

KIC 006677256

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})
006677256-01	OBS	1243.01	3.125811	134.481210	240.9	1.870	26.7	31.0	1.18	6358	2.15	1075.79
006677256-02	OBS	No	3.125808	132.916111	57.8	2.007	7.5	8.0	1.18	6358	1.05	1075.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006677256-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
006677256-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

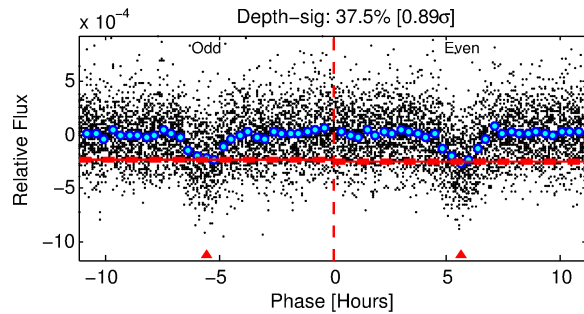
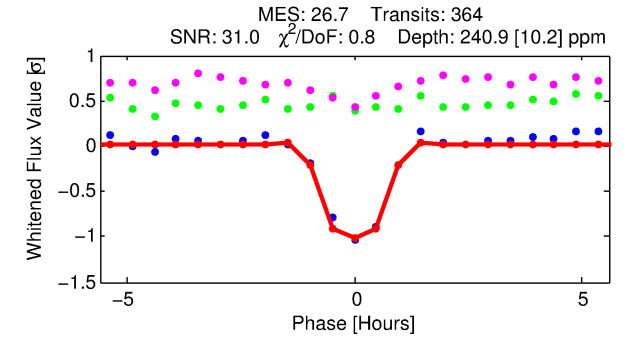
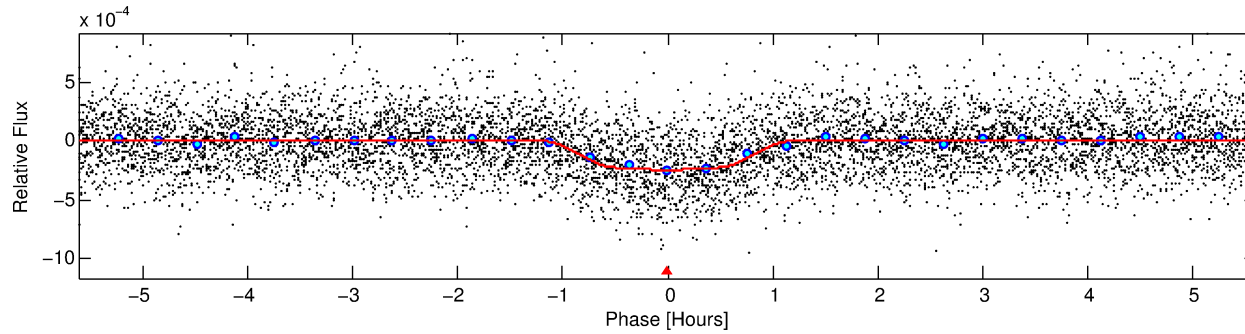
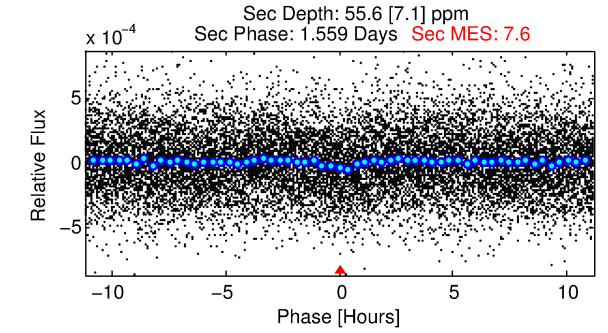
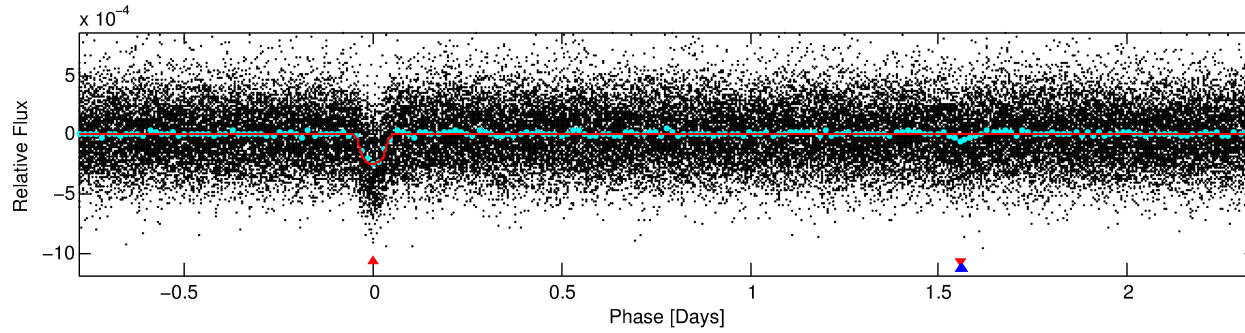
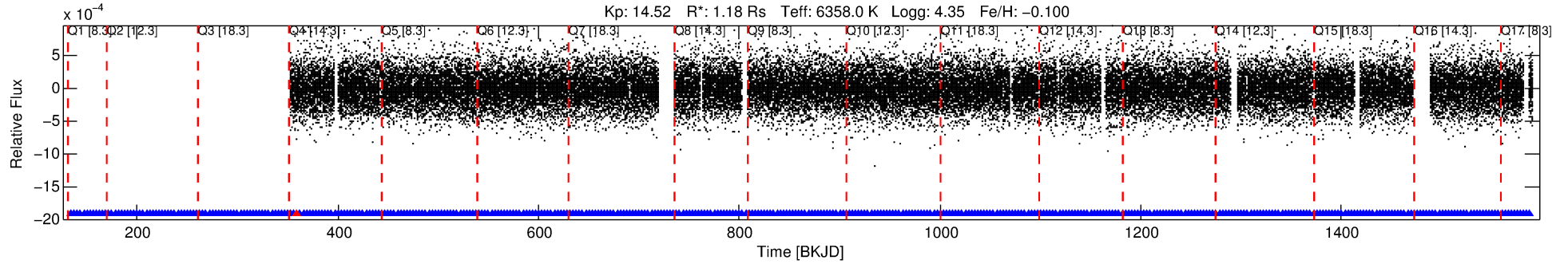
Ephemeris Match Information For 006677256-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006677256-01	6677256	3622.01	6677267	1:1	19.5	-4	-3	12.77	14.52	27.25	Direct-PRF	0	0.18	0.07

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6677256 Candidate: 1 of 2 Period: 3.126 d
KOI: K01243.01 Corr: 0.997



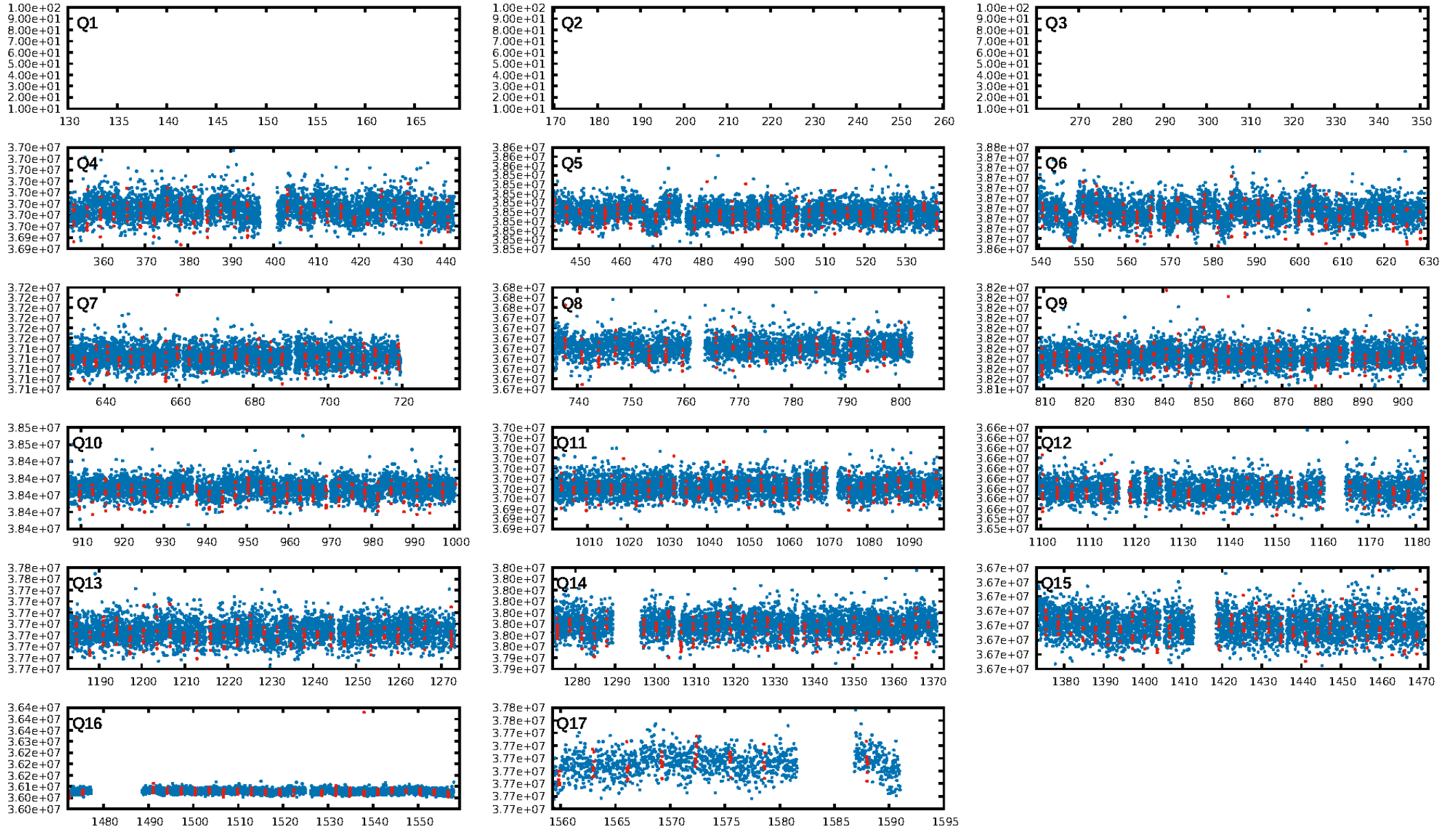
DV Fit Results:

Period = 3.12581 [0.00001] d
Epoch = 134.4812 [0.0011] BKJD
Rp/R* = 0.0167 [0.0035]
a/R* = 6.15 [6.94]
b = 0.90 [0.25]
Seff = 1075.79 [440.04]
Teq = 1460 [149] K
Rp = 2.15 [0.83] Re
a = 0.0436 [0.0116] AU
Ag = 12.57 [7.29] [1.59σ]
Teffp = 4251 [495] K [5.40σ]

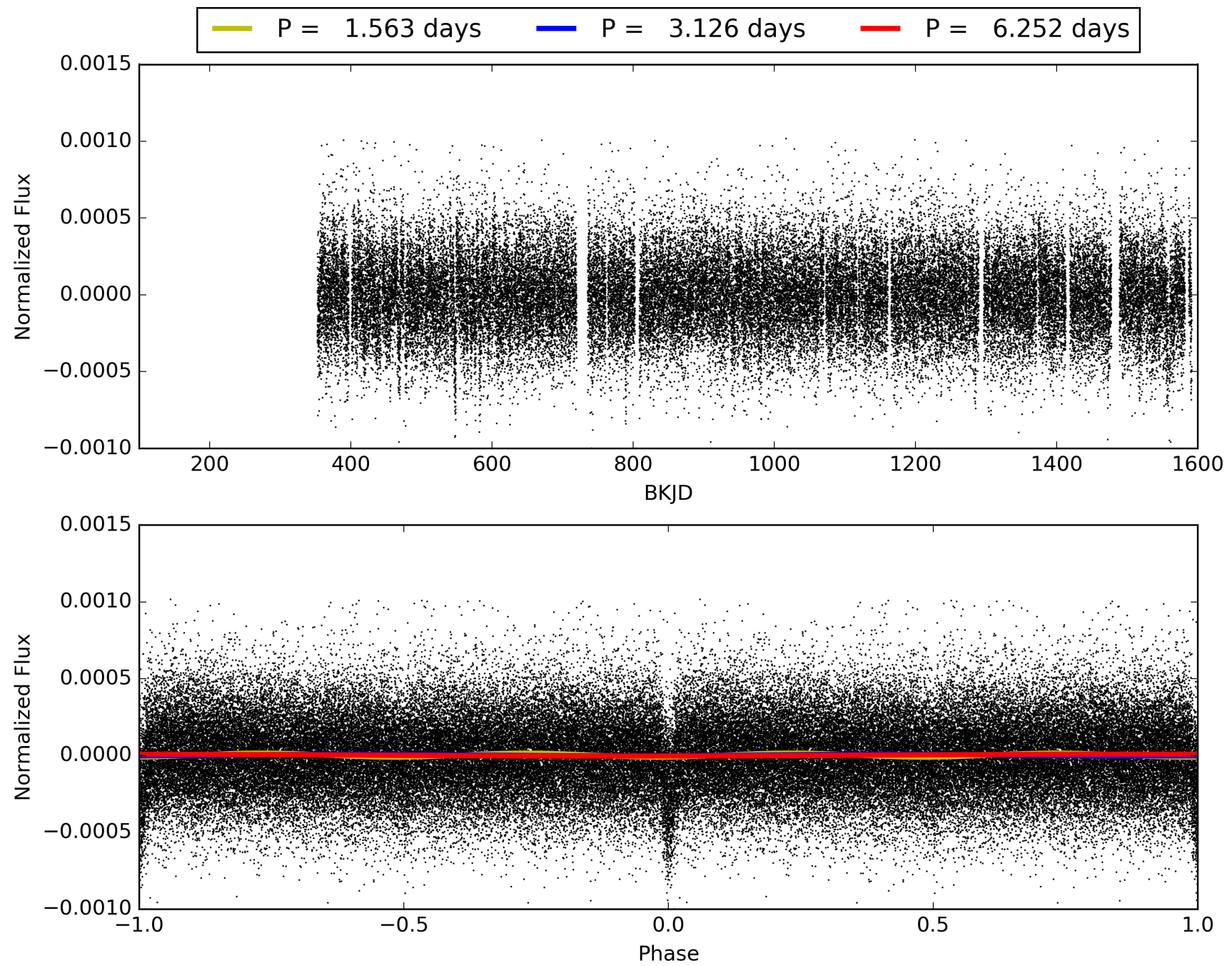
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.48e-156
RollingBand-fgt: 1.00 [355/356]
GhostDiagnostic-chr: -0.4105
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006677256-01, PDC Light Curves

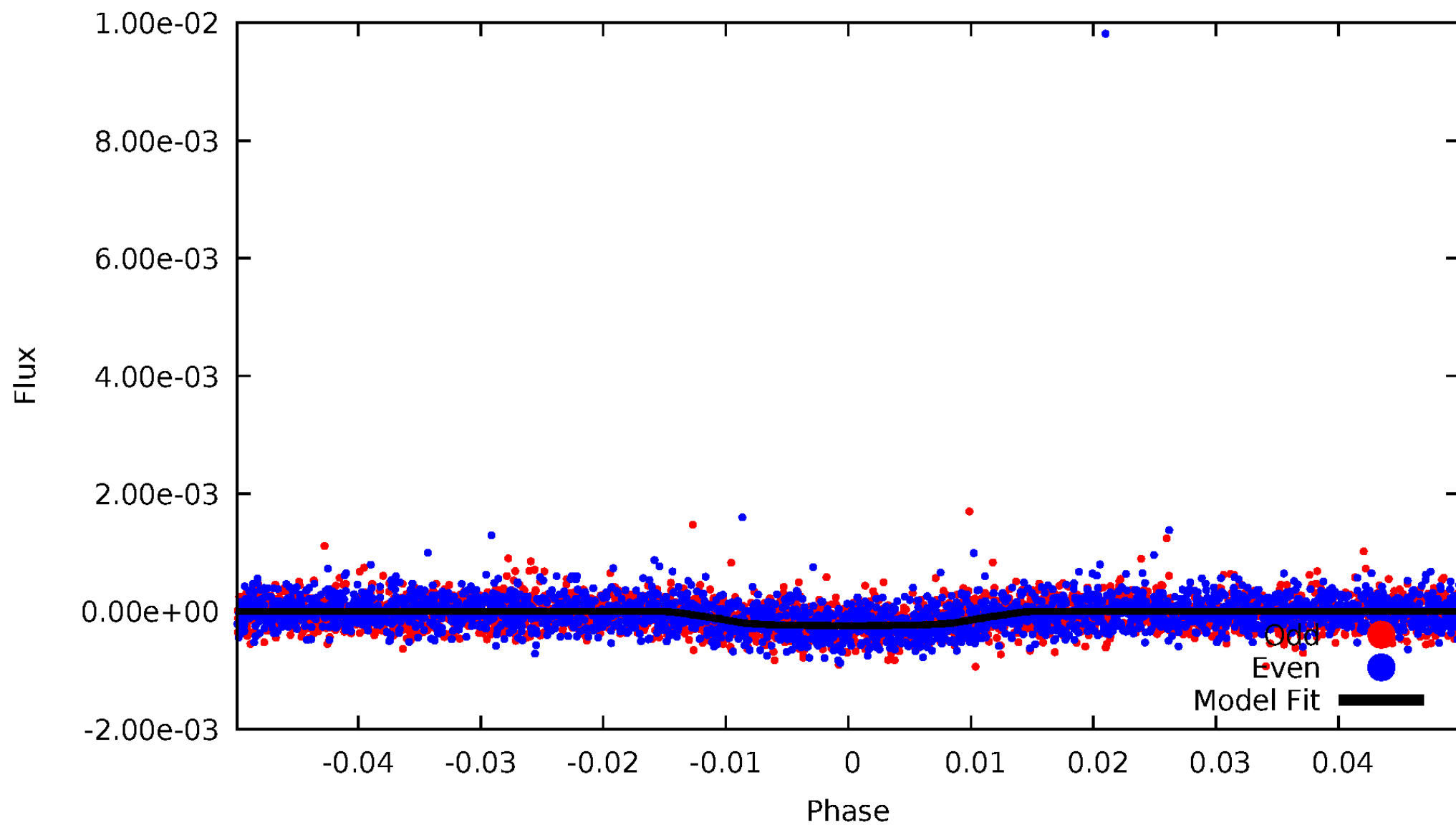


TCE 006677256-01



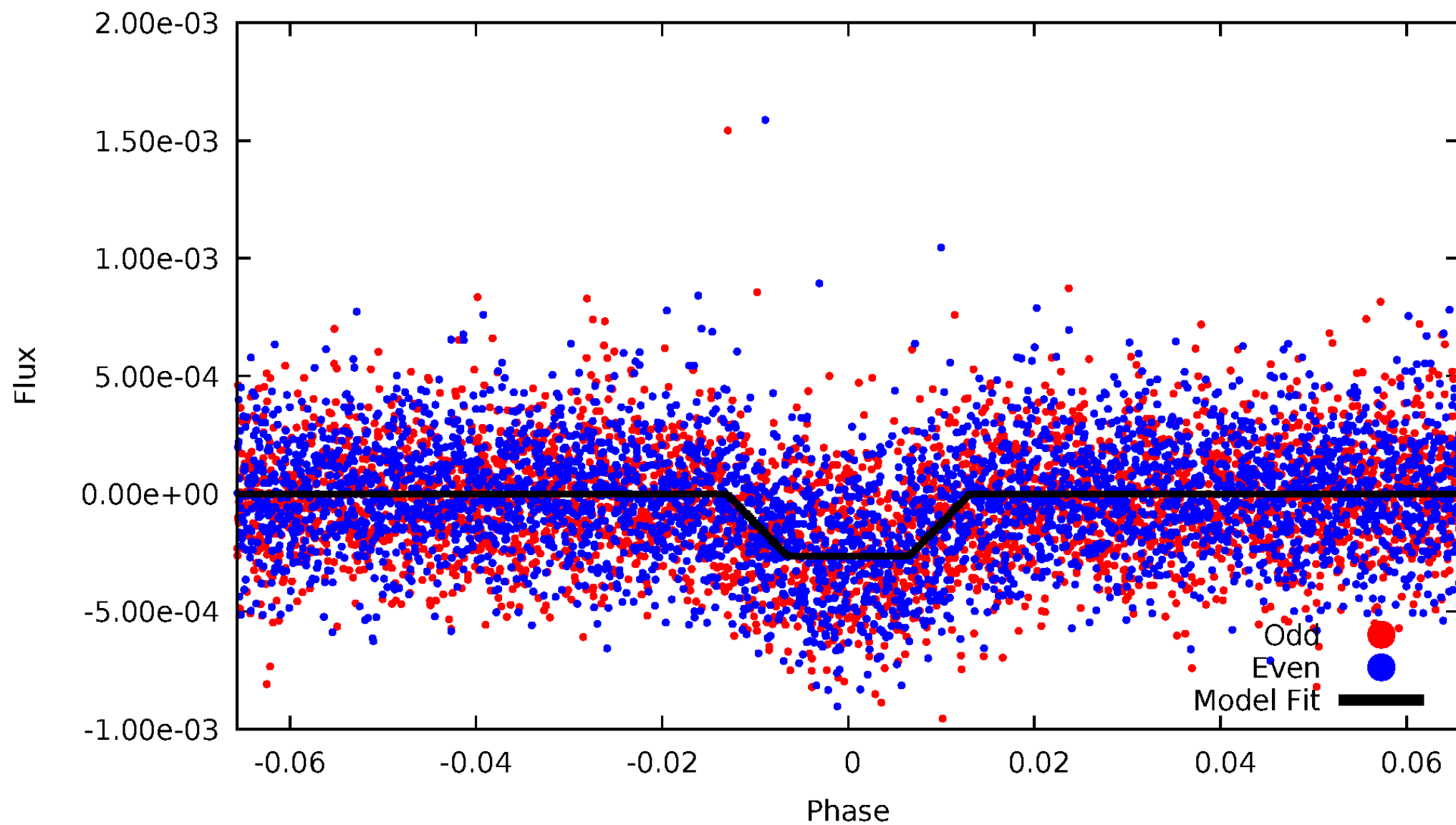
DV Odd/Even

TCE 006677256-01



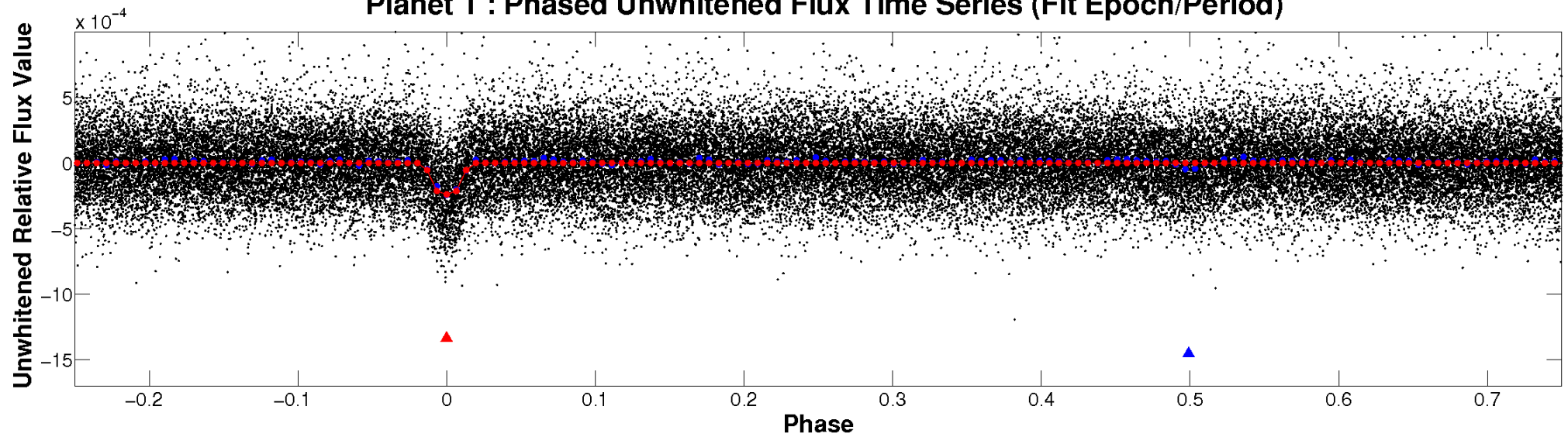
ALT Odd/Even

TCE 006677256-01

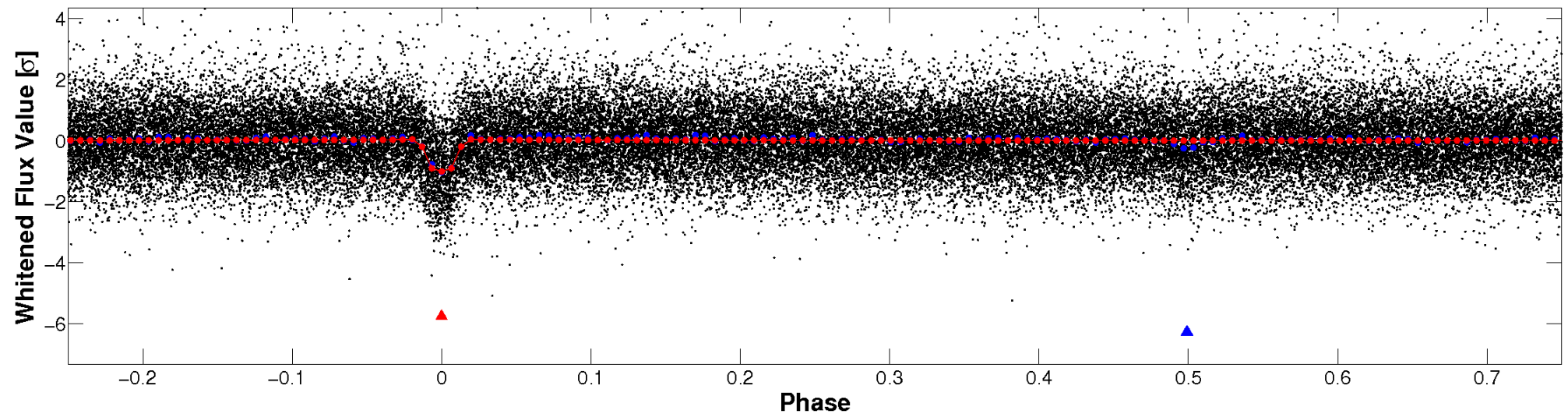


Non-Whitened Vs. Whitened Light Curve

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

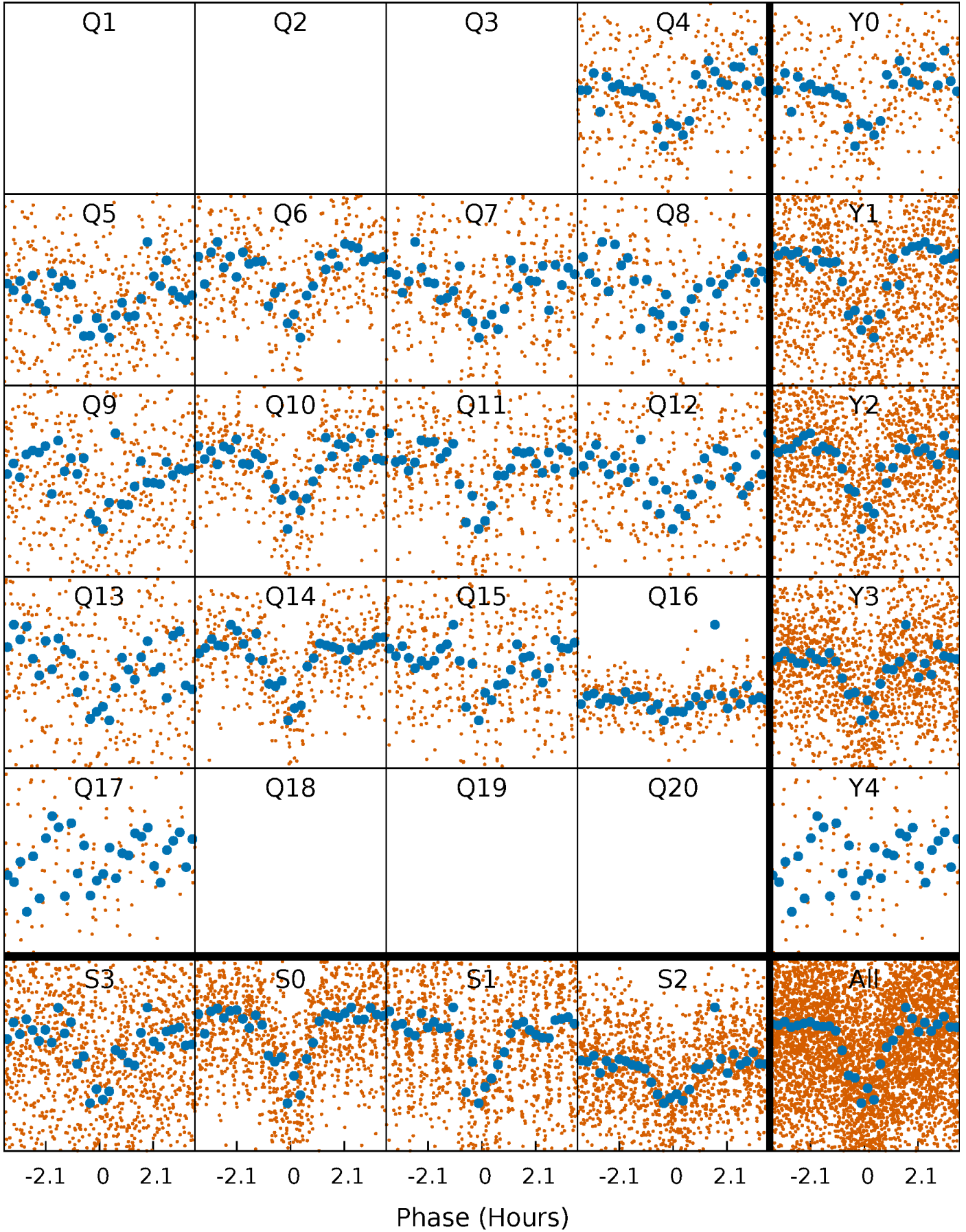


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



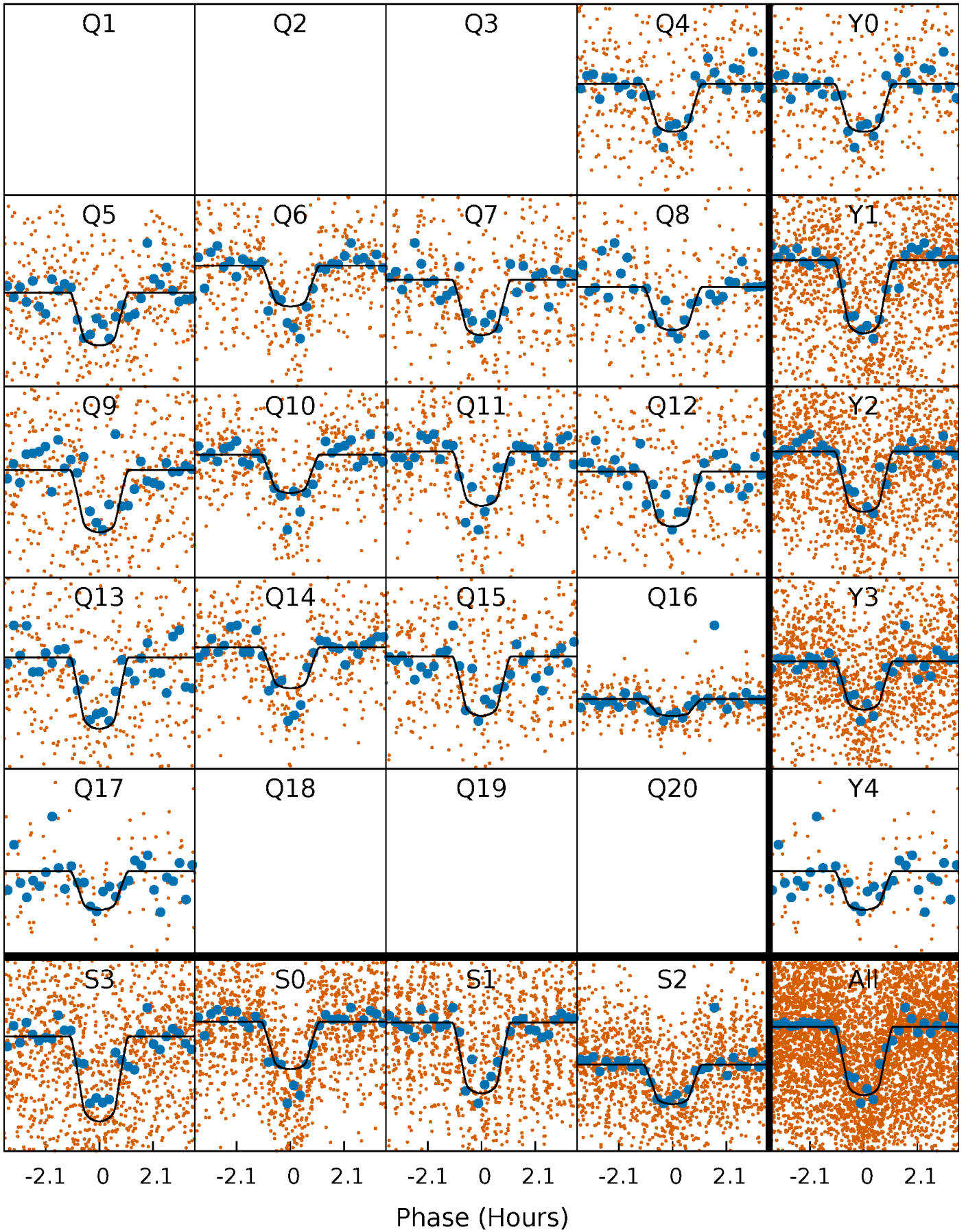
PDC Quarter-Phased Transit Curves

TCE 006677256-01 P= 3.125811 Days $T_0=134.481210$ (BKJD)



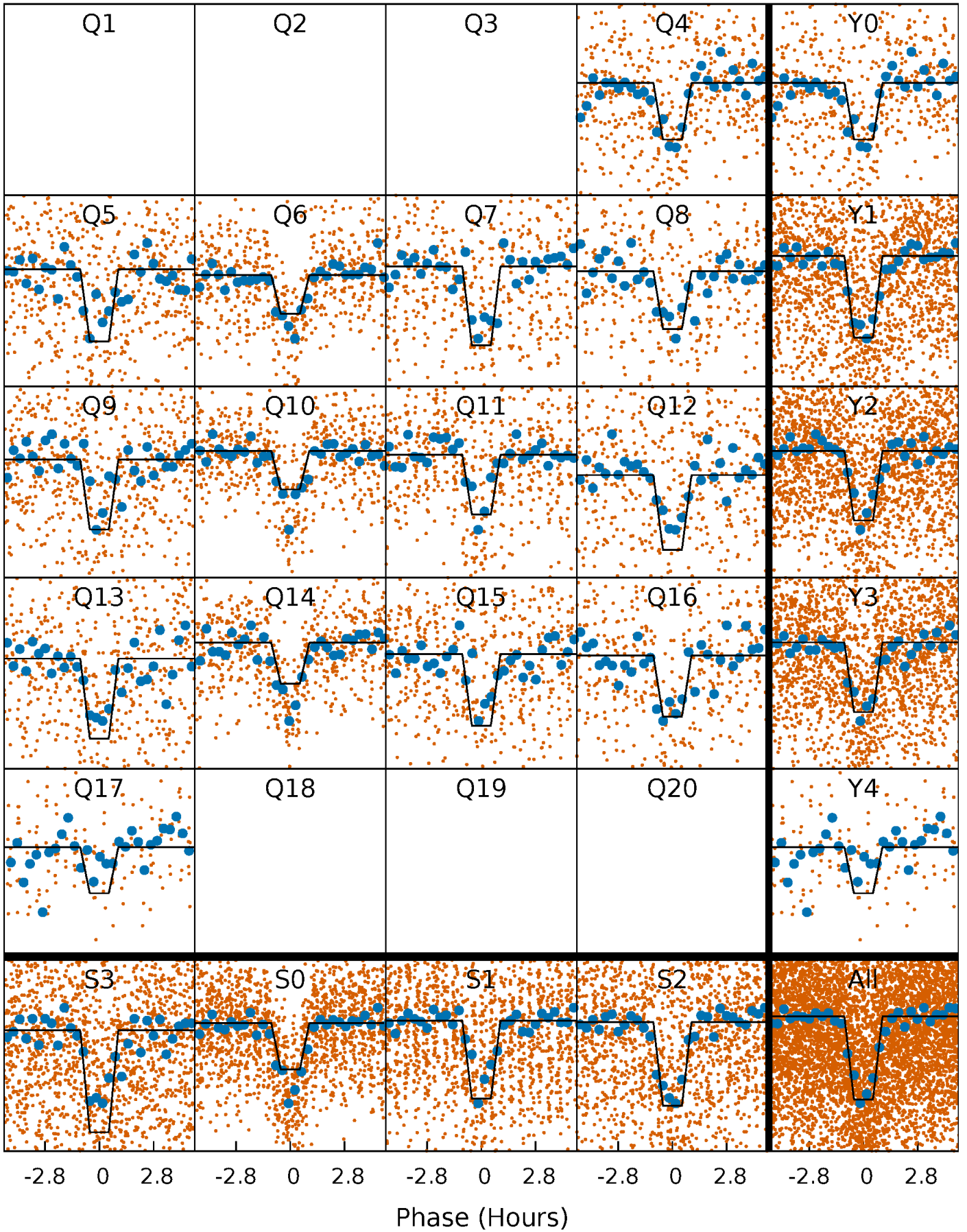
DV Quarter-Phased Transit Curves

TCE 006677256-01 P= 3.125811 Days $T_0=134.481210$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

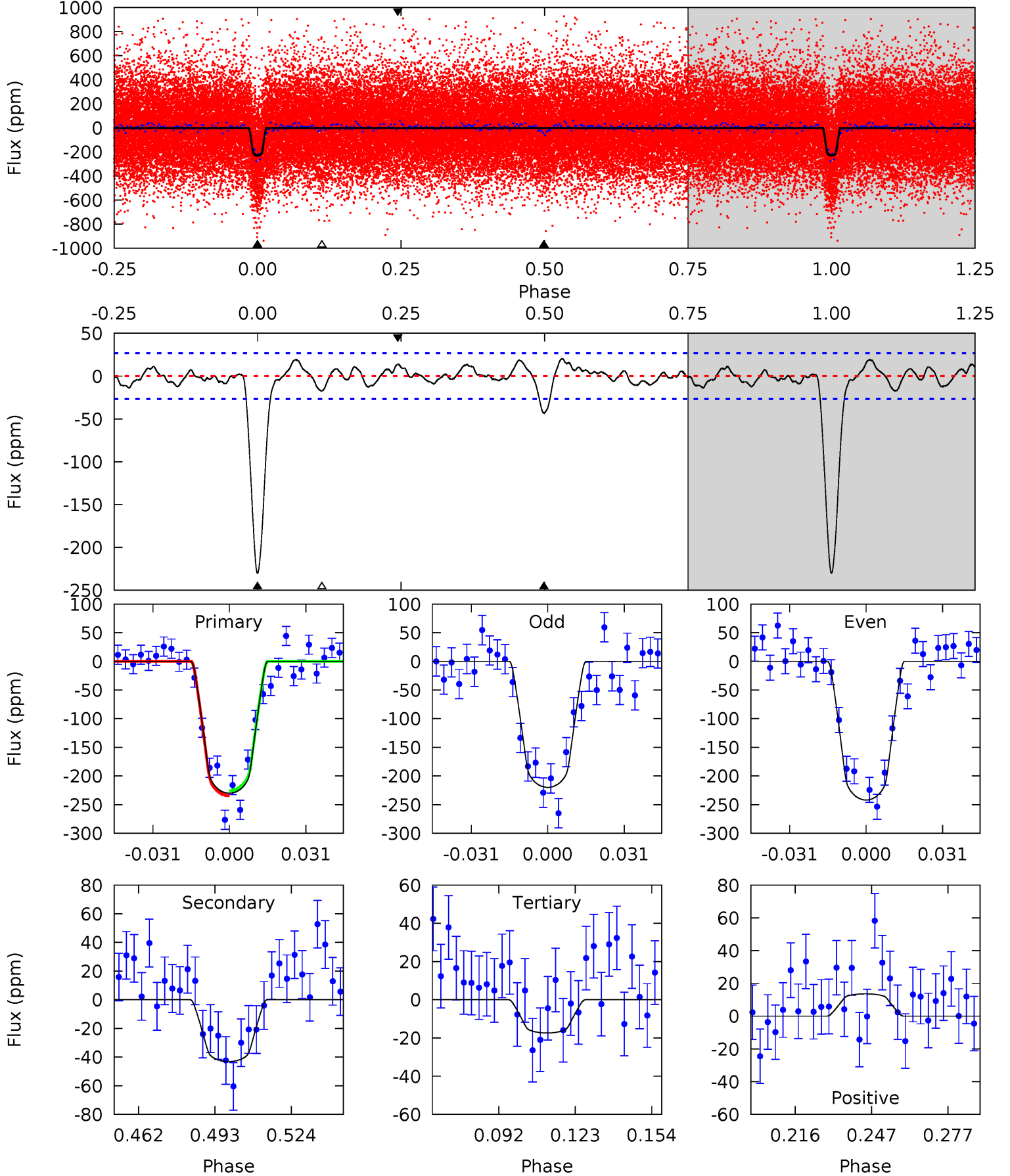
TCE 006677256-01 P= 3.125812 Days $T_0=134.481765$ (BKJD)



DV Model-Shift Uniqueness Test

006677256-01, P = 3.125811 Days, E = 134.481210 Days

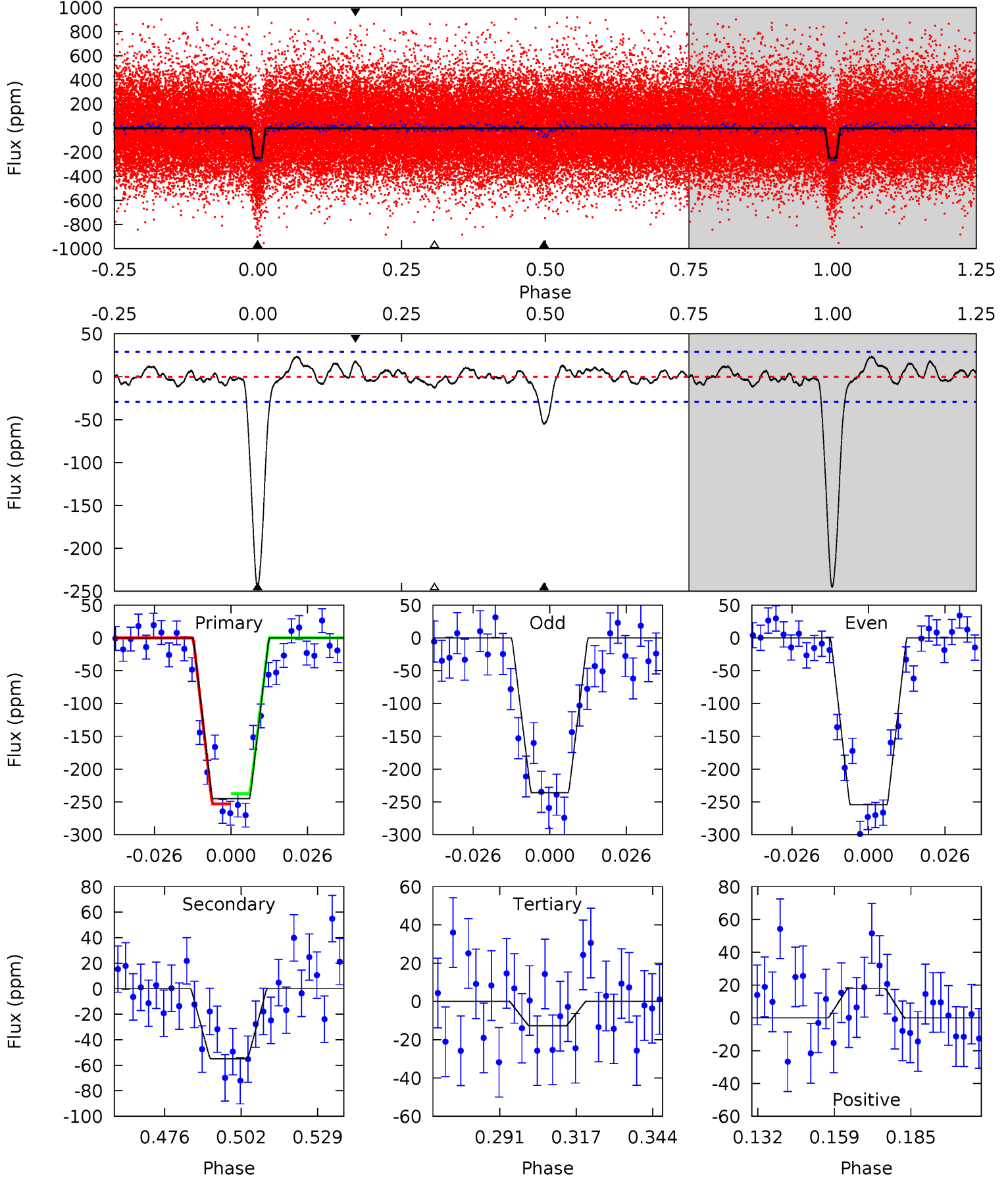
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.4	7.76	3.13	2.45	4.81	2.16	1.34	38.2	38.9	4.63	5.31	1.99	0.96	0.08	0.80



Alt Model-Shift Uniqueness Test

006677256-01, P = 3.125812 Days, E = 134.481765 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	9.10	2.12	2.98	4.84	2.22	1.14	38.5	37.6	6.98	6.11	1.53	0.99	0.09	1.29



Stellar Parameters For KIC 006677256

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6358^{+179}_{-246}	$4.346^{+0.101}_{-0.203}$	$-0.100^{+0.250}_{-0.300}$	$1.181^{+0.381}_{-0.163}$	$1.125^{+0.185}_{-0.152}$	$0.963^{+0.465}_{-0.499}$
	+3%/-4%	+2%/-5%	+250%/-300%	+32%/-14%	+16%/-14%	+48%/-52%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006677256-01 / KOI 1243.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-43 ± 6	$2.19^{+0.61}_{-0.49}$	2063^{+165}_{-115}	4216^{+442}_{-344}	$9.239^{+6.215}_{-3.584}$
Alt.	-55 ± 6	$2.13^{+0.55}_{-0.52}$	2055^{+159}_{-115}	4466^{+517}_{-385}	12^{+9}_{-5}

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

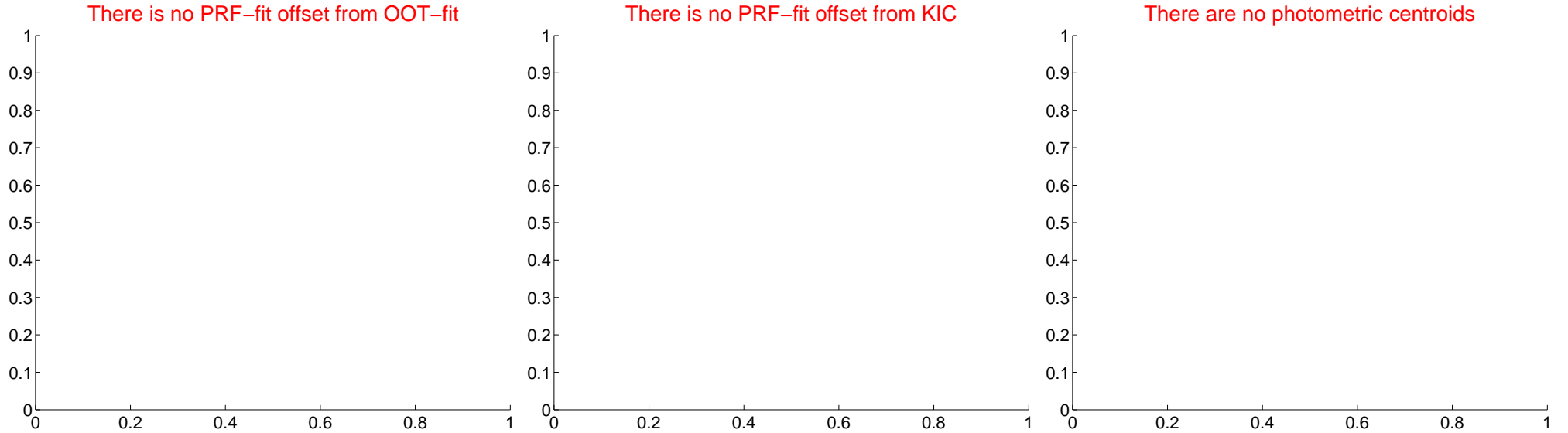
DV Centroid Data

Supplemental centroid analysis for 006677256-01. Kepler magnitude: 14.52. Transit SNR 30.98

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—



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

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

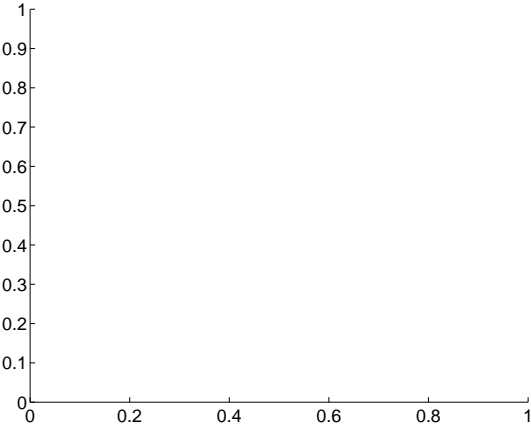
Q1 no difference image



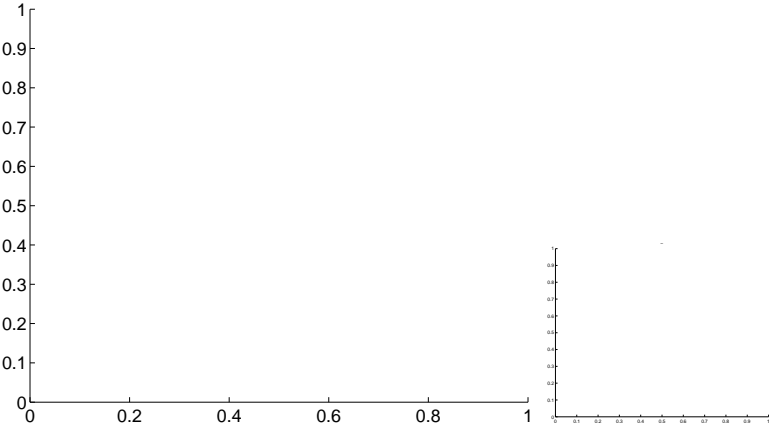
Q1 no OOT image



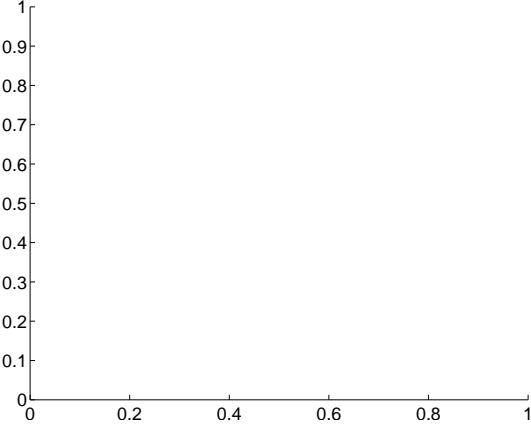
Q2 no difference image



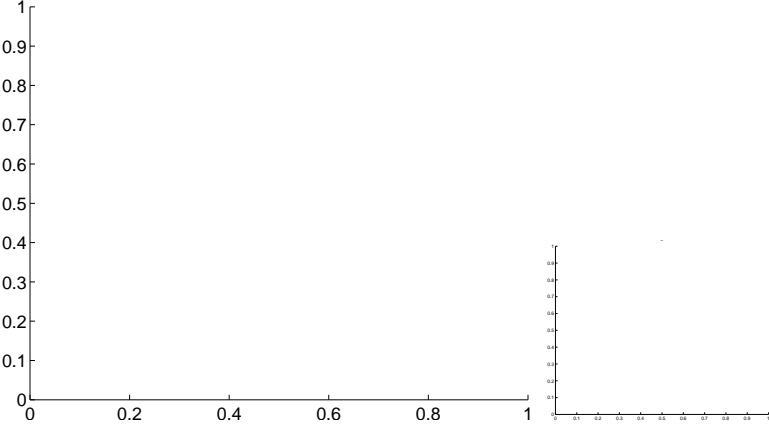
Q2 no OOT image



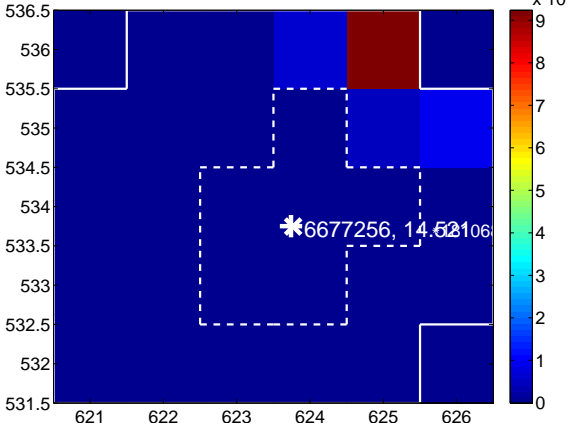
Q3 no difference image



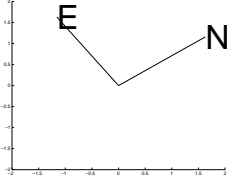
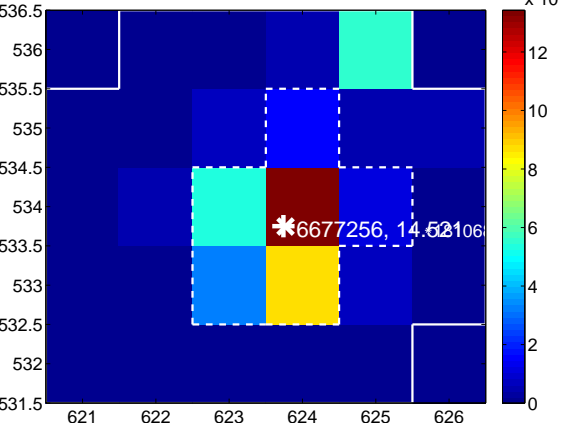
Q3 no OOT image



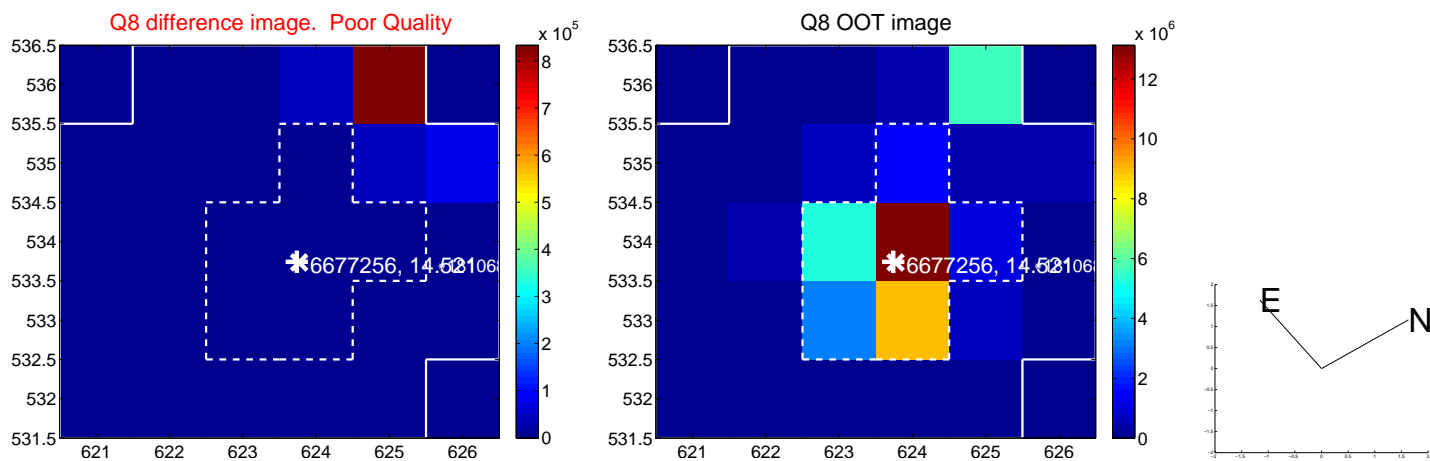
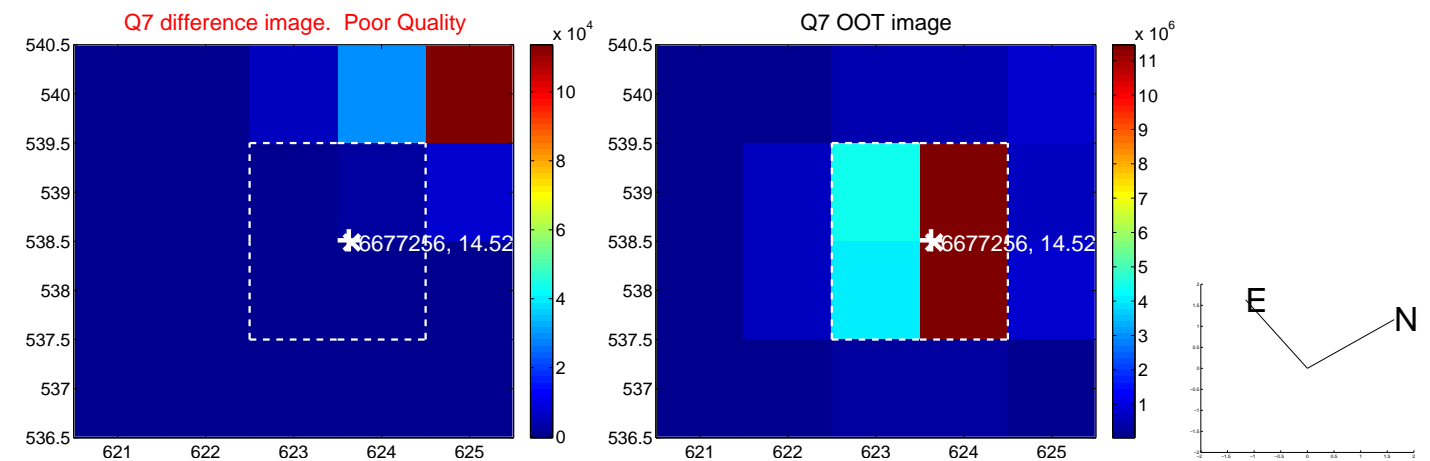
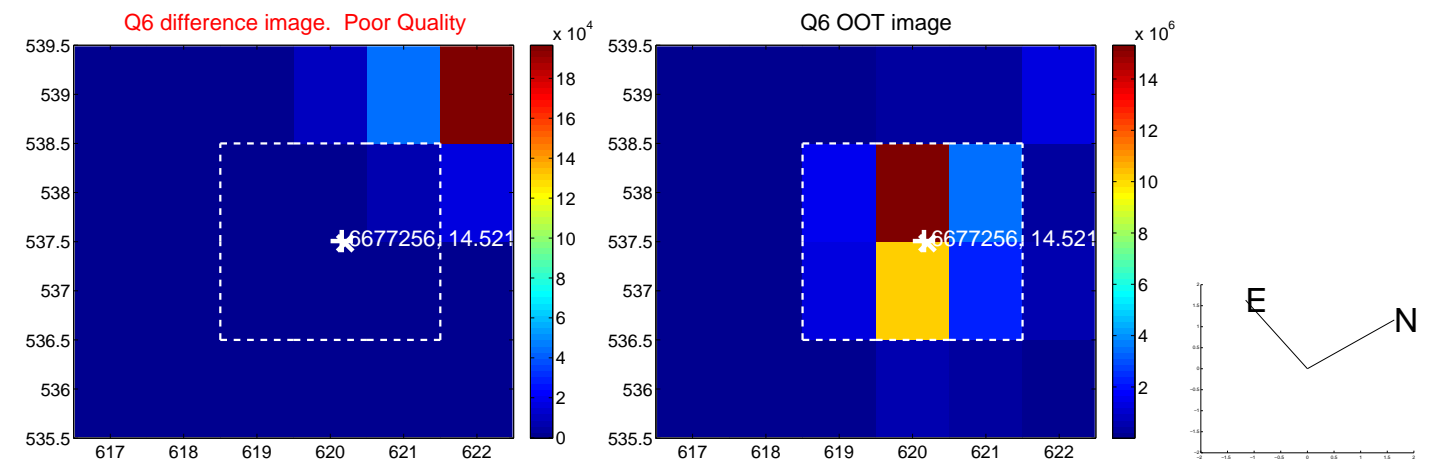
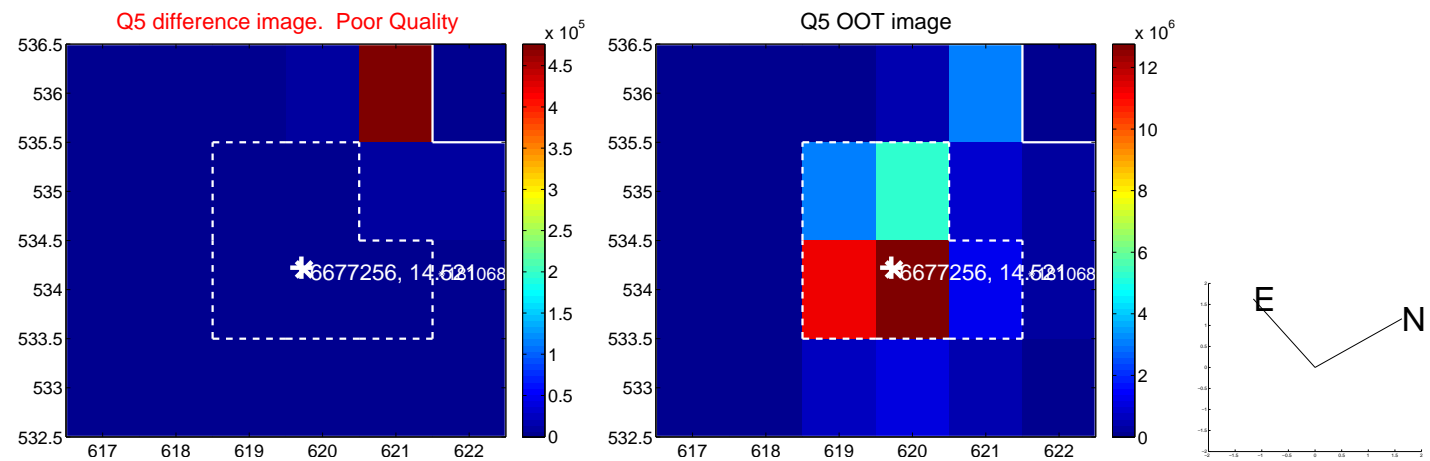
Q4 difference image. Poor Quality



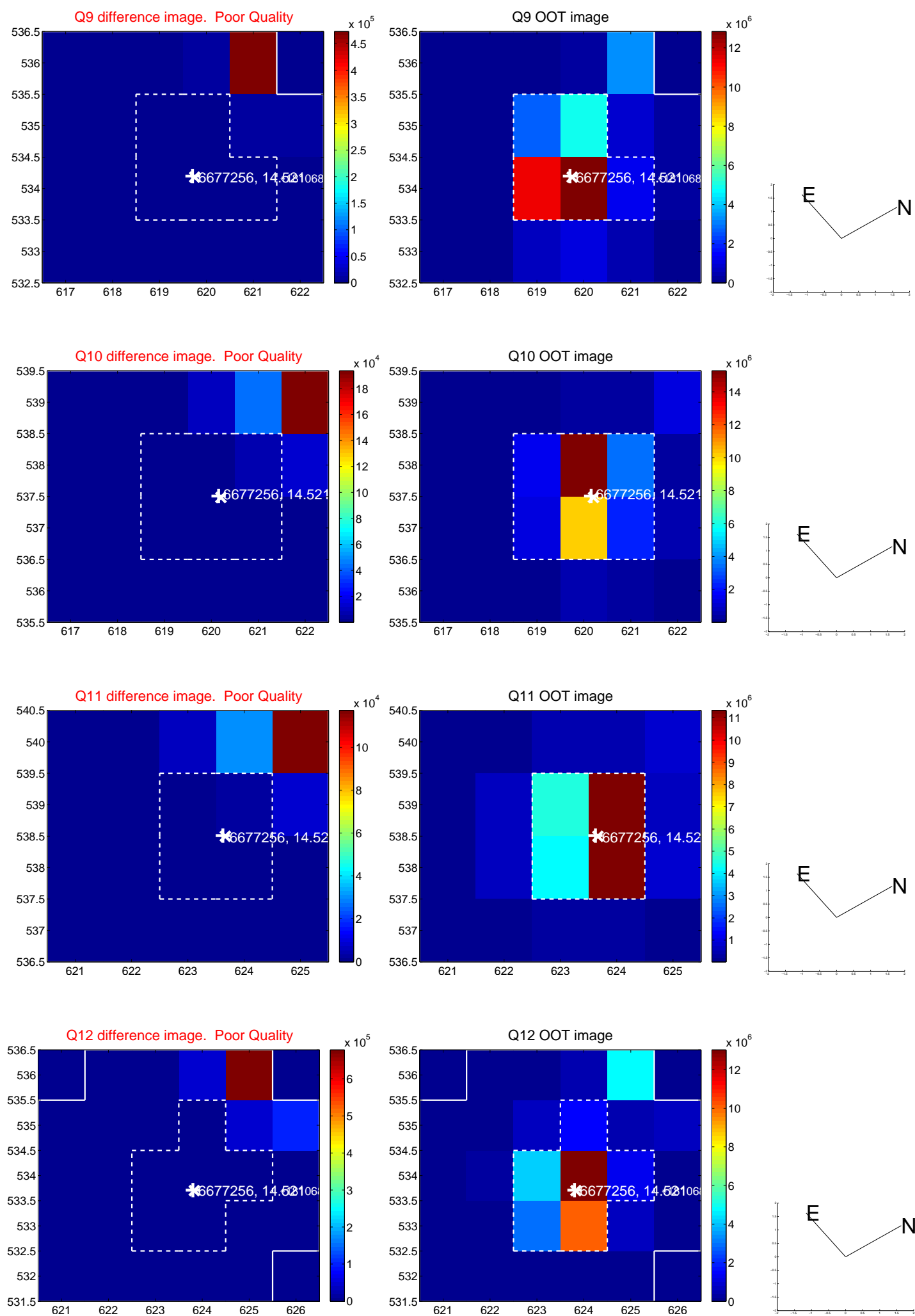
Q4 OOT image



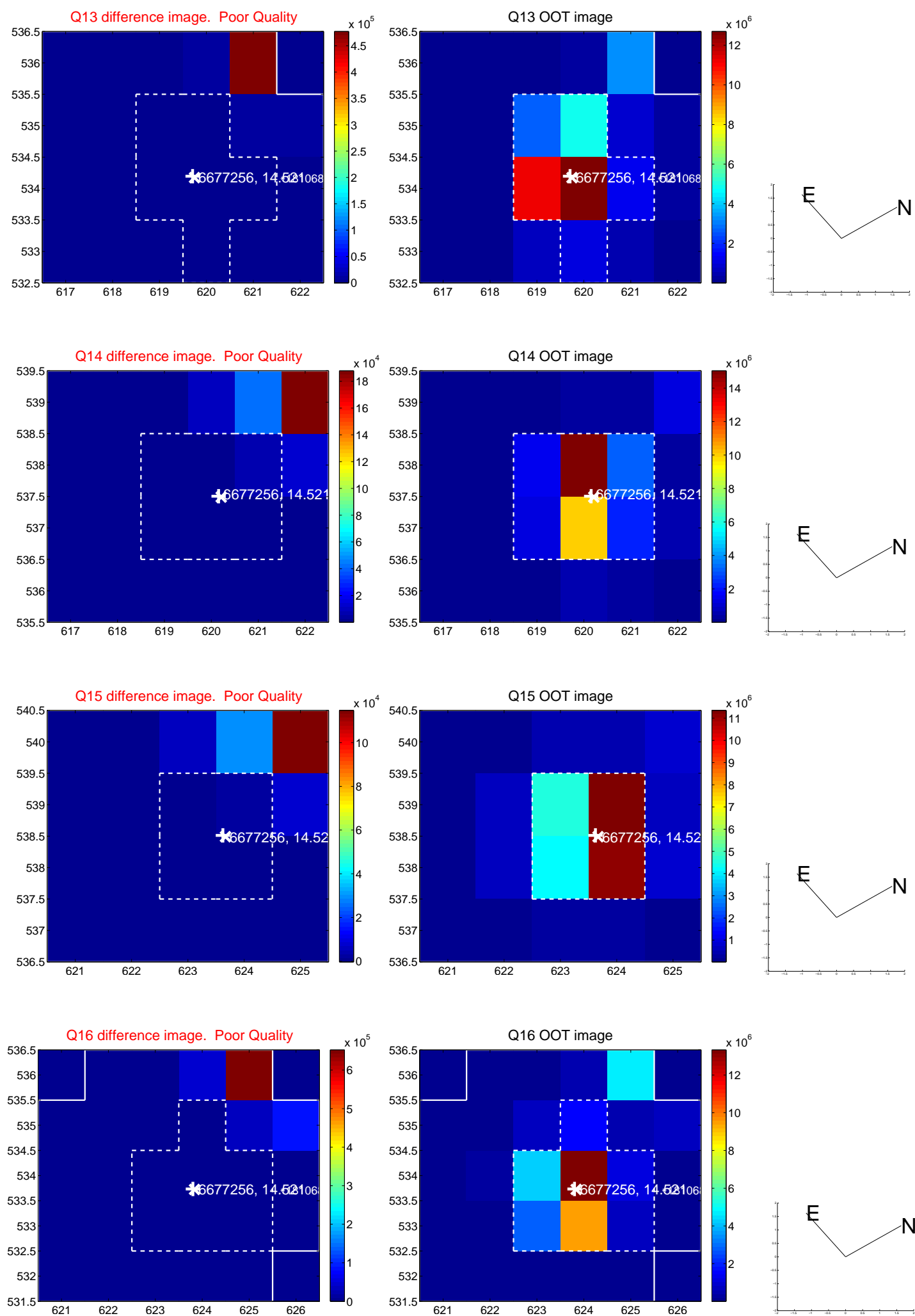
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



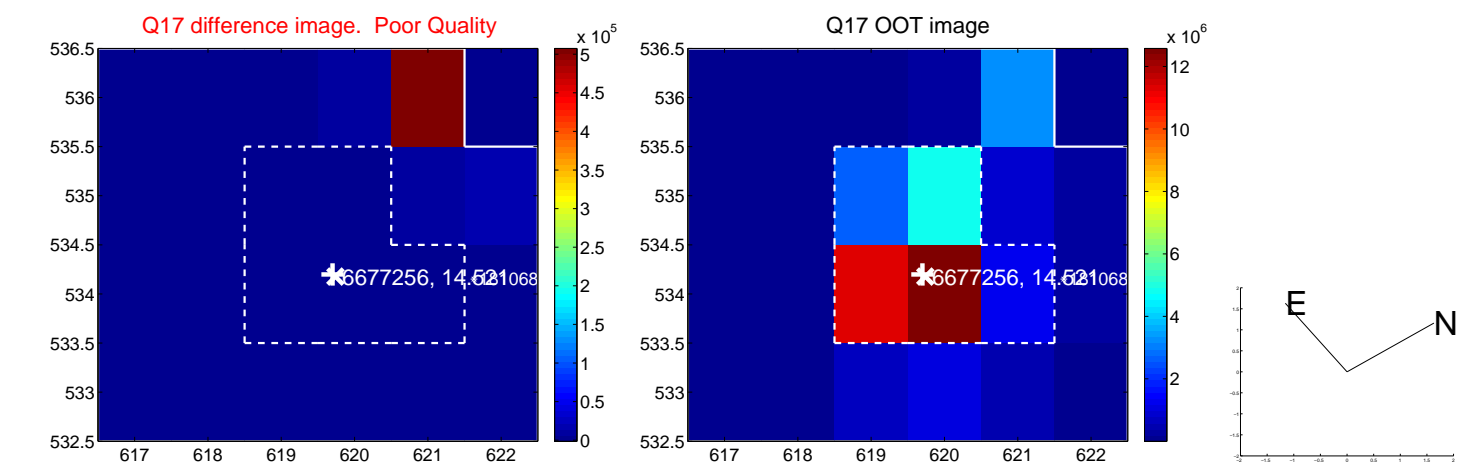
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



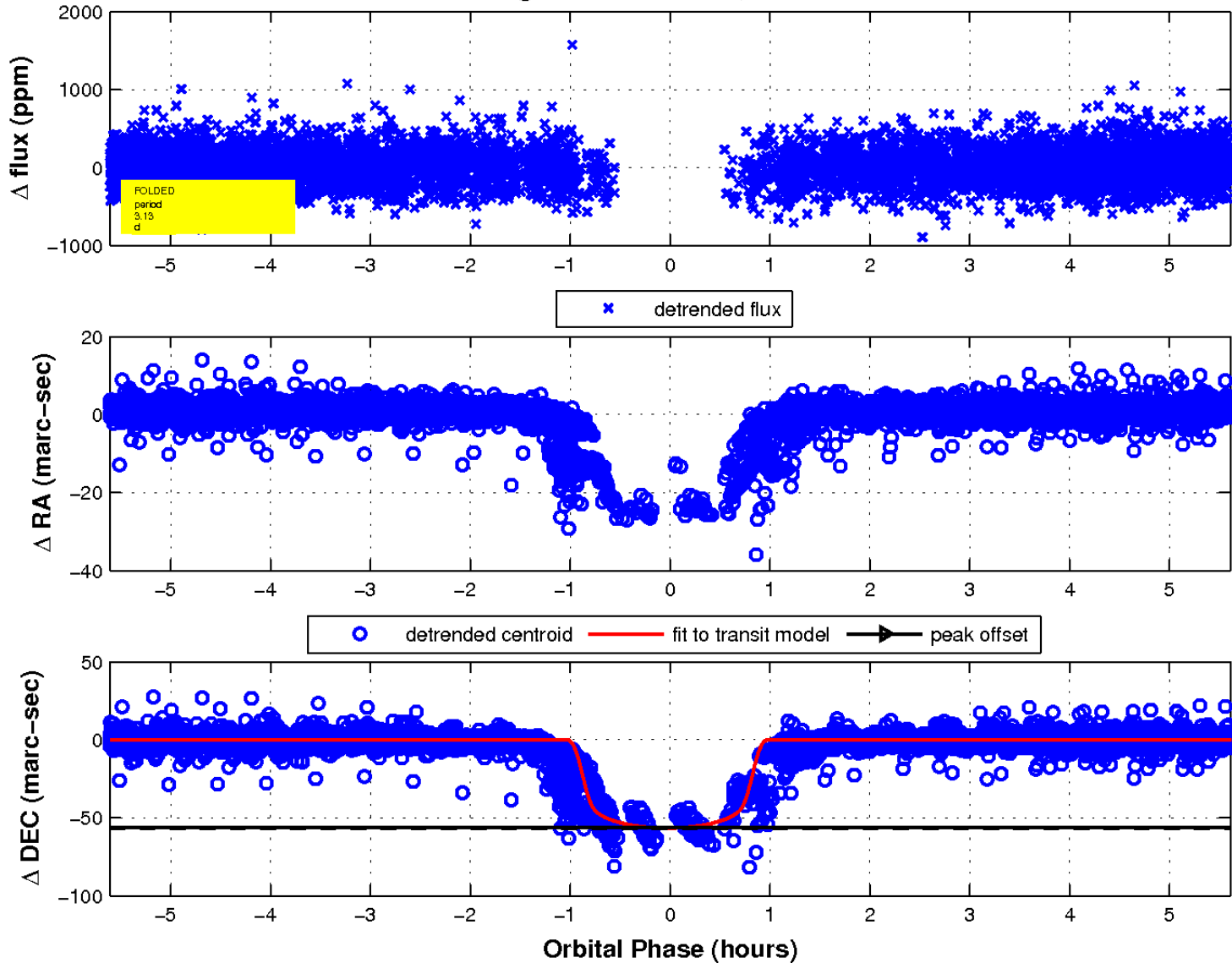
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

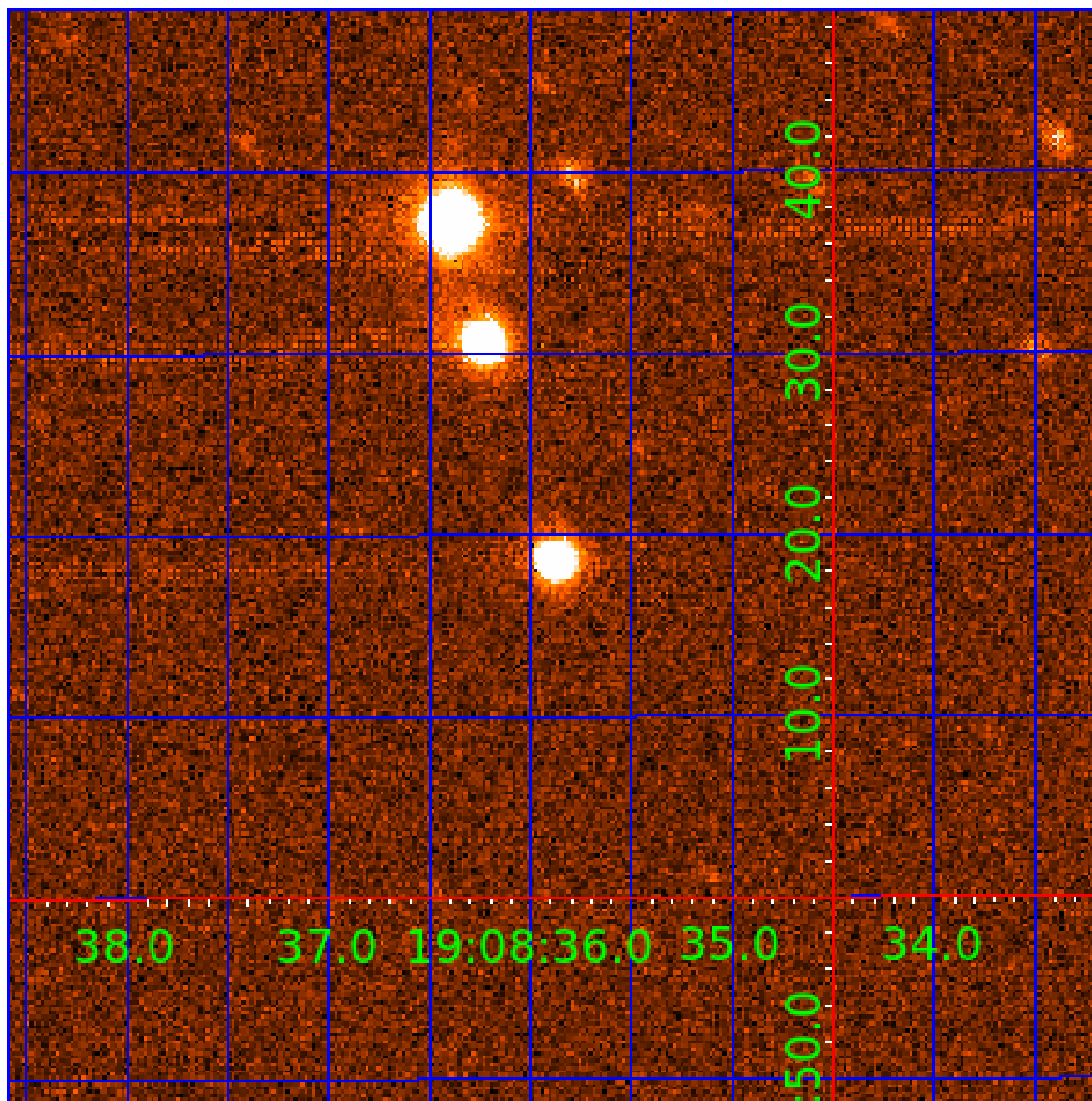


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 006677256

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})
006677256-01	OBS	1243.01	3.125811	134.481210	240.9	1.870	26.7	31.0	1.18	6358	2.15	1075.79
006677256-02	OBS	No	3.125808	132.916111	57.8	2.007	7.5	8.0	1.18	6358	1.05	1075.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006677256-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH
006677256-02	OBS	FP	0.00	1	1	1	1	IS_SEC_TCE—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

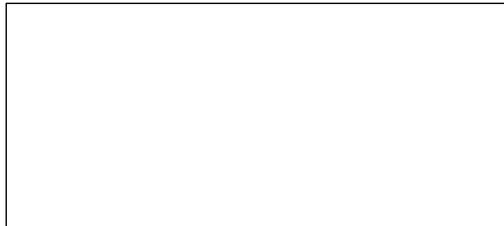
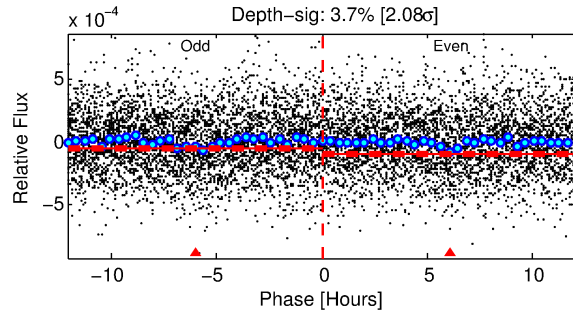
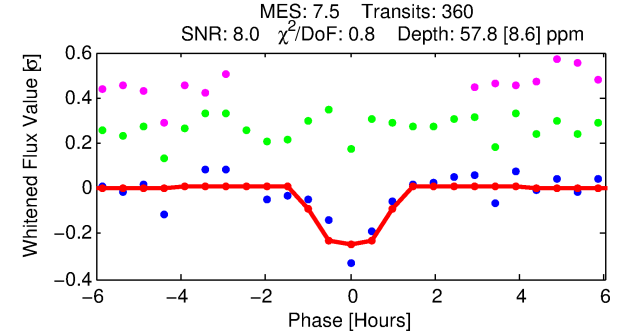
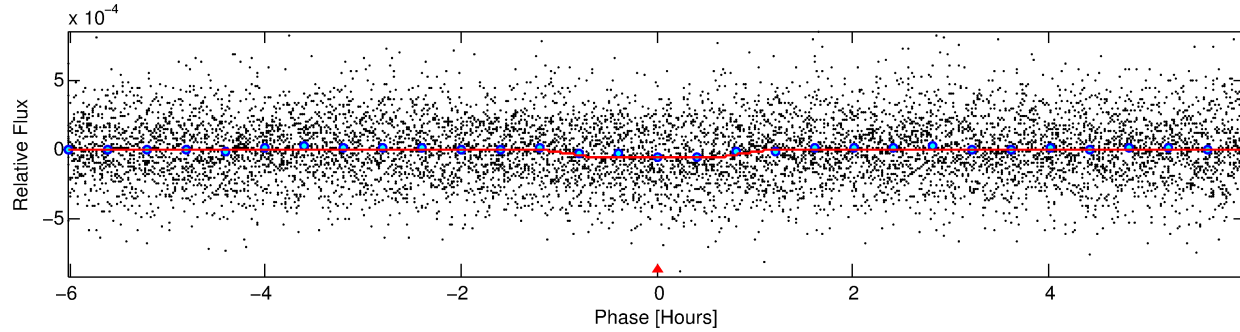
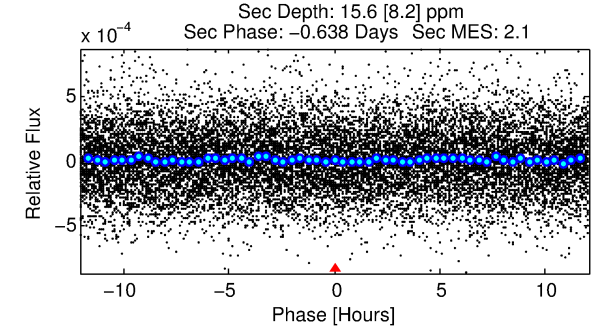
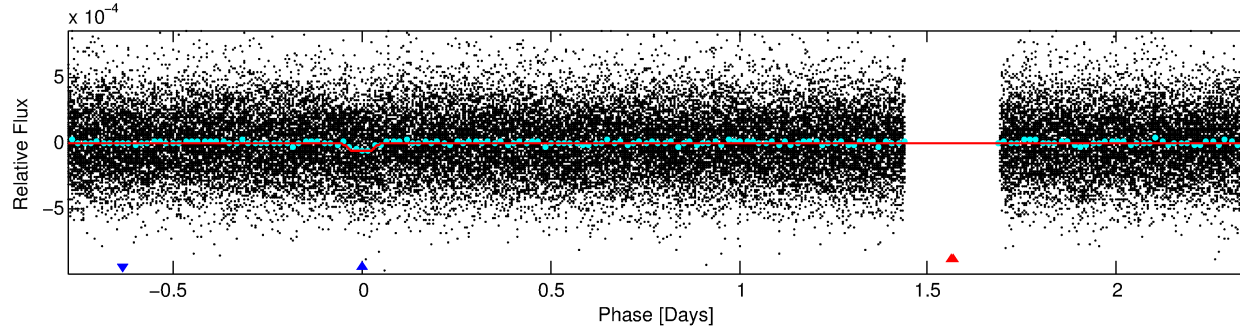
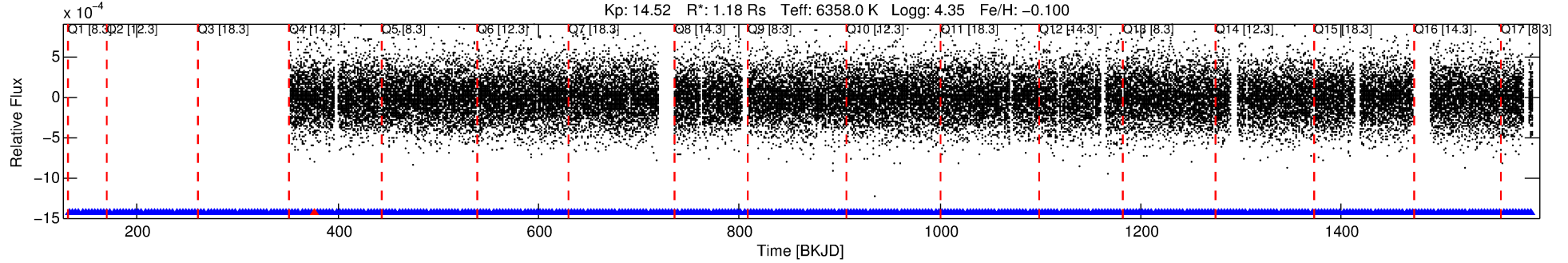
Ephemeris Match Information For 006677256-02

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
006677256-02	6677256	006677267-02	6677267	1:1	19.5	-4	-3	12.77	14.52	8.62	Direct-PRF	0	0.03	0.16

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 6677256 Candidate: 2 of 2 Period: 3.126 d
KOI: K01243 Corr: No Ephemeris Match



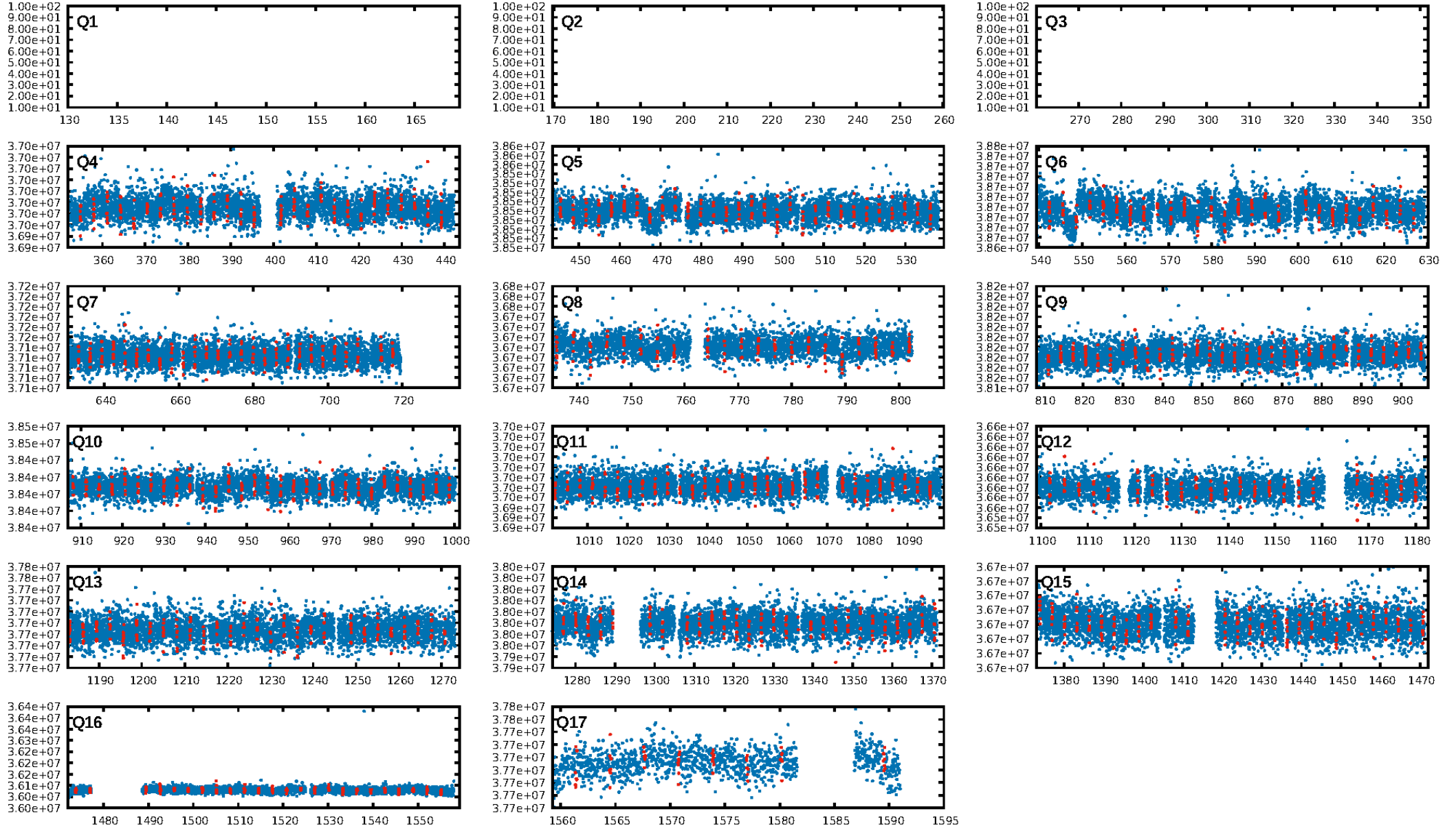
DV Fit Results:

Period = 3.12581 [0.00002] d
Epoch = 132.9161 [0.0044] BKJD
Rp/R* = 0.0081 [0.0049]
a/R* = 5.58 [17.90]
b = 0.90 [0.74]
Seff = 1075.79 [440.04]
Teq = 1460 [149] K
Rp = 1.05 [0.71] Re
a = 0.0436 [0.0116] AU
Ag = 14.74 [20.00] [0.69σ]
Teffp = 4424 [1451] K [2.03σ]

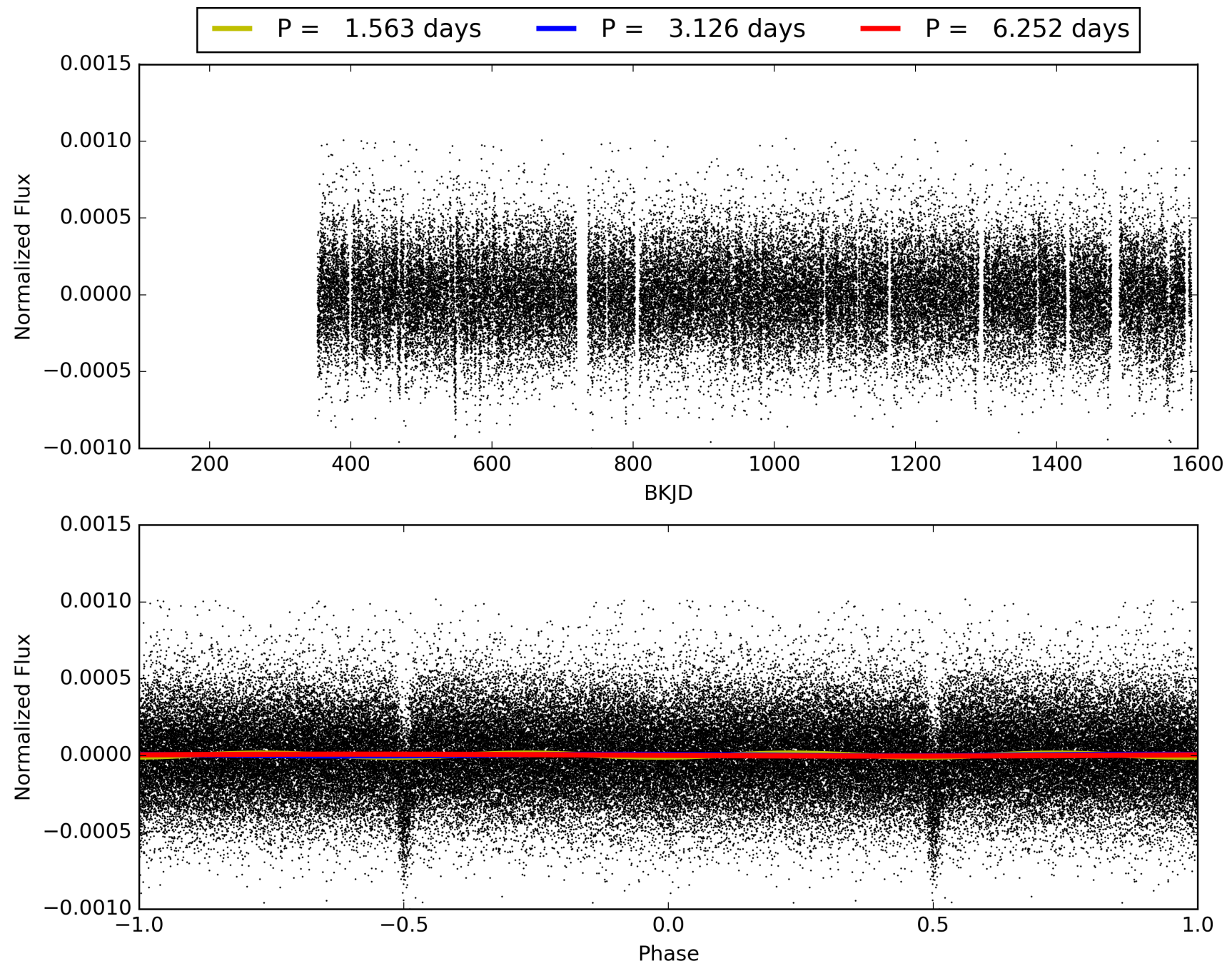
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.93e-14
RollingBand-fgt: 1.00 [351/352]
GhostDiagnostic-chr: -0.4449
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006677256-02, PDC Light Curves

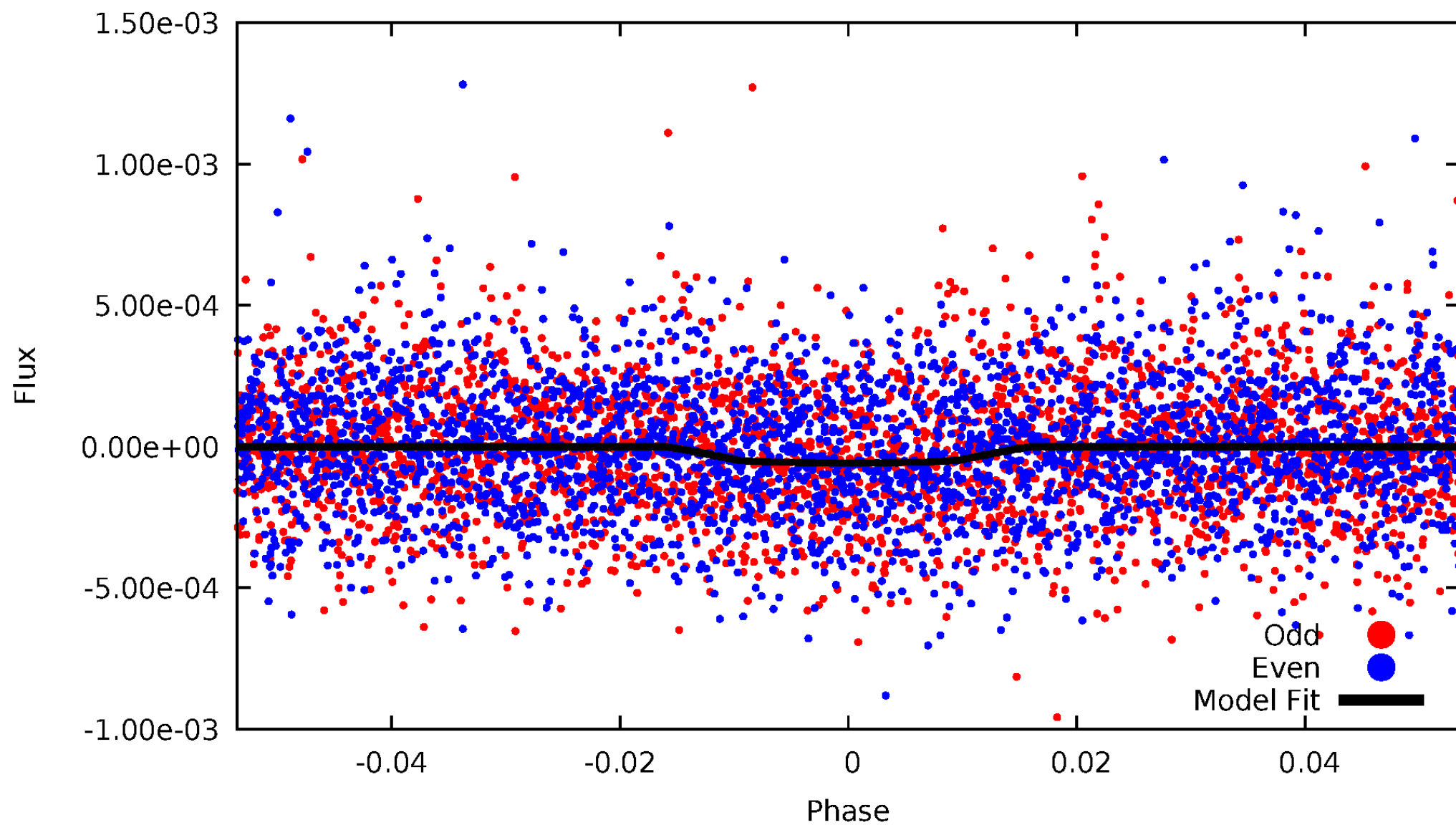


TCE 006677256-02



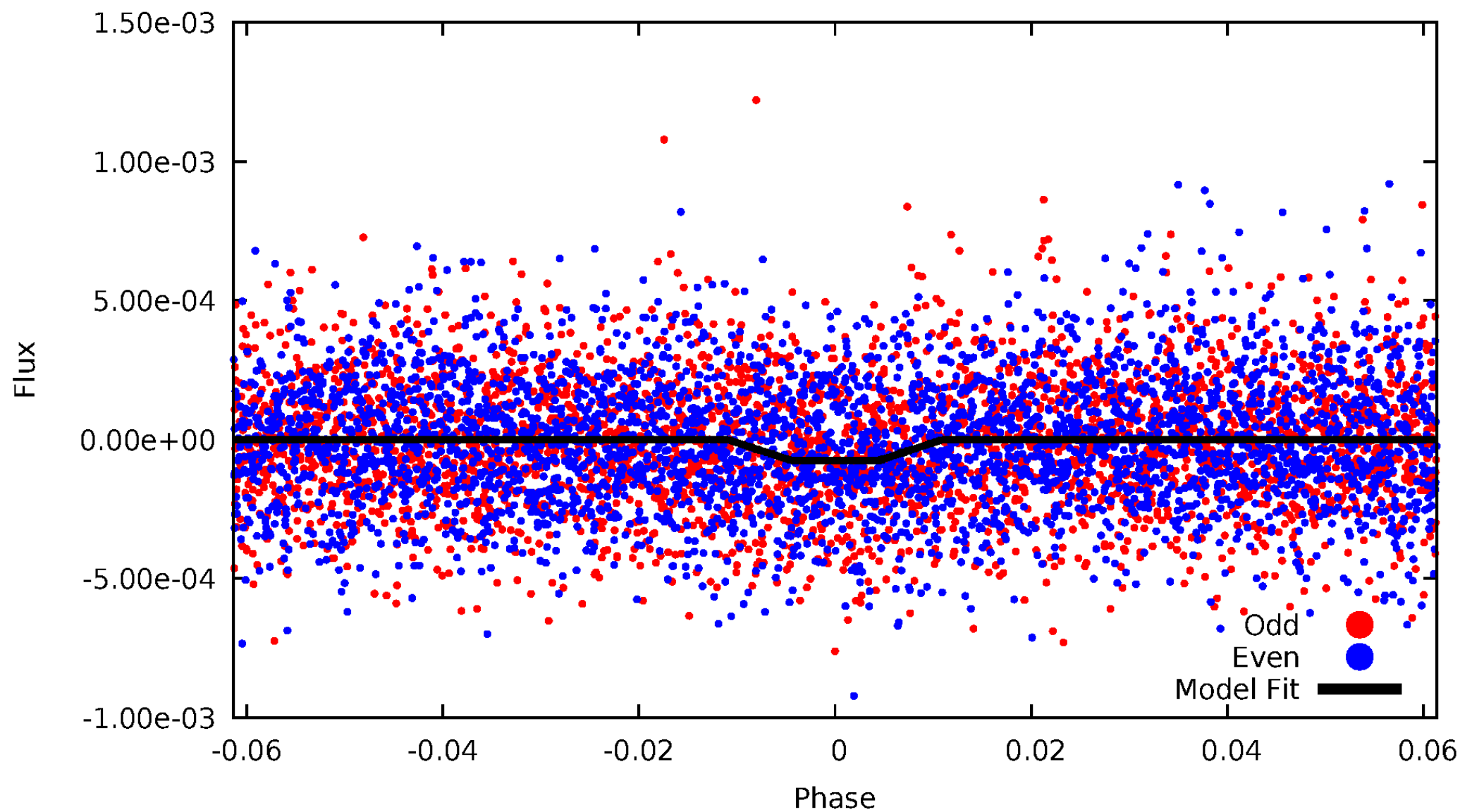
DV Odd/Even

TCE 006677256-02



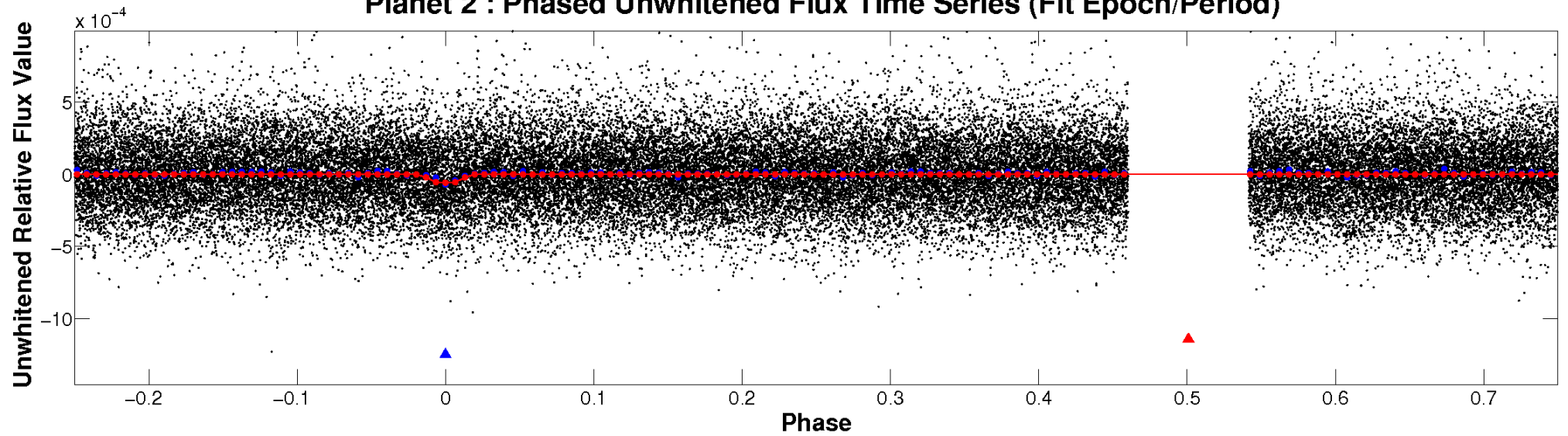
ALT Odd/Even

TCE 006677256-02

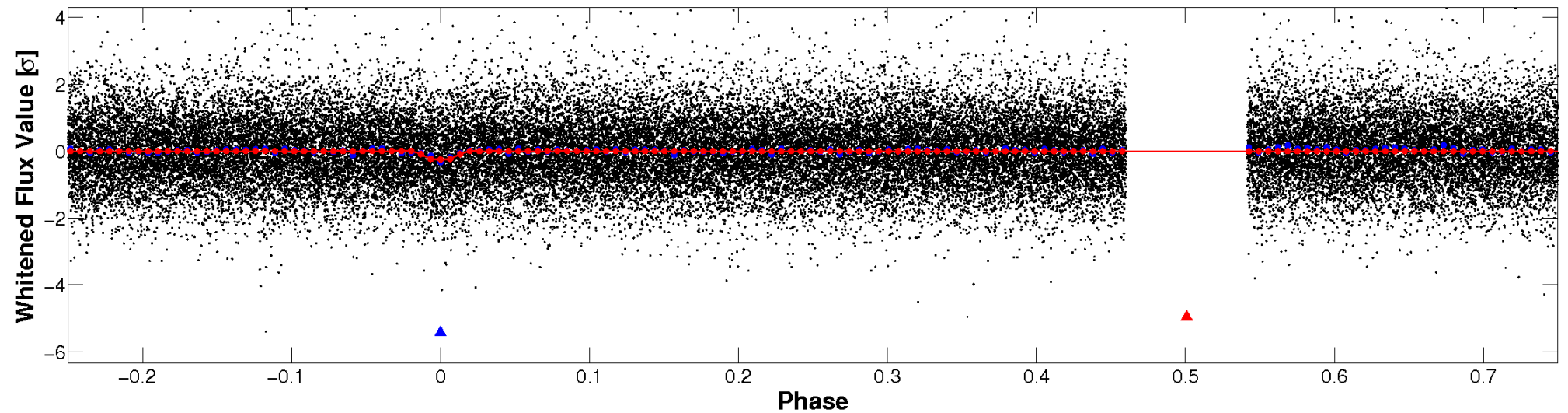


Non-Whitened Vs. Whitened Light Curve

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

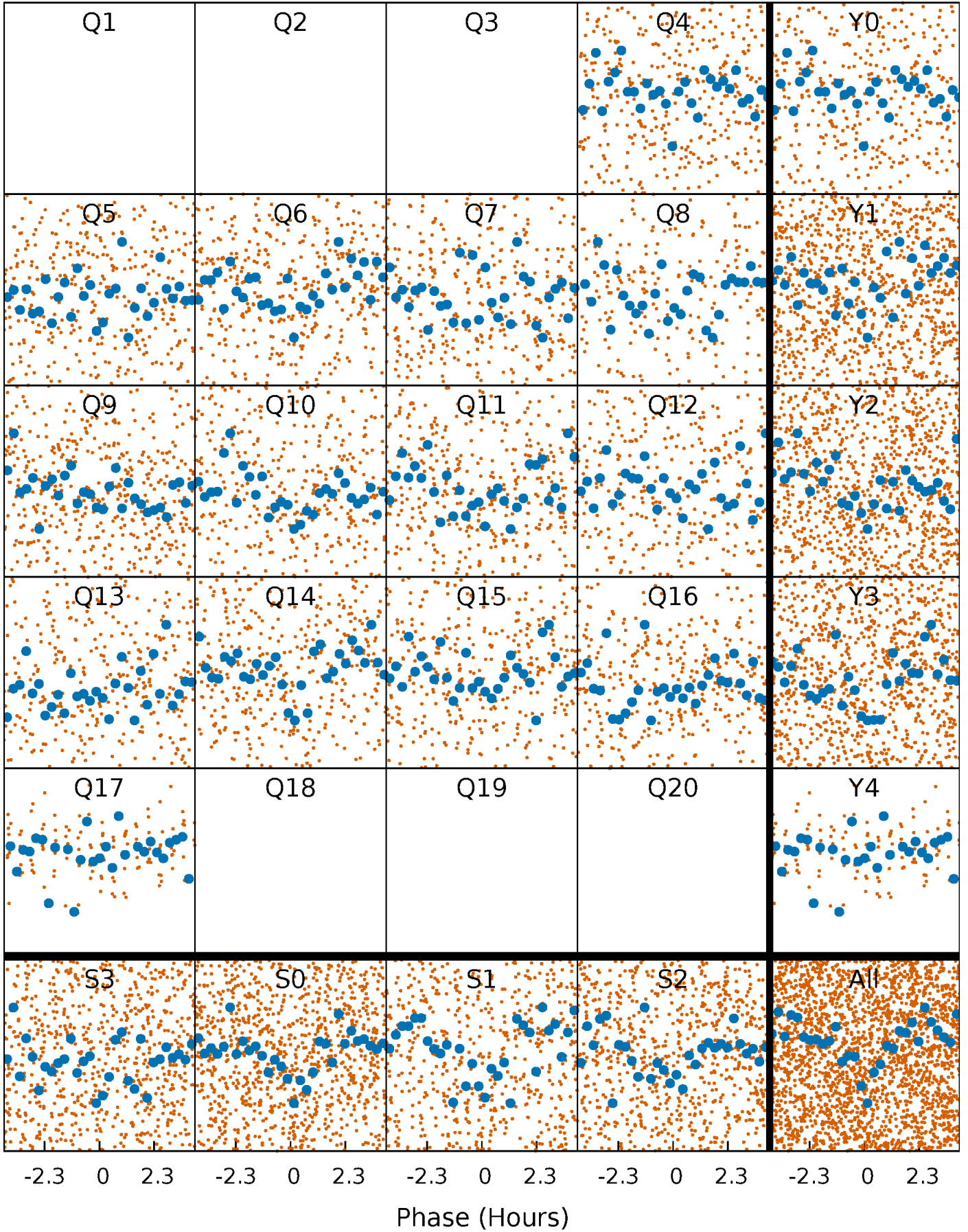


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



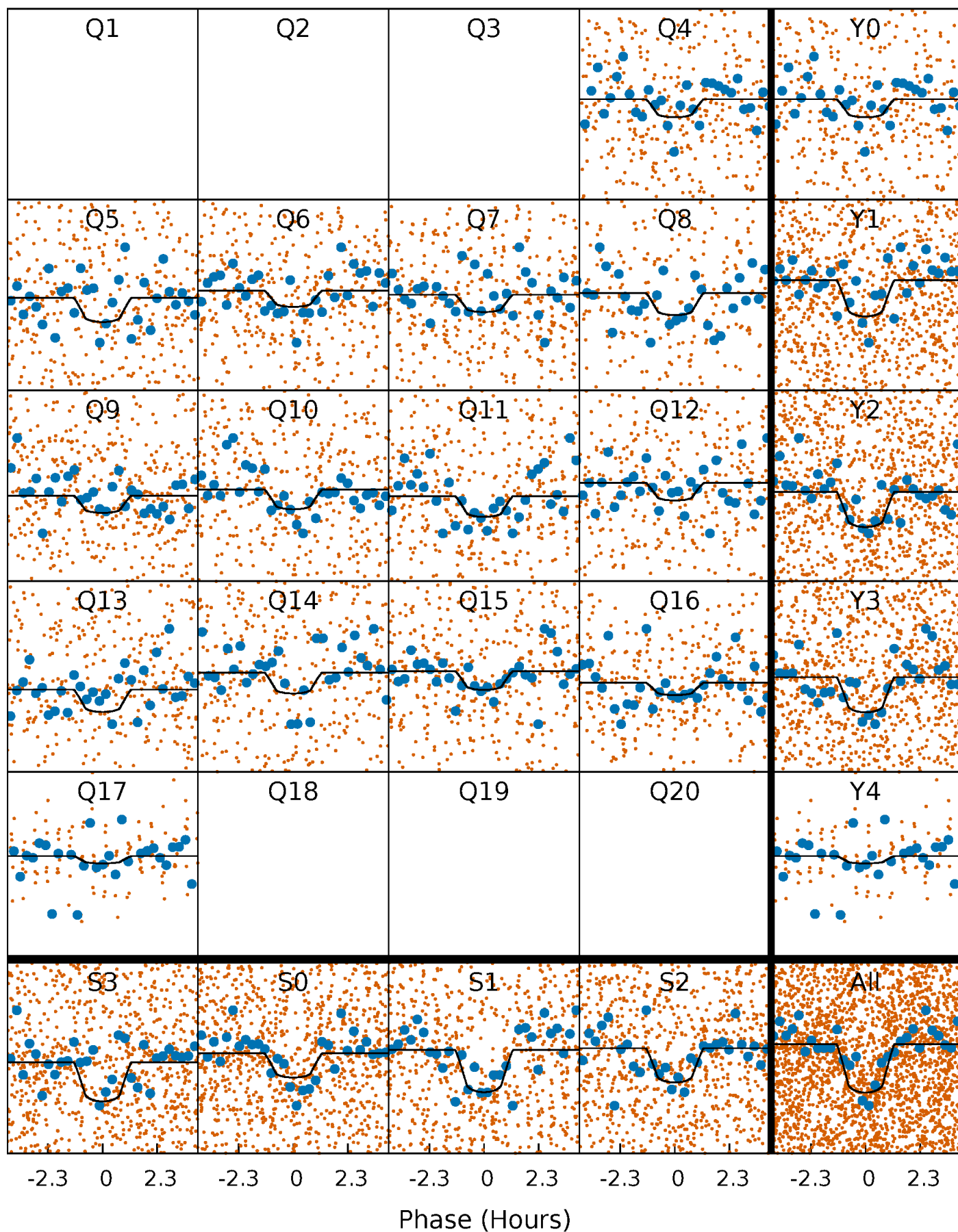
PDC Quarter-Phased Transit Curves

TCE 006677256-02 P= 3.125808 Days $T_0=132.916111$ (BKJD)



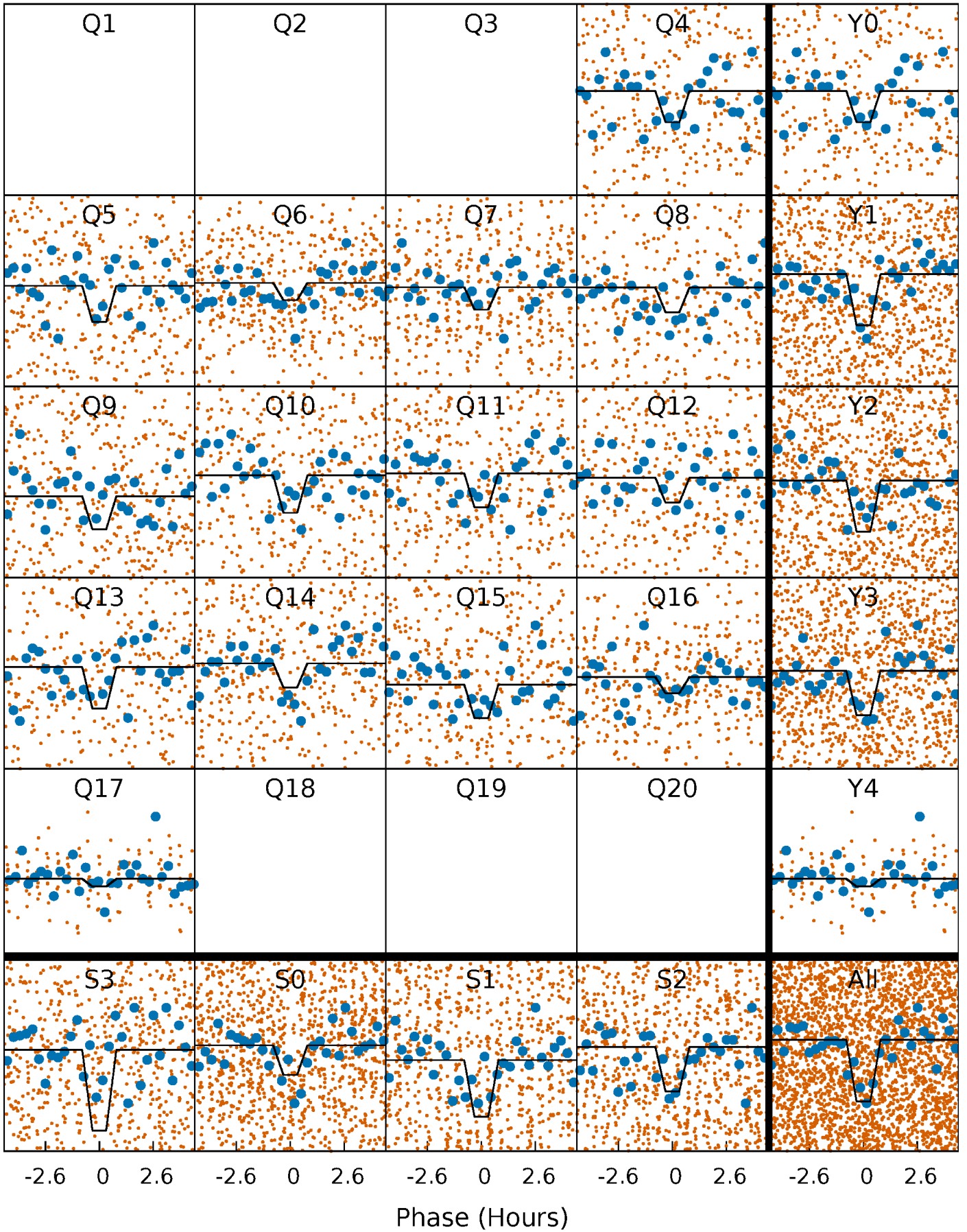
DV Quarter-Phased Transit Curves

TCE 006677256-02 P= 3.125808 Days $T_0=132.916111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

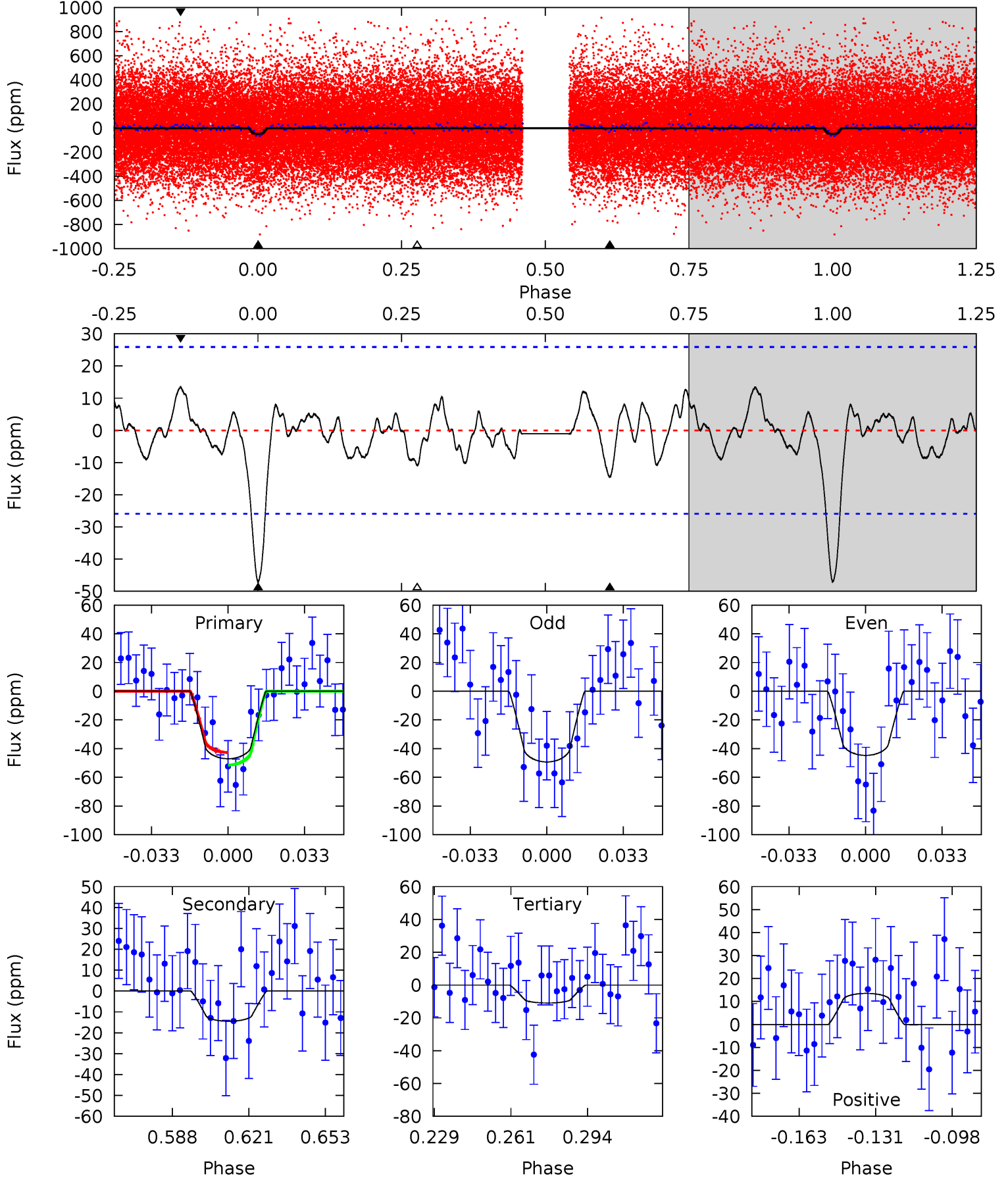
TCE 006677256-02 P= 3.125826 Days $T_0=132.913225$ (BKJD)



DV Model-Shift Uniqueness Test

006677256-02, P = 3.125808 Days, E = 132.916111 Days

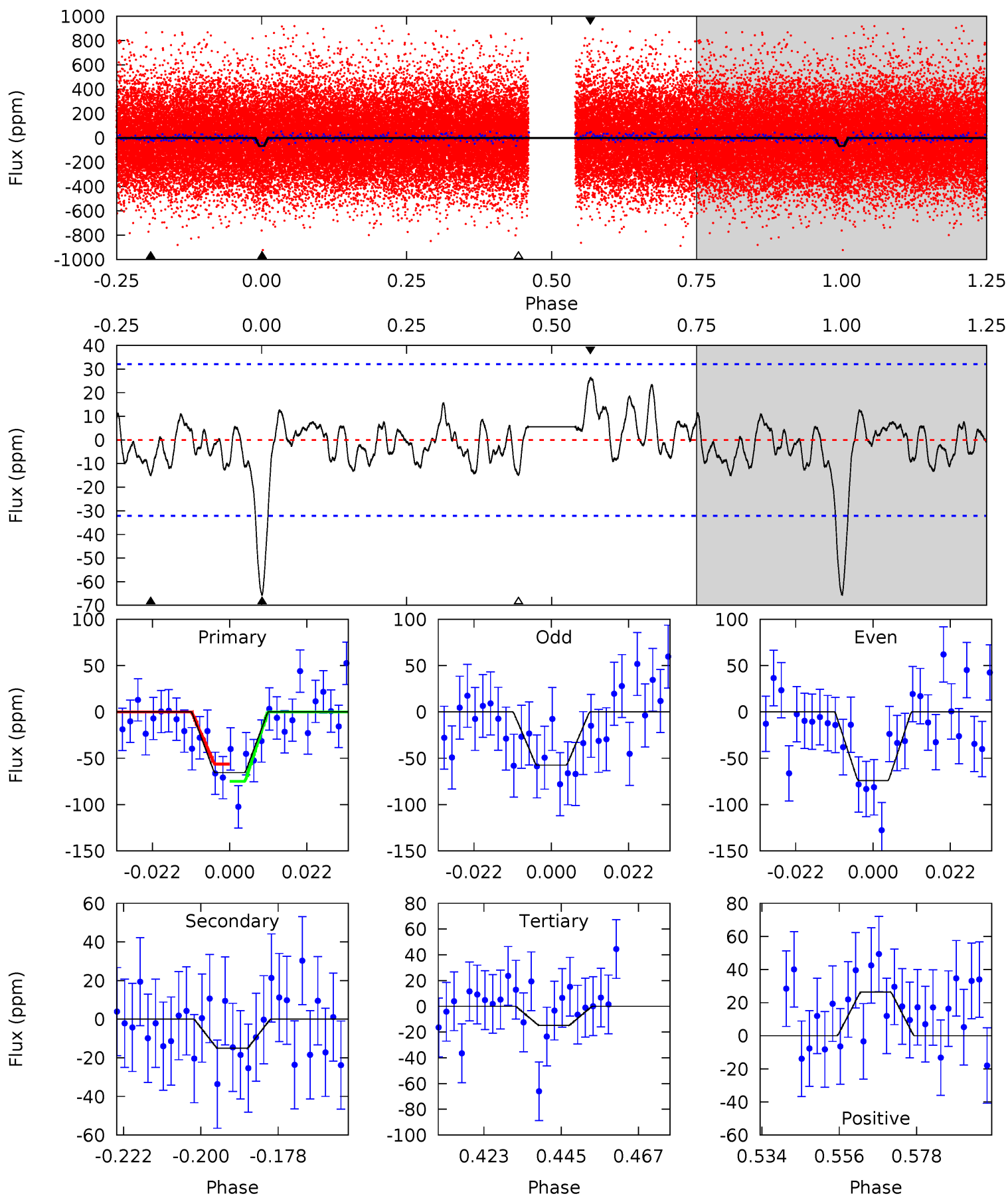
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	2.68	2.02	2.50	4.79	2.14	1.02	6.68	6.21	0.66	0.18	0.42	0.88	0.22	0.81



Alt Model-Shift Uniqueness Test

006677256-02, P = 3.125826 Days, E = 132.913225 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.95	2.29	2.25	4.00	4.87	2.29	1.21	7.70	5.95	0.04	-1.72	1.27	1.05	0.29	1.41



Stellar Parameters For KIC 006677256

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6358^{+179}_{-246}	$4.346^{+0.101}_{-0.203}$	$-0.100^{+0.250}_{-0.300}$	$1.181^{+0.381}_{-0.163}$	$1.125^{+0.185}_{-0.152}$	$0.963^{+0.465}_{-0.499}$
	+3%/-4%	+2%/-5%	+250%/-300%	+32%/-14%	+16%/-14%	+48%/-52%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006677256-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 5	$1.15^{+0.65}_{-0.59}$	2059^{+160}_{-118}	4343^{+1707}_{-702}	11^{+40}_{-7}
Alt.	-15 ± 7	$1.20^{+0.66}_{-0.60}$	2066^{+150}_{-128}	4328^{+1519}_{-733}	10^{+34}_{-6}

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

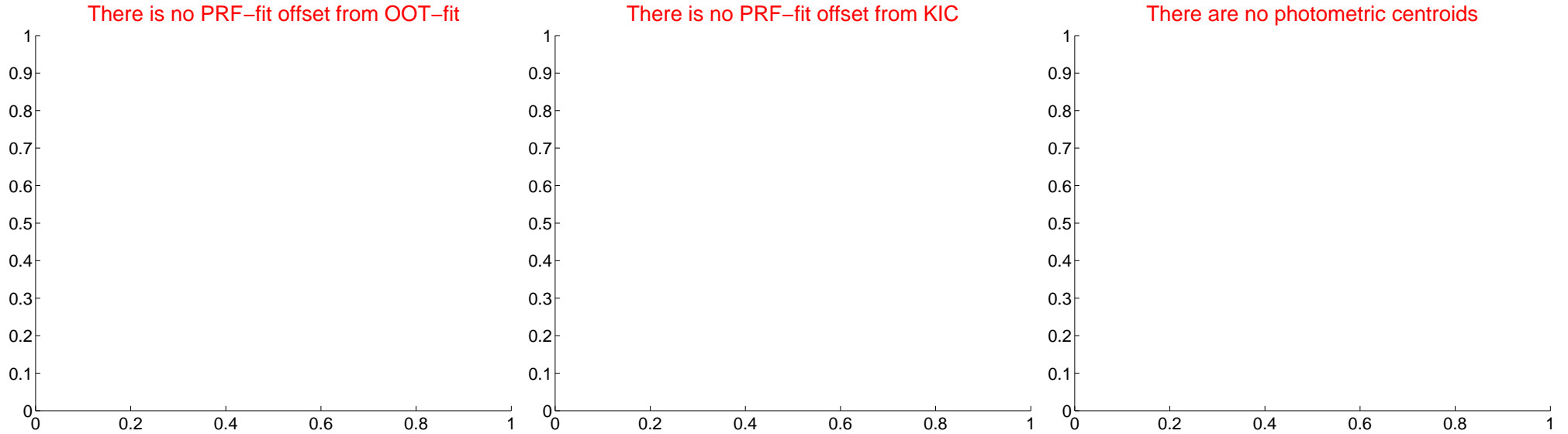
DV Centroid Data

Supplemental centroid analysis for 006677256-02. Kepler magnitude: 14.52. Transit SNR 8.00

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—



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

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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



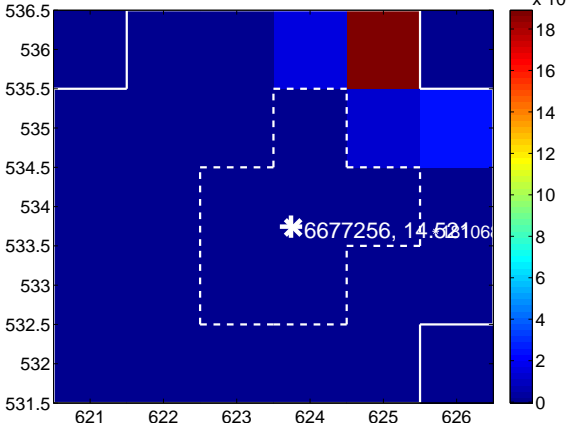
Q3 no difference image



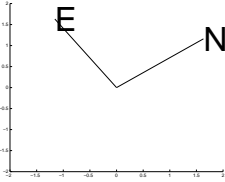
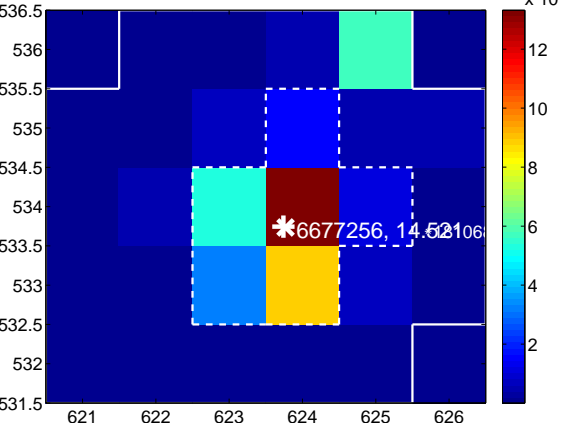
Q3 no OOT image



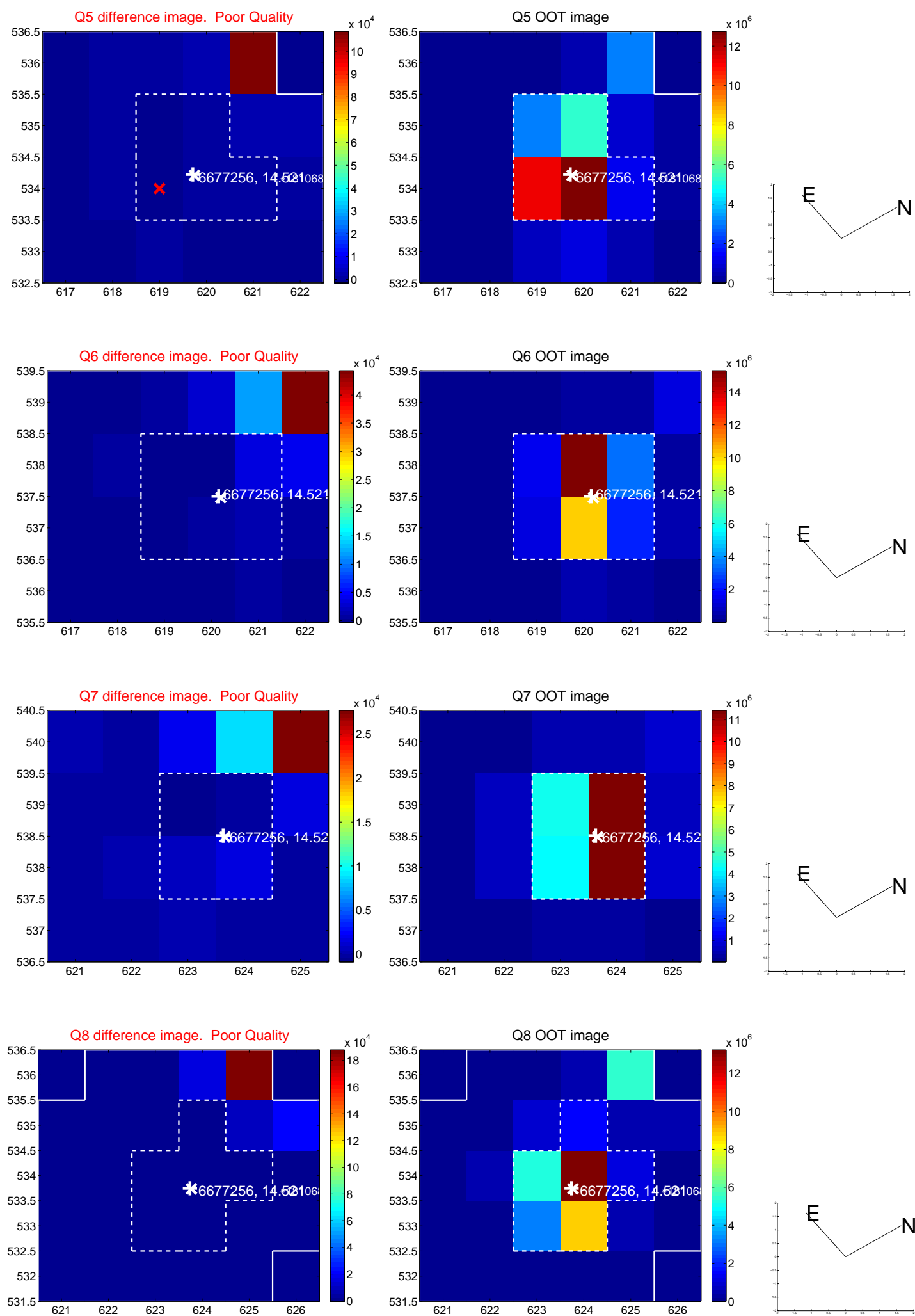
Q4 difference image. Poor Quality



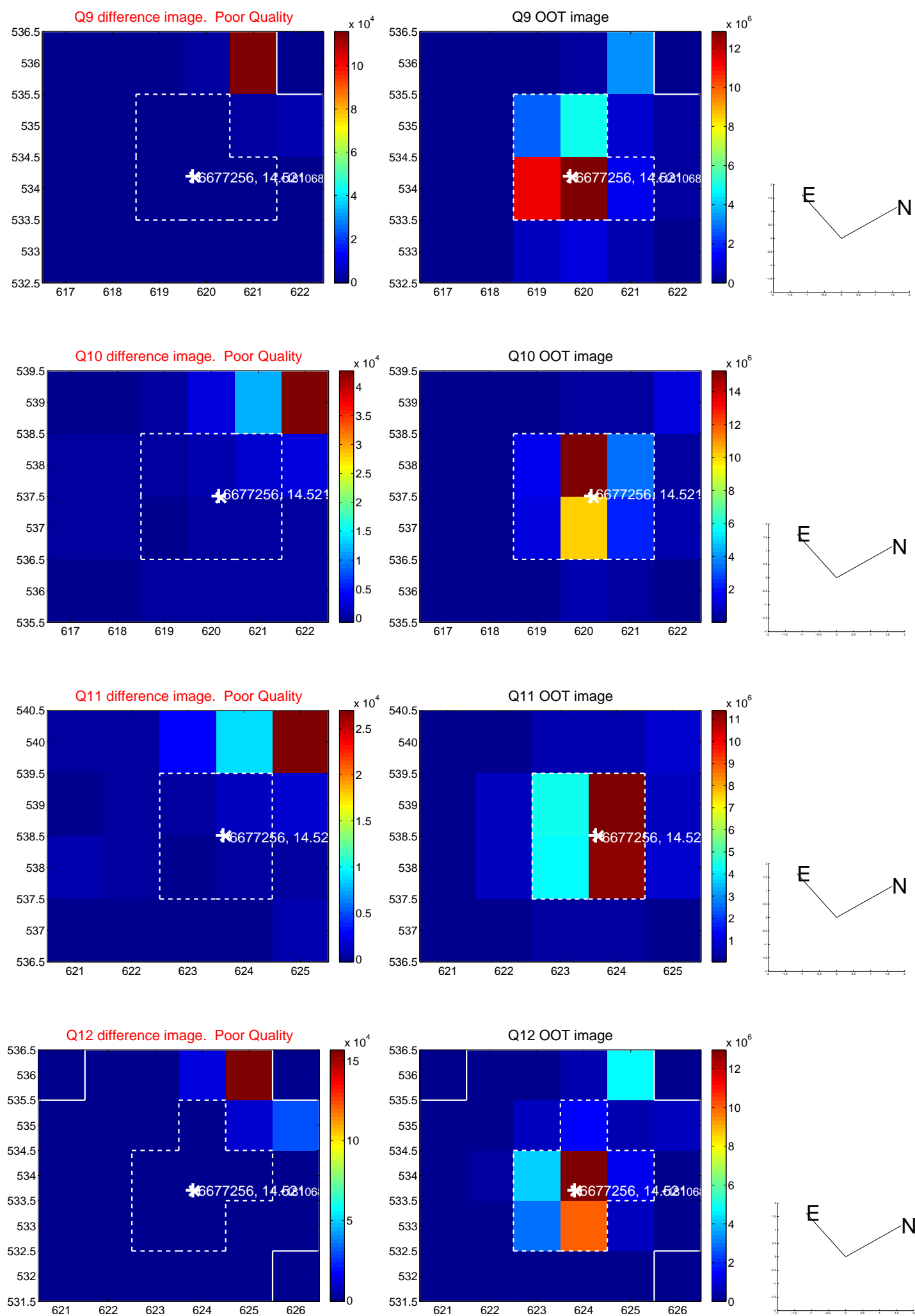
Q4 OOT image



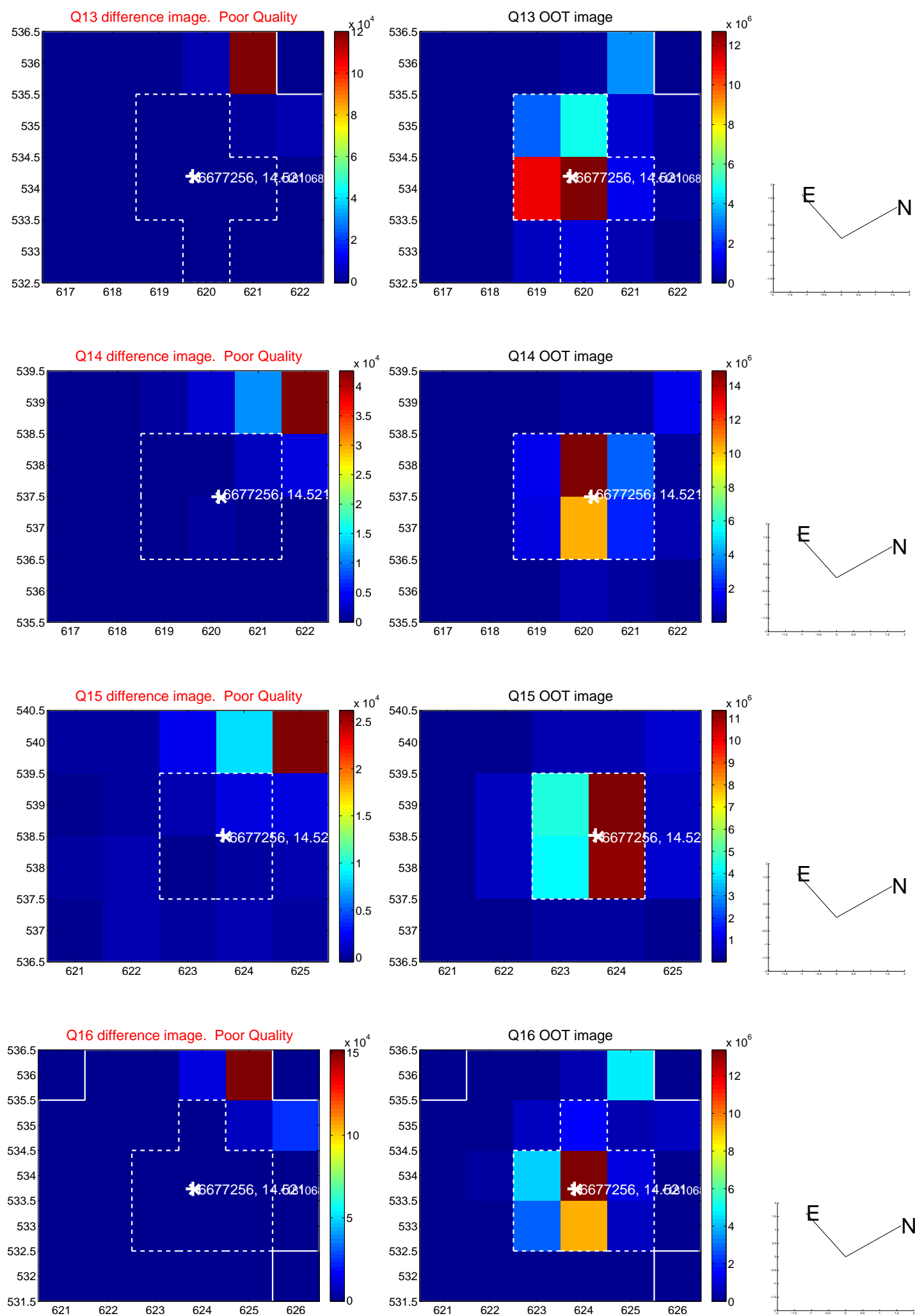
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



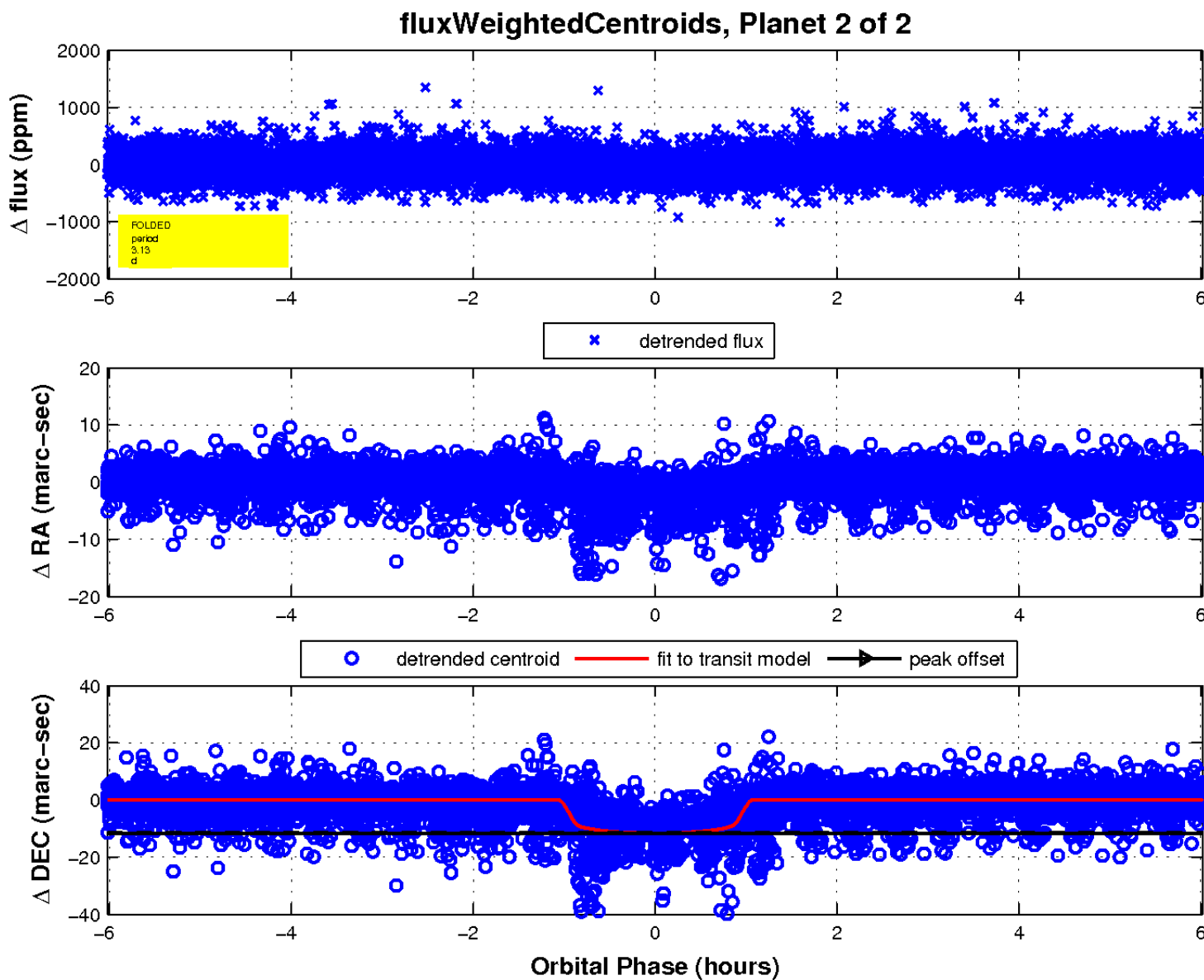
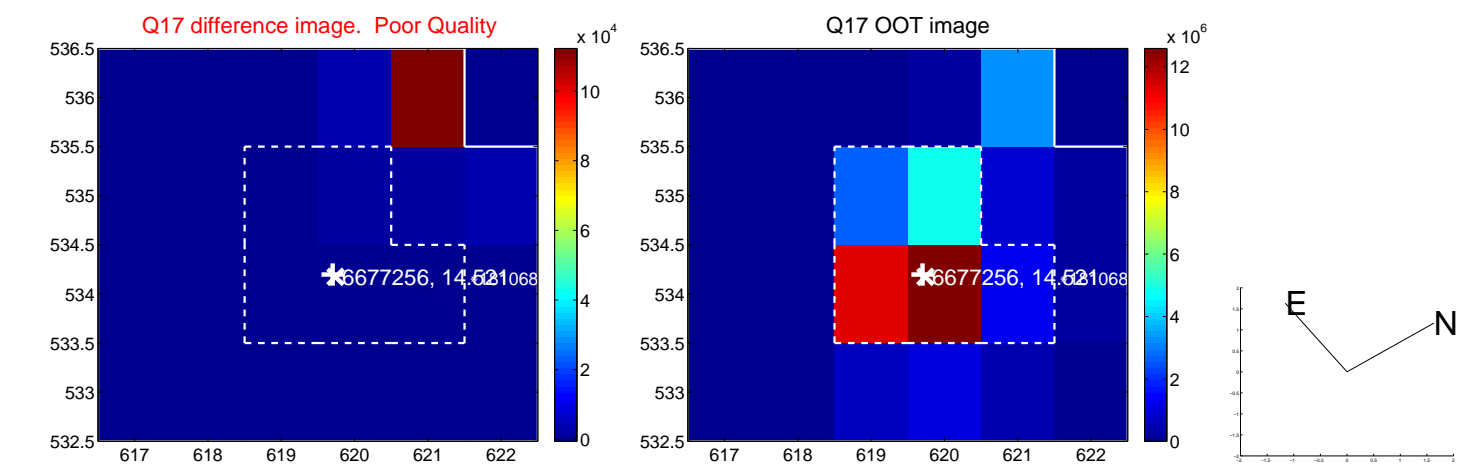
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

