

KIC 012207099

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})
012207099-01	OBS	No	1.422535	132.207758	9.1	1.006	22.6	8.6	2.62	10932	0.90	71218.02
012207099-02	OBS	No	1.422580	132.211387	10.5	8.775	16.0	11.4	2.62	10932	0.91	71215.05
012207099-03	OBS	No	125.040888	140.018489	157.2	4.575	21.8	12.7	2.62	10932	3.50	182.22
012207099-04	OBS	No	134.942397	238.786690	111.9	8.223	20.6	9.6	2.62	10932	2.88	164.62
012207099-05	OBS	No	99.849012	199.776534	31.1	4.728	15.5	4.9	2.62	10932	1.51	245.97
012207099-06	OBS	No	81.537009	141.359954	142.7	2.500	13.7	-1.0	2.62	10932	3.22	322.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207099-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
012207099-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

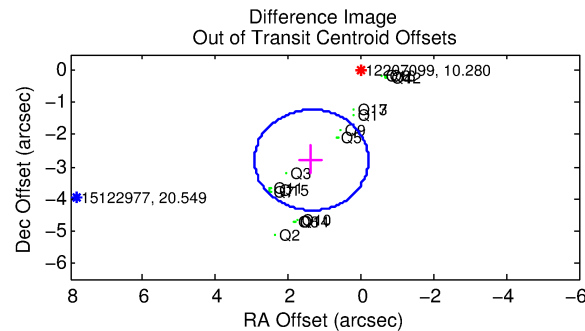
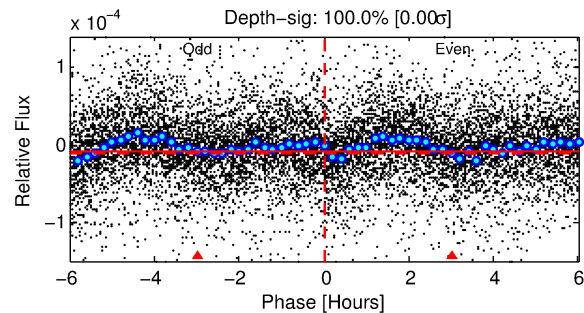
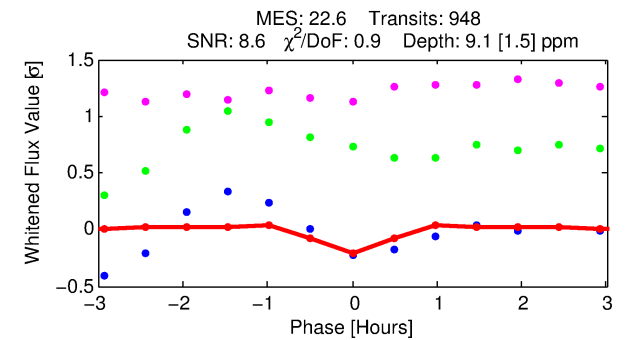
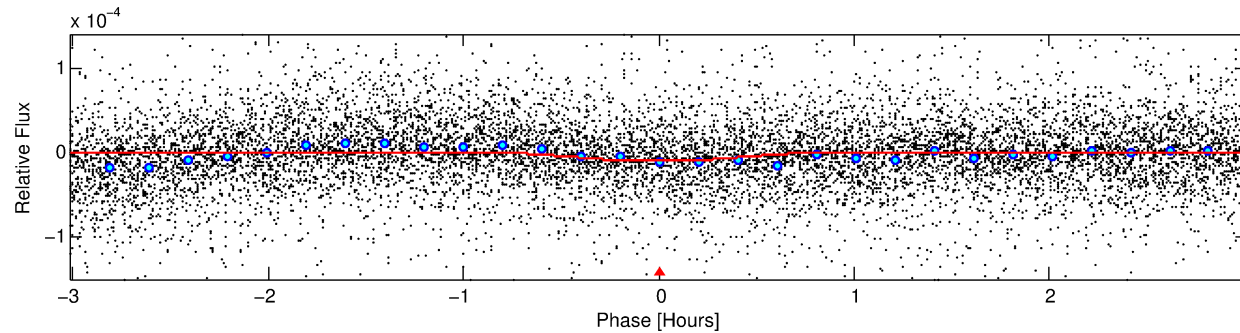
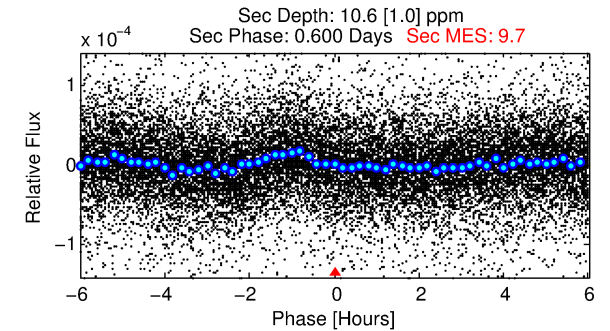
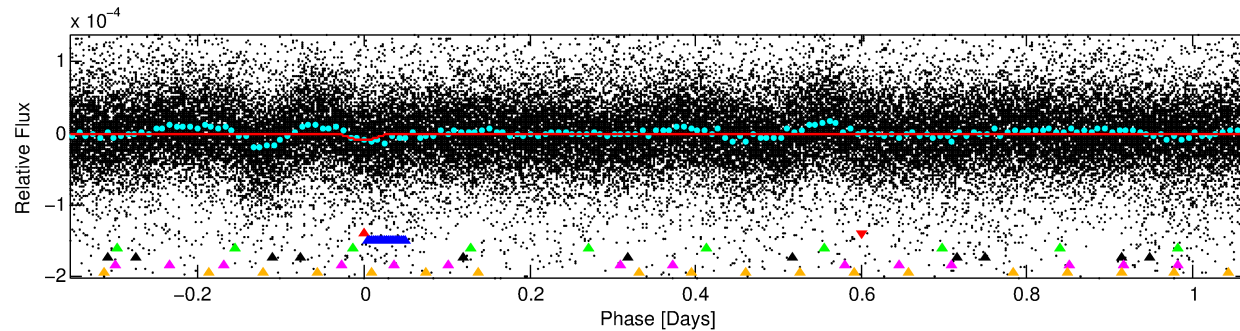
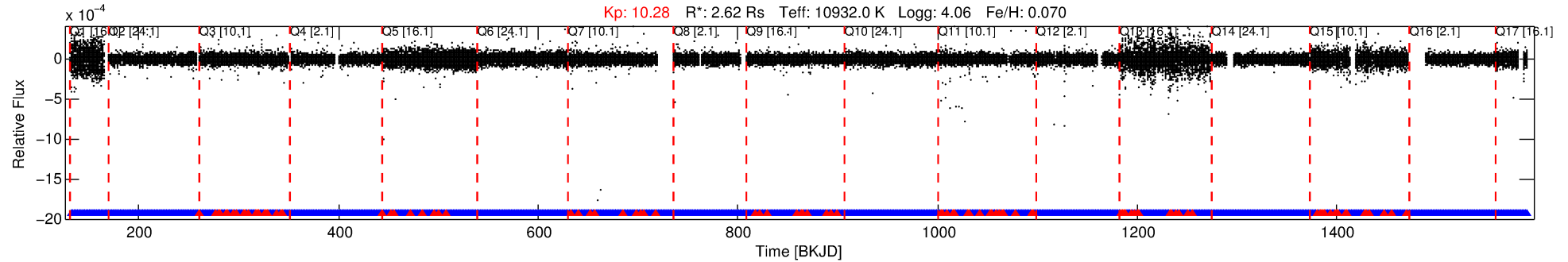
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207099-01

No Significant Match Found

DV One-Page Summary

KIC: 12207099 Candidate: 1 of 6 Period: 1.423 d



DV Fit Results:

Period = 1.42254 [0.00001] d
Epoch = 132.2078 [0.0020] BKJD
Rp/R* = 0.0032 [0.0004]
a/R* = 4.88 [3.01]
b = 0.90 [0.14]
Seff = 71218.02 [34129.98]
Teq = 4166 [499] K
Rp = 0.90 [0.33] Re
a = 0.0351 [0.0105] AU
Ag = 8.75 [4.46] [1.74σ]
Teffp = 11078 [810] K [7.27σ]

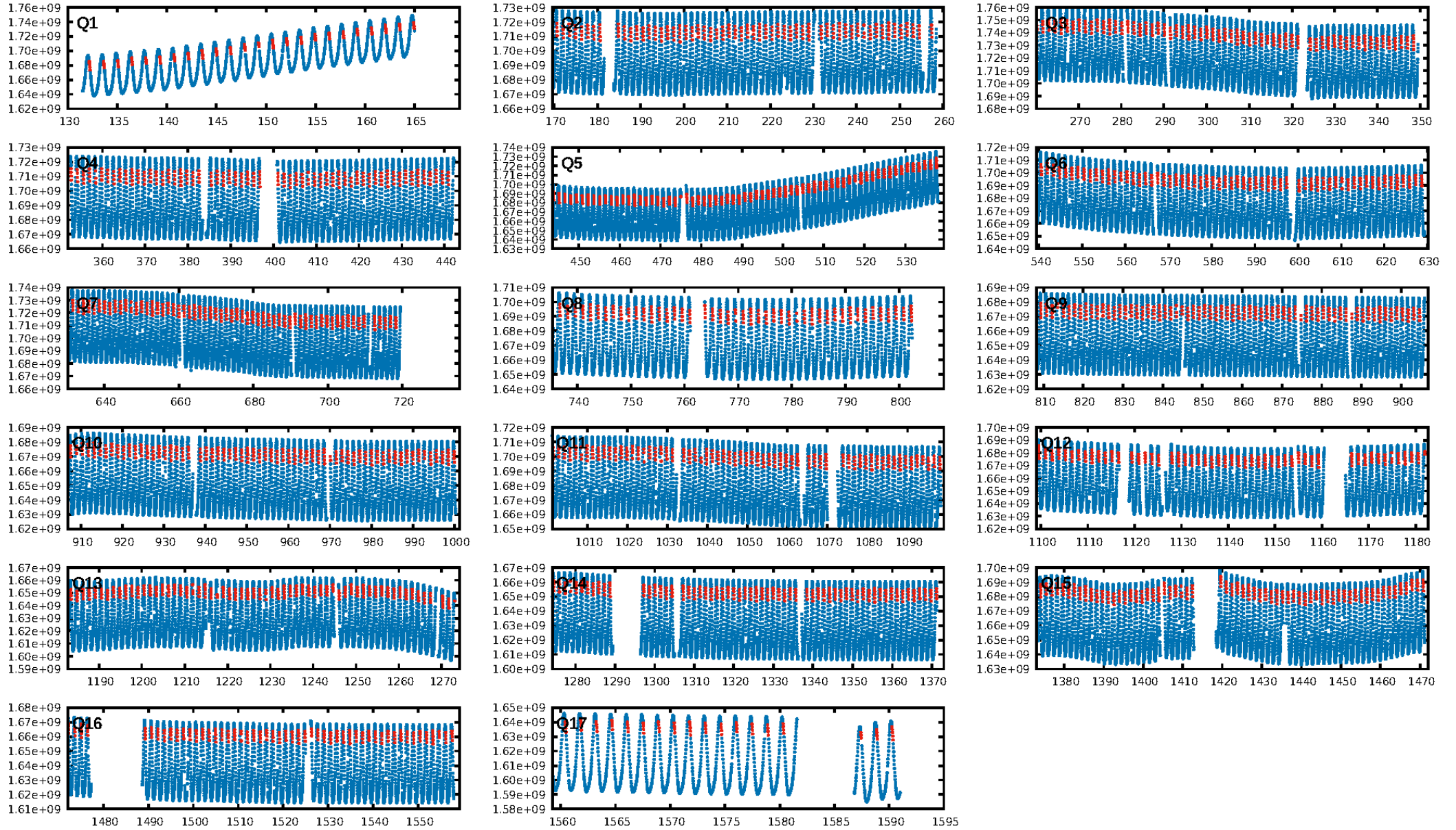
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [810/906]
GhostDiagnostic-chr: N/A
Centroid-sig: 10.5%
Centroid-so: 5.652 arcsec [1.23σ]
OotOffset-rm: 3.108 arcsec [5.95σ]
KicOffset-rm: 2.745 arcsec [7.68σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
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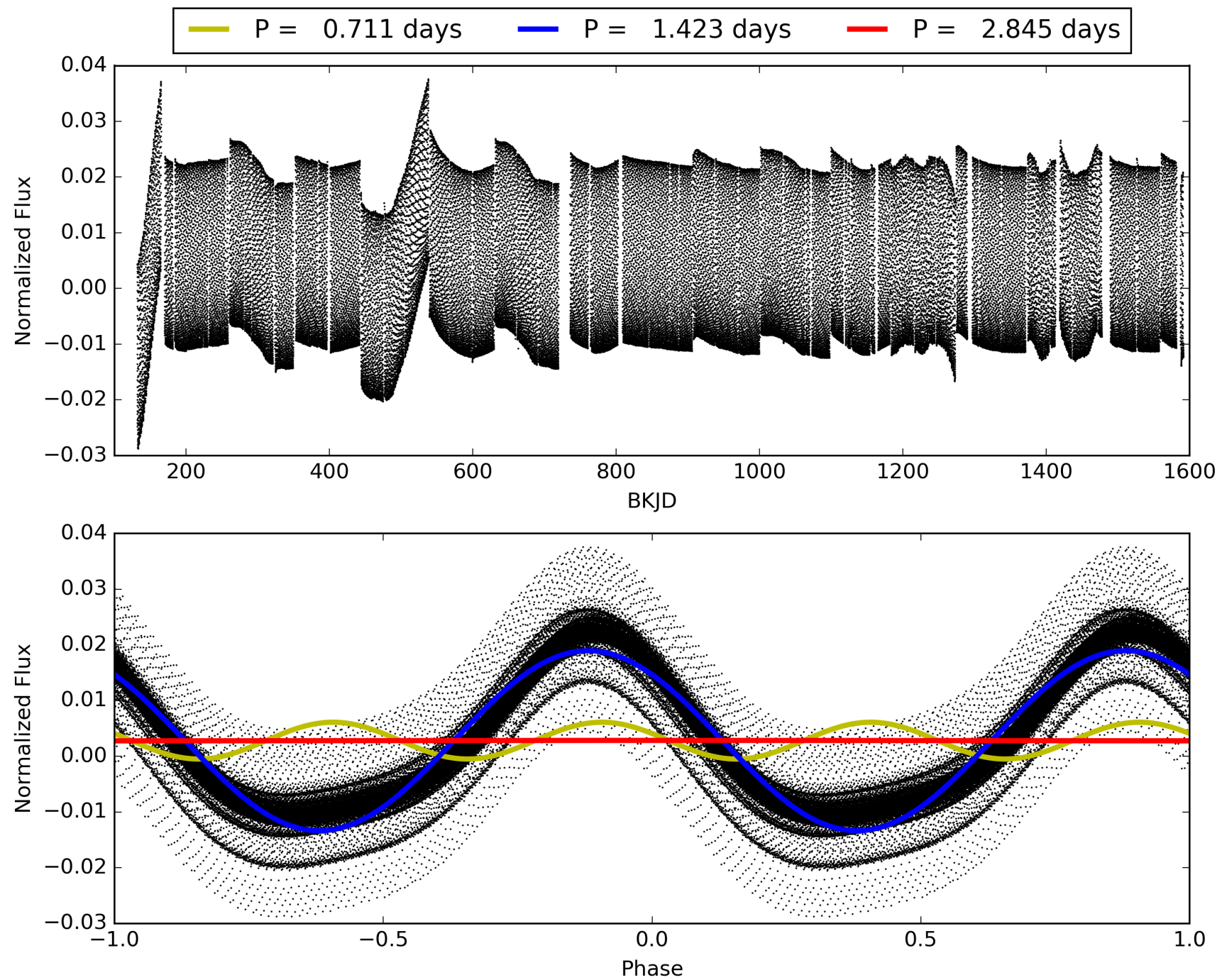
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 012207099-01, PDC Light Curves

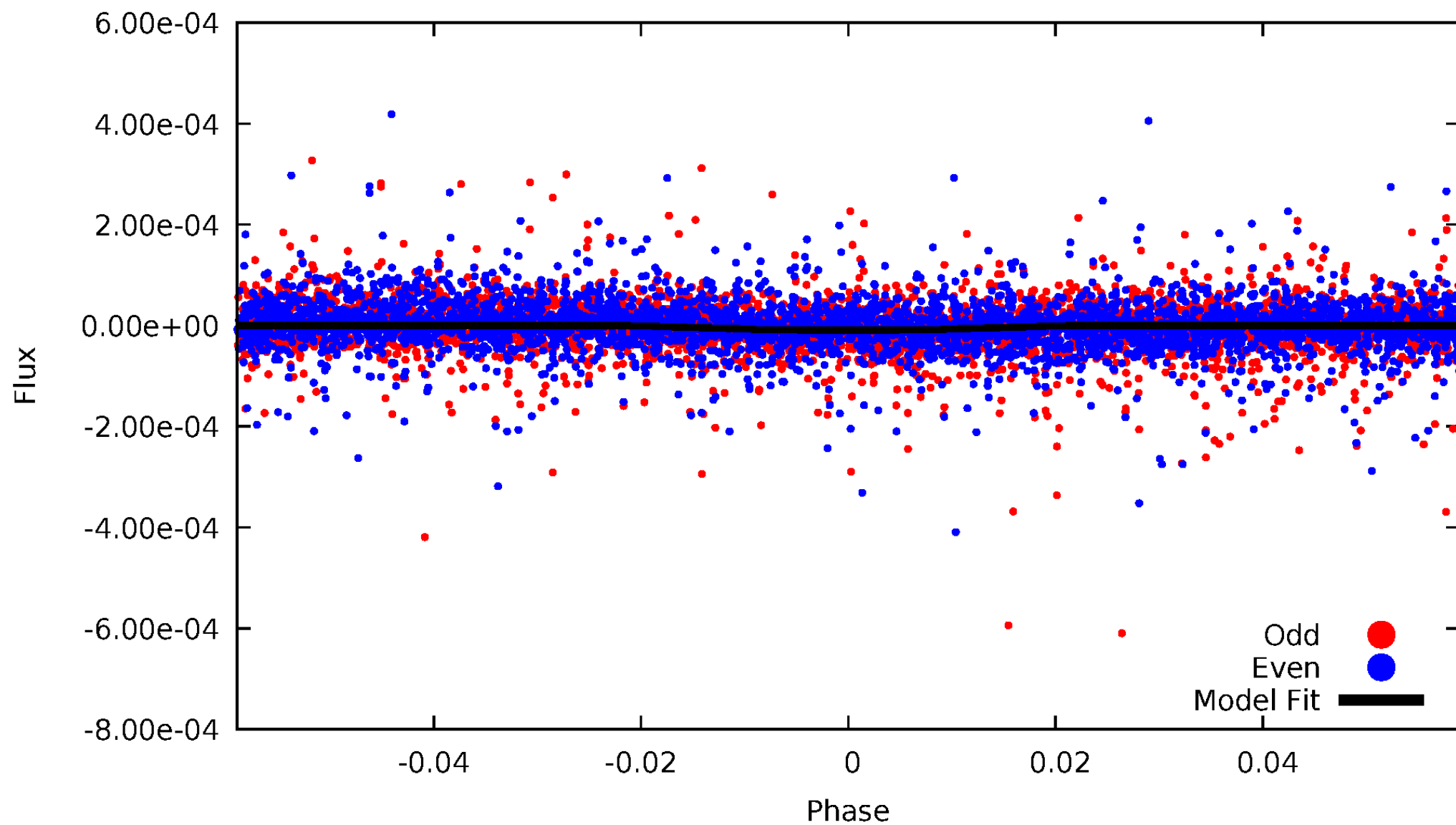


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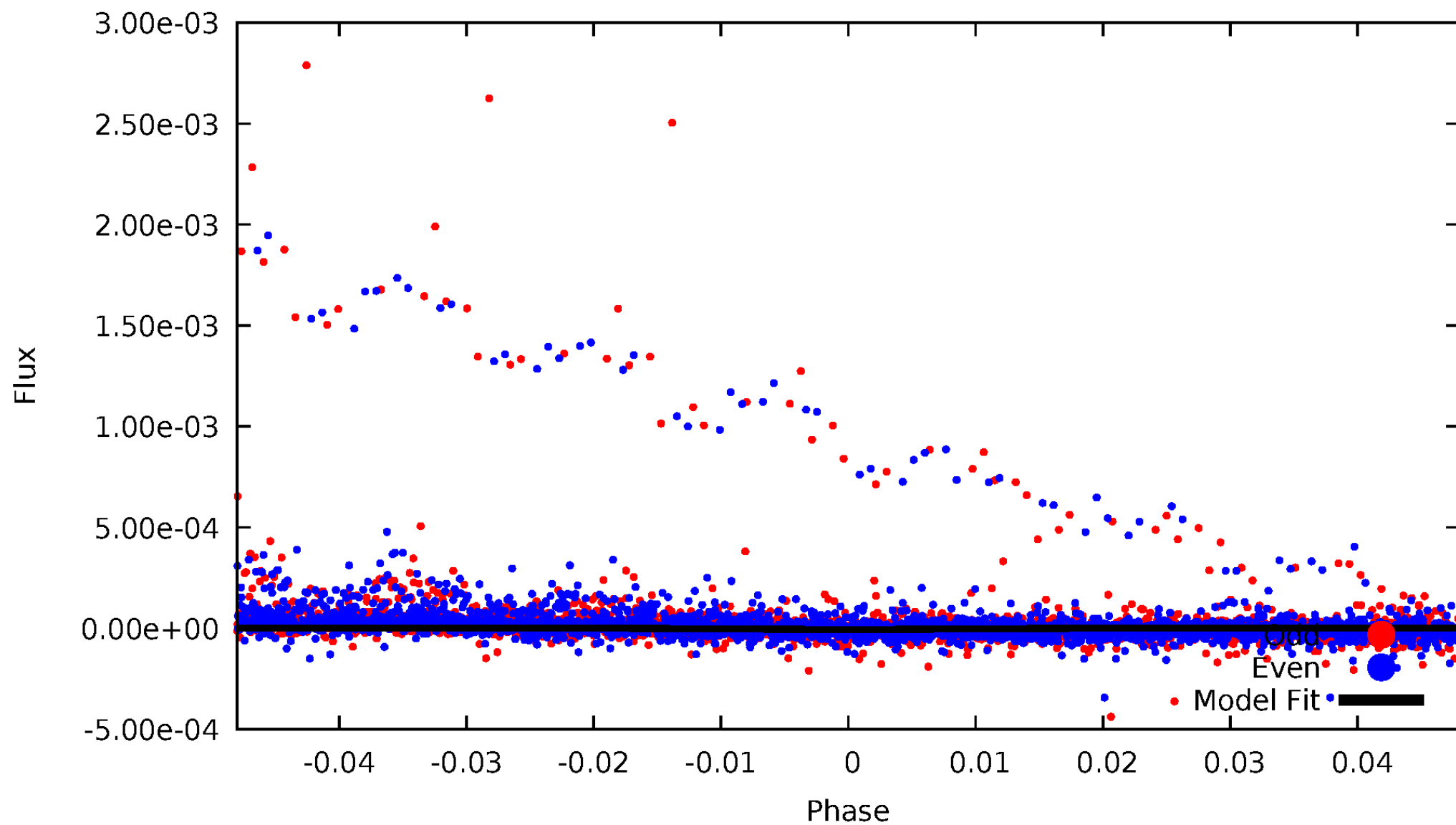
DV Odd/Even

TCE 012207099-01



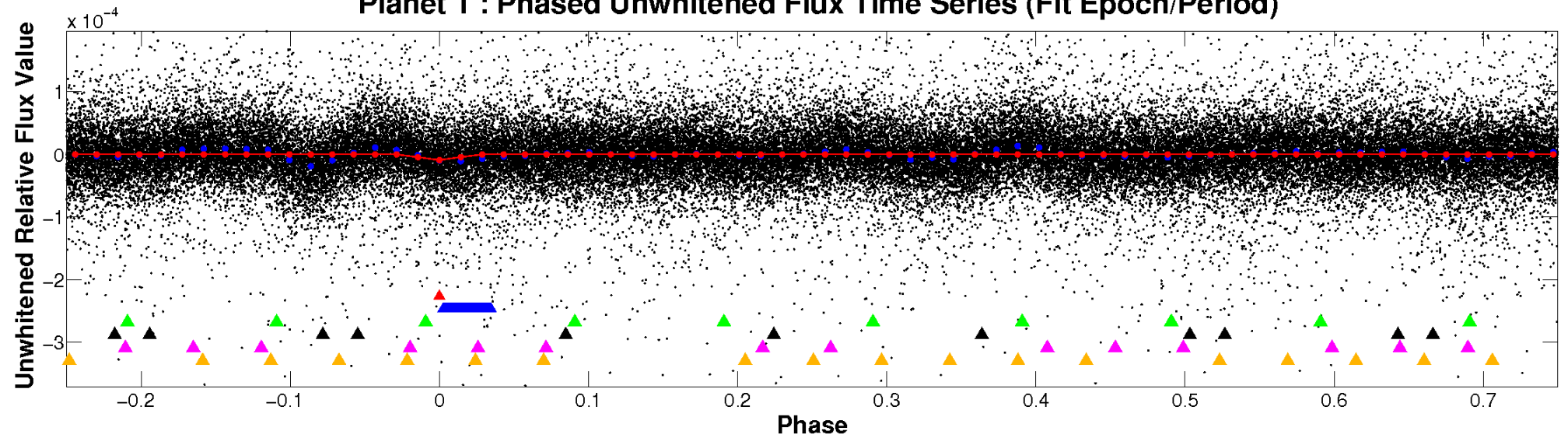
ALT Odd/Even

TCE 012207099-01

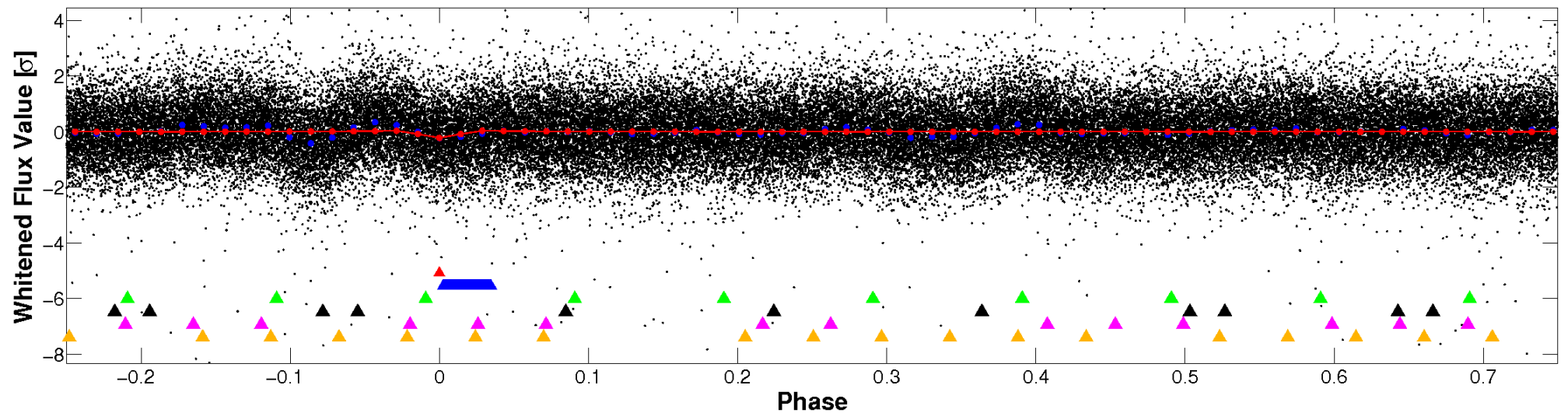


Non-Whitened Vs. Whitened Light Curve

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

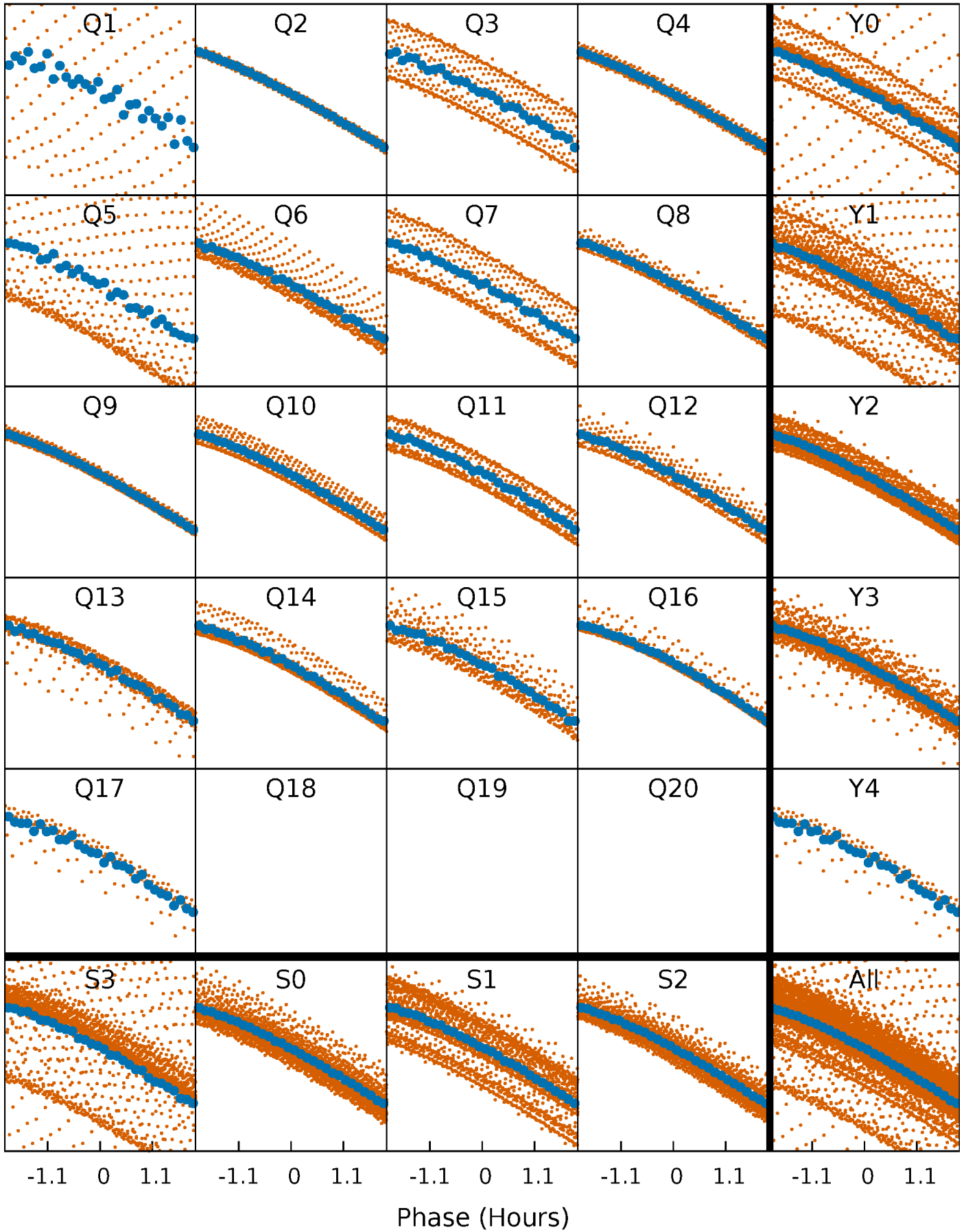


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



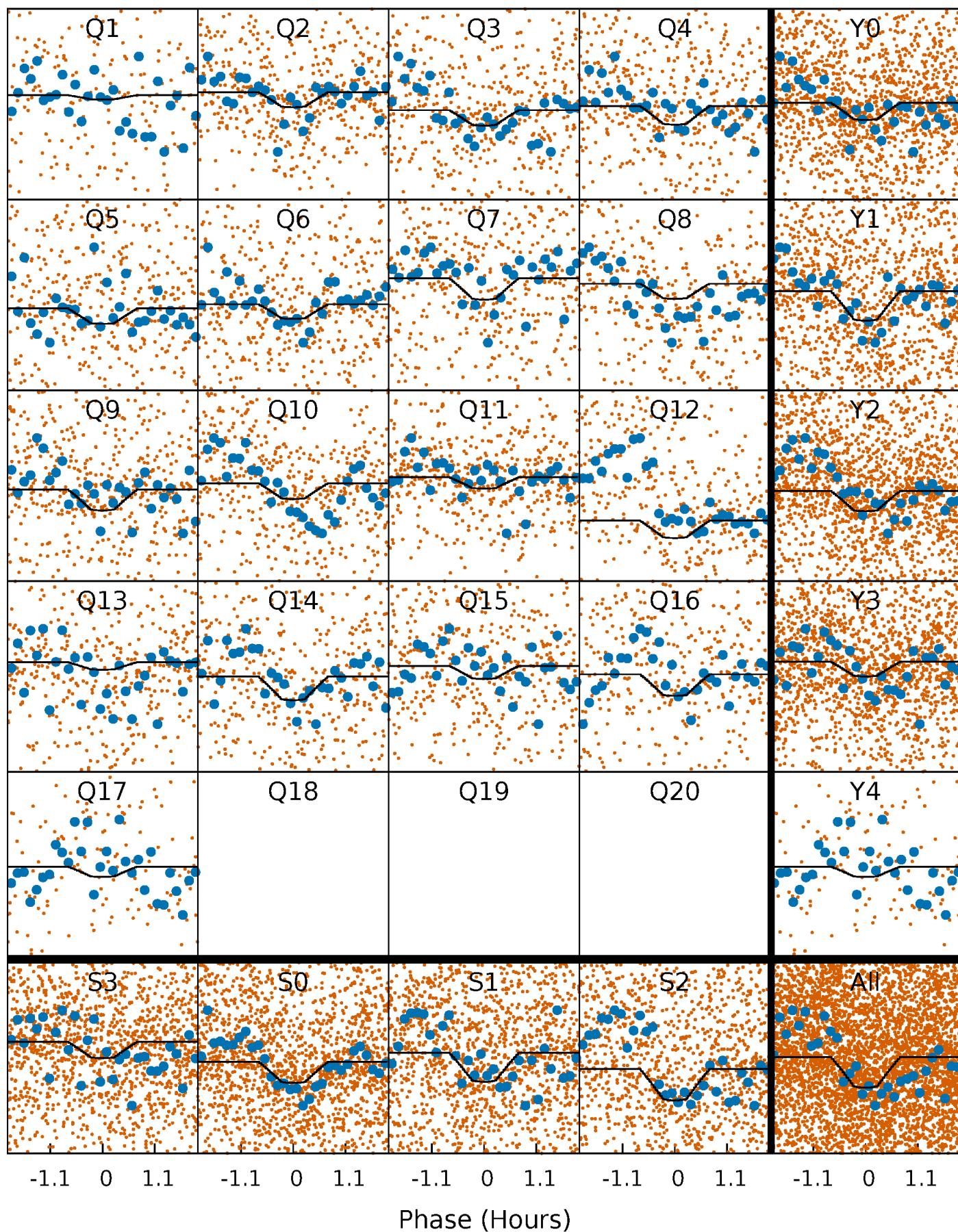
PDC Quarter-Phased Transit Curves

TCE 012207099-01 P= 1.422535 Days $T_0=132.207758$ (BKJD)



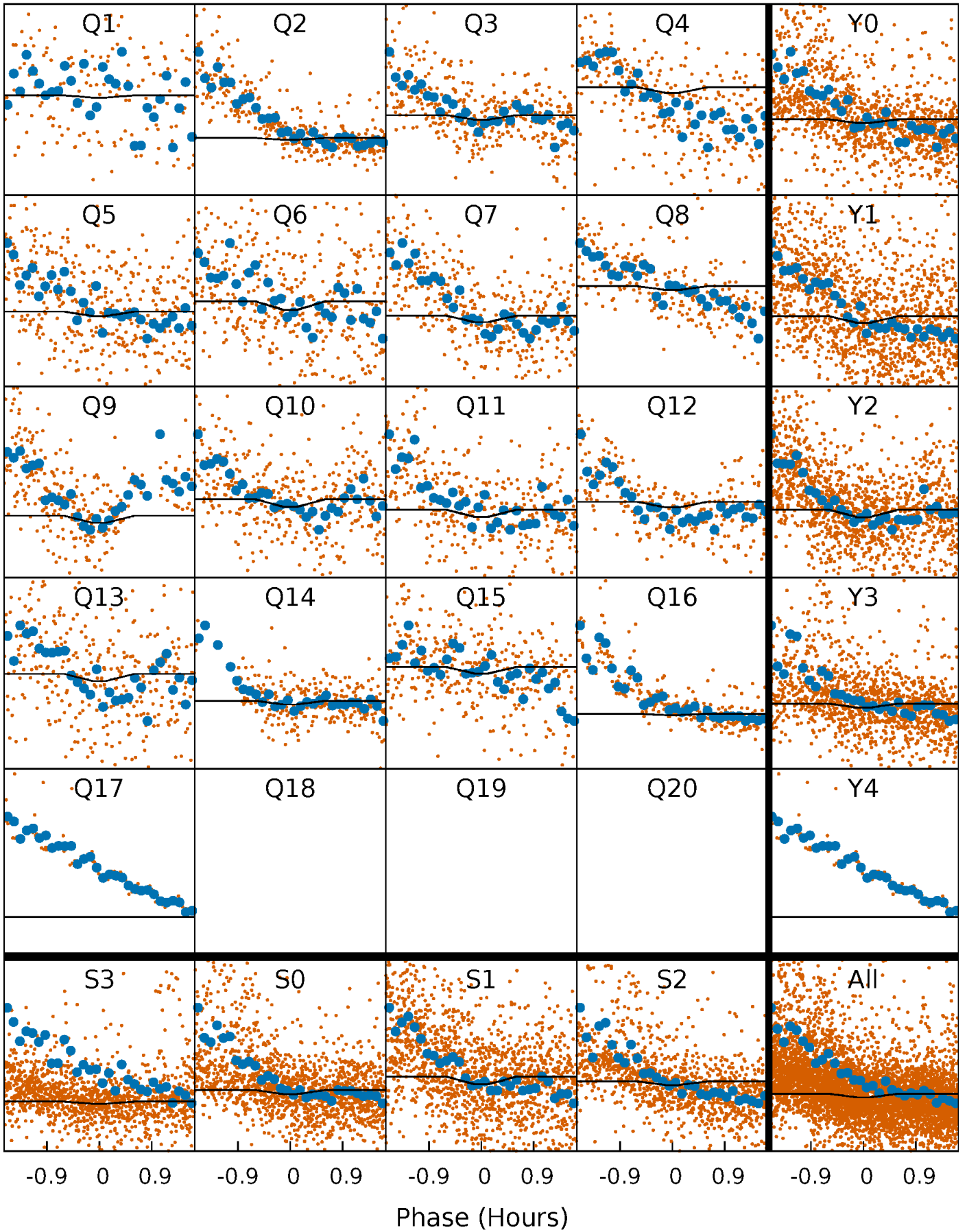
DV Quarter-Phased Transit Curves

TCE 012207099-01 P= 1.422535 Days $T_0=132.207758$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

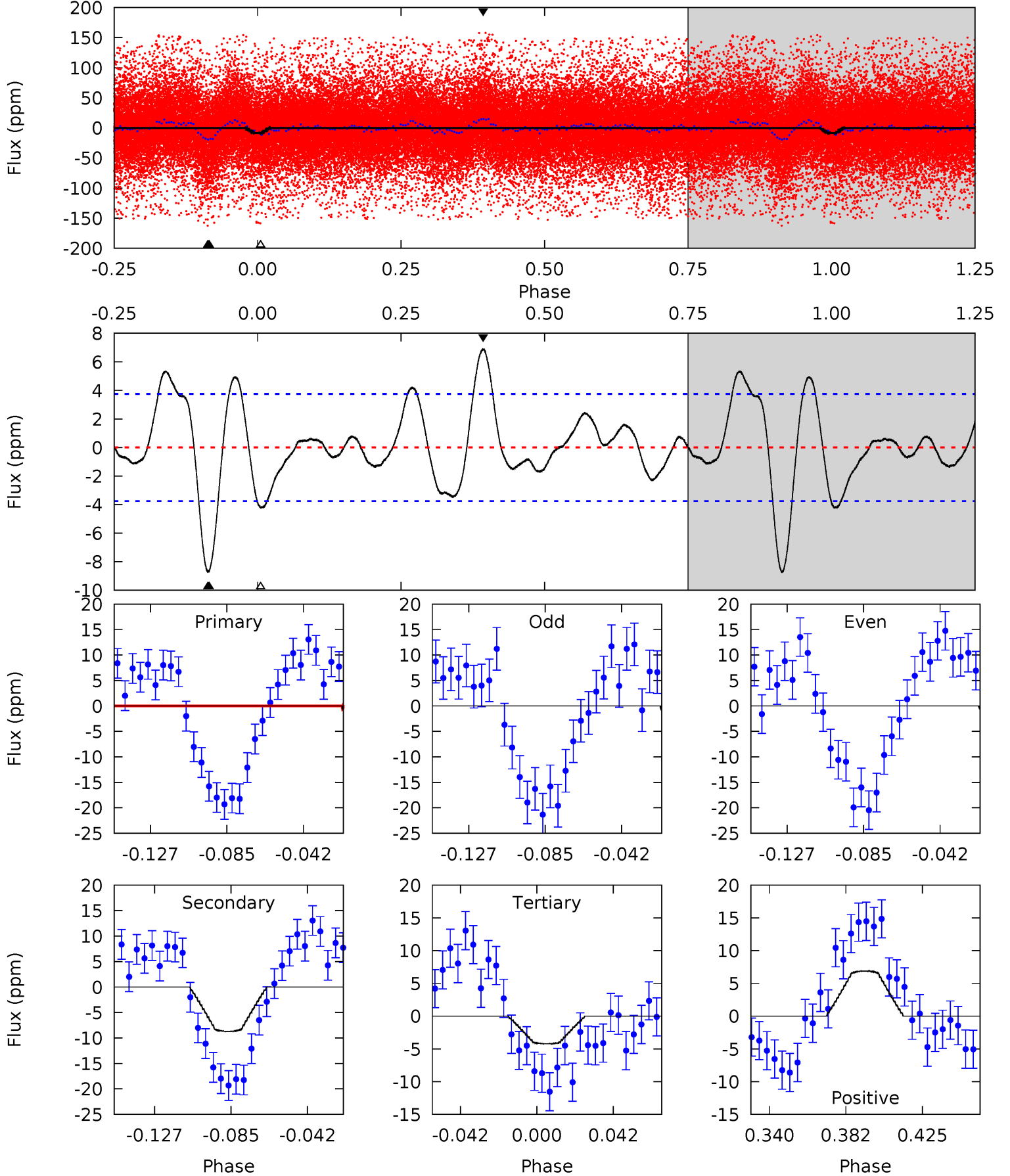
TCE 012207099-01 P= 1.422573 Days $T_0=132.193799$ (BKJD)



DV Model-Shift Uniqueness Test

012207099-01, P = 1.422535 Days, E = 130.785223 Days

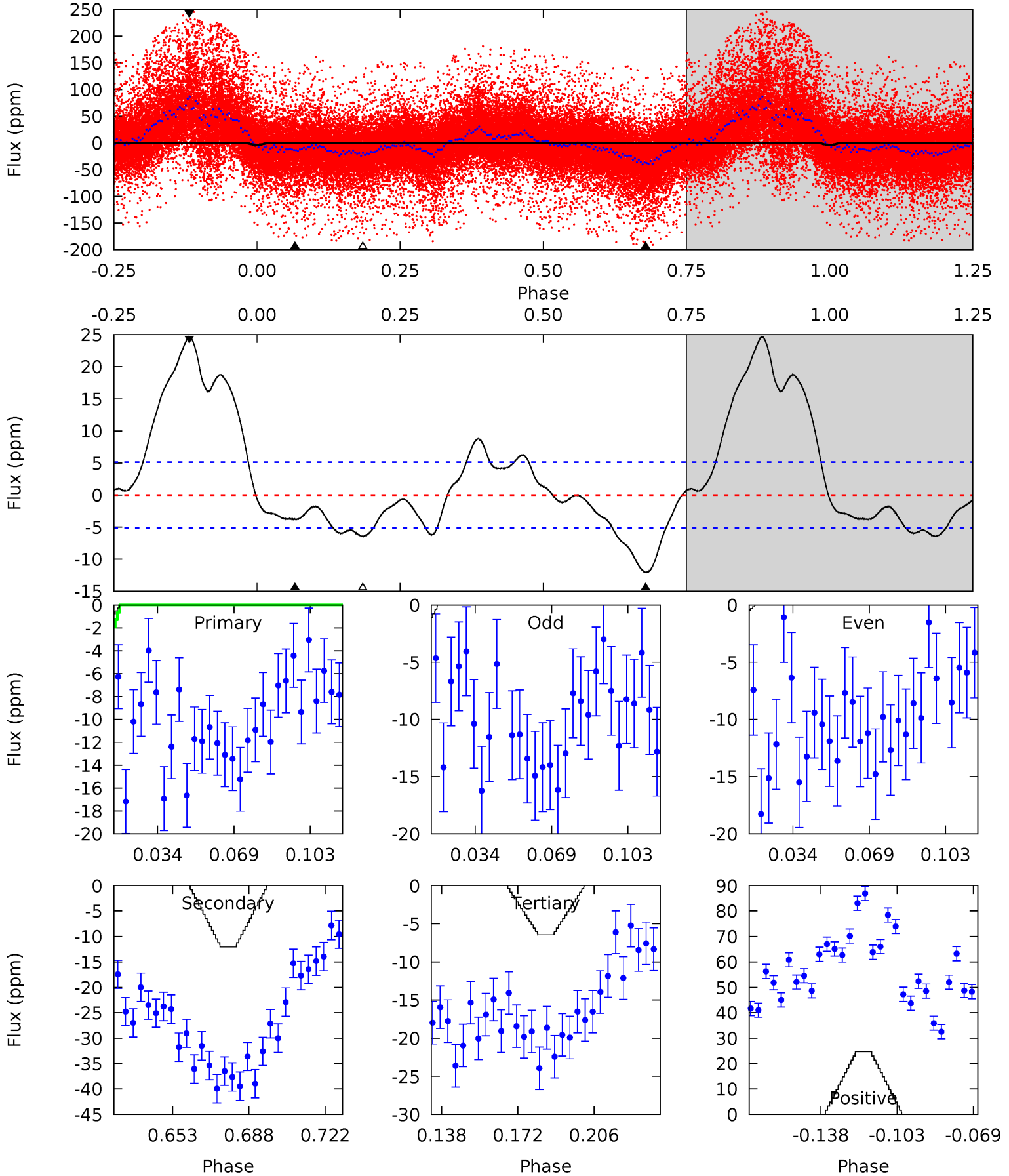
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	11.0	5.33	8.71	4.74	2.03	2.86	5.59	2.22	5.68	2.31	2.38	1.17	0.44	2.39



Alt Model-Shift Uniqueness Test

012207099-01, P = 1.422573 Days, E = 130.771226 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.54	11.2	5.99	23.0	4.78	2.12	7.23	-2.45	-19.4	5.23	-11.8	1.59	-6.43	0.67	3.77



Stellar Parameters For KIC 012207099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10932^{+266}_{-457}	$4.056^{+0.252}_{-0.189}$	$0.070^{+0.050}_{-0.600}$	$2.615^{+0.733}_{-0.895}$	$2.838^{+0.289}_{-0.674}$	$0.224^{+0.370}_{-0.106}$
	+2%/-4%	+6%/-5%	+71%/-857%	+28%/-34%	+10%/-24%	+165%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 012207099-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9 ± 1	$0.87^{+0.20}_{-0.17}$	5759^{+503}_{-468}	10213^{+1201}_{-1017}	$7.537^{+4.170}_{-2.617}$
Alt.	-12 ± 1	$0.66^{+0.17}_{-0.15}$	5791^{+453}_{-523}	14958^{+3183}_{-1965}	18^{+12}_{-7}

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 $A_{obs} \gg 1.0$

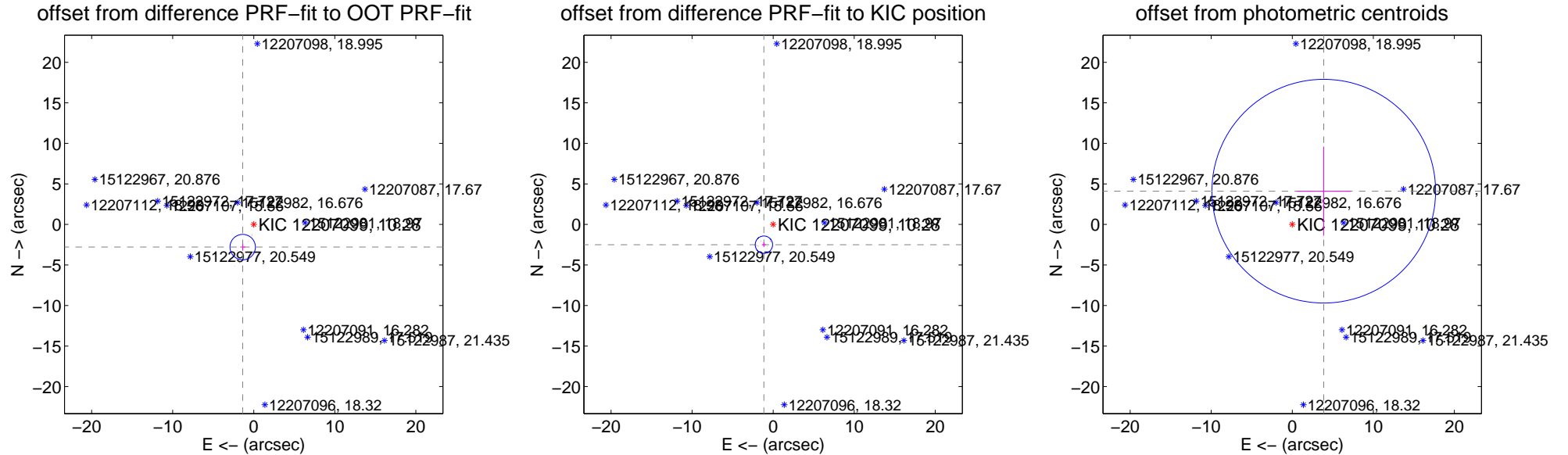
DV Centroid Data

Supplemental centroid analysis for 012207099-01. **Kepler magnitude: 10.28.** Transit SNR 8.56

There are 0 quarters with good PRF difference image offsets

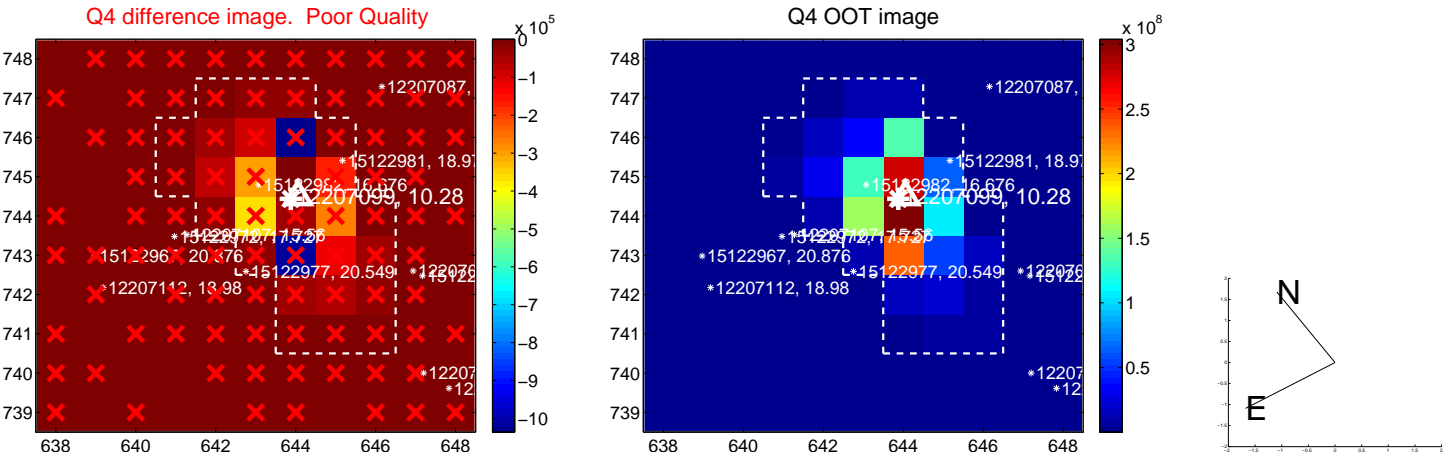
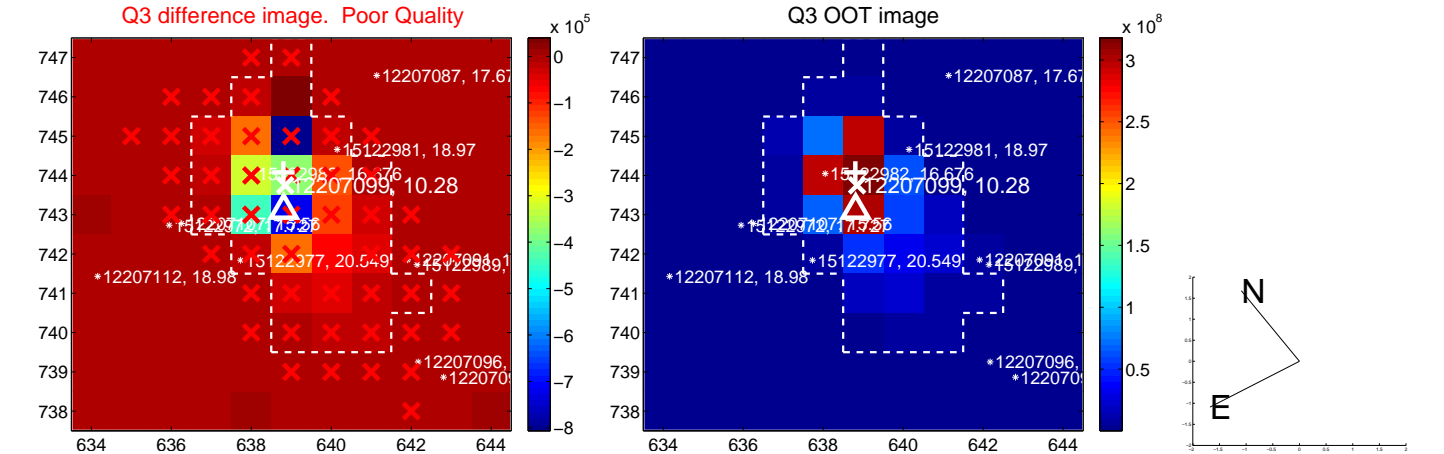
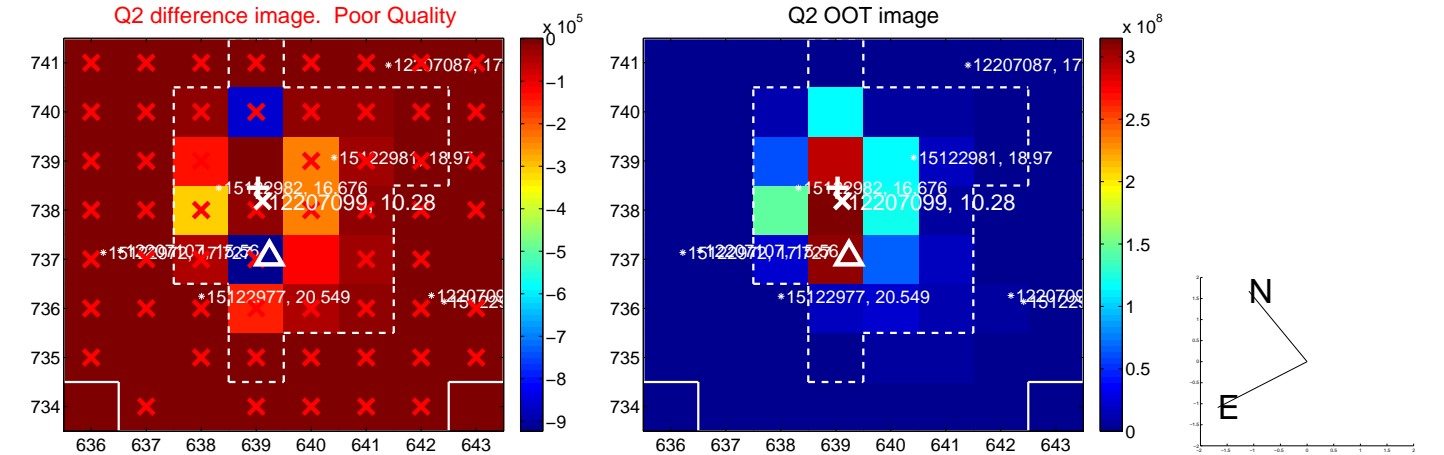
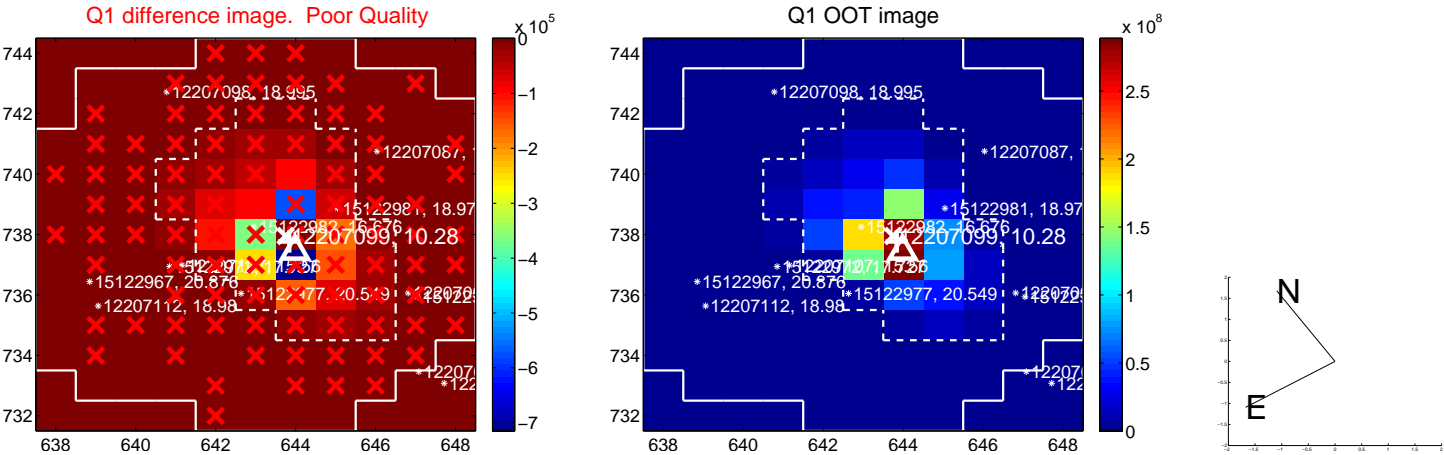
The direct PRF centroid is offset from the target star catalog position by about 0.82 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.108 ± 0.523	5.95	1.363 ± 0.311	-2.793 ± 0.440
PRF-fit source offset from KIC position	2.745 ± 0.357	7.68	1.141 ± 0.250	-2.497 ± 0.295
photometric centroid source offset	5.65 ± 4.60	1.23	-3.88 ± 3.34	4.11 ± 5.49

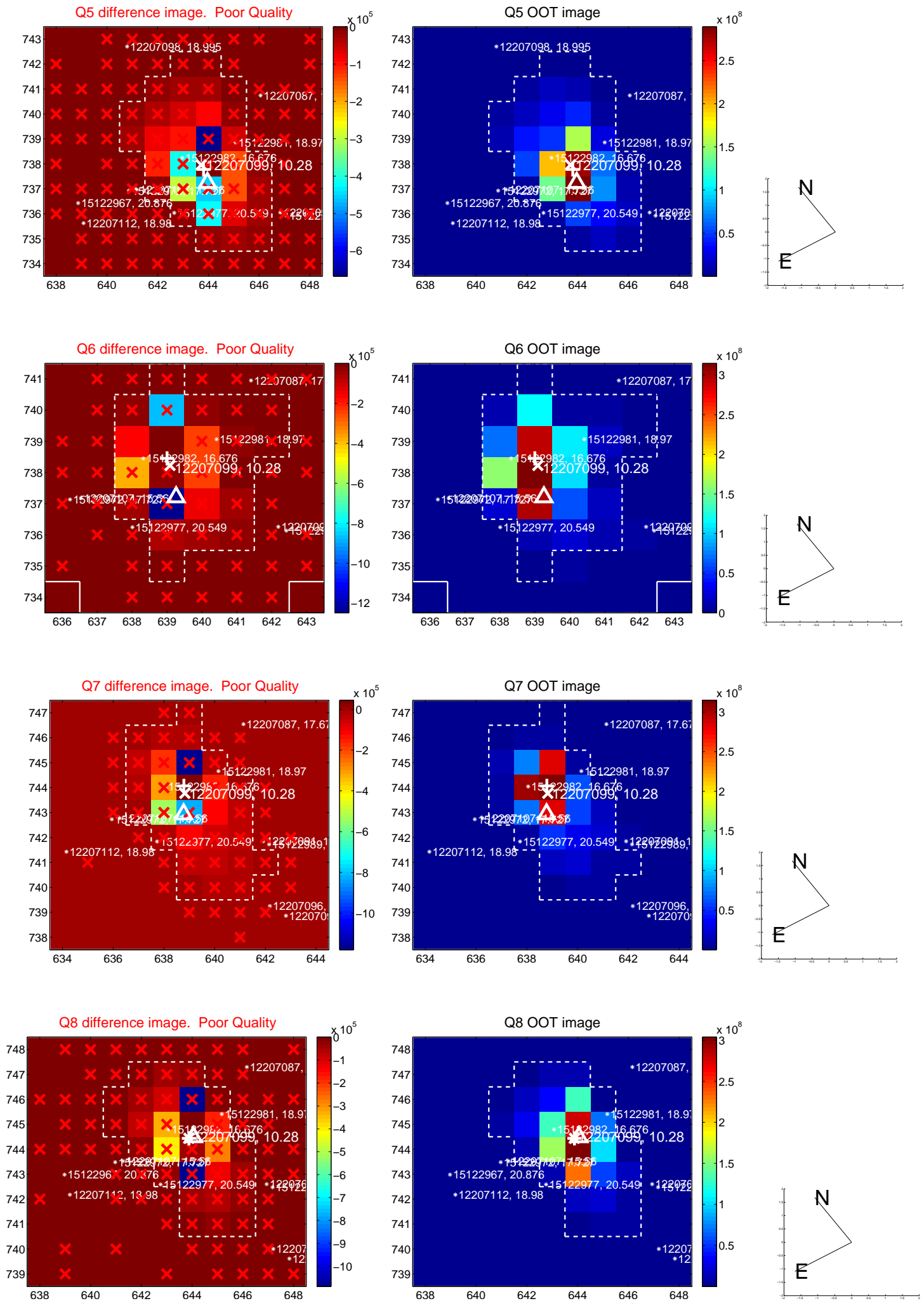


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

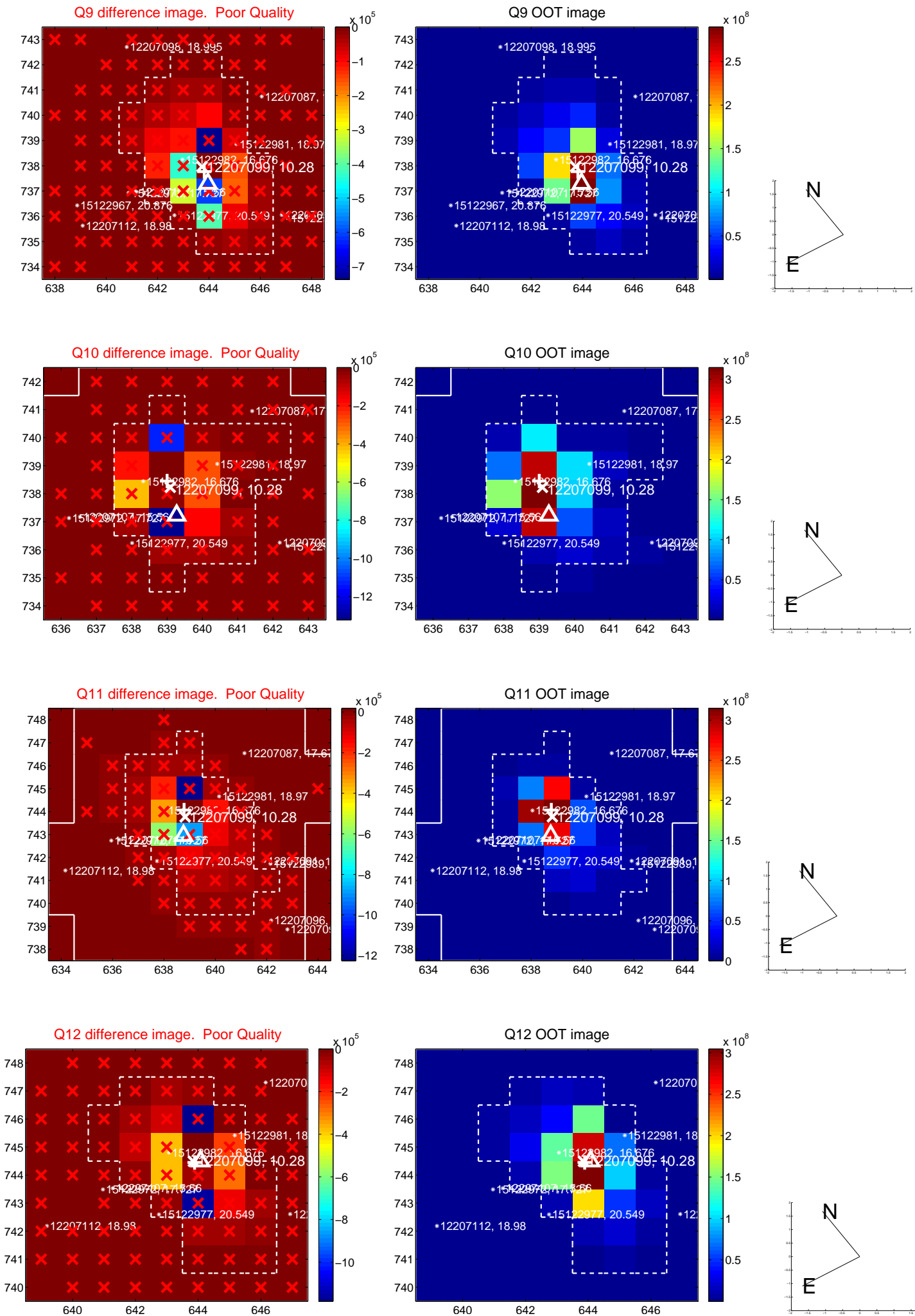
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



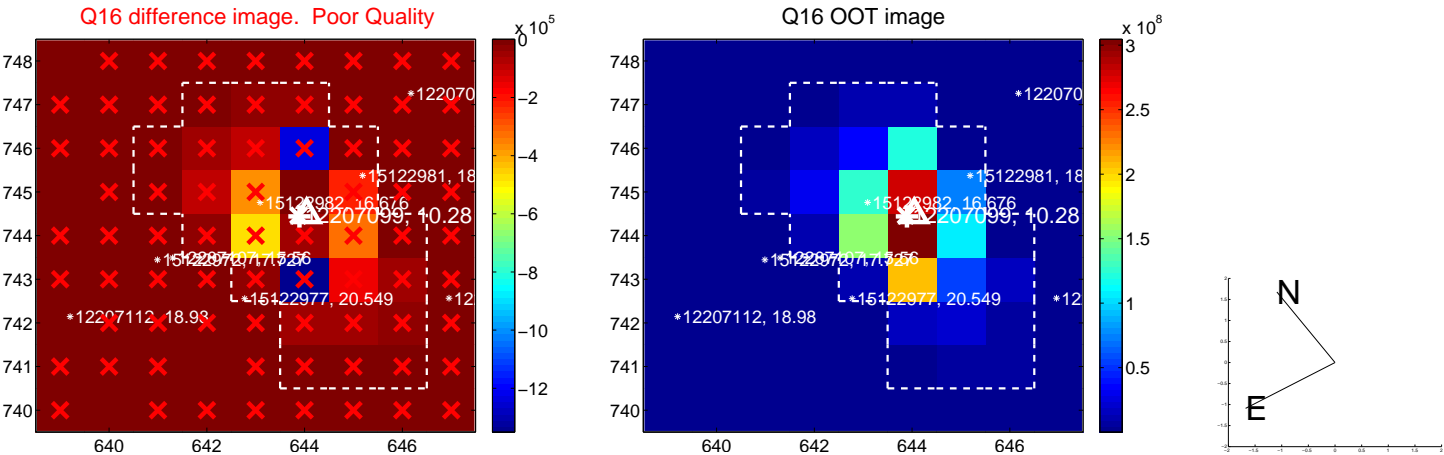
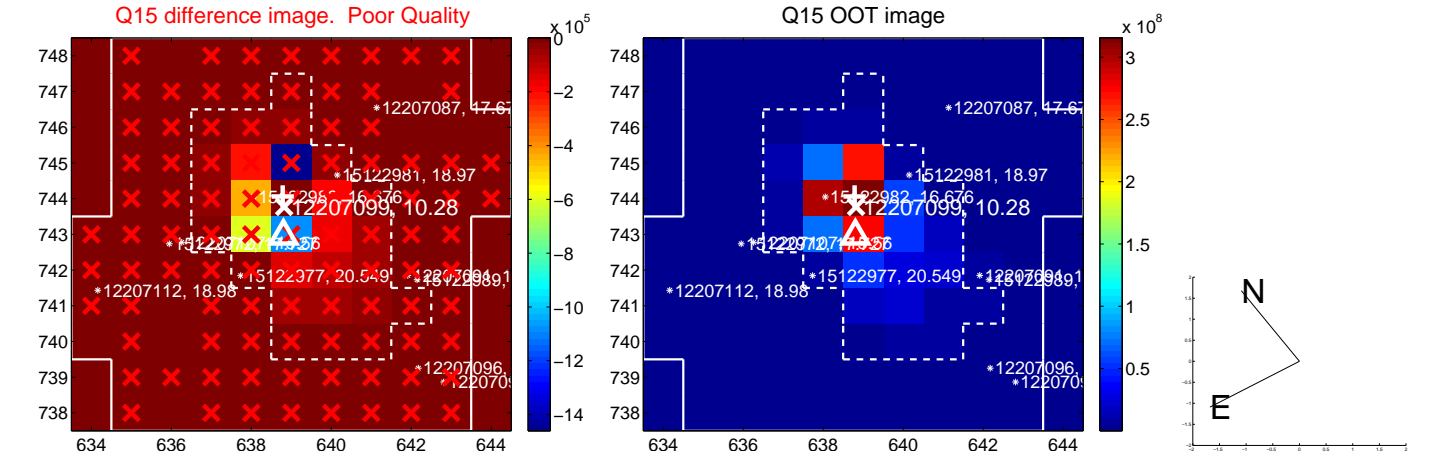
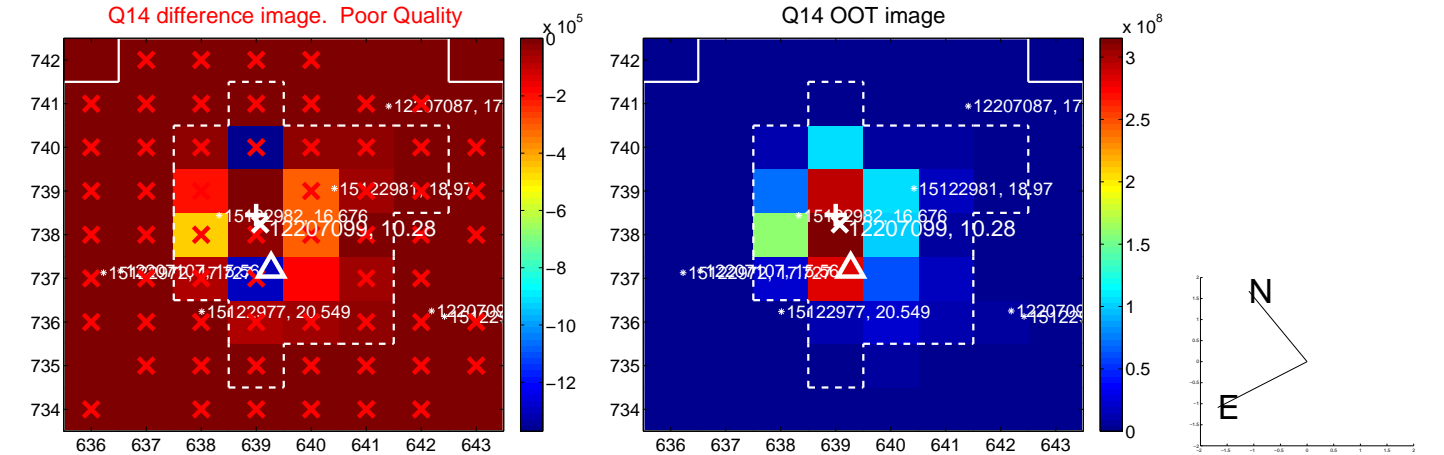
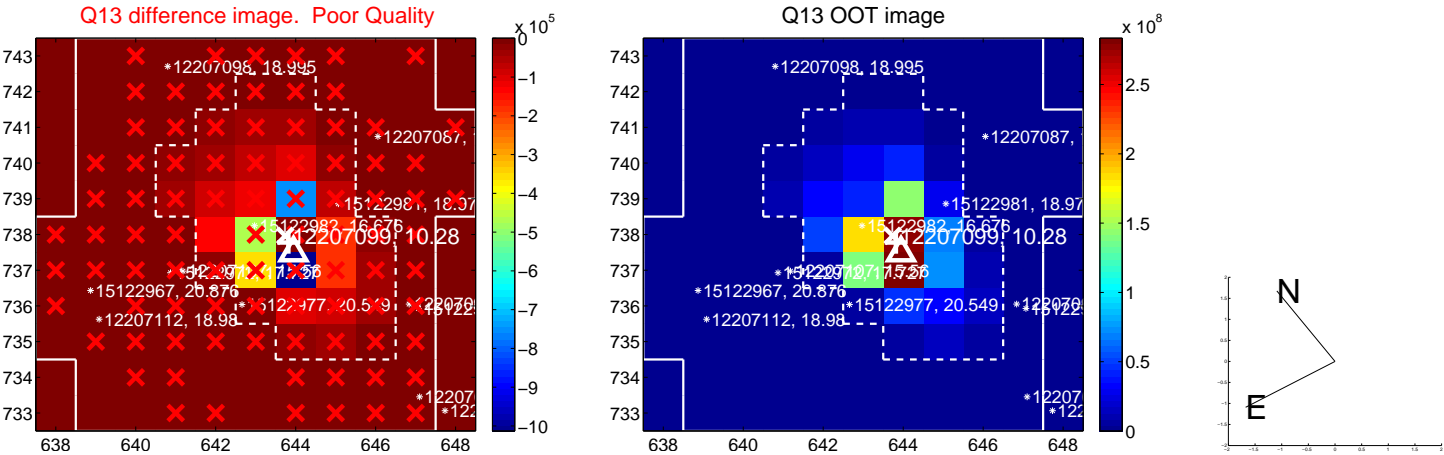
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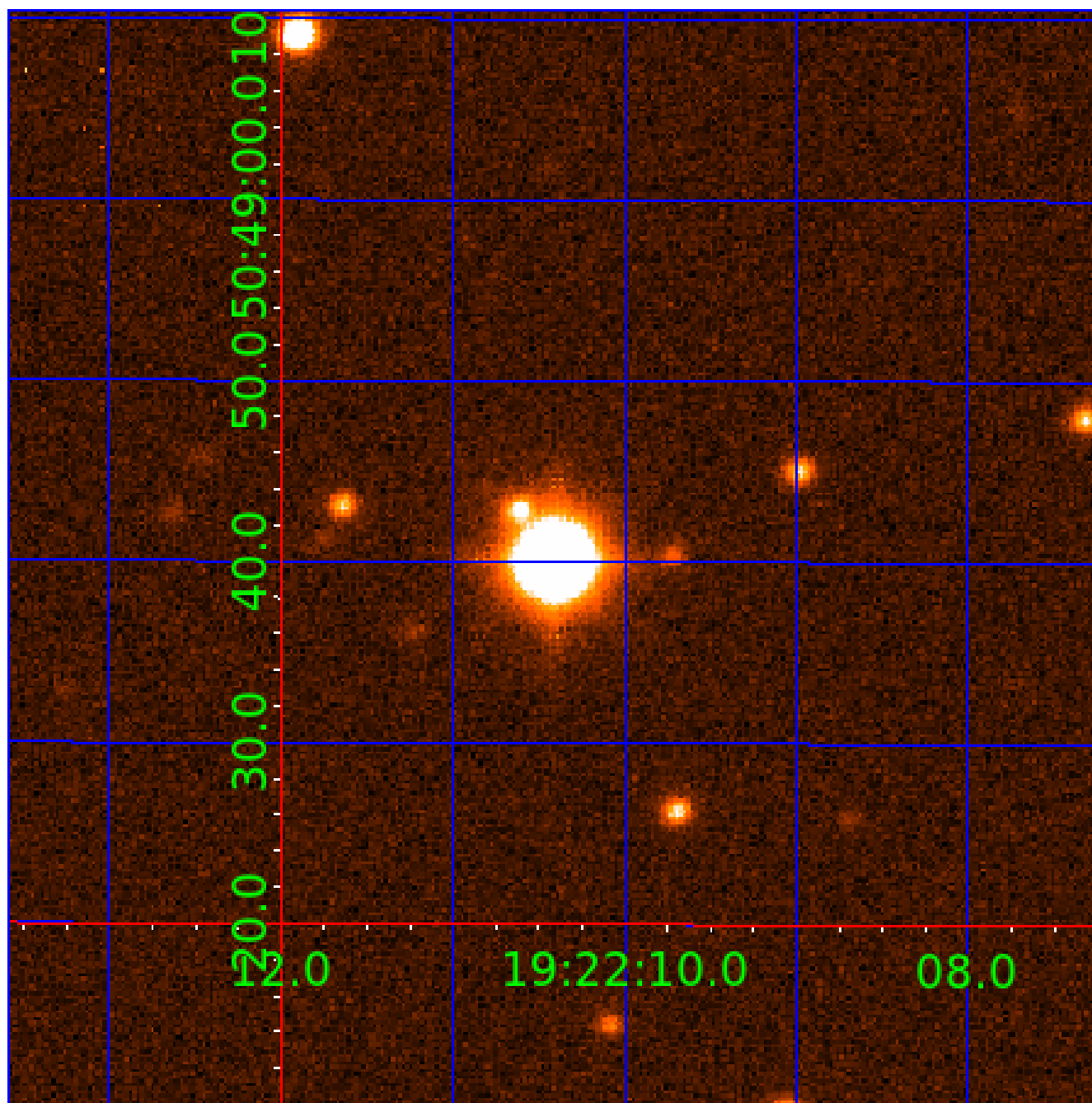


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012207099

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})
012207099-01	OBS	No	1.422535	132.207758	9.1	1.006	22.6	8.6	2.62	10932	0.90	71218.02
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012207099-04	OBS	No	134.942397	238.786690	111.9	8.223	20.6	9.6	2.62	10932	2.88	164.62
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Robovetter Results

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012207099-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
012207099-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

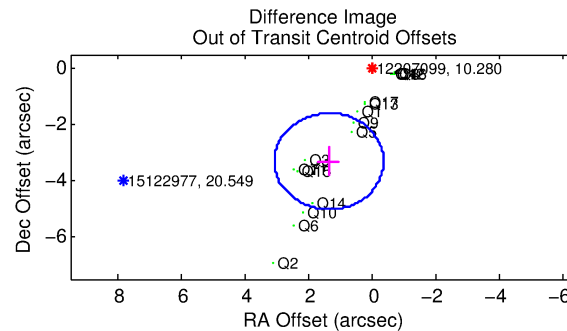
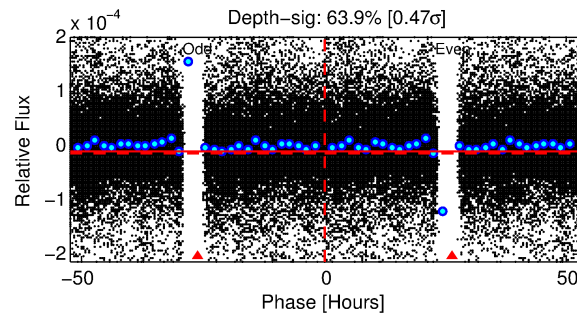
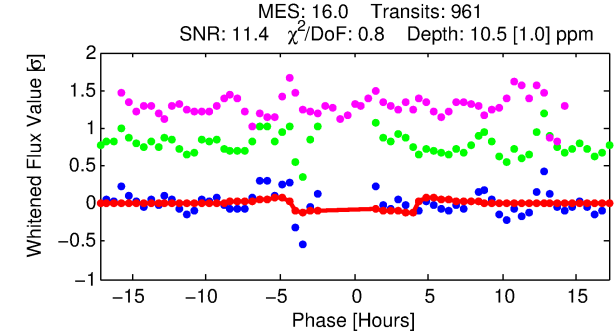
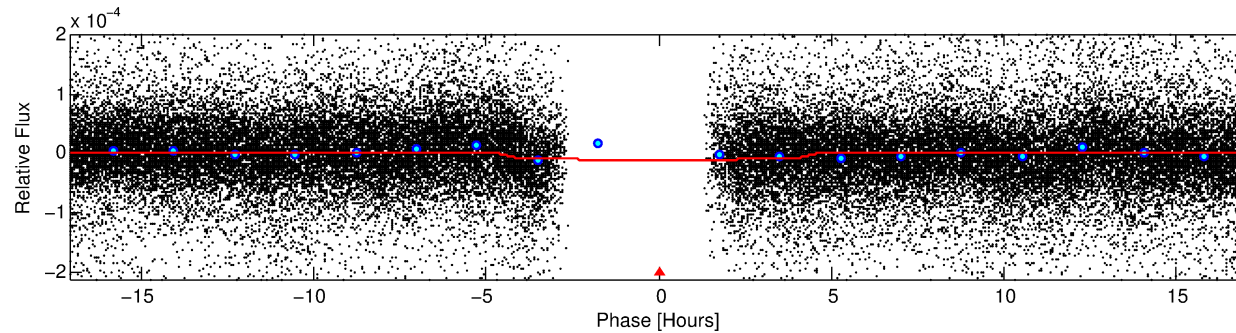
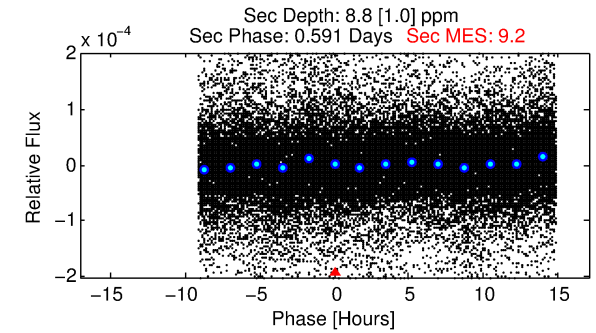
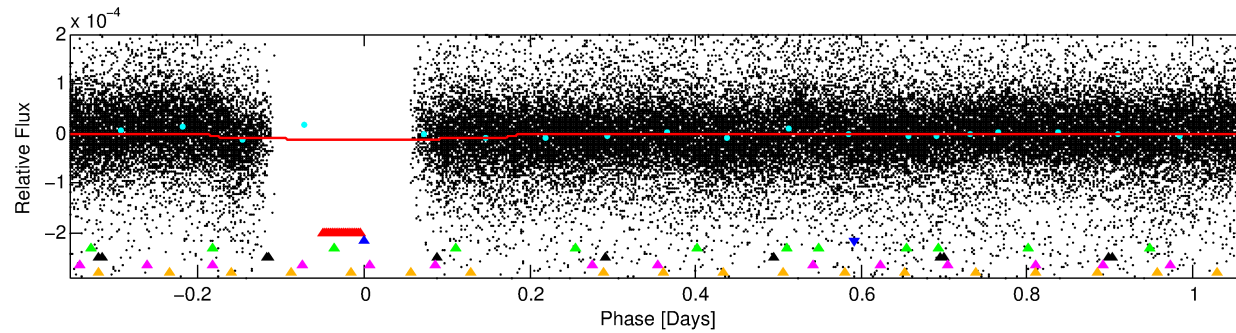
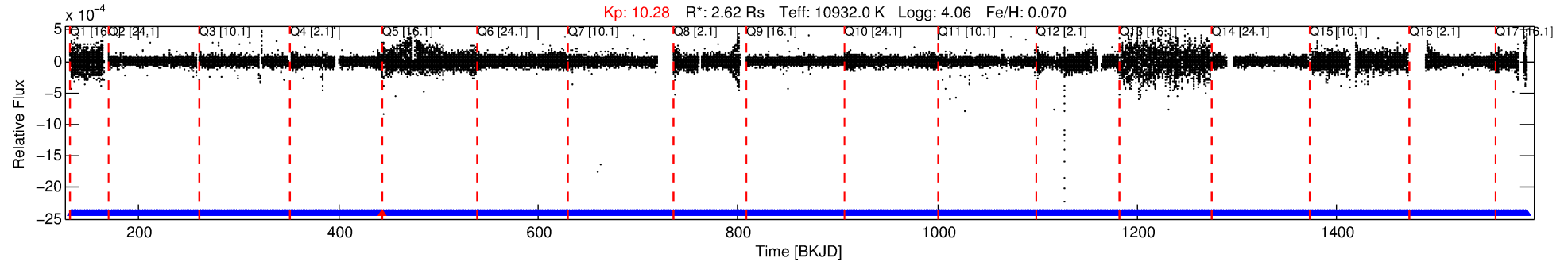
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207099-02

No Significant Match Found

DV One-Page Summary

KIC: 12207099 Candidate: 2 of 6 Period: 1.423 d



DV Fit Results:

Period = 1.42258 [0.00001] d
Epoch = 132.2114 [0.0025] BKJD
Rp/R* = 0.0032 [0.0003]
a/R* = 1.22 [0.29]
b = 0.70 [0.54]
Seff = 71215.05 [34128.56]
Teq = 4166 [499] K
Rp = 0.91 [0.32] Re
a = 0.0351 [0.0105] AU
Ag = 7.15 [3.60] [1.71σ]
Teffp = 10530 [744] K [7.10σ]

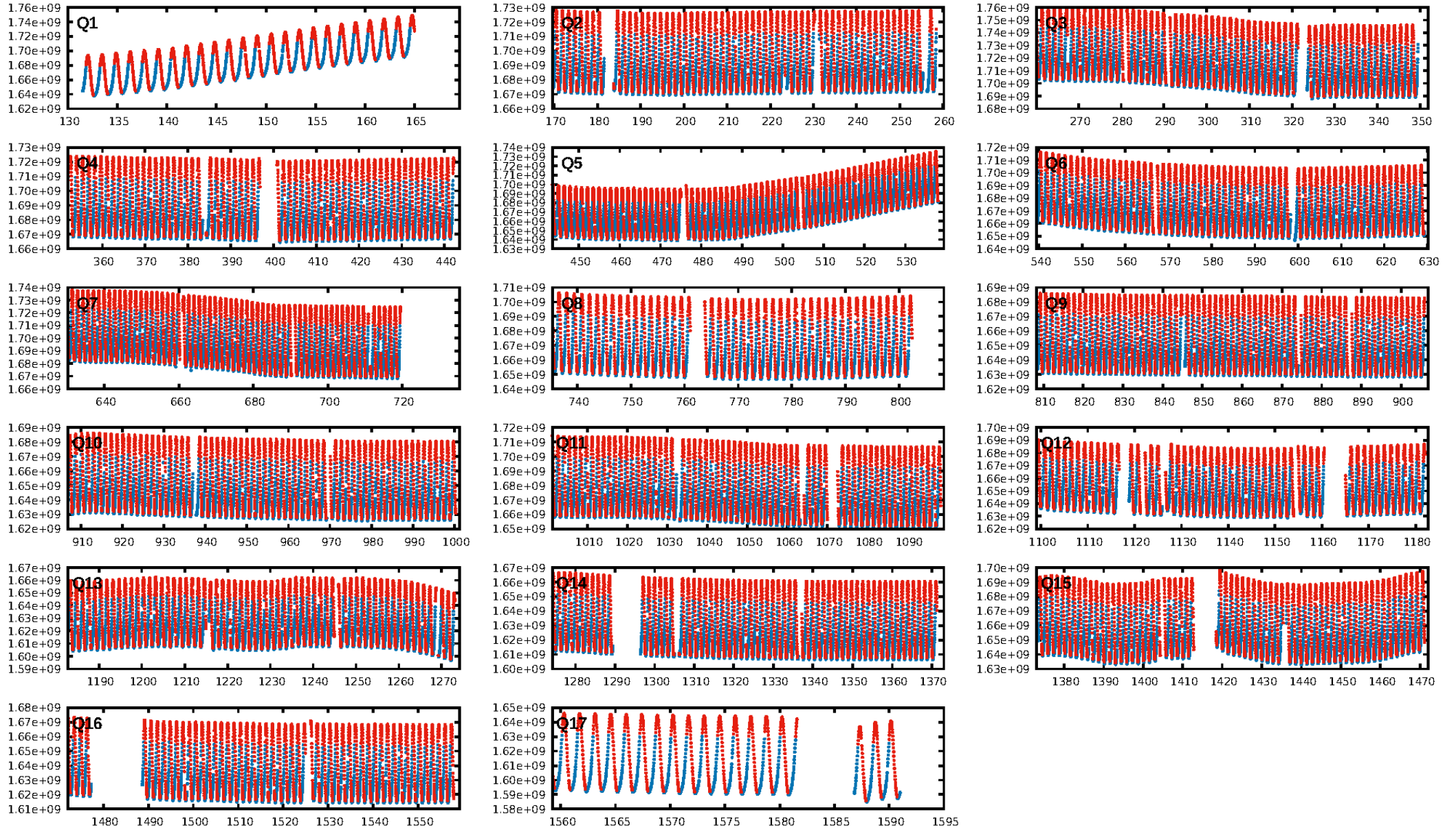
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [210.73σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [917/918]
GhostDiagnostic-chr: N/A
Centroid-sig: 6.9%
Centroid-so: 4.085 arcsec [1.75σ]
OotOffset-rm: 3.582 arcsec [6.27σ]
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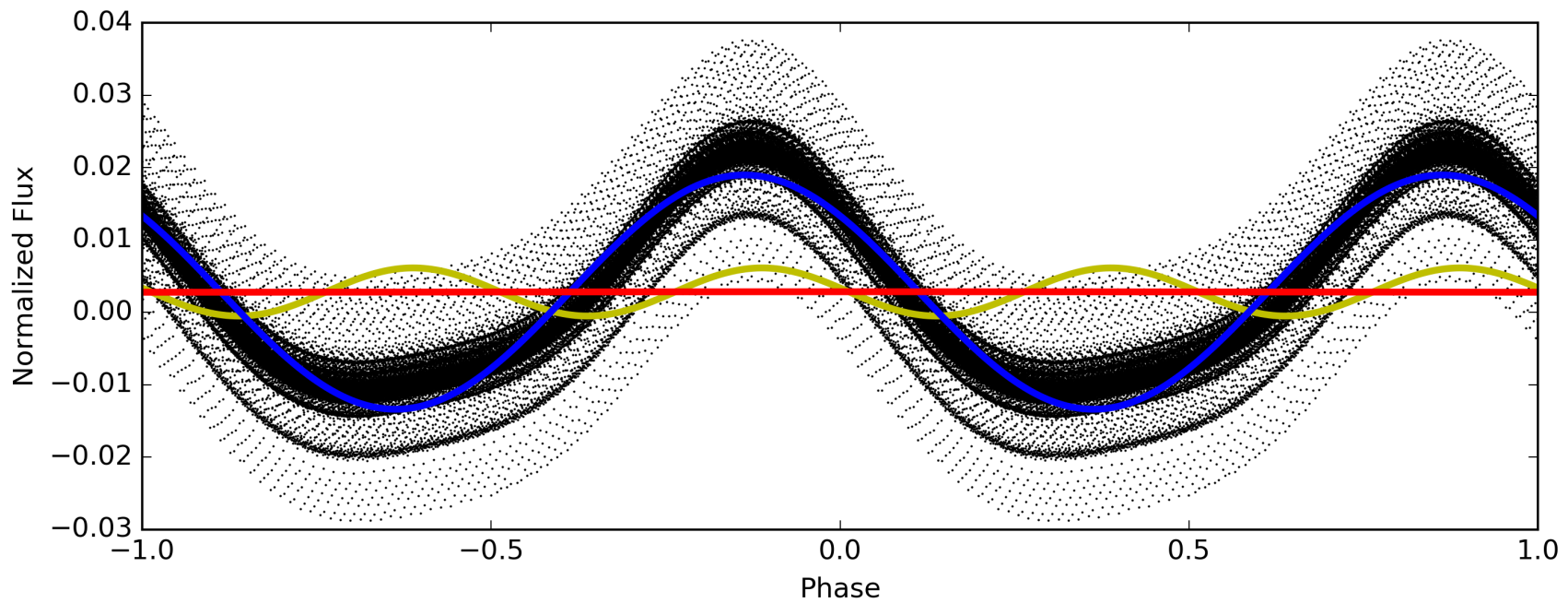
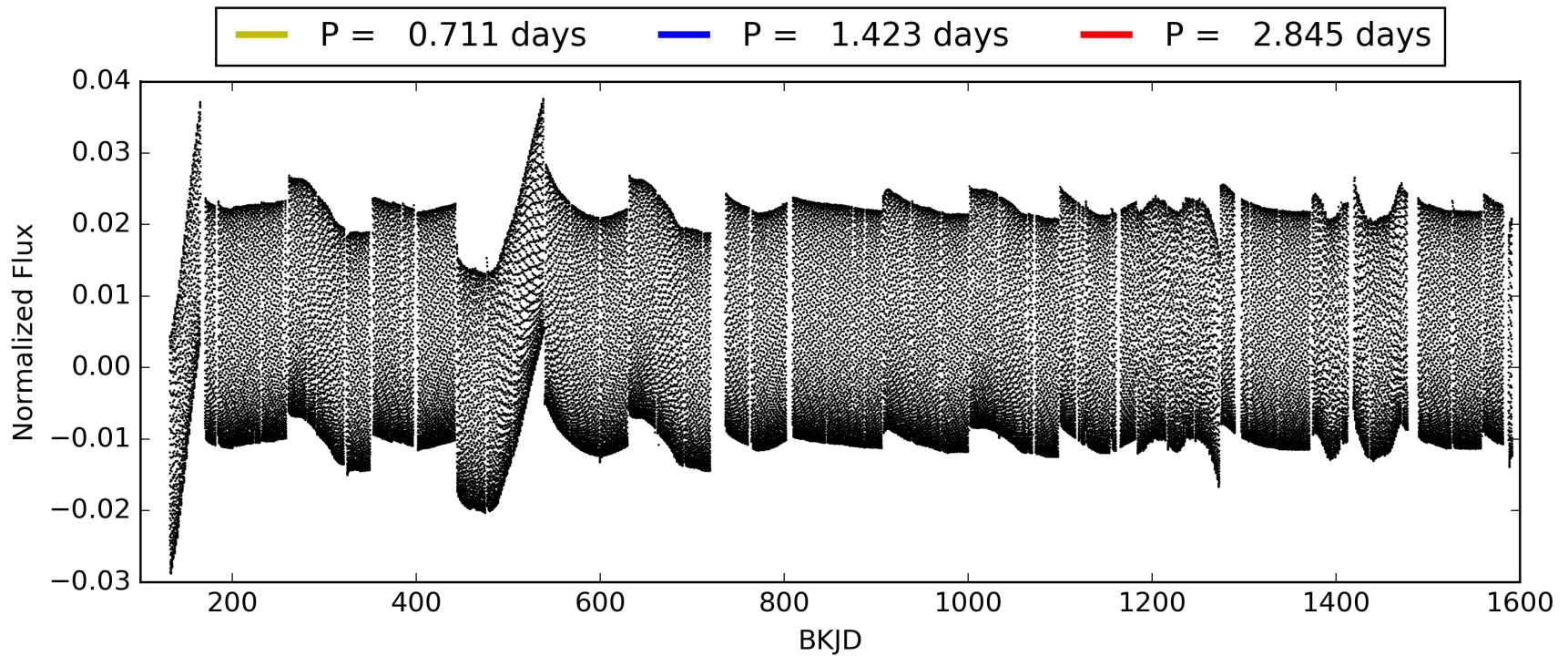
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 012207099-02, PDC Light Curves

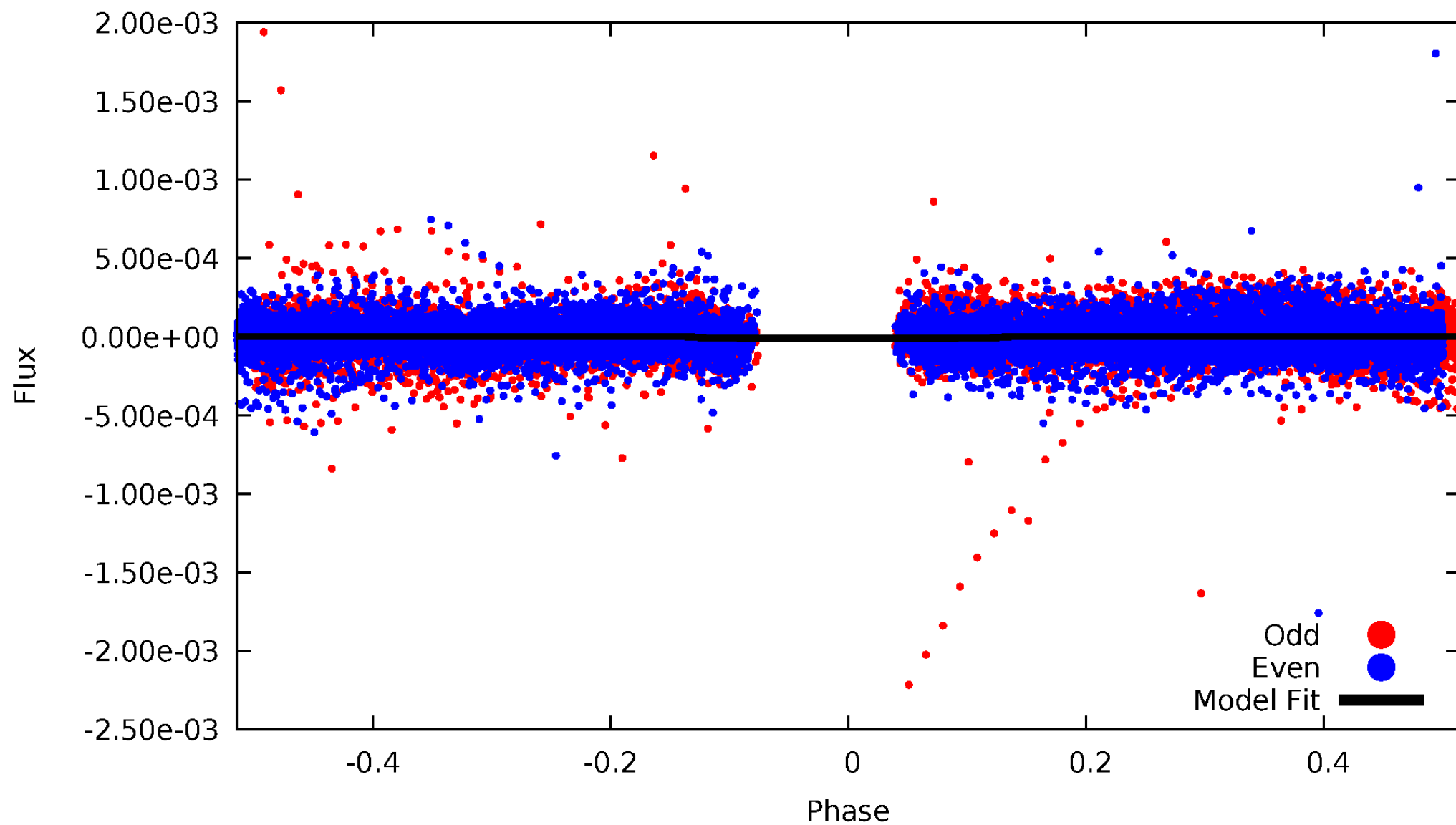


TCE 012207099-02



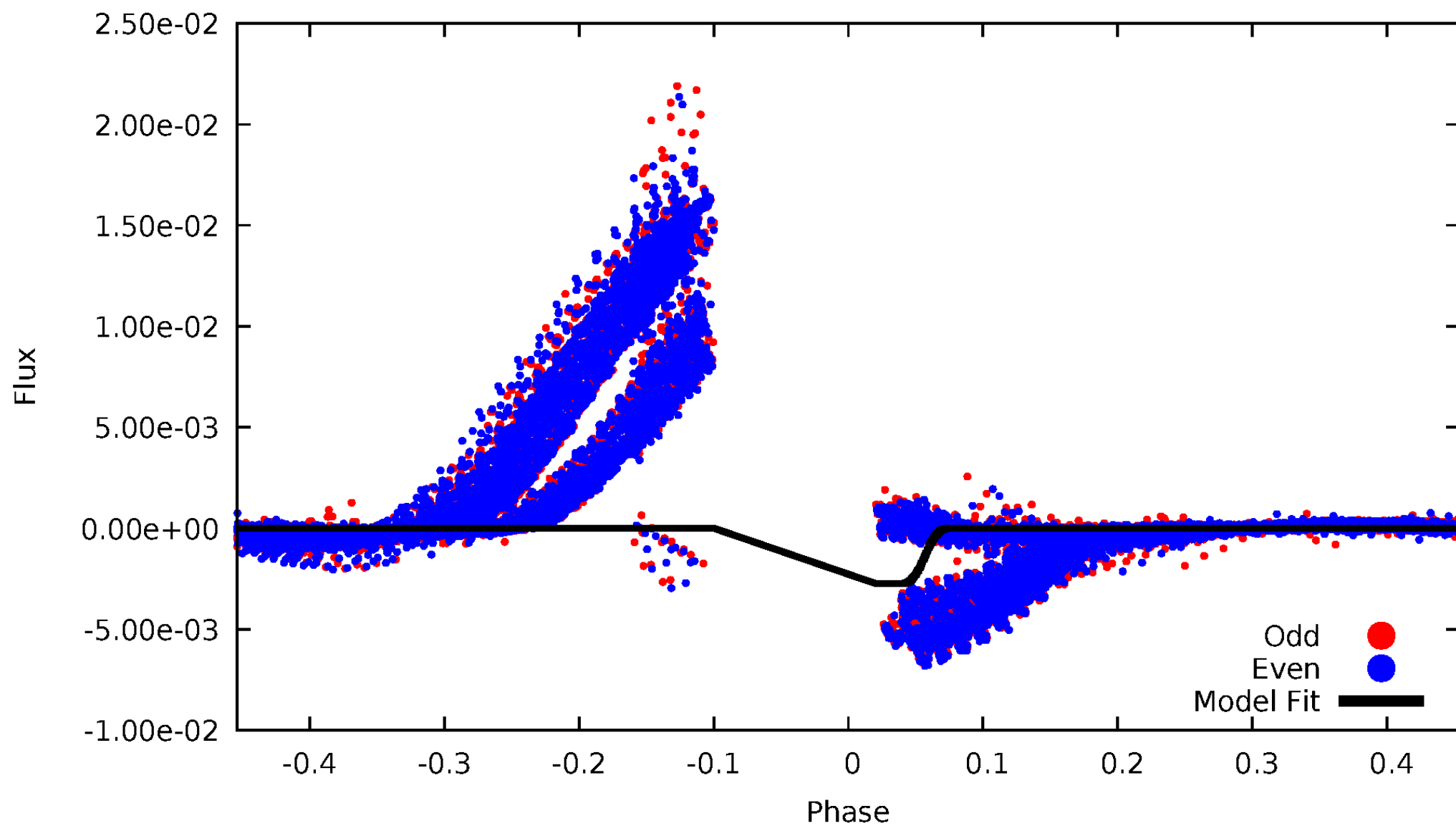
DV Odd/Even

TCE 012207099-02



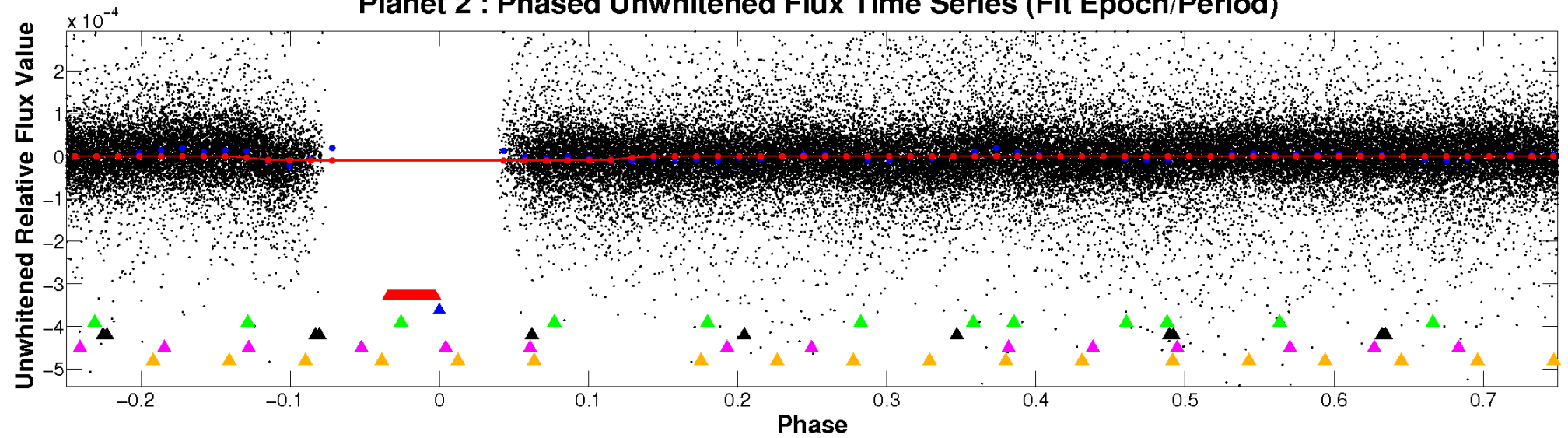
ALT Odd/Even

TCE 012207099-02

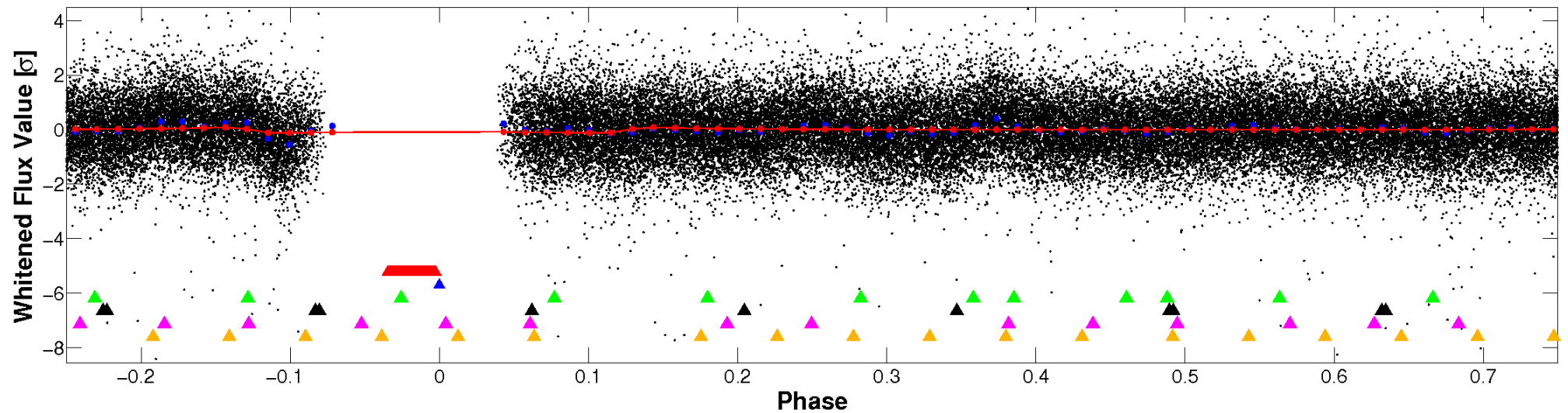


Non-Whitened Vs. Whitened Light Curve

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

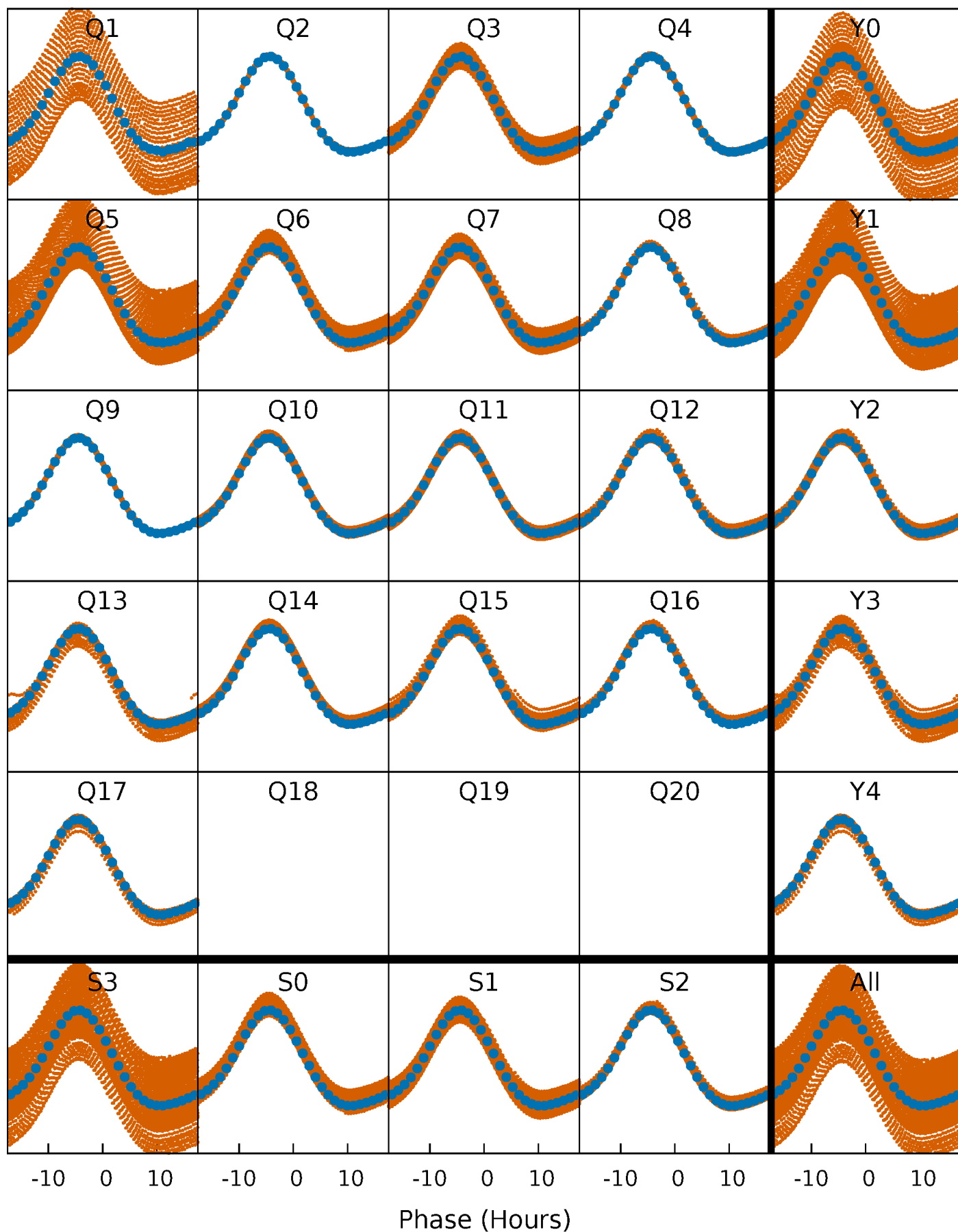


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



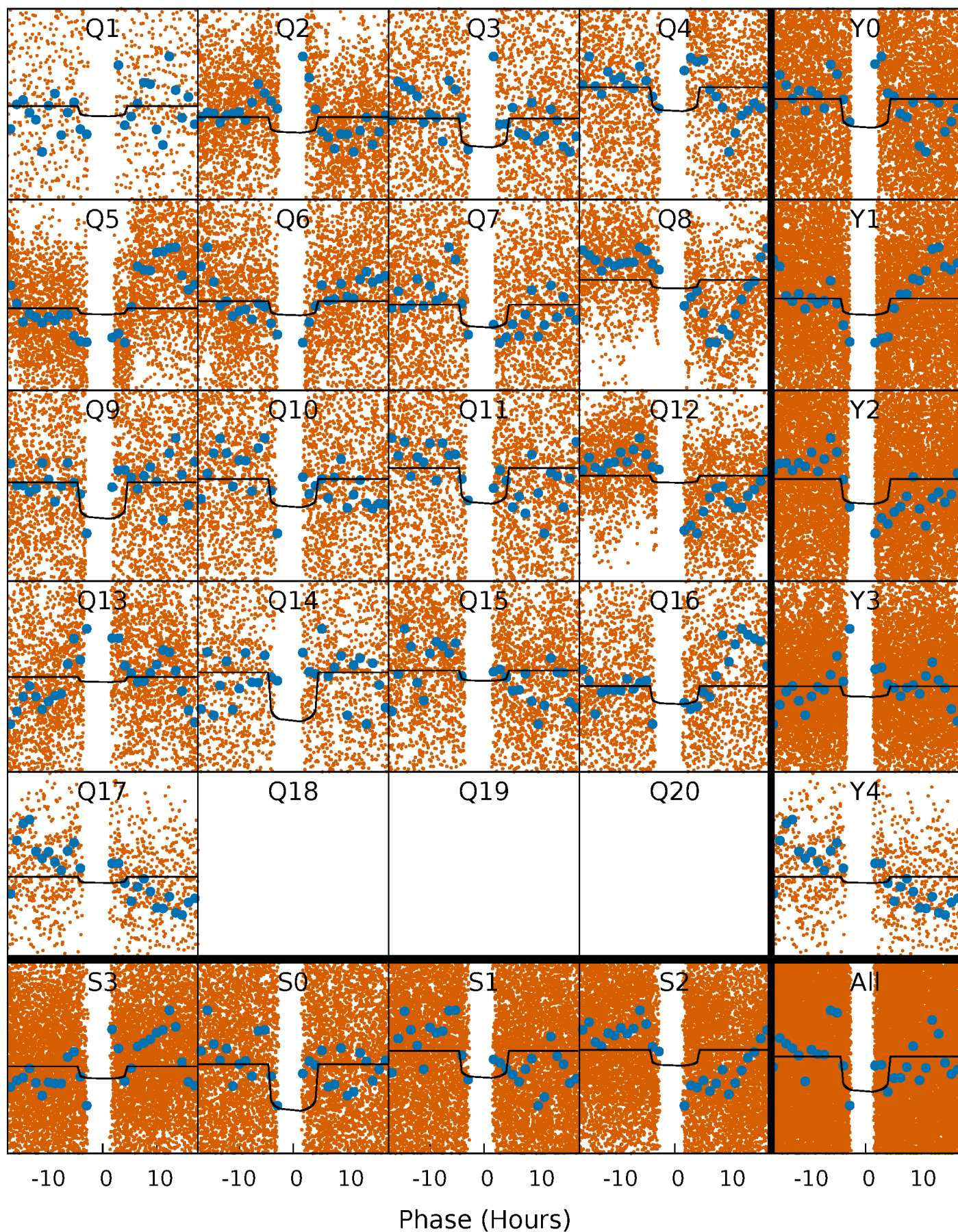
PDC Quarter-Phased Transit Curves

TCE 012207099-02 $P = 1.422580$ Days $T_0 = 132.211387$ (BKJD)



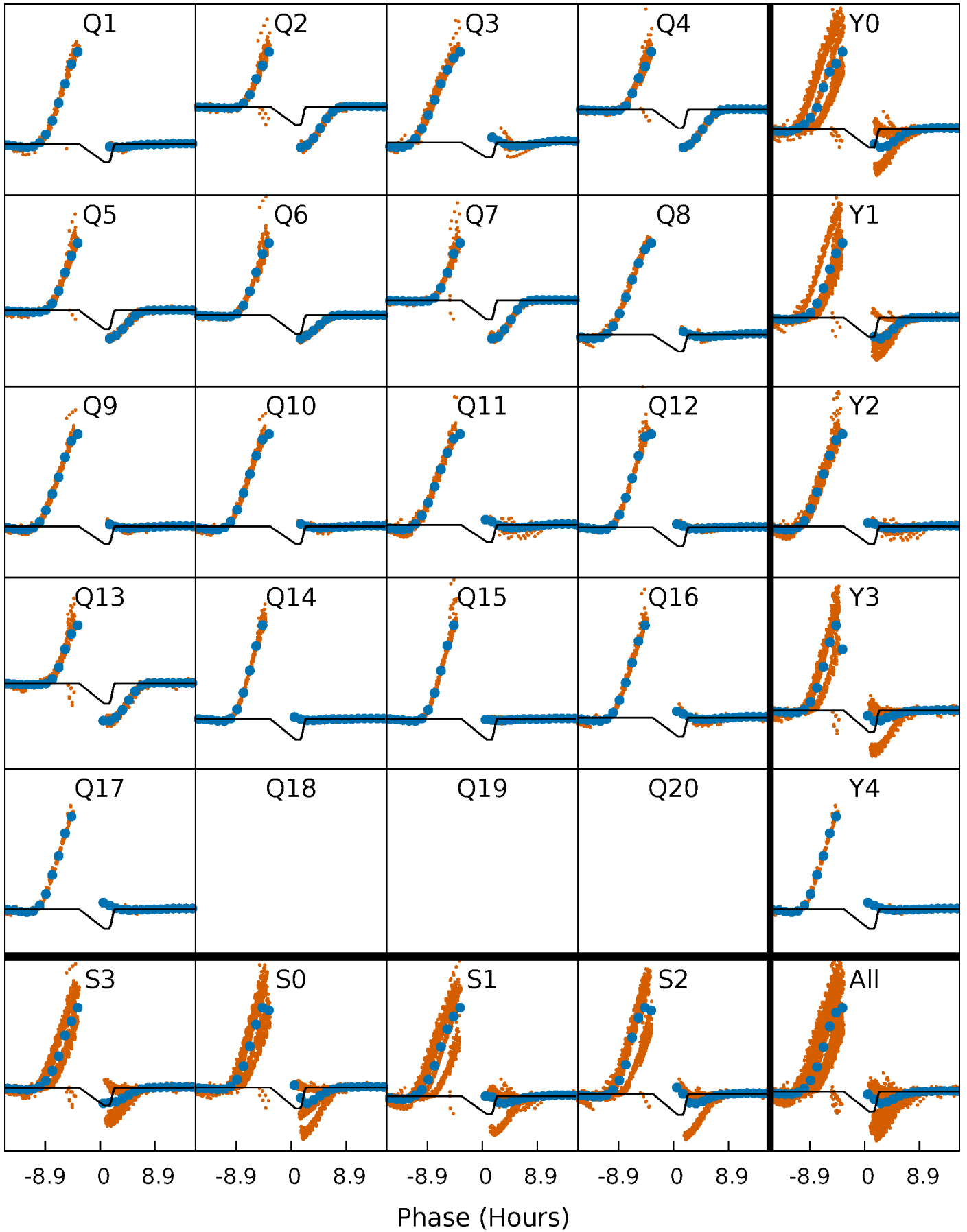
DV Quarter-Phased Transit Curves

TCE 012207099-02 P= 1.422580 Days $T_0=132.211387$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

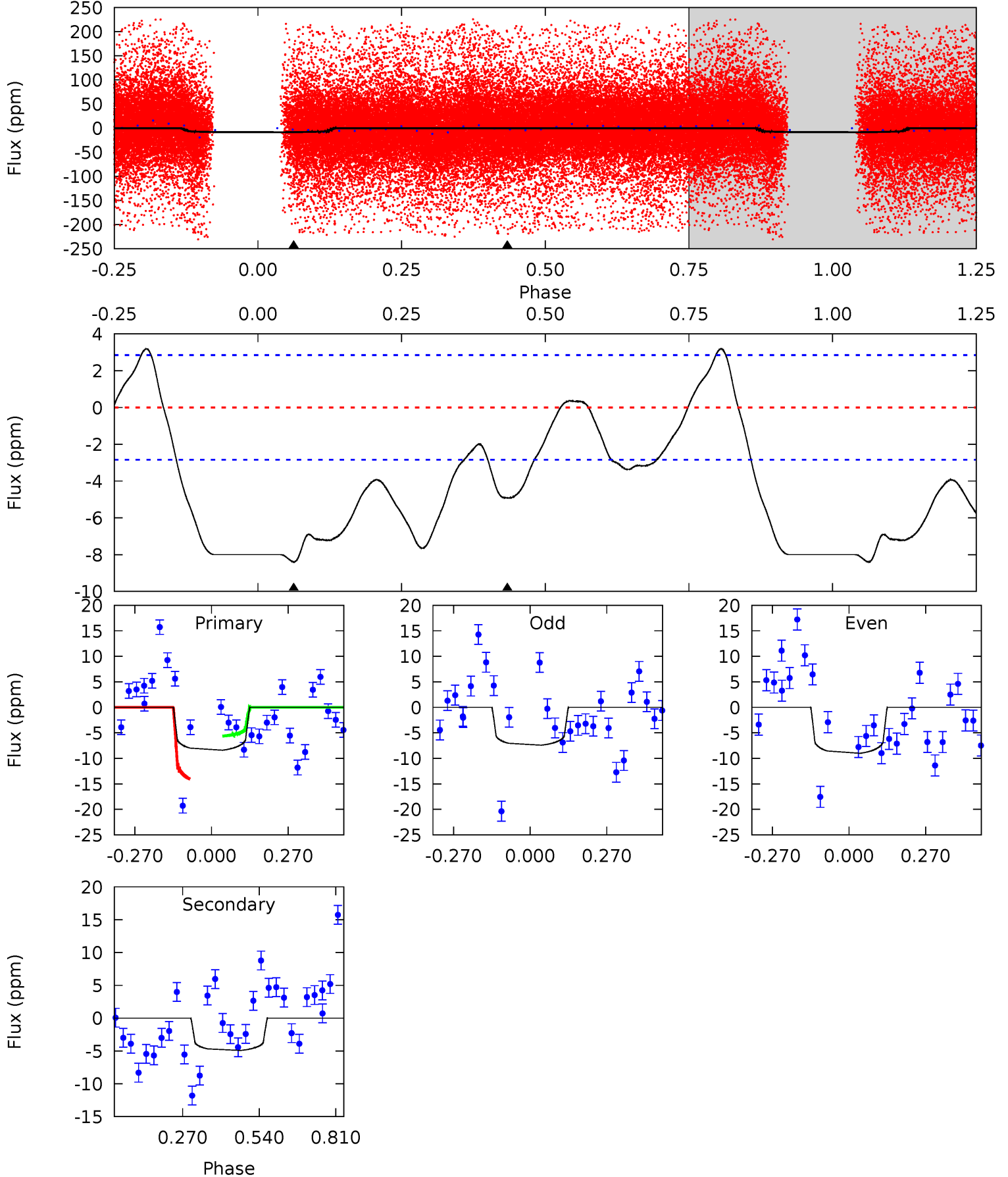
TCE 012207099-02 $P = 1.422573$ Days $T_0 = 132.244594$ (BKJD)



DV Model-Shift Uniqueness Test

012207099-02, P = 1.422580 Days, E = 130.788807 Days

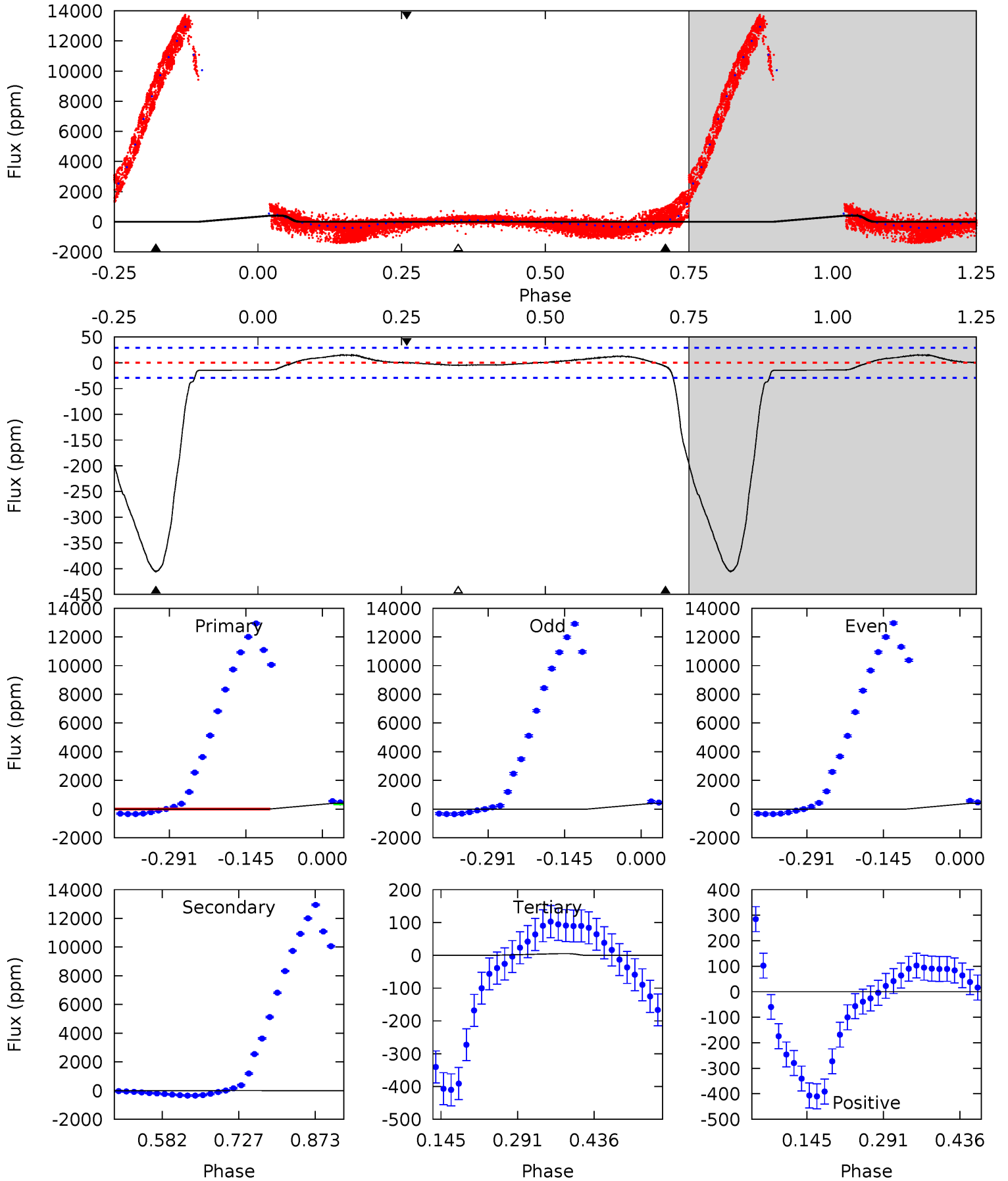
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	7.54	0	0	4.35	1.10	2.29	12.9	12.9	7.54	7.54	1.19	1.44	0.28	5.92



Alt Model-Shift Uniqueness Test

012207099-02, P = 1.422573 Days, E = 130.822021 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.4	1.07	0.75	0.02	4.49	1.46	0.90	61.7	62.4	0.32	1.05	1.27	-6.13	0.04	0



Stellar Parameters For KIC 012207099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10932^{+266}_{-457}	$4.056^{+0.252}_{-0.189}$	$0.070^{+0.050}_{-0.600}$	$2.615^{+0.733}_{-0.895}$	$2.838^{+0.289}_{-0.674}$	$0.224^{+0.370}_{-0.106}$
	+2%/-4%	+6%/-5%	+71%/-857%	+28%/-34%	+10%/-24%	+165%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 012207099-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 1	$0.90^{+0.19}_{-0.17}$	5816^{+461}_{-559}	8224^{+710}_{-697}	$4.067^{+1.971}_{-1.381}$
Alt.	-7 ± 6	$14.97^{+2.44}_{-2.77}$	5779^{+501}_{-504}	-4389^{+306}_{-306}	$0.019^{+0.023}_{-0.019}$

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

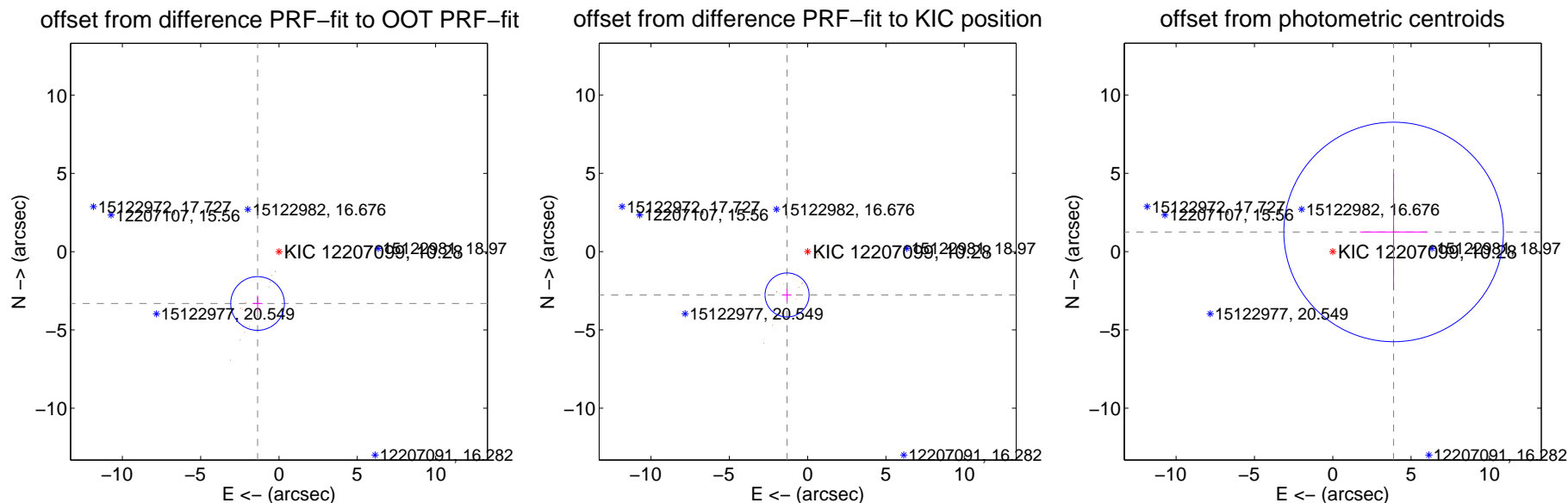
DV Centroid Data

Supplemental centroid analysis for 012207099-02. **Kepler magnitude: 10.28.** Transit SNR 11.44

There are 0 quarters with good PRF difference image offsets

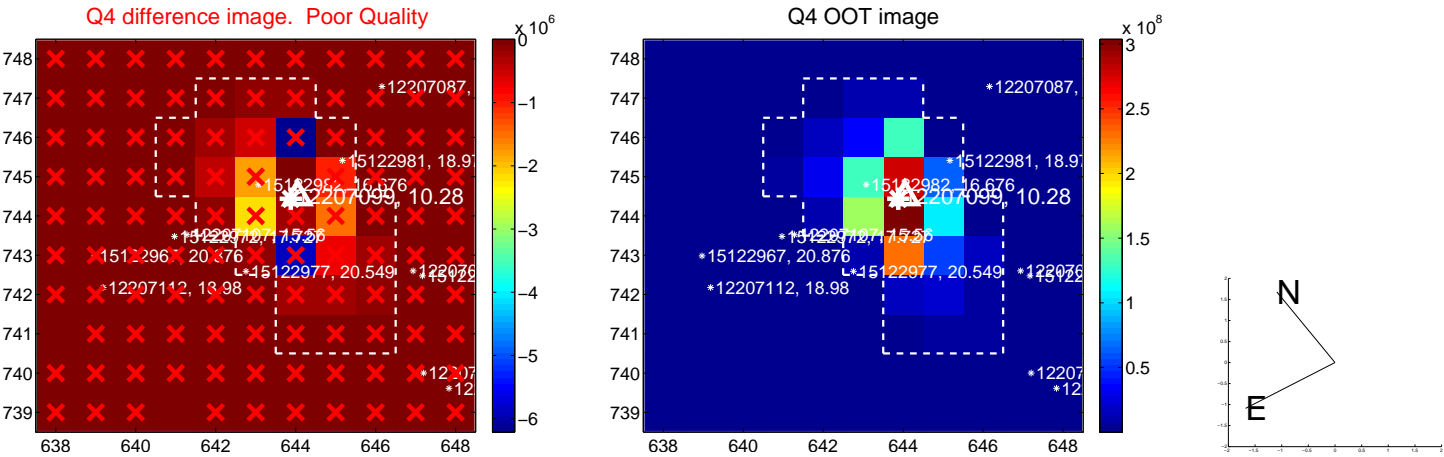
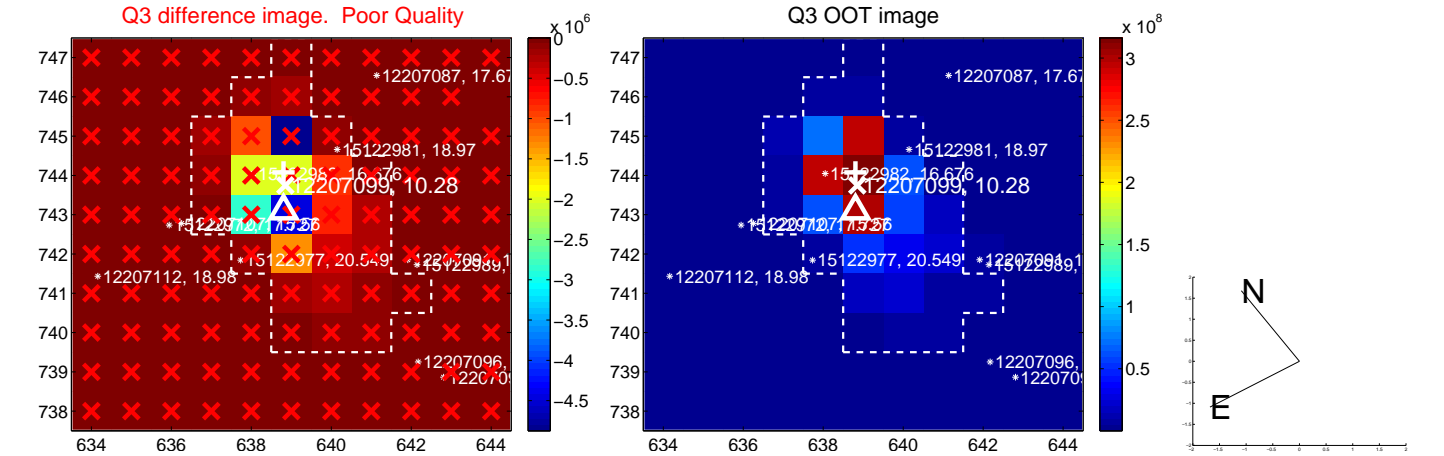
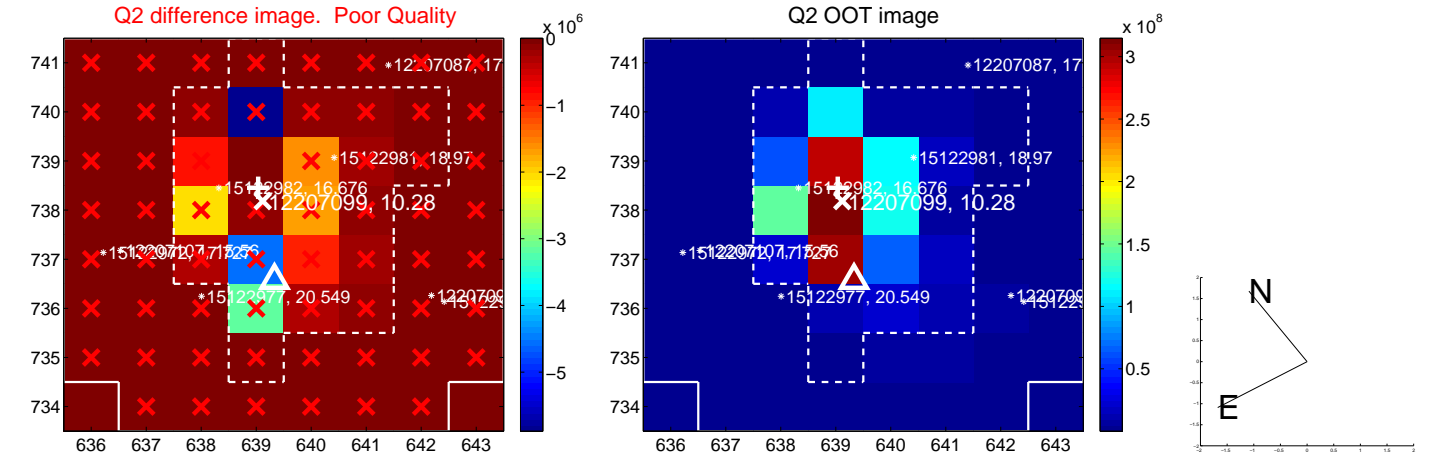
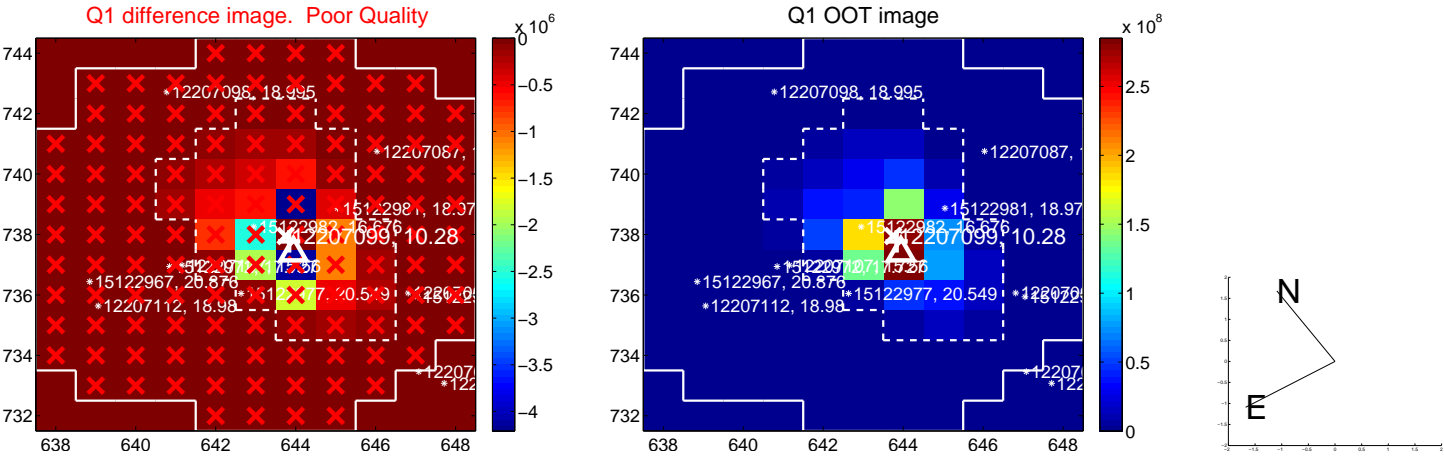
The direct PRF centroid is offset from the target star catalog position by about 0.79 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.582 ± 0.572	6.27	1.367 ± 0.319	-3.311 ± 0.496
PRF-fit source offset from KIC position	3.067 ± 0.469	6.54	1.314 ± 0.284	-2.771 ± 0.398
photometric centroid source offset	4.08 ± 2.34	1.75	-3.89 ± 2.14	1.25 ± 3.73

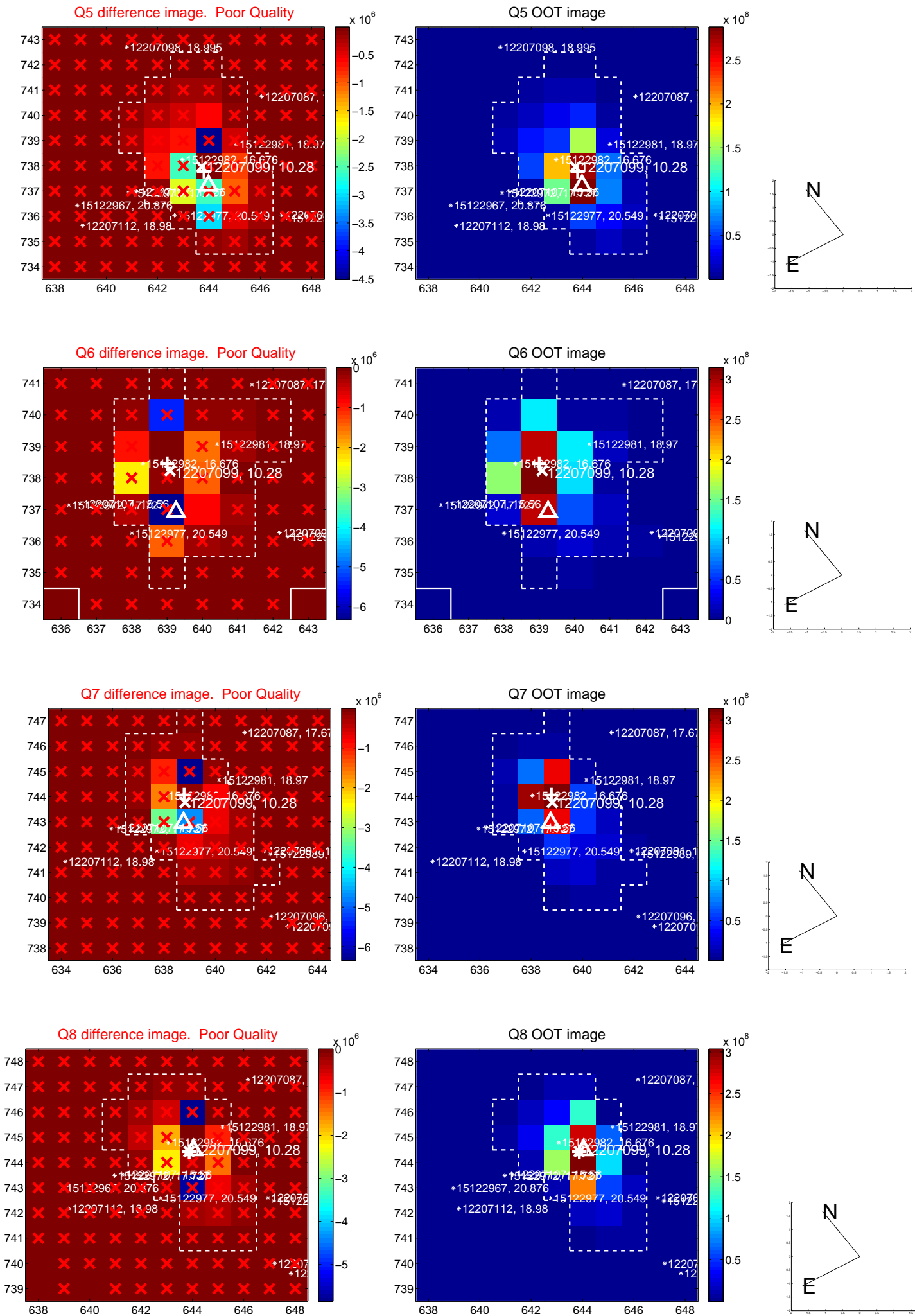


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

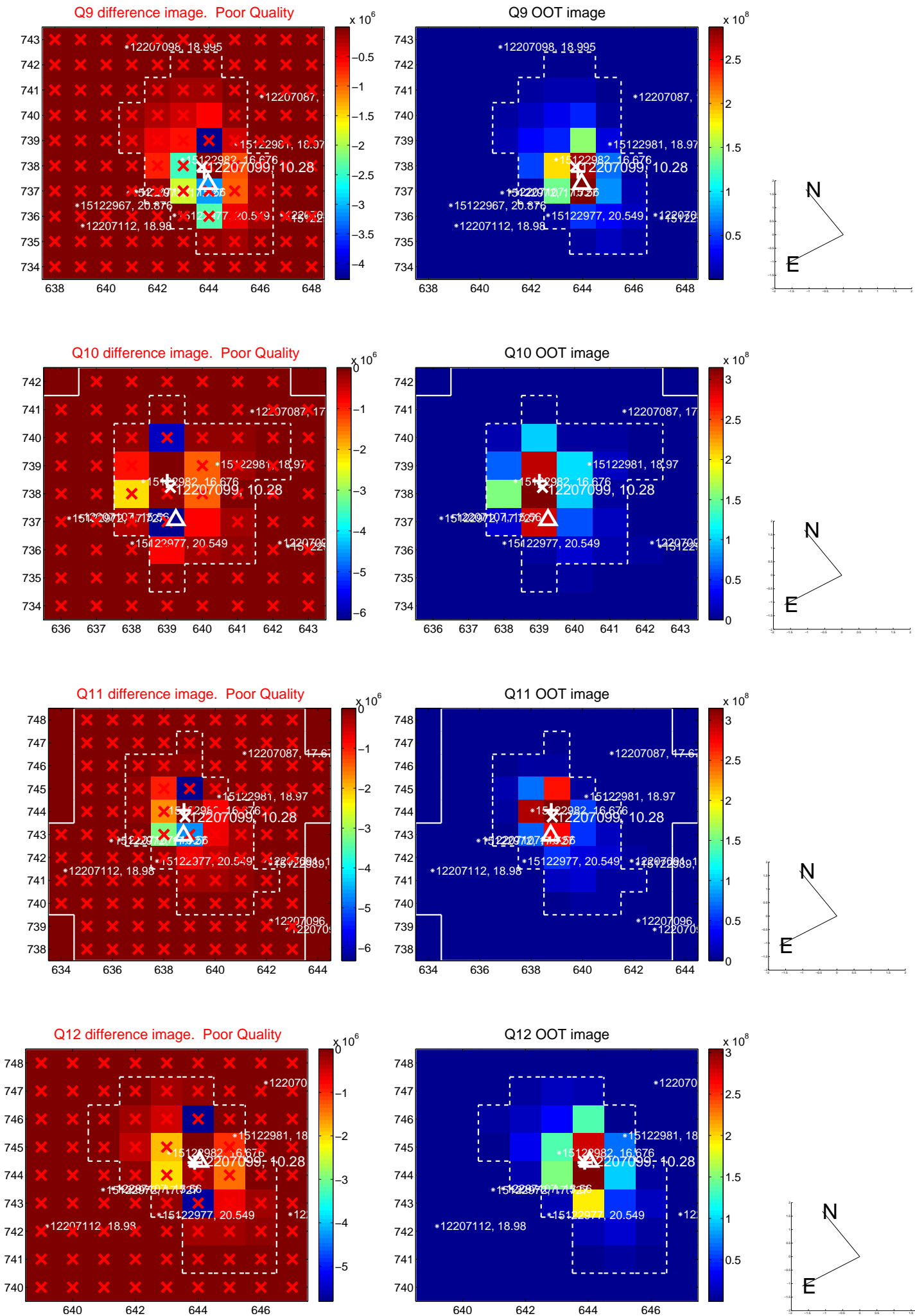
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



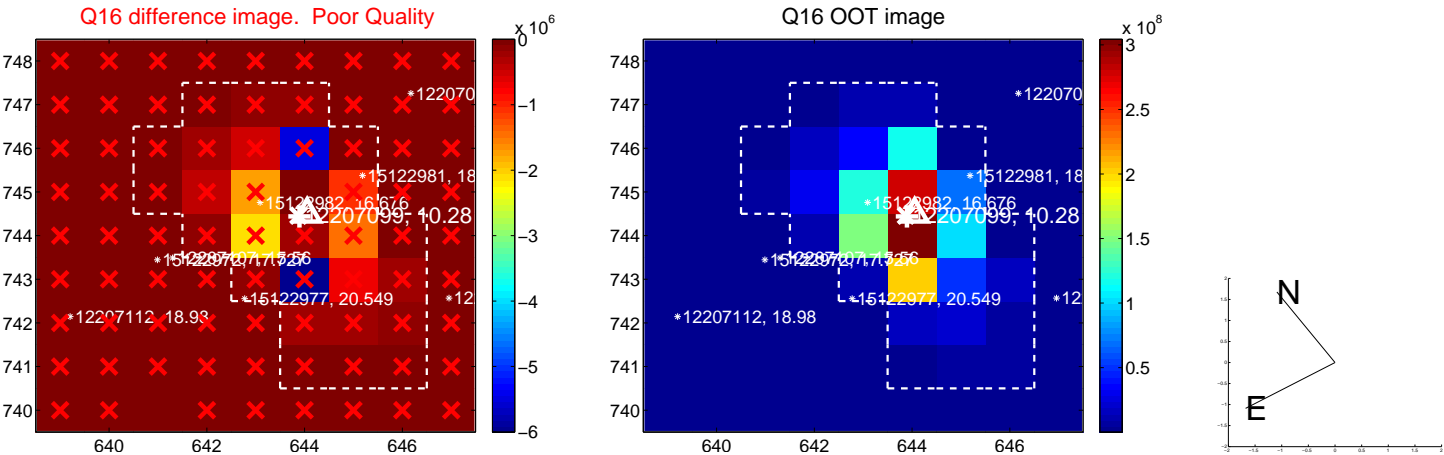
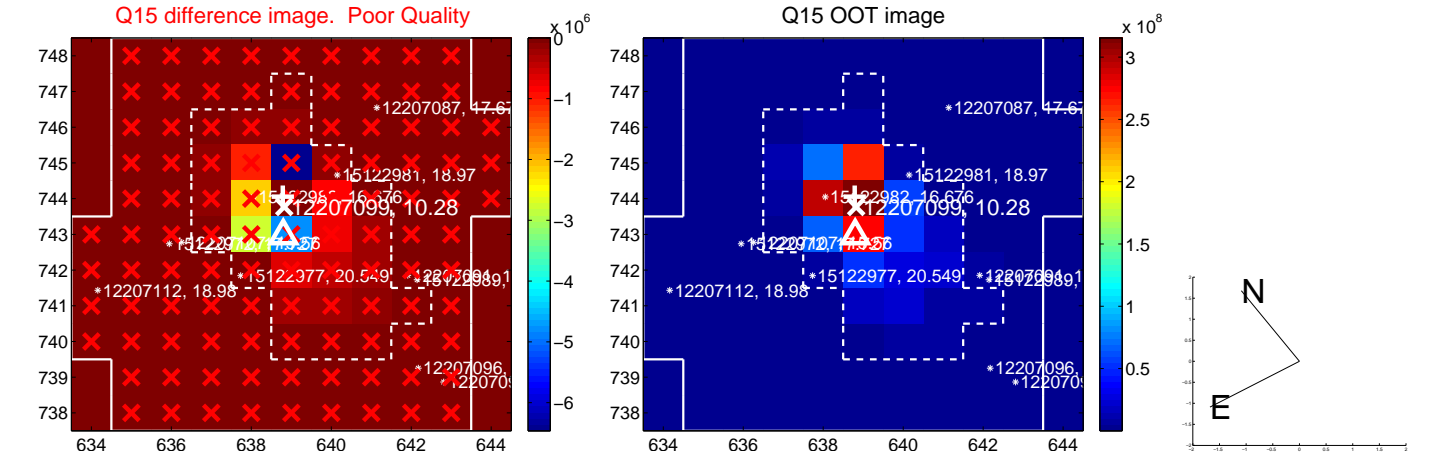
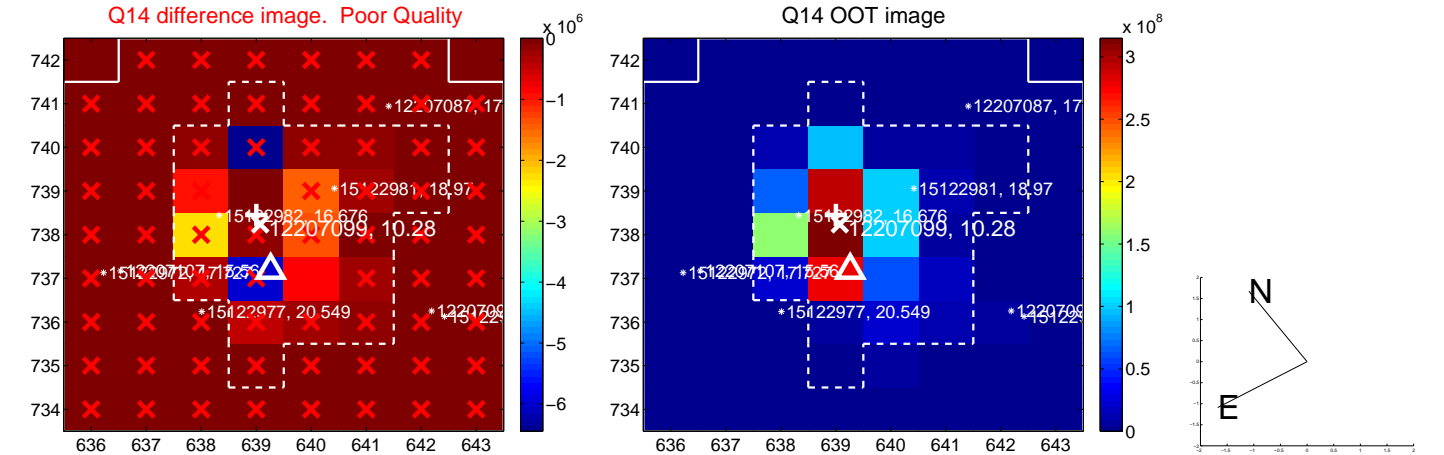
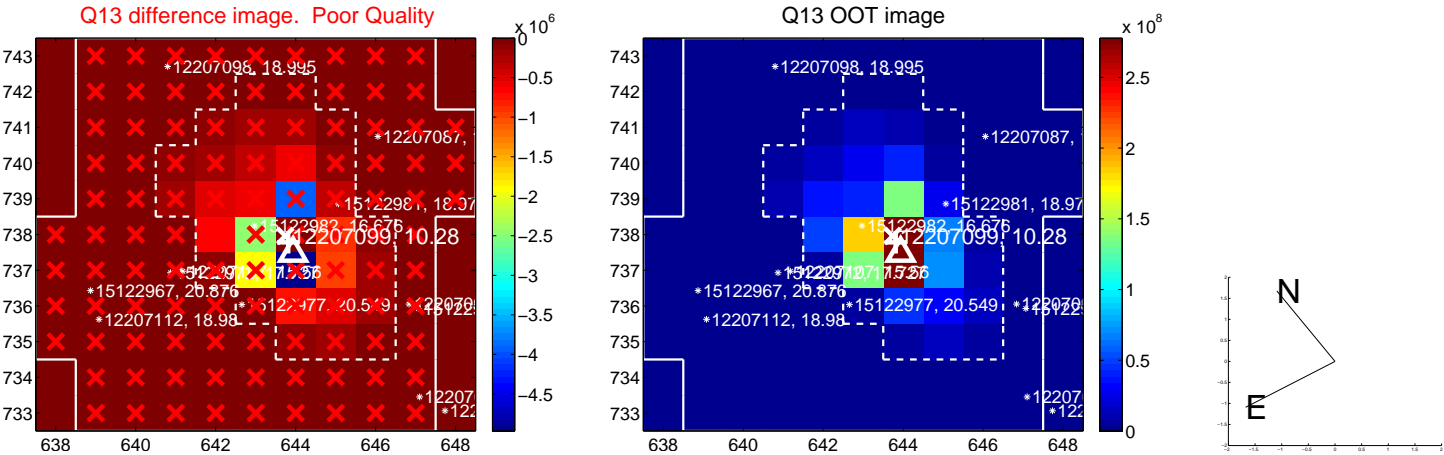
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



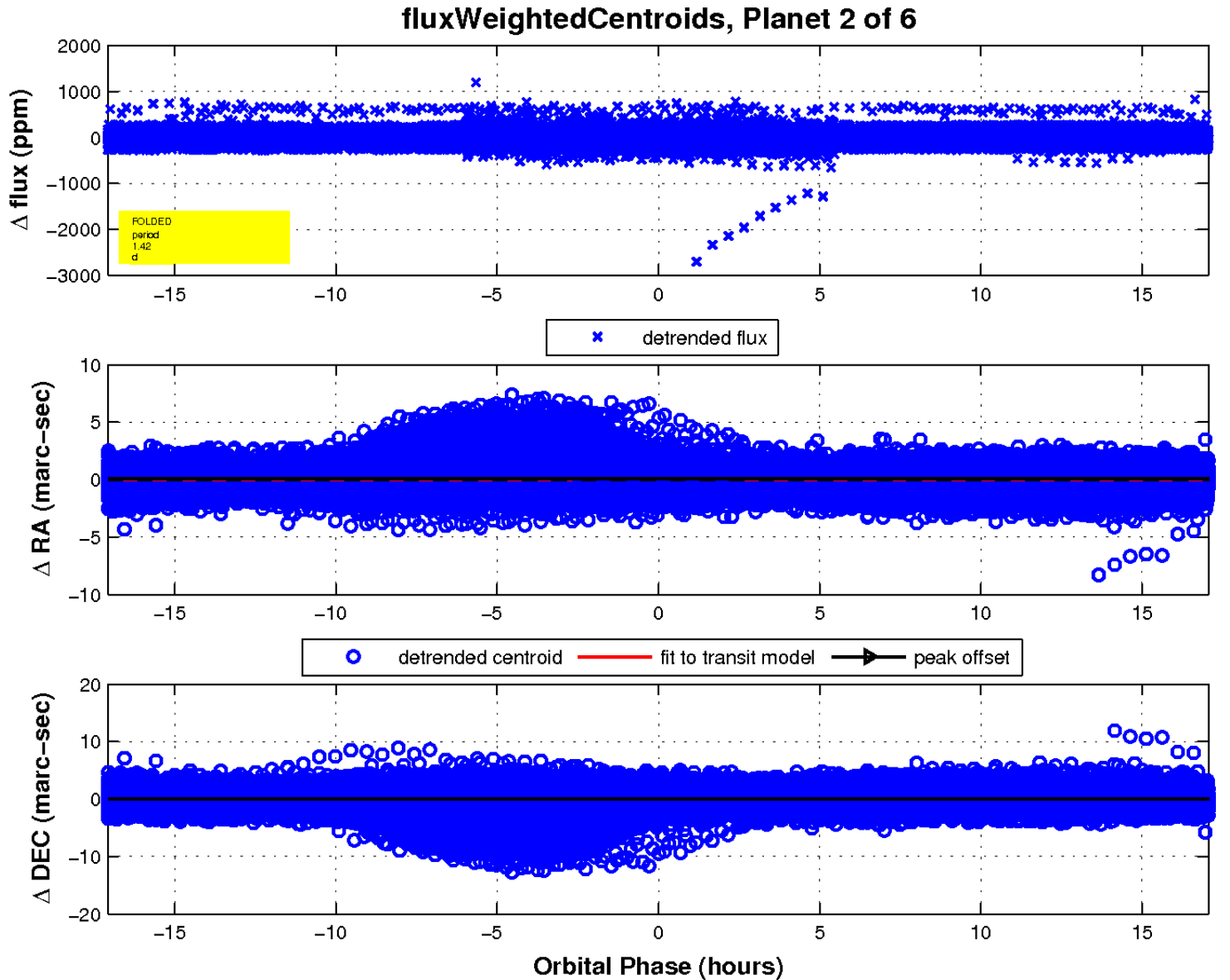
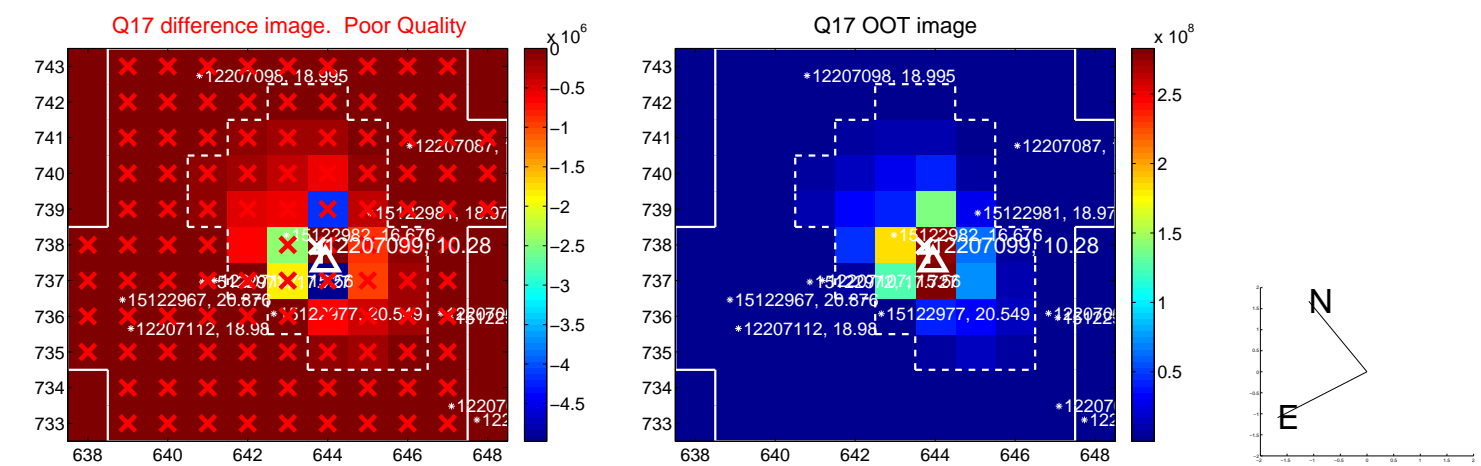
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

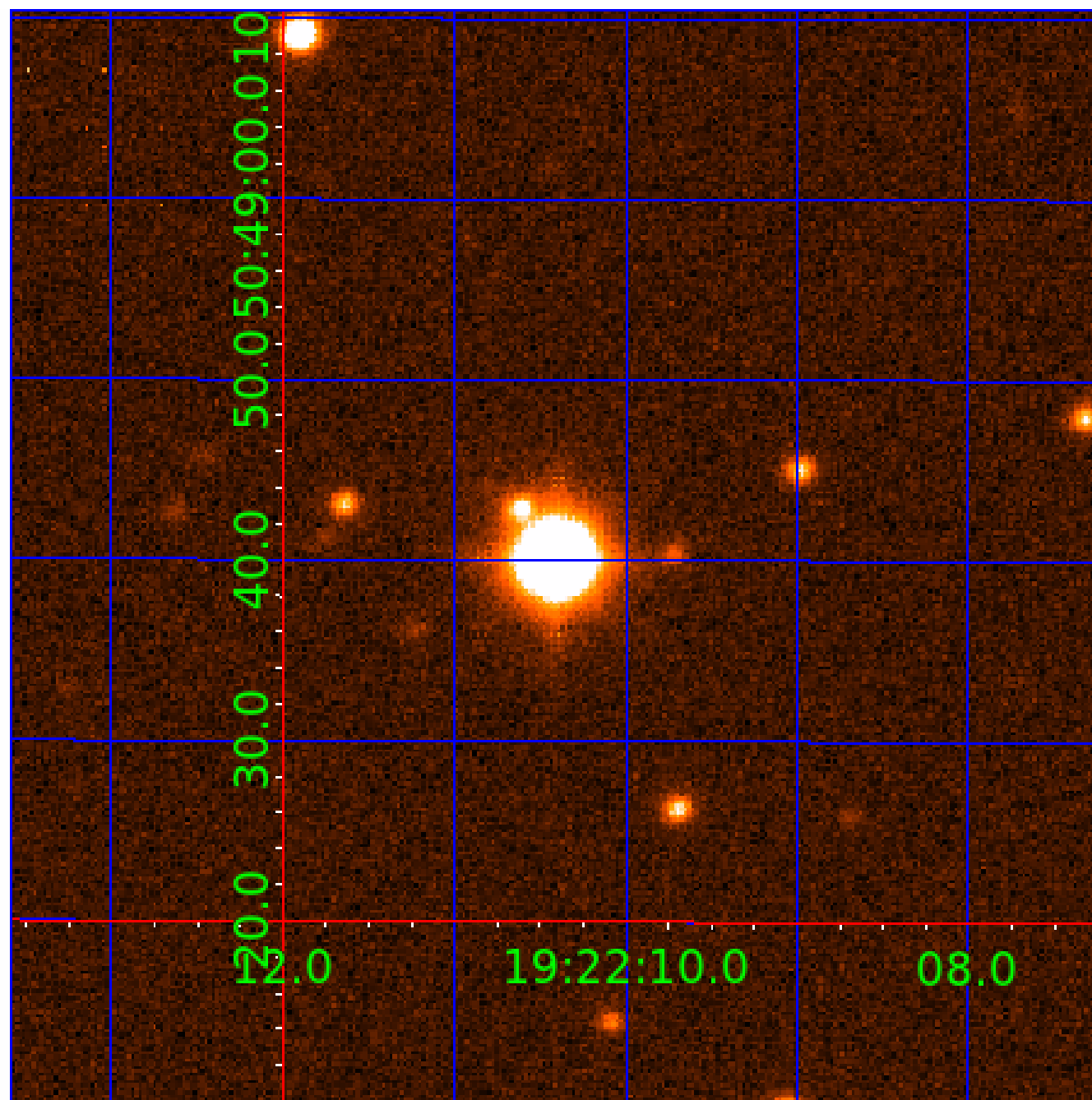


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012207099

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})
012207099-01	OBS	No	1.422535	132.207758	9.1	1.006	22.6	8.6	2.62	10932	0.90	71218.02
012207099-02	OBS	No	1.422580	132.211387	10.5	8.775	16.0	11.4	2.62	10932	0.91	71215.05
012207099-03	OBS	No	125.040888	140.018489	157.2	4.575	21.8	12.7	2.62	10932	3.50	182.22
012207099-04	OBS	No	134.942397	238.786690	111.9	8.223	20.6	9.6	2.62	10932	2.88	164.62
012207099-05	OBS	No	99.849012	199.776534	31.1	4.728	15.5	4.9	2.62	10932	1.51	245.97
012207099-06	OBS	No	81.537009	141.359954	142.7	2.500	13.7	-1.0	2.62	10932	3.22	322.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207099-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
012207099-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

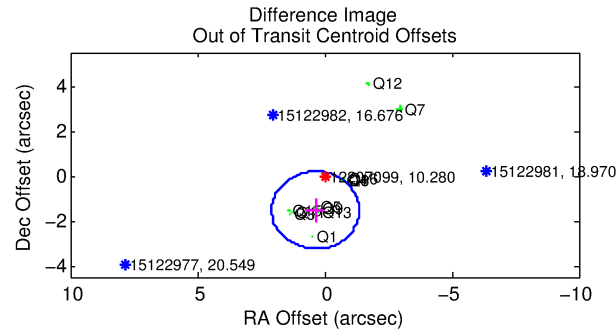
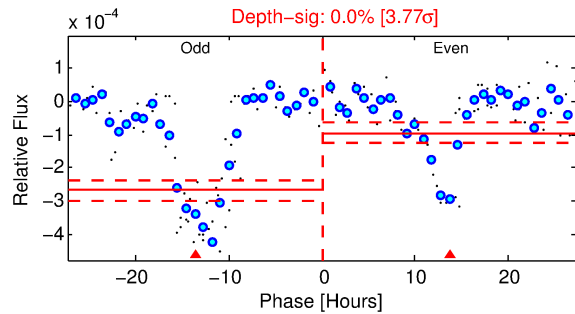
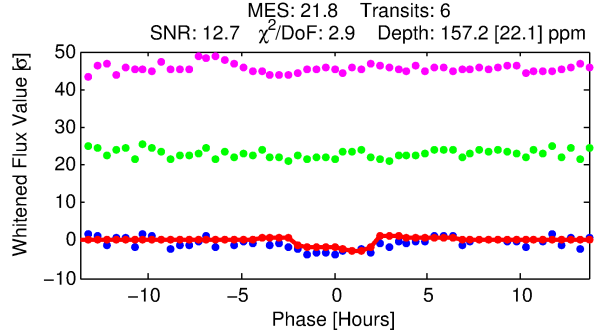
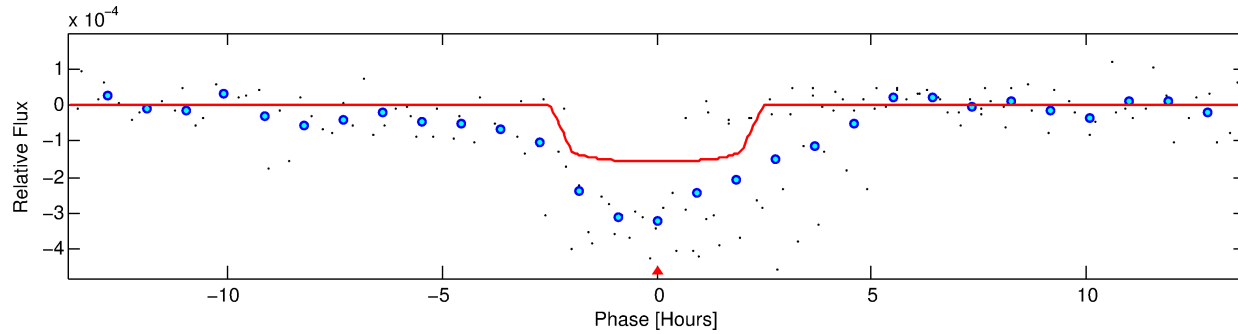
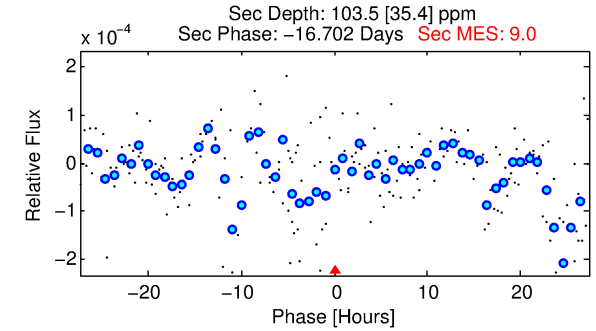
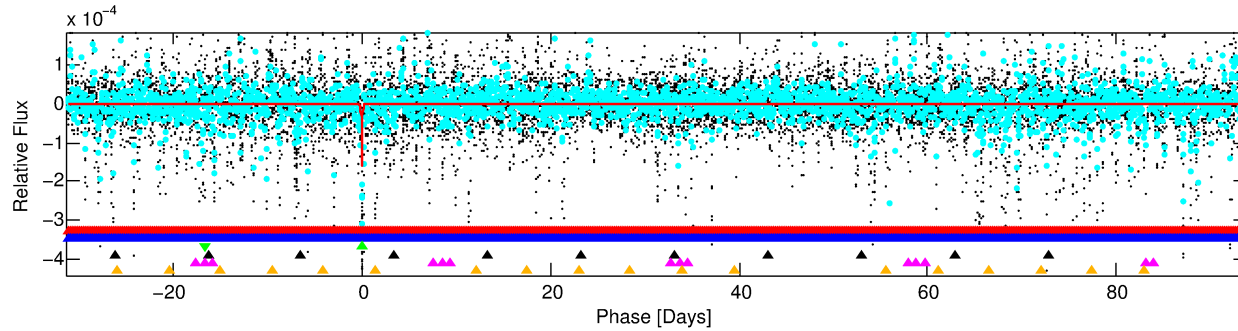
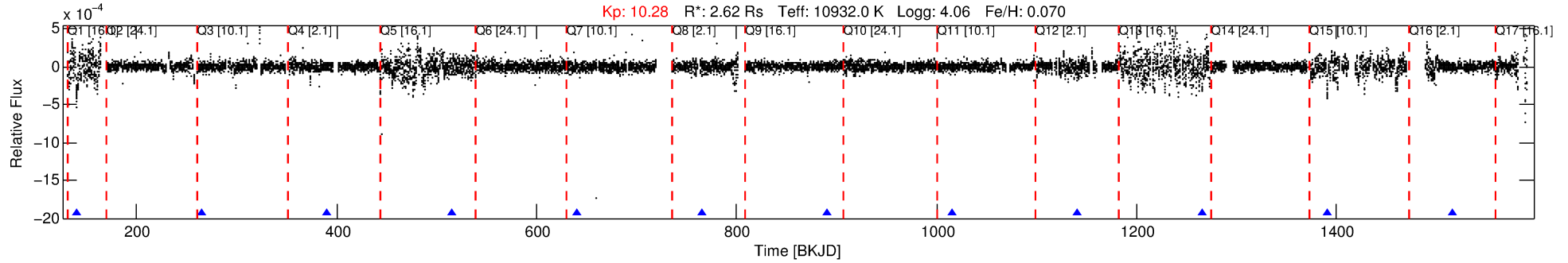
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207099-03

No Significant Match Found

DV One-Page Summary

KIC: 12207099 Candidate: 3 of 6 Period: 125.041 d



DV Fit Results:

Period = 125.04089 [0.00083] d
Epoch = 140.0185 [0.0070] BKJD
Rp/R* = 0.0123 [0.0047]
a/R* = 161.02 [473.31]
b = 0.66 [2.56]
Seff = 182.22 [87.33]
Teff = 937 [112] K
Rp = 3.50 [1.79] Re
a = 0.6930 [0.2073] AU
Ag = 2229.02 [2107.83] [1.06σ]
Teffp = 9953 [2112] K [4.26σ]

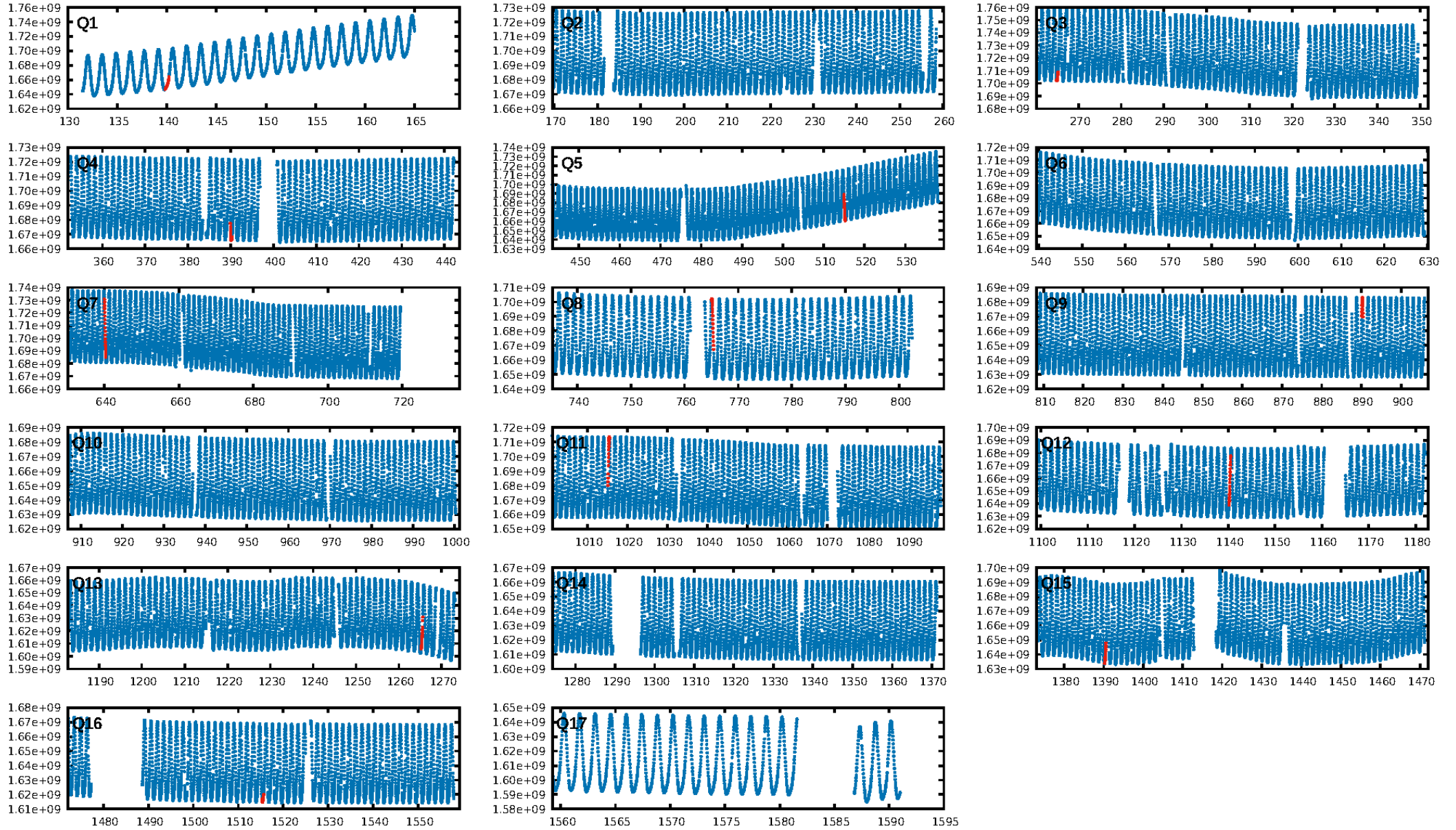
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [91.91σ]
LongPeriod-sig: 100.0% [25.25σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: 6.8%
Centroid-so: 2.102 arcsec [1.03σ]
OotOffset-rm: 1.568 arcsec [2.73σ]
KicOffset-rm: 2.006 arcsec [3.05σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-st: 0/4/4/4 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 0.25 [3/12]

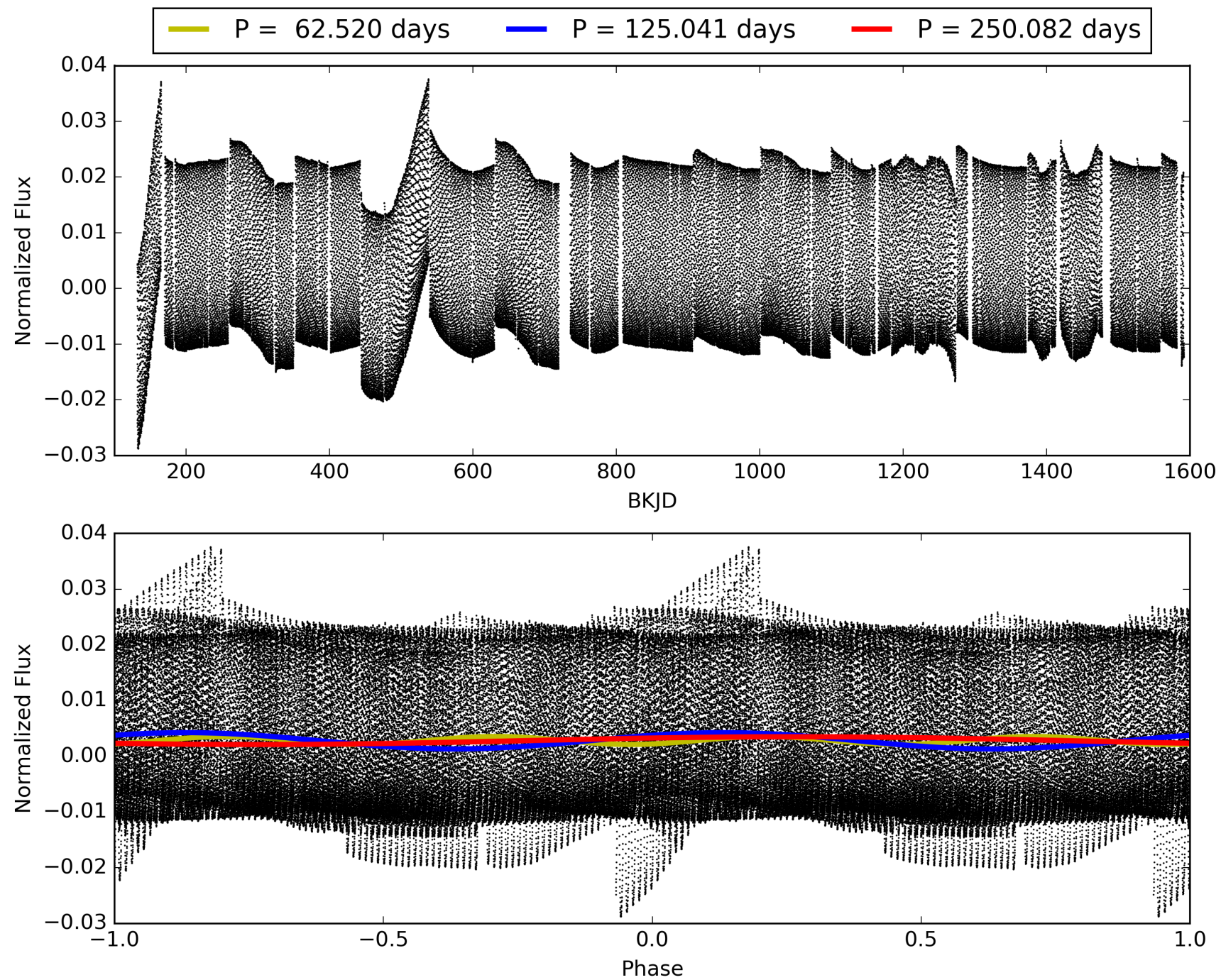
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:52:23 Z

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

TCE 012207099-03, PDC Light Curves

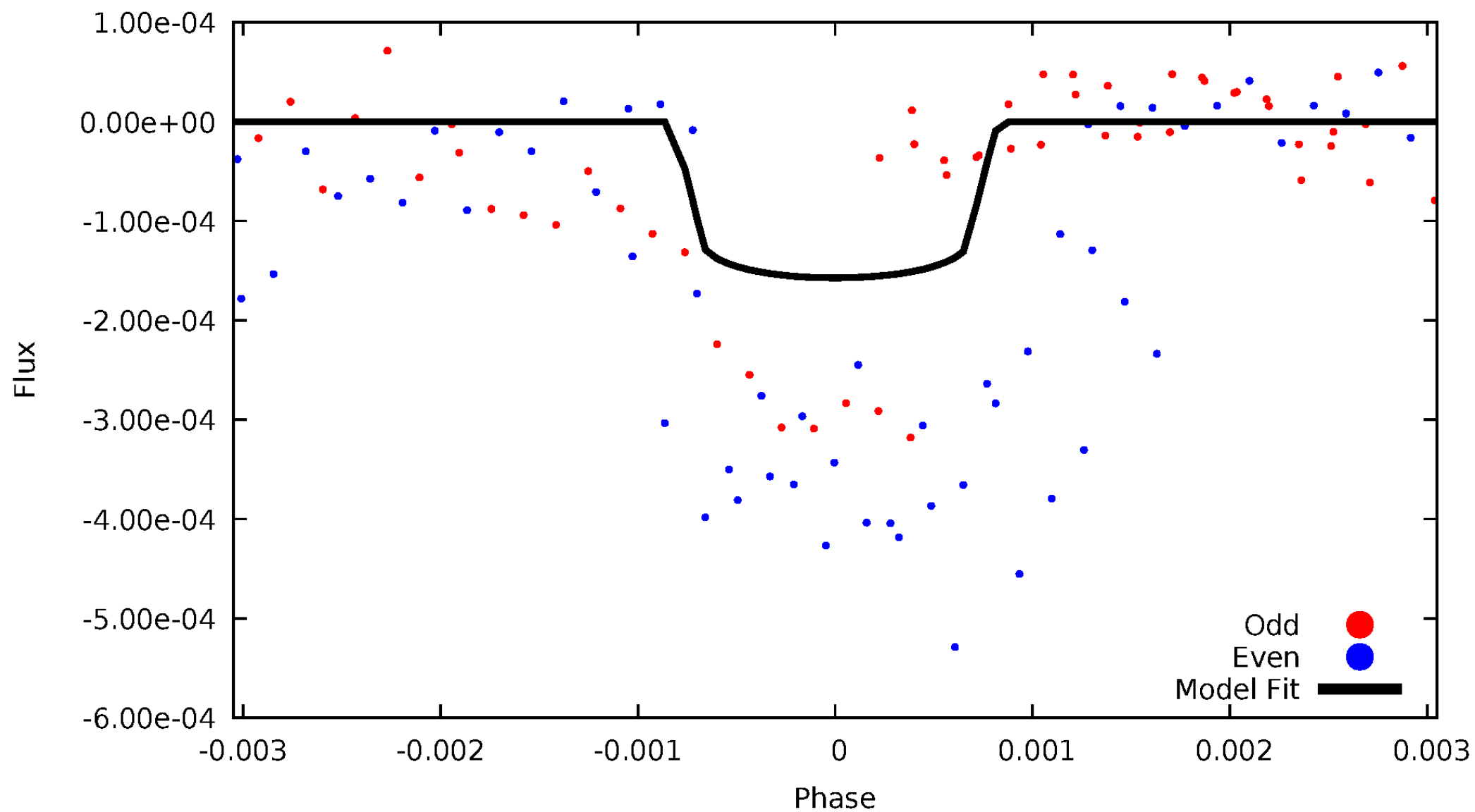


TCE 012207099-03



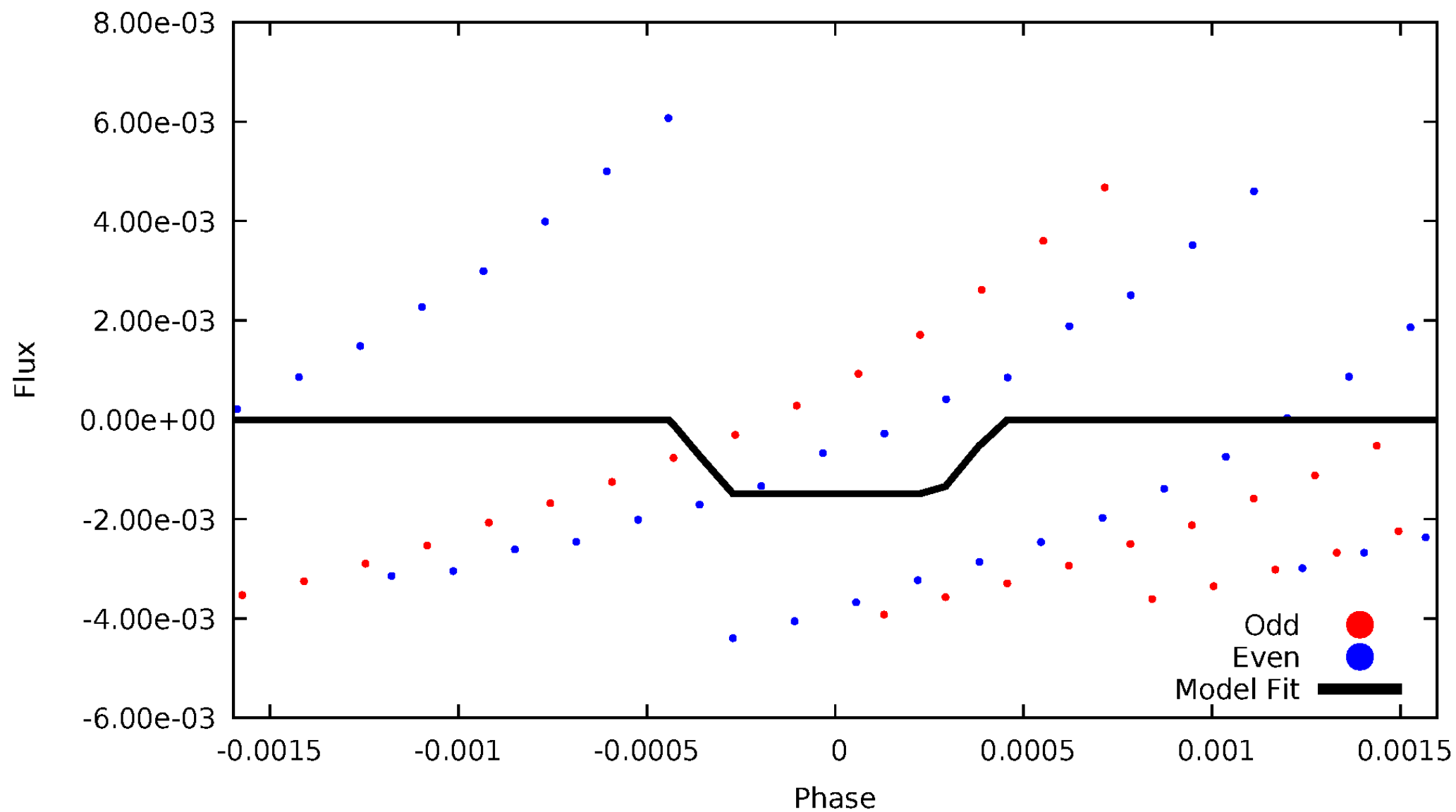
DV Odd/Even

TCE 012207099-03

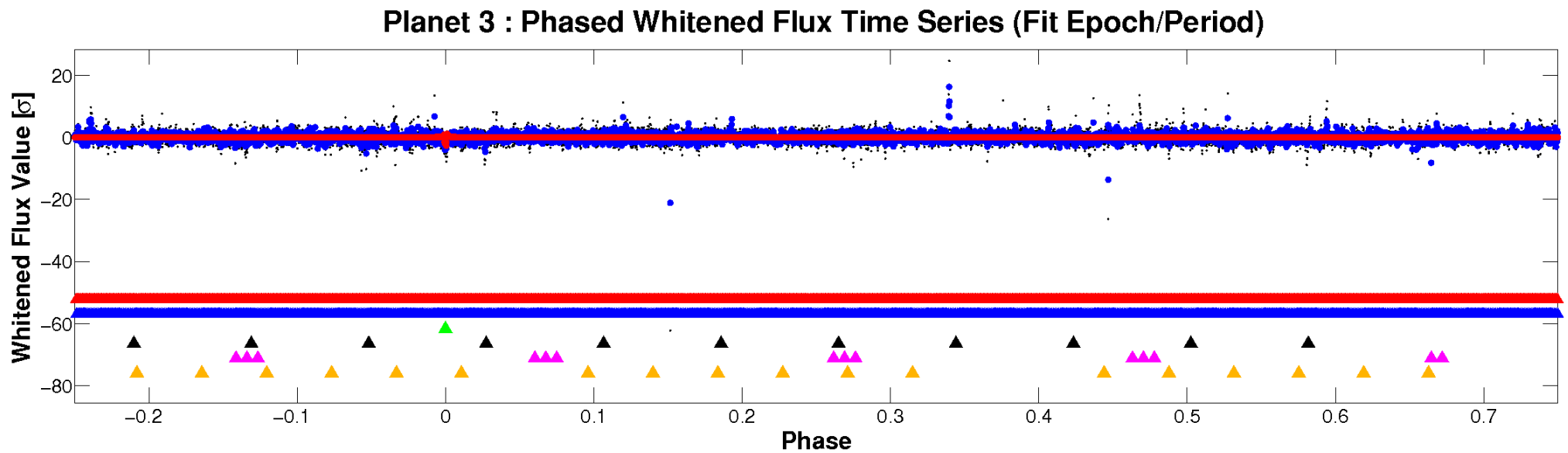
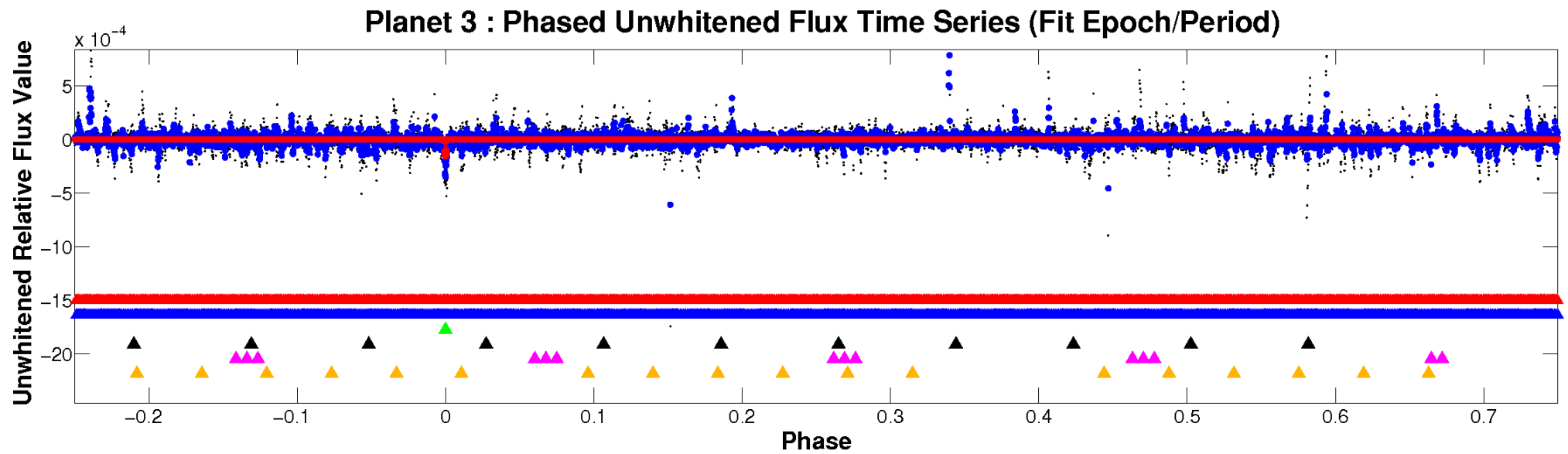


ALT Odd/Even

TCE 012207099-03

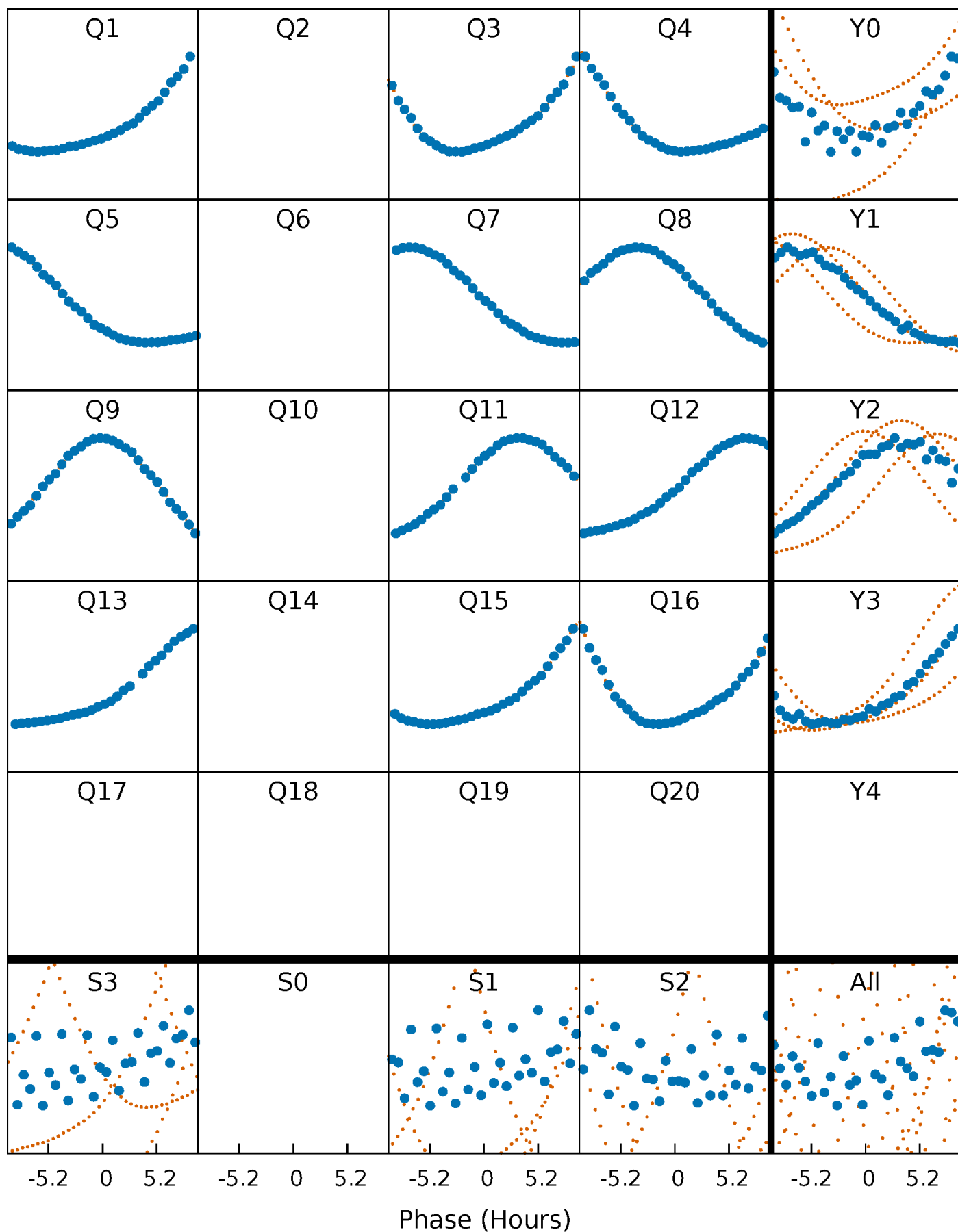


Non-Whitened Vs. Whitened Light Curve



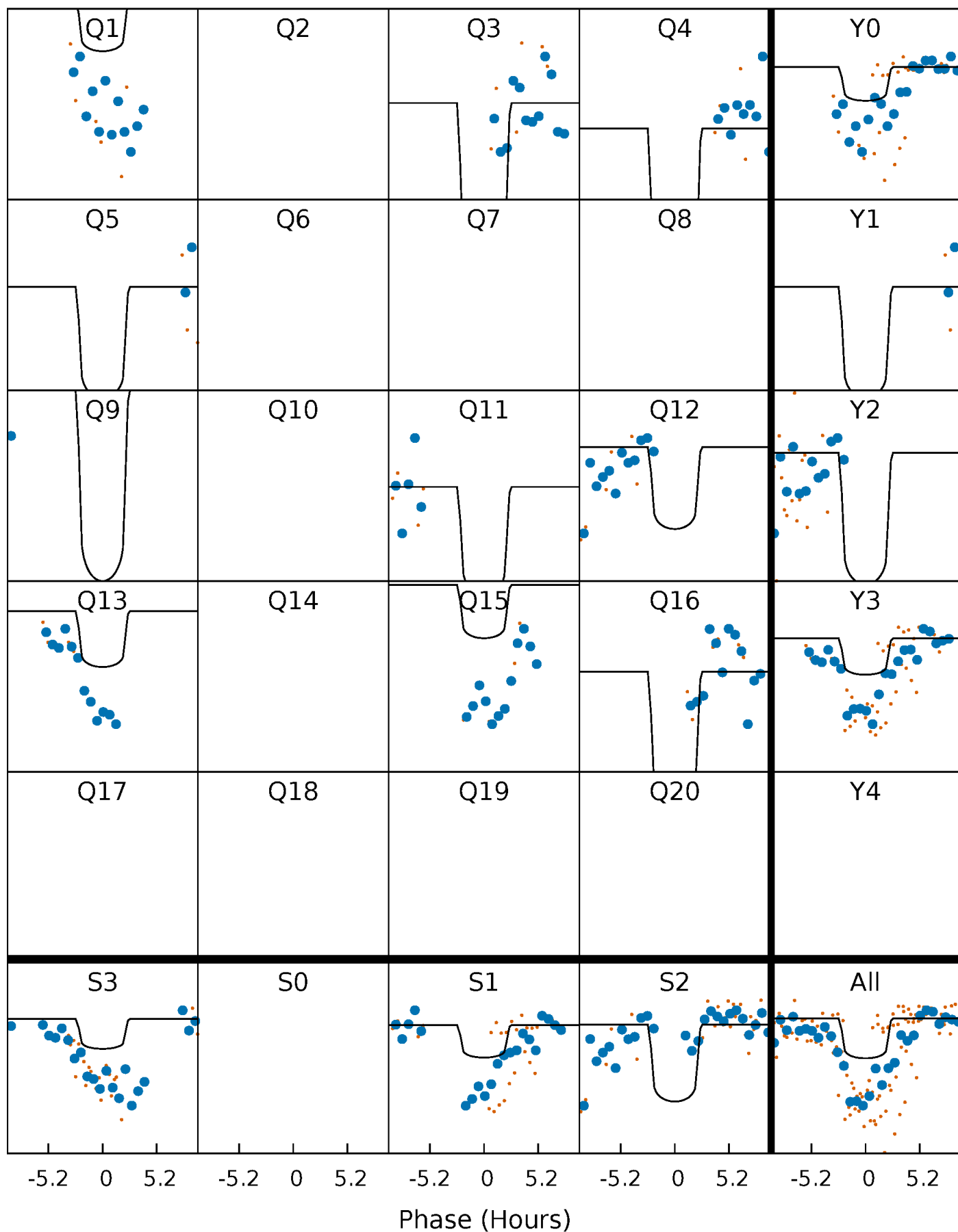
PDC Quarter-Phased Transit Curves

TCE 012207099-03 P=125.040888 Days $T_0=140.018489$ (BKJD)



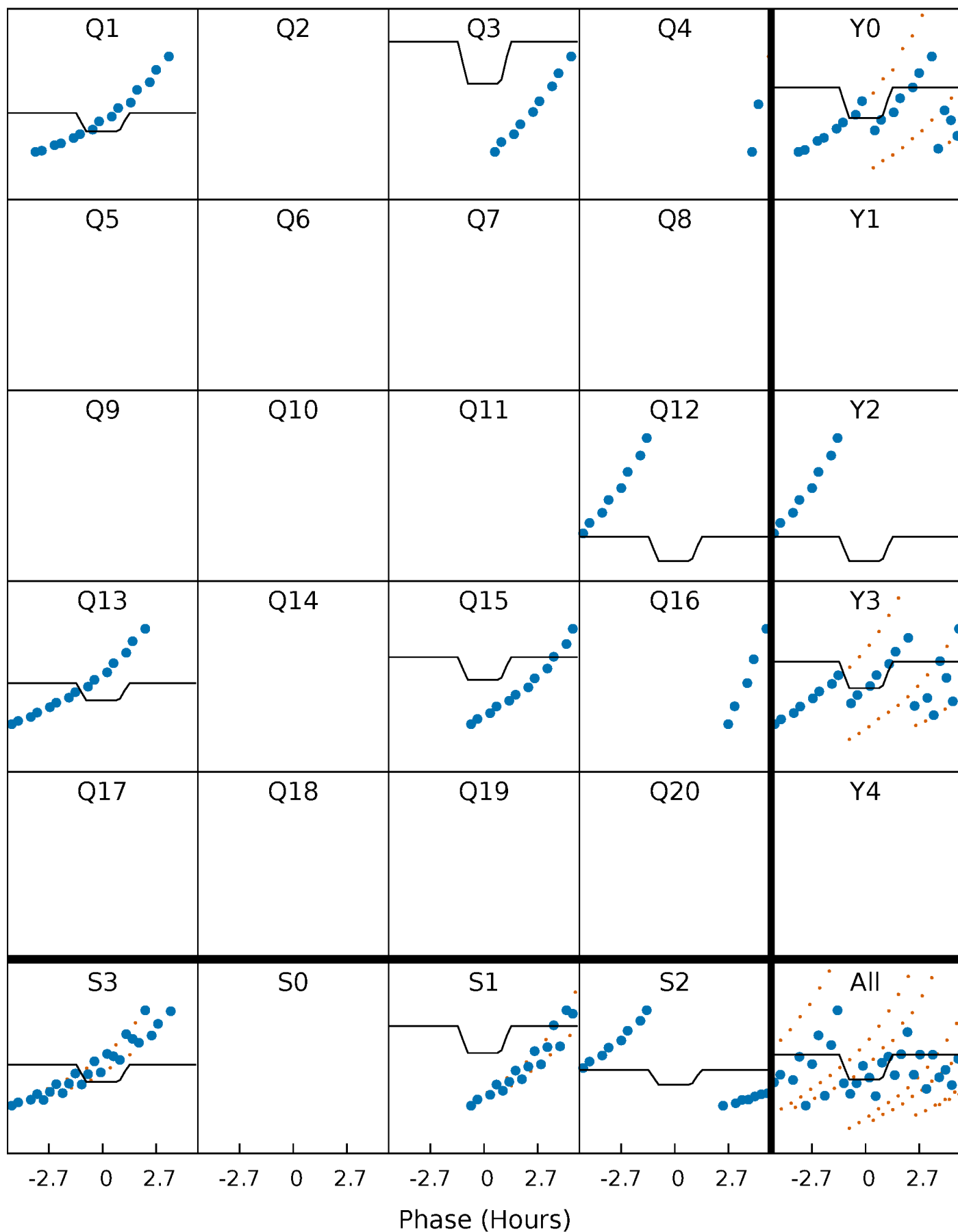
DV Quarter-Phased Transit Curves

TCE 012207099-03 P=125.040888 Days $T_0=140.018489$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

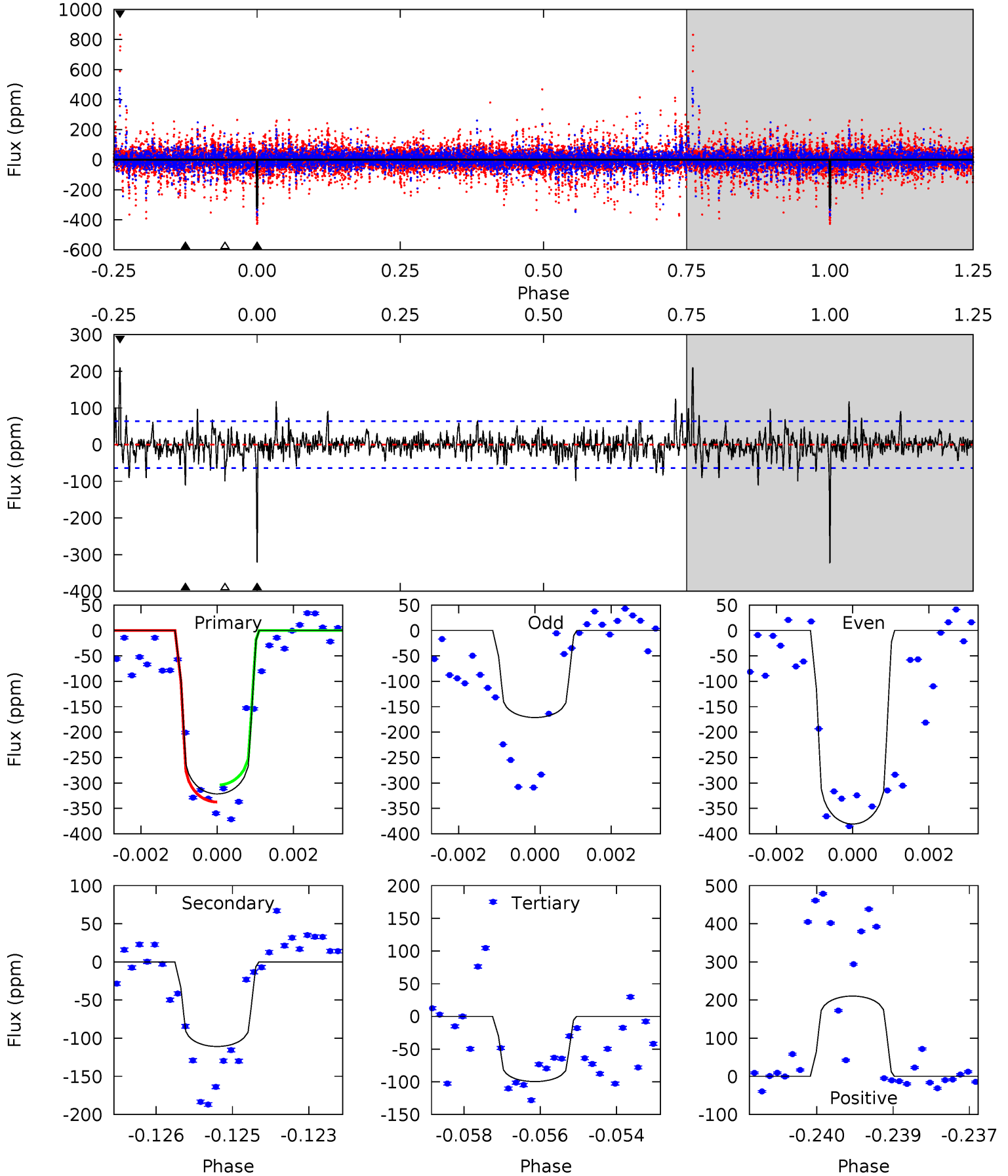
TCE 012207099-03 P=125.034187 Days $T_0=140.037186$ (BKJD)



DV Model-Shift Uniqueness Test

012207099-03, P = 125.040888 Days, E = 14.977601 Days

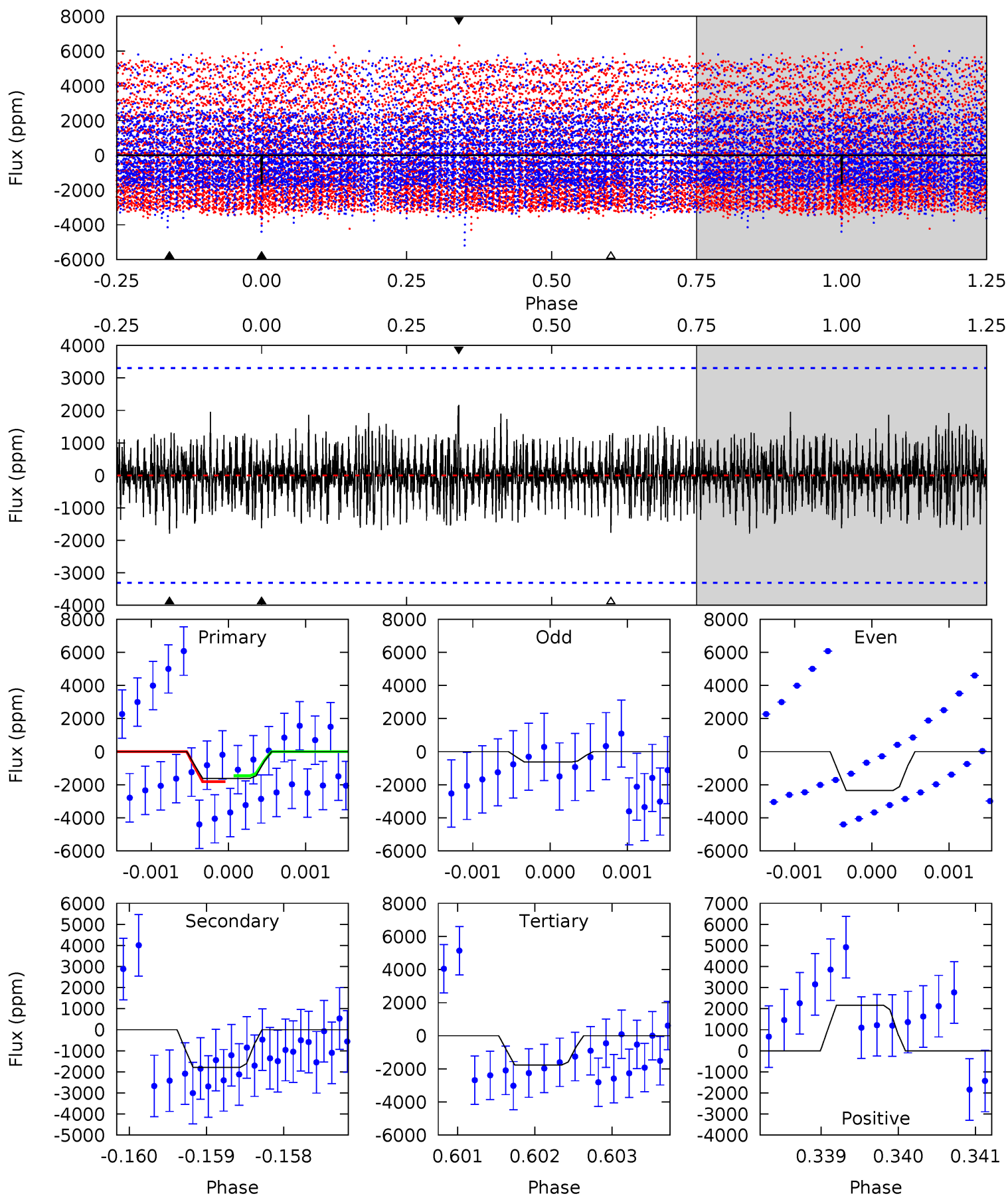
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	9.29	8.35	17.6	5.37	3.16	2.10	18.6	9.31	0.94	-8.34	7.54	0.77	0.40	1.39



Alt Model-Shift Uniqueness Test

012207099-03, P = 125.034187 Days, E = 15.002999 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.70	2.97	2.93	3.59	5.49	3.35	0.85	-0.24	-0.90	0.04	-0.62	1.45	0.84	0.55	0.29



Stellar Parameters For KIC 012207099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10932^{+266}_{-457}	$4.056^{+0.252}_{-0.189}$	$0.070^{+0.050}_{-0.600}$	$2.615^{+0.733}_{-0.895}$	$2.838^{+0.289}_{-0.674}$	$0.224^{+0.370}_{-0.106}$
	+2%/-4%	+6%/-5%	+71%/-857%	+28%/-34%	+10%/-24%	+165%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 012207099-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-111±12	$3.37^{+1.59}_{-1.38}$	1297^{+113}_{-109}	9709^{+4598}_{-1884}	2500^{+4292}_{-1325}
Alt.	-1789±602	$10.88^{+2.21}_{-2.35}$	1296^{+112}_{-116}	11579^{+2138}_{-1842}	3937^{+2664}_{-1678}

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

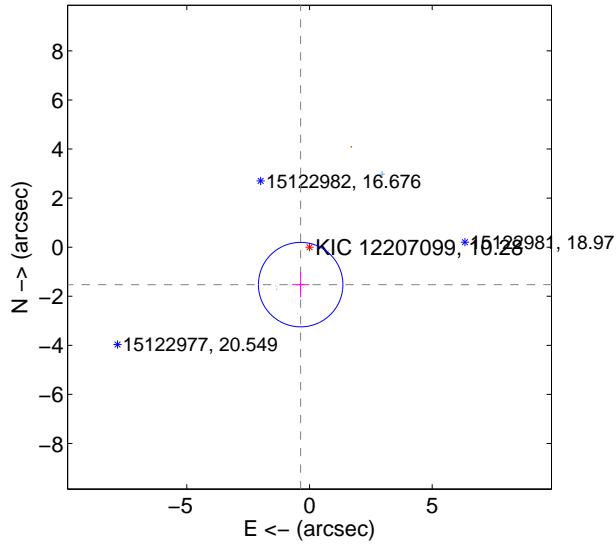
Supplemental centroid analysis for 012207099-03. **Kepler magnitude: 10.28**. Transit SNR 12.74

There are 5 quarters with good PRF difference image offsets

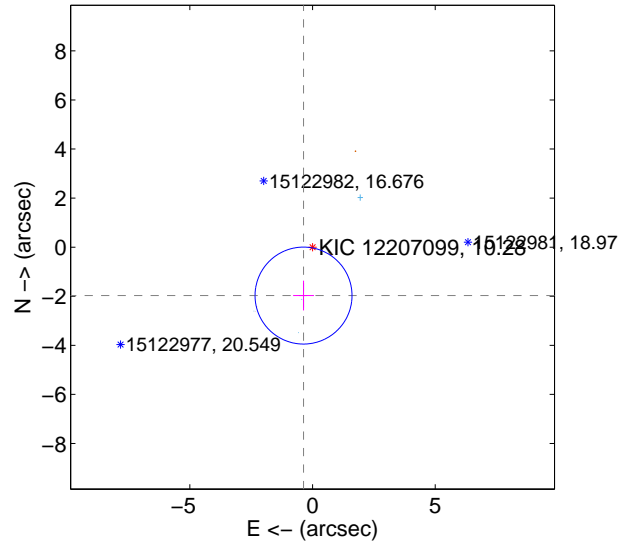
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.568 ± 0.574	2.73	0.360 ± 0.348	-1.526 ± 0.520
PRF-fit source offset from KIC position	2.006 ± 0.659	3.05	0.367 ± 0.424	-1.973 ± 0.605
photometric centroid source offset	2.10 ± 2.04	1.03	-1.10 ± 1.36	1.79 ± 2.24

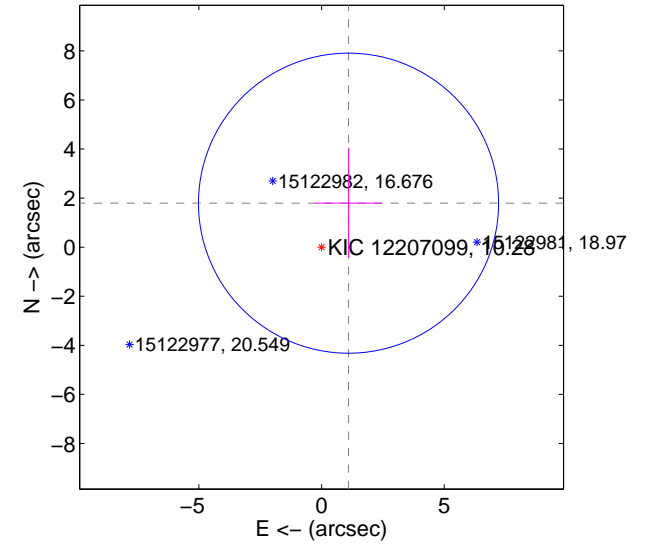
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

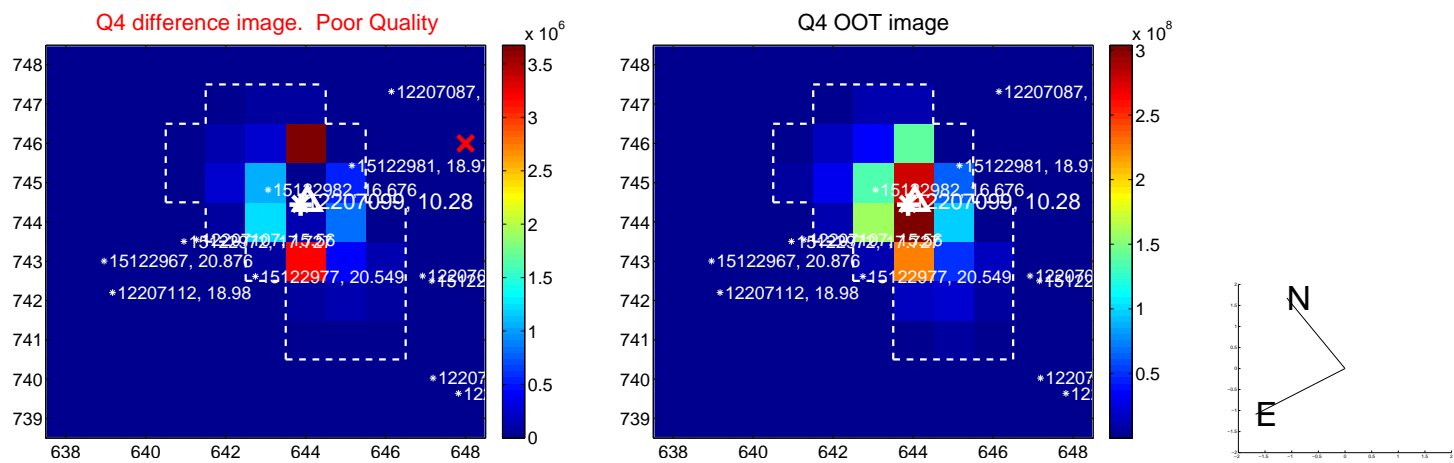
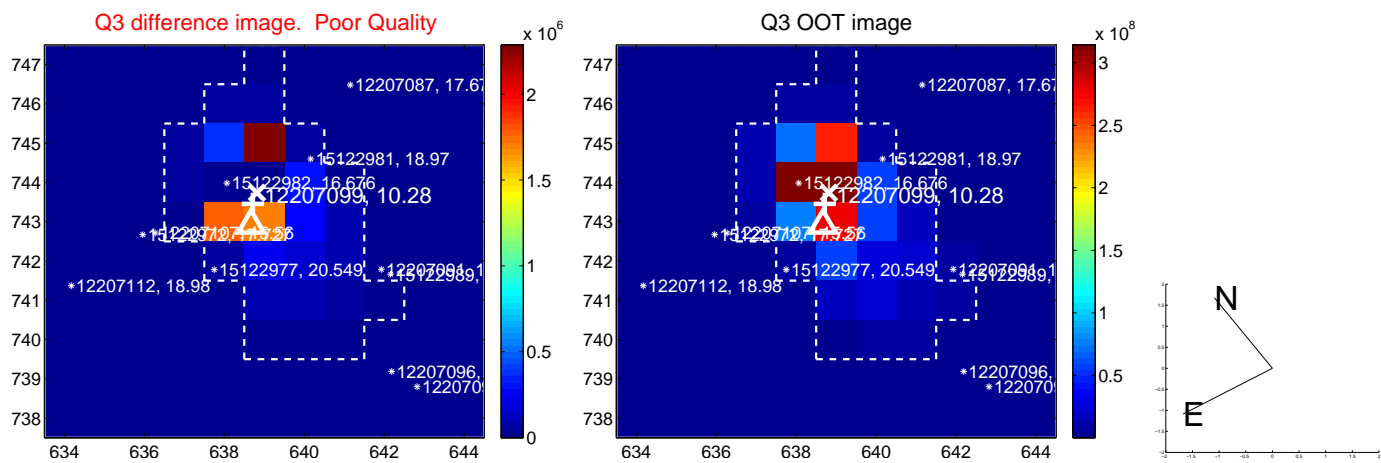
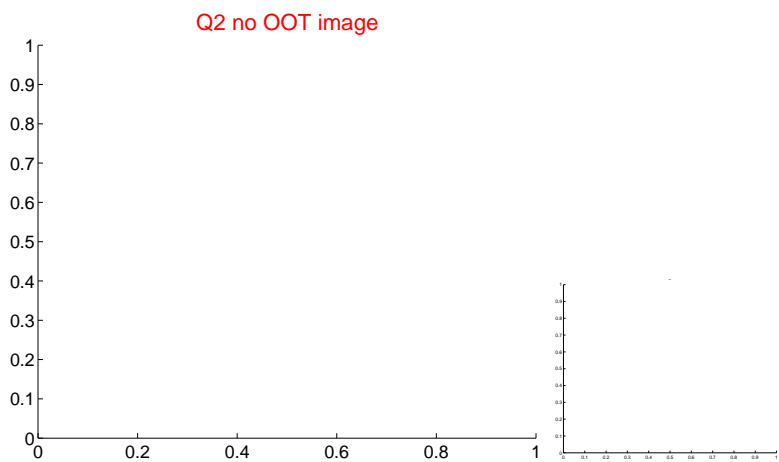
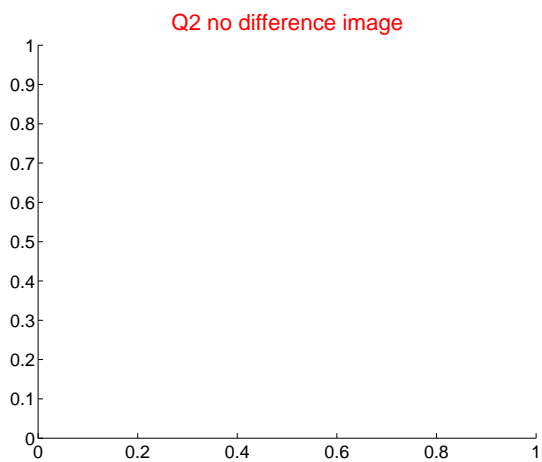
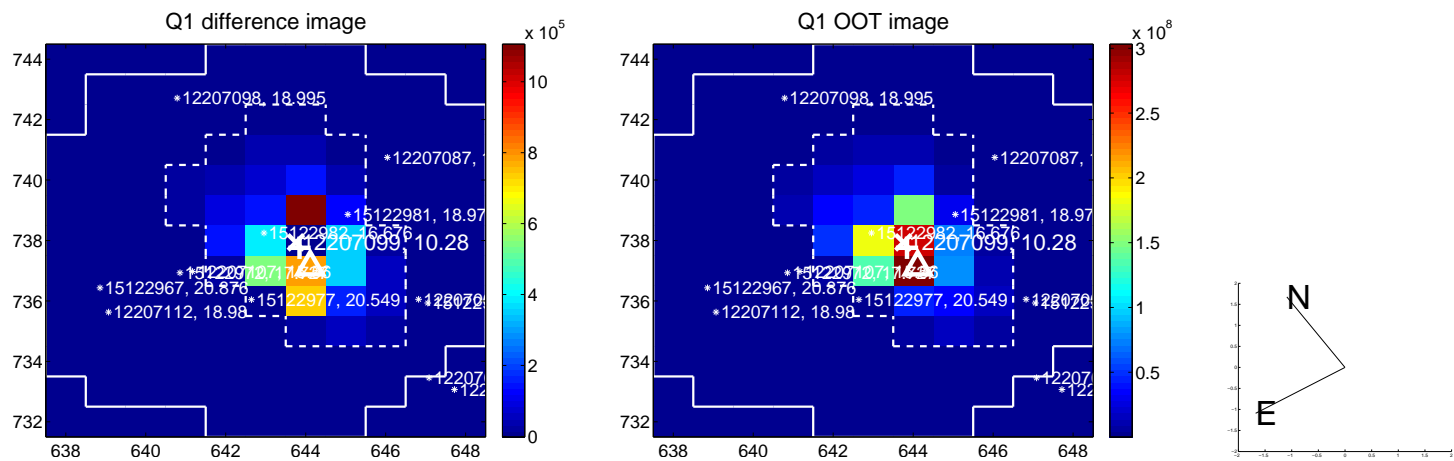


offset from photometric centroids

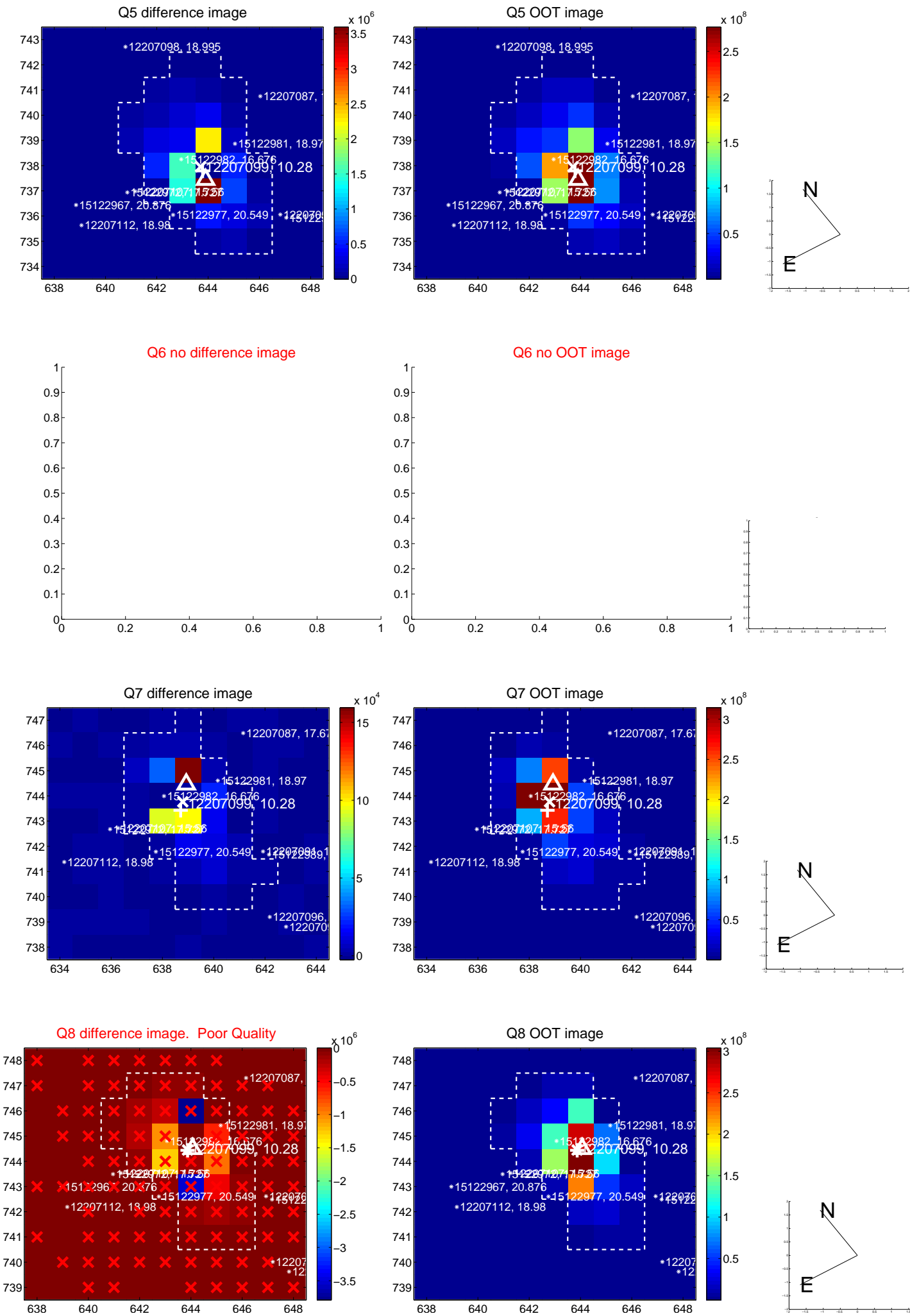


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

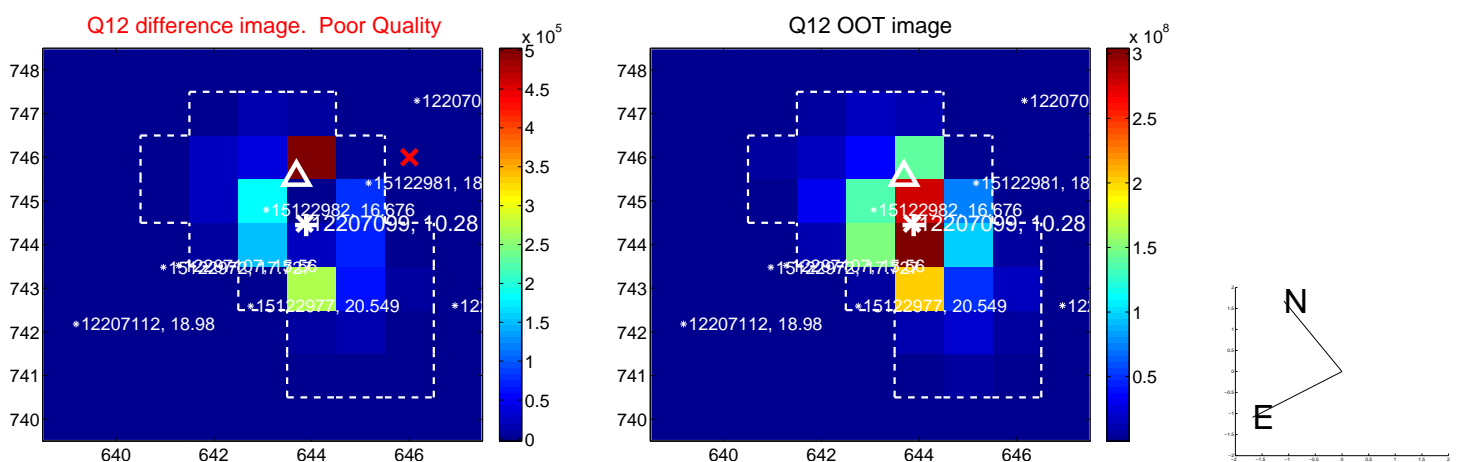
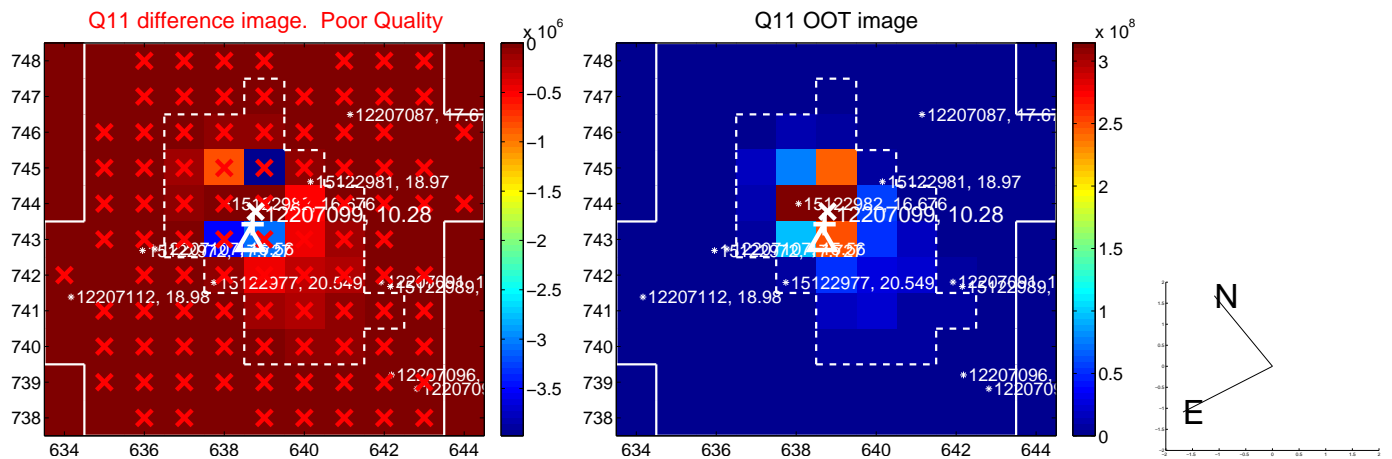
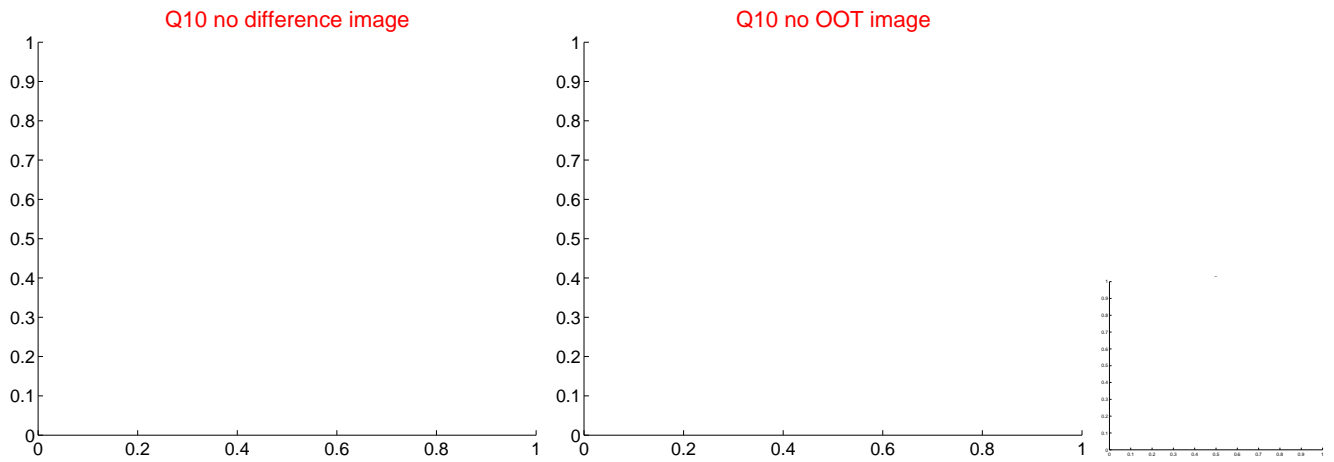
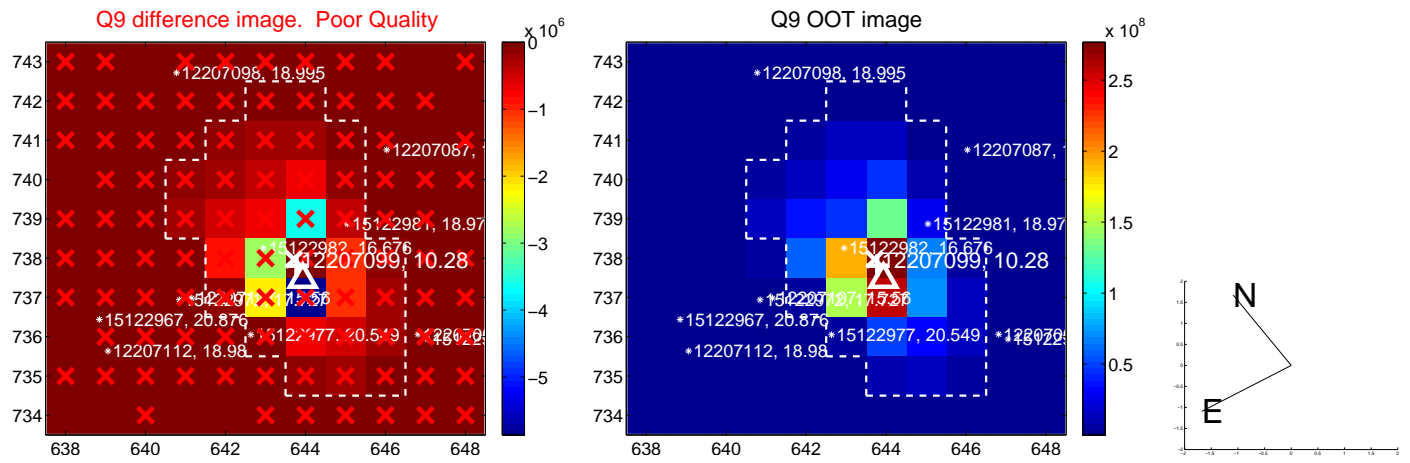
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



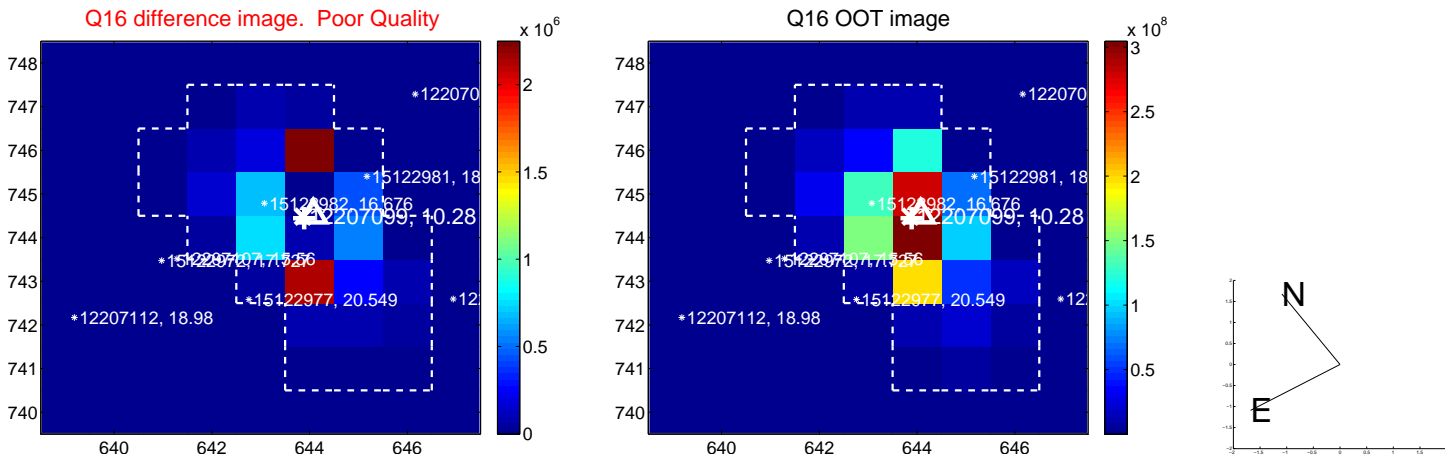
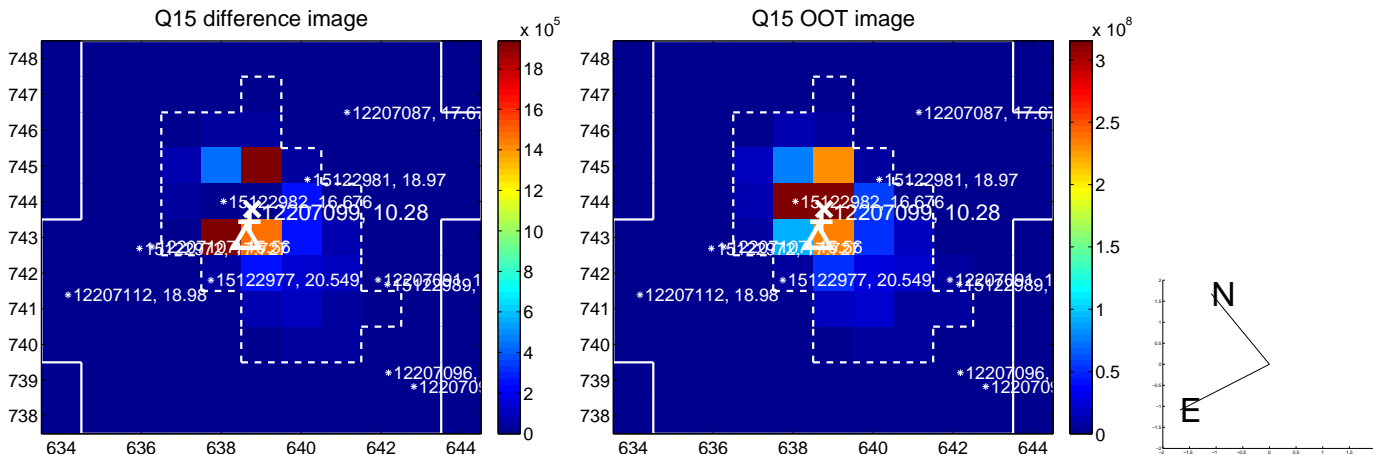
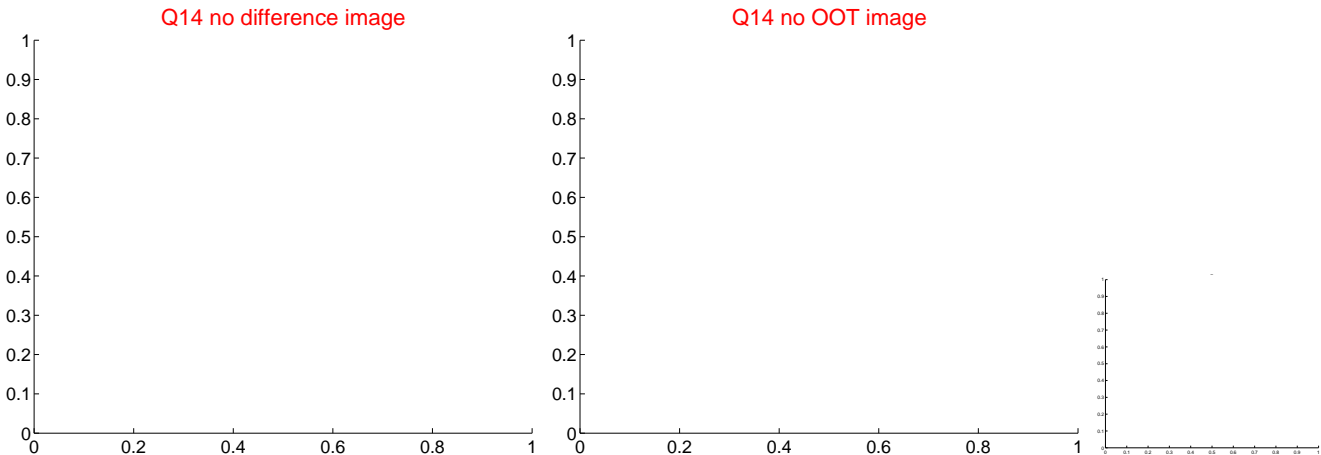
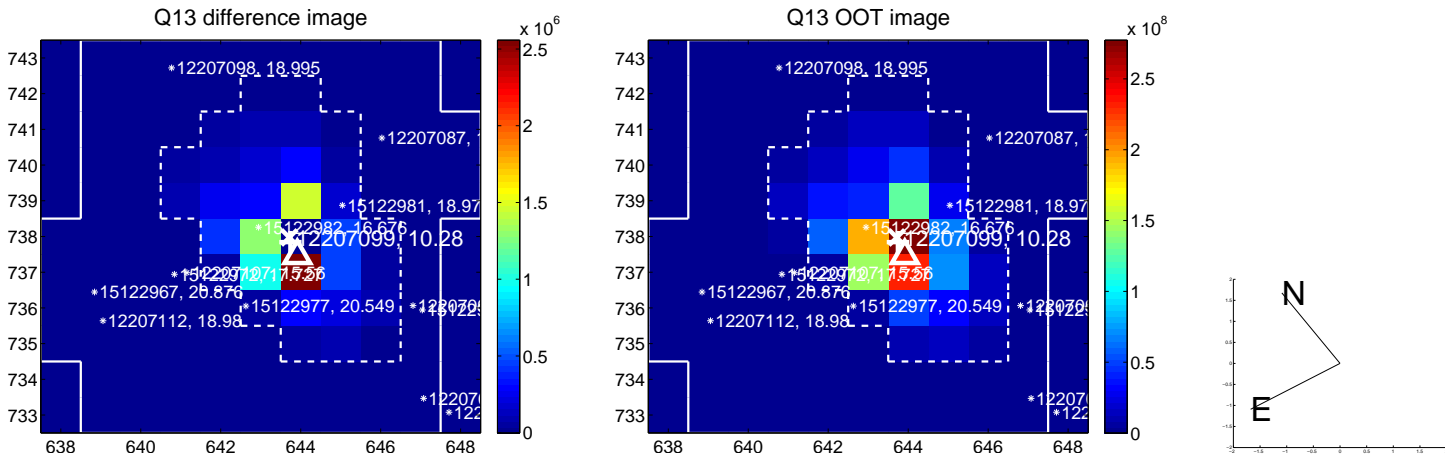
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



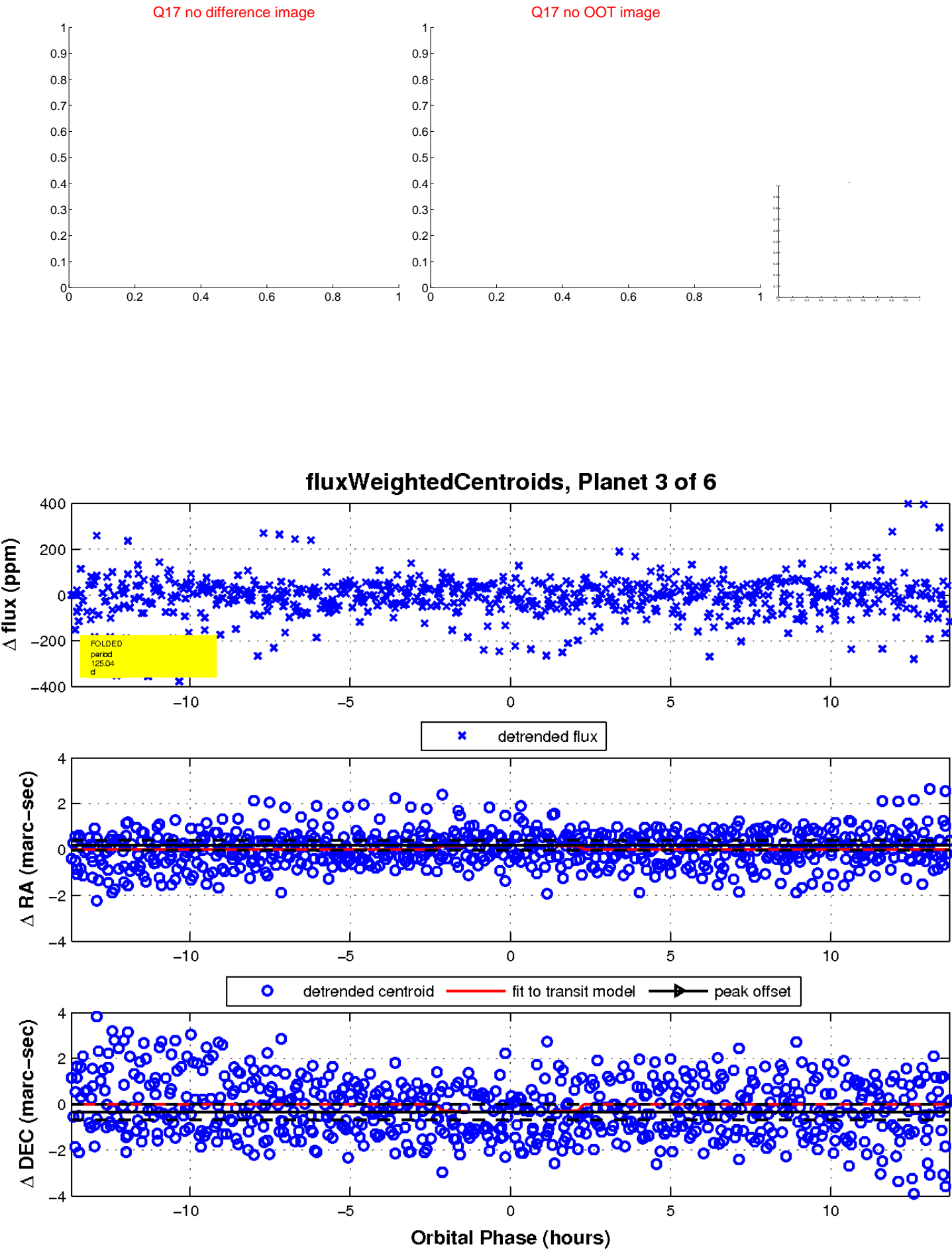
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



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

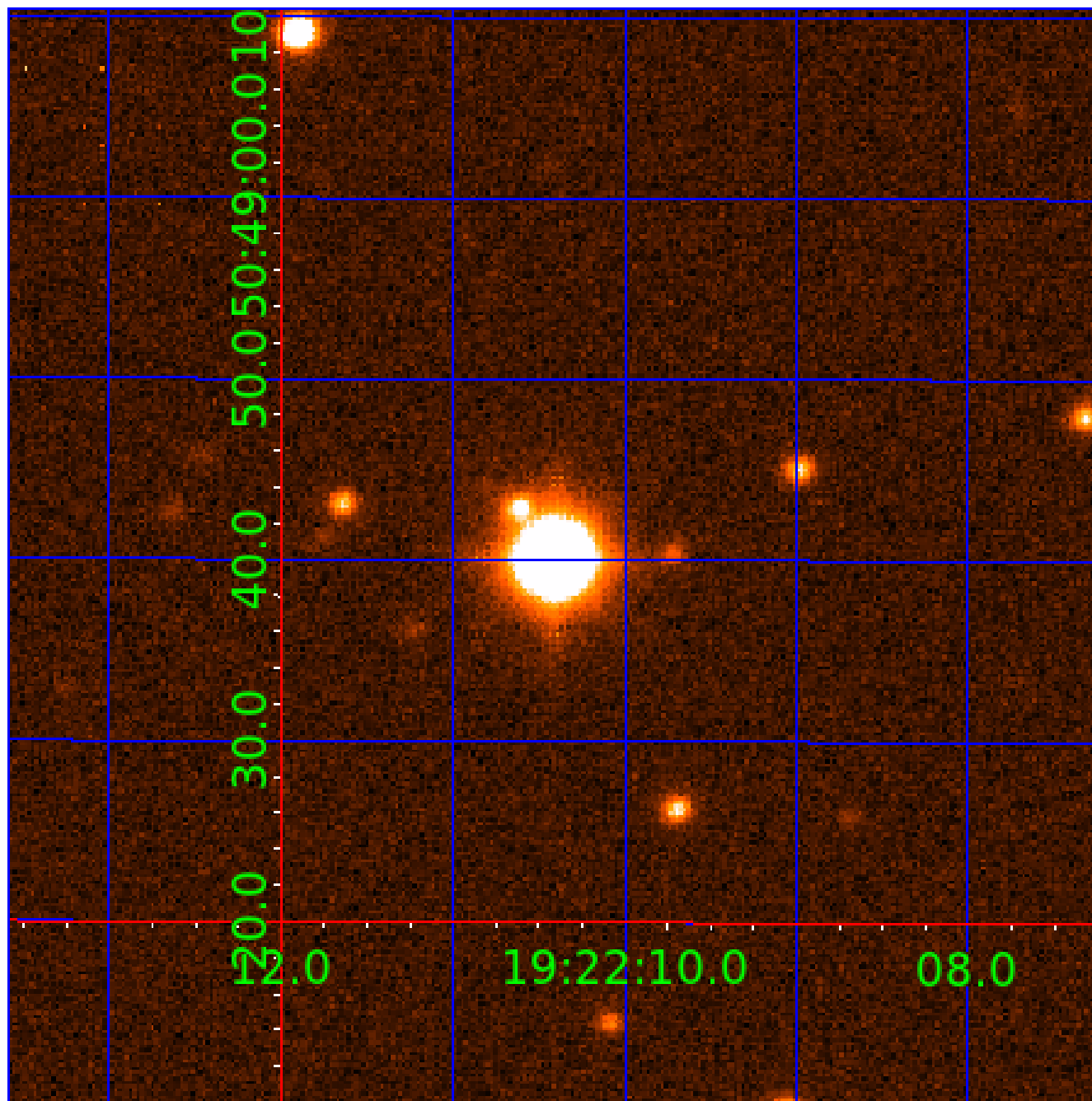


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012207099

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})
012207099-01	OBS	No	1.422535	132.207758	9.1	1.006	22.6	8.6	2.62	10932	0.90	71218.02
012207099-02	OBS	No	1.422580	132.211387	10.5	8.775	16.0	11.4	2.62	10932	0.91	71215.05
012207099-03	OBS	No	125.040888	140.018489	157.2	4.575	21.8	12.7	2.62	10932	3.50	182.22
012207099-04	OBS	No	134.942397	238.786690	111.9	8.223	20.6	9.6	2.62	10932	2.88	164.62
012207099-05	OBS	No	99.849012	199.776534	31.1	4.728	15.5	4.9	2.62	10932	1.51	245.97
012207099-06	OBS	No	81.537009	141.359954	142.7	2.500	13.7	-1.0	2.62	10932	3.22	322.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207099-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
012207099-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

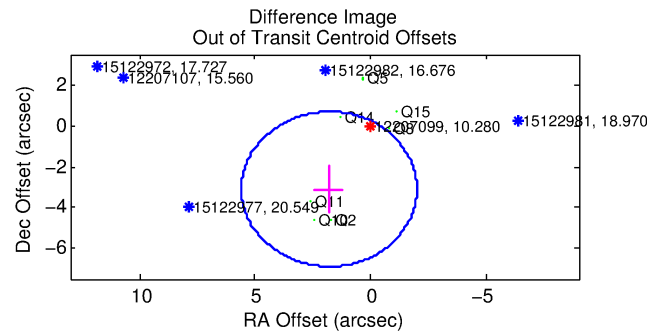
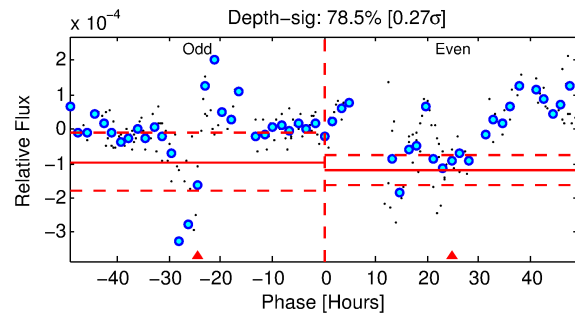
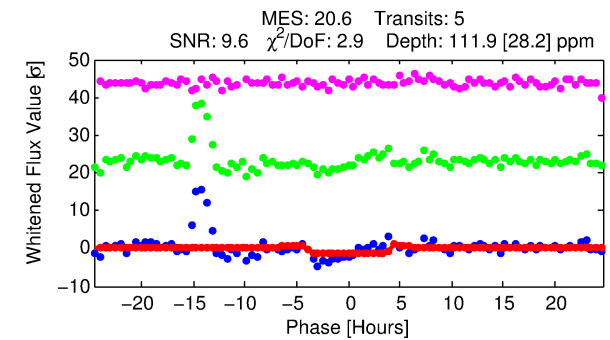
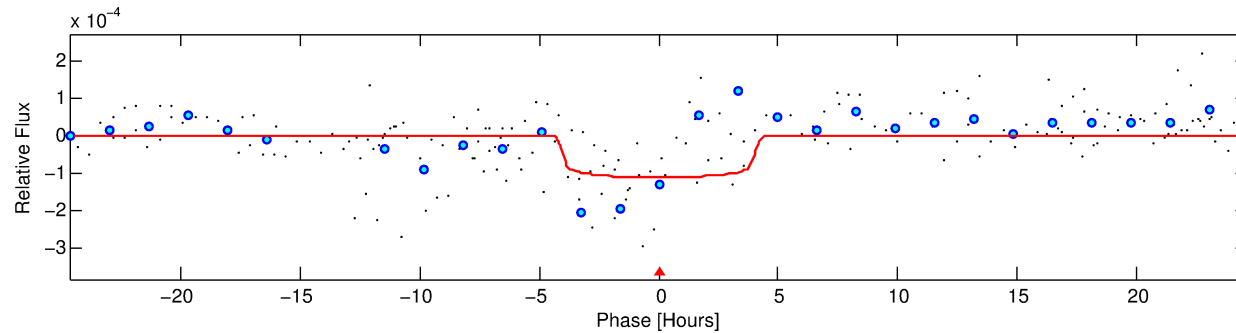
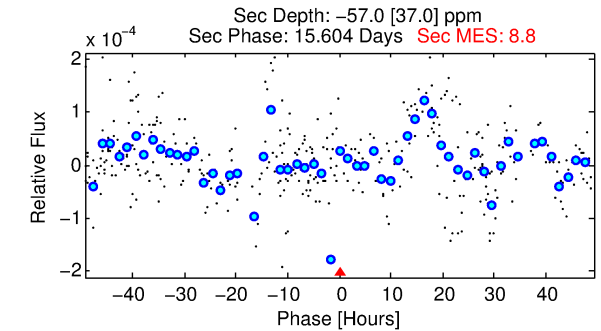
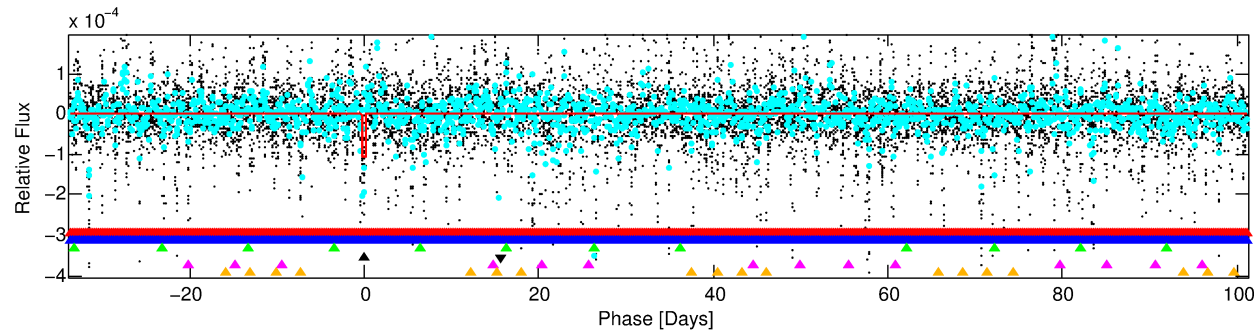
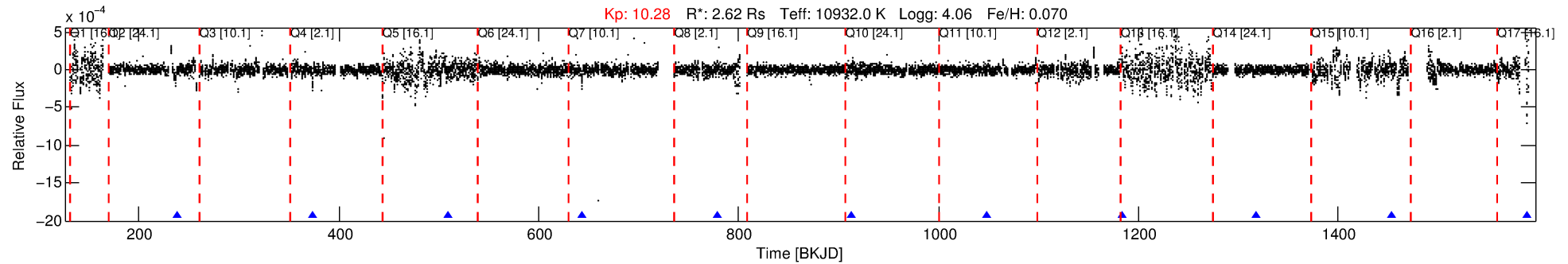
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207099-04

No Significant Match Found

DV One-Page Summary

KIC: 12207099 Candidate: 4 of 6 Period: 134.942 d



DV Fit Results:

Period = 134.94240 [0.00458] d
Epoch = 238.7867 [0.0272] BKJD
Rp/R* = 0.0101 [0.0137]
a/R* = 117.67 [1240.77]
b = 0.37 [24.35]
Seff = 164.62 [78.89]
Teq = 913 [109] K
Rp = 2.88 [4.03] Re
a = 0.7291 [0.2181] AU
Ag = N/A
Teffp = N/A

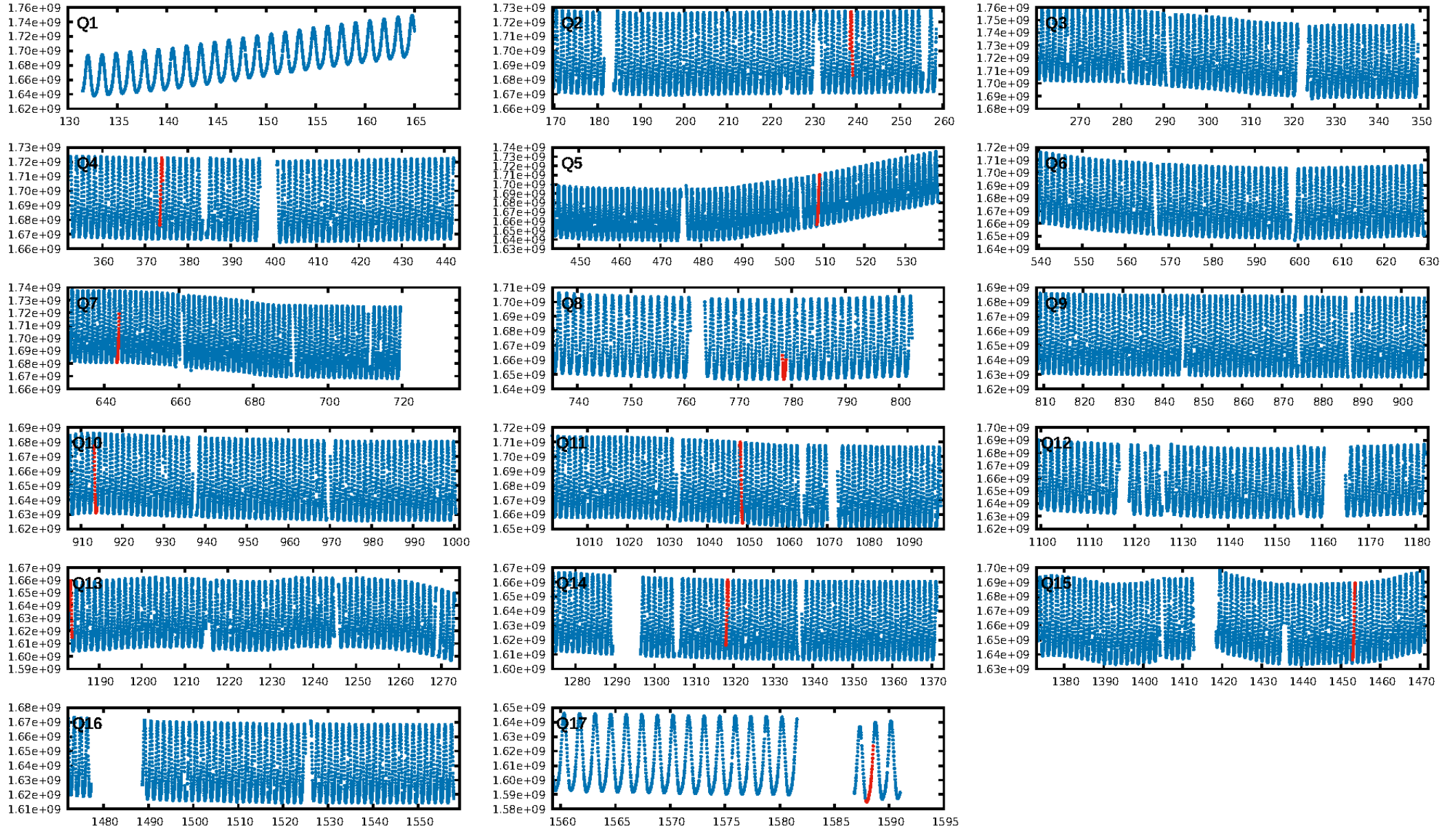
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [25.25 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 24.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: 63.8%
Centroid-so: 2.004 arcsec [0.62 σ]
OotOffset-rm: 3.587 arcsec [2.84 σ]
OotOffset-st: 3/2/1/1 [7]
KicOffset-rm: 3.244 arcsec [2.88 σ]
KicOffset-st: 3/2/1/1 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 0.00 [0/7]

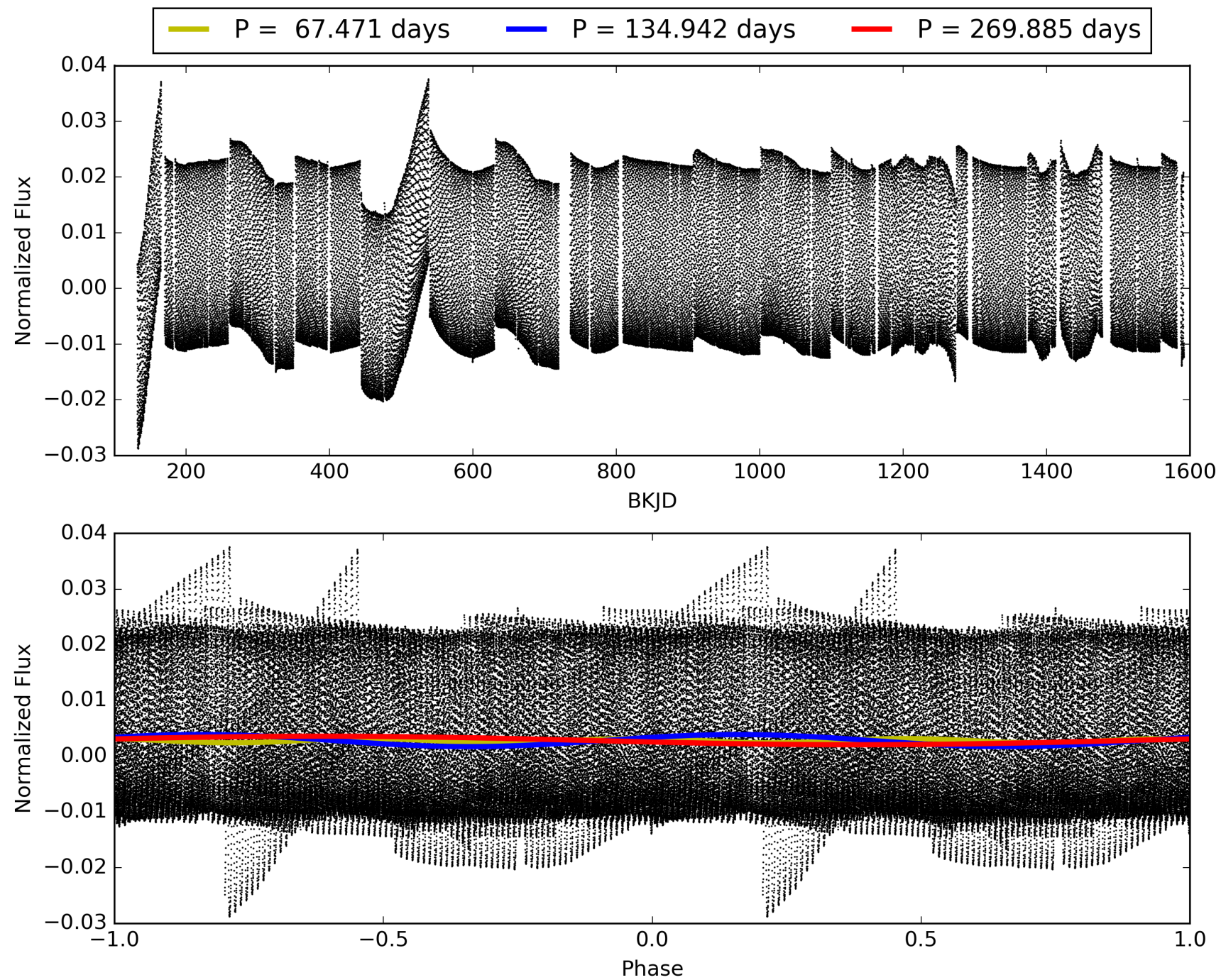
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:52:27 Z

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

TCE 012207099-04, PDC Light Curves

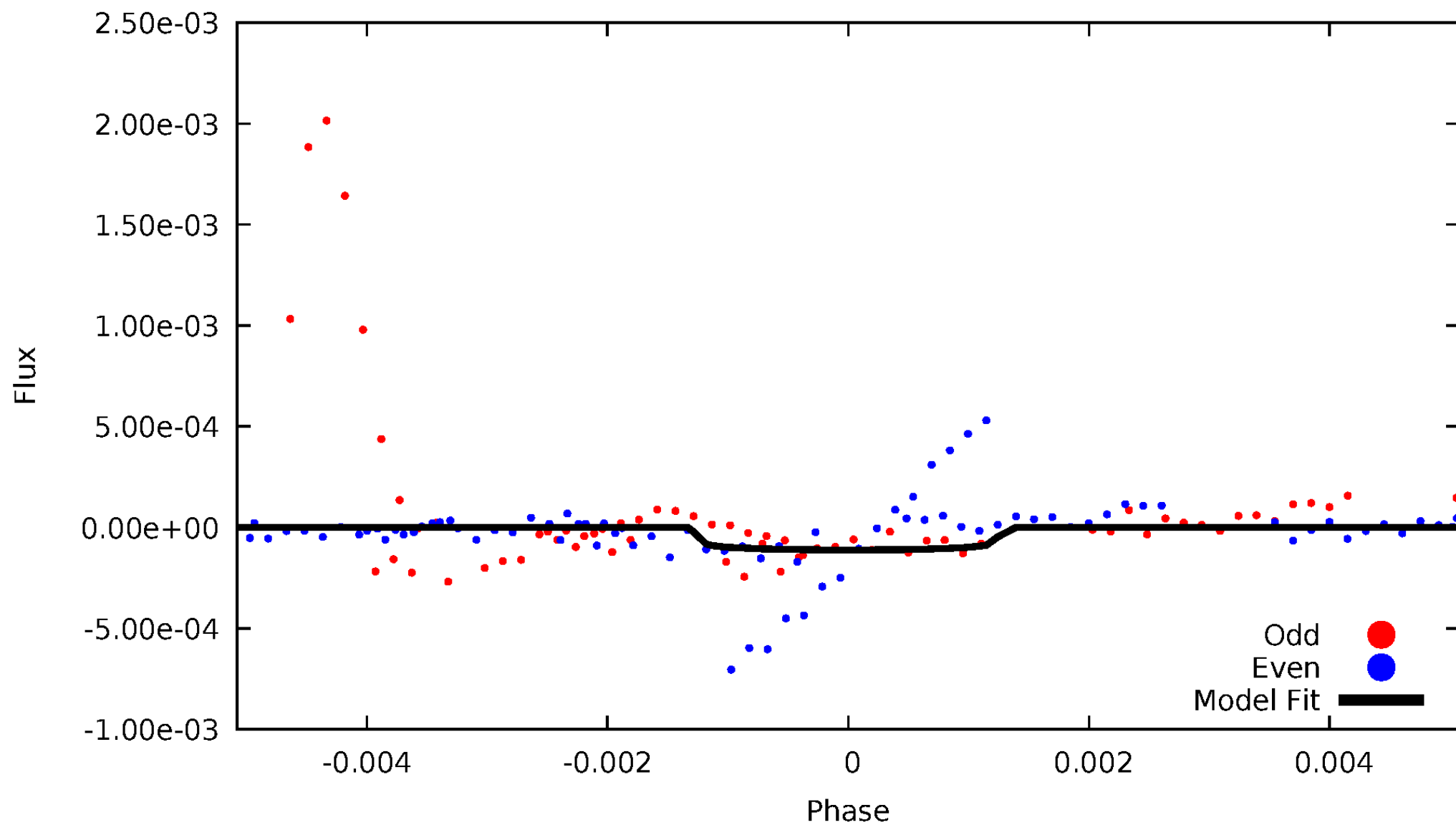


TCE 012207099-04



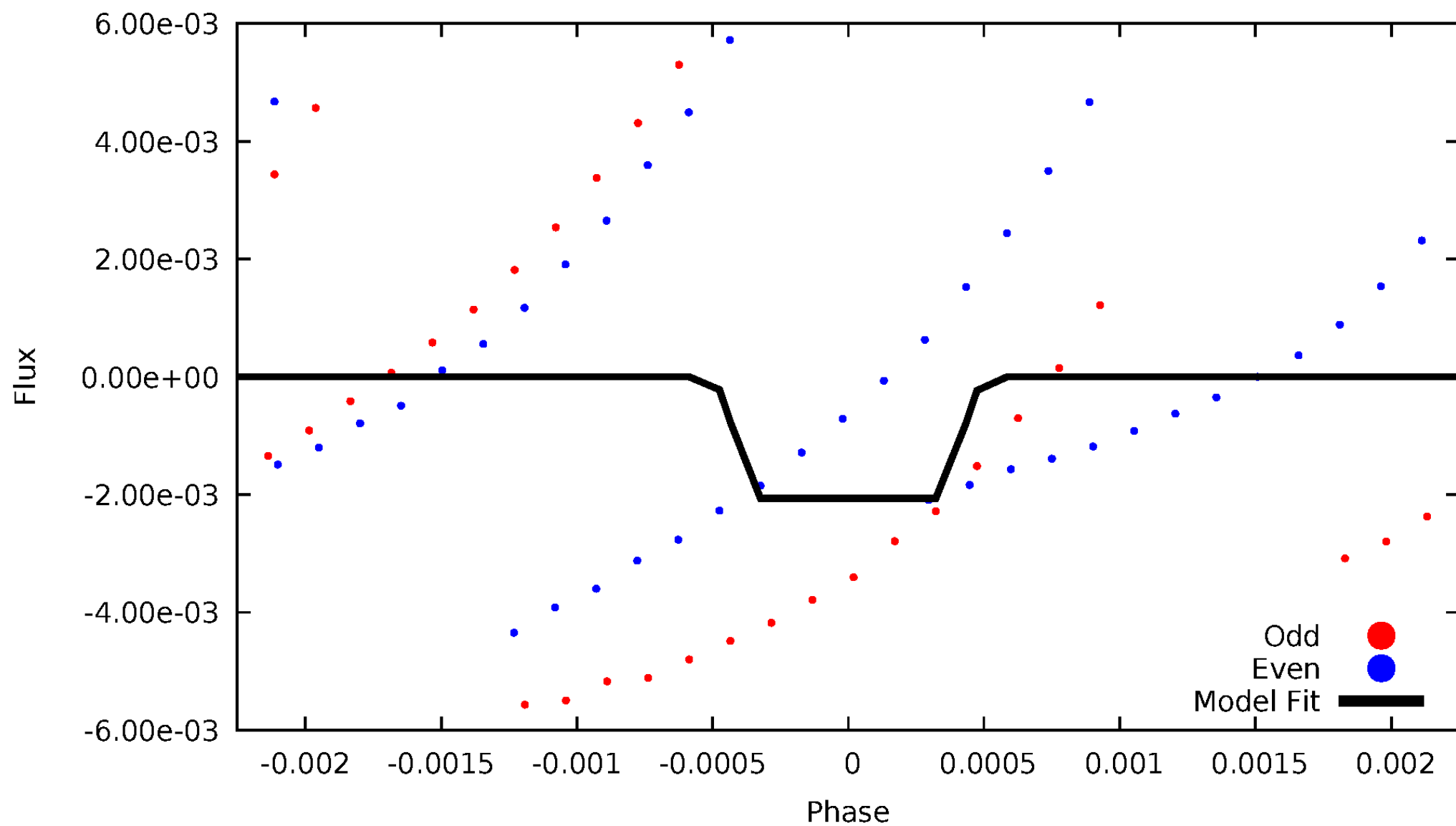
DV Odd/Even

TCE 012207099-04



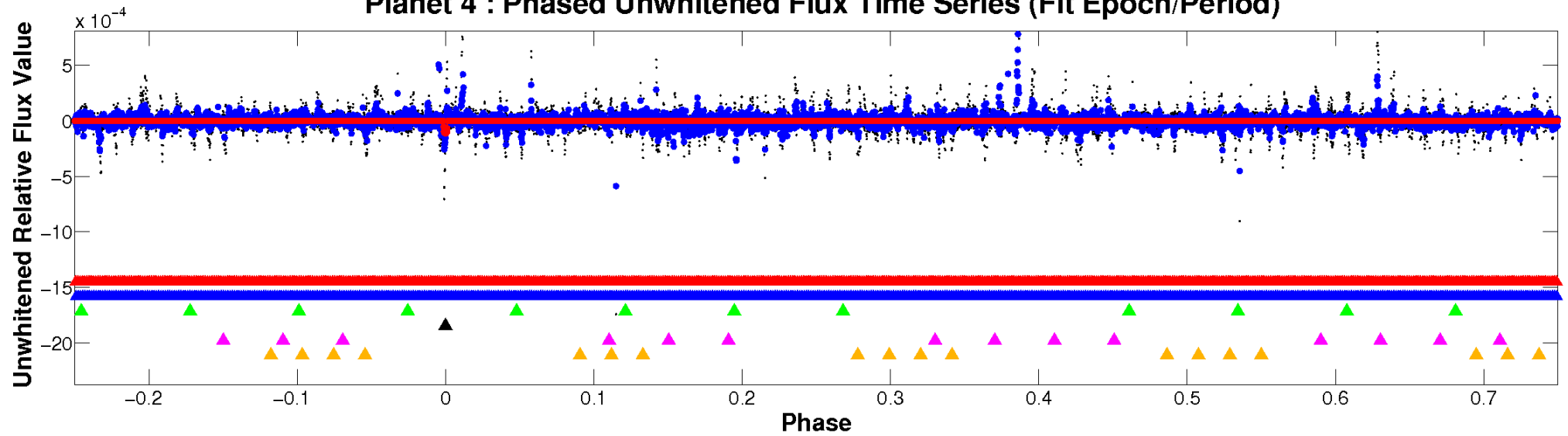
ALT Odd/Even

TCE 012207099-04

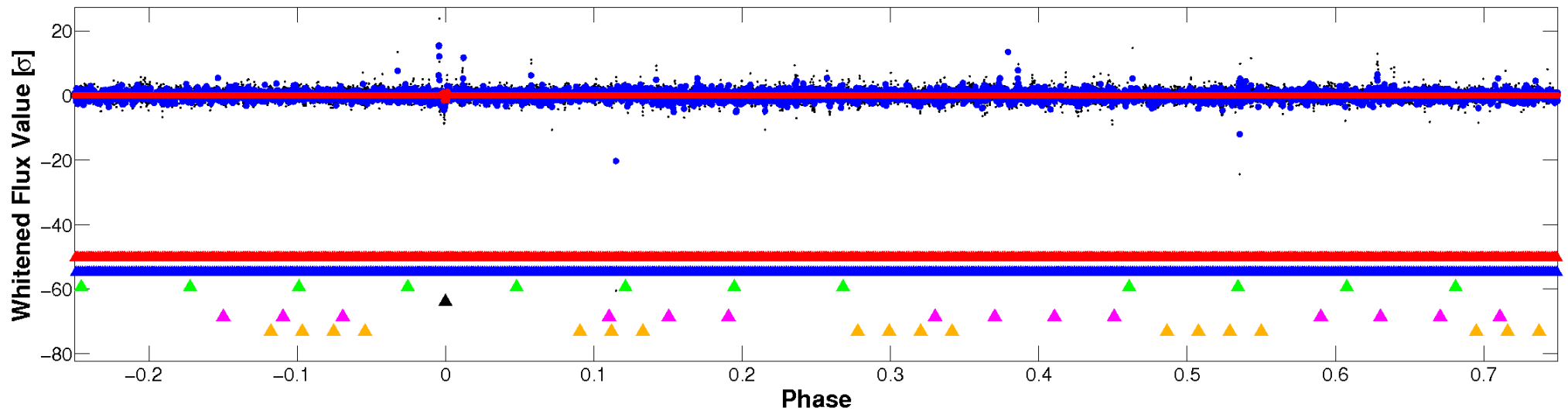


Non-Whitened Vs. Whitened Light Curve

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

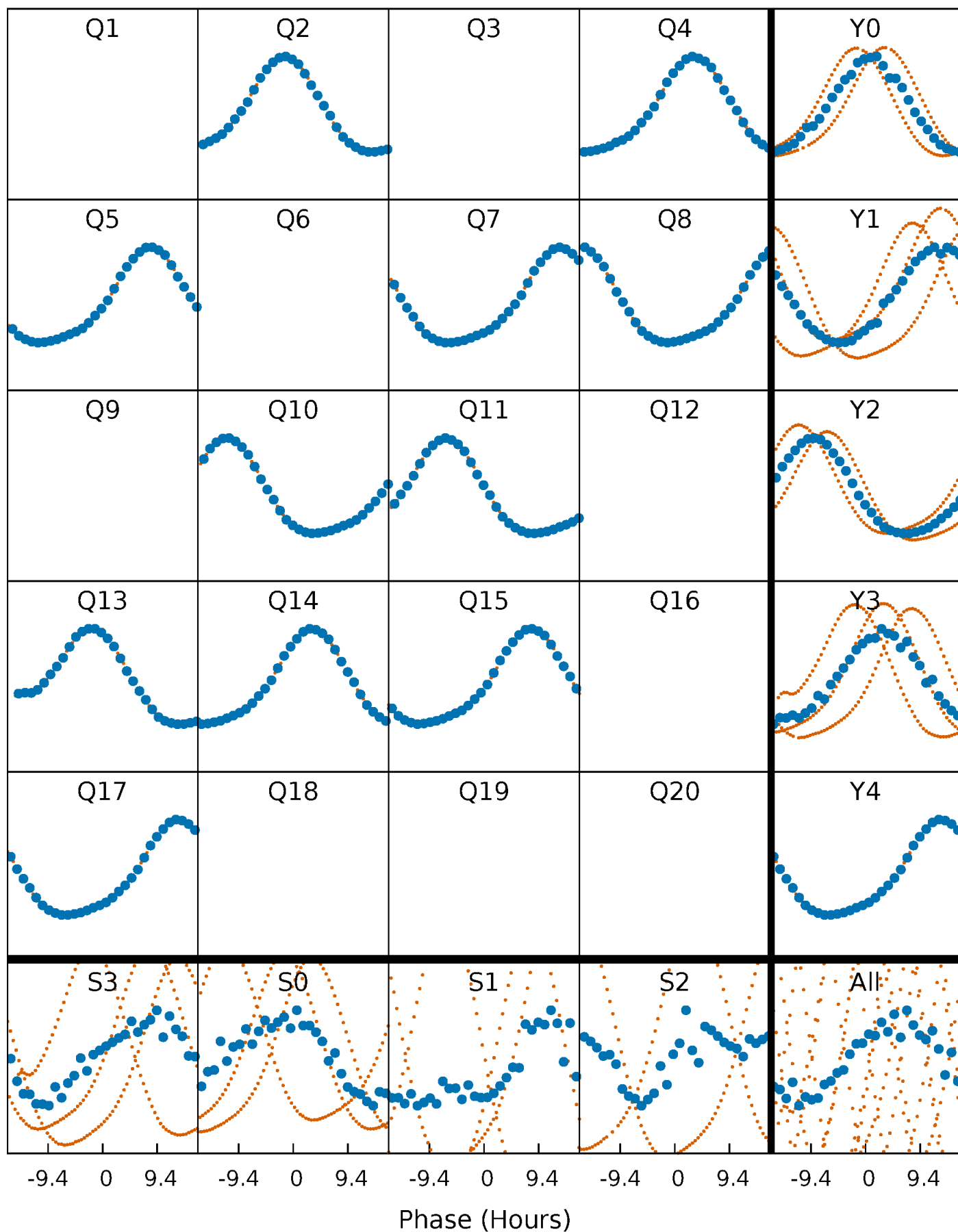


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



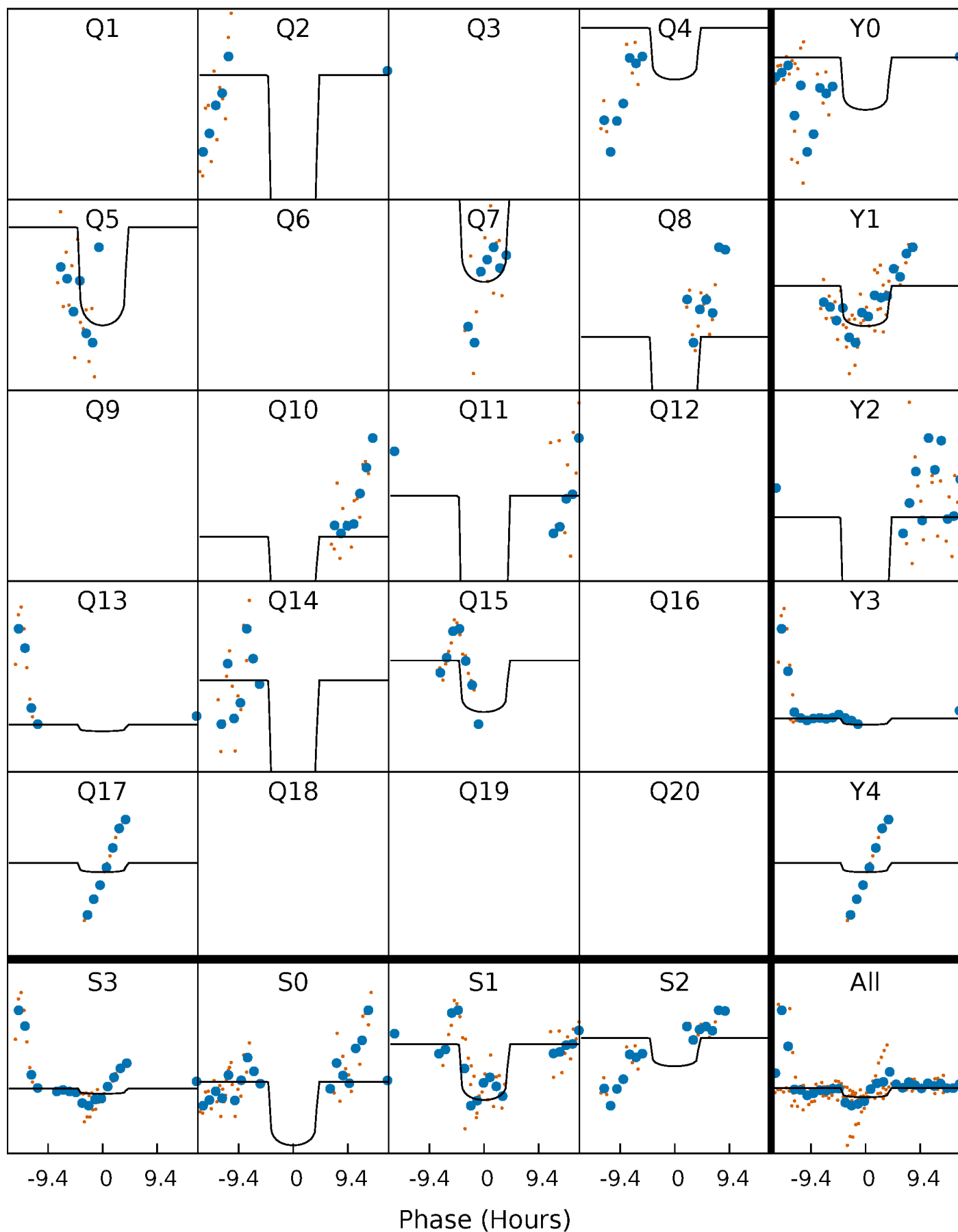
PDC Quarter-Phased Transit Curves

TCE 012207099-04 P=134.942397 Days $T_0=238.786690$ (BKJD)



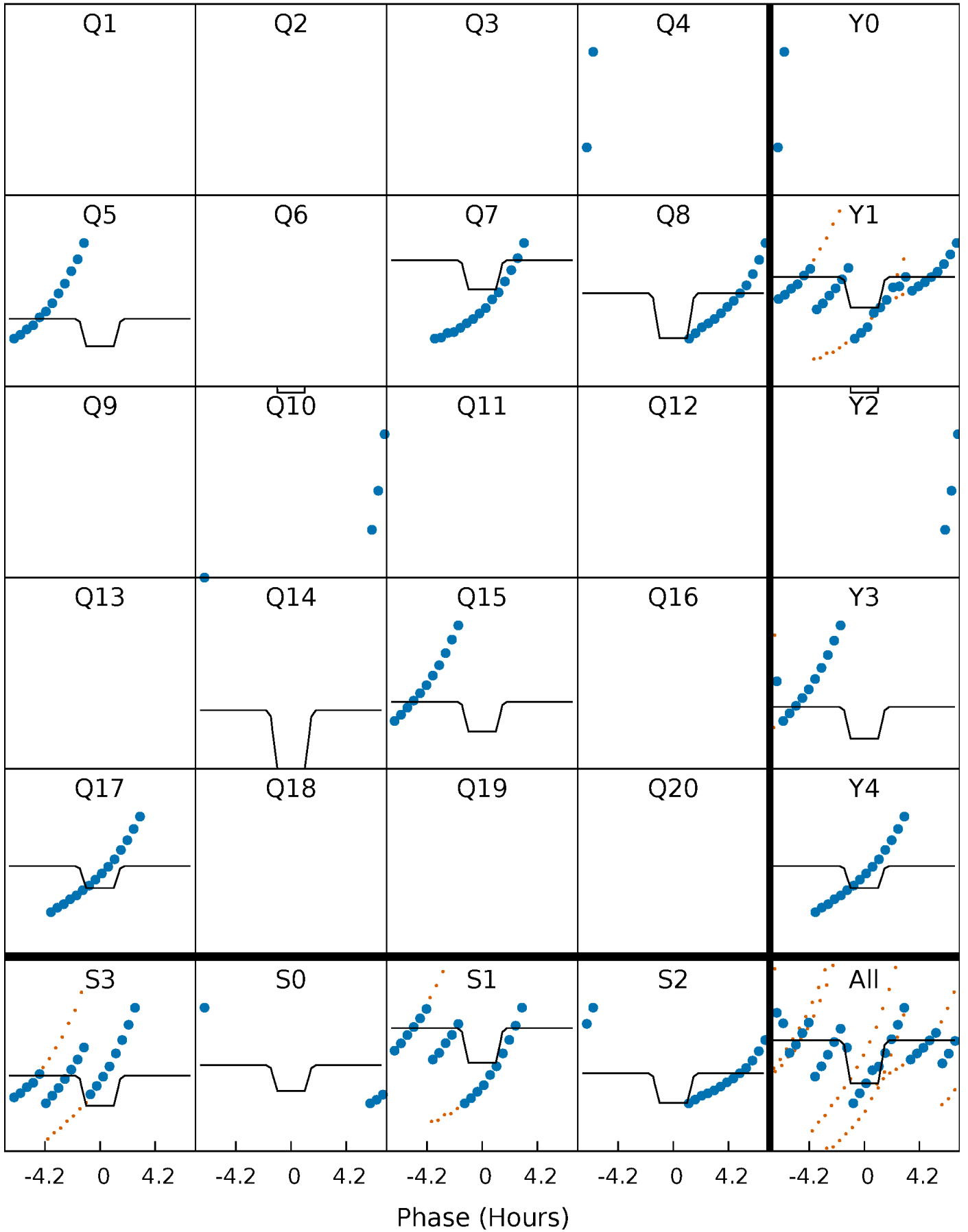
DV Quarter-Phased Transit Curves

TCE 012207099-04 P=134.942397 Days $T_0=238.786690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

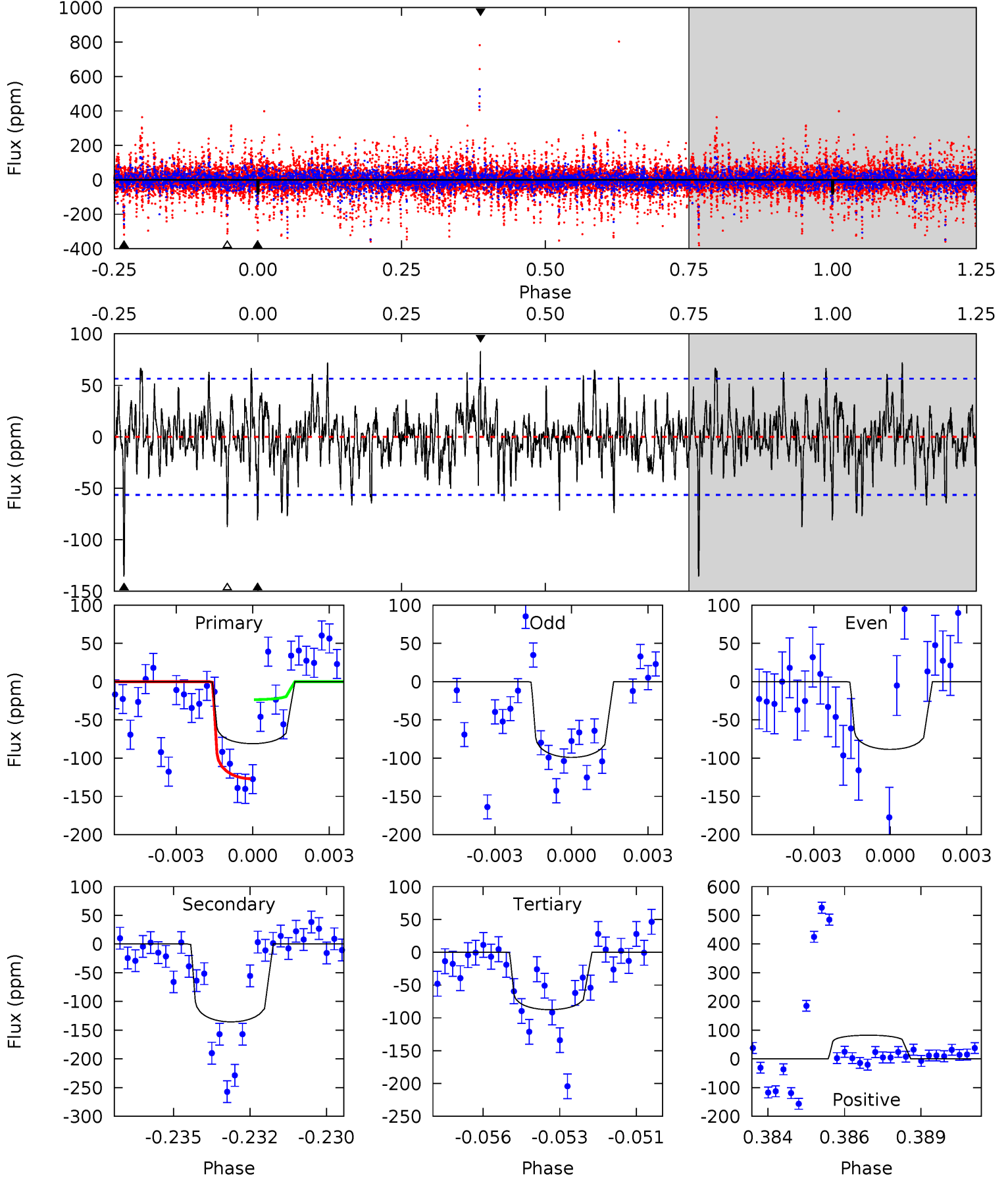
TCE 012207099-04 $P=134.943993$ Days $T_0=238.805606$ (BKJD)



DV Model-Shift Uniqueness Test

012207099-04, P = 134.942397 Days, E = 103.844293 Days

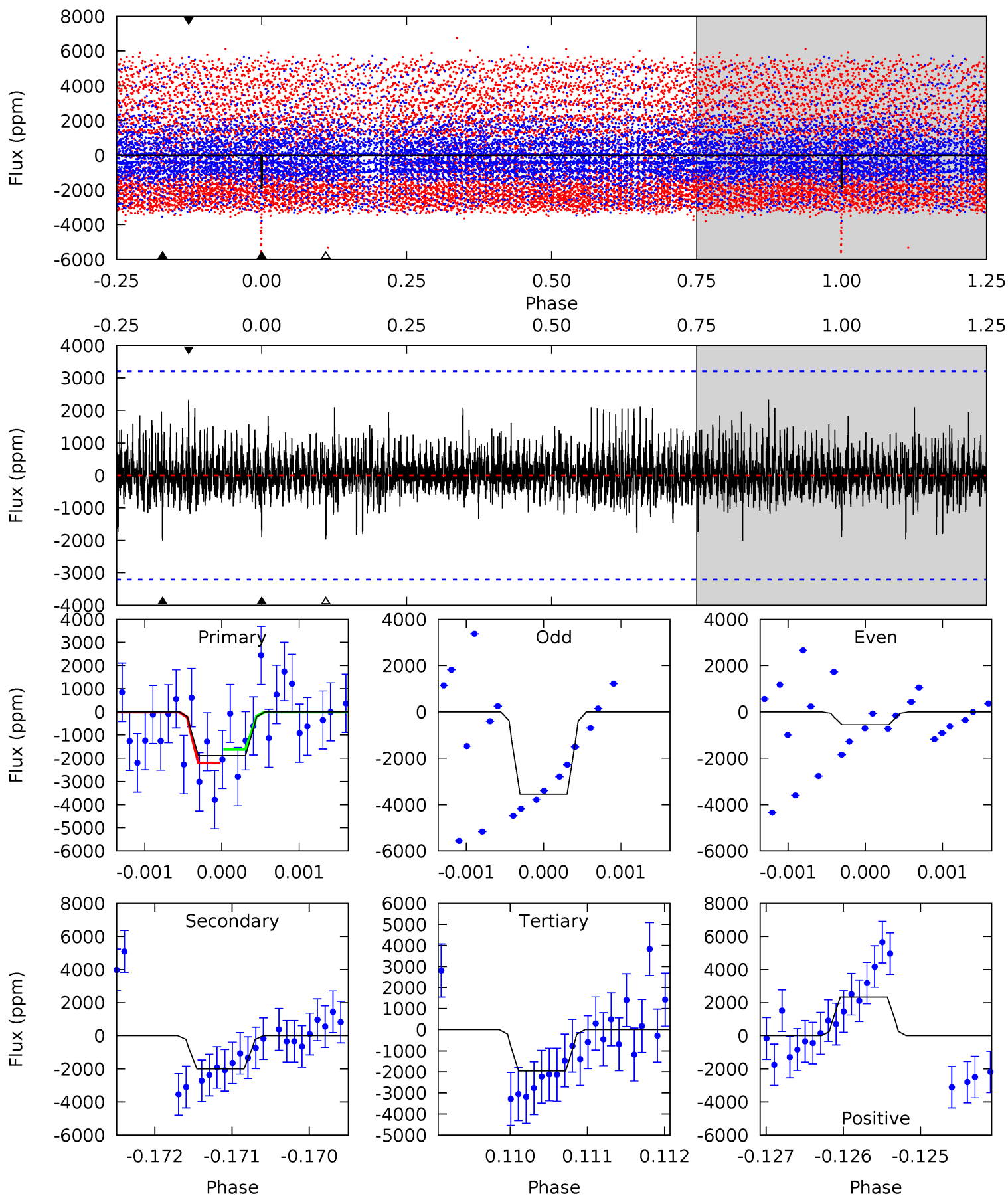
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.59	12.7	8.20	7.72	5.28	3.02	2.03	-0.60	-0.13	4.50	4.98	0.42	0.64	0.38	4.87



Alt Model-Shift Uniqueness Test

012207099-04, P = 134.943993 Days, E = 103.861613 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.20	3.40	3.33	3.95	5.44	3.27	0.87	-0.13	-0.75	0.07	-0.56	2.52	0.90	0.54	0.49



Stellar Parameters For KIC 012207099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10932^{+266}_{-457}	$4.056^{+0.252}_{-0.189}$	$0.070^{+0.050}_{-0.600}$	$2.615^{+0.733}_{-0.895}$	$2.838^{+0.289}_{-0.674}$	$0.224^{+0.370}_{-0.106}$
	+2%/-4%	+6%/-5%	+71%/-857%	+28%/-34%	+10%/-24%	+165%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 012207099-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-136 ± 11	$3.85^{+3.53}_{-2.62}$	1272^{+105}_{-115}	9496^{+18584}_{-3006}	2614^{+22951}_{-1913}
Alt.	-2006 ± 590	$12.70^{+4.75}_{-4.44}$	1275^{+104}_{-113}	10662^{+4215}_{-2101}	3467^{+4948}_{-1782}

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 $A_{obs} \gg 1.0$

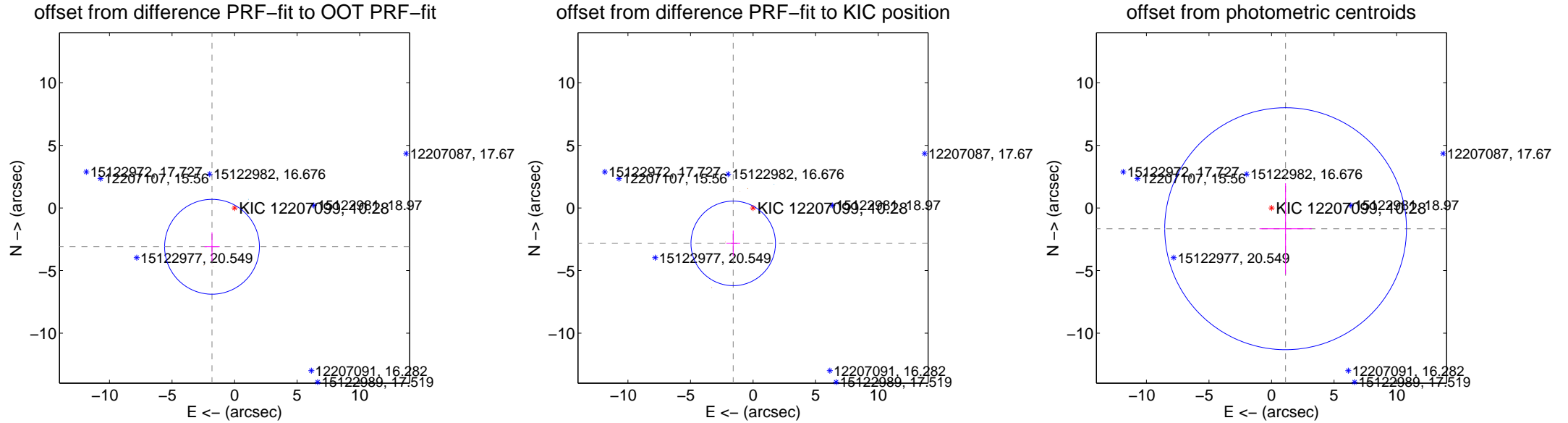
DV Centroid Data

Supplemental centroid analysis for 012207099-04. **Kepler magnitude: 10.28.** Transit SNR 9.56

There are 1 quarters with good PRF difference image offsets

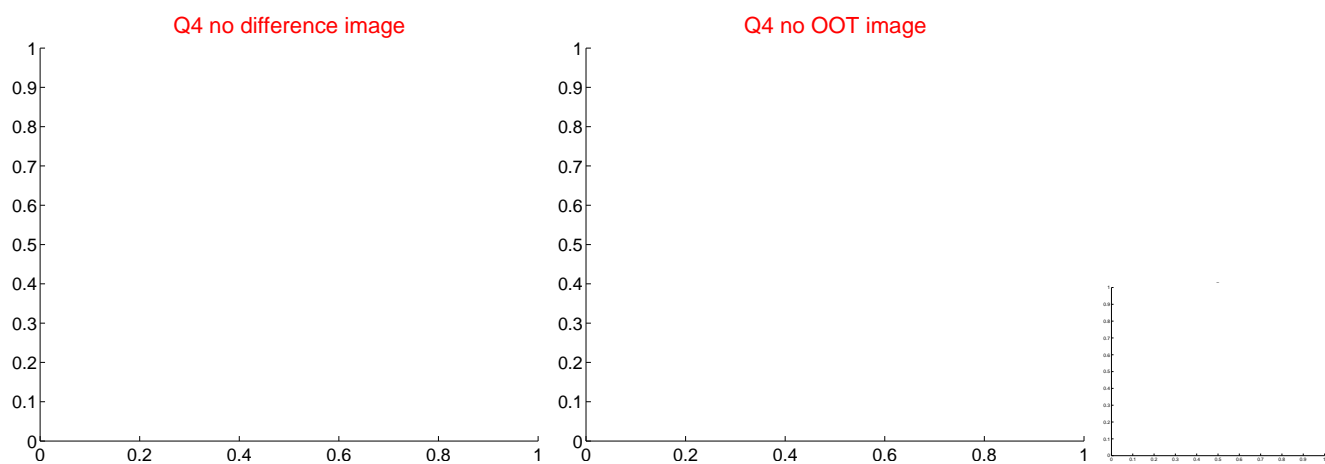
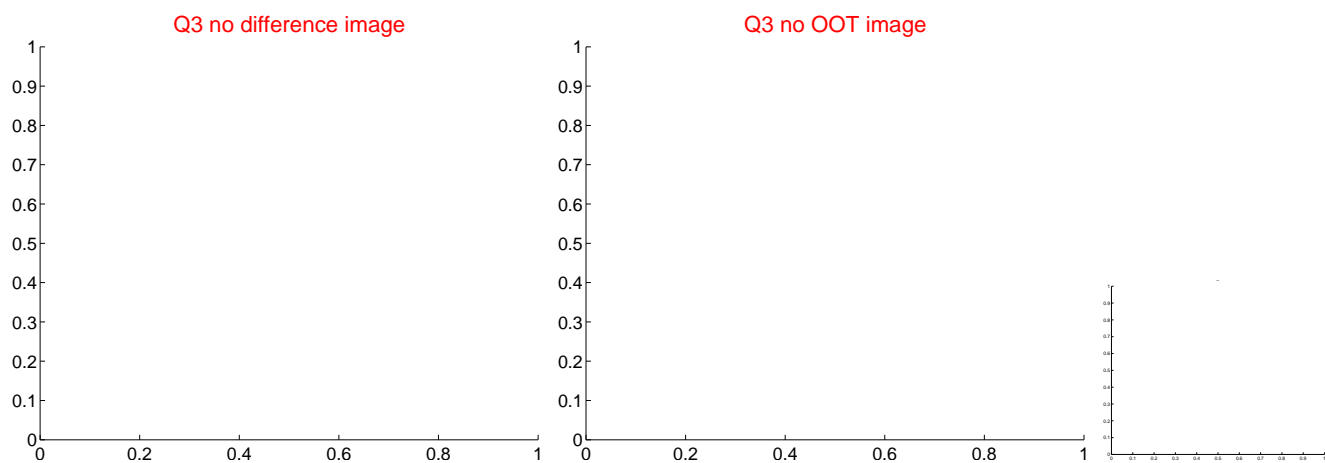
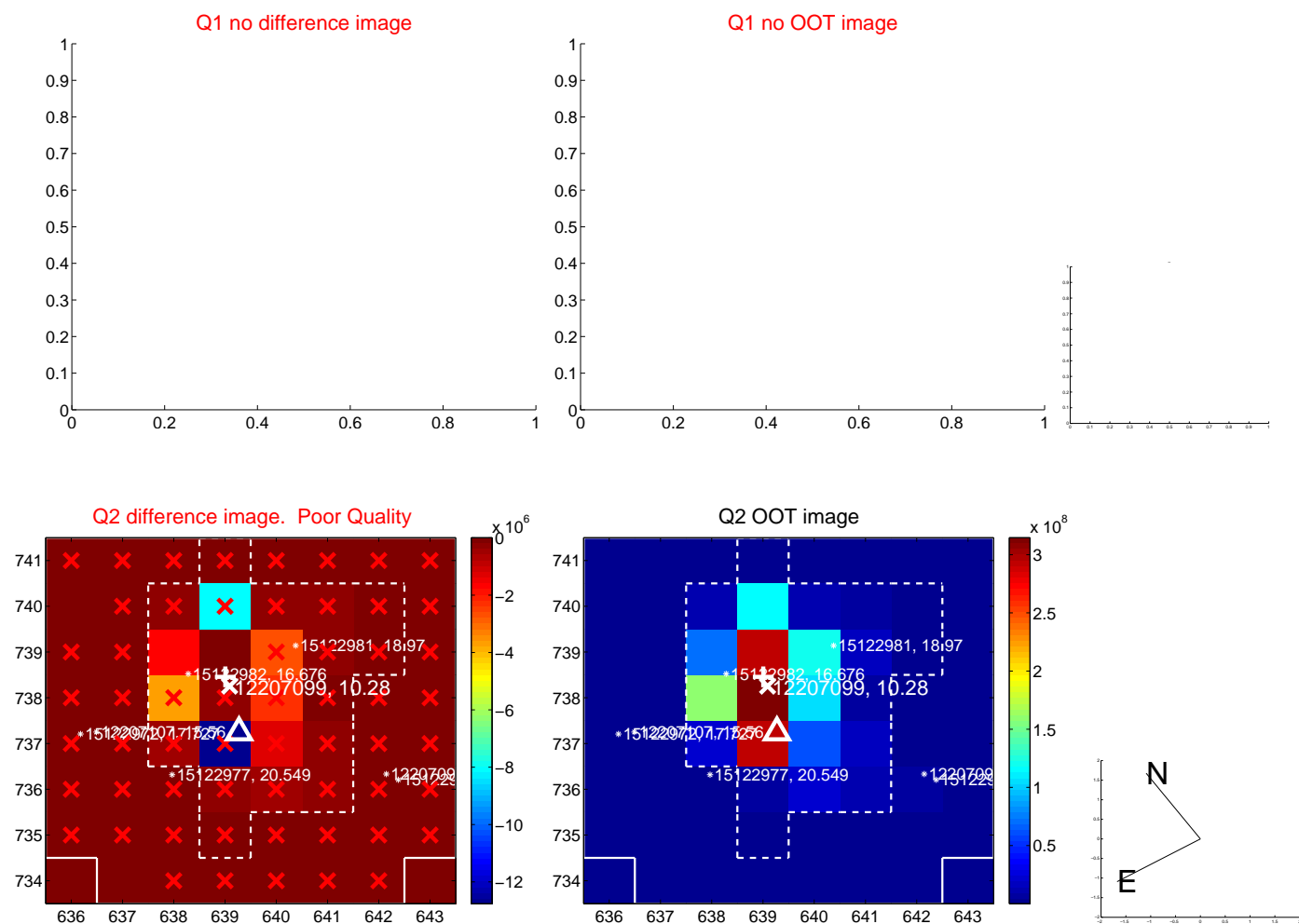
The direct PRF centroid is offset from the target star catalog position by about 1.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.587 ± 1.263	2.84	1.804 ± 0.612	-3.100 ± 1.152
PRF-fit source offset from KIC position	3.244 ± 1.126	2.88	1.585 ± 0.552	-2.830 ± 1.026
photometric centroid source offset	2.00 ± 3.22	0.62	-1.12 ± 2.09	-1.66 ± 3.63

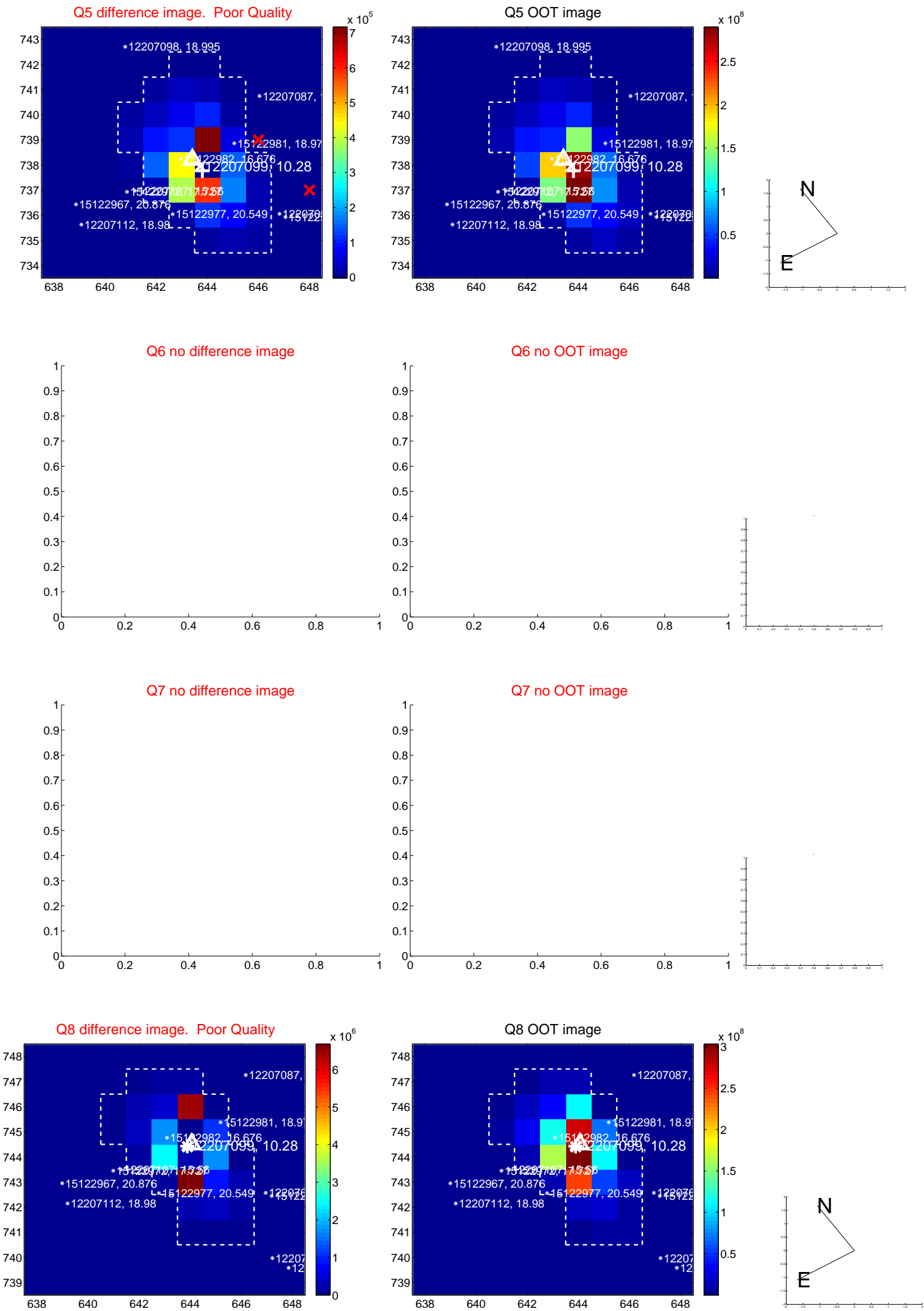


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

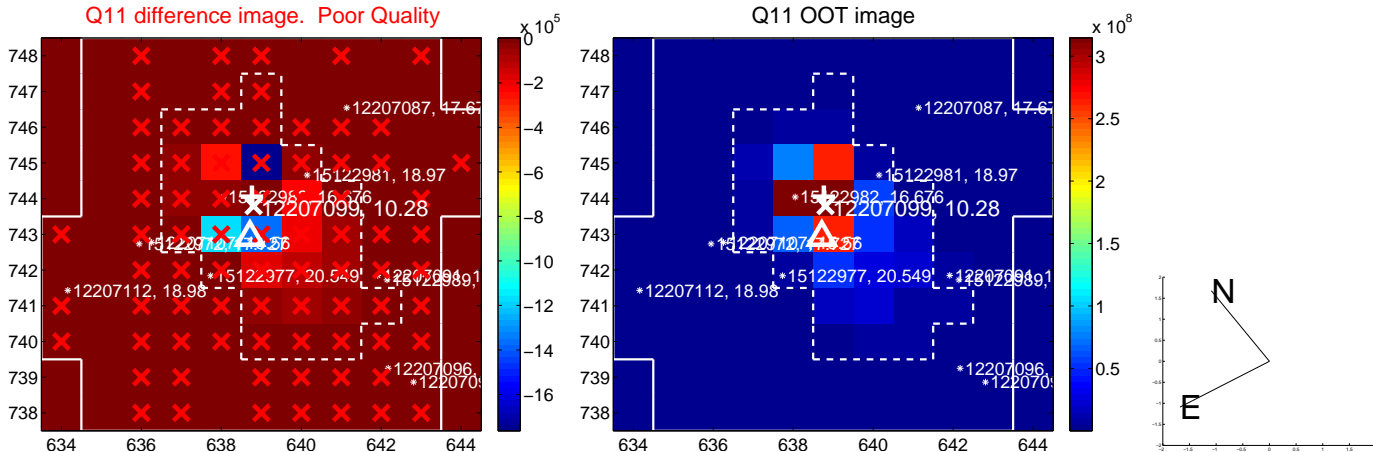
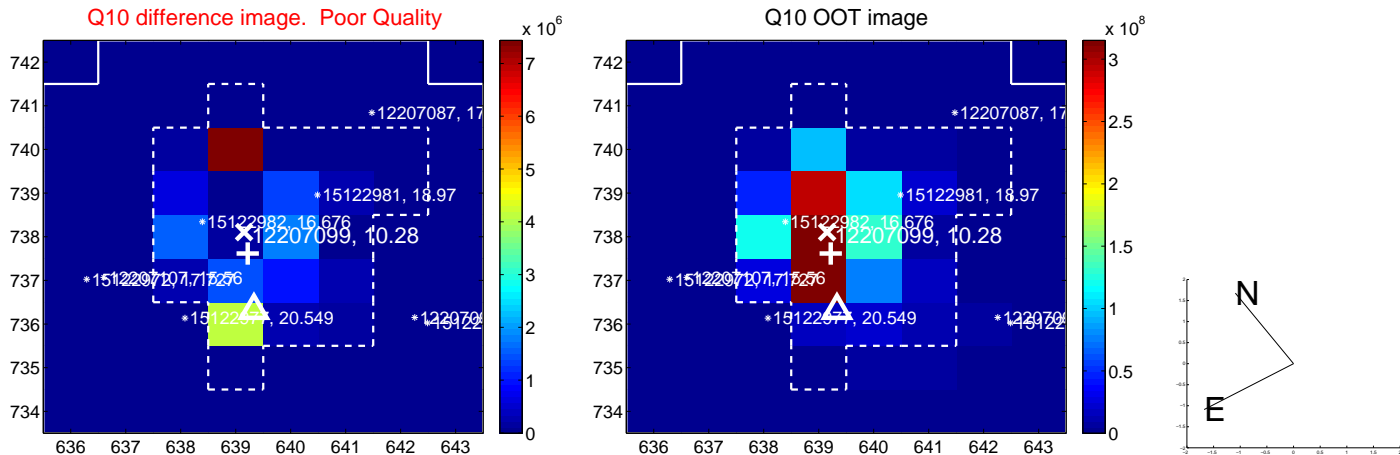
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

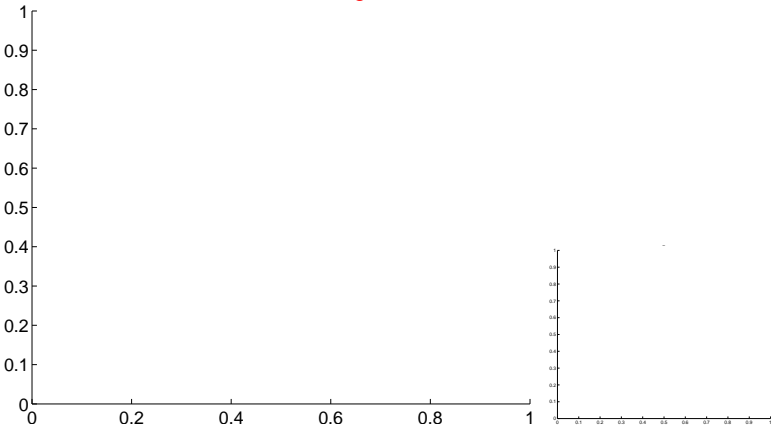


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

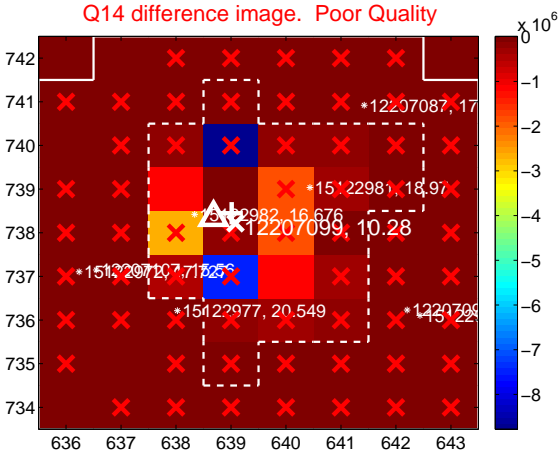
Q13 no difference image



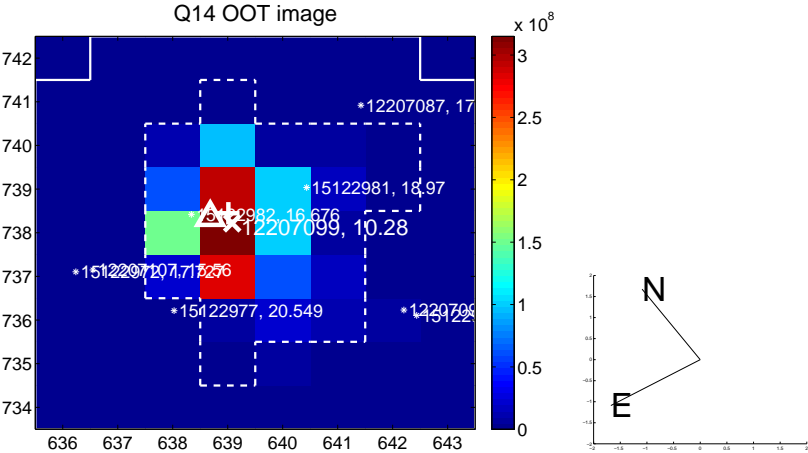
Q13 no OOT image



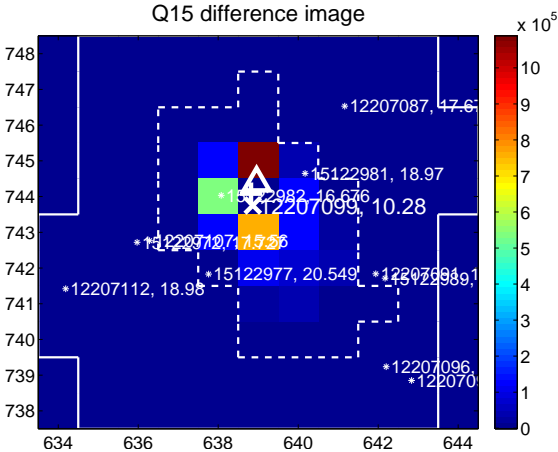
Q14 difference image. Poor Quality



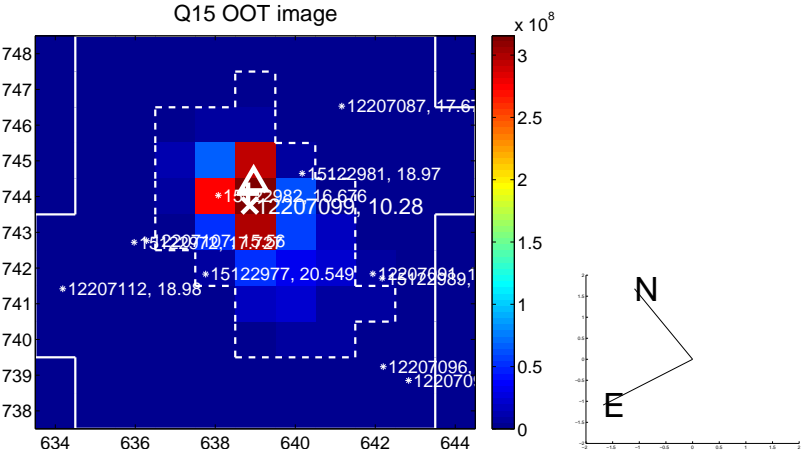
Q14 OOT image



Q15 difference image



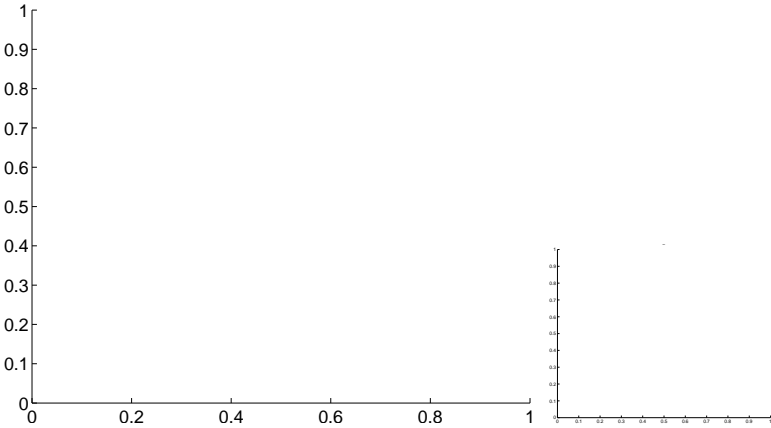
Q15 OOT image



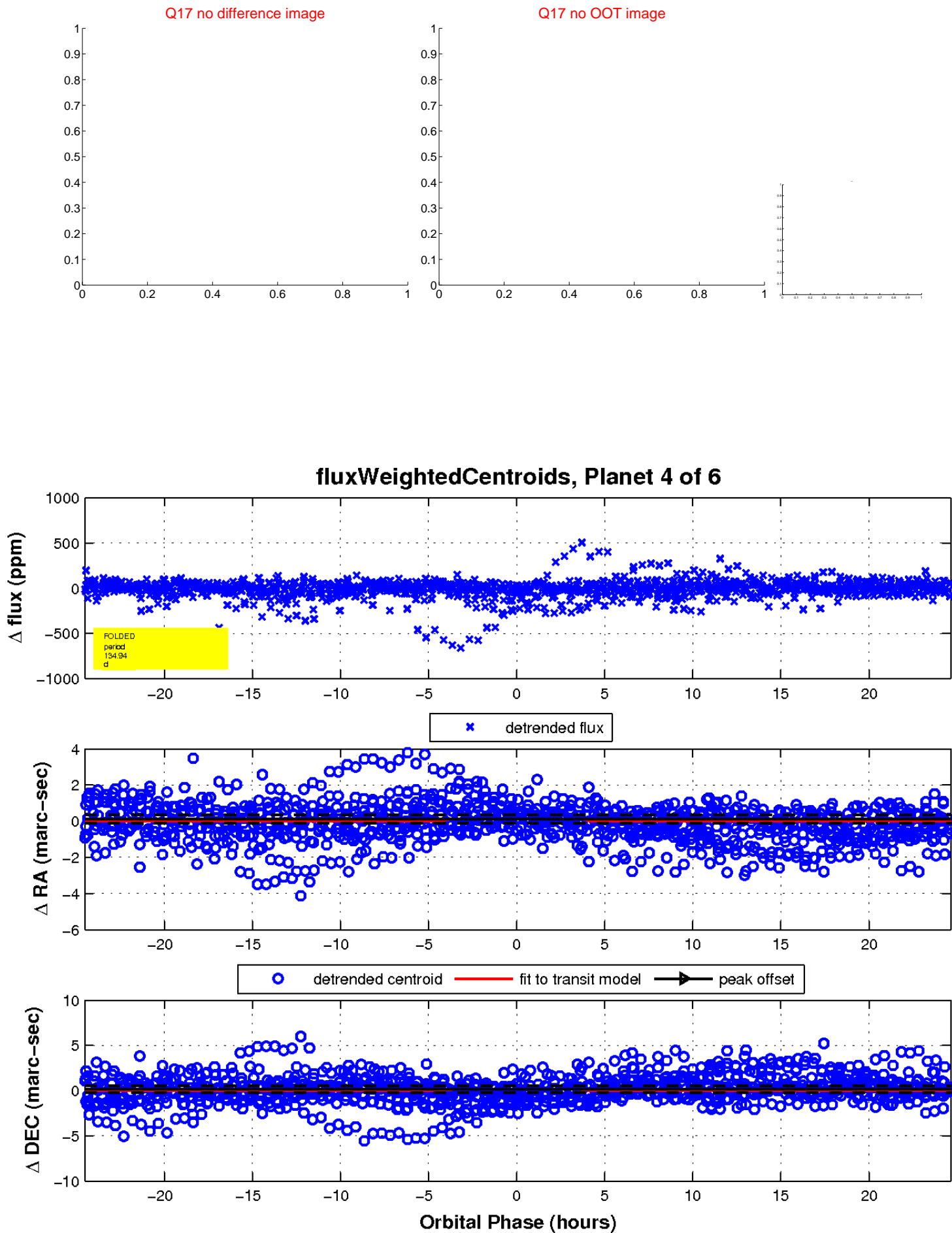
Q16 no difference image



Q16 no OOT image

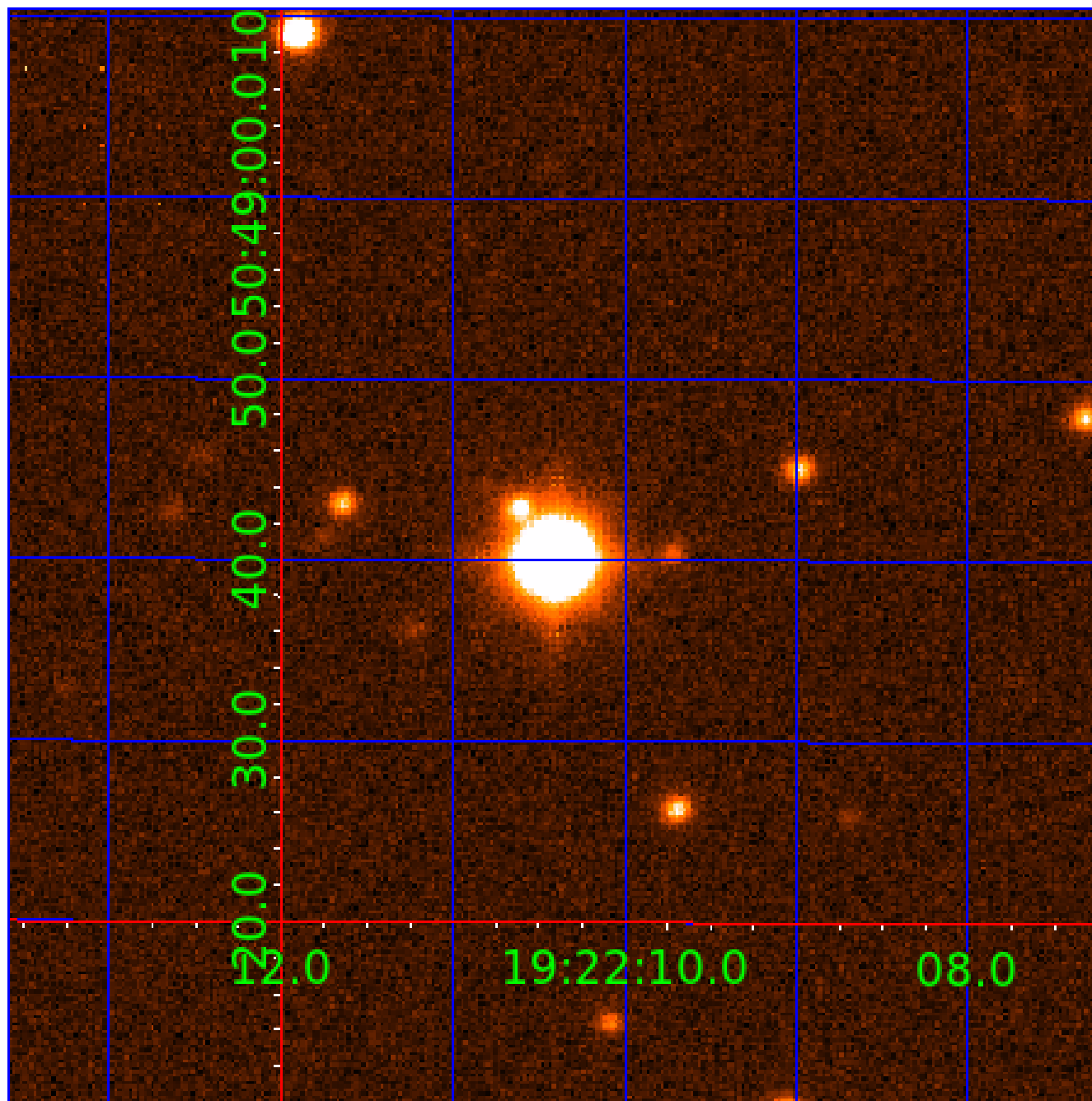


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012207099

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})
012207099-01	OBS	No	1.422535	132.207758	9.1	1.006	22.6	8.6	2.62	10932	0.90	71218.02
012207099-02	OBS	No	1.422580	132.211387	10.5	8.775	16.0	11.4	2.62	10932	0.91	71215.05
012207099-03	OBS	No	125.040888	140.018489	157.2	4.575	21.8	12.7	2.62	10932	3.50	182.22
012207099-04	OBS	No	134.942397	238.786690	111.9	8.223	20.6	9.6	2.62	10932	2.88	164.62
012207099-05	OBS	No	99.849012	199.776534	31.1	4.728	15.5	4.9	2.62	10932	1.51	245.97
012207099-06	OBS	No	81.537009	141.359954	142.7	2.500	13.7	-1.0	2.62	10932	3.22	322.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207099-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
012207099-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

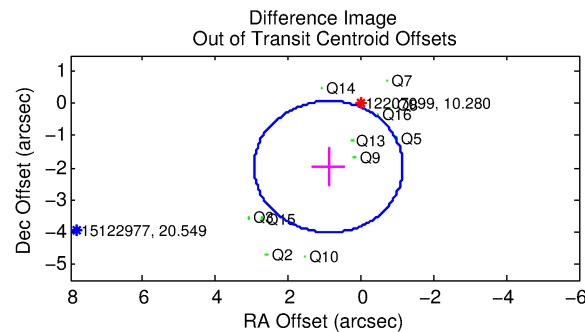
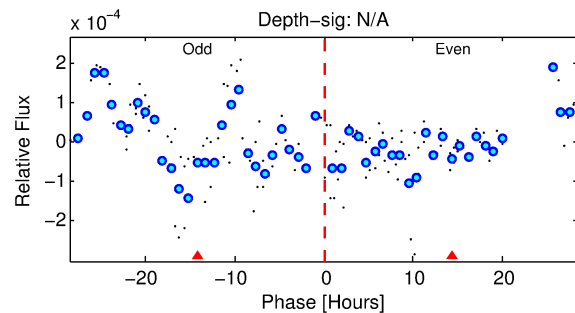
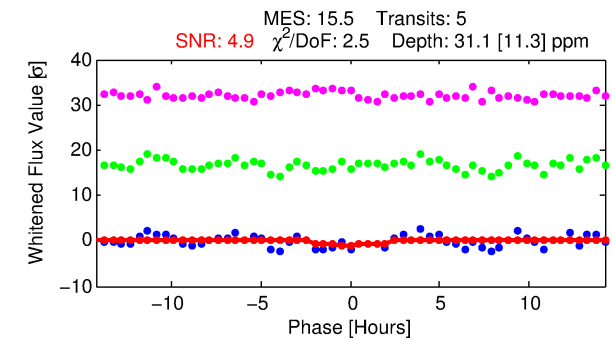
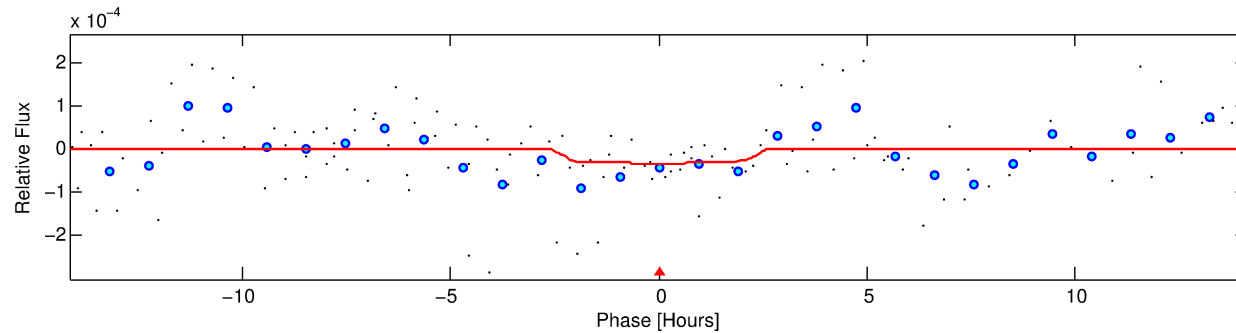
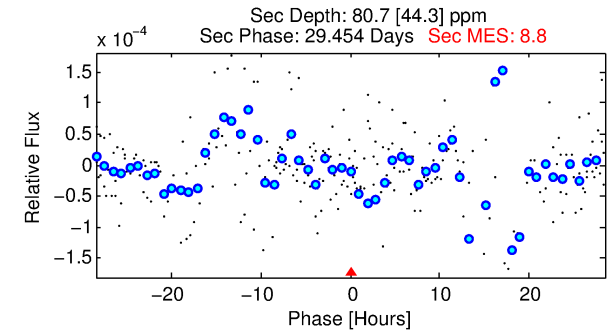
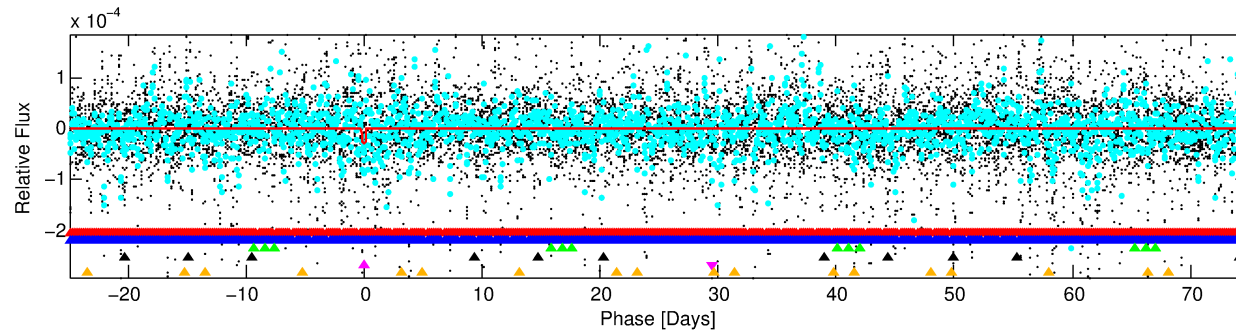
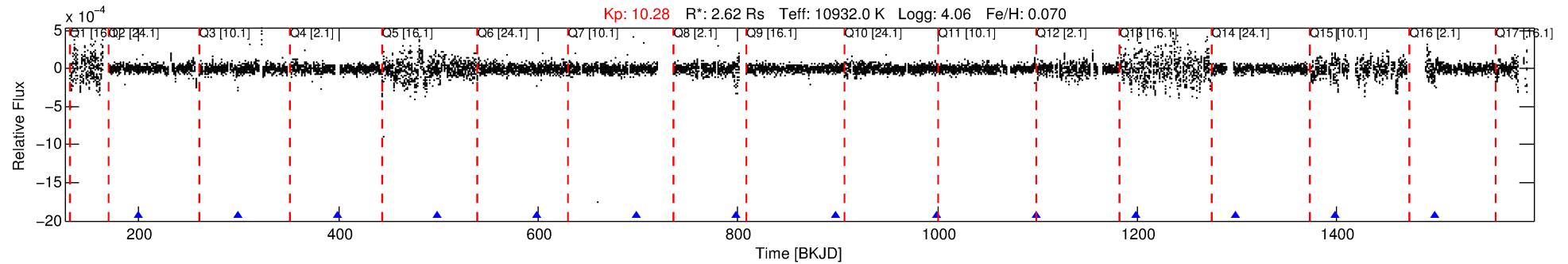
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207099-05

No Significant Match Found

DV One-Page Summary

KIC: 12207099 Candidate: 5 of 6 Period: 99.849 d



DV Fit Results:

Period = 99.84901 [0.00407] d
Epoch = 199.7765 [0.0263] BKJD
 $R_p/R^* = 0.0053$ [0.0100]
 $a/R^* = 155.56$ [2224.21]
 $b = 0.28$ [46.56]
 $S_{\text{eff}} = 245.97$ [117.88]
 $T_{\text{eq}} = 1010$ [121] K
 $R_p = 1.51$ [2.90] R_e
 $a = 0.5965$ [0.1784] AU
 $A_g = 6927.35$ [26644.83] [0.26] σ
 $T_{\text{eff}} = 14244$ [13616] K [0.97] σ

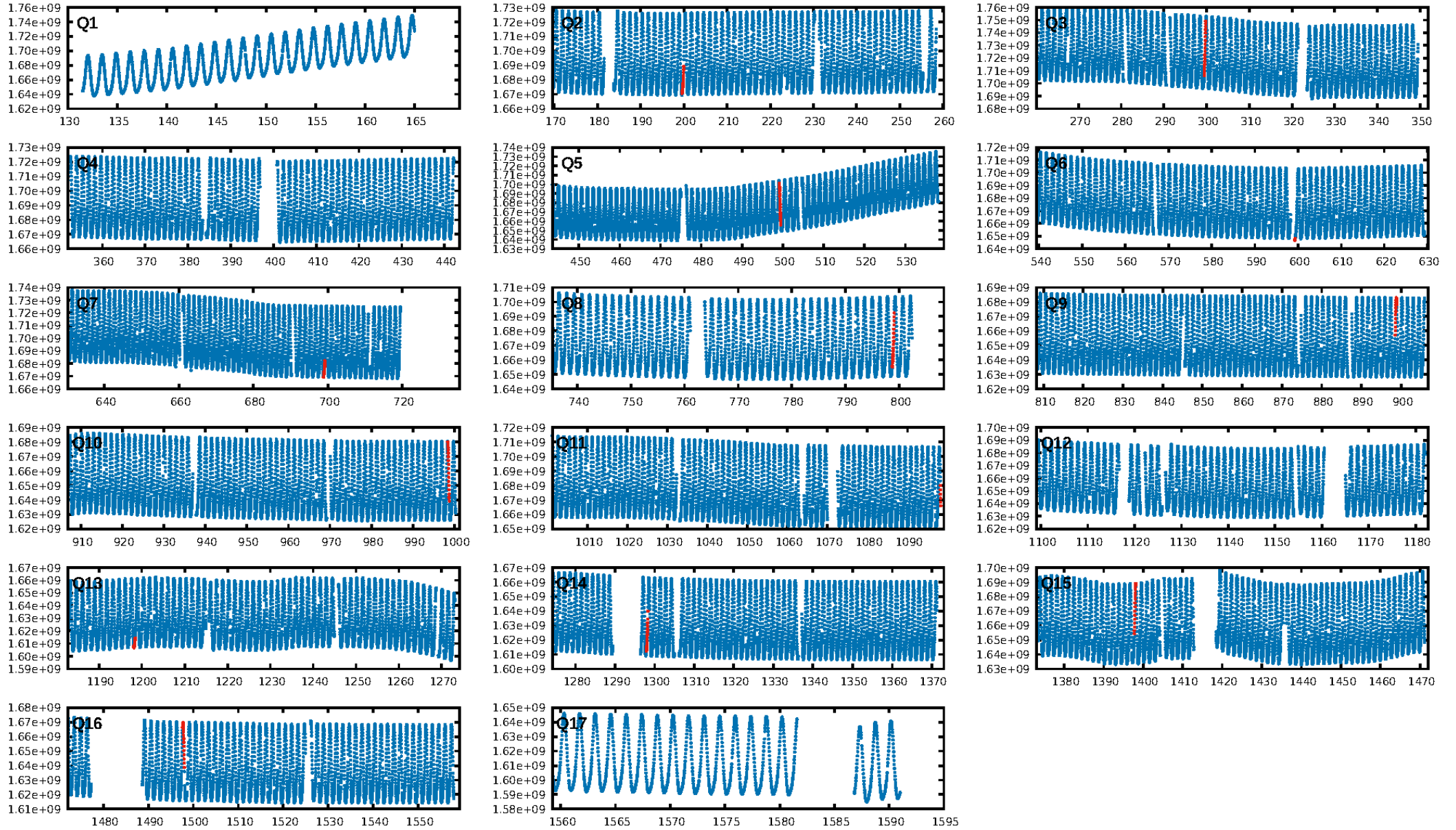
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [82.18] σ
LongPeriod-sig: 100.0% [91.91] σ
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 32.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: 55.7%
Centroid-so: 6.196 arcsec [0.67] σ
OotOffset-rm: 2.165 arcsec [3.17] σ
KicOffset-rm: 2.248 arcsec [3.18] σ
OotOffset-st: 3/3/2/3 [11]
KicOffset-st: 3/3/2/3 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 0.18 [2/11]

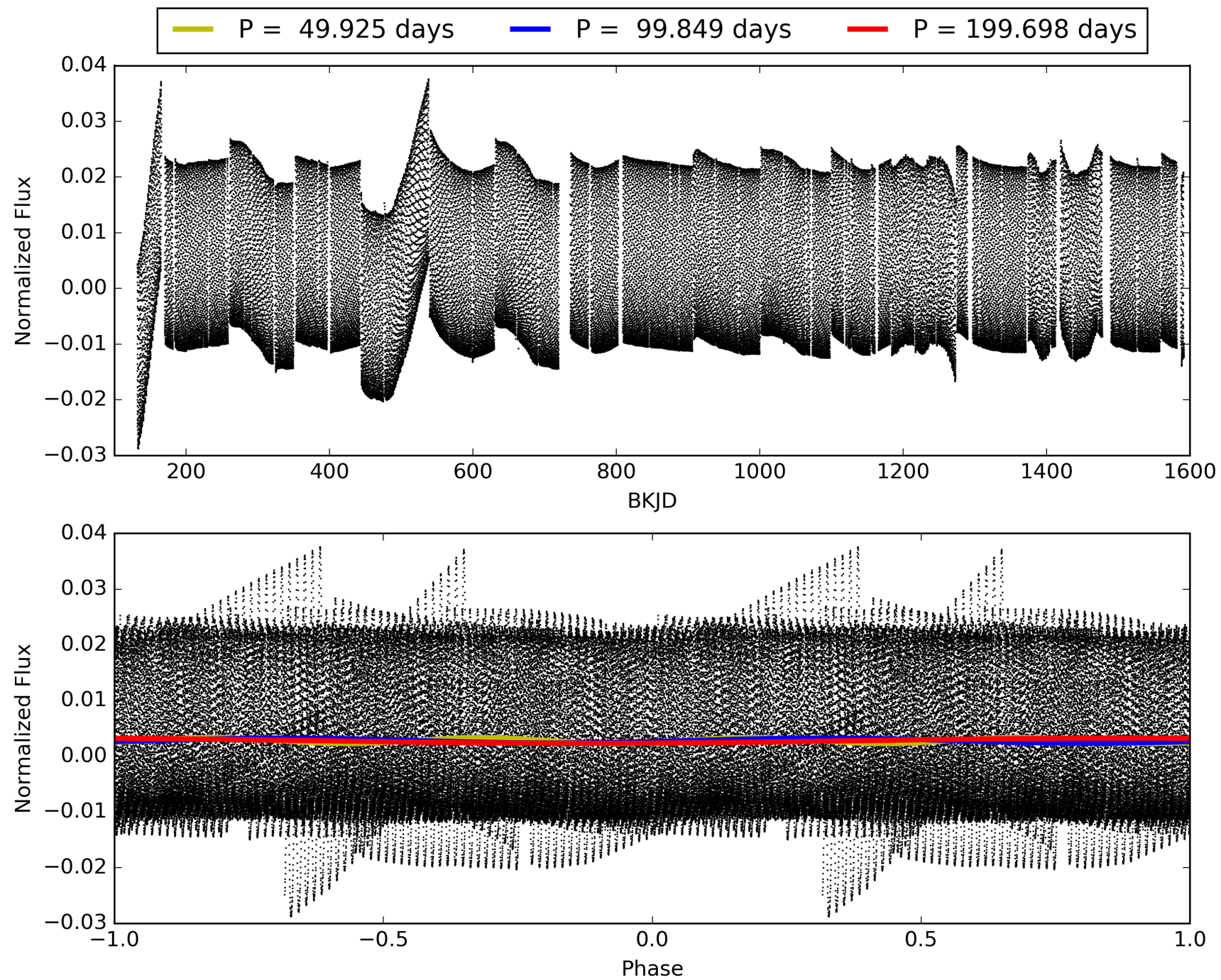
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:52:31 Z

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

TCE 012207099-05, PDC Light Curves

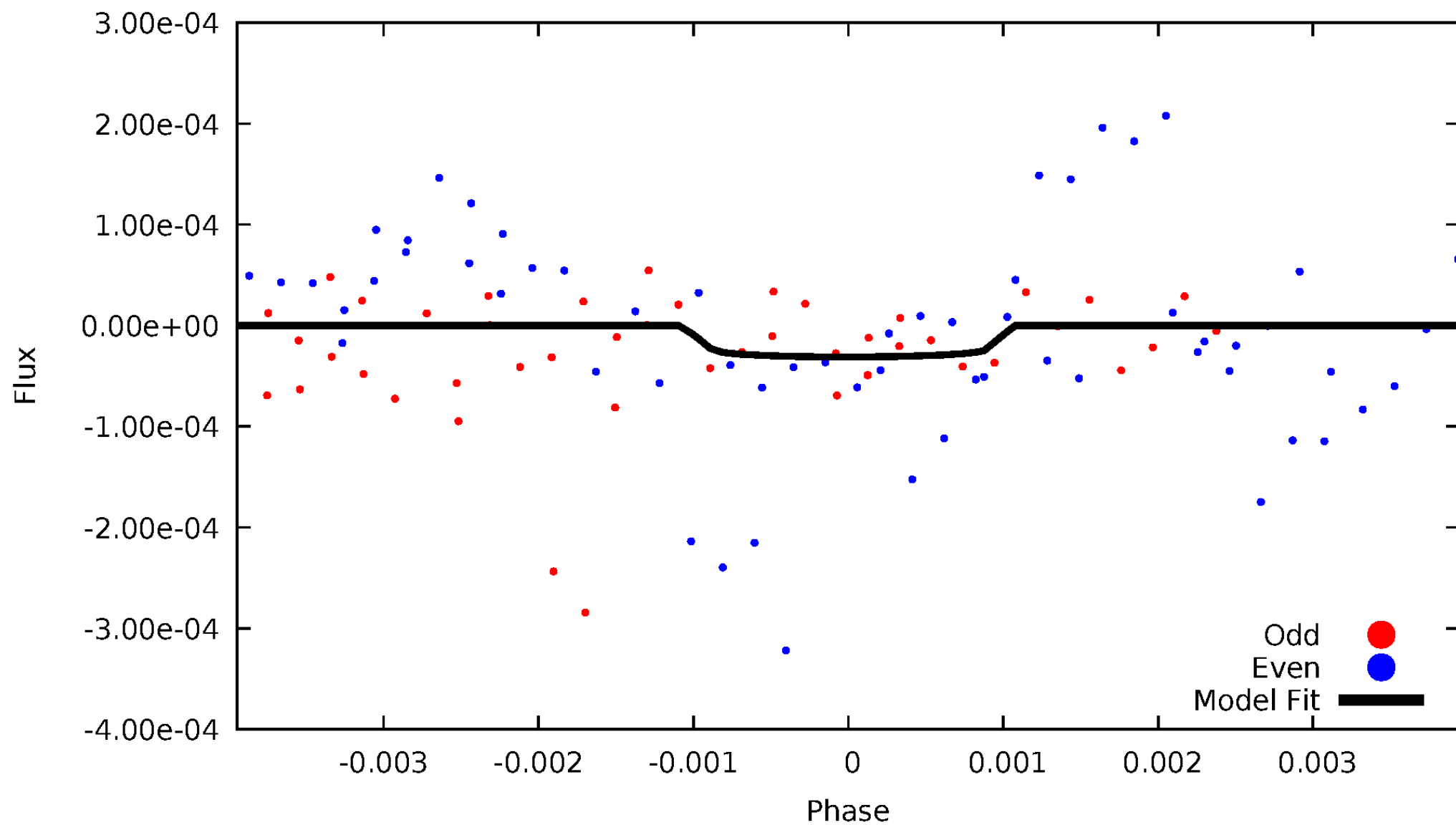


TCE 012207099-05



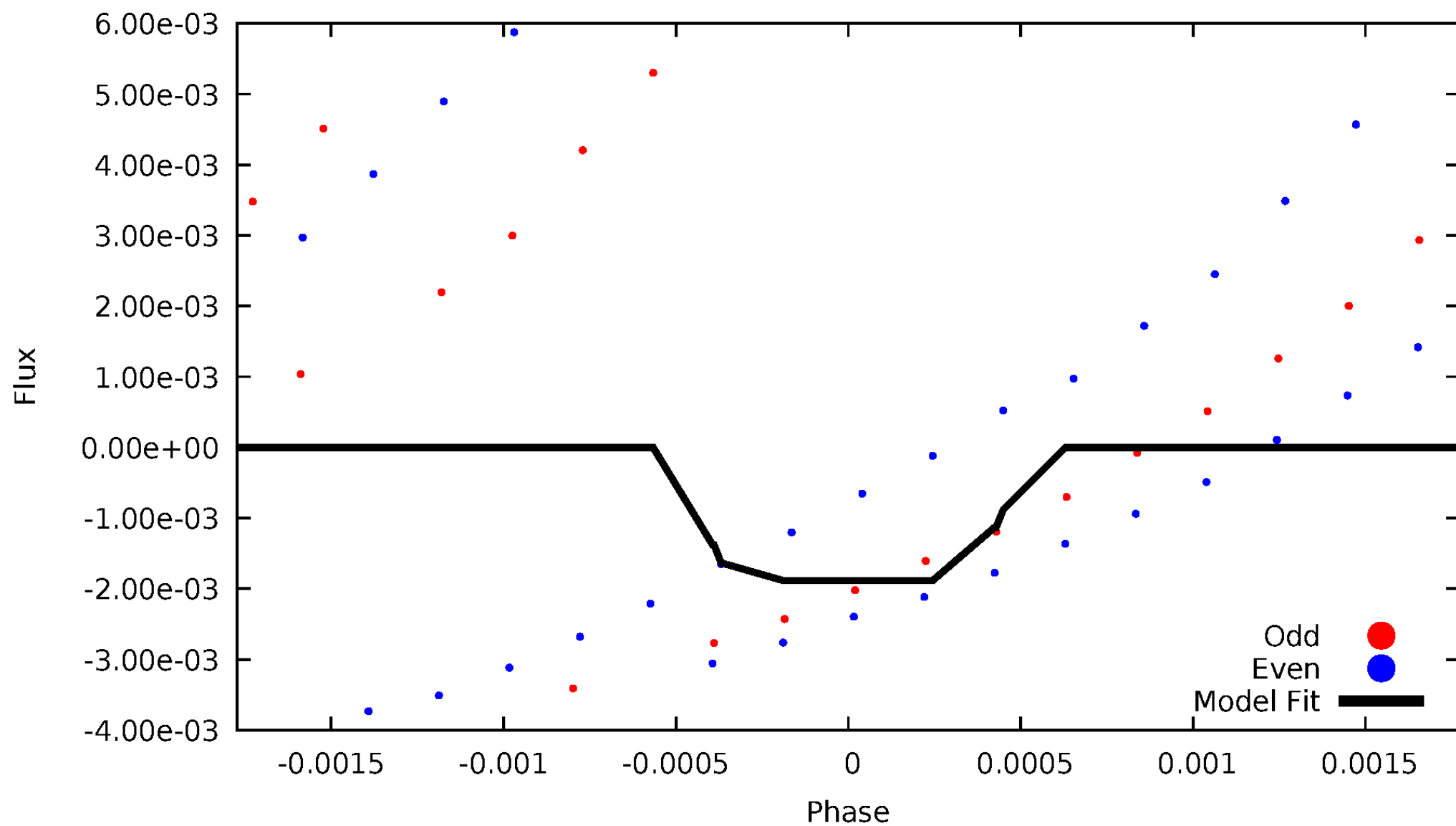
DV Odd/Even

TCE 012207099-05



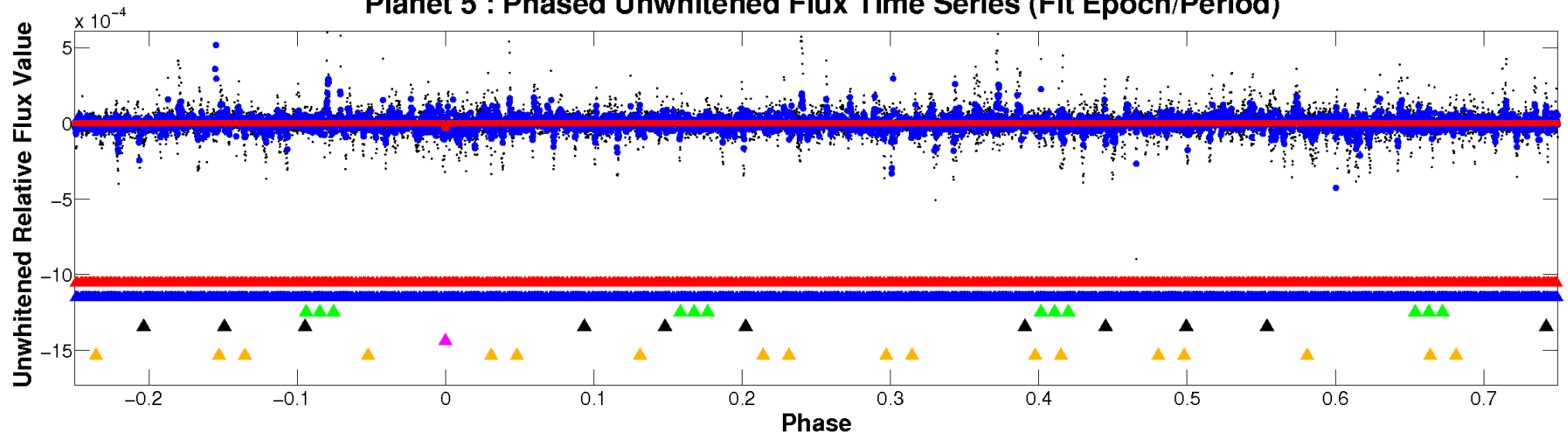
ALT Odd/Even

TCE 012207099-05

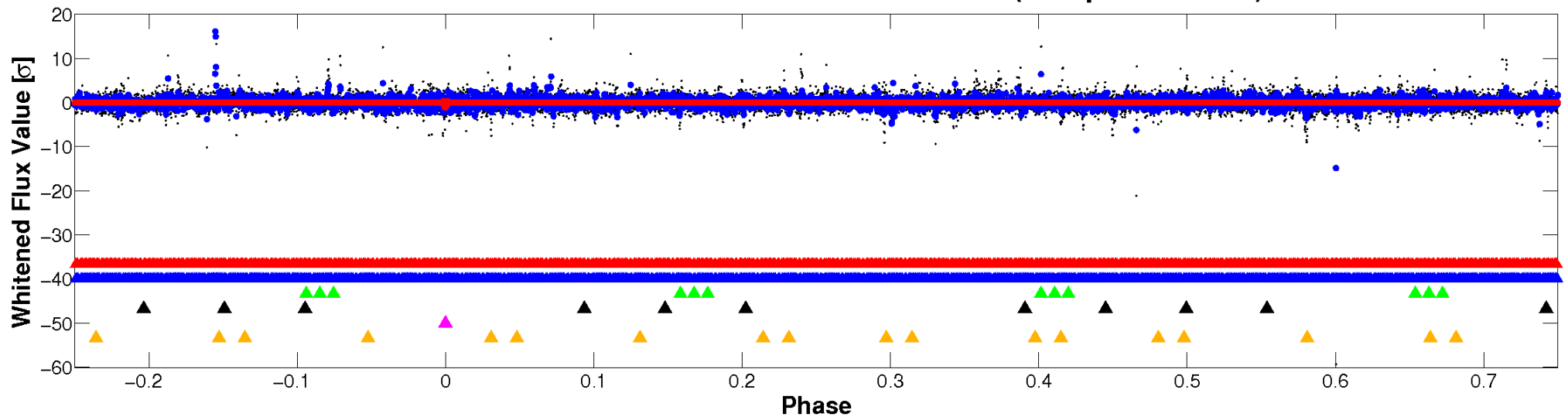


Non-Whitened Vs. Whitened Light Curve

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

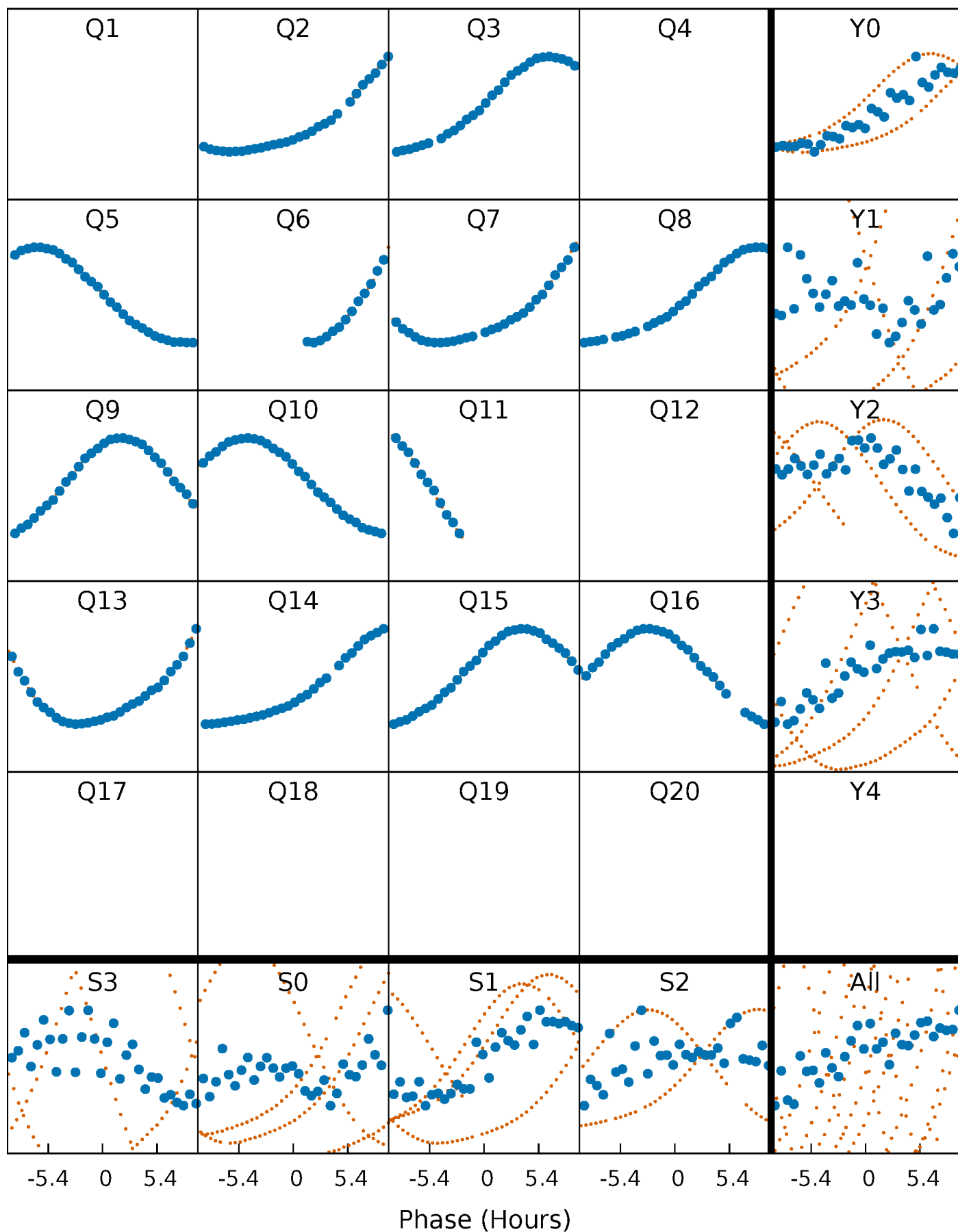


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



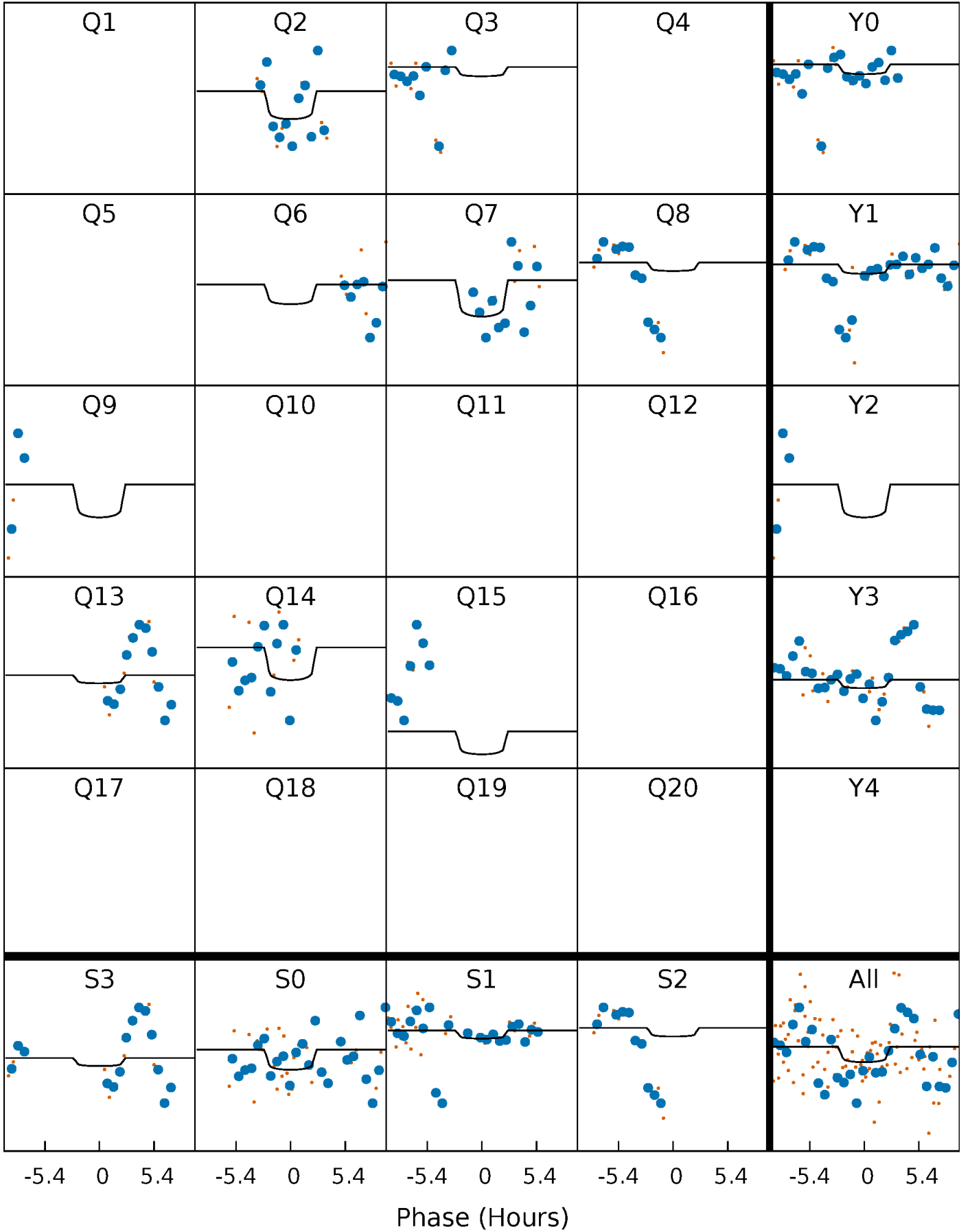
PDC Quarter-Phased Transit Curves

TCE 012207099-05 P= 99.849012 Days $T_0=199.776534$ (BKJD)



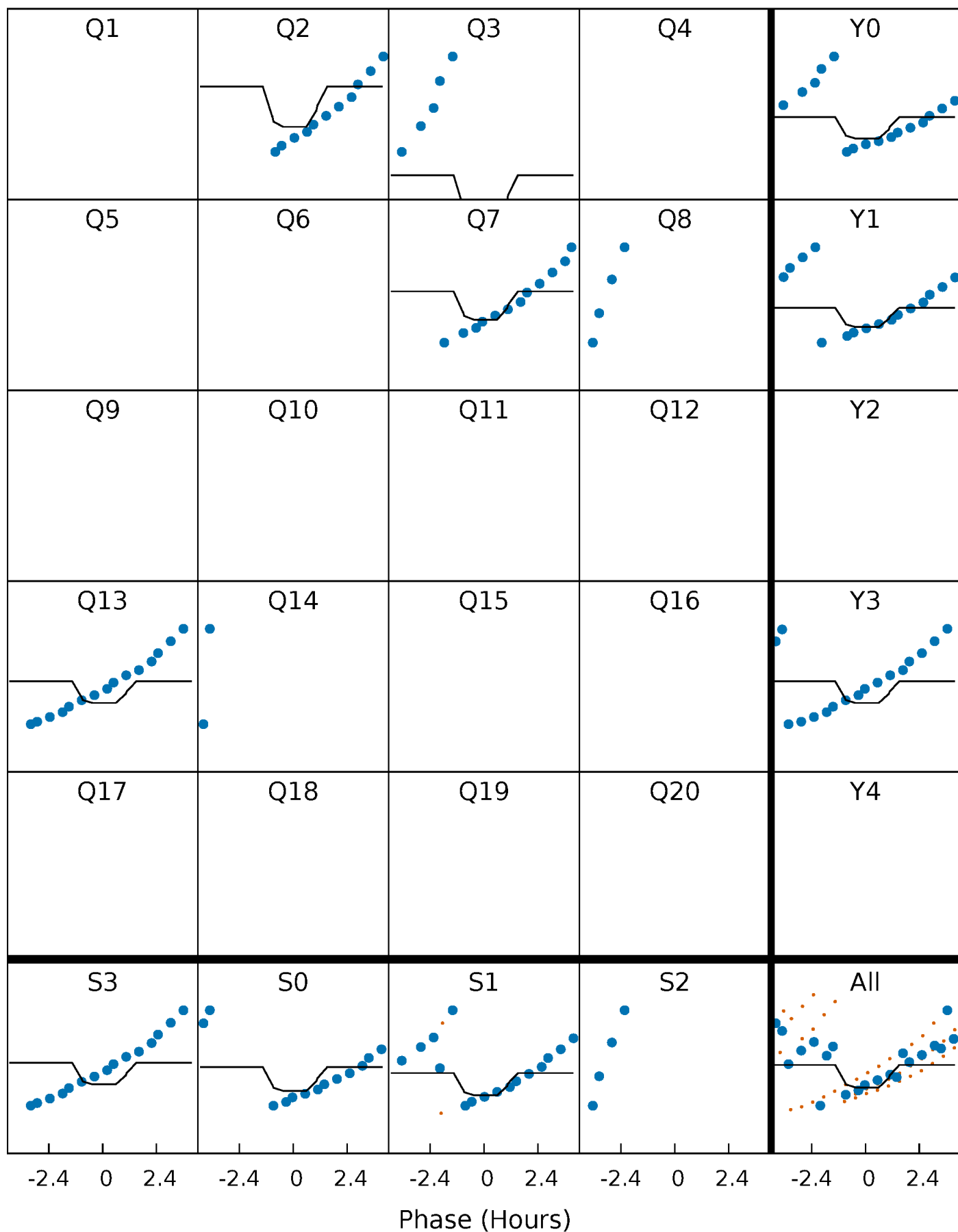
DV Quarter-Phased Transit Curves

TCE 012207099-05 $P = 99.849012$ Days $T_0 = 199.776534$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

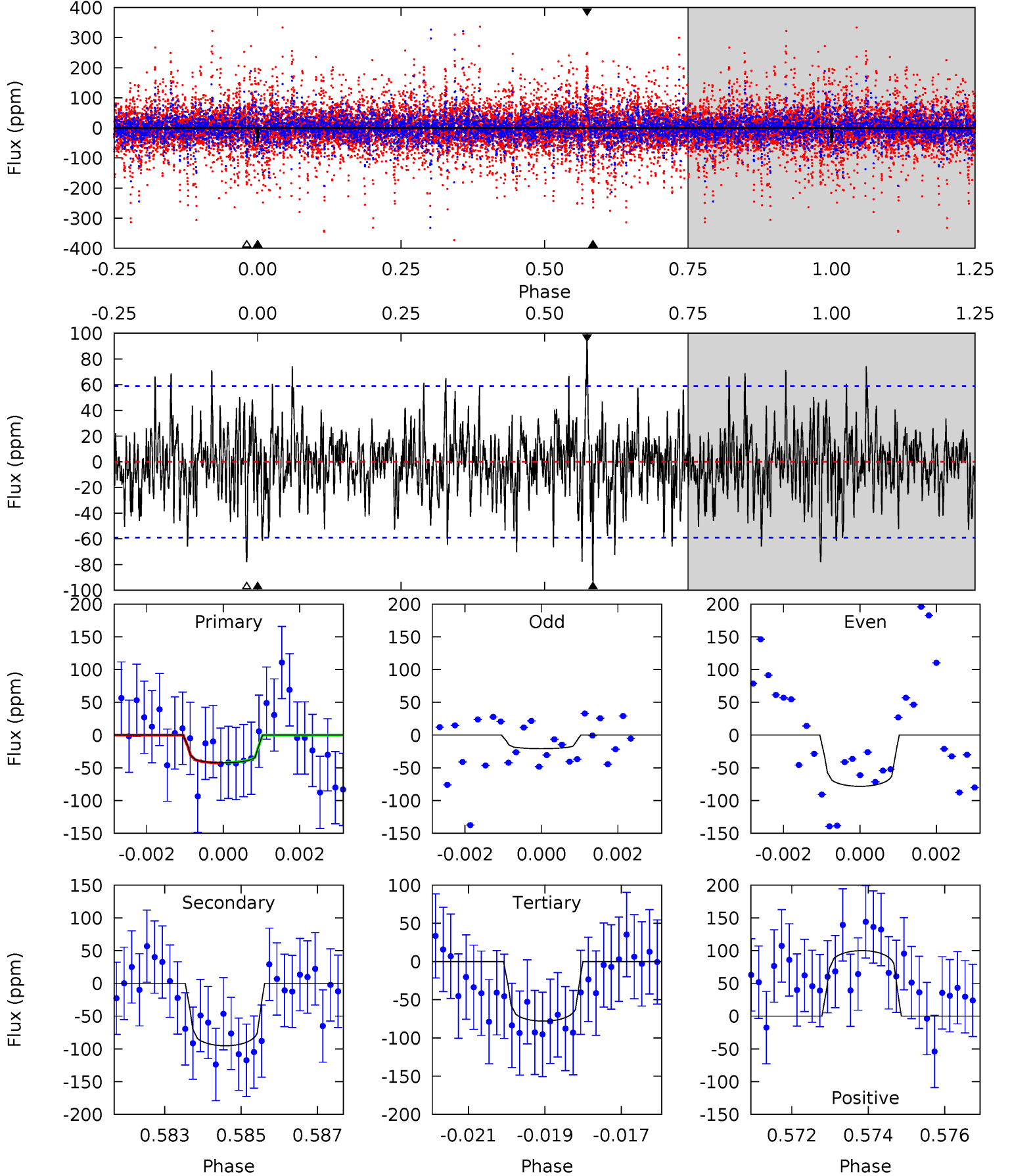
TCE 012207099-05 P= 99.874804 Days $T_0=199.678474$ (BKJD)



DV Model-Shift Uniqueness Test

012207099-05, P = 99.849012 Days, E = 99.927522 Days

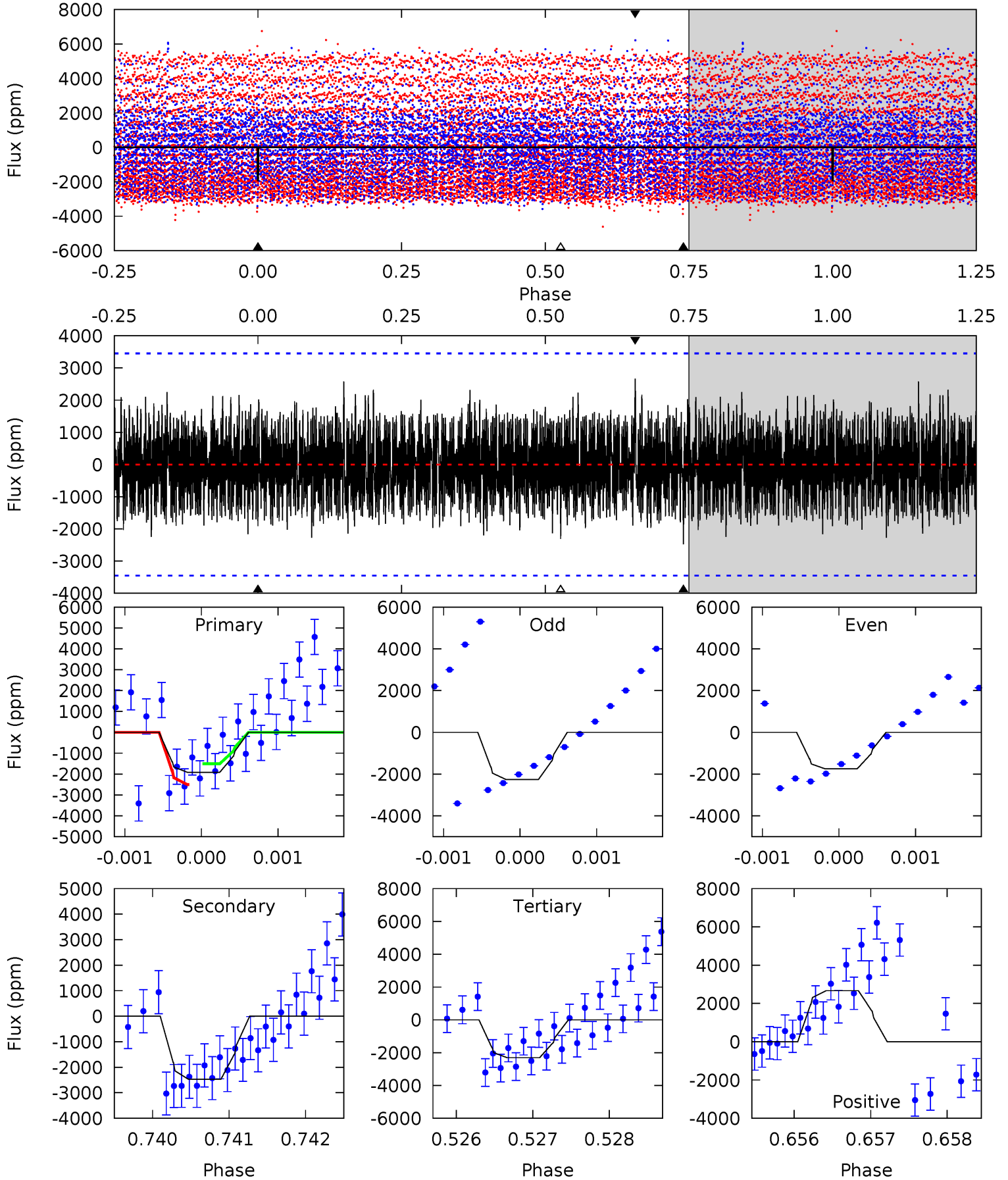
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.81	8.58	7.03	9.01	5.32	3.08	1.97	-3.22	-5.20	1.55	-0.44	2.19	3.00	0.51	0.04



Alt Model-Shift Uniqueness Test

012207099-05, P = 99.874804 Days, E = 99.803670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.02	3.90	3.64	4.21	5.45	3.28	1.45	-0.62	-1.18	0.26	-0.31	0.39	0.85	0.52	0.76



Stellar Parameters For KIC 012207099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10932^{+266}_{-457}	$4.056^{+0.252}_{-0.189}$	$0.070^{+0.050}_{-0.600}$	$2.615^{+0.733}_{-0.895}$	$2.838^{+0.289}_{-0.674}$	$0.224^{+0.370}_{-0.106}$
	+2%/-4%	+6%/-5%	+71%/-857%	+28%/-34%	+10%/-24%	+165%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 012207099-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-95 ± 11	$2.51^{+2.46}_{-1.76}$	1401^{+116}_{-125}	11364^{+32821}_{-4154}	2987^{+28630}_{-2267}
Alt.	-2470 ± 634	$11.94^{+3.91}_{-3.54}$	1407^{+122}_{-121}	12305^{+3733}_{-2294}	3258^{+3480}_{-1441}

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 $A_{obs} \gg 1.0$

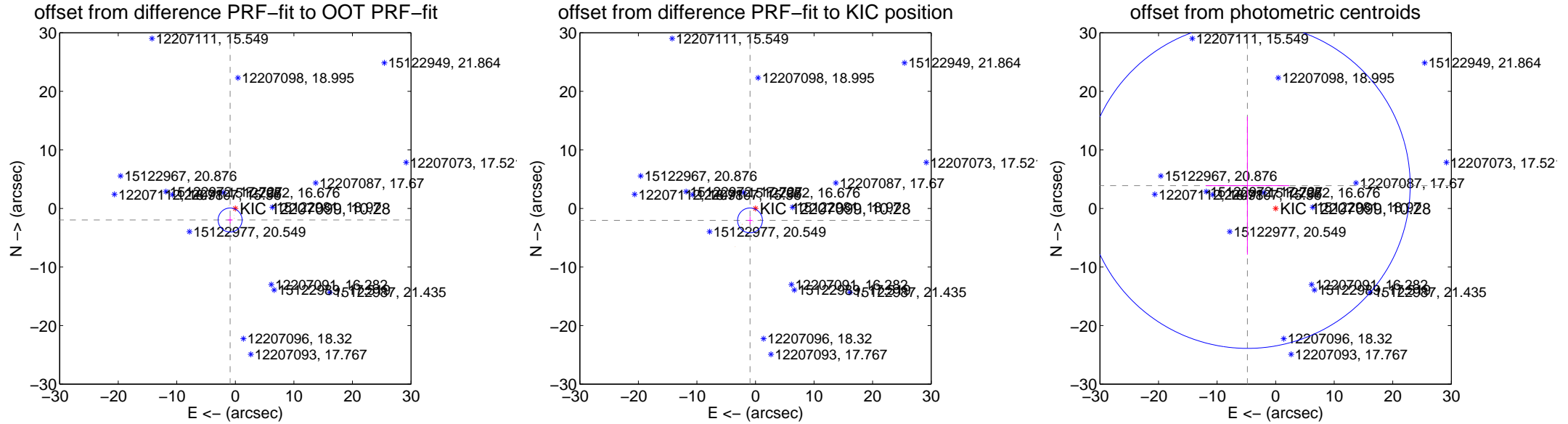
DV Centroid Data

Supplemental centroid analysis for 012207099-05. **Kepler magnitude: 10.28.** Transit SNR 4.92

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.165 \pm 0.683	3.17	0.892 \pm 0.432	-1.973 \pm 0.587
PRF-fit source offset from KIC position	2.248 \pm 0.707	3.18	0.937 \pm 0.436	-2.043 \pm 0.630
photometric centroid source offset	6.20 \pm 9.26	0.67	4.82 \pm 7.15	3.90 \pm 11.78



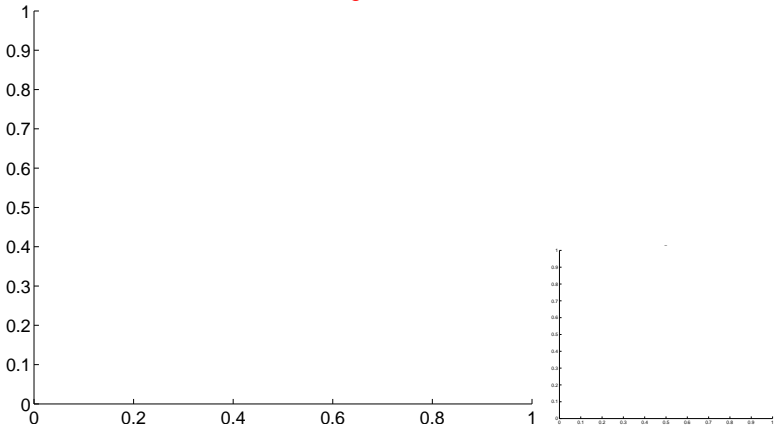
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

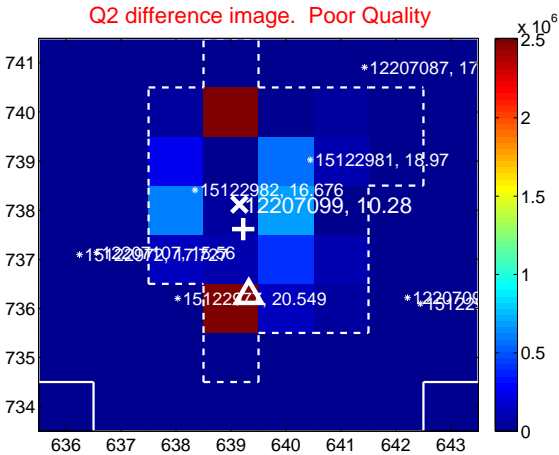
Q1 no difference image



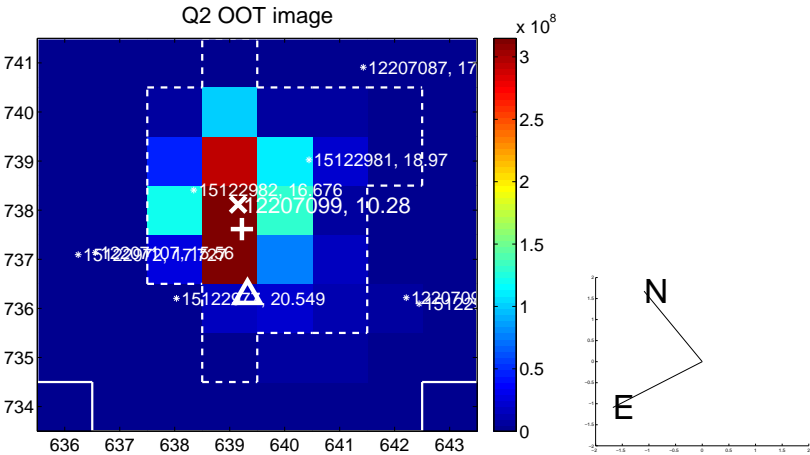
Q1 no OOT image



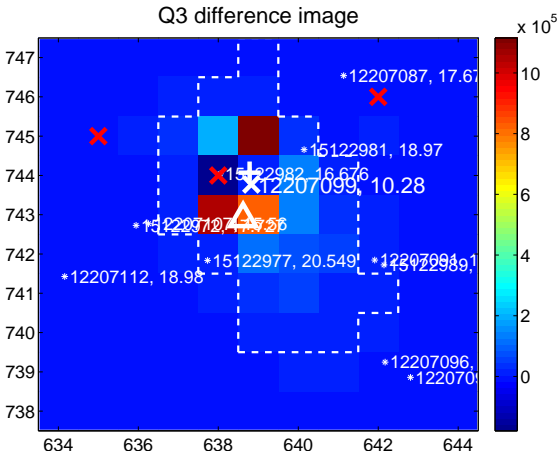
Q2 difference image. Poor Quality



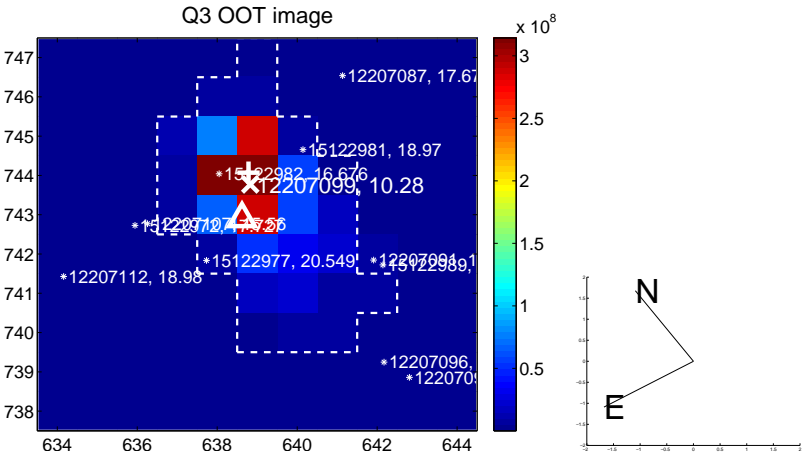
Q2 OOT image



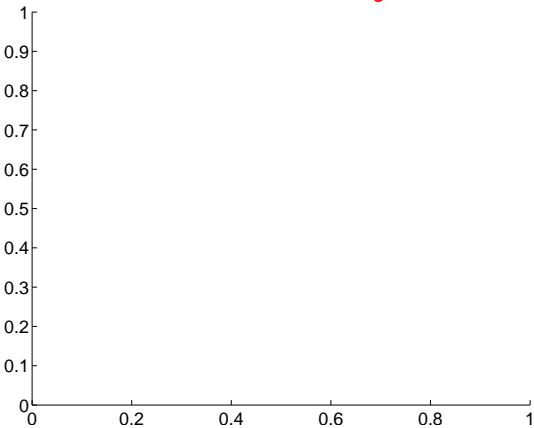
Q3 difference image



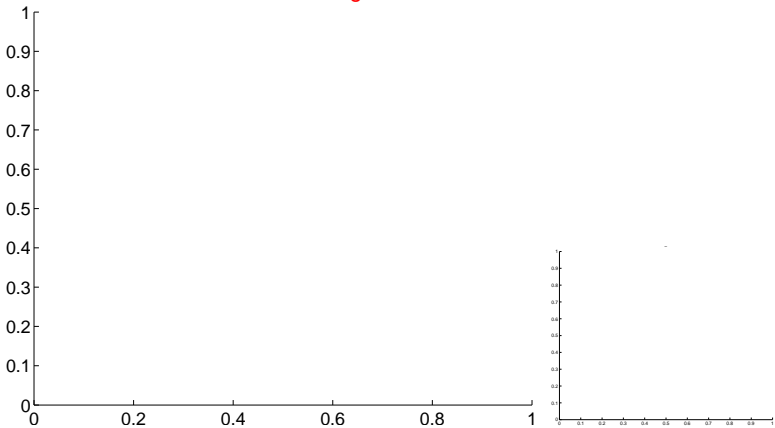
Q3 OOT image



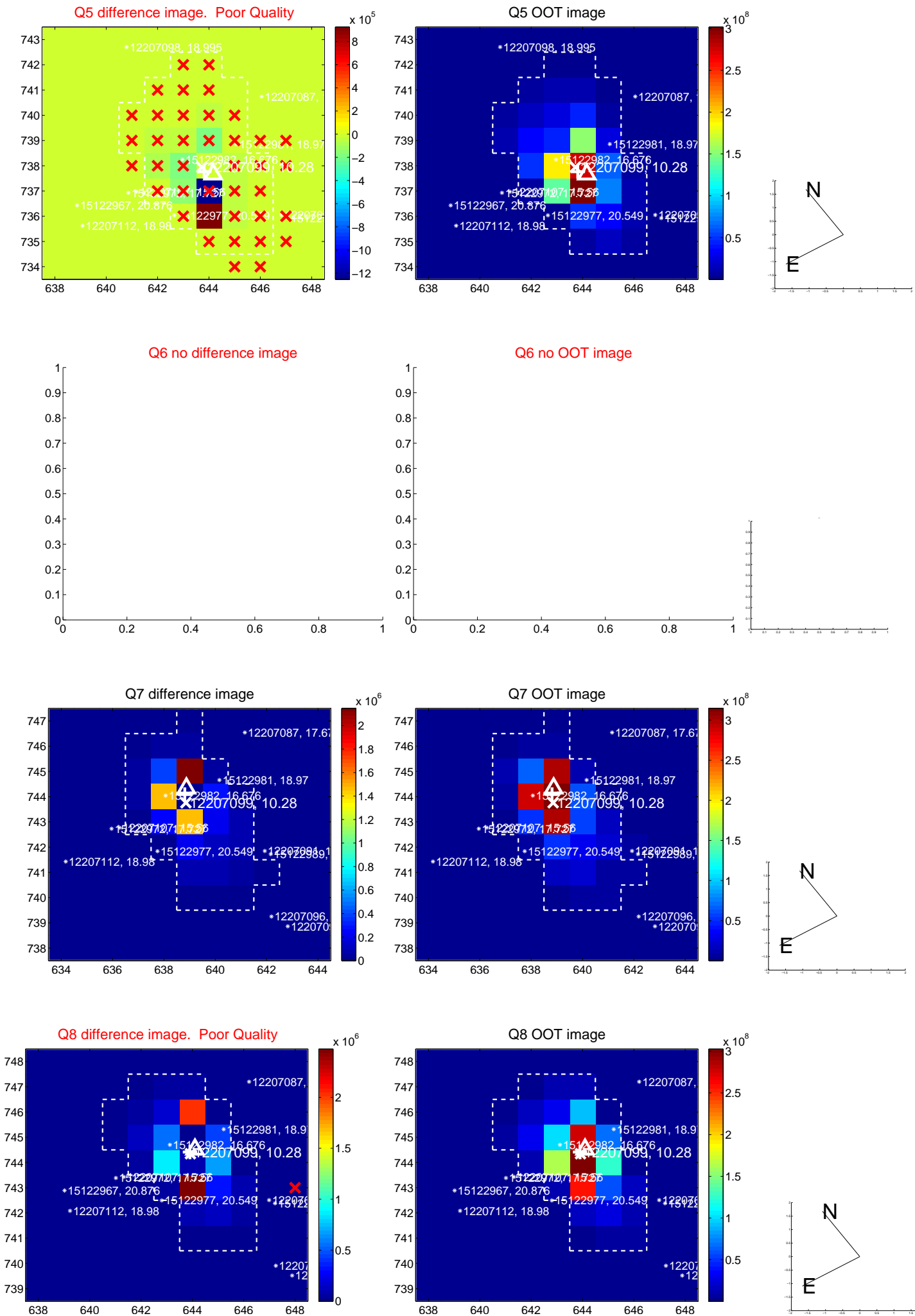
Q4 no difference image



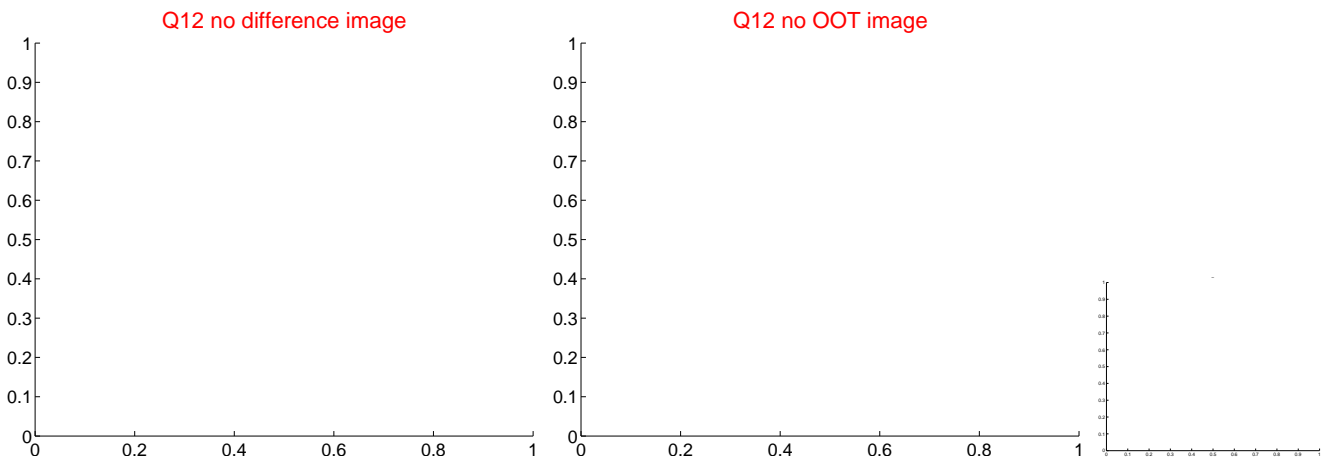
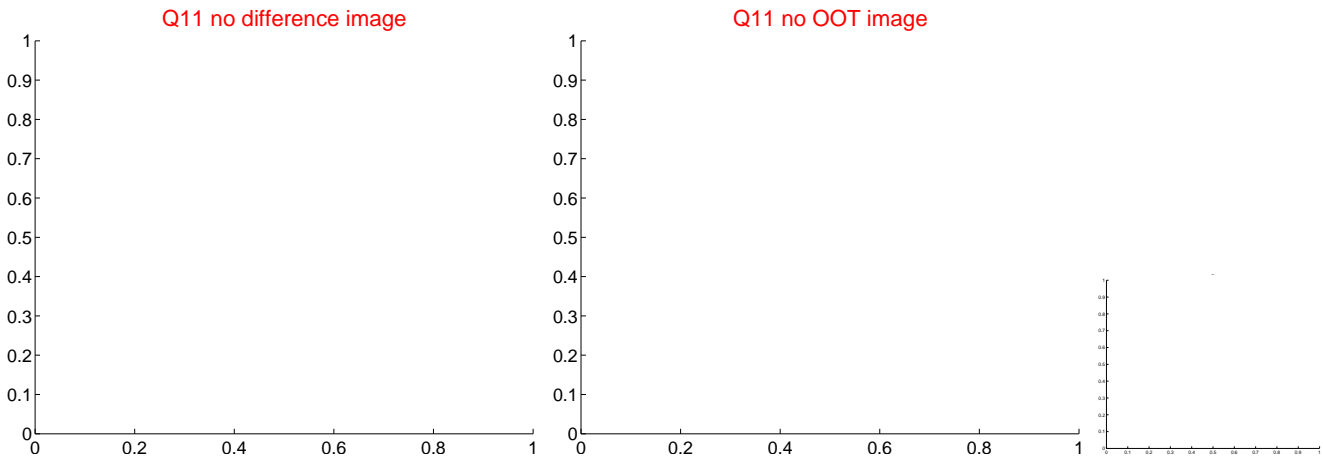
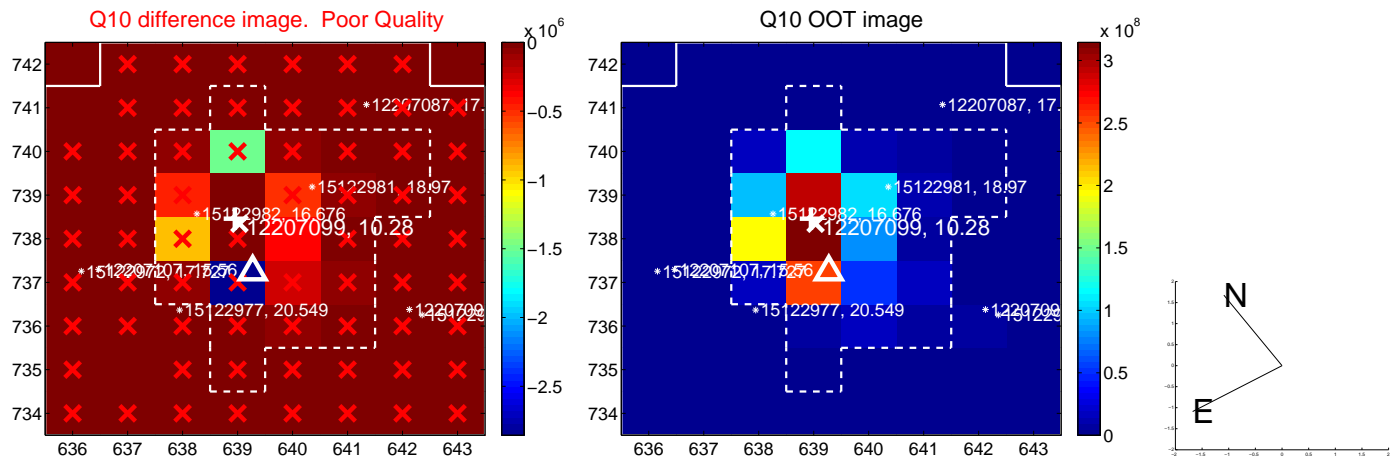
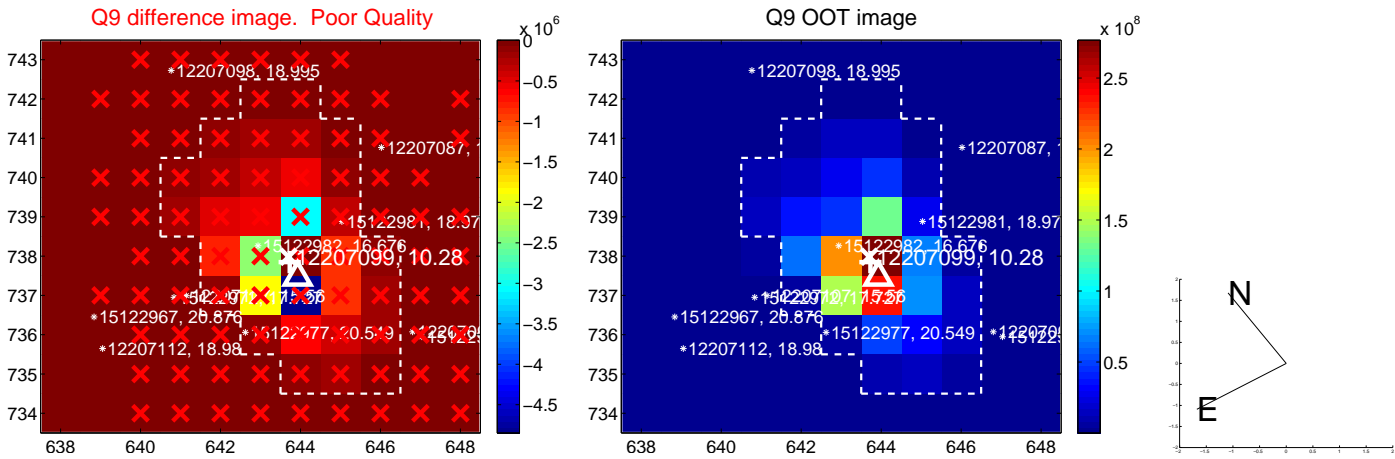
Q4 no OOT image



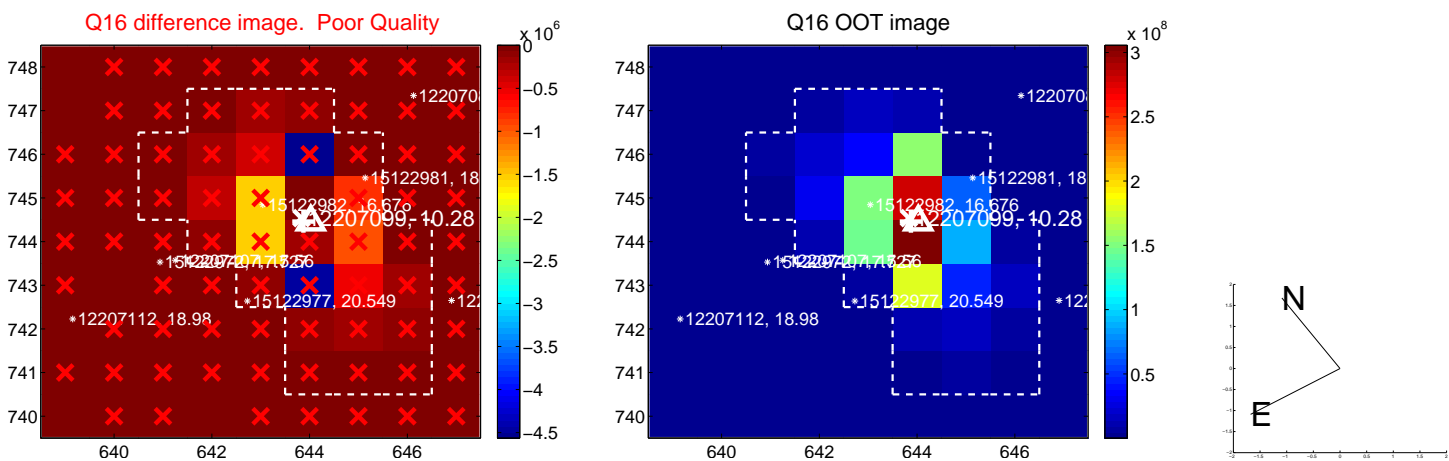
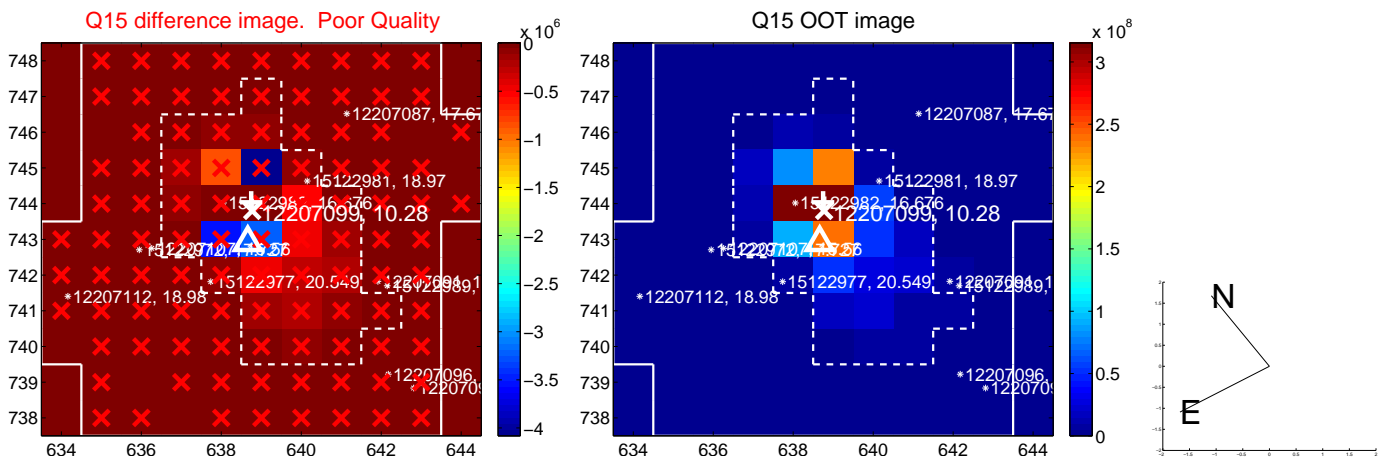
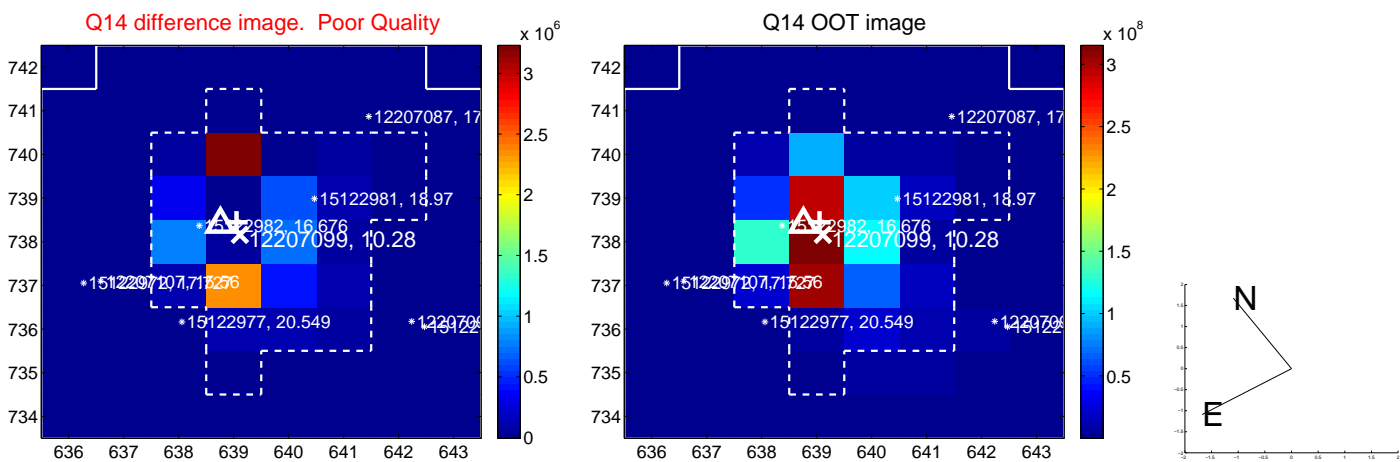
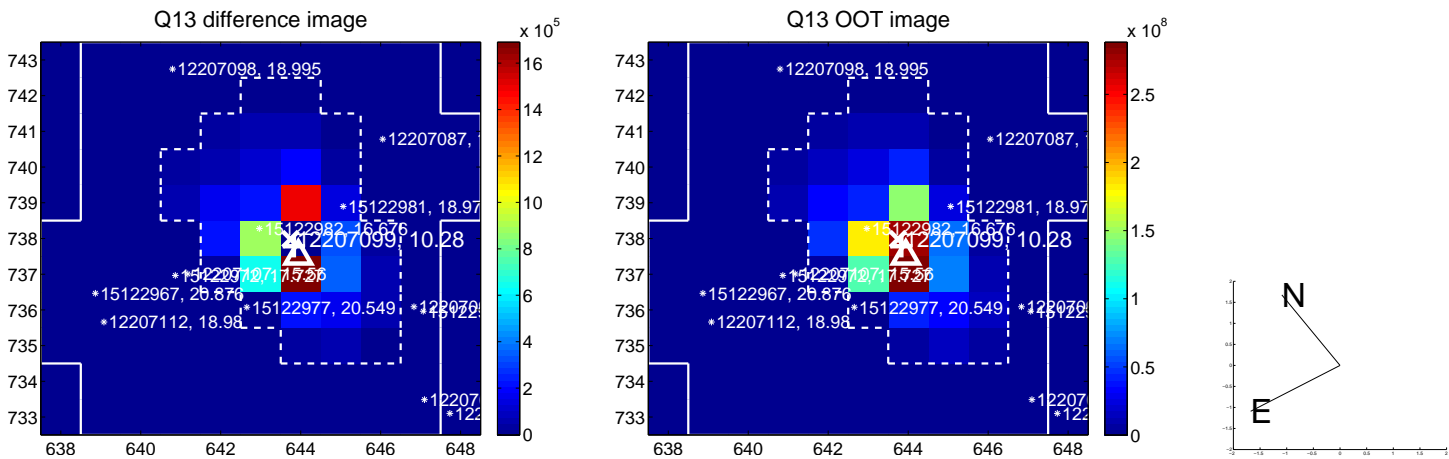
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



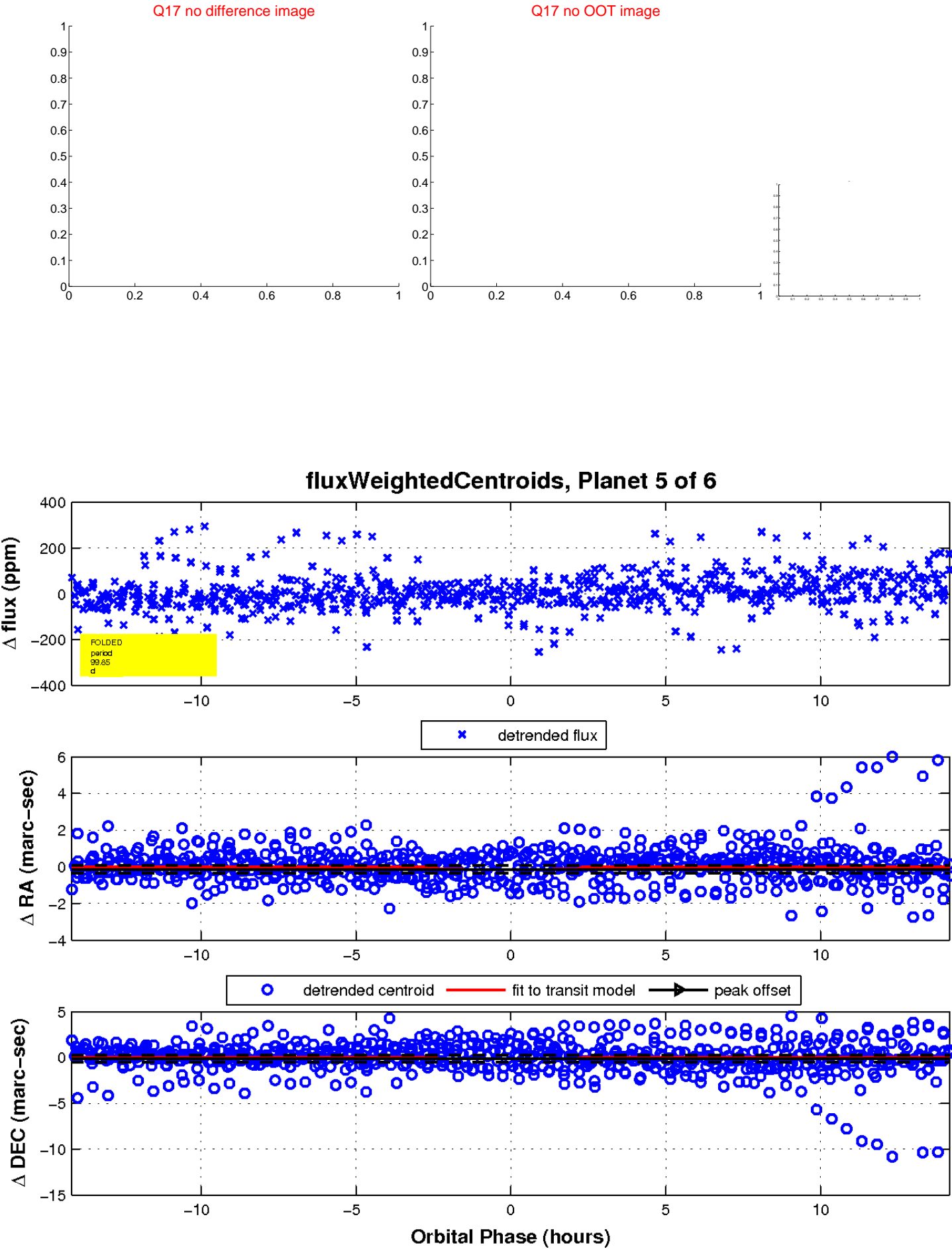
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

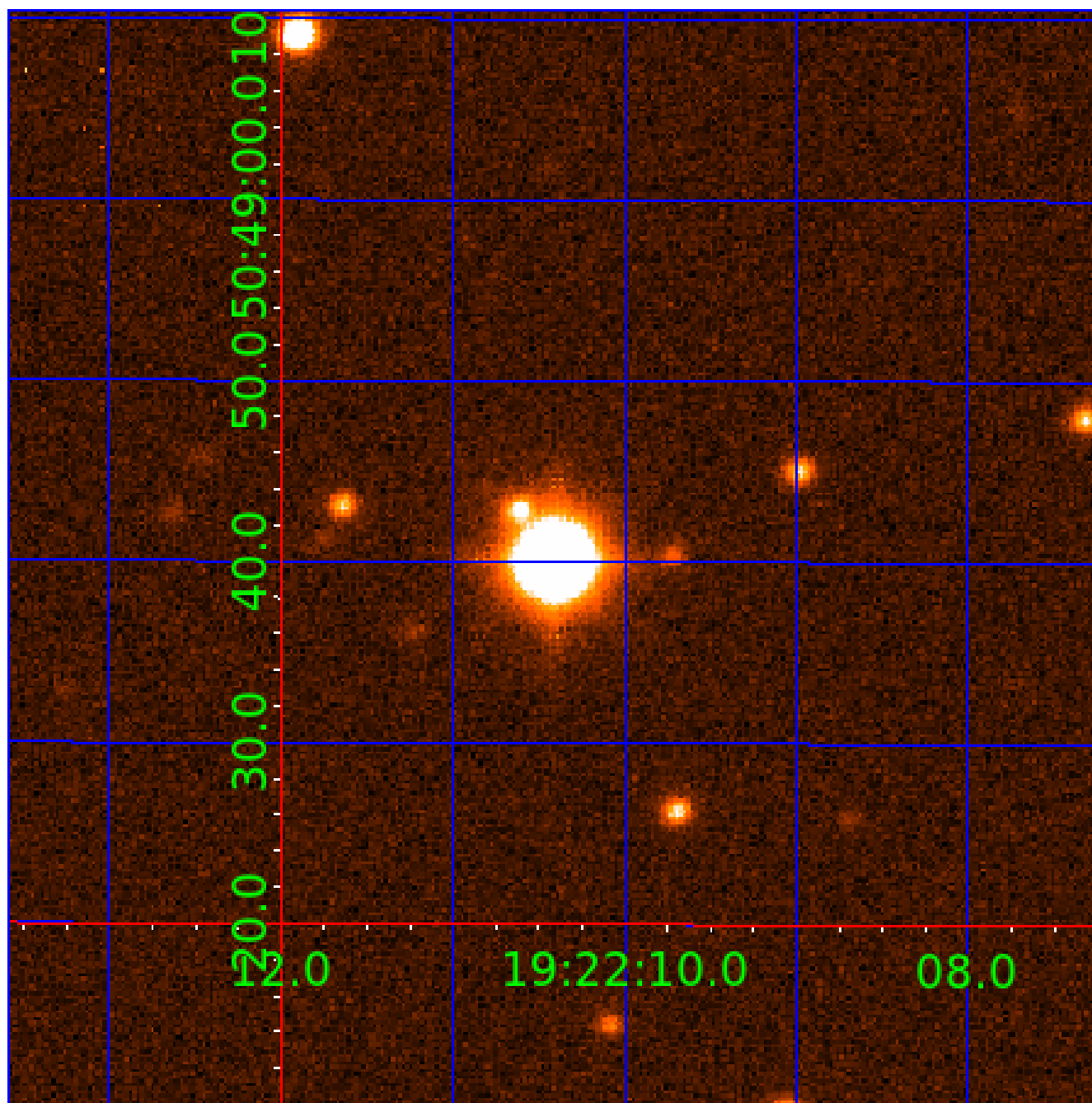


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012207099

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})
012207099-01	OBS	No	1.422535	132.207758	9.1	1.006	22.6	8.6	2.62	10932	0.90	71218.02
012207099-02	OBS	No	1.422580	132.211387	10.5	8.775	16.0	11.4	2.62	10932	0.91	71215.05
012207099-03	OBS	No	125.040888	140.018489	157.2	4.575	21.8	12.7	2.62	10932	3.50	182.22
012207099-04	OBS	No	134.942397	238.786690	111.9	8.223	20.6	9.6	2.62	10932	2.88	164.62
012207099-05	OBS	No	99.849012	199.776534	31.1	4.728	15.5	4.9	2.62	10932	1.51	245.97
012207099-06	OBS	No	81.537009	141.359954	142.7	2.500	13.7	-1.0	2.62	10932	3.22	322.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012207099-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
012207099-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
012207099-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
012207099-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

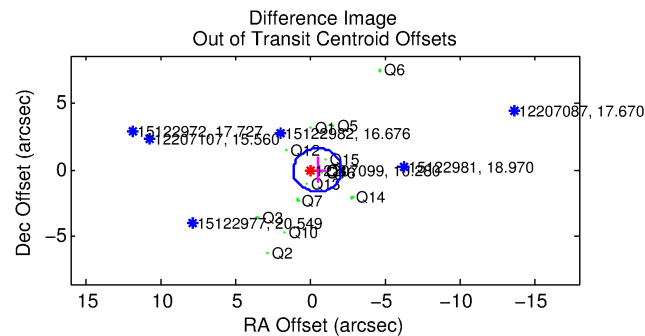
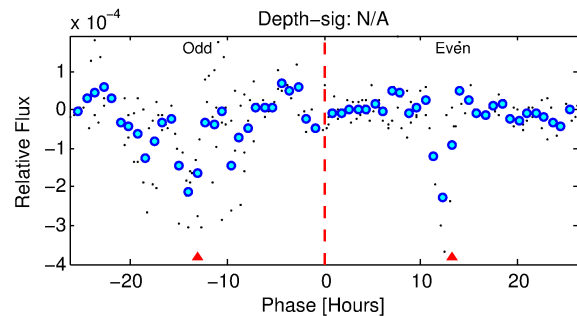
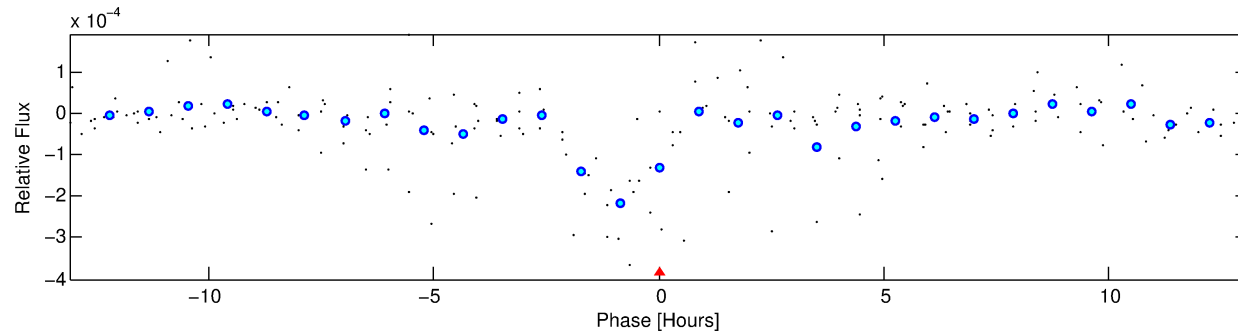
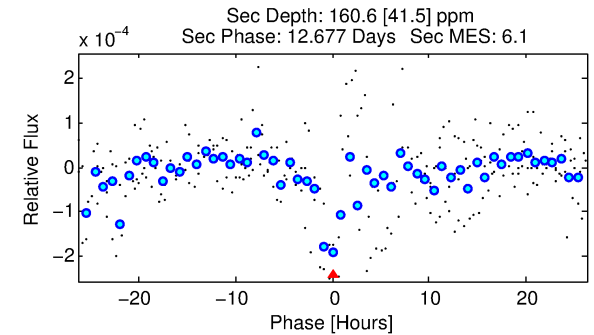
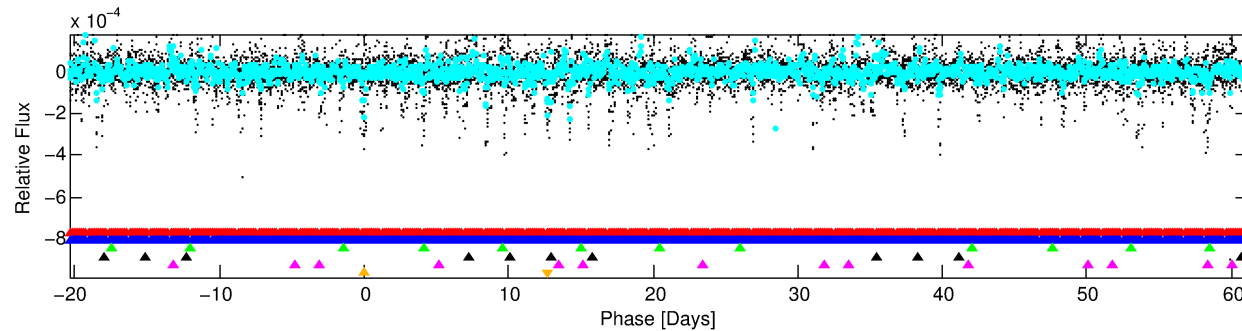
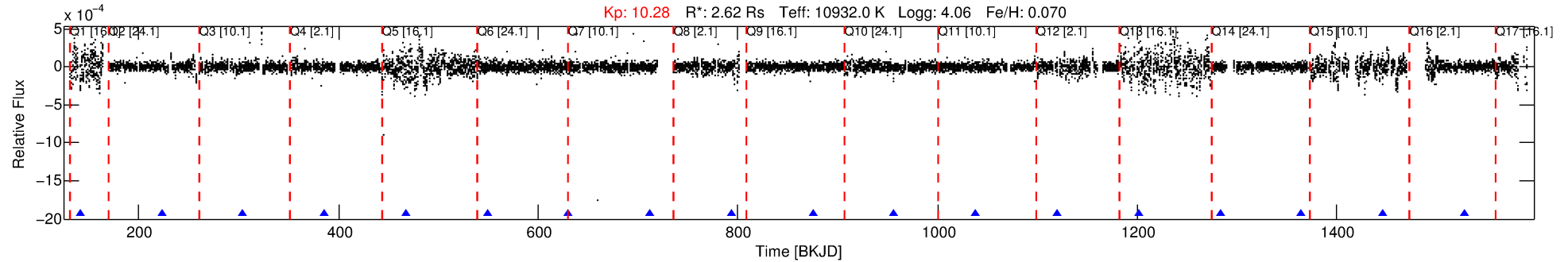
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012207099-06

No Significant Match Found

DV One-Page Summary

KIC: 12207099 Candidate: 6 of 6 Period: 81.537 d



TPS TCE Results:

Period = 81.53701 d
Epoch = 141.3600 BKJD

DV fit results are unavailable

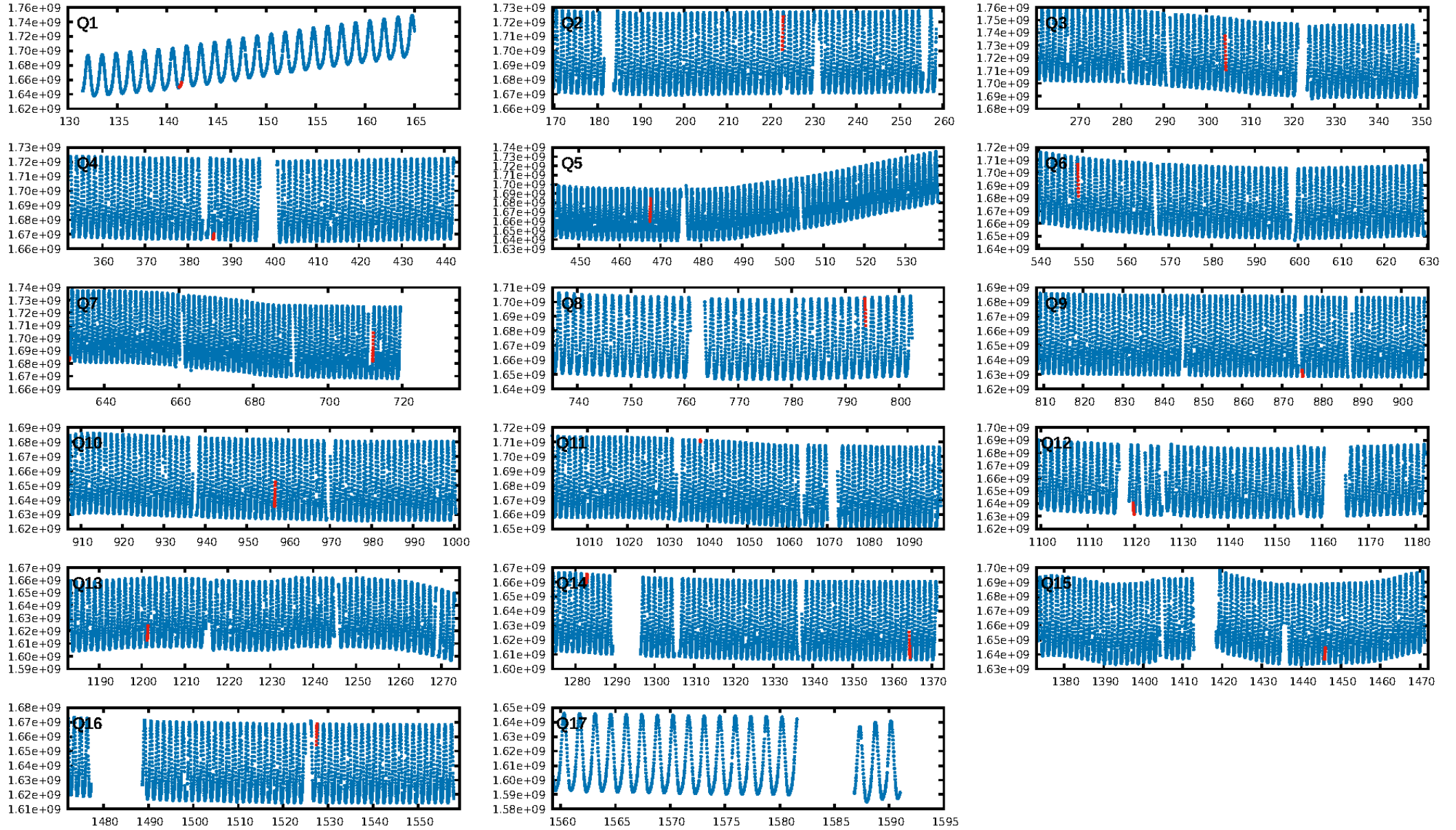
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [210.73 σ]
LongPeriod-sig: 100.0% [82.18 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: 93.8%
Centroid-so: 0.348 arcsec [0.82 σ]
OotOffset-rm: 0.512 arcsec [0.95 σ]
KicOffset-rm: 0.137 arcsec [0.21 σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 0.21 [3/14]

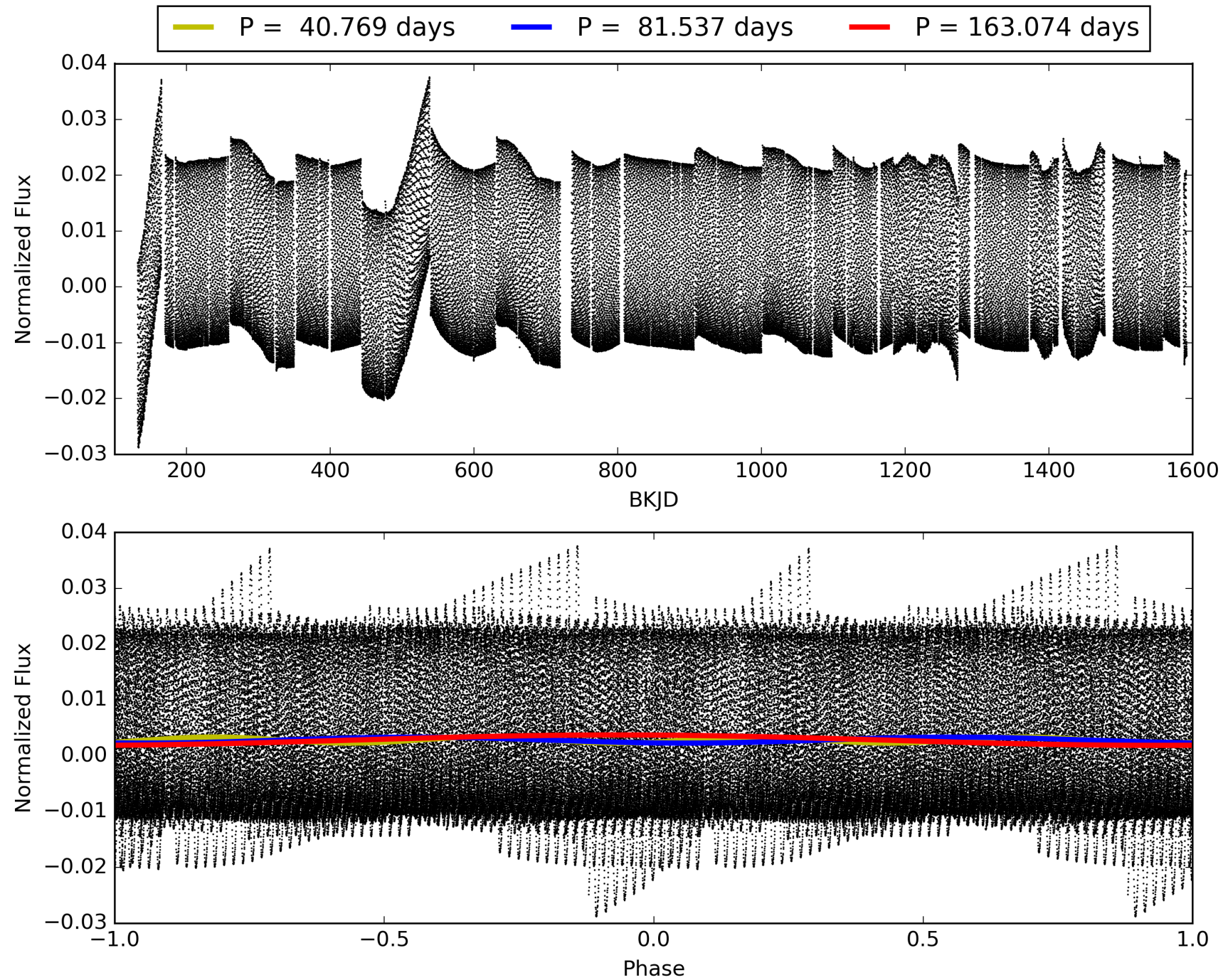
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:52:35 Z

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

TCE 012207099-06, PDC Light Curves

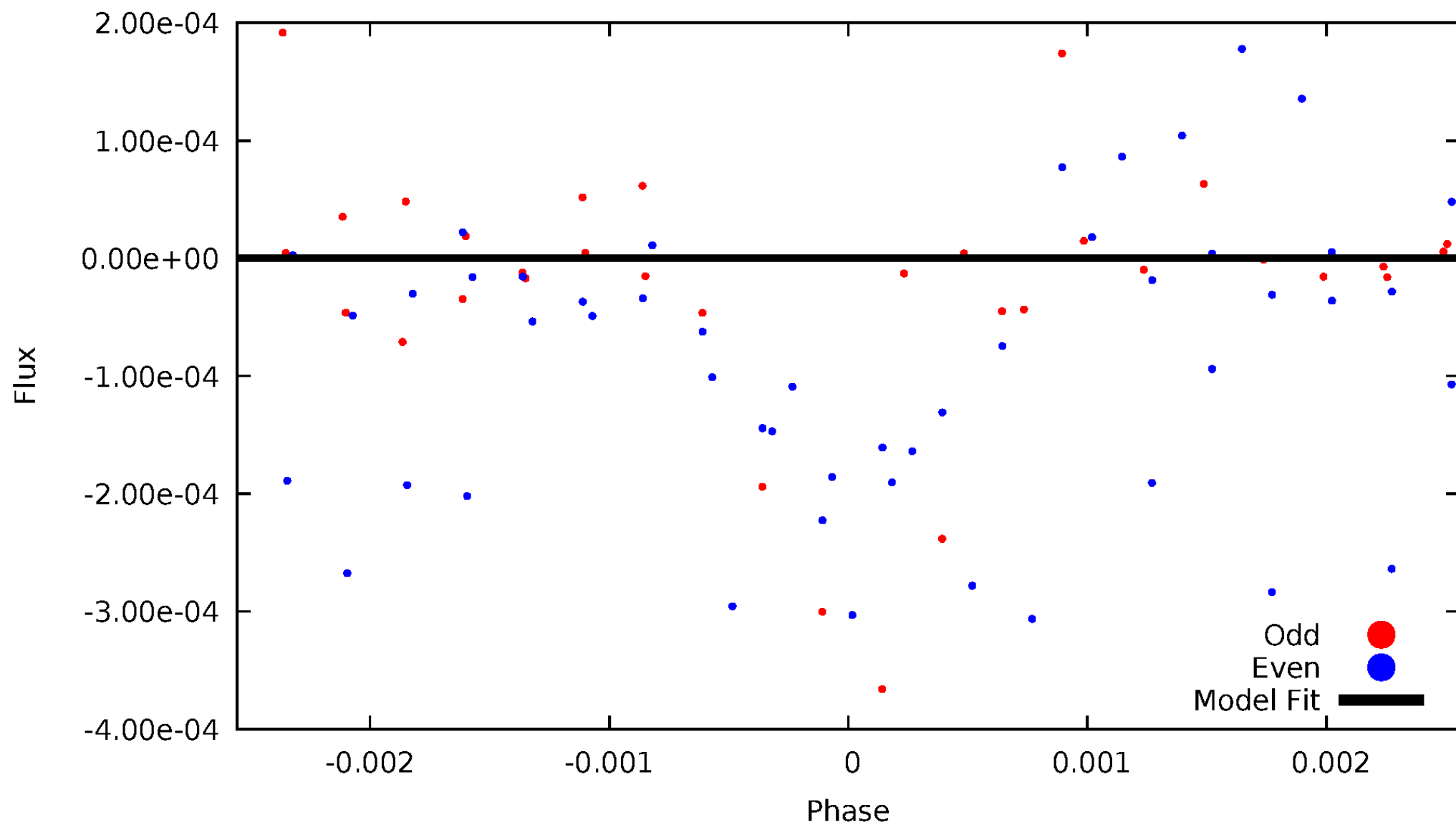


TCE 012207099-06



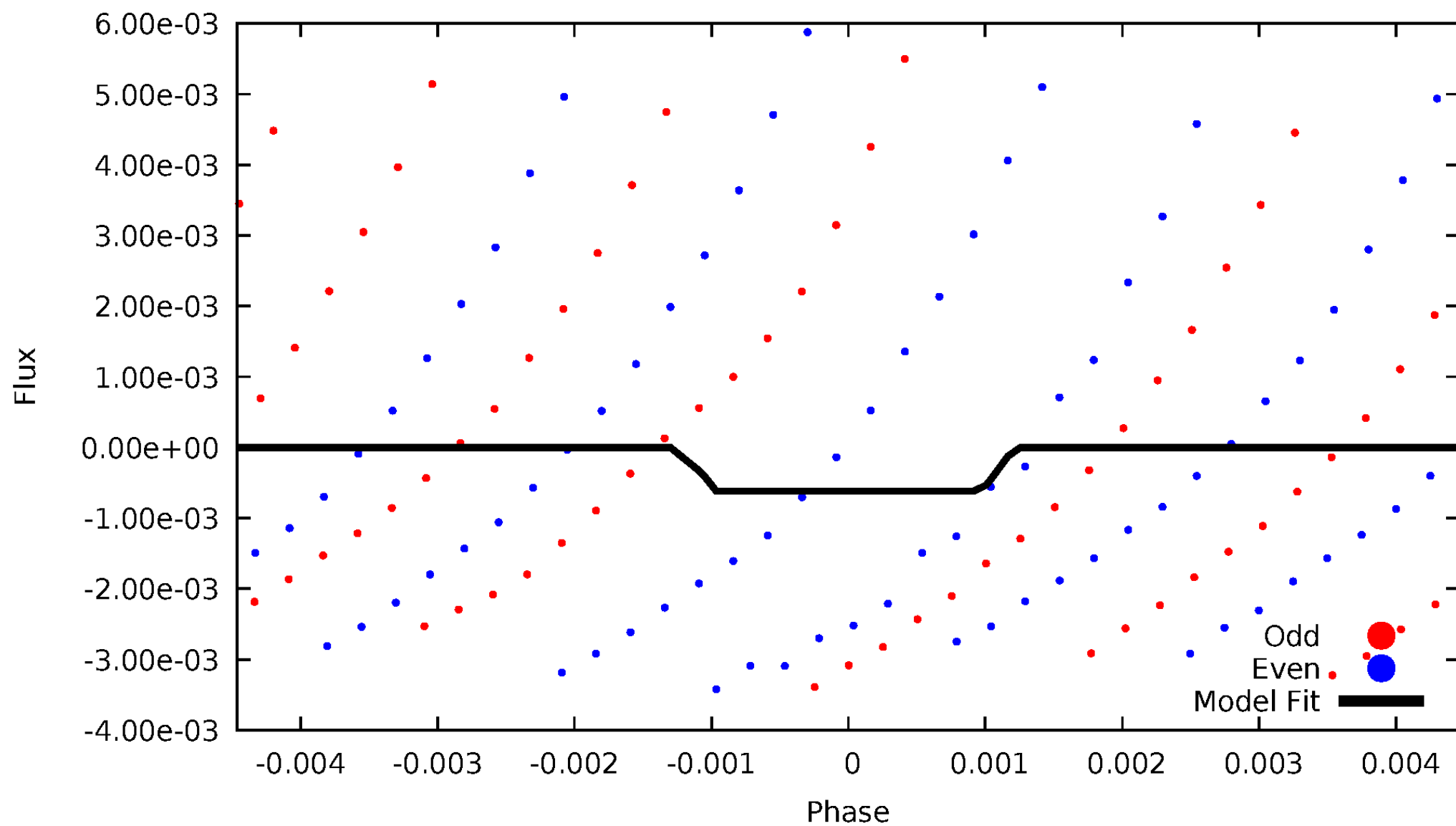
DV Odd/Even

TCE 012207099-06



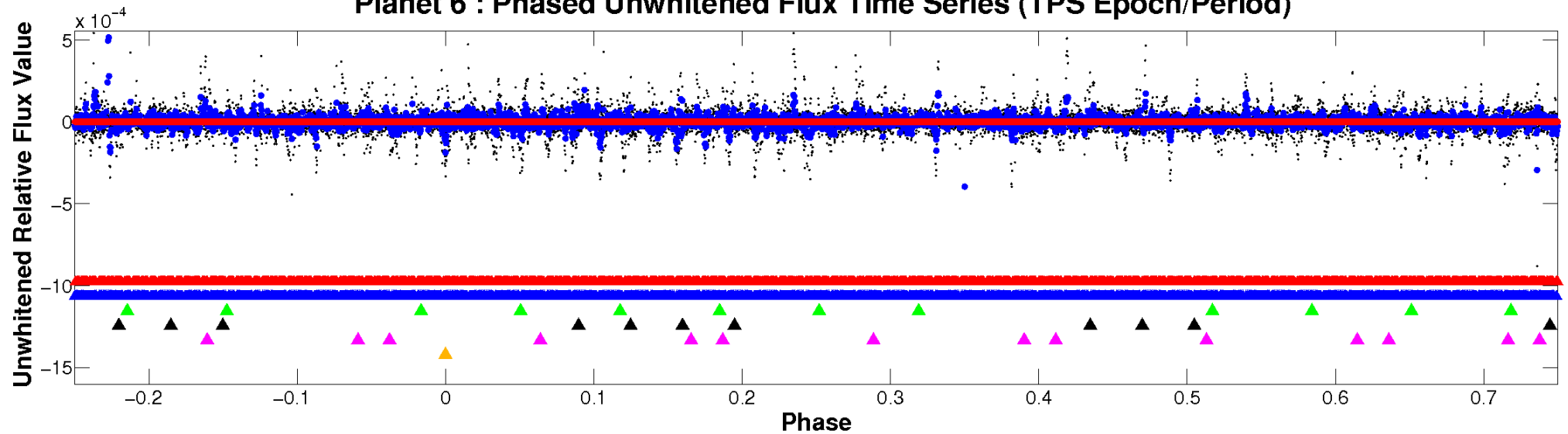
ALT Odd/Even

TCE 012207099-06

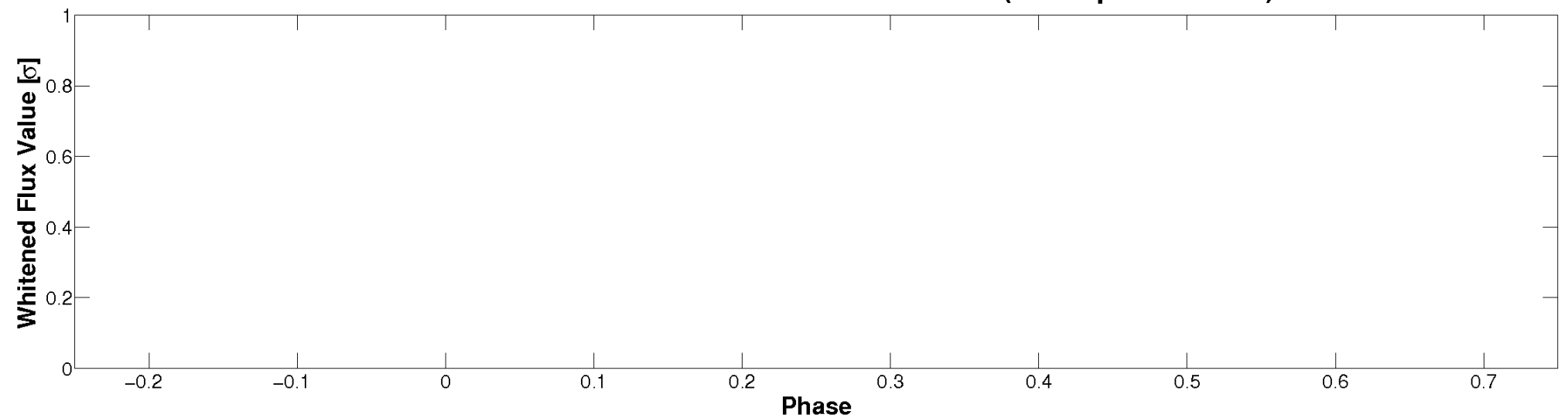


Non-Whitened Vs. Whitened Light Curve

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

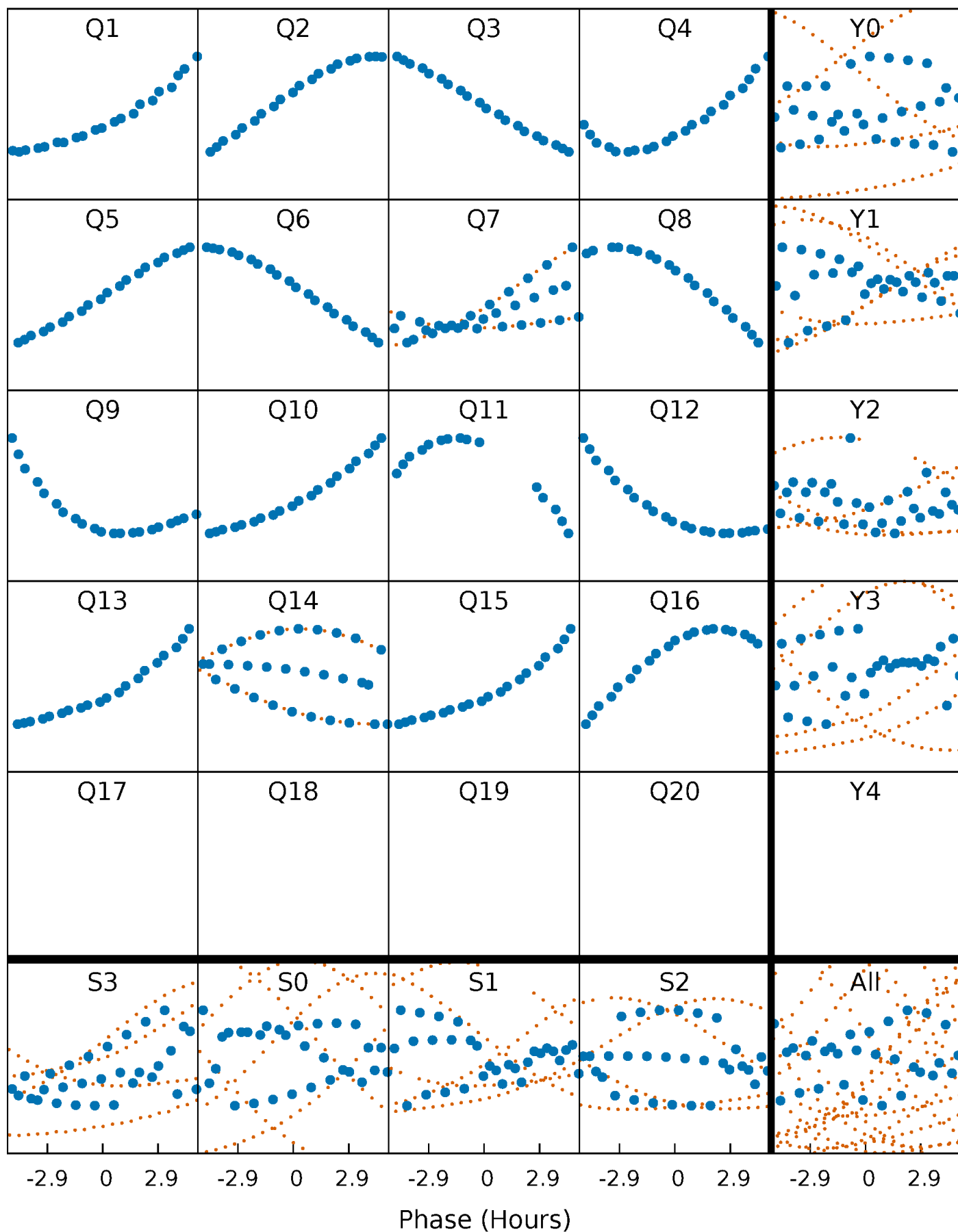


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



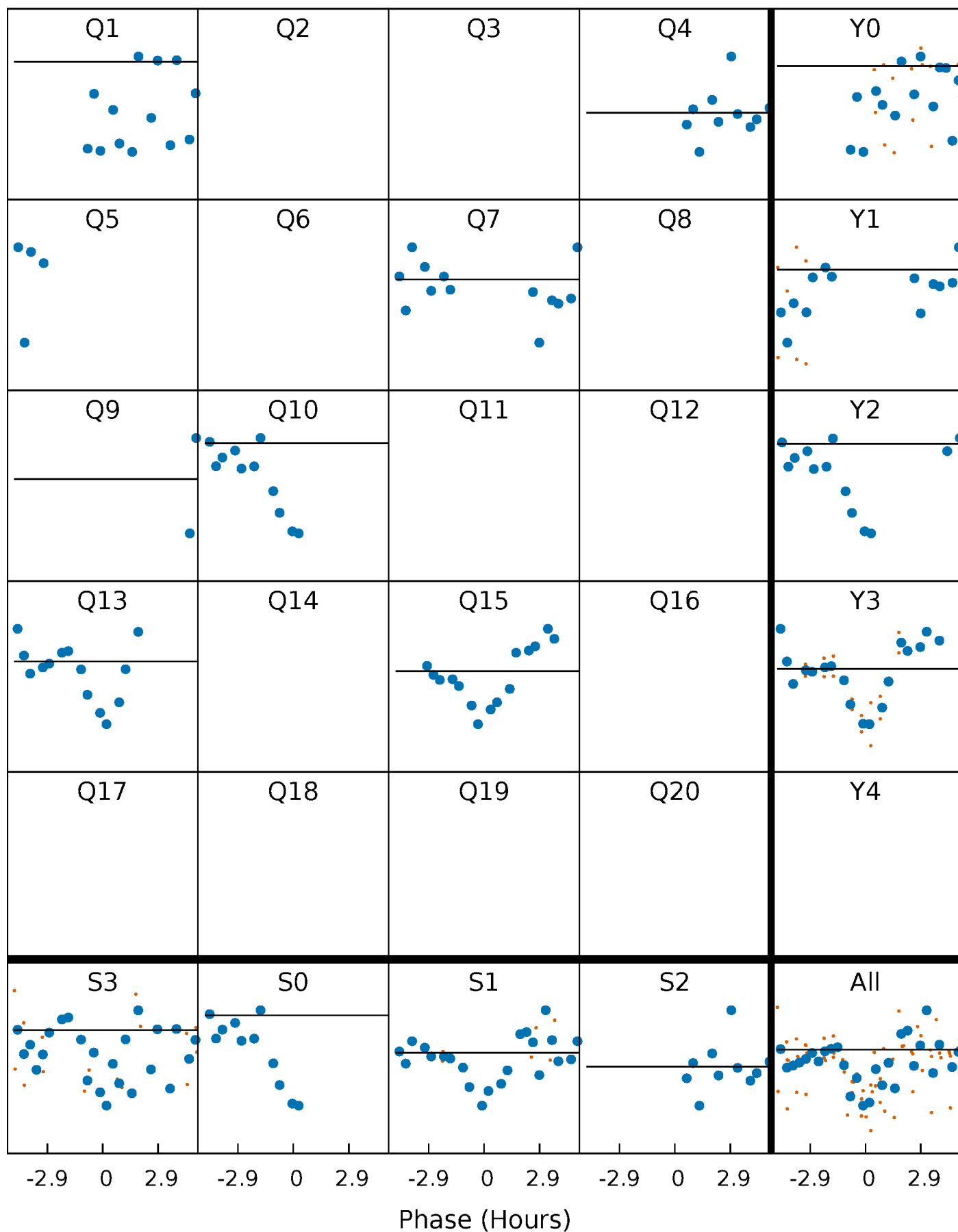
PDC Quarter-Phased Transit Curves

TCE 012207099-06 P= 81.537009 Days $T_0=141.359954$ (BKJD)



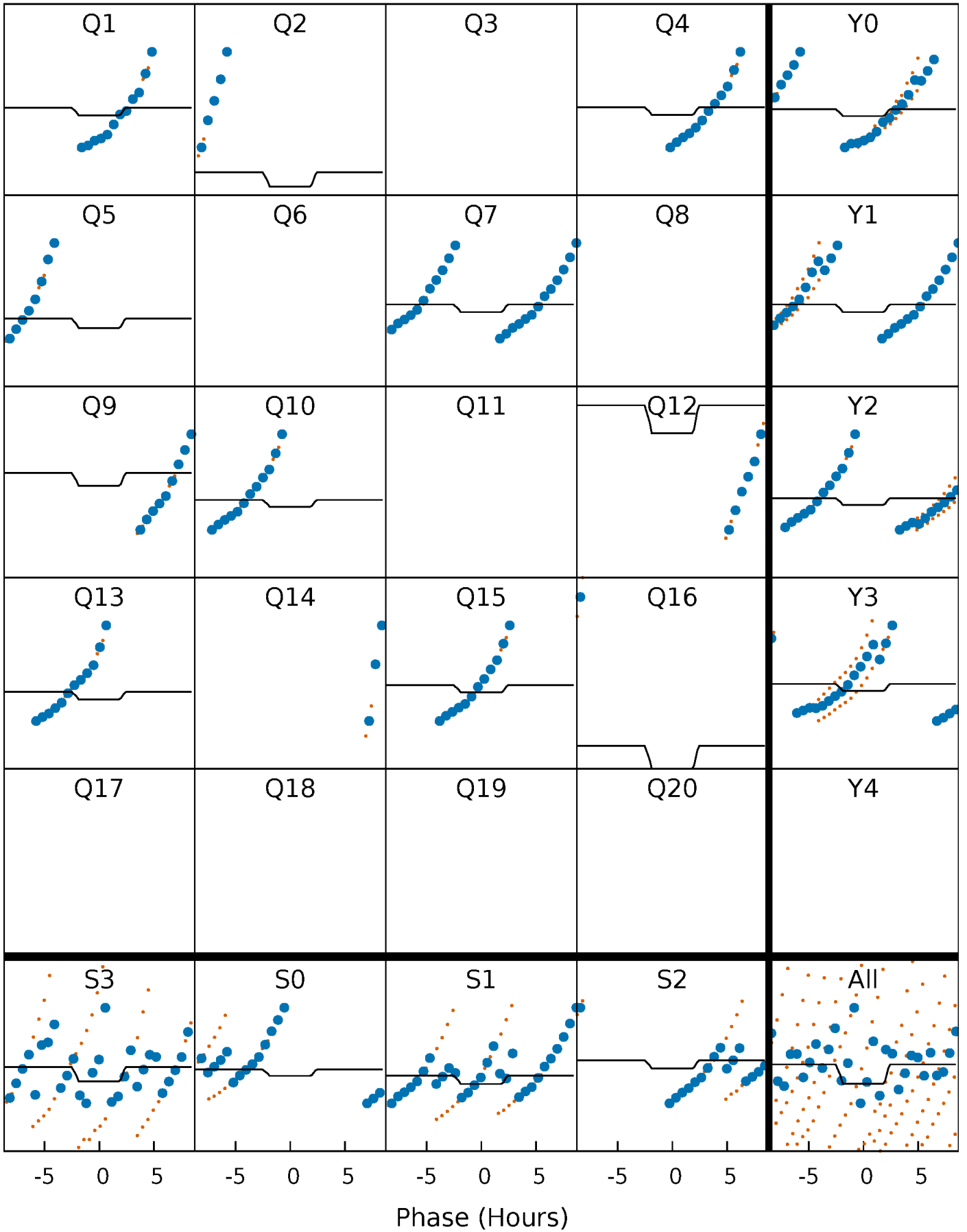
DV Quarter-Phased Transit Curves

TCE 012207099-06 P= 81.537009 Days $T_0=141.359954$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

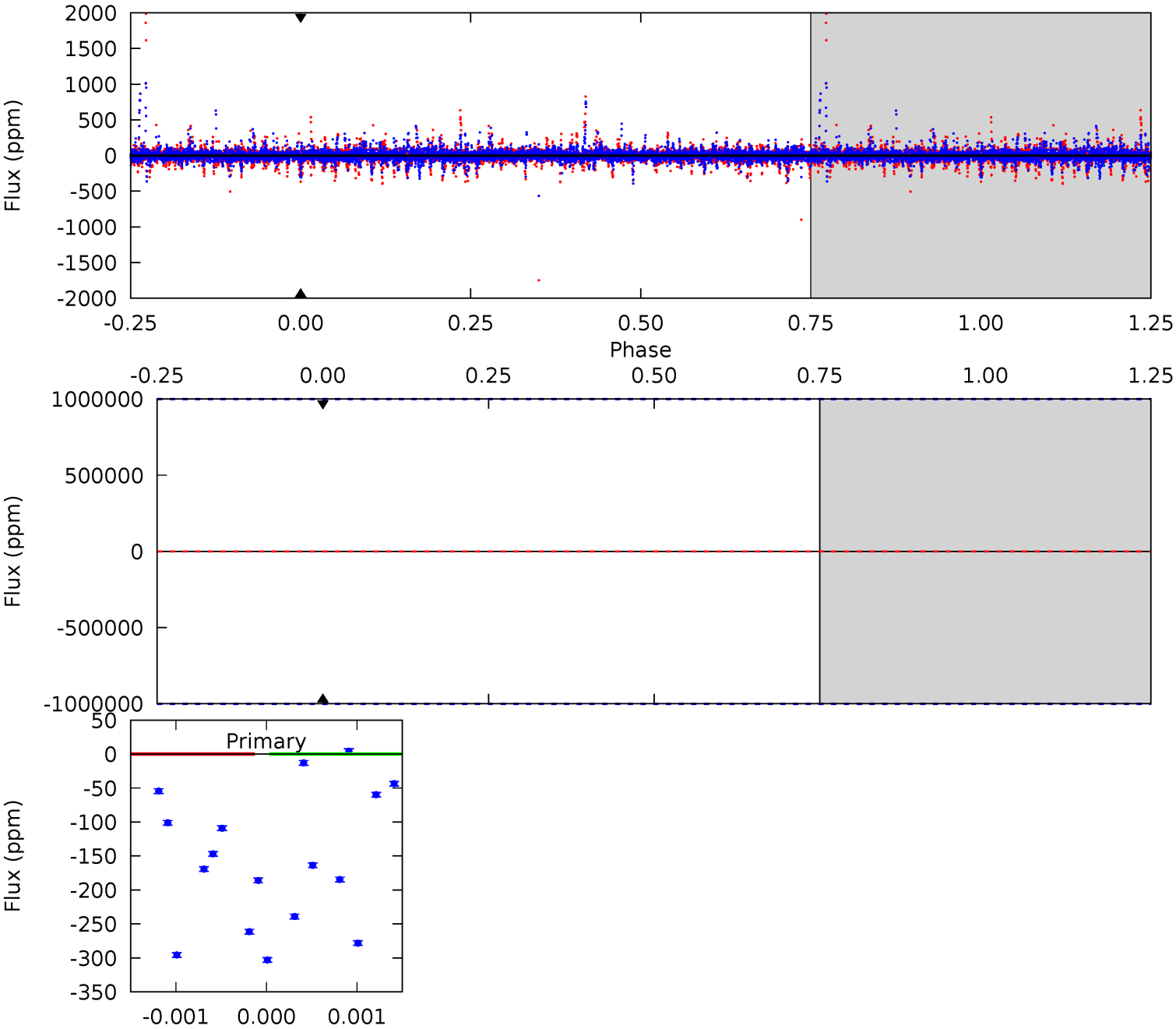
TCE 012207099-06 P= 81.537009 Days $T_0=141.399111$ (BKJD)



DV Model-Shift Uniqueness Test

012207099-06, P = 81.537009 Days, E = 59.822945 Days

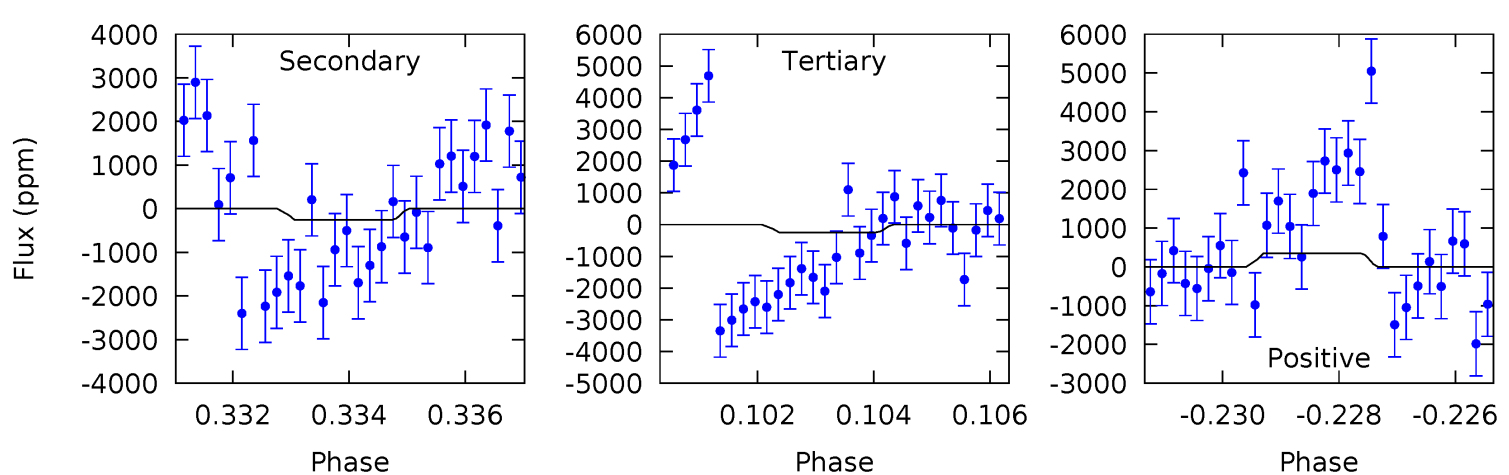
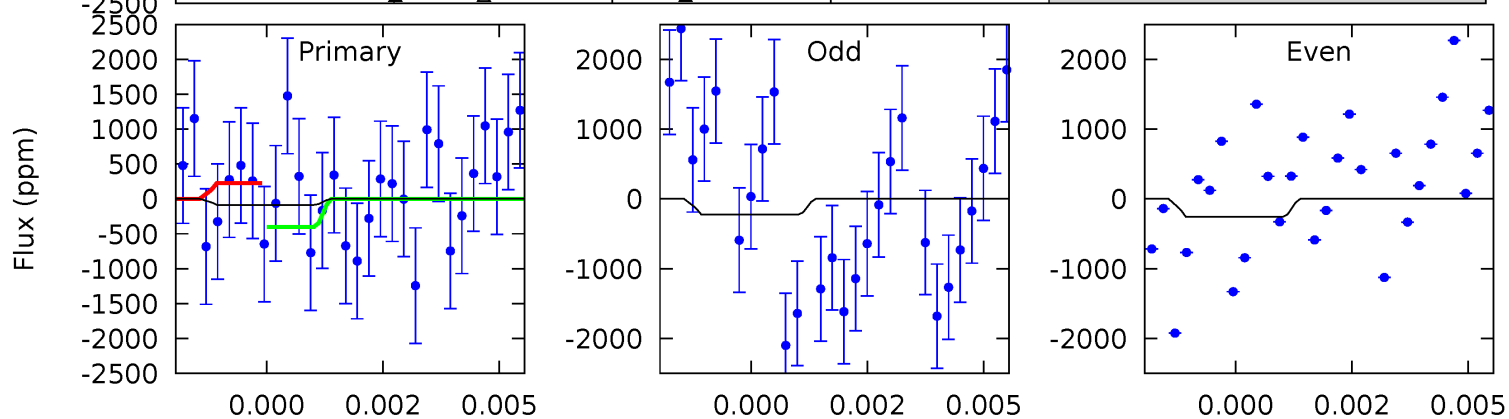
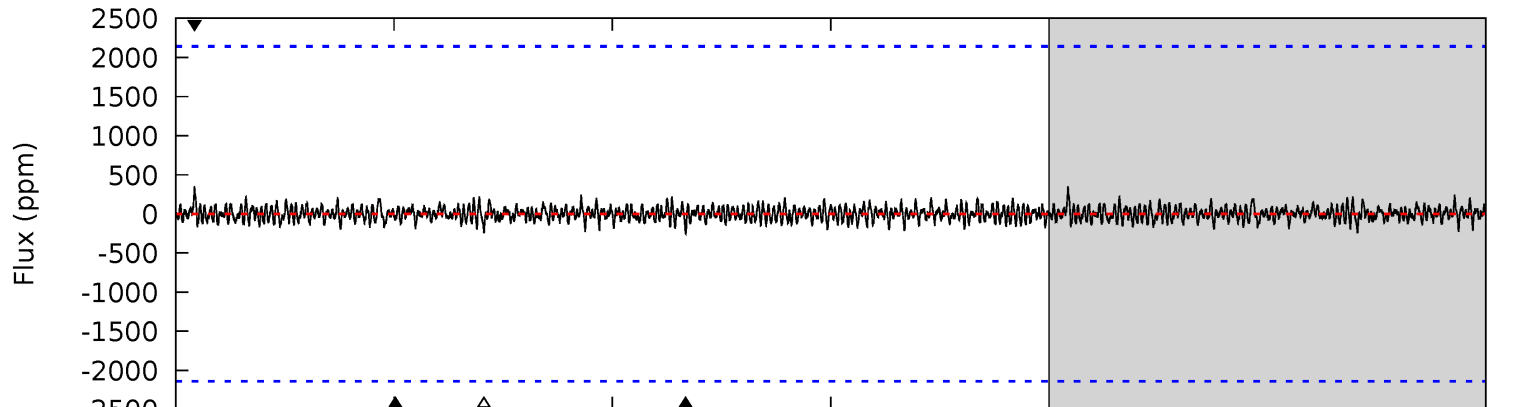
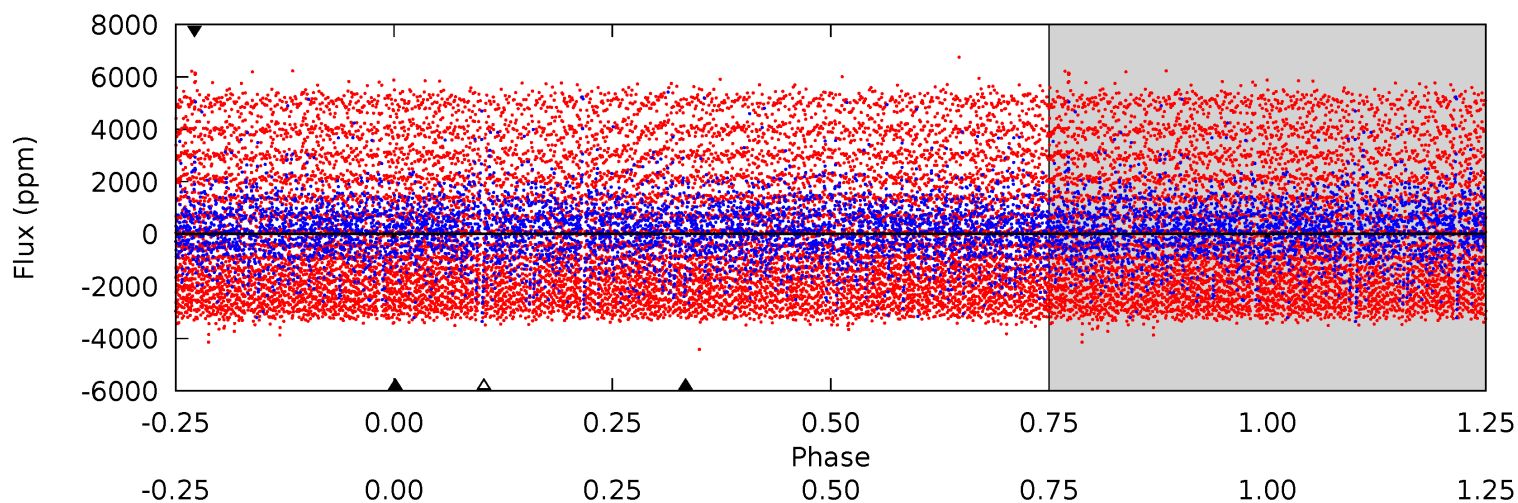
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012207099-06, P = 81.537009 Days, E = 59.862102 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.21	0.64	0.61	0.88	5.30	3.05	0.19	-0.40	-0.66	0.04	-0.23	0.04	0.02	0.58	0.22



Stellar Parameters For KIC 012207099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10932^{+266}_{-457}	$4.056^{+0.252}_{-0.189}$	$0.070^{+0.050}_{-0.600}$	$2.615^{+0.733}_{-0.895}$	$2.838^{+0.289}_{-0.674}$	$0.224^{+0.370}_{-0.106}$
	+2%/-4%	+6%/-5%	+71%/-857%	+28%/-34%	+10%/-24%	+165%/-48%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 012207099-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$17.85^{+22.81}_{-12.08}$	1505^{+123}_{-130}	$9469^{+133342}_{-107634}$	1332^{+94513}_{-60992}
Alt.	-260 ± 403	$20.98^{+22.49}_{-14.71}$	1505^{+132}_{-139}	4219^{+3926}_{-8129}	51^{+760}_{-85}

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 $A_{obs} \gg 1.0$

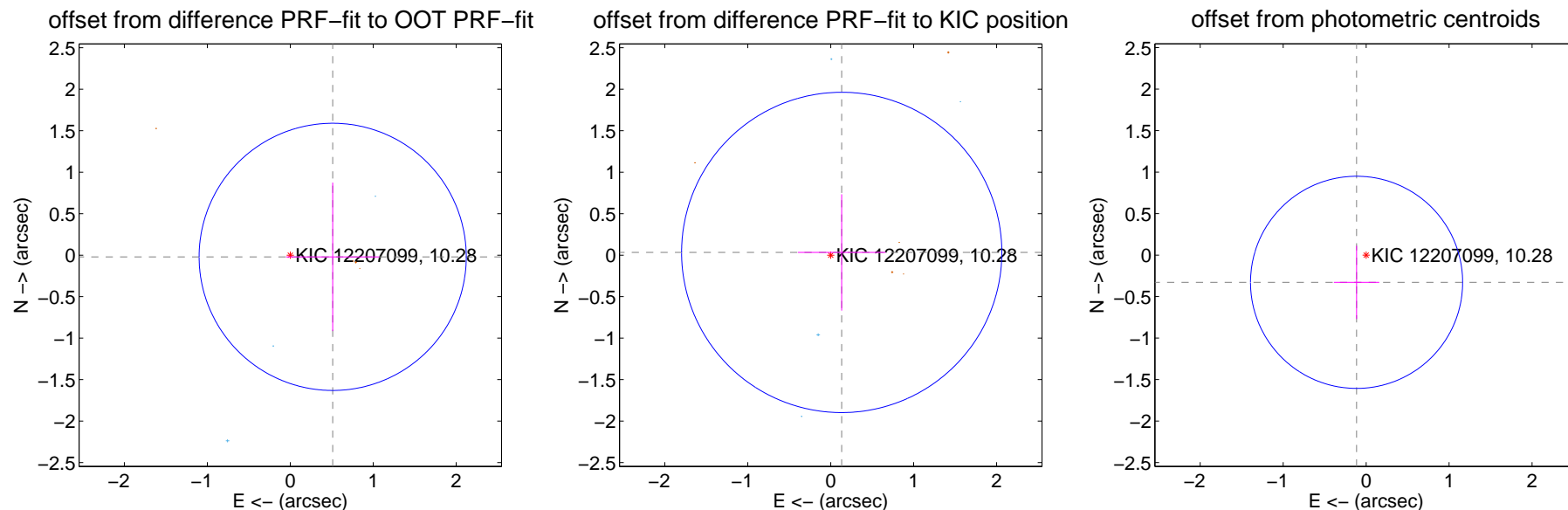
DV Centroid Data

Supplemental centroid analysis for 012207099-06. **Kepler magnitude: 10.28.** Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

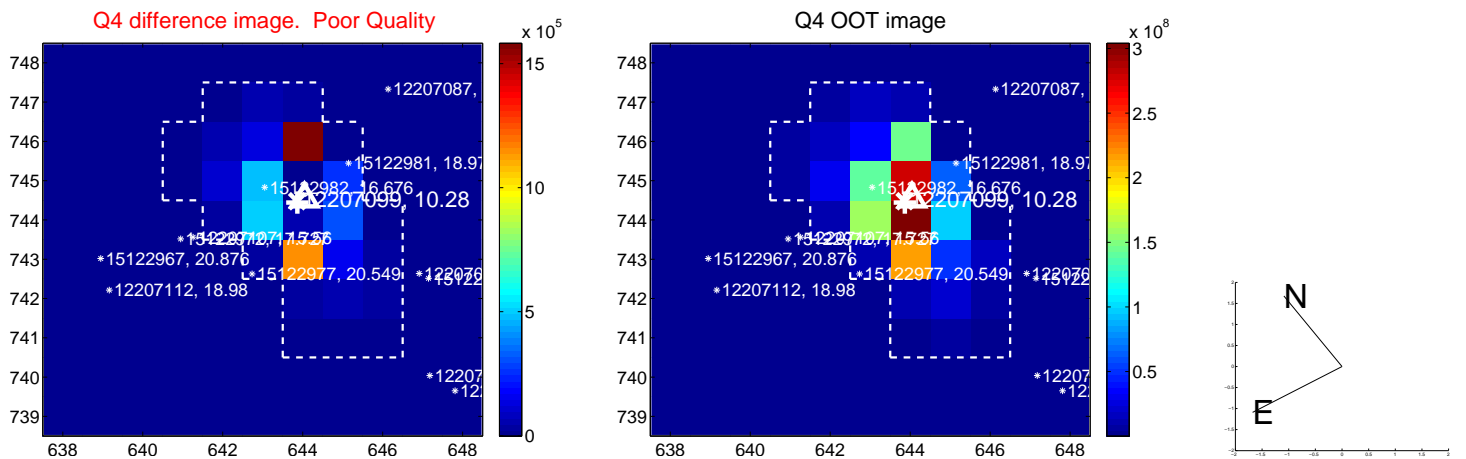
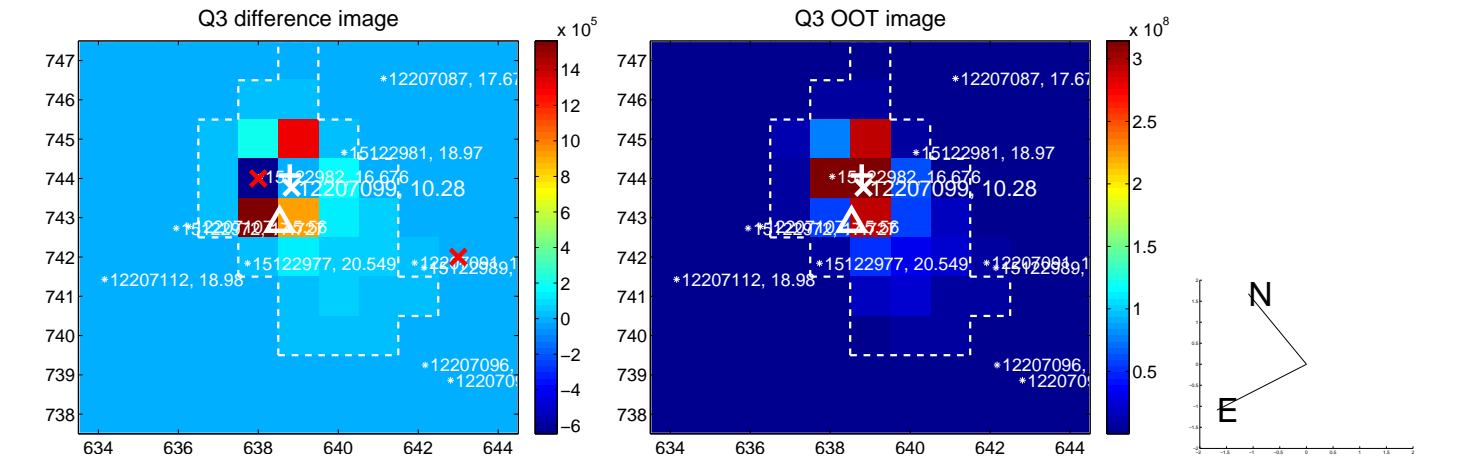
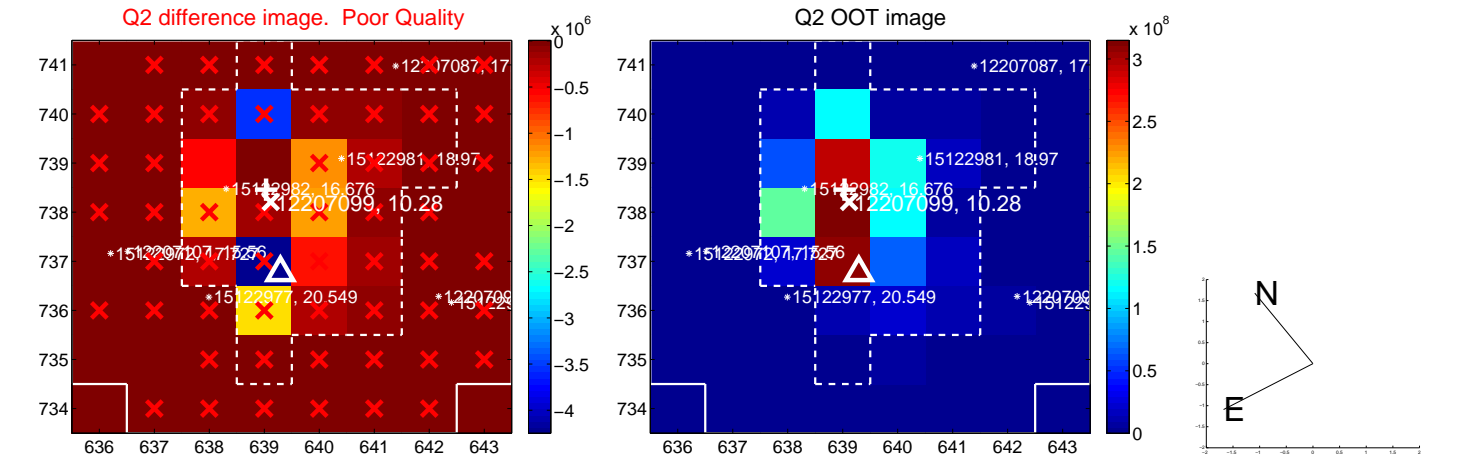
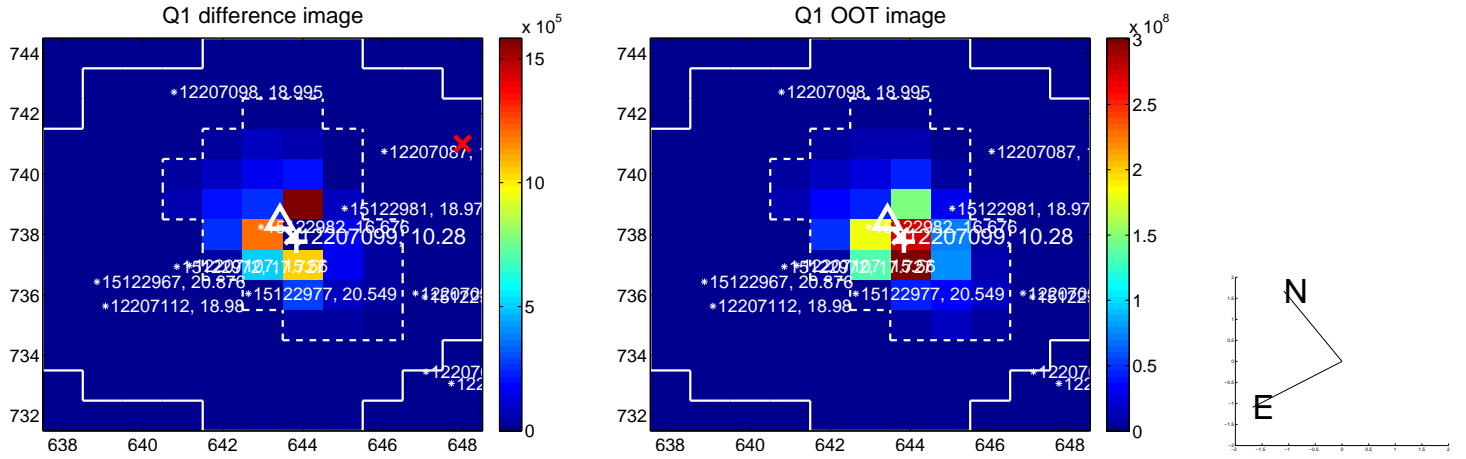
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.512 ± 0.537	0.95	-0.511 ± 0.563	-0.021 ± 0.894
PRF-fit source offset from KIC position	0.137 ± 0.643	0.21	-0.133 ± 0.528	0.033 ± 0.701
photometric centroid source offset	0.35 ± 0.43	0.82	0.12 ± 0.27	-0.33 ± 0.44

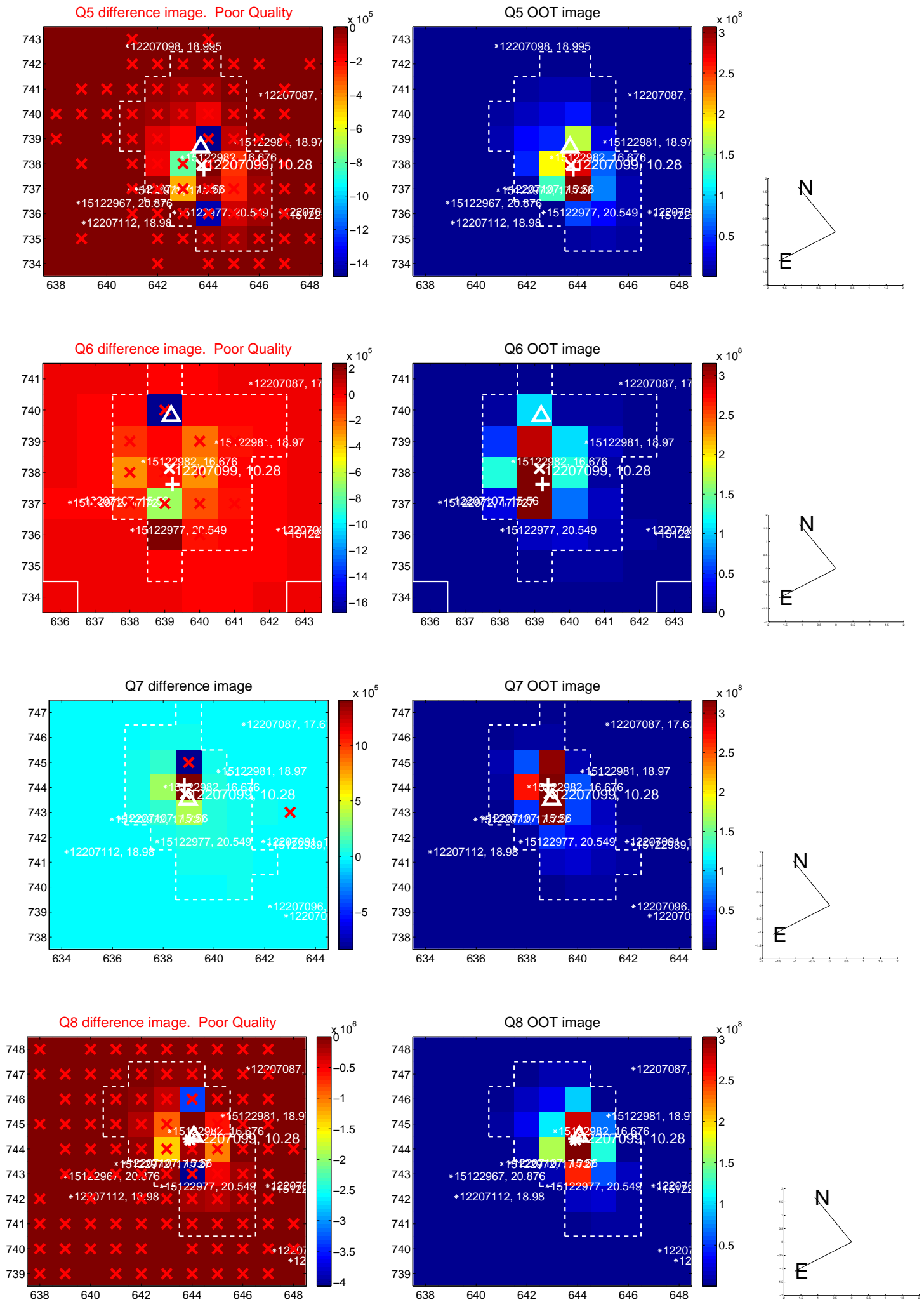


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

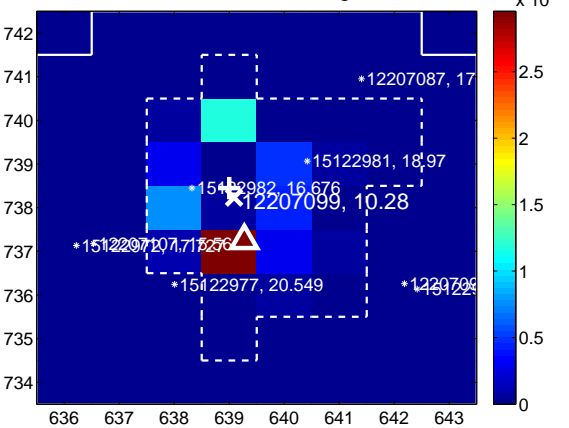
Q9 no difference image



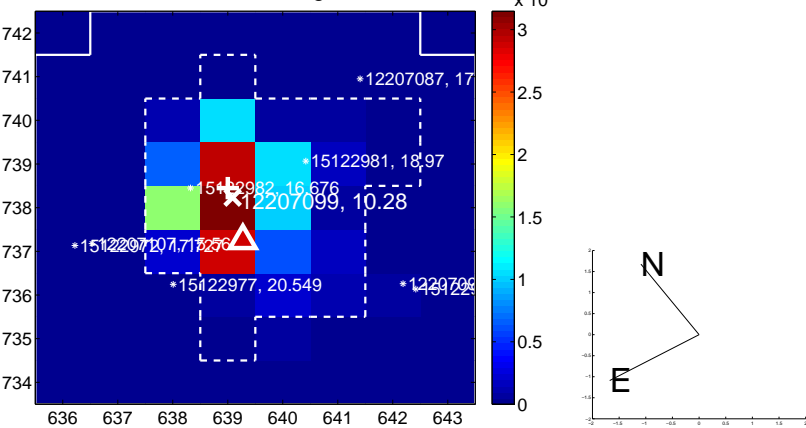
Q9 no OOT image



Q10 difference image



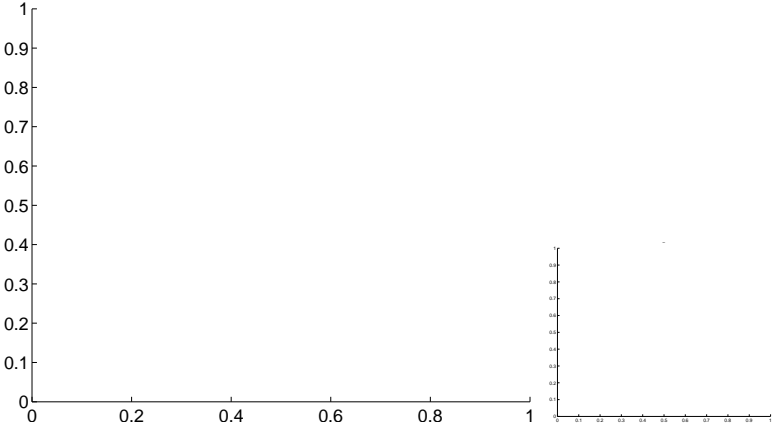
Q10 OOT image



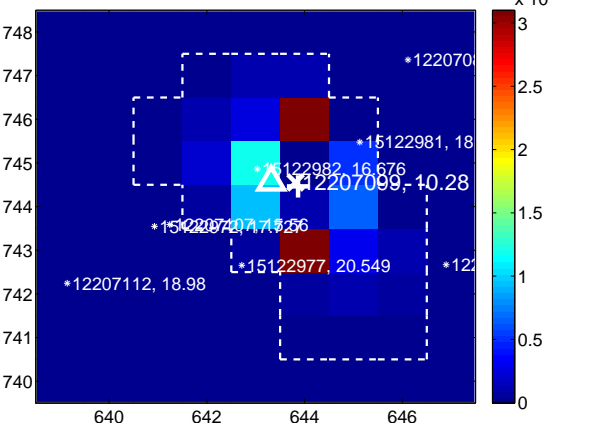
Q11 no difference image



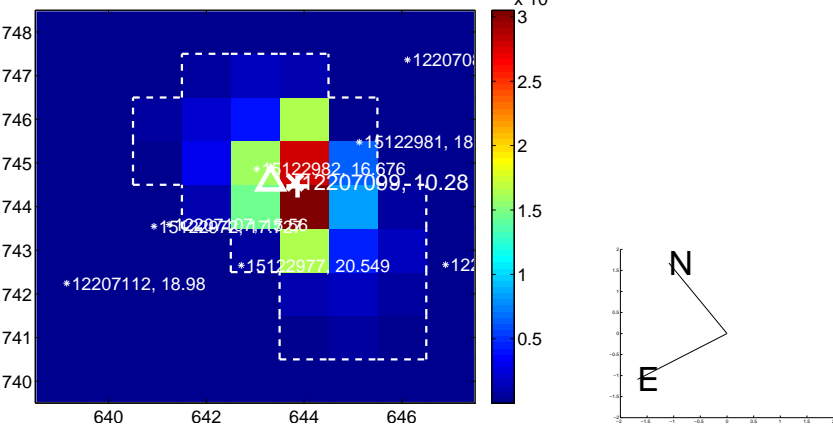
Q11 no OOT image



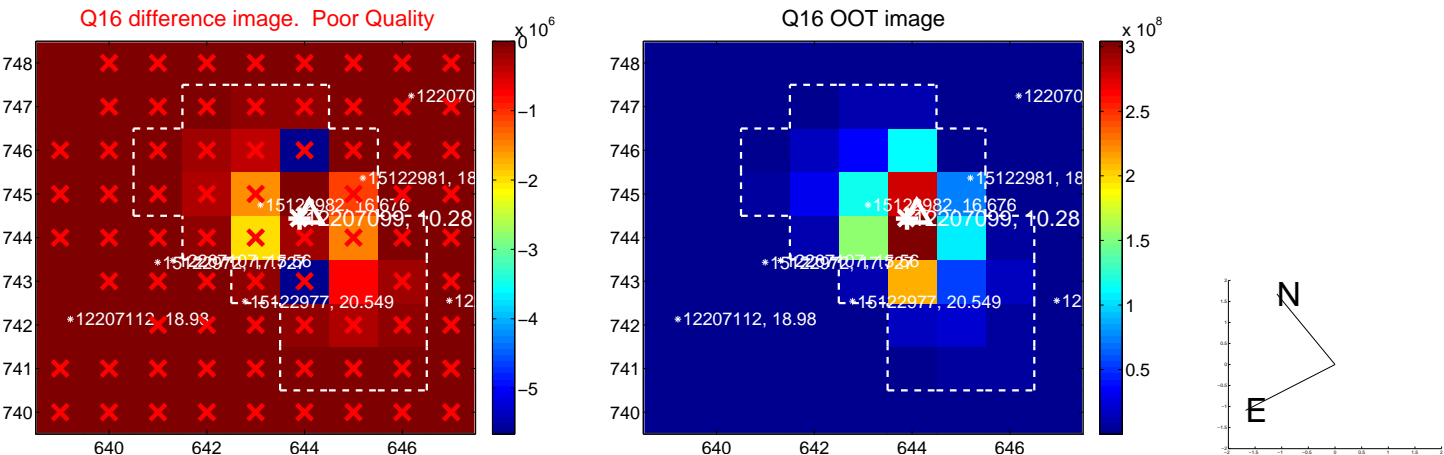
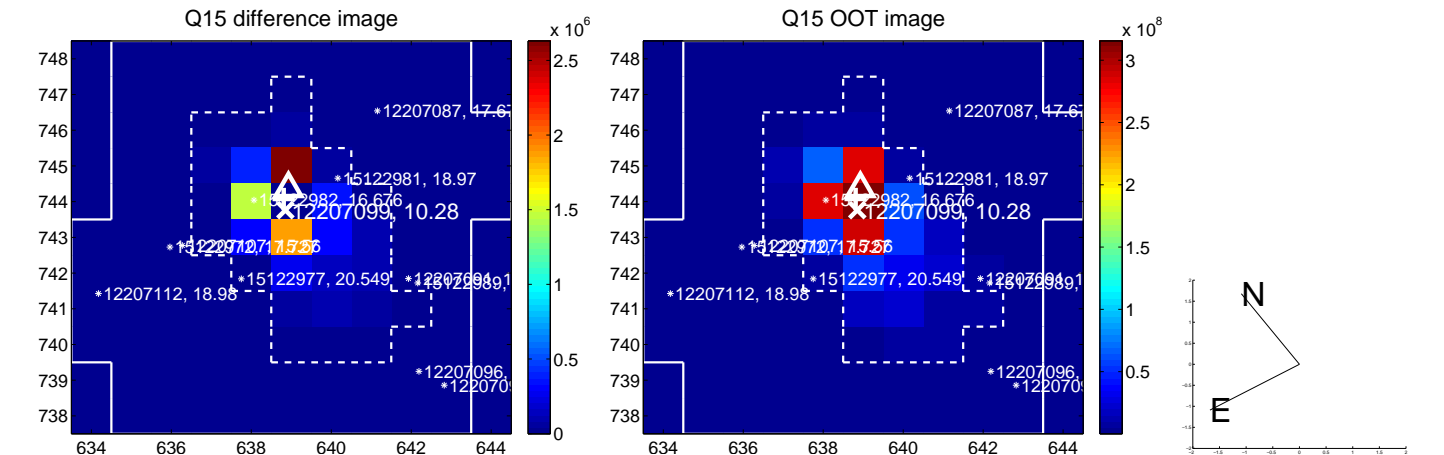
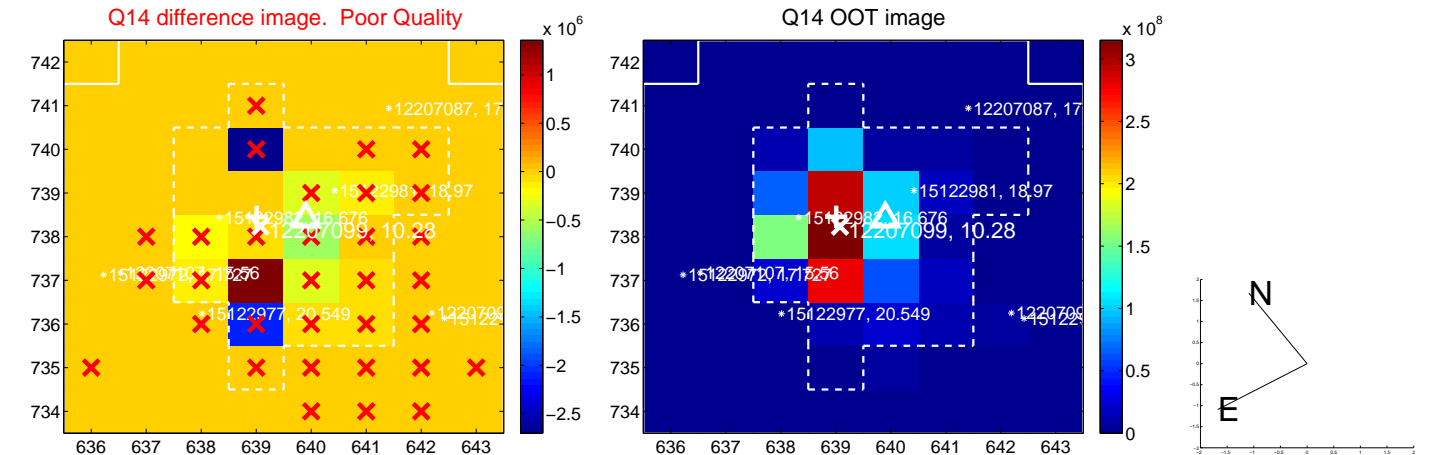
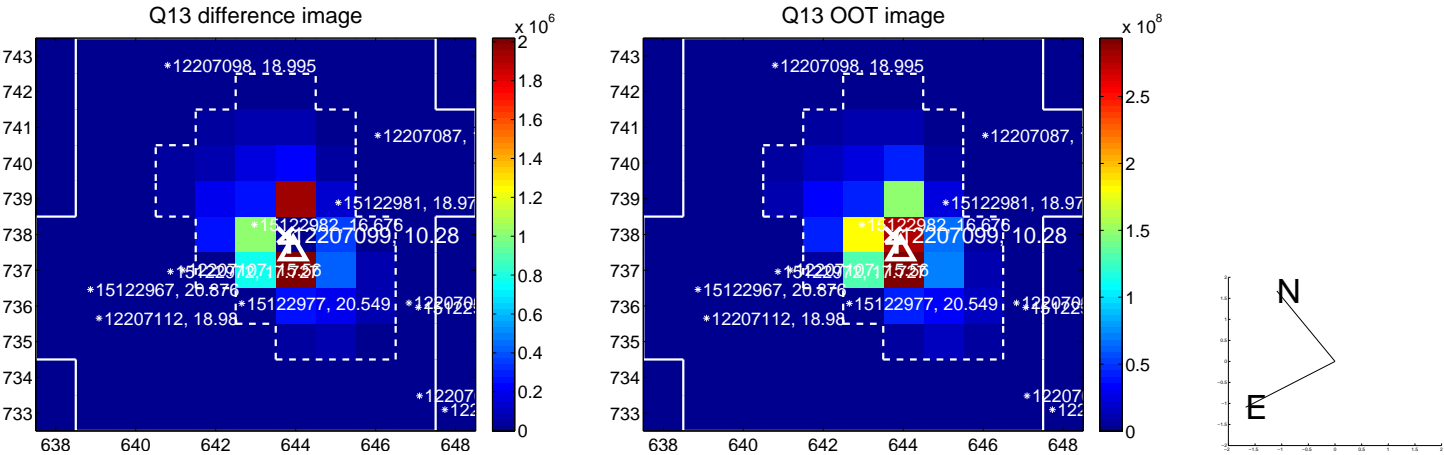
Q12 difference image. Poor Quality



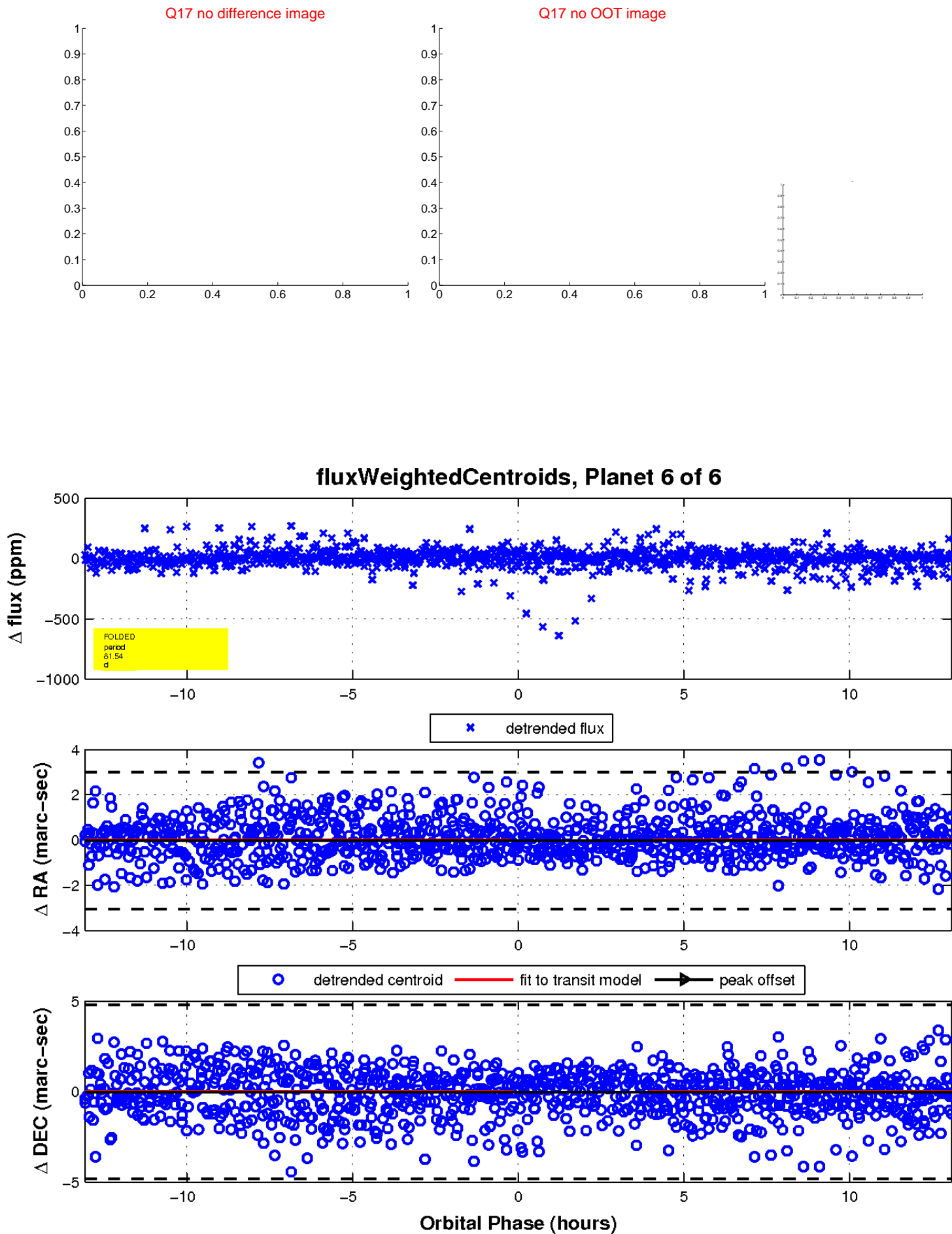
Q12 OOT image



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

