

KIC 005553624

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})
005553624-01	OBS	6599.01	25.762115	139.728691	454004.0	9.000	21190.1	-1.0	1.03	5539	50.72	31.55
005553624-02	OBS	No	25.761855	150.563282	257550.4	3.000	12421.3	-1.0	1.03	5539	51.63	31.55
005553624-03	OBS	No	25.760959	140.978461	36673.1	98.438	1222.8	267.4	1.03	5539	21.03	31.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005553624-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
005553624-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005553624-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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.

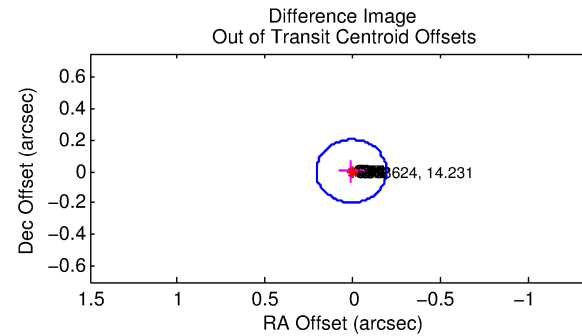
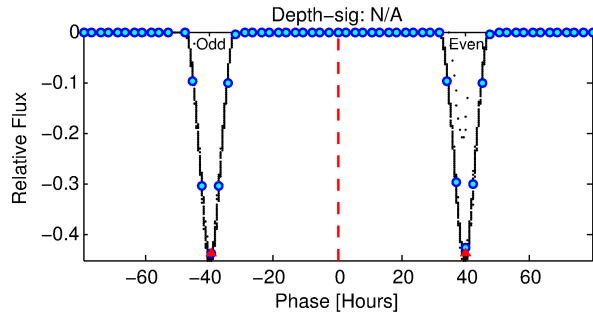
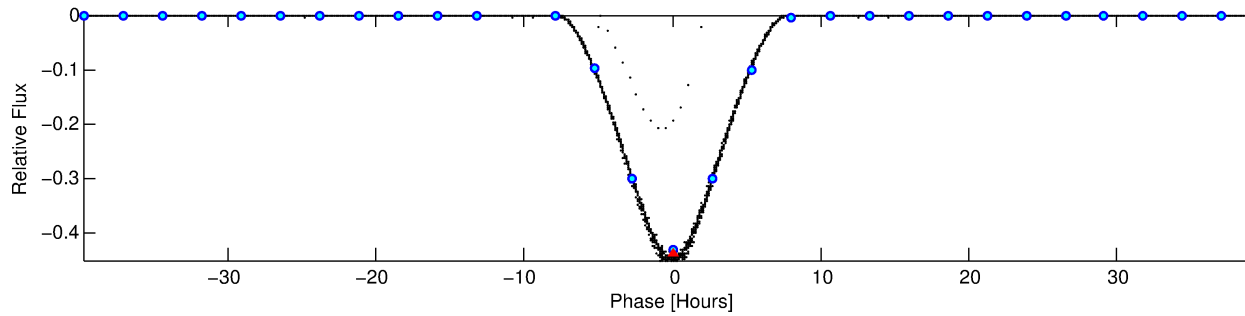
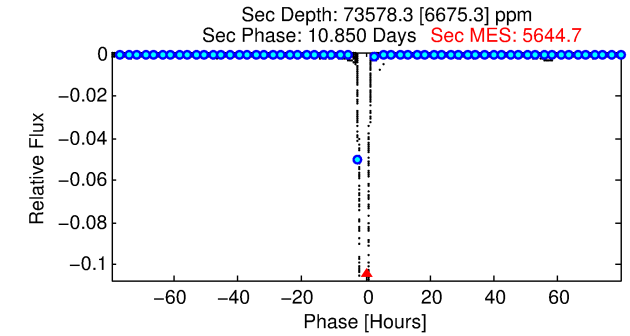
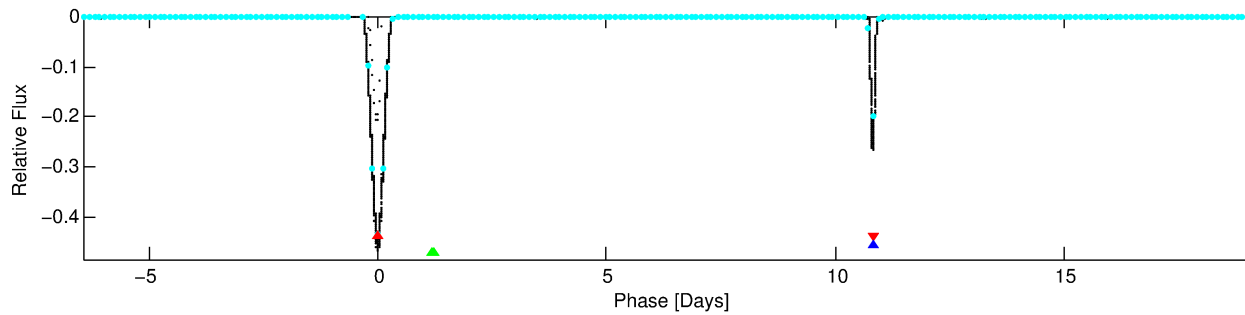
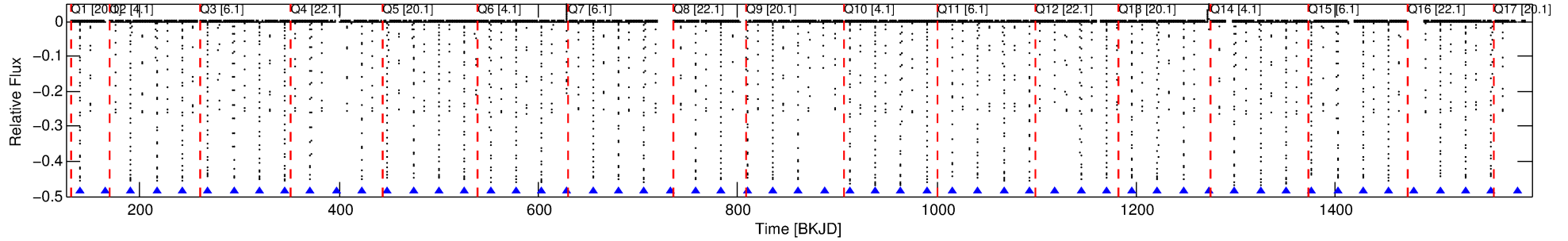
Ephemeris Match Information For 005553624-01

No Significant Match Found

DV One-Page Summary

KIC: 5553624 Candidate: 1 of 3 Period: 25.762 d
KOI: K06599.01 Corr: 0.779

Kp: 14.23 R*: 1.03 Rs Teff: 5539.0 K Logg: 4.39 Fe/H: 0.210



TPS TCE Results:

Period = 25.76212 d
Epoch = 139.7287 BKJD

DV fit results are unavailable

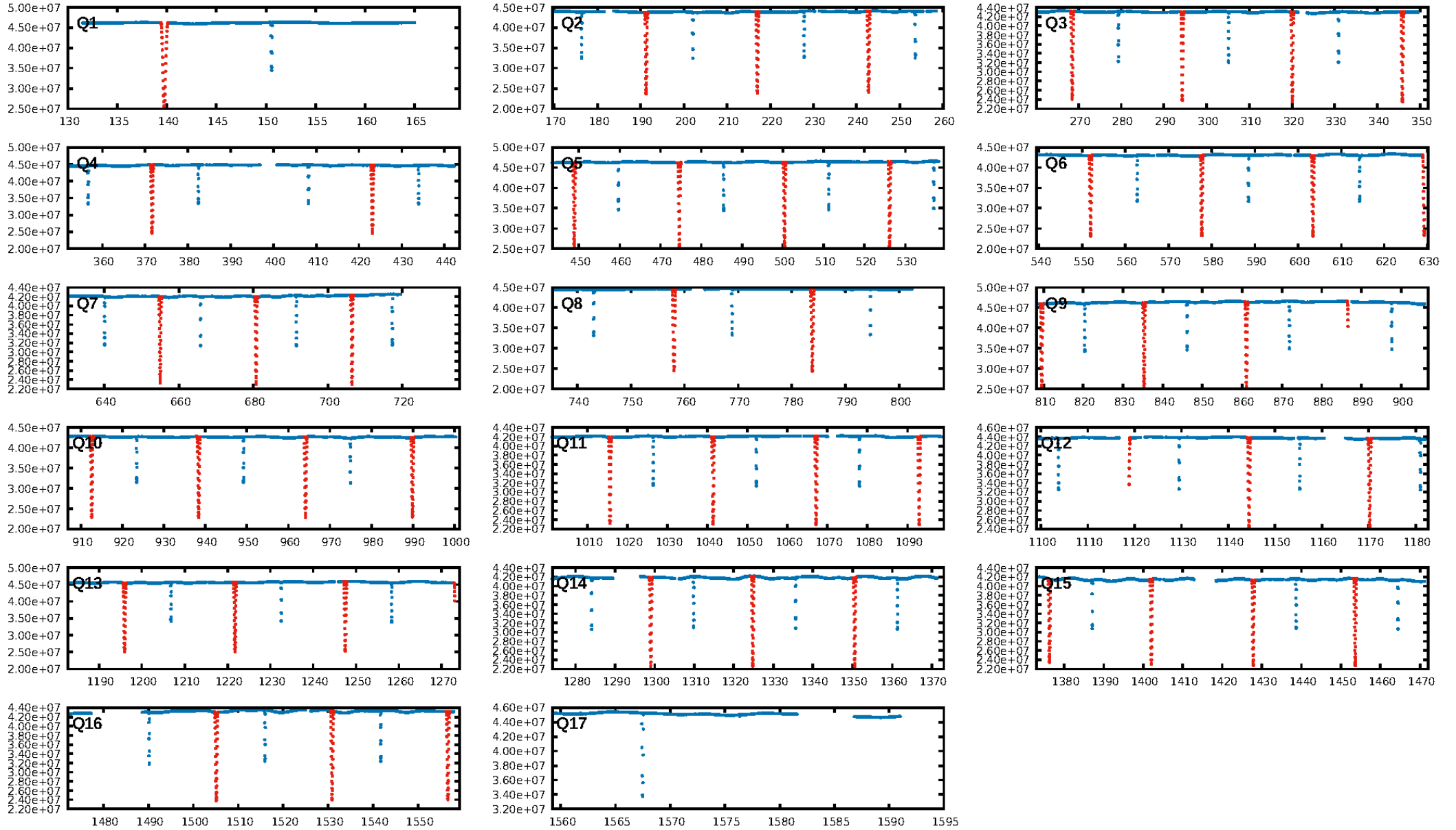
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [51/51]
GhostDiagnostic-chr: 0.8522
Centroid-sig: 0.0%
Centroid-so: 0.142 arcsec [304.05 σ]
OotOffset-rm: 0.010 arcsec [0.16 σ]
KicOffset-rm: 0.069 arcsec [1.03 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 0.00 [0/16]

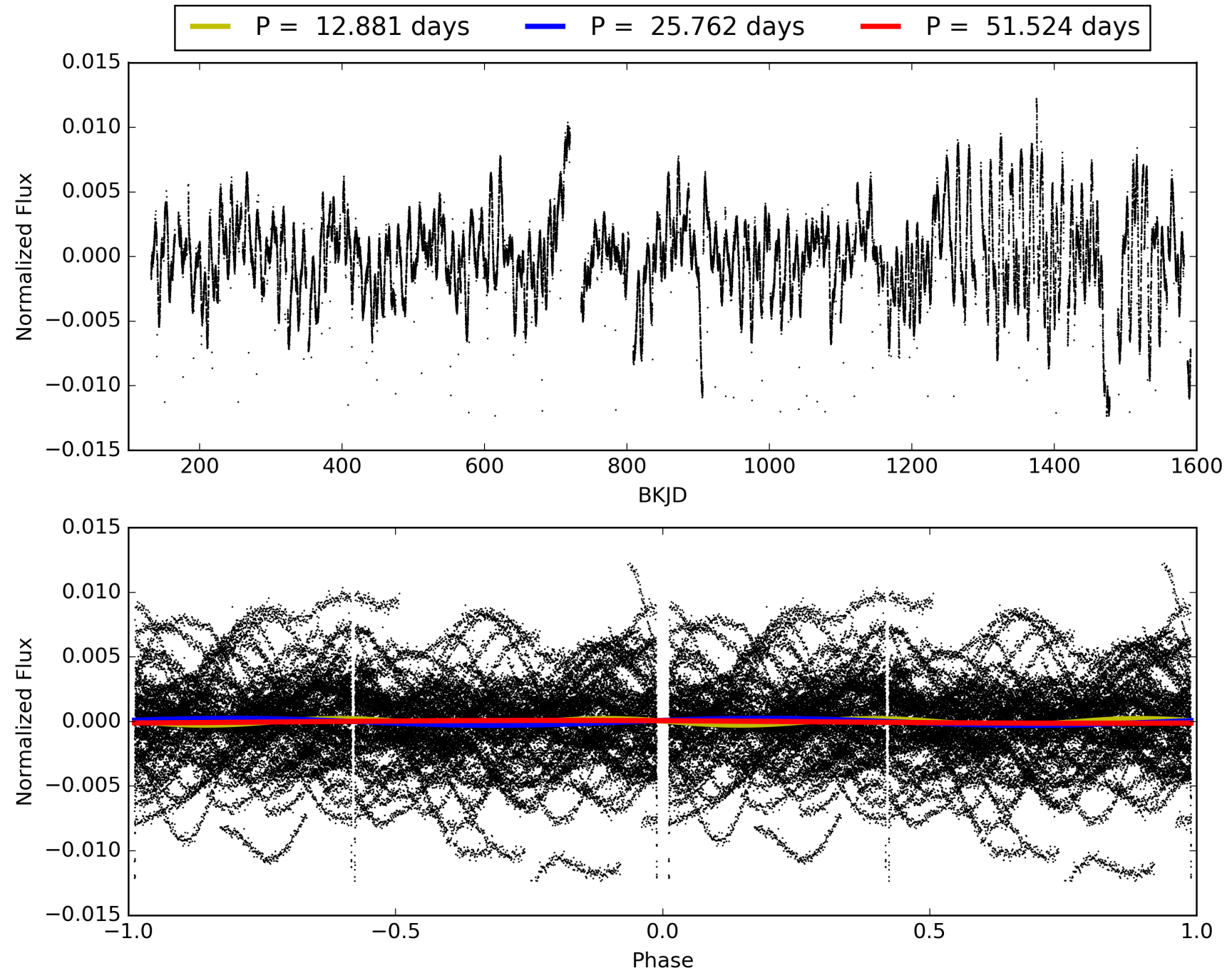
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:58:38 Z

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

TCE 005553624-01, PDC Light Curves

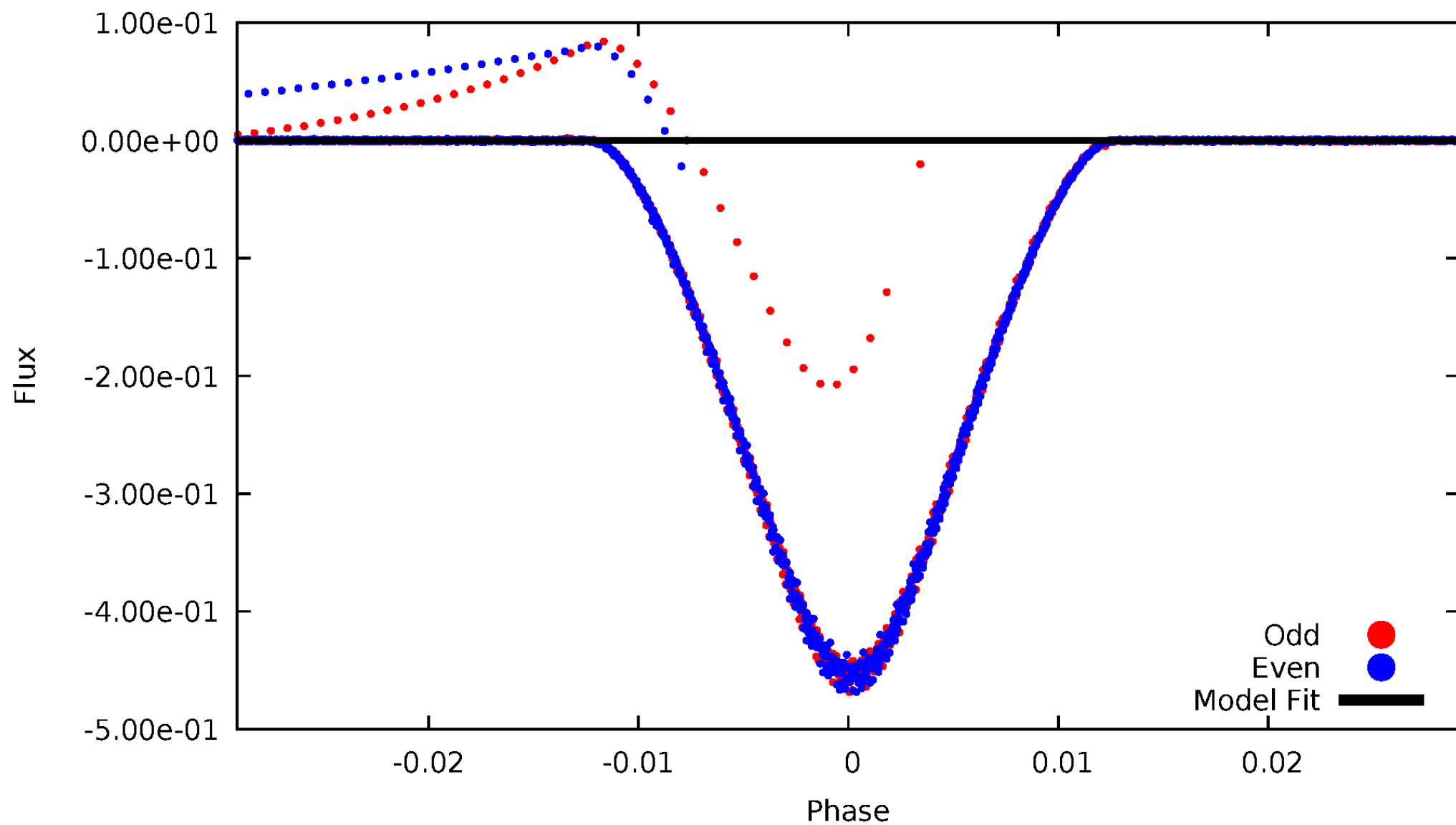


TCE 005553624-01



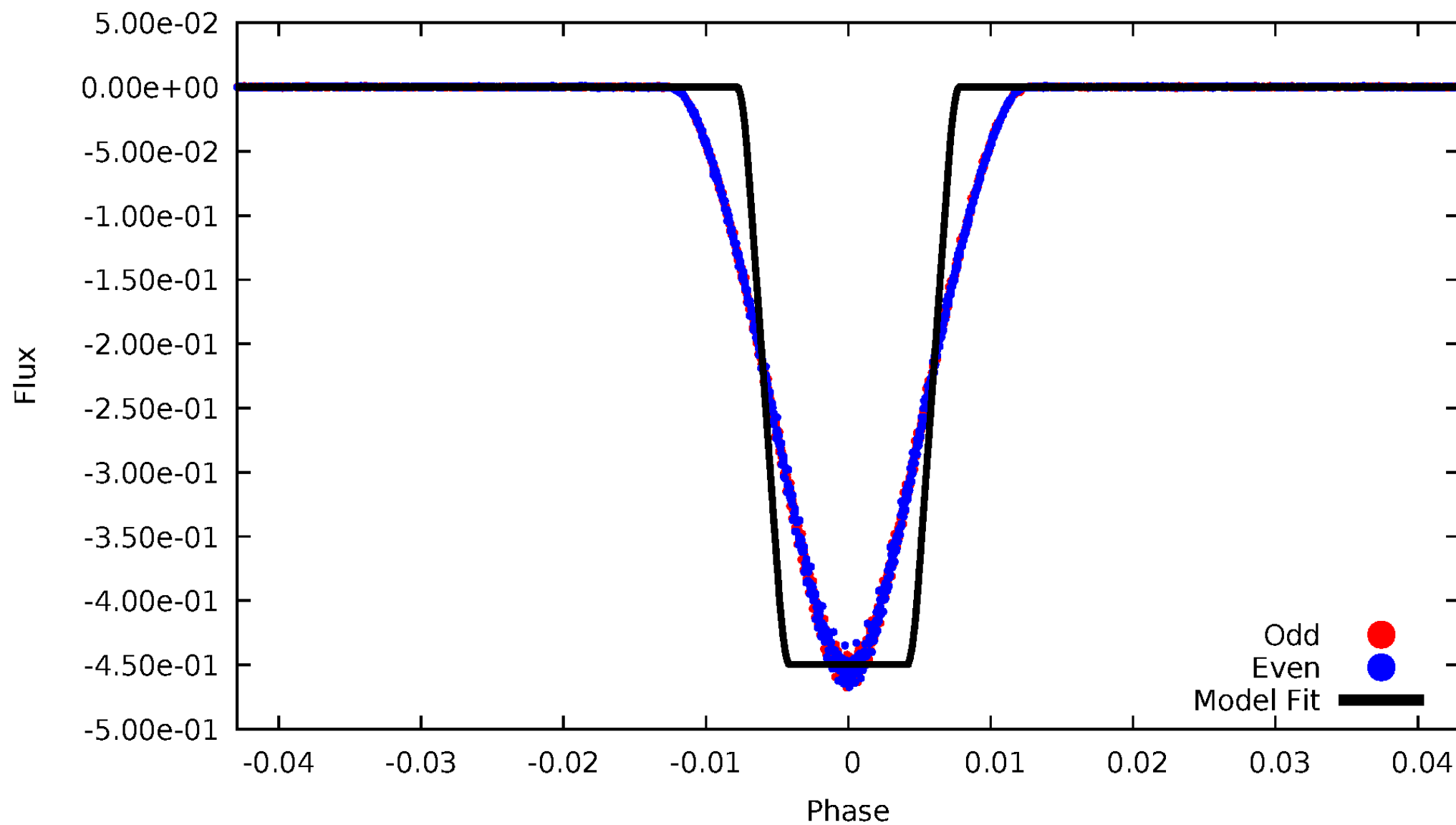
DV Odd/Even

TCE 005553624-01



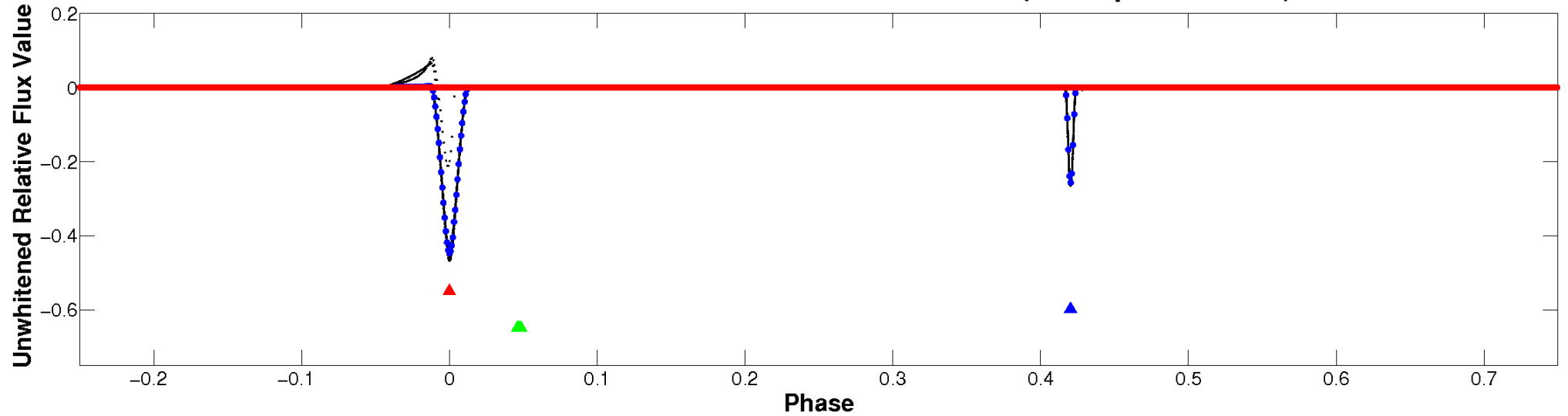
ALT Odd/Even

TCE 005553624-01



Non-Whitened Vs. Whitened Light Curve

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

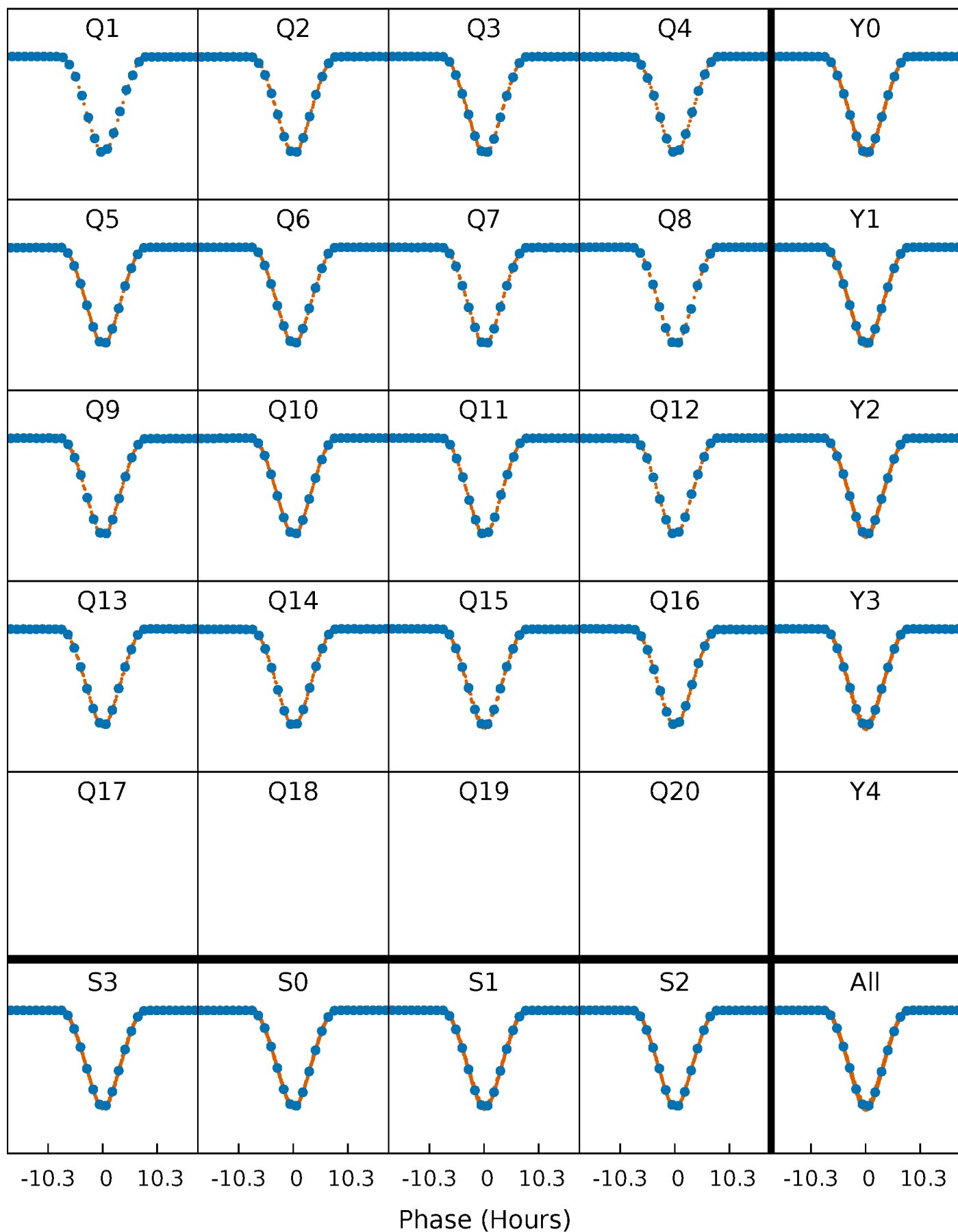


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



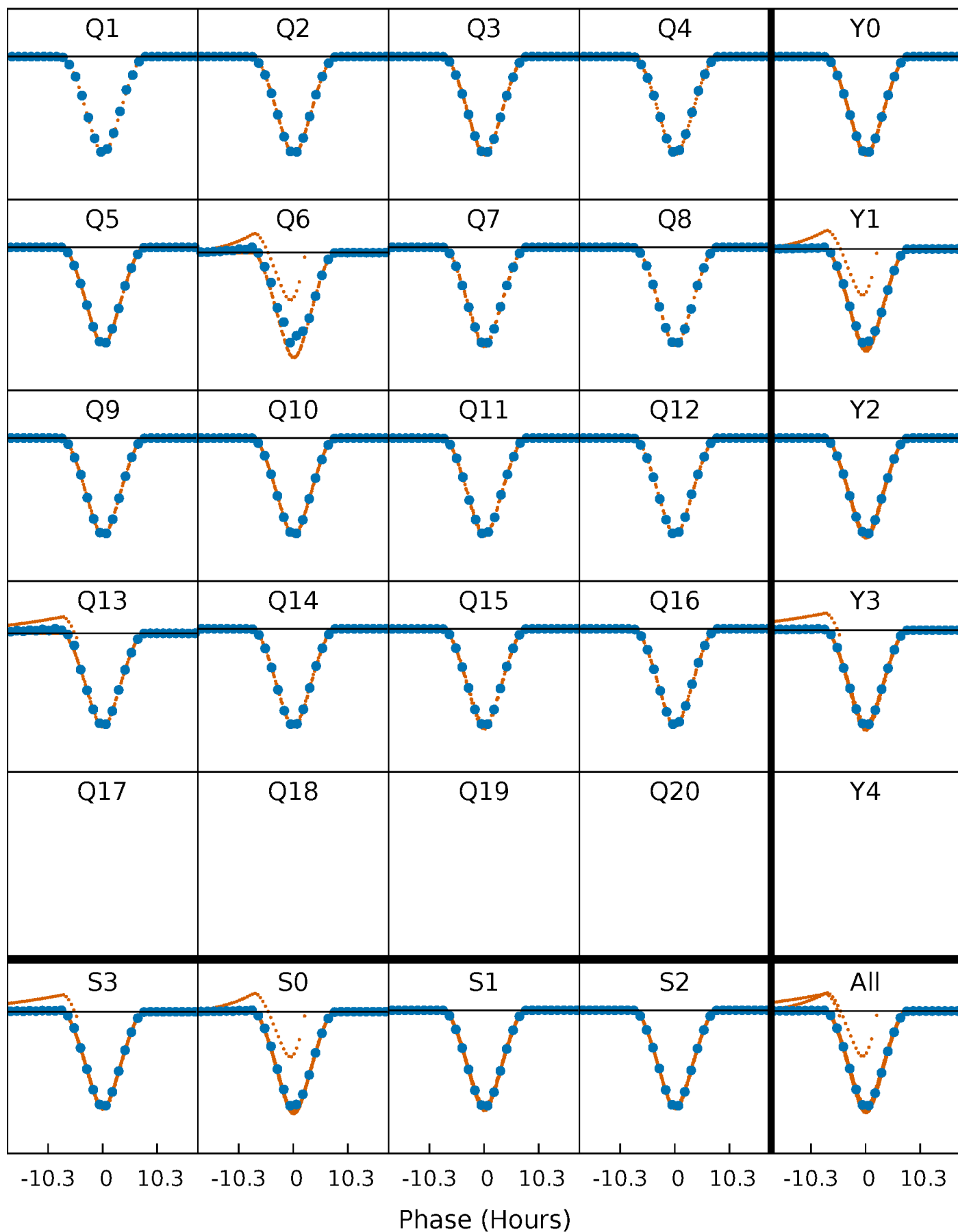
PDC Quarter-Phased Transit Curves

TCE 005553624-01 P= 25.762115 Days $T_0=139.728690$ (BKJD)



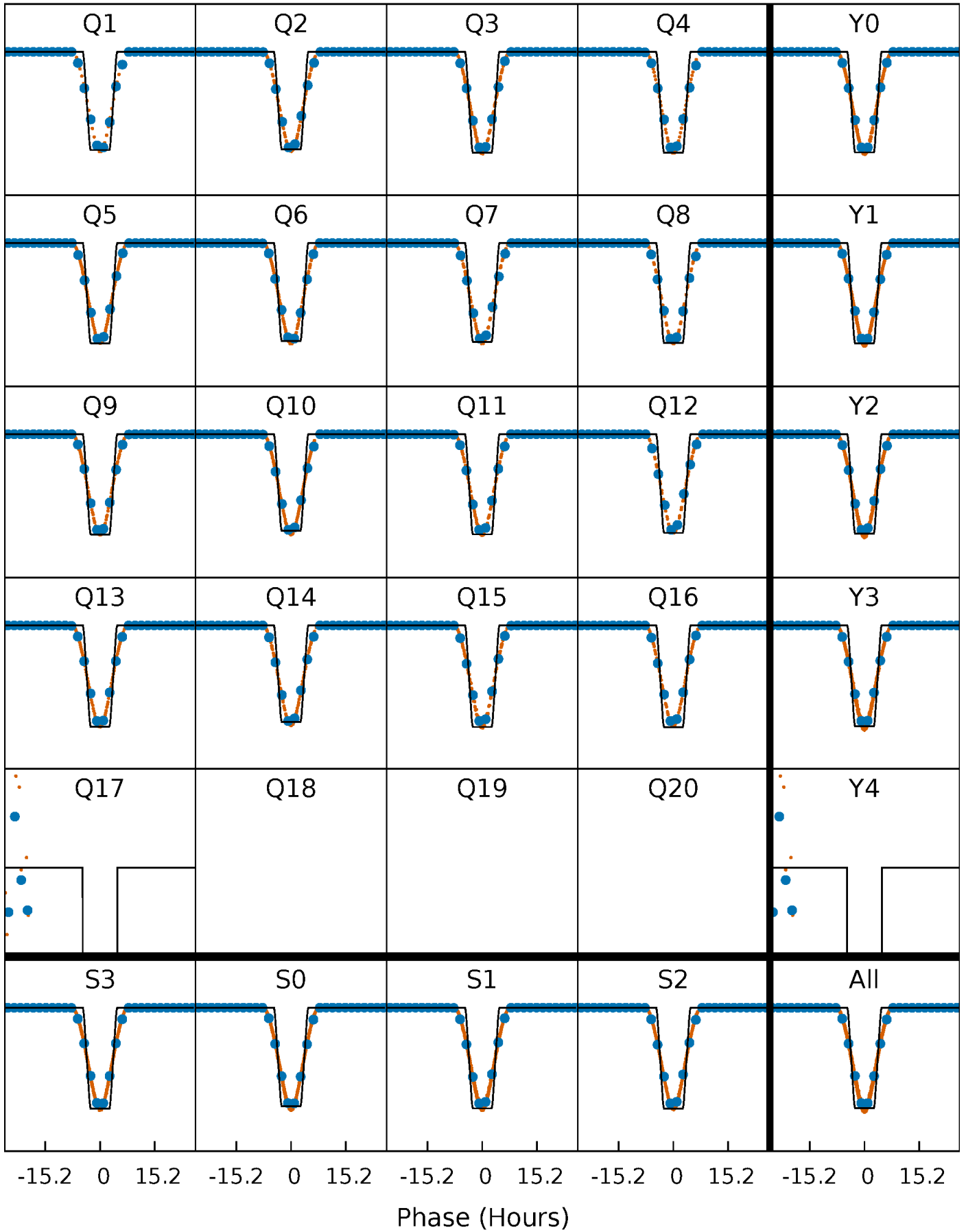
DV Quarter-Phased Transit Curves

TCE 005553624-01 P= 25.762115 Days $T_0=139.728690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

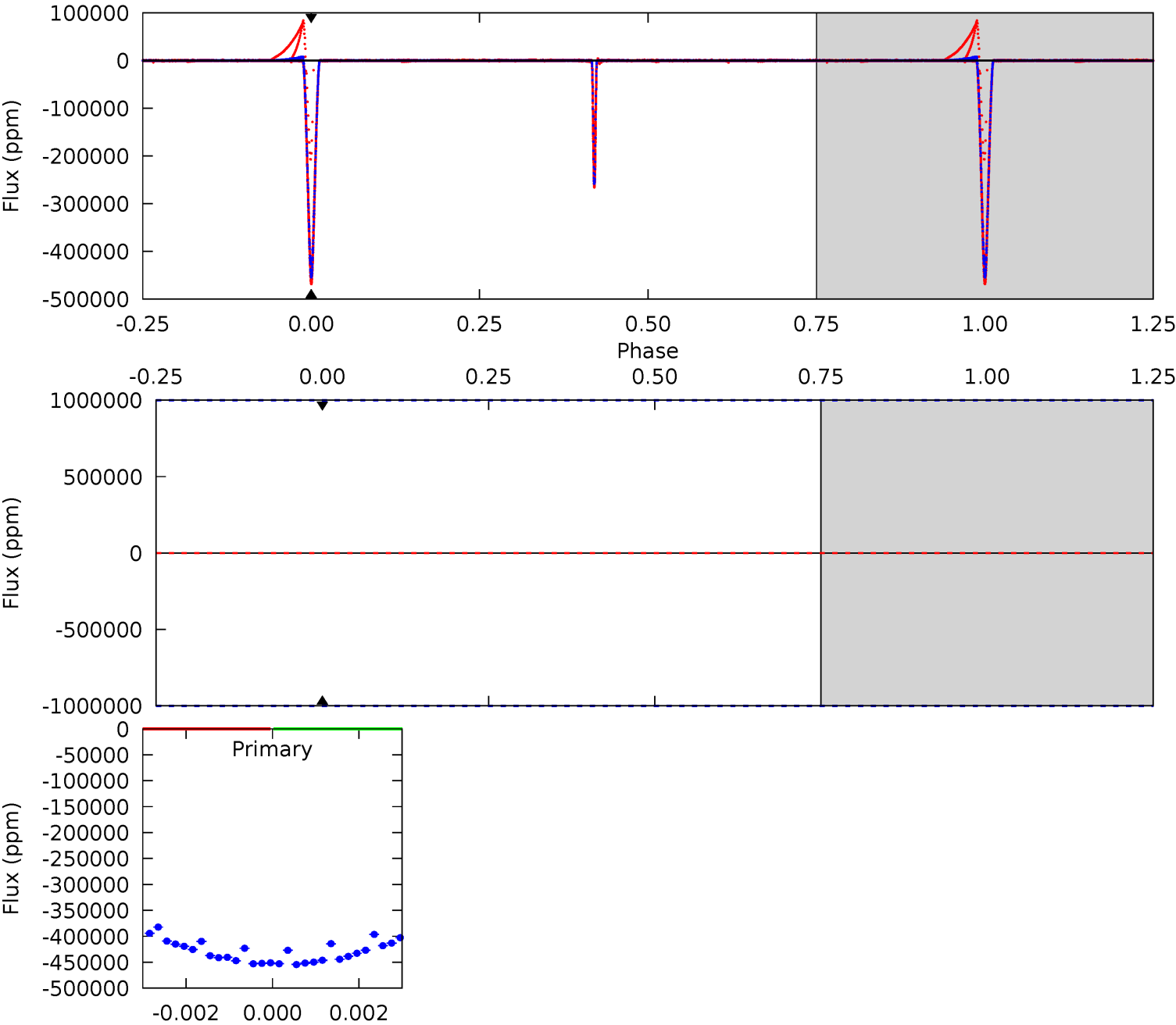
TCE 005553624-01 P= 25.762115 Days $T_0=139.733040$ (BKJD)



DV Model-Shift Uniqueness Test

005553624-01, P = 25.762115 Days, E = 113.966575 Days

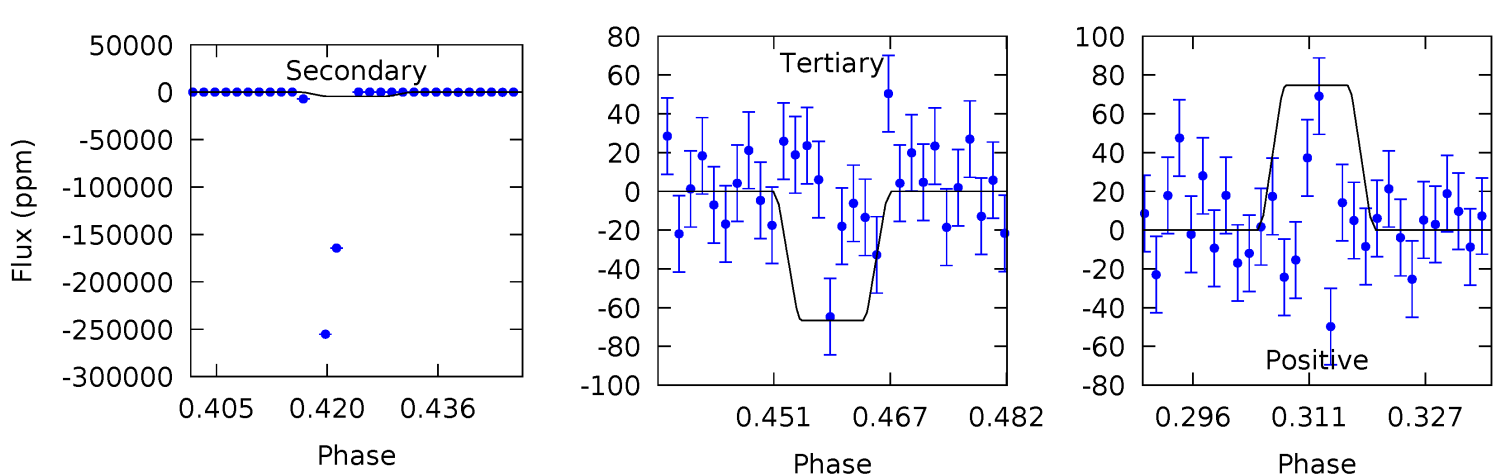
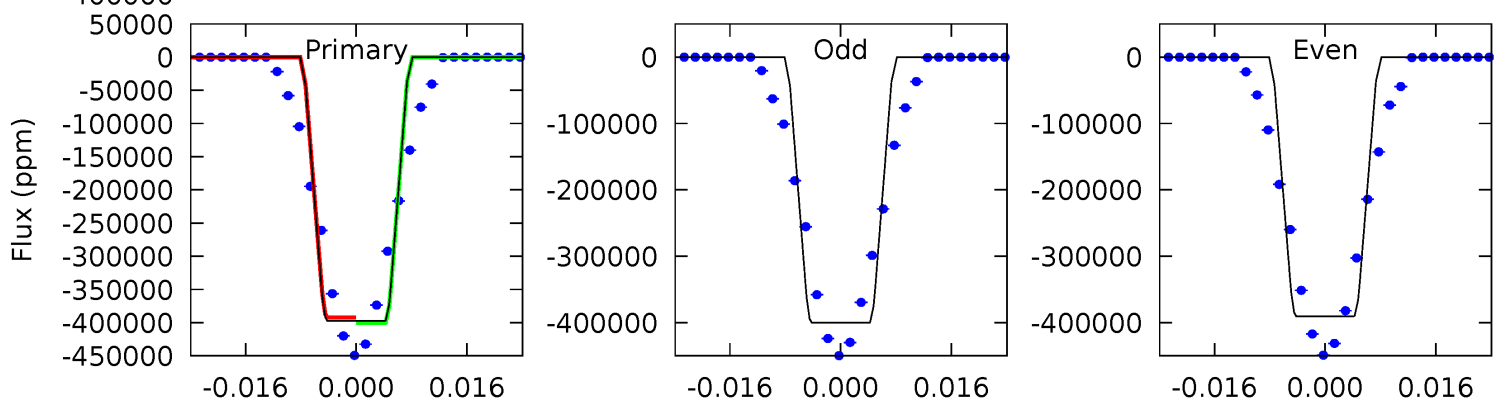
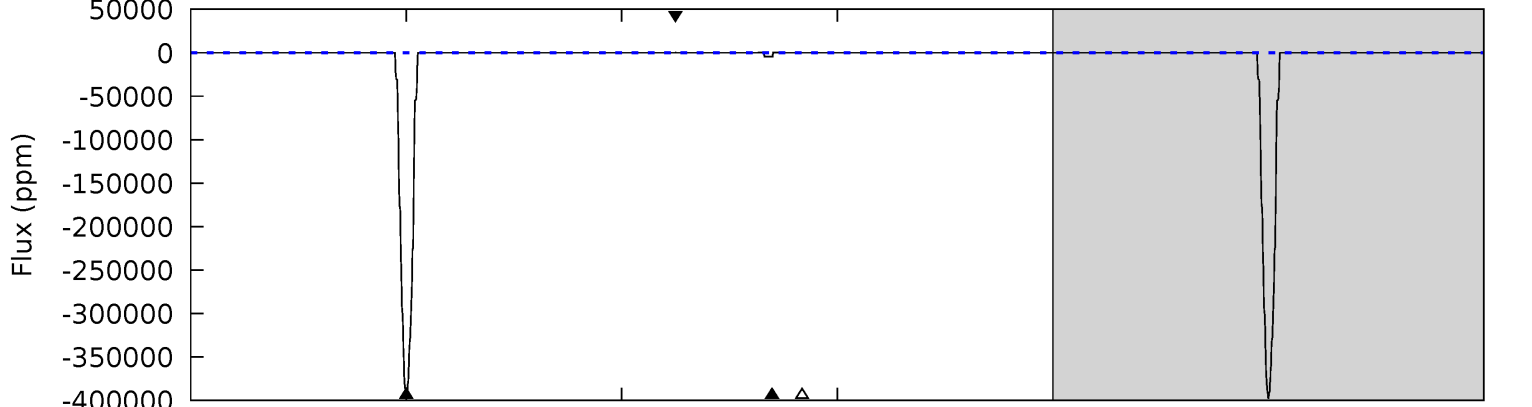
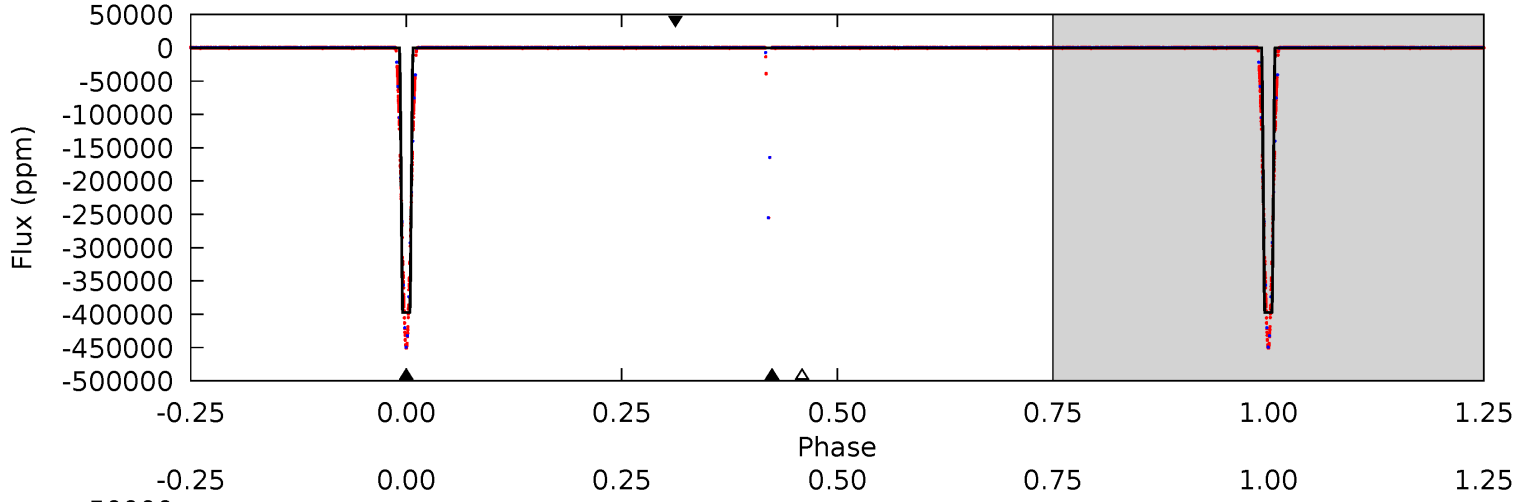
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005553624-01, P = 25.762115 Days, E = 113.970925 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22320	246.3	3.74	4.19	4.94	2.42	1.14	22316	22316	242.6	242.2	292.2	1.01	0.00	0



Stellar Parameters For KIC 005553624

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5539^{+74}_{-83}	$4.393^{+0.105}_{-0.105}$	$0.210^{+0.150}_{-0.150}$	$1.027^{+0.145}_{-0.105}$	$0.950^{+0.057}_{-0.046}$	$1.235^{+0.463}_{-0.397}$
	+1%/-1%	+2%/-2%	+71%/-71%	+14%/-10%	+6%/-5%	+37%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005553624-01 / KOI 6599.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$50.65^{+11.77}_{-11.63}$	843^{+34}_{-32}	2537^{+2479}_{-7256}	15^{+771}_{-613}
Alt.	-4385 ± 18	$75.10^{+13.22}_{-12.35}$	842^{+37}_{-27}	2560^{+112}_{-88}	12^{+5}_{-3}

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 $A_{obs} \gg 1.0$

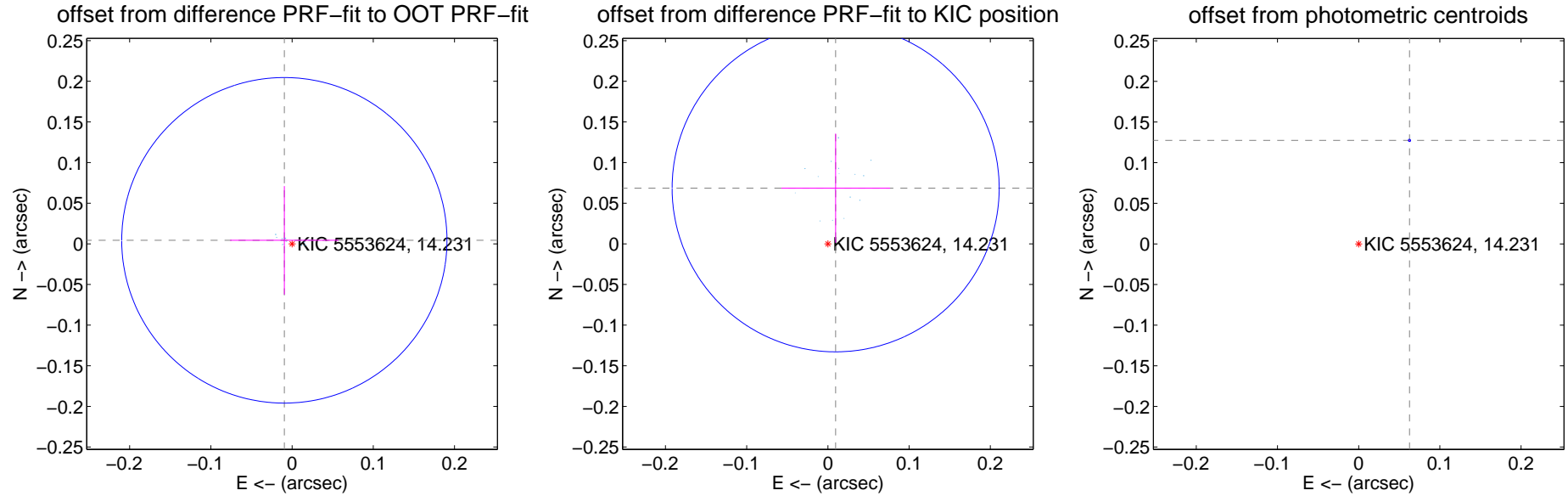
DV Centroid Data

Supplemental centroid analysis for 005553624-01. Kepler magnitude: 14.23. Transit SNR -1.00

There are 16 quarters with good PRF difference image offsets

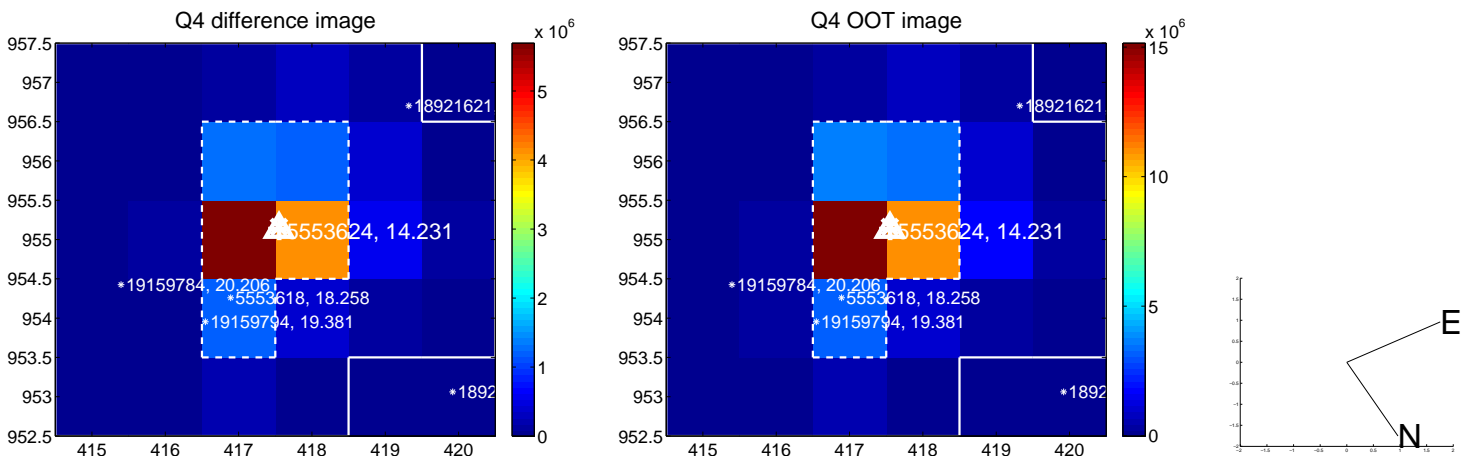
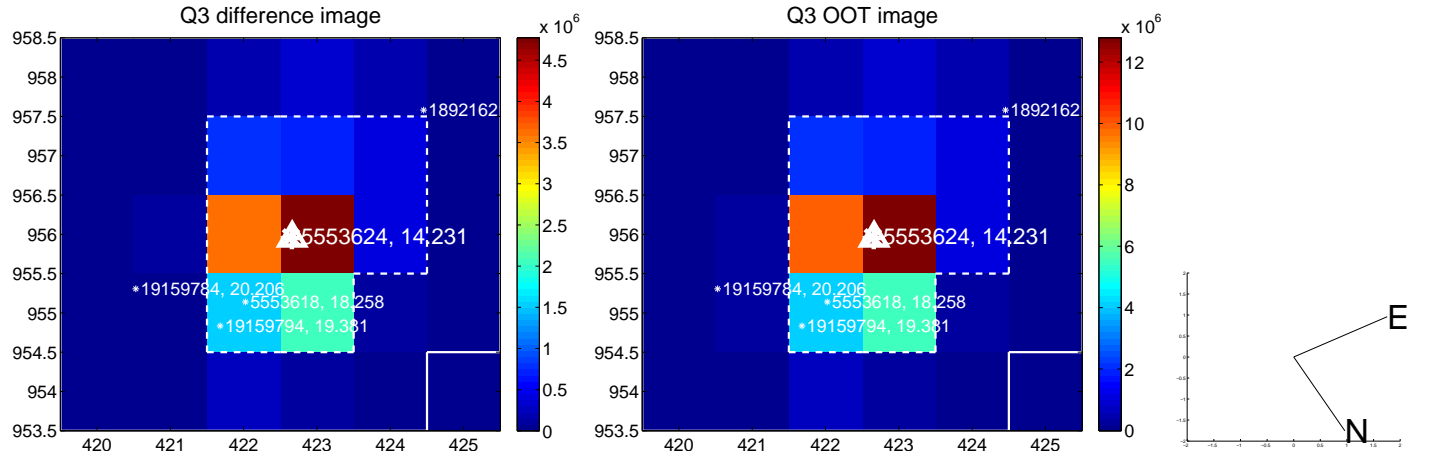
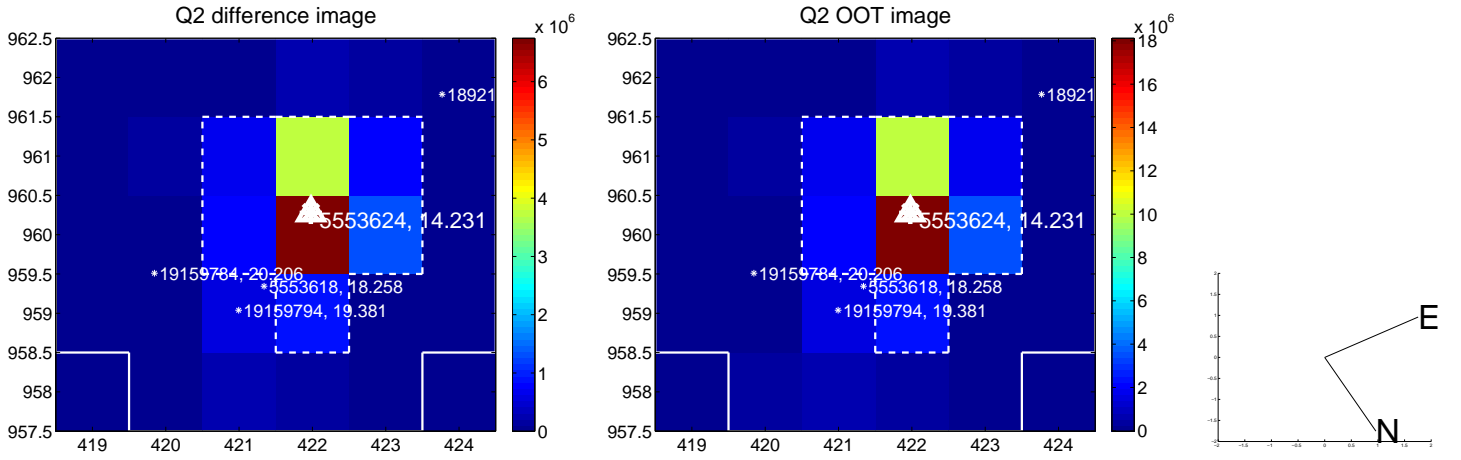
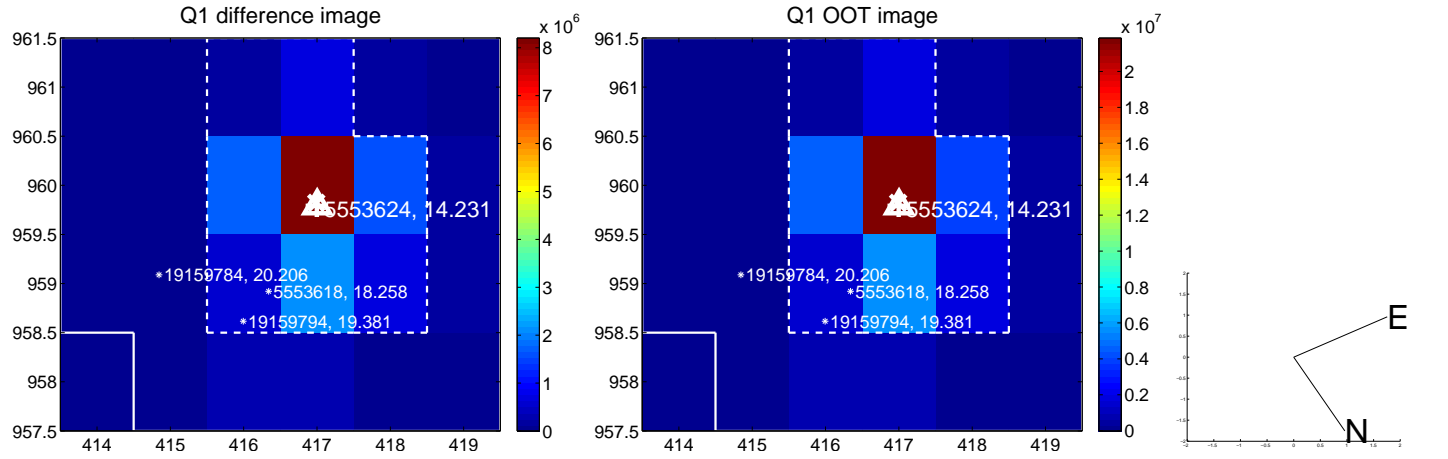
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.16	0.010 ± 0.067	0.004 ± 0.067
PRF-fit source offset from KIC position	0.069 ± 0.067	1.03	-0.010 ± 0.067	0.069 ± 0.067
photometric centroid source offset	0.14 ± 0.00	304.05	-0.06 ± 0.00	0.13 ± 0.00

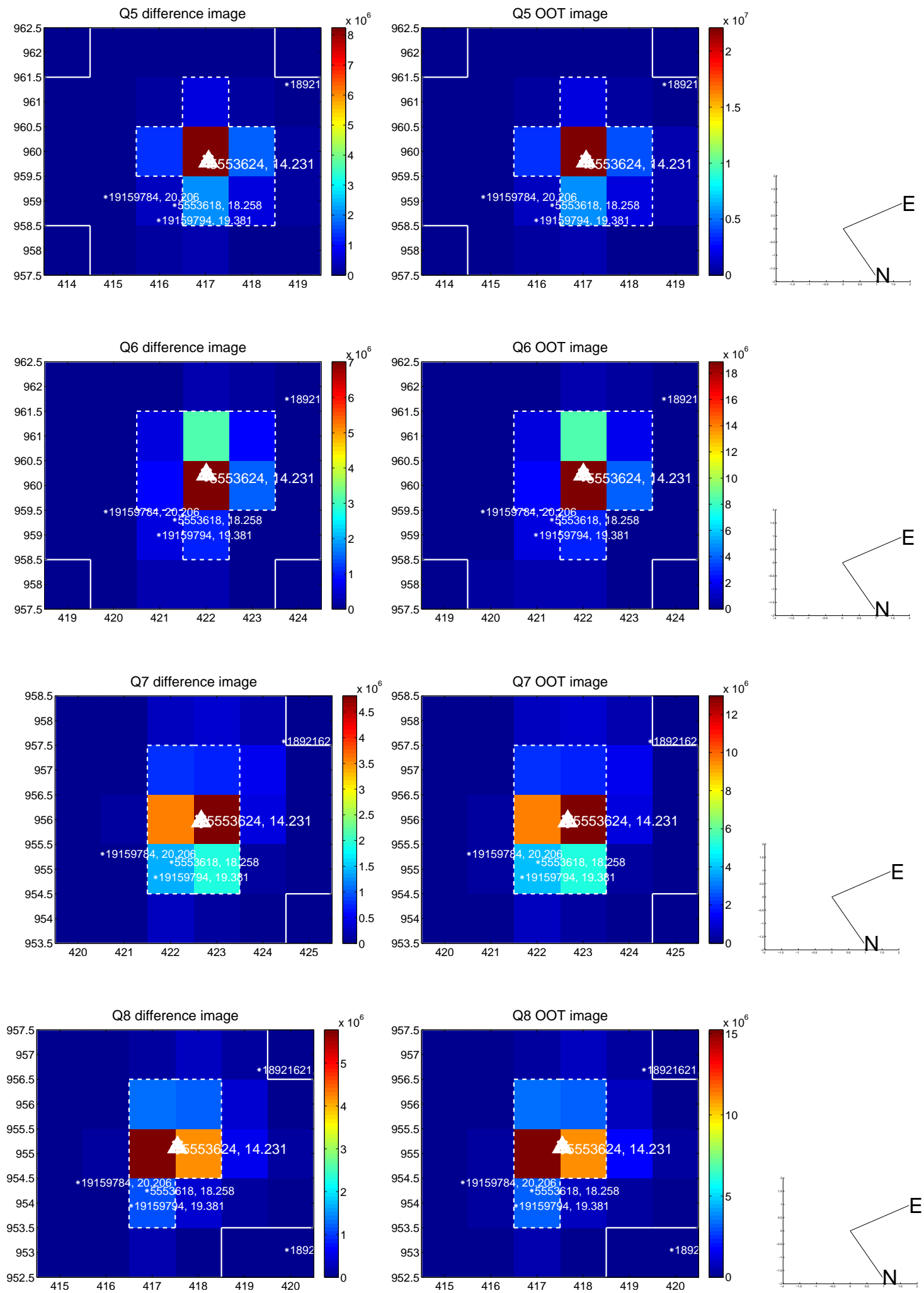


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

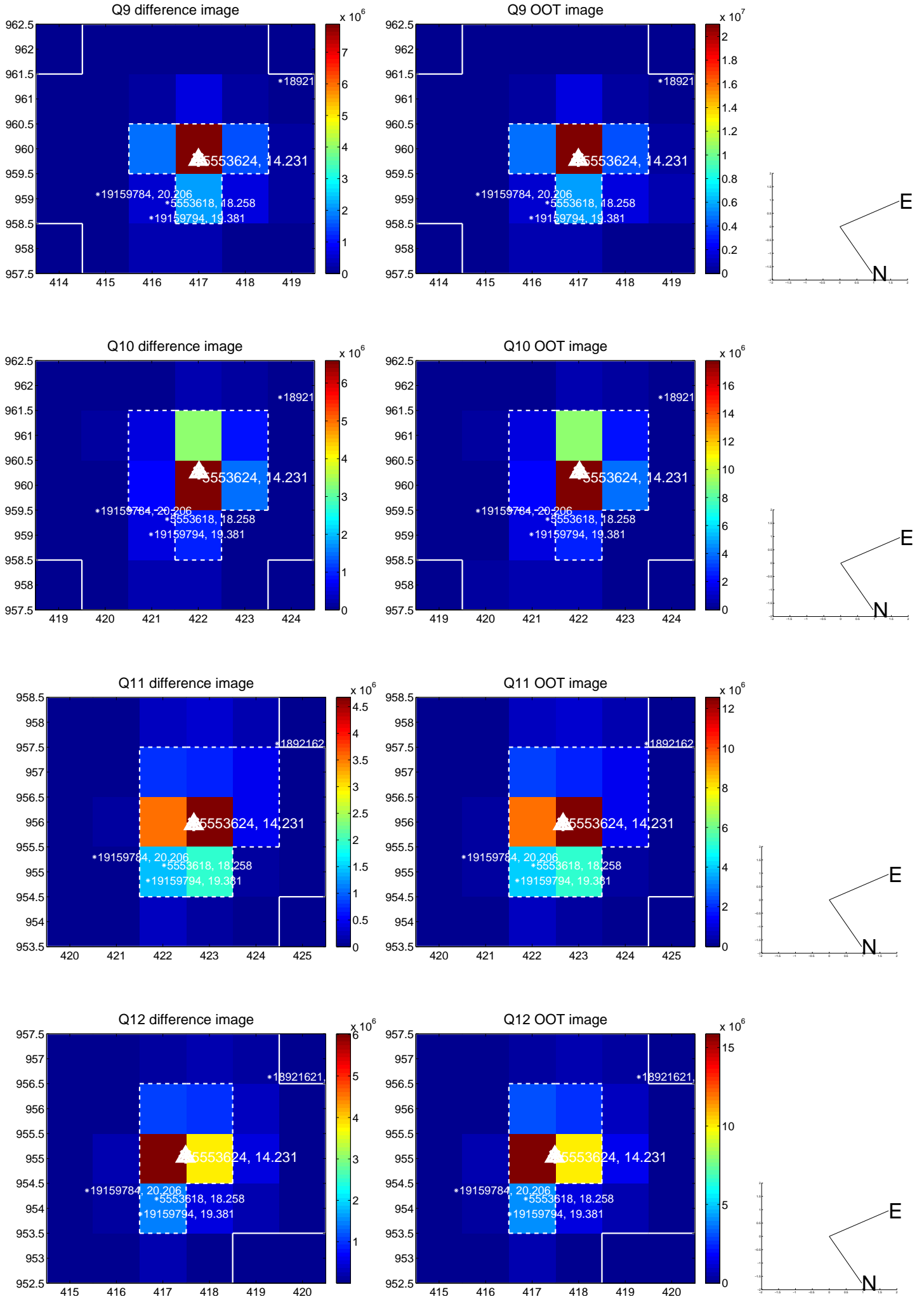
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



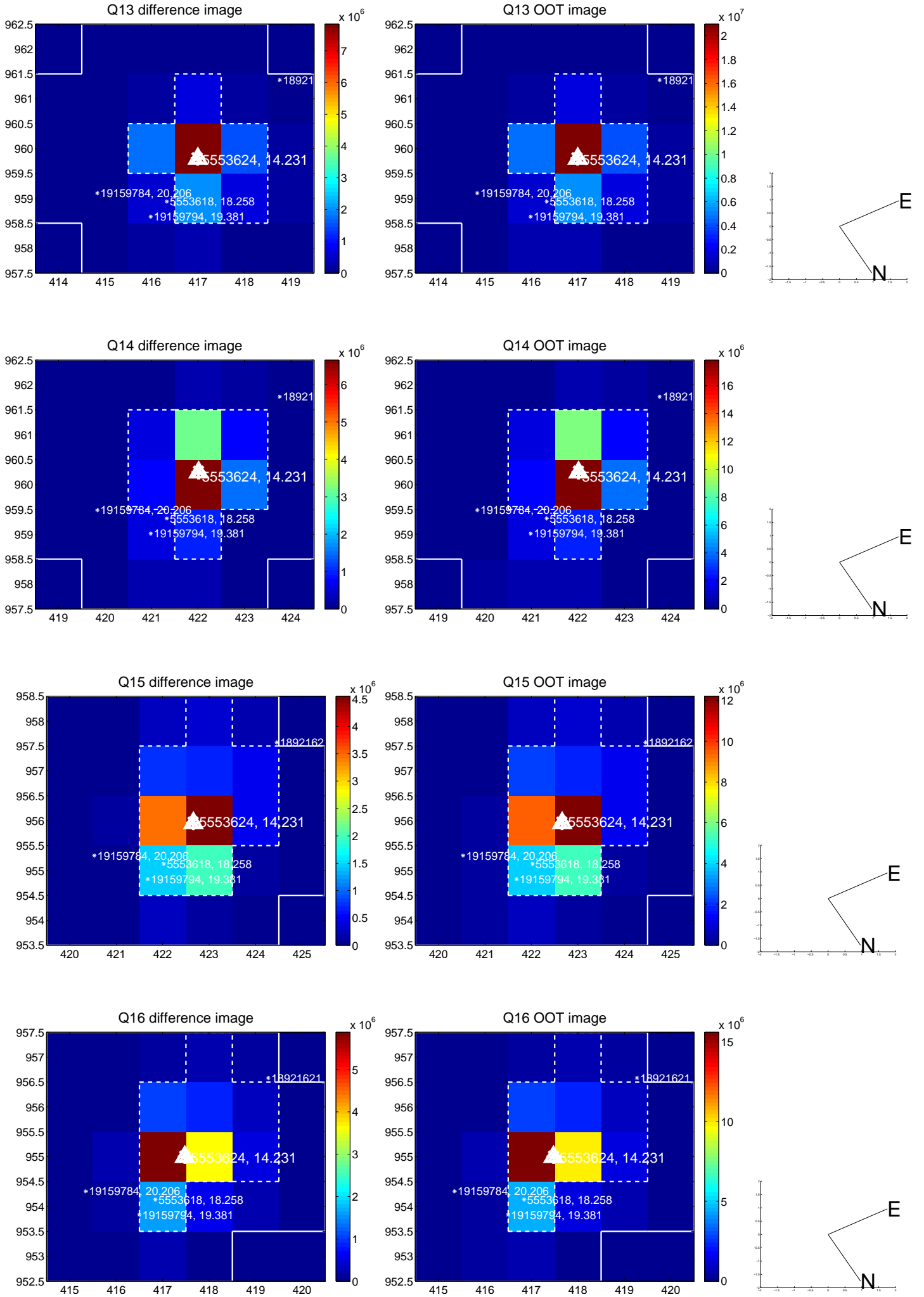
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



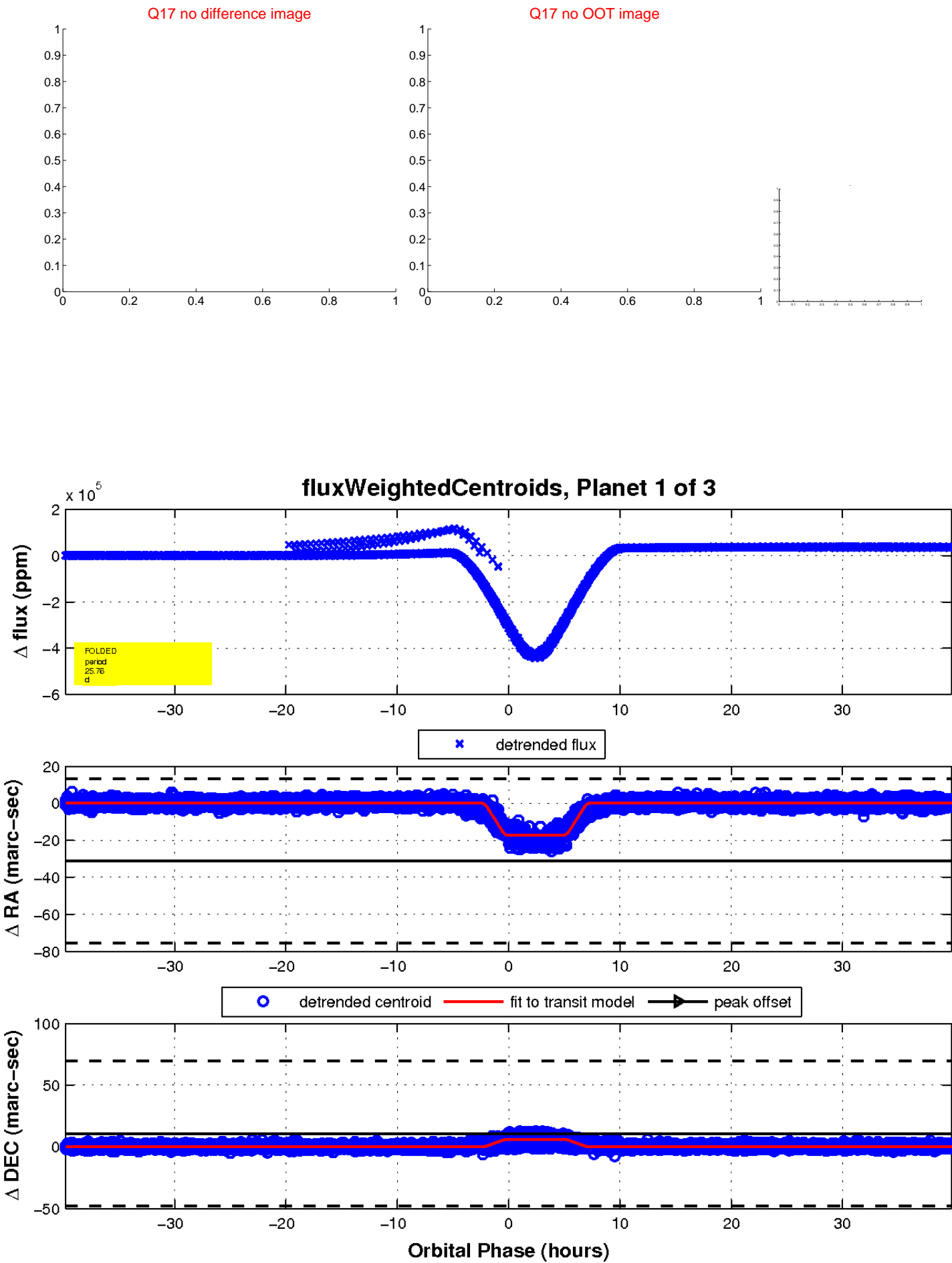
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

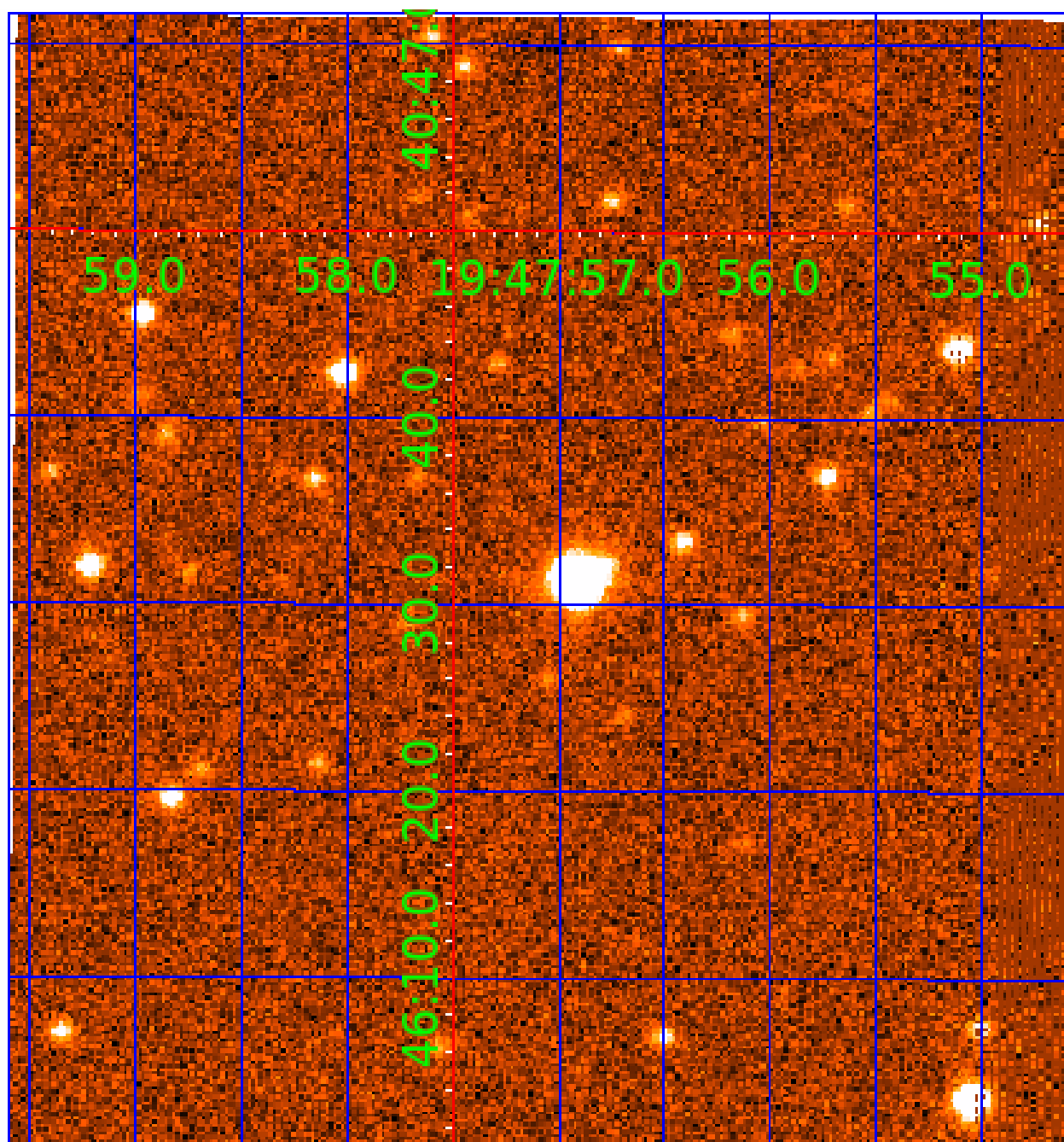


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005553624

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})
005553624-01	OBS	6599.01	25.762115	139.728691	454004.0	9.000	21190.1	-1.0	1.03	5539	50.72	31.55
005553624-02	OBS	No	25.761855	150.563282	257550.4	3.000	12421.3	-1.0	1.03	5539	51.63	31.55
005553624-03	OBS	No	25.760959	140.978461	36673.1	98.438	1222.8	267.4	1.03	5539	21.03	31.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005553624-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
005553624-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005553624-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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 005553624-02

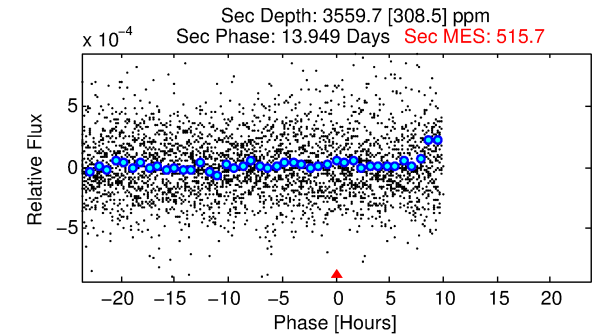
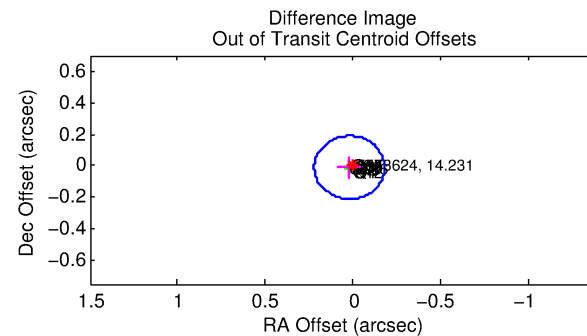
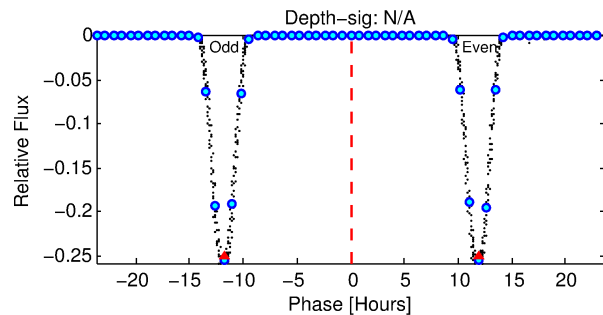
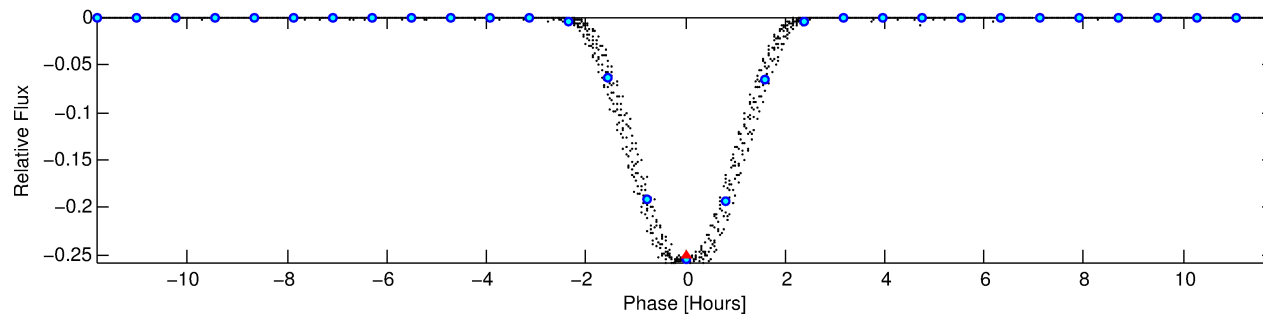
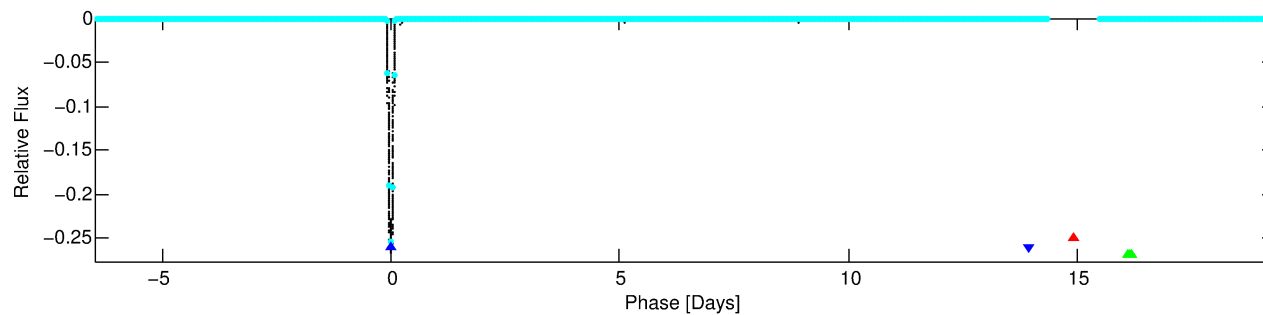
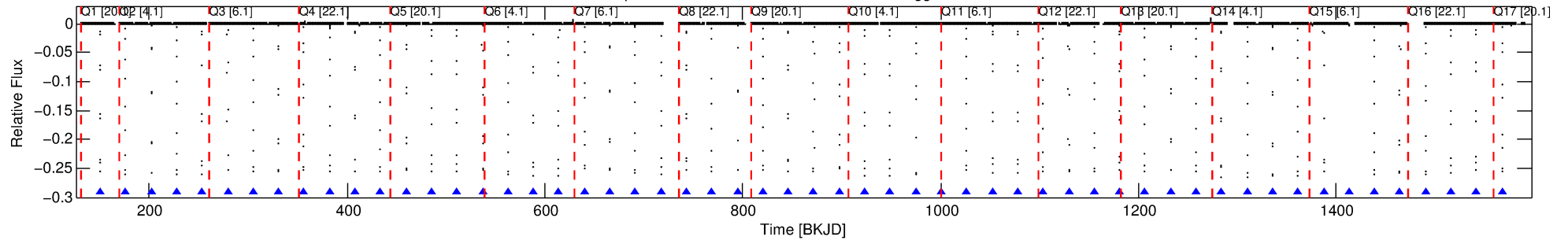
No Significant Match Found

DV One-Page Summary

KIC: 5553624 Candidate: 2 of 3 Period: 25.762 d

KOI: K06599 Corr: No Ephemeris Match

Kp: 14.23 R*: 1.03 Rs Teff: 5539.0 K Logg: 4.39 Fe/H: 0.210



TPS TCE Results:

Period = 25.76185 d
Epoch = 150.5633 BKJD

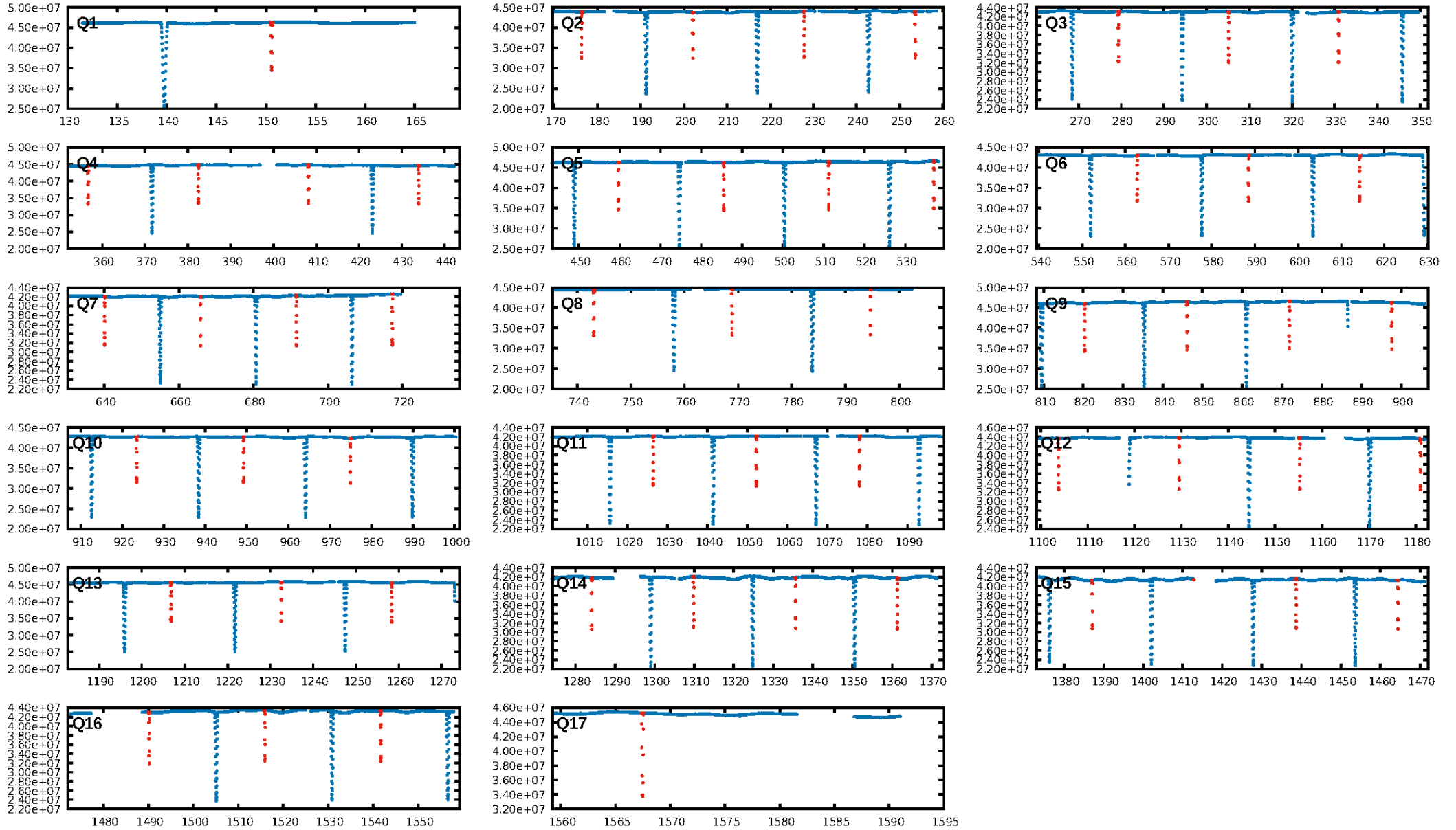
DV fit results are unavailable

DV Diagnostic Results:

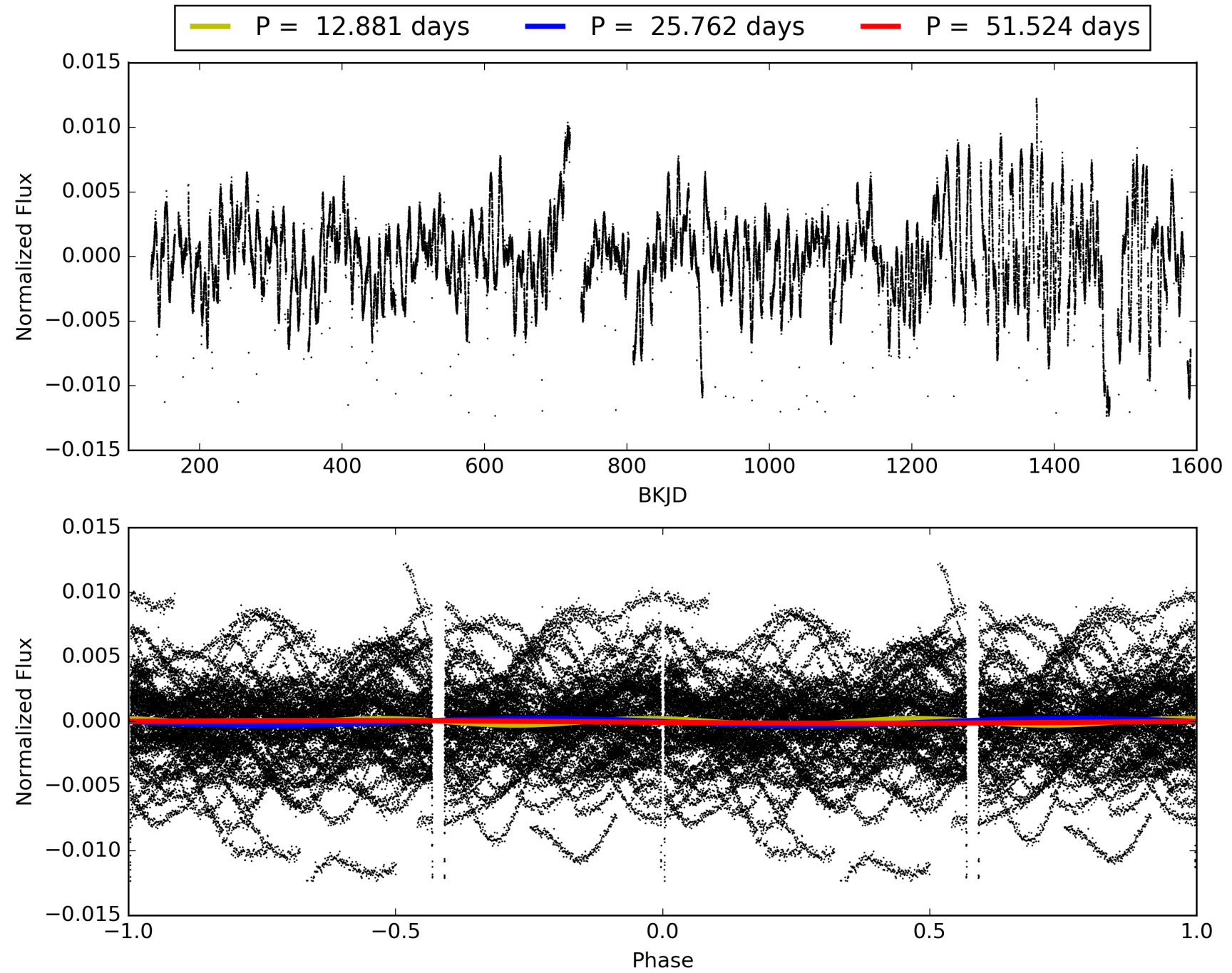
ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: 2.586

Centroid-sig: 0.0%
Centroid-so: 0.128 arcsec [135.51σ]
OotOffset-rm: 0.024 arcsec [0.35σ]
KicOffset-rm: 0.062 arcsec [0.93σ]
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 005553624-02, PDC Light Curves

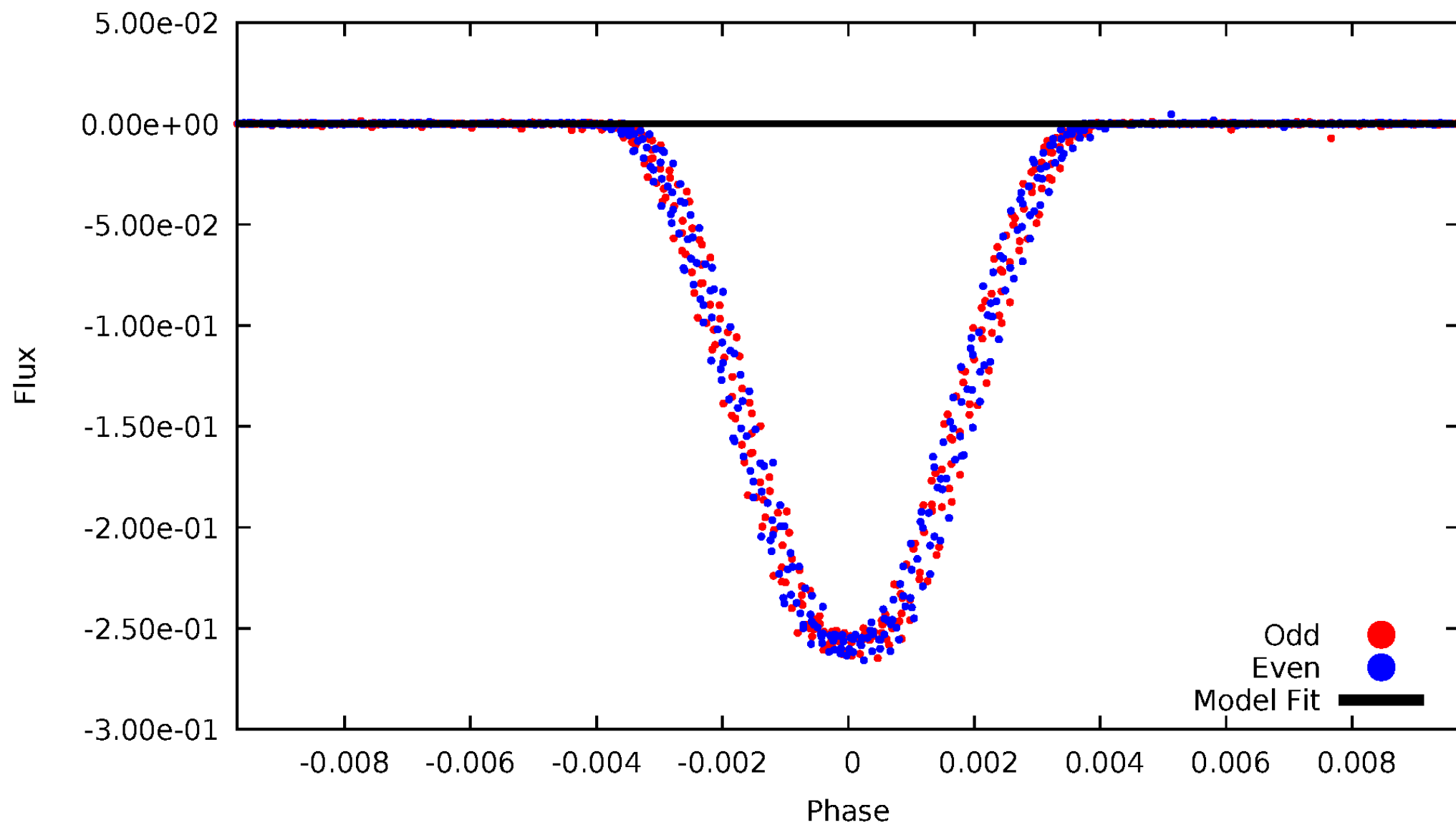


TCE 005553624-02



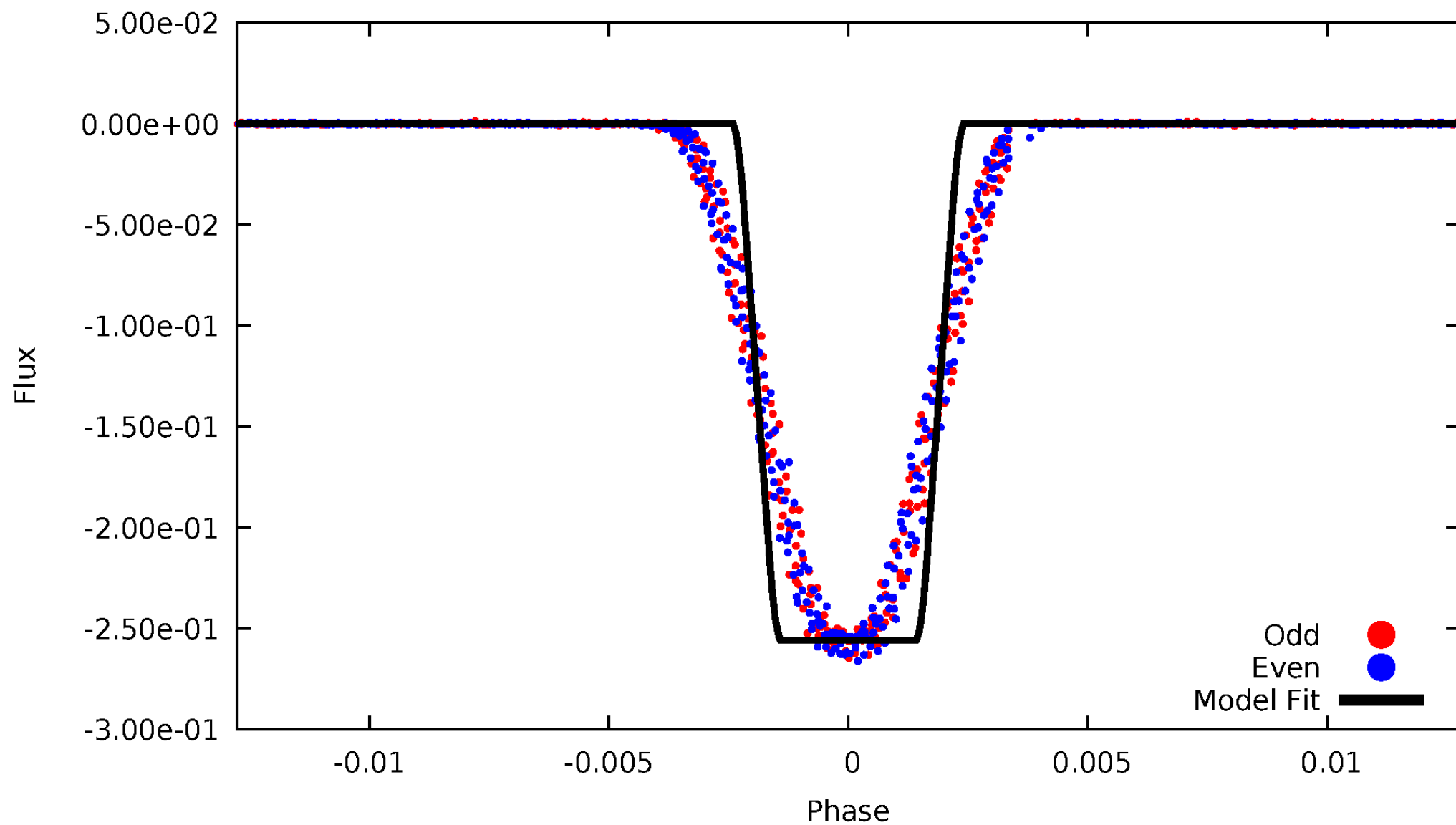
DV Odd/Even

TCE 005553624-02



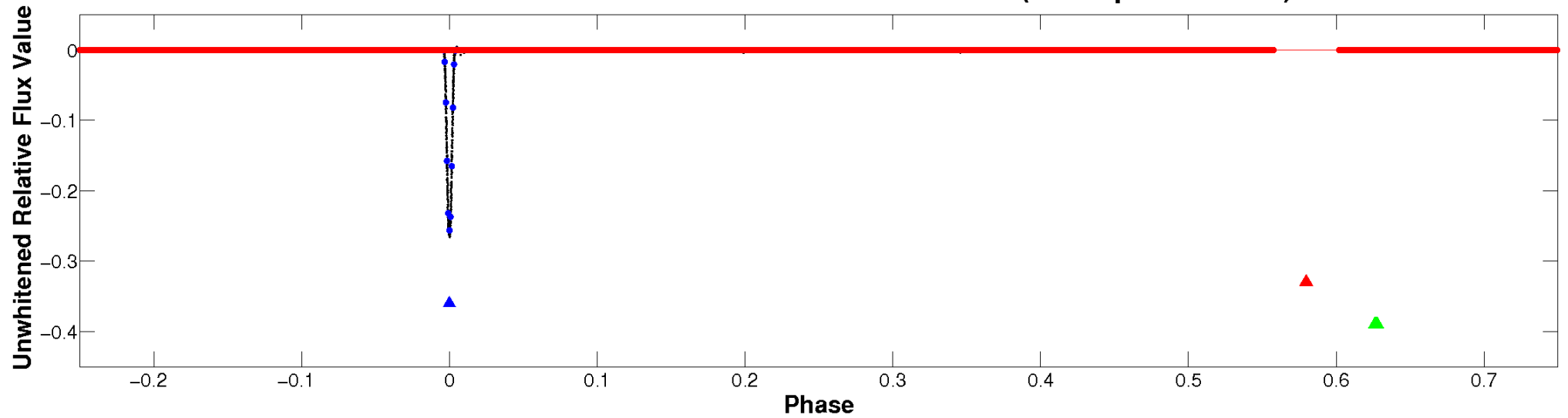
ALT Odd/Even

TCE 005553624-02



Non-Whitened Vs. Whitened Light Curve

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

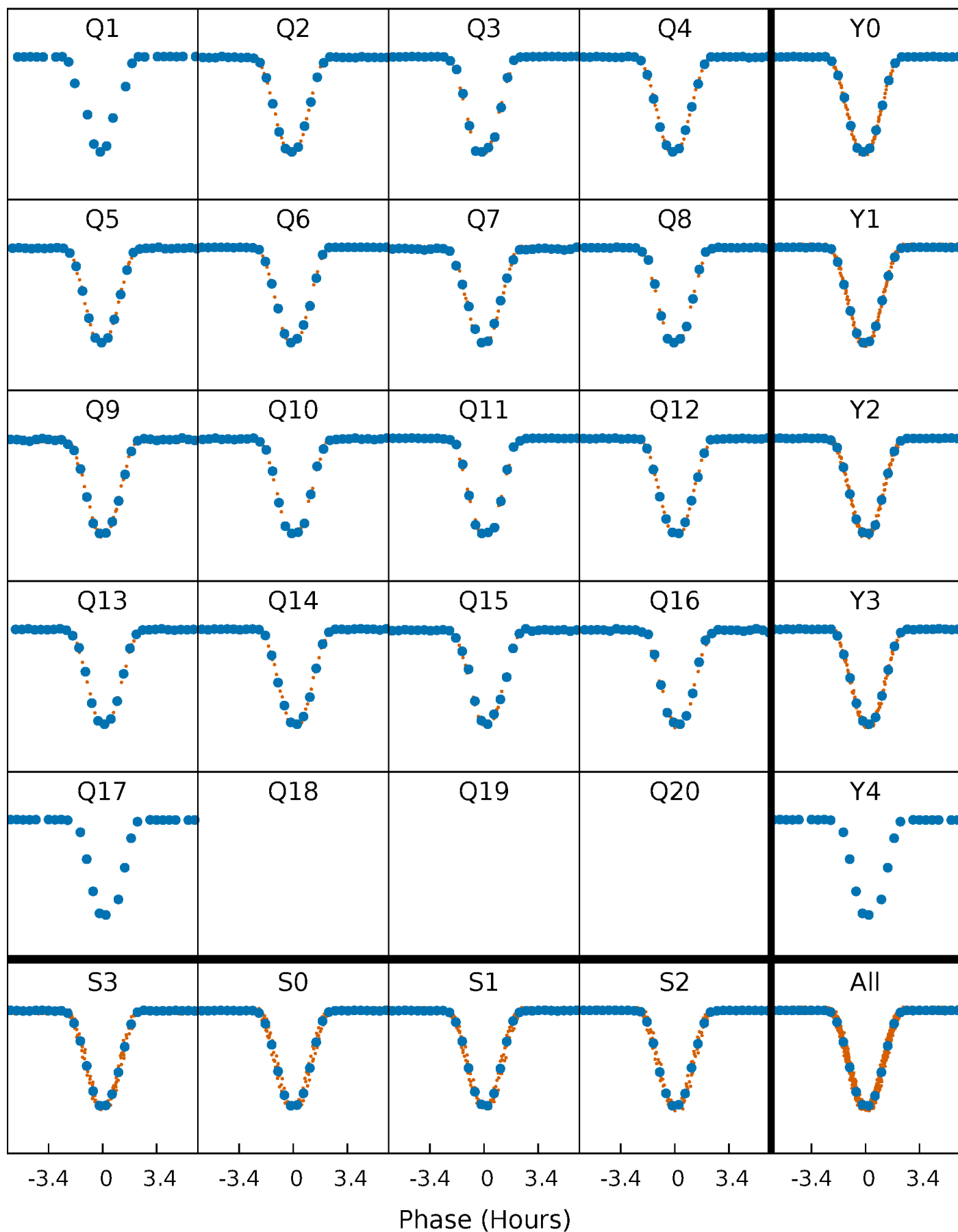


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



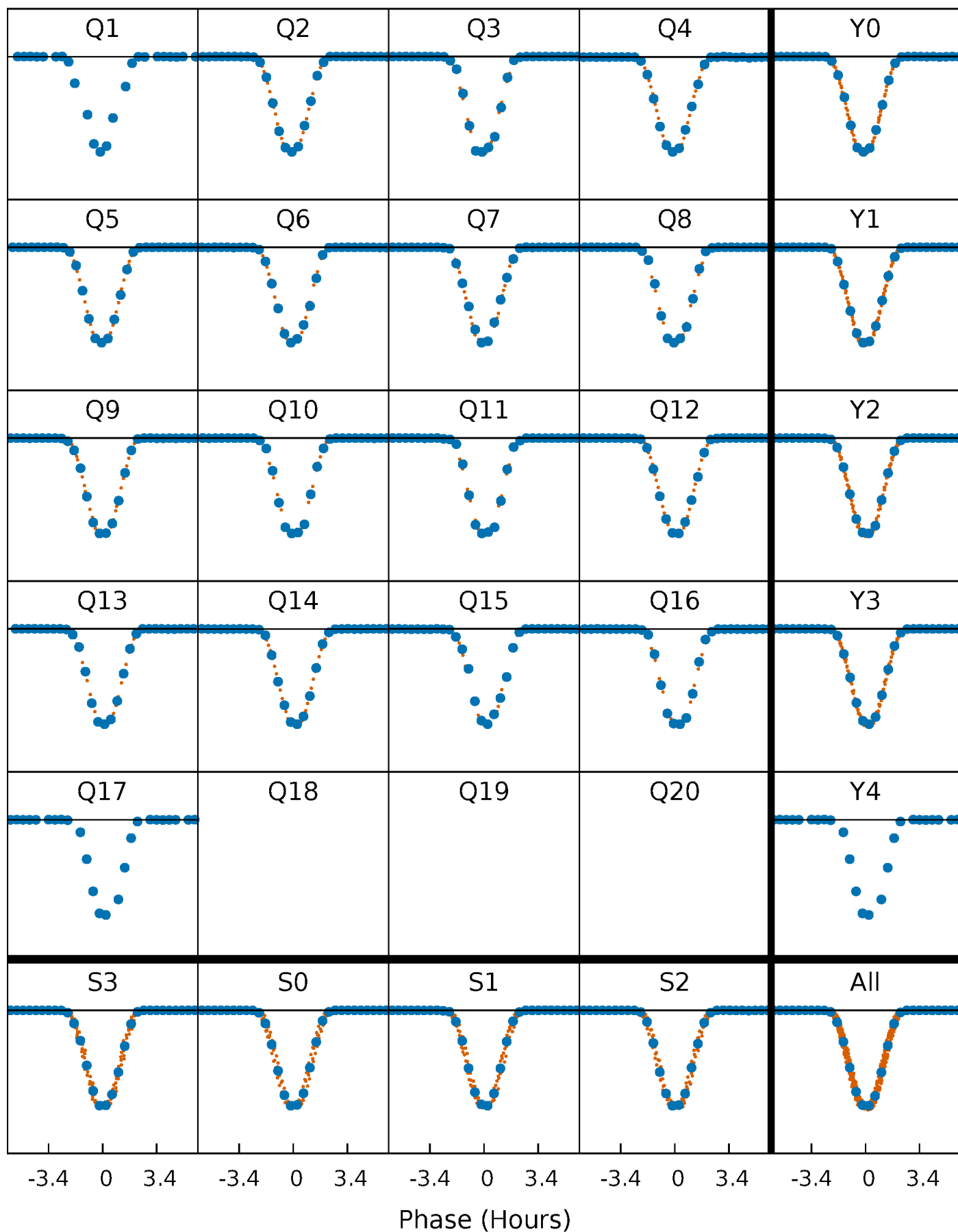
PDC Quarter-Phased Transit Curves

TCE 005553624-02 P= 25.761855 Days $T_0=150.563282$ (BKJD)



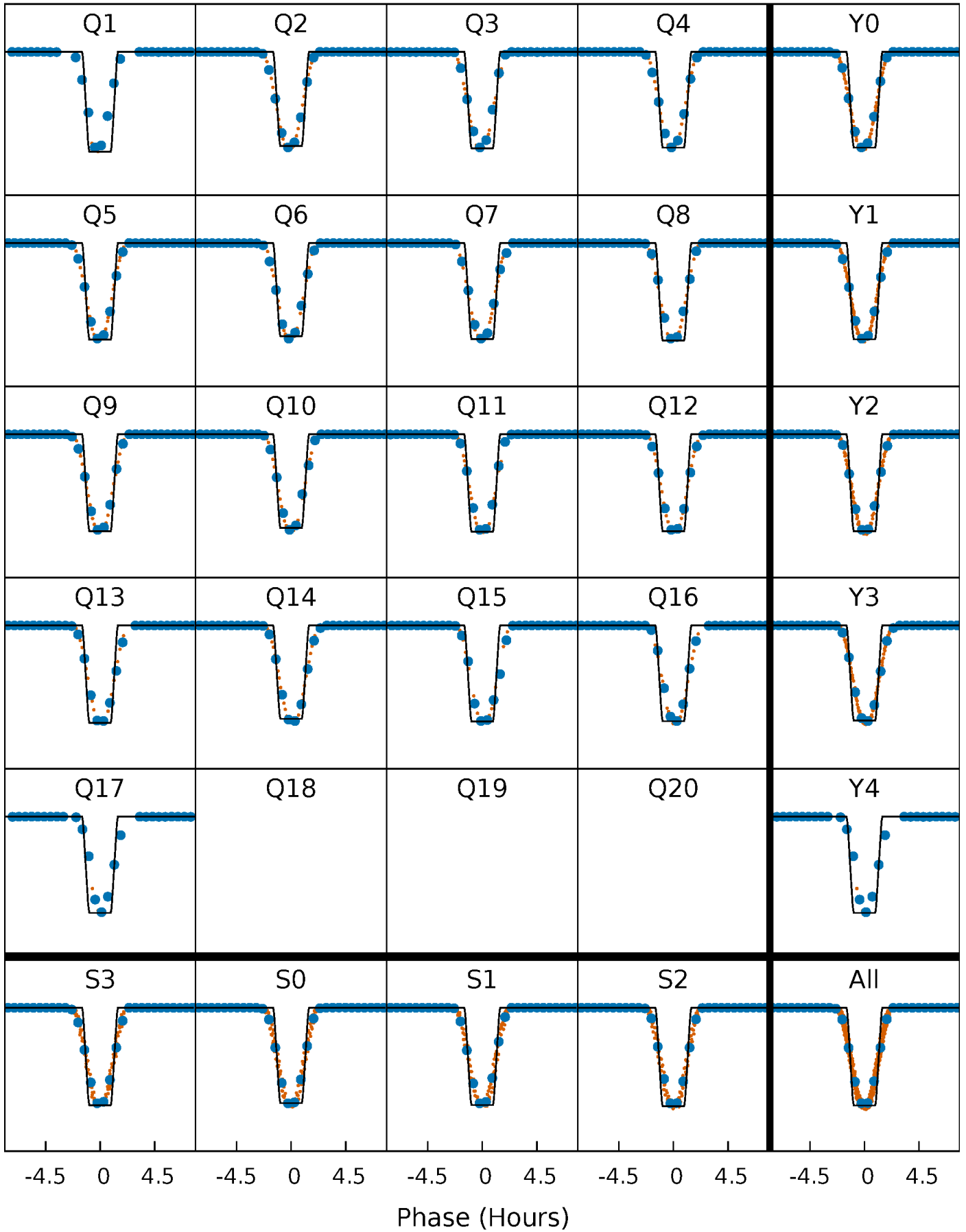
DV Quarter-Phased Transit Curves

TCE 005553624-02 P= 25.761855 Days $T_0=150.563282$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

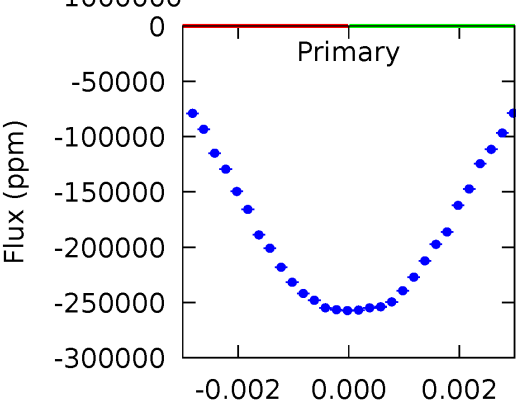
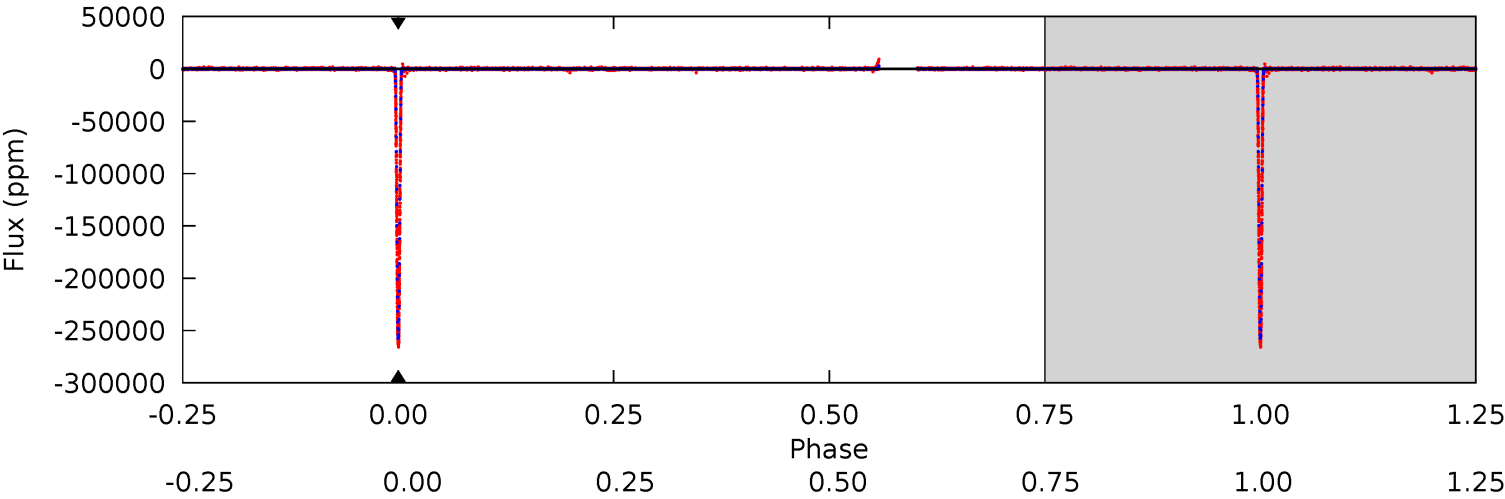
TCE 005553624-02 P= 25.761855 Days $T_0=150.564502$ (BKJD)



DV Model-Shift Uniqueness Test

005553624-02, P = 25.761855 Days, E = 124.801427 Days

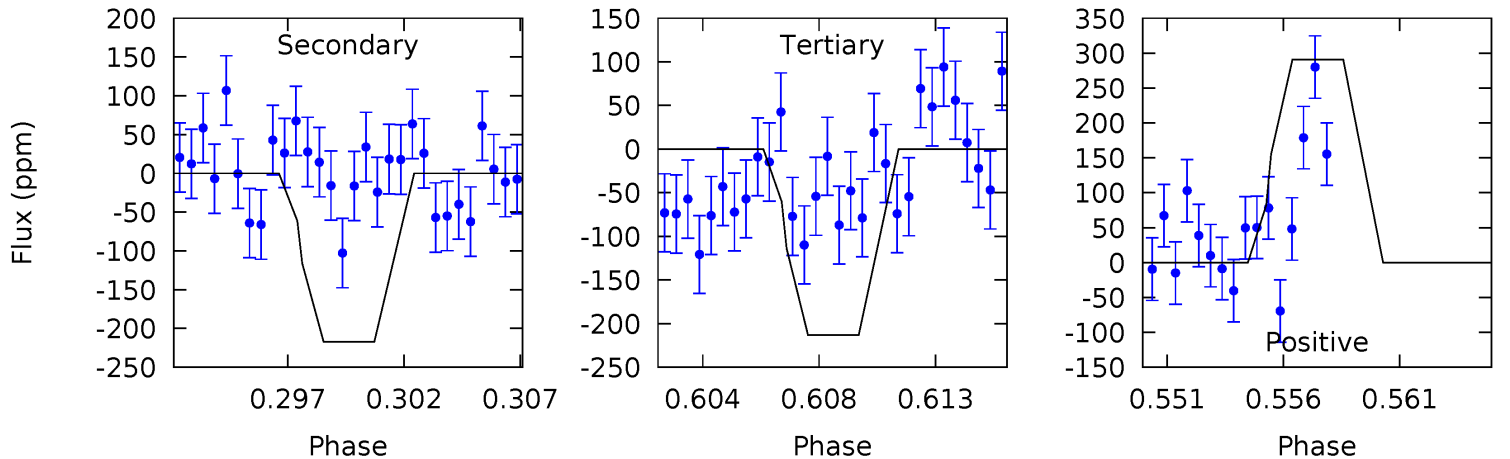
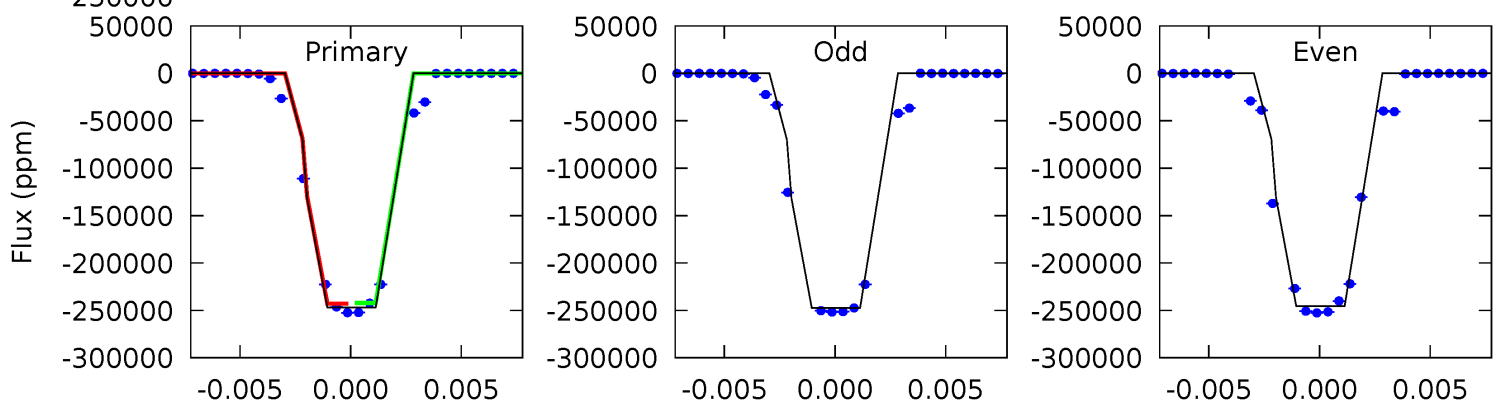
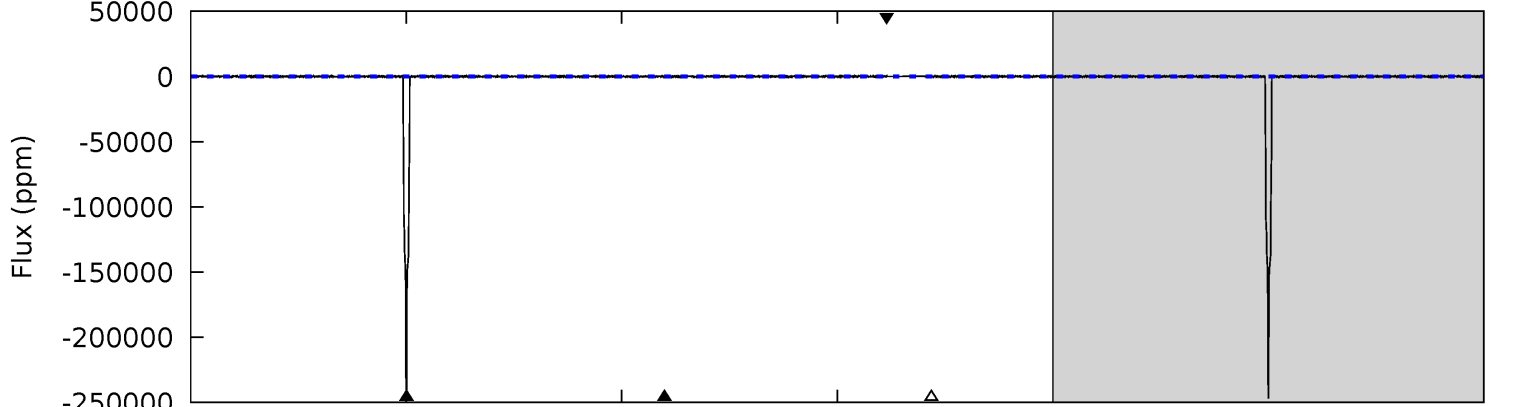
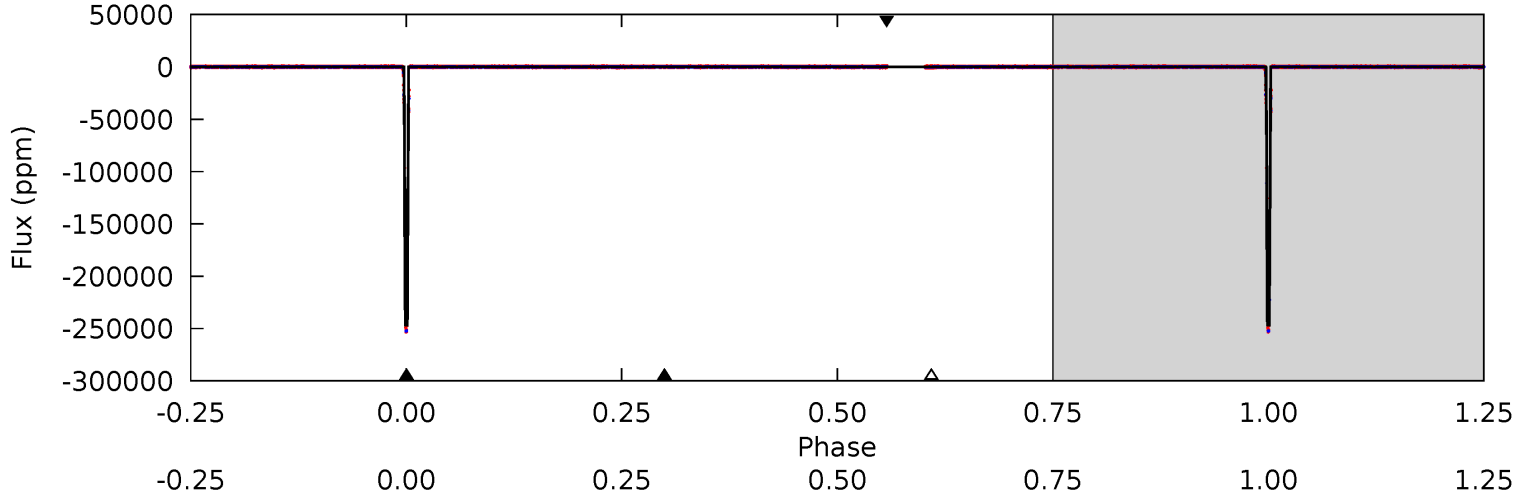
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005553624-02, P = 25.761855 Days, E = 124.802647 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4760	4.19	4.11	5.61	5.17	2.82	1.06	4756	4754	0.08	-1.42	18.6	1.00	0.00	0



Stellar Parameters For KIC 005553624

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5539^{+74}_{-83}	$4.393^{+0.105}_{-0.105}$	$0.210^{+0.150}_{-0.150}$	$1.027^{+0.145}_{-0.105}$	$0.950^{+0.057}_{-0.046}$	$1.235^{+0.463}_{-0.397}$
	+1%/-1%	+2%/-2%	+71%/-71%	+14%/-10%	+6%/-5%	+37%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005553624-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$51.13^{+12.50}_{-11.81}$	843^{+35}_{-32}	-2115^{+6986}_{-2648}	$-1.916^{+688.250}_{-589.784}$
Alt.	-217 ± 52	$57.58^{+12.17}_{-12.10}$	841^{+35}_{-30}	1880^{+121}_{-126}	$1.019^{+0.678}_{-0.396}$

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 $A_{obs} \gg 1.0$

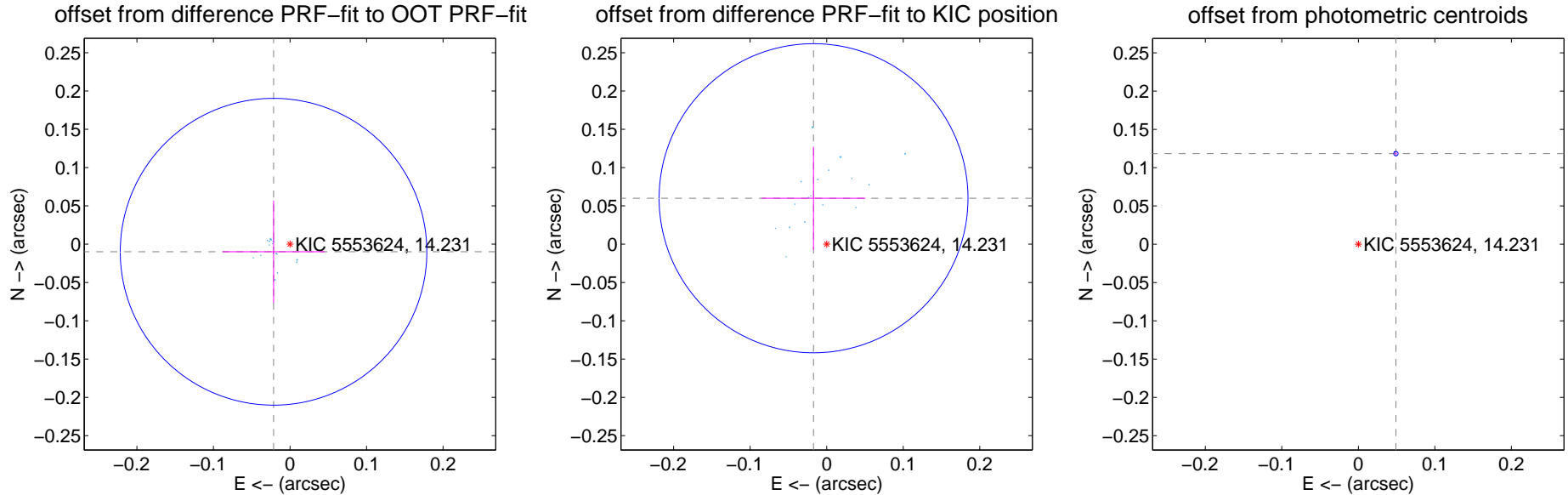
DV Centroid Data

Supplemental centroid analysis for 005553624-02. Kepler magnitude: 14.23. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

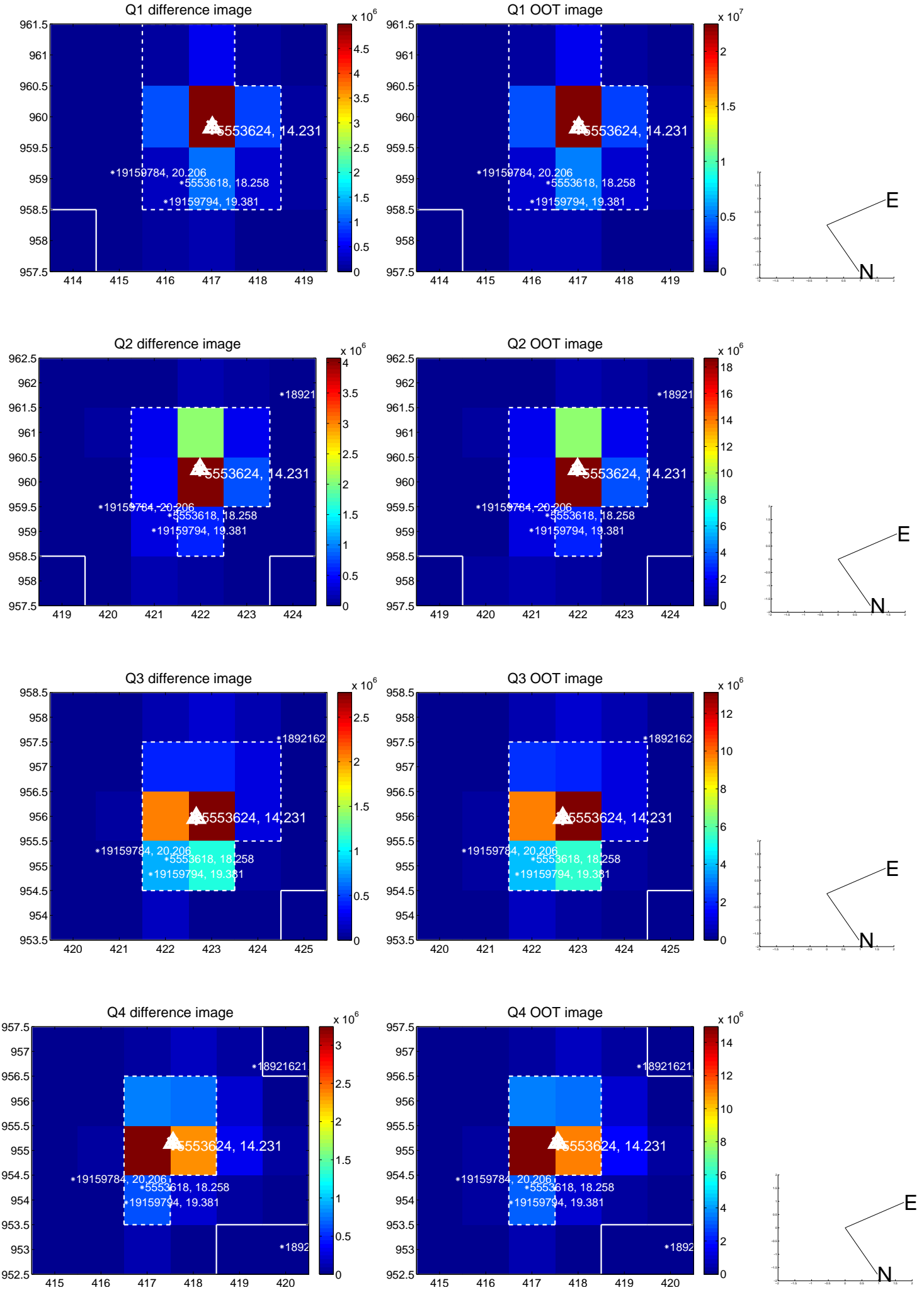
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.067	0.35	0.021 ± 0.067	-0.010 ± 0.067
PRF-fit source offset from KIC position	0.062 ± 0.067	0.93	0.017 ± 0.068	0.060 ± 0.067
photometric centroid source offset	0.13 ± 0.00	135.51	-0.05 ± 0.00	0.12 ± 0.00

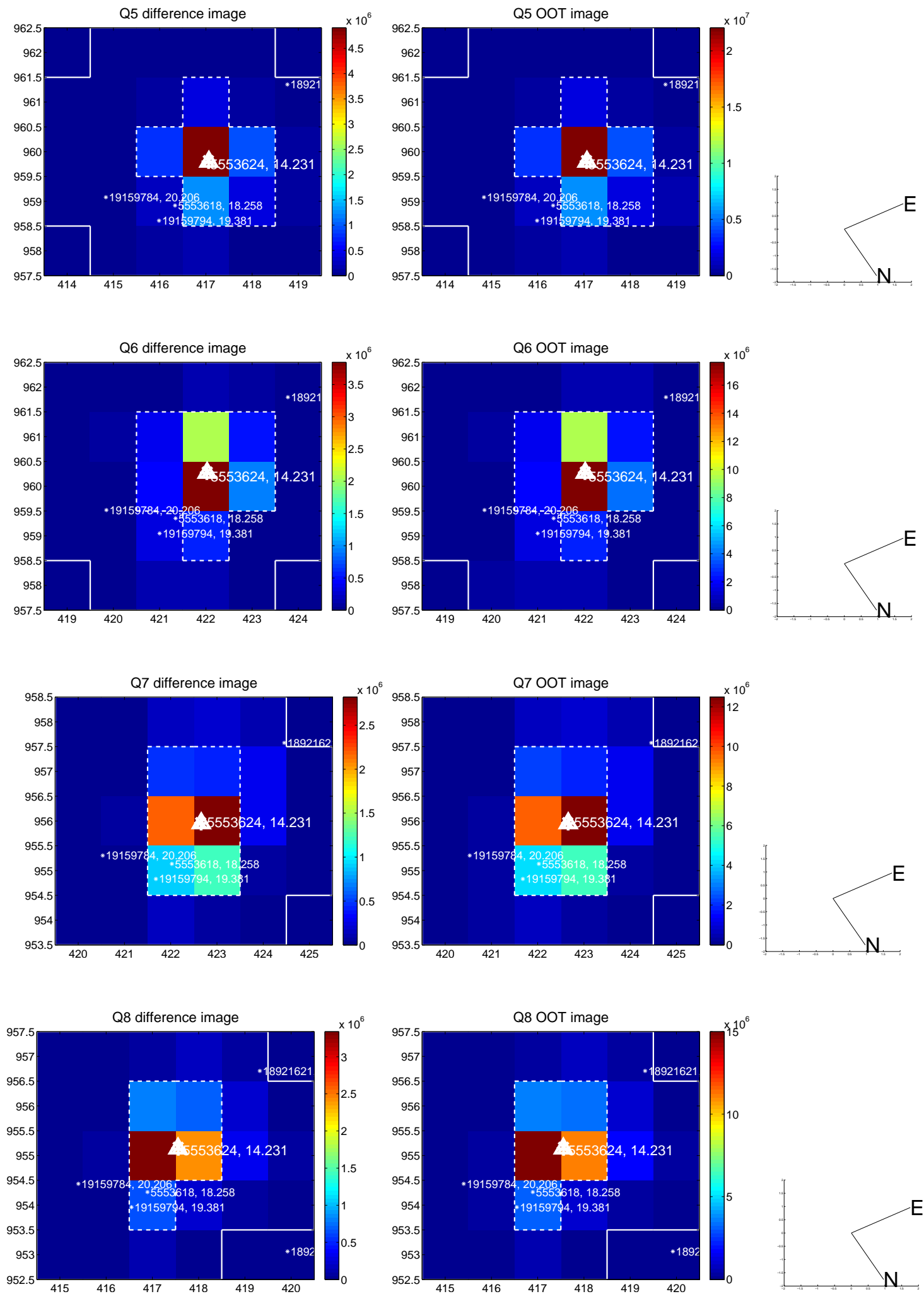


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

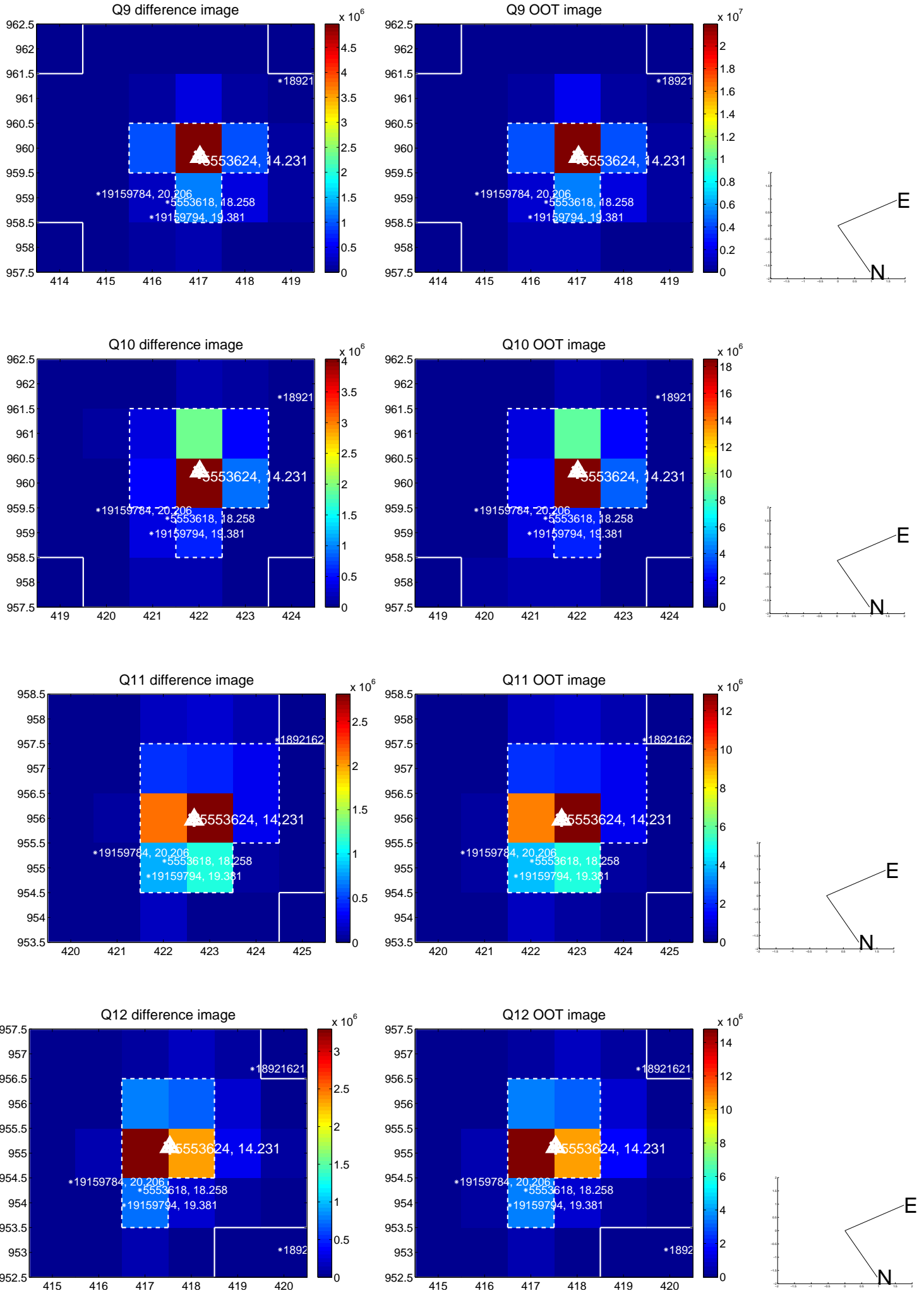
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



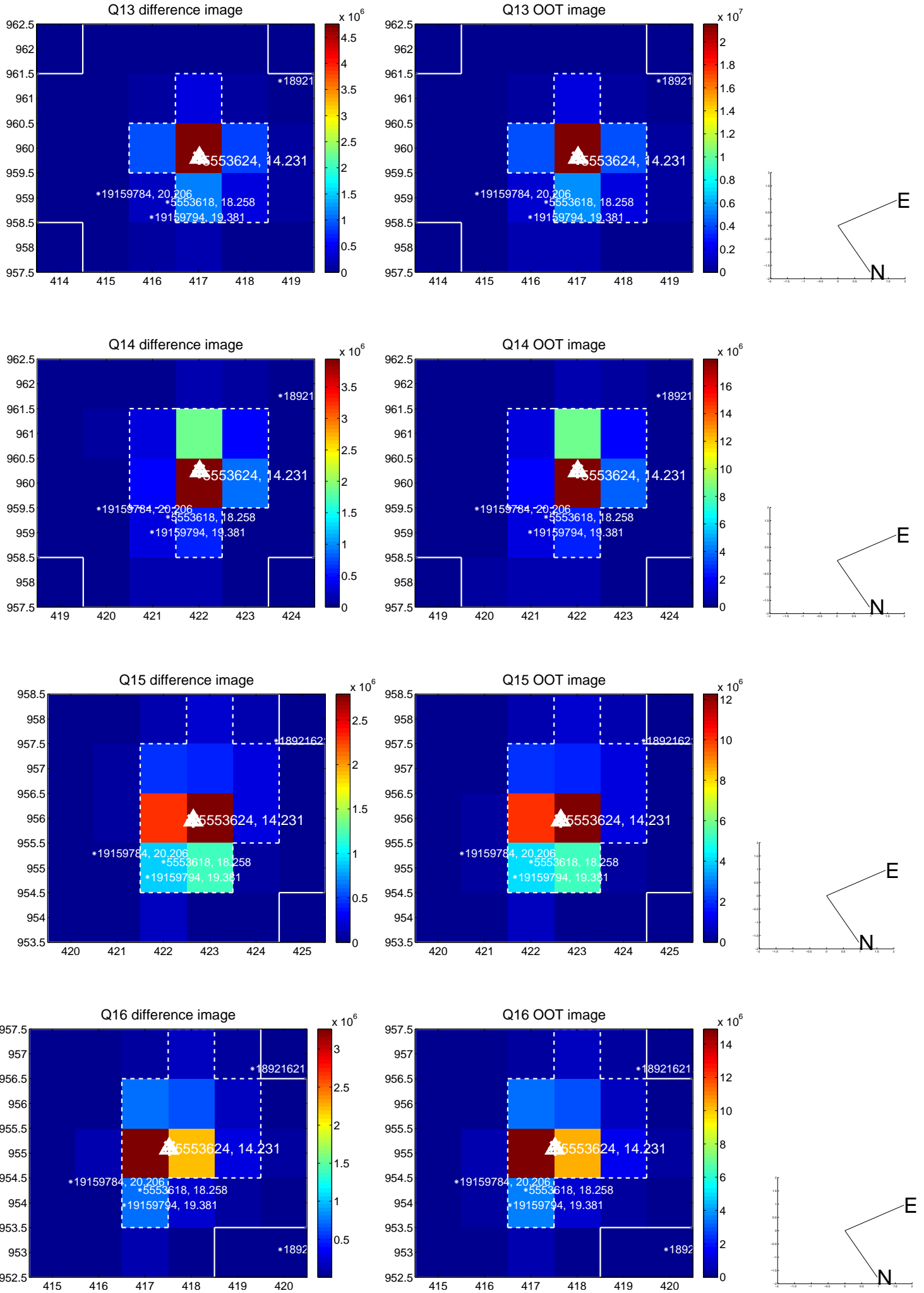
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



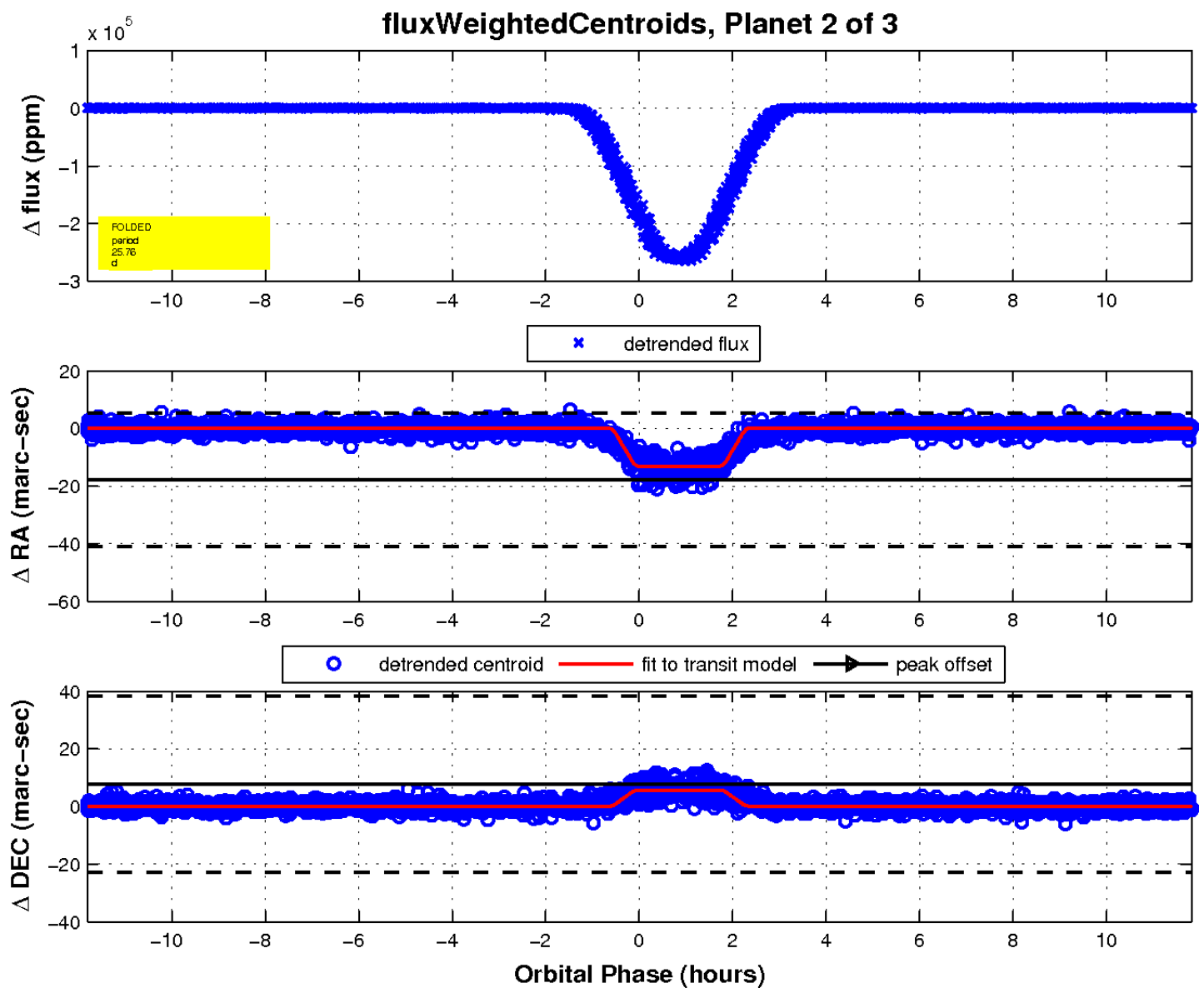
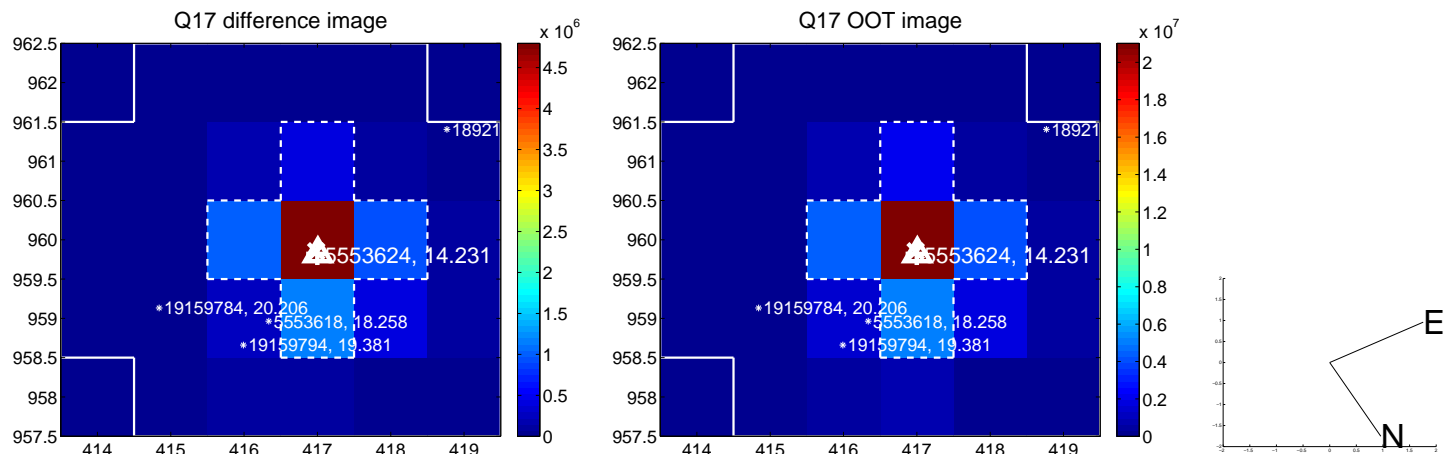
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

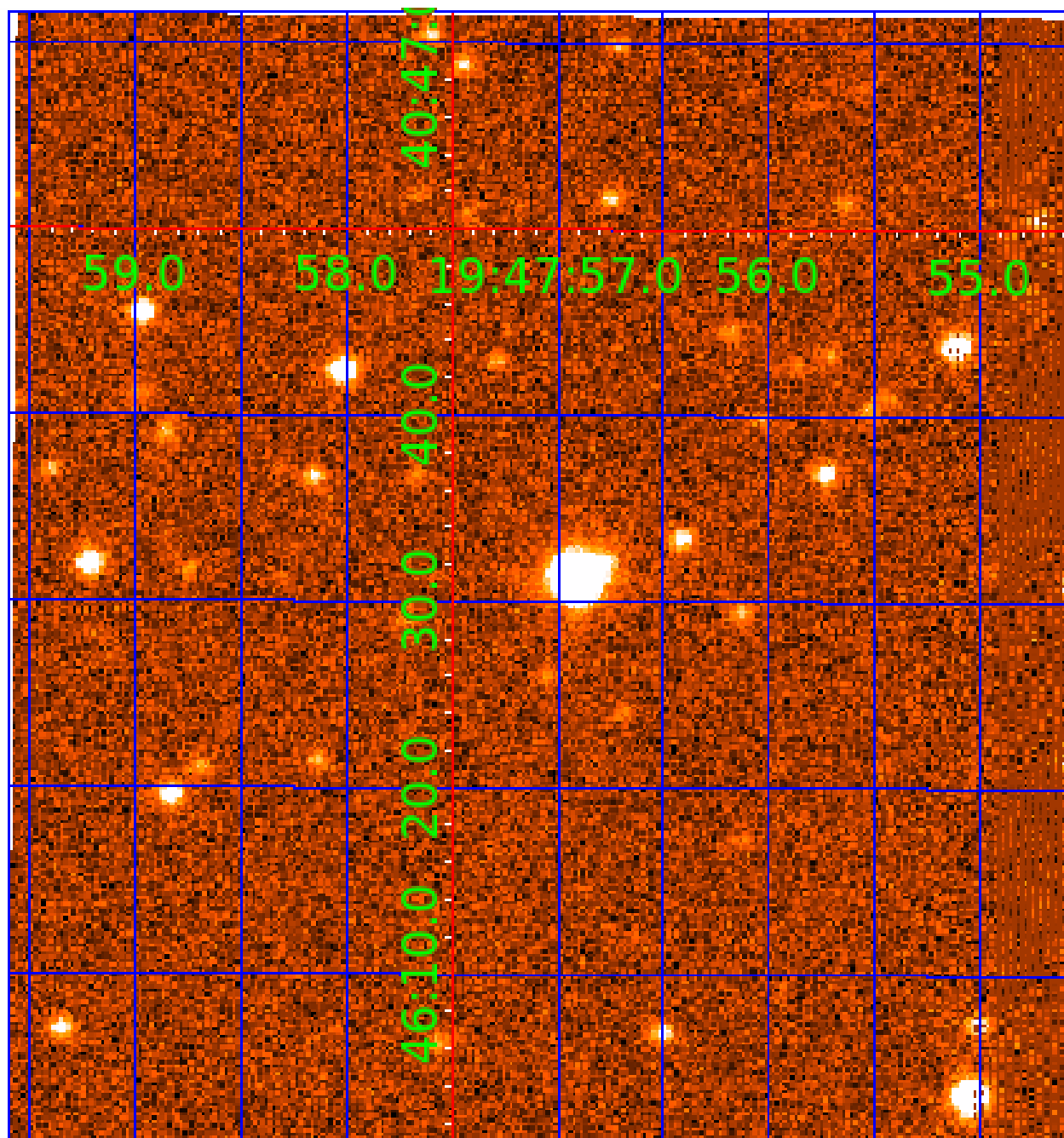


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005553624

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})
005553624-01	OBS	6599.01	25.762115	139.728691	454004.0	9.000	21190.1	-1.0	1.03	5539	50.72	31.55
005553624-02	OBS	No	25.761855	150.563282	257550.4	3.000	12421.3	-1.0	1.03	5539	51.63	31.55
005553624-03	OBS	No	25.760959	140.978461	36673.1	98.438	1222.8	267.4	1.03	5539	21.03	31.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005553624-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
005553624-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
005553624-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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 005553624-03

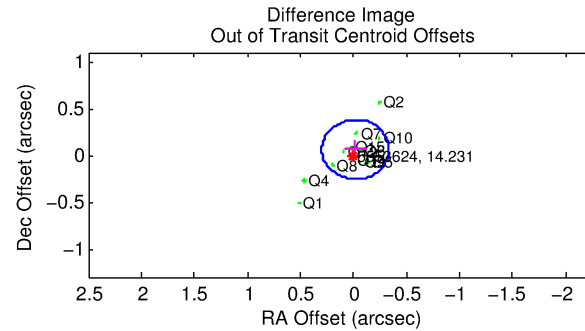
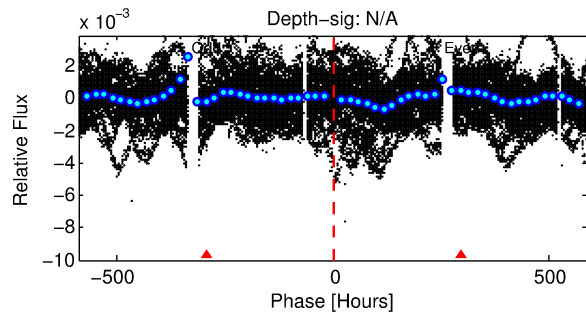
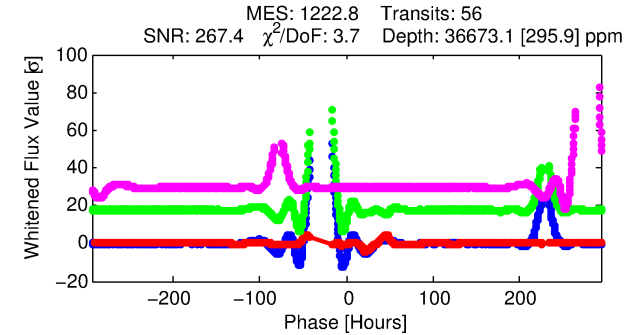
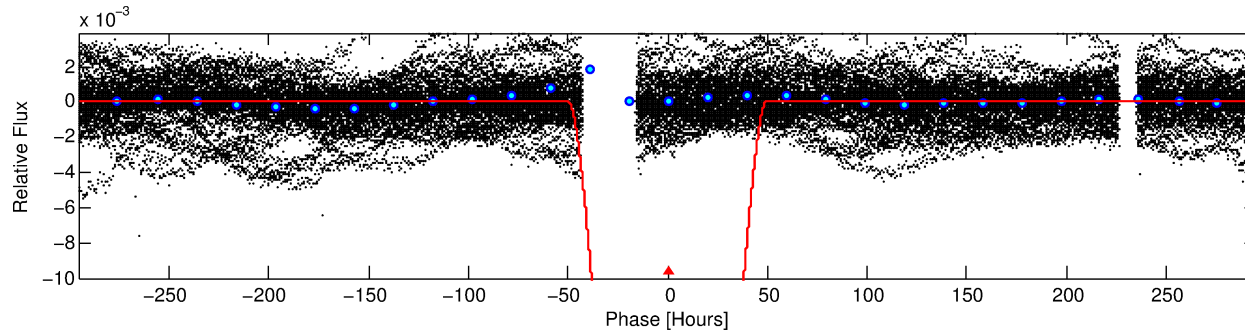
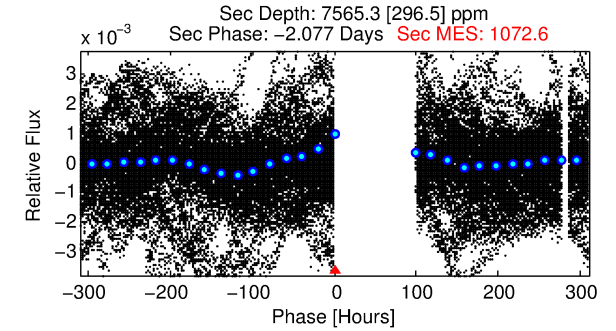
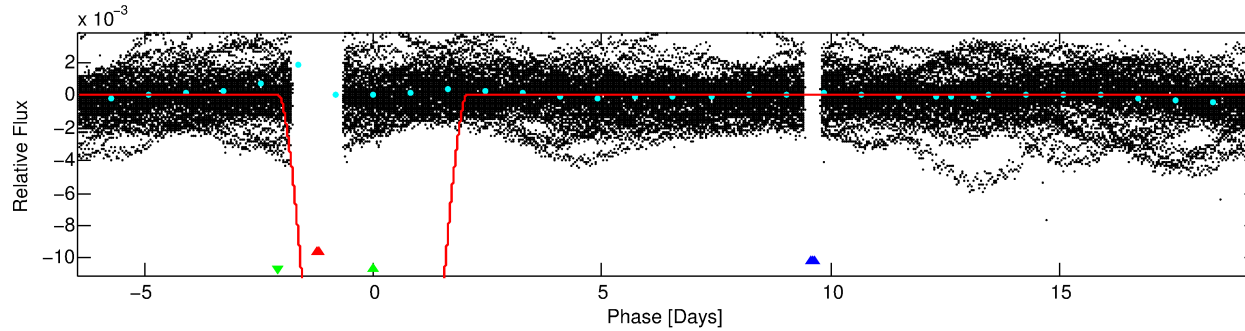
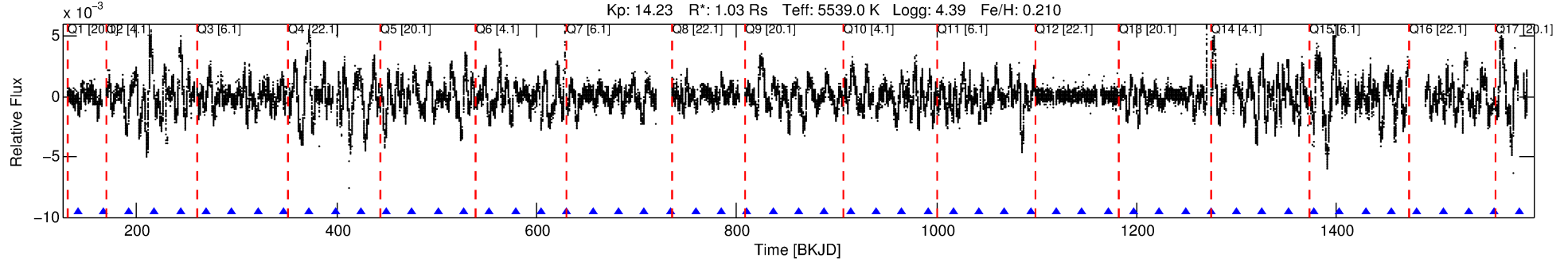
No Significant Match Found

DV One-Page Summary

KIC: 5553624 Candidate: 3 of 3 Period: 25.761 d

KOI: K06599 Corr: No Ephemeris Match

Kp: 14.23 R*: 1.03 Rs Teff: 5539.0 K Logg: 4.39 Fe/H: 0.210



DV Fit Results:

Period = 25.76096 [0.00016] d
Epoch = 140.9785 [0.0052] BKJD
Rp/R* = 0.1877 [0.0008]
a/R* = 2.13 [0.00]
b = 0.69 [0.00]
Seff = 31.55 [6.19]
Teq = 604 [30] K
Rp = 21.03 [2.97] Re
a = 0.1679 [0.0208] AU
Ag = 265.25 [50.63] [5.22σ]
Teffp = 3771 [68] K [42.73σ]

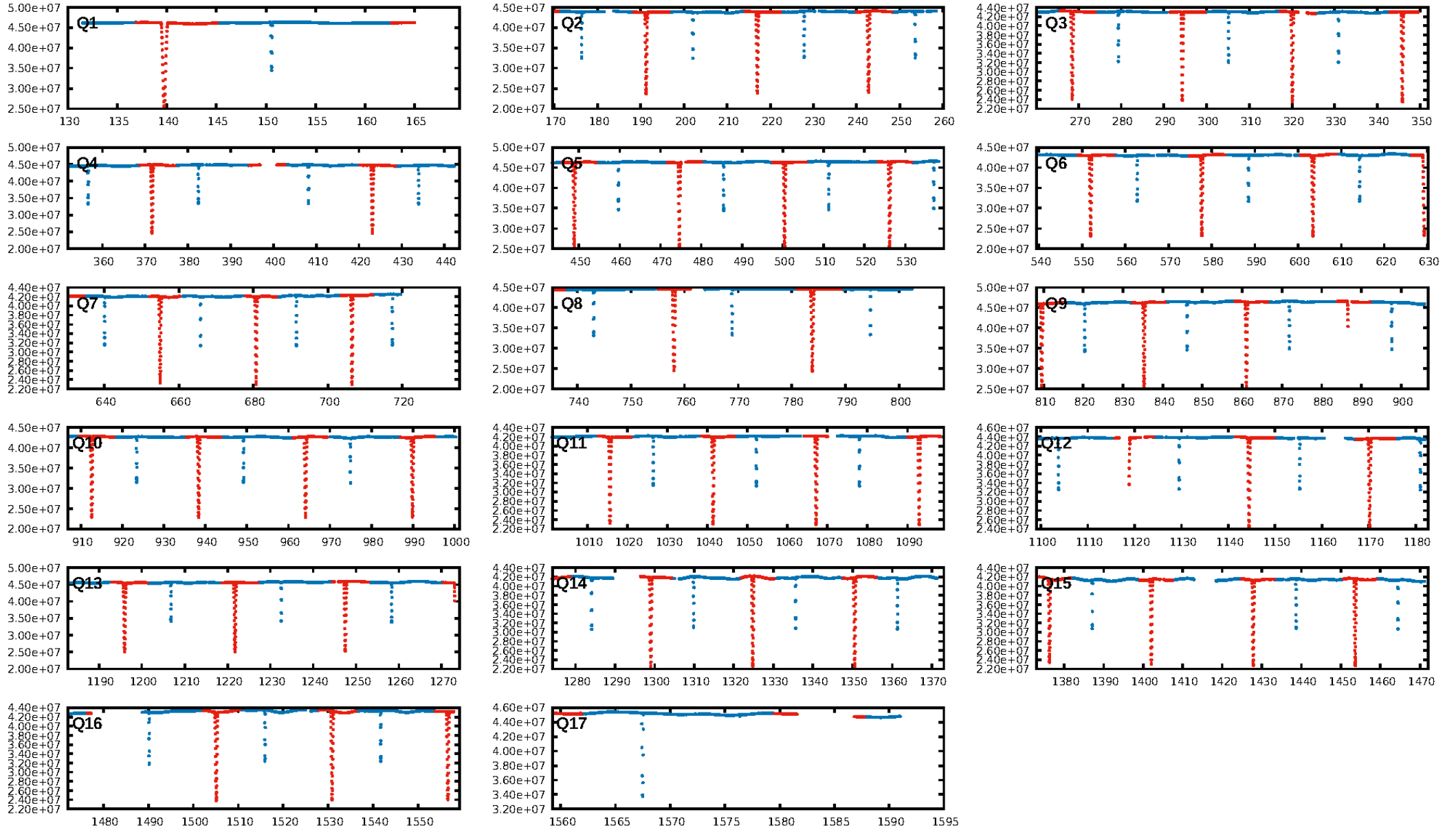
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [53/53]
GhostDiagnostic-chr: 1.619
Centroid-sig: 0.0%
Centroid-so: 0.181 arcsec [90.87σ]
OotOffset-rm: 0.065 arcsec [0.62σ]
KicOffset-rm: 0.137 arcsec [1.28σ]
OotOffset-st: 4/2/3/3 [12]
KicOffset-st: 4/2/3/3 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 0.00 [0/12]

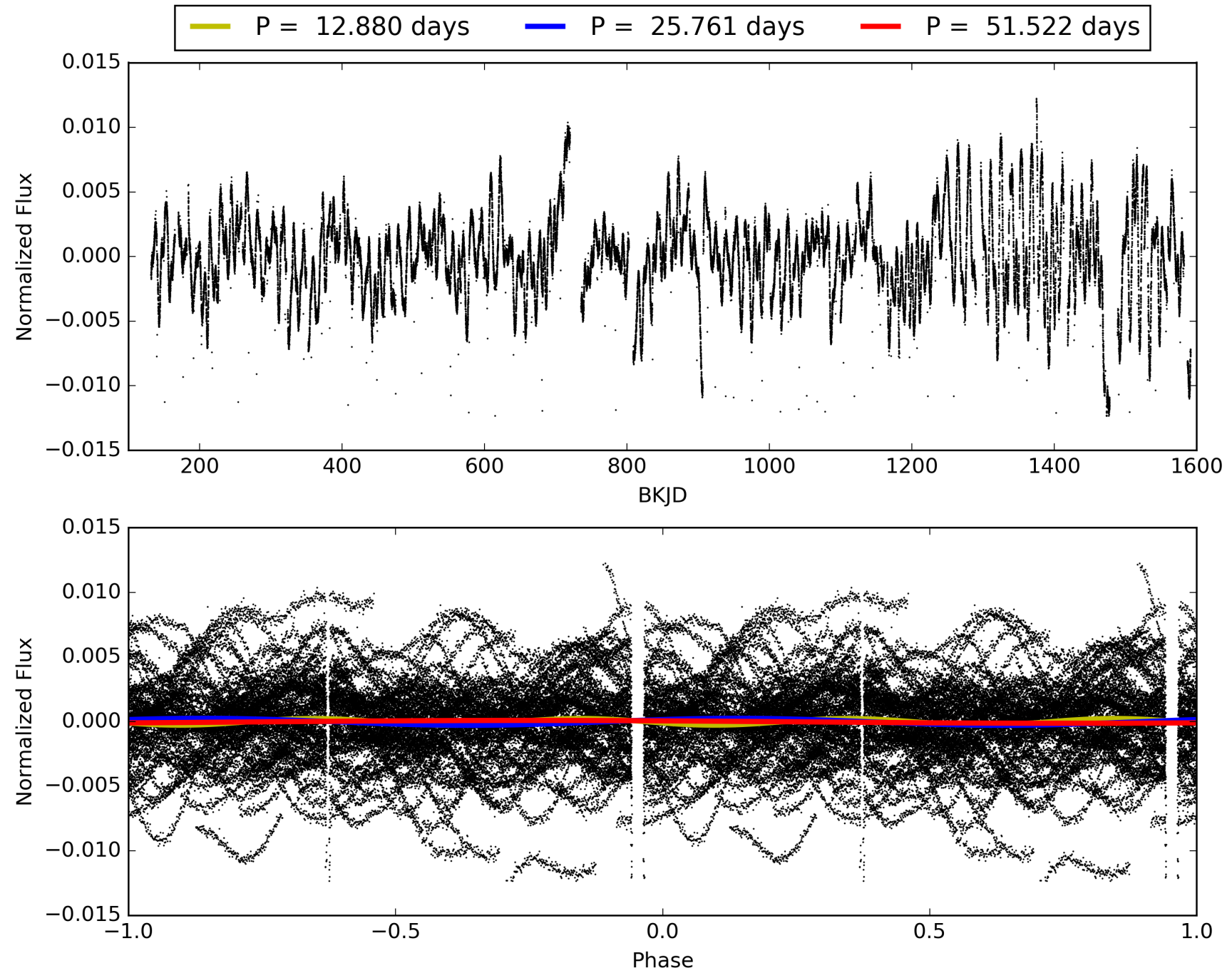
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 07:58:51 Z

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

TCE 00553624-03, PDC Light Curves

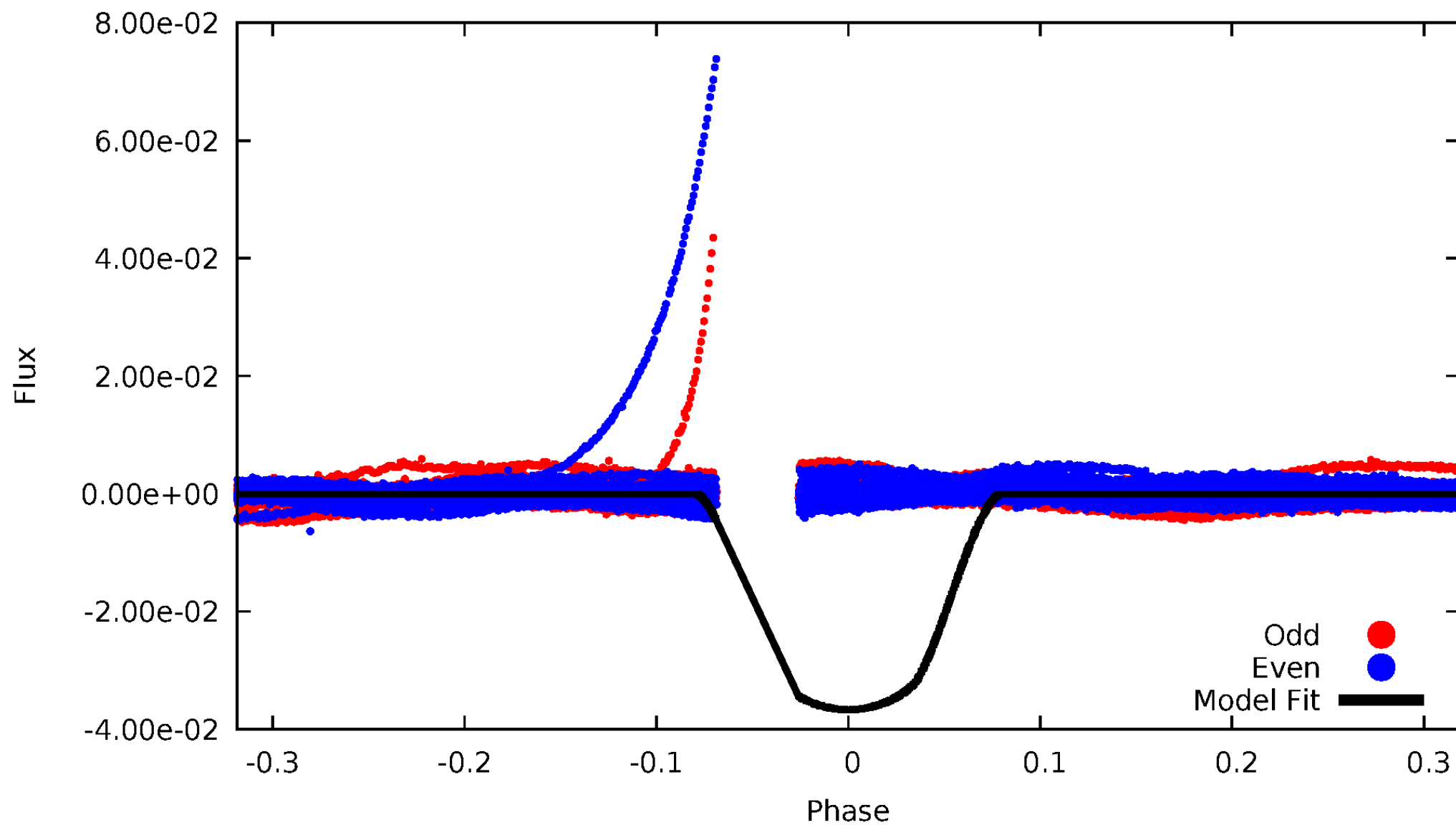


TCE 005553624-03



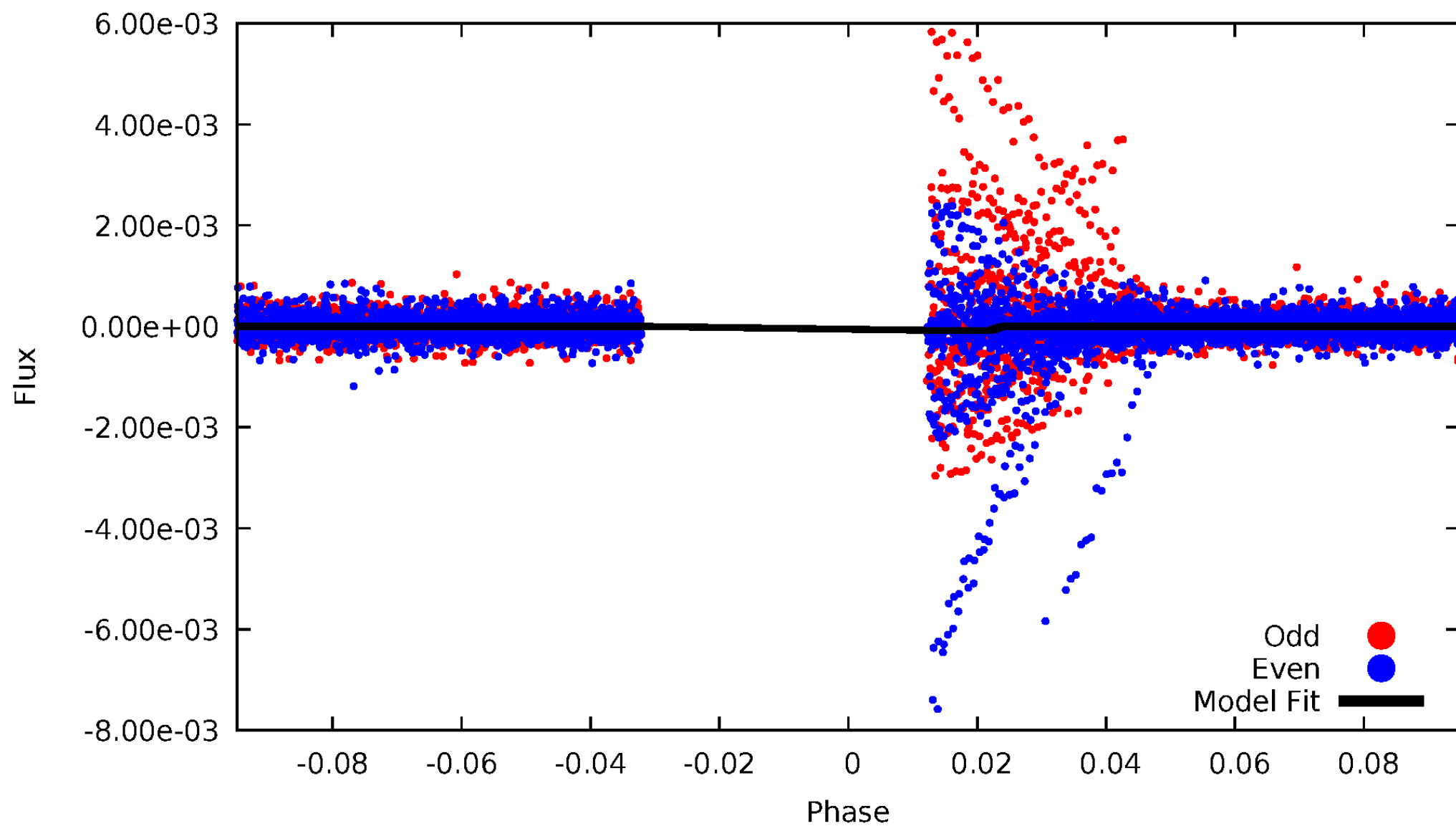
DV Odd/Even

TCE 005553624-03



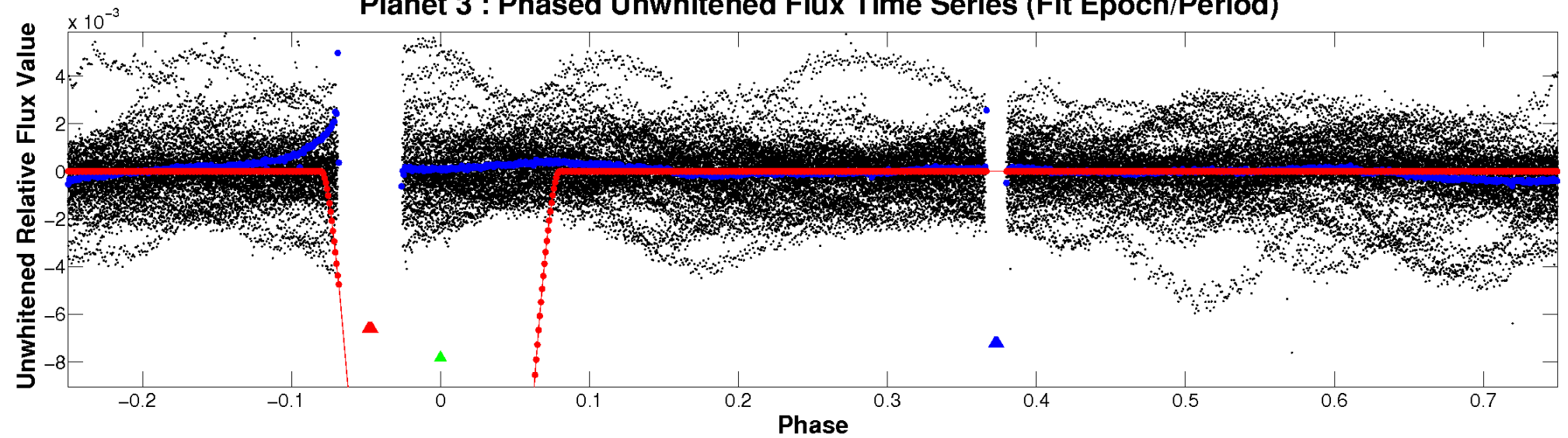
ALT Odd/Even

TCE 005553624-03

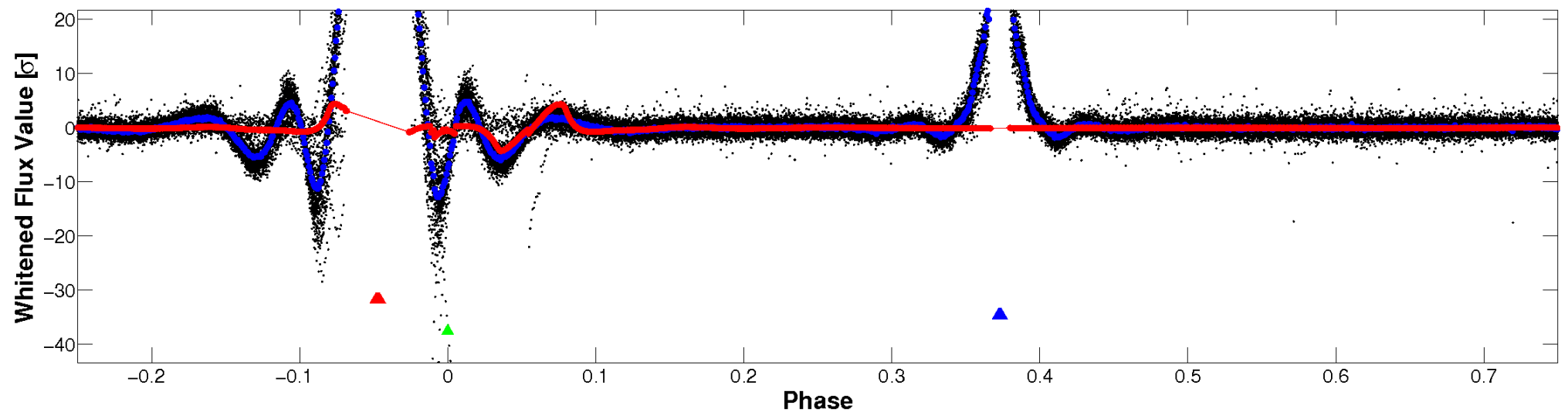


Non-Whitened Vs. Whitened Light Curve

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

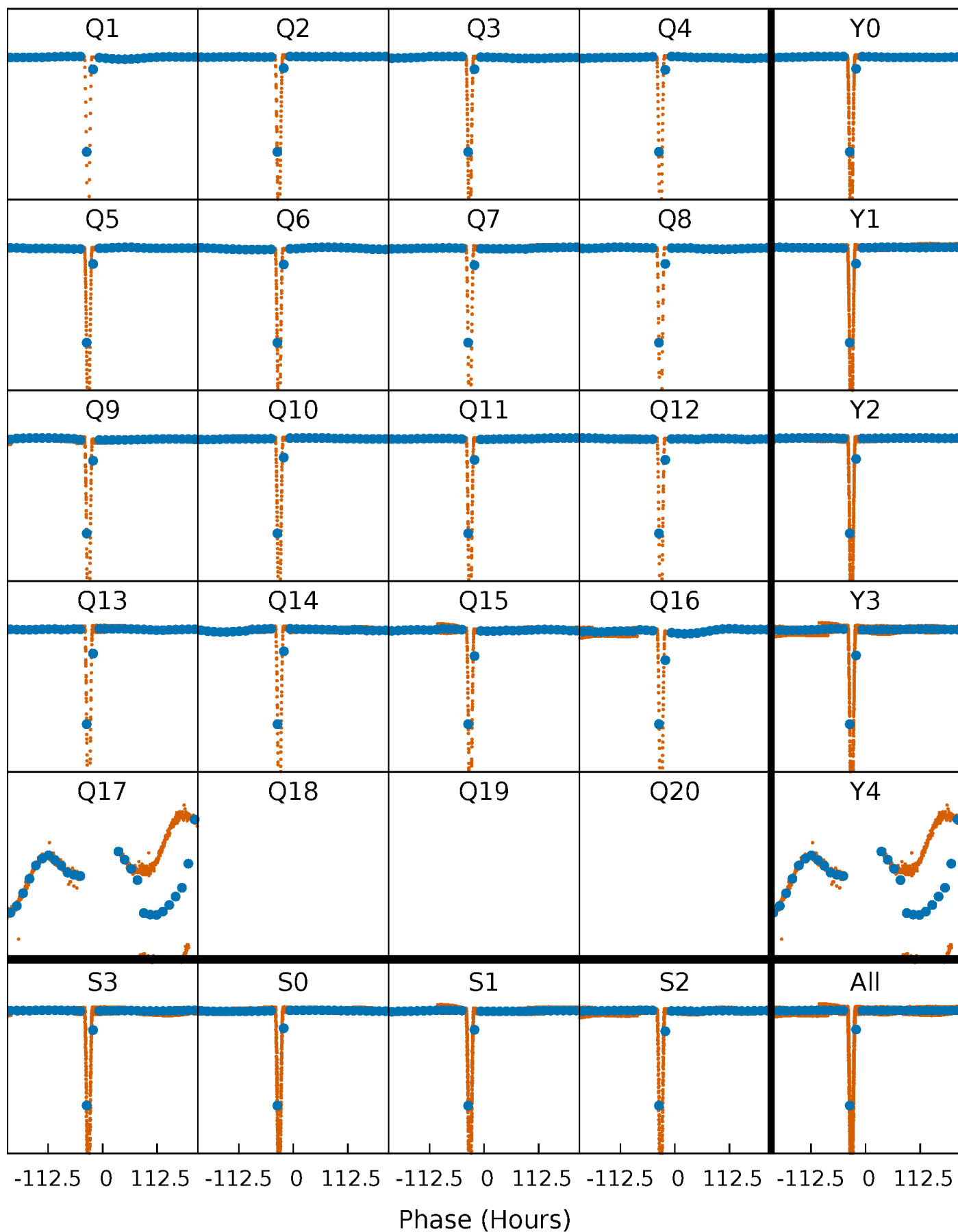


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



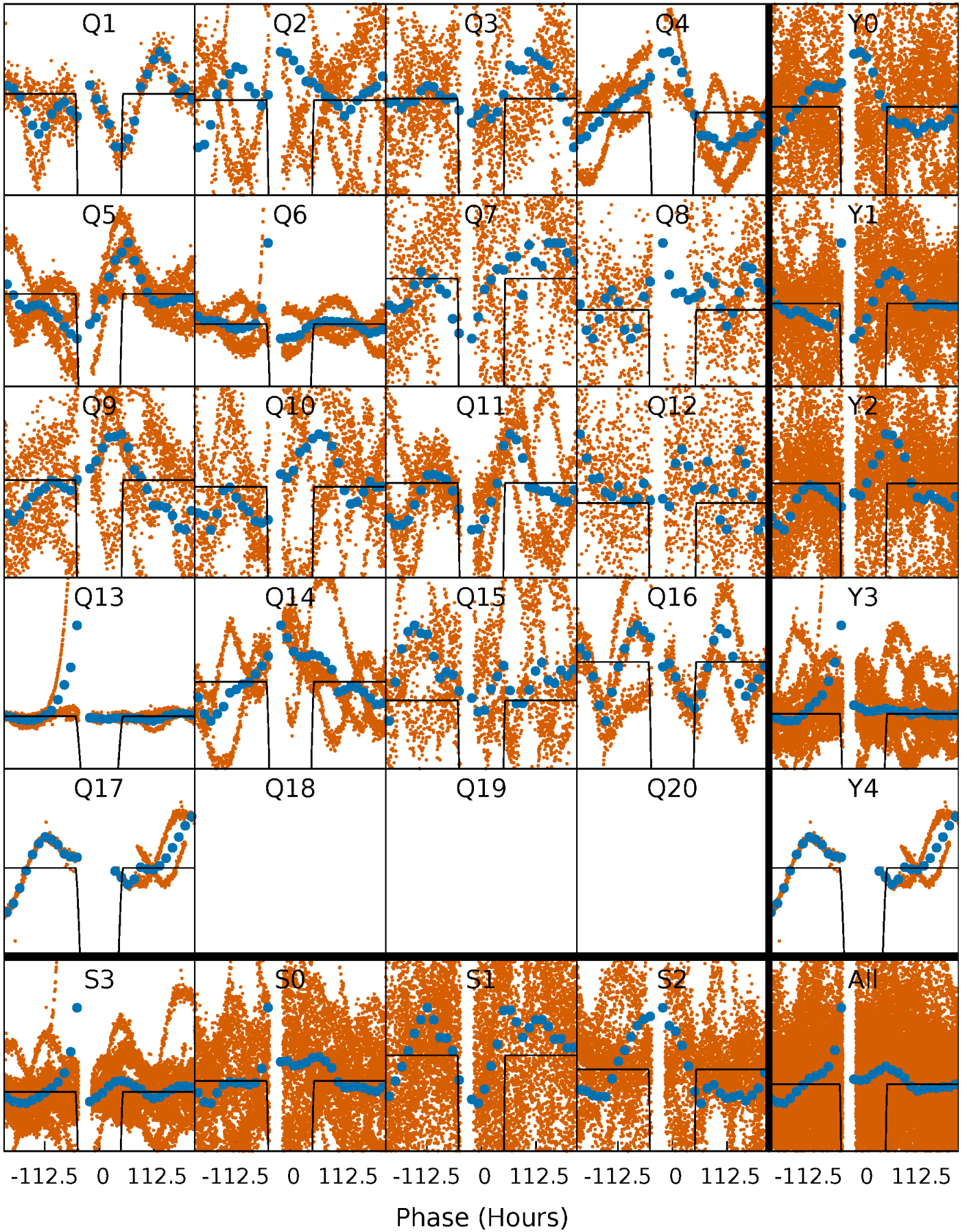
PDC Quarter-Phased Transit Curves

TCE 005553624-03 P= 25.760959 Days $T_0=140.978461$ (BKJD)



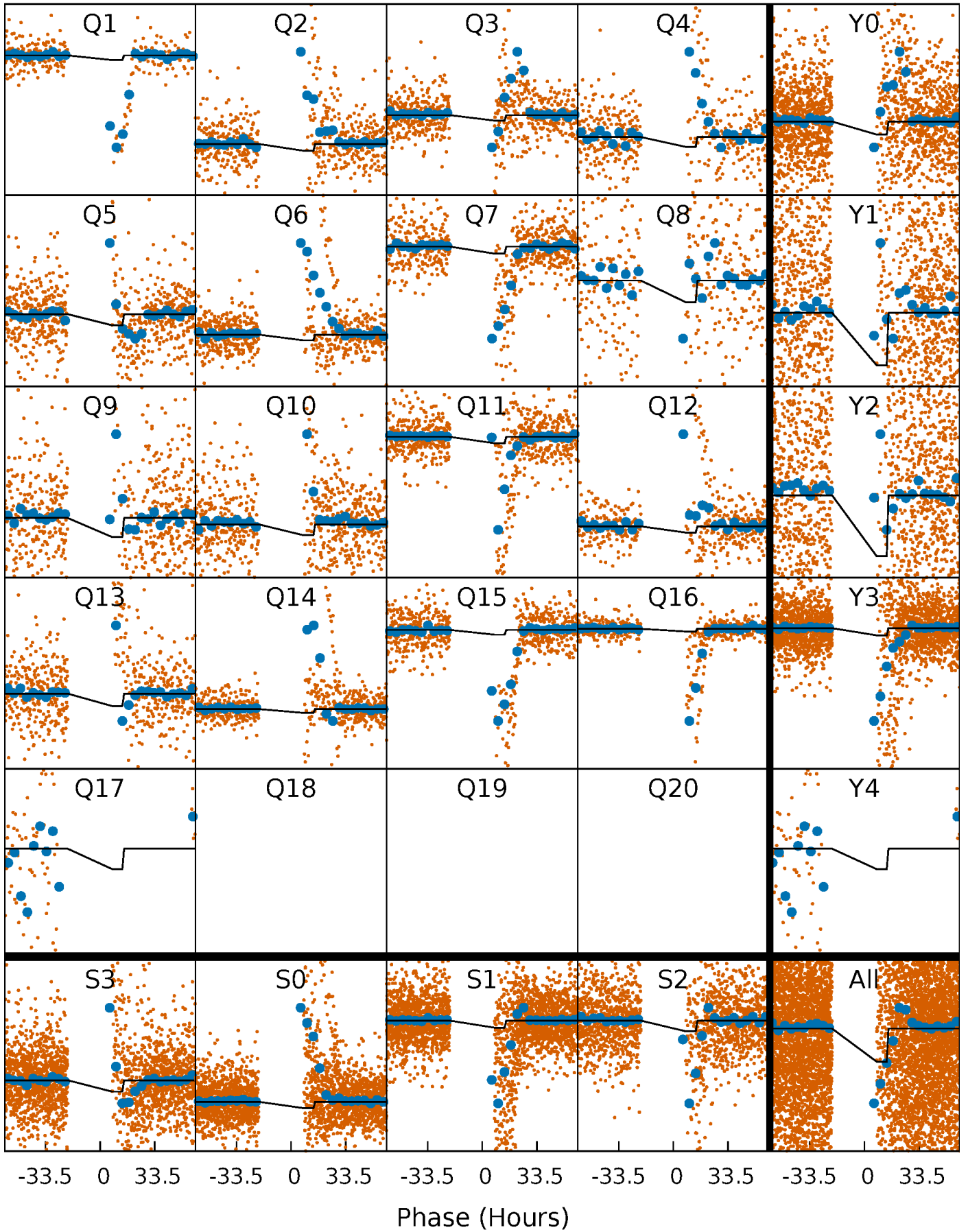
DV Quarter-Phased Transit Curves

TCE 005553624-03 P= 25.760959 Days $T_0=140.978461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

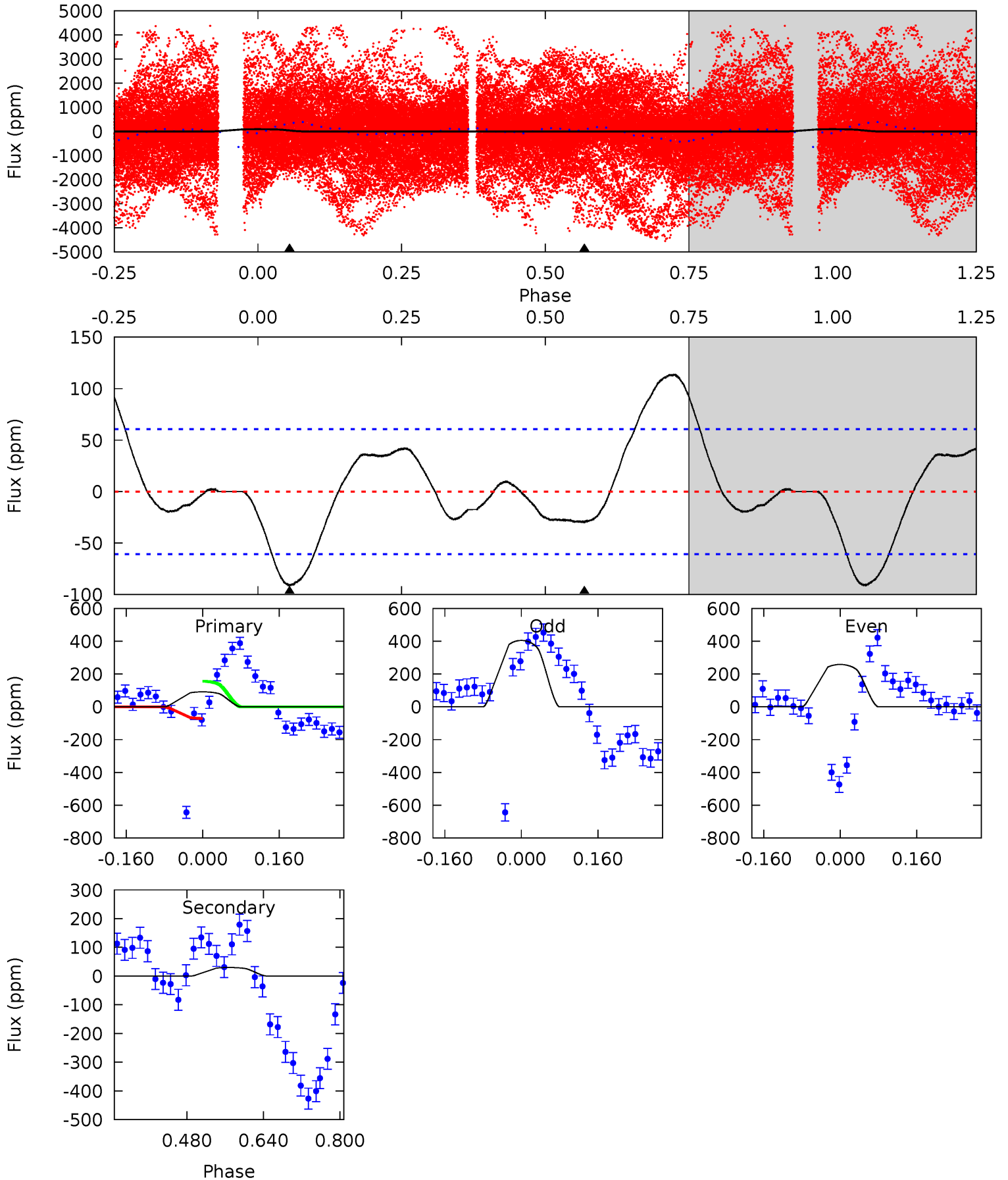
TCE 005553624-03 P= 25.761961 Days $T_0=139.989787$ (BKJD)



DV Model-Shift Uniqueness Test

005553624-03, P = 25.760959 Days, E = 115.217502 Days

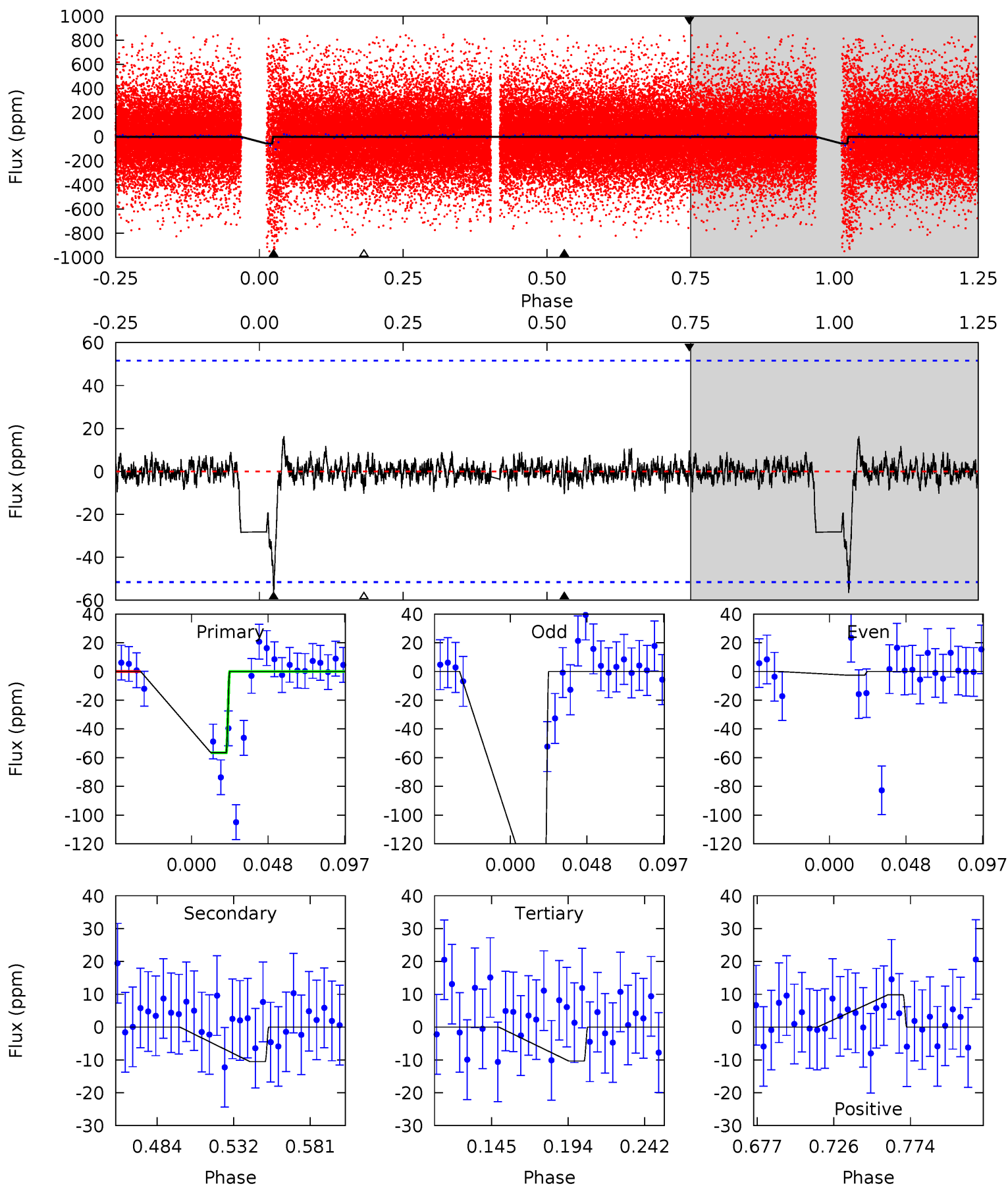
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.70	2.19	0	0	4.47	1.41	2.68	6.70	6.70	2.19	2.19	4.72	-184.4	0.56	2.66



Alt Model-Shift Uniqueness Test

005553624-03, P = 25.761961 Days, E = 114.227826 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.17	0.96	0.95	0.90	4.71	1.97	0.32	4.22	4.27	0.02	0.06	6.57	1.72	0.22	0



Stellar Parameters For KIC 005553624

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5539^{+74}_{-83}	$4.393^{+0.105}_{-0.105}$	$0.210^{+0.150}_{-0.150}$	$1.027^{+0.145}_{-0.105}$	$0.950^{+0.057}_{-0.046}$	$1.235^{+0.463}_{-0.397}$
	+1%/-1%	+2%/-2%	+71%/-71%	+14%/-10%	+6%/-5%	+37%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005553624-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-30 ± 14	$20.95^{+1.74}_{-1.24}$	845^{+33}_{-30}	1886^{+101}_{-183}	$1.029^{+0.543}_{-0.490}$
Alt.	-11 ± 11	$0.98^{+0.12}_{-0.11}$	843^{+34}_{-31}	3785^{+519}_{-1289}	175^{+193}_{-165}

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 $A_{obs} \gg 1.0$

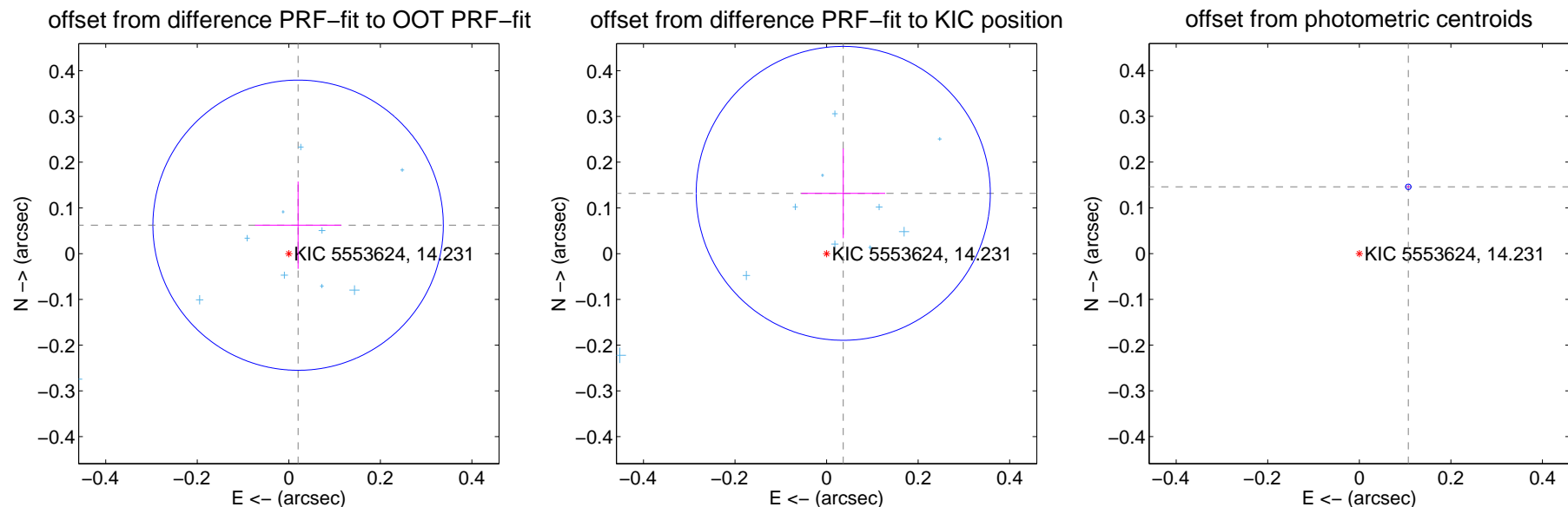
DV Centroid Data

Supplemental centroid analysis for 005553624-03. Kepler magnitude: 14.23. Transit SNR 267.38

There are 12 quarters with good PRF difference image offsets

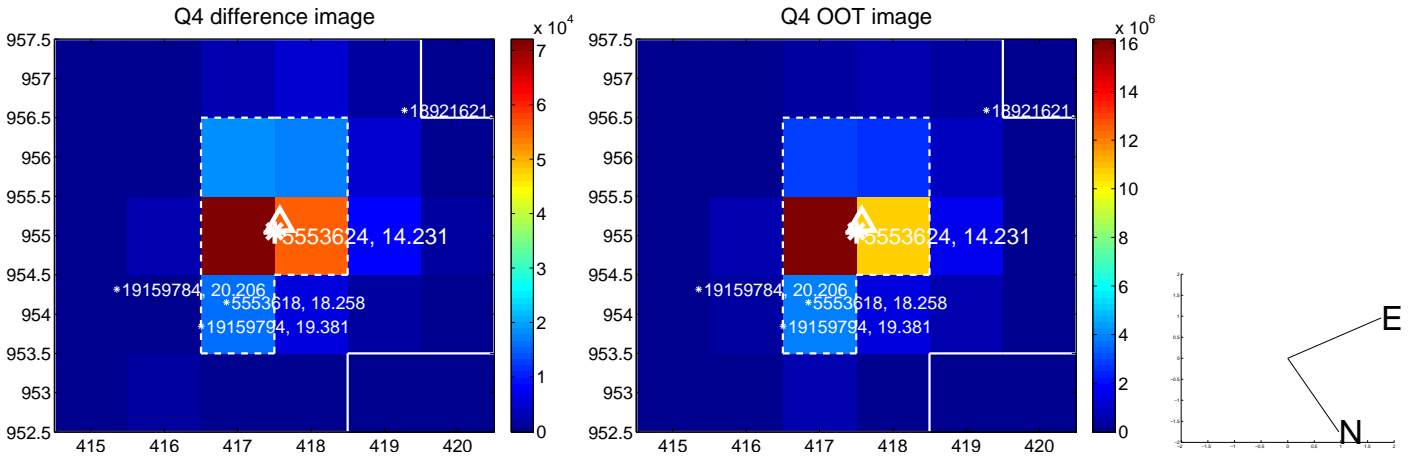
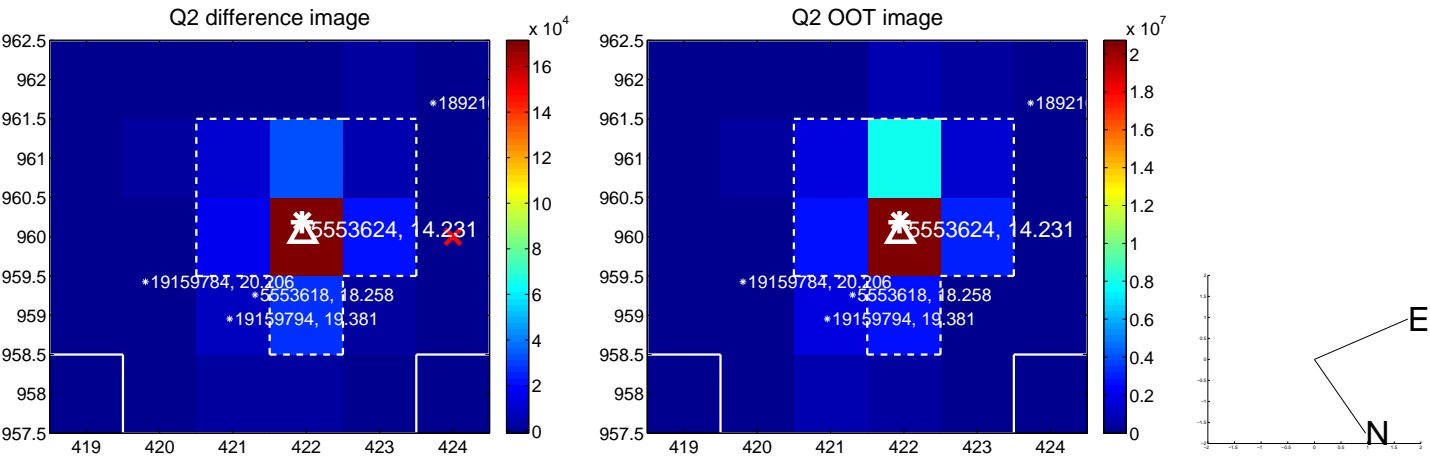
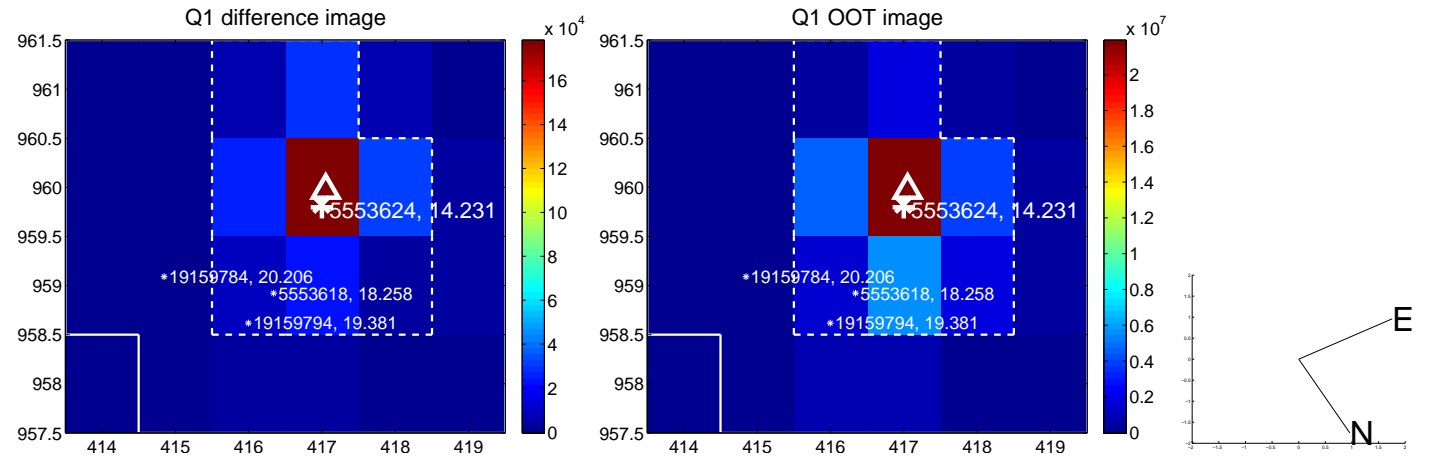
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.065 ± 0.106	0.62	-0.020 ± 0.094	0.062 ± 0.095
PRF-fit source offset from KIC position	0.137 ± 0.107	1.28	-0.036 ± 0.092	0.132 ± 0.098
photometric centroid source offset	0.18 ± 0.00	90.87	-0.11 ± 0.00	0.15 ± 0.00

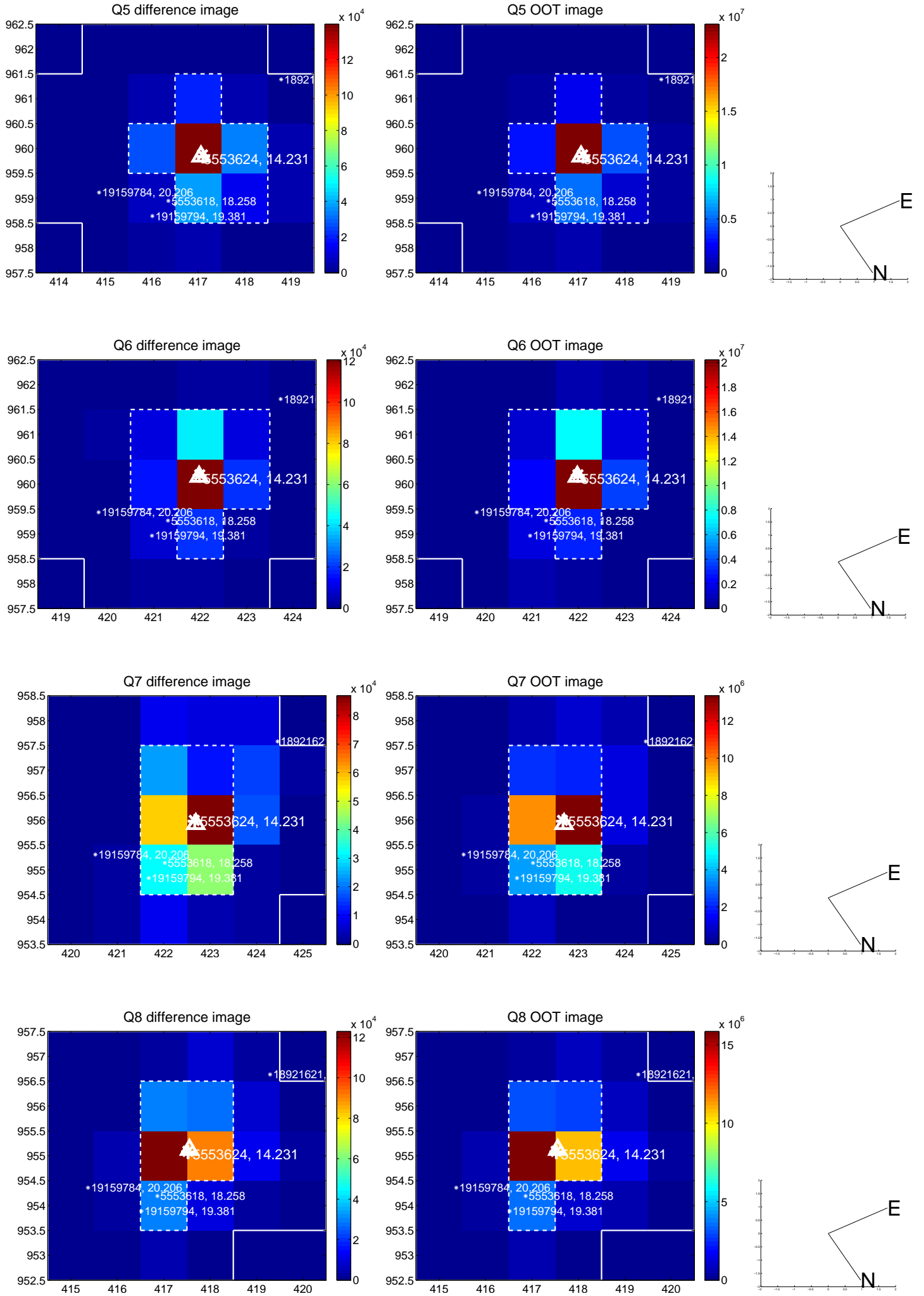


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

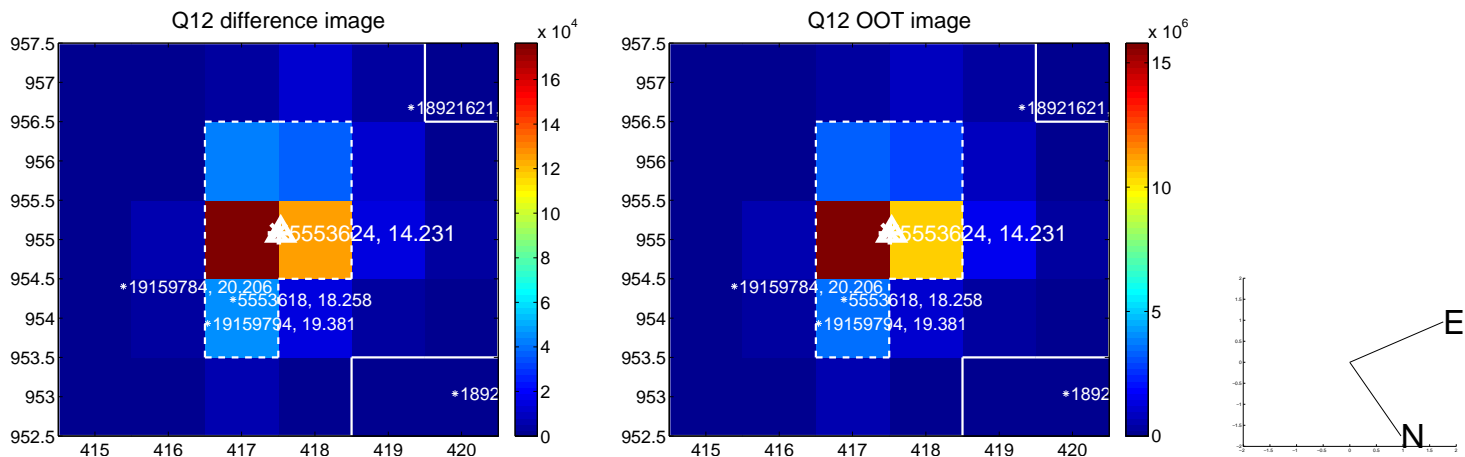
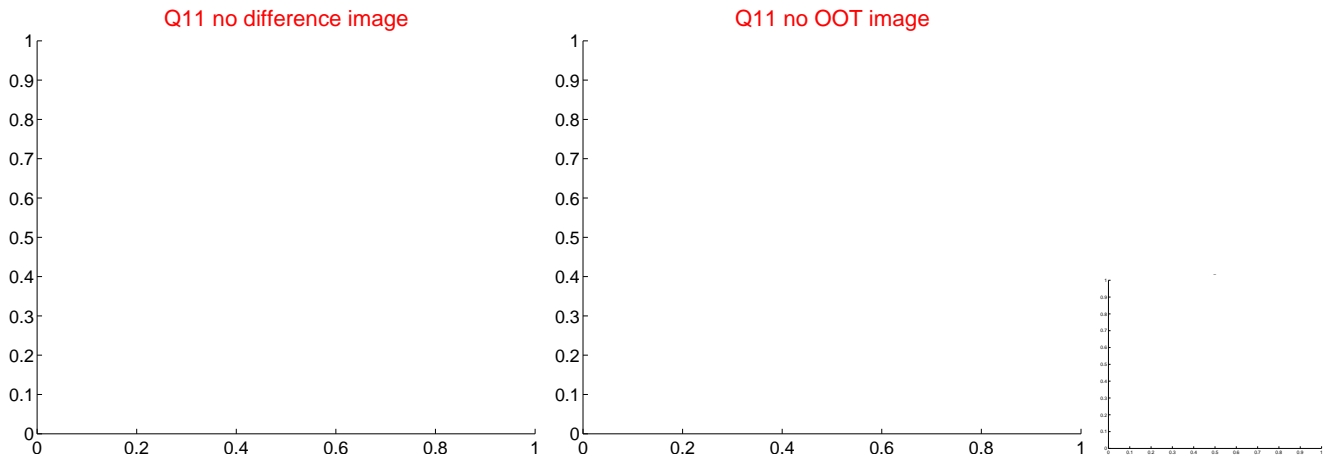
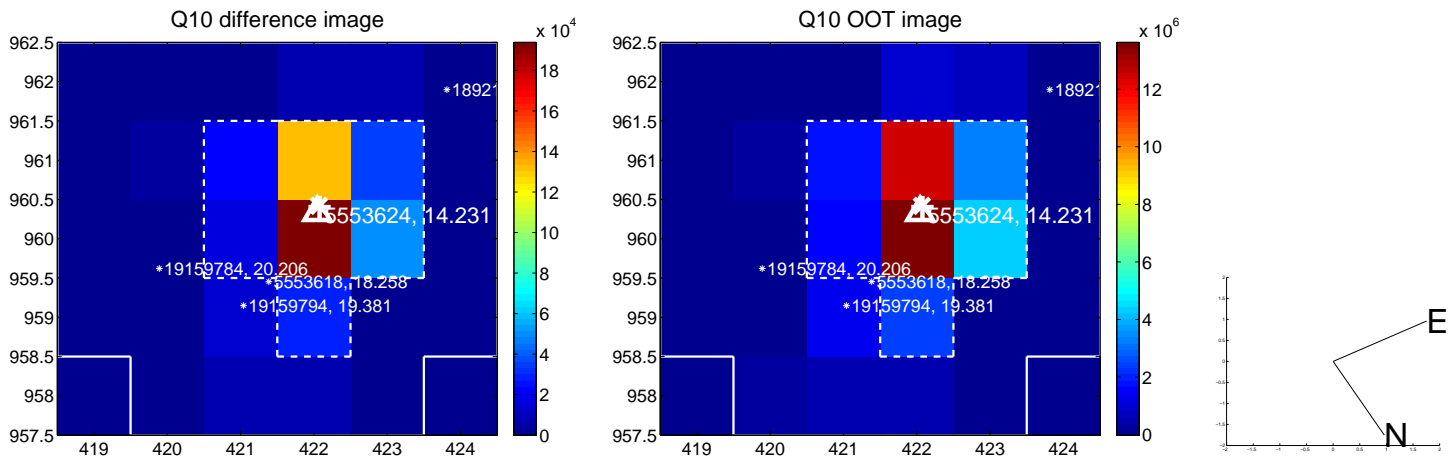
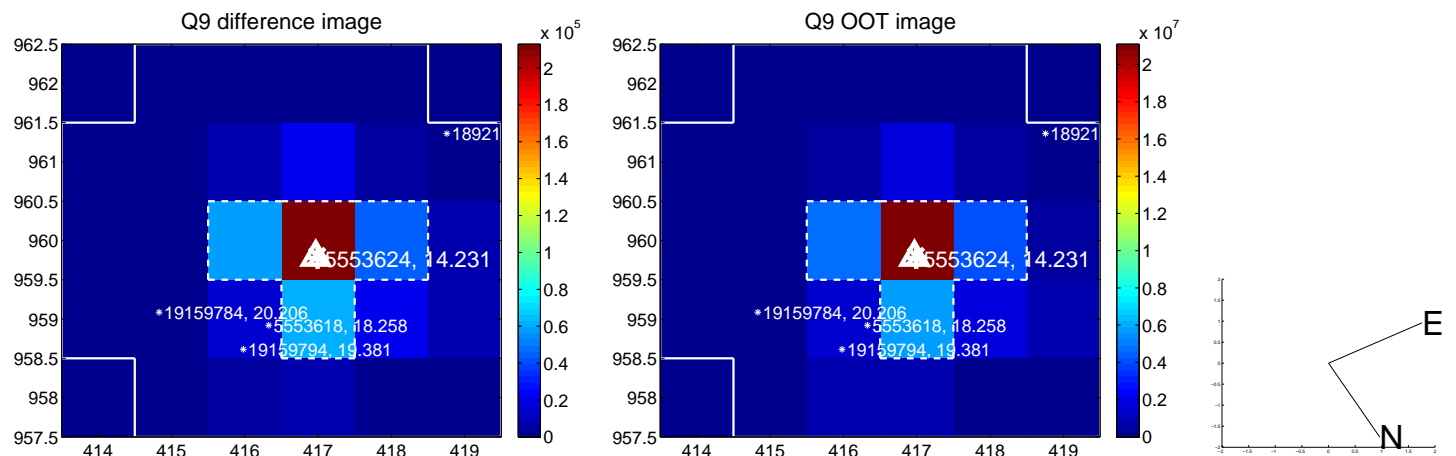
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

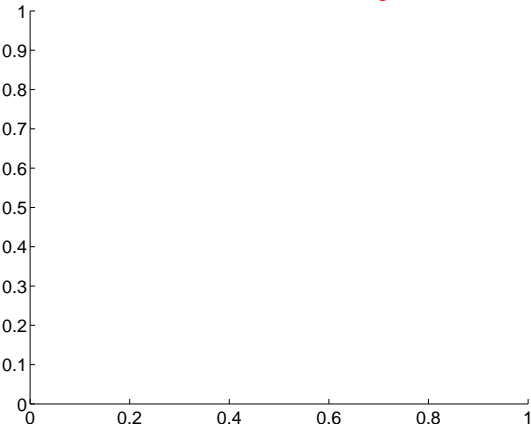


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

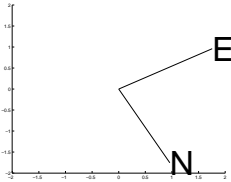
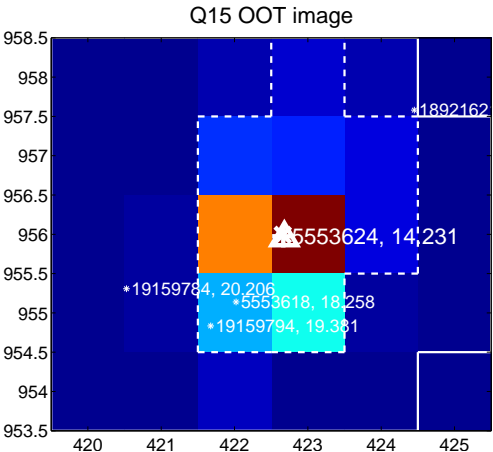
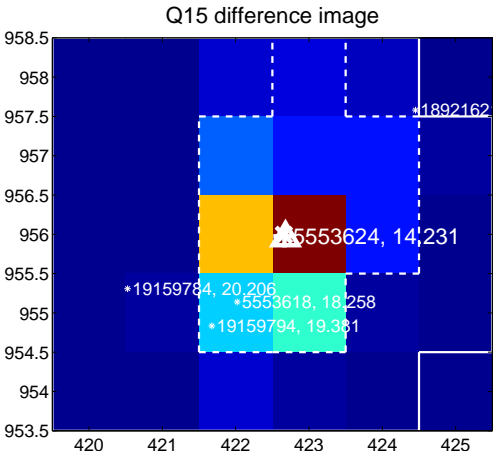
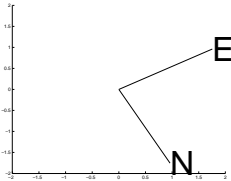
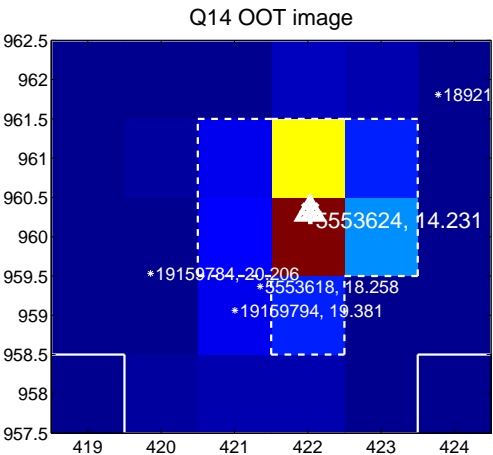
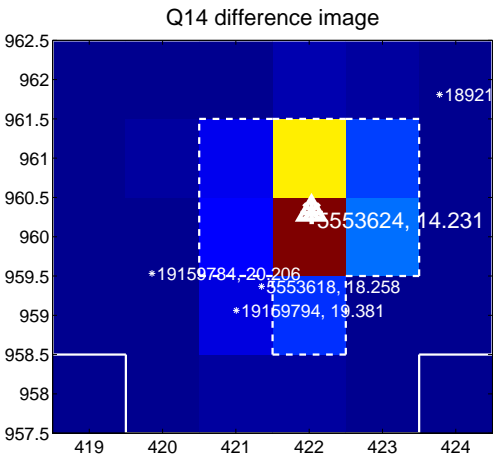
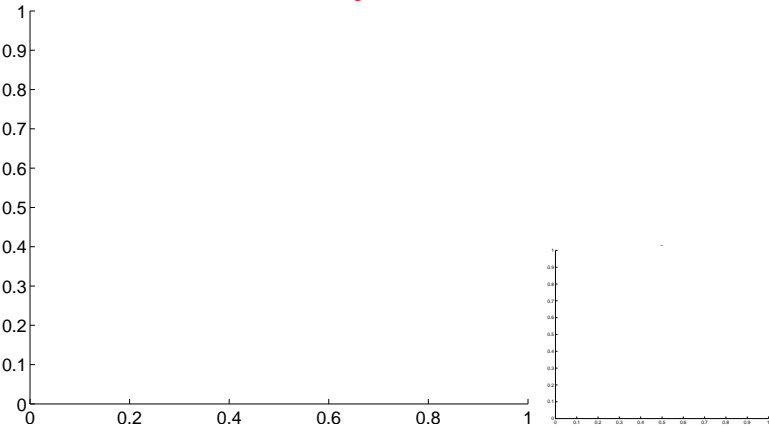


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

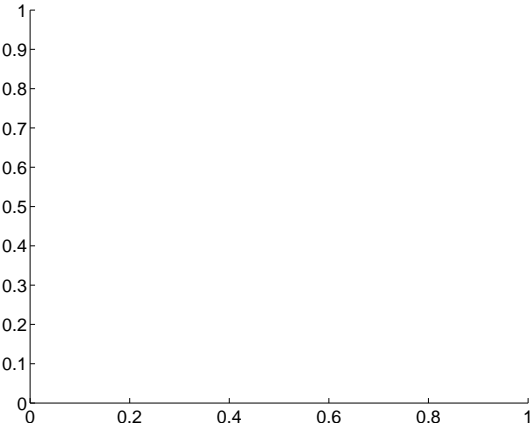
Q13 no difference image



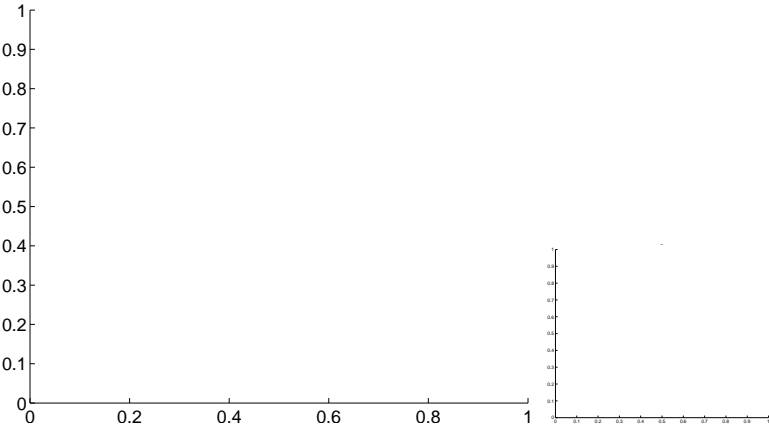
Q13 no OOT image



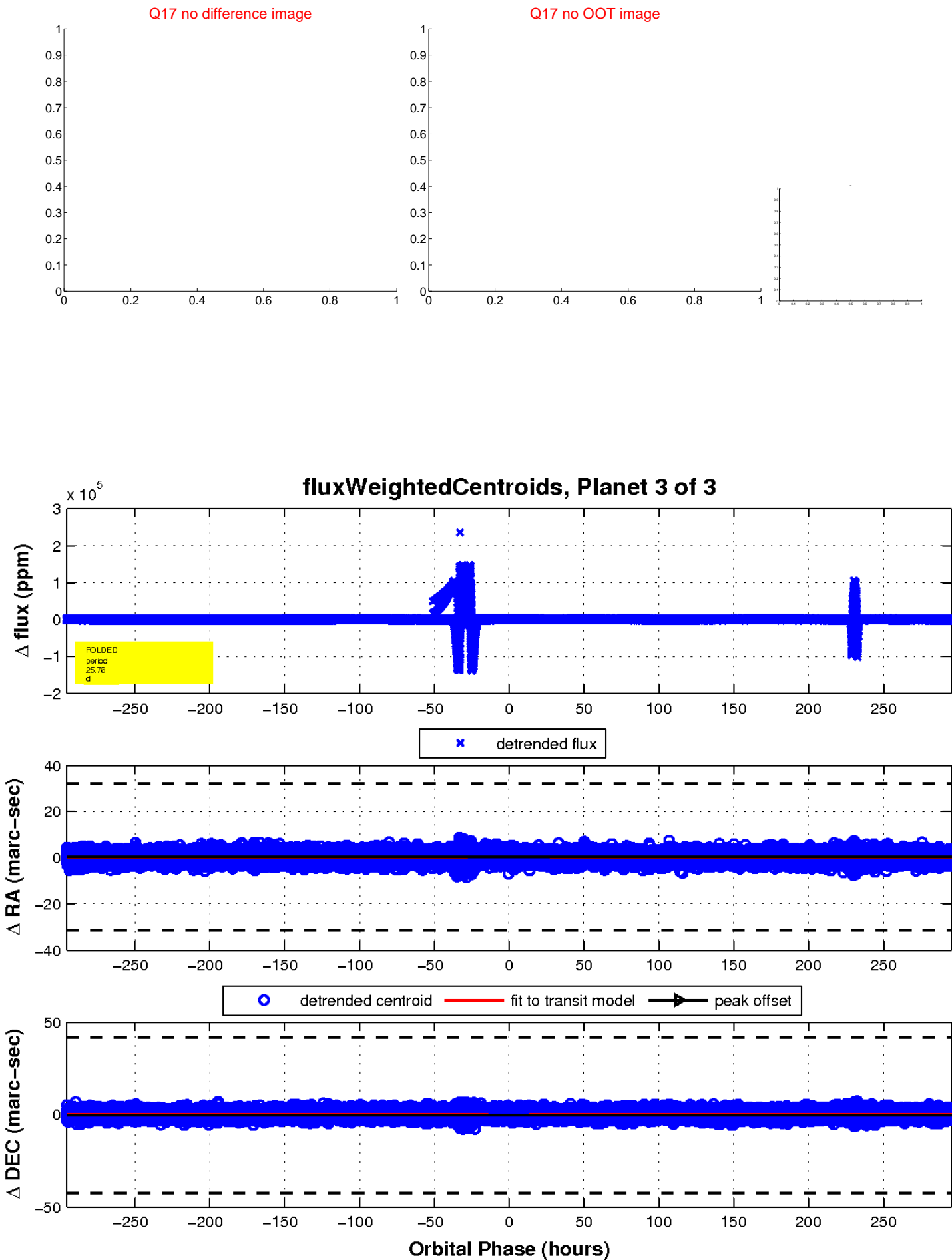
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

