

KIC 003561464

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})
003561464-01	OBS	3398.02	35.799465	144.957797	445.6	8.557	15.3	16.9	3.96	5745	8.96	228.20
003561464-02	OBS	3398.01	7.319370	137.235565	165.4	5.203	13.3	14.3	3.96	5745	6.53	1894.61
003561464-03	OBS	3398.03	4.327028	131.603313	96.8	4.103	9.7	11.0	3.96	5745	4.68	3818.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561464-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
003561464-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
003561464-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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.

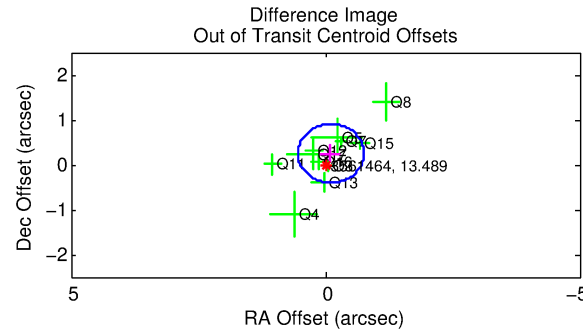
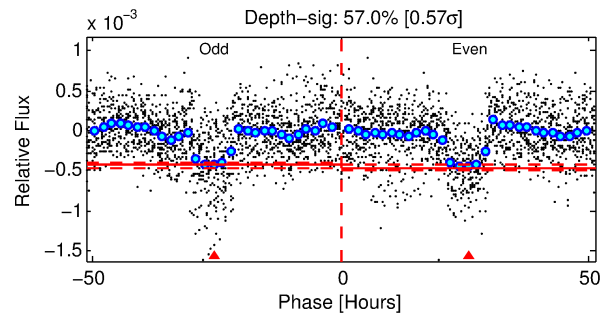
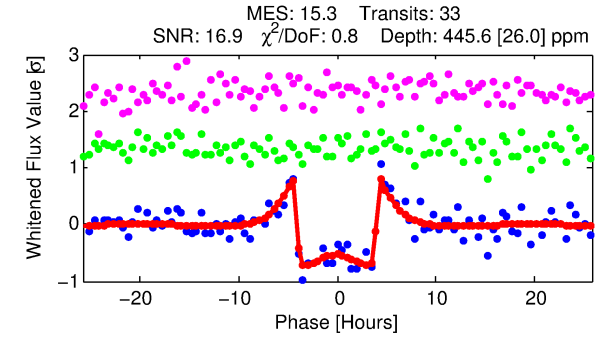
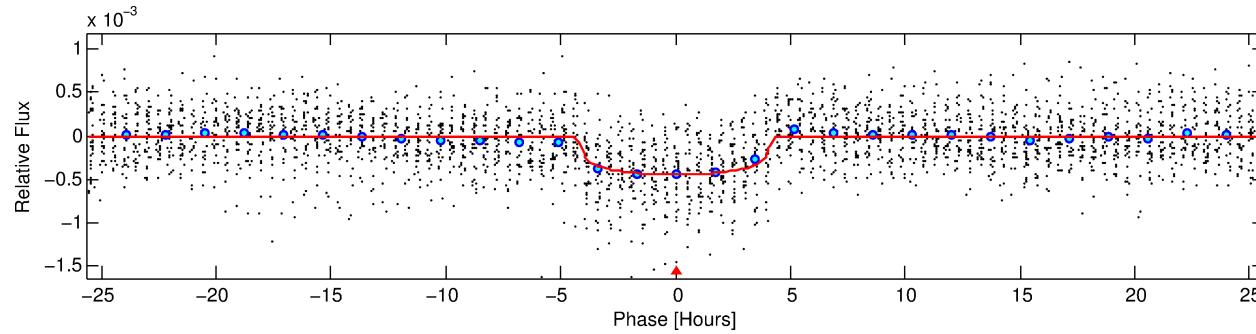
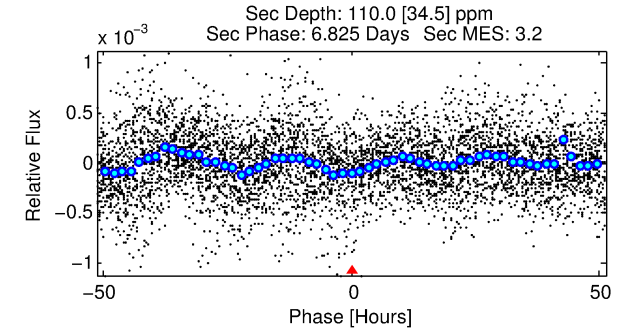
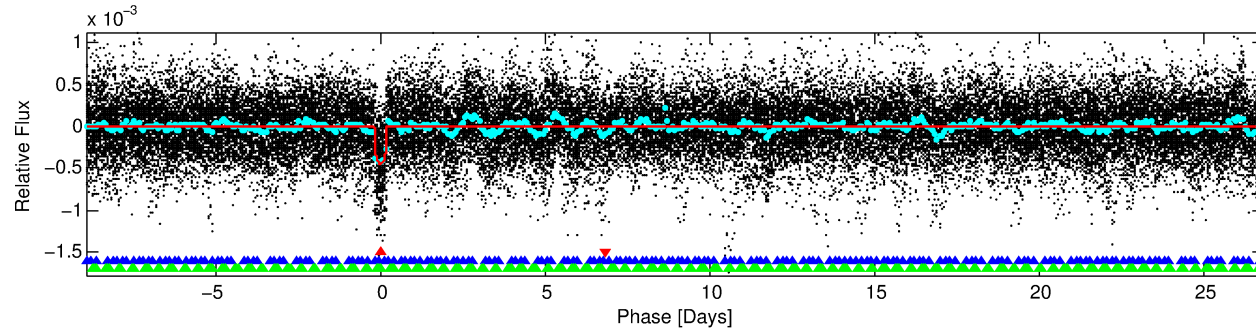
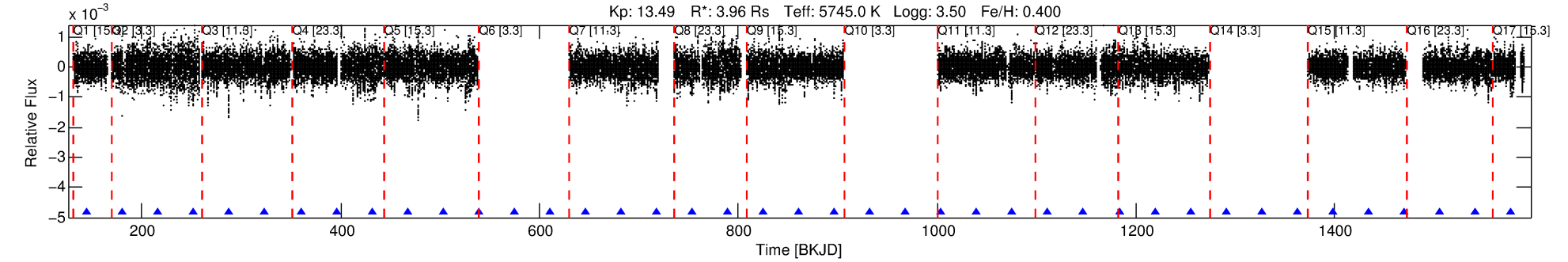
Ephemeris Match Information For 003561464-01

No Significant Match Found

DV One-Page Summary

KIC: 3561464 Candidate: 1 of 3 Period: 35.799 d

KOI: K03398.02 Corr: 0.880



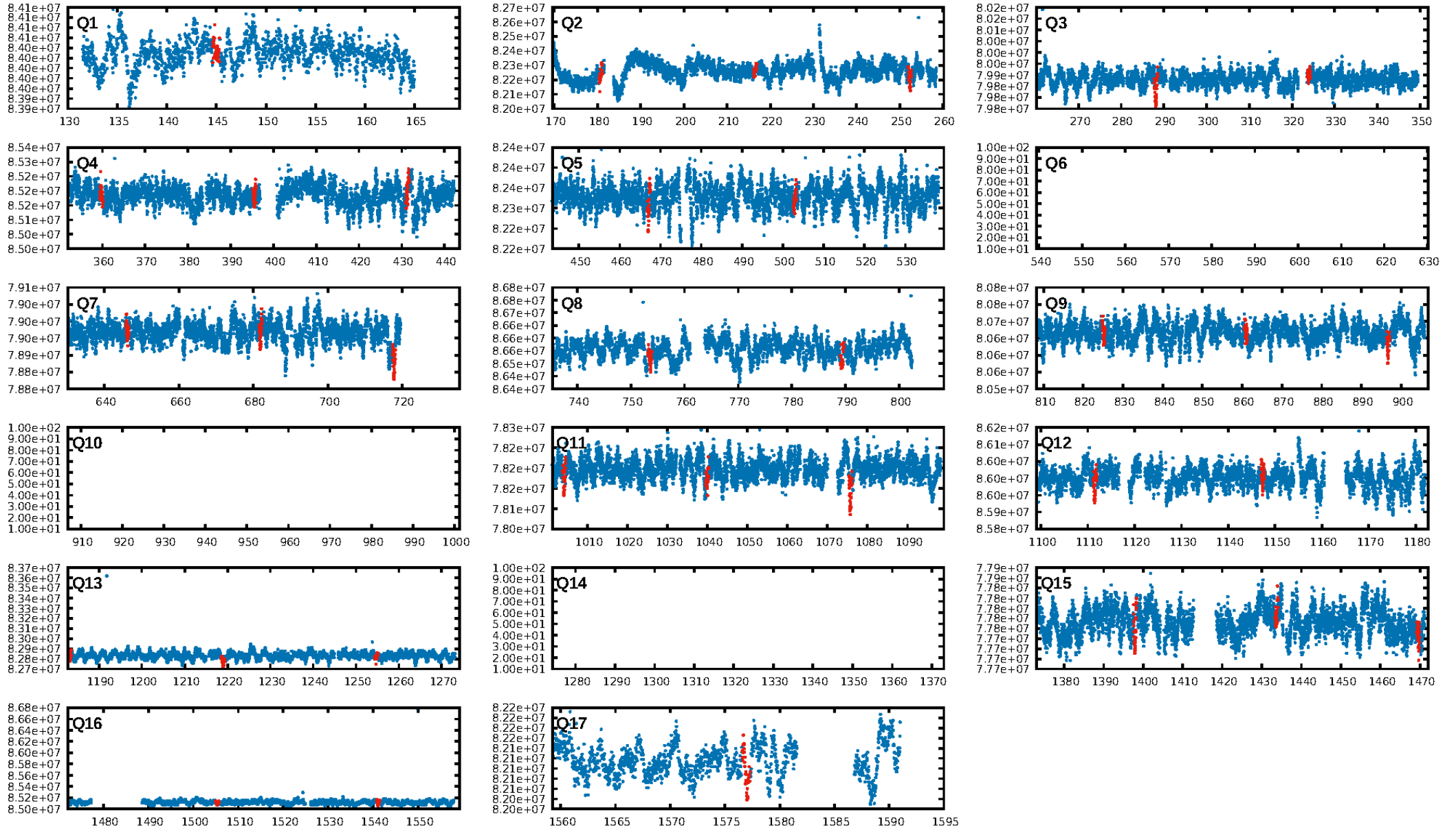
DV Fit Results:

Period = 35.79947 [0.00016] d
Epoch = 144.9578 [0.0039] BKJD
Rp/R* = 0.0208 [0.0026]
a/R* = 23.23 [11.52]
b = 0.72 [0.34]
Seff = 228.20 [105.92]
Teff = 991 [115] K
Rp = 8.96 [3.31] Re
a = 0.2587 [0.0790] AU
Ag = 50.47 [30.80] [1.61σ]
Teffp = 4084 [414] K [7.20σ]

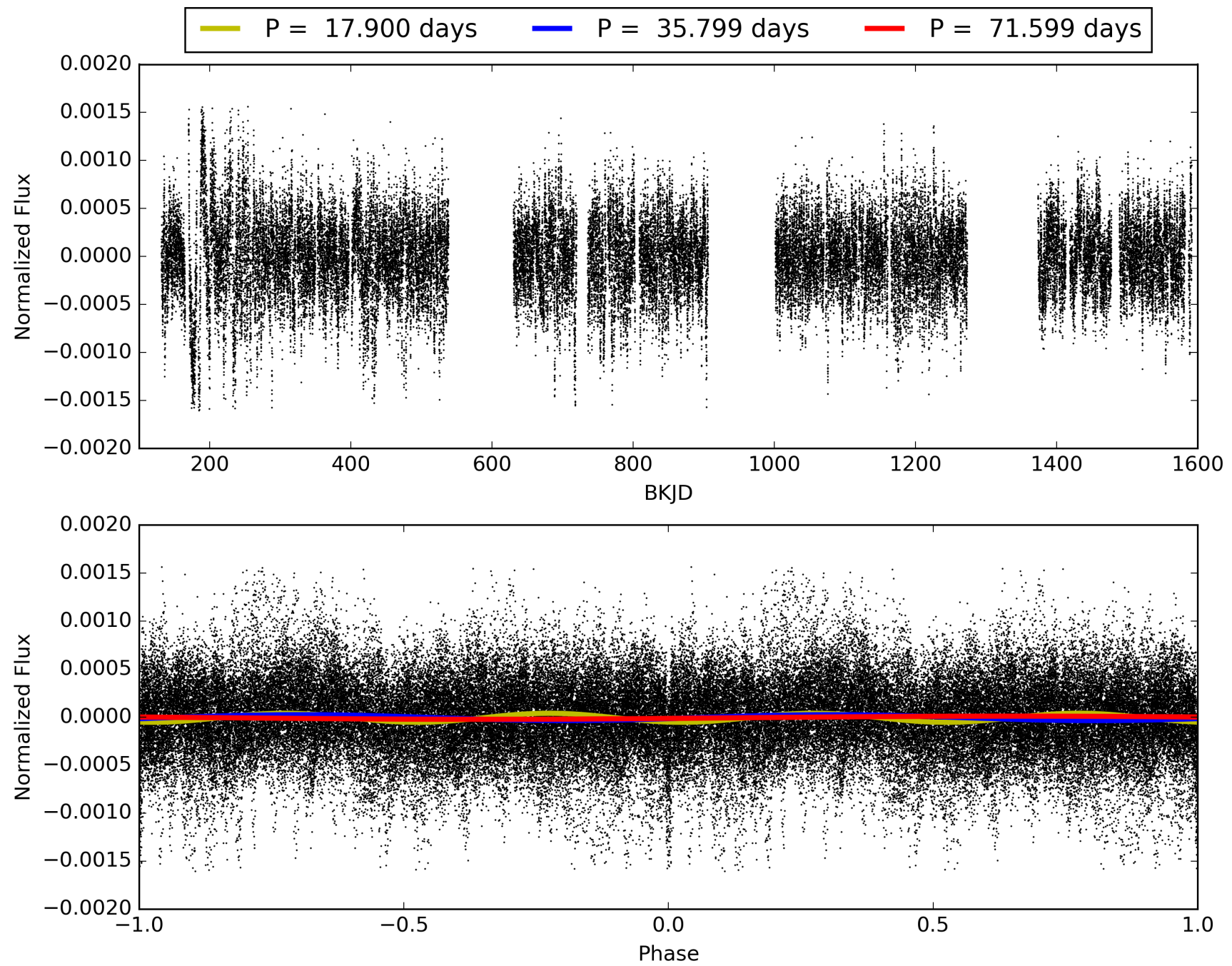
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [68.25σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 20.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.46e-40
RollingBand-fgt: 1.00 [31/31]
GhostDiagnostic-chr: 2.498
Centroid-sig: 94.6%
Centroid-so: 0.542 arcsec [1.77σ]
OotOffset-rm: 0.270 arcsec [1.24σ]
KicOffset-rm: 0.236 arcsec [1.56σ]
OotOffset-st: 0/4/4/3 [11]
KicOffset-st: 0/4/4/3 [11]
DiffImageQuality-fgm: 0.91 [10/11]
DiffImageOverlap-fno: 0.79 [11/14]

TCE 003561464-01, PDC Light Curves

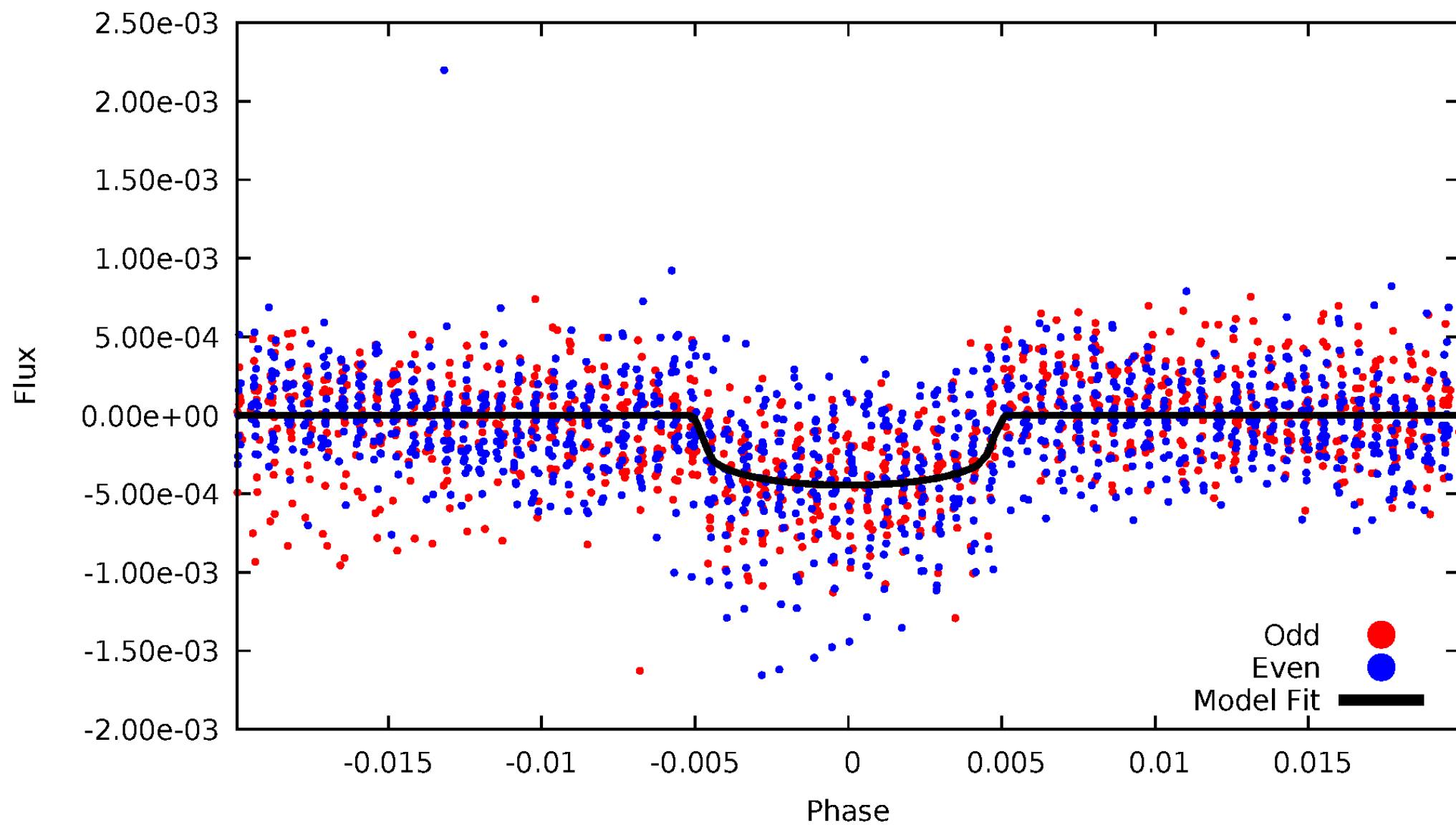


TCE 003561464-01



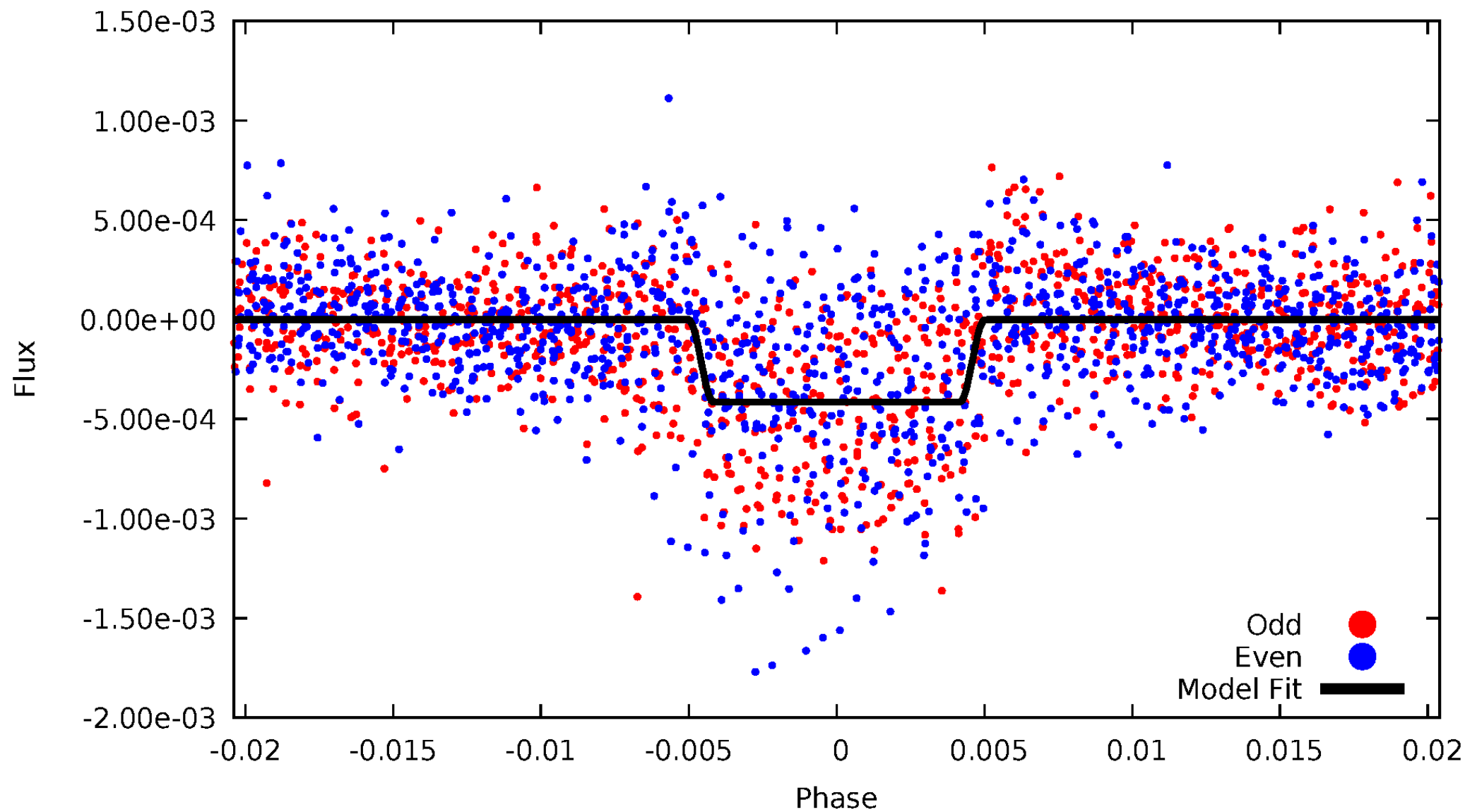
DV Odd/Even

TCE 003561464-01

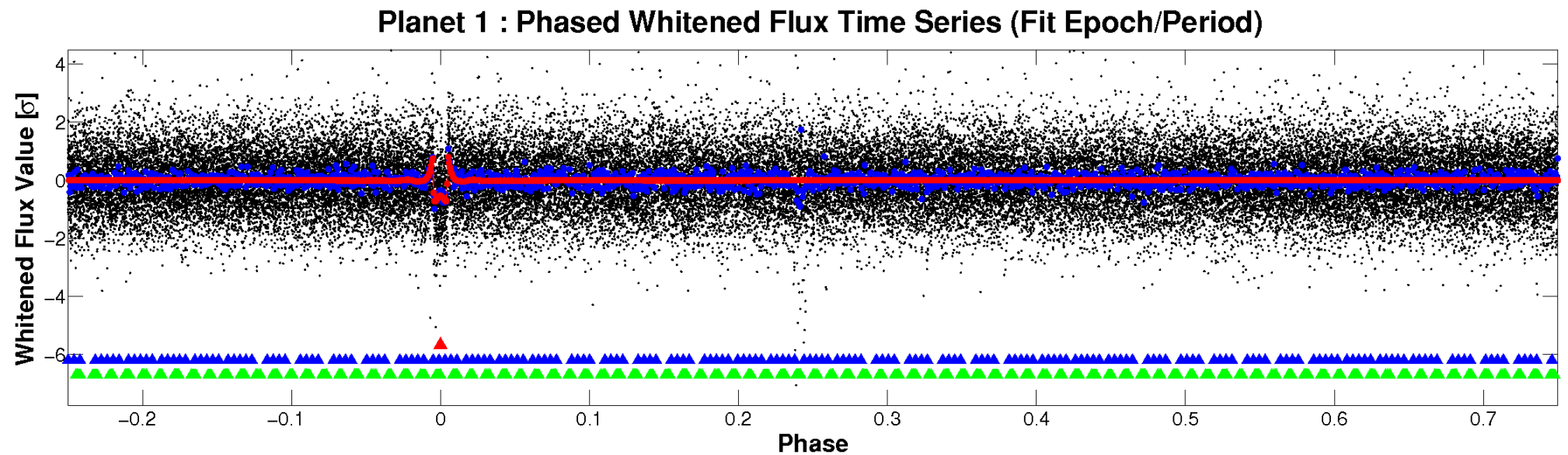
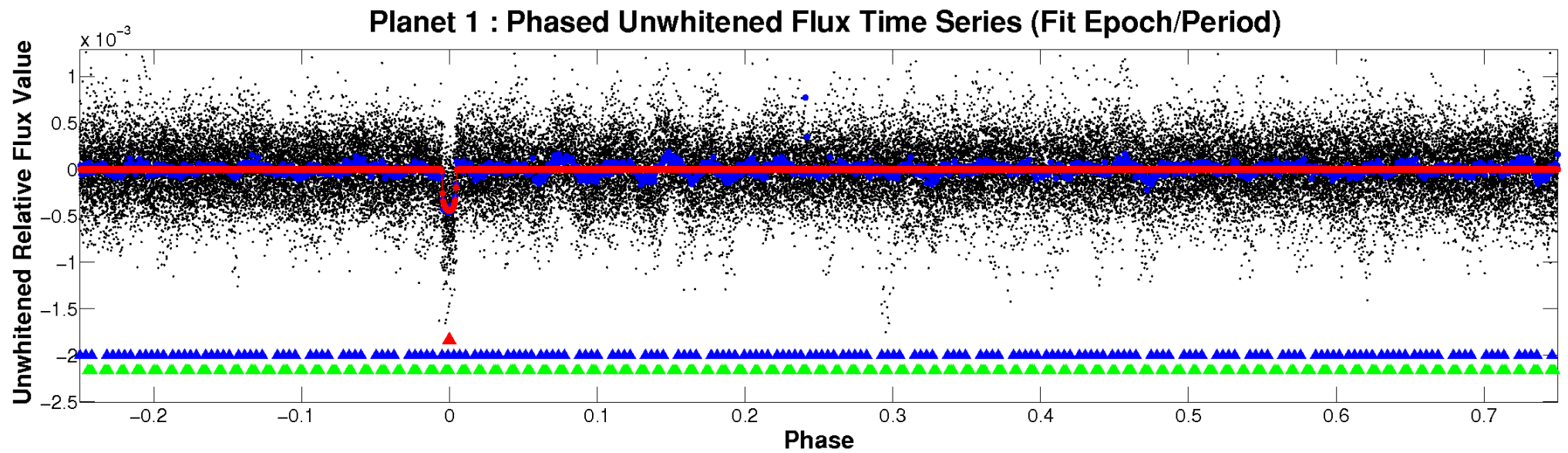


ALT Odd/Even

TCE 003561464-01

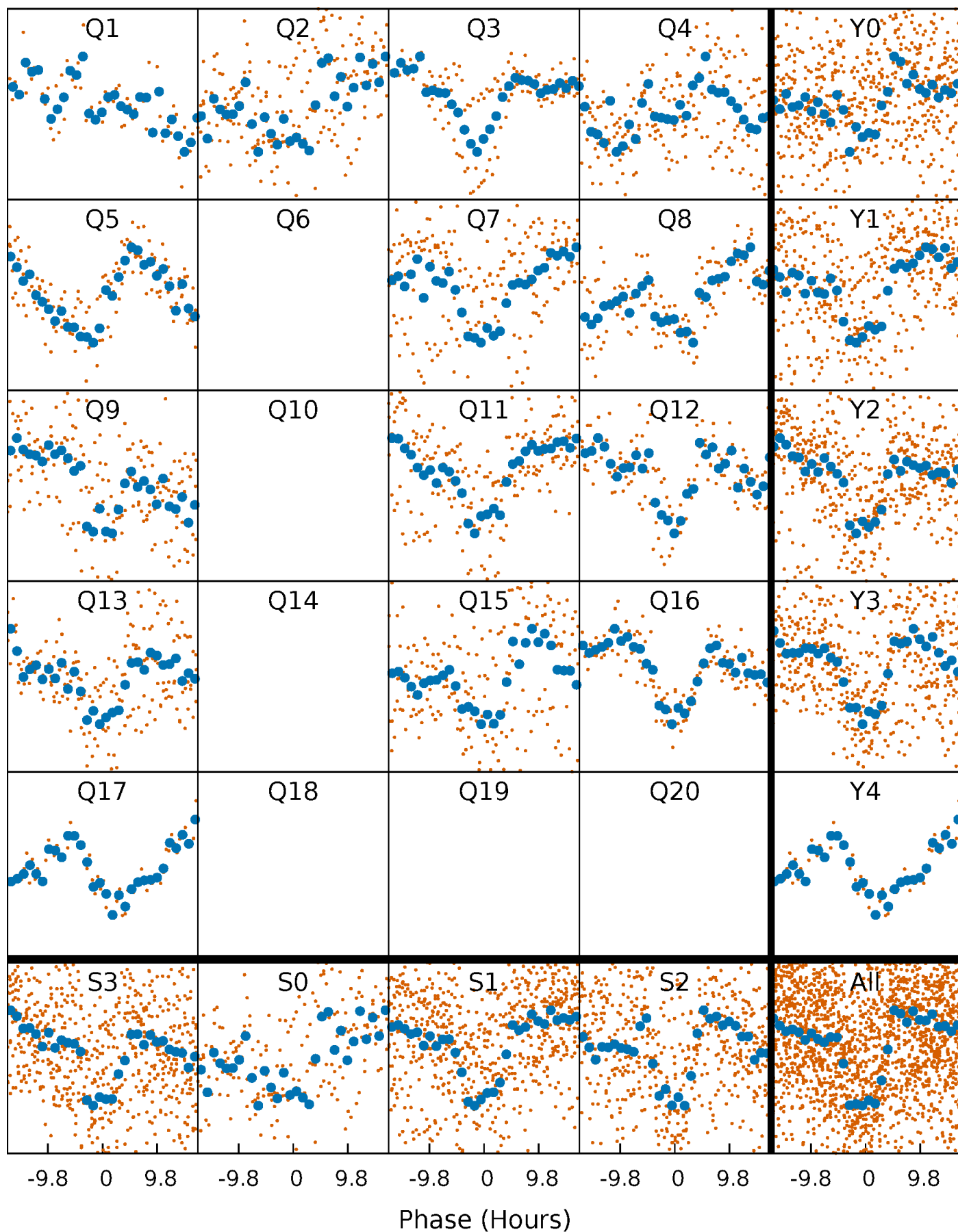


Non-Whitened Vs. Whitened Light Curve



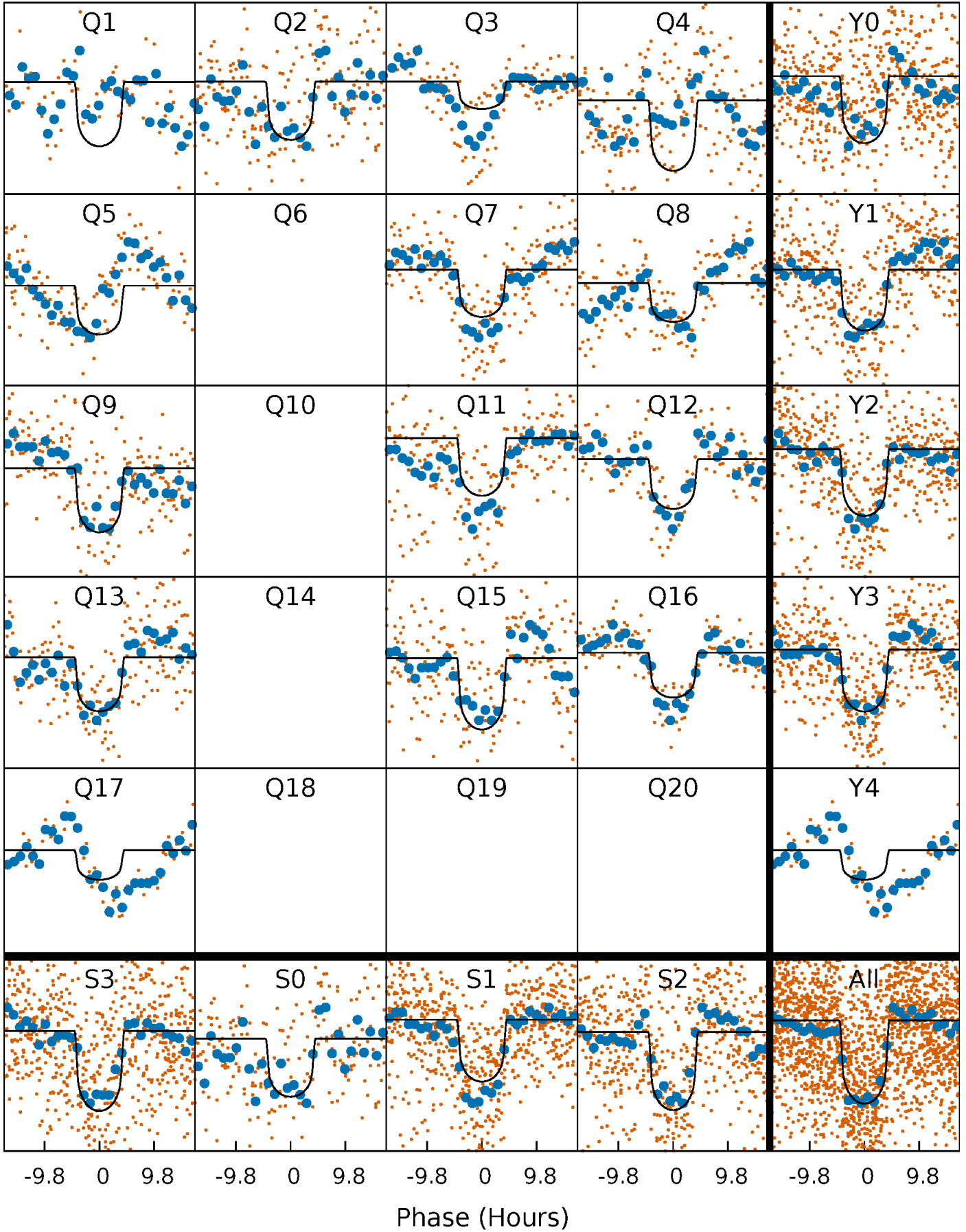
PDC Quarter-Phased Transit Curves

TCE 003561464-01 P= 35.799465 Days $T_0=144.957797$ (BKJD)



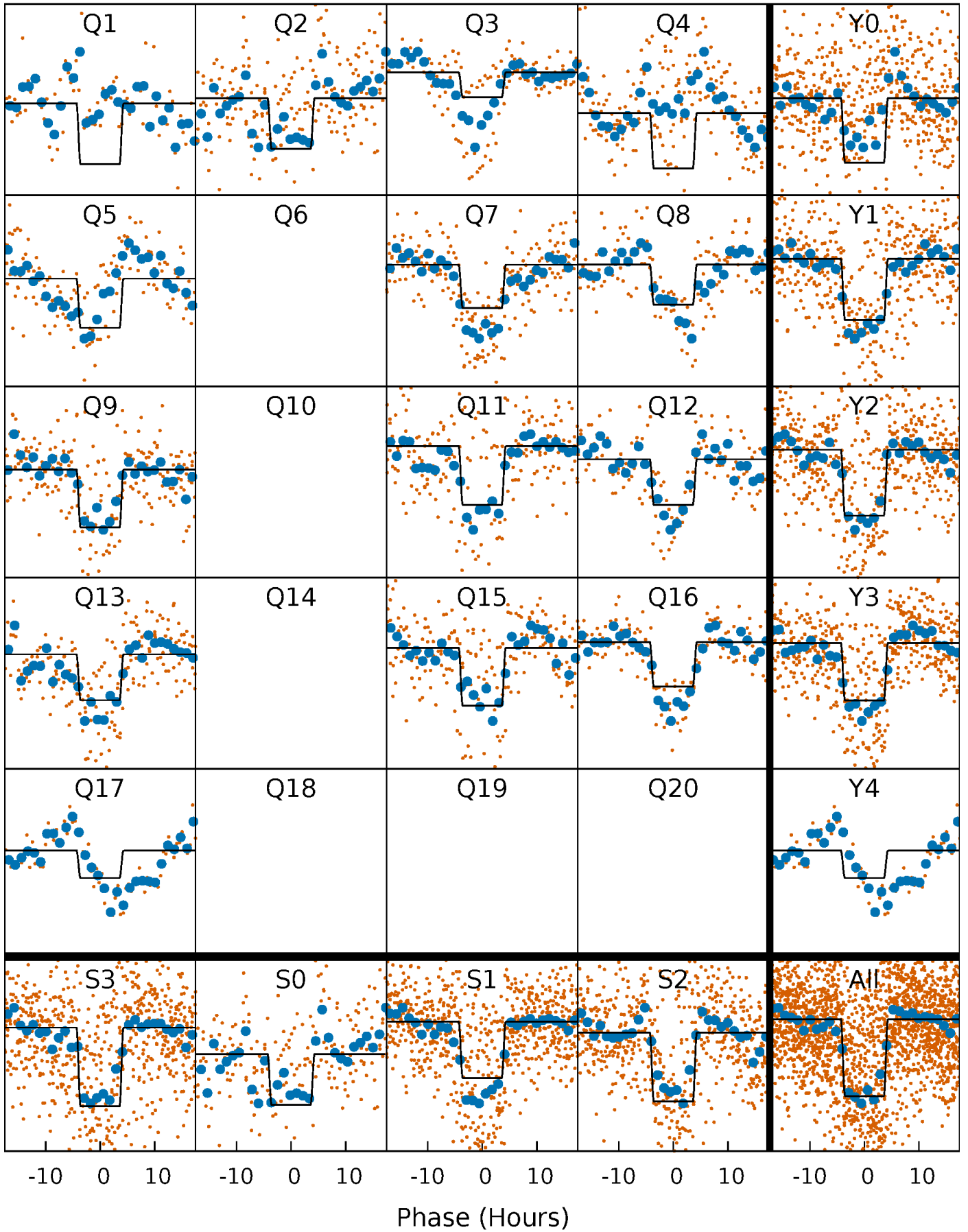
DV Quarter-Phased Transit Curves

TCE 003561464-01 P= 35.799465 Days $T_0=144.957797$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

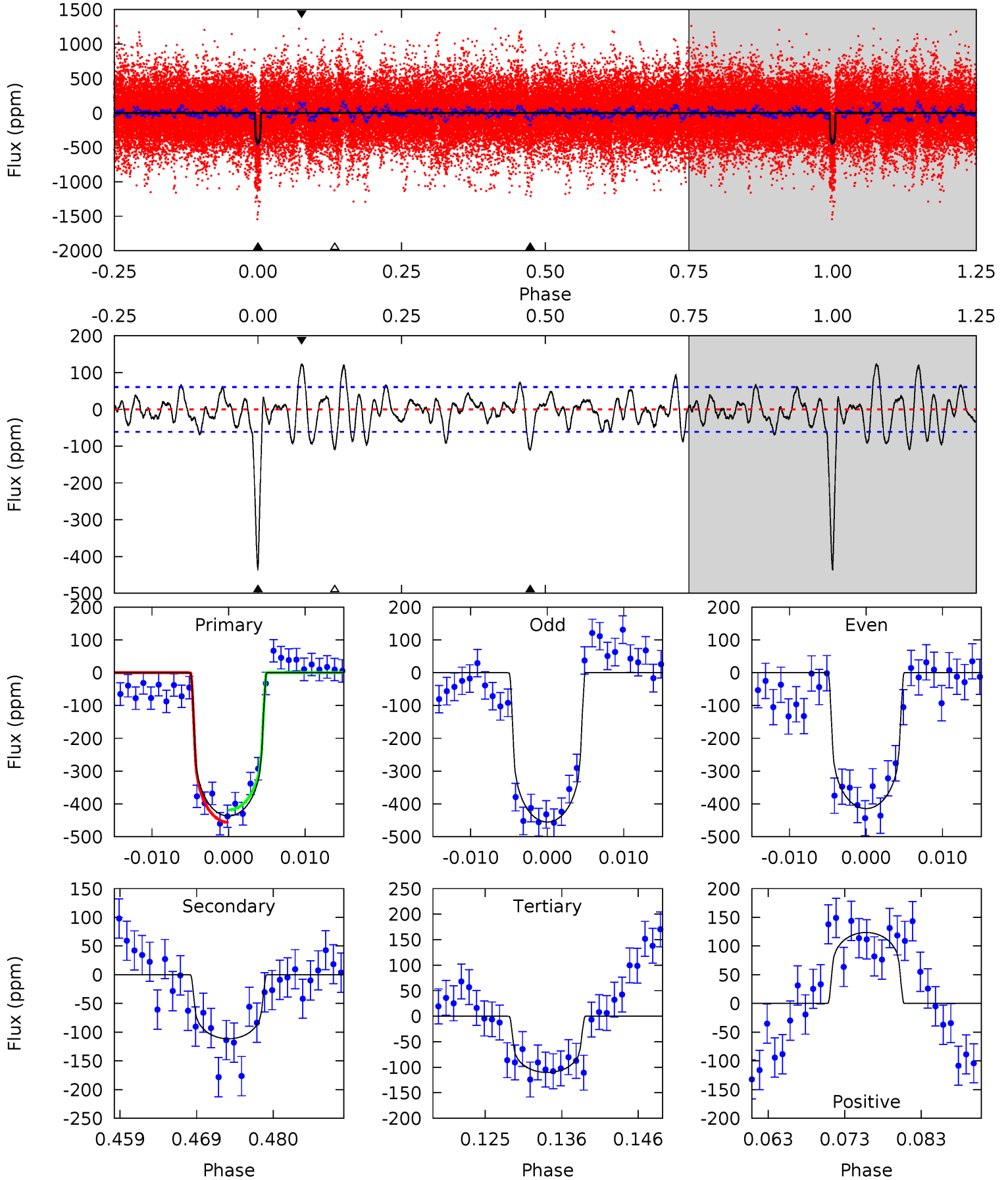
TCE 003561464-01 P= 35.799300 Days $T_0=144.955998$ (BKJD)



DV Model-Shift Uniqueness Test

003561464-01, $P = 35.799465$ Days, $E = 109.158332$ Days

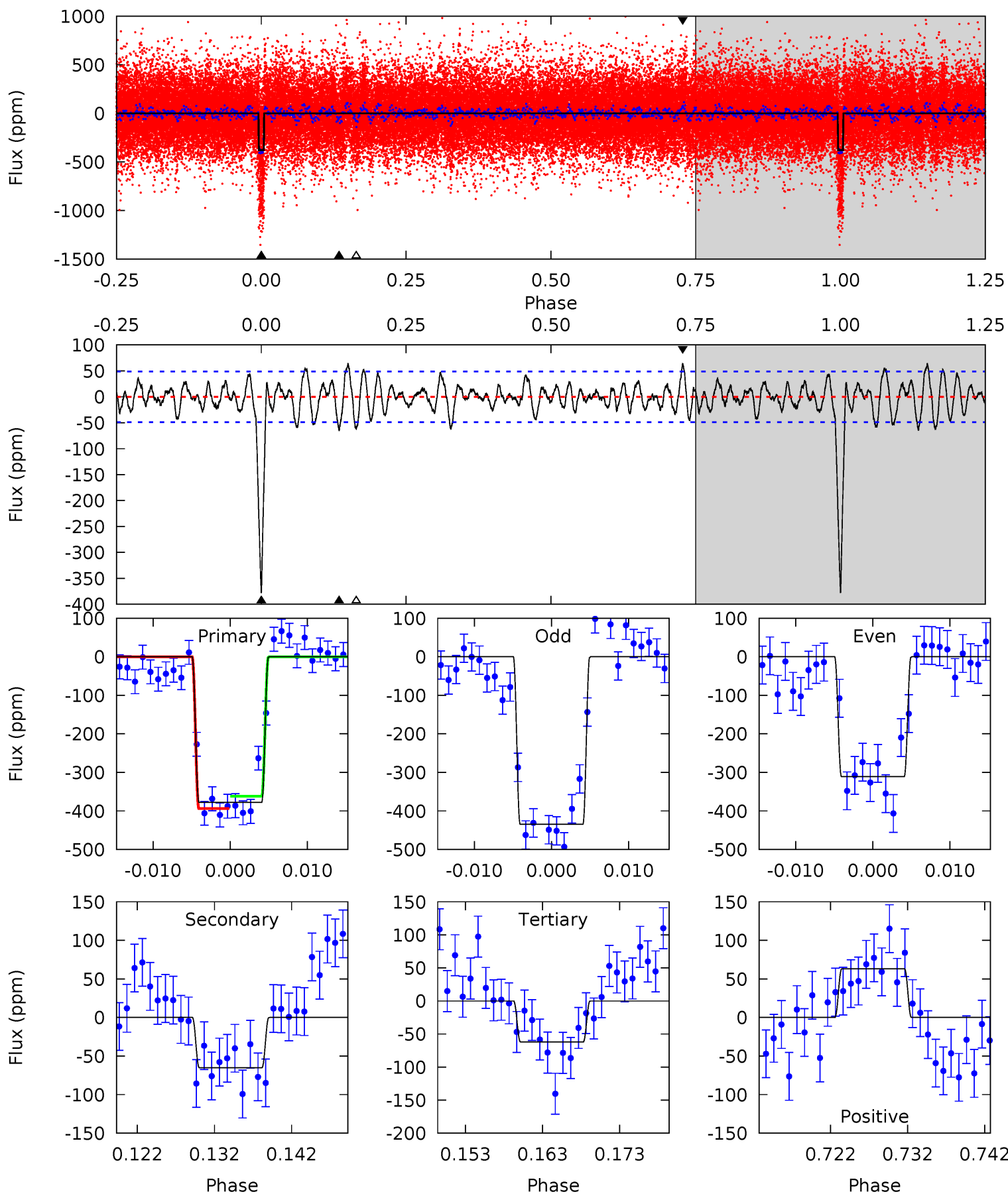
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.0	9.18	9.07	10.2	5.02	2.56	3.04	26.9	25.8	0.10	-1.00	1.69	1.14	0.22	1.55



Alt Model-Shift Uniqueness Test

003561464-01, P = 35.799300 Days, E = 109.156698 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.9	6.69	6.39	6.49	5.02	2.57	2.21	32.5	32.4	0.30	0.20	6.36	0.90	0.15	1.65



Stellar Parameters For KIC 003561464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5745^{+86}_{-77}	$3.499^{+0.259}_{-0.129}$	$0.400^{+0.050}_{-0.150}$	$3.955^{+0.688}_{-1.376}$	$1.801^{+0.193}_{-0.359}$	$0.041^{+0.073}_{-0.014}$
	+1%/-1%	+7%/-4%	+12%/-37%	+17%/-35%	+11%/-20%	+178%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003561464-01 / KOI 3398.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-111 ± 12	$8.71^{+1.57}_{-1.68}$	1378^{+73}_{-112}	4321^{+247}_{-223}	54^{+26}_{-16}
Alt.	-65 ± 10	$8.73^{+1.53}_{-1.80}$	1387^{+66}_{-102}	3936^{+232}_{-204}	32^{+16}_{-10}

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 $A_{obs} \gg 1.0$

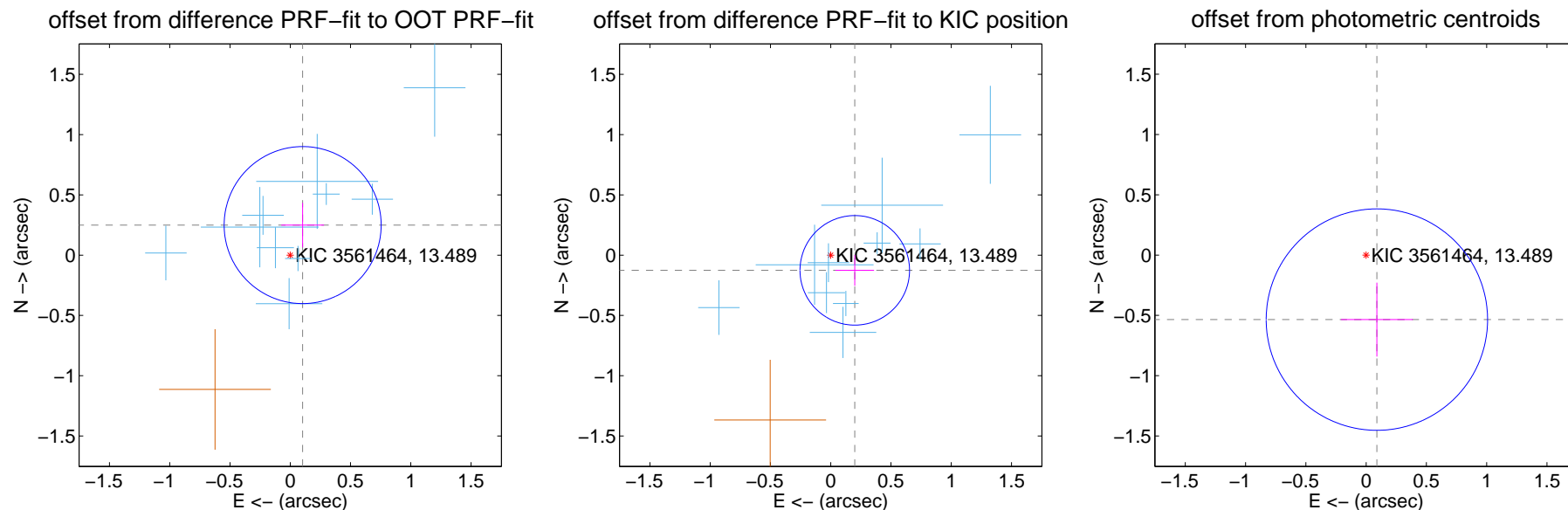
DV Centroid Data

Supplemental centroid analysis for 003561464-01. Kepler magnitude: 13.49. Transit SNR 16.92

There are 10 quarters with good PRF difference image offsets

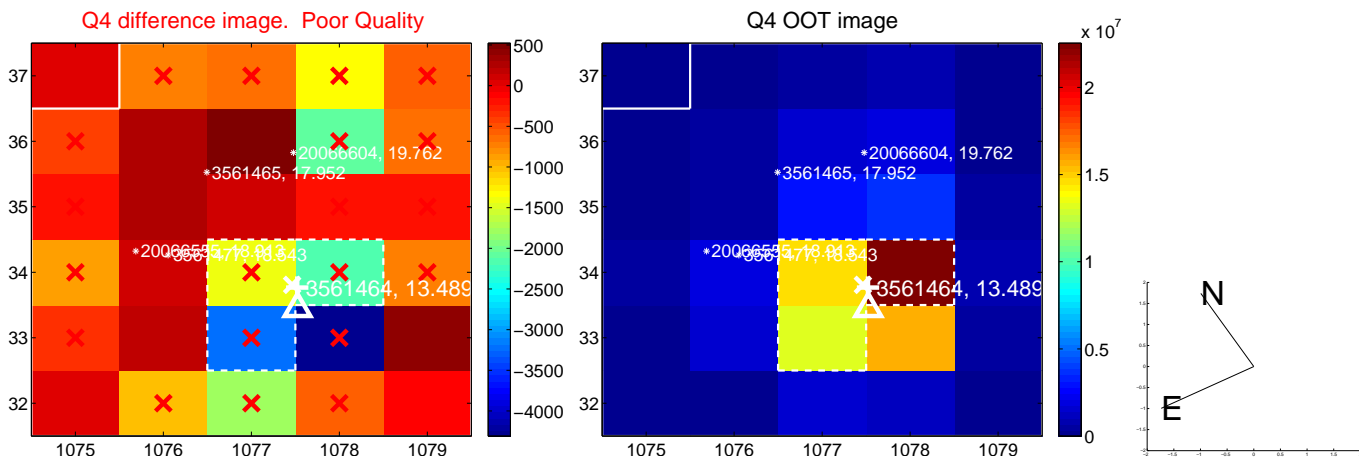
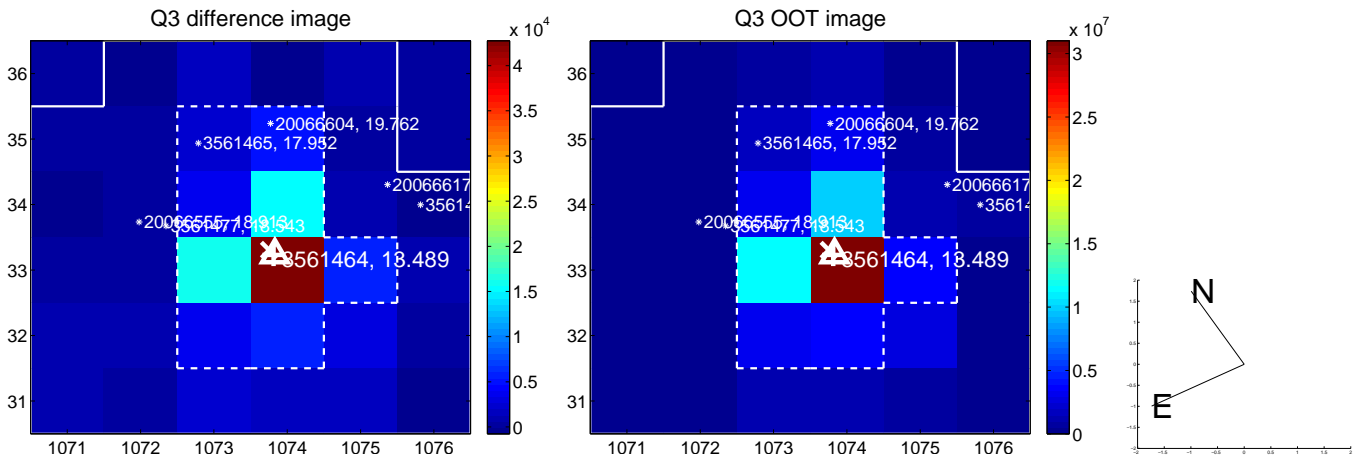
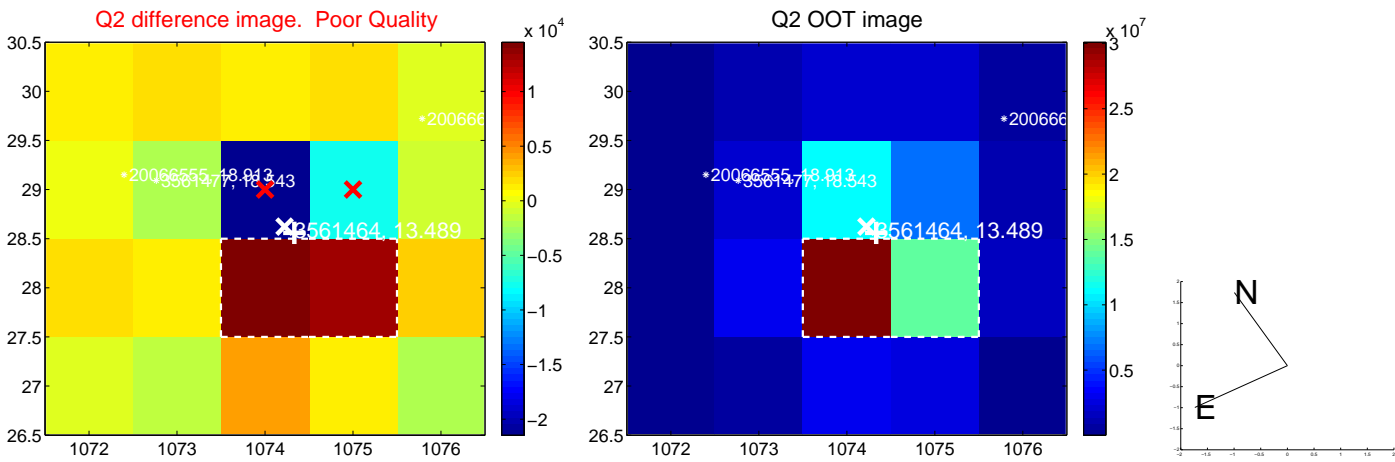
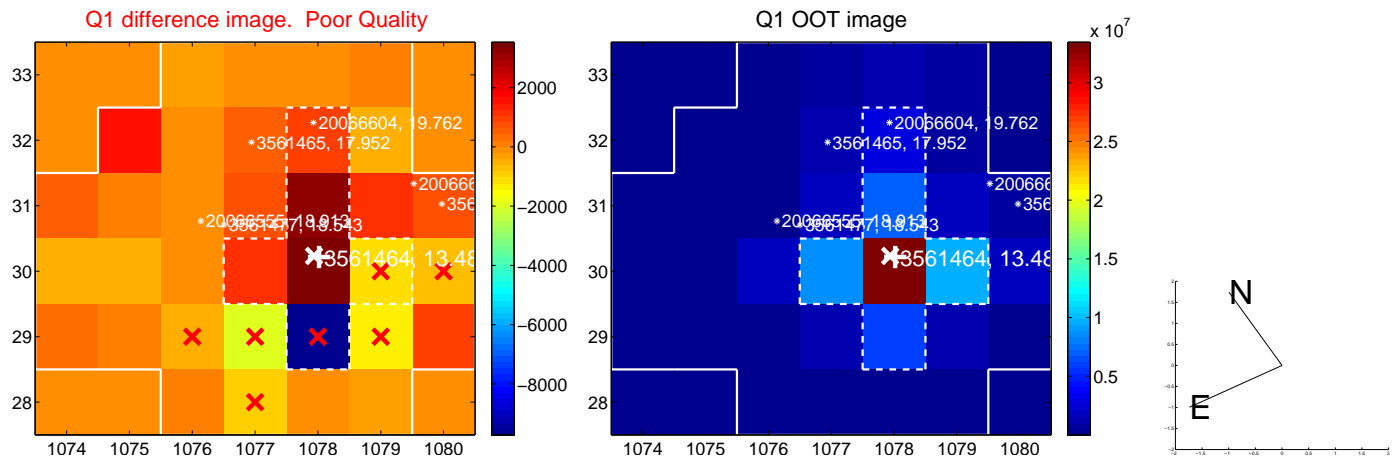
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.270 ± 0.217	1.24	-0.103 ± 0.177	0.249 ± 0.184
PRF-fit source offset from KIC position	0.236 ± 0.151	1.56	-0.199 ± 0.160	-0.126 ± 0.128
photometric centroid source offset	0.54 ± 0.31	1.77	-0.09 ± 0.30	-0.53 ± 0.31

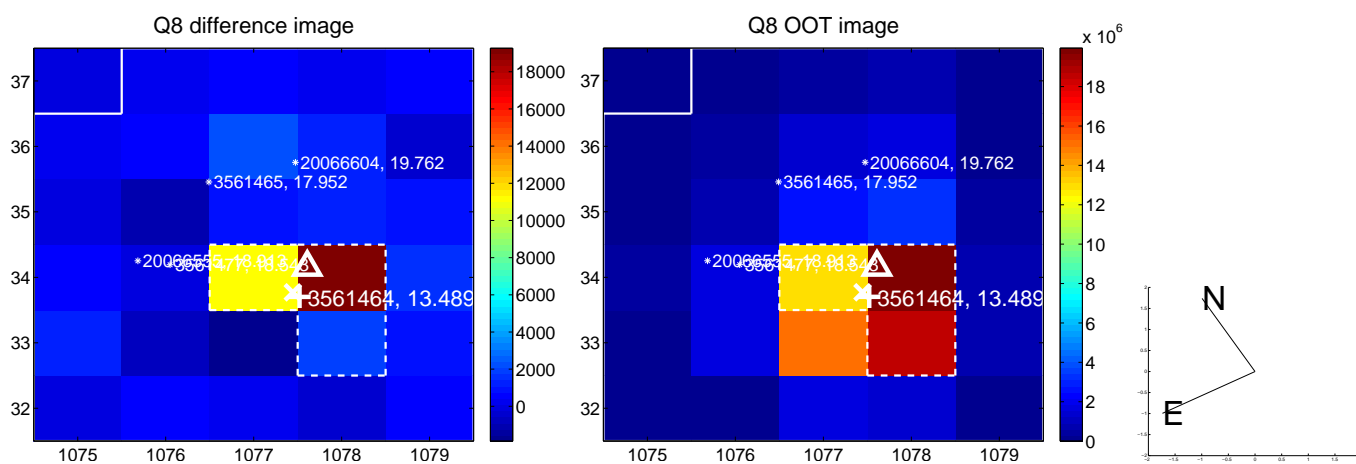
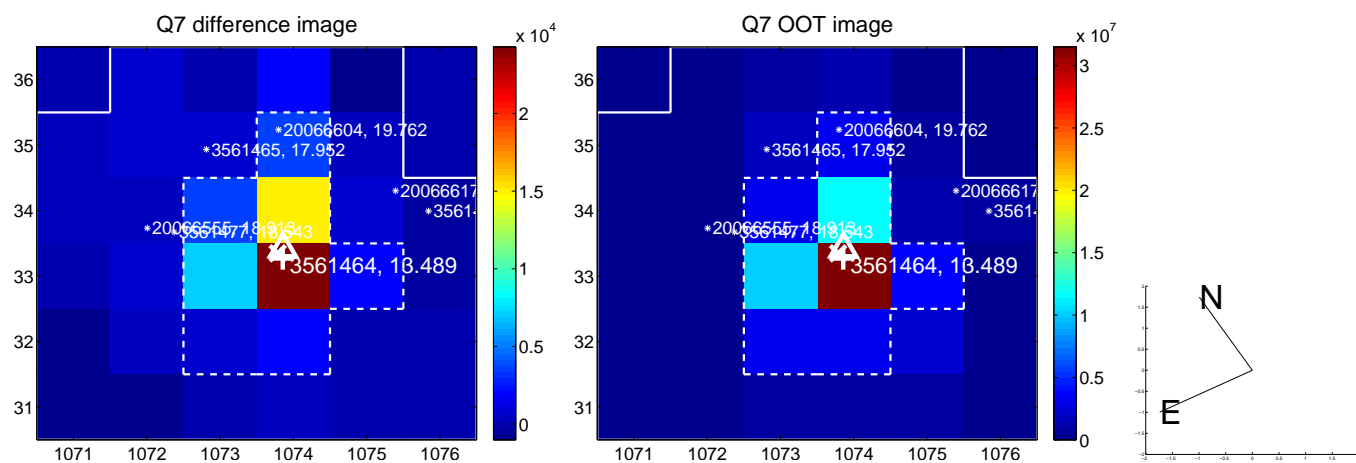
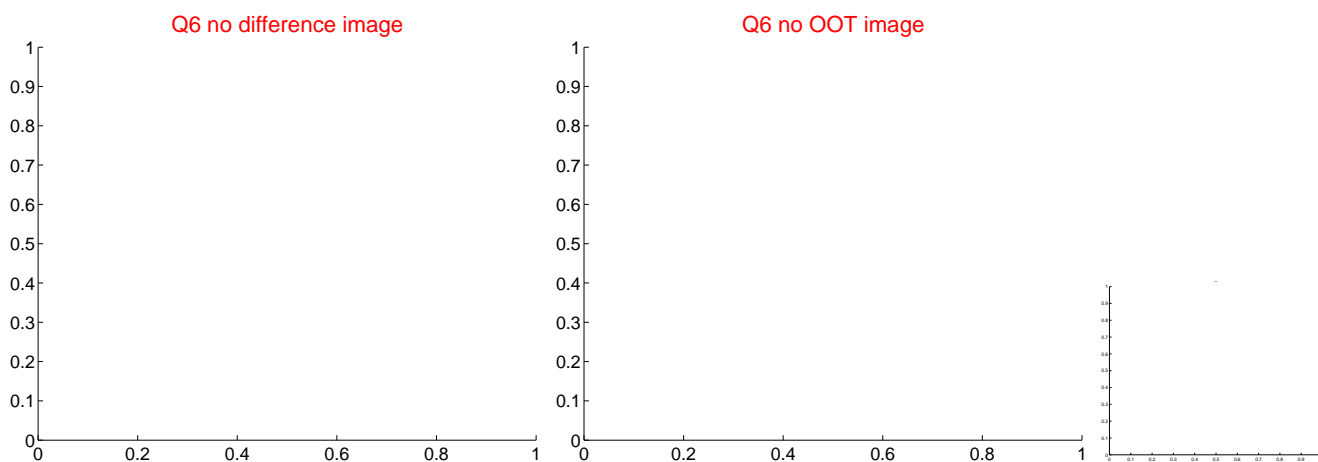
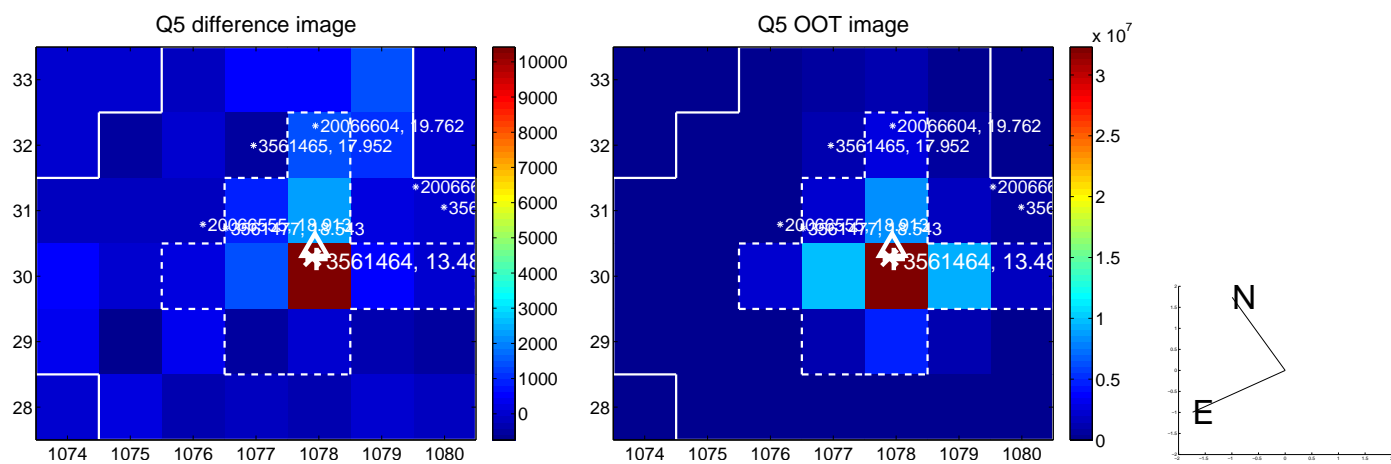


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

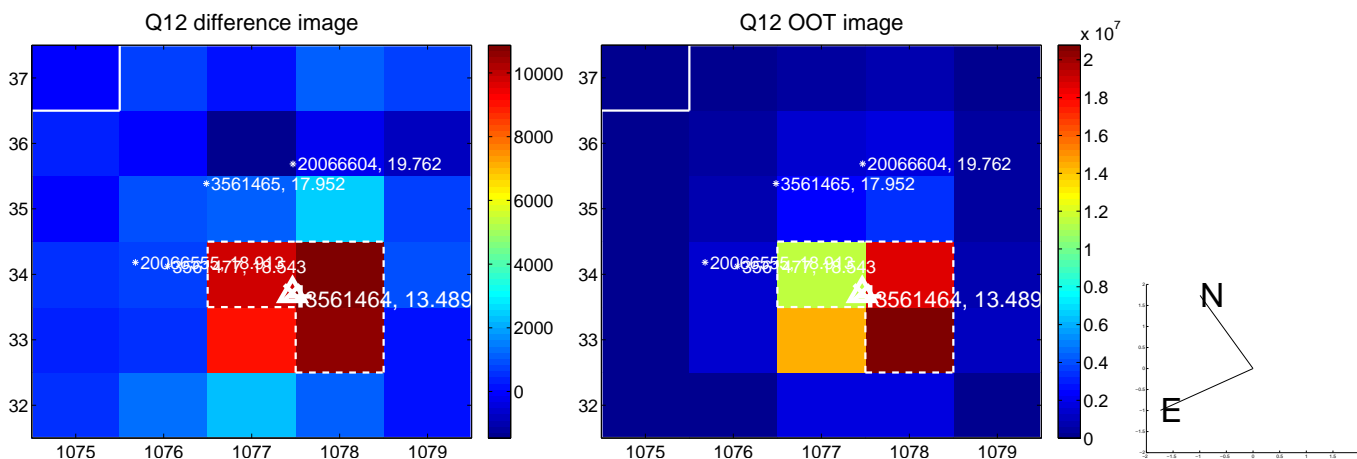
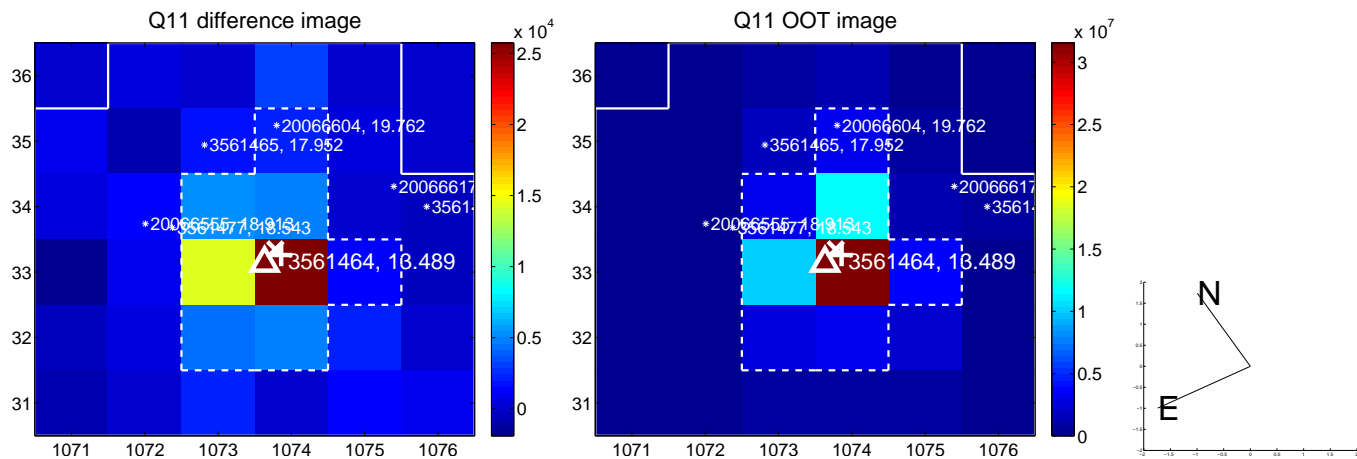
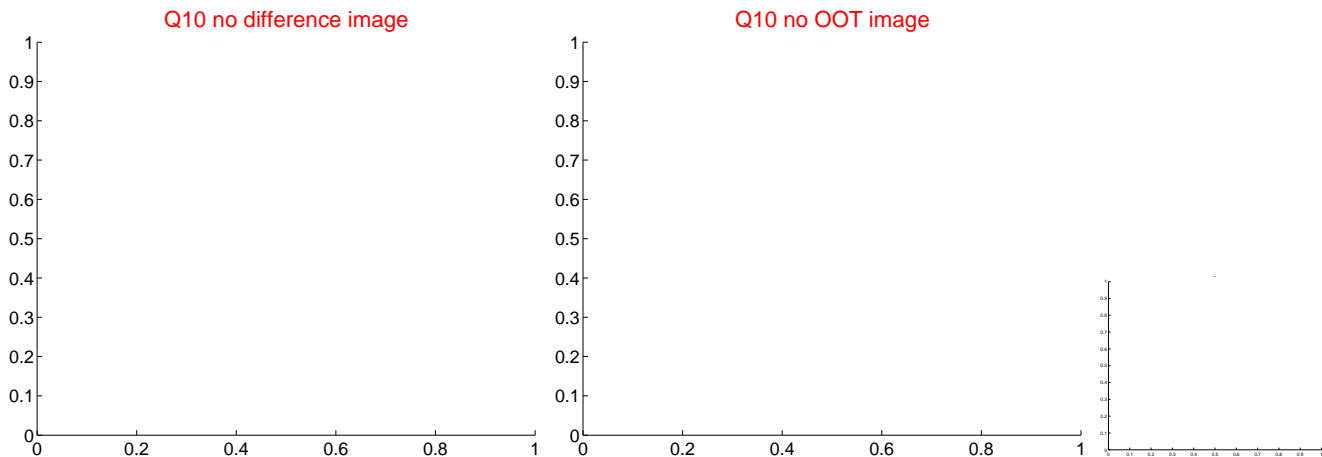
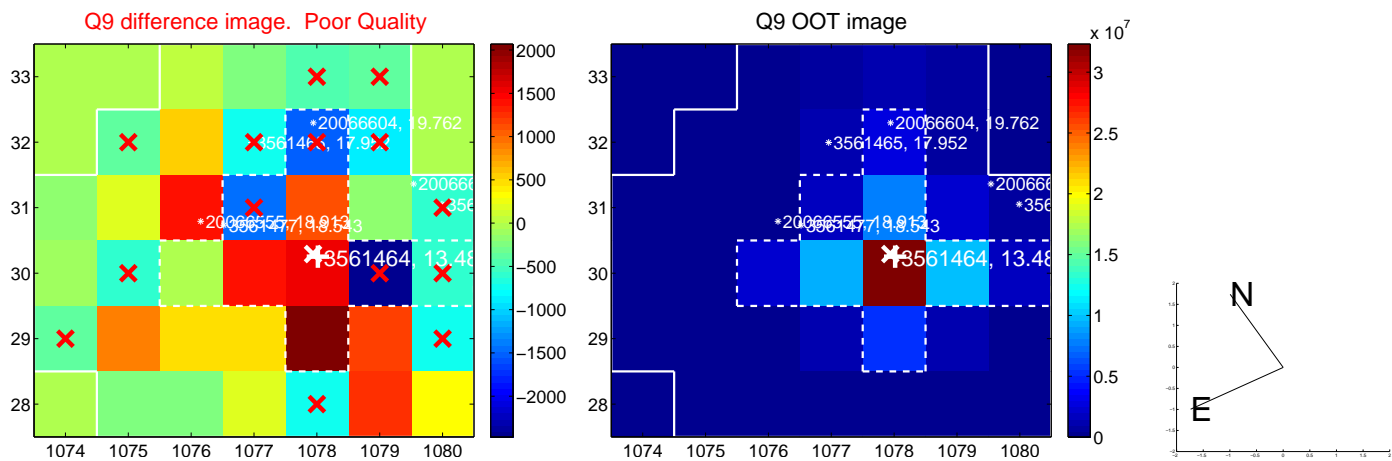
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



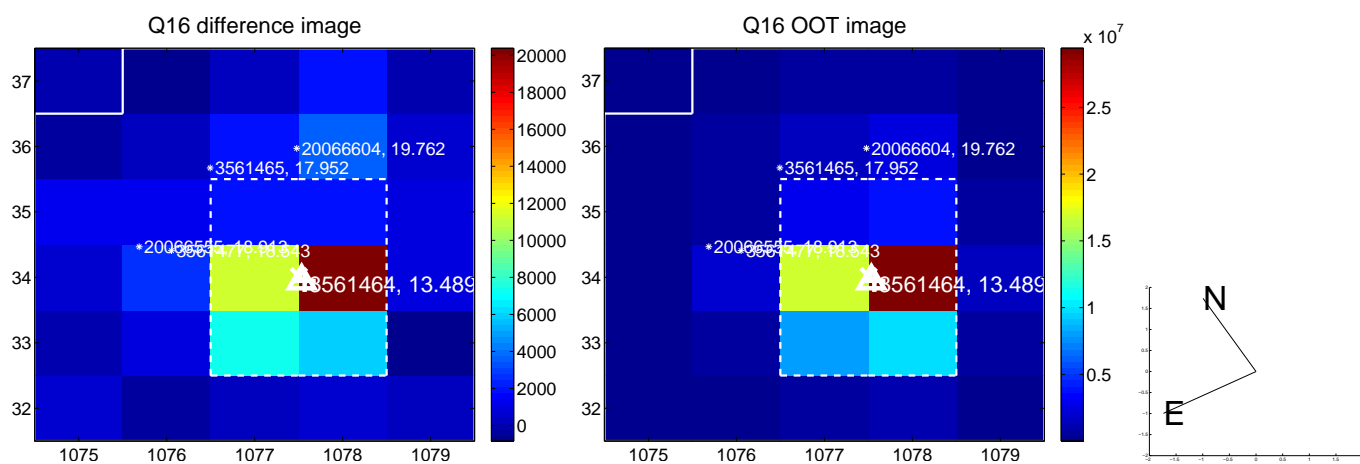
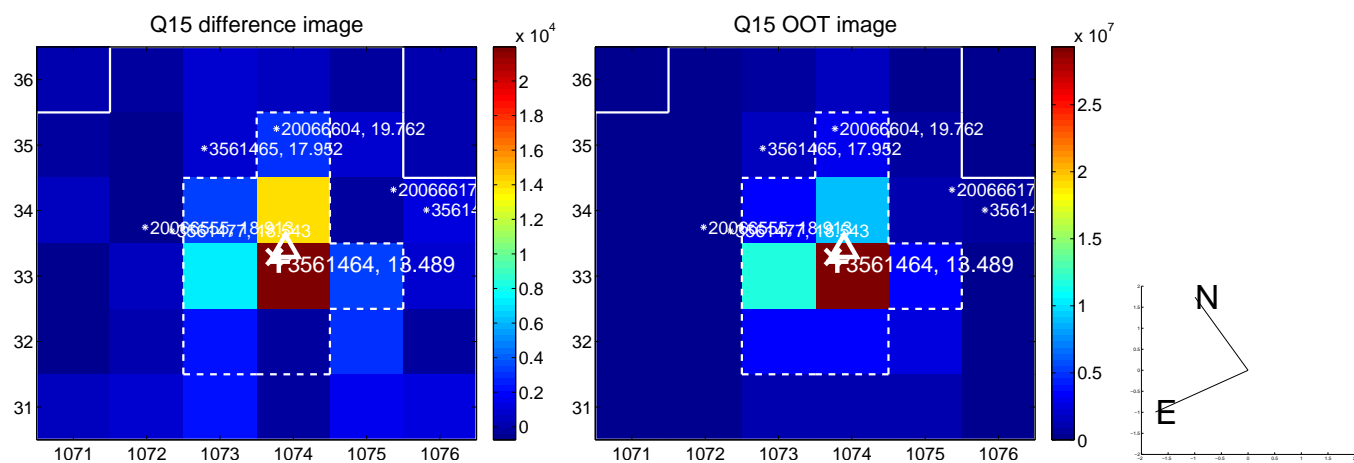
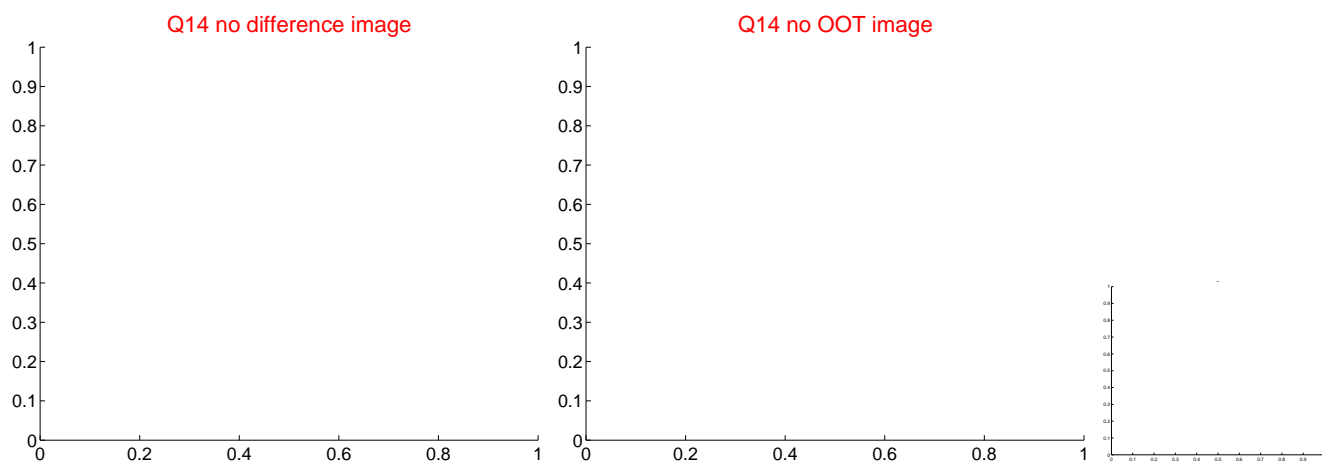
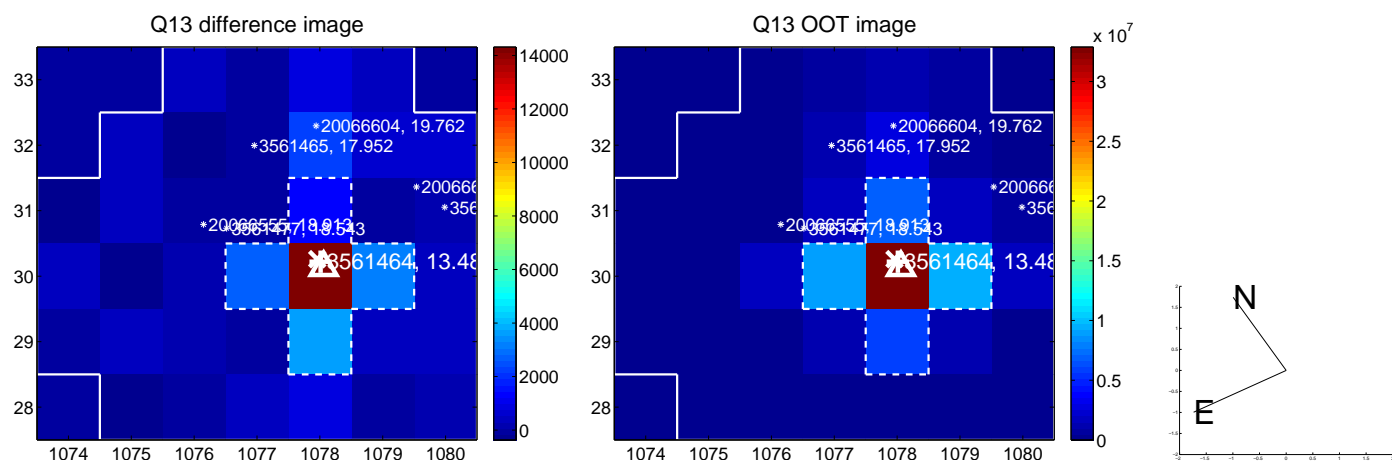
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



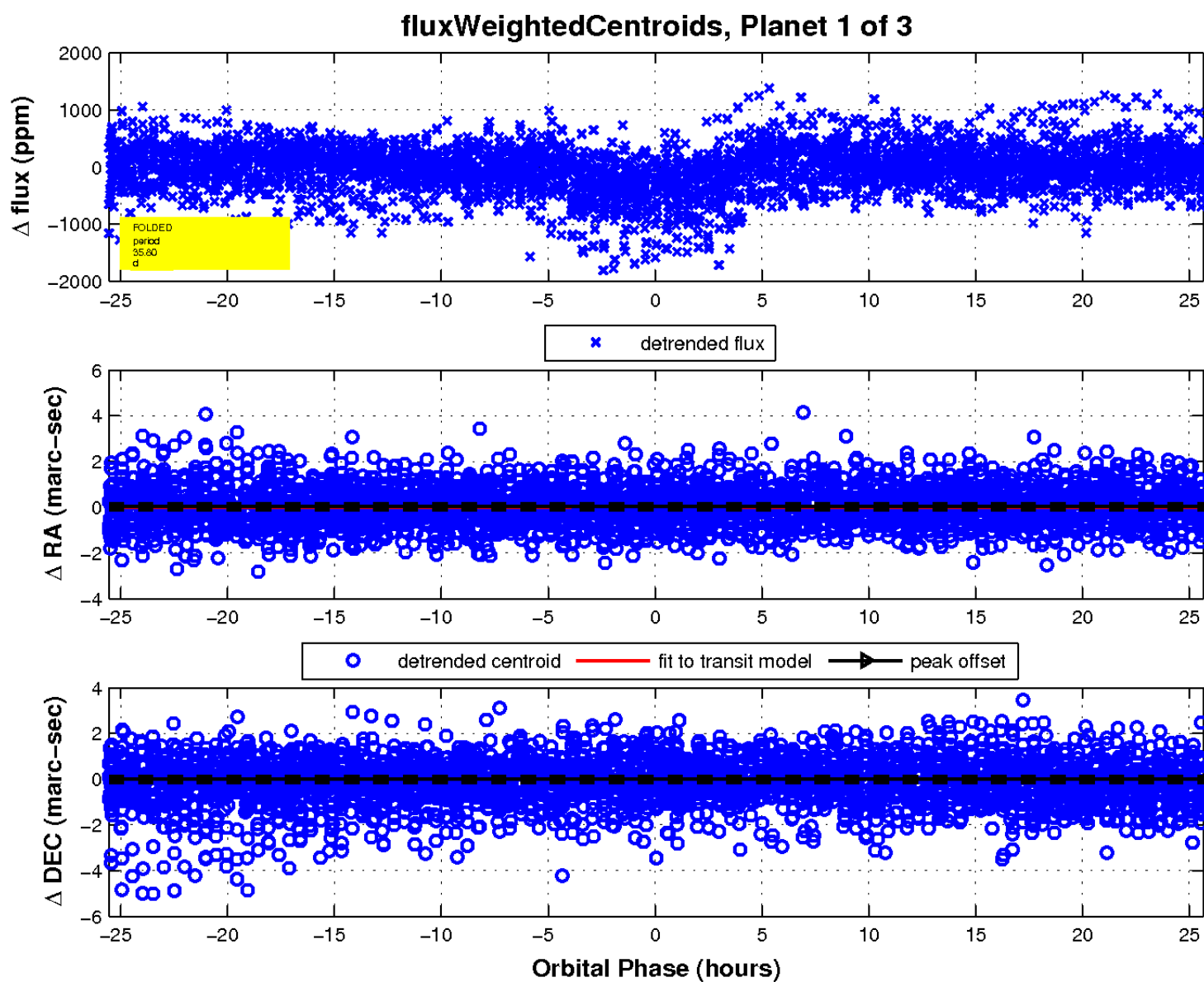
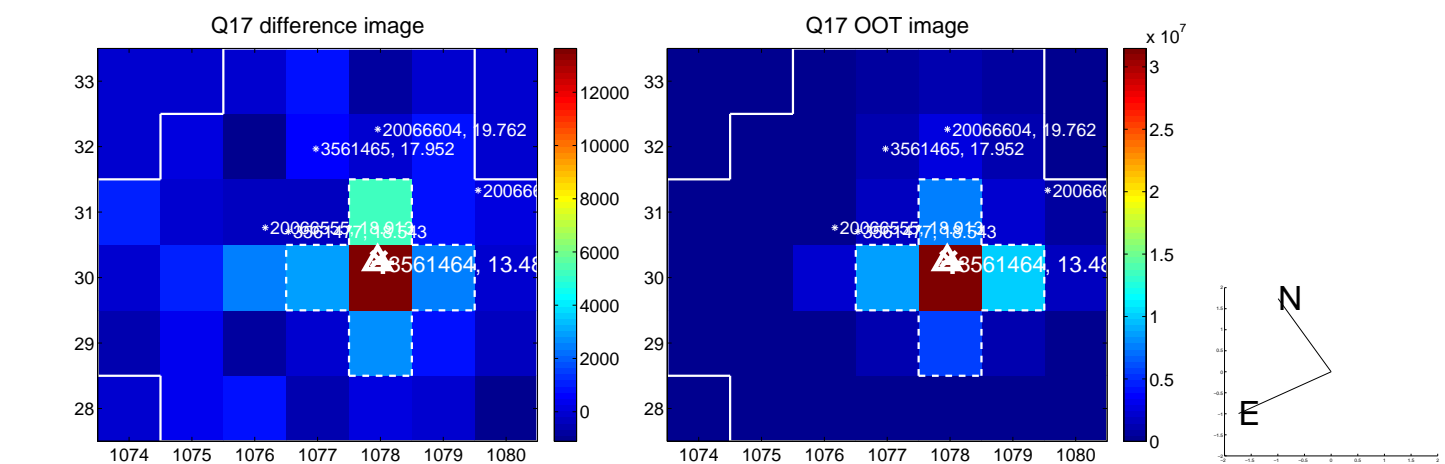
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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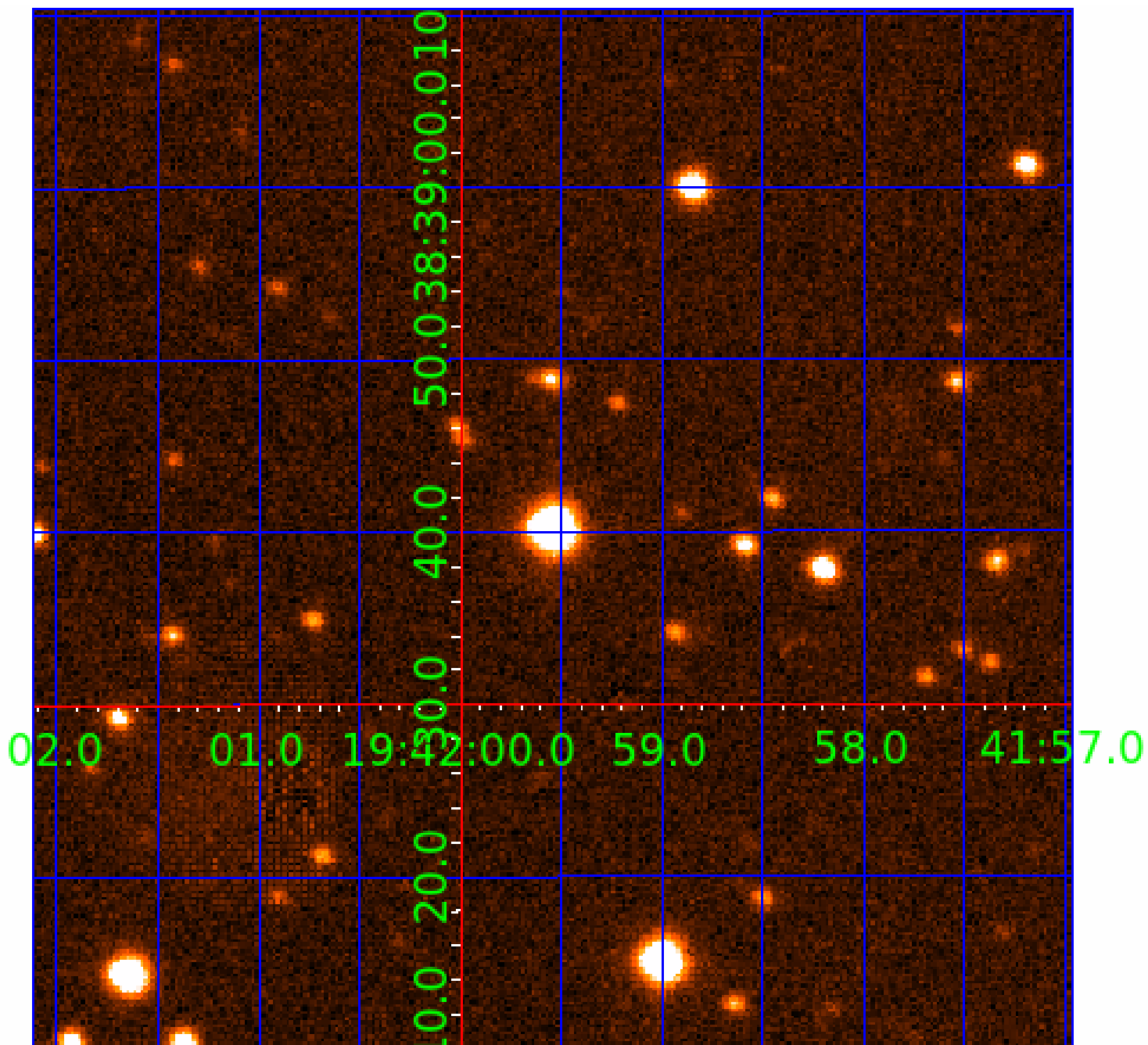


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003561464

Q1-17 DR25 TCE Parameters

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Robovetter Results

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003561464-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
003561464-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

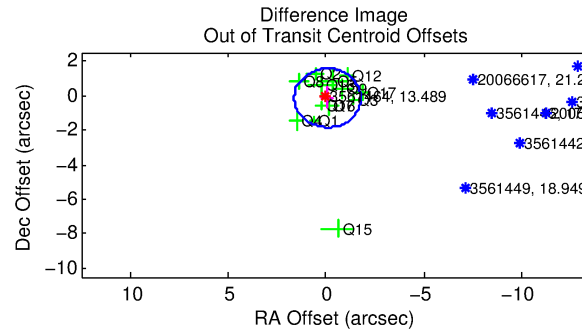
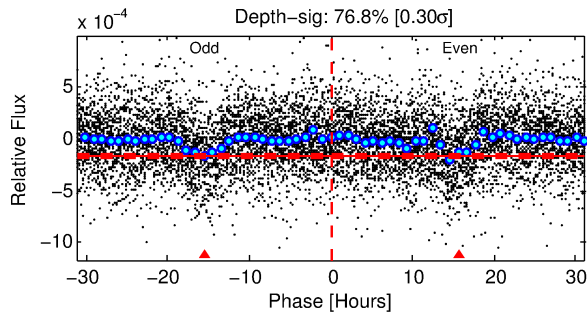
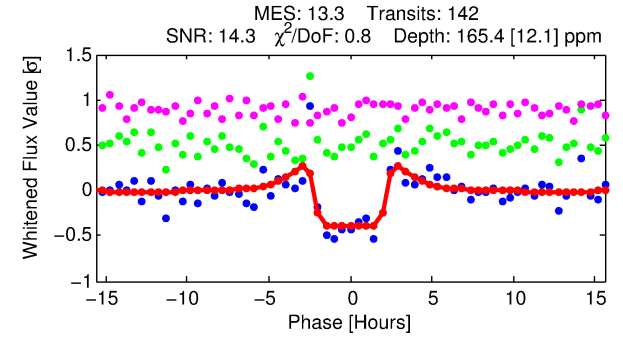
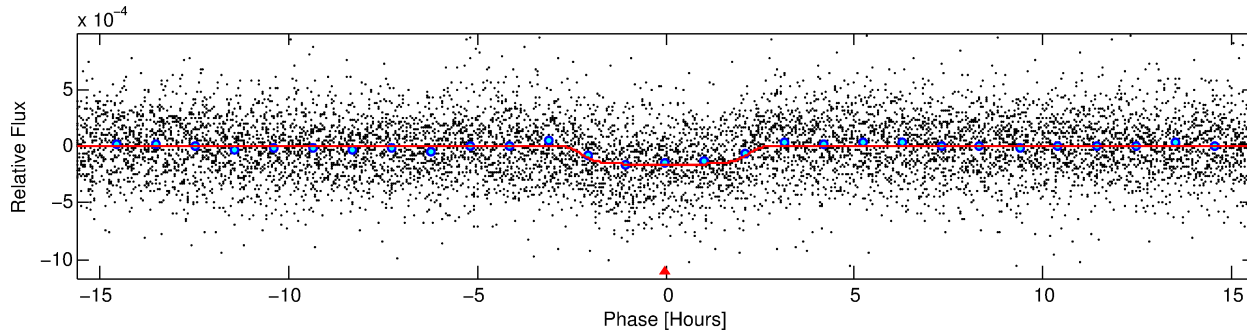
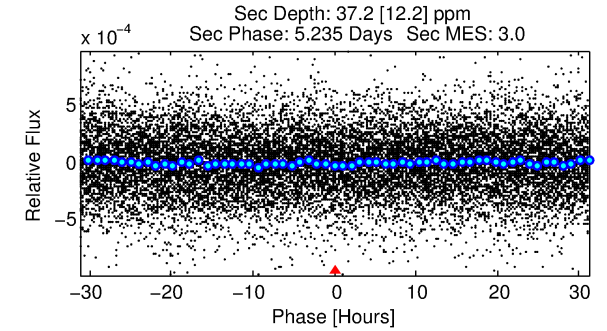
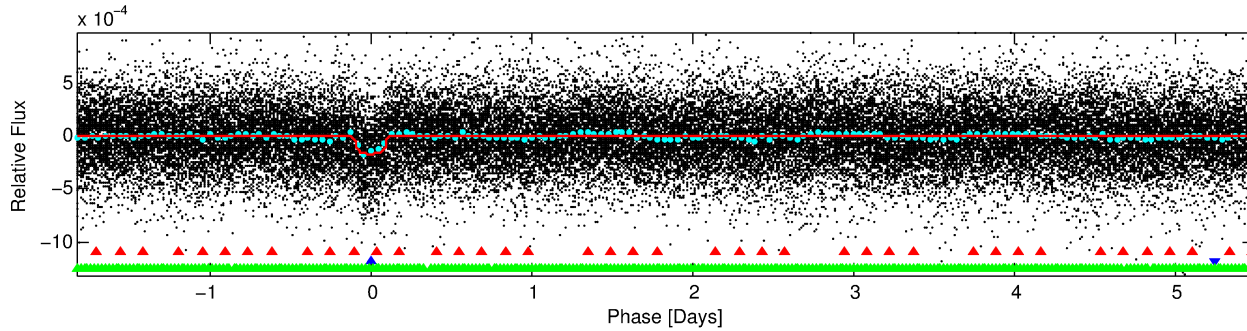
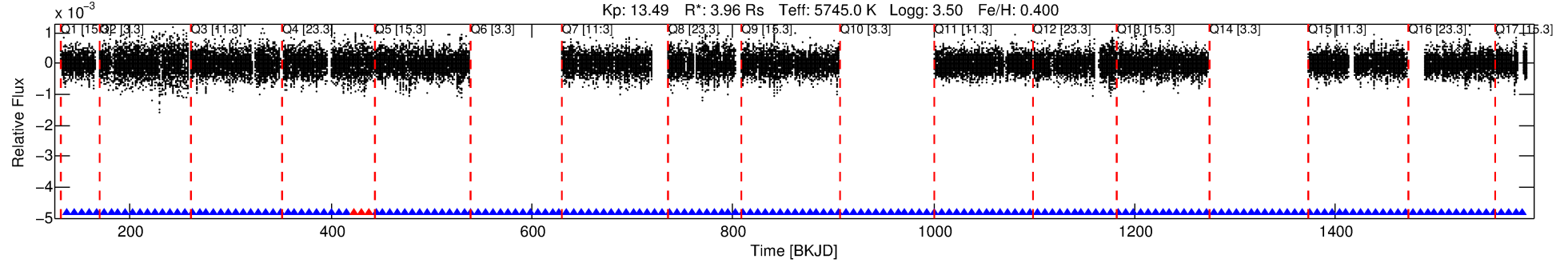
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561464-02

No Significant Match Found

DV One-Page Summary

KIC: 3561464 Candidate: 2 of 3 Period: 7.319 d
KOI: K03398.01 Corr: 0.953



DV Fit Results:

Period = 7.31937 [0.00004] d
Epoch = 137.2356 [0.0042] BKJD
Rp/R* = 0.0151 [0.0010]
a/R* = 3.90 [0.85]
b = 0.95 [0.02]
Seff = 1894.61 [879.42]
Teq = 1682 [195] K
Rp = 6.53 [2.31] Re
a = 0.0898 [0.0274] AU
Ag = 3.87 [2.24] [1.28σ]
Teffp = 3648 [326] K [5.18σ]

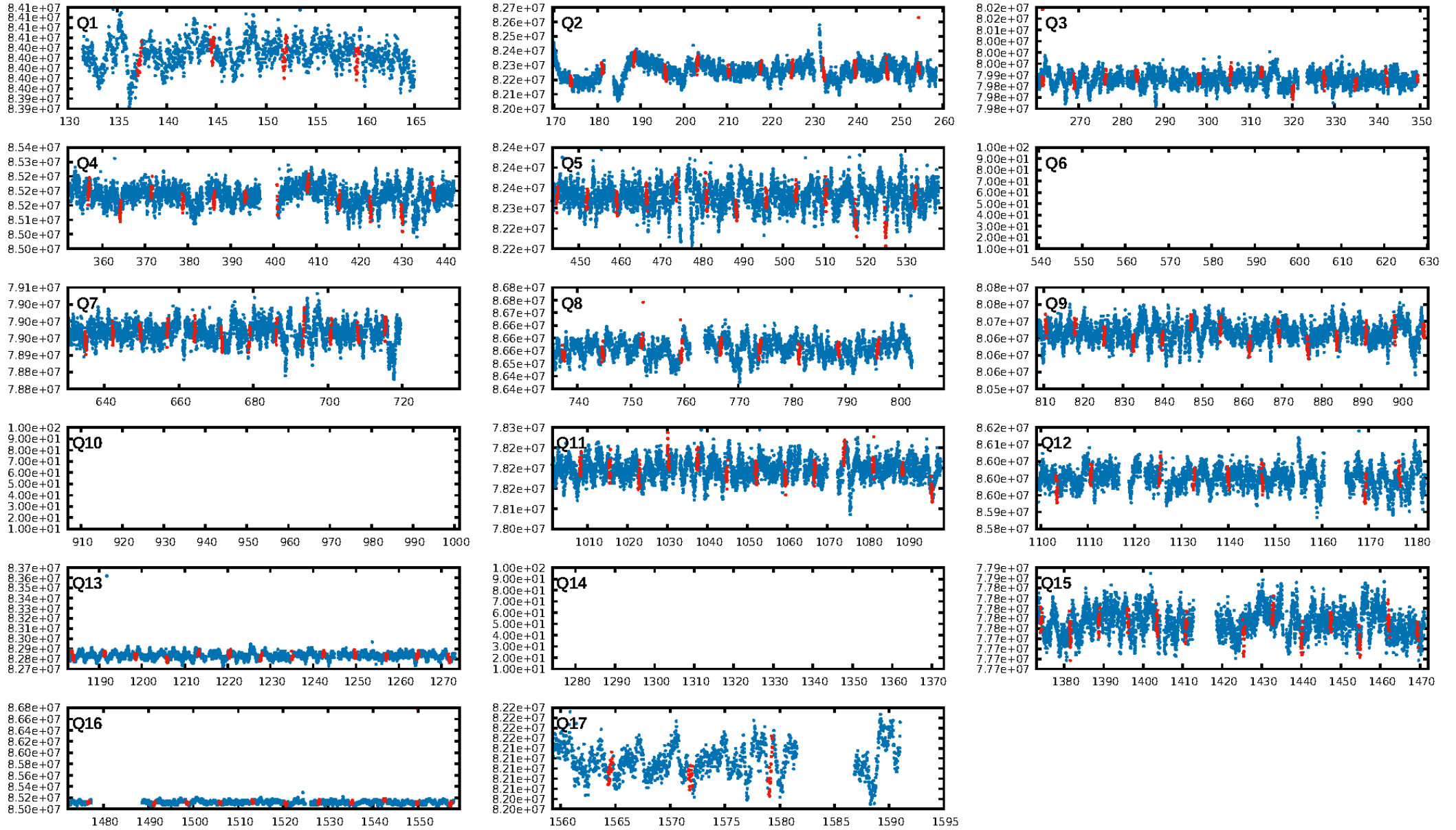
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.84σ]
LongPeriod-sig: 100.0% [68.25σ]
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.45e-37
RollingBand-fgt: 0.98 [133/136]
GhostDiagnostic-chr: 2.597
Centroid-sig: 27.9%
Centroid-so: 0.379 arcsec [0.79σ]
OotOffset-rm: 0.164 arcsec [0.29σ]
KicOffset-rm: 0.606 arcsec [1.03σ]
OotOffset-st: 1/3/4/5 [13]
KicOffset-st: 1/3/4/5 [13]
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DiffImageOverlap-fno: 1.00 [14/14]

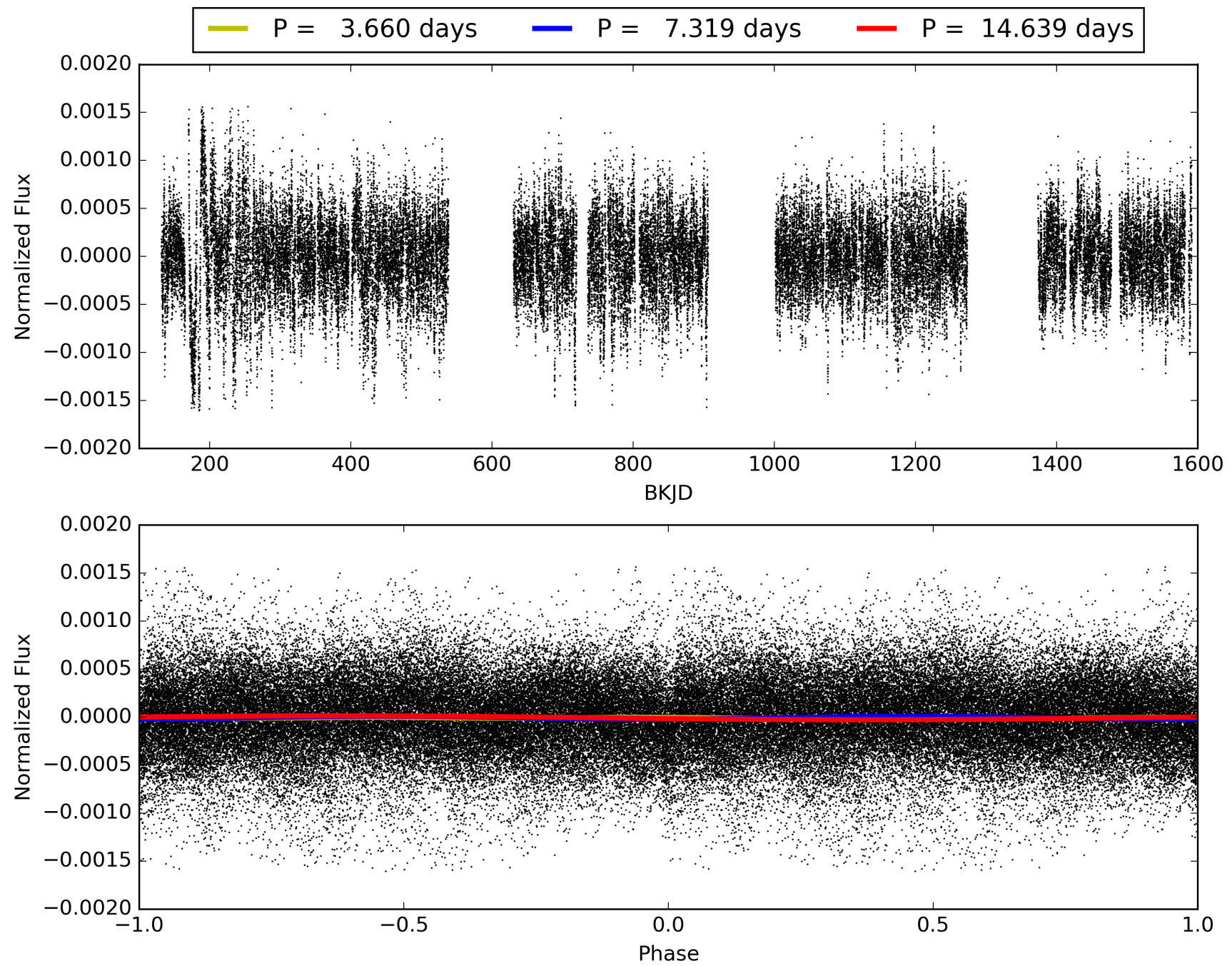
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:53:29 Z

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

TCE 003561464-02, PDC Light Curves

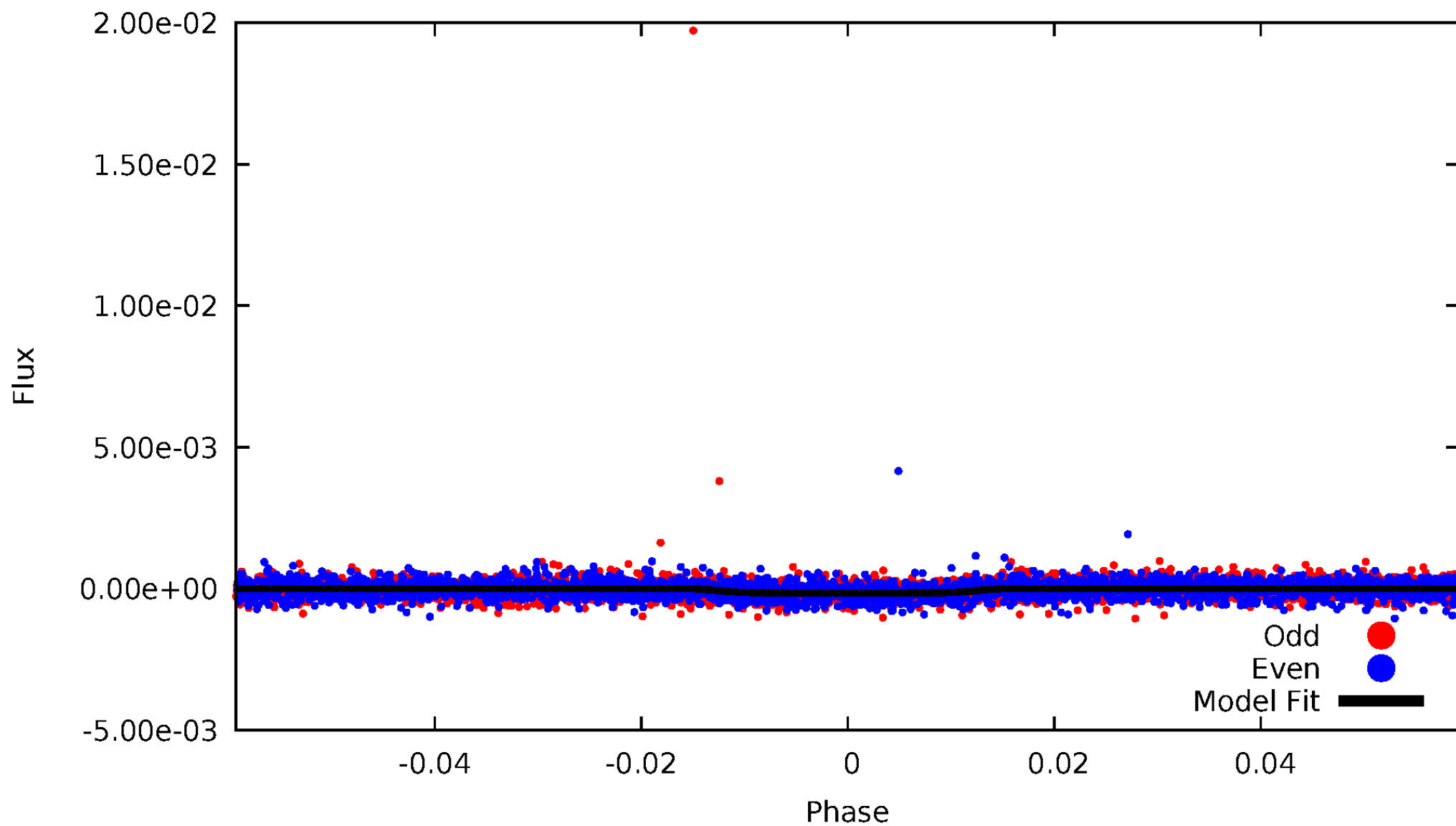


TCE 003561464-02



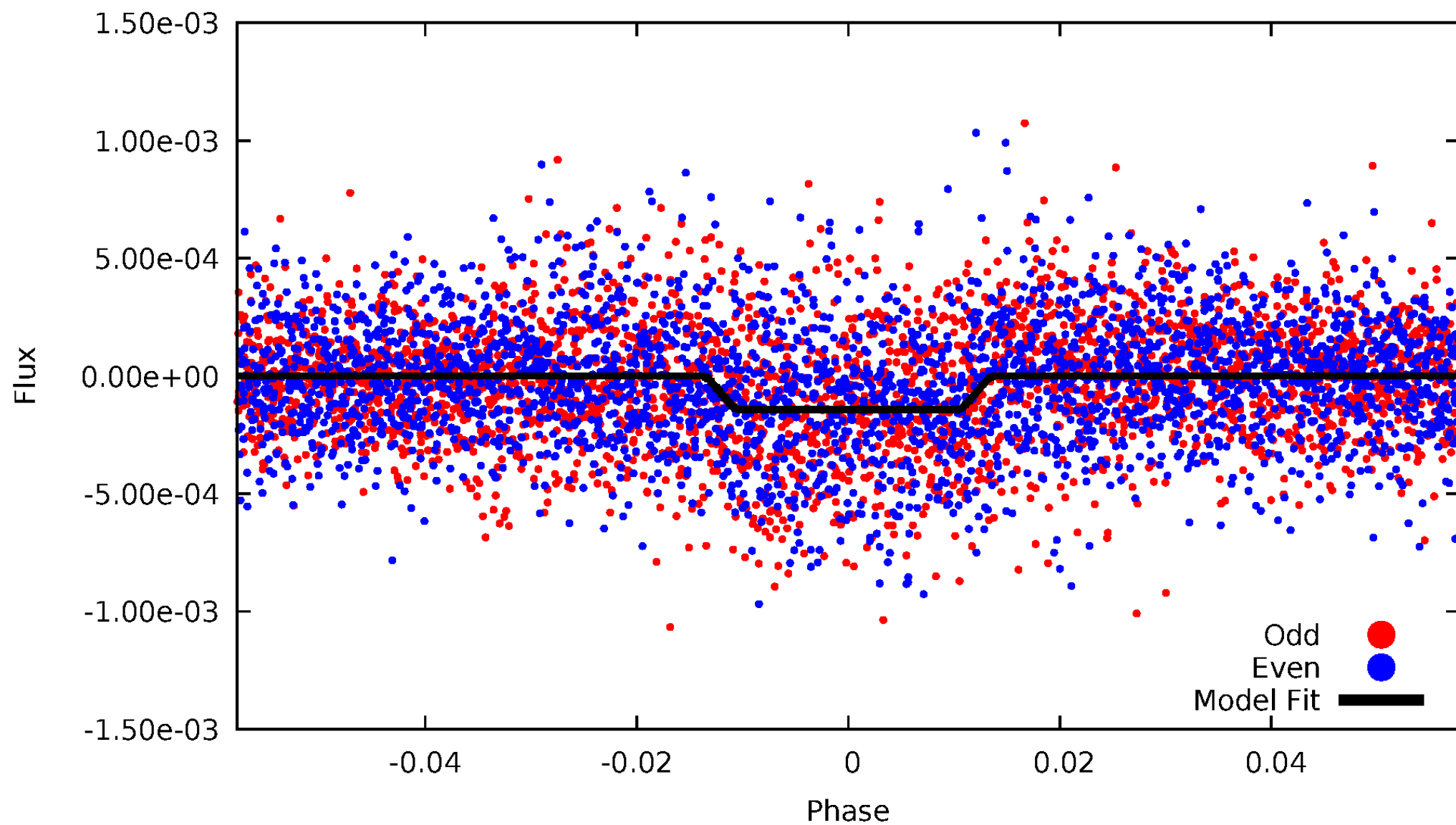
DV Odd/Even

TCE 003561464-02



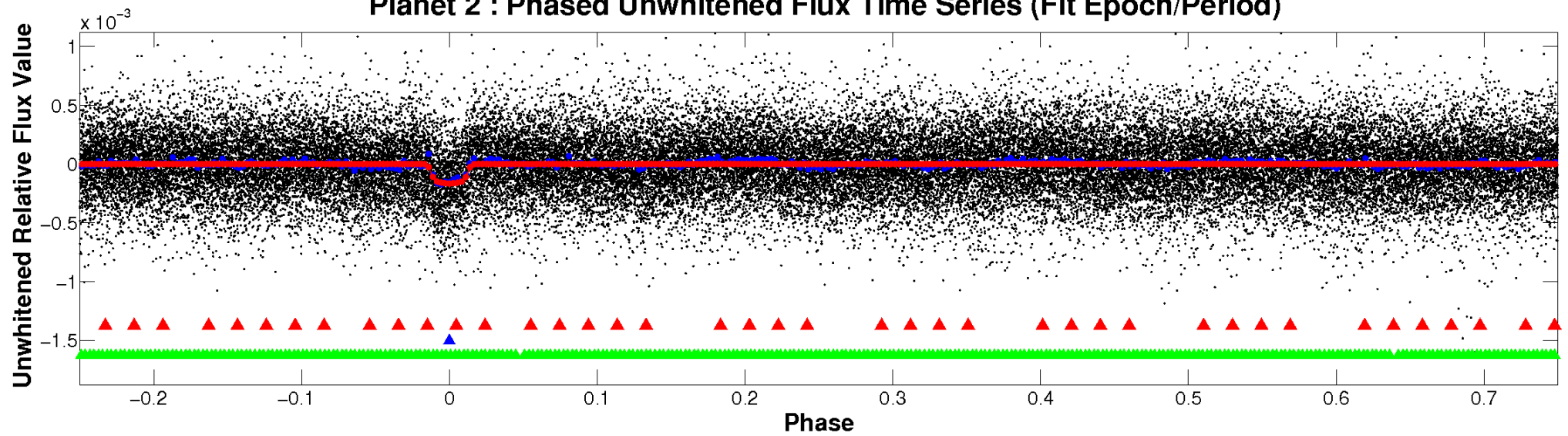
ALT Odd/Even

TCE 003561464-02

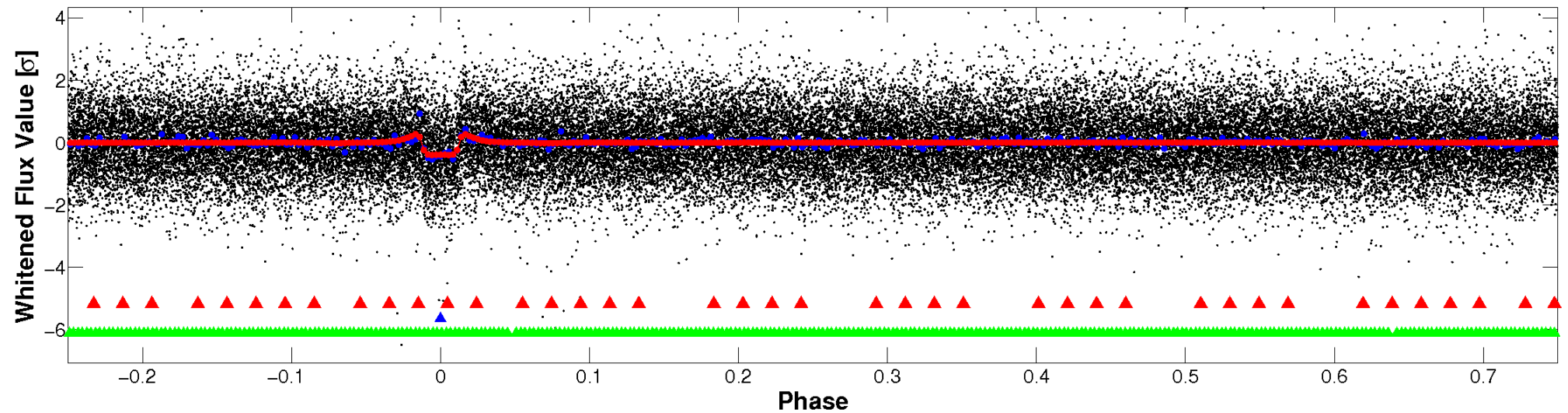


Non-Whitened Vs. Whitened Light Curve

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

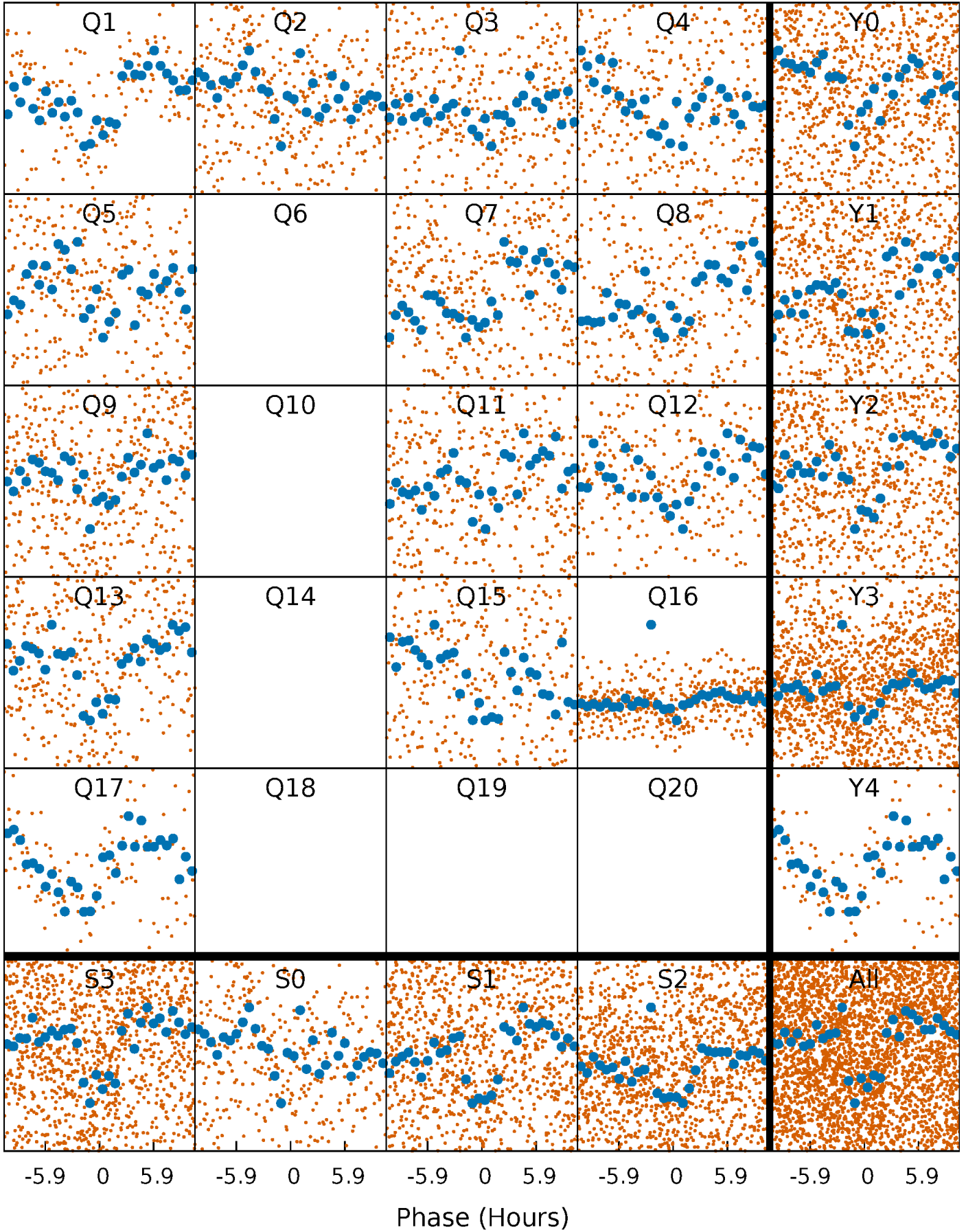


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



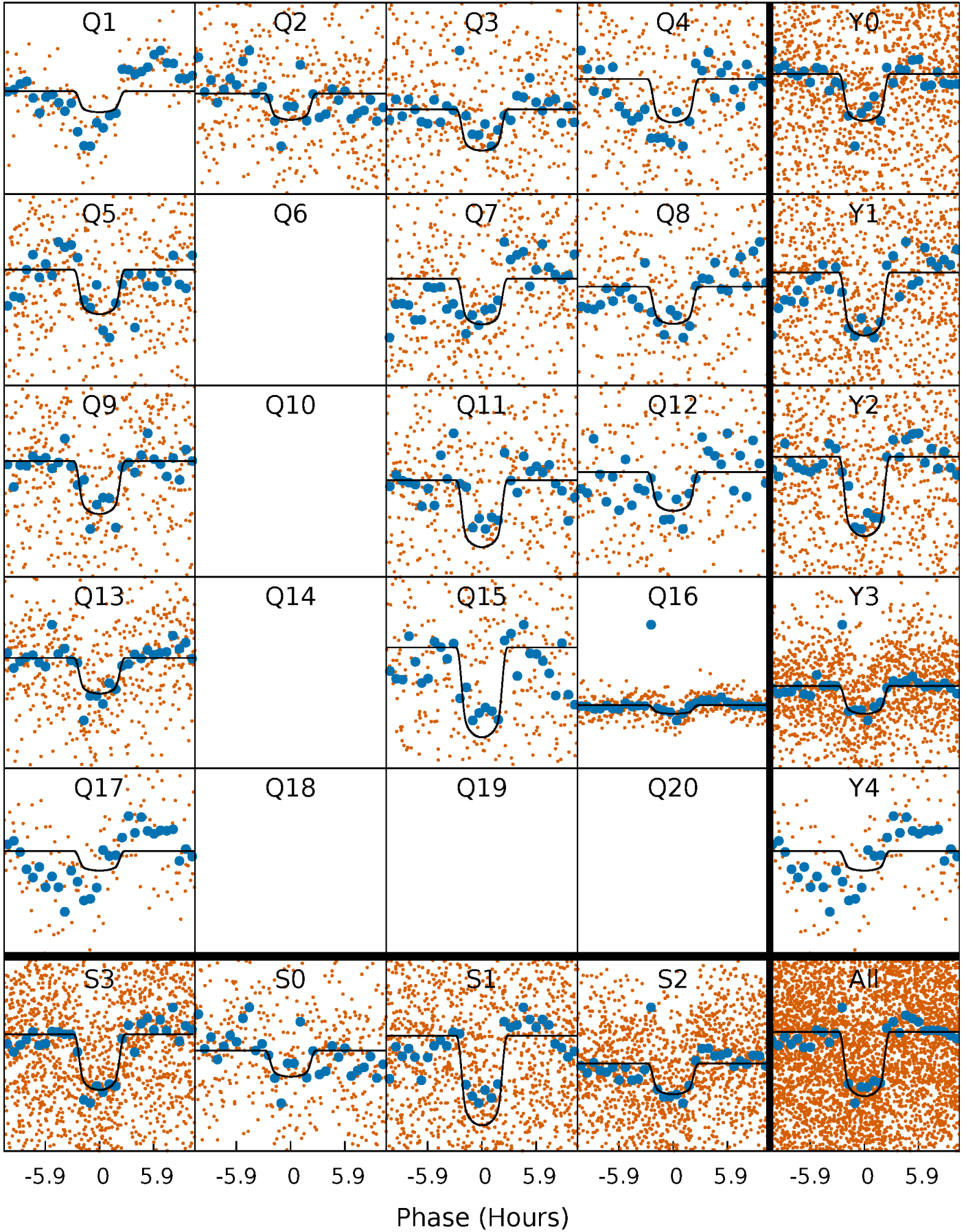
PDC Quarter-Phased Transit Curves

TCE 003561464-02 P= 7.319370 Days $T_0=137.235565$ (BKJD)



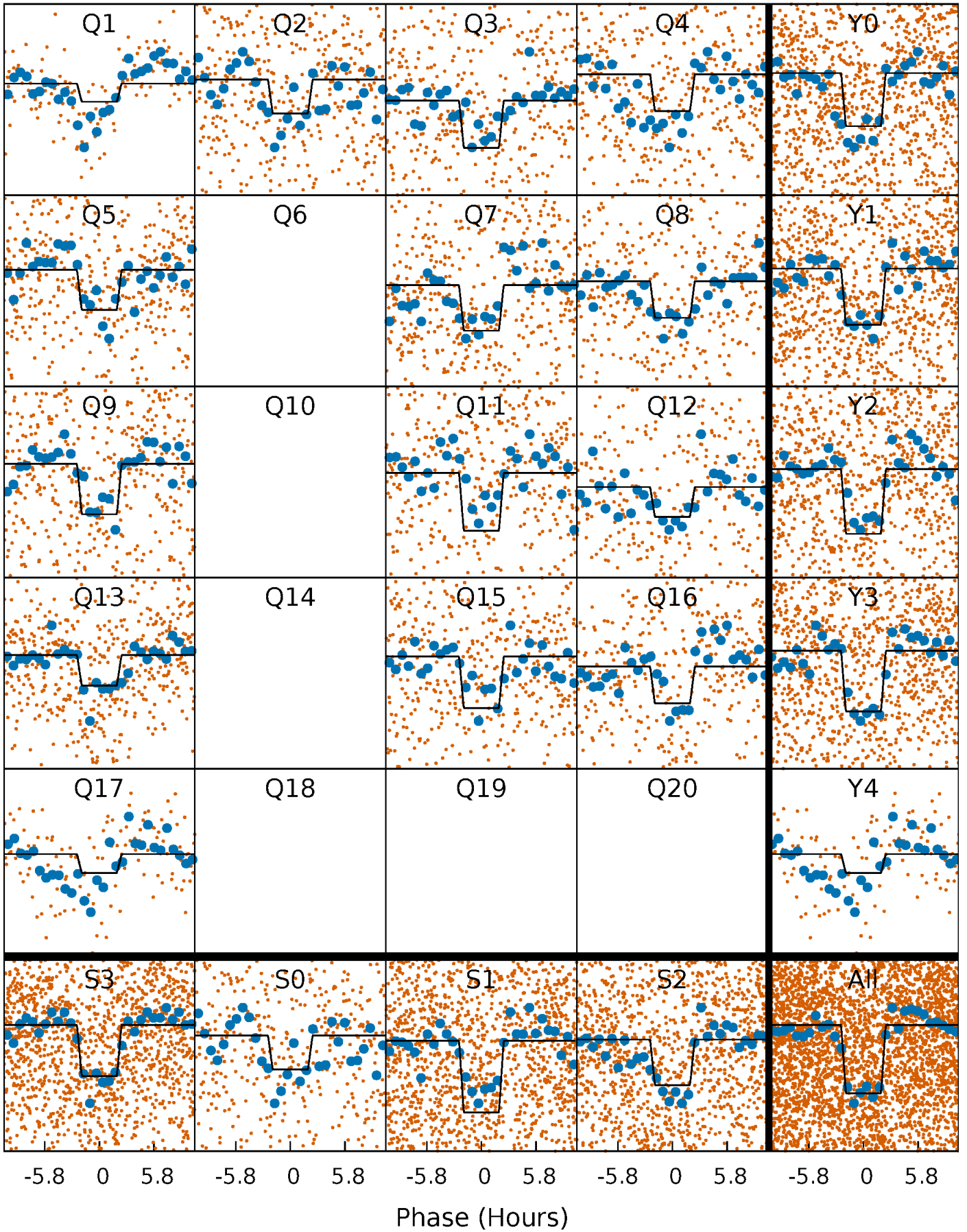
DV Quarter-Phased Transit Curves

TCE 003561464-02 P= 7.319370 Days $T_0=137.235565$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

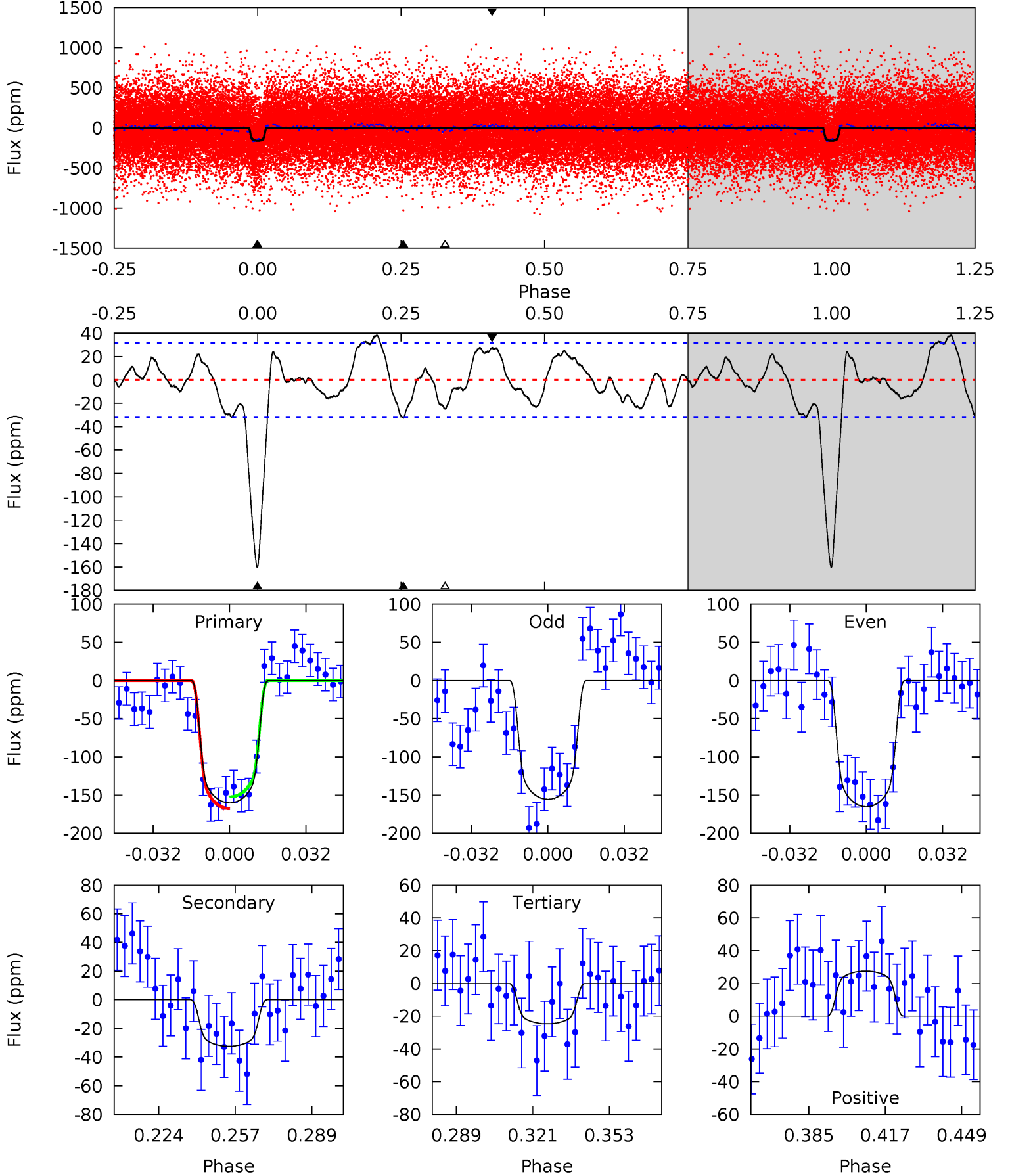
TCE 003561464-02 P= 7.319277 Days $T_0=137.241247$ (BKJD)



DV Model-Shift Uniqueness Test

003561464-02, P = 7.319370 Days, E = 129.916195 Days

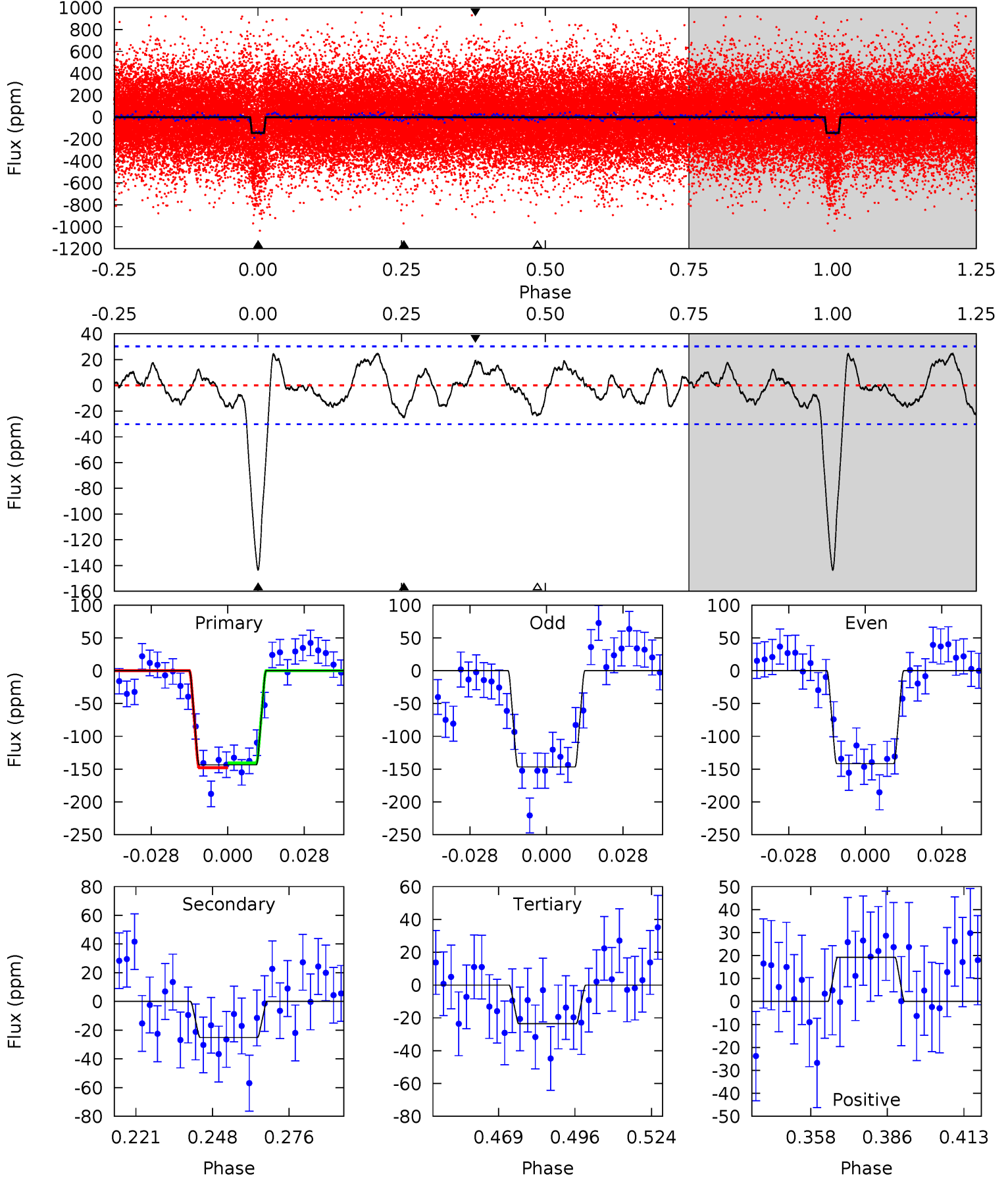
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	4.91	3.73	4.16	4.80	2.14	2.37	20.5	20.0	1.18	0.75	0.74	0.88	0.19	1.17



Alt Model-Shift Uniqueness Test

003561464-02, P = 7.319277 Days, E = 129.921970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	4.01	3.77	3.08	4.83	2.20	1.69	19.2	19.9	0.24	0.93	0.40	0.93	0.15	0.58



Stellar Parameters For KIC 003561464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5745^{+86}_{-77}	$3.499^{+0.259}_{-0.129}$	$0.400^{+0.050}_{-0.150}$	$3.955^{+0.688}_{-1.376}$	$1.801^{+0.193}_{-0.359}$	$0.041^{+0.073}_{-0.014}$
	+1%/-1%	+7%/-4%	+12%/-37%	+17%/-35%	+11%/-20%	+178%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003561464-02 / KOI 3398.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-32 ± 7	$6.38^{+0.90}_{-1.09}$	2336^{+130}_{-183}	3823^{+162}_{-188}	$3.519^{+1.738}_{-1.045}$
Alt.	-25 ± 6	$5.07^{+0.84}_{-0.98}$	2339^{+130}_{-184}	3964^{+246}_{-224}	$4.296^{+2.105}_{-1.428}$

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

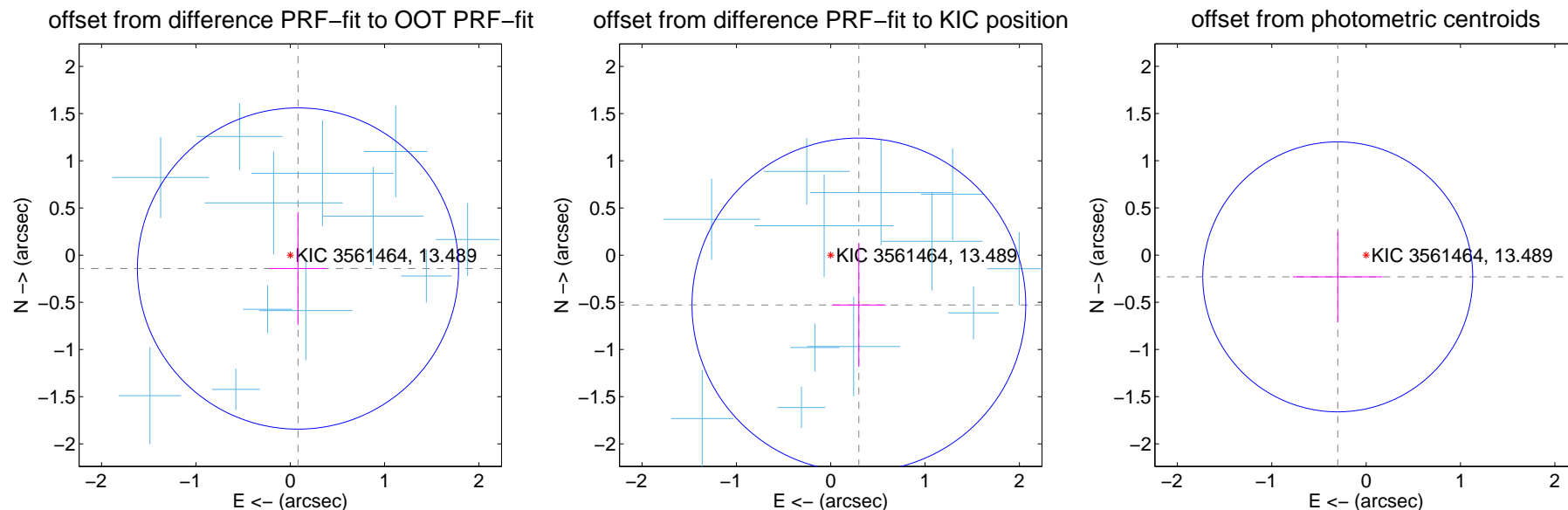
DV Centroid Data

Supplemental centroid analysis for 003561464-02. Kepler magnitude: 13.49. Transit SNR 14.31

There are 12 quarters with good PRF difference image offsets

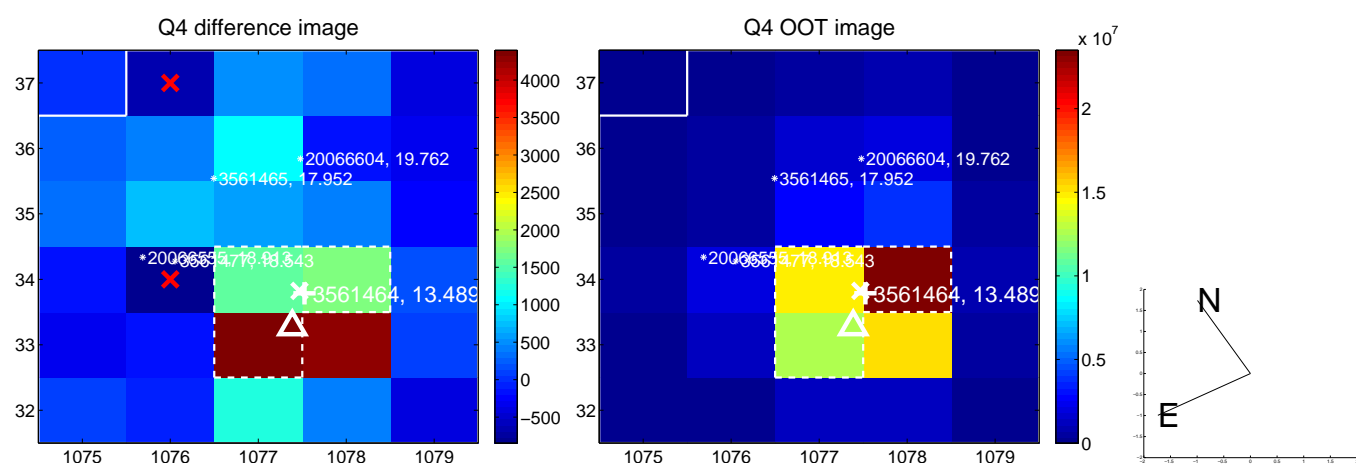
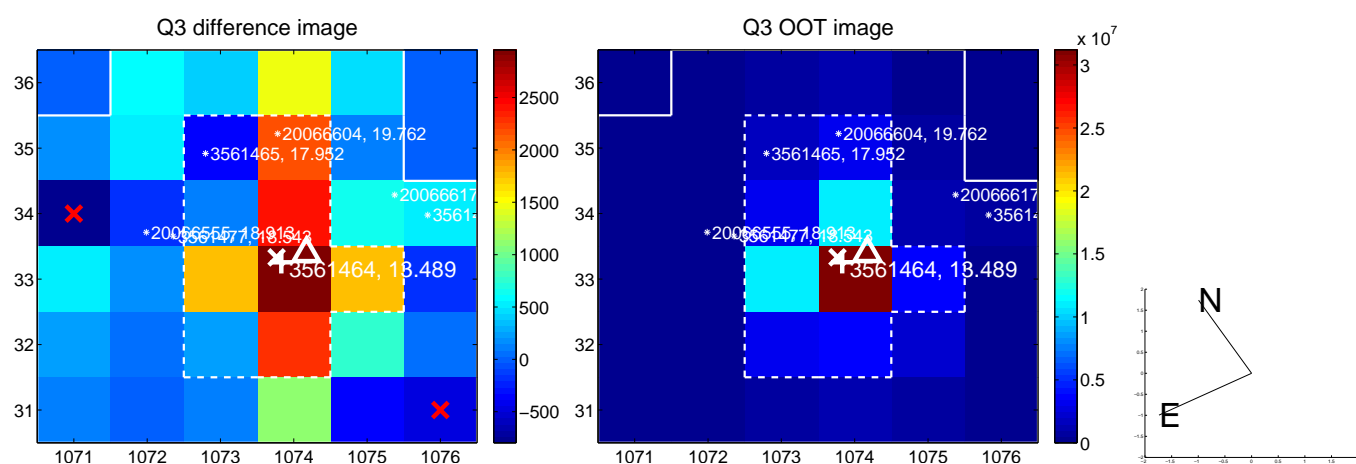
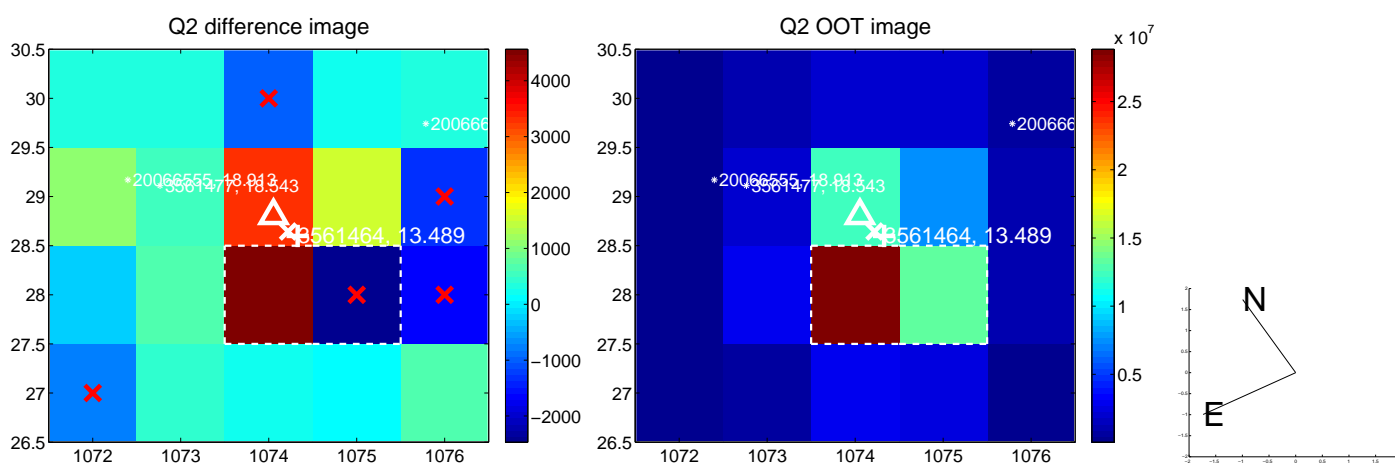
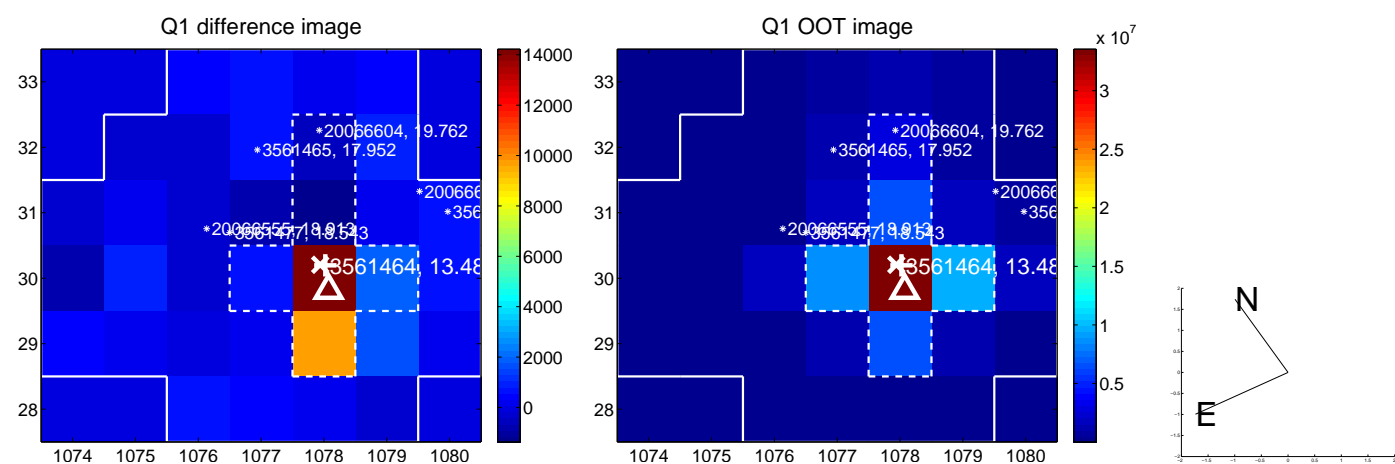
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.164 ± 0.567	0.29	-0.082 ± 0.303	-0.142 ± 0.599
PRF-fit source offset from KIC position	0.606 ± 0.590	1.03	-0.298 ± 0.286	-0.528 ± 0.656
photometric centroid source offset	0.38 ± 0.48	0.79	0.30 ± 0.47	-0.23 ± 0.48

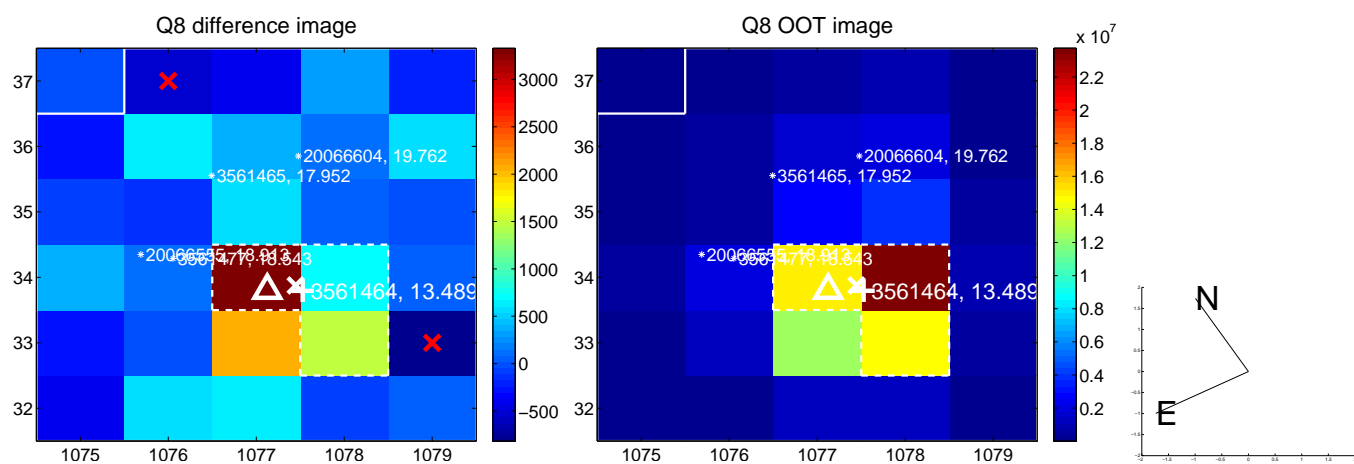
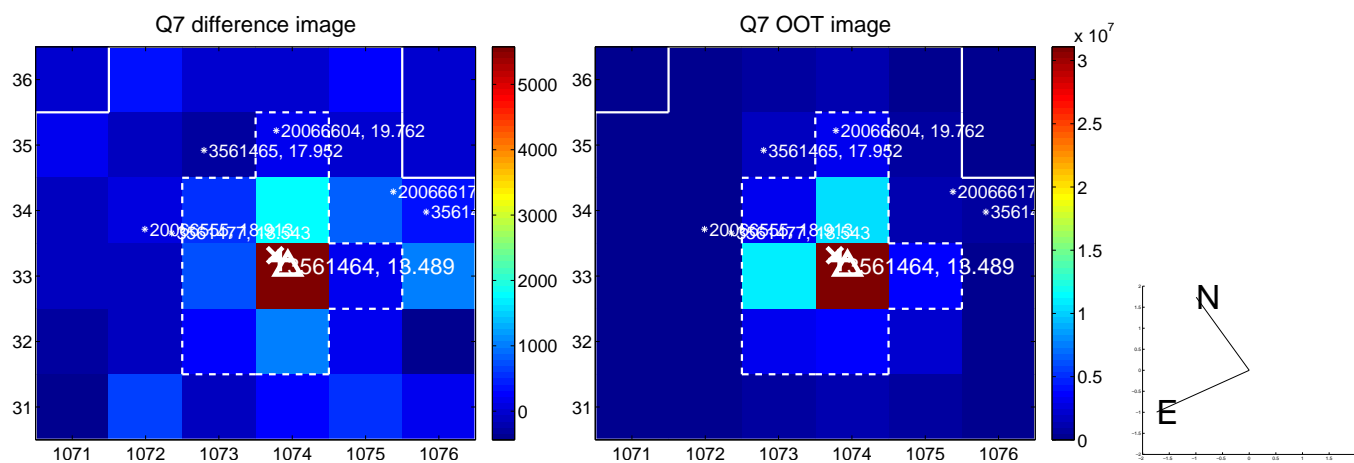
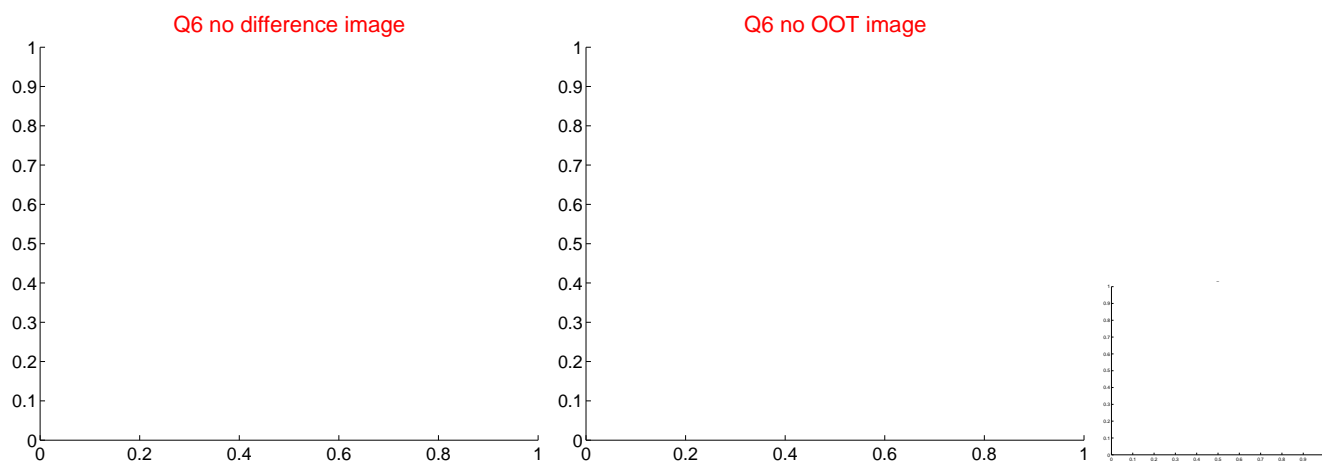
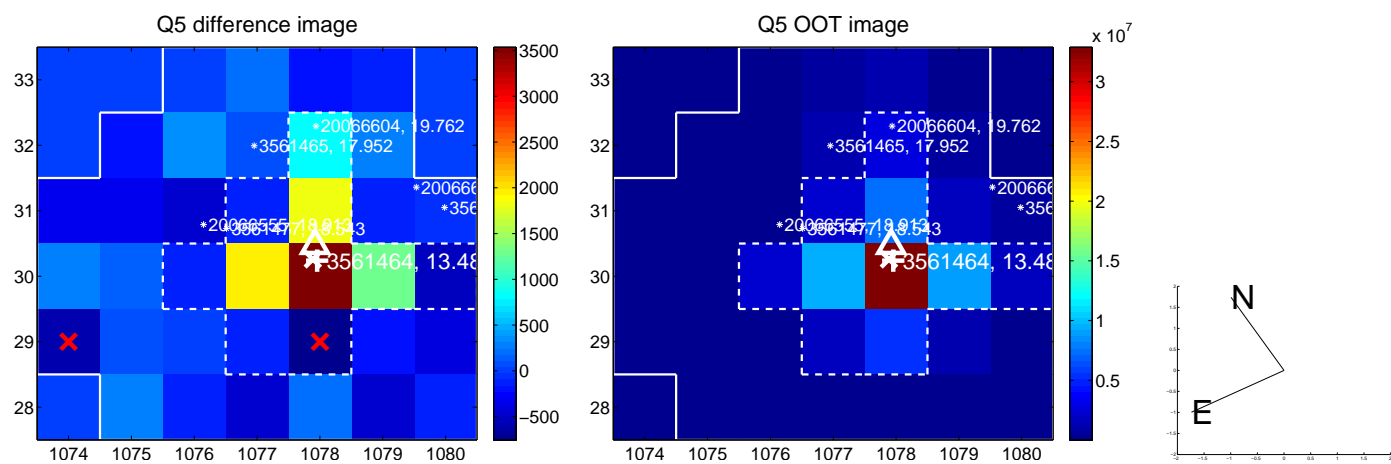


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

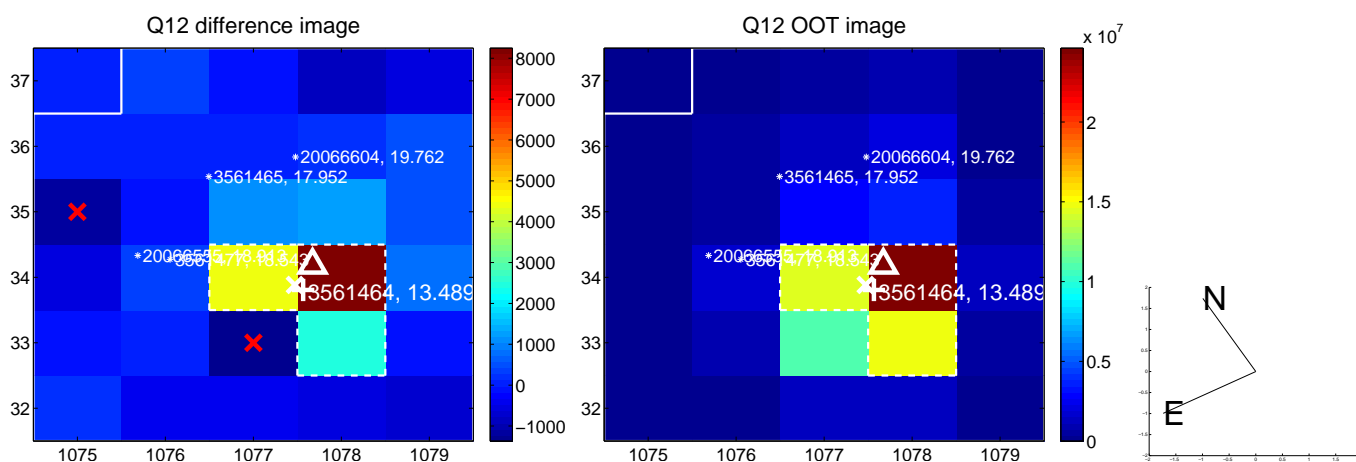
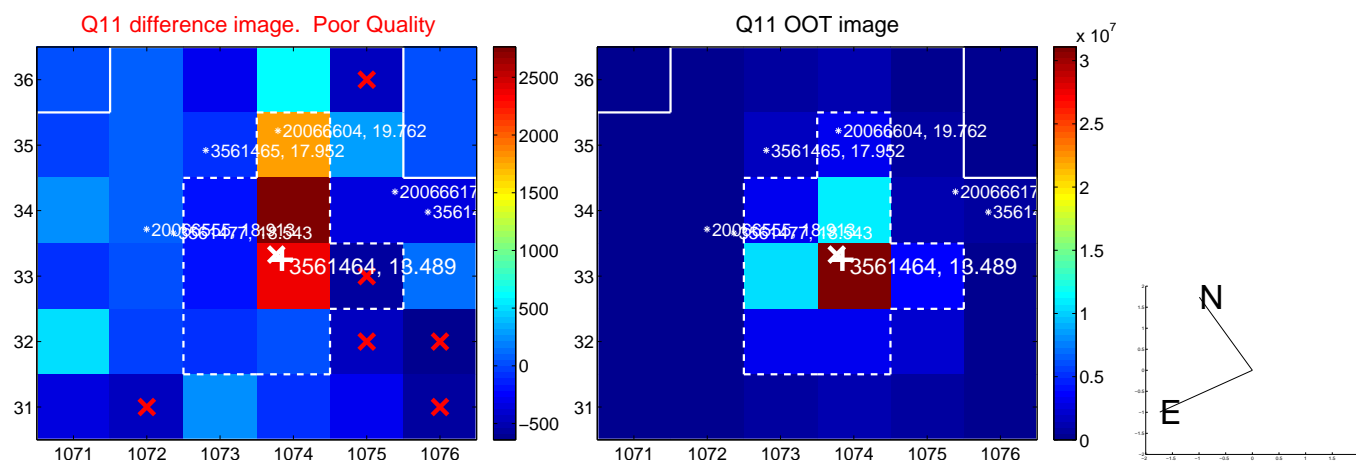
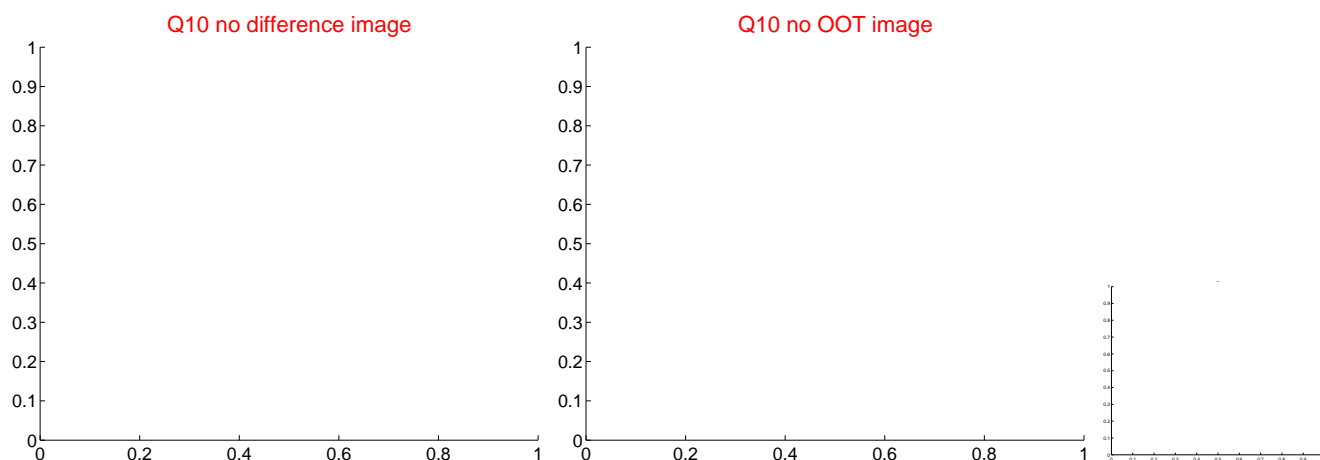
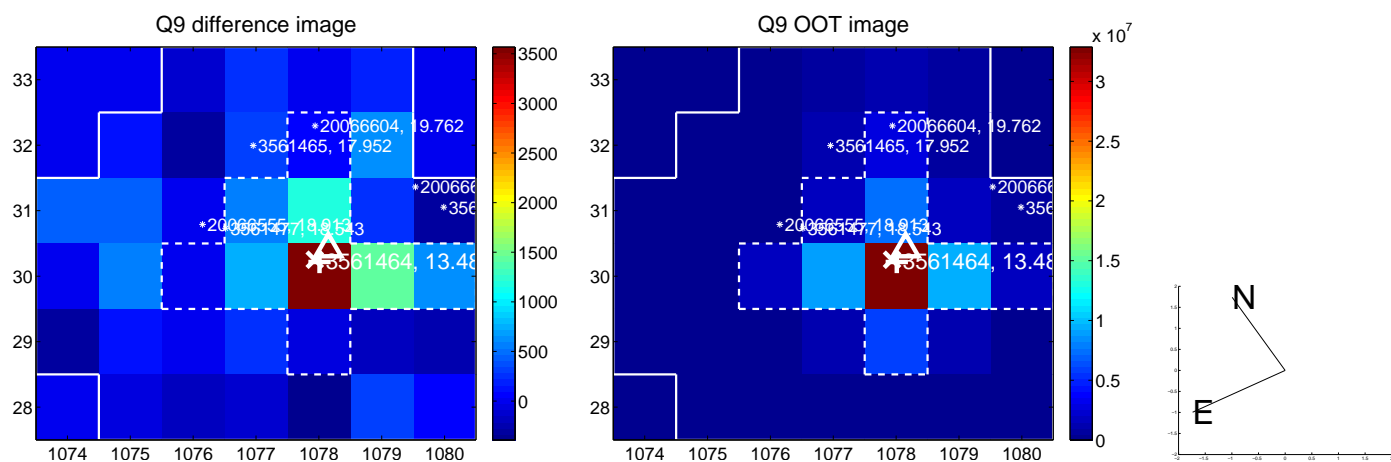
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



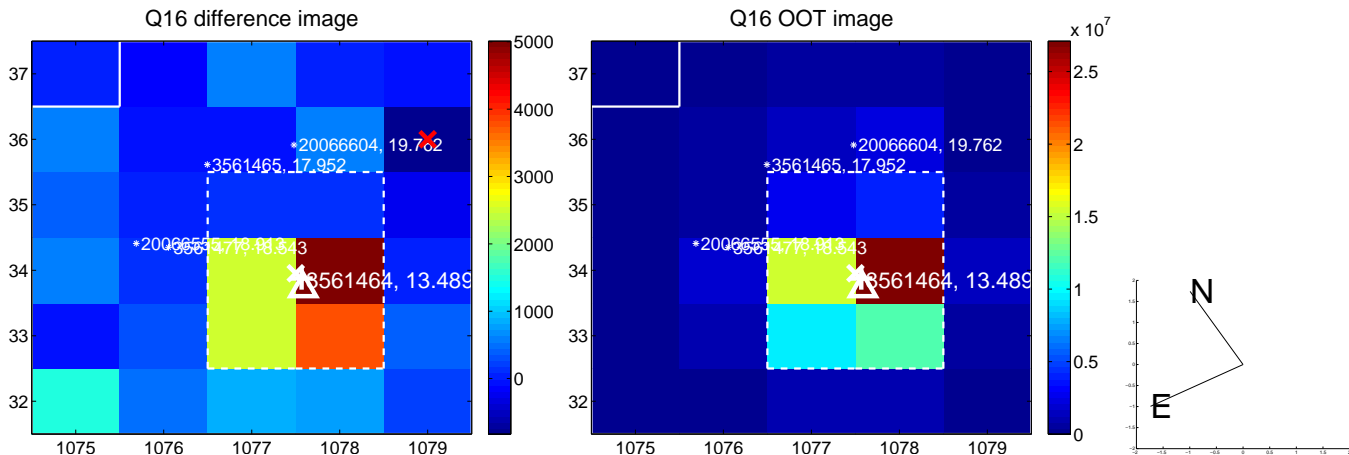
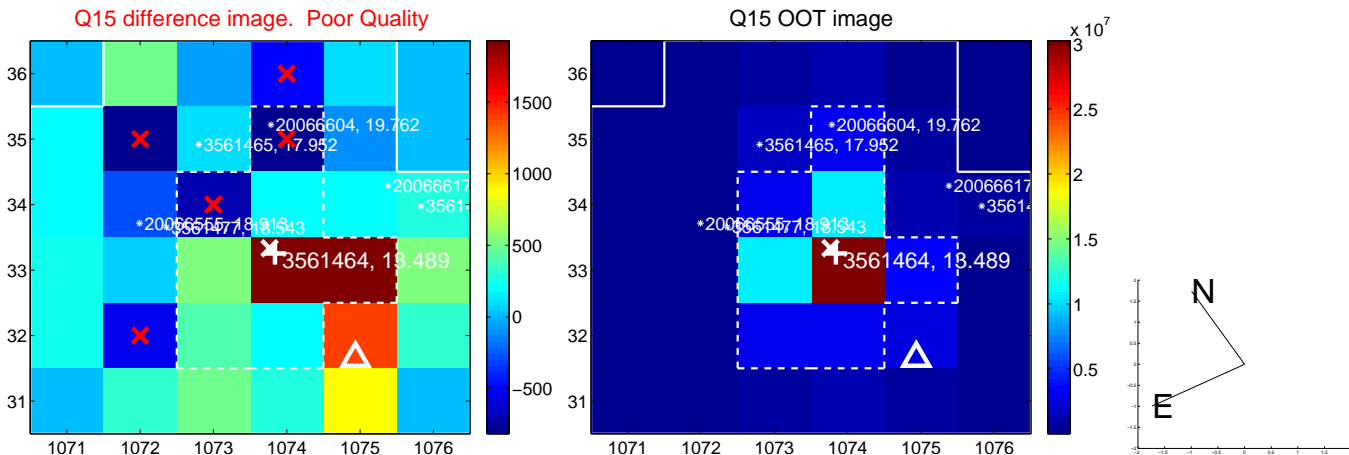
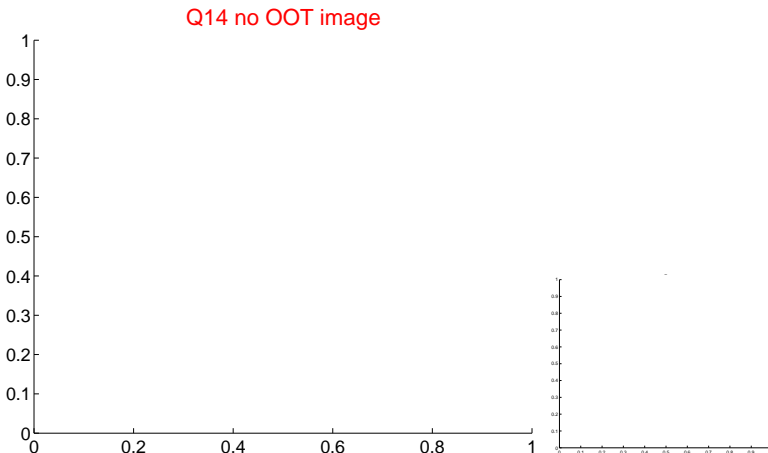
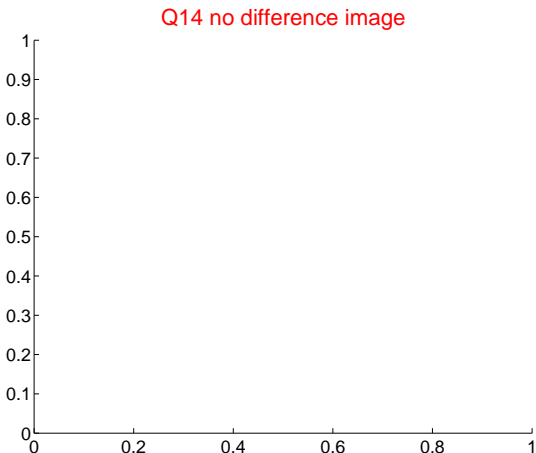
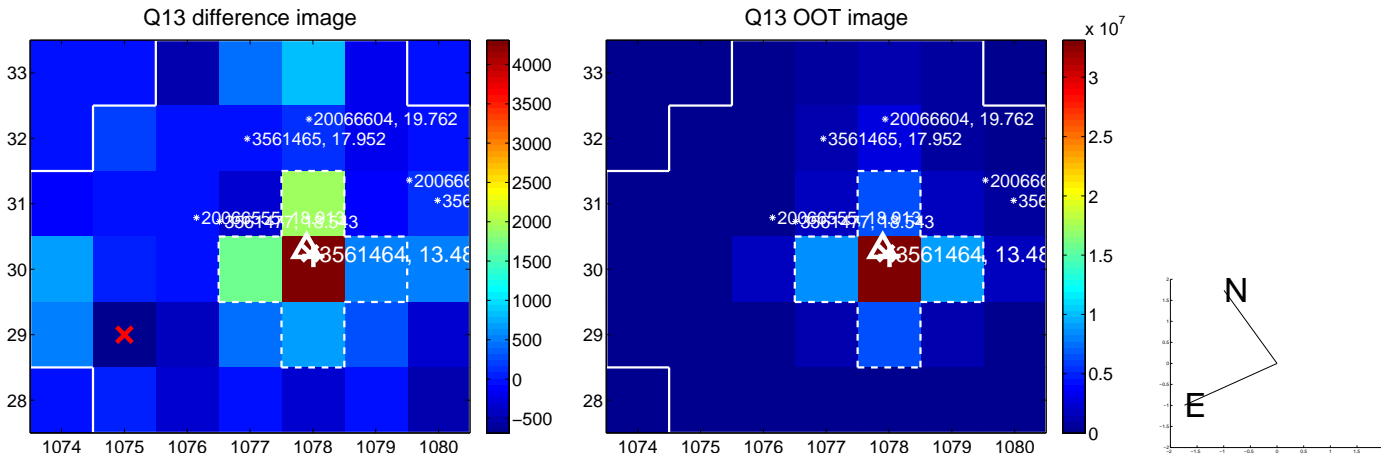
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



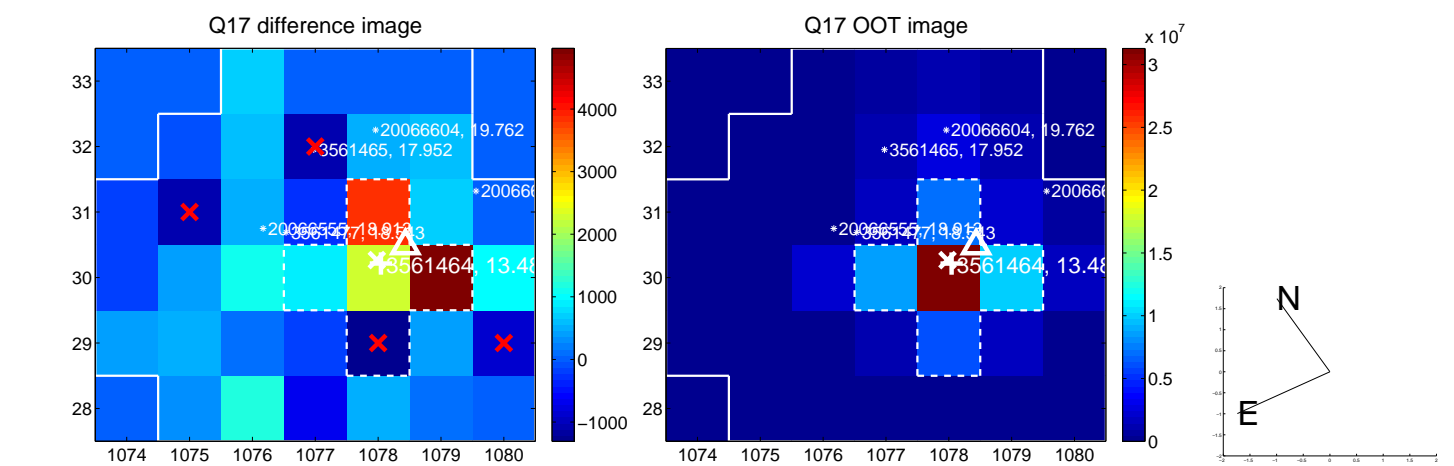
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



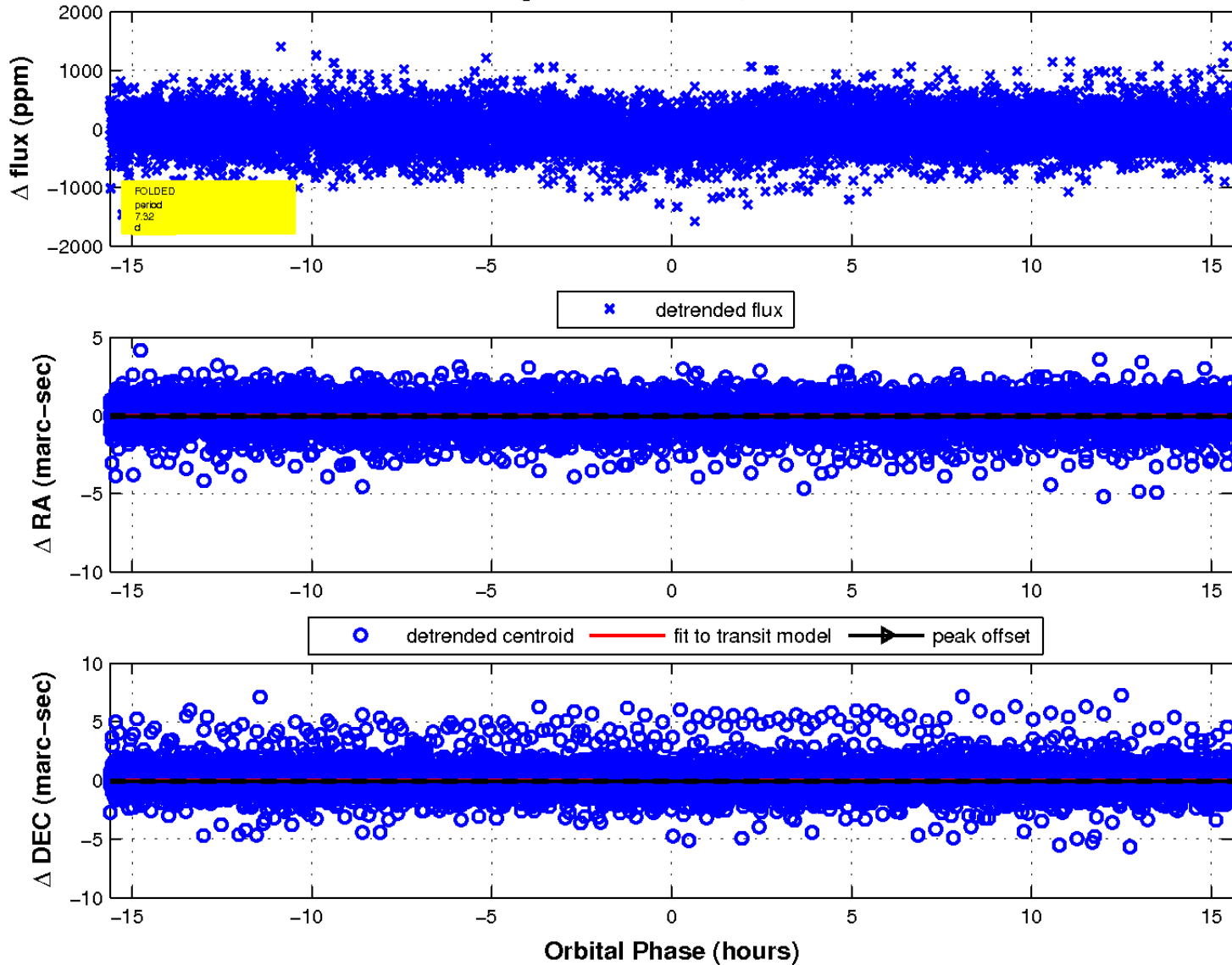
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

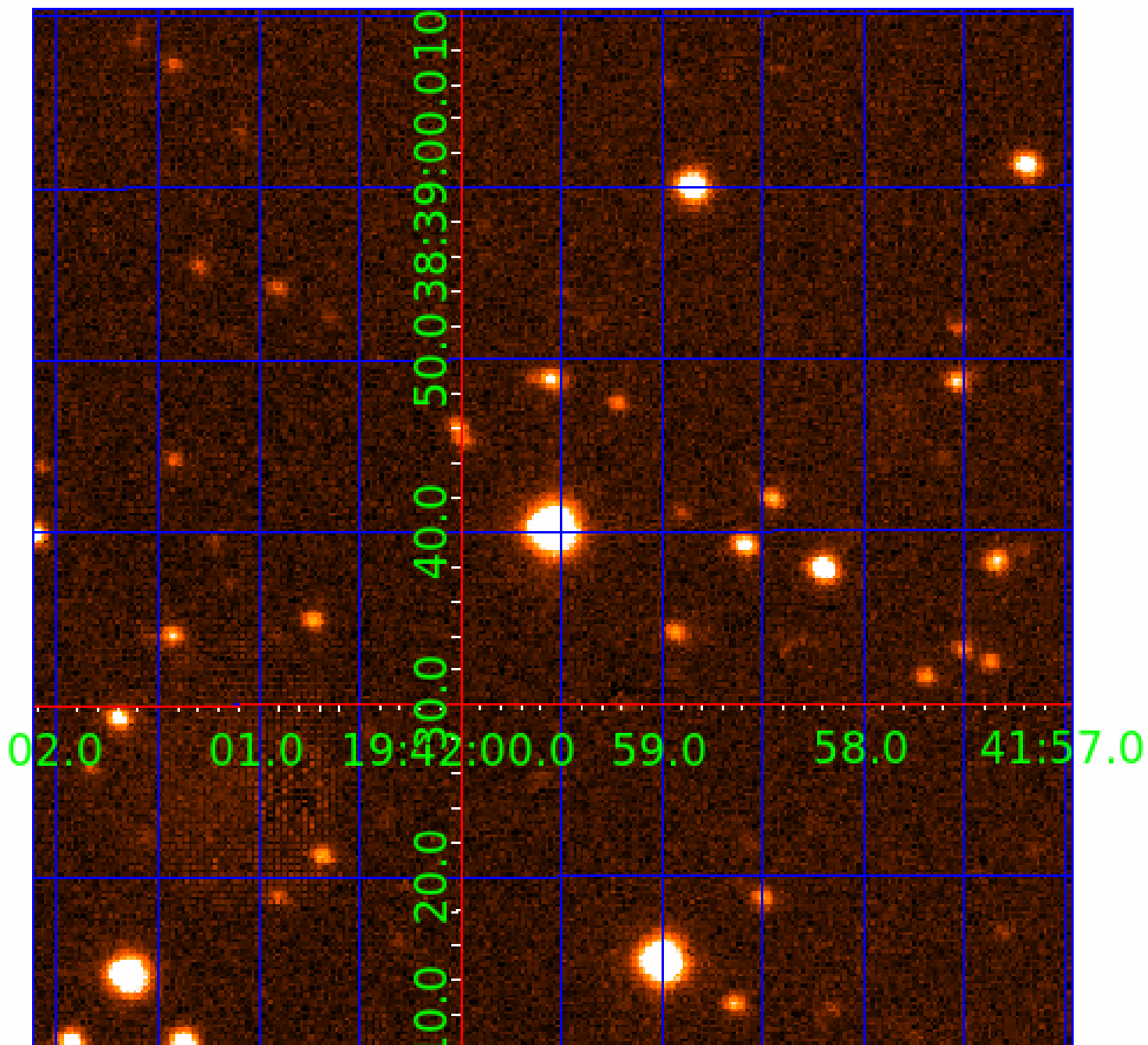


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 003561464

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})
003561464-01	OBS	3398.02	35.799465	144.957797	445.6	8.557	15.3	16.9	3.96	5745	8.96	228.20
003561464-02	OBS	3398.01	7.319370	137.235565	165.4	5.203	13.3	14.3	3.96	5745	6.53	1894.61
003561464-03	OBS	3398.03	4.327028	131.603313	96.8	4.103	9.7	11.0	3.96	5745	4.68	3818.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003561464-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
003561464-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
003561464-03	OBS	PC	0.99	0	0	0	0	CENT_KIC_POS

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

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

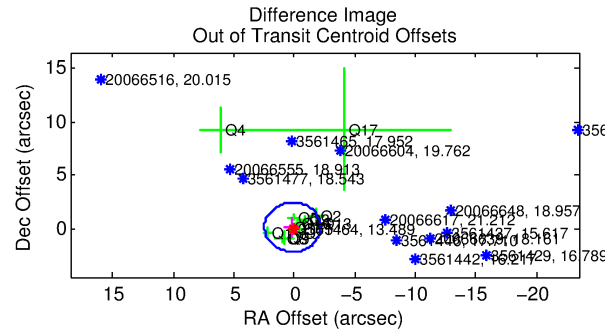
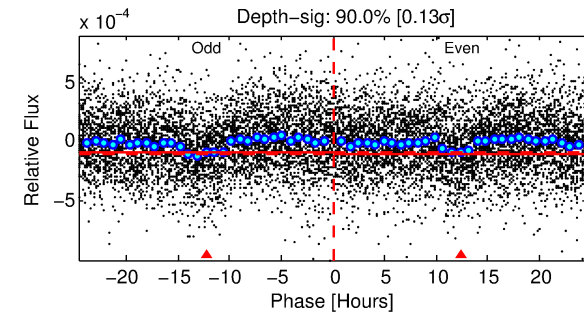
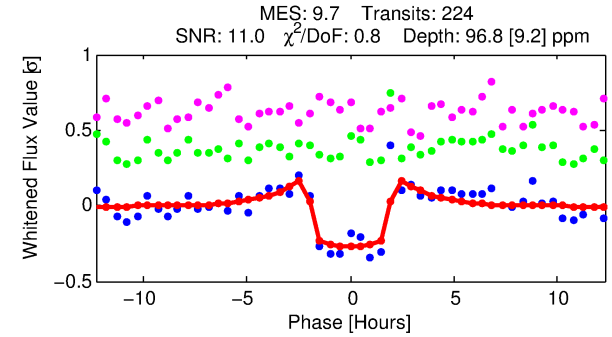
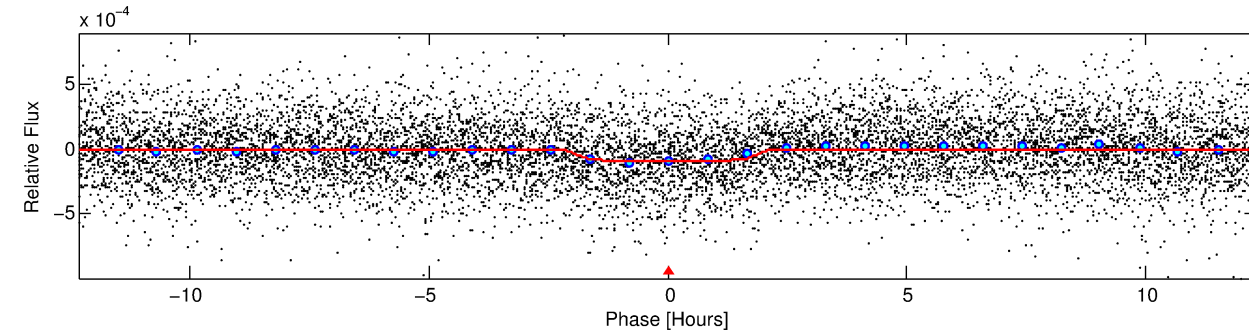
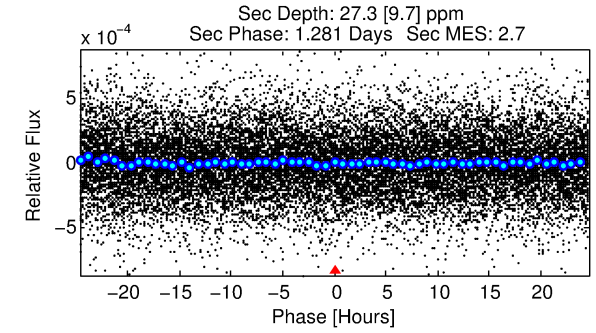
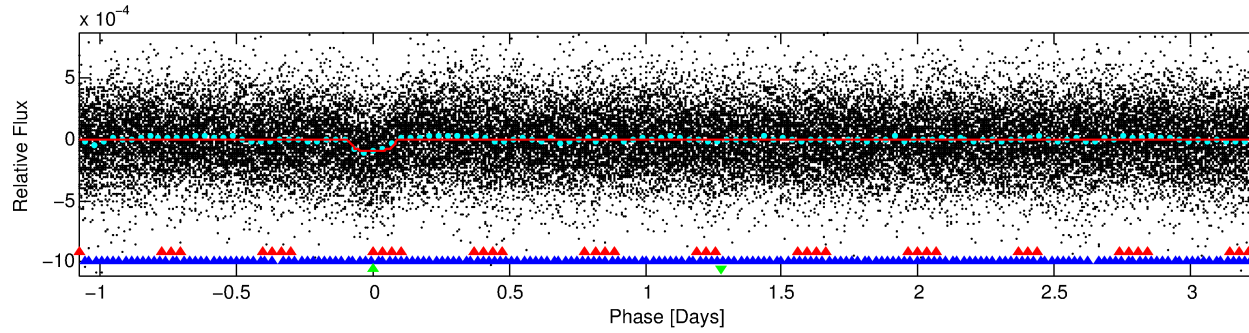
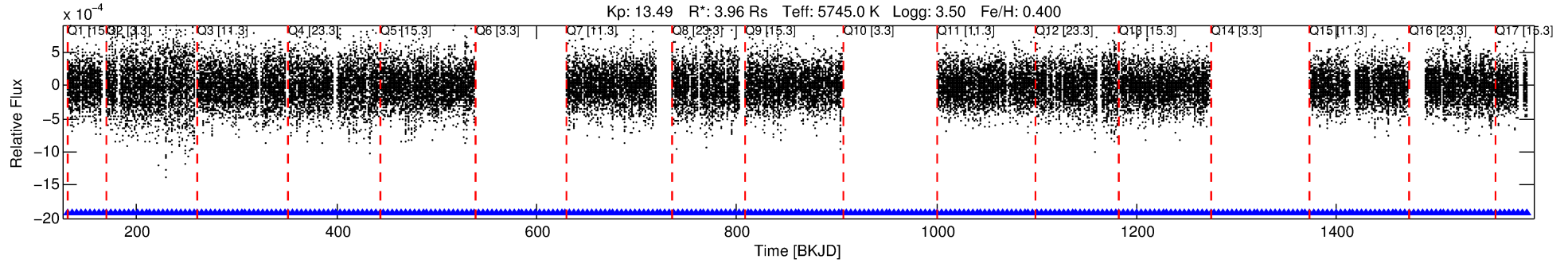
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003561464-03

No Significant Match Found

DV One-Page Summary

KIC: 3561464 Candidate: 3 of 3 Period: 4.327 d
KOI: K03398.03 Corr: 0.965



DV Fit Results:

Period = 4.32703 [0.00002] d
Epoch = 131.6033 [0.0036] BKJD
Rp/R* = 0.0108 [0.0033]
b = 0.91 [0.28]
Seff = 3818.56 [1772.45]
Teq = 2004 [233] K
Rp = 4.68 [2.17] Re
a = 0.0632 [0.0193] AU
Ag = 2.75 [2.33] [0.75σ]
Teffp = 3990 [711] K [2.65σ]

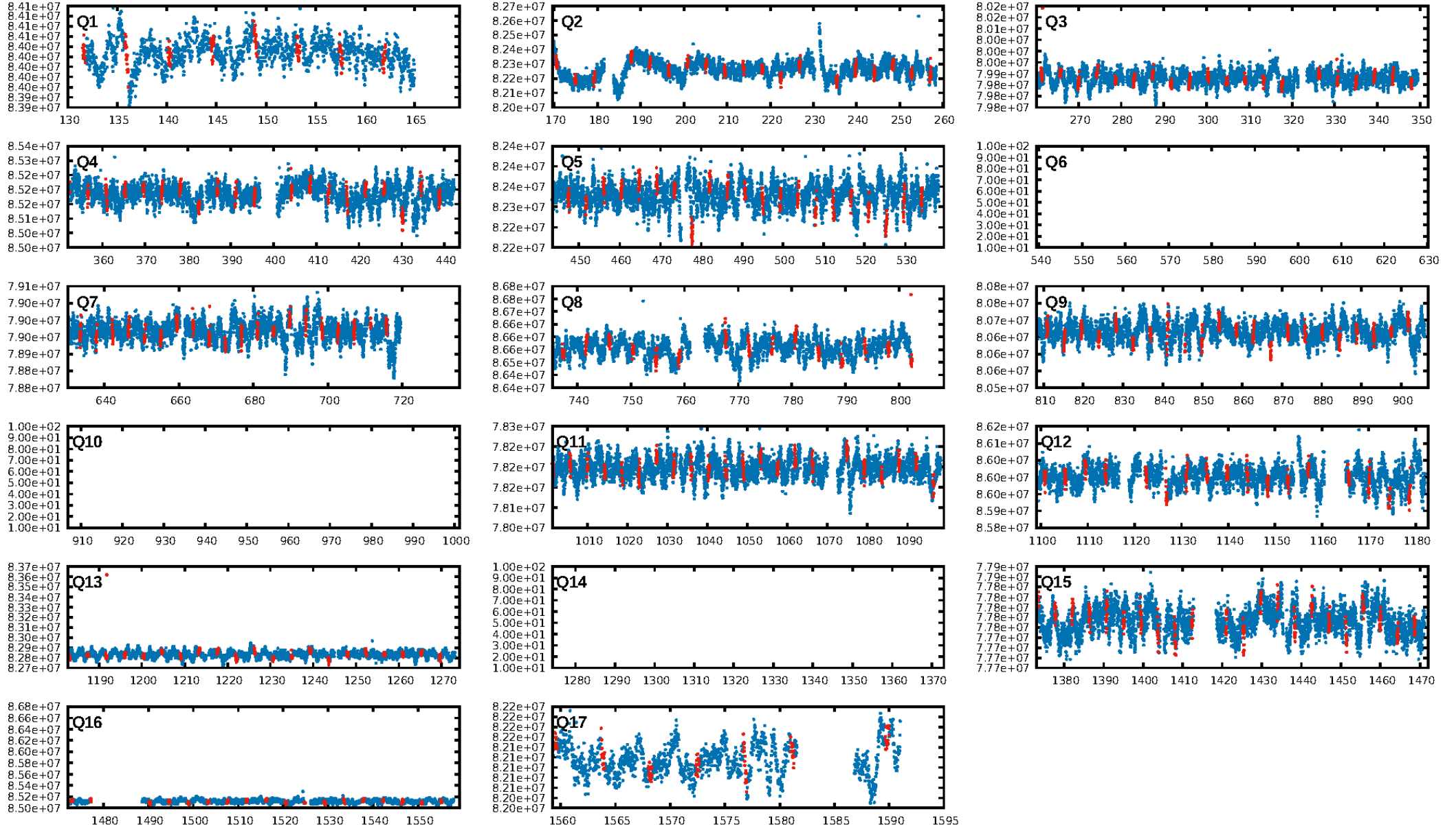
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [10.84σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.95e-21
RollingBand-fgt: 1.00 [211/211]
GhostDiagnostic-chr: 4.216
Centroid-sig: 6.8%
Centroid-so: 1.324 arcsec [2.00σ]
OotOffset-rm: 0.226 arcsec [0.29σ]
KicOffset-rm: 0.201 arcsec [0.20σ]
OotOffset-st: 1/3/4/5 [13]
KicOffset-st: 1/3/4/5 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 1.00 [14/14]

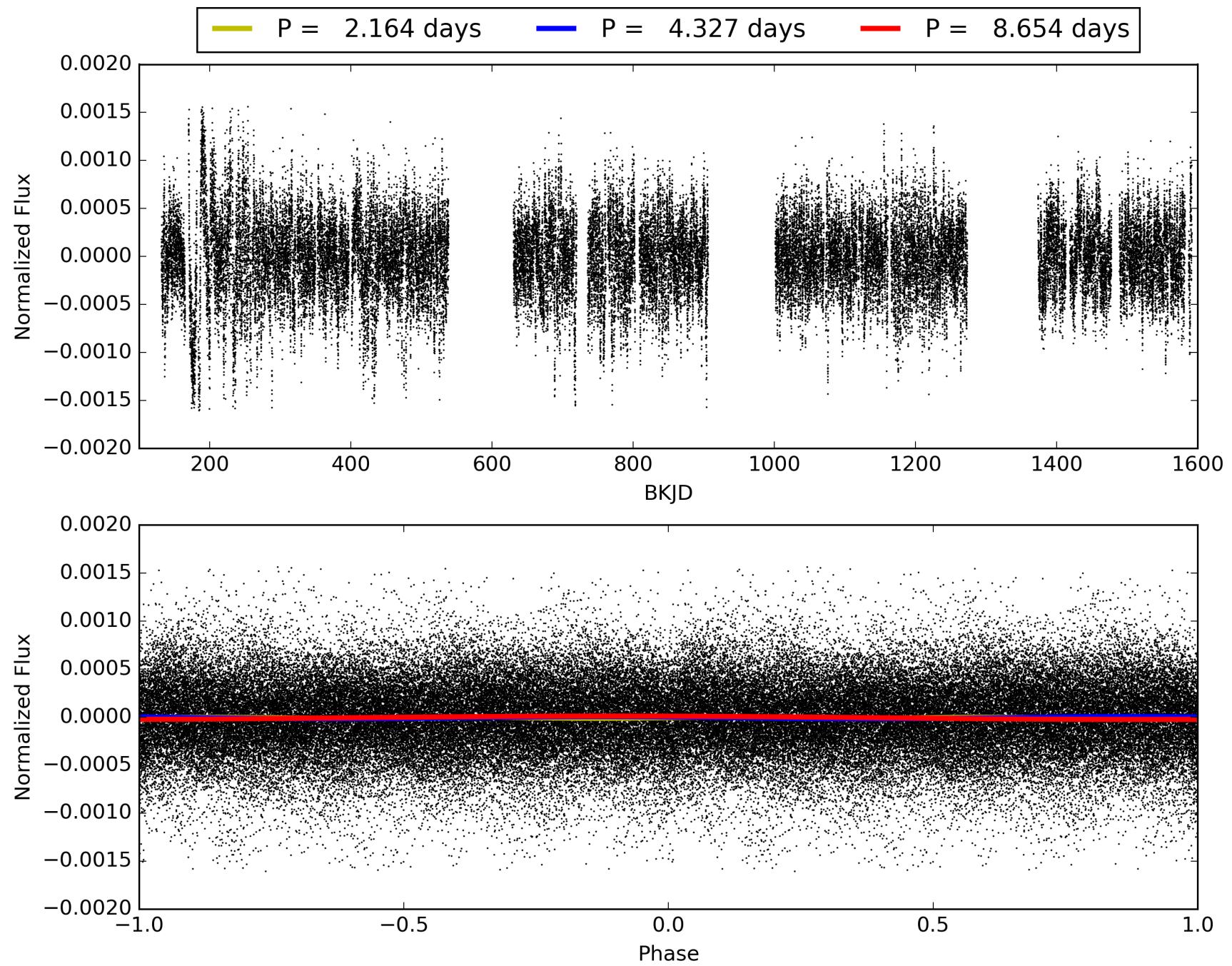
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:53:36 Z

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

TCE 003561464-03, PDC Light Curves

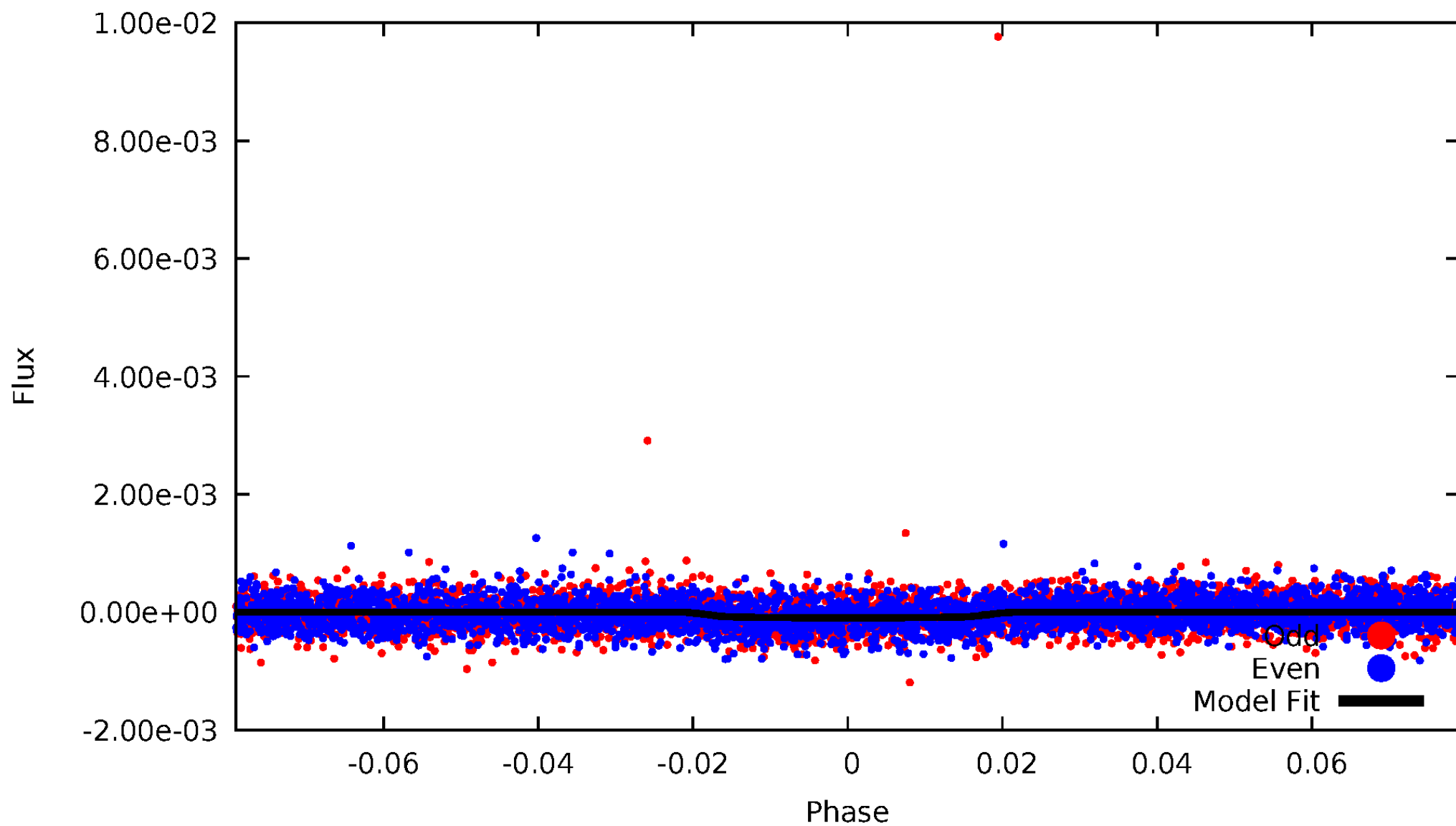


TCE 003561464-03



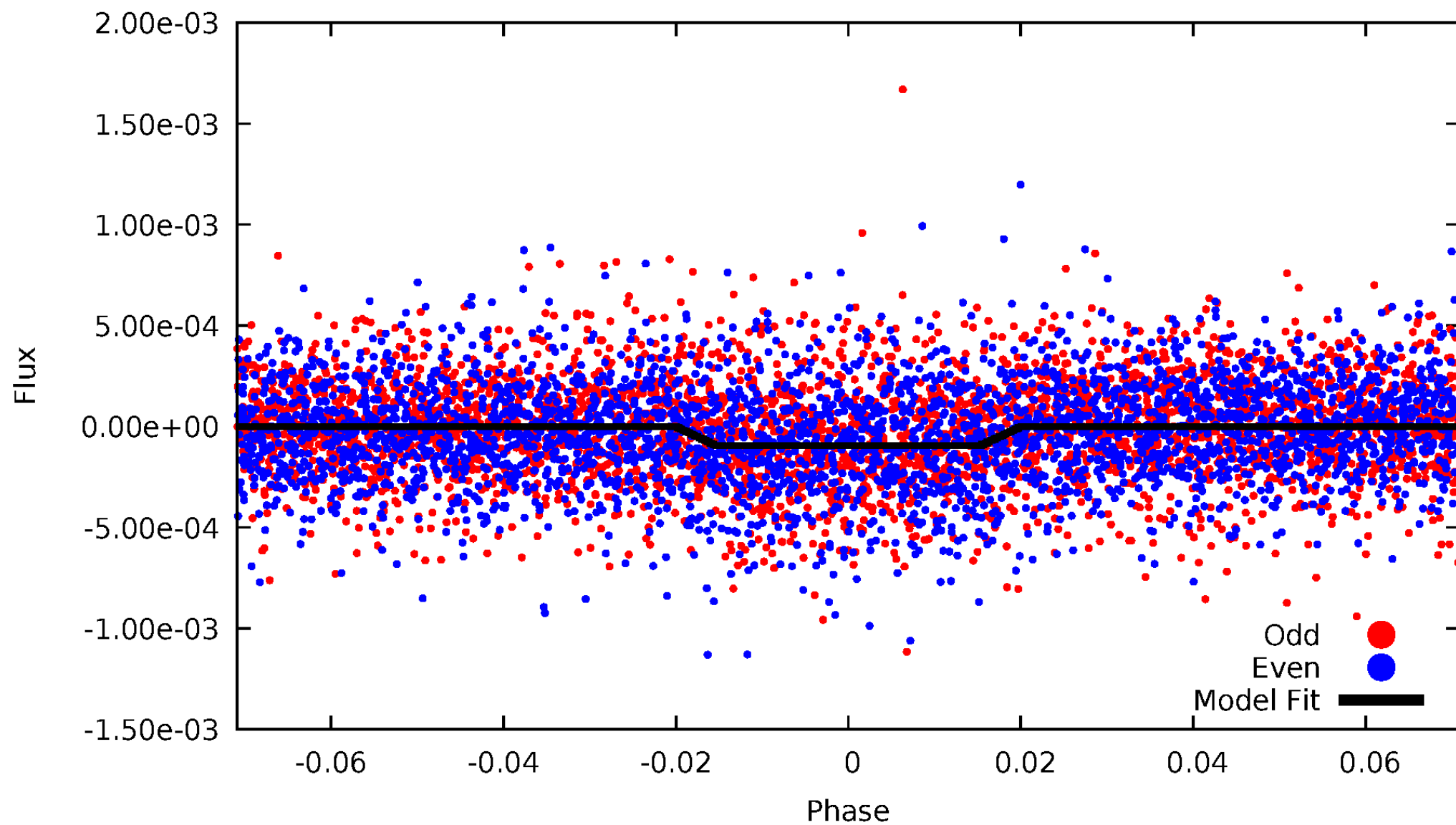
DV Odd/Even

TCE 003561464-03

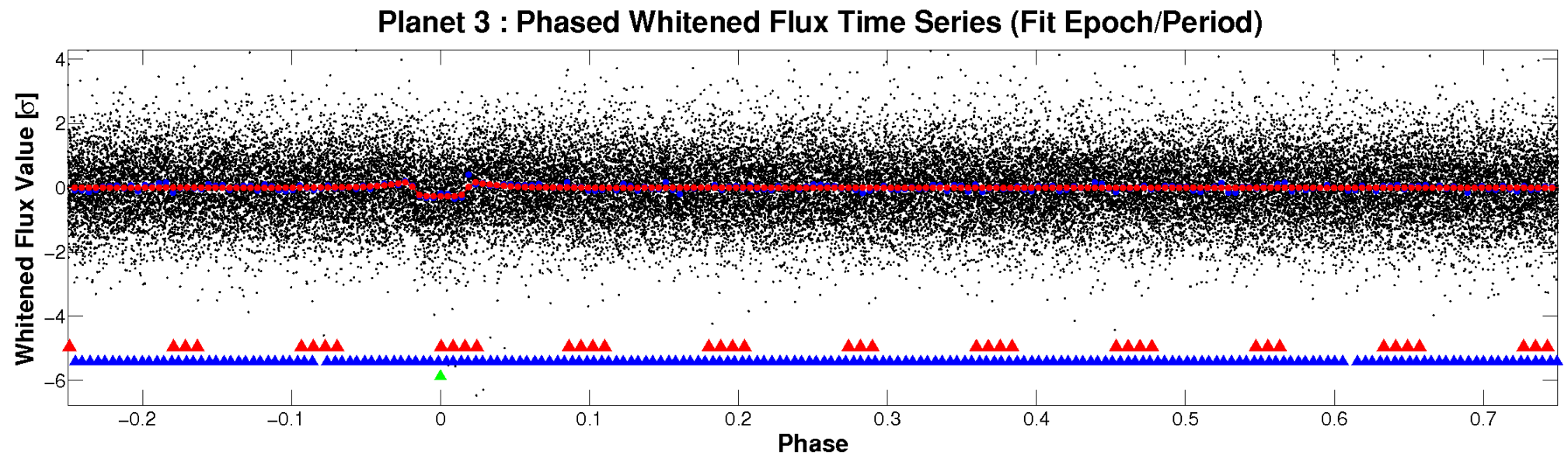
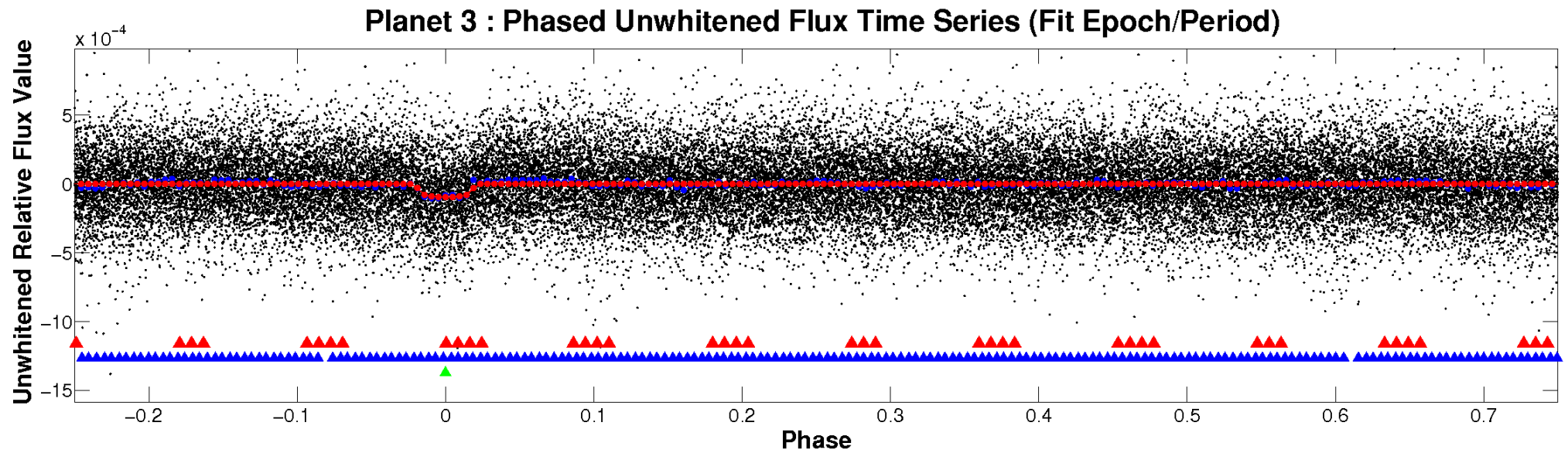


ALT Odd/Even

TCE 003561464-03

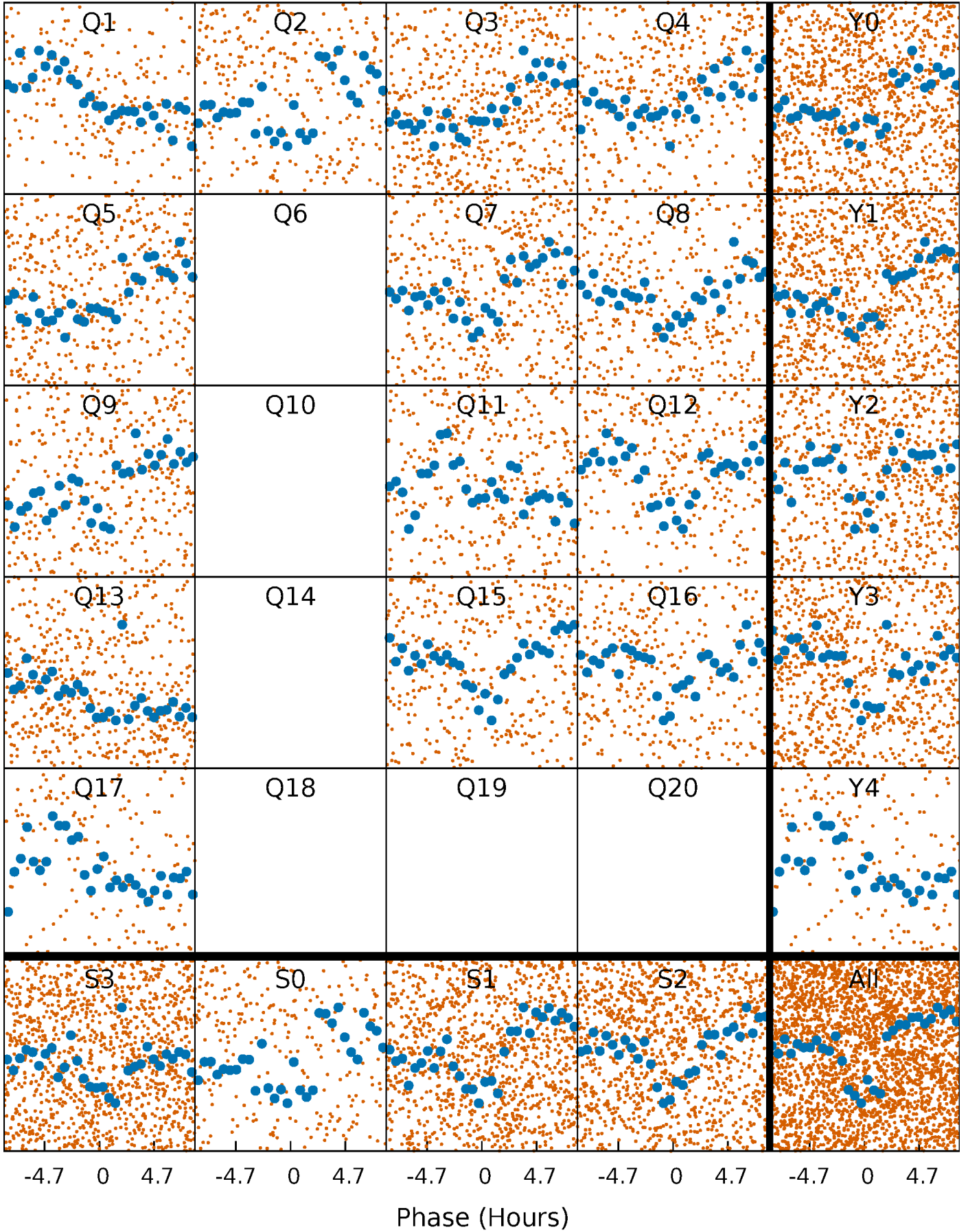


Non-Whitened Vs. Whitened Light Curve



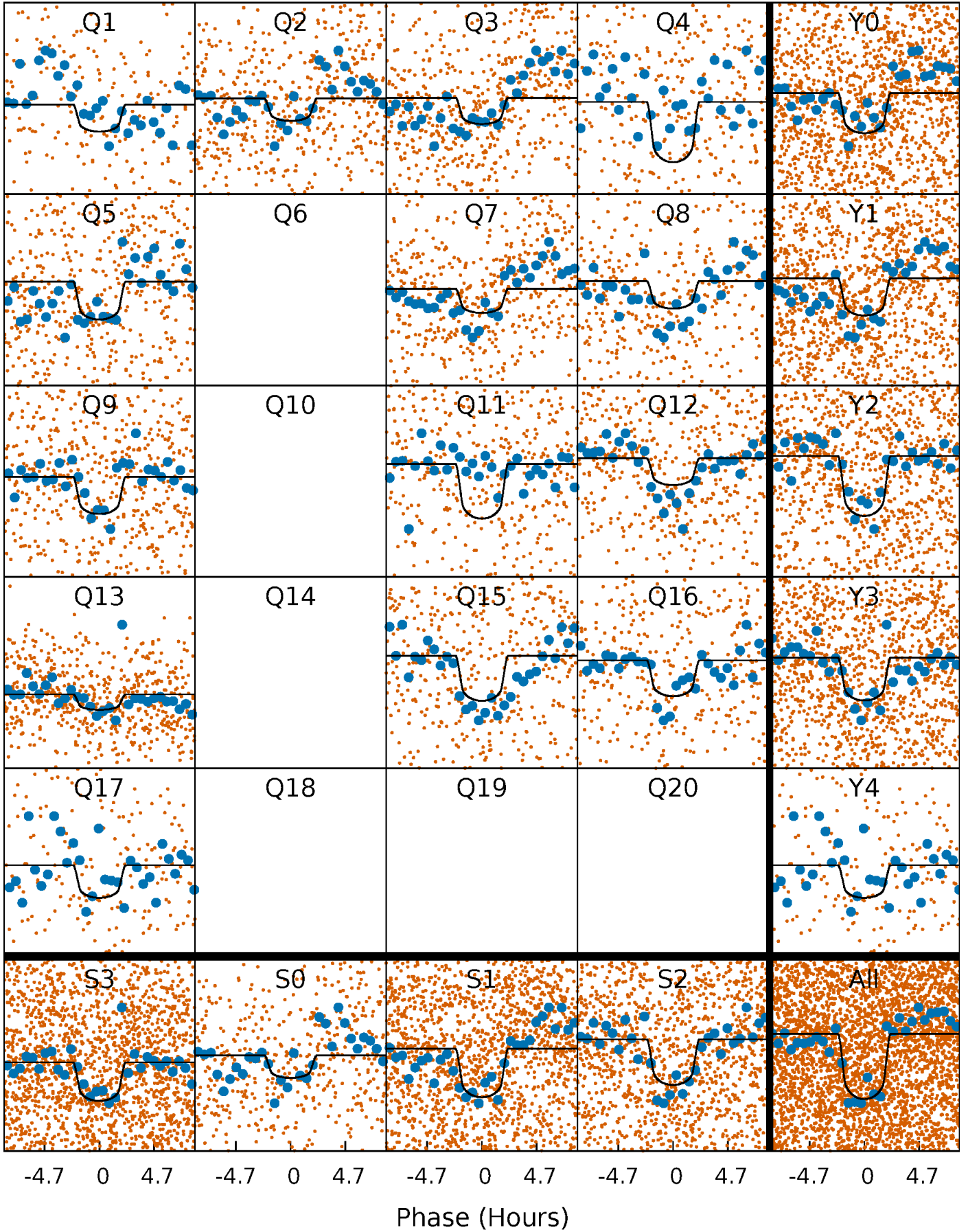
PDC Quarter-Phased Transit Curves

TCE 003561464-03 P= 4.327028 Days $T_0=131.603313$ (BKJD)



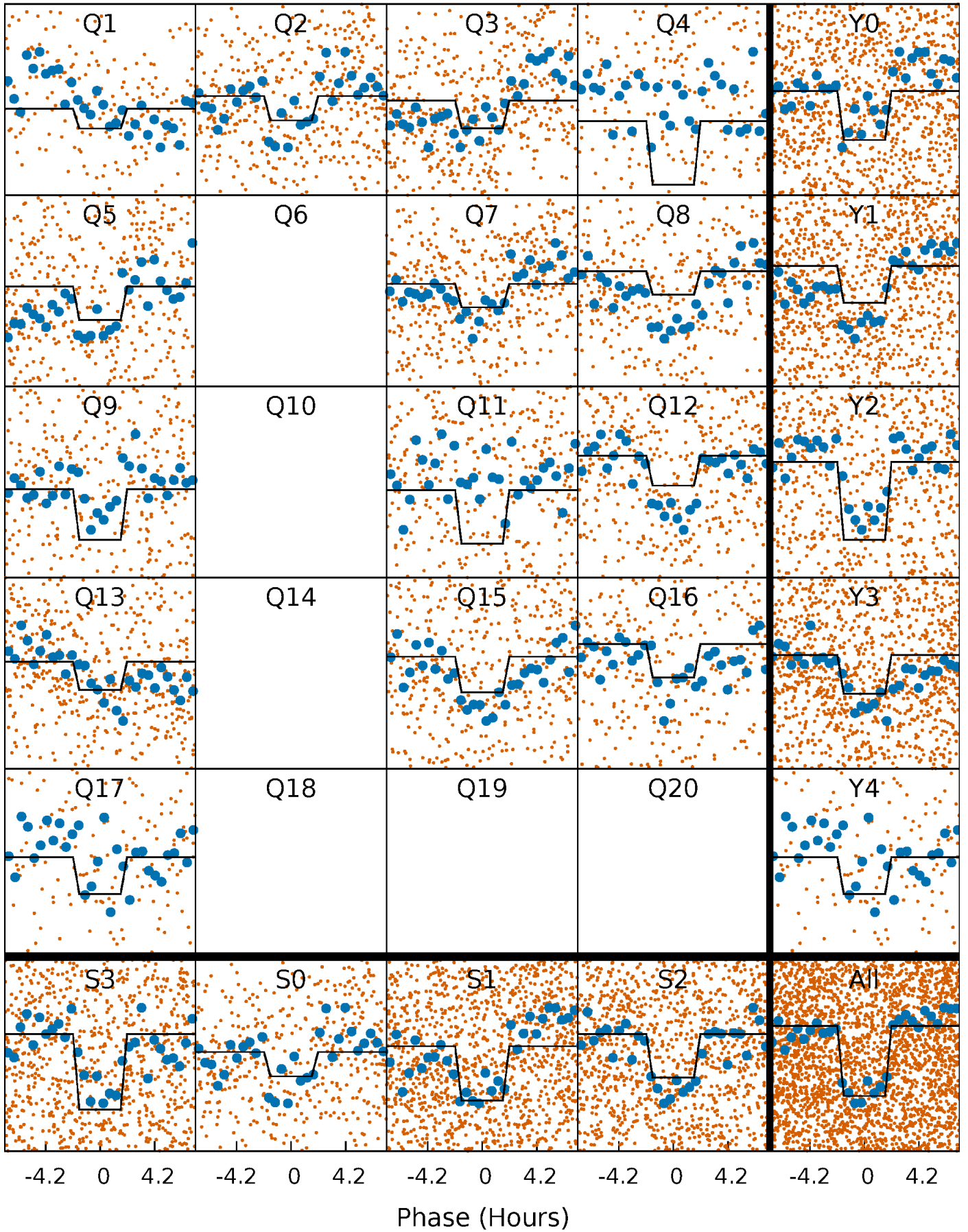
DV Quarter-Phased Transit Curves

TCE 003561464-03 P= 4.327028 Days $T_0=131.603313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

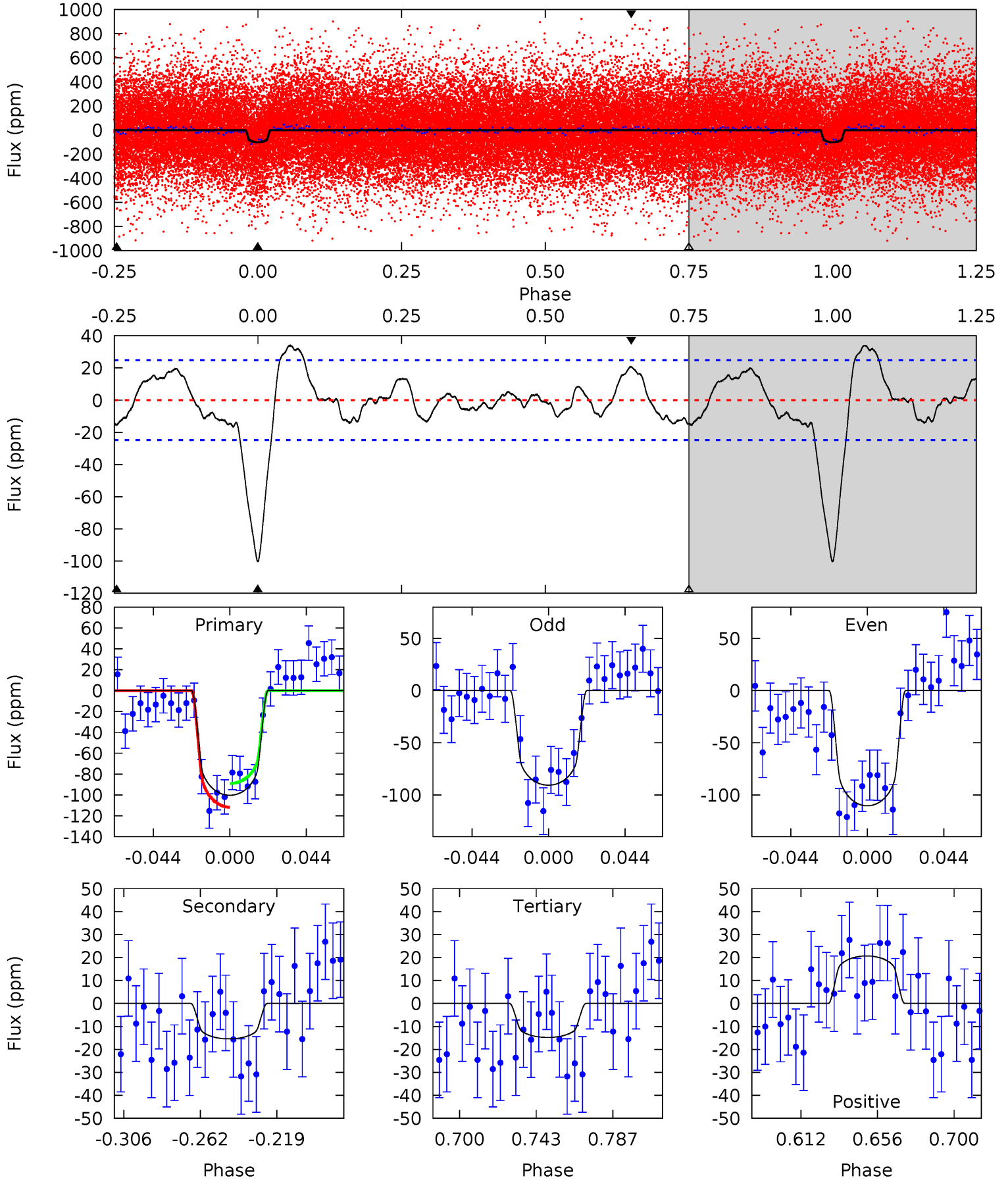
TCE 003561464-03 P= 4.326982 Days $T_0=131.609633$ (BKJD)



DV Model-Shift Uniqueness Test

003561464-03, P = 4.327028 Days, E = 127.276285 Days

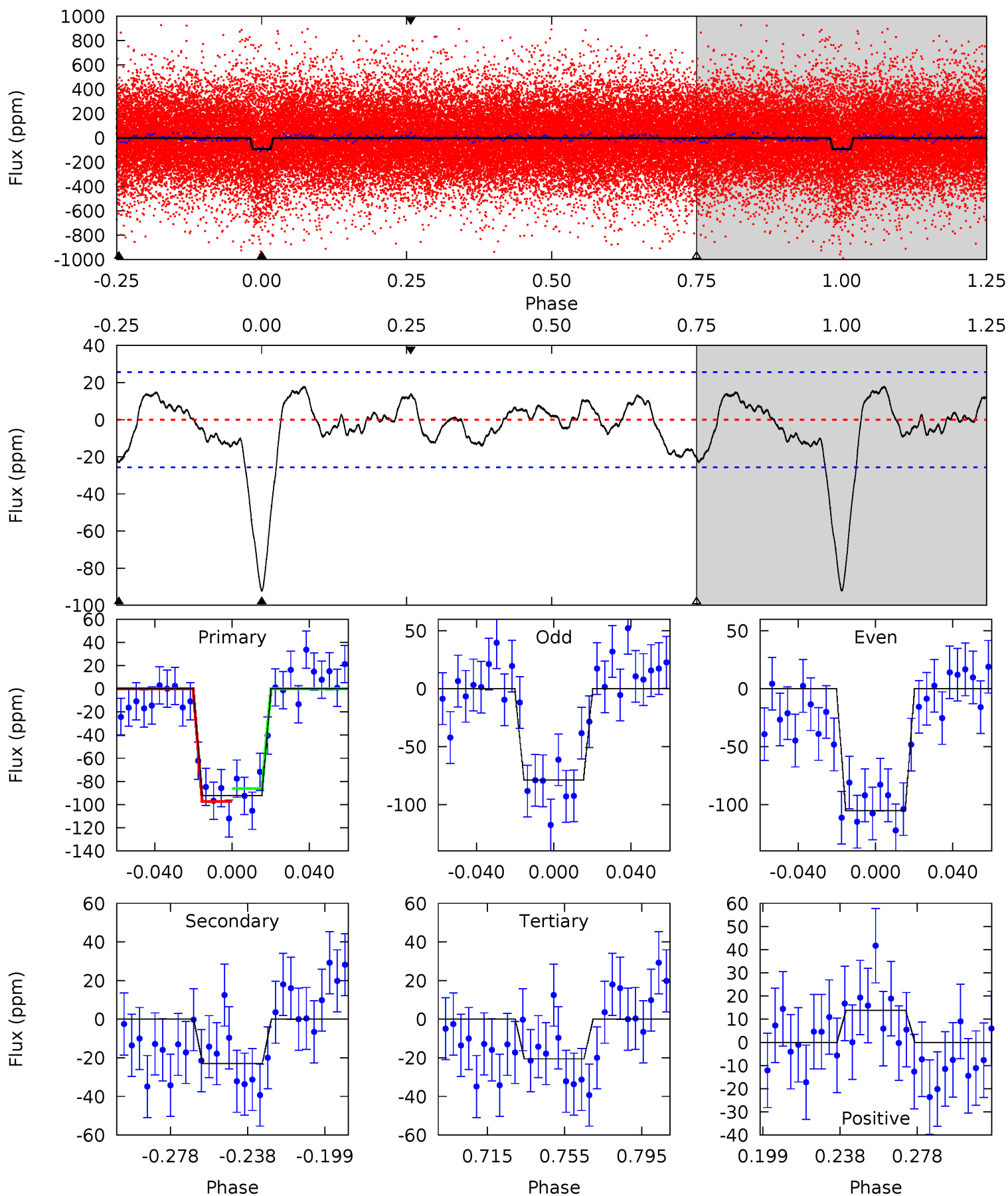
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	2.95	2.83	3.96	4.74	2.02	2.12	16.4	15.2	0.12	-1.01	1.90	1.11	0.25	2.16



Alt Model-Shift Uniqueness Test

003561464-03, P = 4.326982 Days, E = 127.282651 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	4.26	3.81	2.56	4.75	2.06	1.64	13.3	14.6	0.45	1.70	2.47	0.91	0.16	1.03



Stellar Parameters For KIC 003561464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5745^{+86}_{-77}	$3.499^{+0.259}_{-0.129}$	$0.400^{+0.050}_{-0.150}$	$3.955^{+0.688}_{-1.376}$	$1.801^{+0.193}_{-0.359}$	$0.041^{+0.073}_{-0.014}$
	+1%/-1%	+7%/-4%	+12%/-37%	+17%/-35%	+11%/-20%	+178%/-33%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 003561464-03 / KOI 3398.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 5	$4.56^{+1.54}_{-1.47}$	2787^{+156}_{-208}	3660^{+626}_{-514}	$1.575^{+2.084}_{-0.836}$
Alt.	-23 ± 5	$4.14^{+1.52}_{-1.53}$	2791^{+141}_{-203}	4130^{+876}_{-494}	$2.896^{+4.708}_{-1.431}$

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

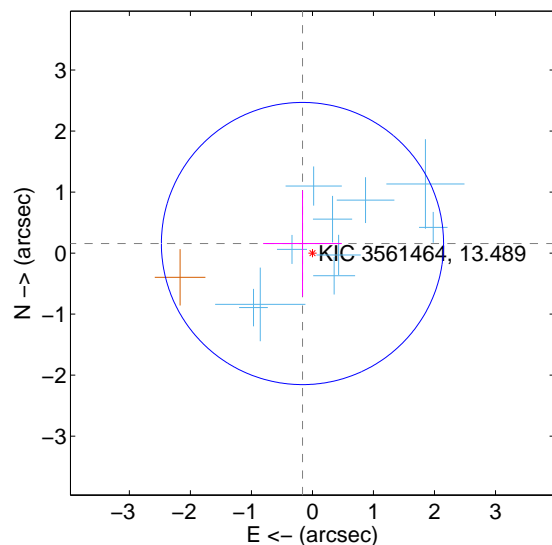
Supplemental centroid analysis for 003561464-03. Kepler magnitude: 13.49. Transit SNR 10.98

There are 10 quarters with good PRF difference image offsets

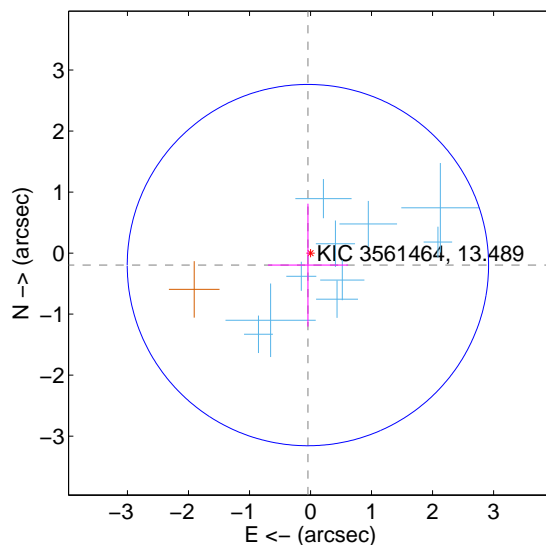
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.226 ± 0.771	0.29	0.163 ± 0.644	0.157 ± 0.868
PRF-fit source offset from KIC position	0.201 ± 0.987	0.20	0.043 ± 0.655	-0.197 ± 1.007
photometric centroid source offset	1.32 ± 0.66	2.00	0.58 ± 0.66	-1.19 ± 0.66

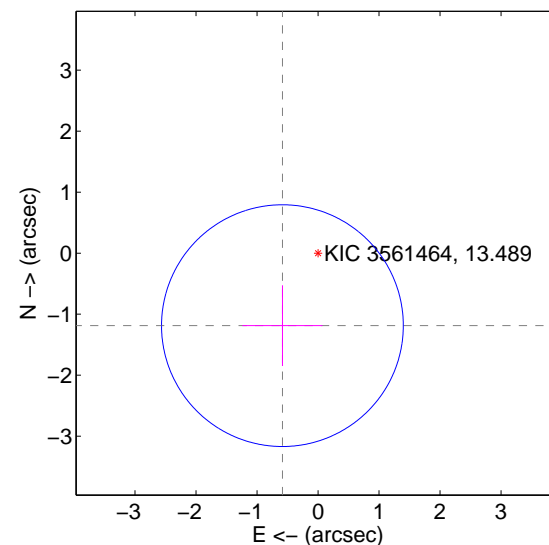
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

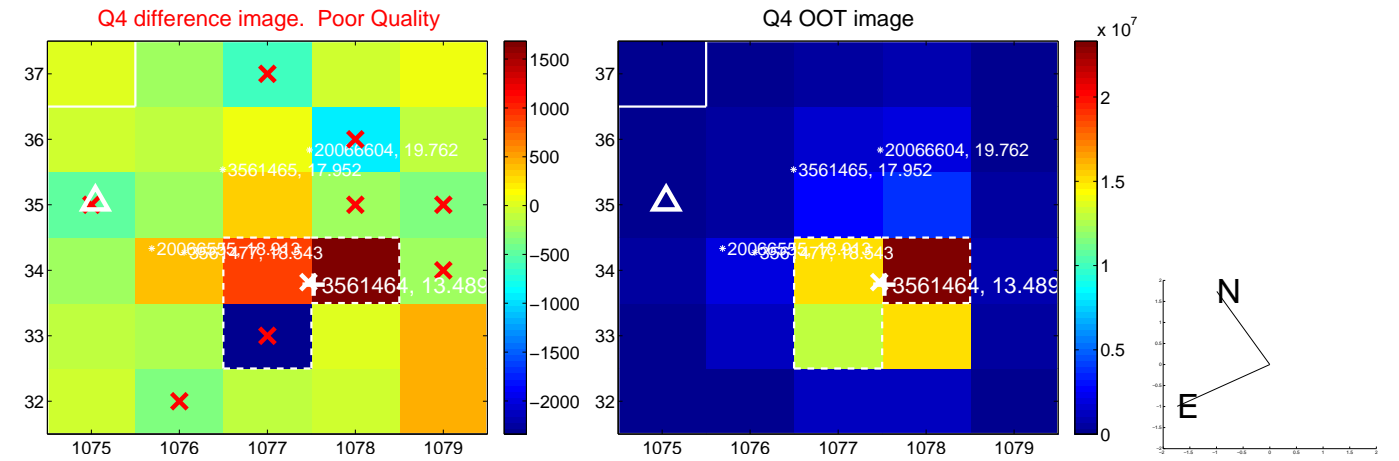
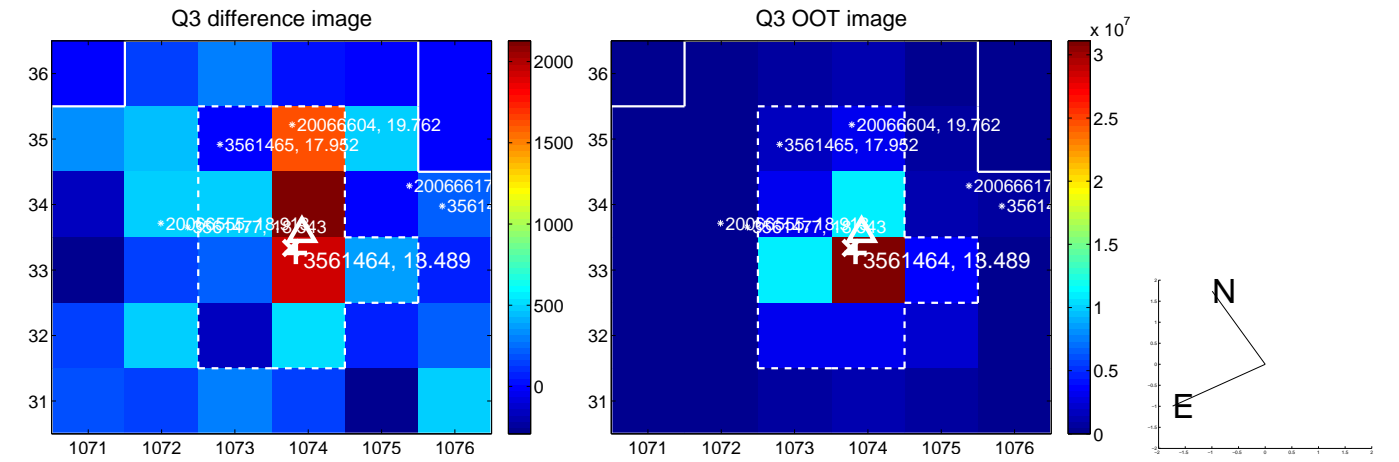
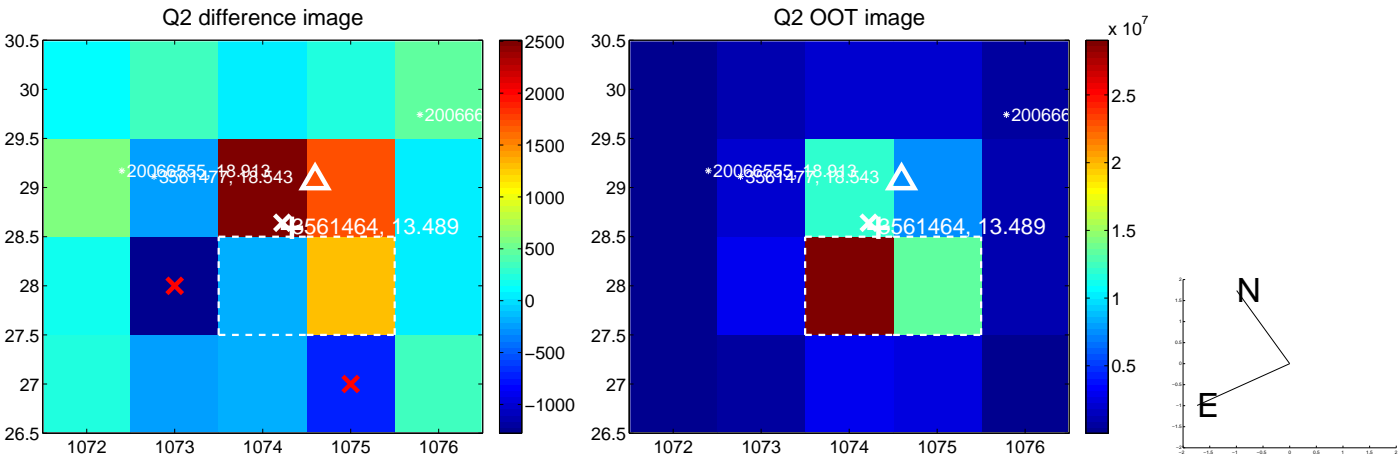
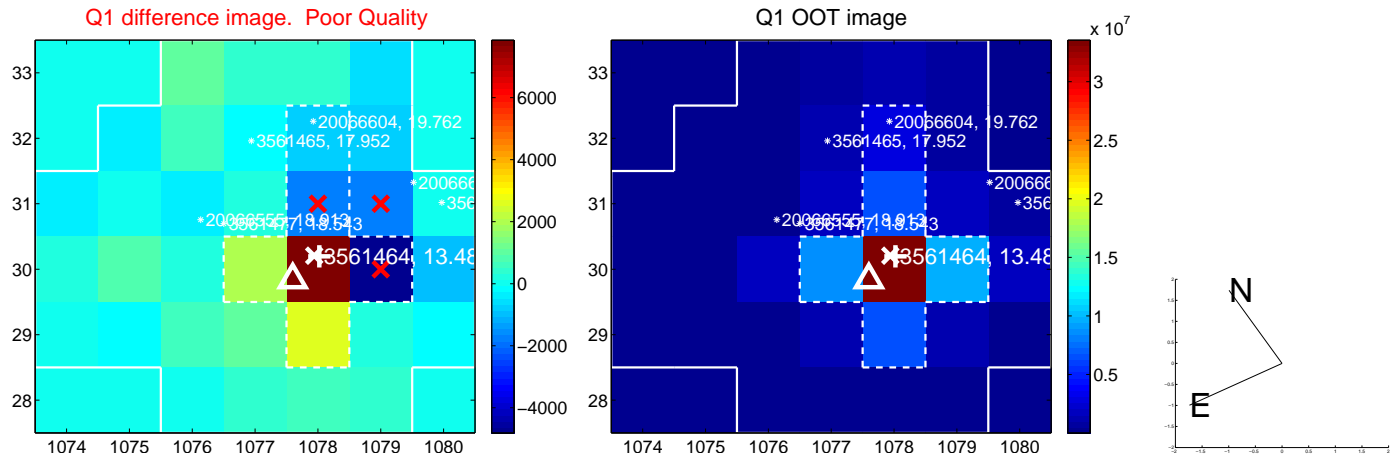


offset from photometric centroids

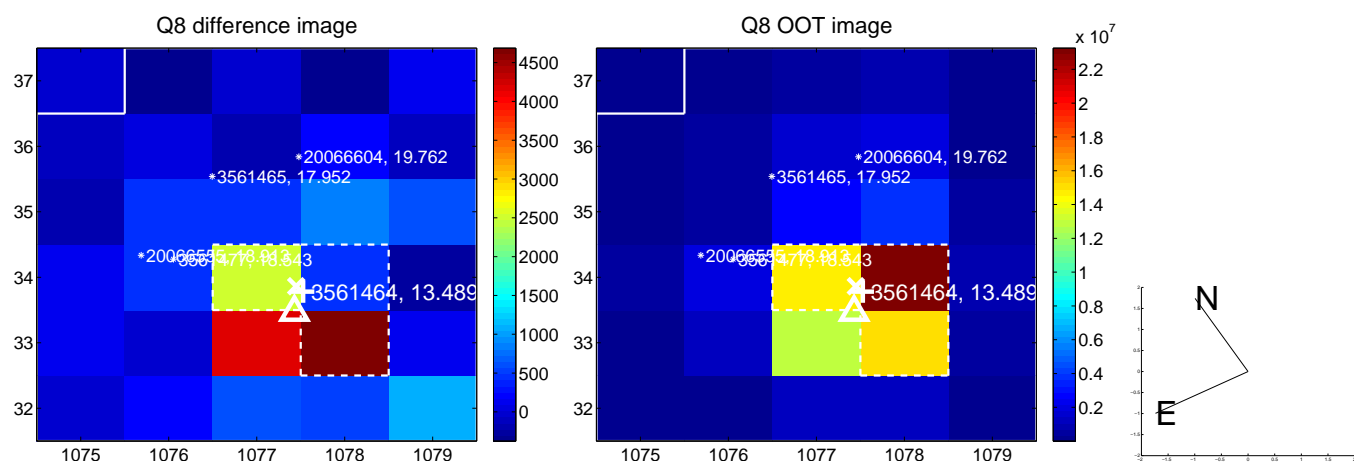
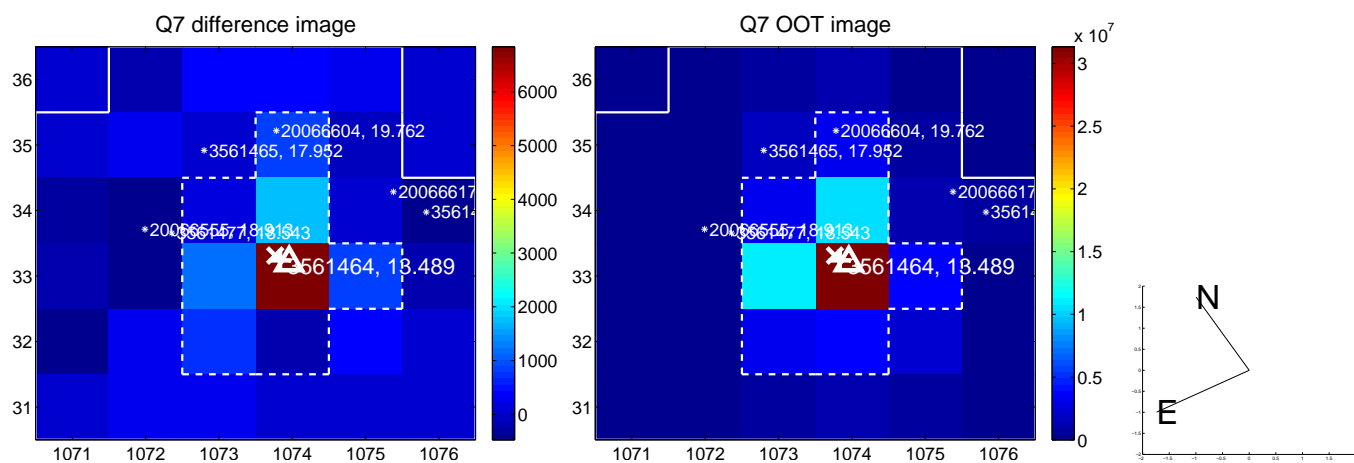
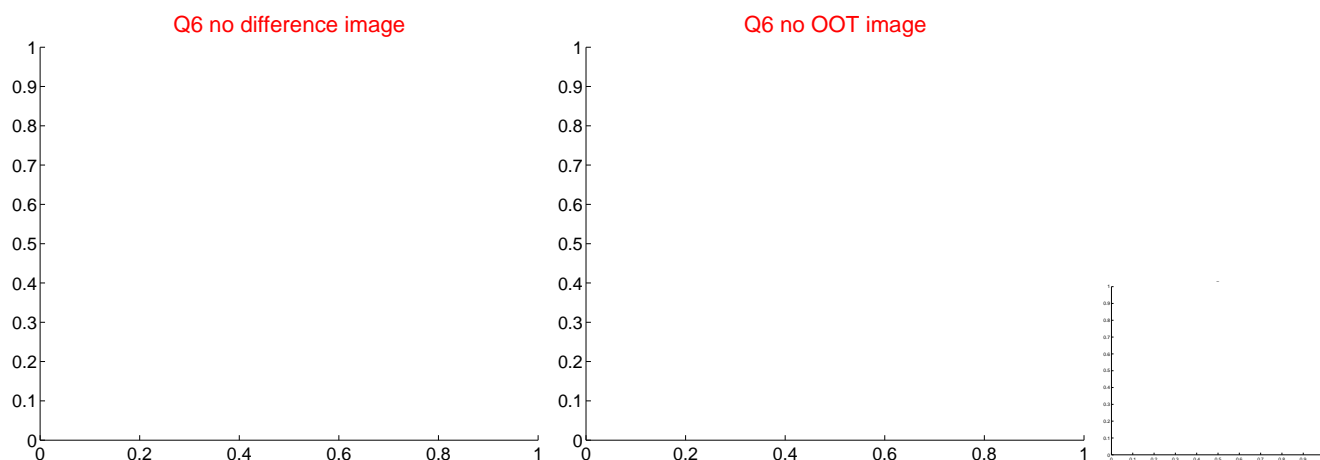
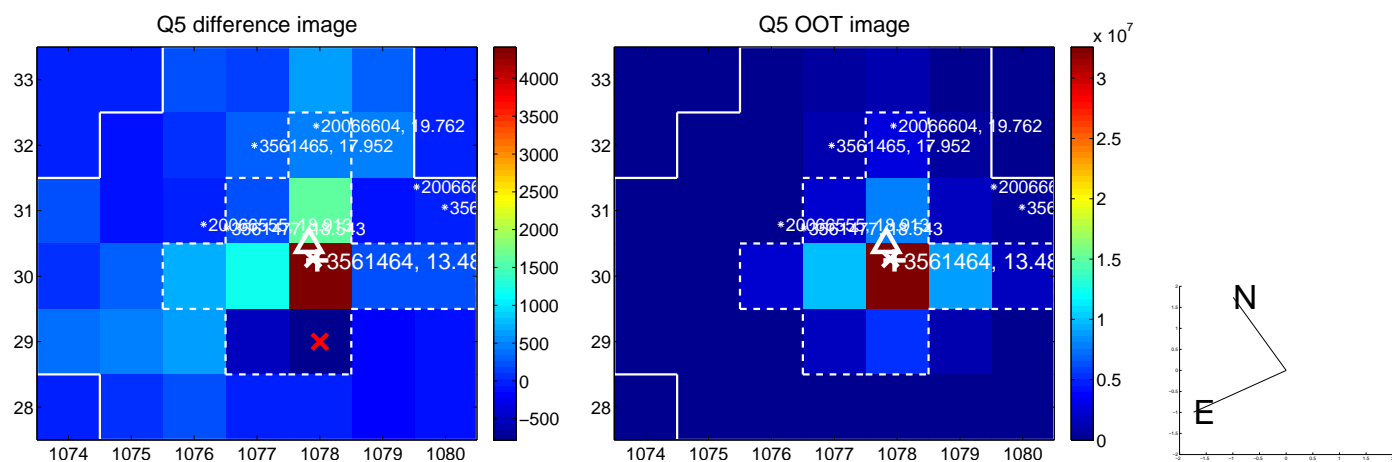


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

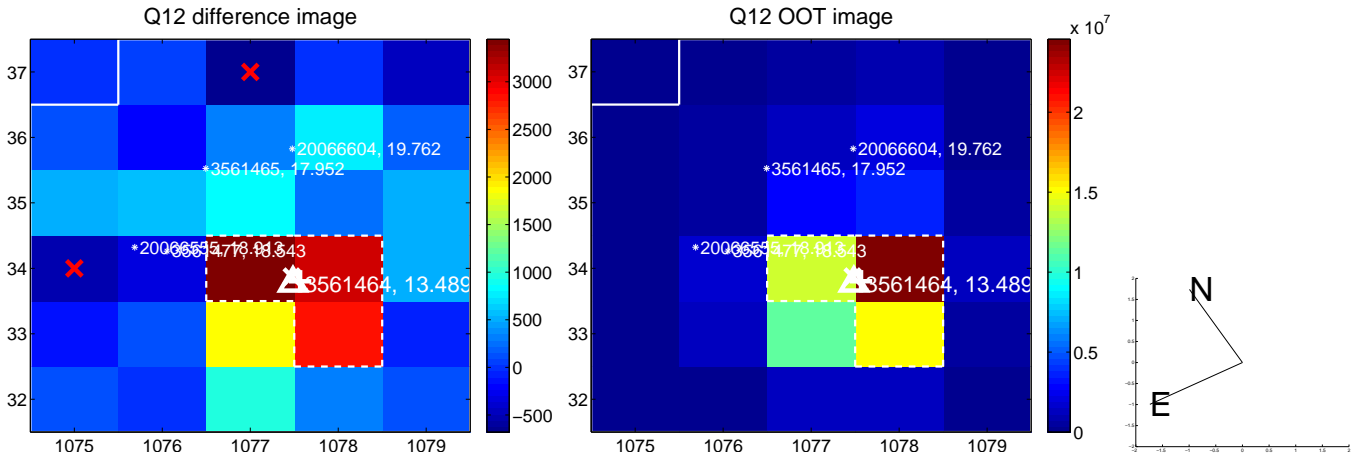
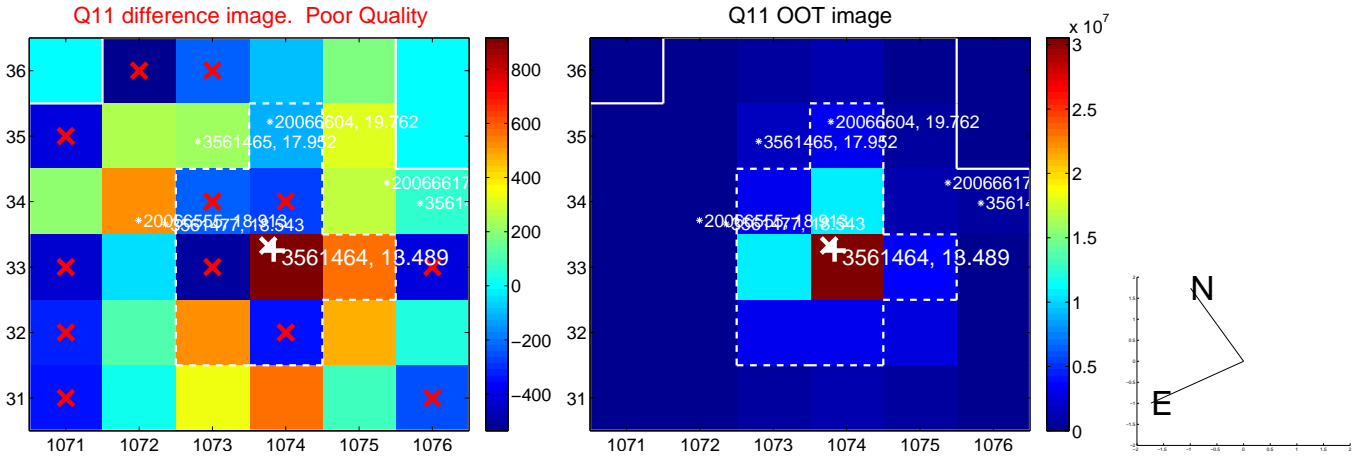
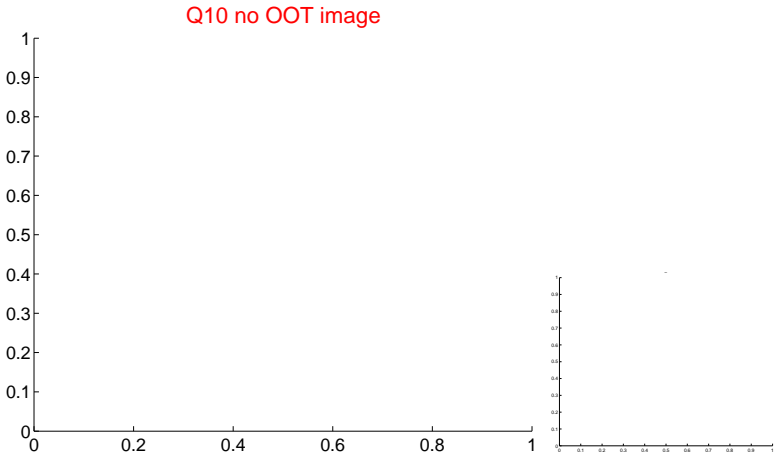
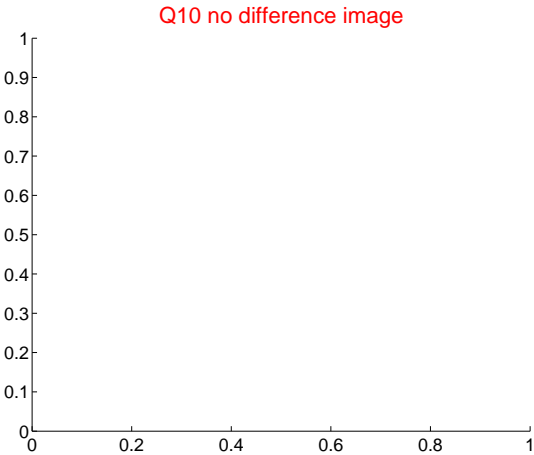
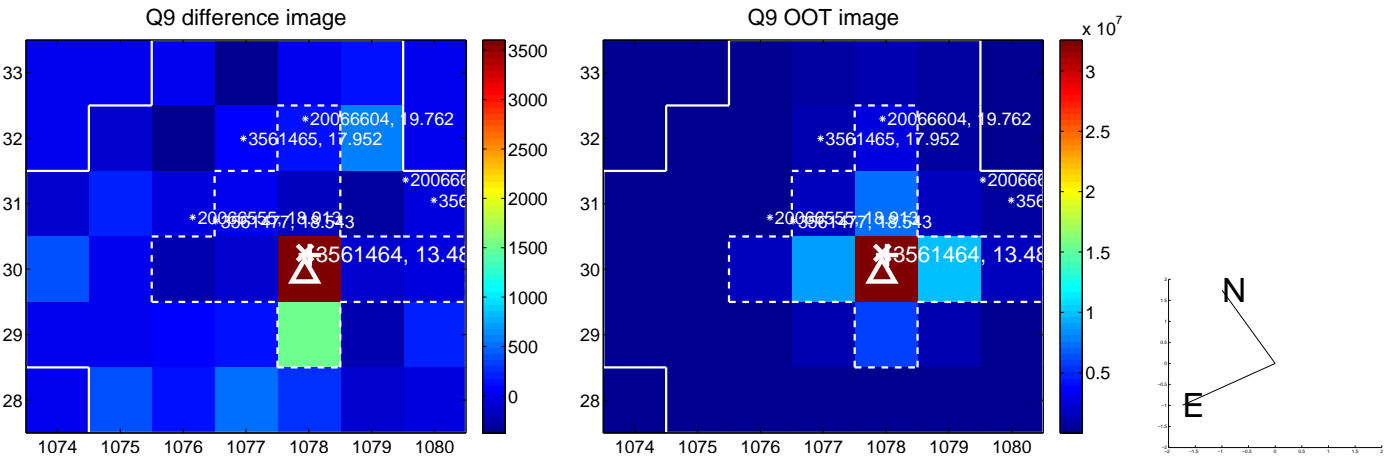
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



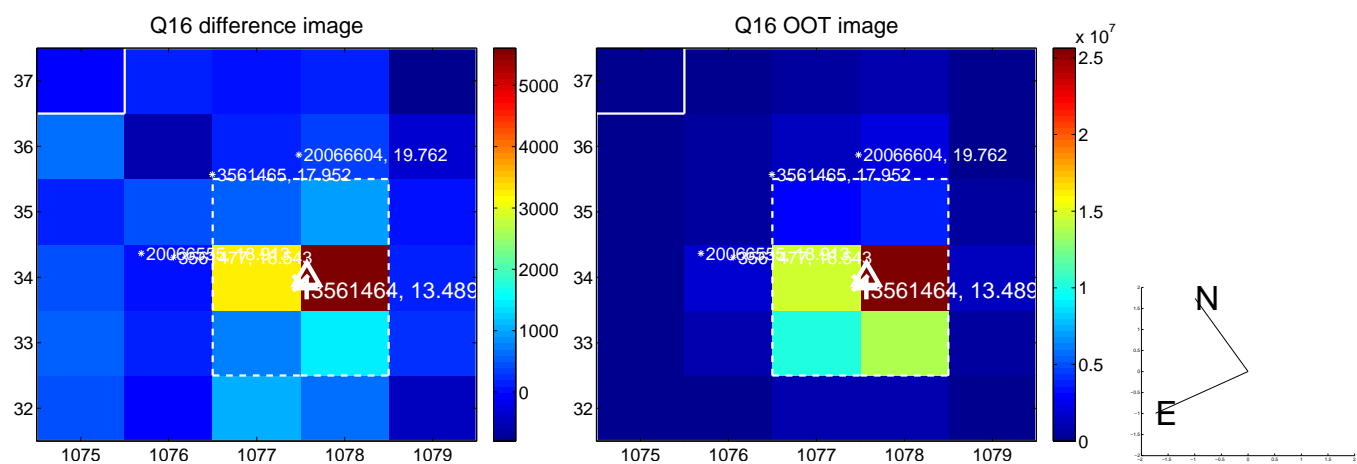
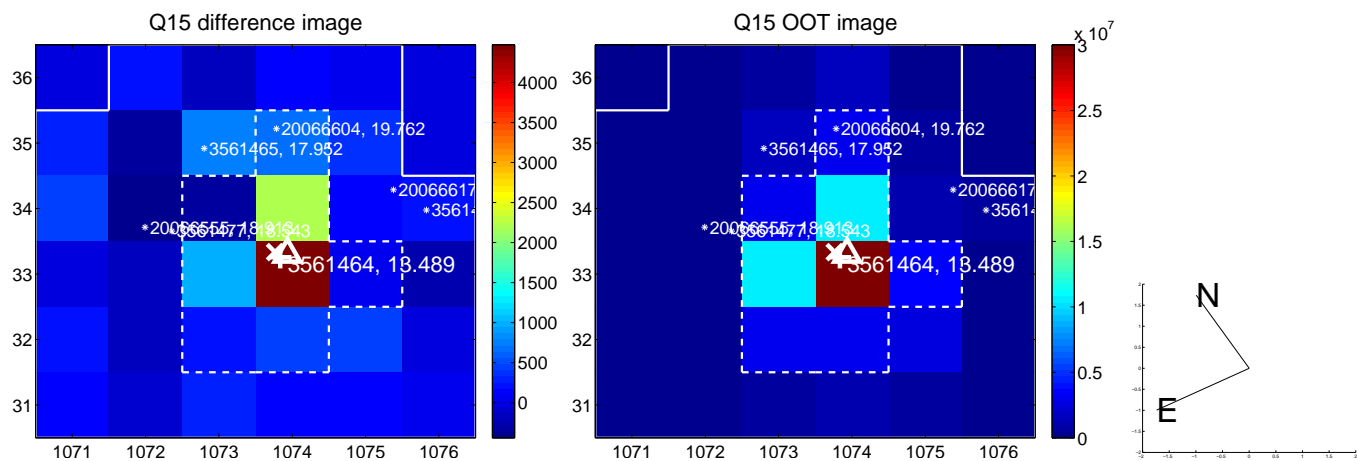
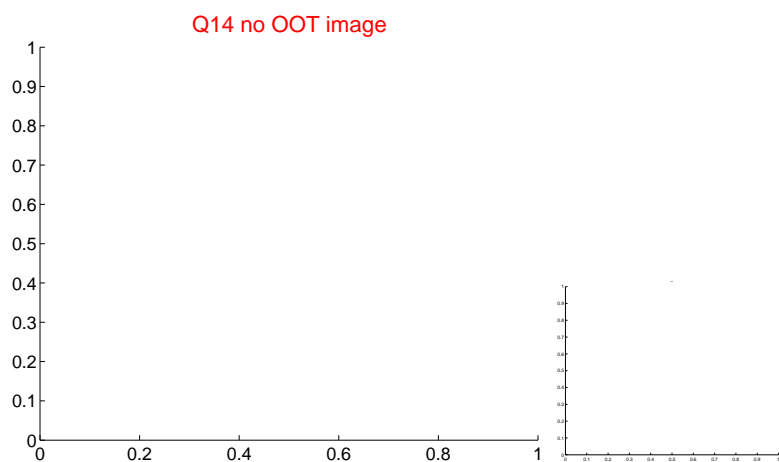
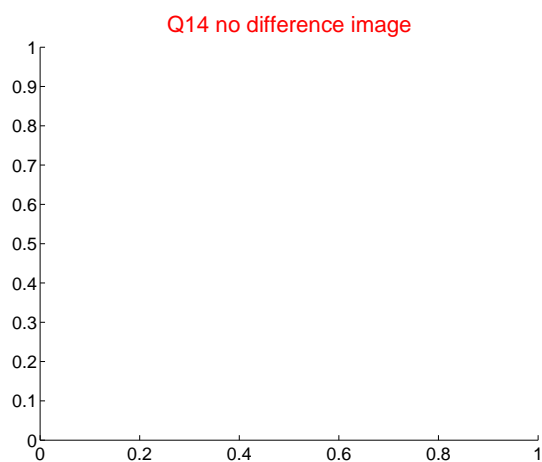
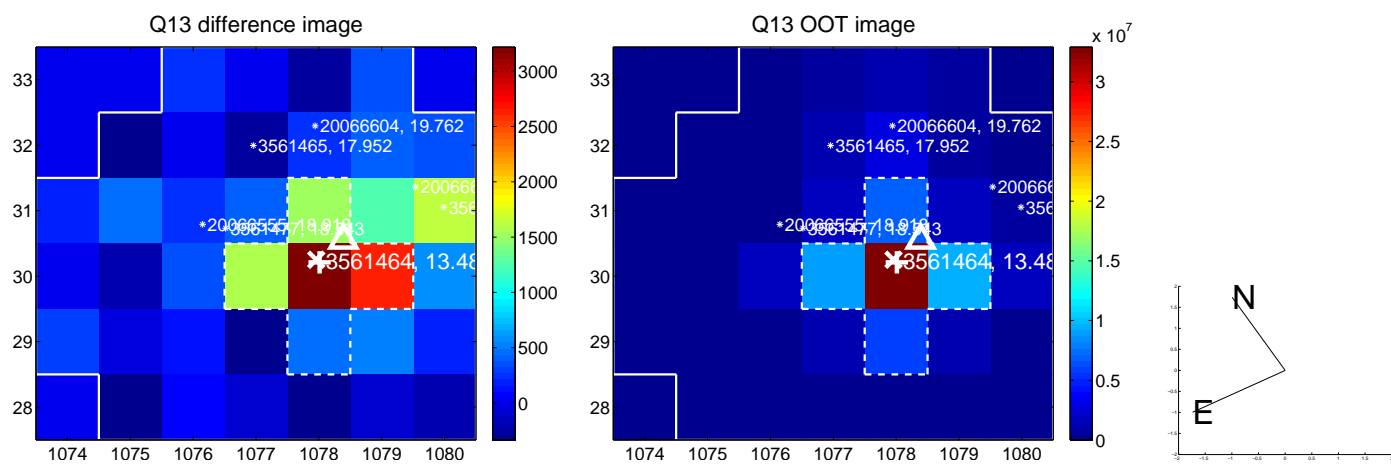
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



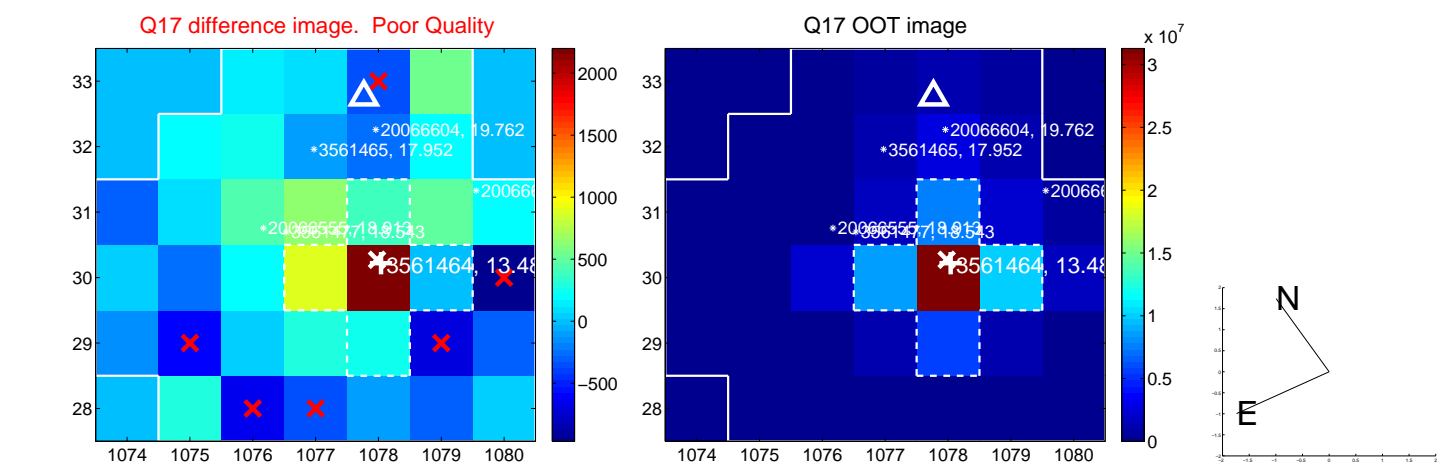
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



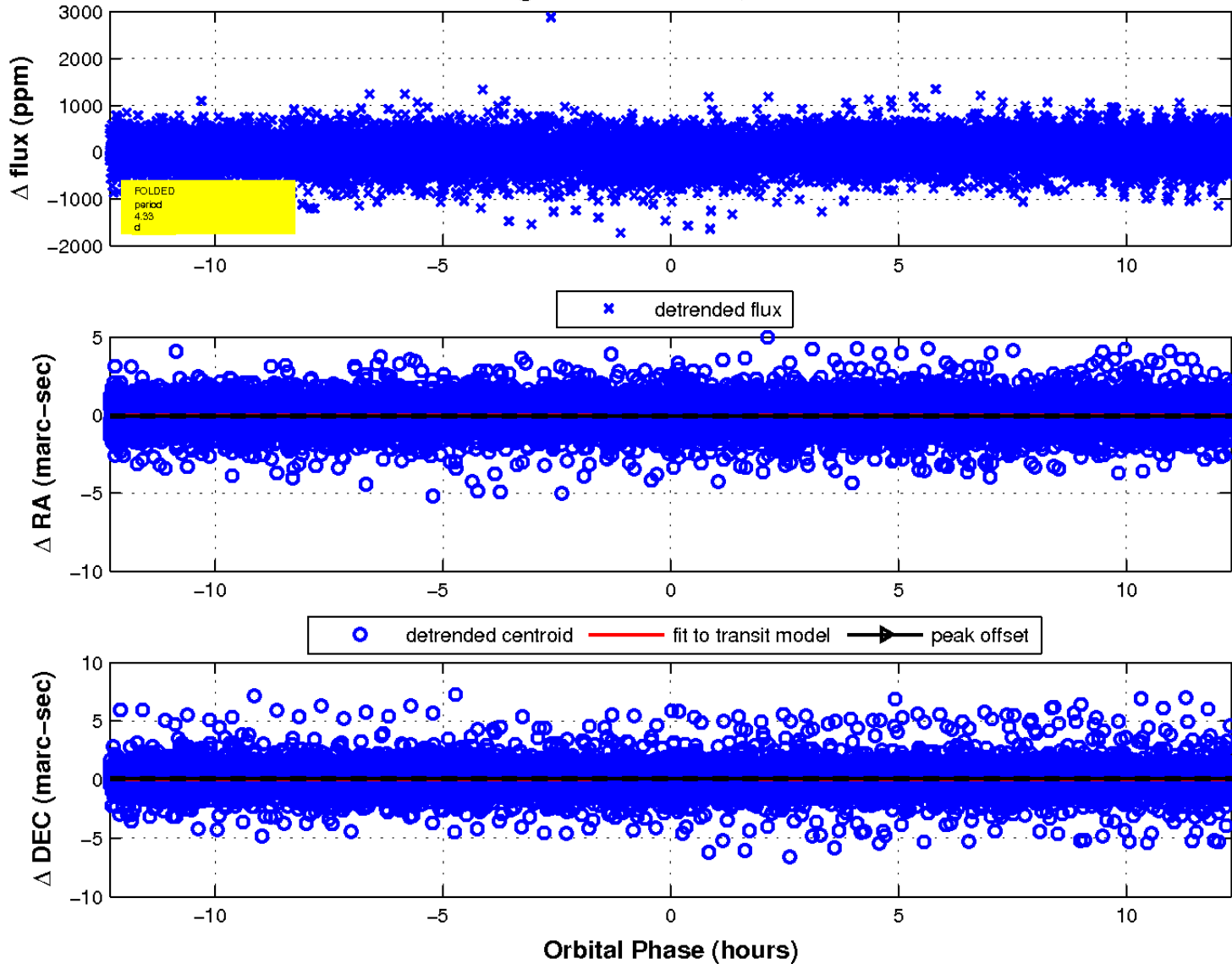
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

