

KIC 008814775

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})
008814775-01	OBS	No	606.250345	287.421133	1834.2	8.943	13.0	3.9	0.28	3348	1.31	0.01
008814775-02	OBS	No	274.724978	211.668137	3076.7	5.065	13.1	9.2	0.28	3348	1.52	0.03
008814775-03	OBS	No	471.034669	552.600340	2624.6	4.154	11.7	6.9	0.28	3348	1.42	0.01
008814775-04	OBS	No	310.849463	195.920736	1616.9	4.092	12.6	4.5	0.28	3348	1.11	0.03
008814775-05	OBS	No	493.026623	296.827214	2786.0	3.887	12.3	6.7	0.28	3348	1.50	0.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008814775-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008814775-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008814775-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
008814775-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008814775-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

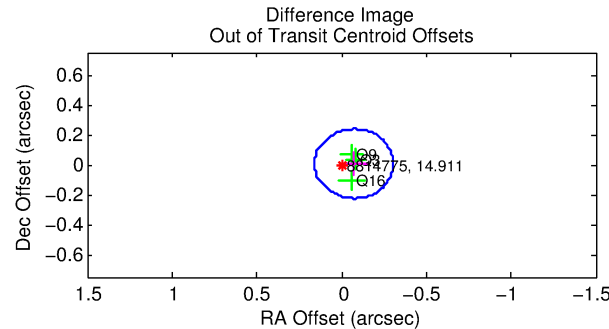
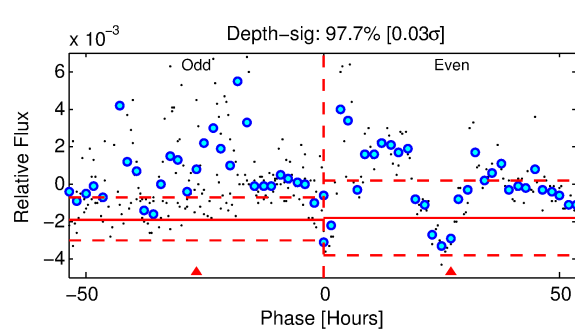
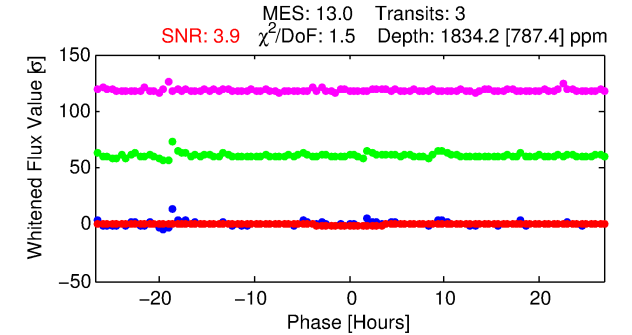
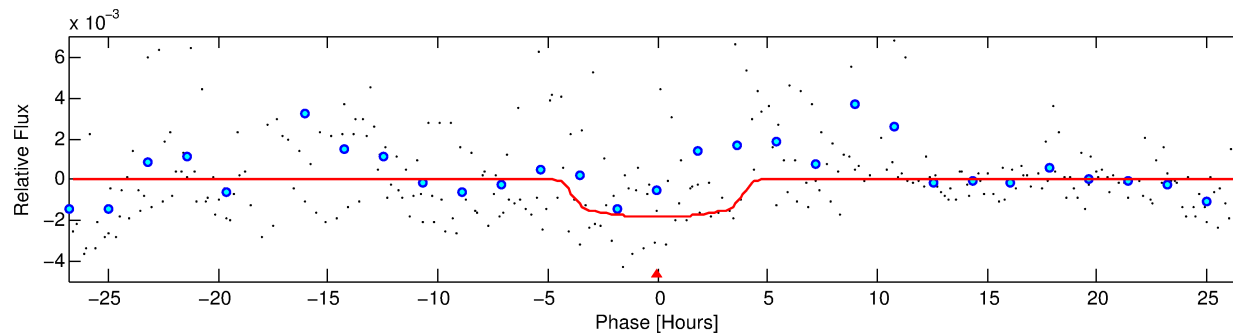
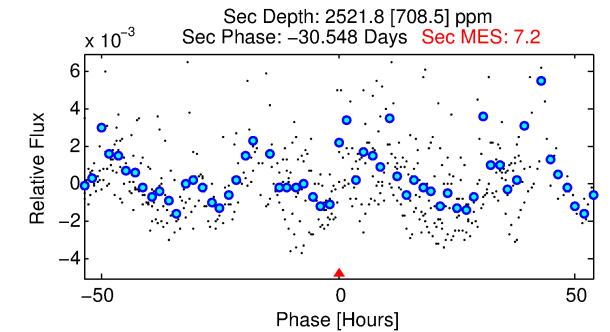
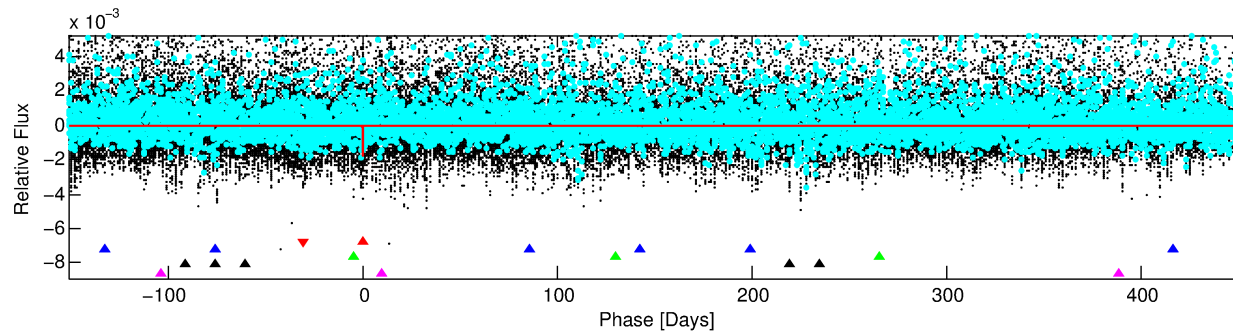
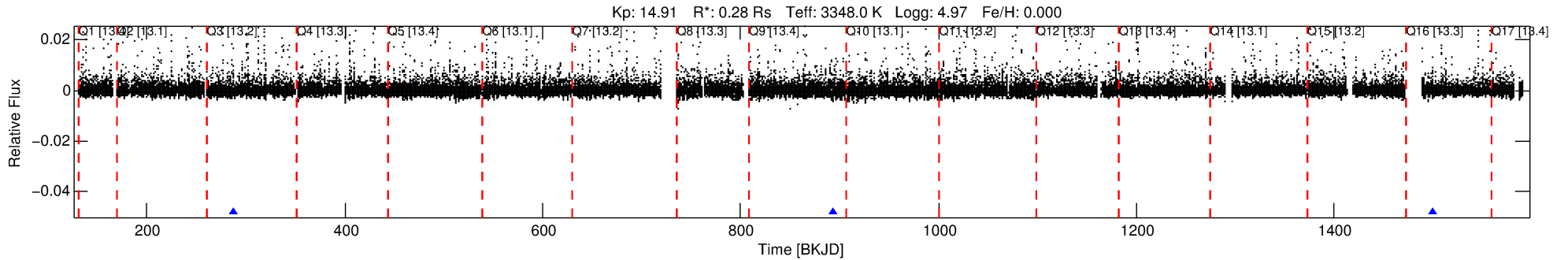
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008814775-01

No Significant Match Found

DV One-Page Summary

KIC: 8814775 Candidate: 1 of 5 Period: 606.250 d



DV Fit Results:

Period = 606.25035 [0.02400] d
Epoch = 287.4211 [0.0355] BKJD
Rp/R* = 0.0434 [0.0145]
a/R* = 349.38 [321.41]
b = 0.80 [0.43]
Seff = 0.01 [0.00]
Teq = 82 [3] K
Rp = 1.31 [0.47] Re
a = 0.8977 [0.0855] AU
Ag = 648811.70 [475806.52] [1.36σ]
Teffp = 3600 [654] K [5.38σ]

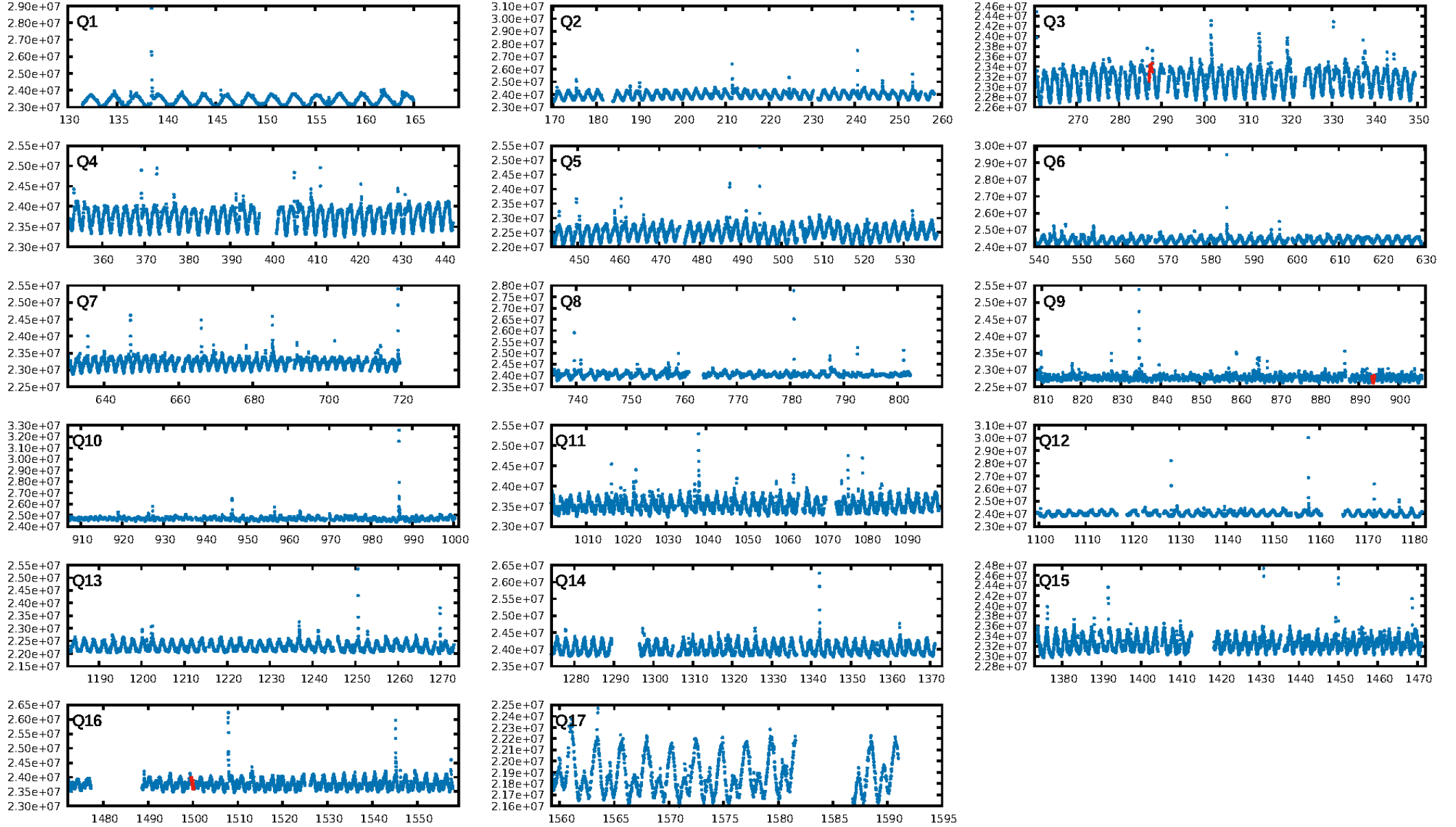
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [278.66σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.6%
ModelChiSquareGof-sig: 96.3%
Bootstrap-pfa: 4.46e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.851
Centroid-sig: 49.0%
Centroid-so: 0.795 arcsec [1.50σ]
OotOffset-rm: 0.073 arcsec [0.94σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 0.217 arcsec [1.67σ]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

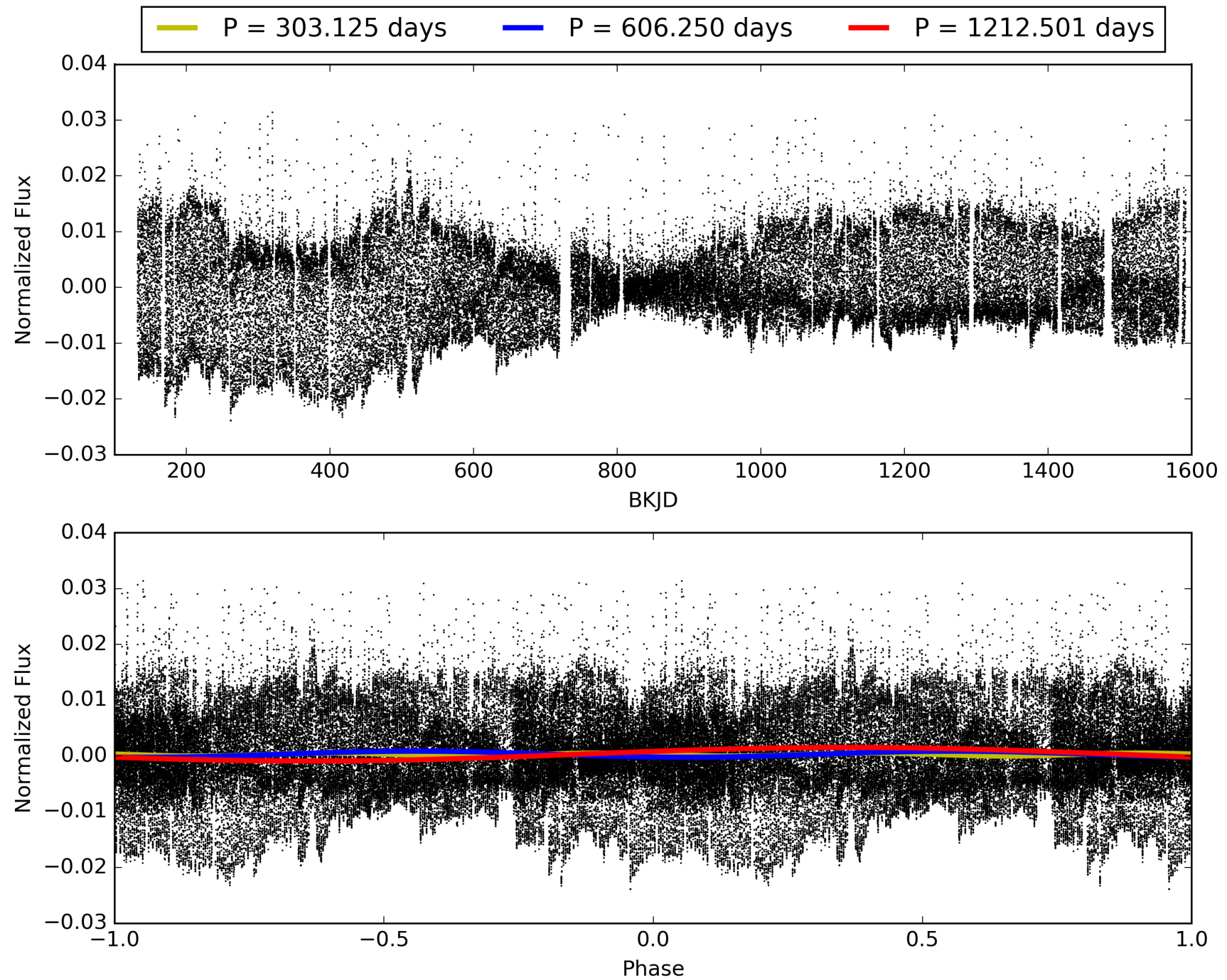
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:00:42 Z

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

TCE 008814775-01, PDC Light Curves

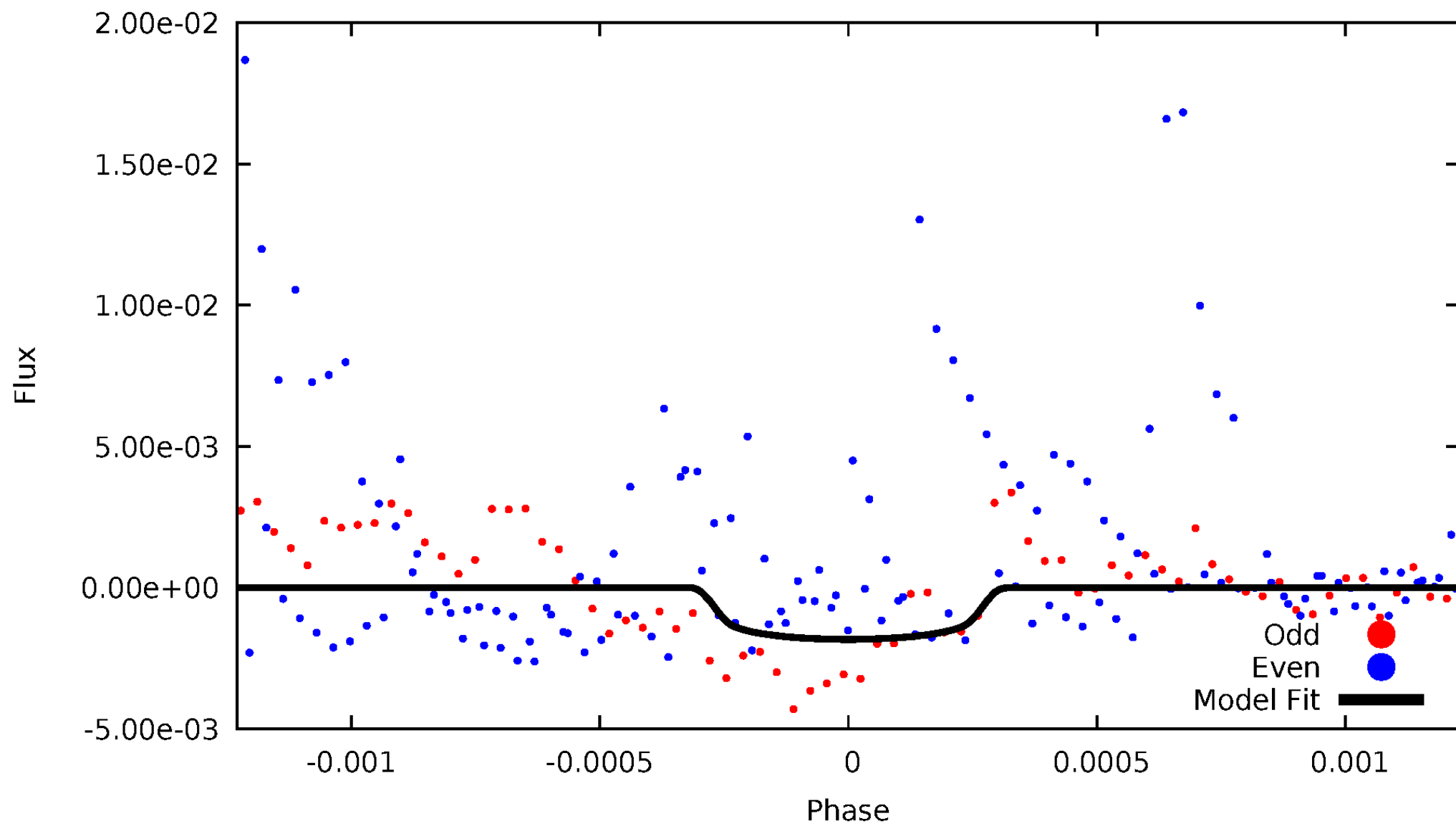


TCE 008814775-01



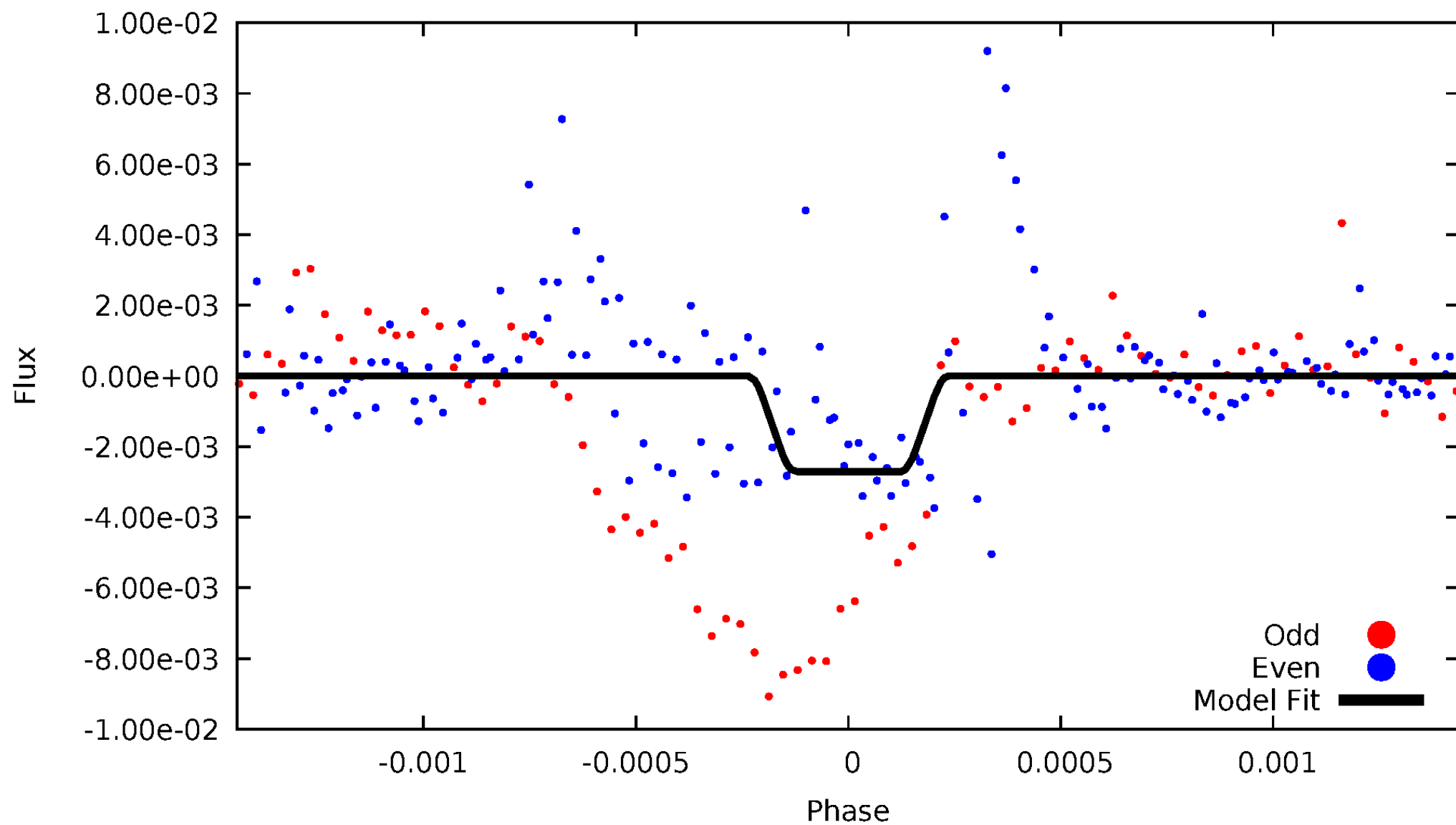
DV Odd/Even

TCE 008814775-01



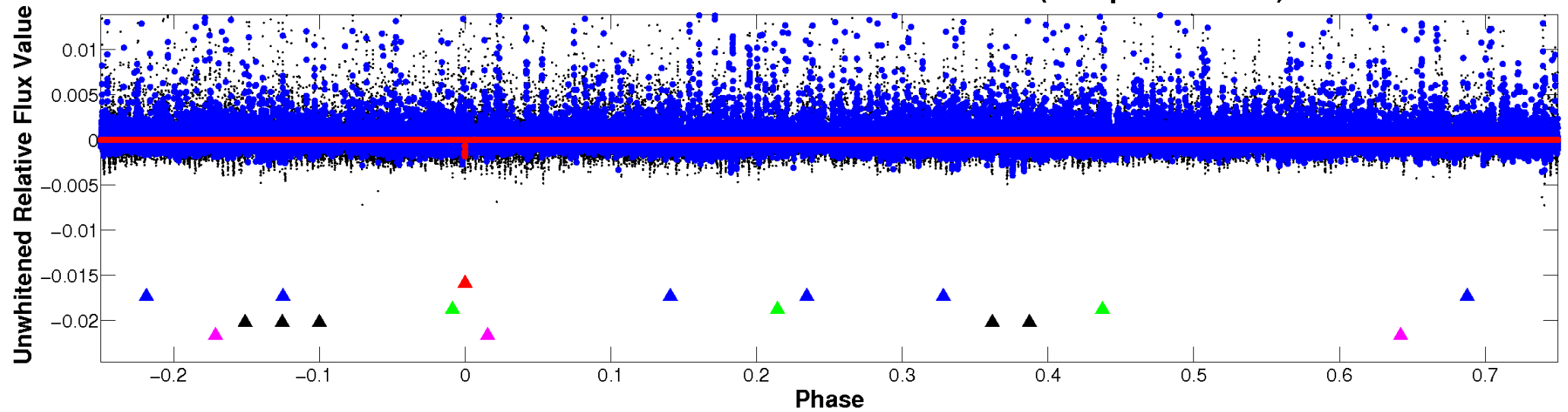
ALT Odd/Even

TCE 008814775-01

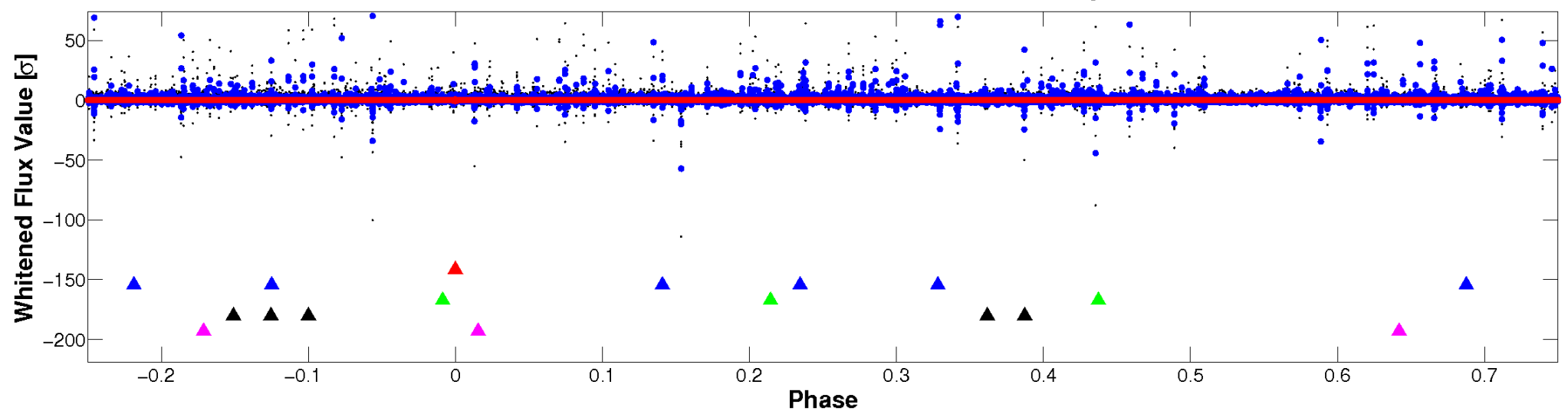


Non-Whitened Vs. Whitened Light Curve

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

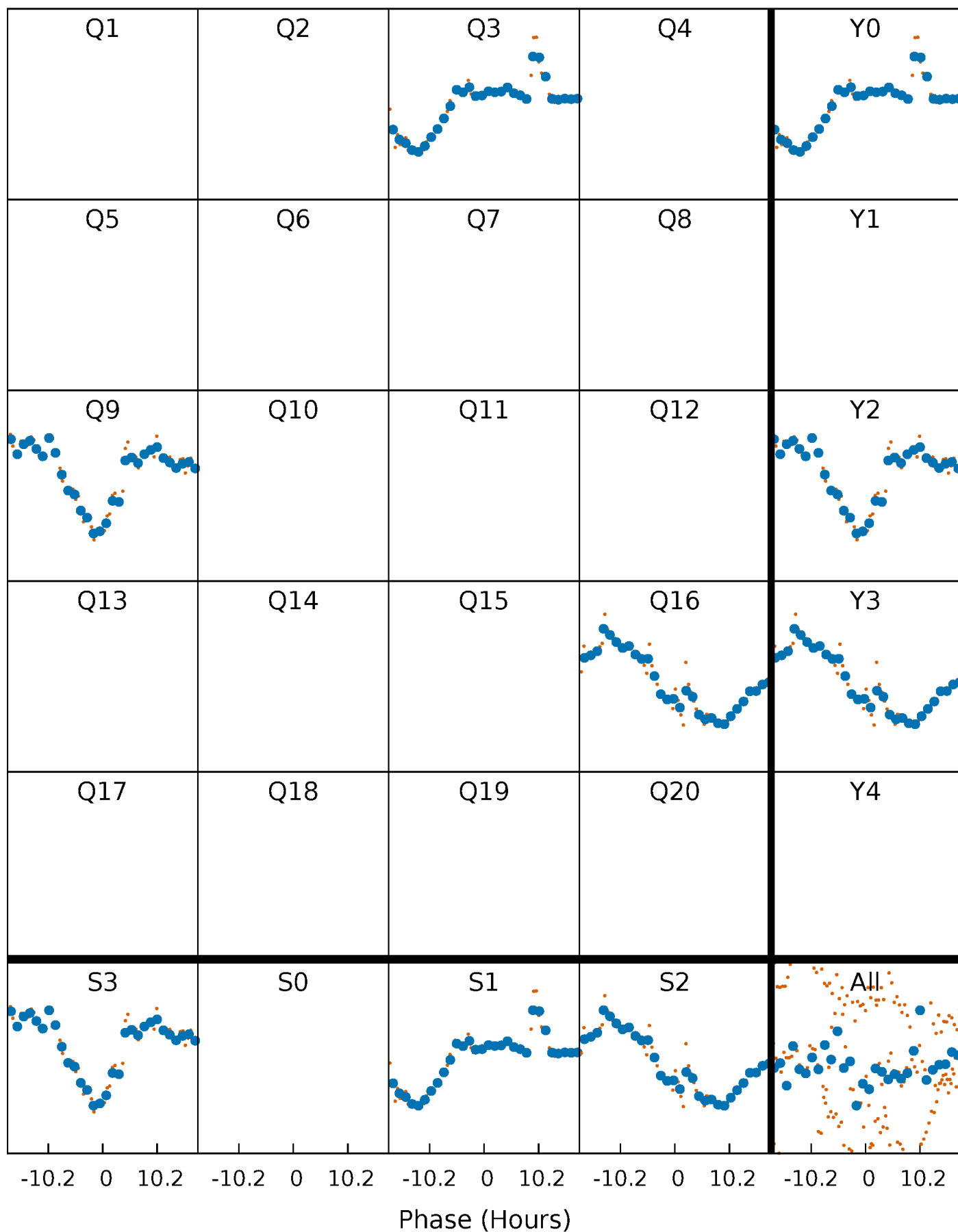


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



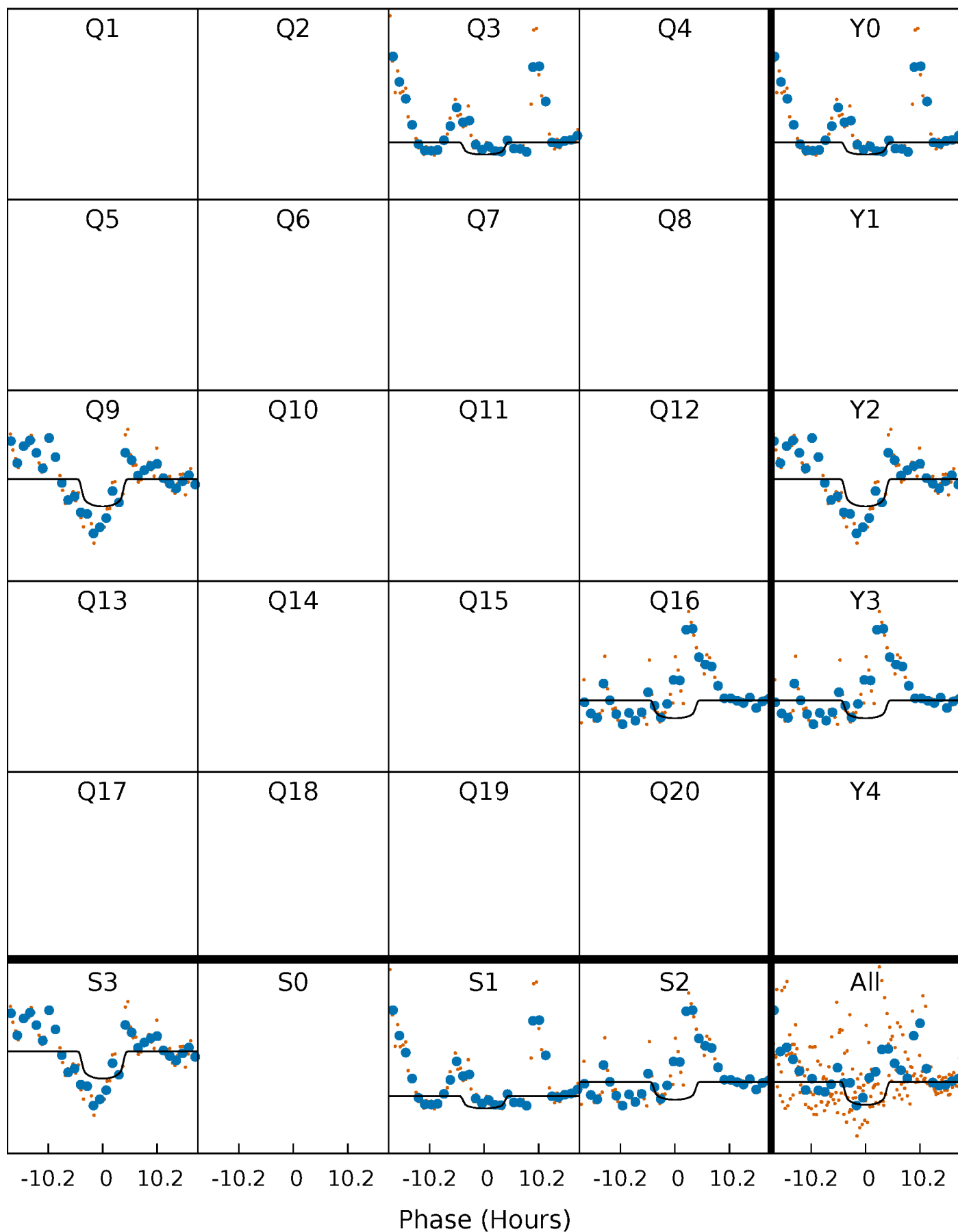
PDC Quarter-Phased Transit Curves

TCE 008814775-01 P=606.250345 Days $T_0=287.421133$ (BKJD)



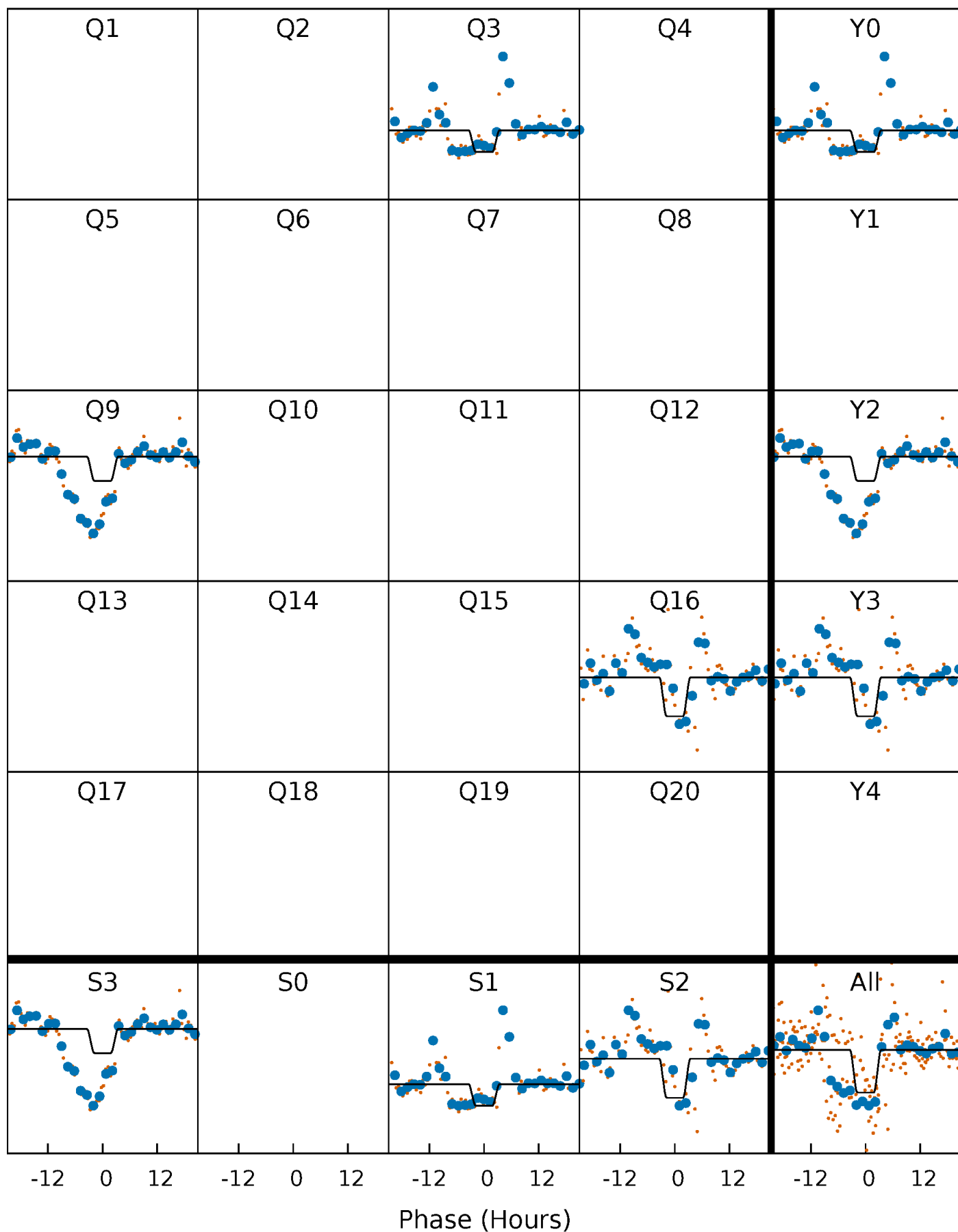
DV Quarter-Phased Transit Curves

TCE 008814775-01 $P=606.250345$ Days $T_0=287.421133$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

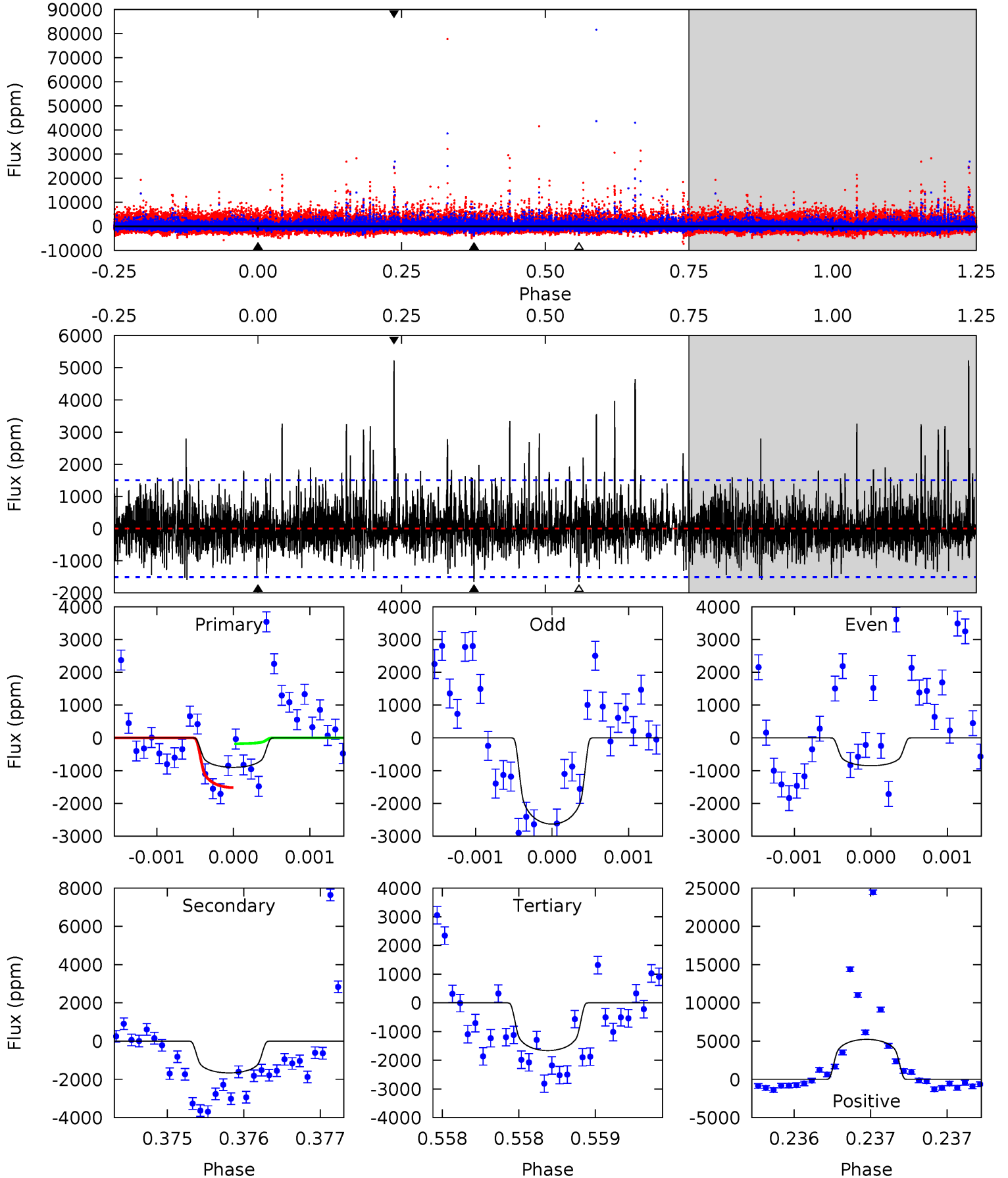
TCE 008814775-01 P=606.066201 Days $T_0=287.651671$ (BKJD)



DV Model-Shift Uniqueness Test

008814775-01, P = 606.250345 Days, E = 287.421133 Days

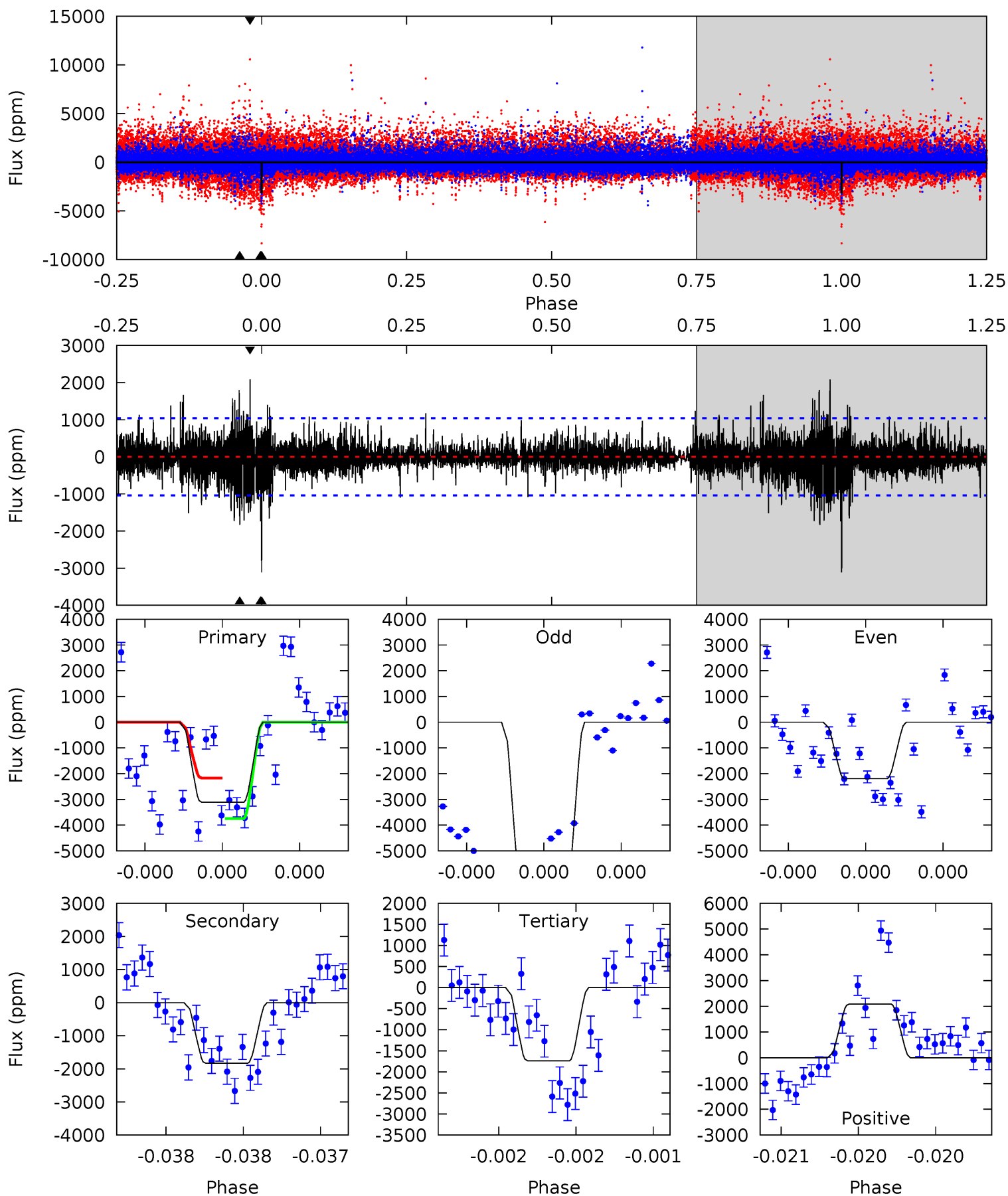
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.30	6.10	6.09	19.2	5.53	3.42	2.18	-2.80	-15.9	0.00	-13.1	1.84	0.12	0.76	2.45



Alt Model-Shift Uniqueness Test

008814775-01, P = 606.066201 Days, E = 287.651671 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	9.85	9.34	11.2	5.59	3.51	1.68	7.39	5.51	0.51	-1.37	10.9	1.60	0.40	4.11



Stellar Parameters For KIC 008814775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3348^{+43}_{-37}	$4.972^{+0.044}_{-0.044}$	$0.000^{+0.100}_{-0.100}$	$0.277^{+0.037}_{-0.030}$	$0.263^{+0.048}_{-0.032}$	$17.380^{+3.755}_{-3.391}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+13%/-11%	+18%/-12%	+22%/-20%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008814775-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1662 ± 273	$1.34^{+0.47}_{-0.46}$	115^{+3}_{-3}	3274^{+469}_{-274}	$424640^{+516268}_{-203320}$
Alt.	-1831 ± 186	$1.58^{+0.48}_{-0.45}$	115^{+3}_{-3}	3154^{+349}_{-213}	$320999^{+299941}_{-122583}$

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

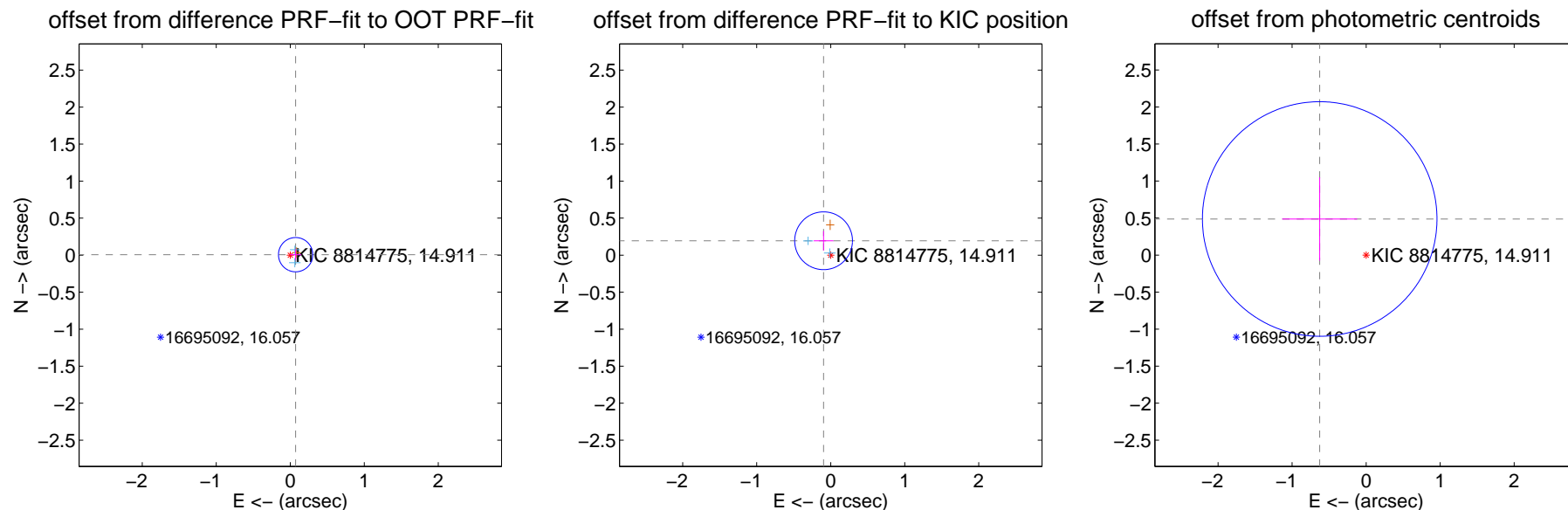
DV Centroid Data

Supplemental centroid analysis for 008814775-01. Kepler magnitude: 14.91. Transit SNR 3.91

There are 2 quarters with good PRF difference image offsets

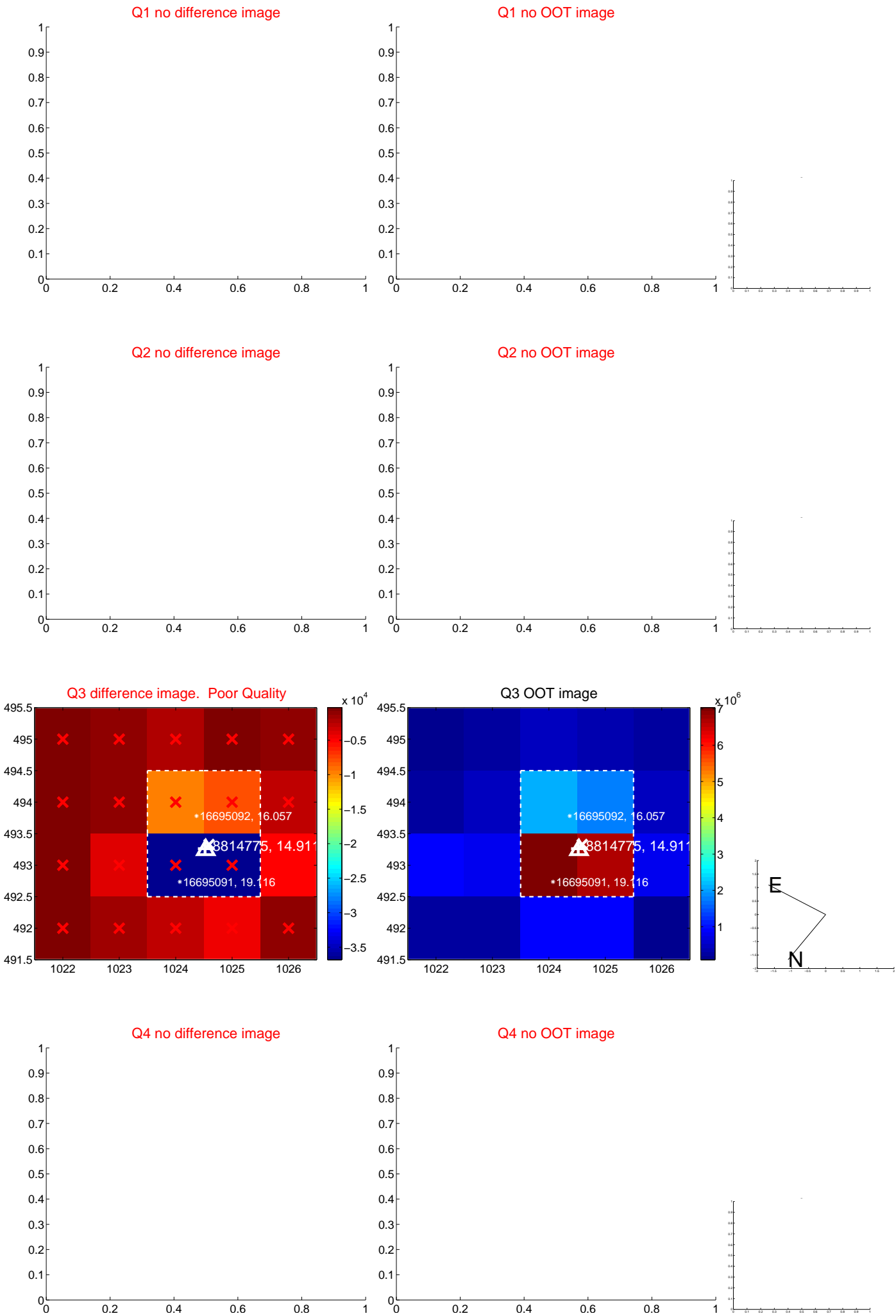
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.073 ± 0.077	0.94	-0.072 ± 0.077	0.006 ± 0.076
PRF-fit source offset from KIC position	0.217 ± 0.130	1.67	0.097 ± 0.132	0.195 ± 0.130
photometric centroid source offset	0.79 ± 0.53	1.50	0.63 ± 0.51	0.49 ± 0.56



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

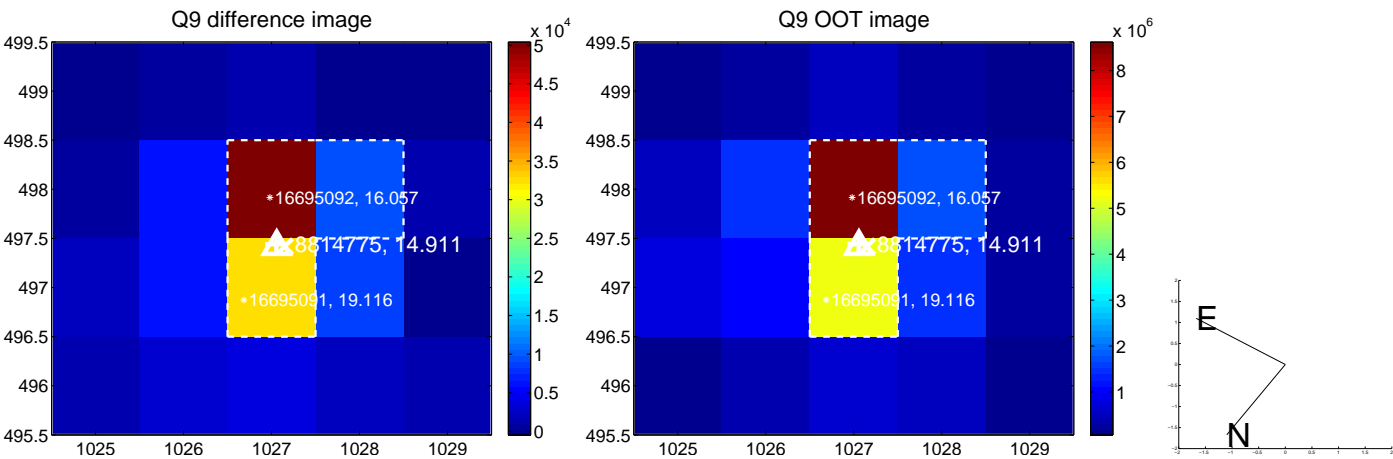
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



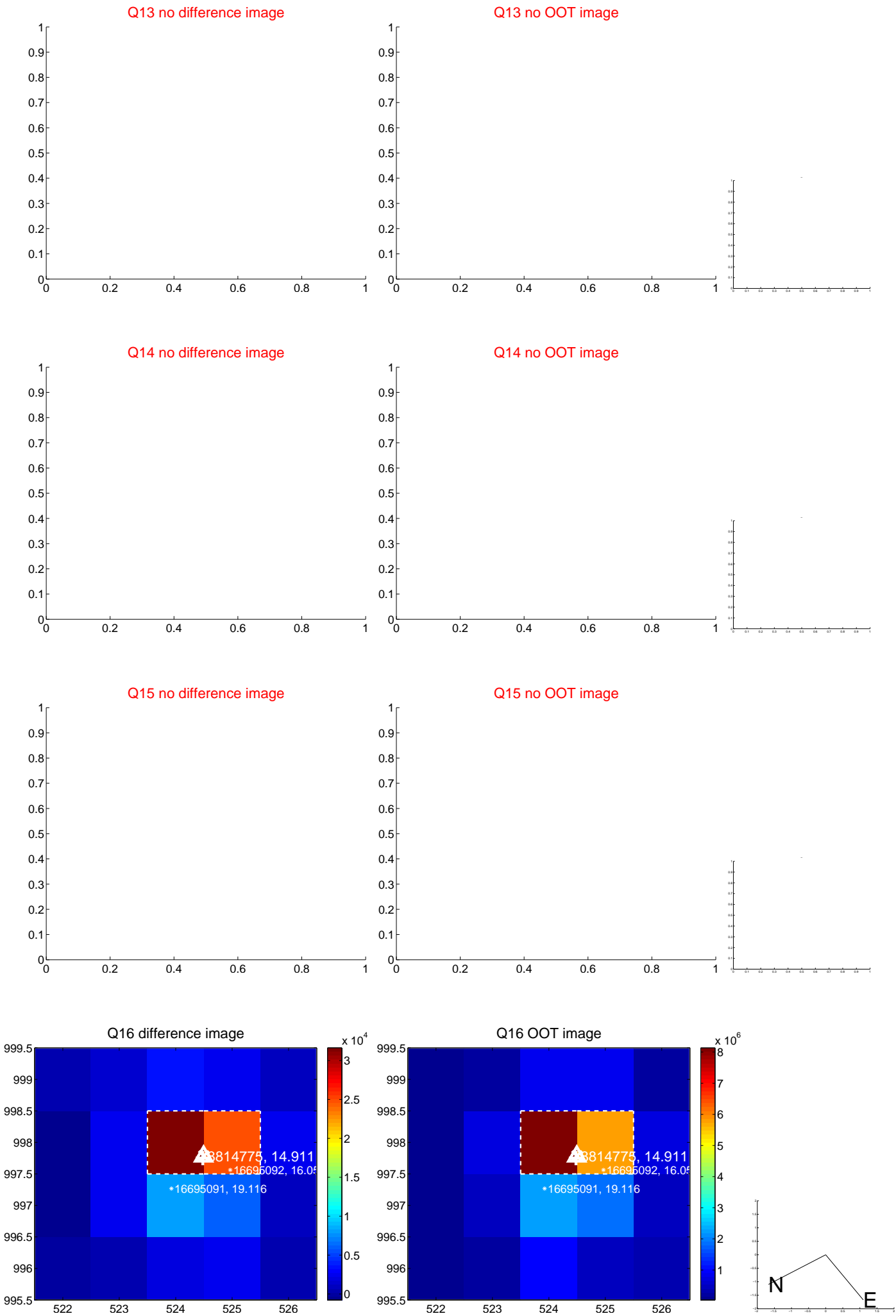
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



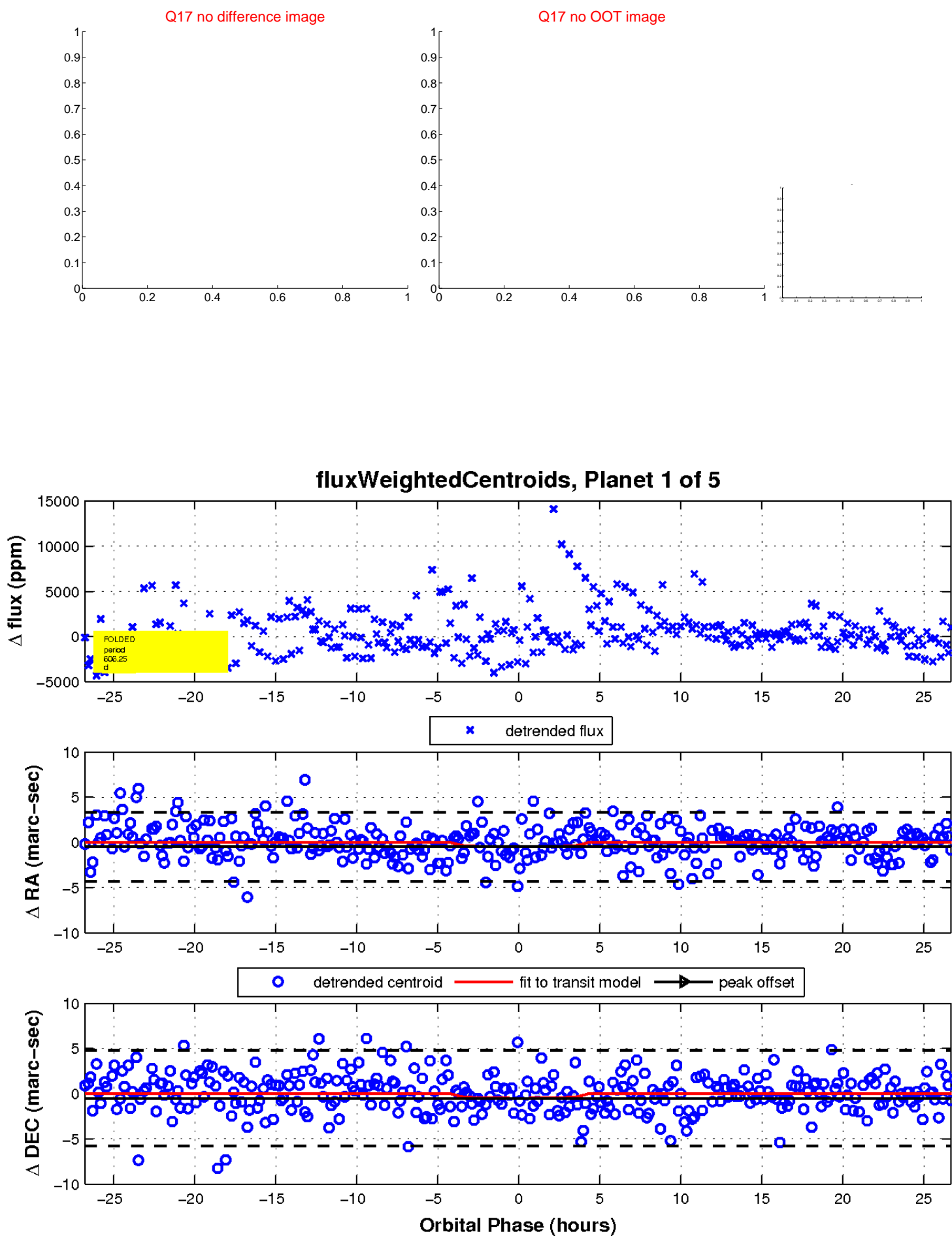
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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

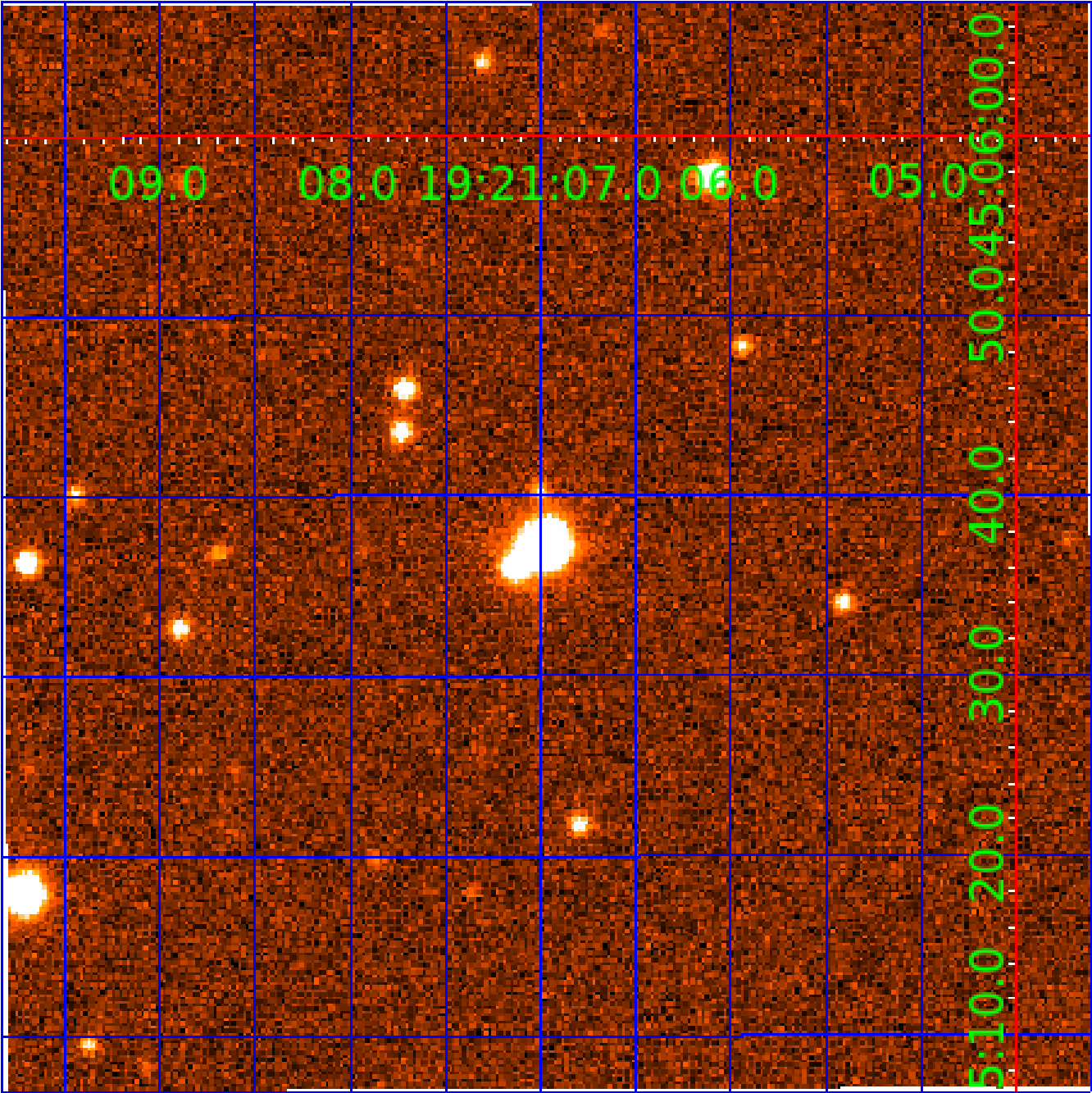


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008814775

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})
008814775-01	OBS	No	606.250345	287.421133	1834.2	8.943	13.0	3.9	0.28	3348	1.31	0.01
008814775-02	OBS	No	274.724978	211.668137	3076.7	5.065	13.1	9.2	0.28	3348	1.52	0.03
008814775-03	OBS	No	471.034669	552.600340	2624.6	4.154	11.7	6.9	0.28	3348	1.42	0.01
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Robovetter Results

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008814775-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008814775-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
008814775-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008814775-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

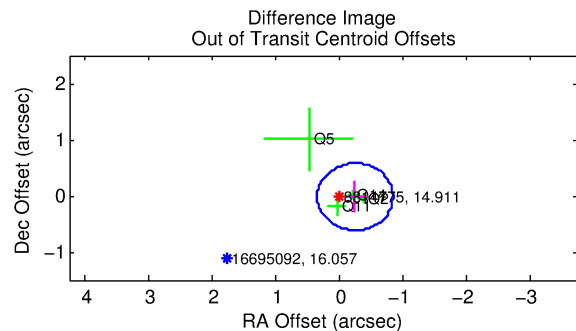
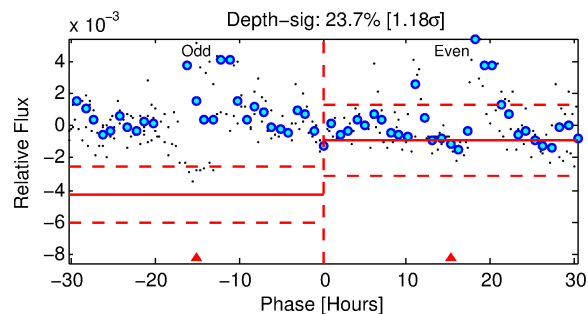
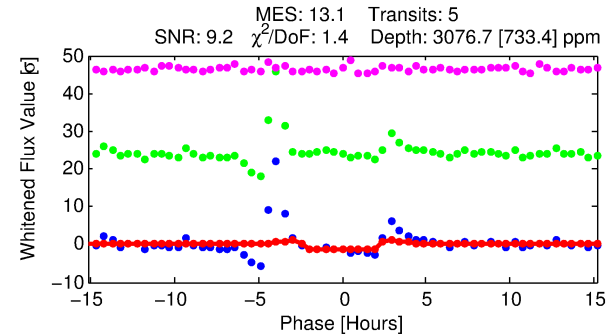
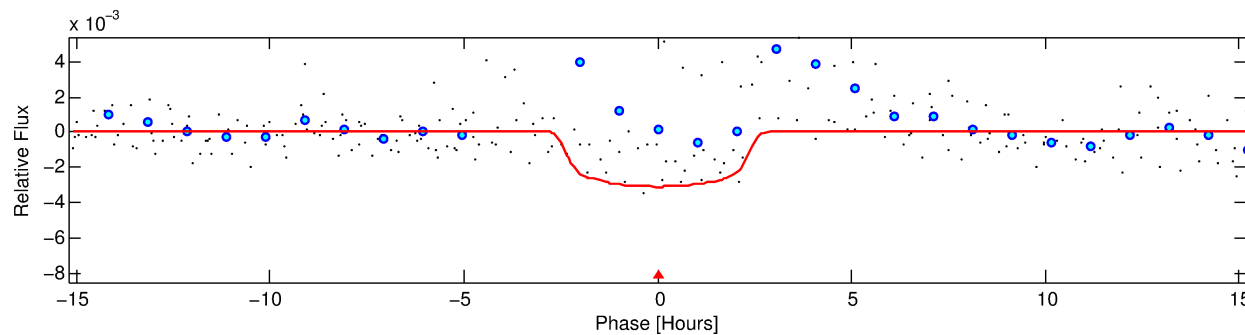
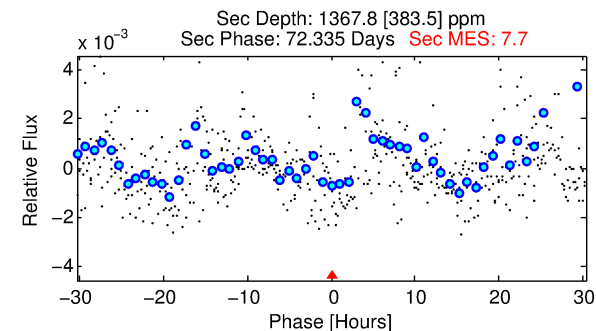
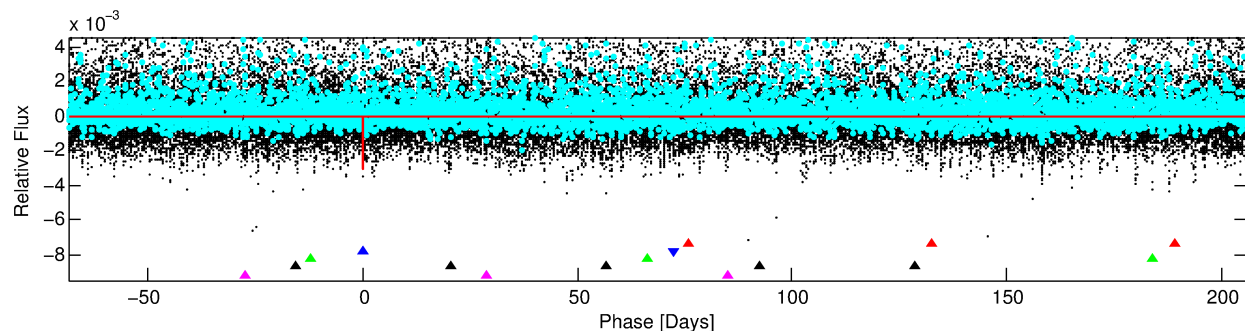
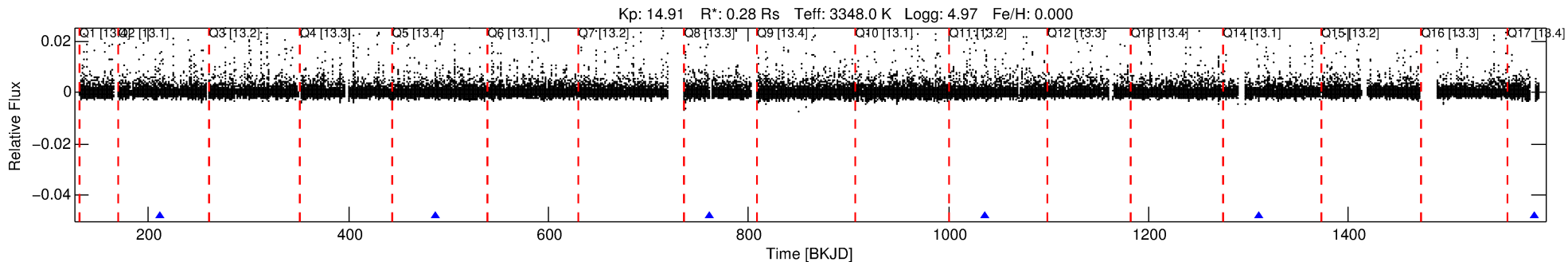
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008814775-02

No Significant Match Found

DV One-Page Summary

KIC: 8814775 Candidate: 2 of 5 Period: 274.725 d



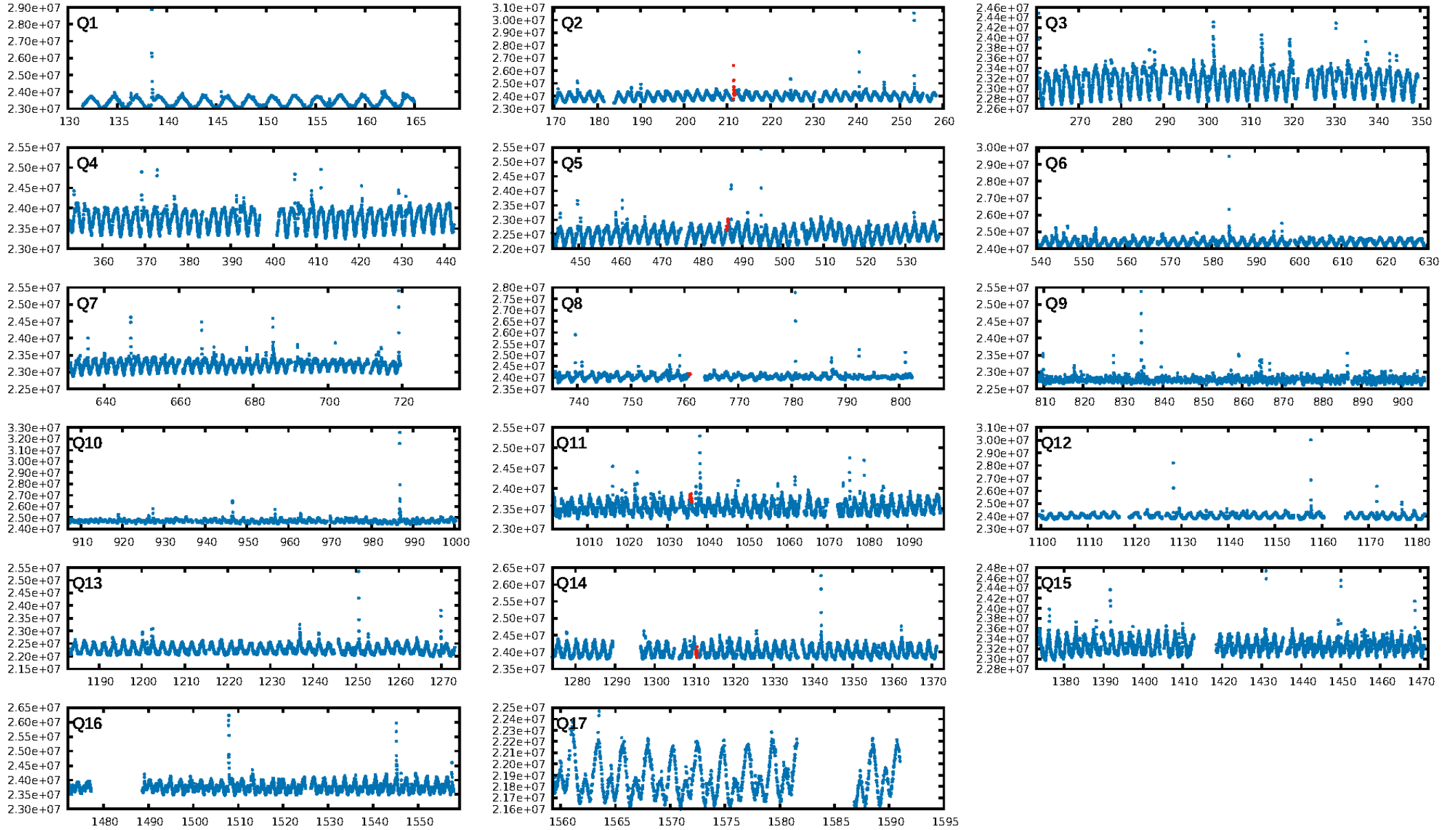
DV Fit Results:

Period = 274.72498 [0.00426] d
Epoch = 211.6681 [0.0113] BKJD
Rp/R* = 0.0502 [0.0438]
a/R* = 432.90 [1569.06]
b = 0.11 [33.66]
Seff = 0.03 [0.00]
Teq = 107 [3] K
Rp = 1.52 [1.34] Re
a = 0.5296 [0.0504] AU
Ag = 91701.64 [162307.53] [0.56σ]
Teffp = 2874 [1270] K [2.18σ]

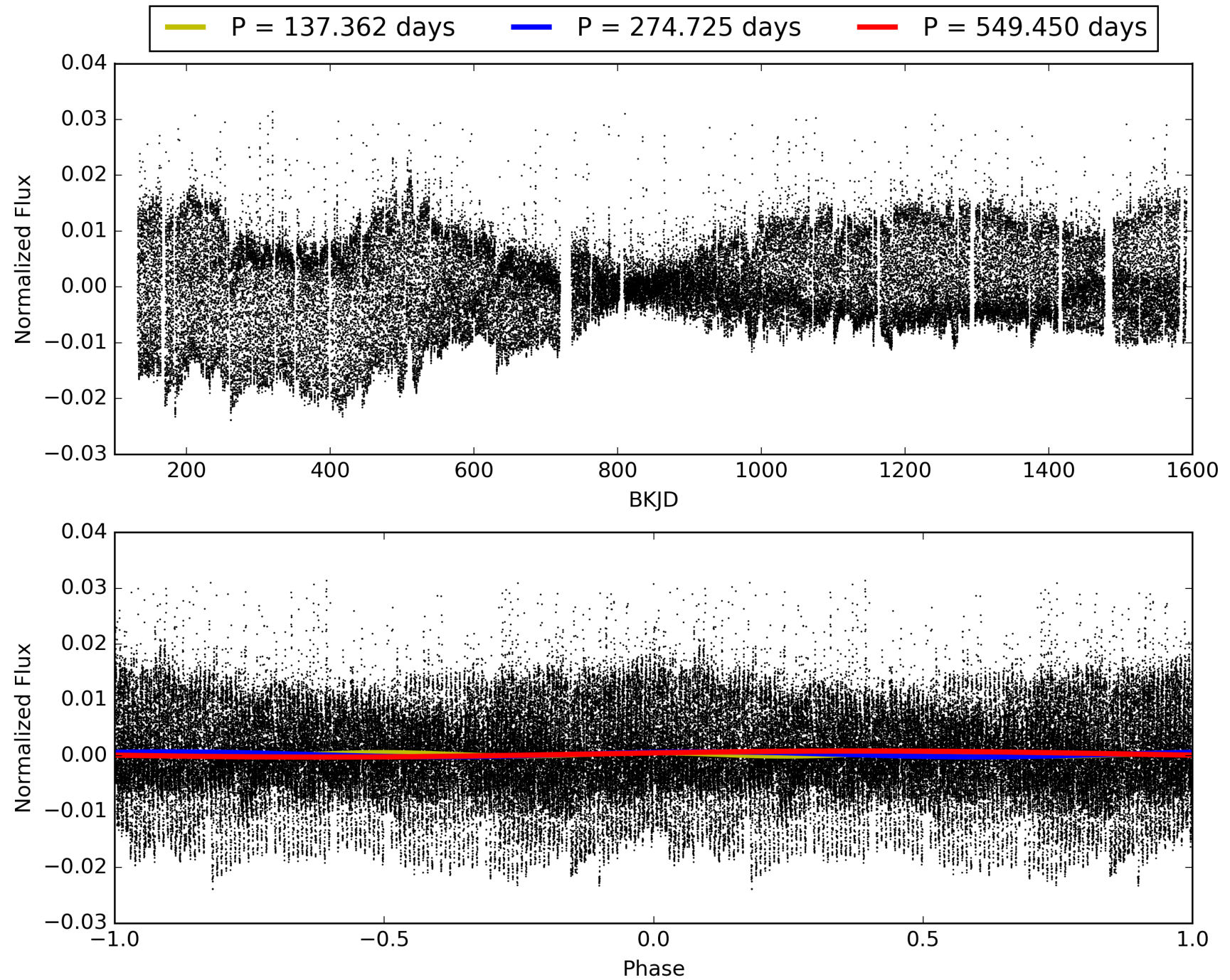
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [133.14σ]
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 82.0%
Bootstrap-pfa: 2.74e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.8
Centroid-sig: 23.8%
Centroid-so: 0.878 arcsec [2.43σ]
OotOffset-rm: 0.246 arcsec [1.24σ]
KicOffset-rm: 0.203 arcsec [1.11σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 008814775-02, PDC Light Curves

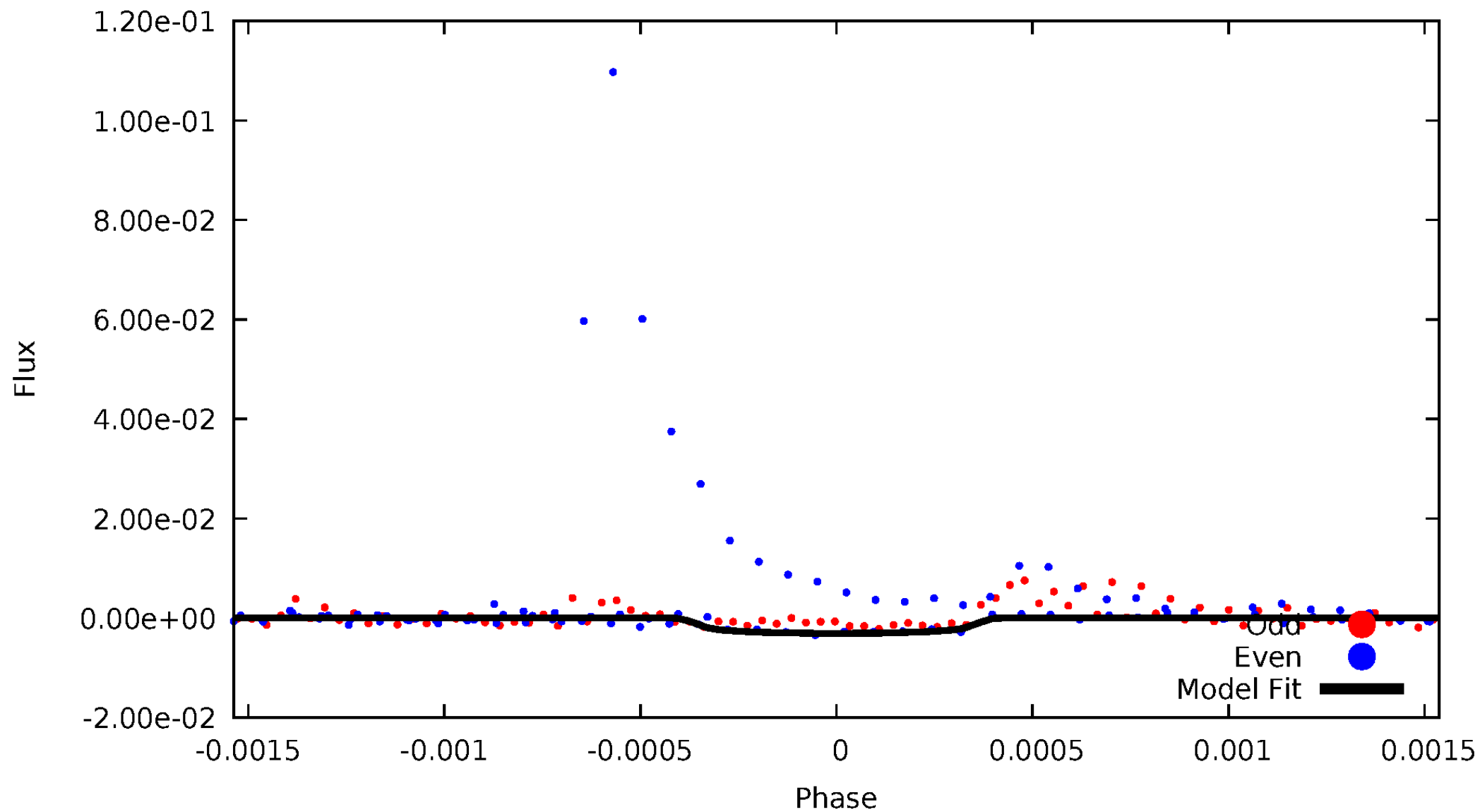


TCE 008814775-02



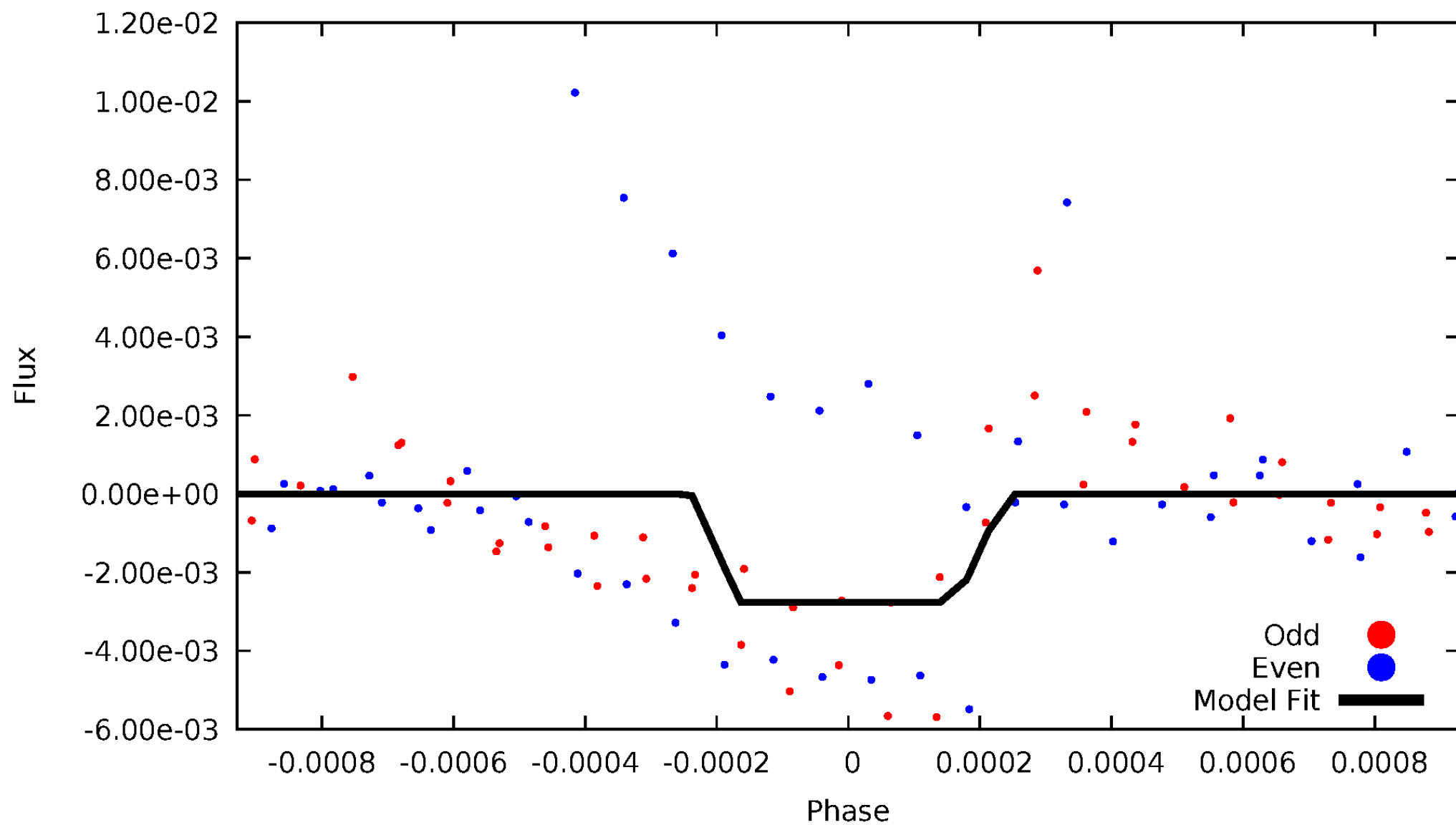
DV Odd/Even

TCE 008814775-02



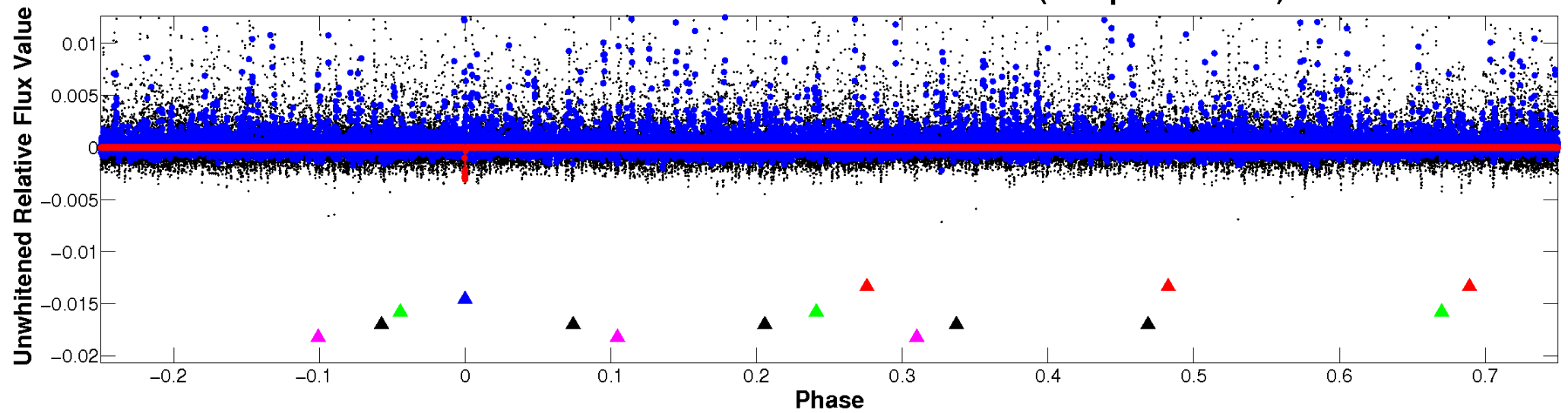
ALT Odd/Even

TCE 008814775-02

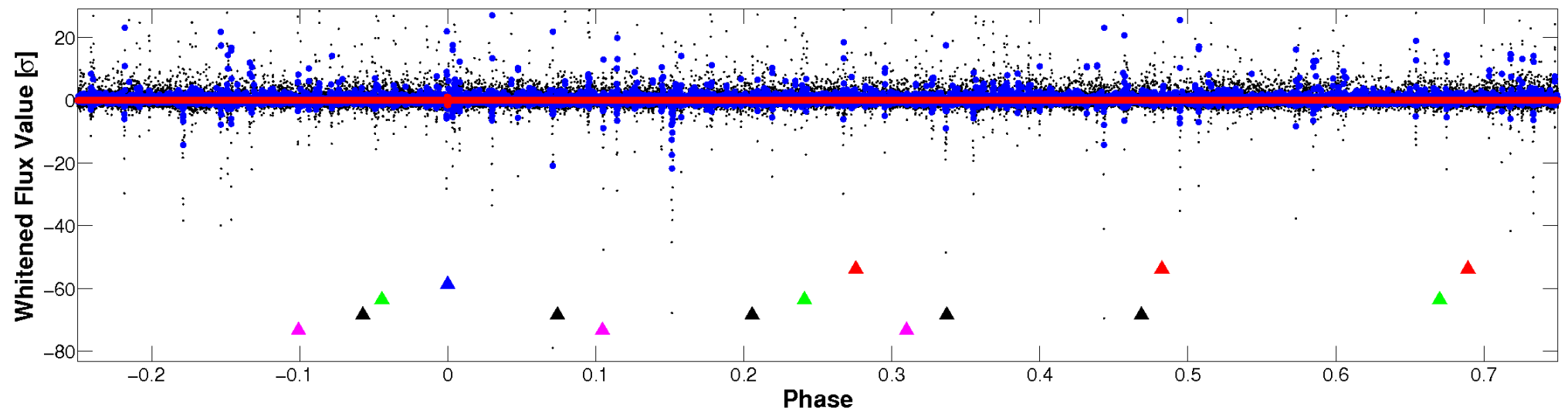


Non-Whitened Vs. Whitened Light Curve

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

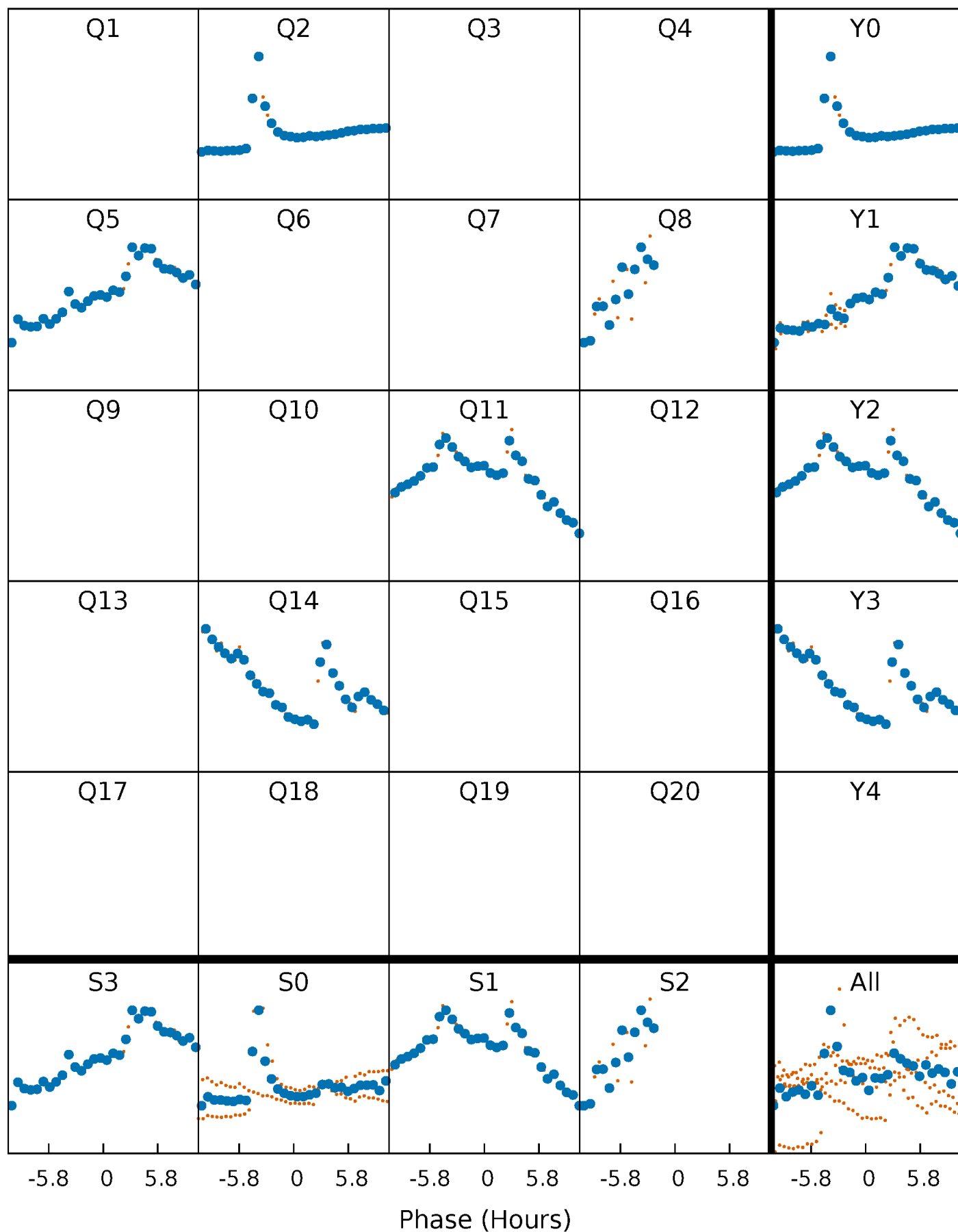


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



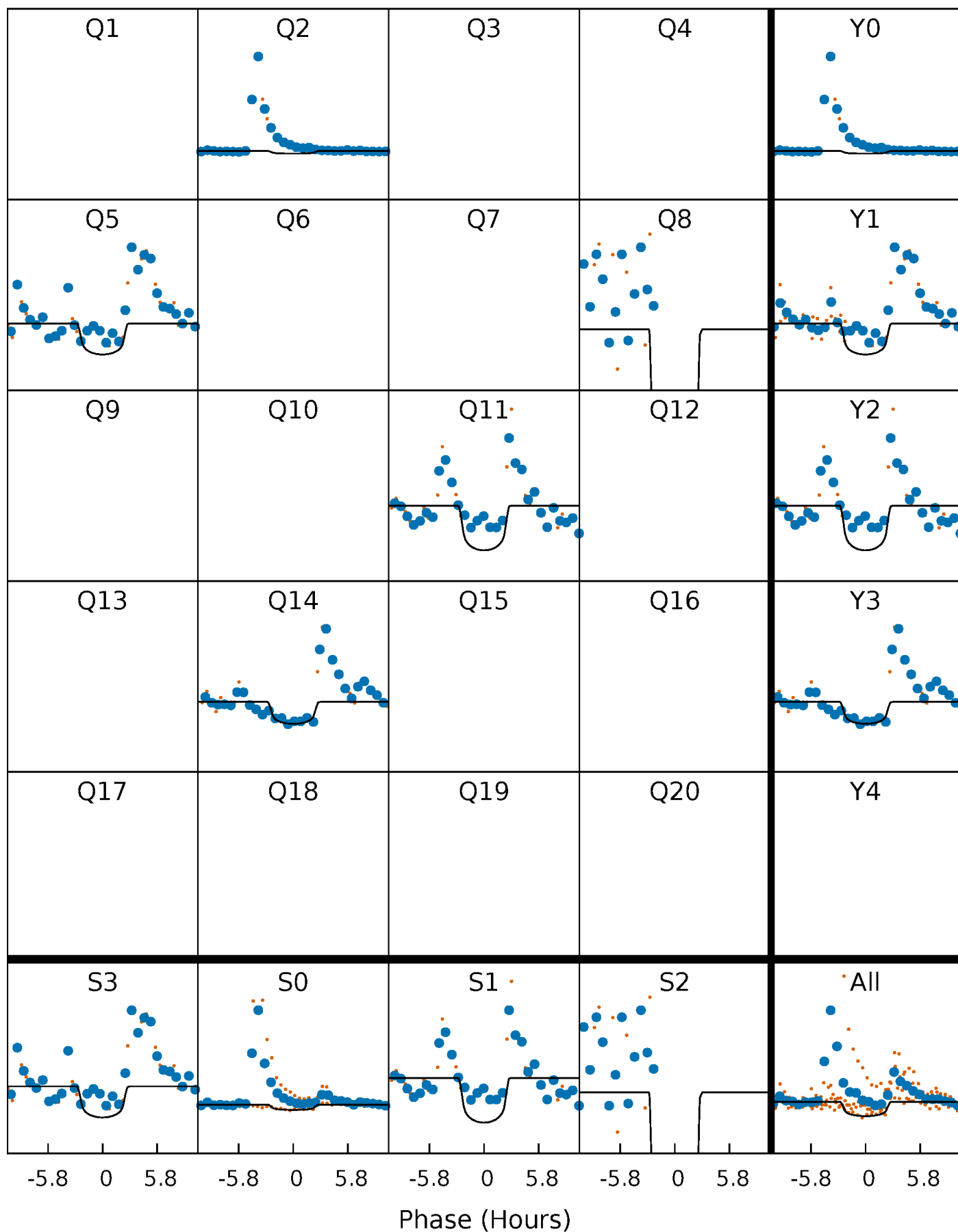
PDC Quarter-Phased Transit Curves

TCE 008814775-02 $P=274.724978$ Days $T_0=211.668137$ (BKJD)



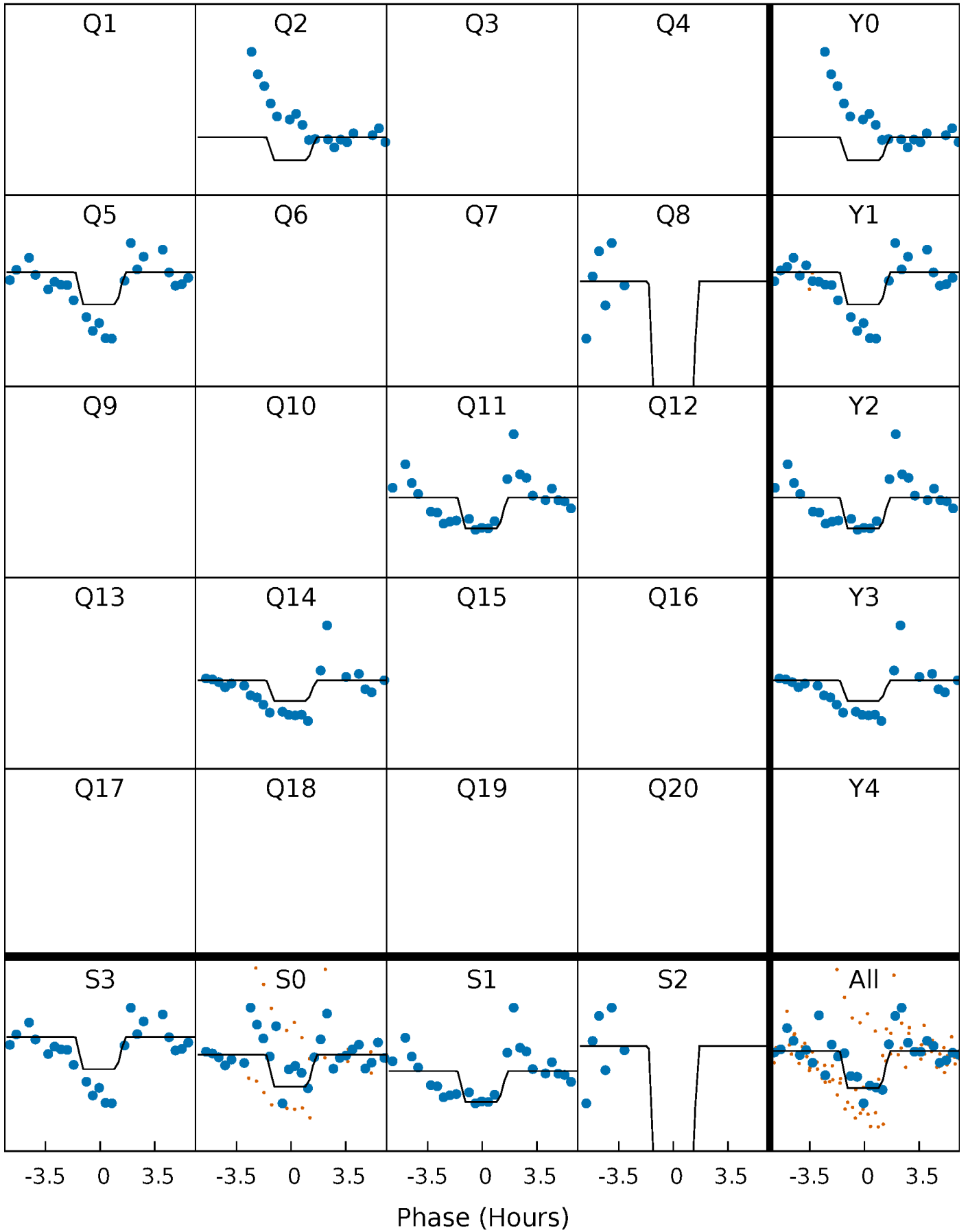
DV Quarter-Phased Transit Curves

TCE 008814775-02 $P=274.724978$ Days $T_0=211.668137$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

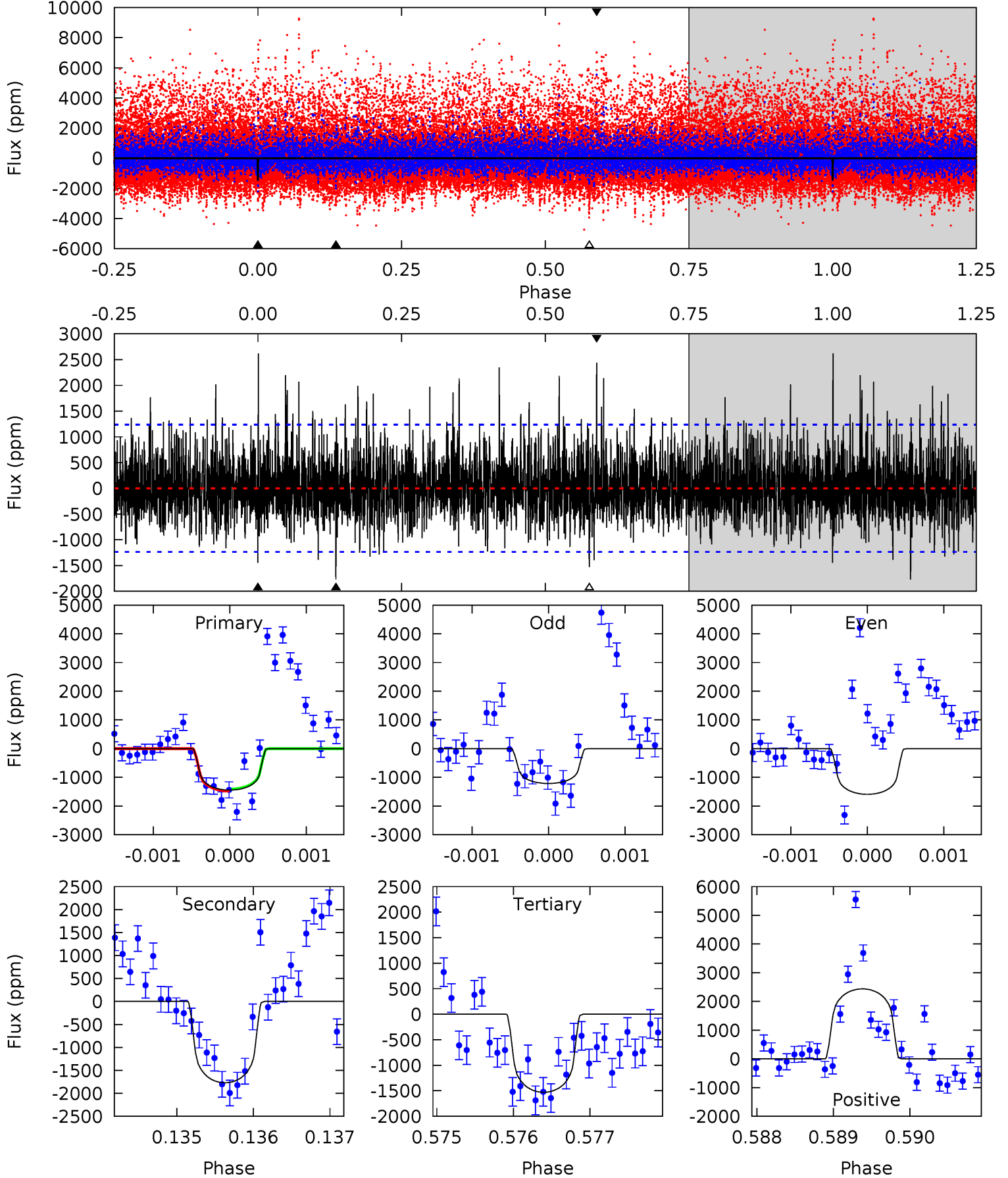
TCE 008814775-02 P=274.719198 Days $T_0=211.728083$ (BKJD)



DV Model-Shift Uniqueness Test

008814775-02, P = 274.724978 Days, E = 211.668137 Days

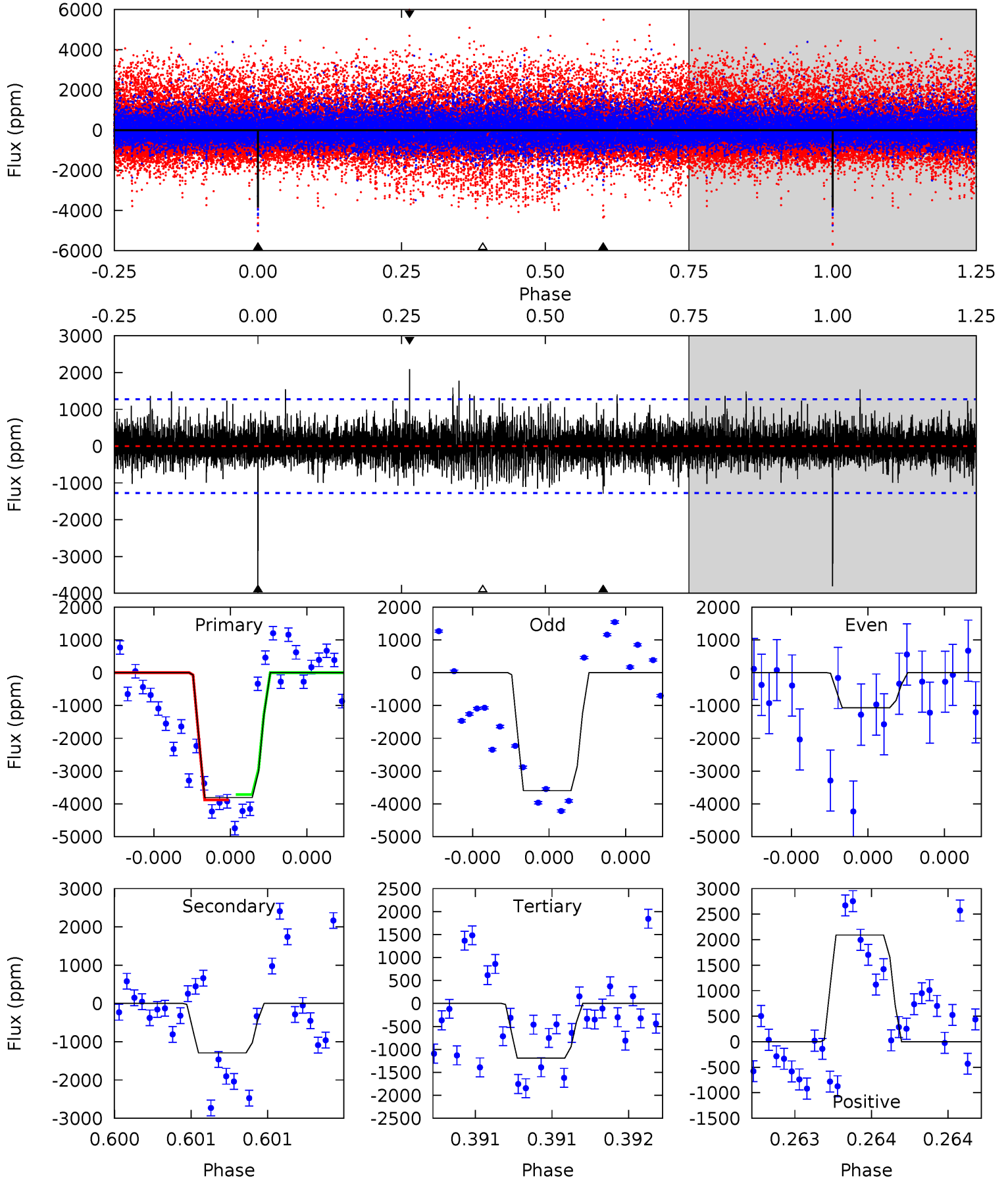
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.41	7.85	6.78	10.8	5.48	3.33	2.14	-0.37	-4.40	1.07	-2.96	0.78	-0.67	0.60	0.15



Alt Model-Shift Uniqueness Test

008814775-02, P = 274.719198 Days, E = 211.728083 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	5.66	5.21	9.15	5.58	3.49	1.43	11.4	7.50	0.45	-3.50	6.09	0.70	0.35	0.37



Stellar Parameters For KIC 008814775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3348^{+43}_{-37}	$4.972^{+0.044}_{-0.044}$	$0.000^{+0.100}_{-0.100}$	$0.277^{+0.037}_{-0.030}$	$0.263^{+0.048}_{-0.032}$	$17.380^{+3.755}_{-3.391}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+13%/-11%	+18%/-12%	+22%/-20%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008814775-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1771 ± 226	$1.69^{+1.22}_{-1.07}$	150^{+4}_{-4}	3079^{+1208}_{-424}	$94058^{+579719}_{-61914}$
Alt.	-1292 ± 228	$1.80^{+1.27}_{-1.07}$	149^{+4}_{-3}	2888^{+925}_{-368}	$60049^{+311499}_{-39109}$

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 $A_{obs} \gg 1.0$

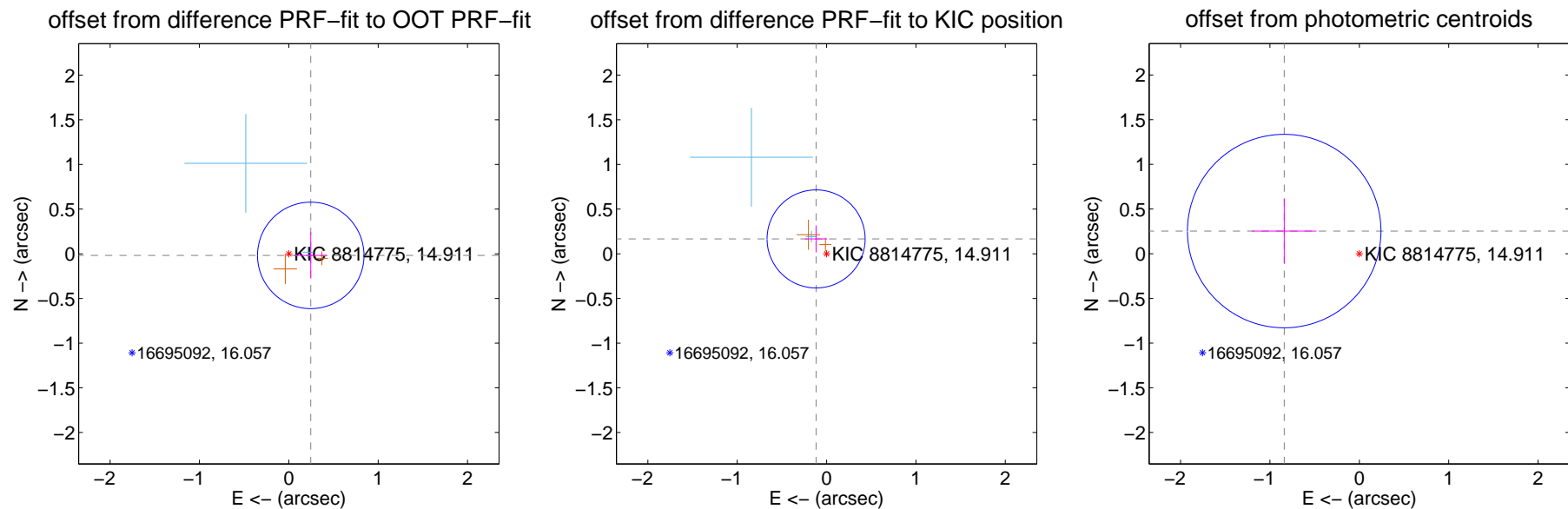
DV Centroid Data

Supplemental centroid analysis for 008814775-02. Kepler magnitude: 14.91. Transit SNR 9.19

There are 2 quarters with good PRF difference image offsets

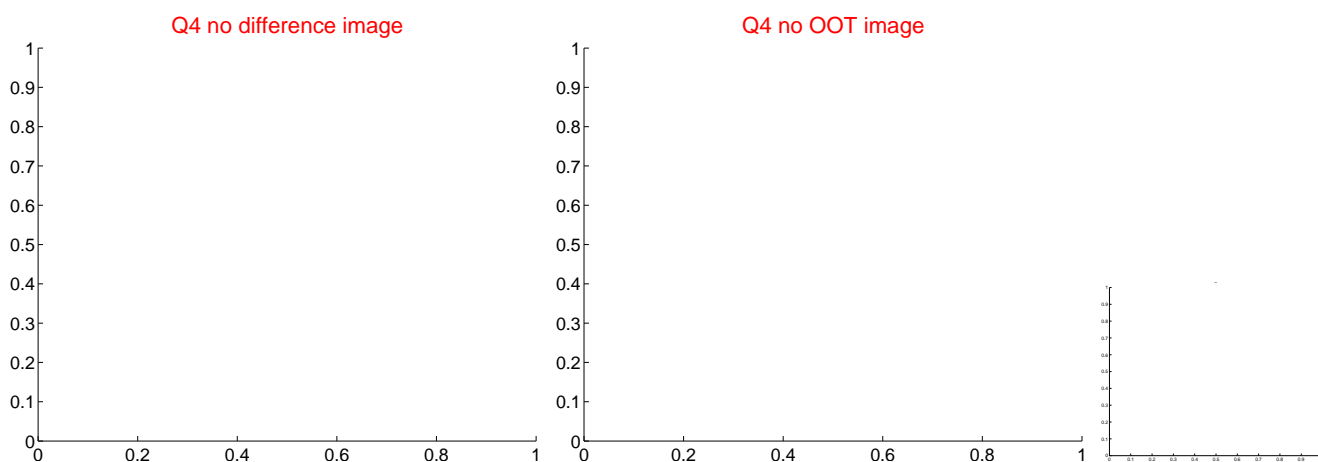
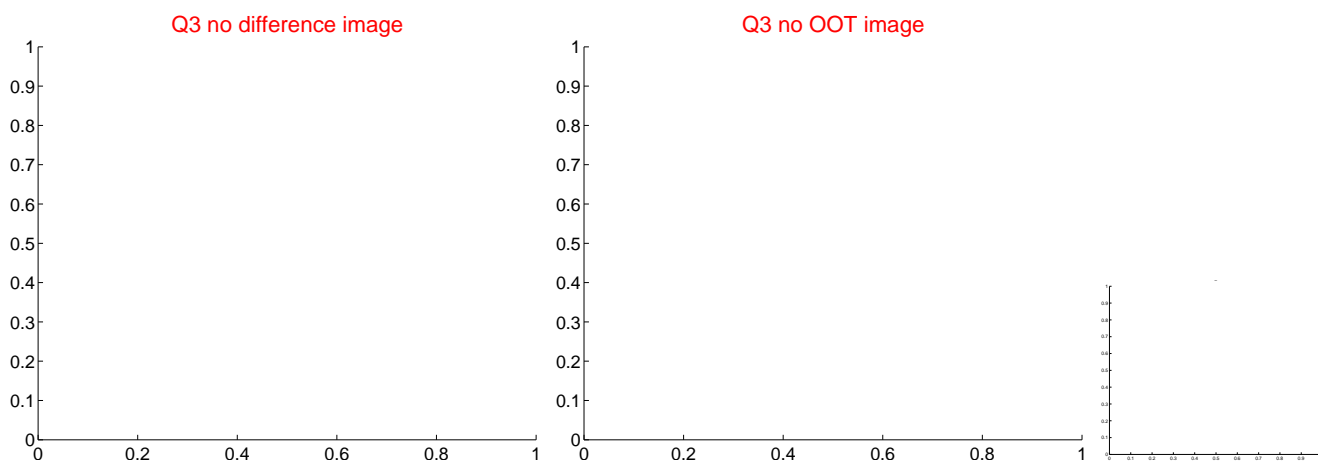
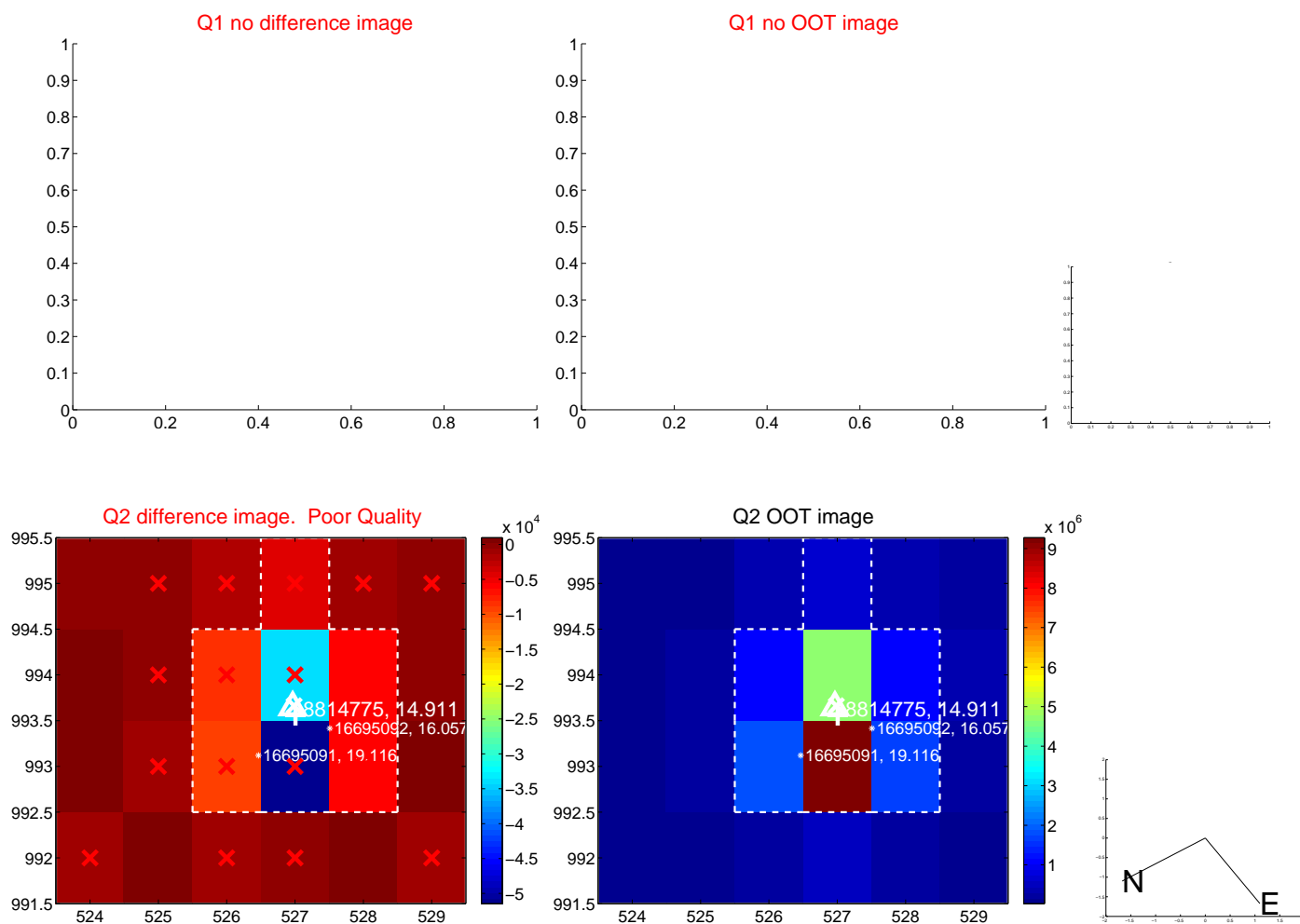
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.246 ± 0.199	1.24	-0.246 ± 0.184	-0.018 ± 0.258
PRF-fit source offset from KIC position	0.203 ± 0.183	1.11	0.117 ± 0.123	0.166 ± 0.151
photometric centroid source offset	0.88 ± 0.36	2.43	0.84 ± 0.36	0.25 ± 0.37

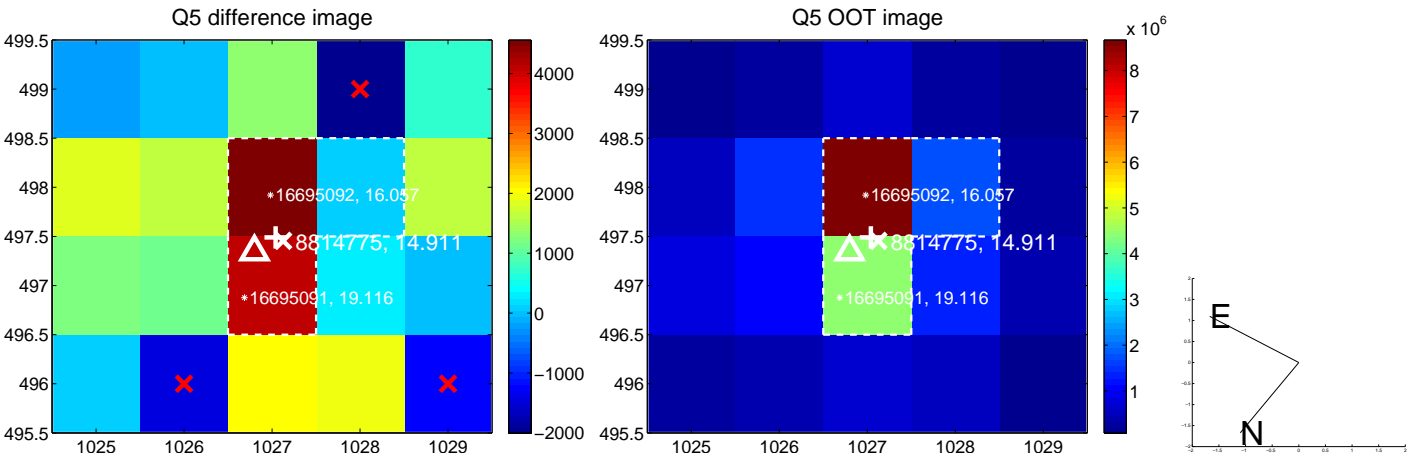


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

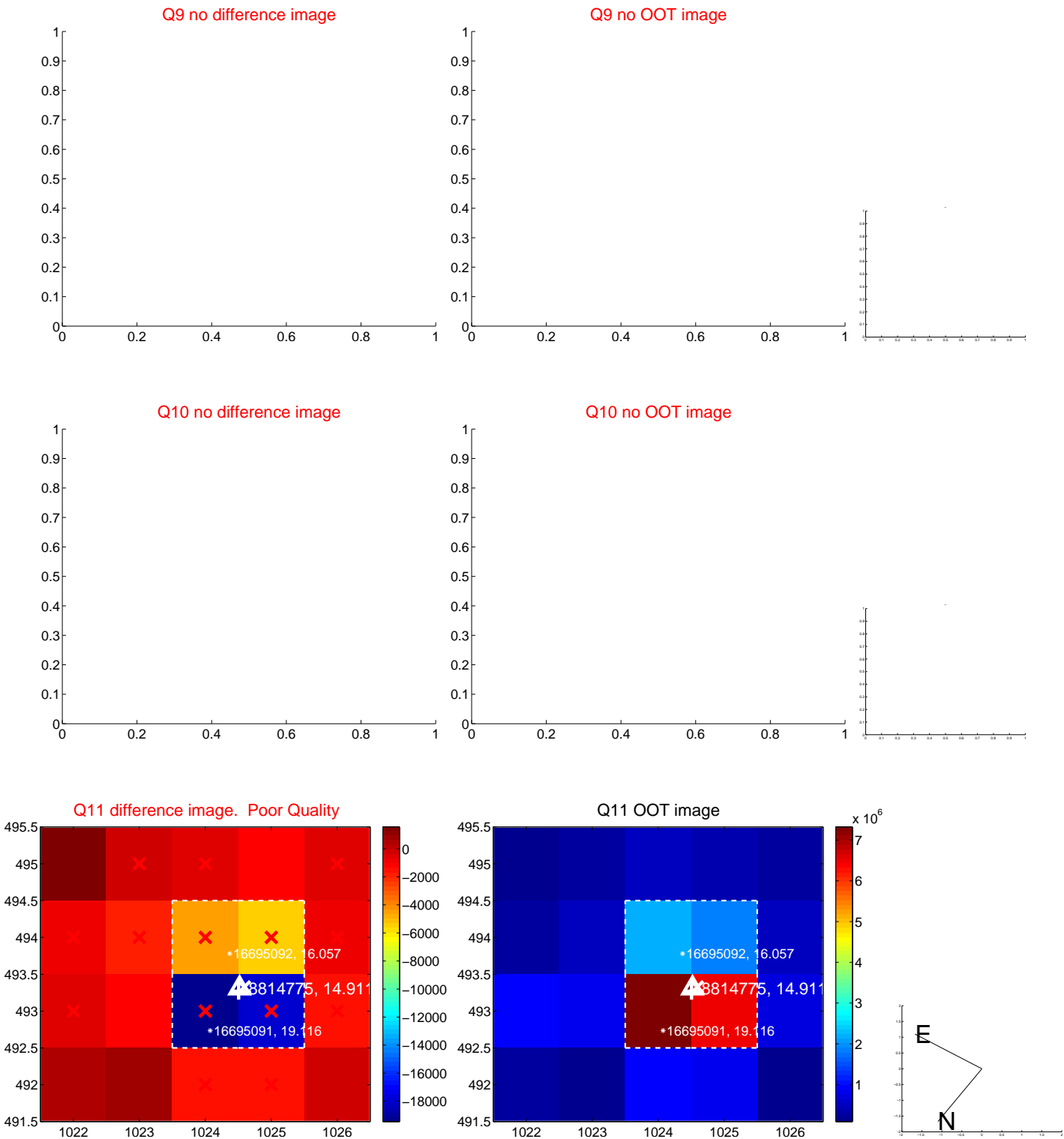
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



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

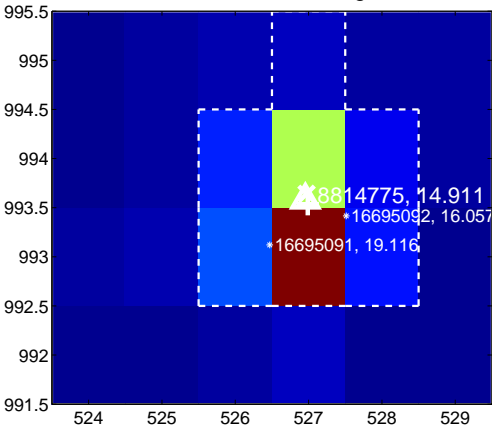
Q13 no difference image



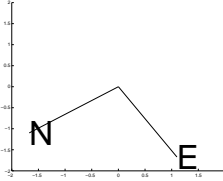
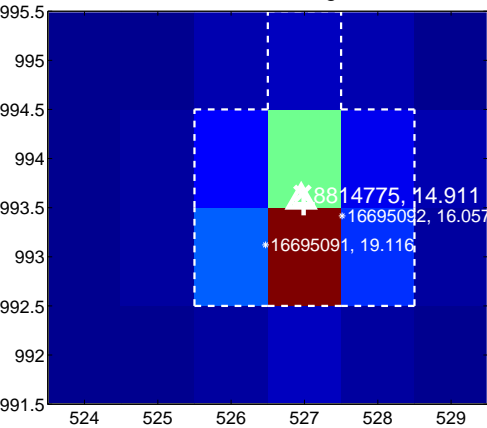
Q13 no OOT image



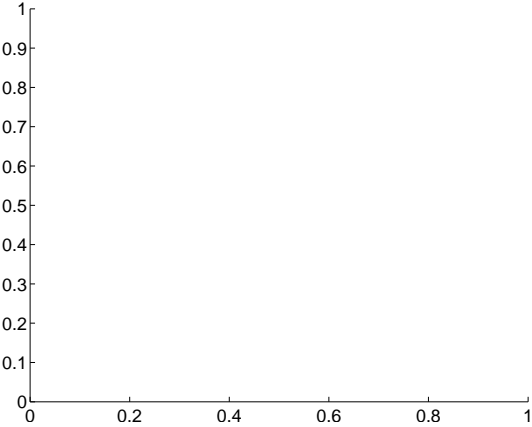
Q14 difference image



Q14 OOT image



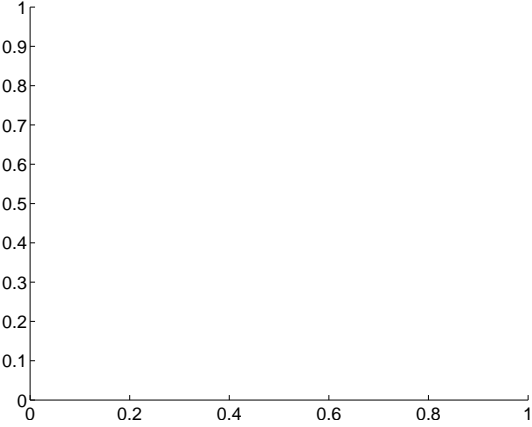
Q15 no difference image



Q15 no OOT image



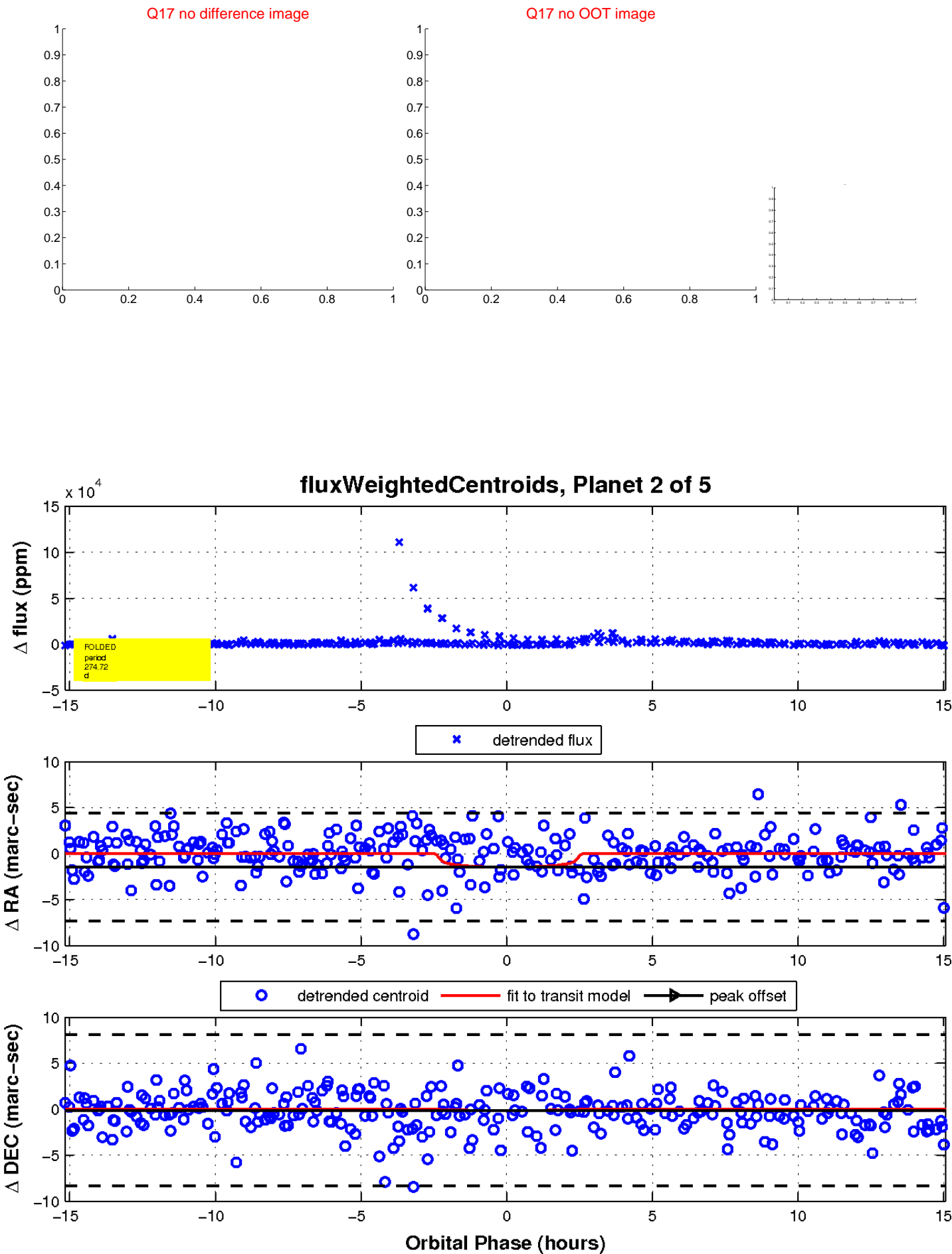
Q16 no difference image



Q16 no OOT image

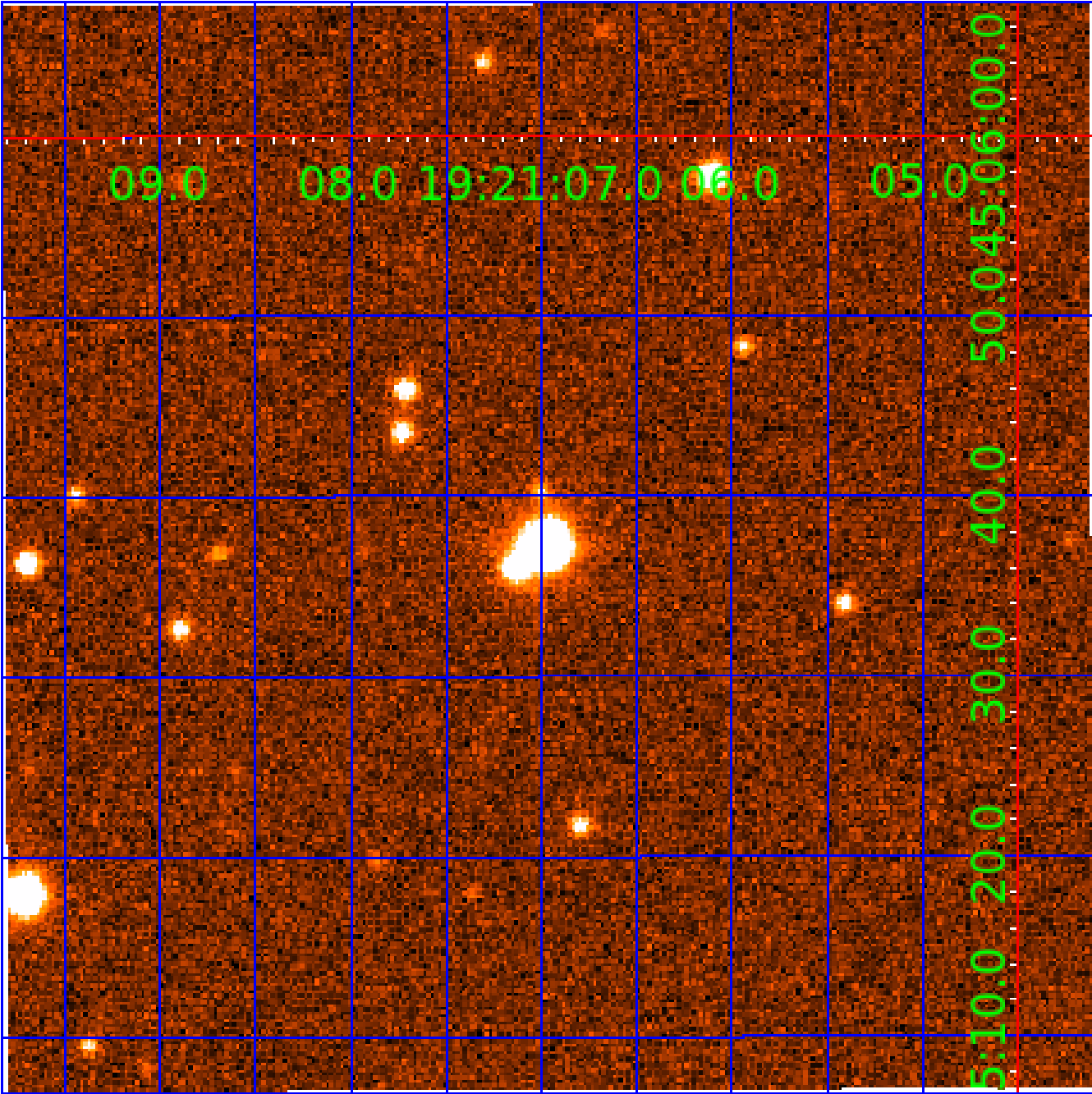


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008814775

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})
008814775-01	OBS	No	606.250345	287.421133	1834.2	8.943	13.0	3.9	0.28	3348	1.31	0.01
008814775-02	OBS	No	274.724978	211.668137	3076.7	5.065	13.1	9.2	0.28	3348	1.52	0.03
008814775-03	OBS	No	471.034669	552.600340	2624.6	4.154	11.7	6.9	0.28	3348	1.42	0.01
008814775-04	OBS	No	310.849463	195.920736	1616.9	4.092	12.6	4.5	0.28	3348	1.11	0.03
008814775-05	OBS	No	493.026623	296.827214	2786.0	3.887	12.3	6.7	0.28	3348	1.50	0.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008814775-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008814775-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008814775-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
008814775-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008814775-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

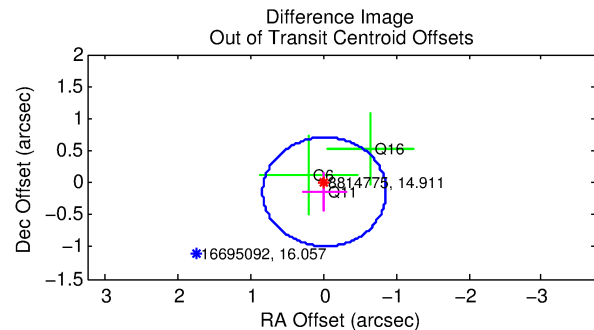
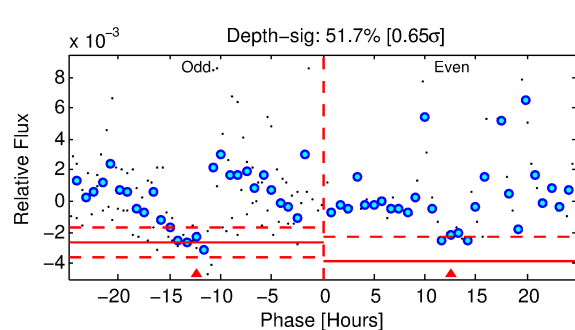
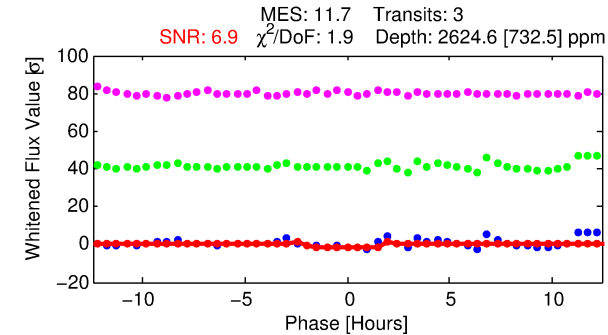
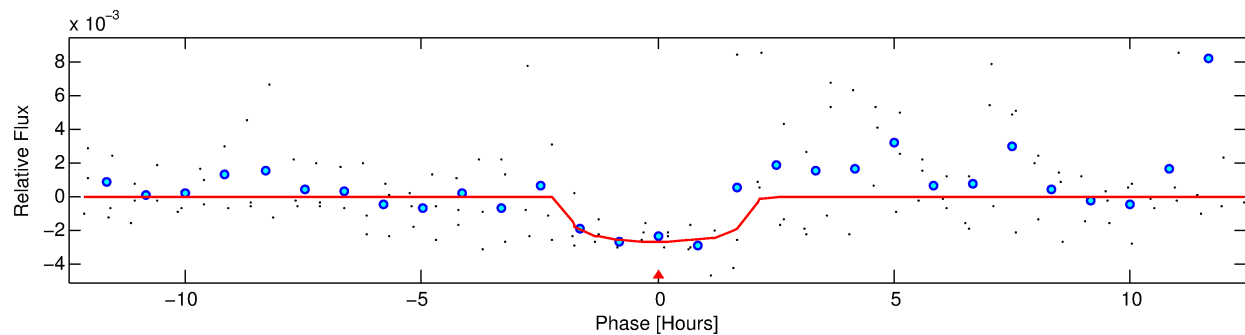
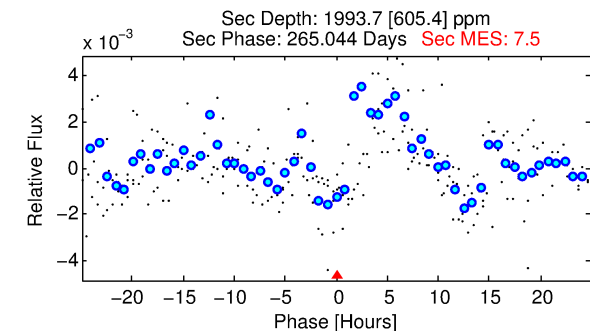
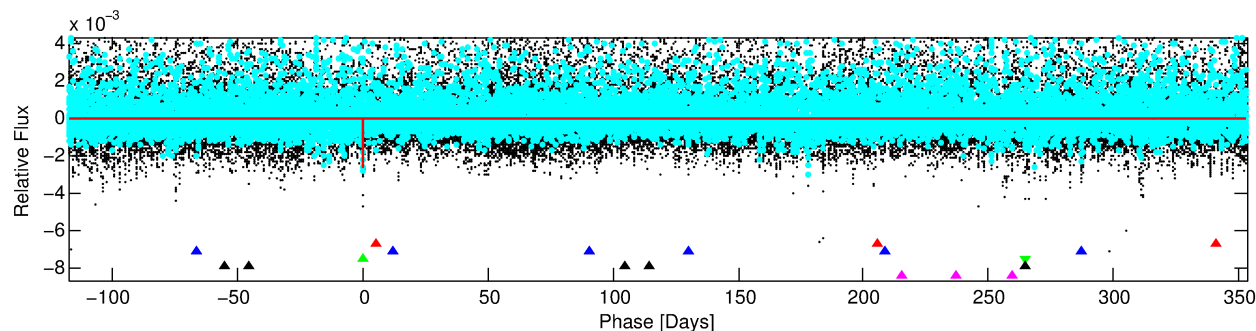
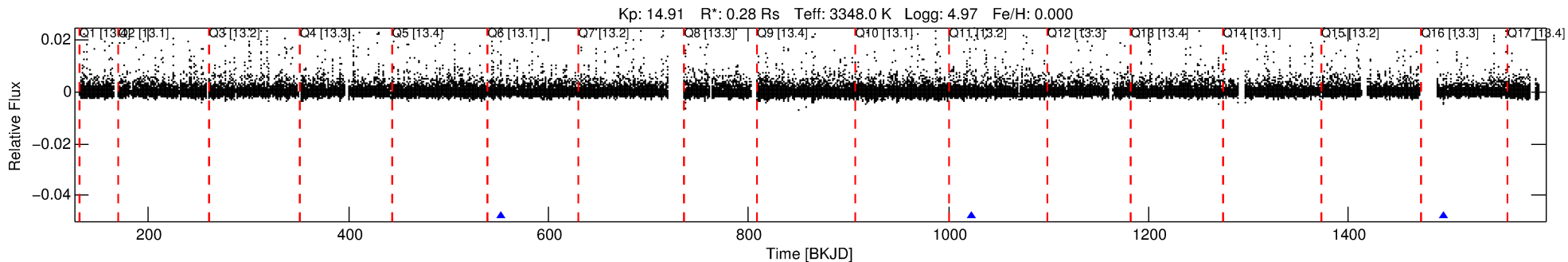
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008814775-03

No Significant Match Found

DV One-Page Summary

KIC: 8814775 Candidate: 3 of 5 Period: 471.035 d



DV Fit Results:

Period = 471.03467 [0.01024] d
Epoch = 552.6003 [0.0160] BKJD
Rp/R* = 0.0469 [0.0595]
a/R* = 862.37 [4592.16]
b = 0.32 [14.74]
Seff = 0.02 [0.00]
Teq = 89 [3] K
Rp = 1.42 [1.81] Re
a = 0.7587 [0.0723] AU
Ag = 313871.26 [802387.86] [0.39σ]
Teffp = 3266 [2086] K [1.52σ]

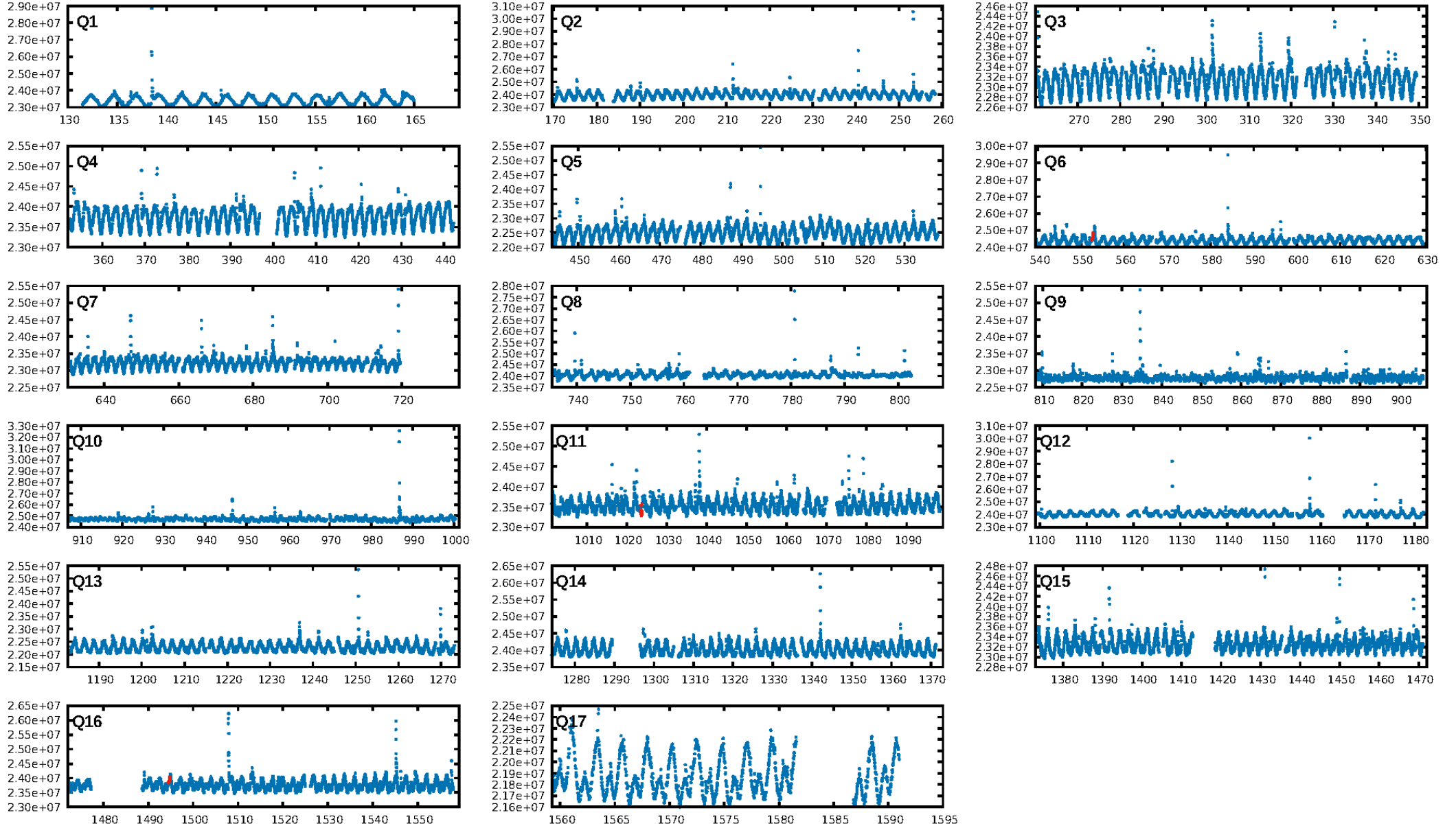
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [659.26σ]
LongPeriod-sig: 100.0% [92.77σ]
ModelChiSquare2-sig: 51.9%
ModelChiSquareGof-sig: 72.6%
Bootstrap-pfa: 1.41e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.287
Centroid-sig: 85.2%
Centroid-so: 0.509 arcsec [1.10σ]
OotOffset-rm: 0.143 arcsec [0.50σ]
KicOffset-rm: 0.270 arcsec [0.93σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

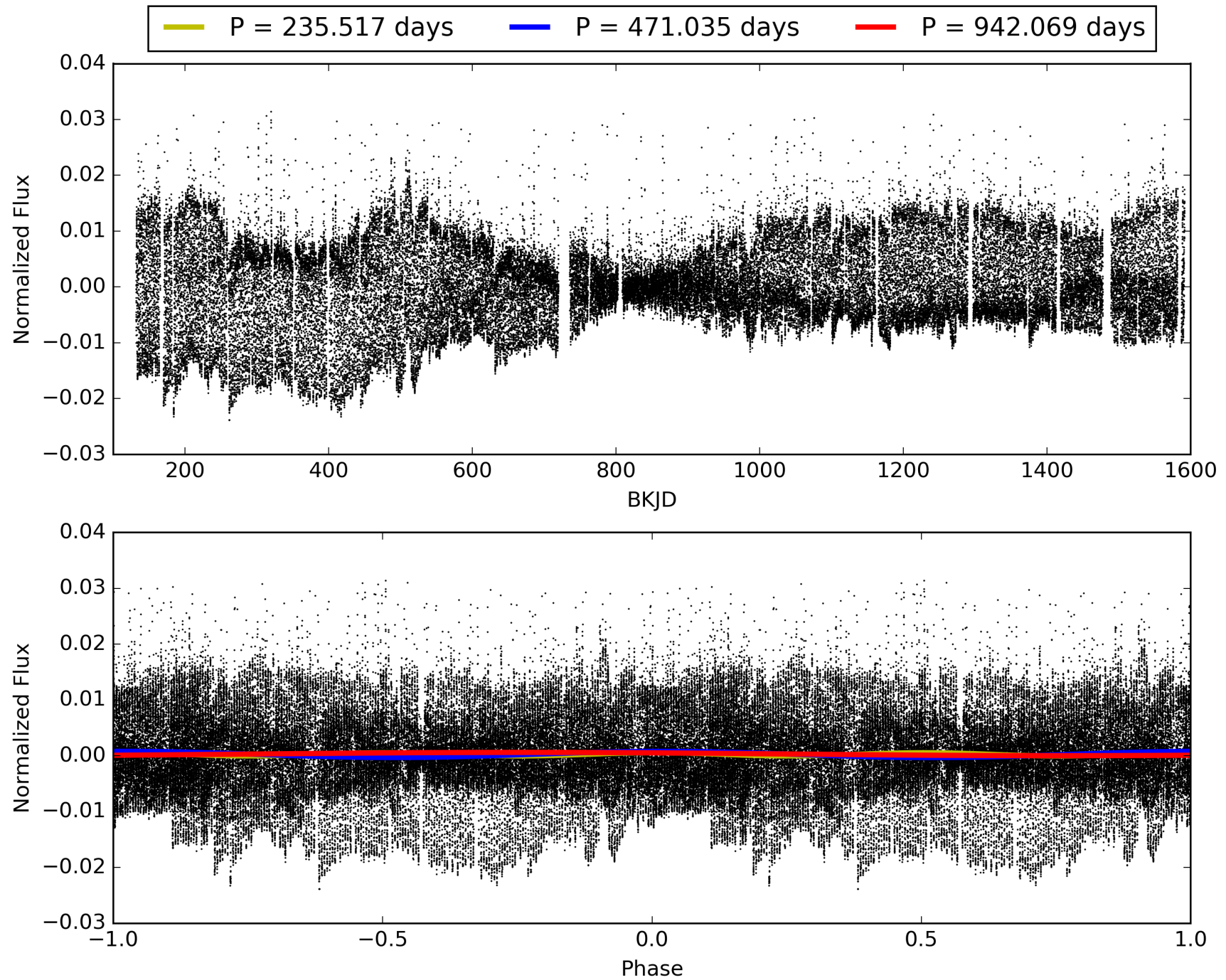
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:01:09 Z

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

TCE 008814775-03, PDC Light Curves

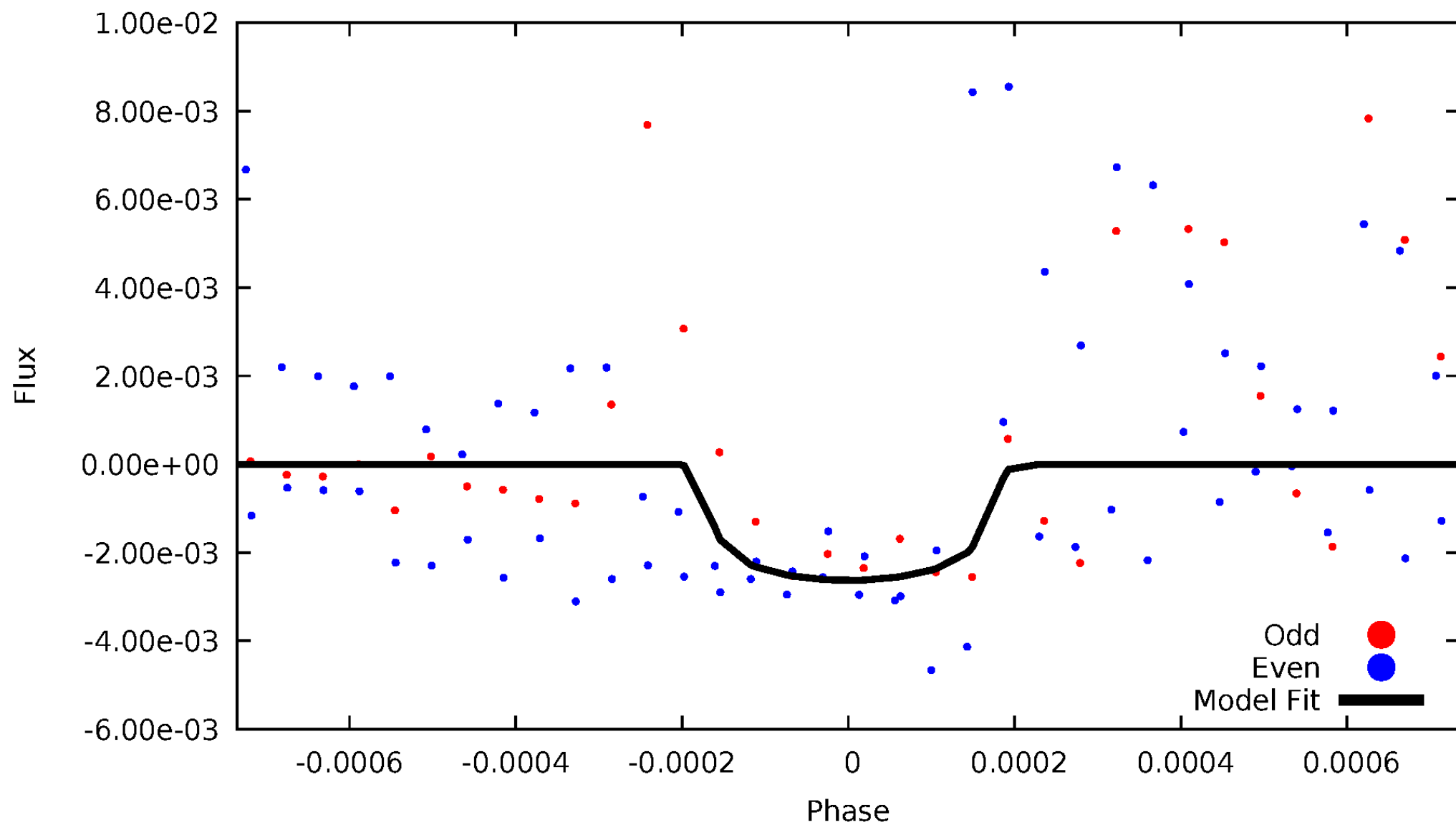


TCE 008814775-03



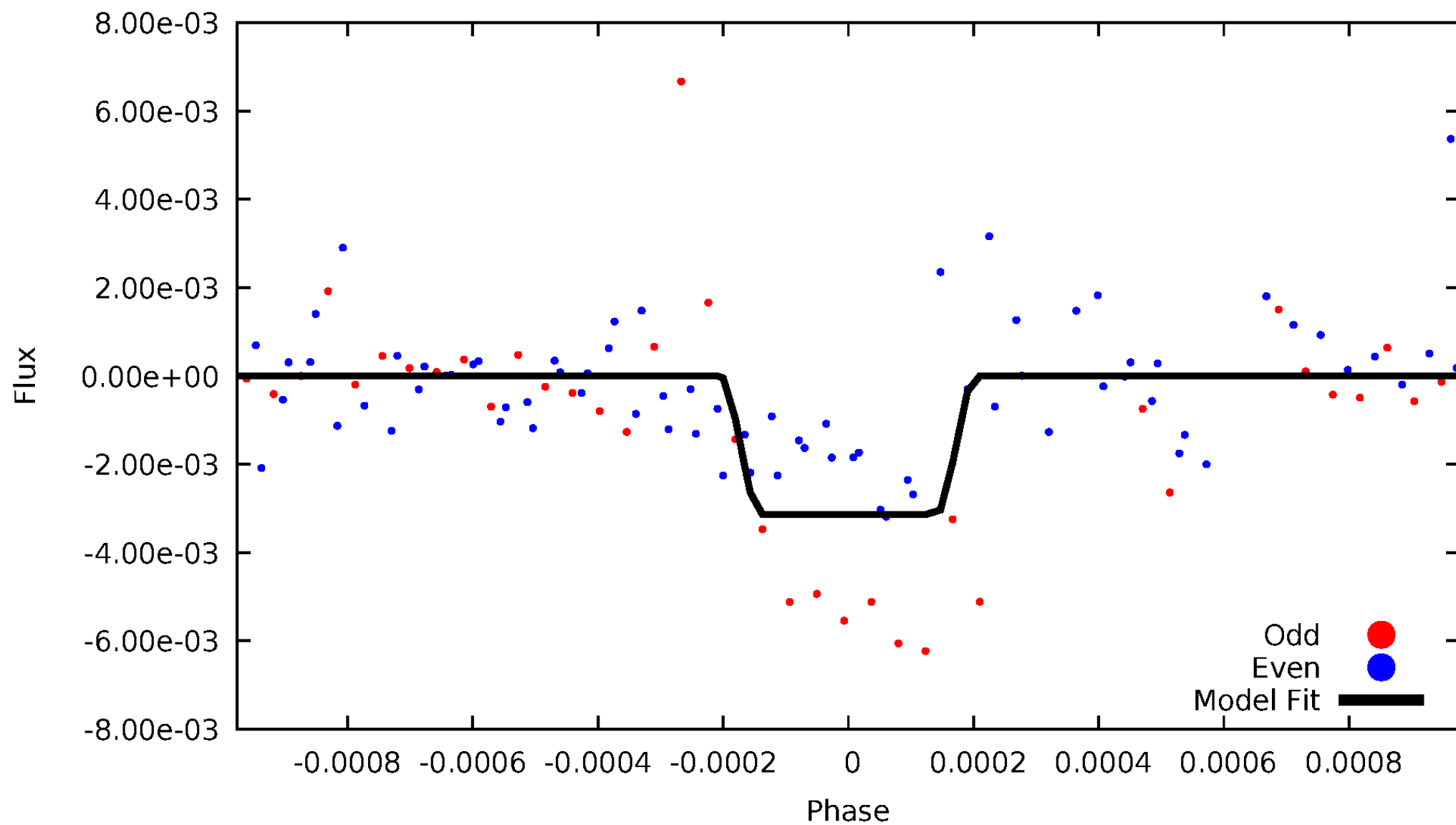
DV Odd/Even

TCE 008814775-03



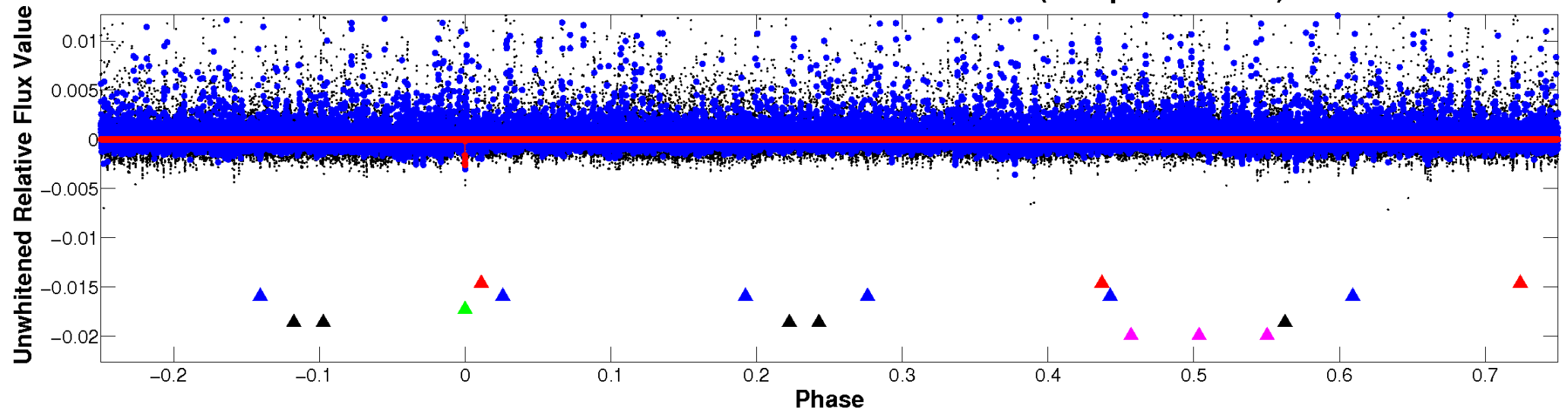
ALT Odd/Even

TCE 008814775-03

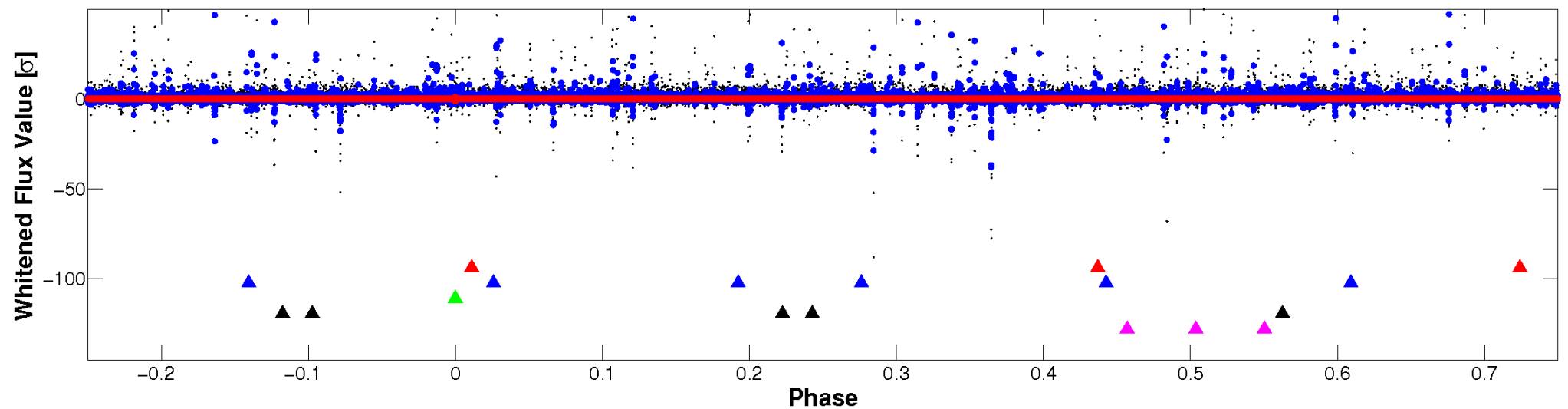


Non-Whitened Vs. Whitened Light Curve

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

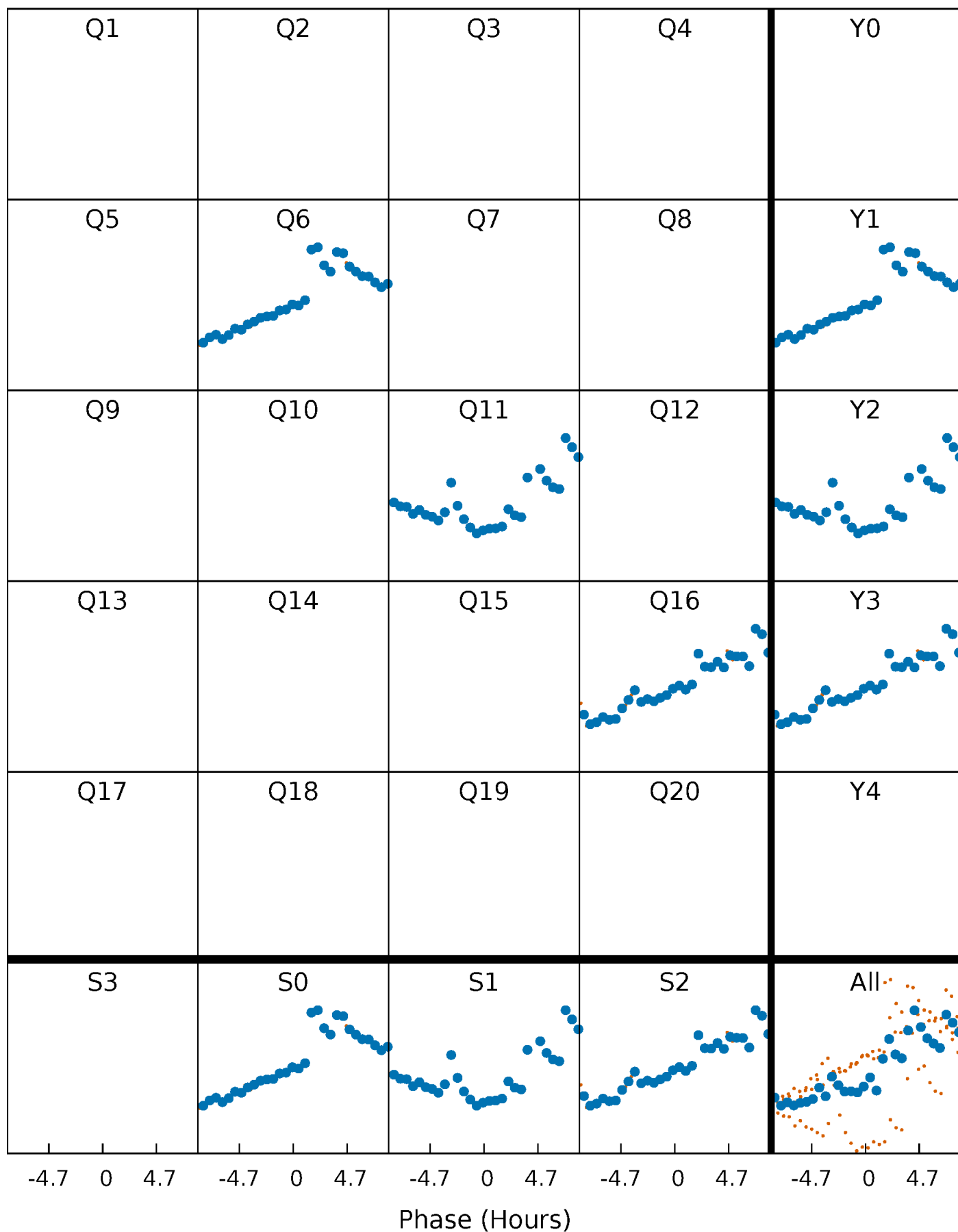


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



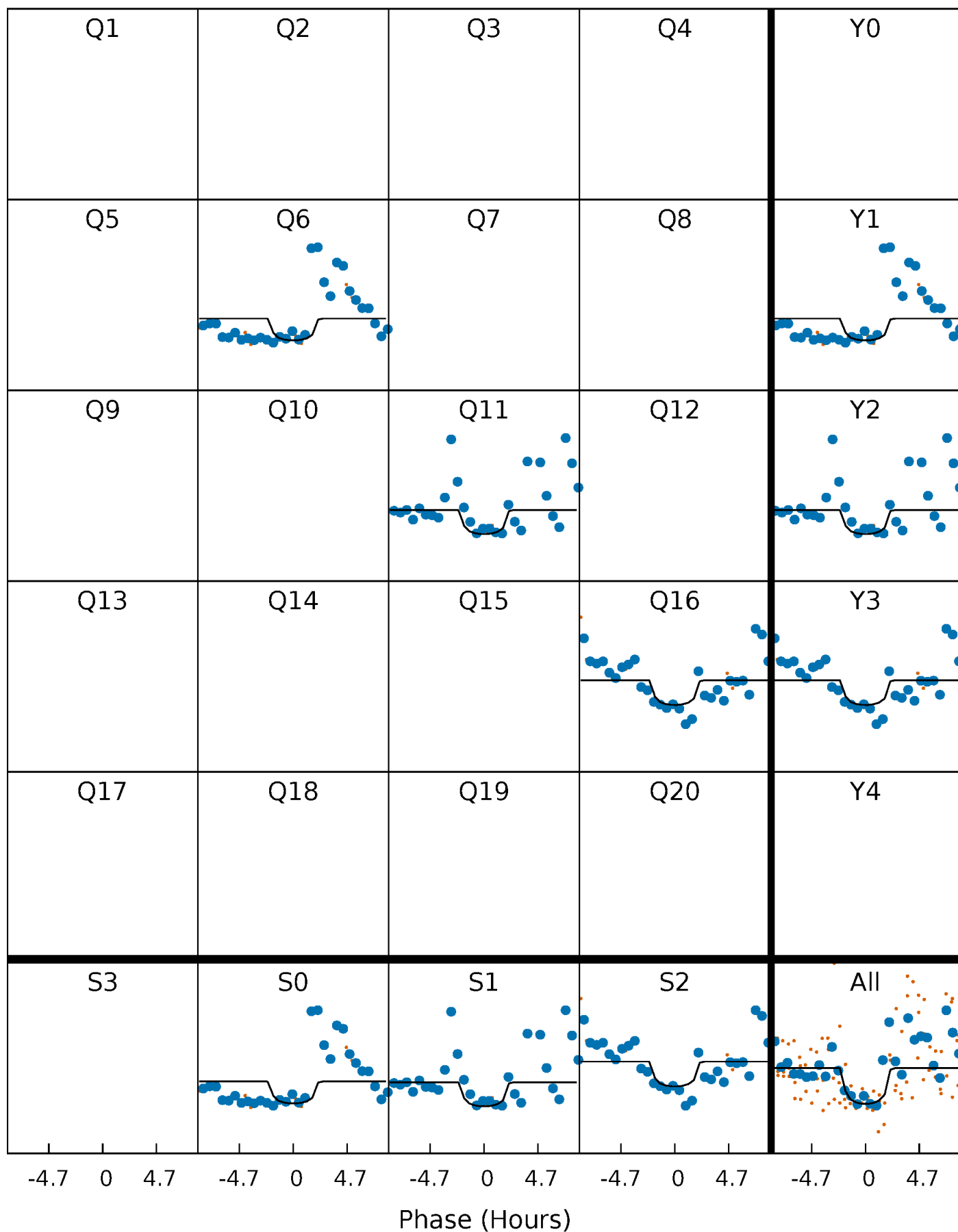
PDC Quarter-Phased Transit Curves

TCE 008814775-03 $P=471.034669$ Days $T_0=552.600340$ (BKJD)



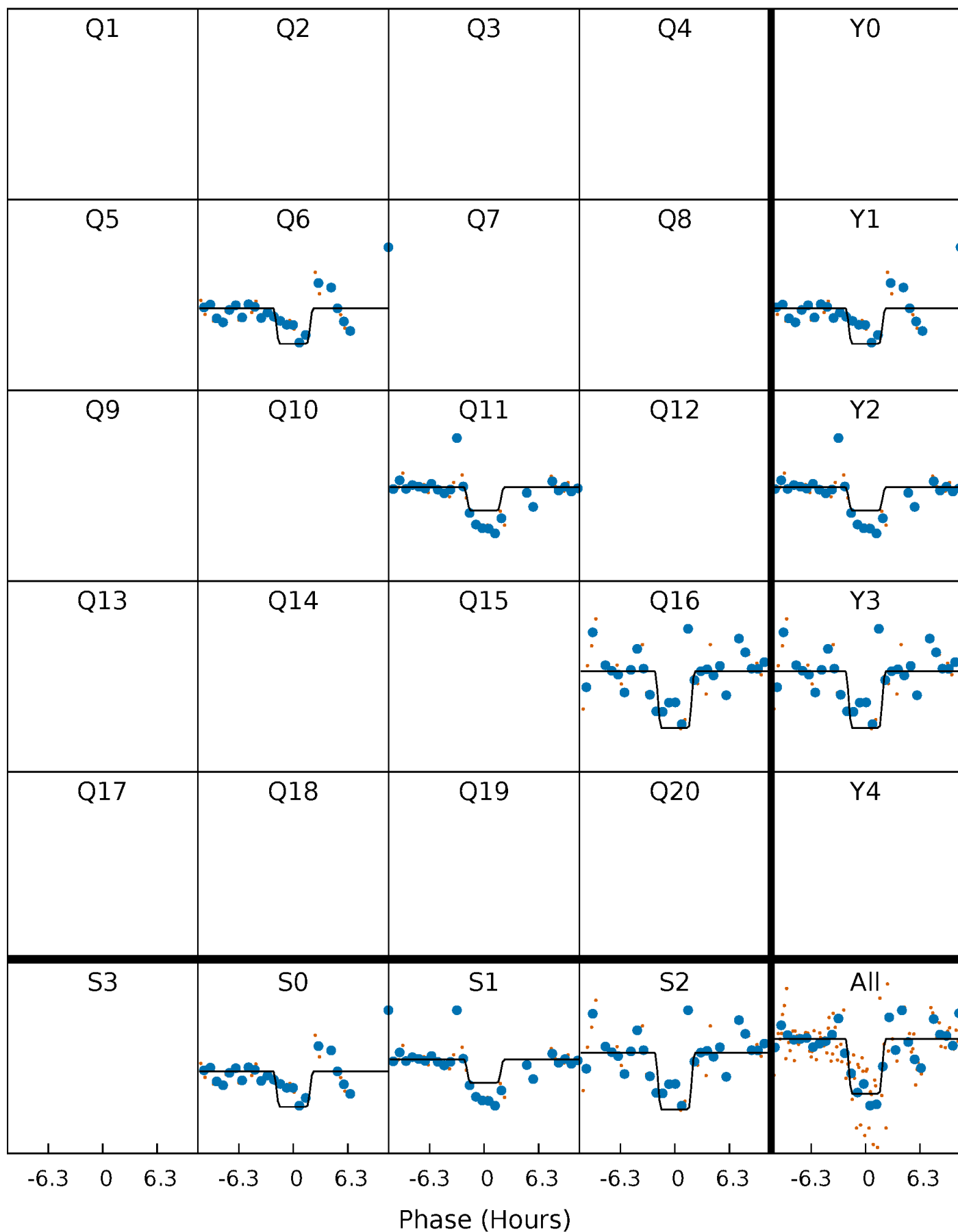
DV Quarter-Phased Transit Curves

TCE 008814775-03 P=471.034669 Days $T_0=552.600340$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

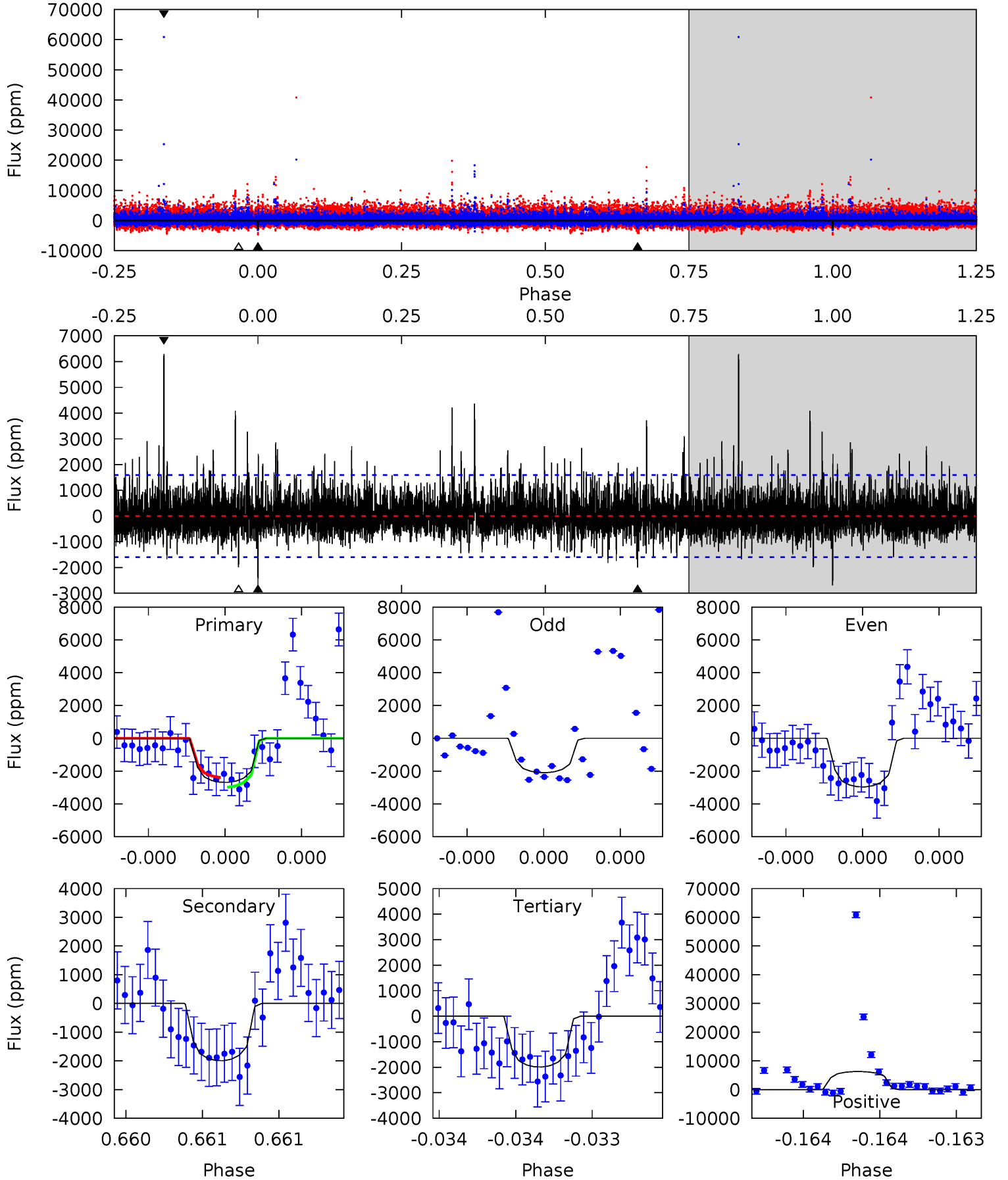
TCE 008814775-03 P=471.041236 Days $T_0=552.605709$ (BKJD)



DV Model-Shift Uniqueness Test

008814775-03, P = 471.034669 Days, E = 81.565671 Days

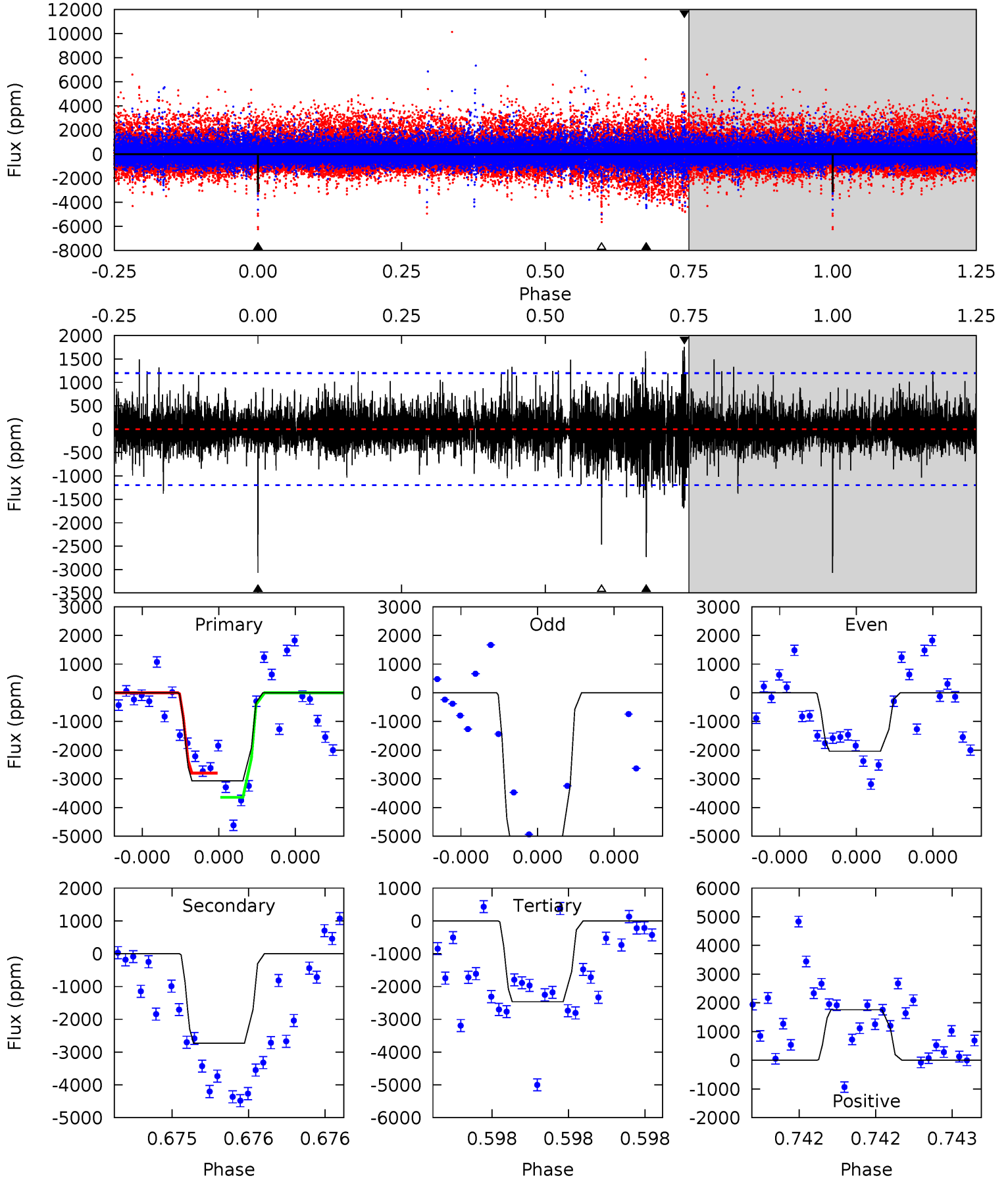
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.43	6.99	6.98	22.1	5.60	3.52	2.10	2.45	-12.6	0.01	-15.1	0.78	1.09	0.70	1.05



Alt Model-Shift Uniqueness Test

008814775-03, P = 471.041236 Days, E = 81.564473 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	12.8	11.6	8.26	5.62	3.55	1.57	2.82	6.13	1.23	4.54	5.95	1.61	0.36	2.05



Stellar Parameters For KIC 008814775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3348^{+43}_{-37}	$4.972^{+0.044}_{-0.044}$	$0.000^{+0.100}_{-0.100}$	$0.277^{+0.037}_{-0.030}$	$0.263^{+0.048}_{-0.032}$	$17.380^{+3.755}_{-3.391}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+13%/-11%	+18%/-12%	+22%/-20%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008814775-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1993 ± 285	$1.94^{+1.59}_{-1.24}$	125^{+3}_{-3}	3020^{+1192}_{-434}	$172262^{+1177373}_{-120013}$
Alt.	-2728 ± 213	$2.03^{+1.65}_{-1.30}$	125^{+3}_{-3}	3119^{+1238}_{-467}	$210675^{+1399623}_{-147929}$

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 $A_{obs} \gg 1.0$

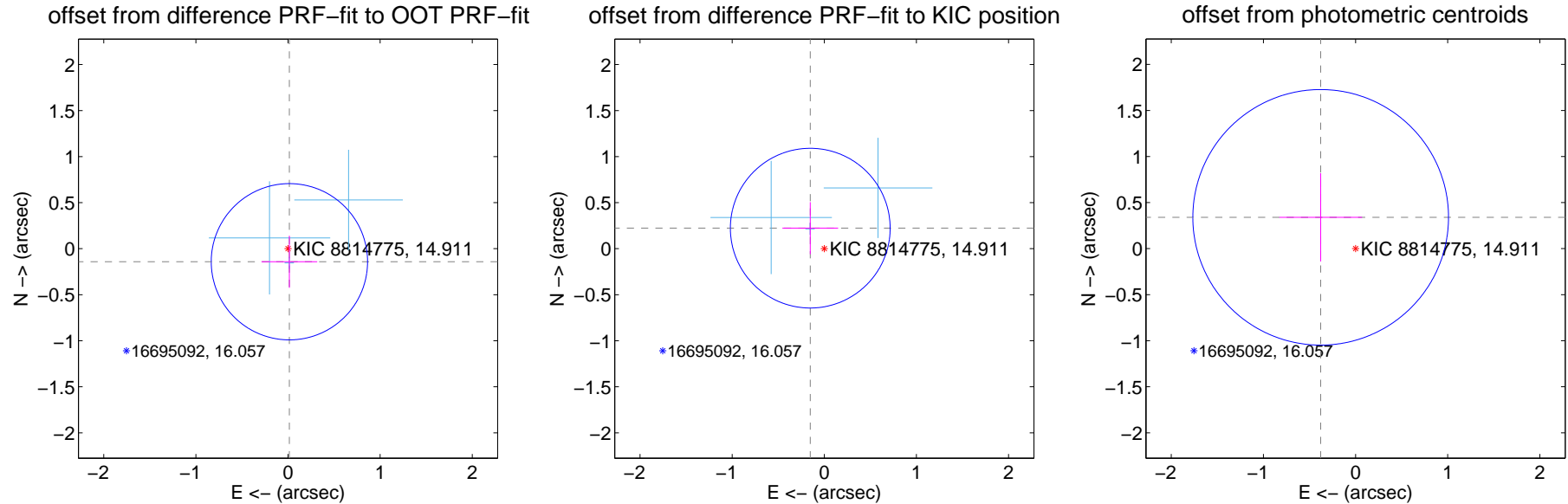
DV Centroid Data

Supplemental centroid analysis for 008814775-03. Kepler magnitude: 14.91. Transit SNR 6.86

There are 3 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.143 ± 0.283	0.50	-0.015 ± 0.303	-0.142 ± 0.283
PRF-fit source offset from KIC position	0.270 ± 0.289	0.93	0.152 ± 0.303	0.223 ± 0.283
photometric centroid source offset	0.51 ± 0.46	1.10	0.38 ± 0.45	0.34 ± 0.48

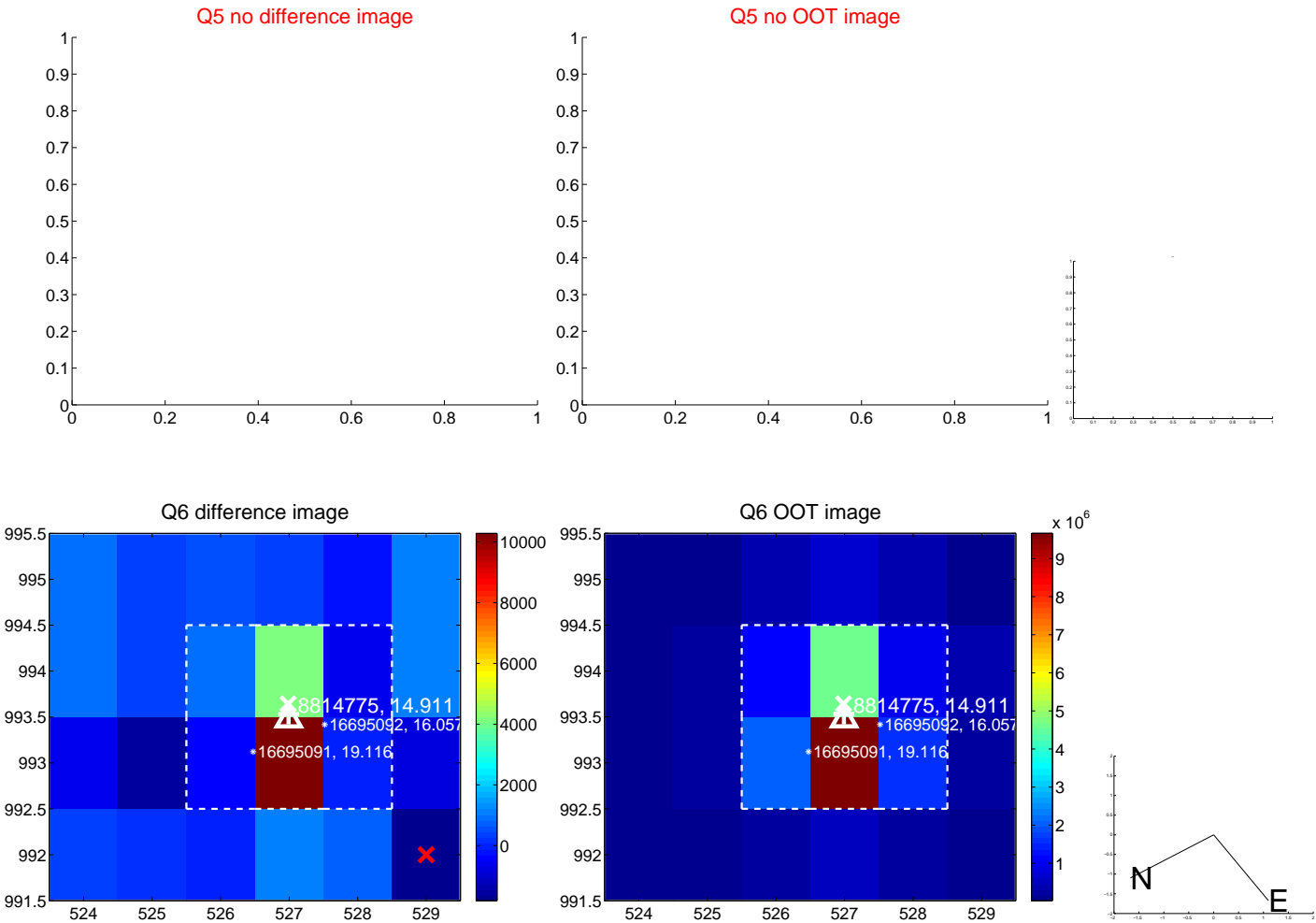


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

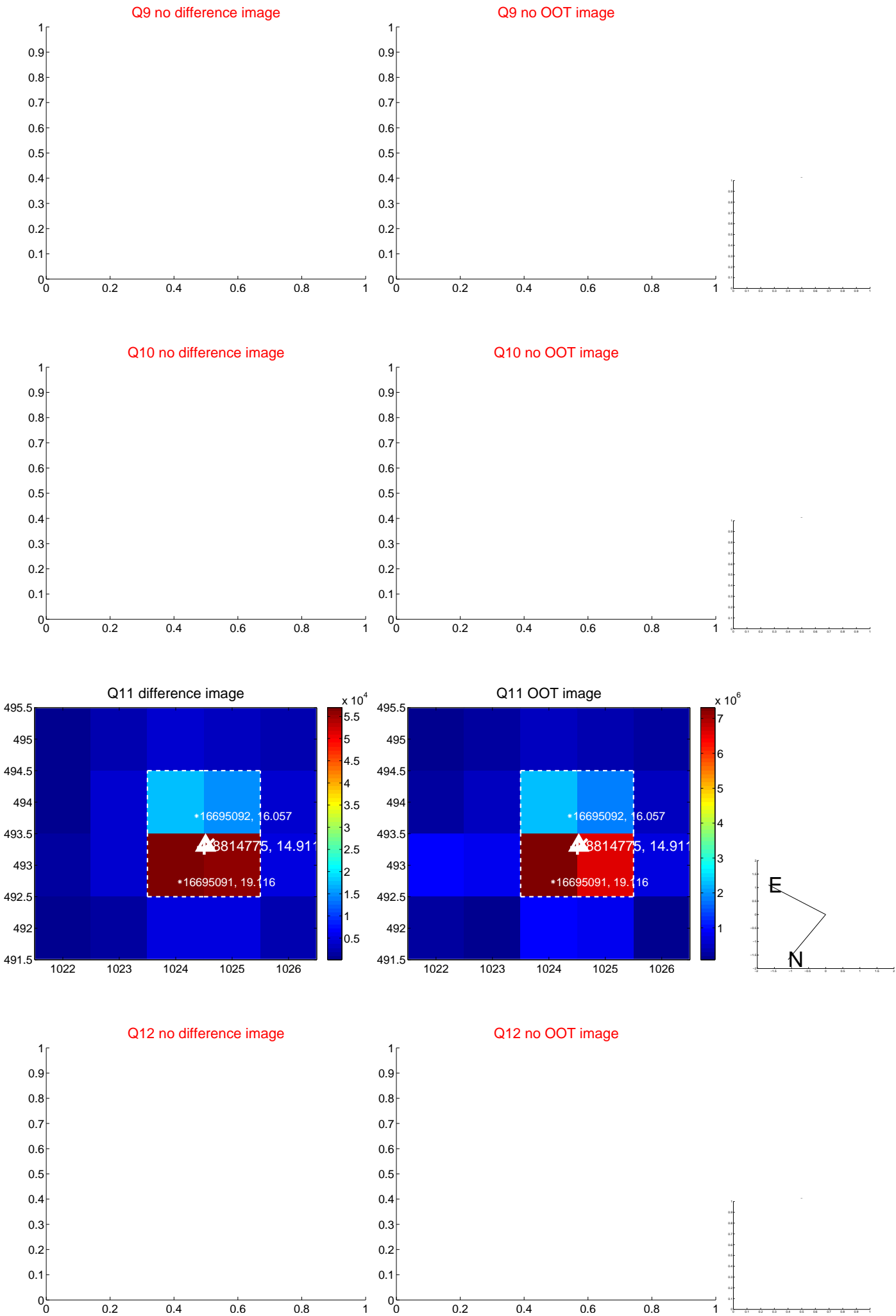
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



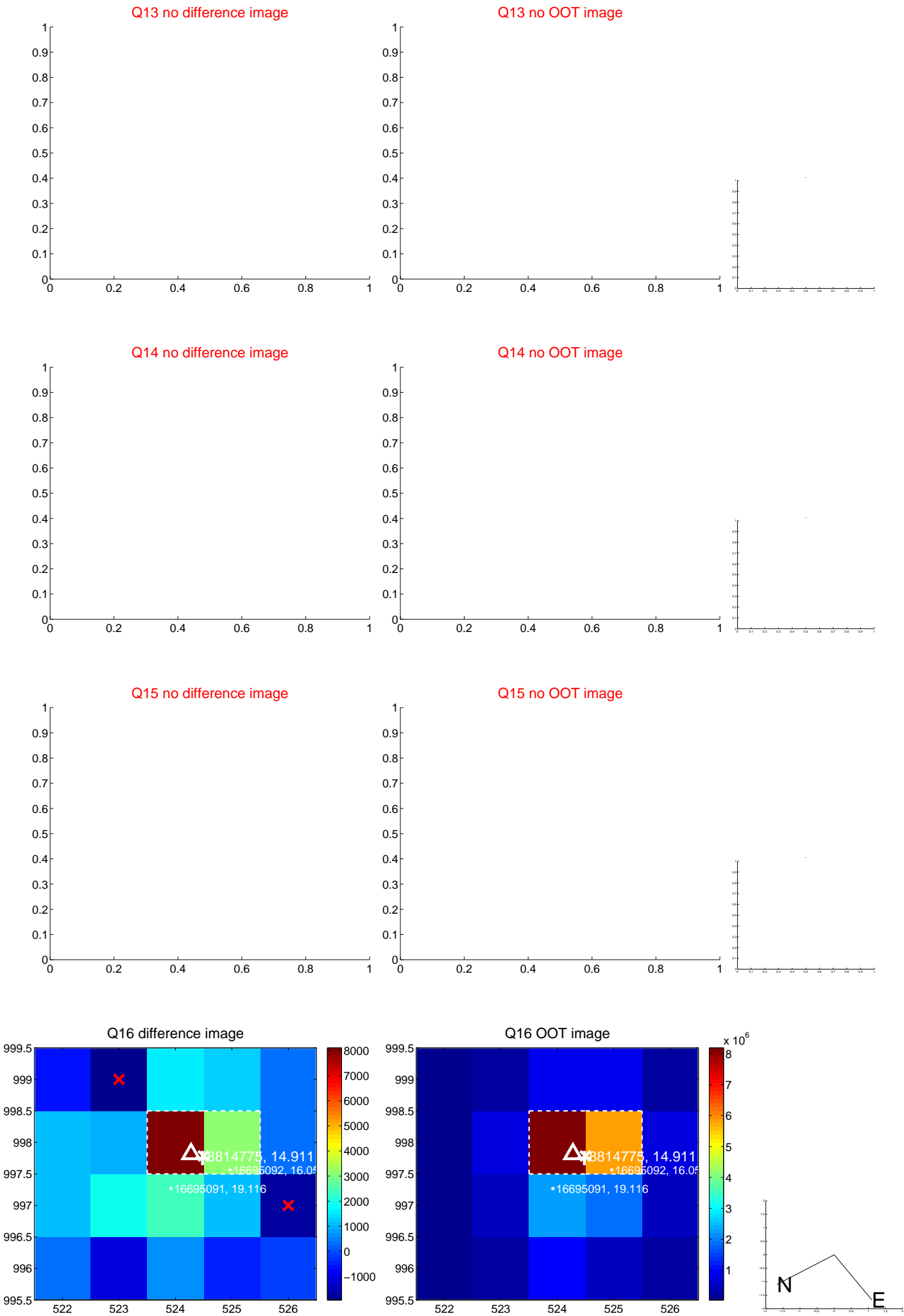
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



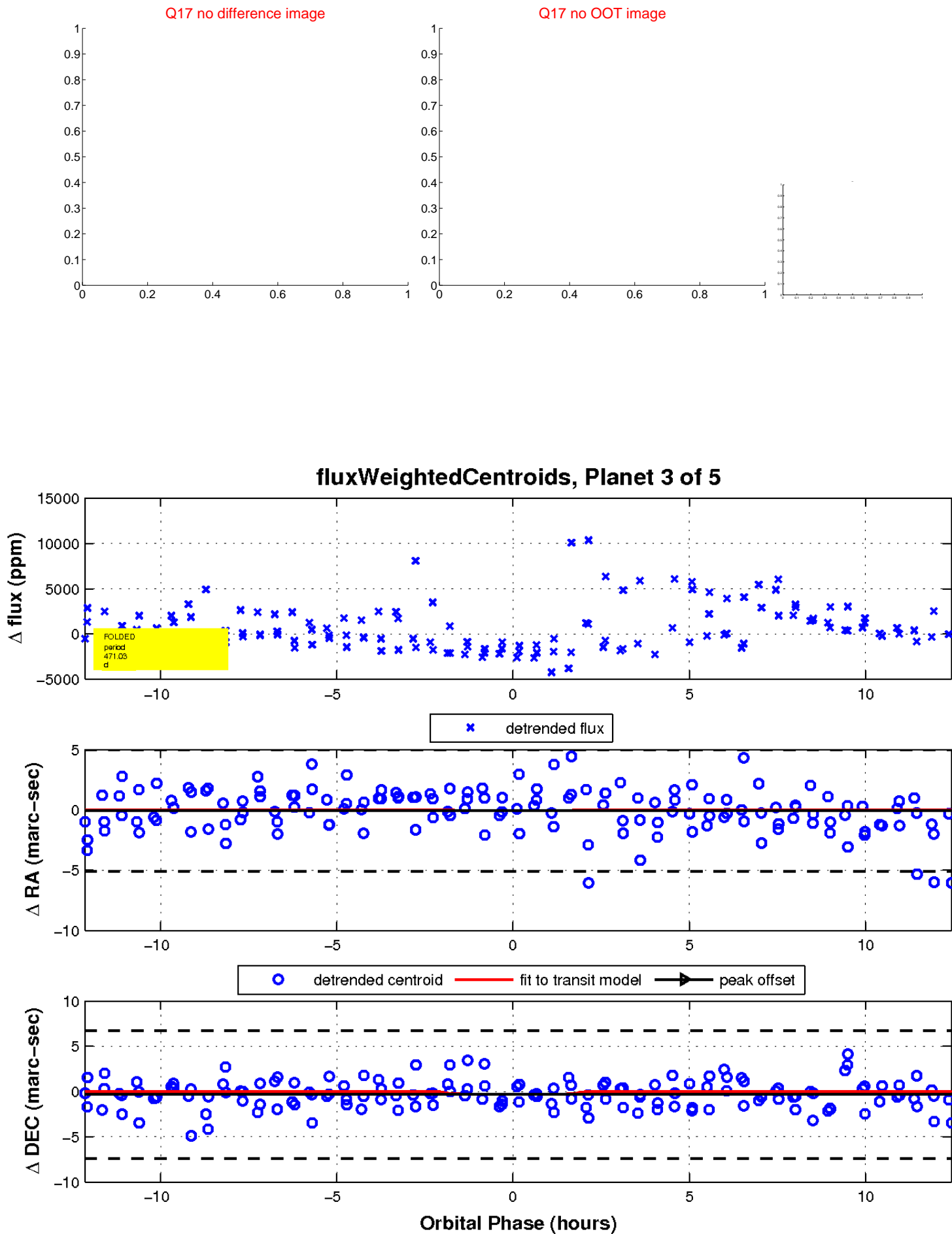
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

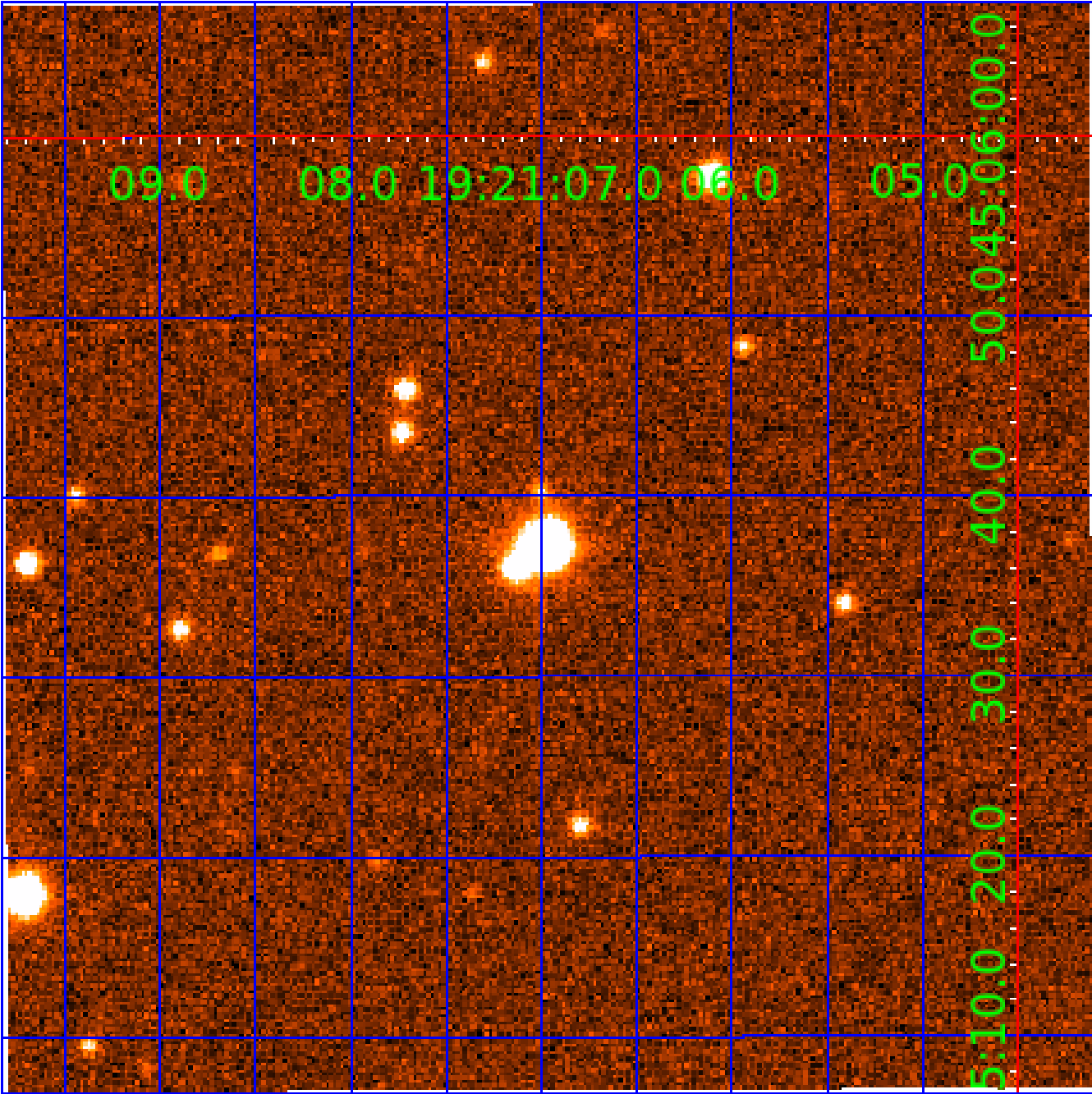


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008814775

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})
008814775-01	OBS	No	606.250345	287.421133	1834.2	8.943	13.0	3.9	0.28	3348	1.31	0.01
008814775-02	OBS	No	274.724978	211.668137	3076.7	5.065	13.1	9.2	0.28	3348	1.52	0.03
008814775-03	OBS	No	471.034669	552.600340	2624.6	4.154	11.7	6.9	0.28	3348	1.42	0.01
008814775-04	OBS	No	310.849463	195.920736	1616.9	4.092	12.6	4.5	0.28	3348	1.11	0.03
008814775-05	OBS	No	493.026623	296.827214	2786.0	3.887	12.3	6.7	0.28	3348	1.50	0.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008814775-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008814775-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008814775-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
008814775-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008814775-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

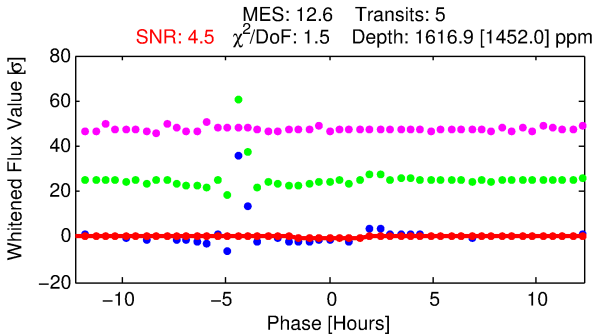
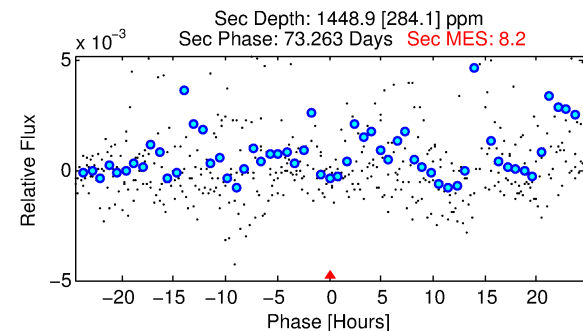
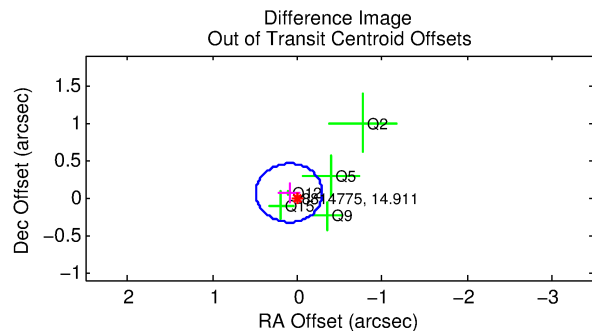
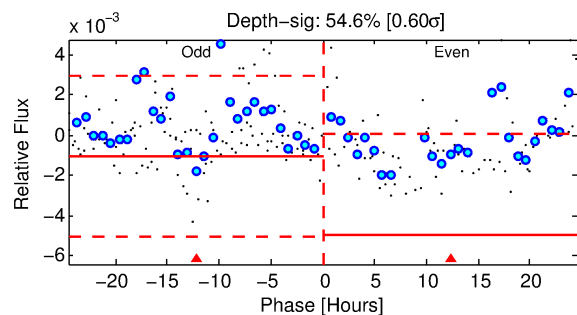
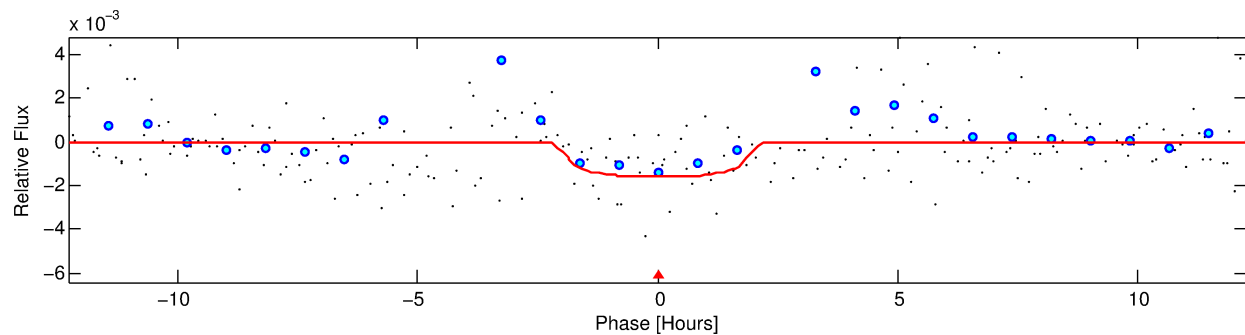
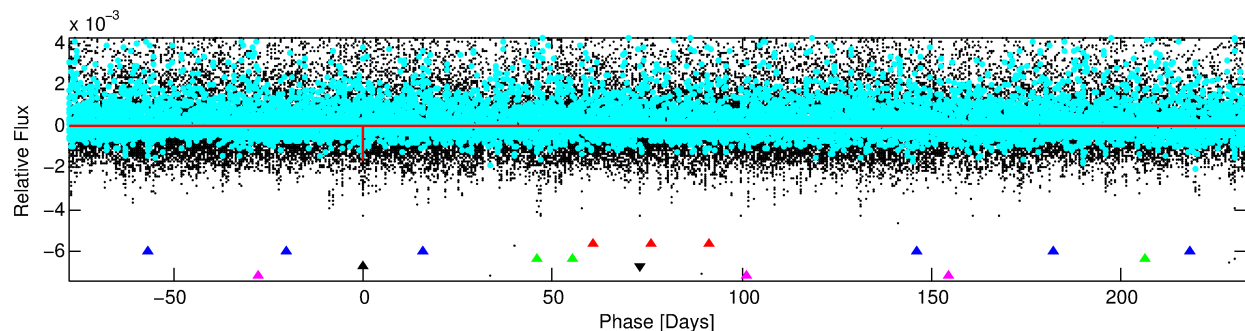
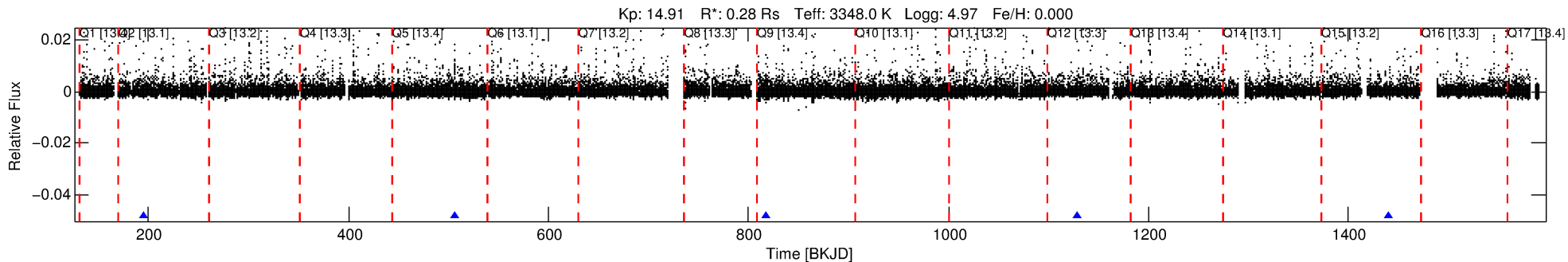
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008814775-04

No Significant Match Found

DV One-Page Summary

KIC: 8814775 Candidate: 4 of 5 Period: 310.849 d



DV Fit Results:

Period = 310.84946 [0.01215] d
Epoch = 195.9207 [0.0331] BKJD
Rp/R* = 0.0367 [0.2246]
a/R* = 576.27 [15050.36]
b = 0.30 [80.21]
Seff = 0.03 [0.00]
Teq = 103 [3] K
Rp = 1.11 [6.79] Re
a = 0.5751 [0.0548] AU
Ag = 213896.28 [2617002.05] [0.08σ]
Teffp = 3408 [10425] K [0.32σ]

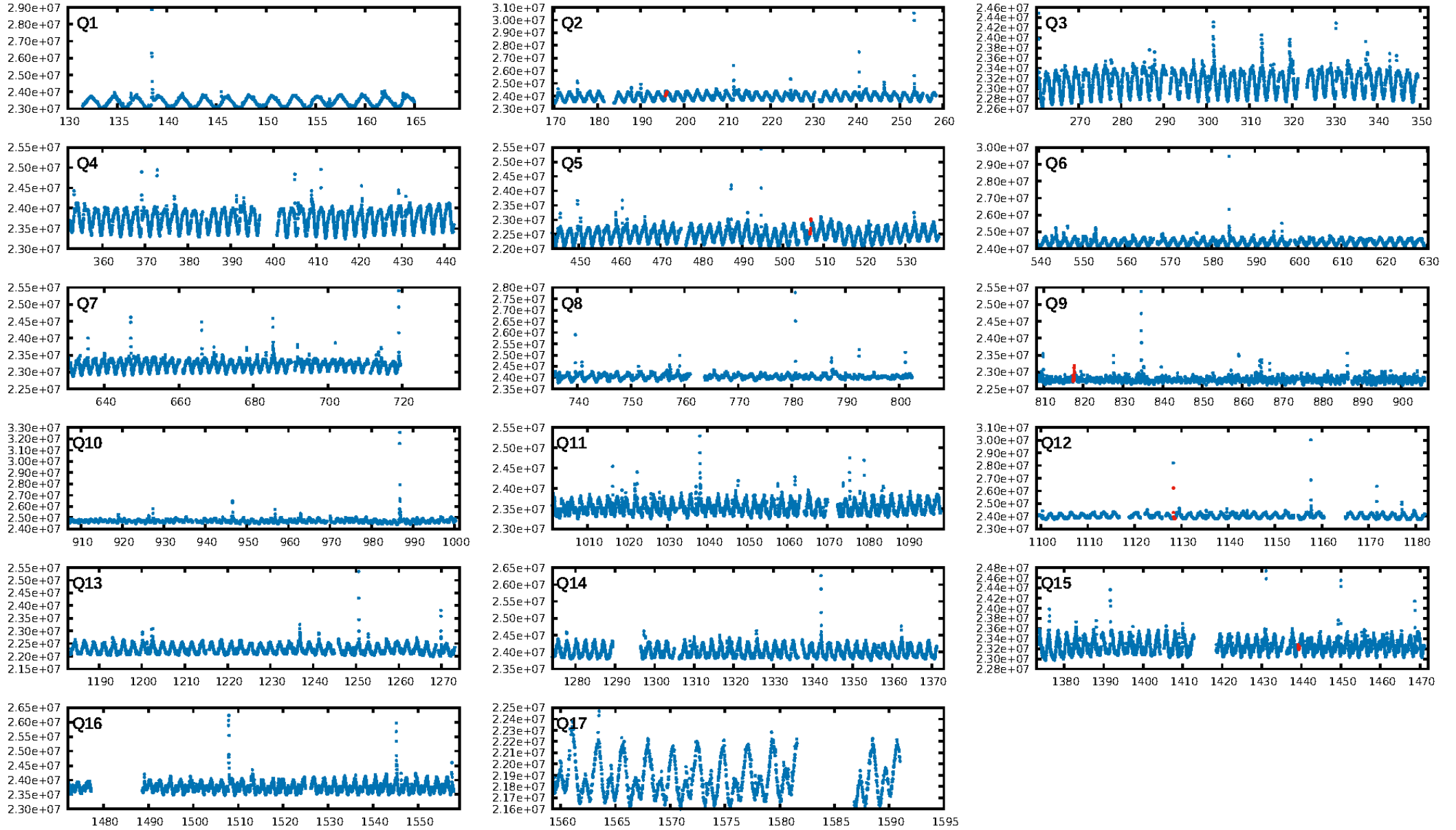
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [133.14σ]
LongPeriod-sig: 100.0% [659.26σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 79.1%
Bootstrap-pfa: 1.53e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.953
Centroid-sig: 8.0%
Centroid-so: 1.145 arcsec [1.80σ]
OotOffset-rm: 0.114 arcsec [0.87σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-rm: 0.251 arcsec [1.93σ]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 1.00 [5/5]

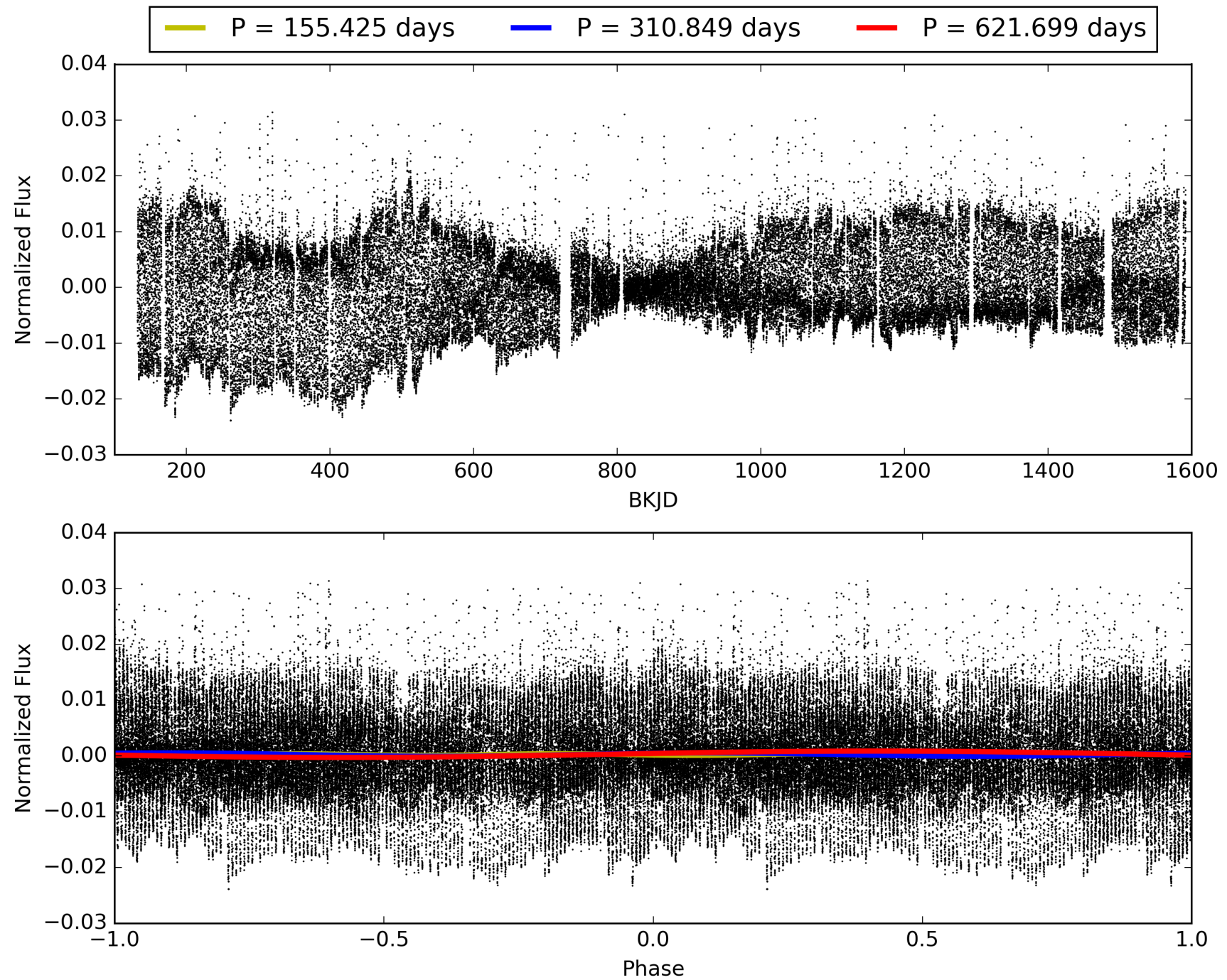
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:01:23 Z

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

TCE 008814775-04, PDC Light Curves

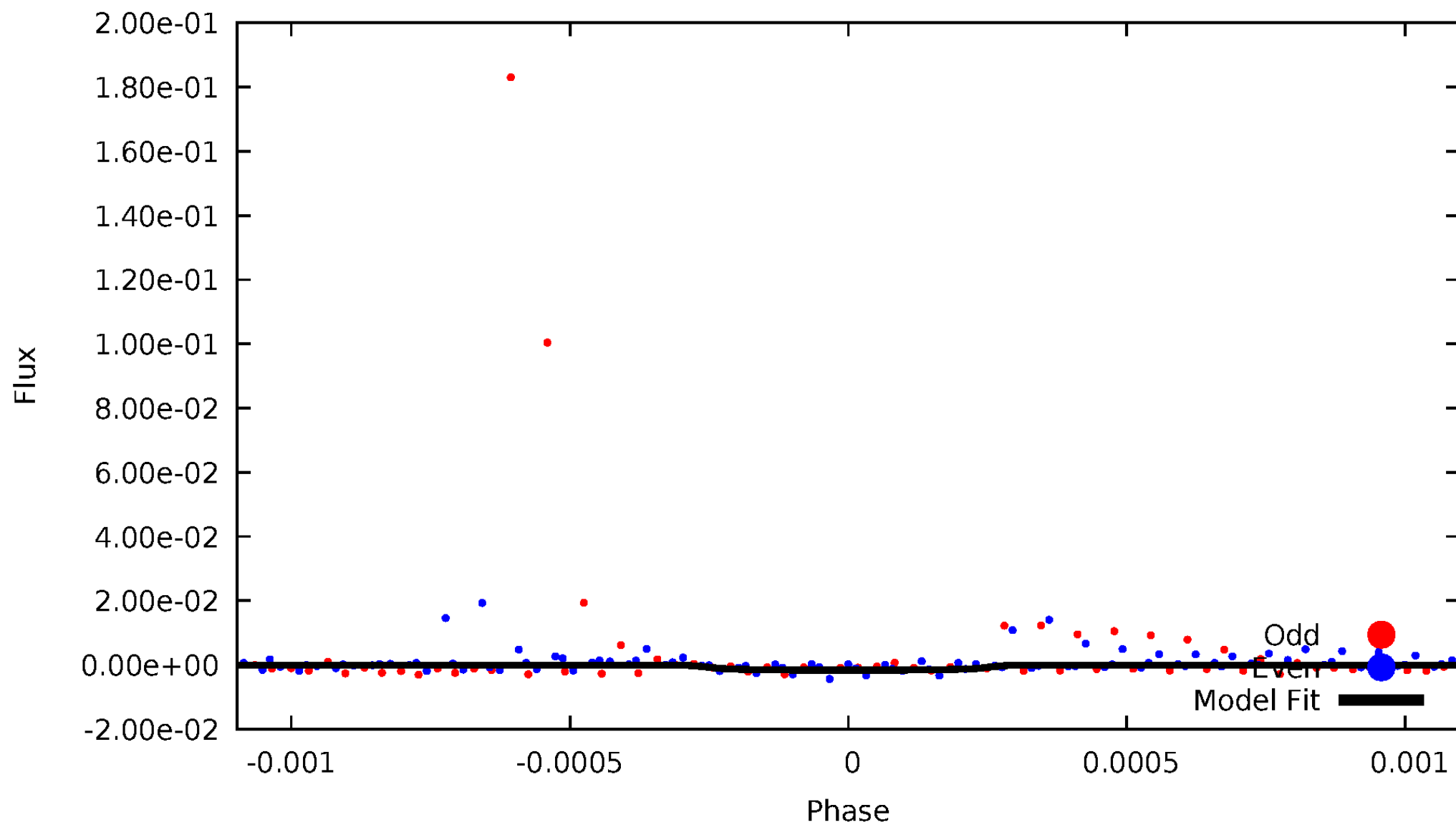


TCE 008814775-04



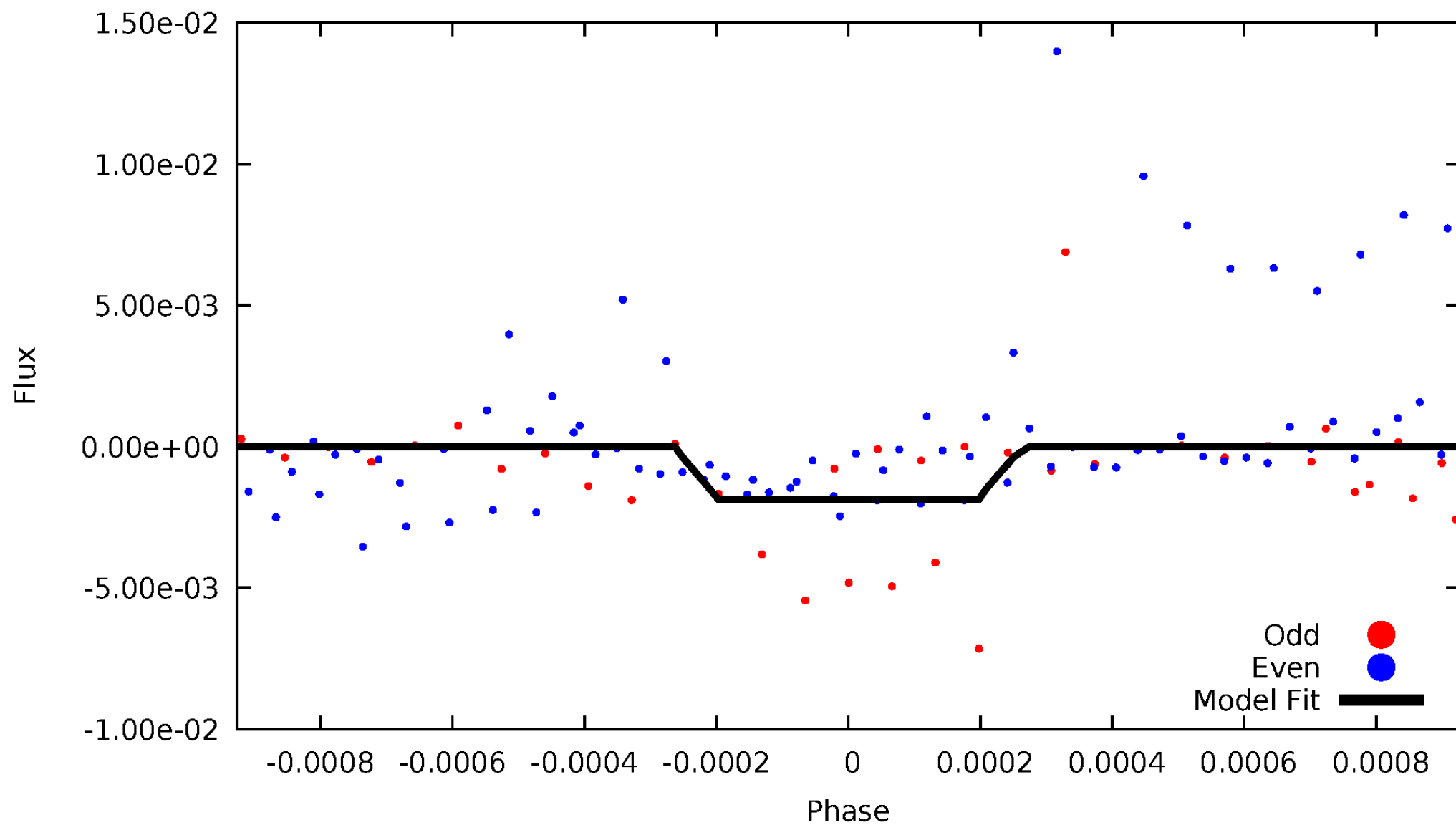
DV Odd/Even

TCE 008814775-04



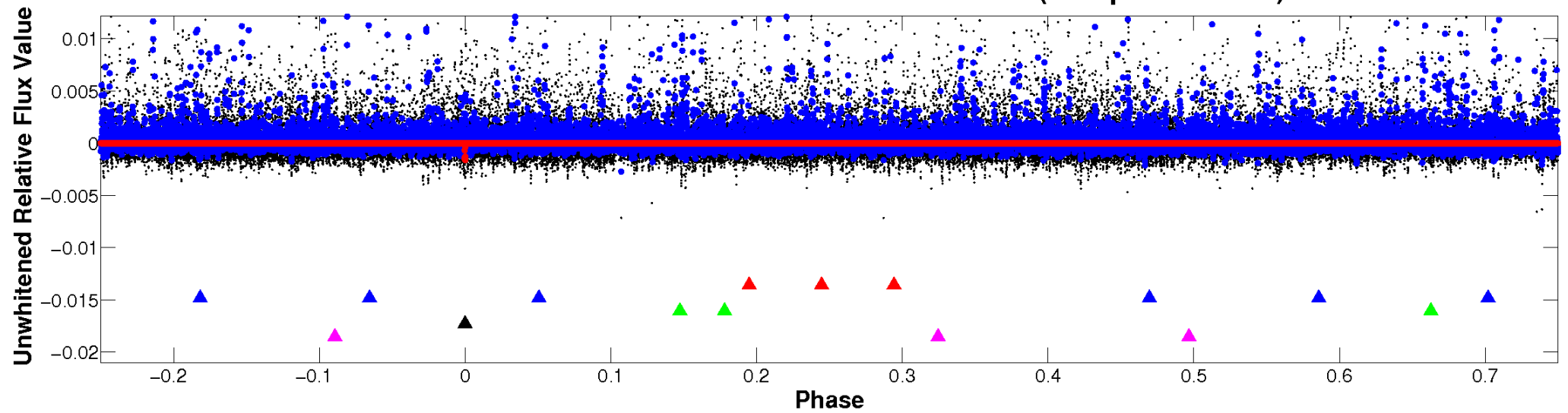
ALT Odd/Even

TCE 008814775-04

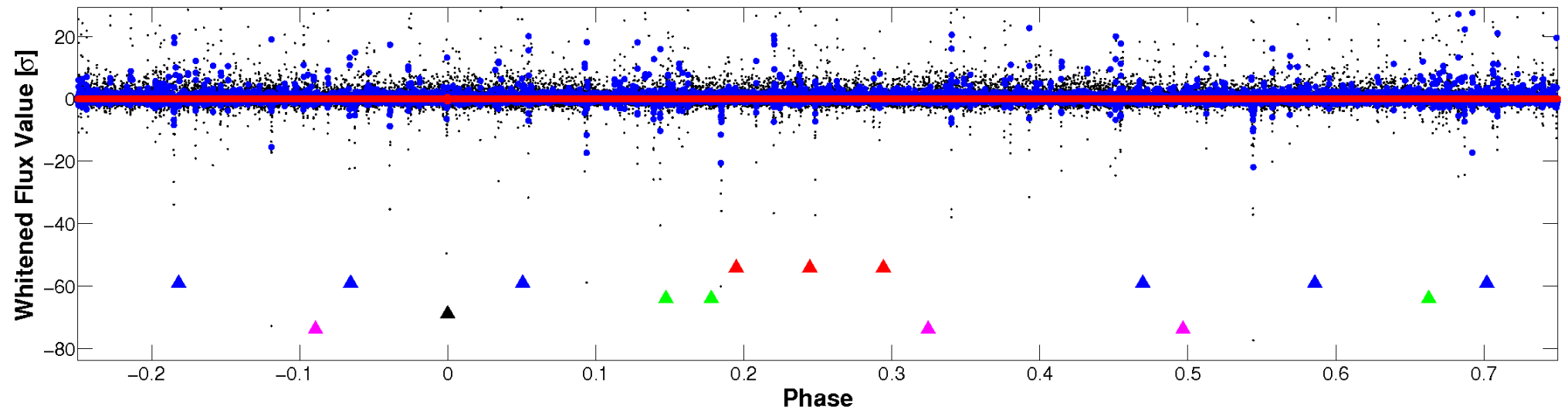


Non-Whitened Vs. Whitened Light Curve

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

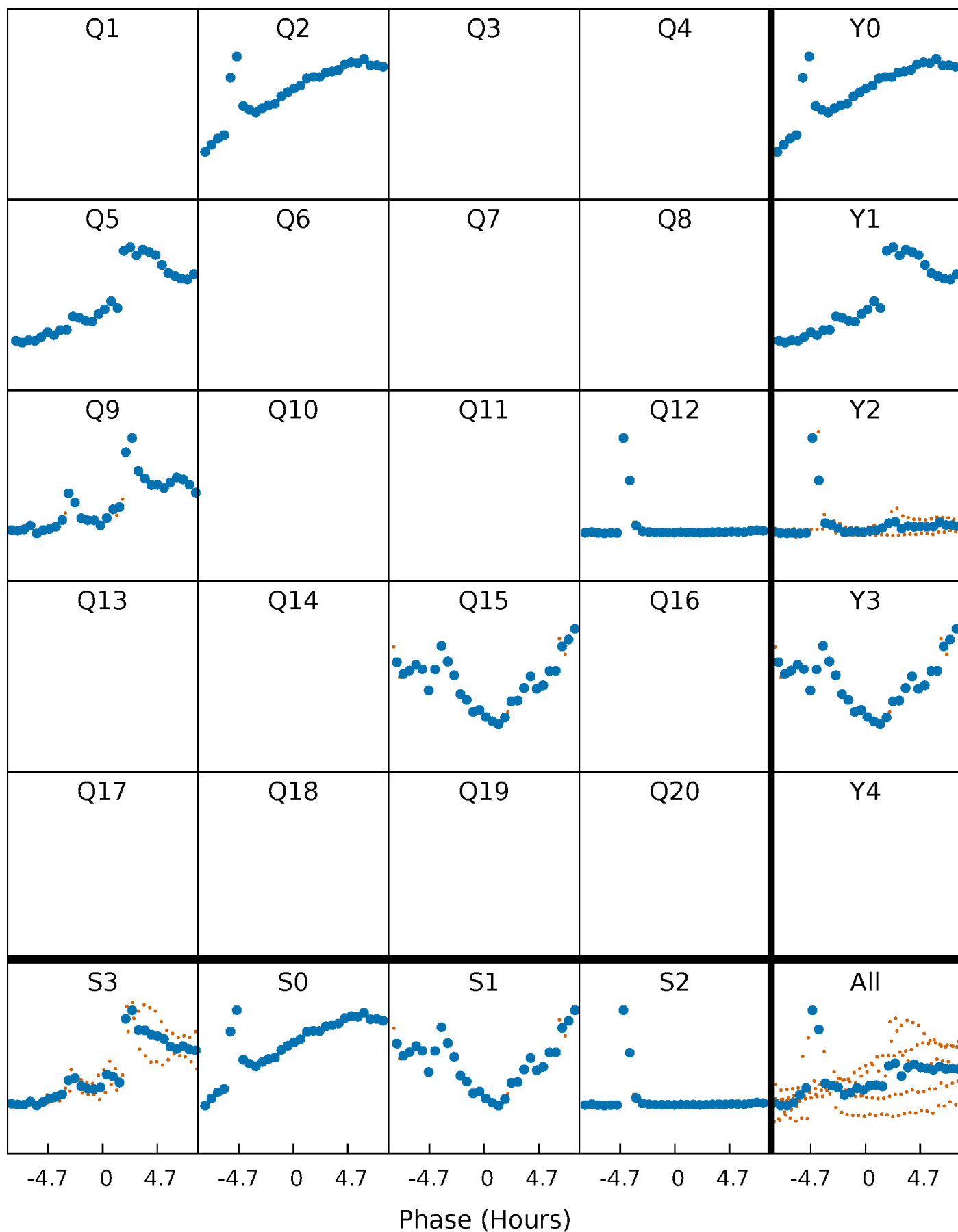


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



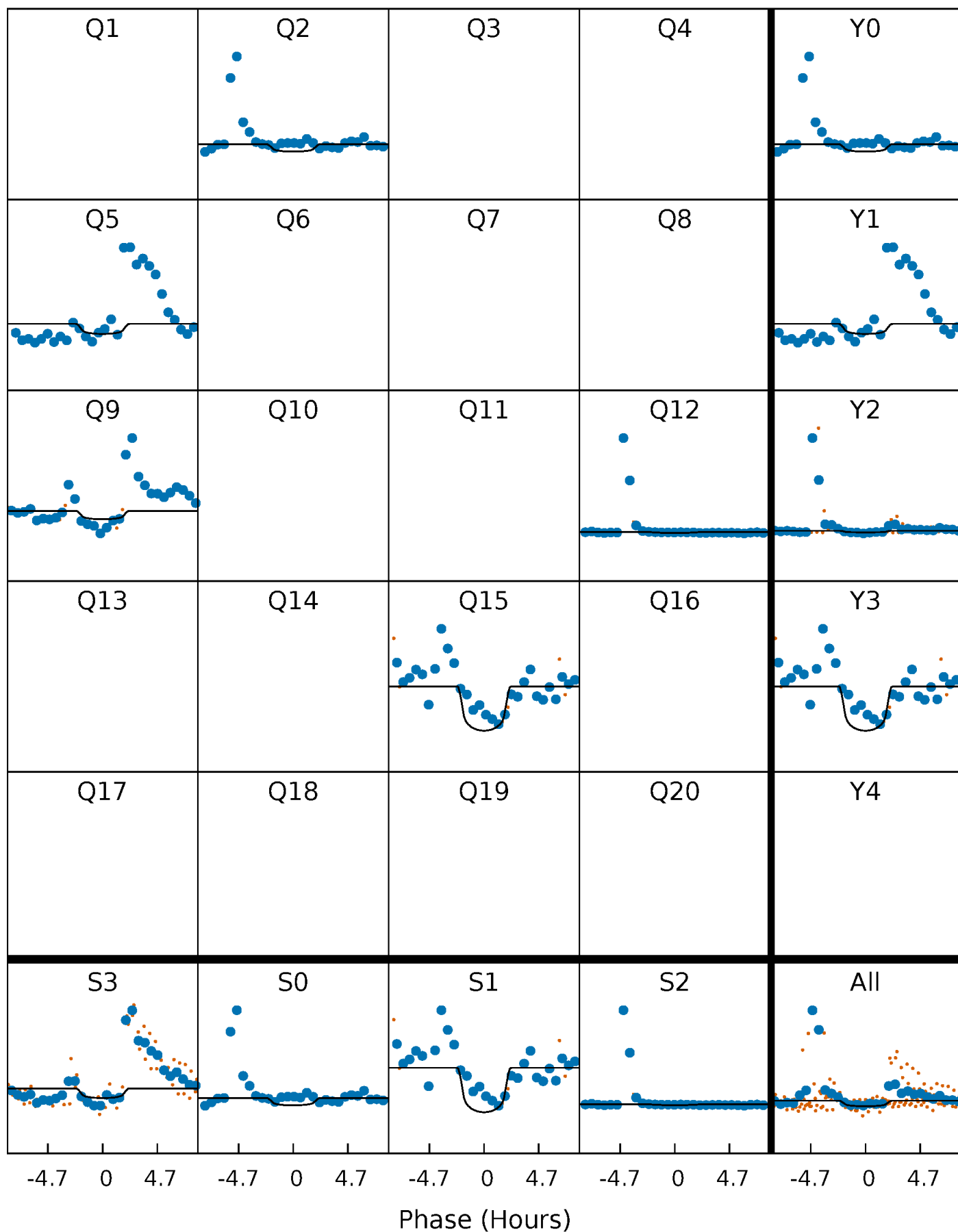
PDC Quarter-Phased Transit Curves

TCE 008814775-04 P=310.849463 Days $T_0=195.920736$ (BKJD)



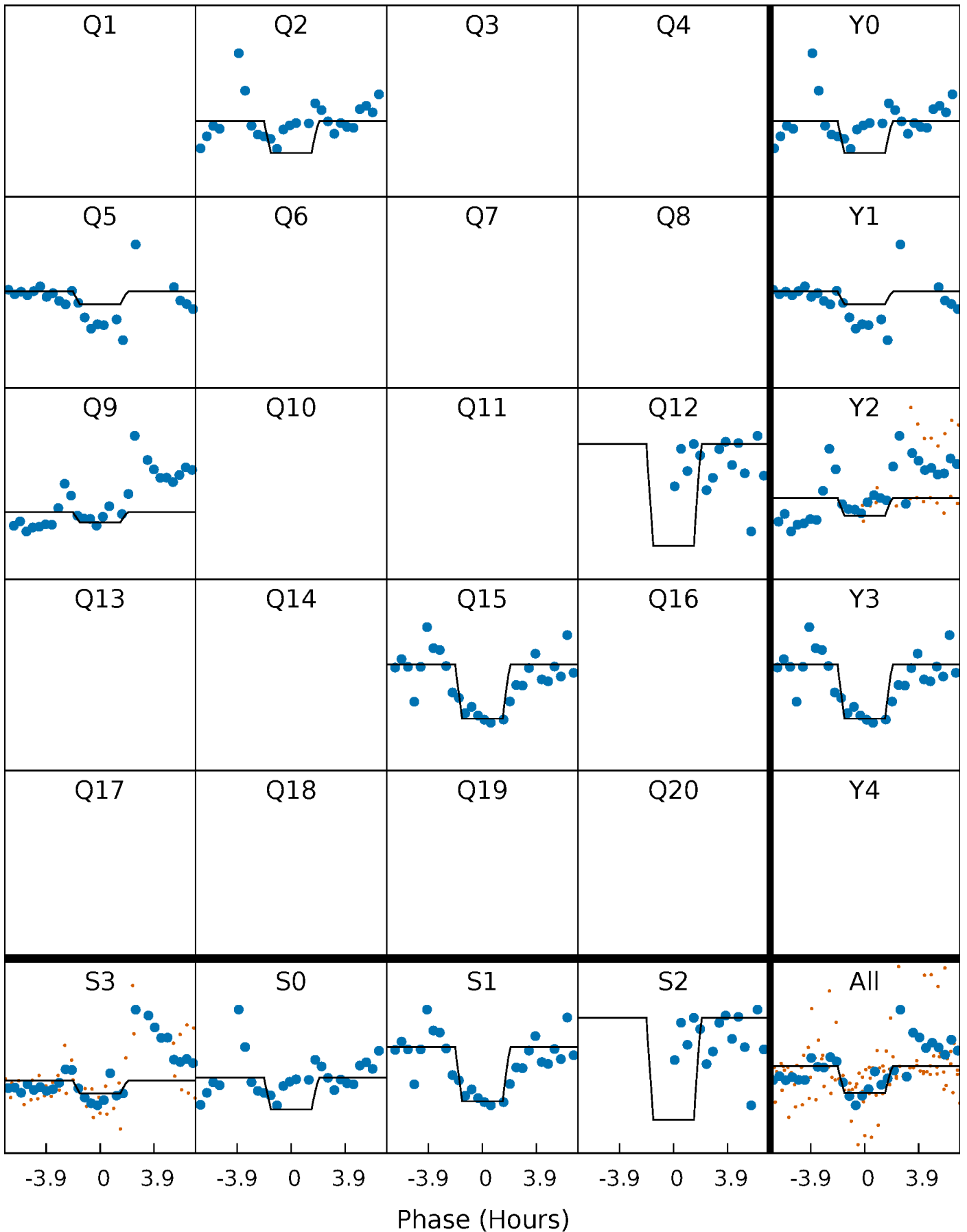
DV Quarter-Phased Transit Curves

TCE 008814775-04 $P=310.849463$ Days $T_0=195.920736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

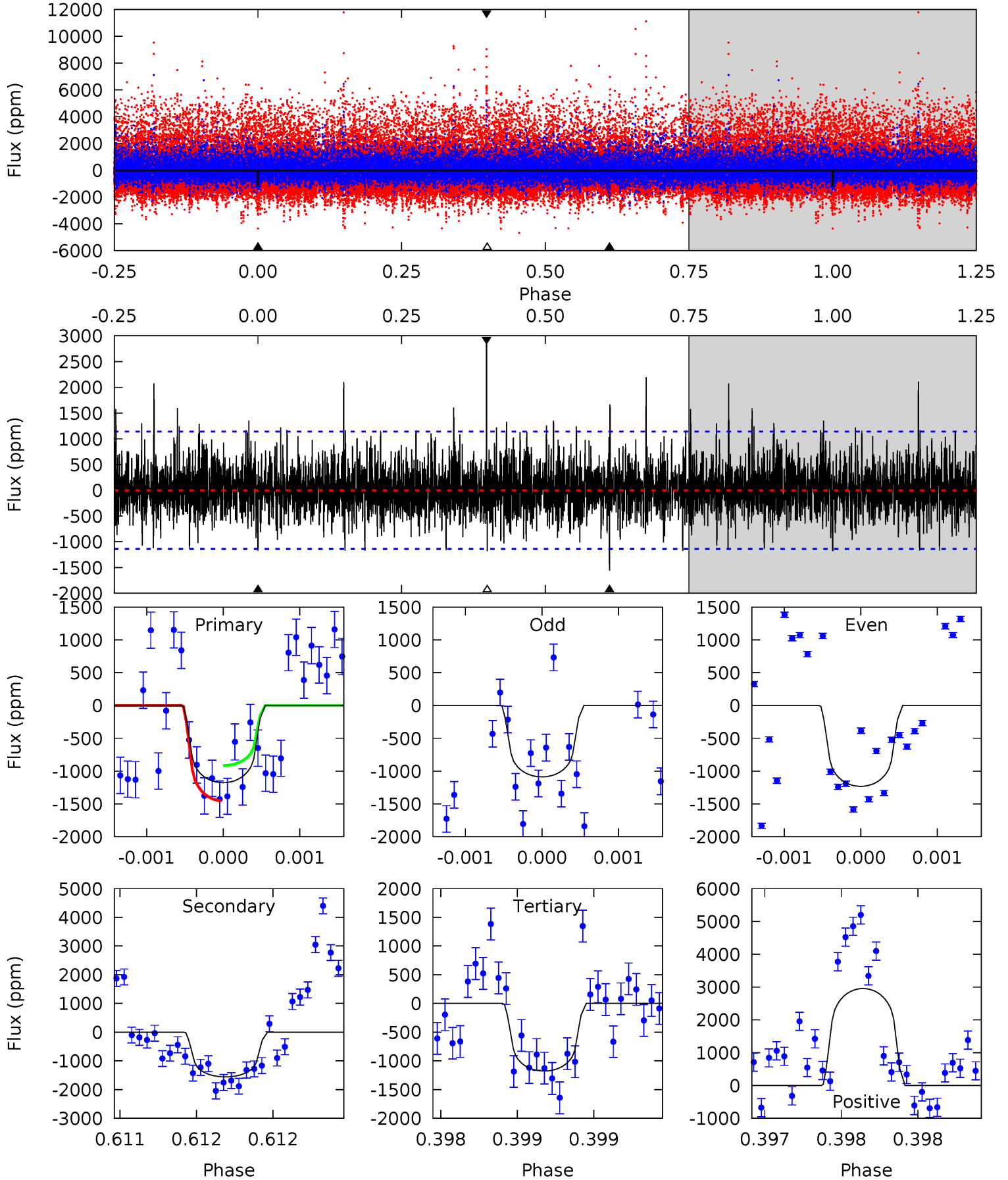
TCE 008814775-04 $P=310.858174$ Days $T_0=195.896772$ (BKJD)



DV Model-Shift Uniqueness Test

008814775-04, P = 310.849463 Days, E = 195.920736 Days

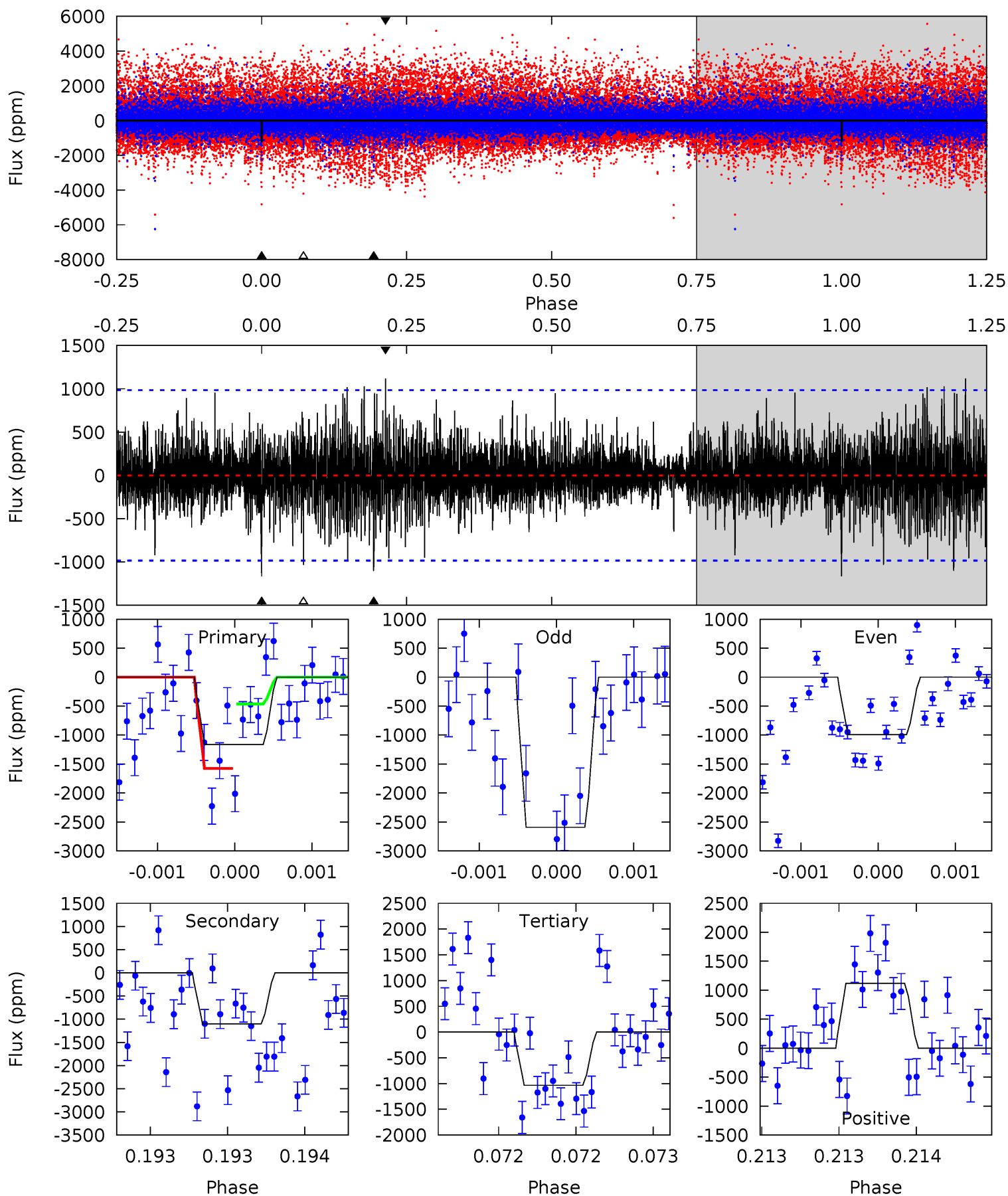
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.73	7.58	5.73	14.4	5.55	3.44	1.92	-0.00	-8.65	1.85	-6.80	0.26	1.09	0.65	1.33



Alt Model-Shift Uniqueness Test

008814775-04, P = 310.858174 Days, E = 195.896772 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.59	6.25	5.85	6.34	5.57	3.48	1.37	0.74	0.25	0.40	-0.09	4.41	2.18	0.49	3.14



Stellar Parameters For KIC 008814775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3348^{+43}_{-37}	$4.972^{+0.044}_{-0.044}$	$0.000^{+0.100}_{-0.100}$	$0.277^{+0.037}_{-0.030}$	$0.263^{+0.048}_{-0.032}$	$17.380^{+3.755}_{-3.391}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+13%/-11%	+18%/-12%	+22%/-20%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008814775-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1558 ± 206	$5.14^{+5.44}_{-3.49}$	143^{+4}_{-3}	2281^{+776}_{-328}	10671^{+92933}_{-8193}
Alt.	-1103 ± 177	$5.01^{+5.25}_{-3.51}$	144^{+3}_{-4}	2207^{+766}_{-305}	8043^{+82404}_{-6178}

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

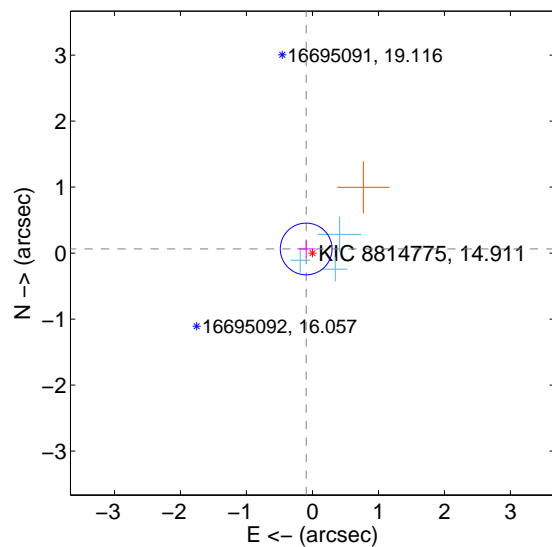
Supplemental centroid analysis for 008814775-04. Kepler magnitude: 14.91. Transit SNR 4.47

There are 4 quarters with good PRF difference image offsets

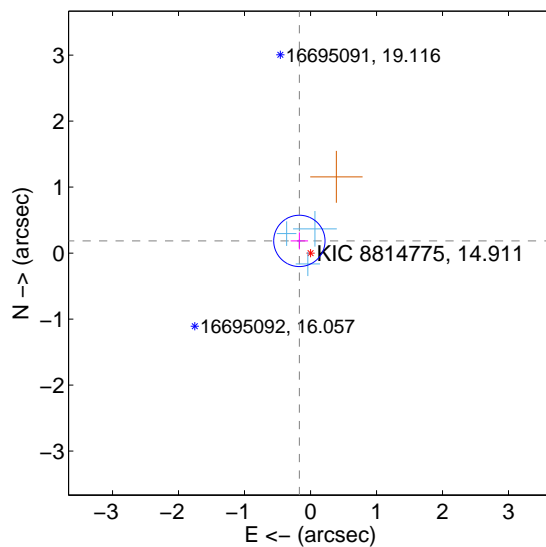
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.114 ± 0.131	0.87	0.095 ± 0.132	0.063 ± 0.128
PRF-fit source offset from KIC position	0.251 ± 0.130	1.93	0.169 ± 0.132	0.185 ± 0.128
photometric centroid source offset	1.14 ± 0.64	1.80	1.11 ± 0.63	-0.30 ± 0.72

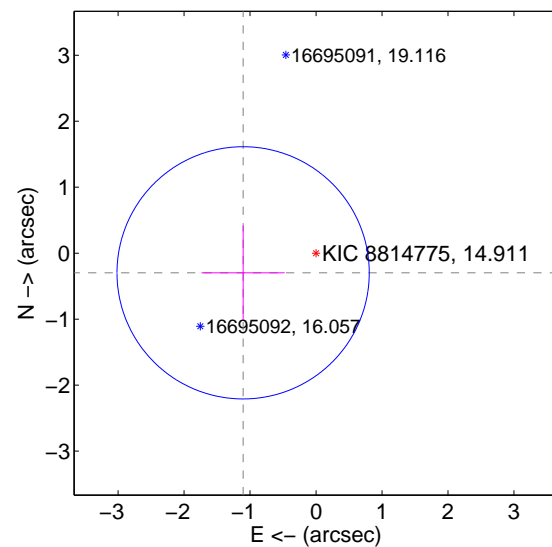
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

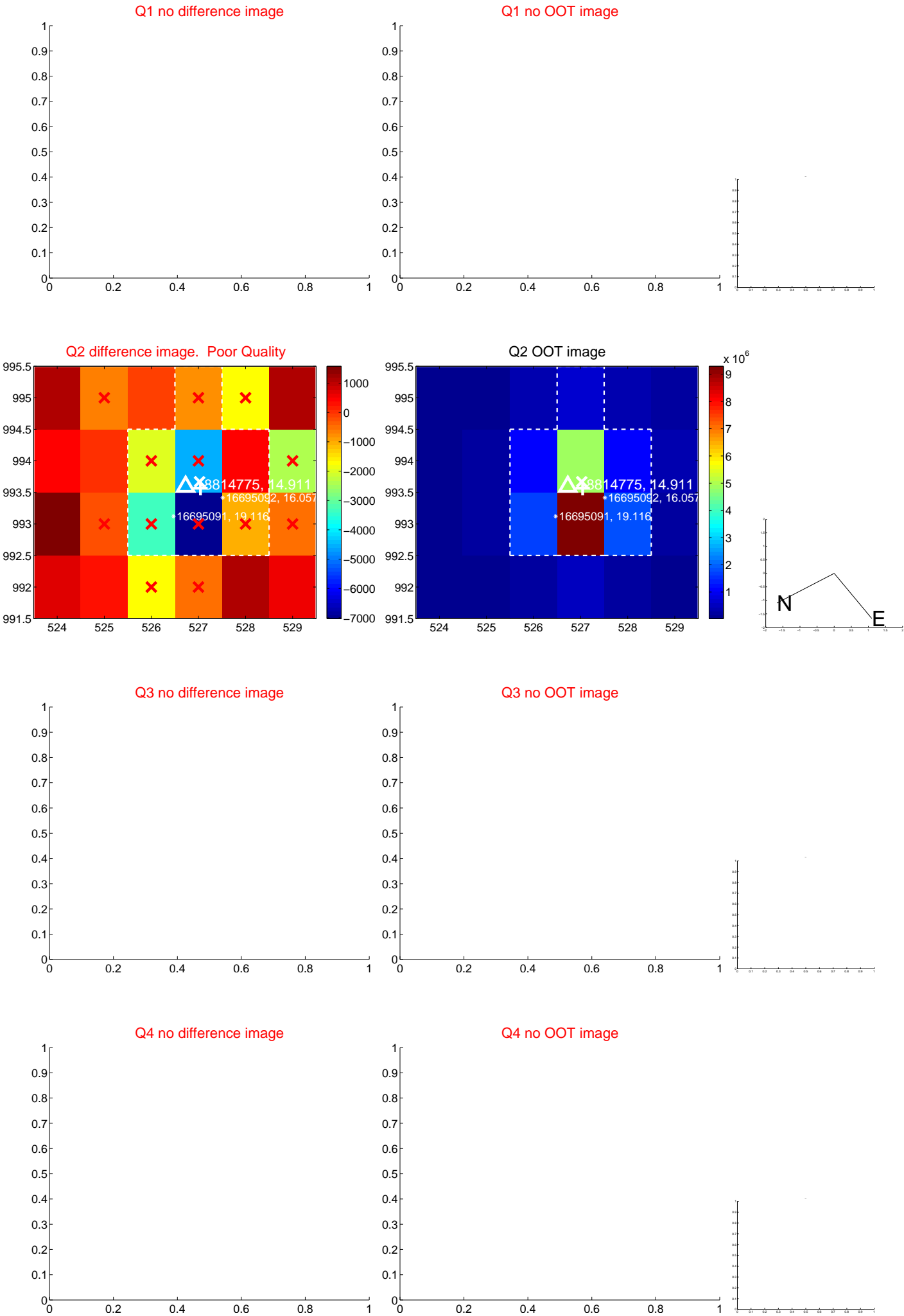


offset from photometric centroids

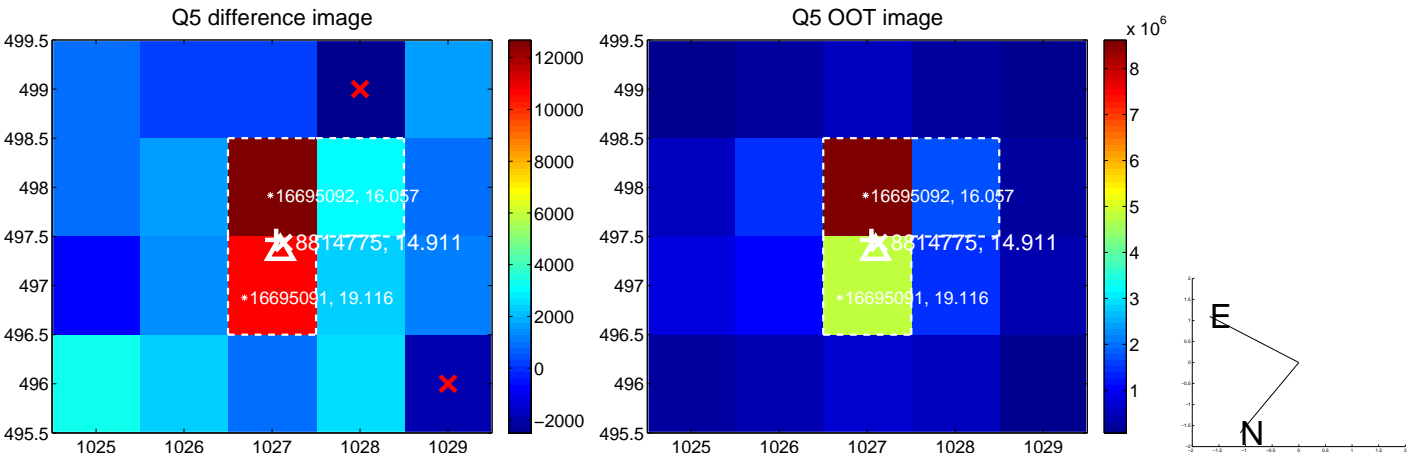


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

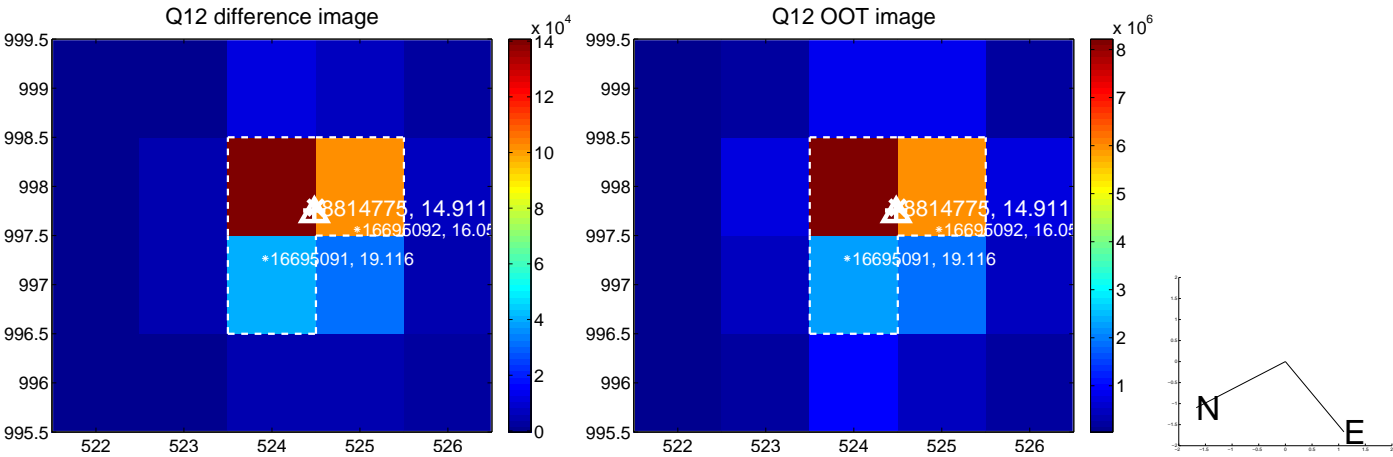
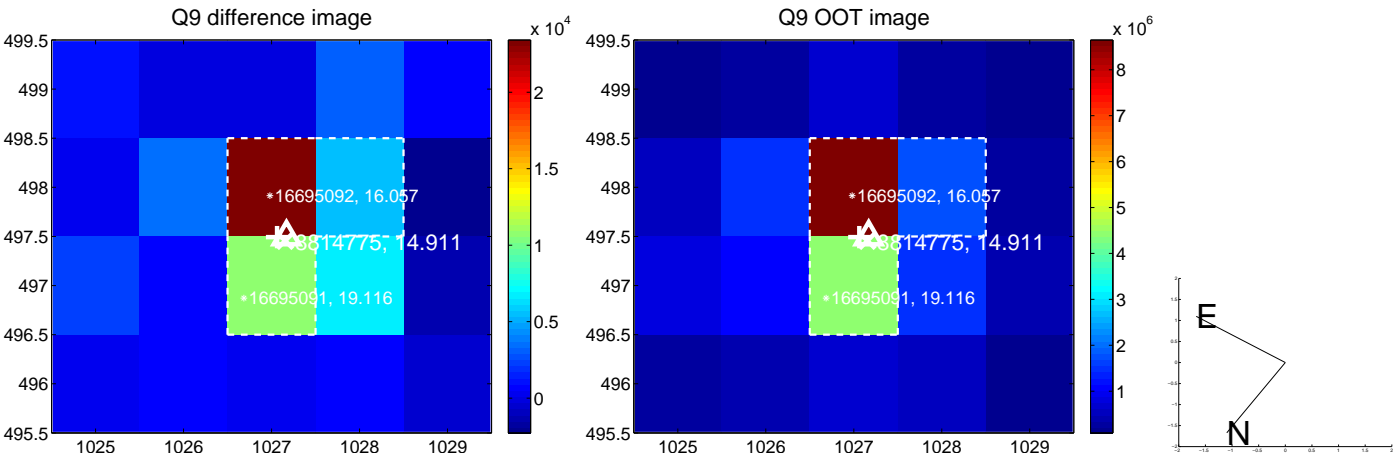
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



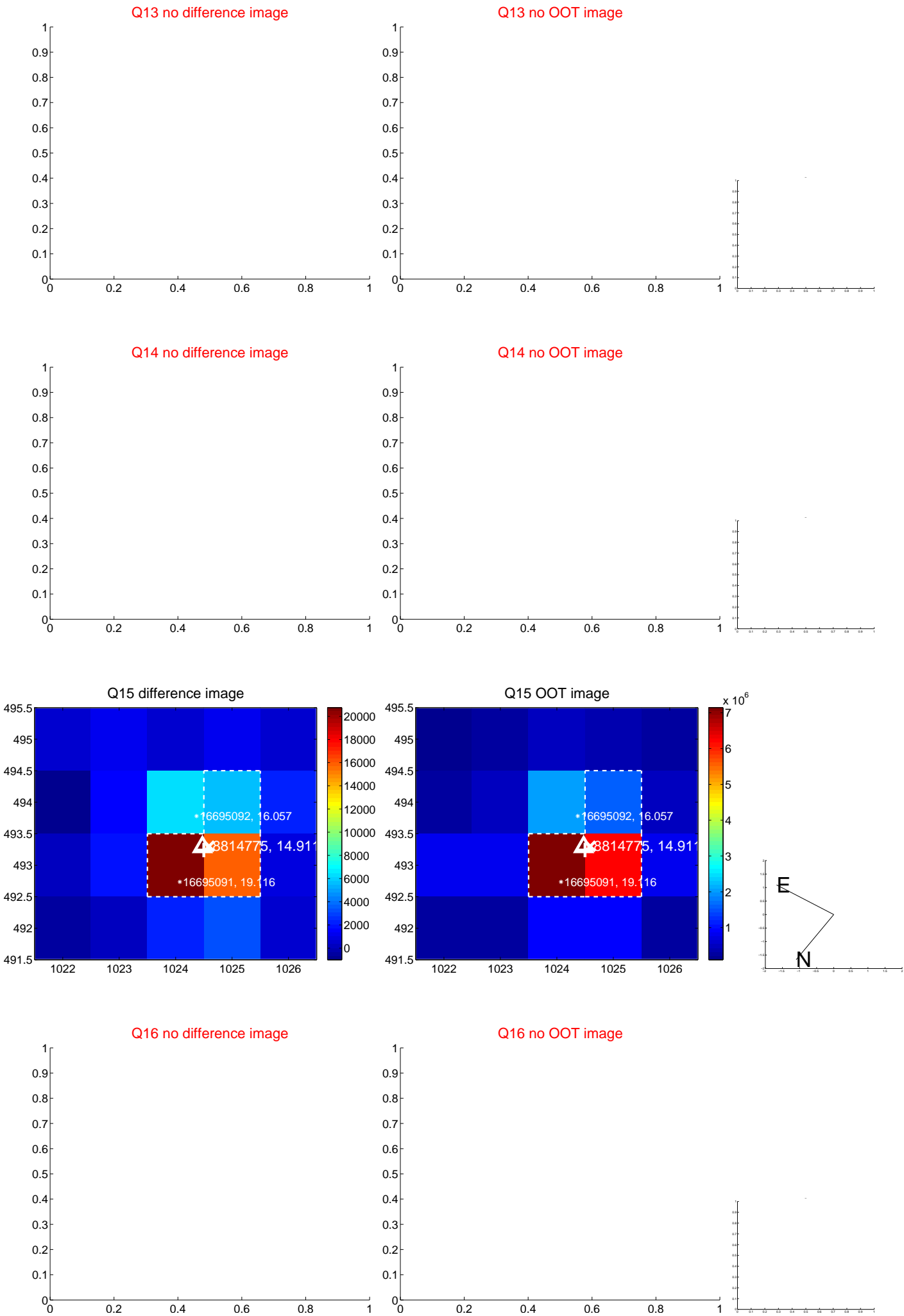
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



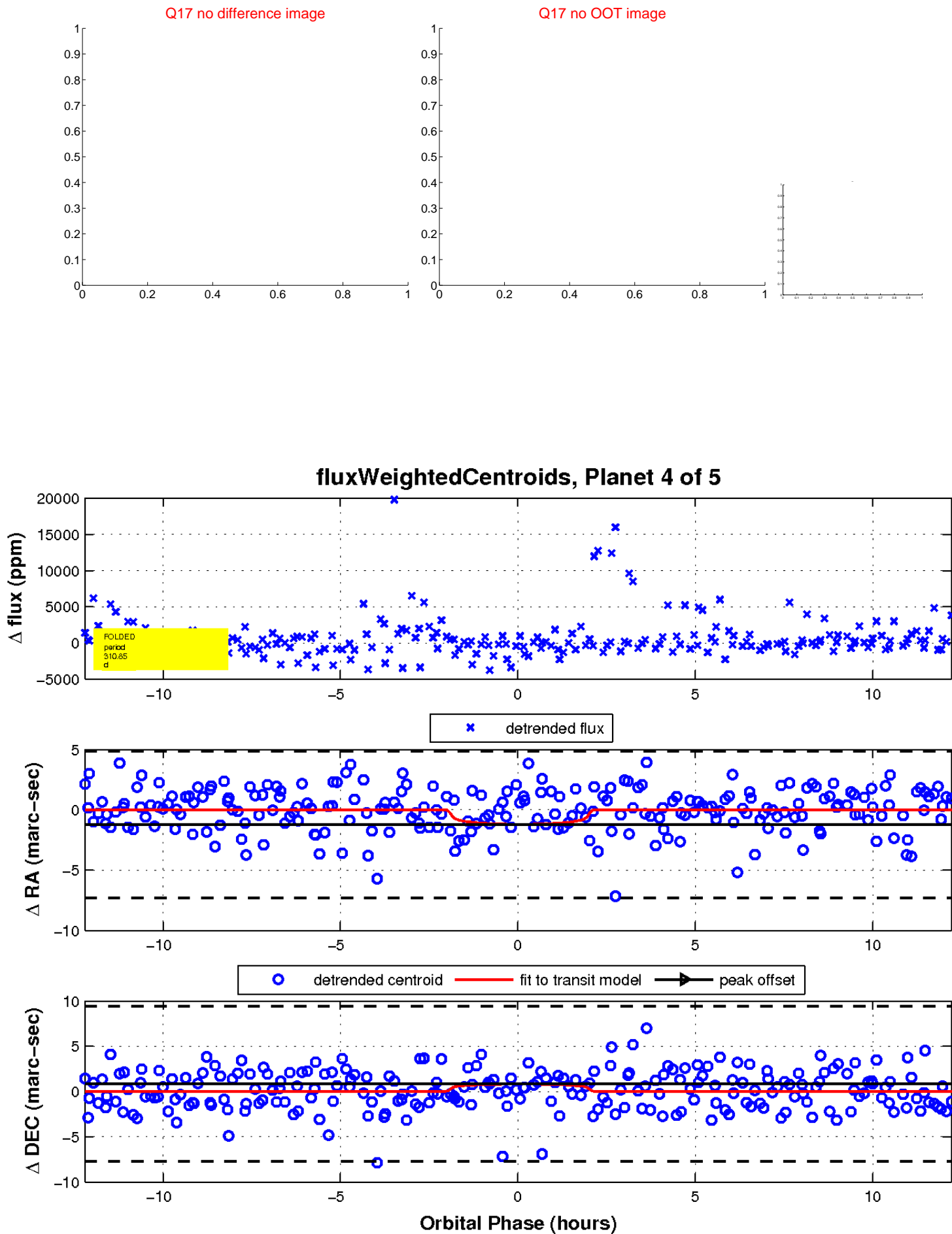
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

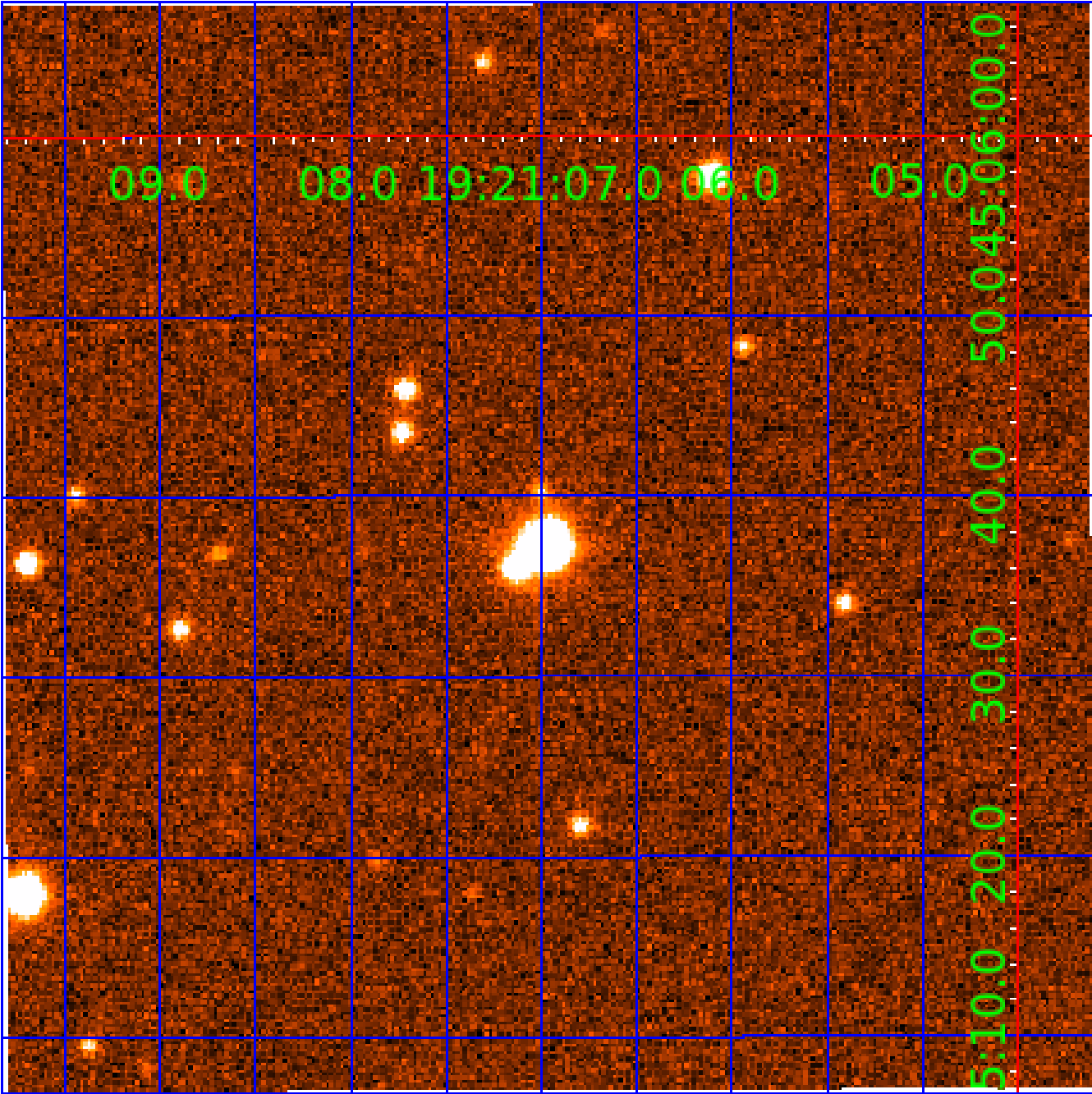


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008814775

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})
008814775-01	OBS	No	606.250345	287.421133	1834.2	8.943	13.0	3.9	0.28	3348	1.31	0.01
008814775-02	OBS	No	274.724978	211.668137	3076.7	5.065	13.1	9.2	0.28	3348	1.52	0.03
008814775-03	OBS	No	471.034669	552.600340	2624.6	4.154	11.7	6.9	0.28	3348	1.42	0.01
008814775-04	OBS	No	310.849463	195.920736	1616.9	4.092	12.6	4.5	0.28	3348	1.11	0.03
008814775-05	OBS	No	493.026623	296.827214	2786.0	3.887	12.3	6.7	0.28	3348	1.50	0.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008814775-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008814775-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008814775-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—CENT_FEW_DIFFS
008814775-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008814775-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

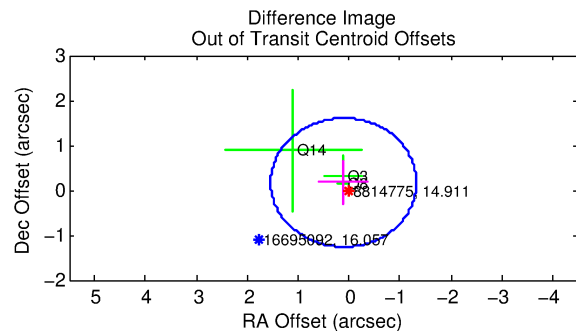
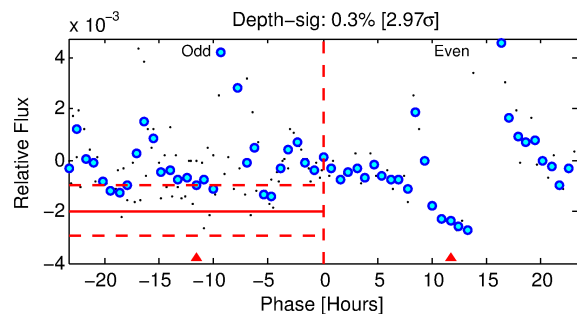
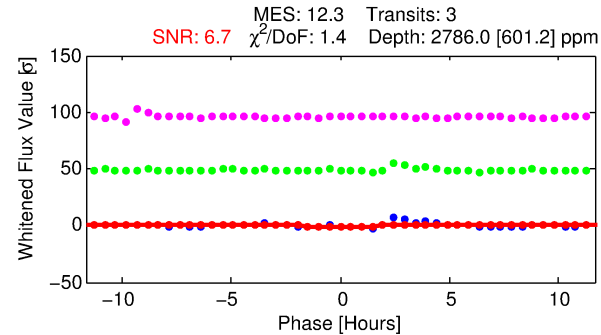
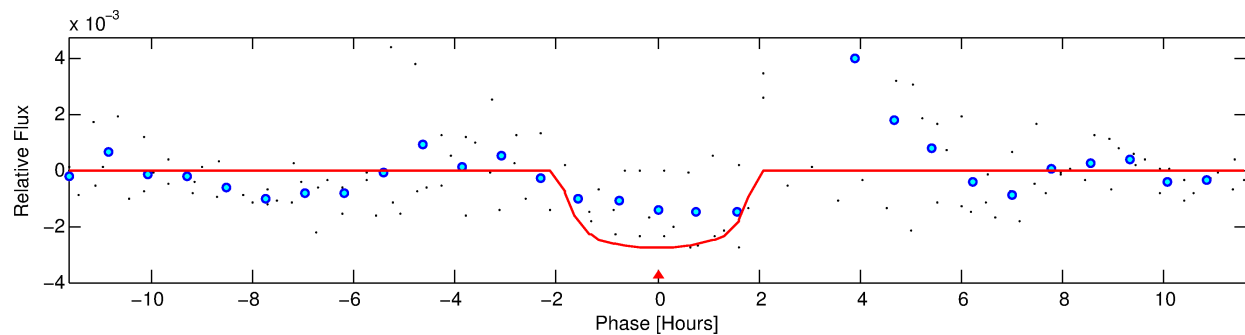
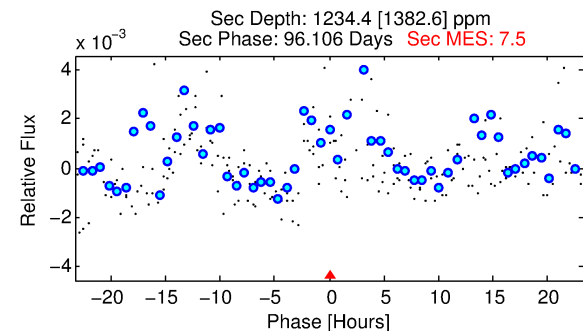
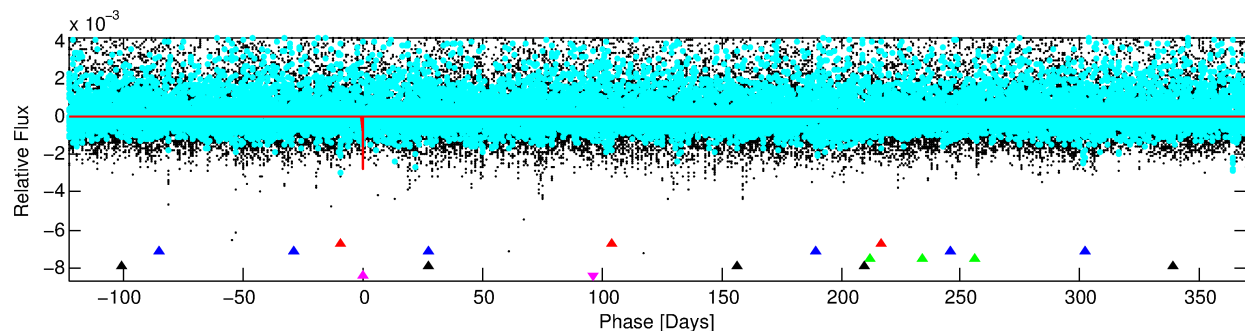
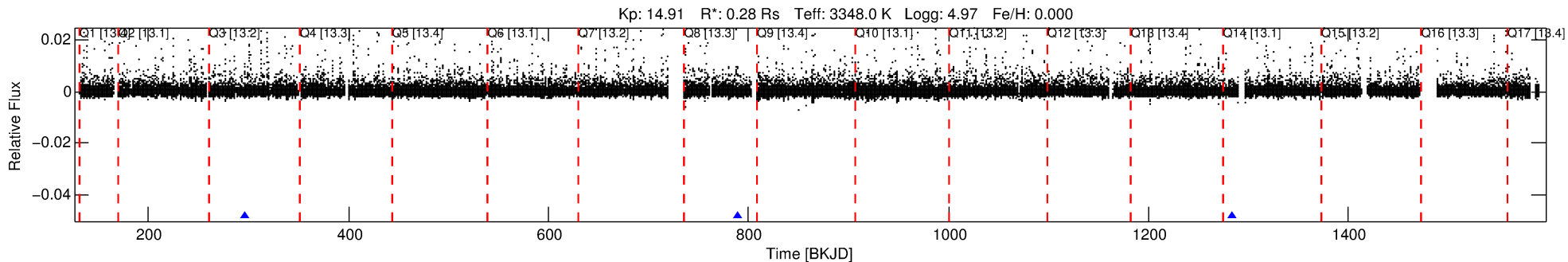
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008814775-05

No Significant Match Found

DV One-Page Summary

KIC: 8814775 Candidate: 5 of 5 Period: 493.027 d



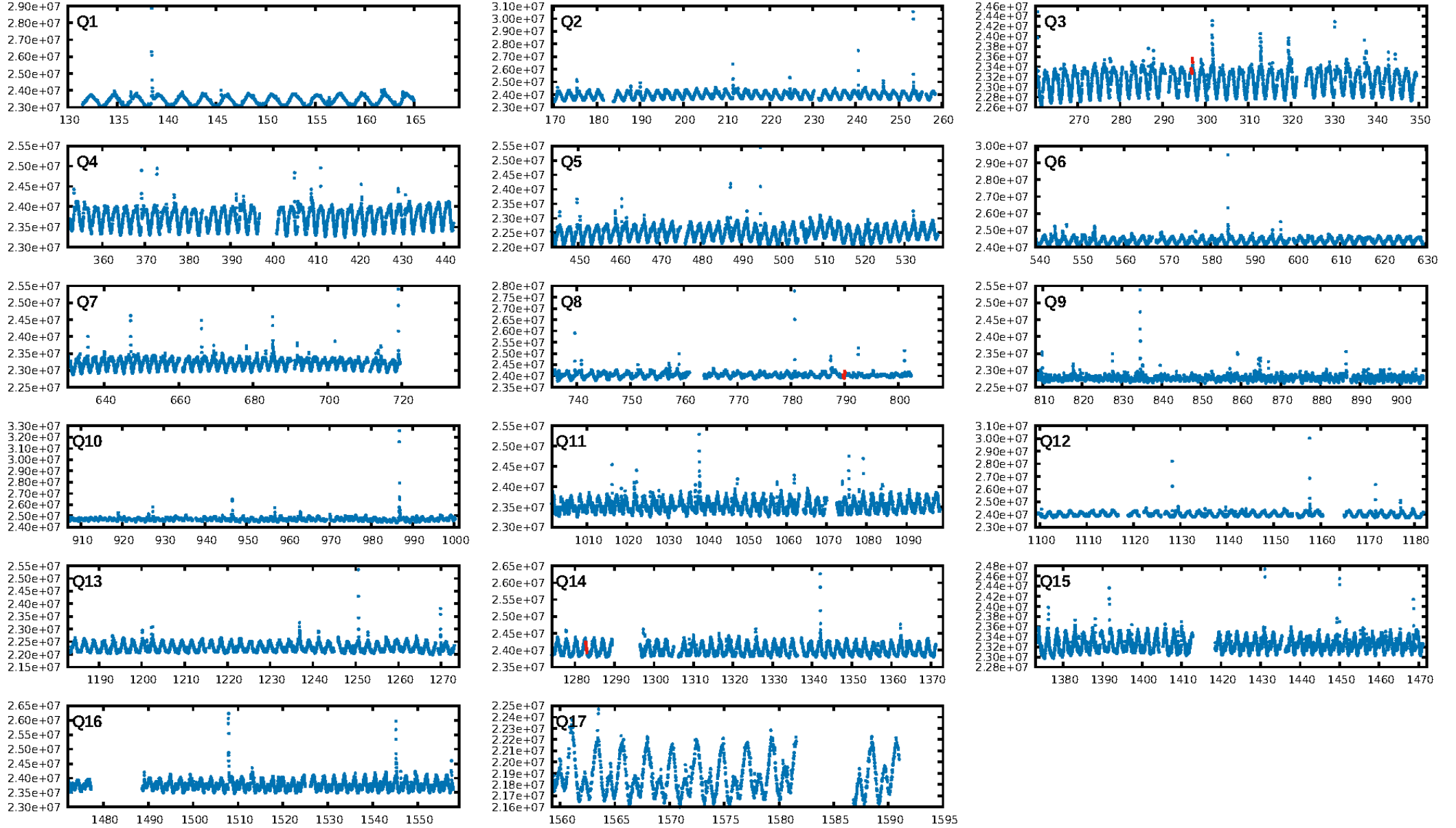
DV Fit Results:

Period = 493.02662 [0.00690] d
Epoch = 296.8272 [0.0081] BKJD
Rp/R* = 0.0495 [0.0523]
a/R* = 881.70 [3928.79]
b = 0.52 [6.17]
Seff = 0.01 [0.00]
Teq = 88 [3] K
Rp = 1.50 [1.59] Re
a = 0.7821 [0.0745] AU
Ag = 185469.38 [444161.20] [0.42σ]
Teffp = 2820 [1687] K [1.62σ]

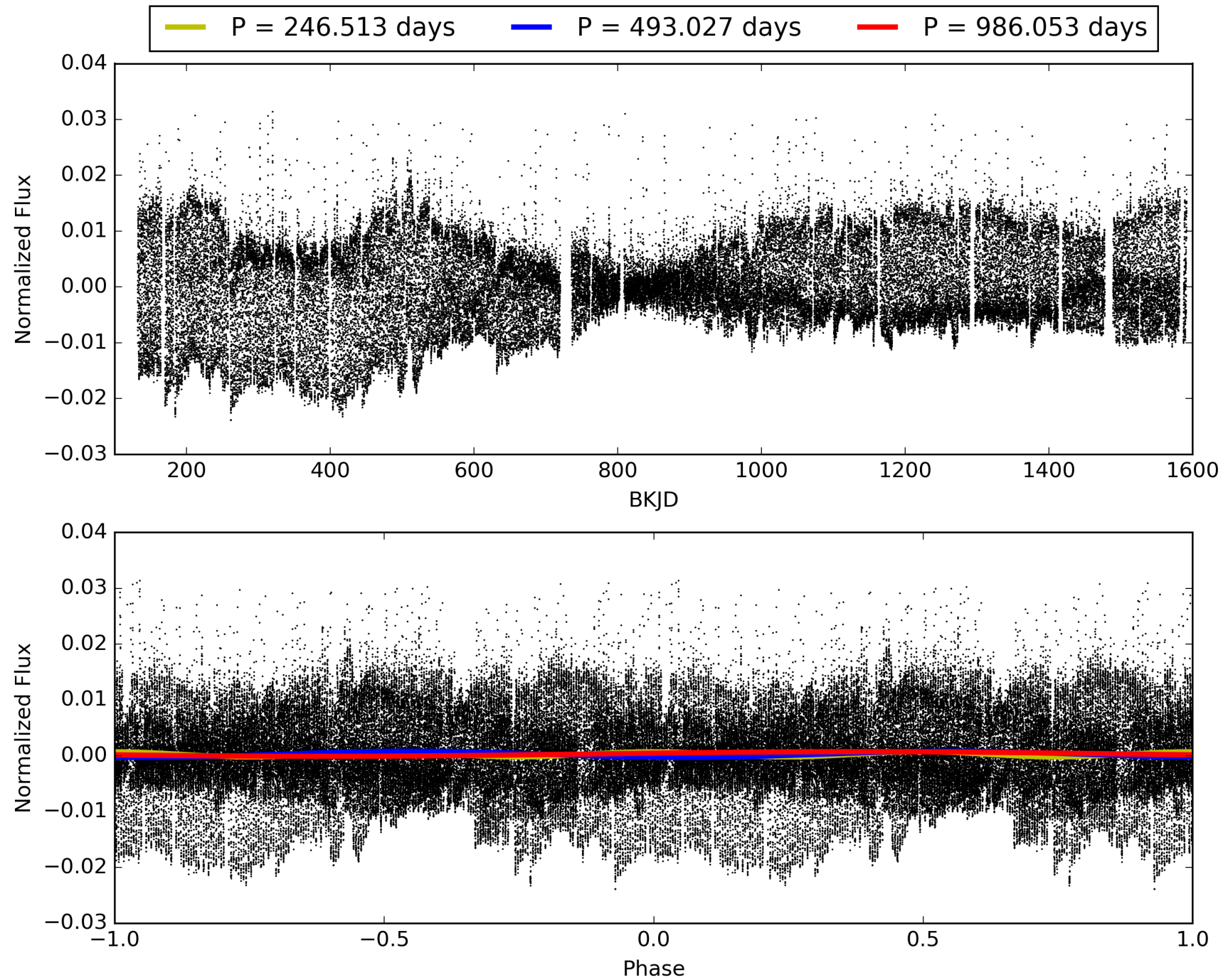
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [92.77σ]
LongPeriod-sig: 100.0% [278.66σ]
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 70.7%
Bootstrap-pfa: 3.53e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.082
Centroid-sig: 36.6%
Centroid-so: 0.151 arcsec [0.30σ]
OotOffset-rm: 0.200 arcsec [0.42σ]
KicOffset-rm: 0.395 arcsec [0.83σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008814775-05, PDC Light Curves

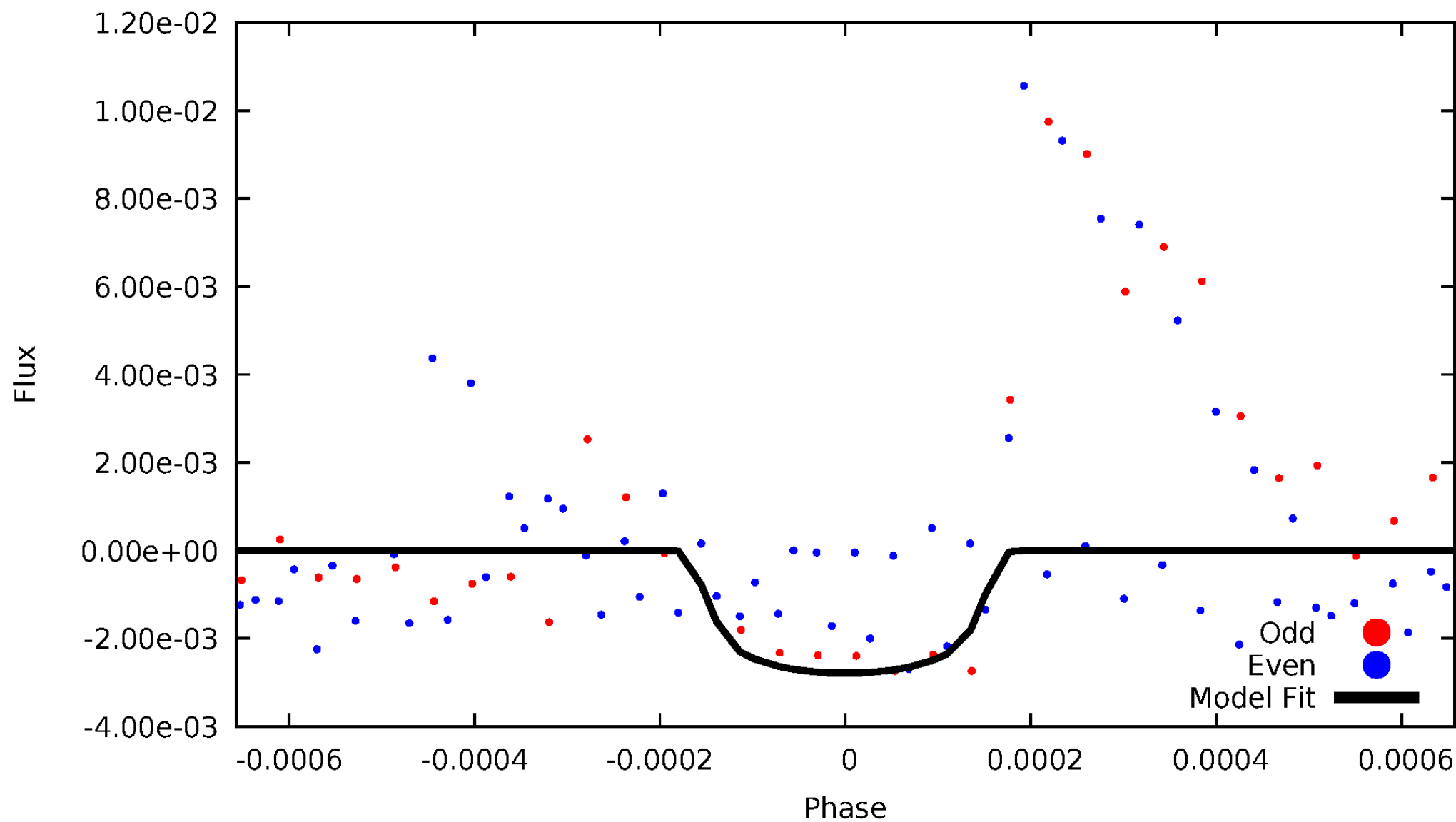


TCE 008814775-05



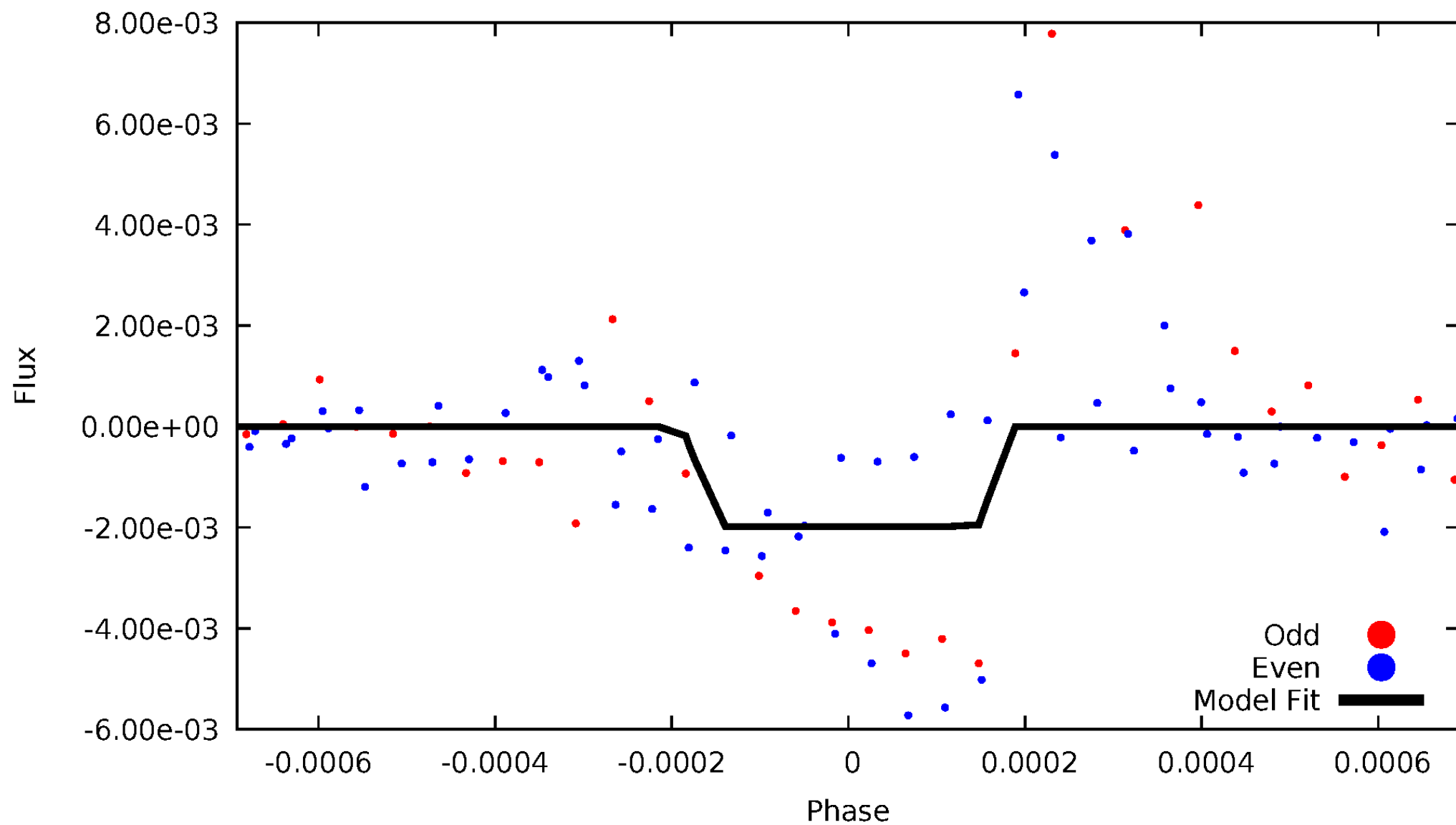
DV Odd/Even

TCE 008814775-05



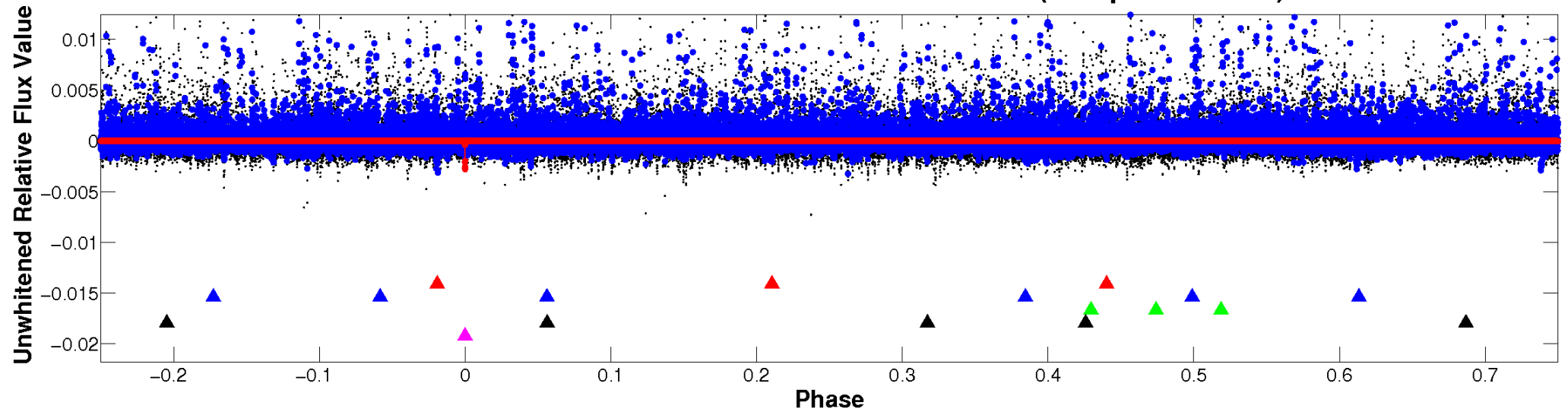
ALT Odd/Even

TCE 008814775-05

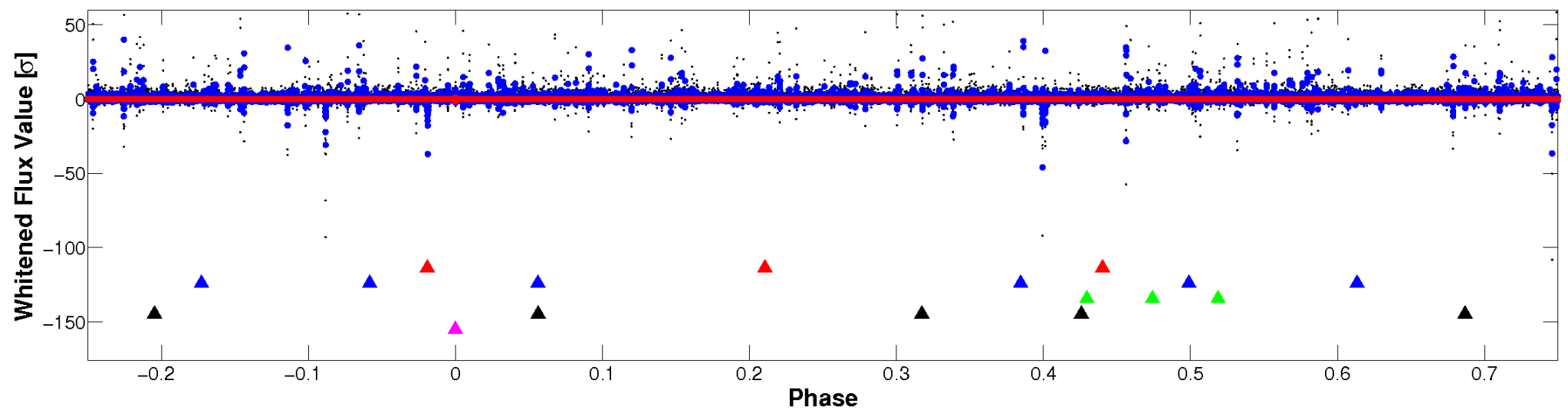


Non-Whitened Vs. Whitened Light Curve

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

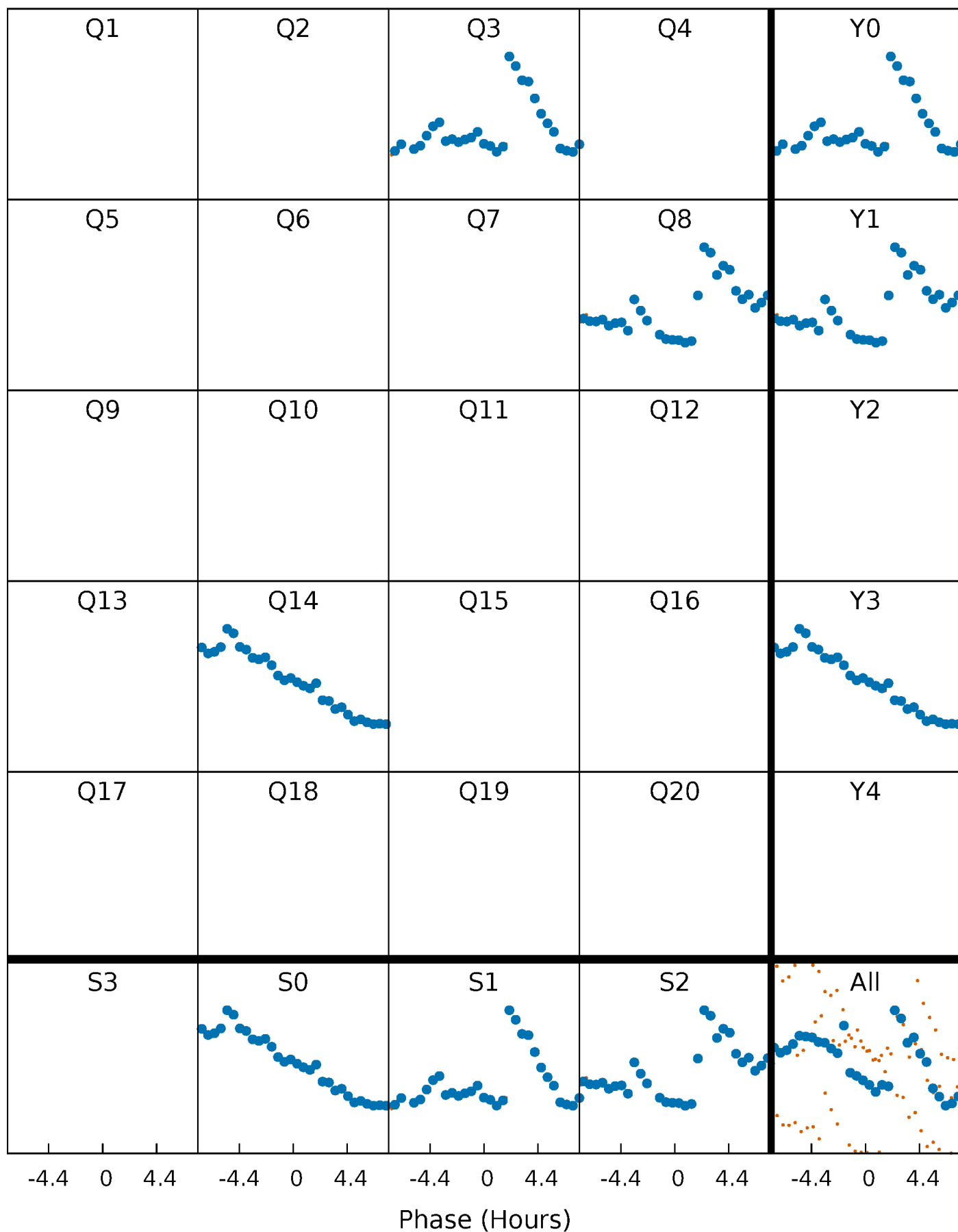


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



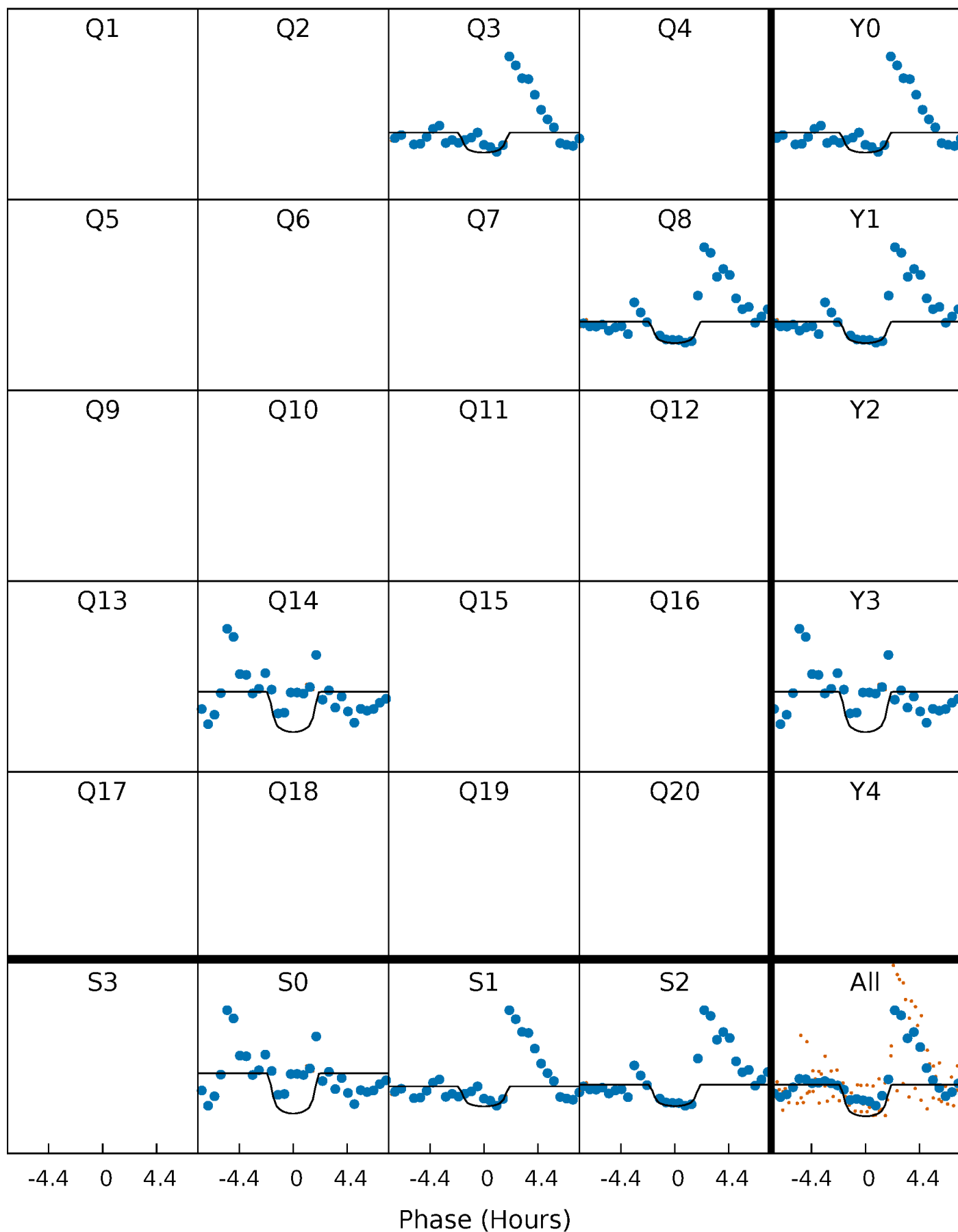
PDC Quarter-Phased Transit Curves

TCE 008814775-05 $P=493.026623$ Days $T_0=296.827214$ (BKJD)



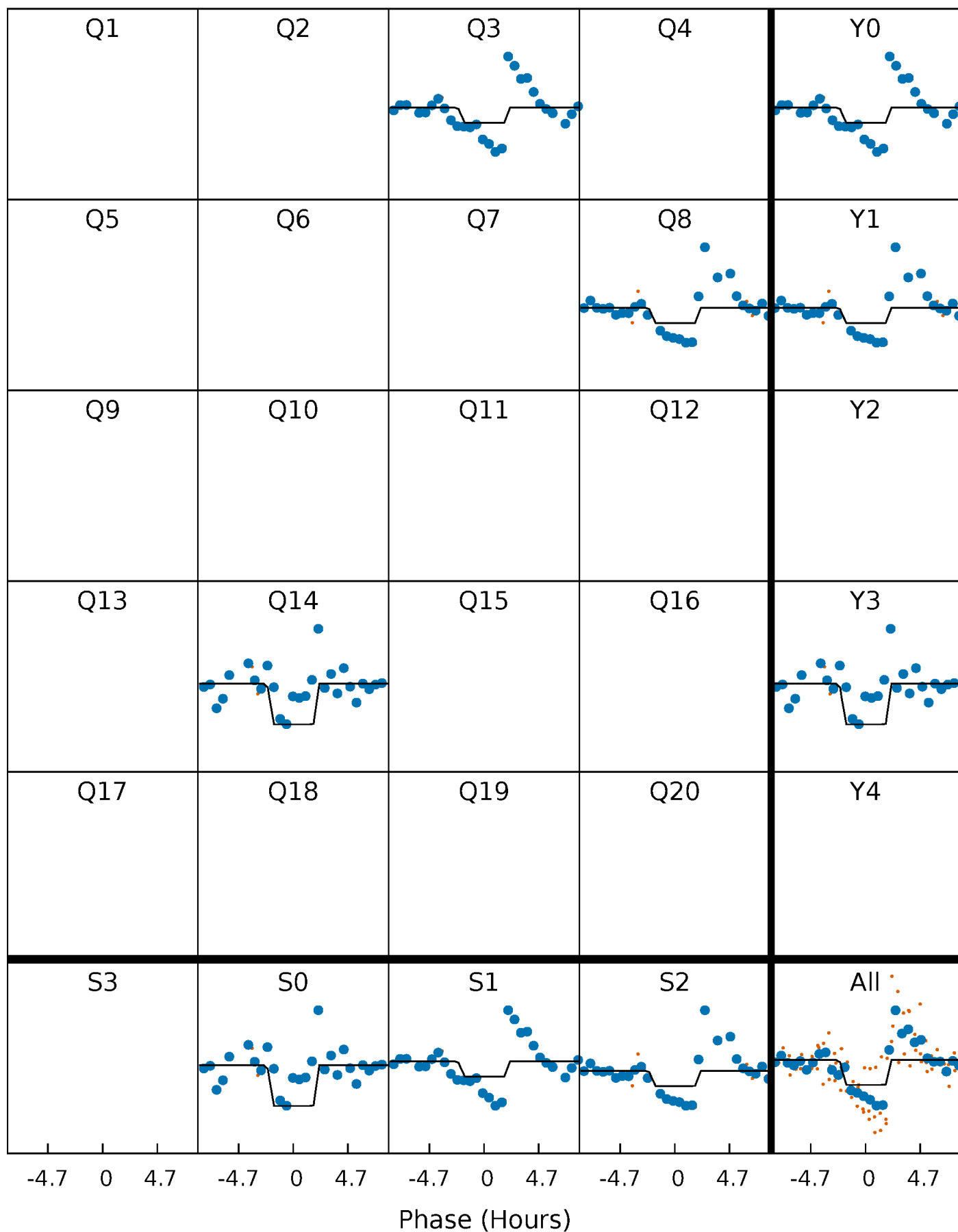
DV Quarter-Phased Transit Curves

TCE 008814775-05 $P=493.026623$ Days $T_0=296.827214$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

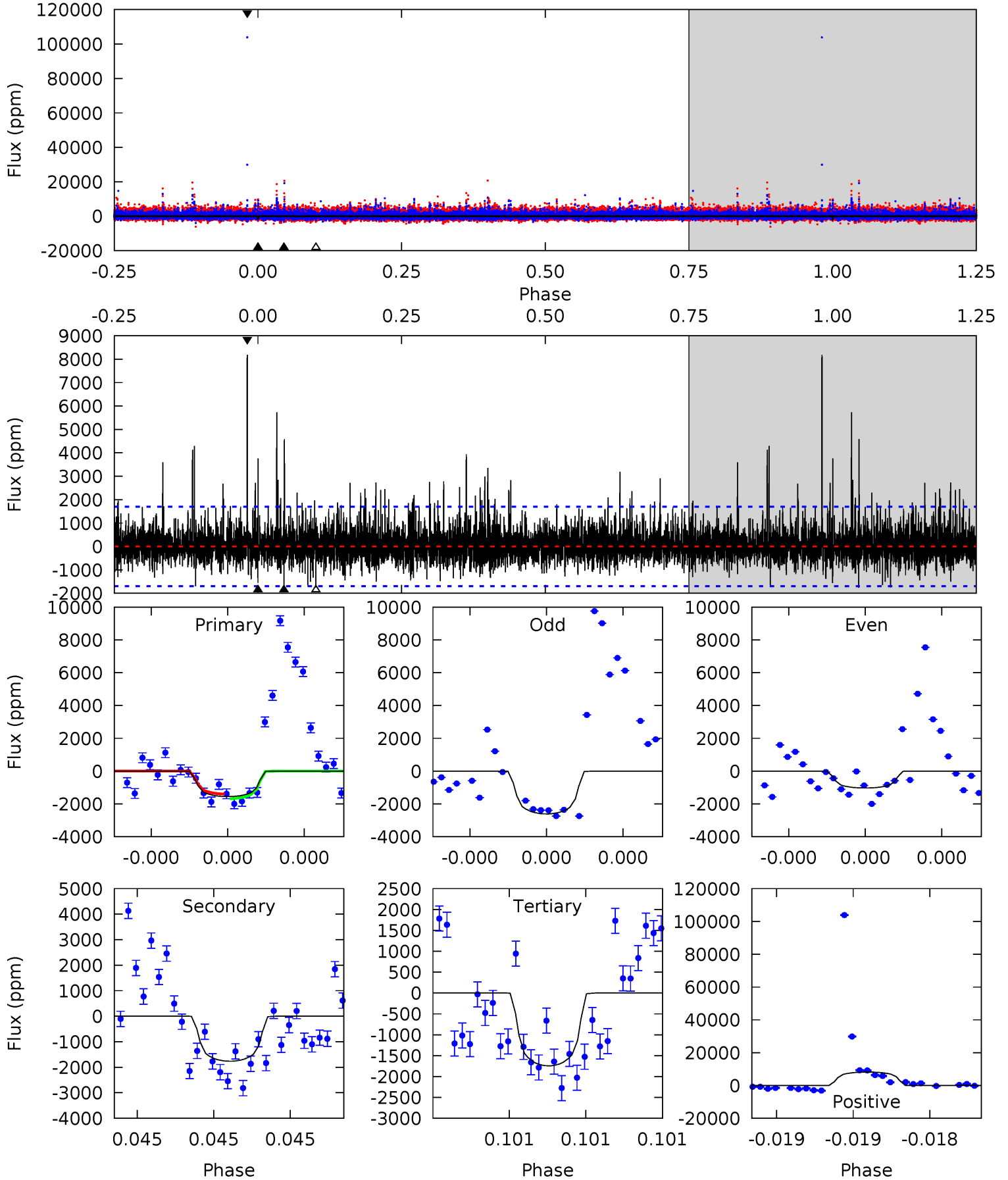
TCE 008814775-05 $P=493.020936$ Days $T_0=296.827324$ (BKJD)



DV Model-Shift Uniqueness Test

008814775-05, P = 493.026623 Days, E = 296.827214 Days

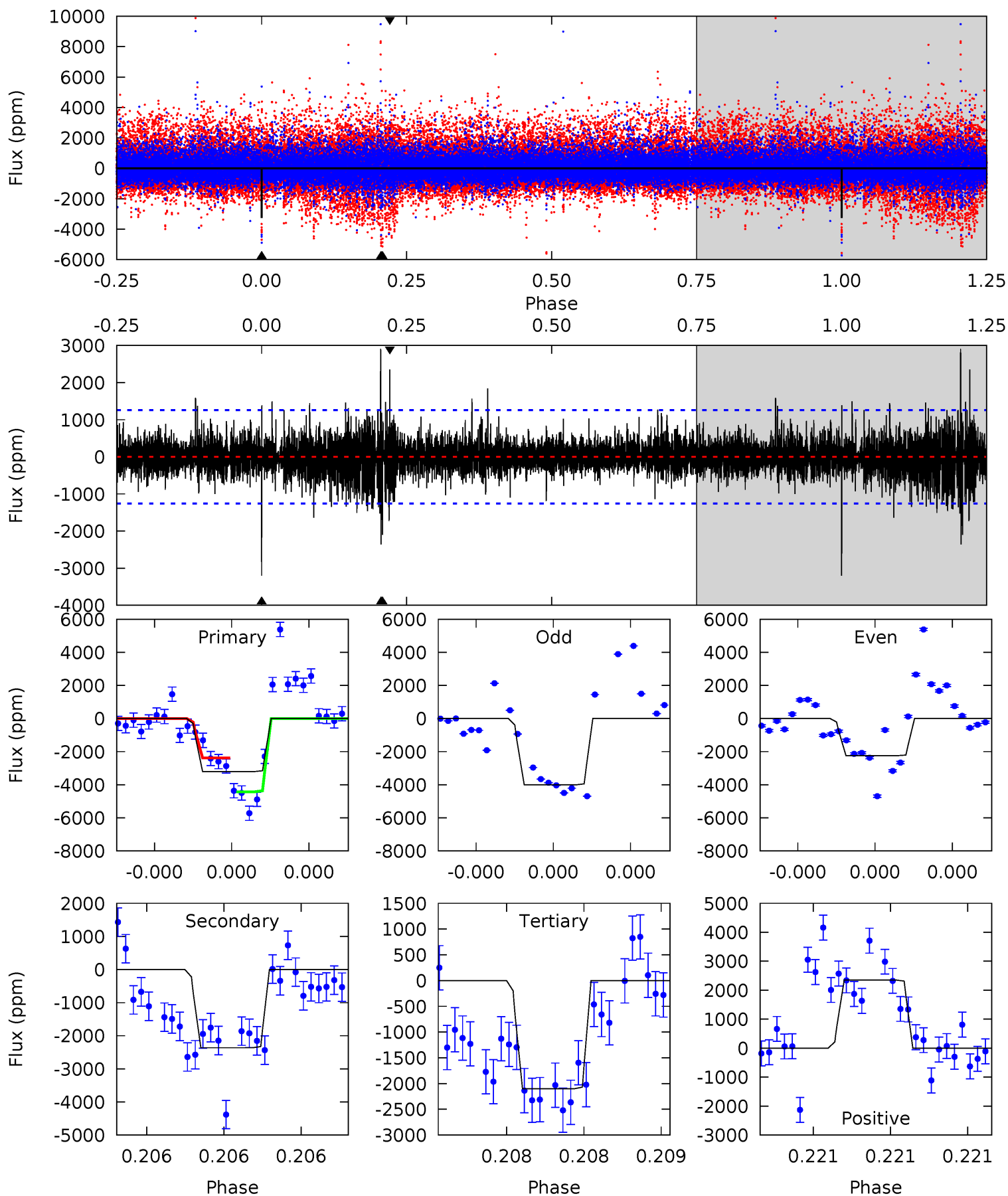
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.14	5.84	5.77	27.1	5.63	3.57	1.96	-0.63	-22.0	0.07	-21.3	1.20	0.92	0.82	0.47



Alt Model-Shift Uniqueness Test

008814775-05, P = 493.020936 Days, E = 296.827324 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	10.6	9.39	10.5	5.63	3.56	1.53	4.94	3.82	1.17	0.05	3.03	0.73	0.48	4.50



Stellar Parameters For KIC 008814775

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3348^{+43}_{-37}	$4.972^{+0.044}_{-0.044}$	$0.000^{+0.100}_{-0.100}$	$0.277^{+0.037}_{-0.030}$	$0.263^{+0.048}_{-0.032}$	$17.380^{+3.755}_{-3.391}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+13%/-11%	+18%/-12%	+22%/-20%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008814775-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1763 ± 302	$1.86^{+1.44}_{-1.17}$	123^{+3}_{-3}	2994^{+1172}_{-421}	$171344^{+1114601}_{-116962}$
Alt.	-2362 ± 224	$1.69^{+1.46}_{-1.08}$	123^{+3}_{-3}	3198^{+1308}_{-484}	$275371^{+1789038}_{-194929}$

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 $A_{obs} \gg 1.0$

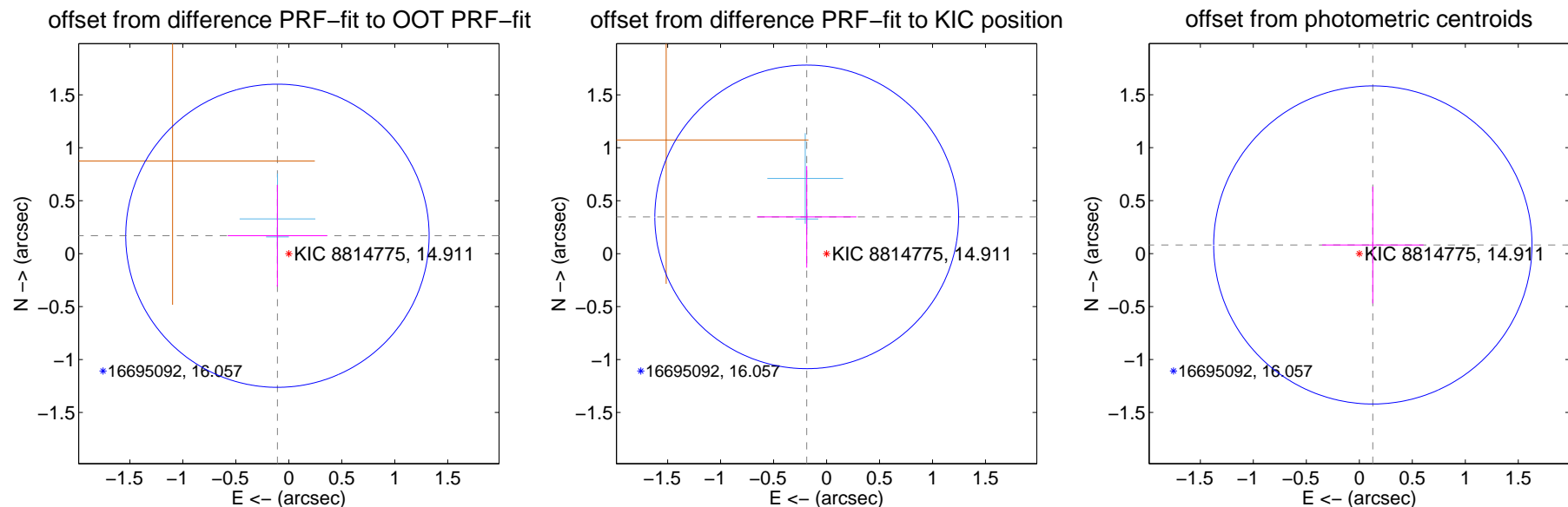
DV Centroid Data

Supplemental centroid analysis for 008814775-05. Kepler magnitude: 14.91. Transit SNR 6.70

There are 2 quarters with good PRF difference image offsets

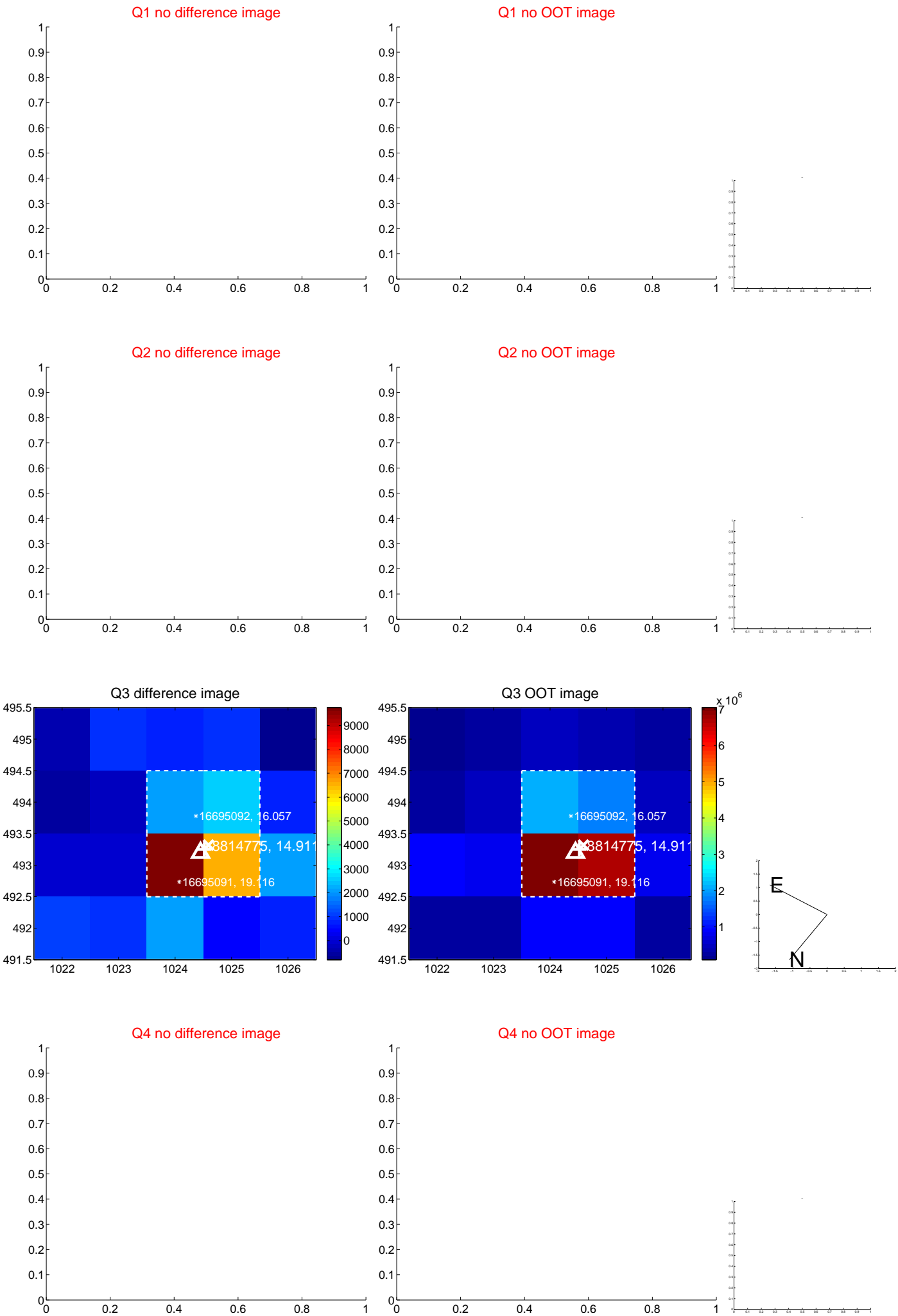
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.200 ± 0.477	0.42	0.107 ± 0.469	0.169 ± 0.480
PRF-fit source offset from KIC position	0.395 ± 0.478	0.83	0.187 ± 0.469	0.347 ± 0.480
photometric centroid source offset	0.15 ± 0.50	0.30	-0.13 ± 0.48	0.08 ± 0.55

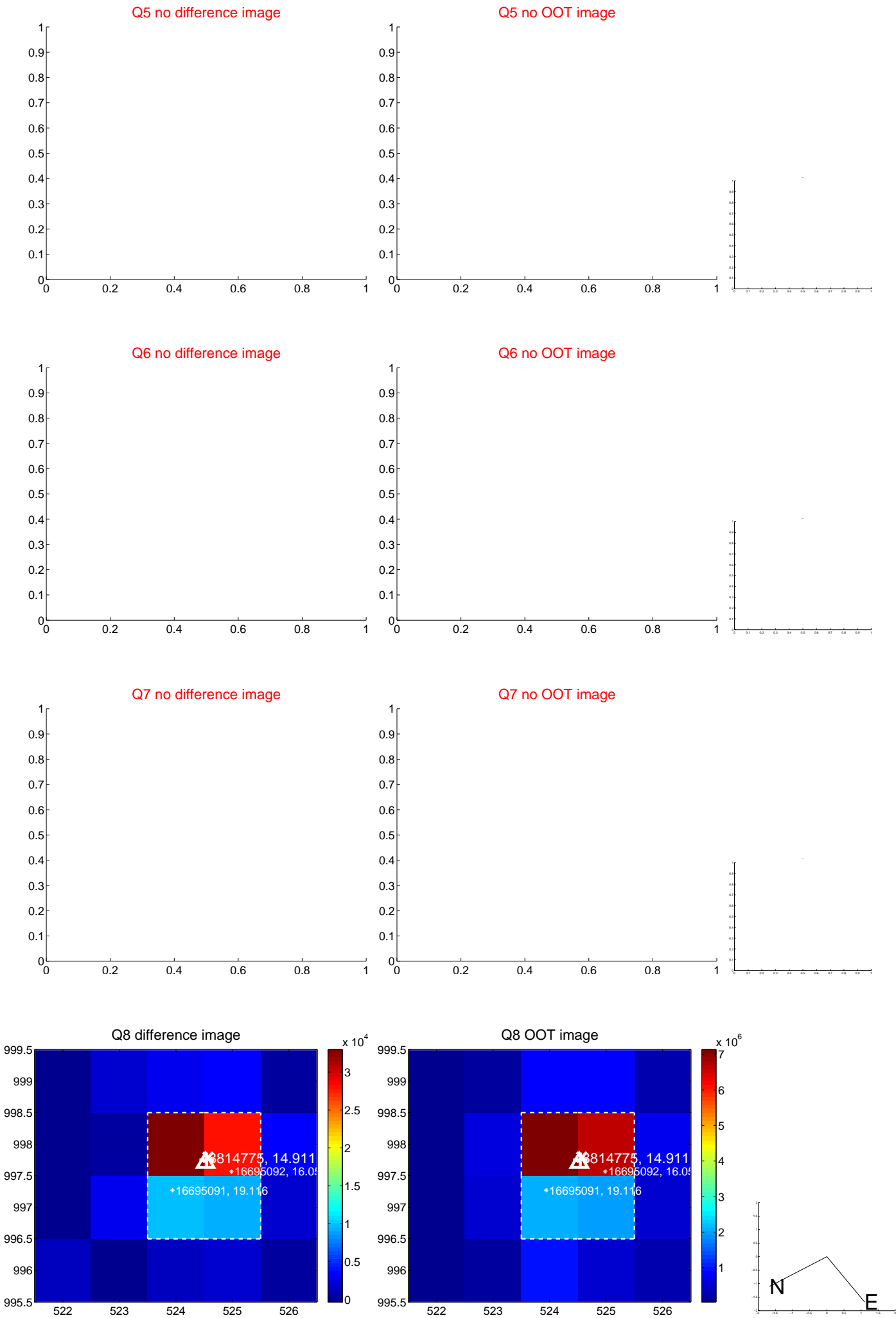


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



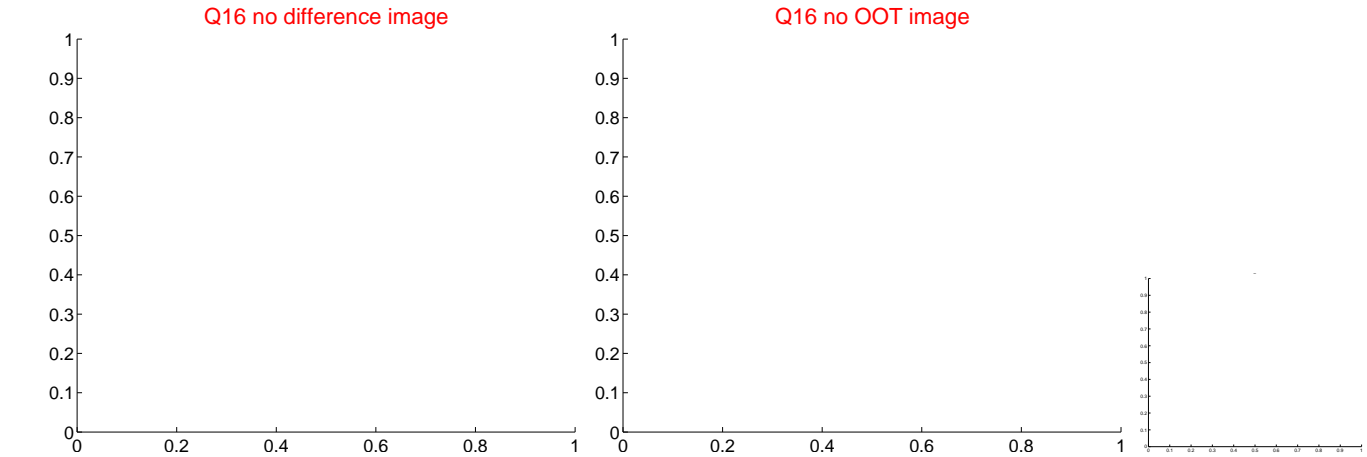
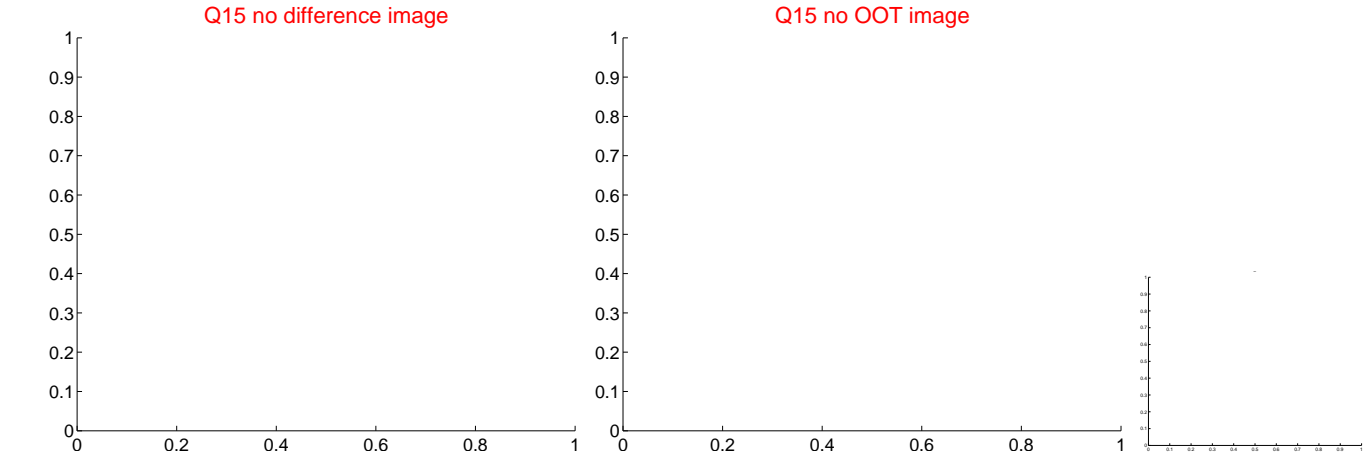
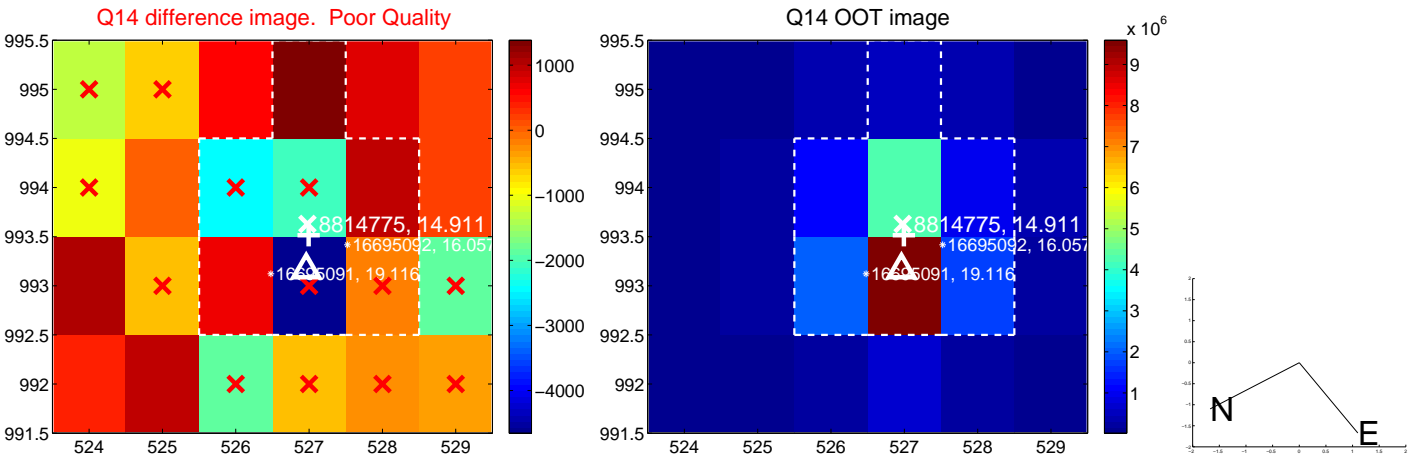
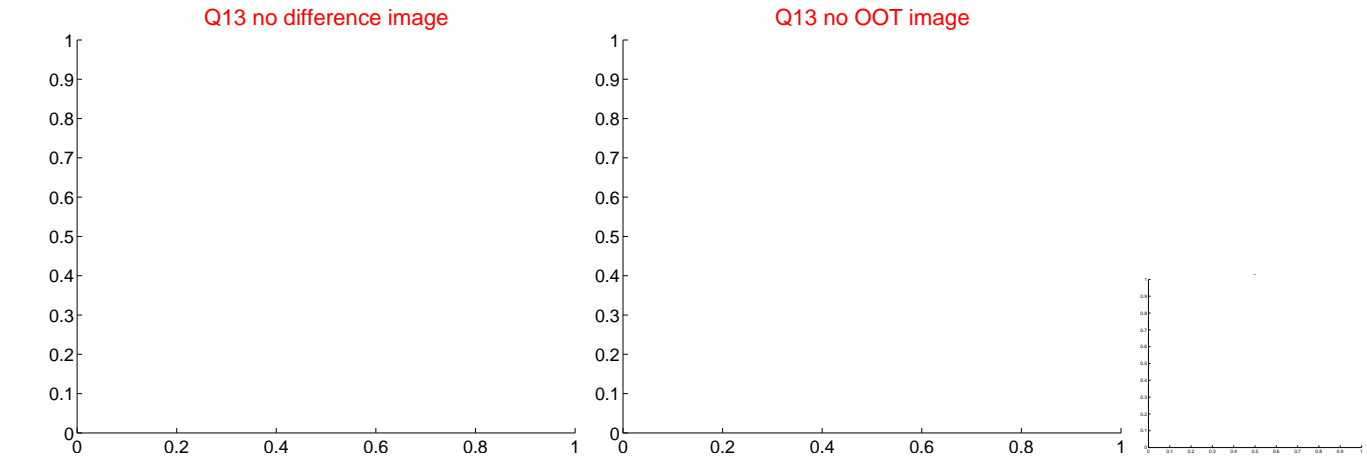
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



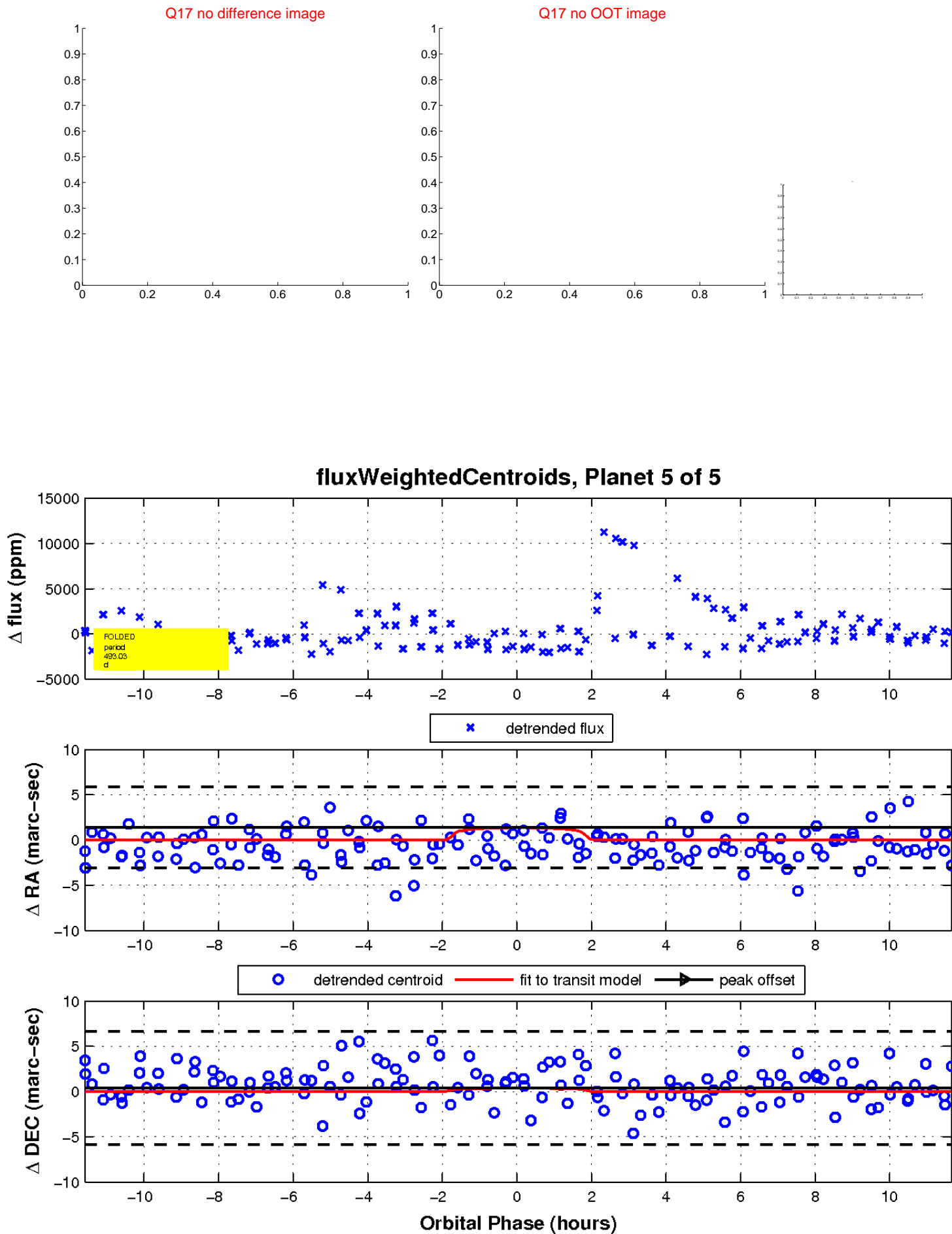
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UKIRT Image

Declination

