

KIC 011775507

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})
011775507-01	OBS	No	2.204555	131.997170	44.8	7.944	12.2	10.8	1.26	6528	1.16	2279.47
011775507-02	OBS	No	183.345201	271.939527	352.4	3.019	8.6	7.5	1.26	6528	2.54	6.28
011775507-03	OBS	No	331.016635	218.229336	311.0	3.257	7.7	8.5	1.26	6528	2.60	2.86
011775507-04	OBS	6245.03	276.402903	161.861116	338.6	4.673	7.6	8.4	1.26	6528	2.57	3.63
011775507-05	OBS	No	162.705829	198.509701	411.5	2.348	7.3	8.1	1.26	6528	2.99	7.36
011775507-06	OBS	No	128.919665	165.554748	258.8	3.842	7.6	7.7	1.26	6528	2.22	10.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011775507-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011775507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-04	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_ALT
011775507-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_UNCERTAIN
011775507-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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 011775507-01

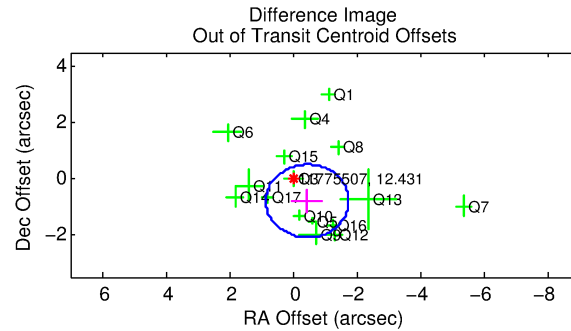
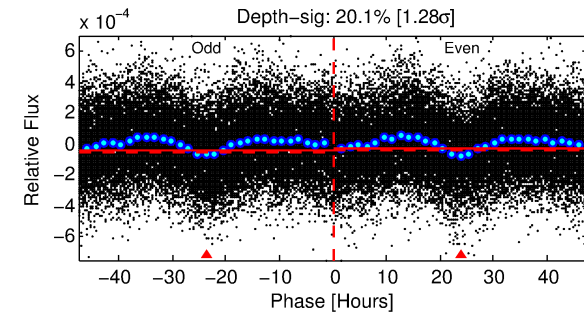
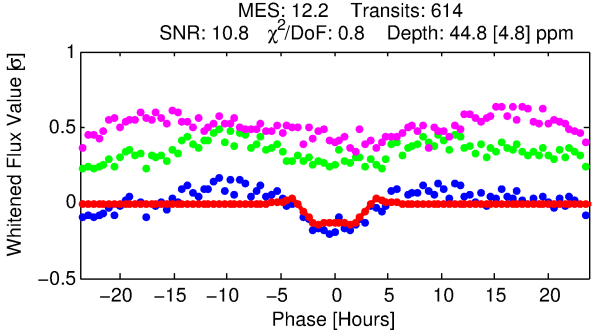
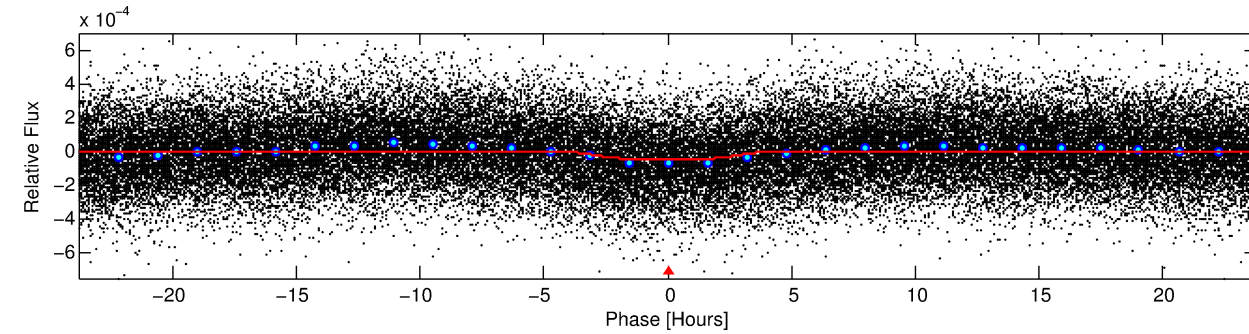
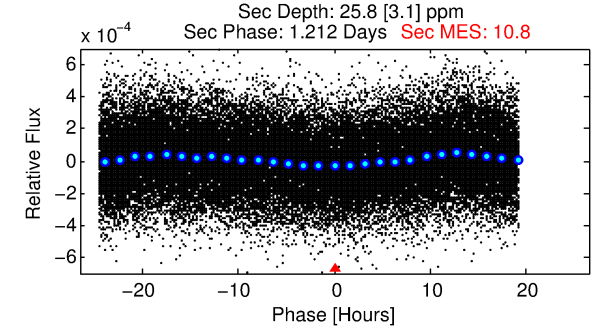
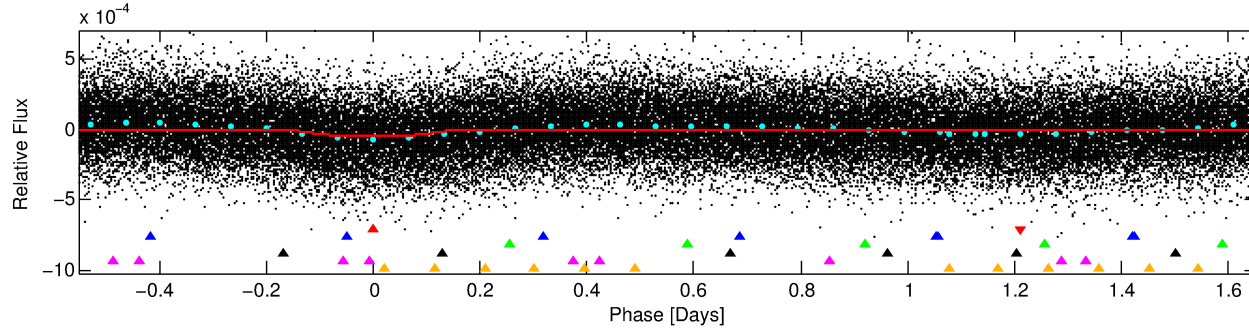
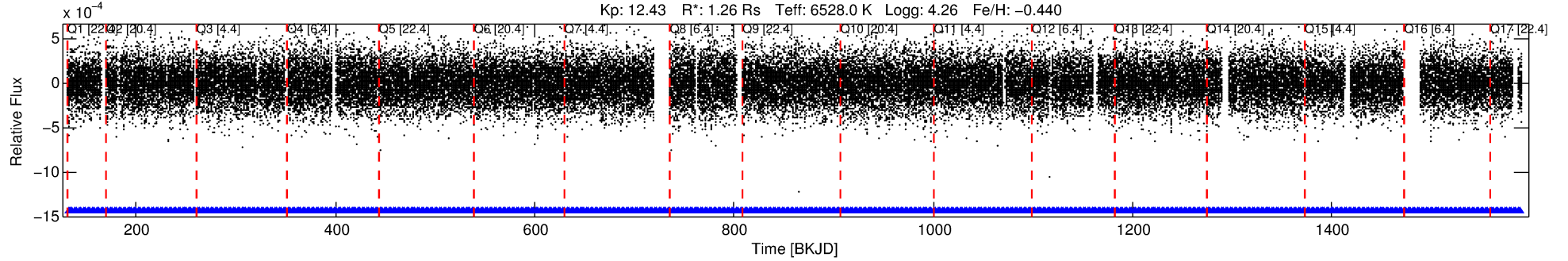
No Significant Match Found

DV One-Page Summary

KIC: 11775507 Candidate: 1 of 6 Period: 2.205 d

KOI: K06245 Corr: No Ephemeris Match

Kp: 12.43 R*: 1.26 Rs Teff: 6528.0 K Logg: 4.26 Fe/H: -0.440



DV Fit Results:

Period = 2.20456 [0.00003] d
Epoch = 131.9972 [0.0104] BKJD
Rp/R* = 0.0084 [0.0005]
a/R* = 1.08 [0.02]
b = 0.99 [0.00]
Seff = 2279.47 [817.53]
Teq = 1762 [158] K
Rp = 1.16 [0.34] Re
a = 0.0337 [0.0078] AU
Ag = 12.02 [4.42] [2.50 sigma]
Teffp = 5072 [295] K [9.90 sigma]

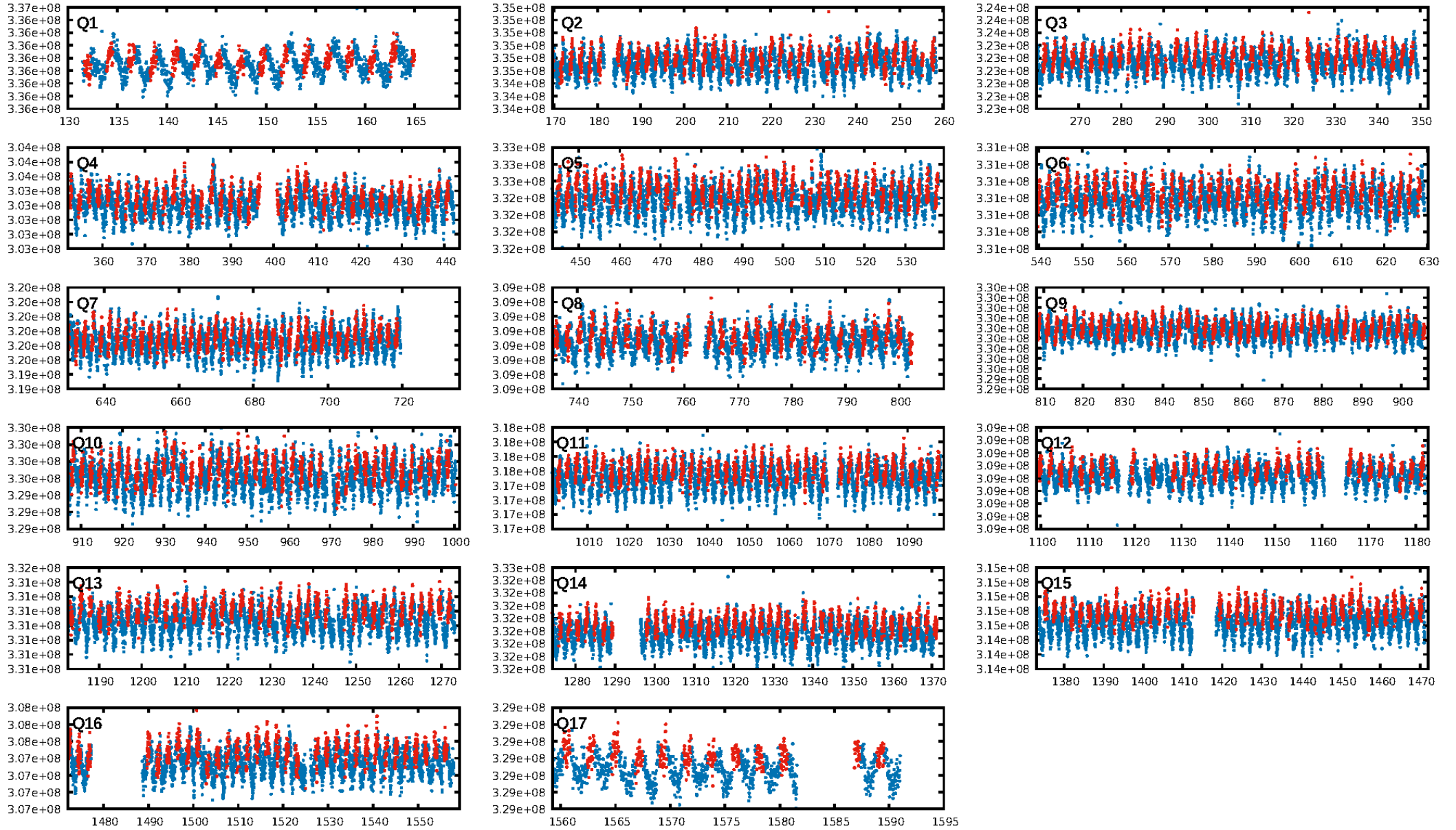
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [344.62 sigma]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 3.17e-20
RollingBand-fgt: 1.00 [586/586]
GhostDiagnostic-chr: 3.091
Centroid-sig: 12.9%
Centroid-so: 0.427 arcsec [1.25 sigma]
OotOffset-rm: 0.915 arcsec [2.11 sigma]
KicOffset-rm: 0.984 arcsec [2.32 sigma]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.25 [4/16]
DiffImageOverlap-fno: 1.00 [17/17]

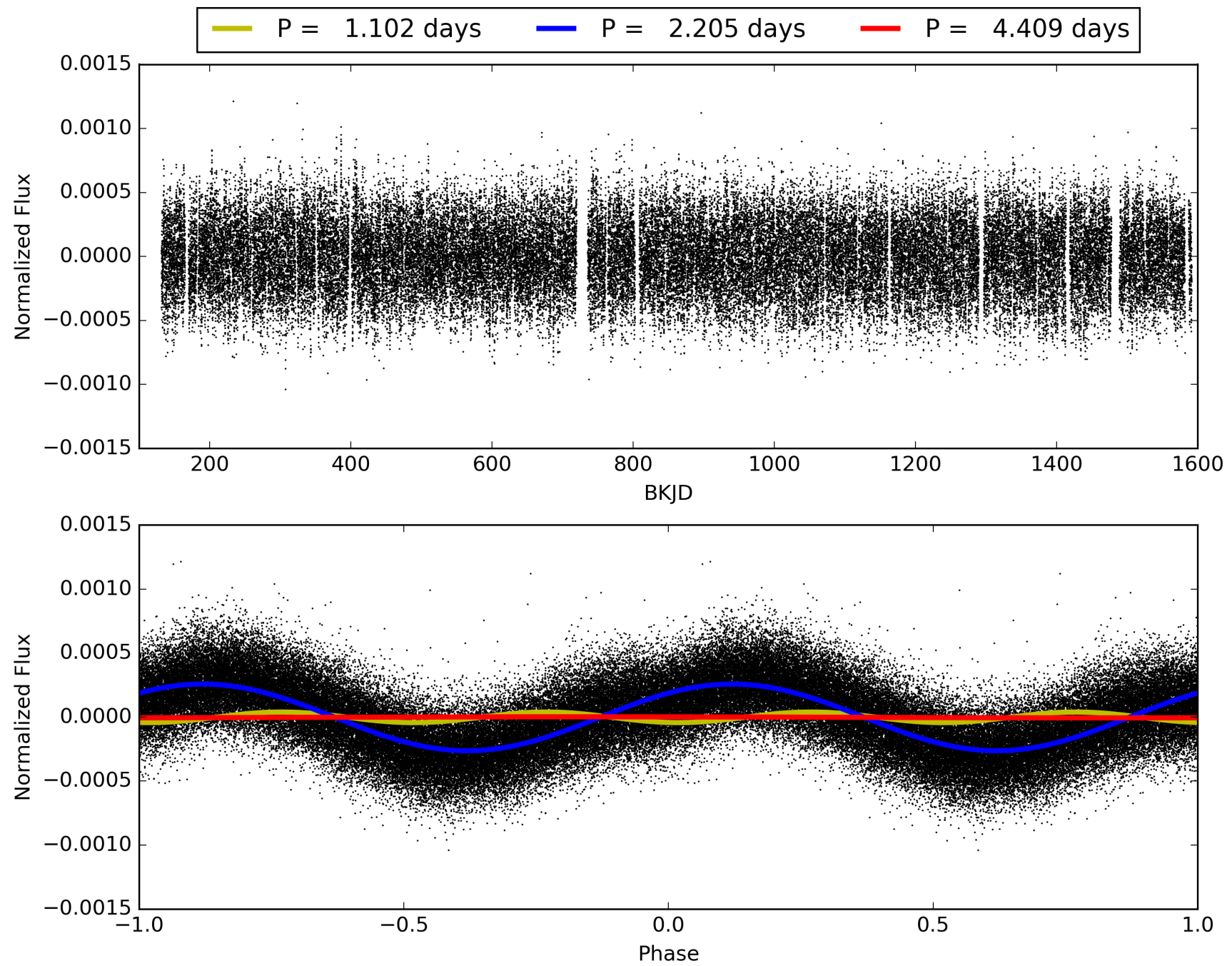
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:49:41 Z

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

TCE 011775507-01, PDC Light Curves

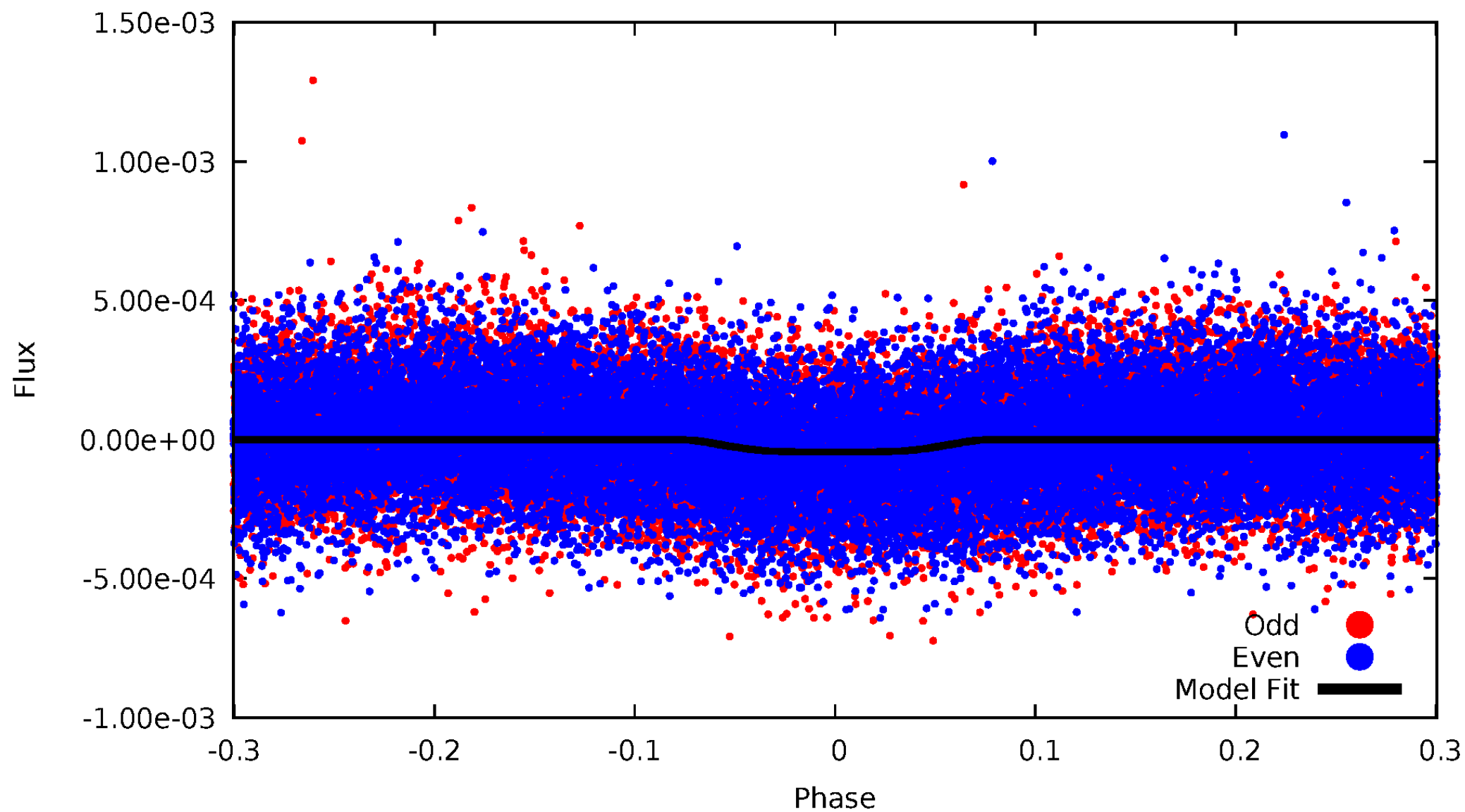


TCE 011775507-01



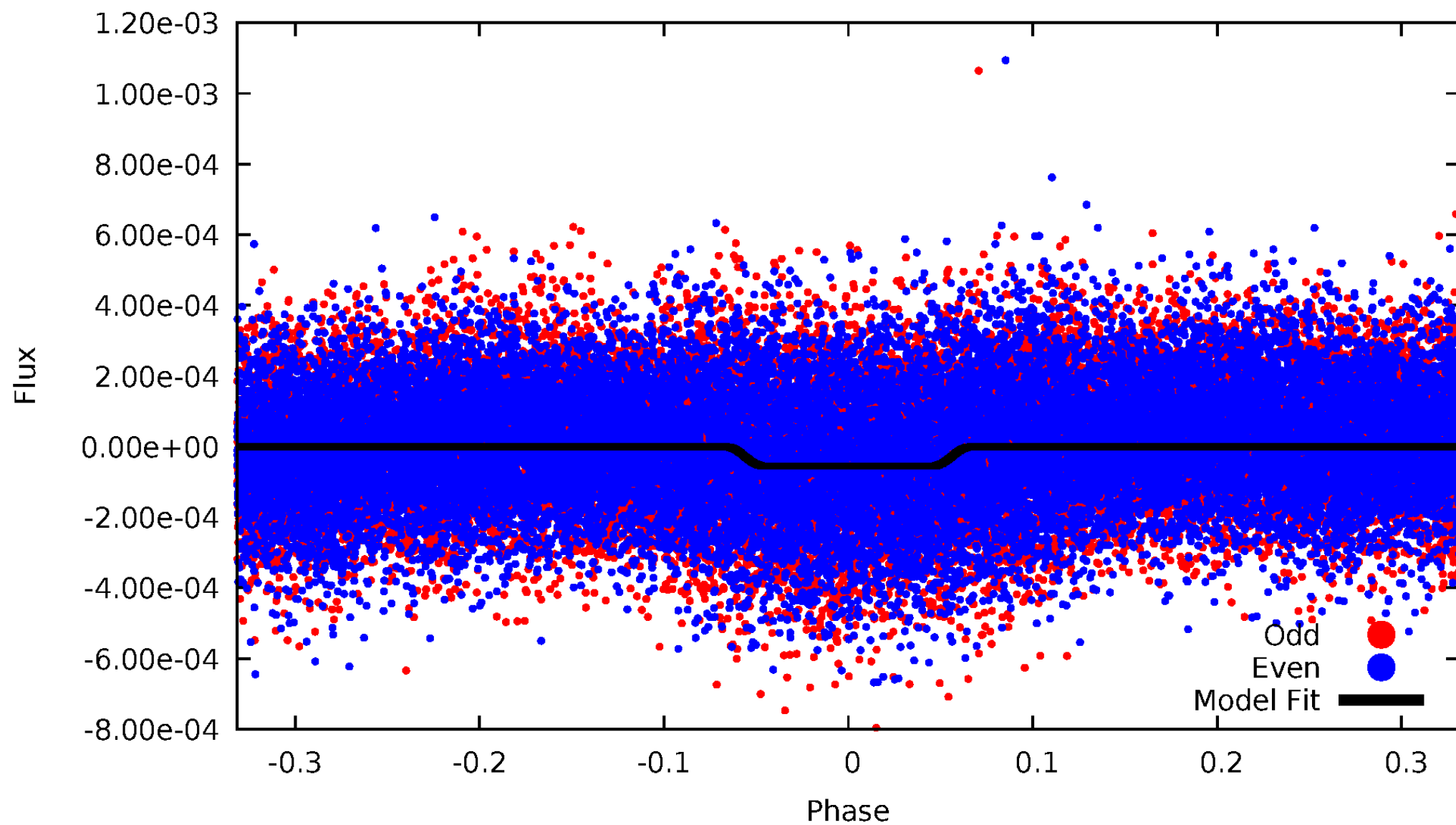
DV Odd/Even

TCE 011775507-01

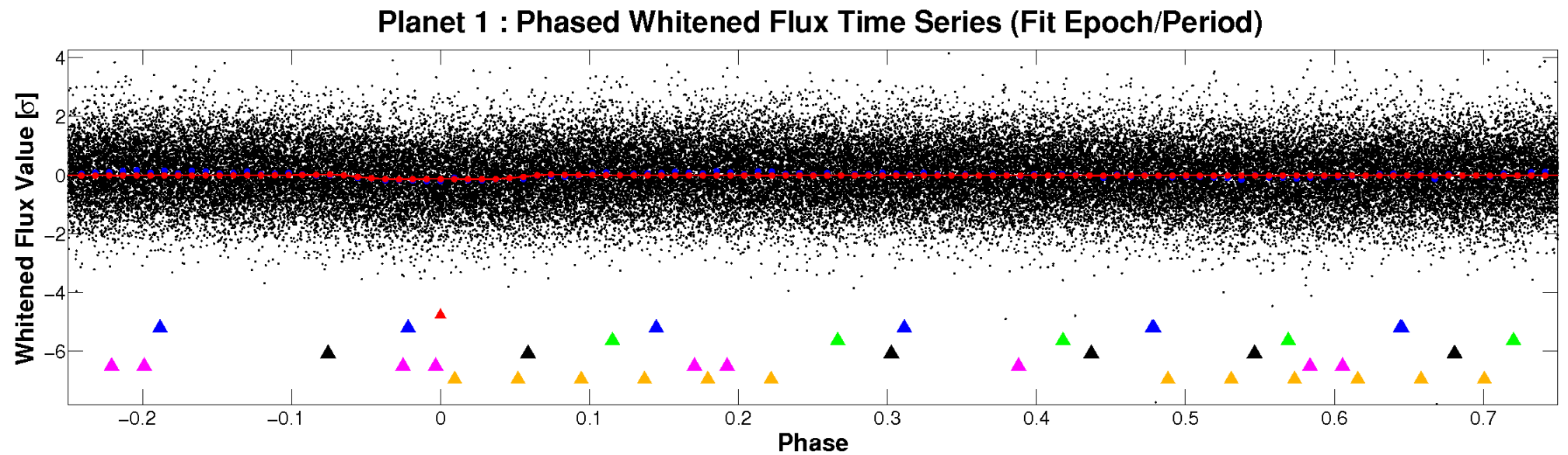
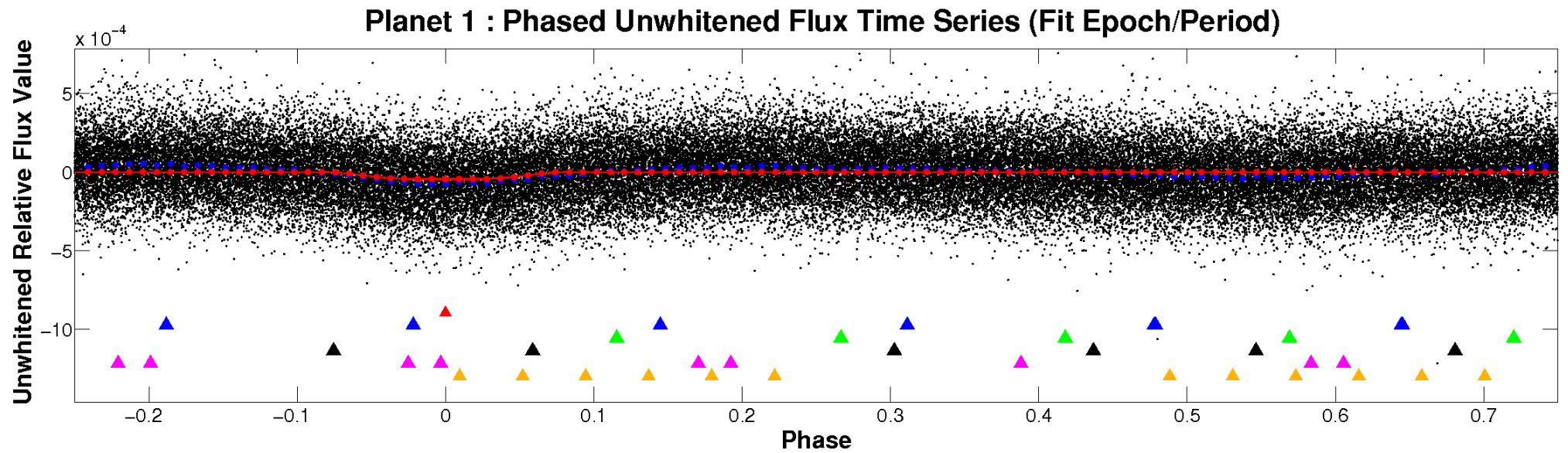


ALT Odd/Even

TCE 011775507-01

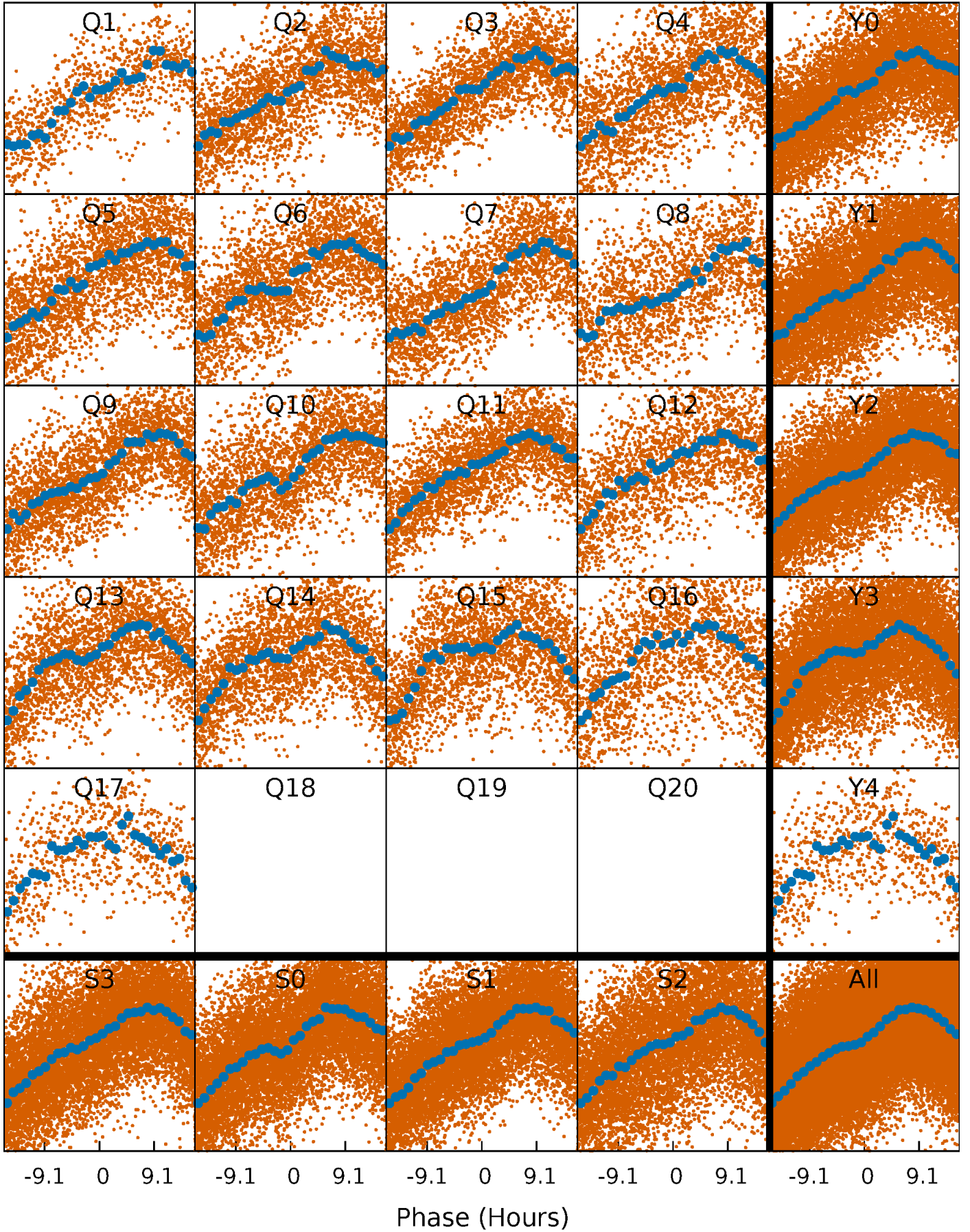


Non-Whitened Vs. Whitened Light Curve



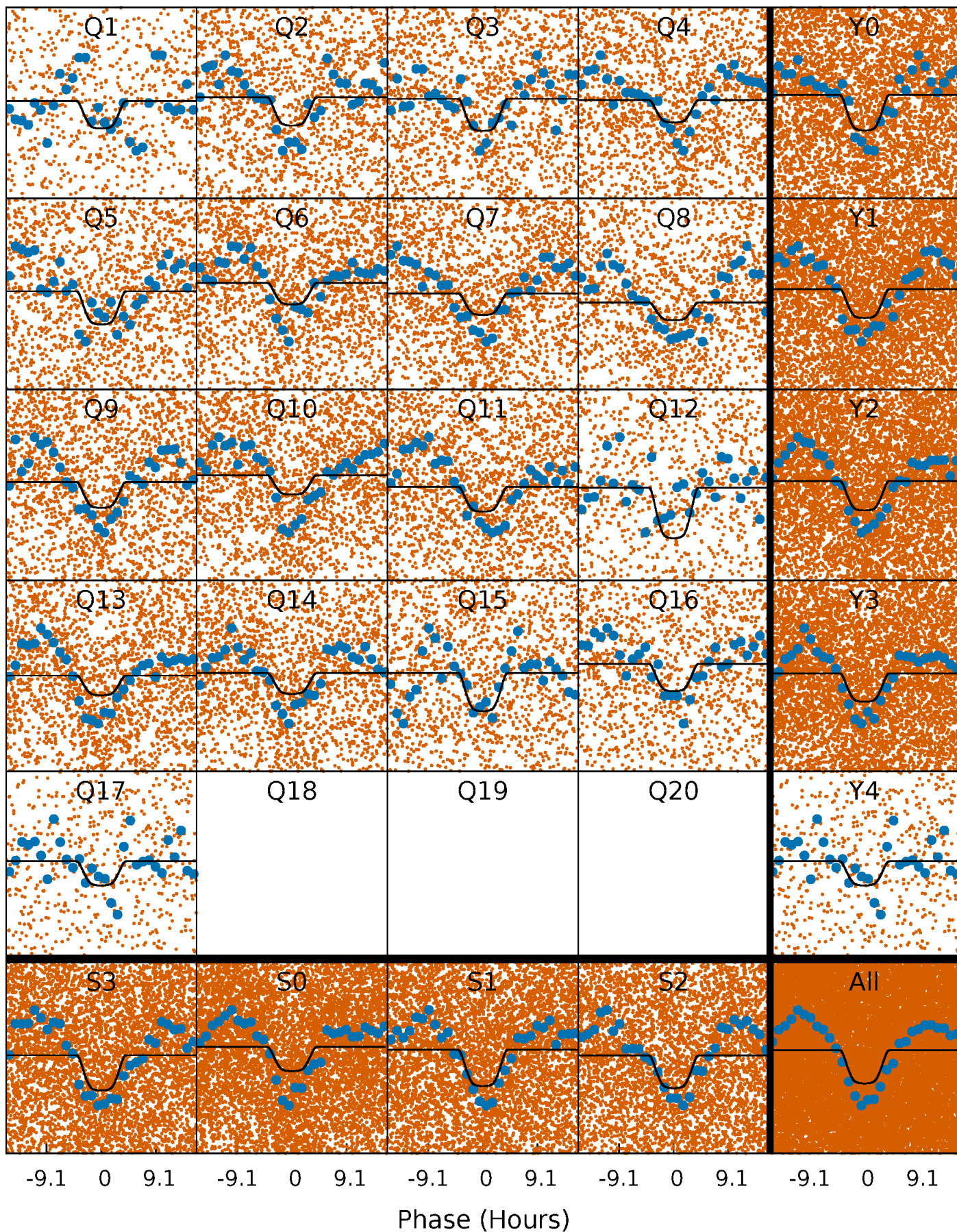
PDC Quarter-Phased Transit Curves

TCE 011775507-01 P= 2.204555 Days $T_0=131.997170$ (BKJD)



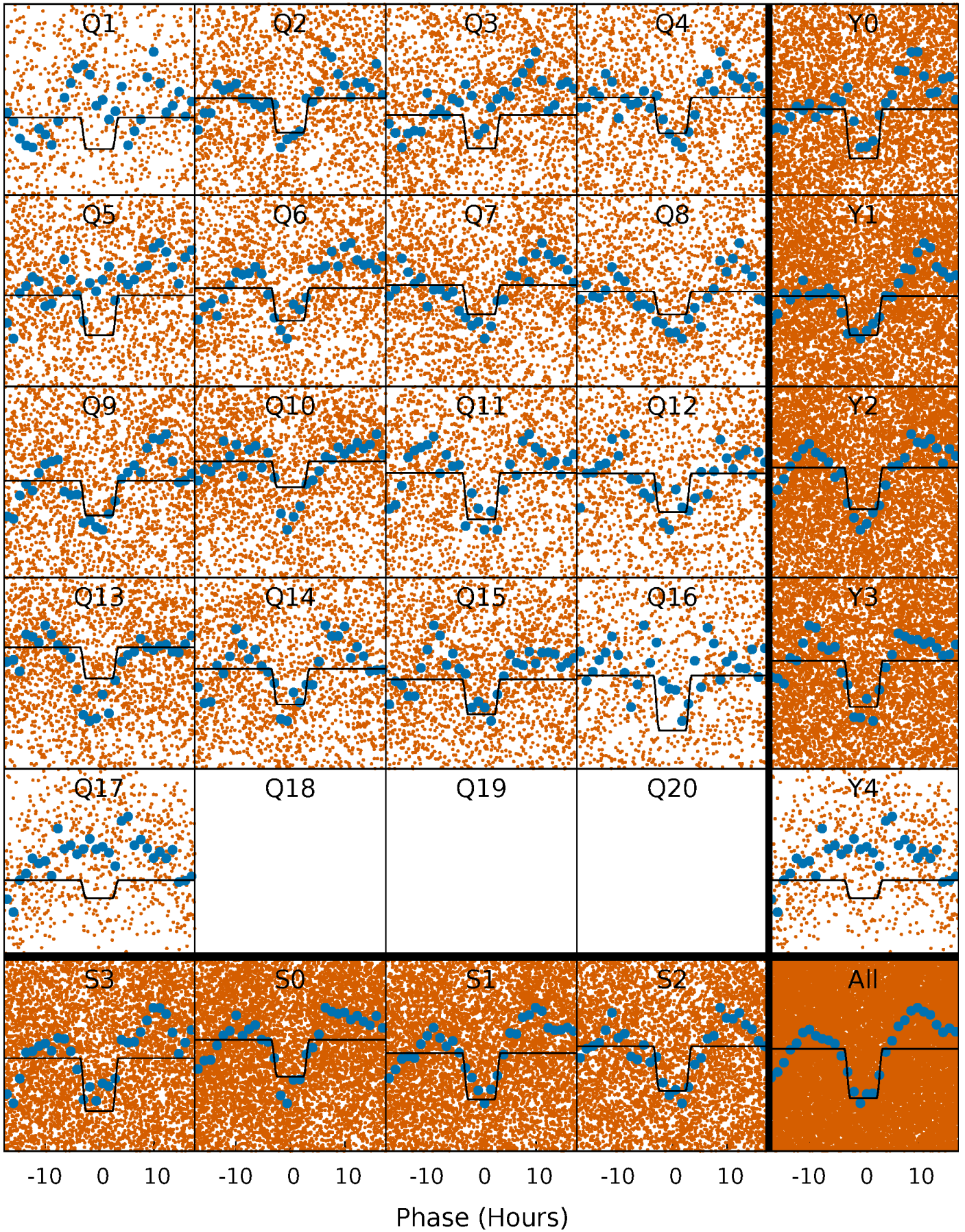
DV Quarter-Phased Transit Curves

TCE 011775507-01 P= 2.204555 Days $T_0=131.997170$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

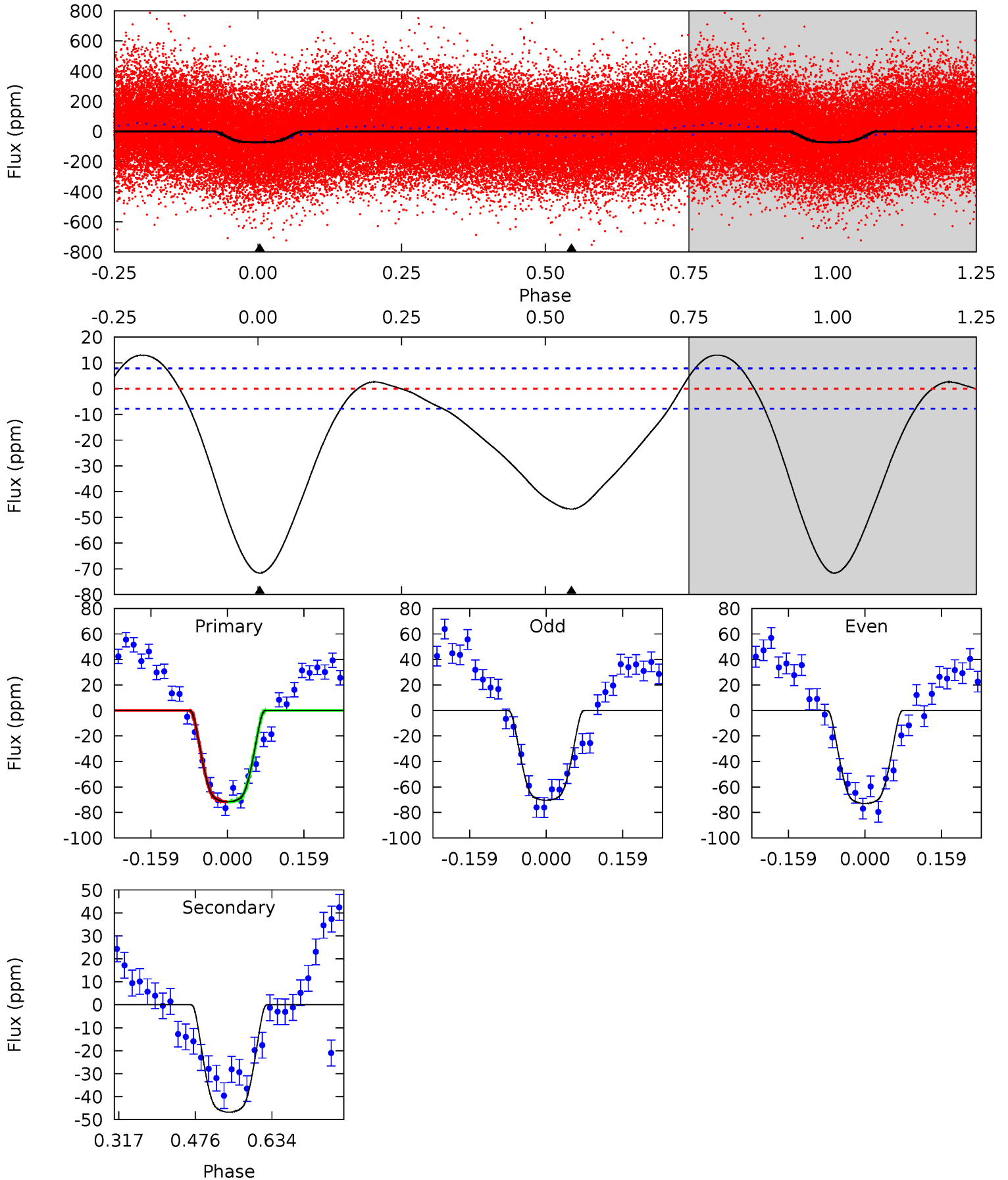
TCE 011775507-01 P= 2.204564 Days $T_0=131.981888$ (BKJD)



DV Model-Shift Uniqueness Test

011775507-01, P = 2.204555 Days, E = 129.792615 Days

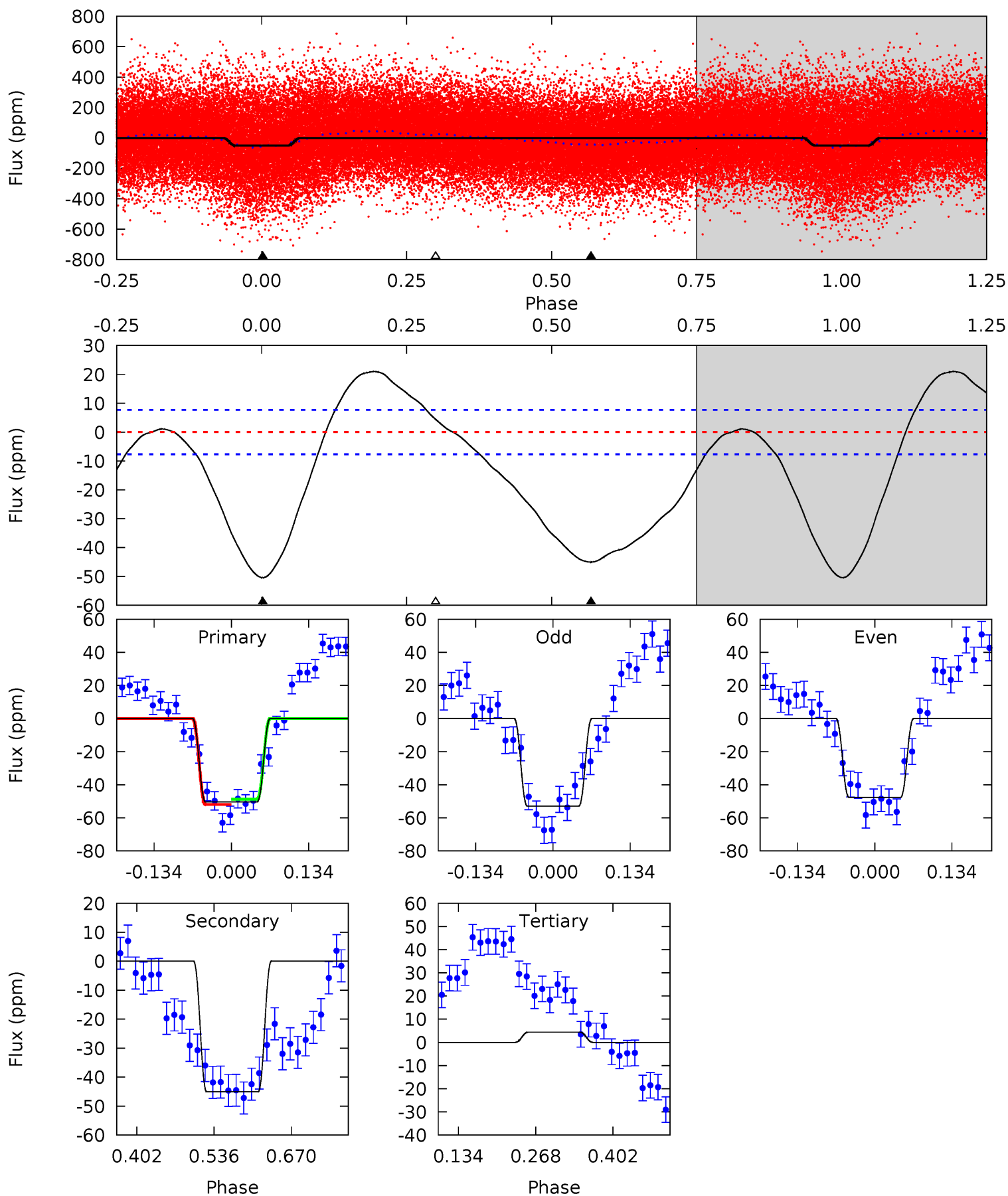
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.7	26.6	0	0	4.47	1.41	4.74	40.7	40.7	26.6	26.6	0.73	1.03	0.15	0.05



Alt Model-Shift Uniqueness Test

011775507-01, P = 2.204564 Days, E = 129.777324 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.7	26.5	-2.59	0	4.50	1.50	7.66	32.3	29.7	29.1	26.5	1.52	0.93	0.29	0.95



Stellar Parameters For KIC 011775507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6528^{+183}_{-252}	$4.257^{+0.153}_{-0.170}$	$-0.440^{+0.250}_{-0.300}$	$1.260^{+0.362}_{-0.241}$	$1.046^{+0.160}_{-0.117}$	$0.737^{+0.625}_{-0.364}$
	+3%/-4%	+4%/-4%	+57%/-68%	+29%/-19%	+15%/-11%	+85%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011775507-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 2	$1.16^{+0.19}_{-0.15}$	2449^{+185}_{-154}	5831^{+275}_{-230}	22^{+7}_{-5}
Alt.	-45 ± 2	$1.03^{+0.17}_{-0.13}$	2464^{+186}_{-152}	6152^{+308}_{-305}	26^{+8}_{-7}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

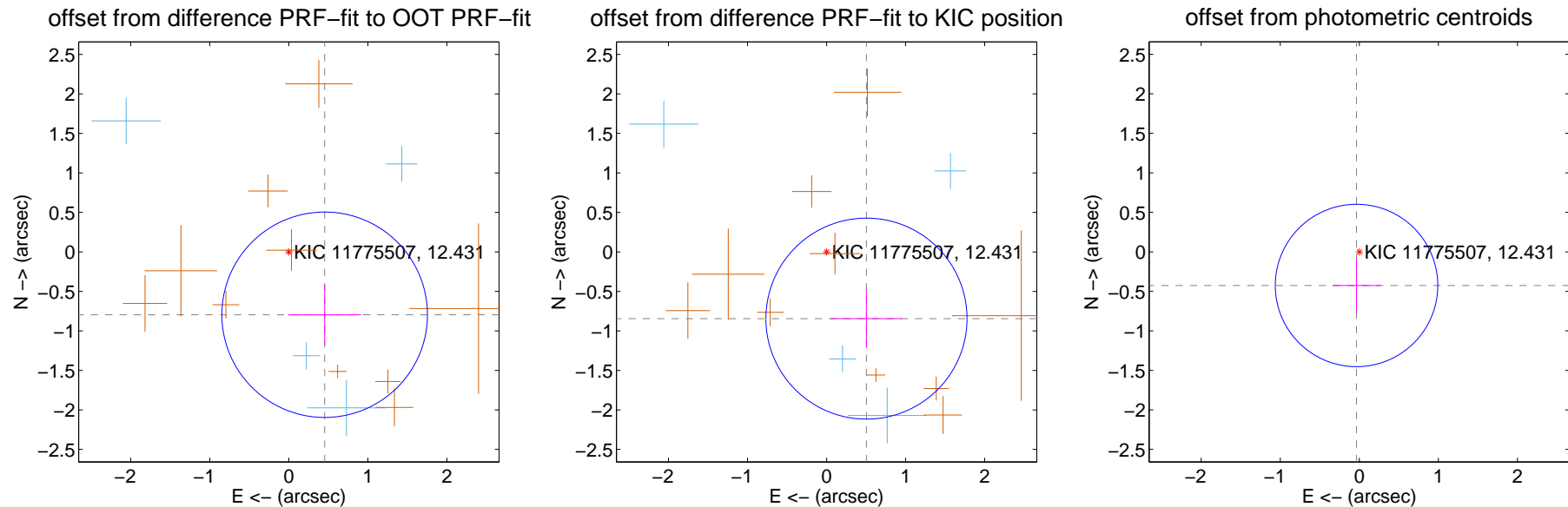
DV Centroid Data

Supplemental centroid analysis for 011775507-01. Kepler magnitude: 12.43. Transit SNR 10.78

There are 4 quarters with good PRF difference image offsets

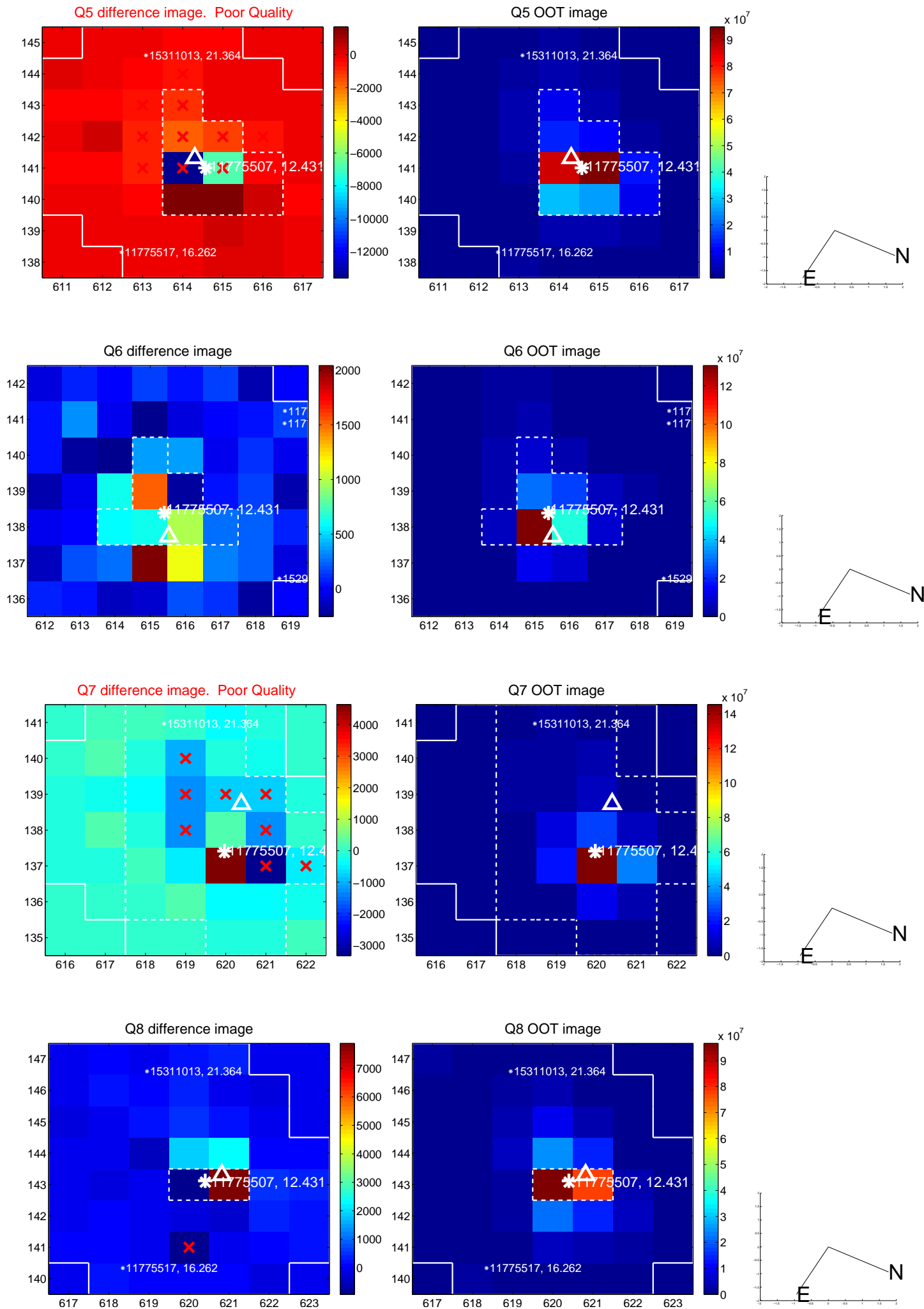
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.915 ± 0.433	2.11	-0.453 ± 0.460	-0.795 ± 0.382
PRF-fit source offset from KIC position	0.984 ± 0.424	2.32	-0.504 ± 0.455	-0.844 ± 0.369
photometric centroid source offset	0.43 ± 0.34	1.25	0.04 ± 0.30	-0.43 ± 0.34

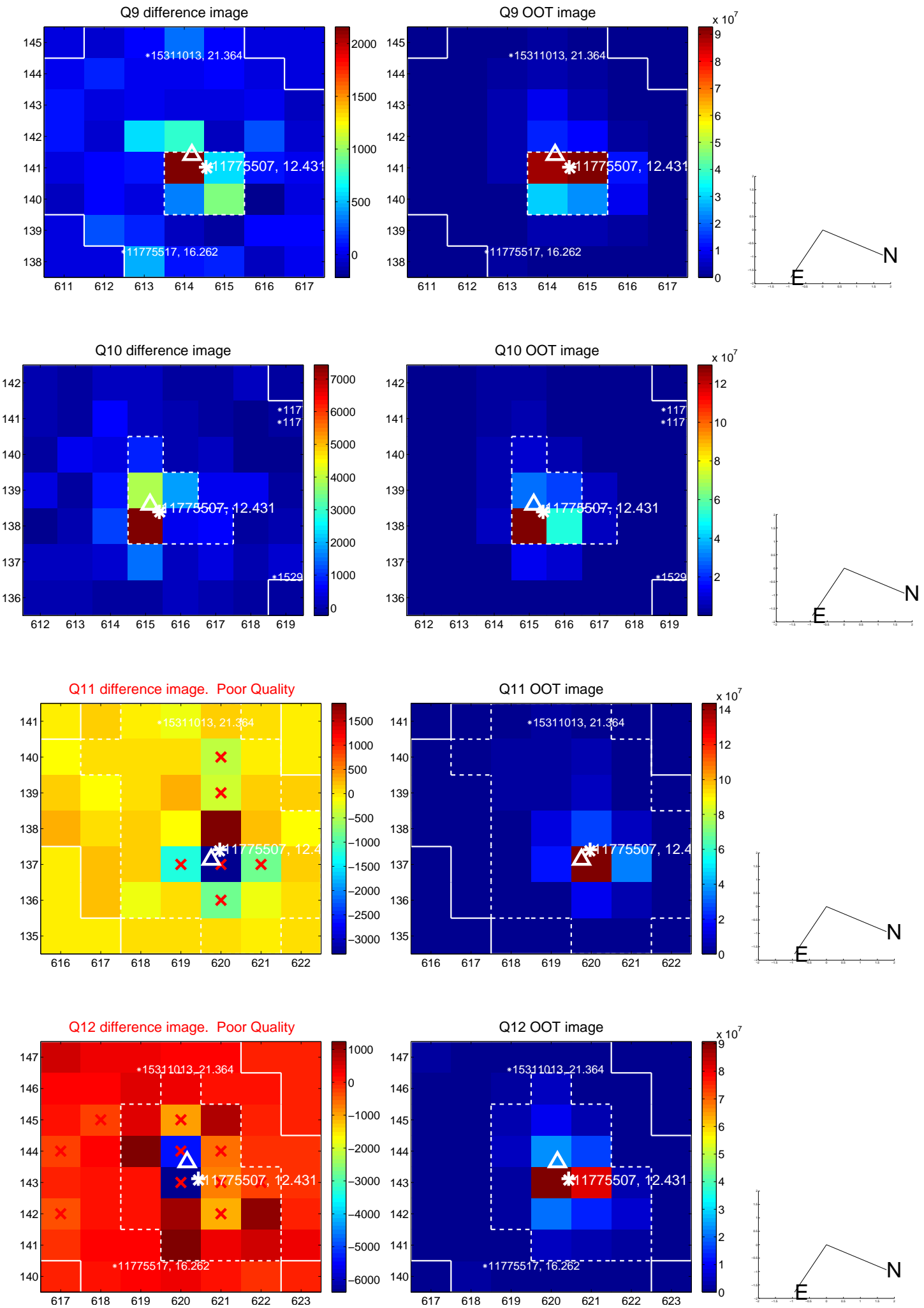


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

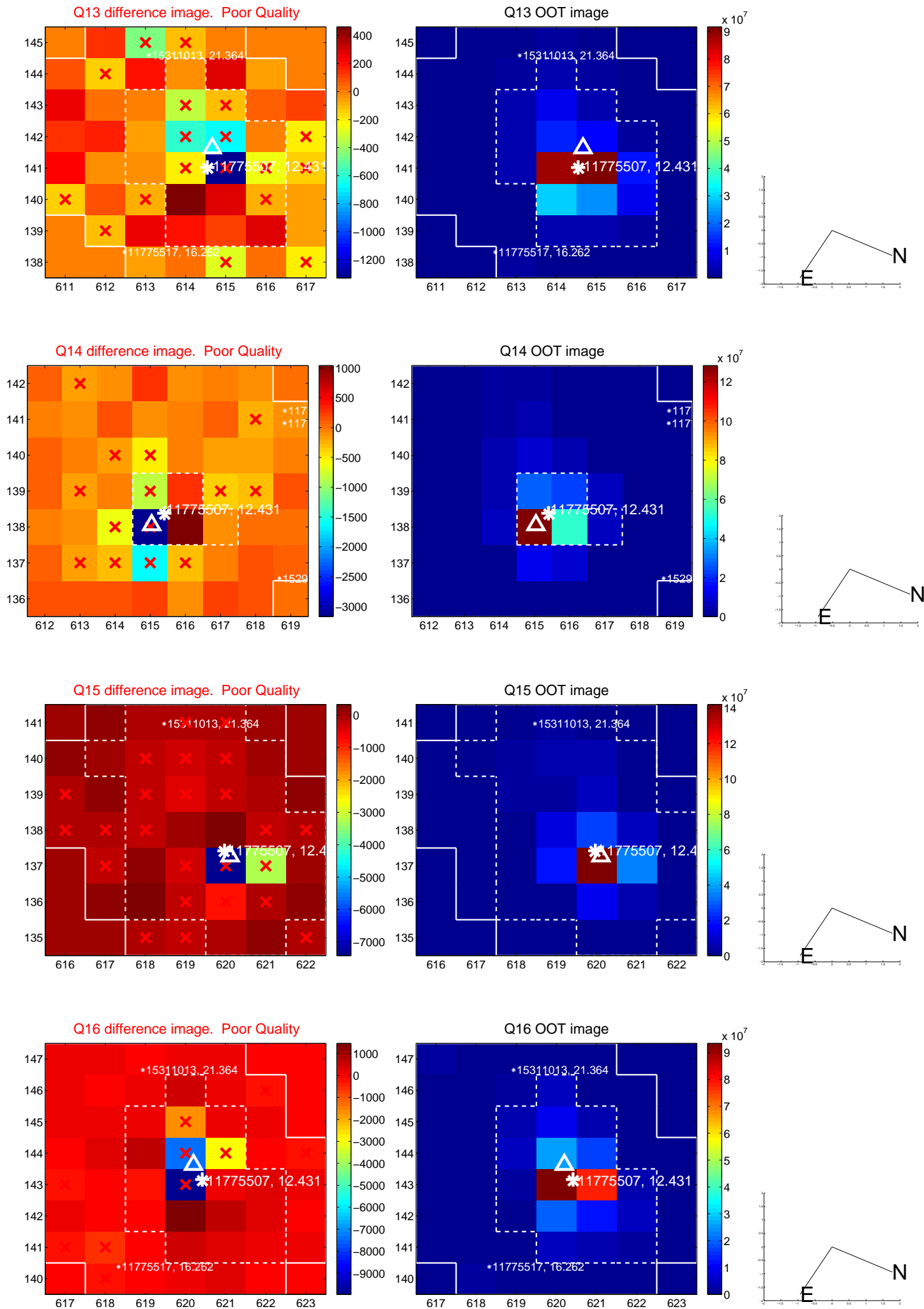
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



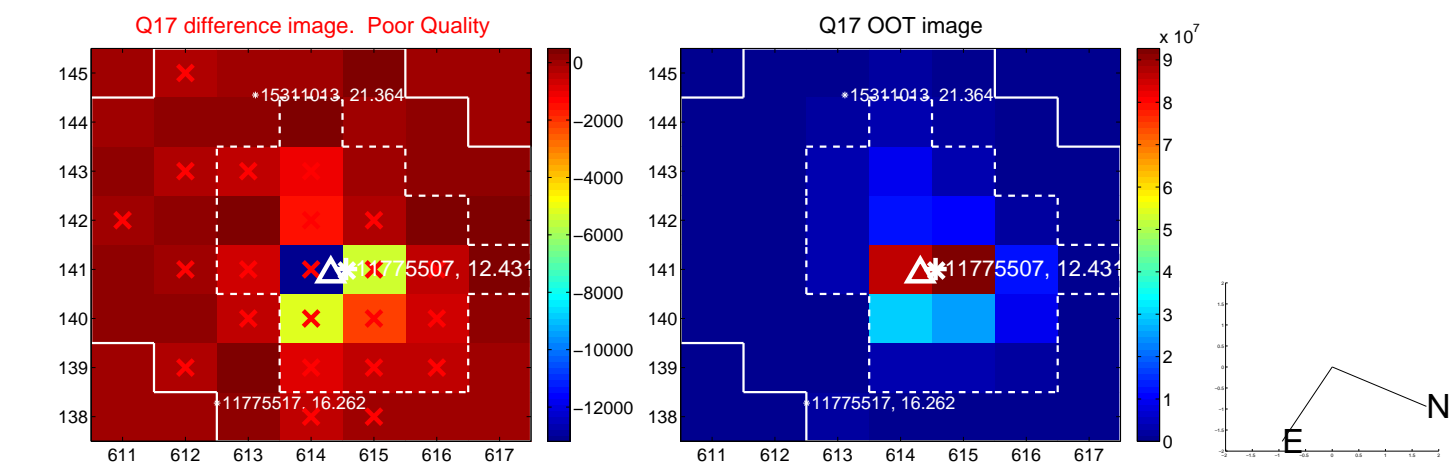
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



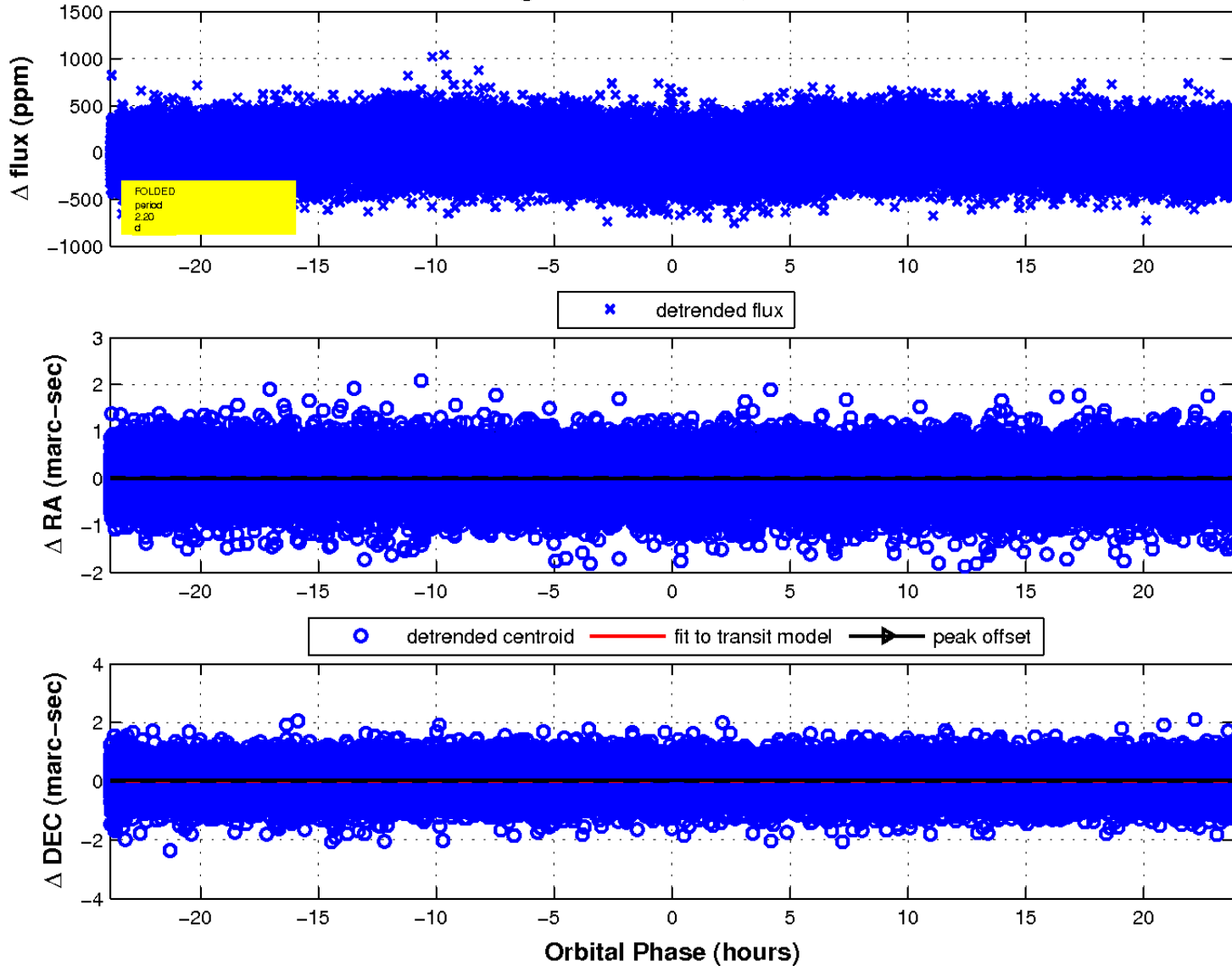
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

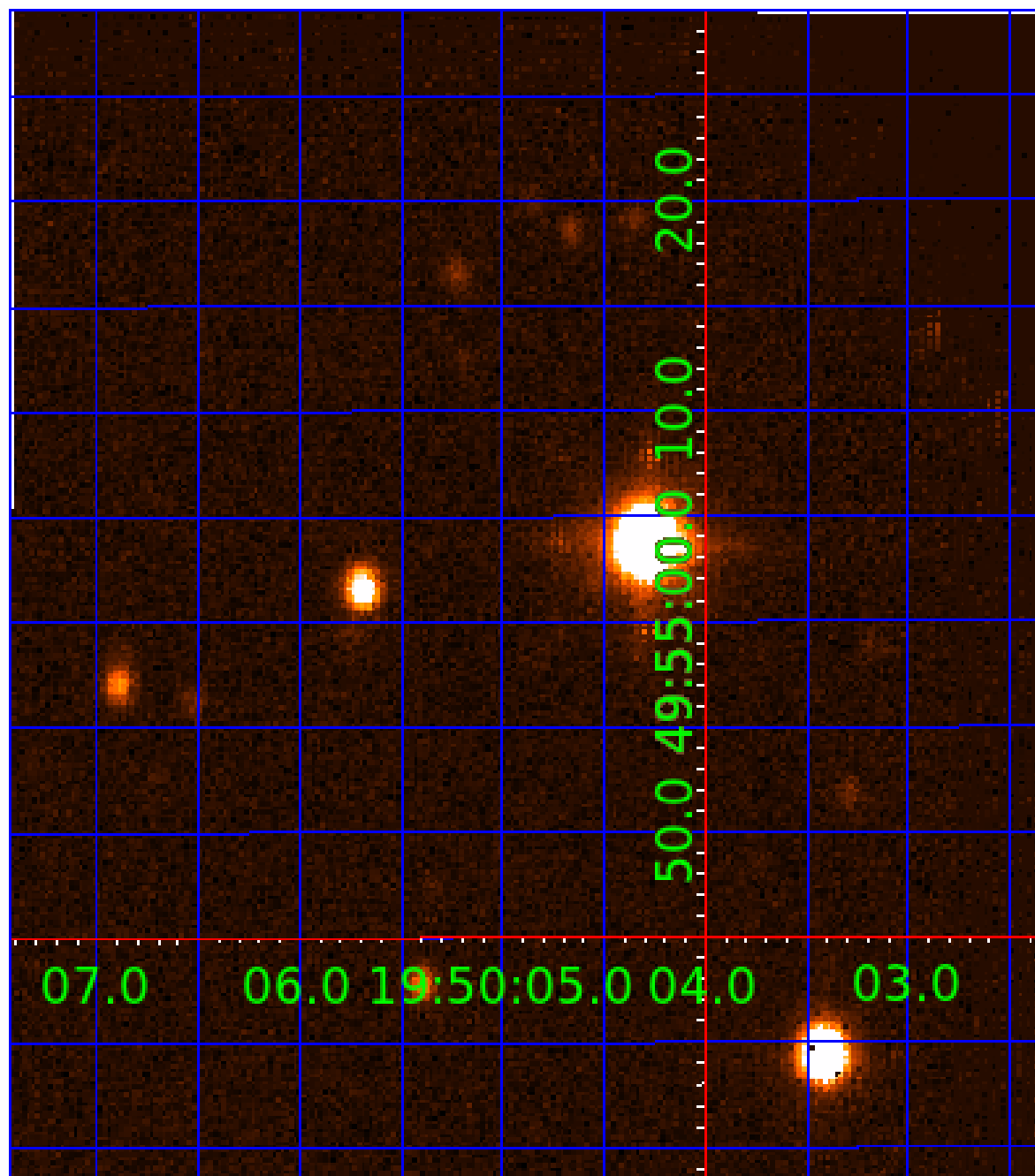


fluxWeightedCentroids, Planet 1 of 6



UKIRT Image

Declination



KIC 011775507

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})
011775507-01	OBS	No	2.204555	131.997170	44.8	7.944	12.2	10.8	1.26	6528	1.16	2279.47
011775507-02	OBS	No	183.345201	271.939527	352.4	3.019	8.6	7.5	1.26	6528	2.54	6.28
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011775507-06	OBS	No	128.919665	165.554748	258.8	3.842	7.6	7.7	1.26	6528	2.22	10.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011775507-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011775507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-04	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_ALT
011775507-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_UNCERTAIN
011775507-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

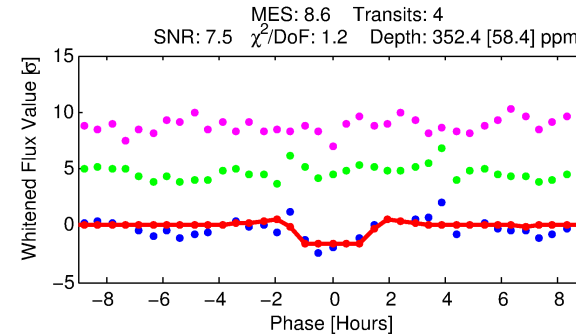
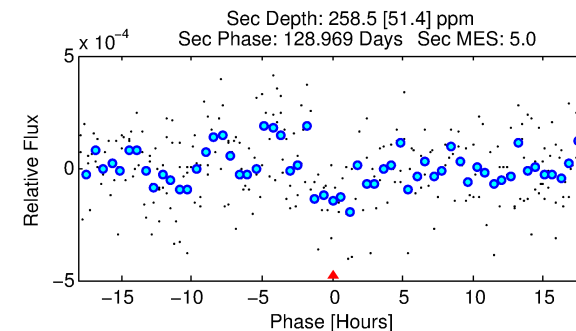
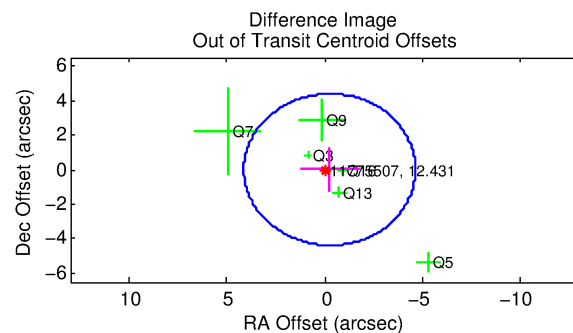
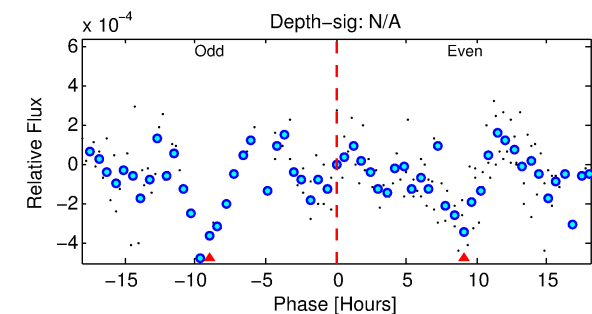
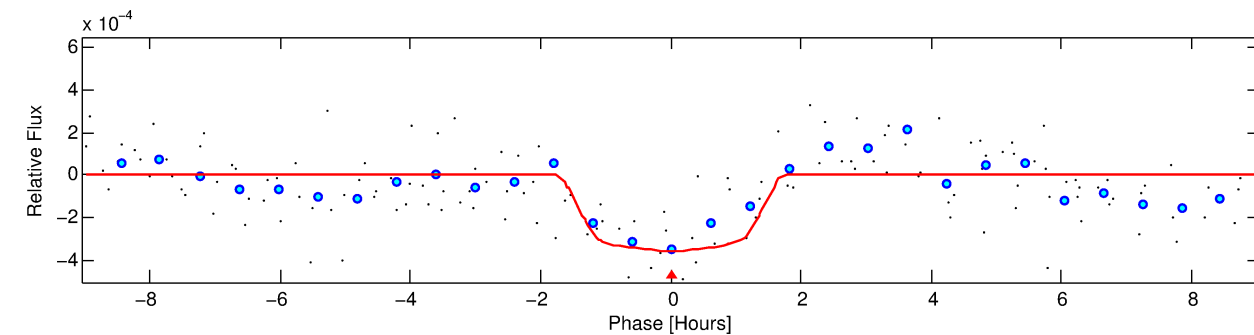
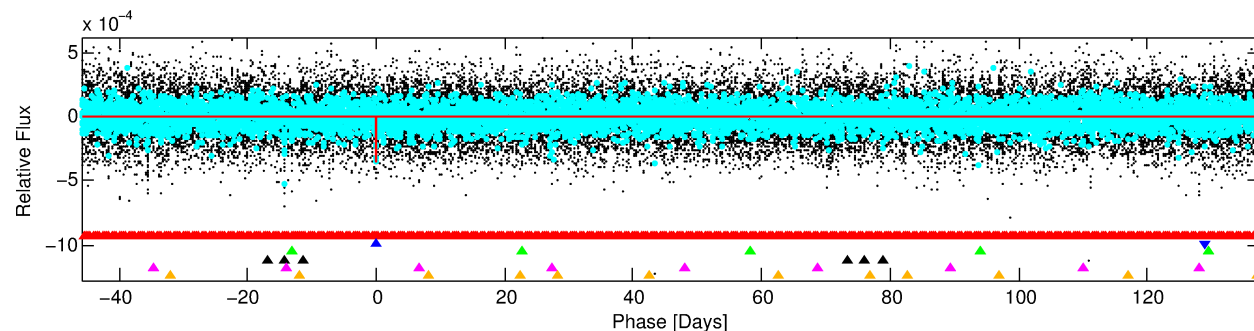
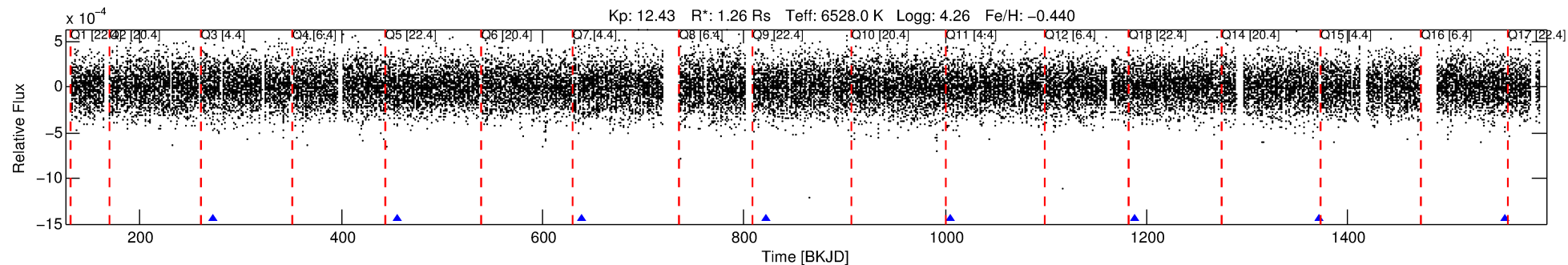
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011775507-02

No Significant Match Found

DV One-Page Summary

KIC: 11775507 Candidate: 2 of 6 Period: 183.345 d
KOI: K06245 Corr: No Ephemeris Match



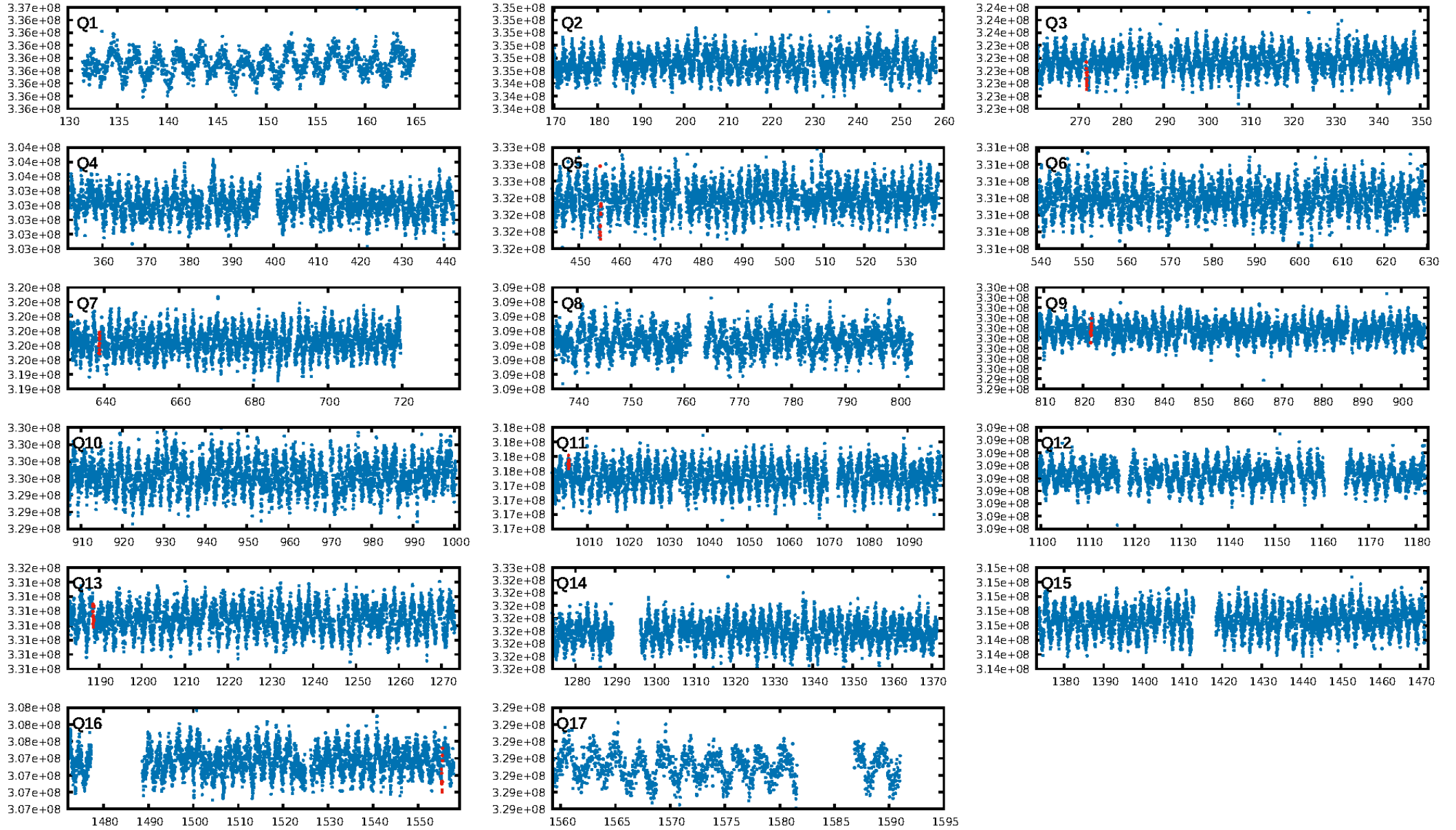
DV Fit Results:

Period = 183.34520 [0.00163] d
Epoch = 271.9395 [0.0074] BKJD
Rp/R* = 0.0185 [0.0397]
a/R* = 339.66 [4084.87]
b = 0.71 [8.56]
Seff = 6.28 [2.25]
Teq = 404 [36] K
Rp = 2.54 [5.50] Re
a = 0.6414 [0.1486] AU
Ag = 9072.15 [39117.55] [0.23σ]
Teffp = 6091 [6551] K [0.87σ]

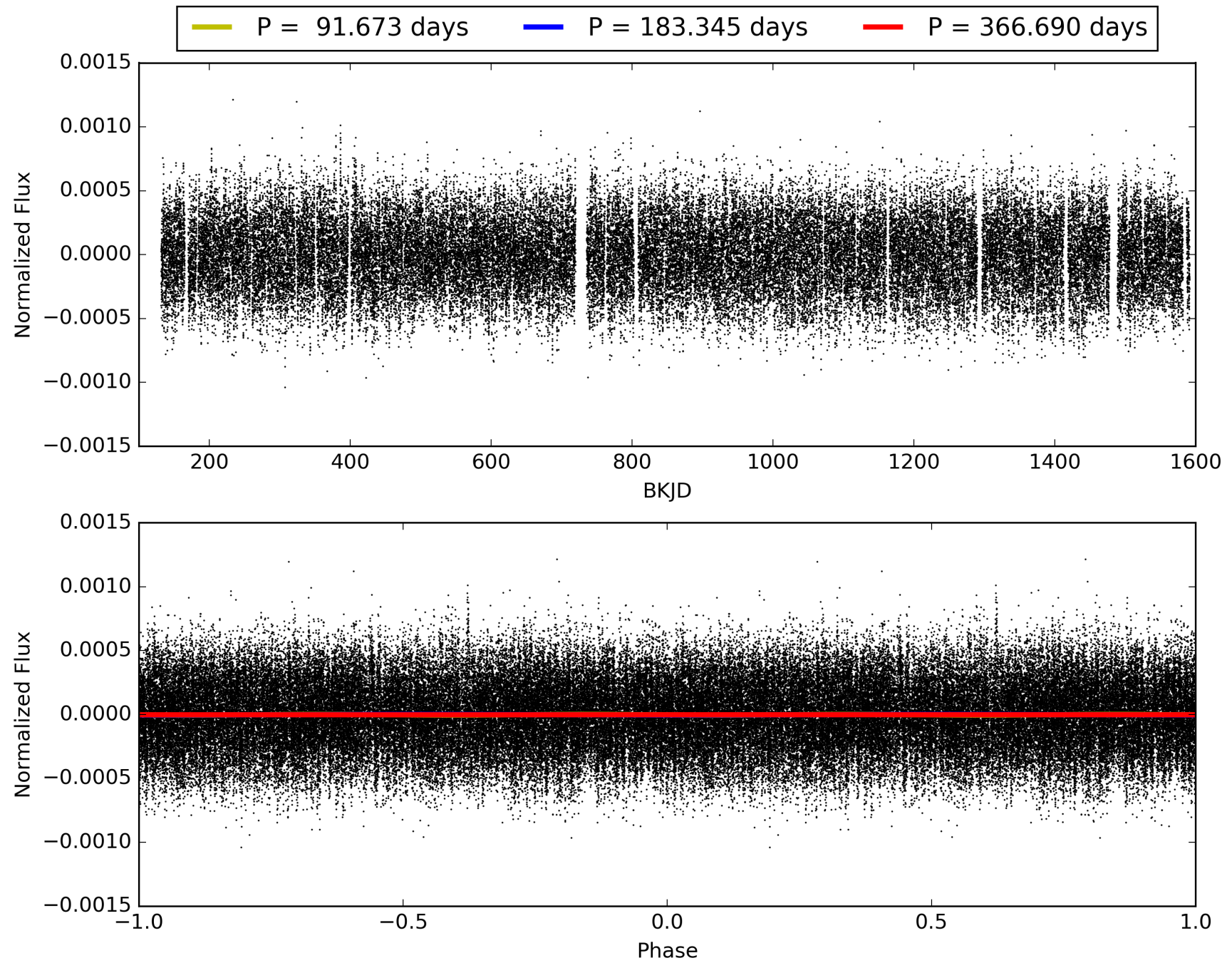
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [129.51σ]
LongPeriod-sig: 100.0% [401.41σ]
ModelChiSquare2-sig: 11.7%
ModelChiSquareGof-sig: 94.4%
Bootstrap-pfa: 3.15e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.763
Centroid-sig: 10.5%
Centroid-so: 0.651 arcsec [1.15σ]
OotOffset-rm: 0.259 arcsec [0.18σ]
KicOffset-rm: 0.340 arcsec [0.23σ]
OotOffset-st: 0/2/1/3 [6]
KicOffset-st: 0/2/1/3 [6]
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DiffImageOverlap-fno: 0.57 [4/7]

TCE 011775507-02, PDC Light Curves

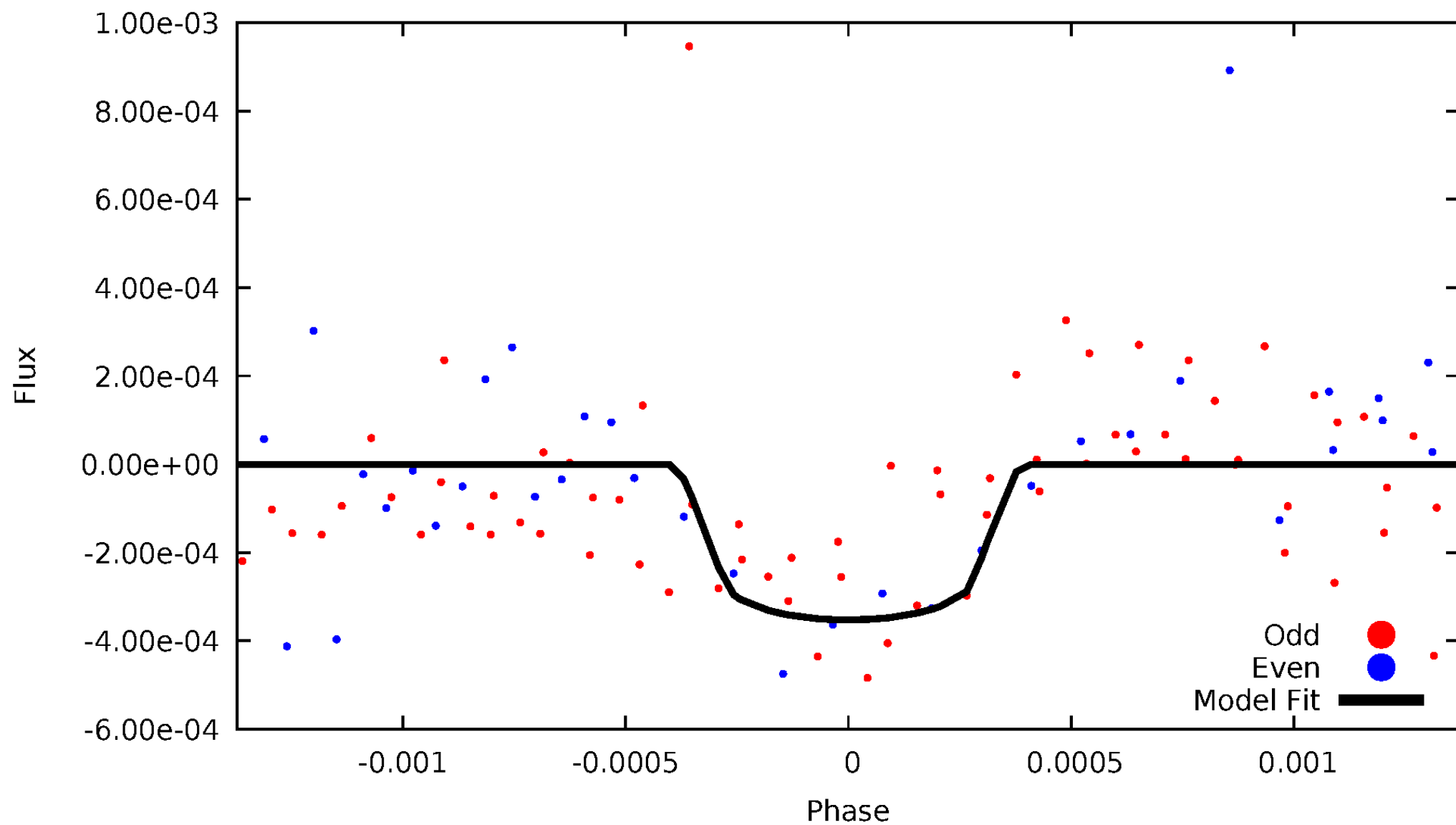


TCE 011775507-02



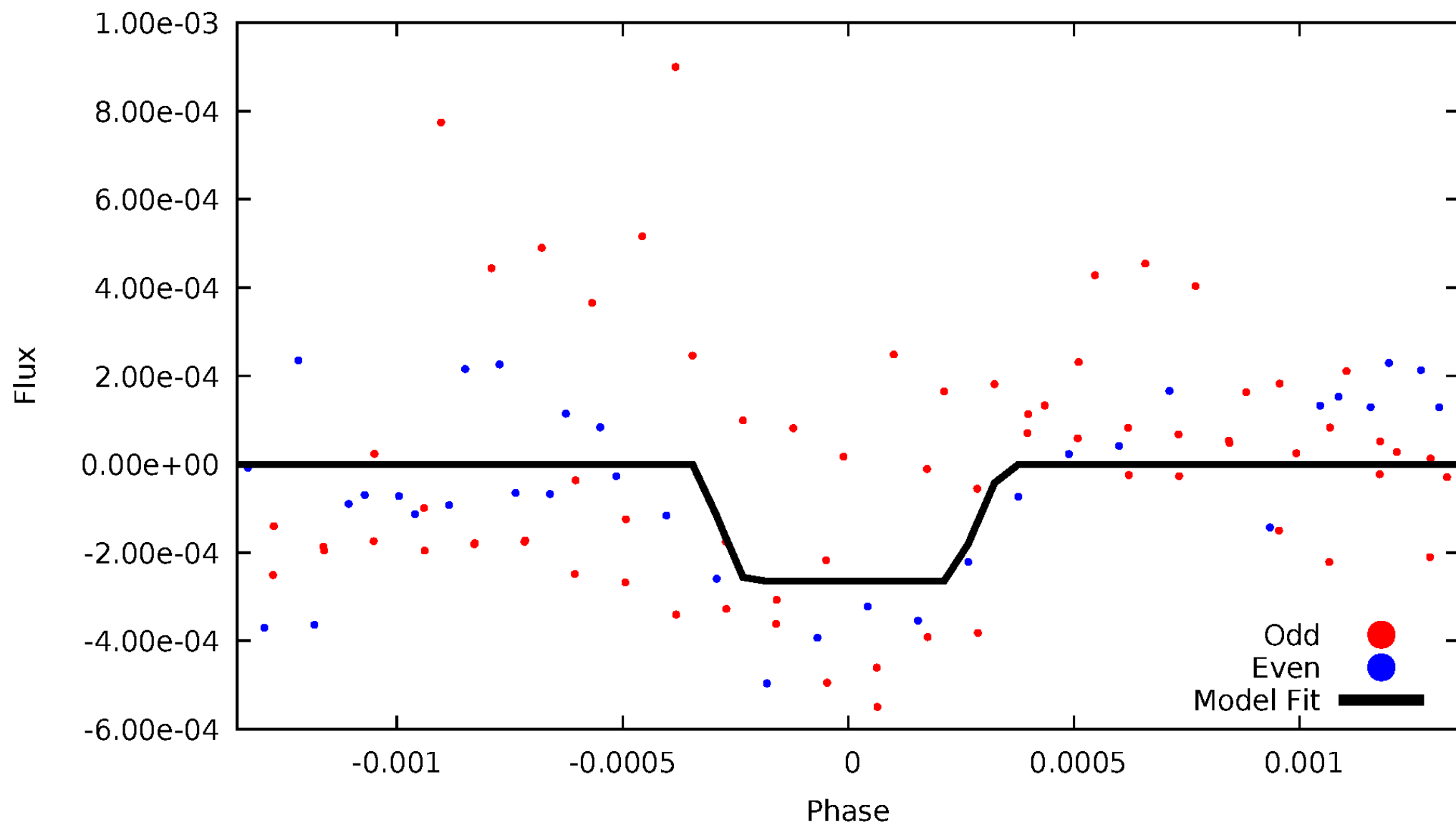
DV Odd/Even

TCE 011775507-02



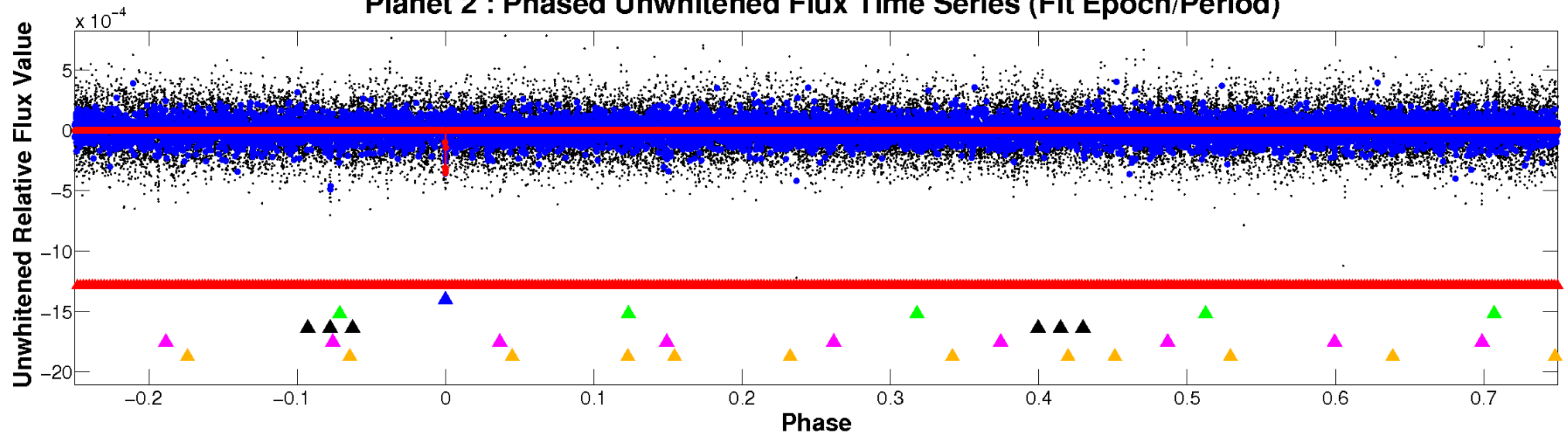
ALT Odd/Even

TCE 011775507-02

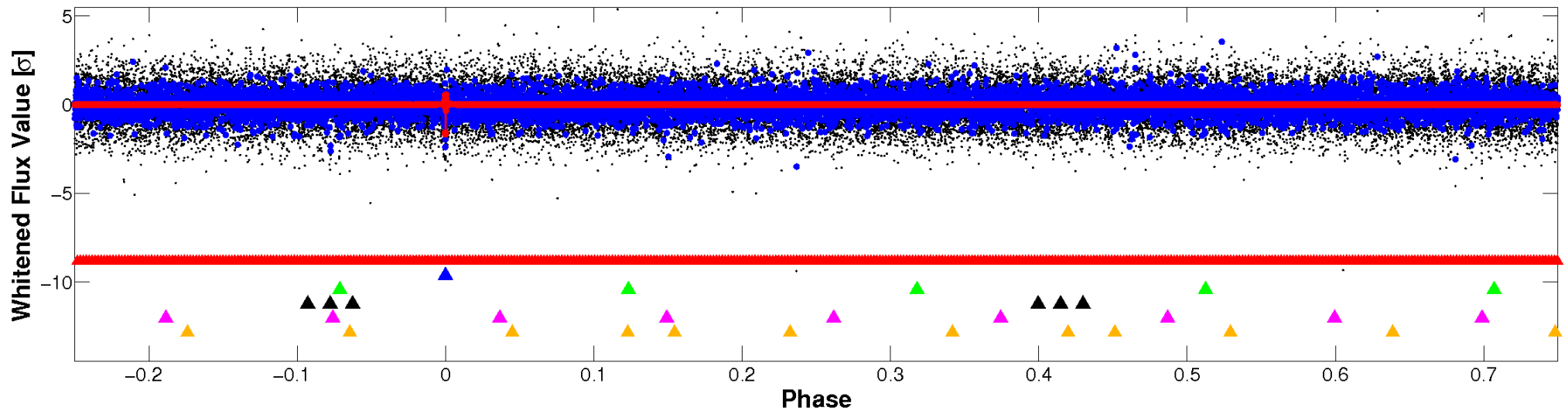


Non-Whitened Vs. Whitened Light Curve

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

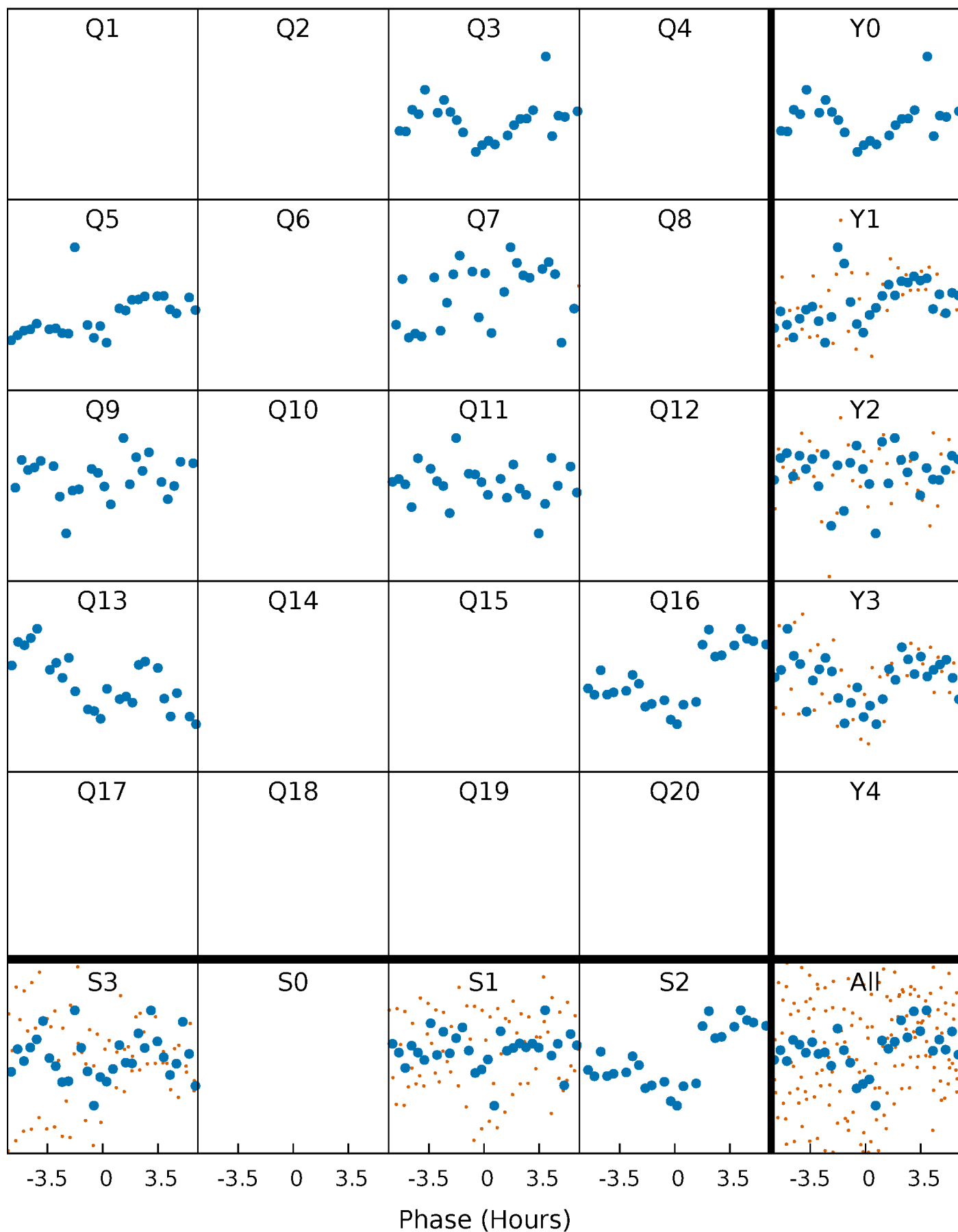


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



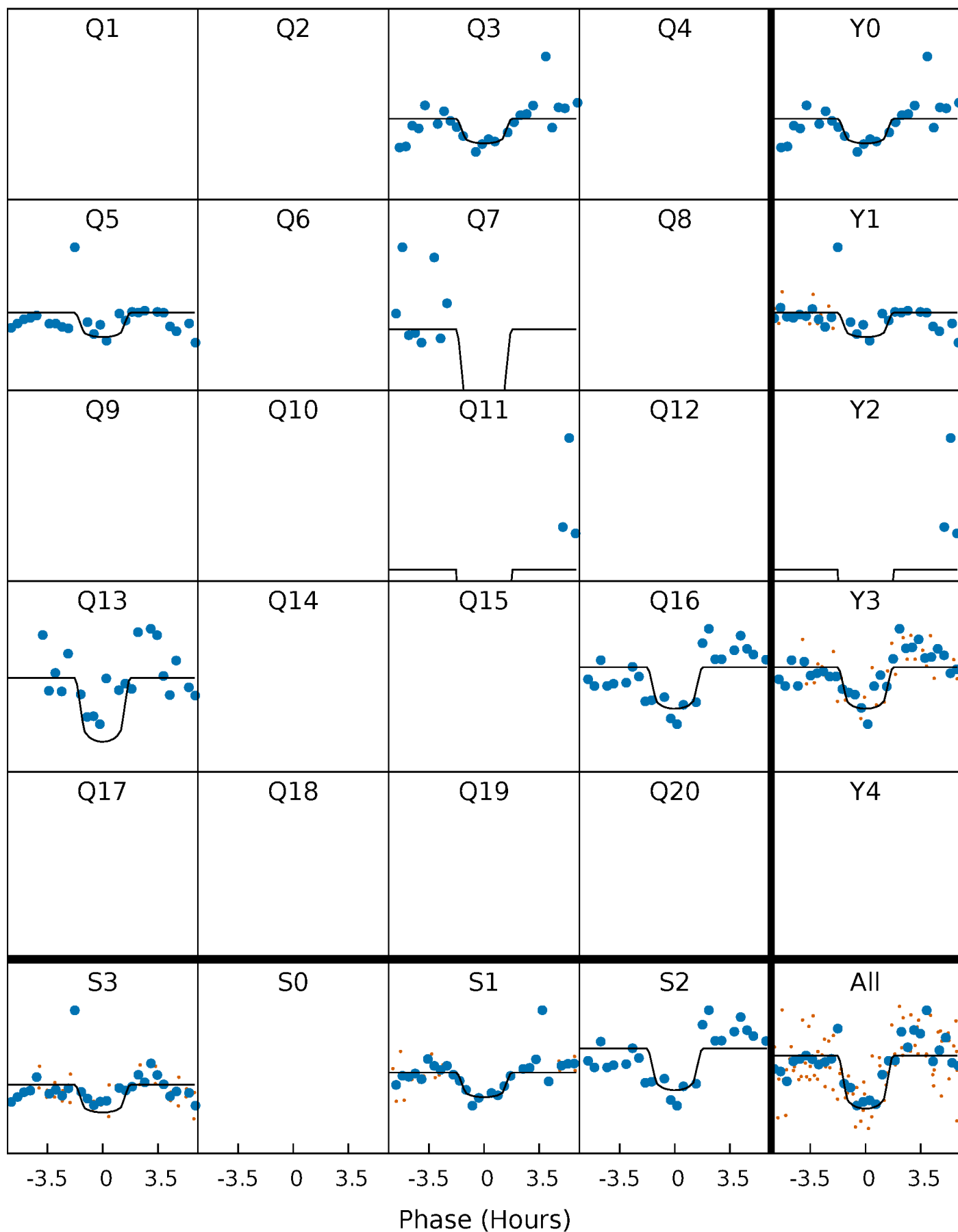
PDC Quarter-Phased Transit Curves

TCE 011775507-02 P=183.345201 Days $T_0=271.939527$ (BKJD)



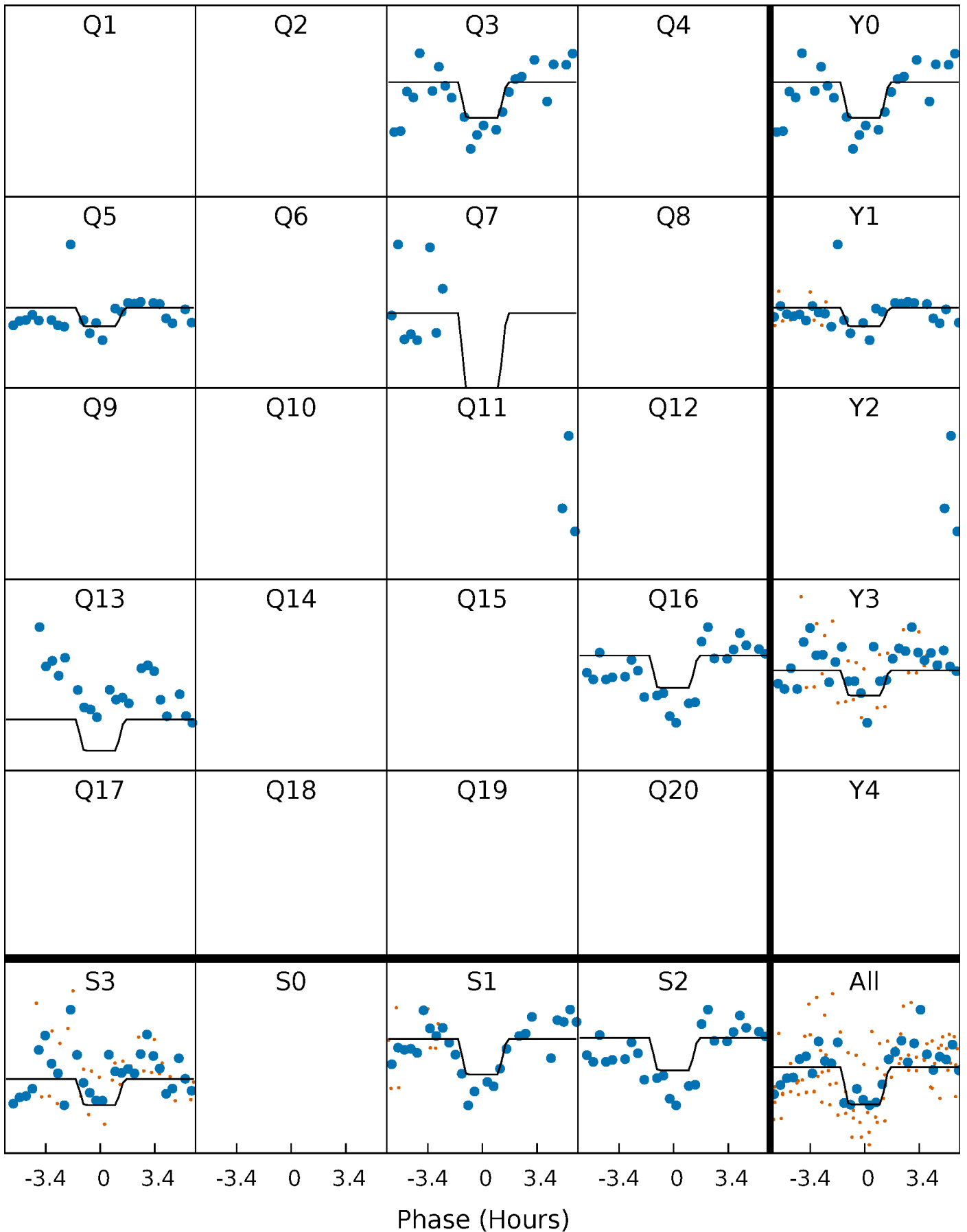
DV Quarter-Phased Transit Curves

TCE 011775507-02 P=183.345201 Days $T_0=271.939527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

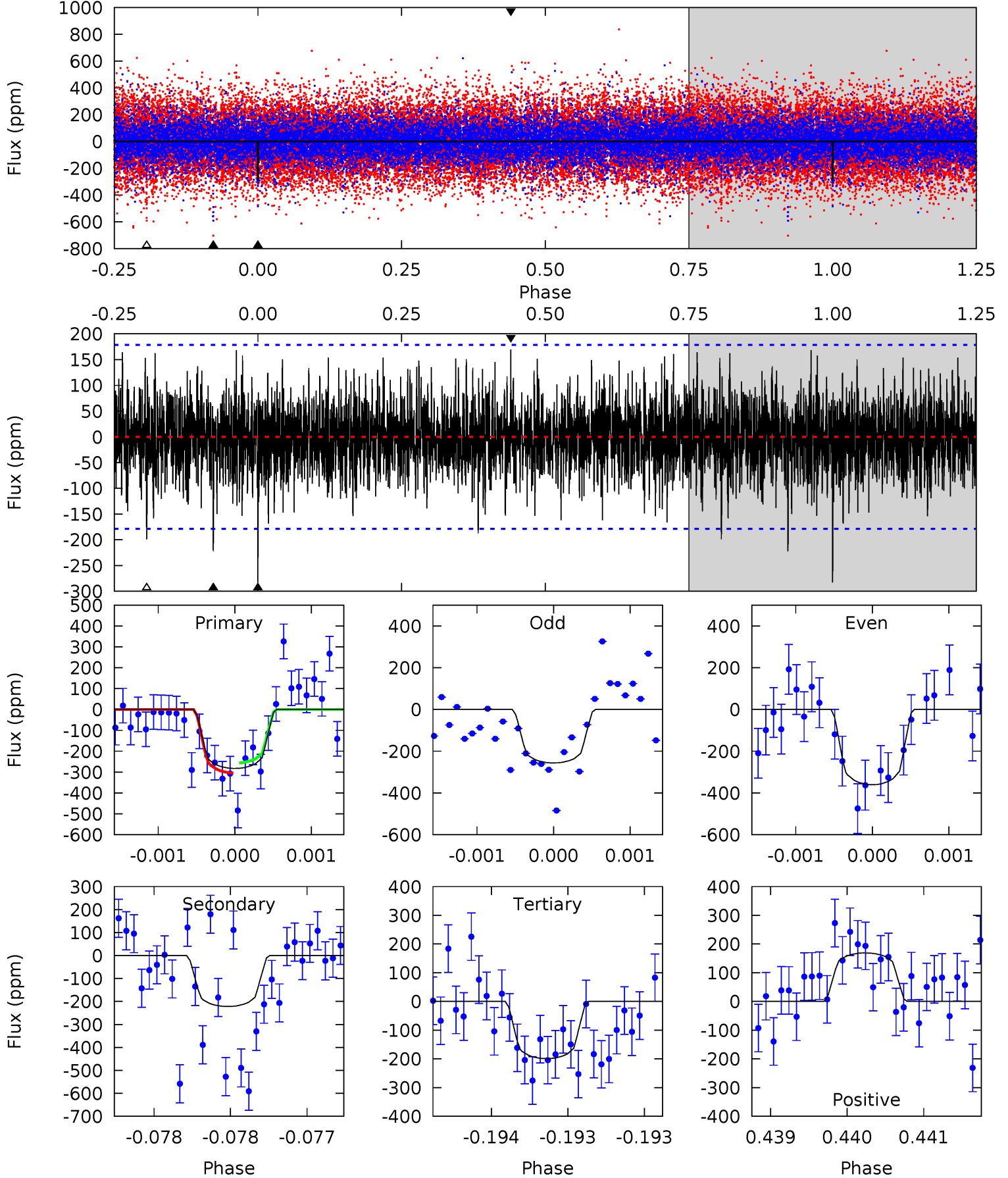
TCE 011775507-02 P=183.343769 Days $T_0=271.945688$ (BKJD)



DV Model-Shift Uniqueness Test

011775507-02, P = 183.345201 Days, E = 88.594326 Days

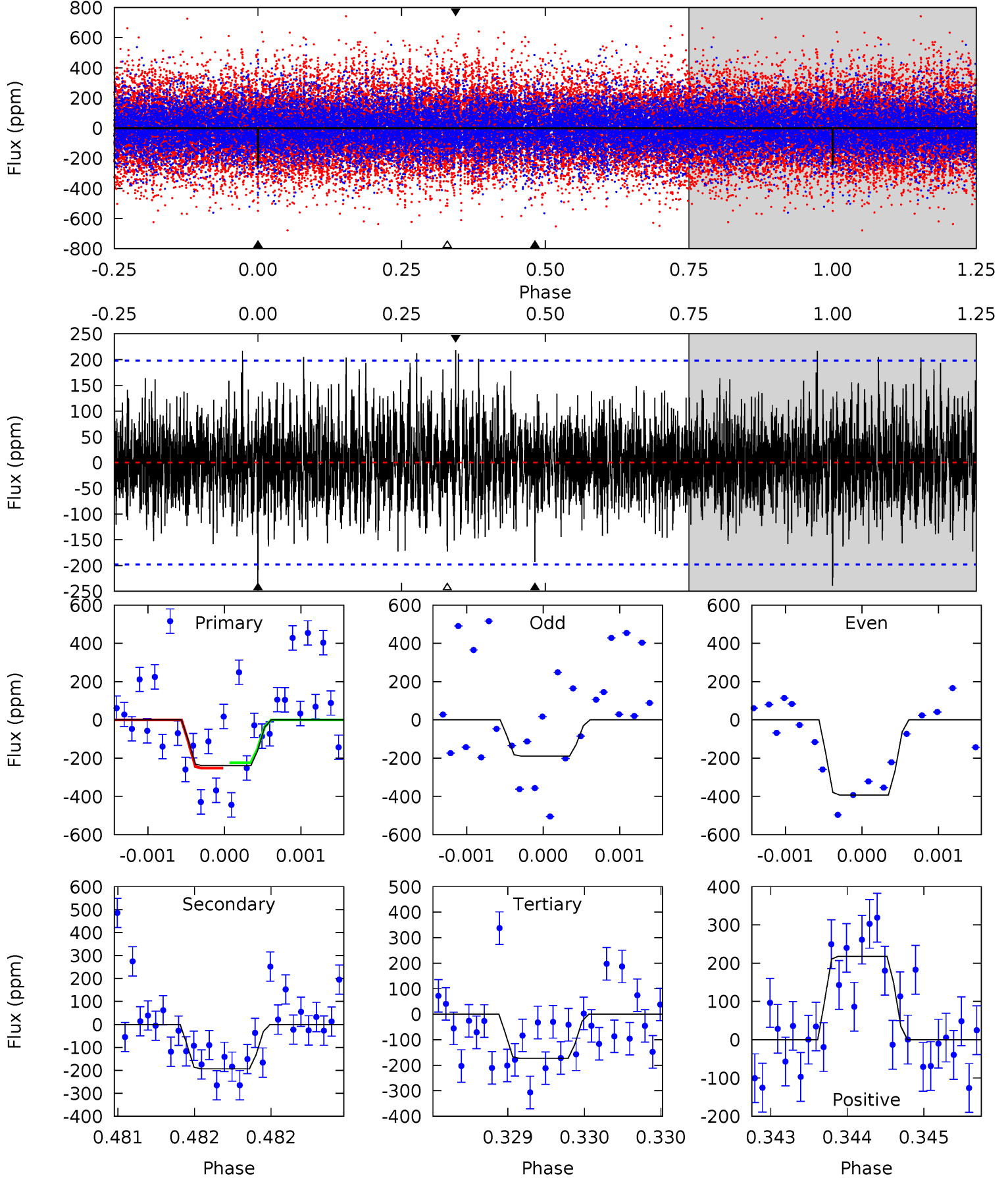
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	6.83	6.13	5.21	5.50	3.37	1.60	2.57	3.50	0.70	1.63	1.37	0.99	0.37	0.74



Alt Model-Shift Uniqueness Test

011775507-02, $P = 183.343769$ Days, $E = 88.601919$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.69	5.40	4.83	6.10	5.54	3.42	1.58	1.85	0.59	0.56	-0.70	2.44	0.76	0.48	0.40



Stellar Parameters For KIC 011775507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6528^{+183}_{-252}	$4.257^{+0.153}_{-0.170}$	$-0.440^{+0.250}_{-0.300}$	$1.260^{+0.362}_{-0.241}$	$1.046^{+0.160}_{-0.117}$	$0.737^{+0.625}_{-0.364}$
	+3%/-4%	+4%/-4%	+57%/-68%	+29%/-19%	+15%/-11%	+85%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011775507-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-222 ± 32	$4.66^{+4.41}_{-3.12}$	563^{+42}_{-36}	4491^{+3325}_{-945}	2321^{+19401}_{-1724}
Alt.	-193 ± 36	$4.63^{+4.89}_{-3.01}$	563^{+42}_{-39}	4326^{+2749}_{-887}	1964^{+15850}_{-1464}

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

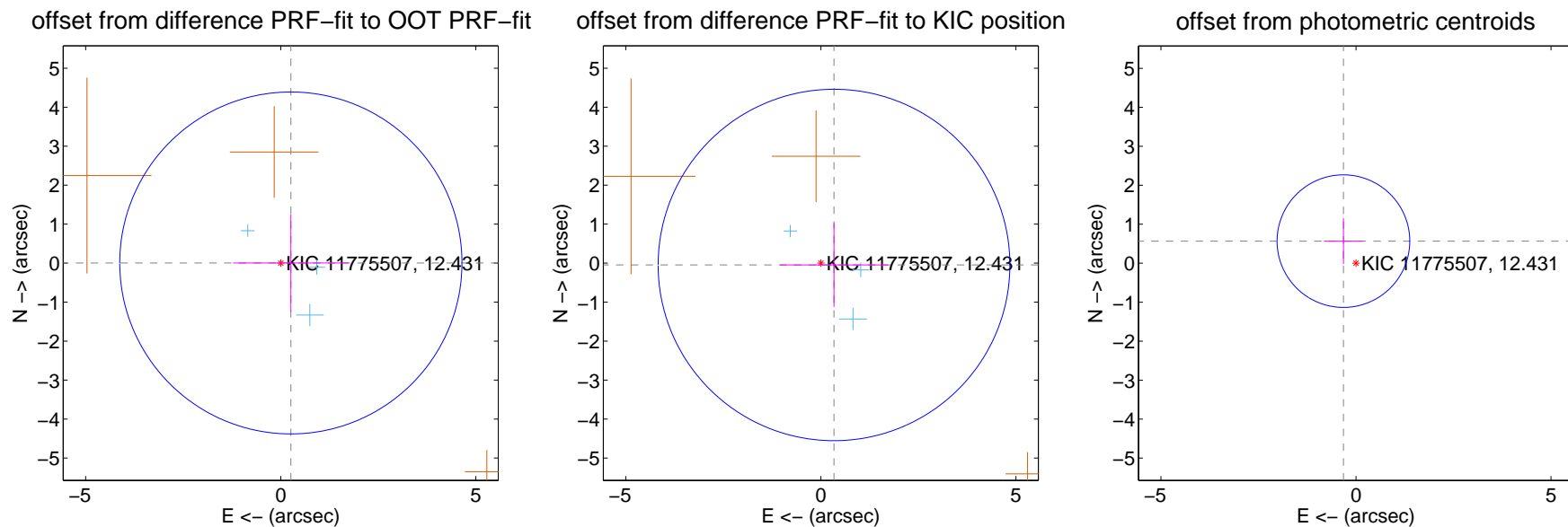
DV Centroid Data

Supplemental centroid analysis for 011775507-02. Kepler magnitude: 12.43. Transit SNR 7.54

There are 3 quarters with good PRF difference image offsets

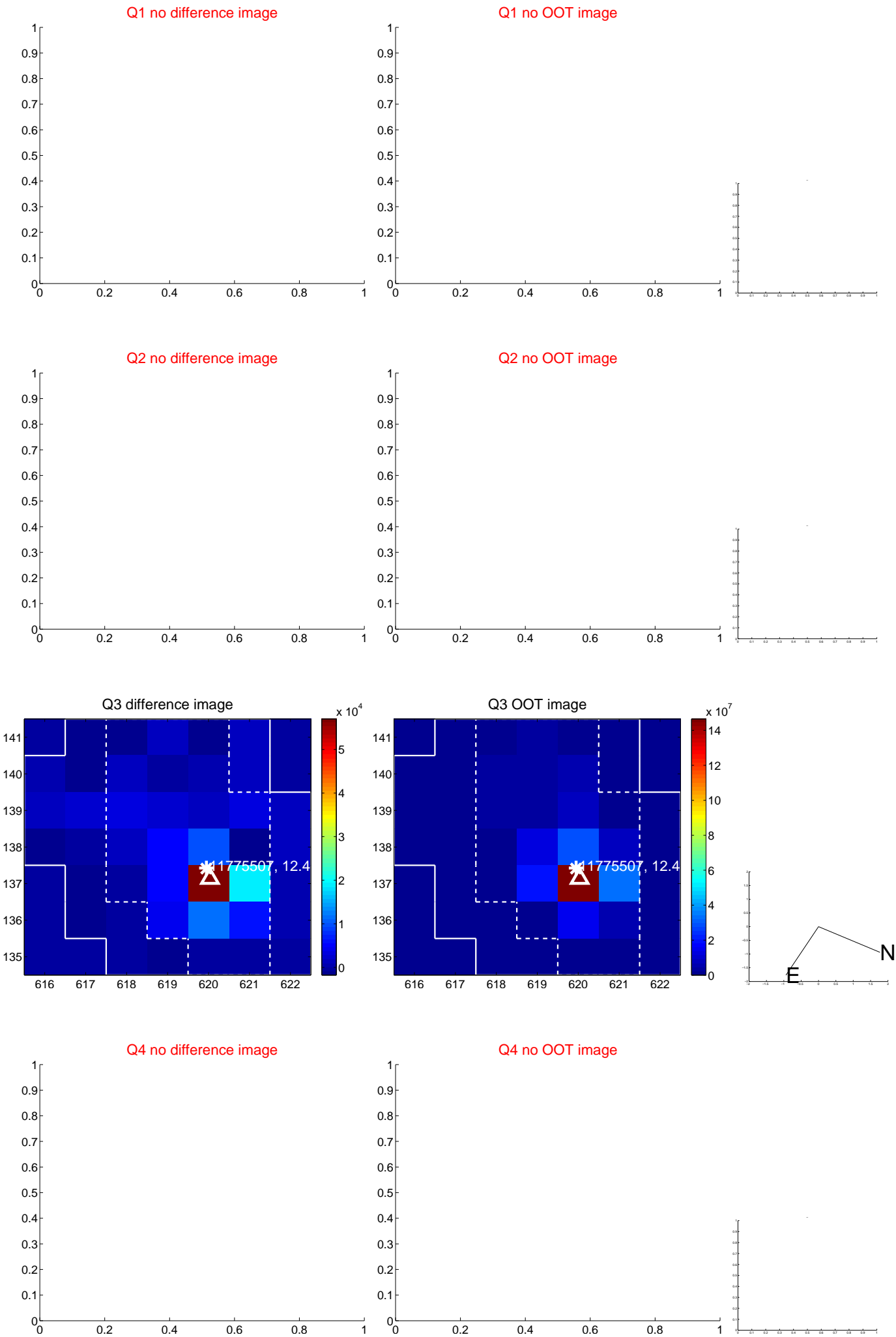
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.259 ± 1.462	0.18	-0.259 ± 1.481	0.005 ± 1.248
PRF-fit source offset from KIC position	0.340 ± 1.502	0.23	-0.337 ± 1.382	-0.047 ± 1.077
photometric centroid source offset	0.65 ± 0.57	1.15	0.32 ± 0.50	0.57 ± 0.59

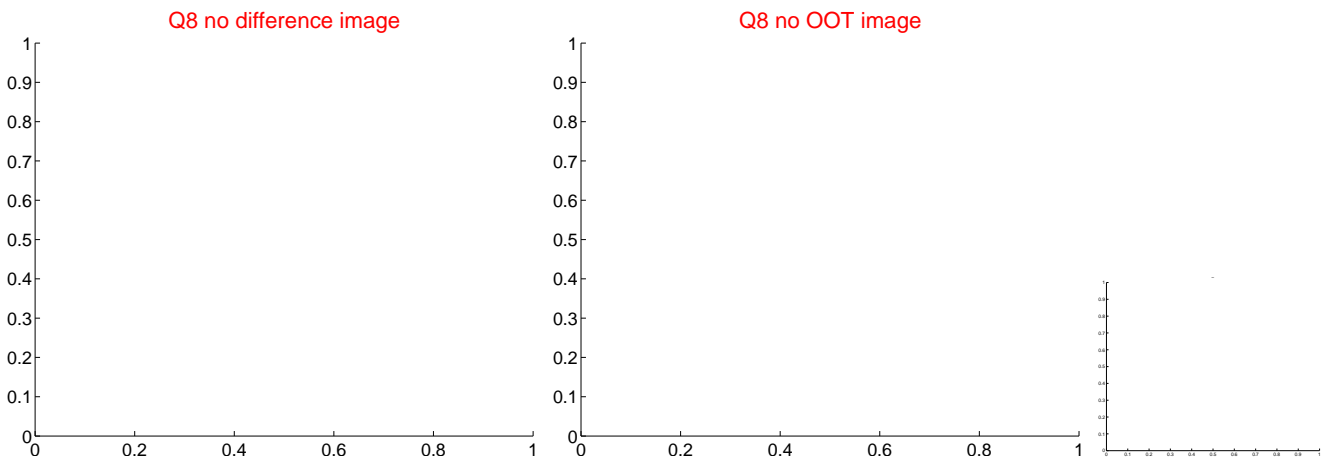
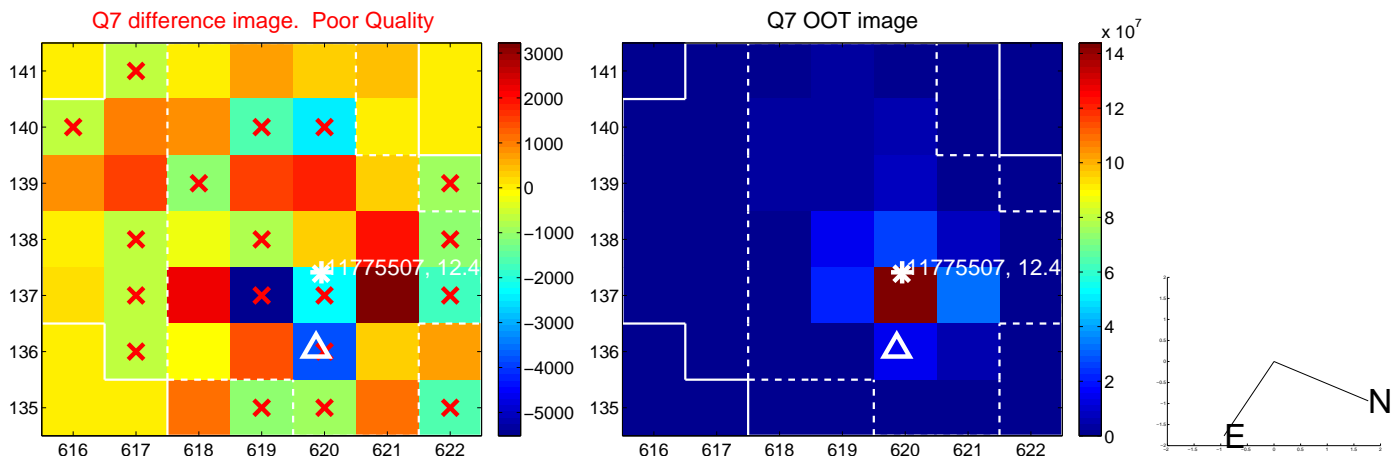
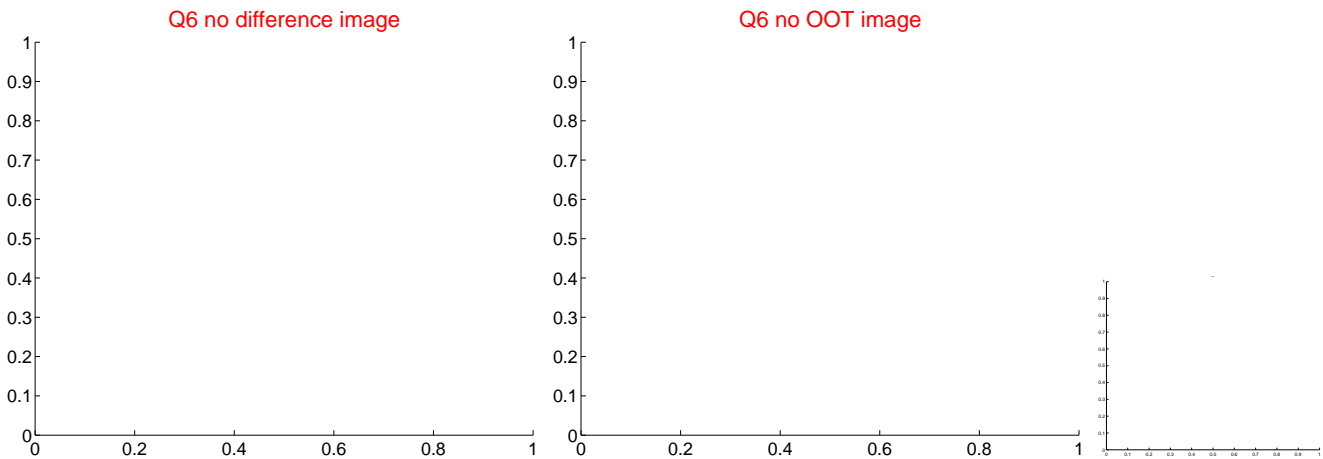
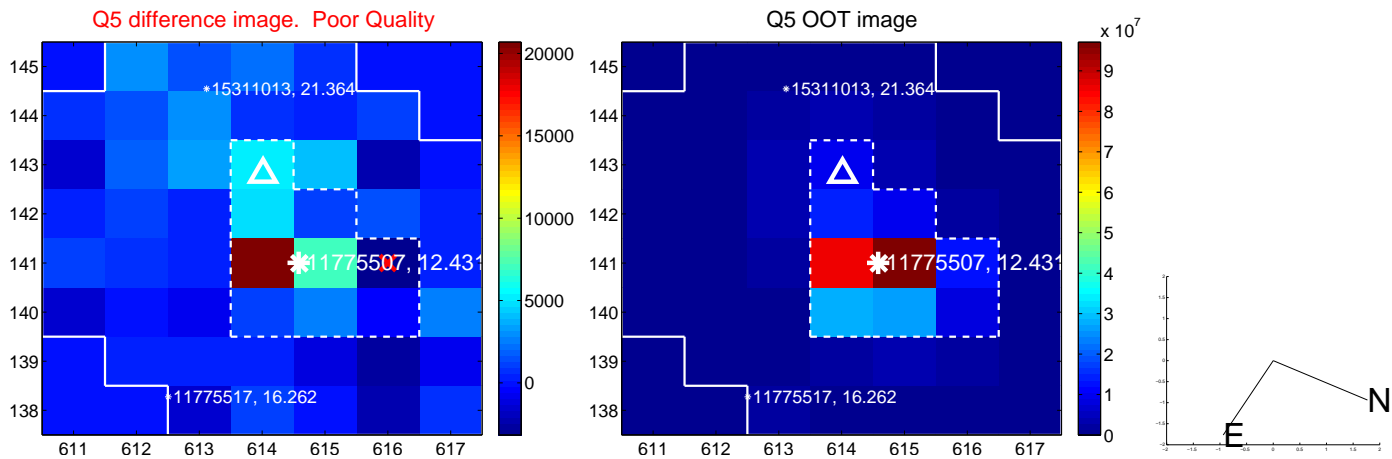


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

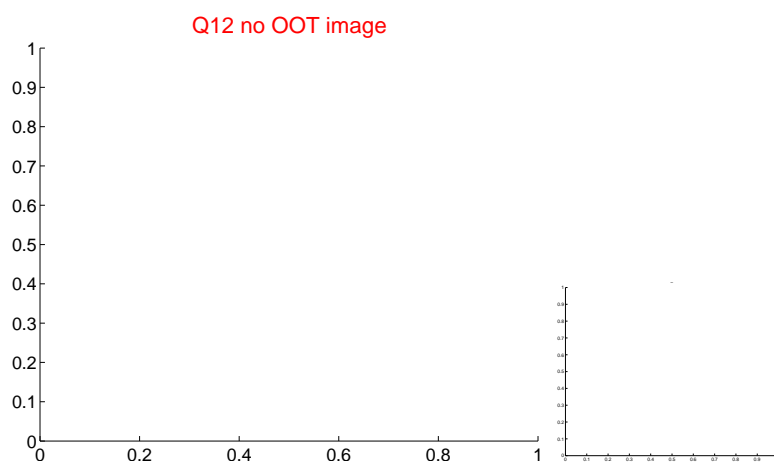
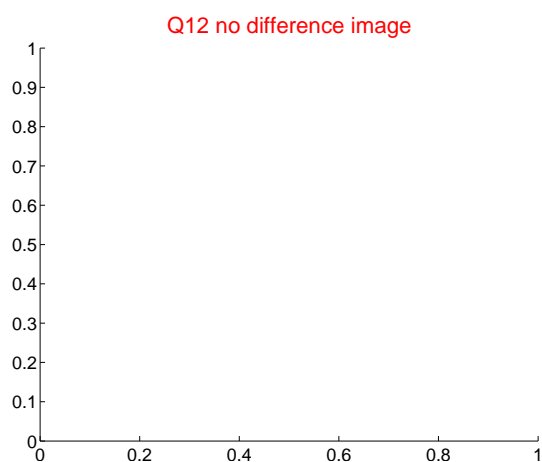
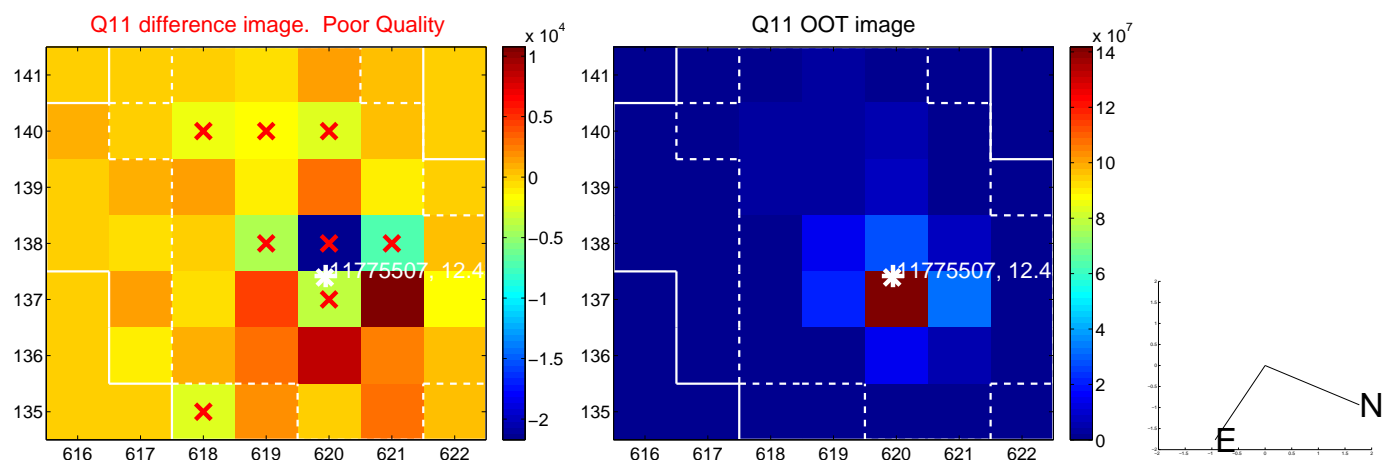
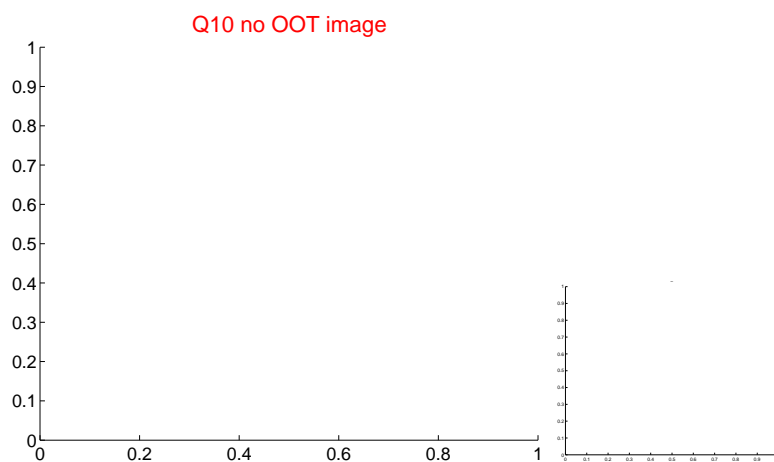
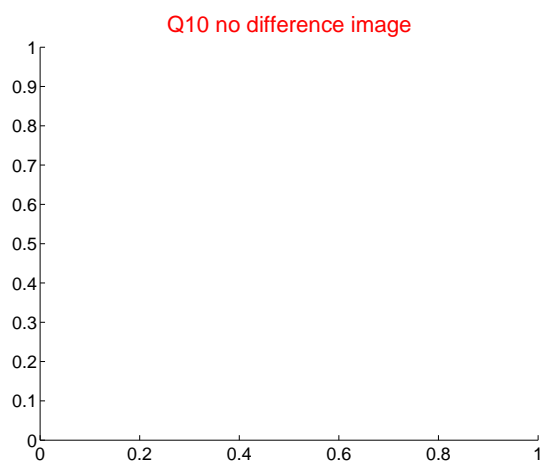
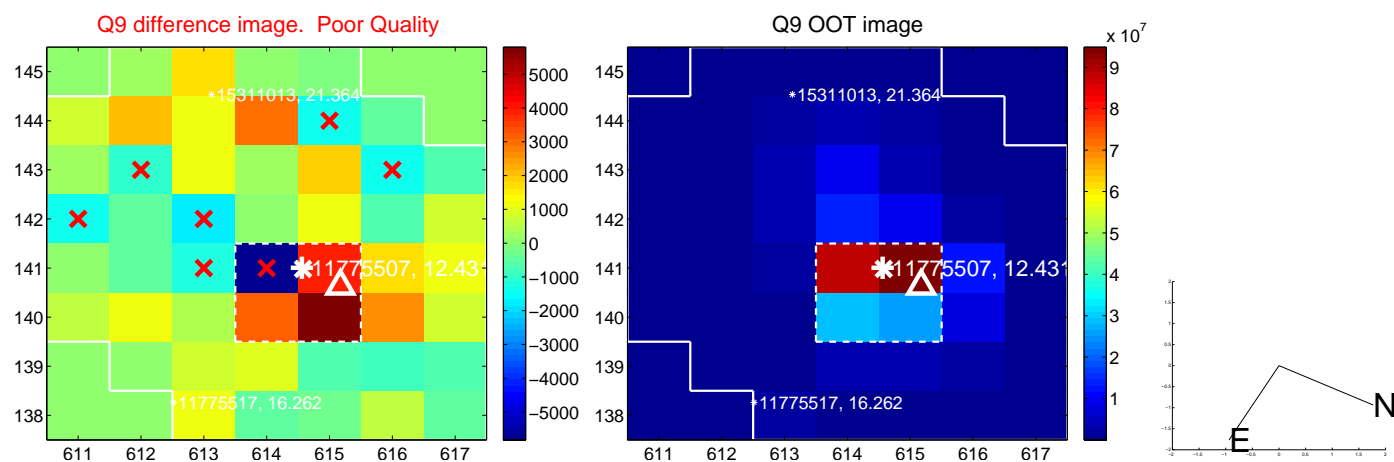
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



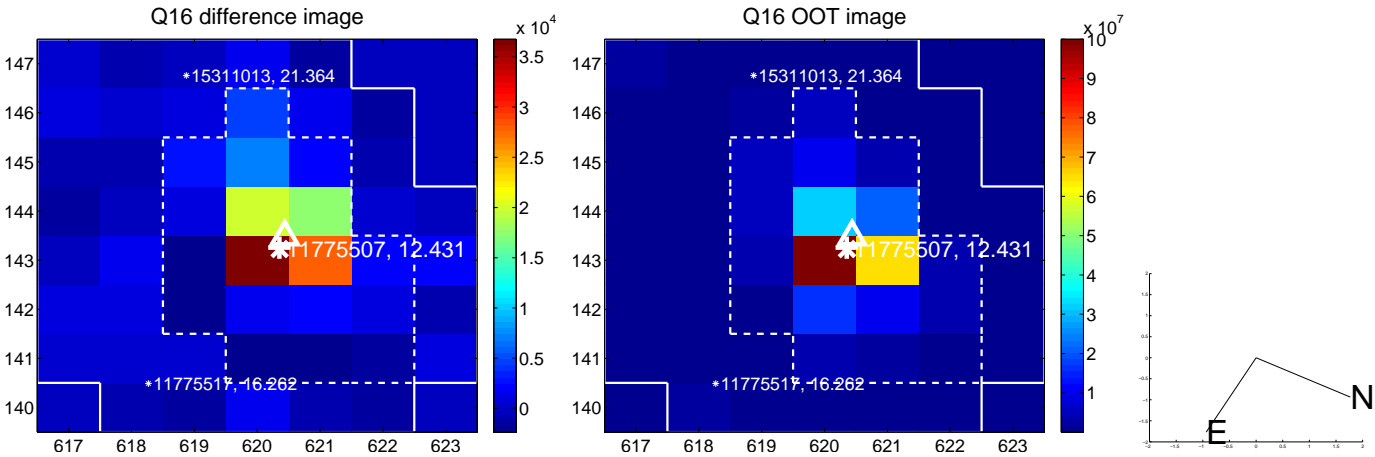
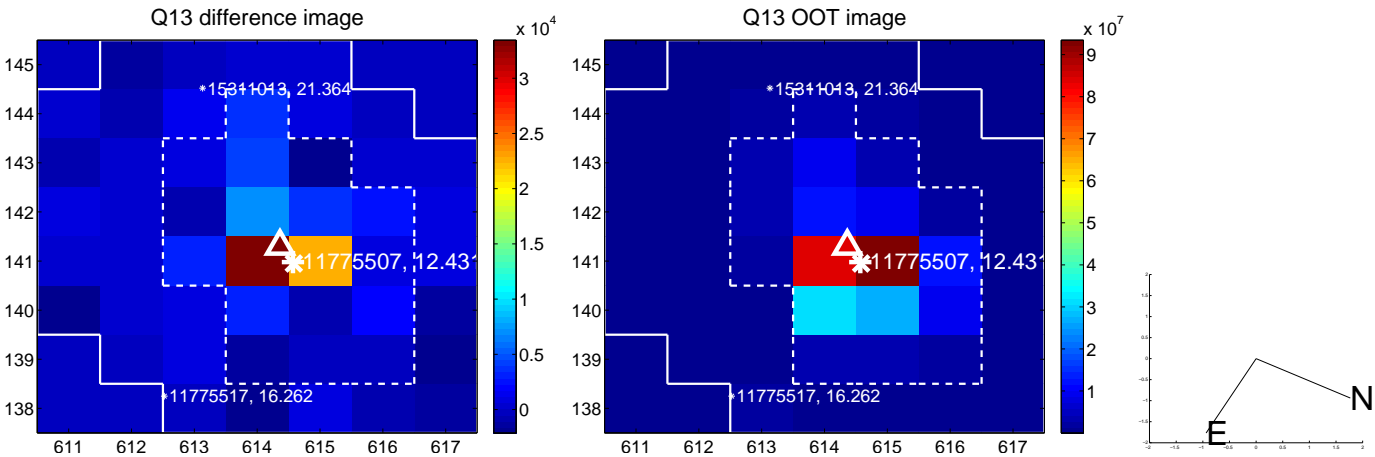
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



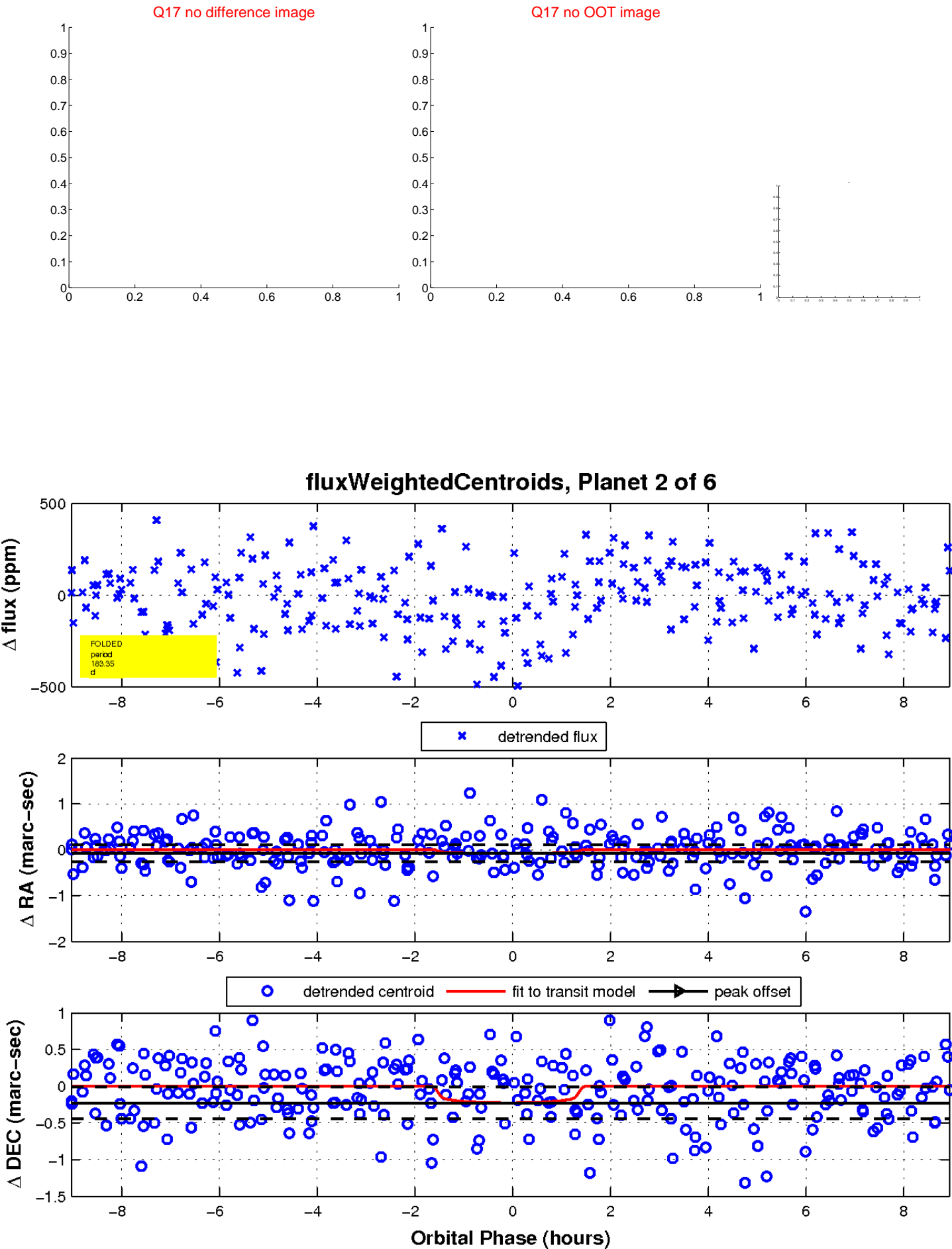
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

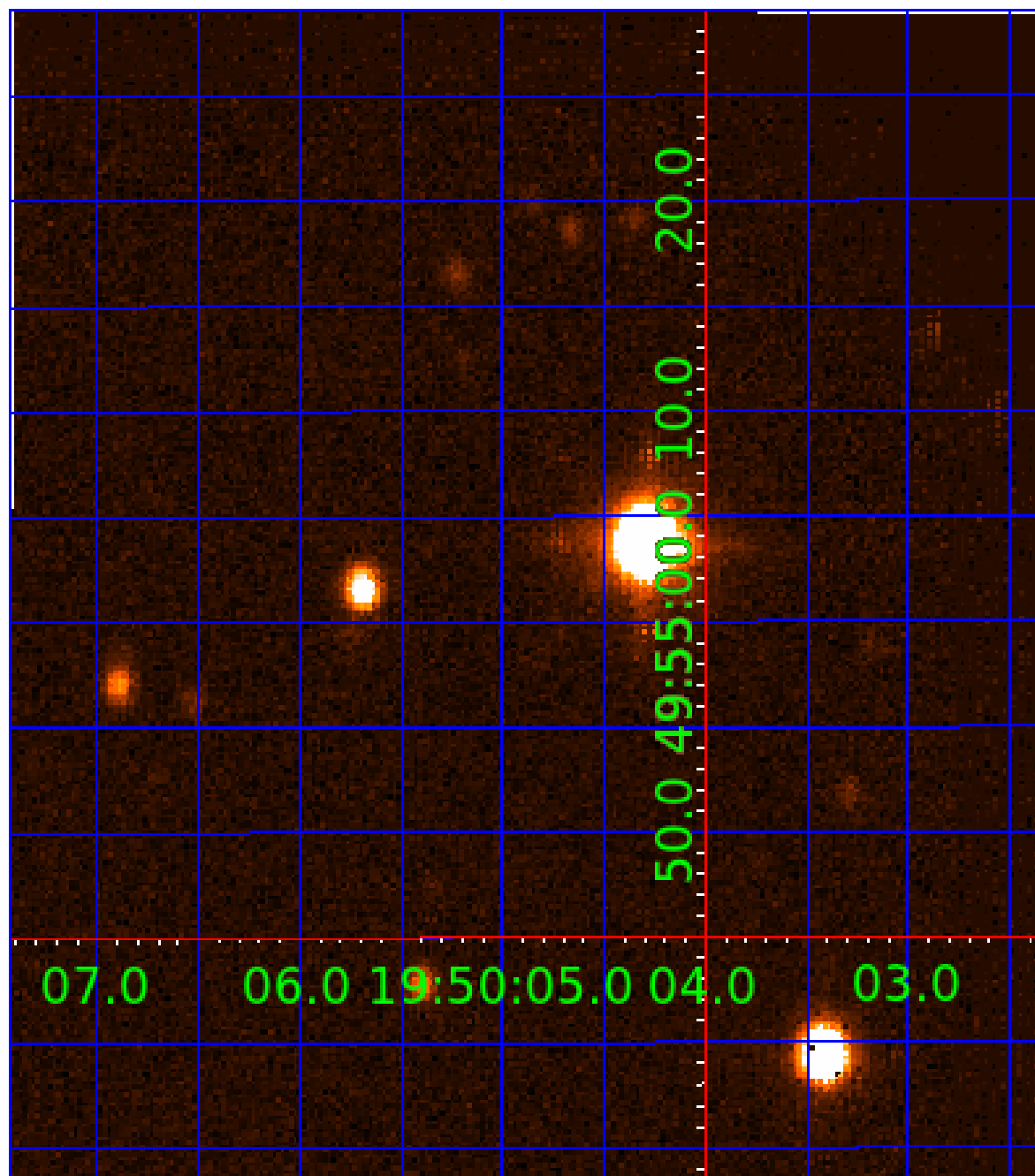


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011775507

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})
011775507-01	OBS	No	2.204555	131.997170	44.8	7.944	12.2	10.8	1.26	6528	1.16	2279.47
011775507-02	OBS	No	183.345201	271.939527	352.4	3.019	8.6	7.5	1.26	6528	2.54	6.28
011775507-03	OBS	No	331.016635	218.229336	311.0	3.257	7.7	8.5	1.26	6528	2.60	2.86
011775507-04	OBS	6245.03	276.402903	161.861116	338.6	4.673	7.6	8.4	1.26	6528	2.57	3.63
011775507-05	OBS	No	162.705829	198.509701	411.5	2.348	7.3	8.1	1.26	6528	2.99	7.36
011775507-06	OBS	No	128.919665	165.554748	258.8	3.842	7.6	7.7	1.26	6528	2.22	10.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011775507-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011775507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-04	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_ALT
011775507-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_UNCERTAIN
011775507-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

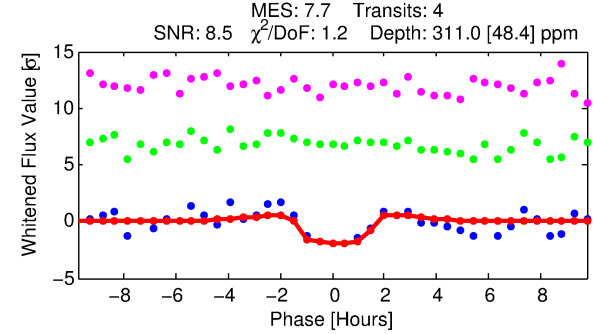
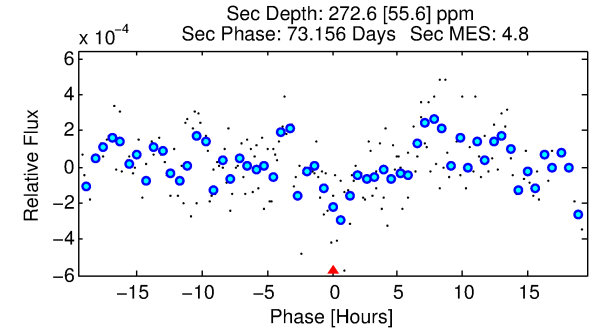
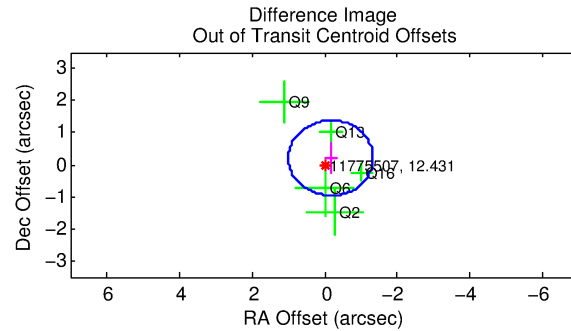
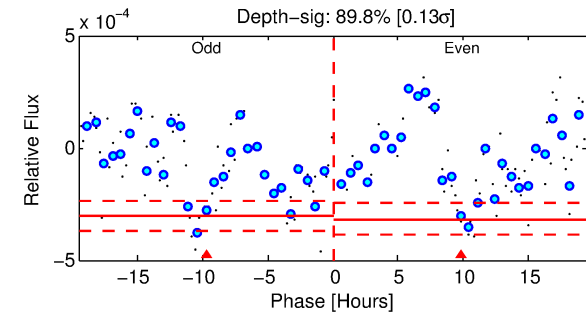
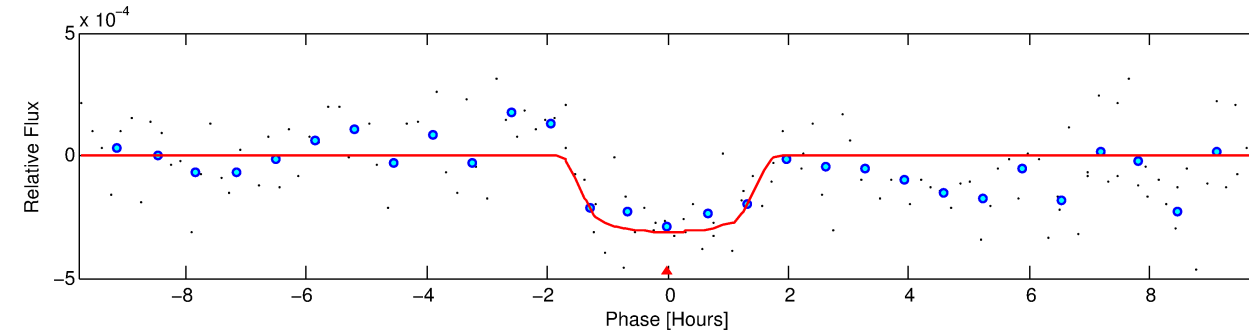
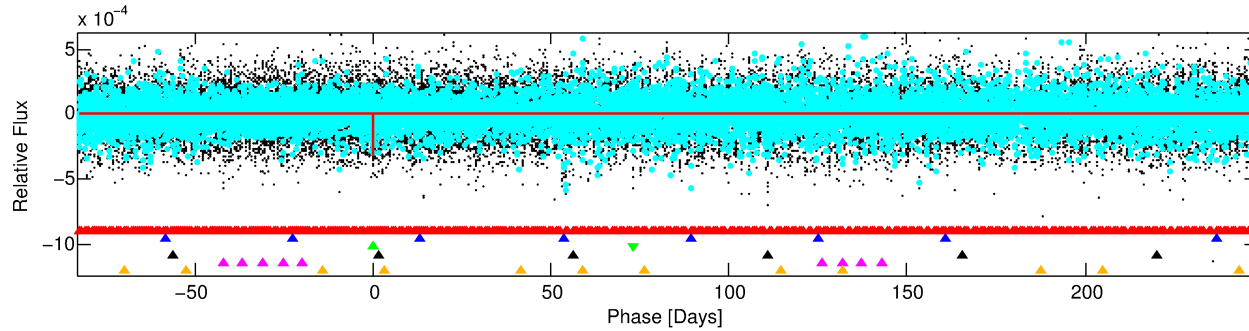
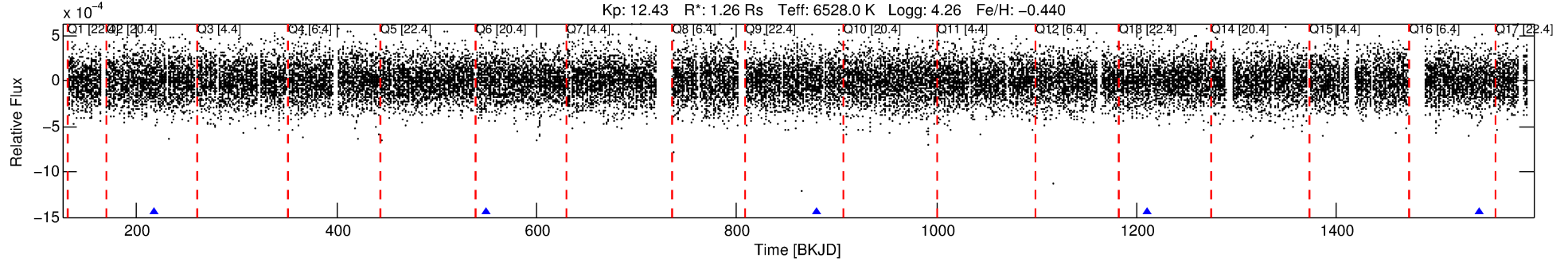
Ephemeris Match Information For 011775507-03

No Significant Match Found

DV One-Page Summary

KIC: 11775507 Candidate: 3 of 6 Period: 331.017 d
KOI: K06245 Corr: No Ephemeris Match

Kp: 12.43 R*: 1.26 Rs Teff: 6528.0 K Logg: 4.26 Fe/H: -0.440



DV Fit Results:

Period = 331.01664 [0.00466] d
Epoch = 218.2293 [0.0126] BKJD
Rp/R* = 0.0189 [0.0061]
a/R* = 368.38 [650.88]
b = 0.90 [0.37]
Seff = 2.86 [1.02]
Teq = 331 [30] K
Rp = 2.60 [1.13] Re
a = 0.9510 [0.2204] AU
Ag = 20103.23 [15153.53] [1.33σ]
Teffp = 6103 [1065] K [5.42σ]

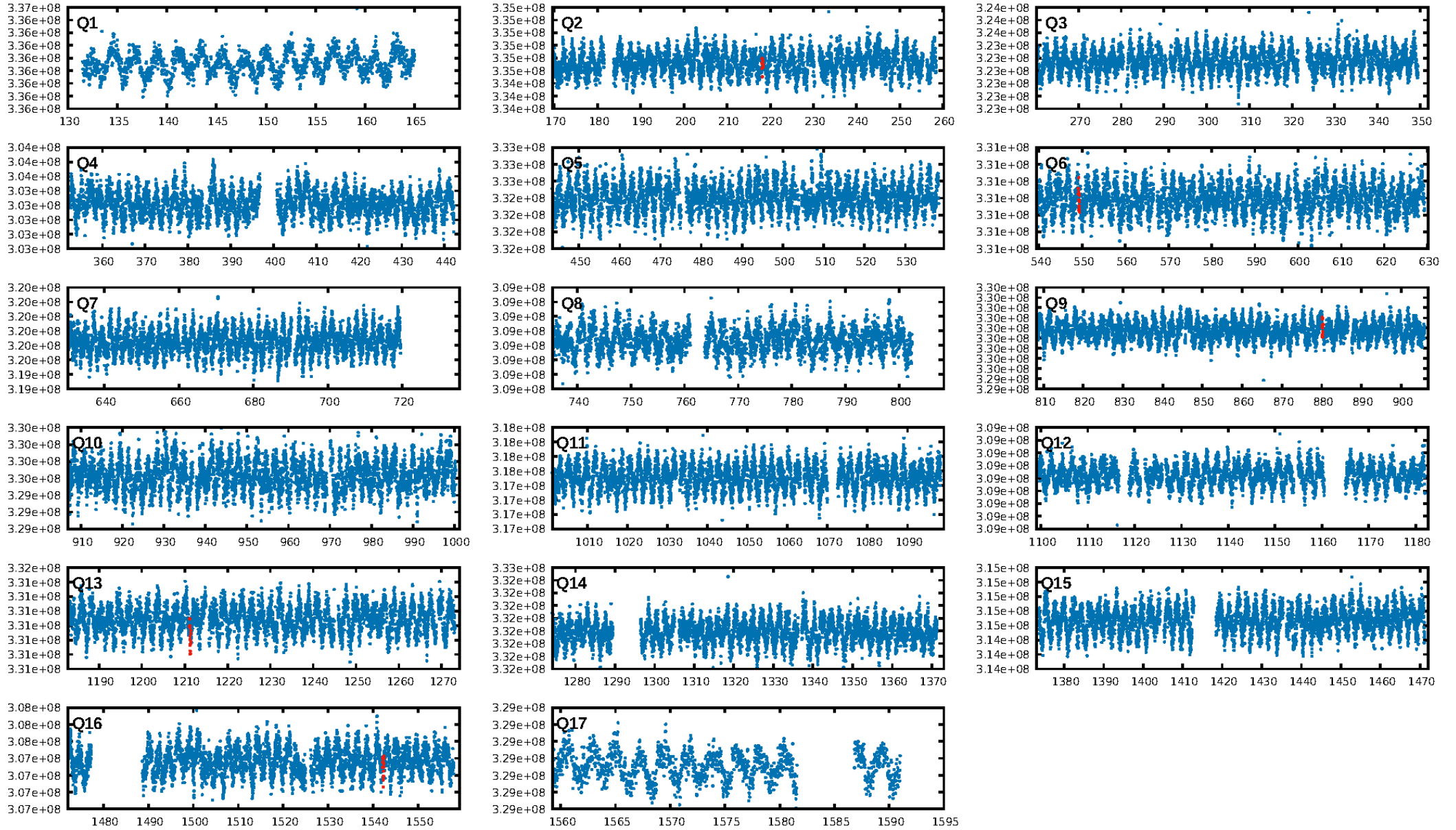
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [230.09σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.0%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 2.45e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 5.288
Centroid-sig: 24.4%
Centroid-so: 0.840 arcsec [1.19σ]
OotOffset-rm: 0.267 arcsec [0.69σ]
KicOffset-rm: 0.250 arcsec [0.85σ]
OotOffset-st: 2/0/1/2 [5]
KicOffset-st: 2/0/1/2 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 0.80 [4/5]

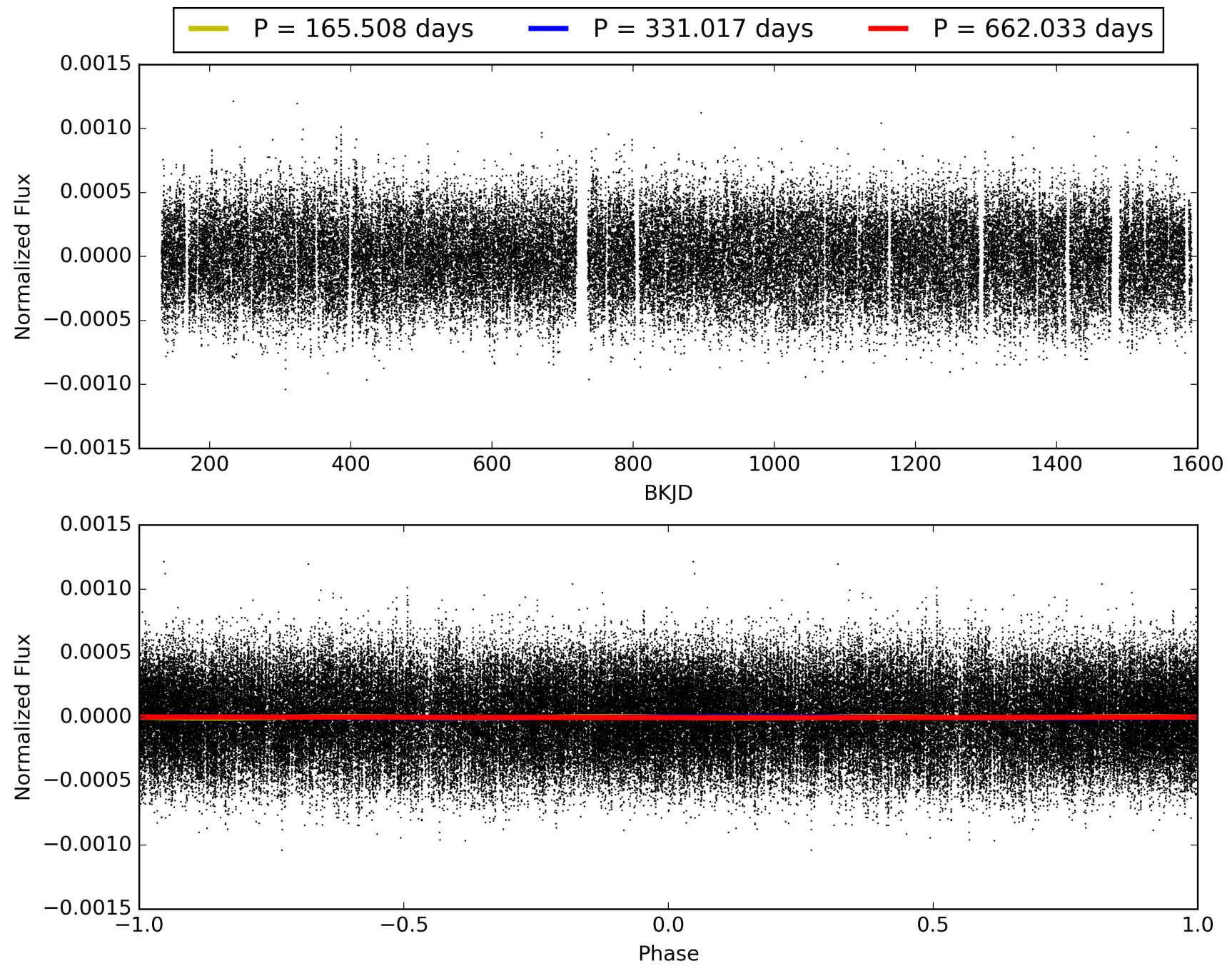
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:50:04 Z

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

TCE 011775507-03, PDC Light Curves

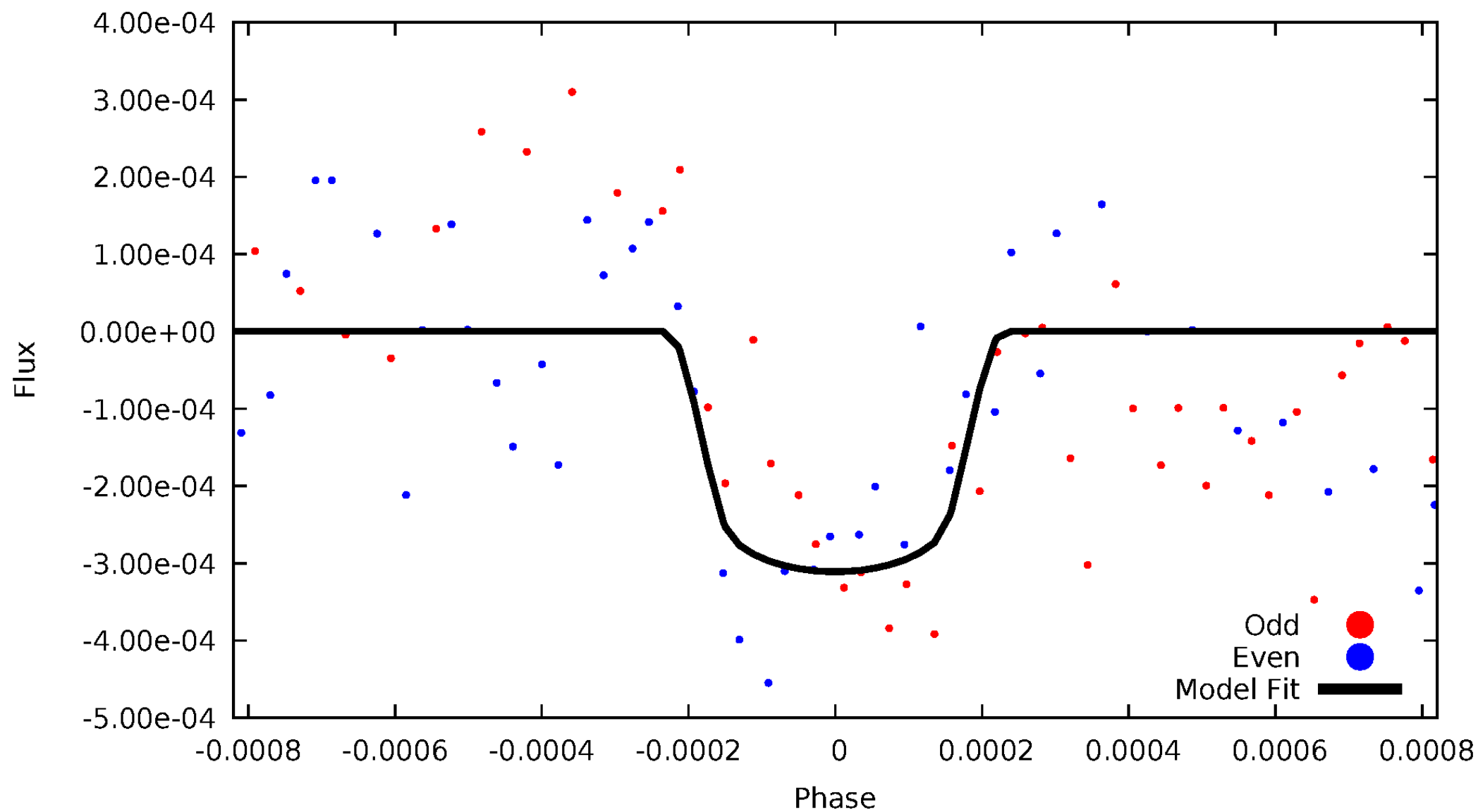


TCE 011775507-03



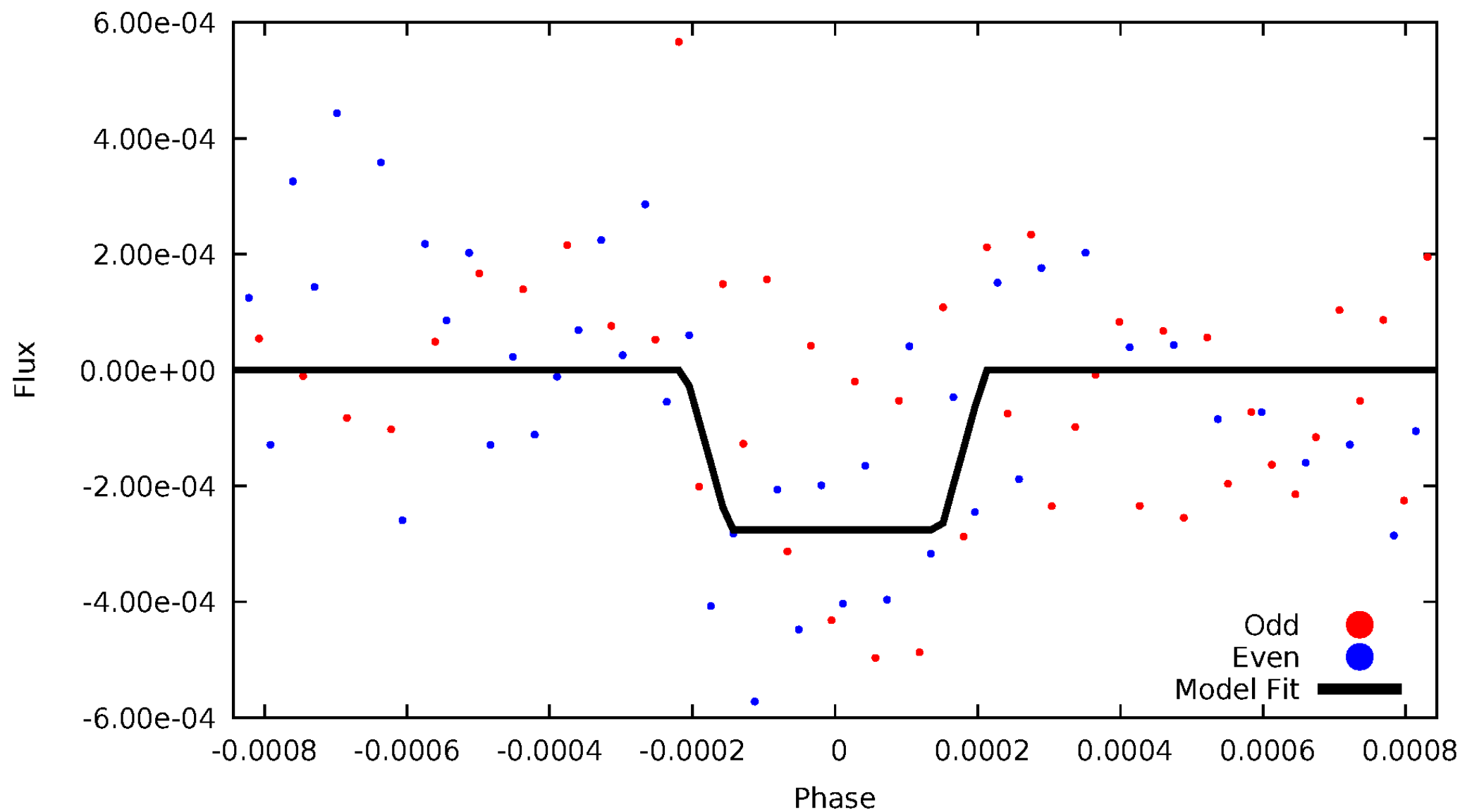
DV Odd/Even

TCE 011775507-03



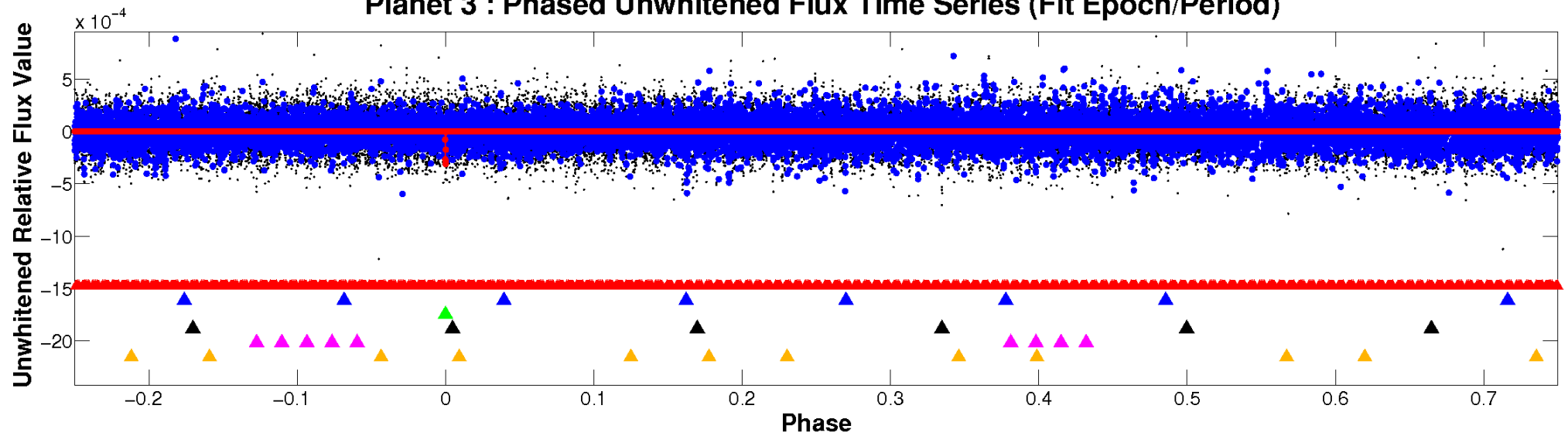
ALT Odd/Even

TCE 011775507-03

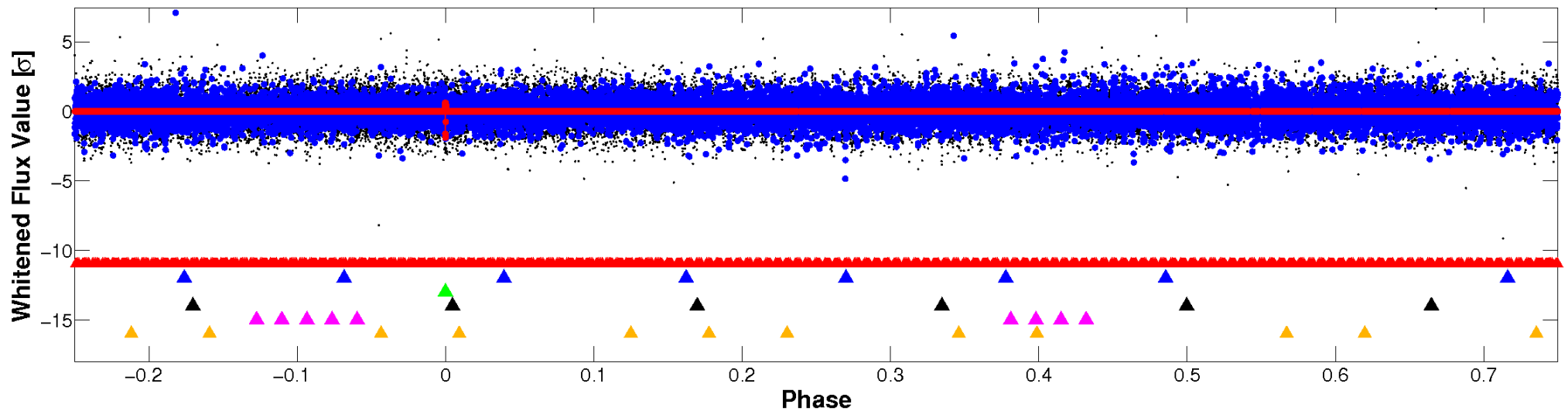


Non-Whitened Vs. Whitened Light Curve

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

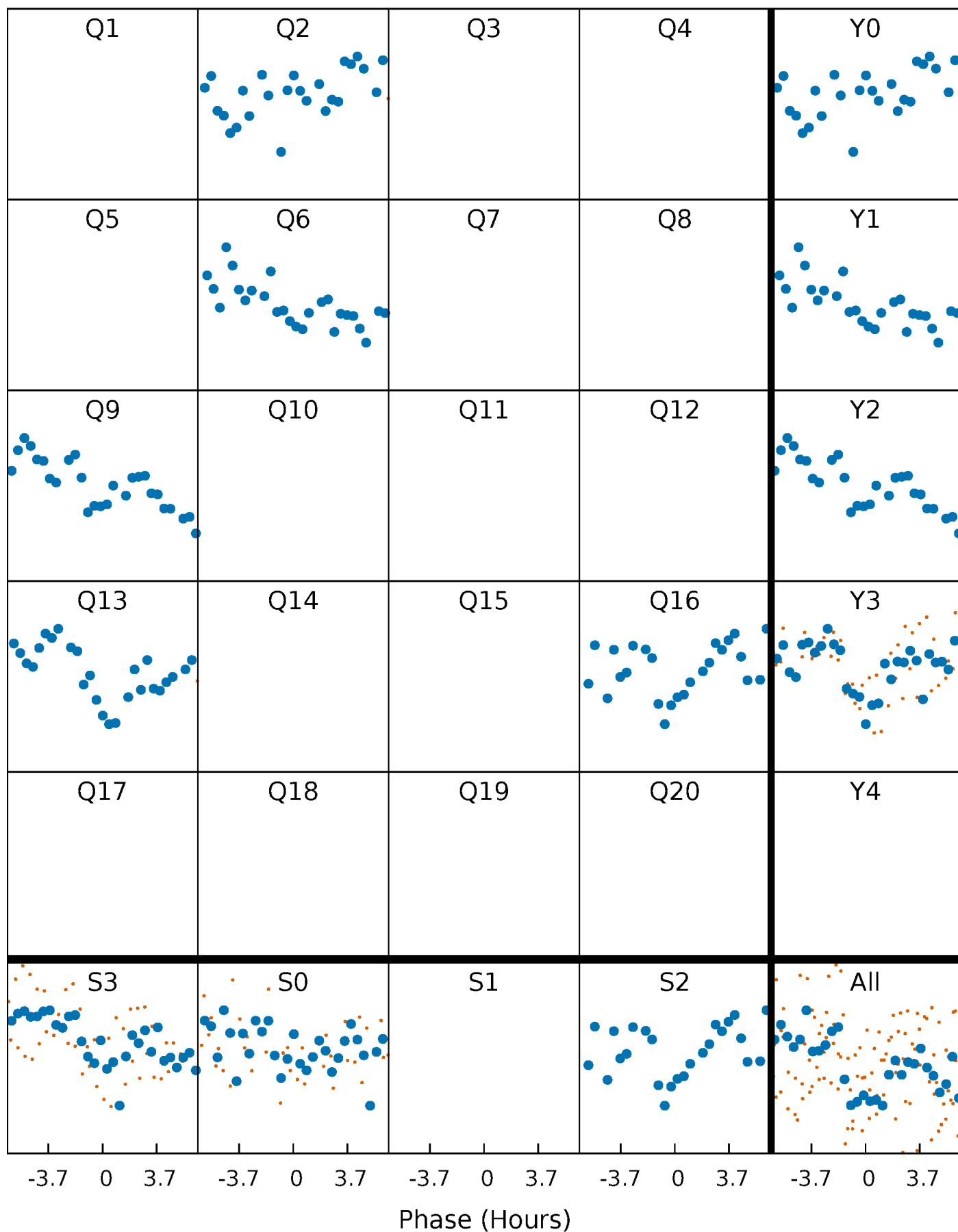


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



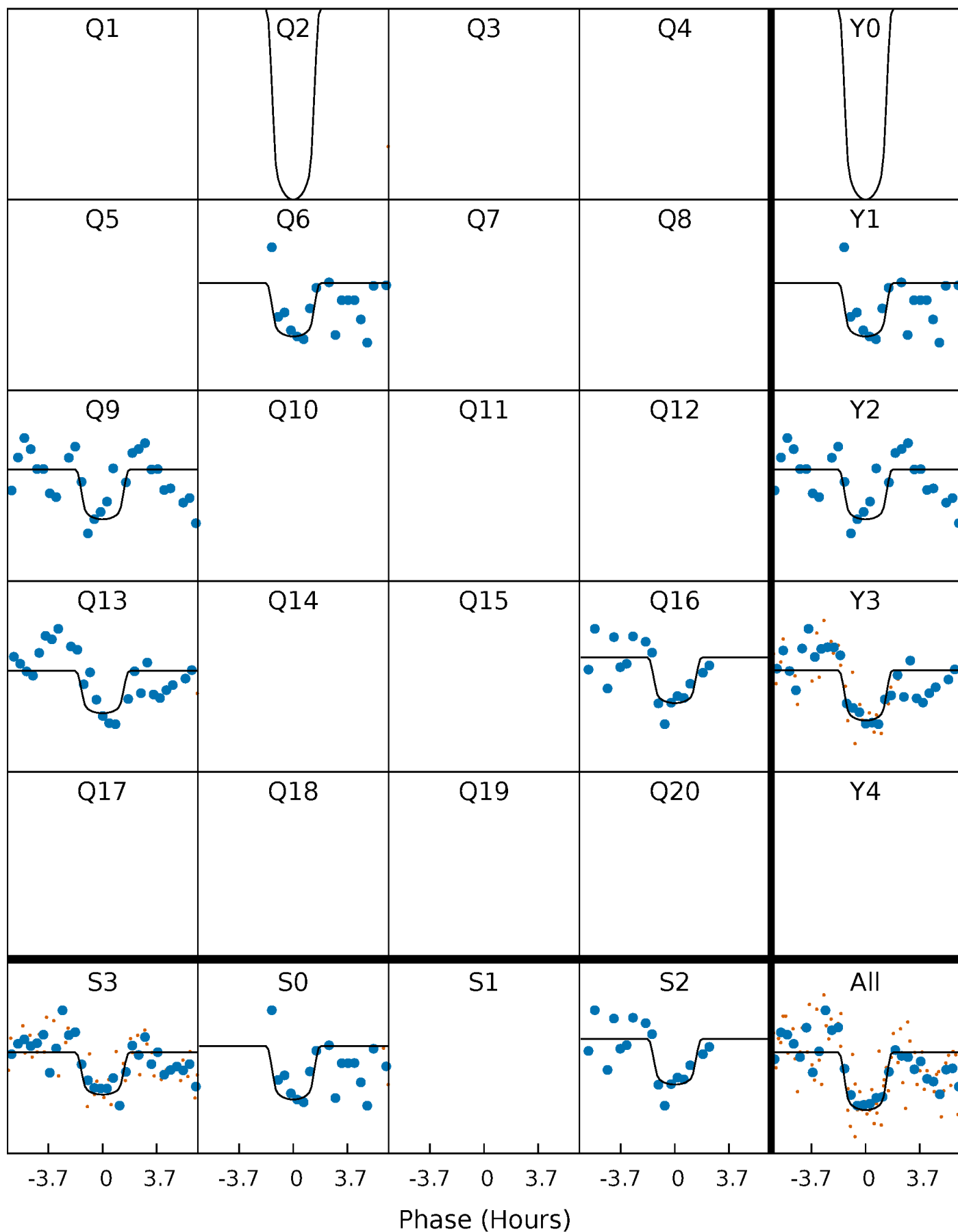
PDC Quarter-Phased Transit Curves

TCE 011775507-03 $P=331.016635$ Days $T_0=218.229336$ (BKJD)



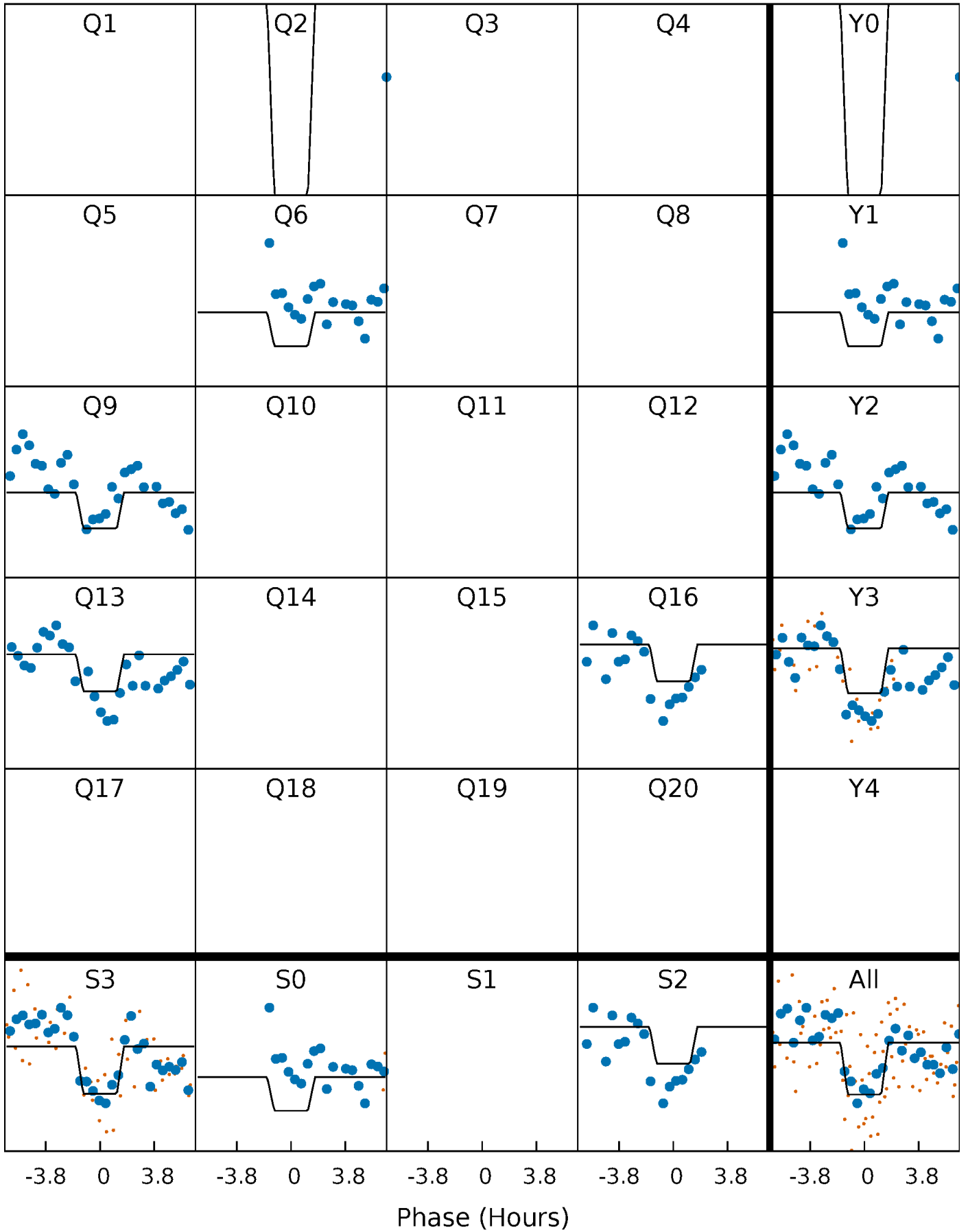
DV Quarter-Phased Transit Curves

TCE 011775507-03 P=331.016635 Days $T_0=218.229336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

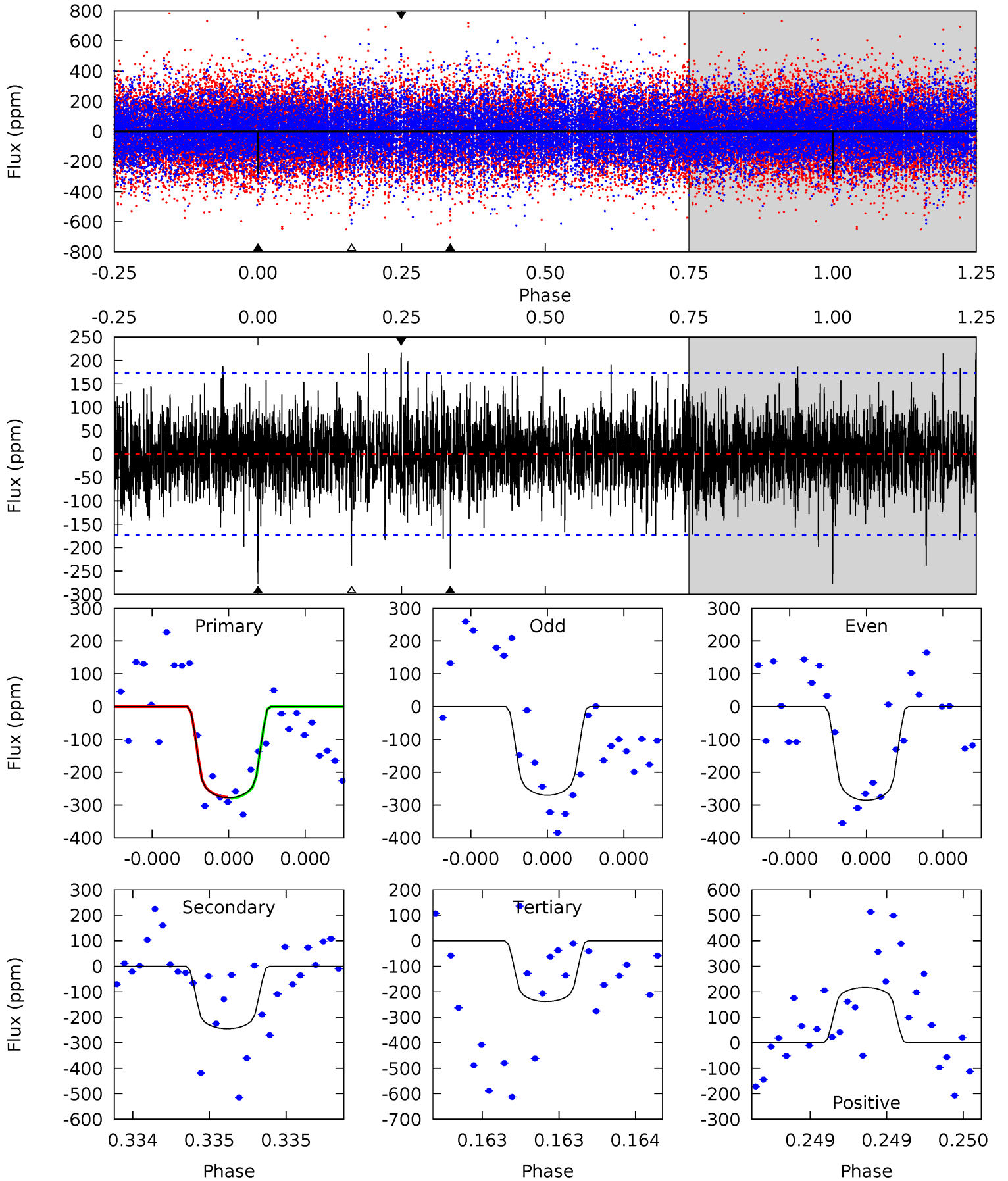
TCE 011775507-03 P=331.018179 Days $T_0=218.230250$ (BKJD)



DV Model-Shift Uniqueness Test

011775507-03, P = 331.016635 Days, E = 218.229336 Days

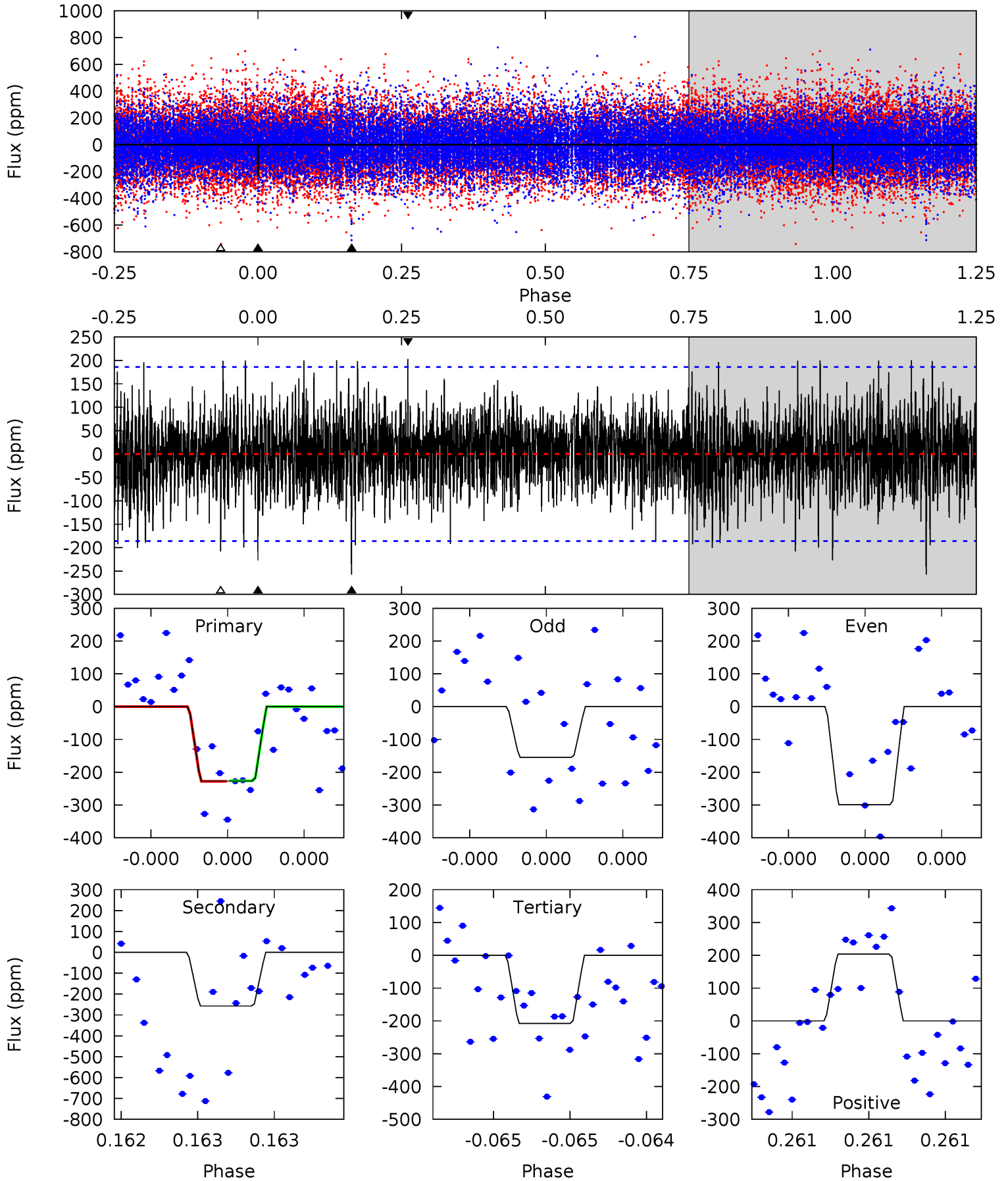
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.00	7.94	7.72	7.02	5.60	3.52	1.74	1.28	1.98	0.22	0.92	0.25	1.03	0.44	0.05



Alt Model-Shift Uniqueness Test

011775507-03, P = 331.018179 Days, E = 218.230250 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.84	7.74	6.26	6.13	5.60	3.53	1.65	0.58	0.71	1.49	1.62	2.18	0.86	0.44	0.03



Stellar Parameters For KIC 011775507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6528^{+183}_{-252}	$4.257^{+0.153}_{-0.170}$	$-0.440^{+0.250}_{-0.300}$	$1.260^{+0.362}_{-0.241}$	$1.046^{+0.160}_{-0.117}$	$0.737^{+0.625}_{-0.364}$
	+3%/-4%	+4%/-4%	+57%/-68%	+29%/-19%	+15%/-11%	+85%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011775507-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-245 ± 31	$2.61^{+0.89}_{-0.88}$	461^{+32}_{-29}	5886^{+1244}_{-737}	17547^{+20319}_{-7875}
Alt.	-257 ± 33	$2.27^{+0.97}_{-0.82}$	464^{+33}_{-31}	6407^{+1955}_{-961}	24552^{+37444}_{-12040}

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

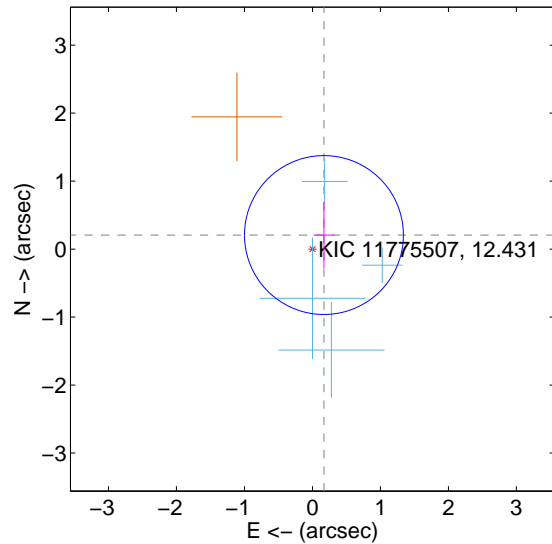
Supplemental centroid analysis for 011775507-03. Kepler magnitude: 12.43. Transit SNR 8.49

There are 4 quarters with good PRF difference image offsets

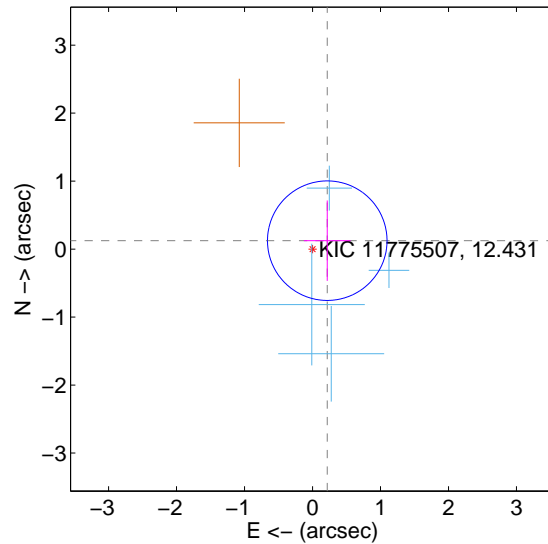
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.267 ± 0.389	0.69	-0.169 ± 0.152	0.207 ± 0.488
PRF-fit source offset from KIC position	0.250 ± 0.293	0.85	-0.217 ± 0.343	0.124 ± 0.592
photometric centroid source offset	0.84 ± 0.71	1.19	0.56 ± 0.67	-0.63 ± 0.74

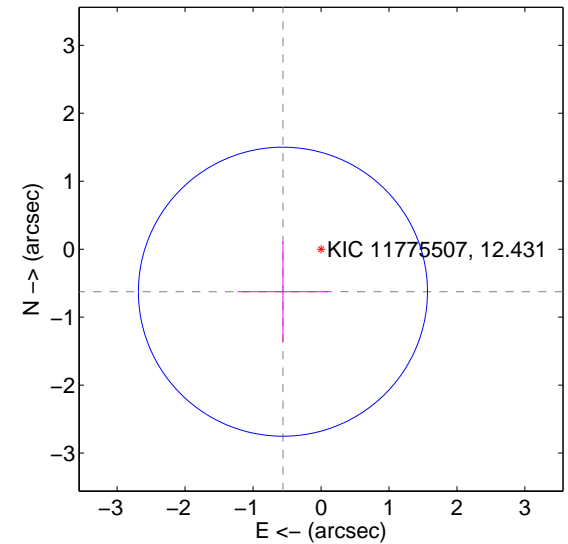
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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

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

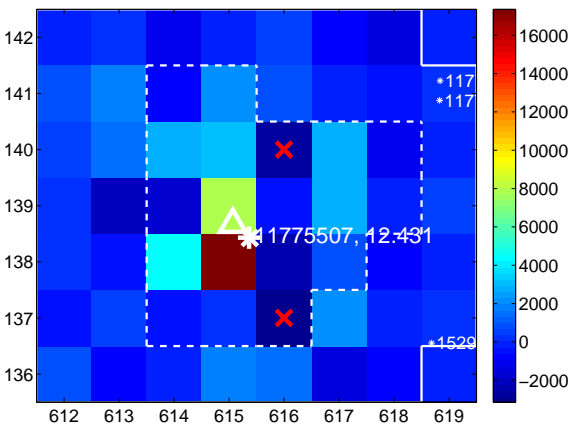
Q1 no difference image



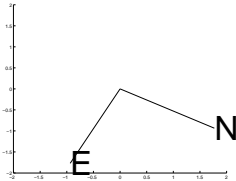
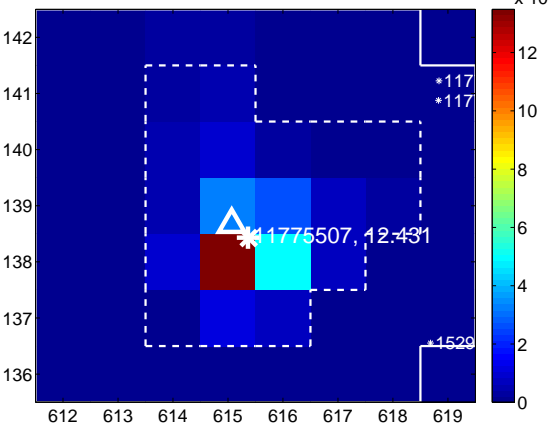
Q1 no OOT image



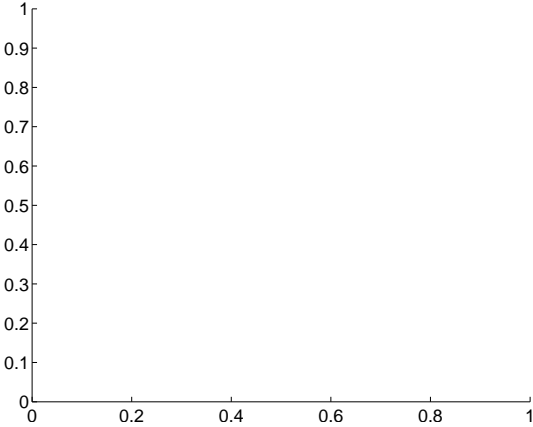
Q2 difference image



Q2 OOT image



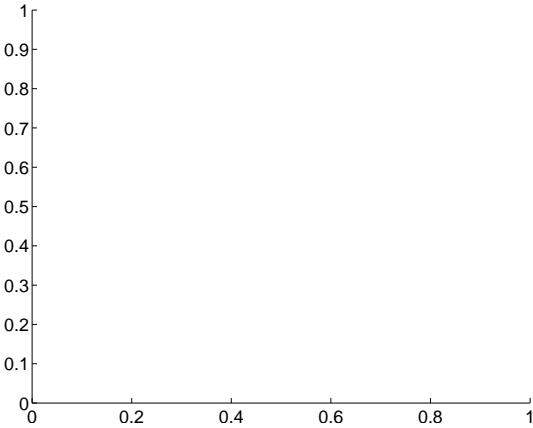
Q3 no difference image



Q3 no OOT image



Q4 no difference image



Q4 no OOT image



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

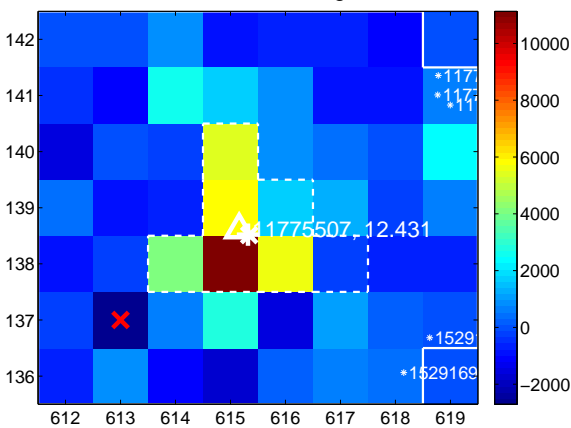
Q5 no difference image



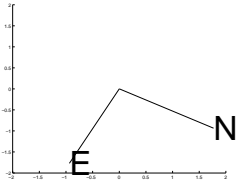
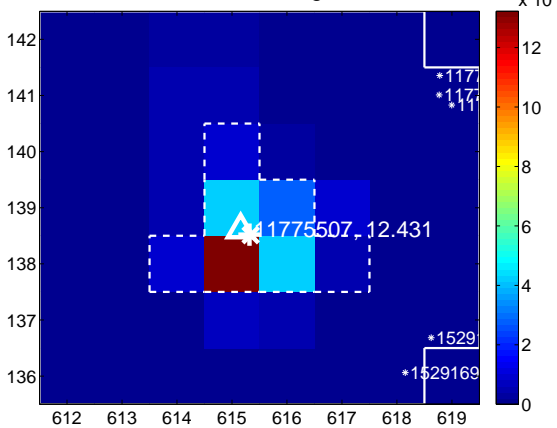
Q5 no OOT image



Q6 difference image



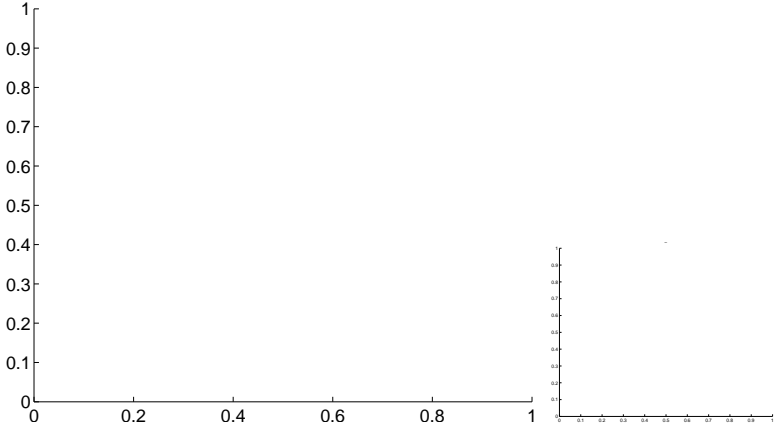
Q6 OOT image



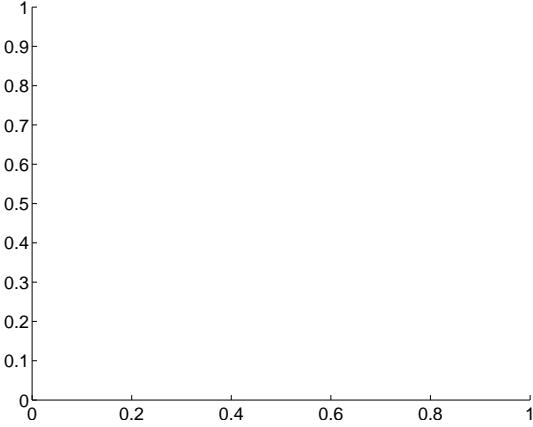
Q7 no difference image



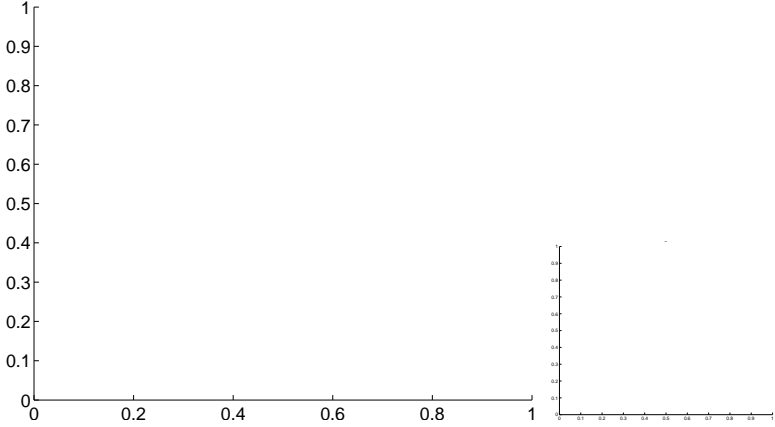
Q7 no OOT image



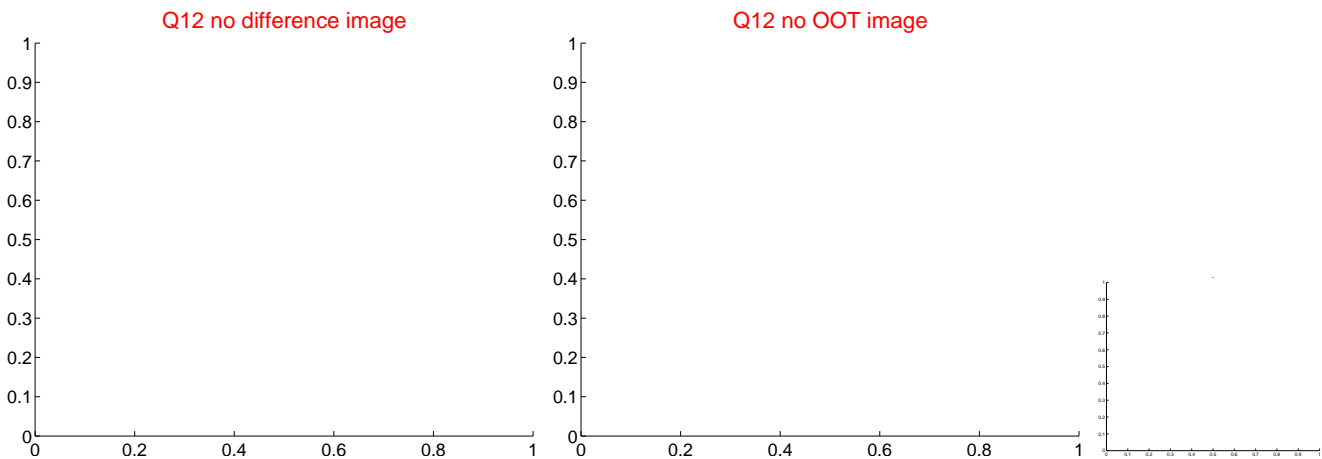
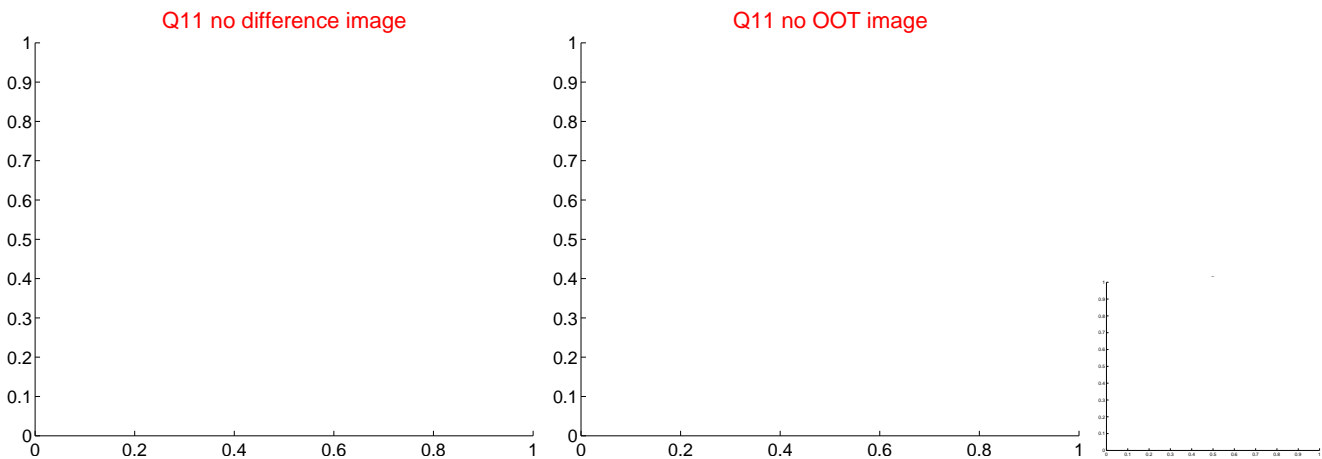
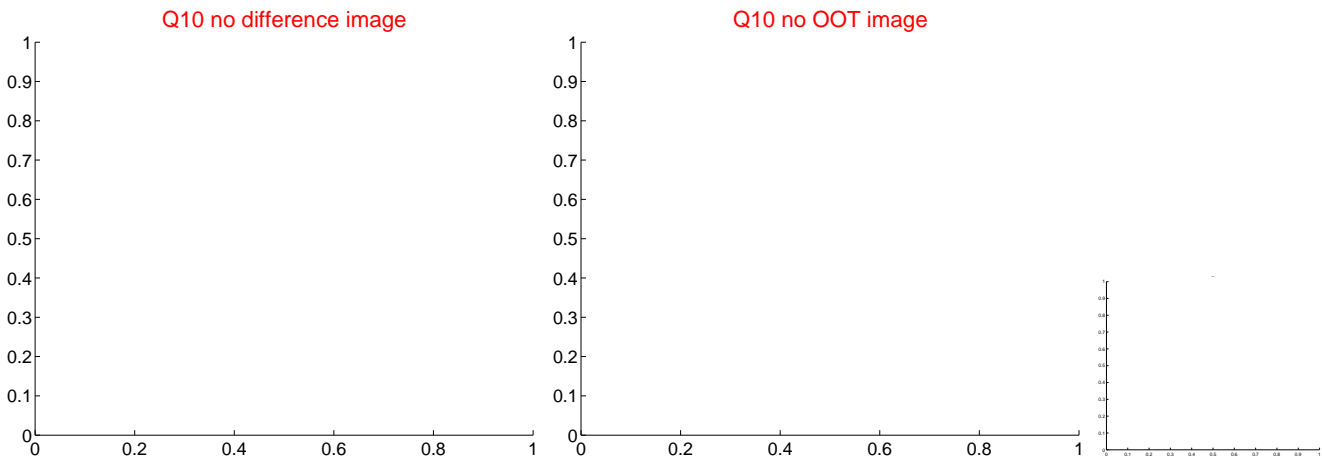
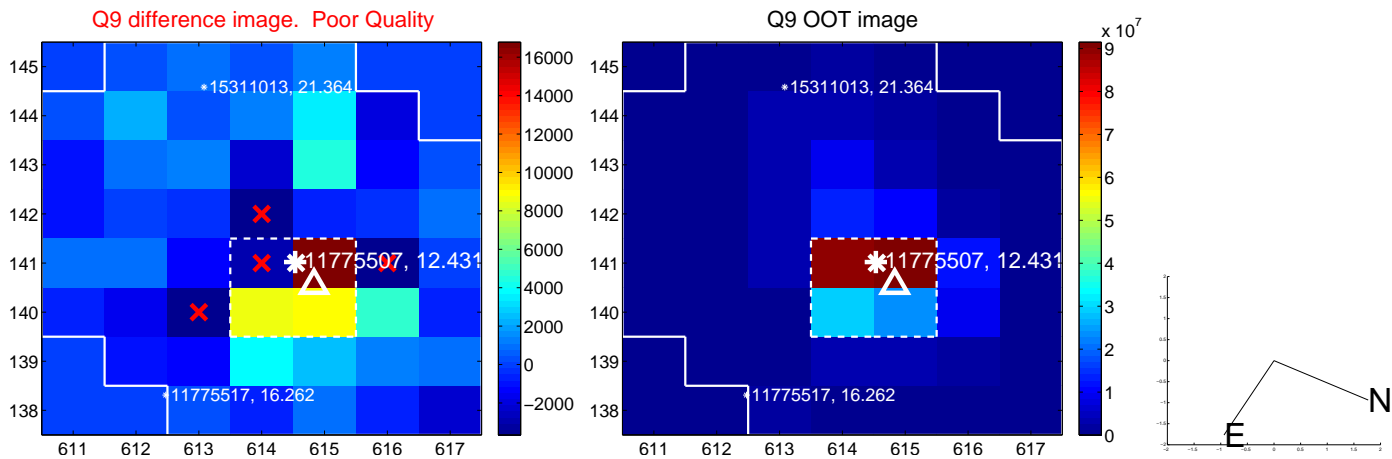
Q8 no difference image



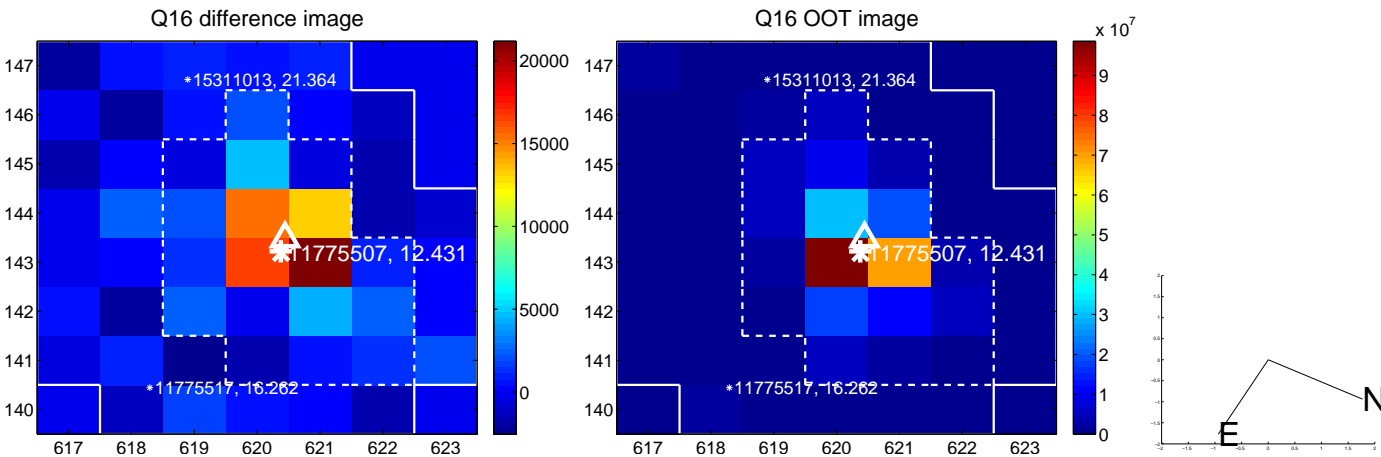
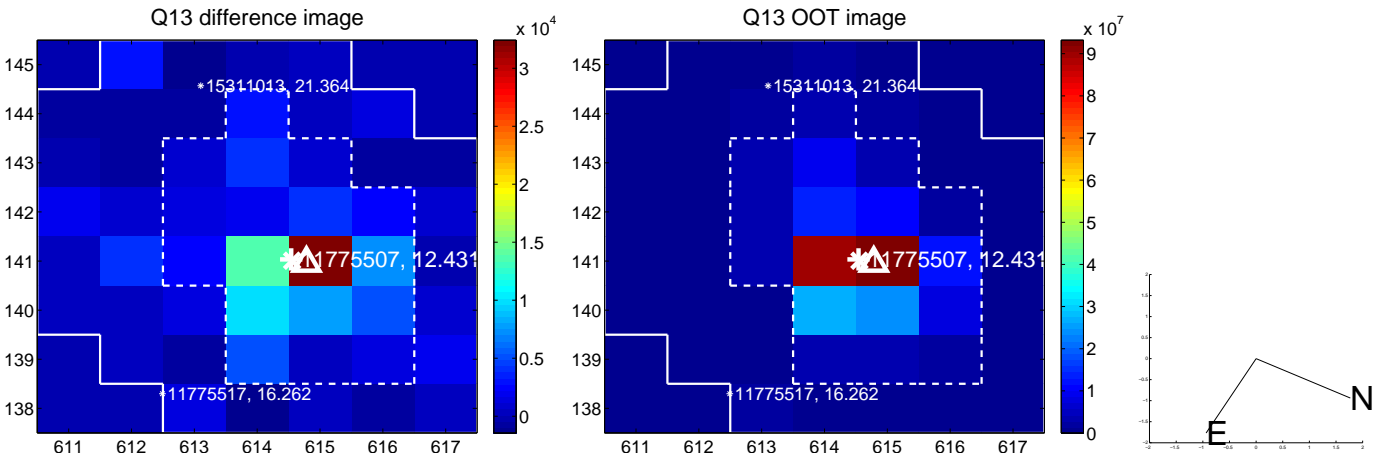
Q8 no OOT image



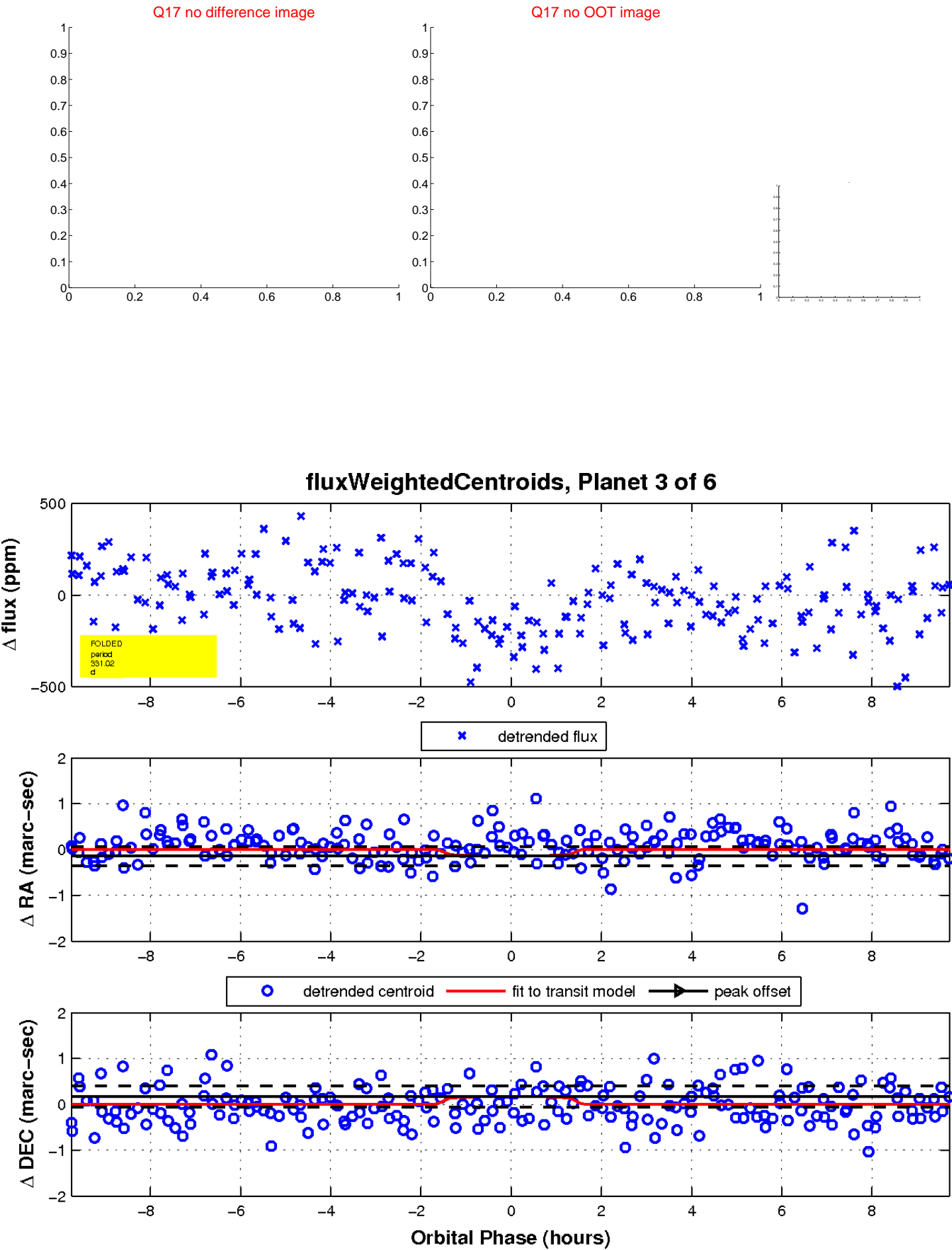
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

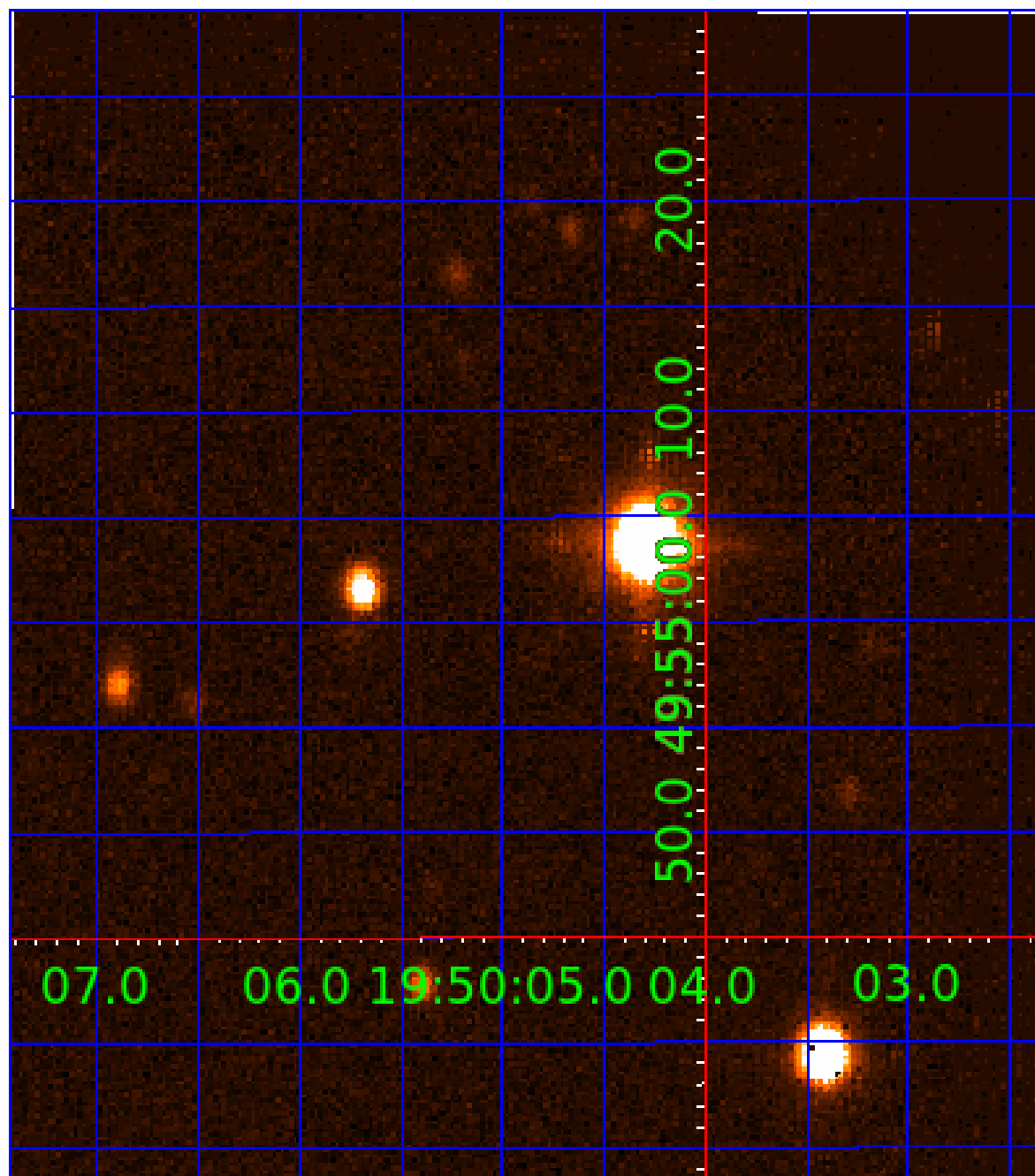


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011775507

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})
011775507-01	OBS	No	2.204555	131.997170	44.8	7.944	12.2	10.8	1.26	6528	1.16	2279.47
011775507-02	OBS	No	183.345201	271.939527	352.4	3.019	8.6	7.5	1.26	6528	2.54	6.28
011775507-03	OBS	No	331.016635	218.229336	311.0	3.257	7.7	8.5	1.26	6528	2.60	2.86
011775507-04	OBS	6245.03	276.402903	161.861116	338.6	4.673	7.6	8.4	1.26	6528	2.57	3.63
011775507-05	OBS	No	162.705829	198.509701	411.5	2.348	7.3	8.1	1.26	6528	2.99	7.36
011775507-06	OBS	No	128.919665	165.554748	258.8	3.842	7.6	7.7	1.26	6528	2.22	10.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011775507-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011775507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-04	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_ALT
011775507-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_UNCERTAIN
011775507-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

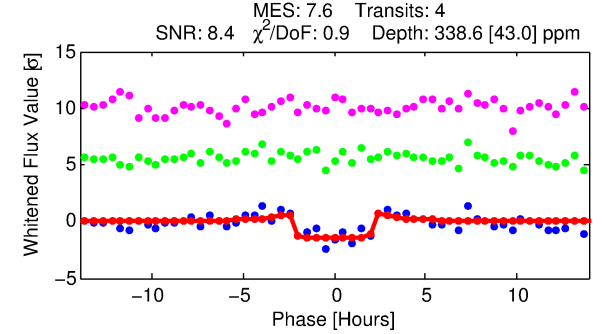
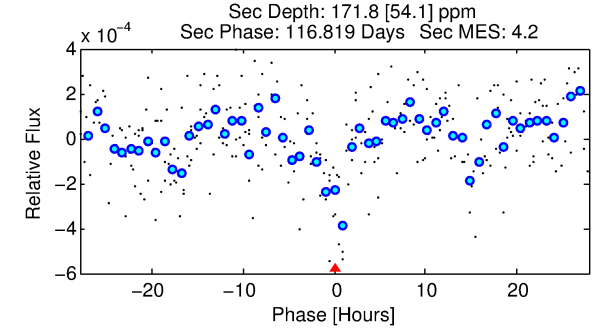
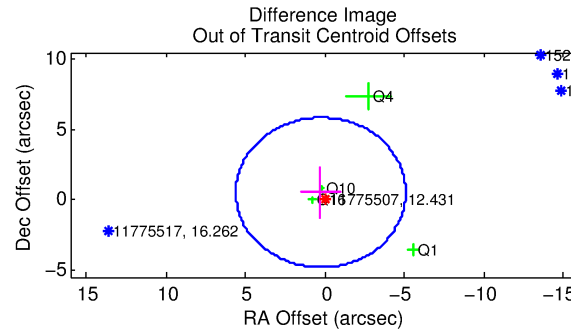
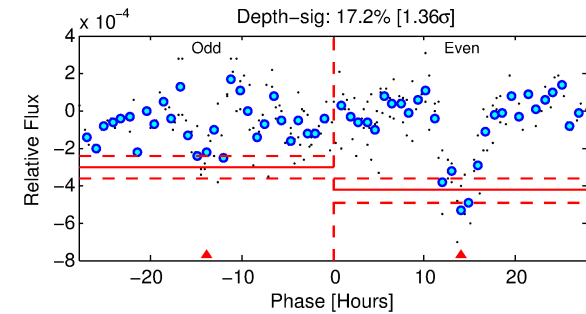
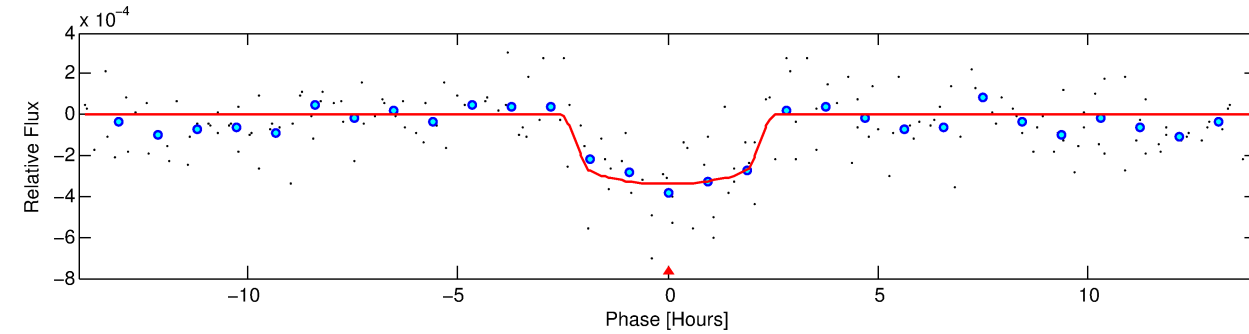
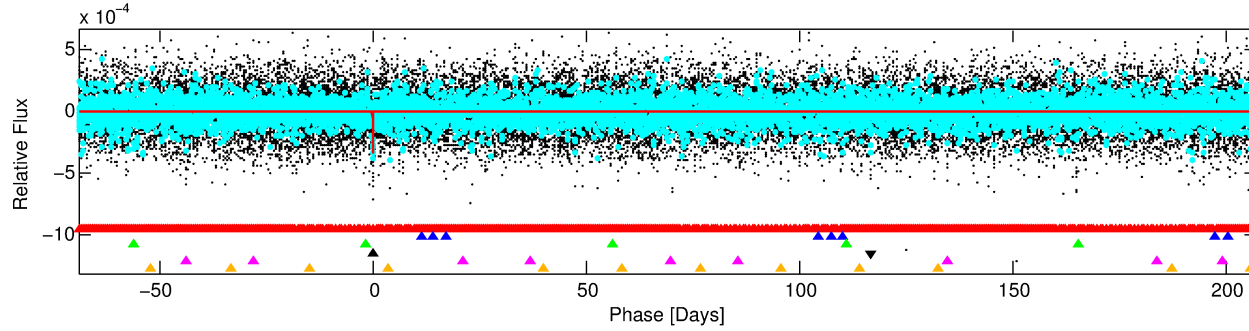
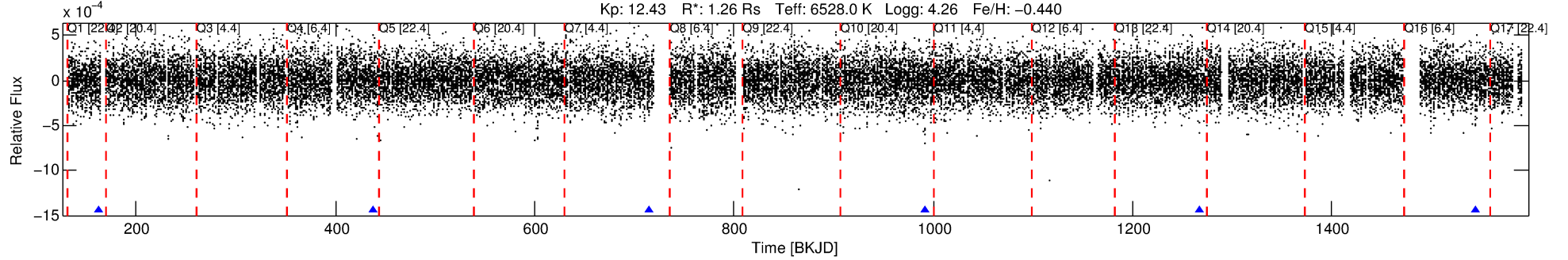
Ephemeris Match Information For 011775507-04

No Significant Match Found

DV One-Page Summary

KIC: 11775507 Candidate: 4 of 6 Period: 276.403 d
KOI: K06245 Corr: No Ephemeris Match

Kp: 12.43 R*: 1.26 Rs Teff: 6528.0 K Logg: 4.26 Fe/H: -0.440



DV Fit Results:

Period = 276.40290 [0.00171] d
Epoch = 161.8611 [0.0055] BKJD
Rp/R* = 0.0187 [0.0075]
a/R* = 279.77 [622.81]
b = 0.81 [0.96]
Seff = 3.63 [1.30]
Teq = 352 [32] K
Rp = 2.57 [1.27] Re
a = 0.8433 [0.1954] AU
Ag = 10180.65 [9408.05] [1.08σ]
Teffp = 5467 [1202] K [4.26σ]

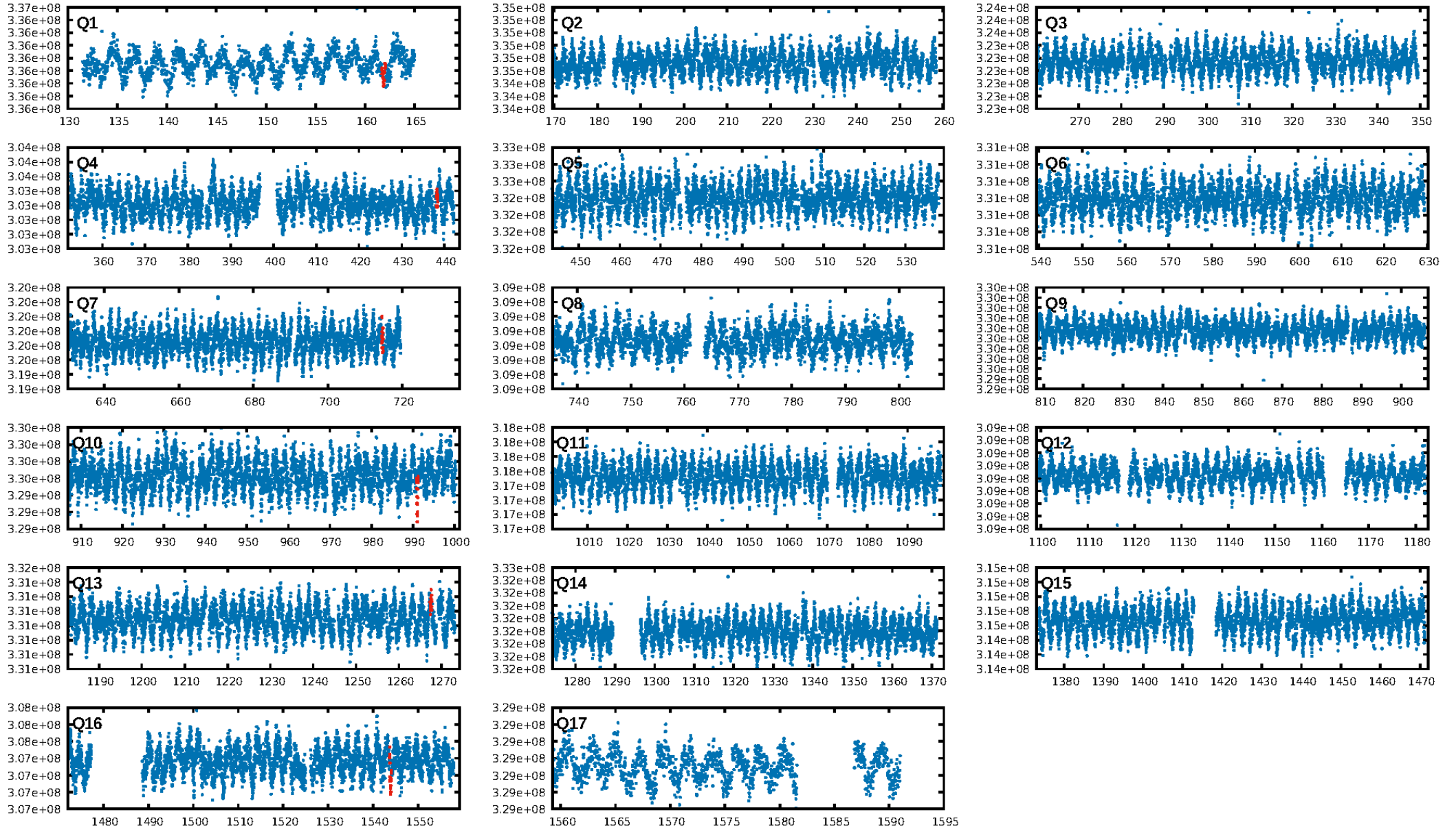
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [401.41σ]
LongPeriod-sig: 100.0% [230.09σ]
ModelChiSquare2-sig: 75.6%
ModelChiSquareGof-sig: 95.5%
Bootstrap-pfa: 3.58e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 5.9
Centroid-sig: 0.1%
Centroid-so: 1.049 arcsec [2.01σ]
OotOffset-rm: 0.570 arcsec [0.32σ]
KicOffset-rm: 0.507 arcsec [0.30σ]
OotOffset-st: 1/0/2/1 [4]
KicOffset-st: 1/0/2/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.80 [4/5]

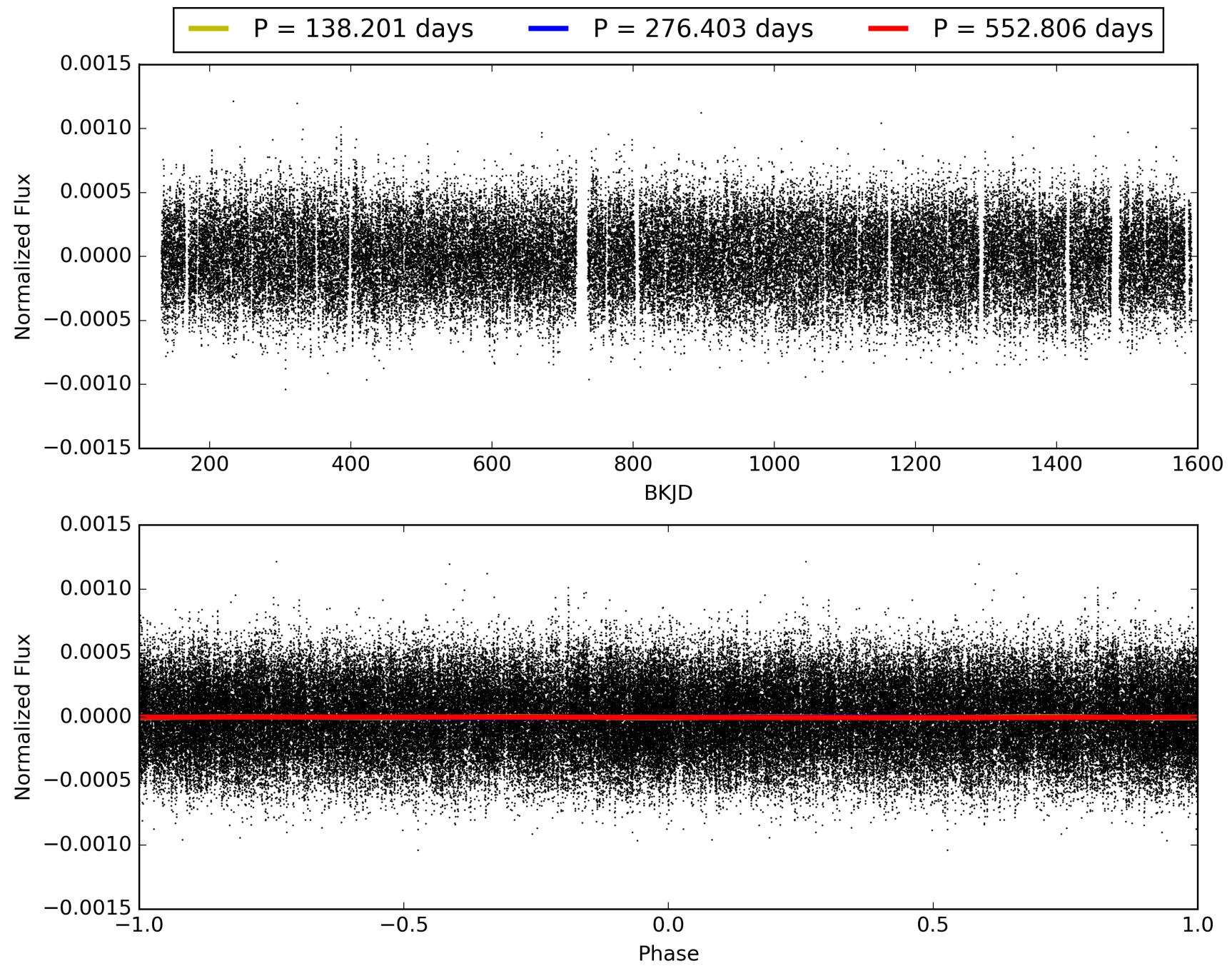
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:50:13 Z

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

TCE 011775507-04, PDC Light Curves

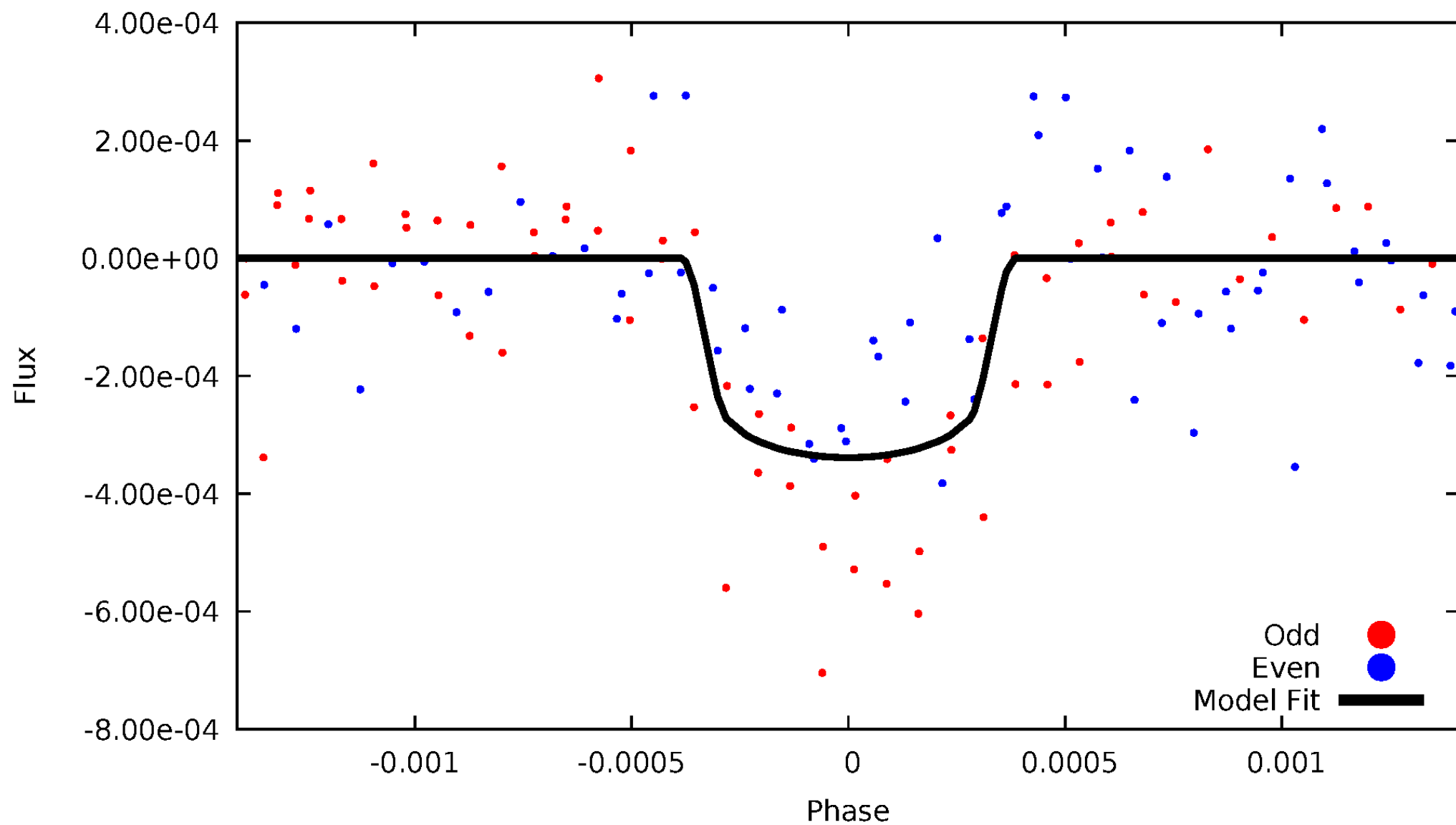


TCE 011775507-04



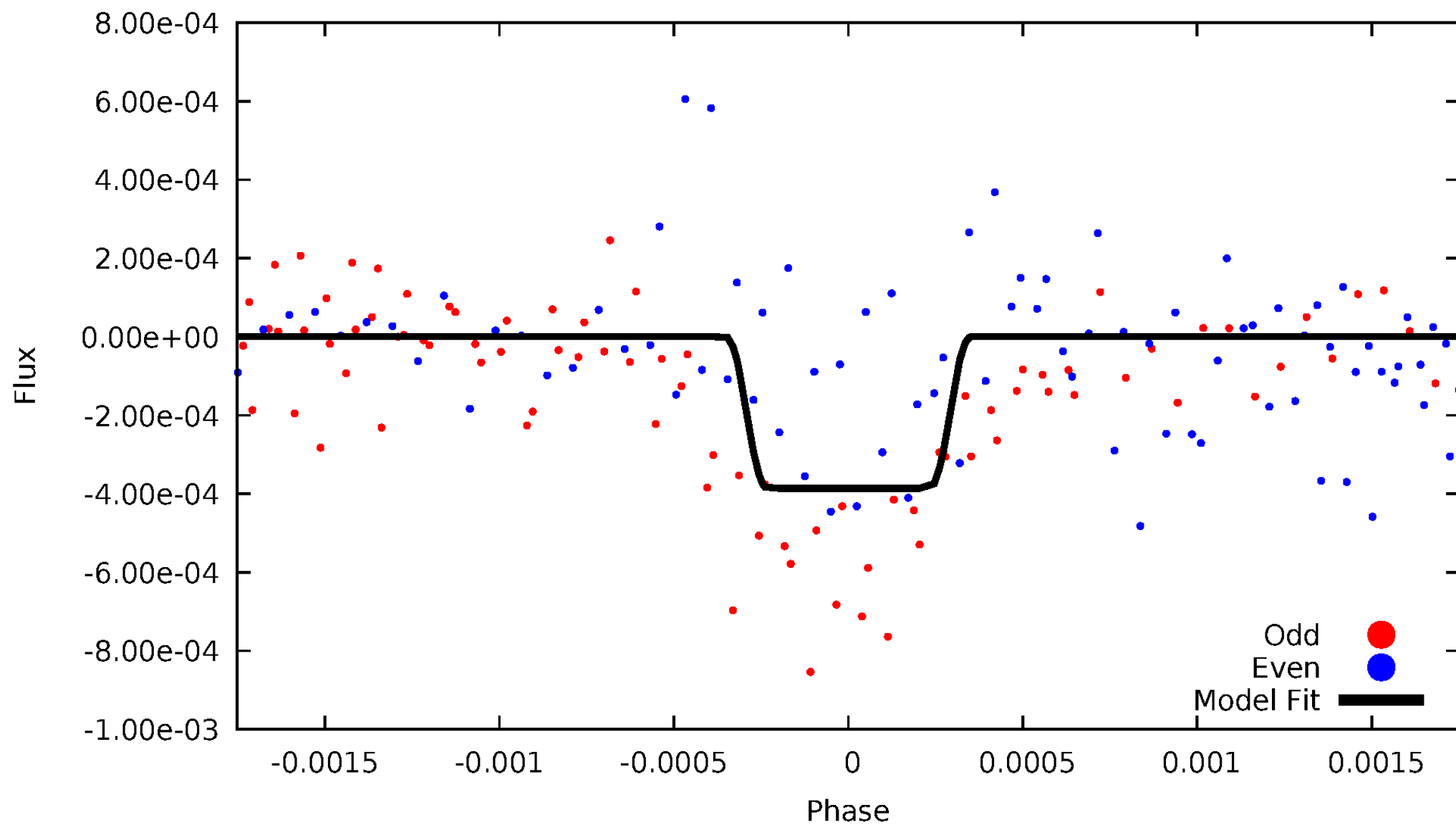
DV Odd/Even

TCE 011775507-04



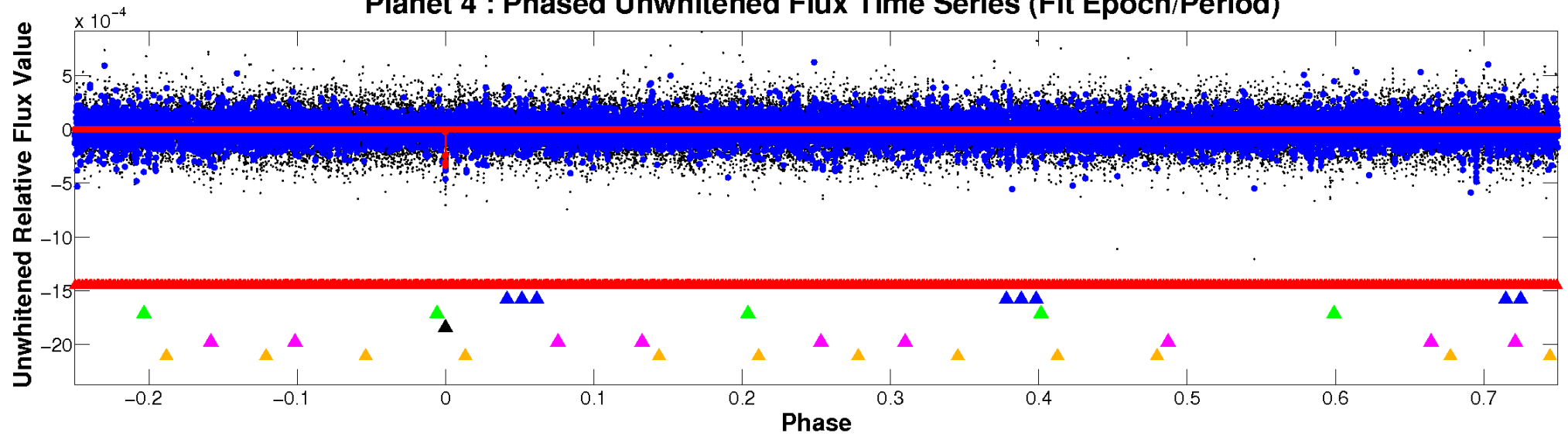
ALT Odd/Even

TCE 011775507-04

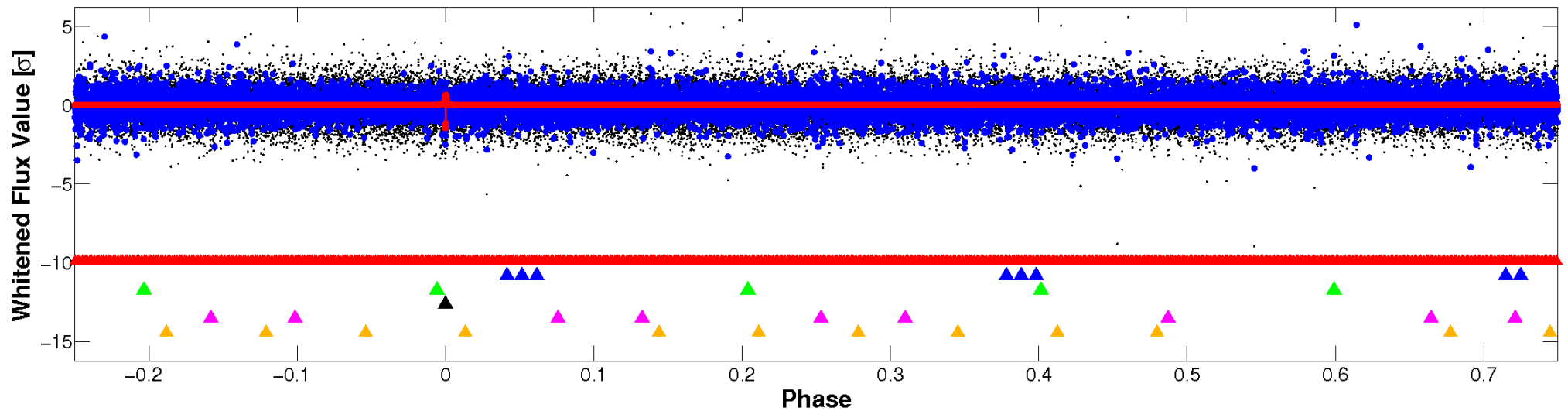


Non-Whitened Vs. Whitened Light Curve

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

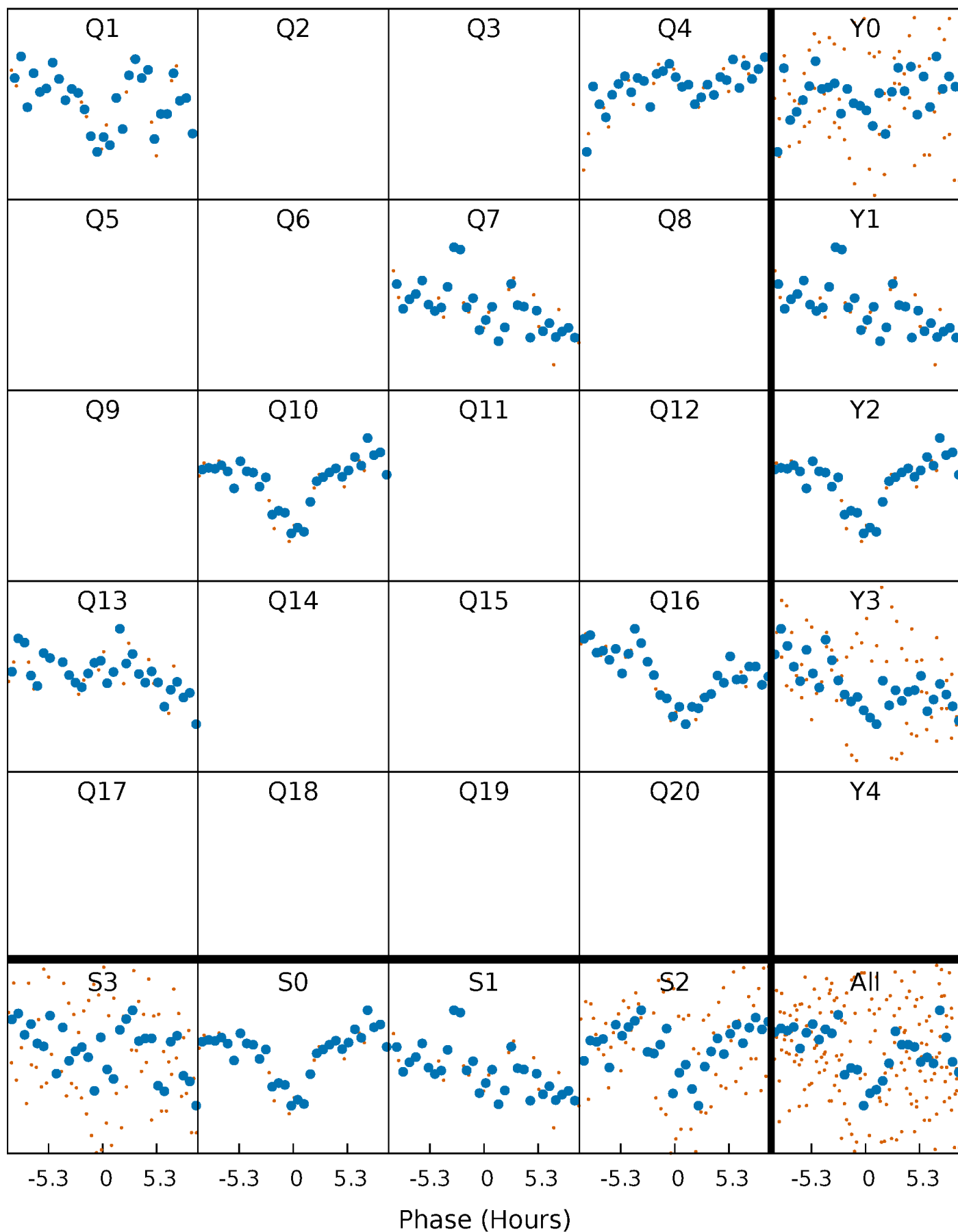


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



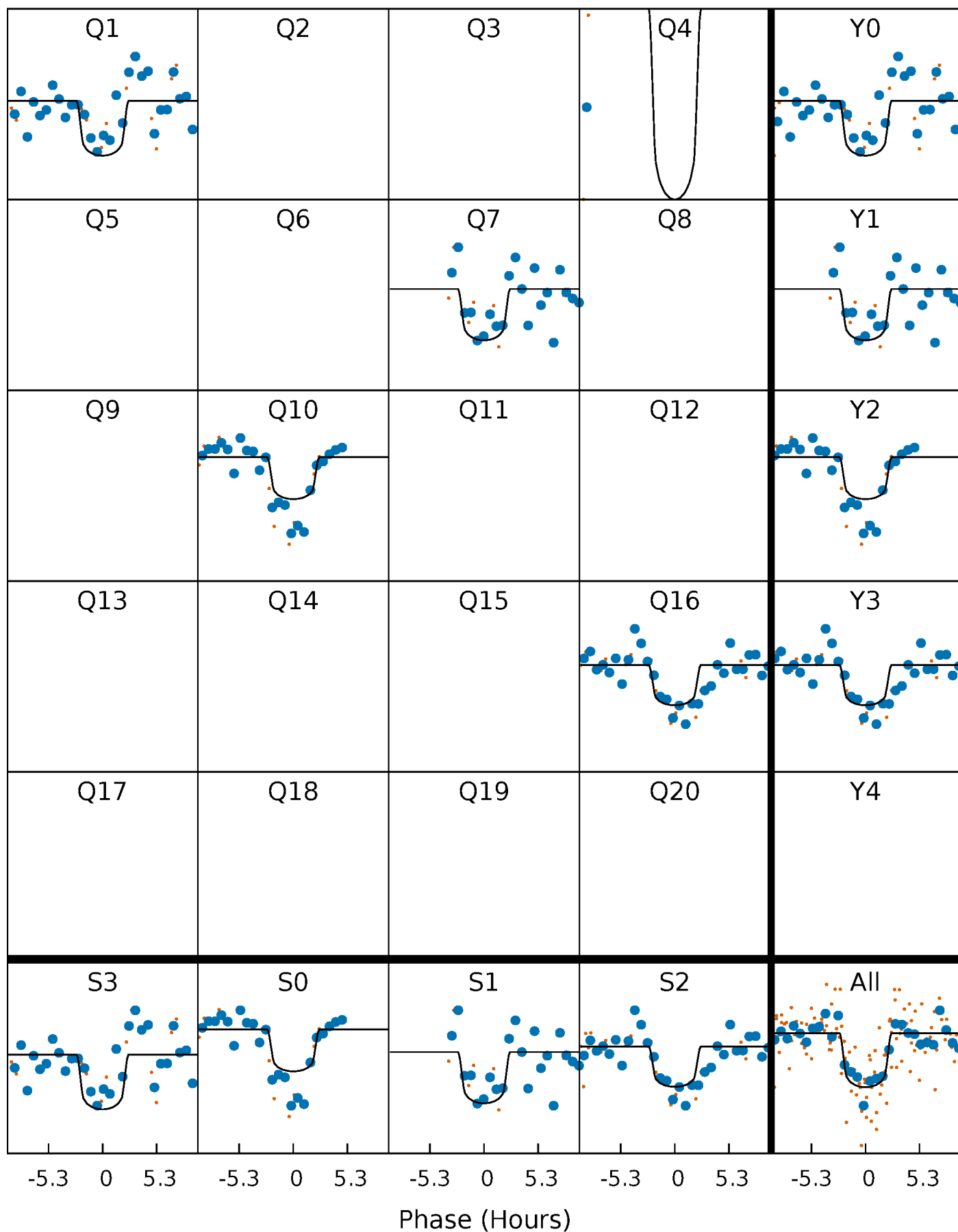
PDC Quarter-Phased Transit Curves

TCE 011775507-04 P=276.402903 Days $T_0=161.861116$ (BKJD)



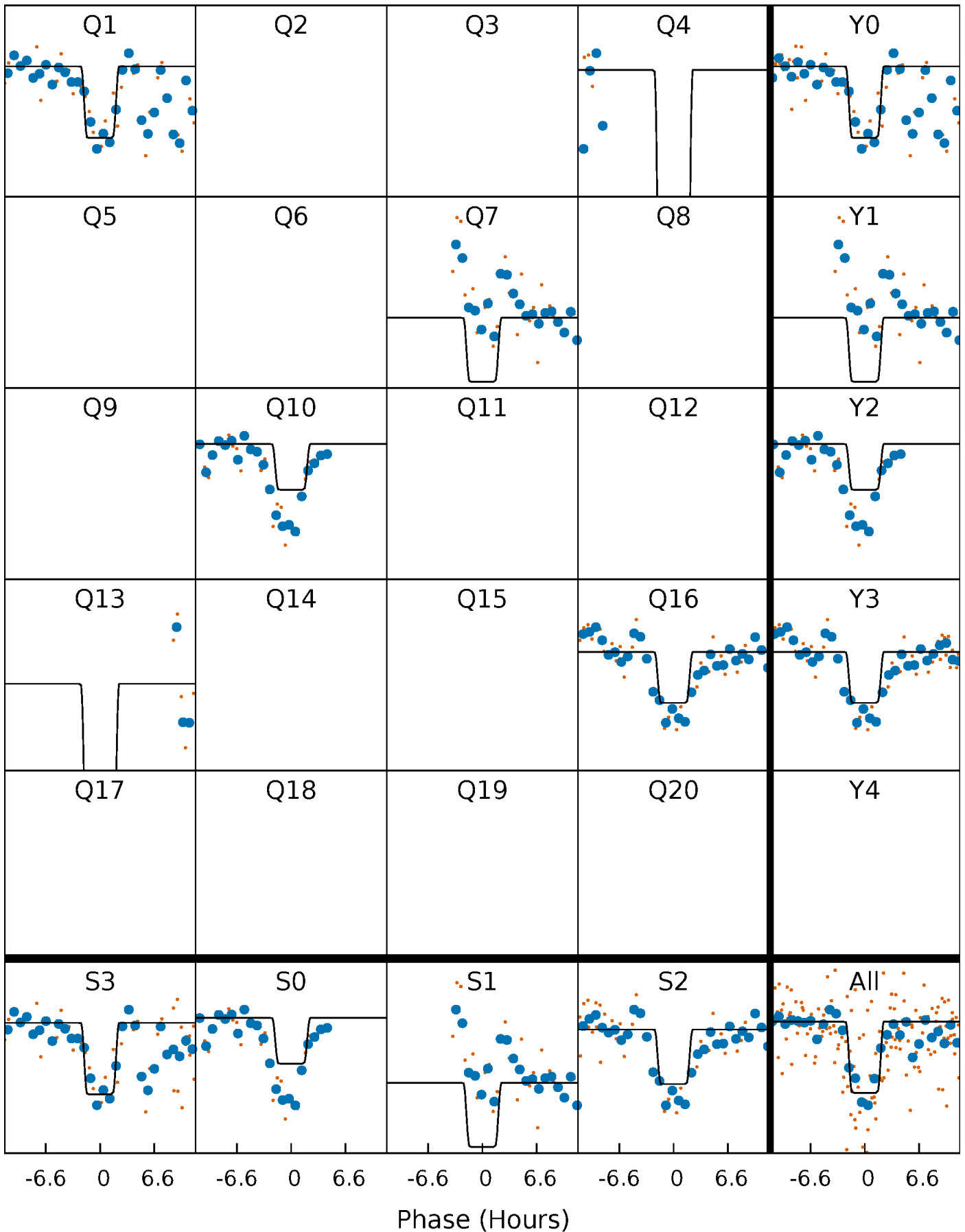
DV Quarter-Phased Transit Curves

TCE 011775507-04 P=276.402903 Days $T_0=161.861116$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

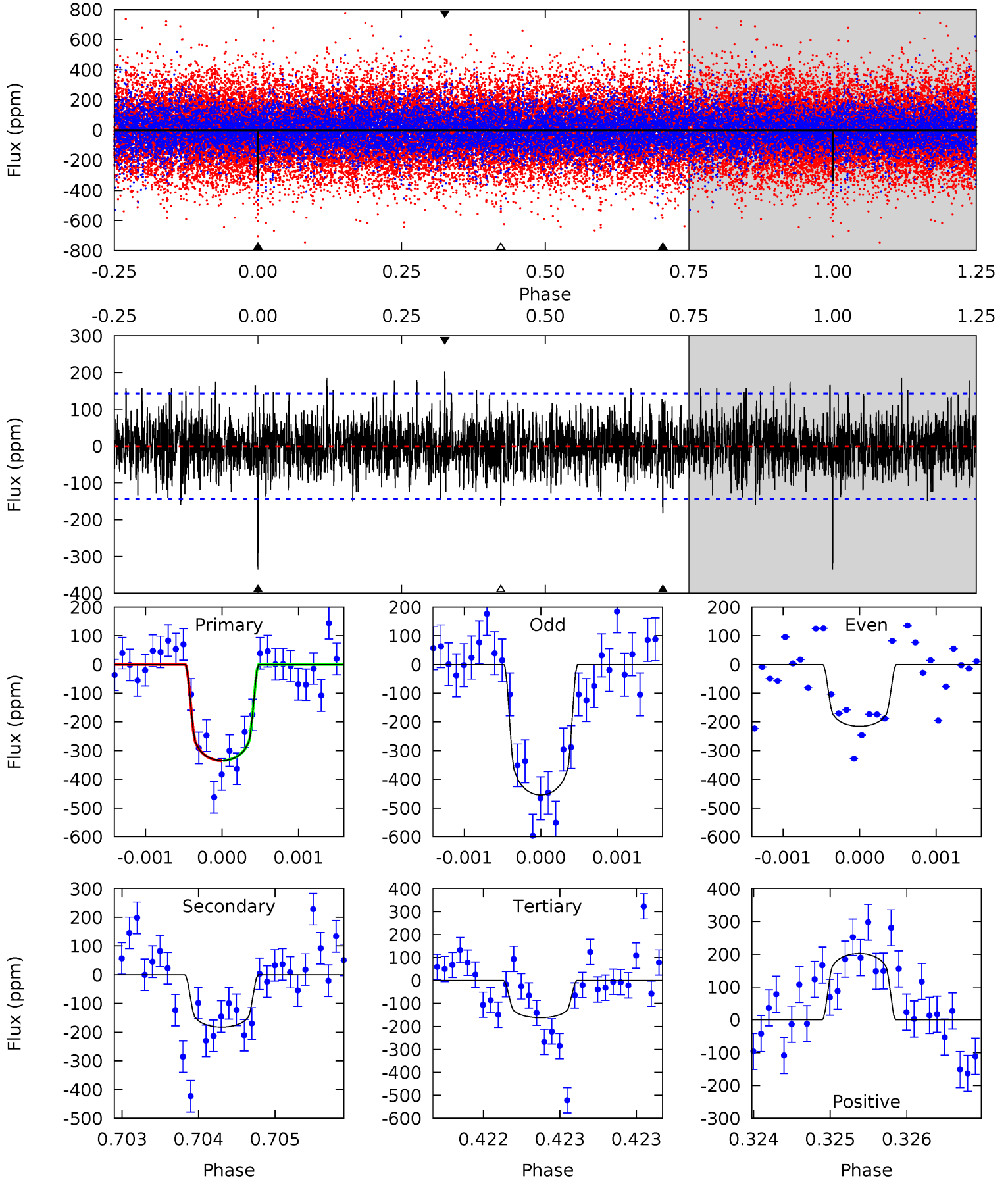
TCE 011775507-04 P=276.411052 Days $T_0=161.849996$ (BKJD)



DV Model-Shift Uniqueness Test

011775507-04, P = 276.402903 Days, E = 161.861116 Days

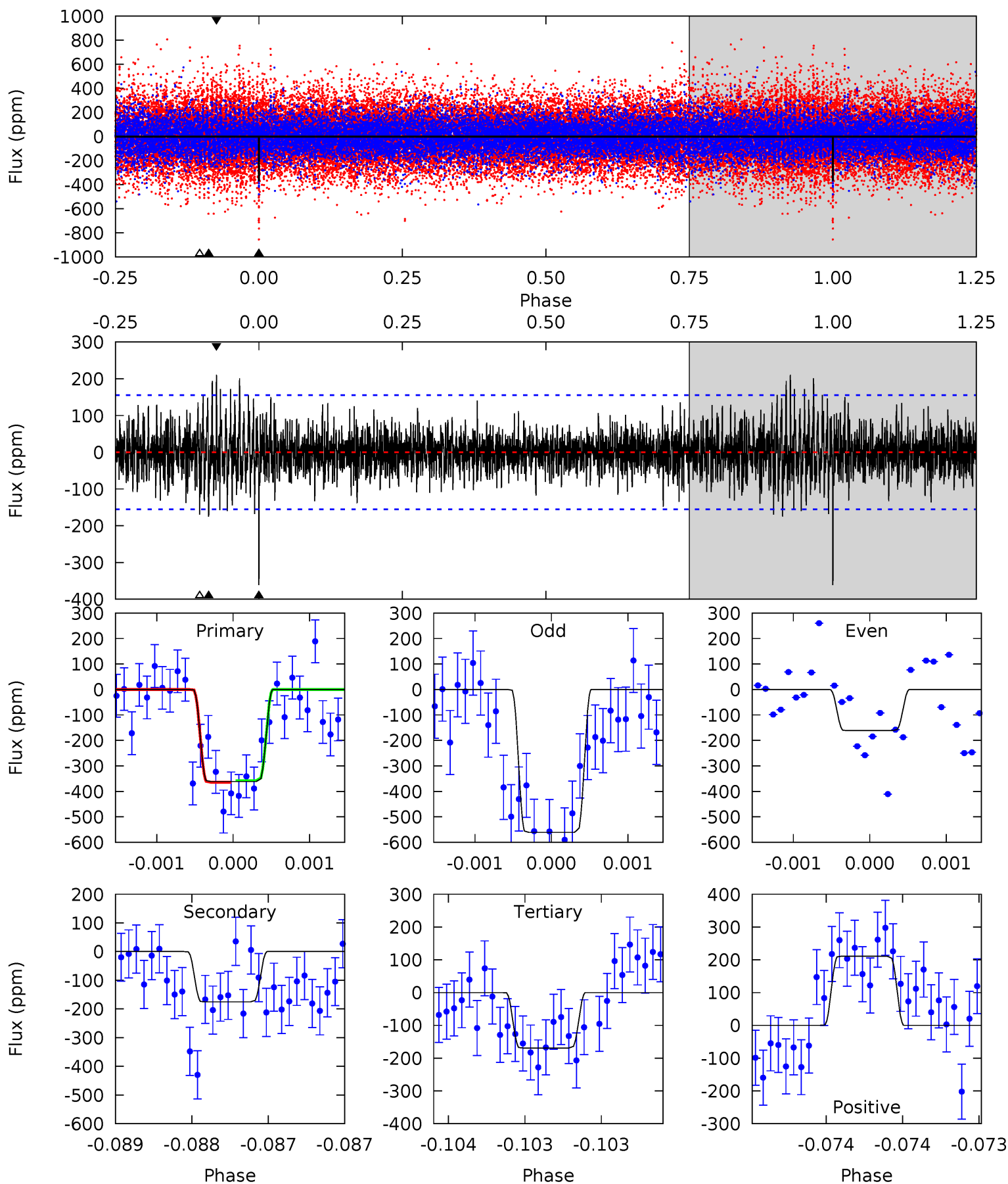
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	7.03	6.23	7.79	5.49	3.35	1.93	6.67	5.11	0.80	-0.76	4.67	1.05	0.38	0.02



Alt Model-Shift Uniqueness Test

011775507-04, $P = 276.411052$ Days, $E = 161.849996$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	6.23	6.01	7.49	5.52	3.40	1.61	6.81	5.33	0.22	-1.27	7.08	0.88	0.37	0.11



Stellar Parameters For KIC 011775507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6528^{+183}_{-252}	$4.257^{+0.153}_{-0.170}$	$-0.440^{+0.250}_{-0.300}$	$1.260^{+0.362}_{-0.241}$	$1.046^{+0.160}_{-0.117}$	$0.737^{+0.625}_{-0.364}$
	+3%/-4%	+4%/-4%	+57%/-68%	+29%/-19%	+15%/-11%	+85%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011775507-04 / KOI 6245.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-183 ± 26	$2.61^{+1.18}_{-1.08}$	489^{+38}_{-29}	5503^{+1752}_{-766}	10718^{+21269}_{-5732}
Alt.	-175 ± 28	$2.70^{+1.16}_{-1.10}$	491^{+36}_{-31}	5391^{+1473}_{-798}	9546^{+17997}_{-5171}

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

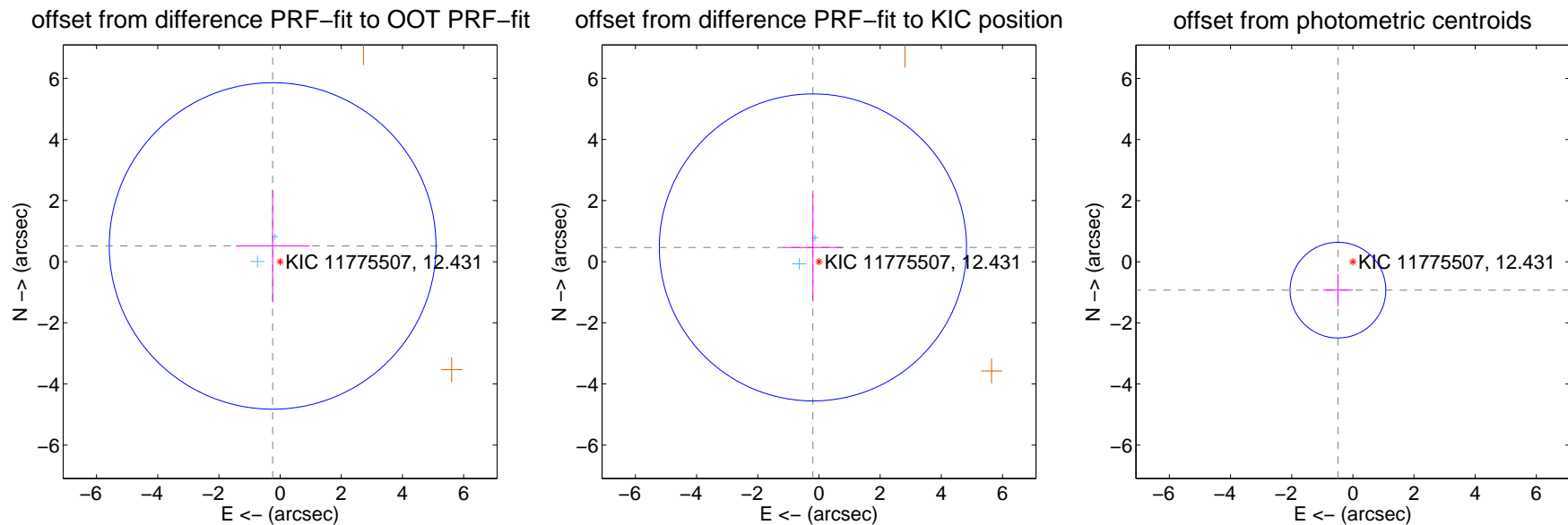
DV Centroid Data

Supplemental centroid analysis for 011775507-04. Kepler magnitude: 12.43. Transit SNR 8.39

There are 2 quarters with good PRF difference image offsets

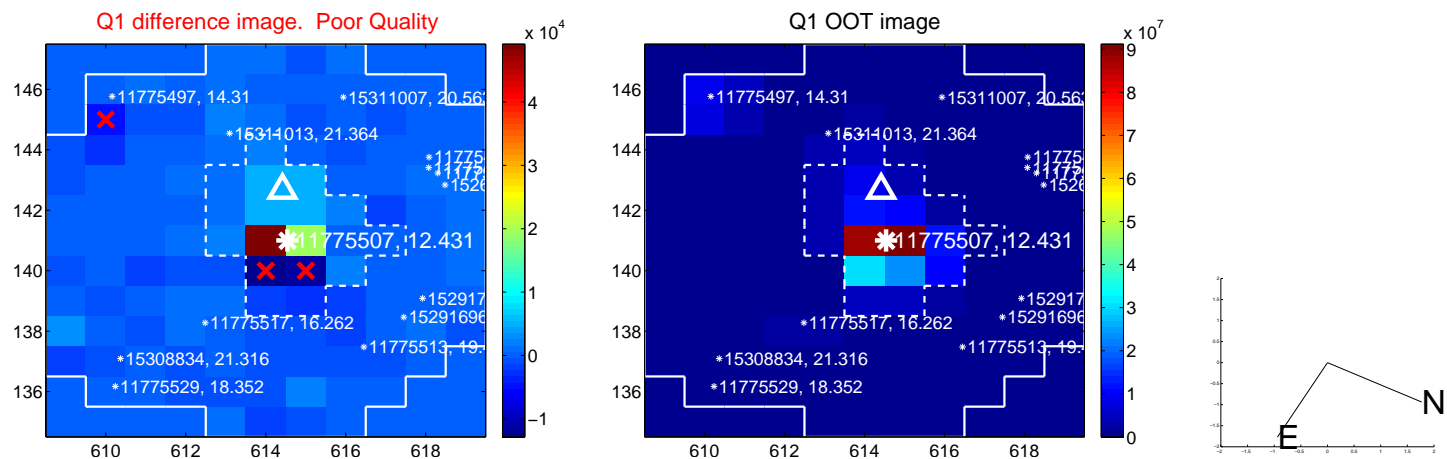
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.570 ± 1.780	0.32	0.244 ± 1.209	0.515 ± 1.838
PRF-fit source offset from KIC position	0.507 ± 1.674	0.30	0.198 ± 0.967	0.466 ± 1.760
photometric centroid source offset	1.05 ± 0.52	2.01	0.49 ± 0.49	-0.93 ± 0.53

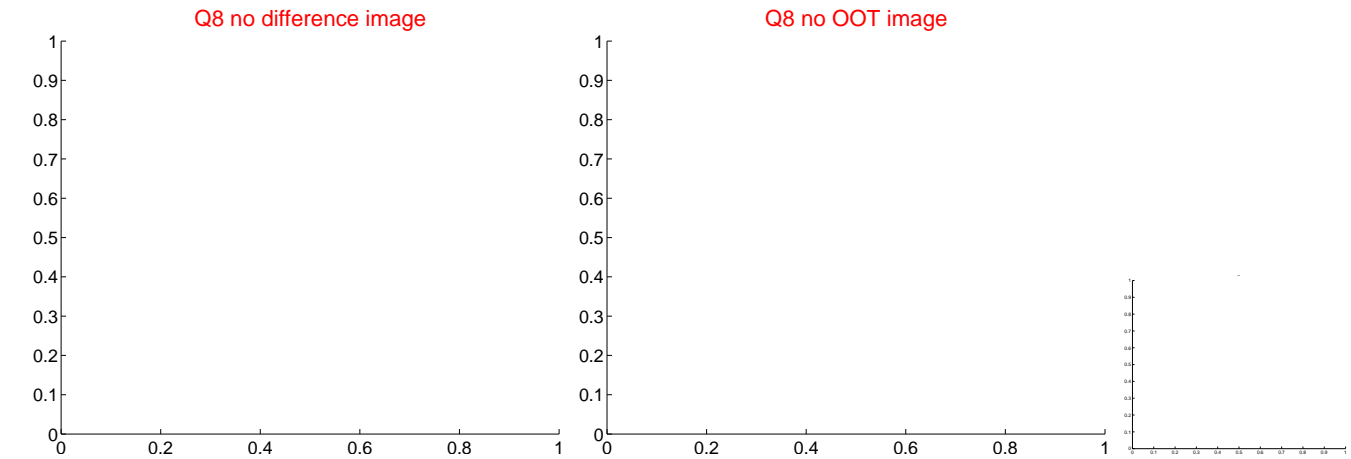
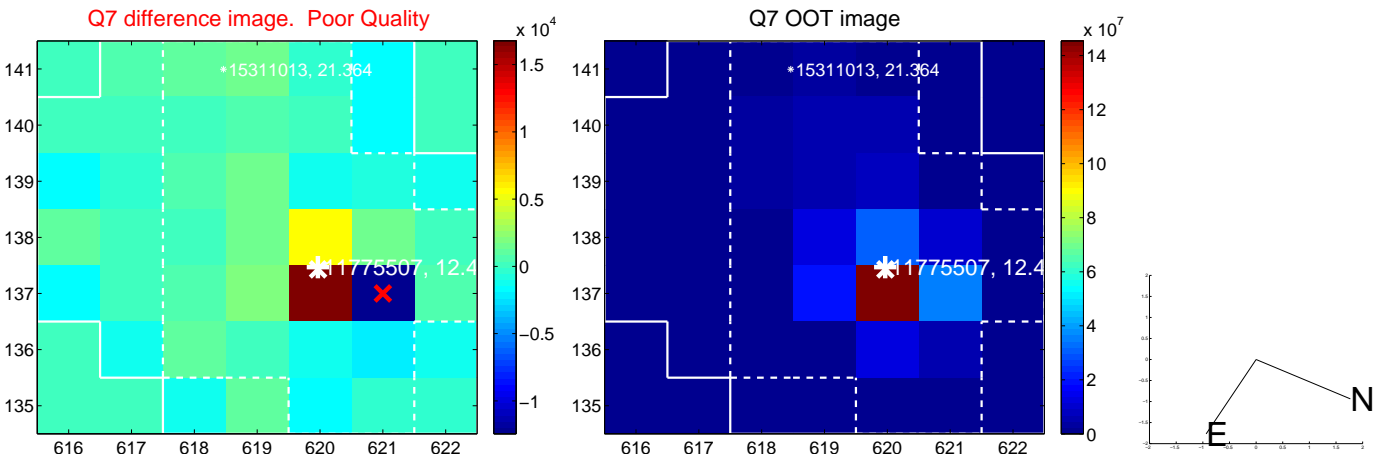
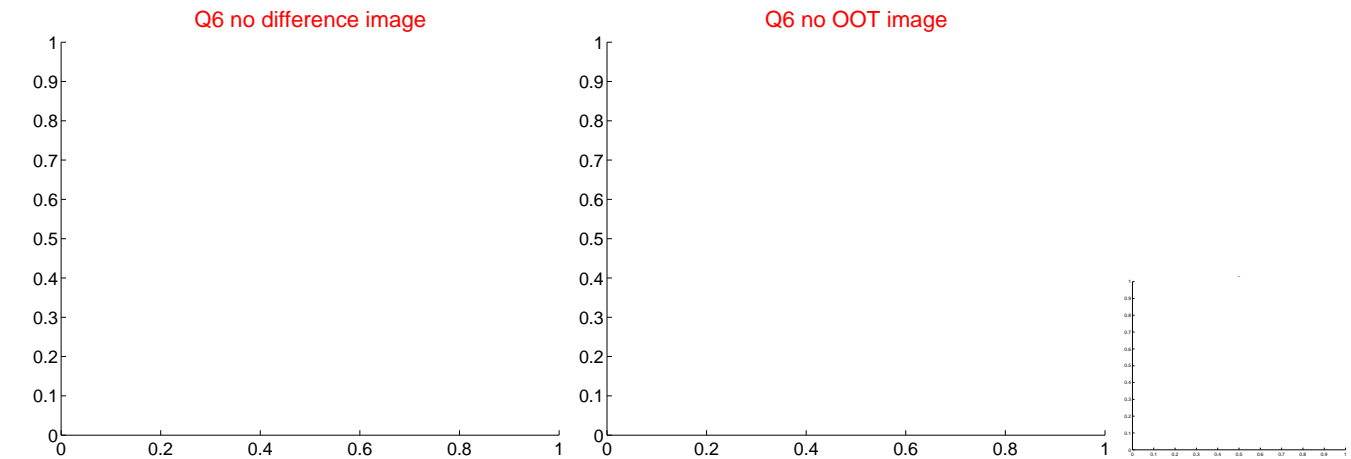
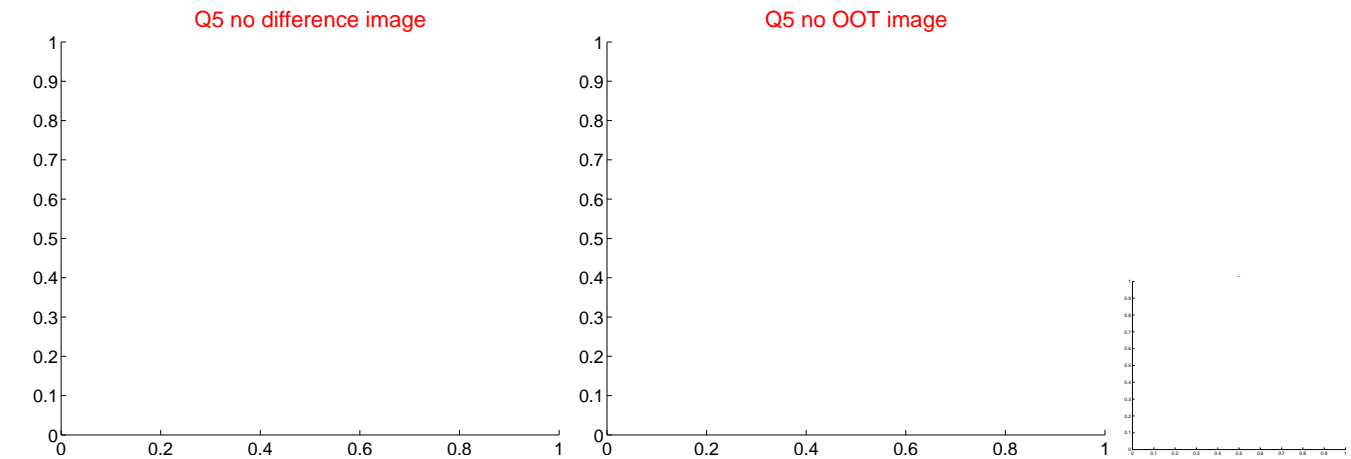


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

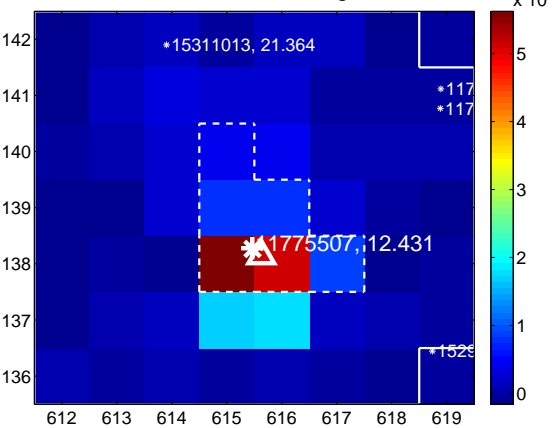
Q9 no difference image



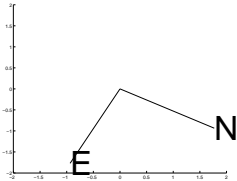
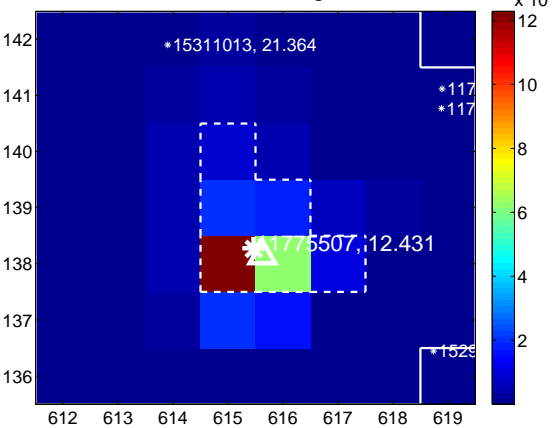
Q9 no OOT image



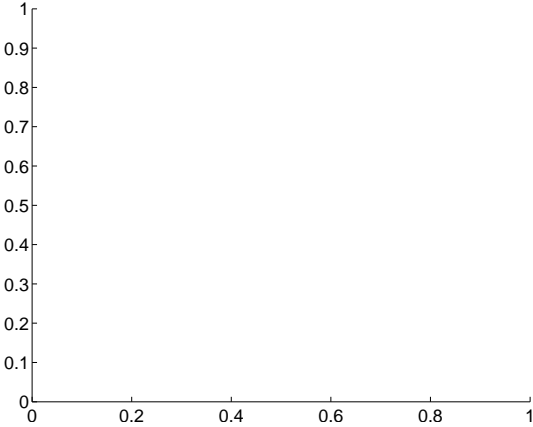
Q10 difference image



Q10 OOT image



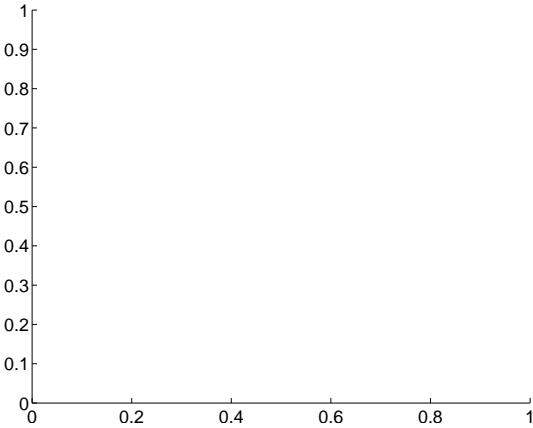
Q11 no difference image



Q11 no OOT image



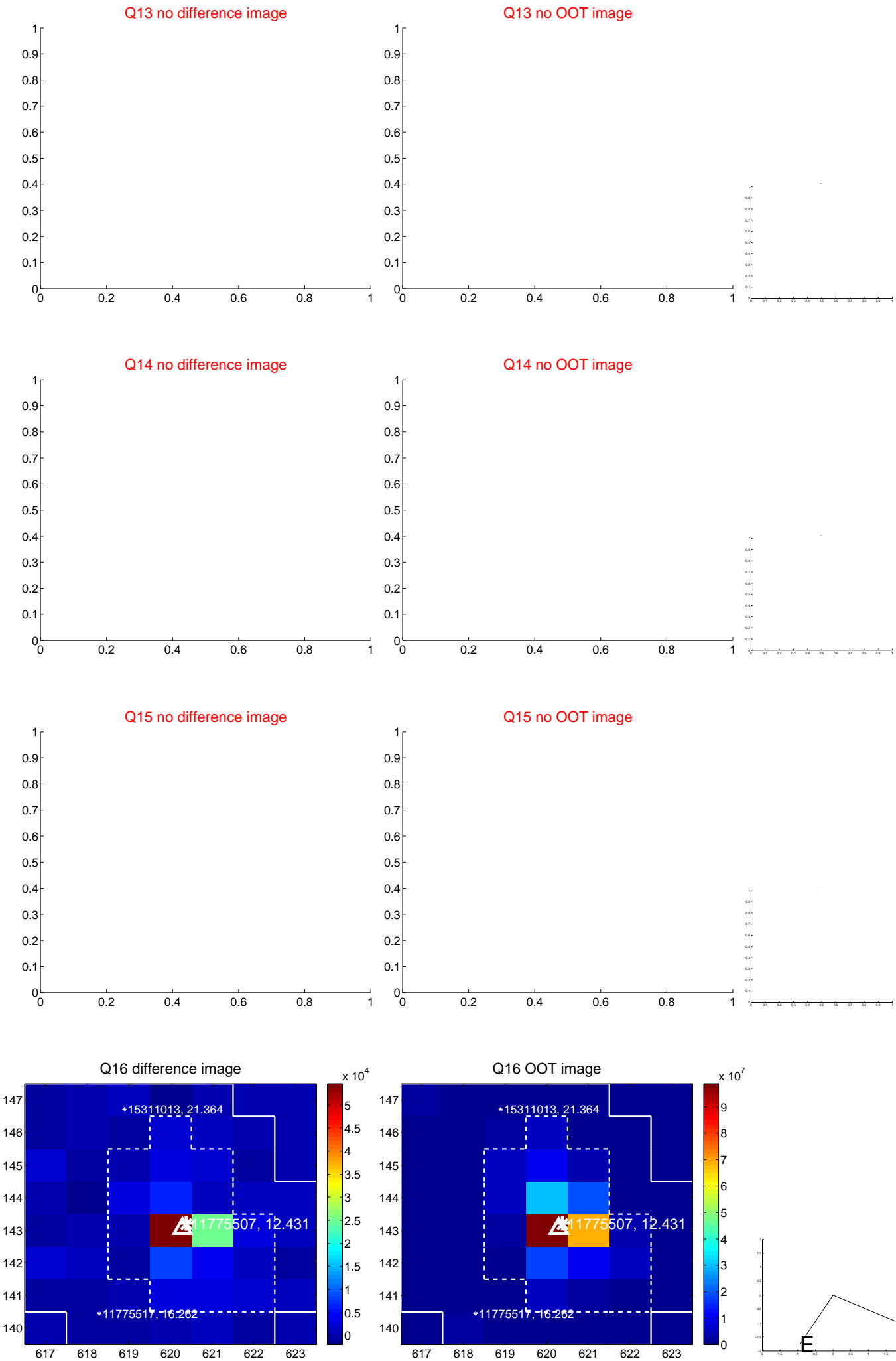
Q12 no difference image



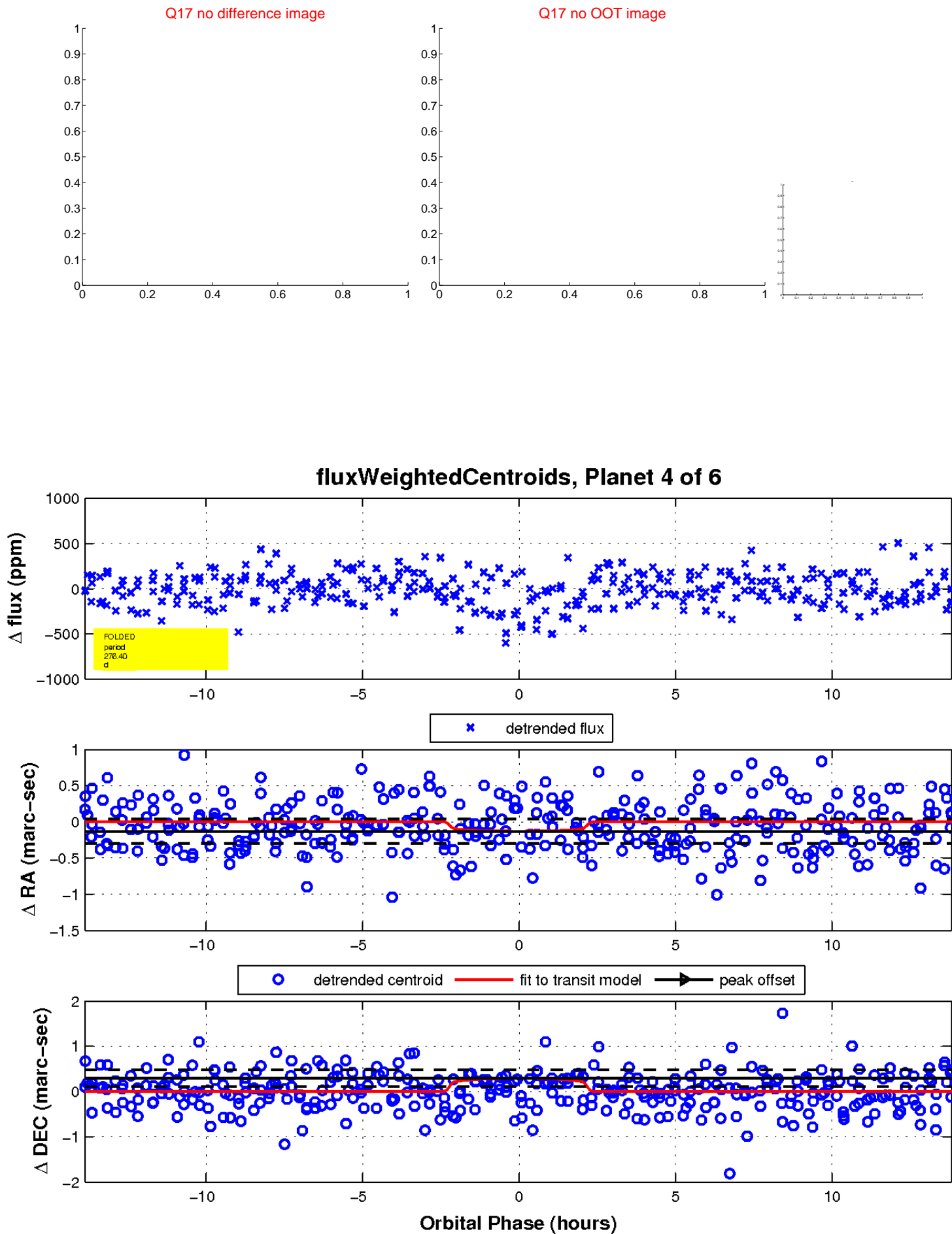
Q12 no OOT image



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

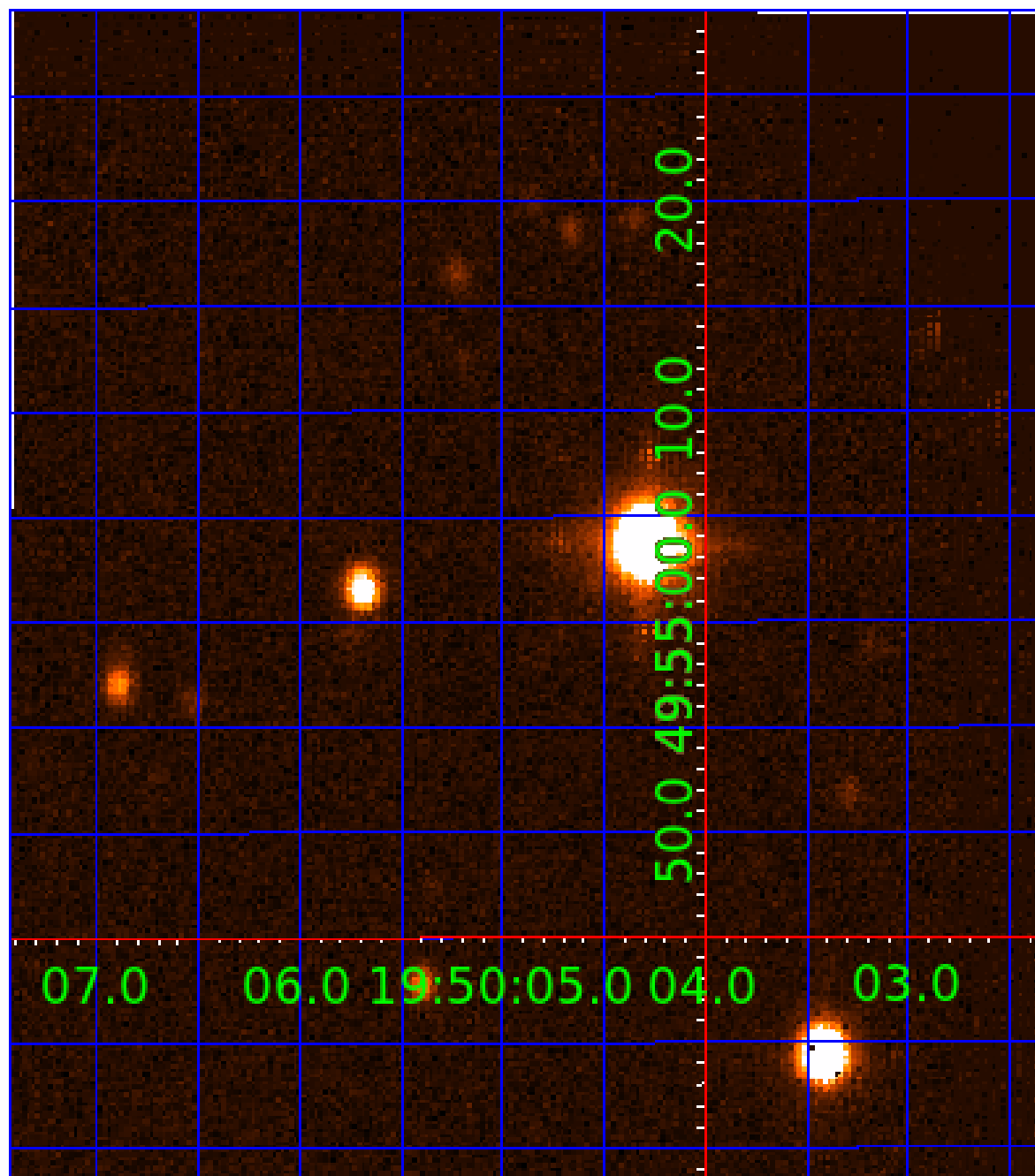


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011775507

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})
011775507-01	OBS	No	2.204555	131.997170	44.8	7.944	12.2	10.8	1.26	6528	1.16	2279.47
011775507-02	OBS	No	183.345201	271.939527	352.4	3.019	8.6	7.5	1.26	6528	2.54	6.28
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011775507-04	OBS	6245.03	276.402903	161.861116	338.6	4.673	7.6	8.4	1.26	6528	2.57	3.63
011775507-05	OBS	No	162.705829	198.509701	411.5	2.348	7.3	8.1	1.26	6528	2.99	7.36
011775507-06	OBS	No	128.919665	165.554748	258.8	3.842	7.6	7.7	1.26	6528	2.22	10.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011775507-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011775507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-04	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_ALT
011775507-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_UNCERTAIN
011775507-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

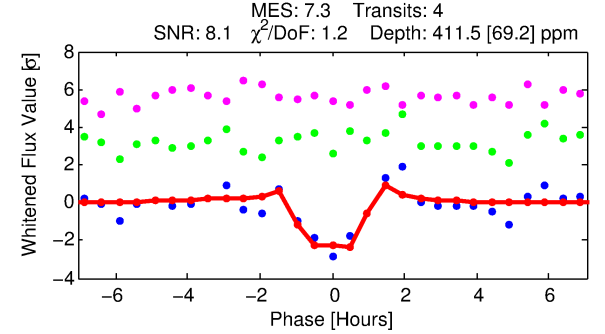
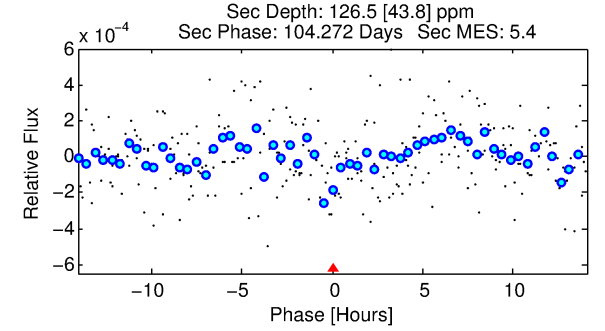
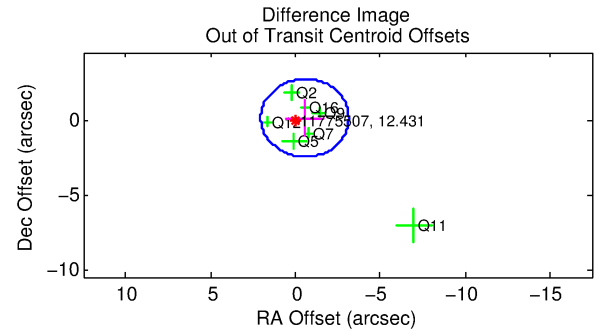
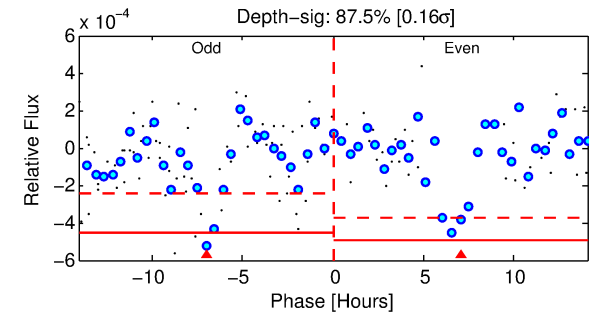
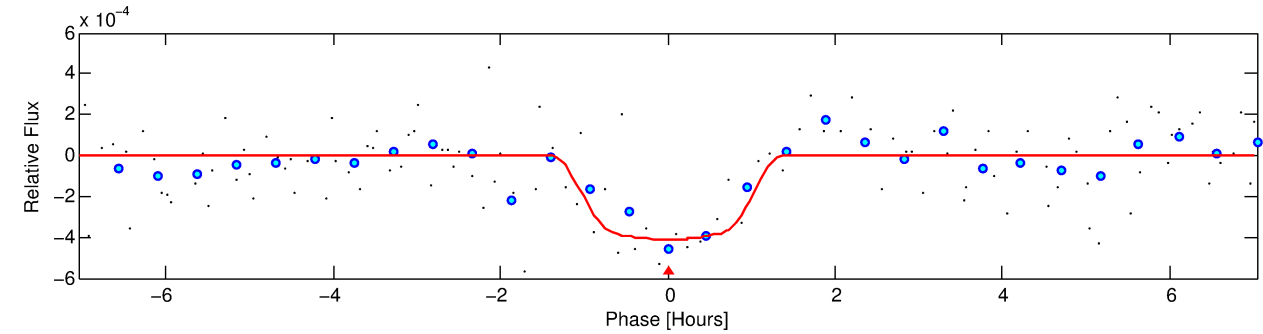
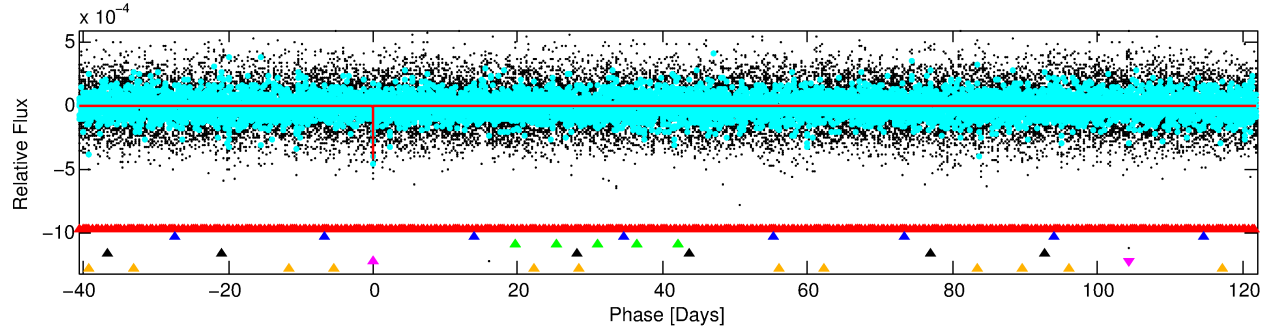
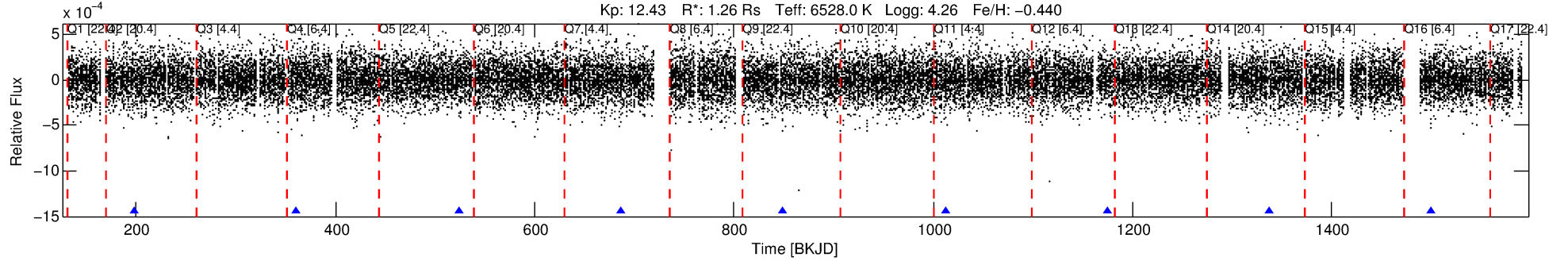
Ephemeris Match Information For 011775507-05

No Significant Match Found

DV One-Page Summary

KIC: 11775507 Candidate: 5 of 6 Period: 162.706 d
KOI: K06245 Corr: No Ephemeris Match

Kp: 12.43 R*: 1.26 Rs Teff: 6528.0 K Logg: 4.26 Fe/H: -0.440



DV Fit Results:

Period = 162.70583 [0.00116] d
Epoch = 198.5097 [0.0067] BKJD
Rp/R* = 0.0217 [0.0122]
a/R* = 255.49 [810.24]
b = 0.90 [0.67]
Seff = 7.36 [2.64]
Teq = 420 [38] K
Rp = 2.99 [1.88] Re
a = 0.5923 [0.1373] AU
Ag = 2737.11 [3338.05] [0.82σ]
Teffp = 4697 [1393] K [3.07σ]

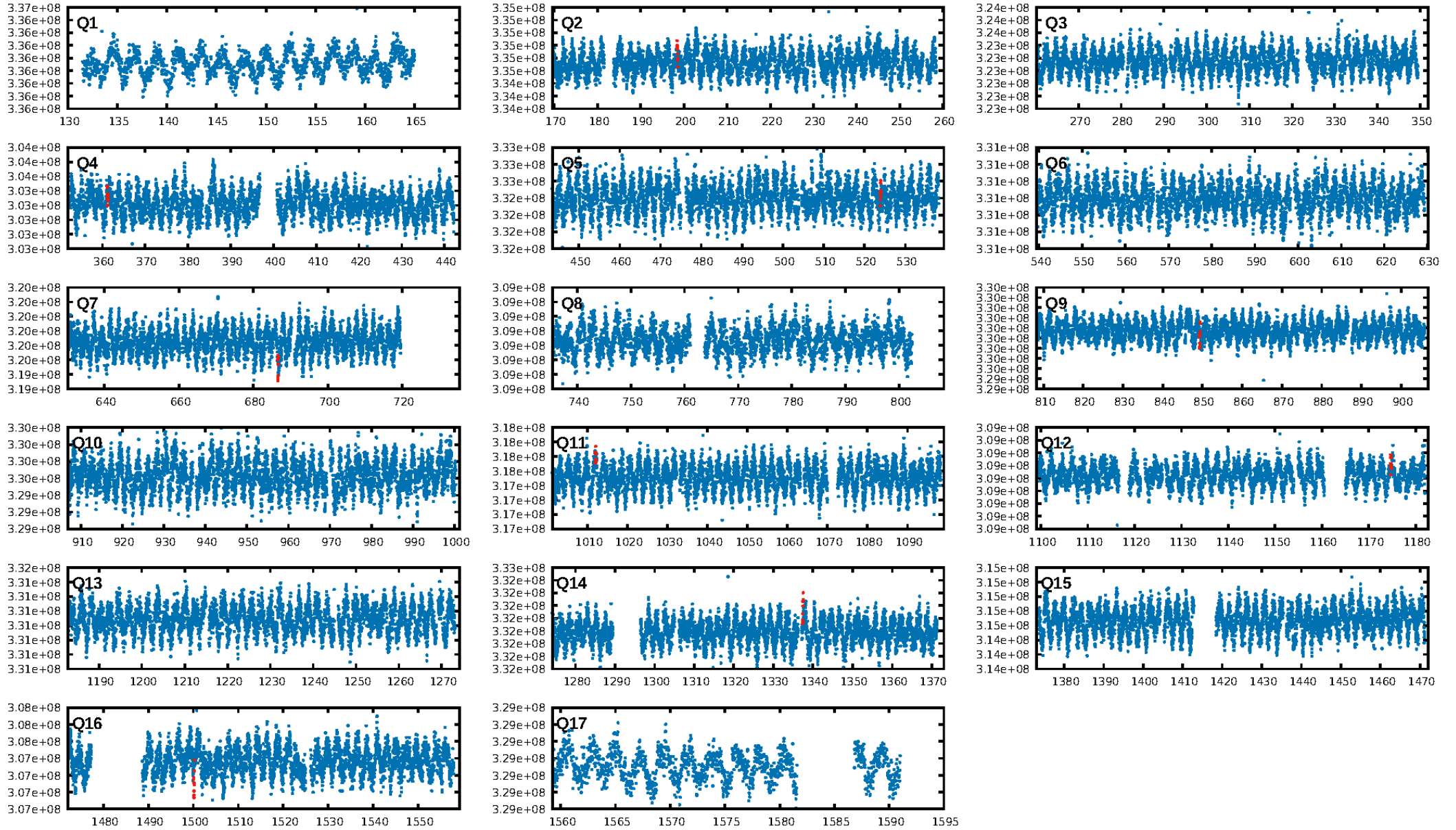
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [180.07σ]
LongPeriod-sig: 100.0% [129.51σ]
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 96.4%
Bootstrap-pfa: 9.89e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.6506
Centroid-sig: 3.7%
Centroid-so: 0.502 arcsec [1.09σ]
OotOffset-rm: 0.577 arcsec [0.67σ]
KicOffset-rm: 0.608 arcsec [0.61σ]
OotOffset-st: 1/2/2/2 [7]
KicOffset-st: 1/2/2/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.50 [4/8]

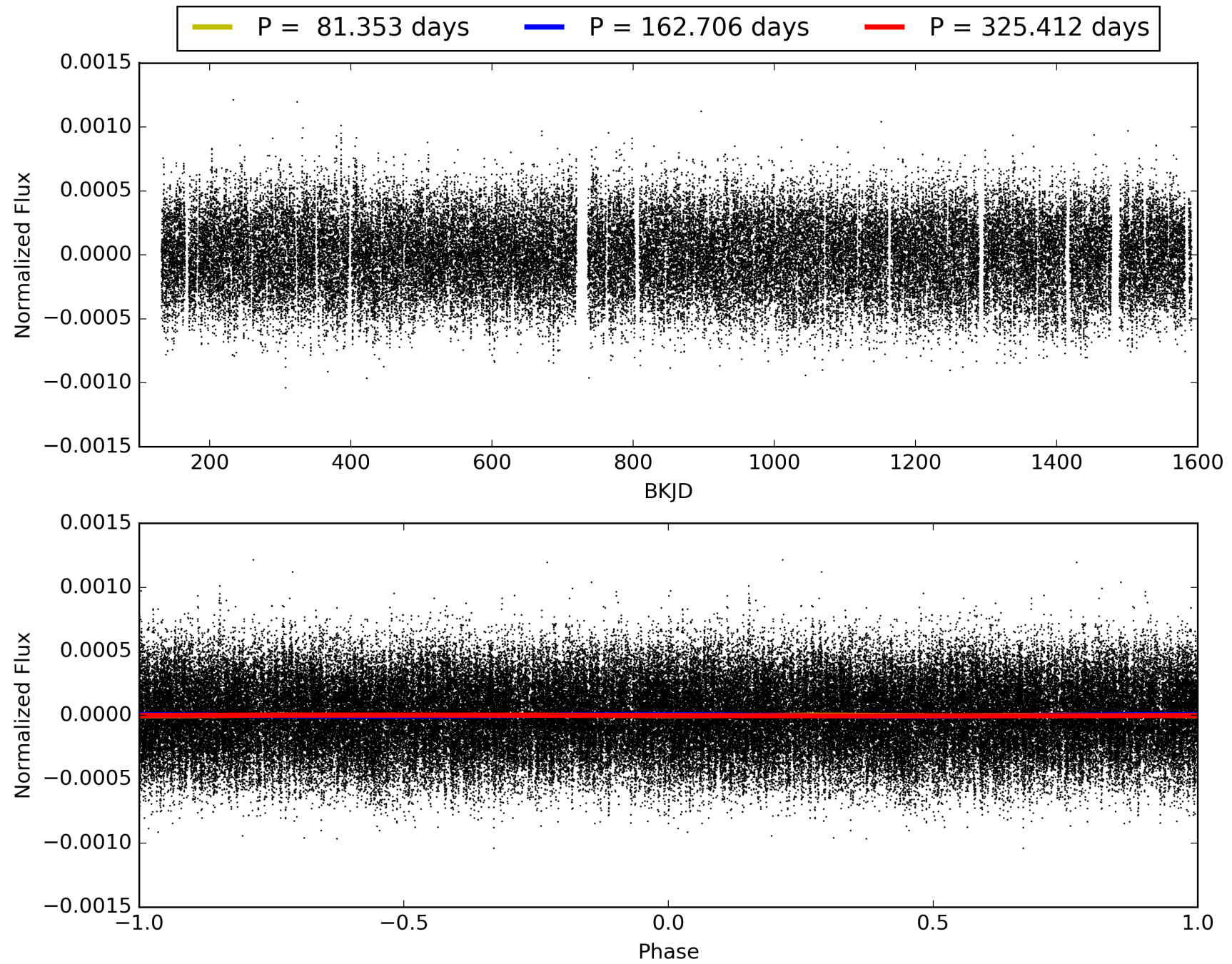
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:50:22 Z

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

TCE 011775507-05, PDC Light Curves

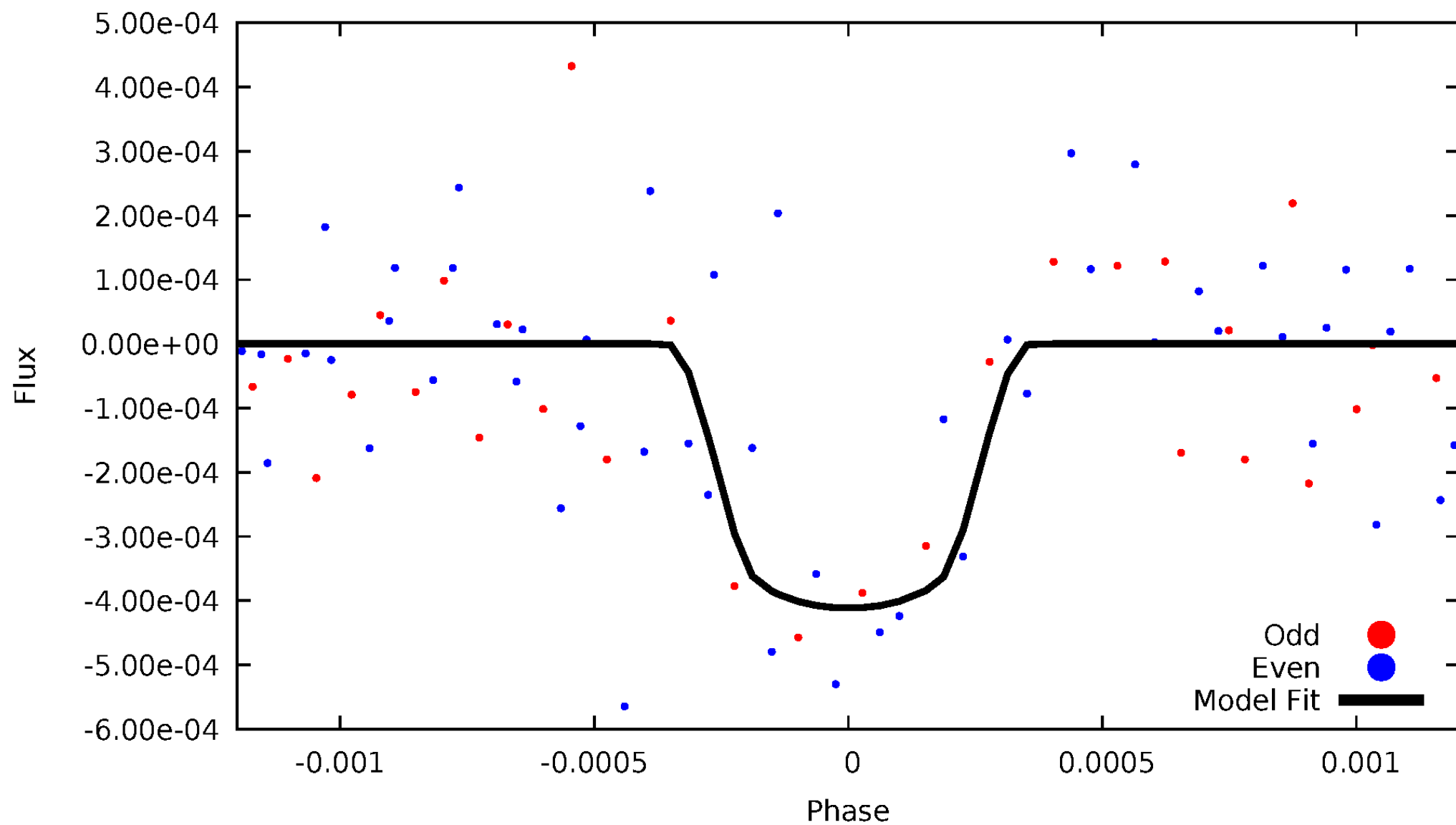


TCE 011775507-05



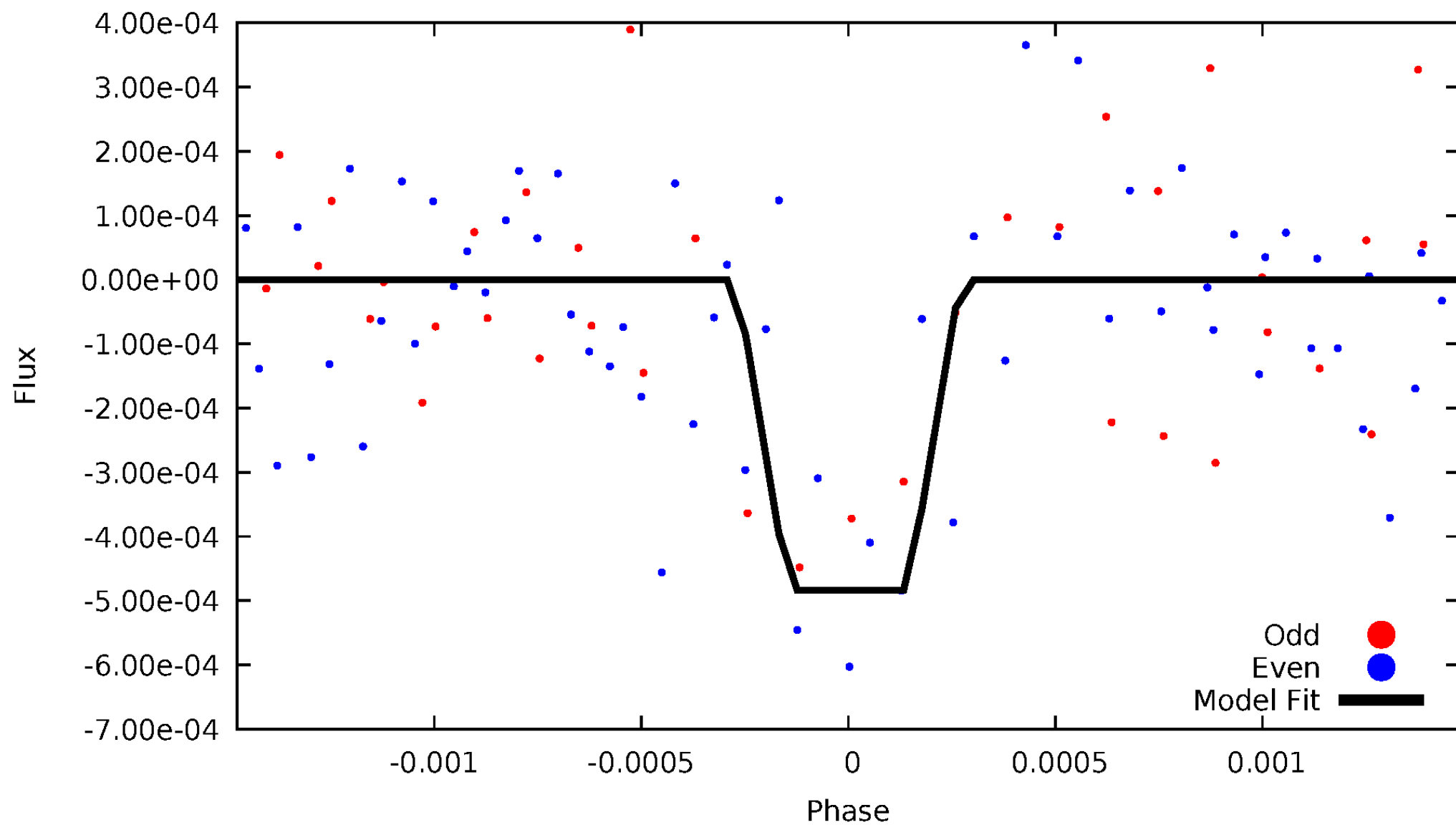
DV Odd/Even

TCE 011775507-05



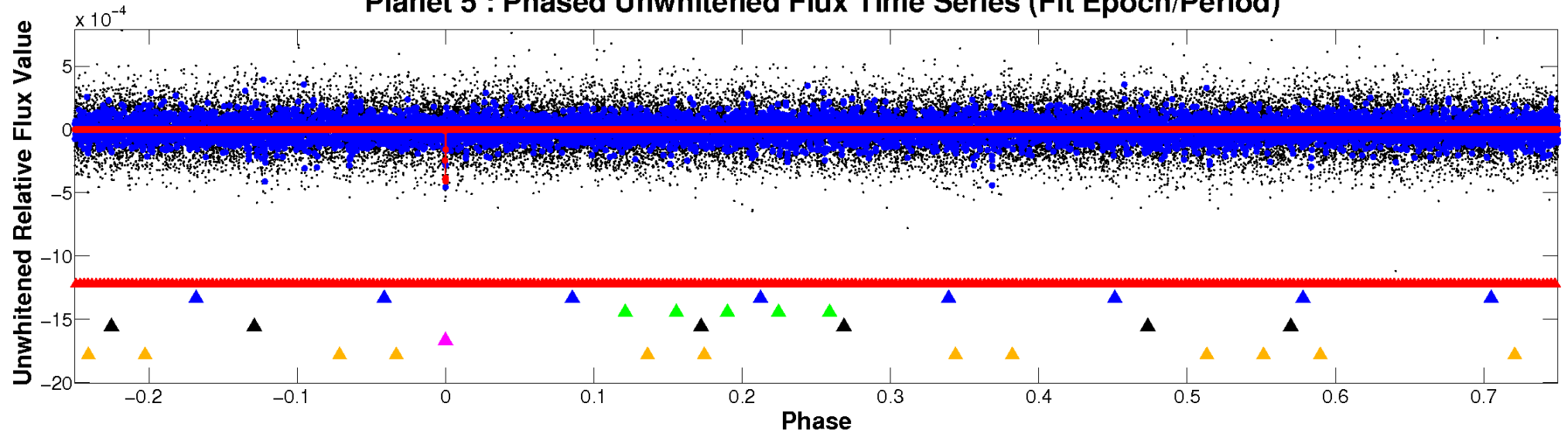
ALT Odd/Even

TCE 011775507-05

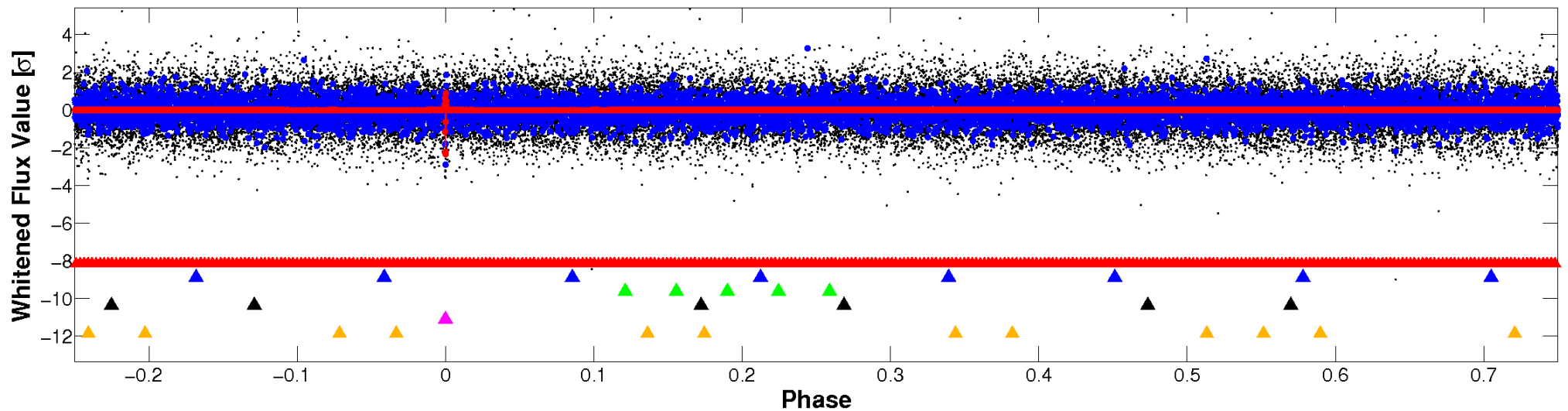


Non-Whitened Vs. Whitened Light Curve

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

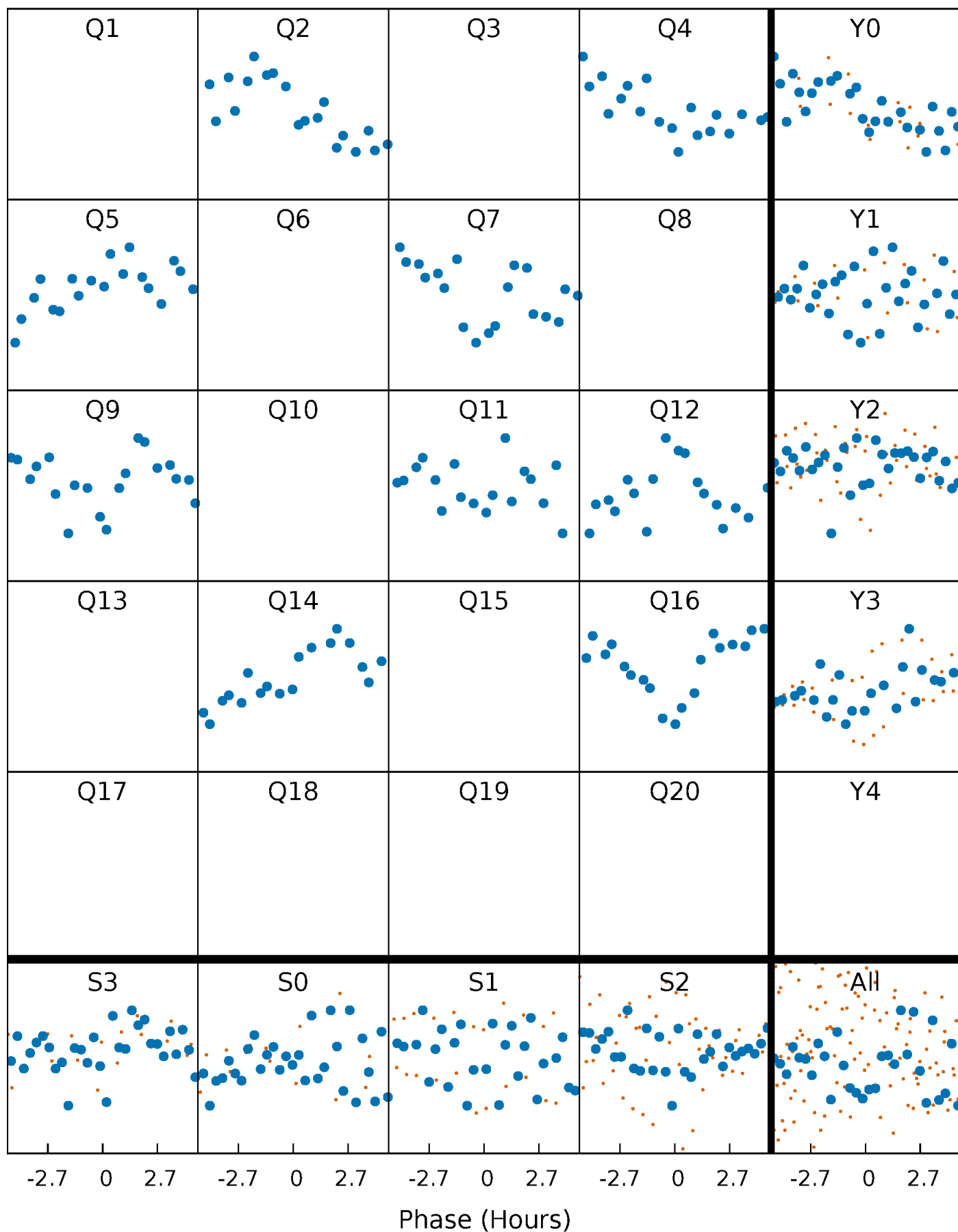


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



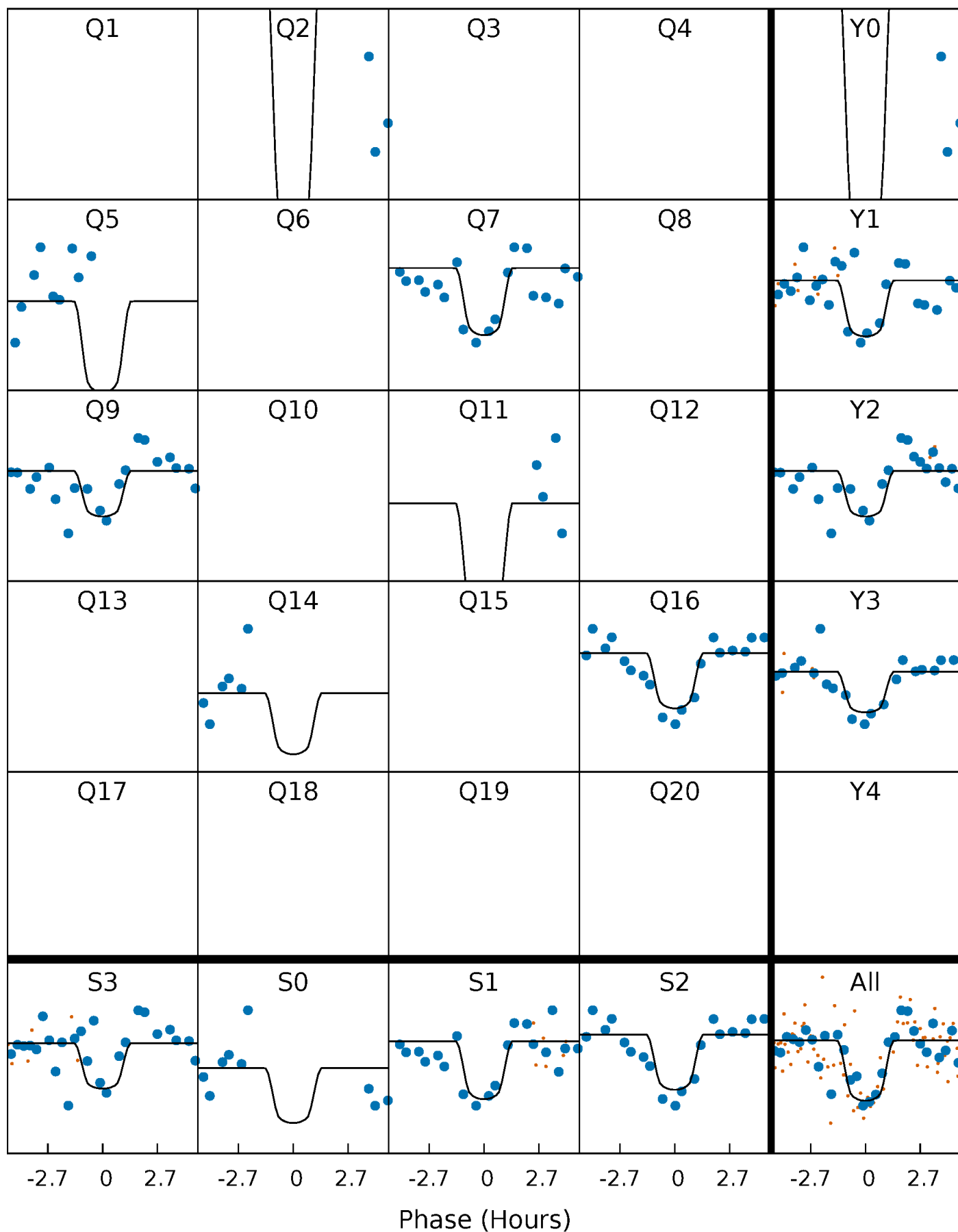
PDC Quarter-Phased Transit Curves

TCE 011775507-05 $P=162.705829$ Days $T_0=198.509701$ (BKJD)



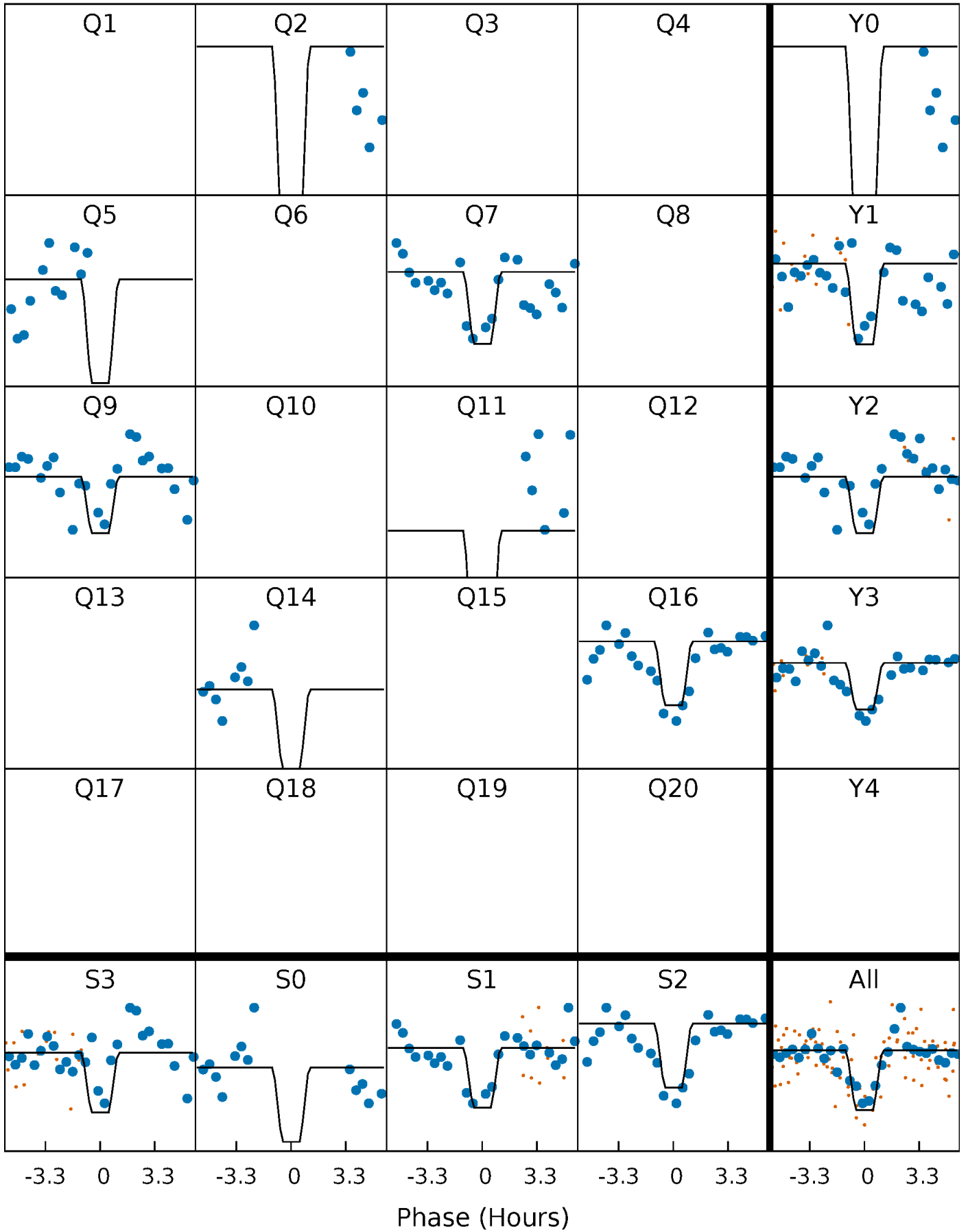
DV Quarter-Phased Transit Curves

TCE 011775507-05 $P=162.705829$ Days $T_0=198.509701$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

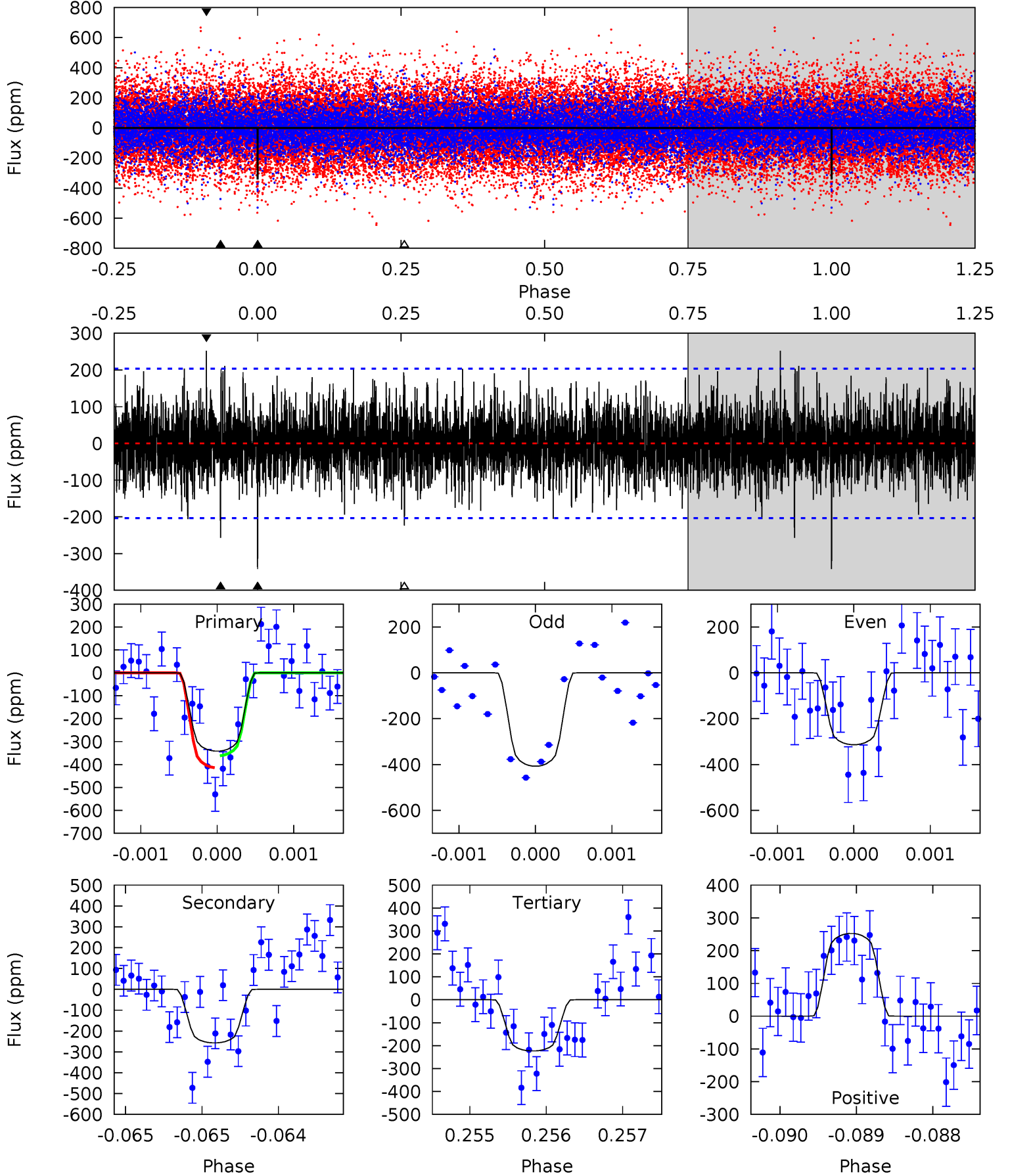
TCE 011775507-05 $P=162.704309$ Days $T_0=198.517416$ (BKJD)



DV Model-Shift Uniqueness Test

011775507-05, P = 162.705829 Days, E = 35.803872 Days

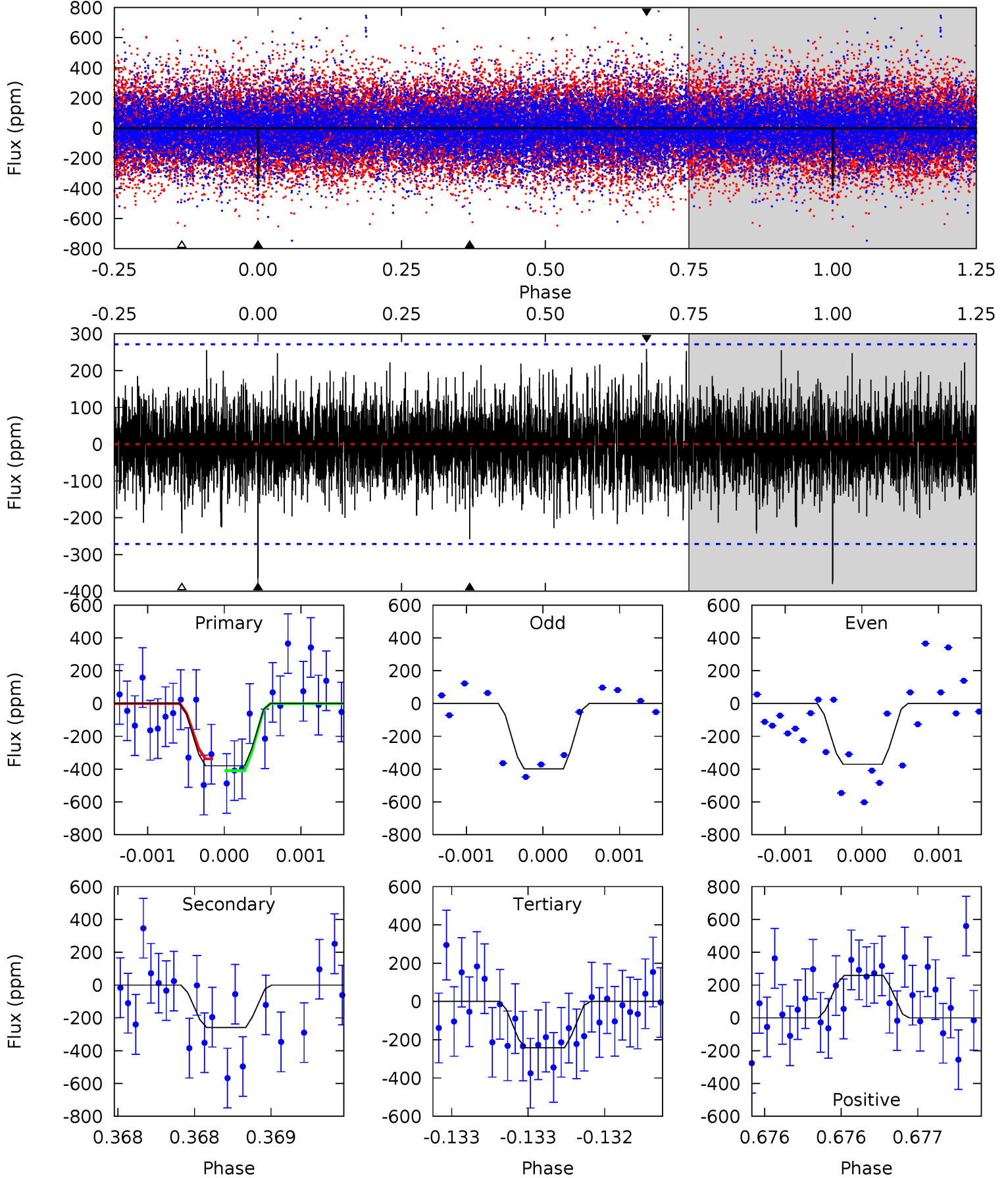
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.25	6.96	6.04	6.83	5.51	3.38	1.63	3.20	2.42	0.91	0.12	1.13	0.69	0.42	0.68



Alt Model-Shift Uniqueness Test

011775507-05, P = 162.704309 Days, E = 35.813107 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.78	5.31	4.97	5.30	5.57	3.48	1.34	2.82	2.48	0.34	0.01	0.25	1.04	0.41	0.73



Stellar Parameters For KIC 011775507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6528^{+183}_{-252}	$4.257^{+0.153}_{-0.170}$	$-0.440^{+0.250}_{-0.300}$	$1.260^{+0.362}_{-0.241}$	$1.046^{+0.160}_{-0.117}$	$0.737^{+0.625}_{-0.364}$
	+3%/-4%	+4%/-4%	+57%/-68%	+29%/-19%	+15%/-11%	+85%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011775507-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-257 ± 37	$2.92^{+1.74}_{-1.46}$	585^{+44}_{-40}	5664^{+2595}_{-1028}	5887^{+16870}_{-3641}
Alt.	-259 ± 49	$3.08^{+1.85}_{-1.50}$	586^{+43}_{-38}	5547^{+2281}_{-1020}	5291^{+15434}_{-3257}

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 $A_{obs} \gg 1.0$

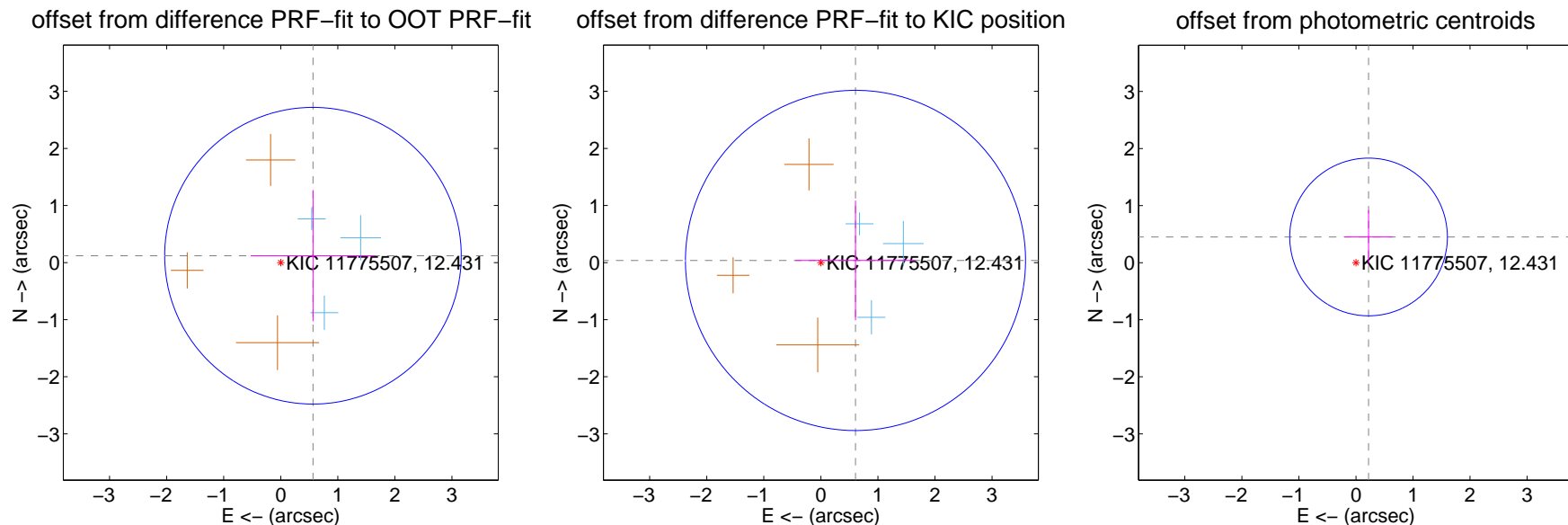
DV Centroid Data

Supplemental centroid analysis for 011775507-05. Kepler magnitude: 12.43. Transit SNR 8.11

There are 3 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.577 ± 0.866	0.67	-0.565 ± 1.092	0.120 ± 1.150
PRF-fit source offset from KIC position	0.608 ± 0.993	0.61	-0.607 ± 1.054	0.038 ± 1.050
photometric centroid source offset	0.50 ± 0.46	1.09	-0.22 ± 0.42	0.45 ± 0.47



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

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

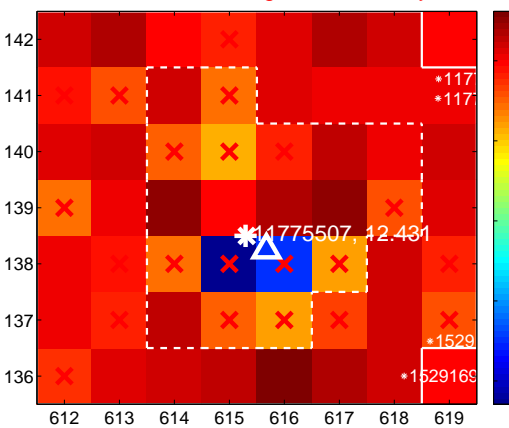
Q1 no difference image



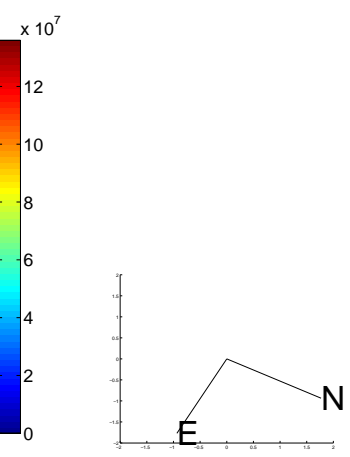
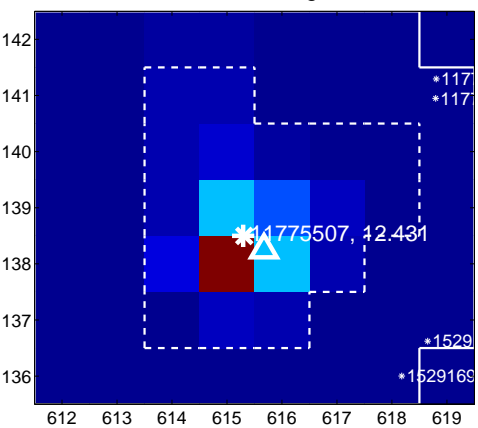
Q1 no OOT image



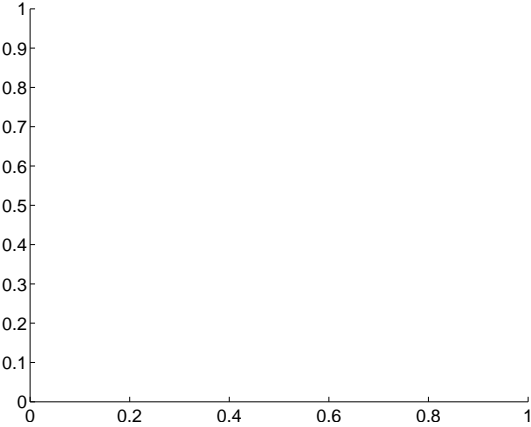
Q2 difference image. Poor Quality



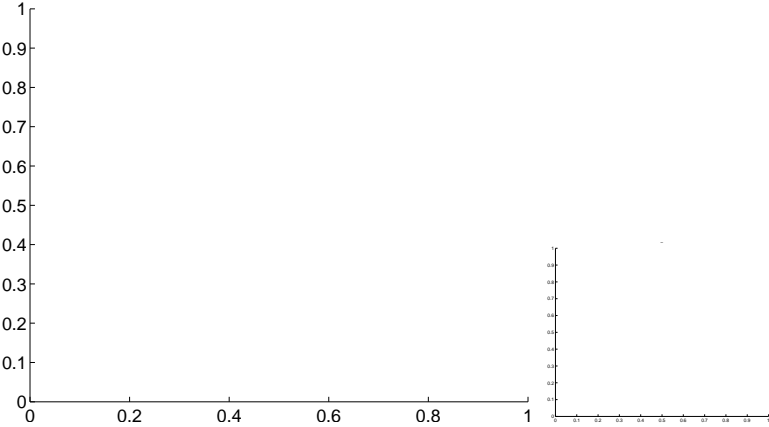
Q2 OOT image



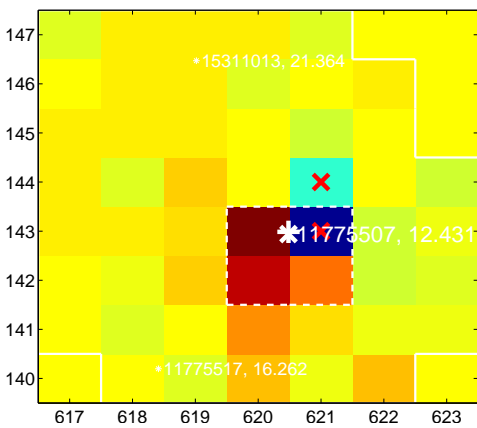
Q3 no difference image



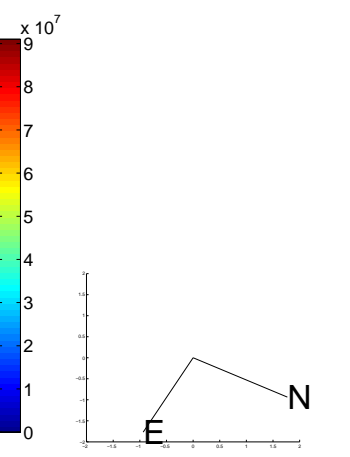
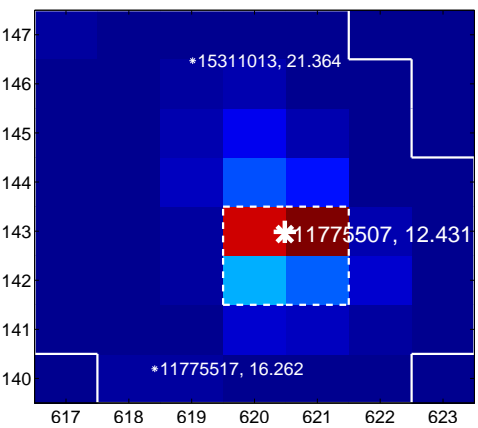
Q3 no OOT image



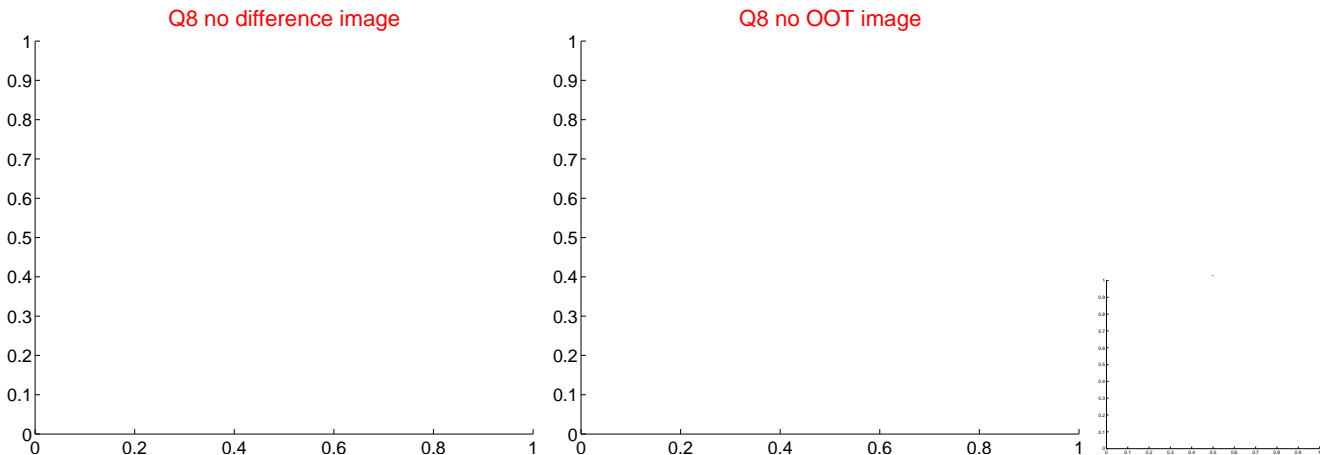
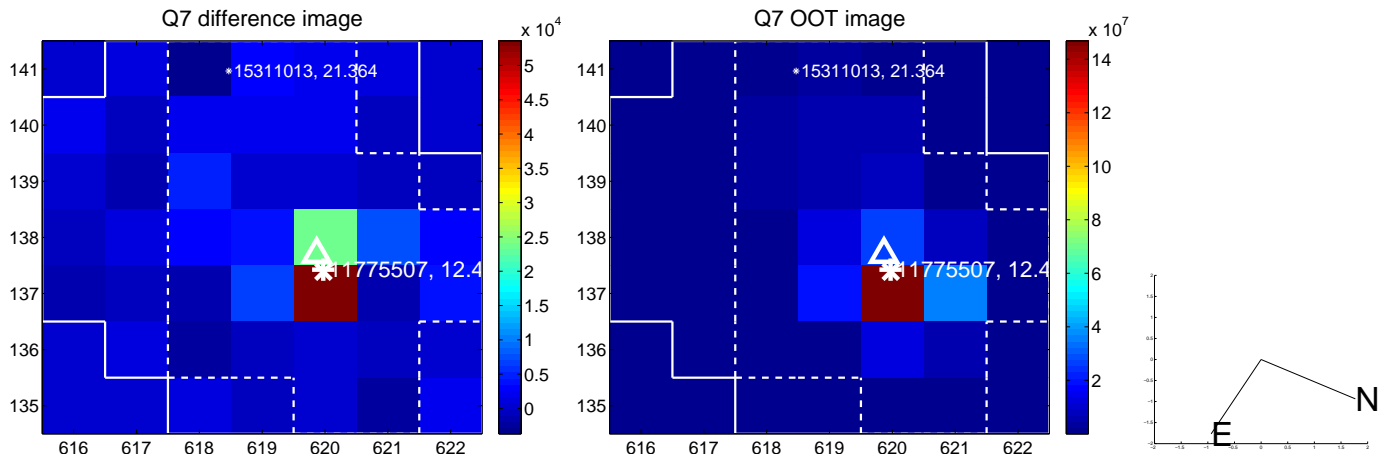
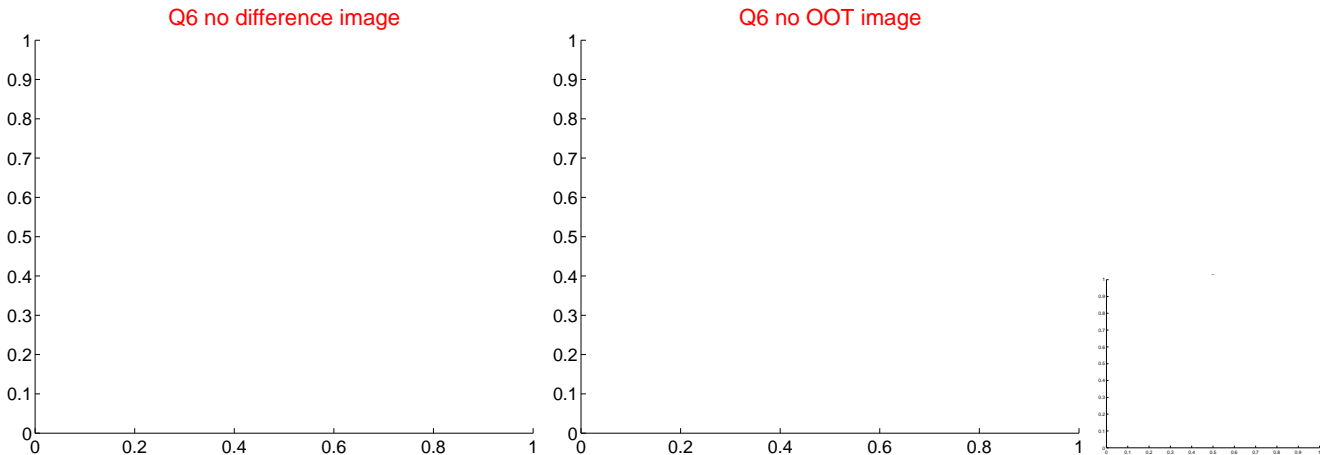
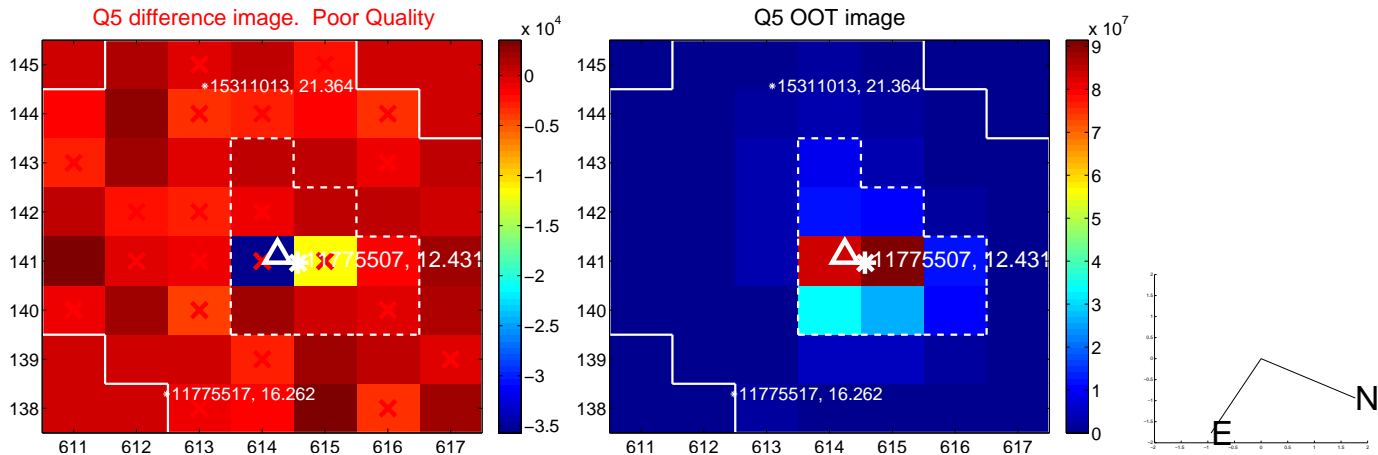
Q4 difference image. Poor Quality



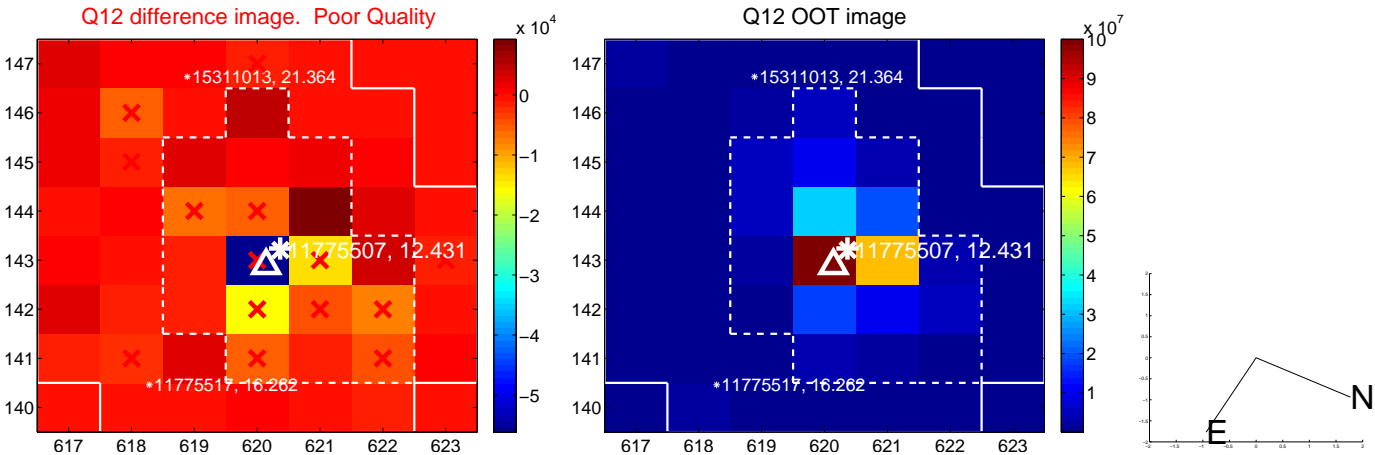
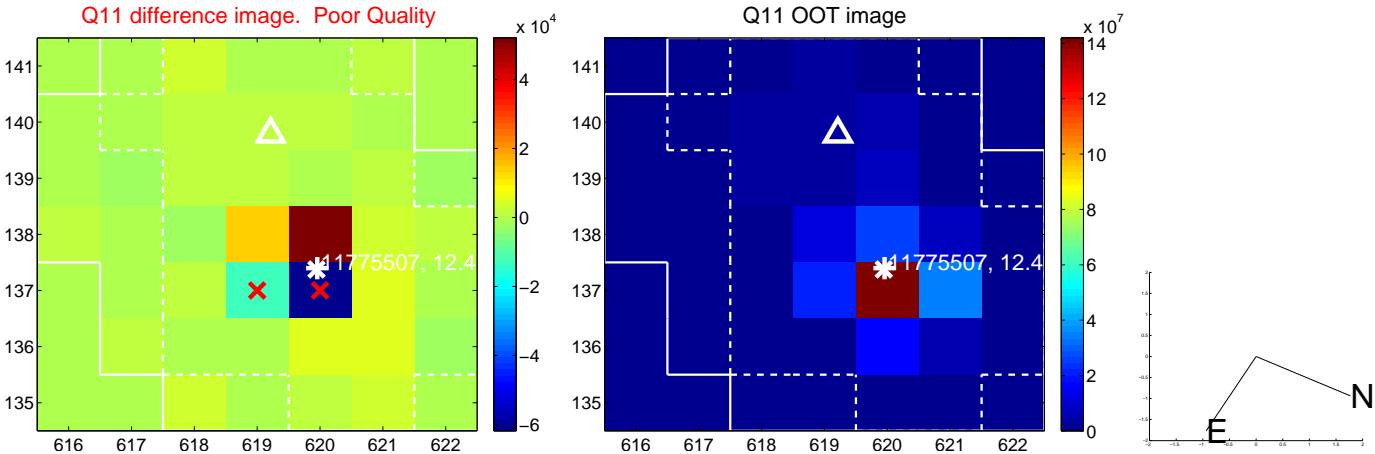
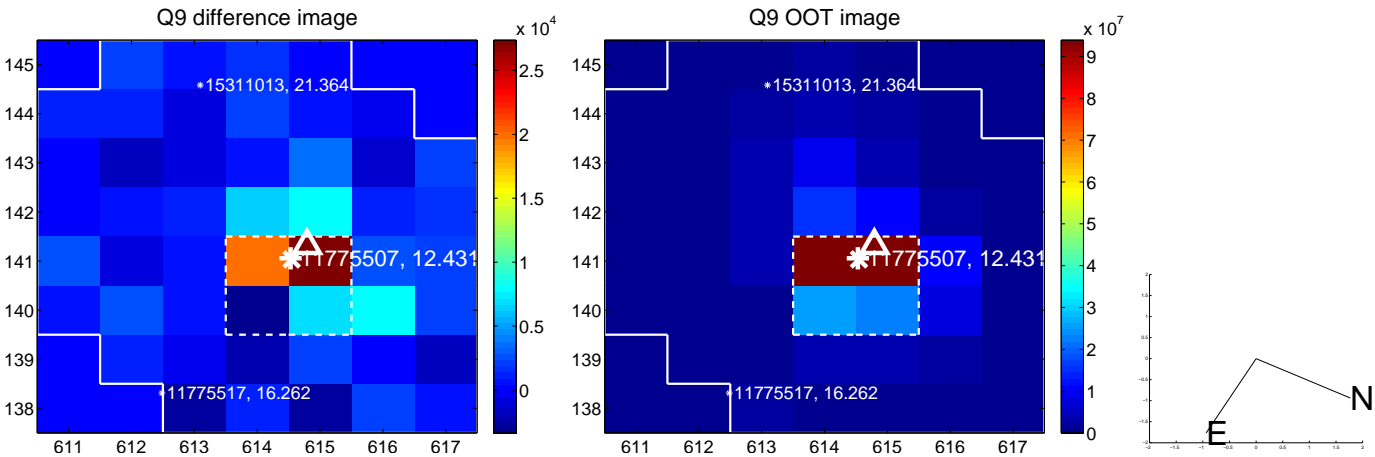
Q4 OOT image



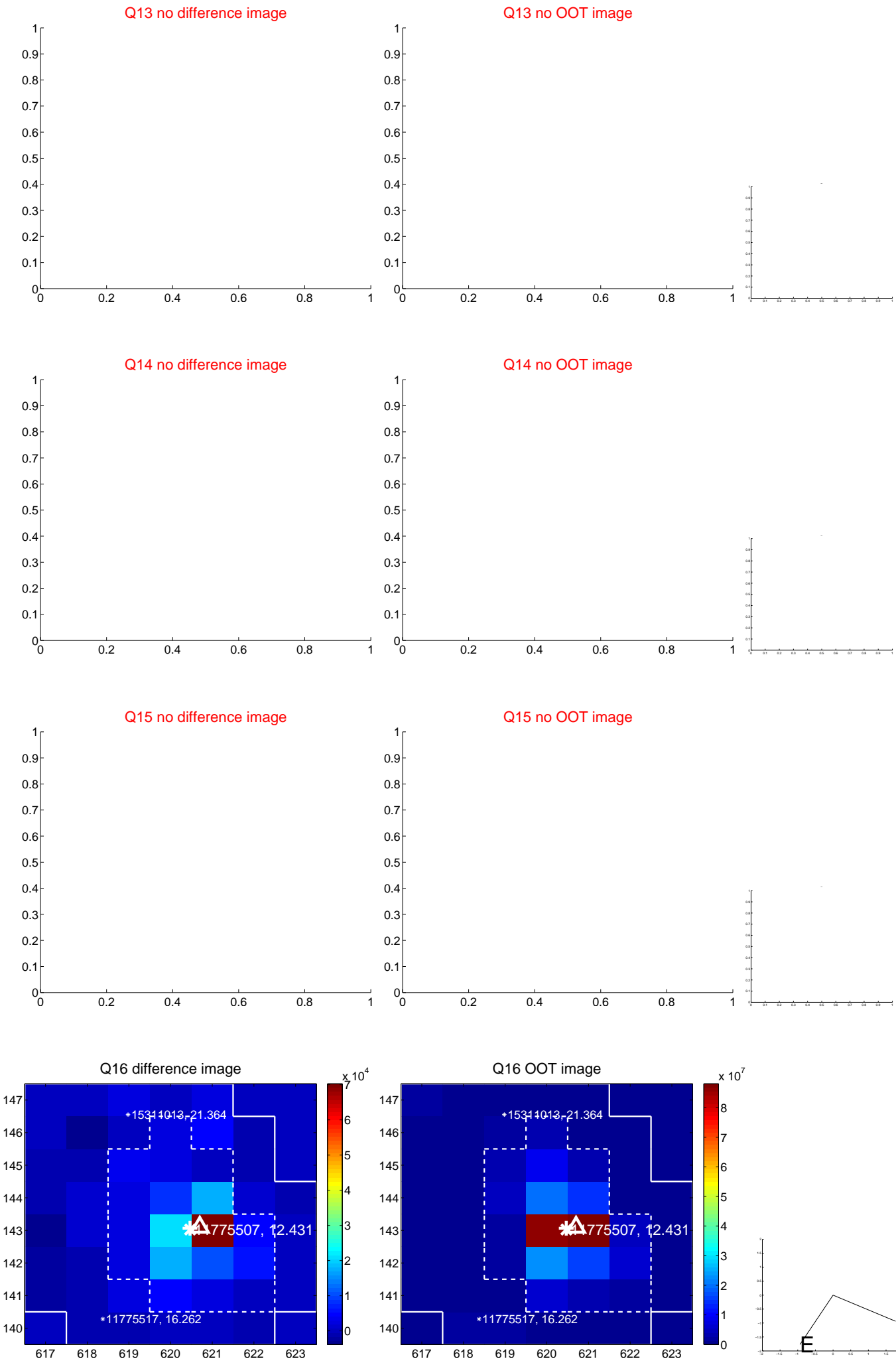
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



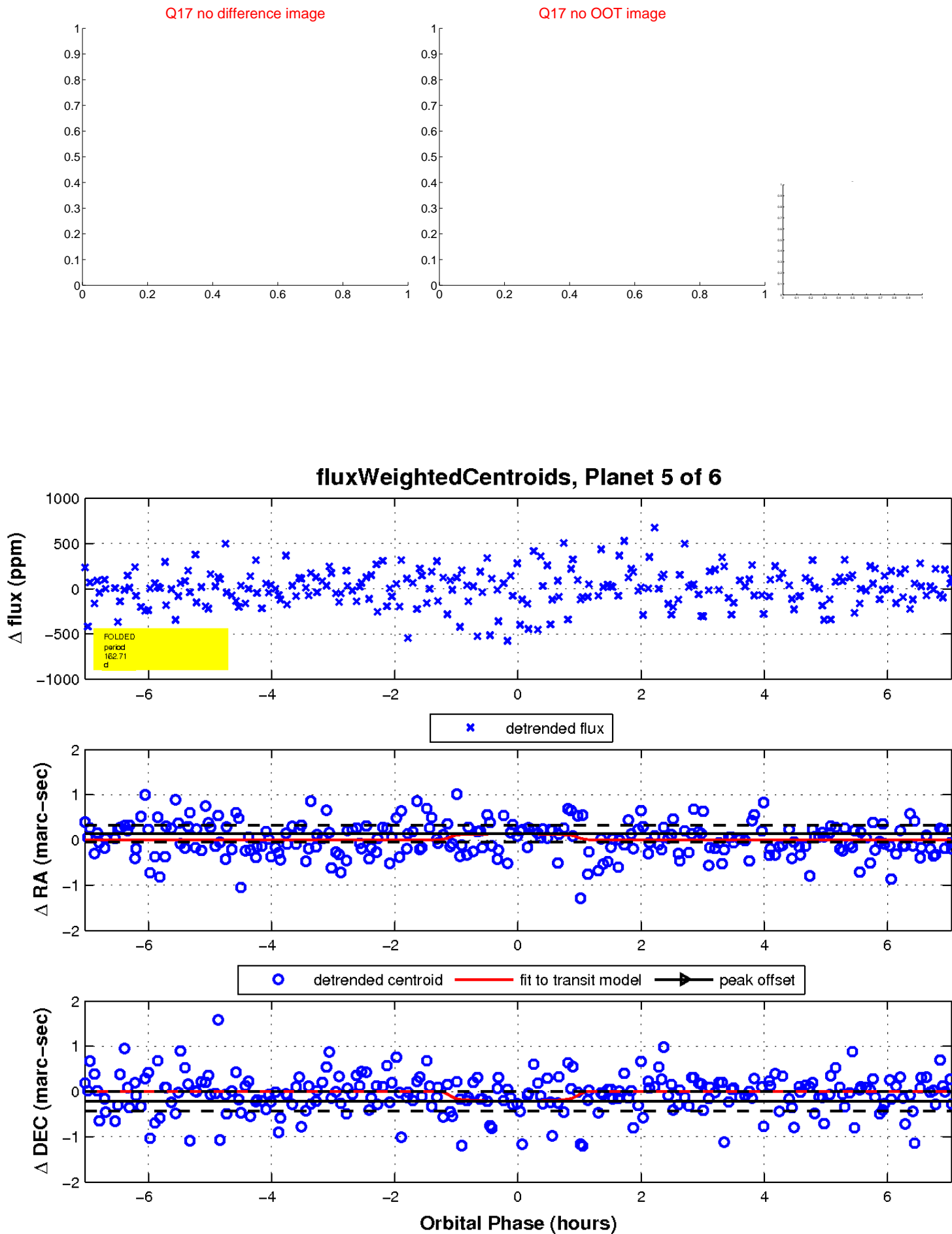
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

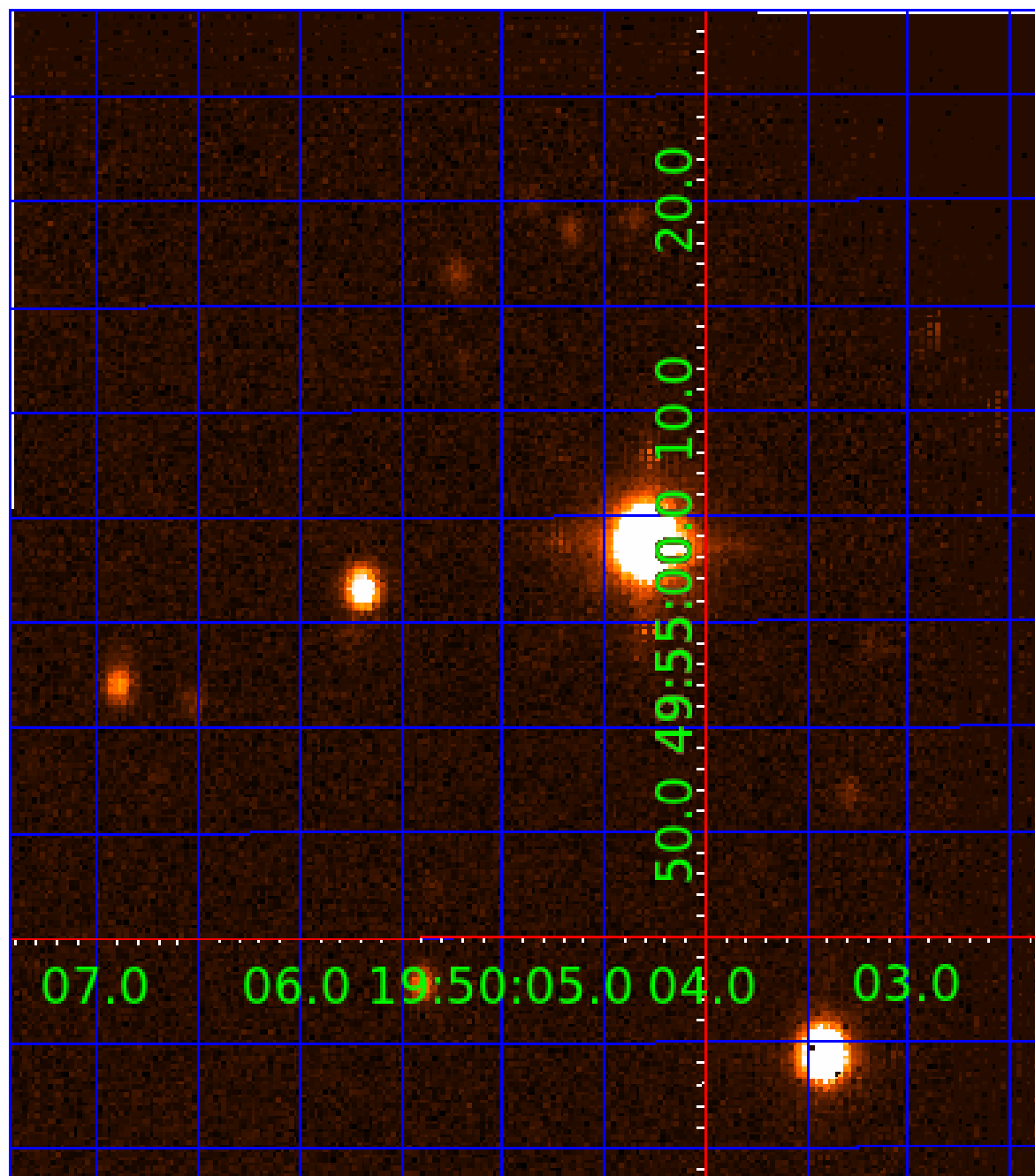


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011775507

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})
011775507-01	OBS	No	2.204555	131.997170	44.8	7.944	12.2	10.8	1.26	6528	1.16	2279.47
011775507-02	OBS	No	183.345201	271.939527	352.4	3.019	8.6	7.5	1.26	6528	2.54	6.28
011775507-03	OBS	No	331.016635	218.229336	311.0	3.257	7.7	8.5	1.26	6528	2.60	2.86
011775507-04	OBS	6245.03	276.402903	161.861116	338.6	4.673	7.6	8.4	1.26	6528	2.57	3.63
011775507-05	OBS	No	162.705829	198.509701	411.5	2.348	7.3	8.1	1.26	6528	2.99	7.36
011775507-06	OBS	No	128.919665	165.554748	258.8	3.842	7.6	7.7	1.26	6528	2.22	10.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011775507-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT
011775507-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011775507-04	OBS	FP	0.17	1	0	0	0	MOD_NONUNIQ_ALT
011775507-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_UNCERTAIN
011775507-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

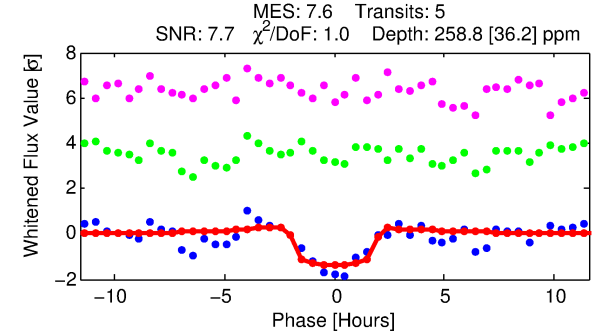
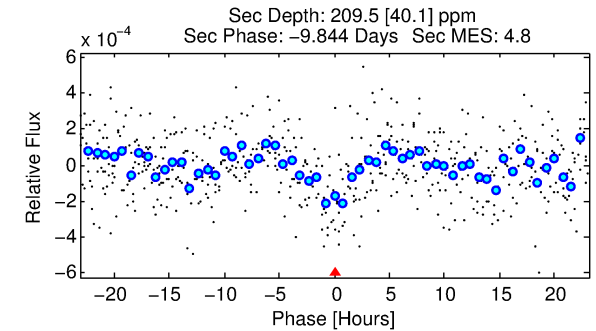
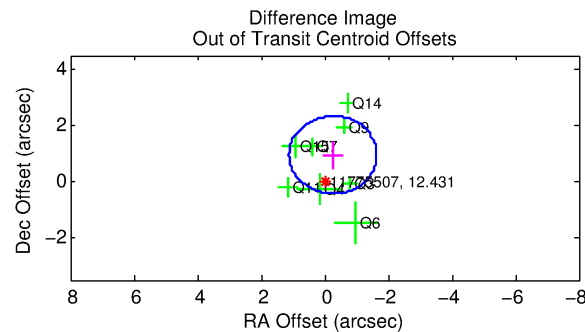
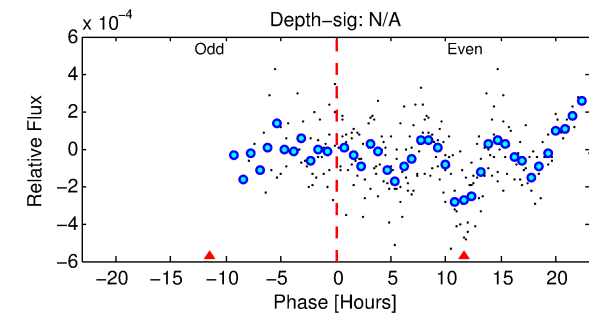
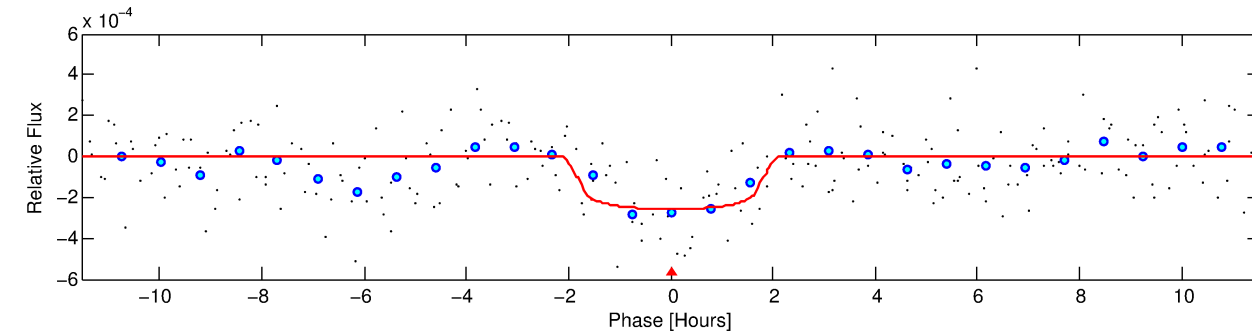
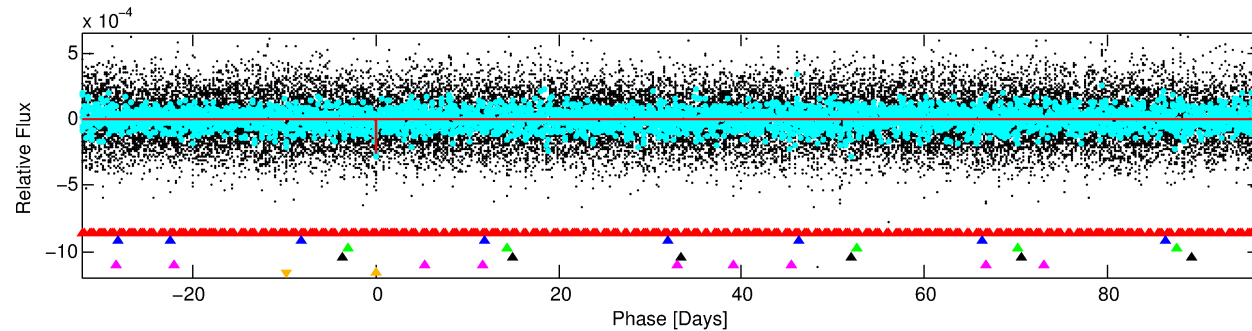
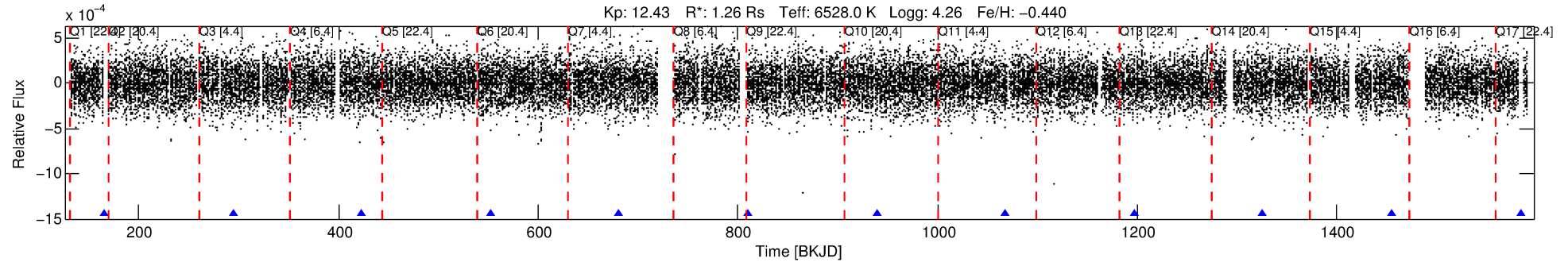
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011775507-06

No Significant Match Found

DV One-Page Summary

KIC: 11775507 Candidate: 6 of 6 Period: 128.920 d
KOI: K06245 Corr: No Ephemeris Match



DV Fit Results:

Period = 128.91966 [0.00204] d
Epoch = 165.5547 [0.0112] BKJD
Rp/R* = 0.0162 [0.0152]
a/R* = 166.43 [880.62]
b = 0.78 [2.66]
Seff = 10.04 [3.60]
Teq = 454 [41] K
Rp = 2.22 [2.18] Re
a = 0.5072 [0.1175] AU
Ag = 5996.37 [11487.78] [0.52σ]
Teffp = 6176 [2925] K [1.96σ]

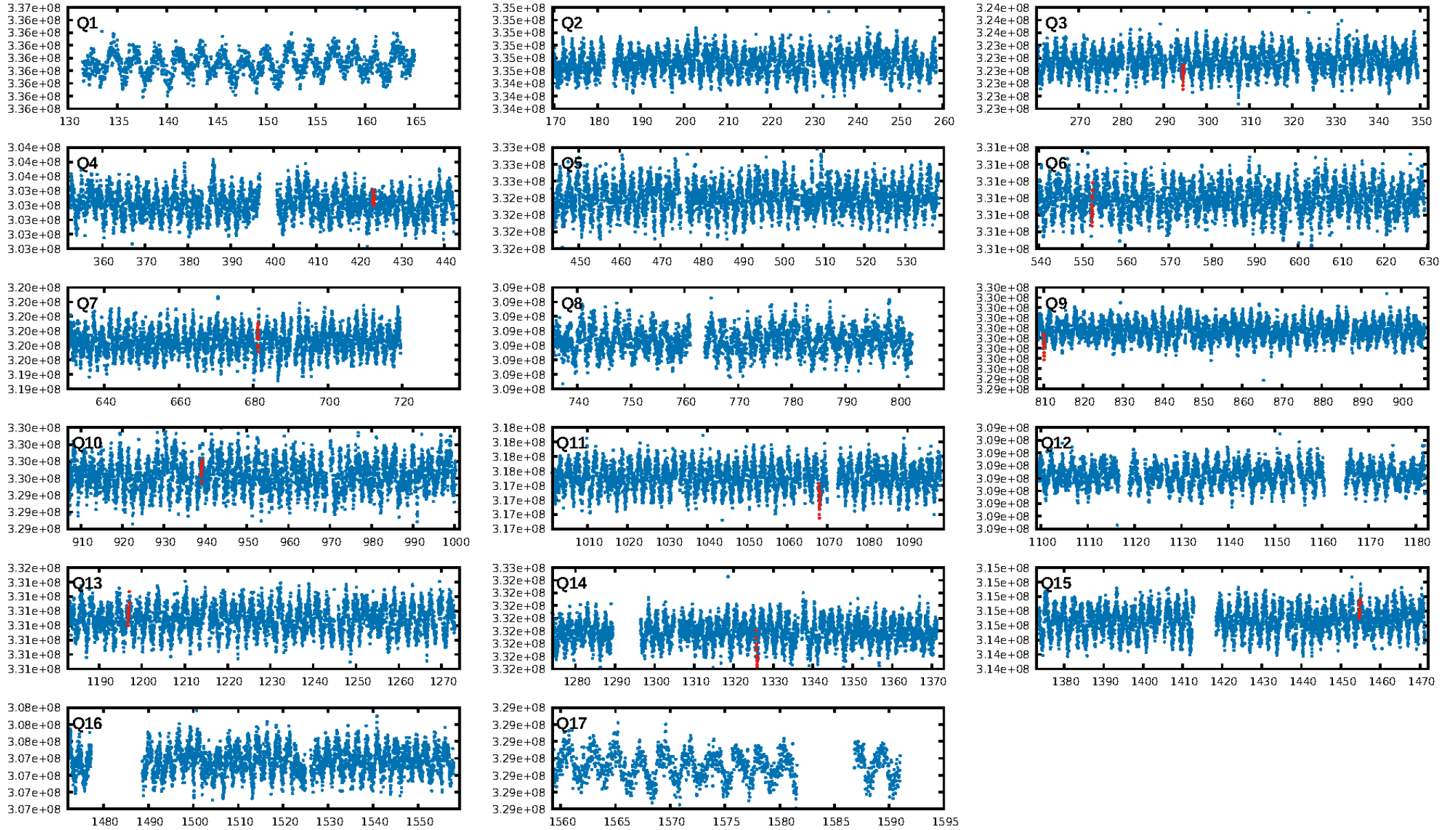
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [344.62σ]
LongPeriod-sig: 100.0% [180.07σ]
ModelChiSquare2-sig: 26.2%
ModelChiSquareGof-sig: 79.2%
Bootstrap-pfa: 2.70e-09
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.8485
Centroid-sig: 21.8%
Centroid-so: 0.570 arcsec [1.04σ]
OotOffset-rm: 0.988 arcsec [2.15σ]
OotOffset-st: 2/4/1/1 [8]
KicOffset-rm: 0.943 arcsec [2.10σ]
KicOffset-st: 2/4/1/1 [8]
DiffImageQuality-fgm: 0.88 [7/8]
DiffImageOverlap-fno: 0.62 [5/8]

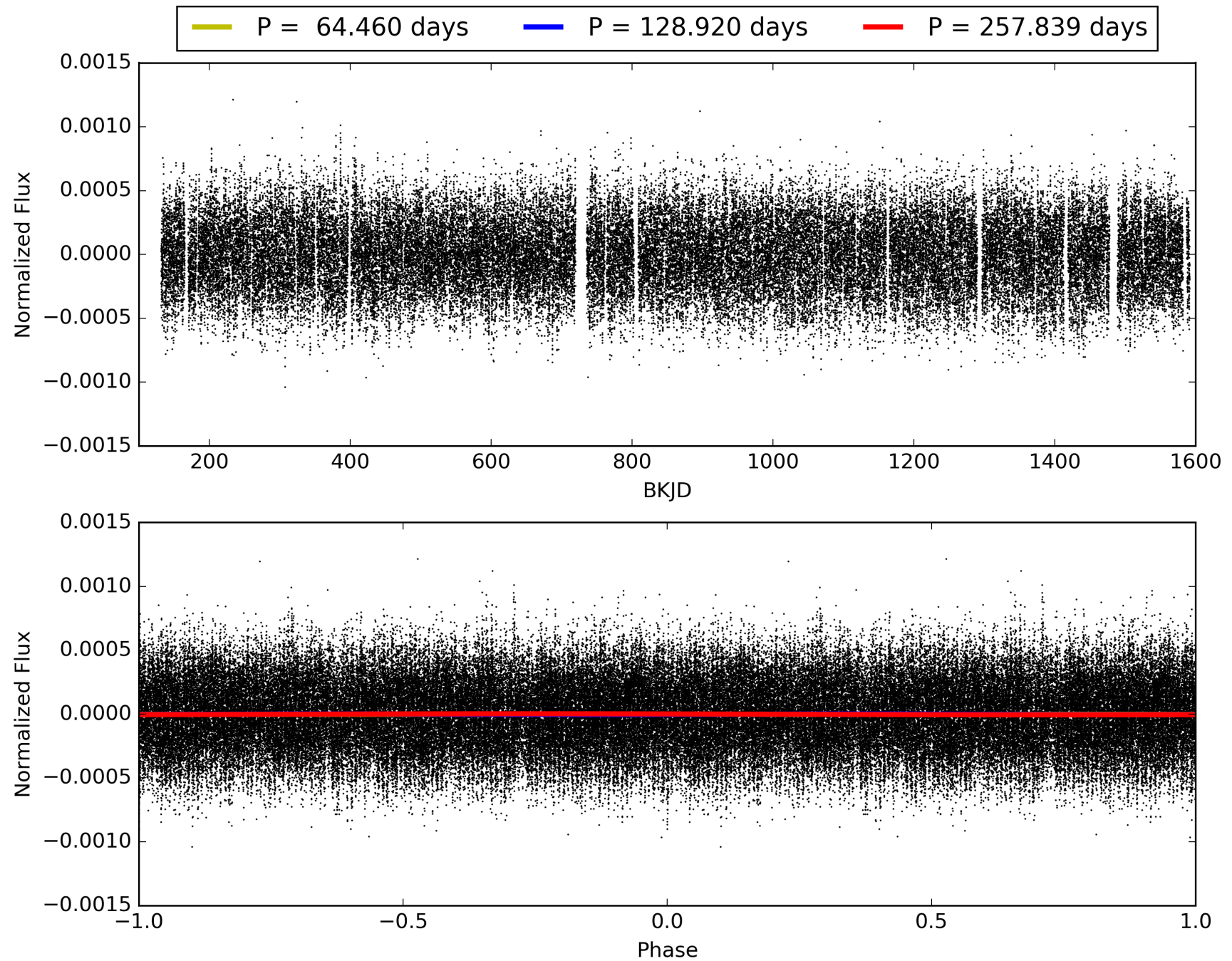
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:50:28 Z

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

TCE 011775507-06, PDC Light Curves

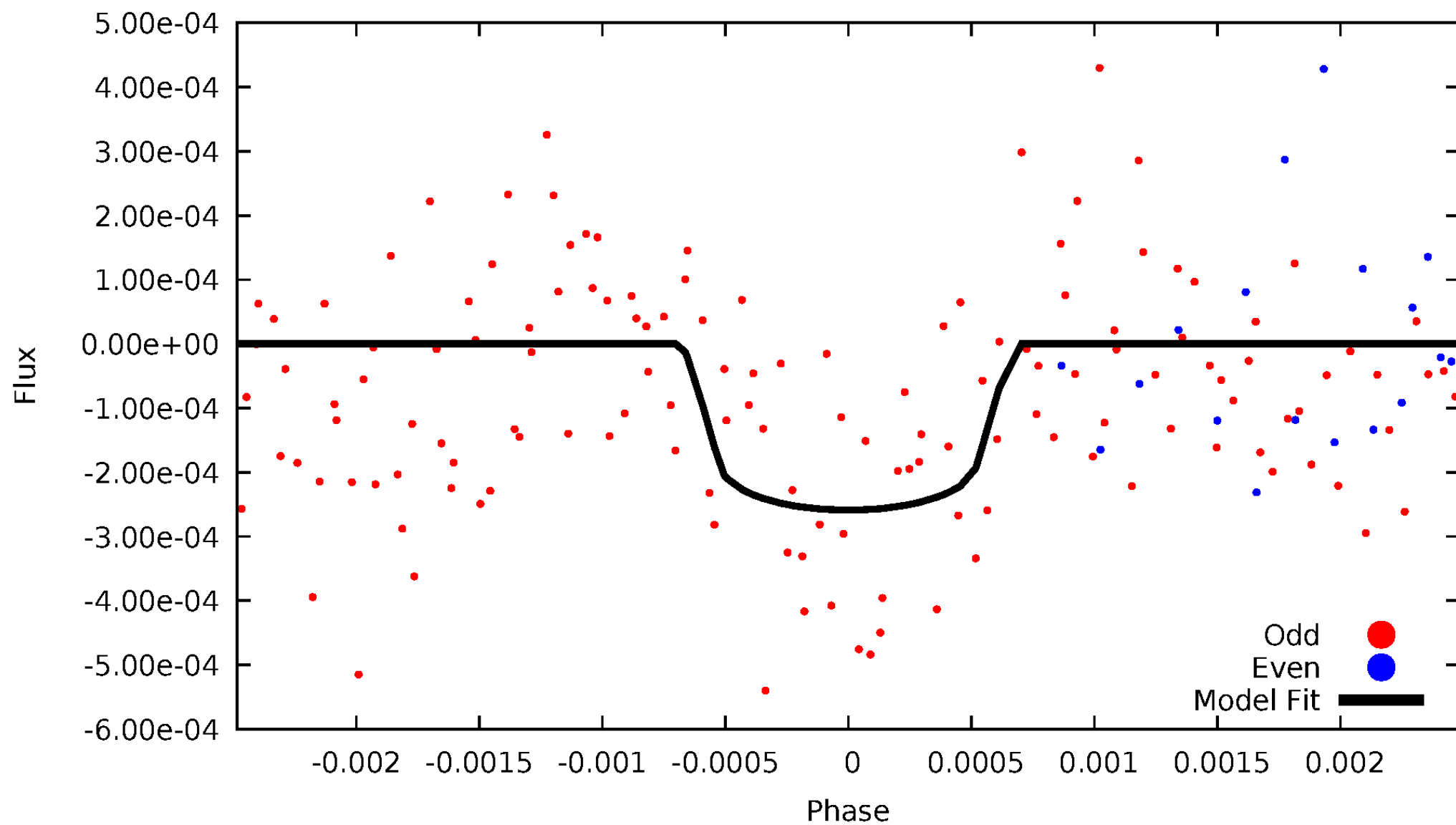


TCE 011775507-06



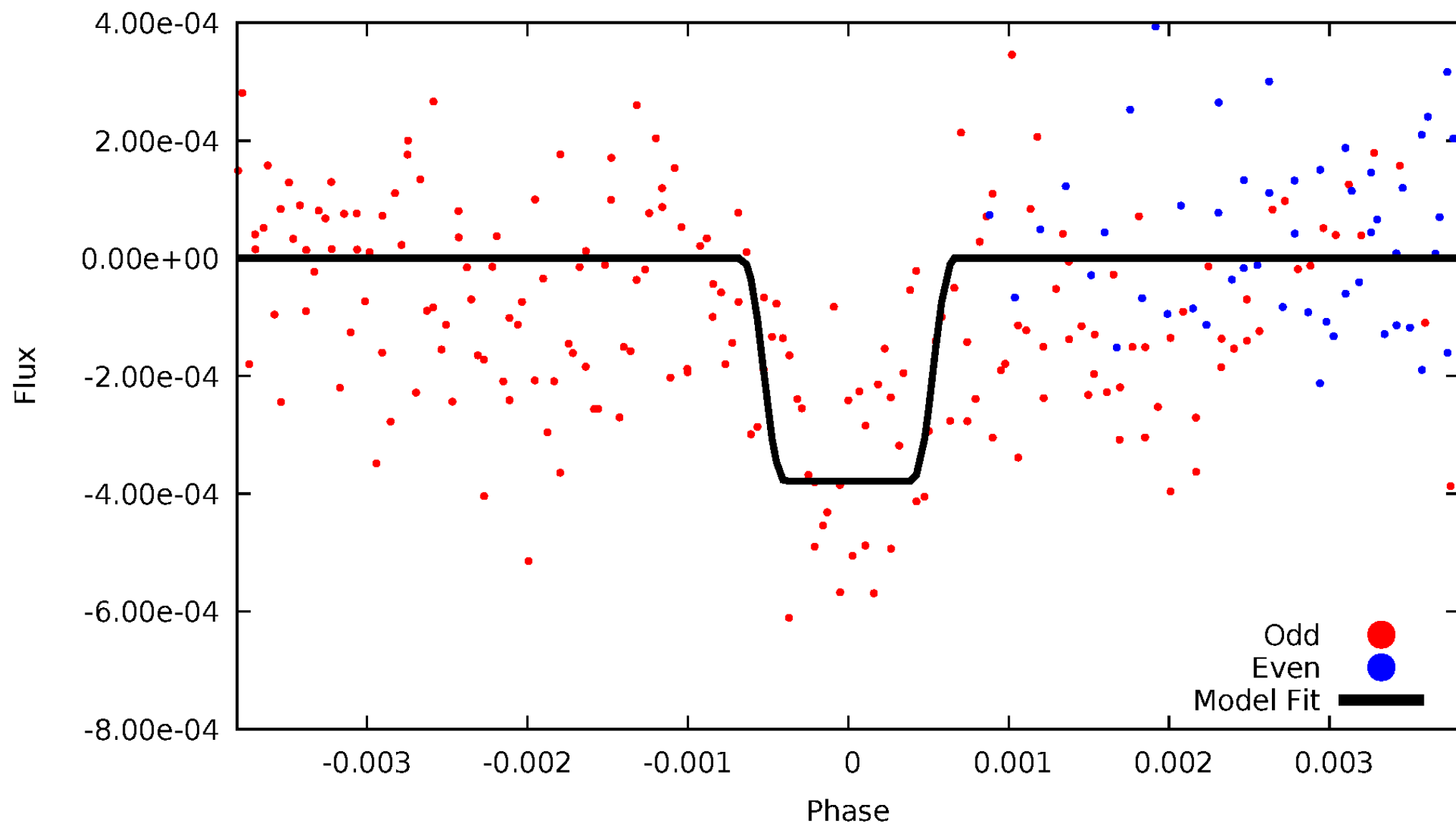
DV Odd/Even

TCE 011775507-06



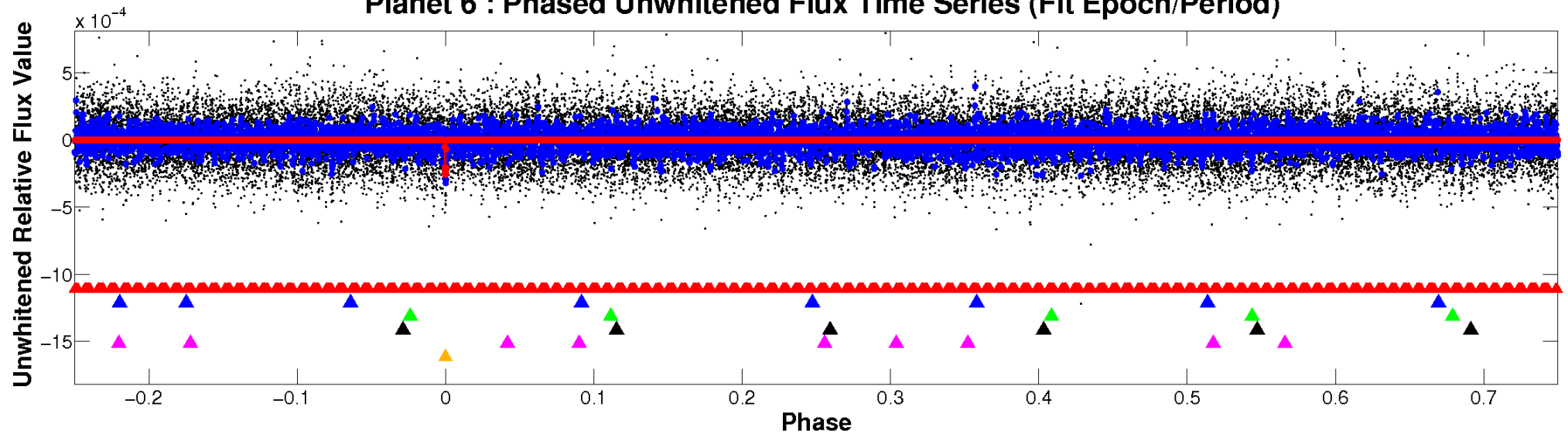
ALT Odd/Even

TCE 011775507-06

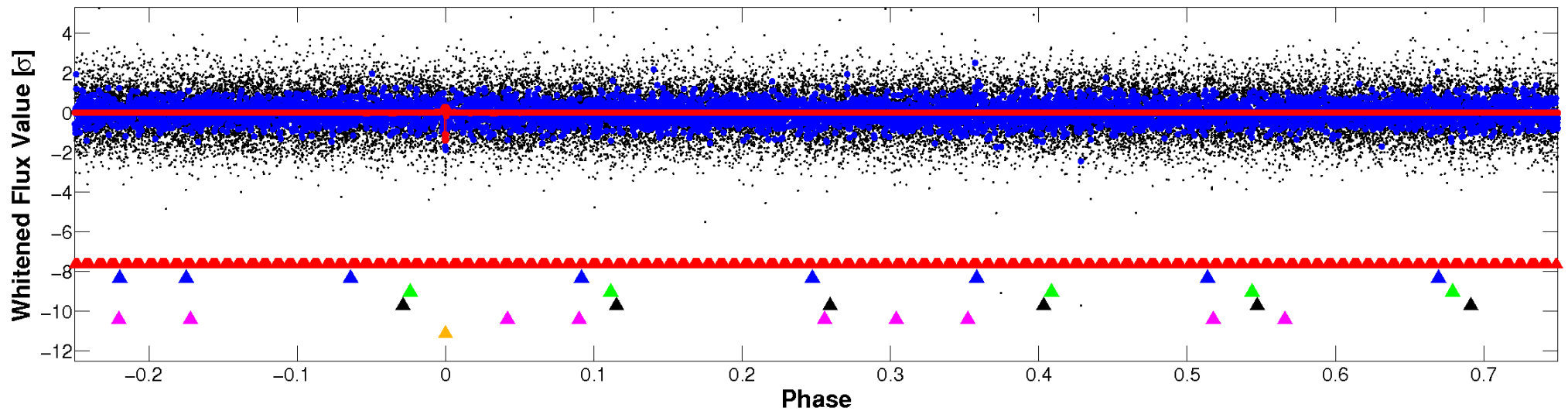


Non-Whitened Vs. Whitened Light Curve

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

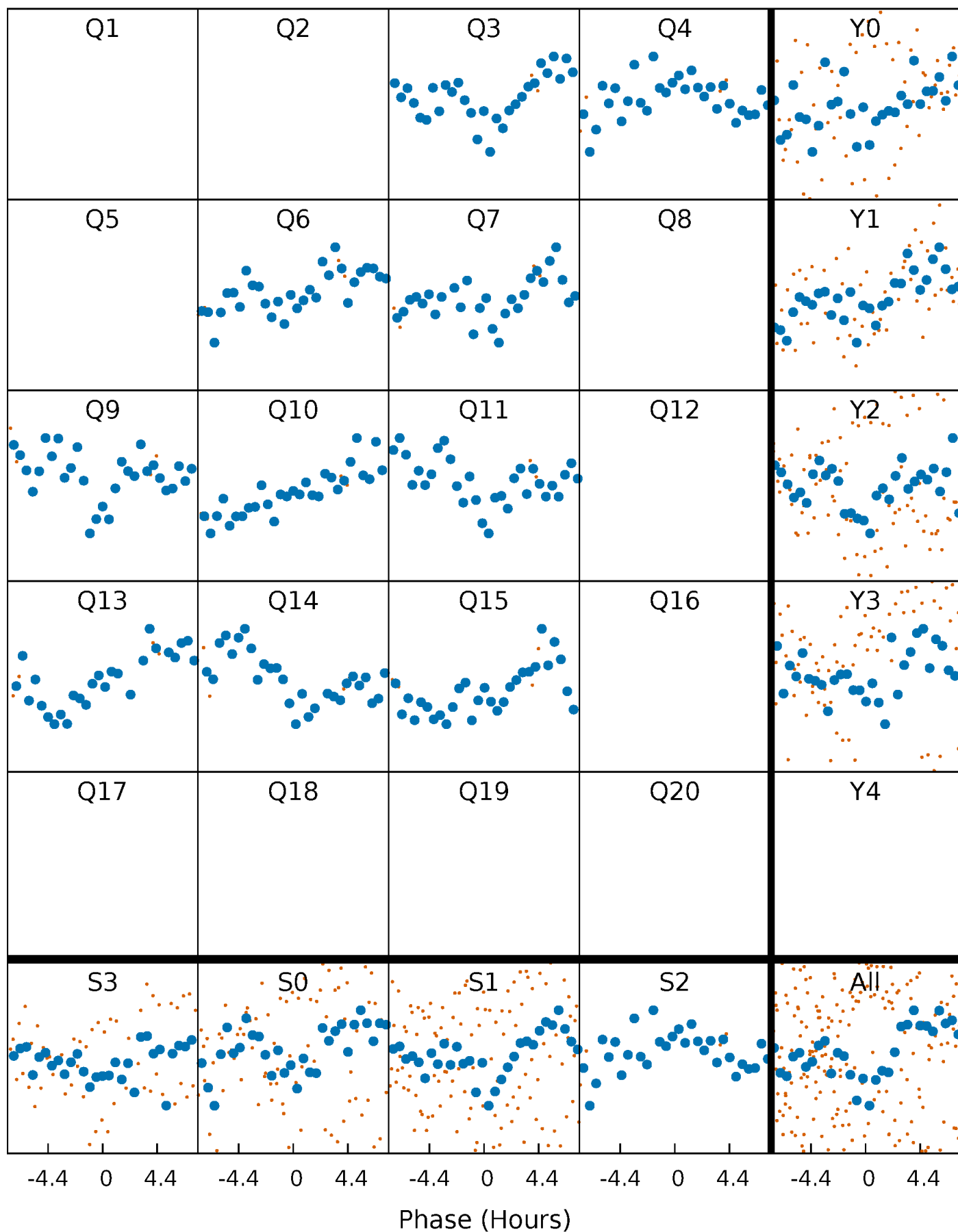


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



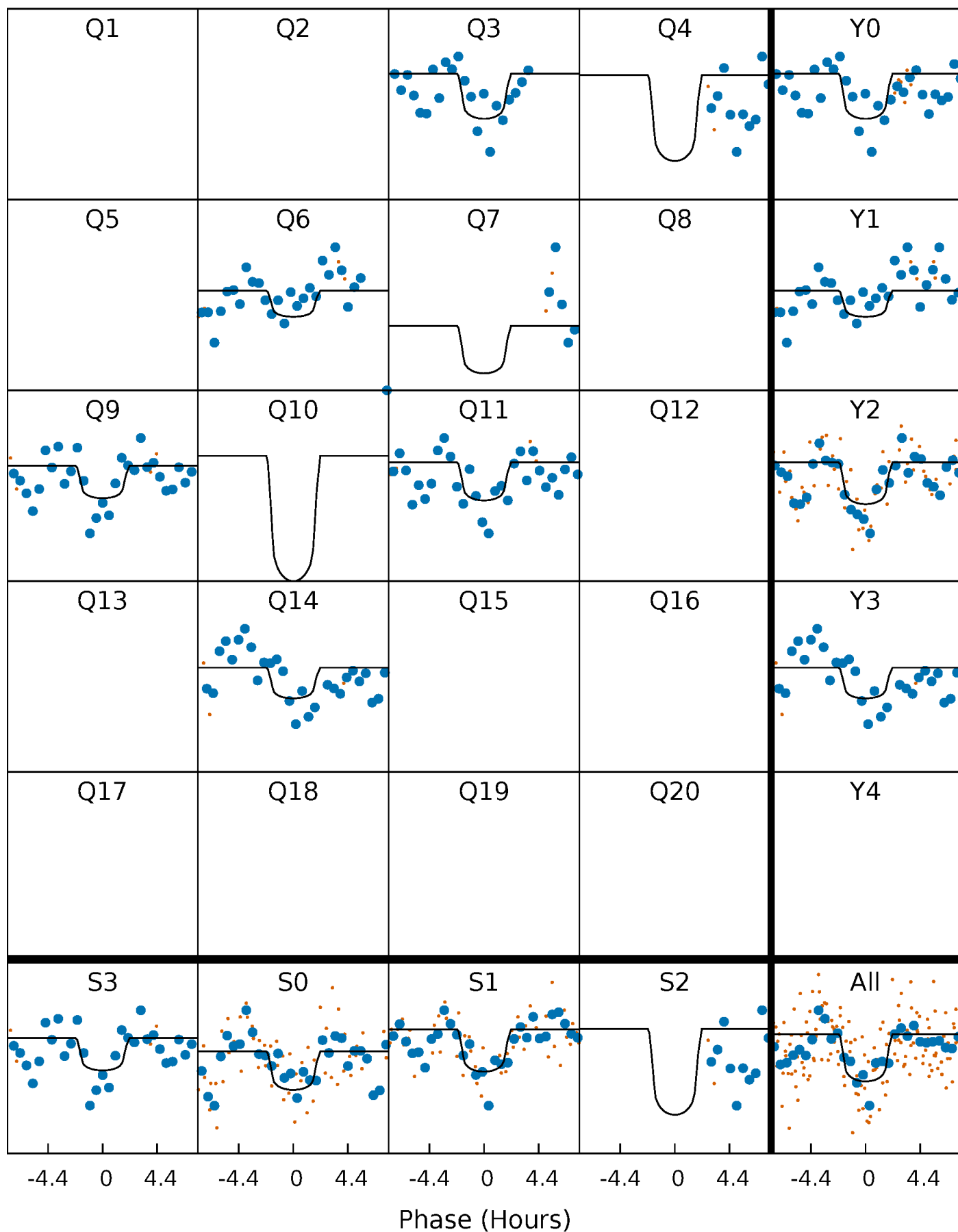
PDC Quarter-Phased Transit Curves

TCE 011775507-06 P=128.919665 Days $T_0=165.554748$ (BKJD)



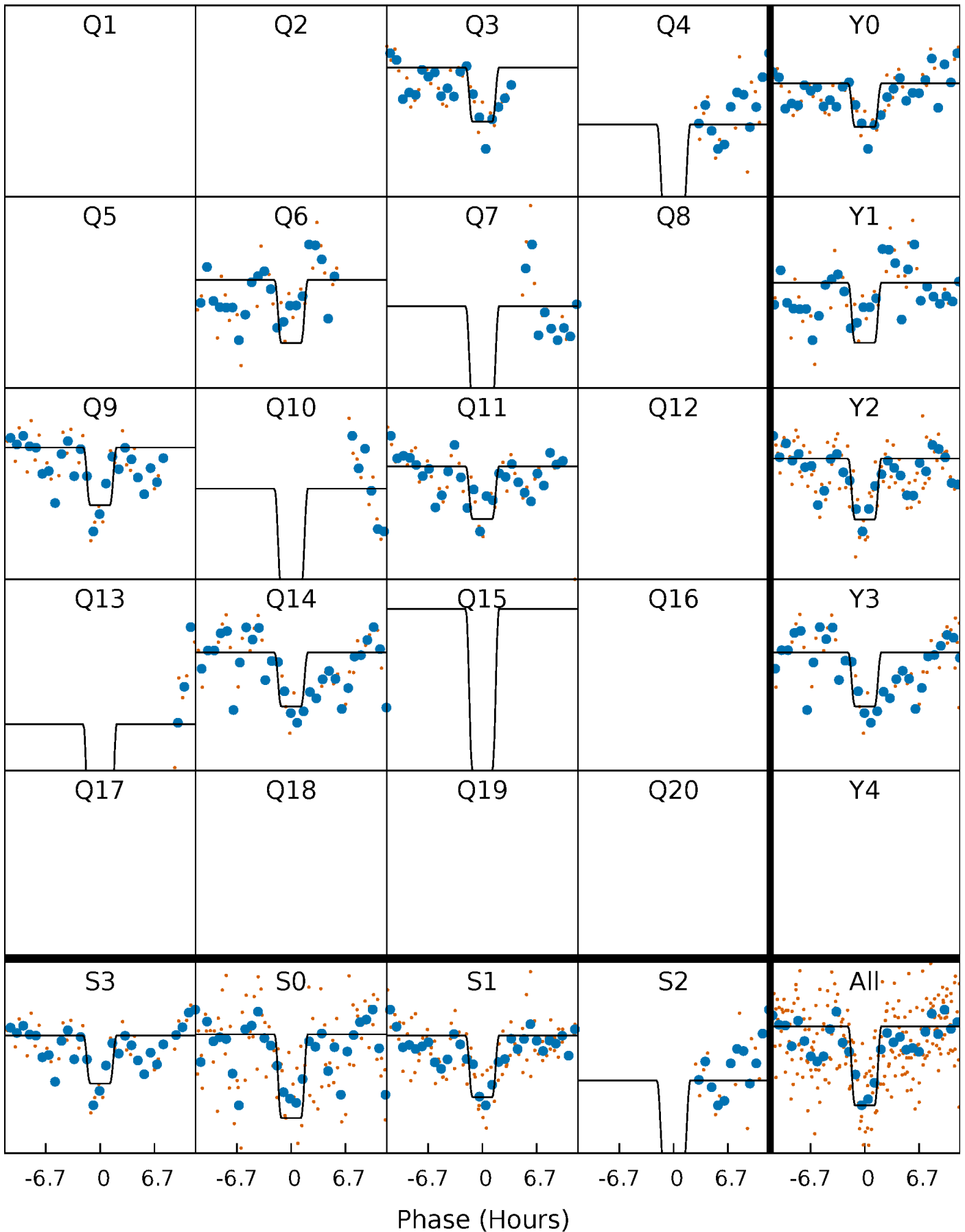
DV Quarter-Phased Transit Curves

TCE 011775507-06 P=128.919665 Days $T_0=165.554748$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

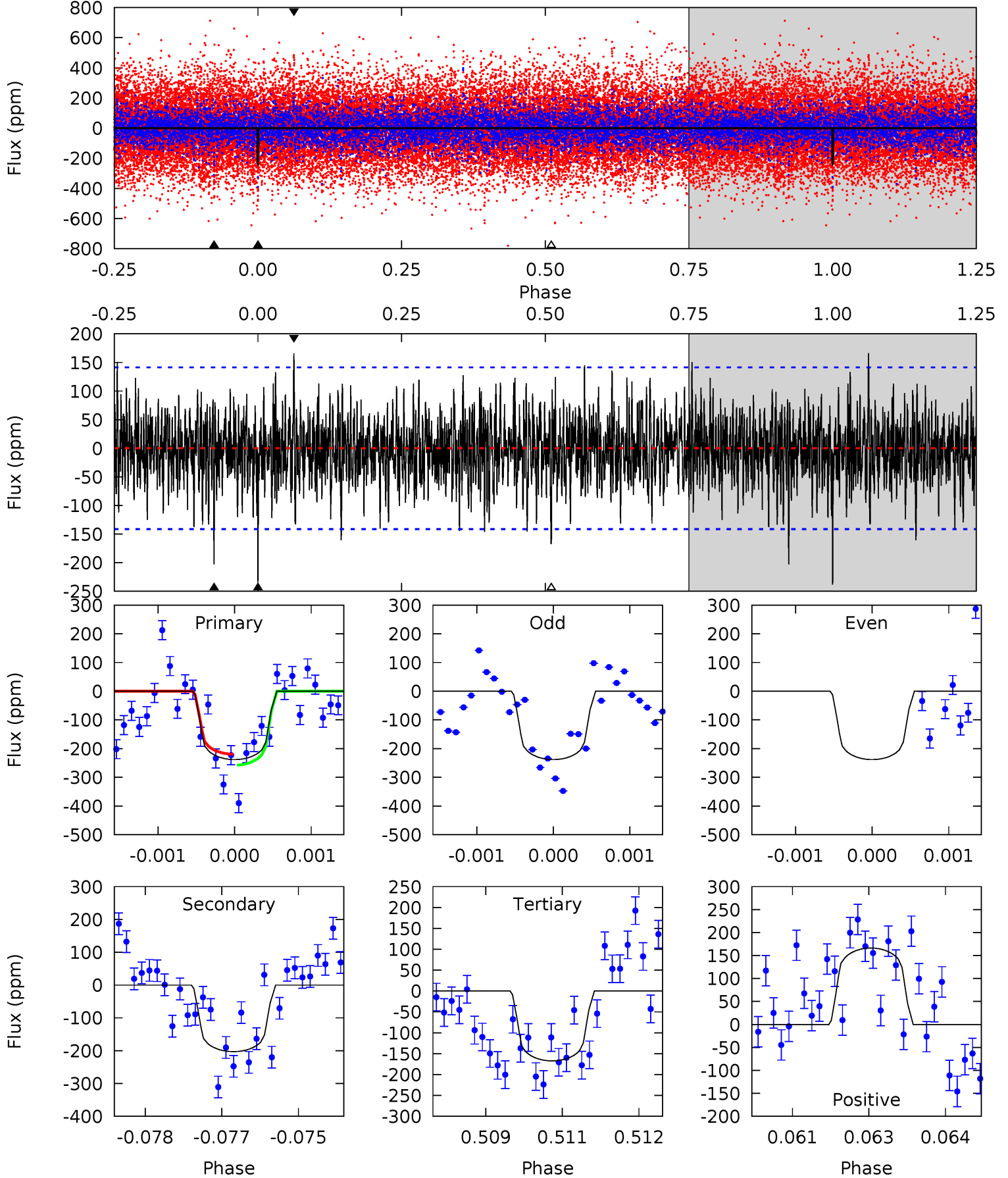
TCE 011775507-06 P=128.921630 Days $T_0=165.549081$ (BKJD)



DV Model-Shift Uniqueness Test

011775507-06, $P = 128.919665$ Days, $E = 36.635083$ Days

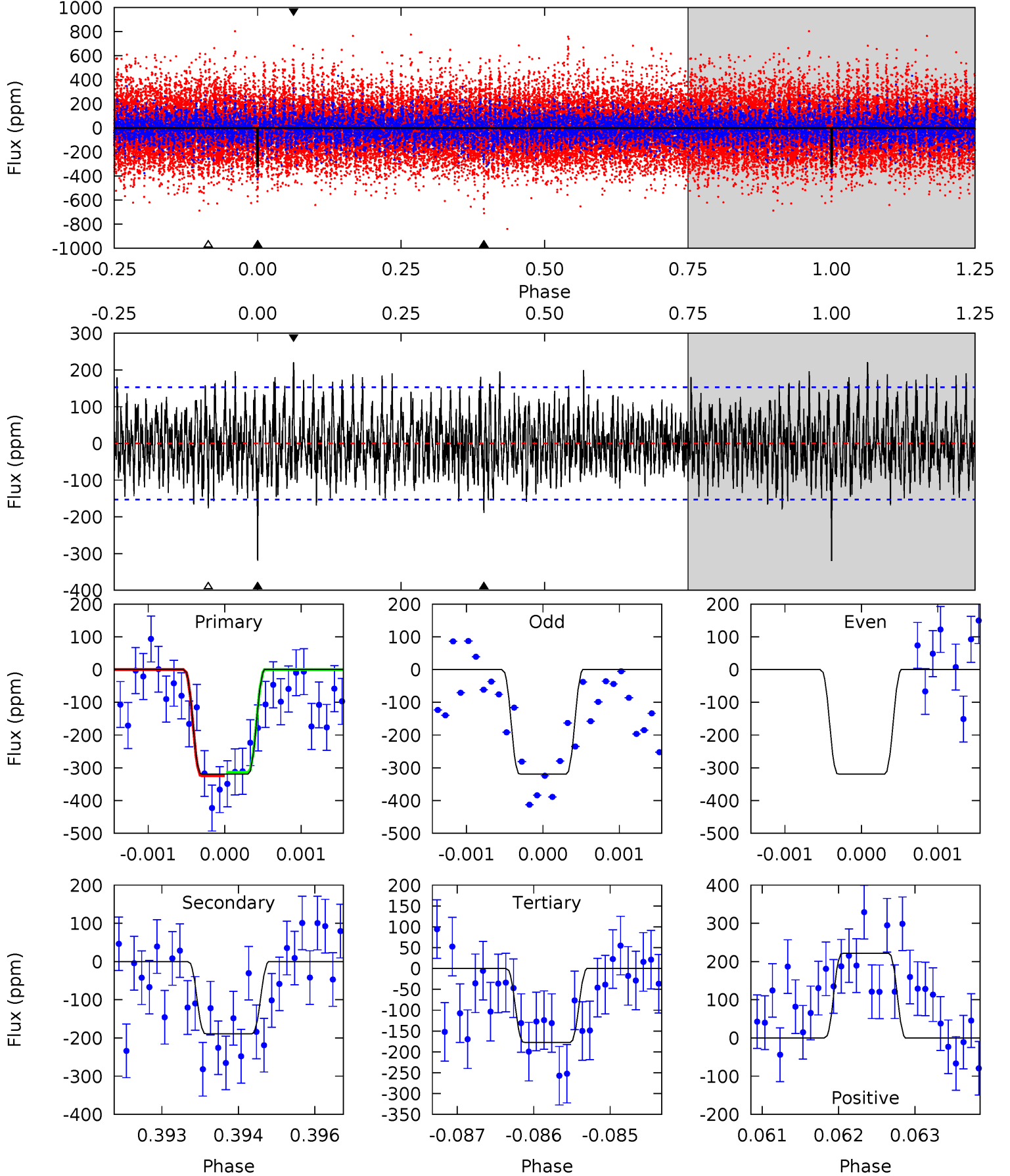
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.11	7.76	6.40	6.36	5.41	3.22	1.82	2.71	2.75	1.36	1.40	0	0.96	0.41	0.73



Alt Model-Shift Uniqueness Test

011775507-06, $P = 128.921630$ Days, $E = 36.627451$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.68	6.26	7.83	5.41	3.22	2.28	5.03	3.46	0.42	-1.14	0	0.89	0.41	0.19



Stellar Parameters For KIC 011775507

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6528^{+183}_{-252}	$4.257^{+0.153}_{-0.170}$	$-0.440^{+0.250}_{-0.300}$	$1.260^{+0.362}_{-0.241}$	$1.046^{+0.160}_{-0.117}$	$0.737^{+0.625}_{-0.364}$
	+3%/-4%	+4%/-4%	+57%/-68%	+29%/-19%	+15%/-11%	+85%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011775507-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-203 ± 26	$2.61^{+1.86}_{-1.63}$	631^{+43}_{-40}	5670^{+4016}_{-1191}	4254^{+25072}_{-2875}
Alt.	-189 ± 28	$2.98^{+2.13}_{-1.71}$	633^{+47}_{-41}	5284^{+2797}_{-1068}	3057^{+13928}_{-2063}

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

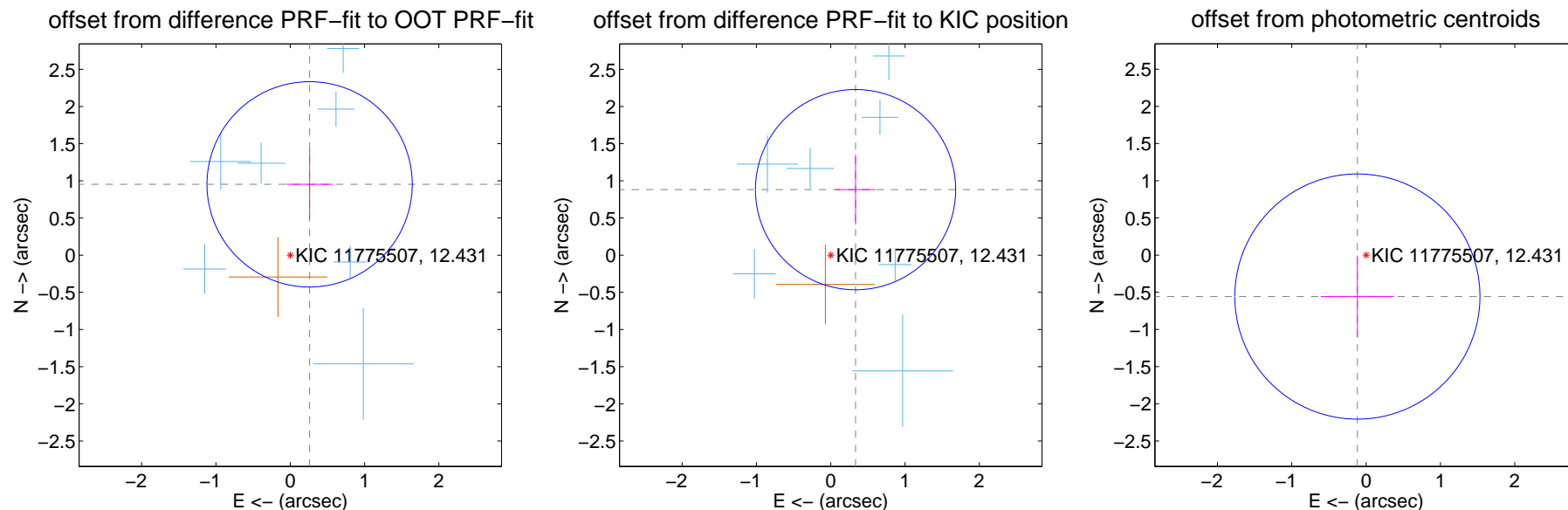
DV Centroid Data

Supplemental centroid analysis for 011775507-06. Kepler magnitude: 12.43. Transit SNR 7.69

There are 7 quarters with good PRF difference image offsets

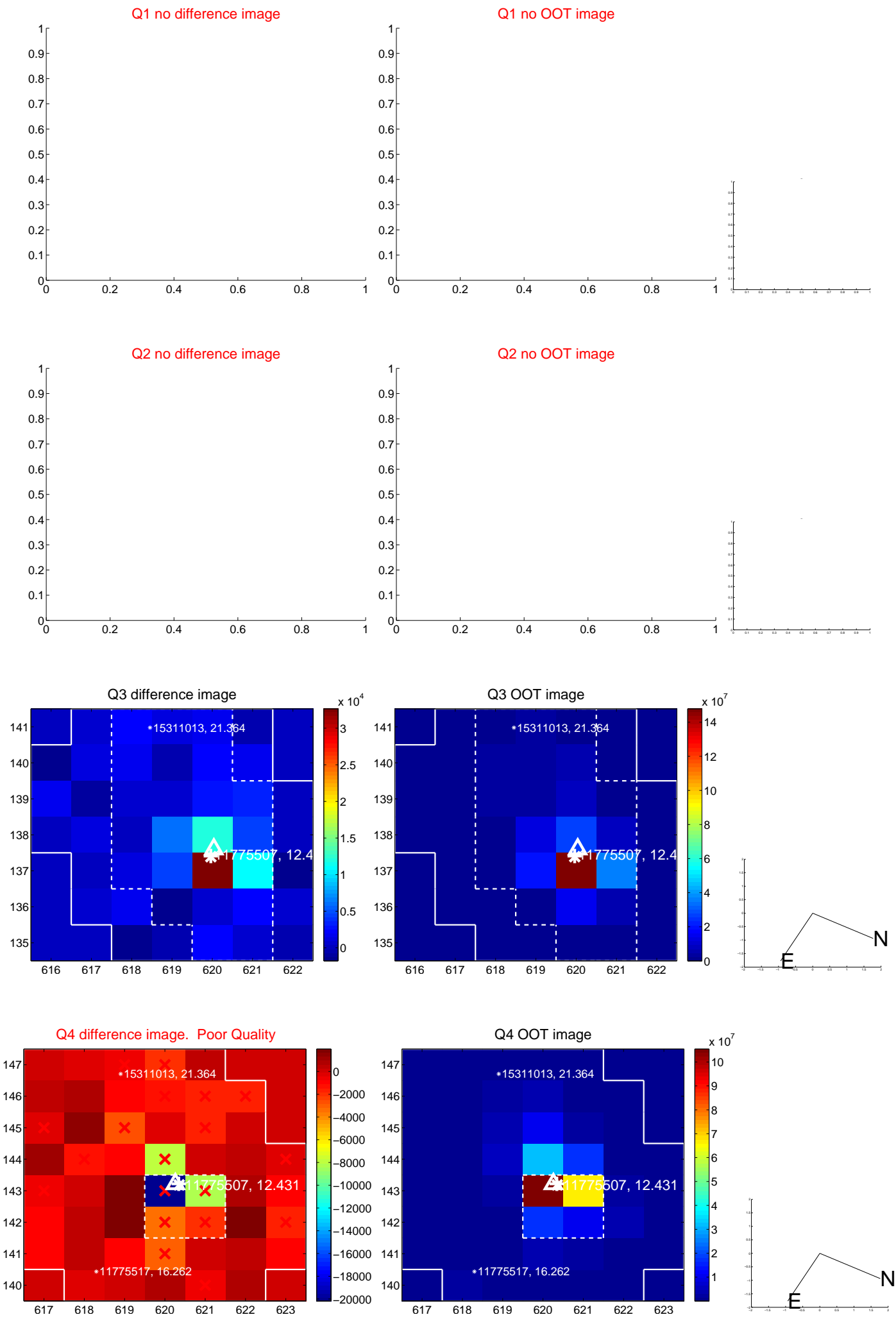
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.988 ± 0.460	2.15	-0.260 ± 0.313	0.953 ± 0.469
PRF-fit source offset from KIC position	0.943 ± 0.449	2.10	-0.334 ± 0.271	0.881 ± 0.470
photometric centroid source offset	0.57 ± 0.55	1.04	0.12 ± 0.49	-0.56 ± 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.

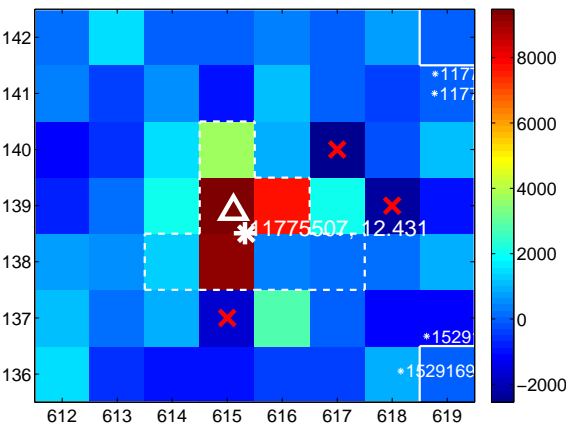
Q5 no difference image



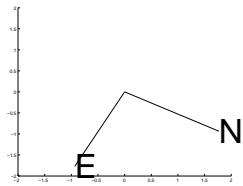
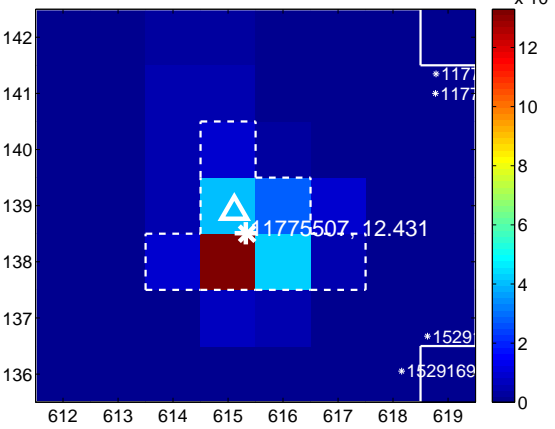
Q5 no OOT image



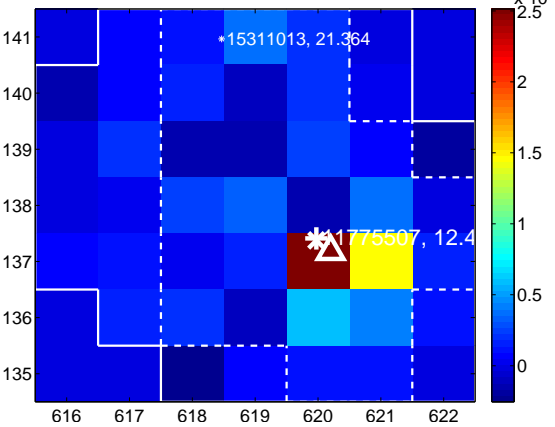
Q6 difference image



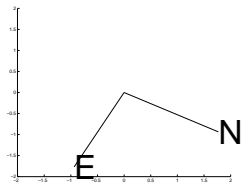
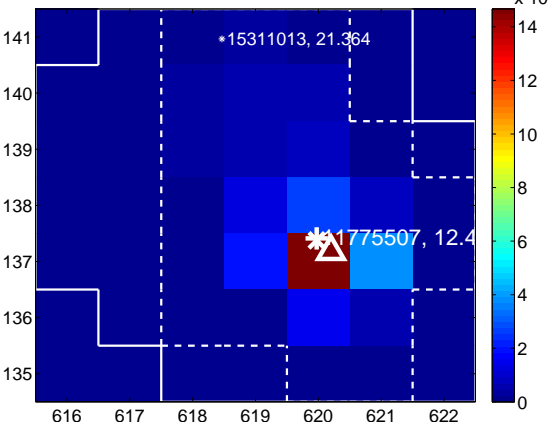
Q6 OOT image



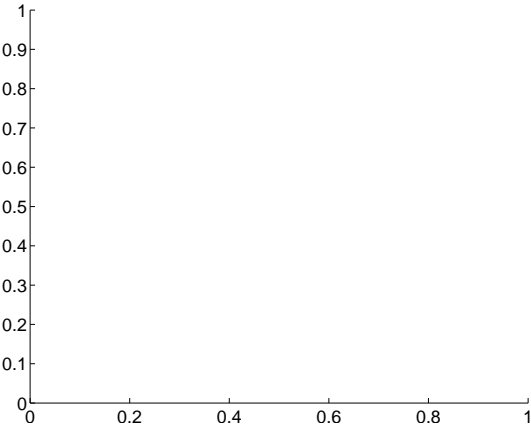
Q7 difference image



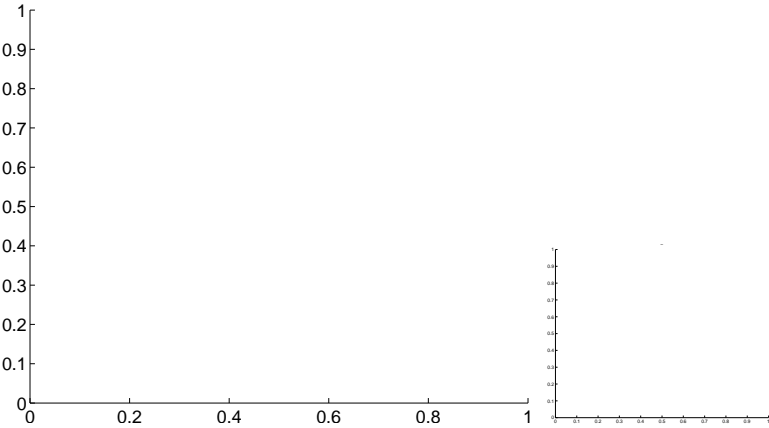
Q7 OOT image



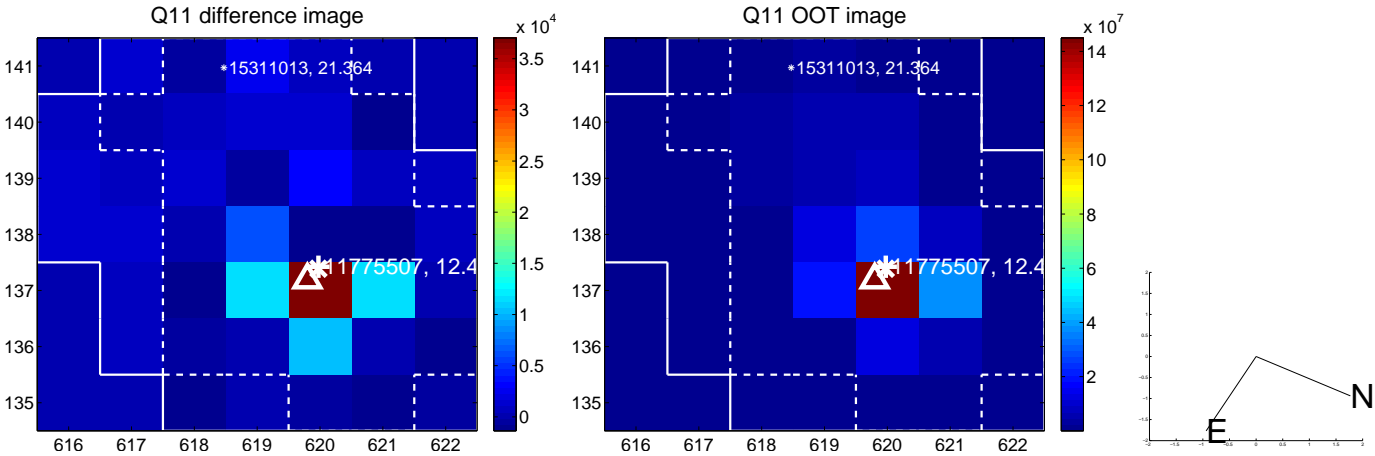
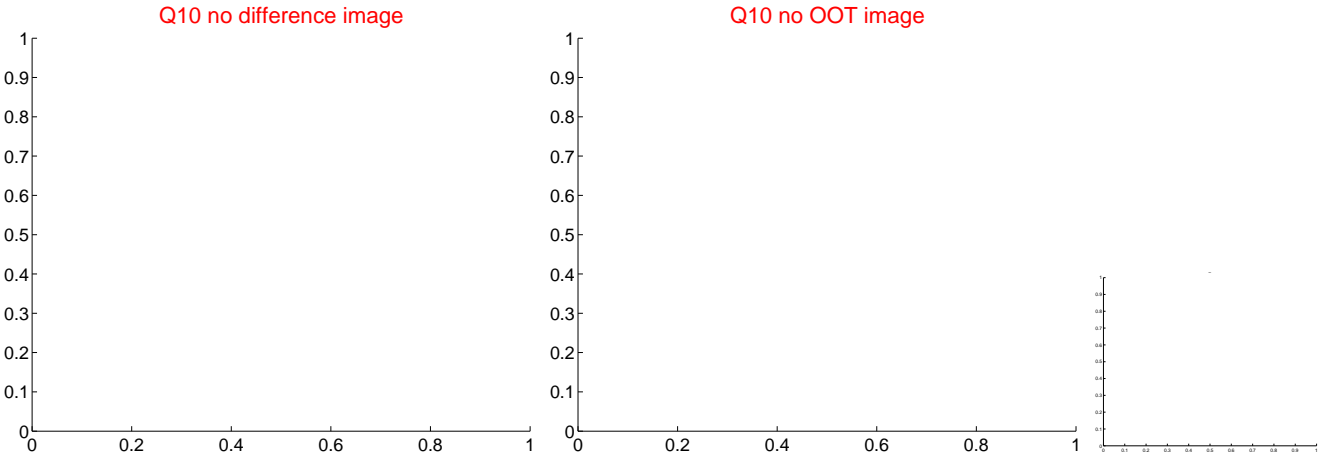
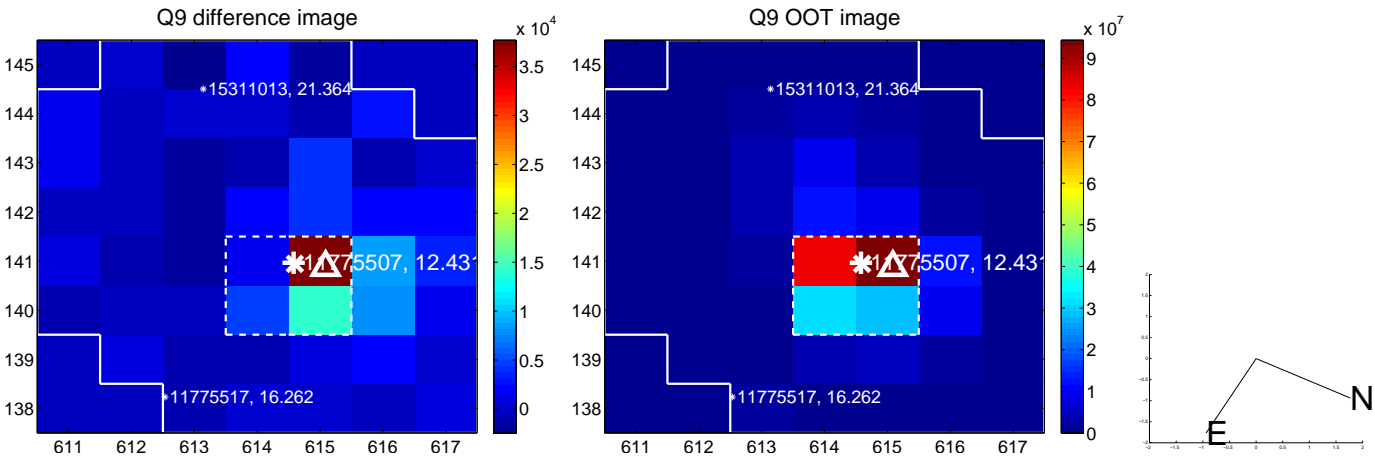
Q8 no difference image



Q8 no OOT image



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



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

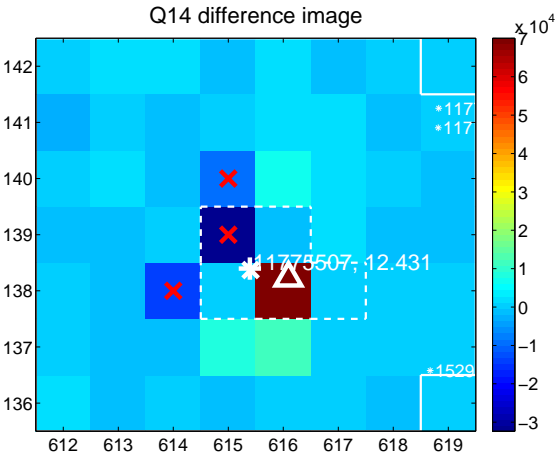
Q13 no difference image



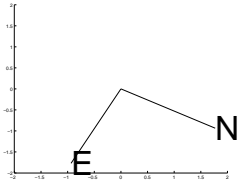
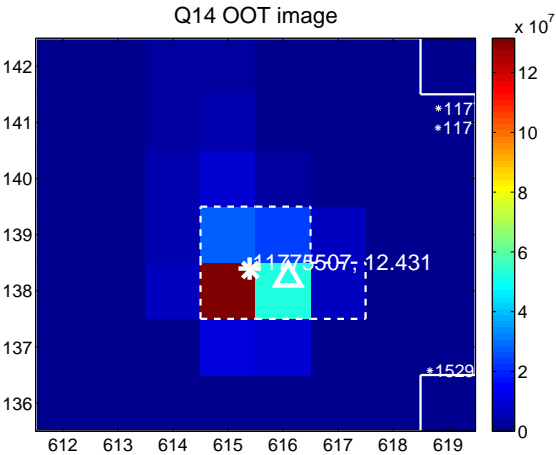
Q13 no OOT image



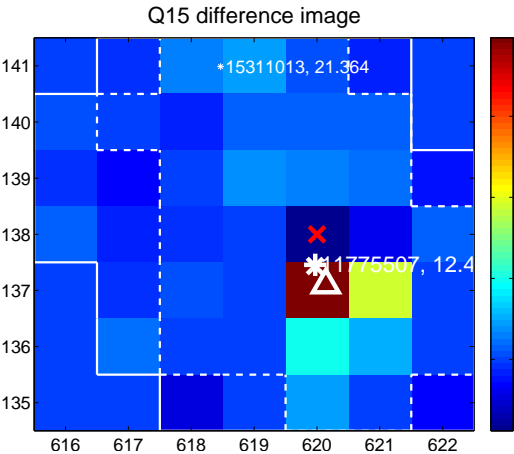
Q14 difference image



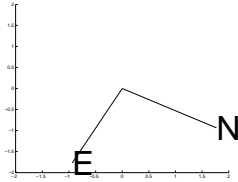
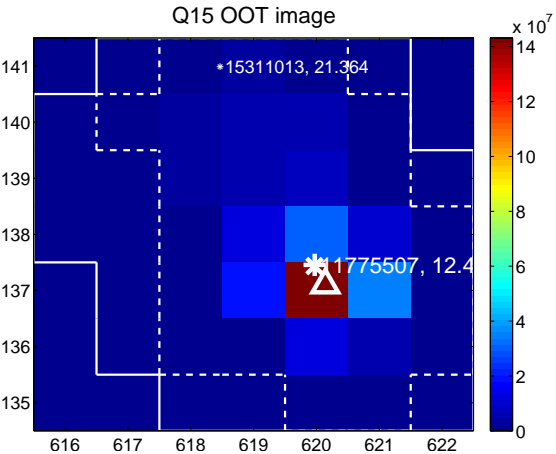
Q14 OOT image



Q15 difference image



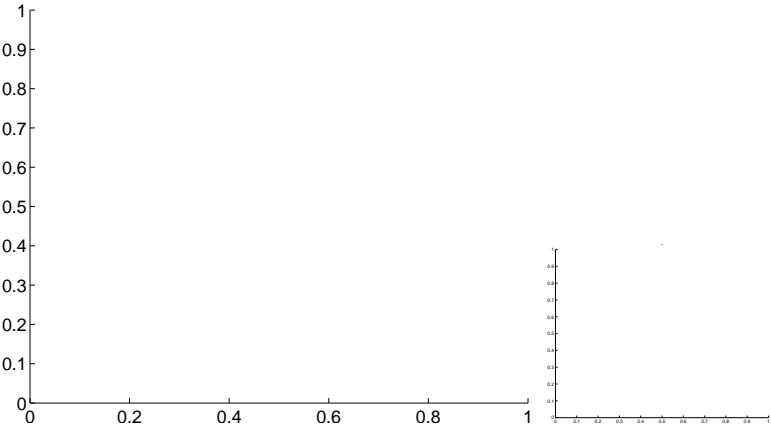
Q15 OOT image



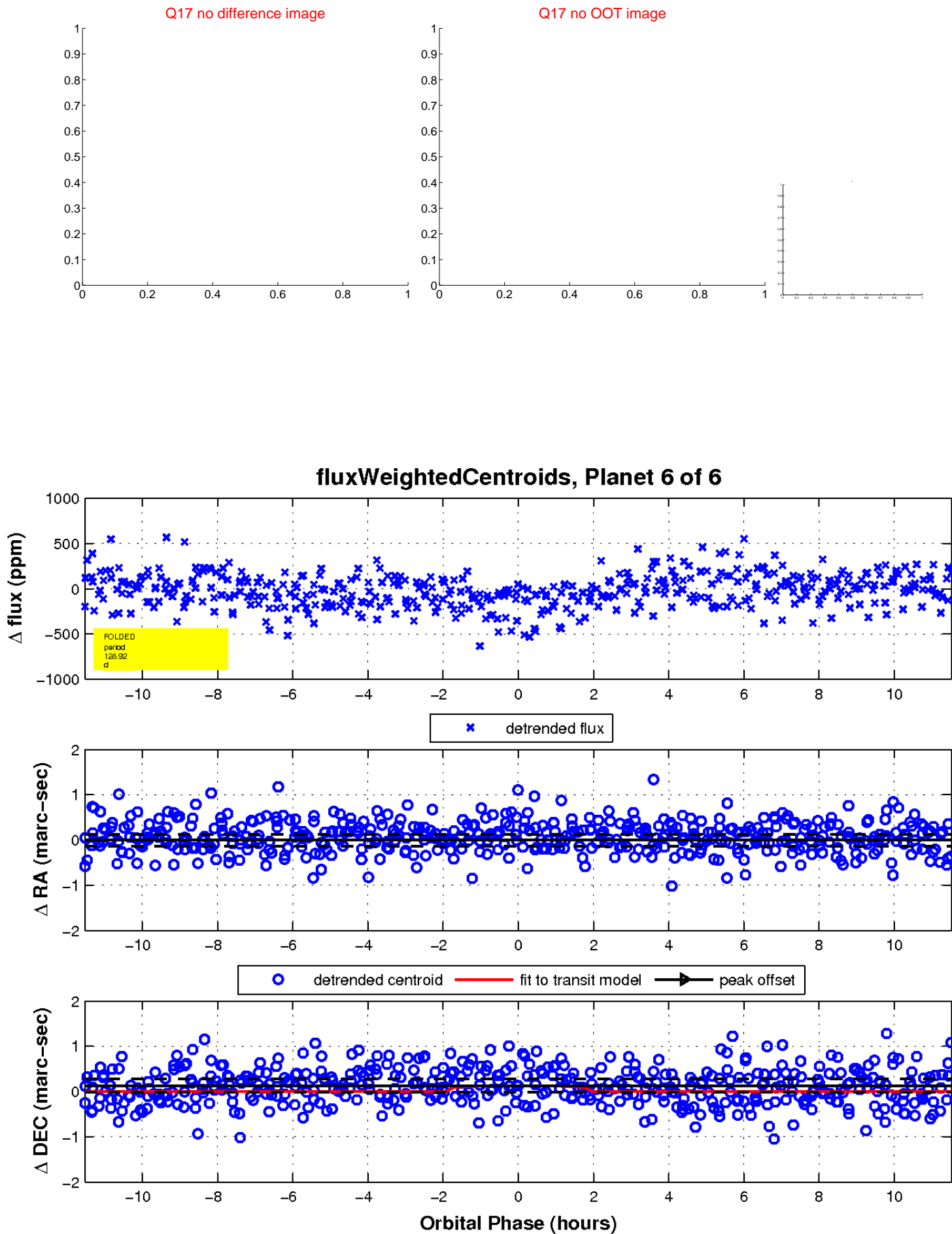
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

