

KIC 007505674

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})
007505674-01	OBS	No	1.599833	132.960327	23.8	3.158	11.2	9.2	2.41	6505	1.37	10756.60
007505674-02	OBS	No	0.800154	131.557657	0.0	0.786	8.9	0.0	2.41	6505	0.02	27094.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007505674-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007505674-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

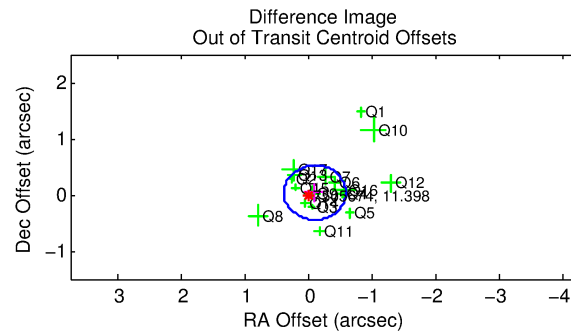
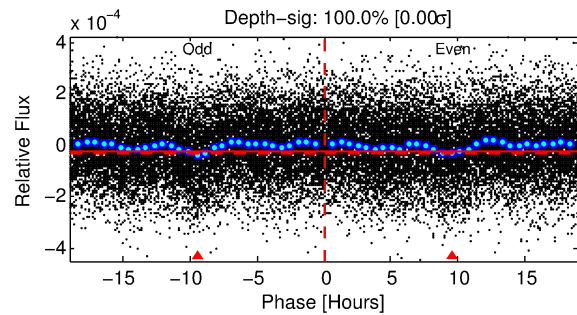
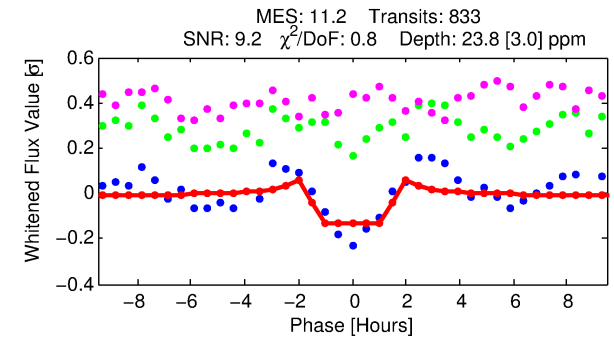
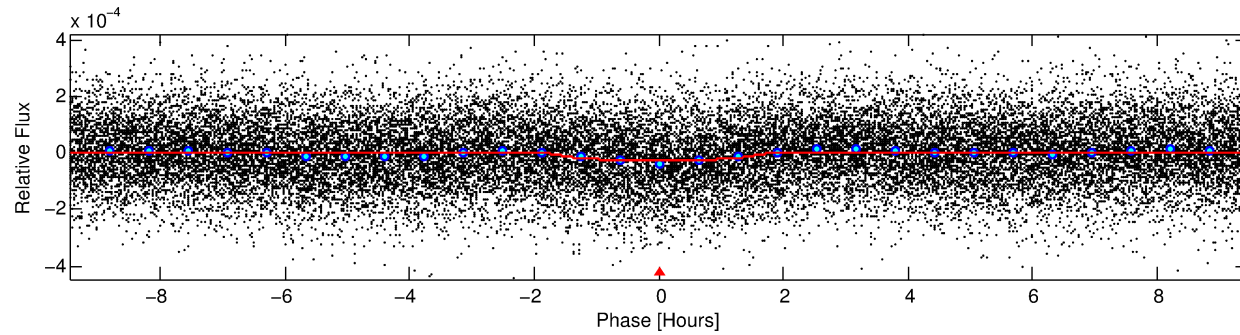
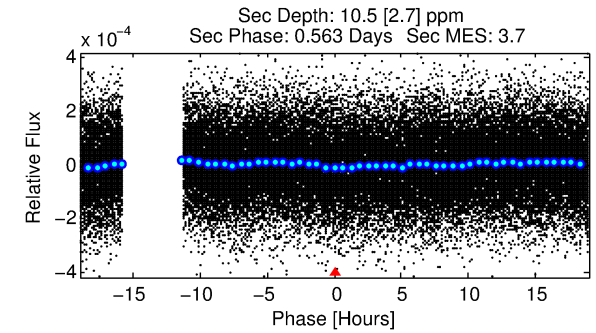
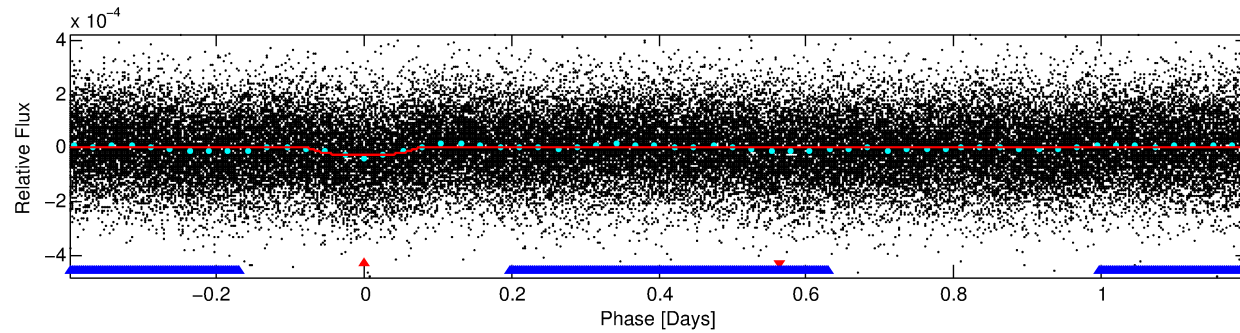
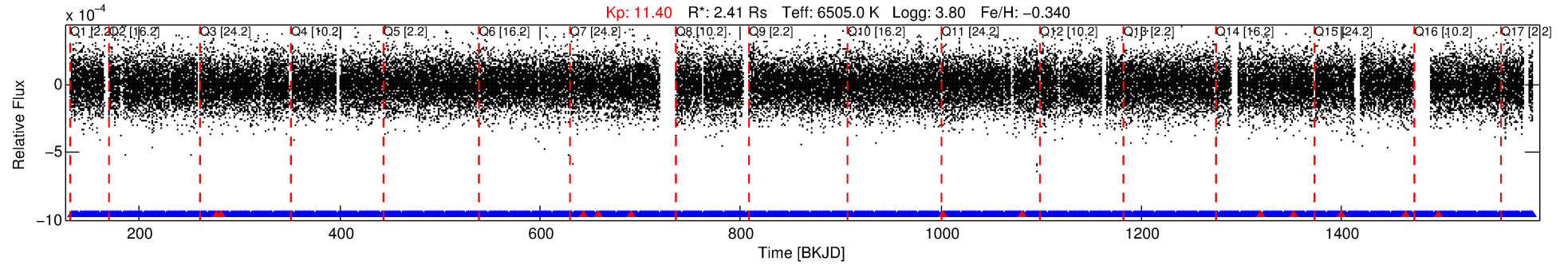
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007505674-01

No Significant Match Found

DV One-Page Summary

KIC: 7505674 Candidate: 1 of 2 Period: 1.600 d



DV Fit Results:

Period = 1.59983 [0.00001] d
Epoch = 132.9603 [0.0027] BKJD
Rp/R* = 0.0052 [0.0011]
a/R* = 1.97 [1.66]
b = 0.90 [0.24]
Seff = 10756.60 [9275.50]
Teq = 2597 [560] K
Rp = 1.37 [0.74] Re
a = 0.0294 [0.0151] AU
Ag = 2.66 [2.60] [0.64σ]
Teffp = 5125 [644] K [2.96σ]

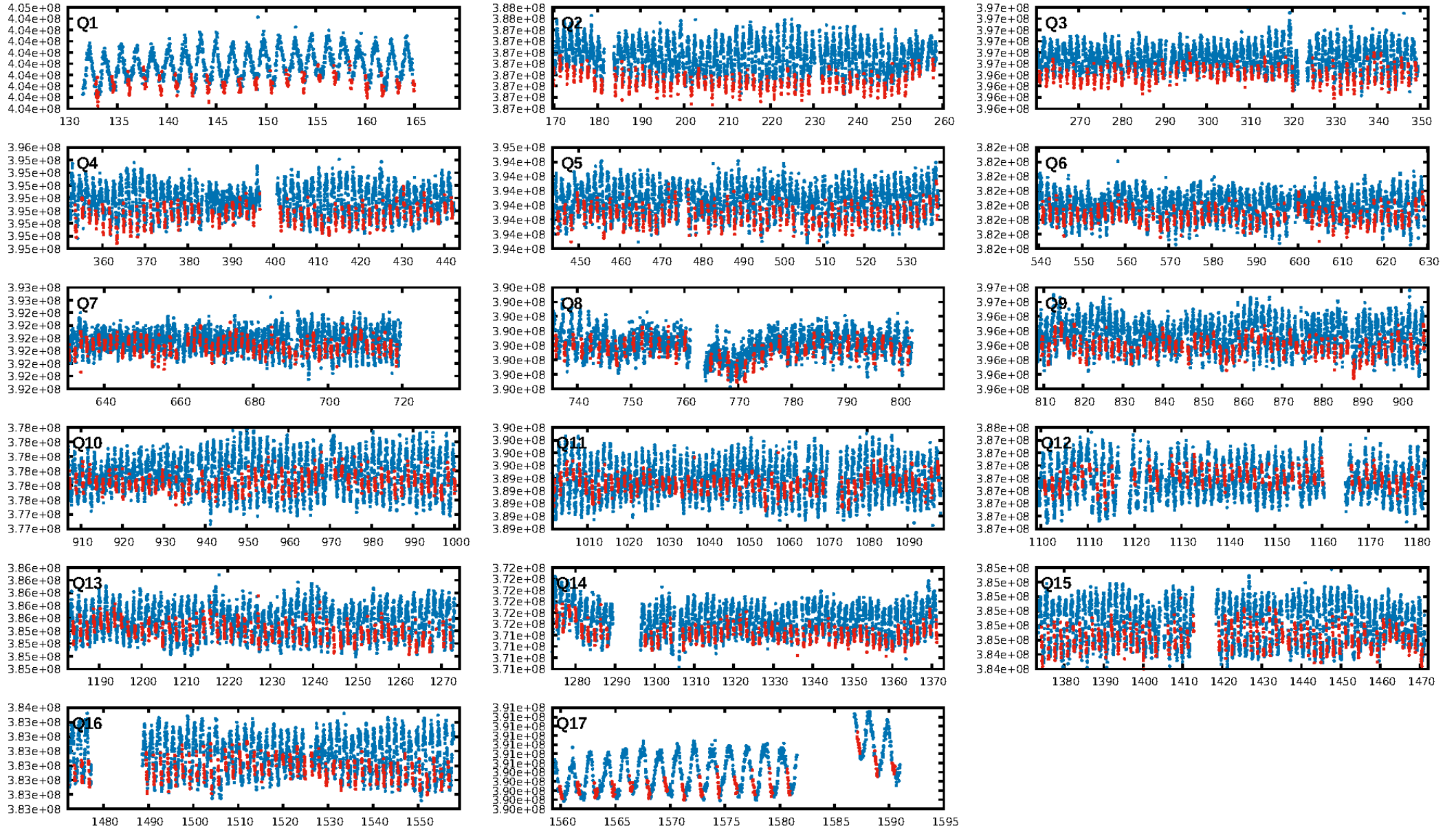
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.90σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.12e-24
RollingBand-fgt: 0.98 [783/795]
GhostDiagnostic-chr: 0.9396
Centroid-sig: 44.4%
Centroid-so: 0.424 arcsec [0.73σ]
OotOffset-rm: 0.103 arcsec [0.64σ]
KicOffset-rm: 0.126 arcsec [0.84σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.24 [4/17]

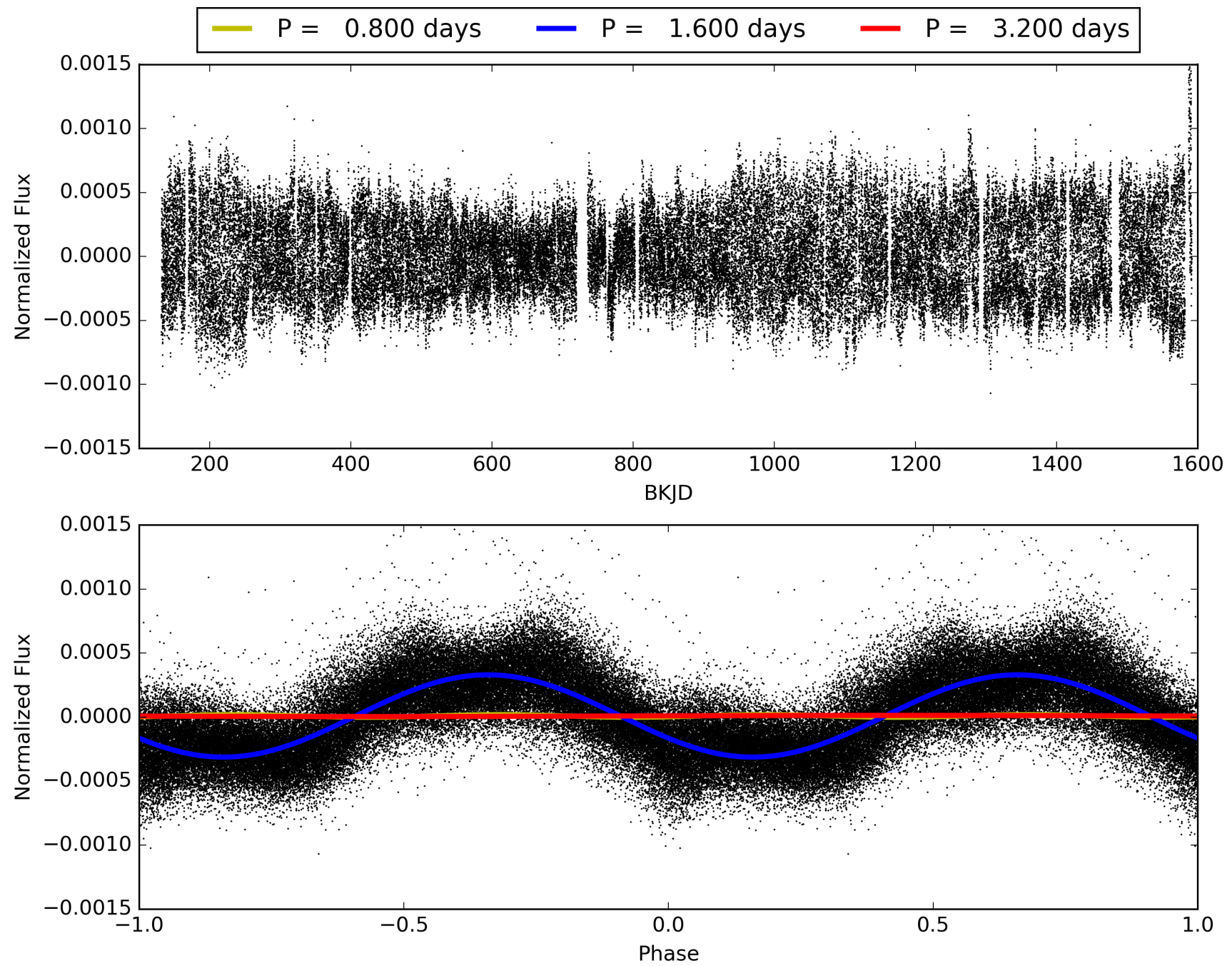
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:15:39 Z

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

TCE 007505674-01, PDC Light Curves

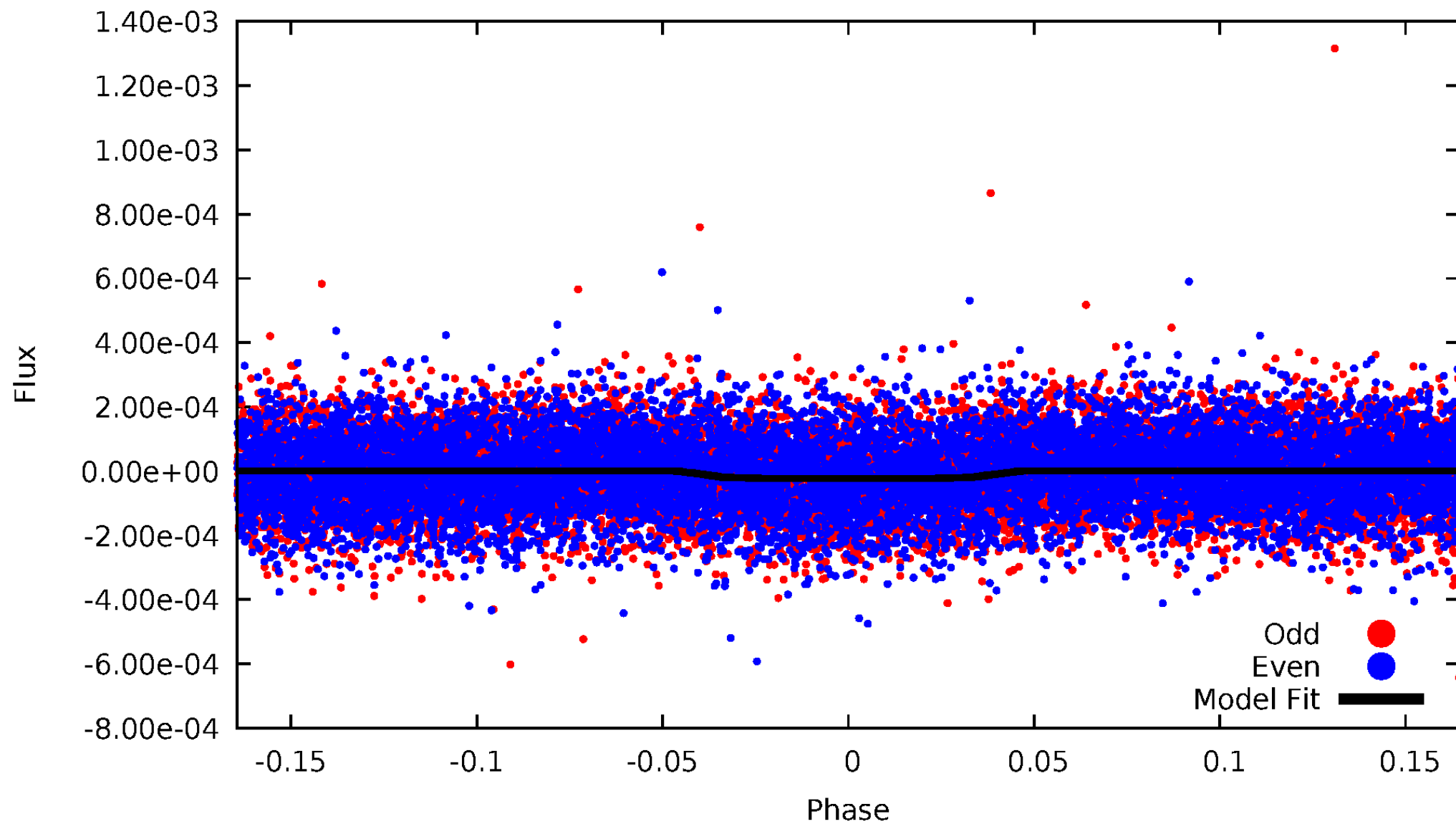


TCE 007505674-01



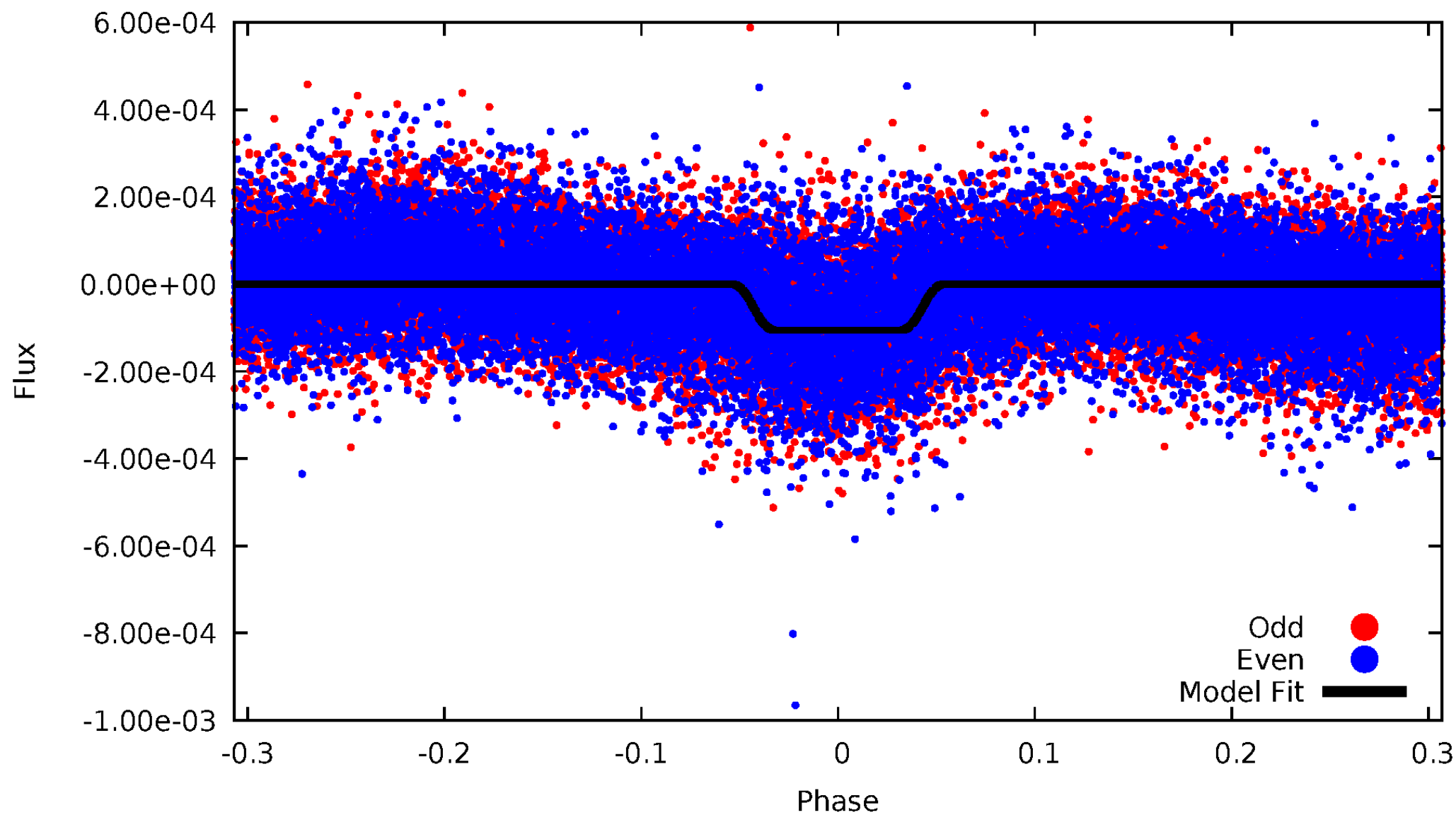
DV Odd/Even

TCE 007505674-01



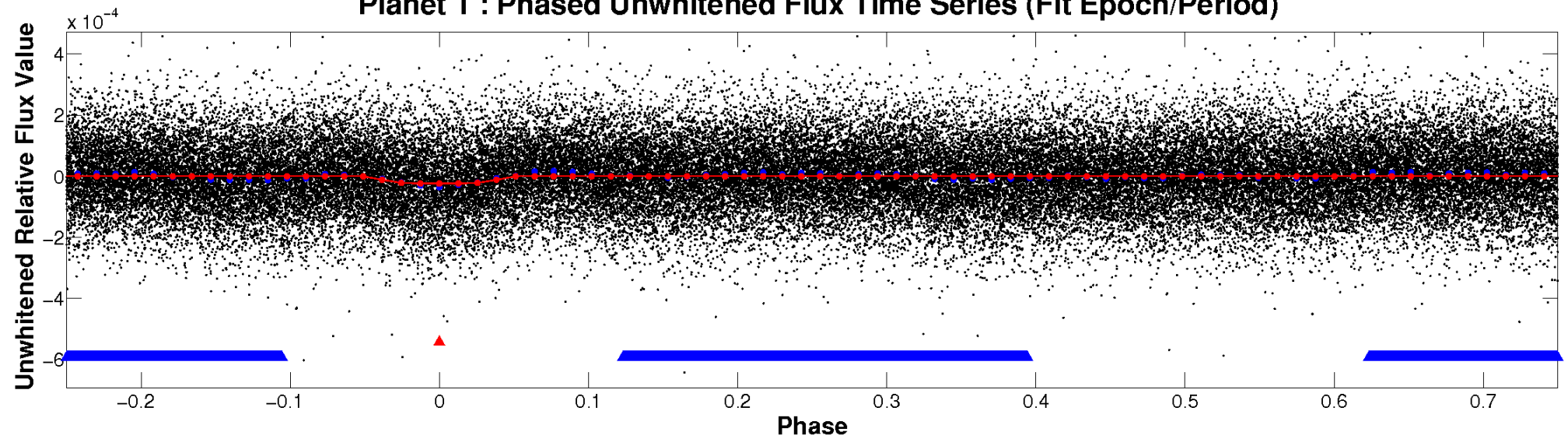
ALT Odd/Even

TCE 007505674-01

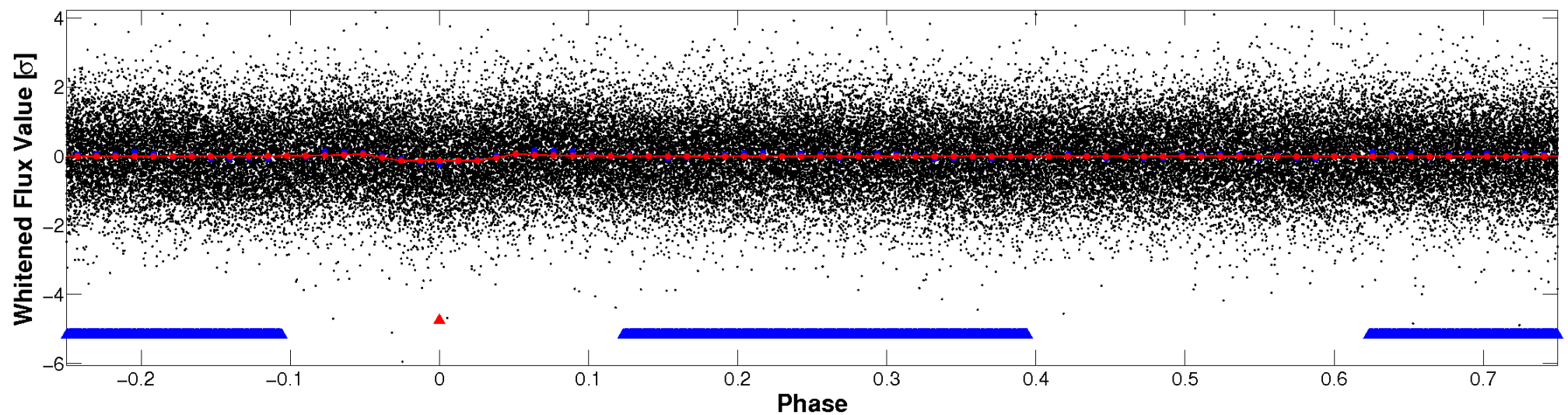


Non-Whitened Vs. Whitened Light Curve

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

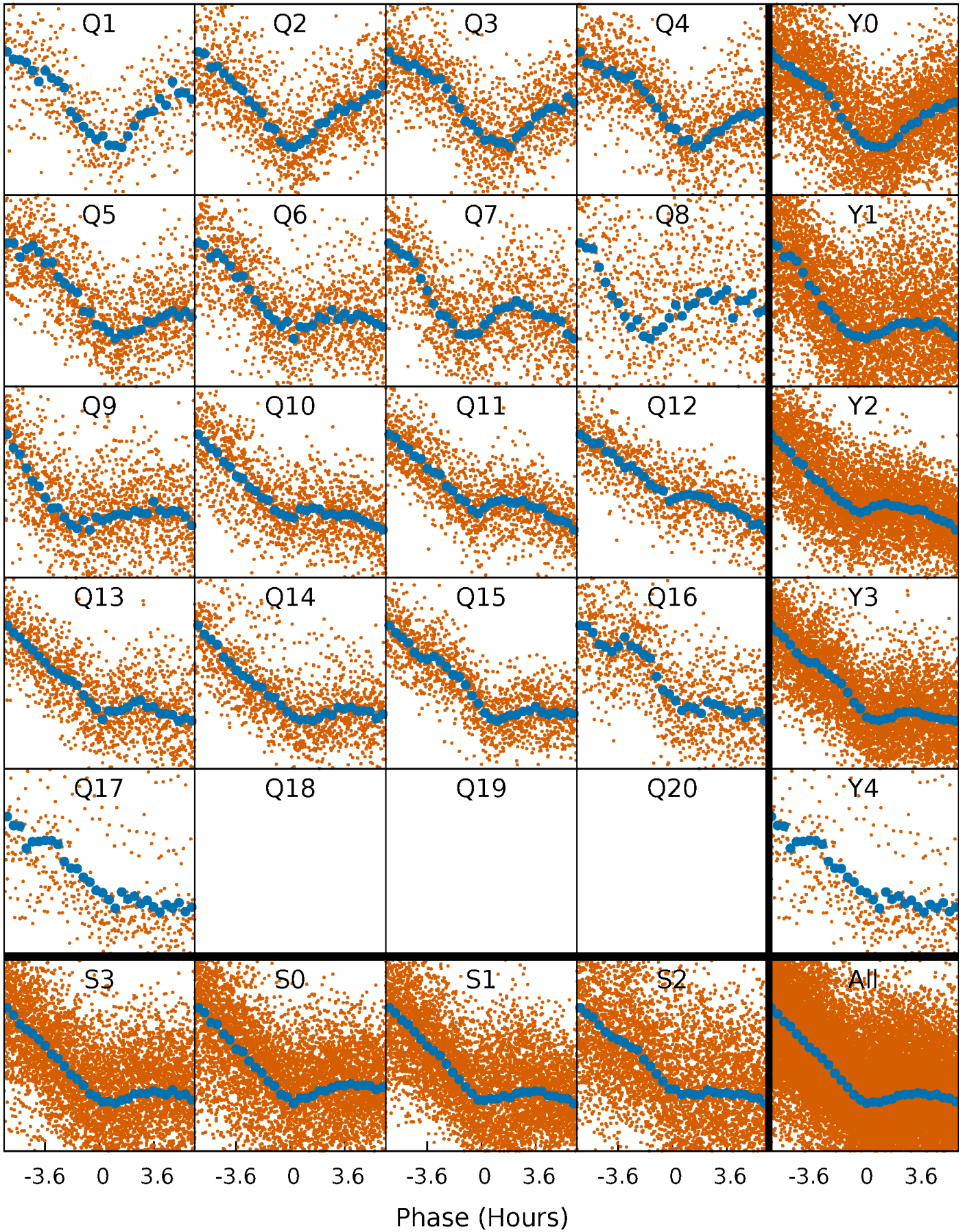


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



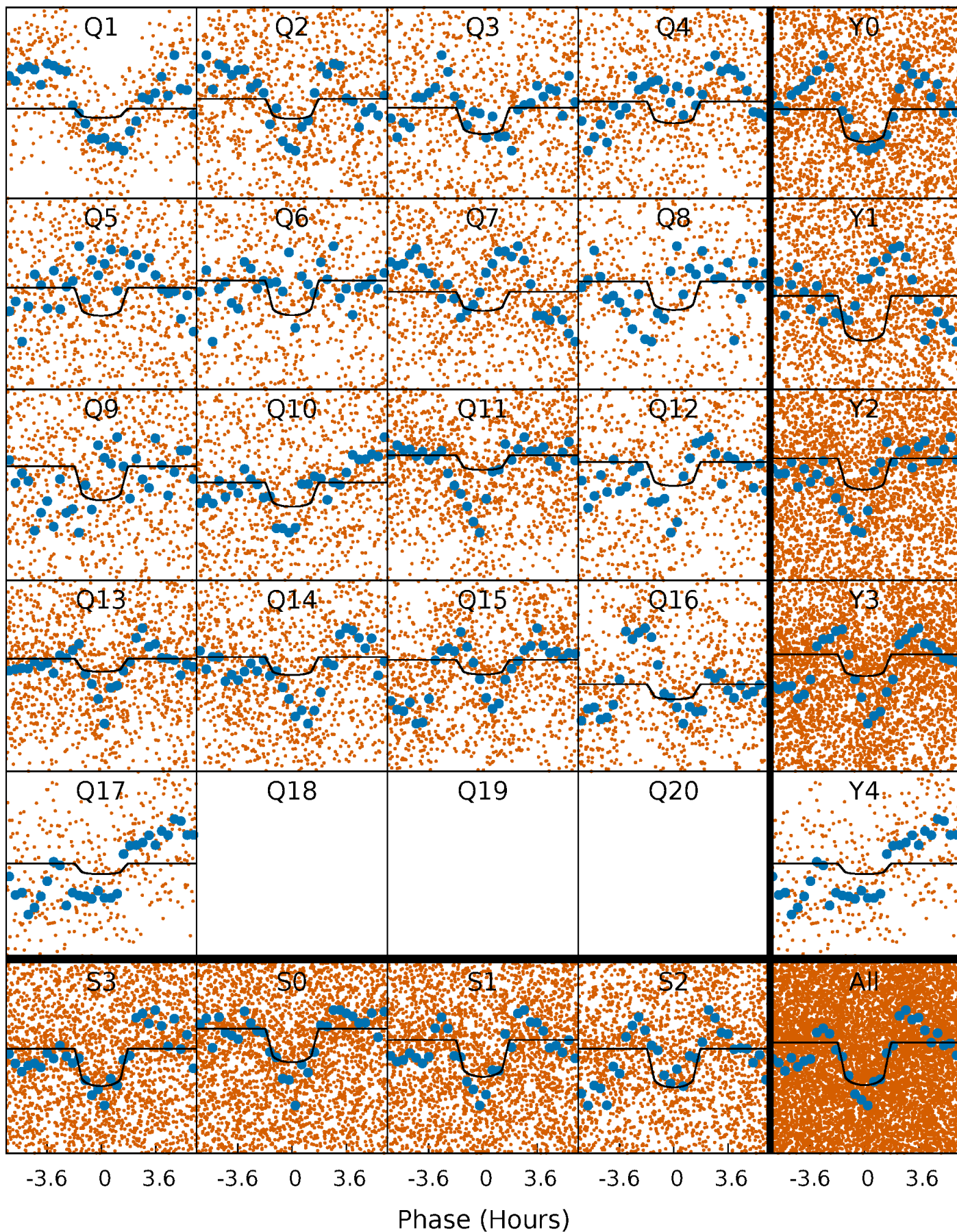
PDC Quarter-Phased Transit Curves

TCE 007505674-01 P= 1.599833 Days $T_0=132.960327$ (BKJD)



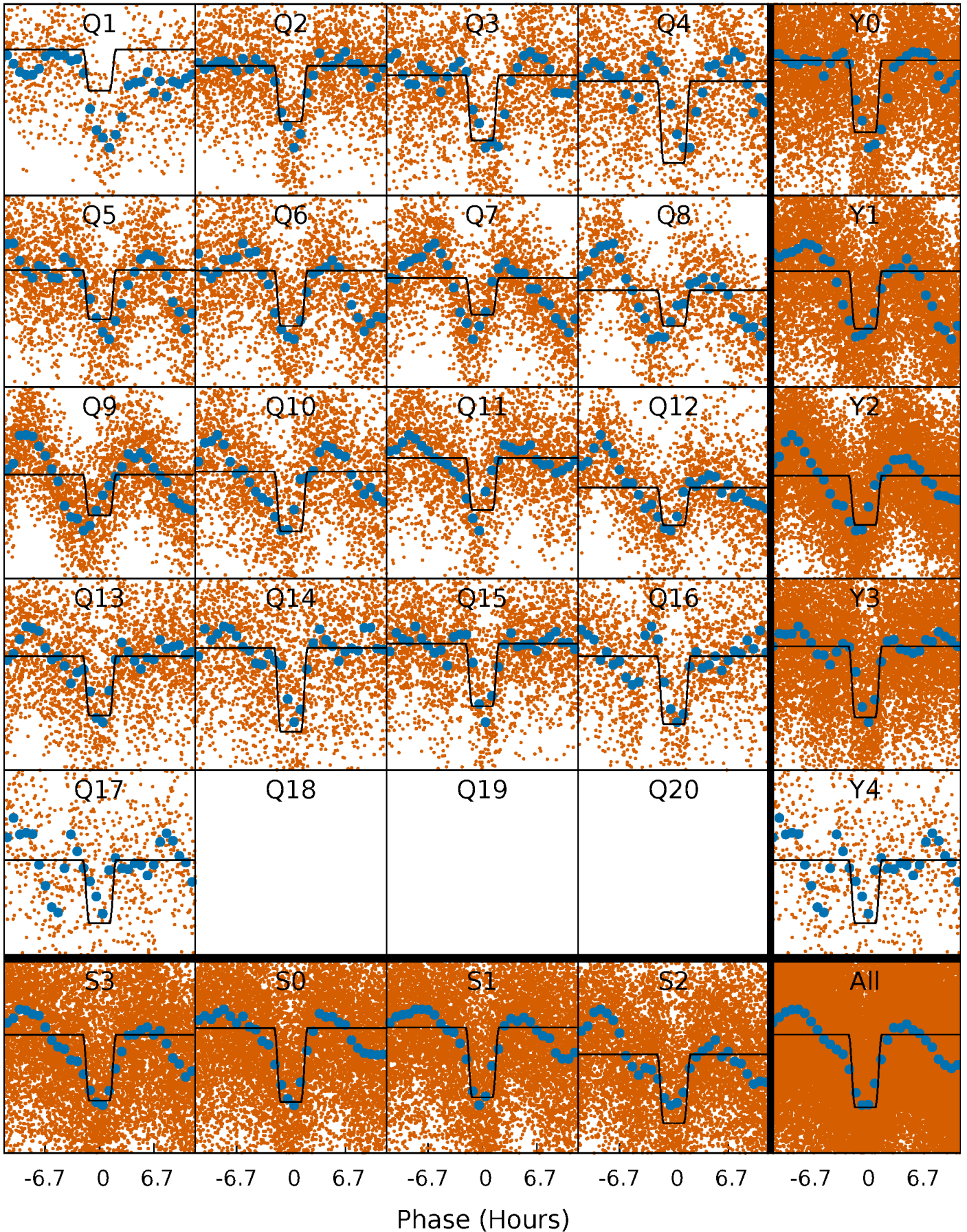
DV Quarter-Phased Transit Curves

TCE 007505674-01 P= 1.599833 Days $T_0=132.960327$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

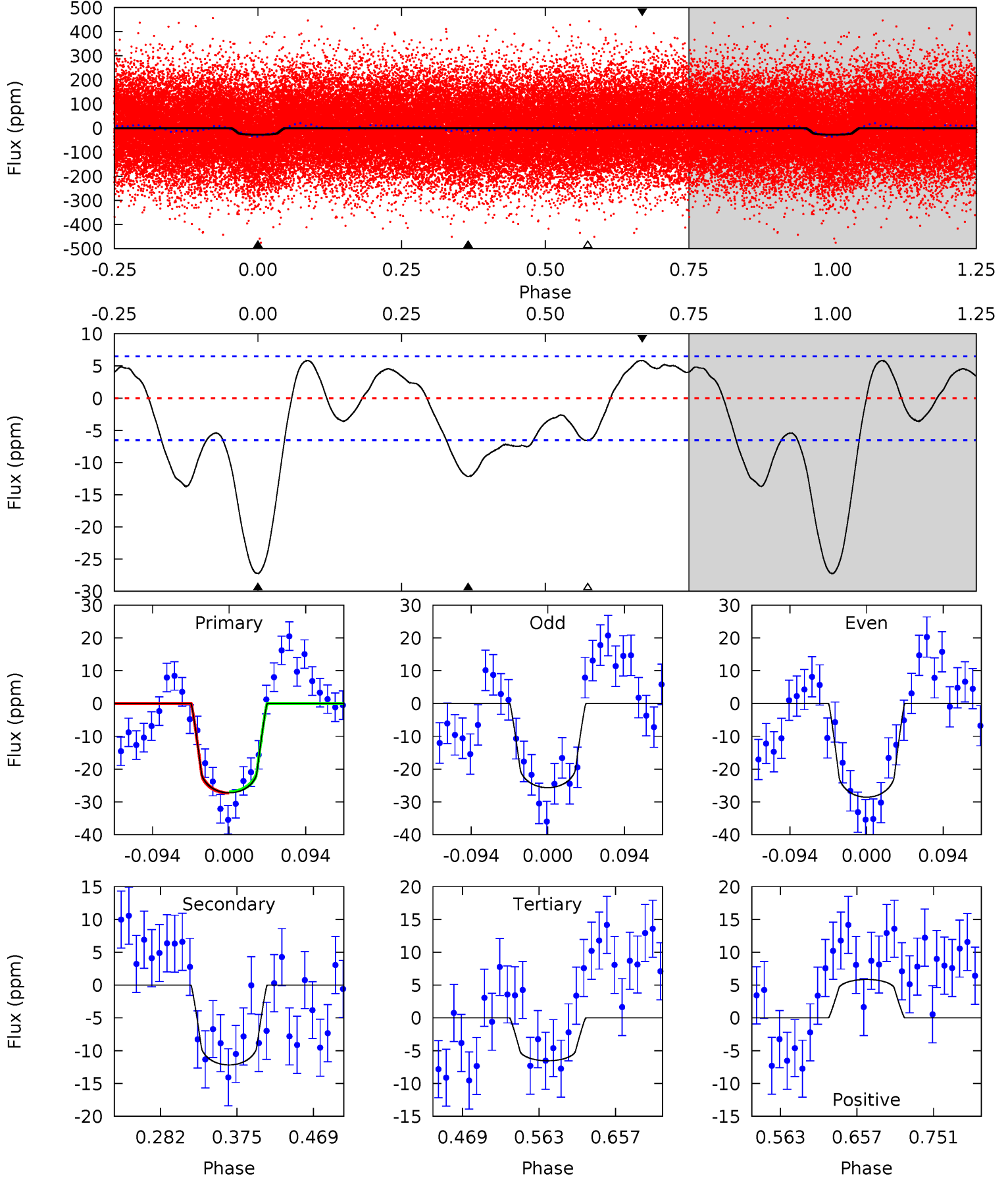
TCE 007505674-01 P= 1.599866 Days $T_0=132.945179$ (BKJD)



DV Model-Shift Uniqueness Test

007505674-01, P = 1.599833 Days, E = 131.360494 Days

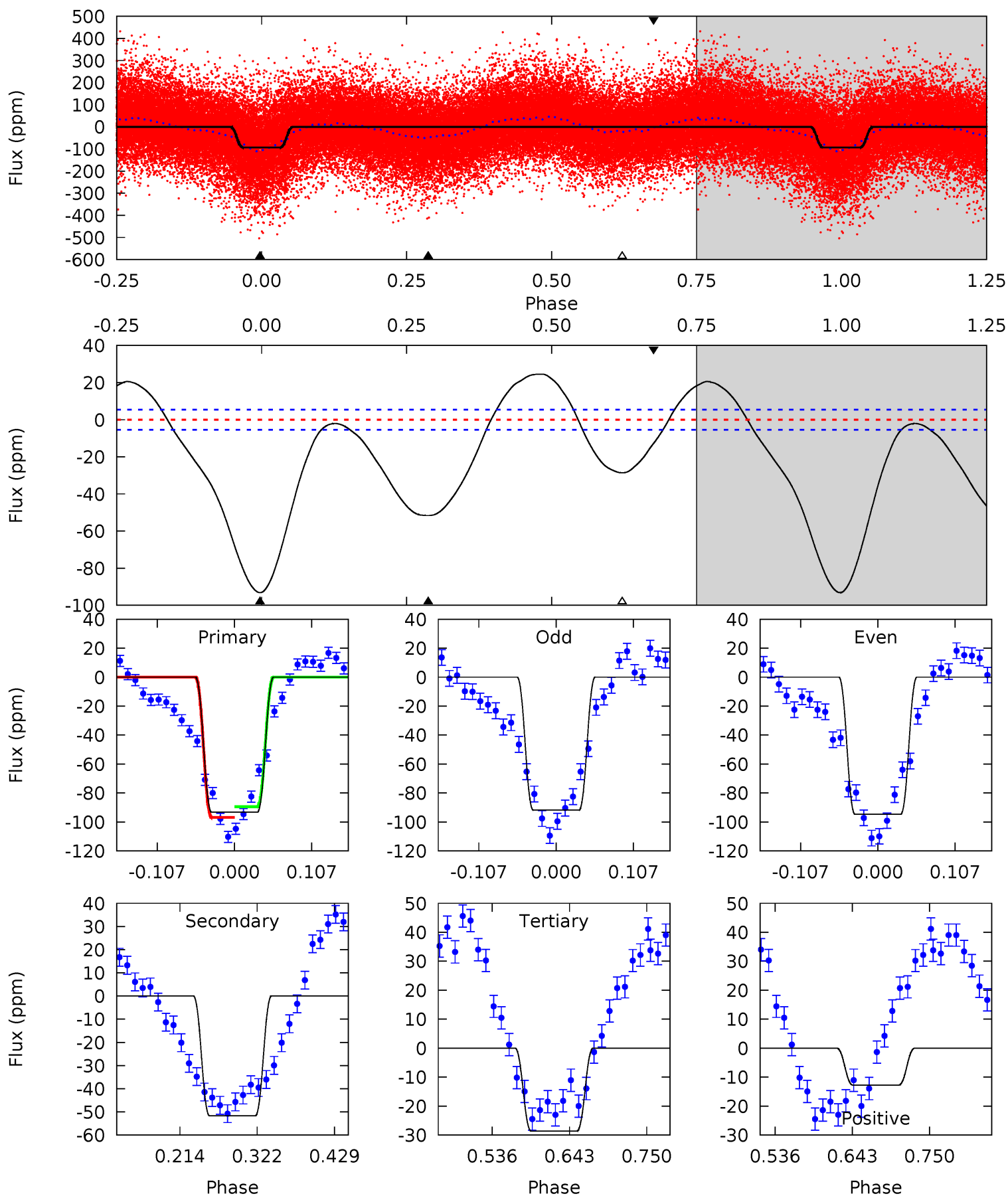
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	8.57	4.61	4.12	4.58	1.68	3.82	14.6	15.1	3.96	4.45	1.02	1.03	0.18	0.13



Alt Model-Shift Uniqueness Test

007505674-01, P = 1.599866 Days, E = 131.345313 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.1	43.3	24.0	-10.7	4.55	1.61	13.9	54.1	88.8	19.3	53.9	1.20	1.02	0.21	3.03



Stellar Parameters For KIC 007505674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6505^{+182}_{-228}	$3.797^{+0.510}_{-0.090}$	$-0.340^{+0.300}_{-0.300}$	$2.409^{+0.516}_{-1.204}$	$1.329^{+0.198}_{-0.321}$	$0.134^{+0.707}_{-0.051}$
	+3%/-4%	+13%/-2%	+88%/-88%	+21%/-50%	+15%/-24%	+528%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007505674-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 1	$1.20^{+0.38}_{-0.32}$	3477^{+268}_{-447}	5234^{+642}_{-471}	$3.981^{+3.570}_{-1.703}$
Alt.	-52 ± 1	$2.48^{+0.54}_{-0.67}$	3496^{+254}_{-493}	5360^{+365}_{-290}	$4.121^{+3.124}_{-1.305}$

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

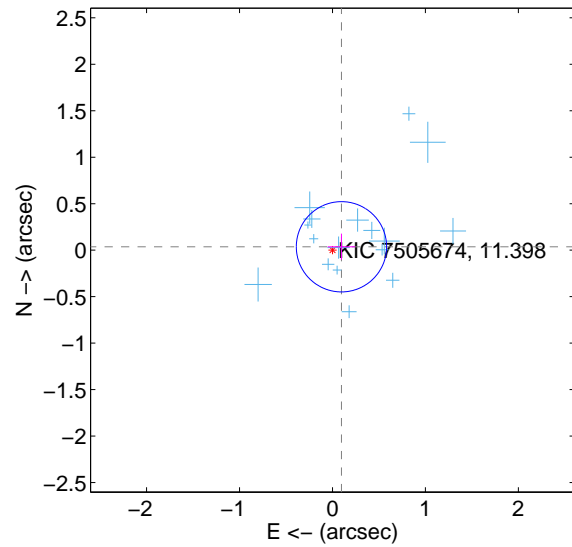
Supplemental centroid analysis for 007505674-01. **Kepler magnitude: 11.40.** Transit SNR 9.24

There are 17 quarters with good PRF difference image offsets

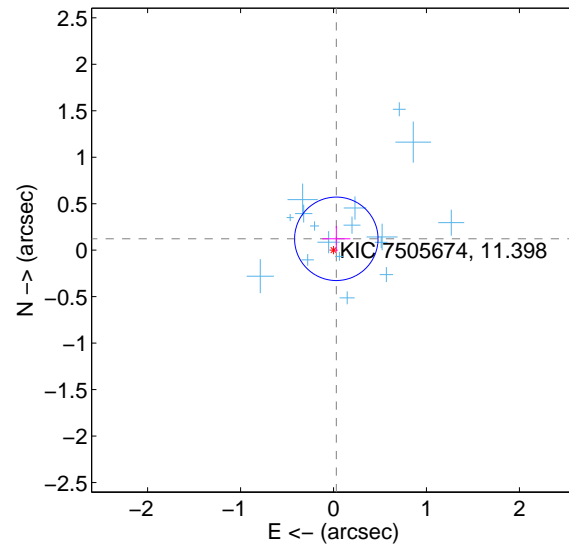
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.103 ± 0.162	0.64	-0.097 ± 0.148	0.036 ± 0.141
PRF-fit source offset from KIC position	0.126 ± 0.150	0.84	-0.030 ± 0.151	0.122 ± 0.139
photometric centroid source offset	0.42 ± 0.58	0.73	-0.08 ± 0.66	0.42 ± 0.58

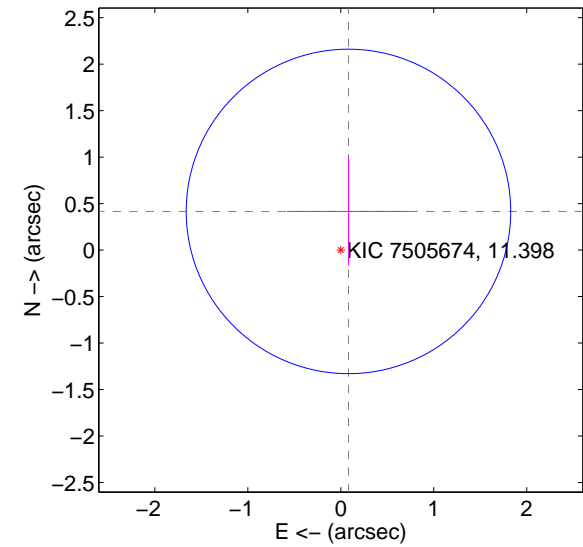
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

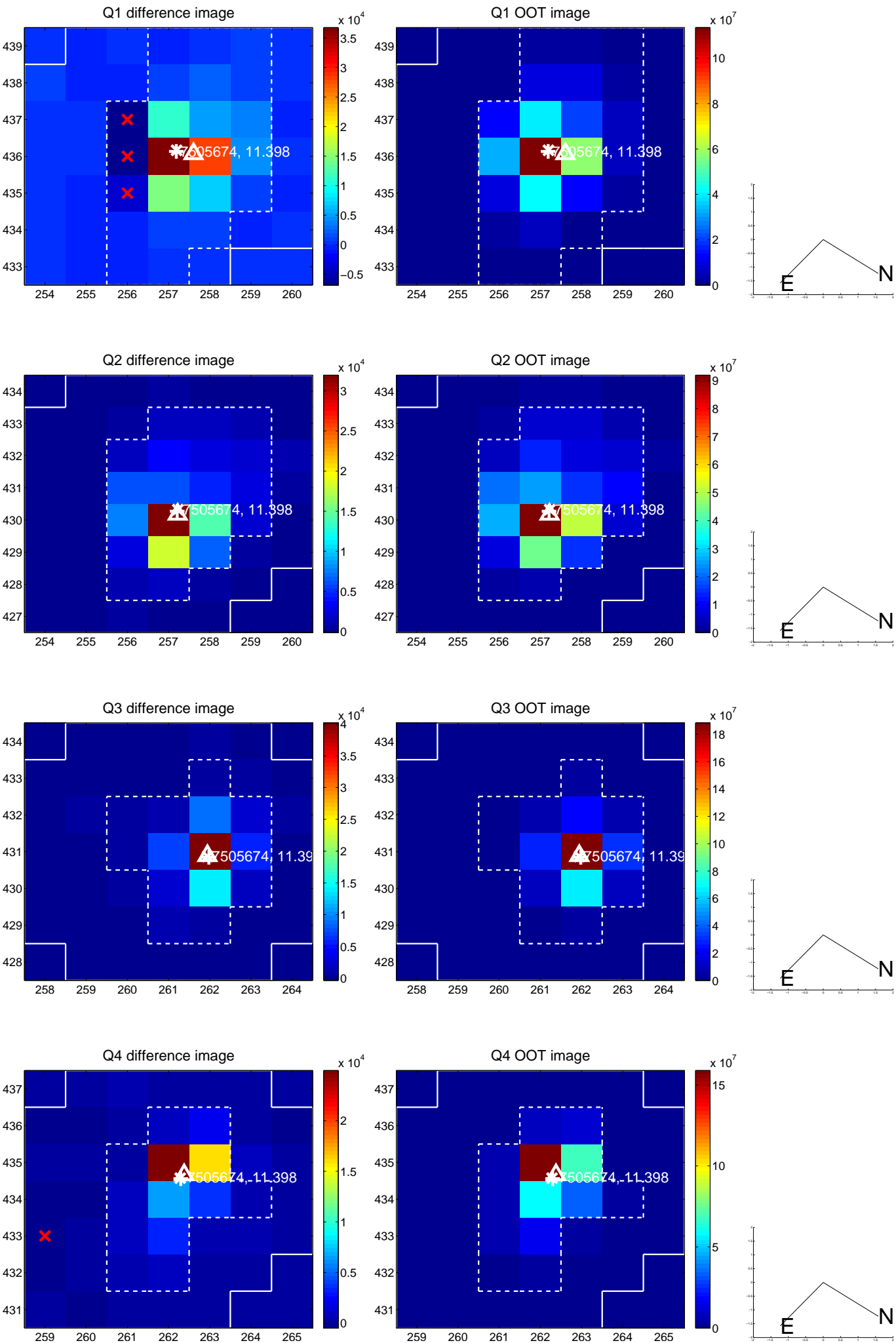


offset from photometric centroids

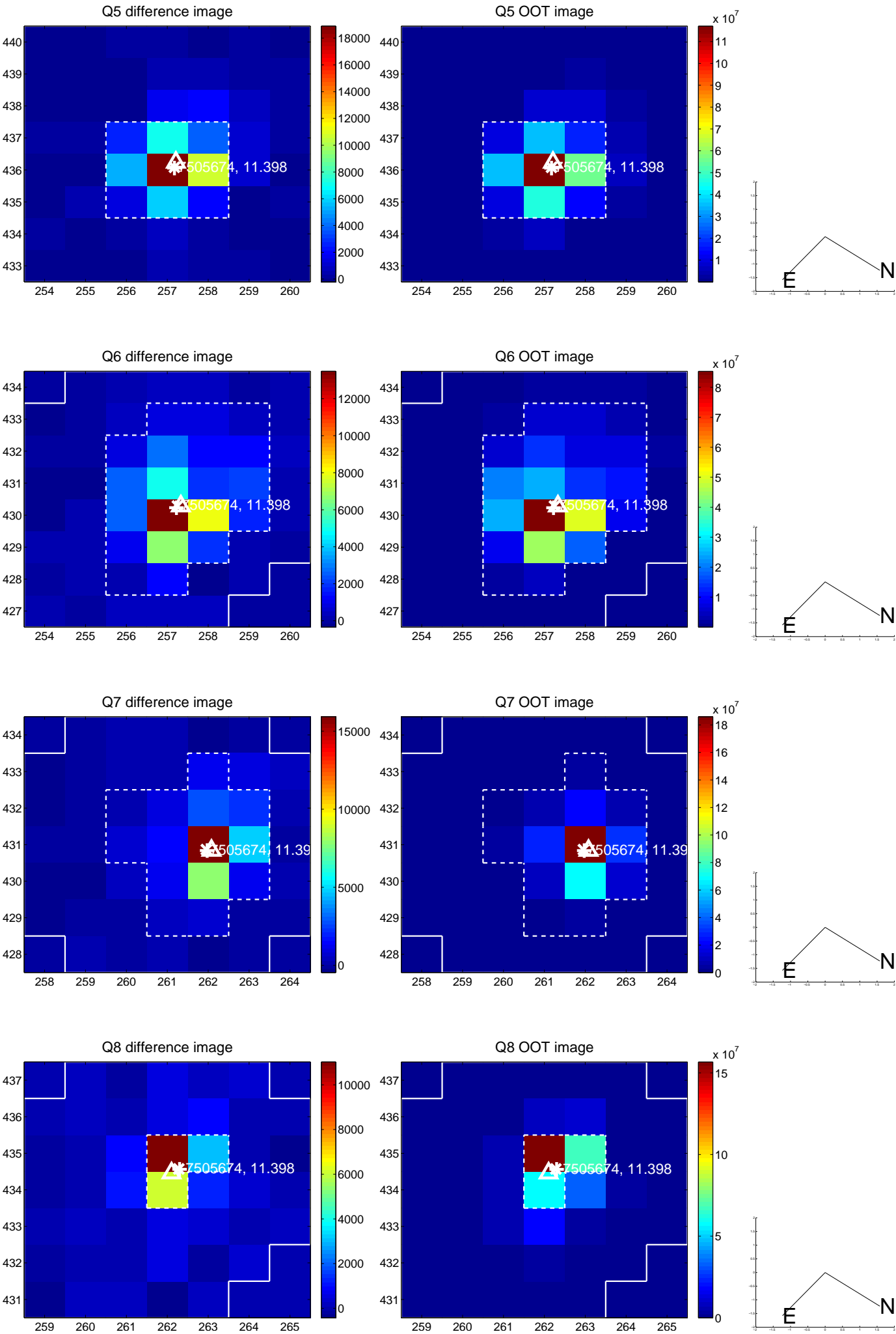


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

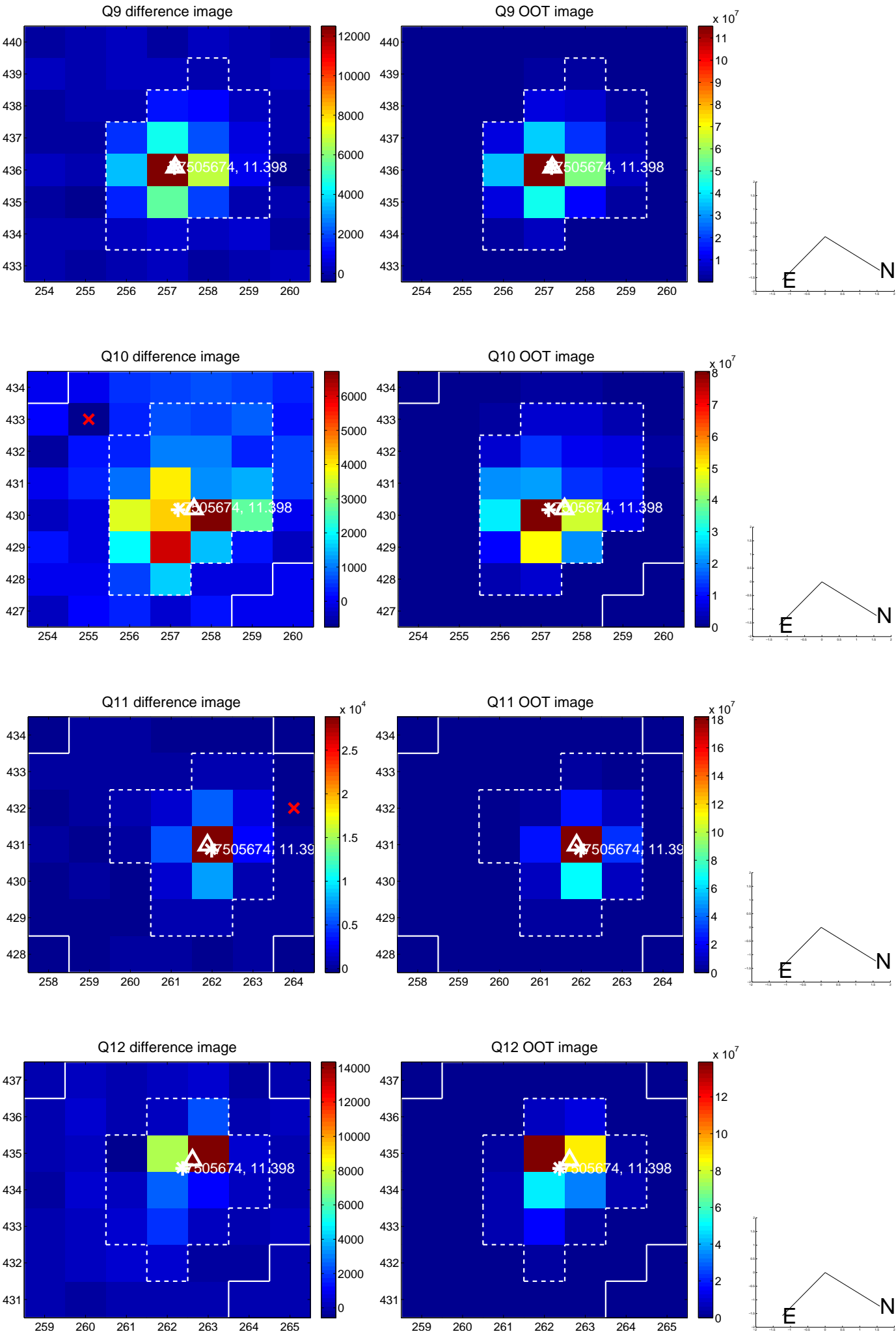
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



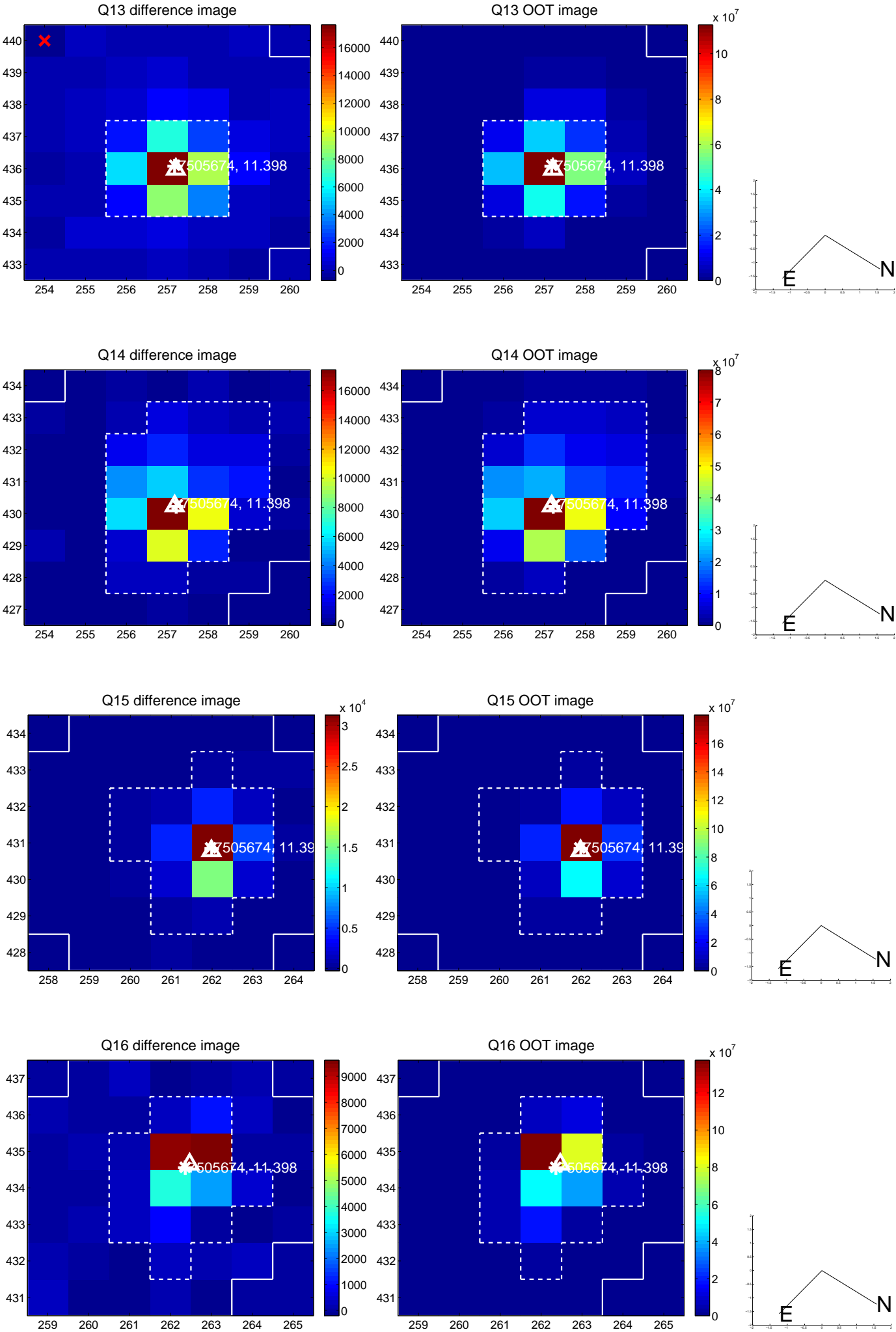
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



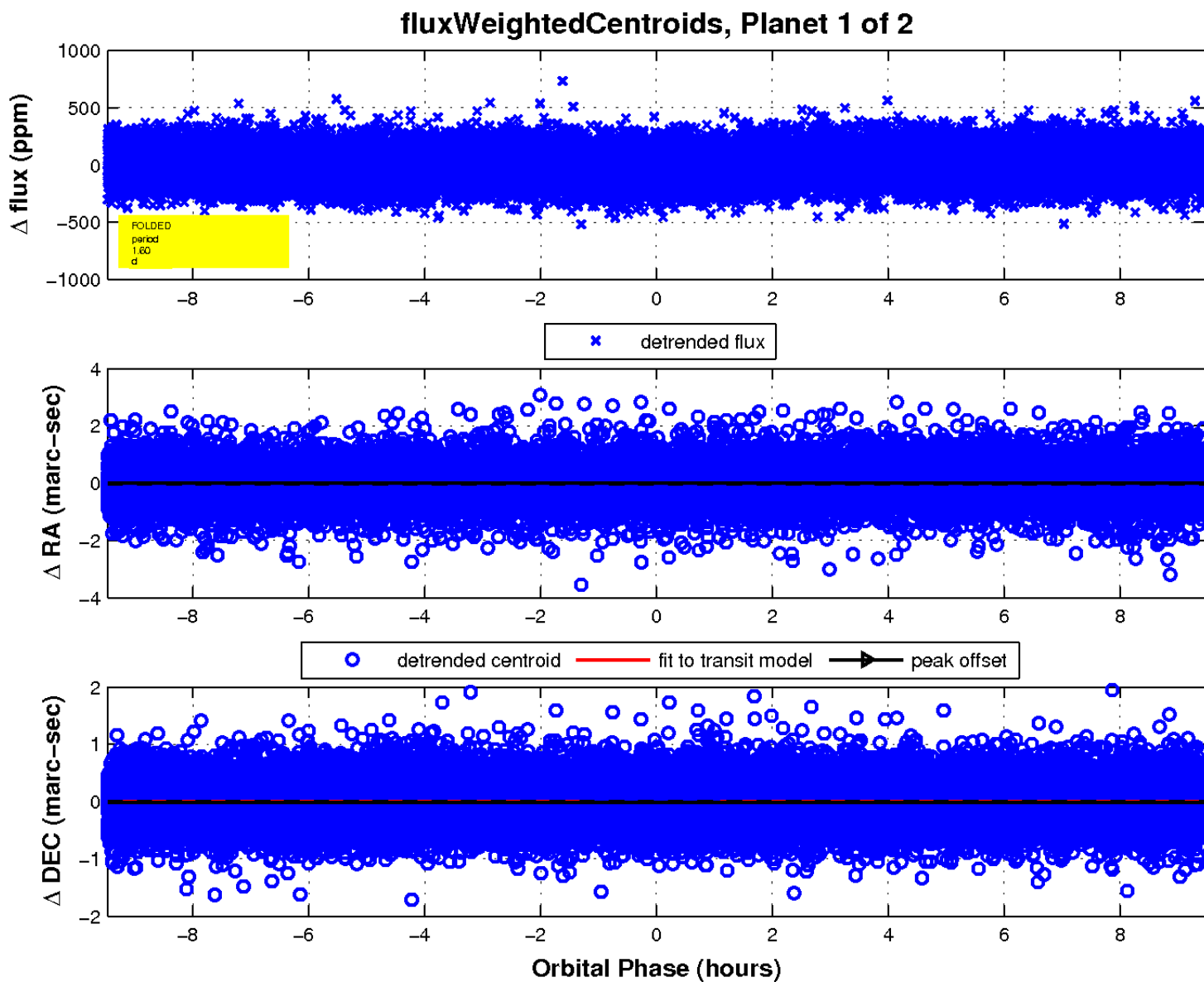
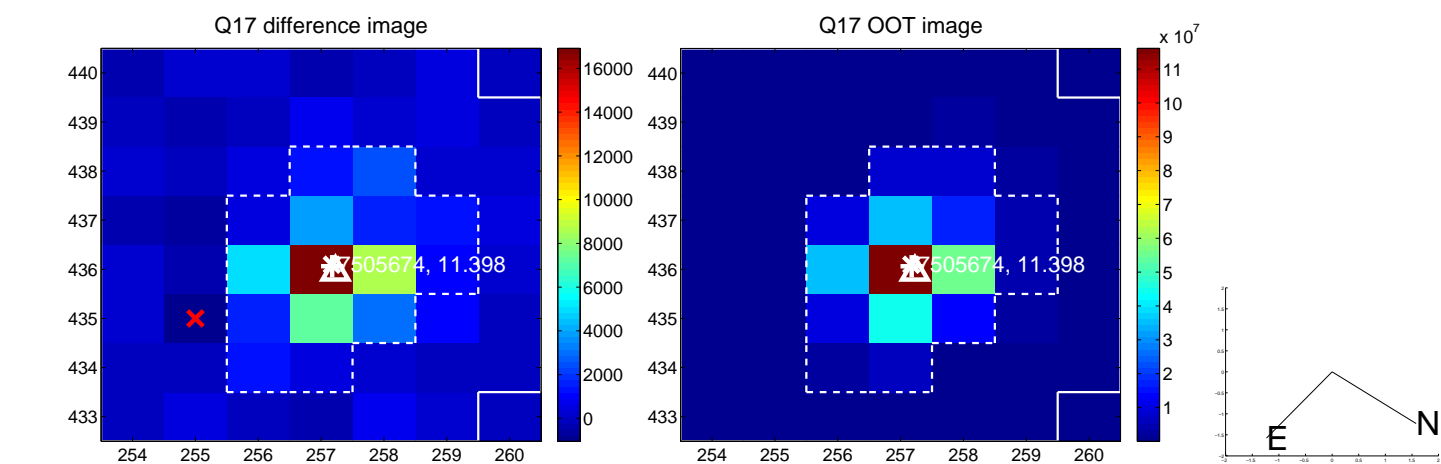
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



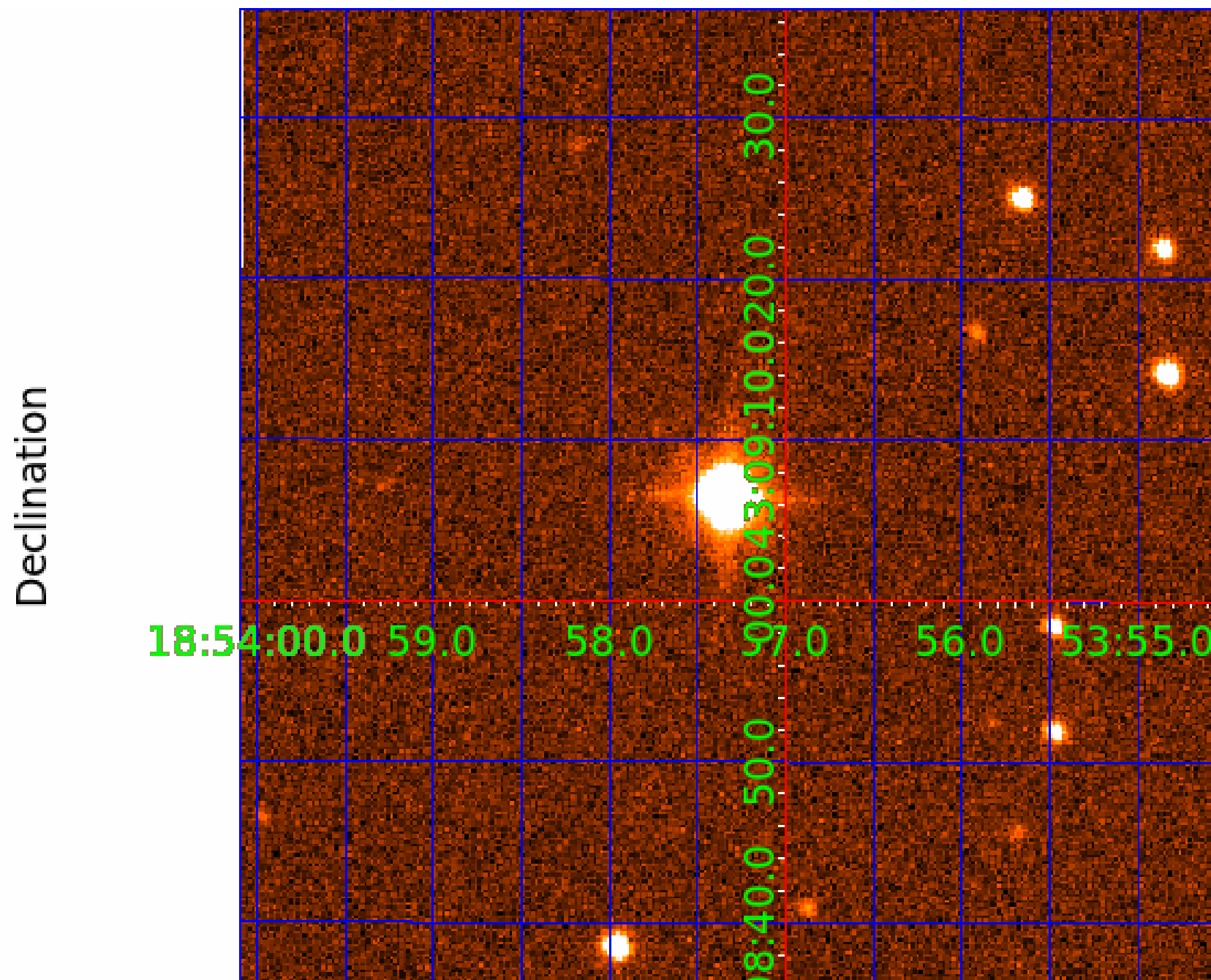
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007505674

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})
007505674-01	OBS	No	1.599833	132.960327	23.8	3.158	11.2	9.2	2.41	6505	1.37	10756.60
007505674-02	OBS	No	0.800154	131.557657	0.0	0.786	8.9	0.0	2.41	6505	0.02	27094.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007505674-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
007505674-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

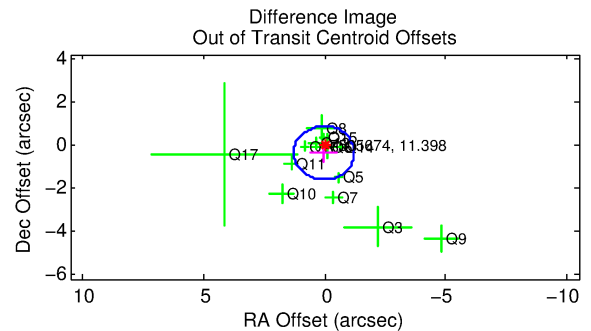
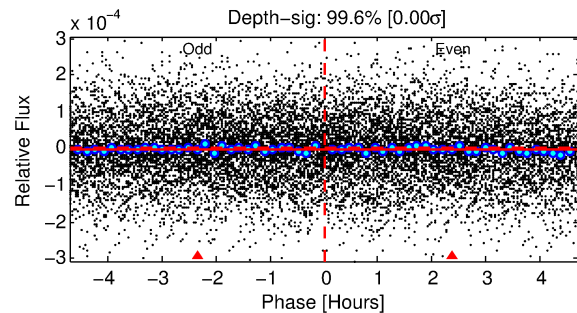
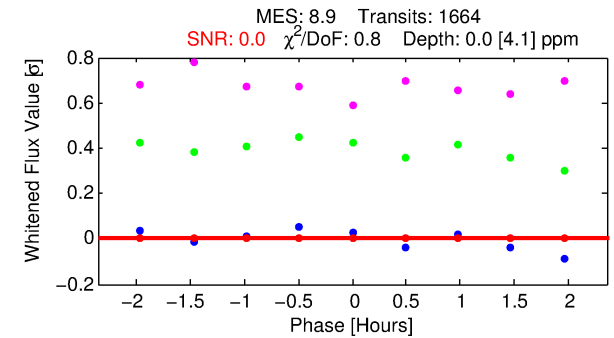
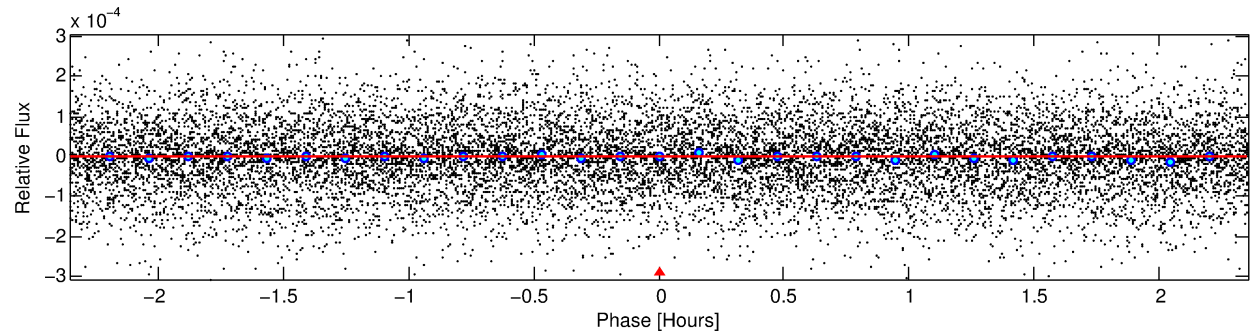
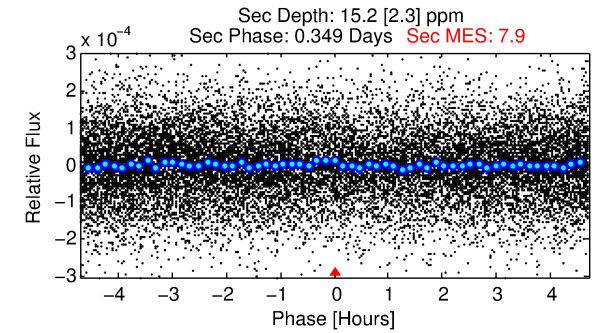
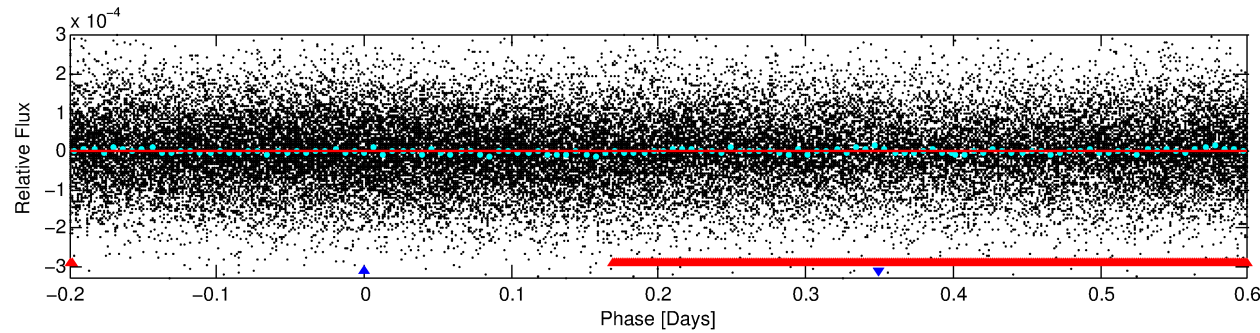
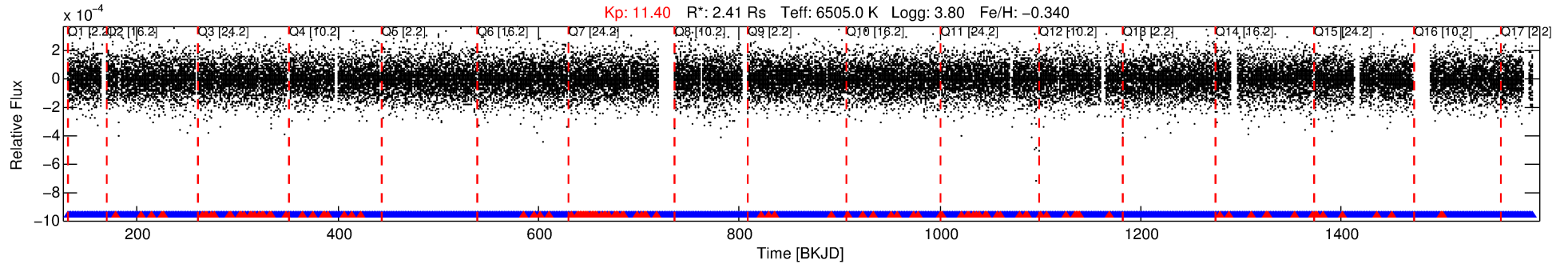
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007505674-02

No Significant Match Found

DV One-Page Summary

KIC: 7505674 Candidate: 2 of 2 Period: 0.800 d



DV Fit Results:

Period = 0.80015 [0.08285] d
Epoch = 131.5577 [8.2350] BKJD
 $R_p/R^* = 0.0001$ [0.0378]
 $a/R^* = 2.42$ [234.06]
 $b = 0.96$ [15.37]
 $\text{Seff} = 27094.20$ [23661.05]
 $T_{\text{eq}} = 3271$ [714] K
 $R_p = 0.02$ [9.94] R_{e}
 $a = 0.0185$ [0.0096] AU
 $A_g = 7569.35$ [7718777.88] [0.00σ]
 $T_{\text{eff}} = 47179$ [12028937] K [0.00σ]

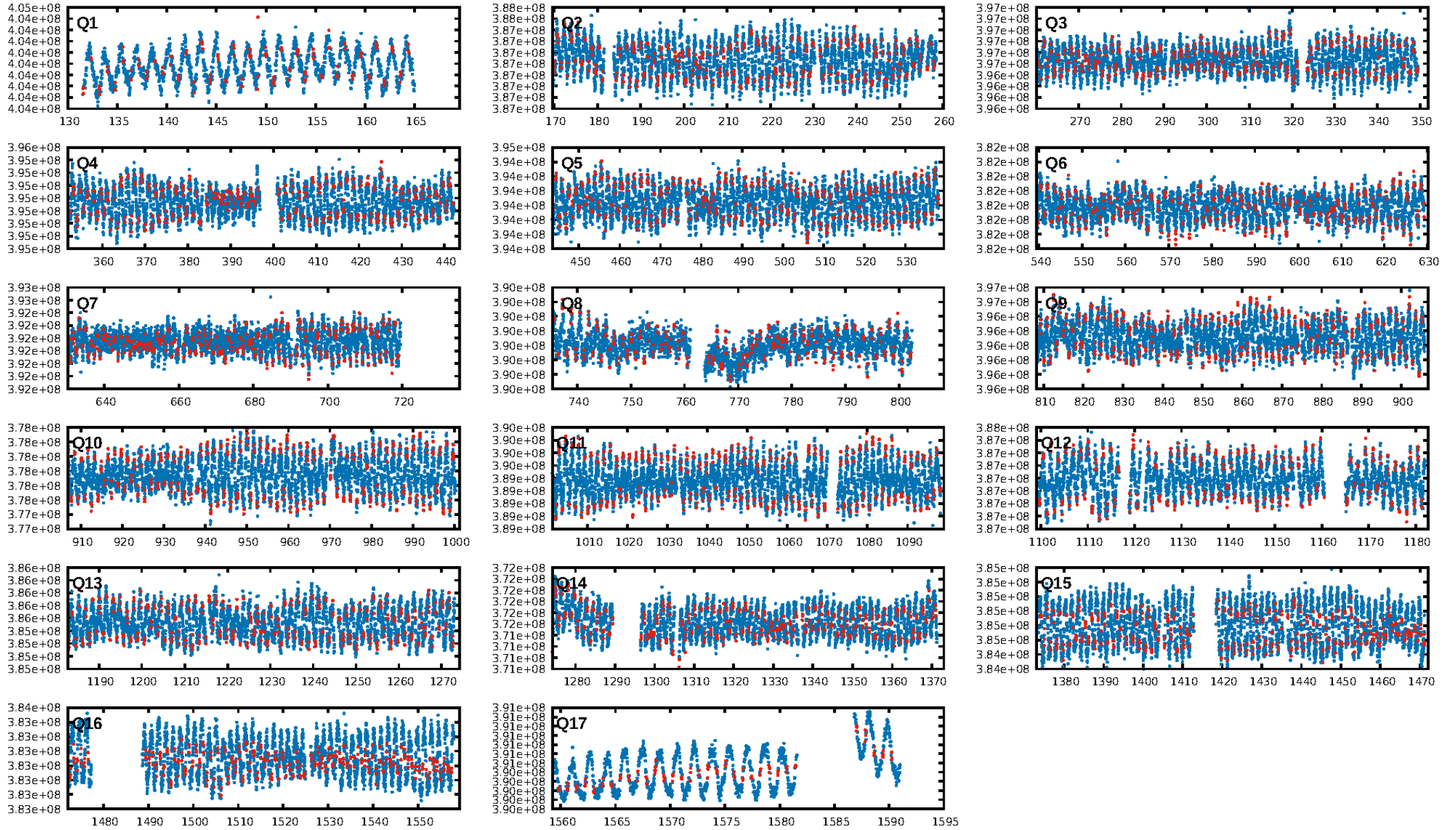
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [5.90σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.58e-16
RollingBand-fgt: 0.92 [1474/1598]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.357 arcsec [0.86σ]
KicOffset-rm: 0.342 arcsec [0.95σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

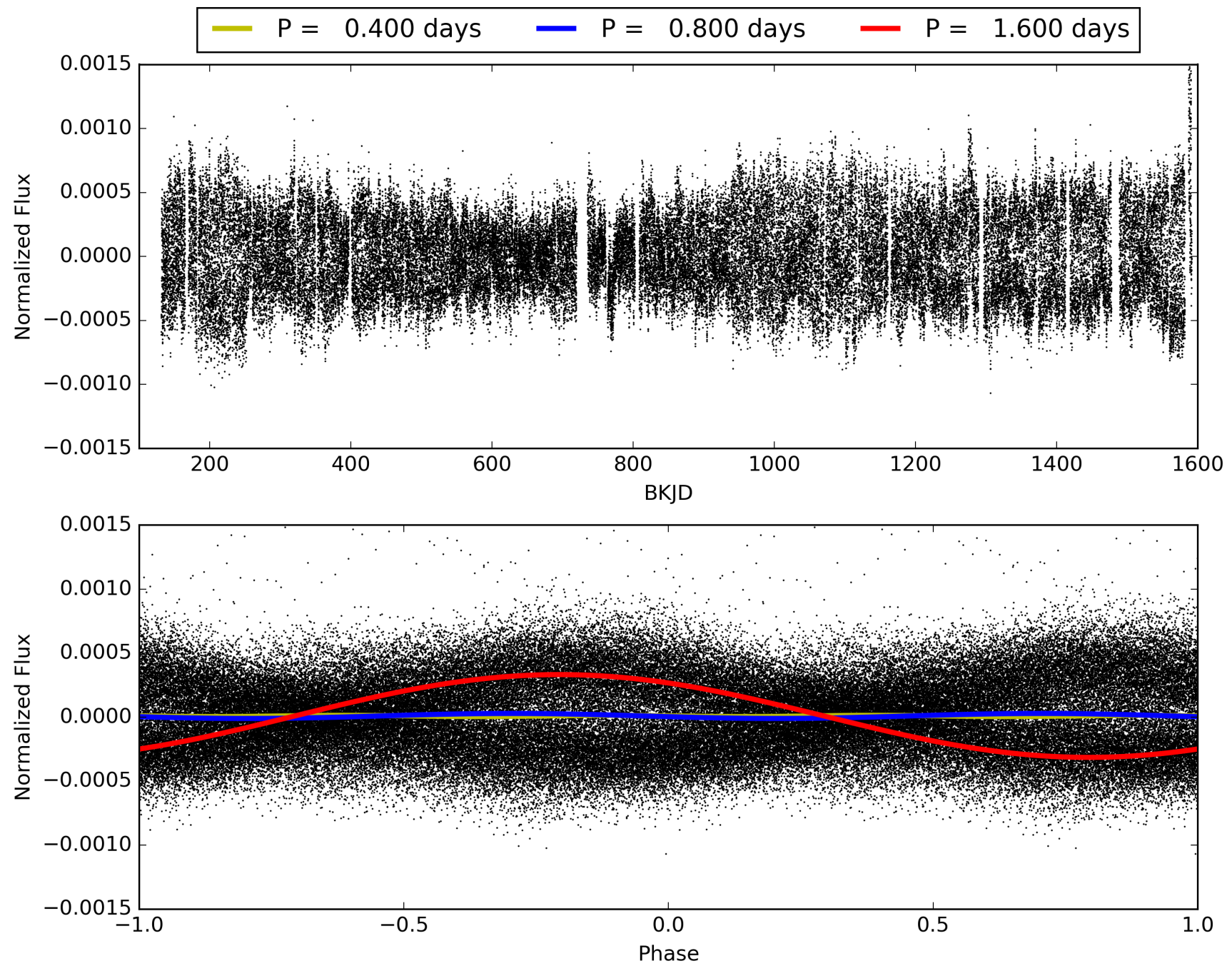
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 14:15:49 Z

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

TCE 007505674-02, PDC Light Curves

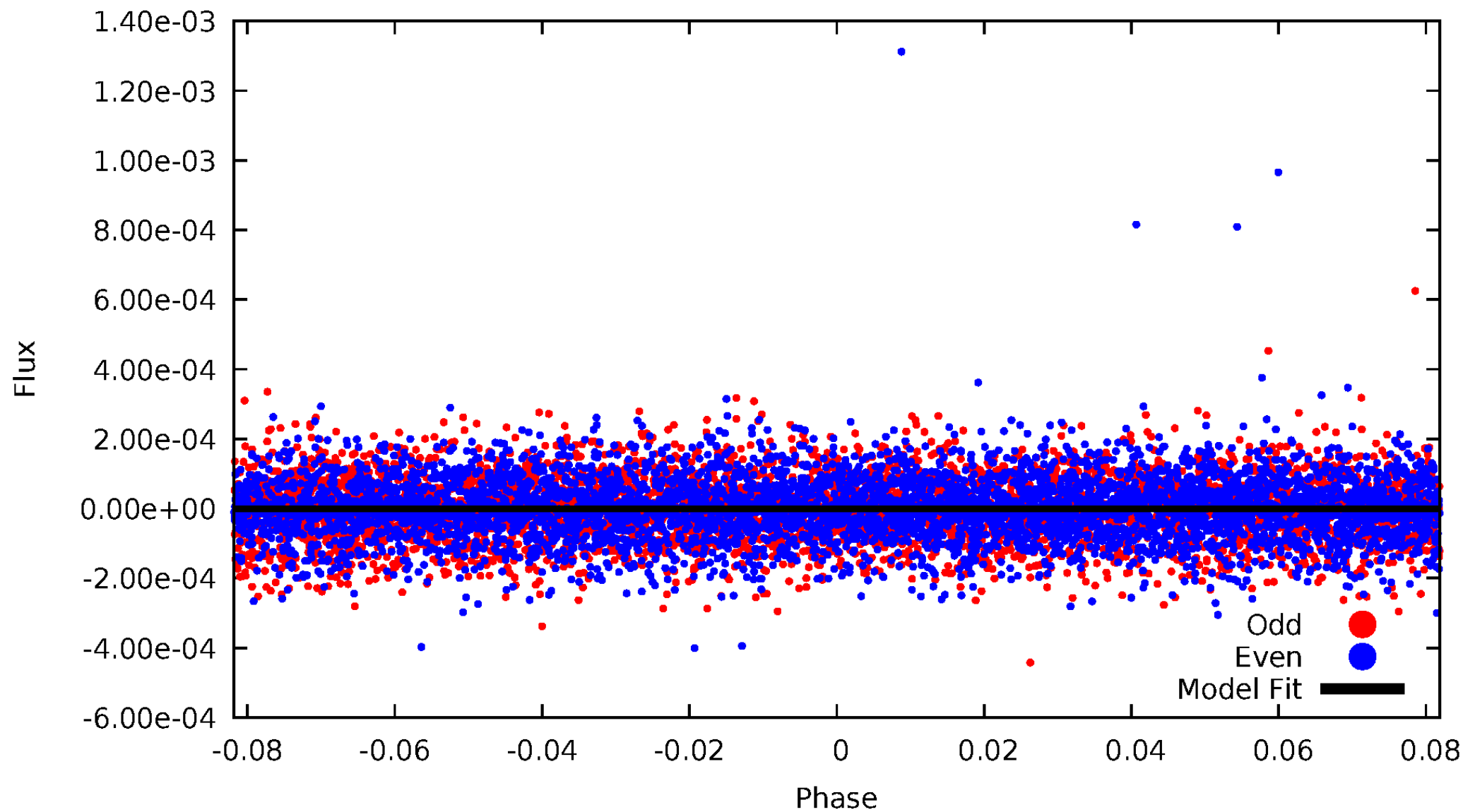


TCE 007505674-02



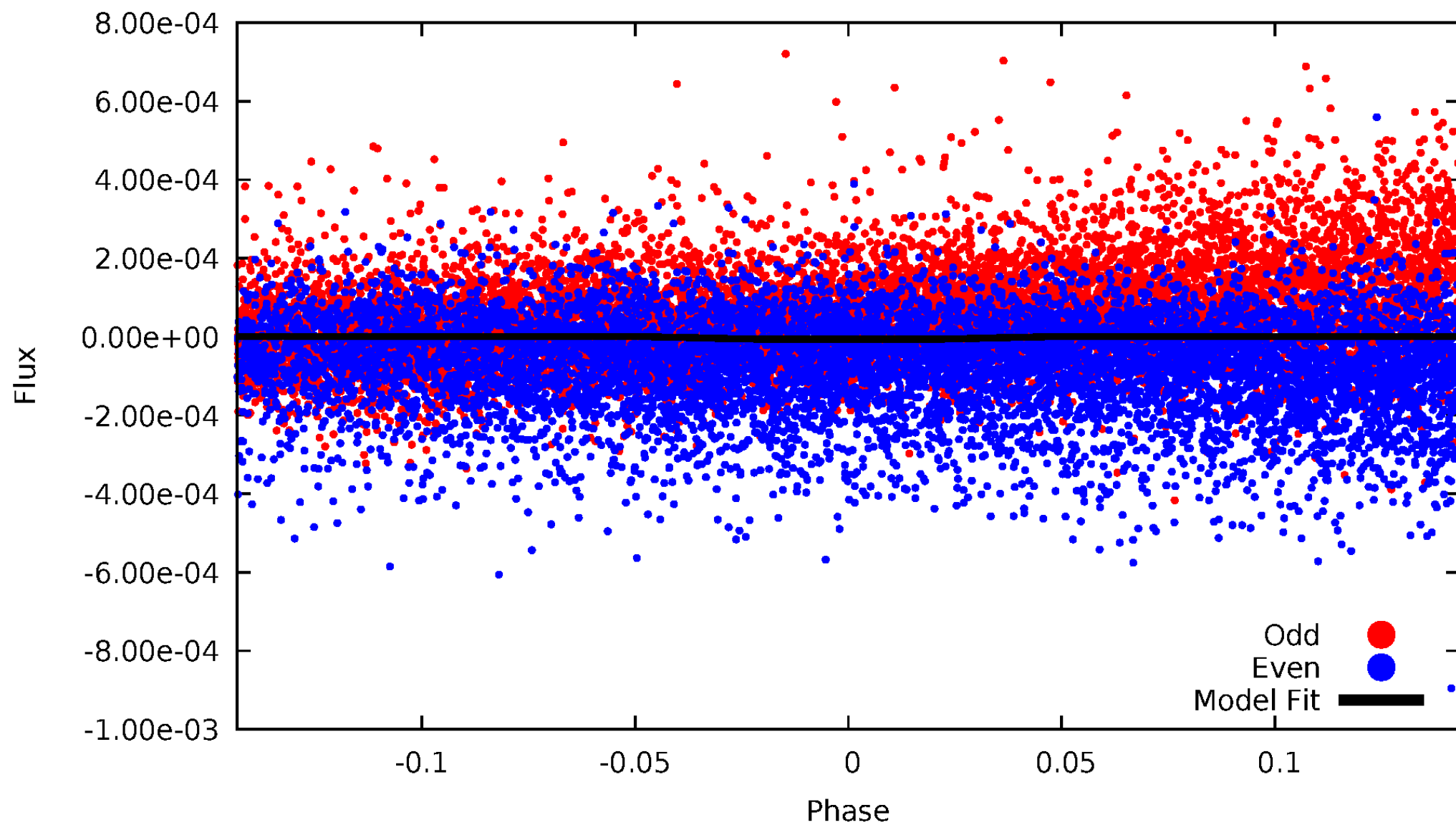
DV Odd/Even

TCE 007505674-02



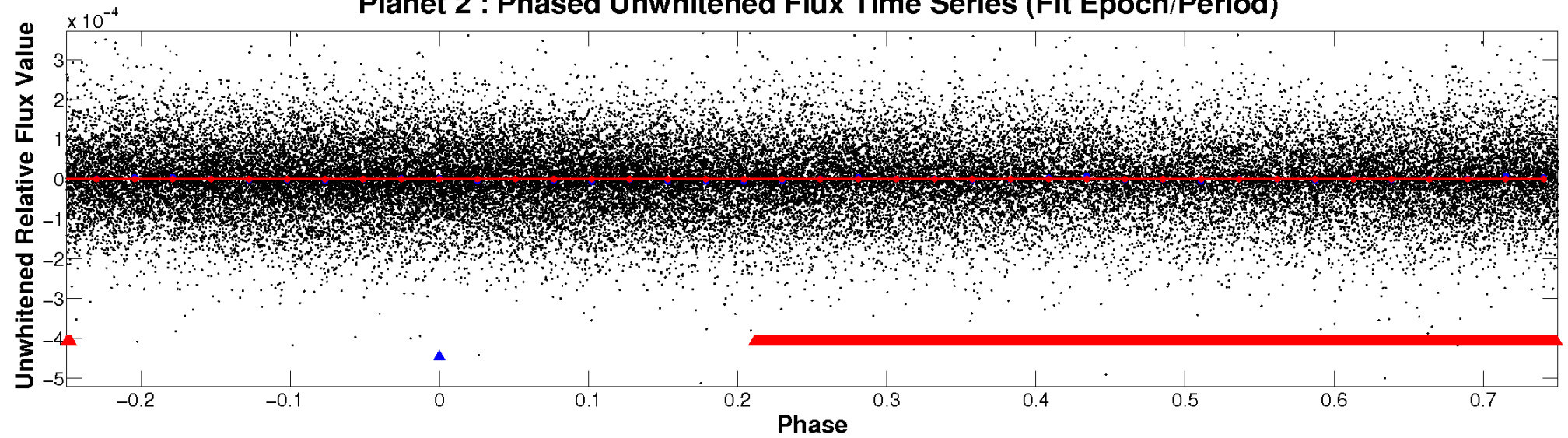
ALT Odd/Even

TCE 007505674-02

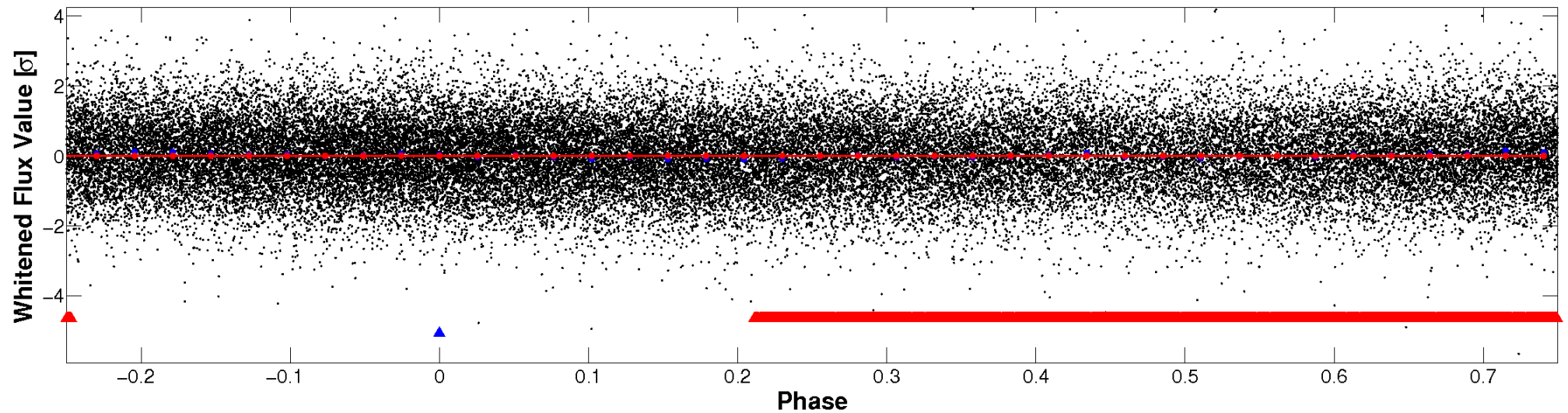


Non-Whitened Vs. Whitened Light Curve

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

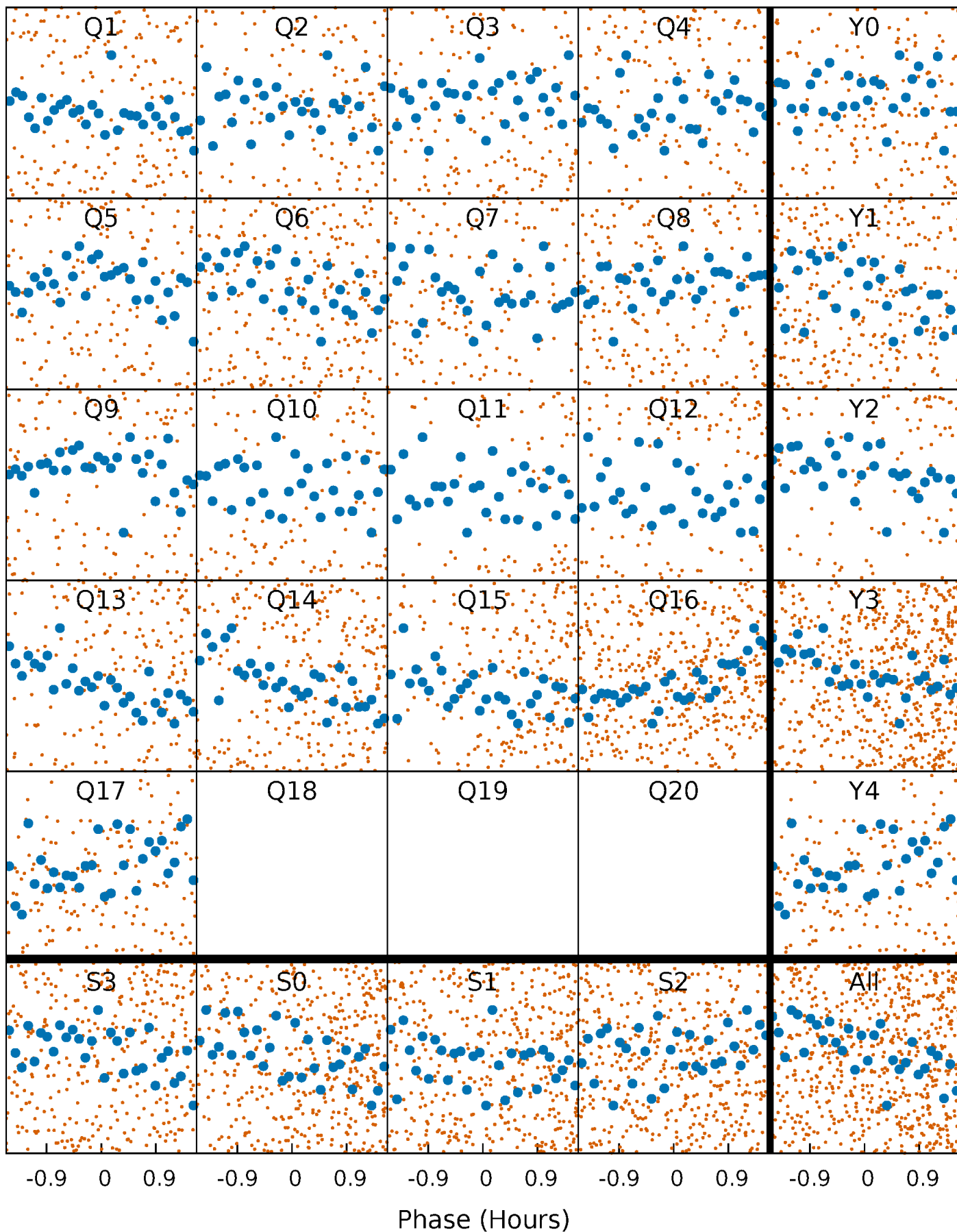


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



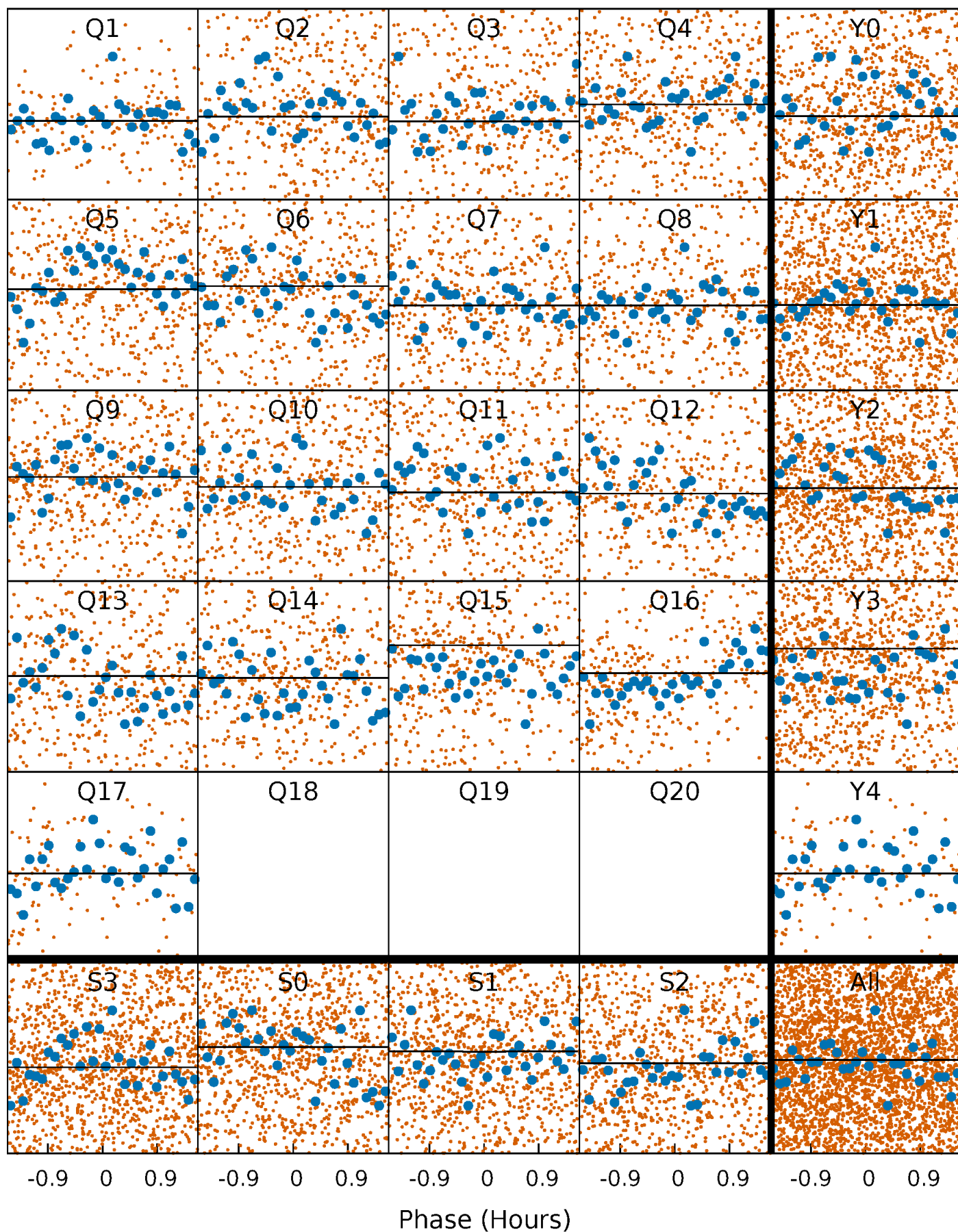
PDC Quarter-Phased Transit Curves

TCE 007505674-02 P= 0.800154 Days $T_0=131.557657$ (BKJD)



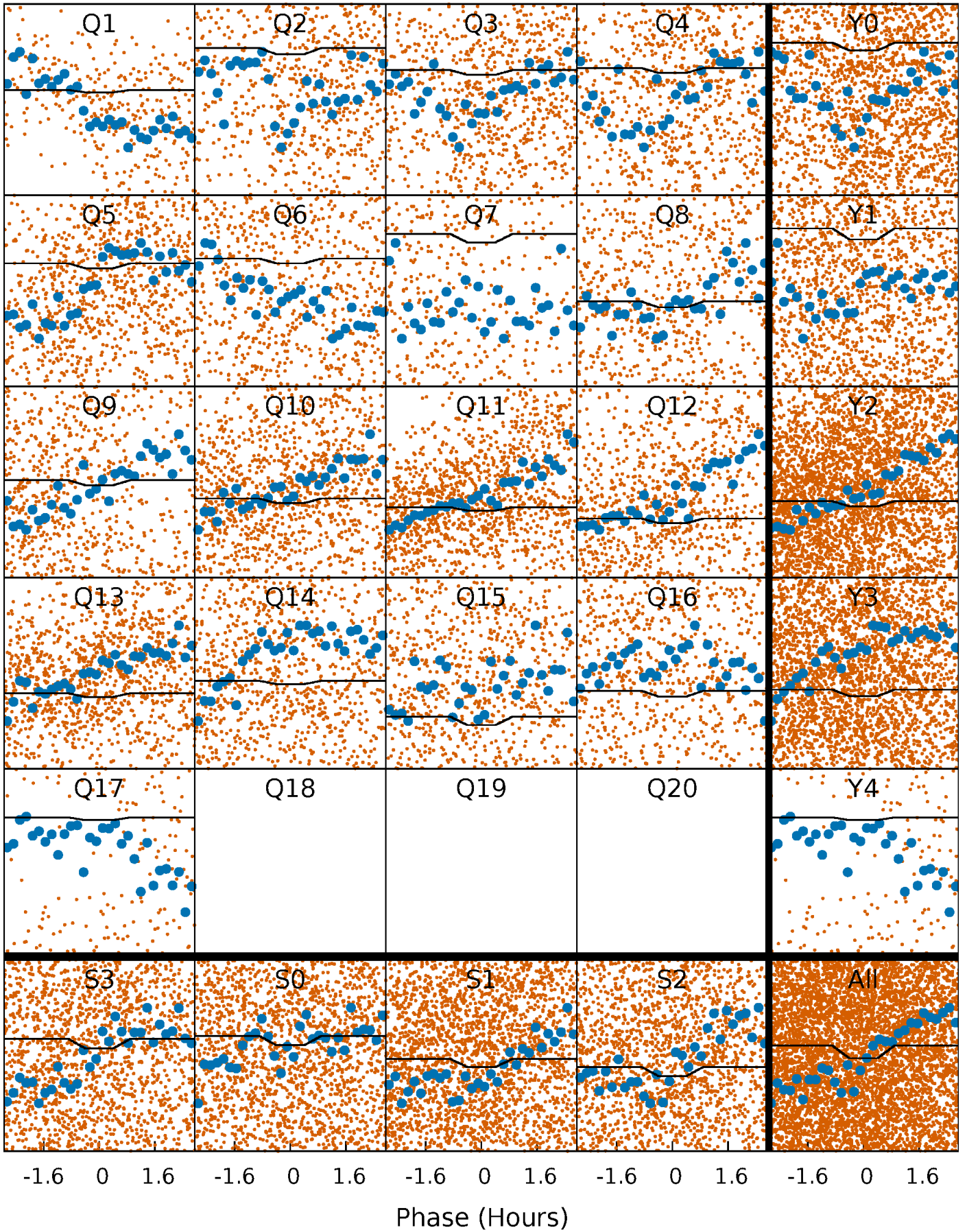
DV Quarter-Phased Transit Curves

TCE 007505674-02 $P = 0.800154$ Days $T_0 = 131.557657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

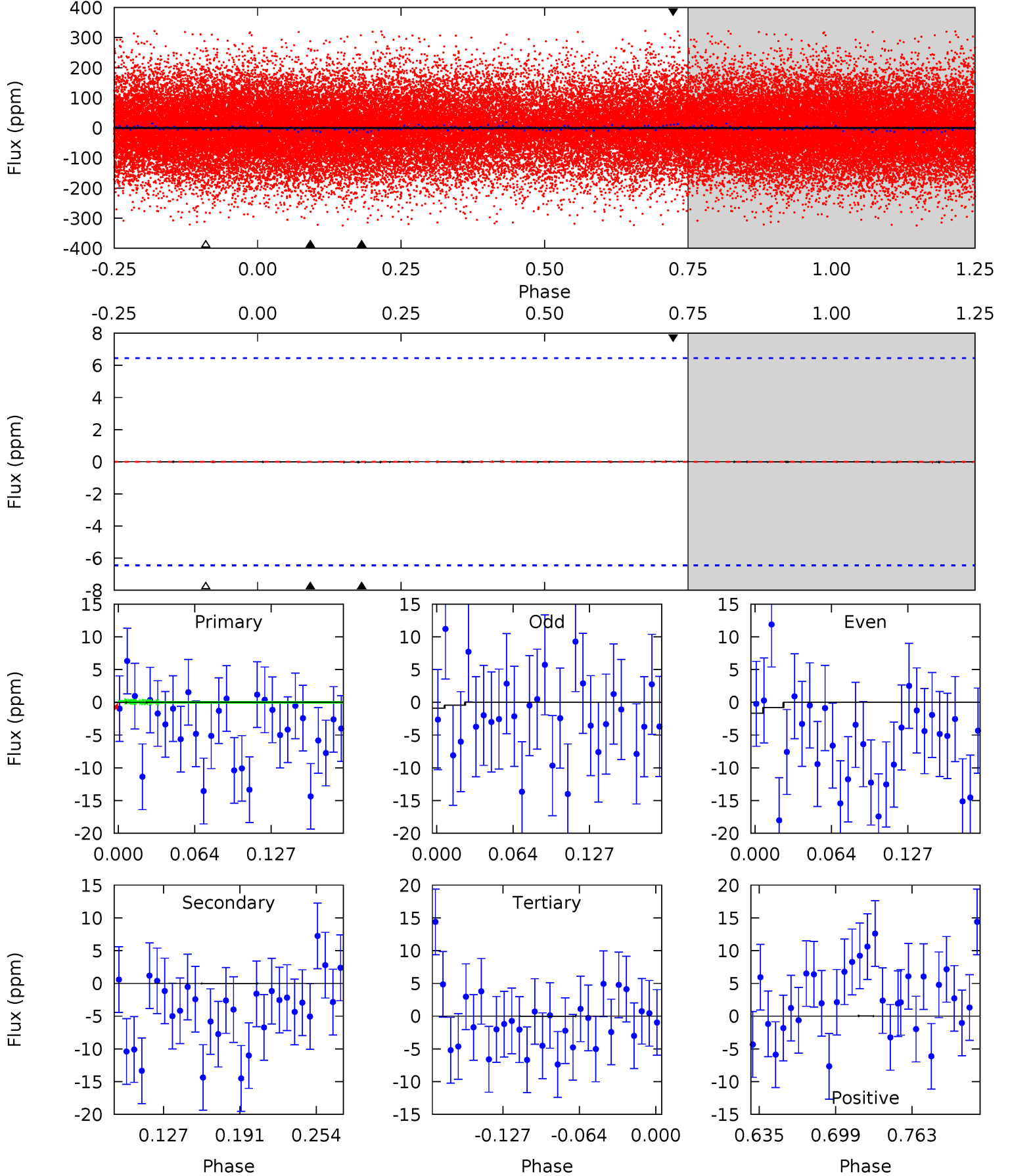
TCE 007505674-02 P= 0.800046 Days $T_0=131.581399$ (BKJD)



DV Model-Shift Uniqueness Test

007505674-02, P = 0.800154 Days, E = 131.557657 Days

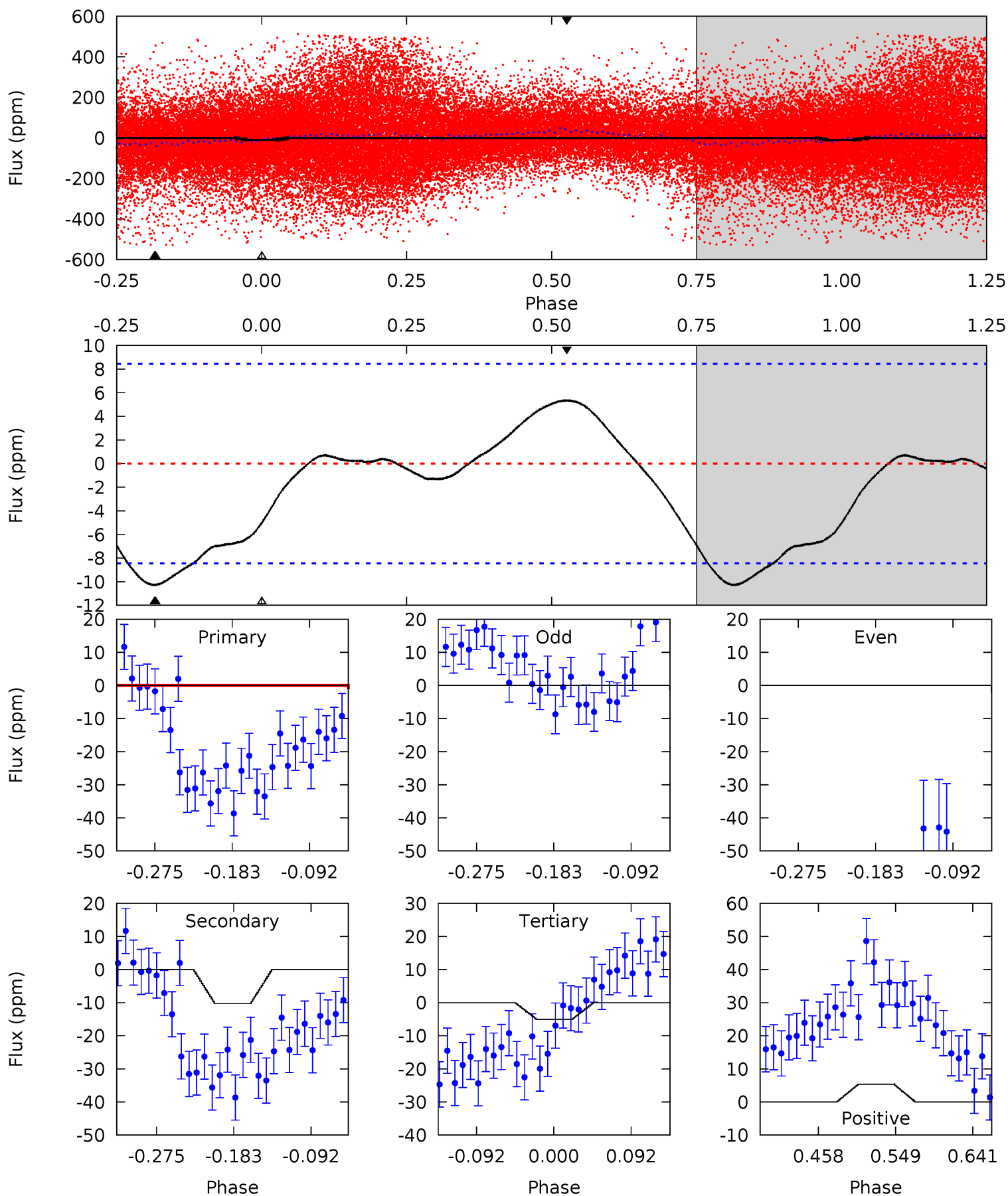
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.01	0.01	0	0.01	4.66	1.86	0.00	0.01	0.00	0.01	0.00	0.21	0.74	0.43	0.19



Alt Model-Shift Uniqueness Test

007505674-02, $P = 0.800046$ Days, $E = 130.781353$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.58	5.58	2.72	2.90	4.58	1.69	1.74	2.86	2.68	2.86	2.68	6.43	-7.16	0.34	4.11



Stellar Parameters For KIC 007505674

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6505^{+182}_{-228}	$3.797^{+0.510}_{-0.090}$	$-0.340^{+0.300}_{-0.300}$	$2.409^{+0.516}_{-1.204}$	$1.329^{+0.198}_{-0.321}$	$0.134^{+0.707}_{-0.051}$
	+3%/-4%	+13%/-2%	+88%/-88%	+21%/-50%	+15%/-24%	+528%/-38%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007505674-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-0 ± 1	$5.82^{+7.23}_{-4.16}$	4393^{+367}_{-542}	-3919^{+416}_{-277}	$-0.000^{+0.017}_{-0.013}$
Alt.	-10 ± 2	$6.12^{+7.43}_{-4.43}$	4371^{+396}_{-638}	-3659^{+7455}_{-399}	$0.051^{+0.605}_{-0.040}$

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 $A_{obs} \gg 1.0$

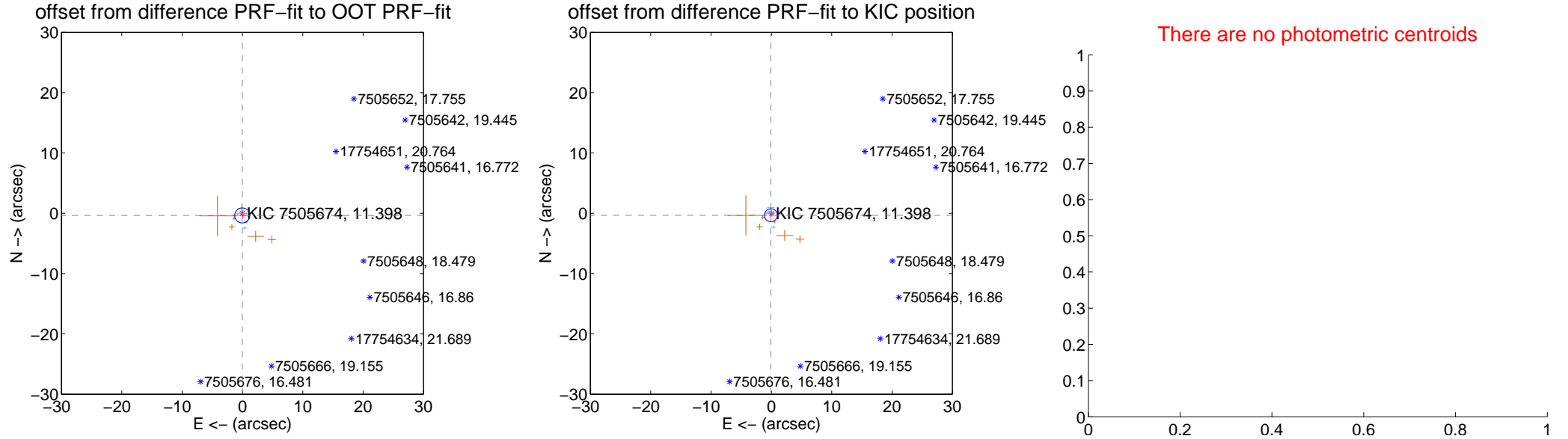
DV Centroid Data

Supplemental centroid analysis for 007505674-02. **Kepler magnitude: 11.40.** Transit SNR 0.00

There are 7 quarters with good PRF difference image offsets

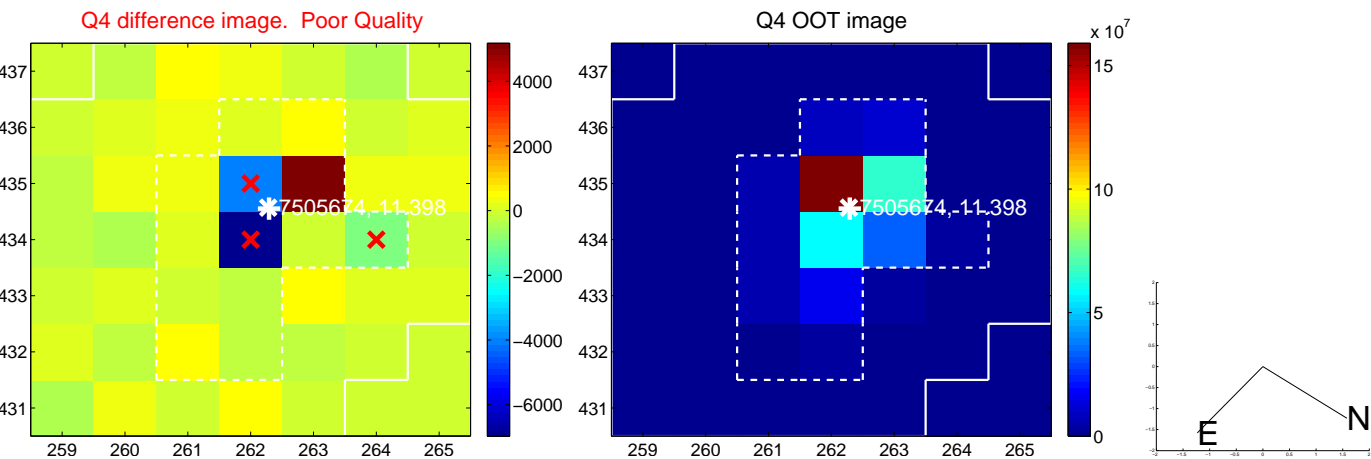
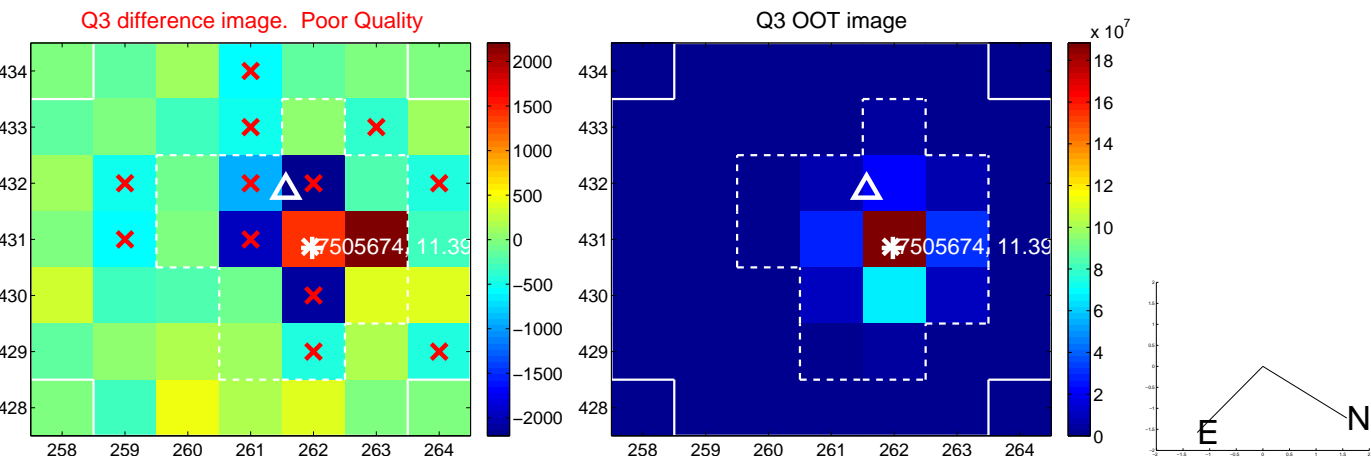
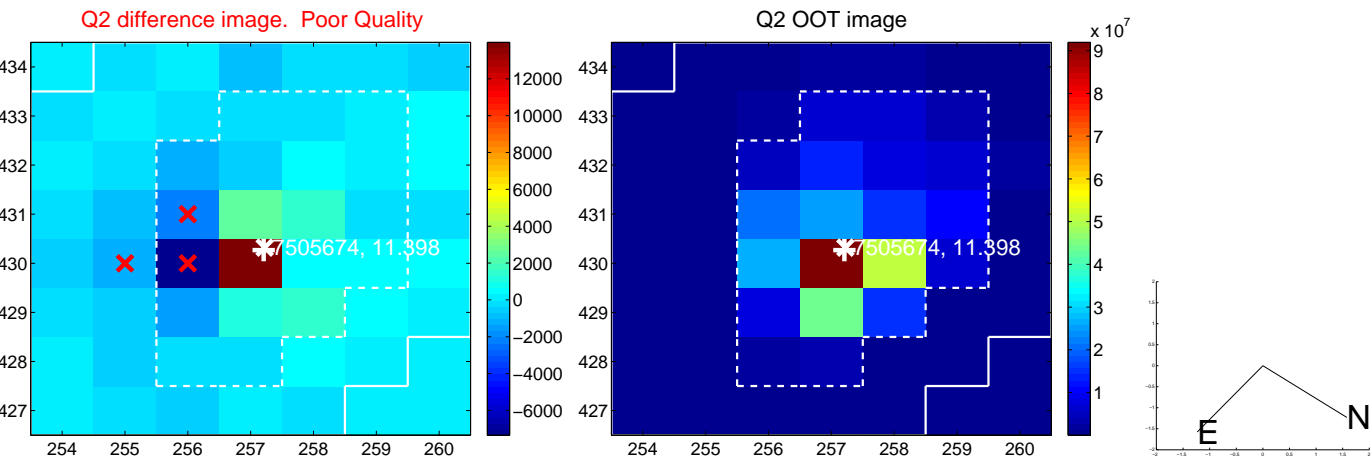
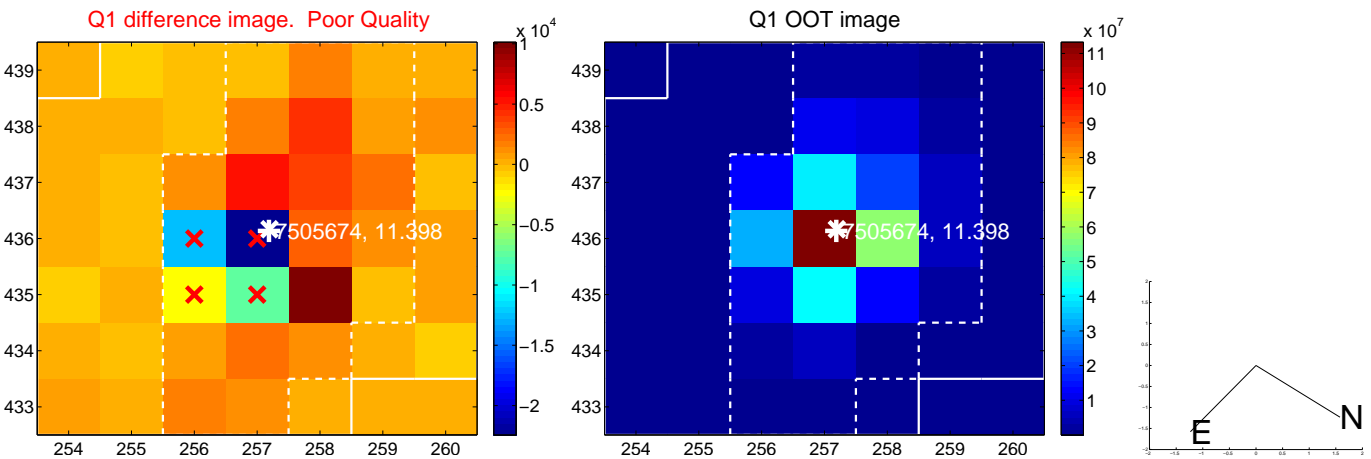
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.357 ± 0.417	0.86	0.034 ± 0.562	-0.356 ± 0.447
PRF-fit source offset from KIC position	0.342 ± 0.359	0.95	0.082 ± 0.270	-0.332 ± 0.364
photometric centroid source offset	—	—	—	—

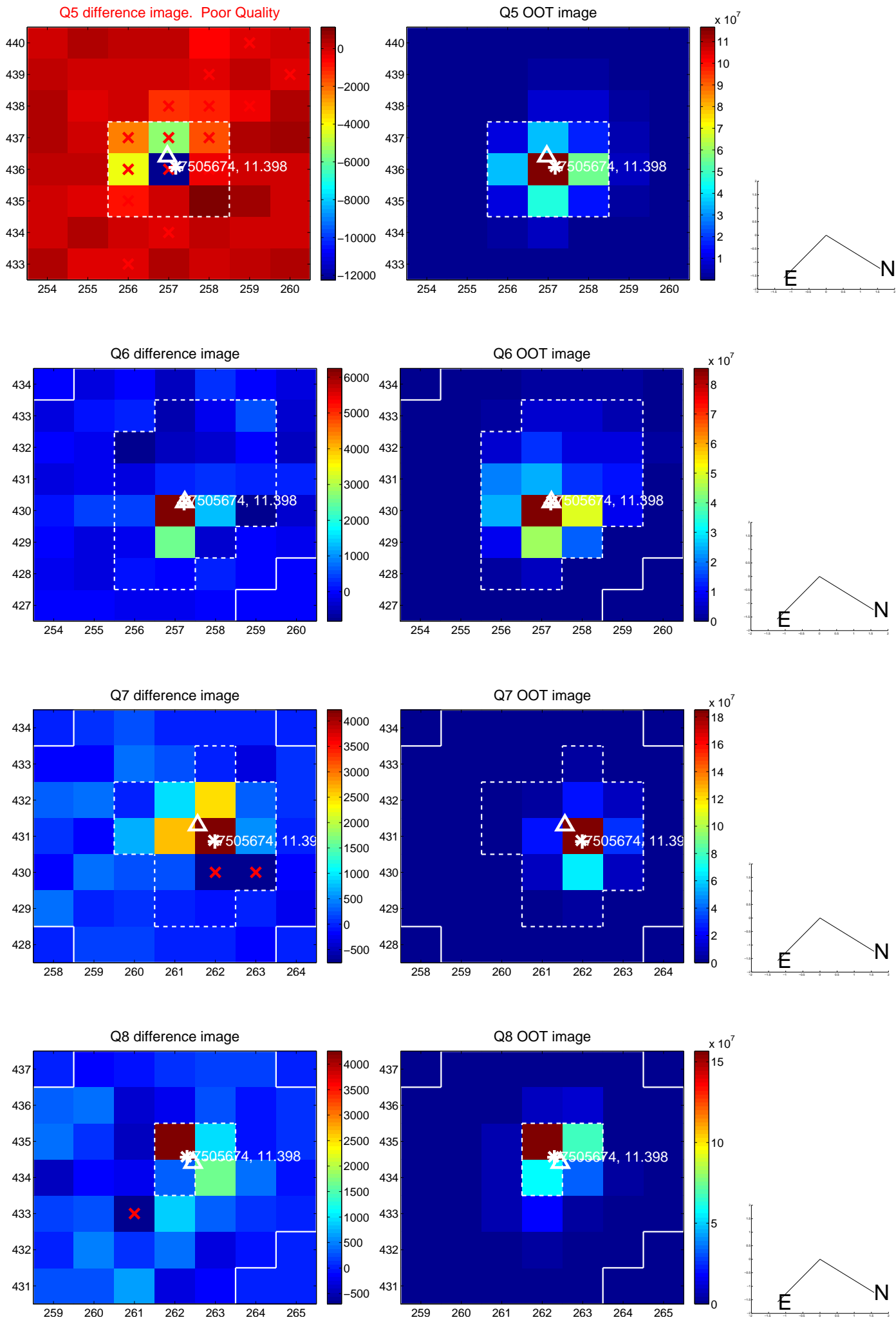


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

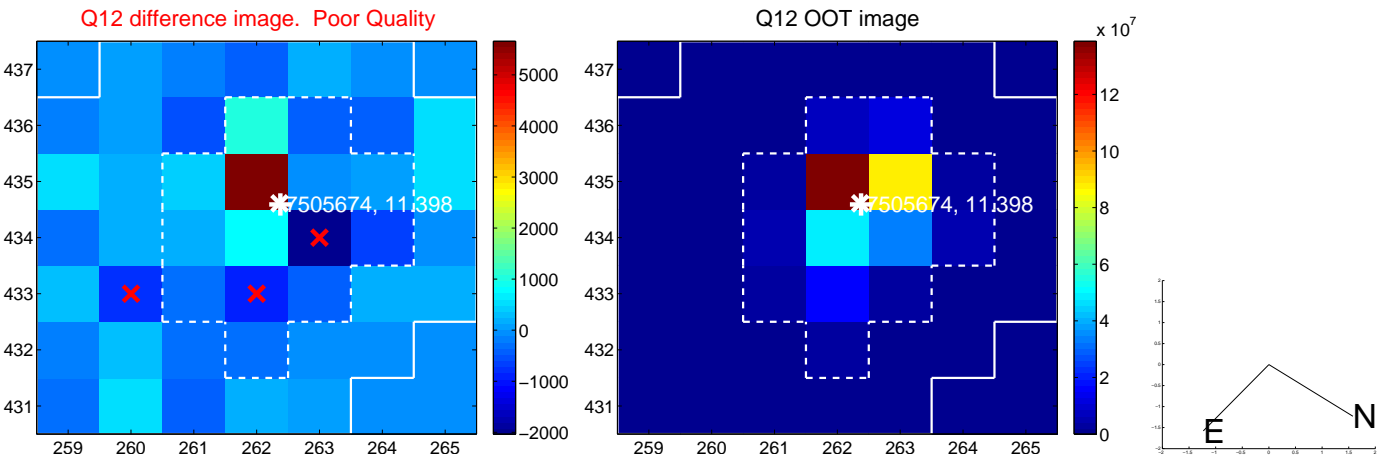
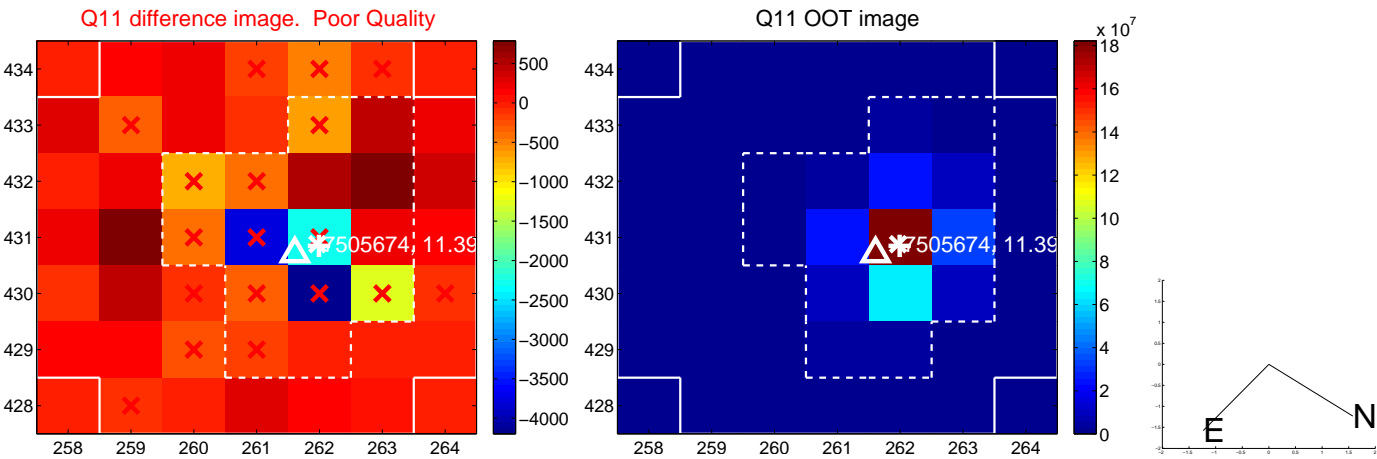
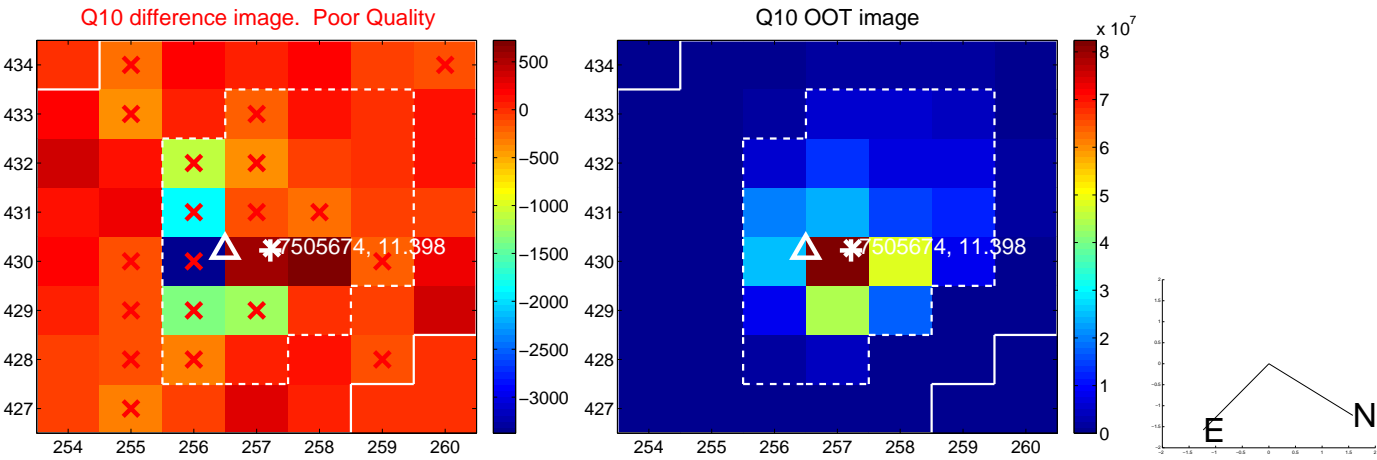
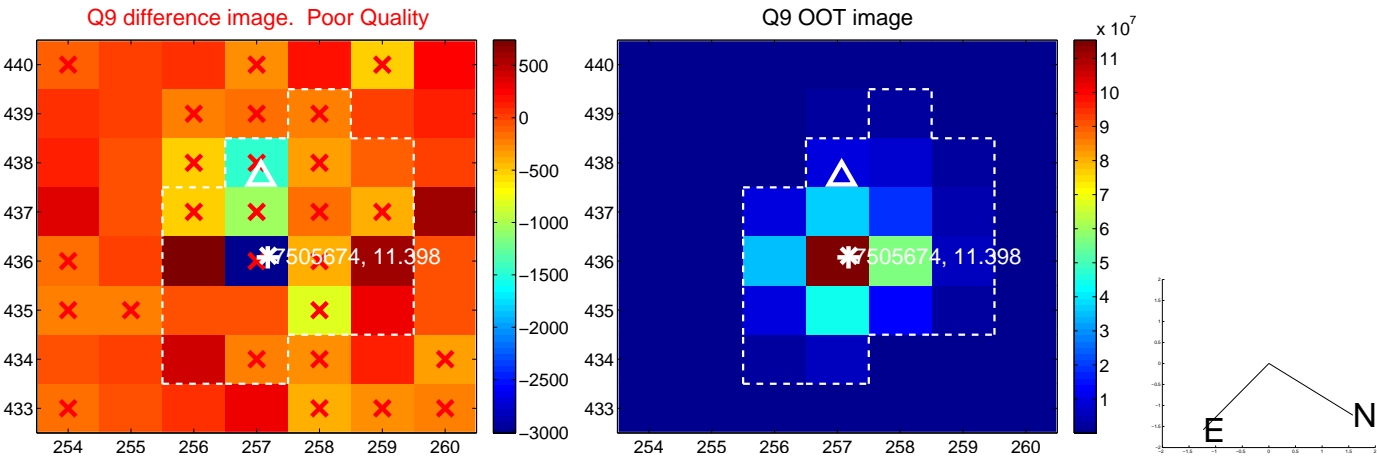
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



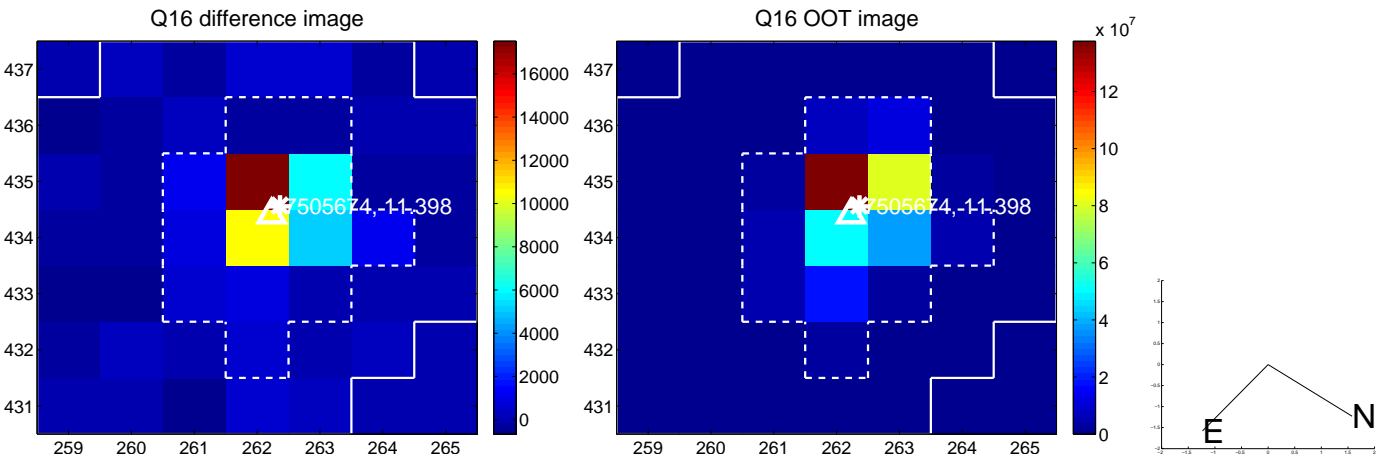
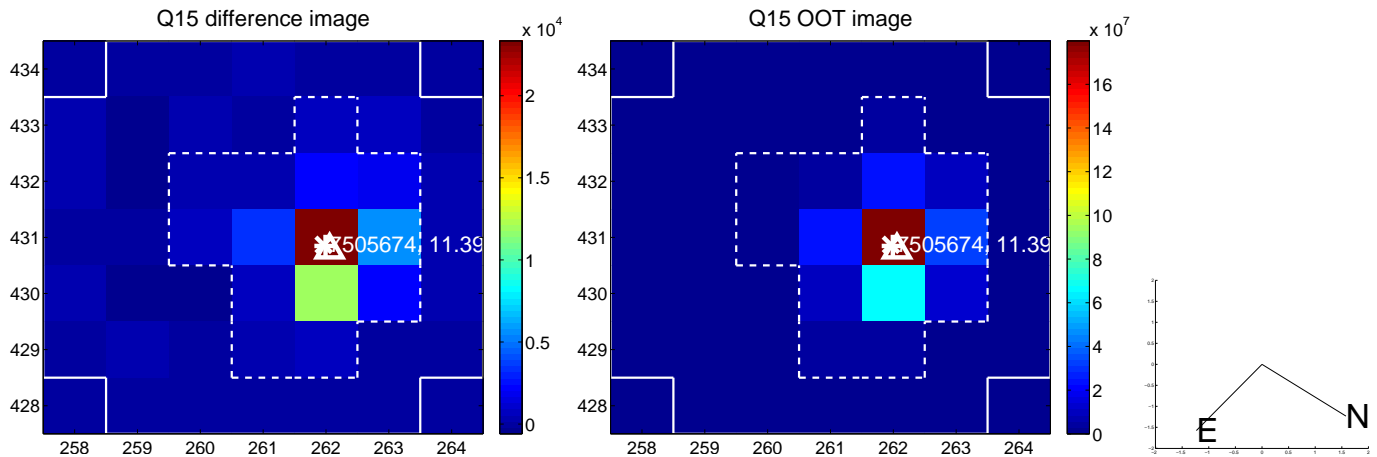
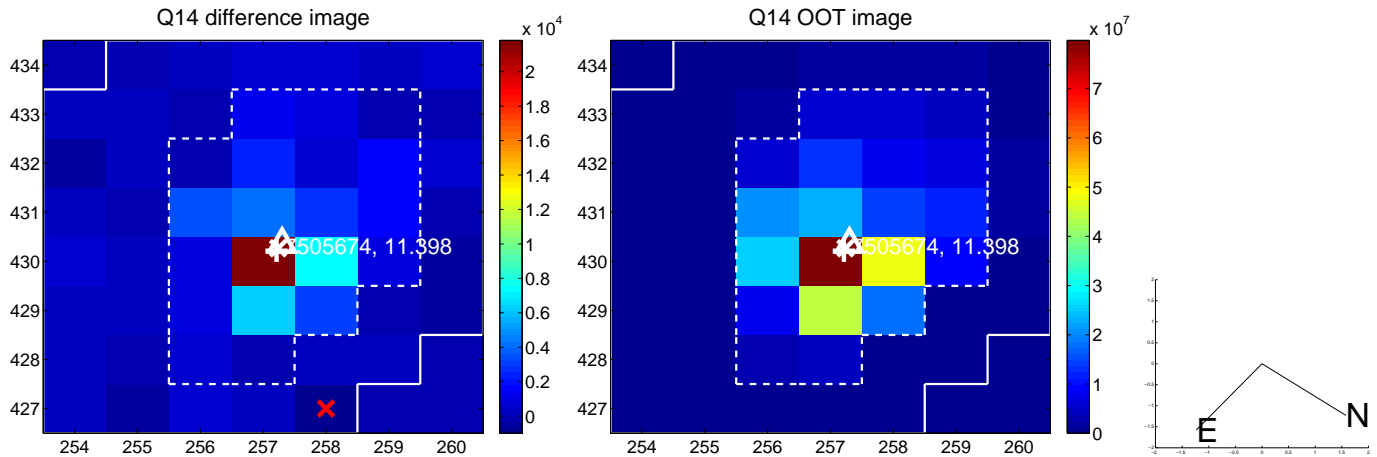
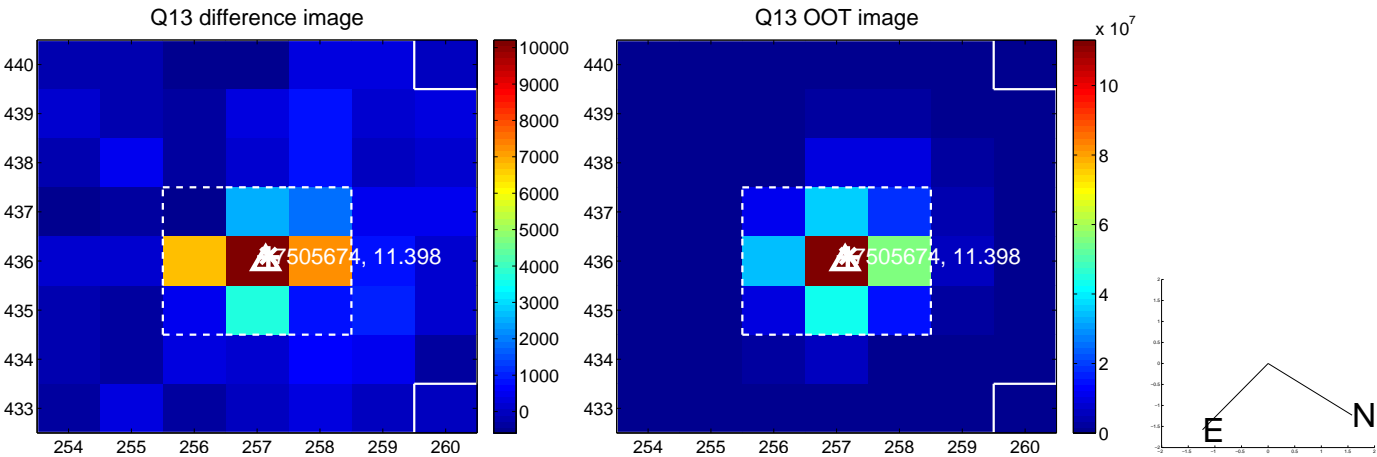
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



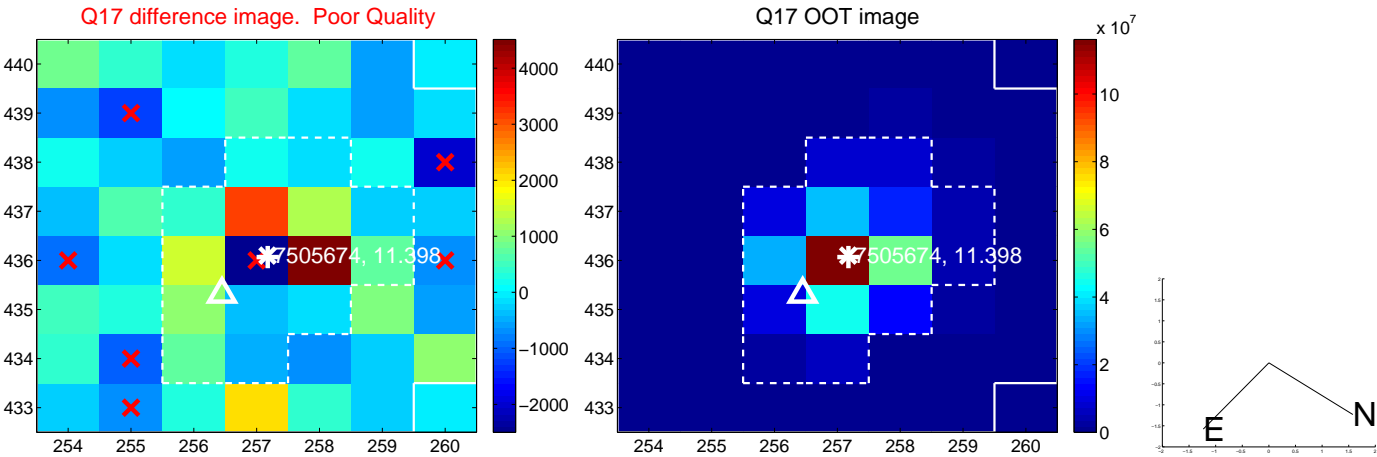
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

