

KIC 008957954

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})
008957954-01	OBS	6189.01	2.179926	132.128983	252088.2	4.884	19929.9	12675.0	0.97	6106	60.11	1042.28
008957954-02	OBS	No	232.118529	171.266105	708.3	1.893	15.7	3.2	0.97	6106	2.81	2.06
008957954-03	OBS	No	65.363913	139.006705	531.1	6.000	10.6	-1.0	0.97	6106	2.23	11.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008957954-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
008957954-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008957954-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS—HALO_GHOST

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.

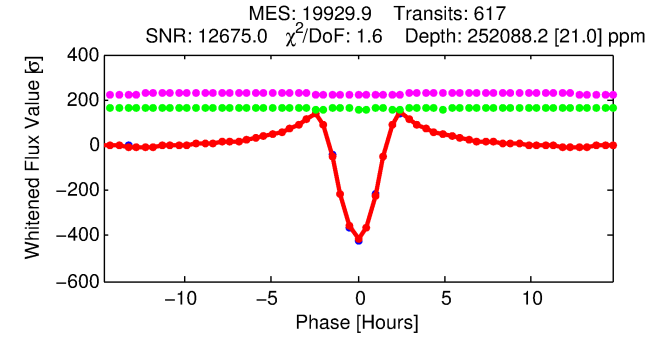
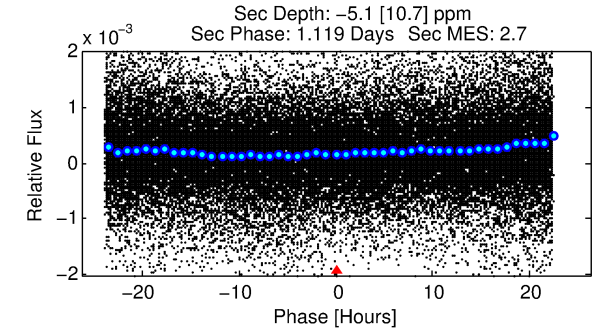
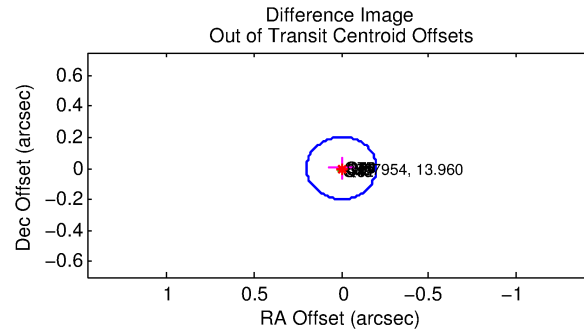
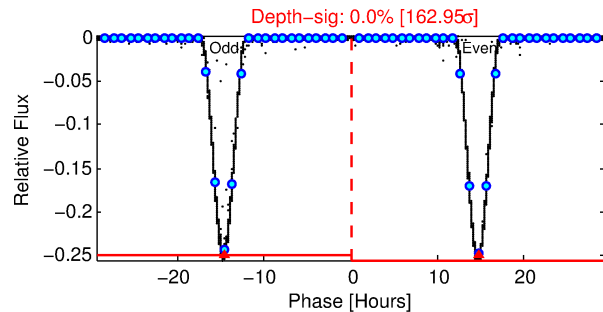
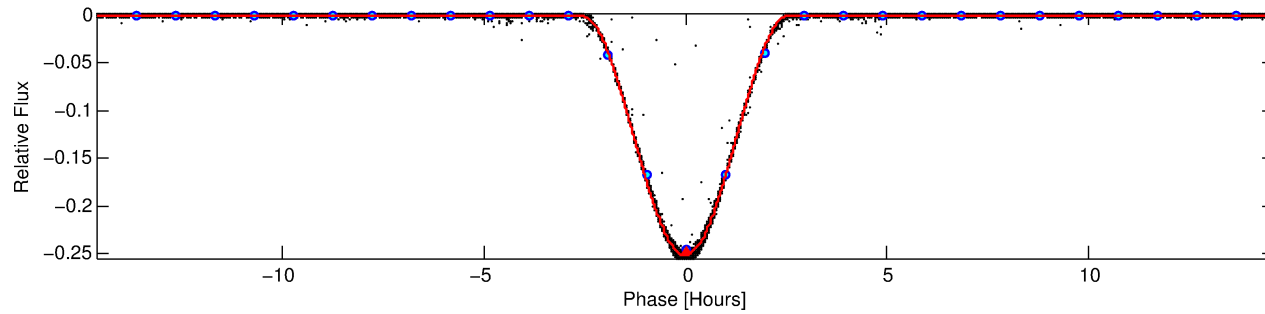
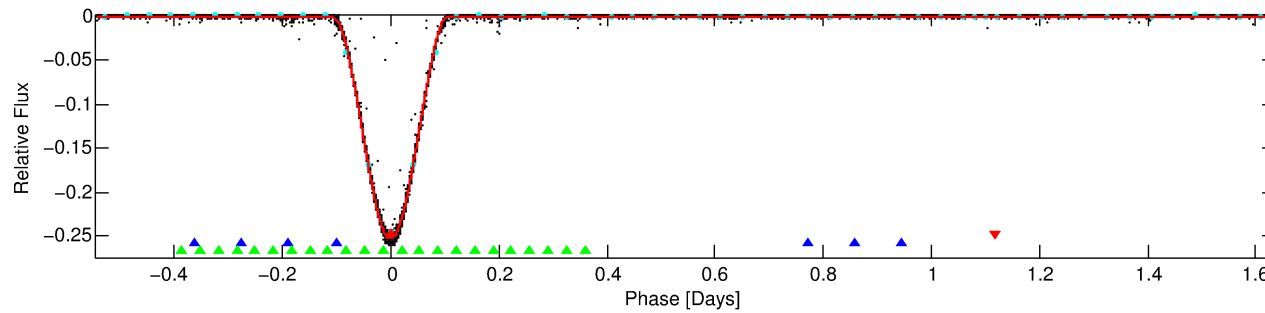
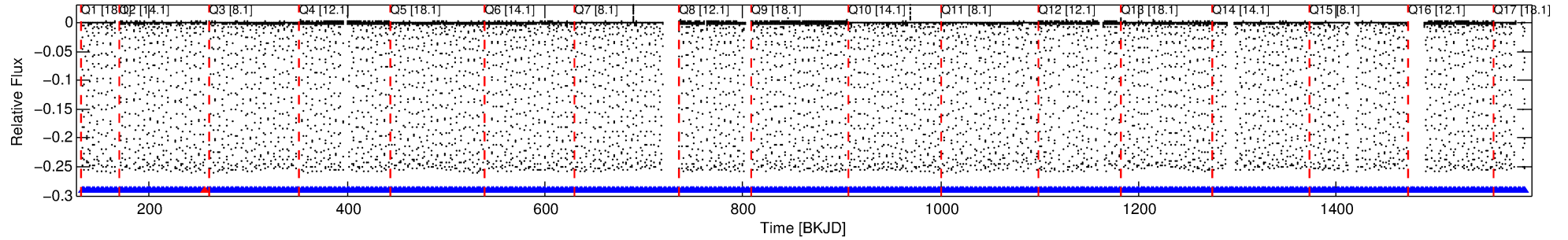
Ephemeris Match Information For 008957954-01

No Significant Match Found

DV One-Page Summary

KIC: 8957954 Candidate: 1 of 3 Period: 2.180 d
KOI: K06189.01 Corr: 0.999

Kp: 13.96 R*: 0.97 Rs Teff: 6106.0 K Logg: 4.49 Fe/H: -0.160



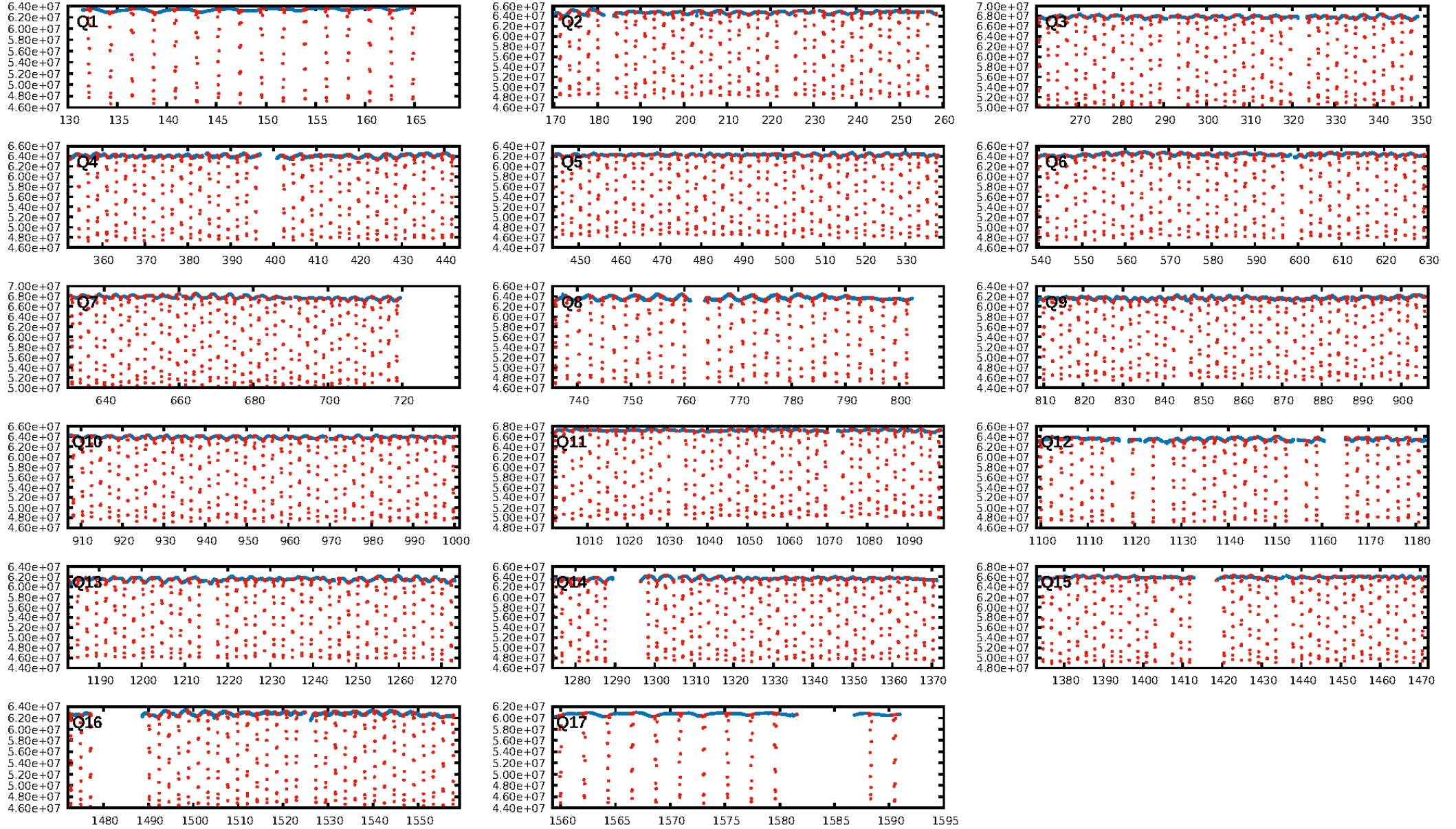
DV Fit Results:

Period = 2.17993 [0.00000] d
Epoch = 132.1290 [0.0000] BKJD
Rp/R* = 0.5702 [0.0056]
a/R* = 4.91 [0.01]
b = 0.70 [0.01]
Seff = 1042.28 [454.99]
Teq = 1449 [158] K
Rp = 60.11 [20.17] Re
a = 0.0334 [0.0095] AU
Ag = N/A
Teffp = N/A

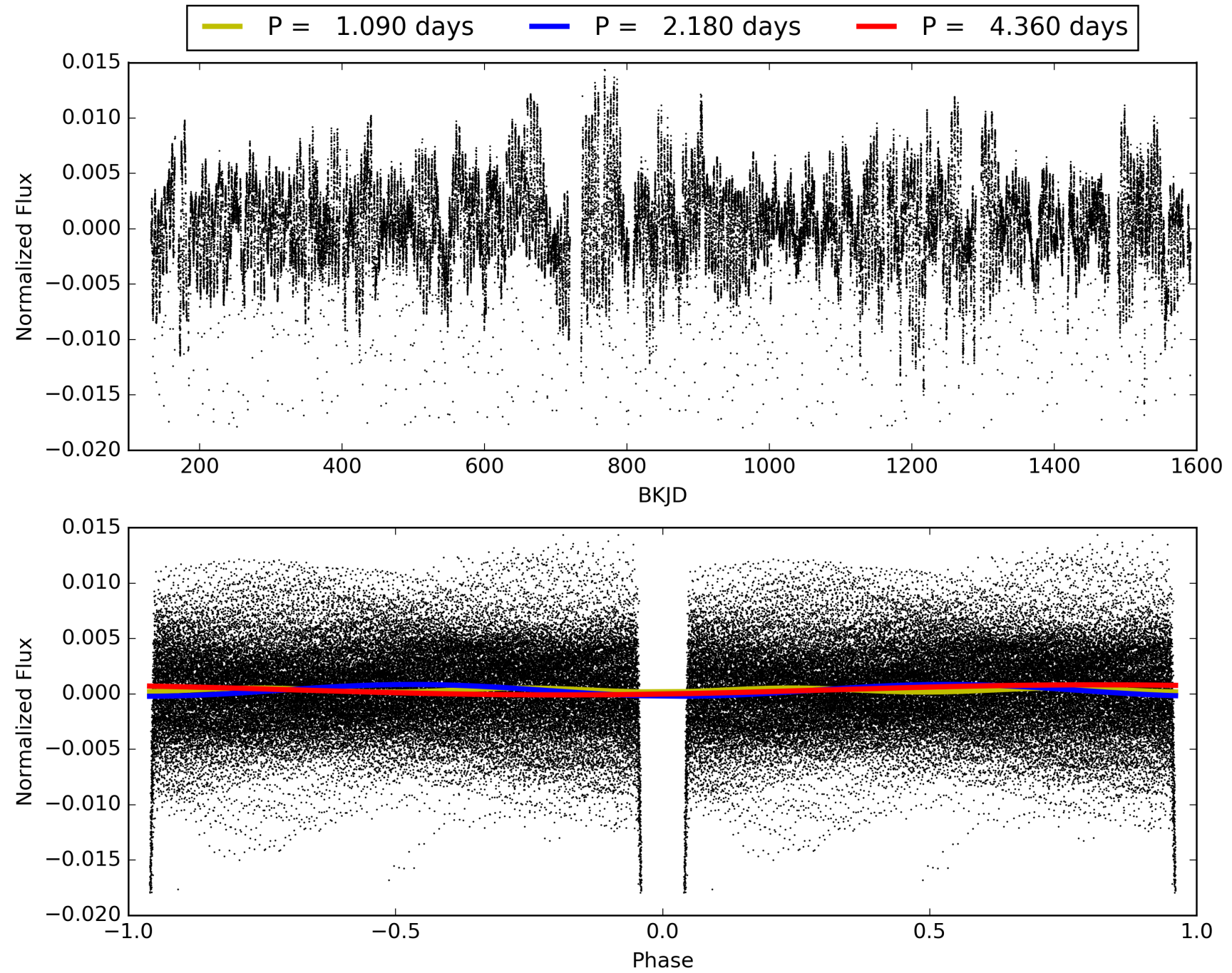
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [196.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [588/589]
GhostDiagnostic-chr: 2.352
Centroid-sig: 0.0%
Centroid-so: 0.153 arcsec [488.82σ]
OotOffset-rm: 0.002 arcsec [0.04σ]
KicOffset-rm: 0.075 arcsec [1.11σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008957954-01, PDC Light Curves

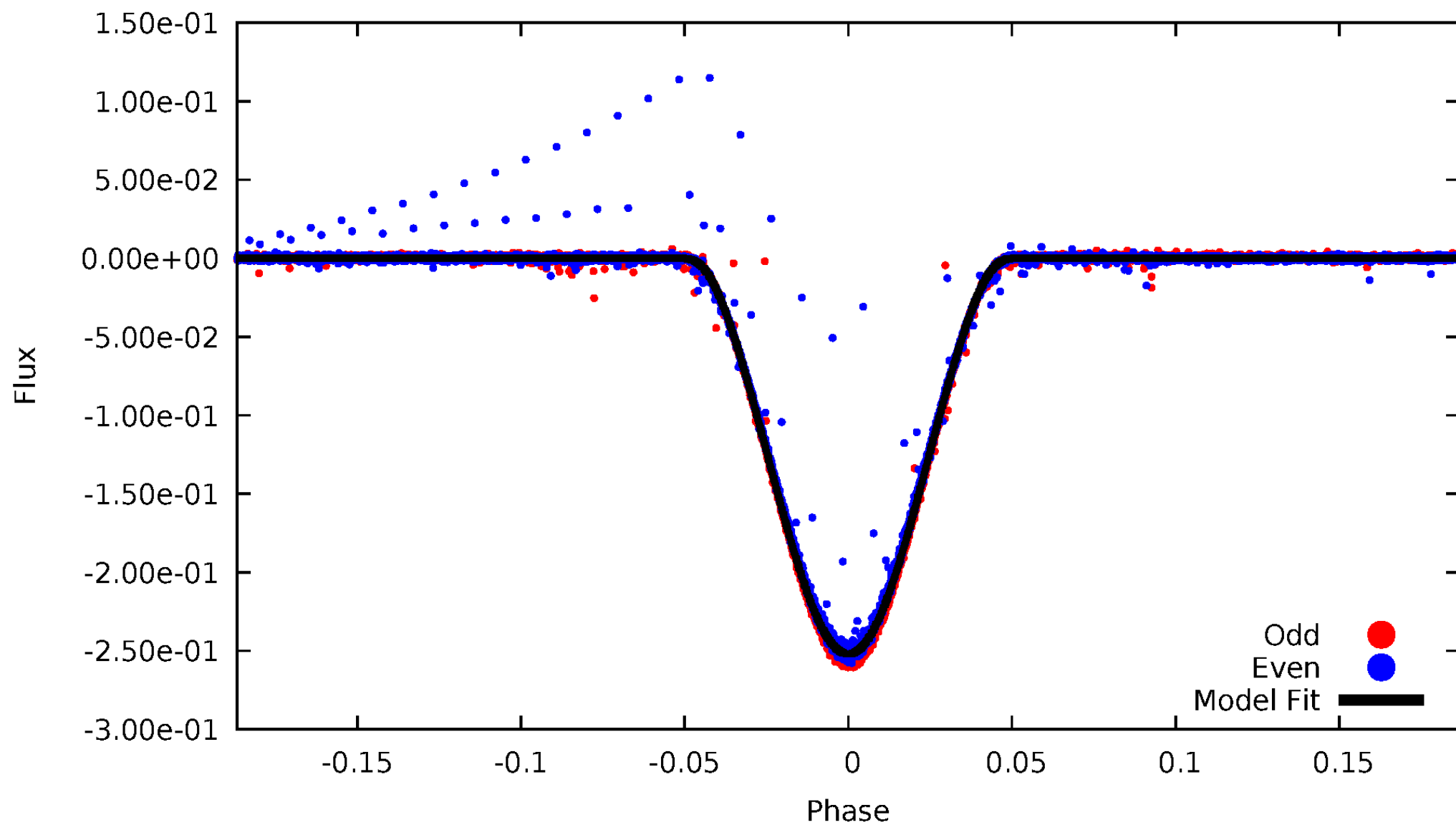


TCE 008957954-01



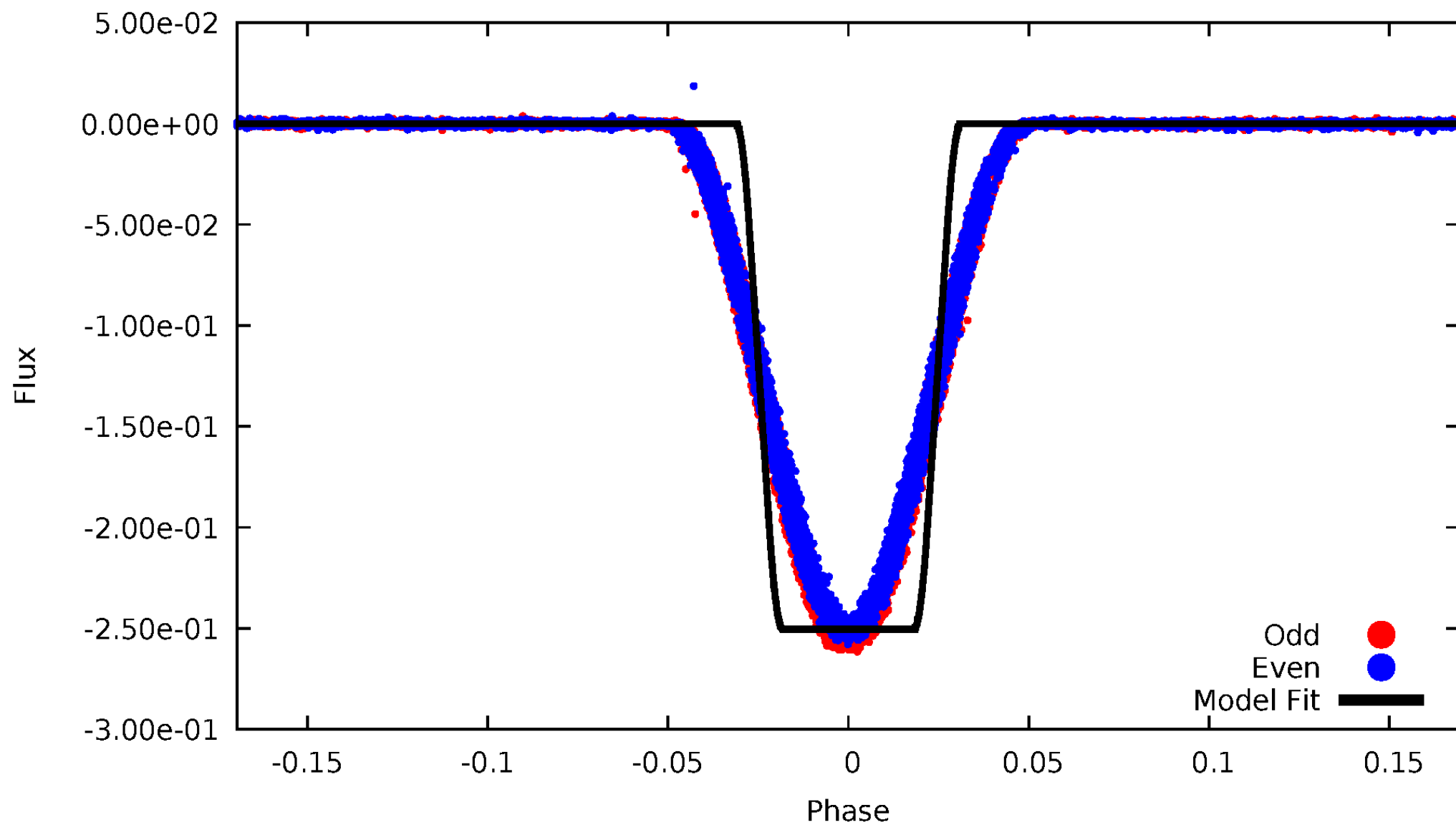
DV Odd/Even

TCE 008957954-01



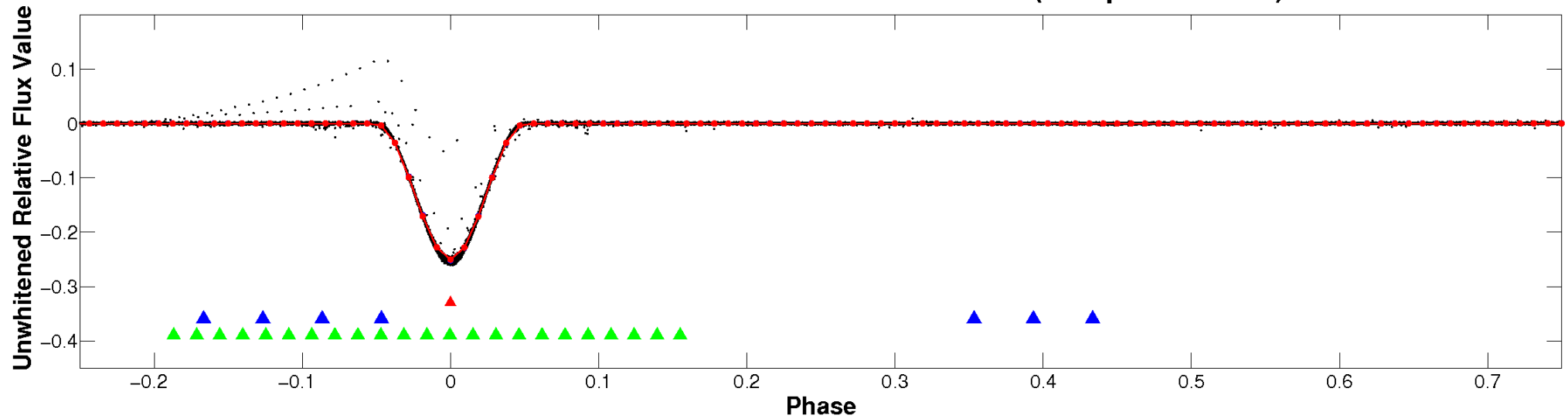
ALT Odd/Even

TCE 008957954-01



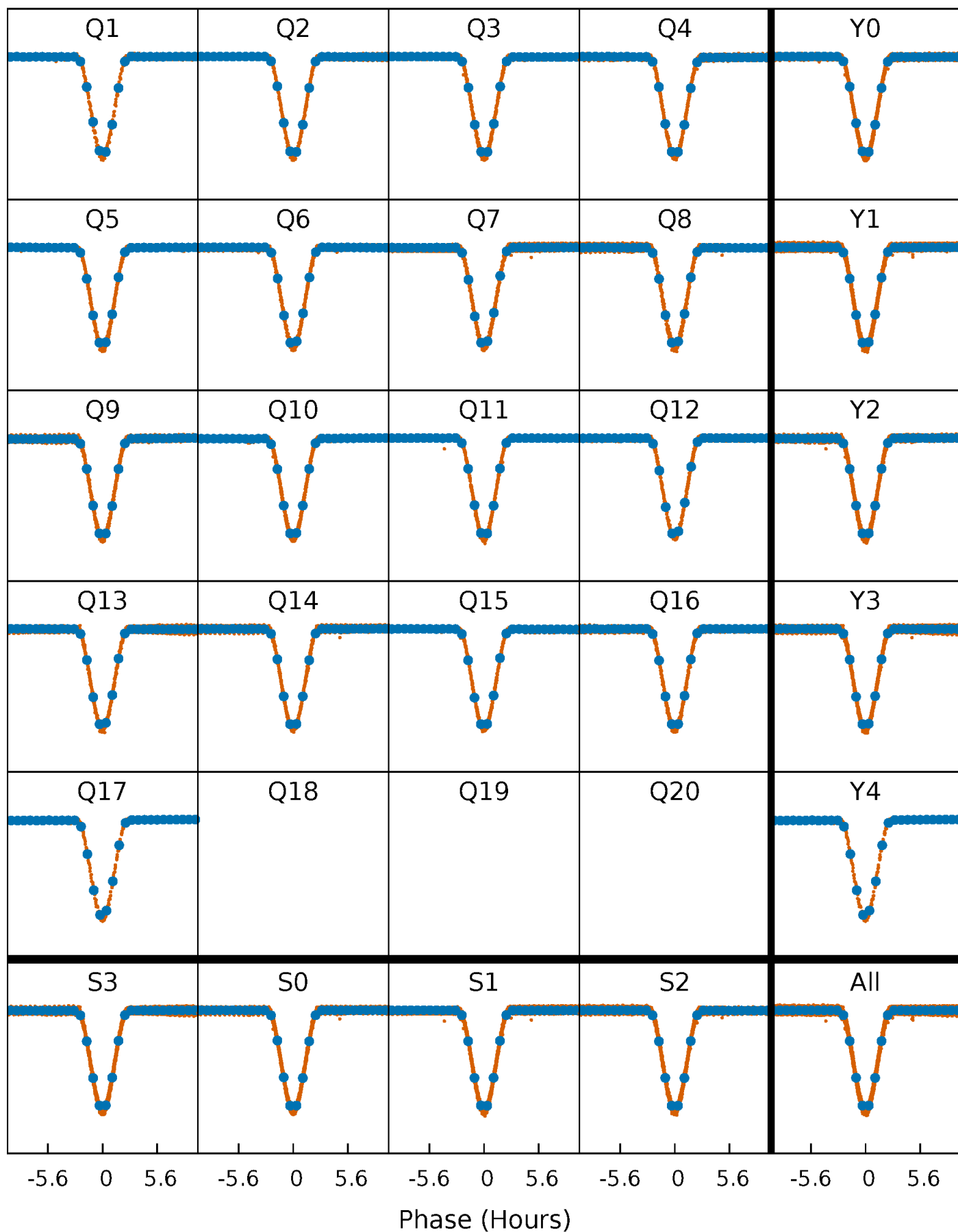
Non-Whitened Vs. Whitened Light Curve

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



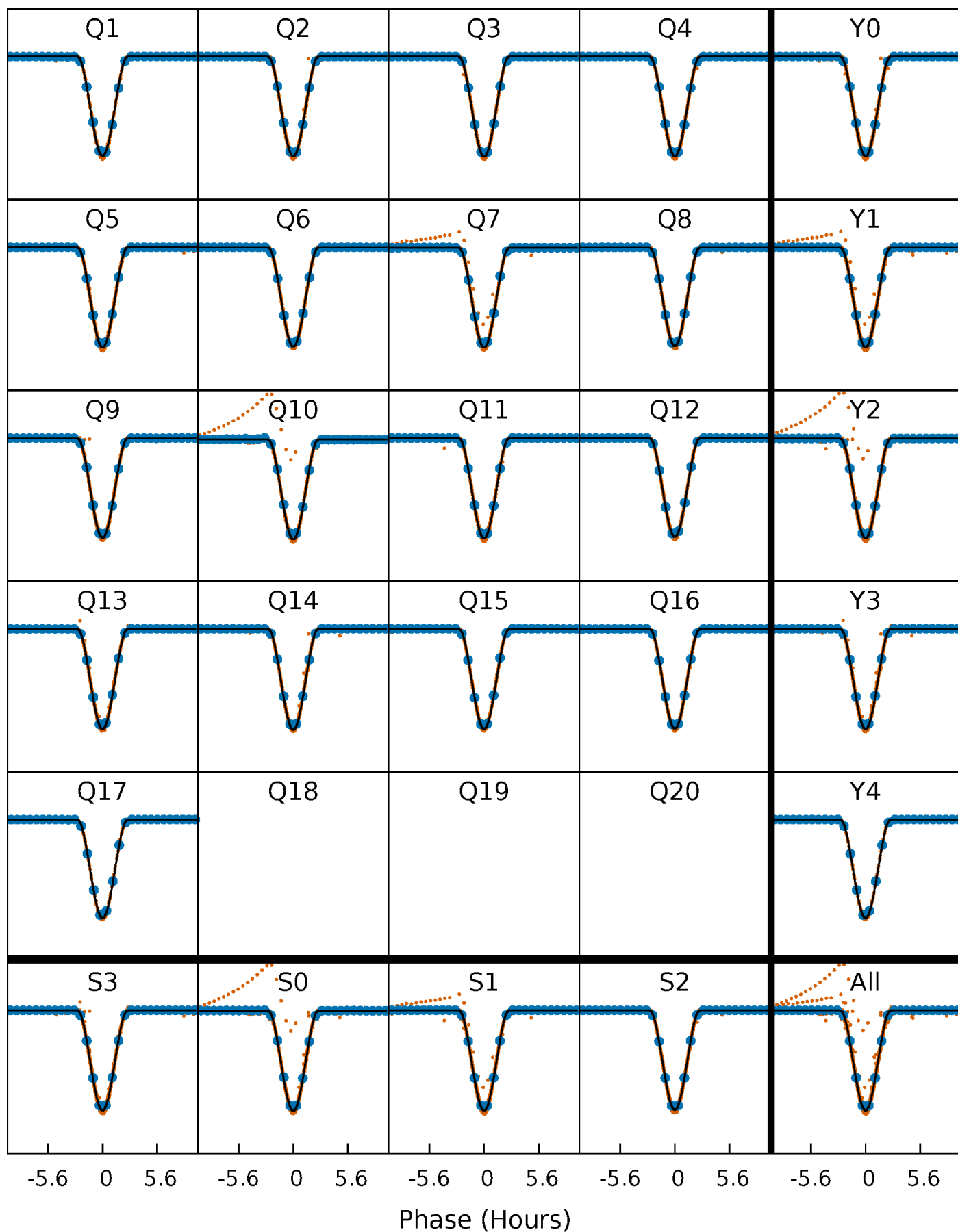
PDC Quarter-Phased Transit Curves

TCE 008957954-01 P= 2.179926 Days $T_0=132.128983$ (BKJD)



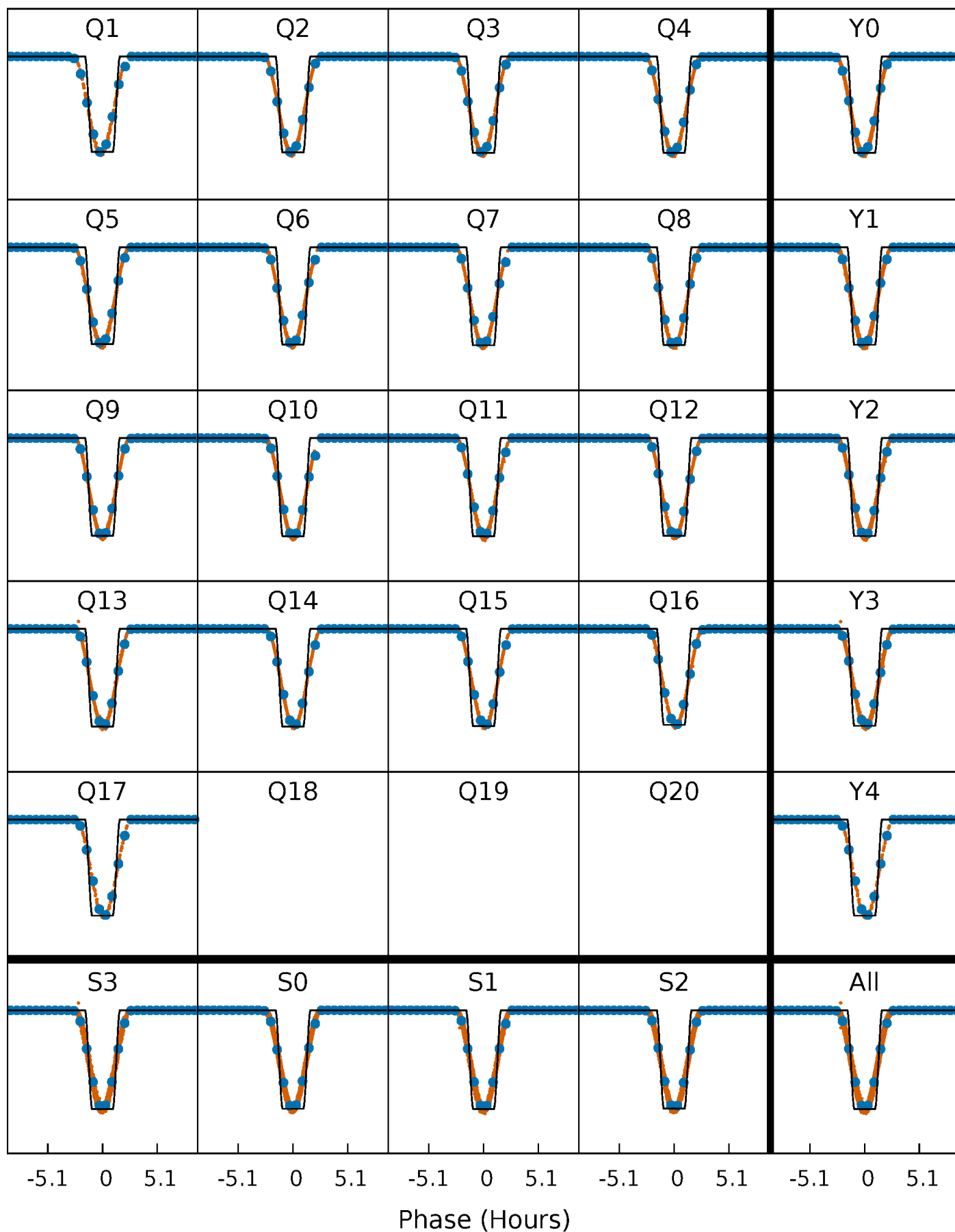
DV Quarter-Phased Transit Curves

TCE 008957954-01 P= 2.179926 Days $T_0=132.128983$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

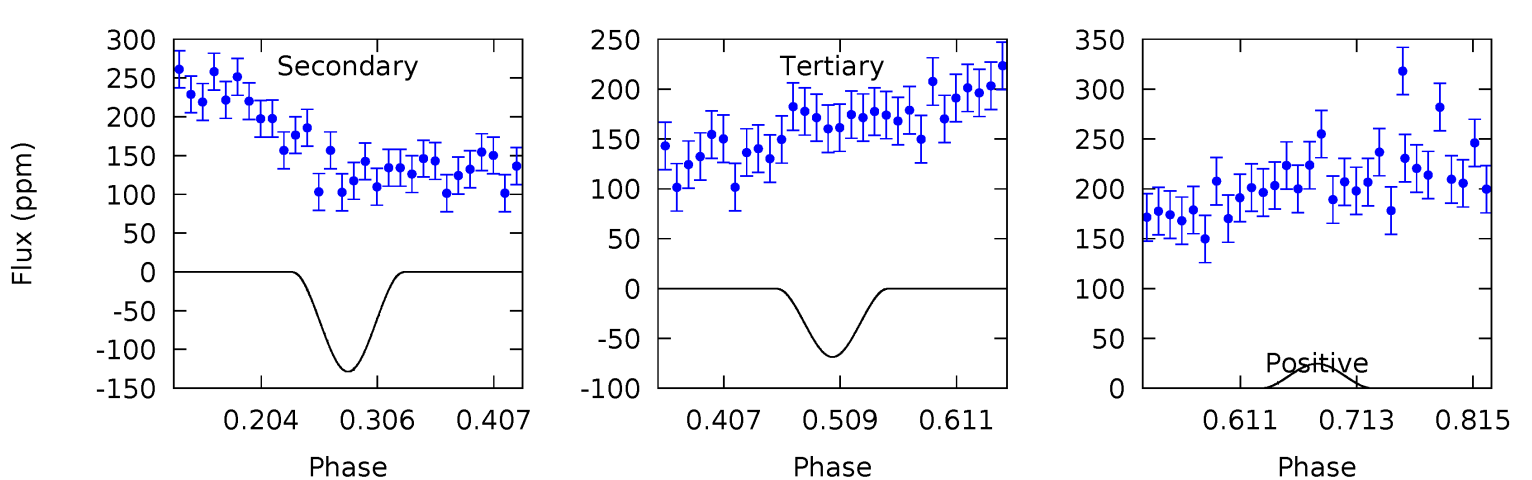
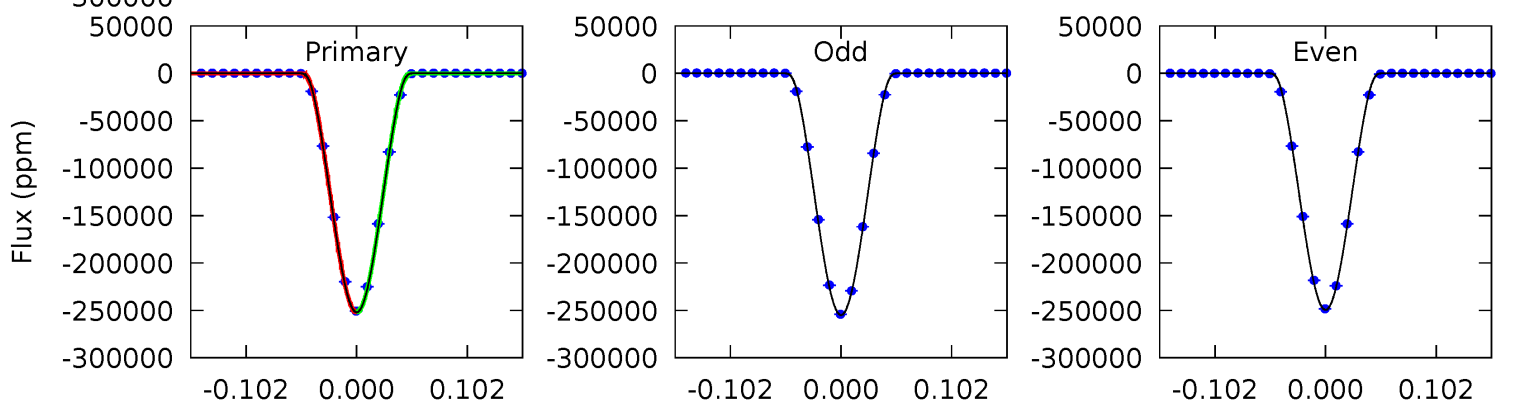
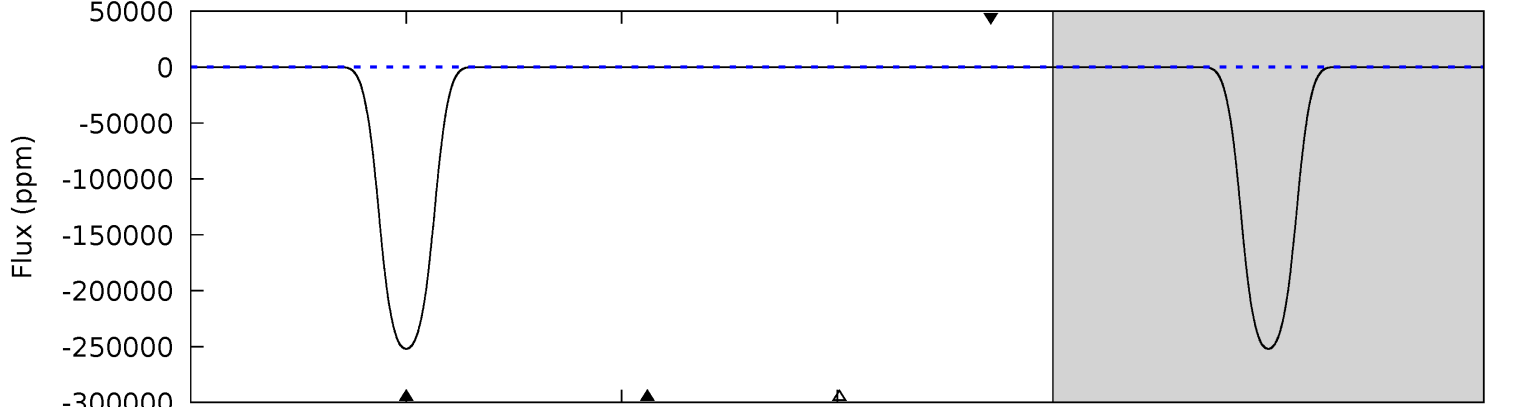
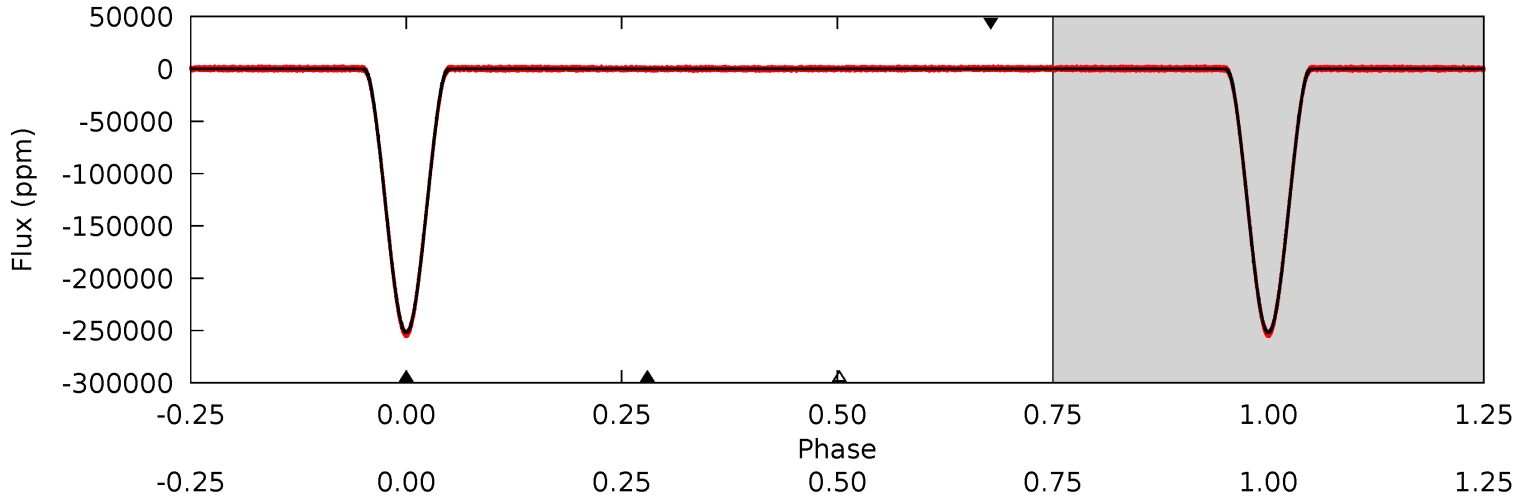
TCE 008957954-01 P= 2.179908 Days $T_0=132.135030$ (BKJD)



DV Model-Shift Uniqueness Test

008957954-01, P = 2.179926 Days, E = 129.949057 Days

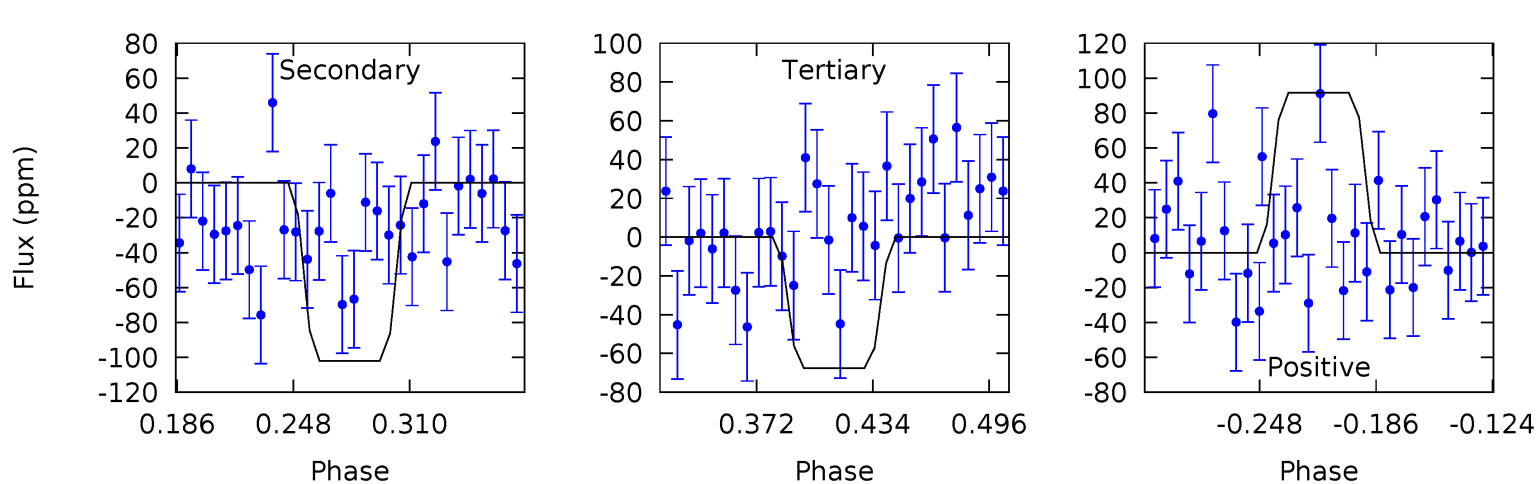
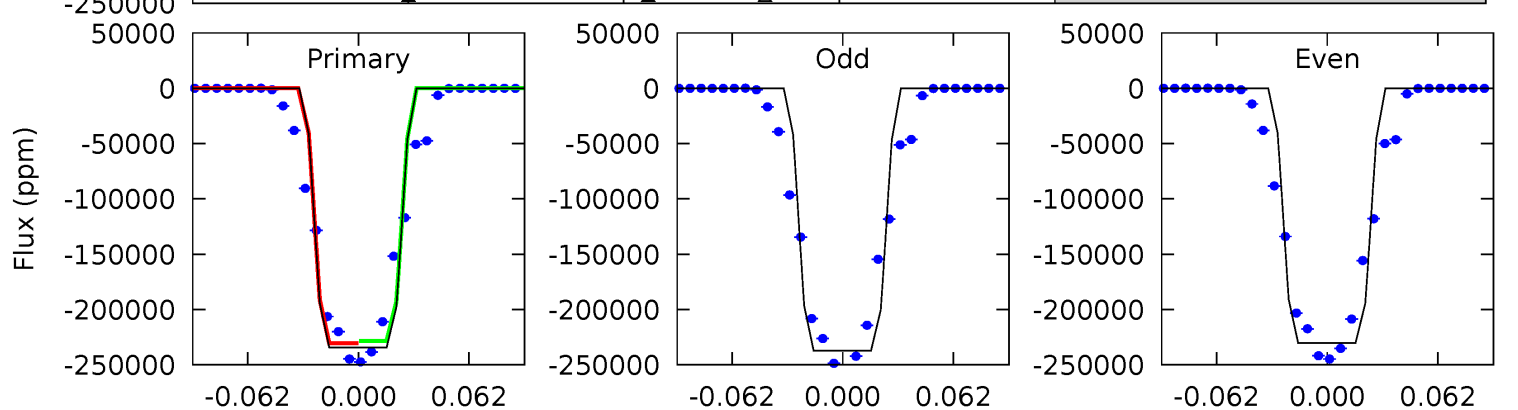
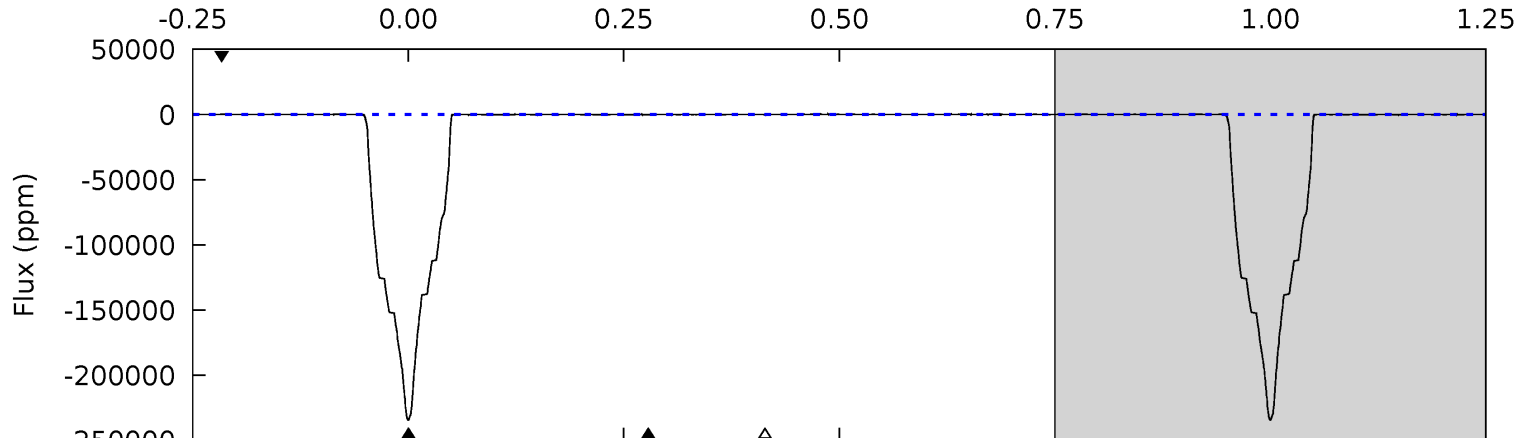
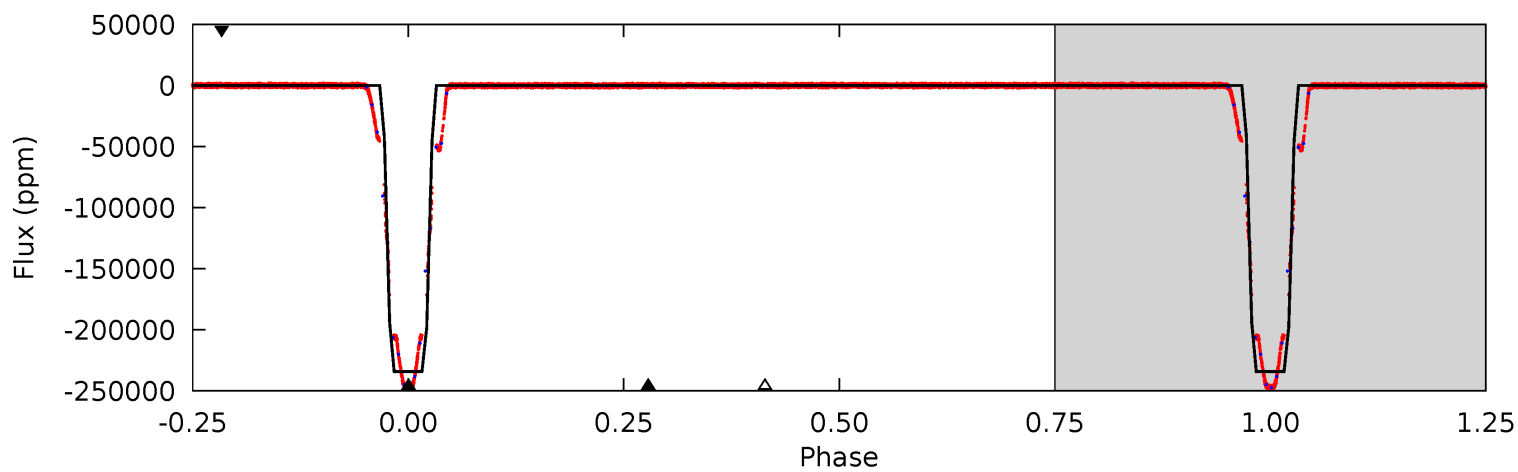
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26930	13.8	7.34	2.62	4.56	1.64	5.53	26923	26928	6.41	11.1	315.3	1.00	0.00	0



Alt Model-Shift Uniqueness Test

008957954-01, P = 2.179908 Days, E = 129.955122 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9392	4.09	2.71	3.67	4.66	1.87	1.32	9389	9388	1.38	0.42	140.3	1.00	0.00	0



Stellar Parameters For KIC 008957954

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6106^{+163}_{-199}	$4.487^{+0.054}_{-0.229}$	$-0.160^{+0.300}_{-0.300}$	$0.966^{+0.324}_{-0.101}$	$1.043^{+0.140}_{-0.140}$	$1.631^{+0.461}_{-0.889}$
	+3%/-3%	+1%/-5%	+188%/-188%	+34%/-10%	+13%/-13%	+28%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008957954-01 / KOI 6189.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-129 ± 9	$62.32^{+11.38}_{-5.17}$	2075^{+151}_{-102}	-2520^{+66}_{-96}	$0.020^{+0.004}_{-0.005}$
Alt.	-102 ± 25	$54.71^{+9.31}_{-4.85}$	2076^{+157}_{-98}	-2520^{+61}_{-97}	$0.020^{+0.007}_{-0.006}$

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

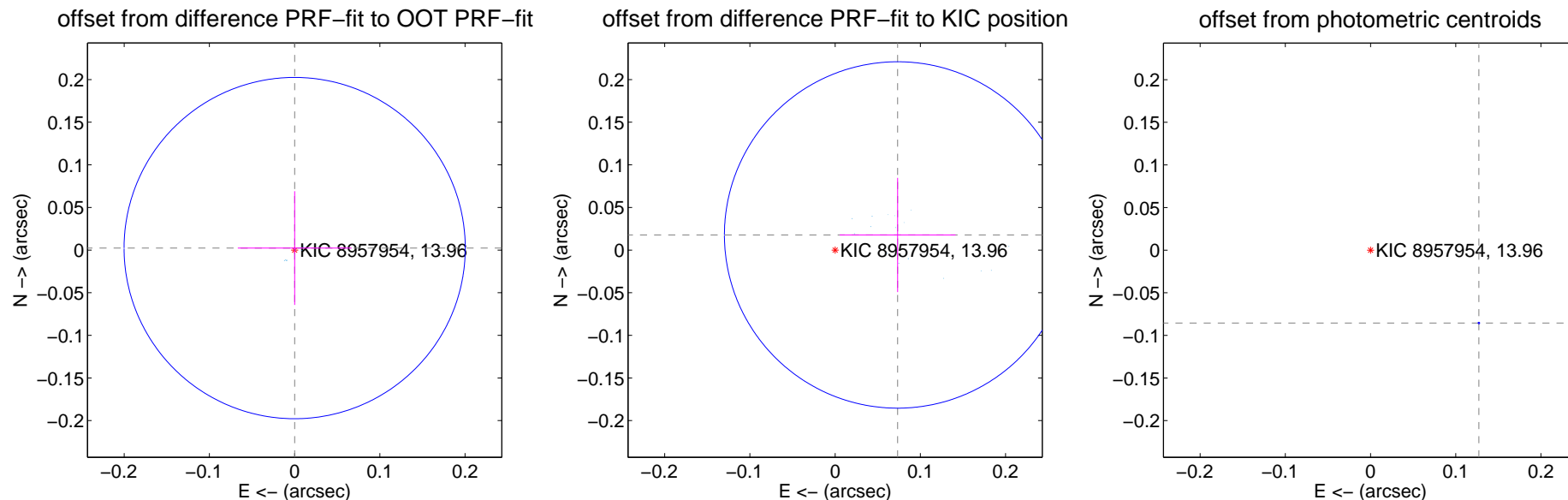
DV Centroid Data

Supplemental centroid analysis for 008957954-01. Kepler magnitude: 13.96. Transit SNR 12675.02

There are 17 quarters with good PRF difference image offsets

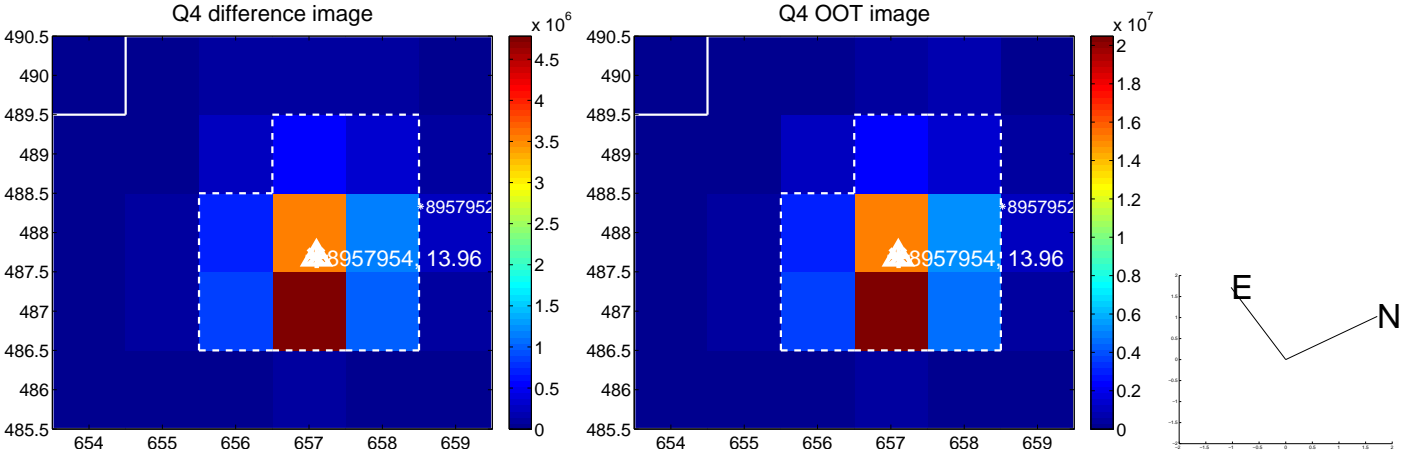
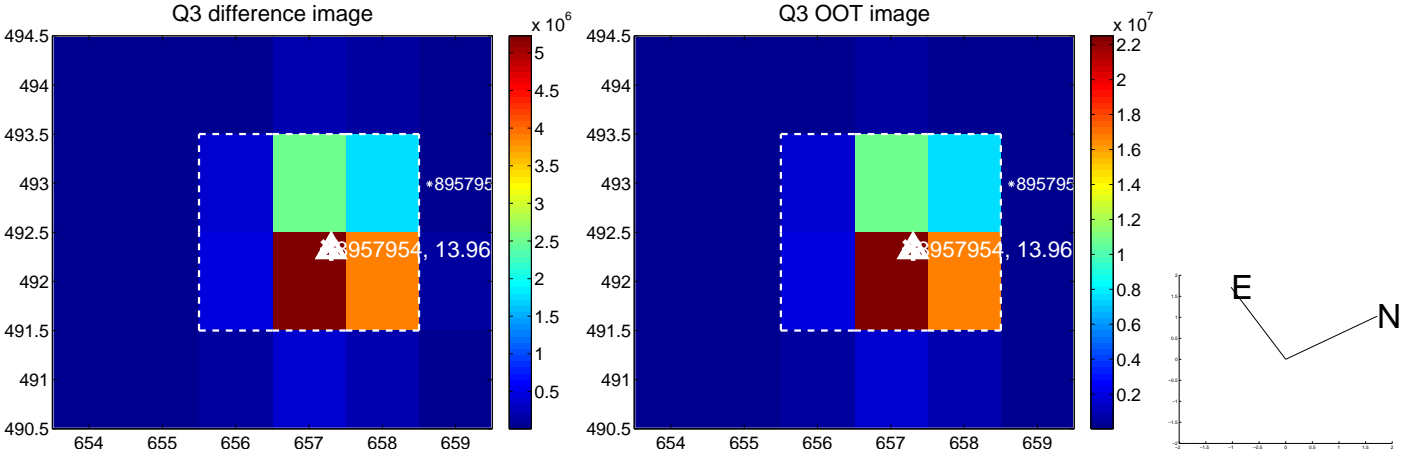
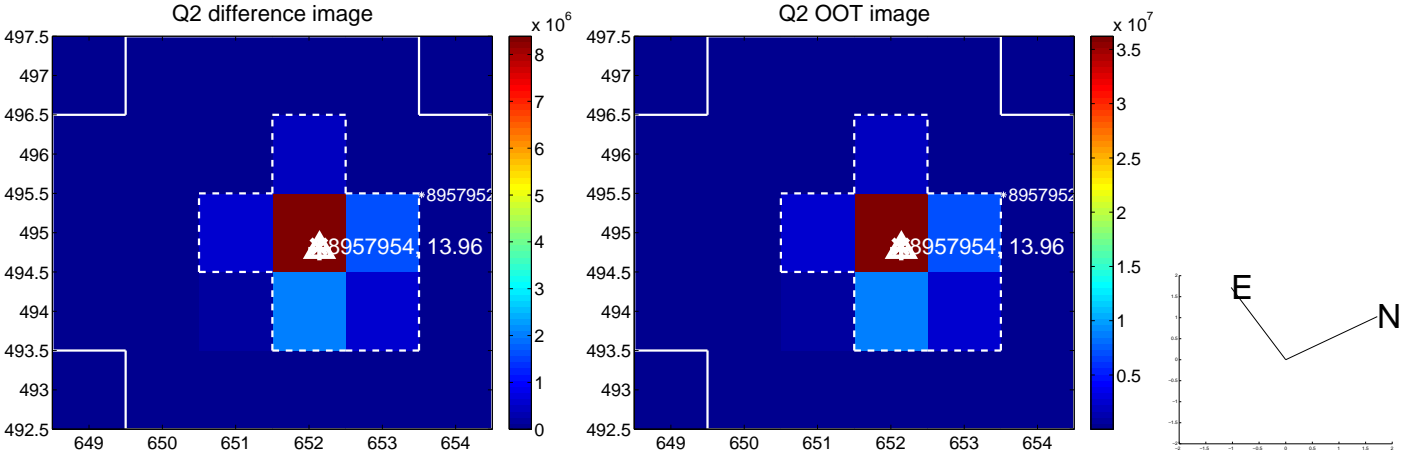
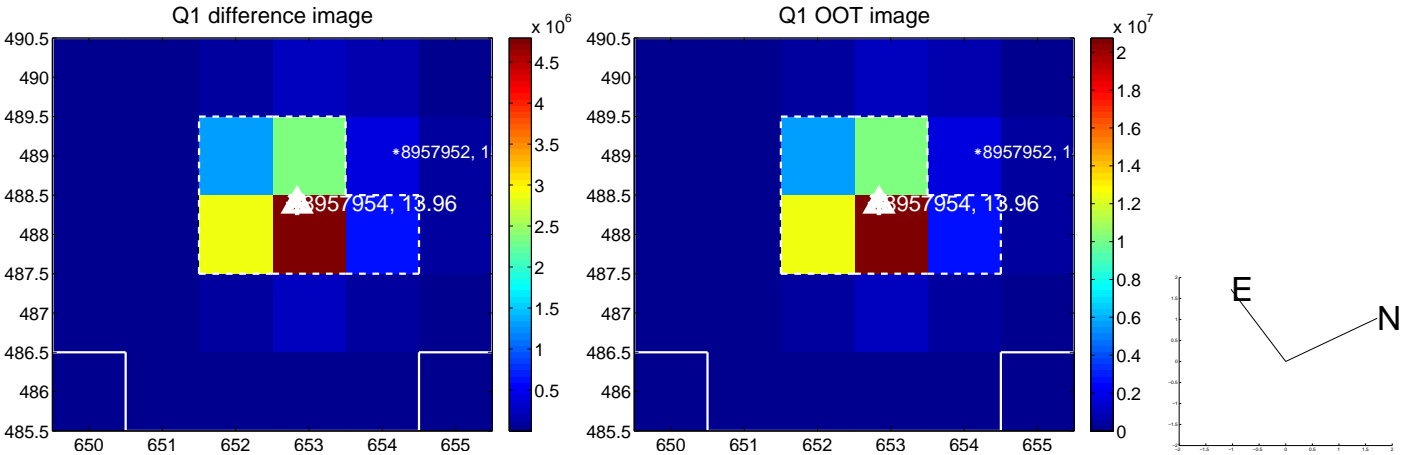
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.067	0.04	-0.000 ± 0.067	0.002 ± 0.067
PRF-fit source offset from KIC position	0.075 ± 0.068	1.11	-0.073 ± 0.068	0.018 ± 0.067
photometric centroid source offset	0.15 ± 0.00	488.82	-0.13 ± 0.00	-0.09 ± 0.00

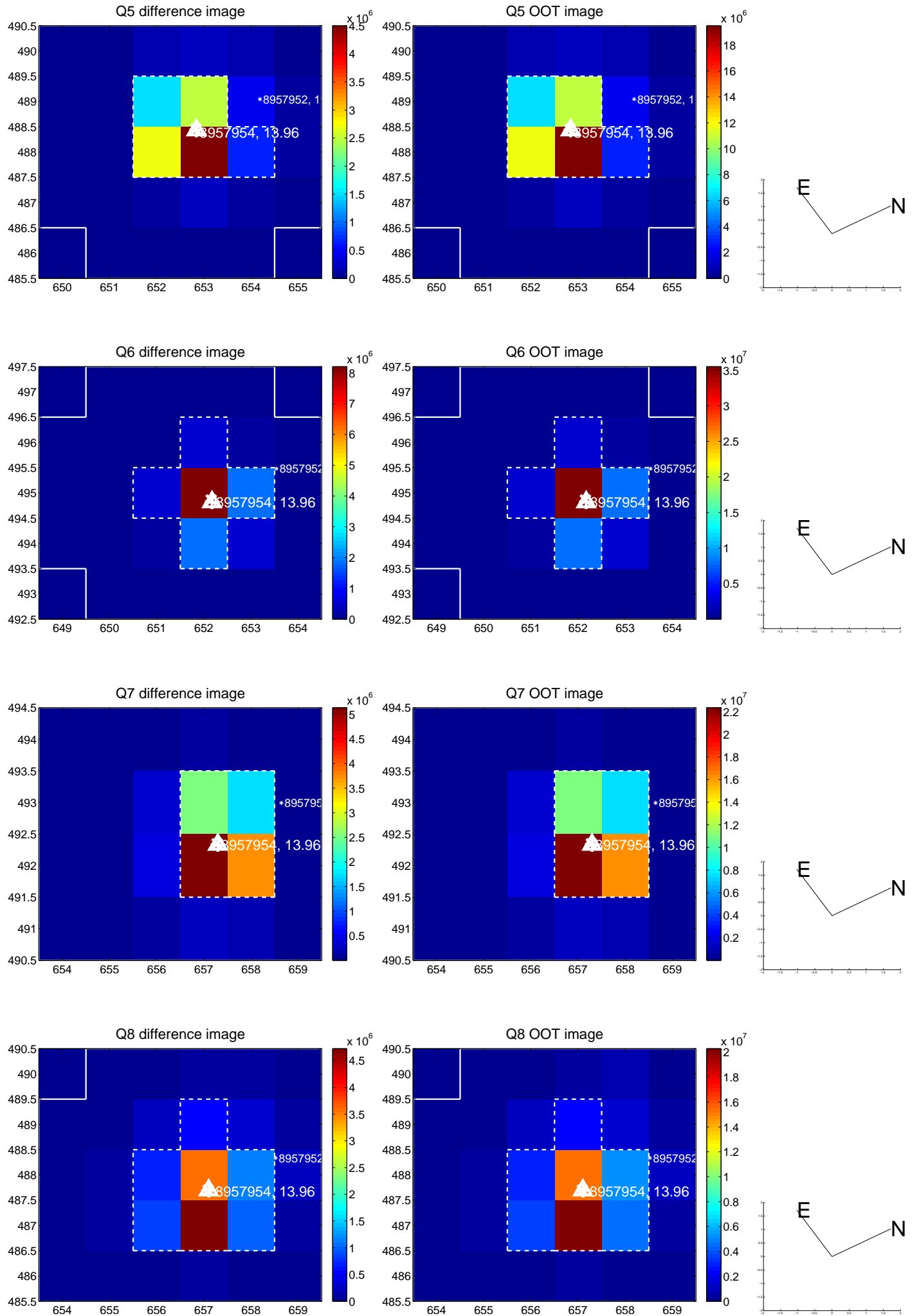


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

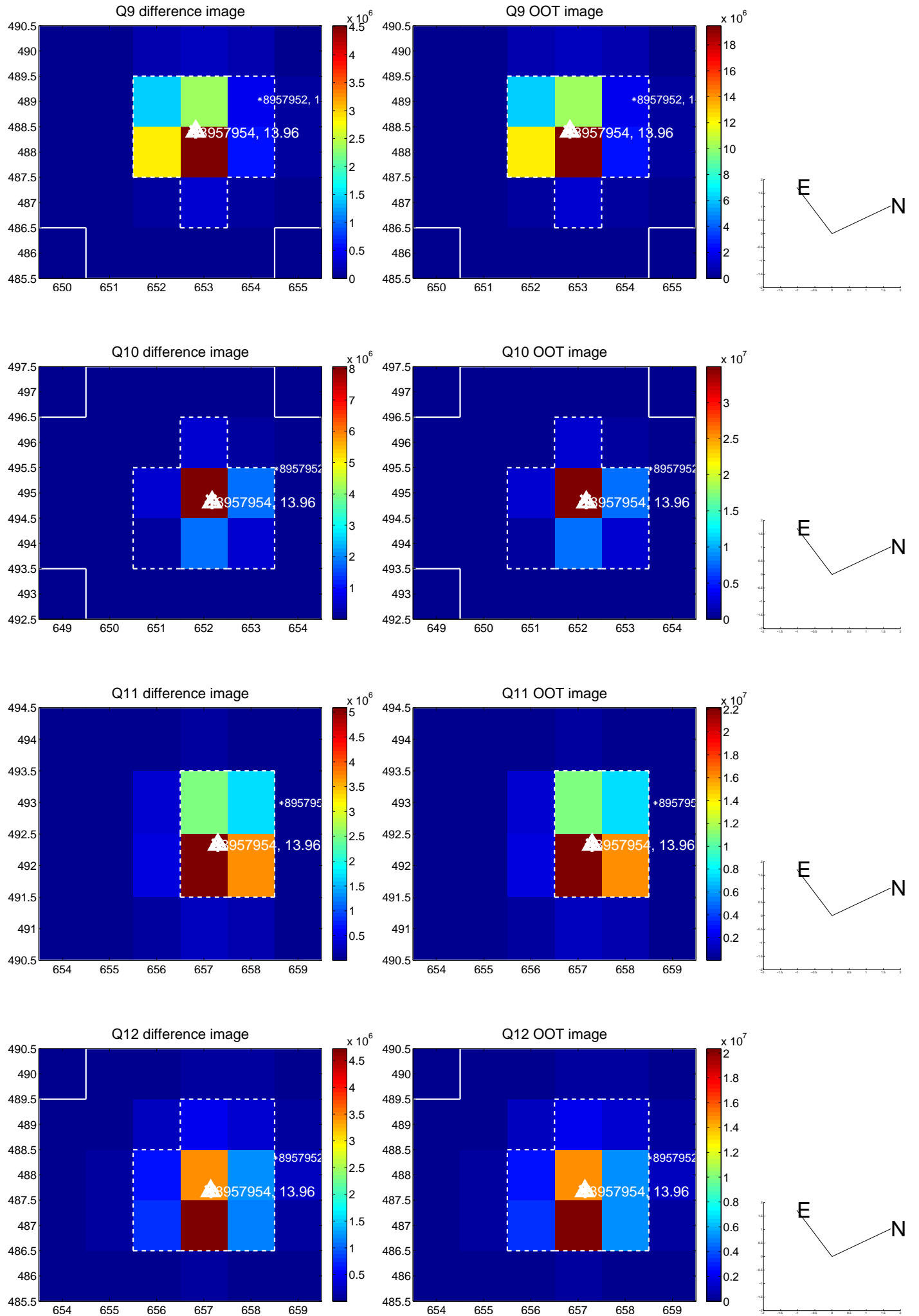
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



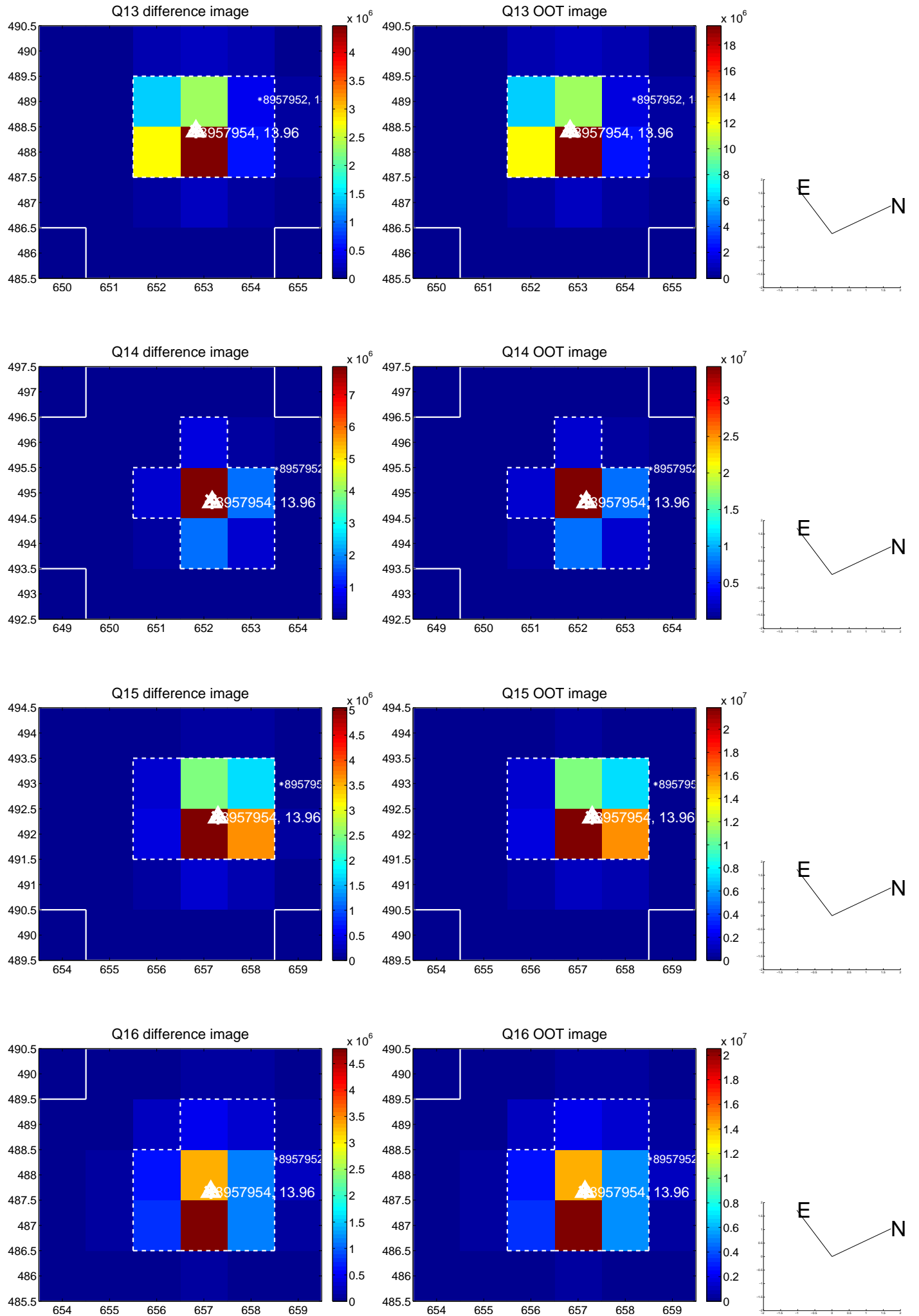
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



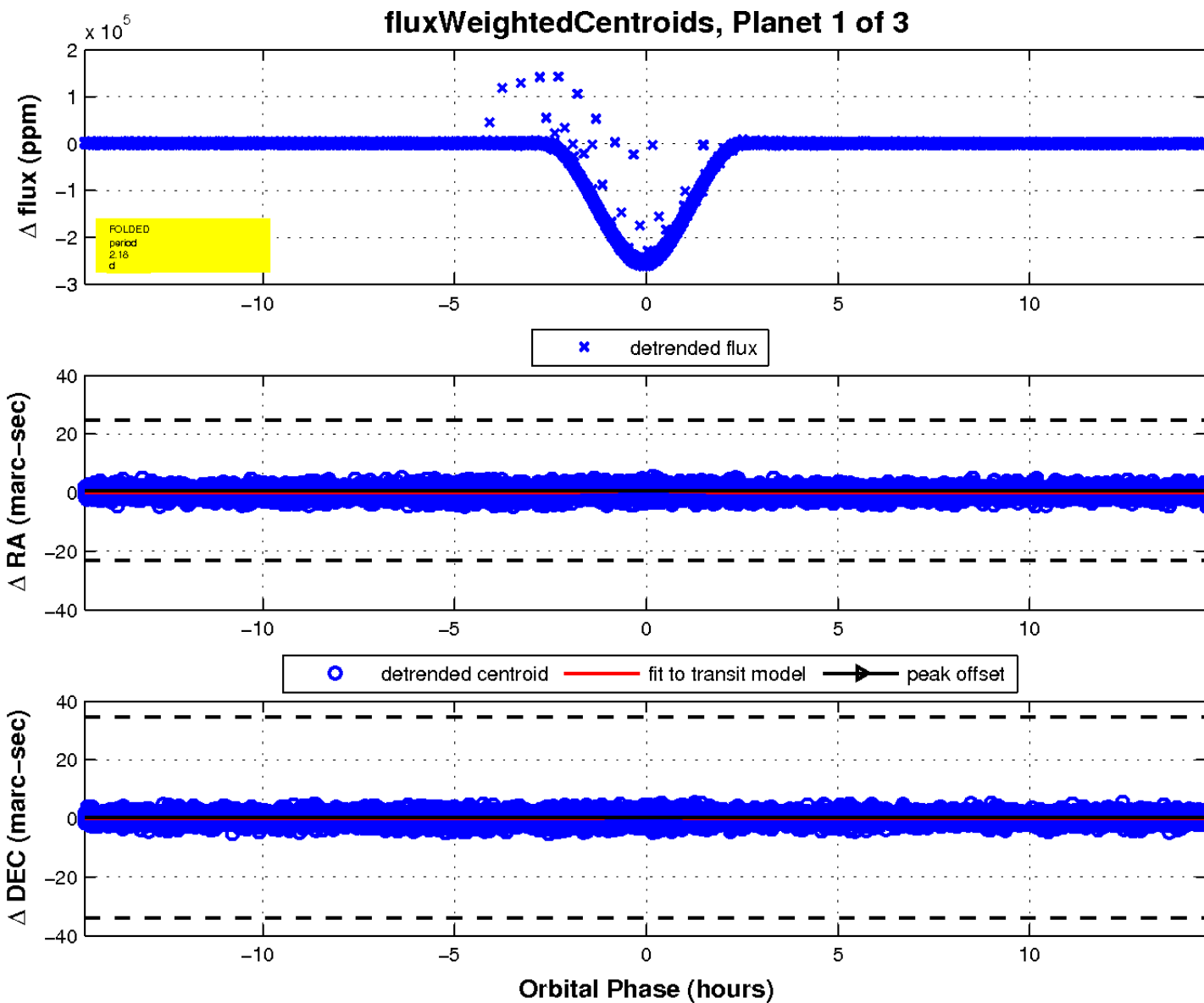
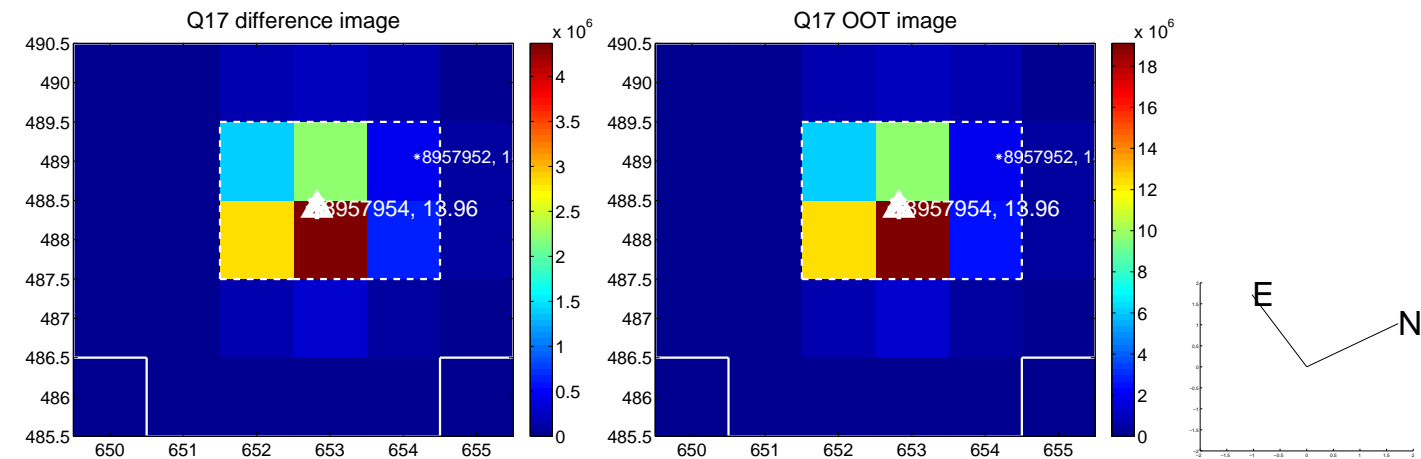
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

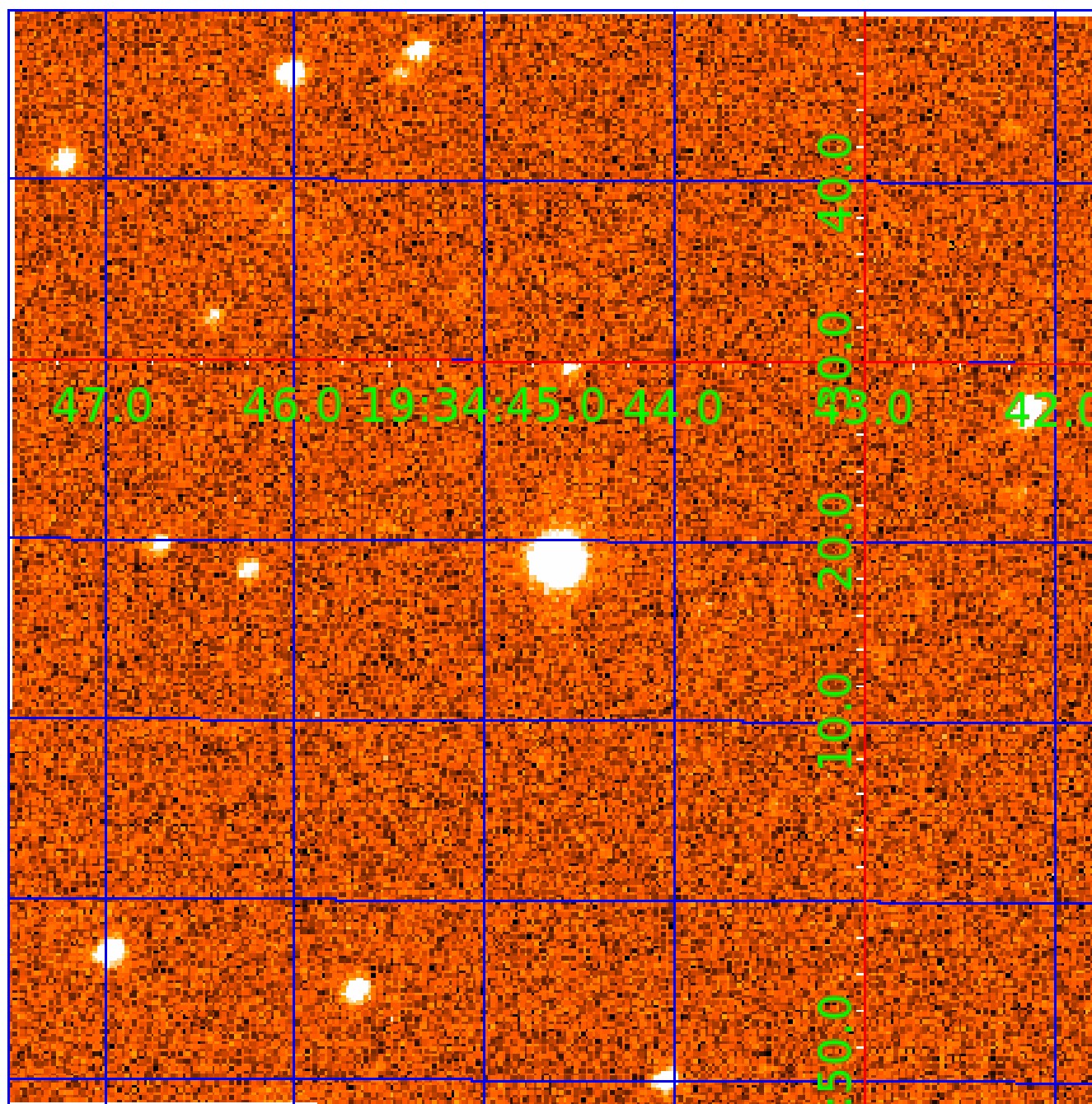


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008957954

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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008957954-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008957954-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS—HALO_GHOST

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

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

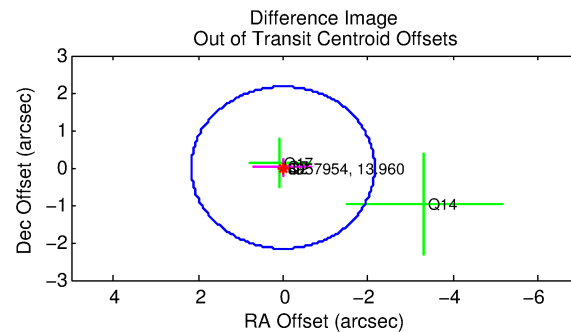
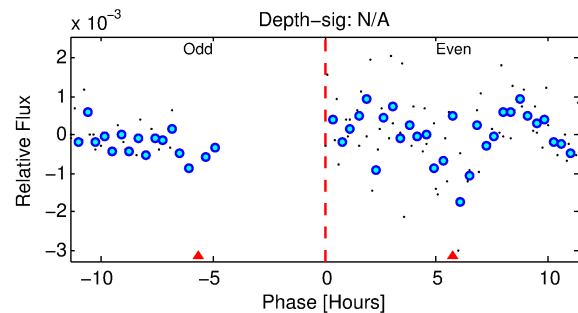
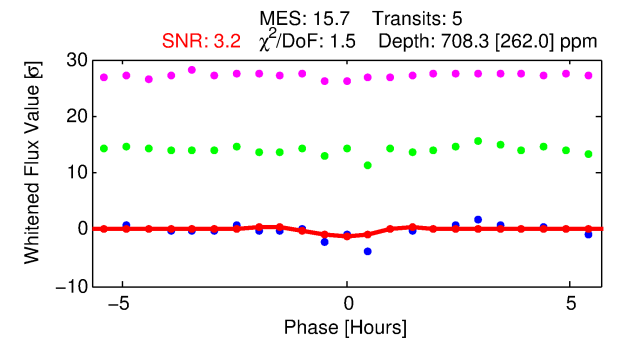
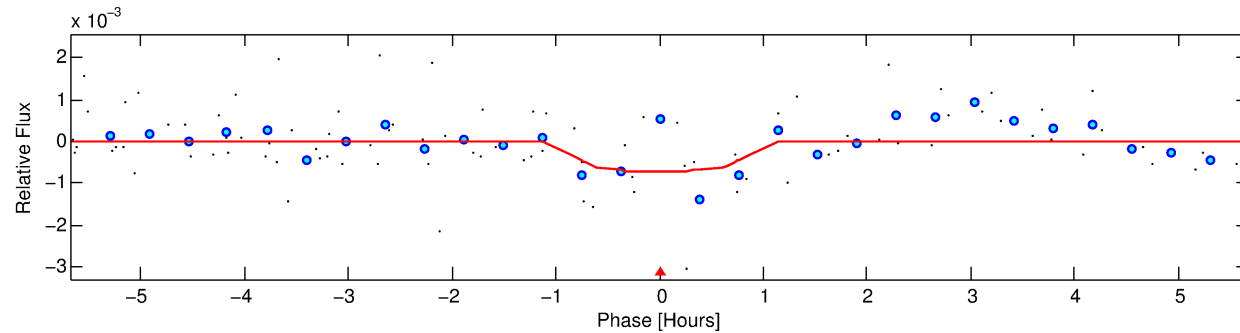
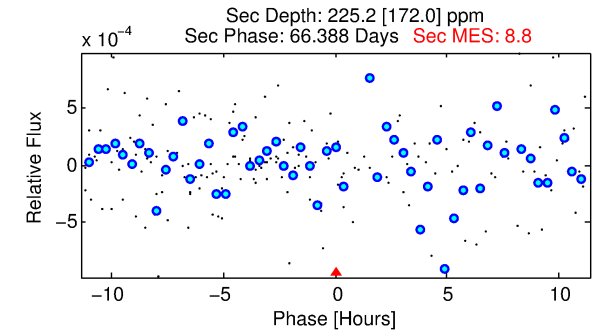
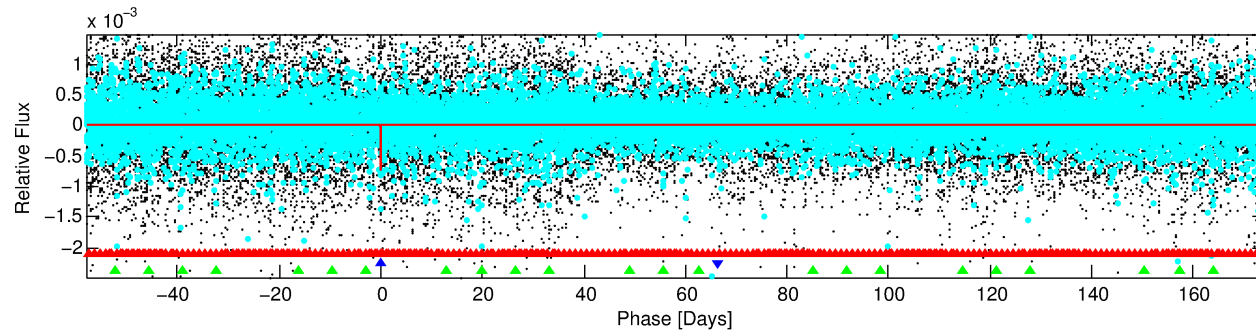
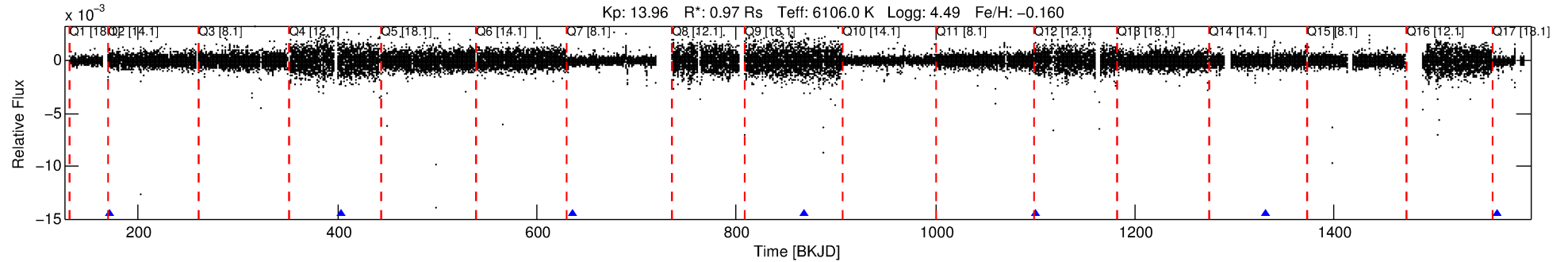
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008957954-02

No Significant Match Found

DV One-Page Summary

KIC: 8957954 Candidate: 2 of 3 Period: 232.119 d
KOI: K06189 Corr: No Ephemeris Match



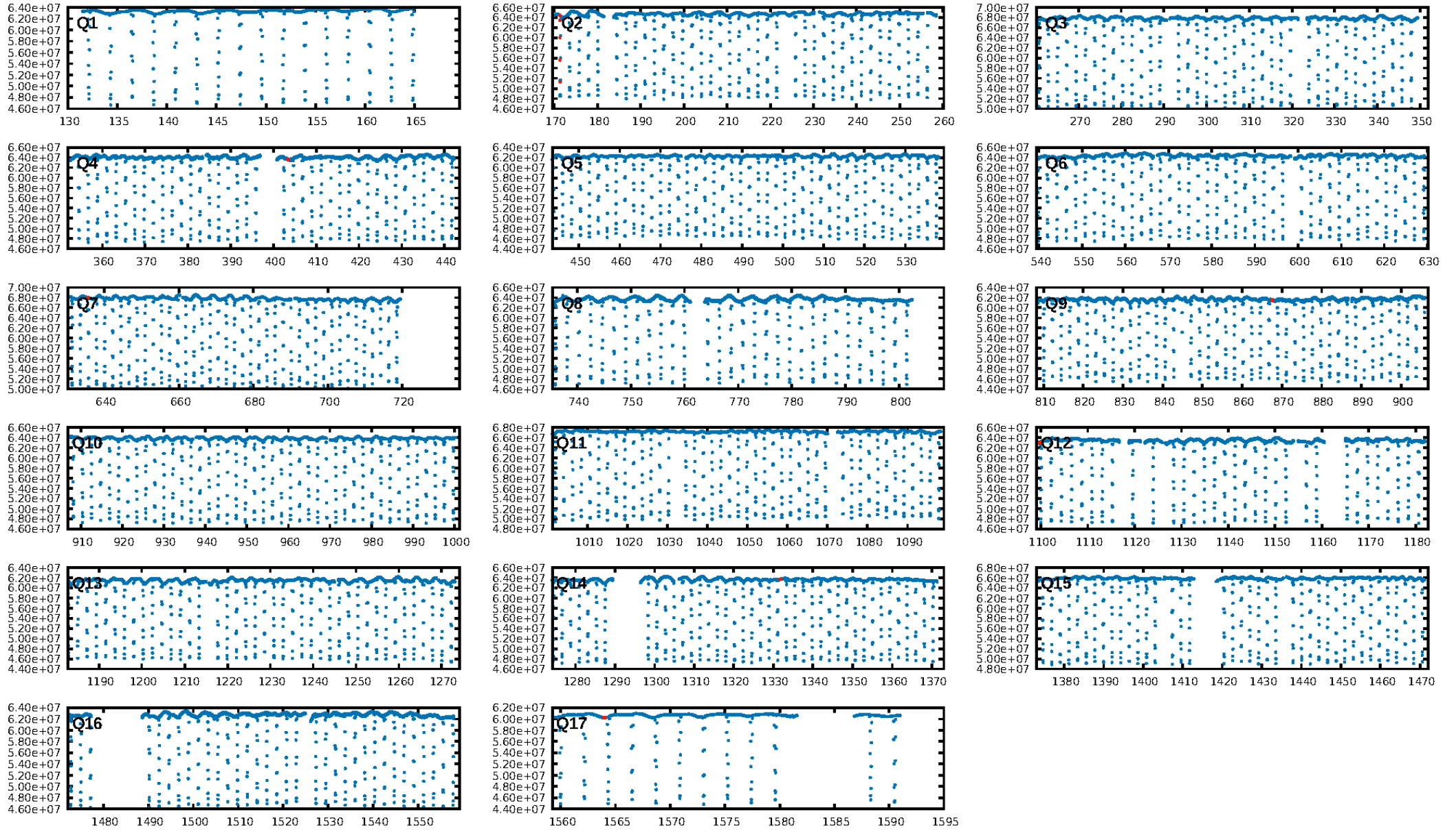
DV Fit Results:

Period = 232.11853 [0.00442] d
Epoch = 171.2661 [0.0254] BKJD
Rp/R* = 0.0266 [0.1192]
a/R* = 651.54 [14455.71]
b = 0.76 [12.78]
Seff = 2.07 [0.90]
Teq = 306 [33] K
Rp = 2.81 [12.60] Re
a = 0.7502 [0.2134] AU
Ag = 8850.96 [79602.93] [0.11σ]
Teffp = 4584 [10297] K [0.42σ]

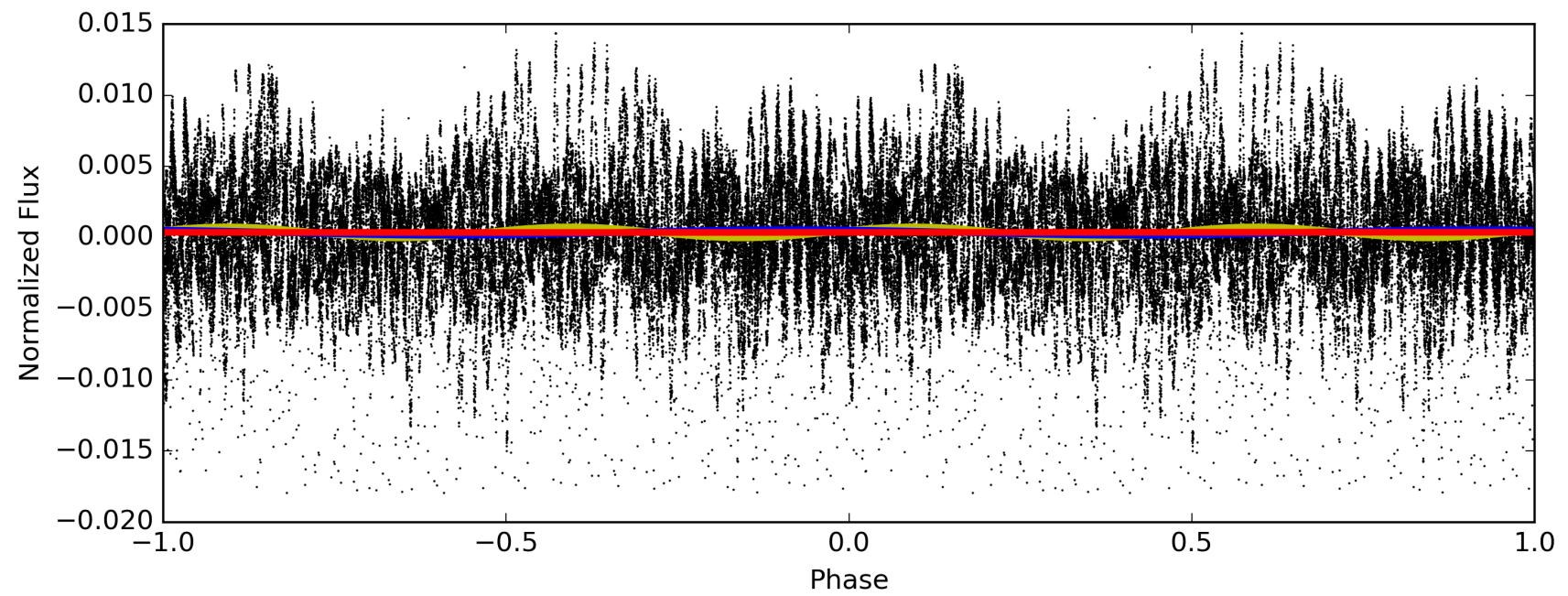
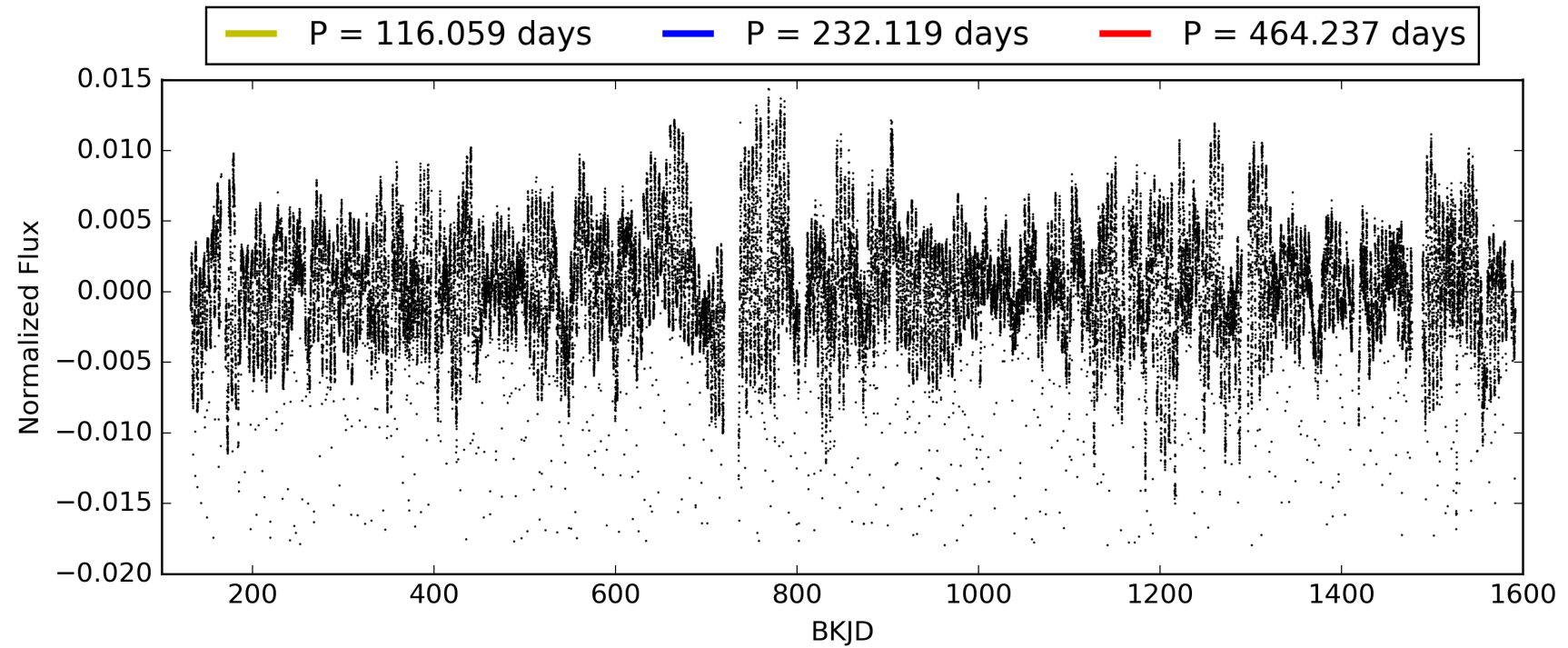
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [636.11σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 35.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.511
Centroid-sig: 19.0%
Centroid-so: 1.196 arcsec [1.63σ]
OotOffset-rm: 0.002 arcsec [0.00σ]
KicOffset-rm: 0.059 arcsec [0.09σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.67 [4/6]

TCE 008957954-02, PDC Light Curves

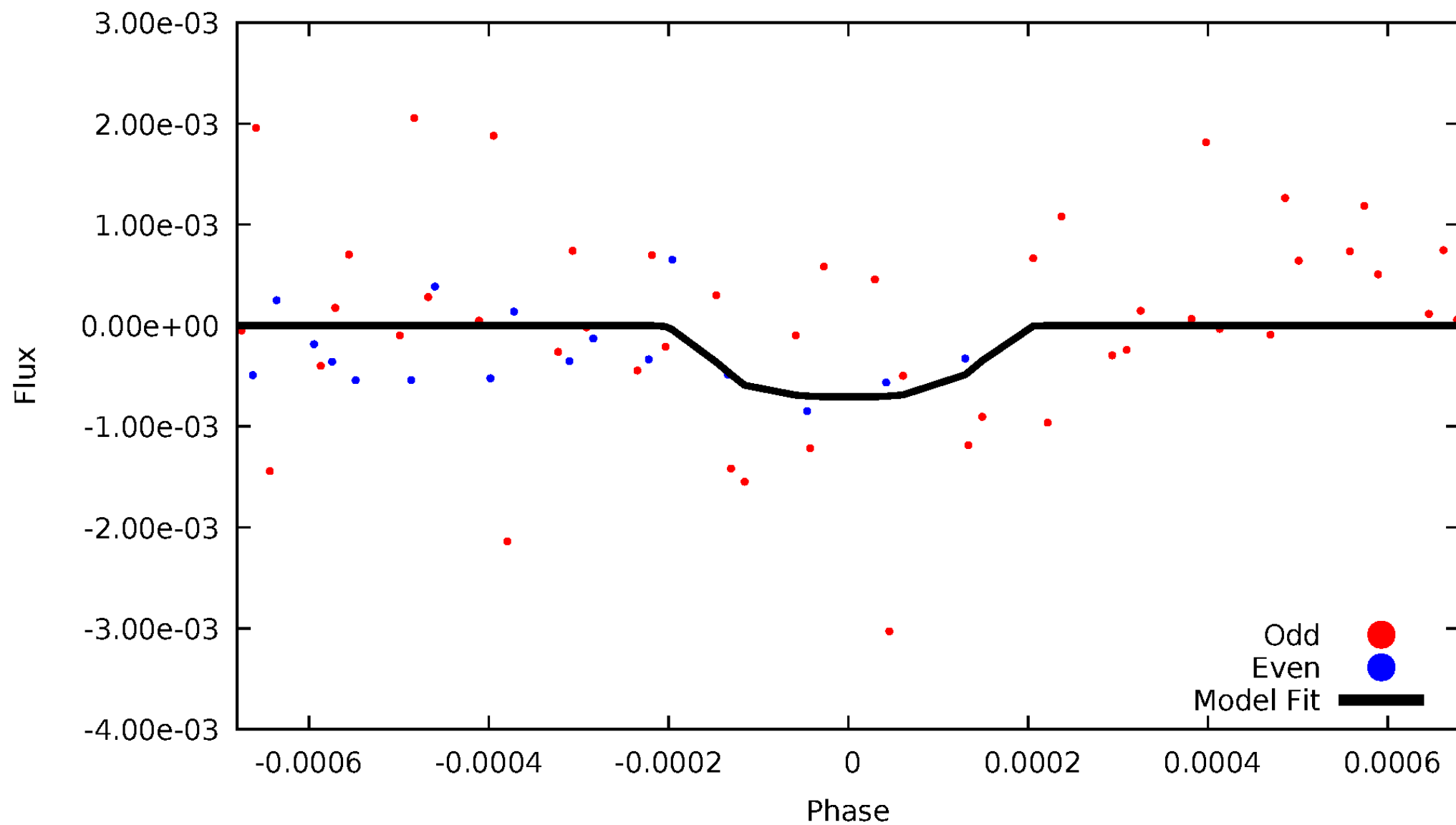


TCE 008957954-02



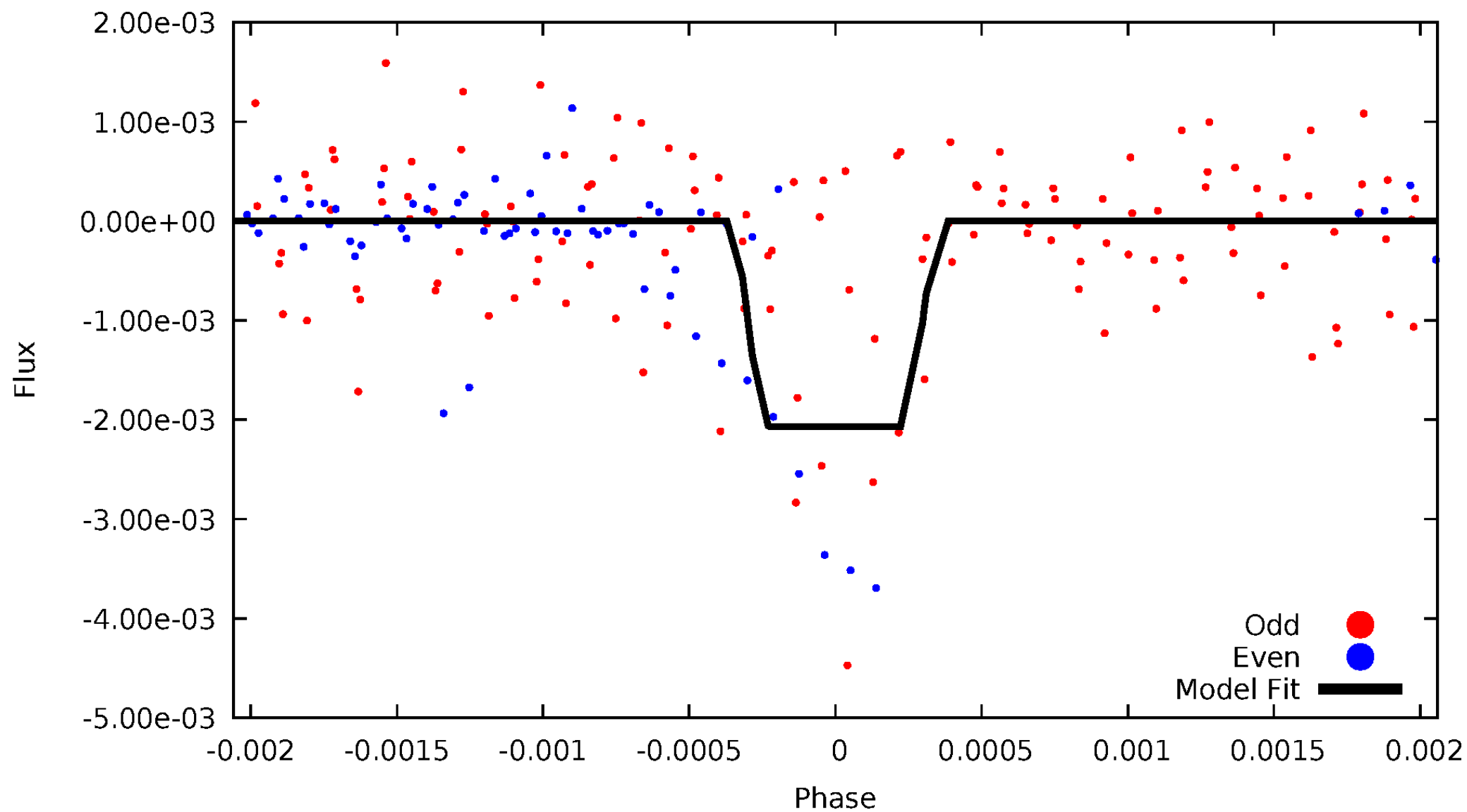
DV Odd/Even

TCE 008957954-02



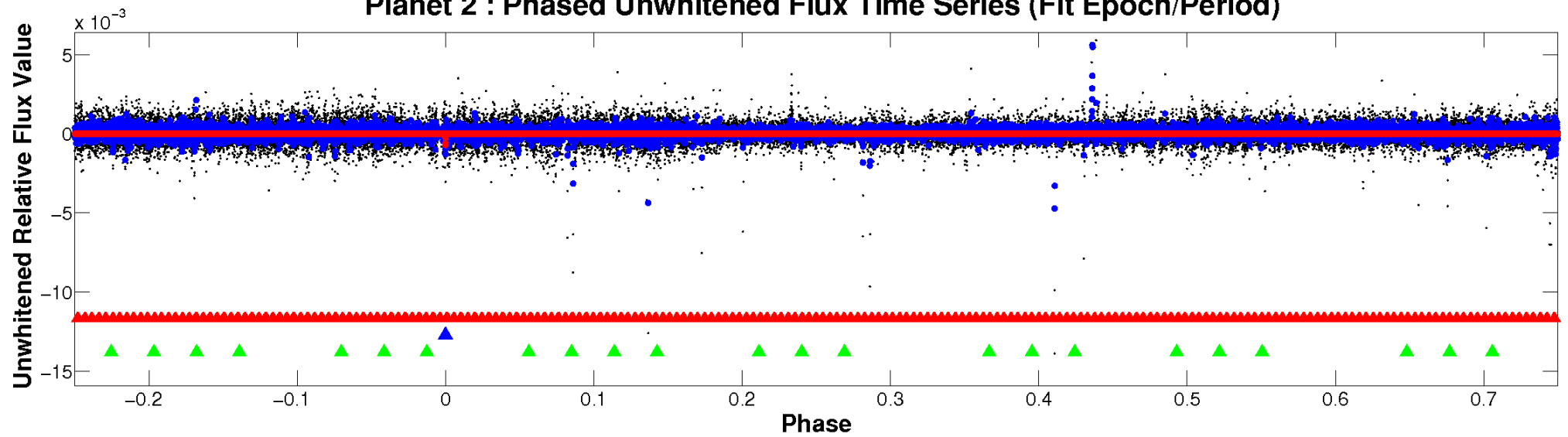
ALT Odd/Even

TCE 008957954-02

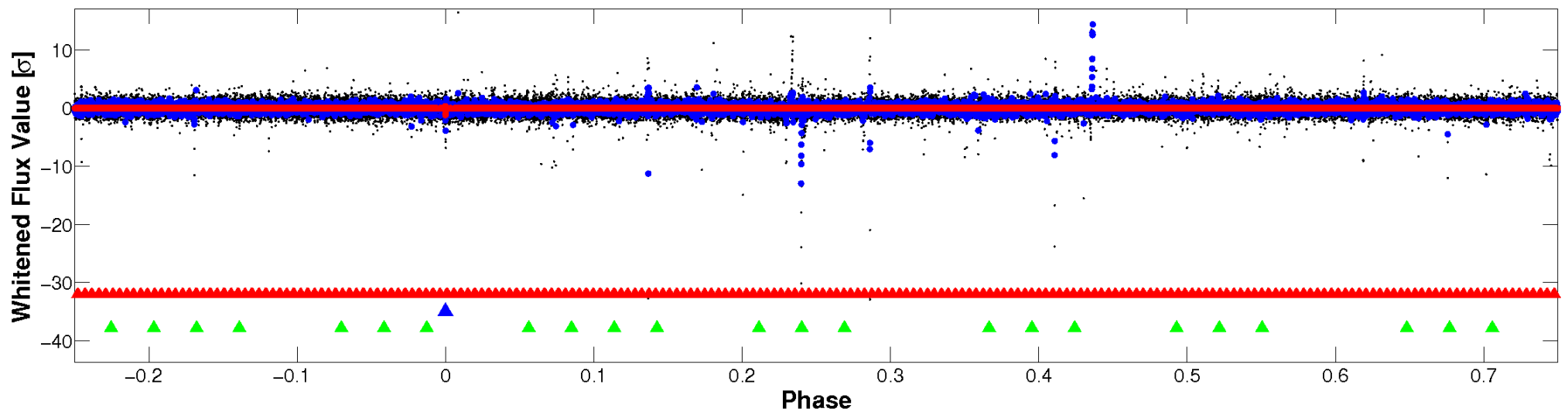


Non-Whitened Vs. Whitened Light Curve

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

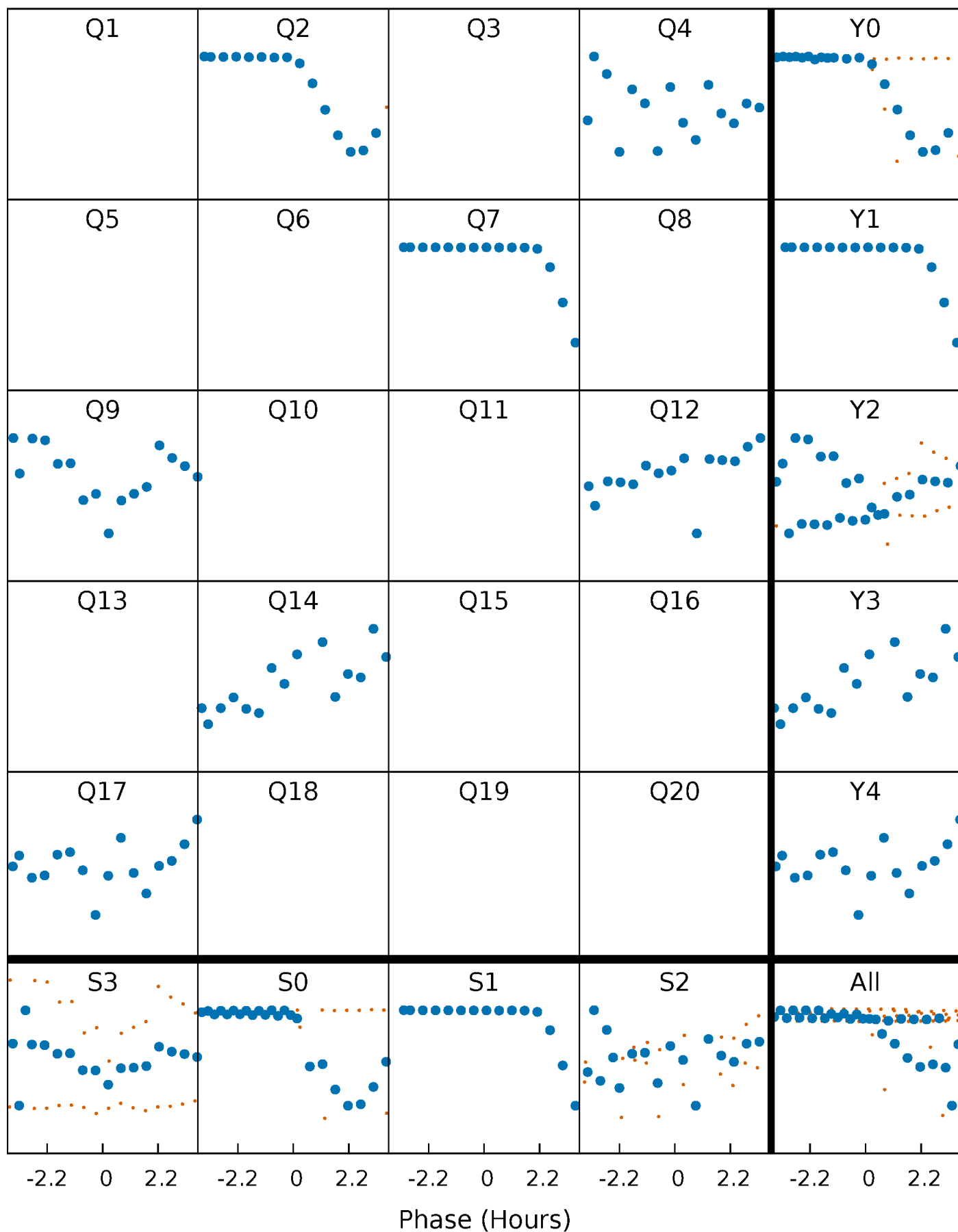


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



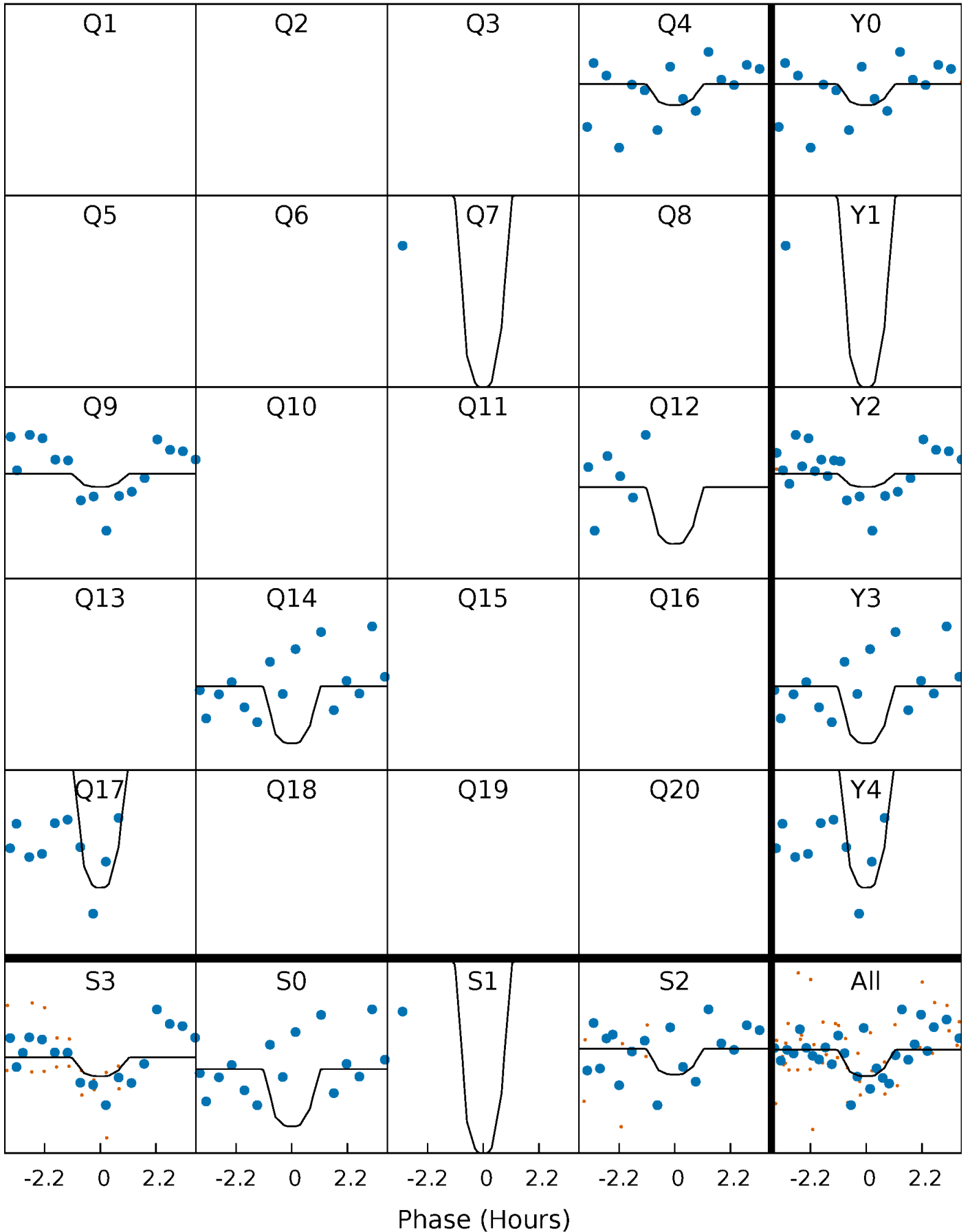
PDC Quarter-Phased Transit Curves

TCE 008957954-02 P=232.118528 Days $T_0=171.266105$ (BKJD)



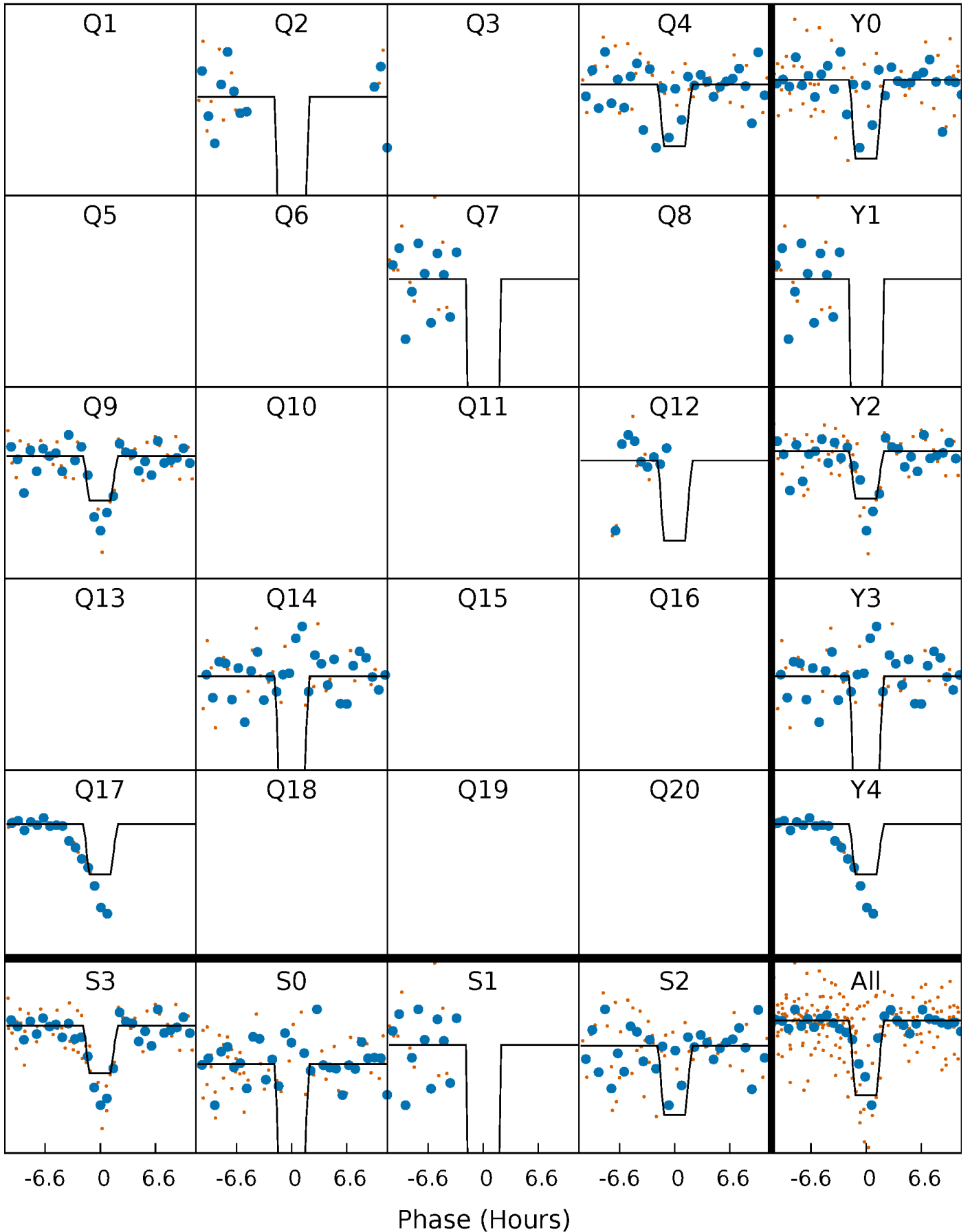
DV Quarter-Phased Transit Curves

TCE 008957954-02 $P=232.118528$ Days $T_0=171.266105$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

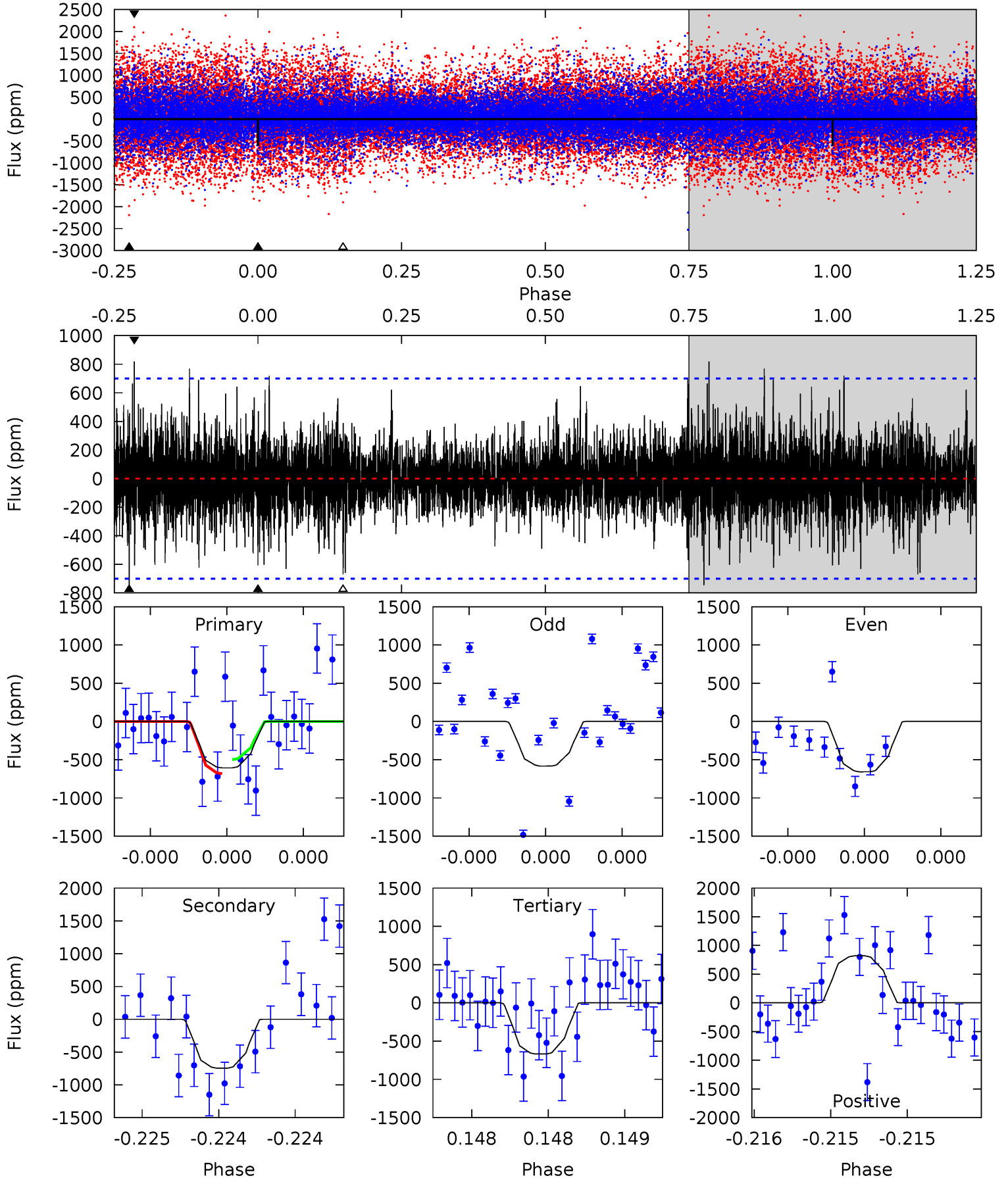
TCE 008957954-02 P=232.117441 Days $T_0=171.270480$ (BKJD)



DV Model-Shift Uniqueness Test

008957954-02, P = 232.118528 Days, E = 171.266105 Days

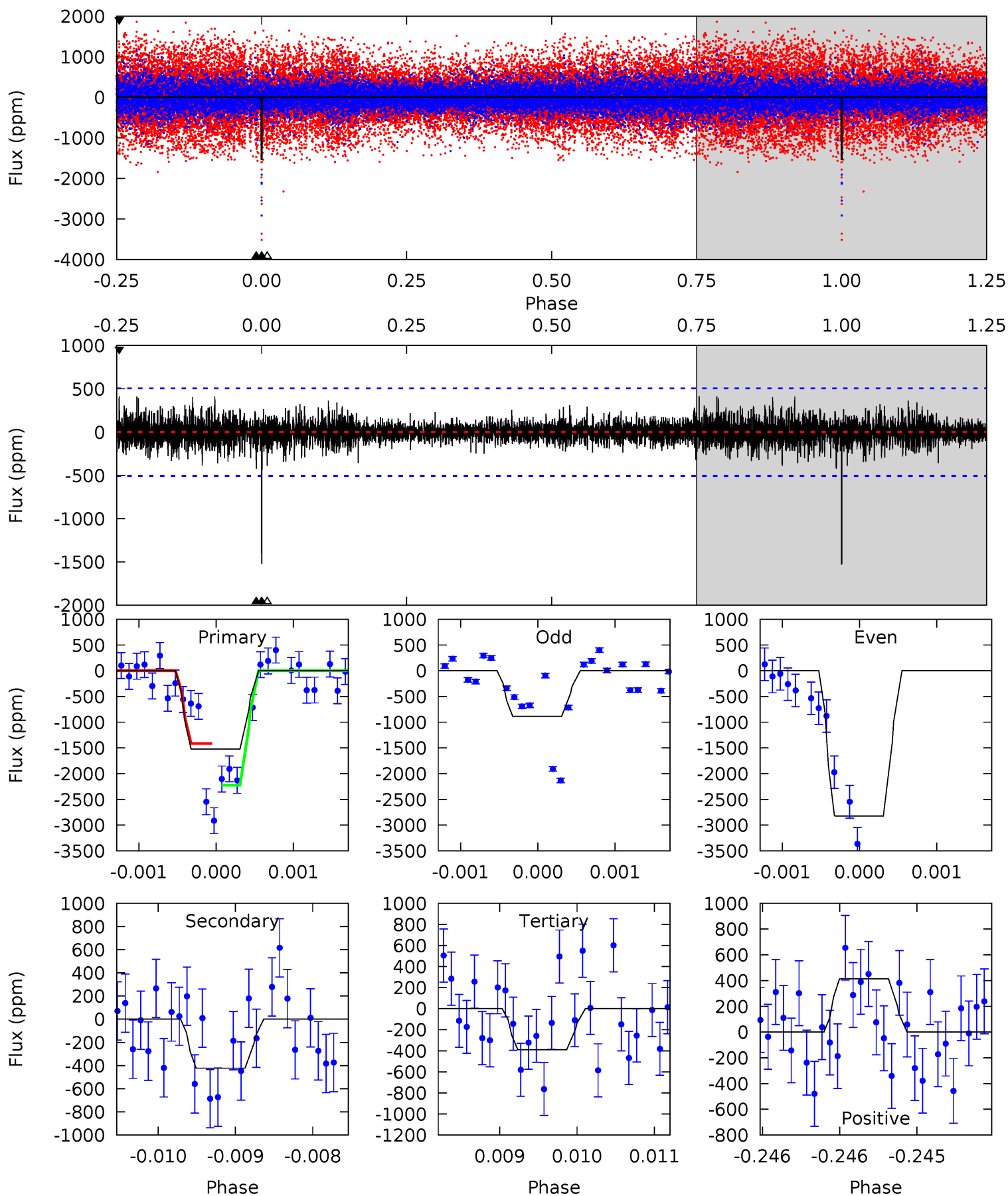
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.86	5.96	5.35	6.56	5.60	3.53	1.21	-0.49	-1.70	0.61	-0.60	0.28	1.24	0.52	0.76



Alt Model-Shift Uniqueness Test

008957954-02, P = 232.117441 Days, E = 171.270480 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	4.60	4.24	4.51	5.51	3.39	0.94	12.3	12.1	0.36	0.10	10.4	2.52	0.21	4.14



Stellar Parameters For KIC 008957954

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6106^{+163}_{-199}	$4.487^{+0.054}_{-0.229}$	$-0.160^{+0.300}_{-0.300}$	$0.966^{+0.324}_{-0.101}$	$1.043^{+0.140}_{-0.140}$	$1.631^{+0.461}_{-0.889}$
	+3%/-3%	+1%/-5%	+188%/-188%	+34%/-10%	+13%/-13%	+28%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008957954-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-746 ± 125	$9.99^{+10.54}_{-7.03}$	437^{+33}_{-22}	3750^{+2423}_{-734}	2216^{+23887}_{-1674}
Alt.	-423 ± 92	$11.74^{+10.34}_{-8.00}$	436^{+35}_{-21}	3260^{+1739}_{-545}	912^{+8557}_{-670}

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 $A_{obs} \gg 1.0$

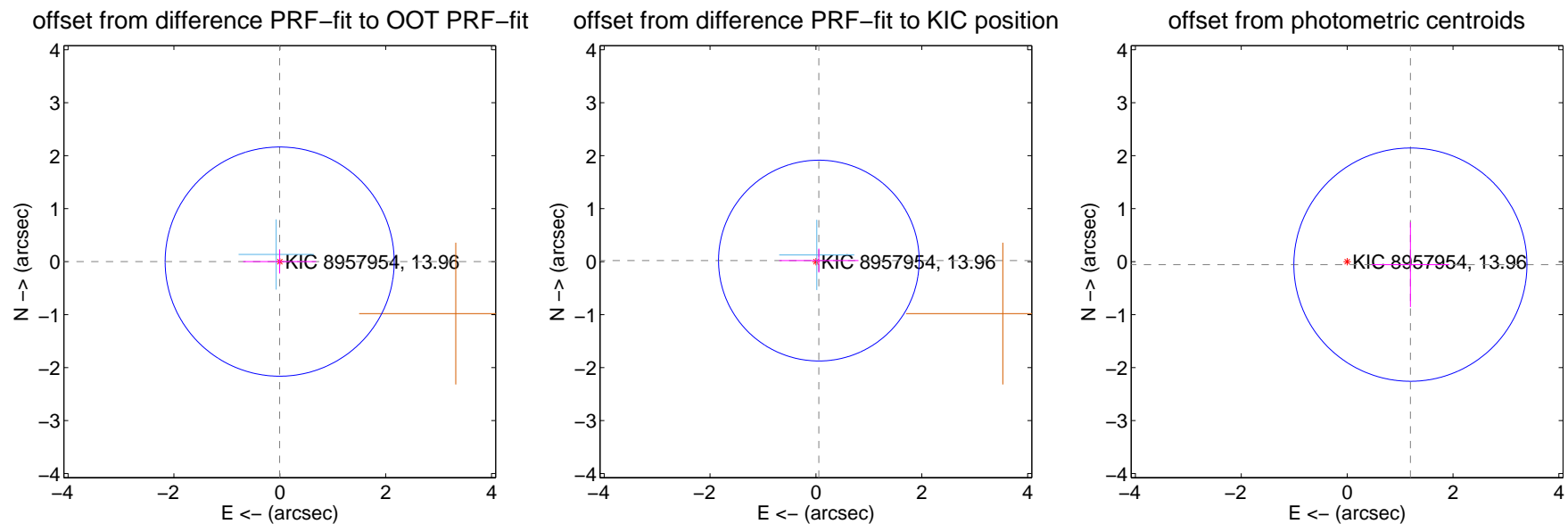
DV Centroid Data

Supplemental centroid analysis for 008957954-02. Kepler magnitude: 13.96. Transit SNR 3.24

There are 1 quarters with good PRF difference image offsets

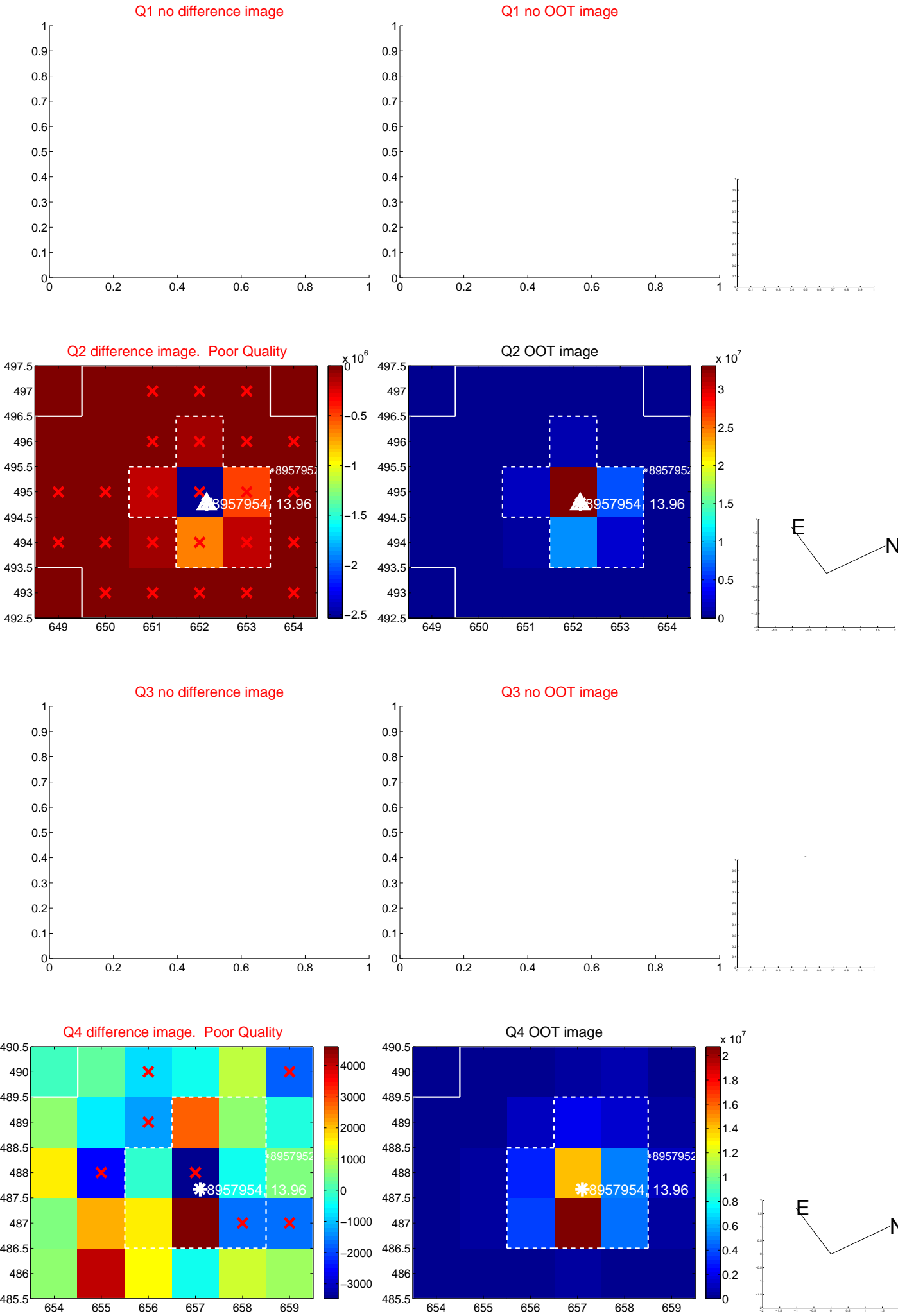
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.721	0.00	0.002 ± 0.689	0.001 ± 0.226
PRF-fit source offset from KIC position	0.059 ± 0.632	0.09	-0.055 ± 0.748	0.020 ± 0.226
photometric centroid source offset	1.20 ± 0.73	1.63	-1.20 ± 0.73	-0.06 ± 0.80

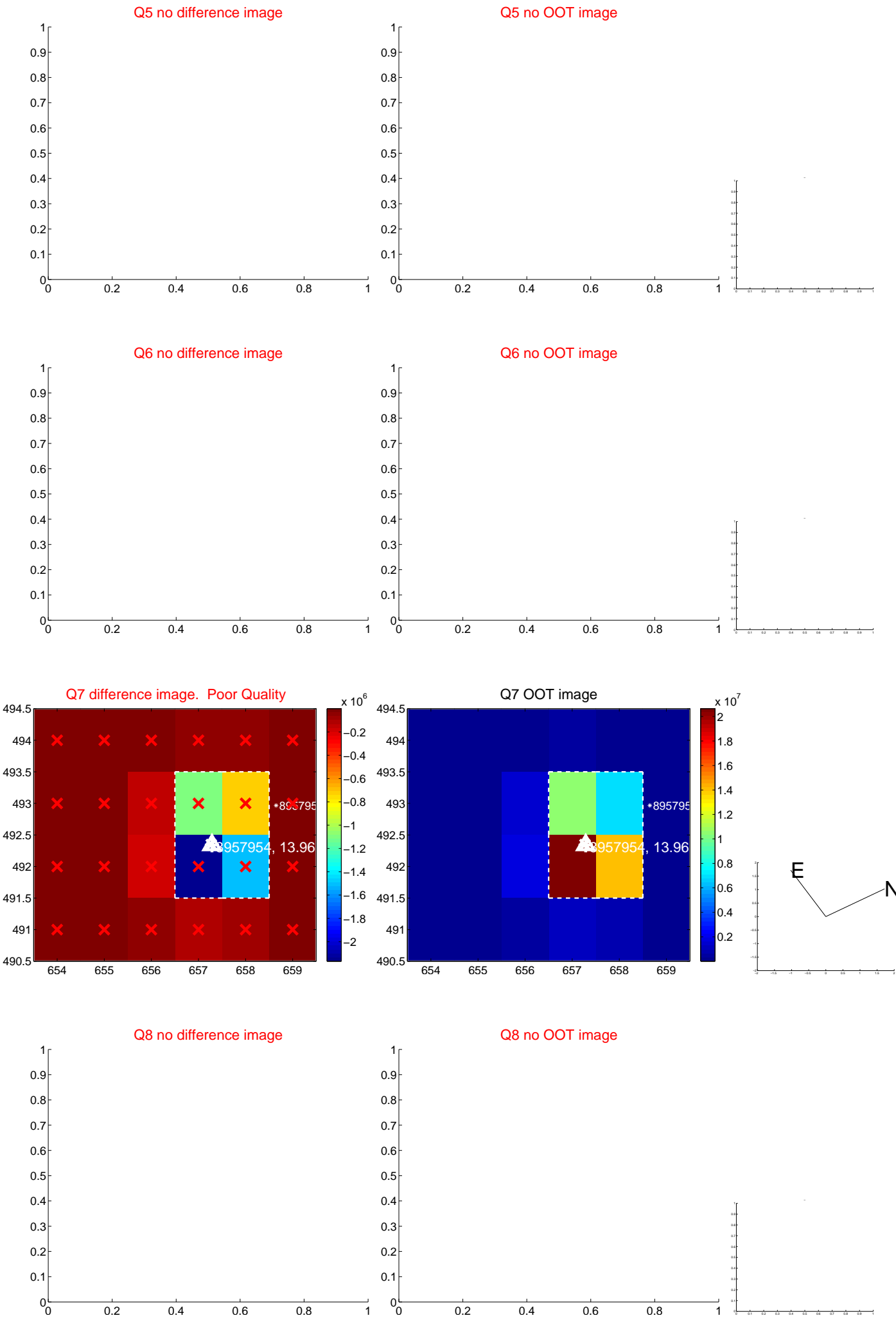


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

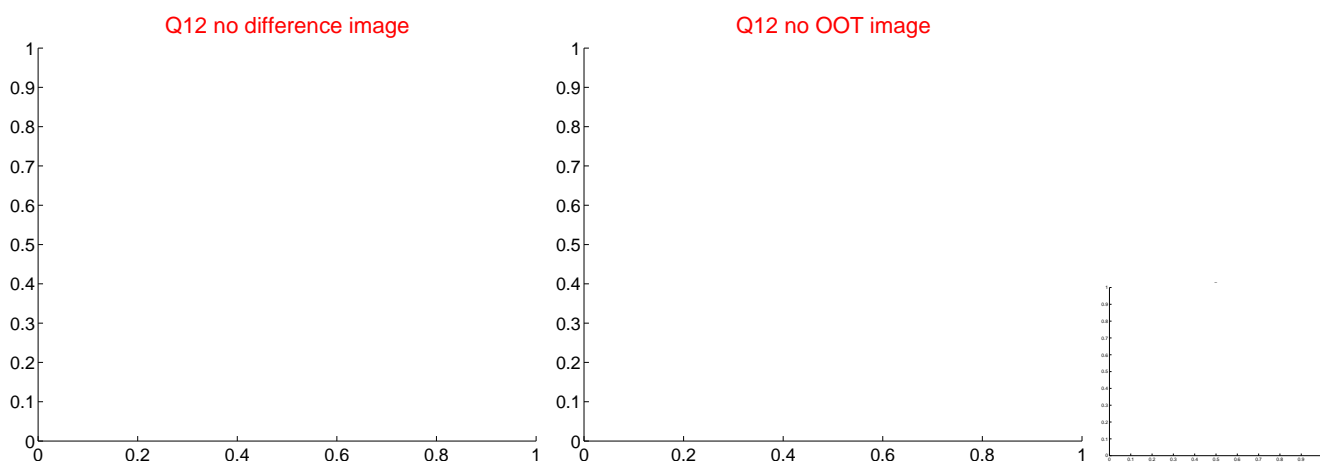
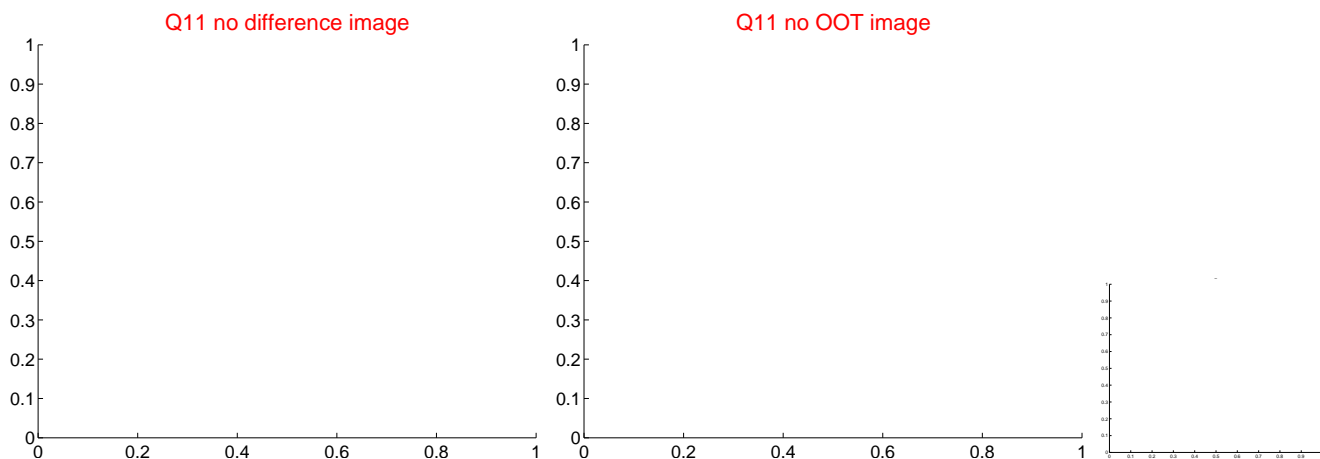
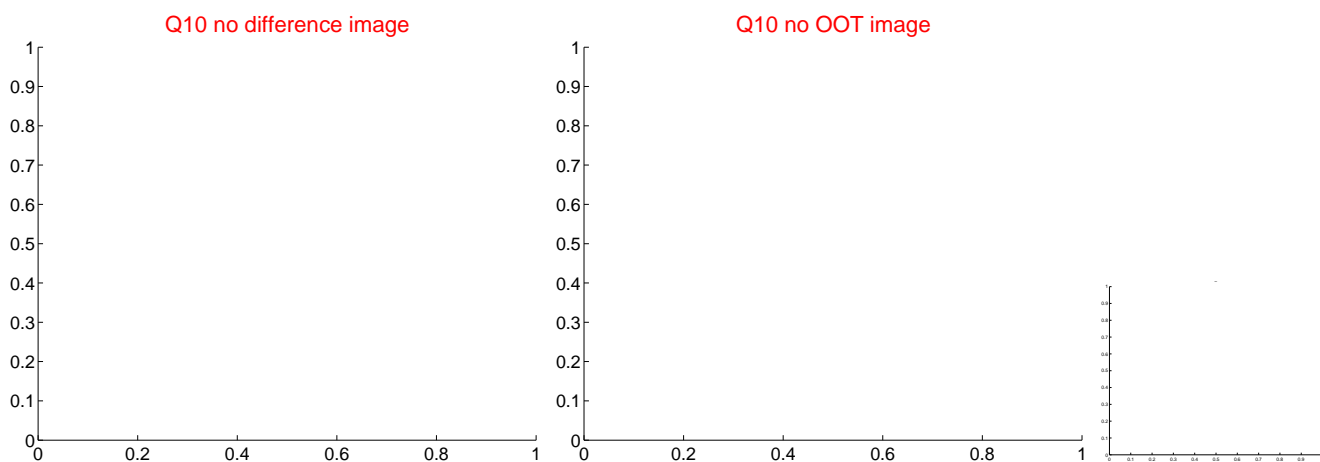
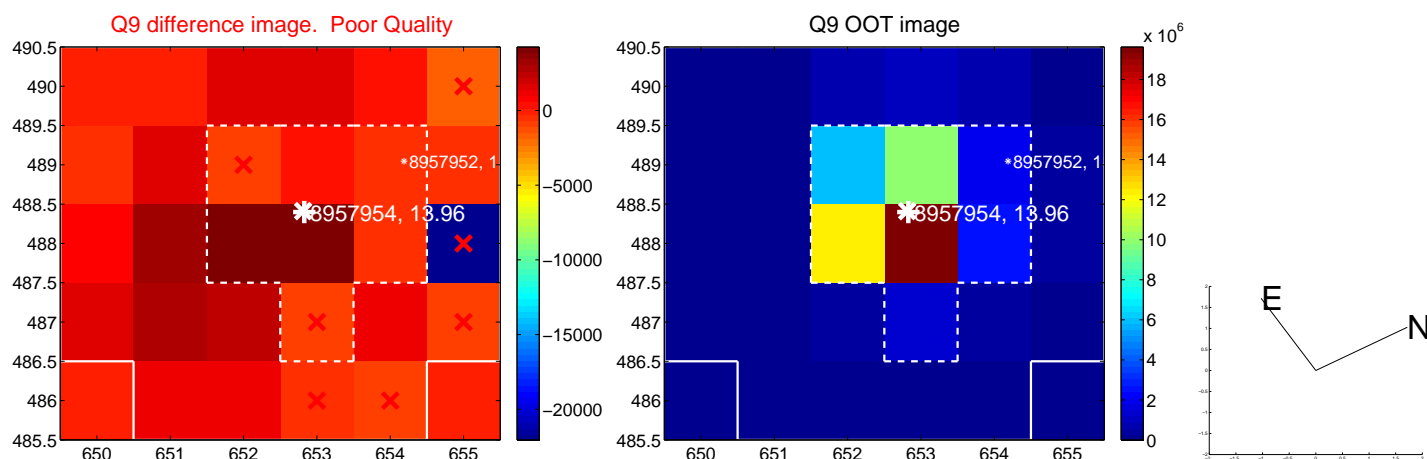
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

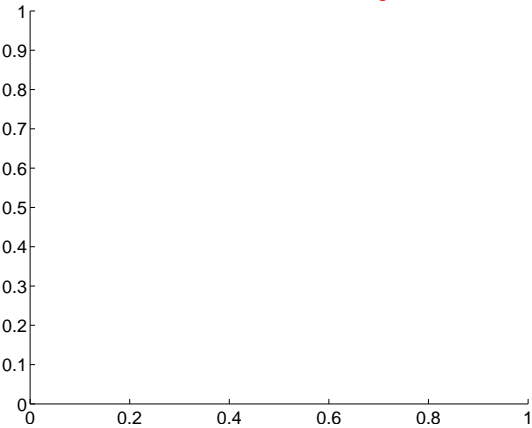


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

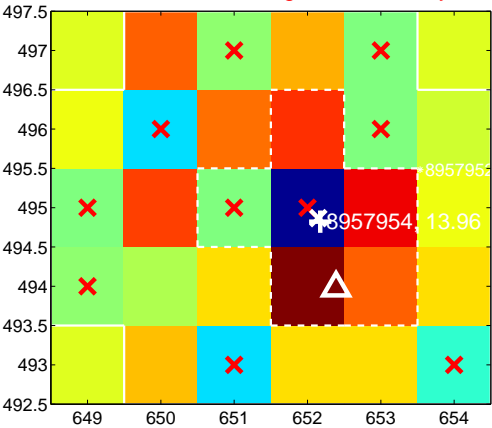
Q13 no difference image



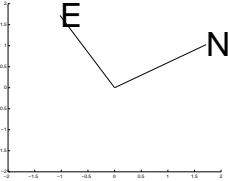
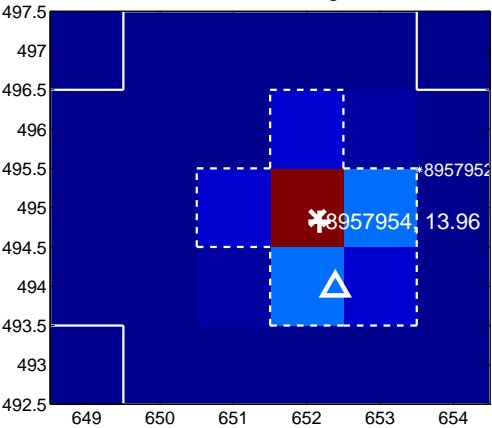
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



Q15 no difference image



Q15 no OOT image



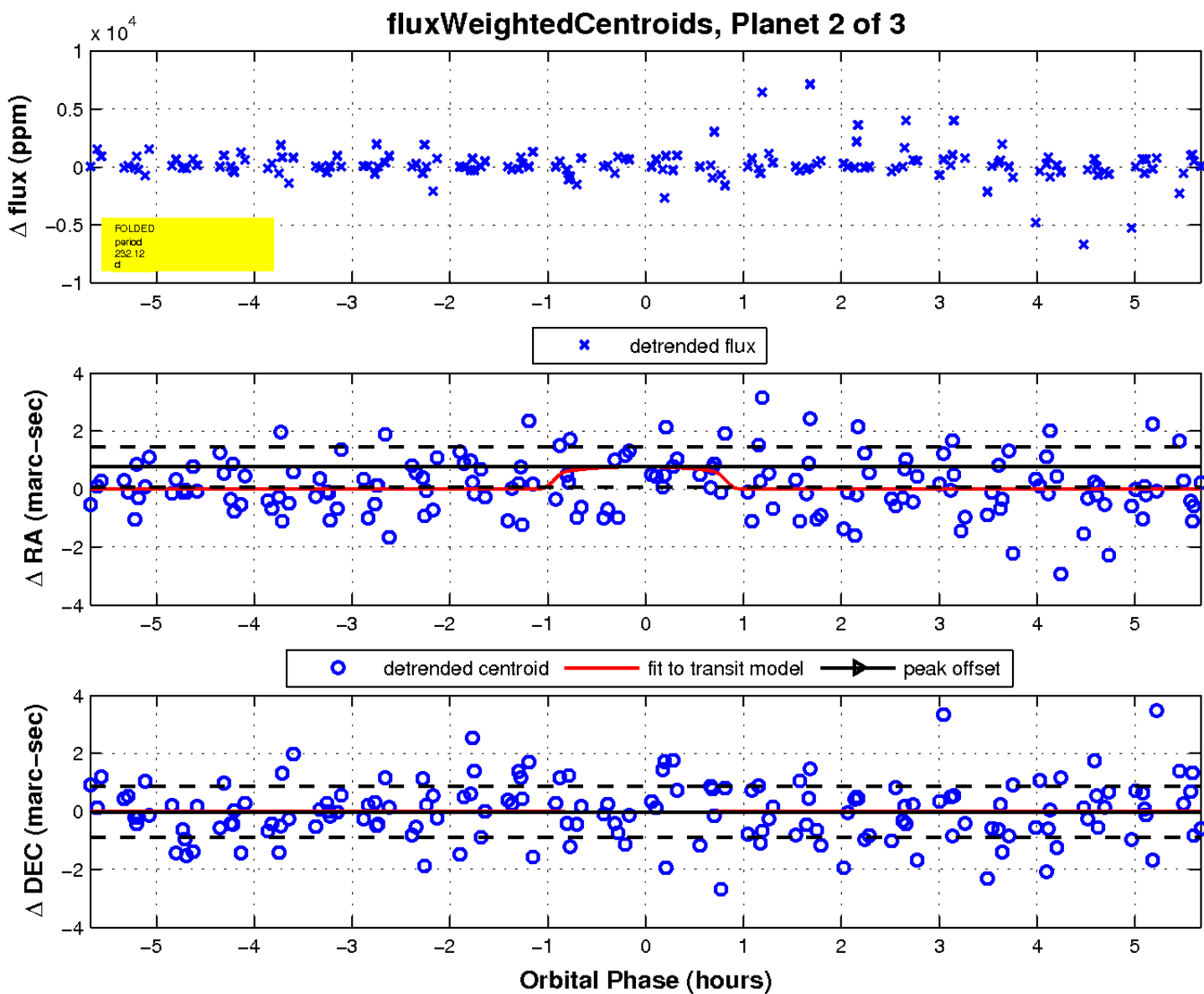
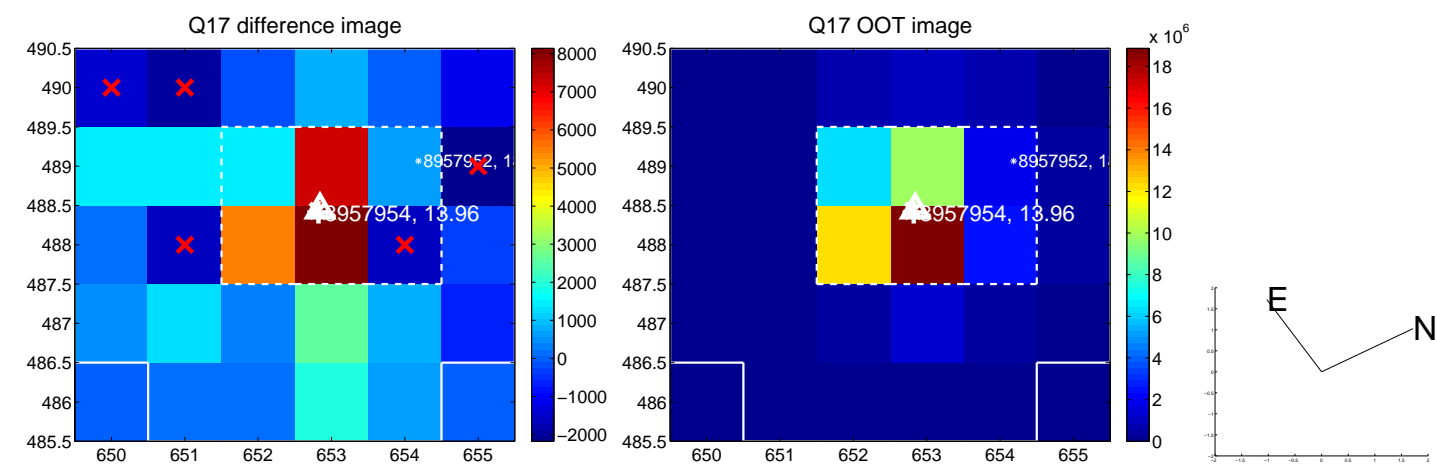
Q16 no difference image



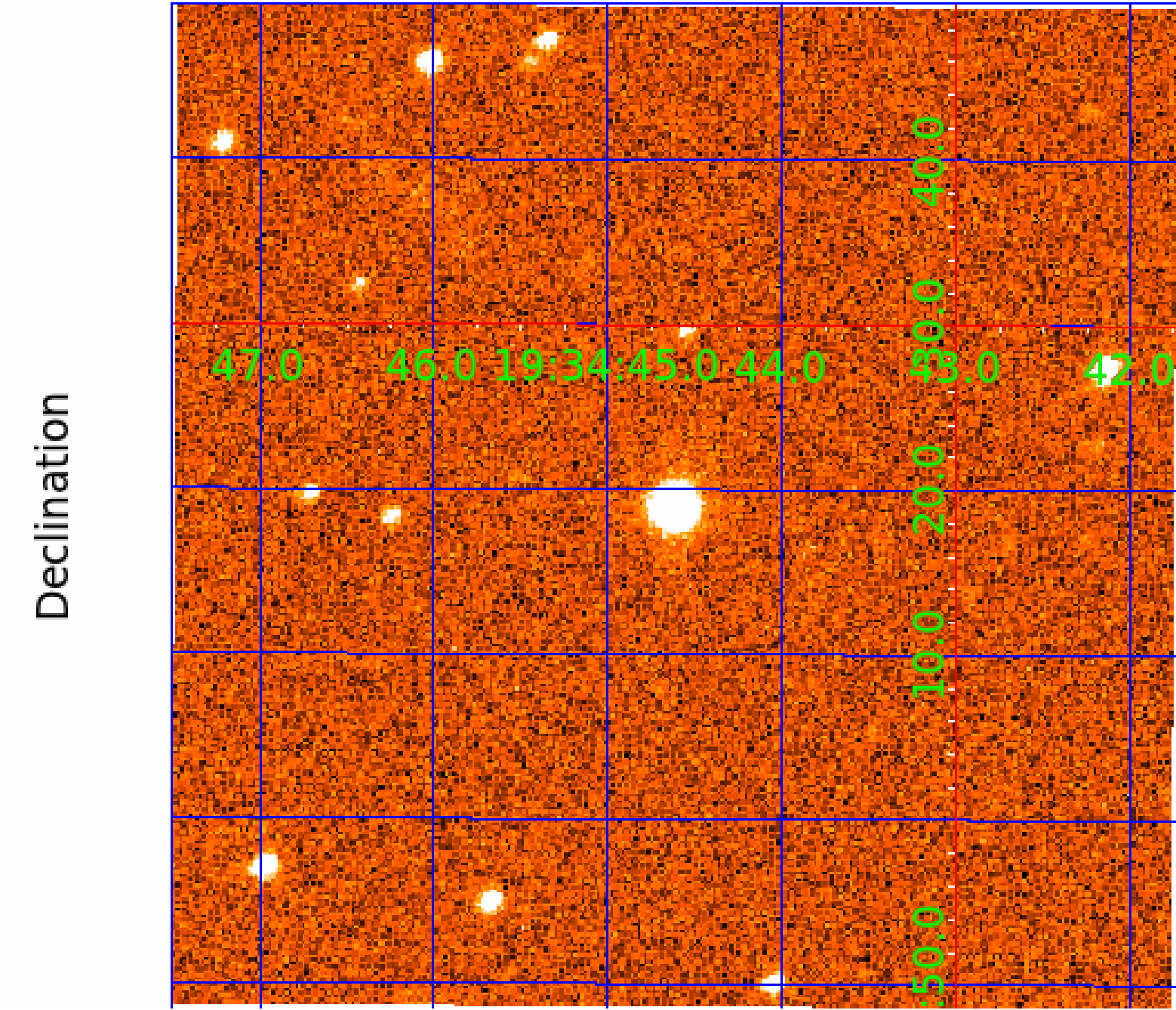
Q16 no OOT image



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



UKIRT Image



KIC 008957954

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})
008957954-01	OBS	6189.01	2.179926	132.128983	252088.2	4.884	19929.9	12675.0	0.97	6106	60.11	1042.28
008957954-02	OBS	No	232.118529	171.266105	708.3	1.893	15.7	3.2	0.97	6106	2.81	2.06
008957954-03	OBS	No	65.363913	139.006705	531.1	6.000	10.6	-1.0	0.97	6106	2.23	11.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008957954-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
008957954-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008957954-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS—HALO_GHOST

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 008957954-03

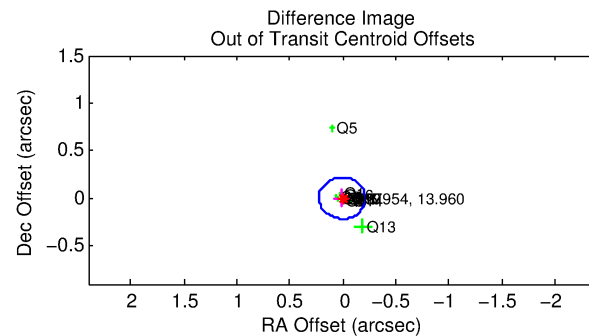
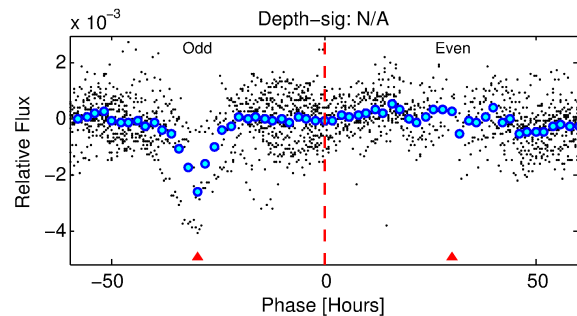
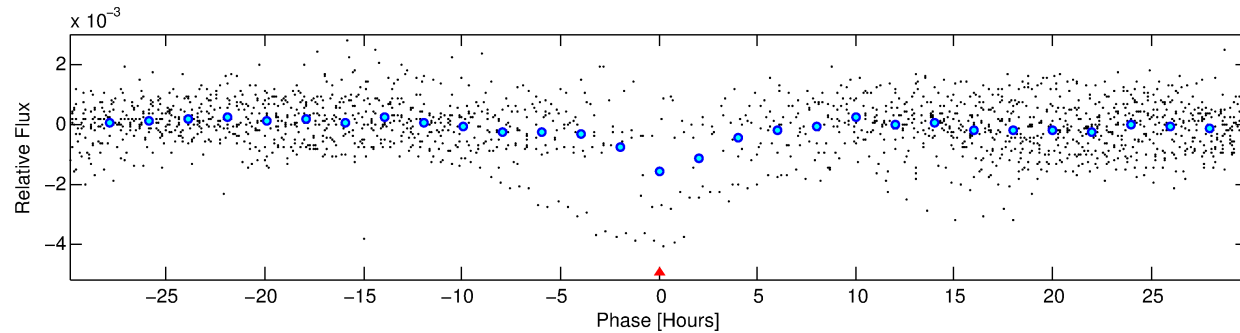
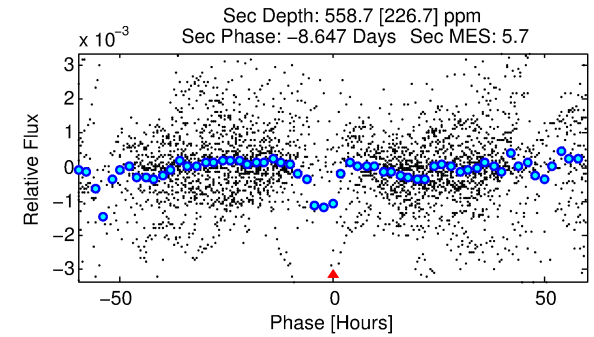
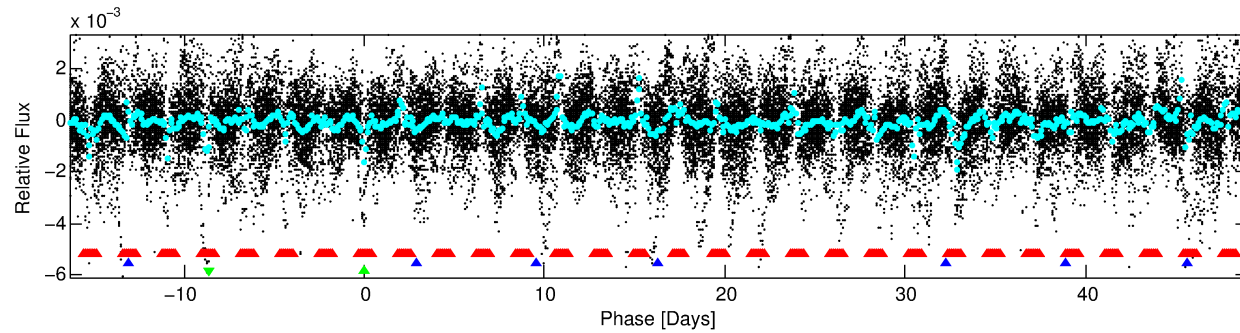
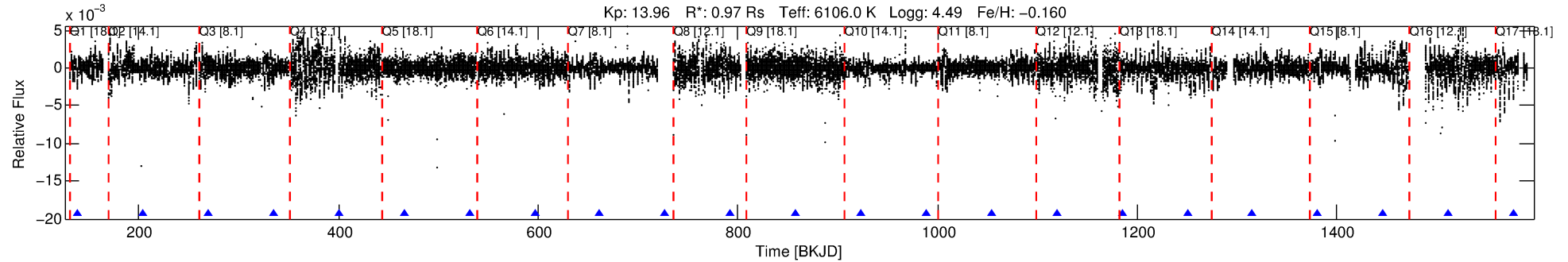
No Significant Match Found

DV One-Page Summary

KIC: 8957954 Candidate: 3 of 3 Period: 65.364 d

KOI: K06189 Corr: No Ephemeris Match

Kp: 13.96 R*: 0.97 Rs Teff: 6106.0 K Logg: 4.49 Fe/H: -0.160



TPS TCE Results:

Period = 65.36391 d

Epoch = 139.0067 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: 100.0% [196.01σ]

LongPeriod-sig: 100.0% [636.11σ]

ModelChiSquare2-sig: N/A

ModelChiSquareGof-sig: N/A

Bootstrap-pfa: N/A

RollingBand-fgt: 1.00 [14/14]

GhostDiagnostic-chr: -0.09925

Centroid-sig: 0.0%

Centroid-so: 0.314 arcsec [3.48σ]

OotOffset-rm: 0.006 arcsec [0.08σ]

KicOffset-rm: 0.075 arcsec [1.08σ]

OotOffset-st: 4/3/2/5 [14]

KicOffset-st: 4/3/2/5 [14]

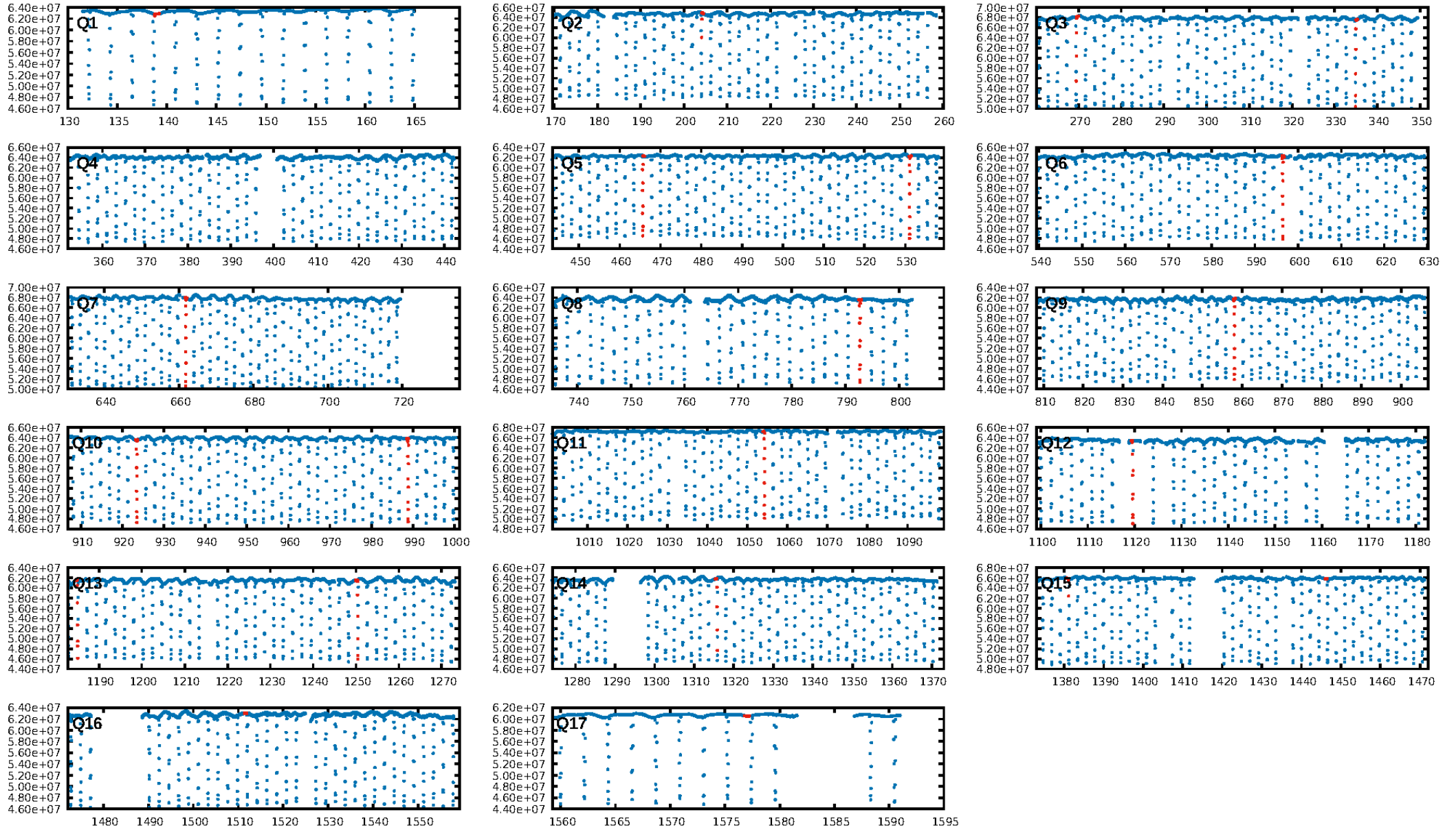
DiffImageQuality-fgm: 0.43 [6/14]

DiffImageOverlap-fno: 0.00 [0/14]

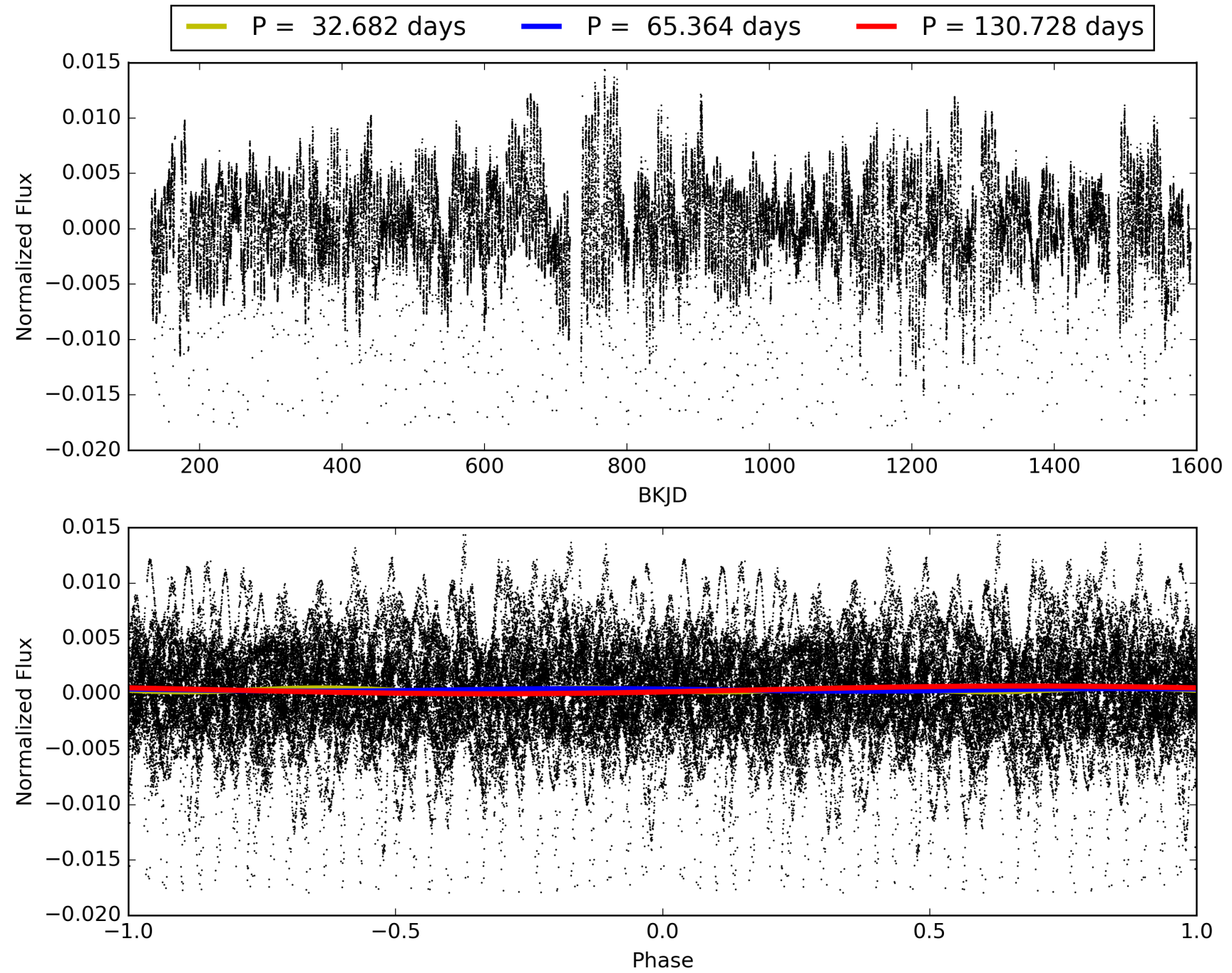
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:10:18 Z

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

TCE 008957954-03, PDC Light Curves

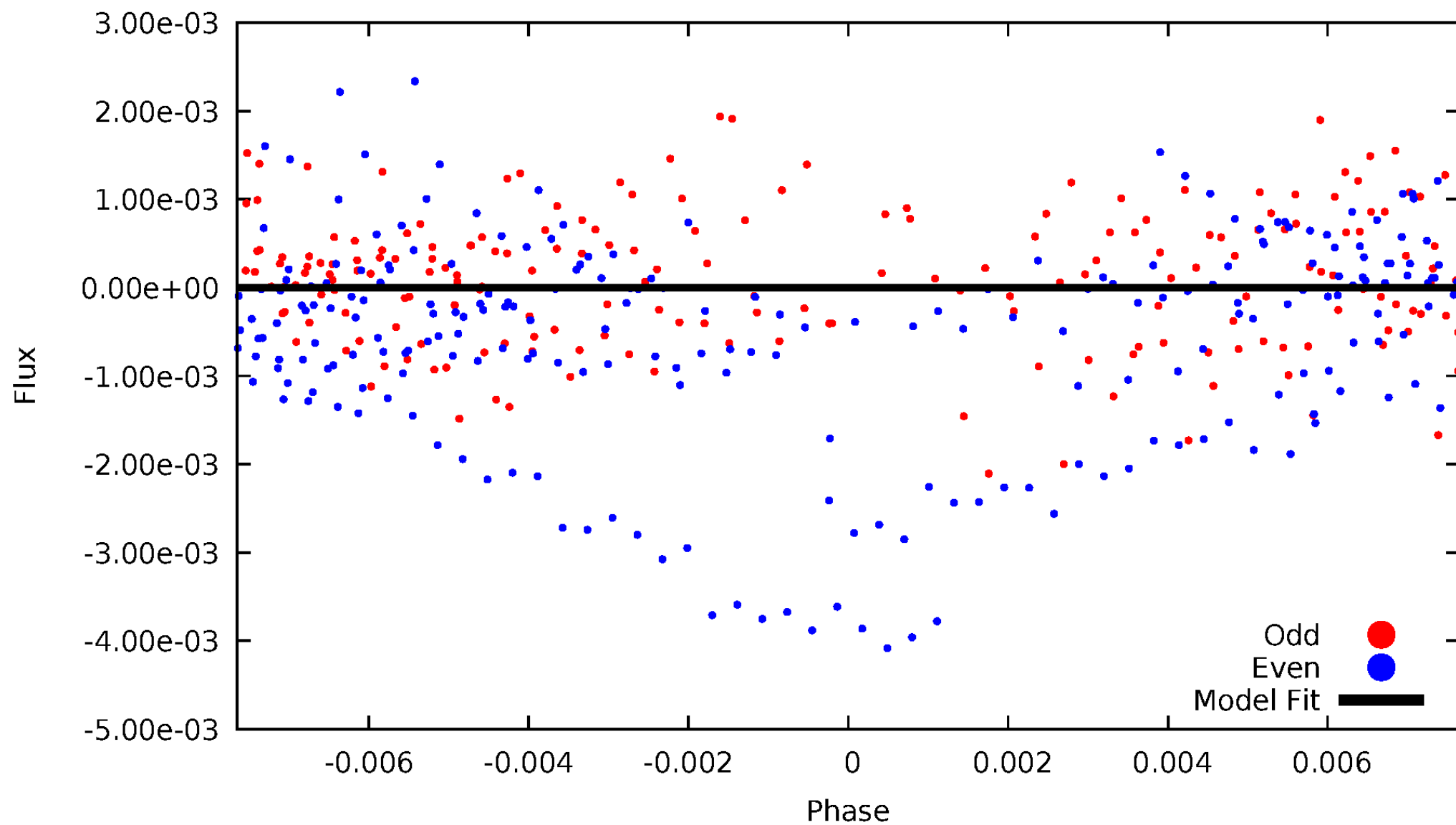


TCE 008957954-03



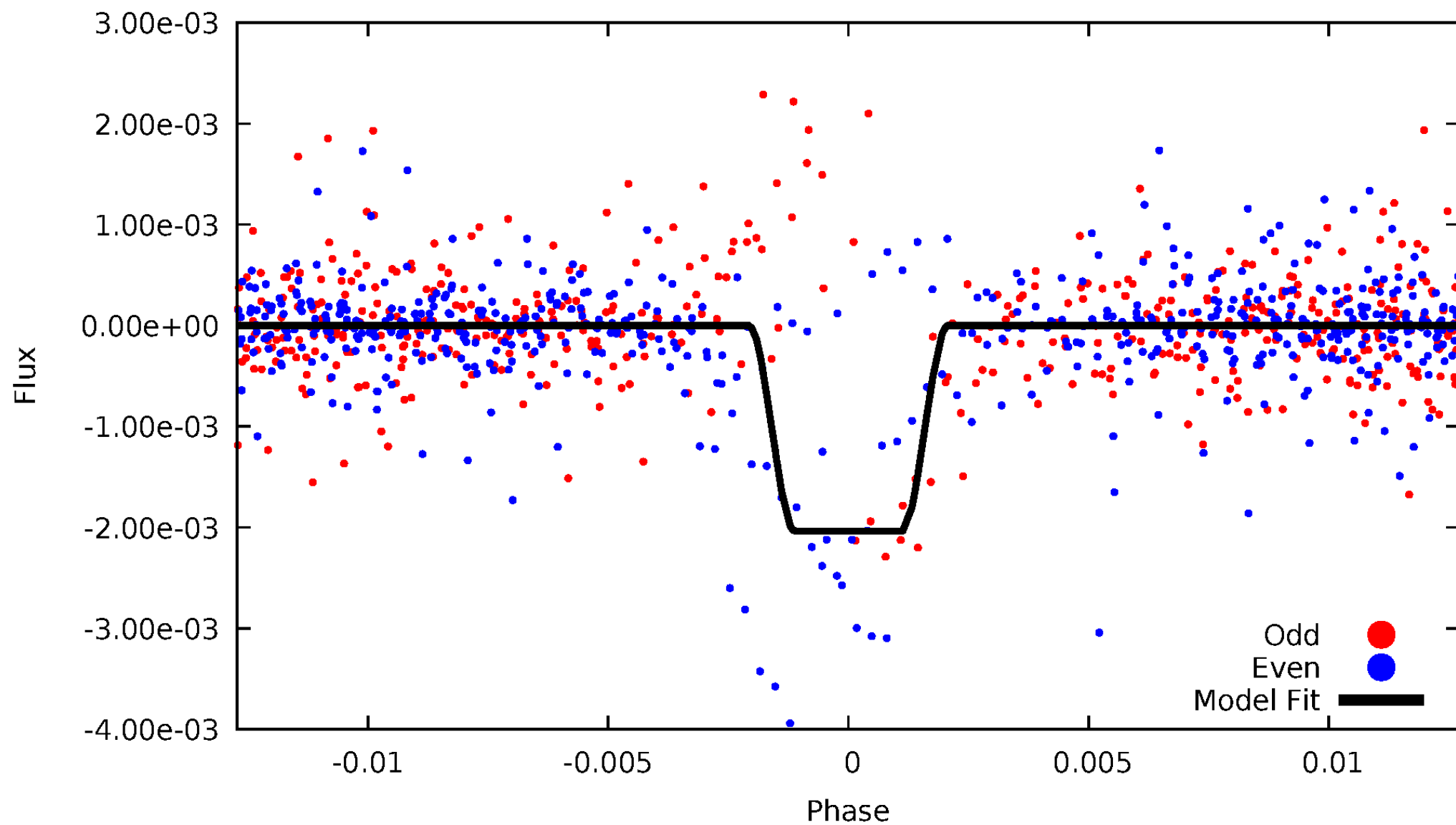
DV Odd/Even

TCE 008957954-03



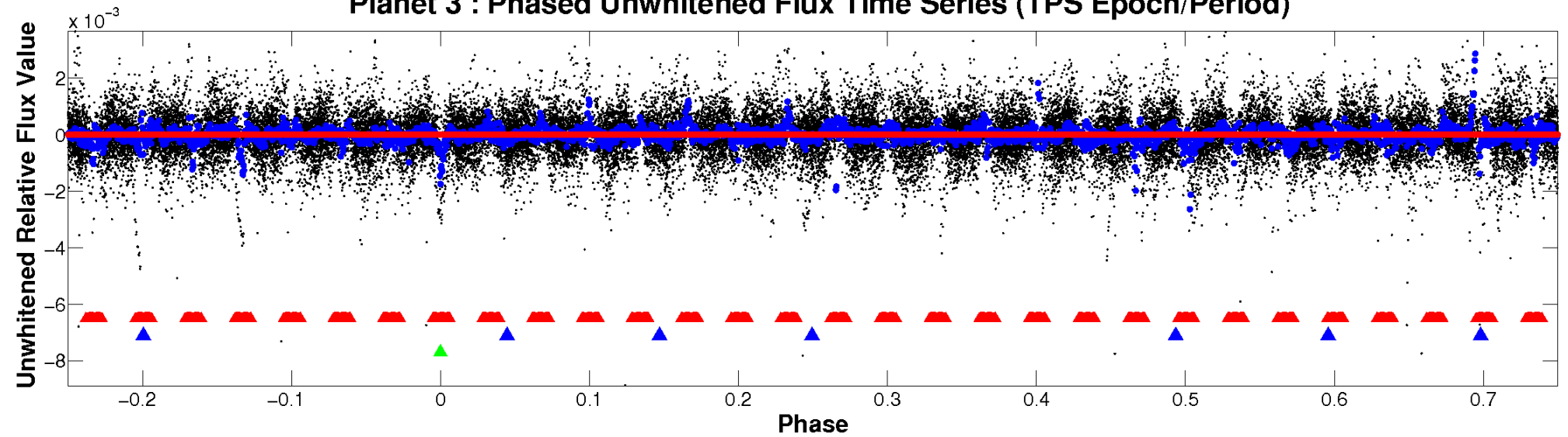
ALT Odd/Even

TCE 008957954-03

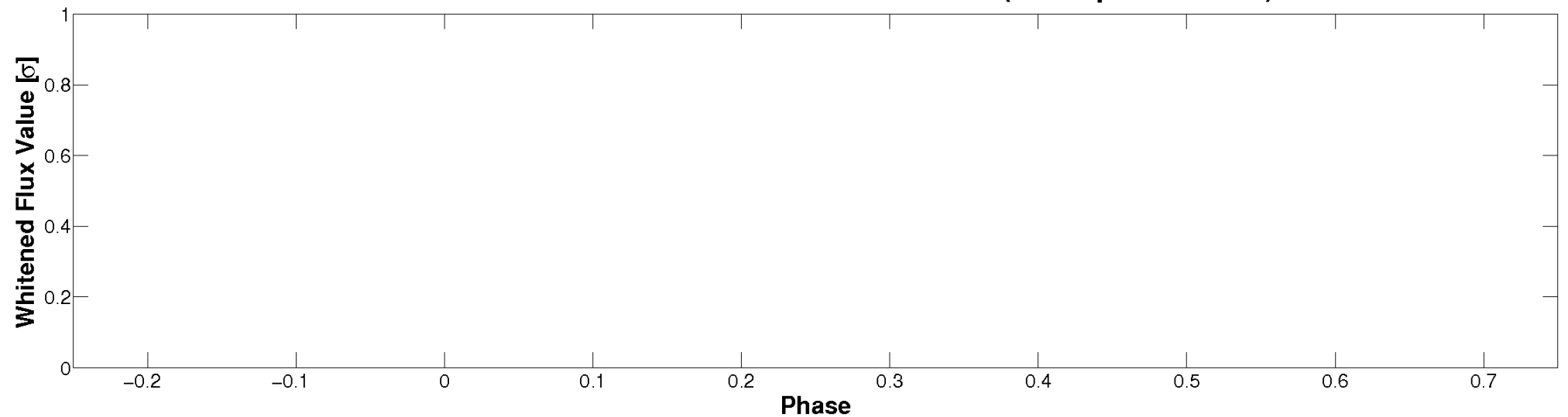


Non-Whitened Vs. Whitened Light Curve

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

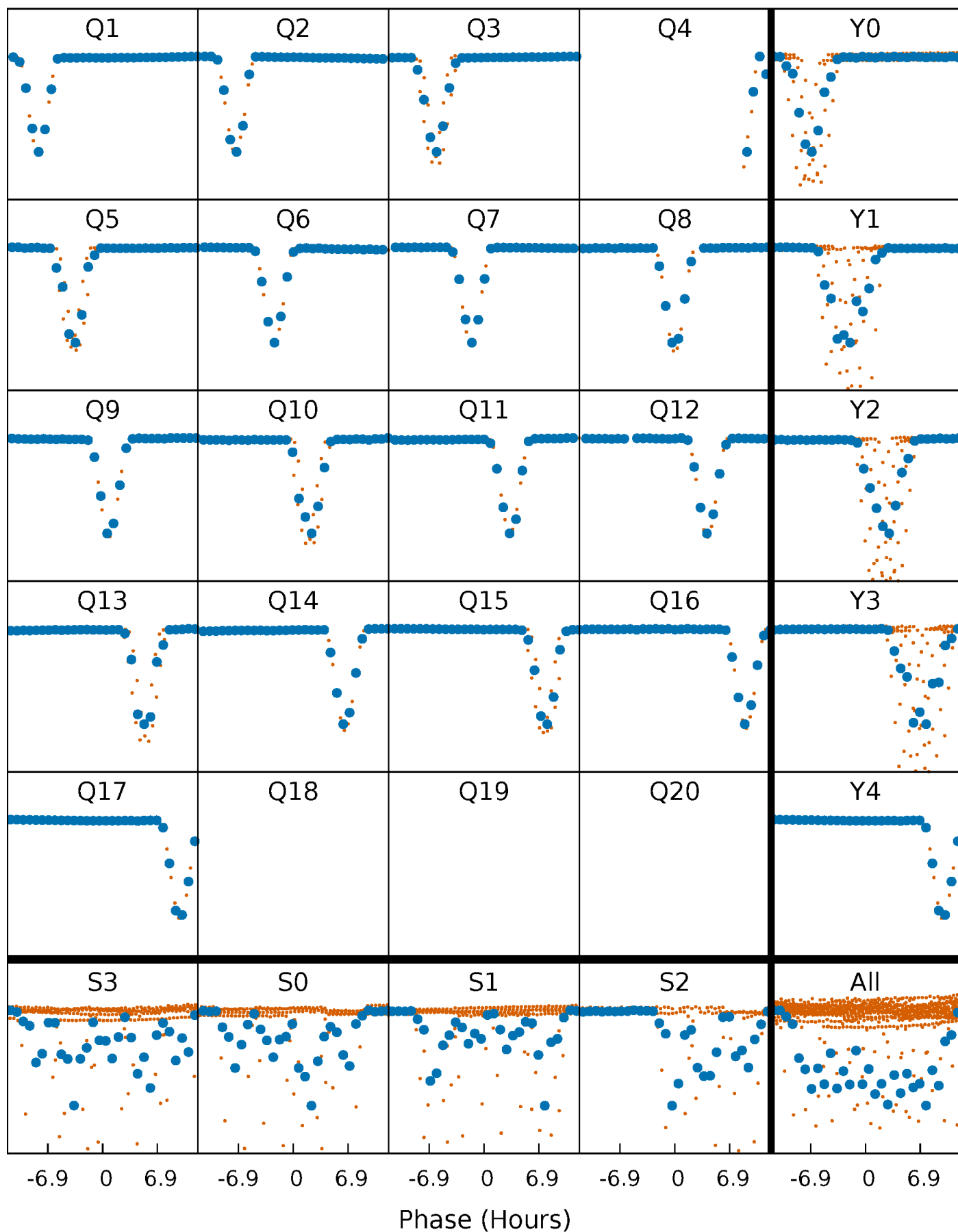


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



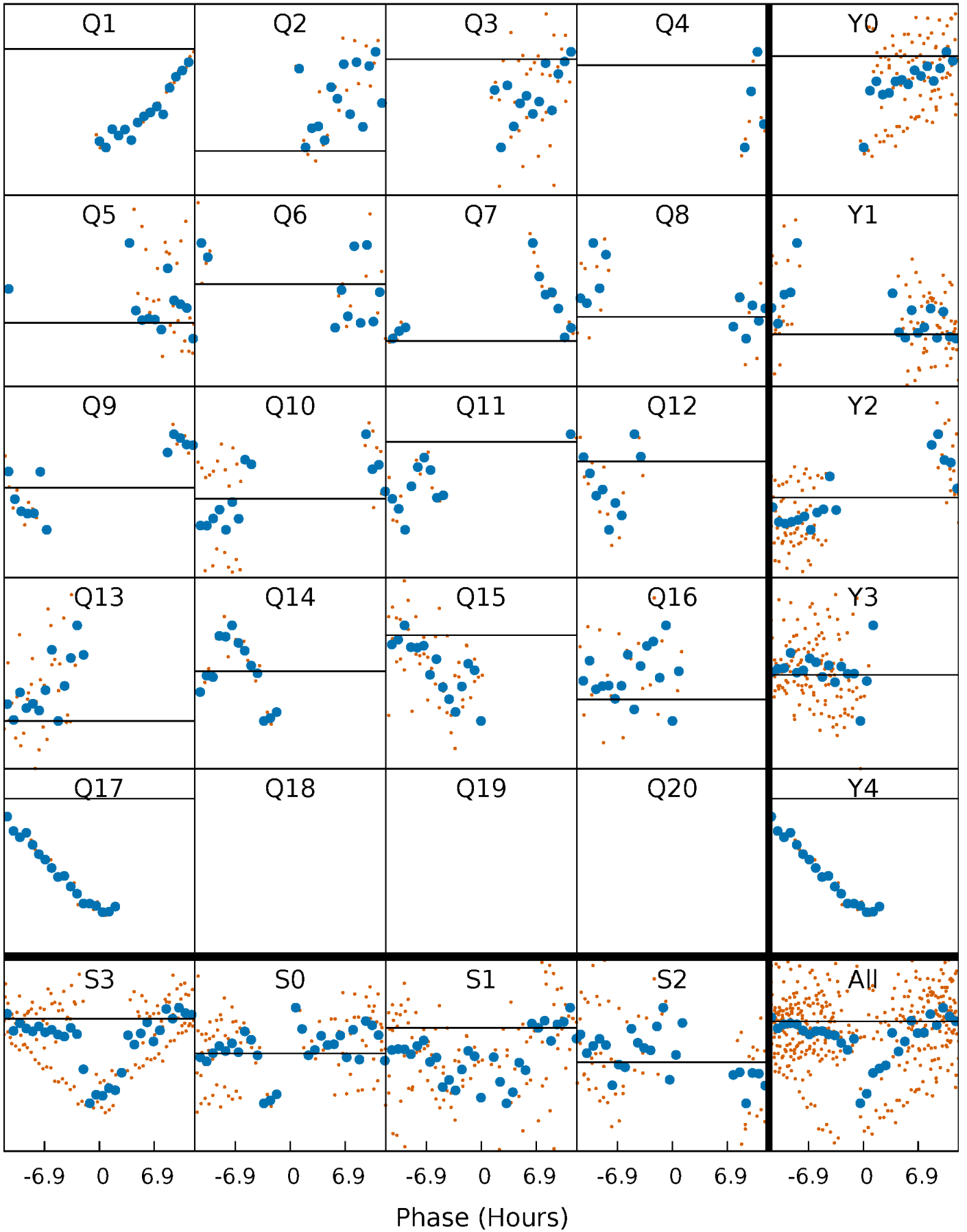
PDC Quarter-Phased Transit Curves

TCE 008957954-03 P= 65.363913 Days $T_0=139.006705$ (BKJD)



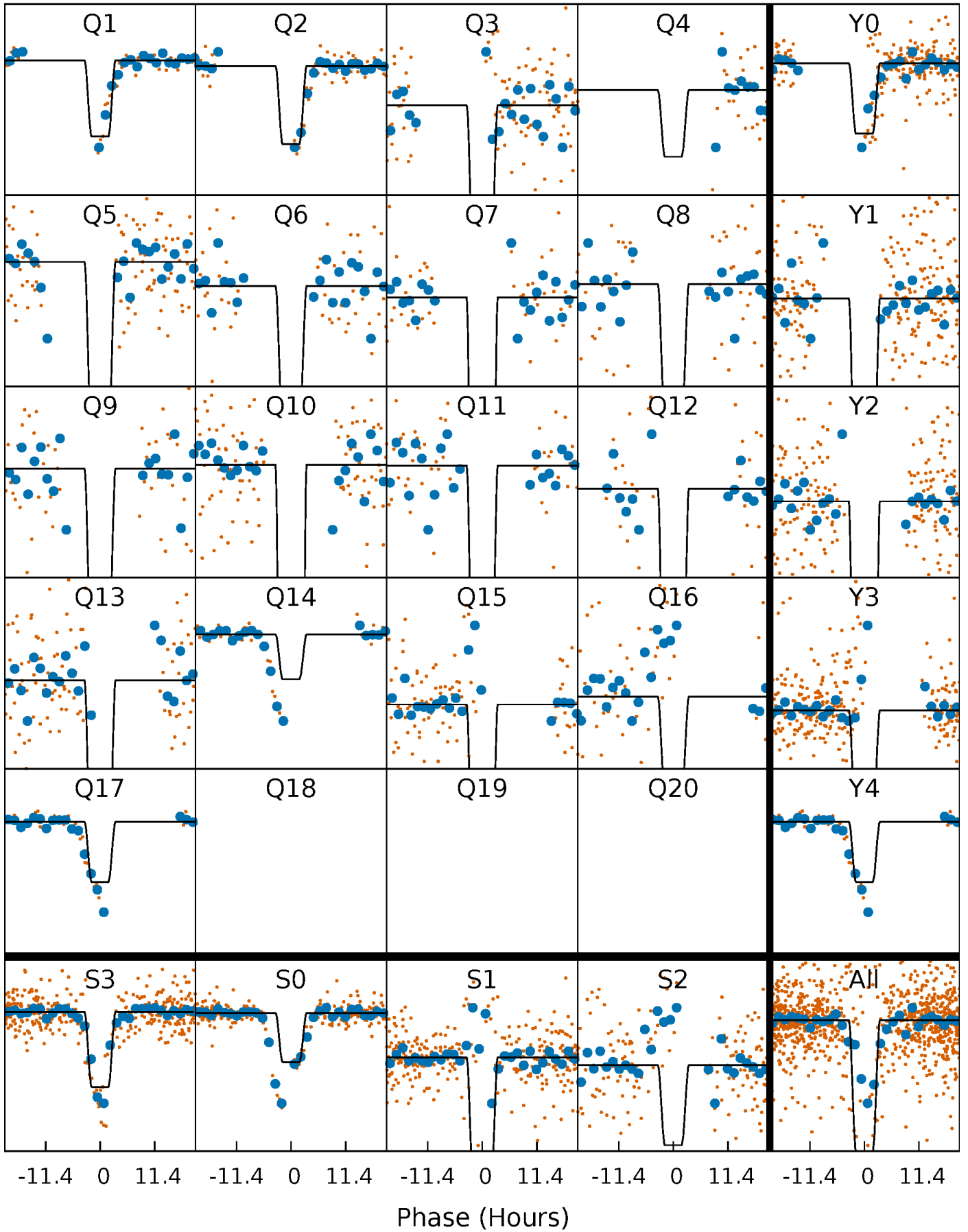
DV Quarter-Phased Transit Curves

TCE 008957954-03 P= 65.363913 Days $T_0=139.006705$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

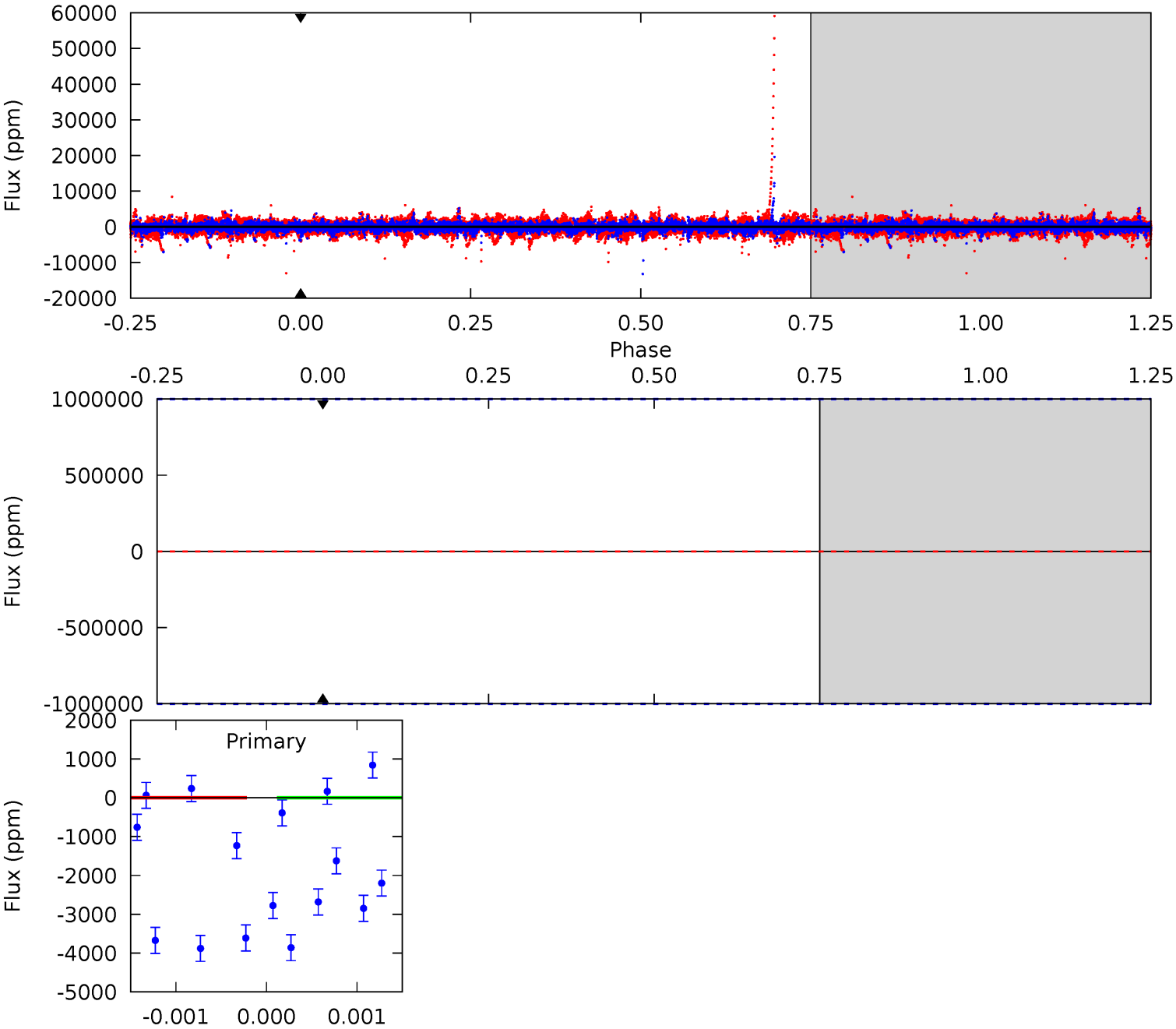
TCE 008957954-03 P= 65.363913 Days $T_0=139.026996$ (BKJD)



DV Model-Shift Uniqueness Test

008957954-03, P = 65.363913 Days, E = 73.642792 Days

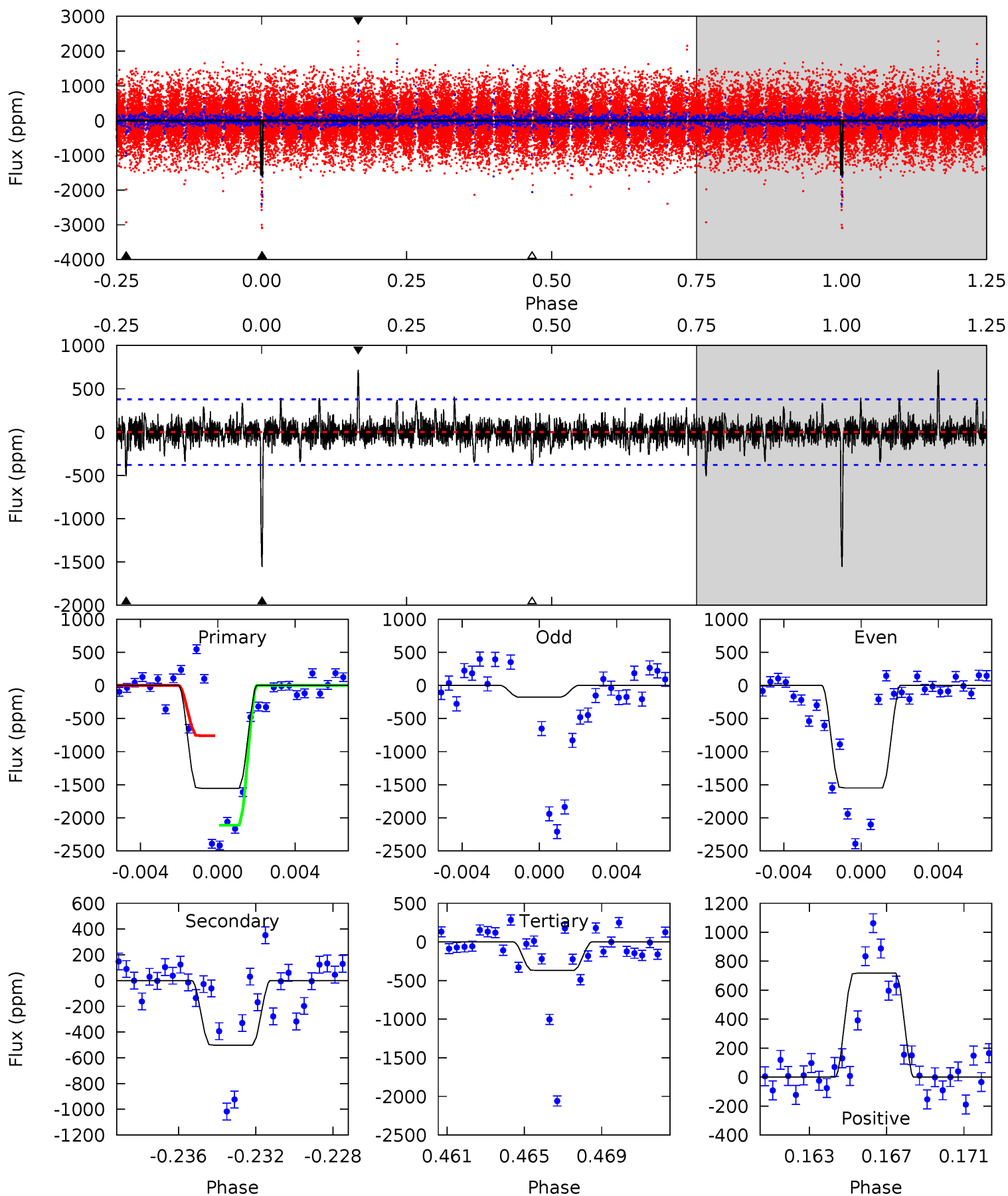
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008957954-03, P = 65.363913 Days, E = 73.663083 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	6.89	5.05	9.86	5.20	2.87	1.12	16.3	11.5	1.84	-2.98	10.7	0.95	0.32	9.34



Stellar Parameters For KIC 008957954

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6106^{+163}_{-199}	$4.487^{+0.054}_{-0.229}$	$-0.160^{+0.300}_{-0.300}$	$0.966^{+0.324}_{-0.101}$	$1.043^{+0.140}_{-0.140}$	$1.631^{+0.461}_{-0.889}$
	+3%/-3%	+1%/-5%	+188%/-188%	+34%/-10%	+13%/-13%	+28%/-54%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008957954-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$8.53^{+9.15}_{-6.09}$	666^{+54}_{-32}	4028^{+20658}_{-28301}	$617^{+160660}_{-153746}$
Alt.	-502 ± 73	$8.96^{+9.73}_{-6.19}$	665^{+54}_{-35}	3628^{+2186}_{-717}	350^{+3282}_{-273}

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

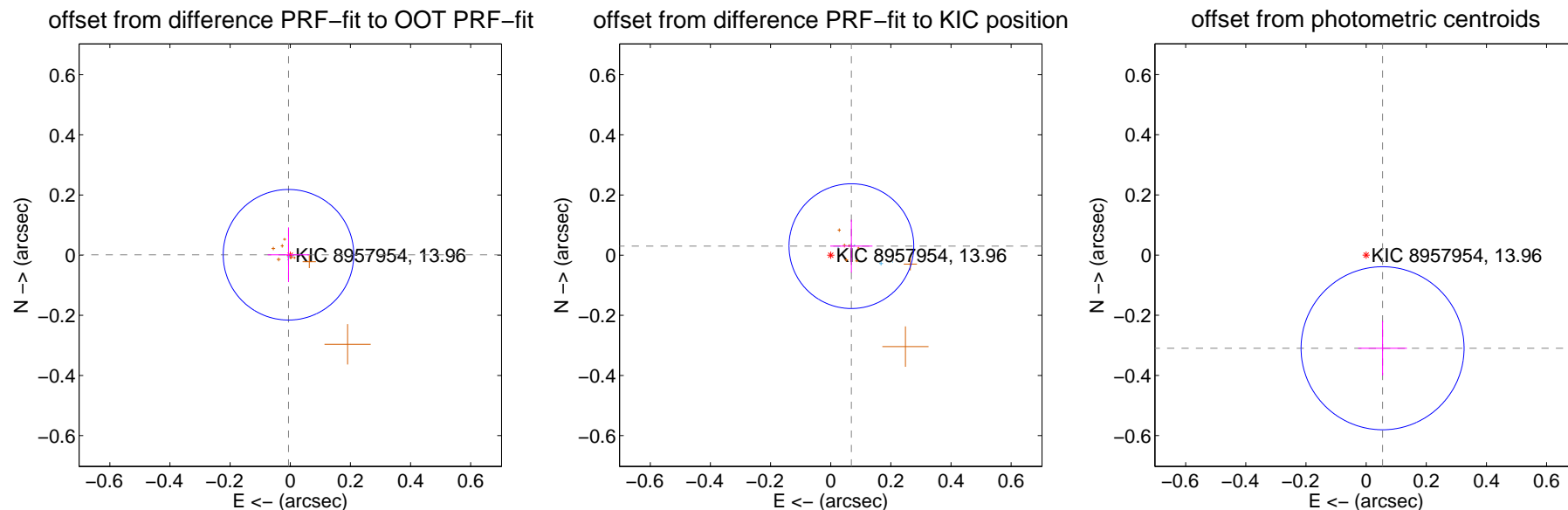
DV Centroid Data

Supplemental centroid analysis for 008957954-03. Kepler magnitude: 13.96. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

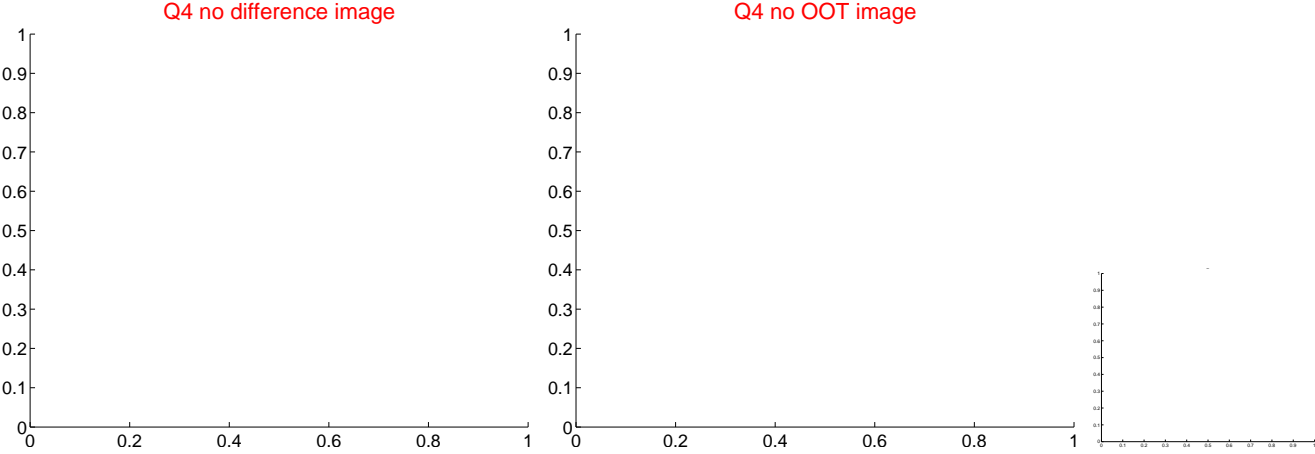
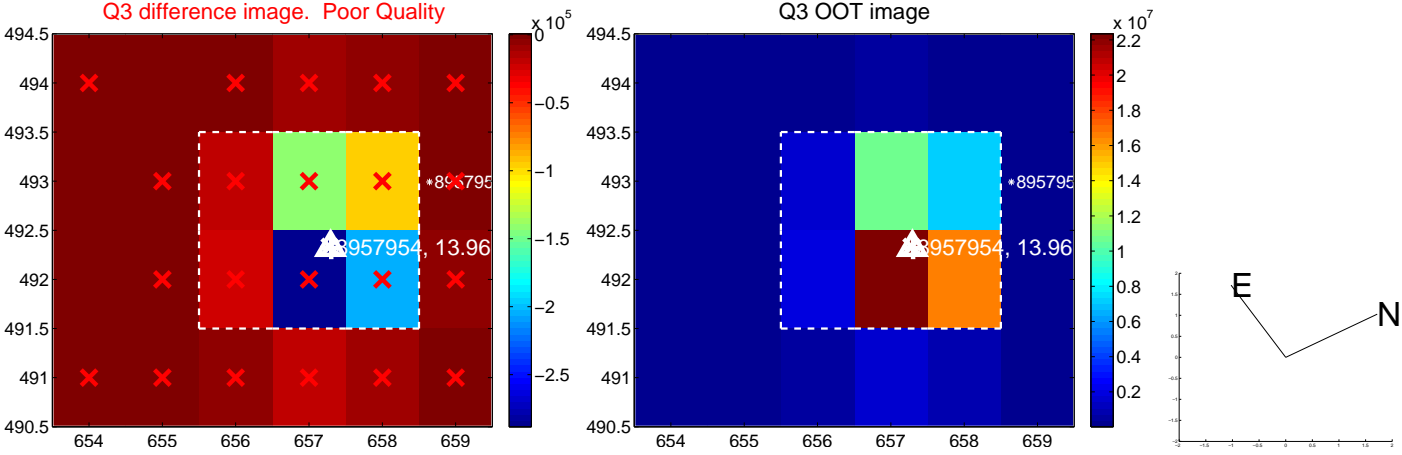
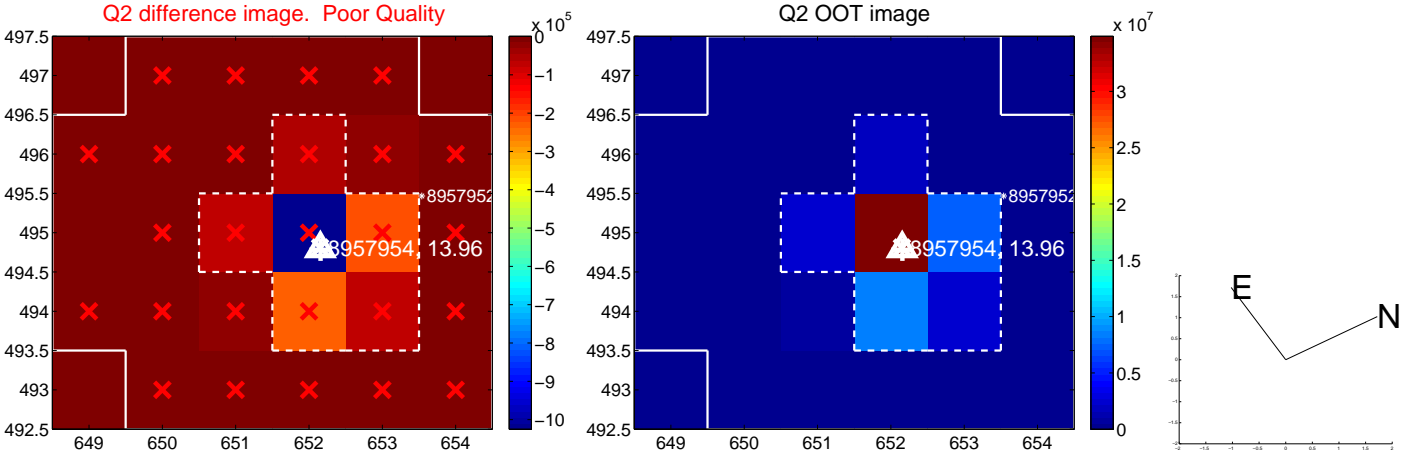
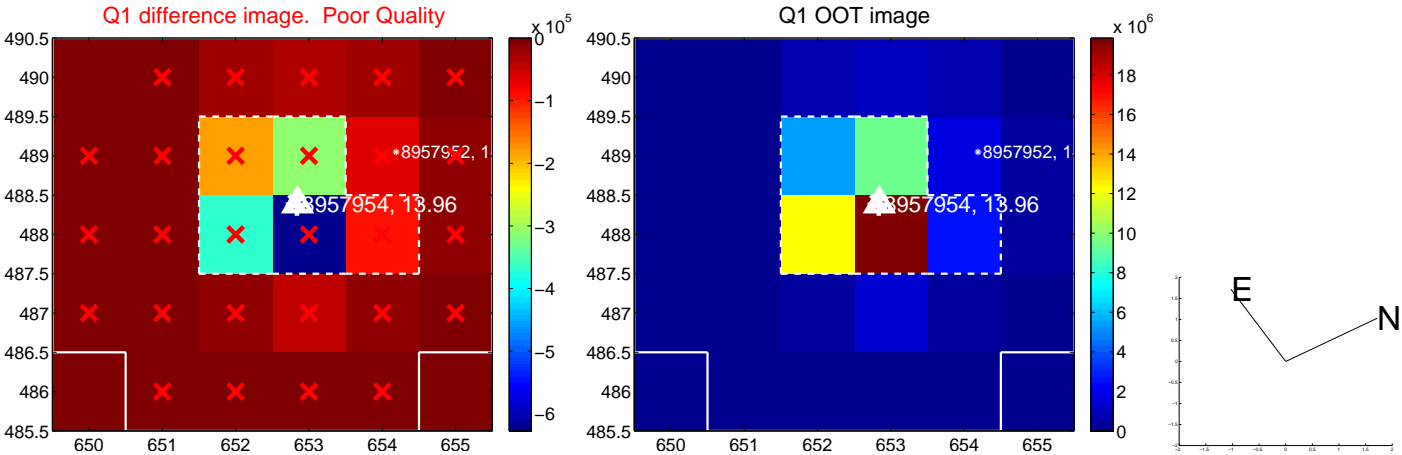
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.006 ± 0.072	0.08	0.006 ± 0.069	0.001 ± 0.091
PRF-fit source offset from KIC position	0.075 ± 0.069	1.08	-0.069 ± 0.070	0.030 ± 0.088
photometric centroid source offset	0.31 ± 0.09	3.48	-0.05 ± 0.08	-0.31 ± 0.09

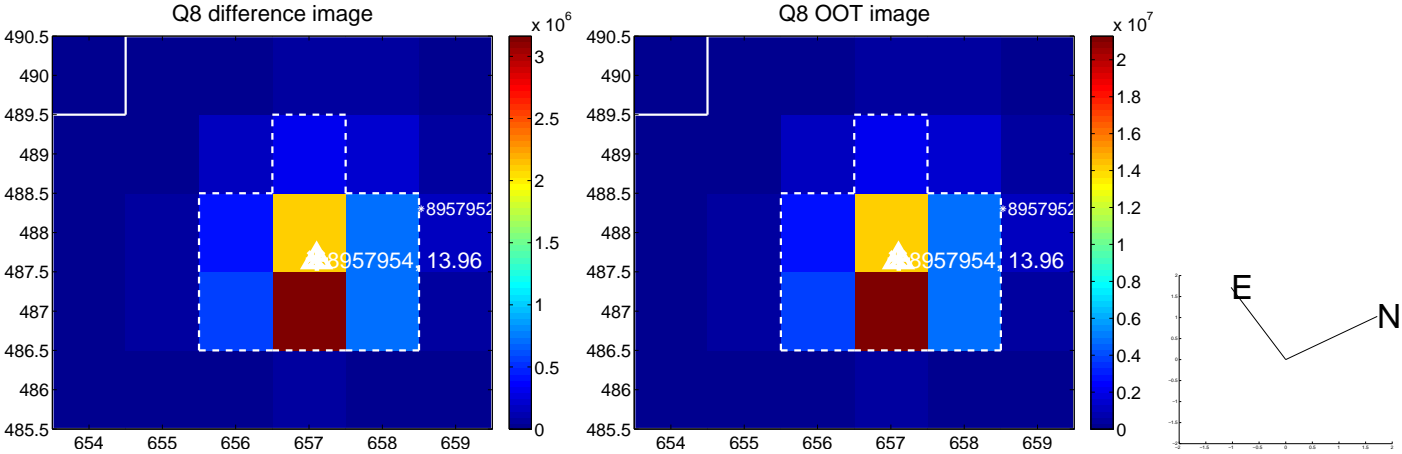
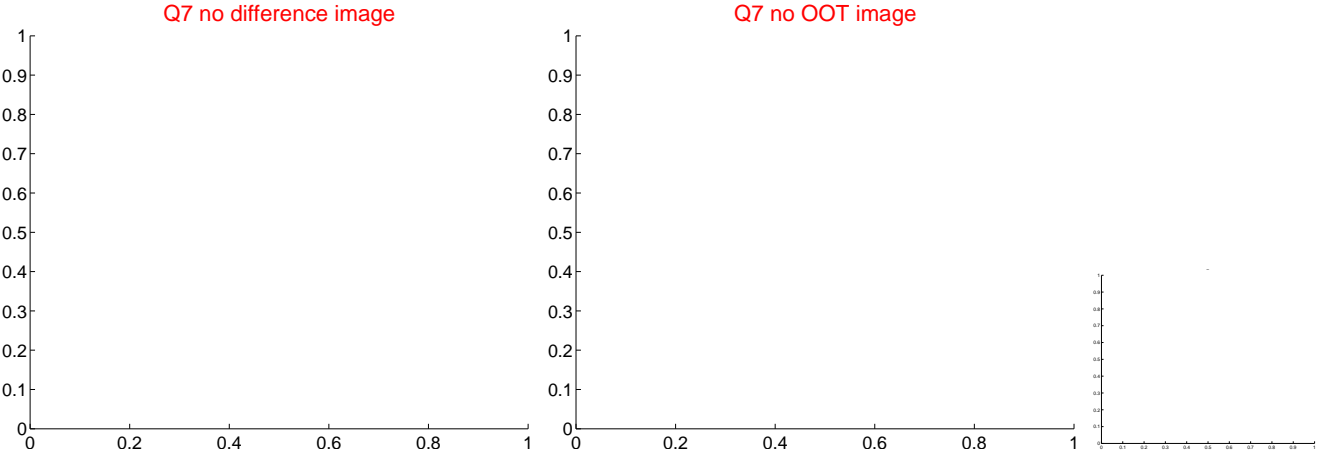
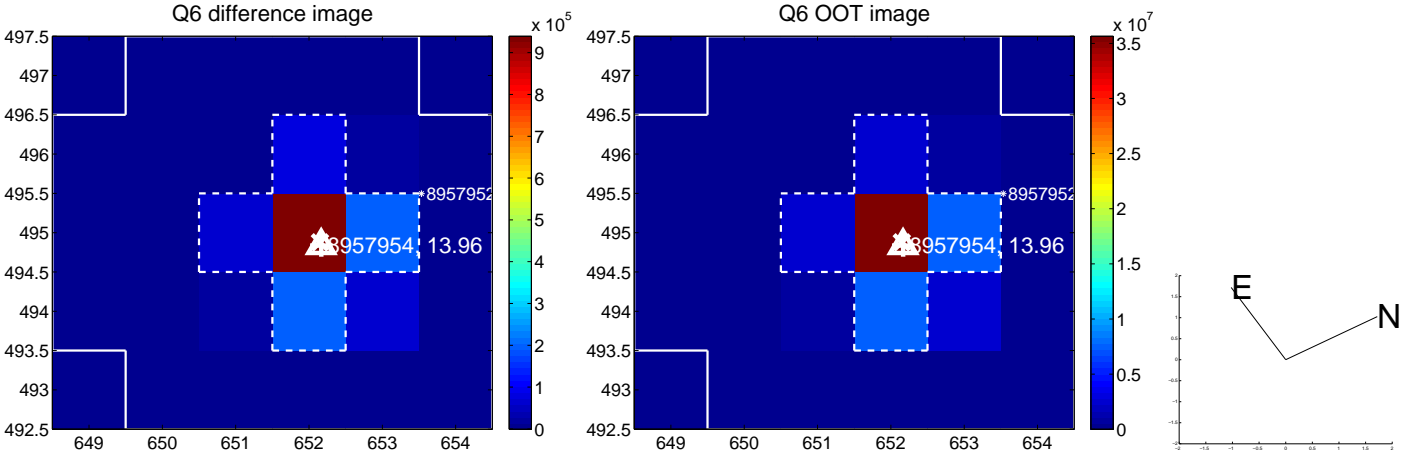
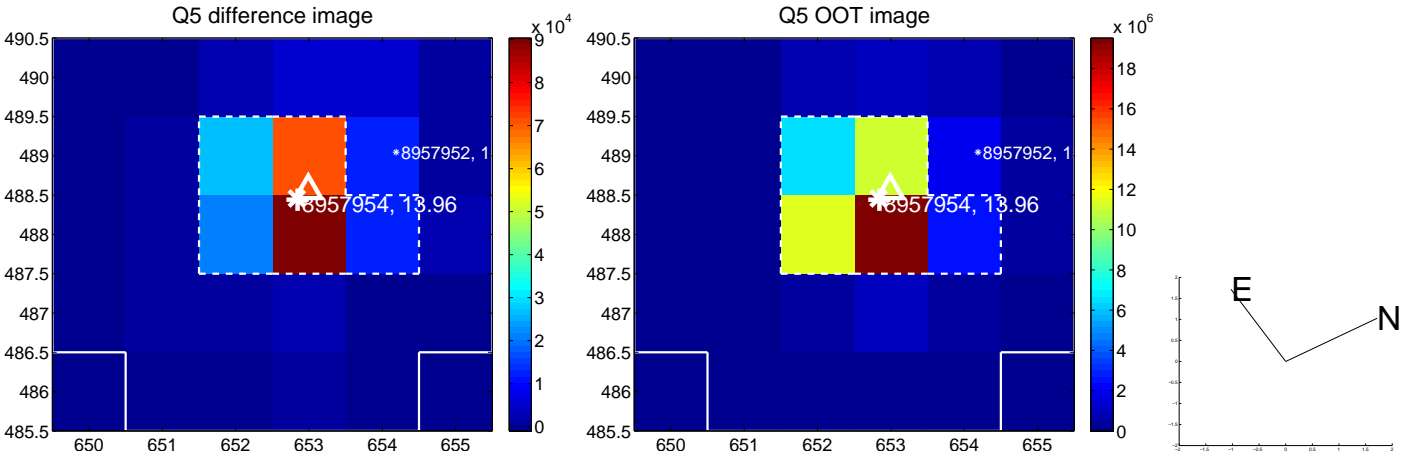


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

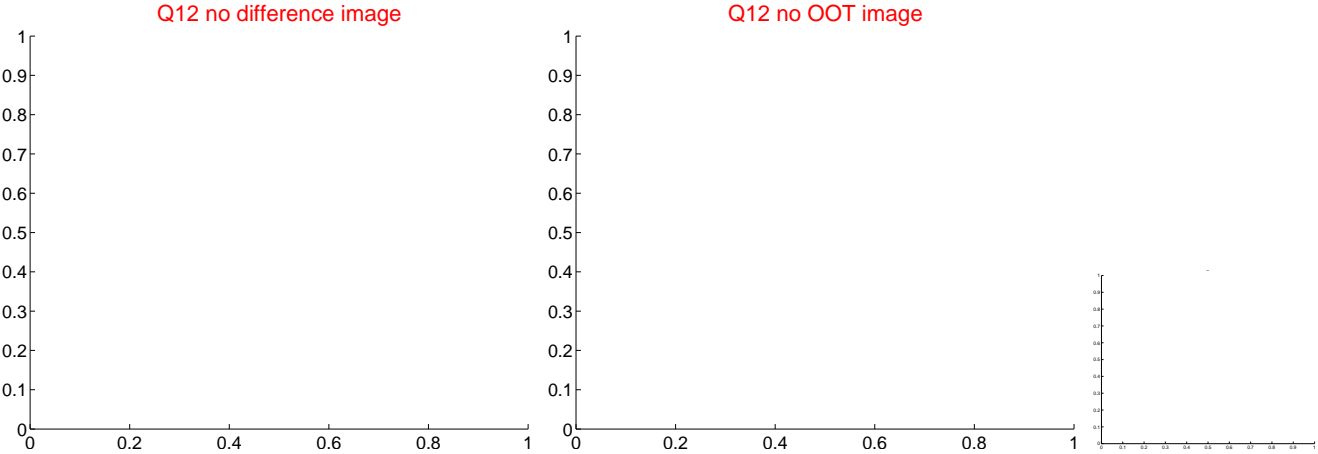
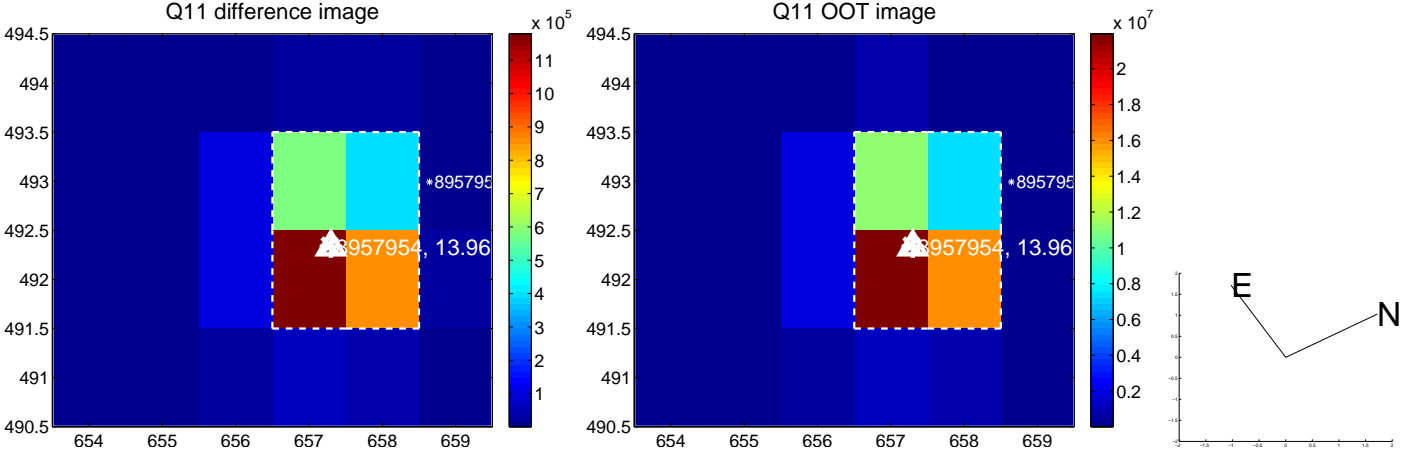
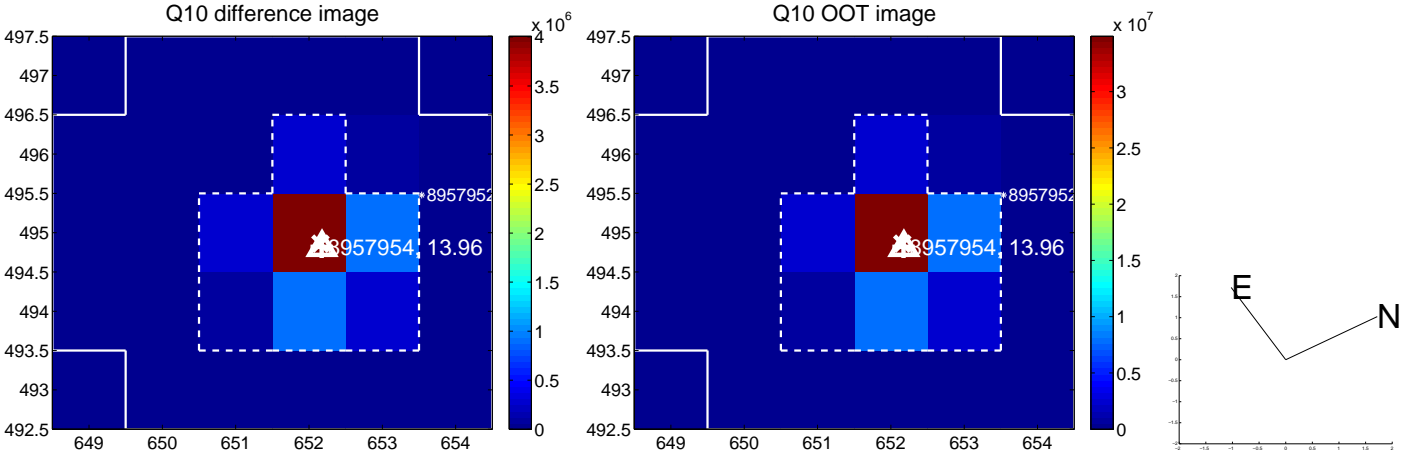
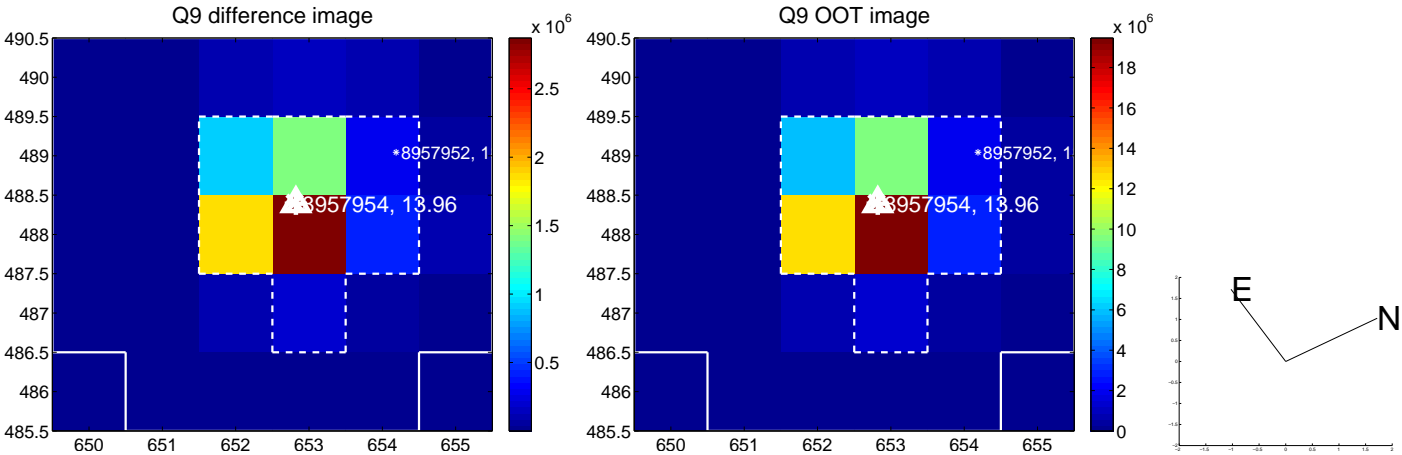
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



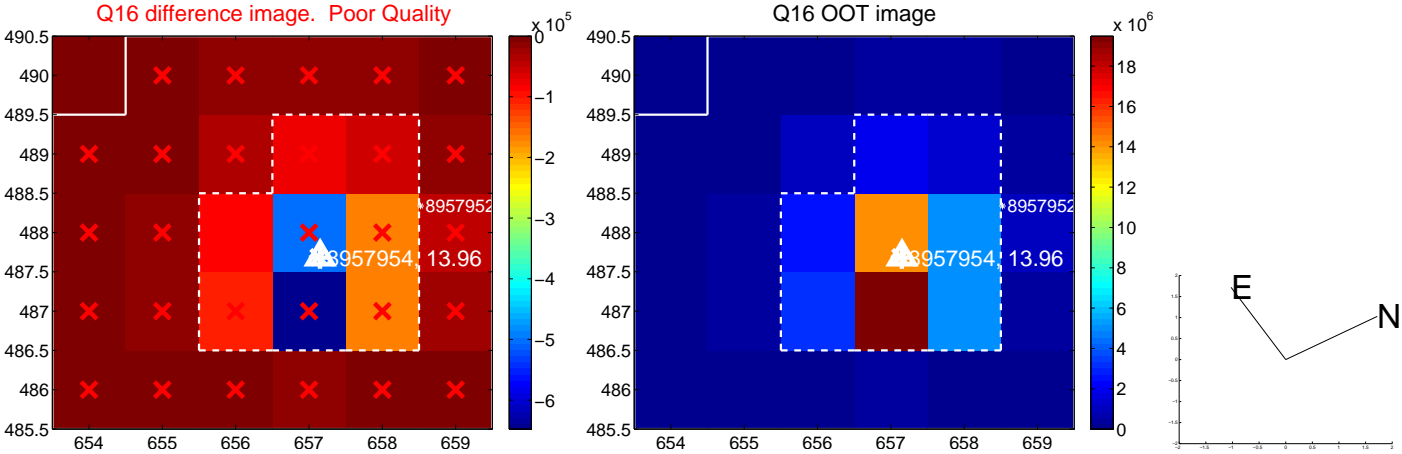
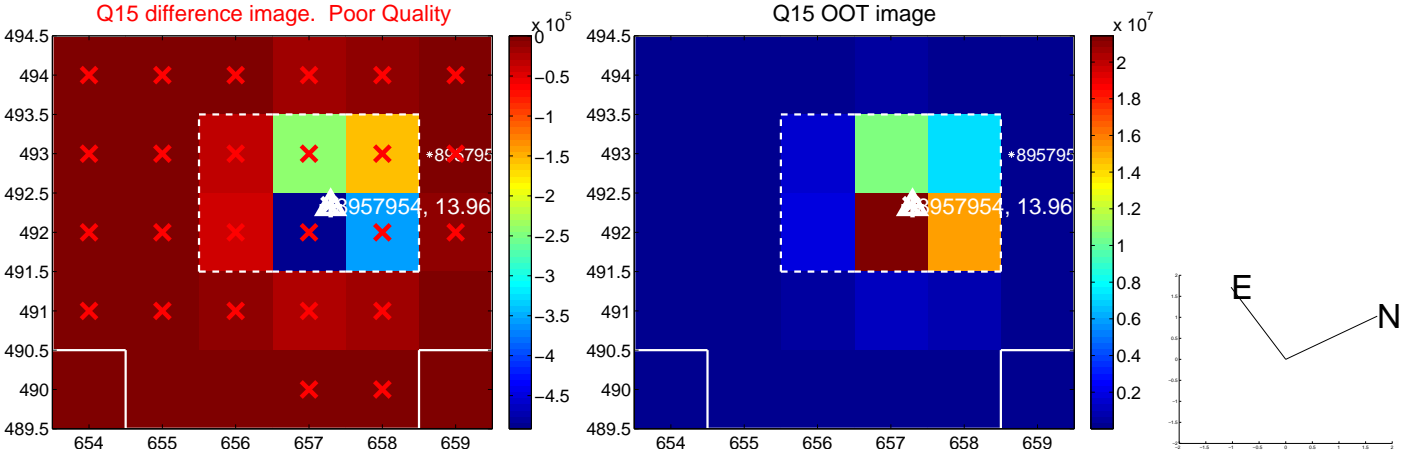
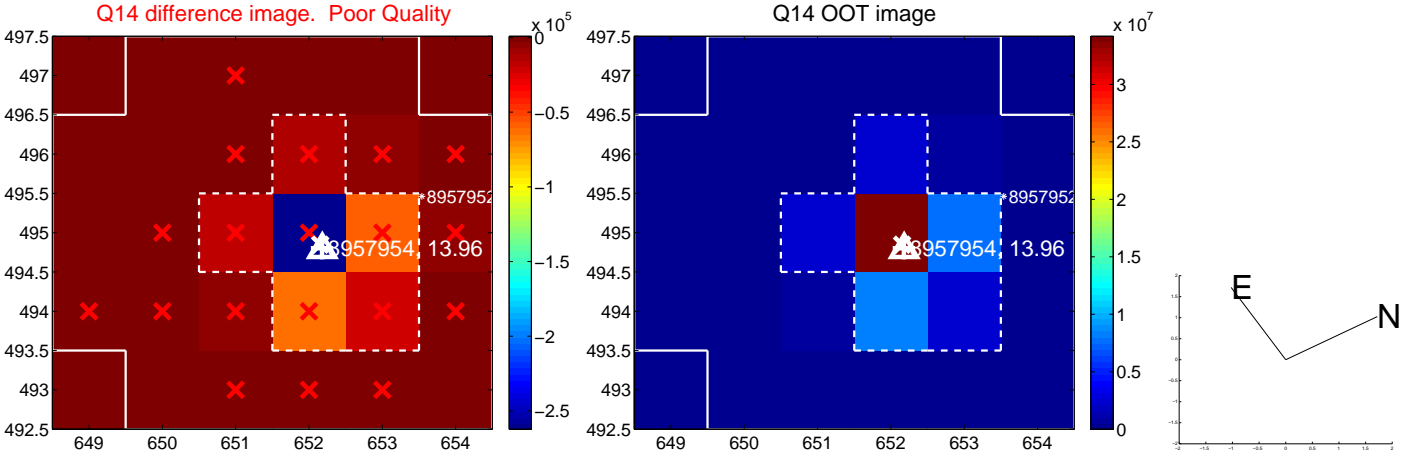
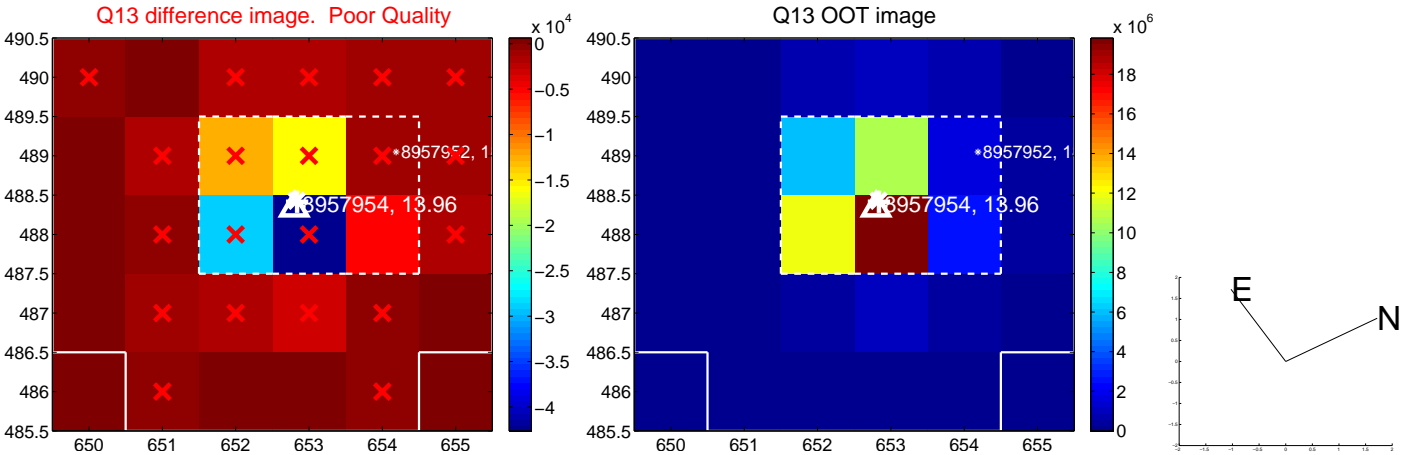
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



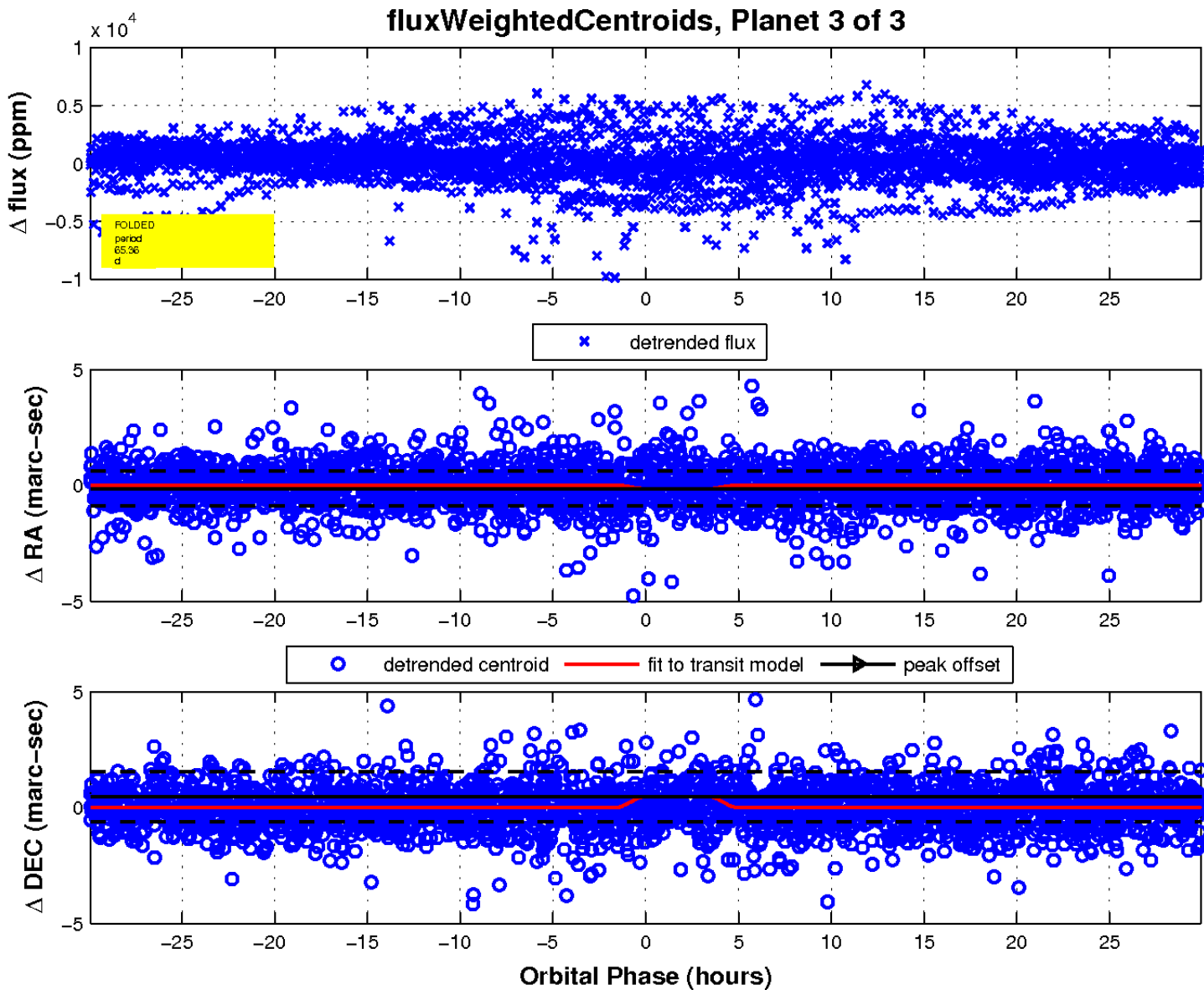
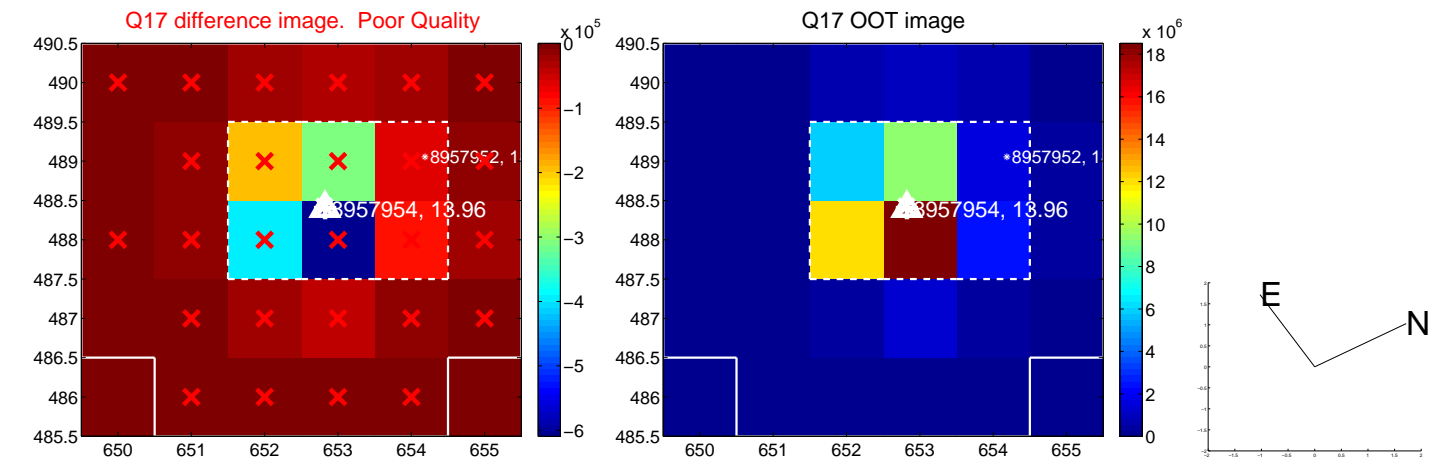
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

