

KIC 005476473

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})
005476473-01	OBS	No	0.808595	131.529527	0.0	5.357	10.2	0.0	1.22	6621	0.00	7719.98
005476473-02	OBS	No	73.602269	140.052375	2635.5	3.815	11.5	10.7	1.22	6621	11.47	18.85
005476473-03	OBS	No	25.313932	140.994912	282.9	5.092	10.0	3.9	1.22	6621	2.34	78.24
005476473-04	OBS	No	67.143714	160.228557	1439.9	4.070	9.3	7.5	1.22	6621	8.64	21.31
005476473-05	OBS	No	105.656608	203.392003	1159.6	2.860	8.4	7.7	1.22	6621	7.42	11.64
005476473-06	OBS	No	36.929269	149.201170	1151.4	1.637	8.0	7.2	1.22	6621	4.45	47.29
005476473-07	OBS	No	58.244842	175.562114	1769.9	3.827	8.9	9.5	1.22	6621	6.35	25.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476473-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS
005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

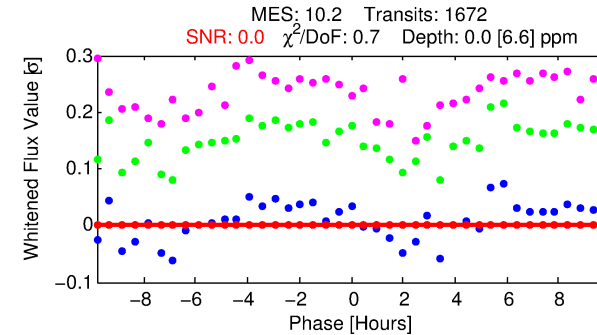
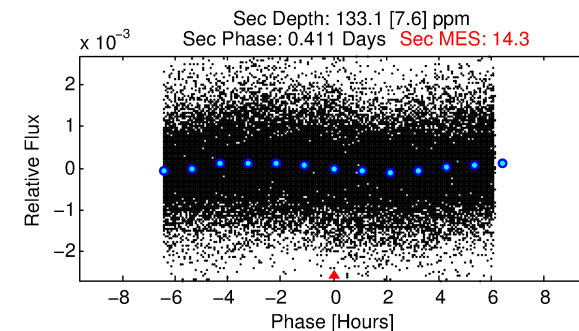
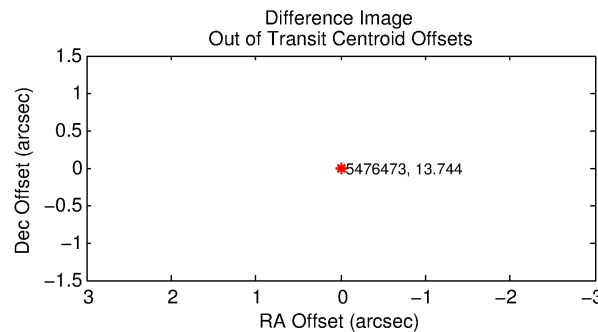
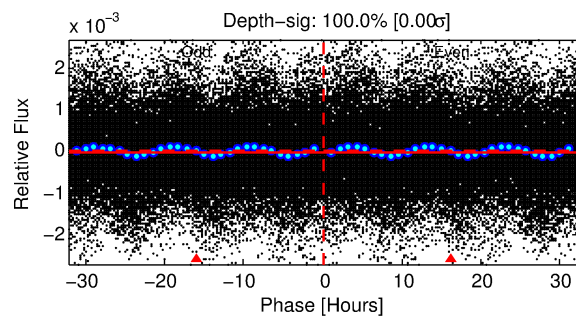
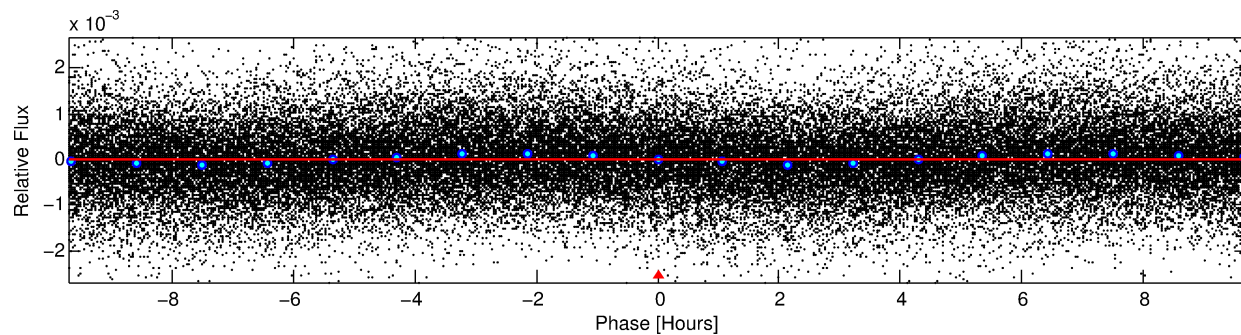
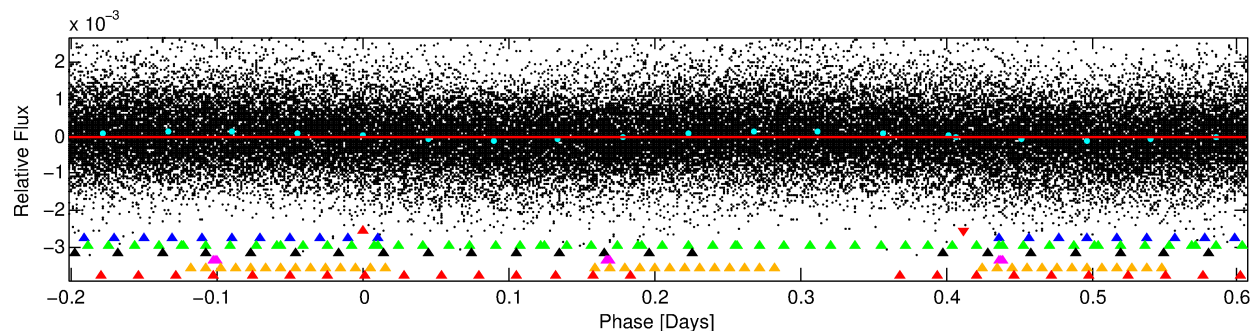
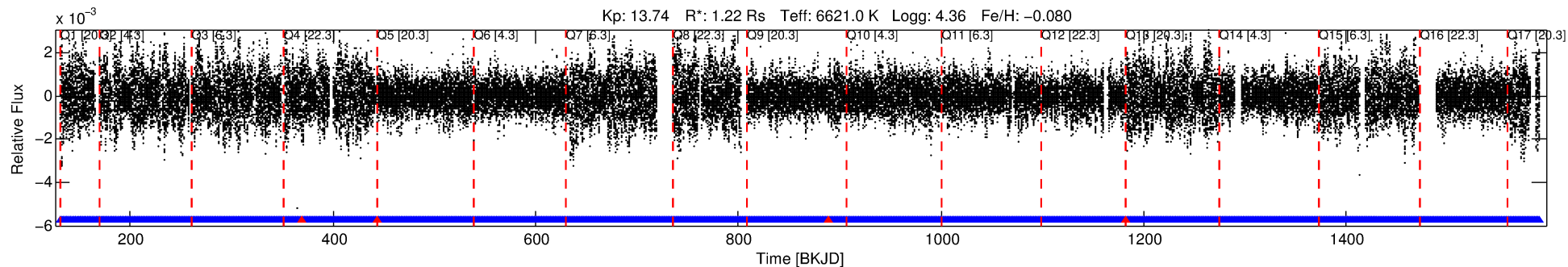
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-01

No Significant Match Found

DV One-Page Summary

KIC: 5476473 Candidate: 1 of 7 Period: 0.809 d



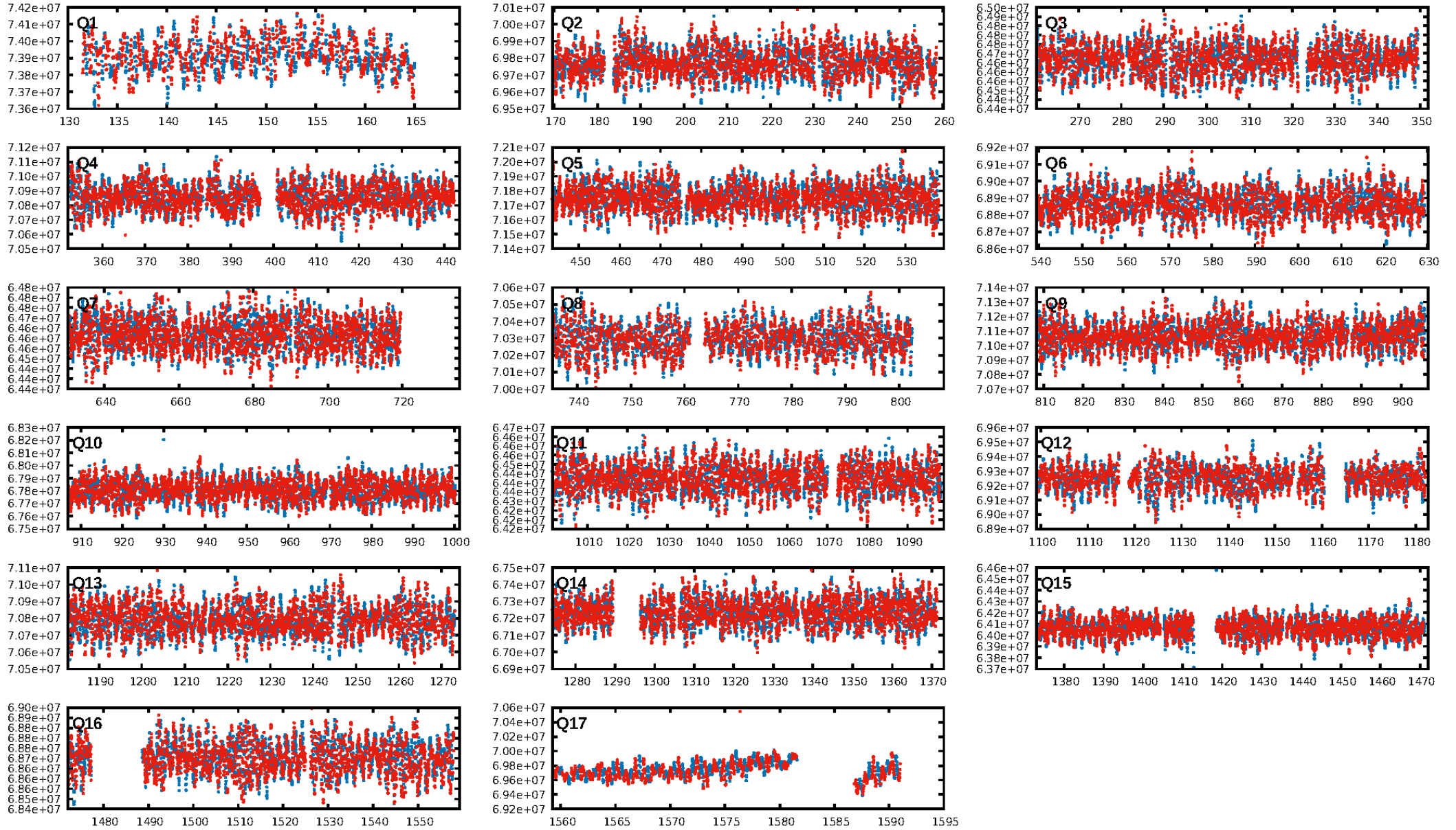
DV Fit Results:

Period = 0.80860 [52.59517] d
Epoch = 131.5295 [10086.7000] BKJD
Rp/R* = 0.0000 [0.8598]
a/R* = 1.22 [8922.65]
b = 0.56 [37482.10]
Seff = 7719.98 [669536.53]
Teff = 2390 [51824] K
Rp = 0.00 [114.37] Re
a = 0.0182 [0.7894] AU
Ag = 111573684.91 [54713268804039.021] W
Teffp = 379805 [46565884179] K

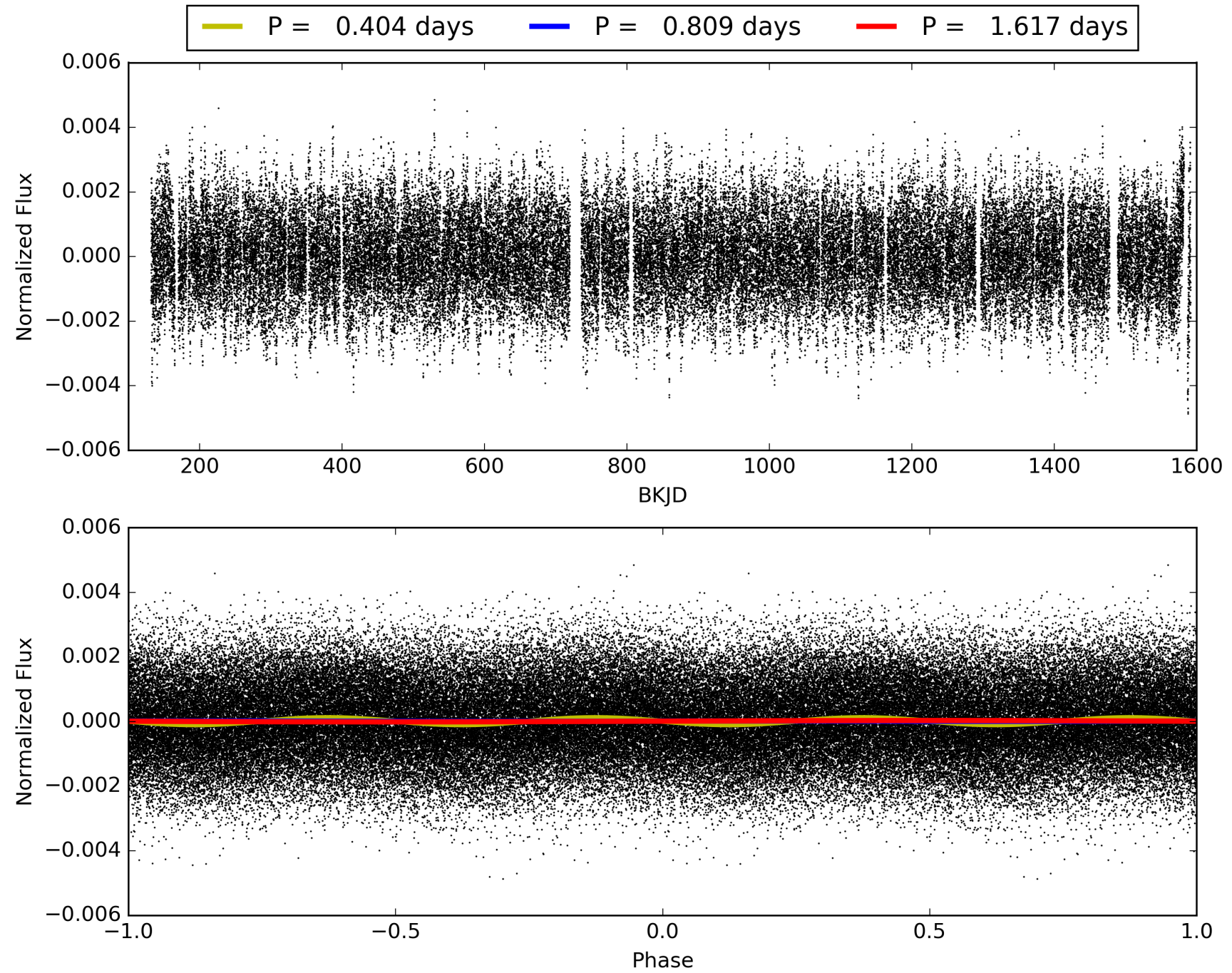
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [79.57σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1592/1596]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
OotOffset-rm: 0.166 arcsec [1.63σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 3/2/1/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005476473-01, PDC Light Curves

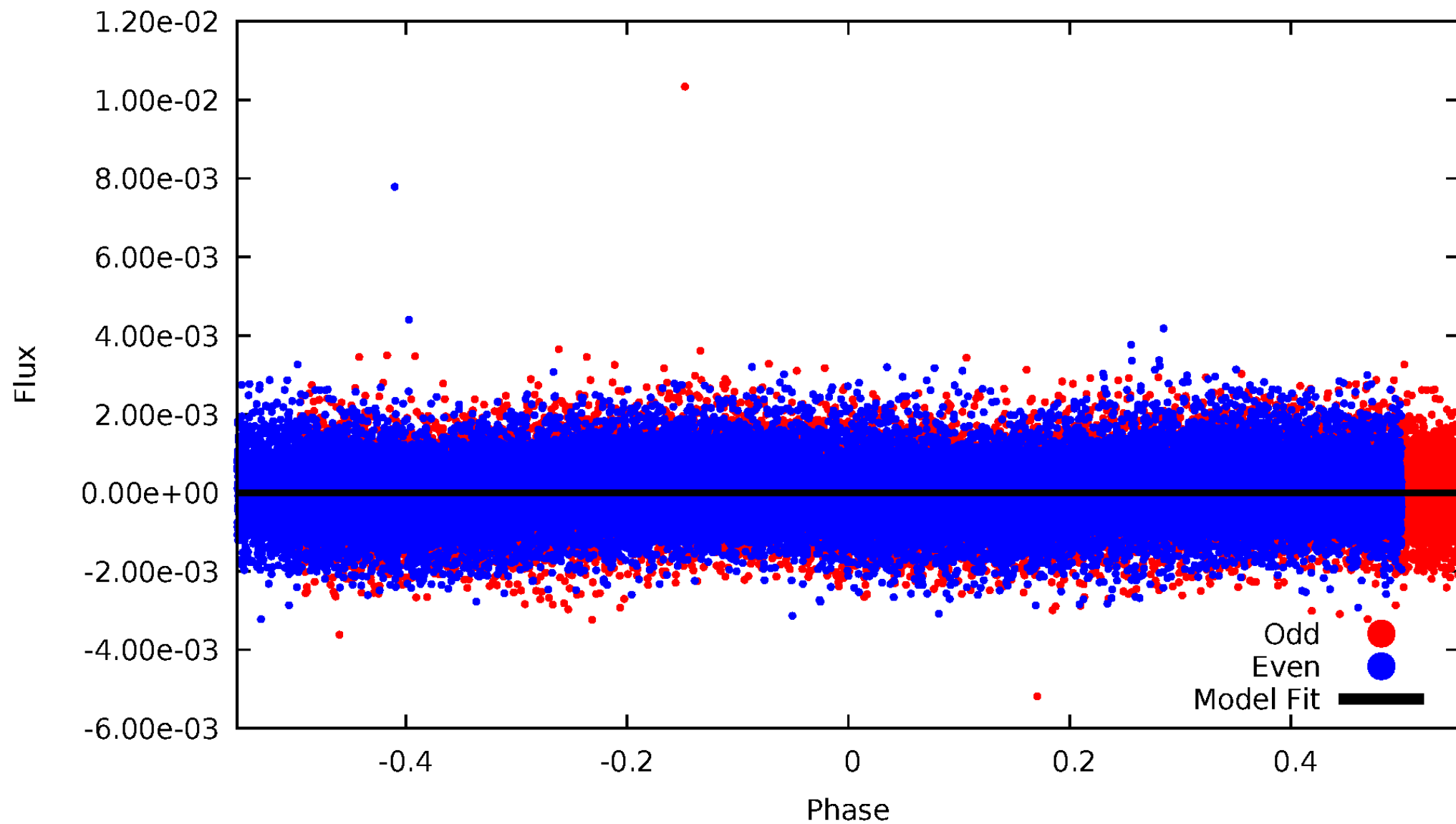


TCE 005476473-01



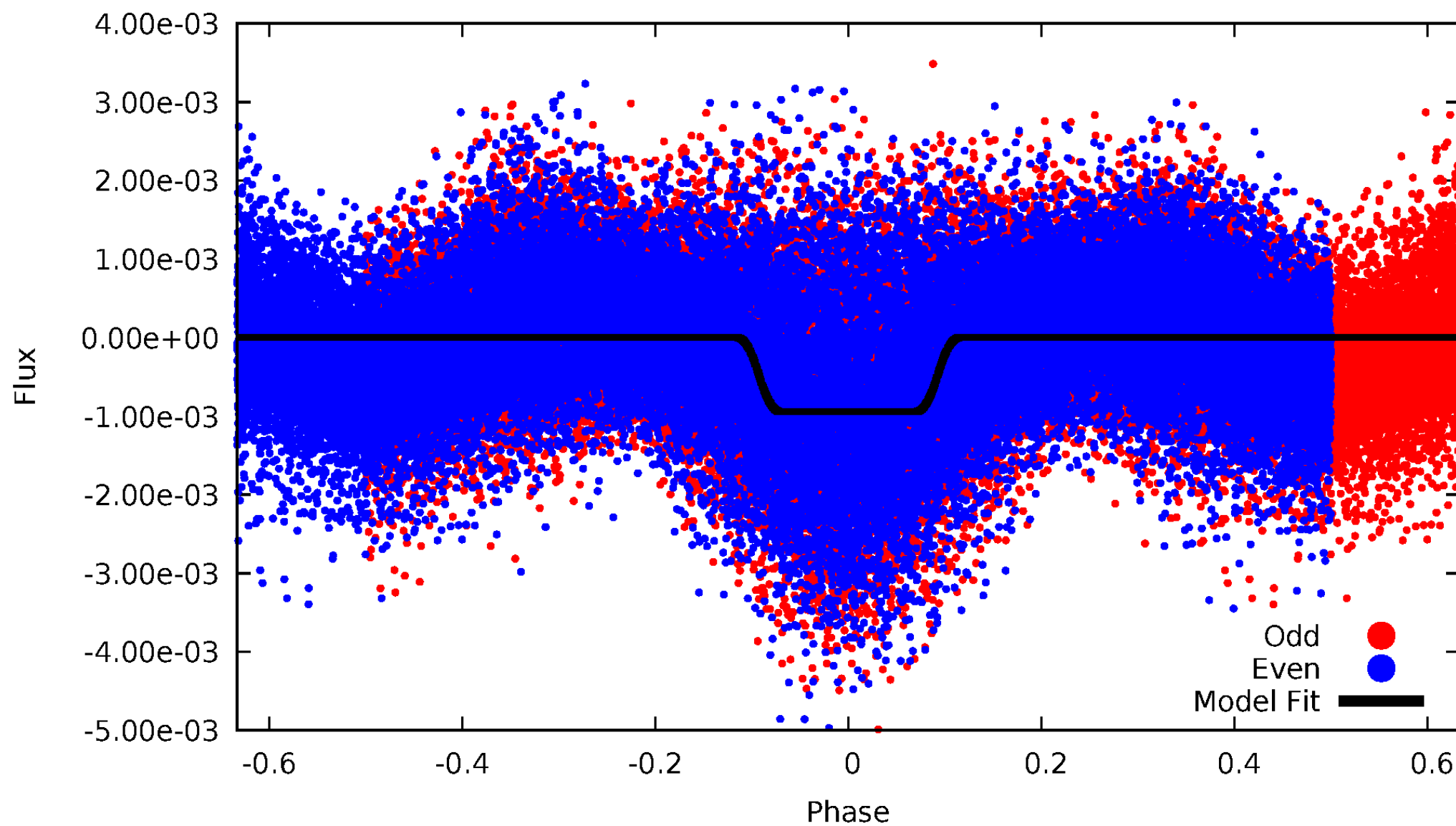
DV Odd/Even

TCE 005476473-01

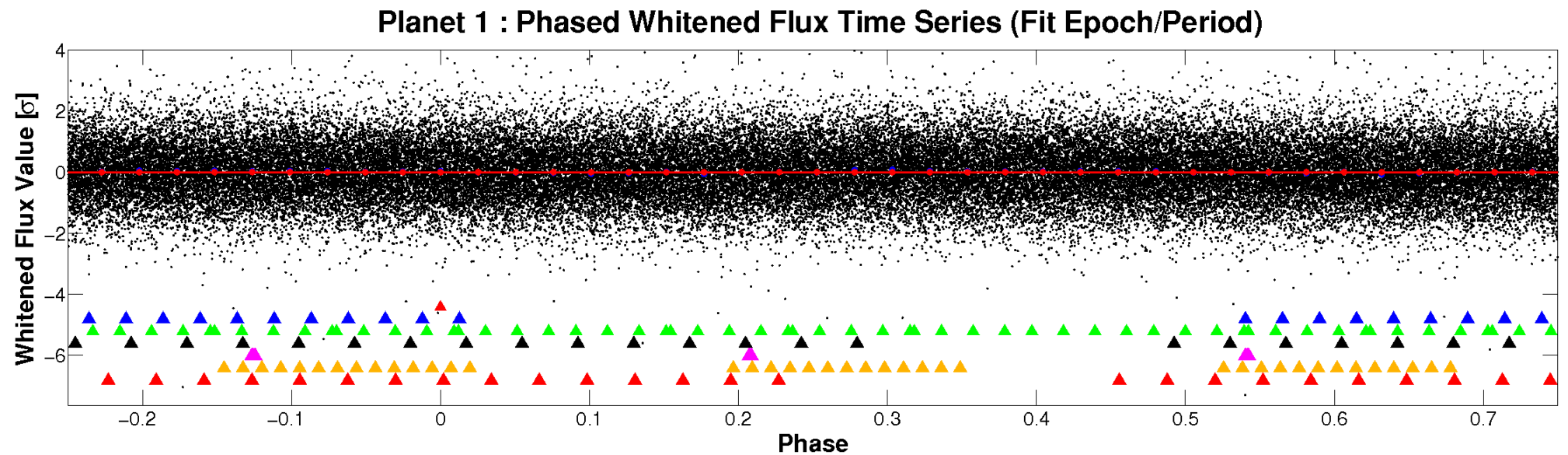
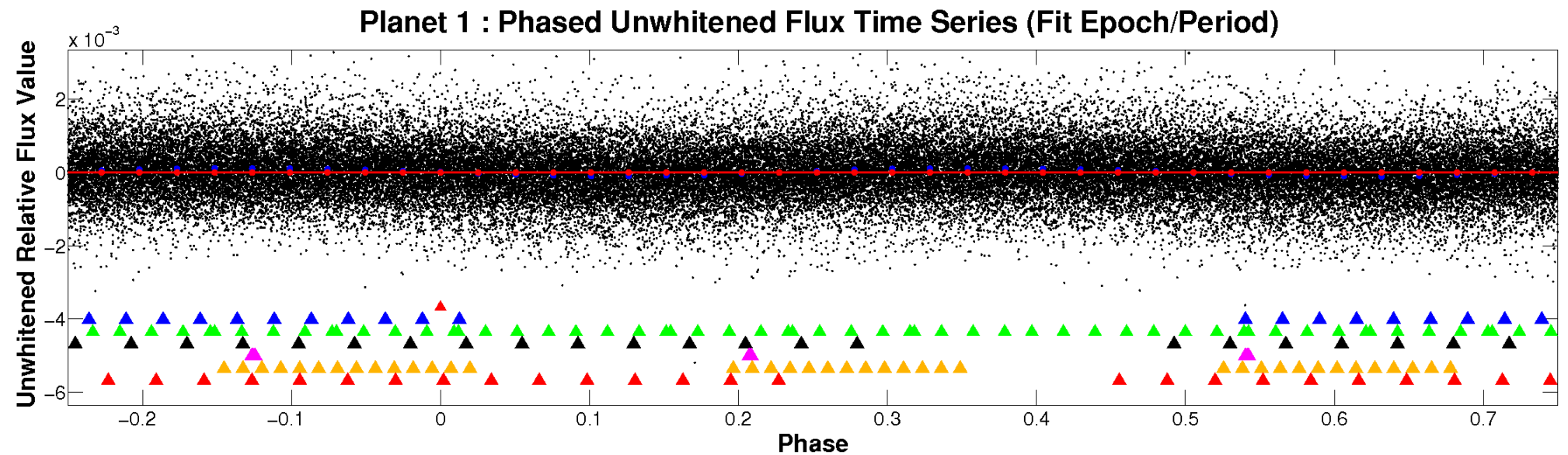


ALT Odd/Even

TCE 005476473-01

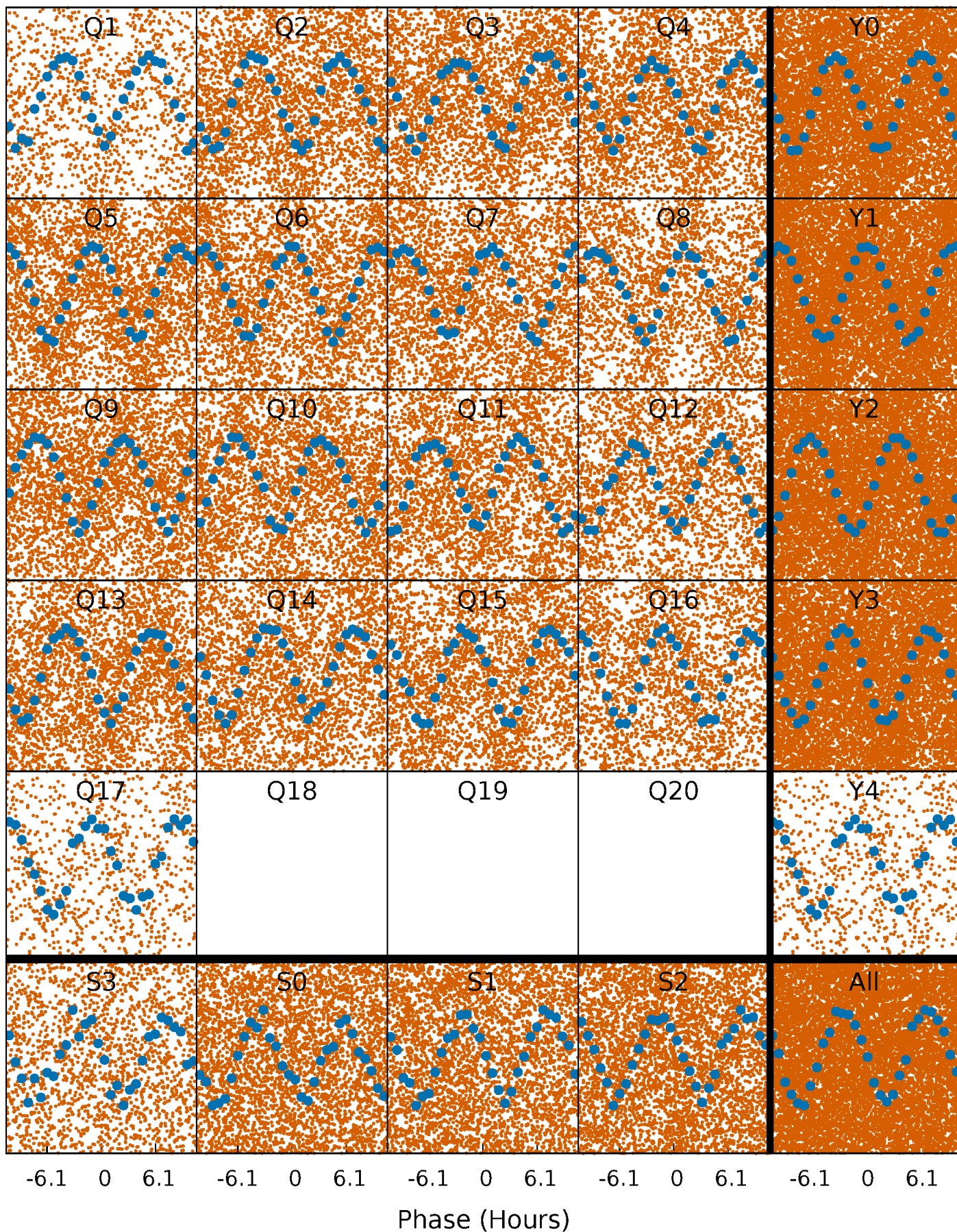


Non-Whitened Vs. Whitened Light Curve



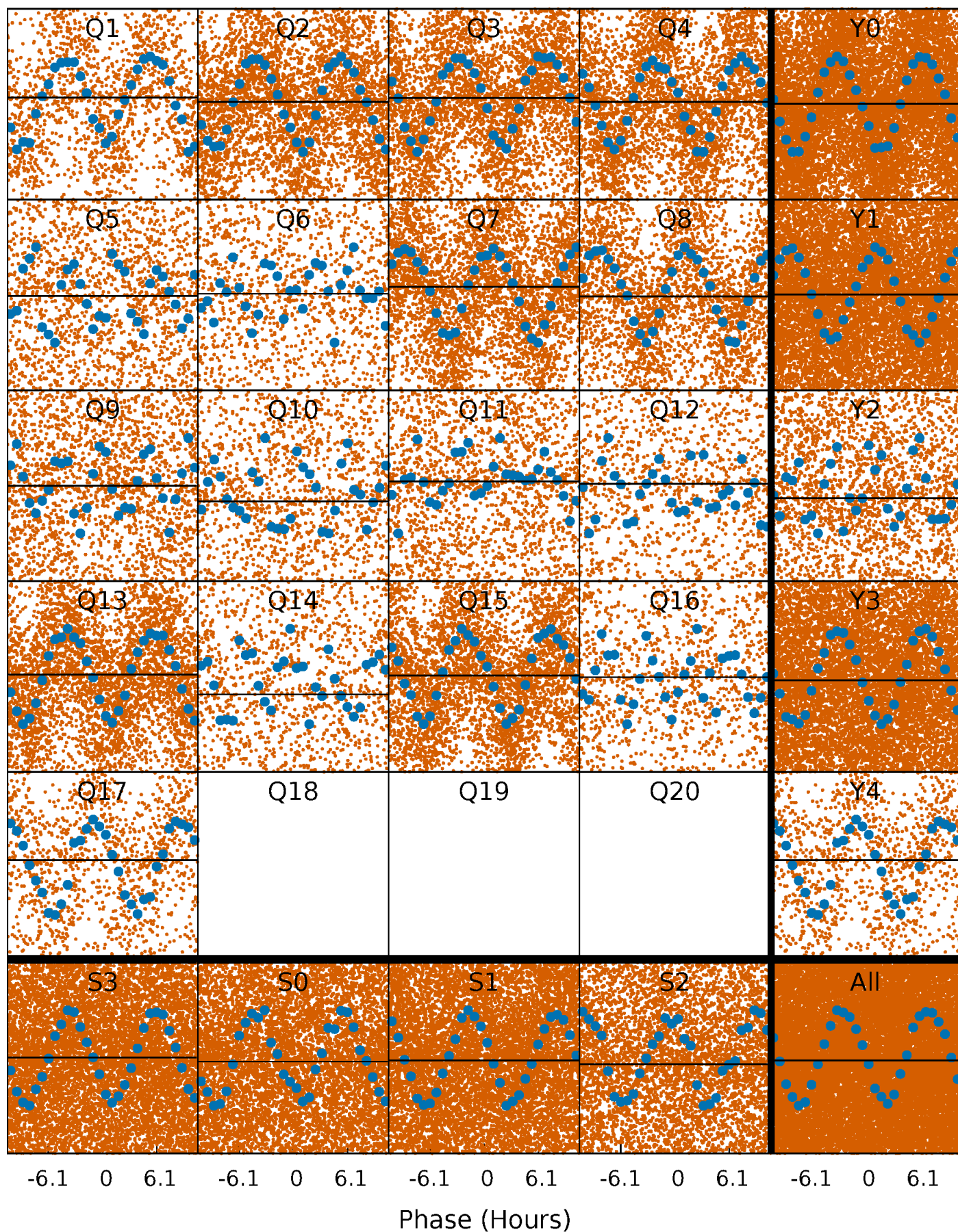
PDC Quarter-Phased Transit Curves

TCE 005476473-01 P= 0.808595 Days $T_0=131.529527$ (BKJD)



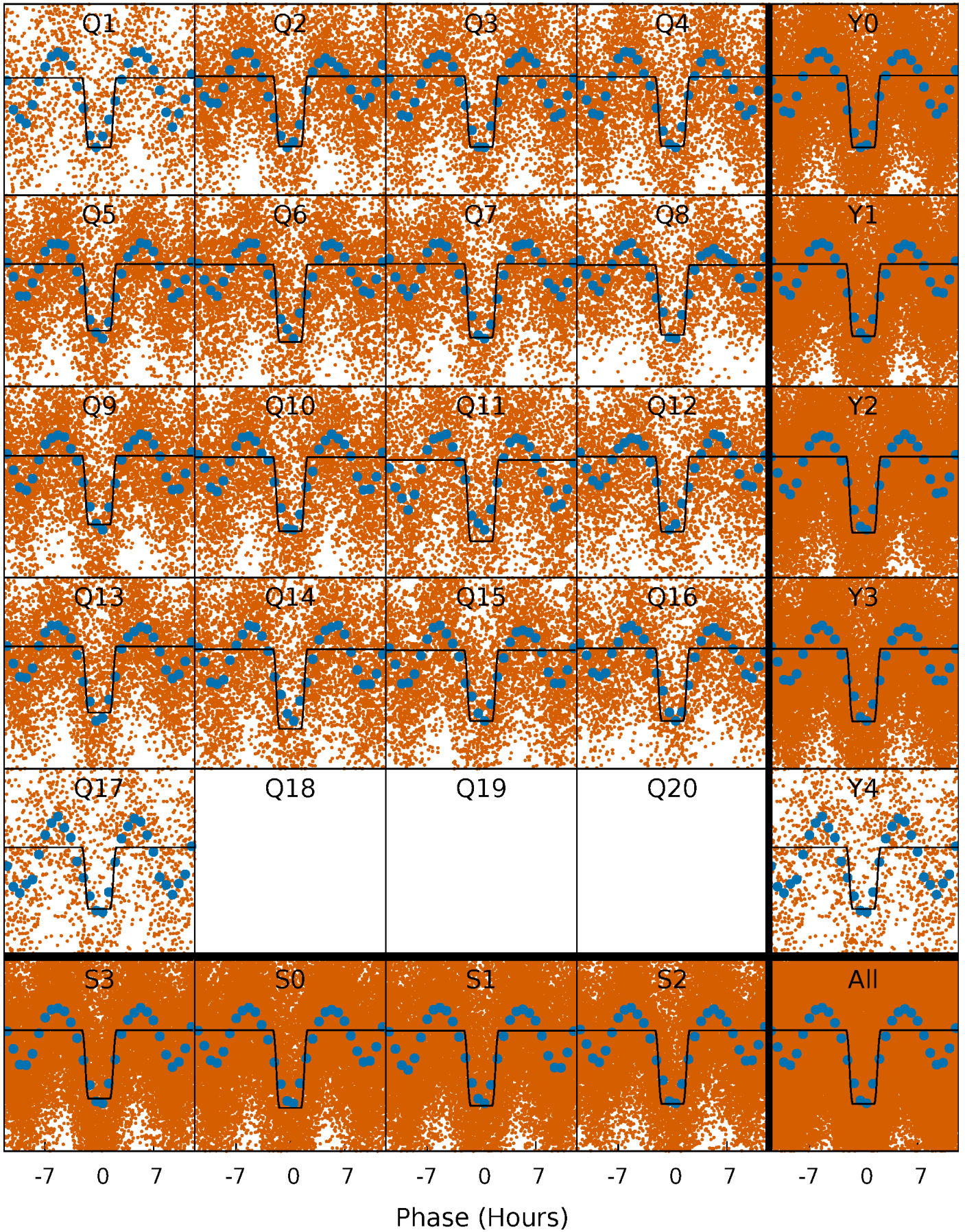
DV Quarter-Phased Transit Curves

TCE 005476473-01 P= 0.808595 Days $T_0=131.529527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

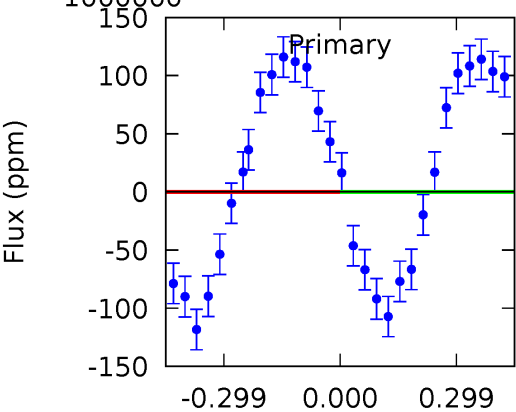
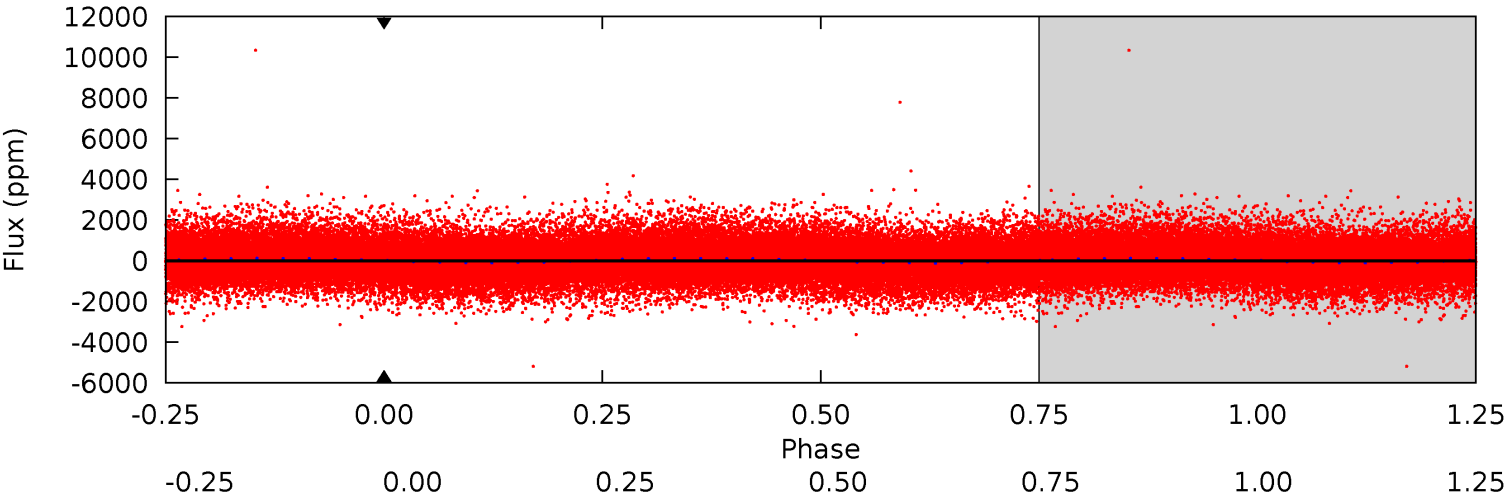
TCE 005476473-01 P= 0.808909 Days $T_0=131.552002$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-01, P = 0.808595 Days, E = 130.720932 Days

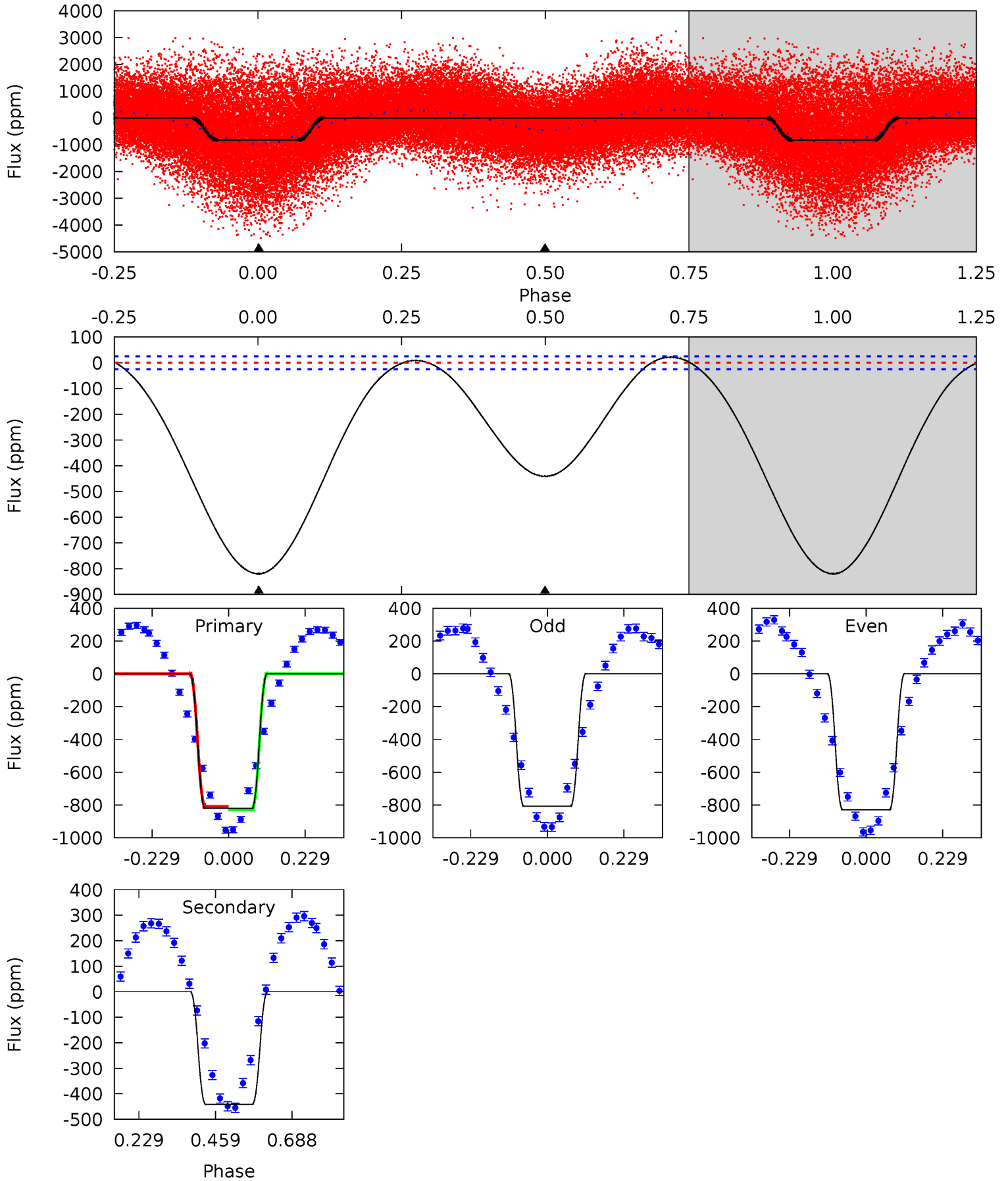
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005476473-01, P = 0.808909 Days, E = 130.743093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
144.7	77.8	0	0	4.39	1.20	2.83	144.7	144.7	77.8	77.8	1.96	1.00	0.03	1.77



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$81.48^{+85.31}_{-56.41}$	959^{+491}_{-215}	-2412^{+8024}_{-3152}	$-0.612^{+710.131}_{-771.823}$
Alt.	-441 ± 6	$82.90^{+85.76}_{-56.77}$	979^{+519}_{-218}	2111^{+806}_{-3866}	$1.616^{+15.815}_{-1.410}$

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 $A_{obs} \gg 1.0$

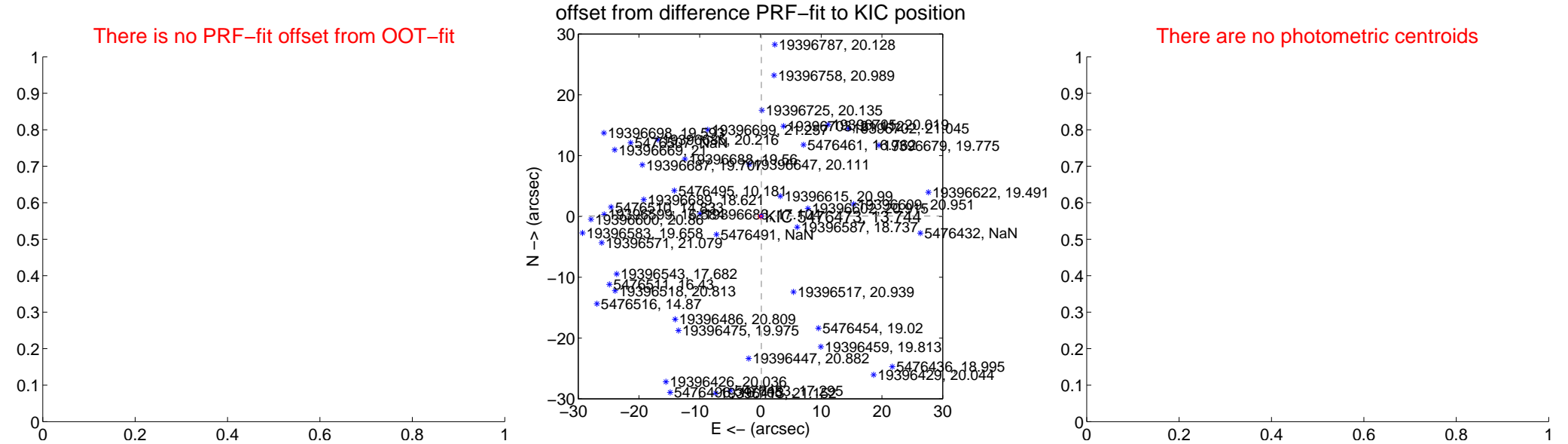
DV Centroid Data

Supplemental centroid analysis for 005476473-01. Kepler magnitude: 13.74. Transit SNR 0.00

There are 4 quarters with good PRF difference image offsets

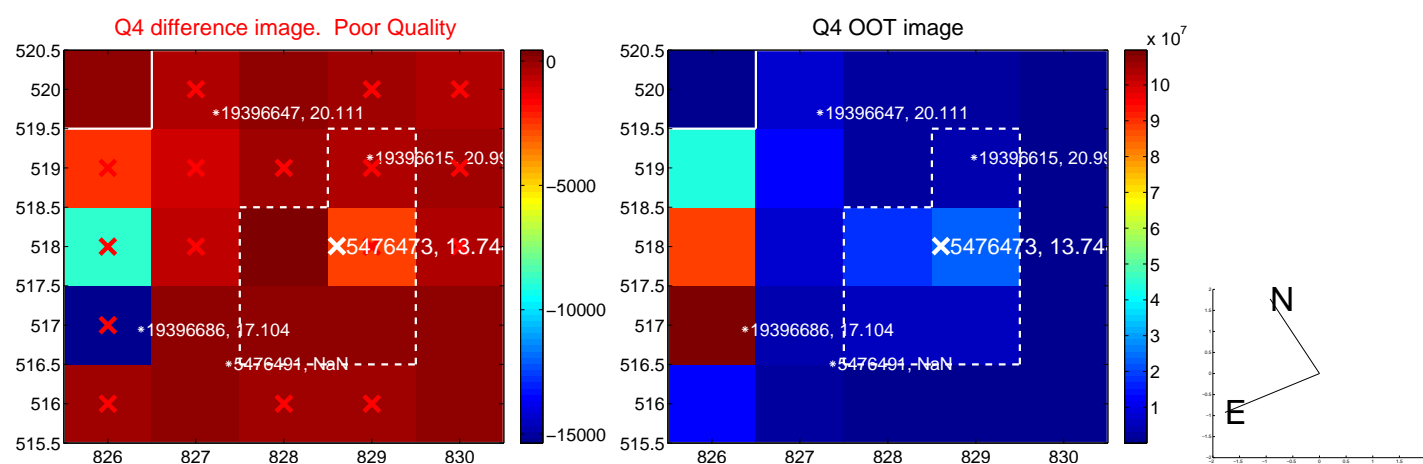
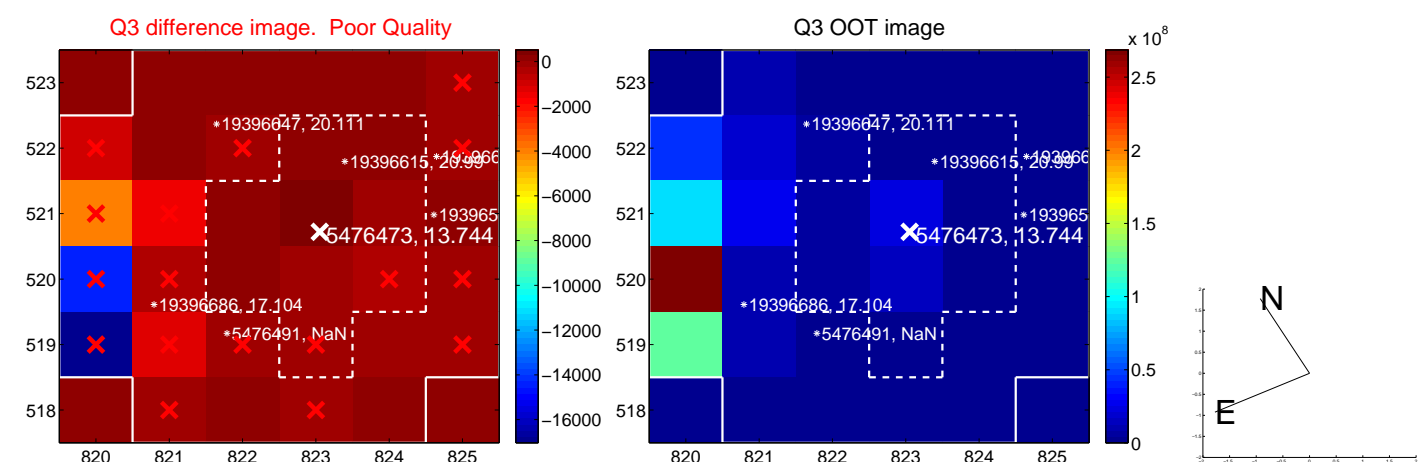
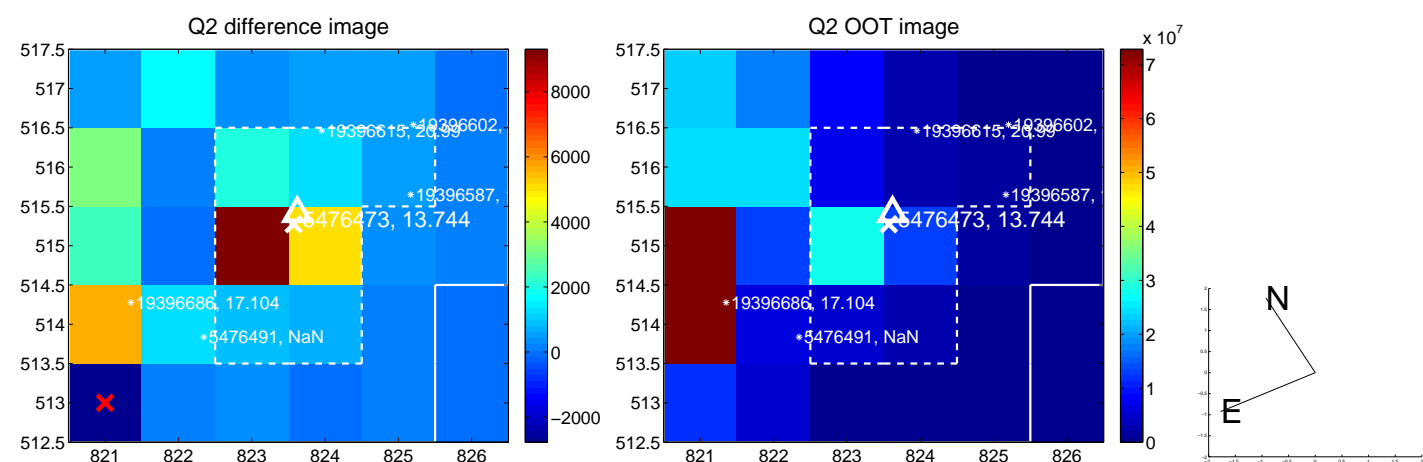
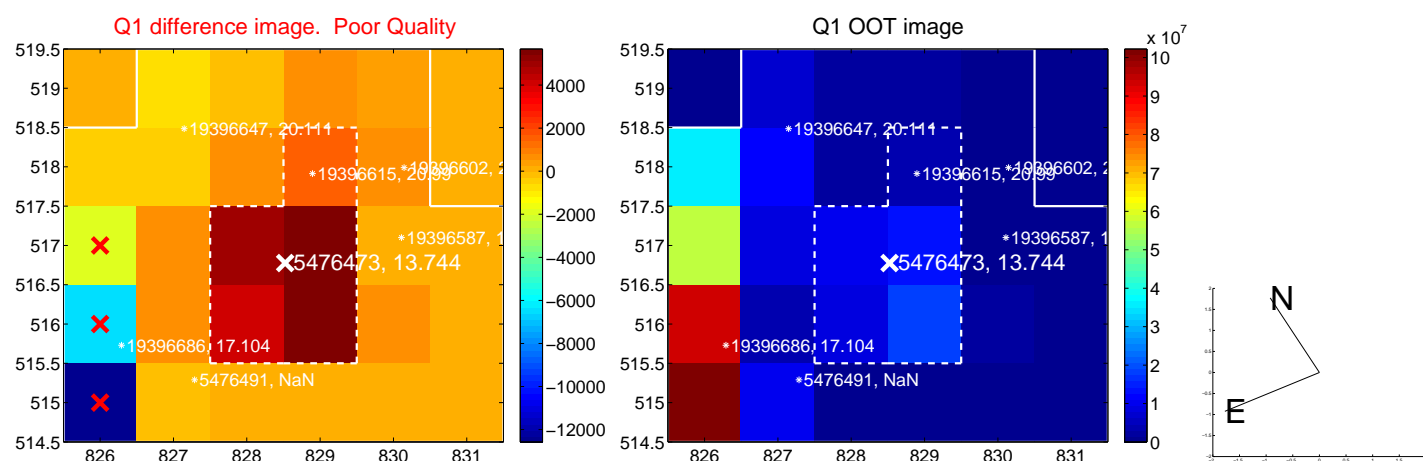
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.166 ± 0.102	1.63	-0.152 ± 0.092	0.066 ± 0.097
photometric centroid source offset	—	—	—	—

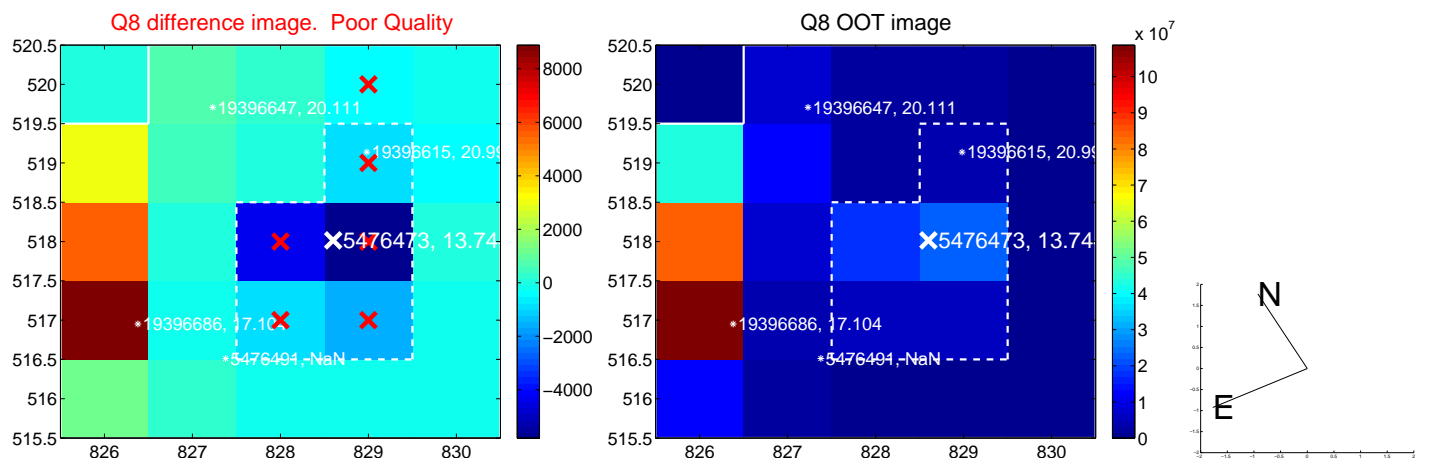
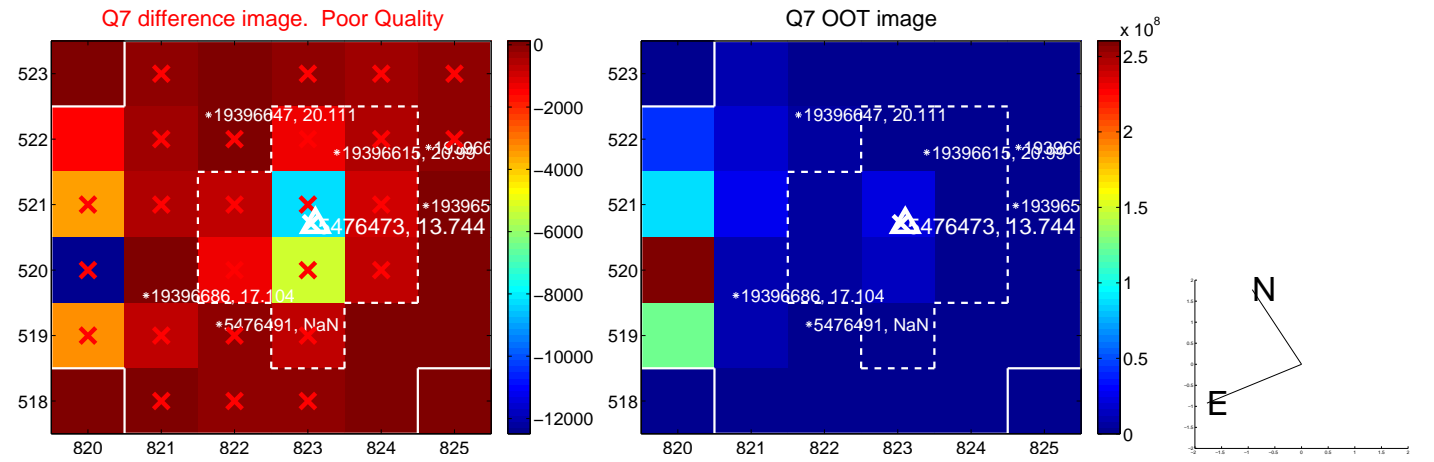
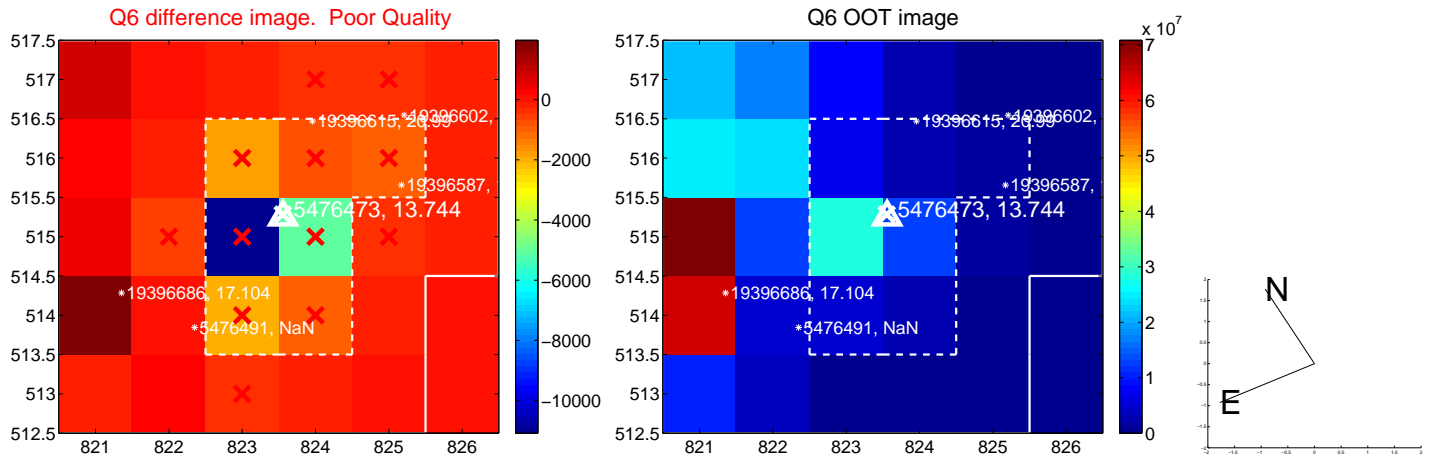
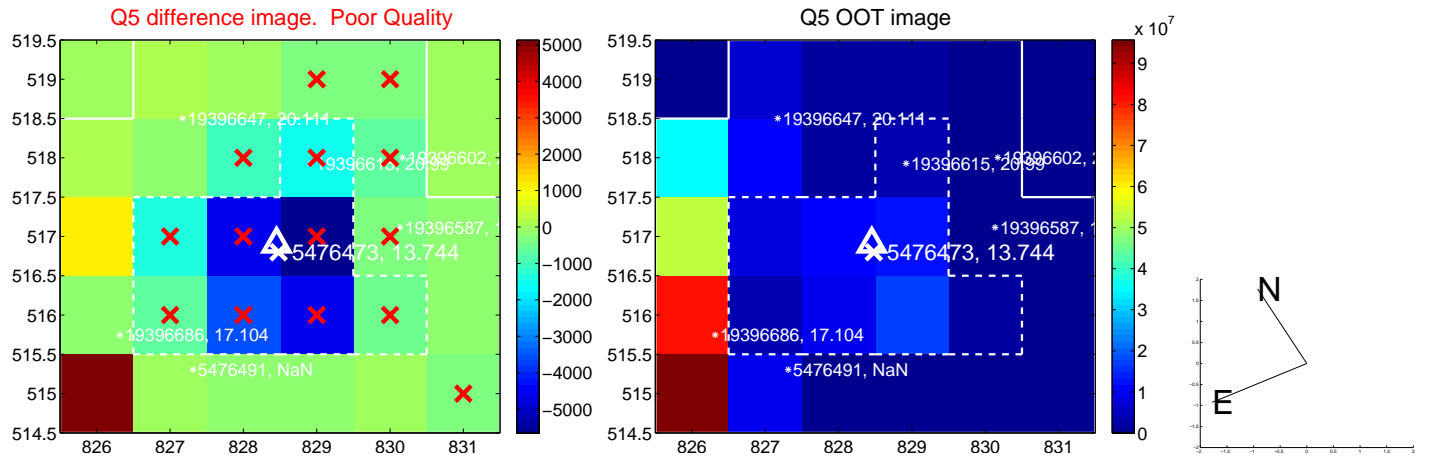


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

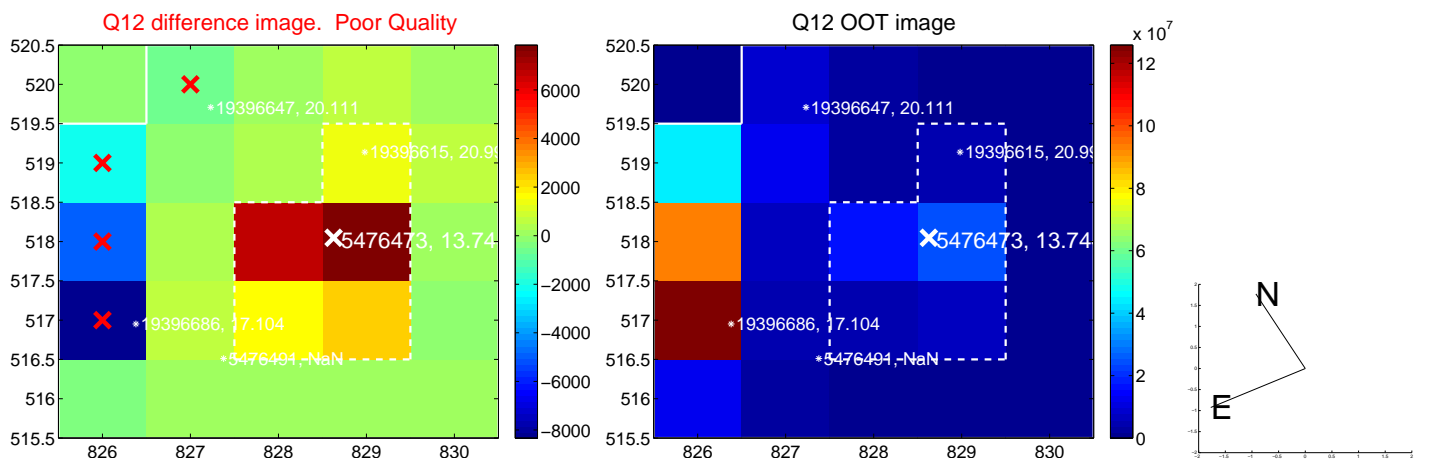
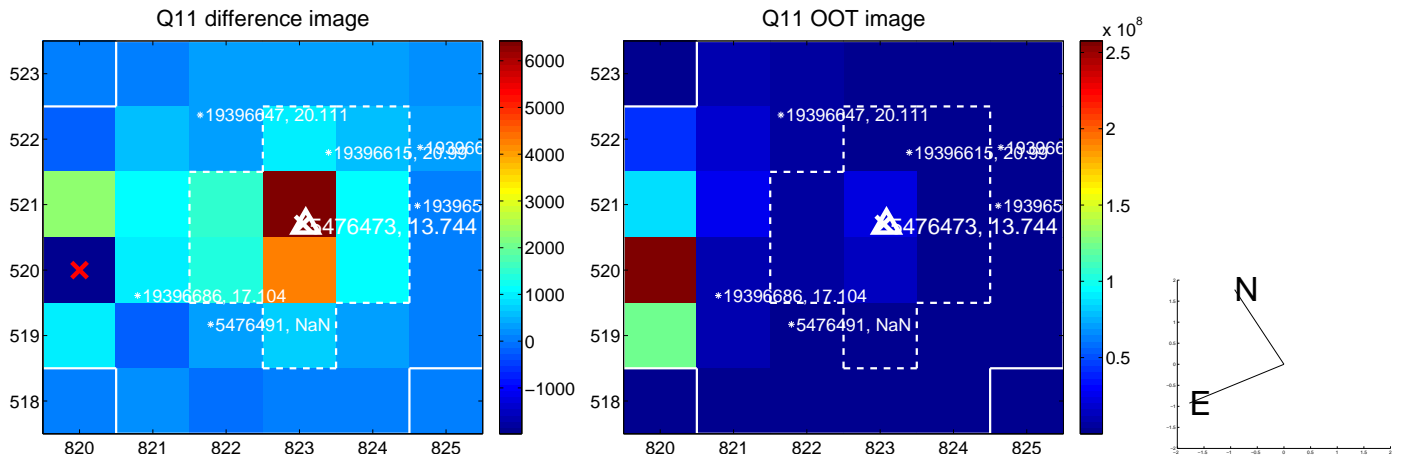
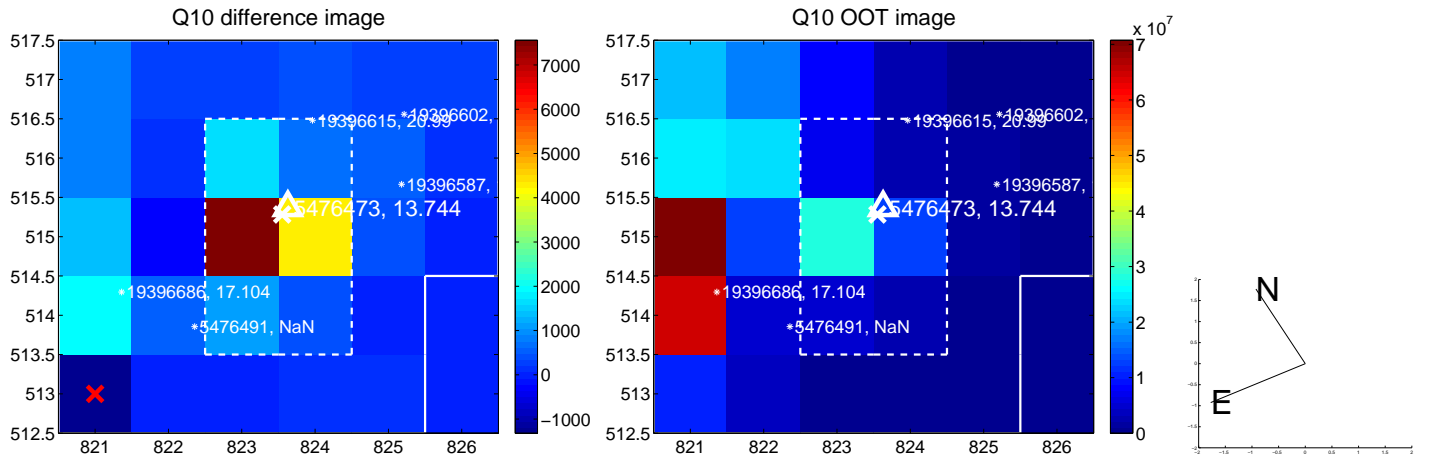
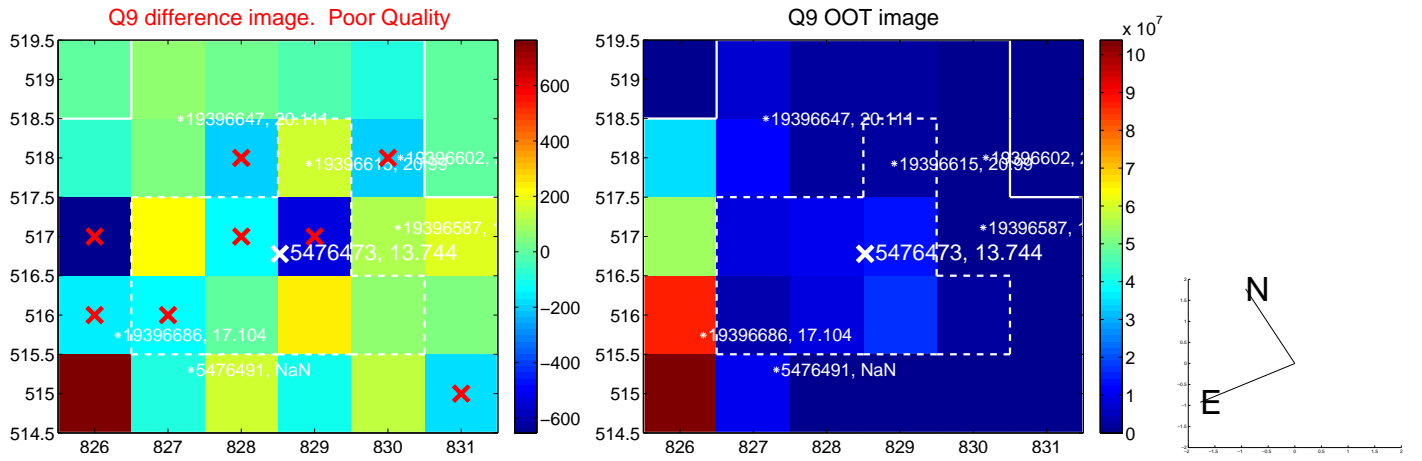
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



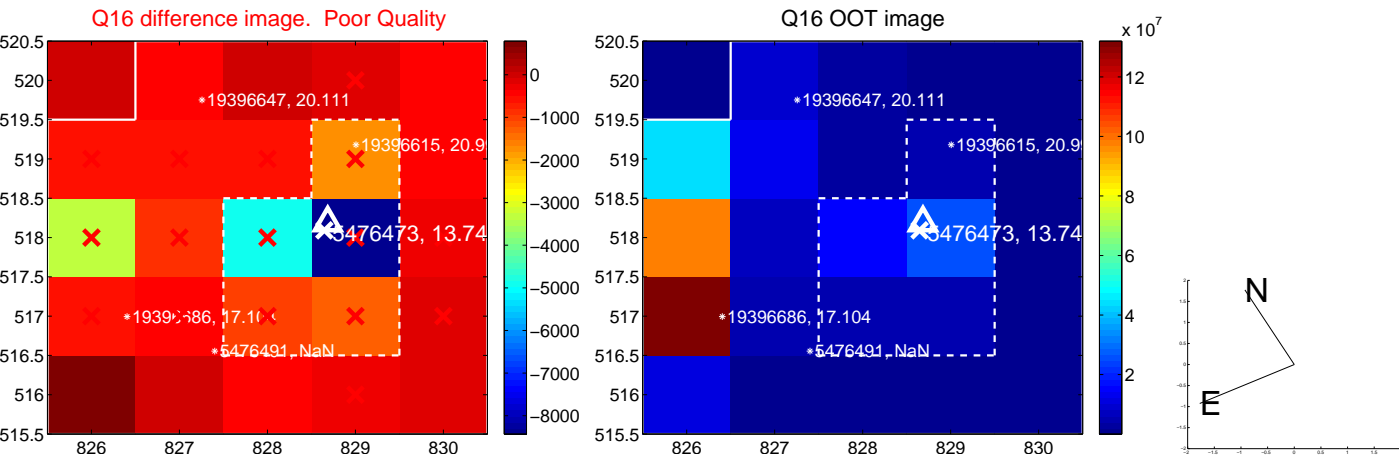
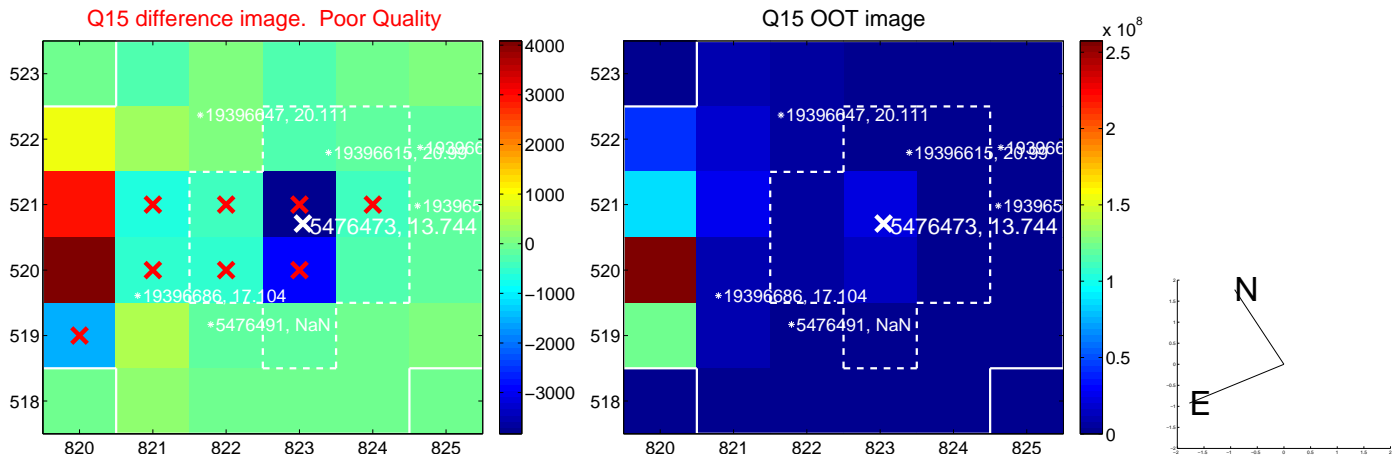
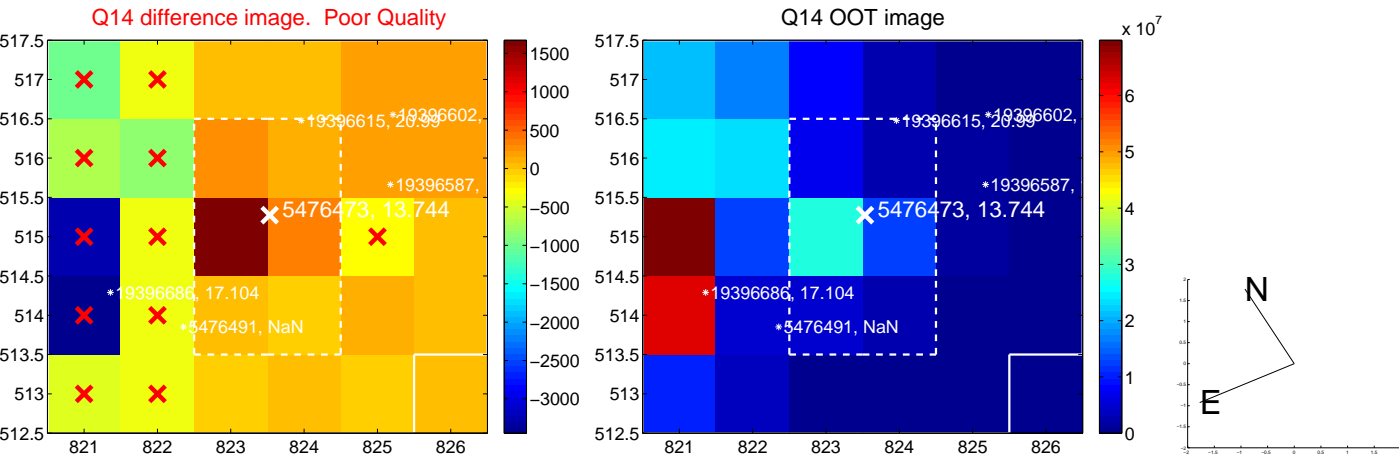
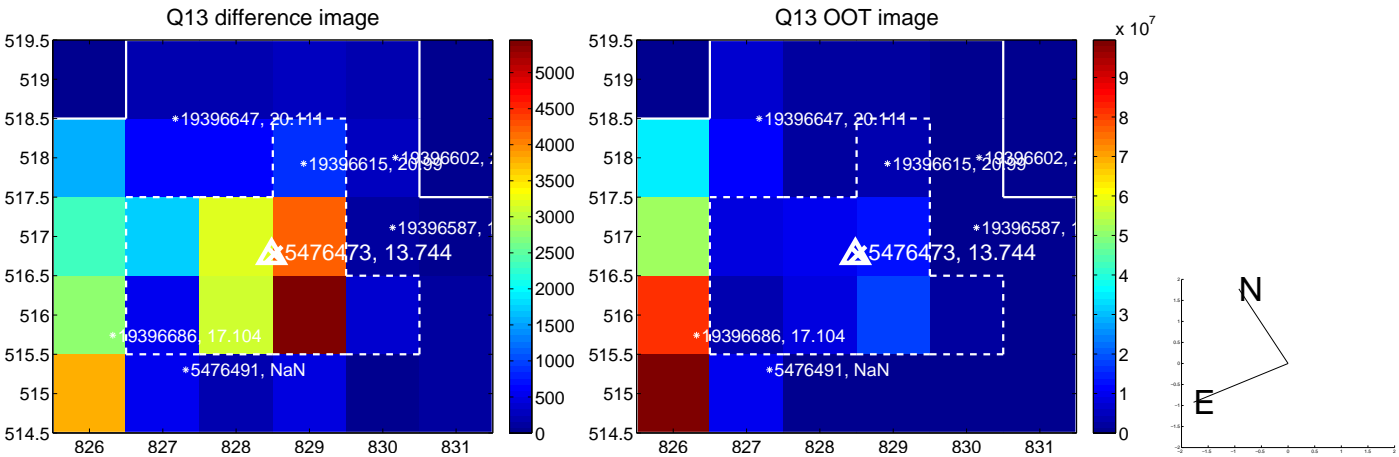
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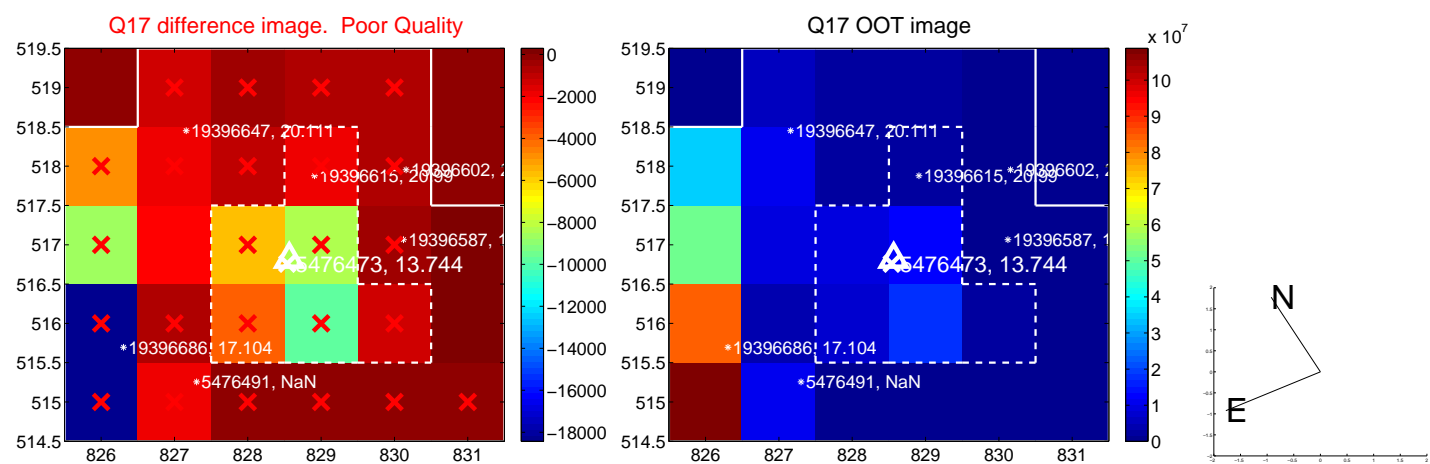
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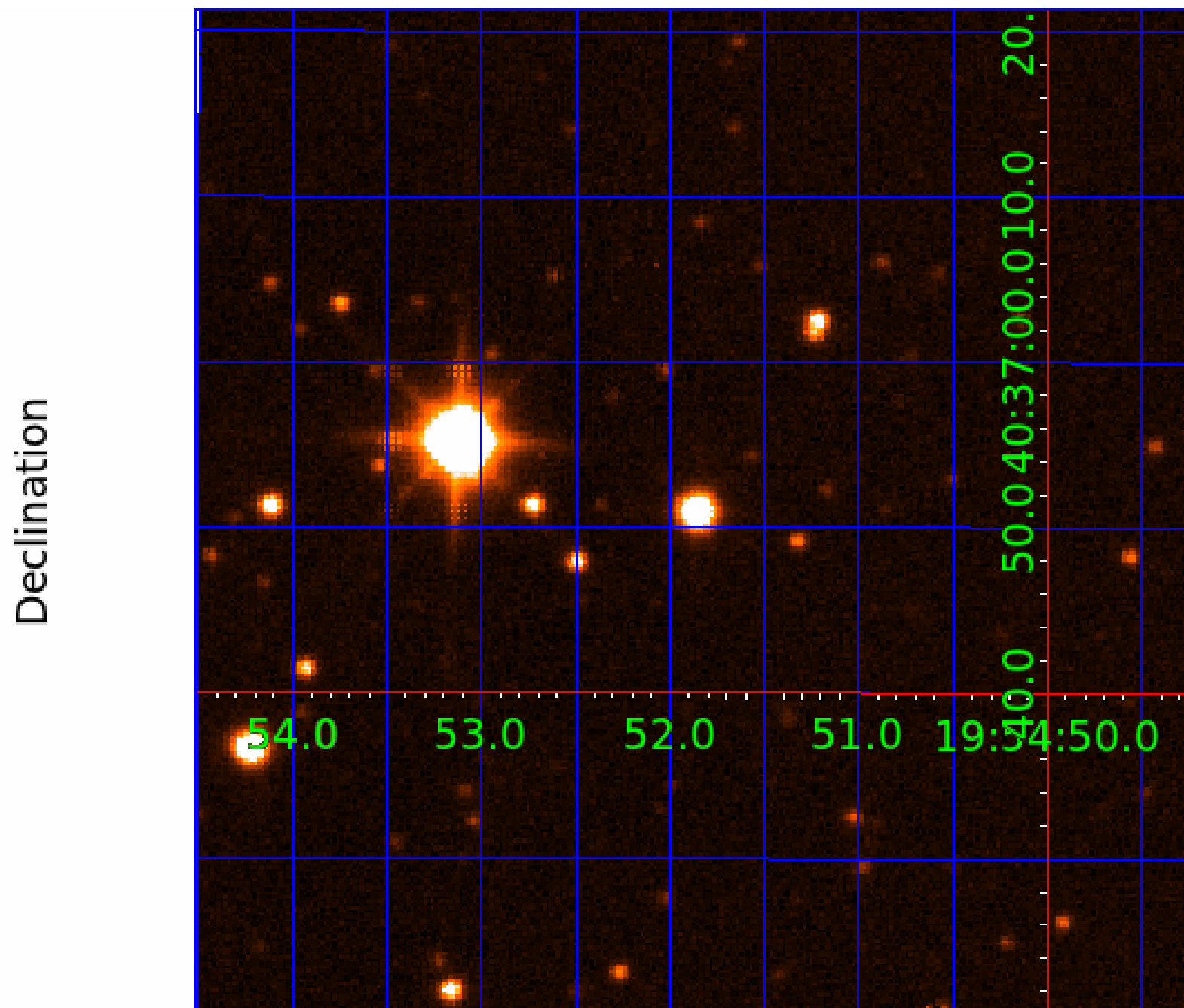


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 005476473

Q1-17 DR25 TCE Parameters

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Robovetter Results

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005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

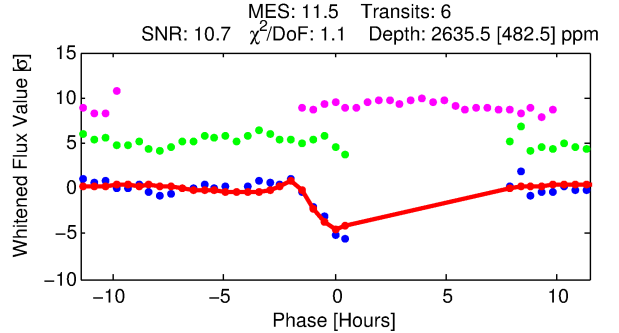
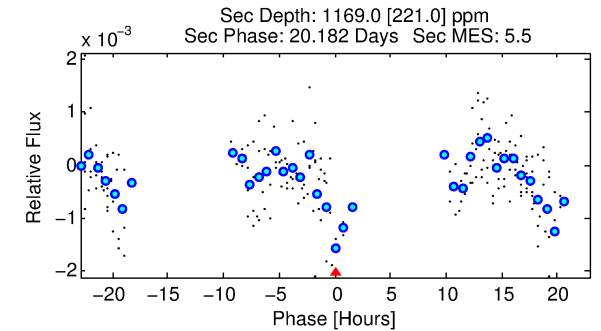
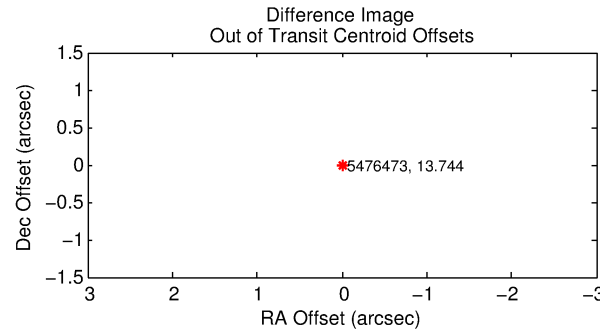
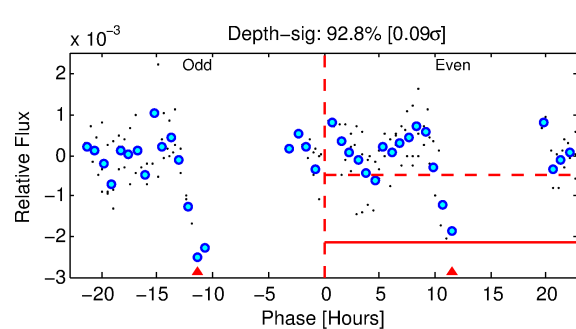
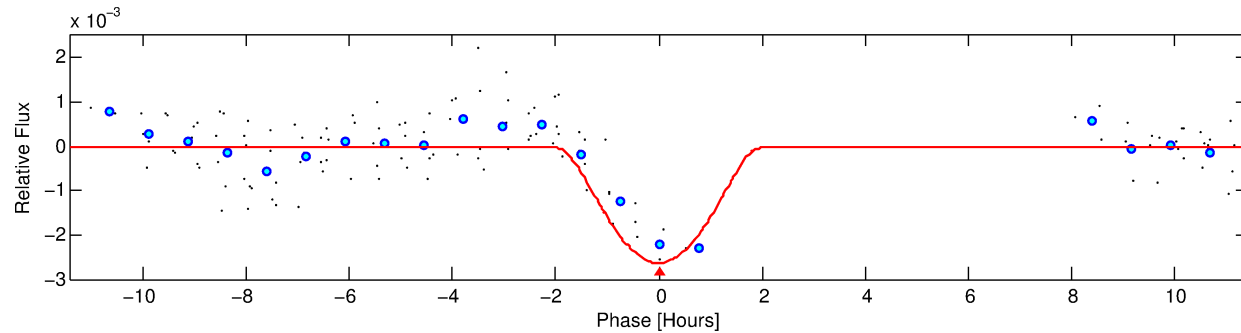
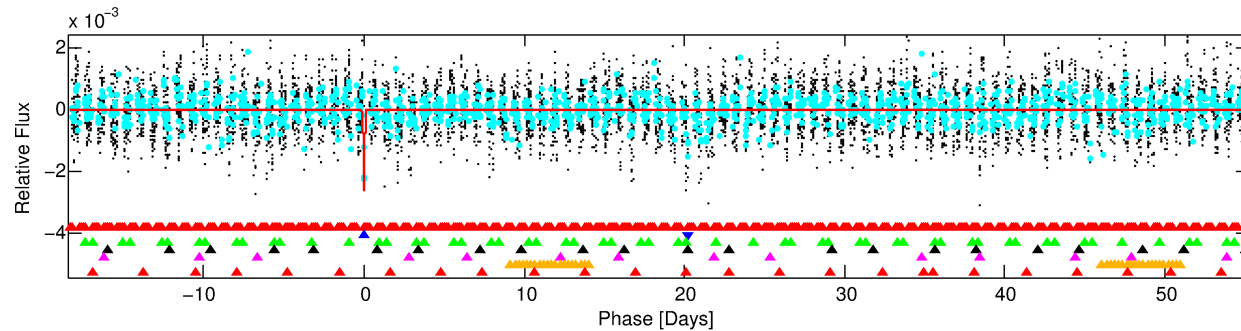
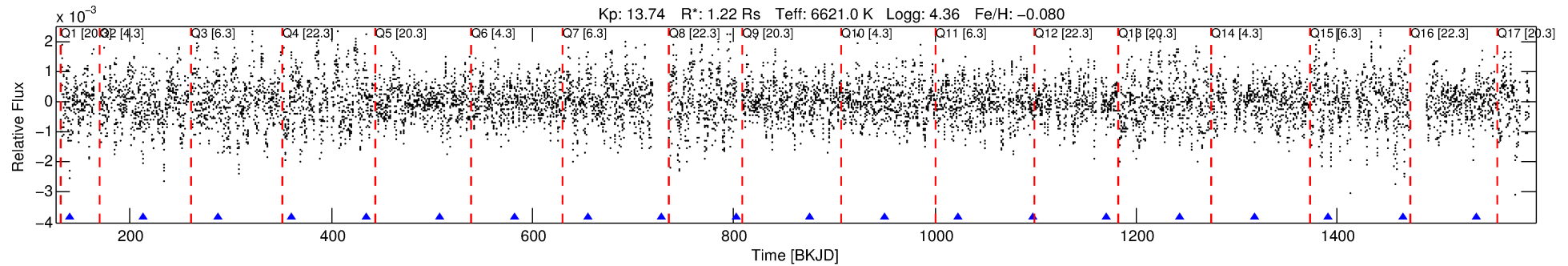
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-02

No Significant Match Found

DV One-Page Summary

KIC: 5476473 Candidate: 2 of 7 Period: 73.602 d



DV Fit Results:

Period = 73.60227 [0.00200] d
Epoch = 140.0524 [0.0106] BKJD
Rp/R* = 0.0863 [0.2777]
a/R* = 62.62 [40.79]
b = 1.00 [0.39]
Seff = 18.85 [7.49]
Teq = 531 [53] K
Rp = 11.48 [37.13] Re
a = 0.3684 [0.0971] AU
Ag = 662.78 [4276.55] [0.15σ]
Teffp = 4168 [6715] K [0.54σ]

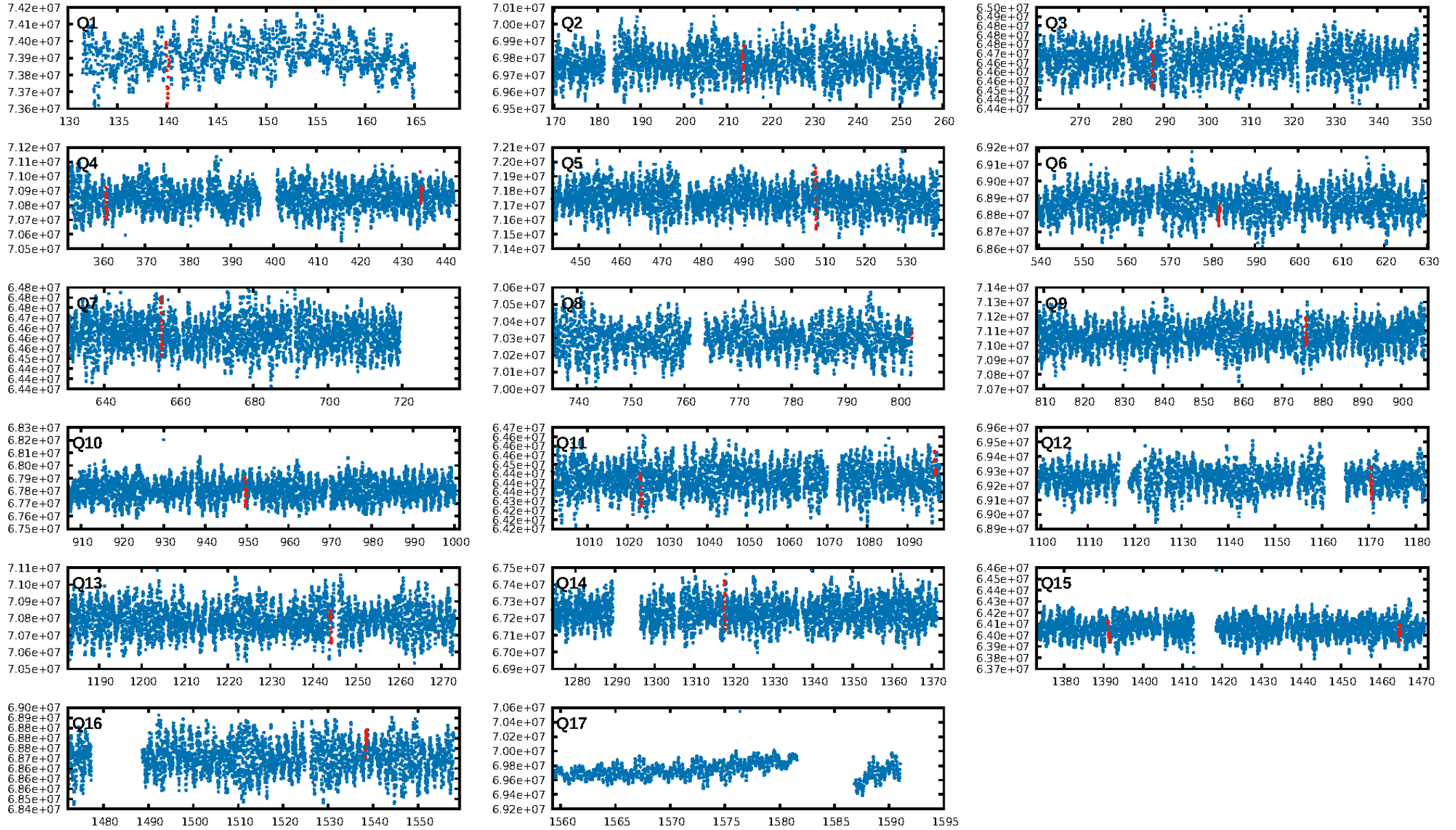
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.78σ]
LongPeriod-sig: 100.0% [161.34σ]
ModelChiSquare2-sig: 64.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.307
Centroid-sig: 8.2%
Centroid-so: 3.302 arcsec [15.69σ]
OotOffset-rm: N/A
KicOffset-rm: 0.116 arcsec [0.84σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 4/1/0/1 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.00 [0/15]

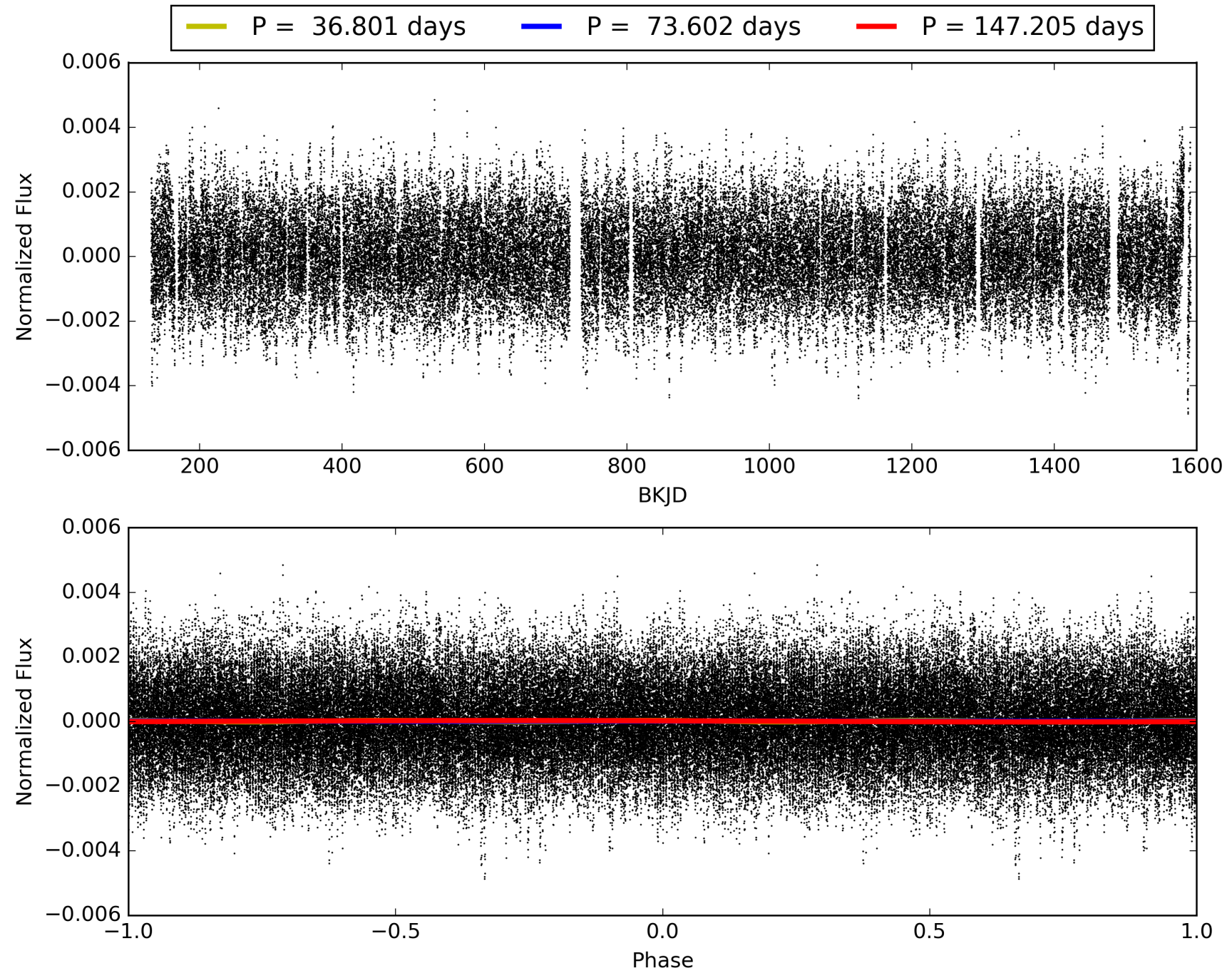
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:50:46 Z

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

TCE 005476473-02, PDC Light Curves

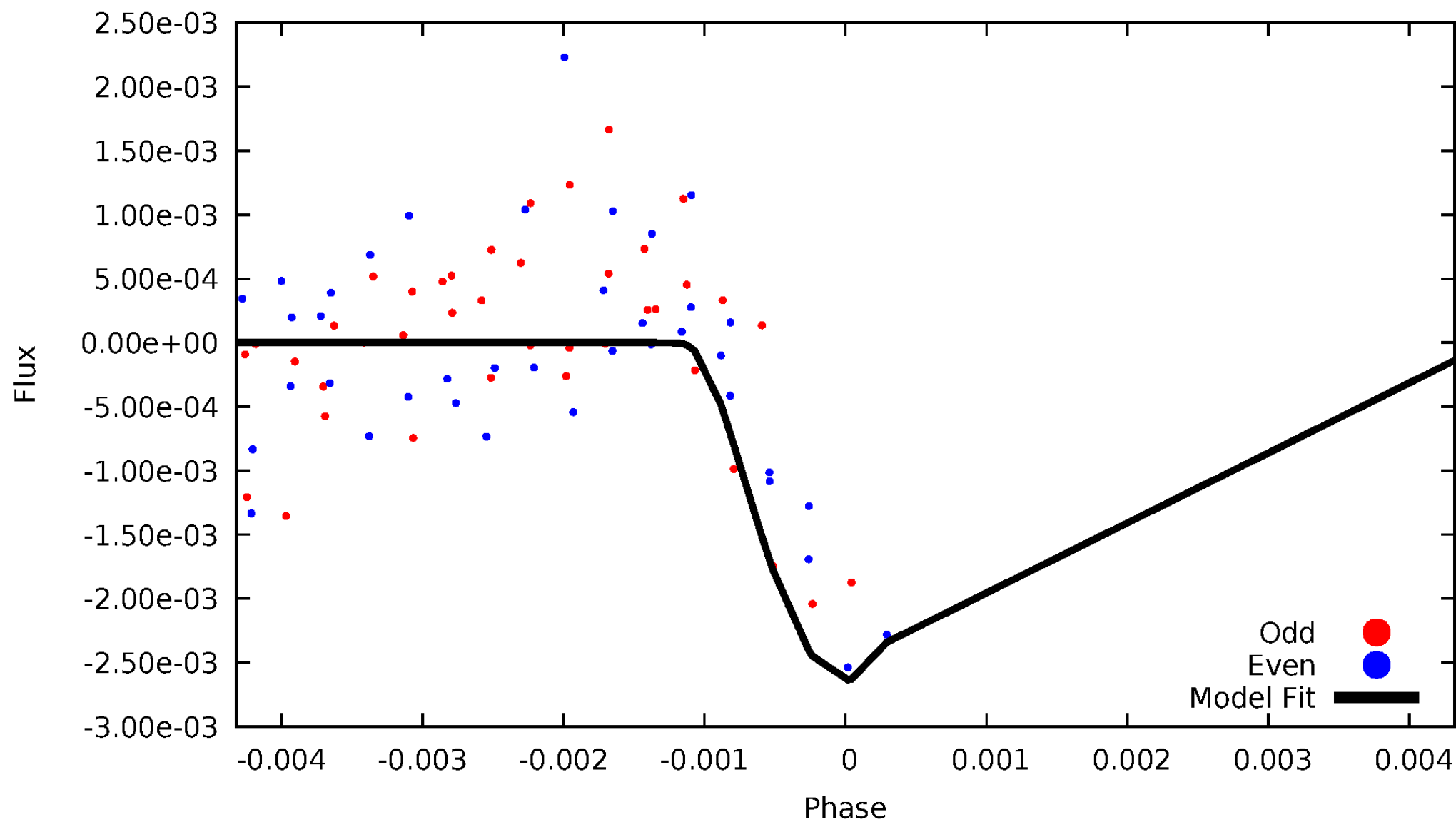


TCE 005476473-02



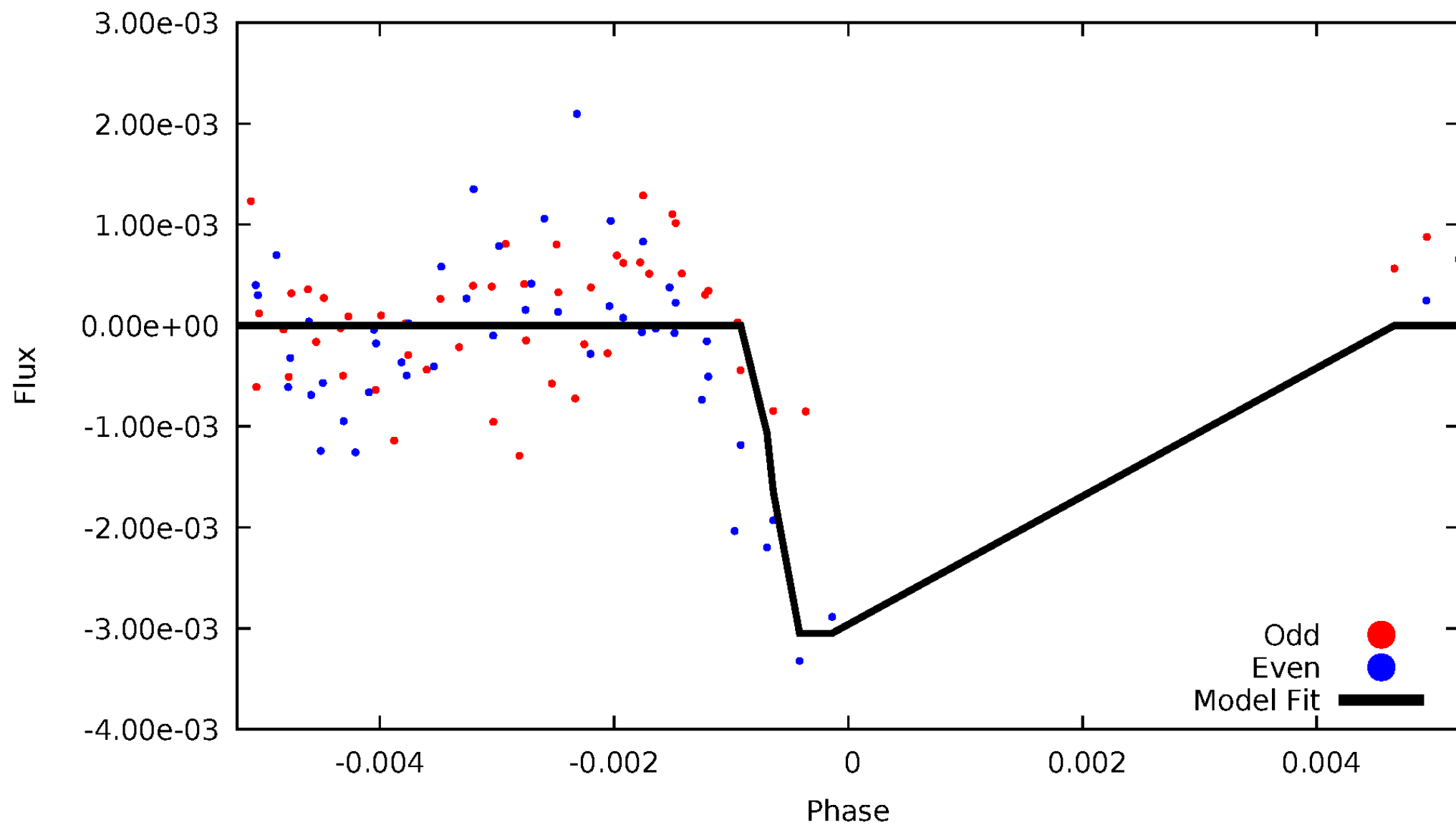
DV Odd/Even

TCE 005476473-02



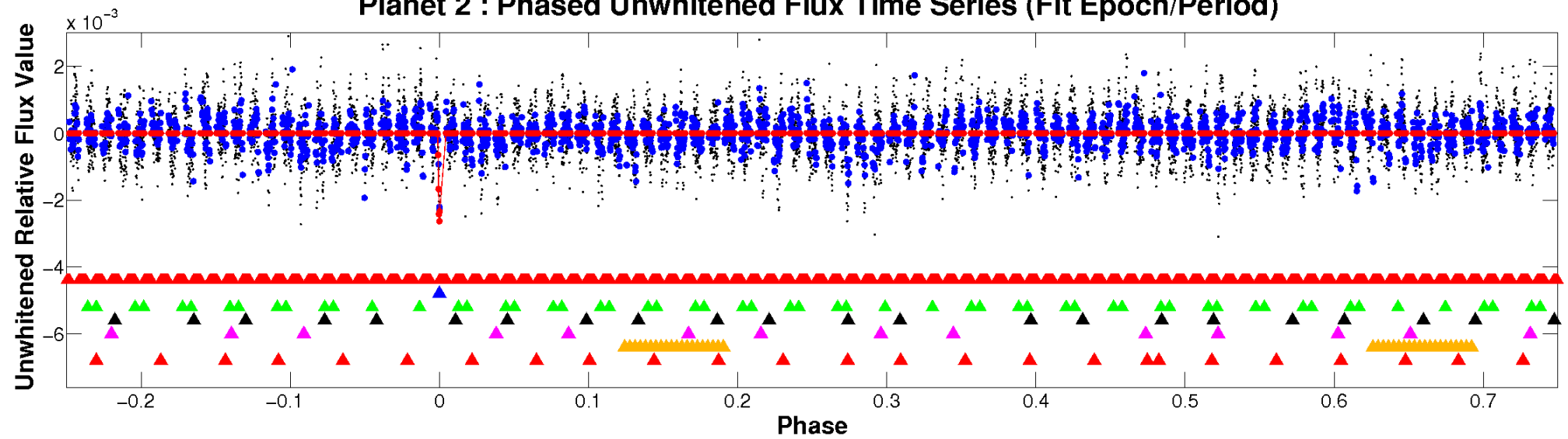
ALT Odd/Even

TCE 005476473-02

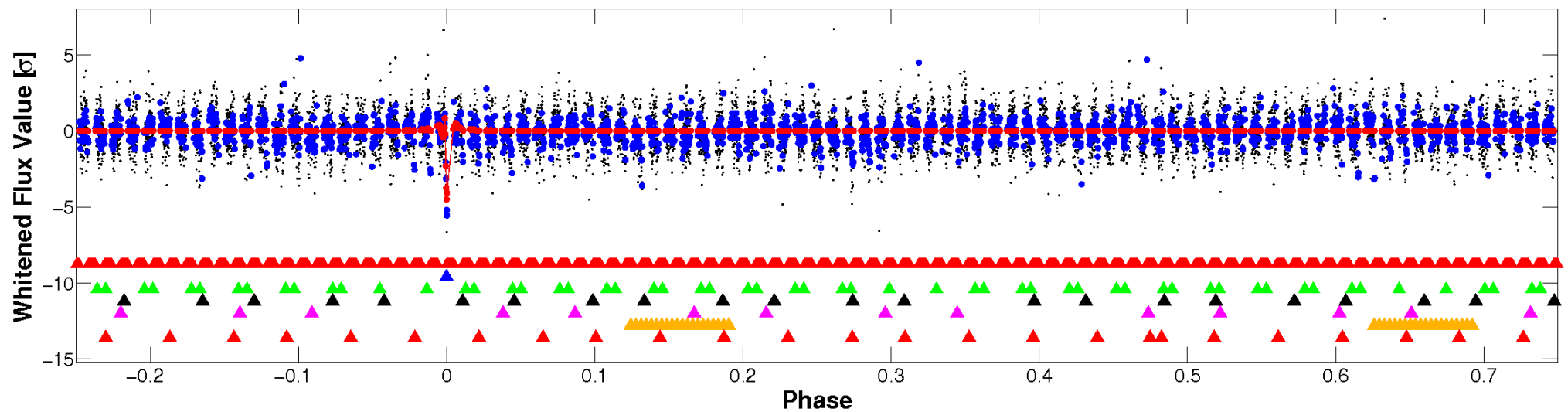


Non-Whitened Vs. Whitened Light Curve

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

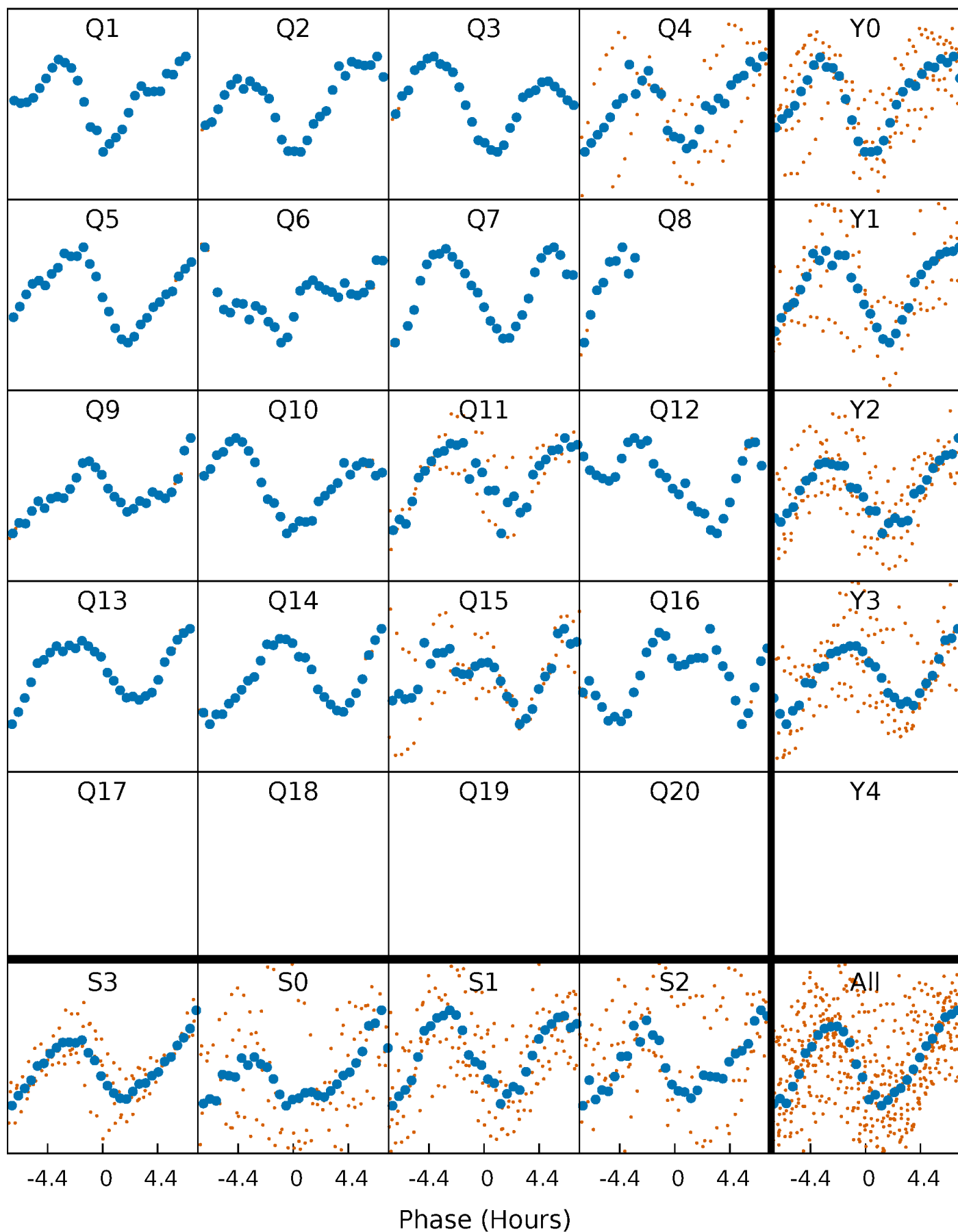


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



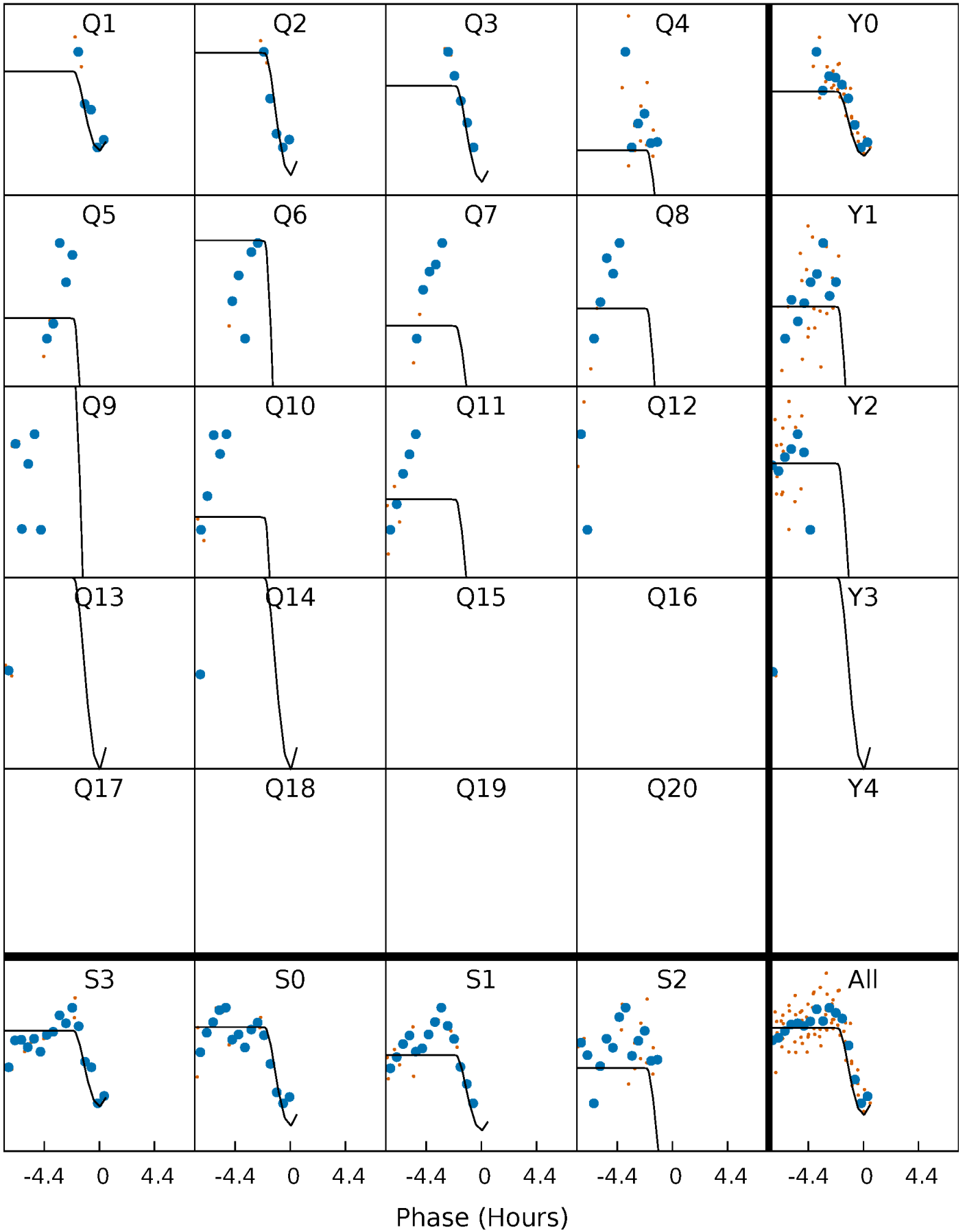
PDC Quarter-Phased Transit Curves

TCE 005476473-02 P= 73.602269 Days $T_0=140.052375$ (BKJD)



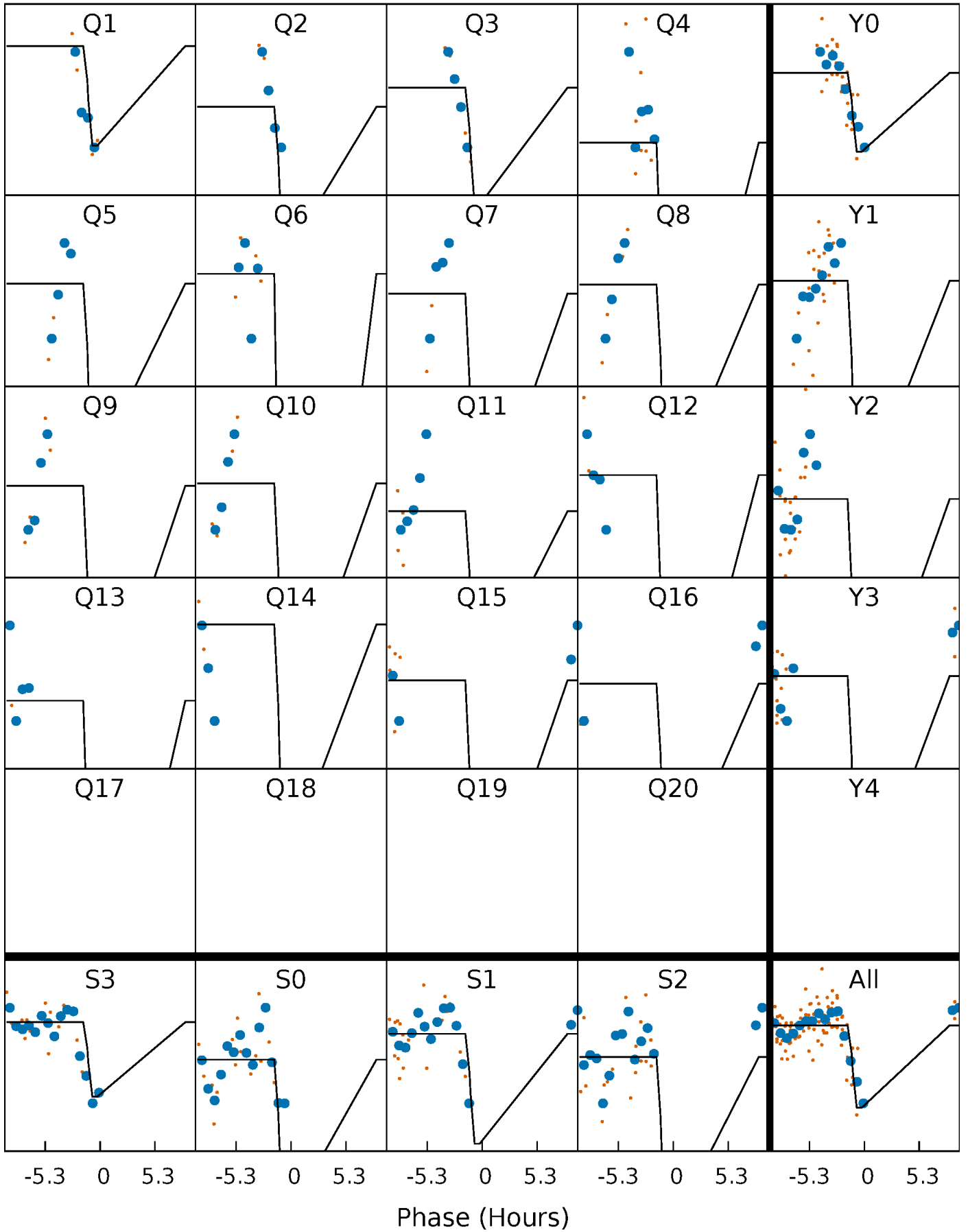
DV Quarter-Phased Transit Curves

TCE 005476473-02 P= 73.602269 Days $T_0=140.052375$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

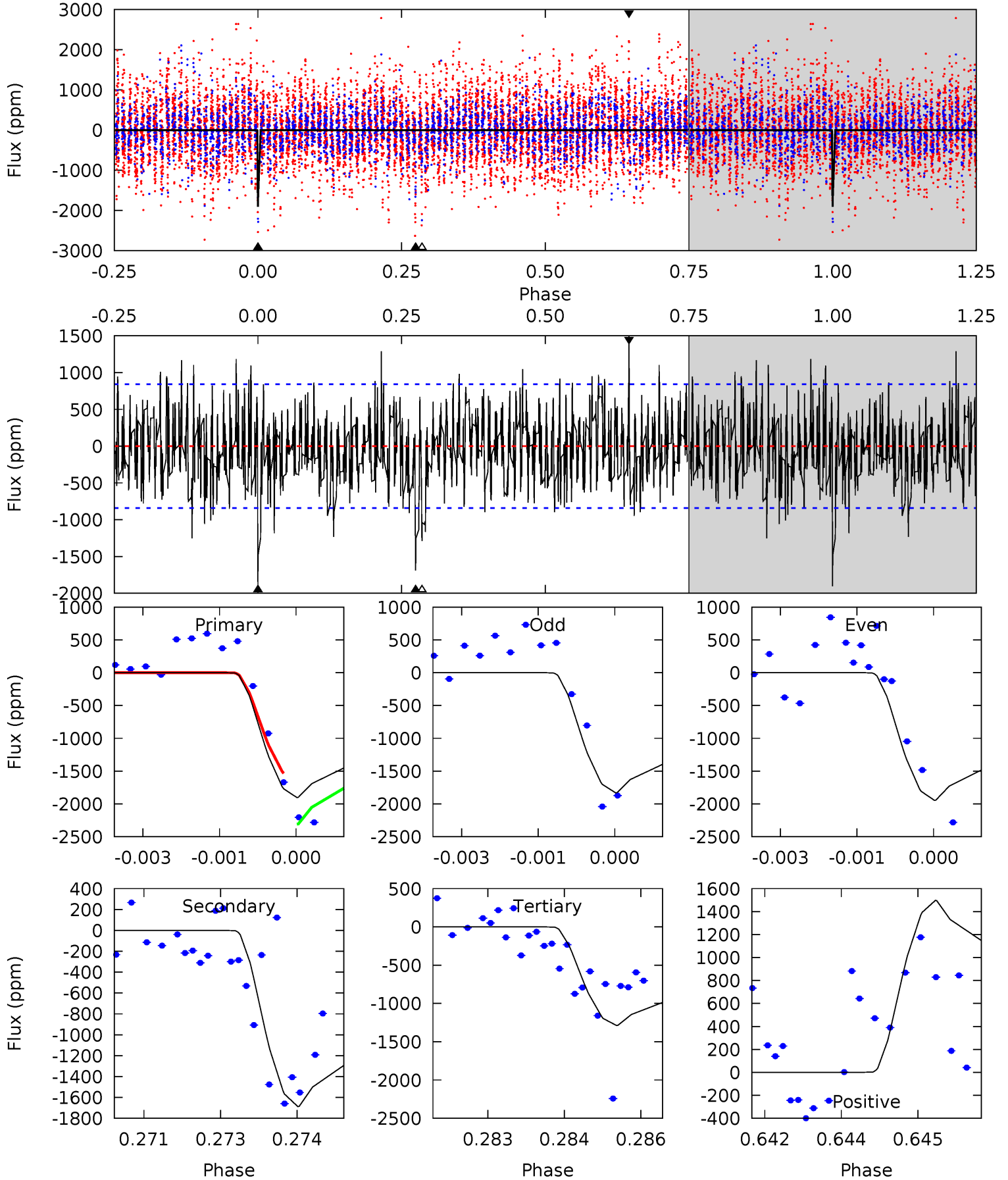
TCE 005476473-02 P= 73.600250 Days $T_0=140.084290$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-02, P = 73.602269 Days, E = 66.450106 Days

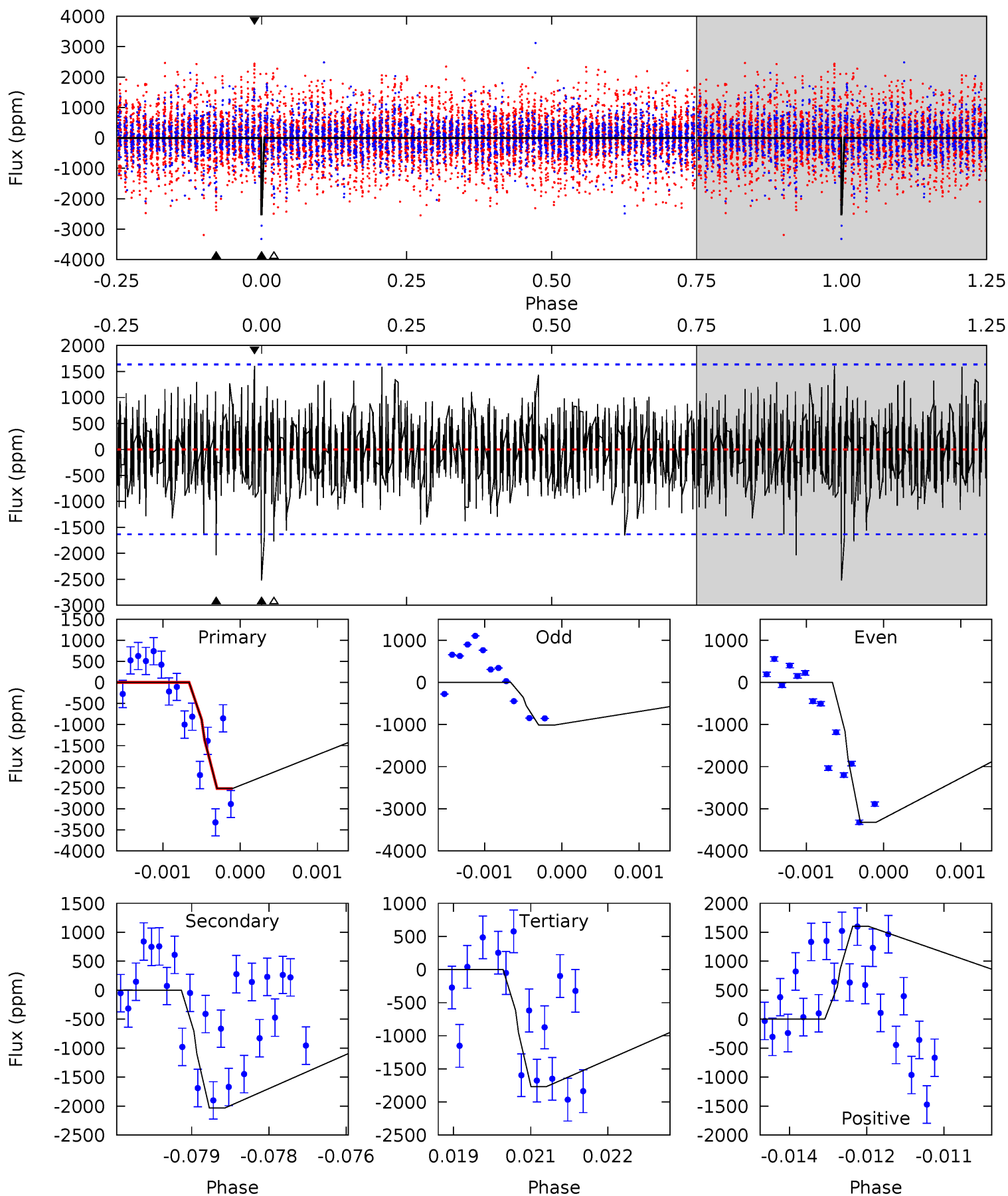
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	10.8	8.24	9.58	5.39	3.19	2.45	3.94	2.60	2.56	1.22	0.37	0.70	0.44	1.59



Alt Model-Shift Uniqueness Test

005476473-02, P = 73.600250 Days, E = 66.484040 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.31	6.71	5.83	5.29	5.39	3.20	1.41	2.48	3.02	0.87	1.42	3.72	0	0.39	0



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1688 ± 156	$31.58^{+30.70}_{-21.39}$	753^{+54}_{-38}	3327^{+1754}_{-561}	122^{+1091}_{-90}
Alt.	-2033 ± 303	$30.08^{+29.53}_{-20.46}$	751^{+54}_{-38}	3492^{+1841}_{-642}	168^{+1509}_{-126}

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

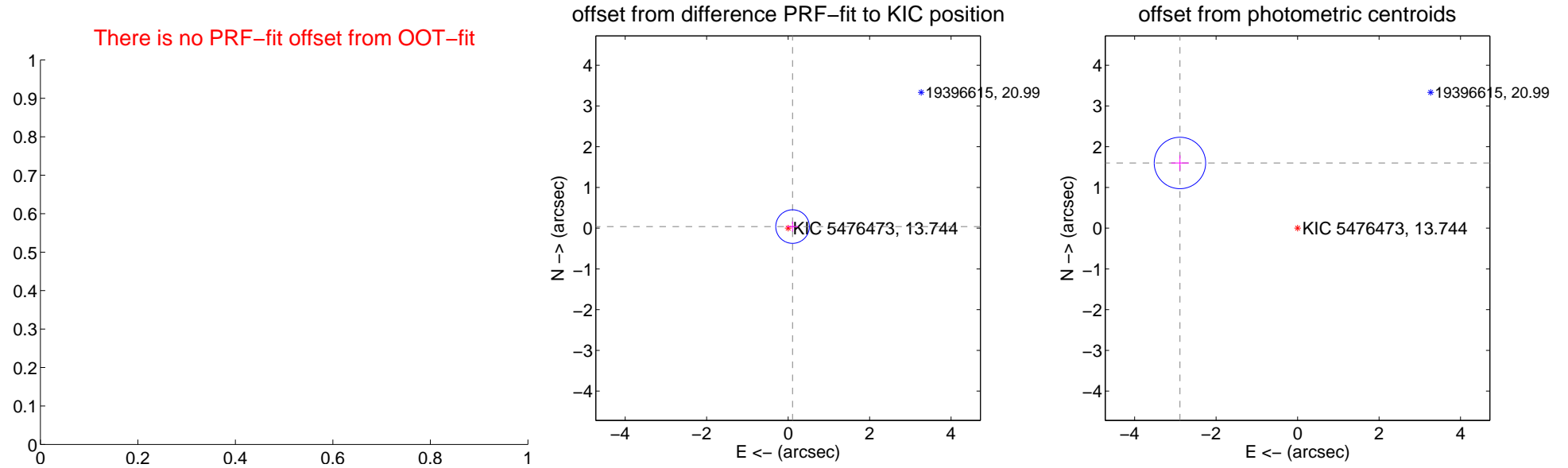
DV Centroid Data

Supplemental centroid analysis for 005476473-02. Kepler magnitude: 13.74. Transit SNR 10.74

There are 2 quarters with good PRF difference image offsets

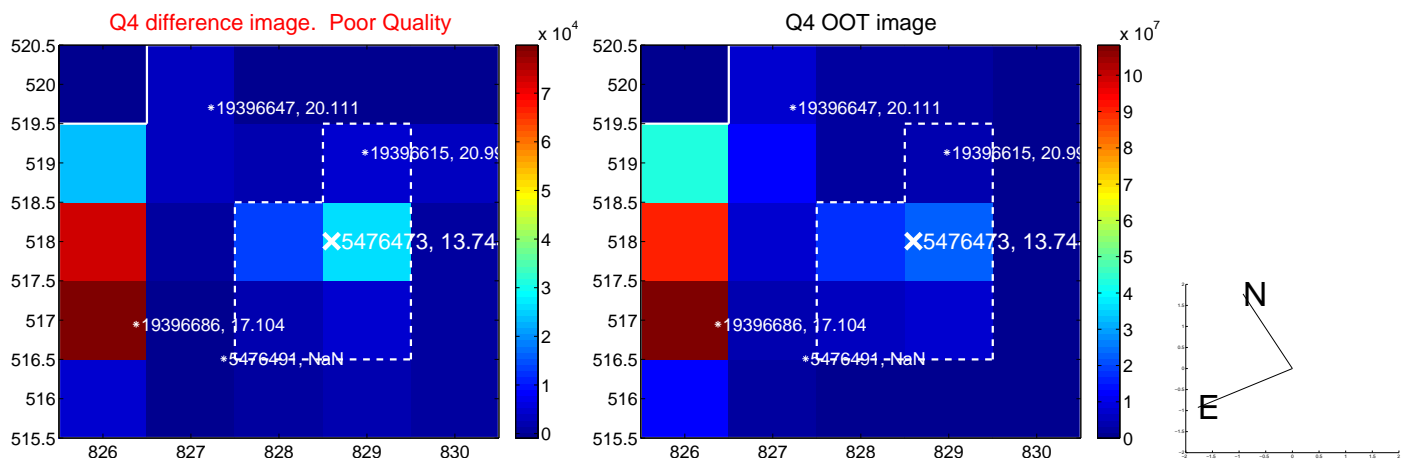
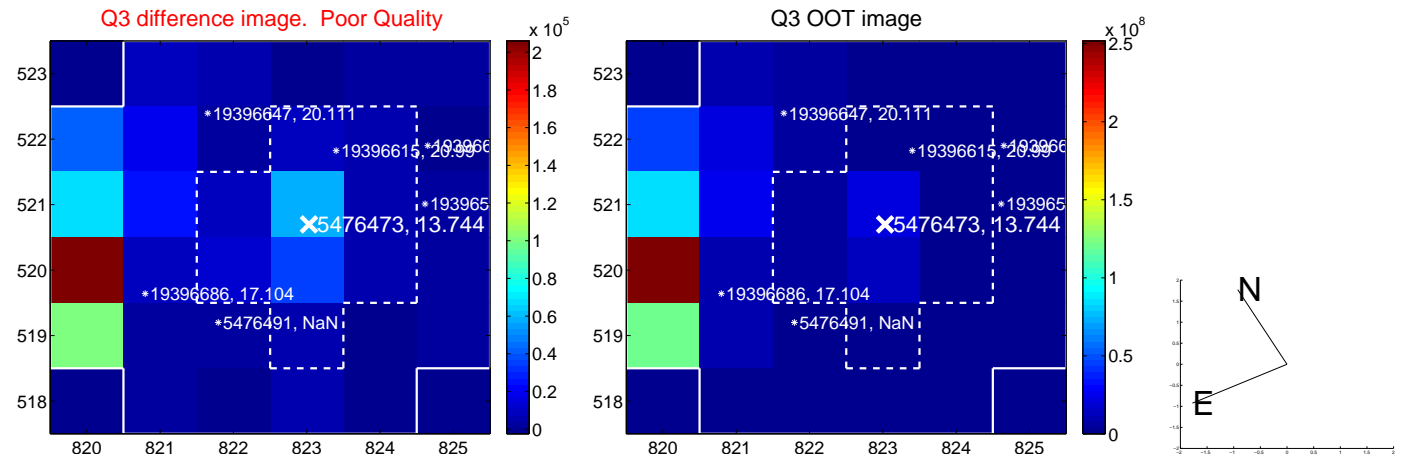
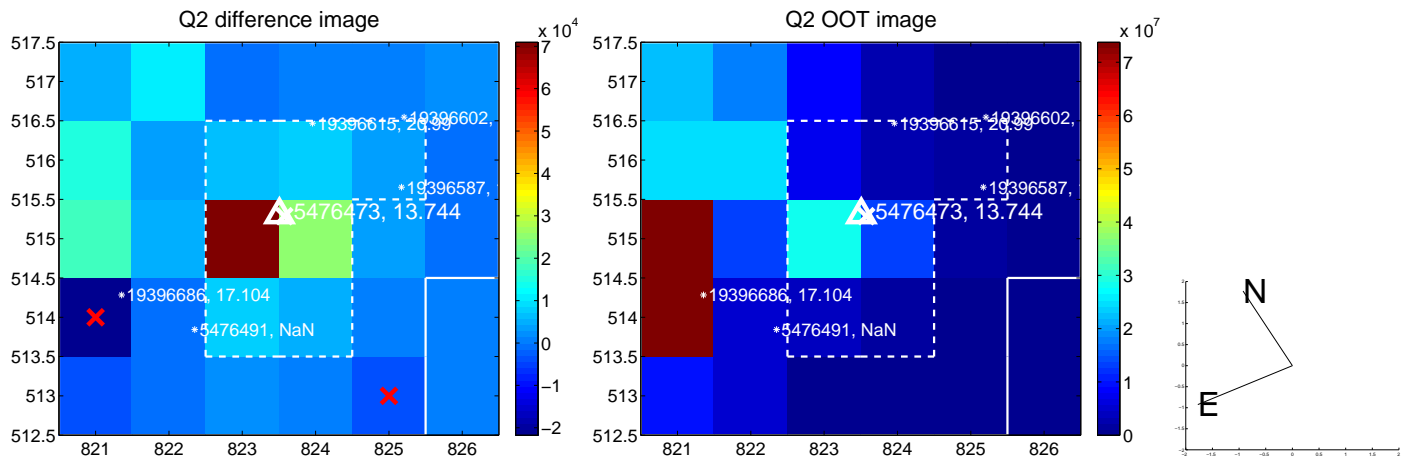
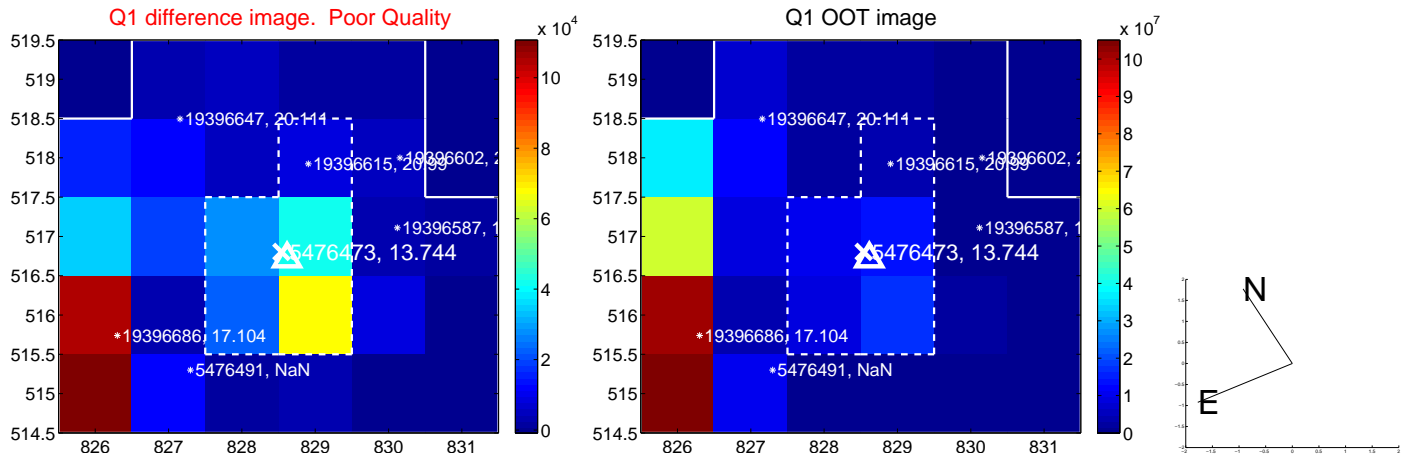
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.116 ± 0.137	0.84	-0.109 ± 0.139	0.039 ± 0.122
photometric centroid source offset	3.30 ± 0.21	15.69	2.89 ± 0.22	1.60 ± 0.19

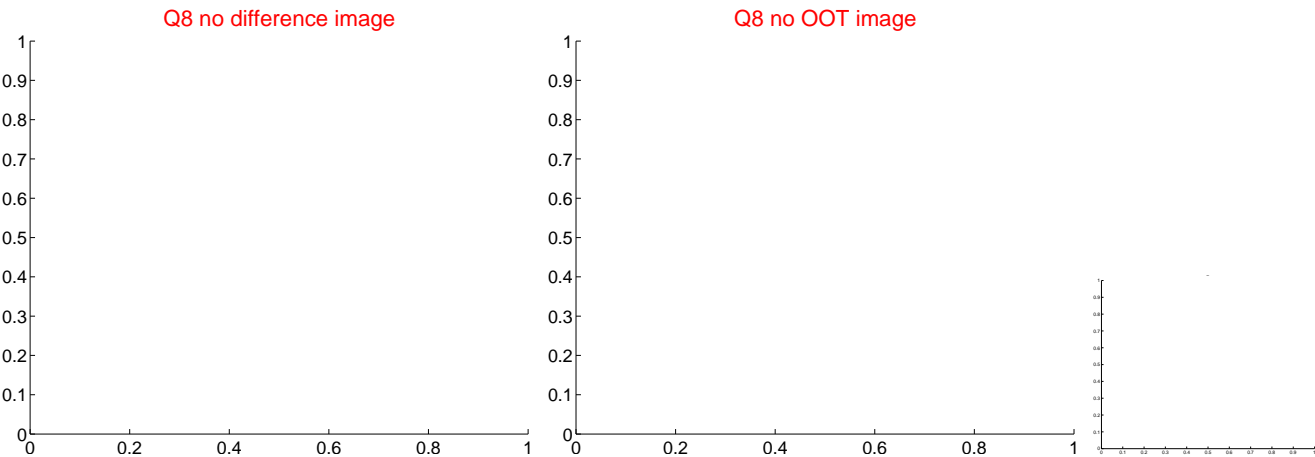
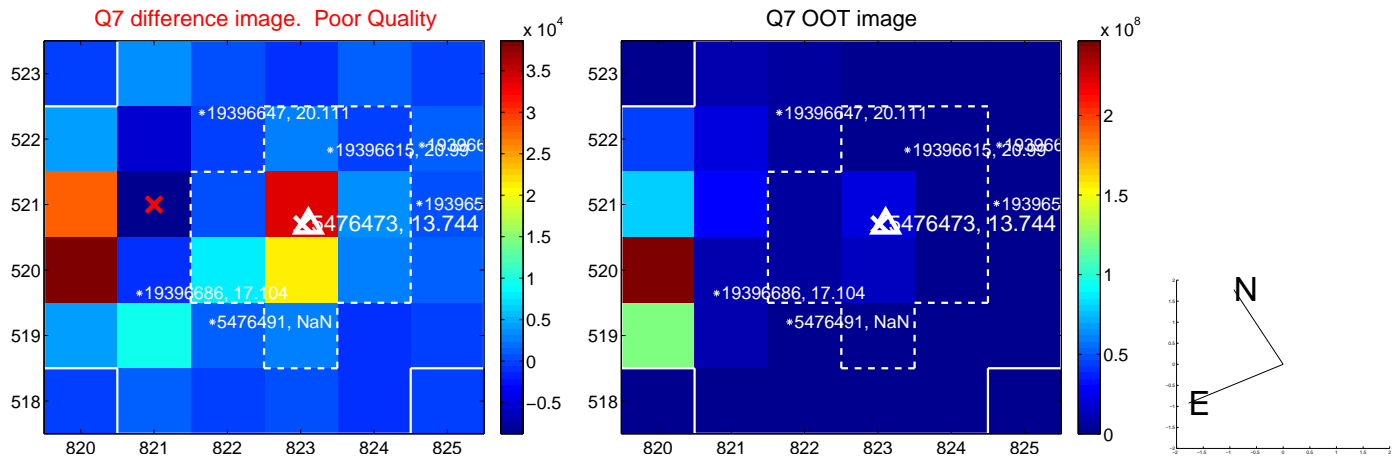
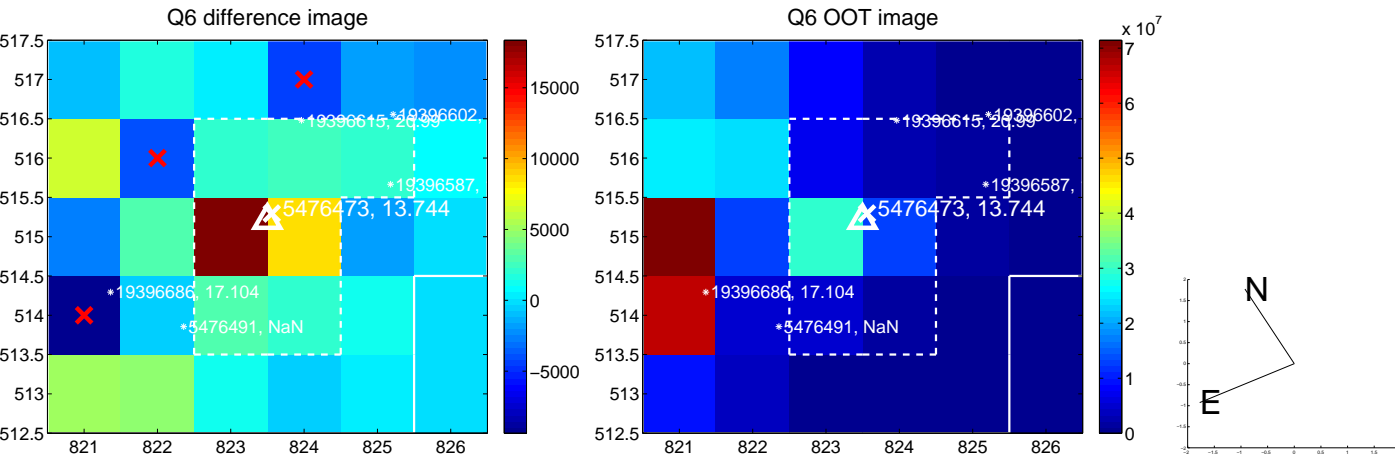
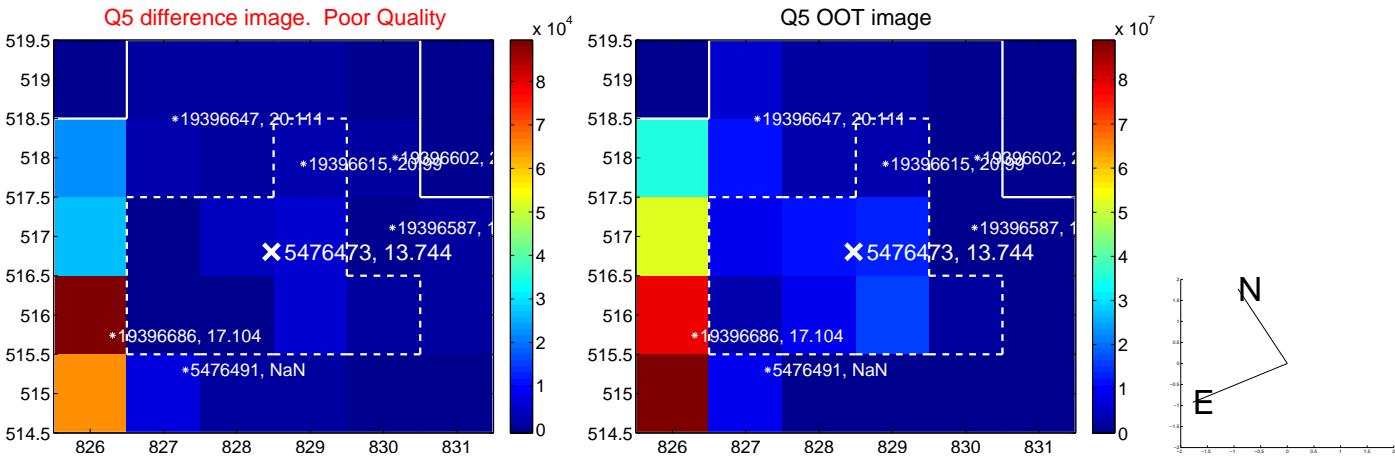


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

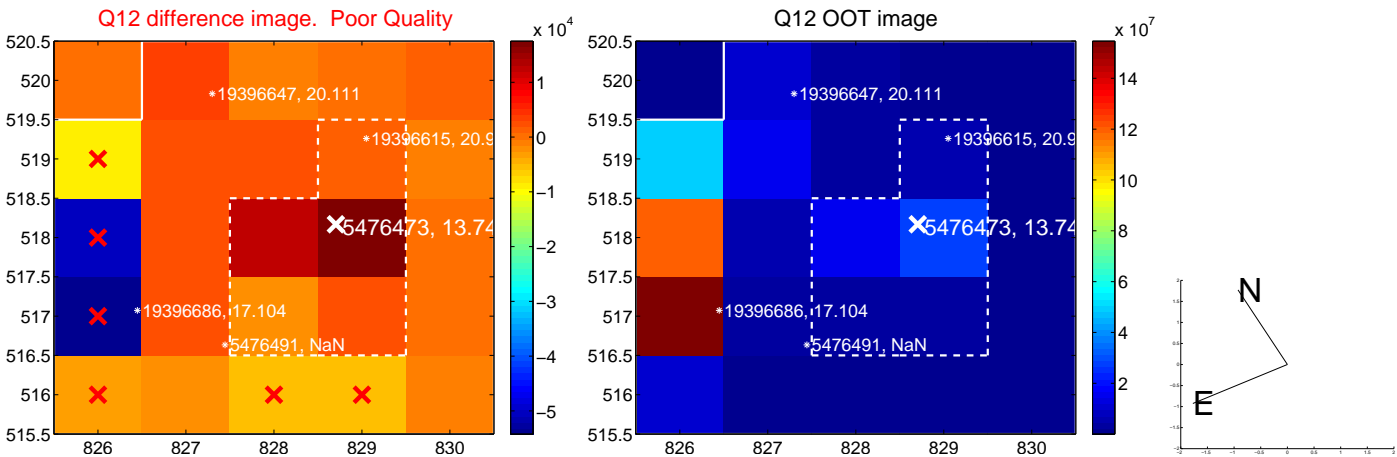
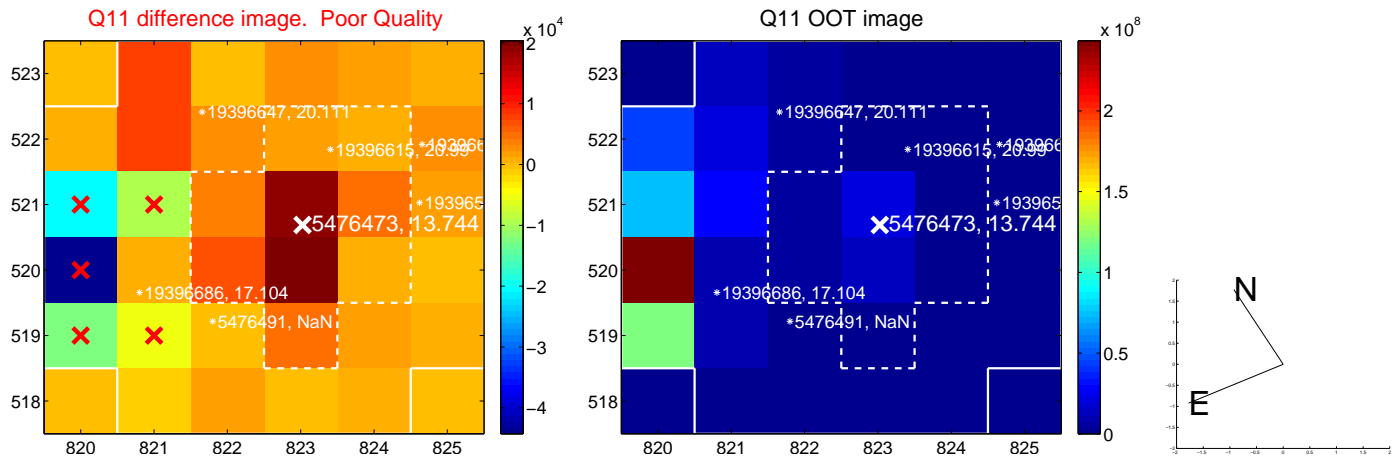
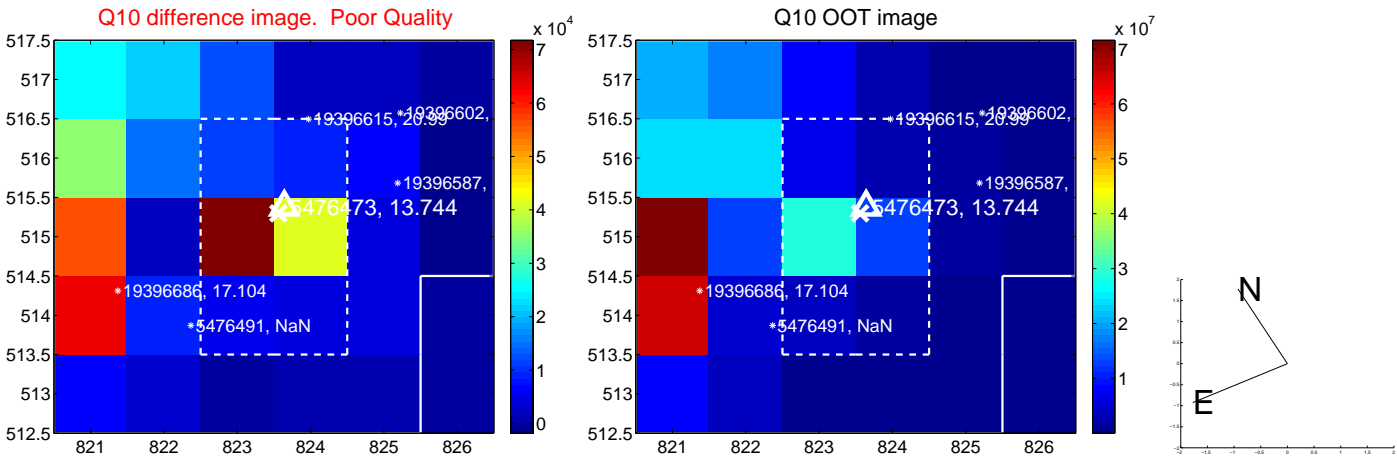
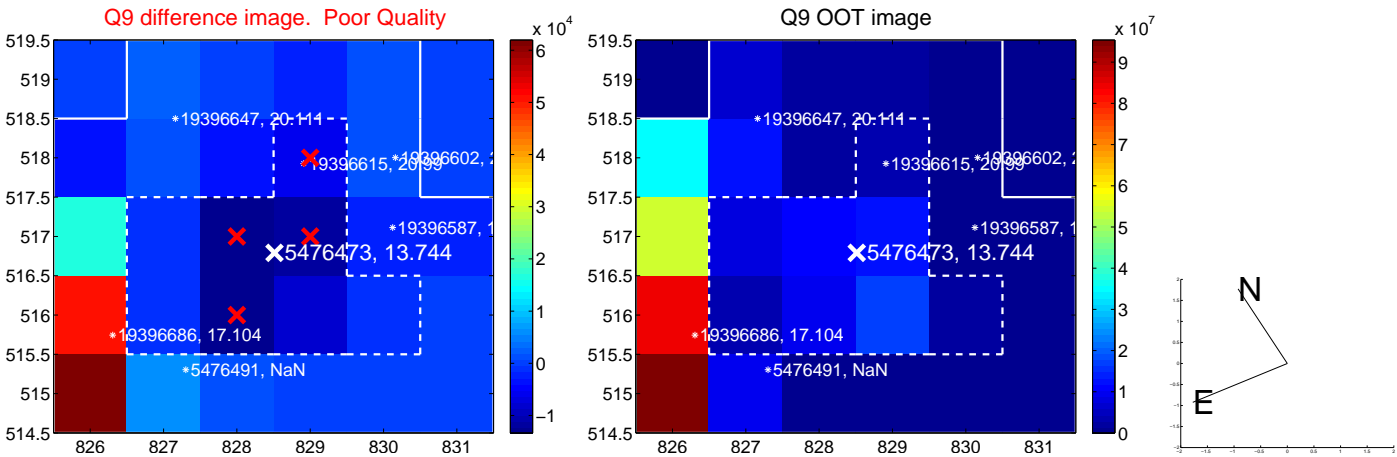
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



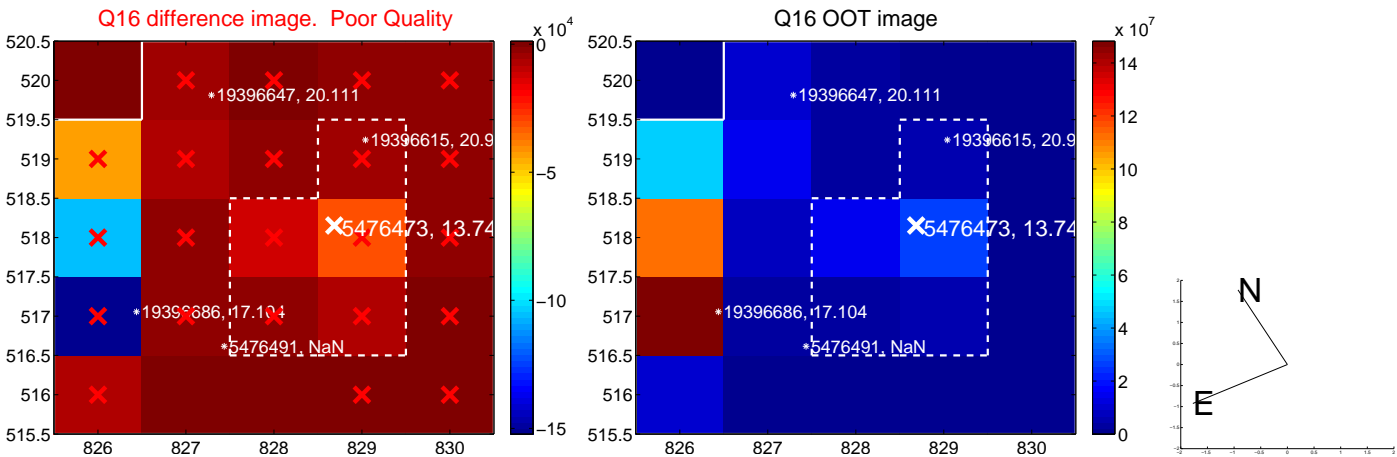
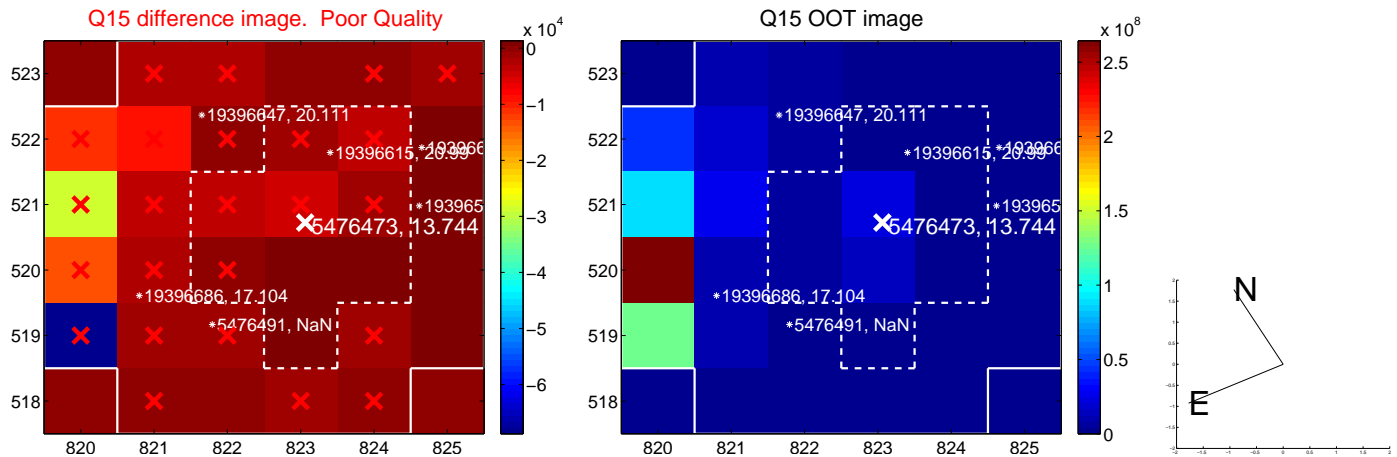
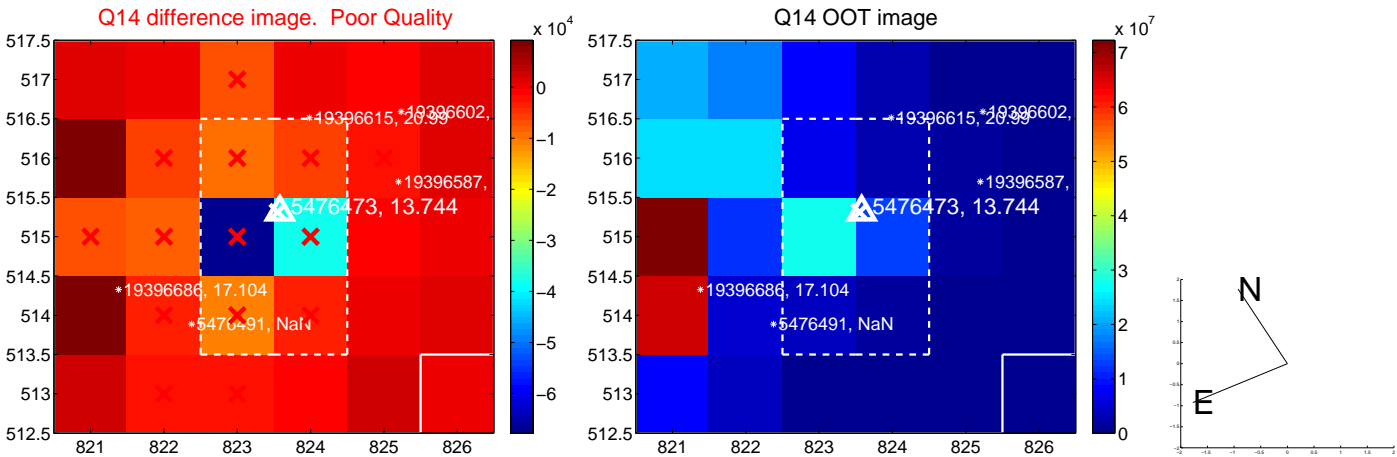
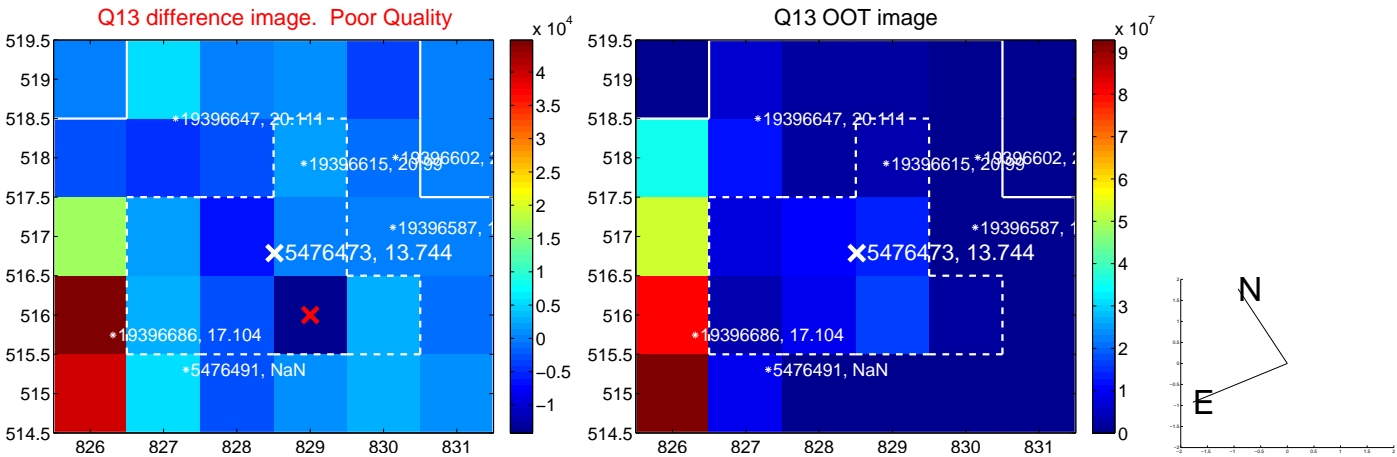
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



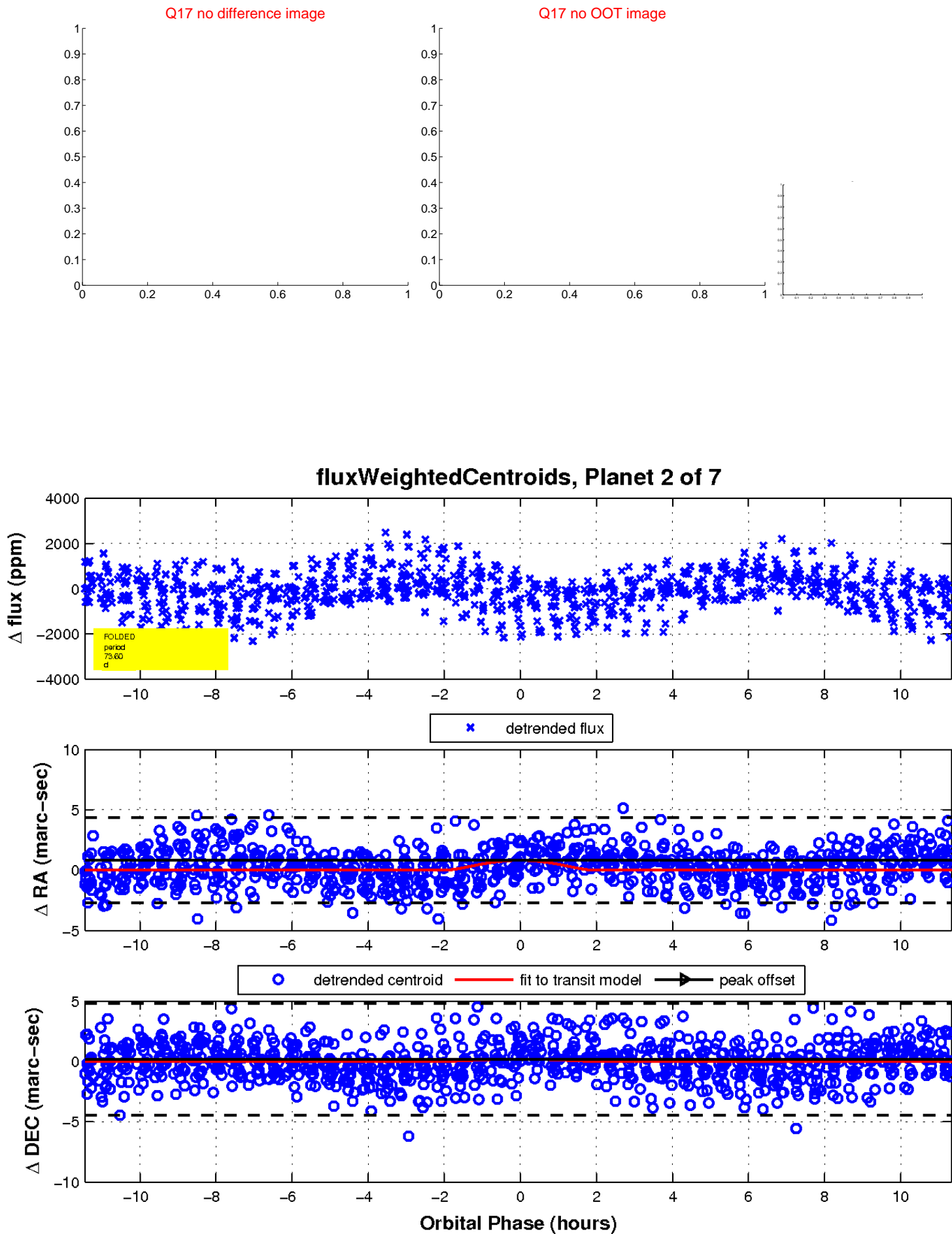
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

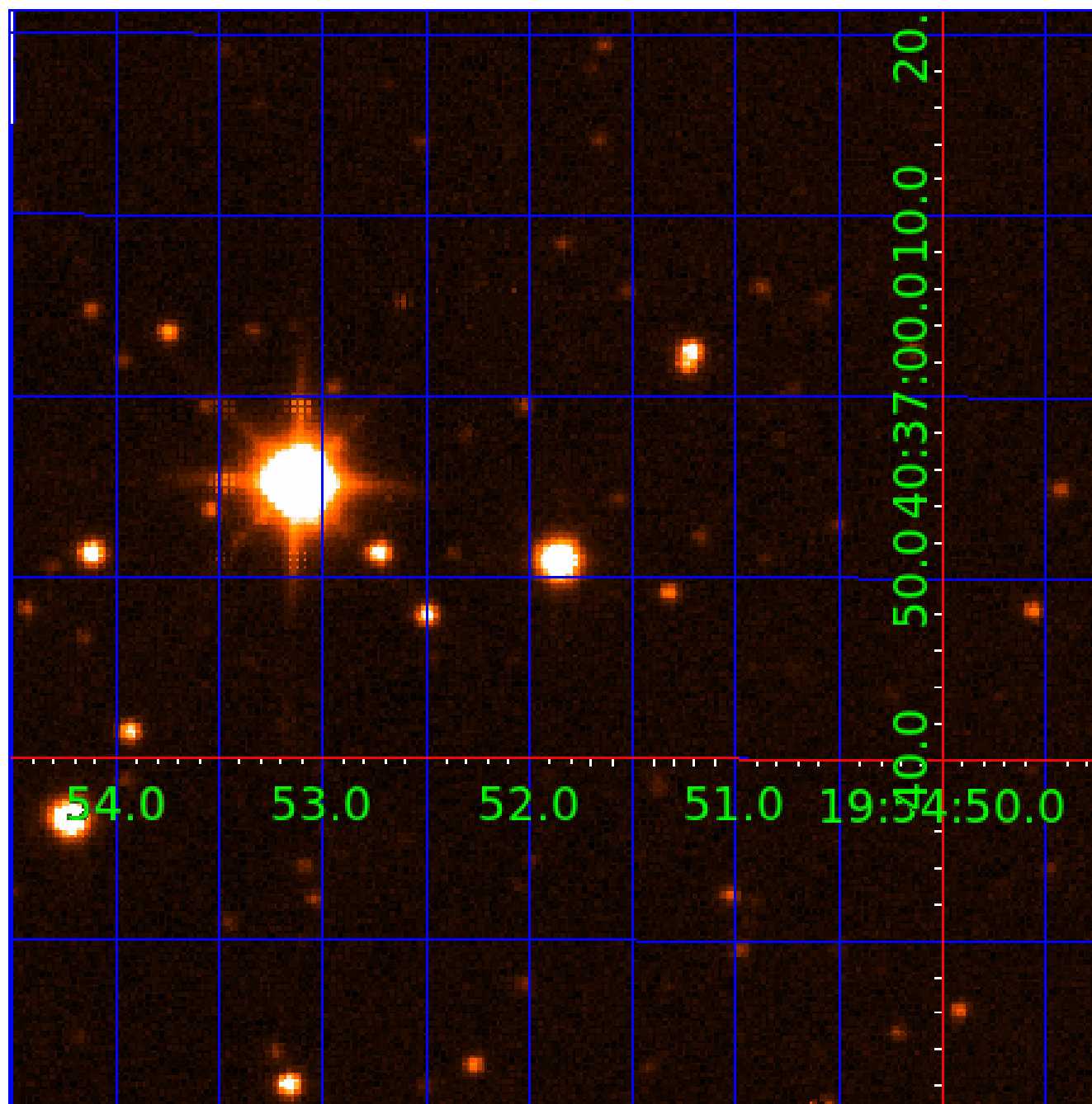


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005476473

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})
005476473-01	OBS	No	0.808595	131.529527	0.0	5.357	10.2	0.0	1.22	6621	0.00	7719.98
005476473-02	OBS	No	73.602269	140.052375	2635.5	3.815	11.5	10.7	1.22	6621	11.47	18.85
005476473-03	OBS	No	25.313932	140.994912	282.9	5.092	10.0	3.9	1.22	6621	2.34	78.24
005476473-04	OBS	No	67.143714	160.228557	1439.9	4.070	9.3	7.5	1.22	6621	8.64	21.31
005476473-05	OBS	No	105.656608	203.392003	1159.6	2.860	8.4	7.7	1.22	6621	7.42	11.64
005476473-06	OBS	No	36.929269	149.201170	1151.4	1.637	8.0	7.2	1.22	6621	4.45	47.29
005476473-07	OBS	No	58.244842	175.562114	1769.9	3.827	8.9	9.5	1.22	6621	6.35	25.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476473-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS
005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

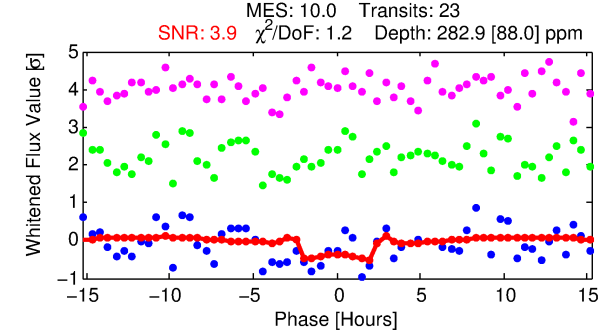
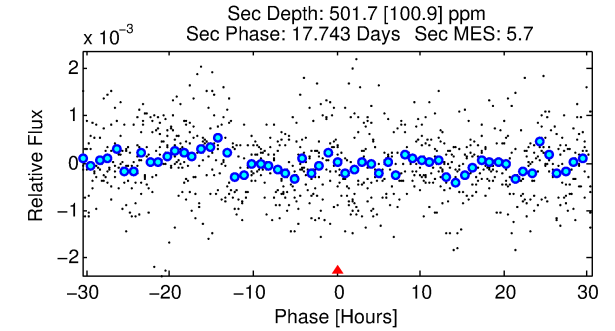
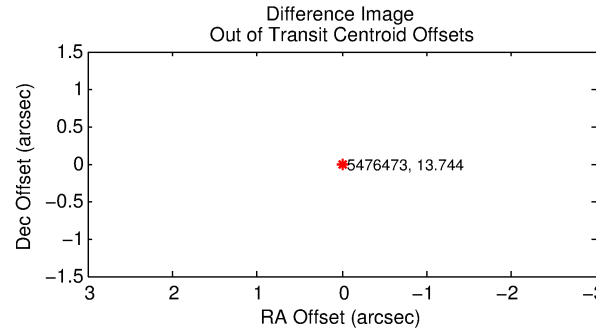
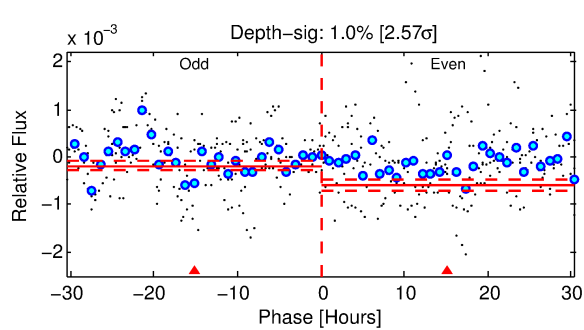
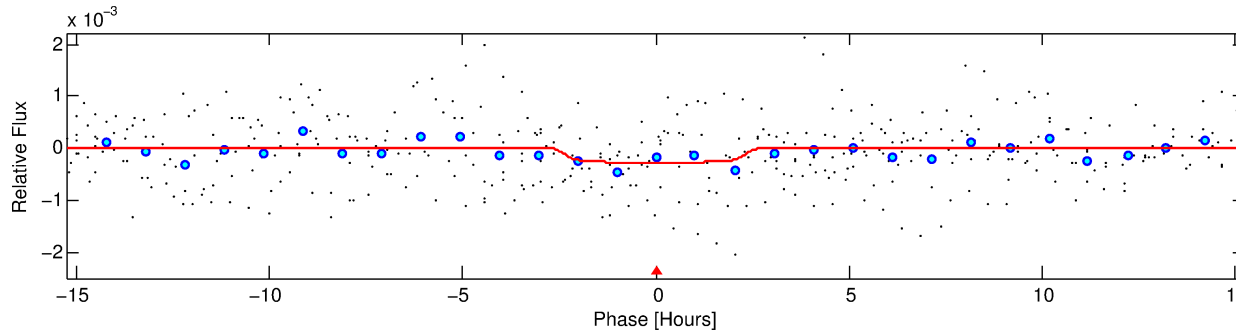
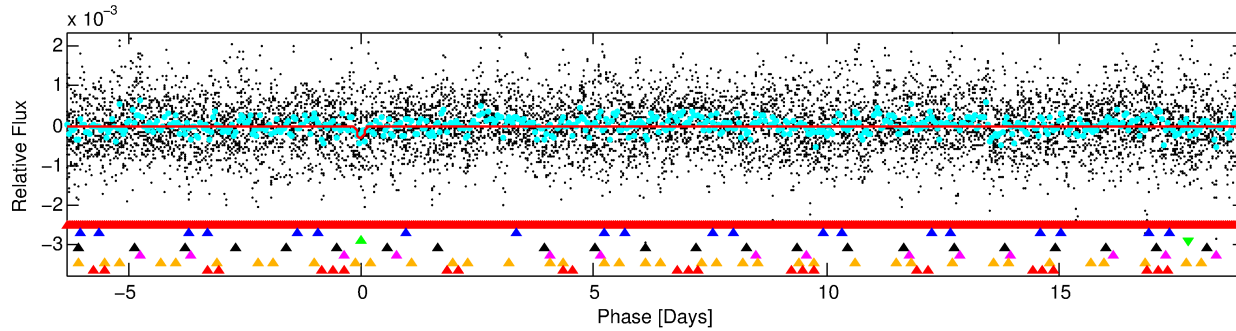
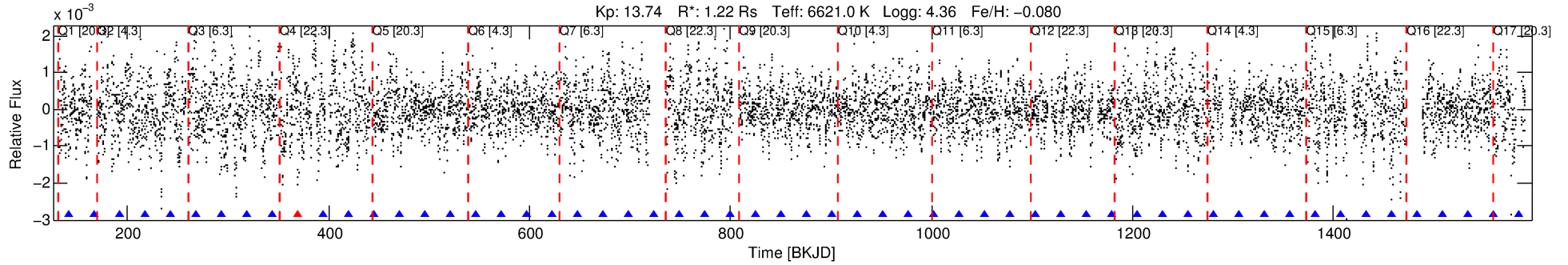
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-03

No Significant Match Found

DV One-Page Summary

KIC: 5476473 Candidate: 3 of 7 Period: 25.314 d



DV Fit Results:

Period = 25.31393 [0.00060] d
Epoch = 140.9949 [0.0210] BKJD
Rp/R* = 0.0176 [0.0094]
a/R* = 20.03 [56.35]
b = 0.87 [0.78]
Seff = 78.24 [31.10]
Teq = 758 [75] K
Rp = 2.34 [1.46] Re
a = 0.1808 [0.0477] AU
Ag = 1642.47 [1876.85] [0.87σ]
Teffp = 7465 [2036] K [3.29σ]

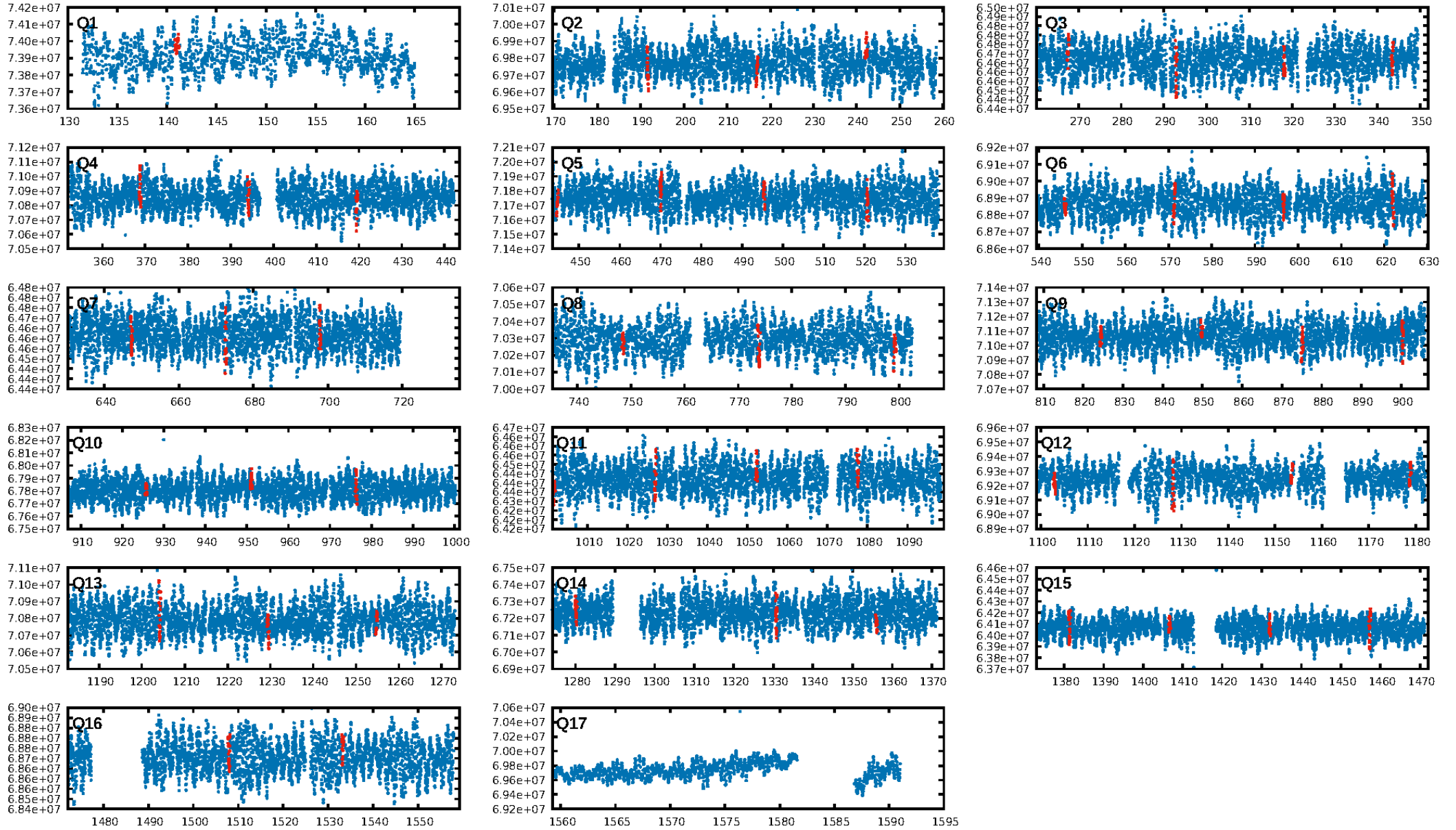
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [79.57σ]
LongPeriod-sig: 100.0% [52.12σ]
ModelChiSquare2-sig: 21.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.96 [22/23]
GhostDiagnostic-chr: -18.9
Centroid-sig: 75.6%
Centroid-so: 3.876 arcsec [4.63σ]
OotOffset-rm: N/A
KicOffset-rm: 0.236 arcsec [0.90σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 2/0/2 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.00 [0/16]

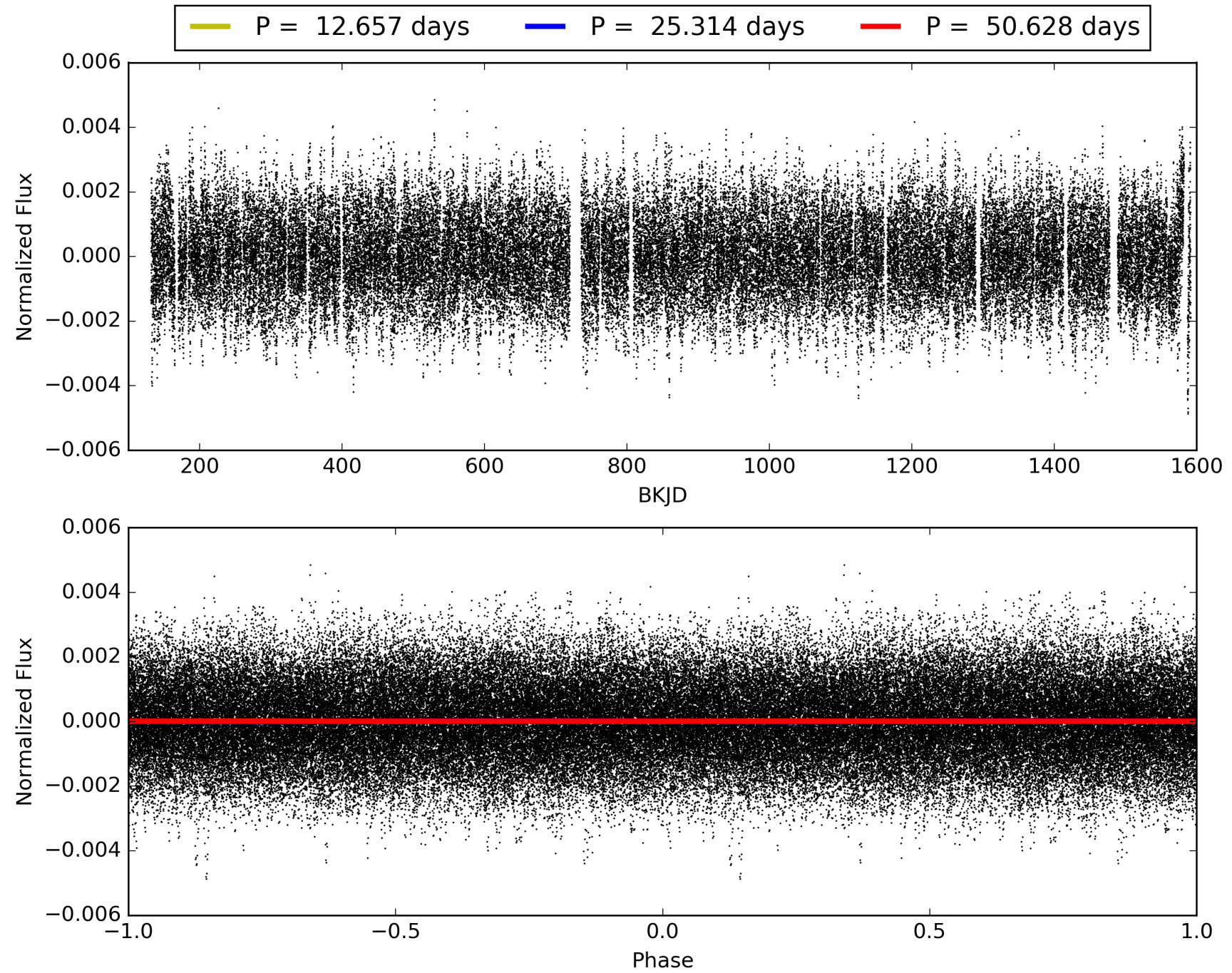
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:50:50 Z

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

TCE 005476473-03, PDC Light Curves

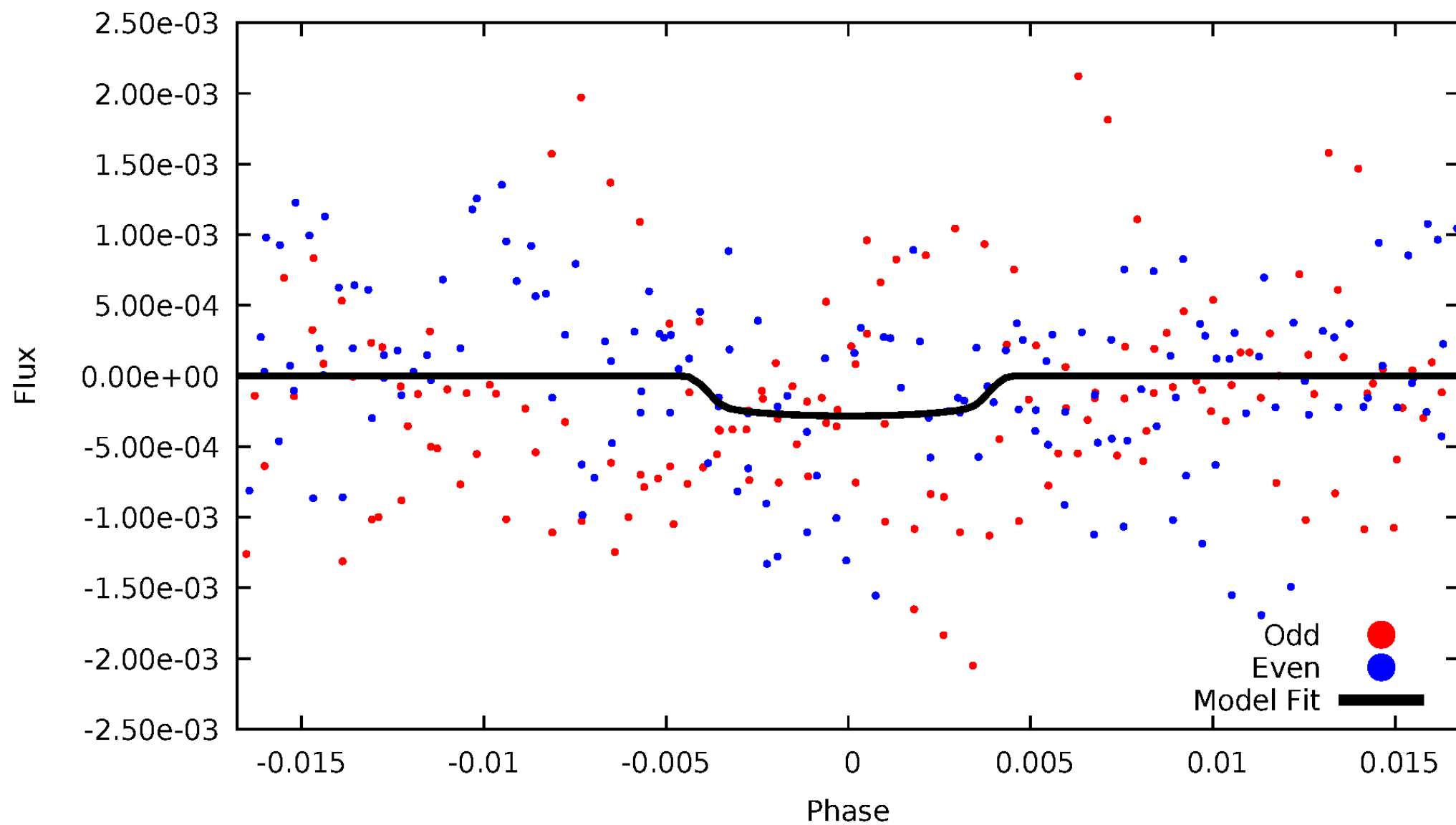


TCE 005476473-03



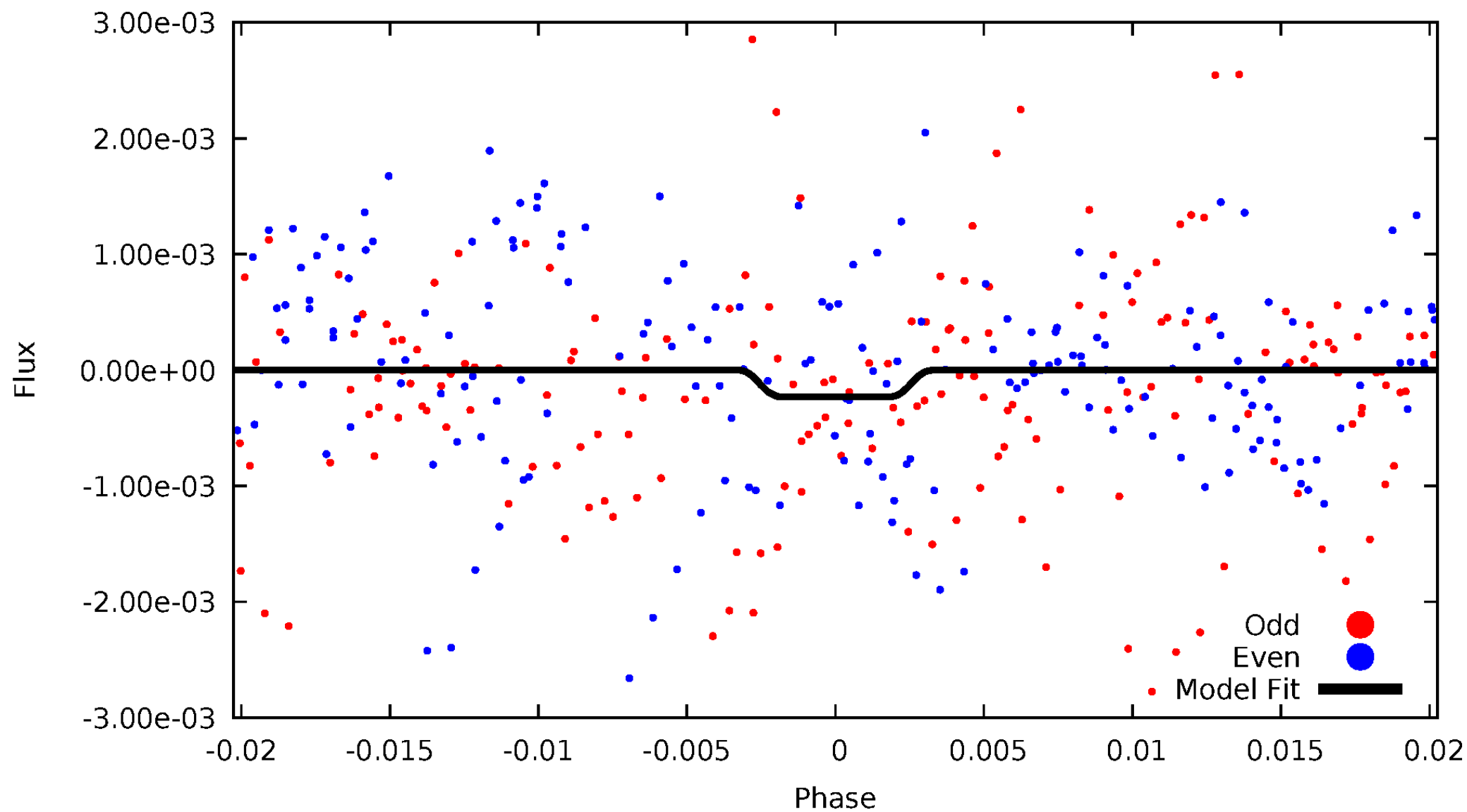
DV Odd/Even

TCE 005476473-03



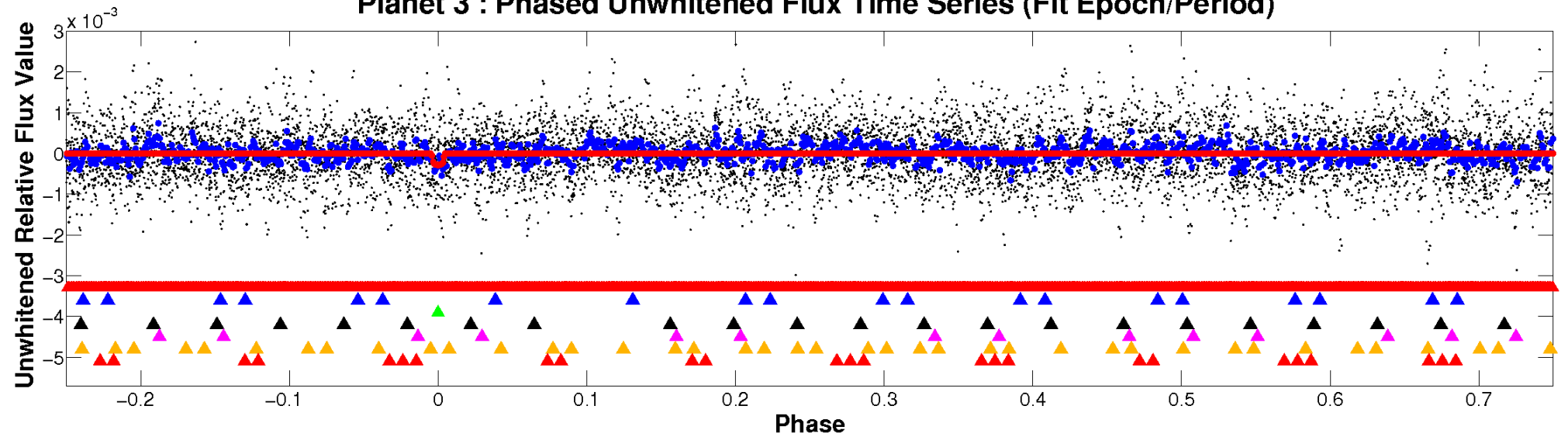
ALT Odd/Even

TCE 005476473-03

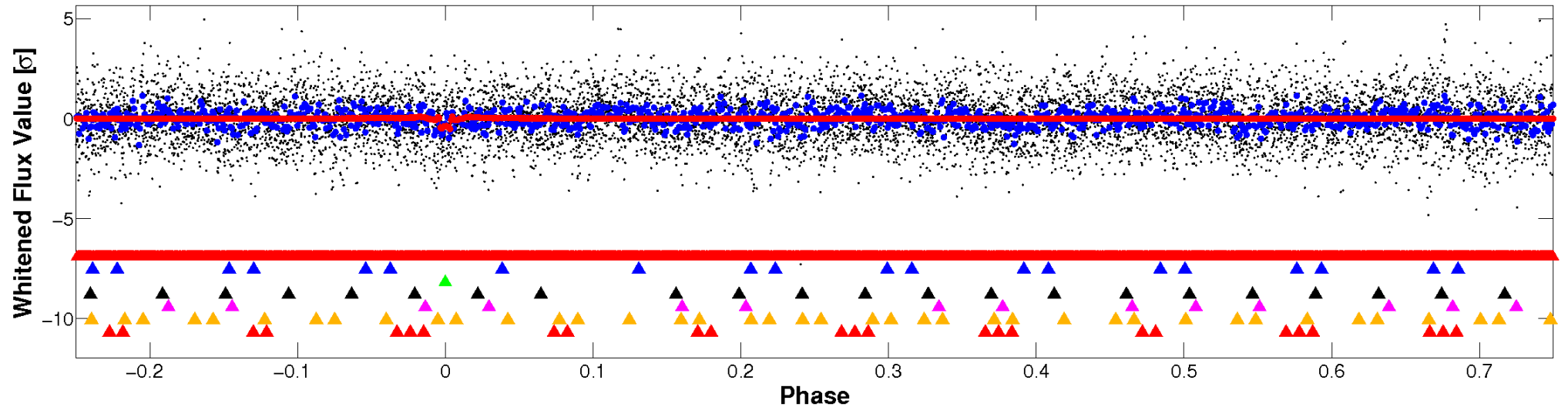


Non-Whitened Vs. Whitened Light Curve

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

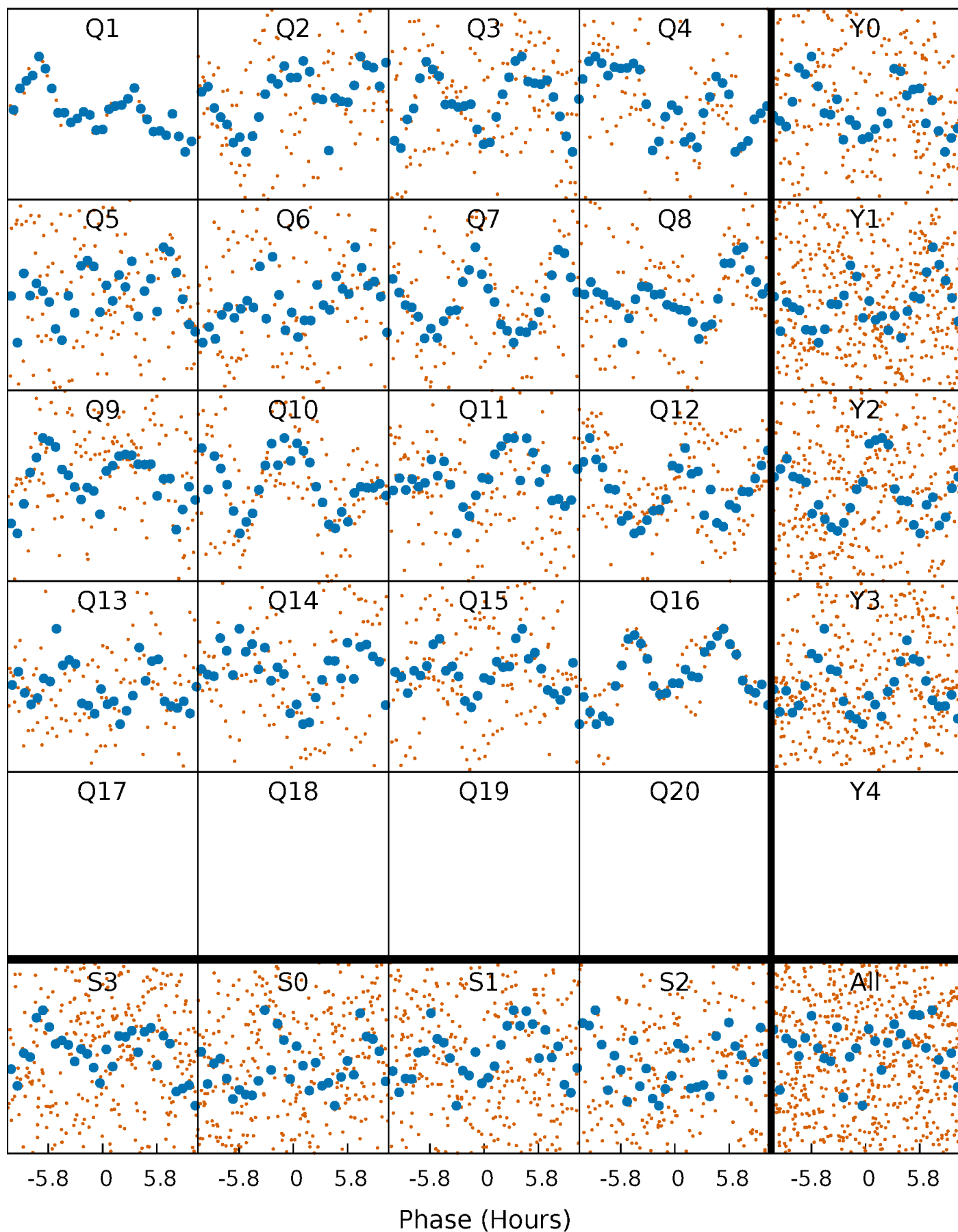


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



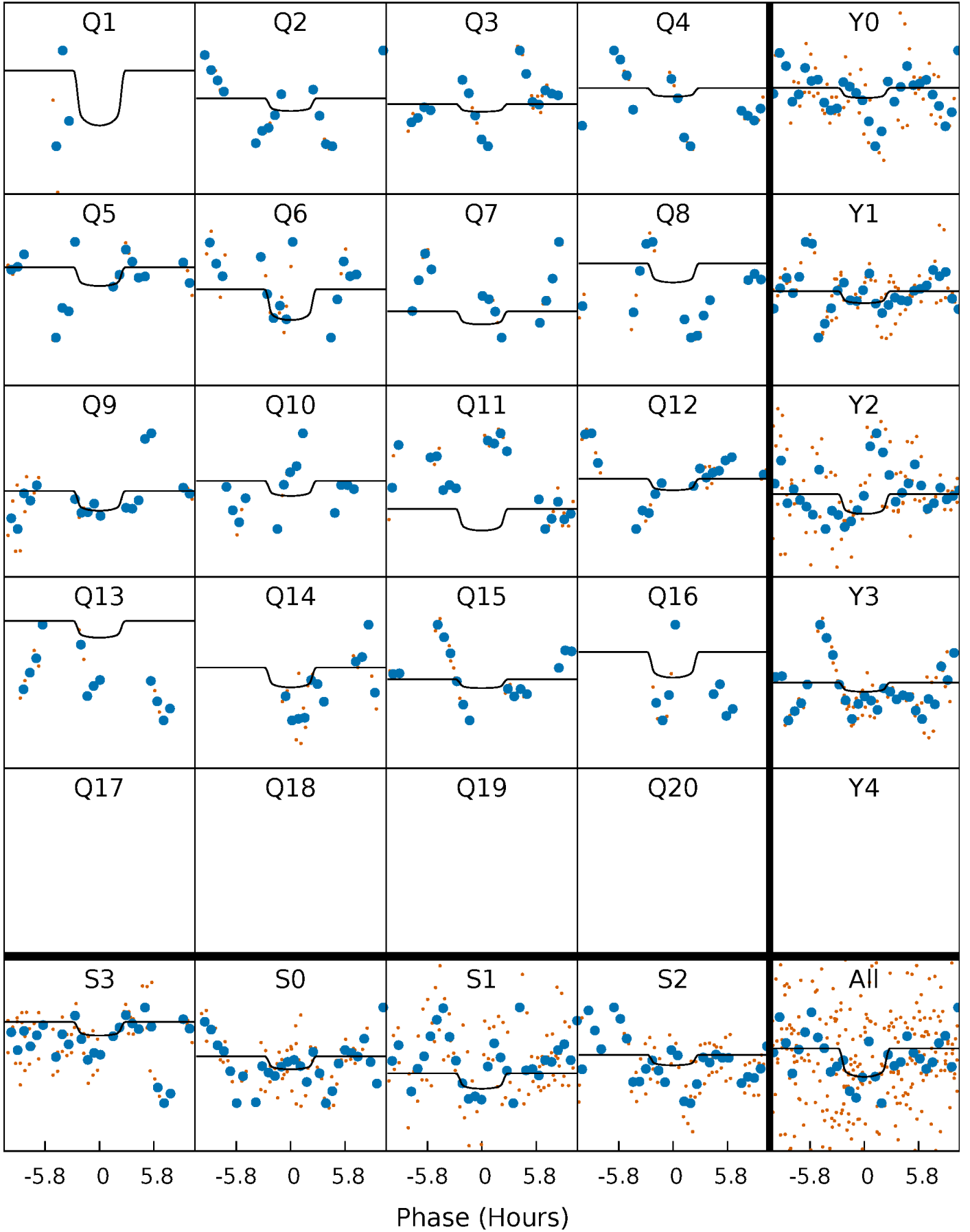
PDC Quarter-Phased Transit Curves

TCE 005476473-03 P= 25.313932 Days $T_0=140.994912$ (BKJD)



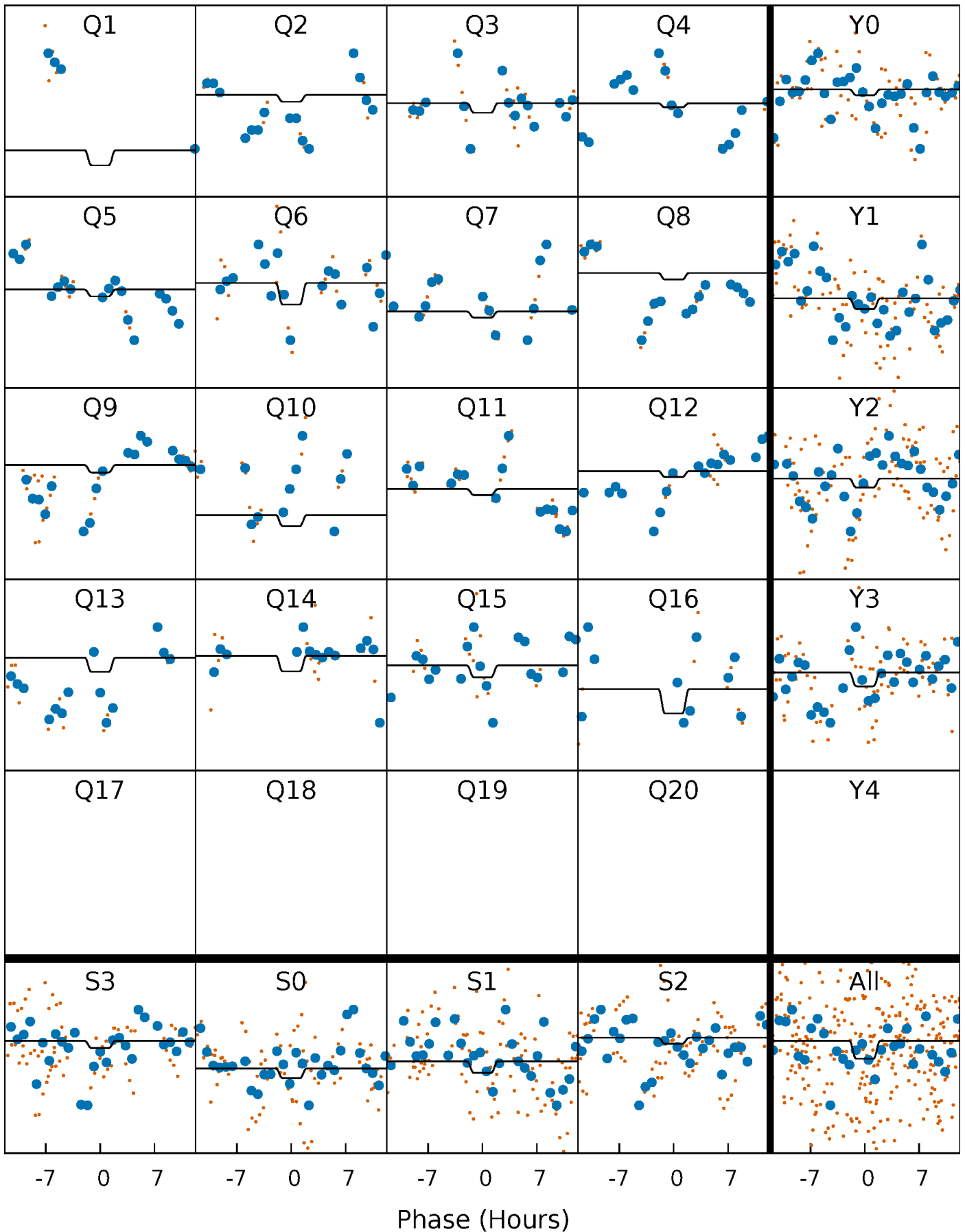
DV Quarter-Phased Transit Curves

TCE 005476473-03 $P = 25.313932$ Days $T_0 = 140.994912$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

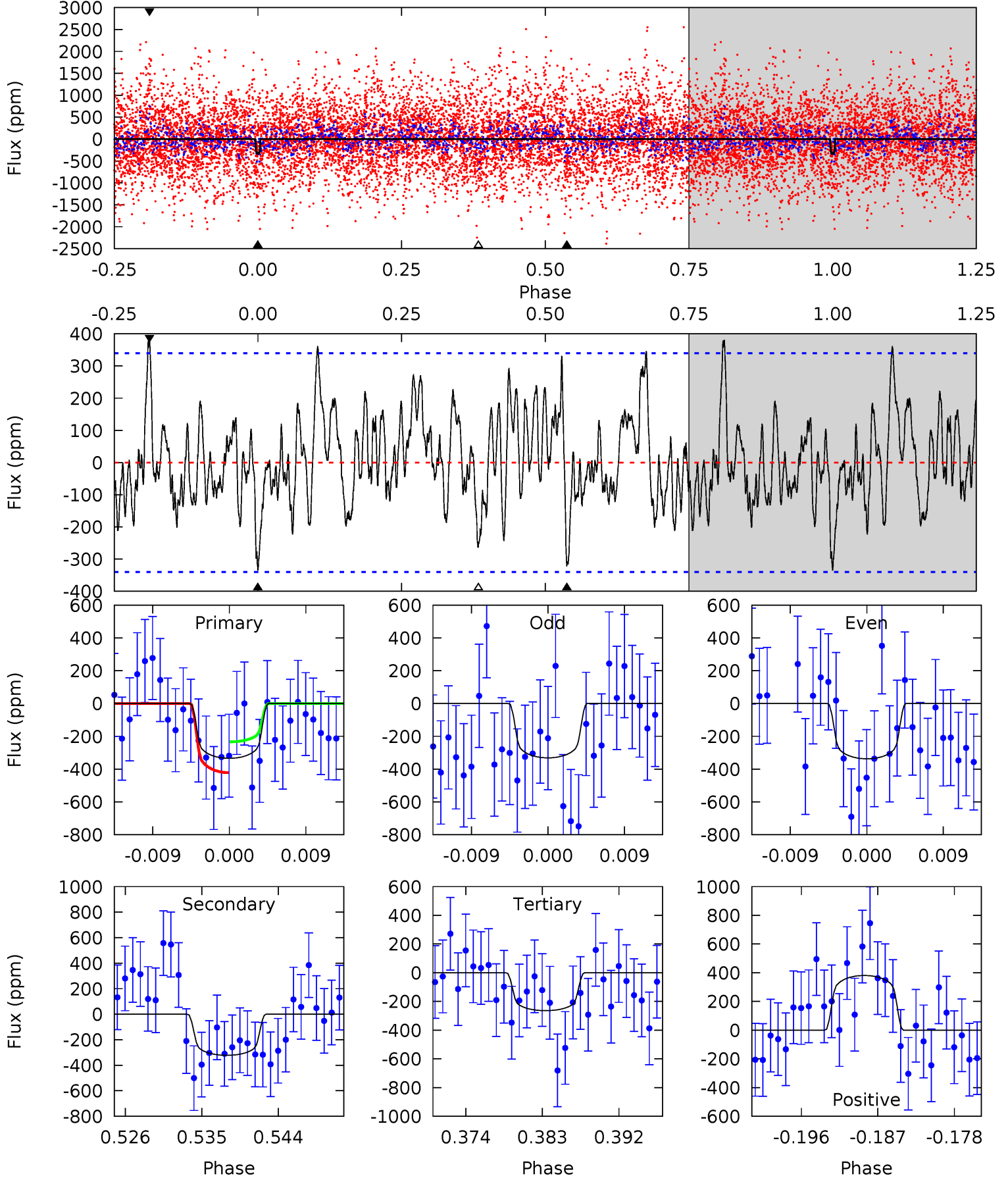
TCE 005476473-03 P= 25.310168 Days $T_0=141.083987$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-03, P = 25.313932 Days, E = 115.680980 Days

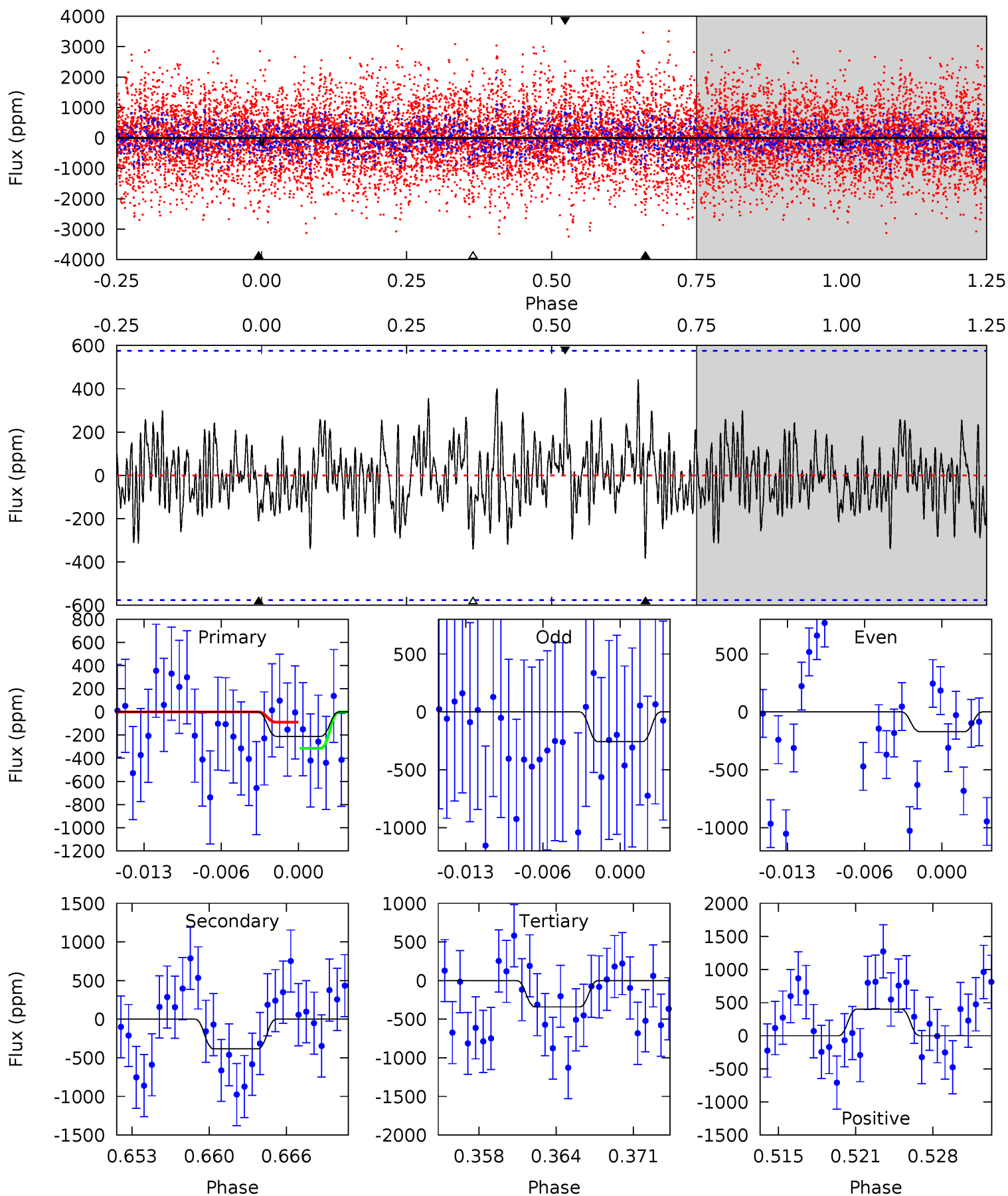
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.96	4.78	3.92	5.66	5.05	2.62	1.82	1.04	-0.69	0.86	-0.87	0.04	0.99	0.53	1.40



Alt Model-Shift Uniqueness Test

005476473-03, P = 25.310168 Days, E = 115.773819 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.88	3.40	3.03	3.57	5.11	2.73	1.12	-1.15	-1.70	0.37	-0.17	0.38	1.42	0.54	1.00



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-322 ± 67	$2.52^{+1.25}_{-1.31}$	1073^{+76}_{-52}	6494^{+3642}_{-1172}	873^{+2857}_{-495}
Alt.	-383 ± 113	$2.20^{+1.31}_{-1.24}$	1075^{+74}_{-57}	7354^{+5939}_{-1693}	1332^{+6059}_{-827}

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 $A_{obs} \gg 1.0$

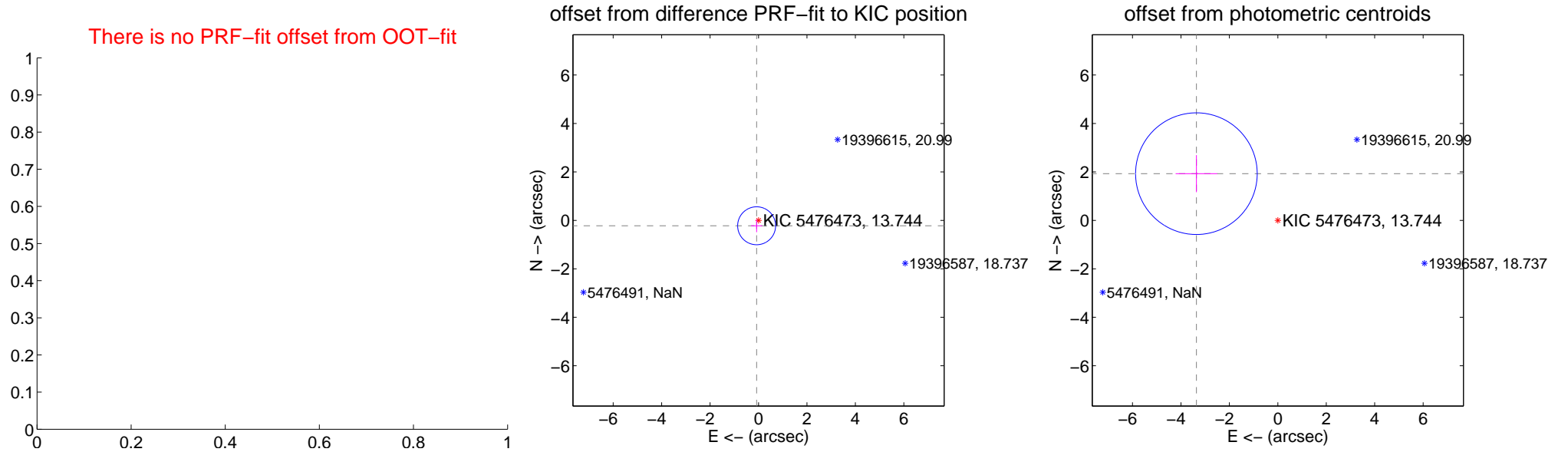
DV Centroid Data

Supplemental centroid analysis for 005476473-03. Kepler magnitude: 13.74. Transit SNR 3.92

There are 2 quarters with good PRF difference image offsets

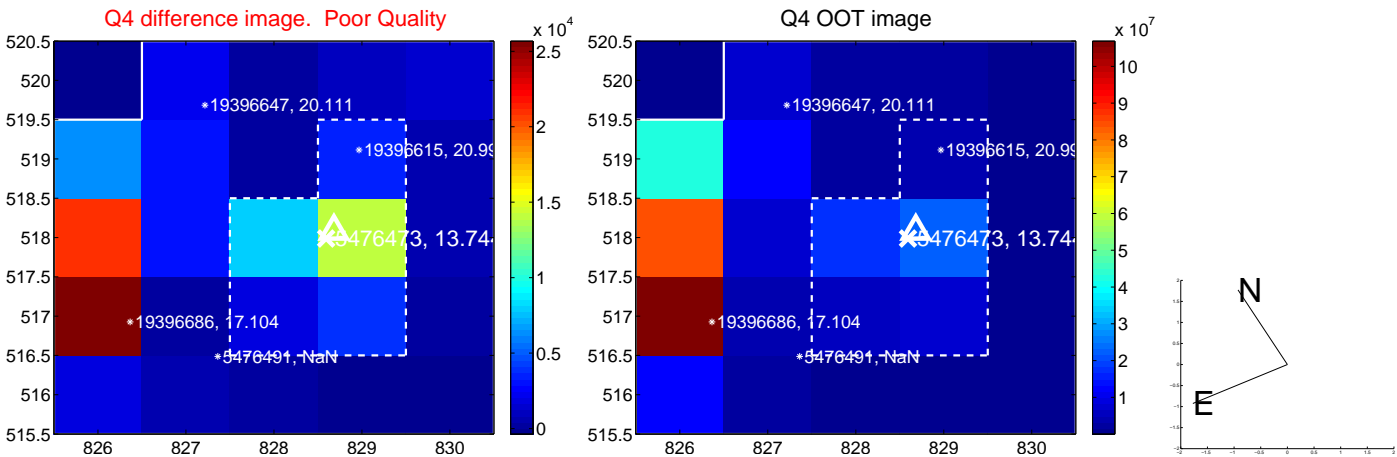
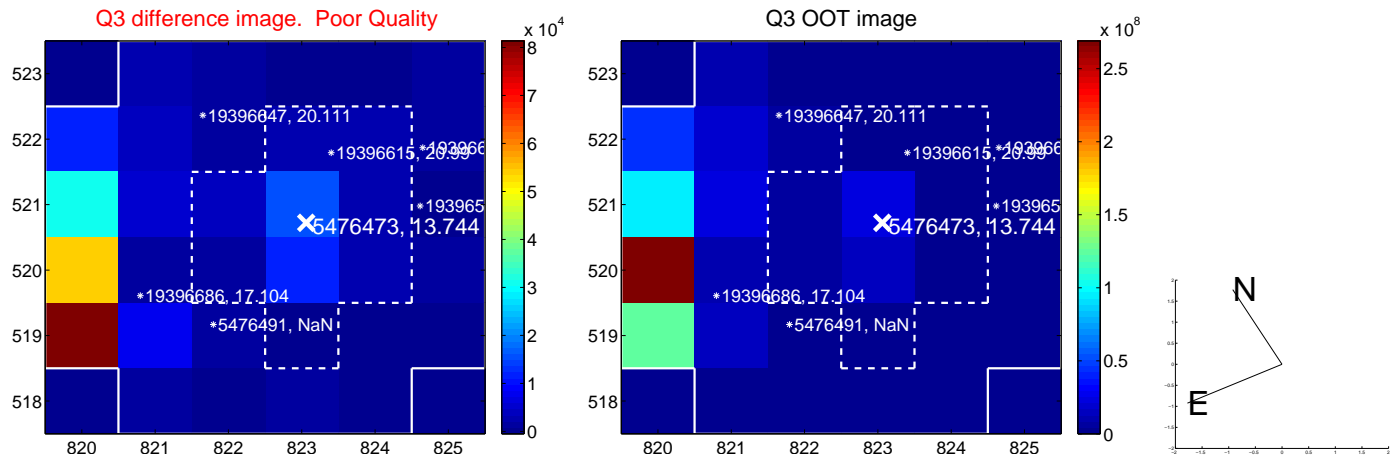
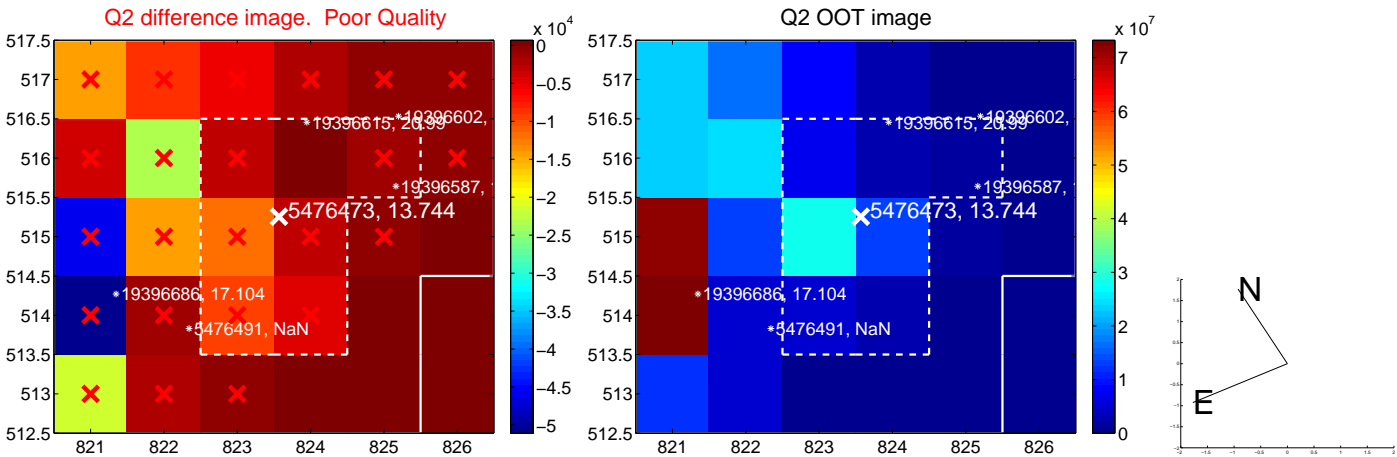
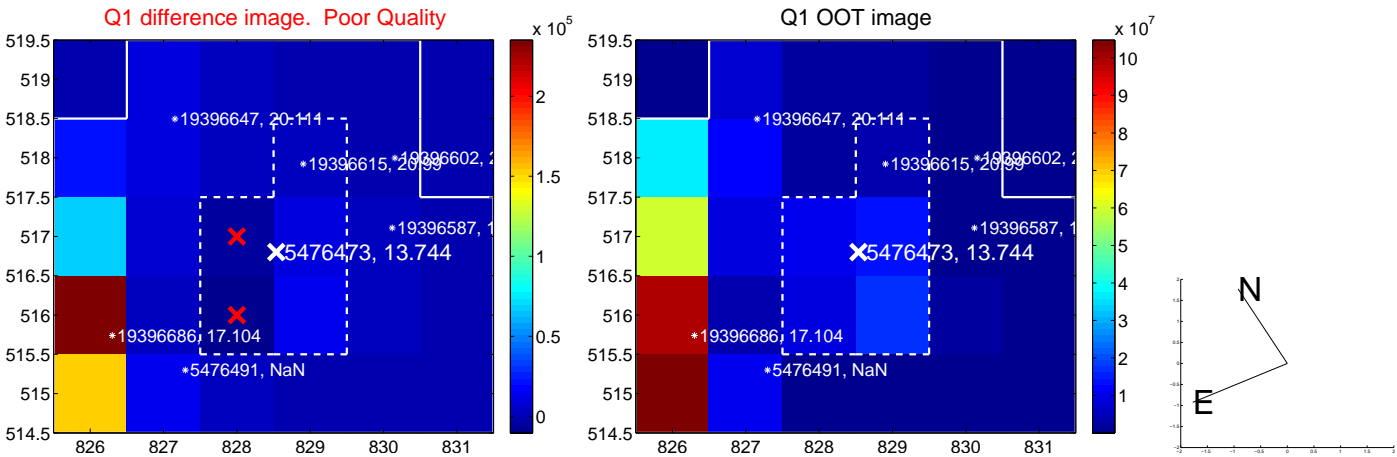
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.236 ± 0.261	0.90	0.078 ± 0.230	-0.223 ± 0.265
photometric centroid source offset	3.88 ± 0.84	4.63	3.36 ± 0.86	1.93 ± 0.76

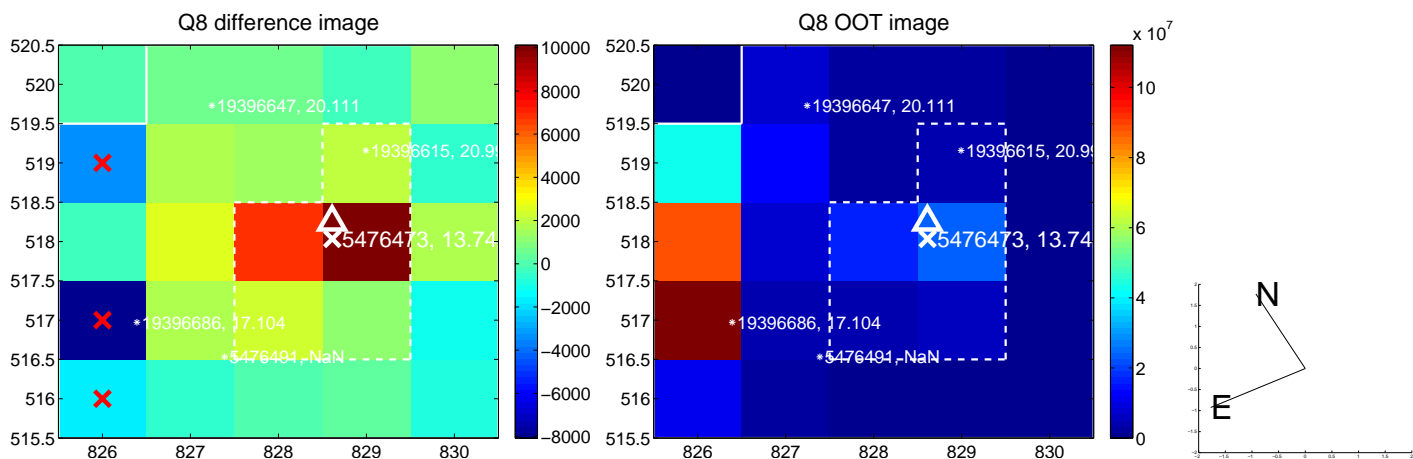
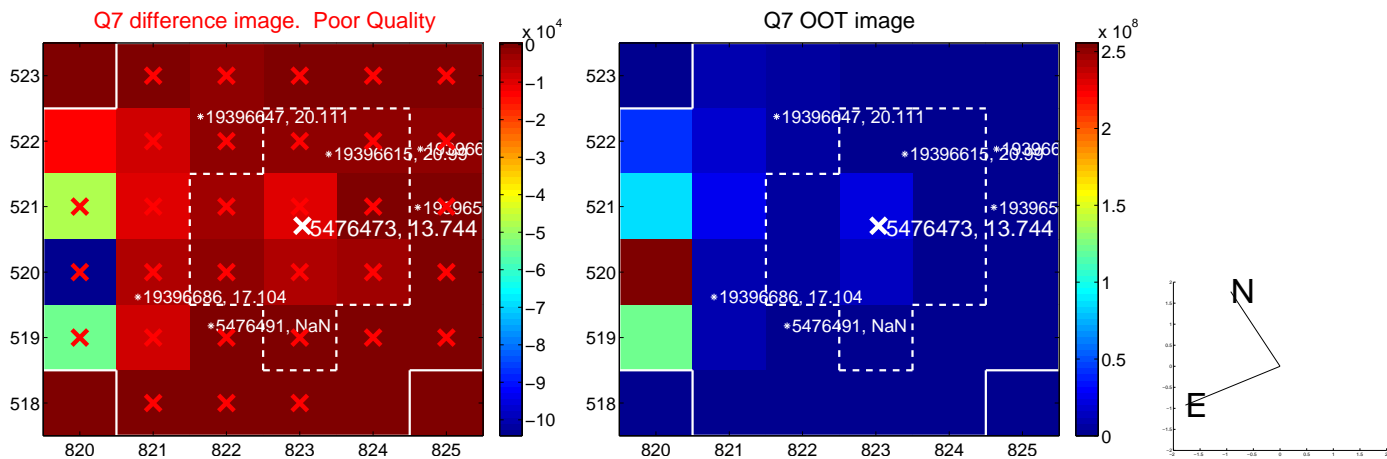
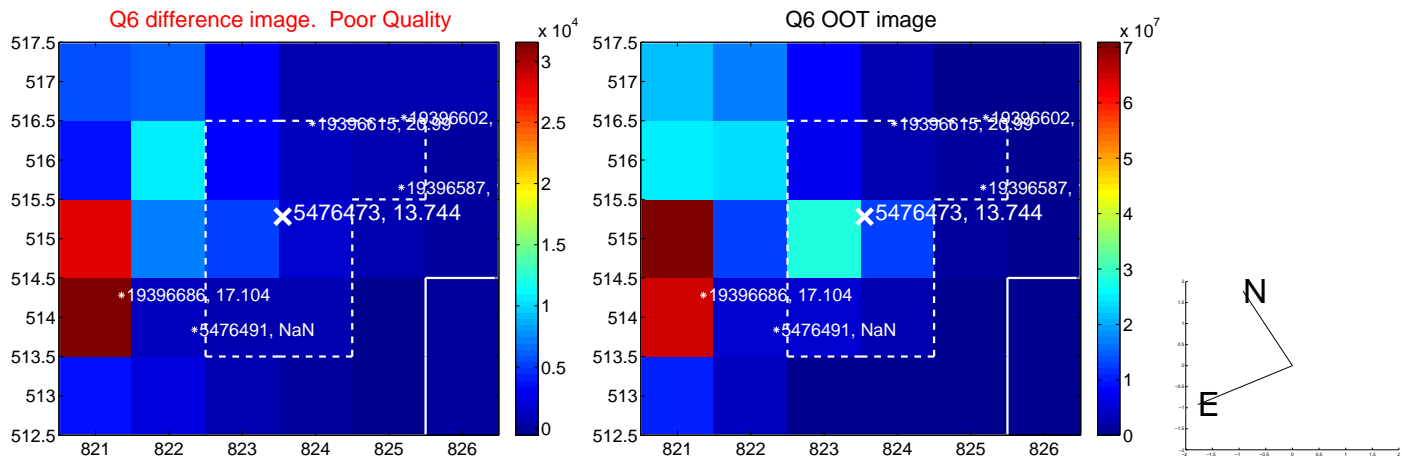
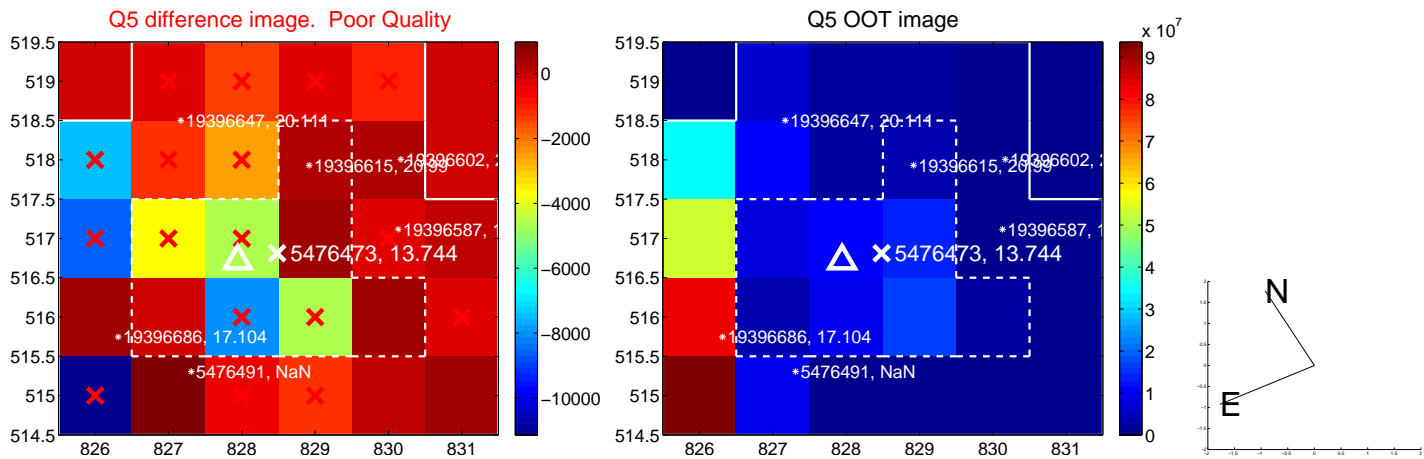


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

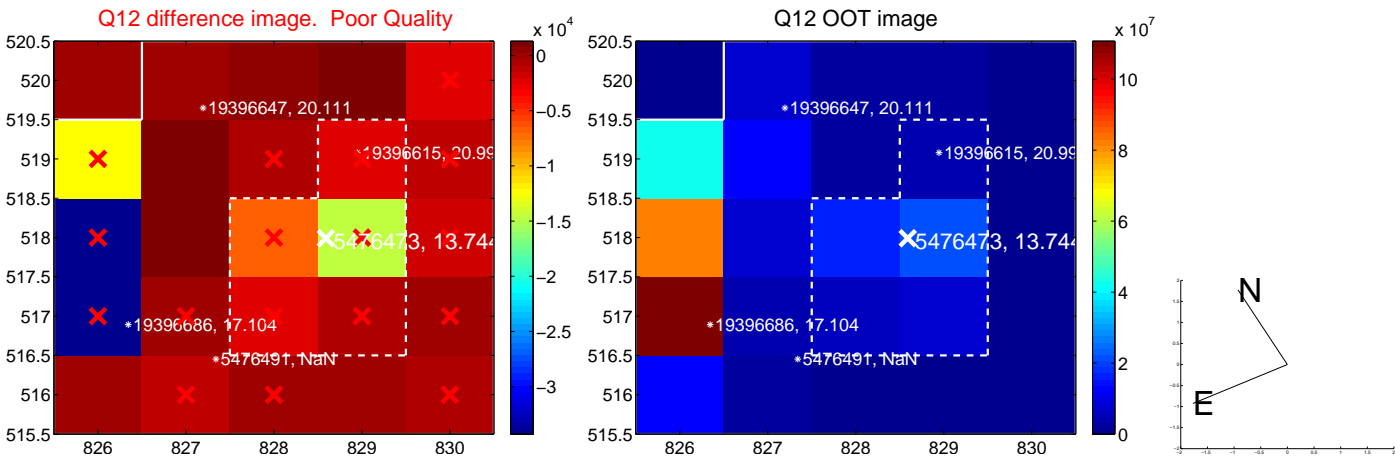
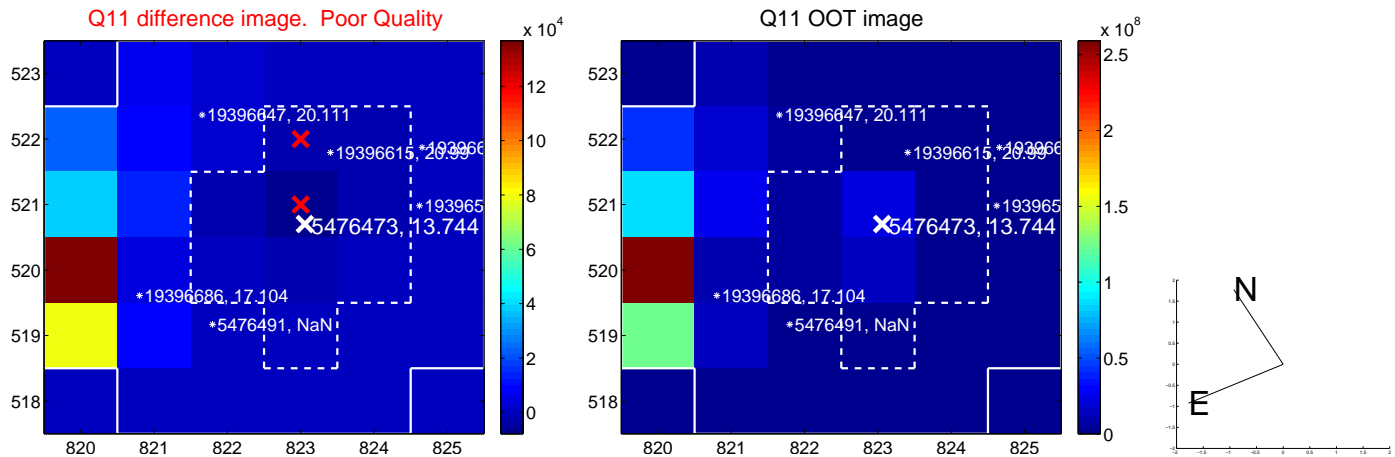
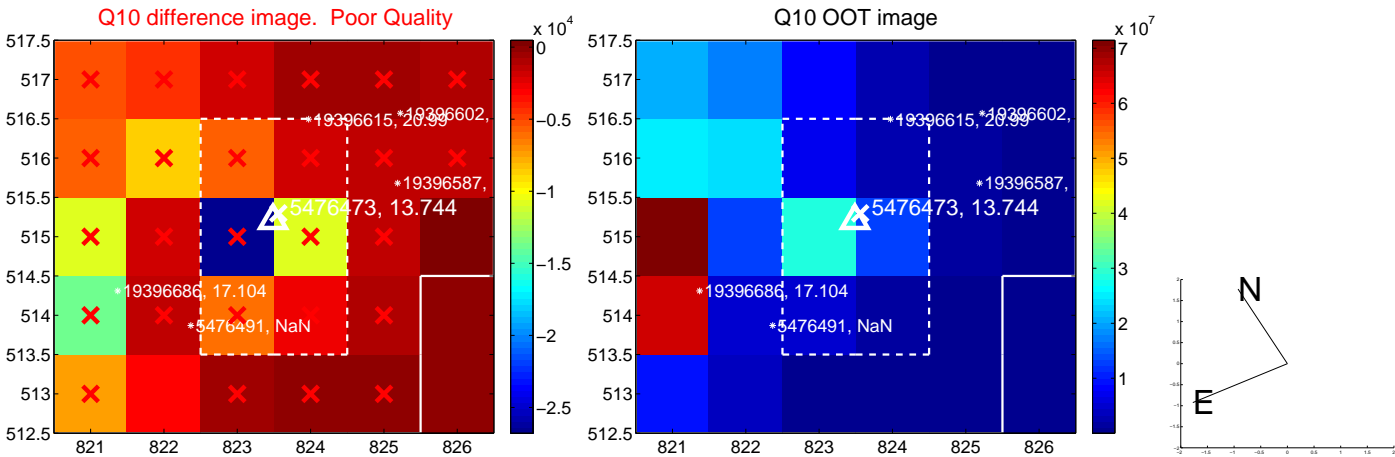
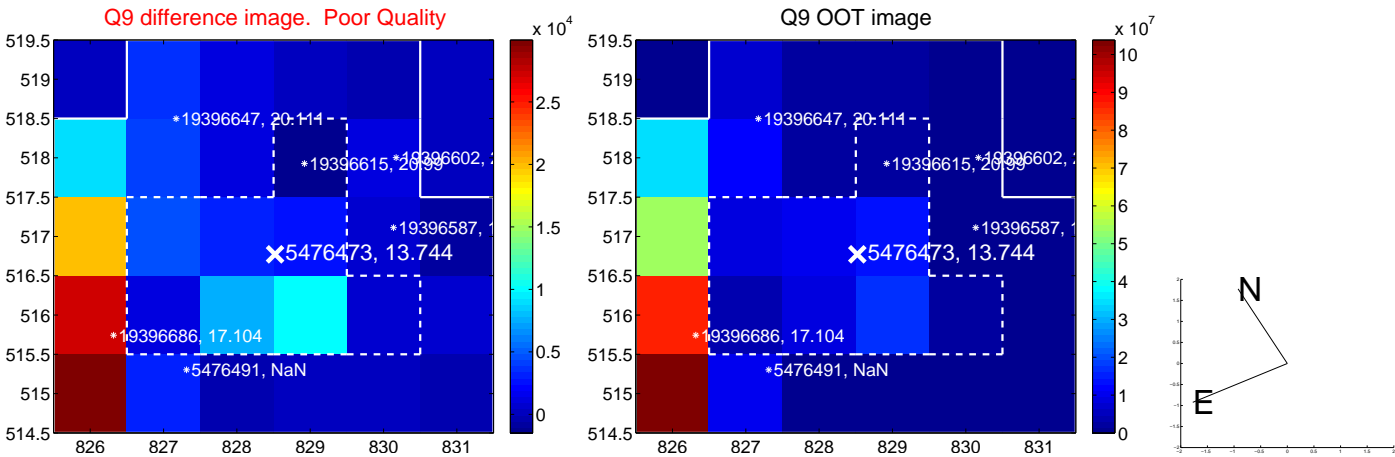
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



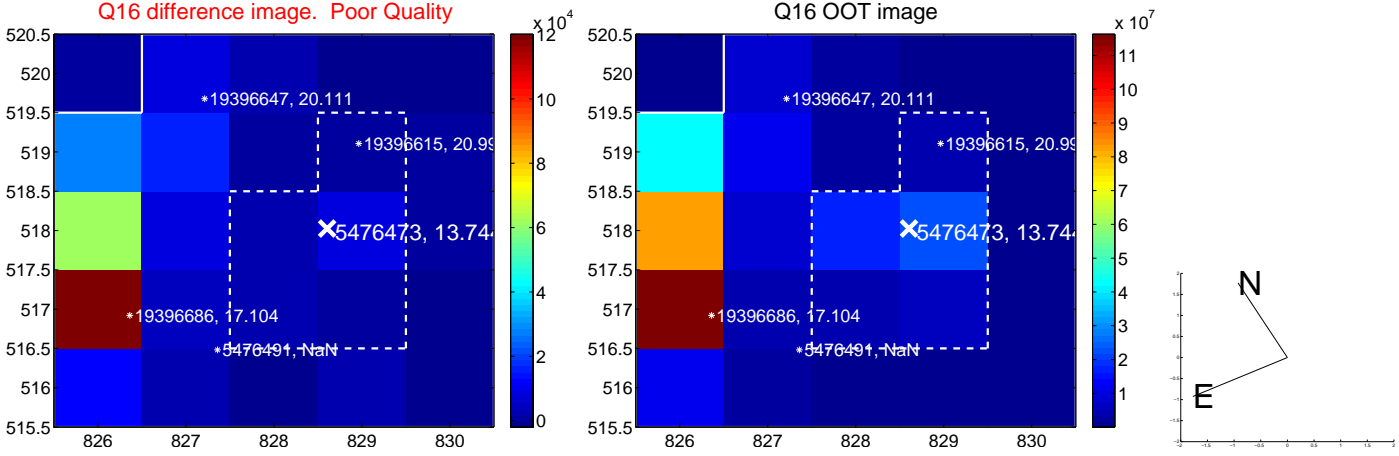
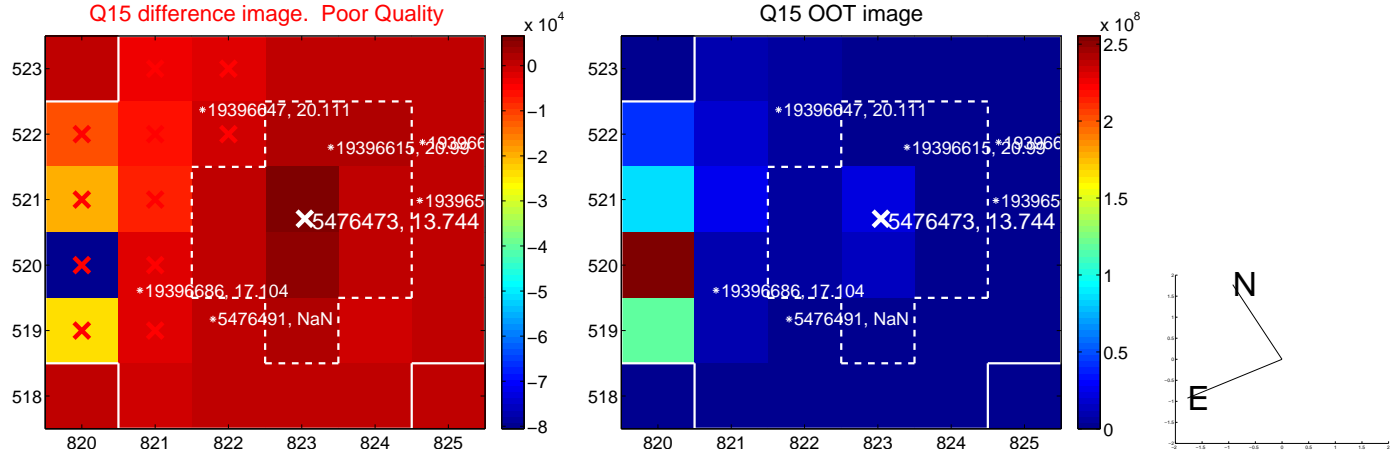
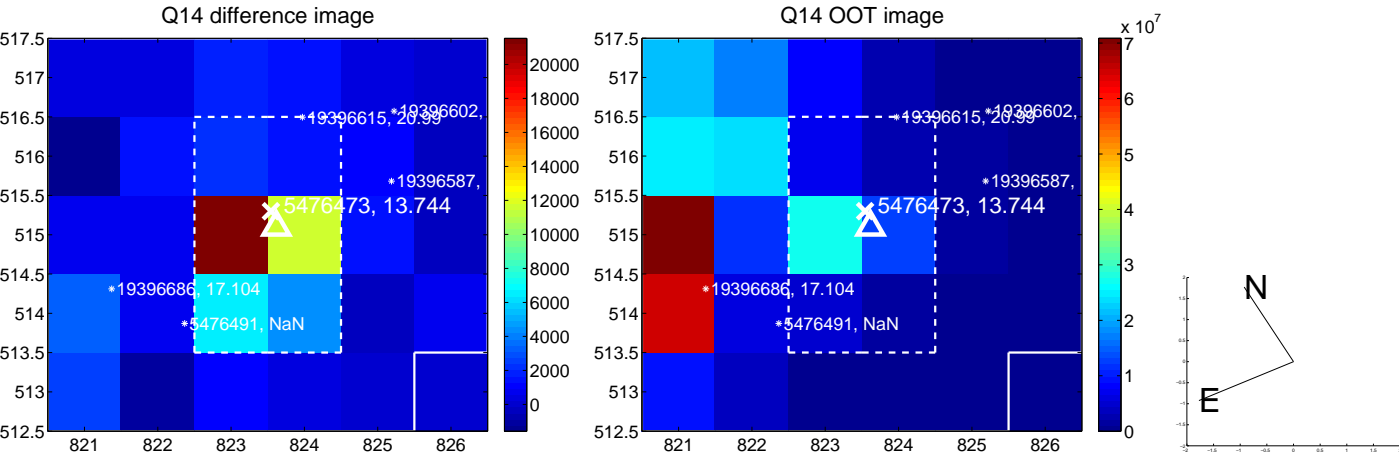
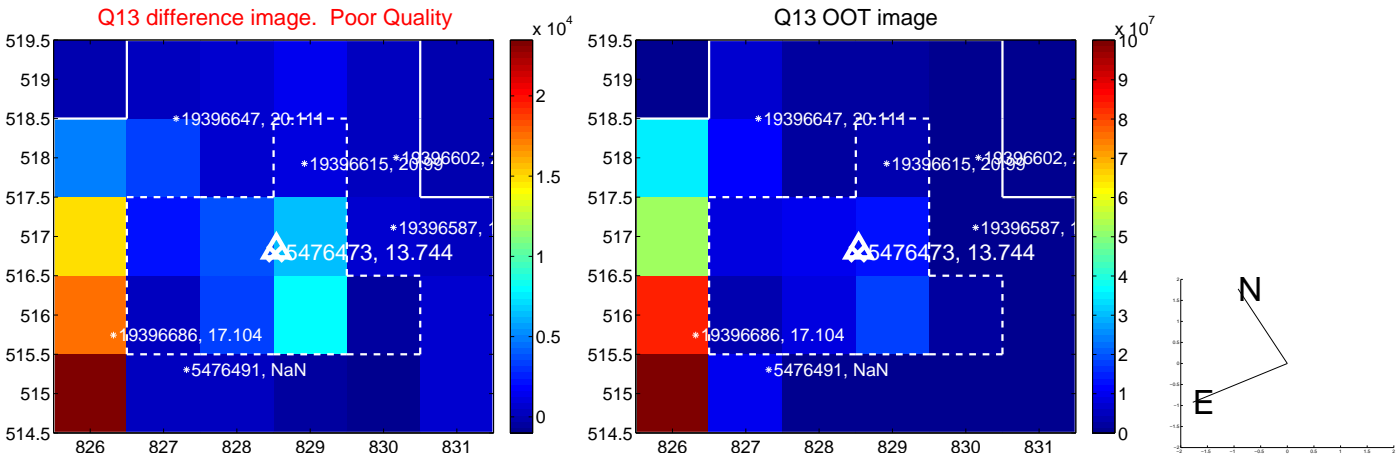
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



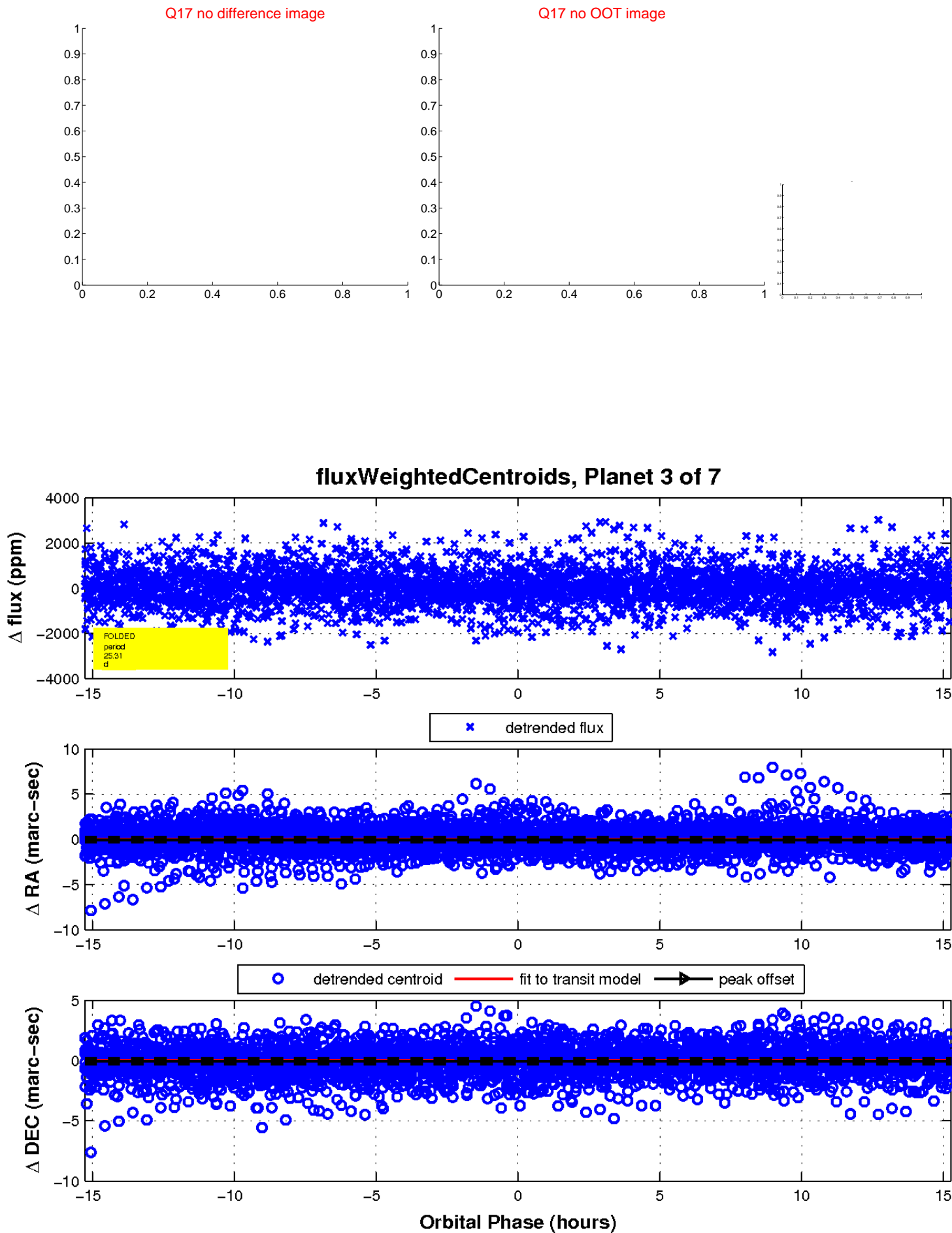
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



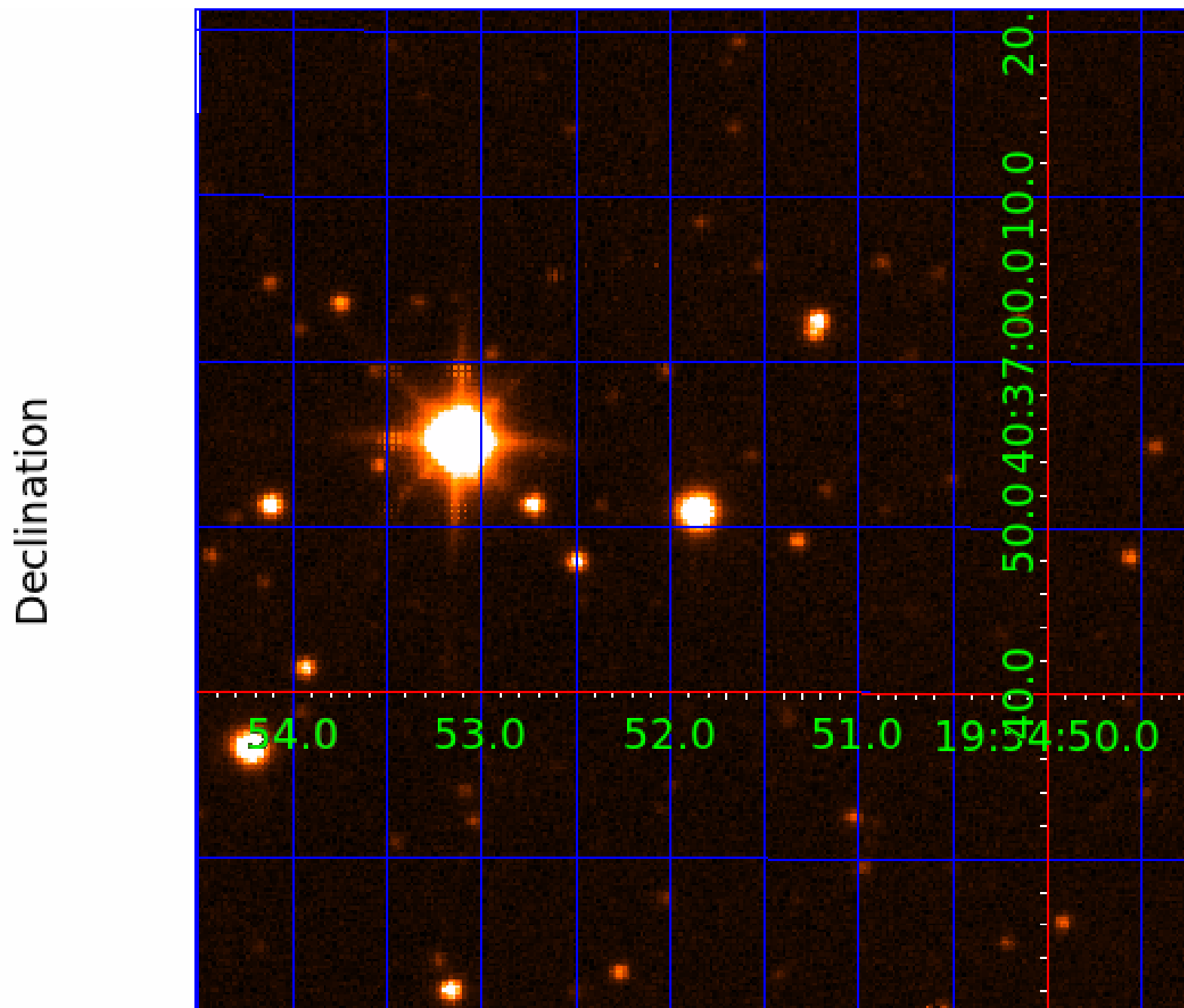
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005476473

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})
005476473-01	OBS	No	0.808595	131.529527	0.0	5.357	10.2	0.0	1.22	6621	0.00	7719.98
005476473-02	OBS	No	73.602269	140.052375	2635.5	3.815	11.5	10.7	1.22	6621	11.47	18.85
005476473-03	OBS	No	25.313932	140.994912	282.9	5.092	10.0	3.9	1.22	6621	2.34	78.24
005476473-04	OBS	No	67.143714	160.228557	1439.9	4.070	9.3	7.5	1.22	6621	8.64	21.31
005476473-05	OBS	No	105.656608	203.392003	1159.6	2.860	8.4	7.7	1.22	6621	7.42	11.64
005476473-06	OBS	No	36.929269	149.201170	1151.4	1.637	8.0	7.2	1.22	6621	4.45	47.29
005476473-07	OBS	No	58.244842	175.562114	1769.9	3.827	8.9	9.5	1.22	6621	6.35	25.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476473-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS
005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

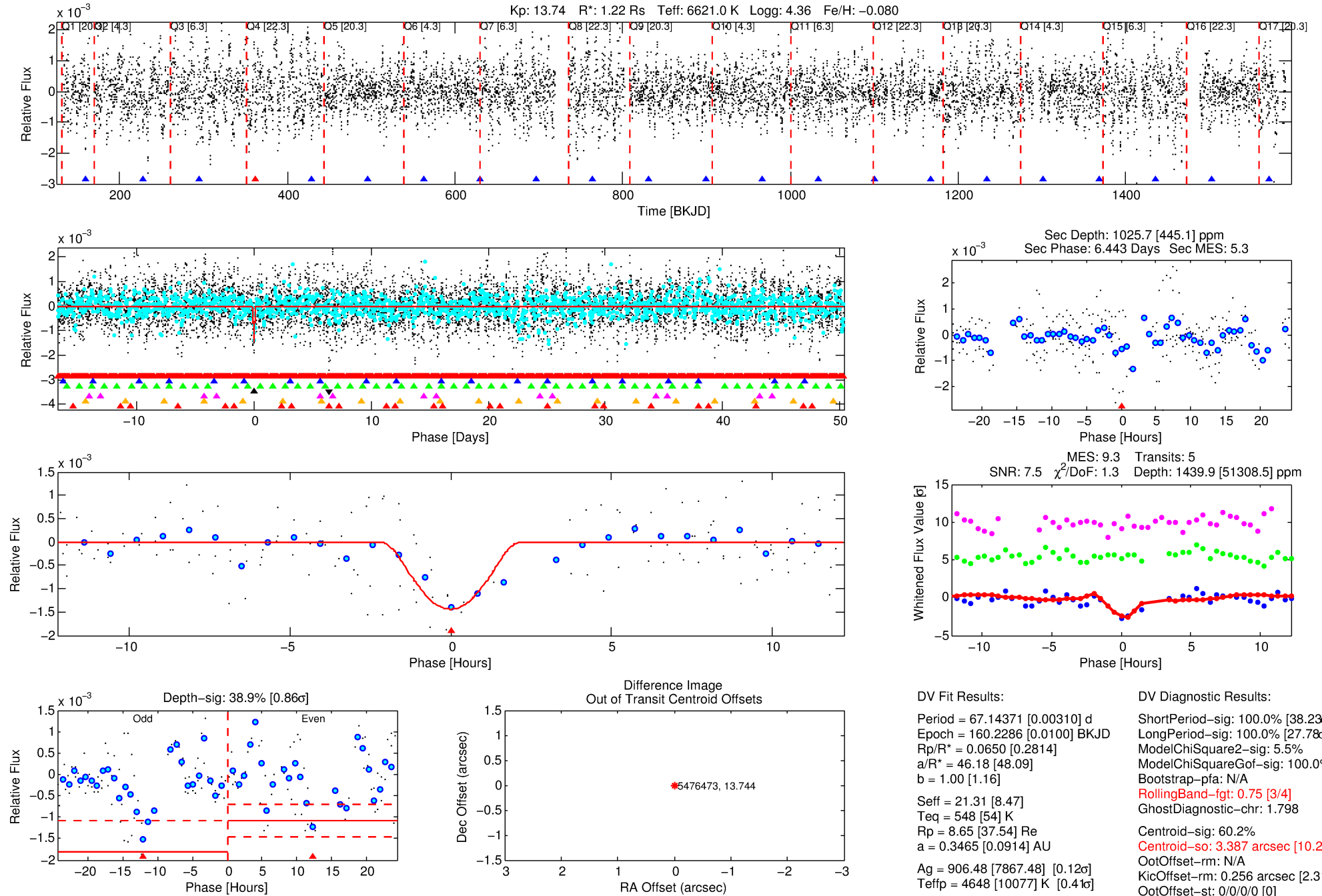
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-04

No Significant Match Found

DV One-Page Summary

KIC: 5476473 Candidate: 4 of 7 Period: 67.144 d



DV Fit Results:

Period = 67.14371 [0.00310] d
Epoch = 160.2286 [0.0100] BKJD
Rp/R* = 0.0650 [0.2814]
a/R* = 46.18 [48.09]
b = 1.00 [1.16]
Seff = 21.31 [8.47]
Teq = 548 [54] K
Rp = 8.65 [37.54] Re
a = 0.3465 [0.0914] AU
Ag = 906.48 [7867.48] [0.12σ]
Teffp = 4648 [10077] K [0.41σ]

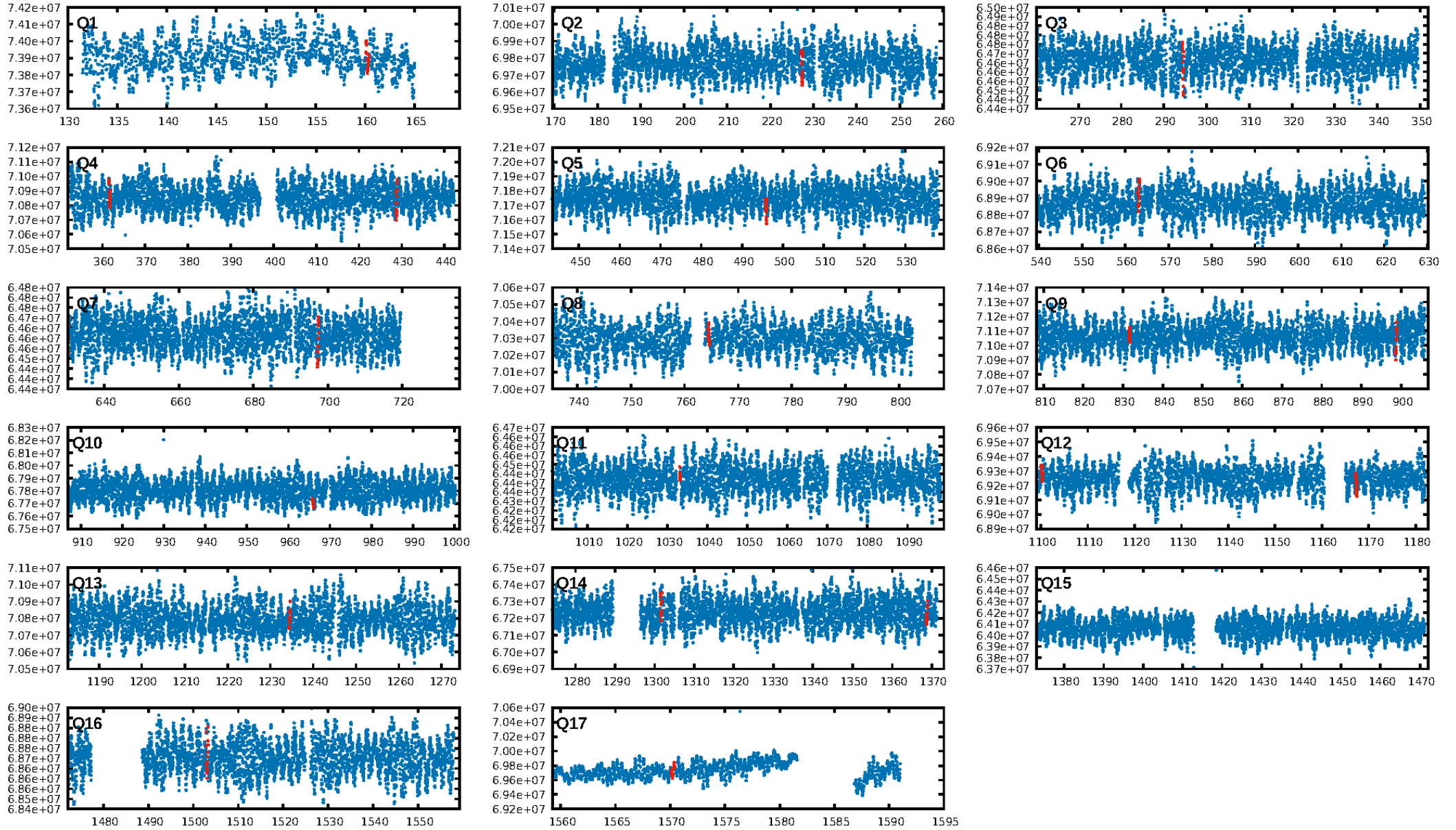
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.23σ]
LongPeriod-sig: 100.0% [27.78σ]
ModelChiSquare2-sig: 5.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 1.798
Centroid-sig: 60.2%
Centroid-so: 3.387 arcsec [10.25σ]
OotOffset-rm: N/A
KicOffset-rm: 0.256 arcsec [2.31σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/1/3/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.00 [0/14]

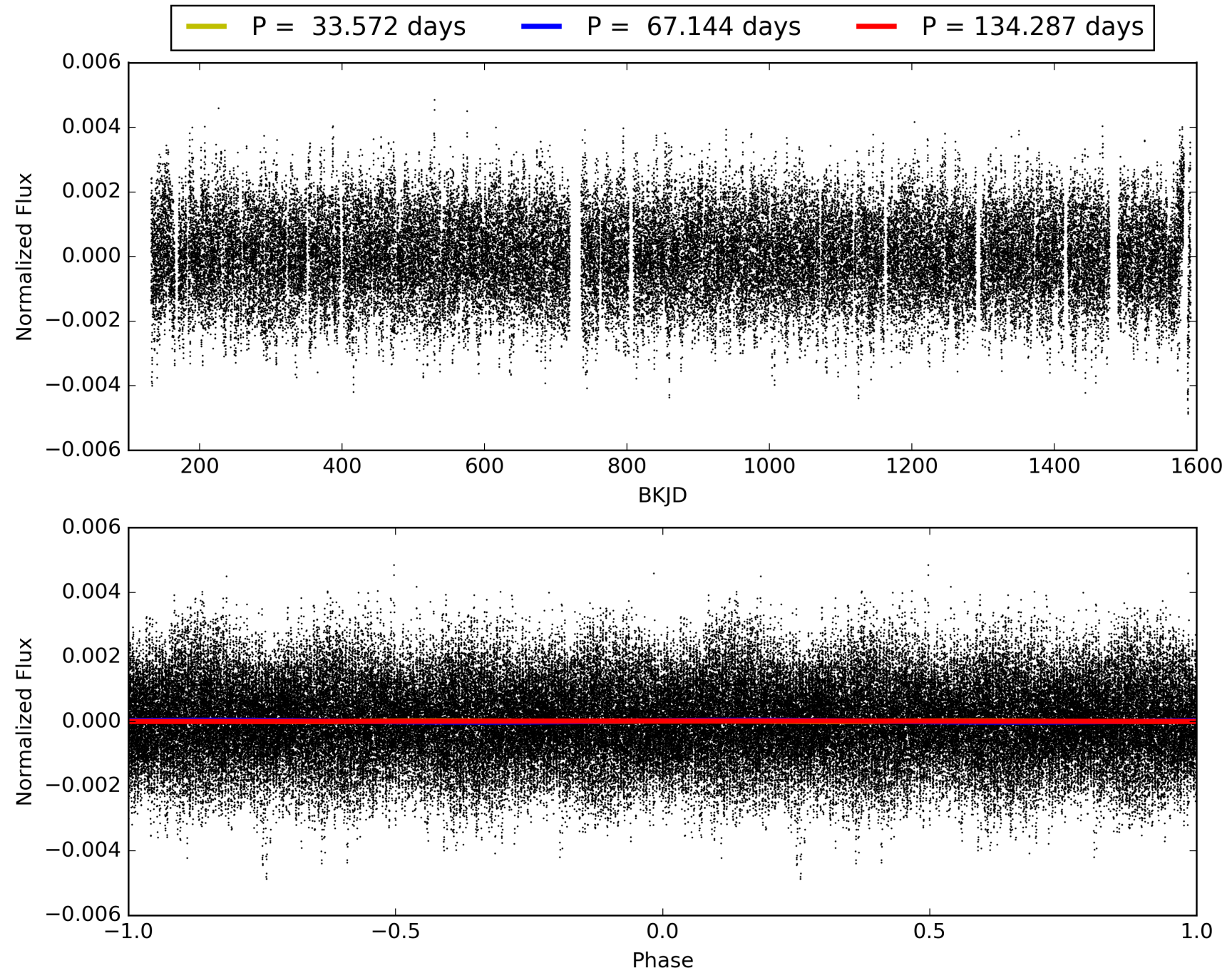
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:50:53 Z

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

TCE 005476473-04, PDC Light Curves

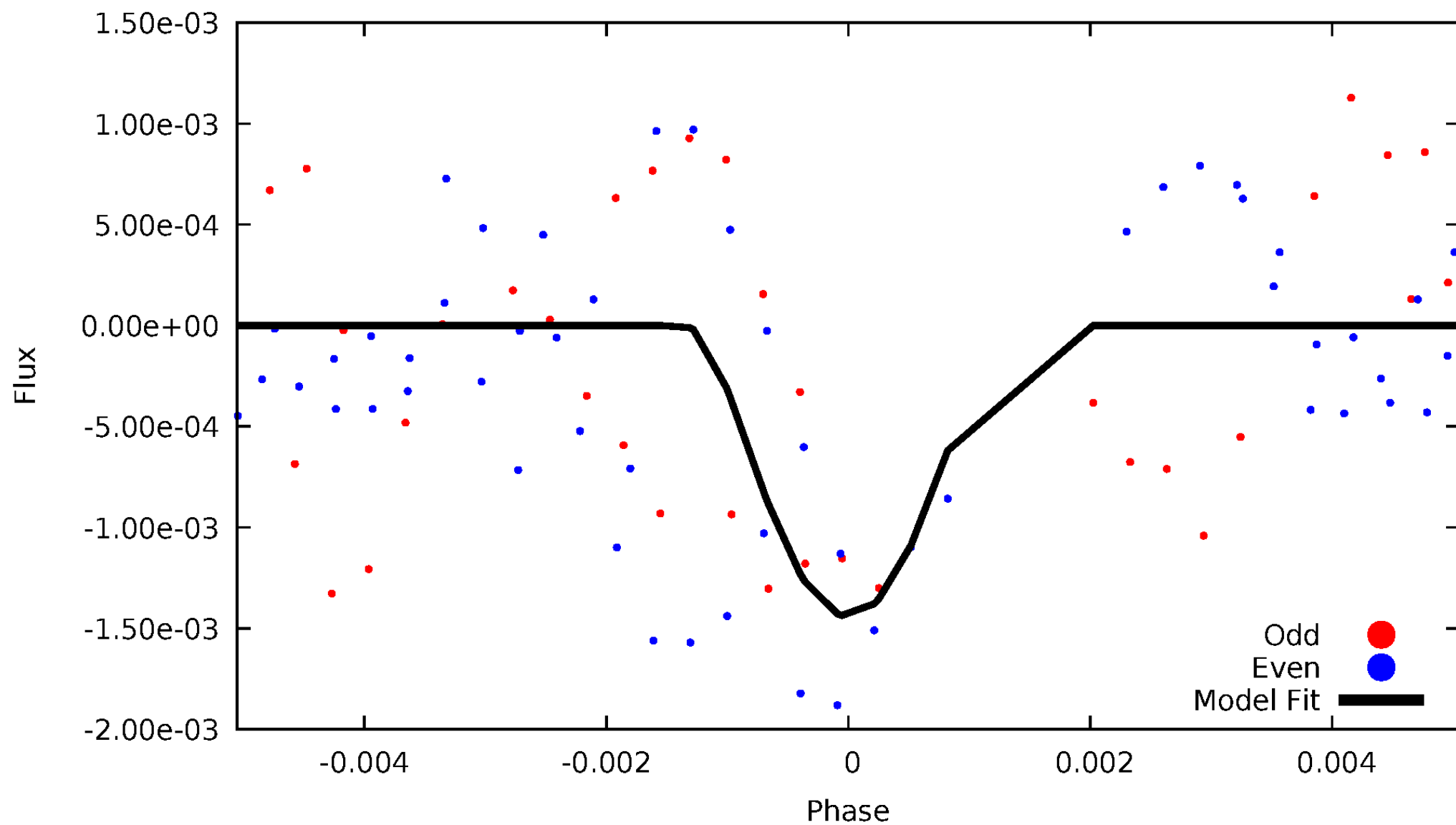


TCE 005476473-04



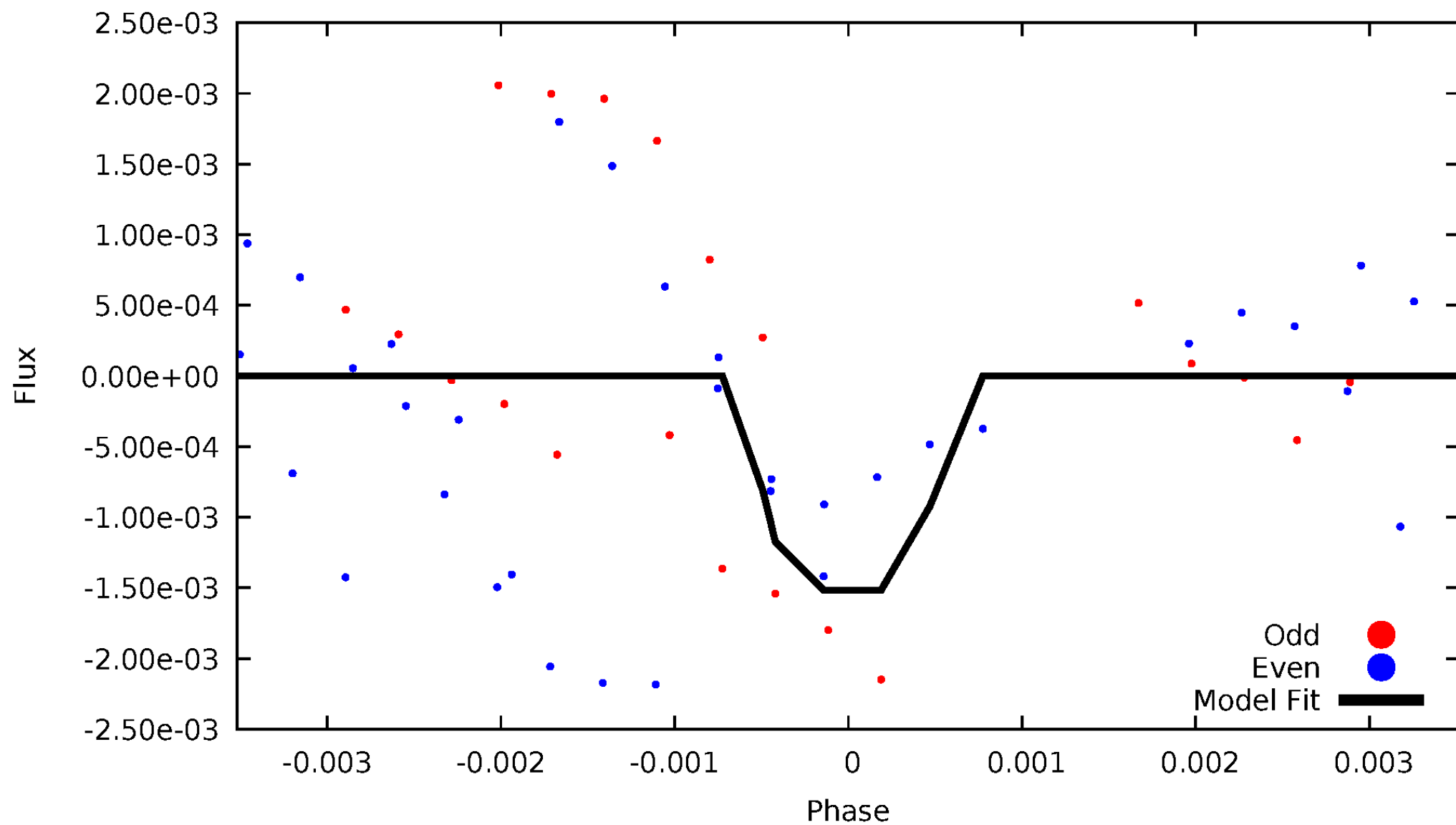
DV Odd/Even

TCE 005476473-04



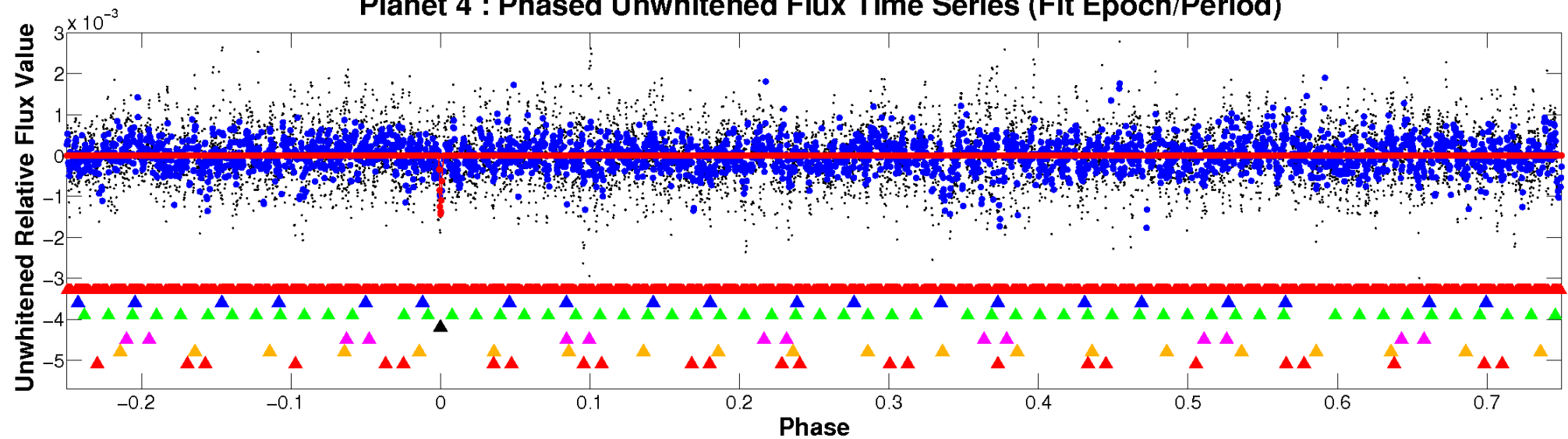
ALT Odd/Even

TCE 005476473-04

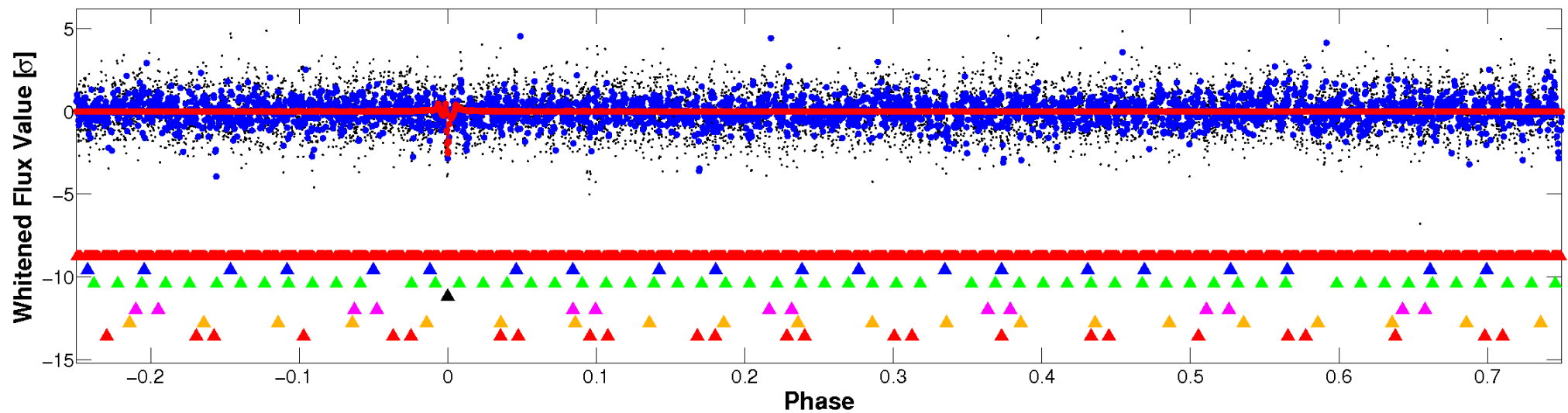


Non-Whitened Vs. Whitened Light Curve

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

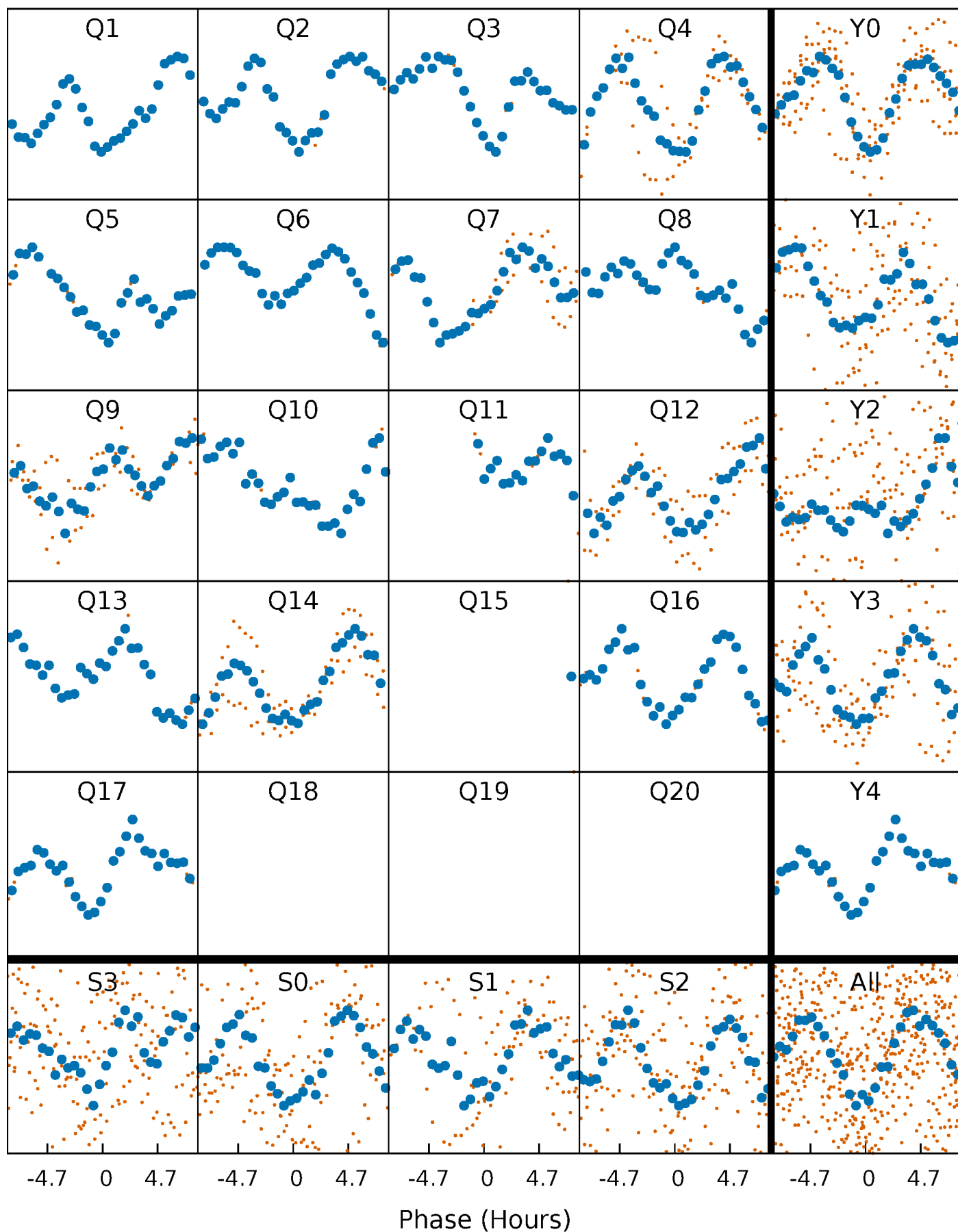


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



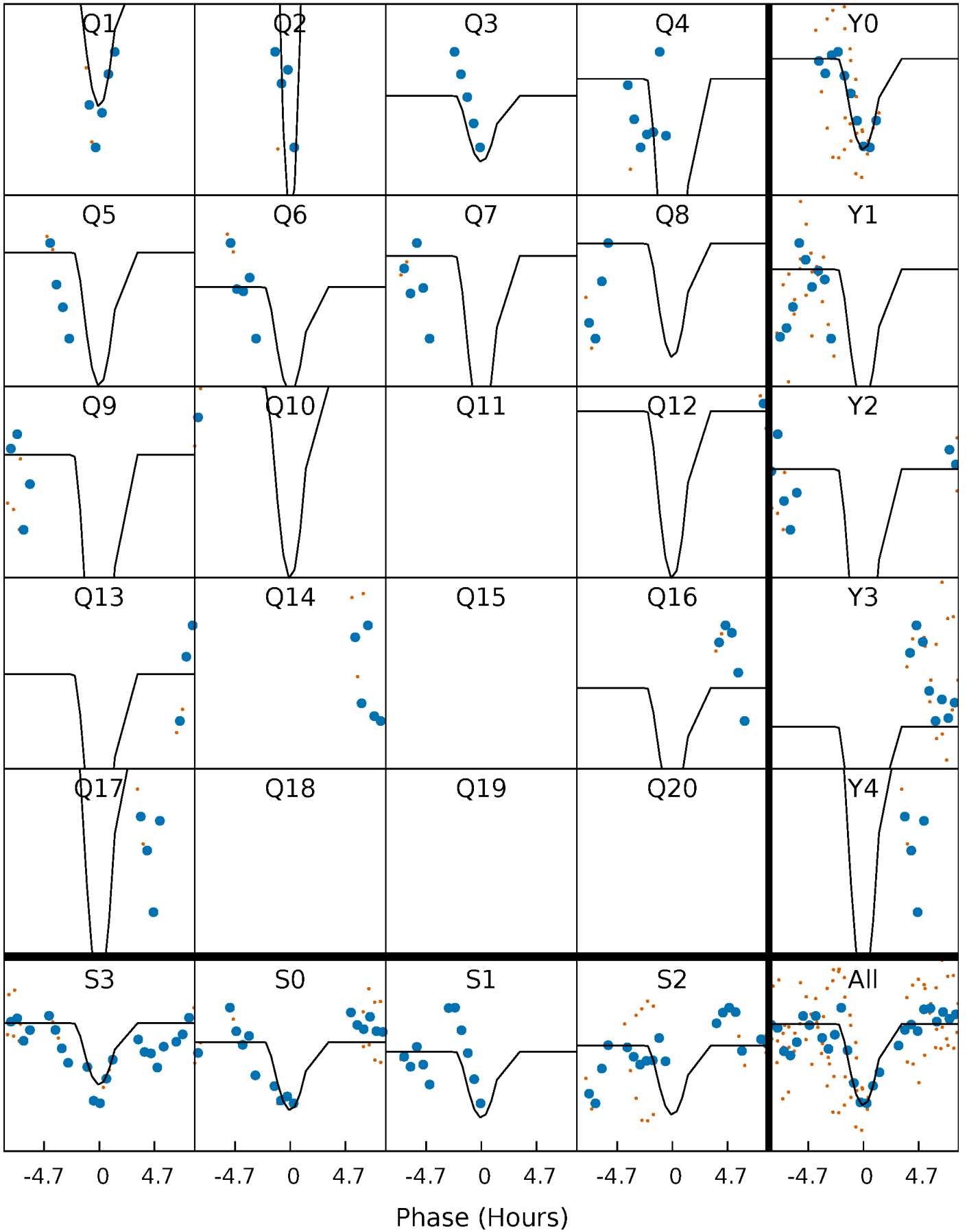
PDC Quarter-Phased Transit Curves

TCE 005476473-04 P= 67.143714 Days $T_0=160.228557$ (BKJD)



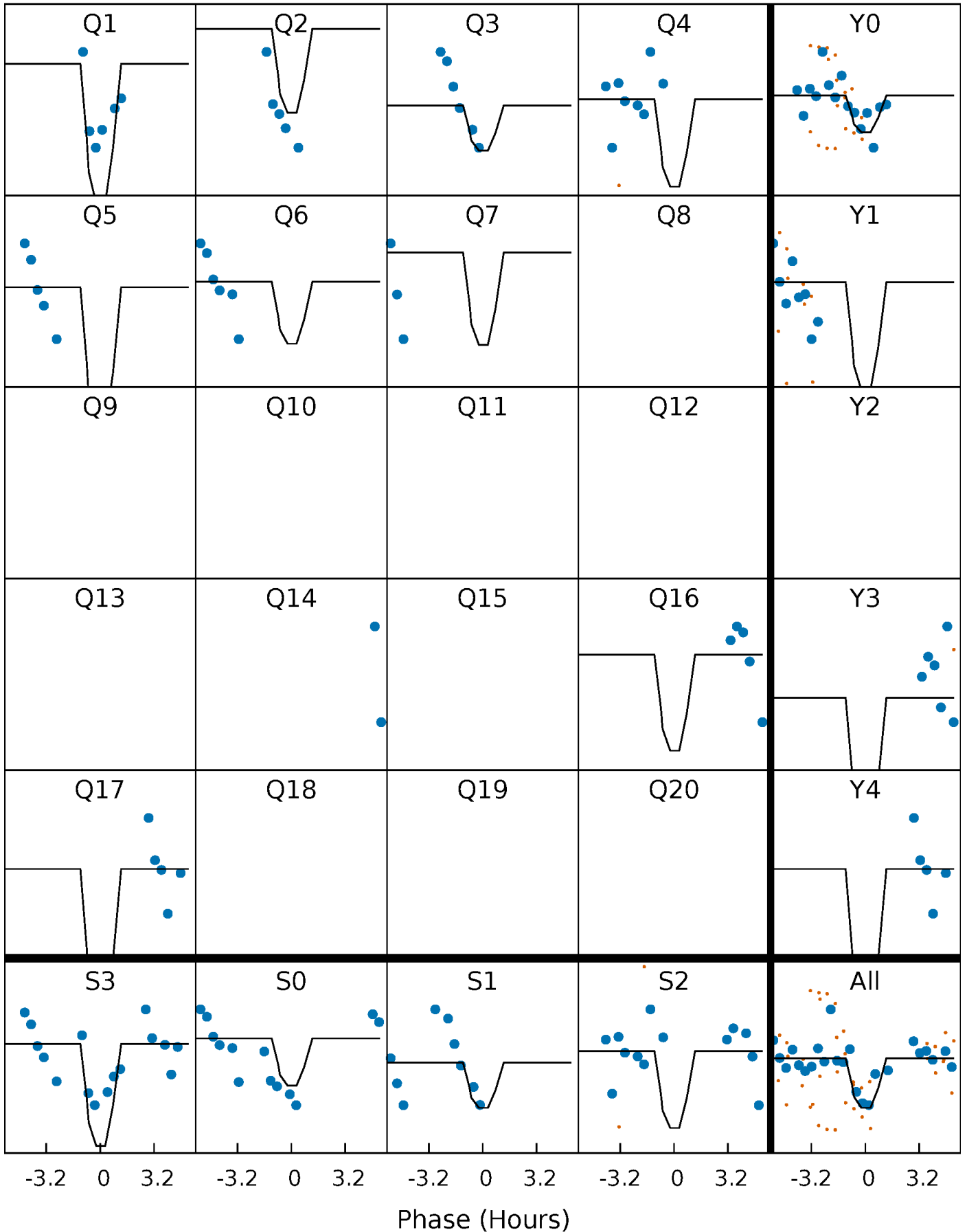
DV Quarter-Phased Transit Curves

TCE 005476473-04 P= 67.143714 Days $T_0=160.228557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

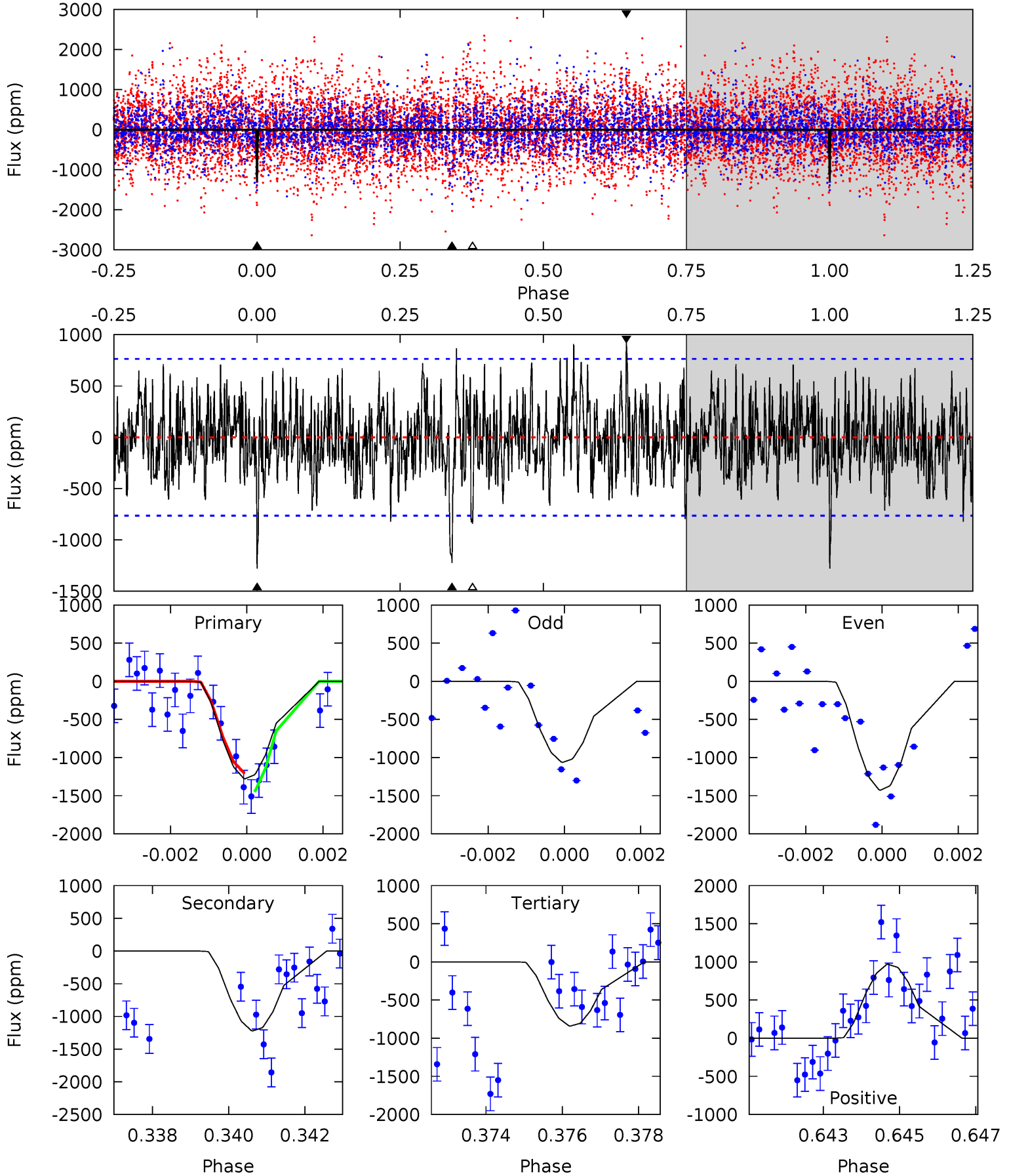
TCE 005476473-04 $P = 67.144690$ Days $T_0 = 160.231836$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-04, P = 67.143714 Days, E = 93.084843 Days

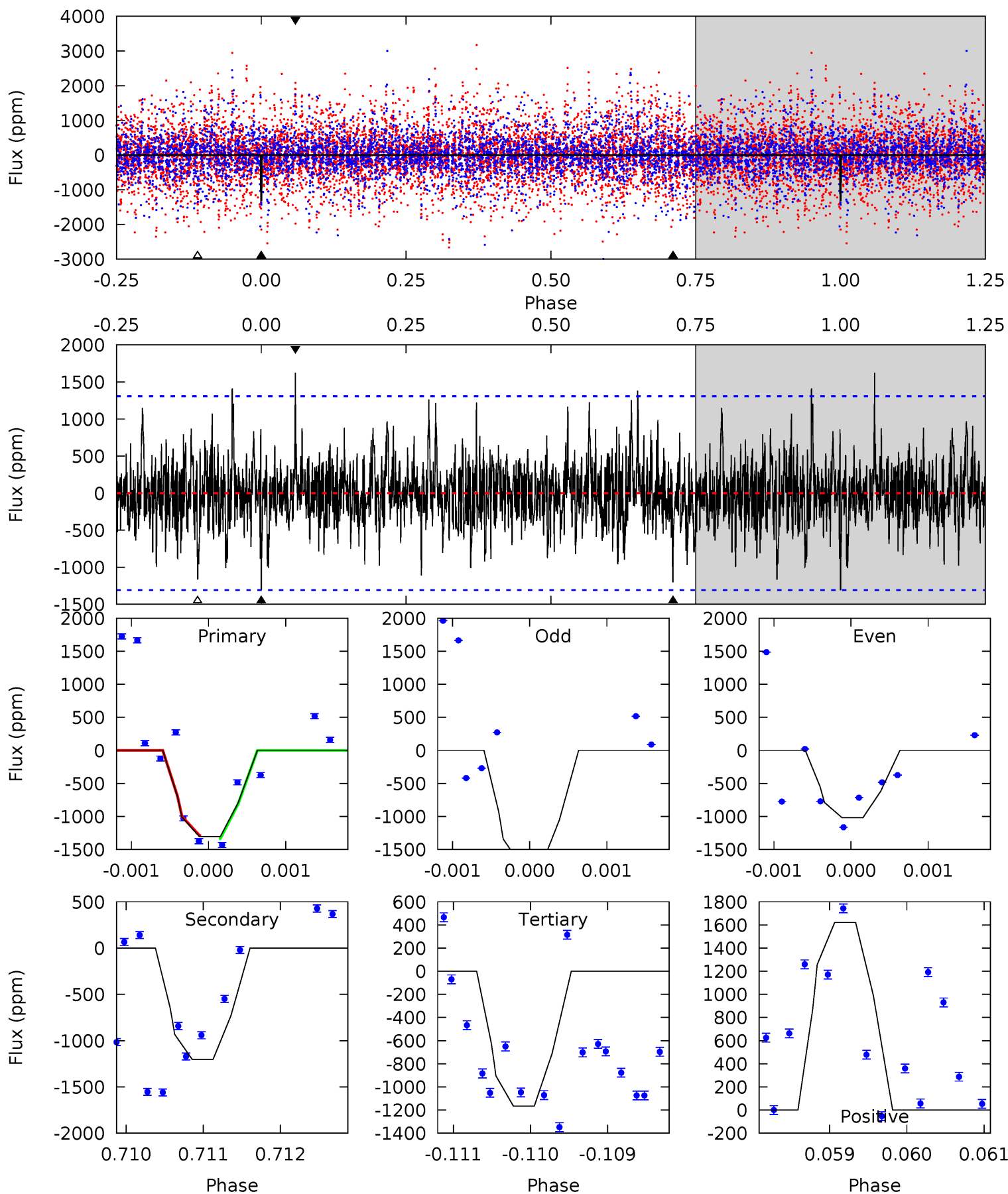
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.89	8.50	5.85	6.74	5.31	3.07	1.93	3.04	2.15	2.65	1.76	1.25	1.49	0.43	0.61



Alt Model-Shift Uniqueness Test

005476473-04, P = 67.144690 Days, E = 93.087146 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.40	4.98	4.83	6.72	5.42	3.23	1.38	0.57	-1.32	0.15	-1.74	1.40	1.03	0.55	0.09



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1222 ± 144	$30.11^{+33.13}_{-21.03}$	777^{+57}_{-38}	3224^{+1761}_{-586}	91^{+887}_{-71}
Alt.	-1203 ± 241	$28.53^{+30.02}_{-19.90}$	775^{+57}_{-35}	3285^{+1714}_{-608}	96^{+945}_{-74}

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

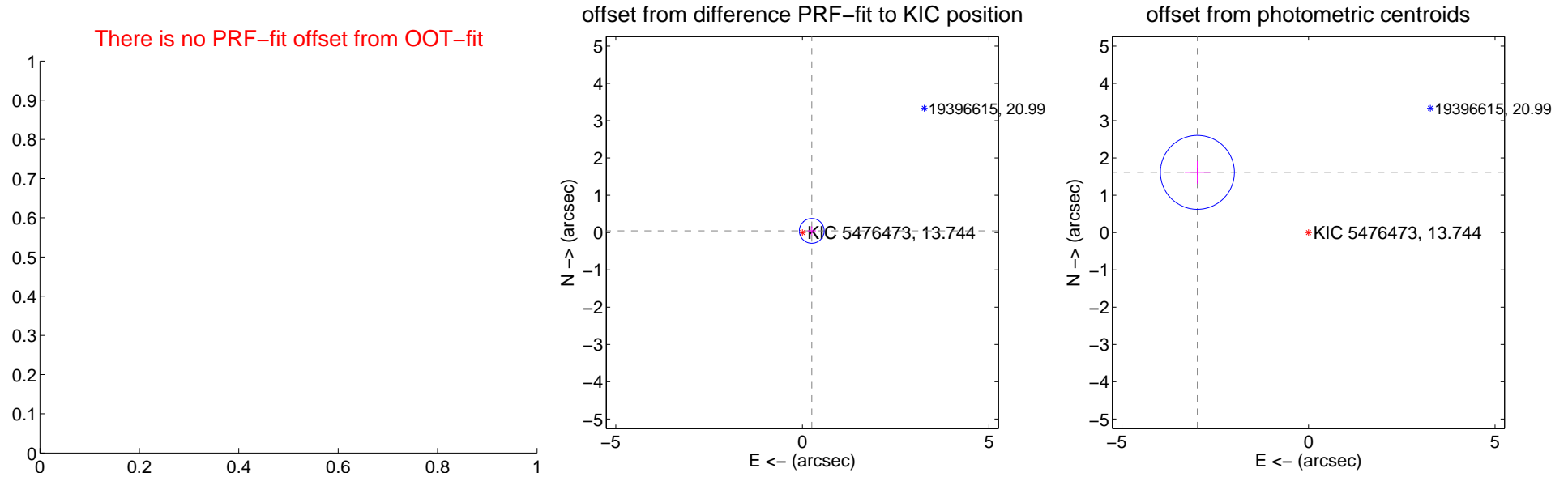
DV Centroid Data

Supplemental centroid analysis for 005476473-04. Kepler magnitude: 13.74. Transit SNR 7.50

There are 3 quarters with good PRF difference image offsets

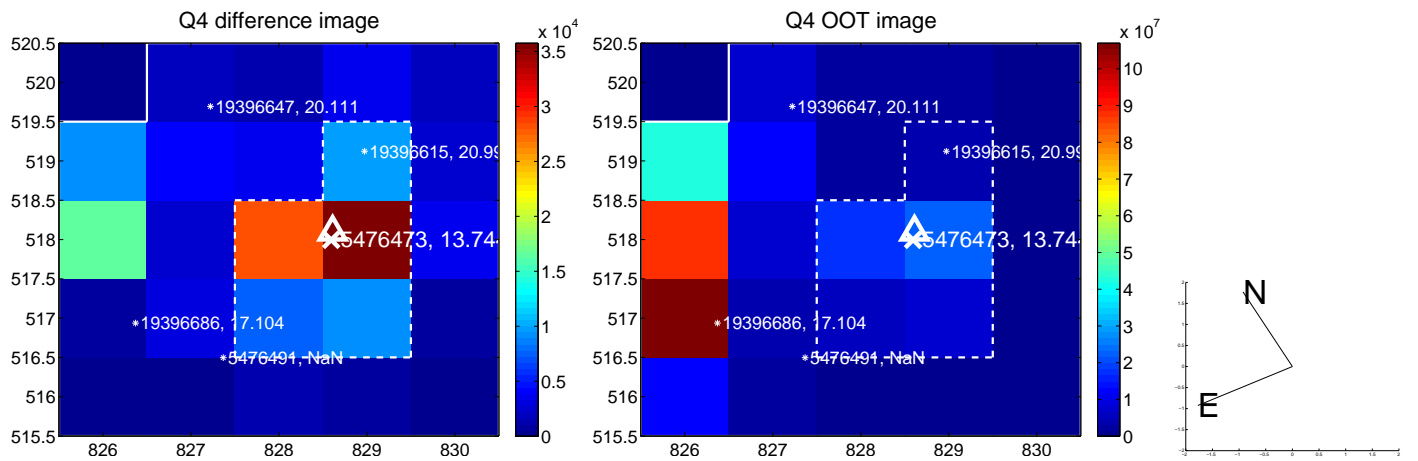
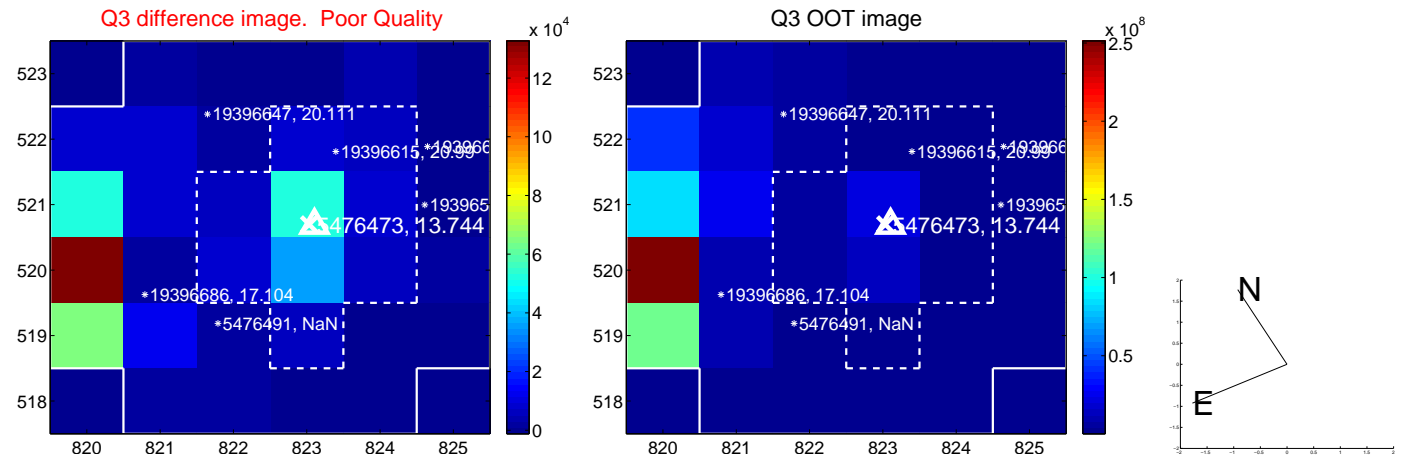
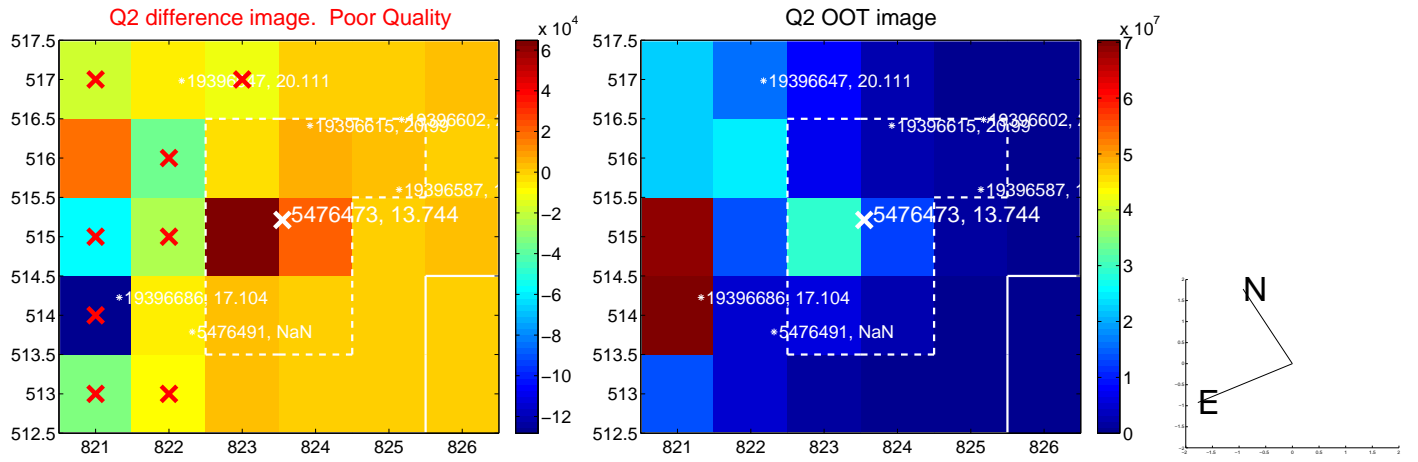
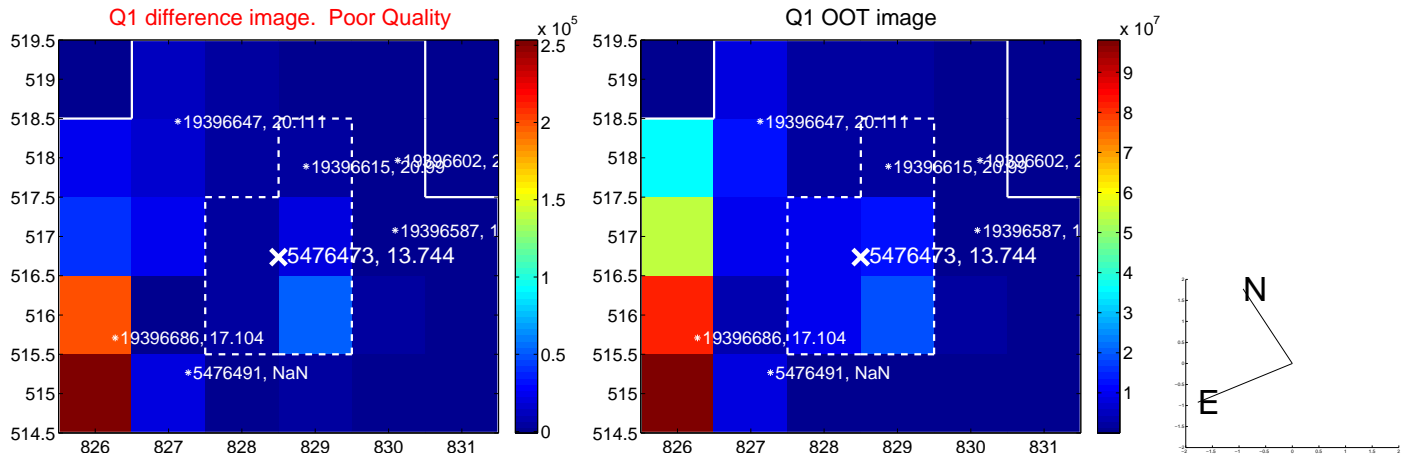
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.256 ± 0.111	2.31	-0.252 ± 0.111	0.046 ± 0.120
photometric centroid source offset	3.39 ± 0.33	10.25	2.98 ± 0.34	1.62 ± 0.30

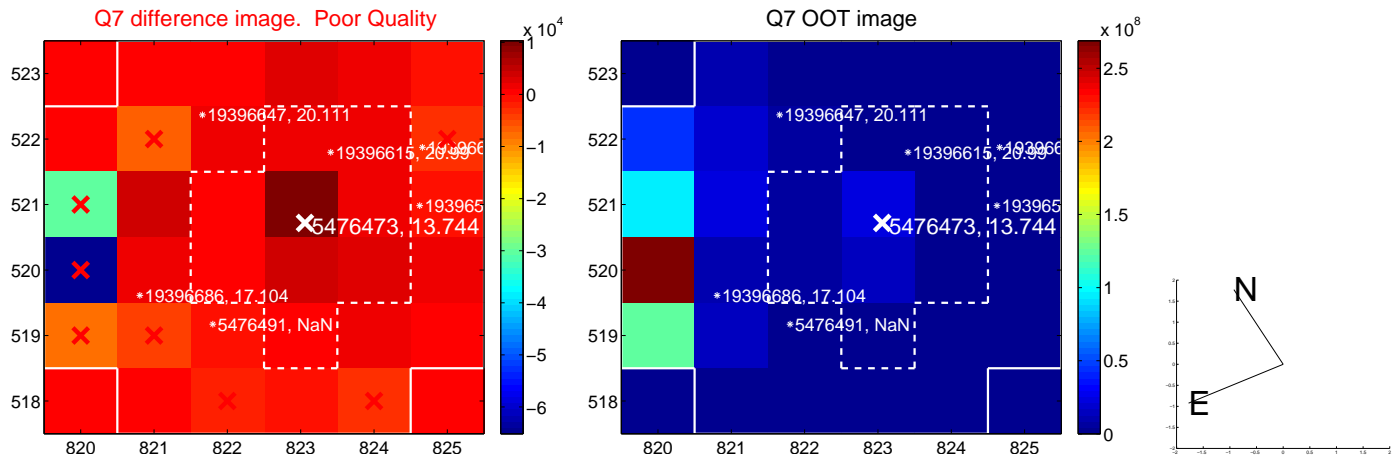
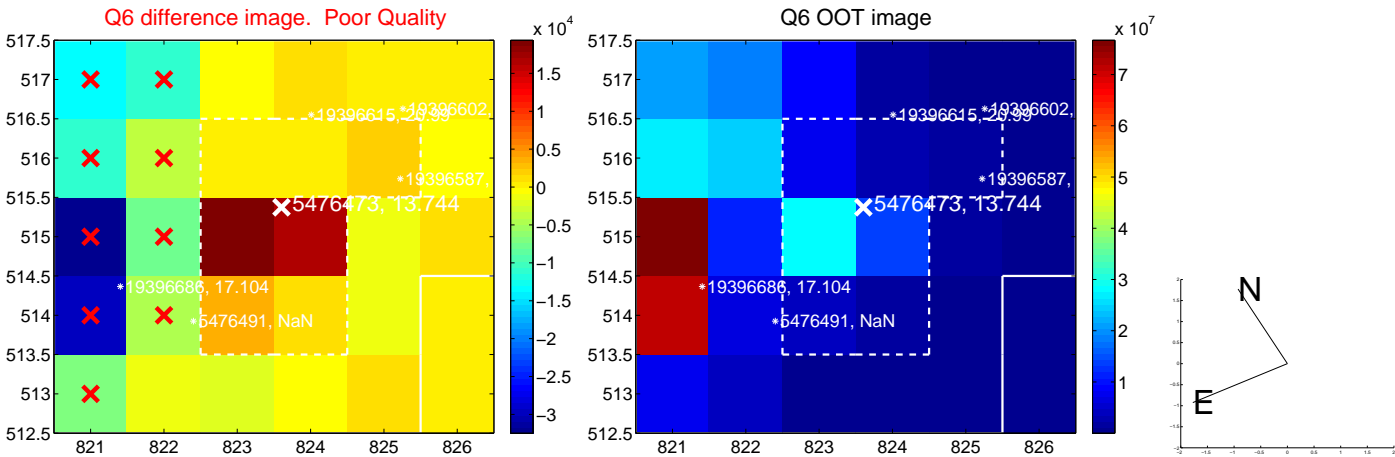
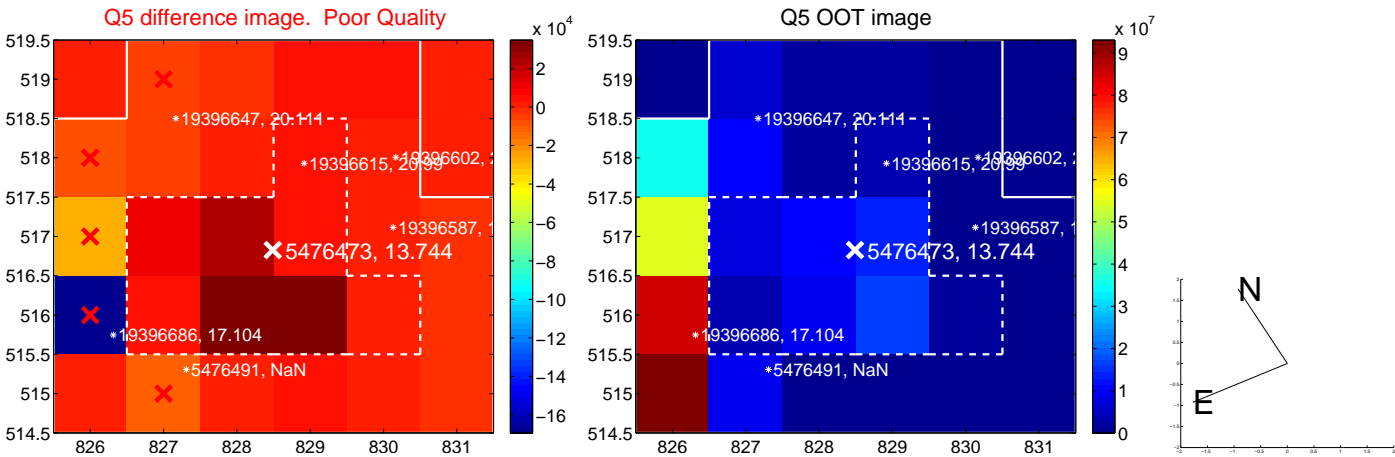


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

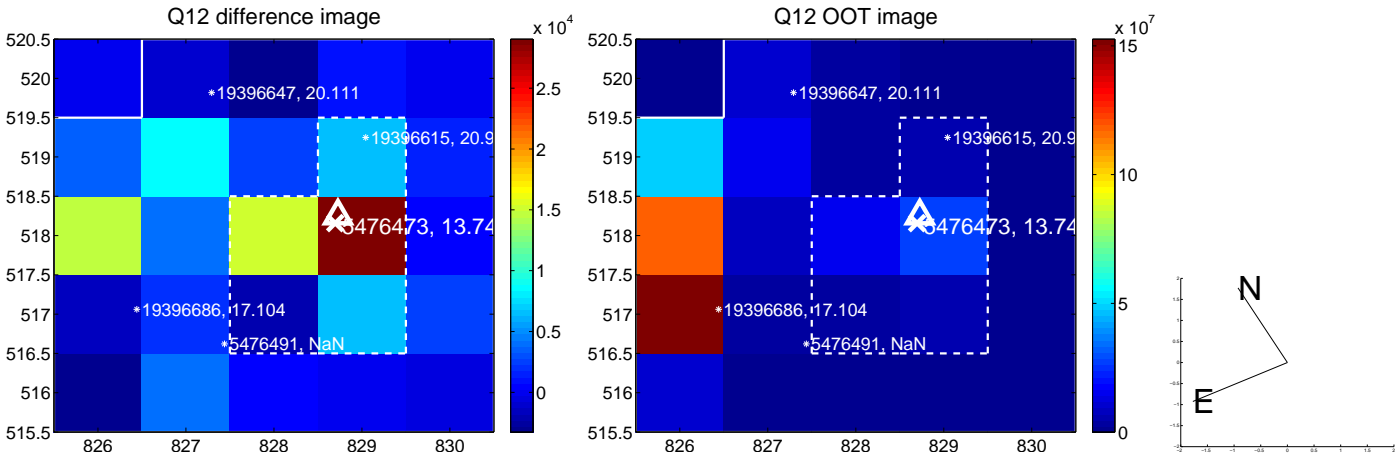
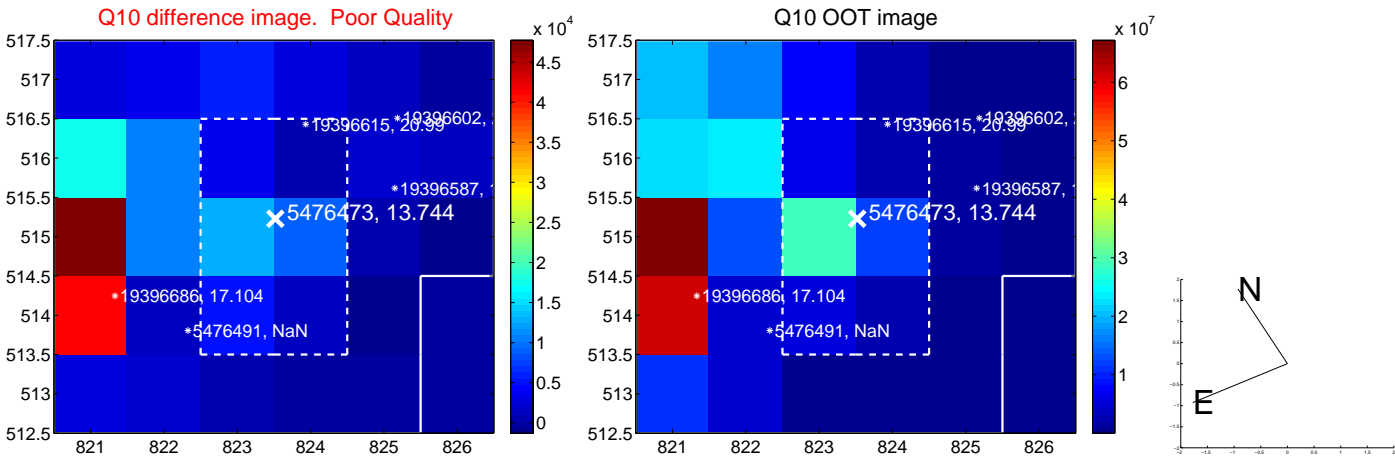
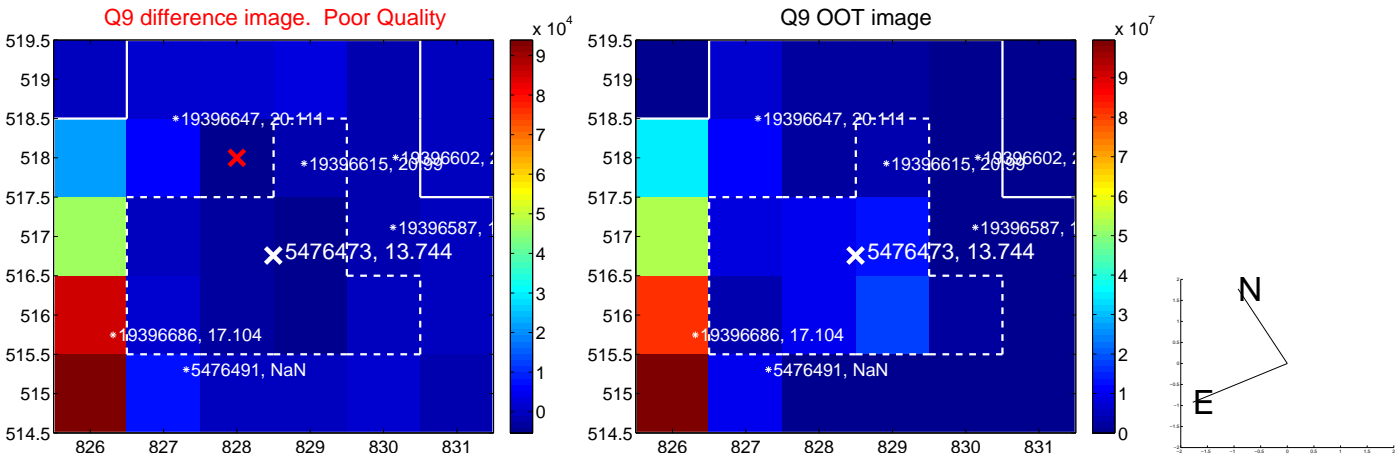
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



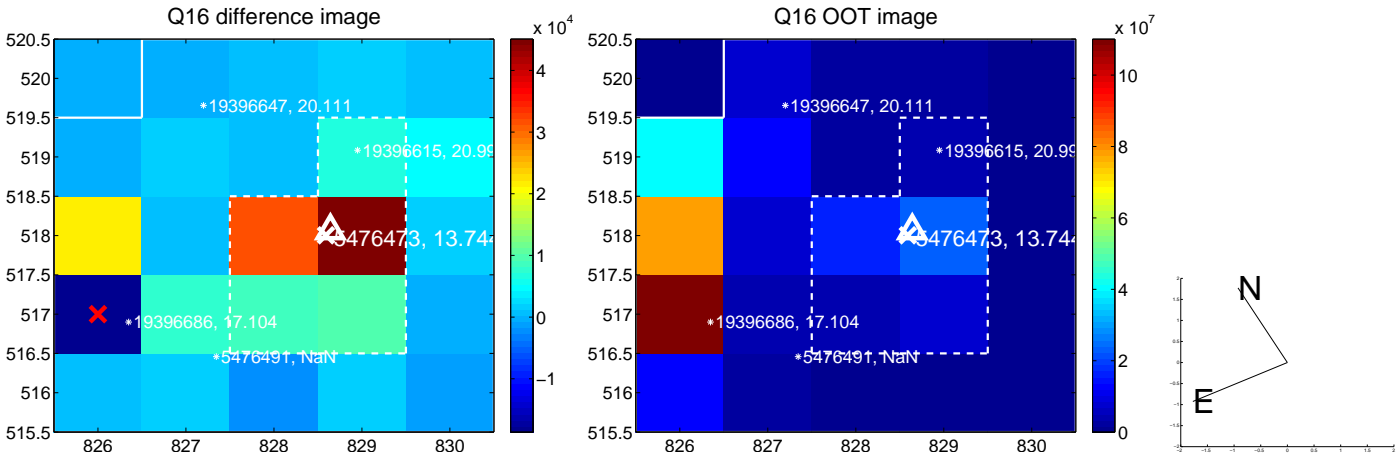
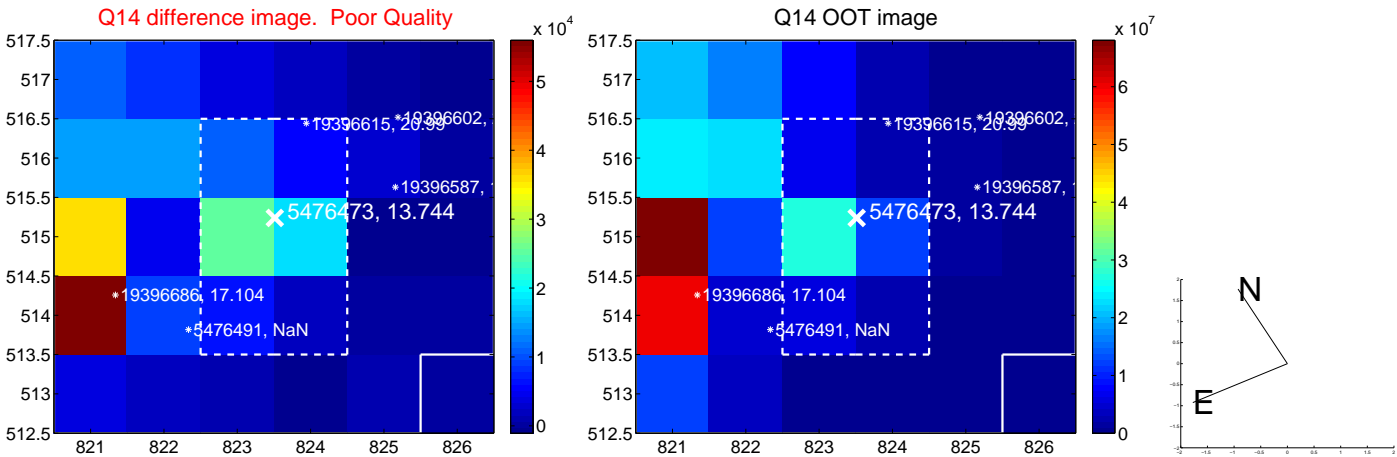
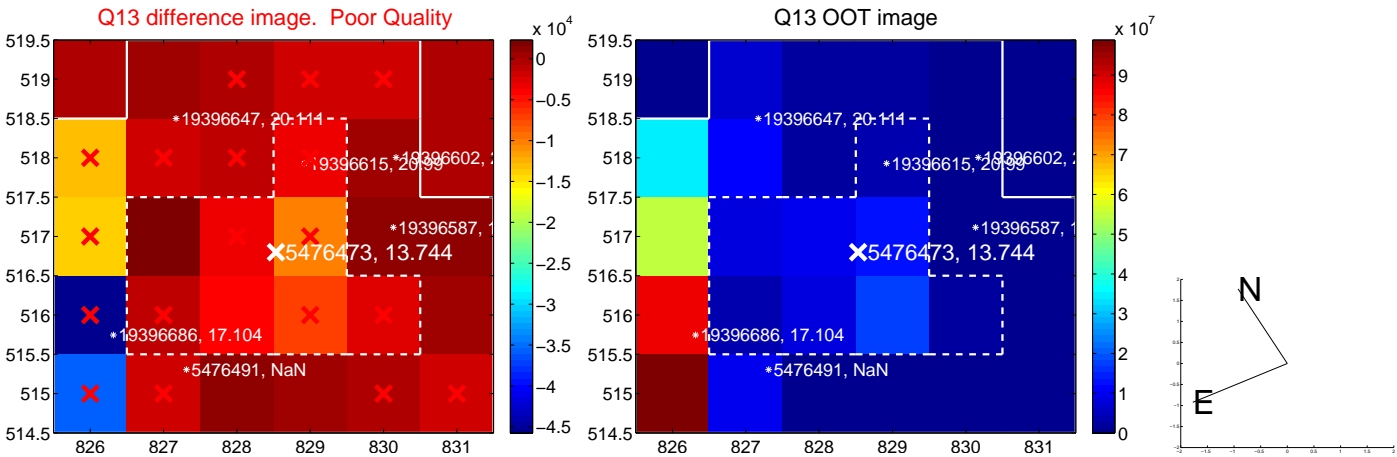
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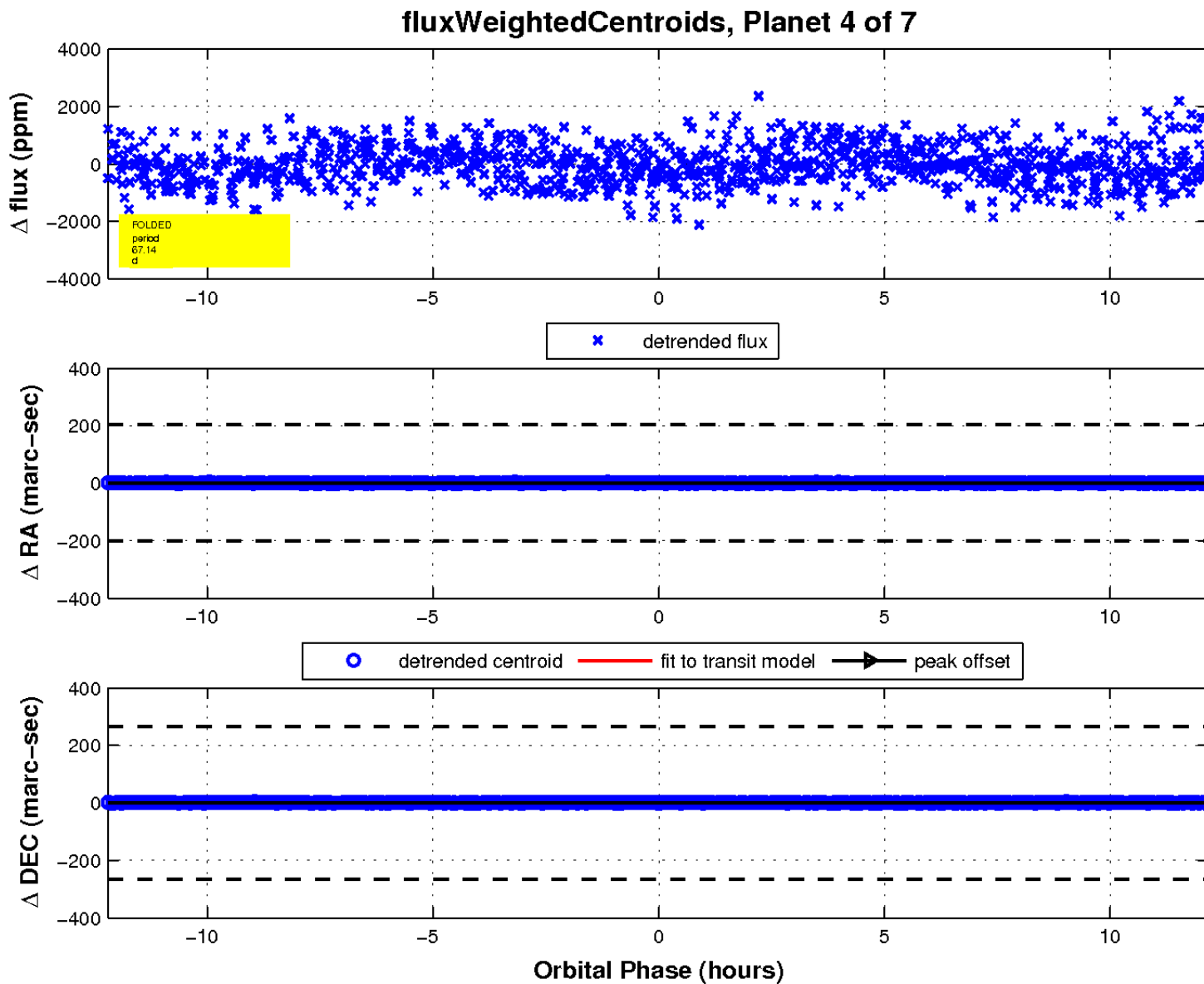
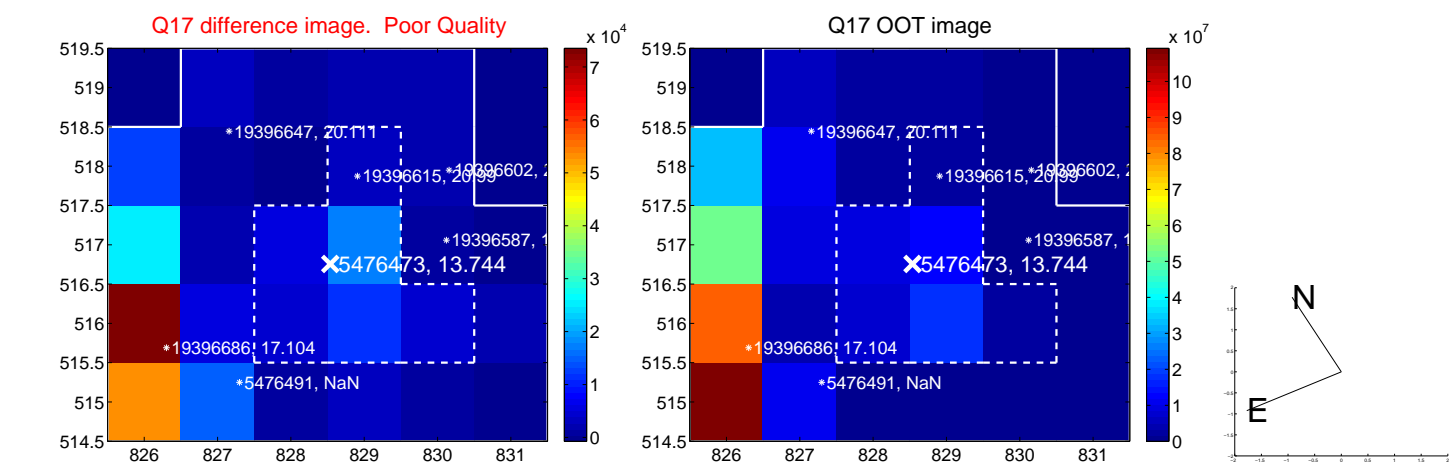
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



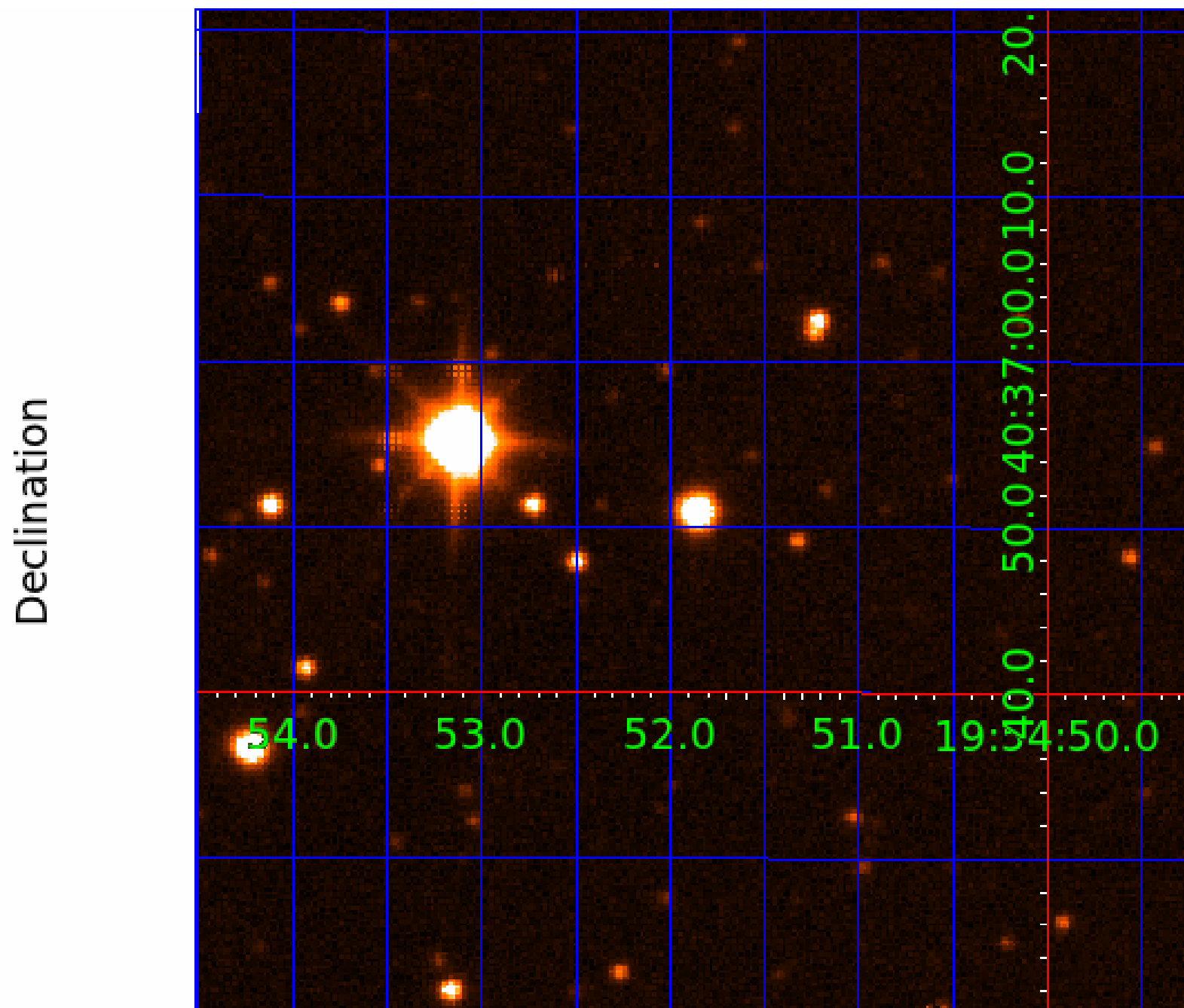
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005476473

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})
005476473-01	OBS	No	0.808595	131.529527	0.0	5.357	10.2	0.0	1.22	6621	0.00	7719.98
005476473-02	OBS	No	73.602269	140.052375	2635.5	3.815	11.5	10.7	1.22	6621	11.47	18.85
005476473-03	OBS	No	25.313932	140.994912	282.9	5.092	10.0	3.9	1.22	6621	2.34	78.24
005476473-04	OBS	No	67.143714	160.228557	1439.9	4.070	9.3	7.5	1.22	6621	8.64	21.31
005476473-05	OBS	No	105.656608	203.392003	1159.6	2.860	8.4	7.7	1.22	6621	7.42	11.64
005476473-06	OBS	No	36.929269	149.201170	1151.4	1.637	8.0	7.2	1.22	6621	4.45	47.29
005476473-07	OBS	No	58.244842	175.562114	1769.9	3.827	8.9	9.5	1.22	6621	6.35	25.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476473-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS
005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

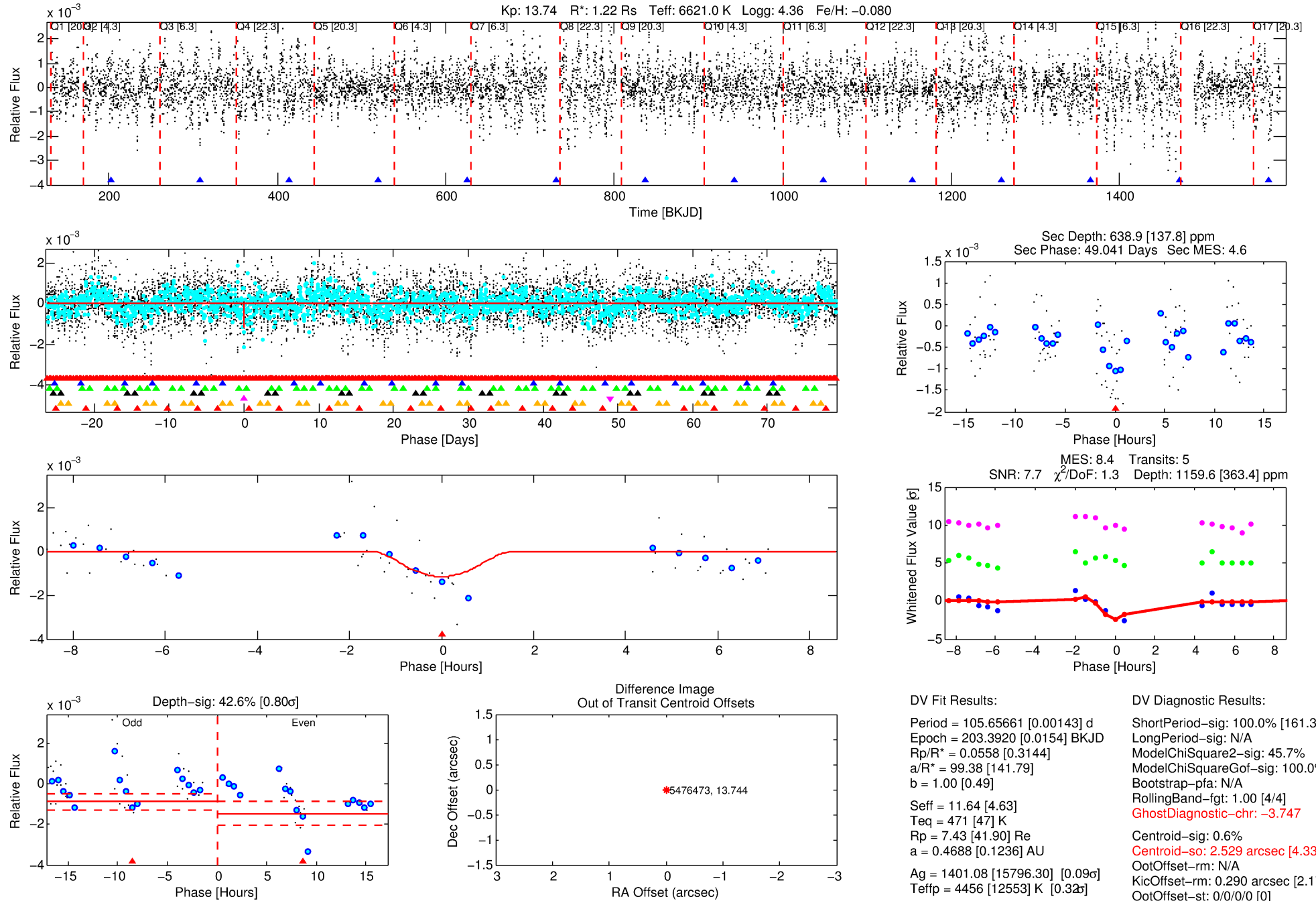
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-05

No Significant Match Found

DV One-Page Summary

KIC: 5476473 Candidate: 5 of 7 Period: 105.657 d



DV Fit Results:

Period = 105.65661 [0.00143] d
Epoch = 203.3920 [0.0154] BKJD
Rp/R* = 0.0558 [0.3144]
a/R* = 99.38 [141.79]
b = 1.00 [0.49]
Seff = 11.64 [4.63]
Teq = 471 [47] K
Rp = 7.43 [41.90] Re
a = 0.4688 [0.1236] AU
Ag = 1401.08 [15796.30] [0.09σ]
Teffp = 4456 [12553] K [0.3σ]

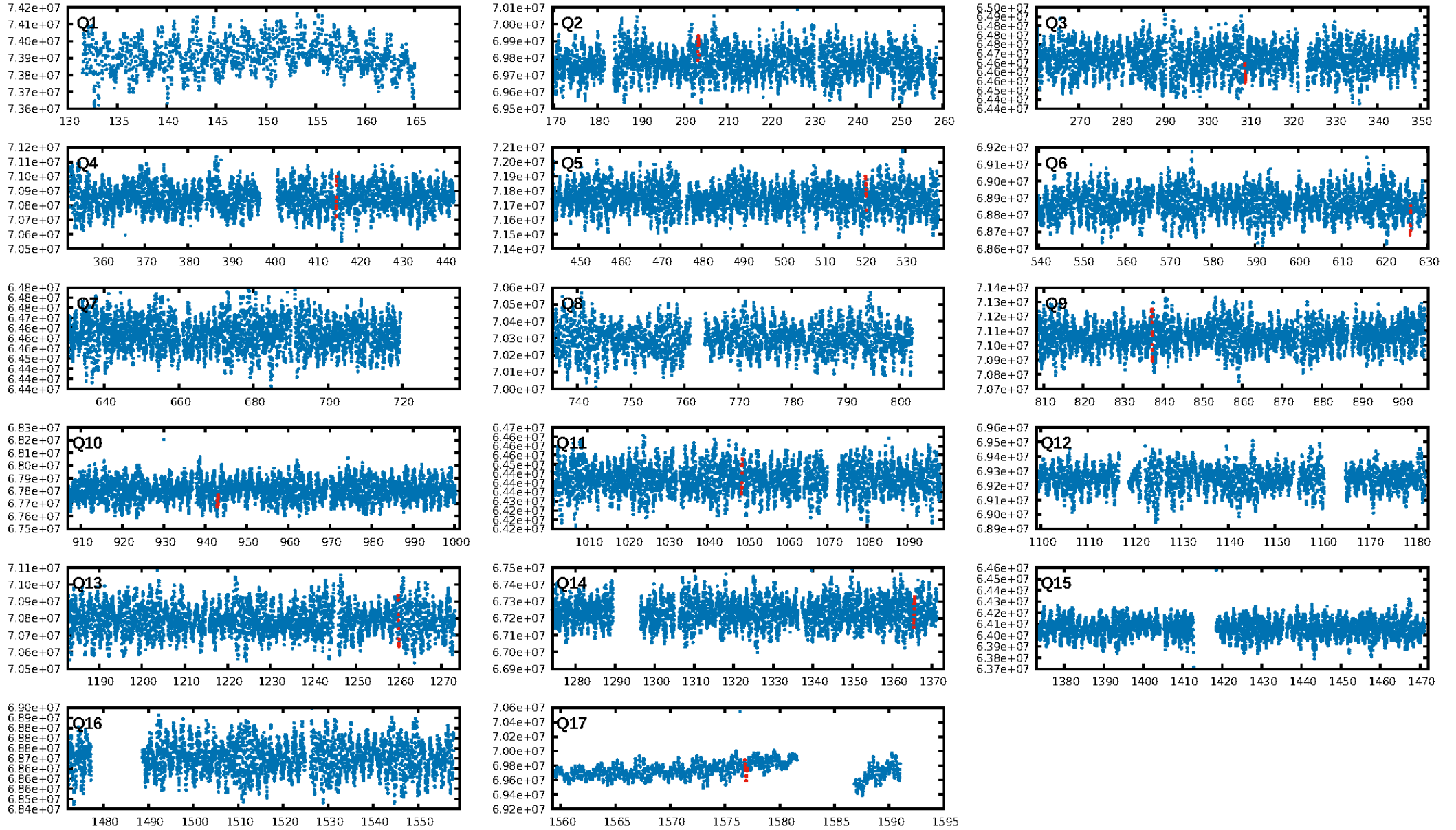
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [161.34σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 45.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -3.747
Centroid-sig: 0.6%
Centroid-so: 2.529 arcsec [4.33σ]
OotOffset-rm: N/A
KicOffset-rm: 0.290 arcsec [2.17σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 2/1/0/3 [6]
DiffImageQuality-fgm: 0.67 [4/6]
DiffImageOverlap-fno: 0.00 [0/11]

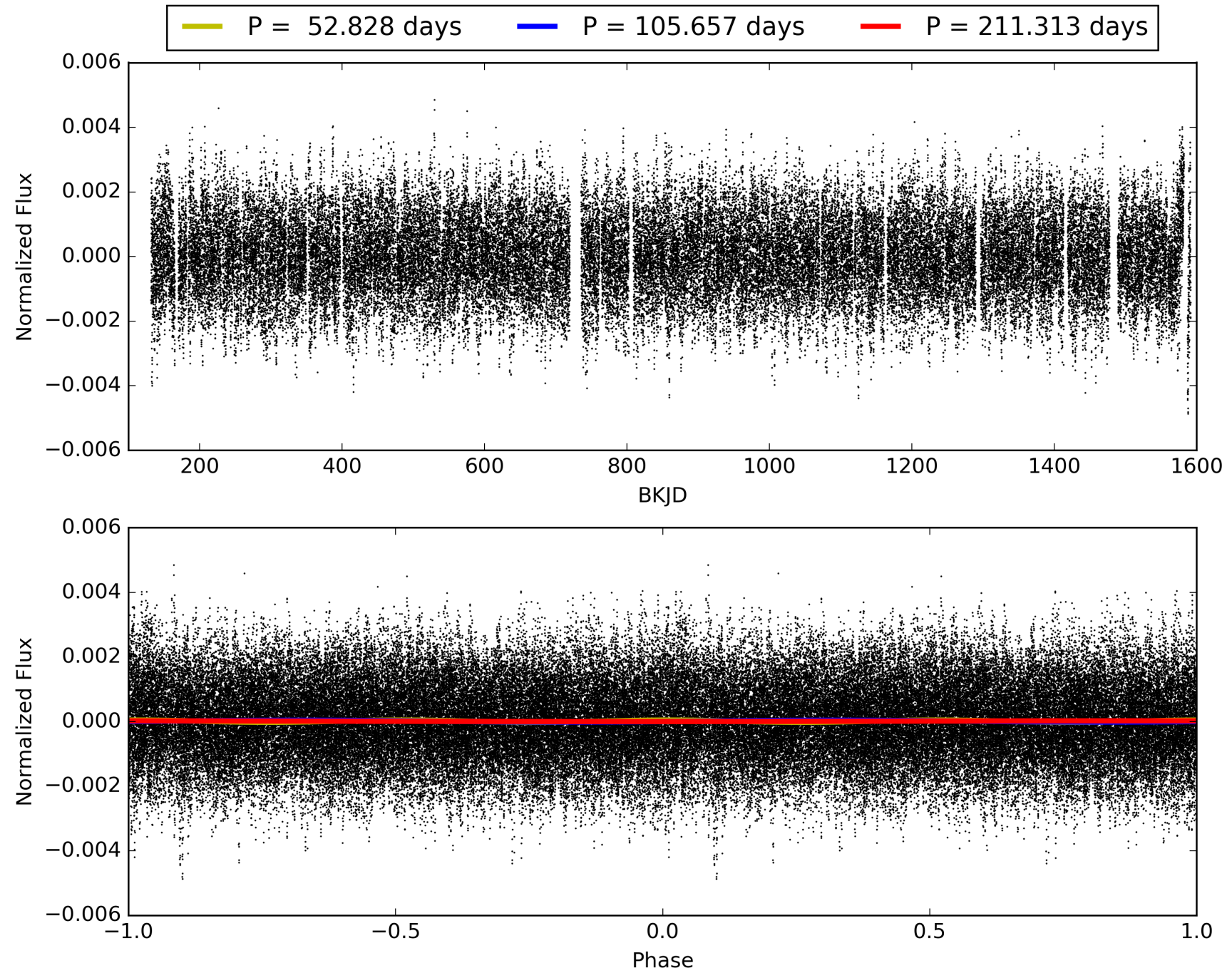
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:50:57 Z

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

TCE 005476473-05, PDC Light Curves

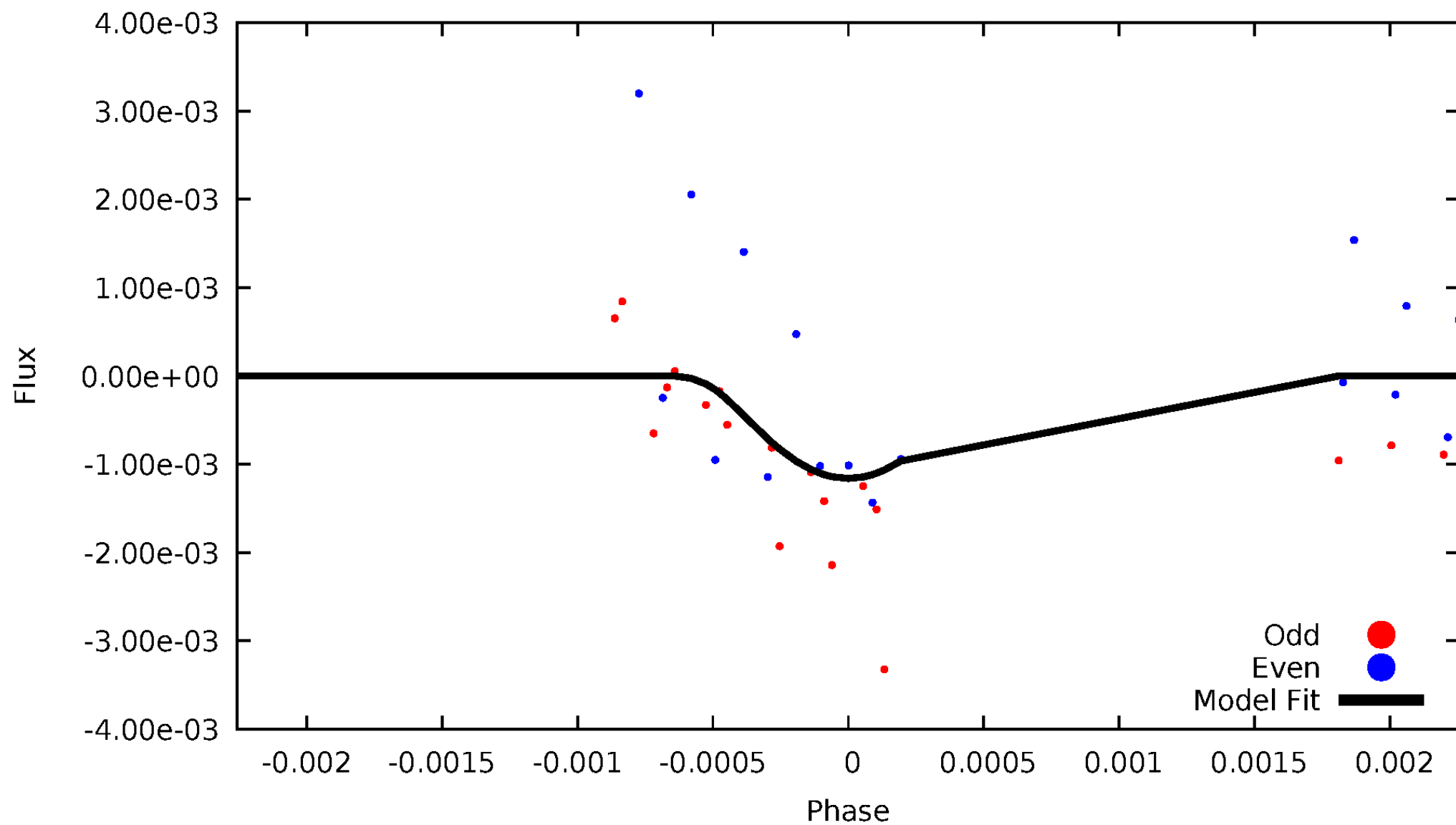


TCE 005476473-05



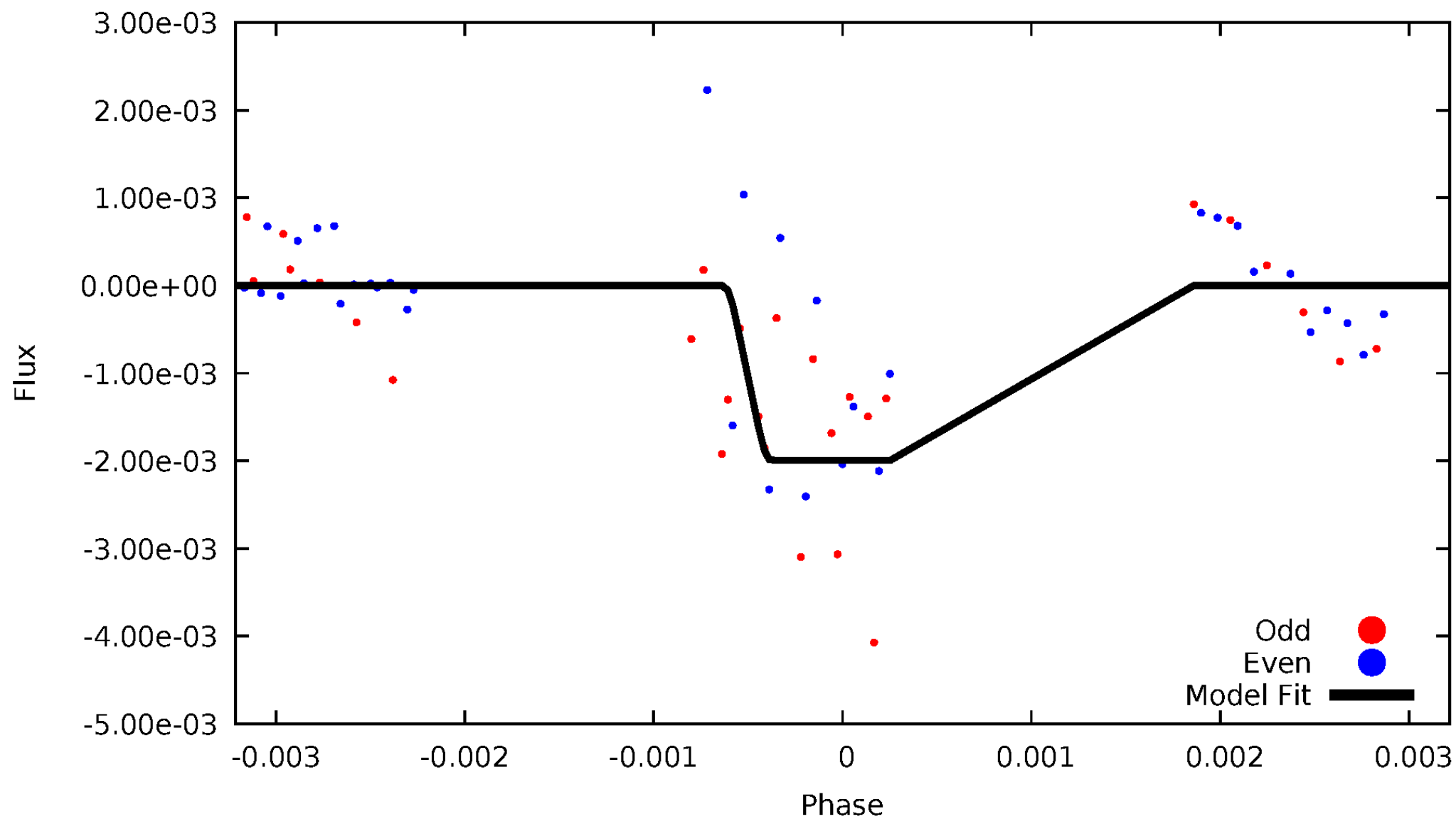
DV Odd/Even

TCE 005476473-05



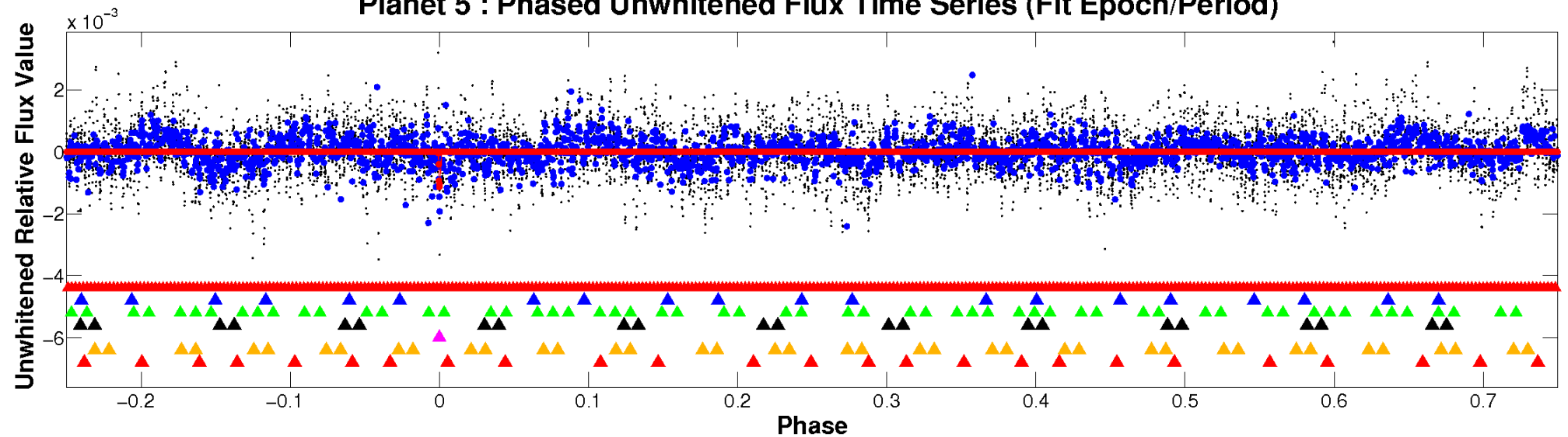
ALT Odd/Even

TCE 005476473-05

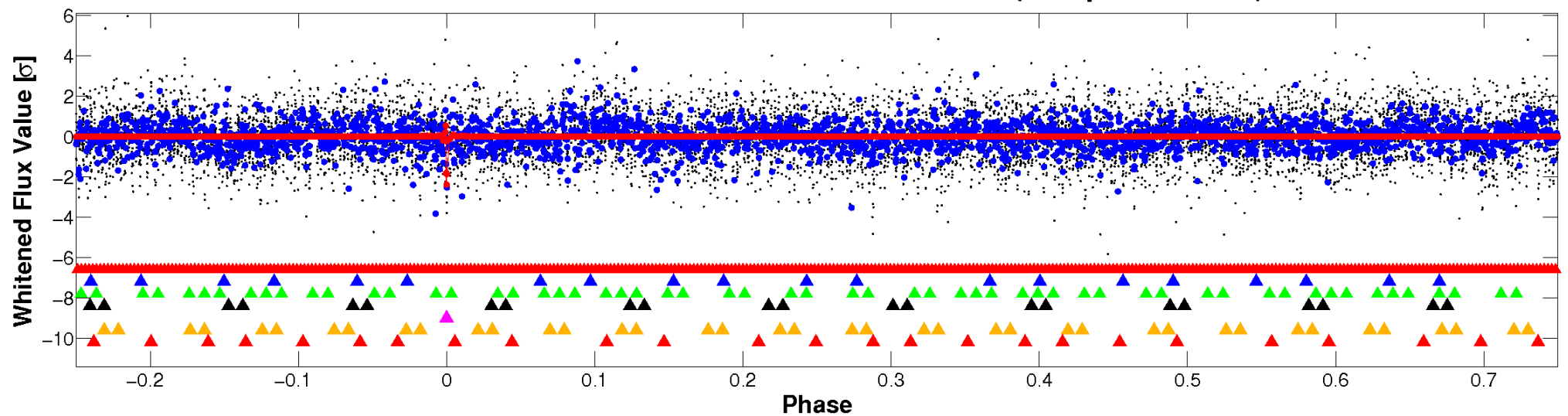


Non-Whitened Vs. Whitened Light Curve

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

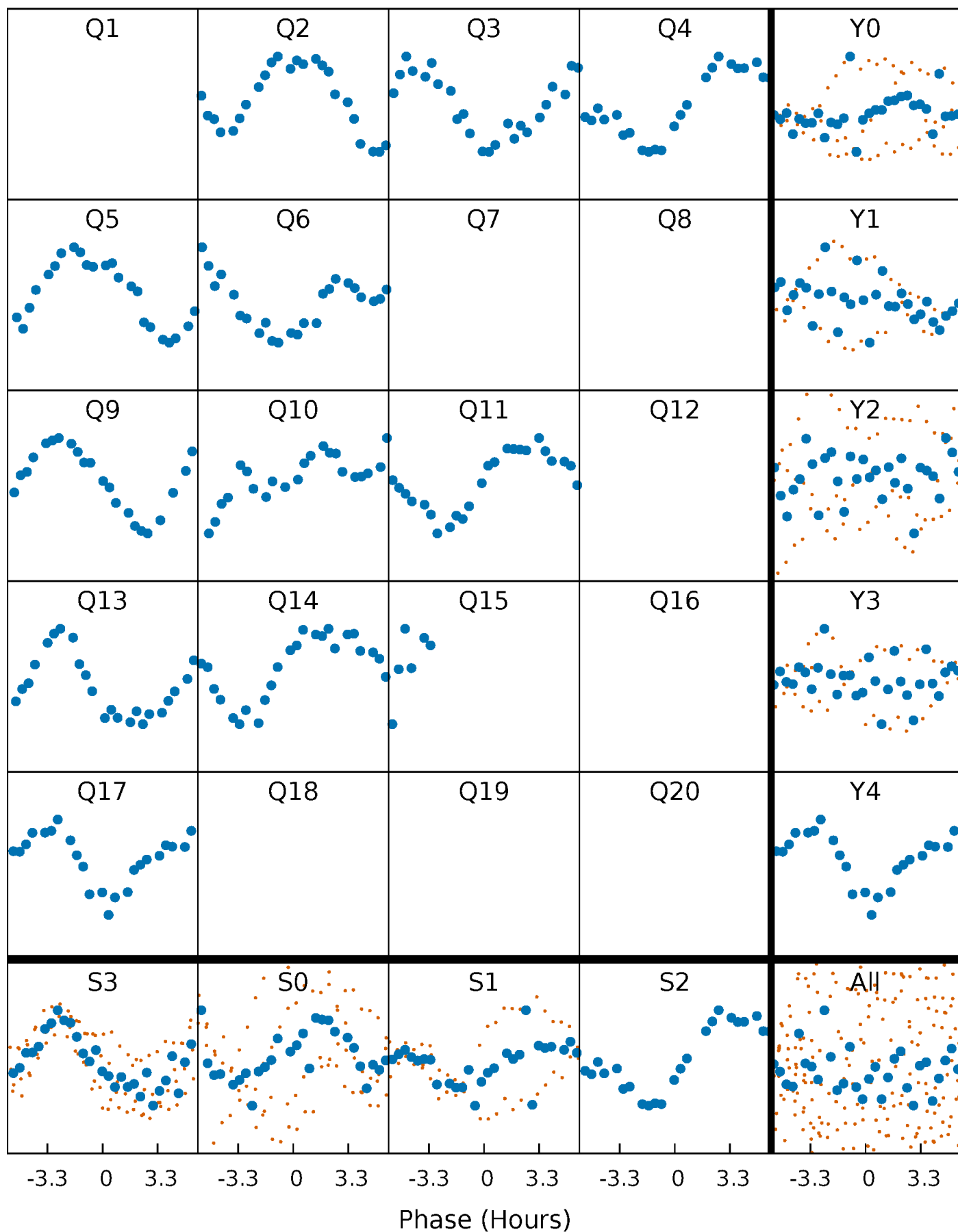


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



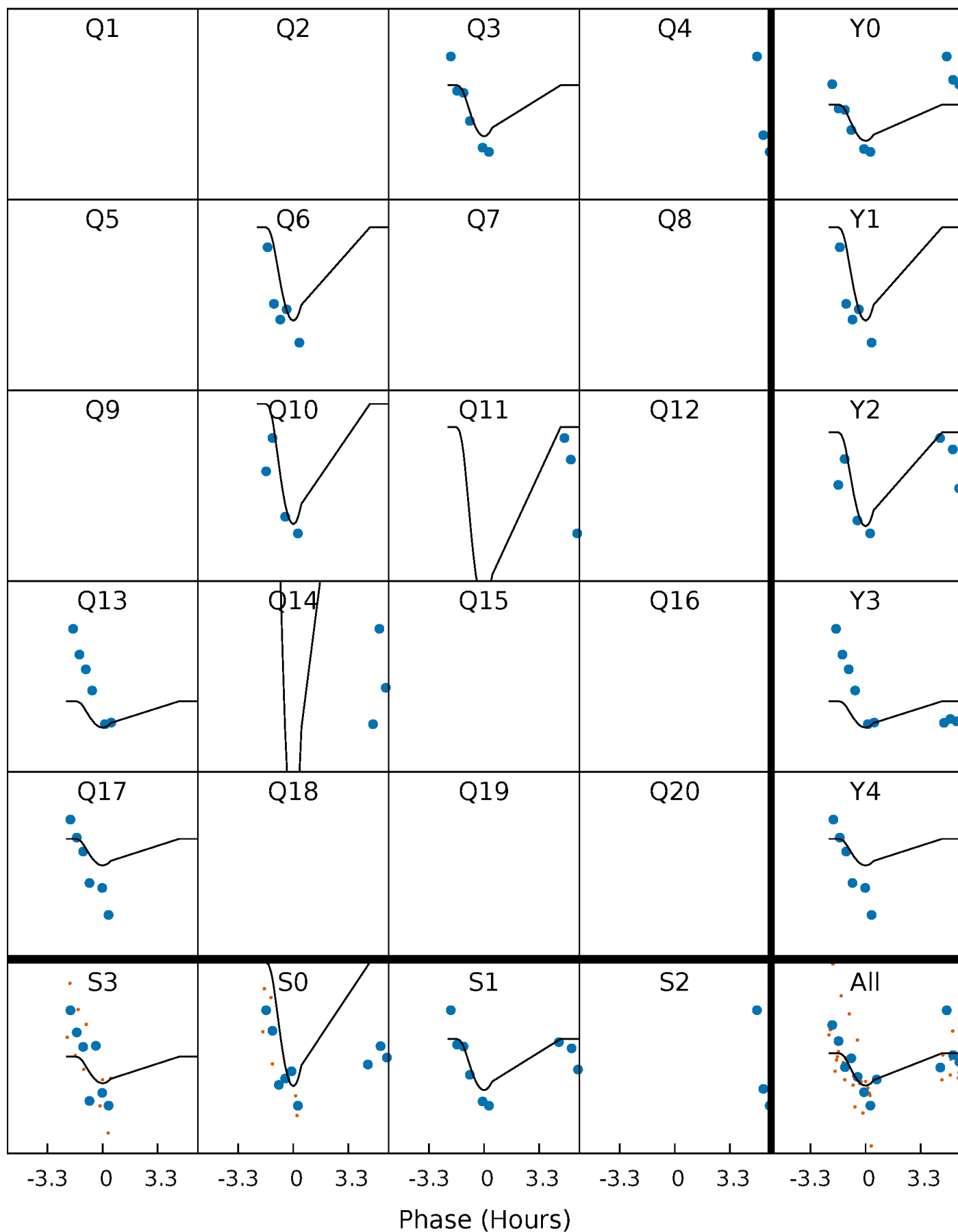
PDC Quarter-Phased Transit Curves

TCE 005476473-05 $P=105.656608$ Days $T_0=203.392003$ (BKJD)



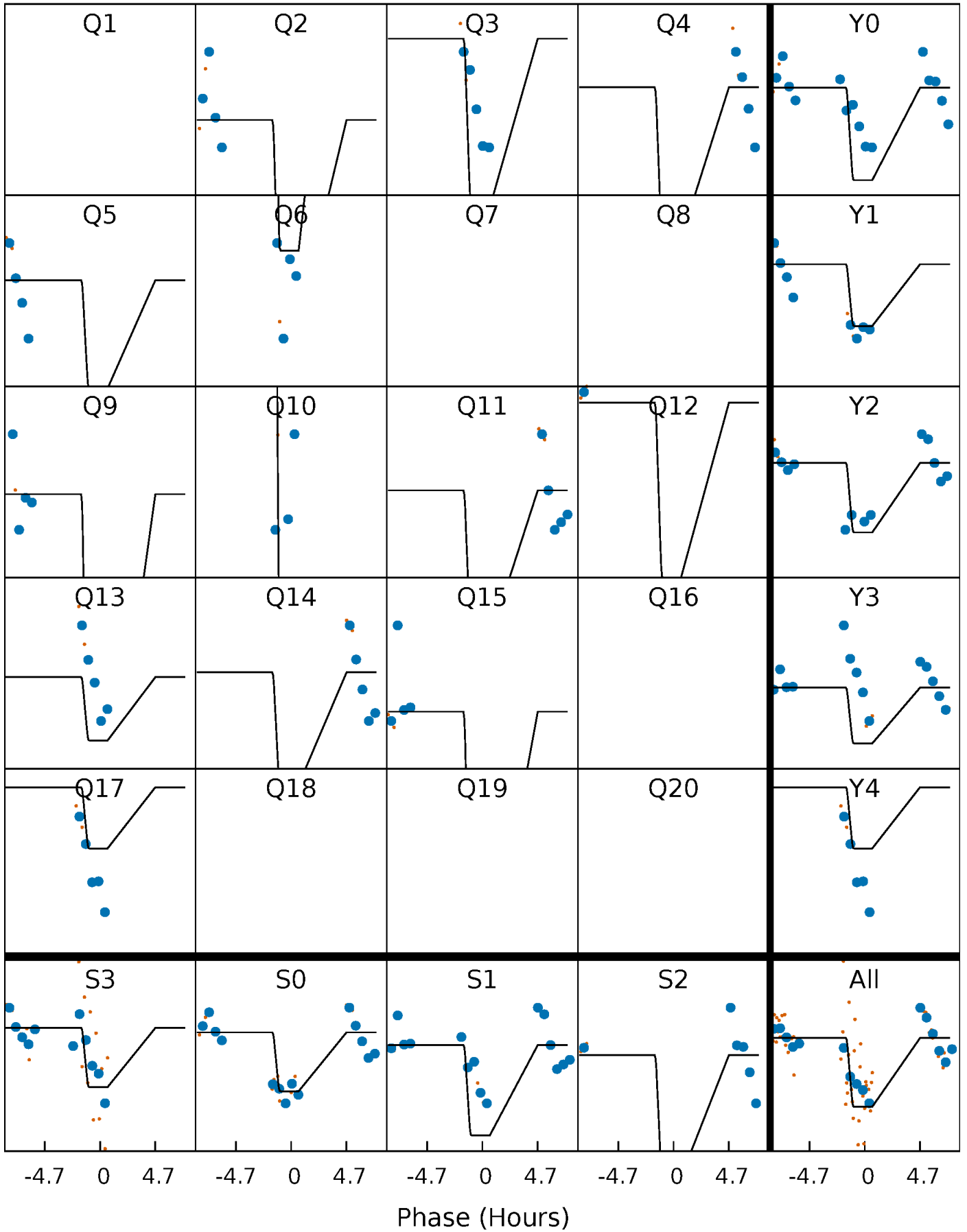
DV Quarter-Phased Transit Curves

TCE 005476473-05 $P=105.656608$ Days $T_0=203.392003$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

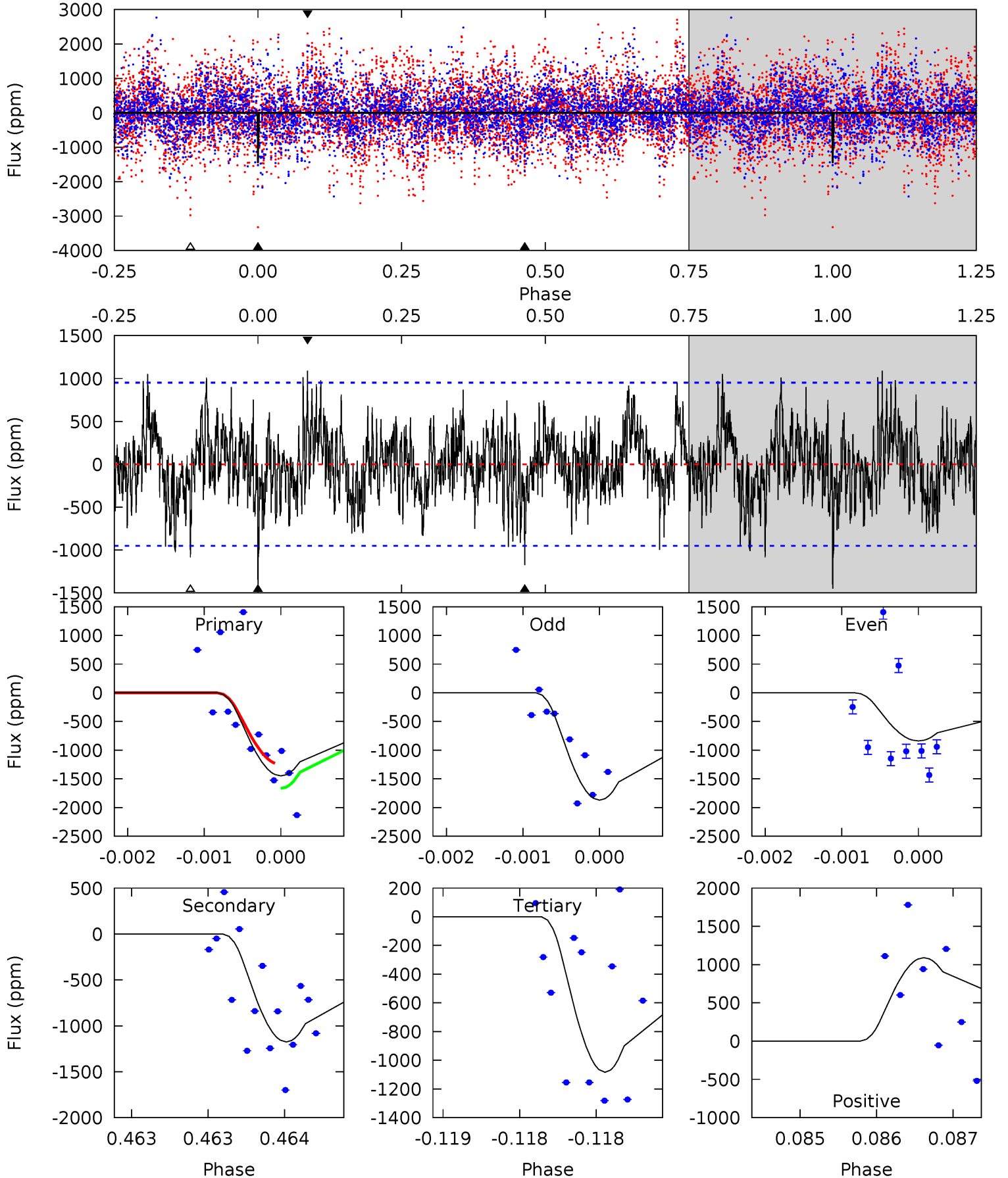
TCE 005476473-05 P=105.657424 Days $T_0=203.377821$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-05, P = 105.656608 Days, E = 97.735395 Days

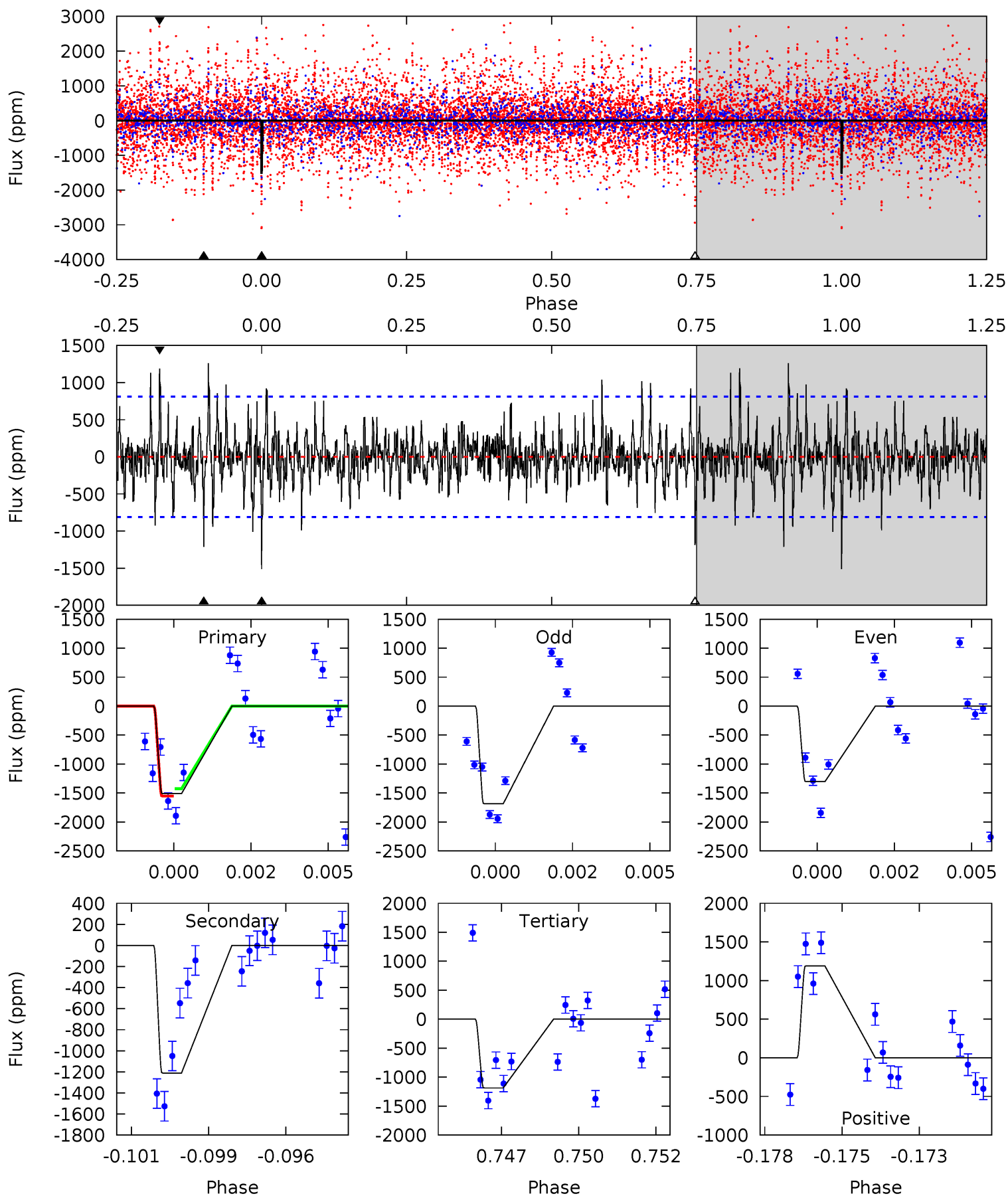
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	6.79	6.26	6.30	5.50	3.36	1.94	2.11	2.07	0.53	0.49	2.89	1.02	0.43	1.12



Alt Model-Shift Uniqueness Test

005476473-05, P = 105.657424 Days, E = 97.720397 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	7.89	7.73	7.75	5.29	3.03	1.80	2.10	2.08	0.15	0.14	1.24	1.01	0.46	0.38



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1176 ± 173	$33.46^{+35.18}_{-23.90}$	668^{+51}_{-34}	3115^{+1600}_{-529}	126^{+1352}_{-96}
Alt.	-1211 ± 154	$31.24^{+34.34}_{-21.91}$	668^{+45}_{-34}	3195^{+1753}_{-601}	148^{+1611}_{-115}

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 $A_{obs} \gg 1.0$

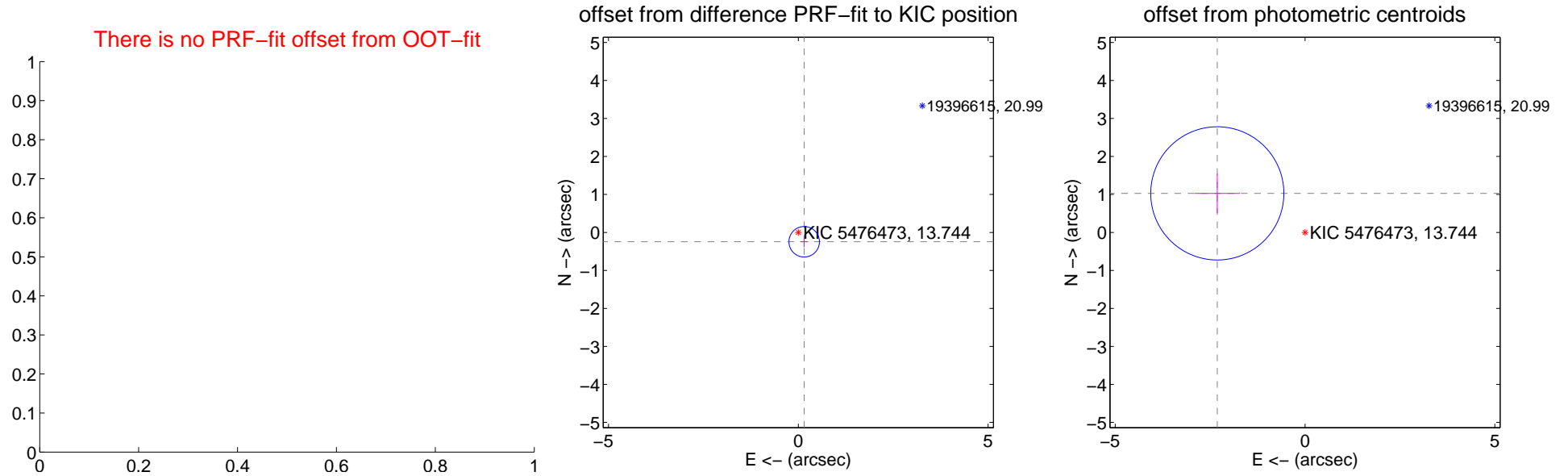
DV Centroid Data

Supplemental centroid analysis for 005476473-05. Kepler magnitude: 13.74. Transit SNR 7.74

There are 4 quarters with good PRF difference image offsets

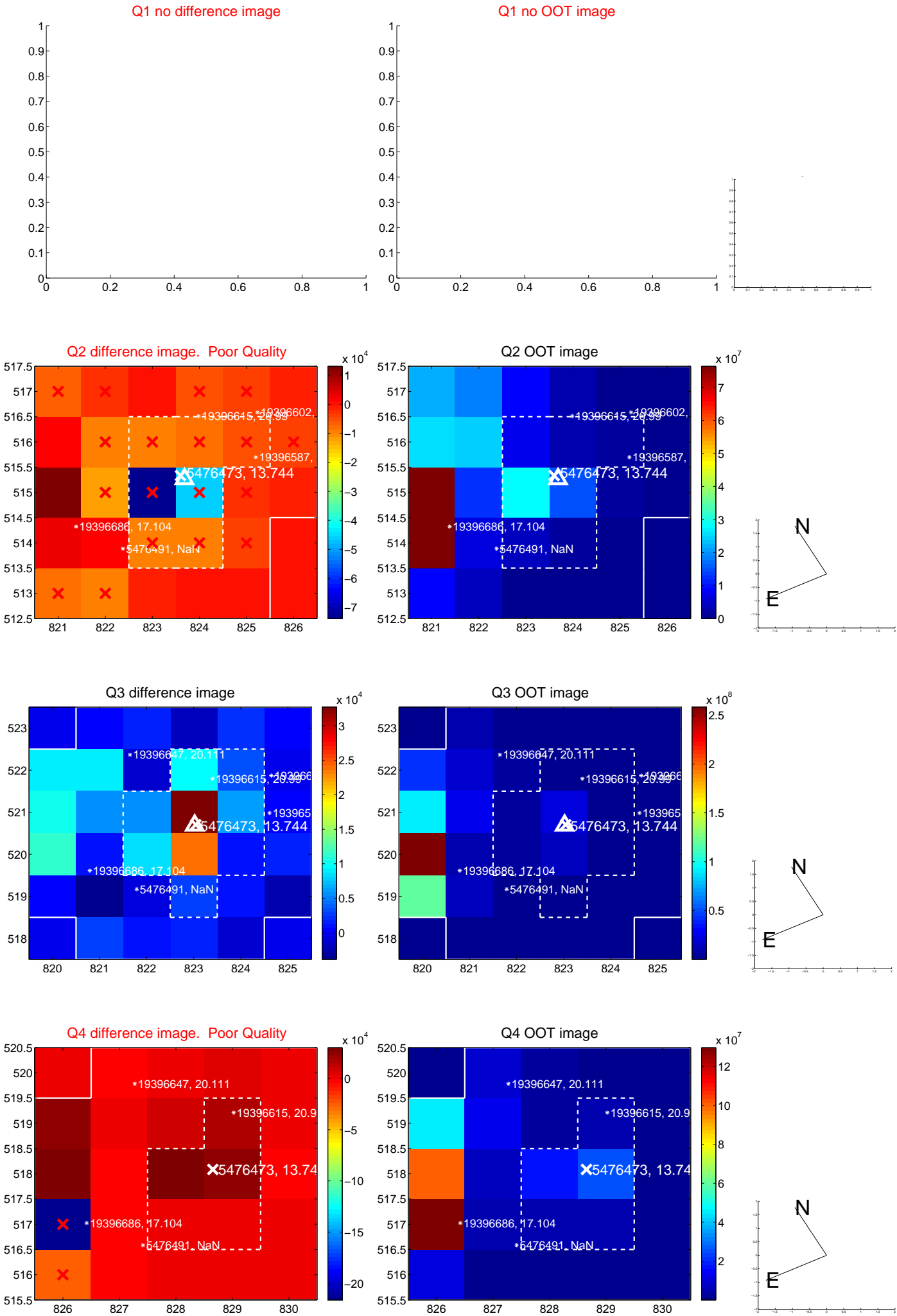
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.290 ± 0.134	2.17	-0.155 ± 0.106	-0.245 ± 0.143
photometric centroid source offset	2.53 ± 0.58	4.33	2.31 ± 0.60	1.03 ± 0.52

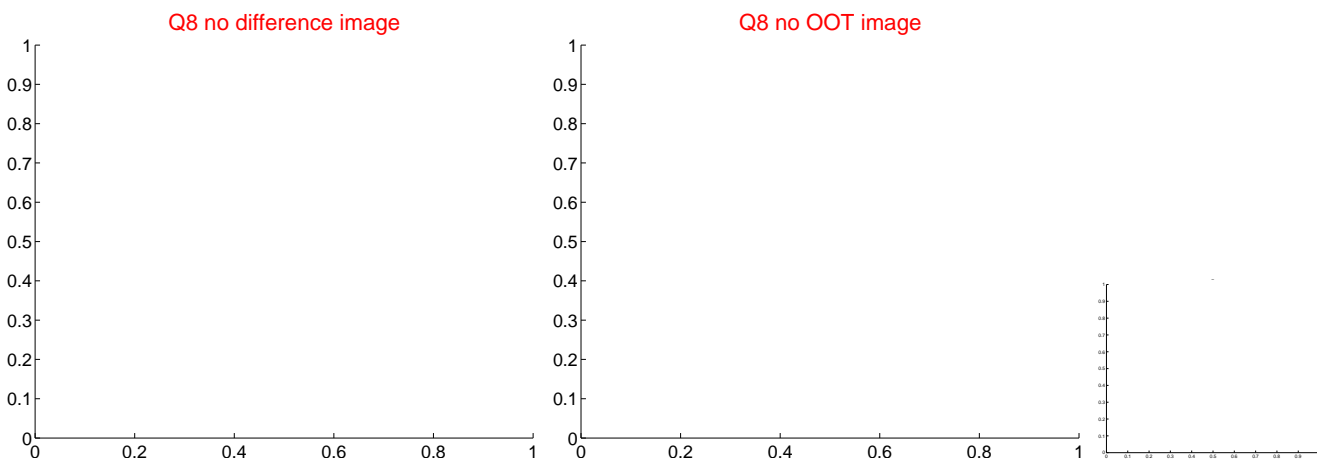
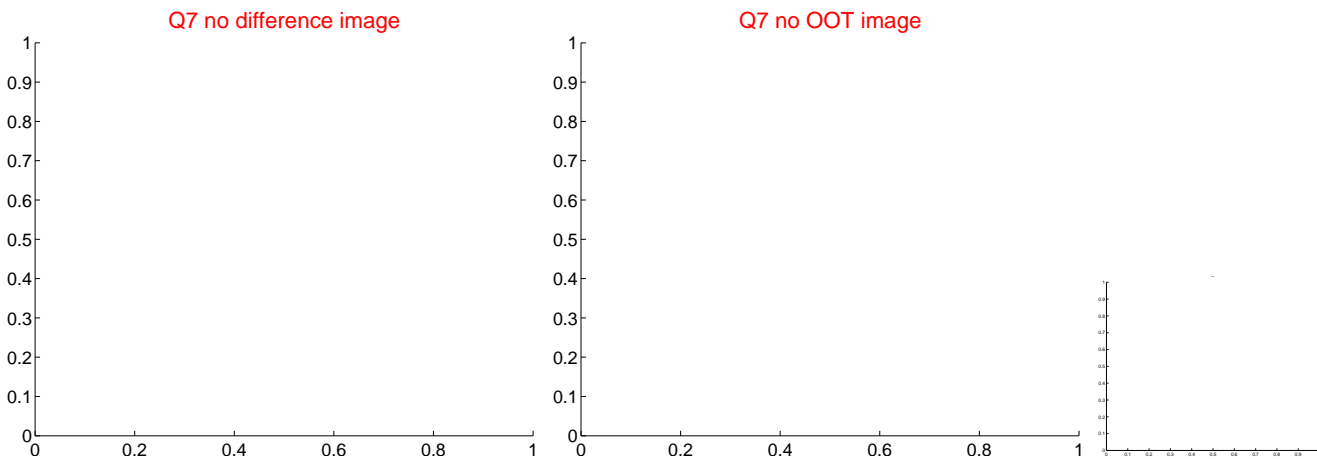
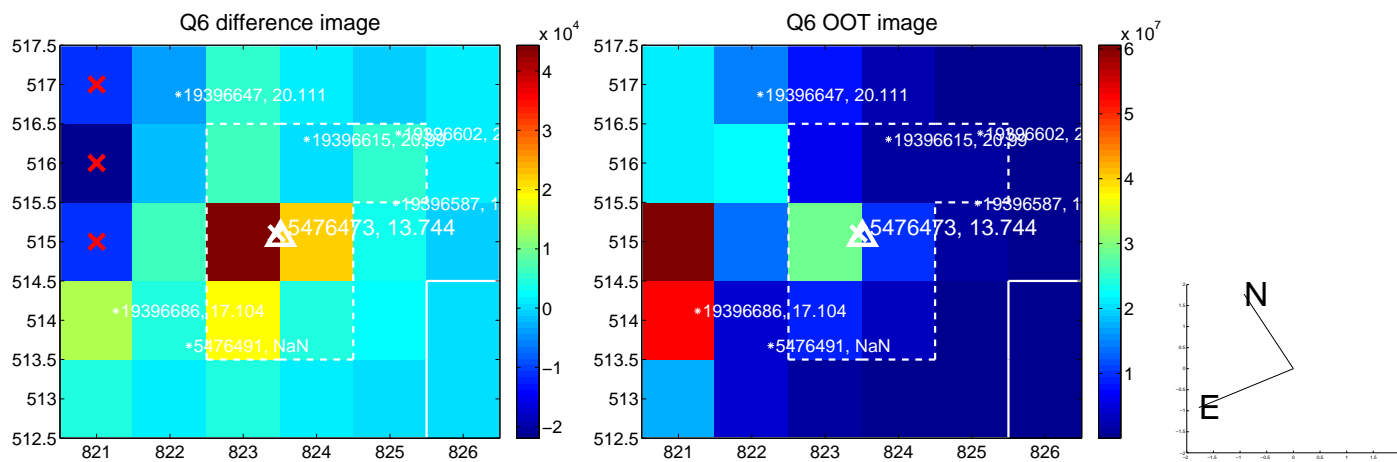
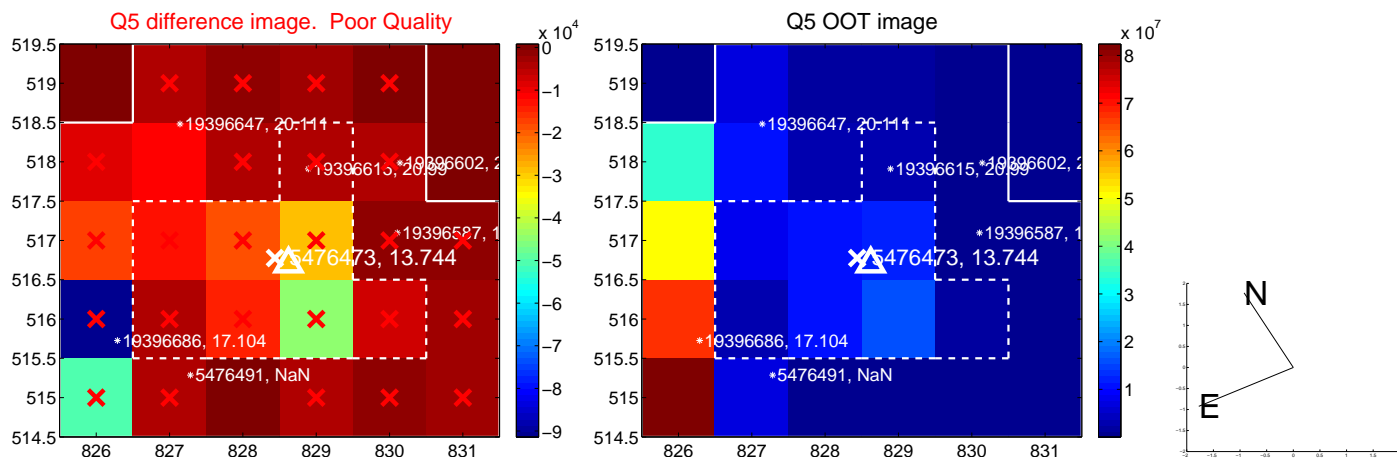


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

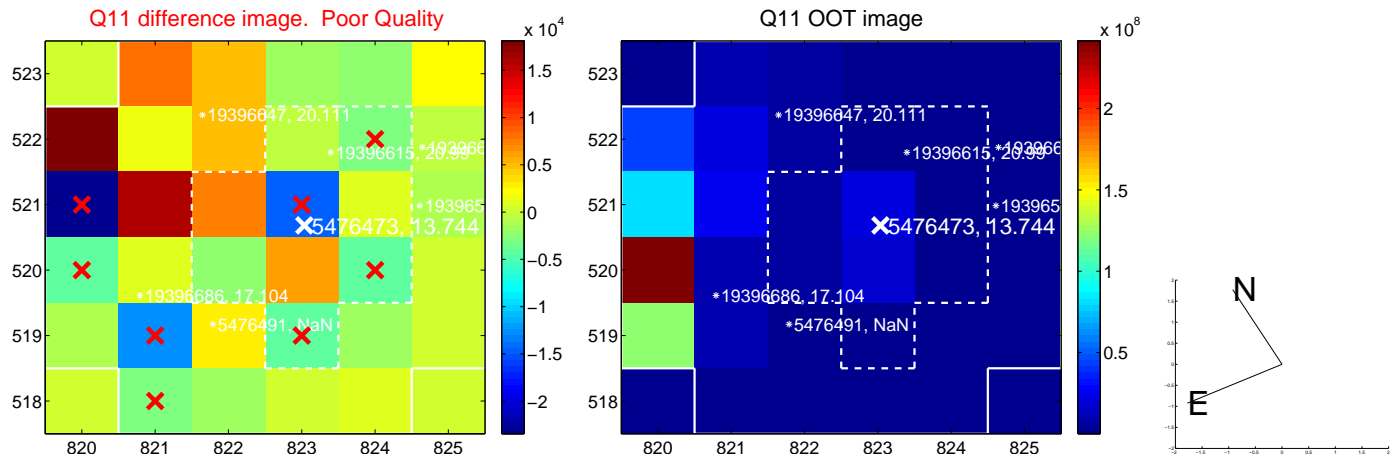
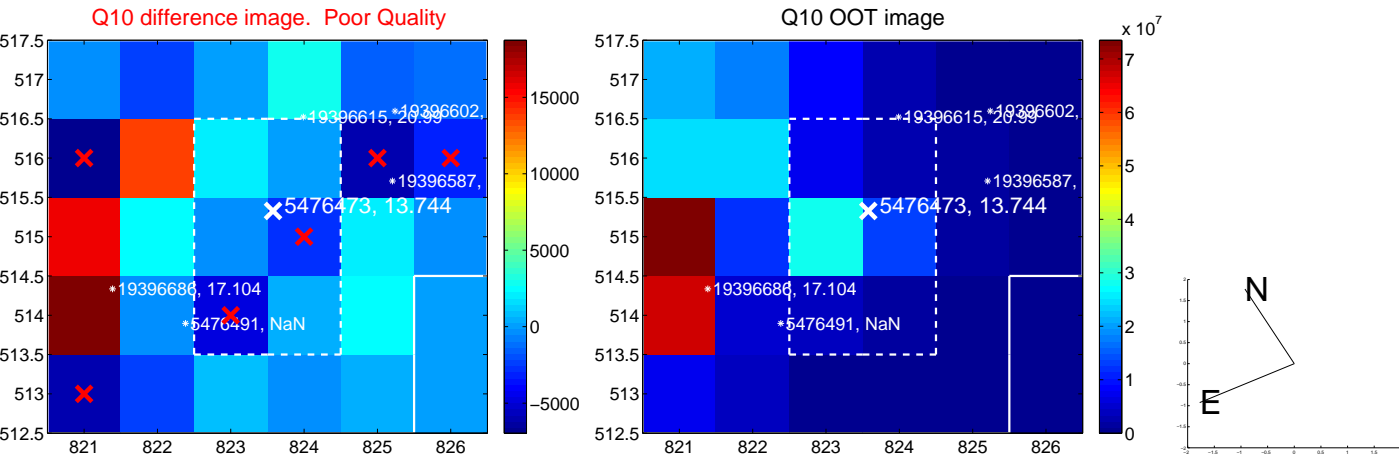
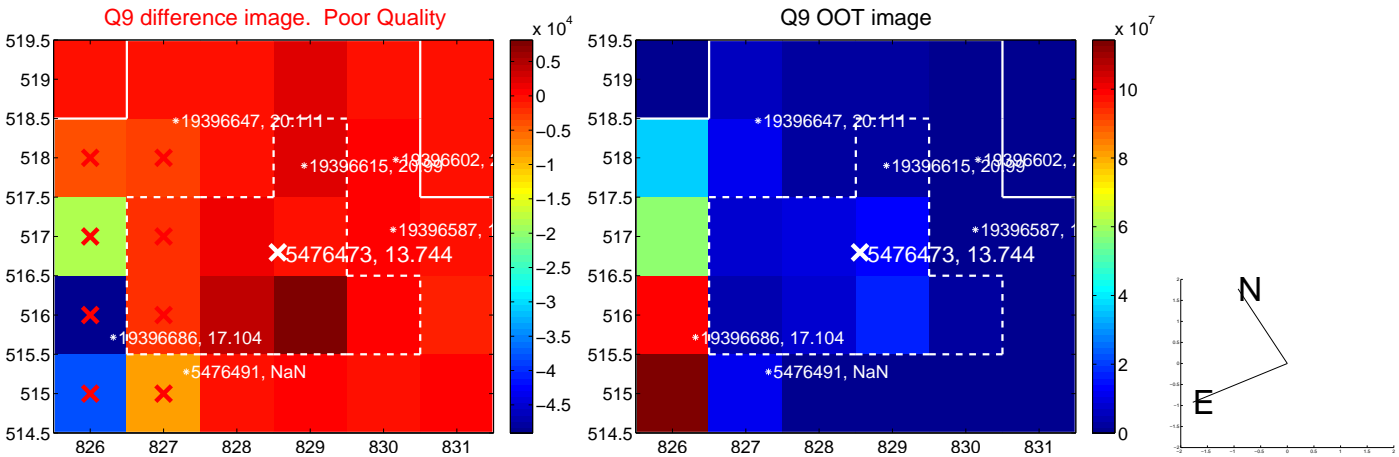
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



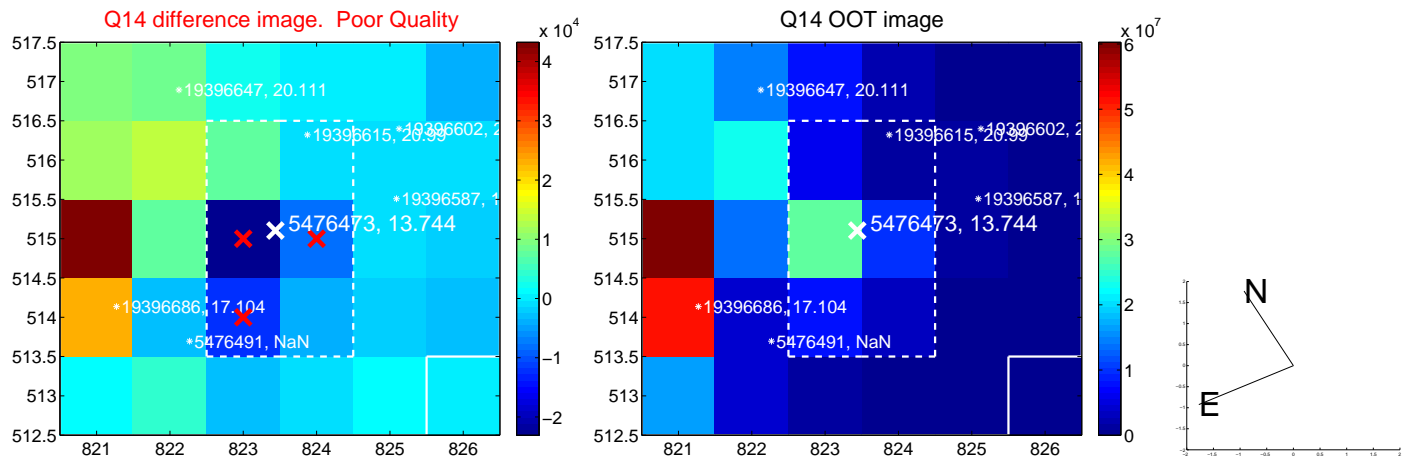
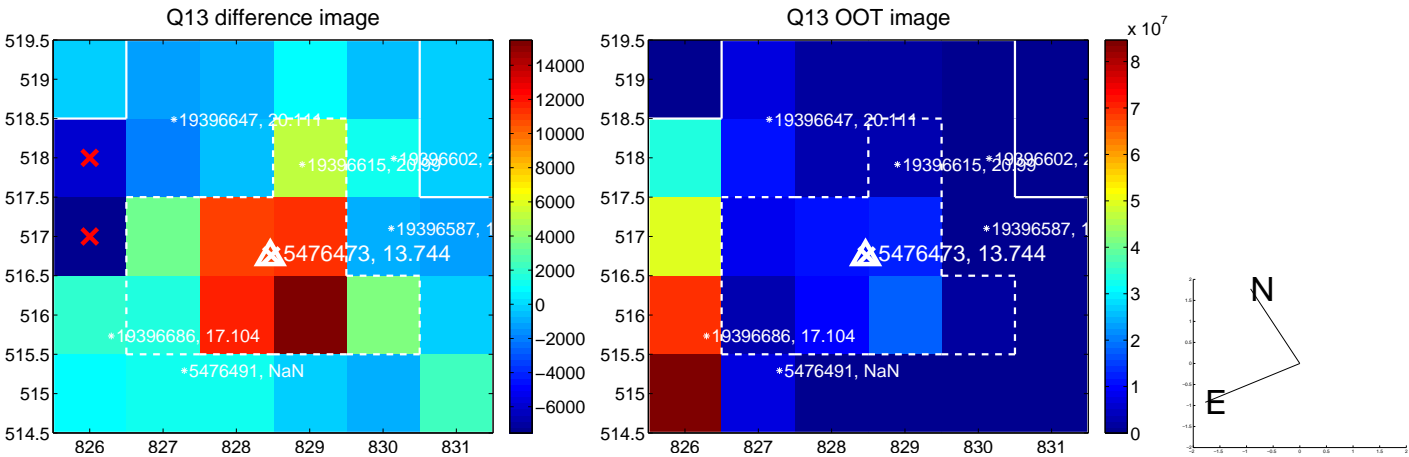
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



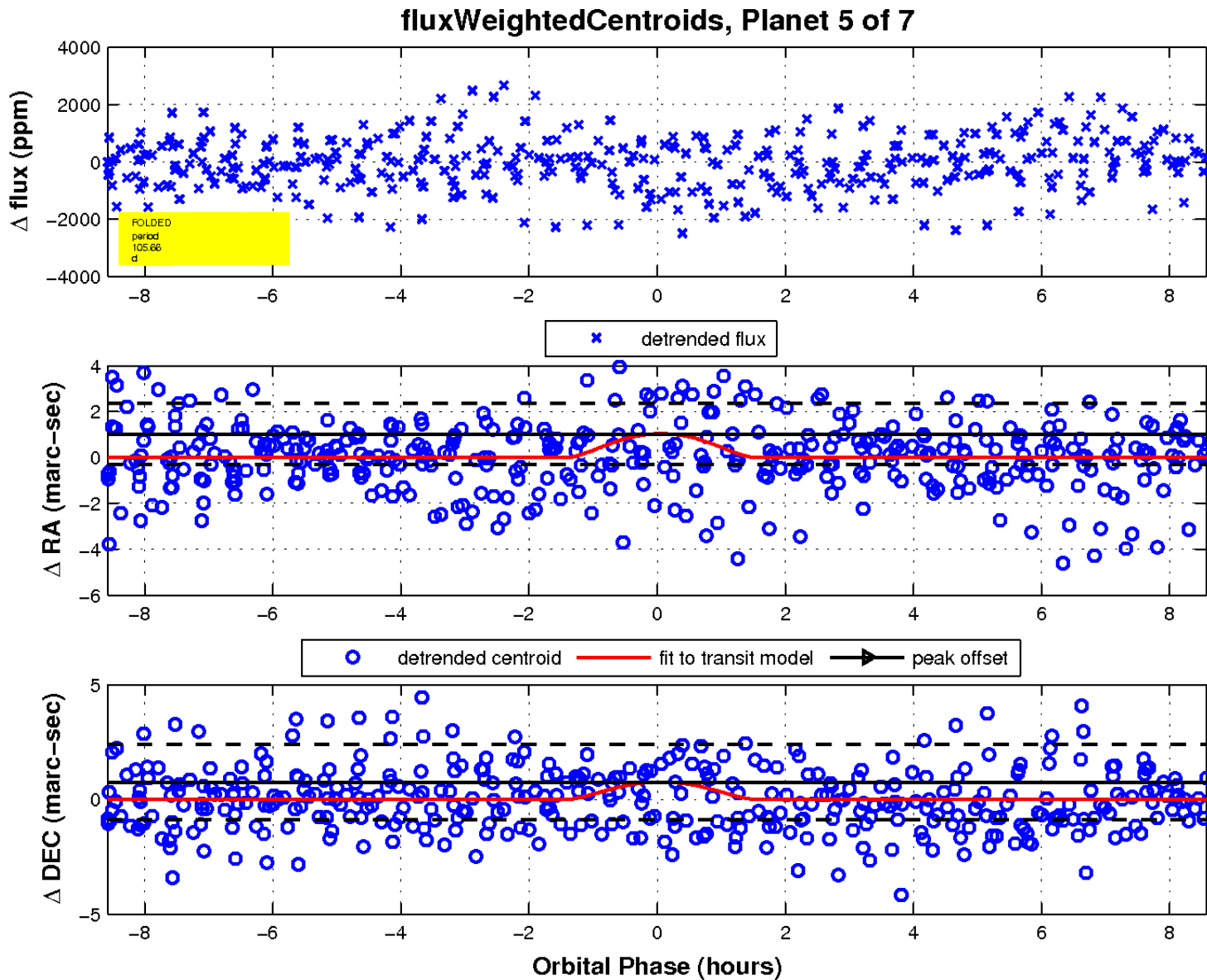
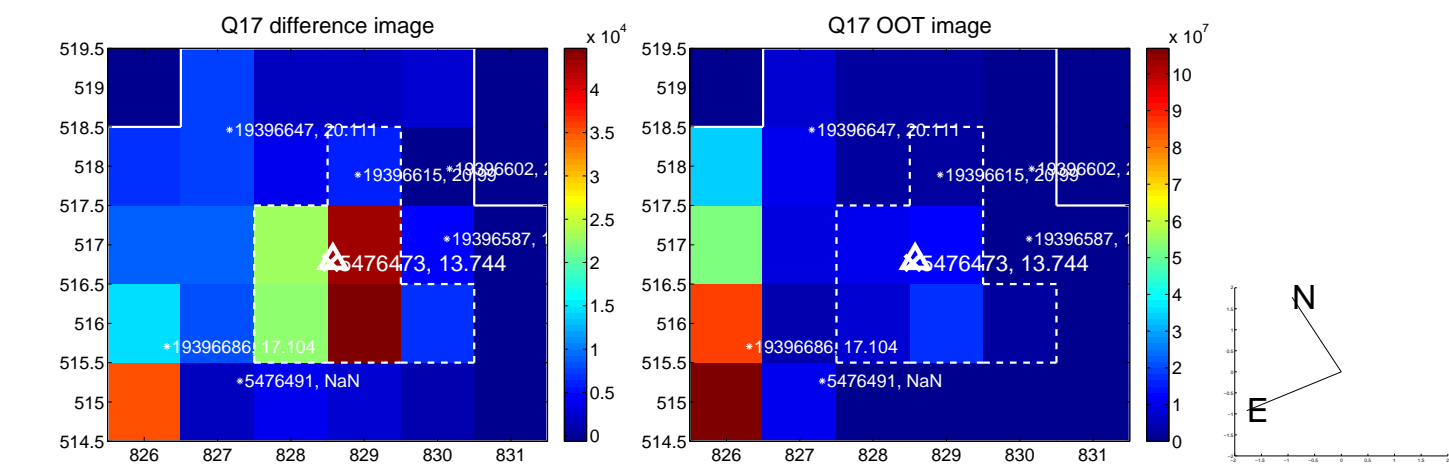
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

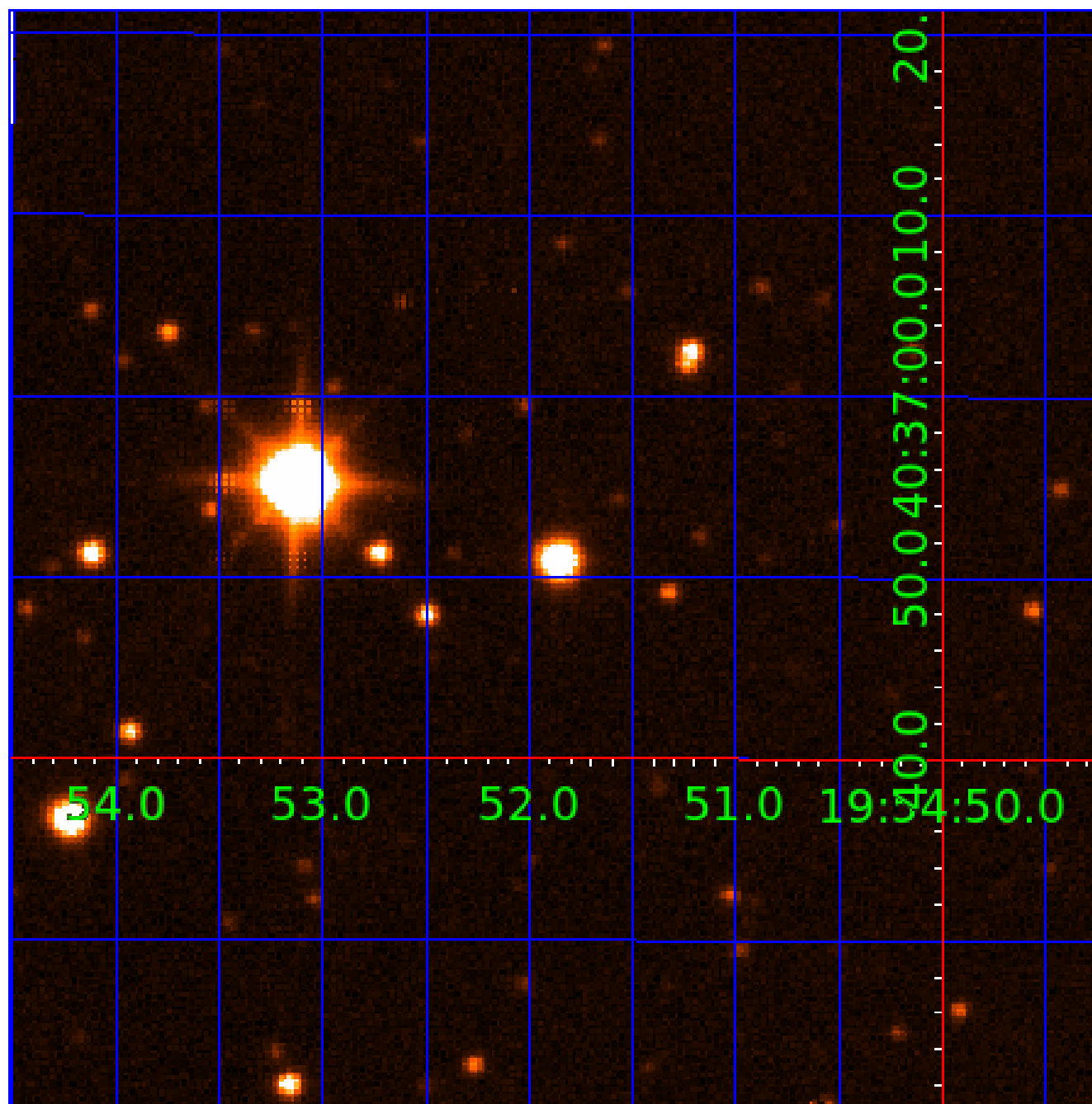


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005476473

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})
005476473-01	OBS	No	0.808595	131.529527	0.0	5.357	10.2	0.0	1.22	6621	0.00	7719.98
005476473-02	OBS	No	73.602269	140.052375	2635.5	3.815	11.5	10.7	1.22	6621	11.47	18.85
005476473-03	OBS	No	25.313932	140.994912	282.9	5.092	10.0	3.9	1.22	6621	2.34	78.24
005476473-04	OBS	No	67.143714	160.228557	1439.9	4.070	9.3	7.5	1.22	6621	8.64	21.31
005476473-05	OBS	No	105.656608	203.392003	1159.6	2.860	8.4	7.7	1.22	6621	7.42	11.64
005476473-06	OBS	No	36.929269	149.201170	1151.4	1.637	8.0	7.2	1.22	6621	4.45	47.29
005476473-07	OBS	No	58.244842	175.562114	1769.9	3.827	8.9	9.5	1.22	6621	6.35	25.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476473-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS
005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

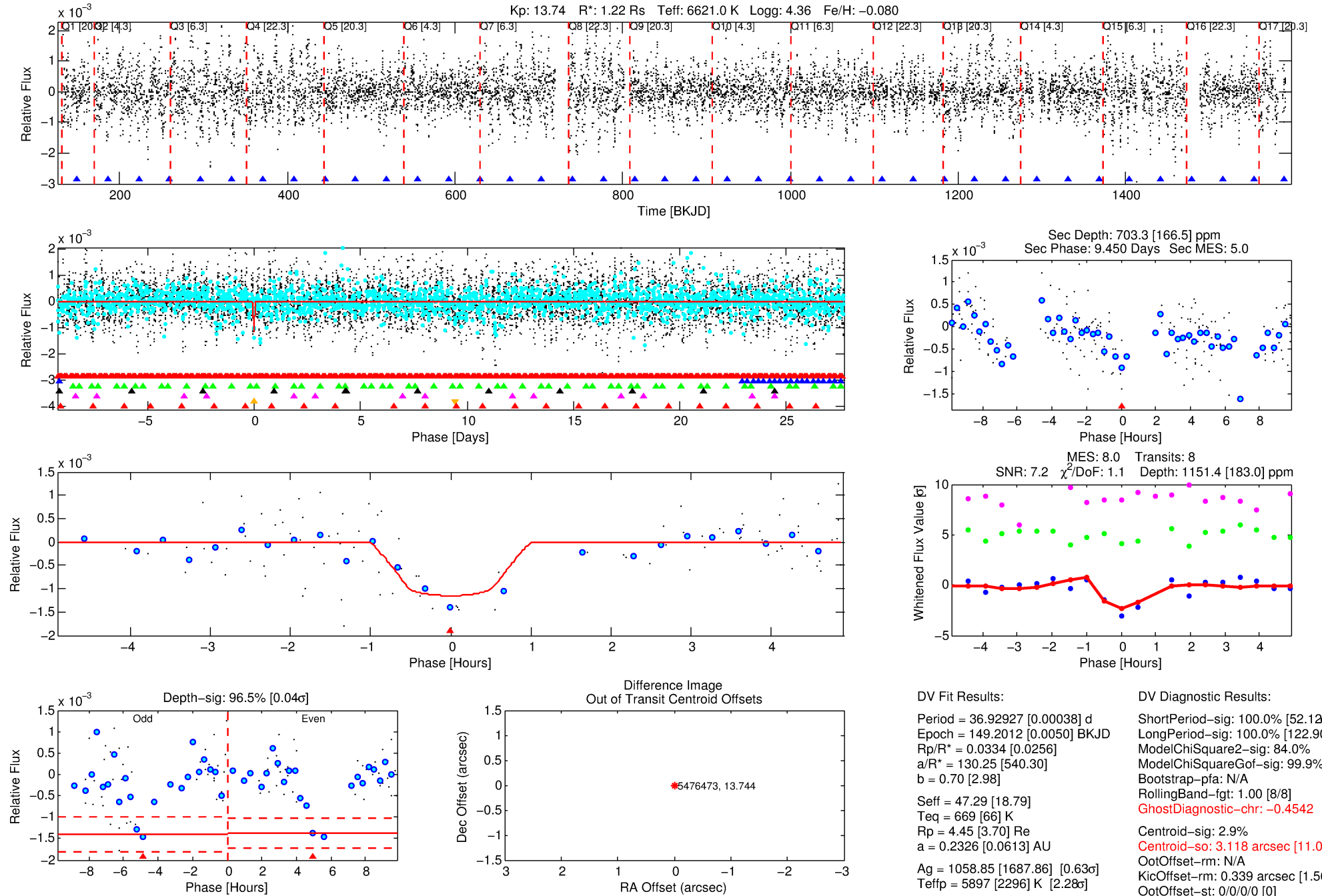
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-06

No Significant Match Found

DV One-Page Summary

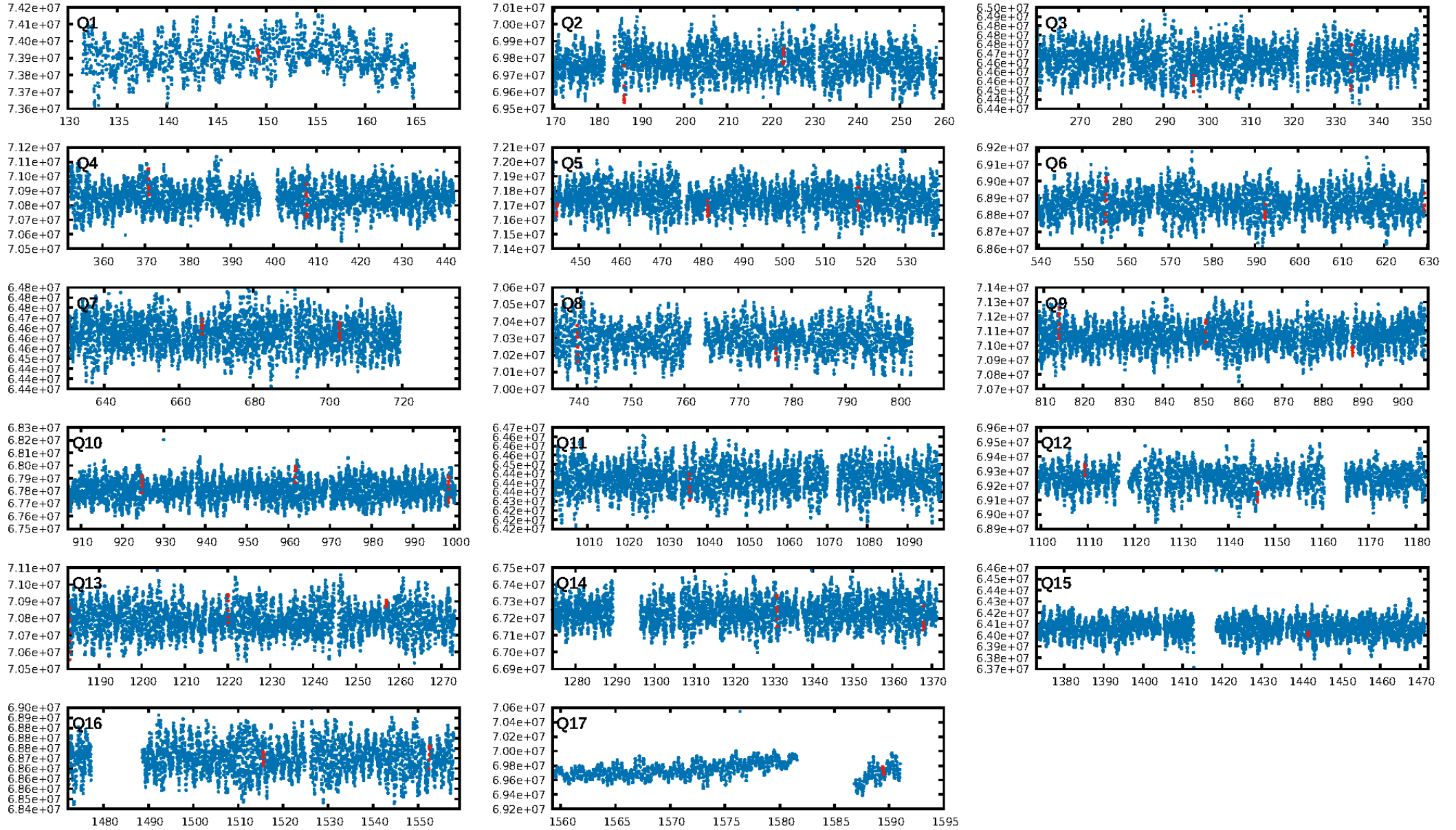
KIC: 5476473 Candidate: 6 of 7 Period: 36.929 d



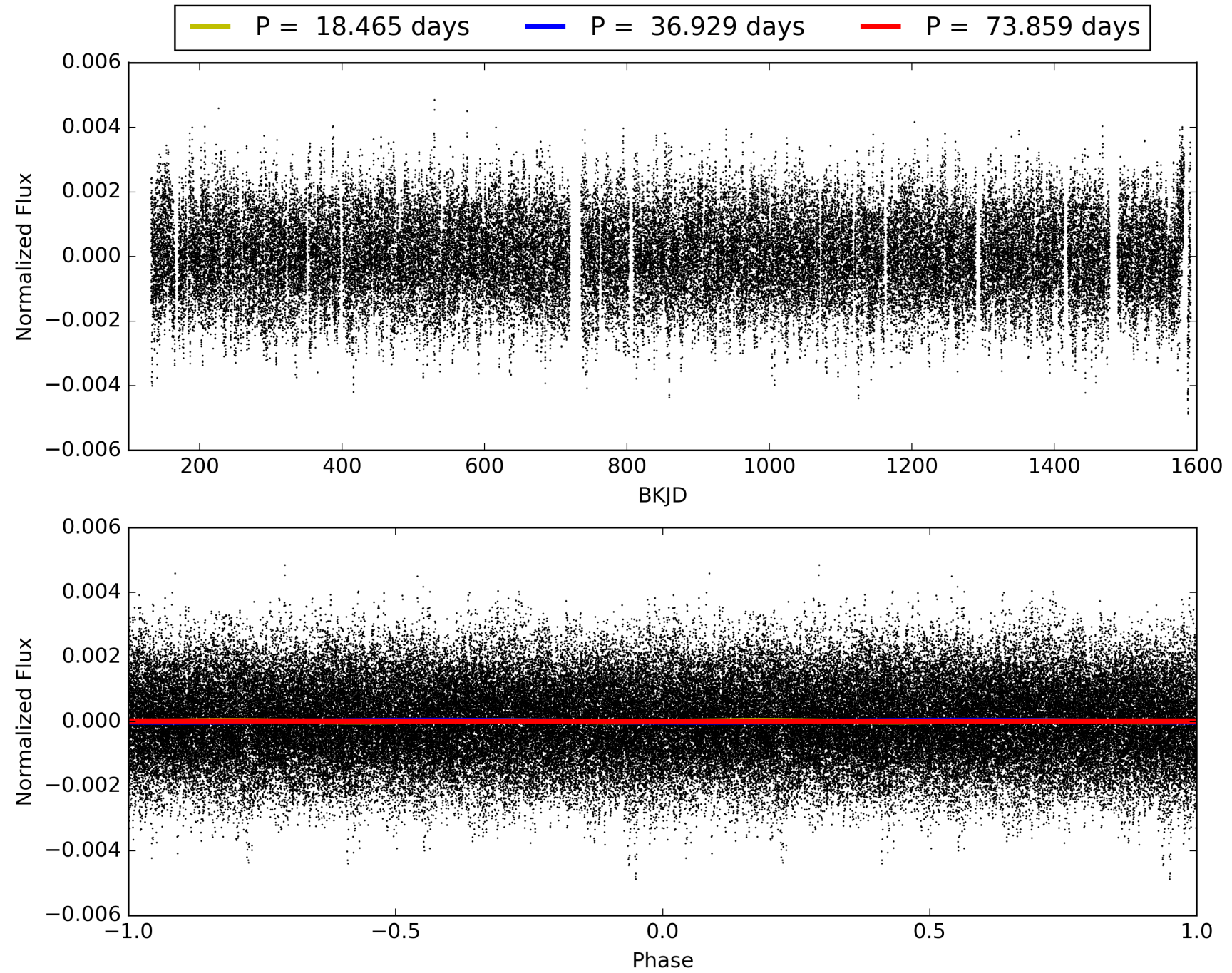
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:51:00 Z

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

TCE 005476473-06, PDC Light Curves

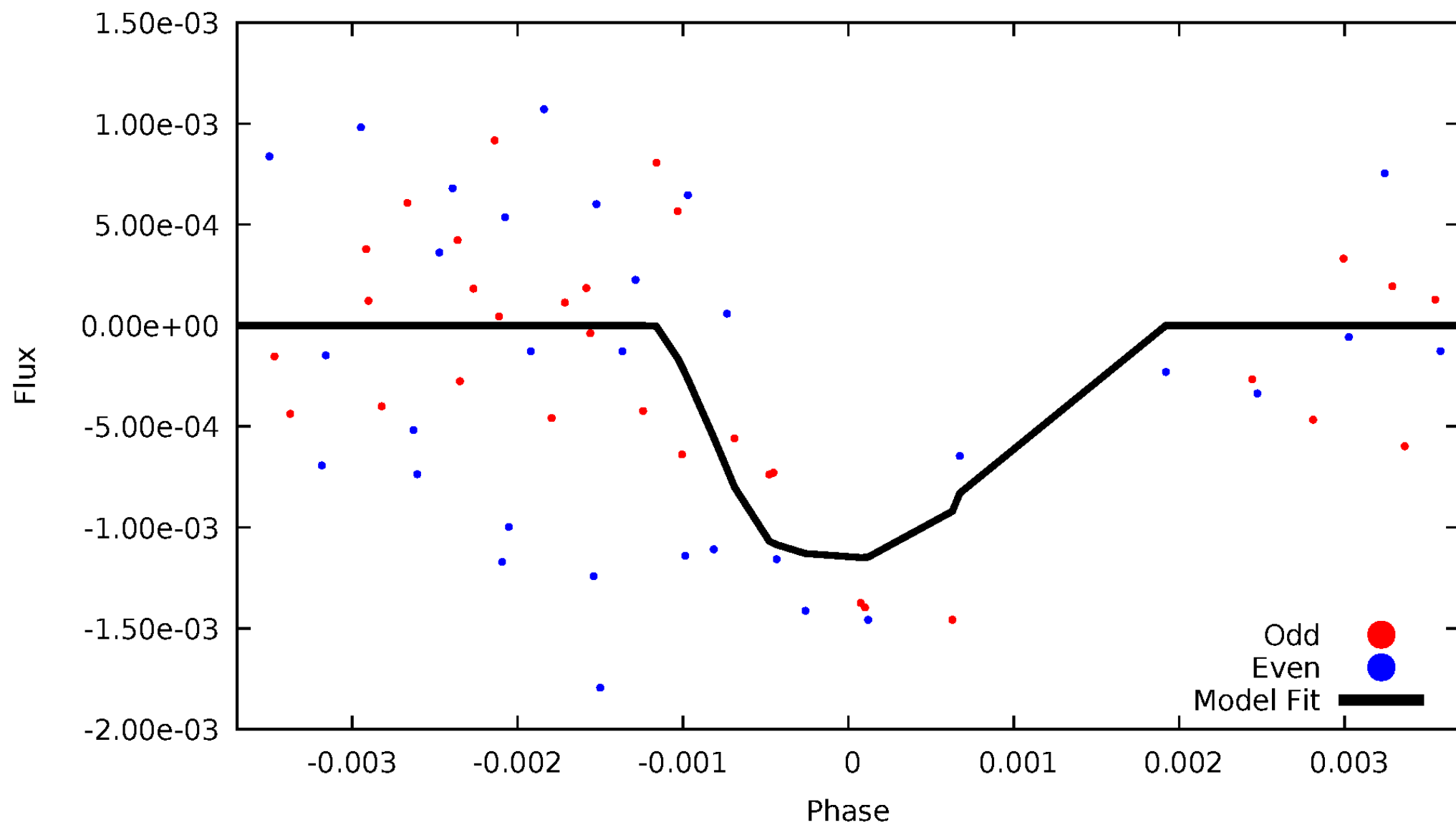


TCE 005476473-06



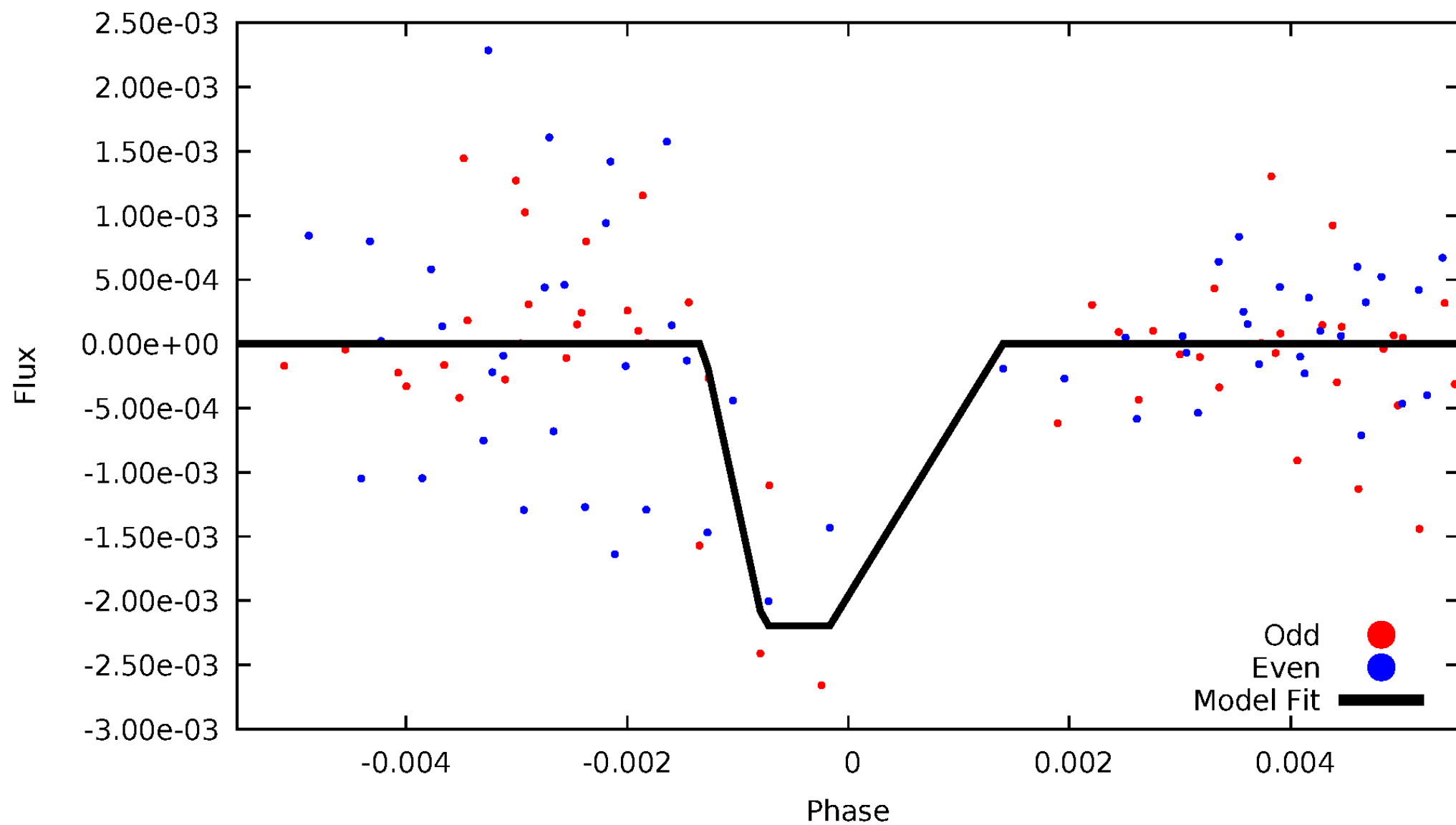
DV Odd/Even

TCE 005476473-06



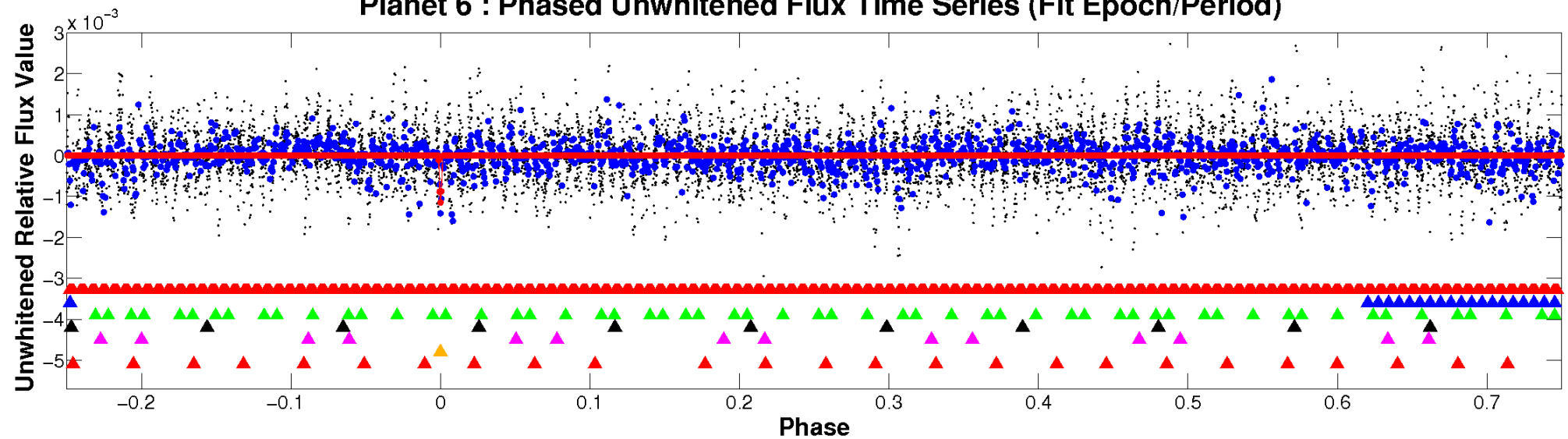
ALT Odd/Even

TCE 005476473-06

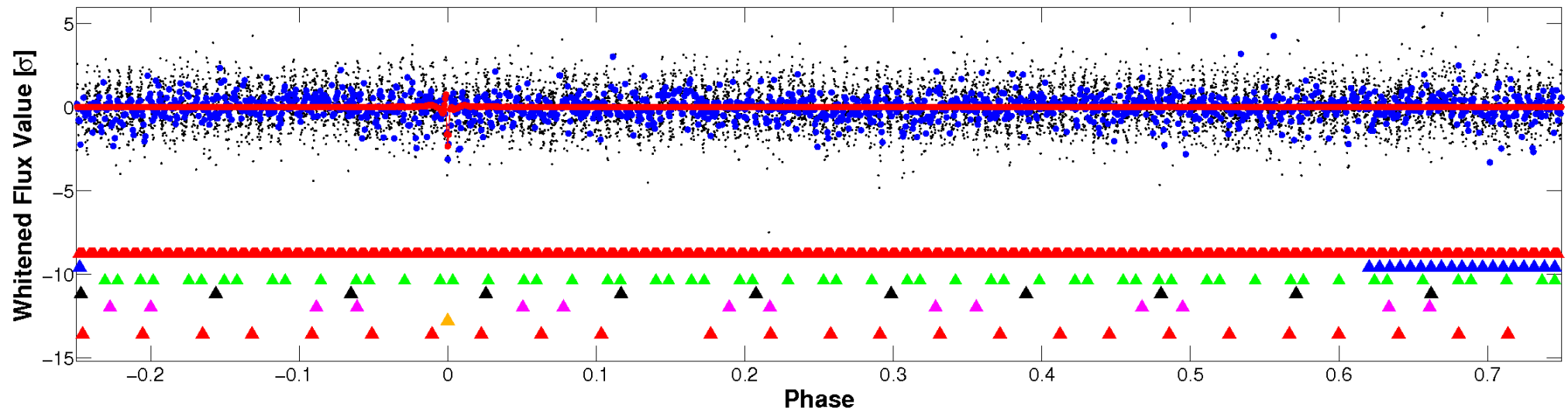


Non-Whitened Vs. Whitened Light Curve

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

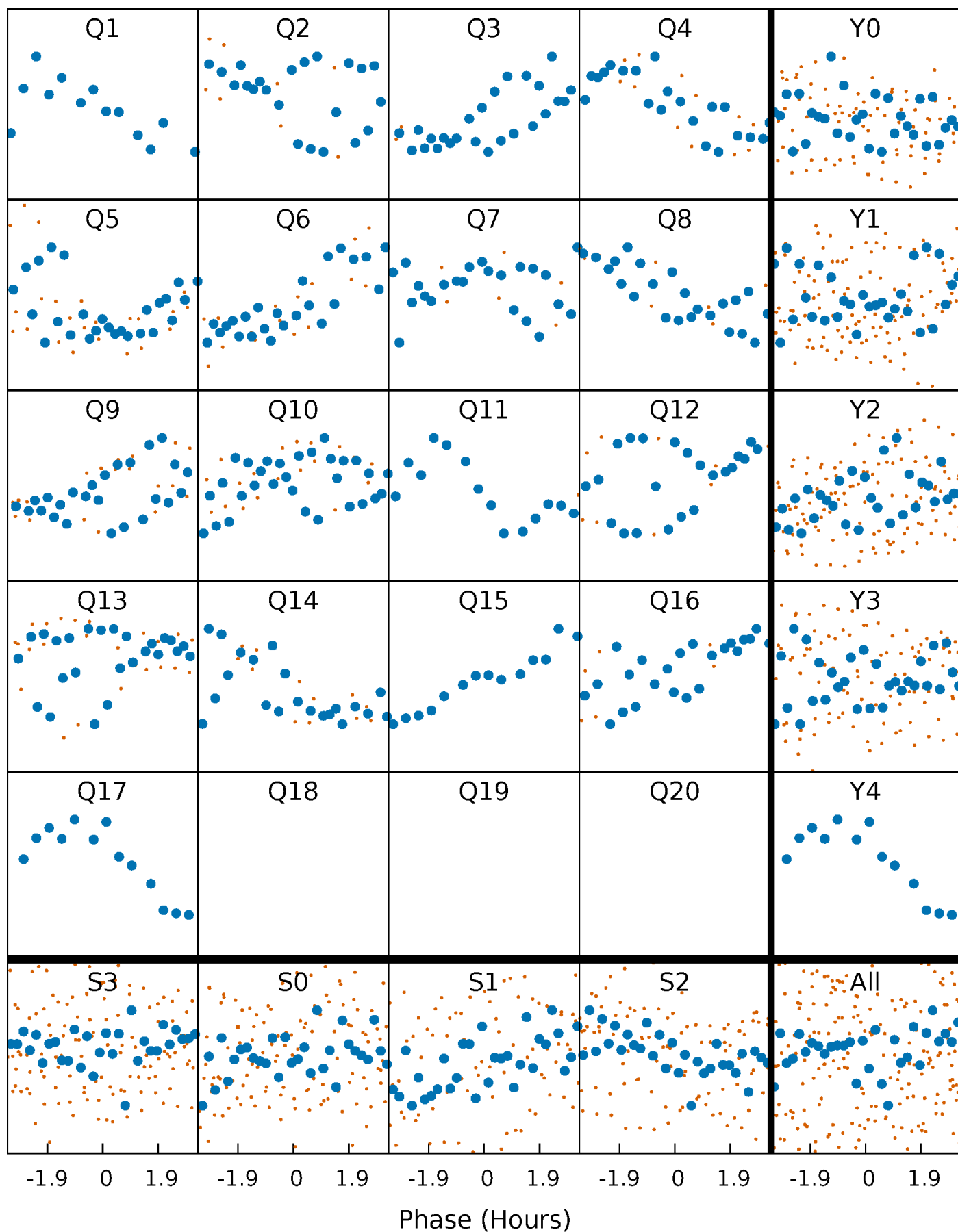


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



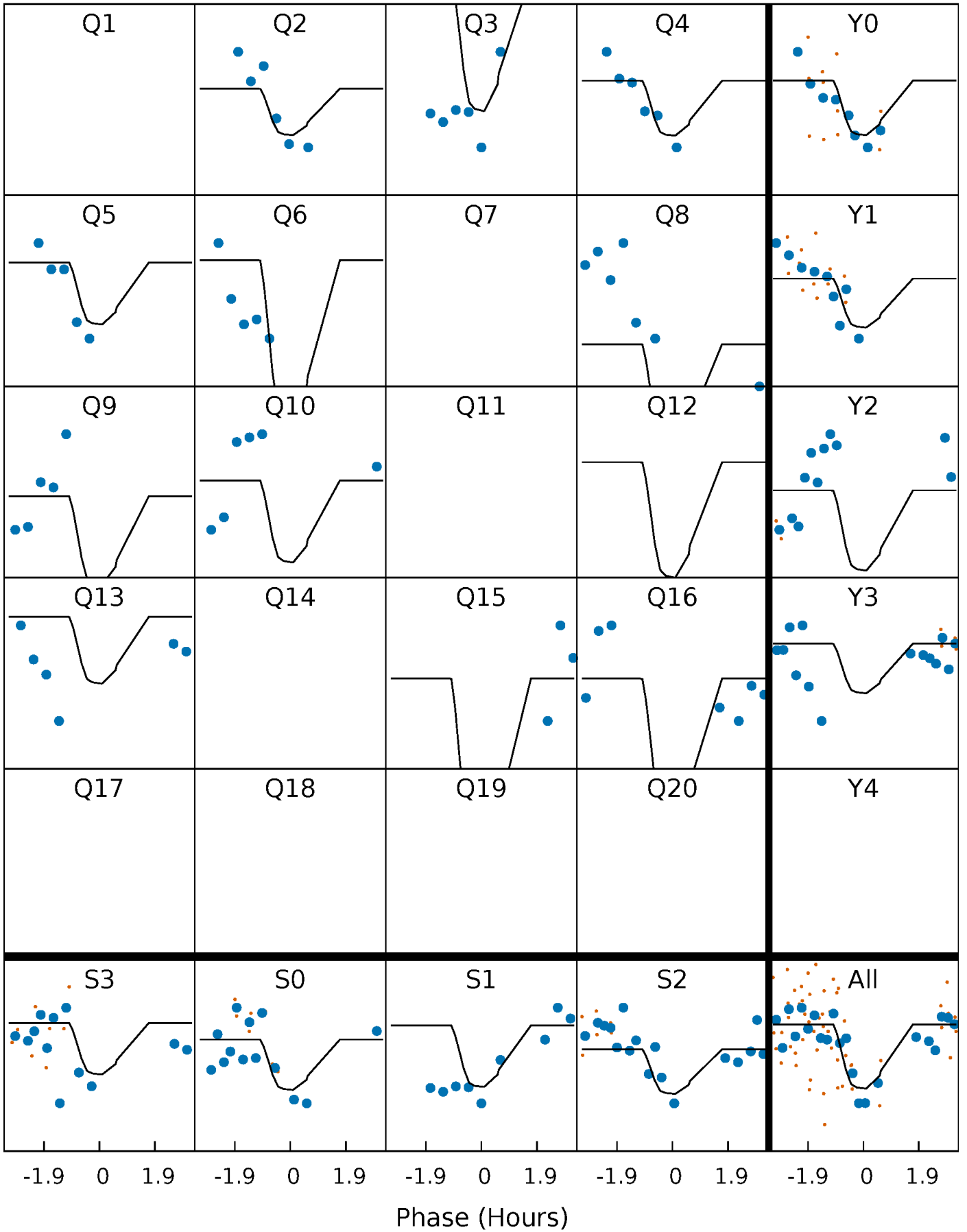
PDC Quarter-Phased Transit Curves

TCE 005476473-06 P= 36.929269 Days $T_0=149.201170$ (BKJD)



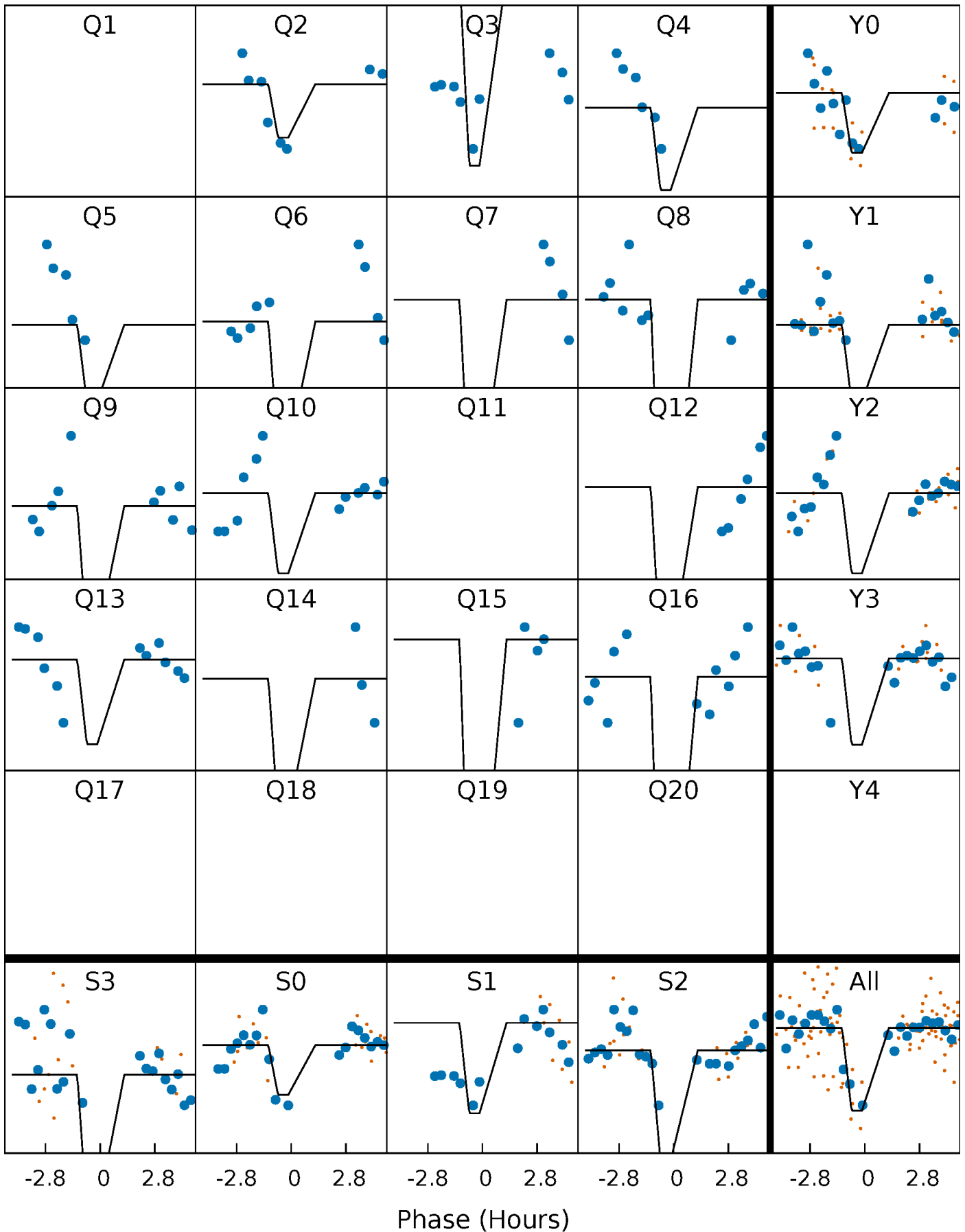
DV Quarter-Phased Transit Curves

TCE 005476473-06 P= 36.929269 Days $T_0=149.201170$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

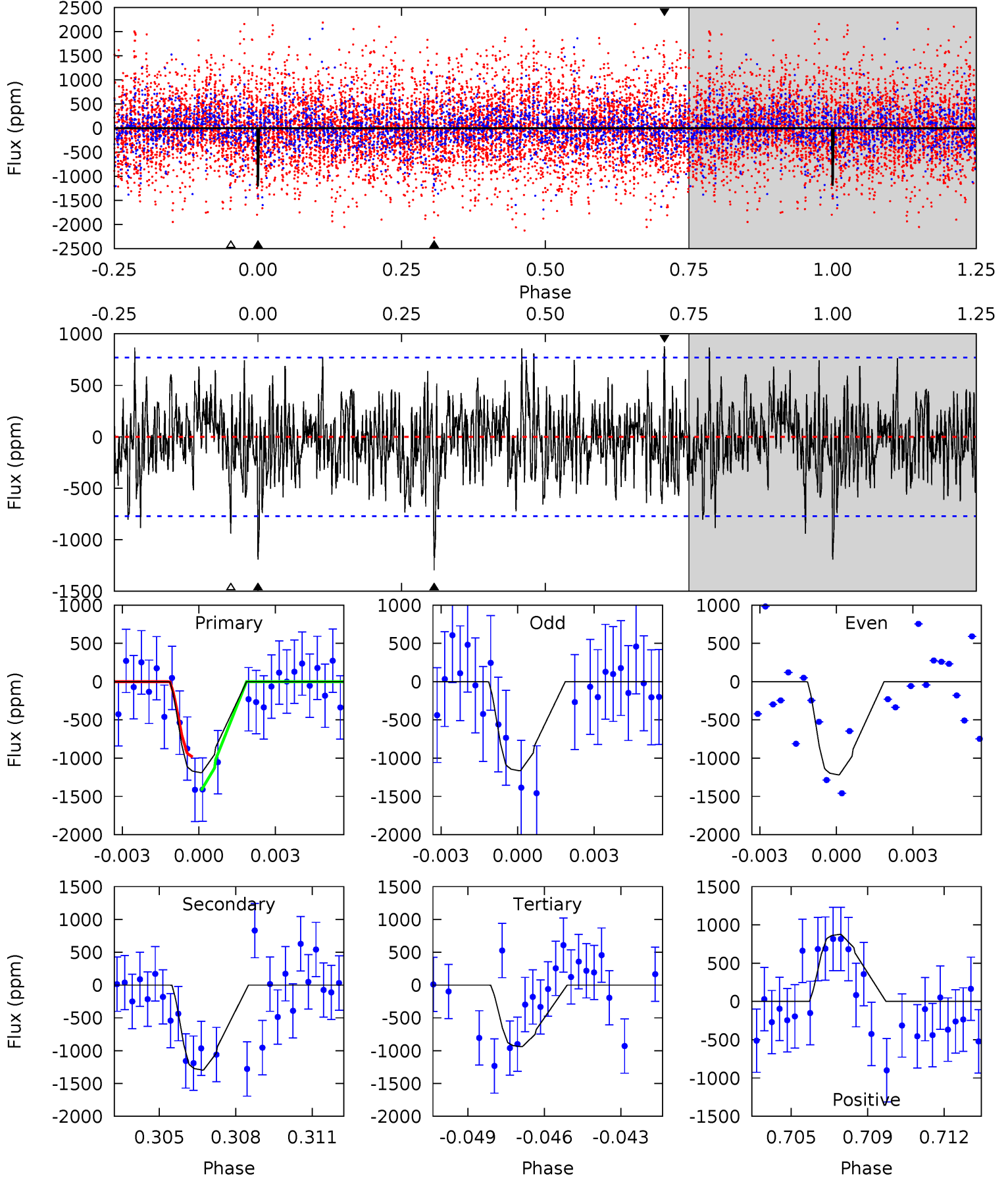
TCE 005476473-06 P= 36.928920 Days $T_0=149.233641$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-06, P = 36.929269 Days, E = 112.271901 Days

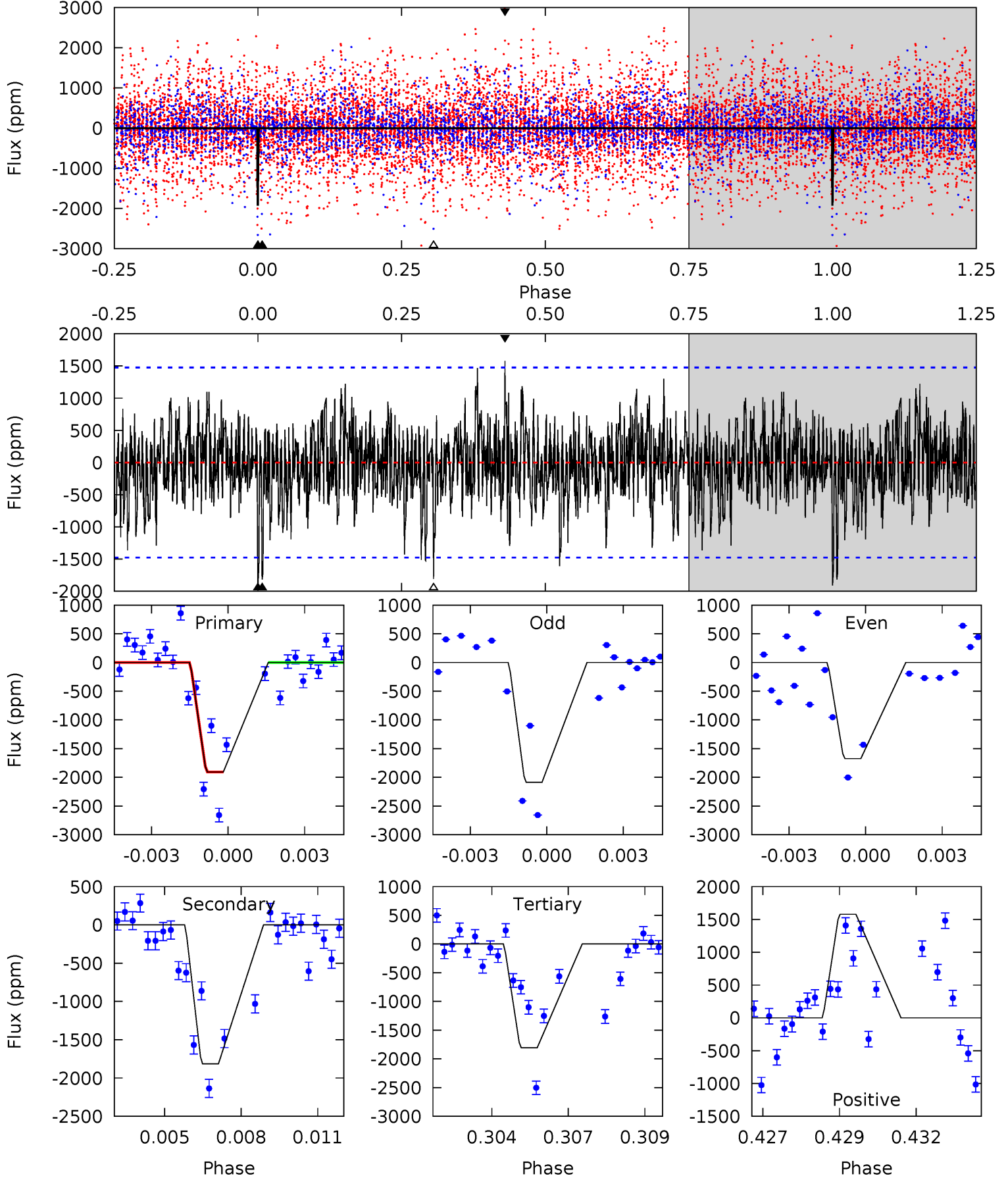
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.11	8.83	6.40	5.98	5.25	2.96	1.71	1.71	2.14	2.43	2.85	0.18	1.03	0.40	1.34



Alt Model-Shift Uniqueness Test

005476473-06, P = 36.928920 Days, E = 112.304721 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.81	6.49	6.46	5.64	5.27	3.00	1.33	0.36	1.18	0.03	0.85	0.74	0	0.45	0



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1295 ± 147	$4.98^{+3.46}_{-2.95}$	950^{+62}_{-47}	6580^{+4829}_{-1431}	1515^{+6950}_{-991}
Alt.	-1816 ± 280	$6.48^{+3.61}_{-3.14}$	944^{+71}_{-47}	6307^{+3035}_{-1309}	1296^{+3444}_{-785}

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

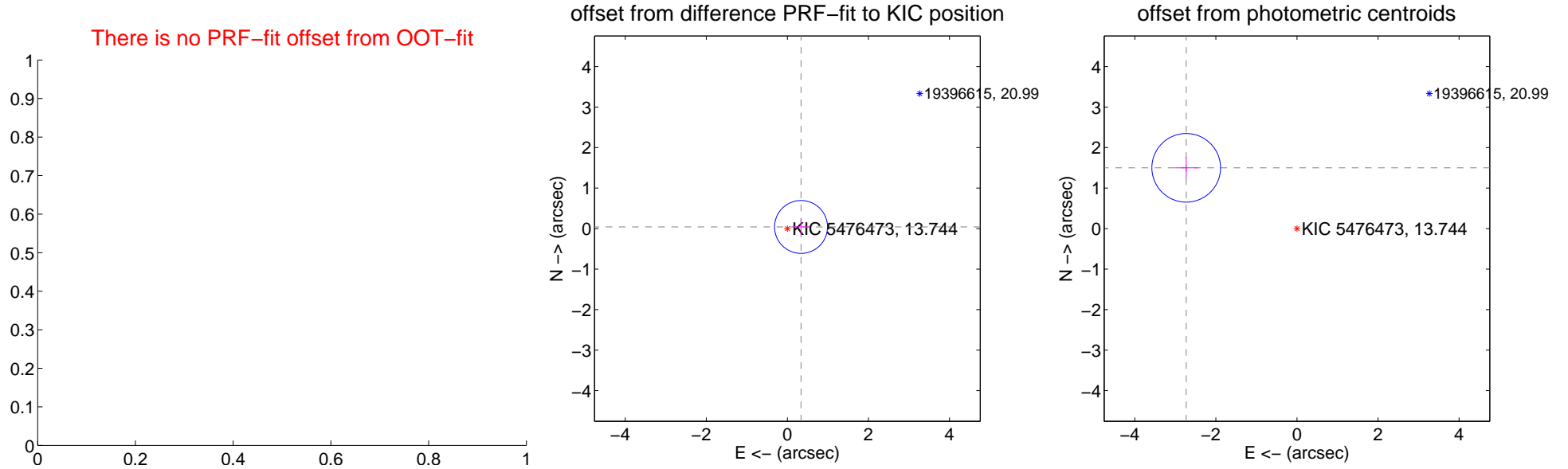
DV Centroid Data

Supplemental centroid analysis for 005476473-06. Kepler magnitude: 13.74. Transit SNR 7.22

There are 2 quarters with good PRF difference image offsets

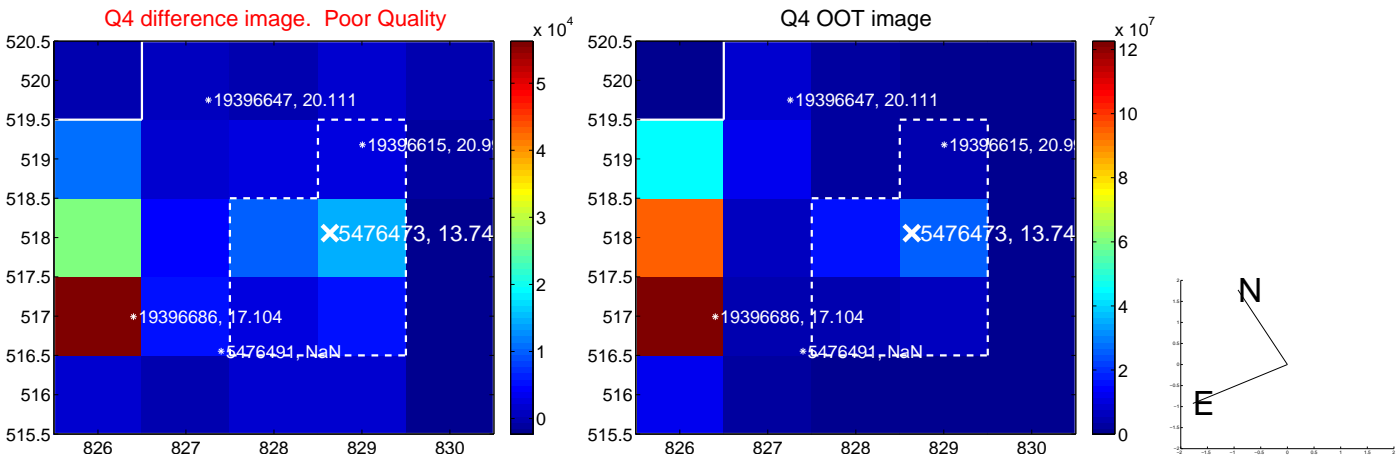
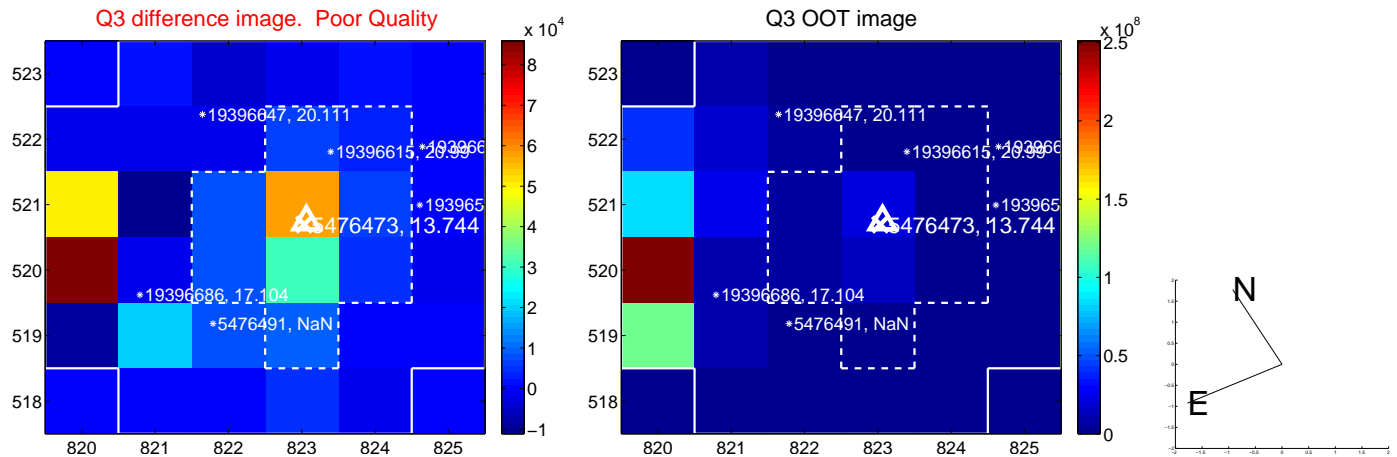
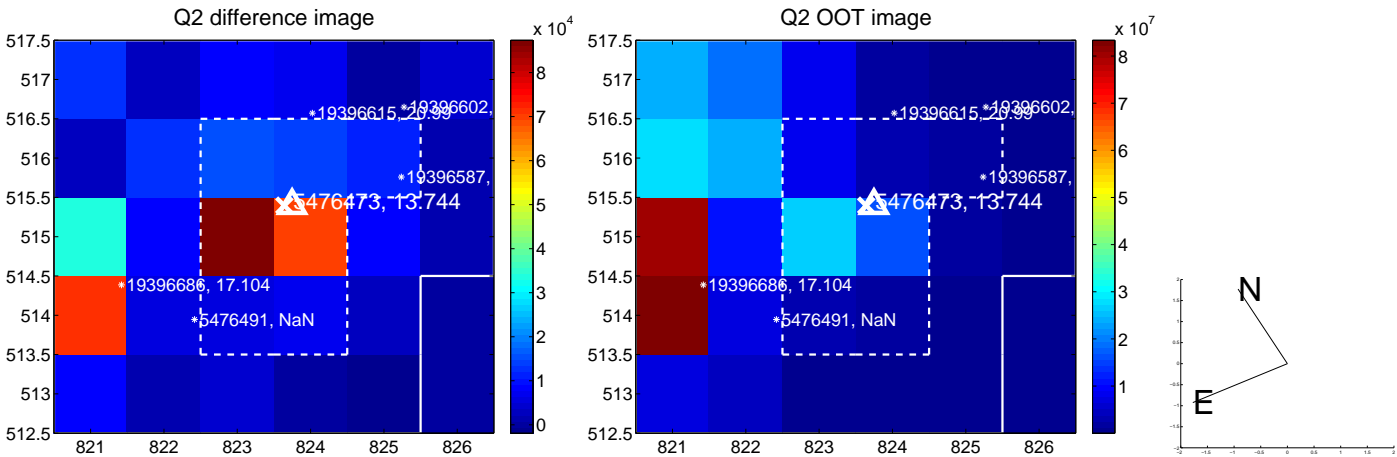
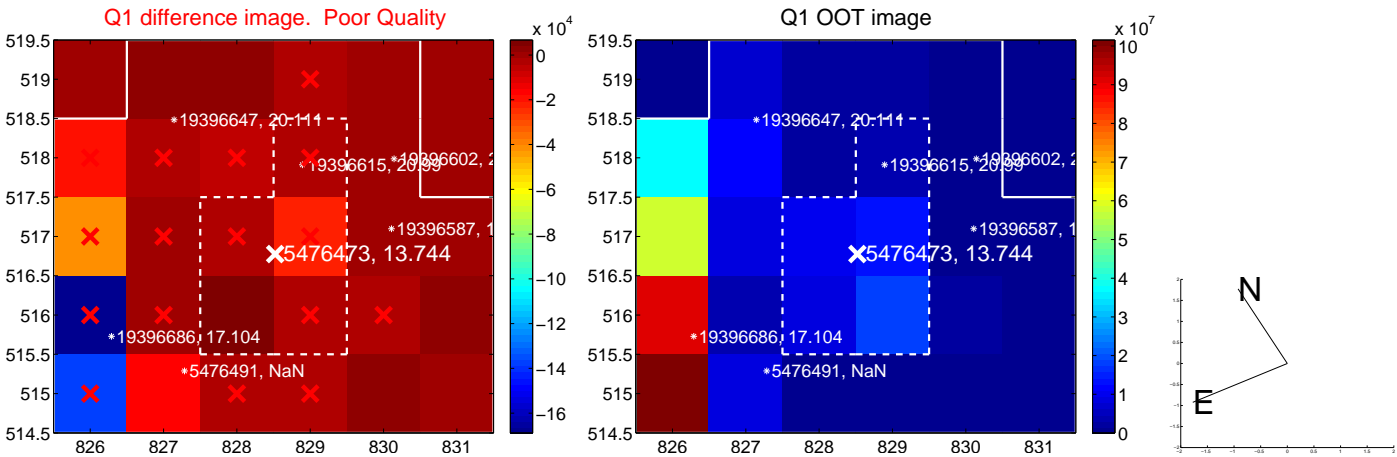
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.339 ± 0.218	1.56	-0.337 ± 0.206	0.041 ± 0.200
photometric centroid source offset	3.12 ± 0.28	11.04	2.73 ± 0.29	1.50 ± 0.26

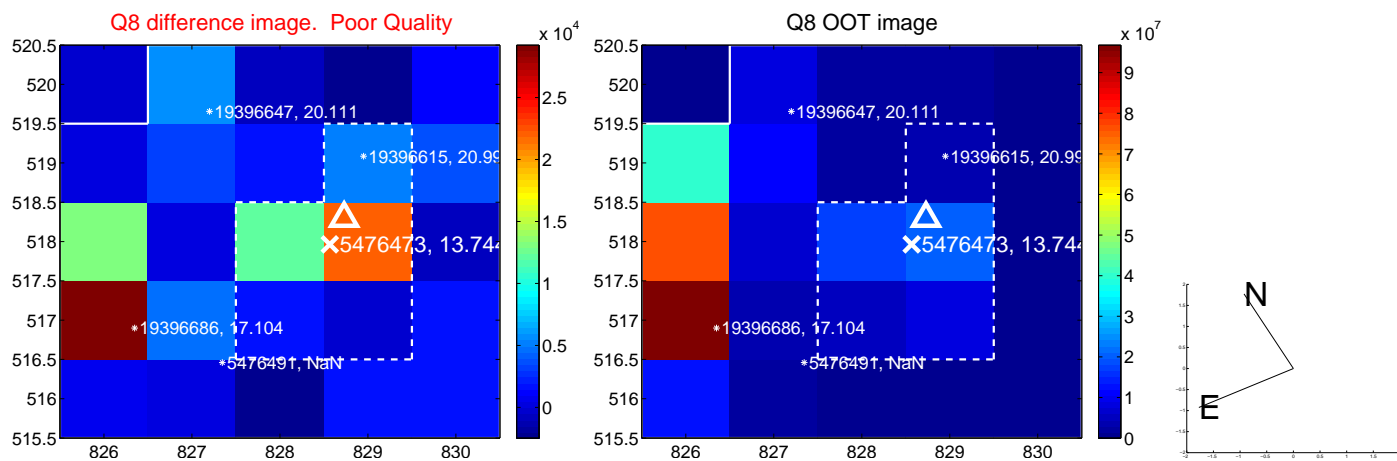
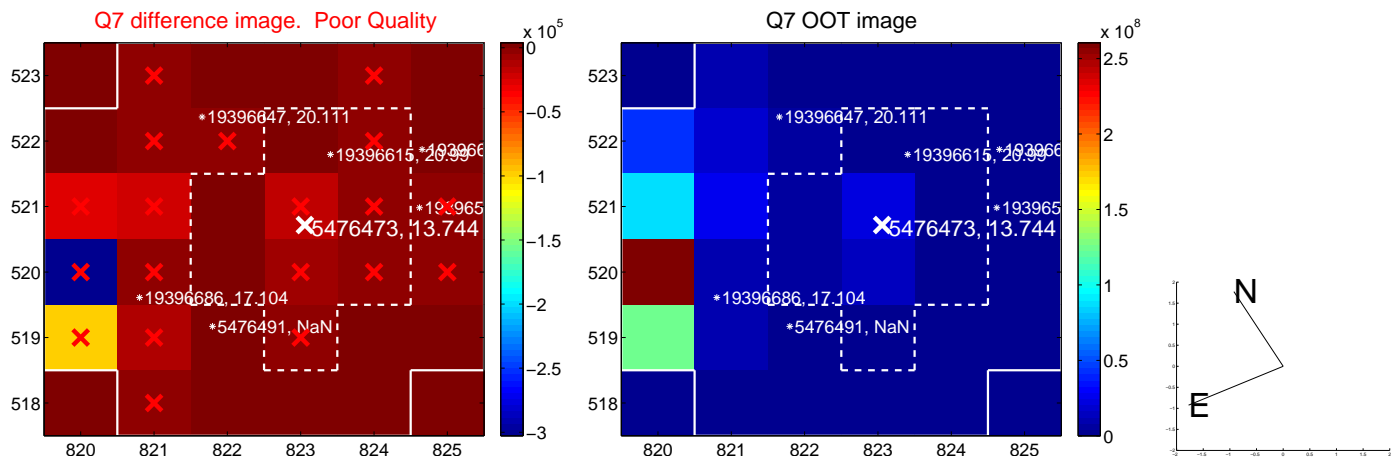
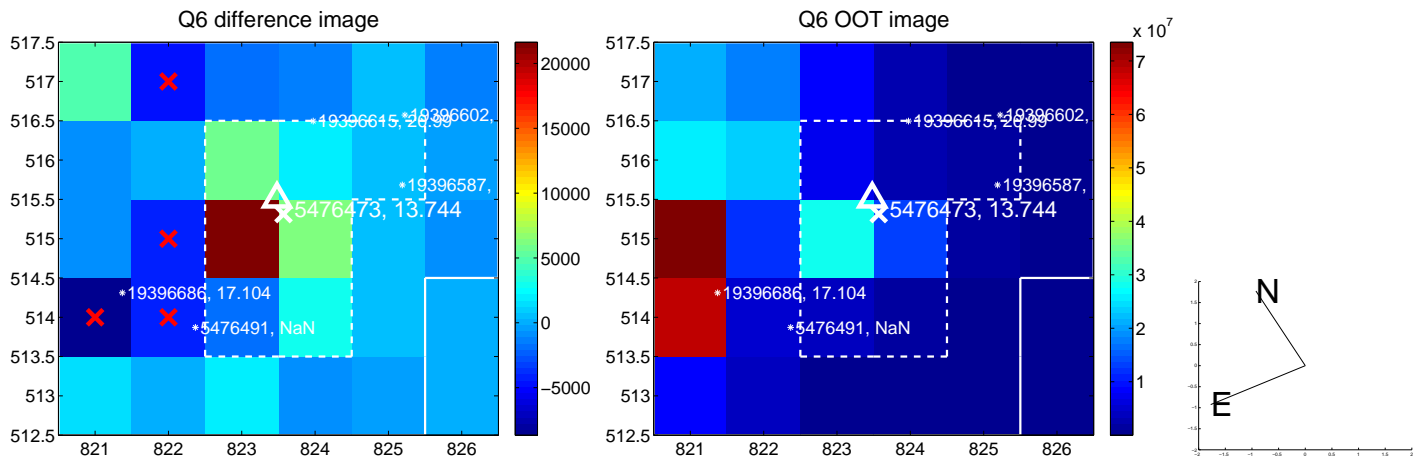
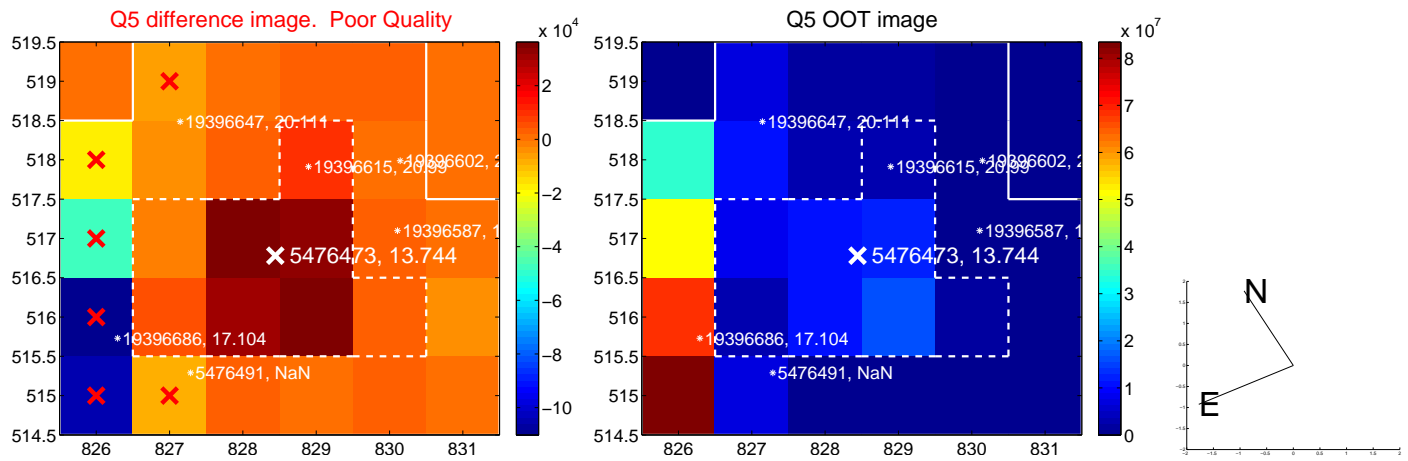


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

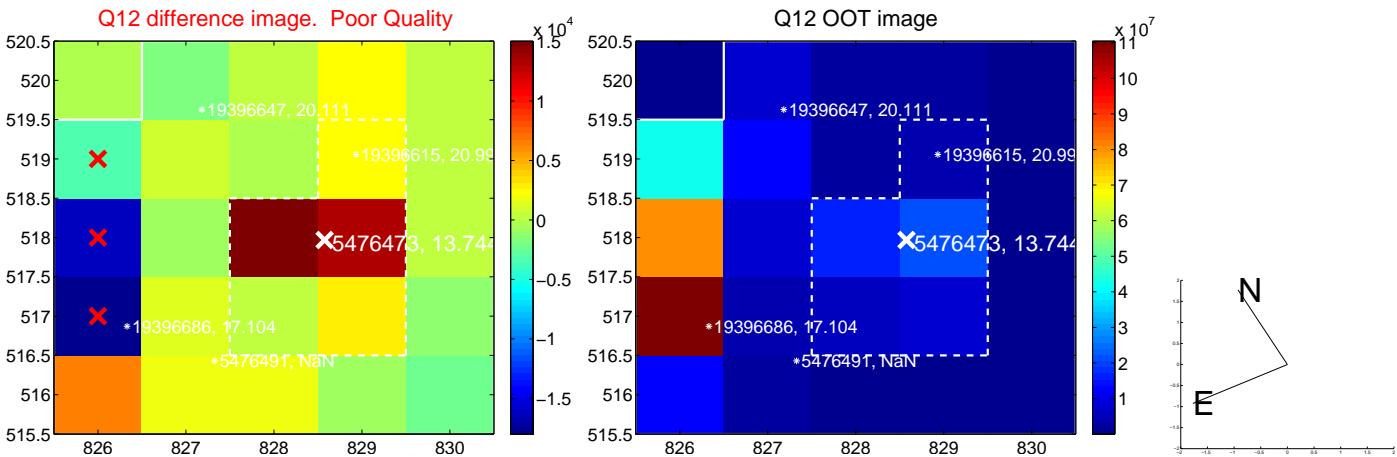
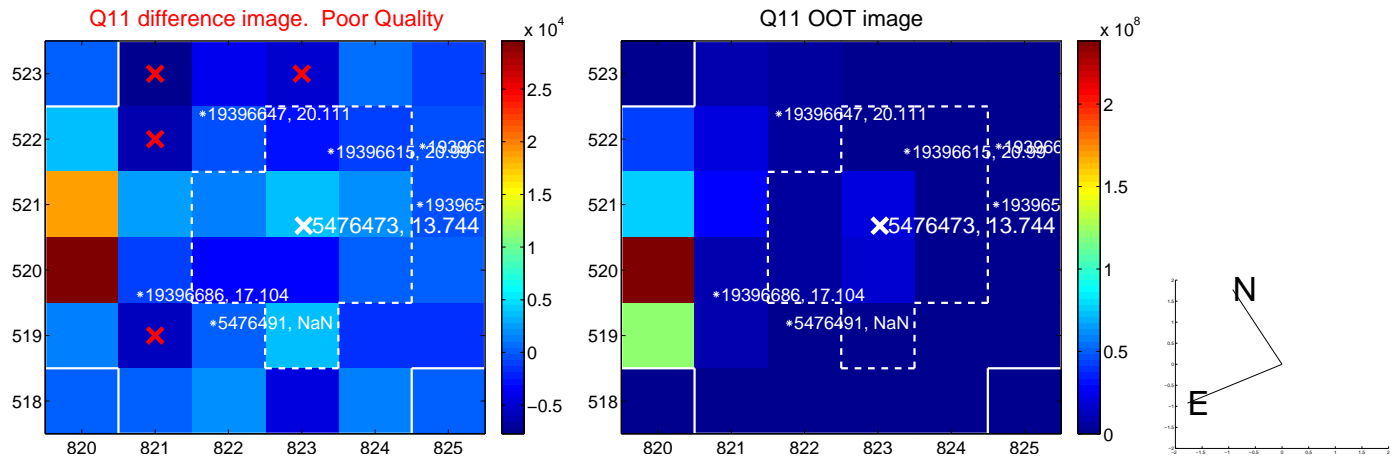
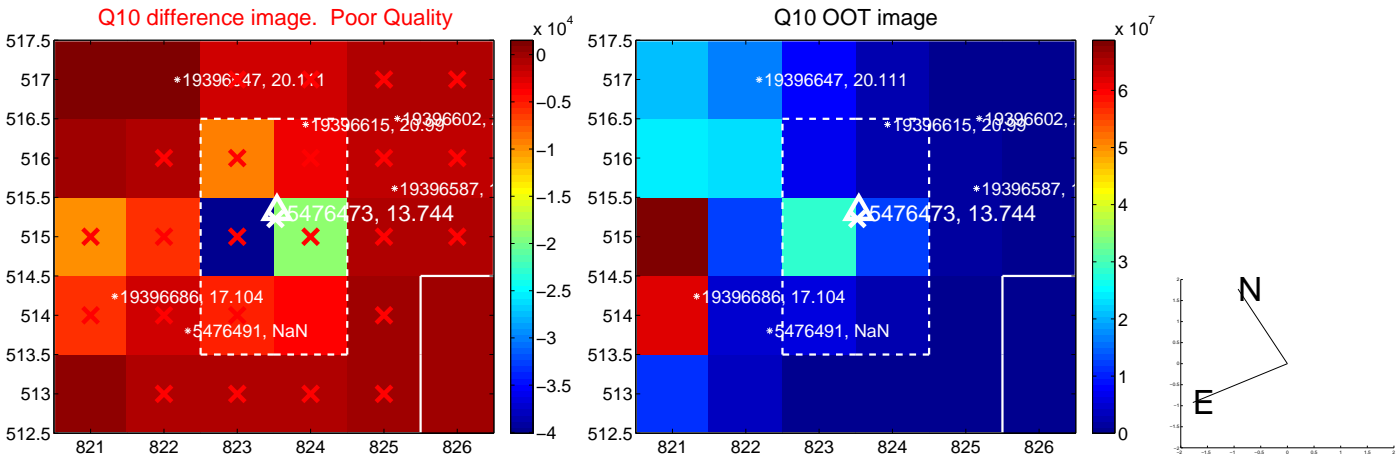
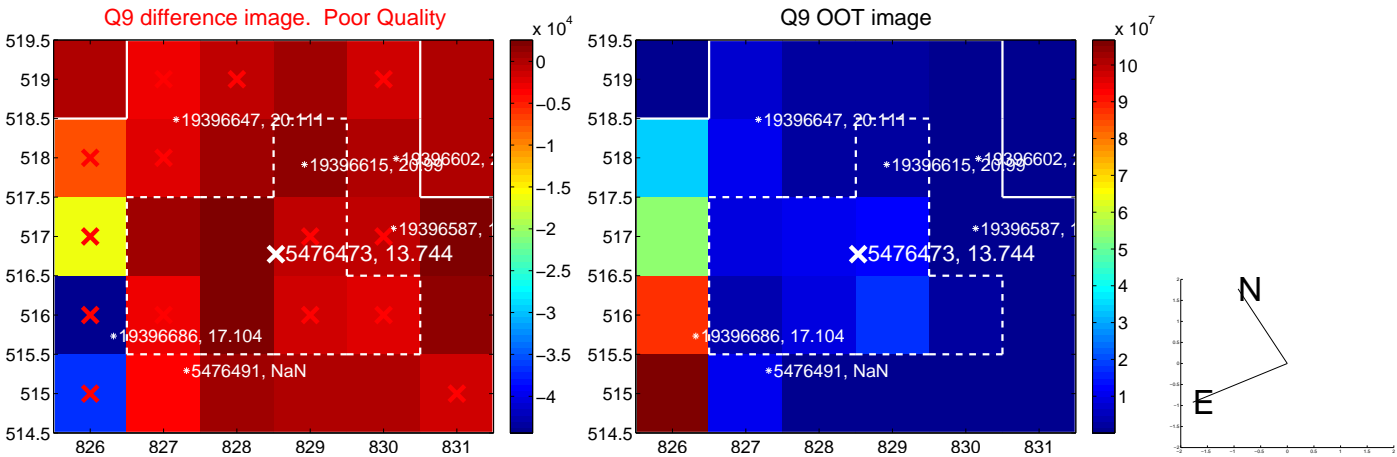
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



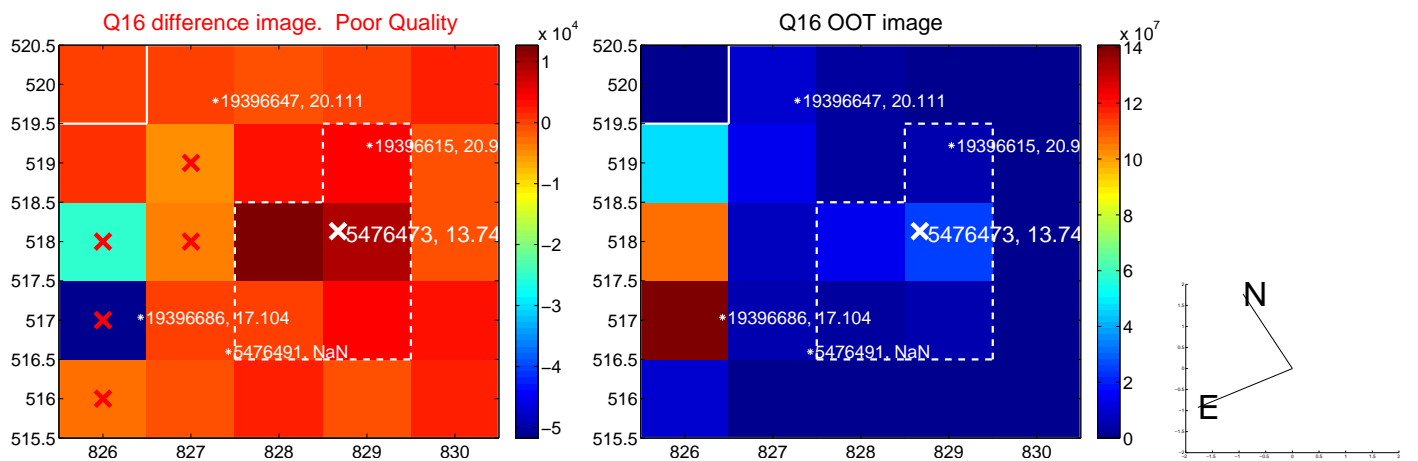
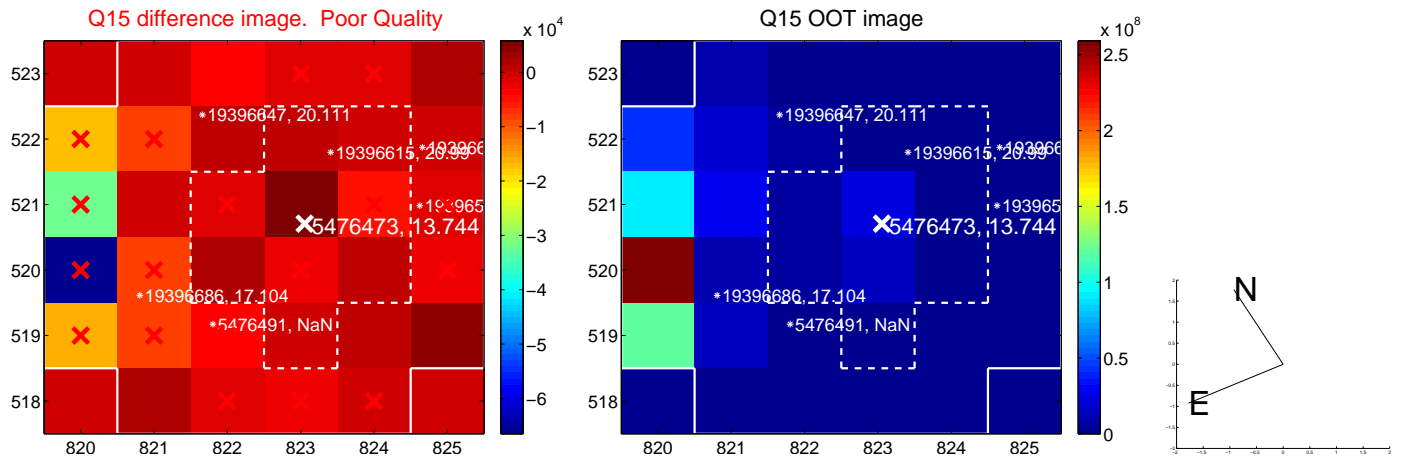
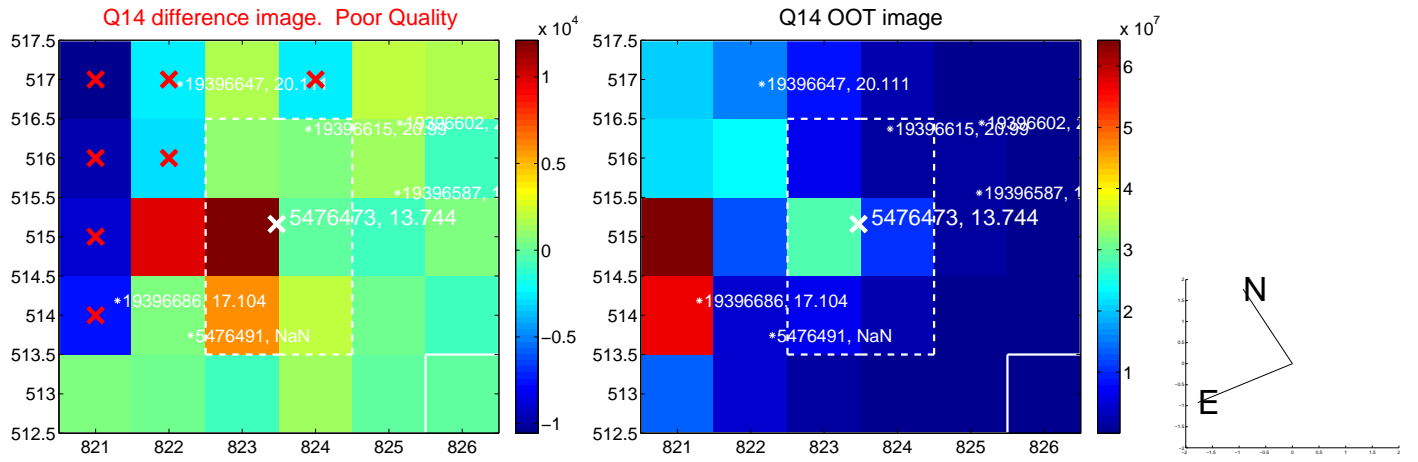
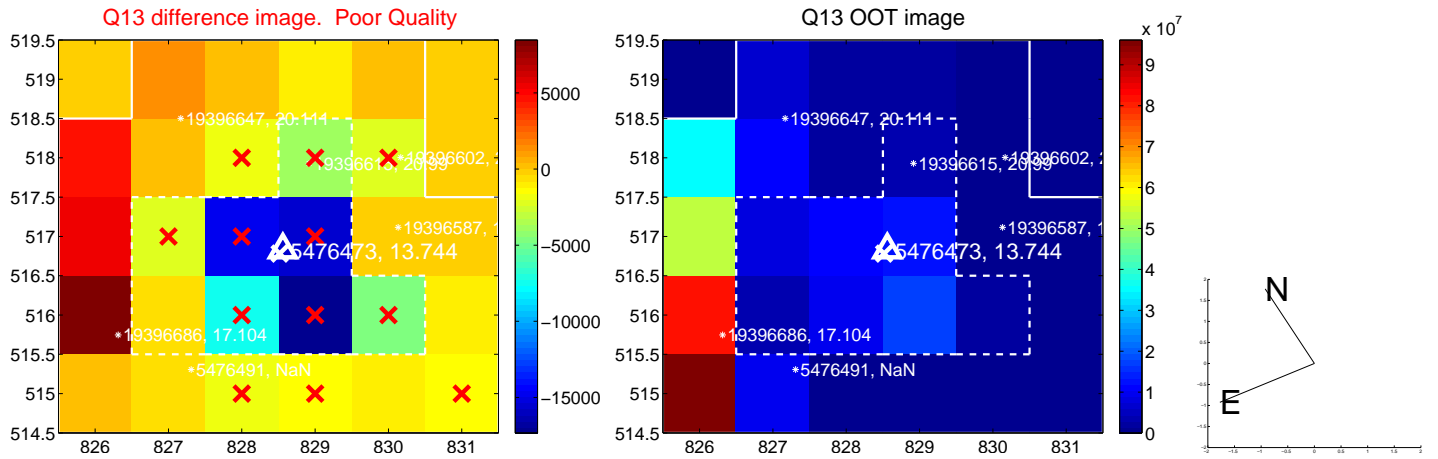
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



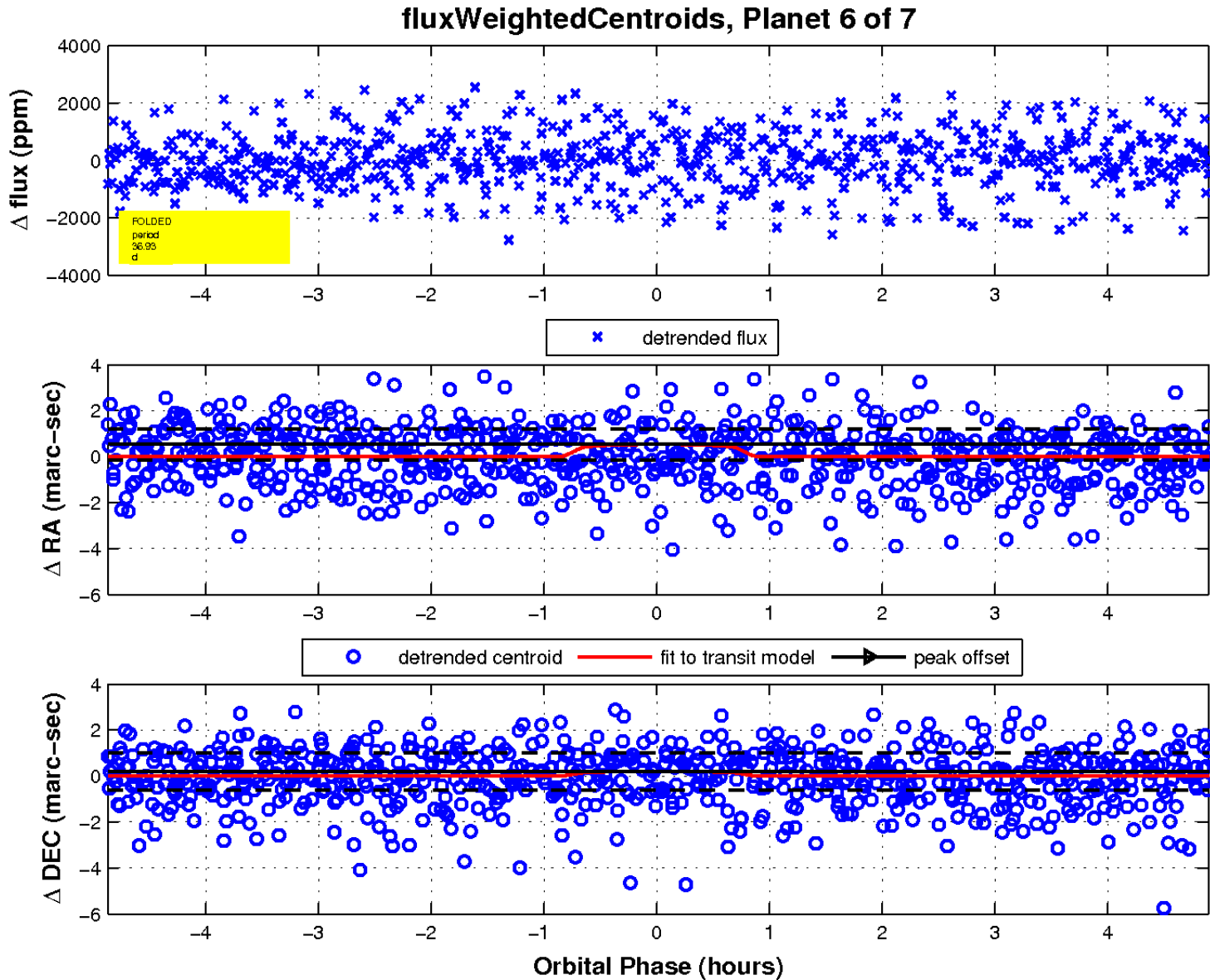
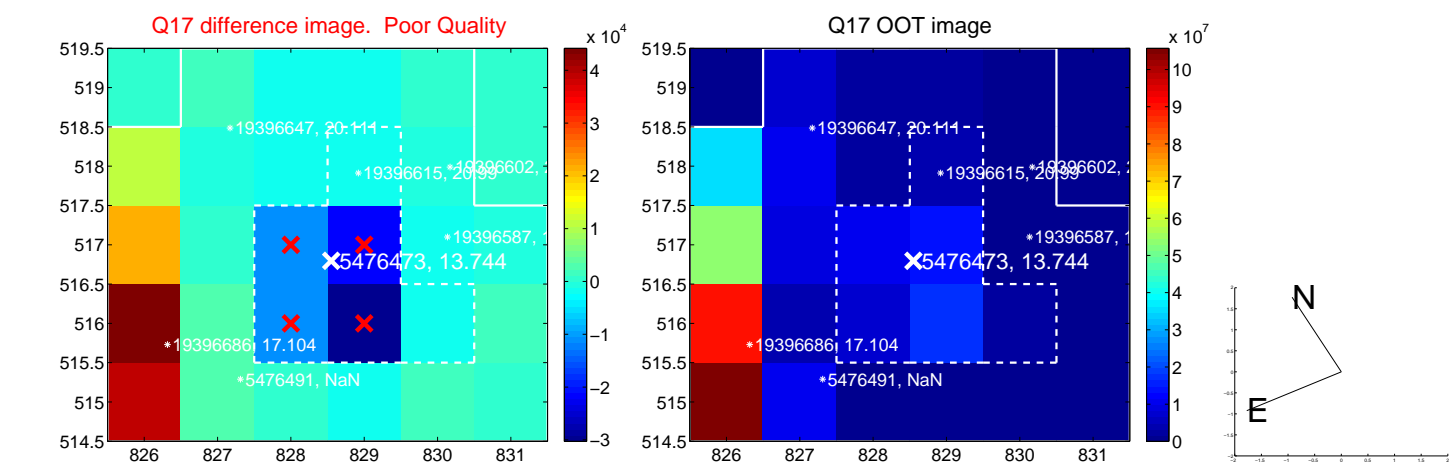
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



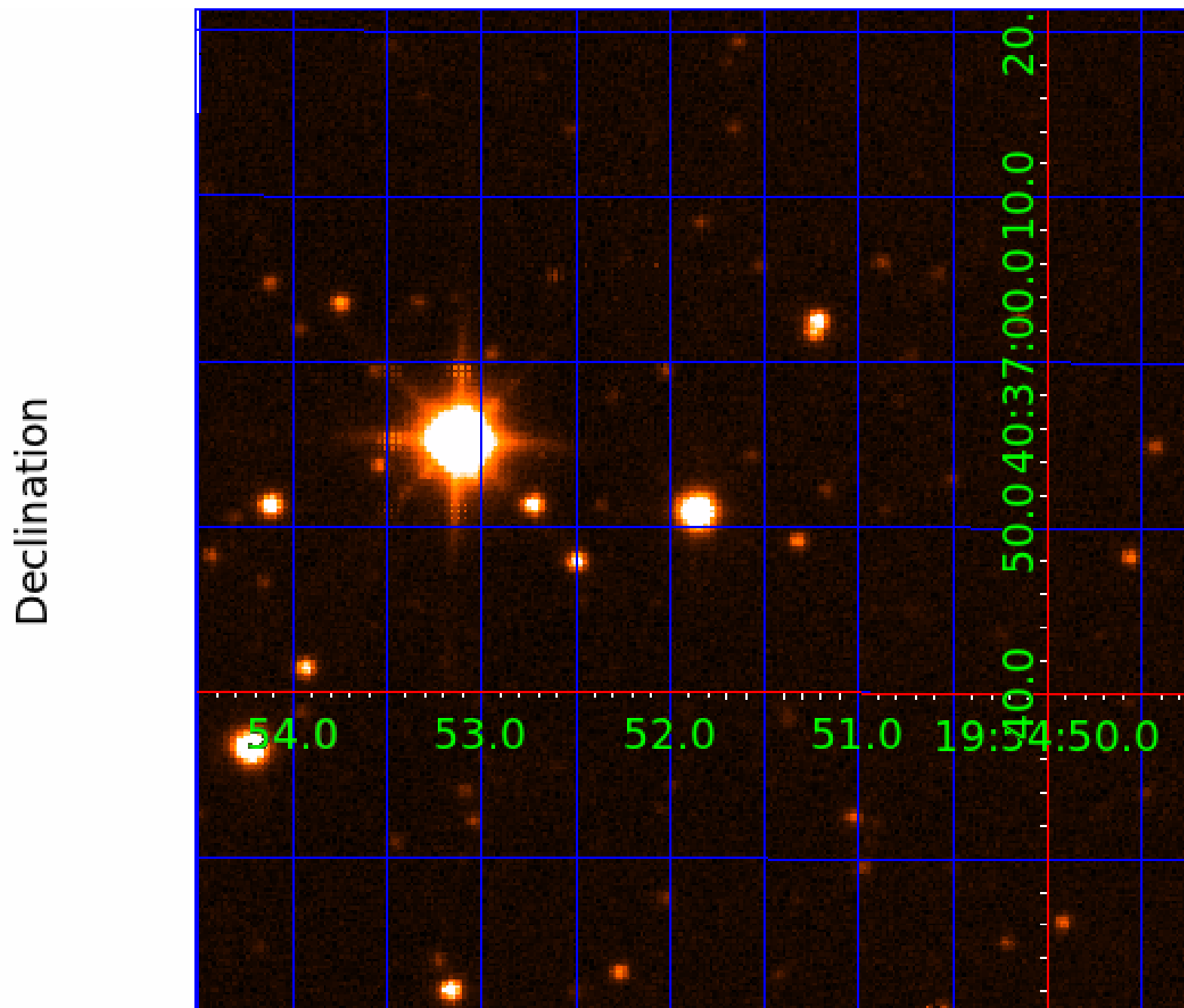
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005476473

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})
005476473-01	OBS	No	0.808595	131.529527	0.0	5.357	10.2	0.0	1.22	6621	0.00	7719.98
005476473-02	OBS	No	73.602269	140.052375	2635.5	3.815	11.5	10.7	1.22	6621	11.47	18.85
005476473-03	OBS	No	25.313932	140.994912	282.9	5.092	10.0	3.9	1.22	6621	2.34	78.24
005476473-04	OBS	No	67.143714	160.228557	1439.9	4.070	9.3	7.5	1.22	6621	8.64	21.31
005476473-05	OBS	No	105.656608	203.392003	1159.6	2.860	8.4	7.7	1.22	6621	7.42	11.64
005476473-06	OBS	No	36.929269	149.201170	1151.4	1.637	8.0	7.2	1.22	6621	4.45	47.29
005476473-07	OBS	No	58.244842	175.562114	1769.9	3.827	8.9	9.5	1.22	6621	6.35	25.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005476473-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_MEAS
005476473-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005476473-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET
005476473-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS
005476473-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS
005476473-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

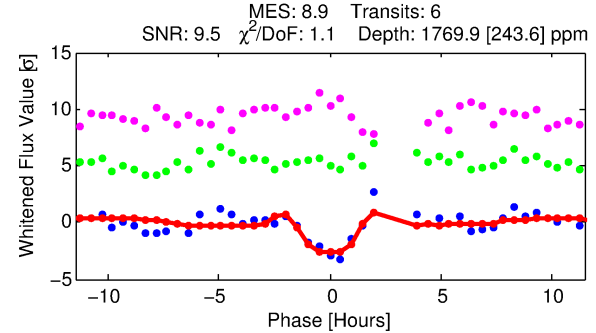
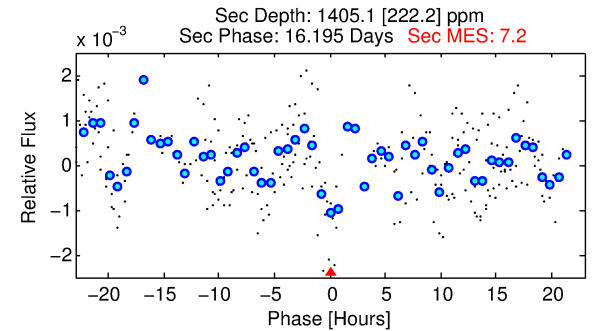
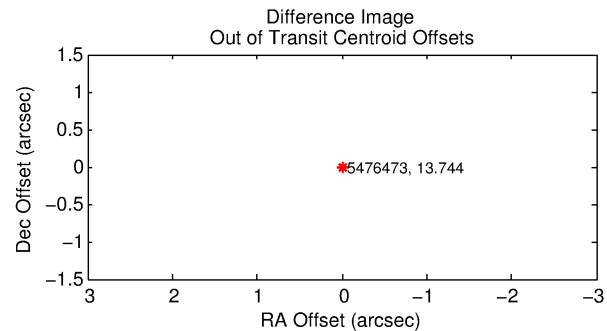
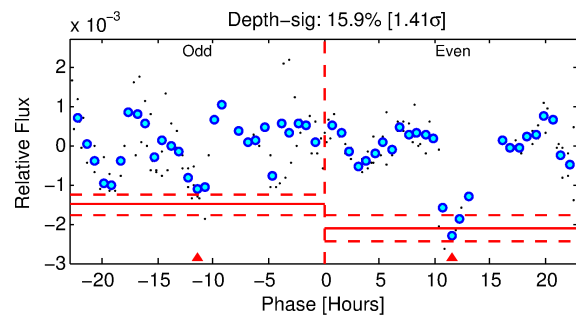
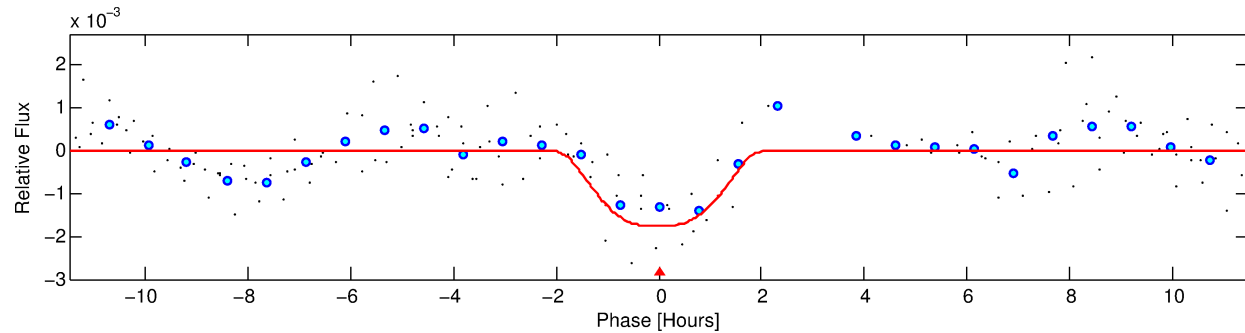
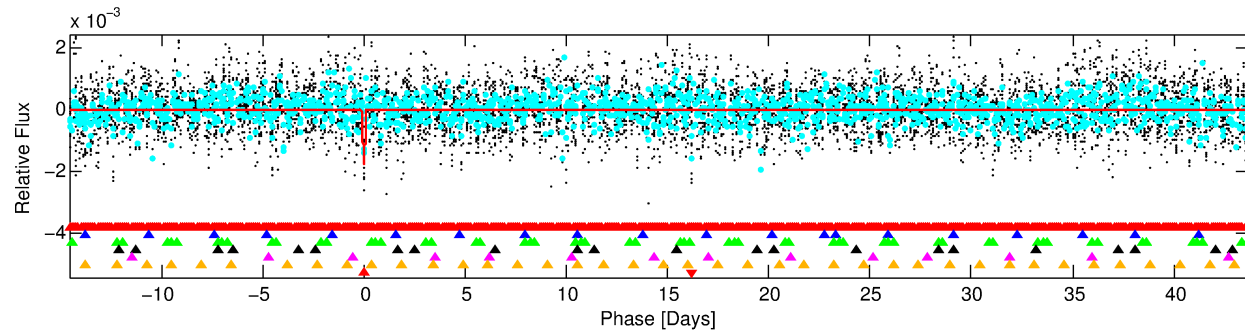
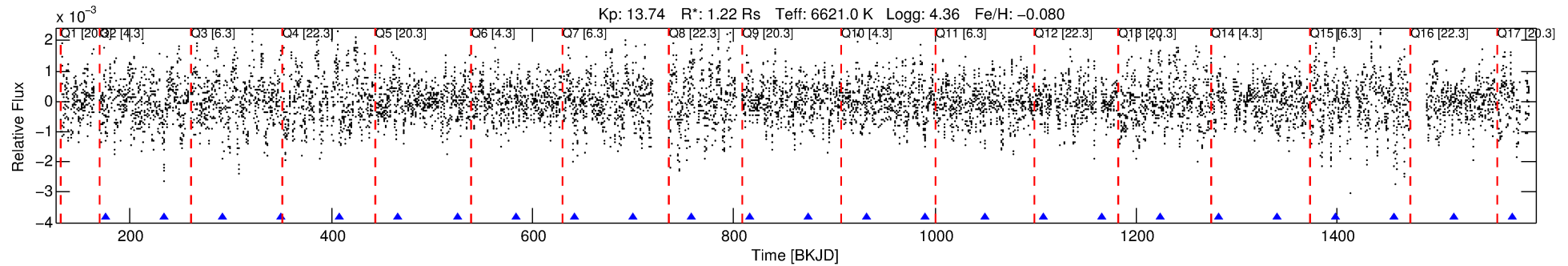
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005476473-07

No Significant Match Found

DV One-Page Summary

KIC: 5476473 Candidate: 7 of 7 Period: 58.245 d



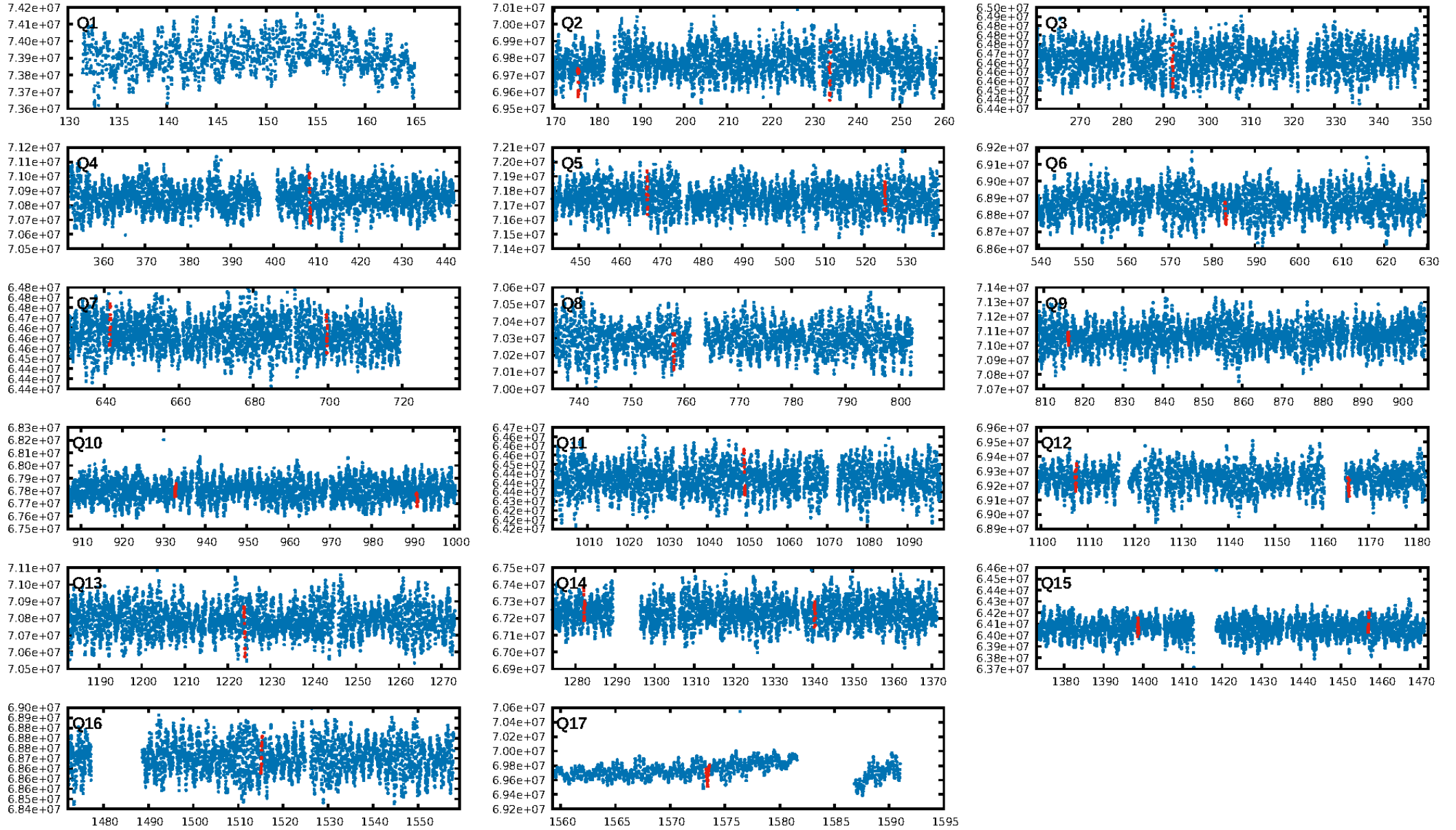
DV Fit Results:

Period = 58.24484 [0.00201] d
Epoch = 175.5621 [0.0067] BKJD
Rp/R* = 0.0477 [0.0042]
a/R* = 52.01 [8.05]
b = 0.95 [0.02]
Seff = 25.76 [10.24]
Teq = 574 [57] K
Rp = 6.35 [2.14] Re
a = 0.3152 [0.0831] AU
Ag = 1903.23 [835.85] [2.28 σ]
Teffp = 5866 [408] K [12.85 σ]

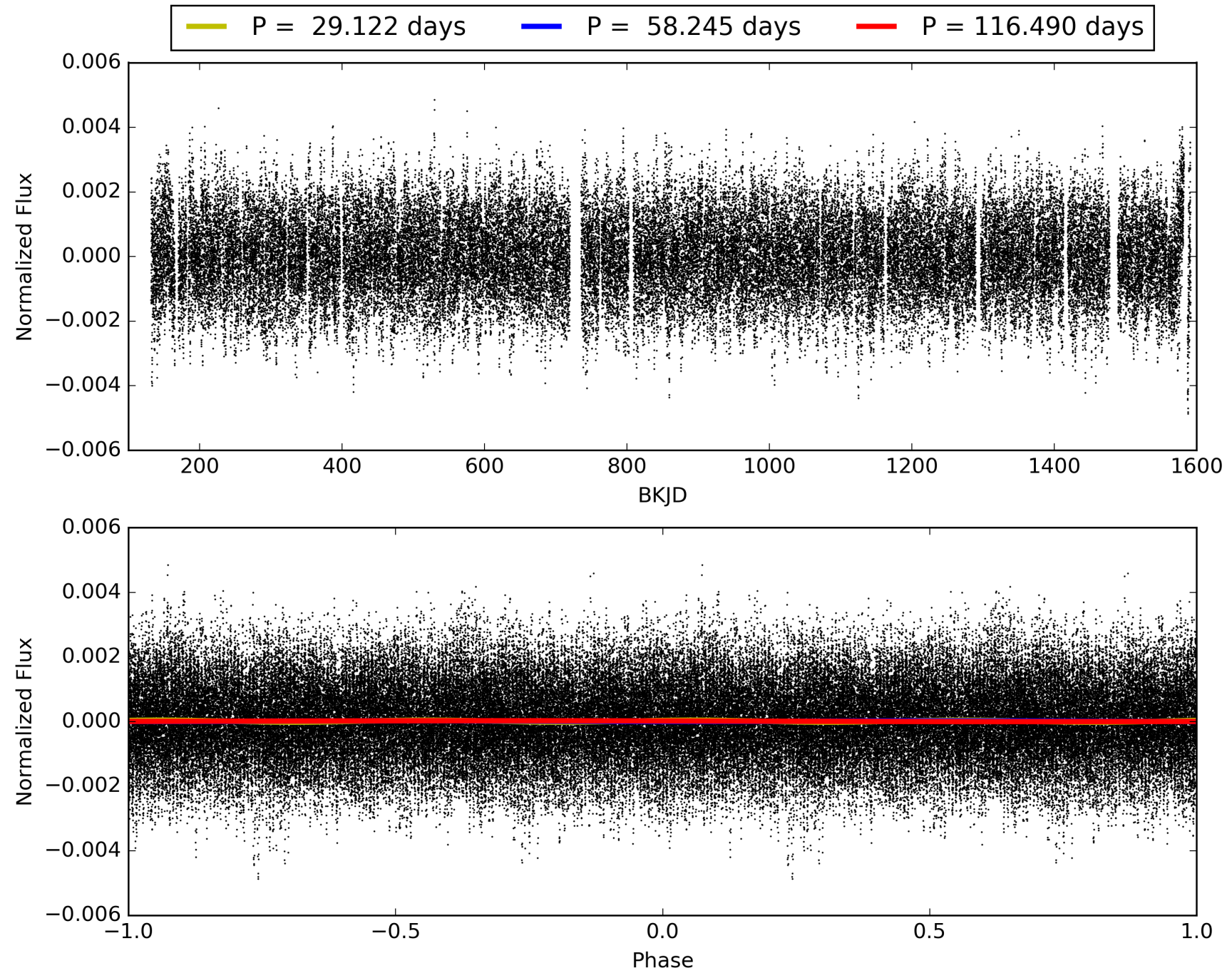
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [122.90 σ]
LongPeriod-sig: 100.0% [38.23 σ]
ModelChiSquare2-sig: 9.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.4318
Centroid-sig: 0.9%
Centroid-so: 3.073 arcsec [12.25 σ]
OotOffset-rm: N/A
KicOffset-rm: 0.316 arcsec [3.16 σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 3/0/1/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/15]

TCE 005476473-07, PDC Light Curves

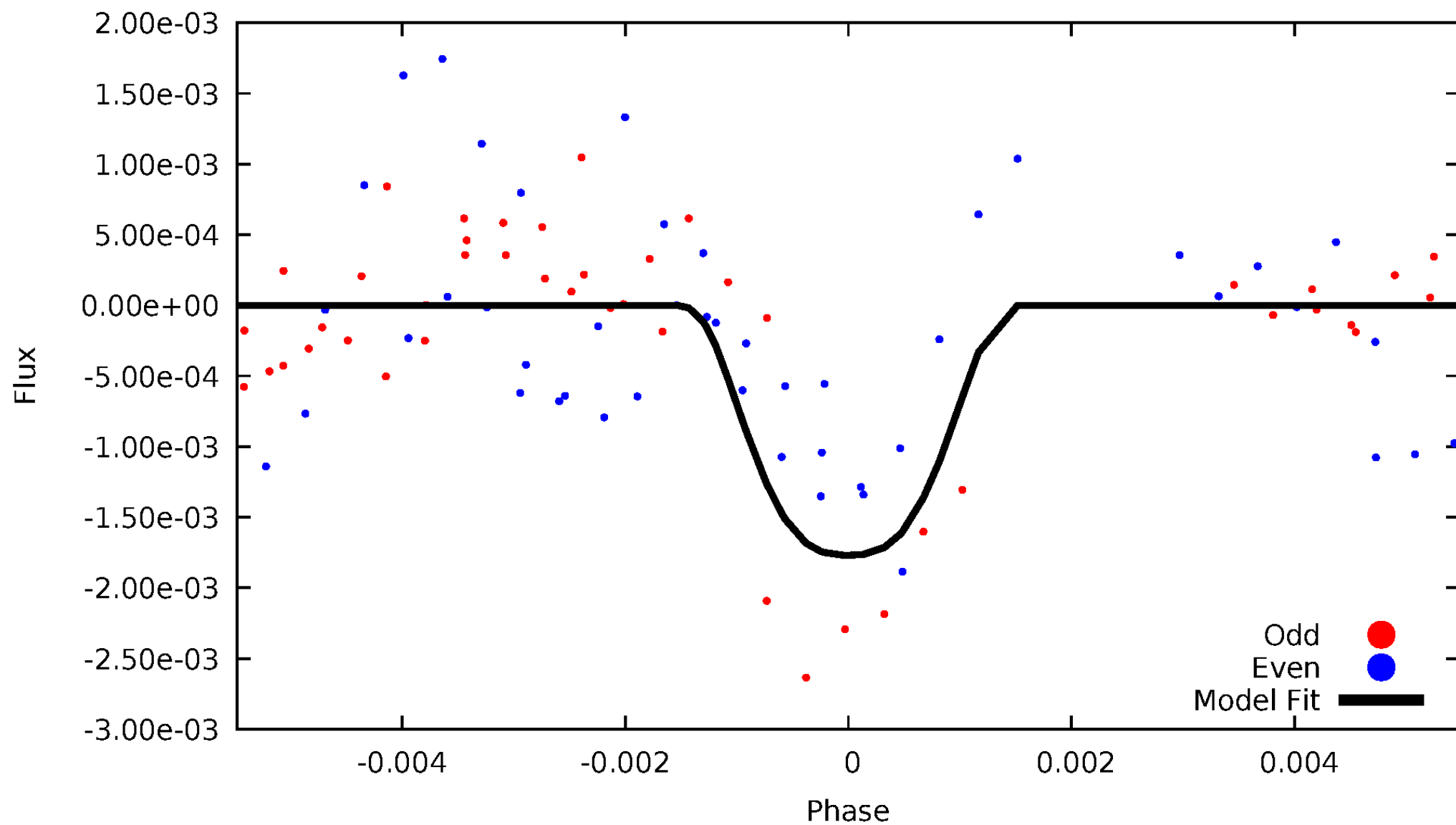


TCE 005476473-07



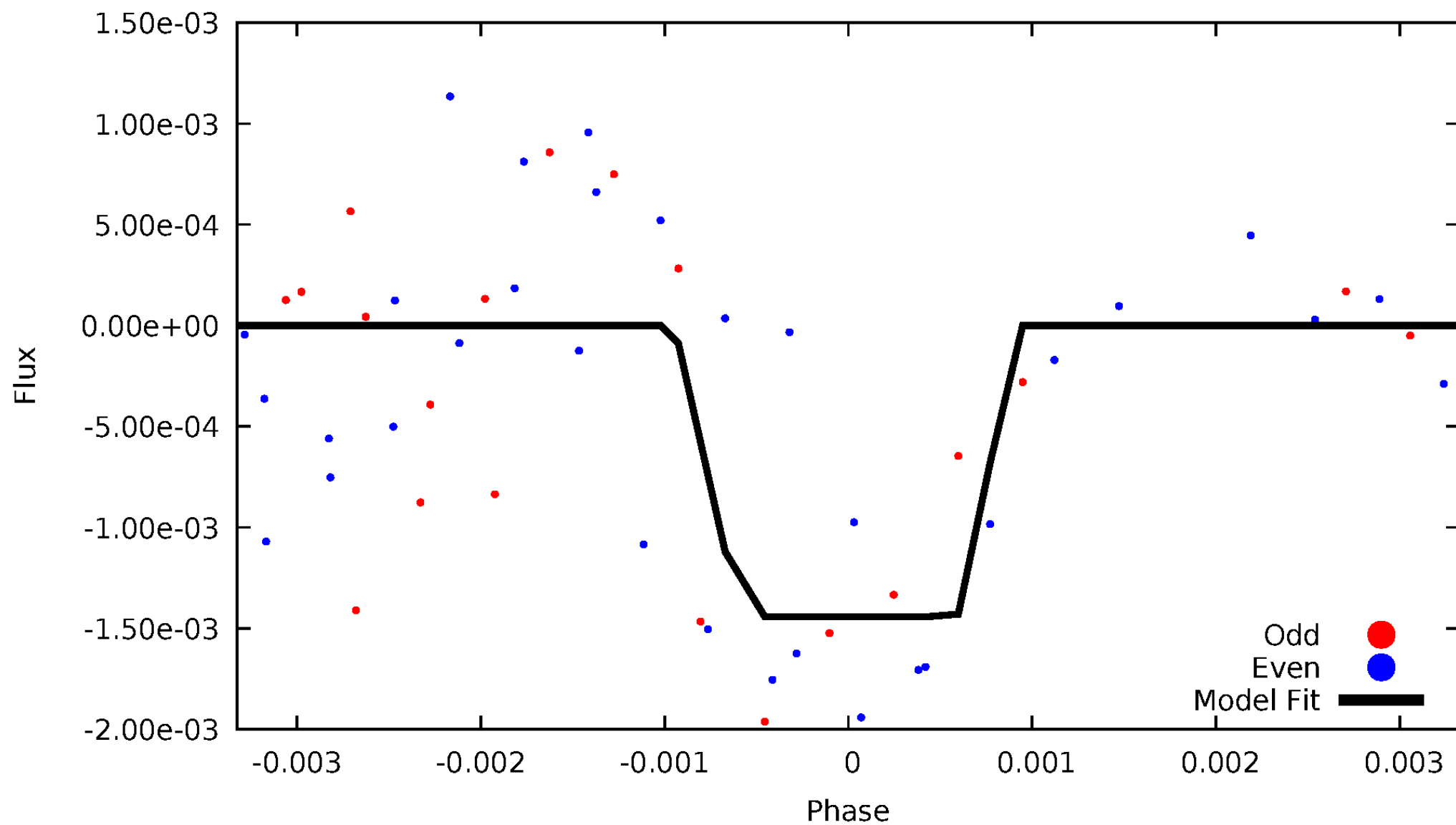
DV Odd/Even

TCE 005476473-07



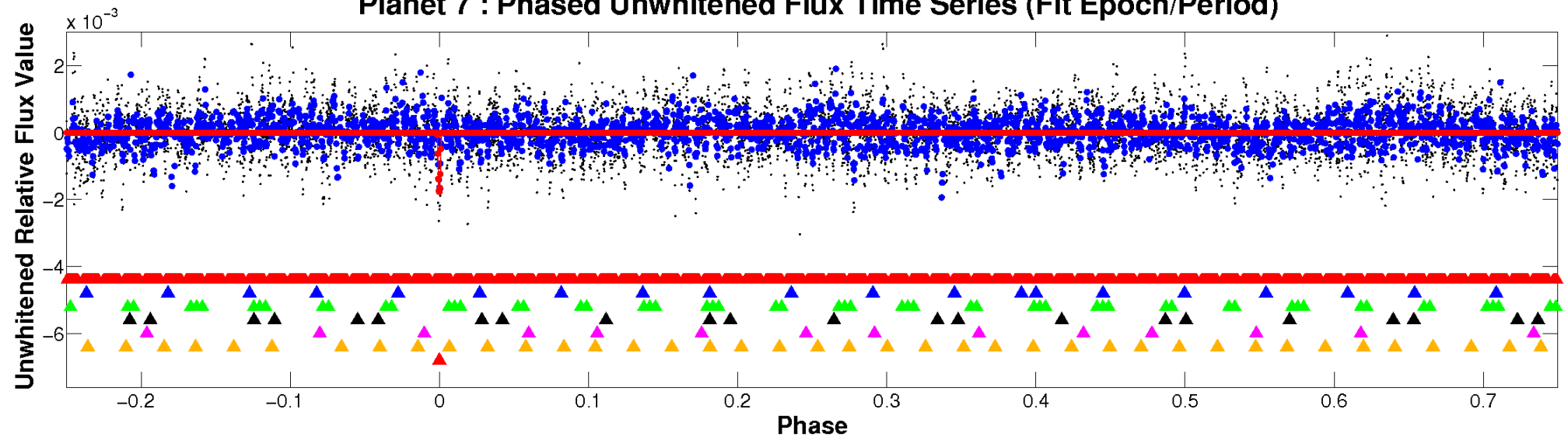
ALT Odd/Even

TCE 005476473-07

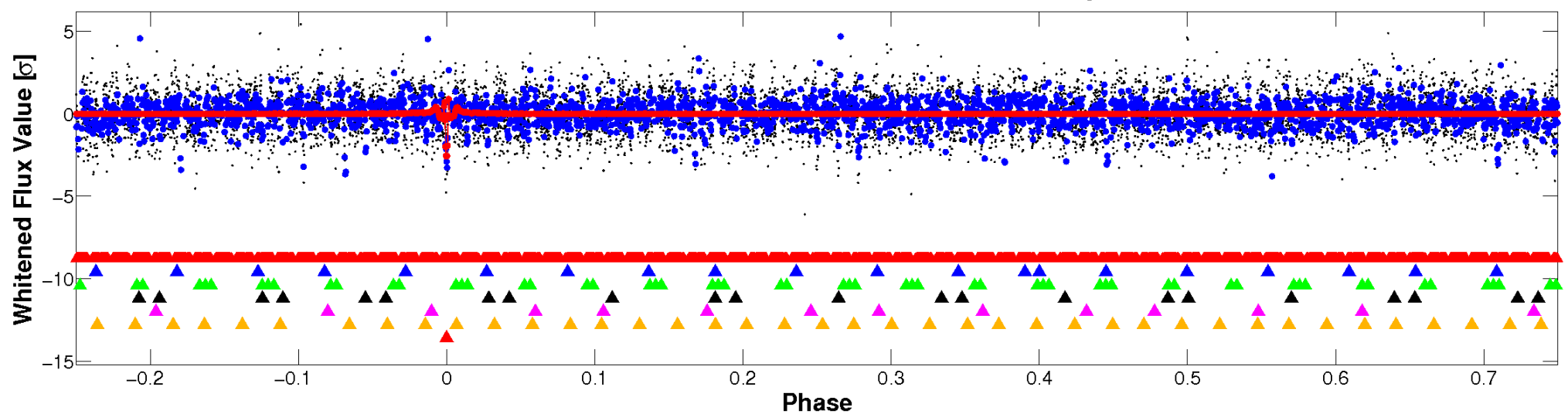


Non-Whitened Vs. Whitened Light Curve

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

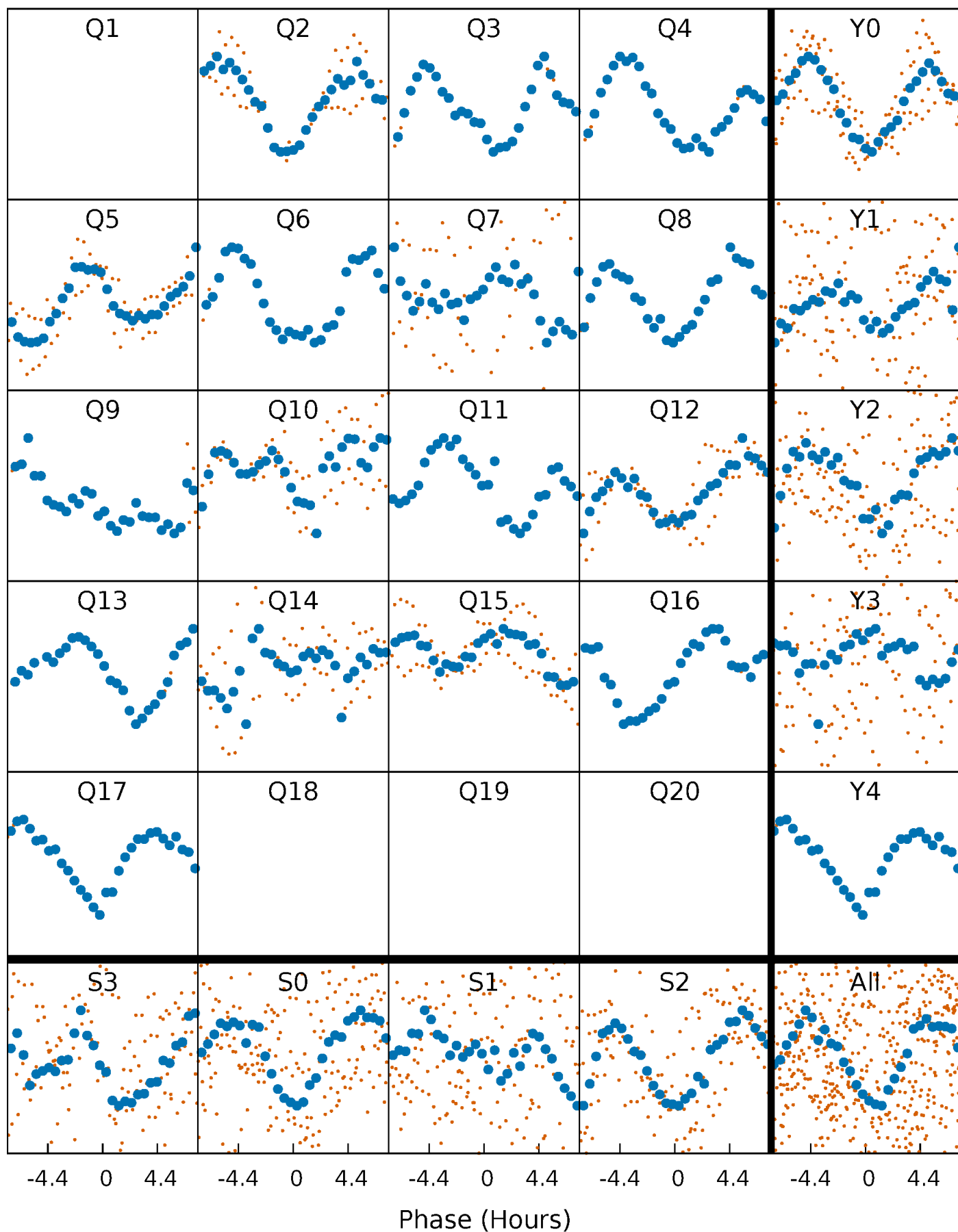


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



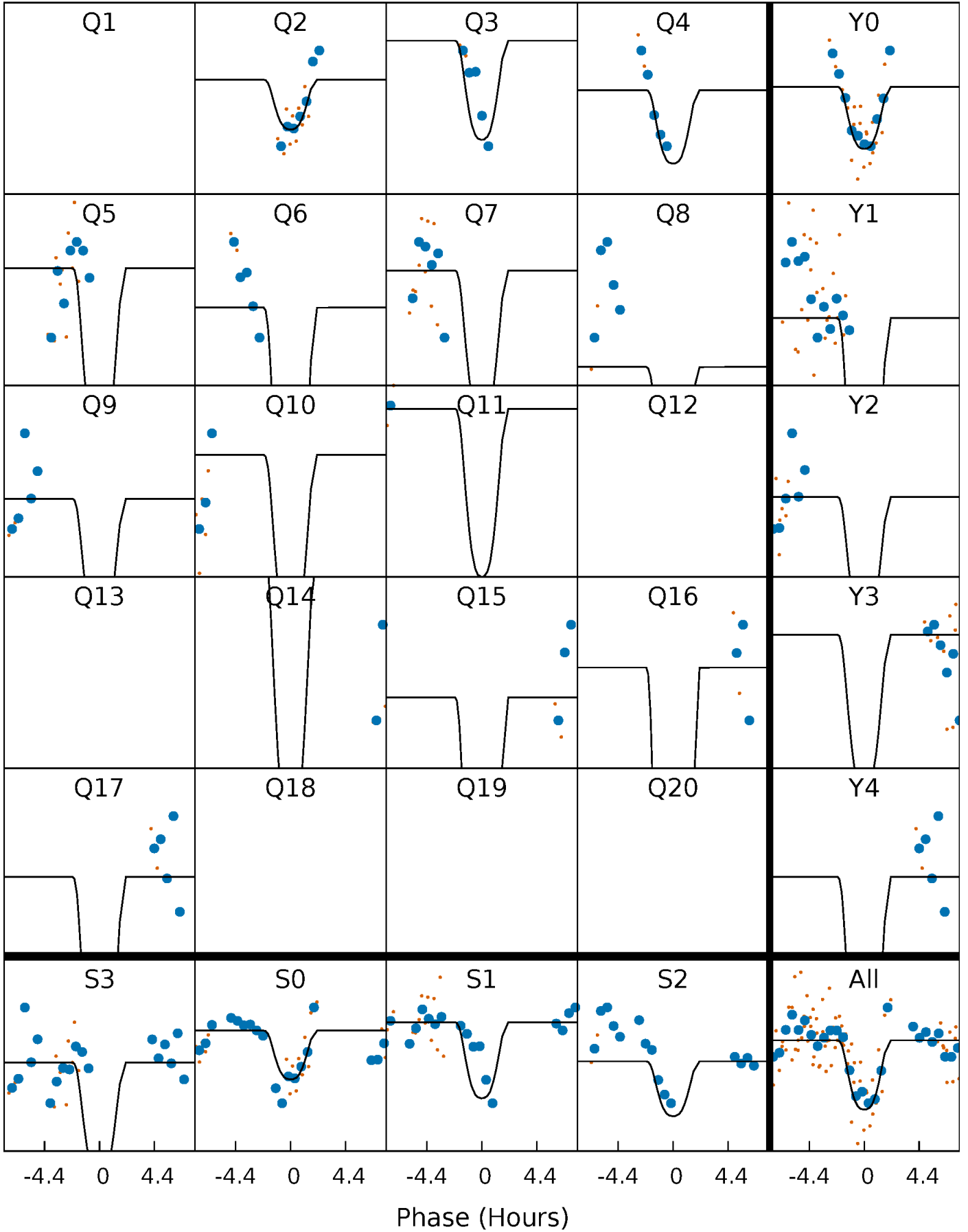
PDC Quarter-Phased Transit Curves

TCE 005476473-07 P= 58.244842 Days $T_0=175.562114$ (BKJD)



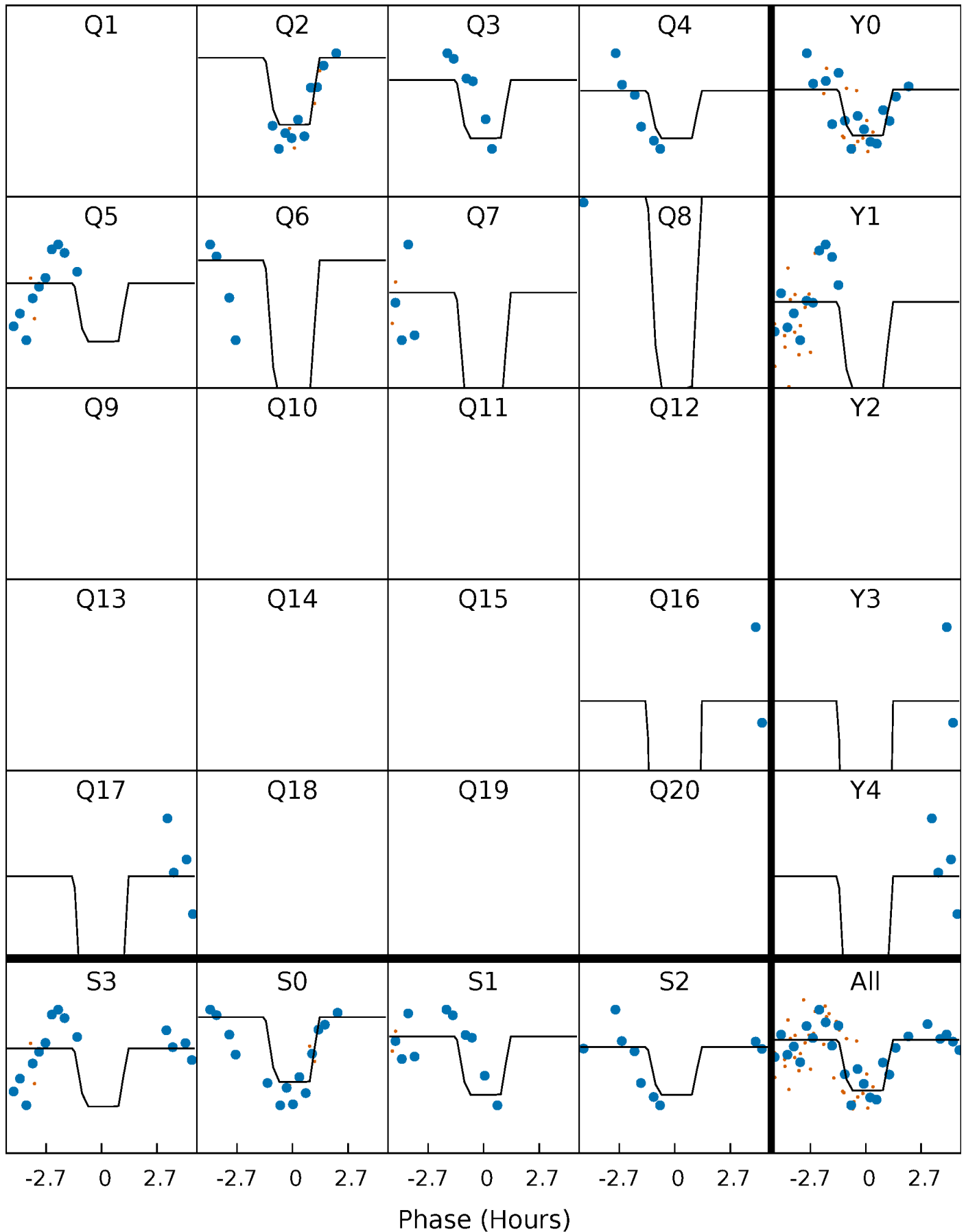
DV Quarter-Phased Transit Curves

TCE 005476473-07 P= 58.244842 Days $T_0=175.562114$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

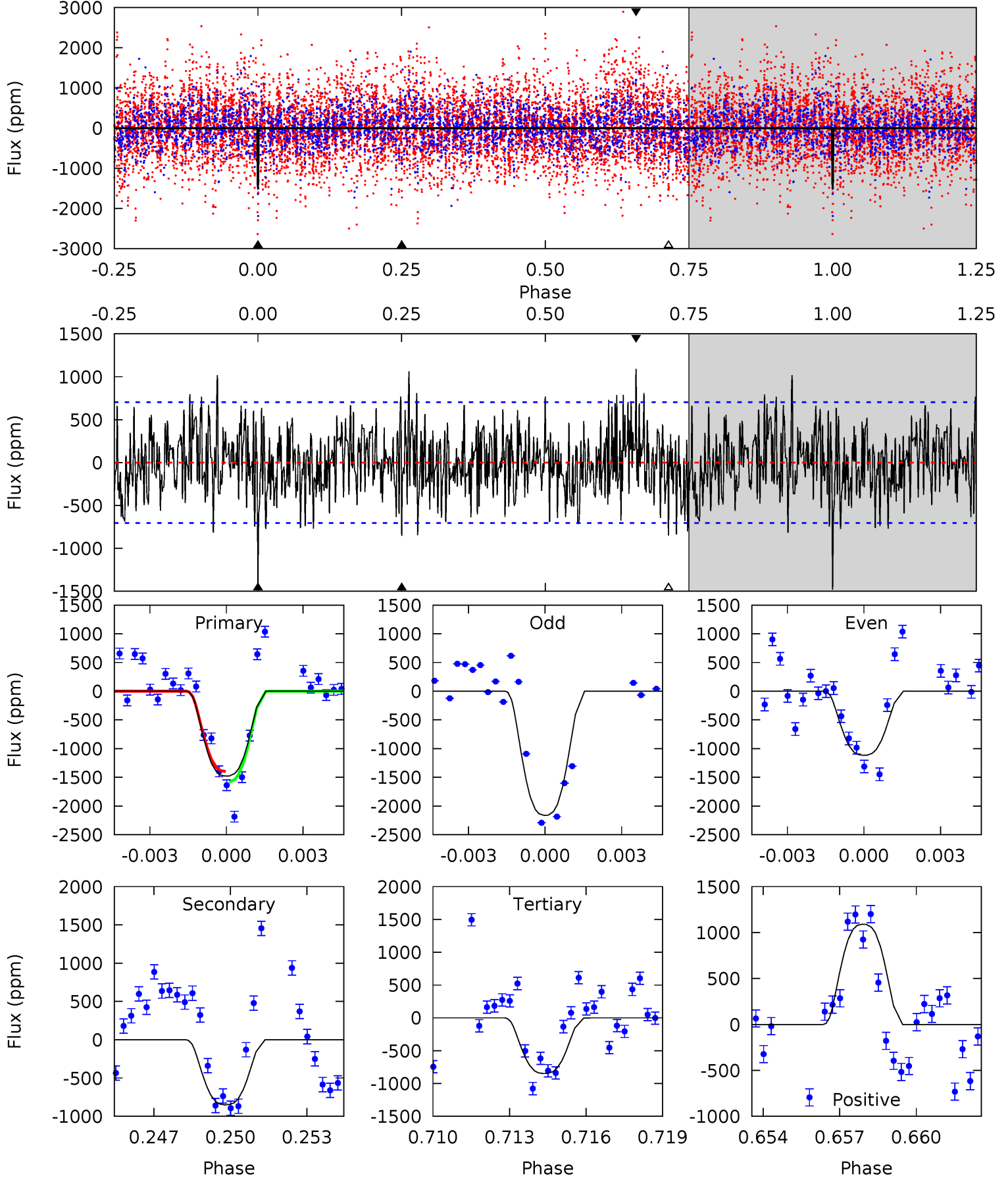
TCE 005476473-07 $P = 58.246624$ Days $T_0 = 175.564686$ (BKJD)



DV Model-Shift Uniqueness Test

005476473-07, $P = 58.244842$ Days, $E = 117.317272$ Days

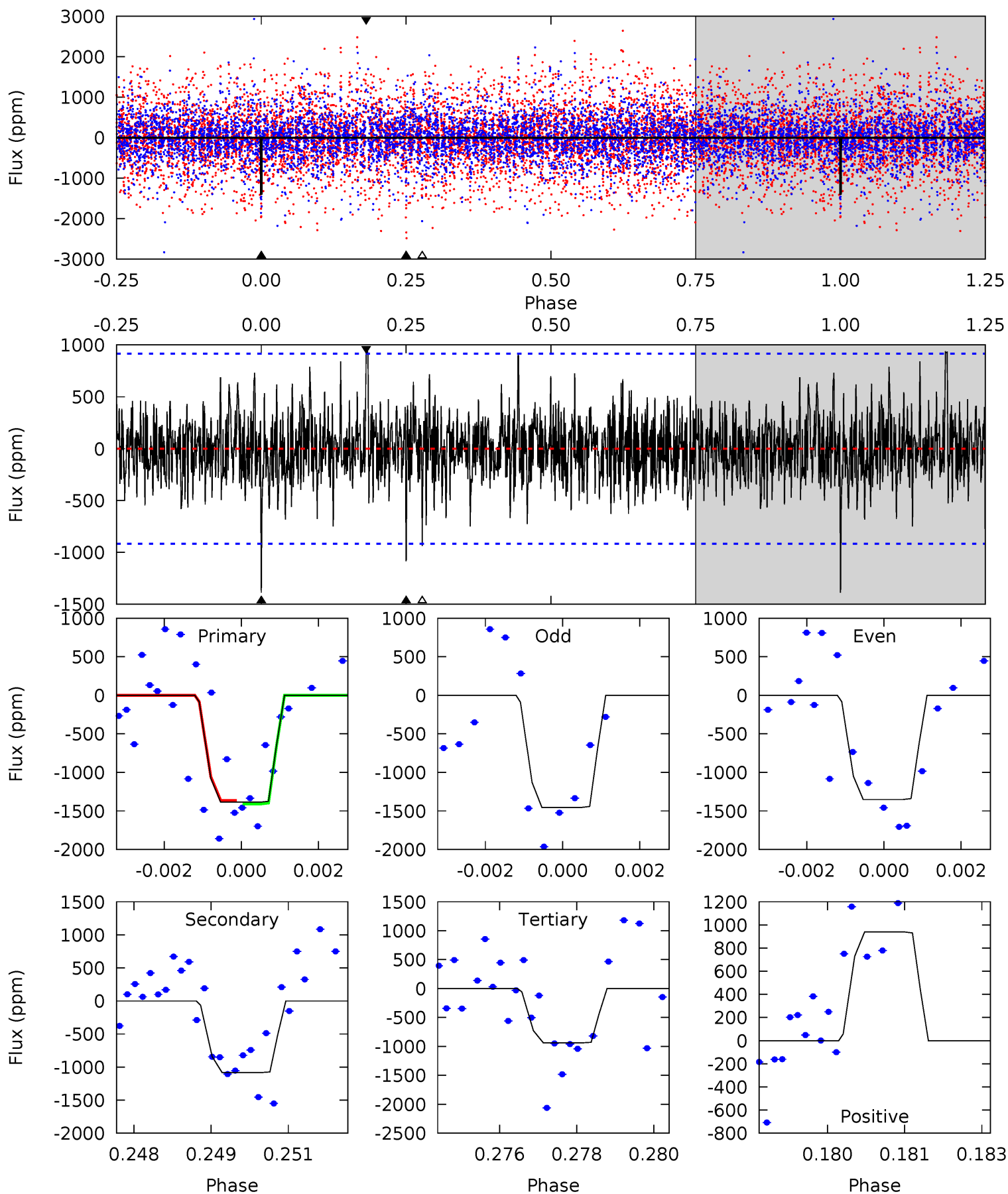
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	6.34	6.33	8.14	5.26	2.97	2.24	4.71	2.90	0.02	-1.80	3.73	1.06	0.42	0.67



Alt Model-Shift Uniqueness Test

005476473-07, P = 58.246624 Days, E = 117.318062 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.11	6.33	5.48	5.49	5.36	3.14	1.40	2.62	2.62	0.85	0.84	0.28	0.92	0.40	0.14



Stellar Parameters For KIC 005476473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+161}_{-241}	$4.356^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.219^{+0.397}_{-0.132}$	$1.237^{+0.174}_{-0.174}$	$0.961^{+0.275}_{-0.512}$
	+2%/-4%	+1%/-4%	+312%/-375%	+33%/-11%	+14%/-14%	+29%/-53%
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 005476473-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-850 ± 134	$6.51^{+1.06}_{-0.79}$	811^{+56}_{-39}	5209^{+313}_{-303}	1068^{+367}_{-314}
Alt.	-1083 ± 171	$5.23^{+0.90}_{-0.76}$	814^{+60}_{-40}	6132^{+489}_{-454}	2147^{+851}_{-660}

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 $A_{obs} \gg 1.0$

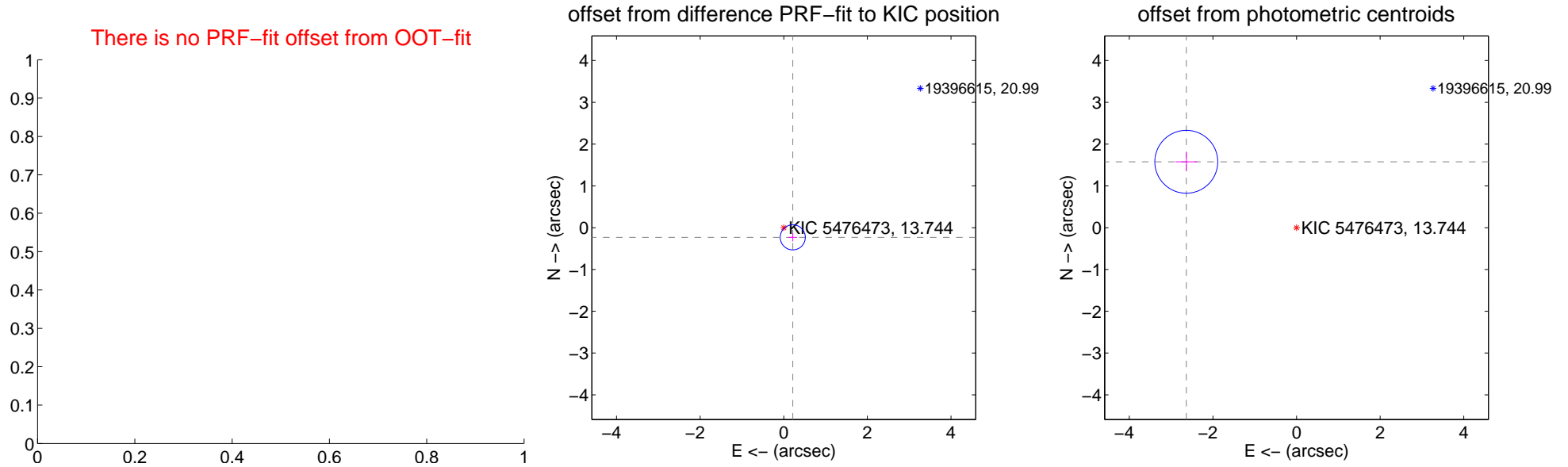
DV Centroid Data

Supplemental centroid analysis for 005476473-07. Kepler magnitude: 13.74. Transit SNR 9.55

There are 1 quarters with good PRF difference image offsets

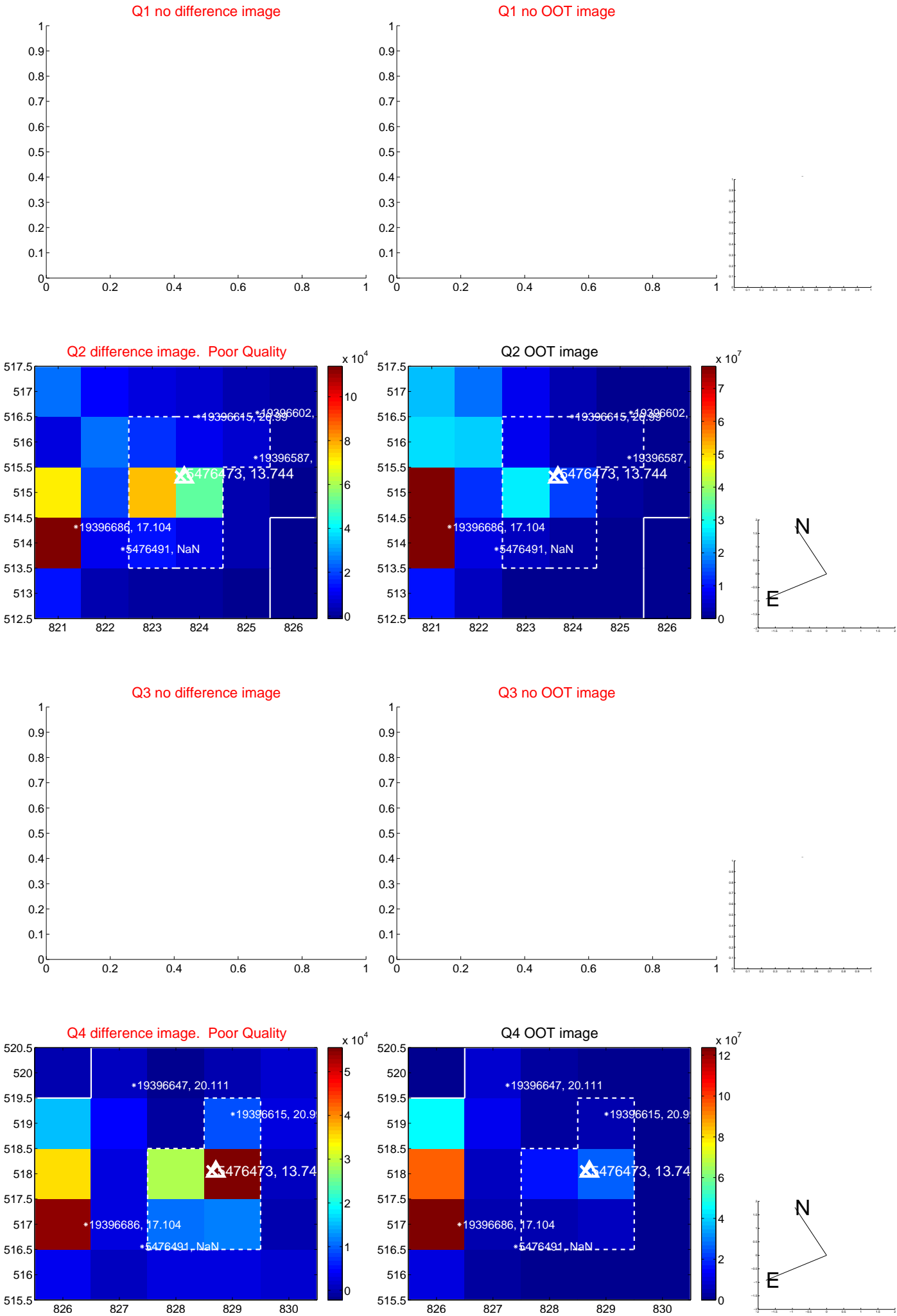
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.316 ± 0.100	3.16	-0.216 ± 0.102	-0.231 ± 0.099
photometric centroid source offset	3.07 ± 0.25	12.25	2.64 ± 0.26	1.58 ± 0.23

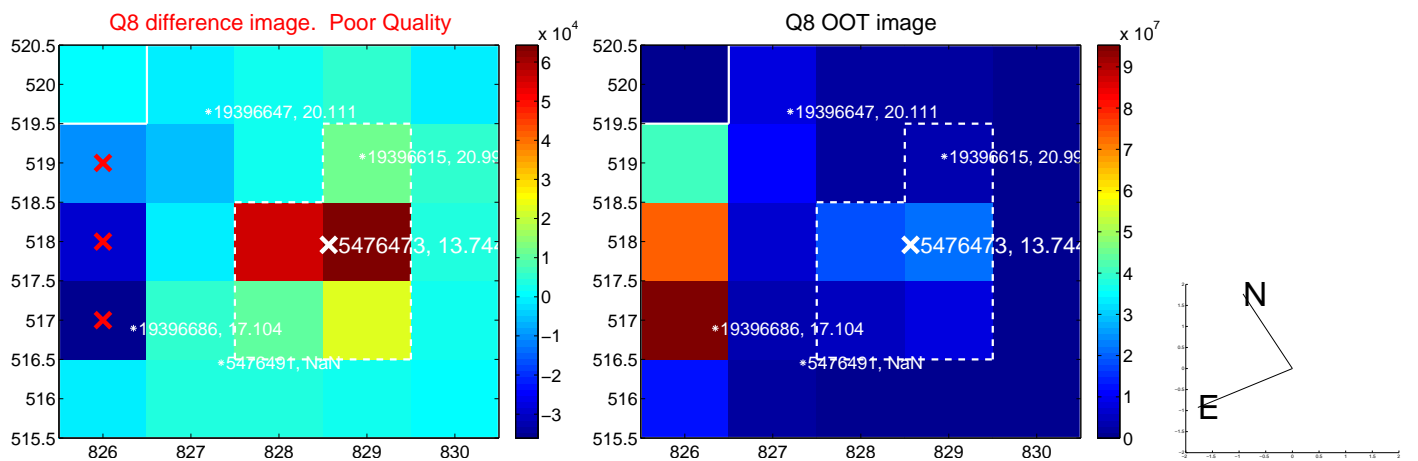
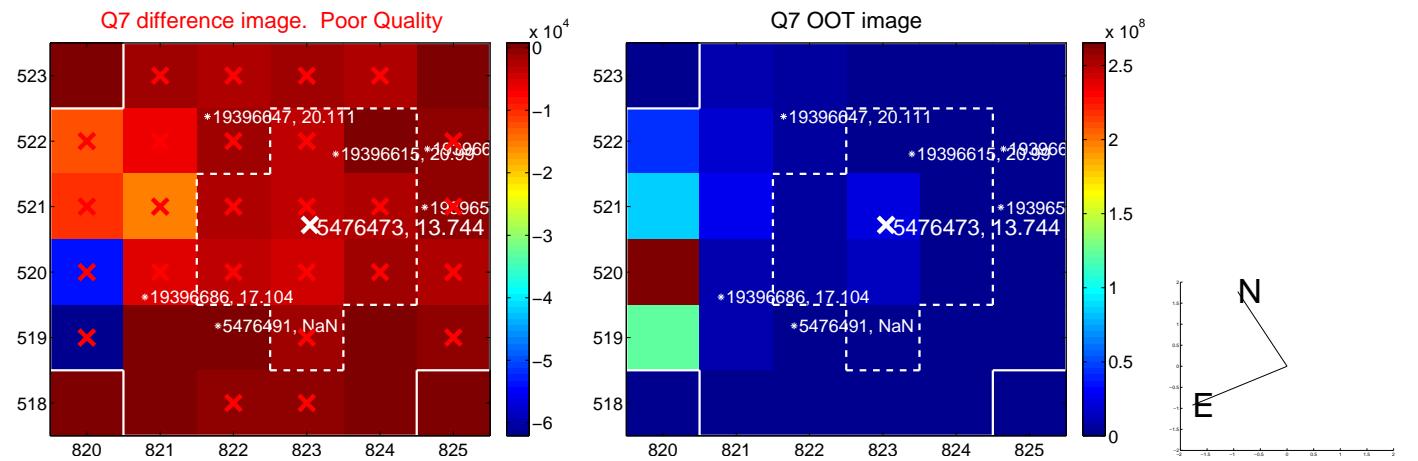
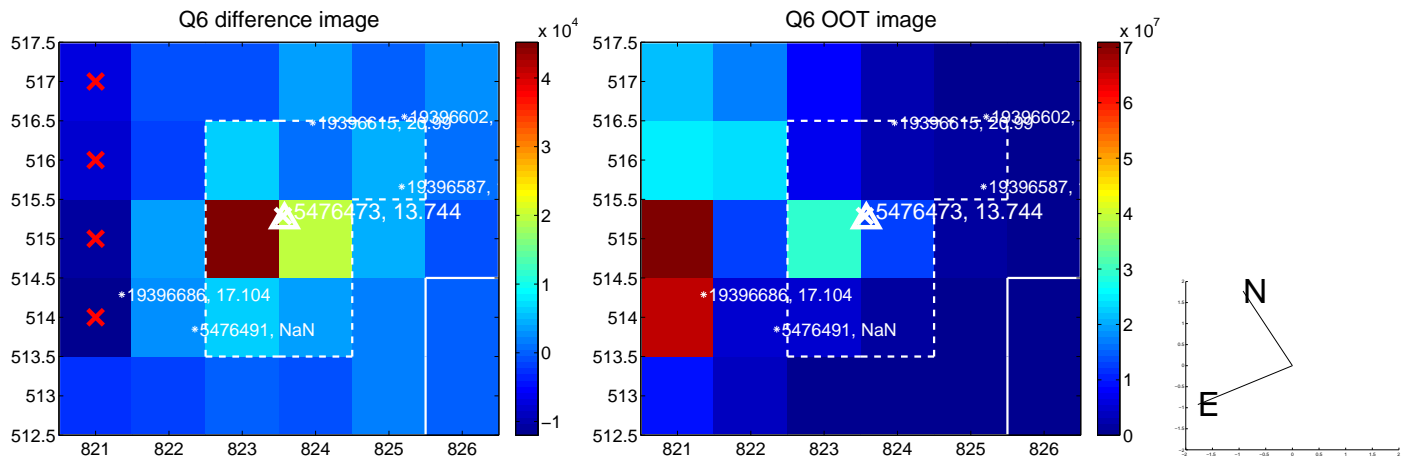
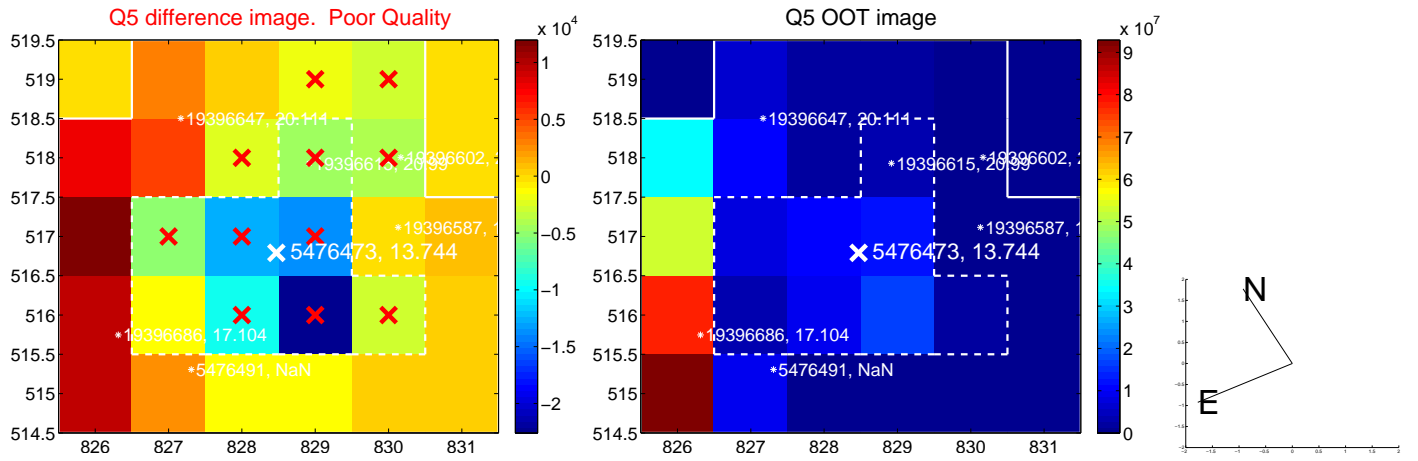


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

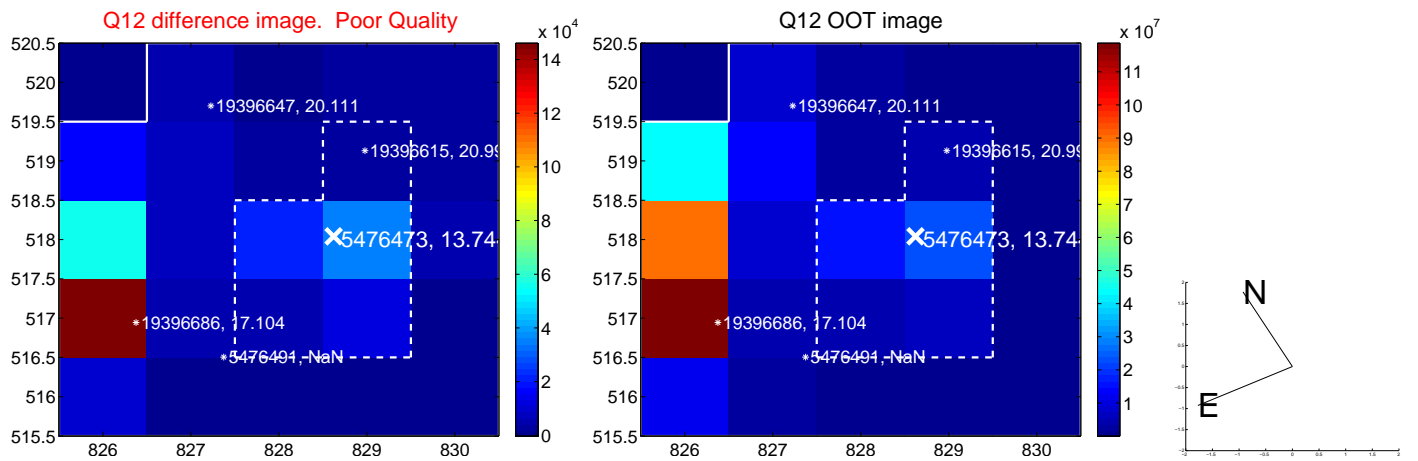
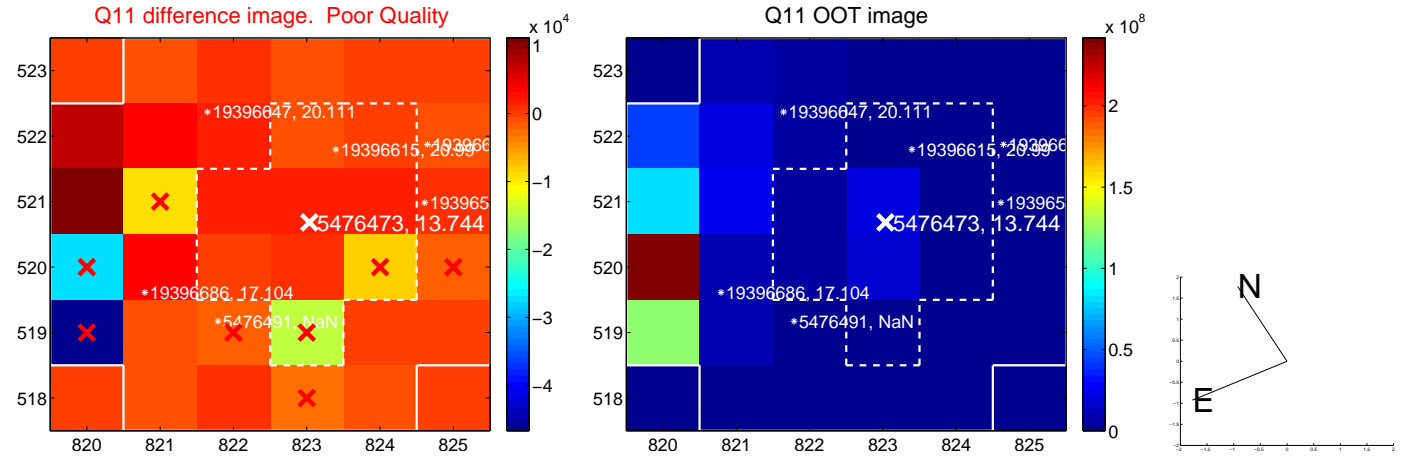
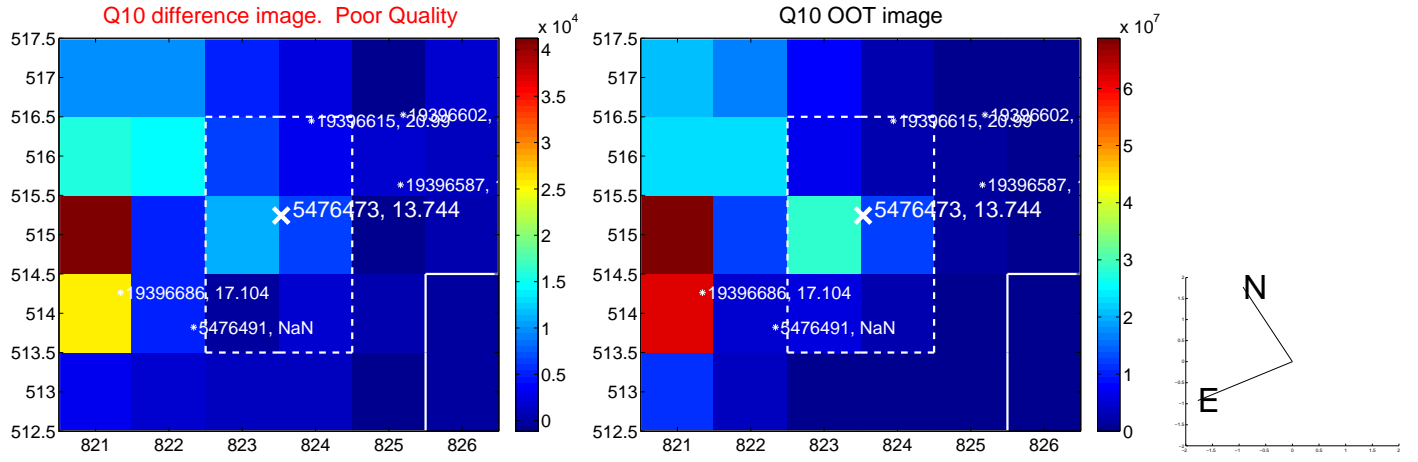
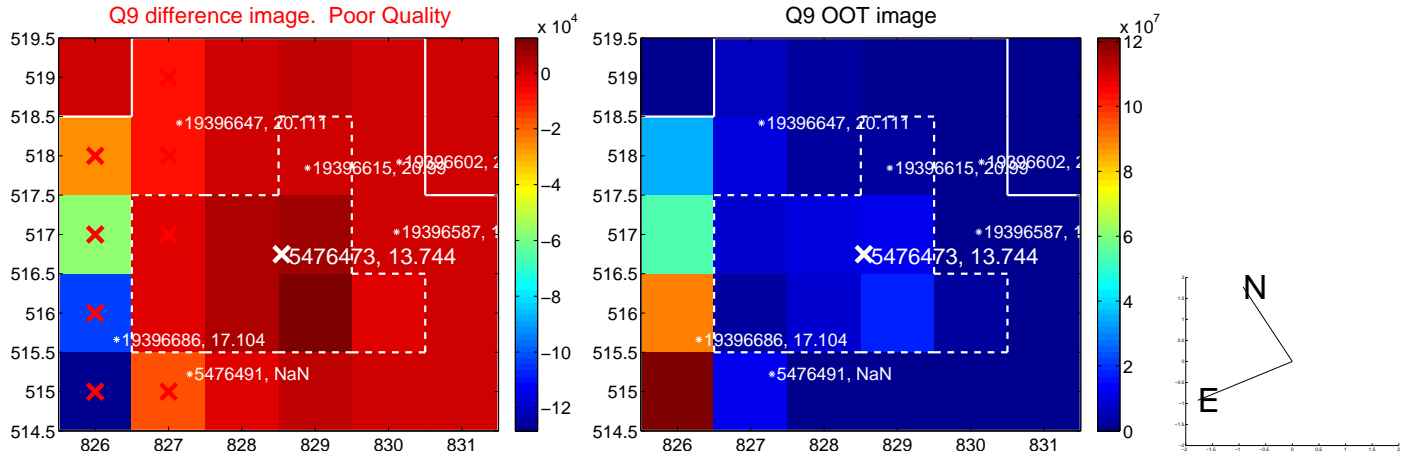
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



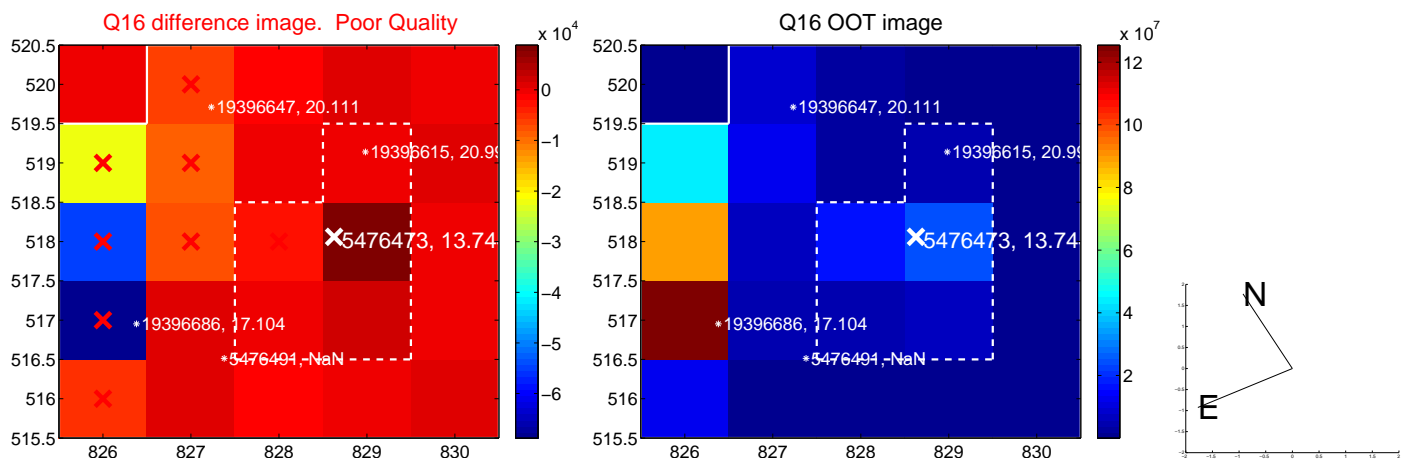
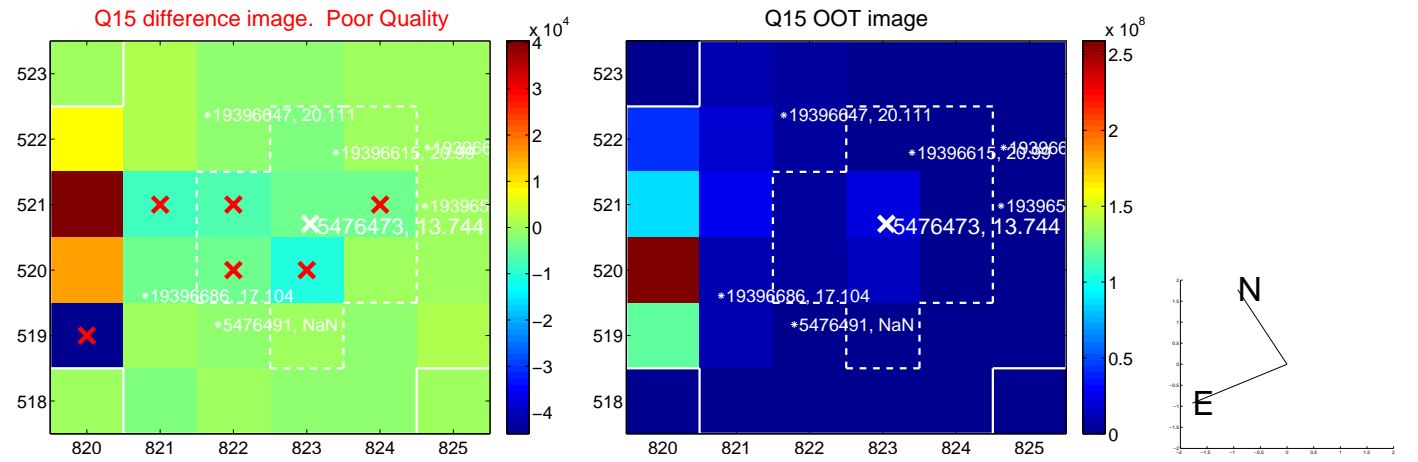
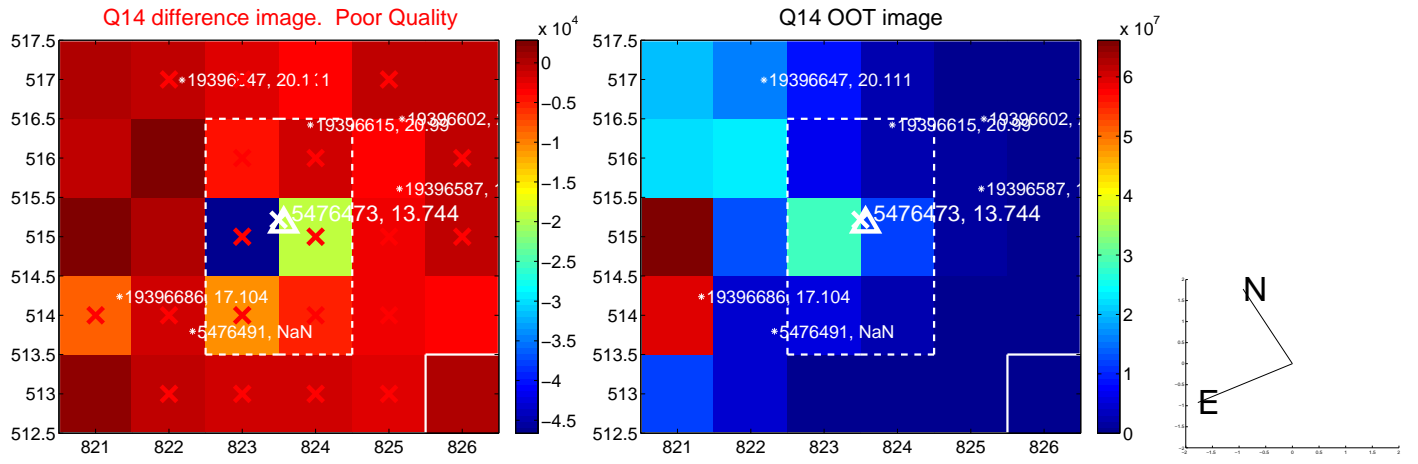
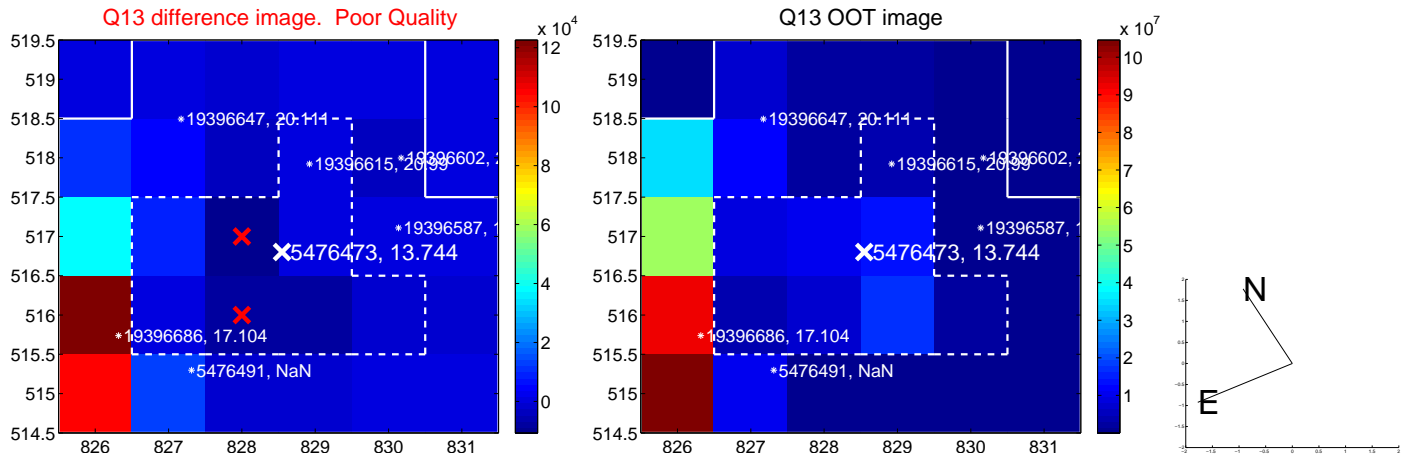
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



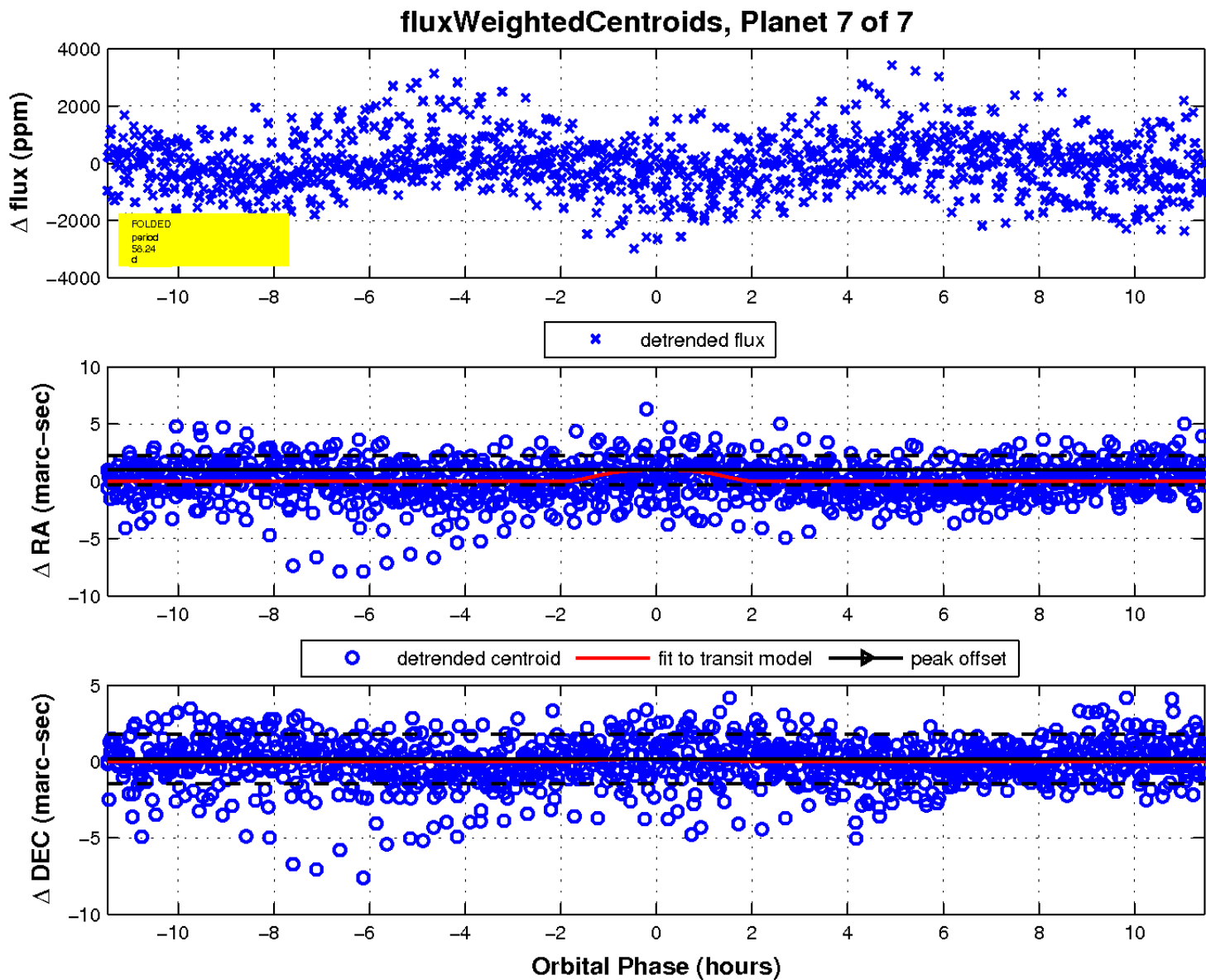
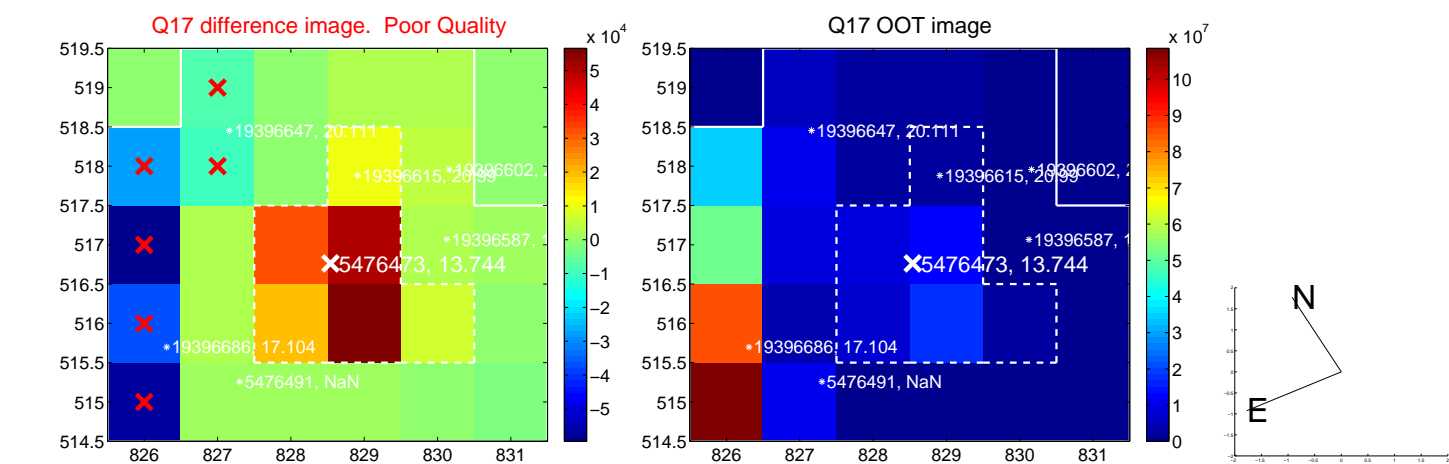
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

