

KIC 002581674

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})
002581674-01	OBS	No	0.695247	131.942985	21.0	2.902	8.8	11.4	3.92	7334	2.08	101556.63
002581674-02	OBS	No	54.079581	183.609665	209.0	6.137	7.9	7.4	3.92	7334	10.96	305.86
002581674-03	OBS	No	168.455256	197.016547	272.3	5.647	7.3	8.0	3.92	7334	8.02	67.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002581674-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
002581674-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
002581674-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

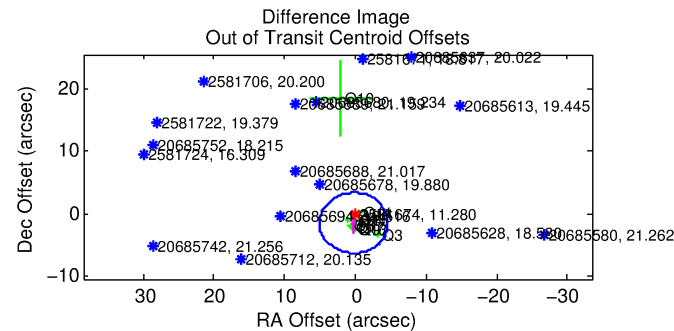
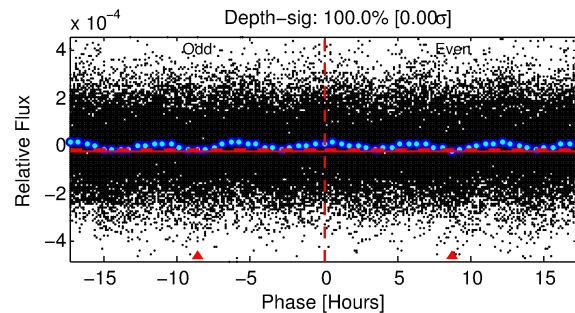
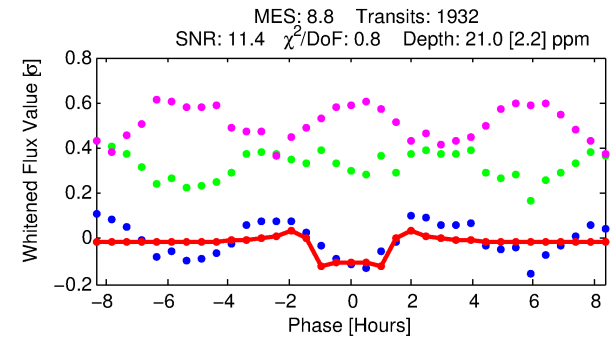
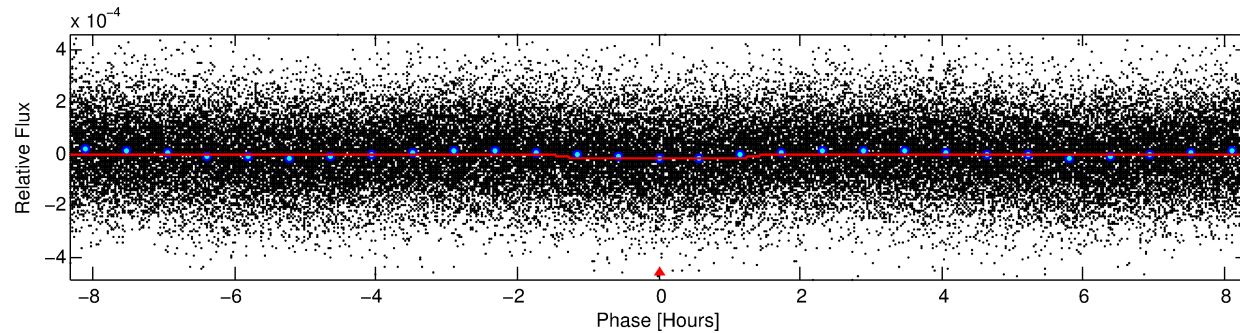
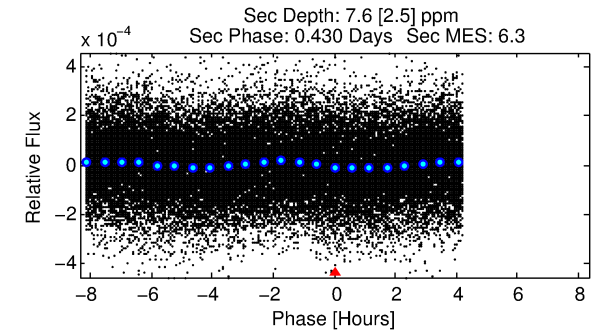
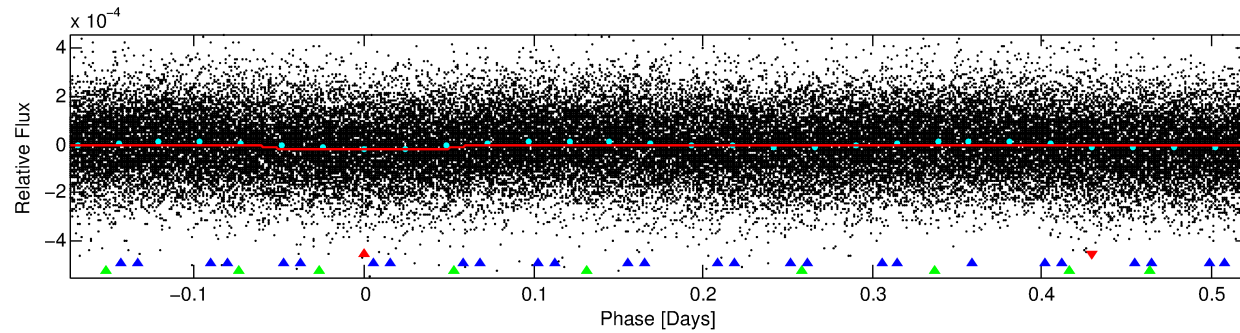
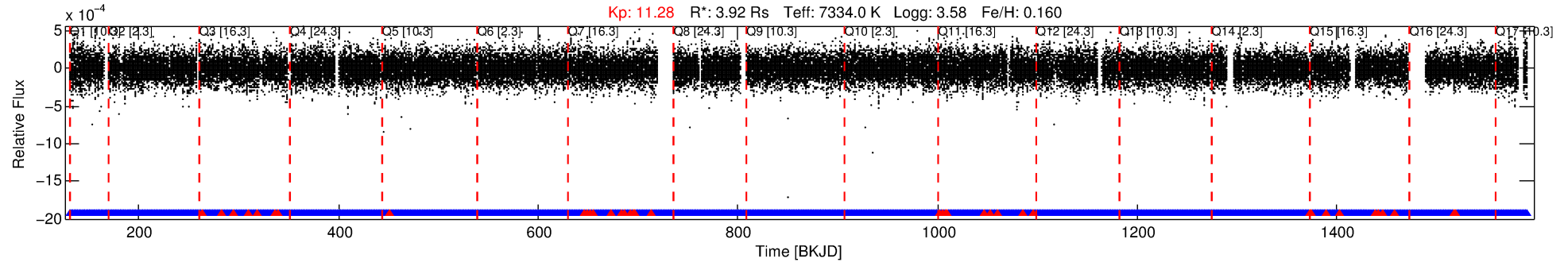
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002581674-01

No Significant Match Found

DV One-Page Summary

KIC: 2581674 Candidate: 1 of 3 Period: 0.695 d



DV Fit Results:

Period = 0.69525 [0.00001] d
Epoch = 131.9430 [0.0017] BKJD
Rp/R* = 0.0049 [0.0009]
a/R* = 1.25 [0.48]
b = 0.90 [0.23]
Seff = 101556.63 [86359.31]
Teq = 4552 [968] K
Rp = 2.08 [1.11] Re
a = 0.0198 [0.0100] AU
Ag = 0.38 [0.36] [-1.73σ]
Teffp = 5509 [705] K [0.80σ]

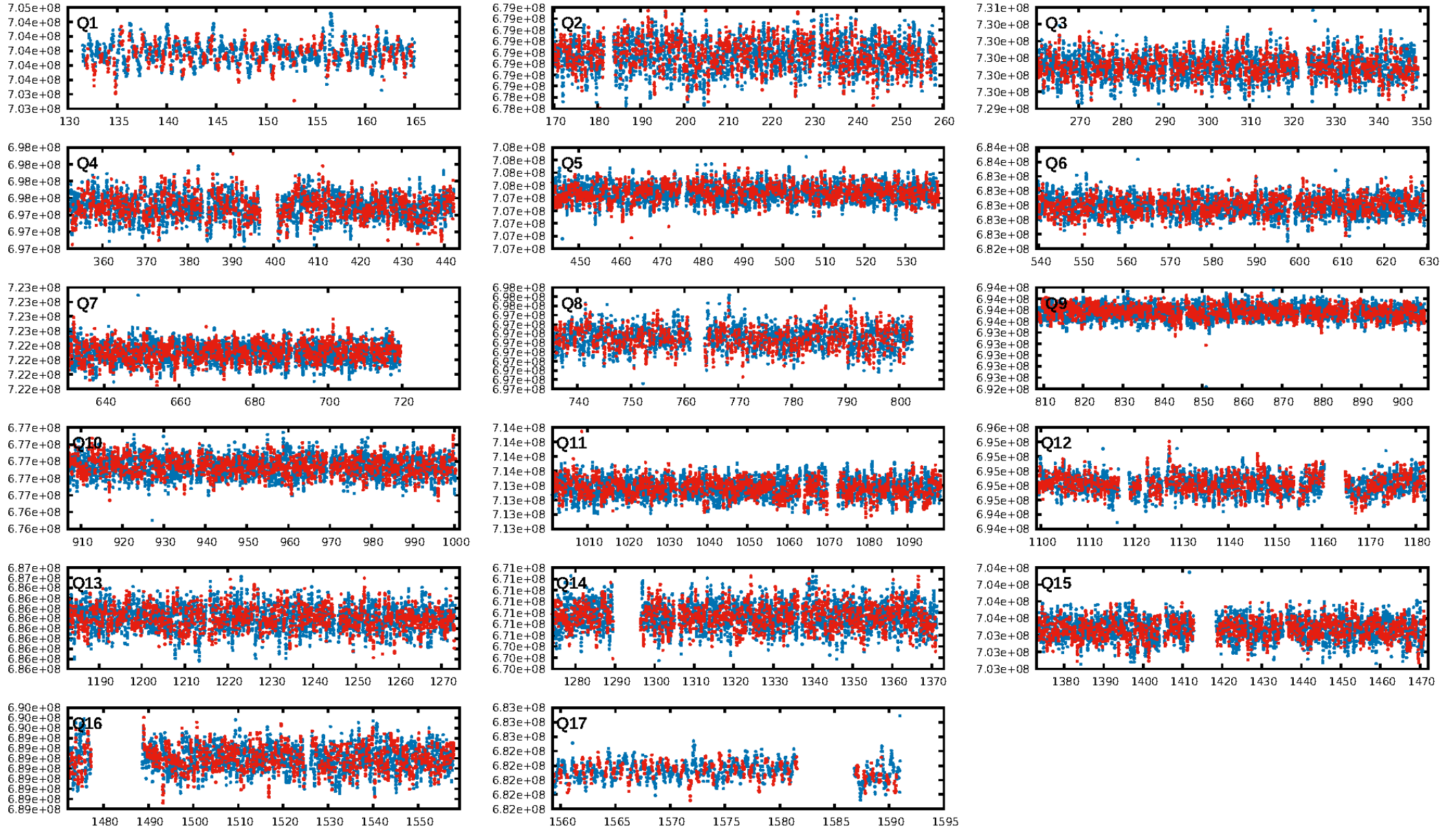
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [188.74σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.66e-12
RollingBand-fgt: 0.98 [1806/1845]
GhostDiagnostic-chr: 2.389
Centroid-sig: 0.1%
Centroid-so: 0.982 arcsec [1.95σ]
OotOffset-rm: 1.554 arcsec [0.96σ]
KicOffset-rm: 1.693 arcsec [1.02σ]
OotOffset-st: 2/3/2/4 [11]
KicOffset-st: 2/3/2/4 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

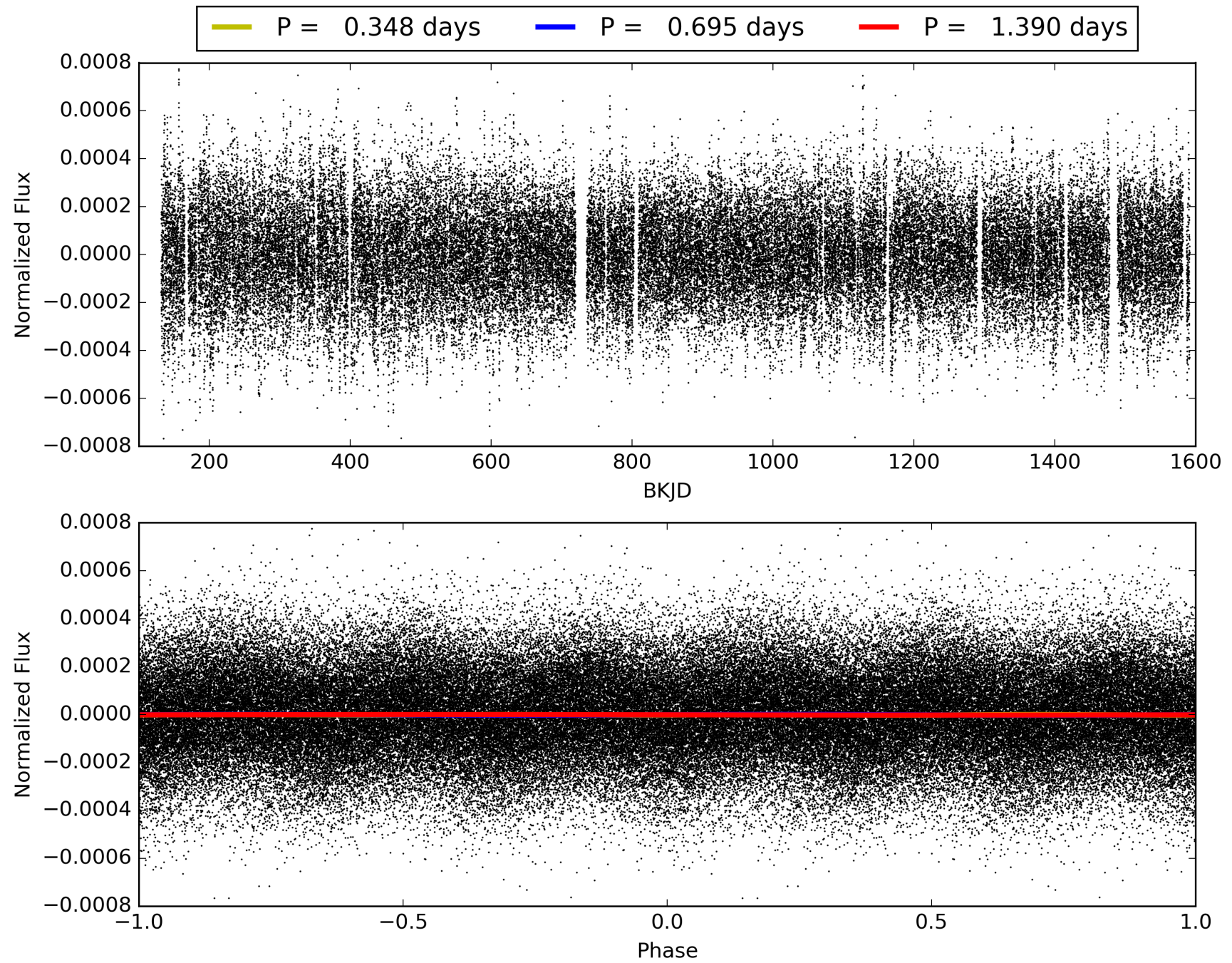
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:05:03 Z

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

TCE 002581674-01, PDC Light Curves

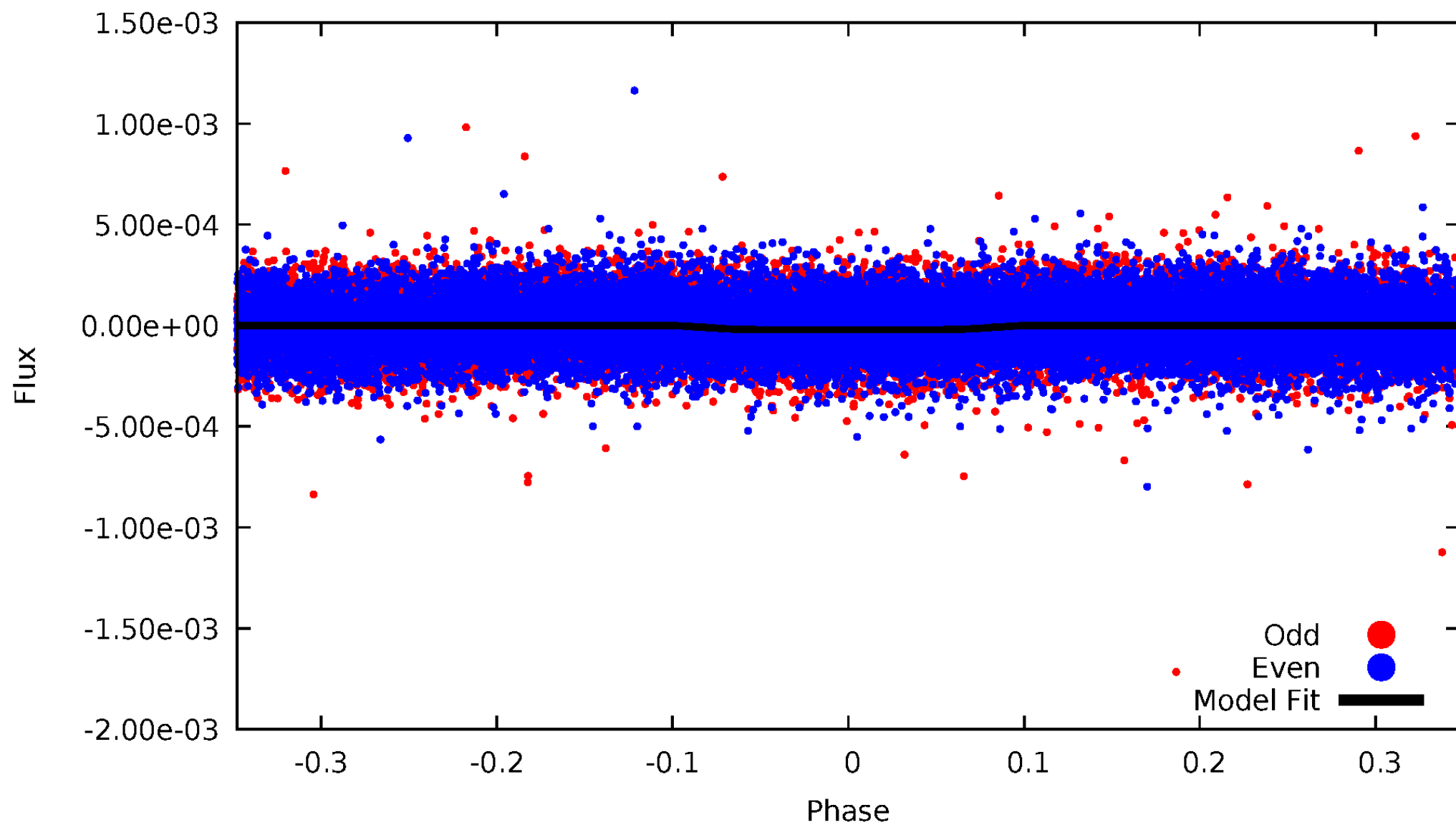


TCE 002581674-01



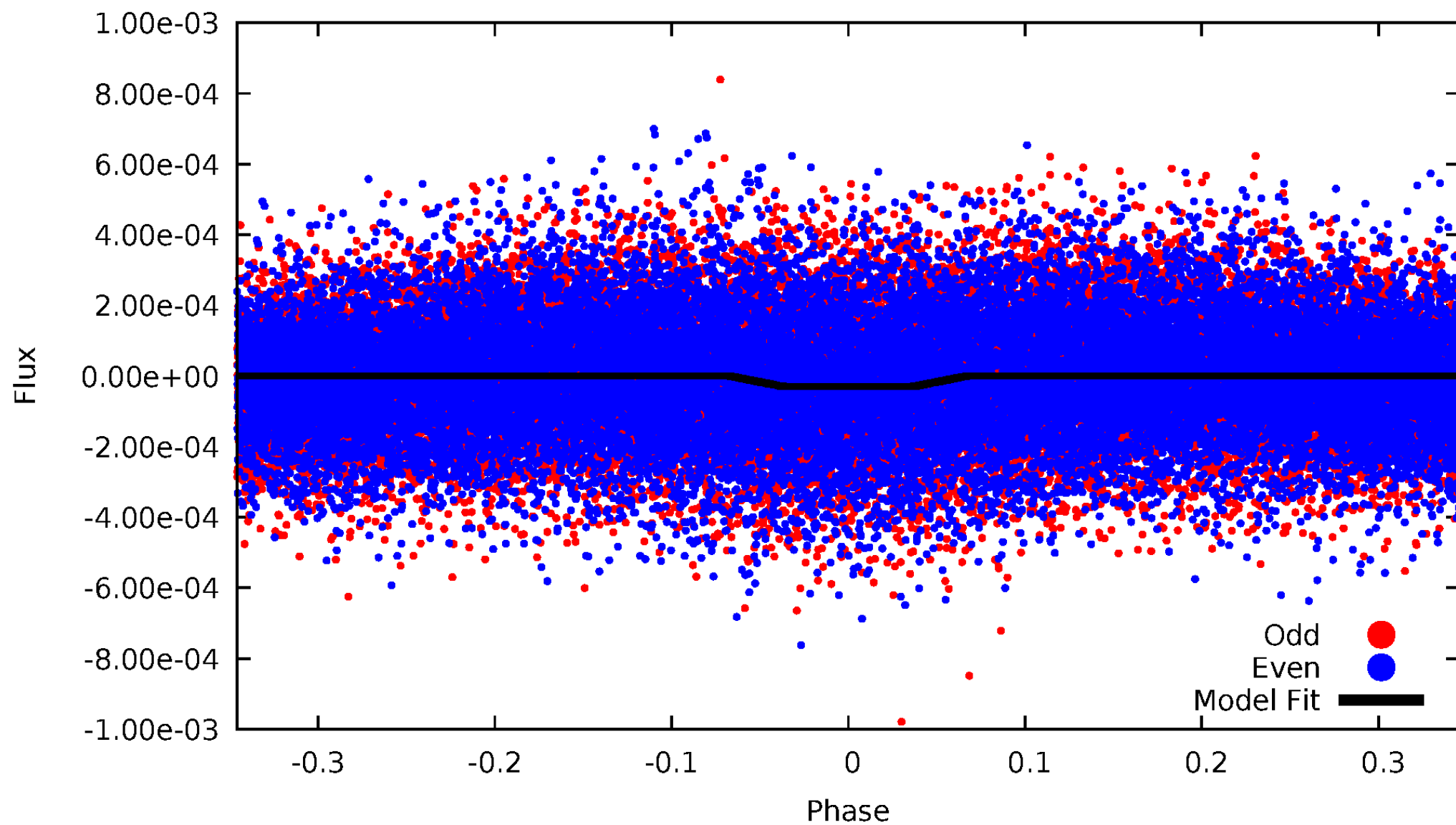
DV Odd/Even

TCE 002581674-01

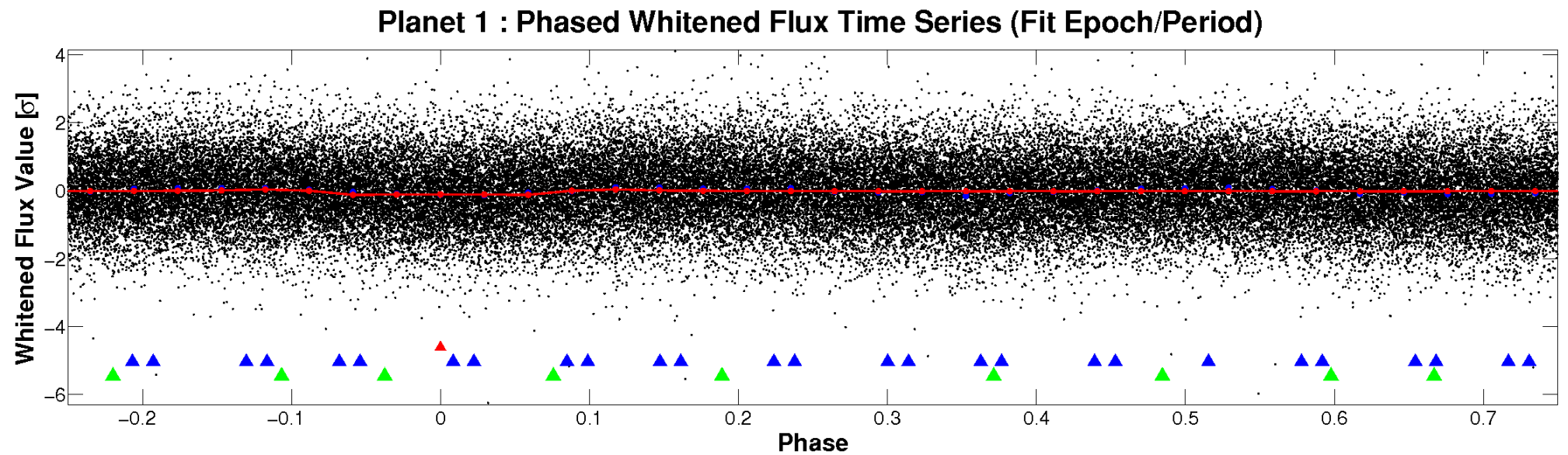
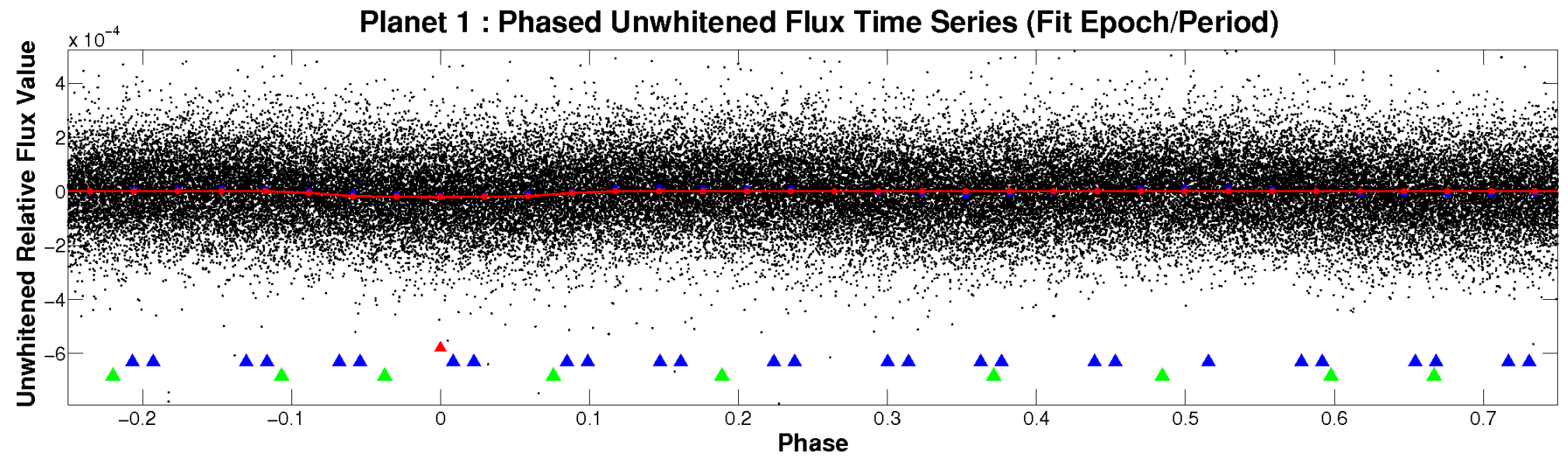


ALT Odd/Even

TCE 002581674-01

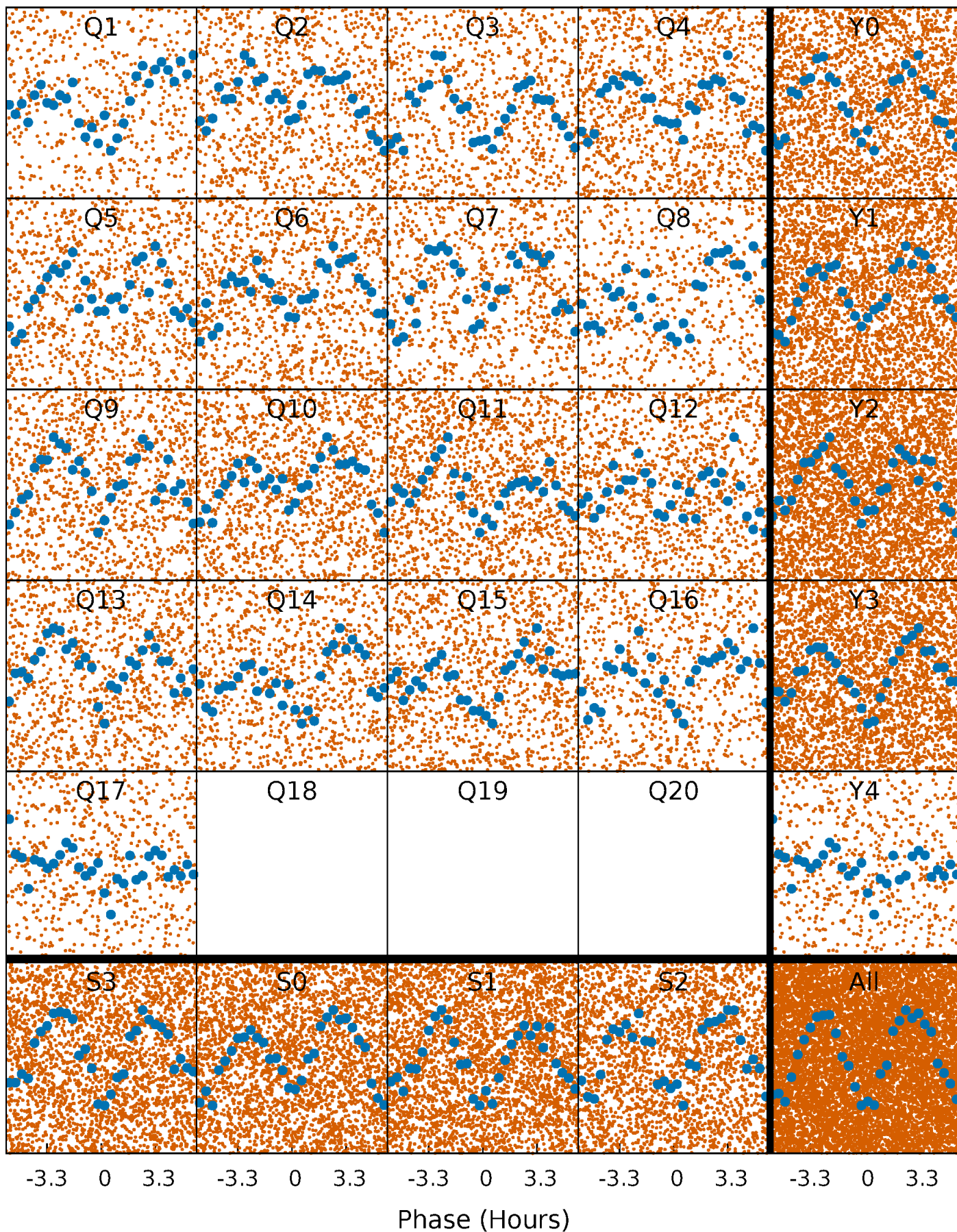


Non-Whitened Vs. Whitened Light Curve



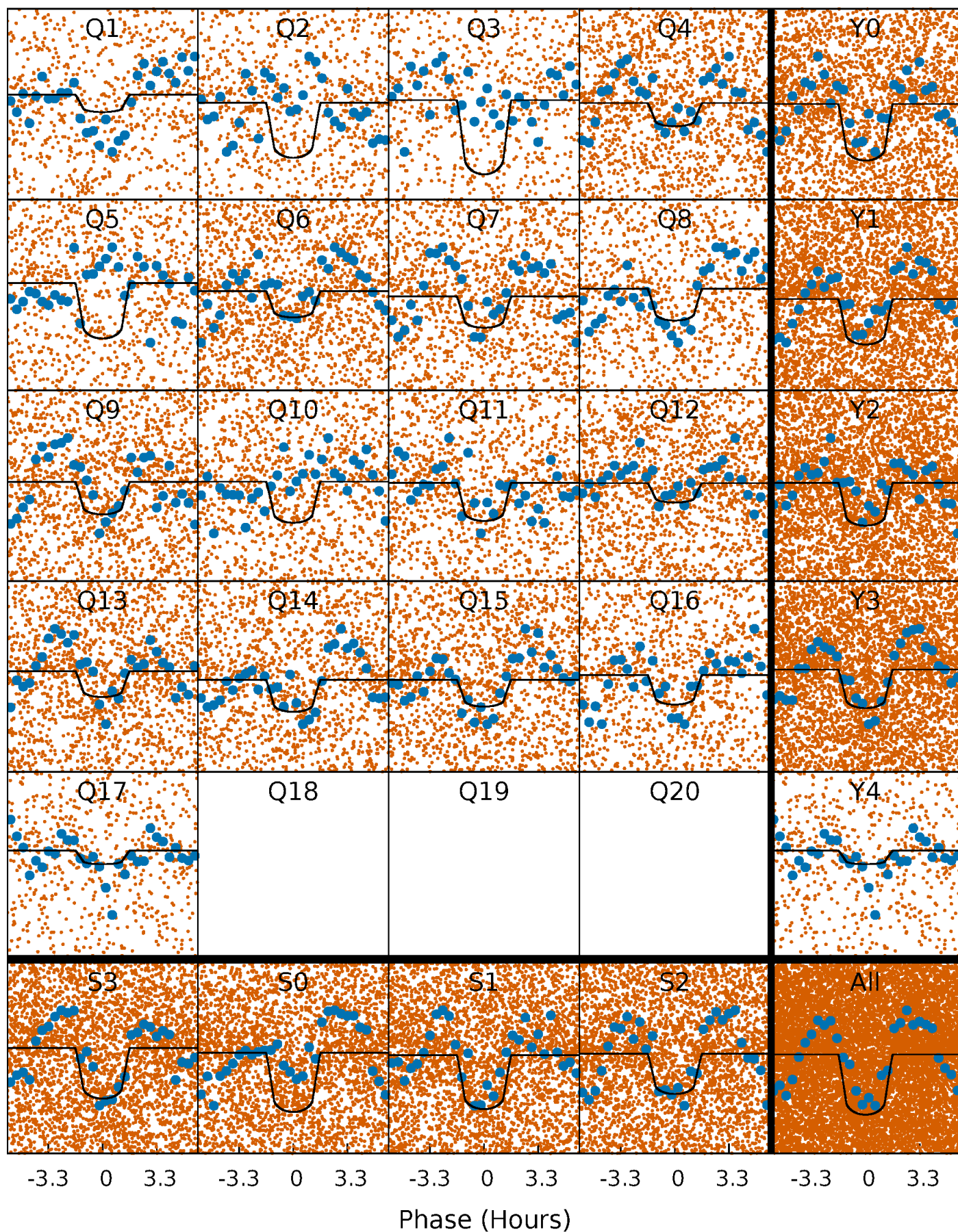
PDC Quarter-Phased Transit Curves

TCE 002581674-01 P= 0.695247 Days $T_0=131.942985$ (BKJD)



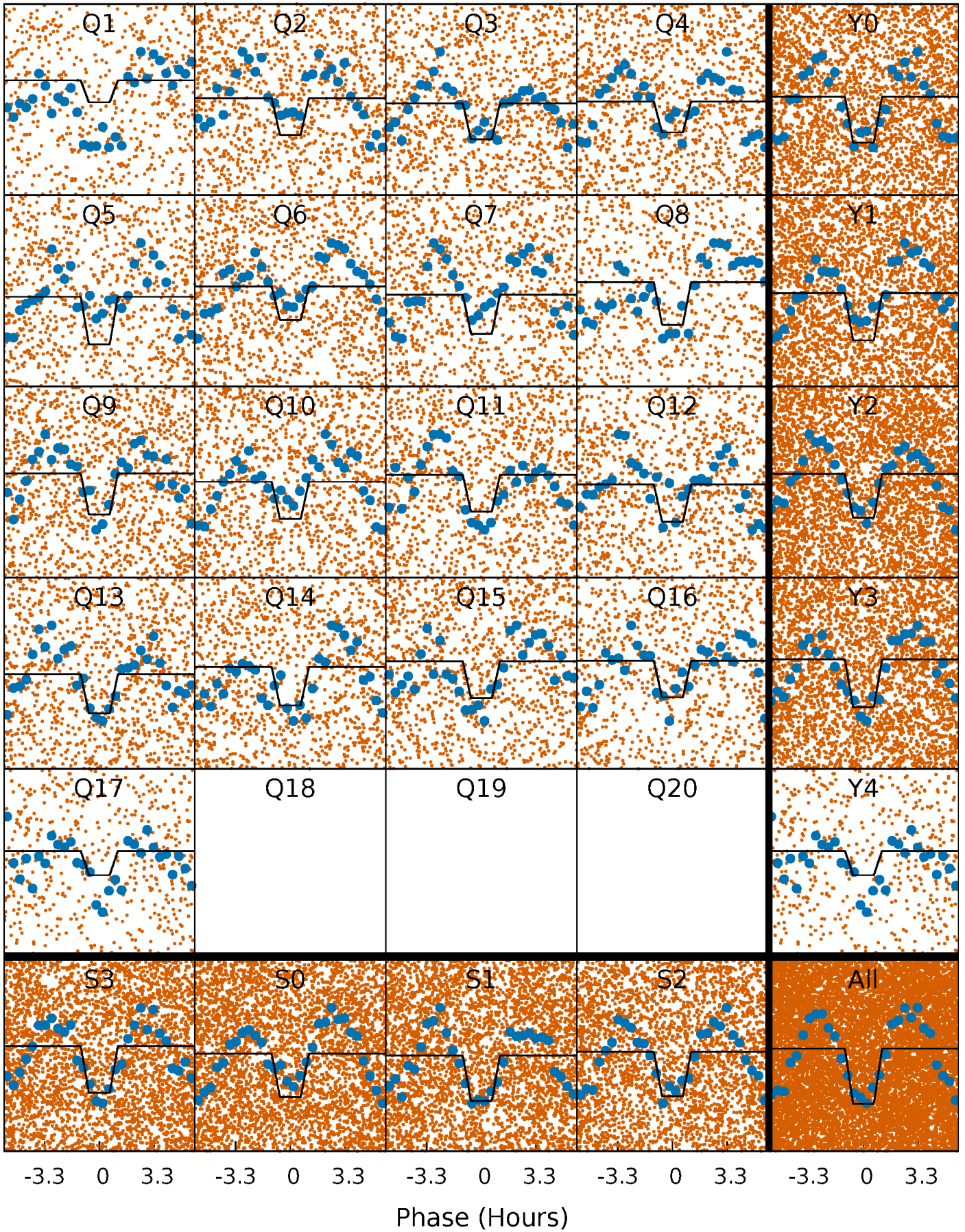
DV Quarter-Phased Transit Curves

TCE 002581674-01 P= 0.695247 Days $T_0=131.942985$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

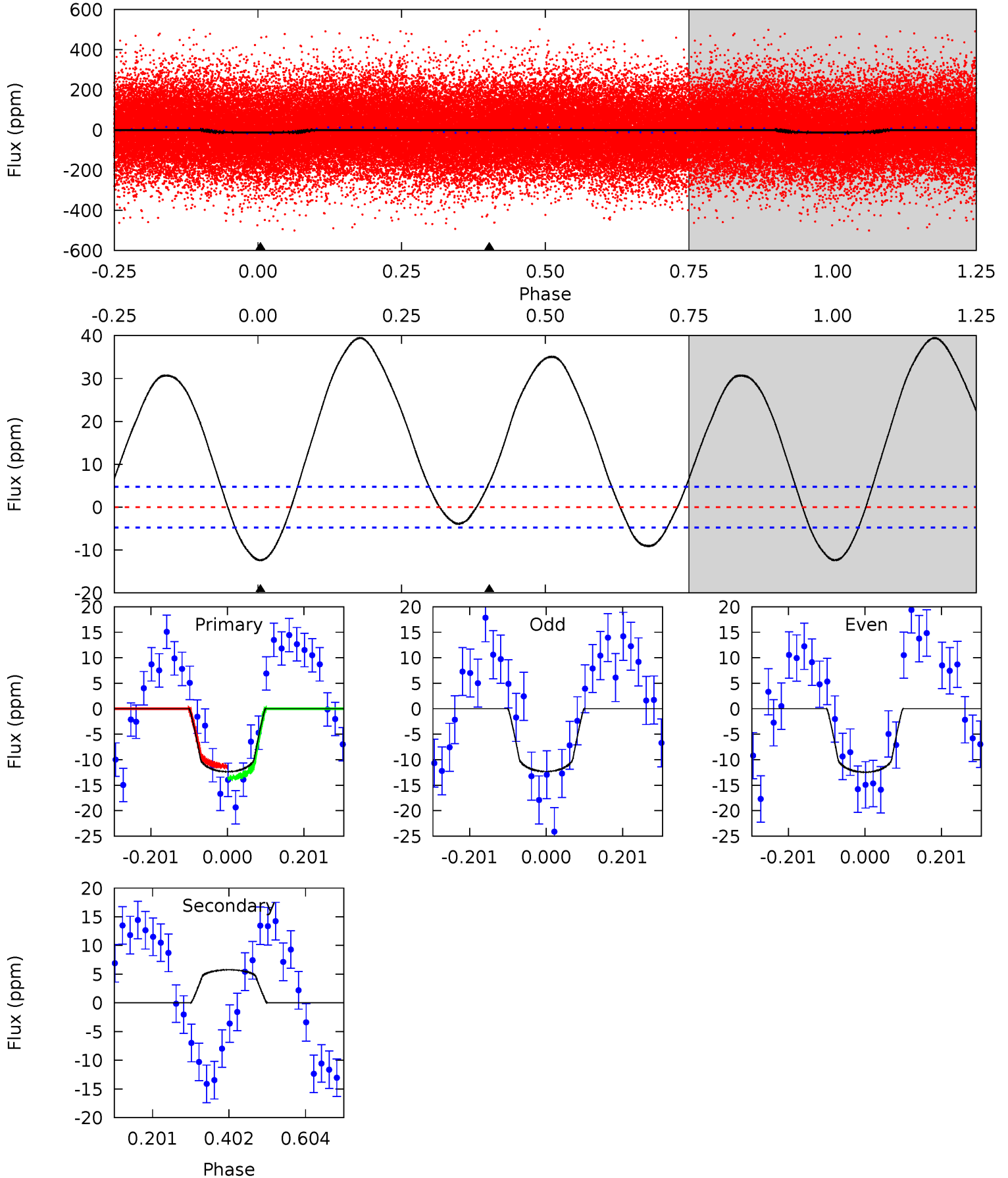
TCE 002581674-01 P= 0.695254 Days $T_0=131.941053$ (BKJD)



DV Model-Shift Uniqueness Test

002581674-01, P = 0.695247 Days, E = 131.247738 Days

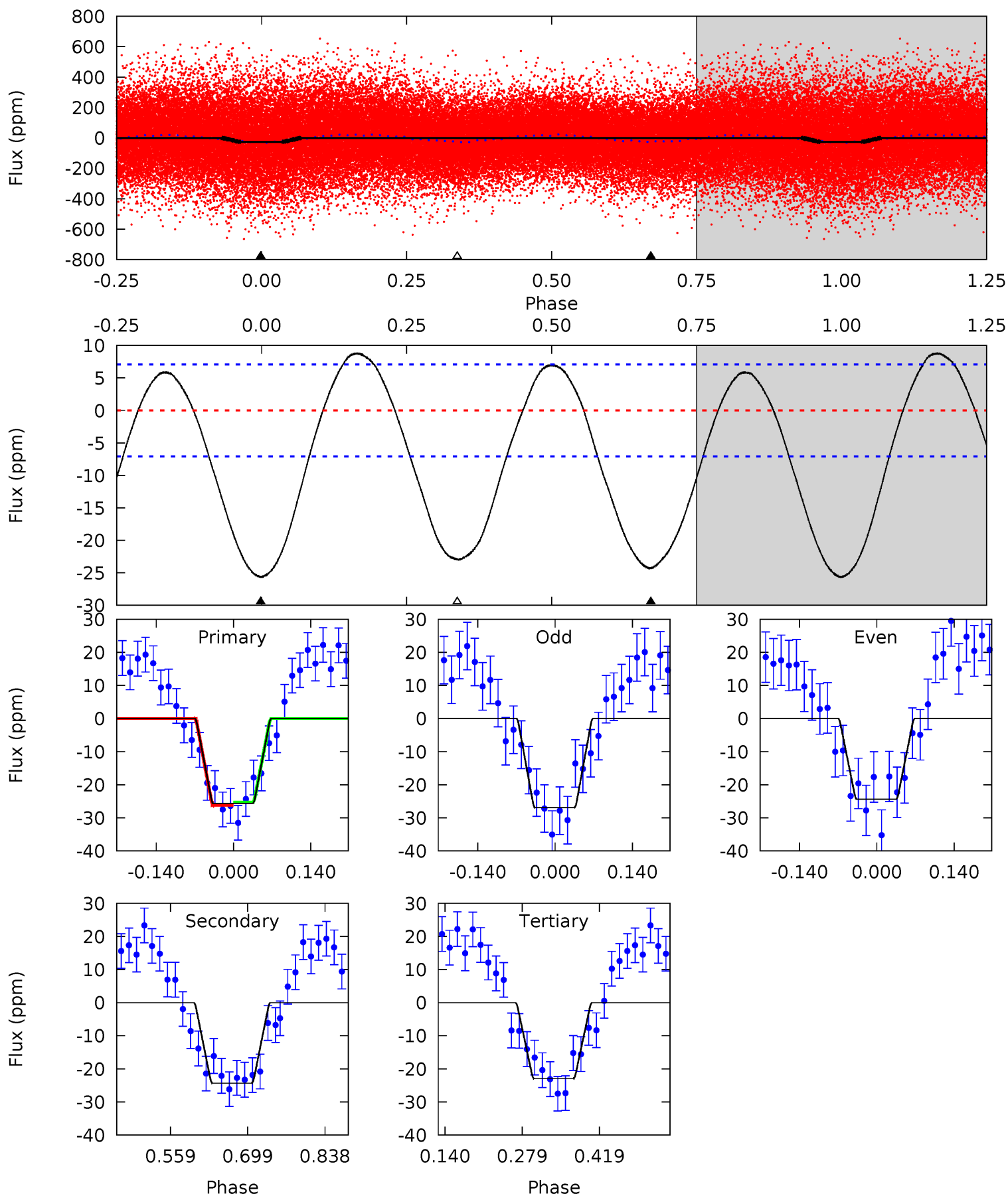
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	-5.37	0	0	4.42	1.28	9.25	11.5	11.5	-5.37	-5.37	0.06	1.03	0.76	1.06



Alt Model-Shift Uniqueness Test

002581674-01, P = 0.695254 Days, E = 131.245799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	15.4	14.6	0	4.49	1.48	7.15	1.71	16.3	0.87	15.4	0.81	1.05	0.26	0.26



Stellar Parameters For KIC 002581674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7334^{+203}_{-330}	$3.582^{+0.495}_{-0.055}$	$0.160^{+0.150}_{-0.350}$	$3.917^{+0.494}_{-1.978}$	$2.133^{+0.234}_{-0.546}$	$0.050^{+0.255}_{-0.014}$
	+3%/-4%	+14%/-2%	+94%/-219%	+13%/-50%	+11%/-26%	+511%/-28%
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 002581674-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	6 ± 1	$1.81^{+0.55}_{-0.47}$	6038^{+478}_{-717}	-5931^{+411}_{-458}	$-0.375^{+0.154}_{-0.302}$
Alt.	-24 ± 2	$2.08^{+0.52}_{-0.58}$	6083^{+413}_{-769}	6394^{+839}_{-664}	$1.229^{+0.943}_{-0.439}$

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

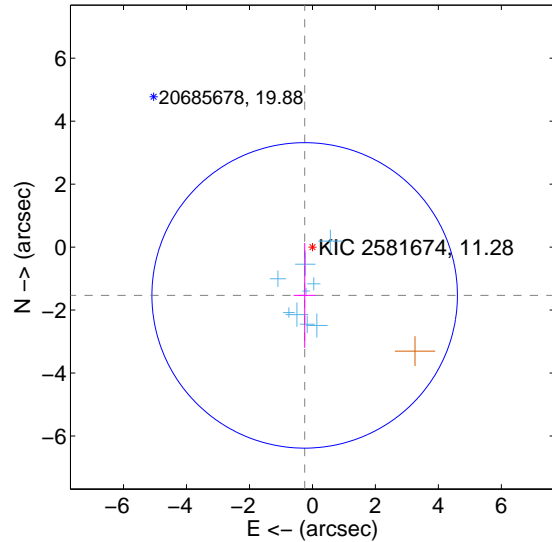
Supplemental centroid analysis for 002581674-01. **Kepler magnitude: 11.28.** Transit SNR 11.42

There are 9 quarters with good PRF difference image offsets

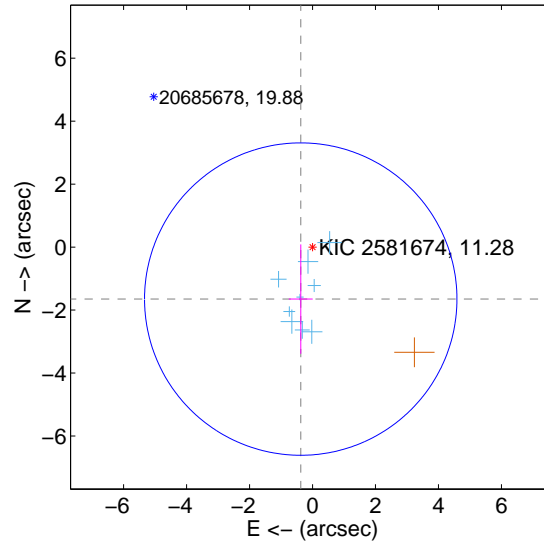
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.554 ± 1.617	0.96	0.247 ± 0.352	-1.535 ± 1.665
PRF-fit source offset from KIC position	1.693 ± 1.654	1.02	0.374 ± 0.381	-1.651 ± 1.737
photometric centroid source offset	0.98 ± 0.50	1.95	0.34 ± 0.41	-0.92 ± 0.52

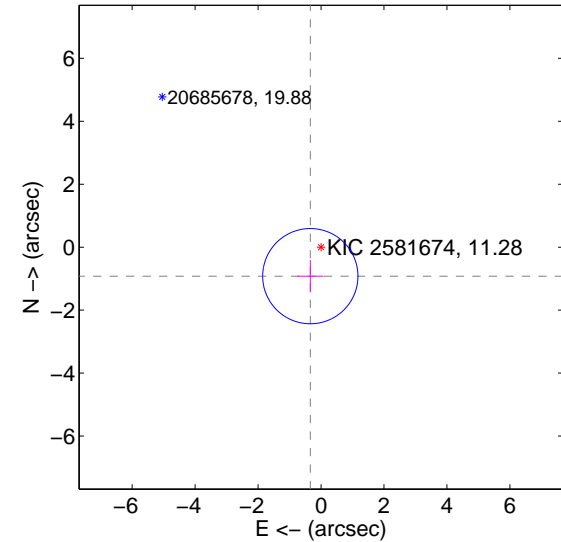
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

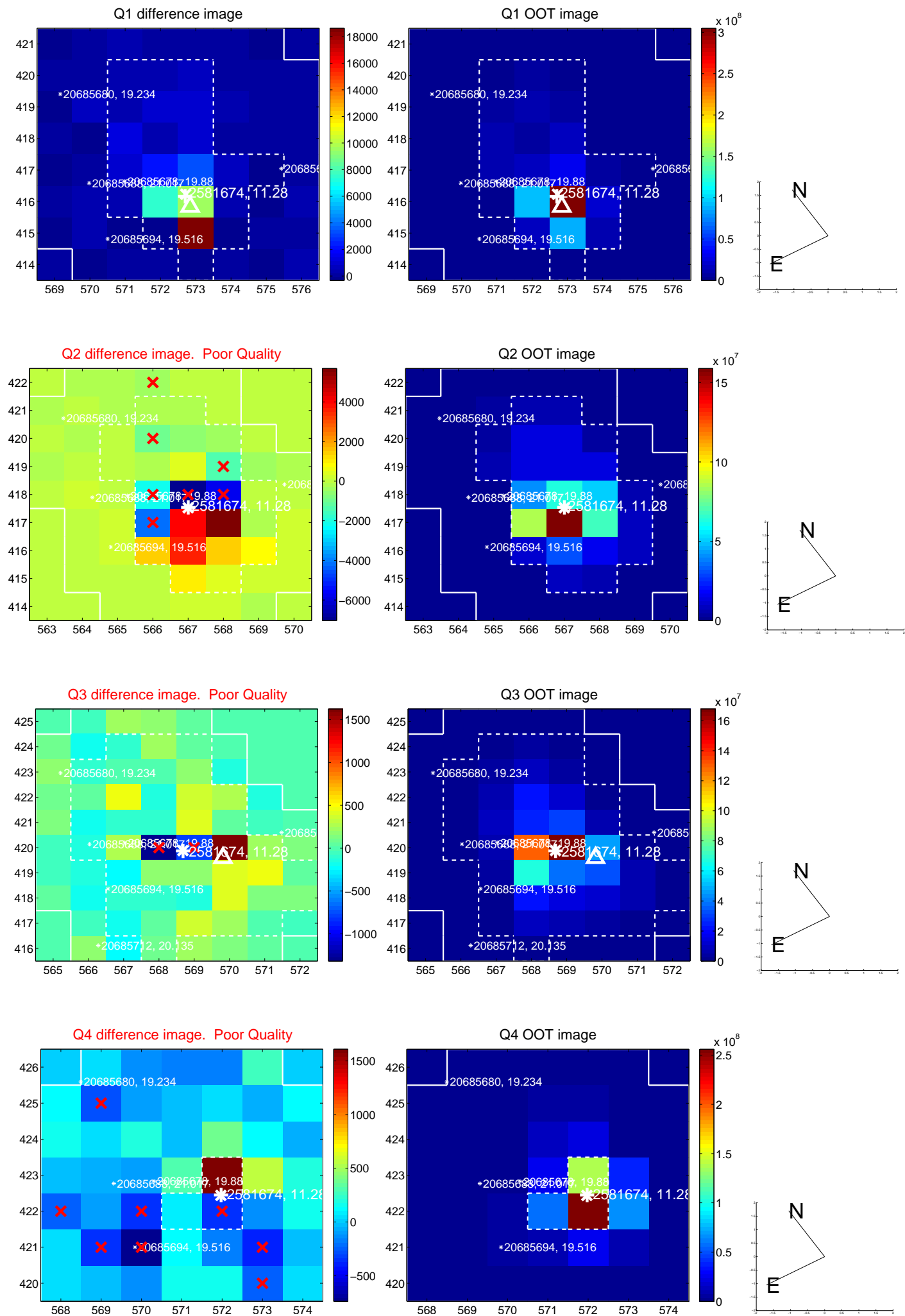


offset from photometric centroids

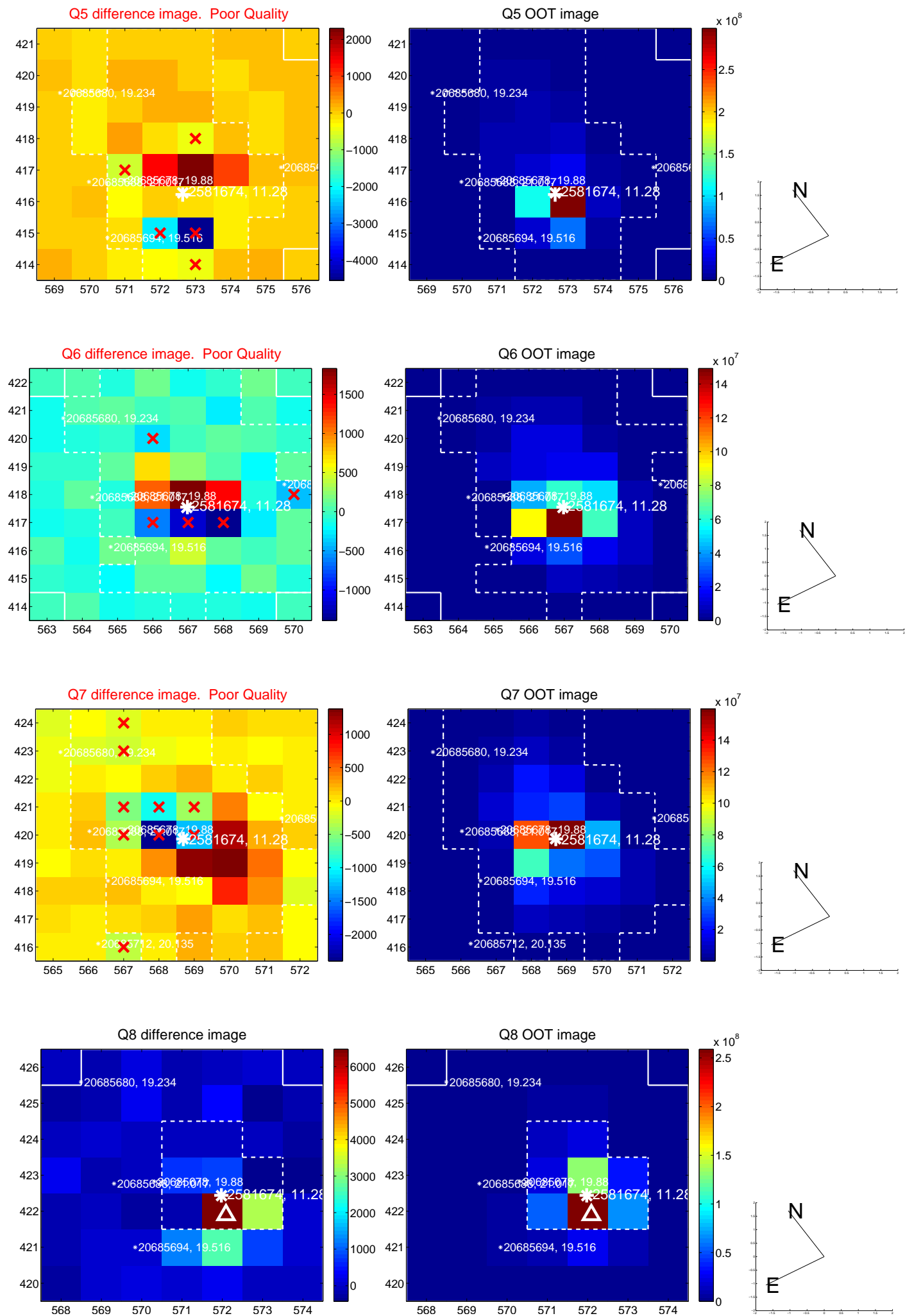


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

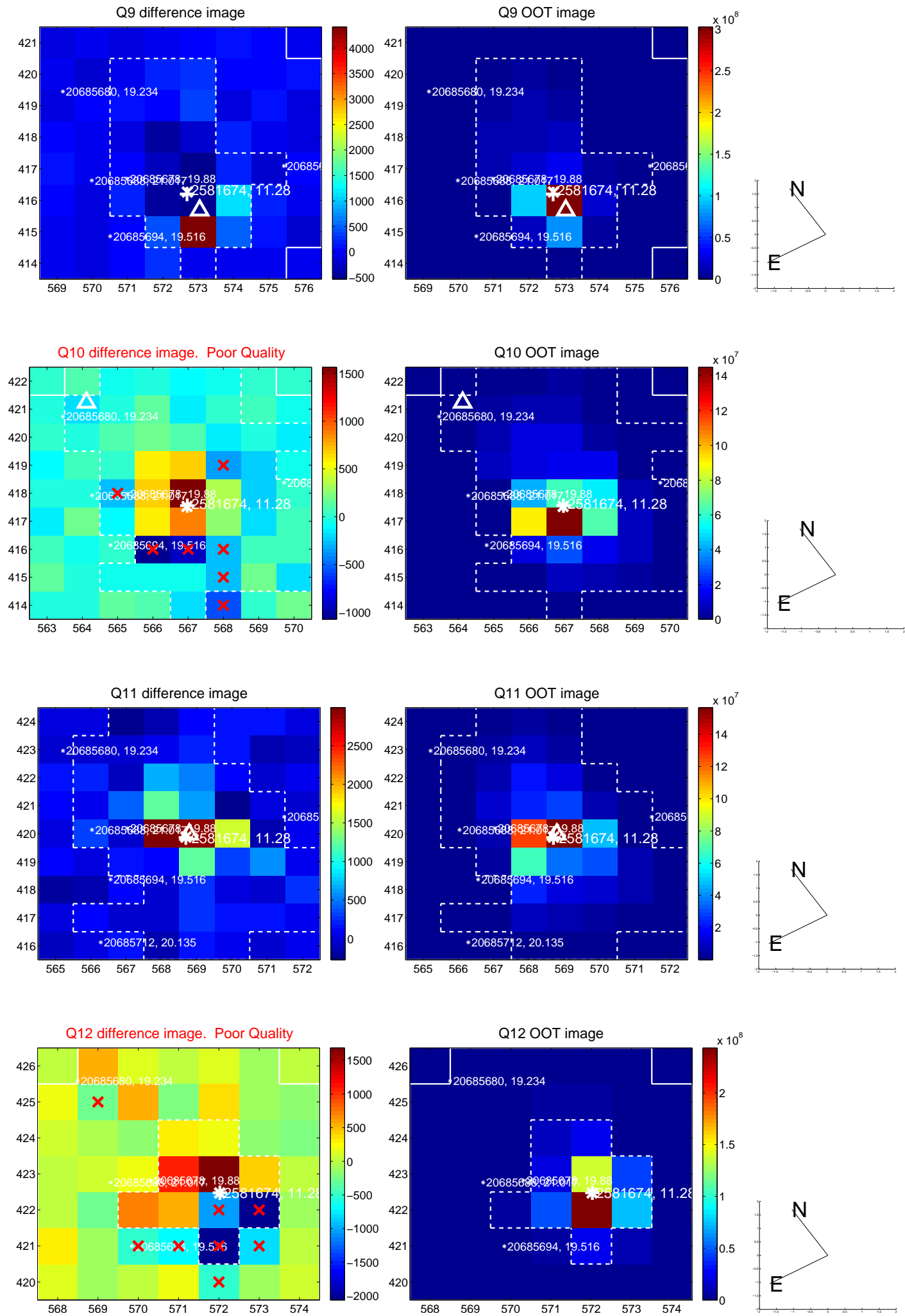
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



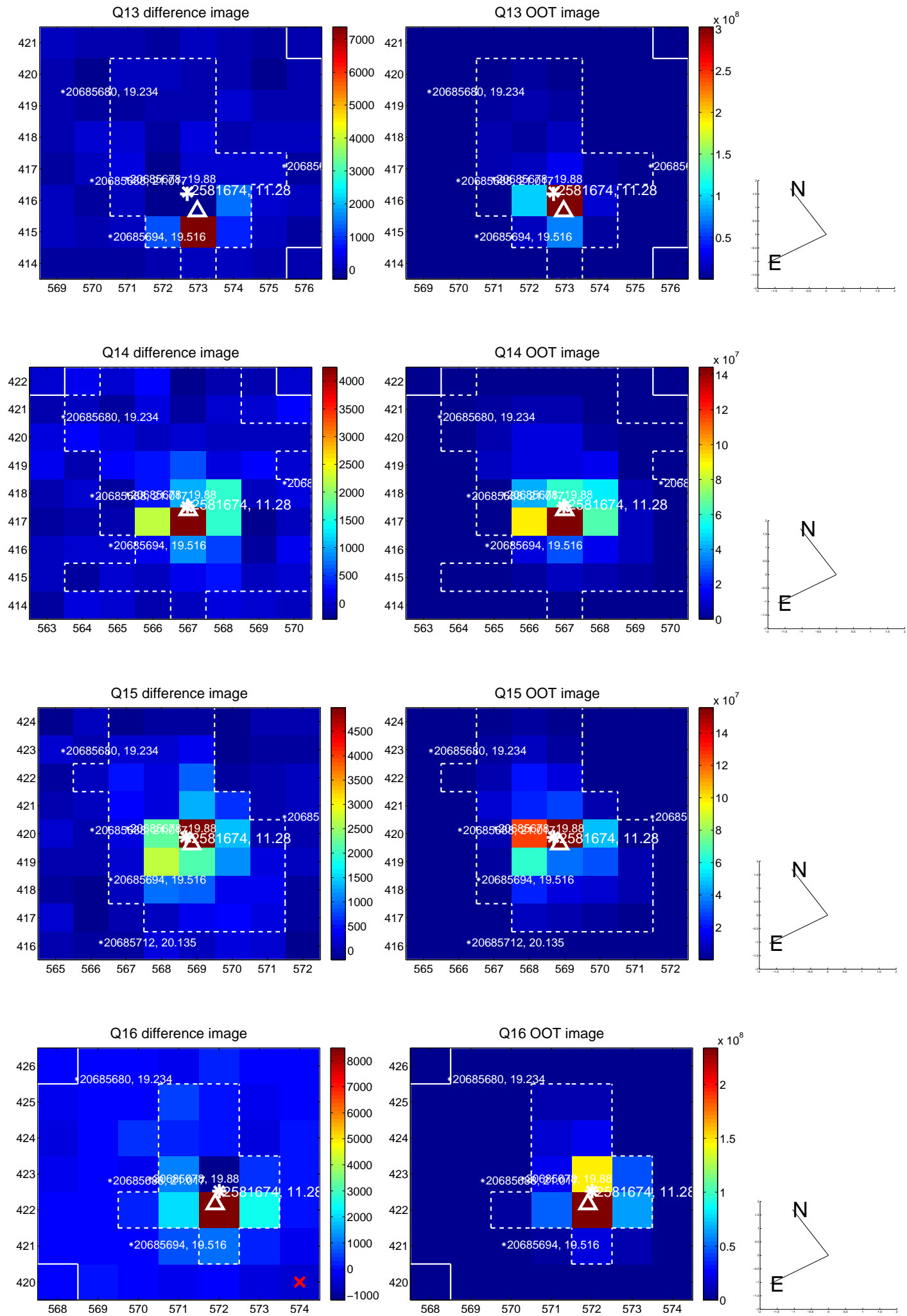
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



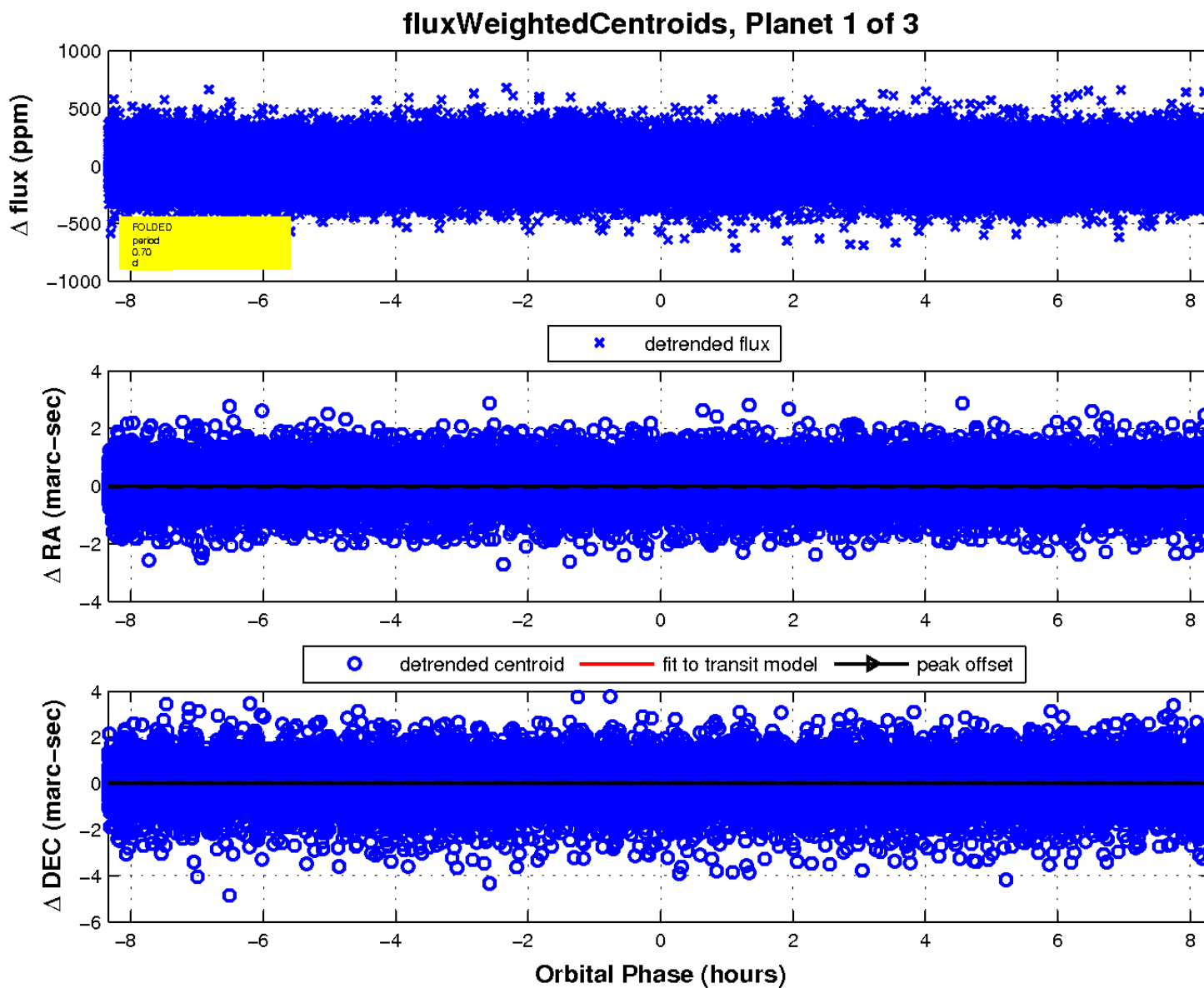
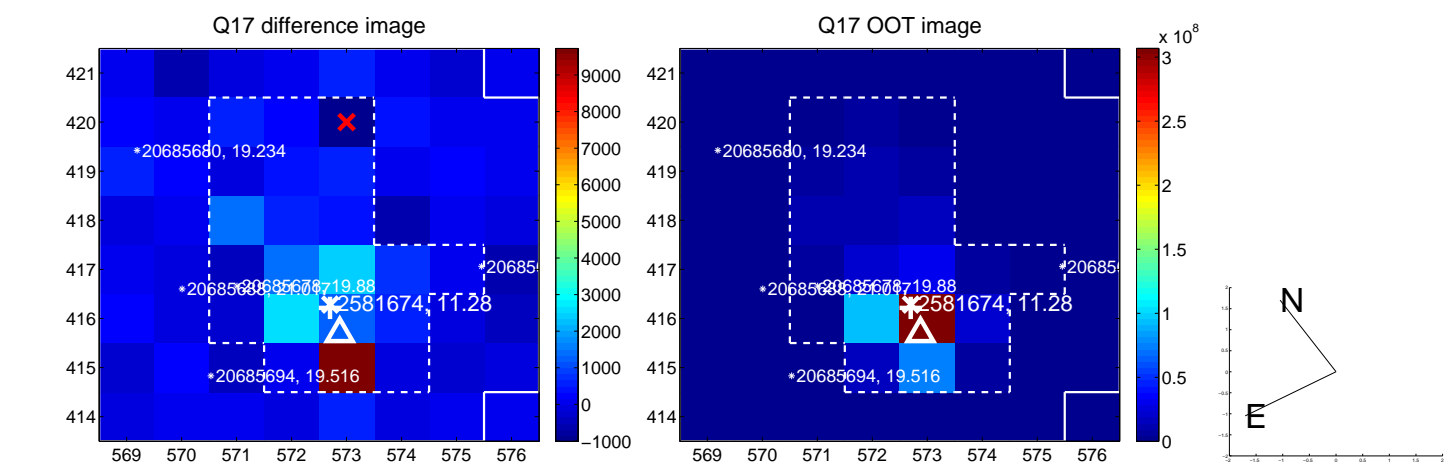
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

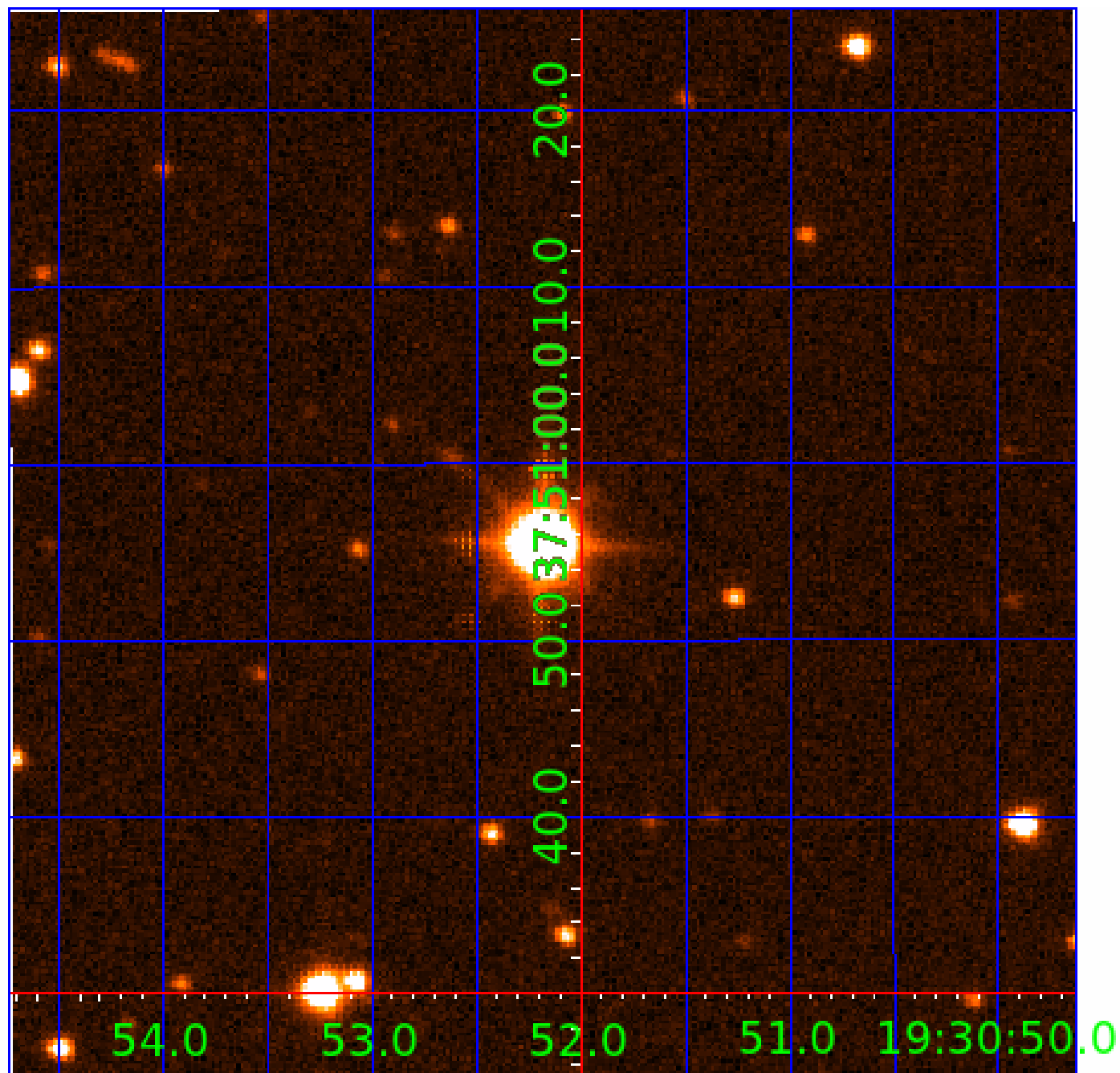


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002581674

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})
002581674-01	OBS	No	0.695247	131.942985	21.0	2.902	8.8	11.4	3.92	7334	2.08	101556.63
002581674-02	OBS	No	54.079581	183.609665	209.0	6.137	7.9	7.4	3.92	7334	10.96	305.86
002581674-03	OBS	No	168.455256	197.016547	272.3	5.647	7.3	8.0	3.92	7334	8.02	67.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002581674-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
002581674-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
002581674-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

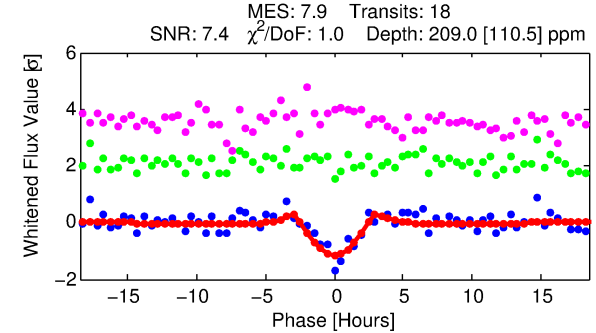
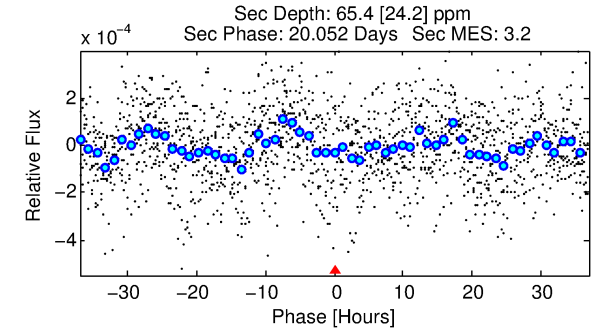
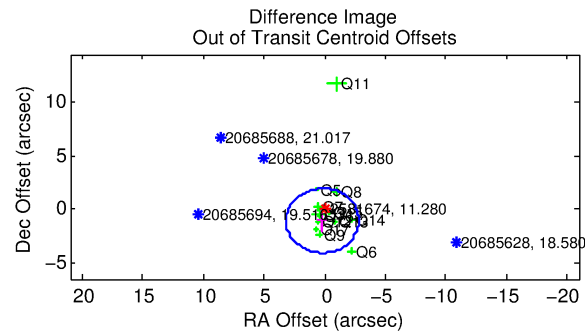
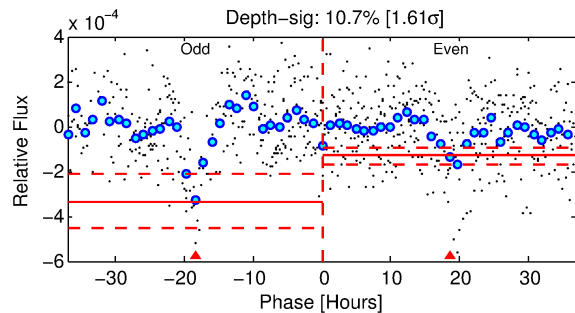
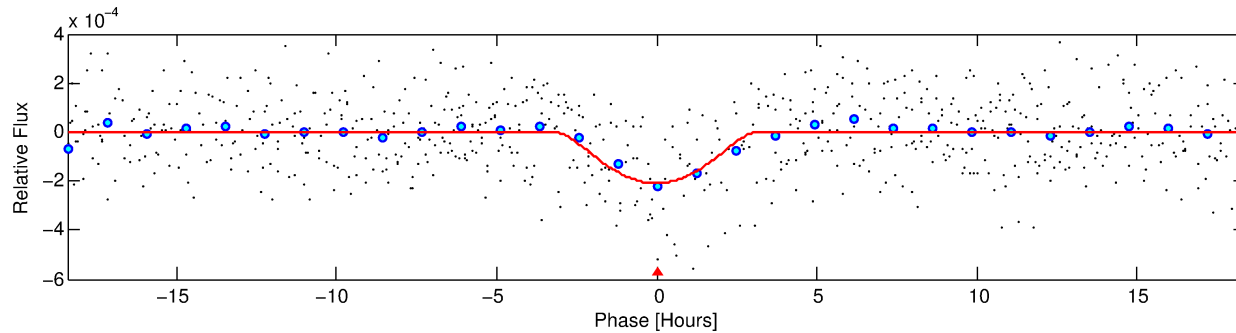
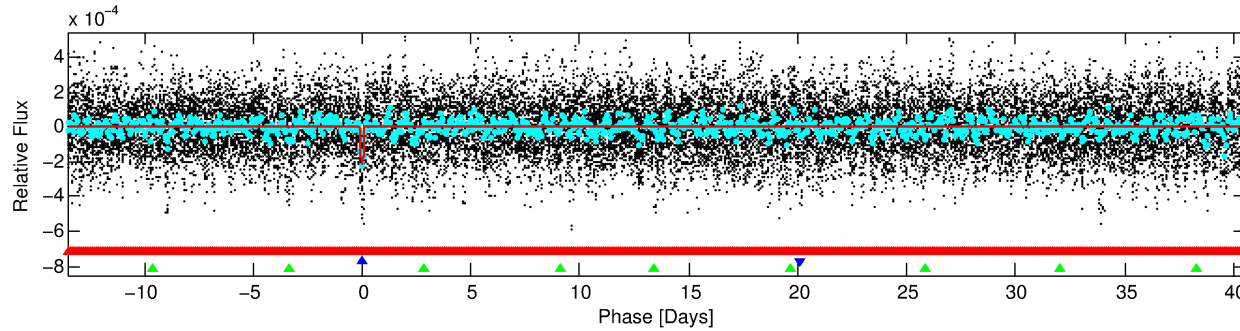
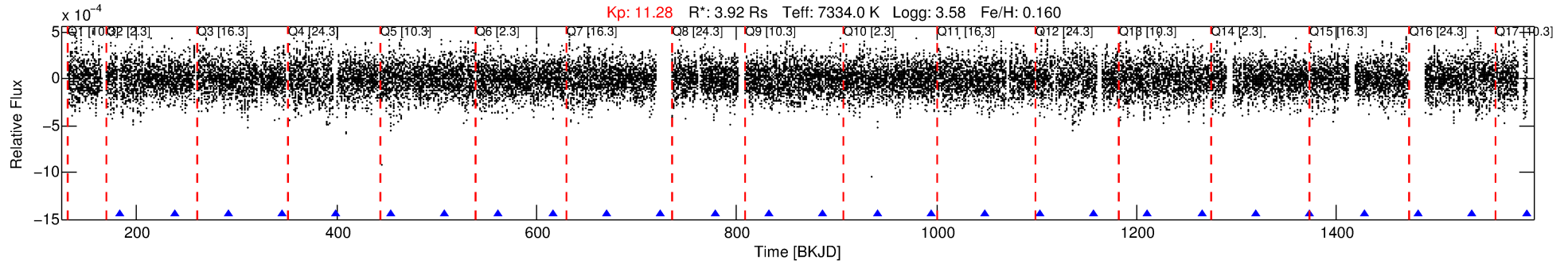
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002581674-02

No Significant Match Found

DV One-Page Summary

KIC: 2581674 Candidate: 2 of 3 Period: 54.080 d



DV Fit Results:

Period = 54.07958 [0.00128] d
Epoch = 183.6097 [0.0195] BKJD
Rp/R* = 0.0257 [0.0764]
a/R* = 15.39 [12.38]
b = 1.00 [0.10]
Seff = 305.86 [260.09]
Teq = 1066 [227] K
Rp = 10.96 [33.13] Re
a = 0.3606 [0.1830] AU
Ag = 38.90 [234.51] [0.16 σ]
Teffp = 4118 [6149] K [0.50 σ]

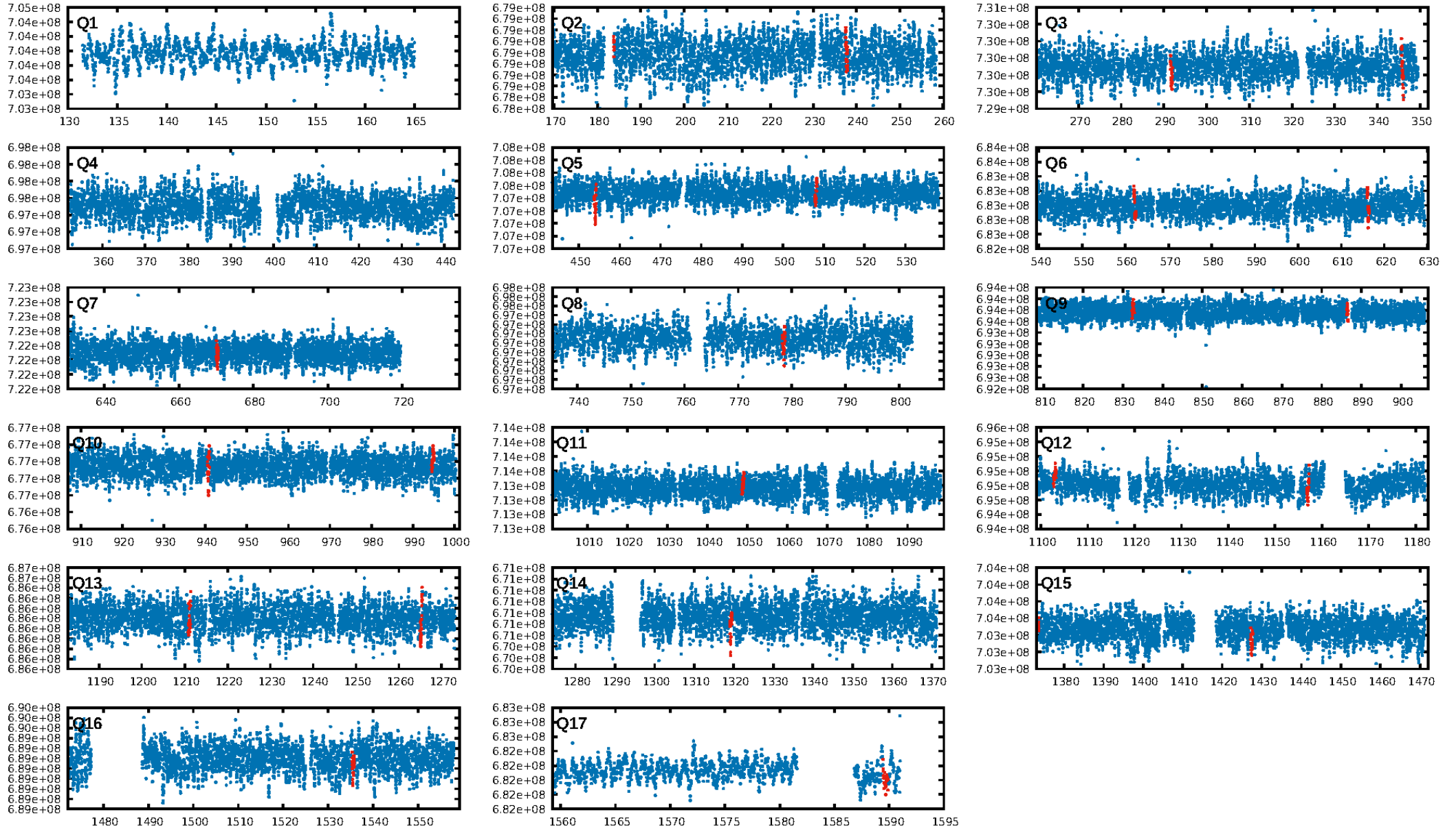
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [188.74 σ]
LongPeriod-sig: 100.0% [329.15 σ]
ModelChiSquare2-sig: 30.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.11e-11
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: -2.071
Centroid-sig: 86.9%
Centroid-so: 0.178 arcsec [0.33 σ]
OotOffset-rm: 1.077 arcsec [1.08 σ]
KicOffset-rm: 1.170 arcsec [1.23 σ]
OotOffset-st: 2/4/3/4 [13]
KicOffset-st: 2/4/3/4 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 0.00 [0/15]

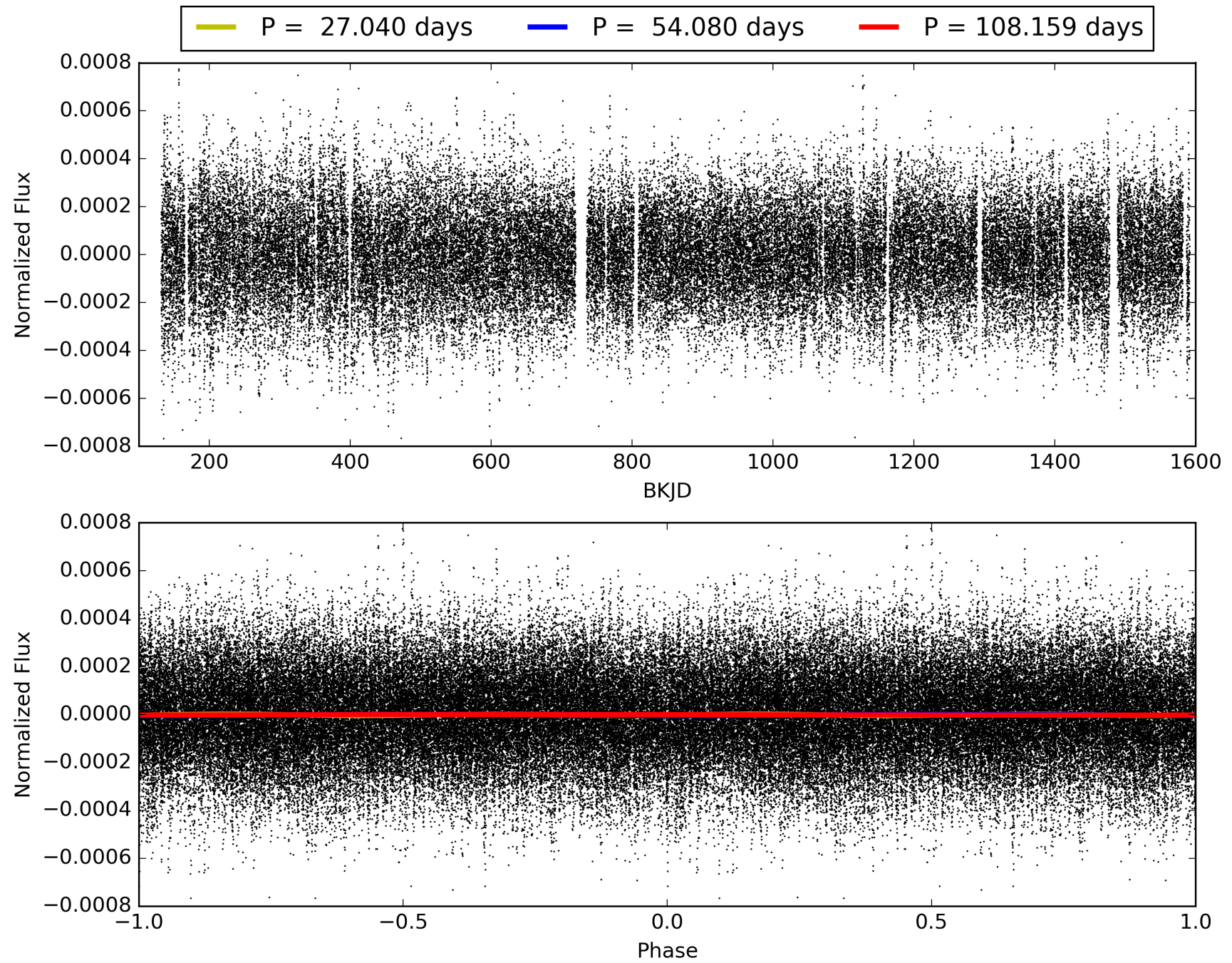
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:05:13 Z

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

TCE 002581674-02, PDC Light Curves

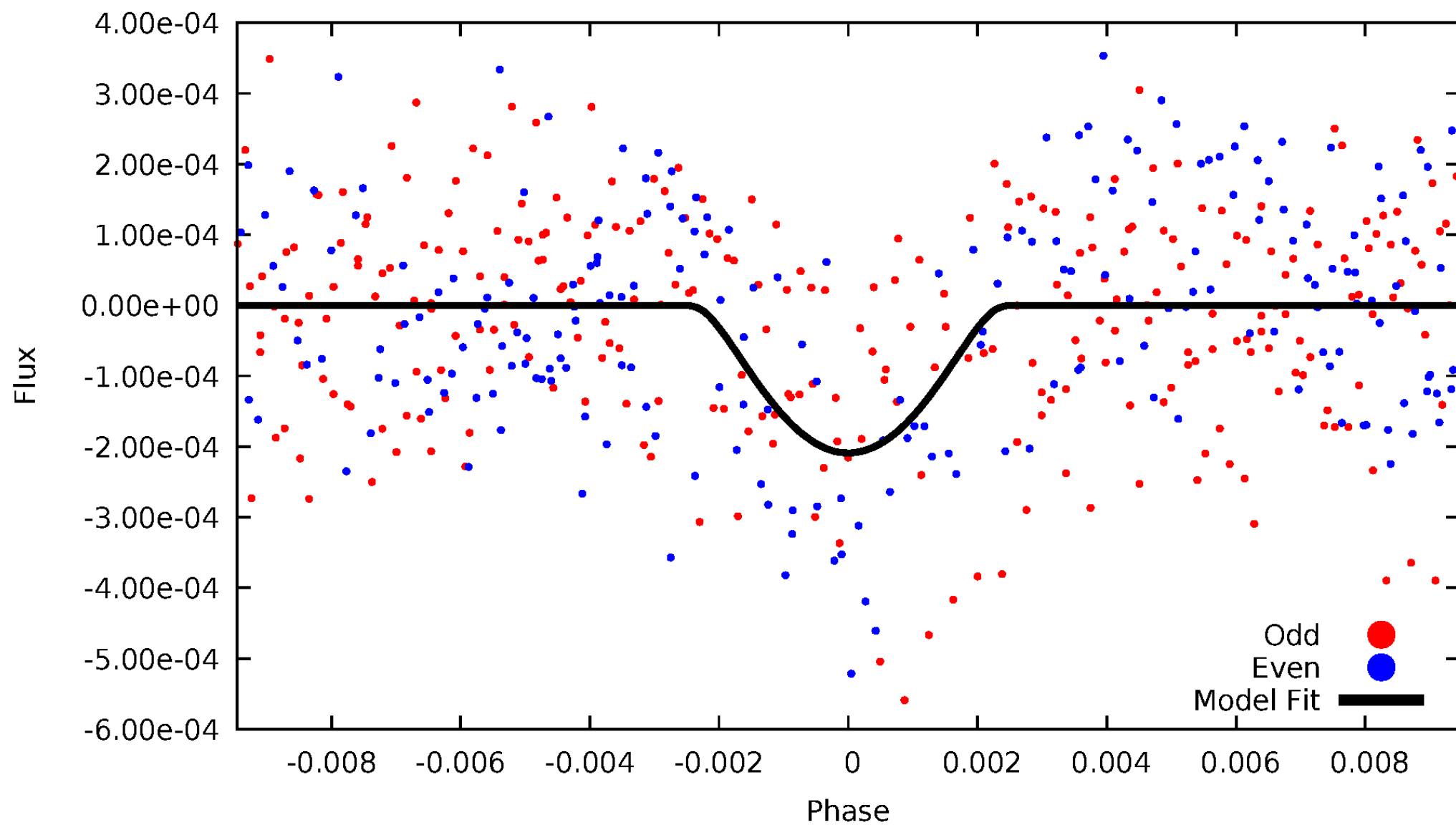


TCE 002581674-02



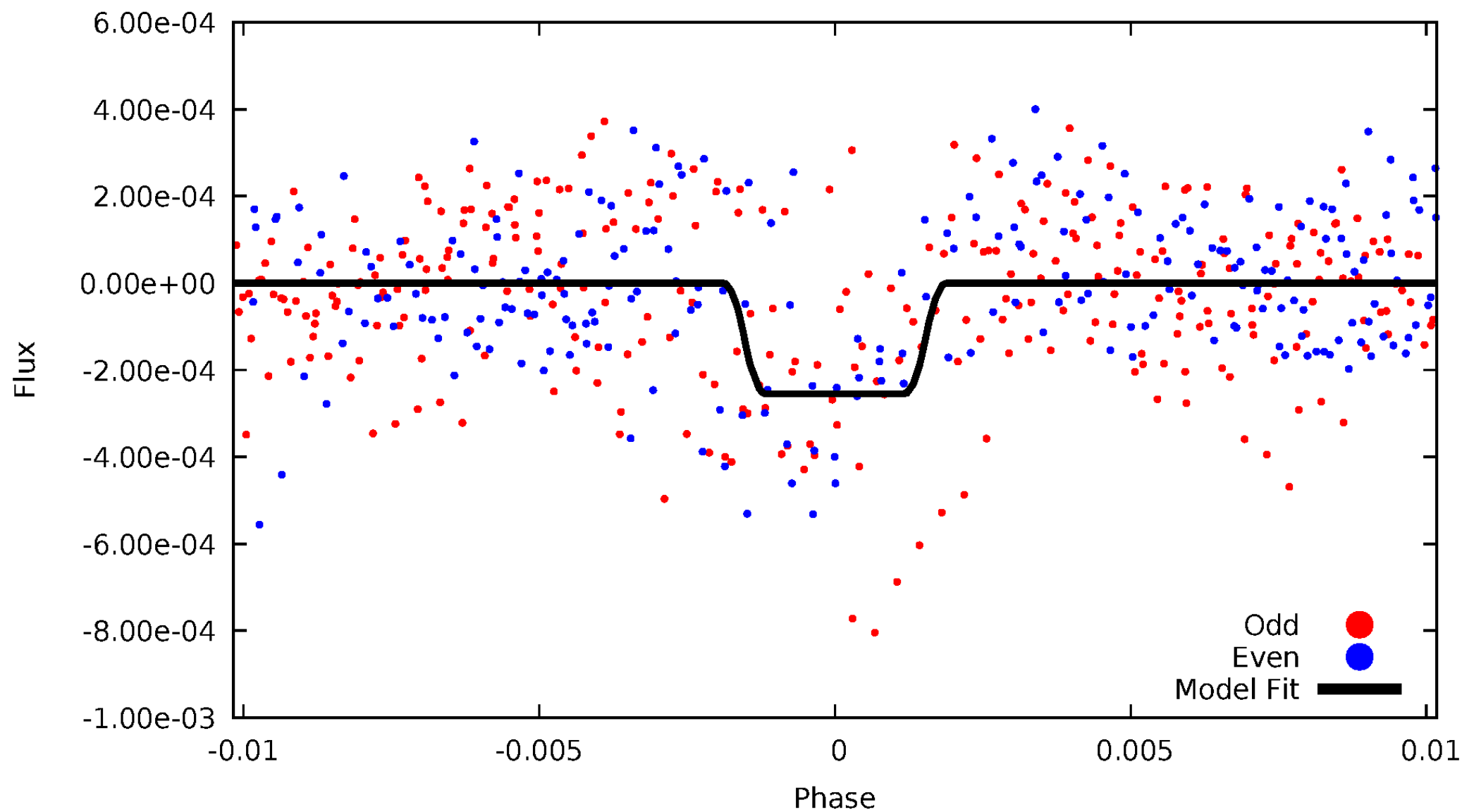
DV Odd/Even

TCE 002581674-02



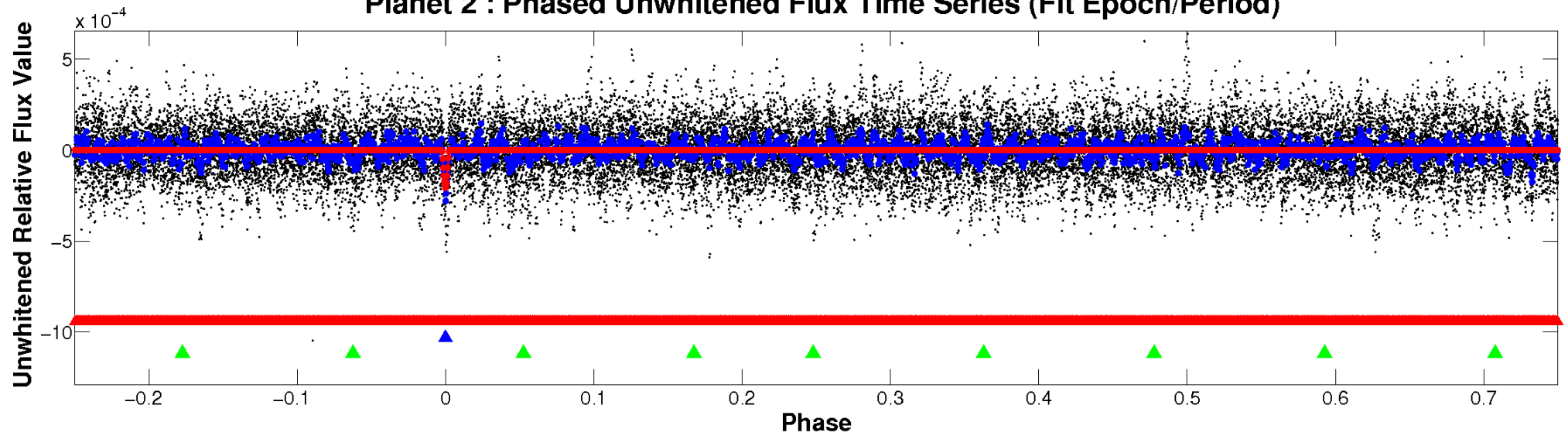
ALT Odd/Even

TCE 002581674-02

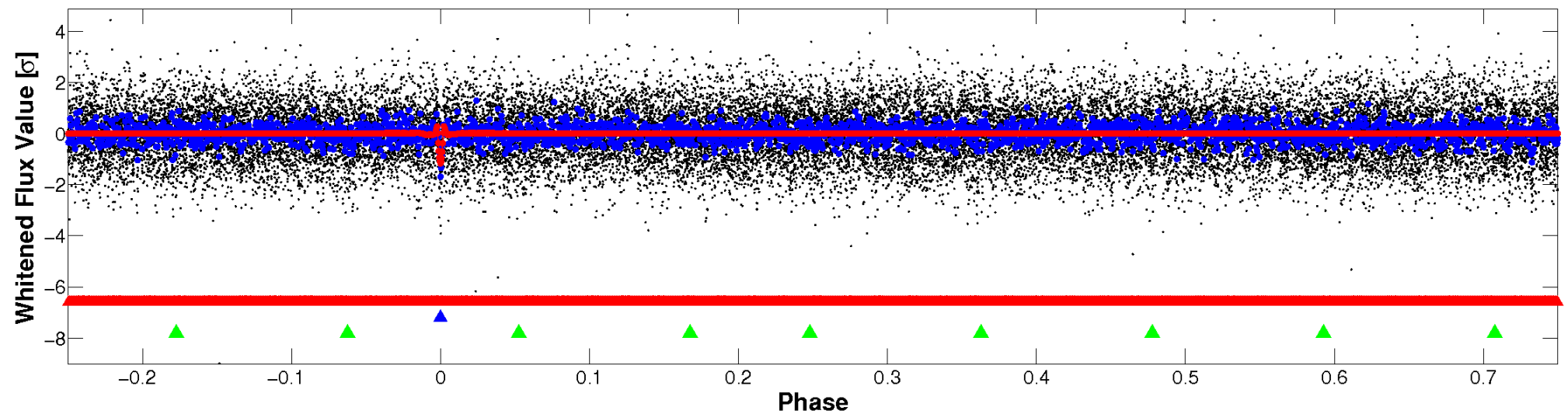


Non-Whitened Vs. Whitened Light Curve

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

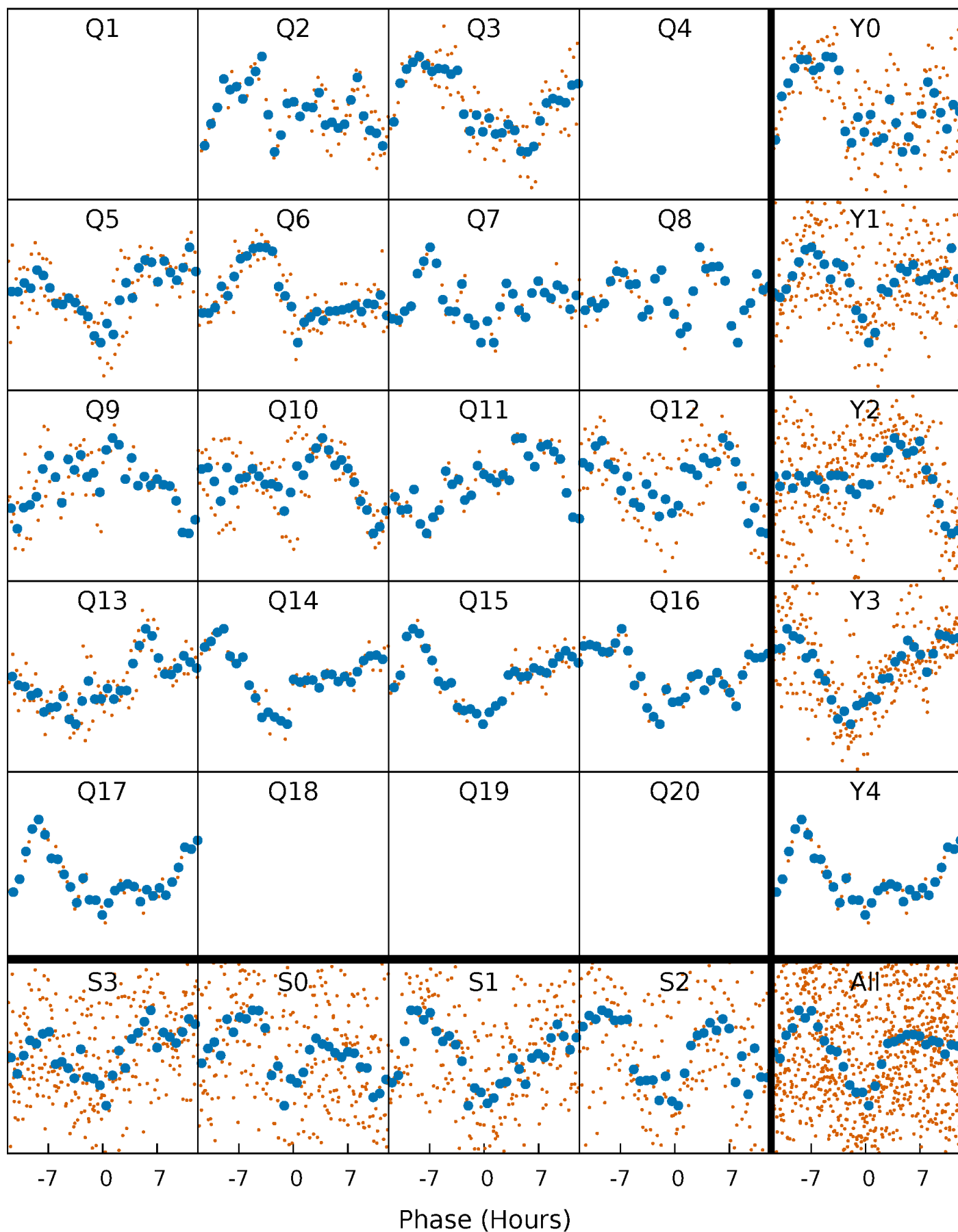


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



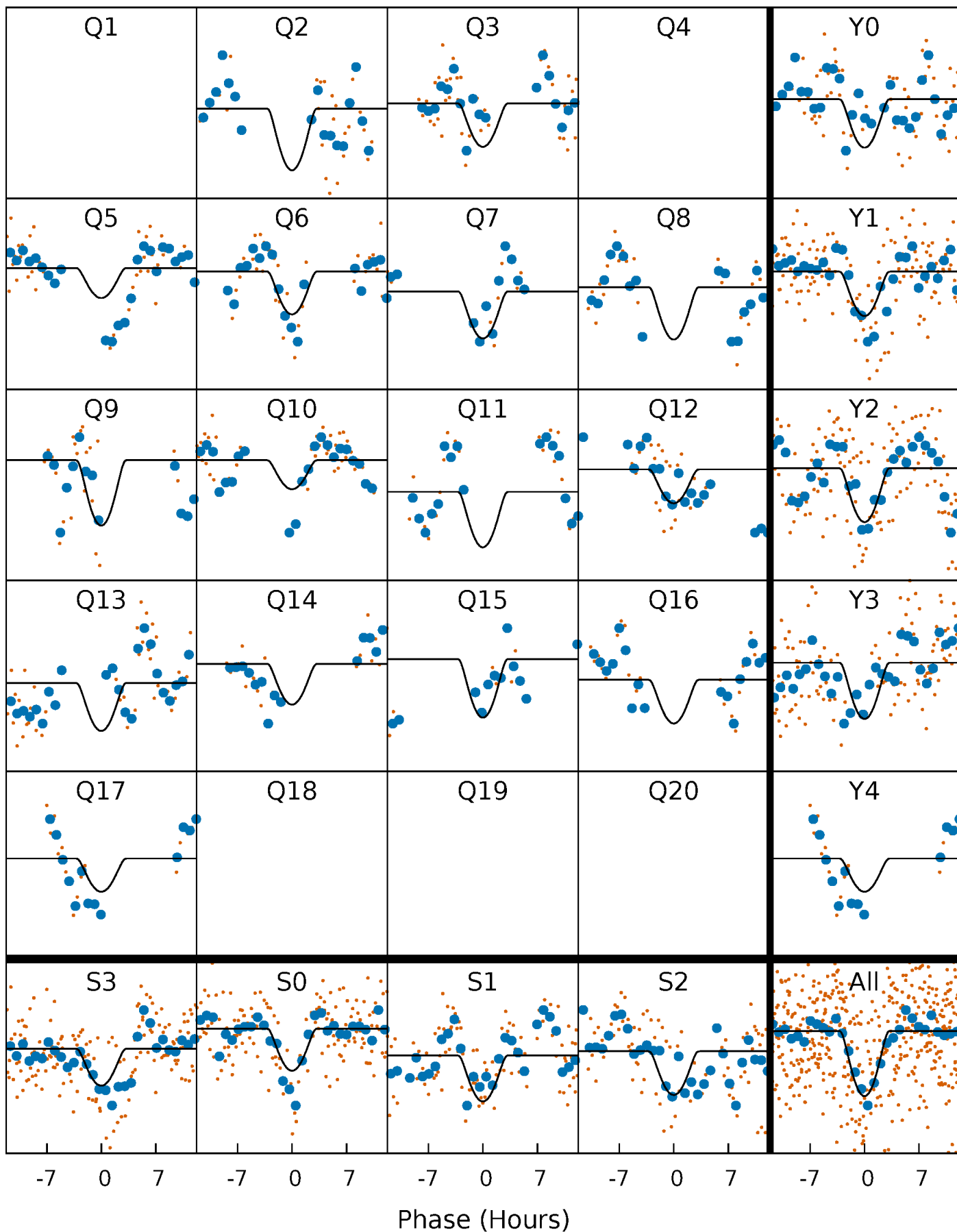
PDC Quarter-Phased Transit Curves

TCE 002581674-02 P= 54.079581 Days $T_0=183.609665$ (BKJD)



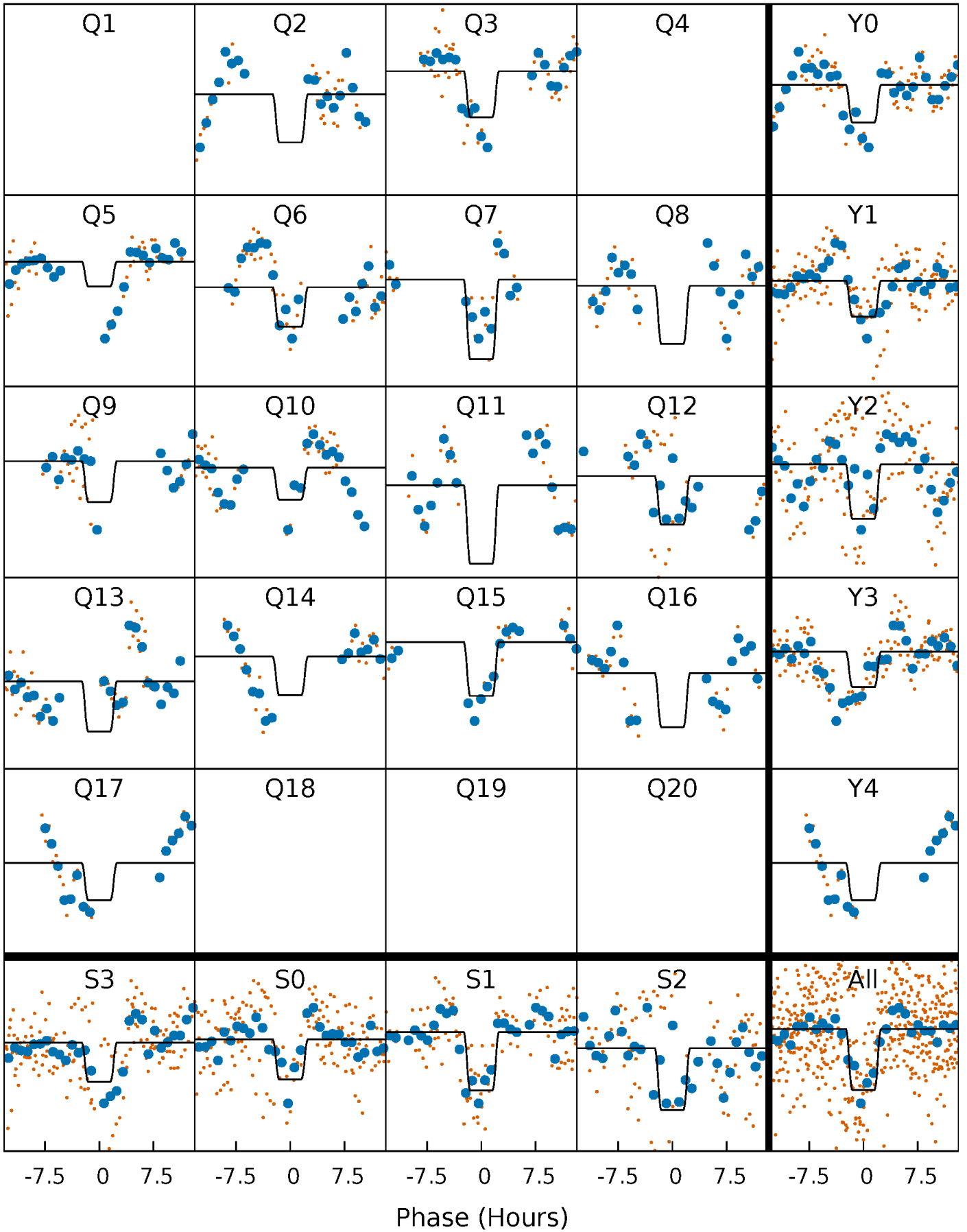
DV Quarter-Phased Transit Curves

TCE 002581674-02 P= 54.079581 Days $T_0=183.609665$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

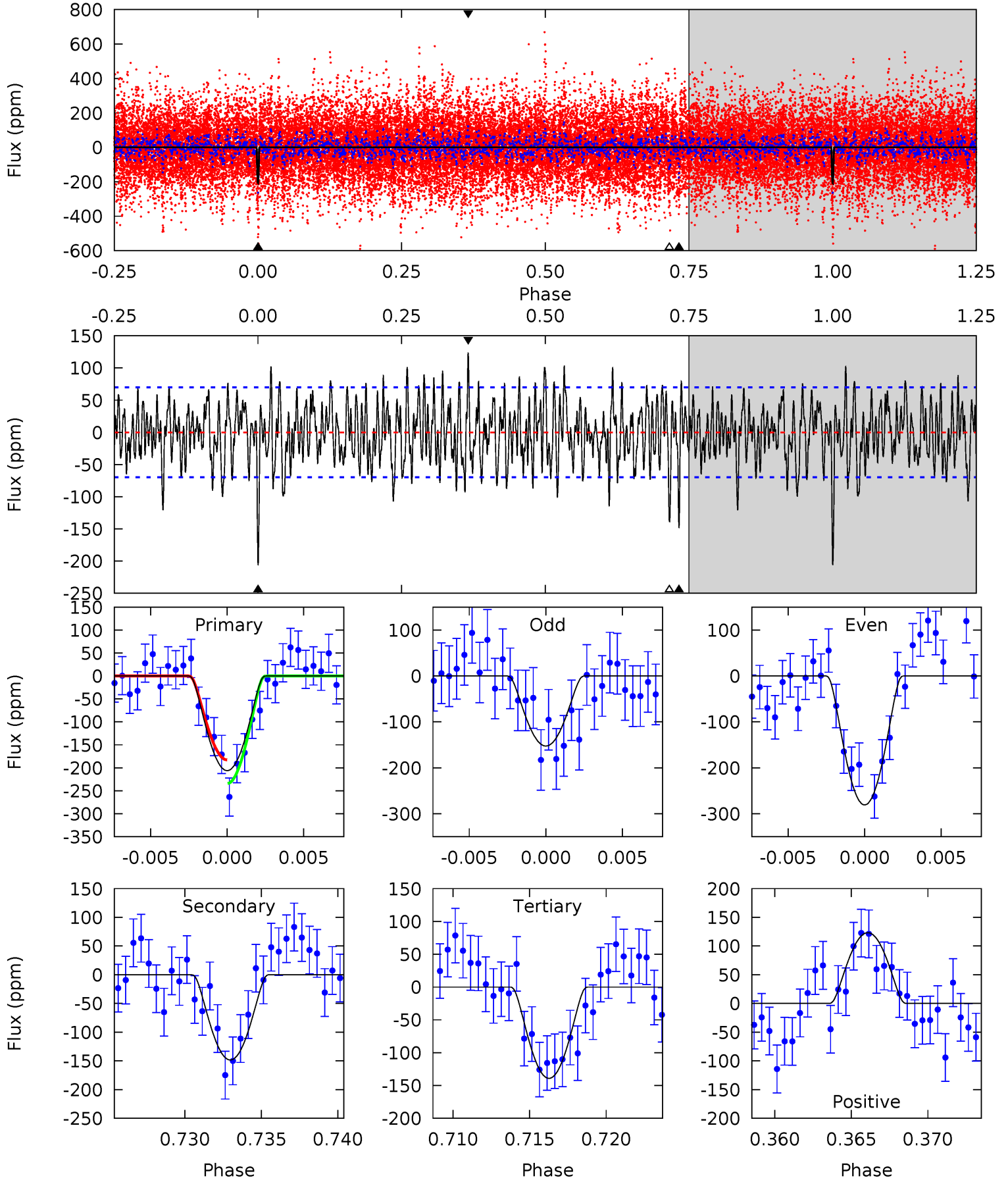
TCE 002581674-02 P= 54.080885 Days $T_0=183.613755$ (BKJD)



DV Model-Shift Uniqueness Test

002581674-02, P = 54.079581 Days, E = 129.530084 Days

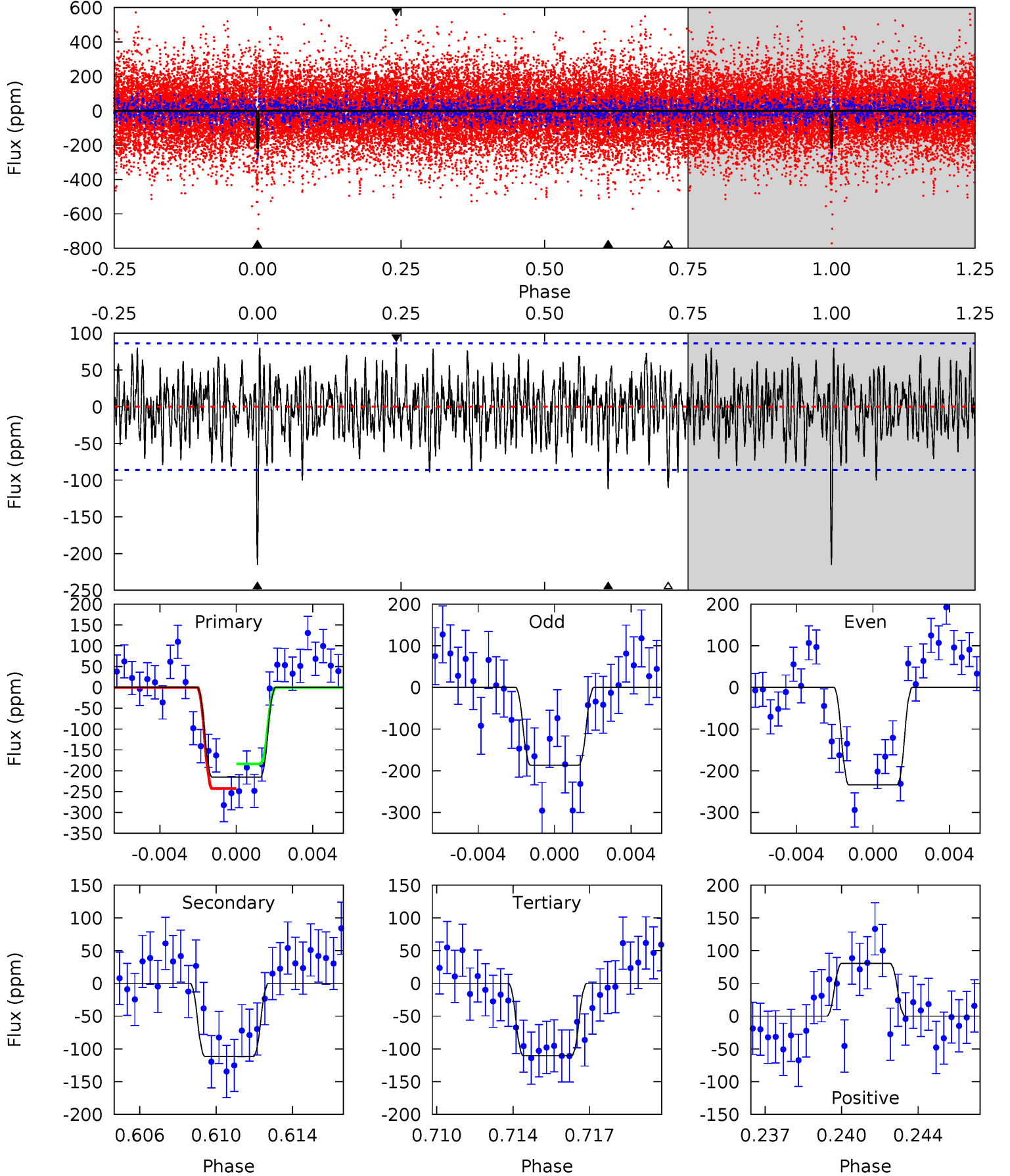
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	11.0	10.3	9.10	5.16	2.81	3.02	4.95	6.12	0.69	1.86	4.68	0.88	0.37	1.89



Alt Model-Shift Uniqueness Test

002581674-02, P = 54.080885 Days, E = 129.532870 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	6.75	6.68	4.88	5.21	2.90	1.89	6.36	8.16	0.08	1.88	1.40	0.80	0.27	1.78



Stellar Parameters For KIC 002581674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7334^{+203}_{-330}	$3.582^{+0.495}_{-0.055}$	$0.160^{+0.150}_{-0.350}$	$3.917^{+0.494}_{-1.978}$	$2.133^{+0.234}_{-0.546}$	$0.050^{+0.255}_{-0.014}$
	+3%/-4%	+14%/-2%	+94%/-219%	+13%/-50%	+11%/-26%	+511%/-28%
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 002581674-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-148 ± 14	$22.59^{+24.98}_{-16.63}$	1424^{+103}_{-163}	3679^{+2359}_{-727}	20^{+260}_{-15}
Alt.	-112 ± 17	$21.69^{+24.24}_{-15.79}$	1415^{+111}_{-180}	3493^{+2233}_{-677}	16^{+202}_{-12}

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

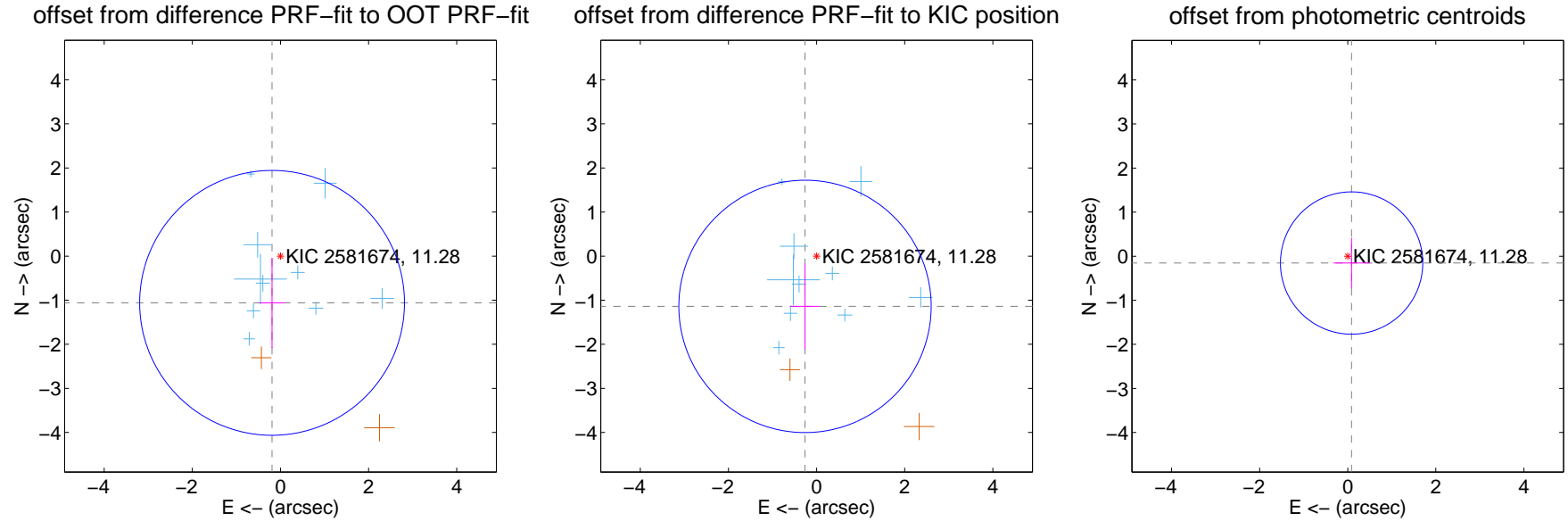
DV Centroid Data

Supplemental centroid analysis for 002581674-02. **Kepler magnitude: 11.28.** Transit SNR 7.45

There are 10 quarters with good PRF difference image offsets

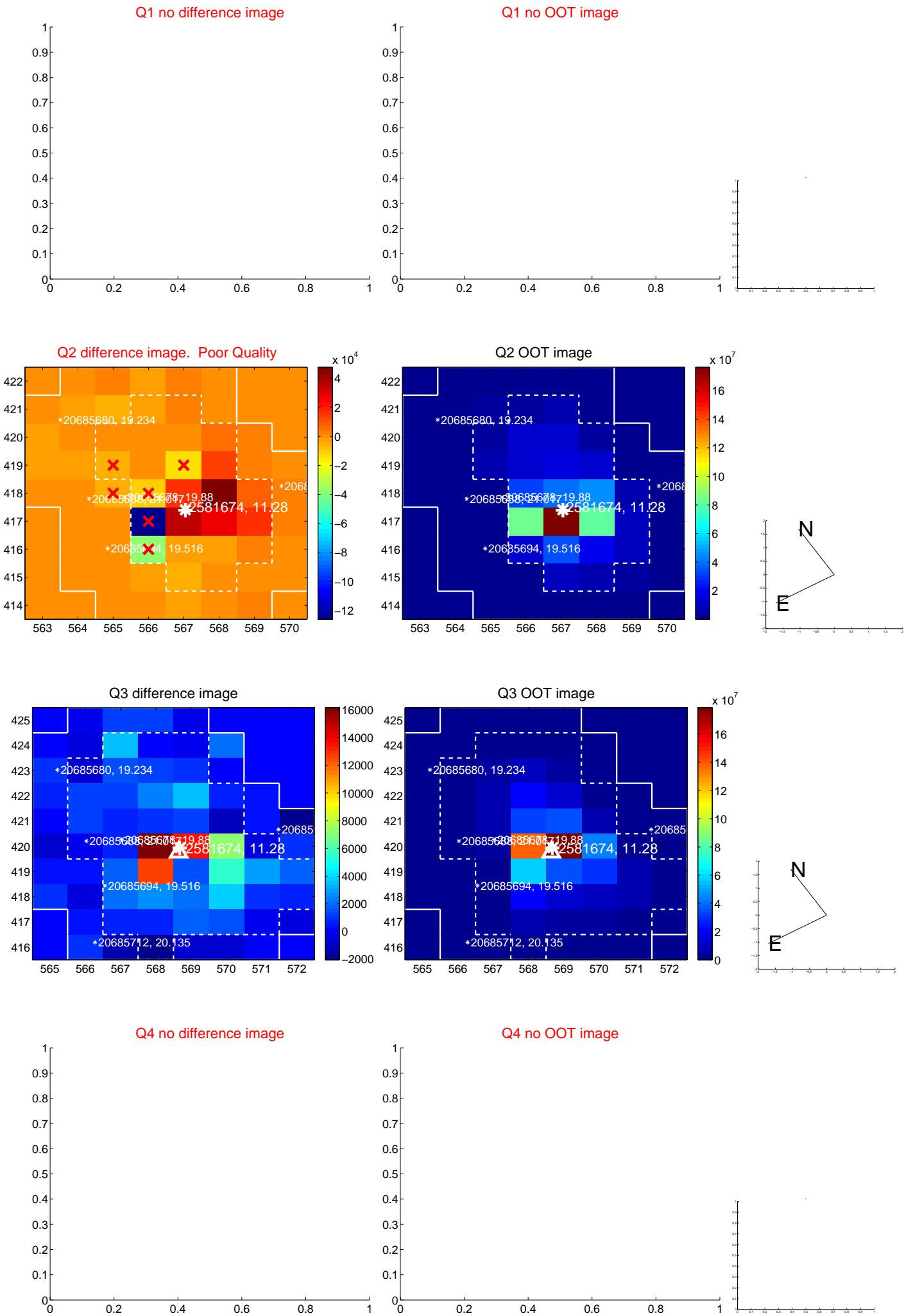
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.077 ± 1.001	1.08	0.191 ± 0.291	-1.060 ± 1.022
PRF-fit source offset from KIC position	1.170 ± 0.954	1.23	0.263 ± 0.329	-1.140 ± 0.972
photometric centroid source offset	0.18 ± 0.54	0.33	-0.09 ± 0.41	-0.16 ± 0.57

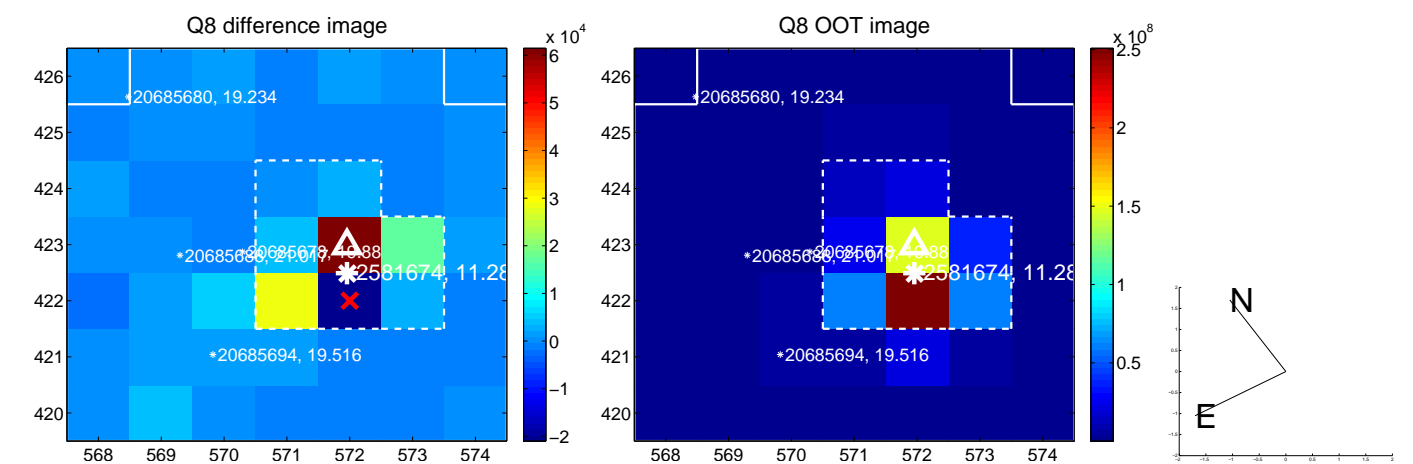
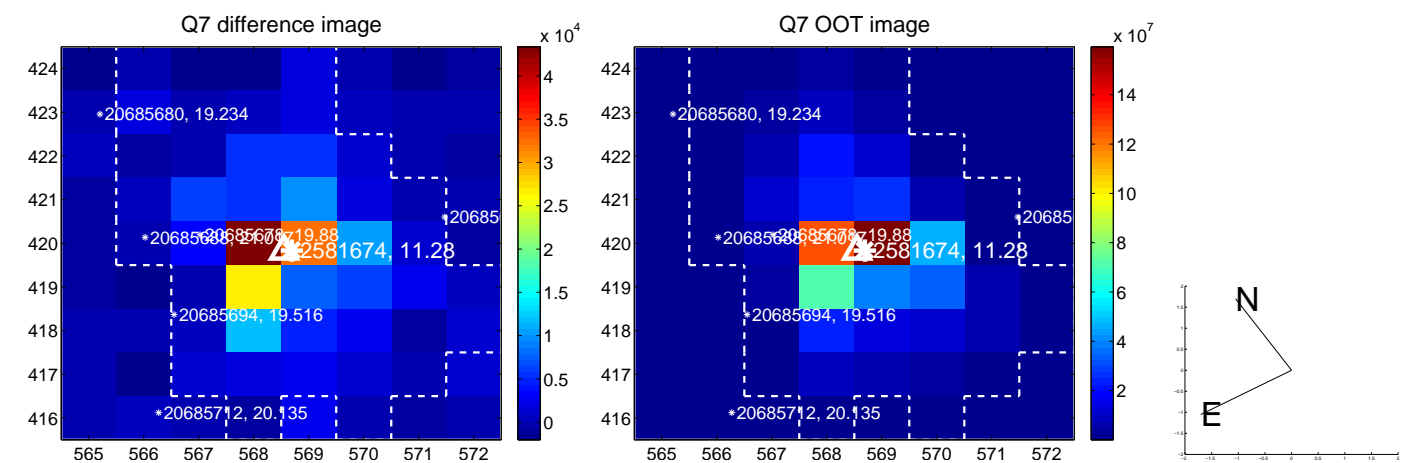
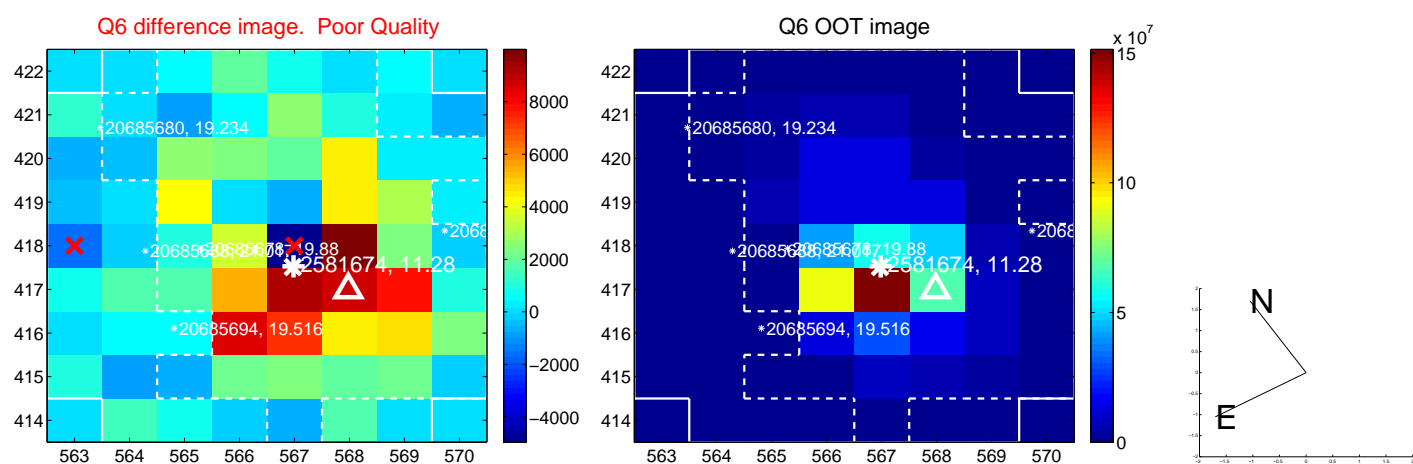
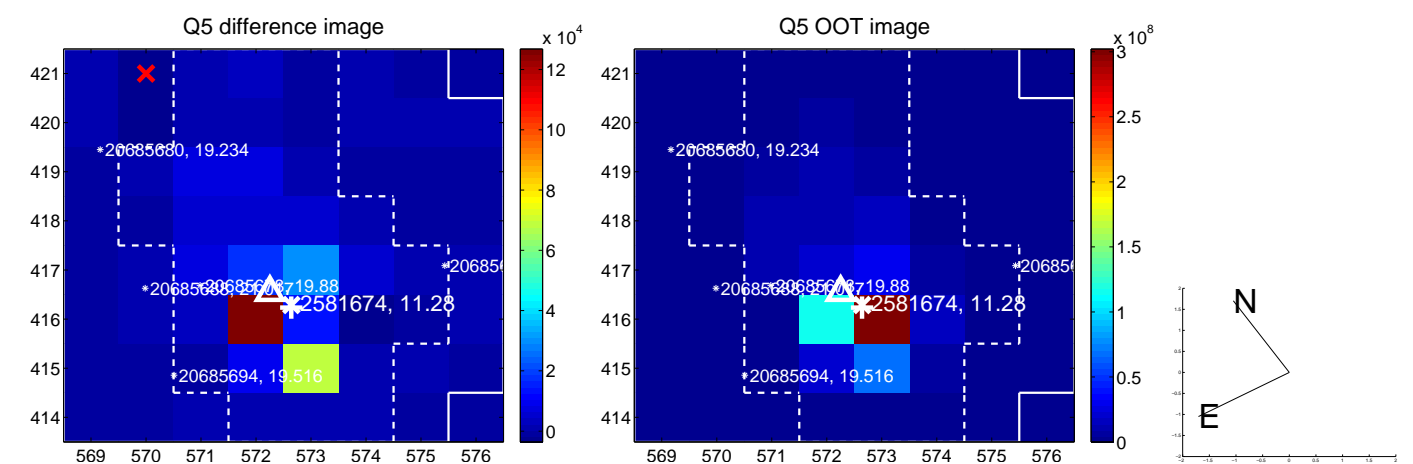


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

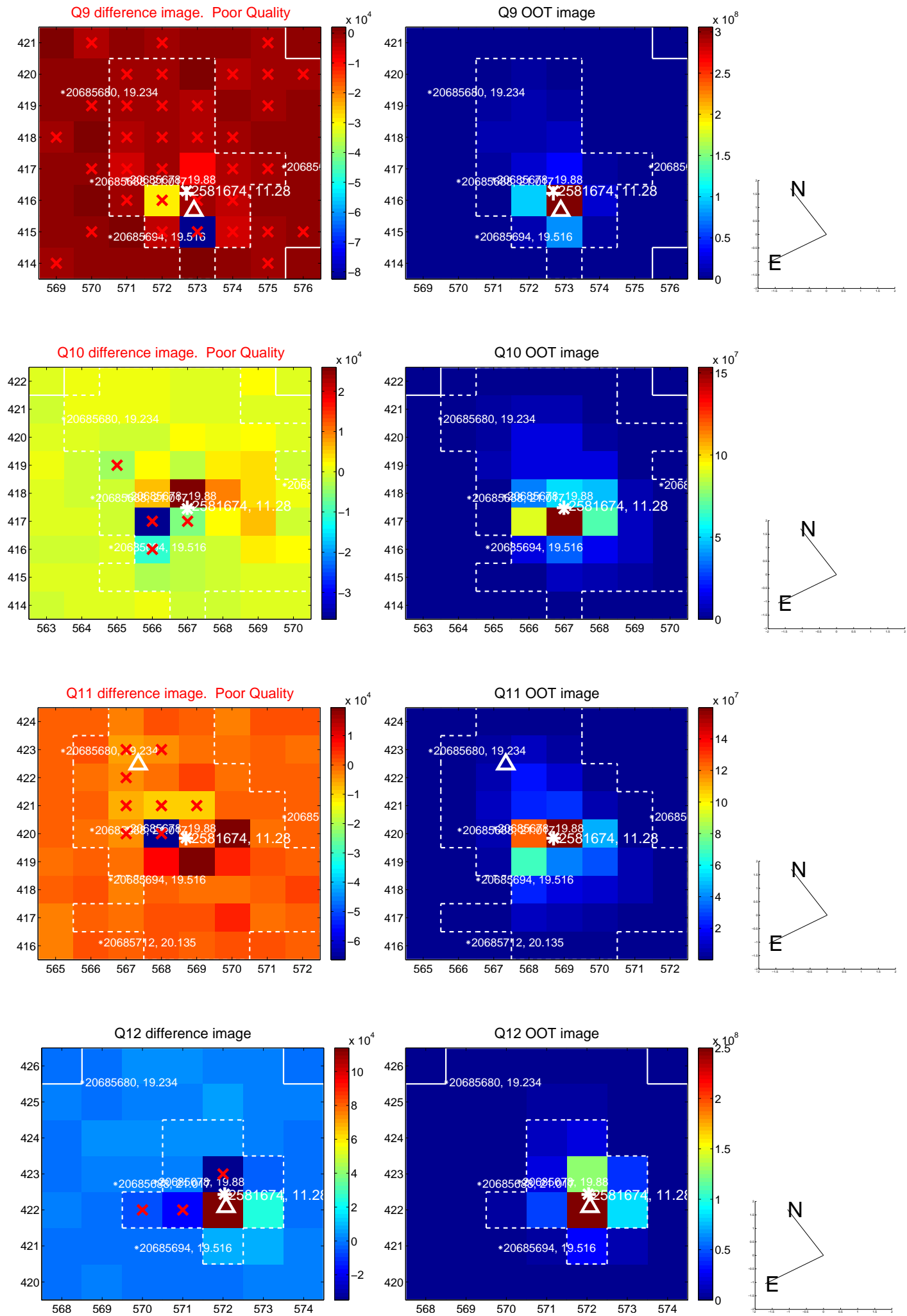
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



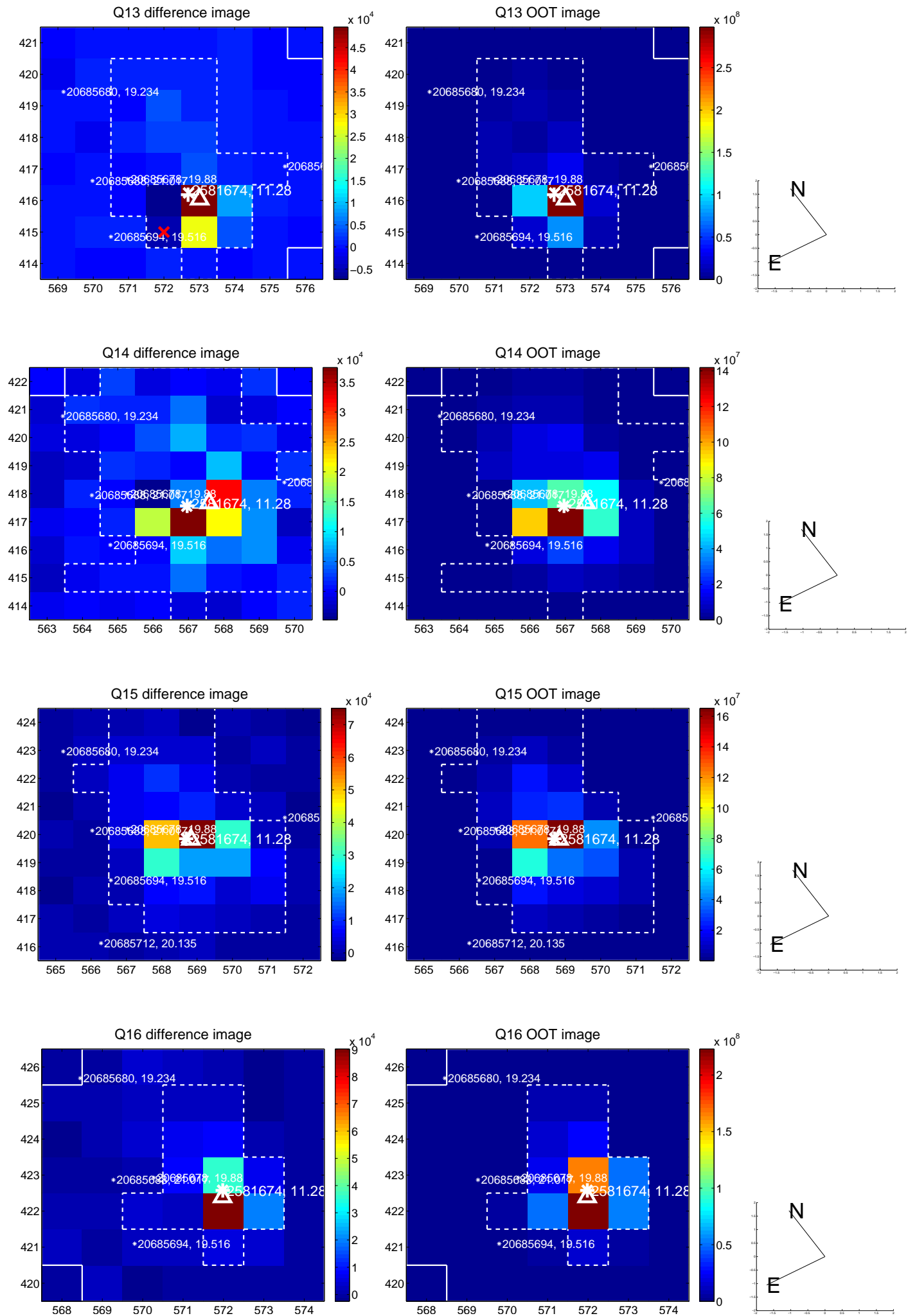
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



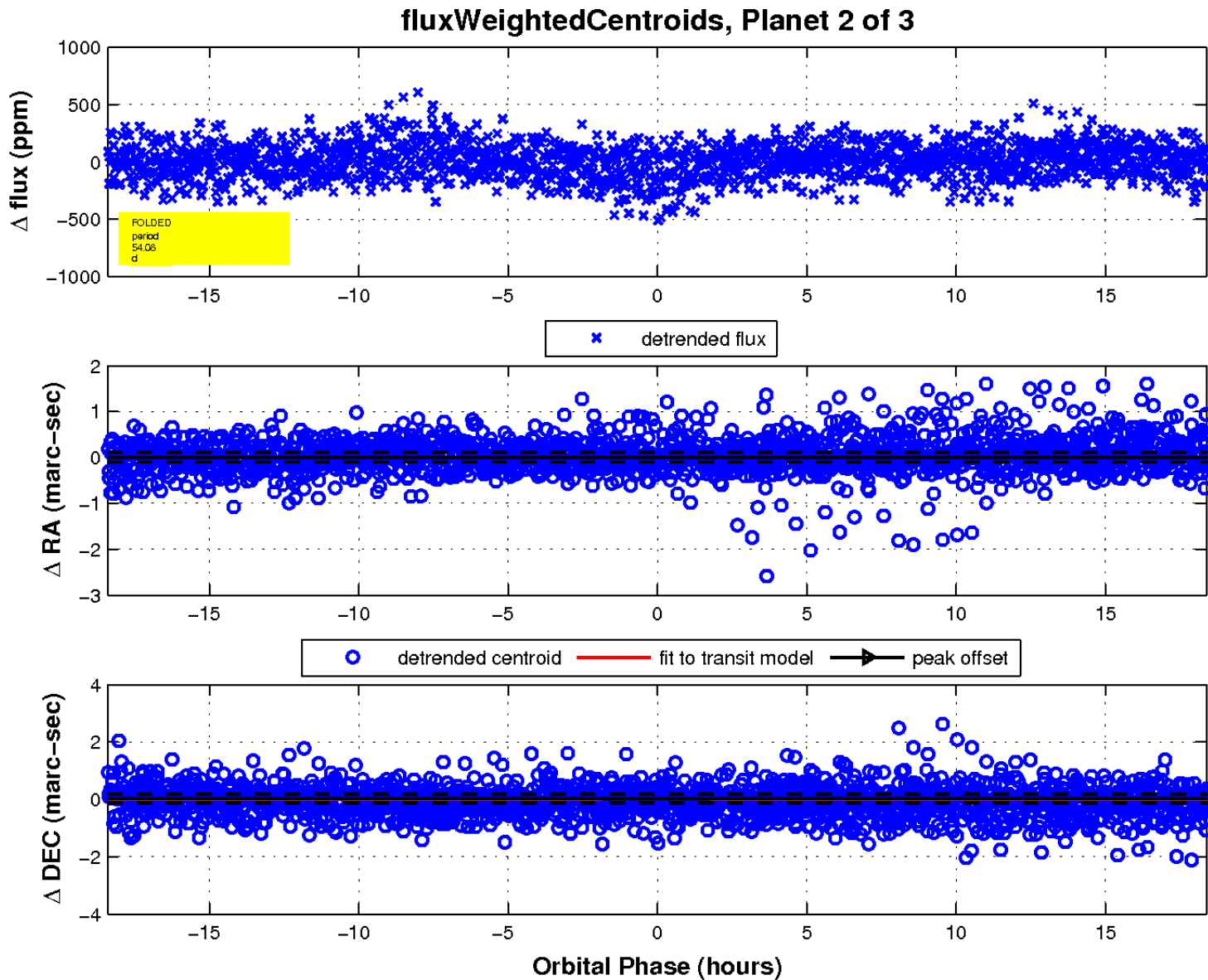
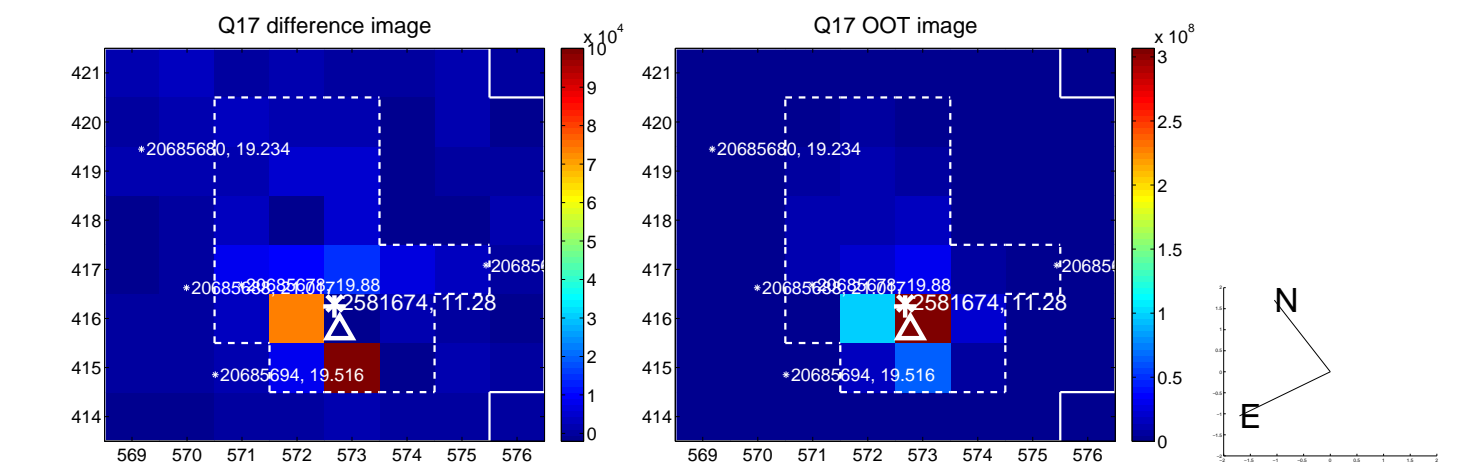
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

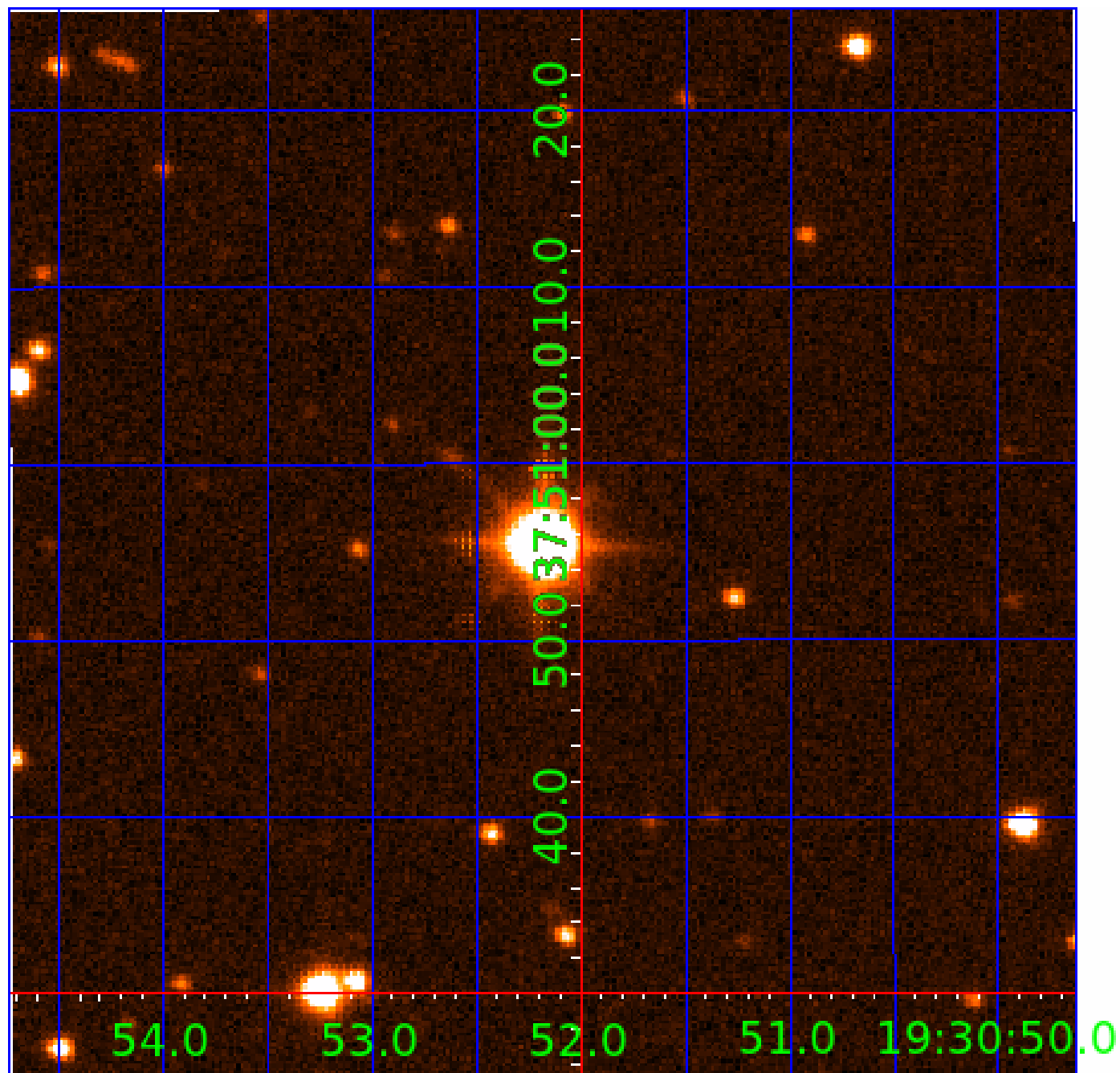


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002581674

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})
002581674-01	OBS	No	0.695247	131.942985	21.0	2.902	8.8	11.4	3.92	7334	2.08	101556.63
002581674-02	OBS	No	54.079581	183.609665	209.0	6.137	7.9	7.4	3.92	7334	10.96	305.86
002581674-03	OBS	No	168.455256	197.016547	272.3	5.647	7.3	8.0	3.92	7334	8.02	67.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002581674-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
002581674-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
002581674-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

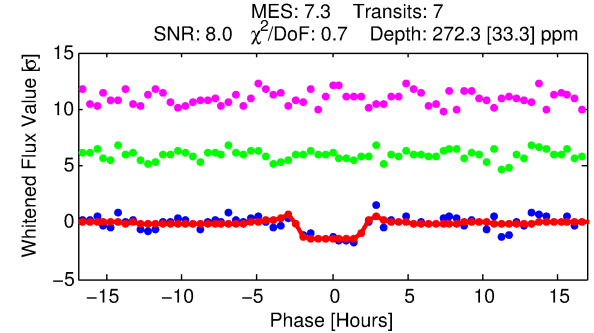
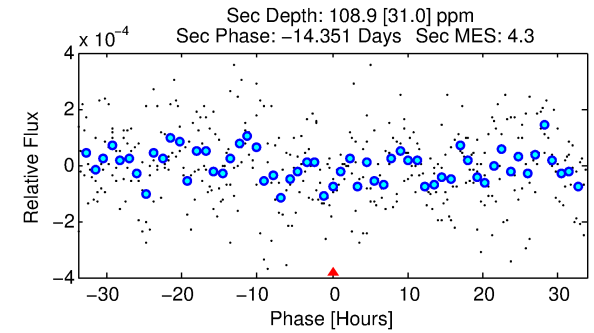
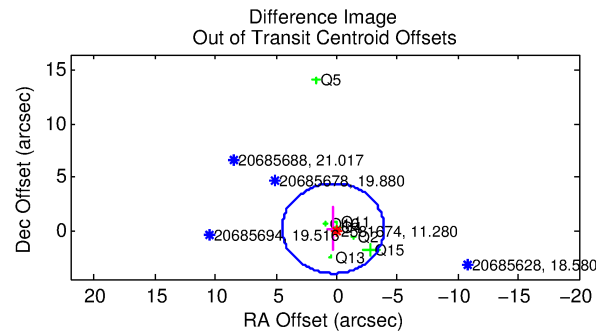
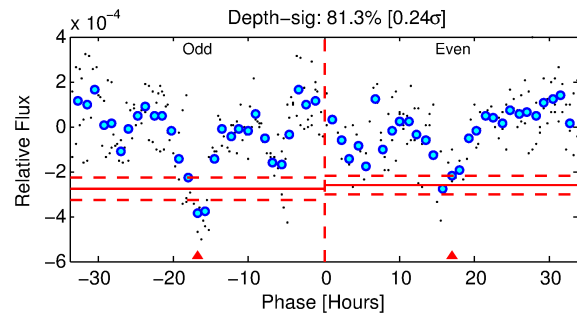
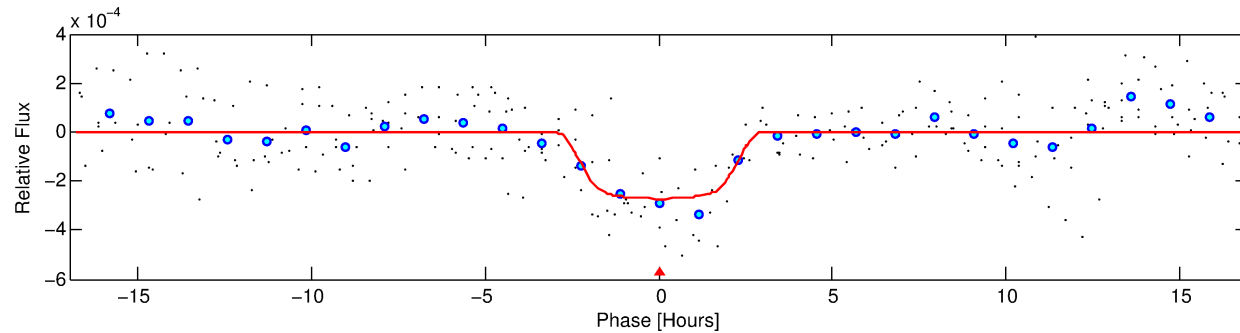
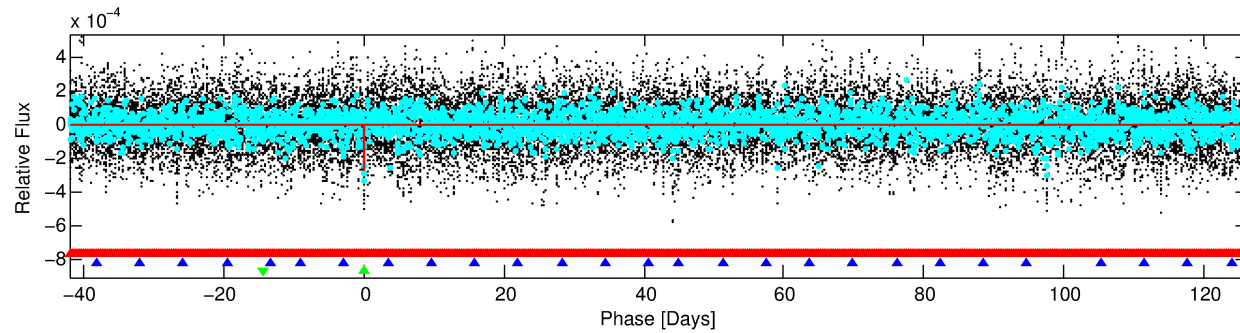
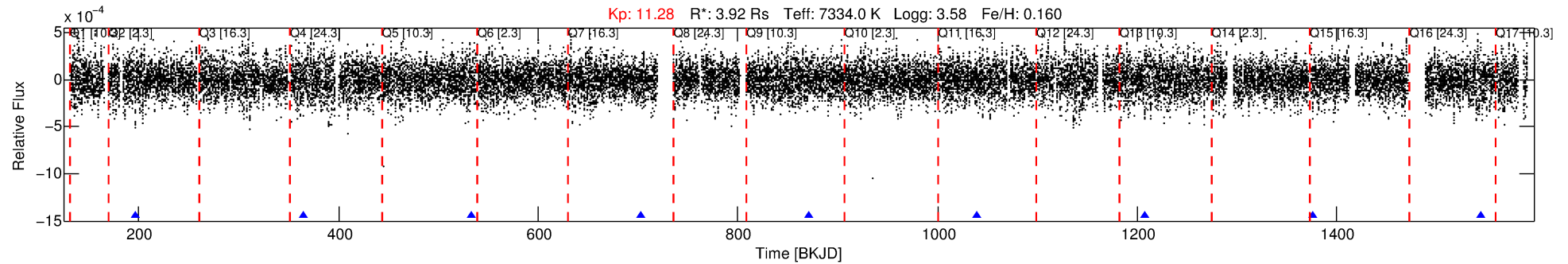
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002581674-03

No Significant Match Found

DV One-Page Summary

KIC: 2581674 Candidate: 3 of 3 Period: 168.455 d



DV Fit Results:

Period = 168.45526 [0.00215] d
Epoch = 197.0165 [0.0093] BKJD
Rp/R* = 0.0188 [0.0014]
a/R* = 77.67 [16.32]
b = 0.96 [0.02]
Seff = 67.23 [57.17]
Teq = 730 [155] K
Rp = 8.02 [4.09] Re
a = 0.7691 [0.3904] AU
Ag = 551.16 [491.16] [1.12 σ]
Teffp = 5470 [504] K [8.99 σ]

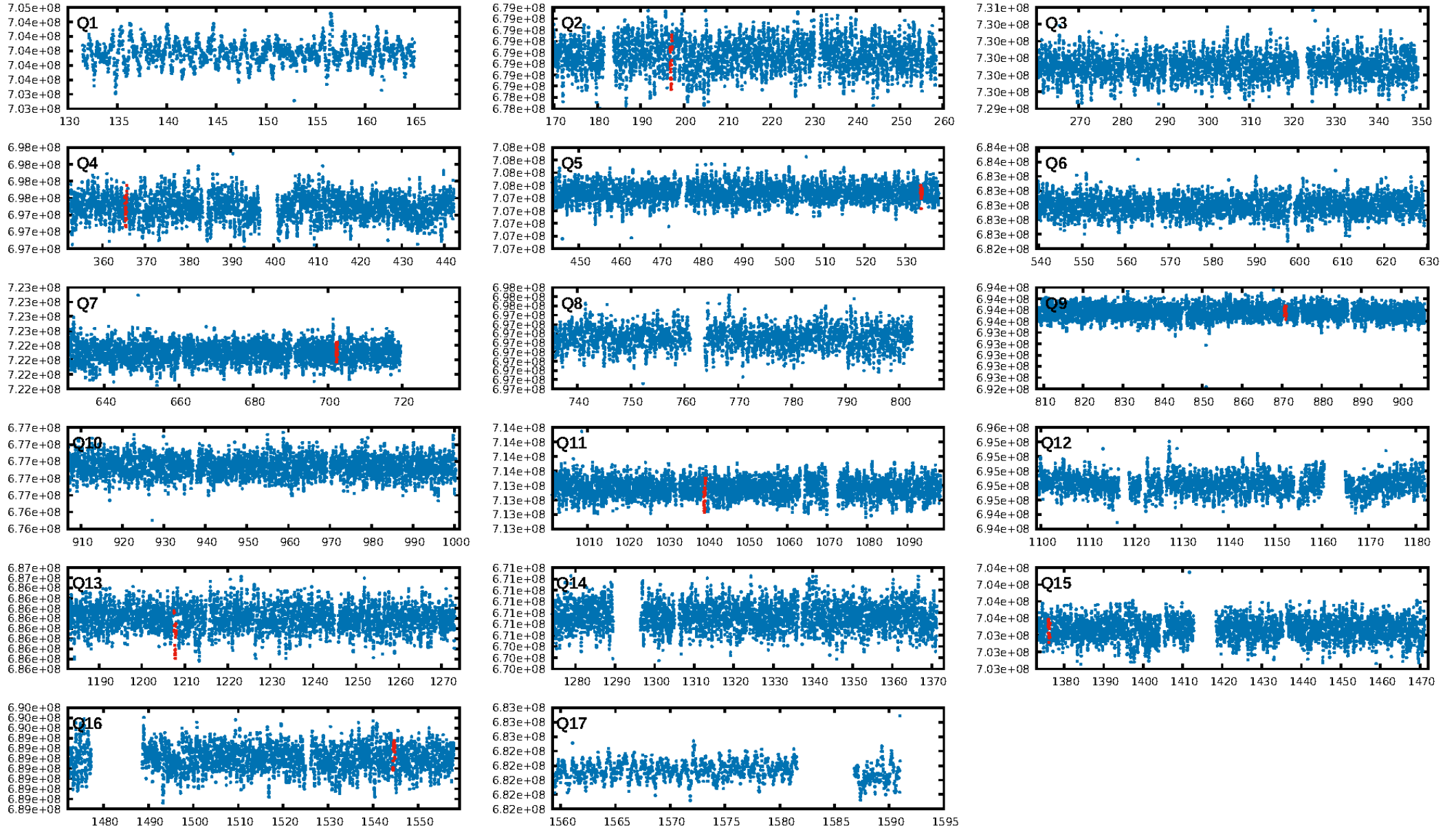
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [329.15 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.02e-09
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 2.83
Centroid-sig: 7.5%
Centroid-so: 0.624 arcsec [1.21 σ]
OotOffset-rm: 0.367 arcsec [0.26 σ]
KicOffset-rm: 0.437 arcsec [0.34 σ]
OotOffset-st: 1/2/2/2 [7]
KicOffset-st: 1/2/2/2 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 0.00 [0/9]

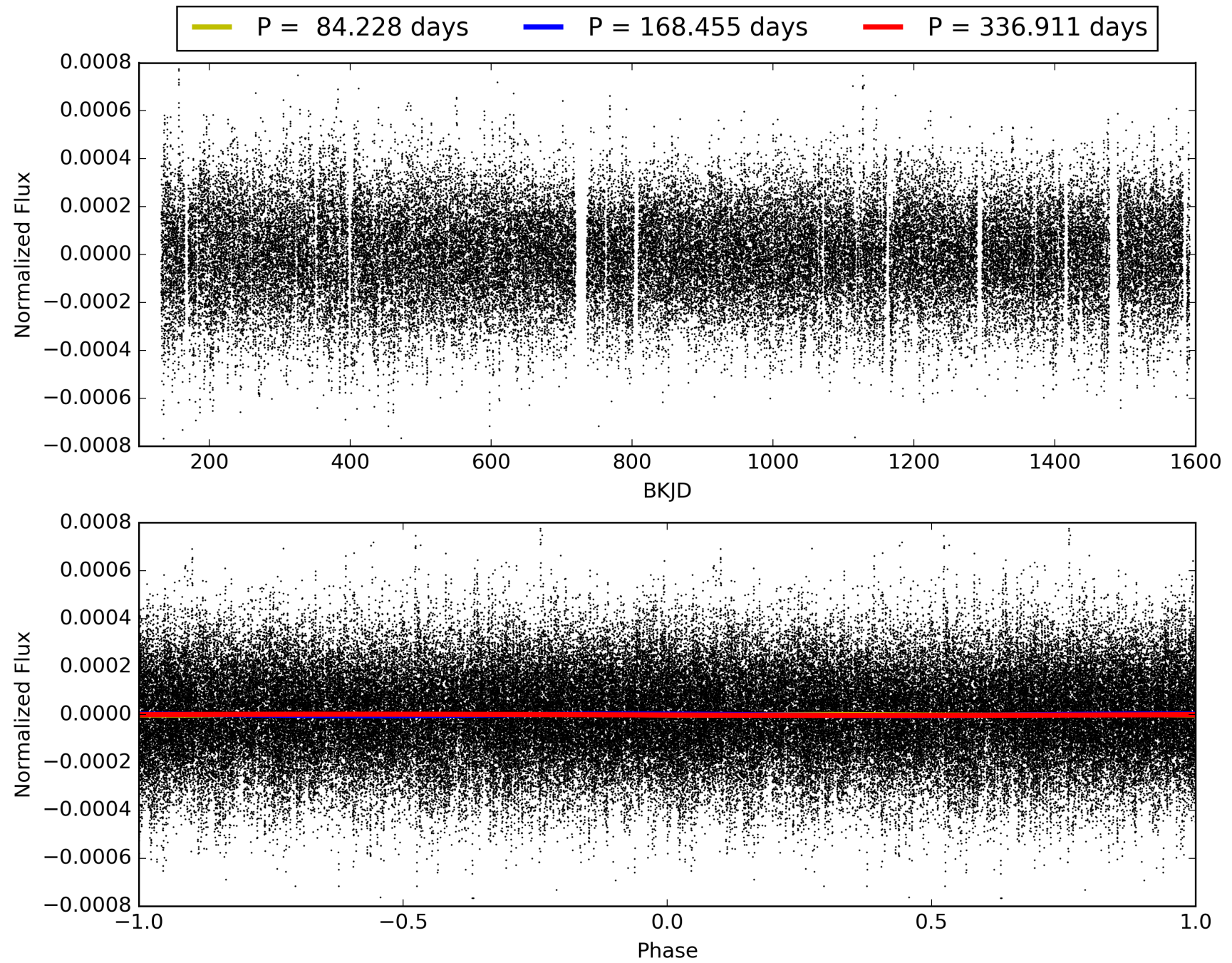
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:05:19 Z

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

TCE 002581674-03, PDC Light Curves

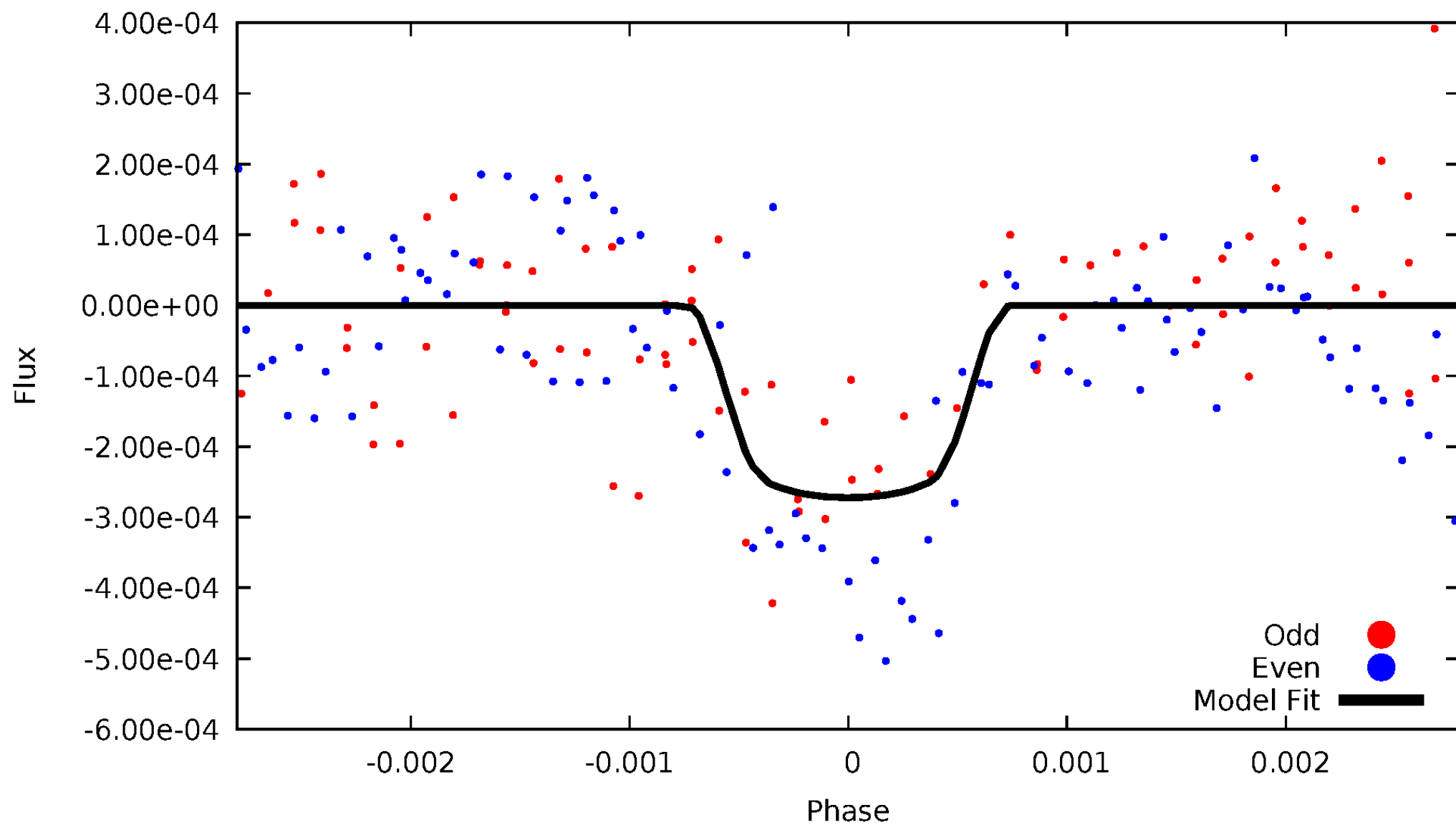


TCE 002581674-03



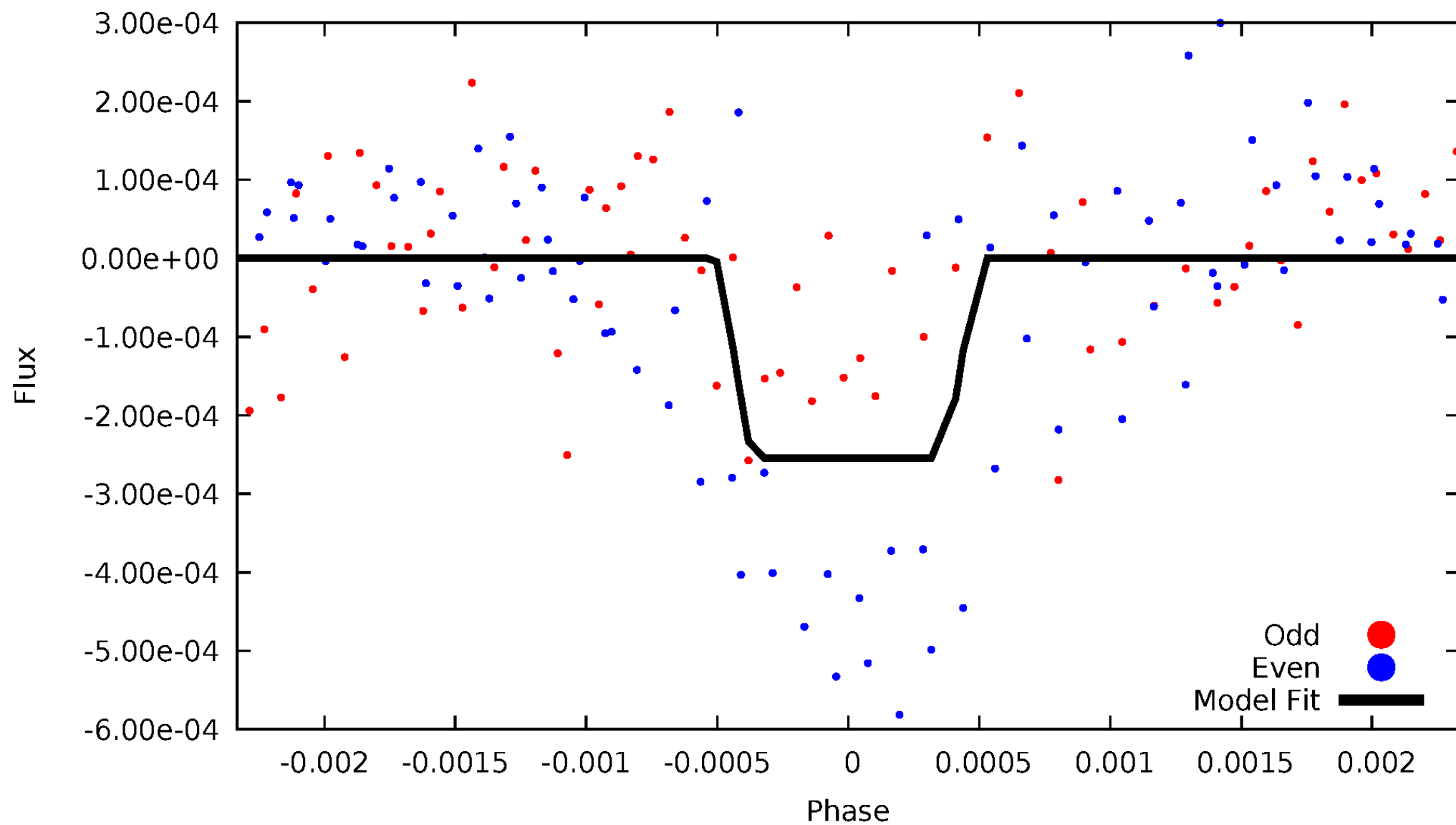
DV Odd/Even

TCE 002581674-03



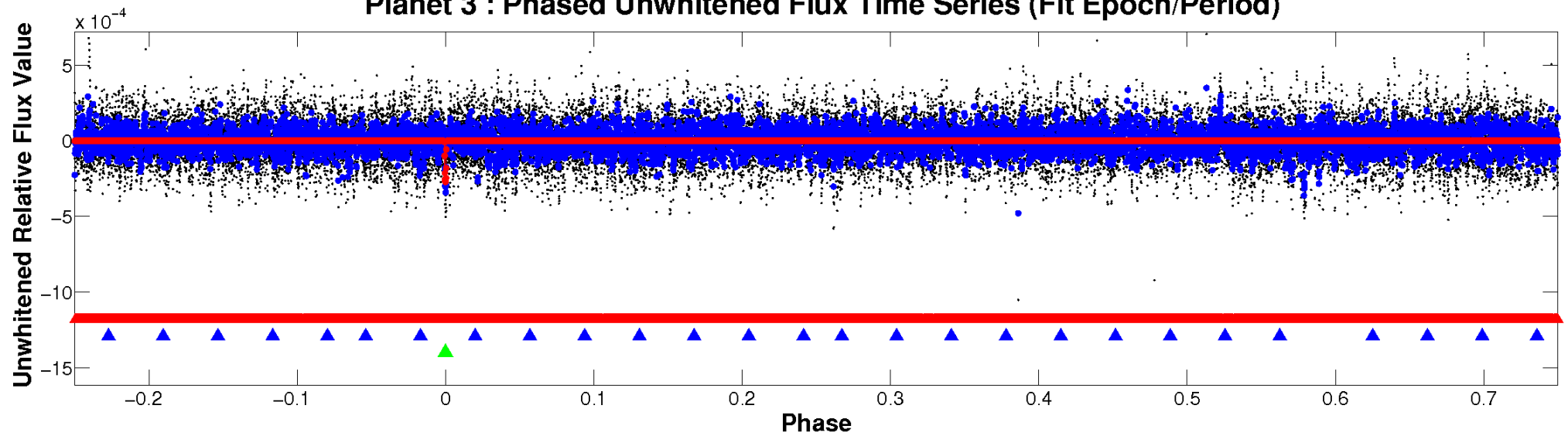
ALT Odd/Even

TCE 002581674-03

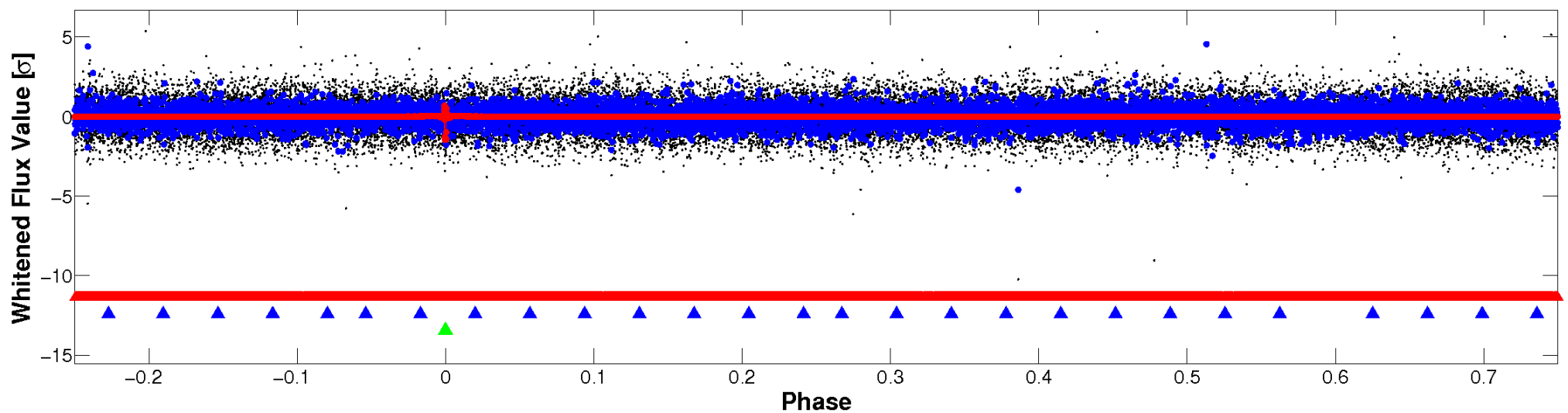


Non-Whitened Vs. Whitened Light Curve

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

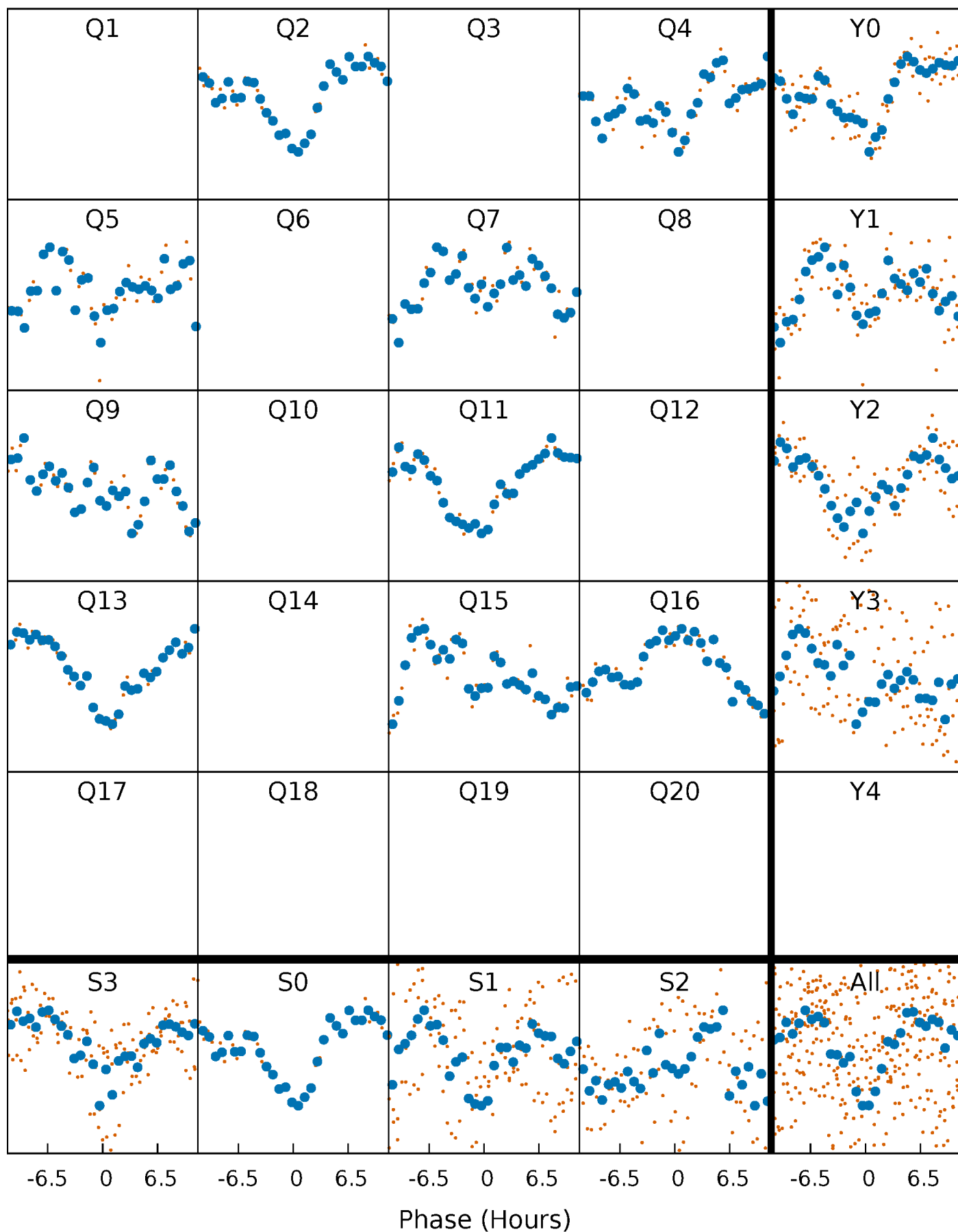


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



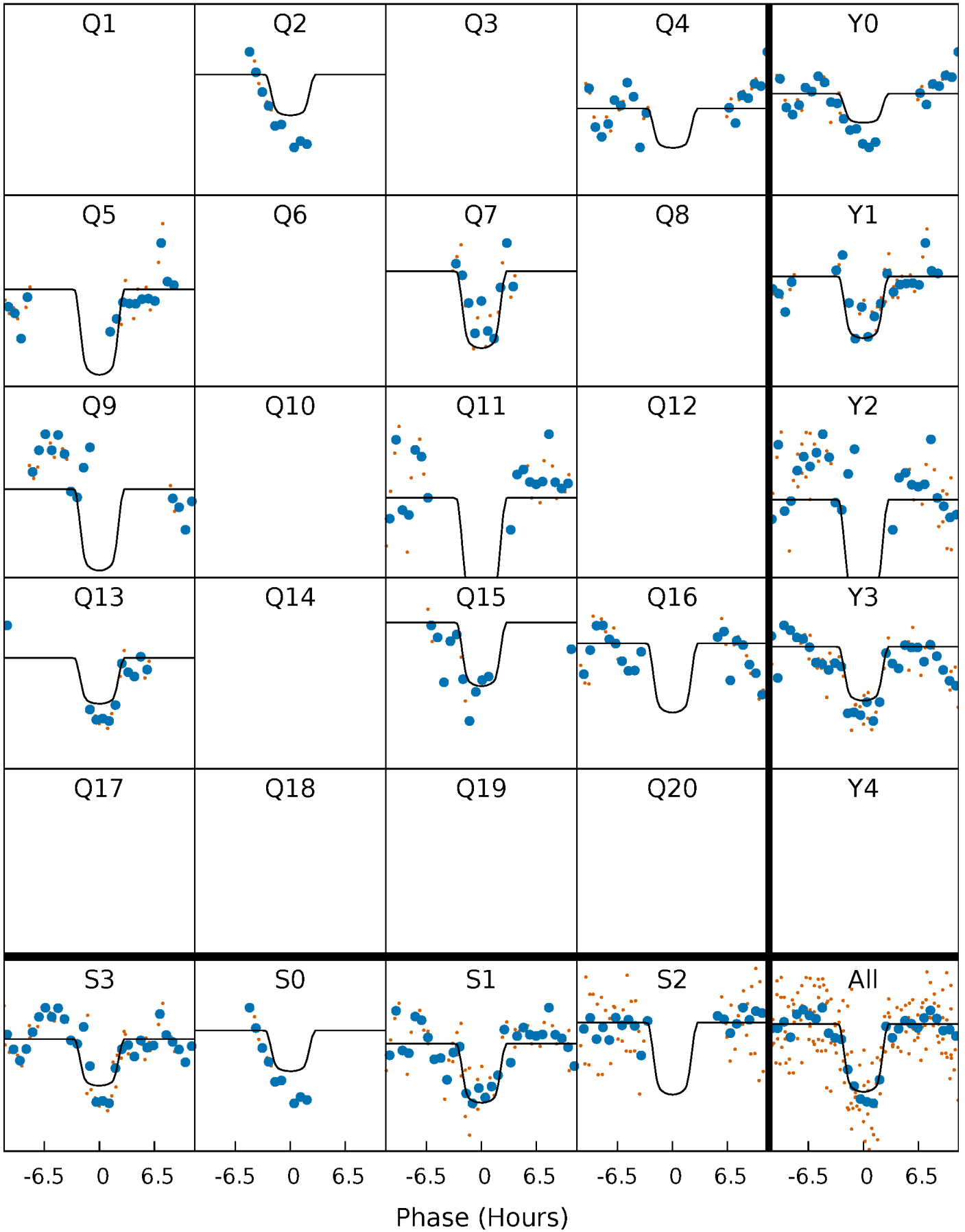
PDC Quarter-Phased Transit Curves

TCE 002581674-03 P=168.455256 Days $T_0=197.016547$ (BKJD)



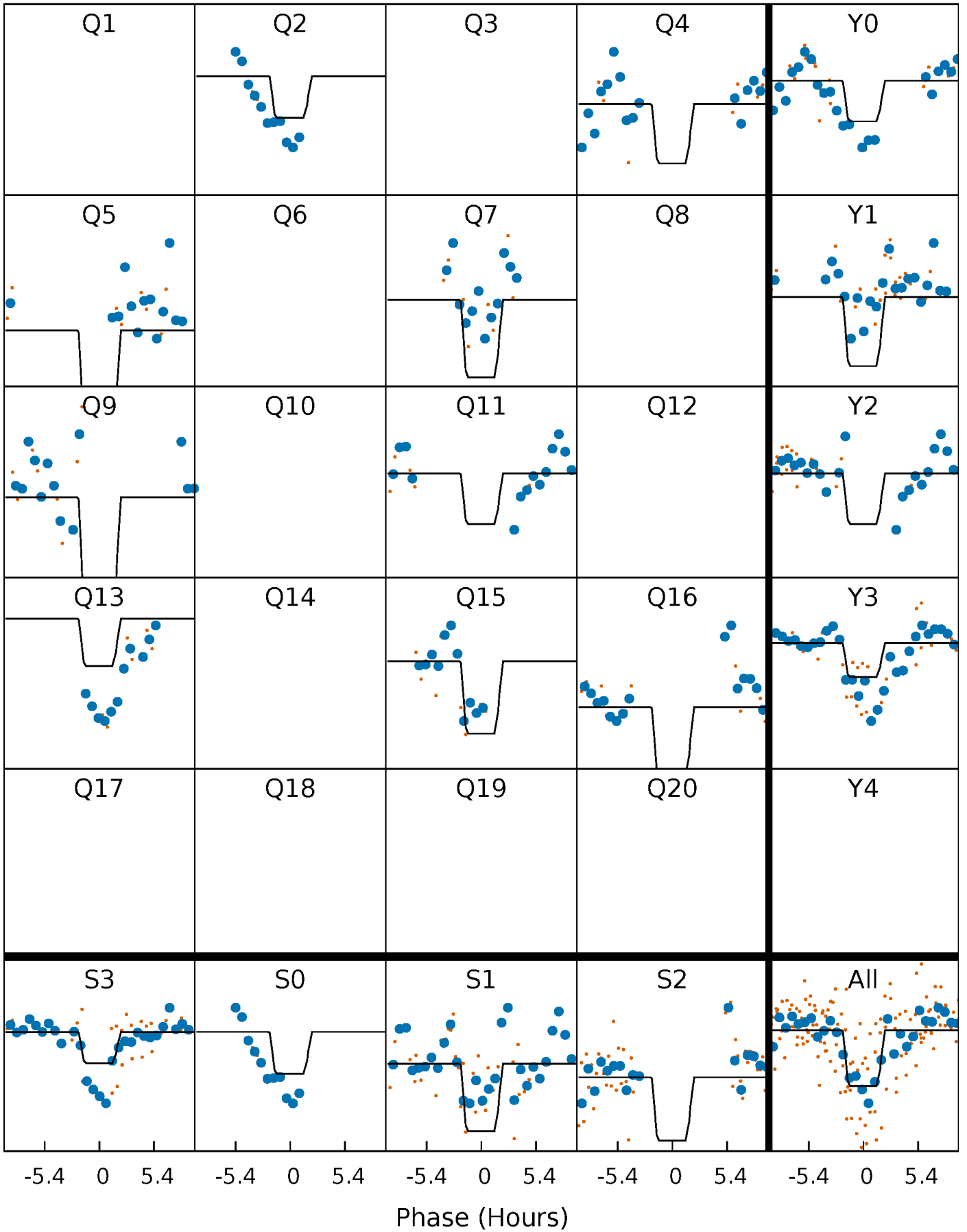
DV Quarter-Phased Transit Curves

TCE 002581674-03 $P=168.455256$ Days $T_0=197.016547$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

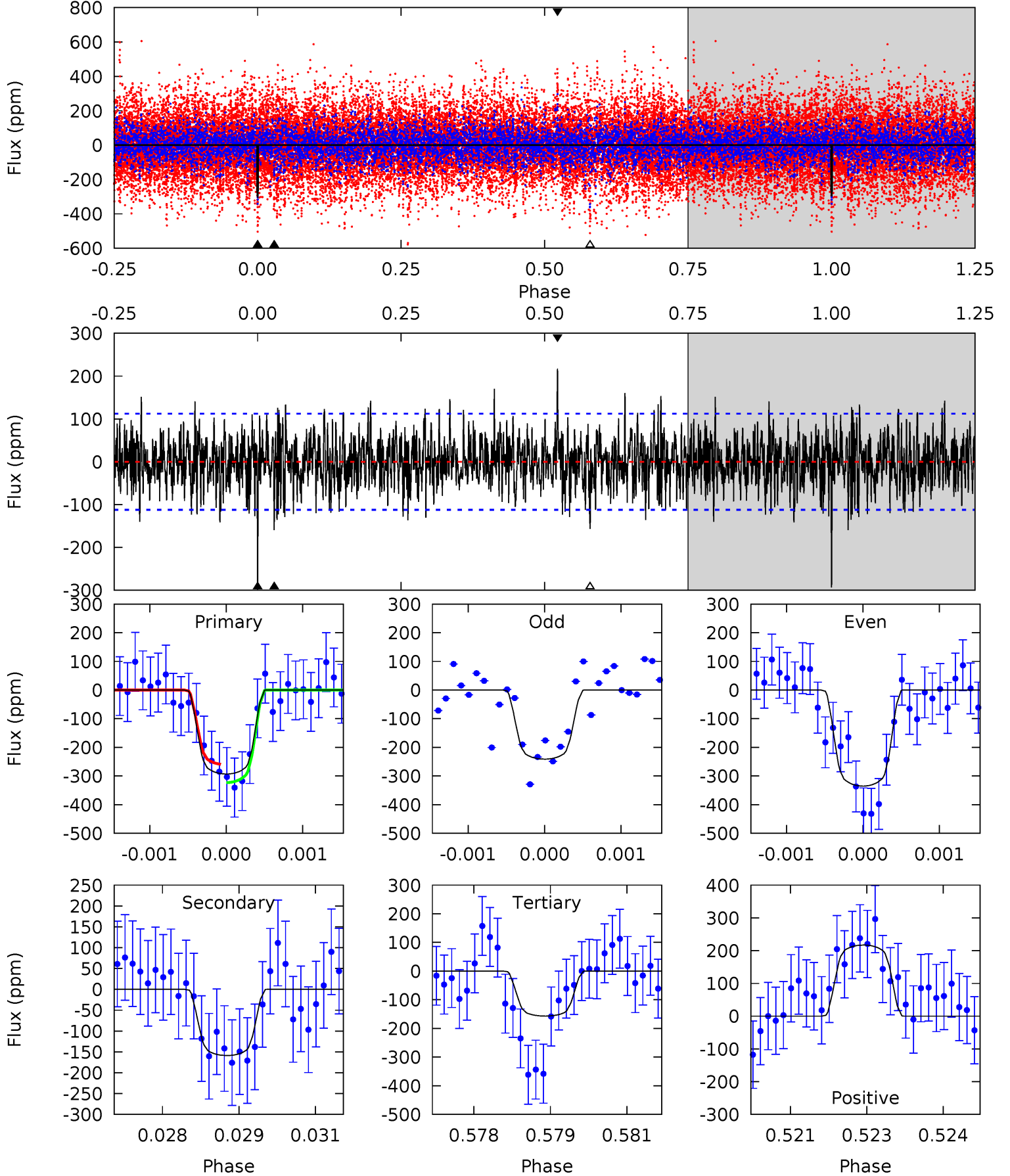
TCE 002581674-03 P=168.452990 Days $T_0=197.038166$ (BKJD)



DV Model-Shift Uniqueness Test

002581674-03, P = 168.455256 Days, E = 28.561291 Days

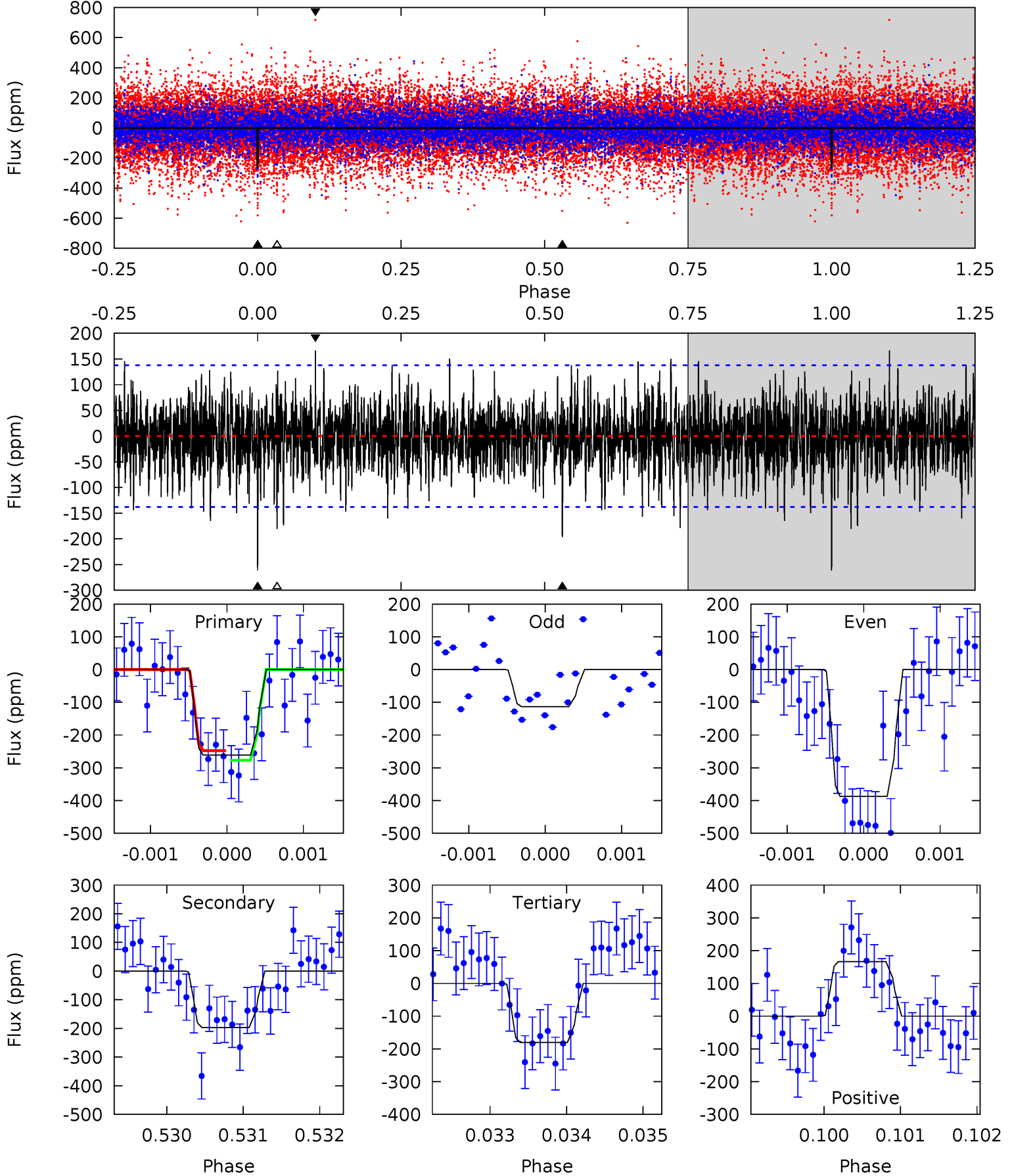
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	7.62	7.53	10.4	5.38	3.18	2.31	6.55	3.66	0.09	-2.80	2.25	0.90	0.43	1.54



Alt Model-Shift Uniqueness Test

002581674-03, P = 168.452990 Days, E = 28.585176 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.77	7.13	6.58	5.45	3.28	1.87	3.20	3.75	0.64	1.19	5.40	1.19	0.39	0.58



Stellar Parameters For KIC 002581674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7334^{+203}_{-330}	$3.582^{+0.495}_{-0.055}$	$0.160^{+0.150}_{-0.350}$	$3.917^{+0.494}_{-1.978}$	$2.133^{+0.234}_{-0.546}$	$0.050^{+0.255}_{-0.014}$
	+3%/-4%	+14%/-2%	+94%/-219%	+13%/-50%	+11%/-26%	+511%/-28%
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 002581674-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-159 ± 21	$7.46^{+1.18}_{-1.99}$	971^{+74}_{-128}	5914^{+338}_{-310}	957^{+695}_{-250}
Alt.	-197 ± 25	$6.31^{+1.09}_{-1.74}$	973^{+69}_{-133}	6758^{+531}_{-455}	1656^{+1246}_{-493}

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

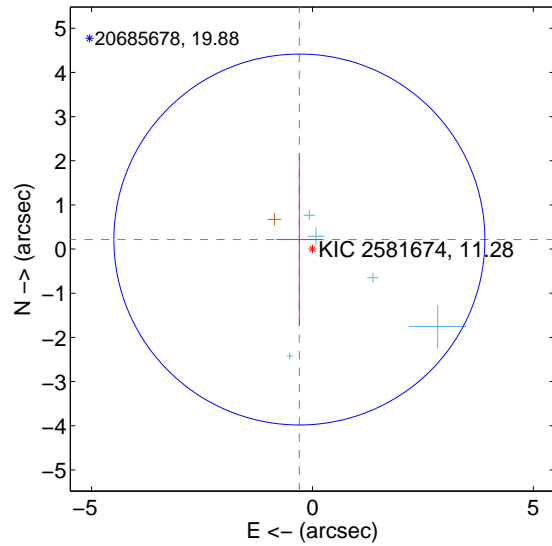
Supplemental centroid analysis for 002581674-03. **Kepler magnitude: 11.28.** Transit SNR 8.03

There are 5 quarters with good PRF difference image offsets

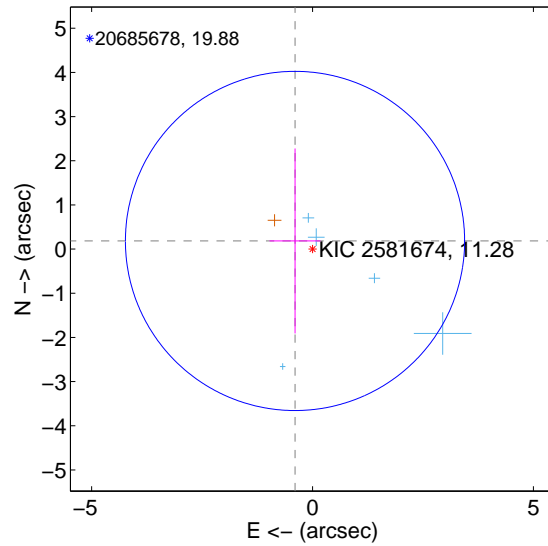
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.367 ± 1.400	0.26	0.296 ± 0.524	0.217 ± 1.953
PRF-fit source offset from KIC position	0.437 ± 1.280	0.34	0.397 ± 0.577	0.184 ± 2.094
photometric centroid source offset	0.62 ± 0.51	1.21	0.17 ± 0.40	-0.60 ± 0.52

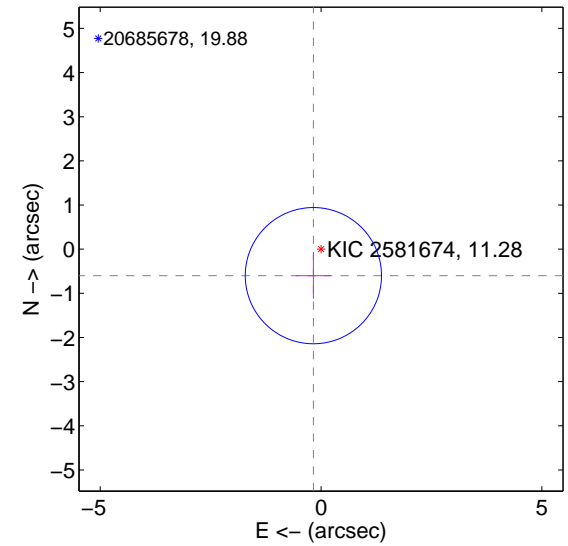
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

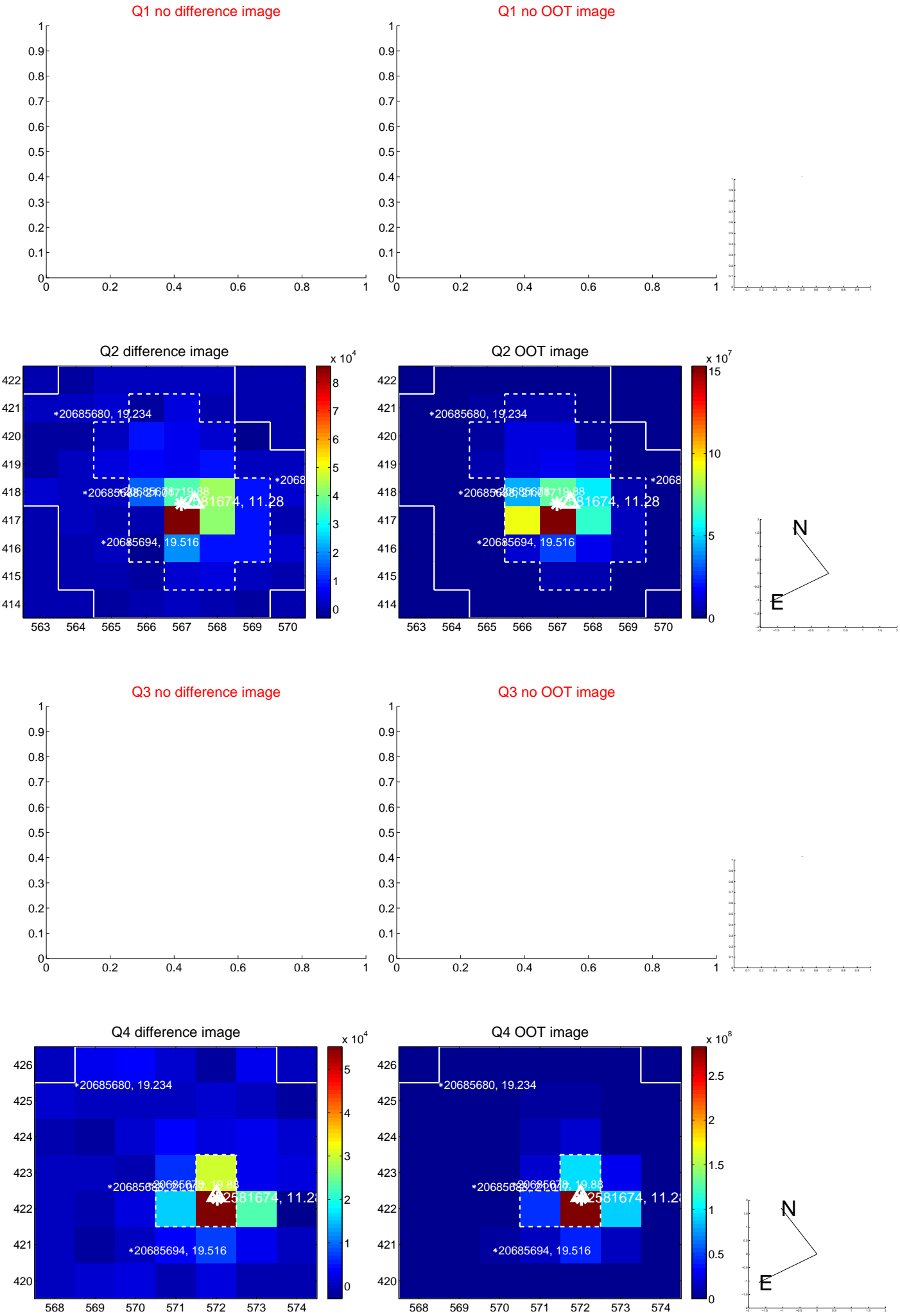


offset from photometric centroids

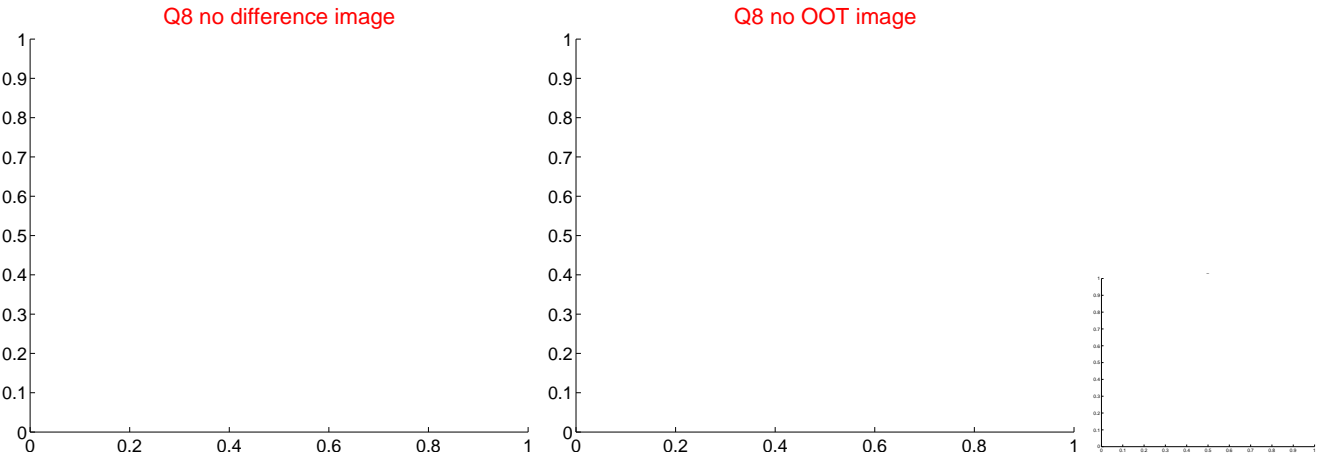
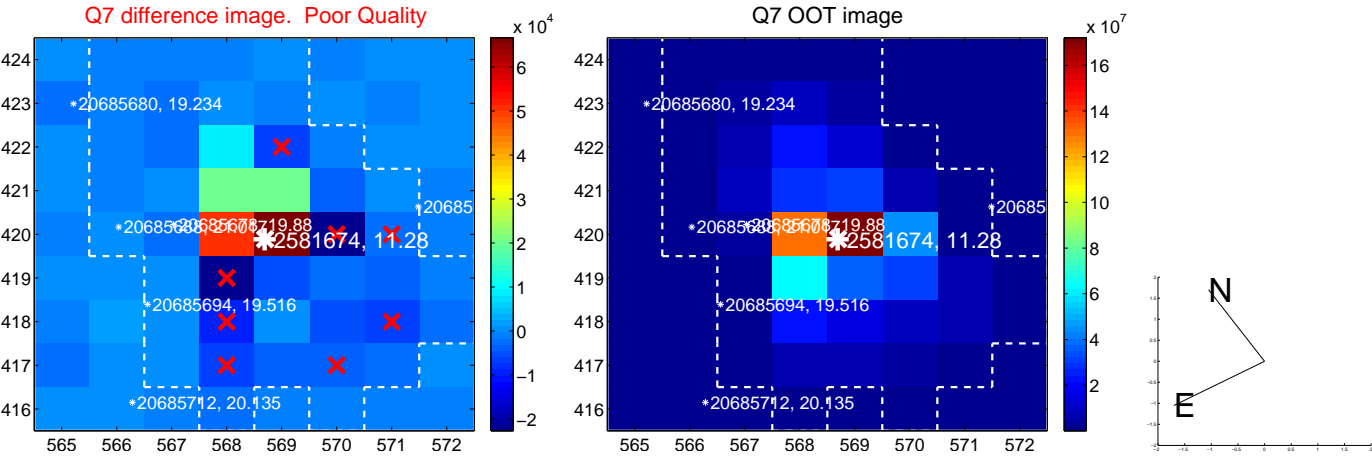
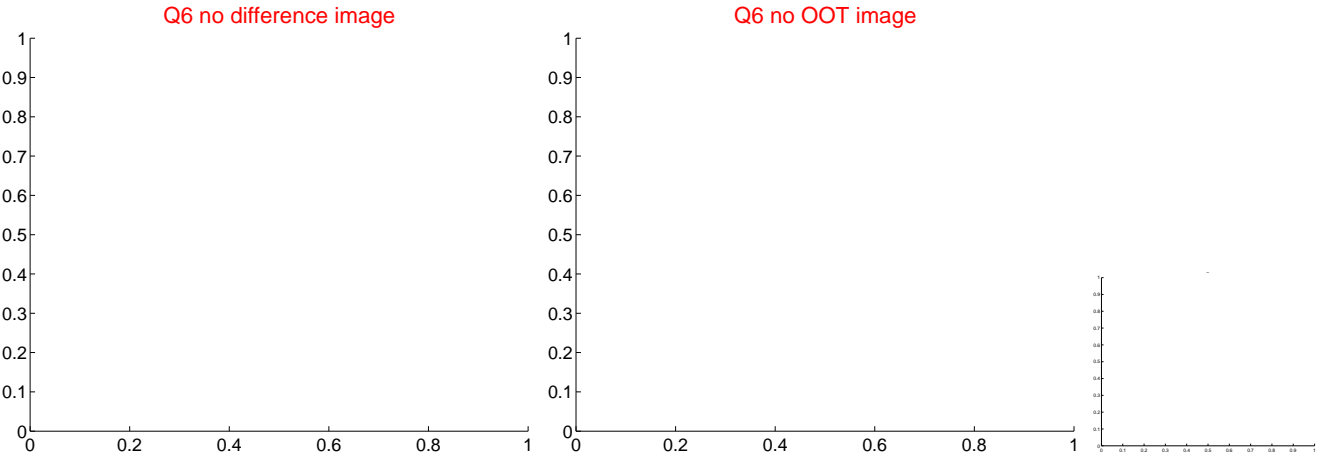
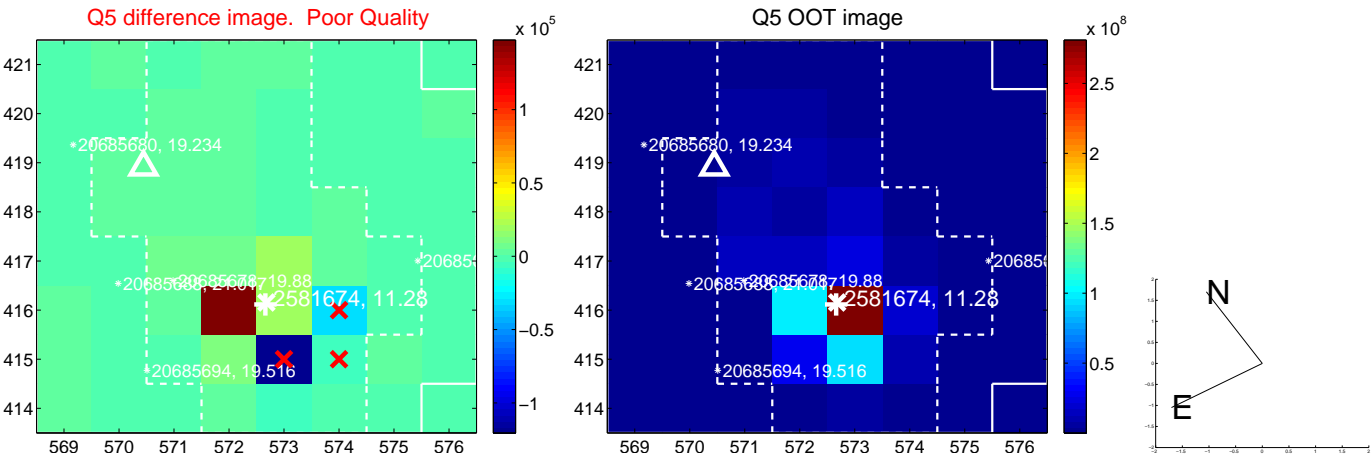


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

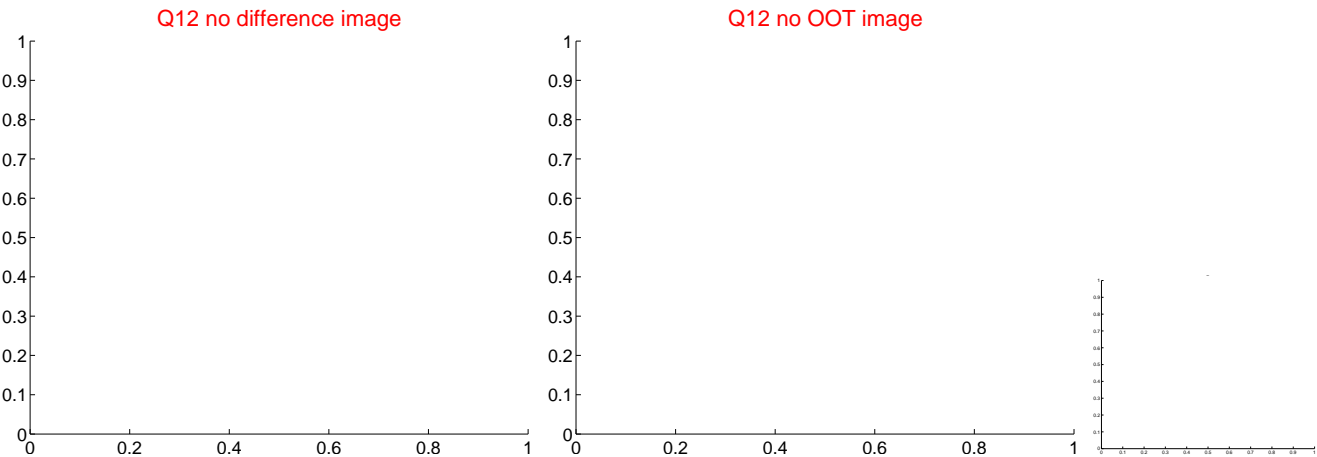
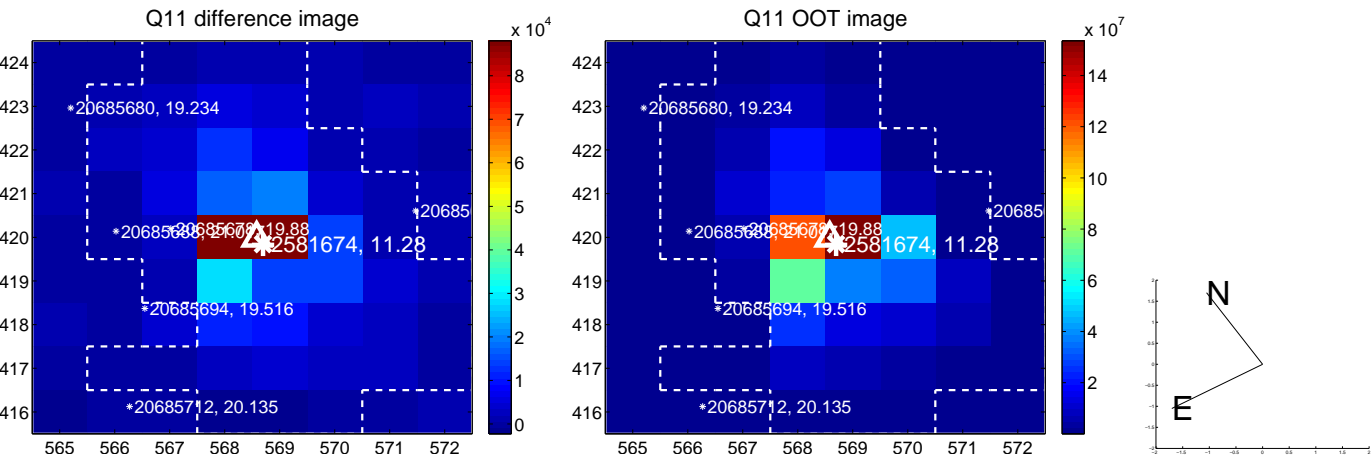
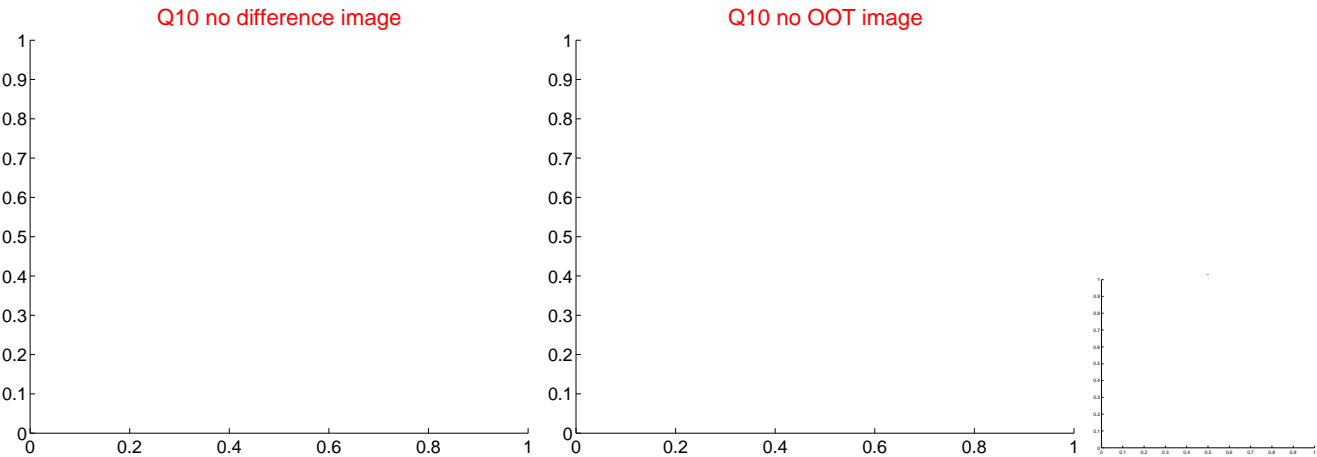
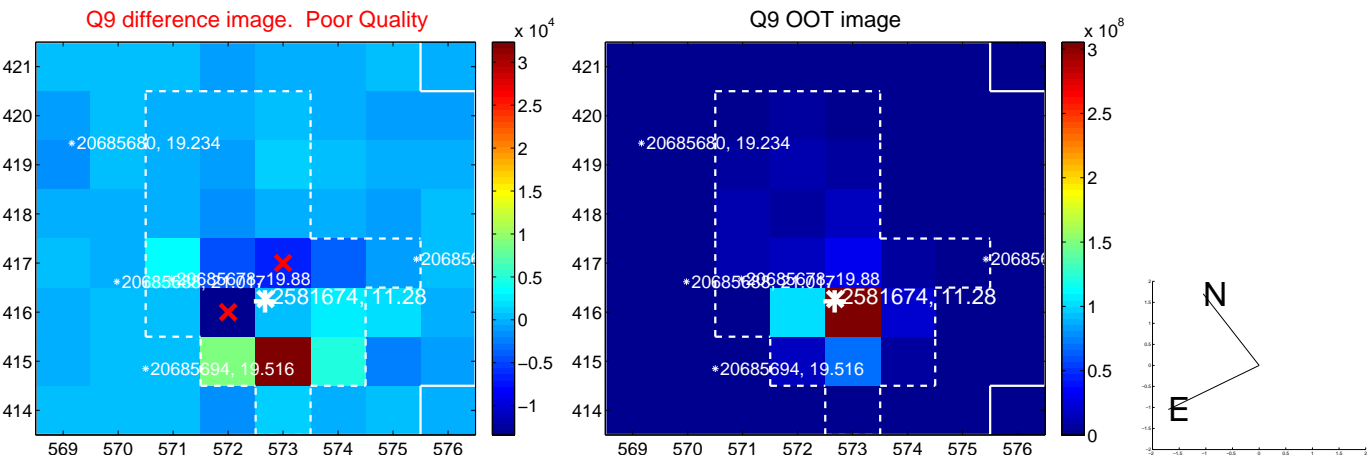
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



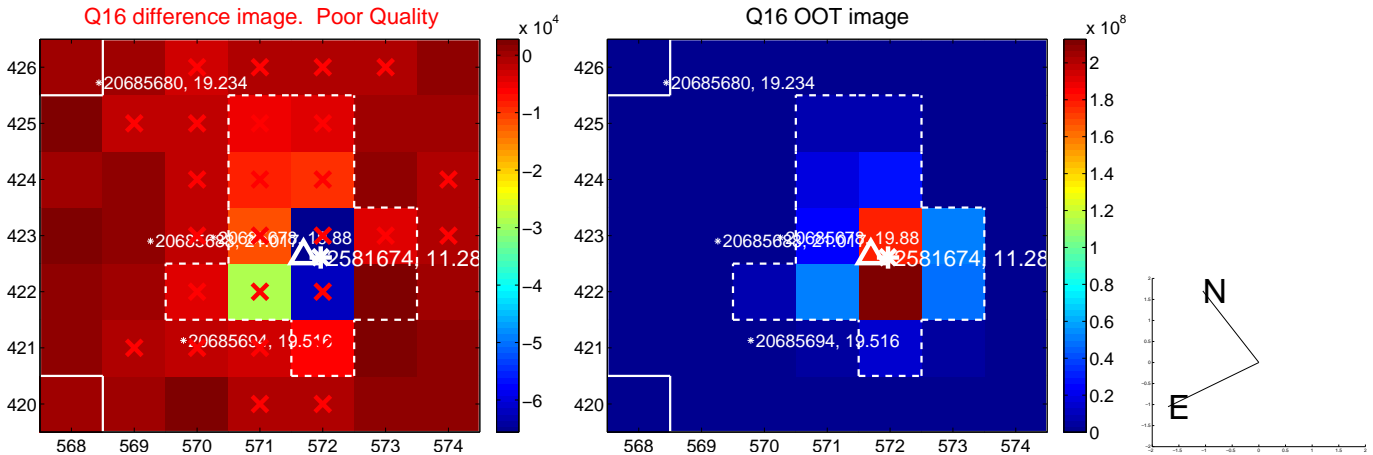
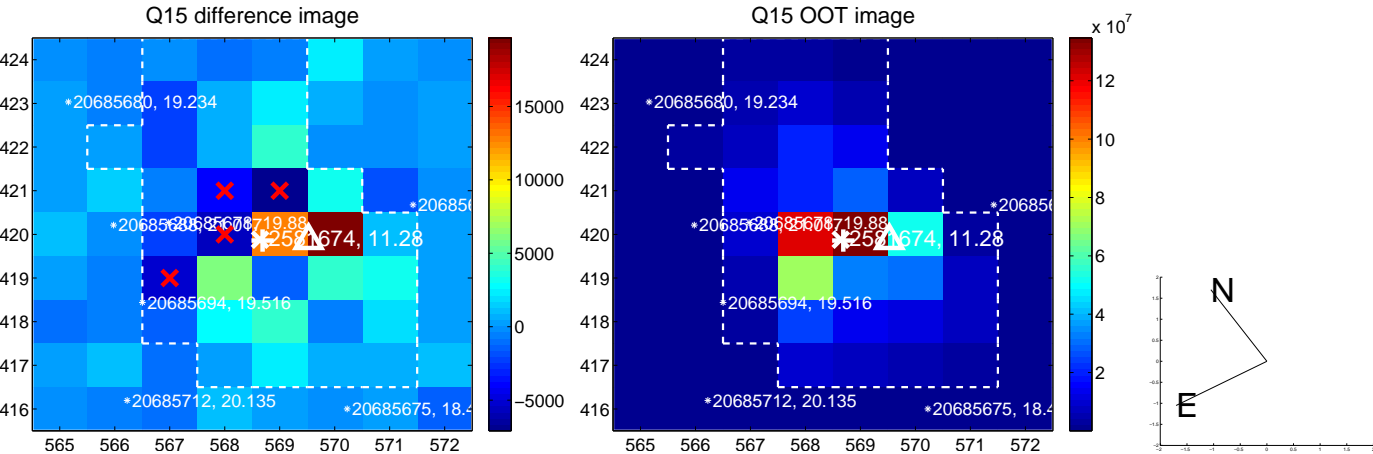
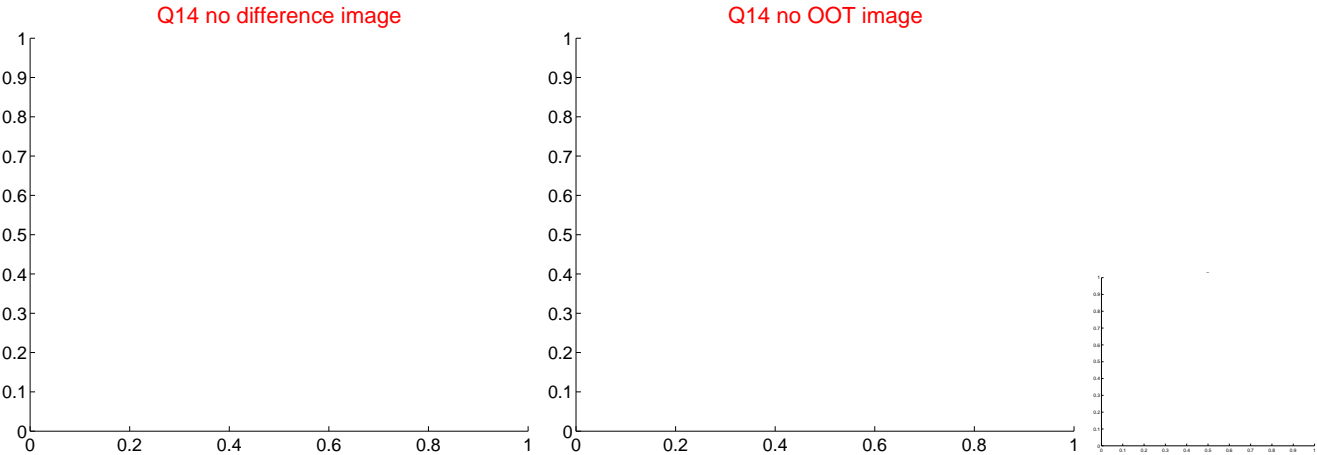
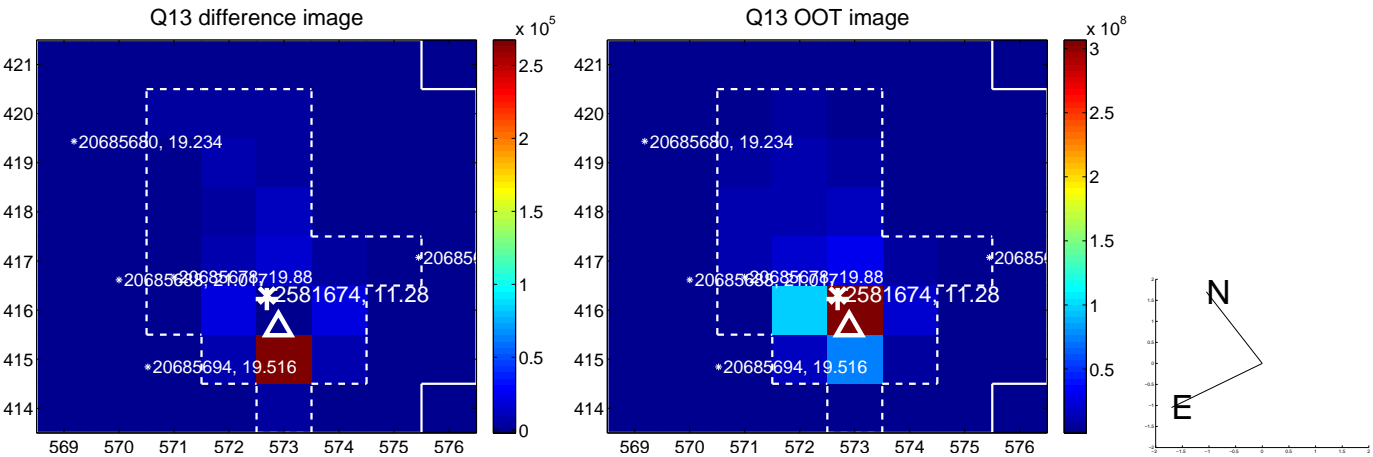
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



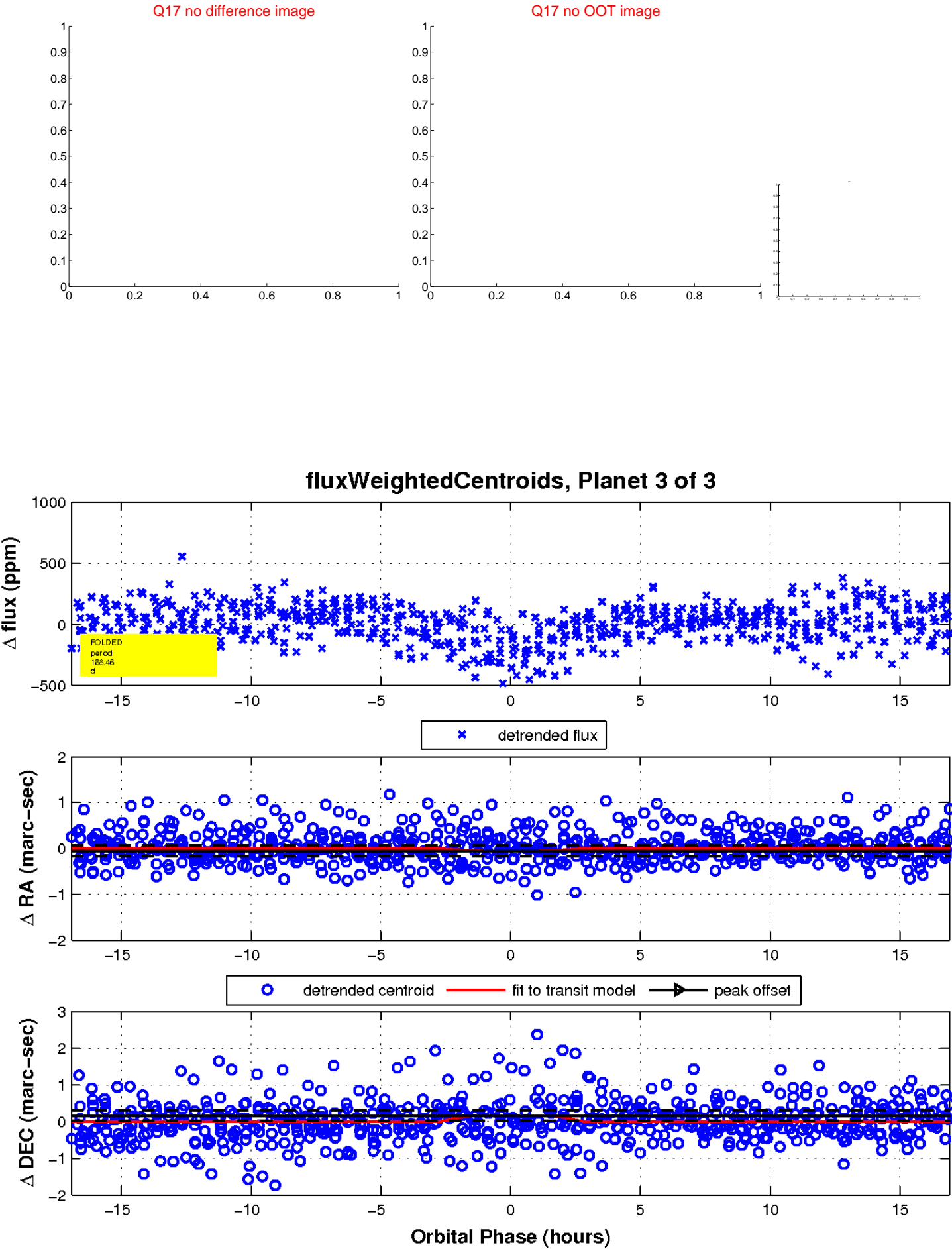
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

