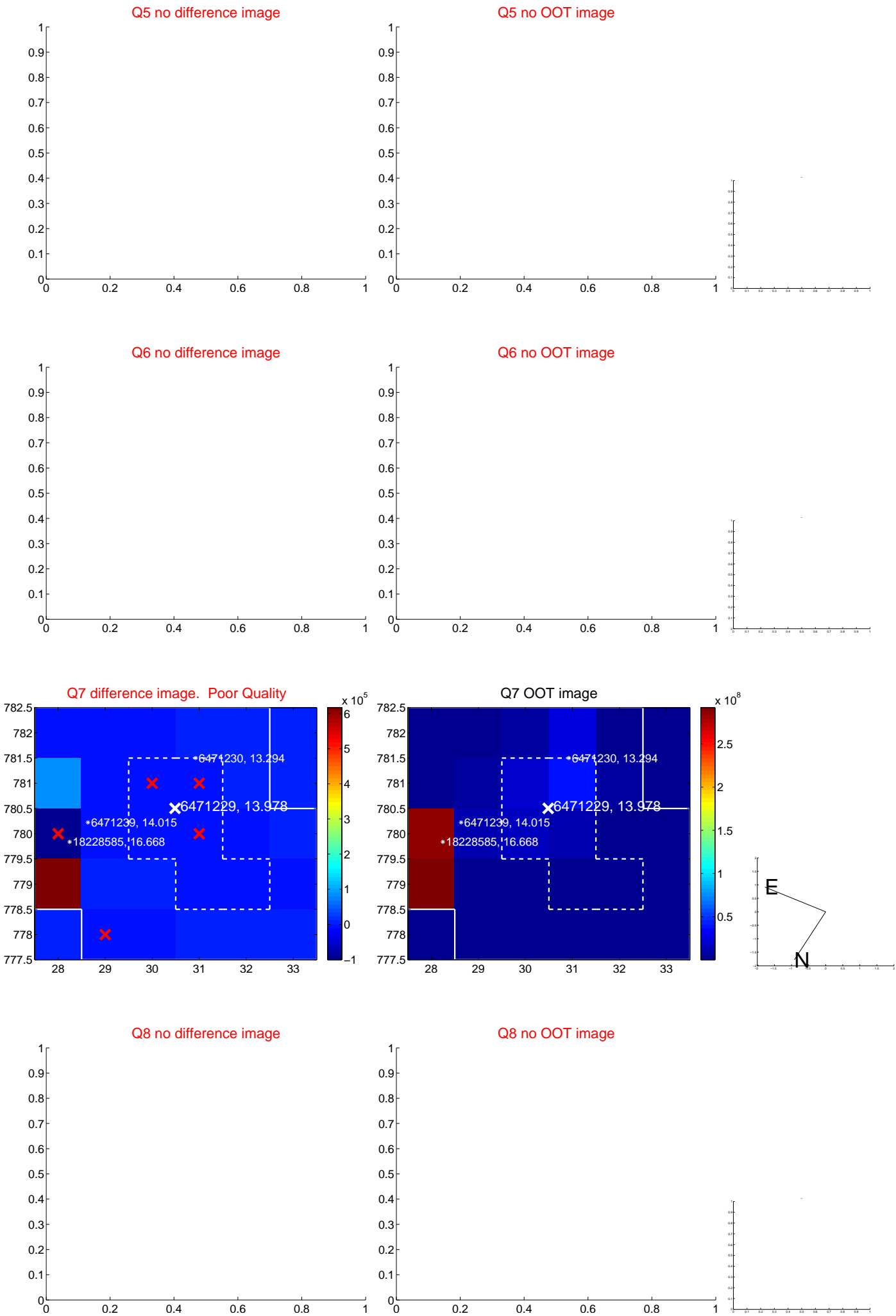


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



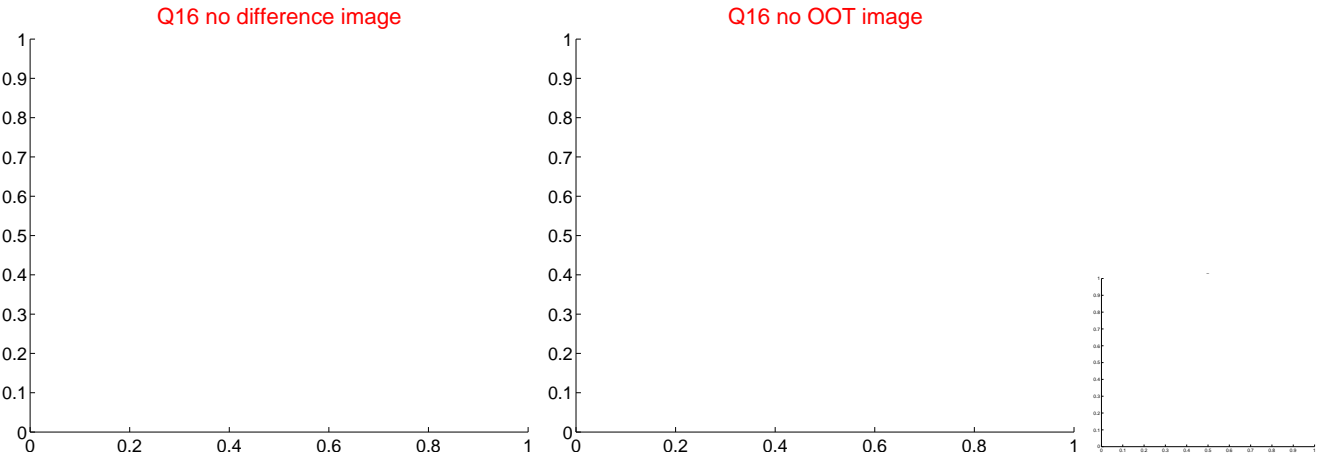
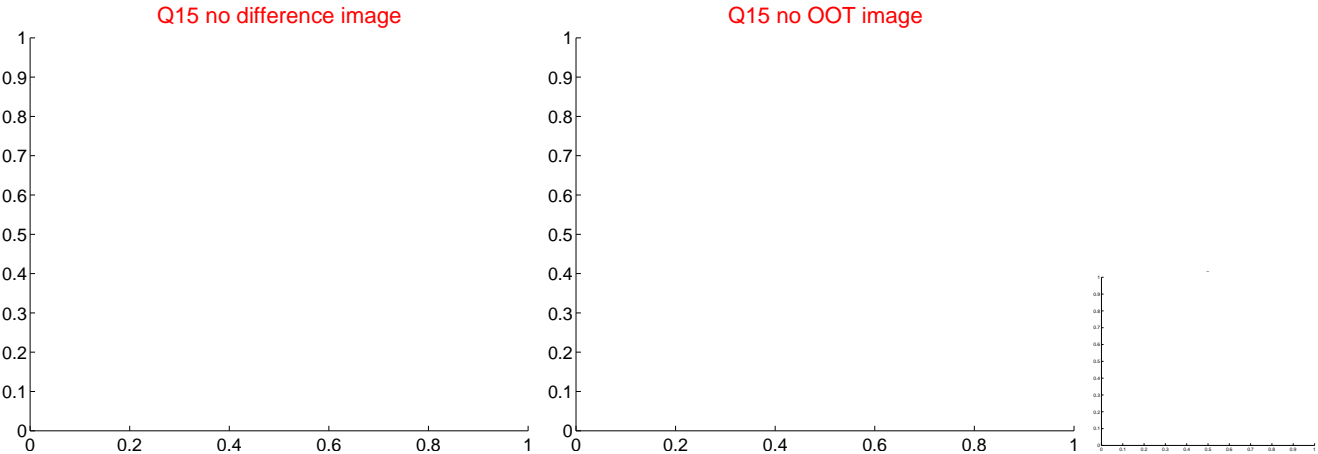
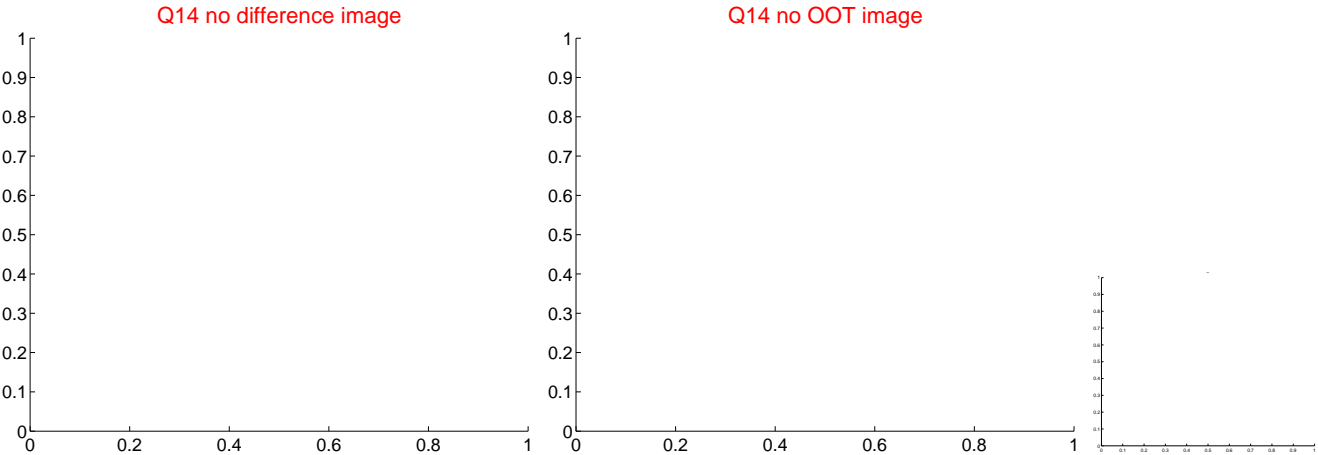
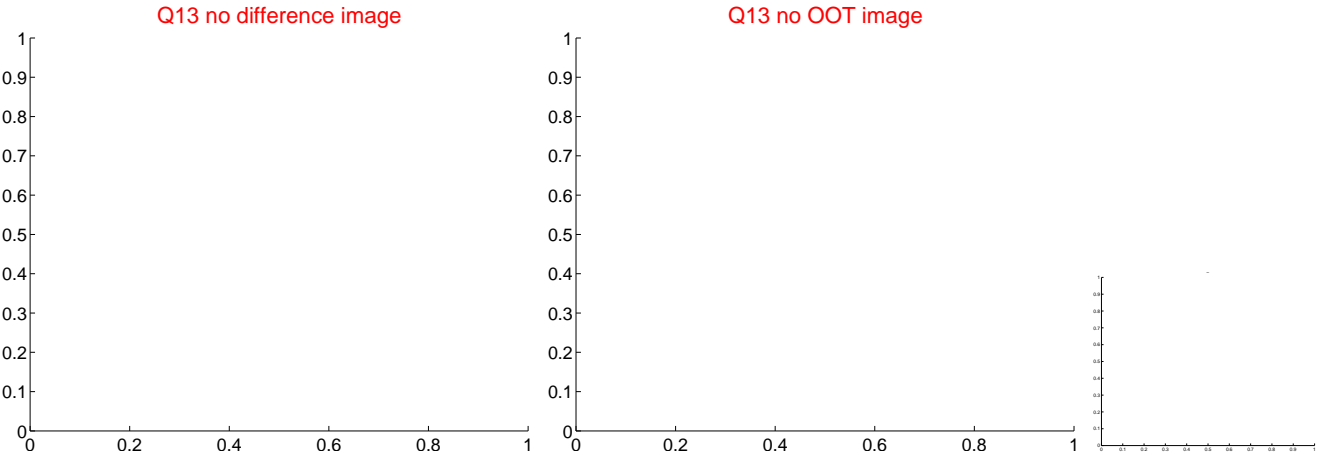
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



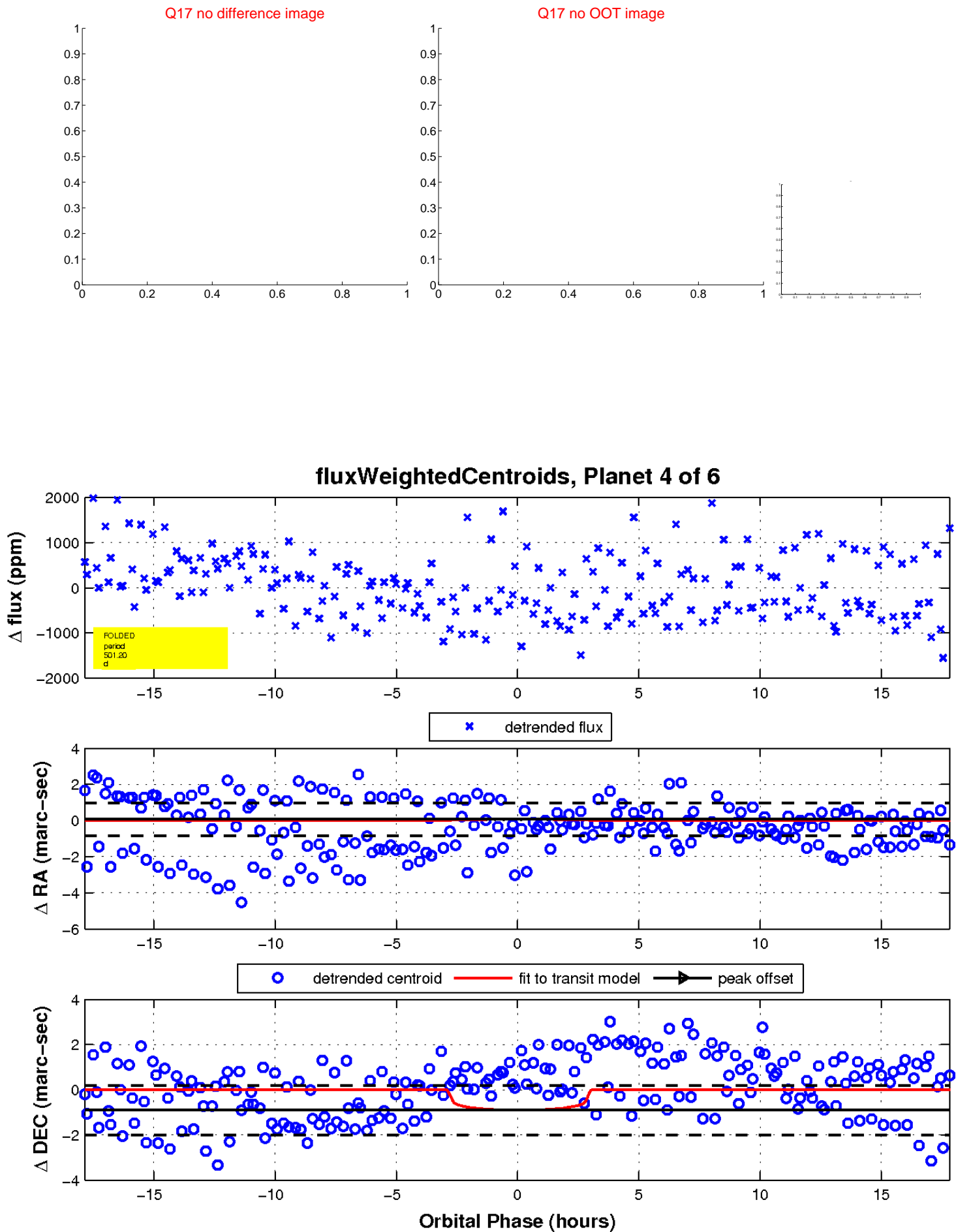
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

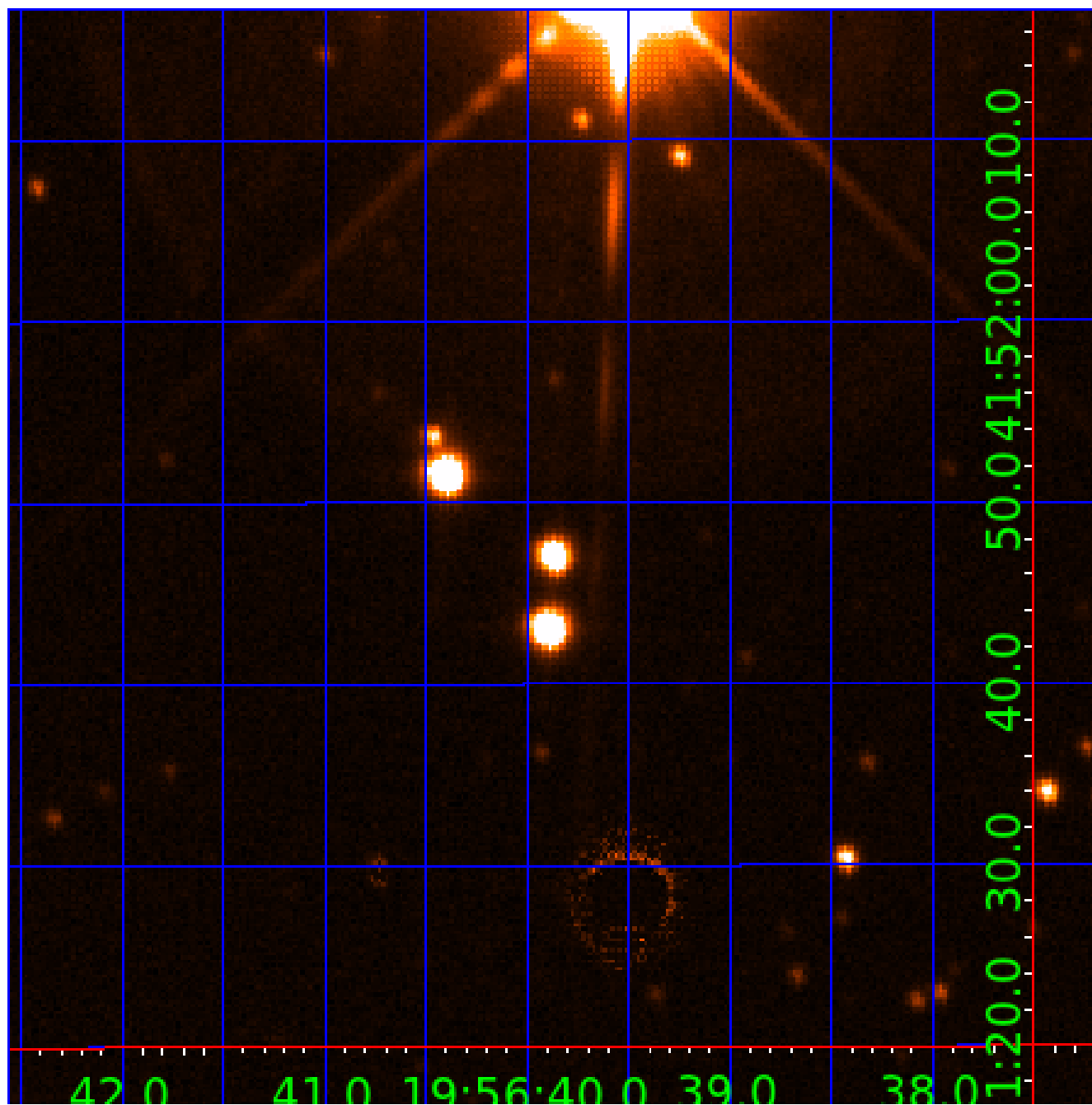


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006471229

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})
006471229-01	OBS	6719.01	1.752431	132.800709	82.7	3.379	13.1	12.4	0.84	5952	0.90	1038.13
006471229-02	OBS	No	381.043705	425.074202	830.1	9.875	12.8	4.7	0.84	5952	2.58	0.79
006471229-03	OBS	No	501.134573	175.601699	330.4	0.577	9.9	1.3	0.84	5952	1.60	0.55
006471229-04	OBS	No	501.197594	175.187760	1030.1	5.957	10.1	6.3	0.84	5952	2.81	0.55
006471229-06	OBS	No	321.089157	266.463399	719.2	4.363	10.6	7.0	0.84	5952	2.37	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006471229-01	OBS	FP	0.00	0	0	0	1	CENT_FEW_DIFFS—EPHEM_MATCH
006471229-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006471229-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
006471229-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
006471229-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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 006471229-06

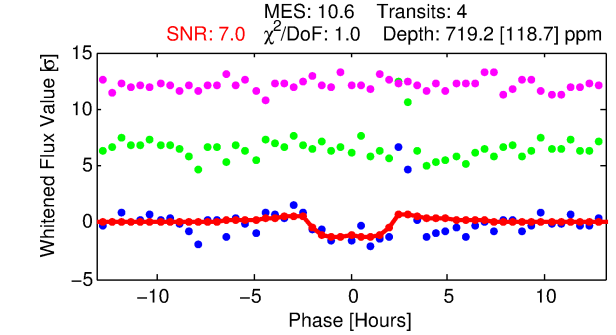
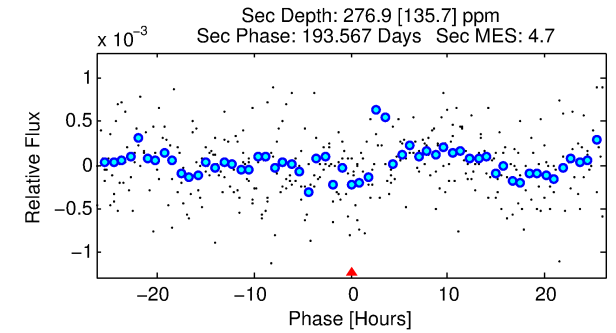
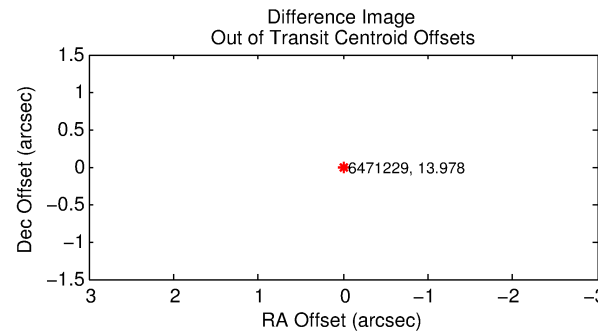
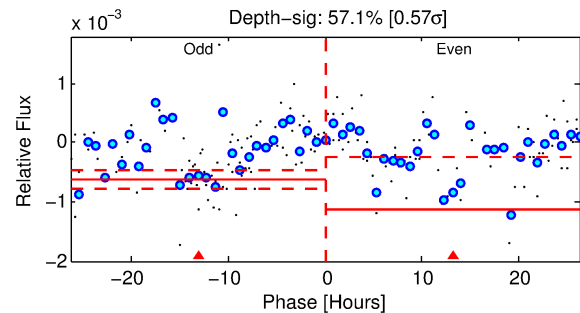
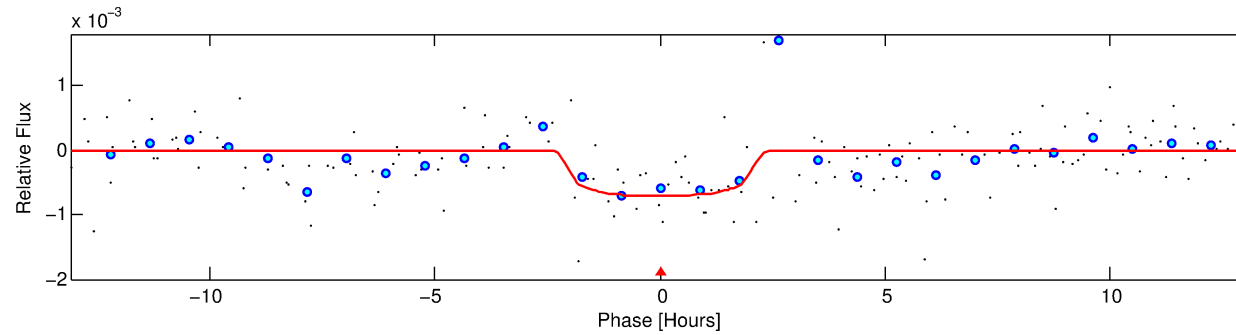
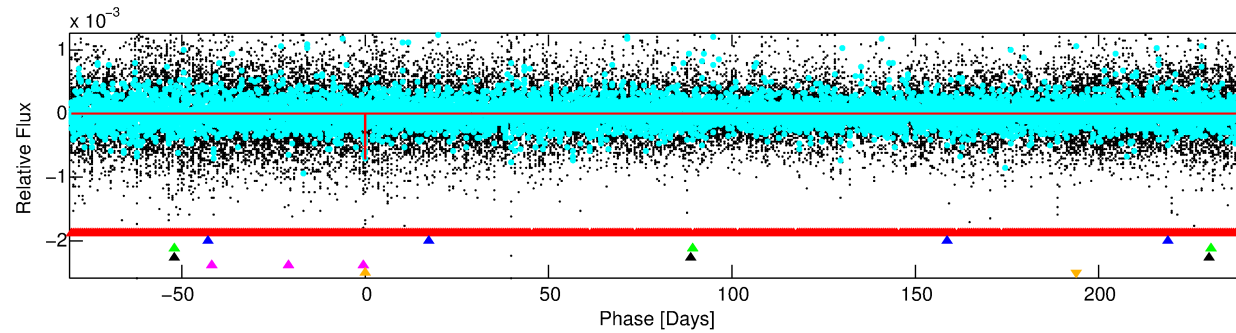
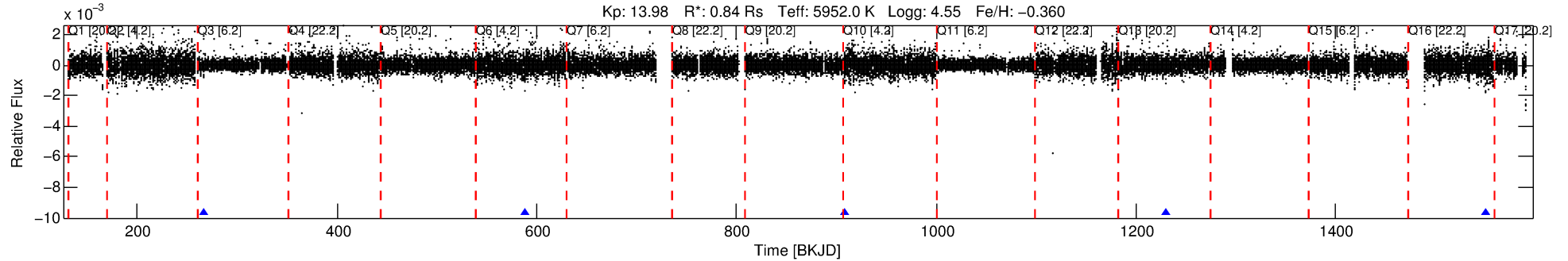
No Significant Match Found

DV One-Page Summary

KIC: 6471229 Candidate: 6 of 6 Period: 321.089 d

KOI: K06719 Corr: No Ephemeris Match

Kp: 13.98 R*: 0.84 Rs Teff: 5952.0 K Logg: 4.55 Fe/H: -0.360



DV Fit Results:

Period = 321.08916 [0.00488] d
Epoch = 266.4634 [0.0098] BKJD
Rp/R* = 0.0258 [0.0351]
a/R* = 459.51 [3015.67]
b = 0.62 [6.59]
Seff = 1.00 [0.34]
Teq = 255 [22] K
Rp = 2.37 [3.29] Re
a = 0.8961 [0.2006] AU
Ag = 21702.39 [60457.80] [0.36σ]
Teffp = 4782 [3310] K [1.37σ]

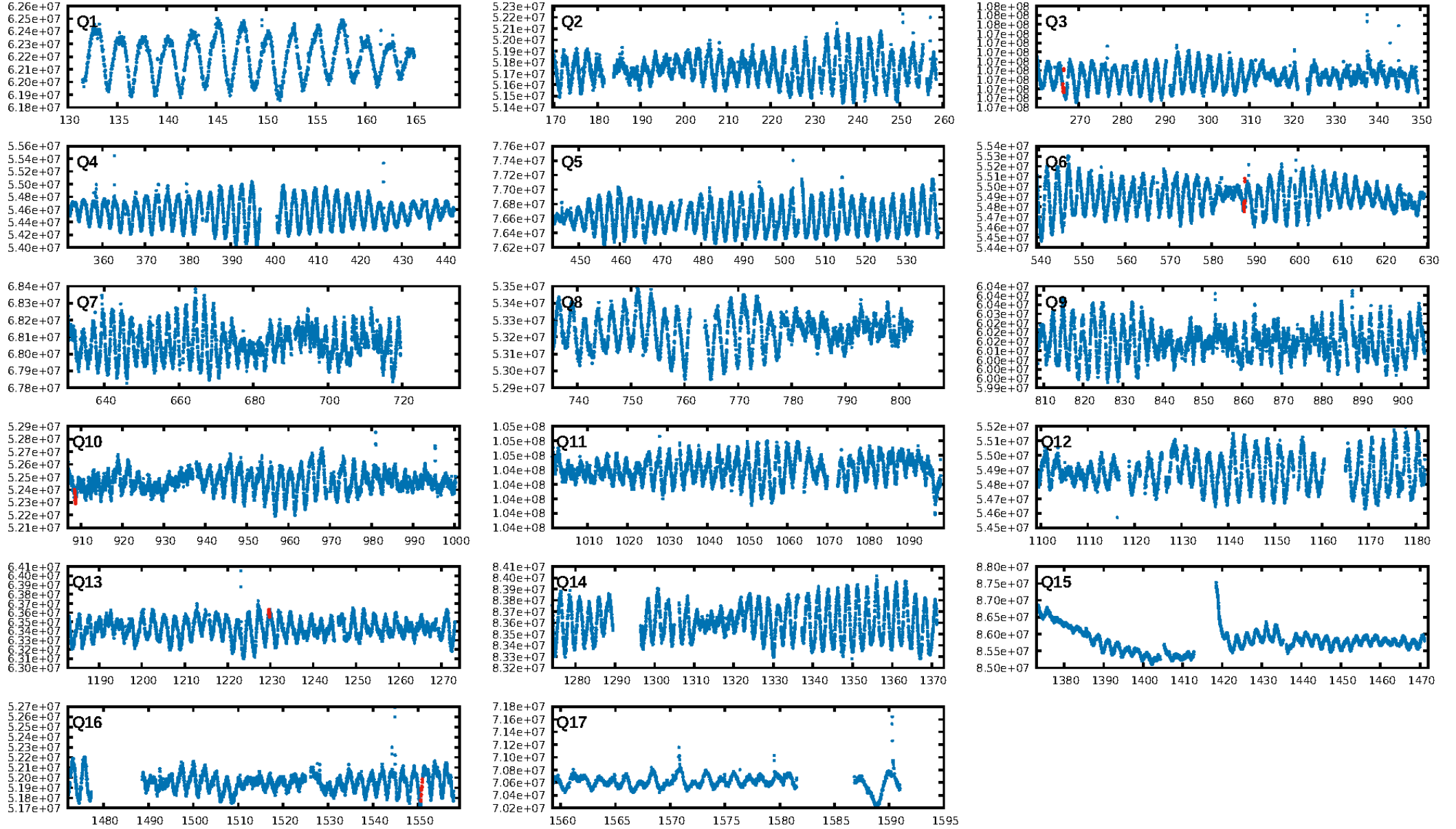
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1388.83σ]
LongPeriod-sig: 100.0% [133.28σ]
ModelChiSquare2-sig: 11.2%
ModelChiSquareGof-sig: 91.2%
Bootstrap-pfa: 1.29e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.752
Centroid-sig: 16.9%
Centroid-so: 1.023 arcsec [1.50σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-rm: 13.635 arcsec [3.95σ]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.40 [2/5]

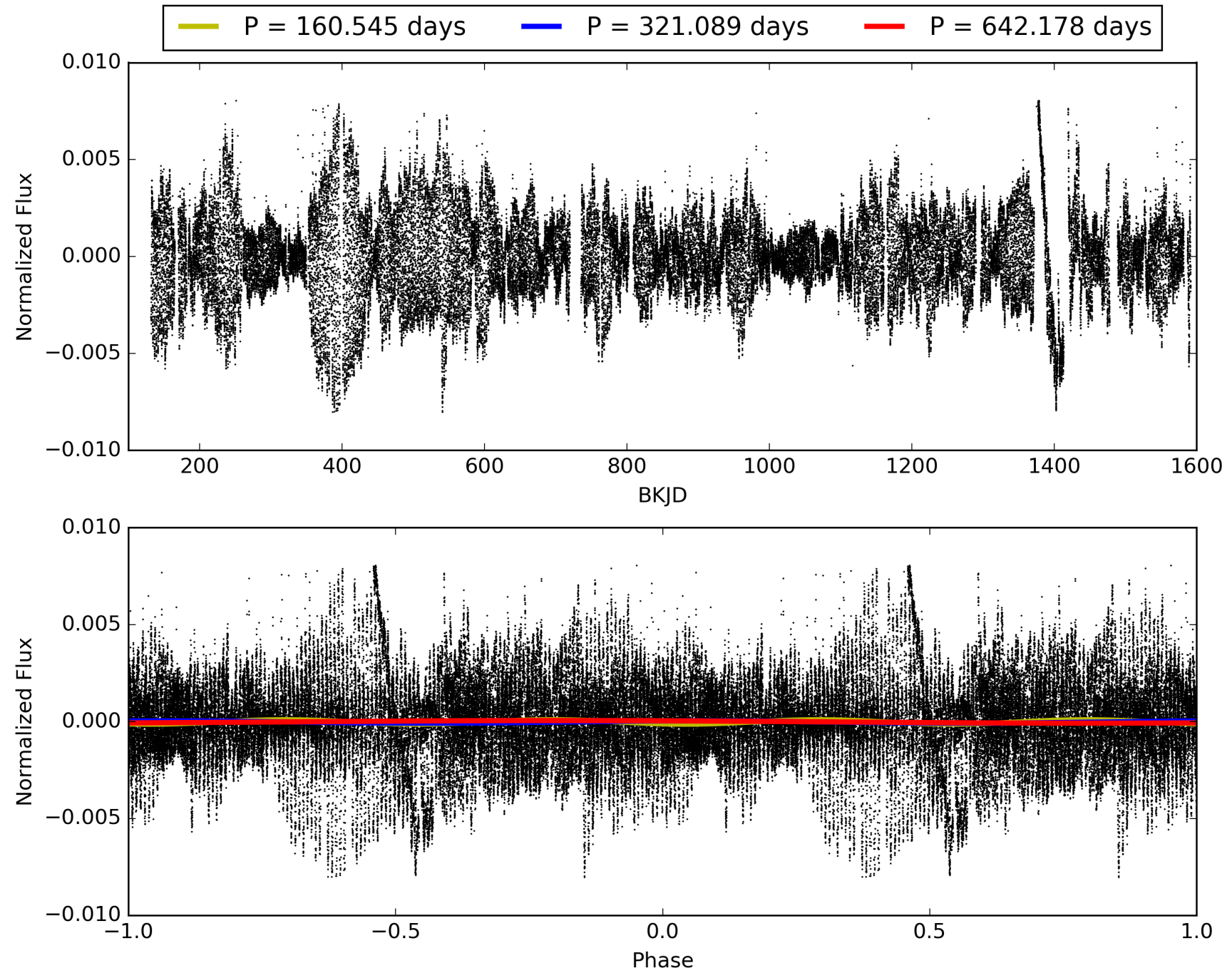
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:56:24 Z

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

TCE 006471229-06, PDC Light Curves

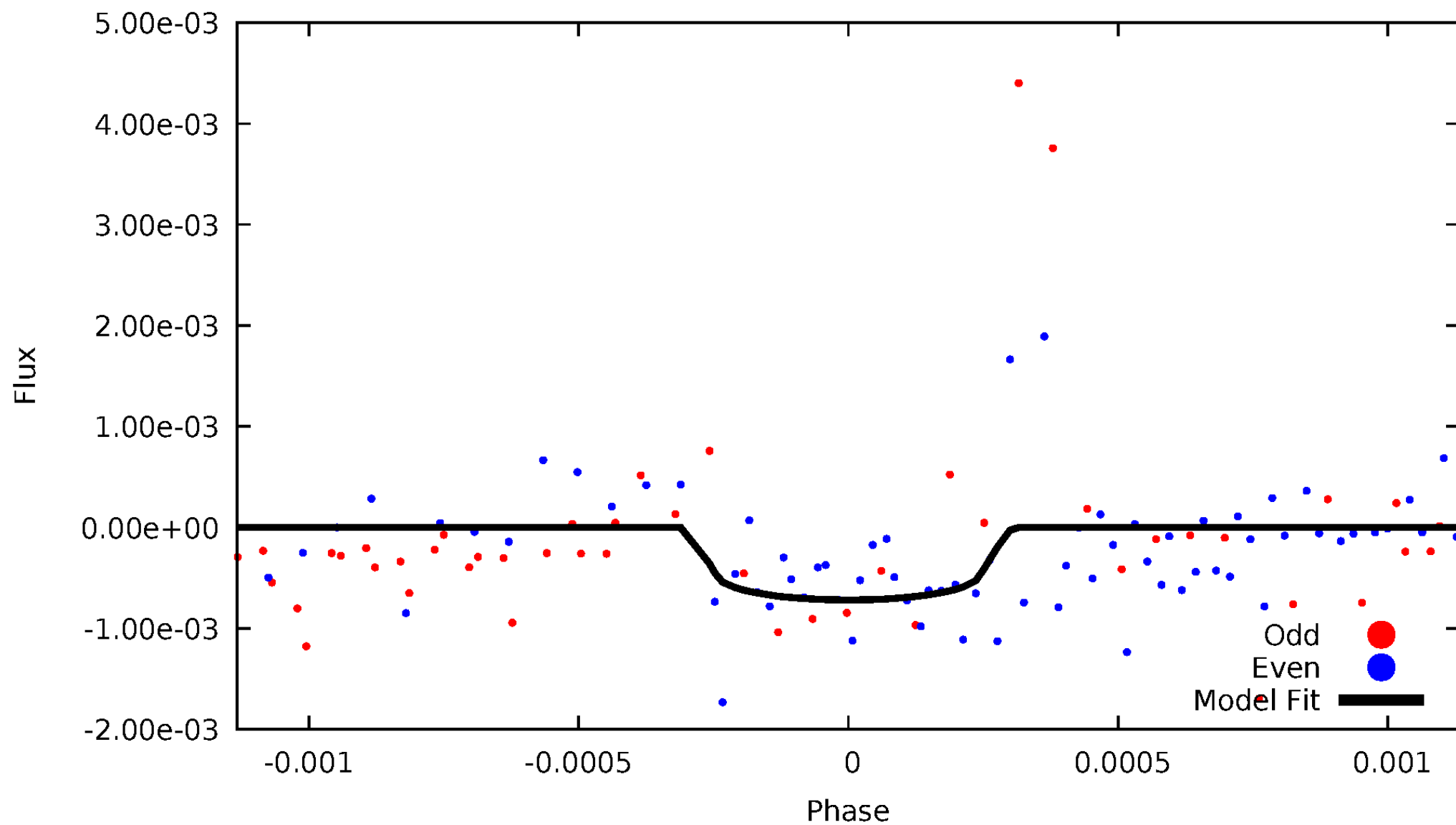


TCE 006471229-06



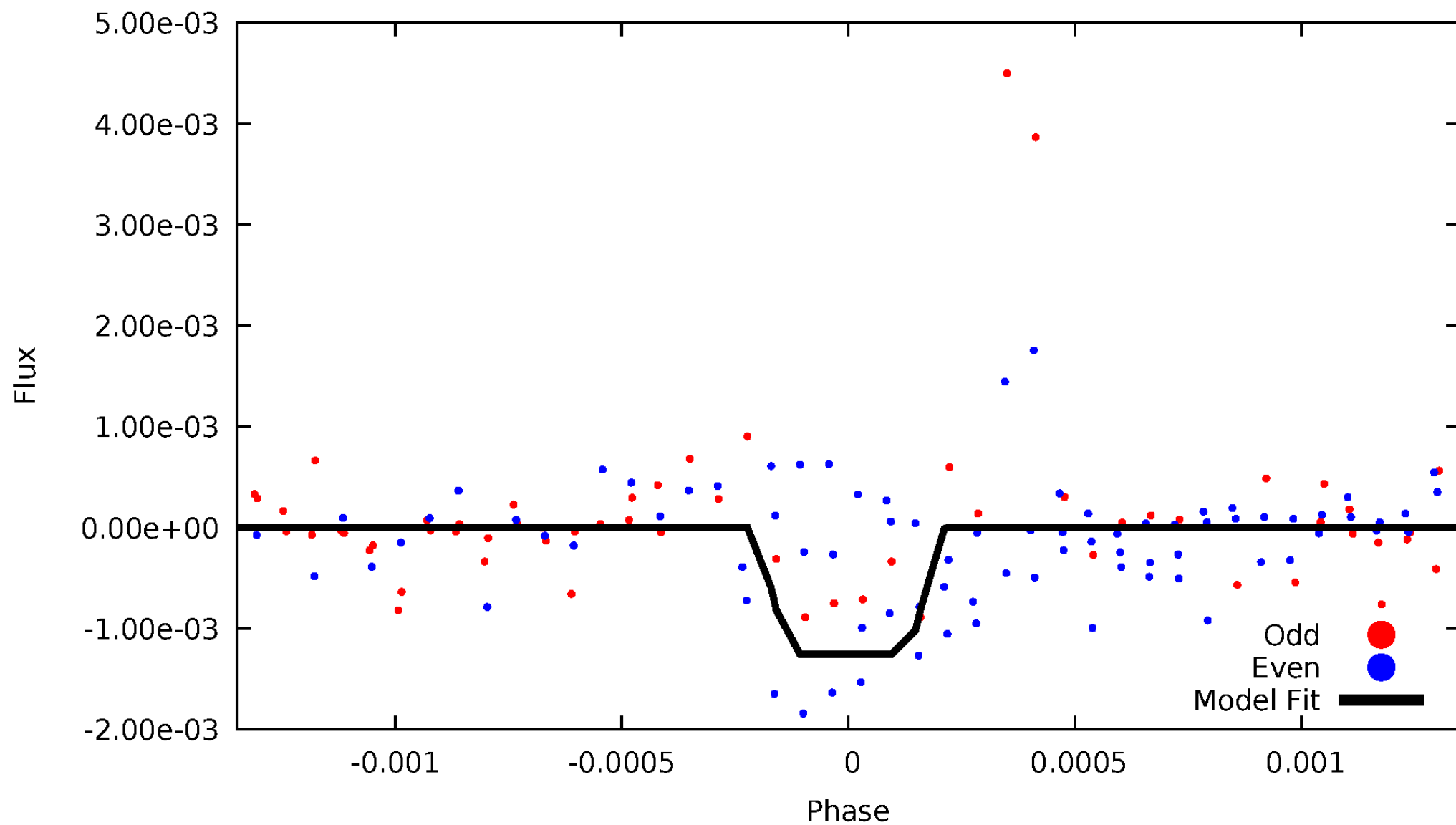
DV Odd/Even

TCE 006471229-06



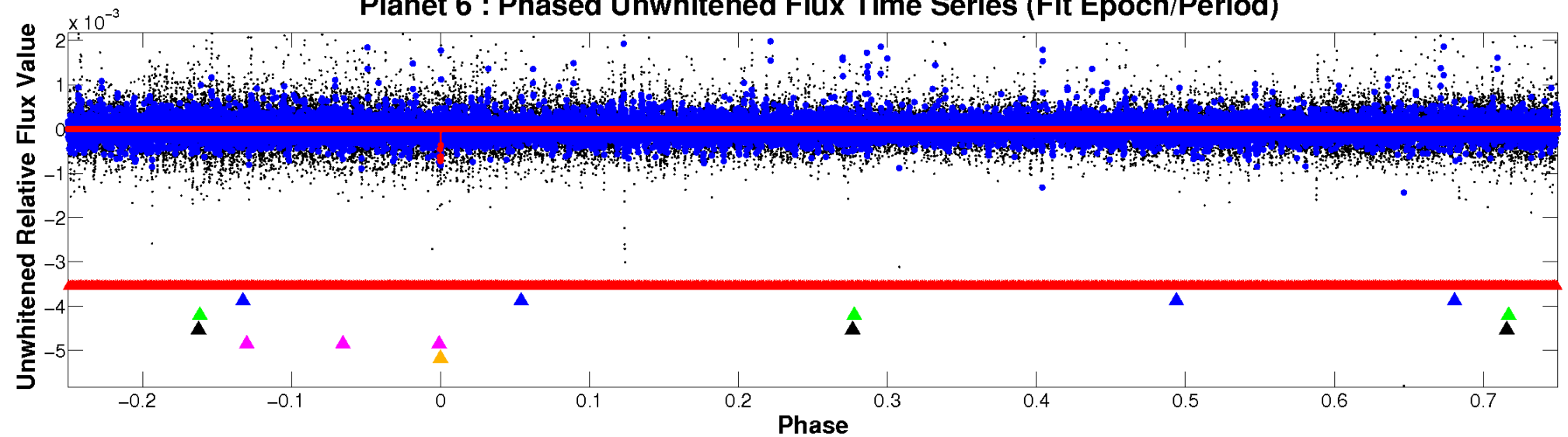
ALT Odd/Even

TCE 006471229-06

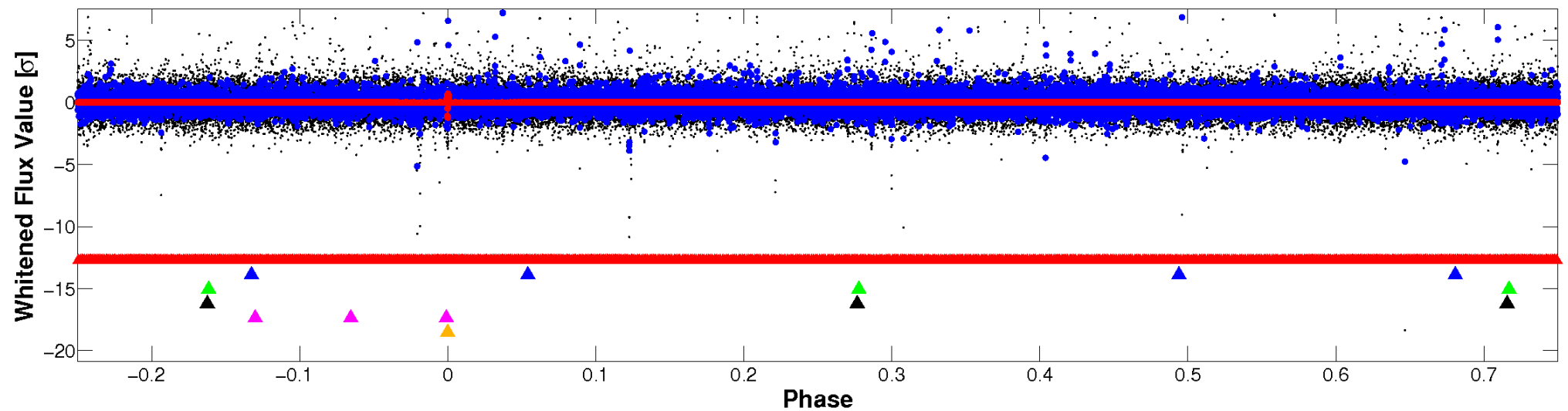


Non-Whitened Vs. Whitened Light Curve

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

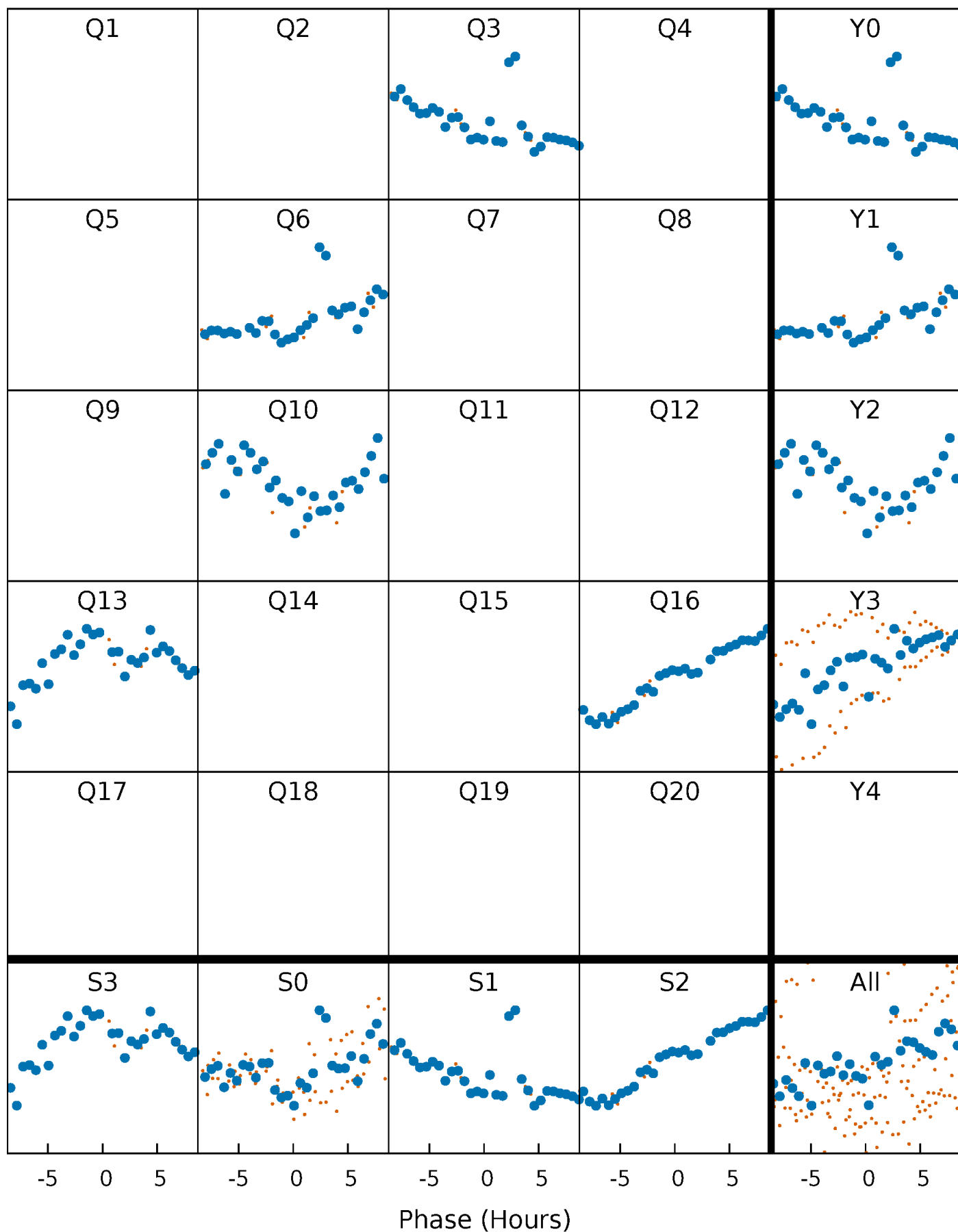


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



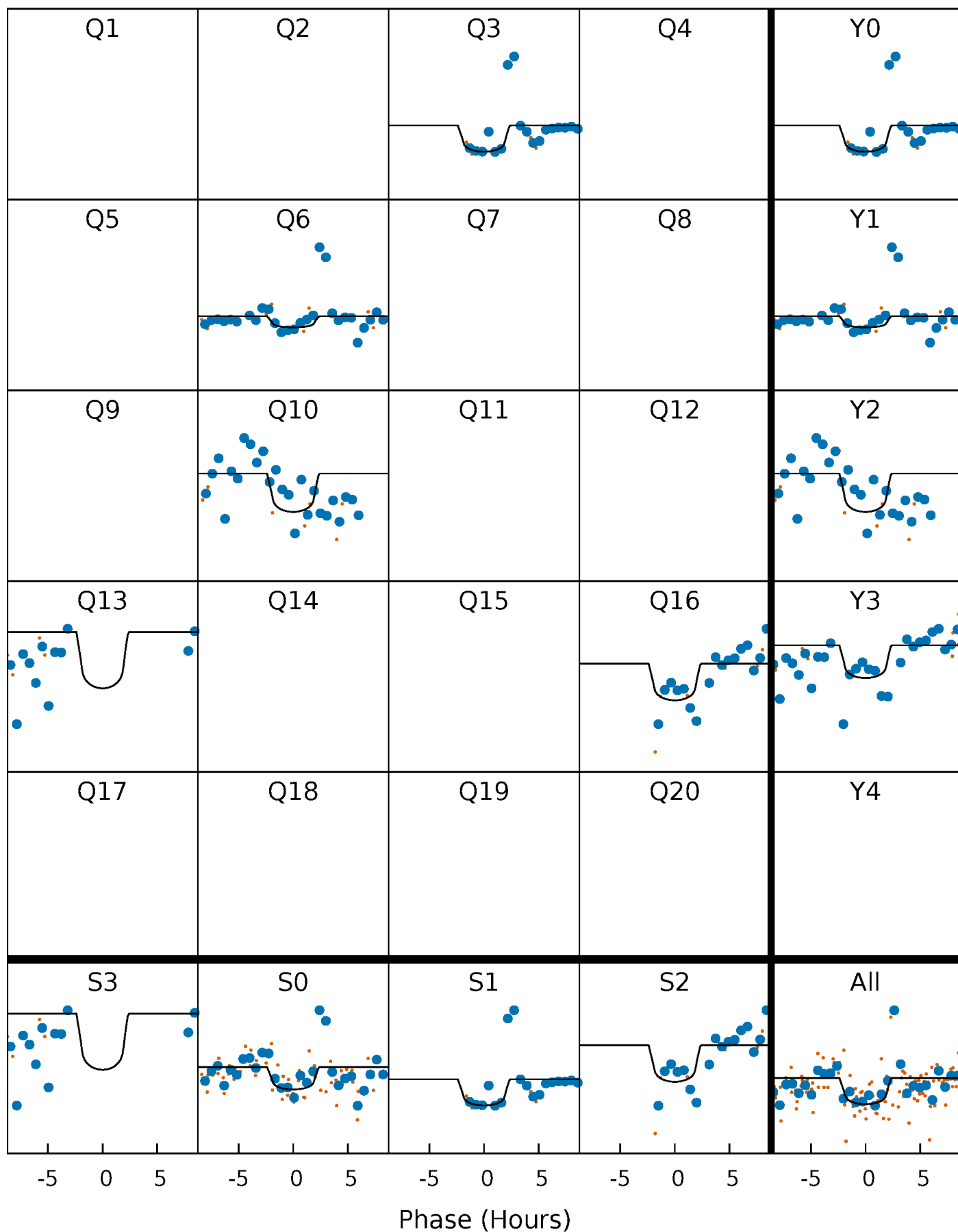
PDC Quarter-Phased Transit Curves

TCE 006471229-06 P=321.089157 Days $T_0=266.463399$ (BKJD)



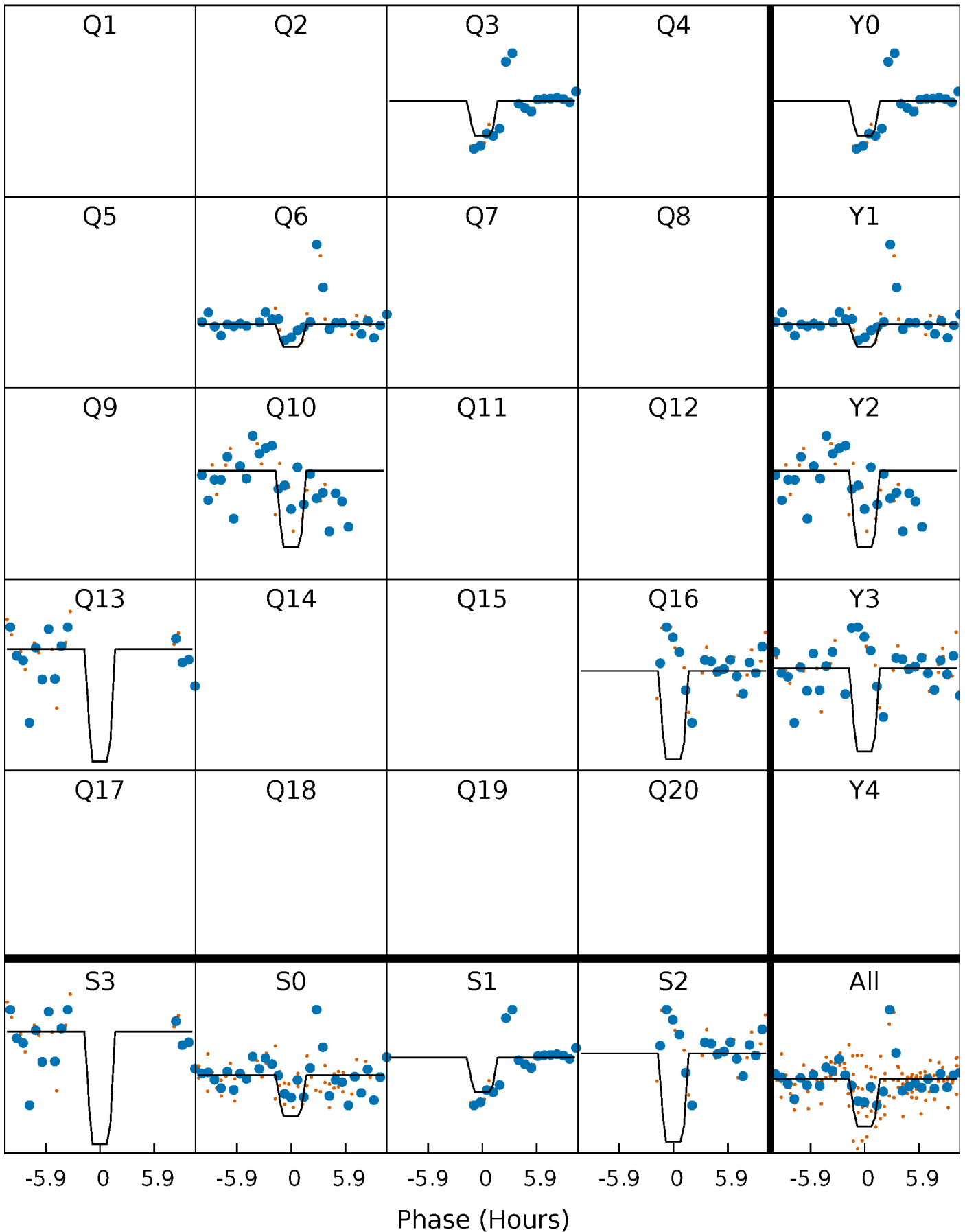
DV Quarter-Phased Transit Curves

TCE 006471229-06 P=321.089157 Days $T_0=266.463399$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

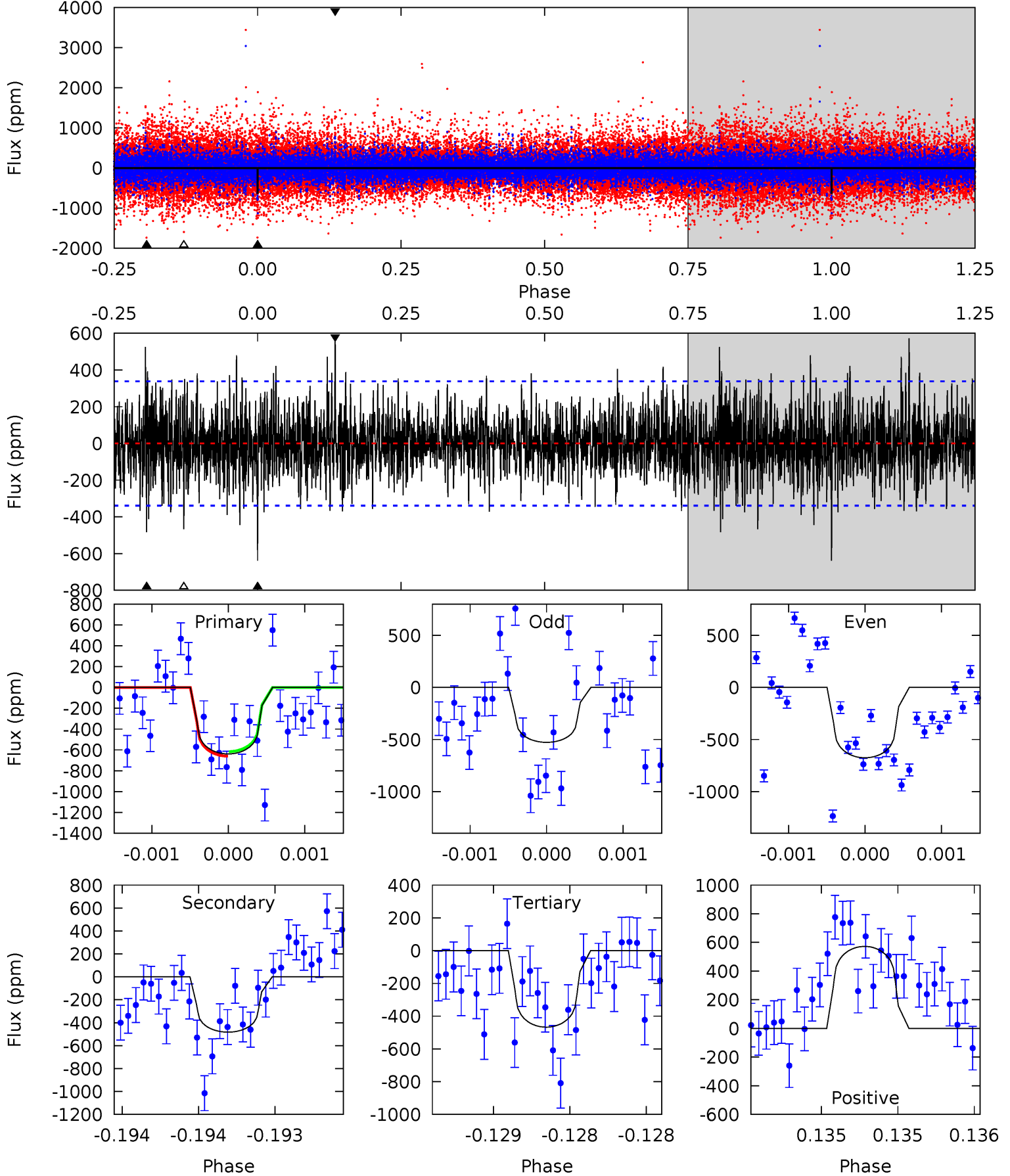
TCE 006471229-06 P=321.092962 Days $T_0=266.448503$ (BKJD)



DV Model-Shift Uniqueness Test

006471229-06, P = 321.089157 Days, E = 266.463399 Days

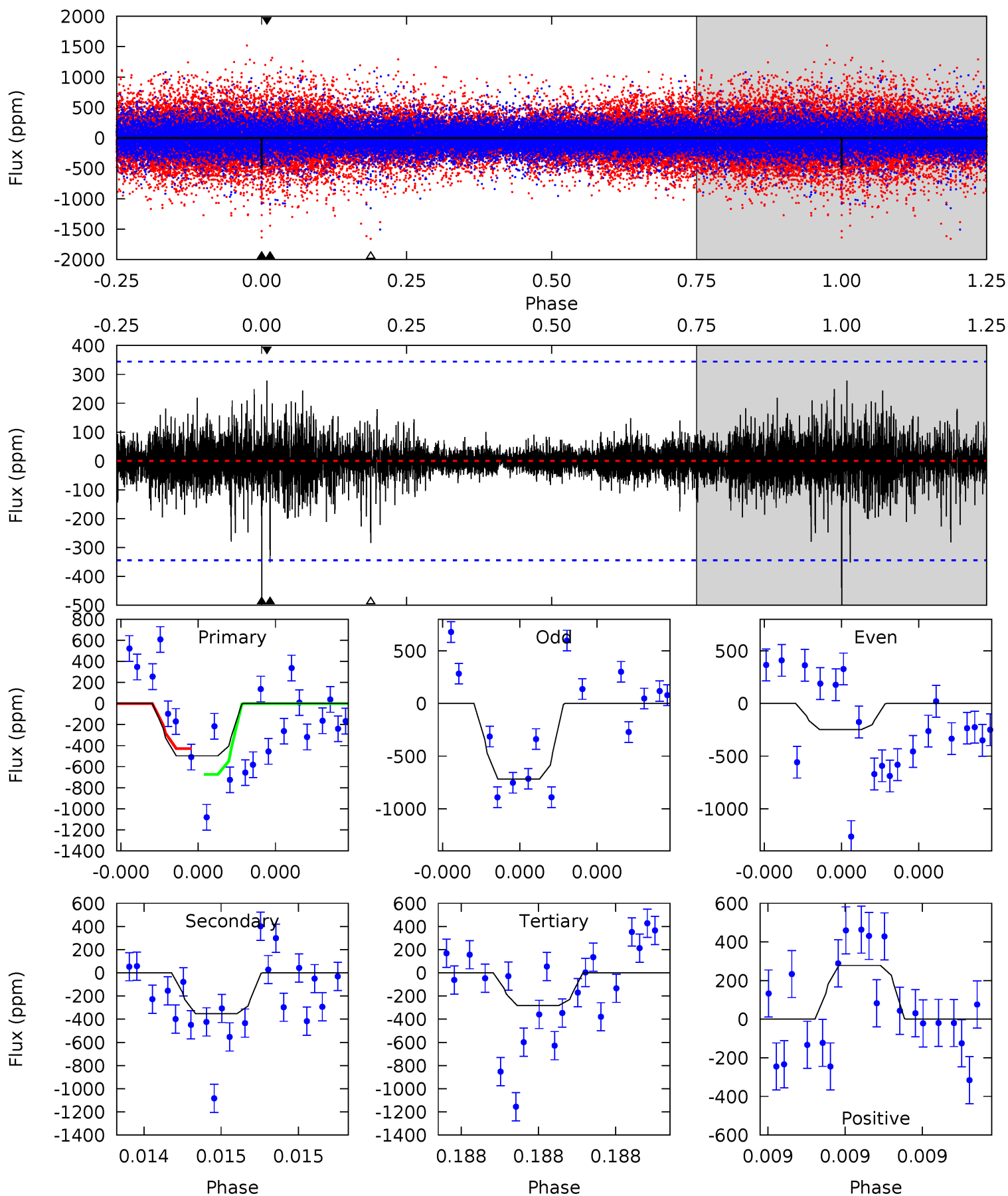
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	7.89	7.64	9.35	5.53	3.42	2.09	2.80	1.08	0.25	-1.47	1.05	1.05	0.47	0.36



Alt Model-Shift Uniqueness Test

006471229-06, P = 321.092962 Days, E = 266.448503 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.12	5.75	4.62	4.55	5.62	3.56	0.76	3.51	3.57	1.13	1.19	3.51	1.02	0.36	1.94



Stellar Parameters For KIC 006471229

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5952^{+160}_{-160}	$4.554^{+0.033}_{-0.176}$	$-0.360^{+0.300}_{-0.300}$	$0.844^{+0.226}_{-0.071}$	$0.932^{+0.098}_{-0.109}$	$2.183^{+0.388}_{-1.055}$
	+3%/-3%	+1%/-4%	+83%/-83%	+27%/-8%	+11%/-12%	+18%/-48%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006471229-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-482 ± 61	$3.57^{+3.22}_{-2.32}$	363^{+22}_{-15}	4747^{+3175}_{-1007}	$16284^{+115630}_{-11740}$
Alt.	-351 ± 61	$4.23^{+3.41}_{-2.70}$	365^{+22}_{-16}	4167^{+2304}_{-752}	8696^{+50404}_{-6139}

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

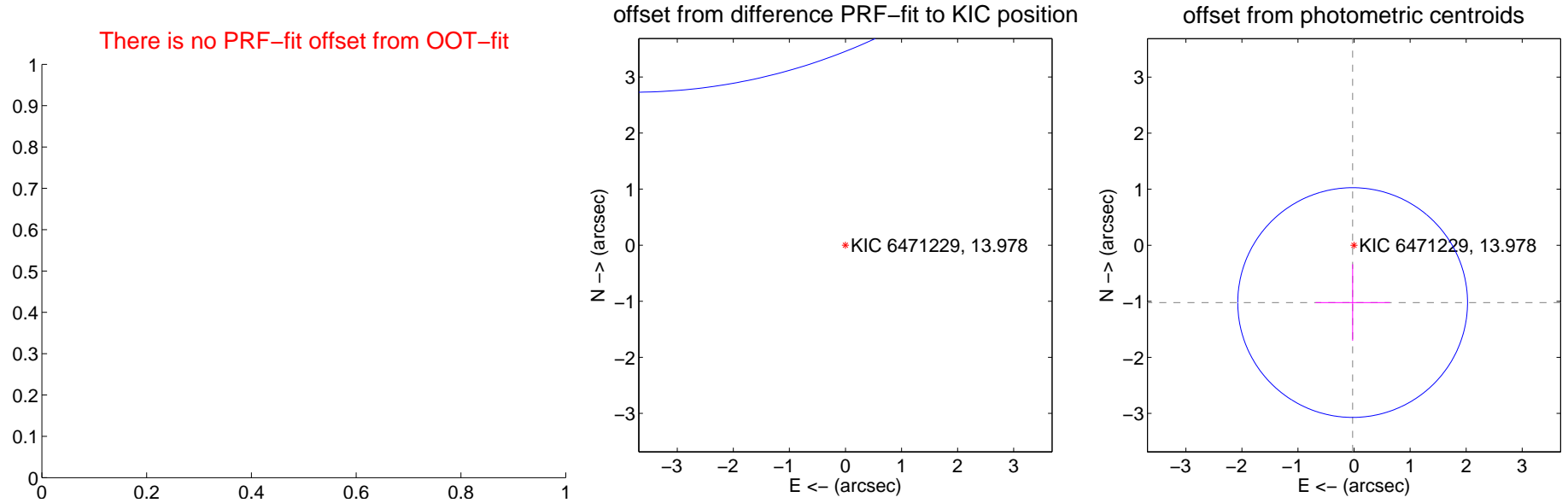
DV Centroid Data

Supplemental centroid analysis for 006471229-06. Kepler magnitude: 13.98. Transit SNR 6.97

There are 0 quarters with good PRF difference image offsets

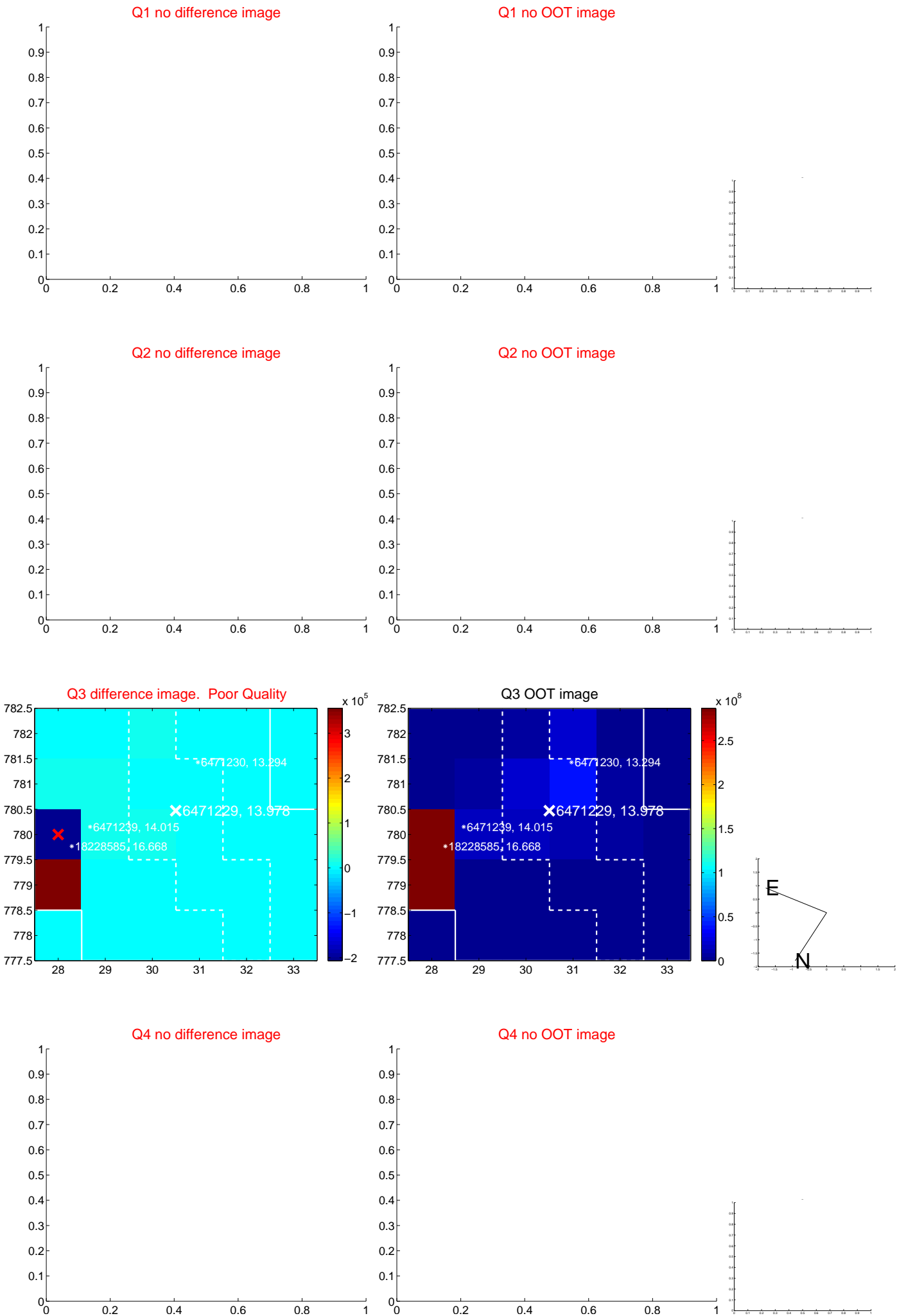
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	13.635 \pm 3.453	3.95	3.819 \pm 1.633	13.089 \pm 3.703
photometric centroid source offset	1.02 \pm 0.68	1.50	0.02 \pm 0.66	-1.02 \pm 0.68

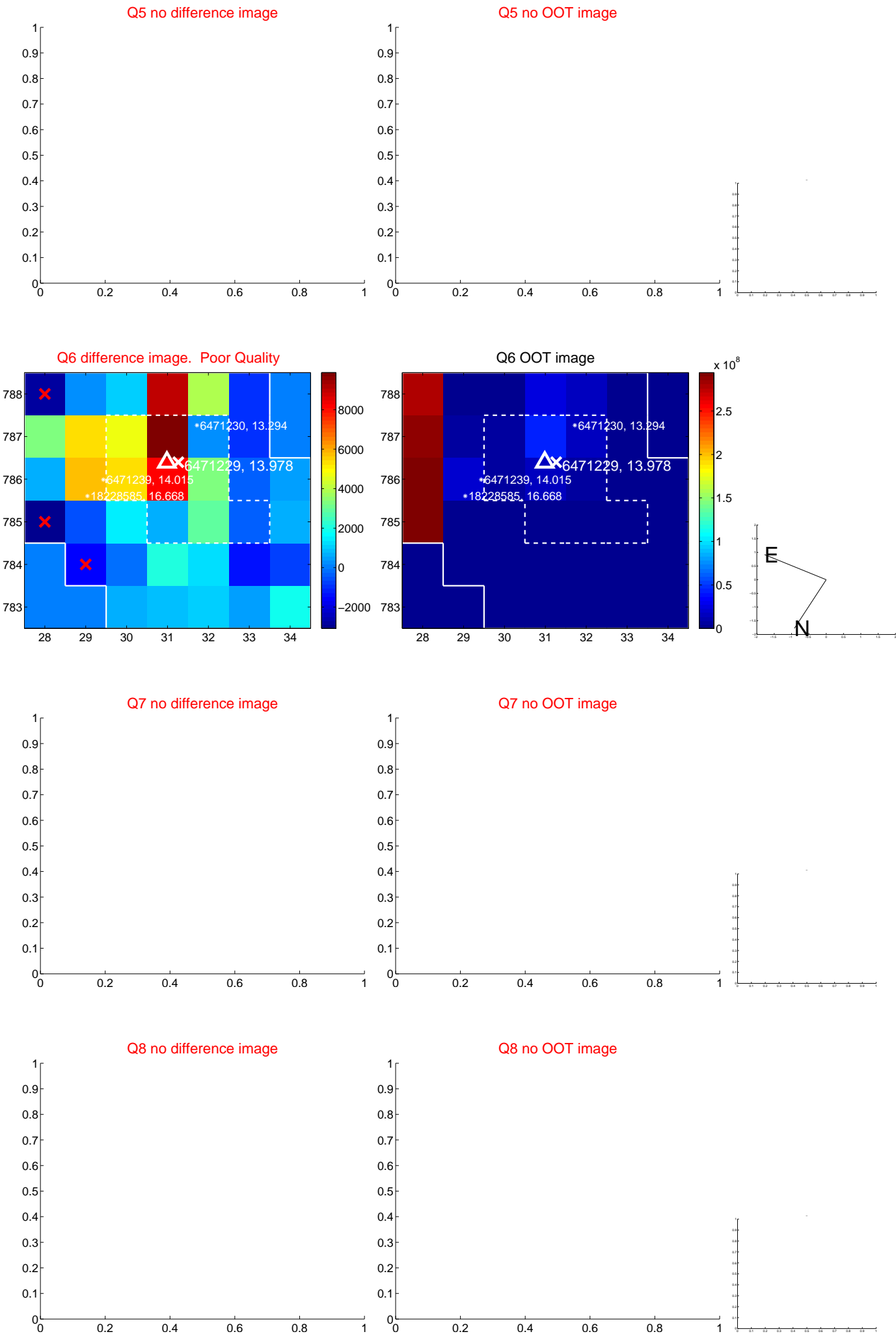


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

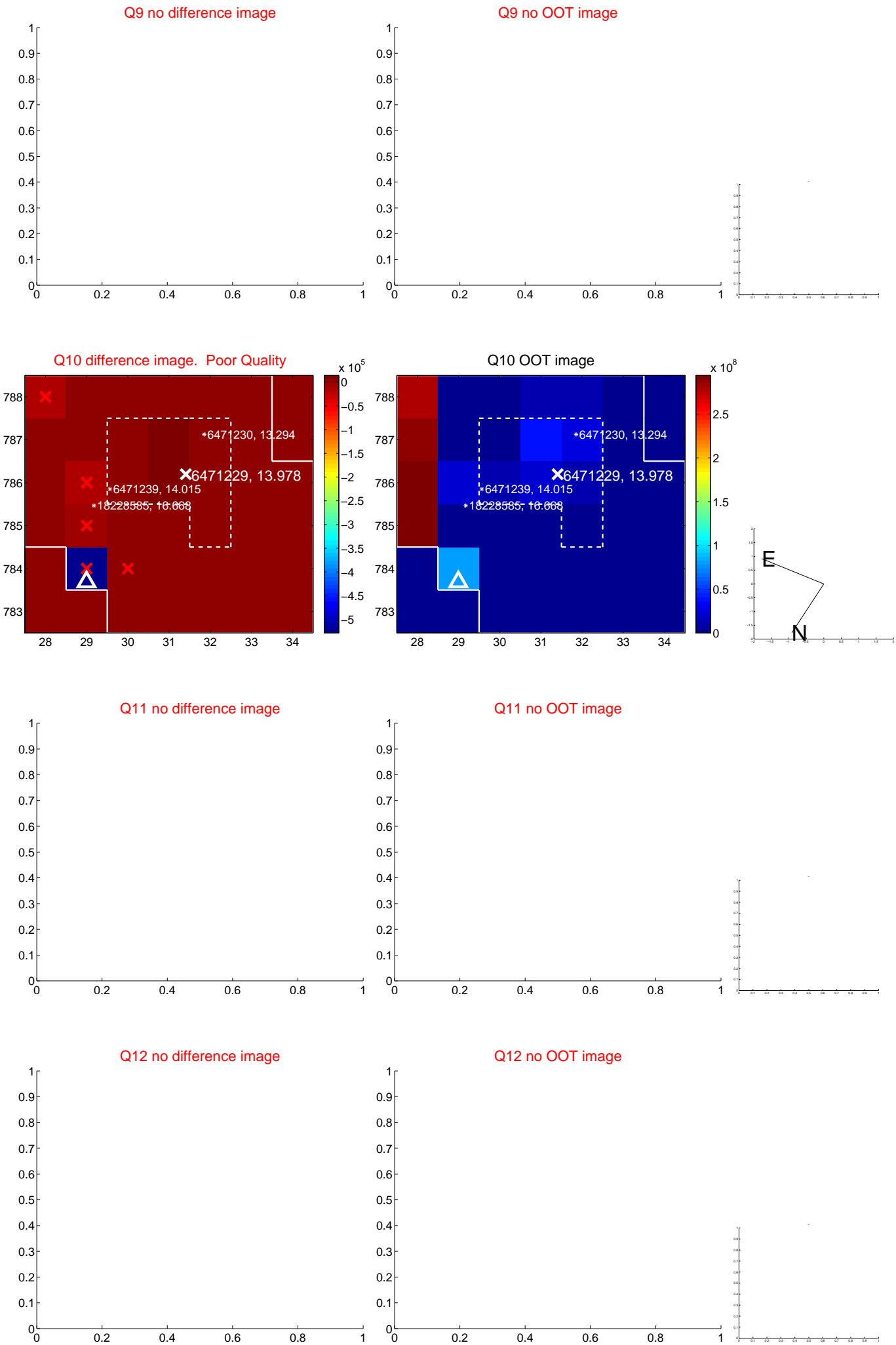
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



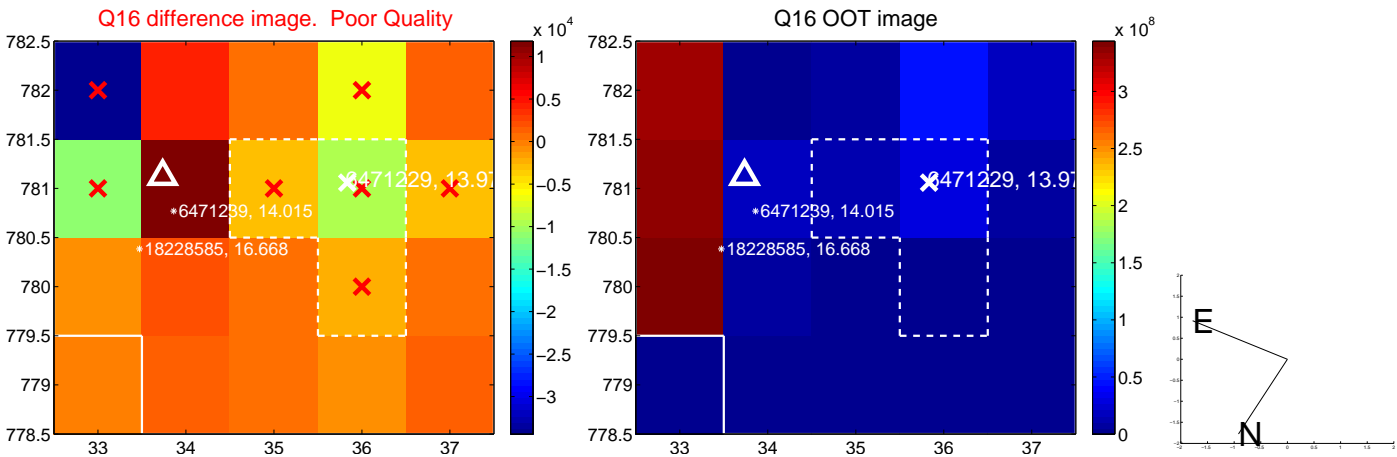
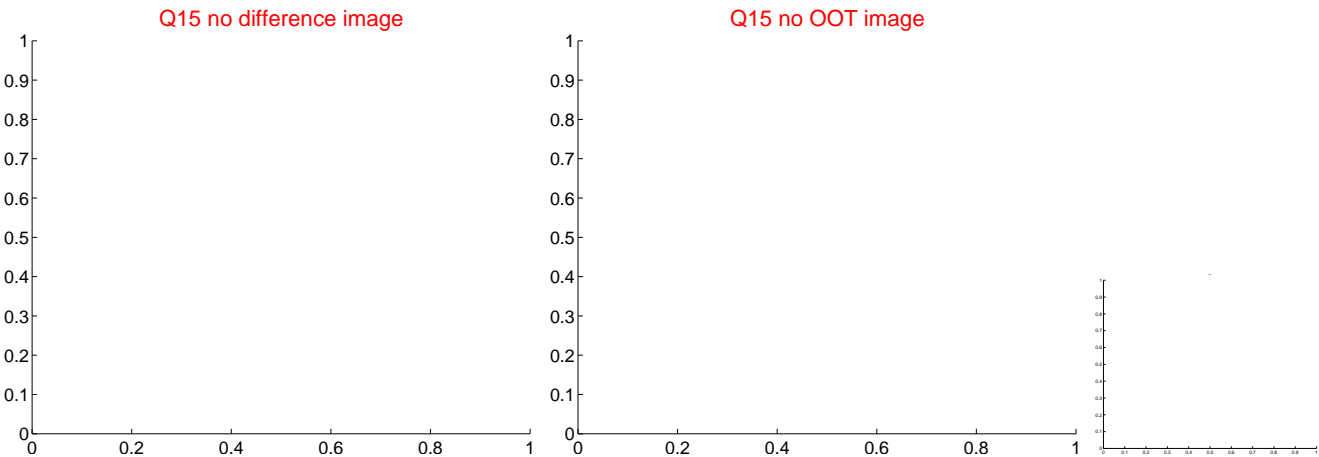
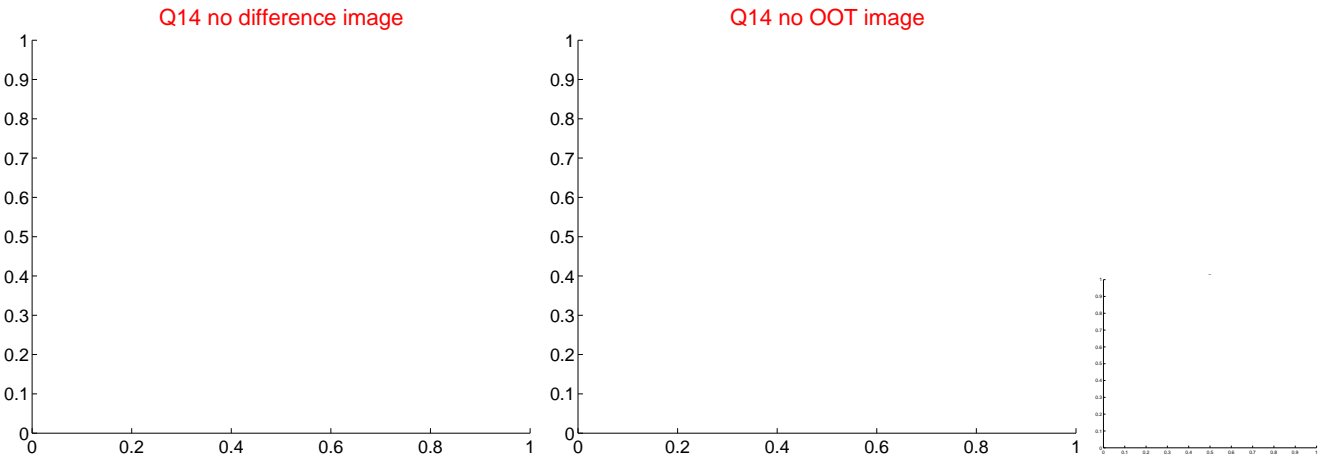
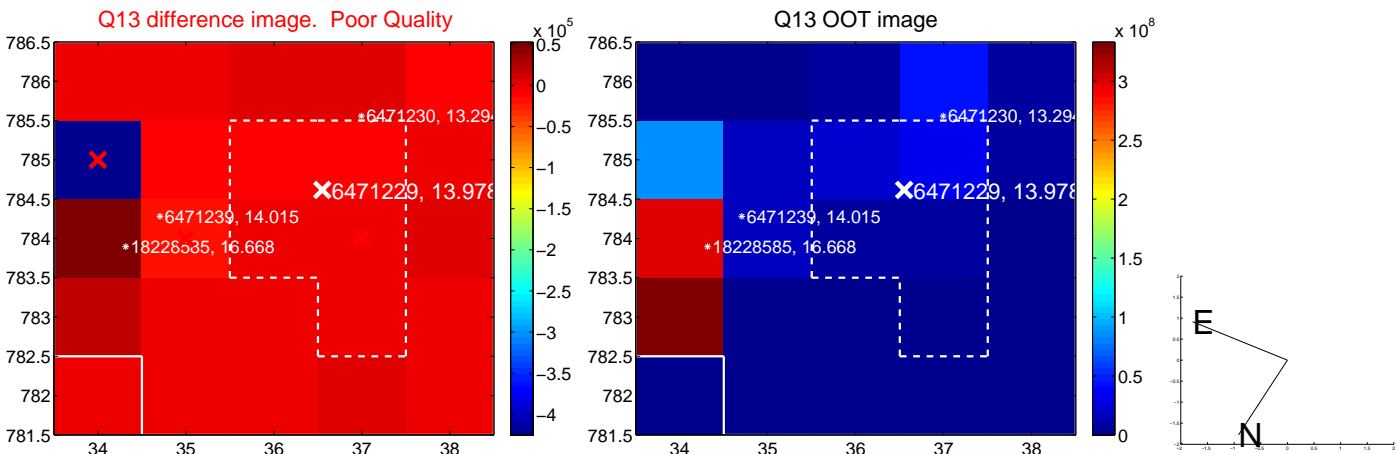
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



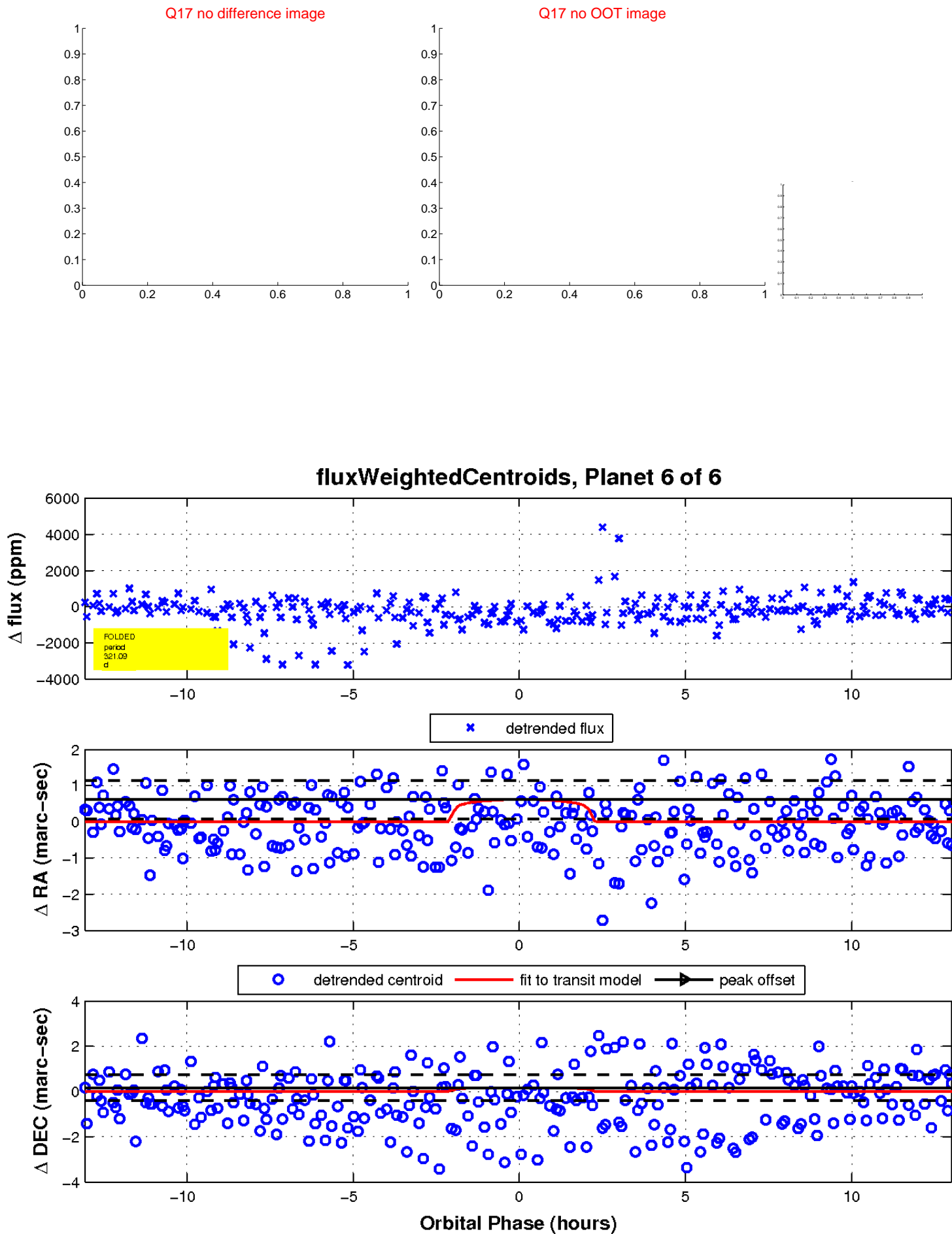
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

