

# KIC 008264274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264274-01	OBS	No	0.815562	131.789170	75.5	3.422	9.0	6.3	3.06	7850	3.09	71411.34
008264274-02	OBS	No	137.953290	134.207957	1817.8	17.169	8.9	7.8	3.06	7850	14.71	76.34
008264274-03	OBS	No	512.100023	421.072268	4304.6	7.037	8.1	9.1	3.06	7850	35.80	13.28
008264274-04	OBS	No	329.701335	178.700403	3461.4	6.158	7.7	8.4	3.06	7850	32.44	23.89
008264274-05	OBS	No	463.415952	187.437241	3469.1	14.322	7.3	7.7	3.06	7850	21.77	15.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264274-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008264274-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008264274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008264274-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
008264274-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

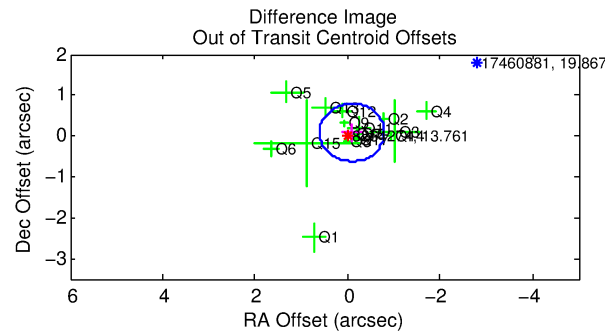
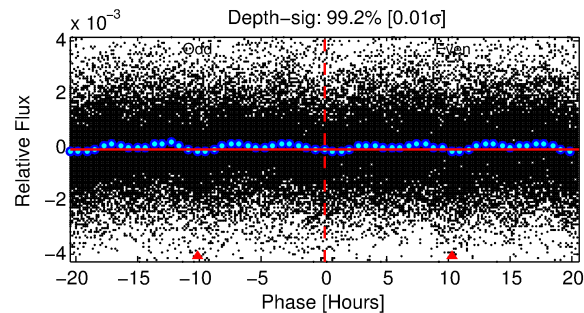
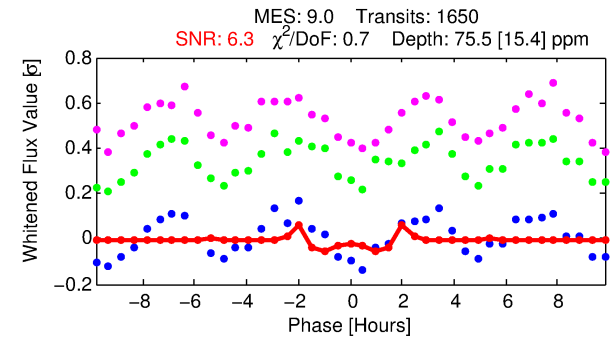
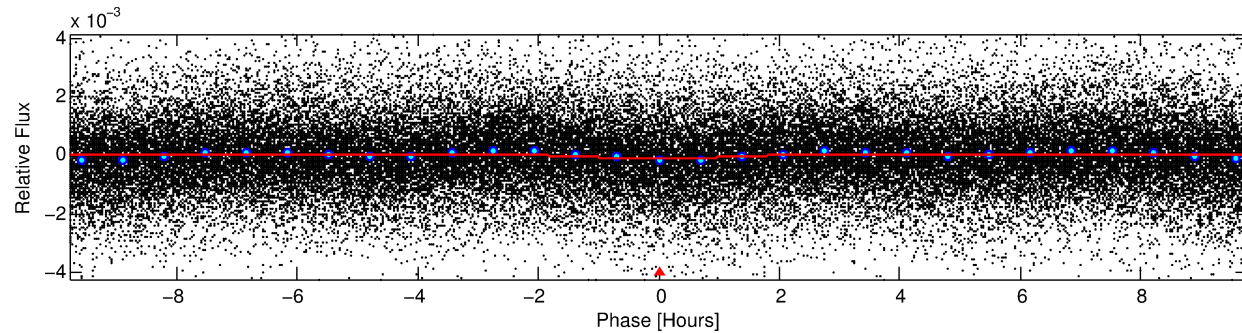
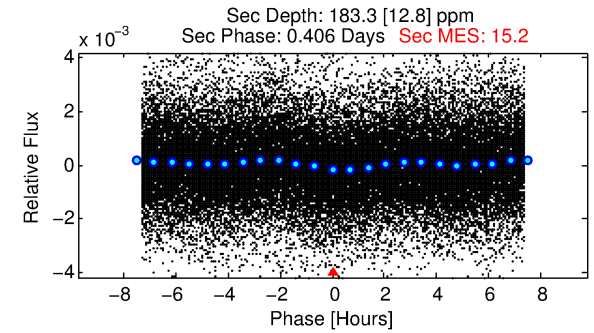
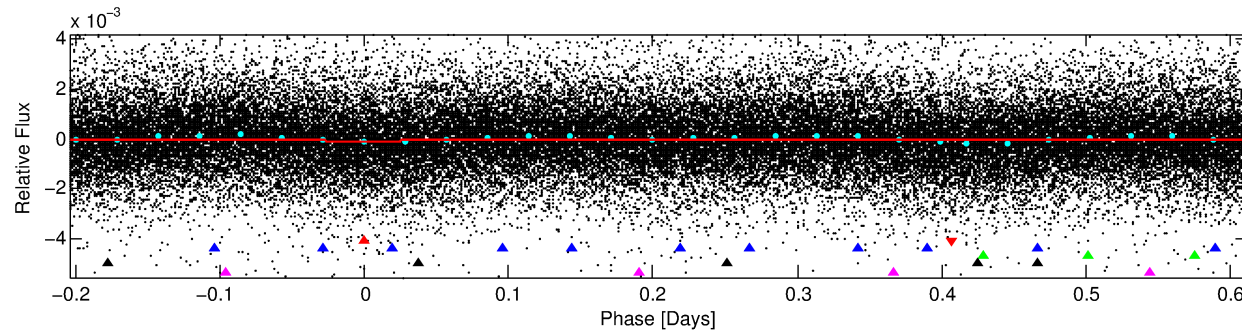
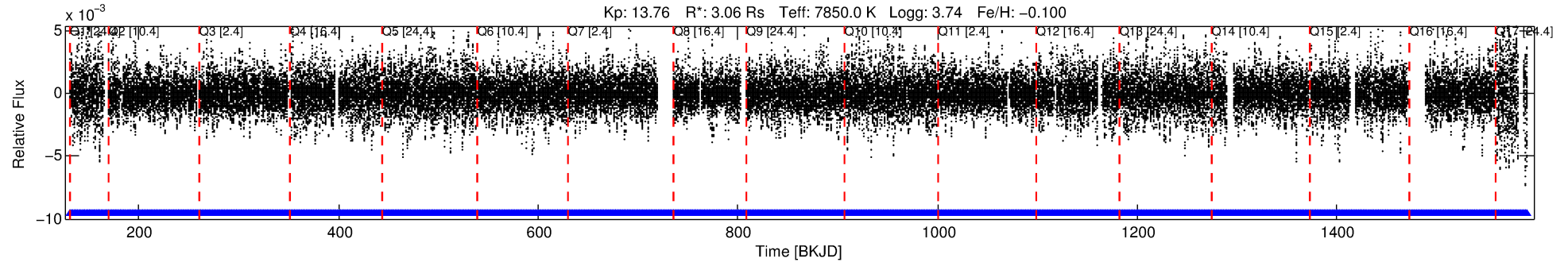
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264274-01

No Significant Match Found

# DV One-Page Summary

KIC: 8264274 Candidate: 1 of 5 Period: 0.816 d



## DV Fit Results:

Period = 0.81556 [0.00001] d  
Epoch = 131.7892 [0.0019] BKJD  
Rp/R\* = 0.0093 [0.0022]  
a/R\* = 1.26 [0.59]  
b = 0.90 [0.28]  
Seff = 71411.34 [51847.63]  
Teq = 4168 [757] K  
Rp = 3.09 [1.57] Re  
a = 0.0211 [0.0093] AU  
Ag = 4.71 [4.04] [0.92σ]  
**Teffp = 9495 [1216] K [3.72σ]**

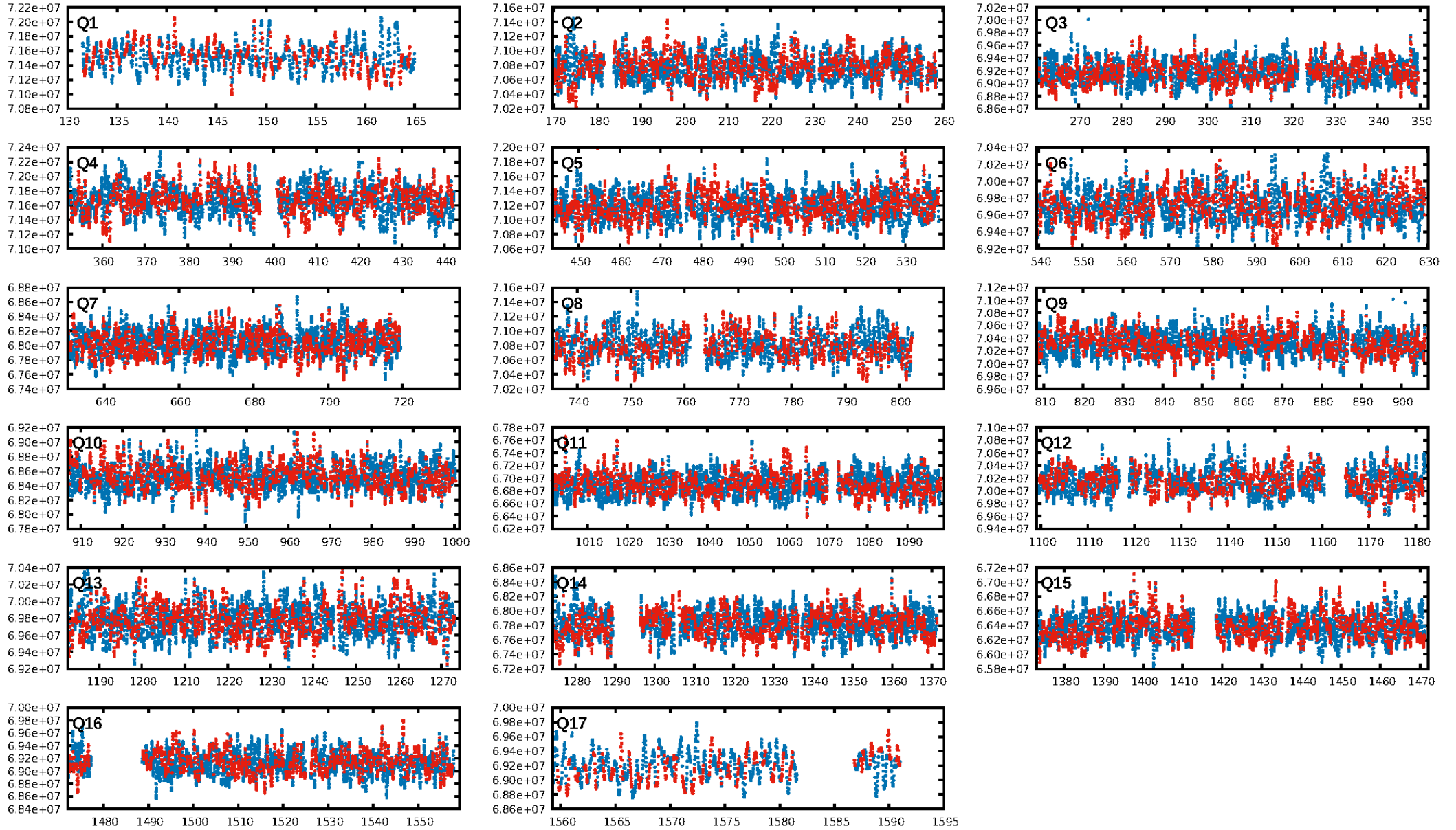
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [188.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 9.38e-18  
RollingBand-fgt: 1.00 [1576/1576]  
**GhostDiagnostic-chr: 0.6748**  
**Centroid-sig: 0.0%**  
Centroid-so: 0.927 arcsec [1.19σ]  
OotOffset-rm: 0.123 arcsec [0.52σ]  
KicOffset-rm: 0.109 arcsec [0.47σ]  
OotOffset-st: 3/4/4/5 [16]  
KicOffset-st: 3/4/4/5 [16]  
DiffImageQuality-fgm: 0.69 [11/16]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:34:28 Z

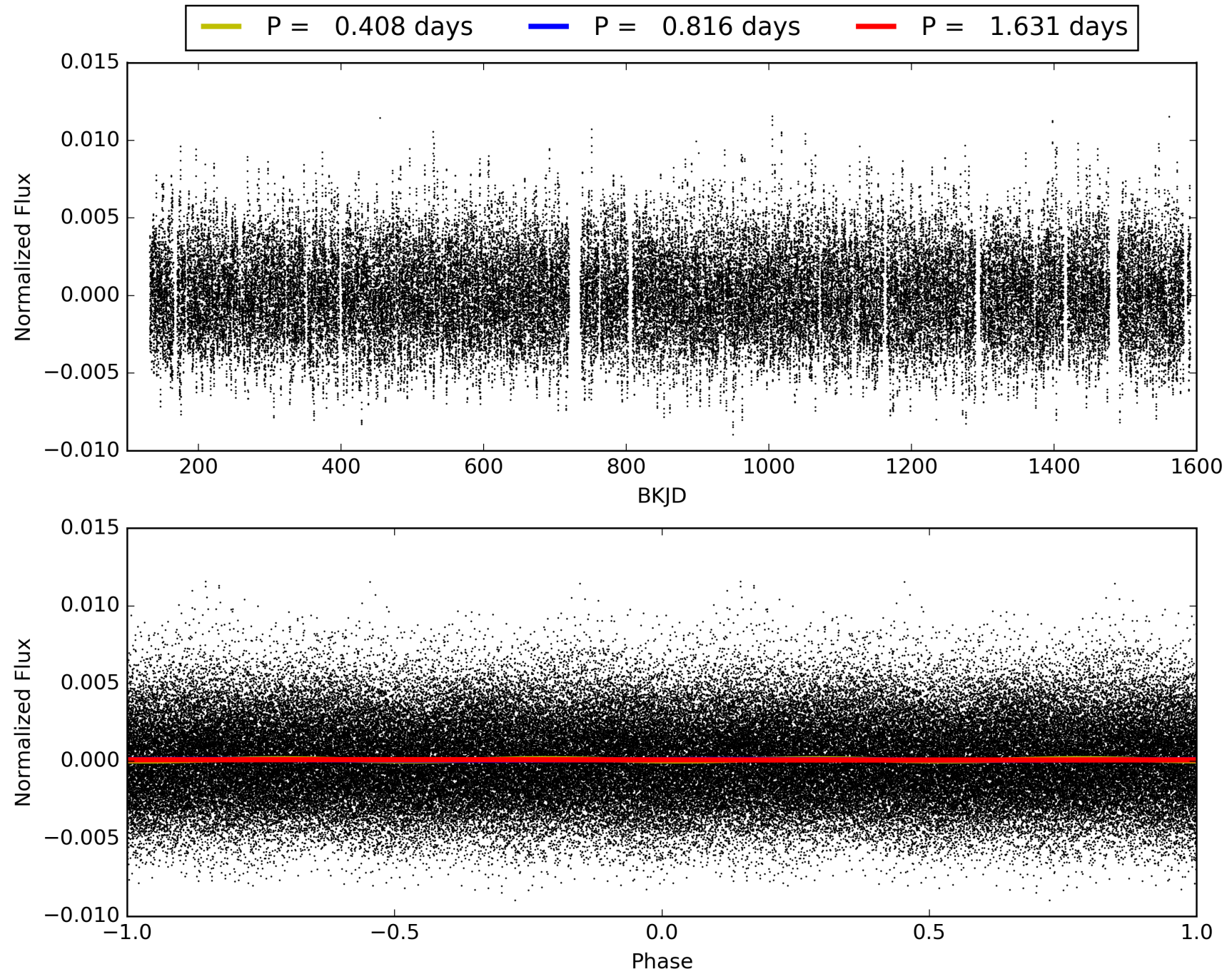
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008264274-01, PDC Light Curves





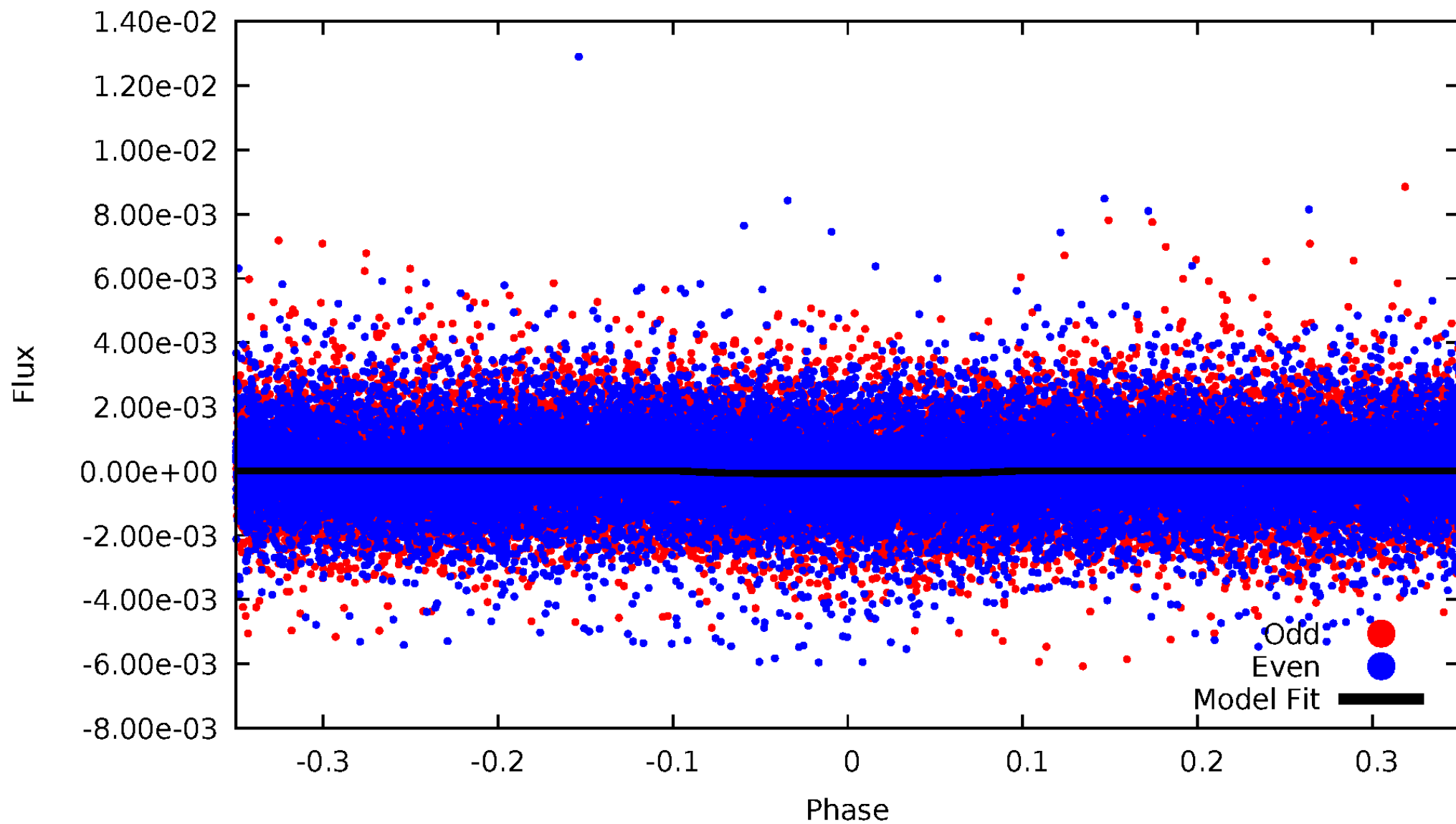
TCE 008264274-01





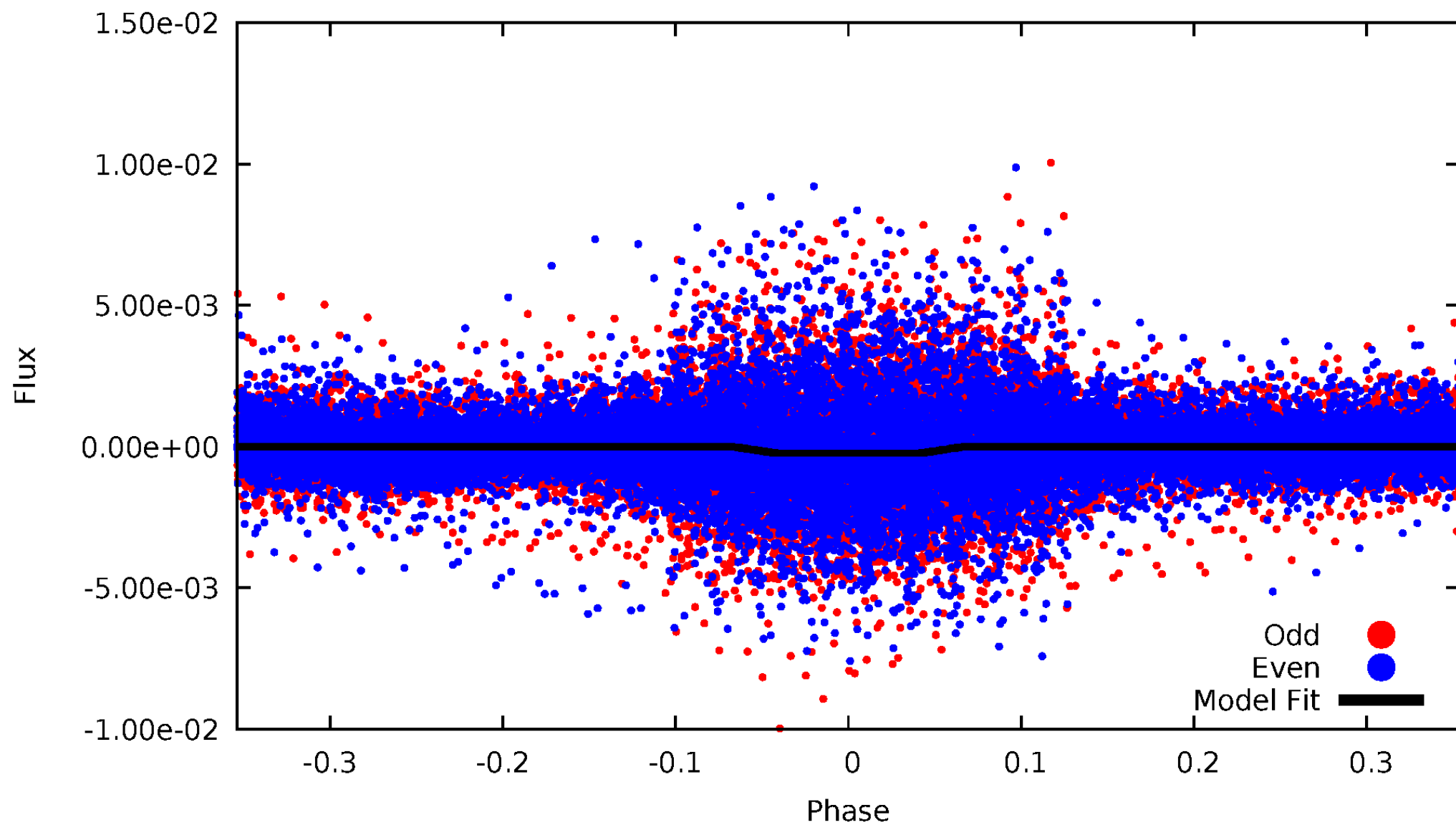
# DV Odd/Even

TCE 008264274-01

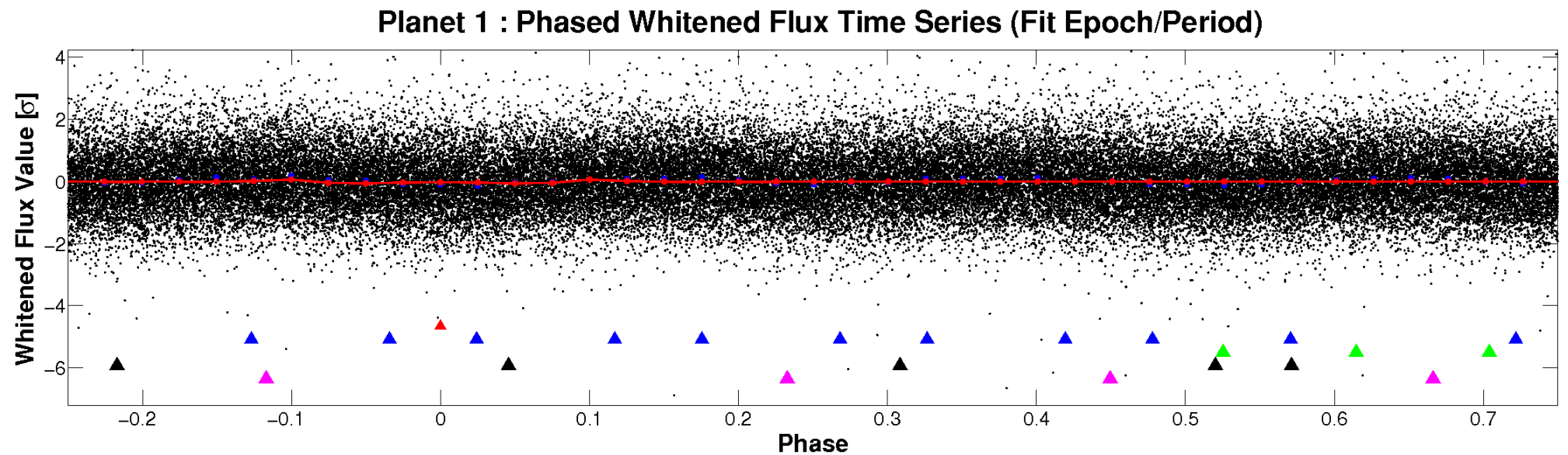
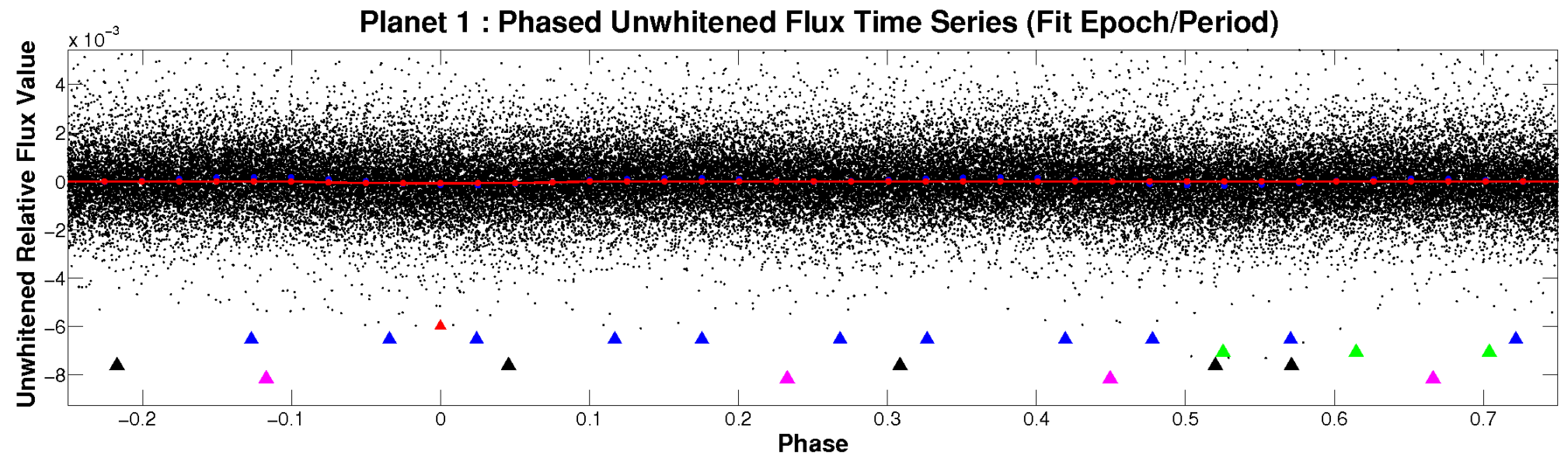


# ALT Odd/Even

TCE 008264274-01



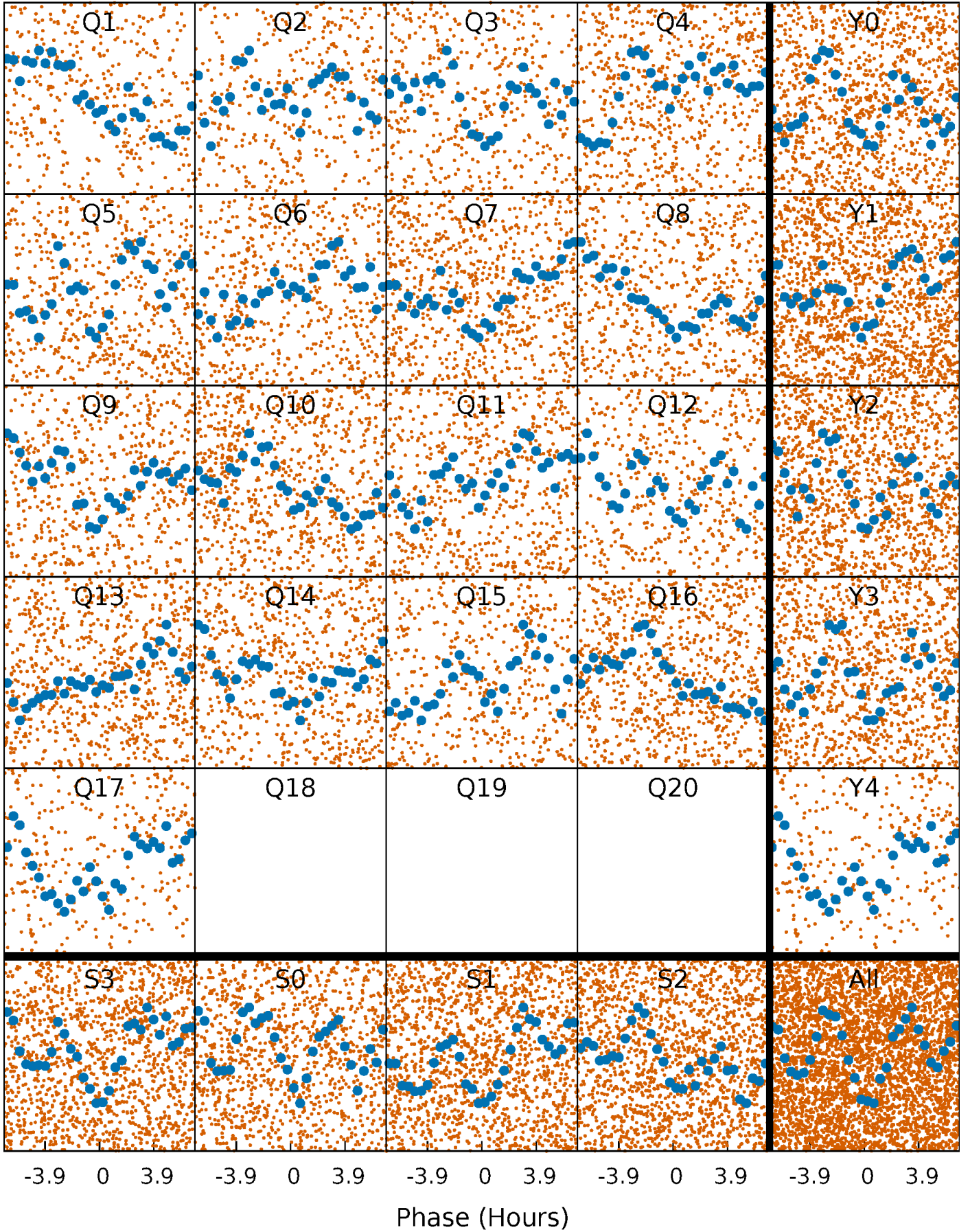
# Non-Whitened Vs. Whitened Light Curve





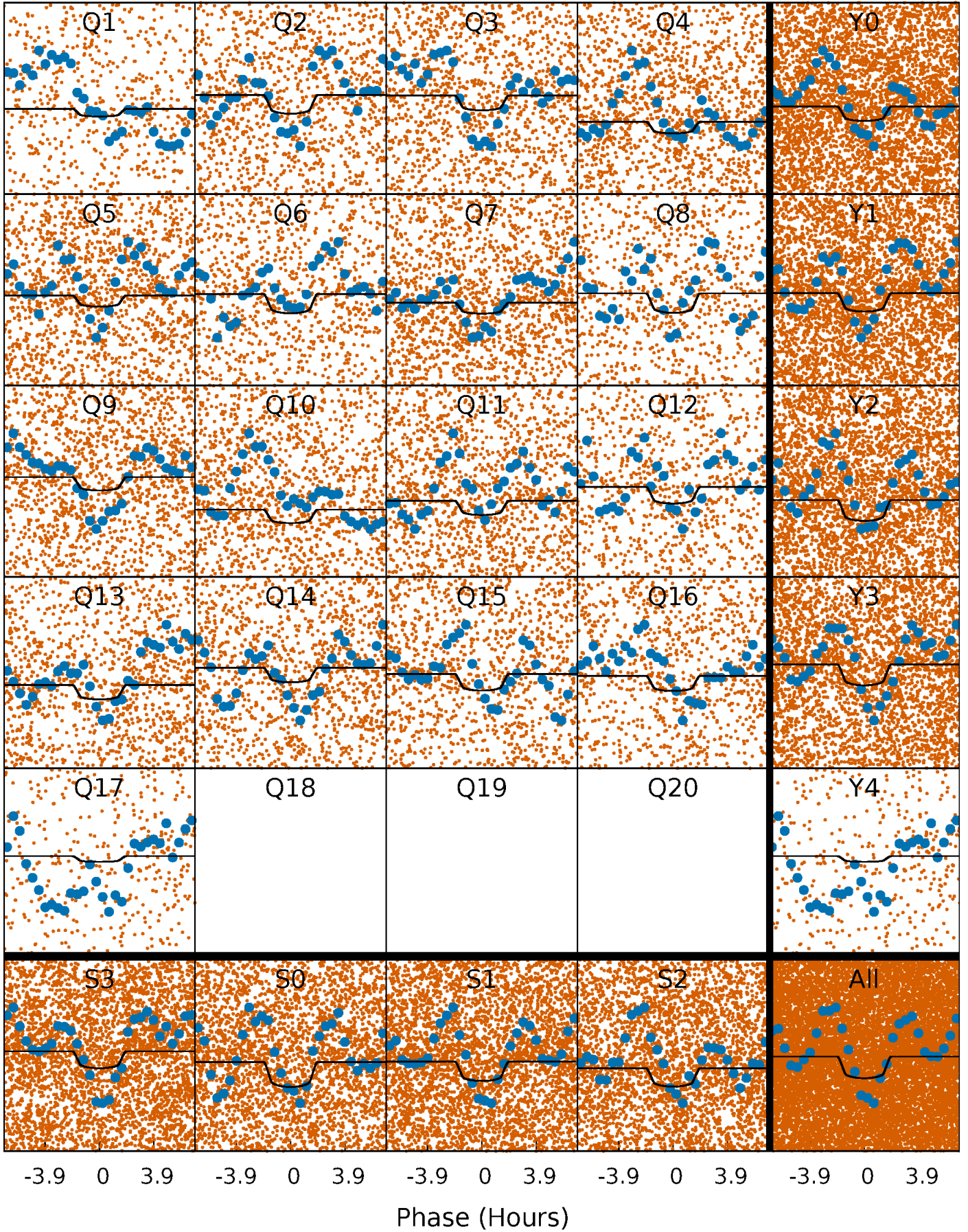
# PDC Quarter-Phased Transit Curves

TCE 008264274-01   P= 0.815562 Days    $T_0=131.789170$  (BKJD)



# DV Quarter-Phased Transit Curves

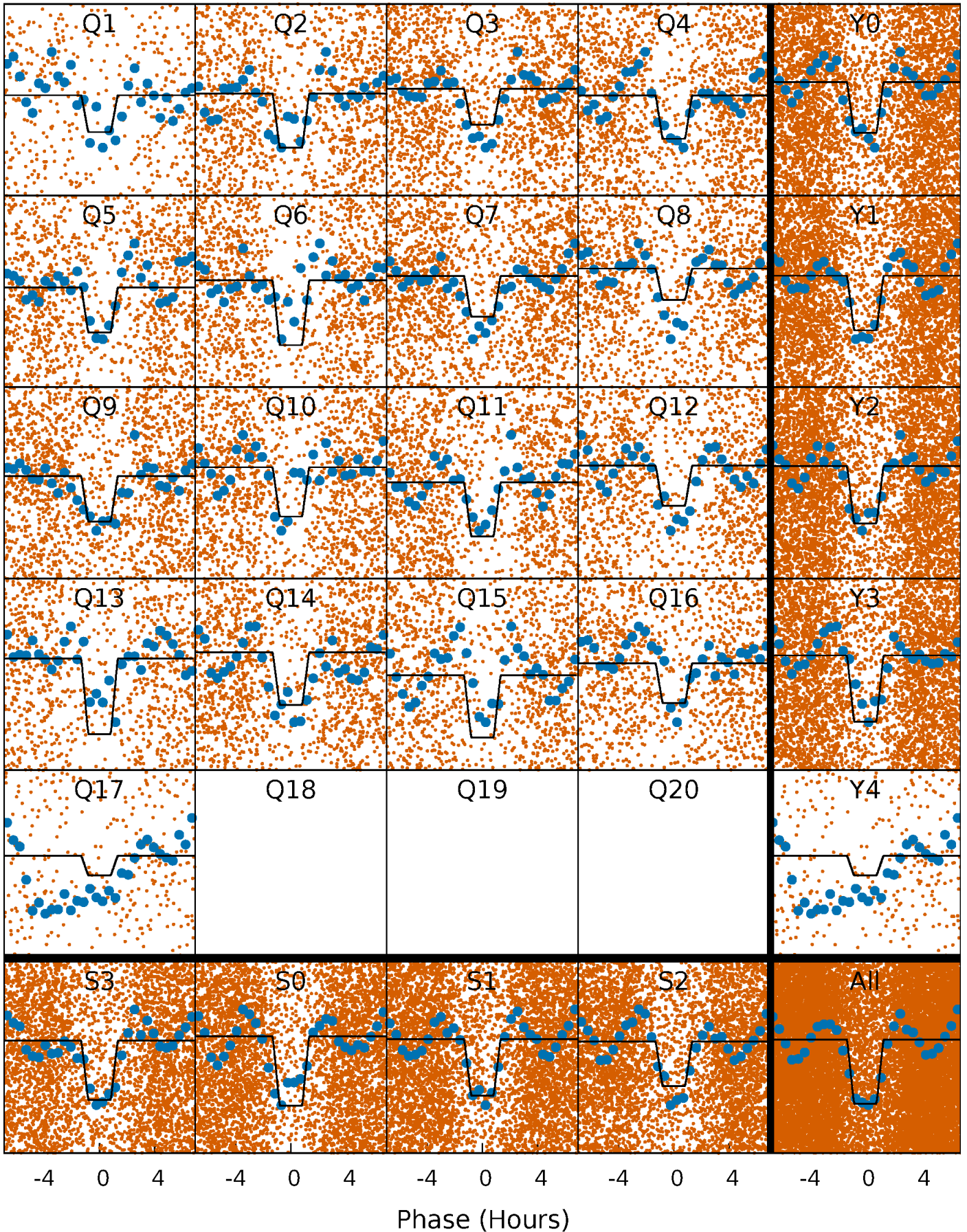
TCE 008264274-01   P= 0.815562 Days    $T_0=131.789170$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

TCE 008264274-01 P= 0.815576 Days  $T_0=131.788007$  (BKJD)

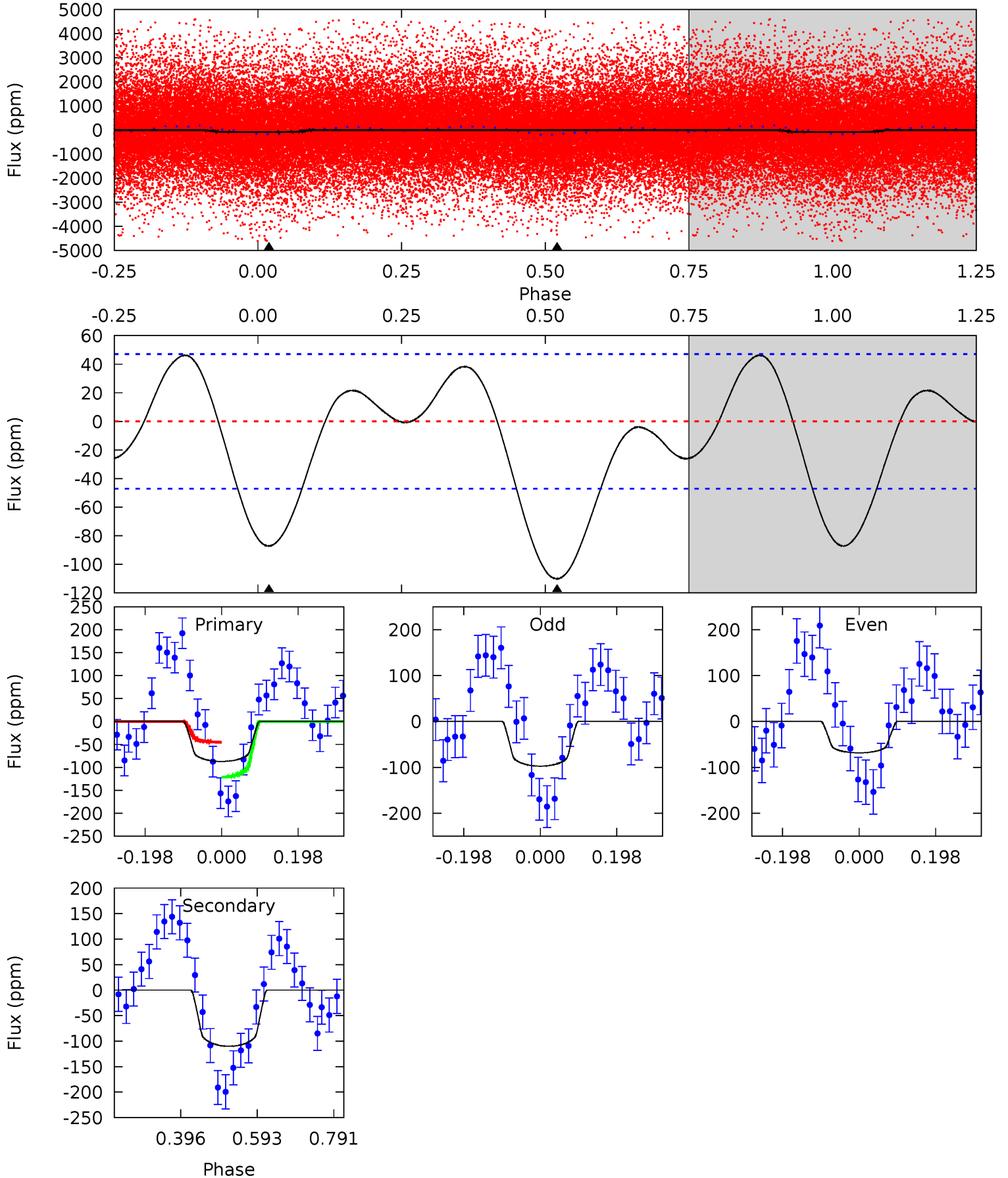




# DV Model-Shift Uniqueness Test

008264274-01, P = 0.815562 Days, E = 130.973608 Days

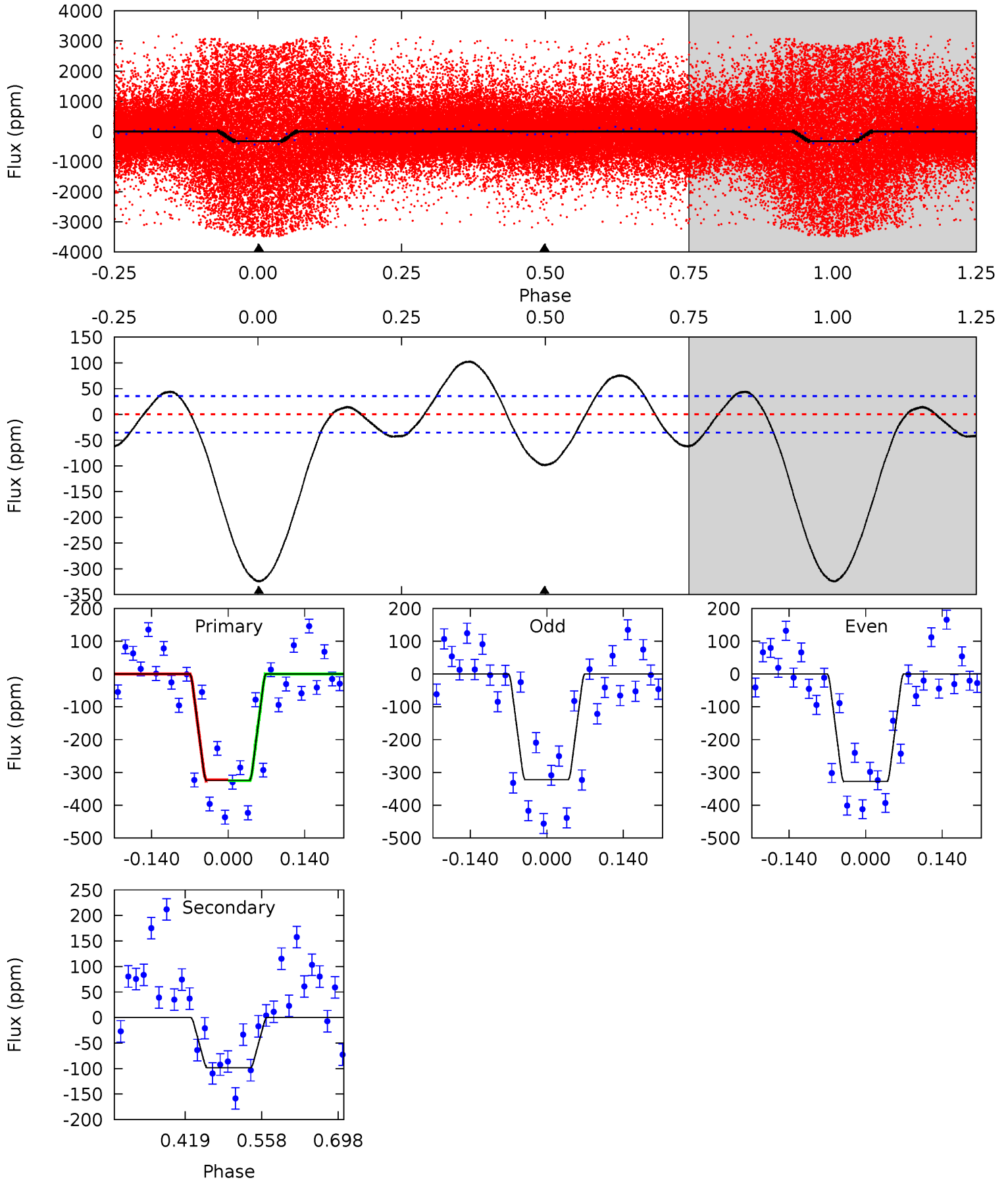
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	10.3	0	0	4.42	1.29	1.39	8.19	8.19	10.3	10.3	1.37	0.98	0.30	3.60



# Alt Model-Shift Uniqueness Test

008264274-01, P = 0.815576 Days, E = 130.972431 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.1	12.5	0	0	4.49	1.48	5.42	41.1	41.1	12.5	12.5	0.38	0.73	0.24	0.17



### Stellar Parameters For KIC 008264274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7850^{+218}_{-327}$	$3.743^{+0.417}_{-0.074}$	$-0.100^{+0.200}_{-0.350}$	$3.062^{+0.430}_{-1.375}$	$1.891^{+0.103}_{-0.410}$	$0.093^{+0.306}_{-0.029}$
	+3%/-4%	+11%/-2%	+200%/-350%	+14%/-45%	+5%/-22%	+329%/-31%
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 008264274-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-110 \pm 11$	$2.79^{+0.86}_{-0.90}$	$5631^{+385}_{-707}$	$8197^{+1881}_{-1194}$	$3.450^{+3.891}_{-1.478}$
Alt.	$-98 \pm 8$	$4.64^{+1.06}_{-1.19}$	$5607^{+391}_{-645}$	$5710^{+615}_{-569}$	$1.109^{+0.850}_{-0.362}$

$T_{max}$  = 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

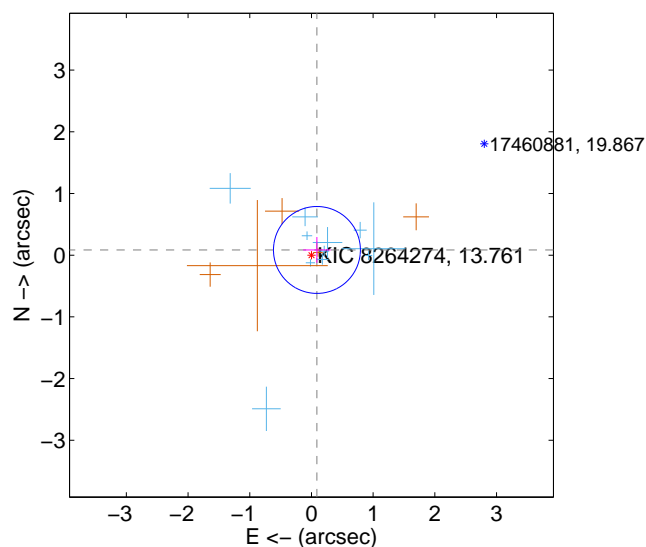
Supplemental centroid analysis for 008264274-01. Kepler magnitude: 13.76. Transit SNR 6.31

There are 11 quarters with good PRF difference image offsets

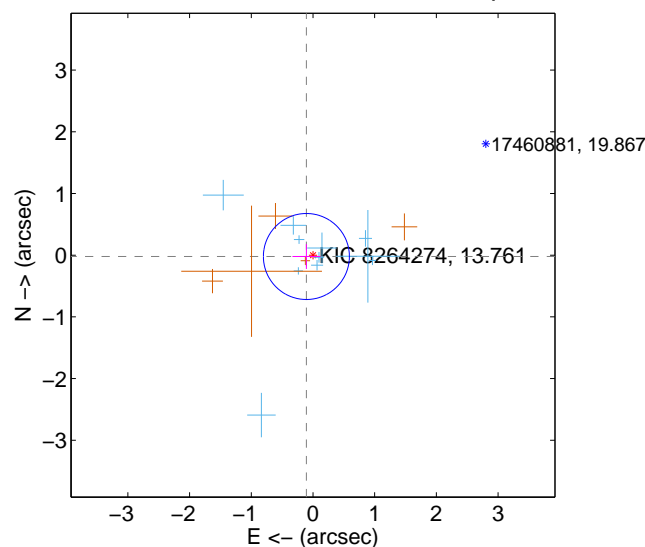
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.123 \pm 0.235$	0.52	$-0.089 \pm 0.223$	$0.085 \pm 0.209$
PRF-fit source offset from KIC position	$0.109 \pm 0.232$	0.47	$0.107 \pm 0.227$	$-0.022 \pm 0.201$
photometric centroid source offset	$0.93 \pm 0.78$	1.19	$-0.81 \pm 0.84$	$-0.46 \pm 0.54$

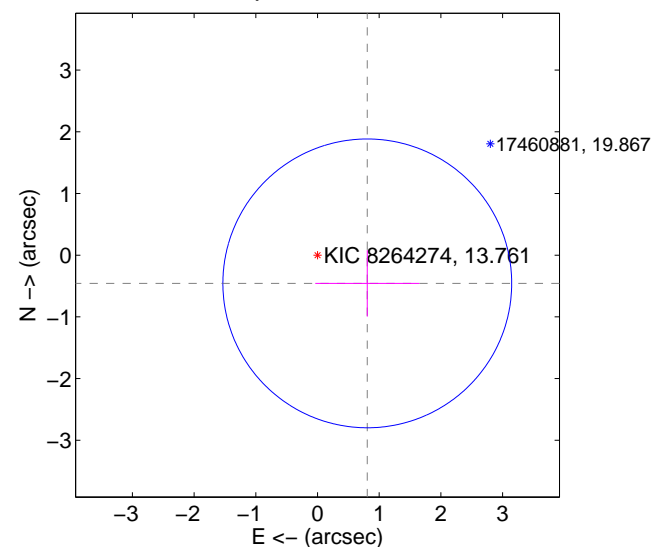
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

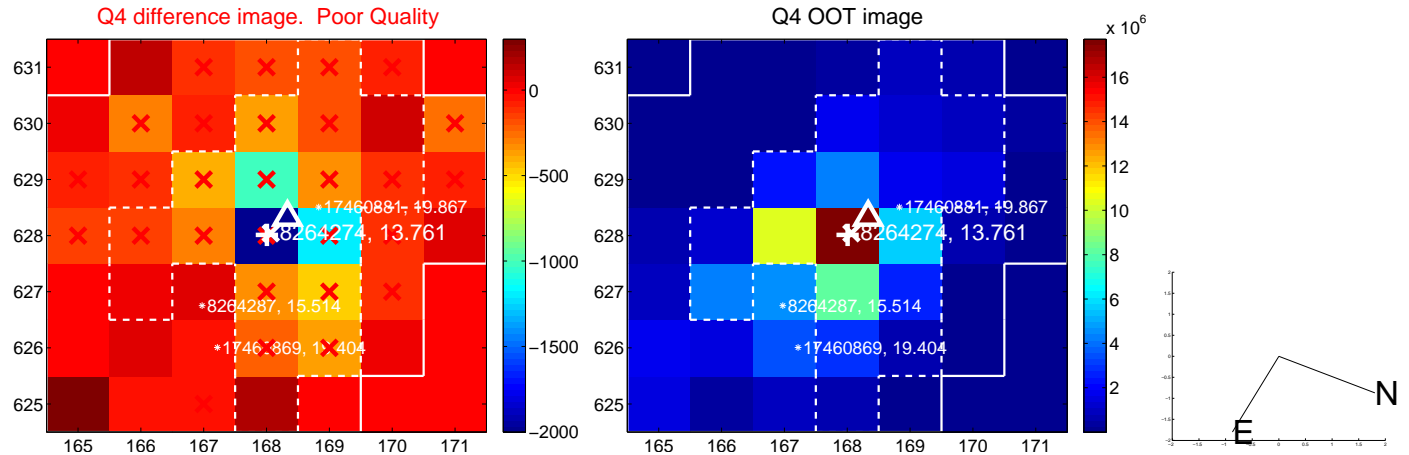
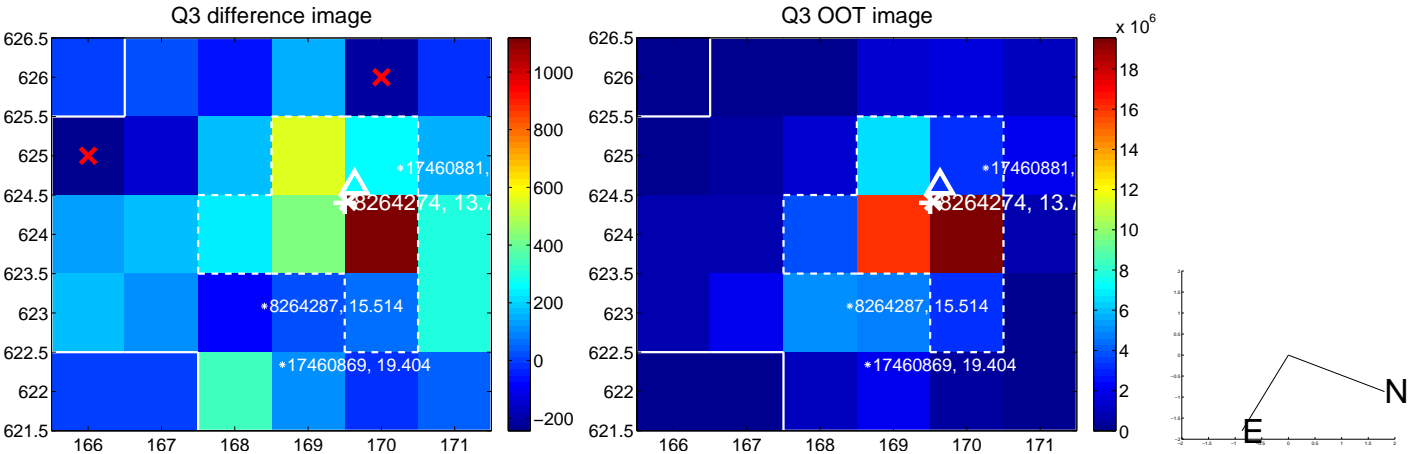
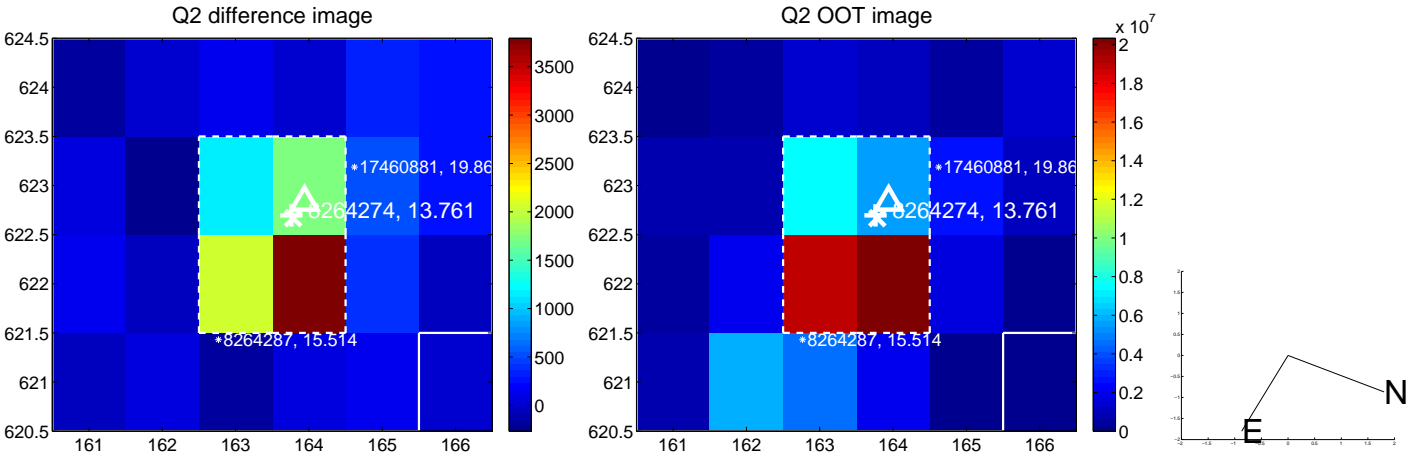
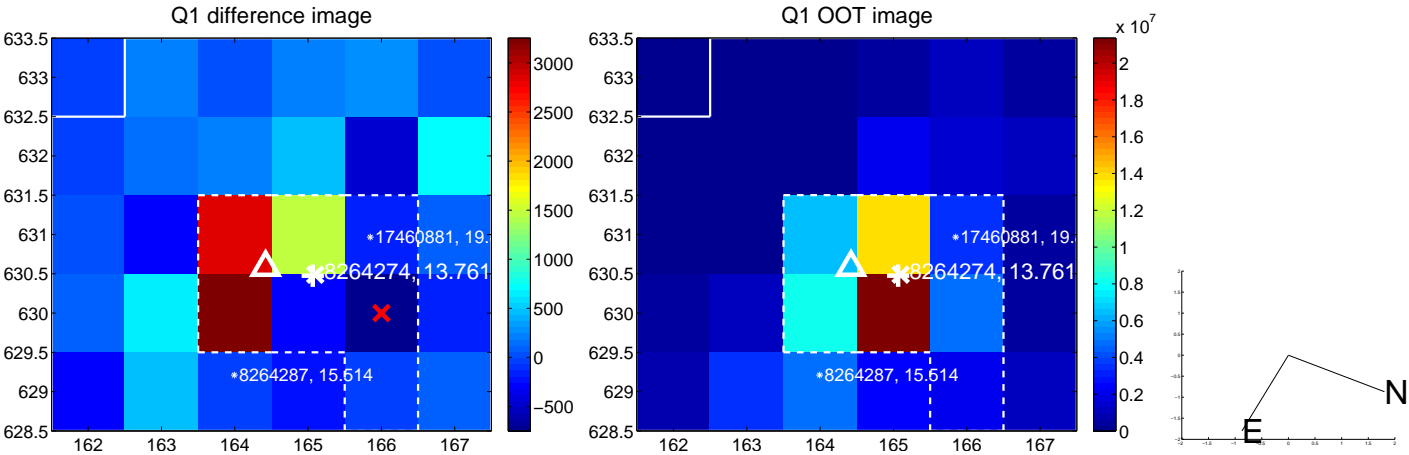


offset from photometric centroids

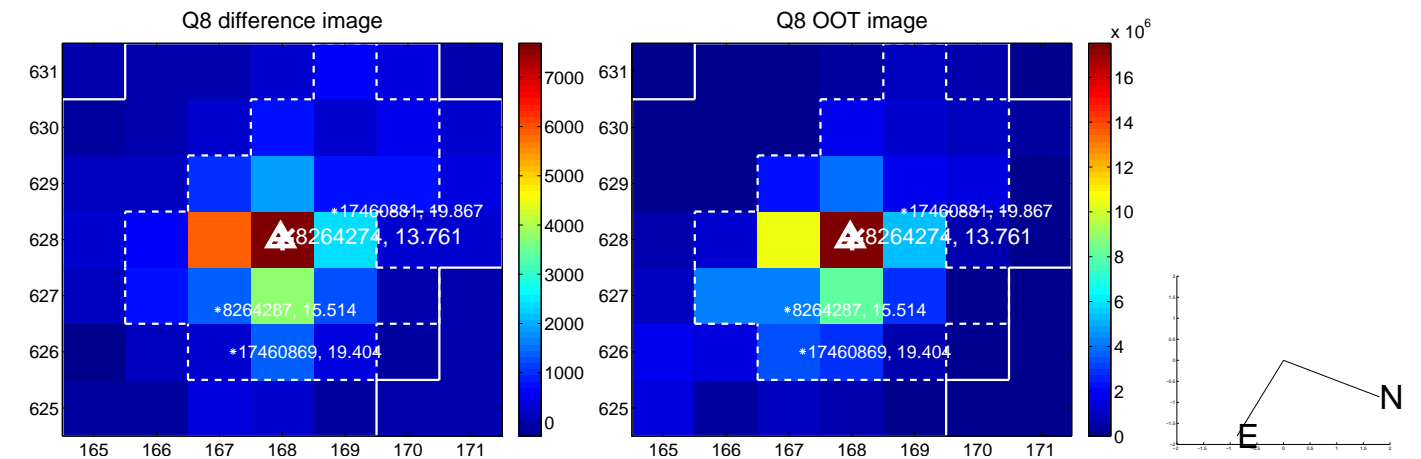
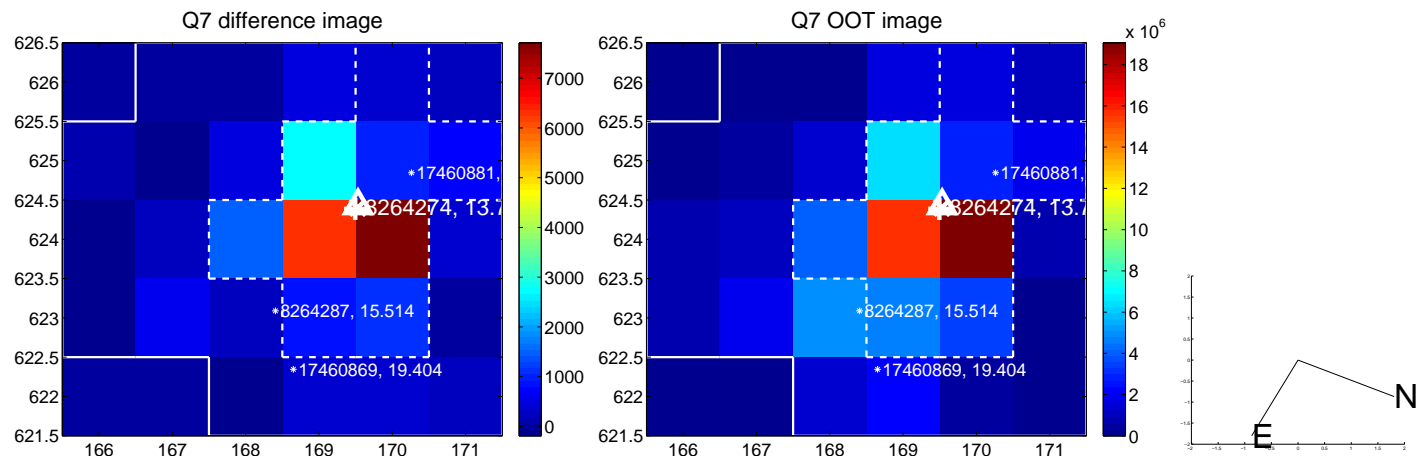
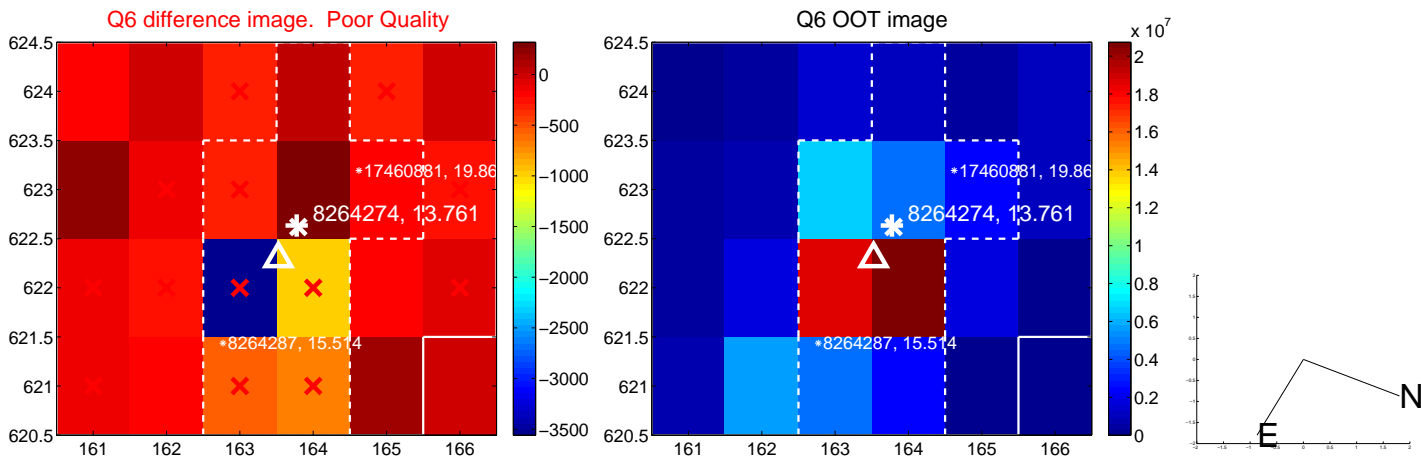
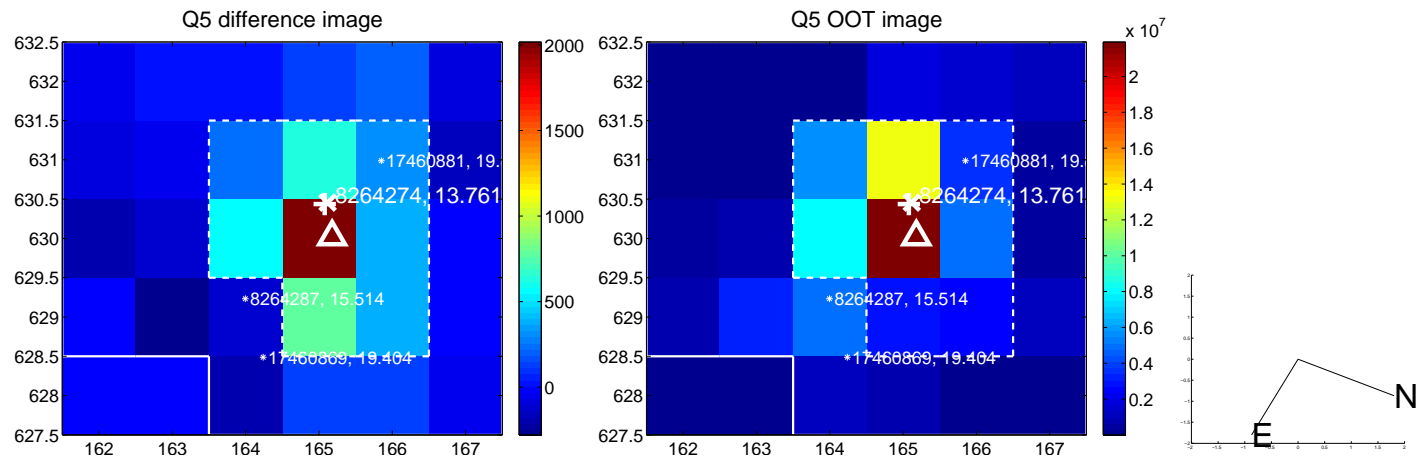


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

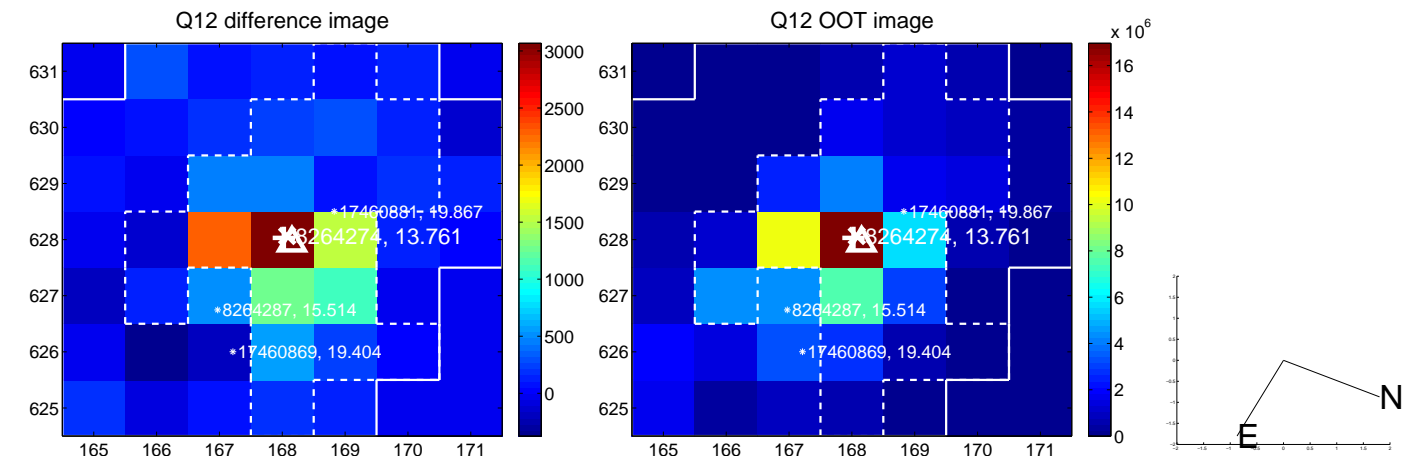
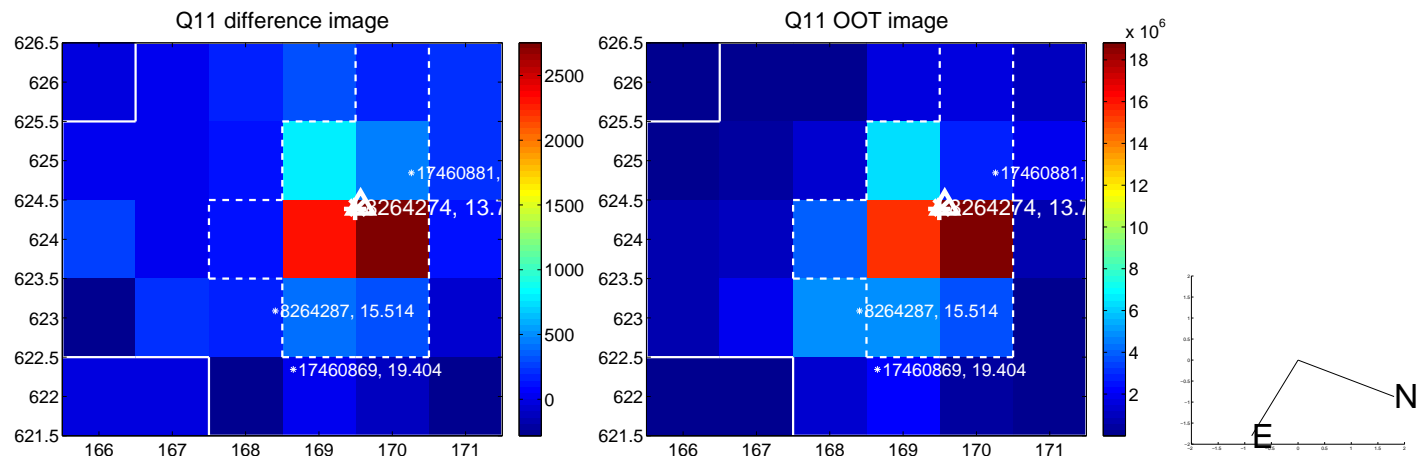
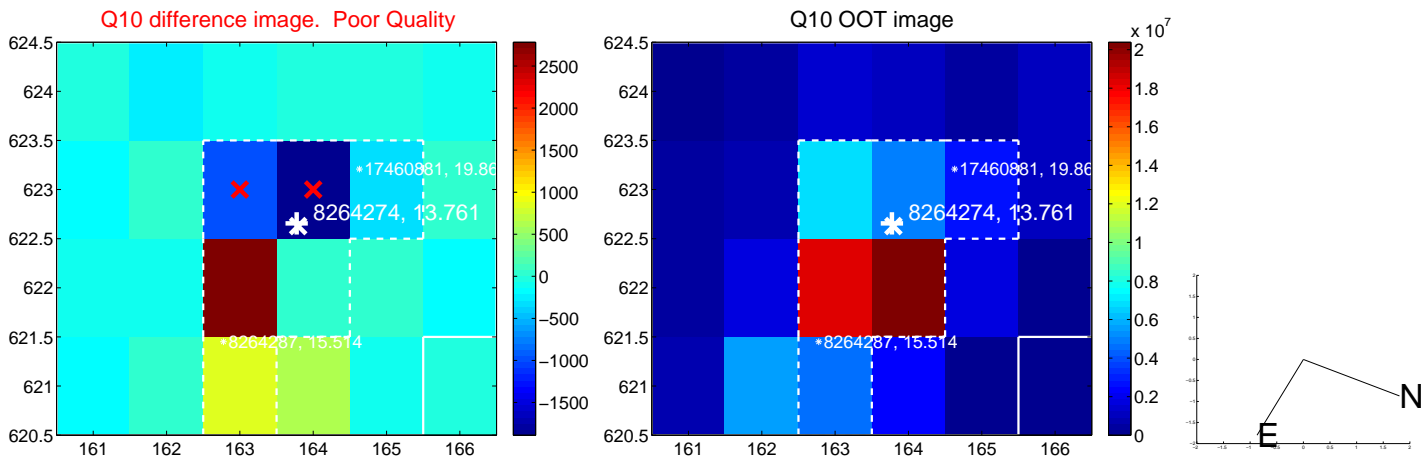
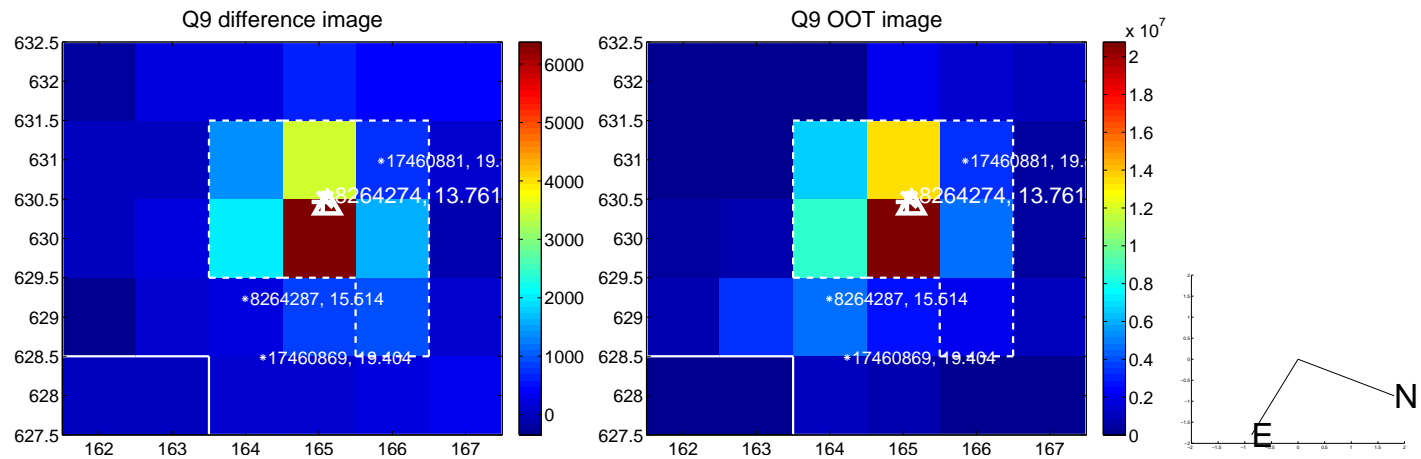


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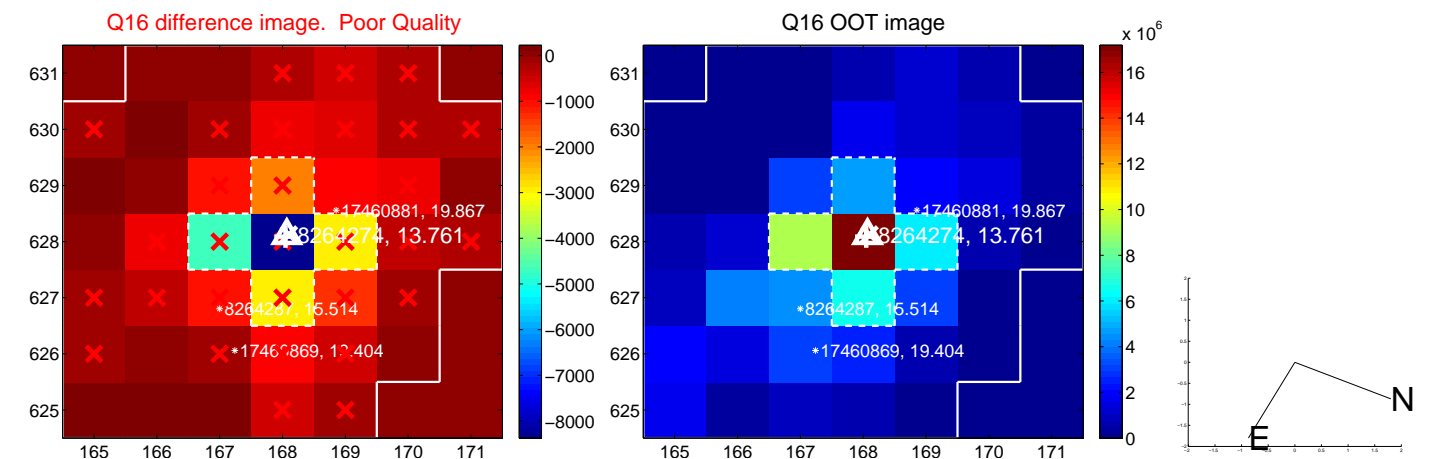
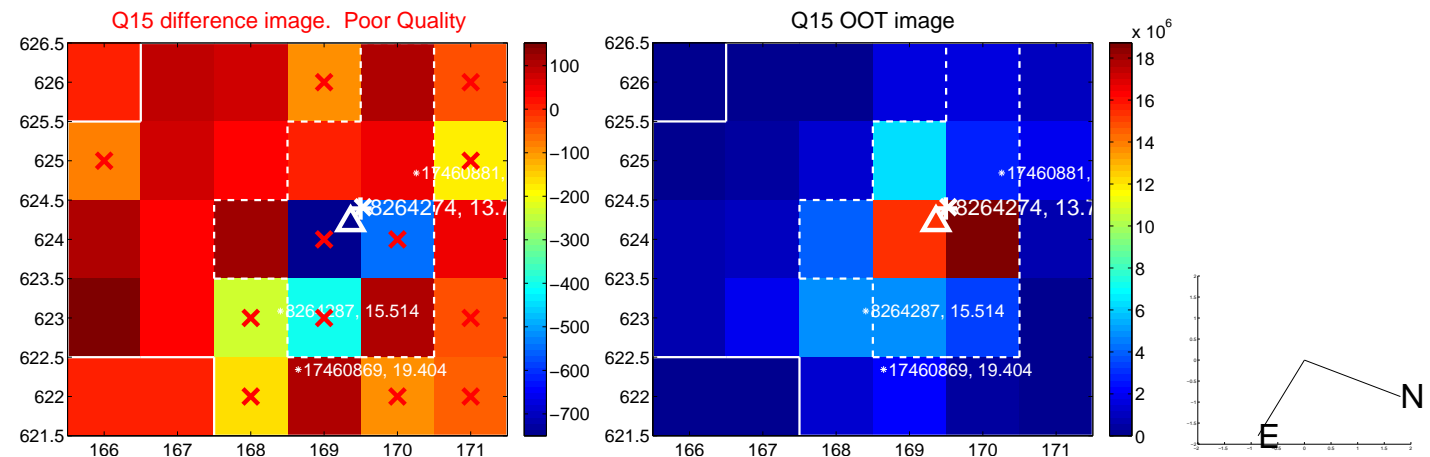
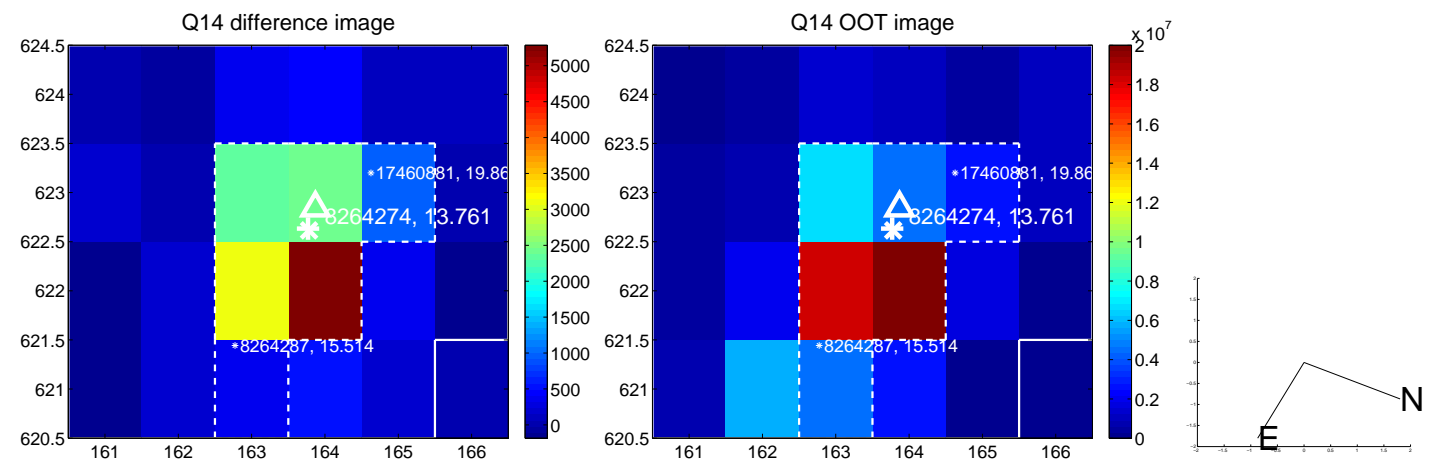
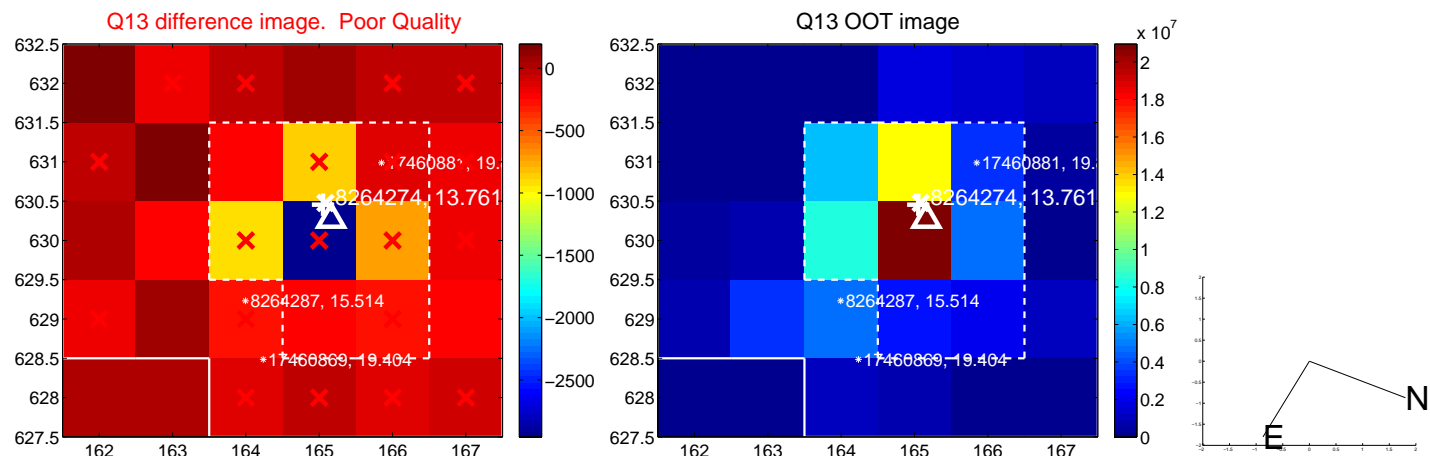




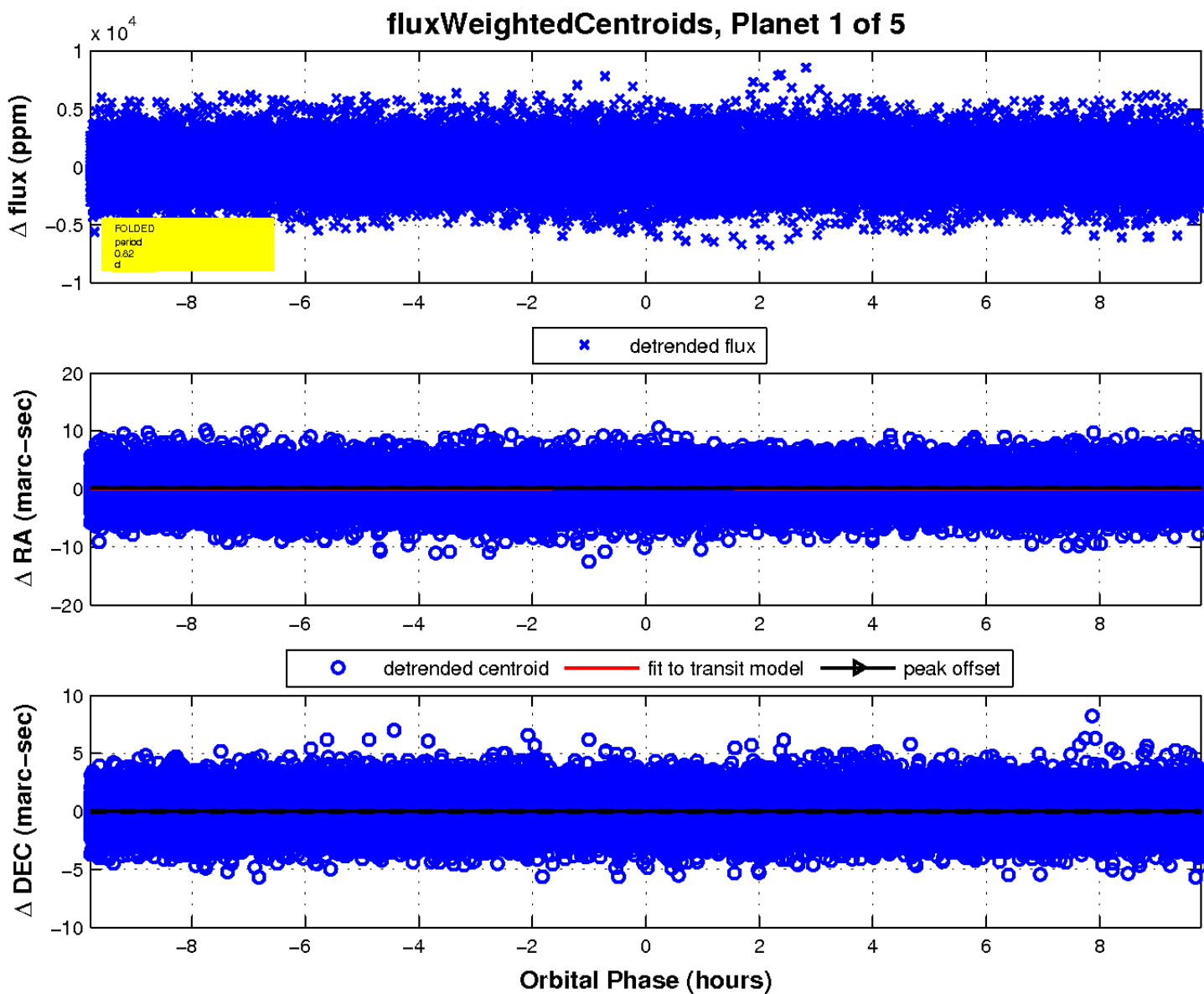
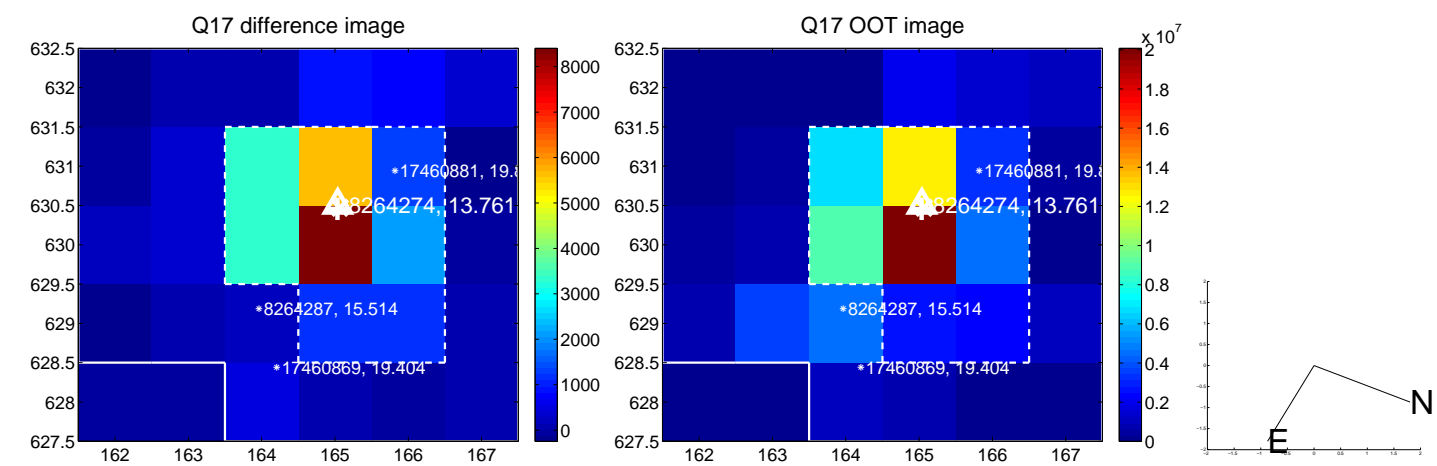
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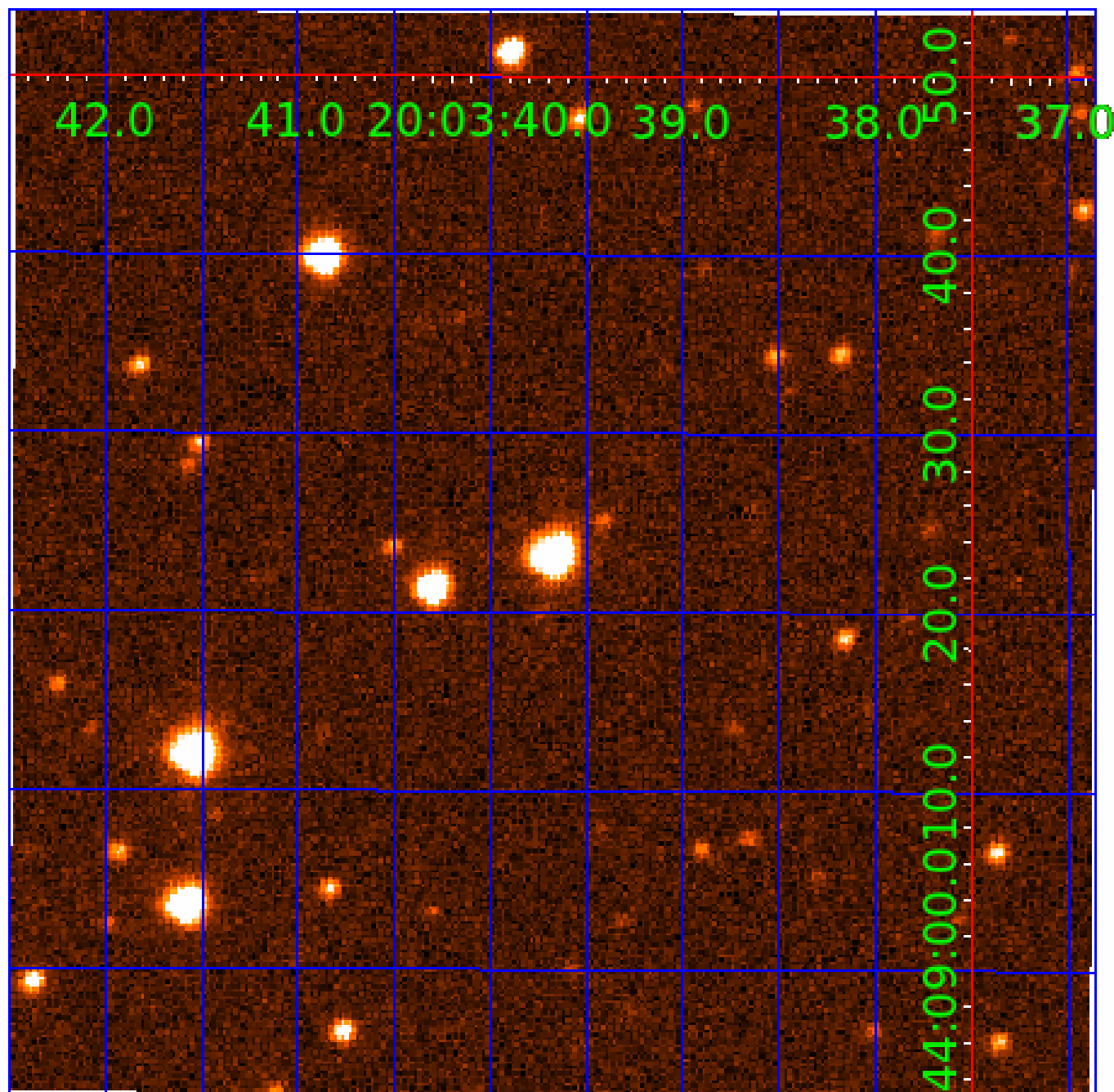


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 008264274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264274-01	OBS	No	0.815562	131.789170	75.5	3.422	9.0	6.3	3.06	7850	3.09	71411.34
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008264274-04	OBS	No	329.701335	178.700403	3461.4	6.158	7.7	8.4	3.06	7850	32.44	23.89
008264274-05	OBS	No	463.415952	187.437241	3469.1	14.322	7.3	7.7	3.06	7850	21.77	15.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264274-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008264274-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008264274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008264274-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
008264274-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

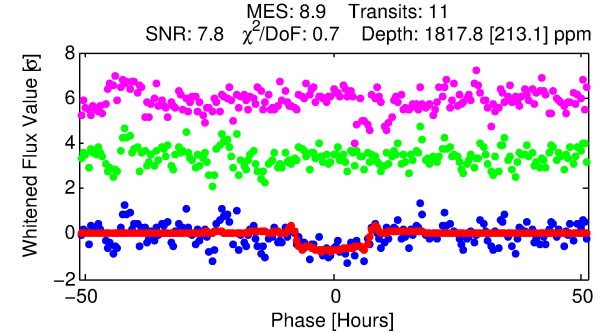
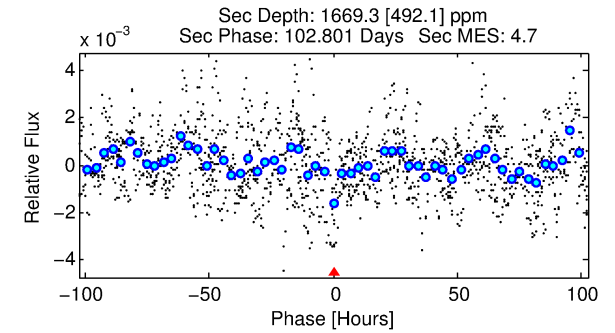
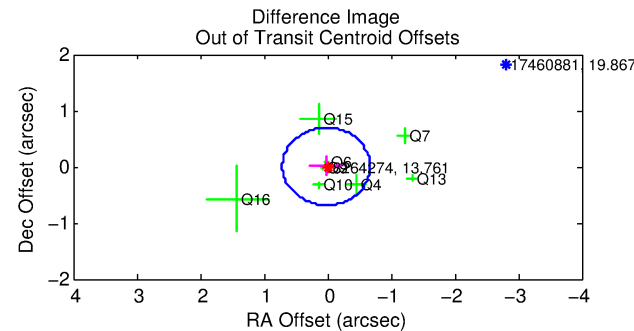
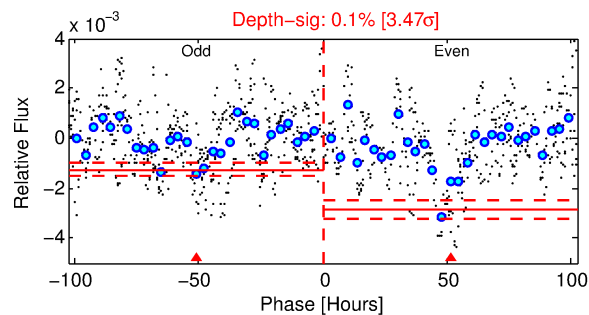
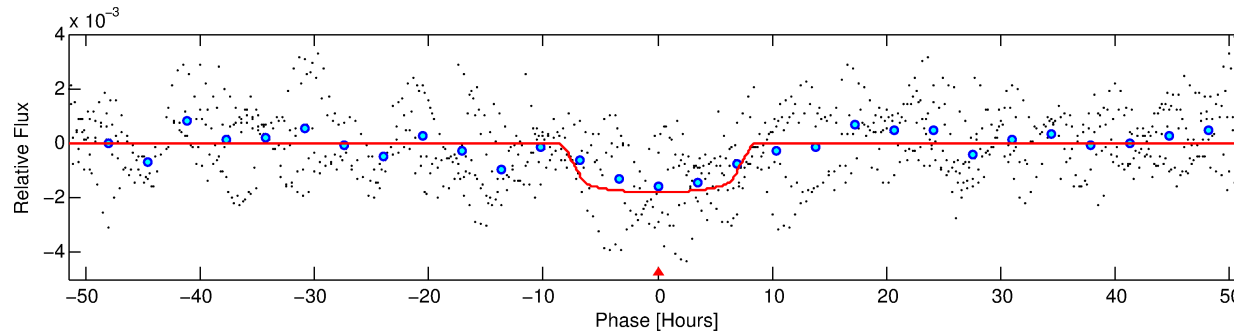
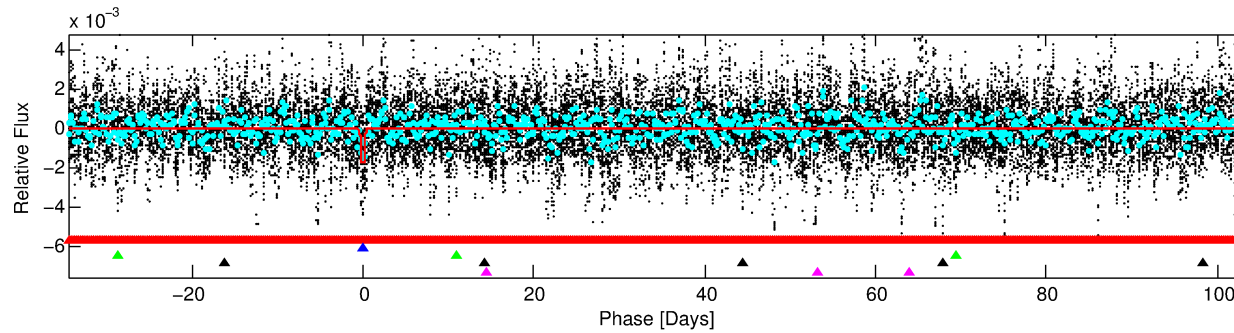
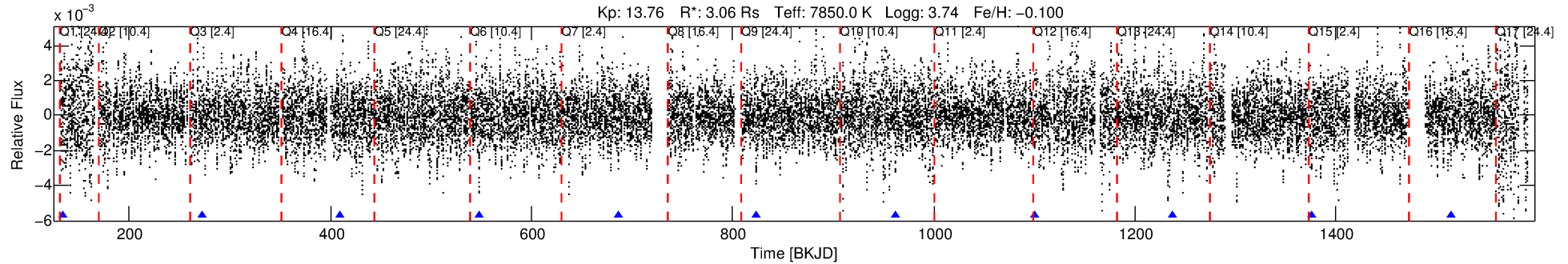
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264274-02

No Significant Match Found

# DV One-Page Summary

KIC: 8264274 Candidate: 2 of 5 Period: 137.953 d



## DV Fit Results:

Period = 137.95329 [0.00295] d  
Epoch = 134.2080 [0.0164] BKJD  
Rp/R\* = 0.0440 [0.0027]  
a/R\* = 37.36 [4.03]  
b = 0.85 [0.04]  
Seff = 76.34 [55.42]  
Teq = 754 [137] K  
Rp = 14.71 [6.67] Re  
a = 0.6464 [0.2833] AU  
Ag = 1772.40 [1374.89] [1.29 $\sigma$ ]  
Teffp = 7561 [682] K [9.79 $\sigma$ ]

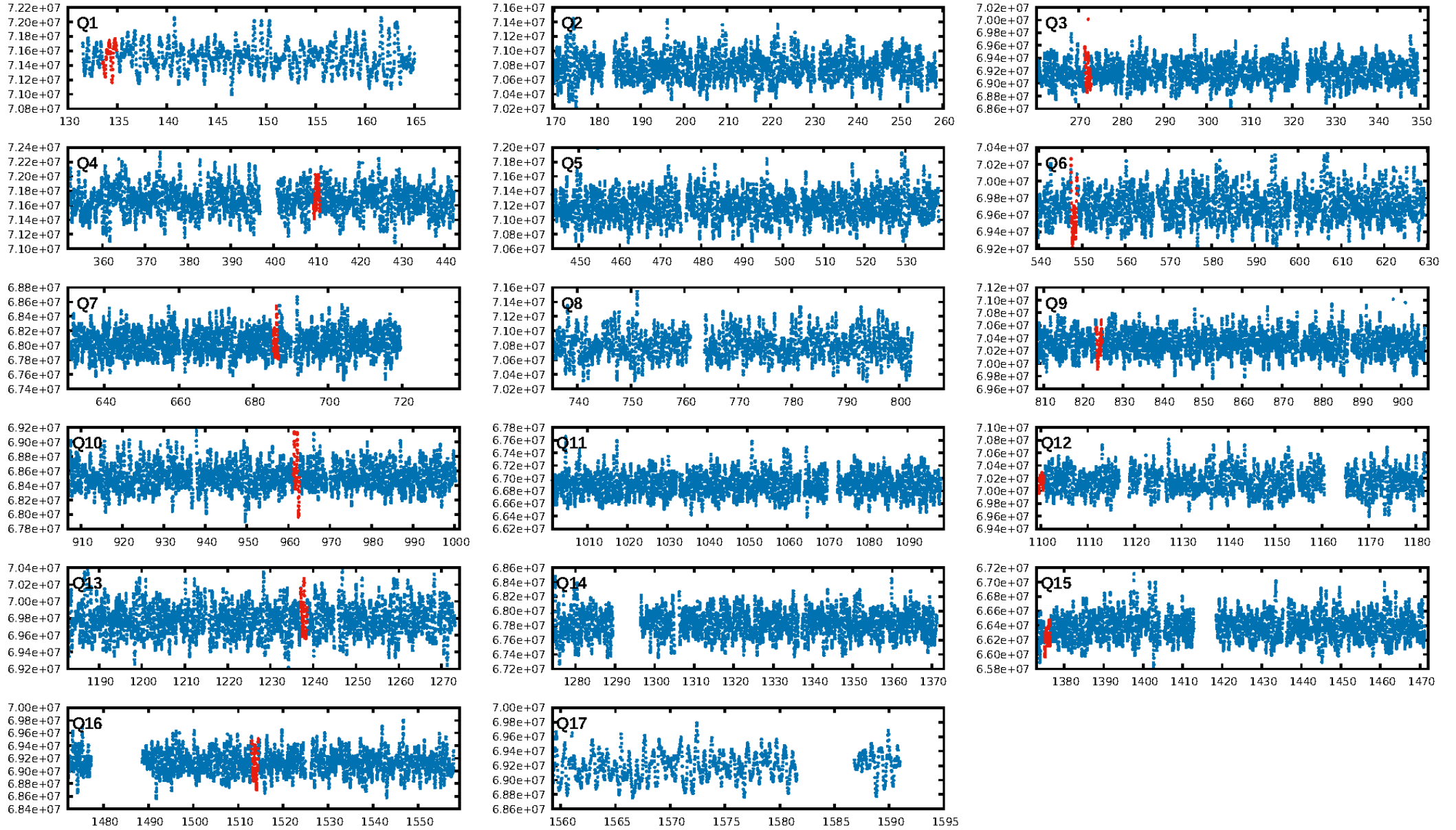
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [188.00 $\sigma$ ]  
LongPeriod-sig: 100.0% [252.30 $\sigma$ ]  
ModelChiSquare2-sig: 40.9%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 7.49e-13  
RollingBand-fgt: 1.00 [10/10]  
GhostDiagnostic-chr: 2.193  
Centroid-sig: 0.2%  
Centroid-so: 0.907 arcsec [2.31 $\sigma$ ]  
OotOffset-rm: 0.022 arcsec [0.10 $\sigma$ ]  
KicOffset-rm: 0.114 arcsec [0.58 $\sigma$ ]  
OotOffset-st: 2/2/2/2 [8]  
KicOffset-st: 2/2/2/2 [8]  
DiffImageQuality-fgm: 0.38 [3/8]  
DiffImageOverlap-fno: 0.00 [0/9]

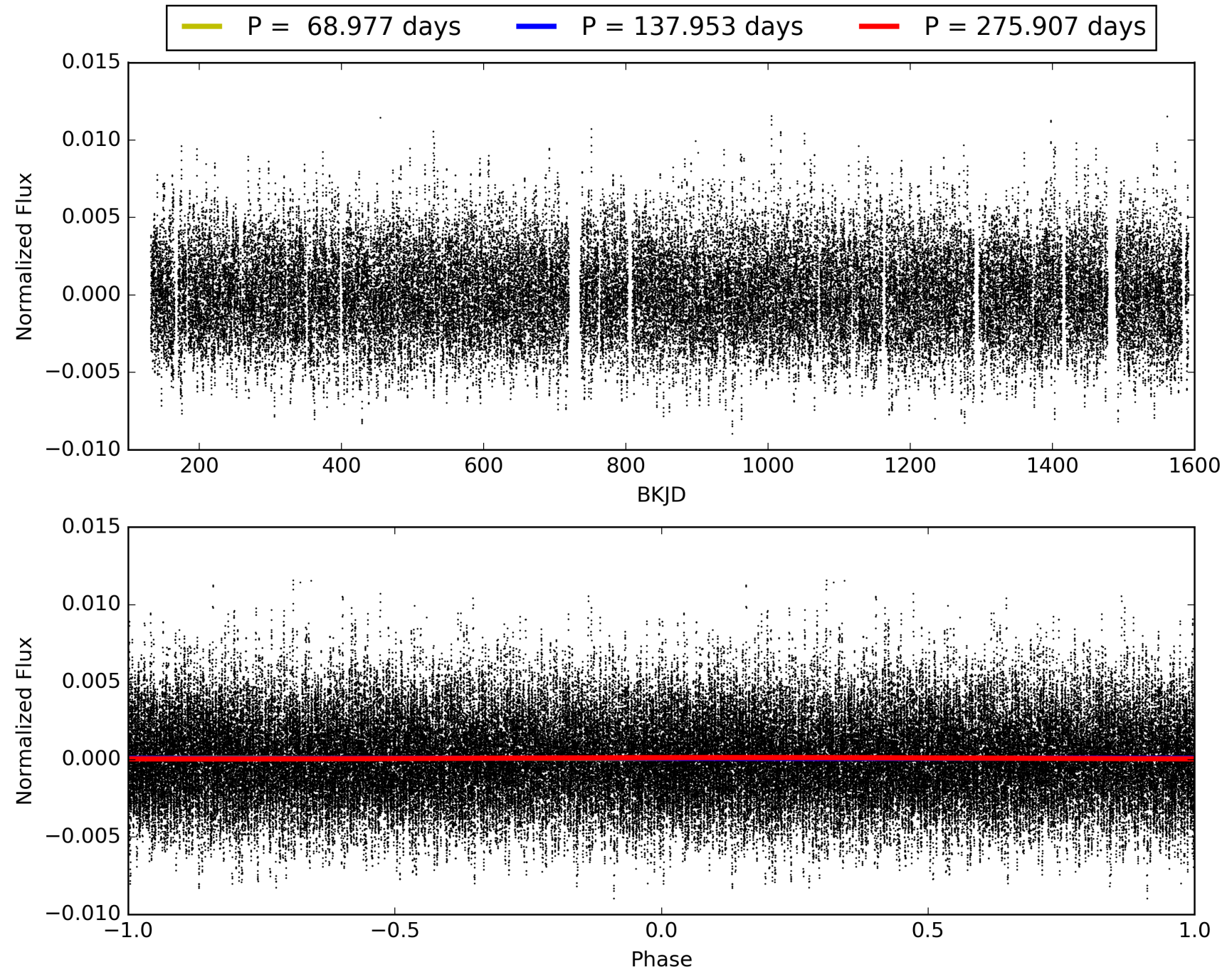
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:34:39 Z

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

# TCE 008264274-02, PDC Light Curves



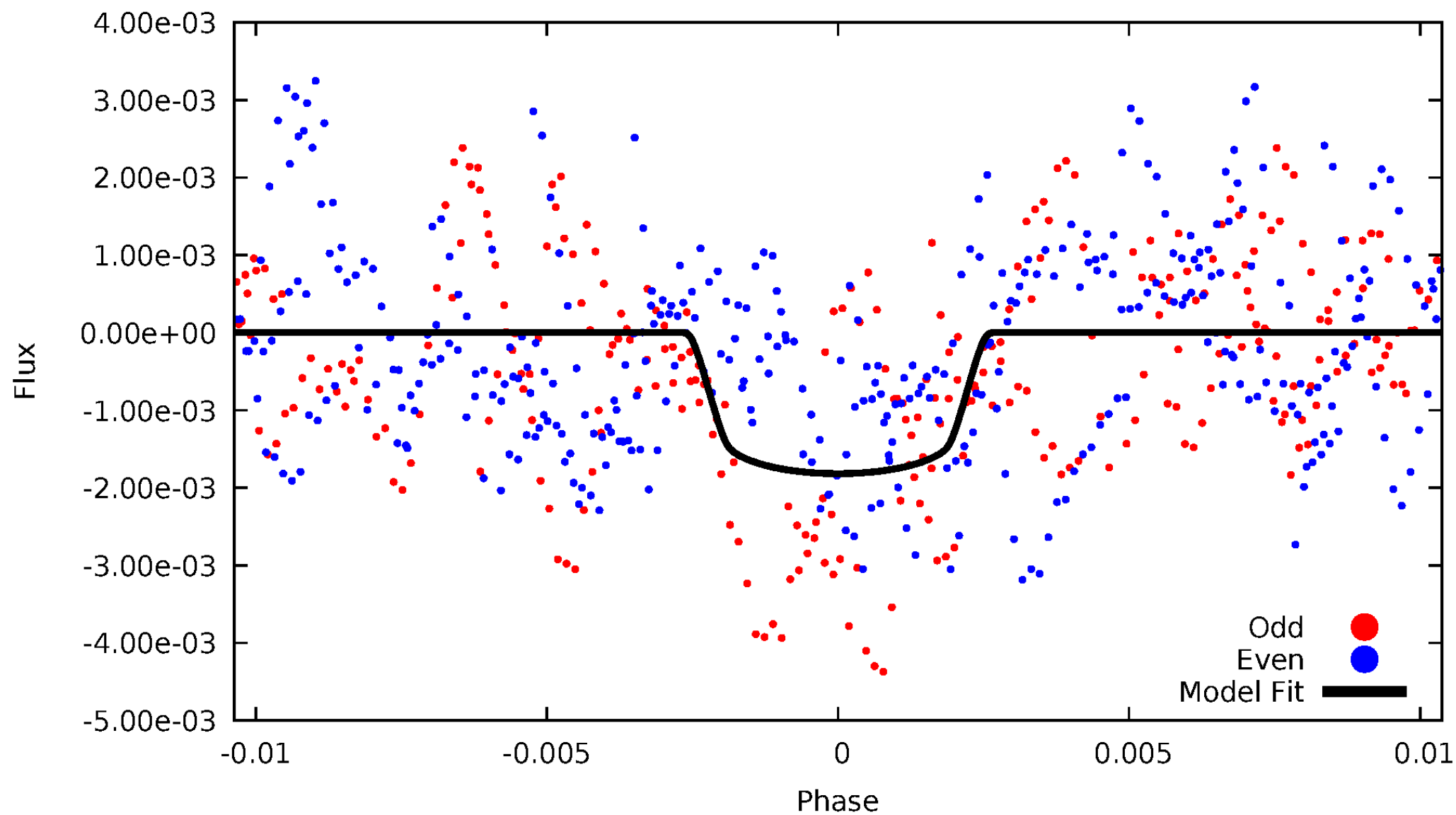
# TCE 008264274-02





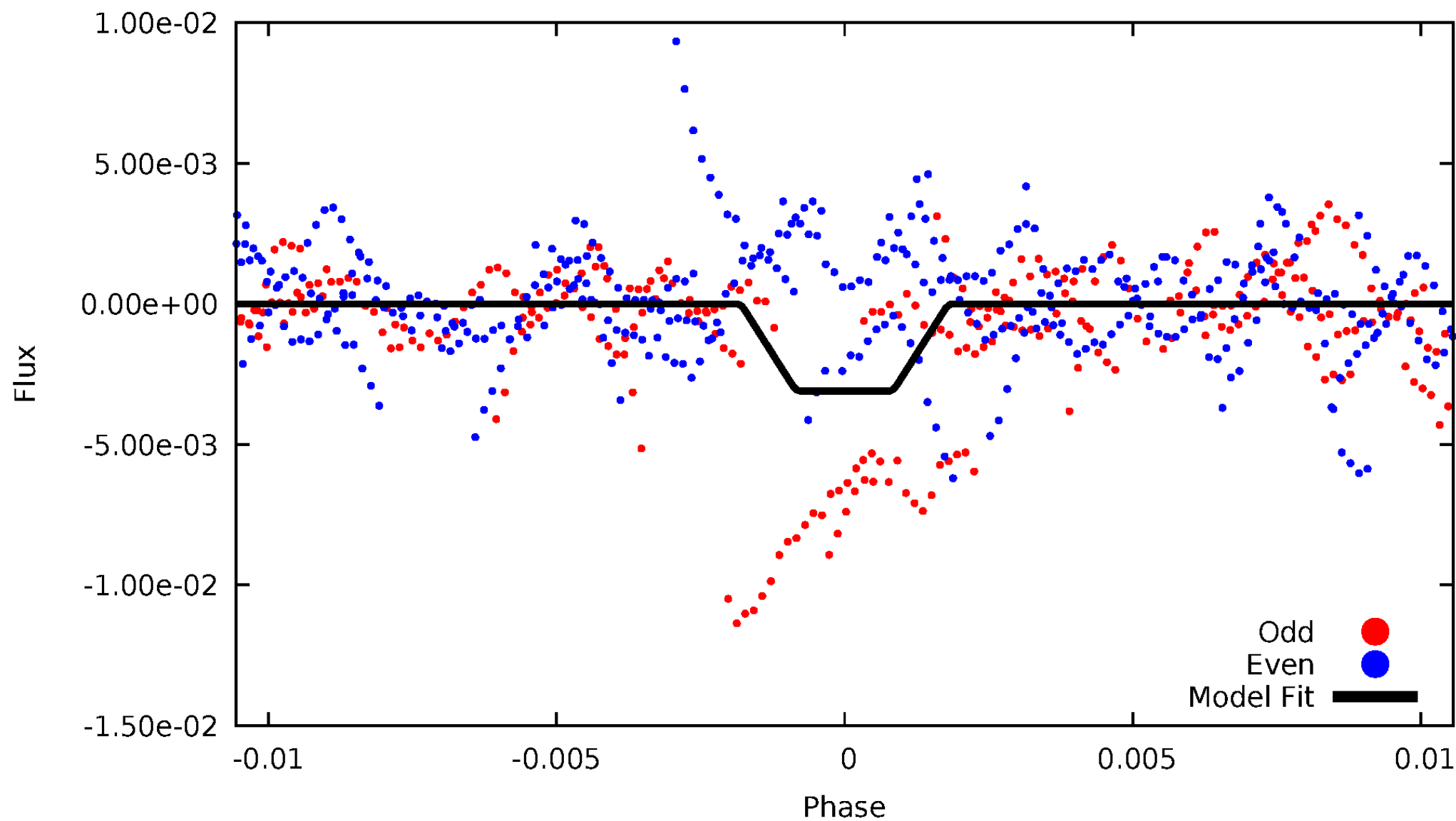
# DV Odd/Even

TCE 008264274-02



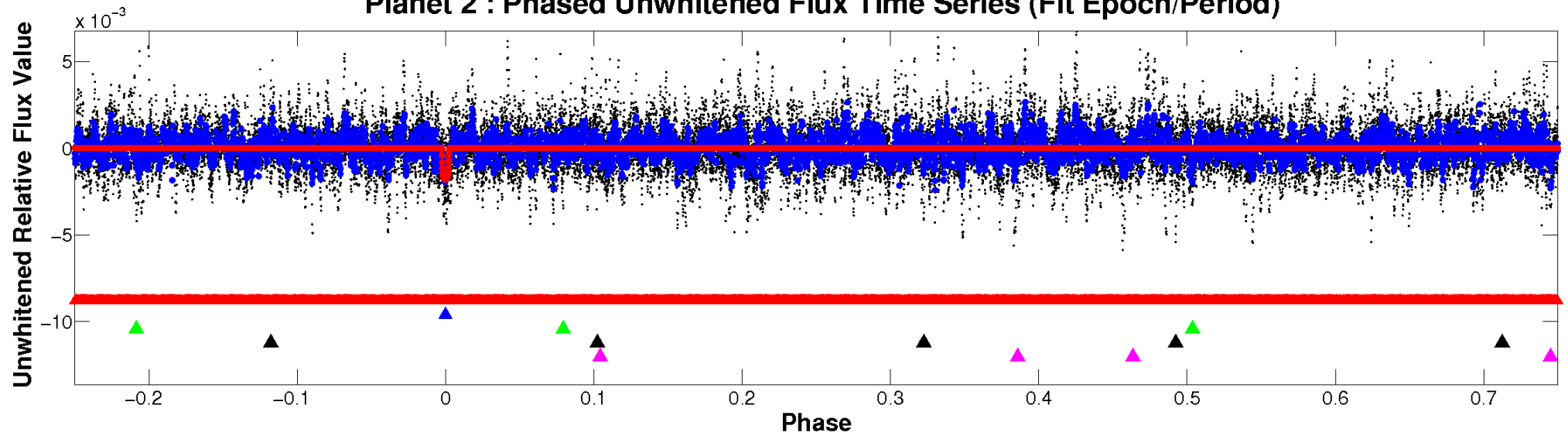
# ALT Odd/Even

TCE 008264274-02

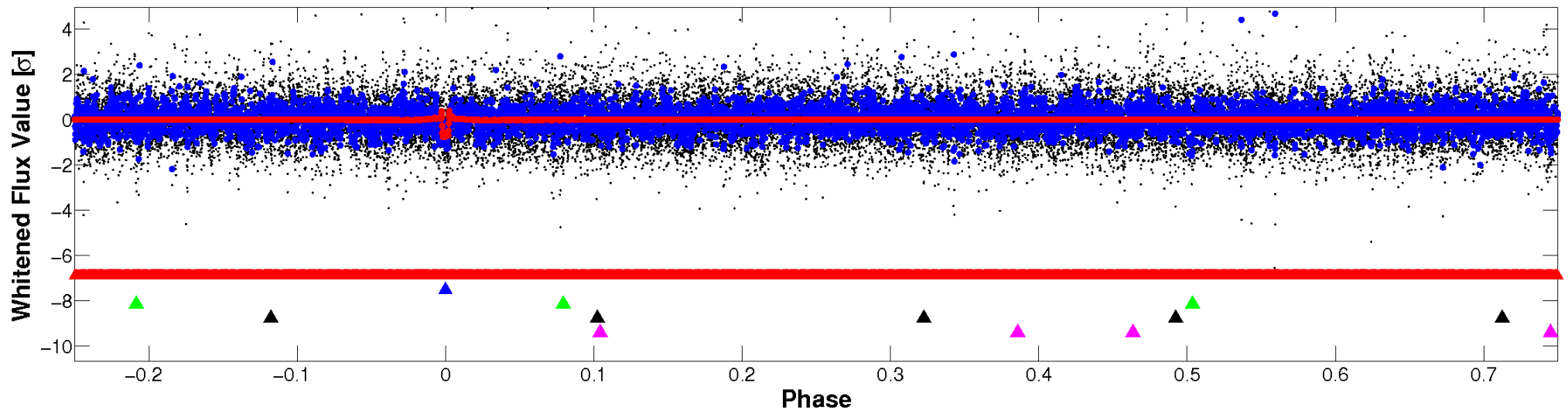


# Non-Whitened Vs. Whitened Light Curve

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

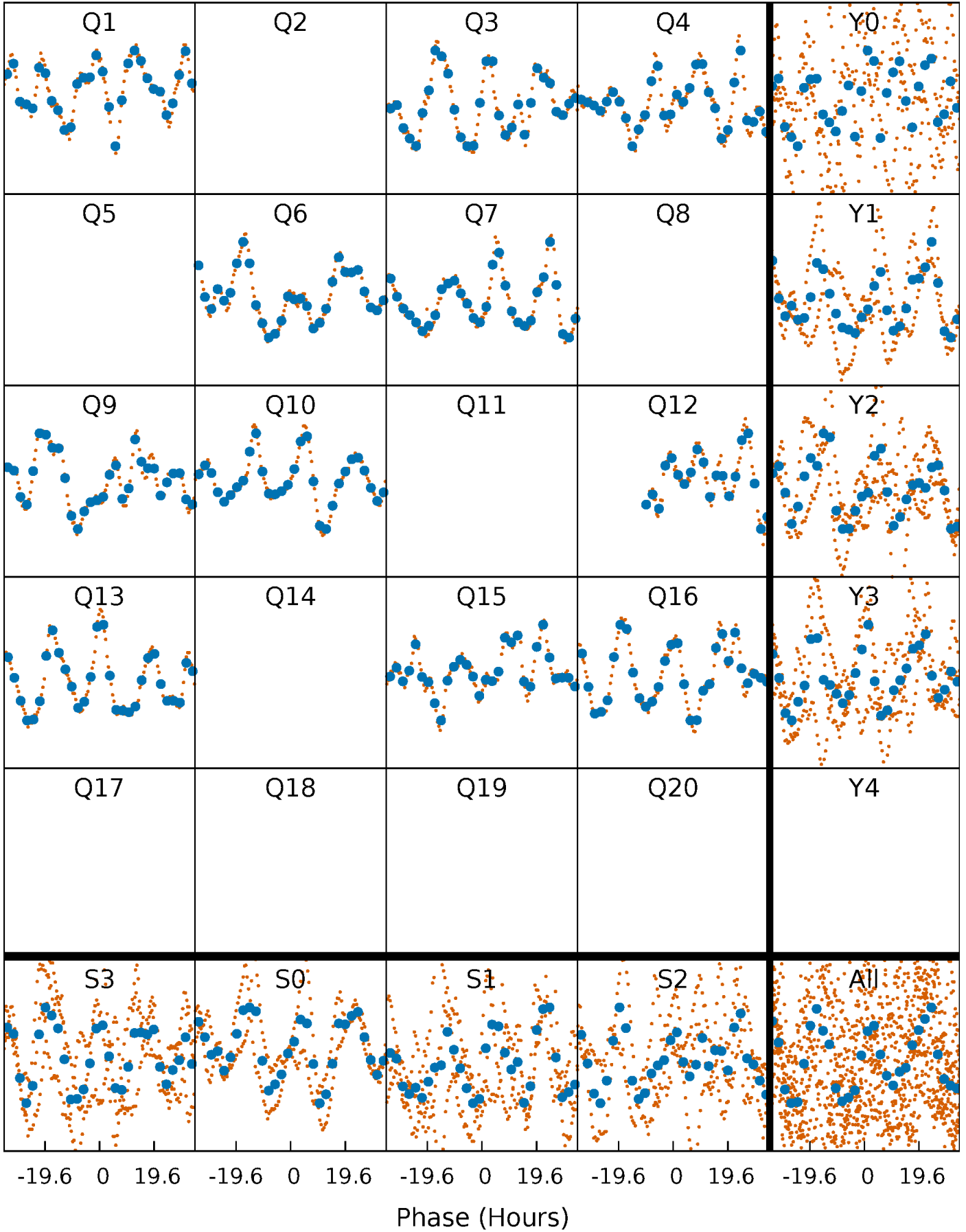


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

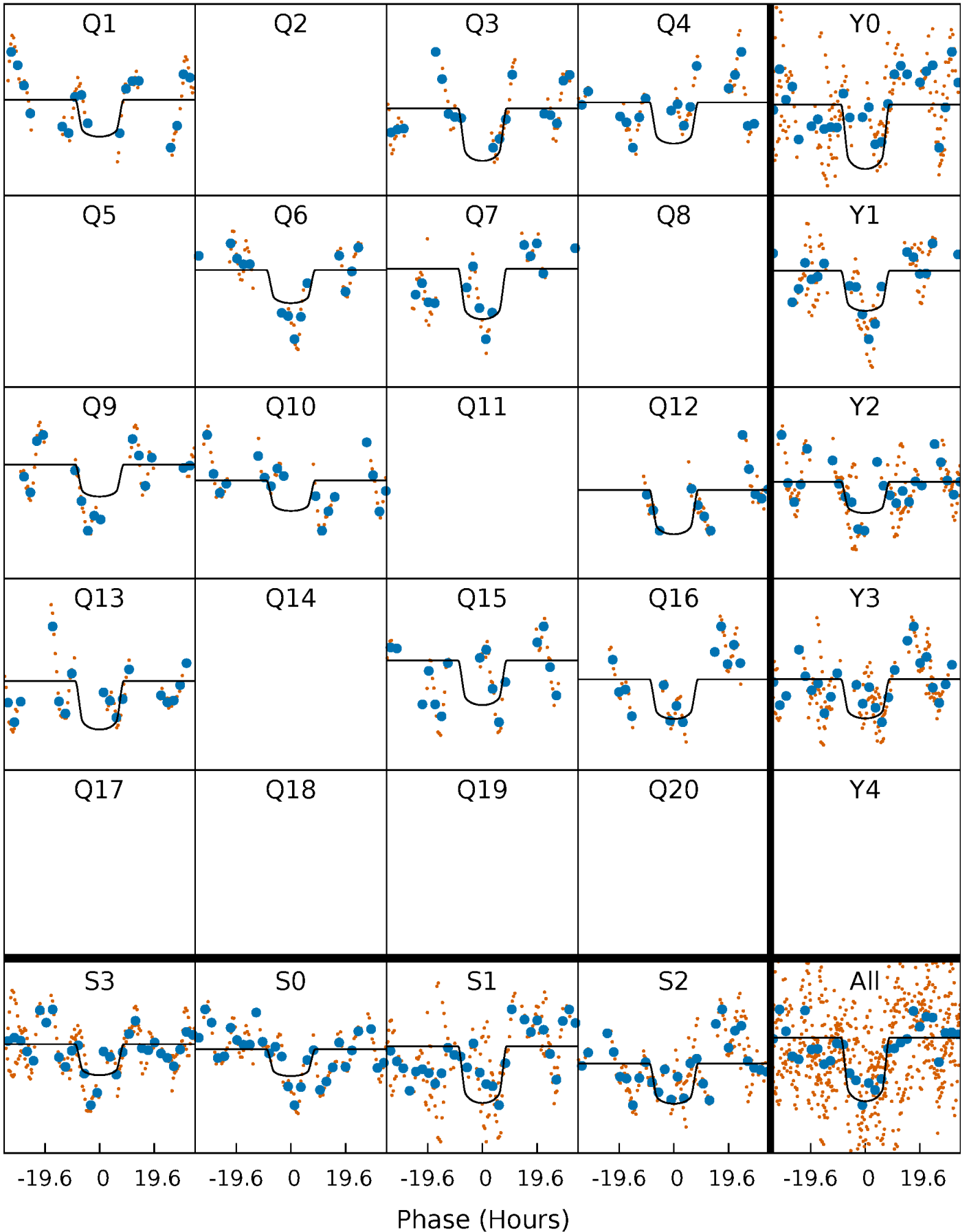
TCE 008264274-02     $P=137.953290$  Days     $T_0=134.207957$  (BKJD)





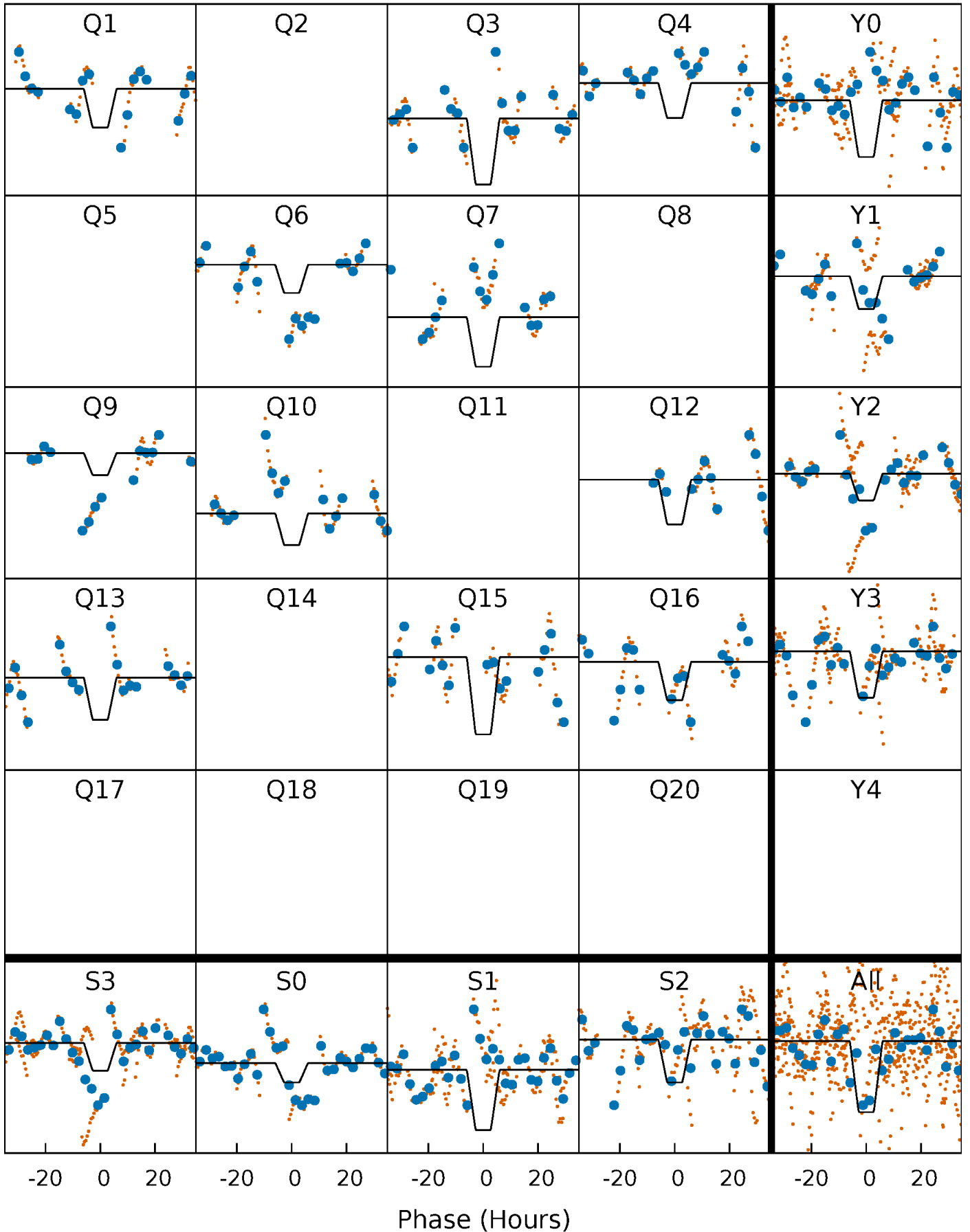
# DV Quarter-Phased Transit Curves

TCE 008264274-02     $P=137.953290$  Days     $T_0=134.207957$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

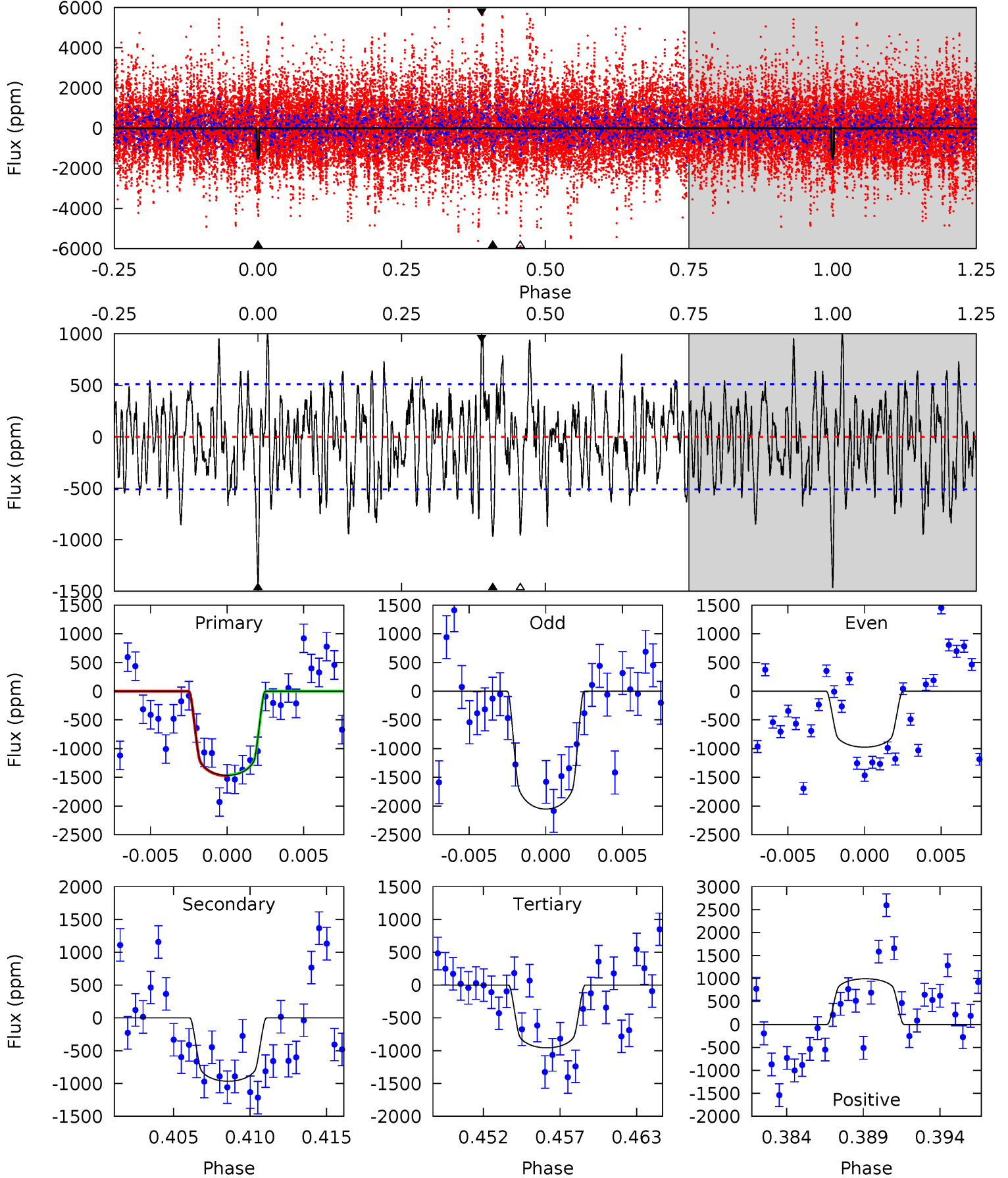
TCE 008264274-02 P=137.953775 Days  $T_0=134.126095$  (BKJD)



# DV Model-Shift Uniqueness Test

008264274-02, P = 137.953290 Days, E = 134.207957 Days

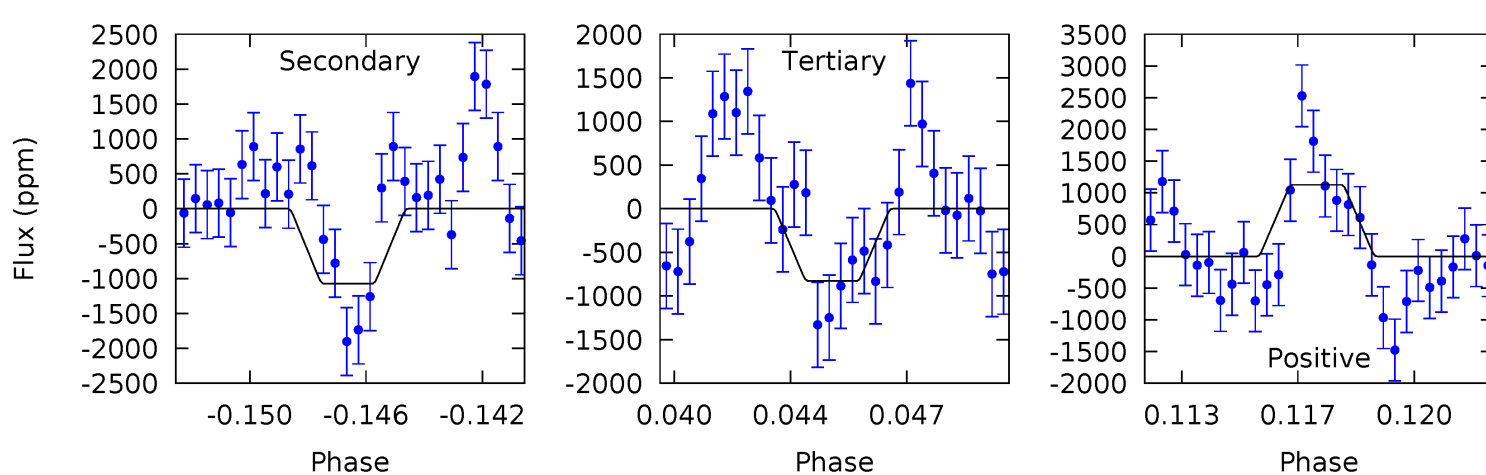
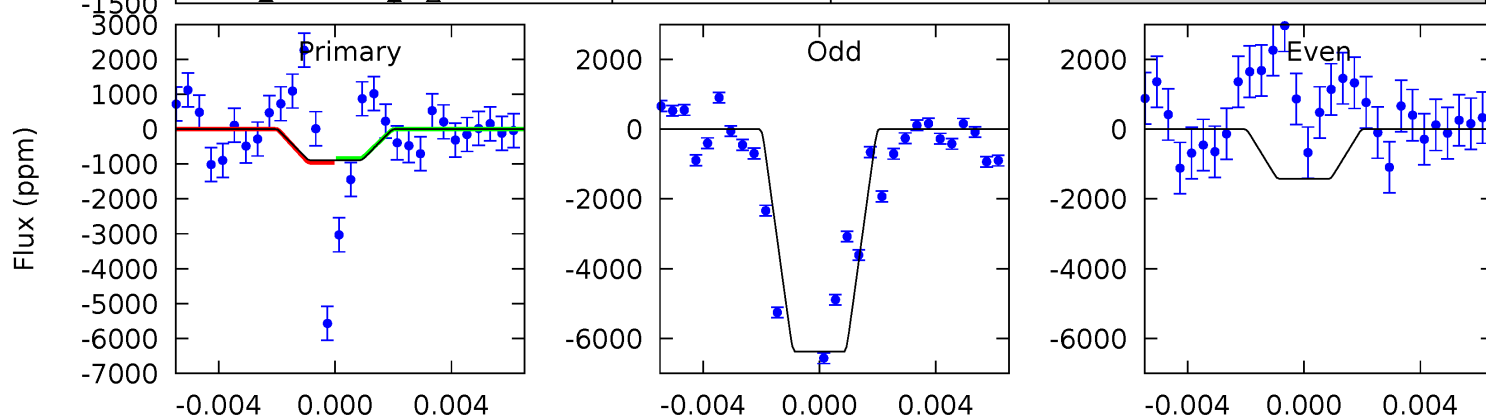
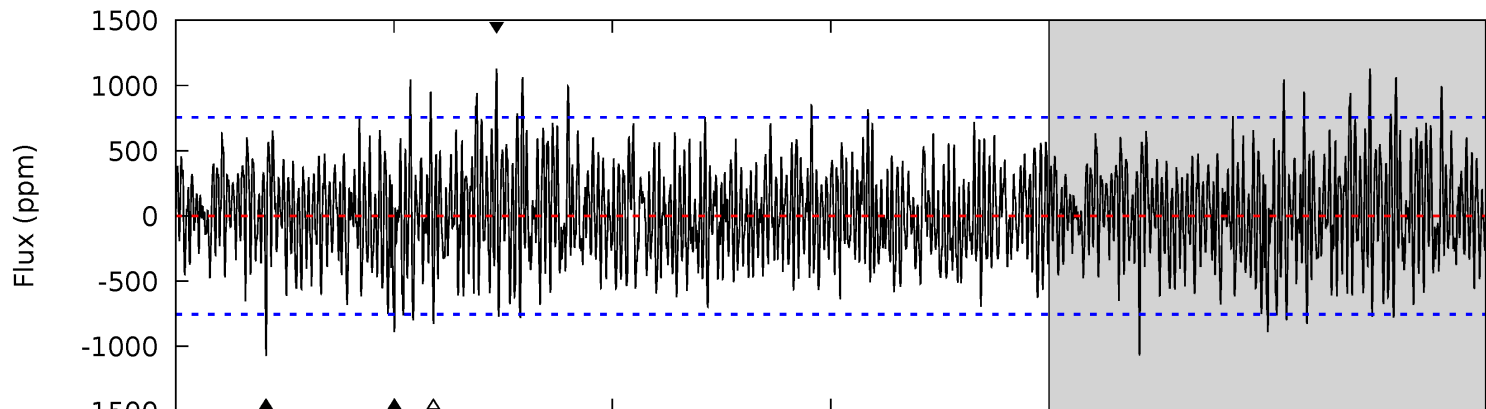
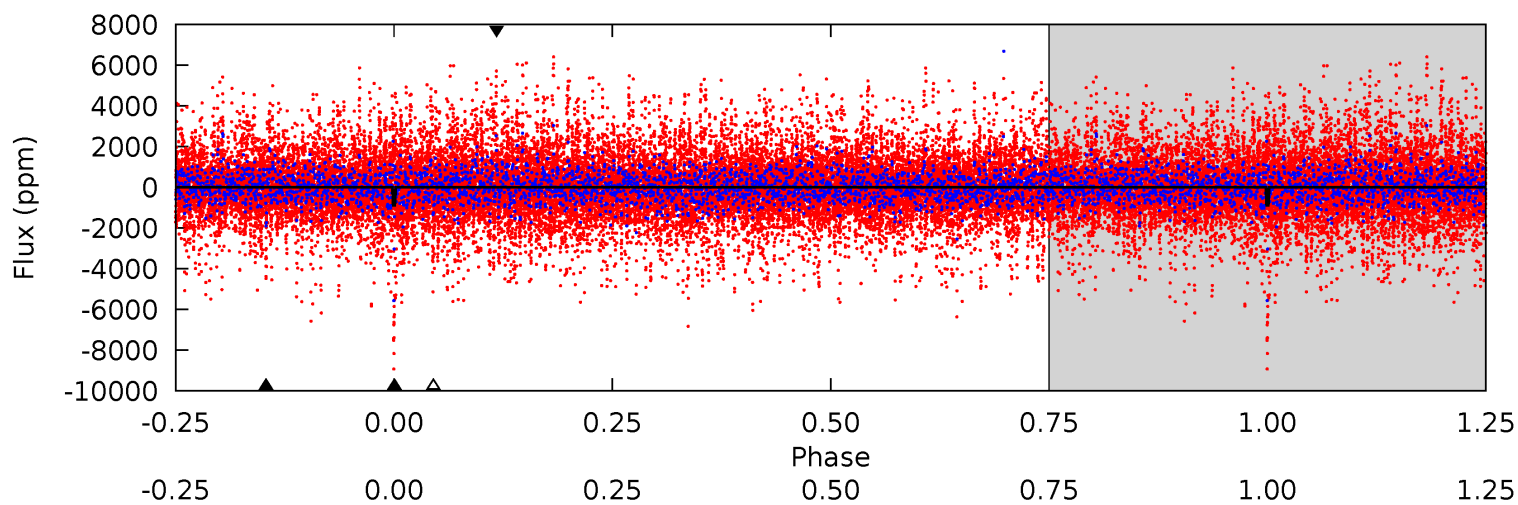
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	9.74	9.66	10.0	5.15	2.79	3.47	5.14	4.77	0.09	-0.29	5.47	1.16	0.40	0.07



# Alt Model-Shift Uniqueness Test

008264274-02, P = 137.953775 Days, E = 134.126095 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.16	7.40	5.72	7.78	5.22	2.91	2.22	0.44	-1.63	1.69	-0.38	17.6	0.89	0.51	0.39





### Stellar Parameters For KIC 008264274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7850^{+218}_{-327}$	$3.743^{+0.417}_{-0.074}$	$-0.100^{+0.200}_{-0.350}$	$3.062^{+0.430}_{-1.375}$	$1.891^{+0.103}_{-0.410}$	$0.093^{+0.306}_{-0.029}$
	+3%/-4%	+11%/-2%	+200%/-350%	+14%/-45%	+5%/-22%	+329%/-31%
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 008264274-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-966 \pm 99$	$13.80^{+1.97}_{-3.11}$	$1013^{+71}_{-118}$	$6409^{+363}_{-327}$	$1166^{+757}_{-295}$
Alt.	$-1072 \pm 145$	$17.26^{+2.51}_{-4.18}$	$1013^{+72}_{-120}$	$5871^{+306}_{-284}$	$823^{+510}_{-211}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature  
 $T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )  
 $A_{\text{obs}}$  = 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  $A_{\text{obs}} \gg 1.0$

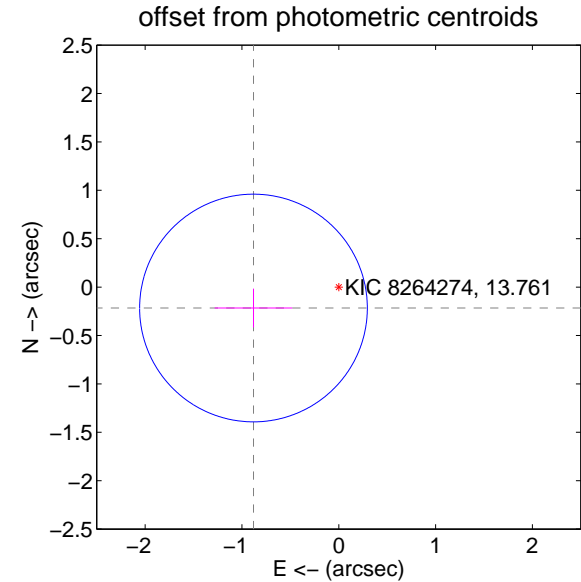
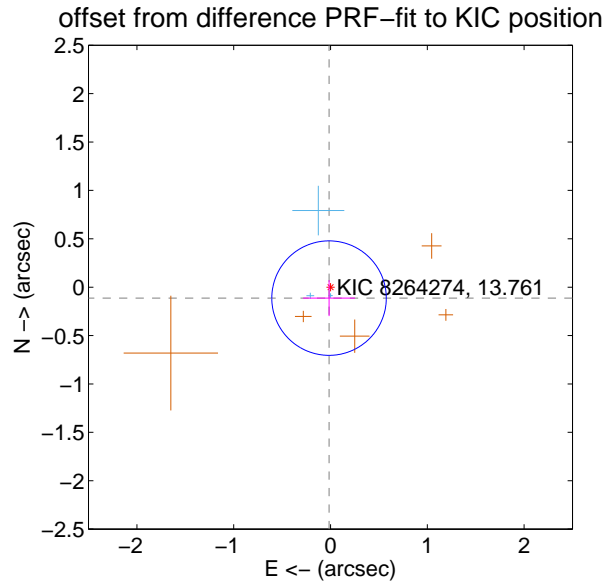
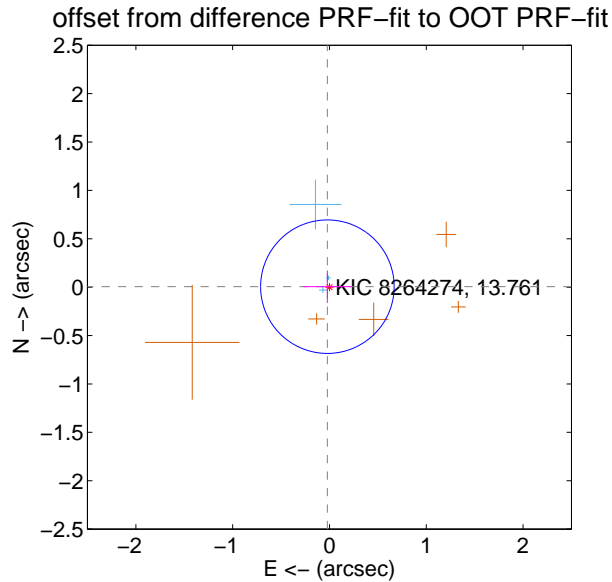
## DV Centroid Data

Supplemental centroid analysis for 008264274-02. Kepler magnitude: 13.76. Transit SNR 7.82

There are 3 quarters with good PRF difference image offsets

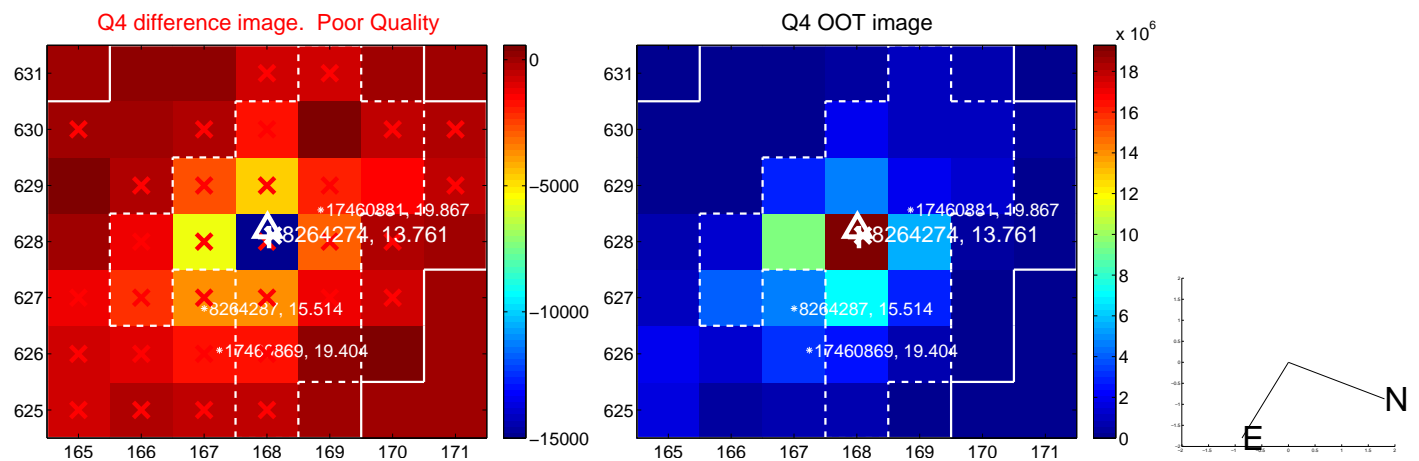
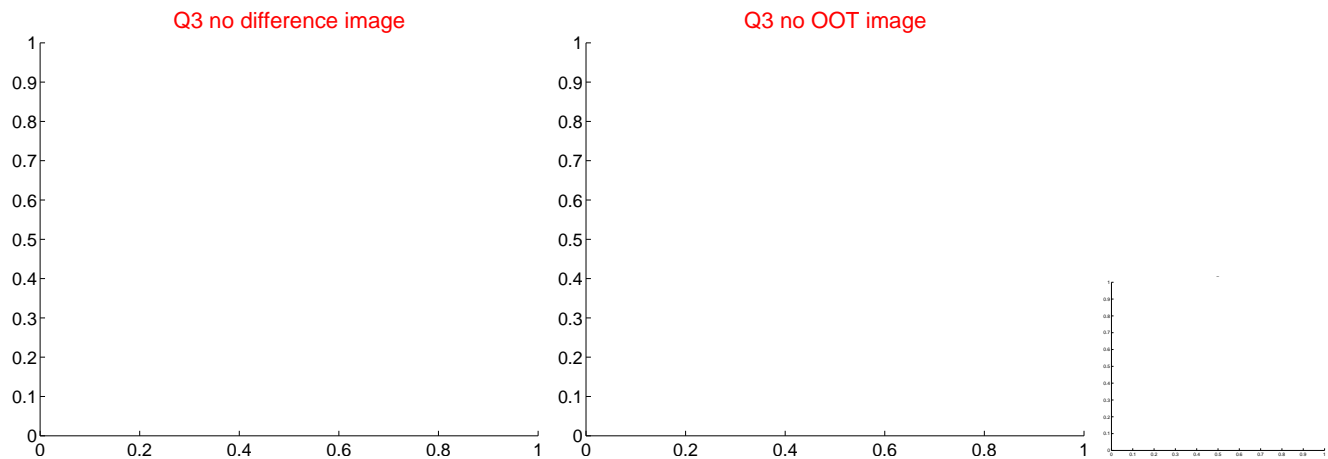
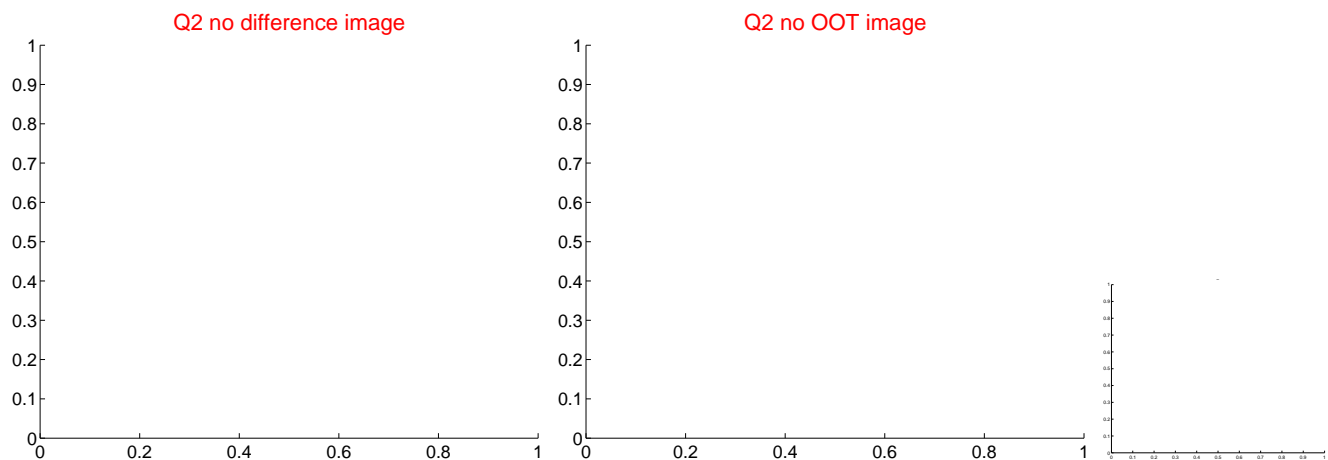
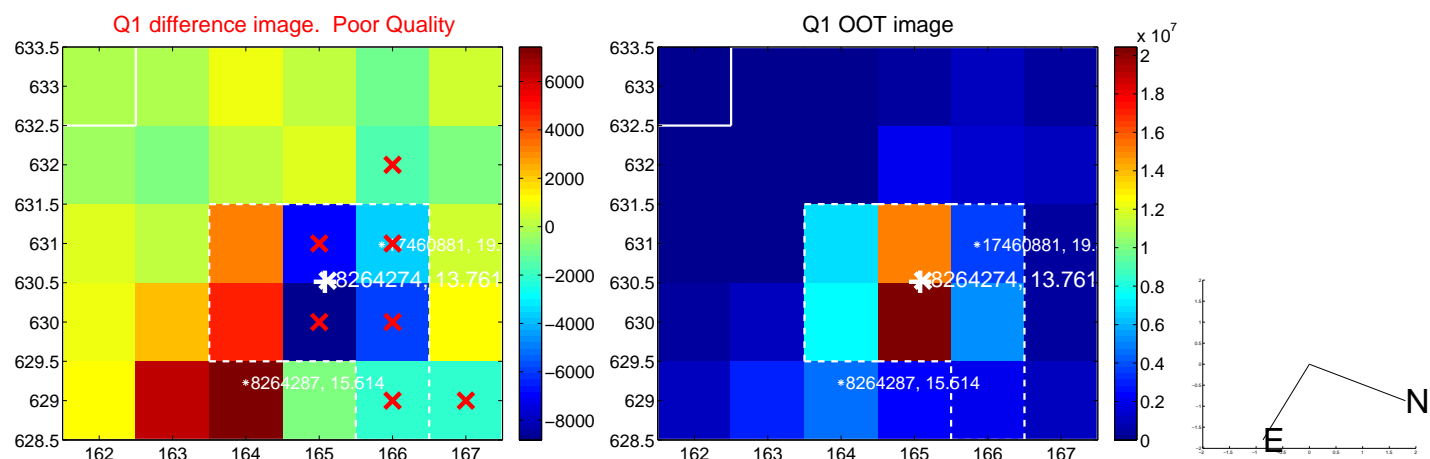
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.022 \pm 0.230$	0.10	$0.022 \pm 0.248$	$0.005 \pm 0.168$
PRF-fit source offset from KIC position	$0.114 \pm 0.197$	0.58	$0.015 \pm 0.268$	$-0.113 \pm 0.185$
photometric centroid source offset	$0.91 \pm 0.39$	2.31	$0.88 \pm 0.40$	$-0.22 \pm 0.20$

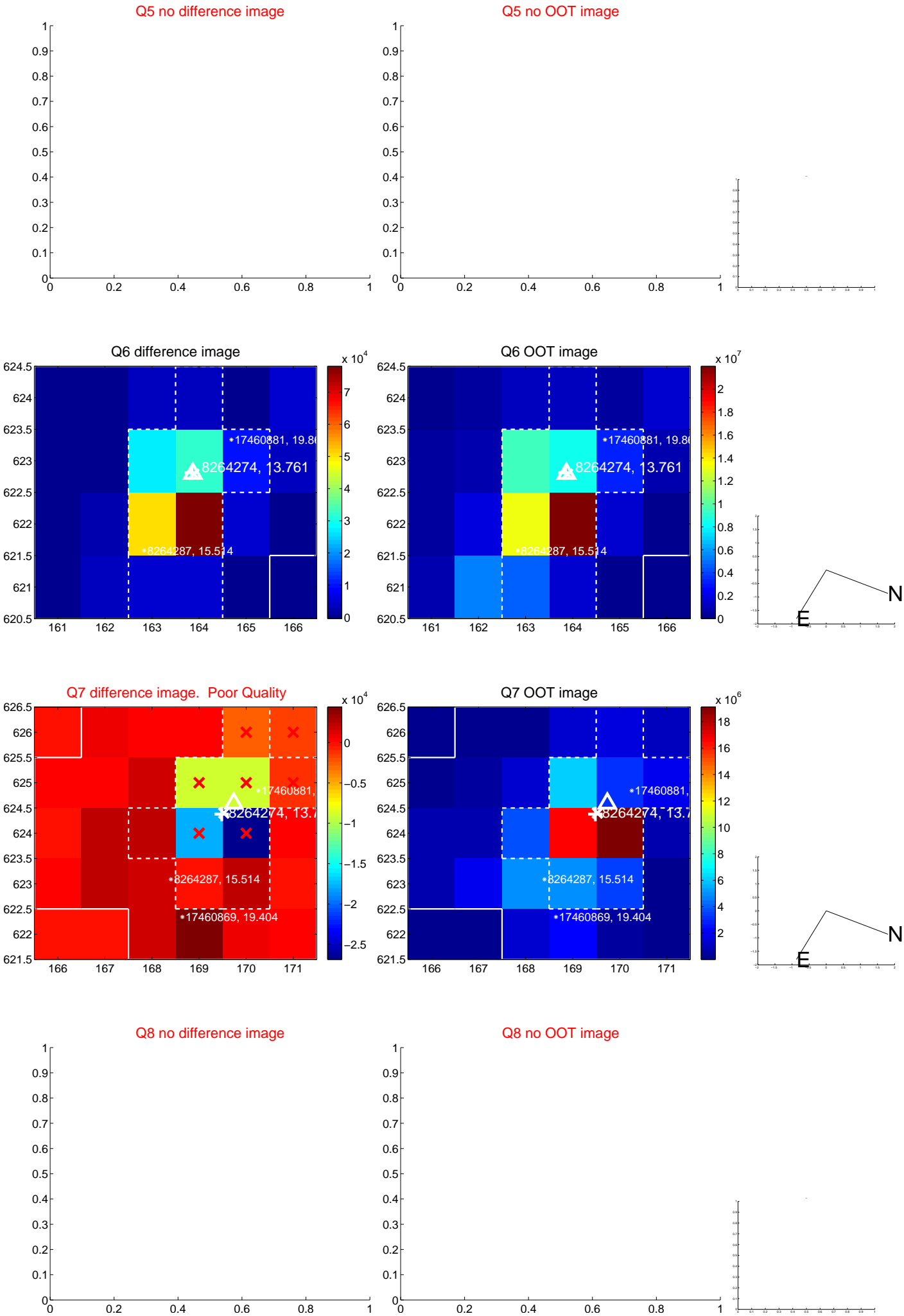


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

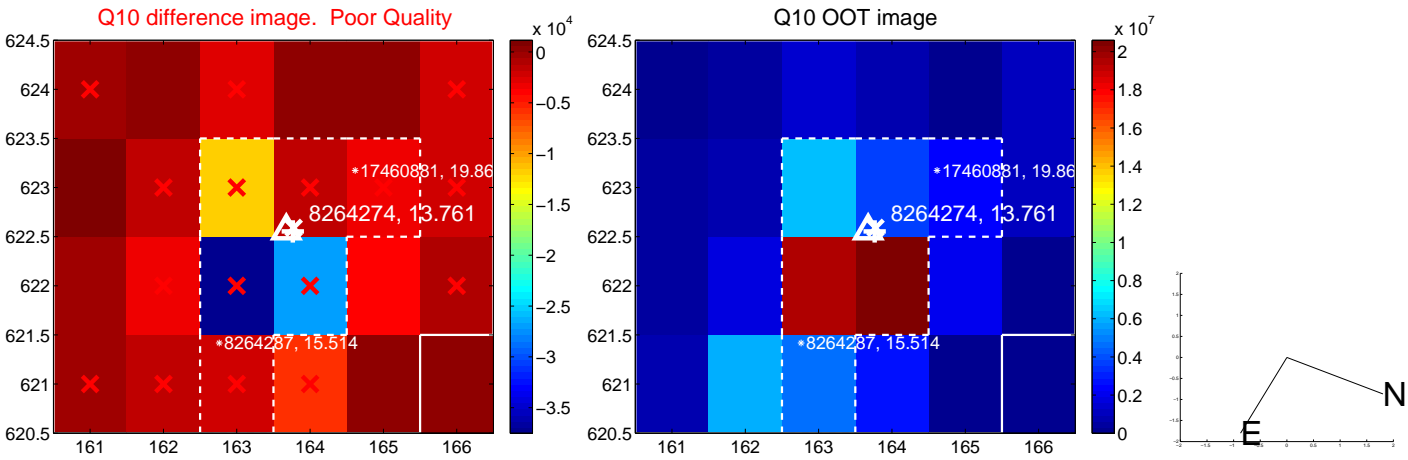
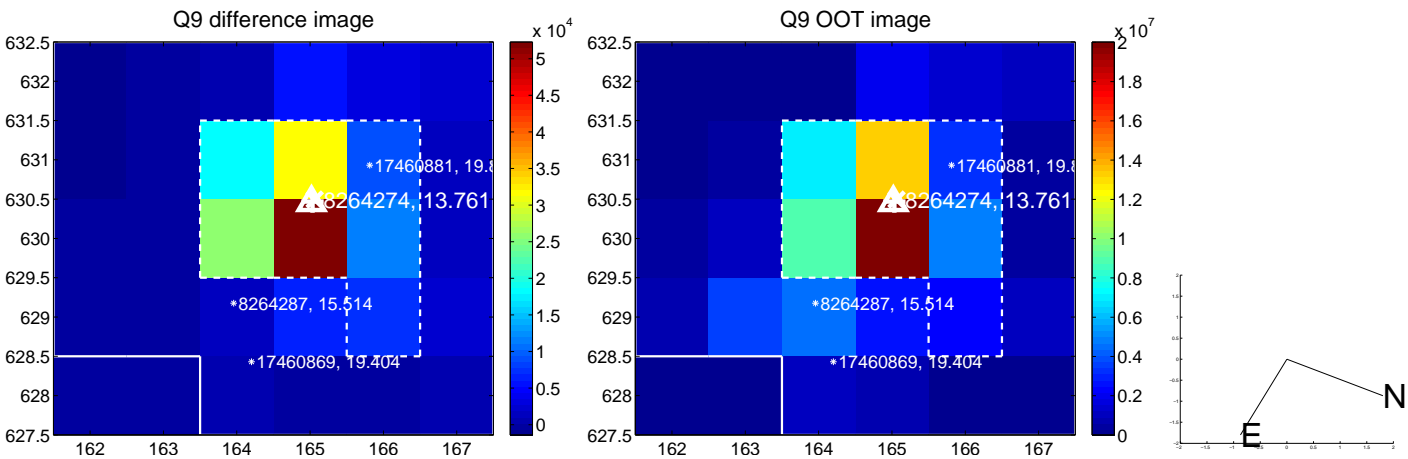
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

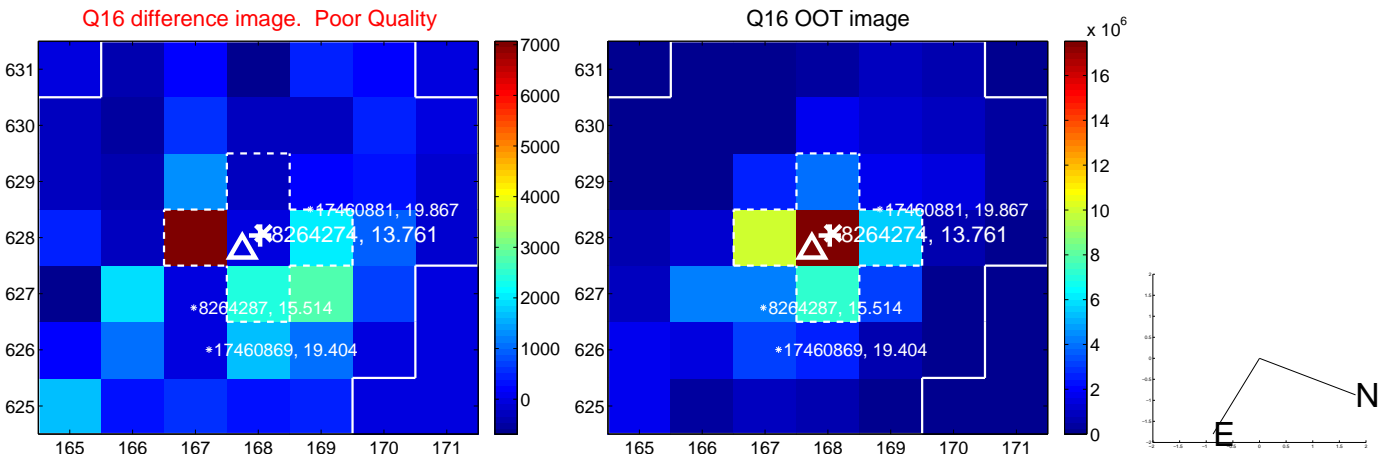
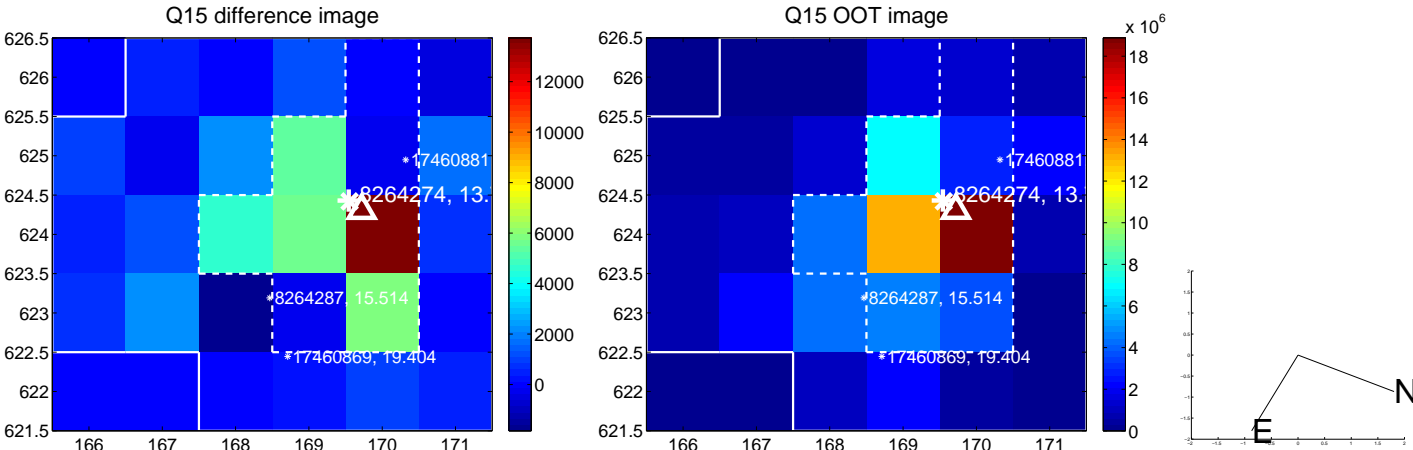
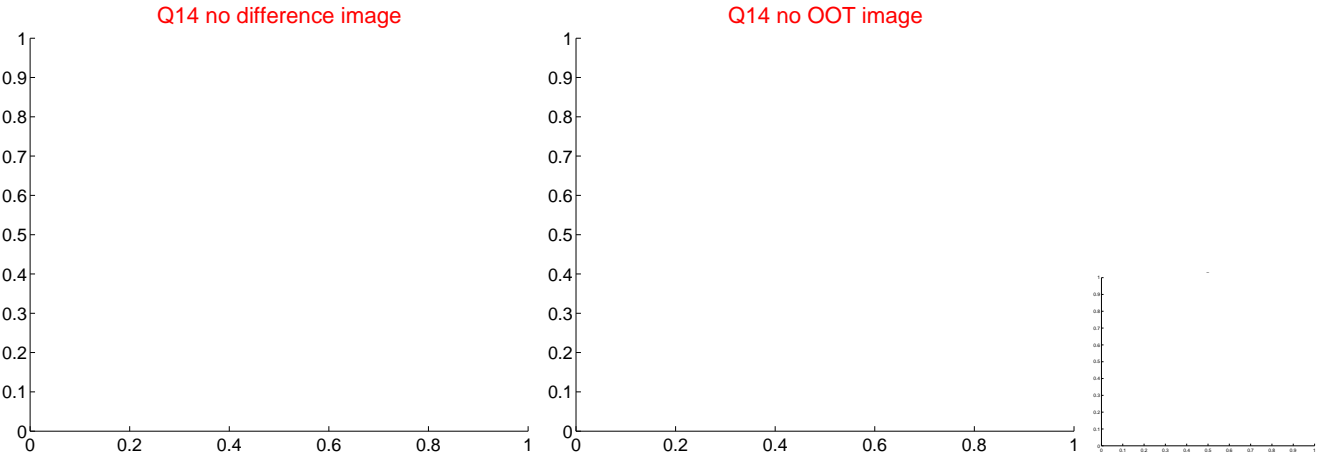
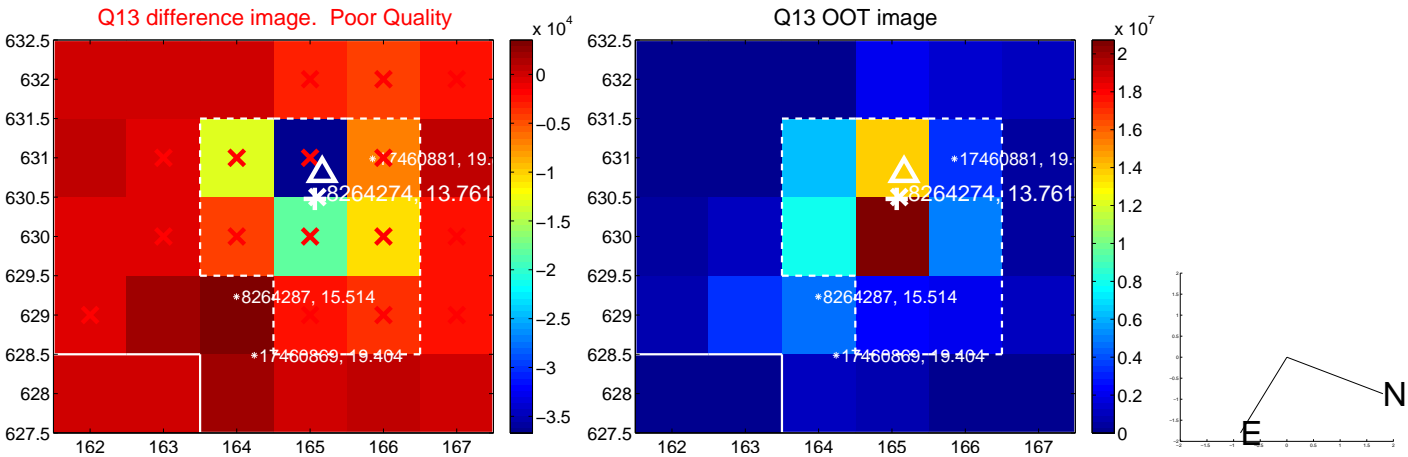


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

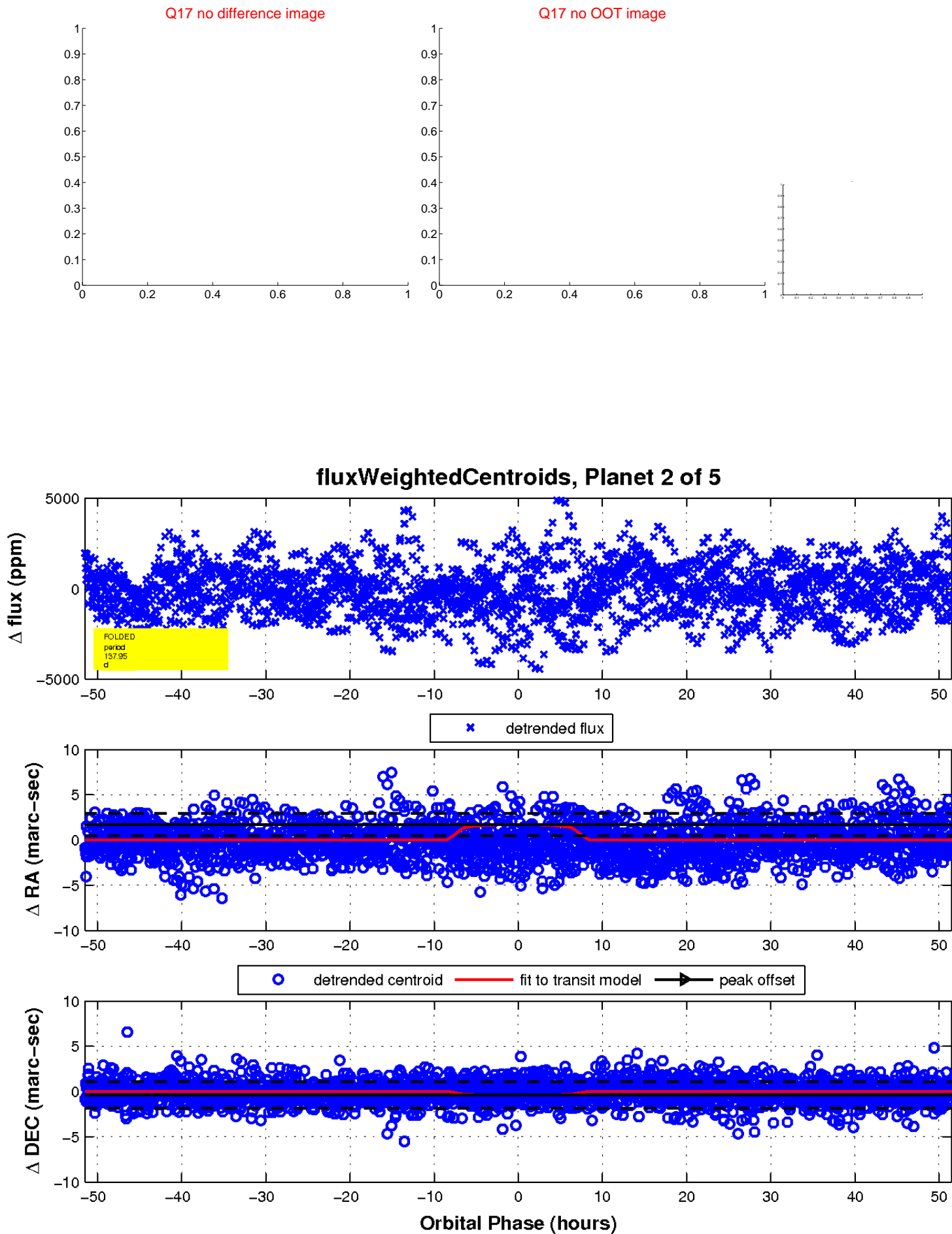




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

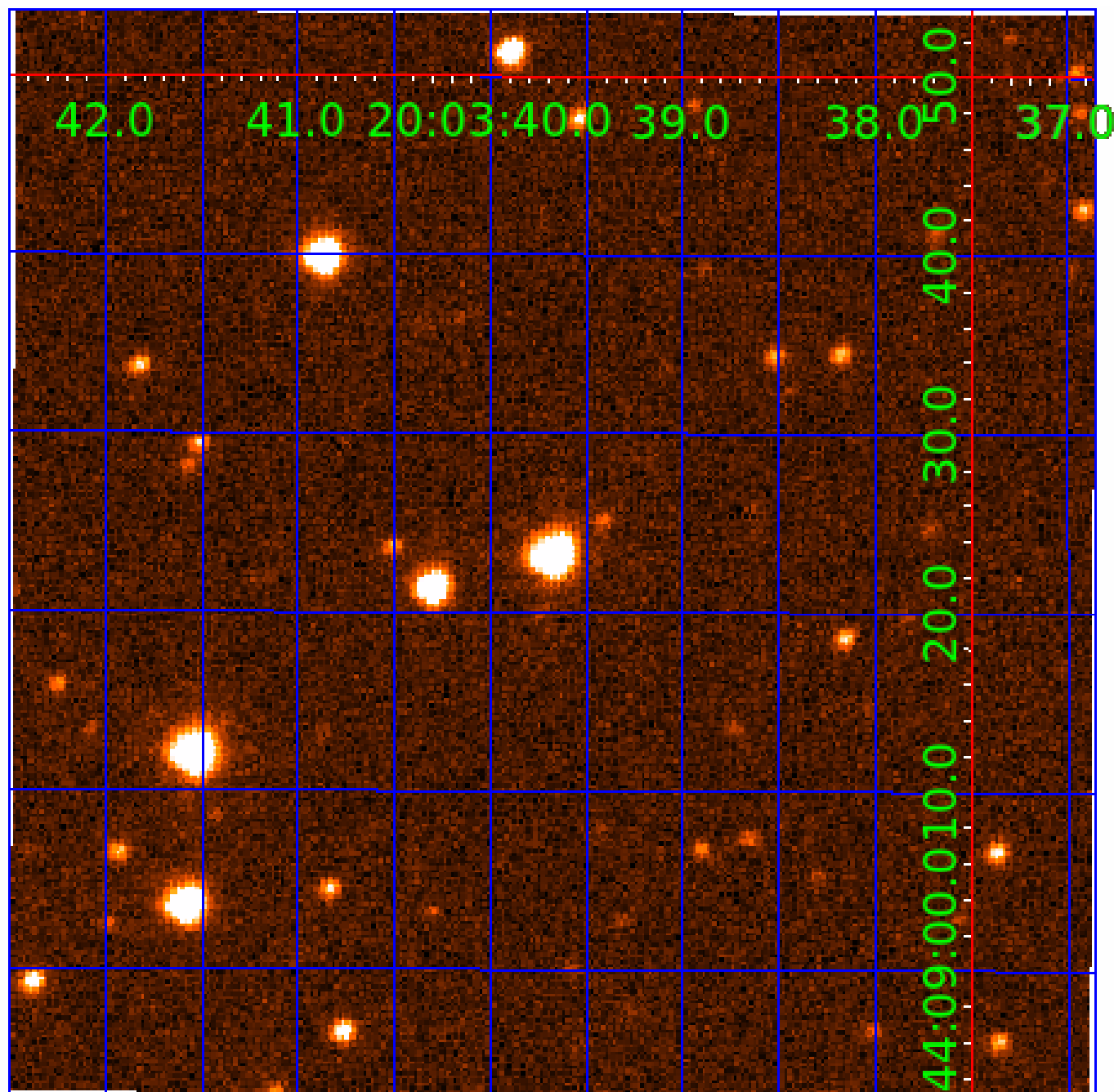


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 008264274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264274-01	OBS	No	0.815562	131.789170	75.5	3.422	9.0	6.3	3.06	7850	3.09	71411.34
008264274-02	OBS	No	137.953290	134.207957	1817.8	17.169	8.9	7.8	3.06	7850	14.71	76.34
008264274-03	OBS	No	512.100023	421.072268	4304.6	7.037	8.1	9.1	3.06	7850	35.80	13.28
008264274-04	OBS	No	329.701335	178.700403	3461.4	6.158	7.7	8.4	3.06	7850	32.44	23.89
008264274-05	OBS	No	463.415952	187.437241	3469.1	14.322	7.3	7.7	3.06	7850	21.77	15.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264274-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008264274-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008264274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008264274-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
008264274-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

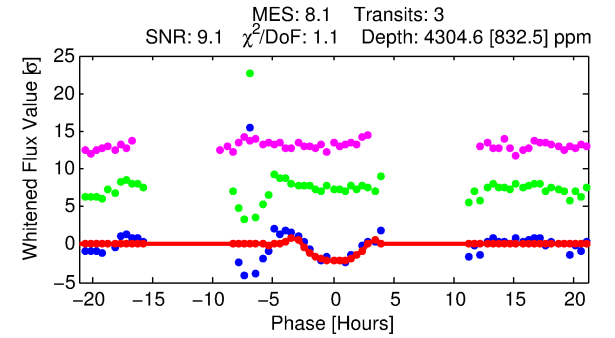
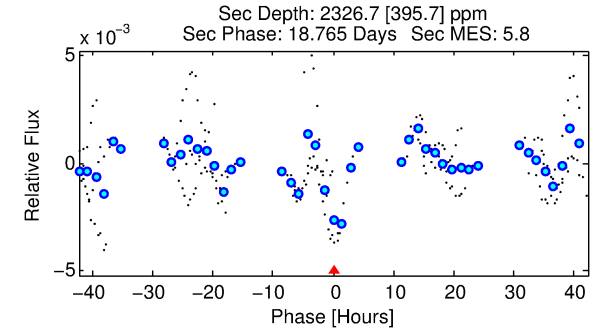
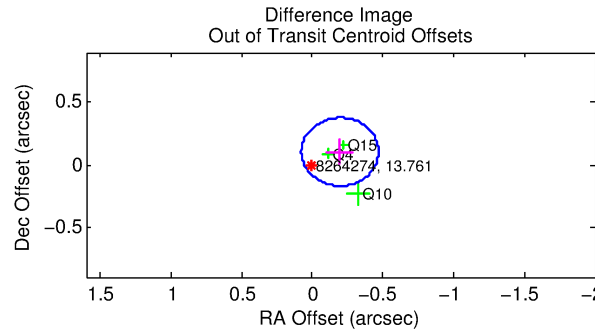
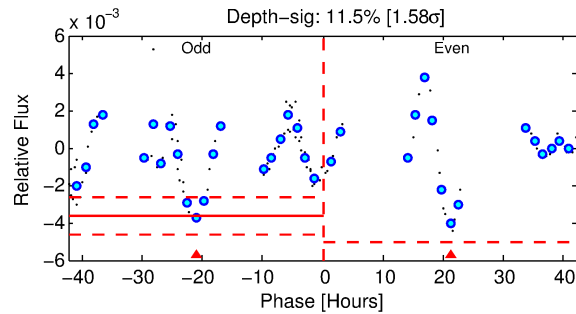
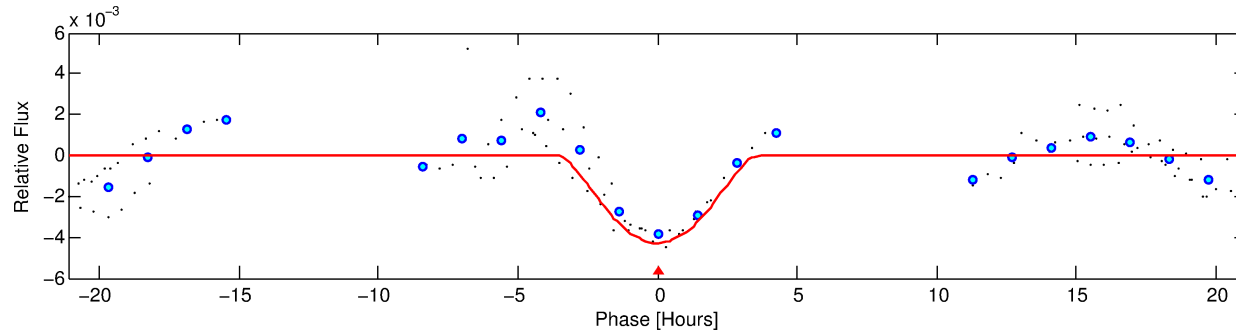
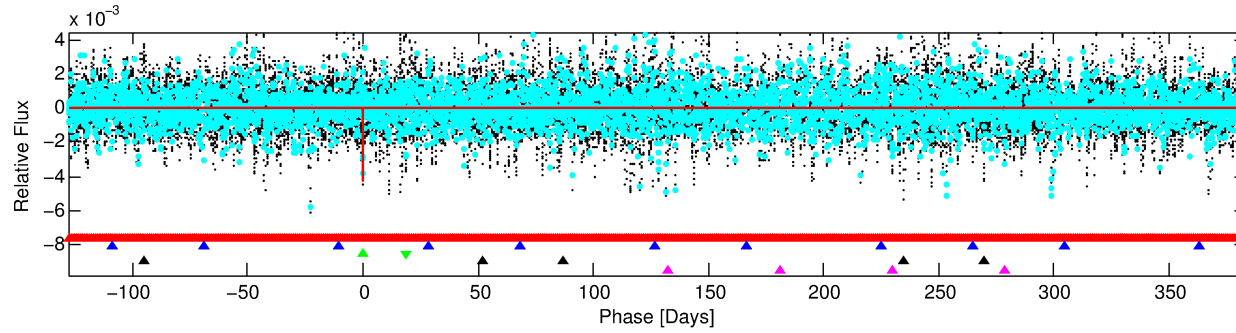
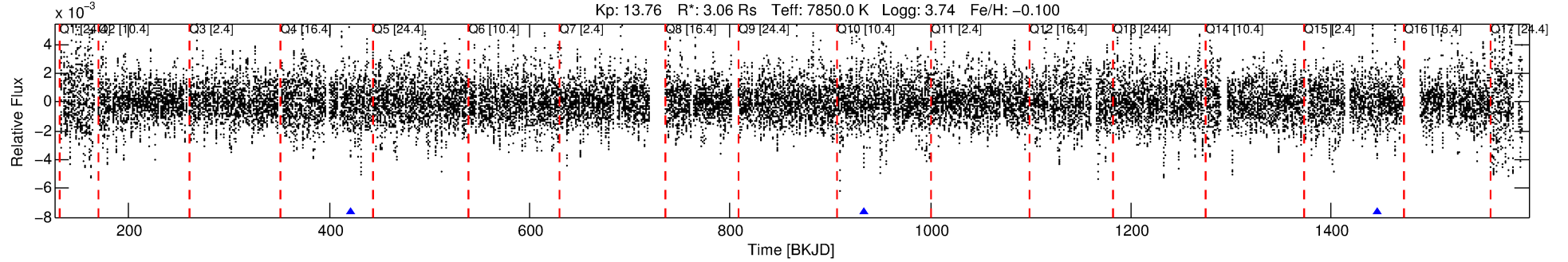
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264274-03

No Significant Match Found

# DV One-Page Summary

KIC: 8264274 Candidate: 3 of 5 Period: 512.100 d



## DV Fit Results:

Period = 512.10002 [0.01307] d  
Epoch = 421.0723 [0.0208] BKJD  
Rp/R\* = 0.1071 [0.2122]  
a/R\* = 264.95 [101.27]  
b = 1.00 [0.31]  
Seff = 13.28 [9.64]  
Teq = 487 [88] K  
Rp = 35.80 [72.69] Re  
a = 1.5498 [0.6792] AU  
Ag = 2399.42 [9663.08] [0.25 $\sigma$ ]  
Teffp = 5267 [5226] K [0.91 $\sigma$ ]

## DV Diagnostic Results:

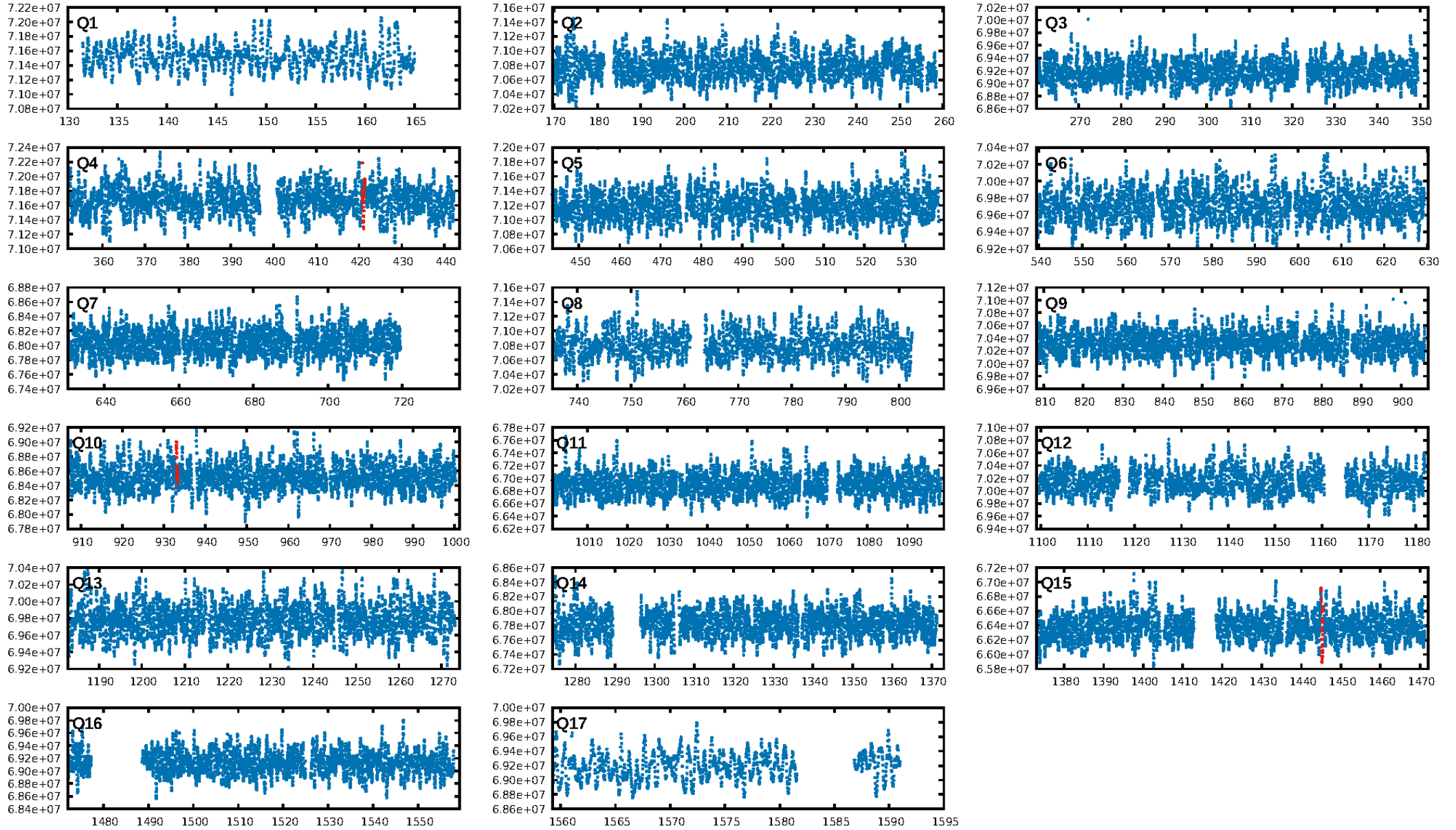
ShortPeriod-sig: 100.0% [73.22 $\sigma$ ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 17.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 4.13e-09  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 6.038  
Centroid-sig: 0.3%  
Centroid-so: 1.147 arcsec [2.28 $\sigma$ ]  
OotOffset-rm: 0.220 arcsec [2.42 $\sigma$ ]  
KicOffset-rm: 0.050 arcsec [0.32 $\sigma$ ]  
OotOffset-st: 1/1/1/0 [3]  
KicOffset-st: 1/1/1/0 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 0.00 [0/3]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:34:47 Z

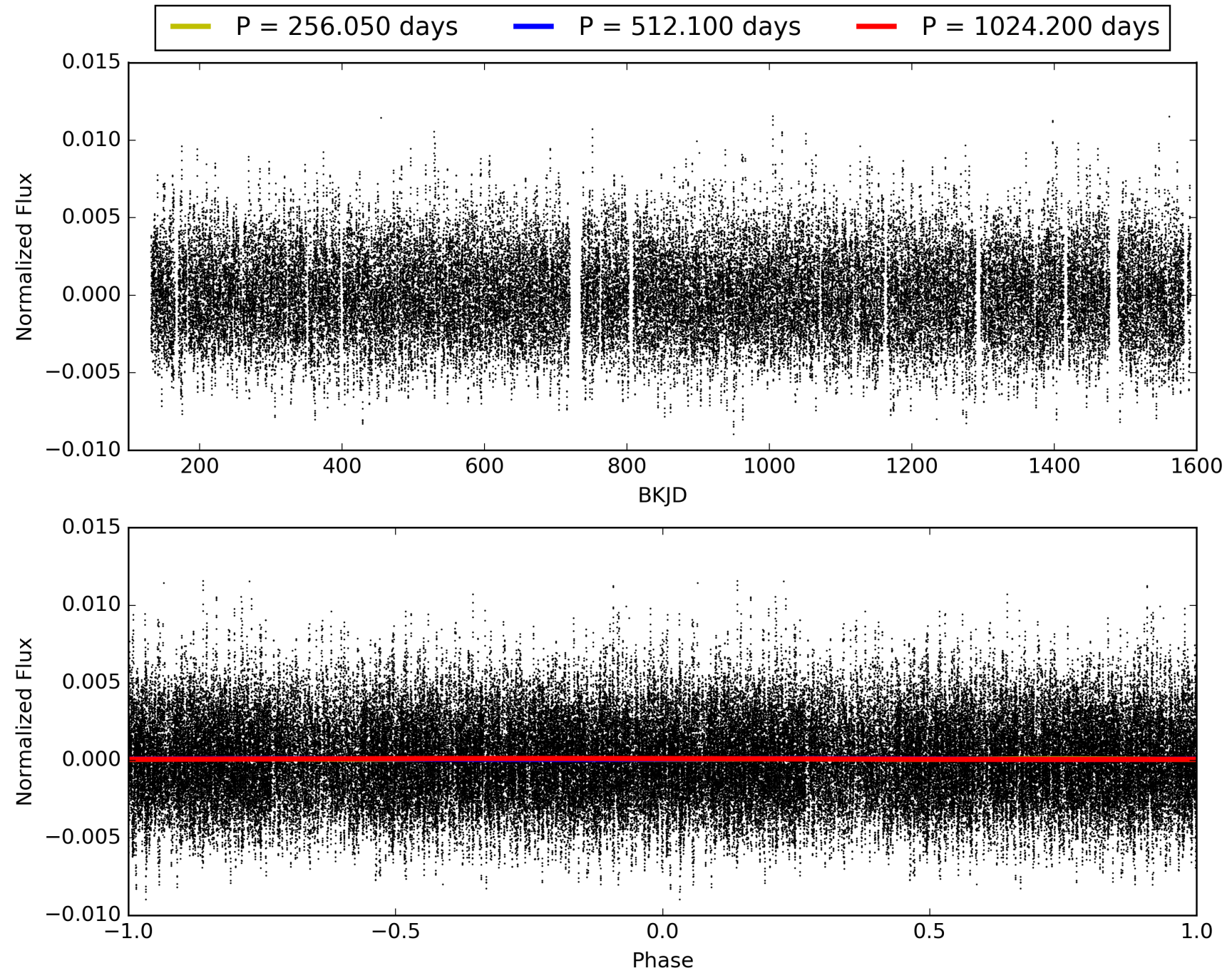
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center



# TCE 008264274-03, PDC Light Curves

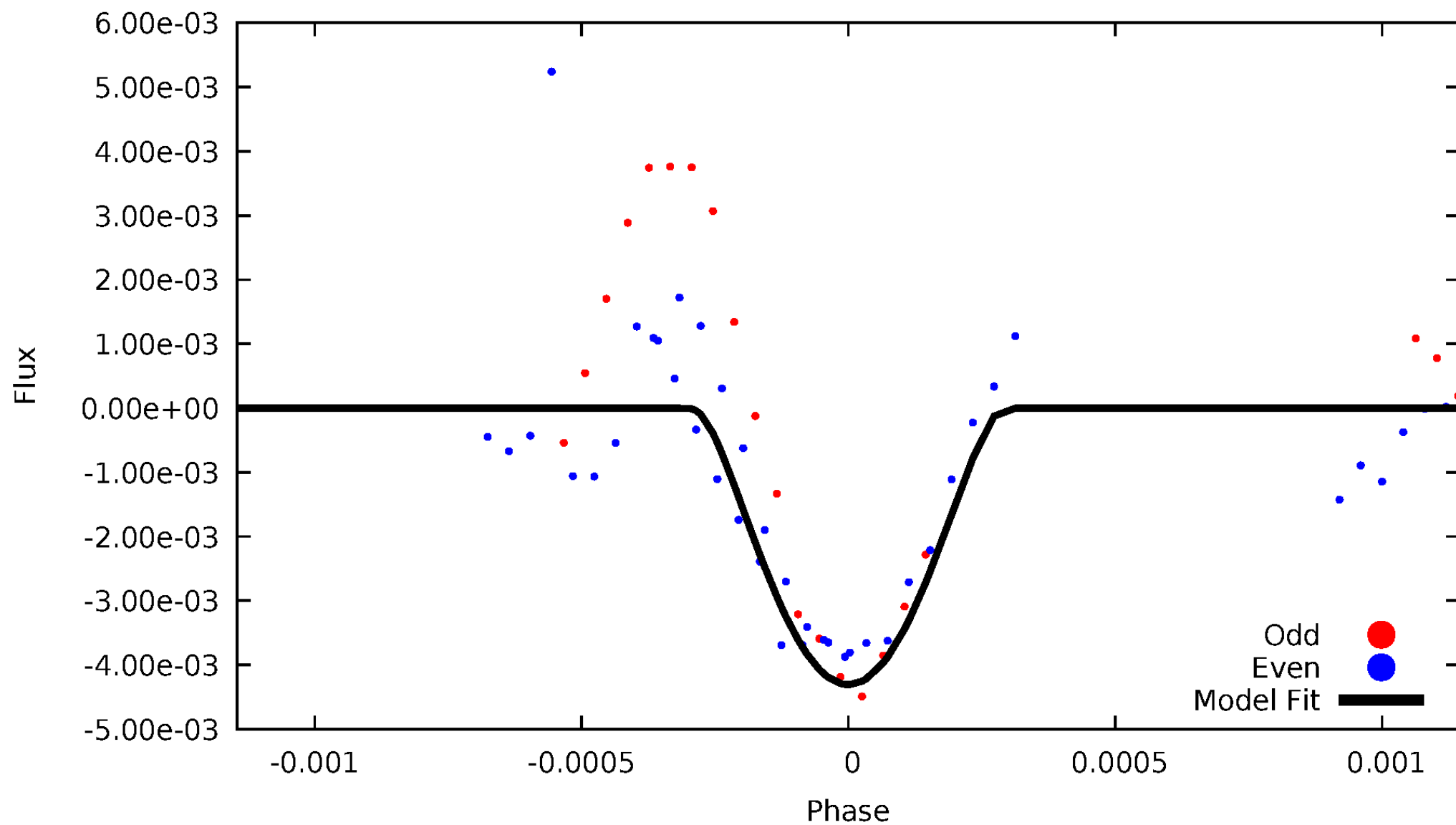


TCE 008264274-03



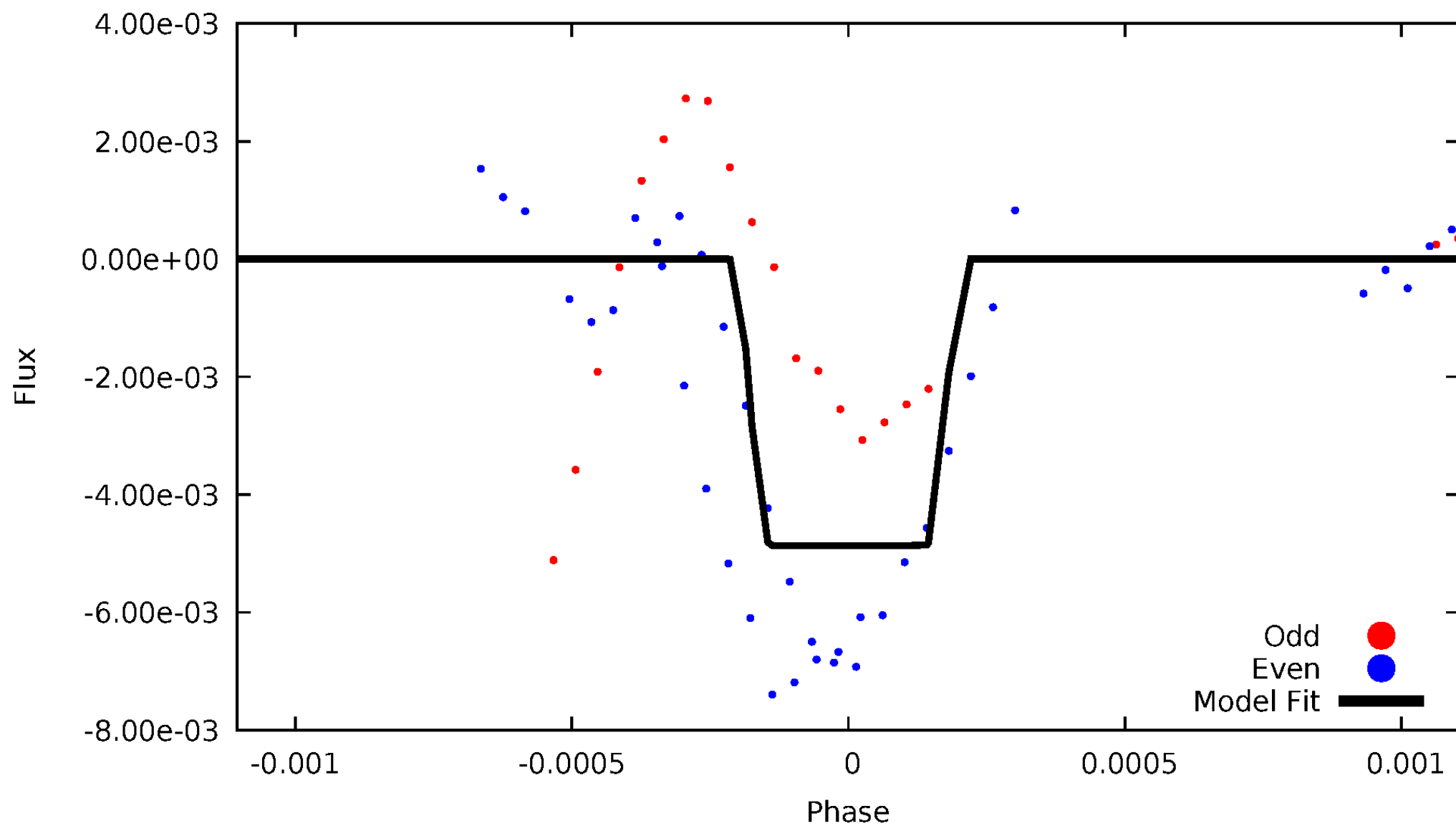
# DV Odd/Even

TCE 008264274-03



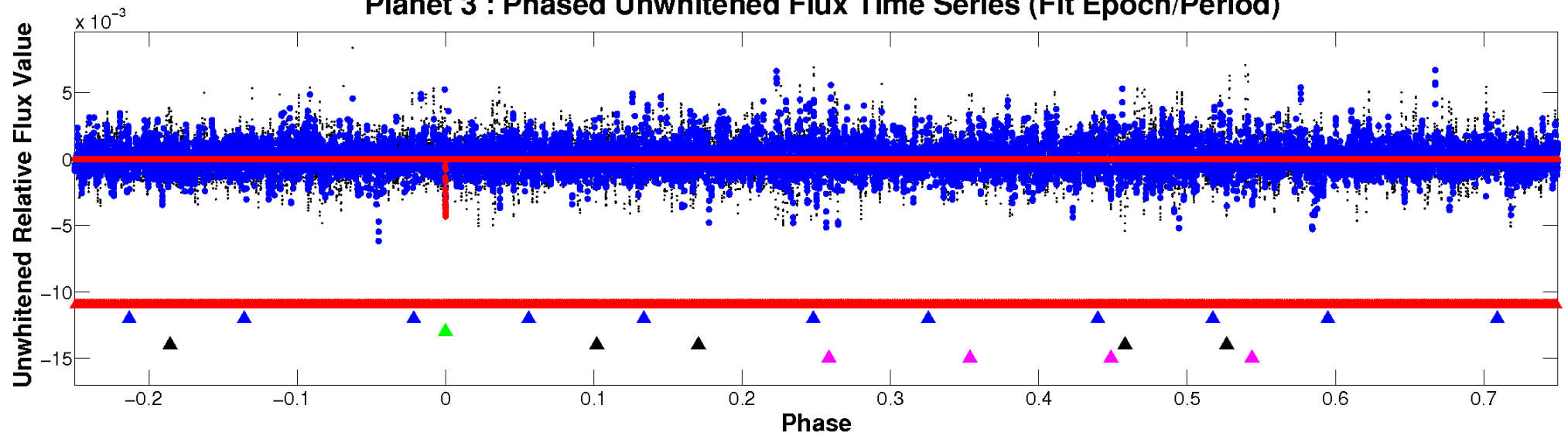
# ALT Odd/Even

TCE 008264274-03

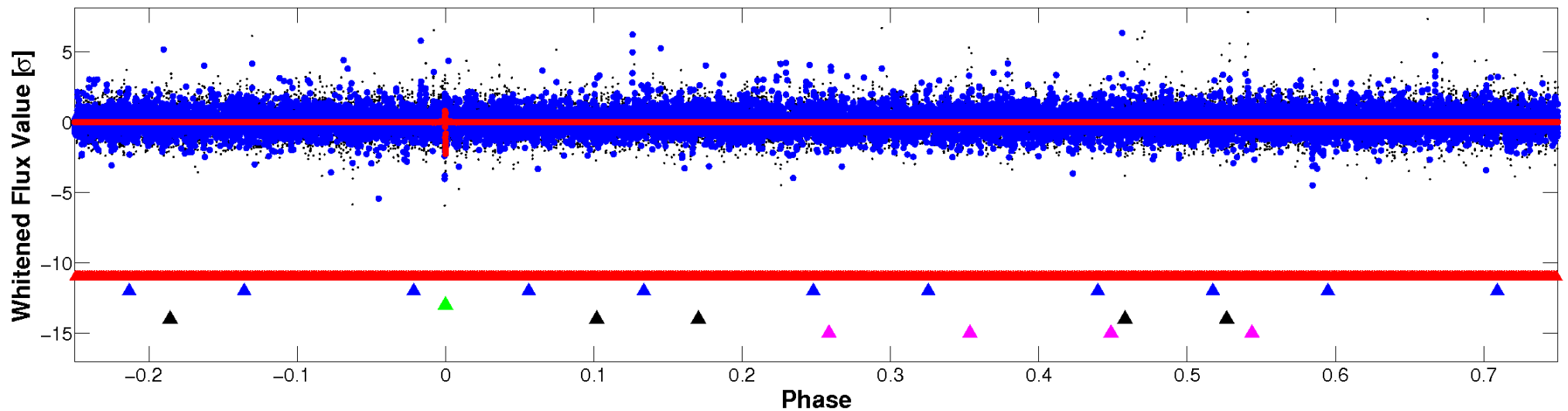


# Non-Whitened Vs. Whitened Light Curve

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



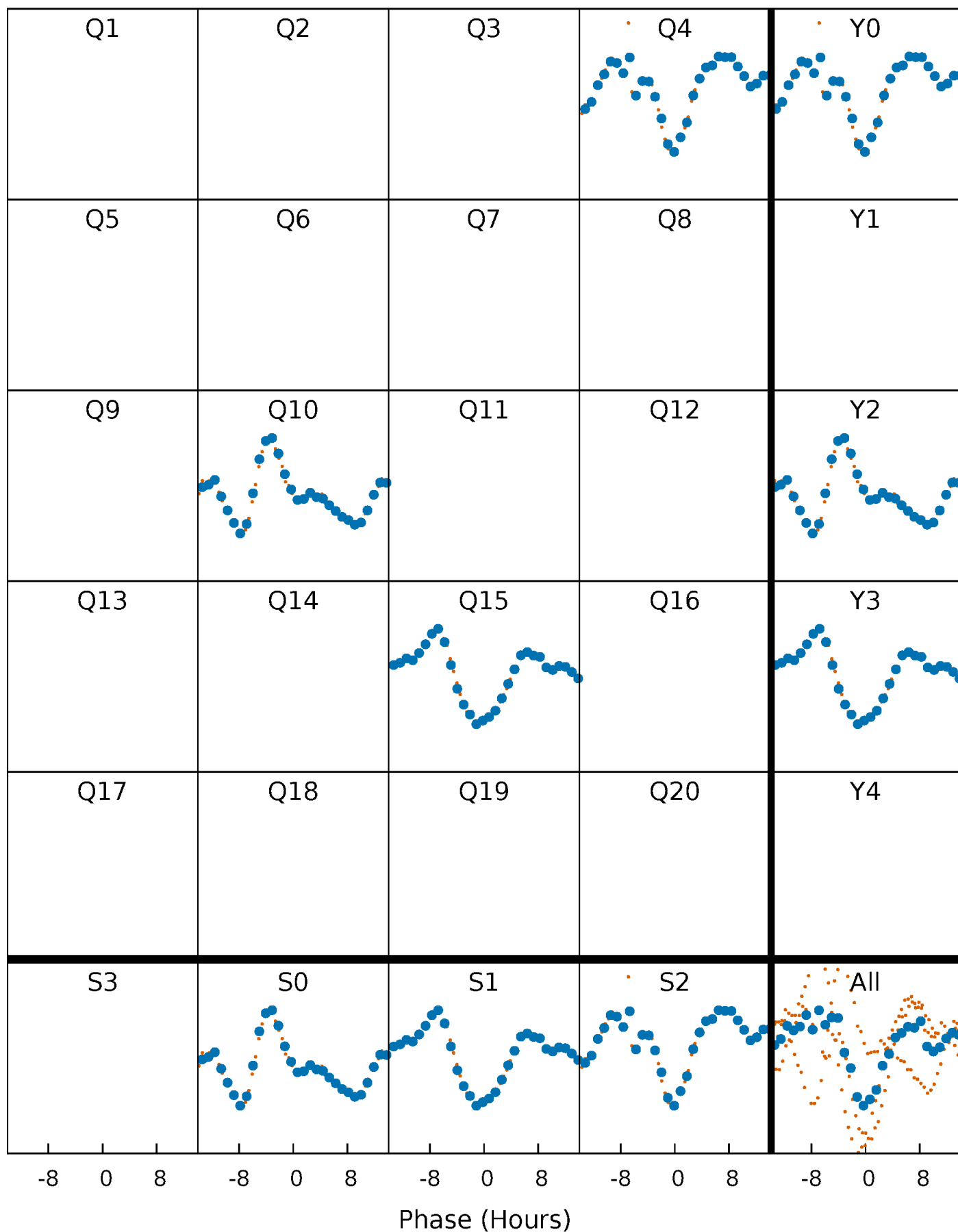
Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)





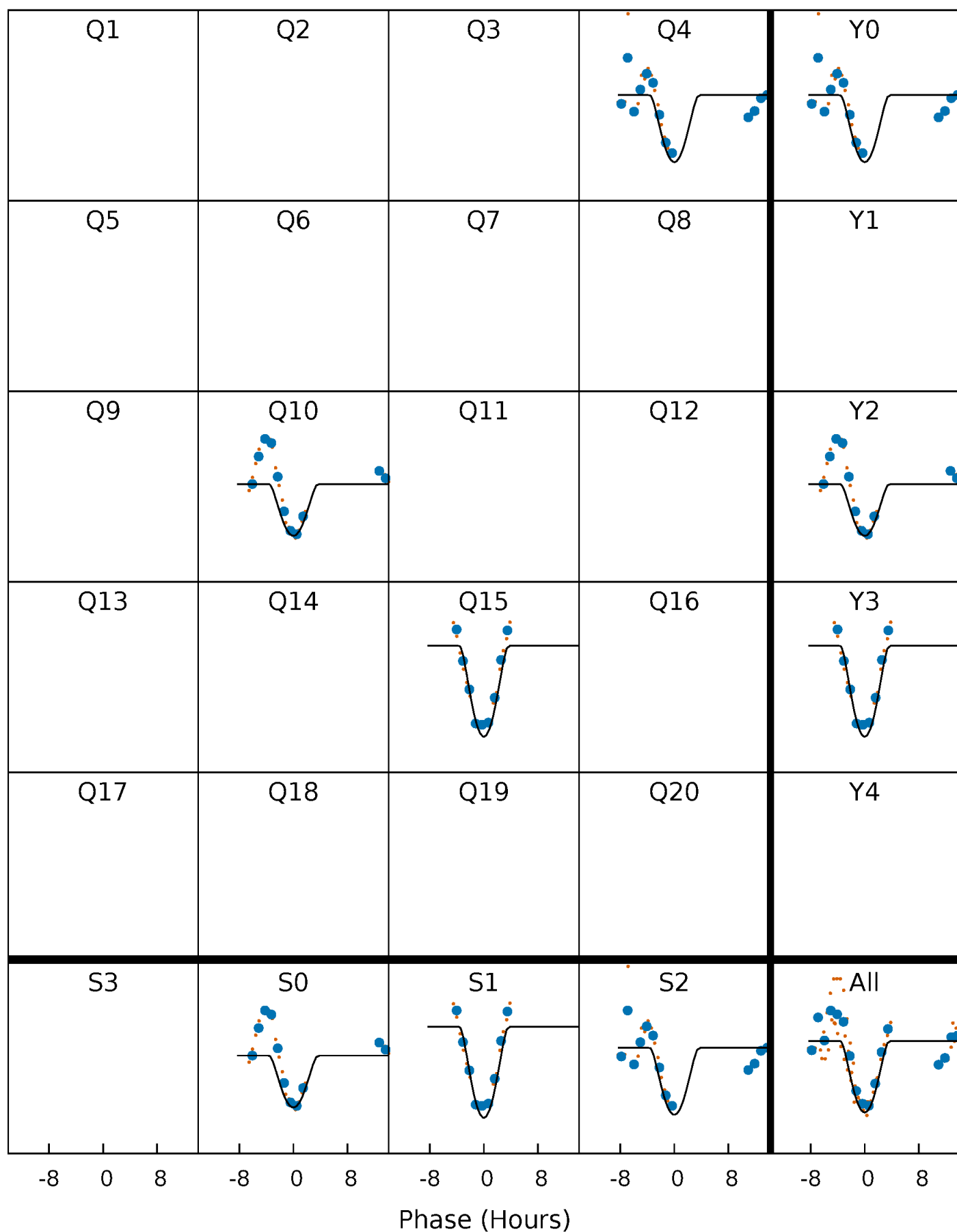
# PDC Quarter-Phased Transit Curves

TCE 008264274-03     $P=512.100023$  Days     $T_0=421.072268$  (BKJD)



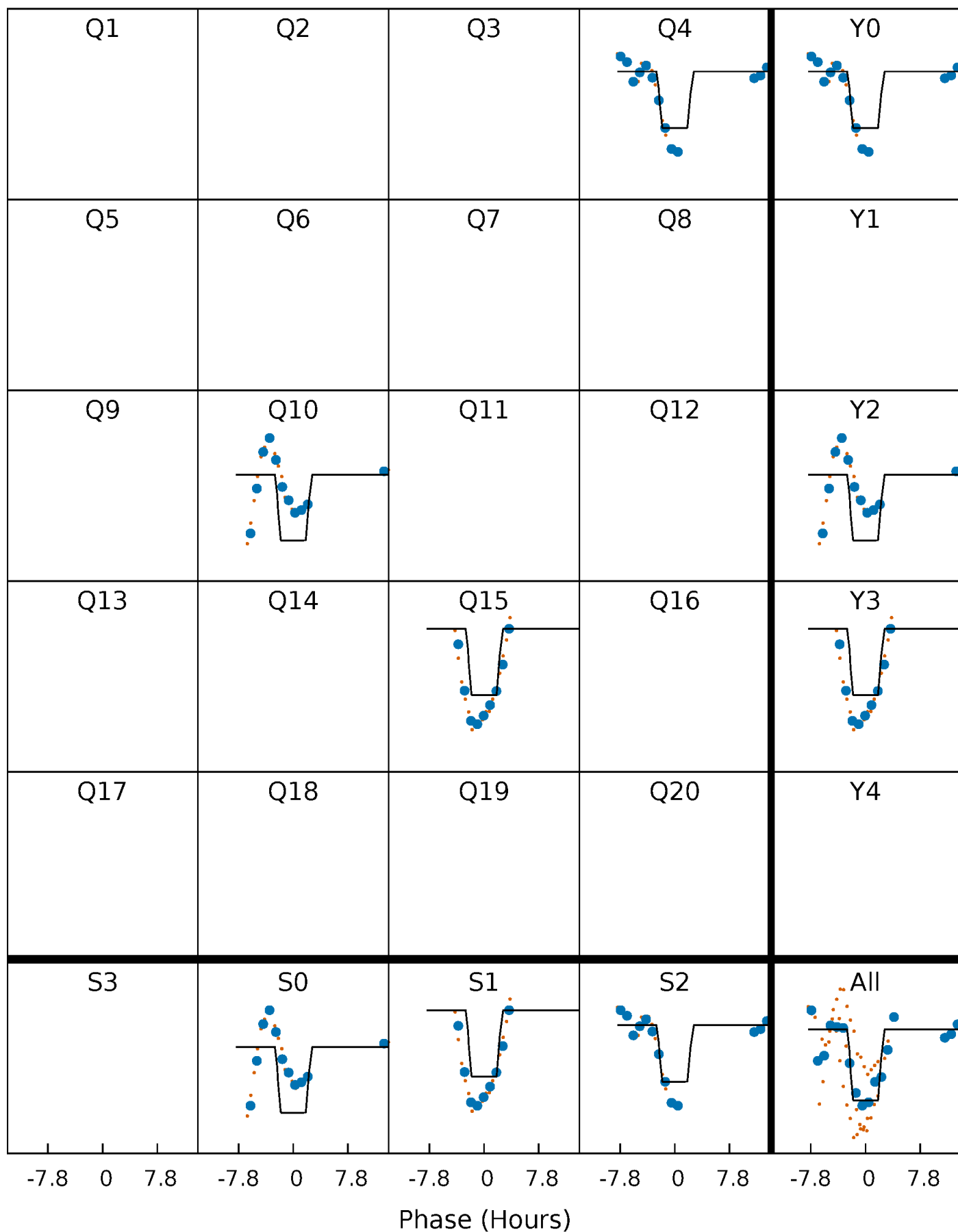
# DV Quarter-Phased Transit Curves

TCE 008264274-03 P=512.100023 Days  $T_0=421.072268$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

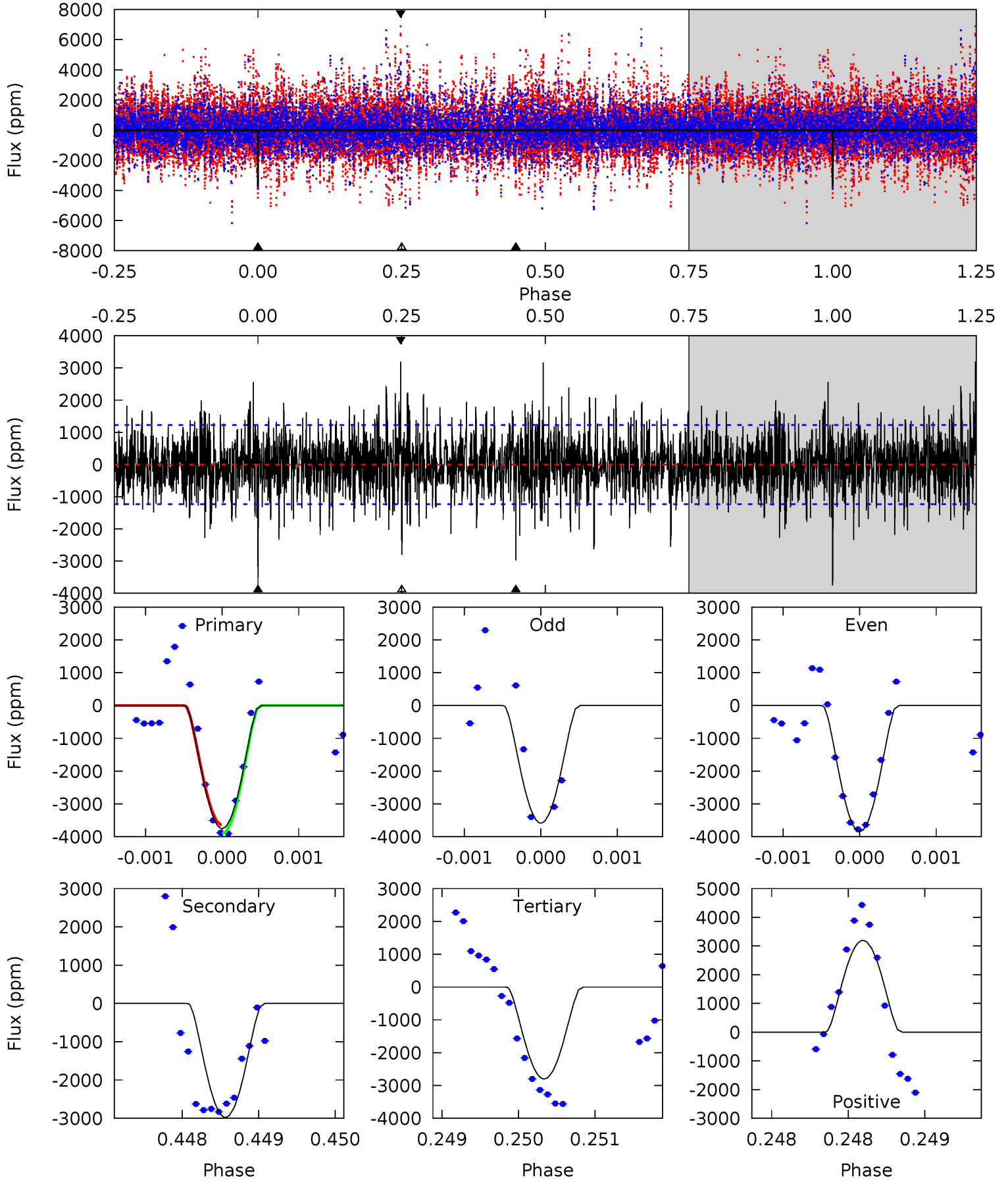
TCE 008264274-03 P=512.105881 Days  $T_0=421.066474$  (BKJD)



# DV Model-Shift Uniqueness Test

008264274-03, P = 512.100023 Days, E = 421.072268 Days

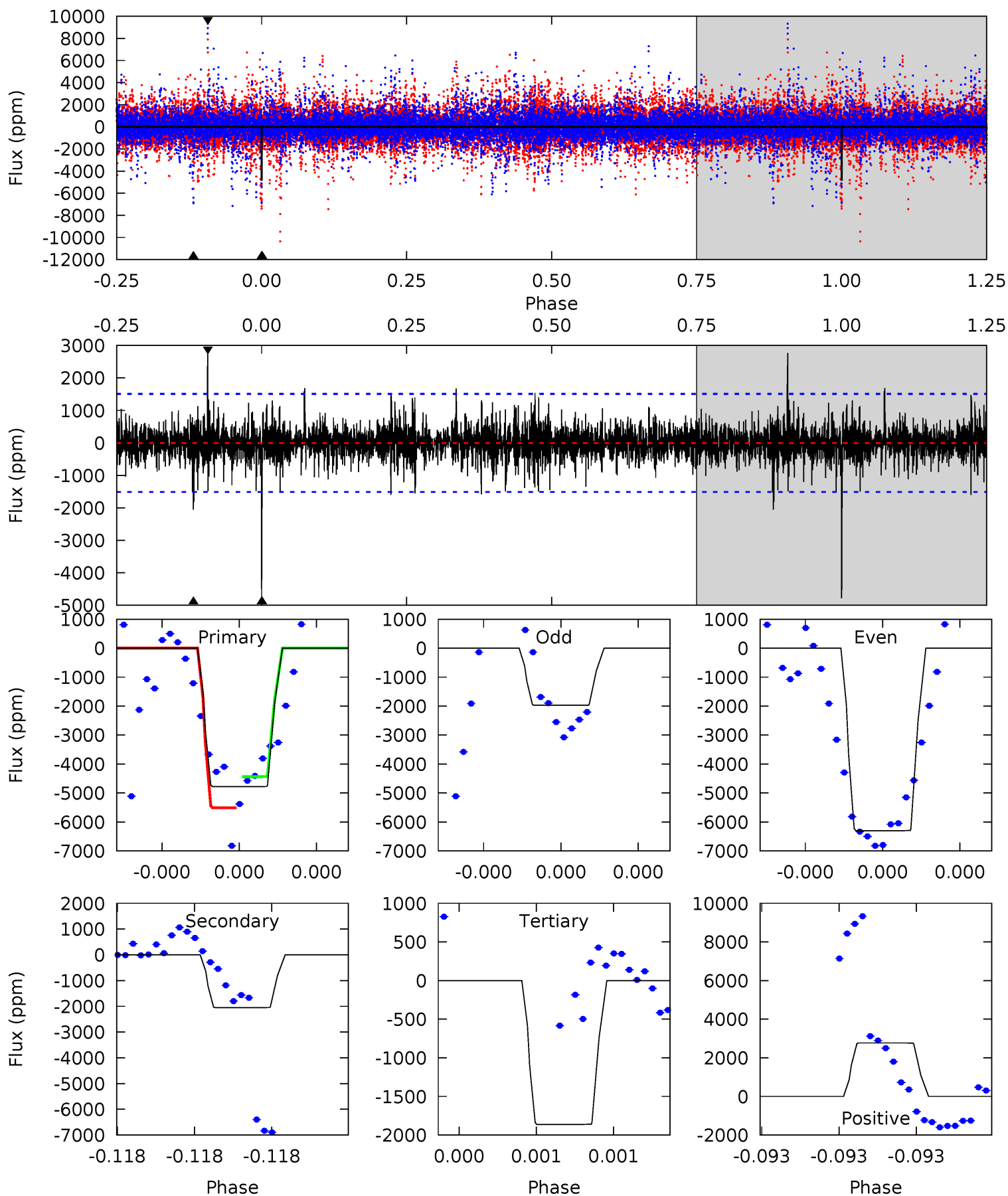
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	13.4	12.6	14.4	5.54	3.43	3.16	4.28	2.50	0.79	-0.99	0.54	1.04	0.46	0.56



# Alt Model-Shift Uniqueness Test

008264274-03, P = 512.105881 Days, E = 421.066474 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	7.63	6.93	10.3	5.61	3.54	1.45	10.9	7.48	0.70	-2.68	7.75	0.80	0.37	1.90





### Stellar Parameters For KIC 008264274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7850^{+218}_{-327}$	$3.743^{+0.417}_{-0.074}$	$-0.100^{+0.200}_{-0.350}$	$3.062^{+0.430}_{-1.375}$	$1.891^{+0.103}_{-0.410}$	$0.093^{+0.306}_{-0.029}$
	+3%/-4%	+11%/-2%	+200%/-350%	+14%/-45%	+5%/-22%	+329%/-31%
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 008264274-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-2977 \pm 222$	$54.58^{+57.43}_{-36.38}$	$653^{+46}_{-71}$	$4344^{+2755}_{-878}$	$1246^{+9440}_{-932}$
Alt.	$-2051 \pm 269$	$53.43^{+54.44}_{-38.45}$	$655^{+45}_{-76}$	$4102^{+3079}_{-831}$	$952^{+11255}_{-734}$

$T_{max}$  = 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

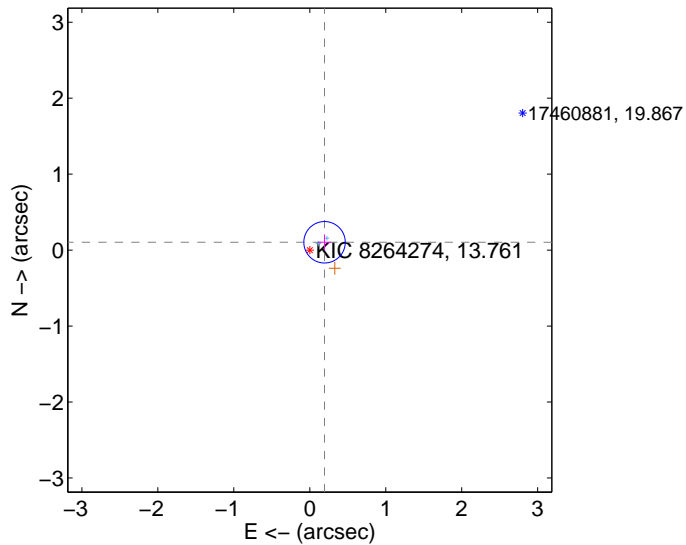
Supplemental centroid analysis for 008264274-03. Kepler magnitude: 13.76. Transit SNR 9.10

There are 2 quarters with good PRF difference image offsets

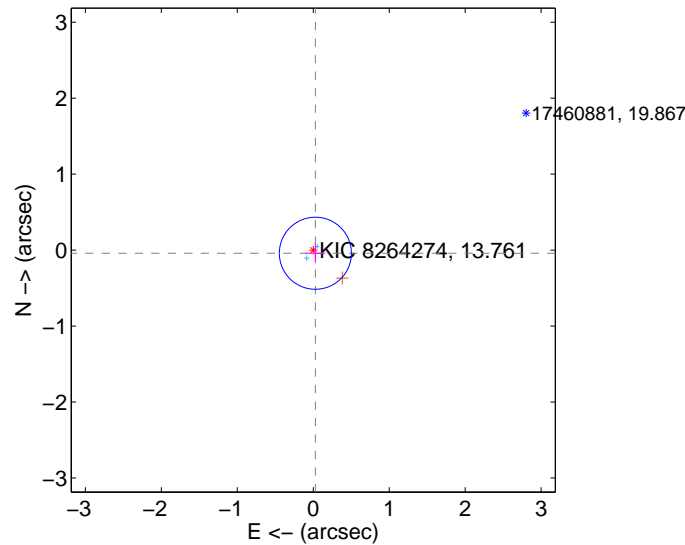
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.220 \pm 0.091$	2.42	$-0.194 \pm 0.087$	$0.103 \pm 0.103$
PRF-fit source offset from KIC position	$0.050 \pm 0.158$	0.32	$-0.028 \pm 0.130$	$-0.041 \pm 0.130$
photometric centroid source offset	$1.15 \pm 0.50$	2.28	$1.14 \pm 0.50$	$0.07 \pm 0.29$

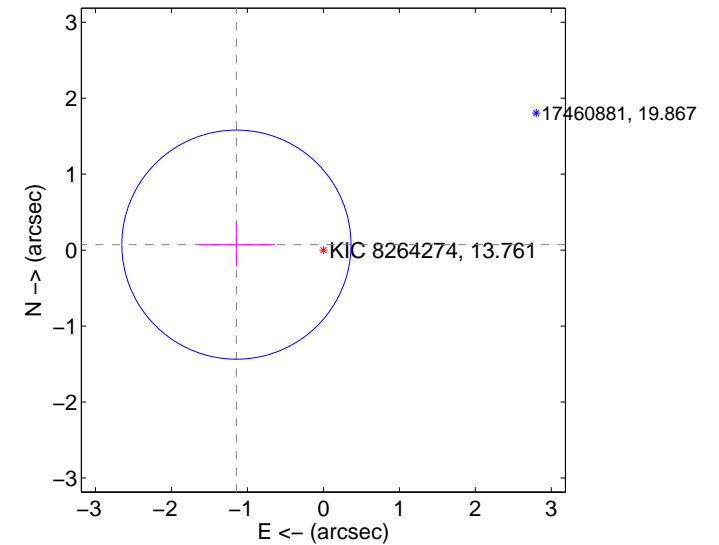
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

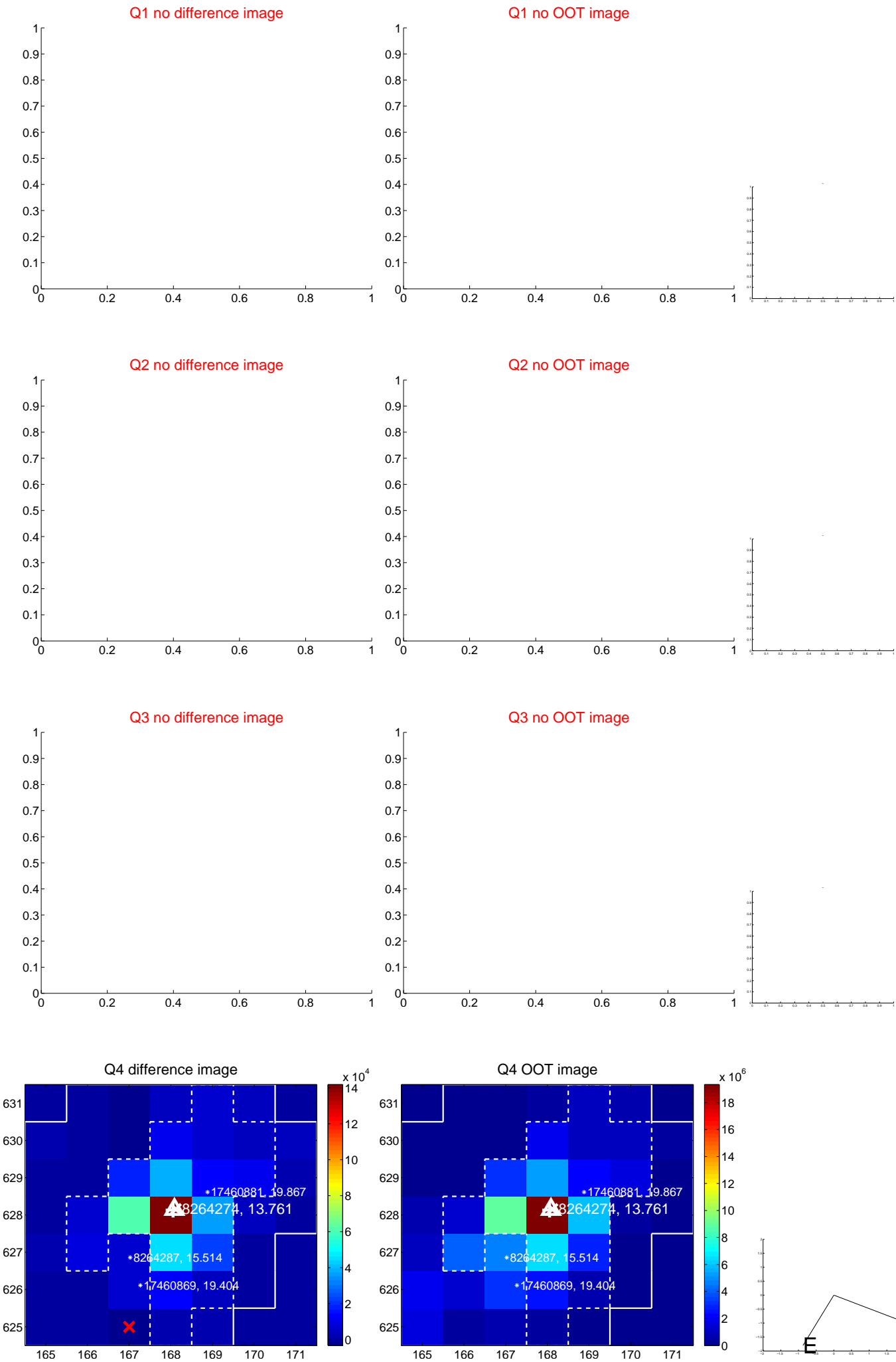


offset from photometric centroids



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- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . 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.

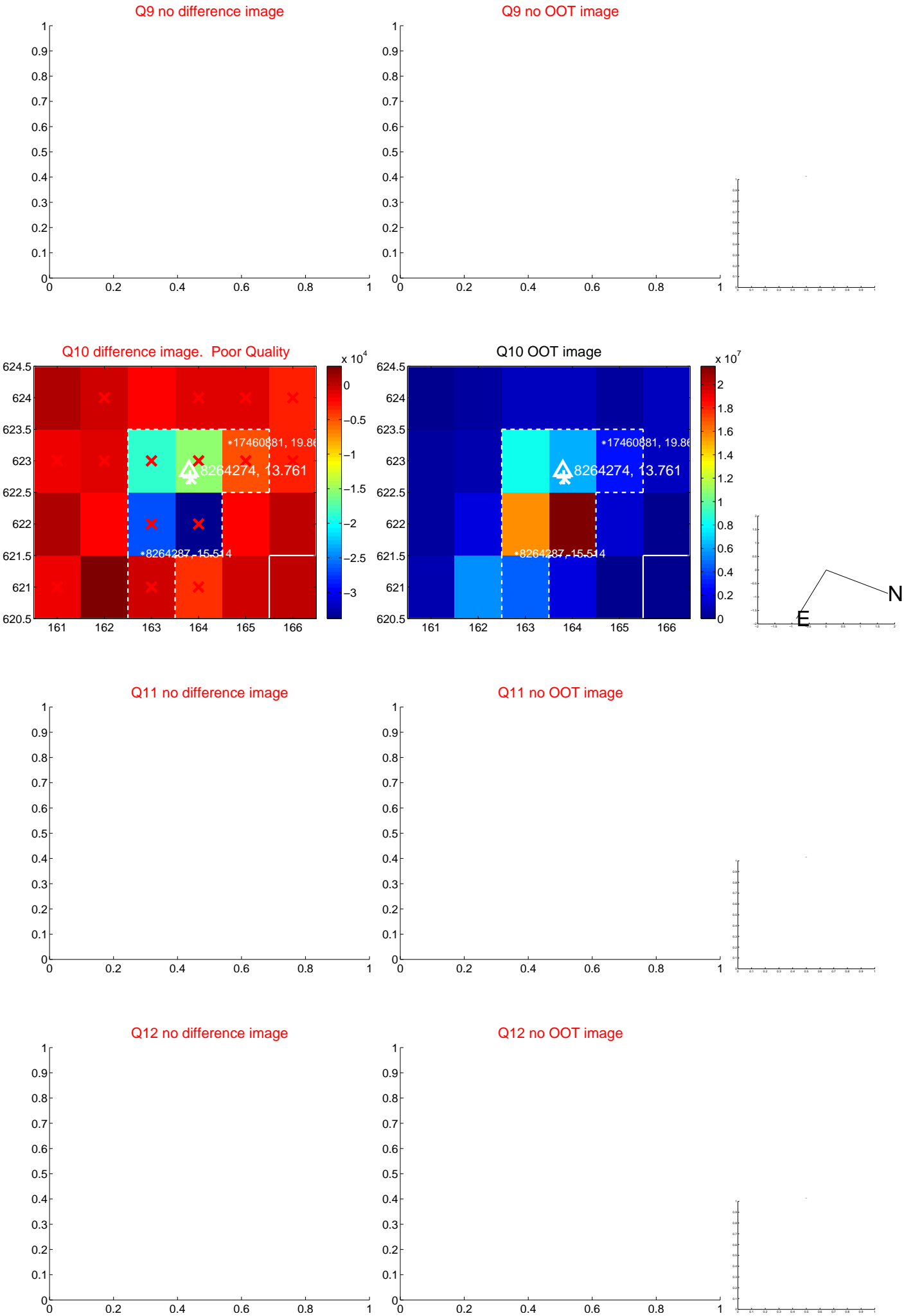
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



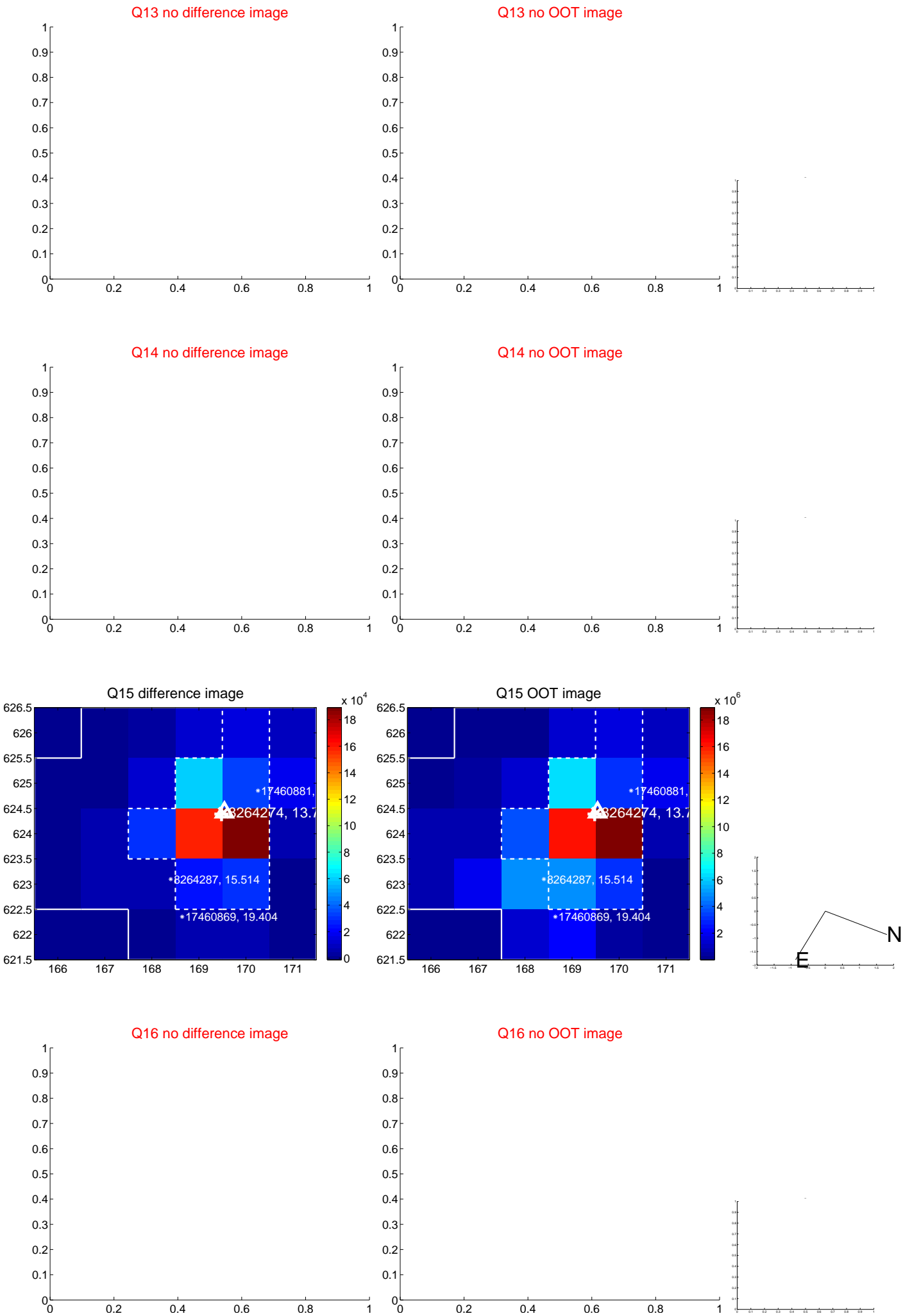
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

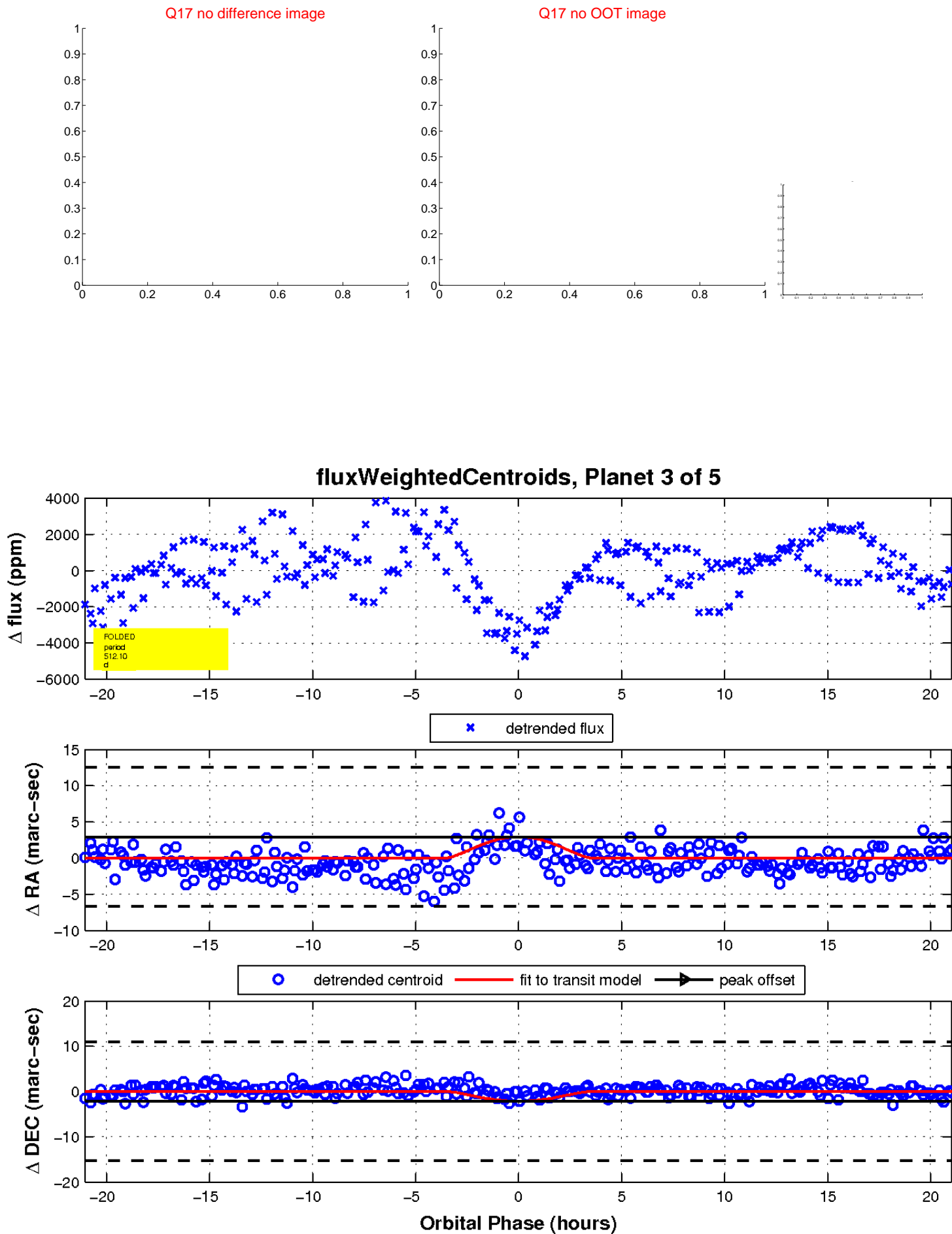


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



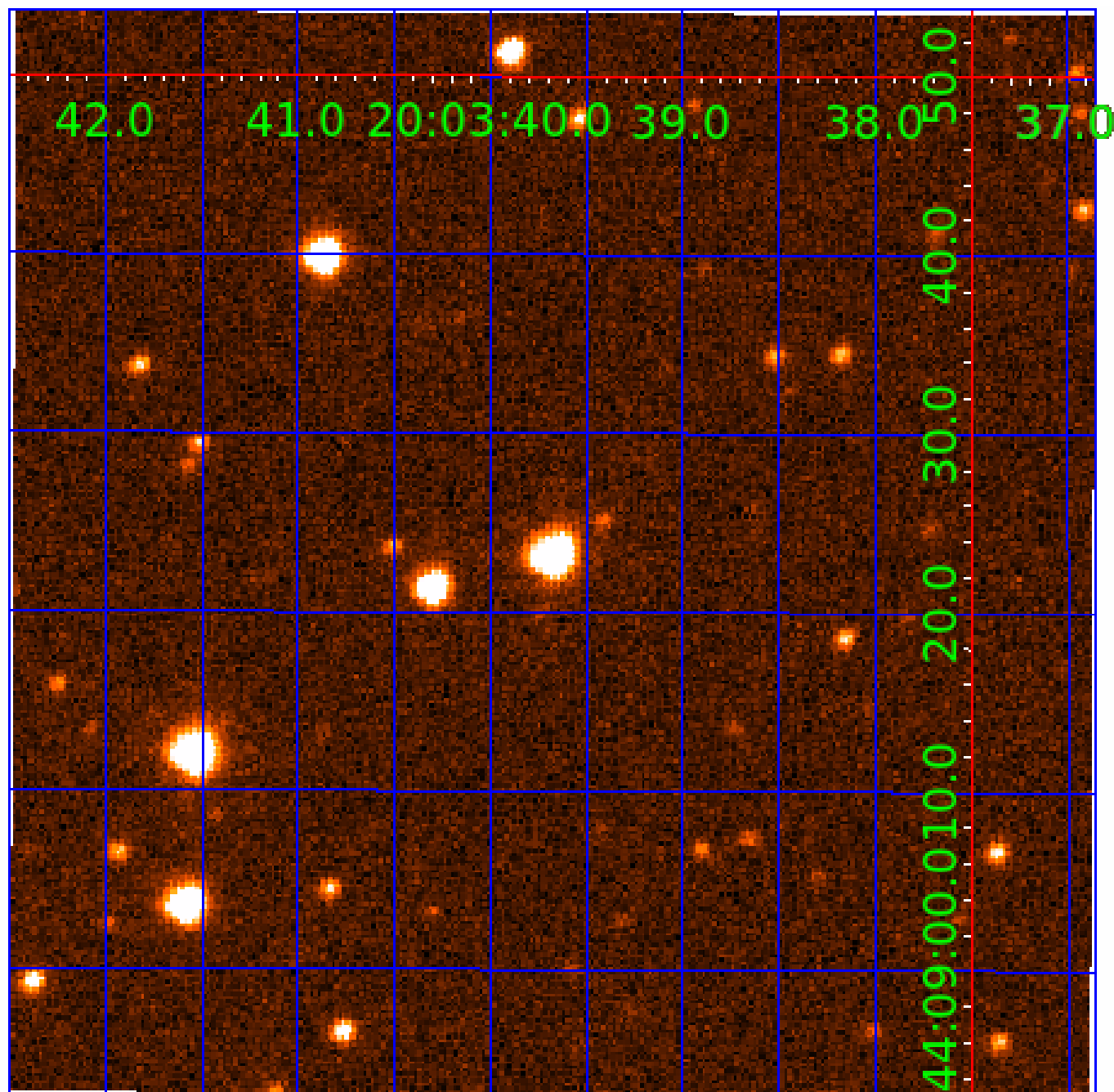


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 008264274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264274-01	OBS	No	0.815562	131.789170	75.5	3.422	9.0	6.3	3.06	7850	3.09	71411.34
008264274-02	OBS	No	137.953290	134.207957	1817.8	17.169	8.9	7.8	3.06	7850	14.71	76.34
008264274-03	OBS	No	512.100023	421.072268	4304.6	7.037	8.1	9.1	3.06	7850	35.80	13.28
008264274-04	OBS	No	329.701335	178.700403	3461.4	6.158	7.7	8.4	3.06	7850	32.44	23.89
008264274-05	OBS	No	463.415952	187.437241	3469.1	14.322	7.3	7.7	3.06	7850	21.77	15.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264274-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008264274-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008264274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008264274-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
008264274-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

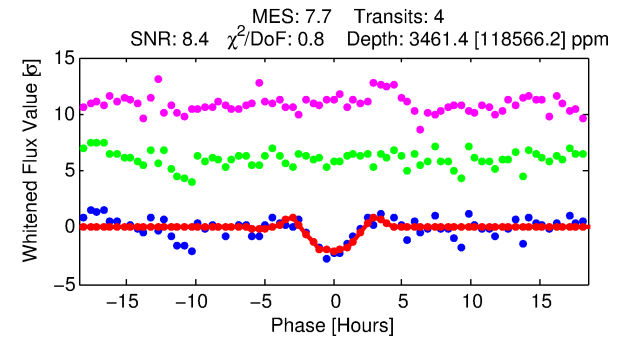
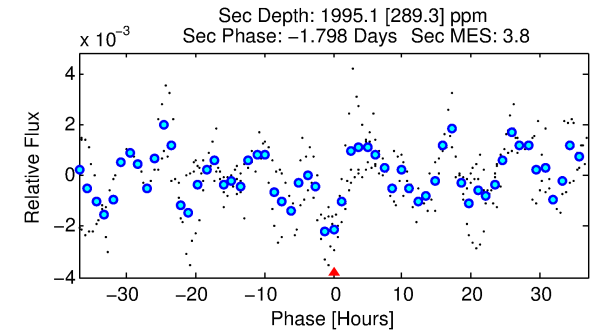
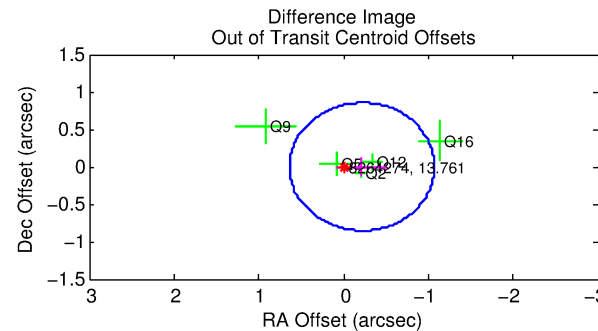
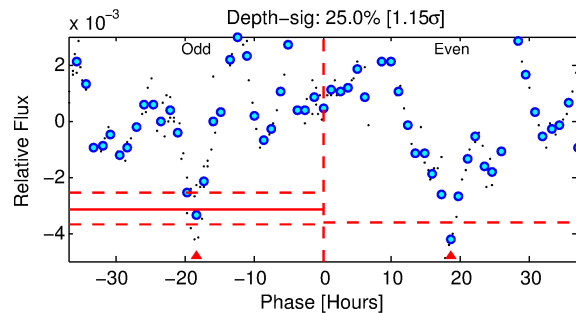
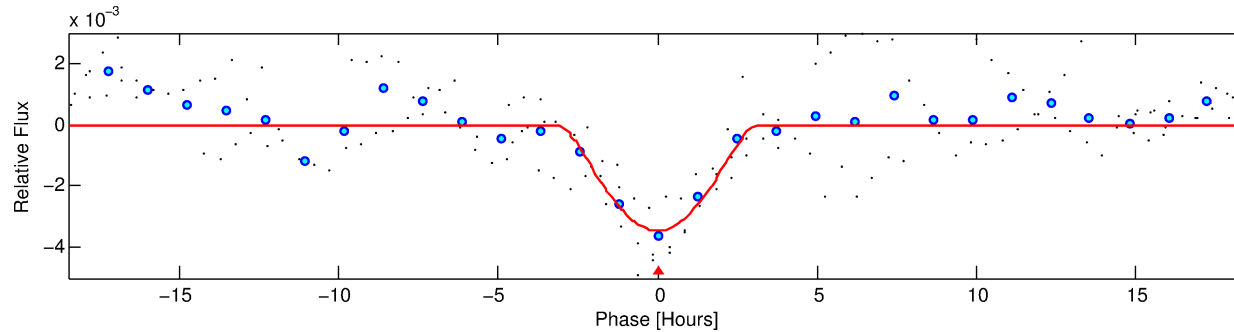
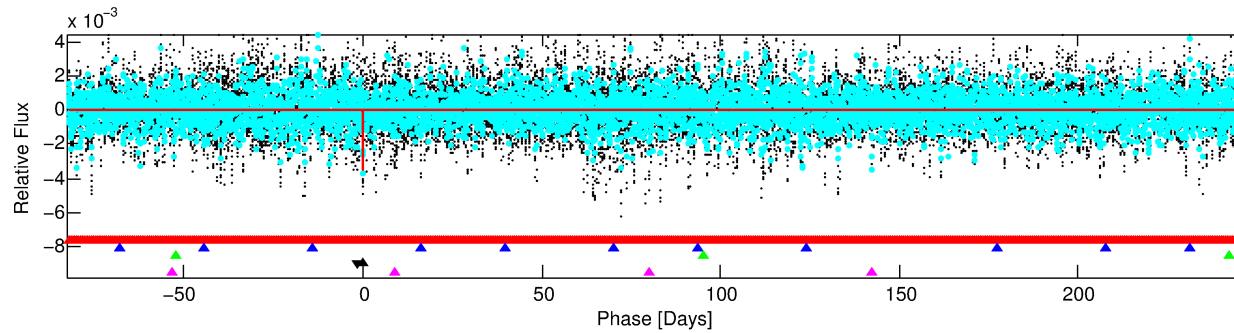
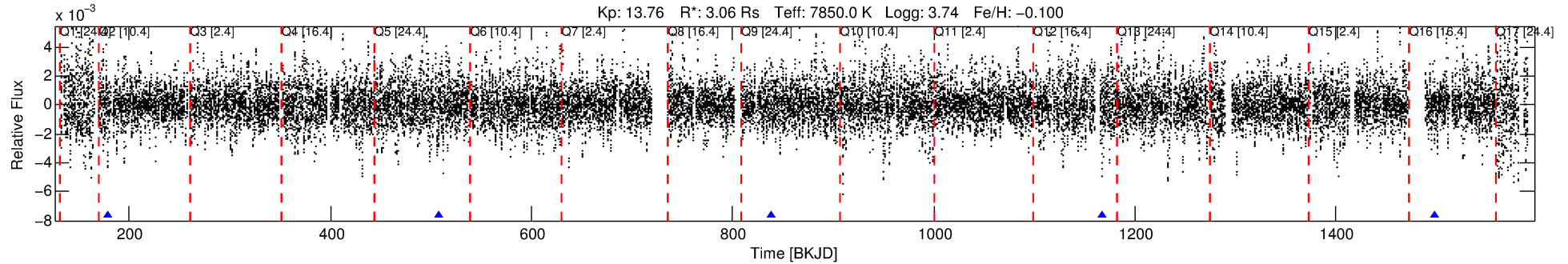
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264274-04

No Significant Match Found

# DV One-Page Summary

KIC: 8264274 Candidate: 4 of 5 Period: 329.701 d



## DV Fit Results:

Period = 329.70133 [0.00301] d  
Epoch = 178.7004 [0.0081] BKJD  
Rp/R\* = 0.0971 [0.1526]  
a/R\* = 184.55 [59.57]  
b = 1.00 [2.05]  
Seff = 23.89 [17.35]  
Teq = 564 [102] K  
**Rp = 32.44 [53.04] Re**  
a = 1.1555 [0.5064] AU  
Ag = 1393.02 [4494.75] [0.31 $\sigma$ ]  
Teffp = 5325 [4197] K [1.13 $\sigma$ ]

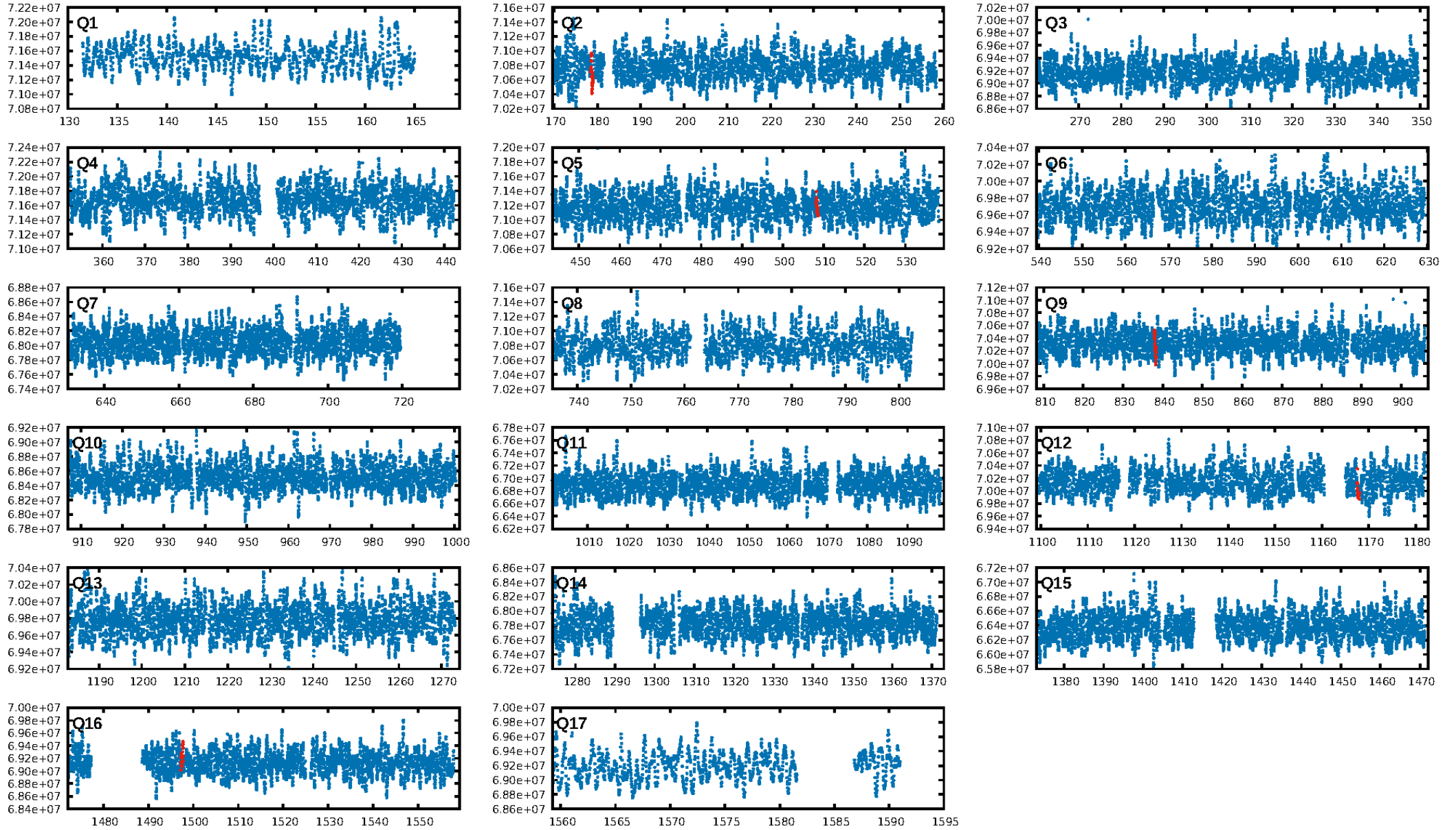
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [252.30 $\sigma$ ]  
LongPeriod-sig: 100.0% [205.85 $\sigma$ ]  
ModelChiSquare2-sig: 37.6%  
ModelChiSquareGof-sig: 100.0%  
**Bootstrap-pfa: 3.16e-09**  
RollingBand-fgt: 1.00 [4/4]  
GhostDiagnostic-chr: 1.823  
Centroid-sig: 14.9%  
Centroid-so: 1.271 arcsec [2.95 $\sigma$ ]  
OotOffset-rm: 0.216 arcsec [0.76 $\sigma$ ]  
KicOffset-rm: 0.209 arcsec [0.85 $\sigma$ ]  
OotOffset-st: 1/0/2/2 [5]  
KicOffset-st: 1/0/2/2 [5]  
DiffImageQuality-fgm: 0.60 [3/5]  
DiffImageOverlap-fno: 0.00 [0/5]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:34:53 Z

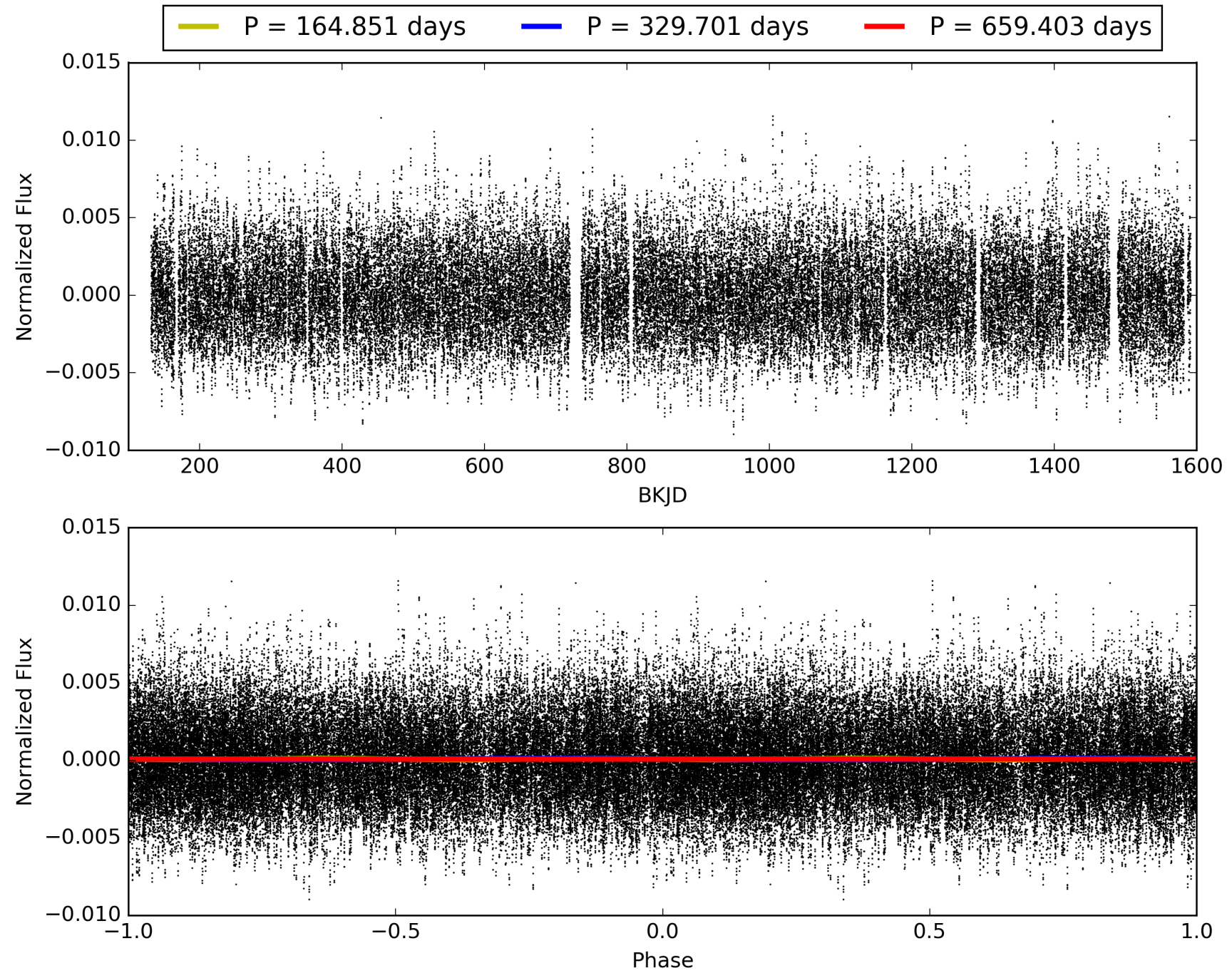
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008264274-04, PDC Light Curves





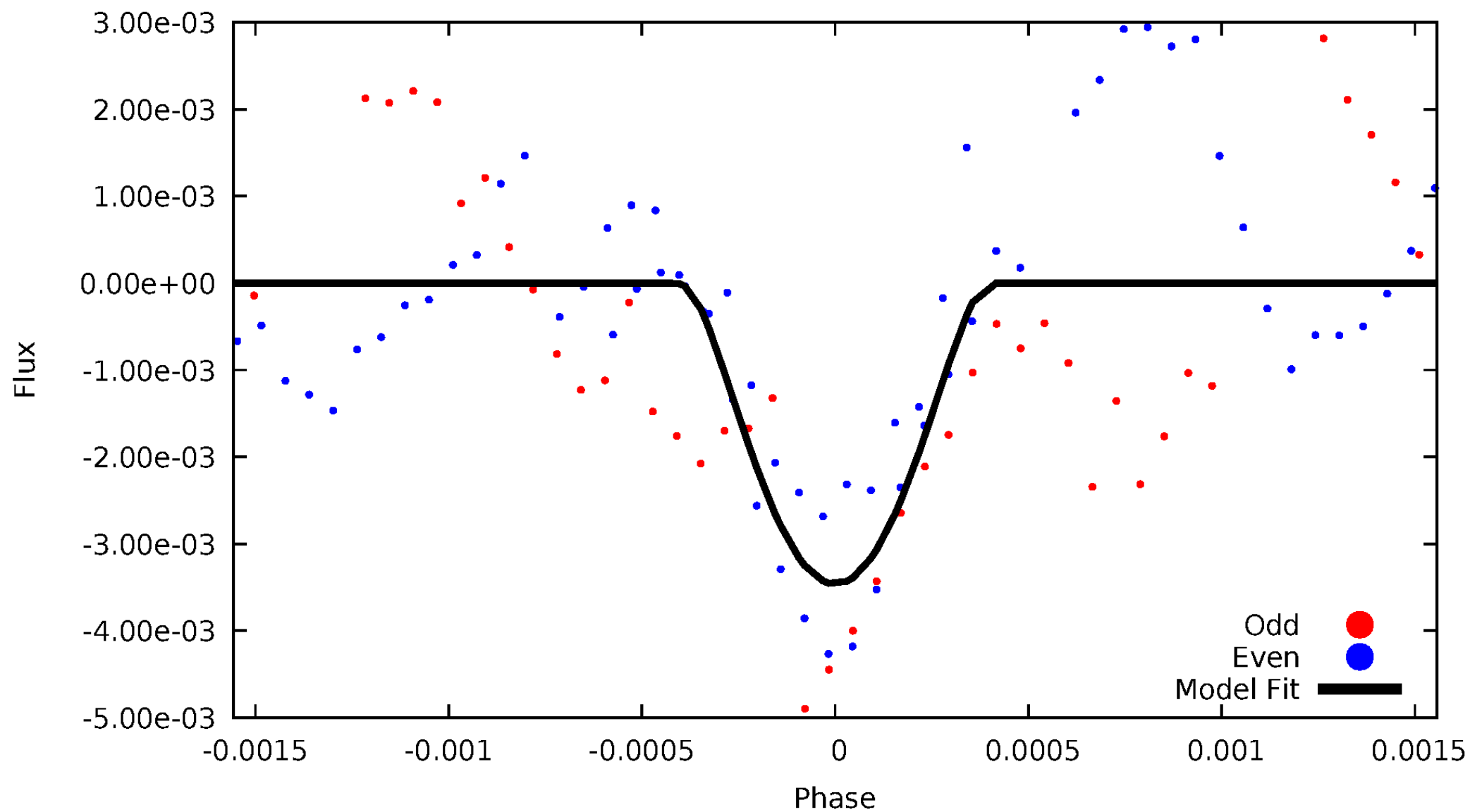
TCE 008264274-04





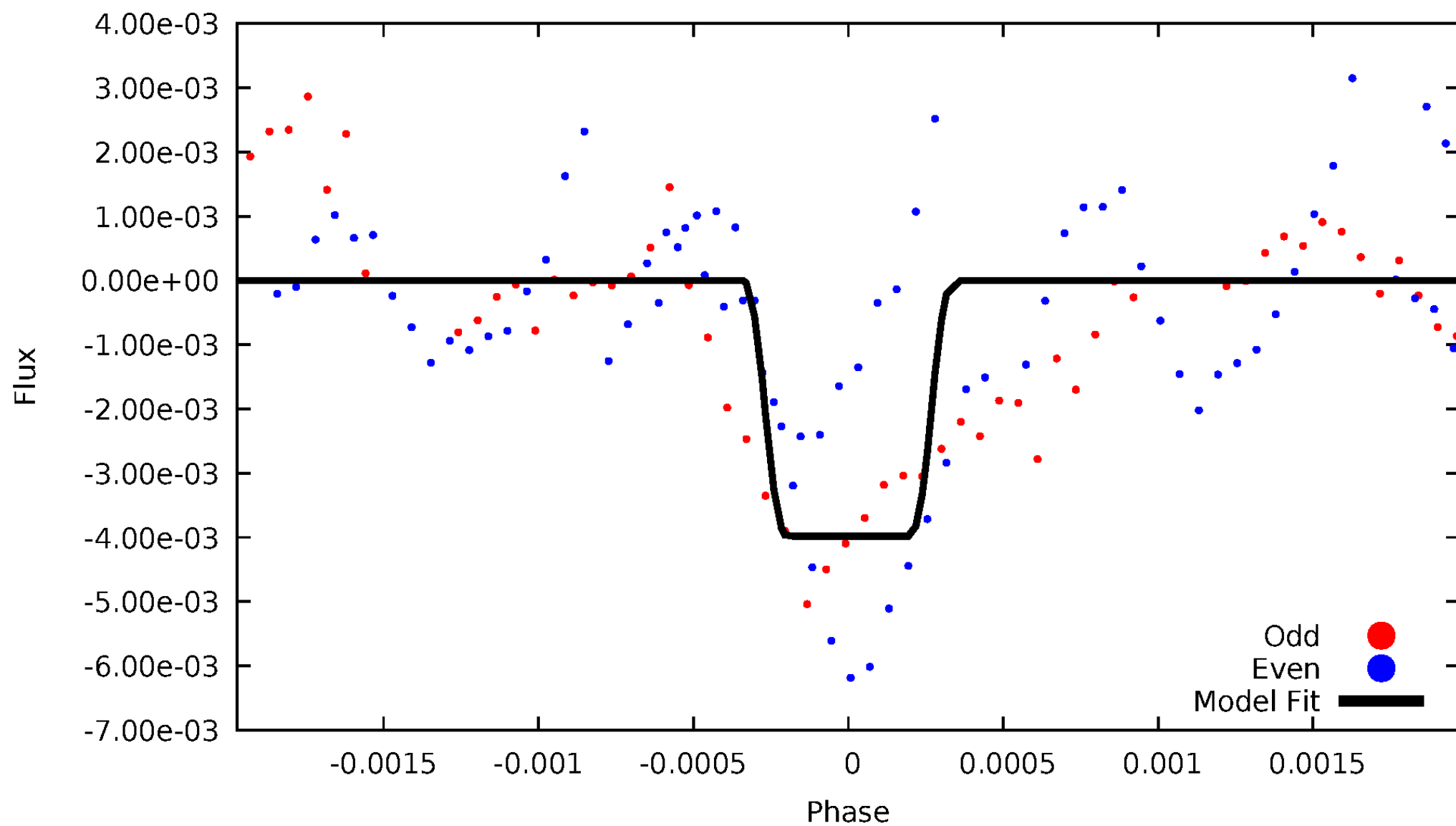
# DV Odd/Even

TCE 008264274-04



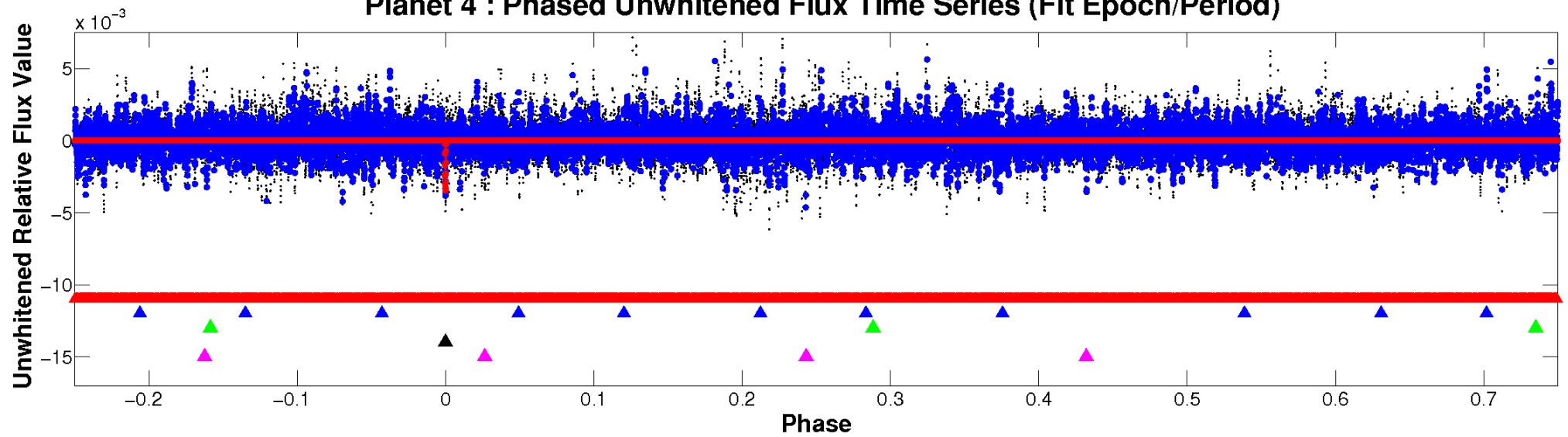
# ALT Odd/Even

TCE 008264274-04

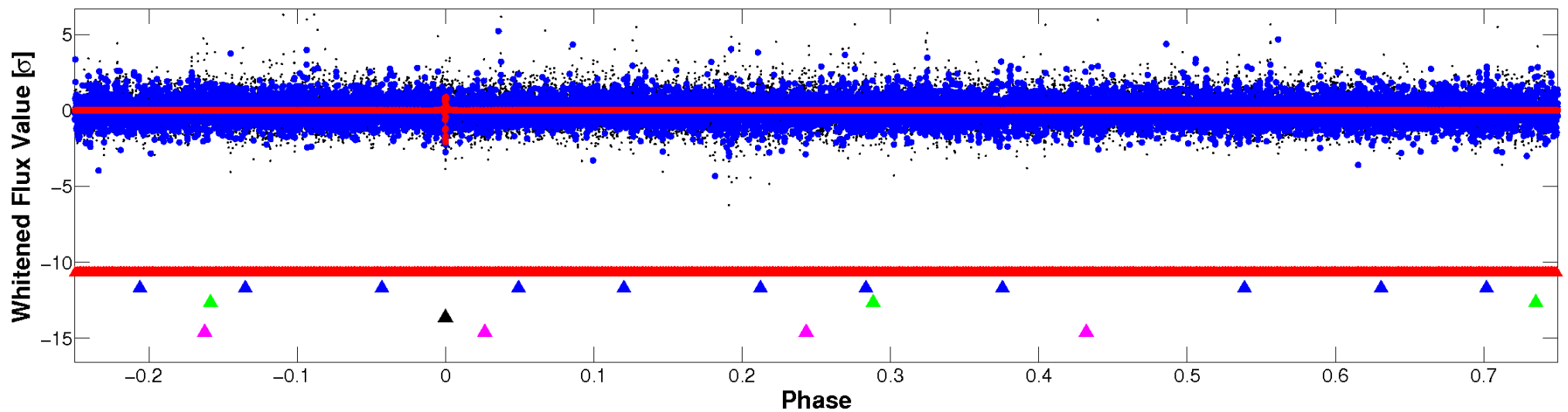


# Non-Whitened Vs. Whitened Light Curve

## Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

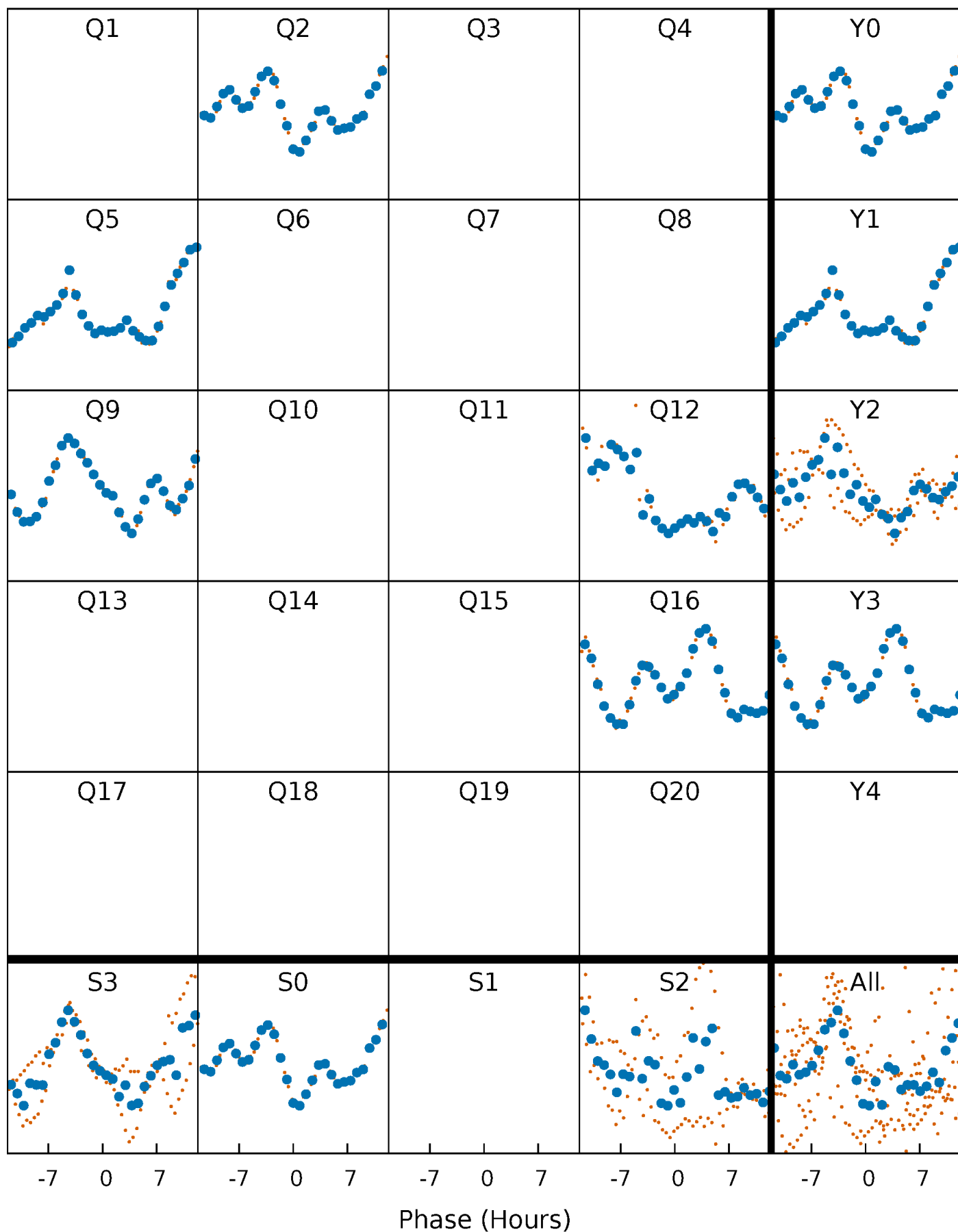


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



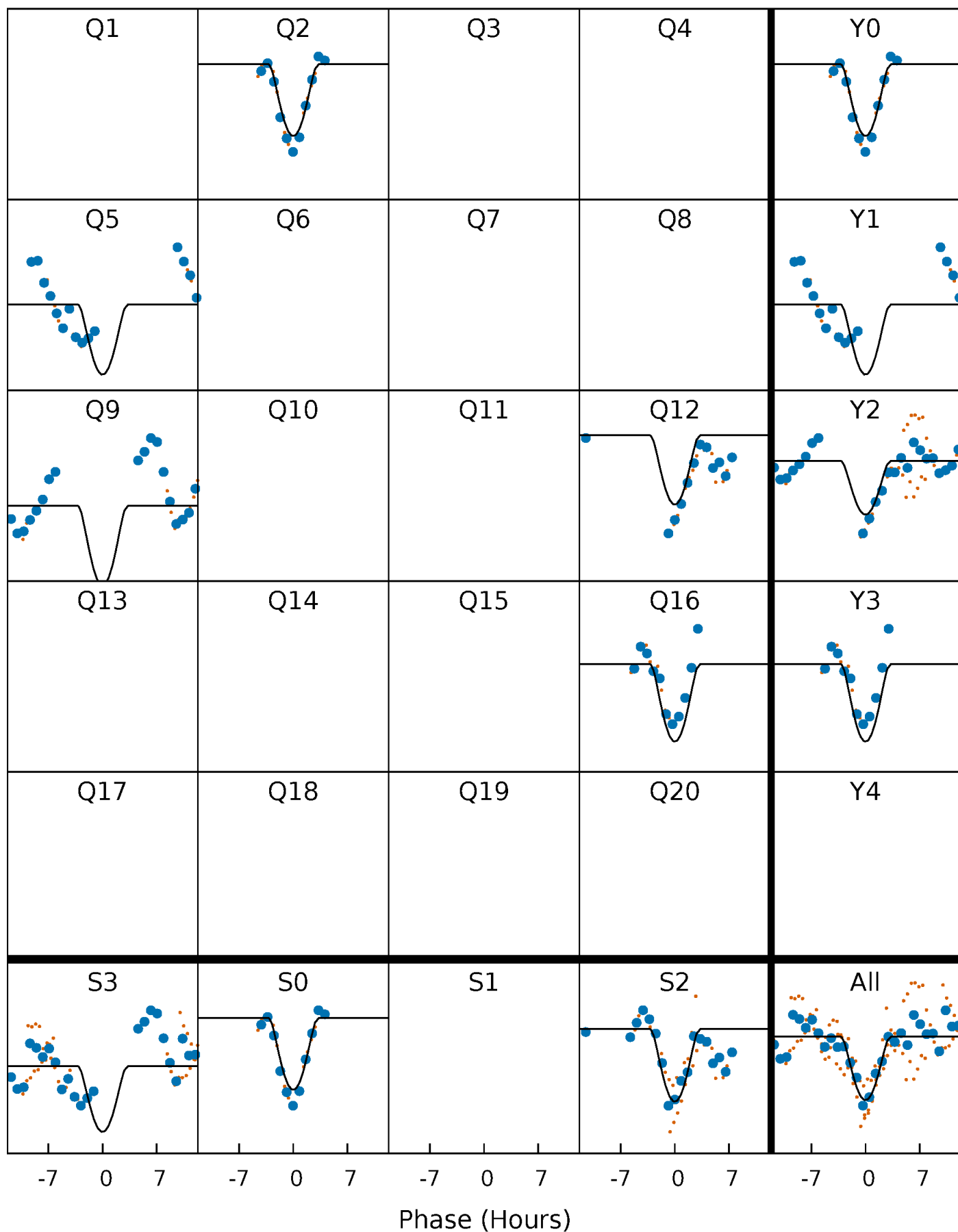
# PDC Quarter-Phased Transit Curves

TCE 008264274-04     $P=329.701335$  Days     $T_0=178.700403$  (BKJD)



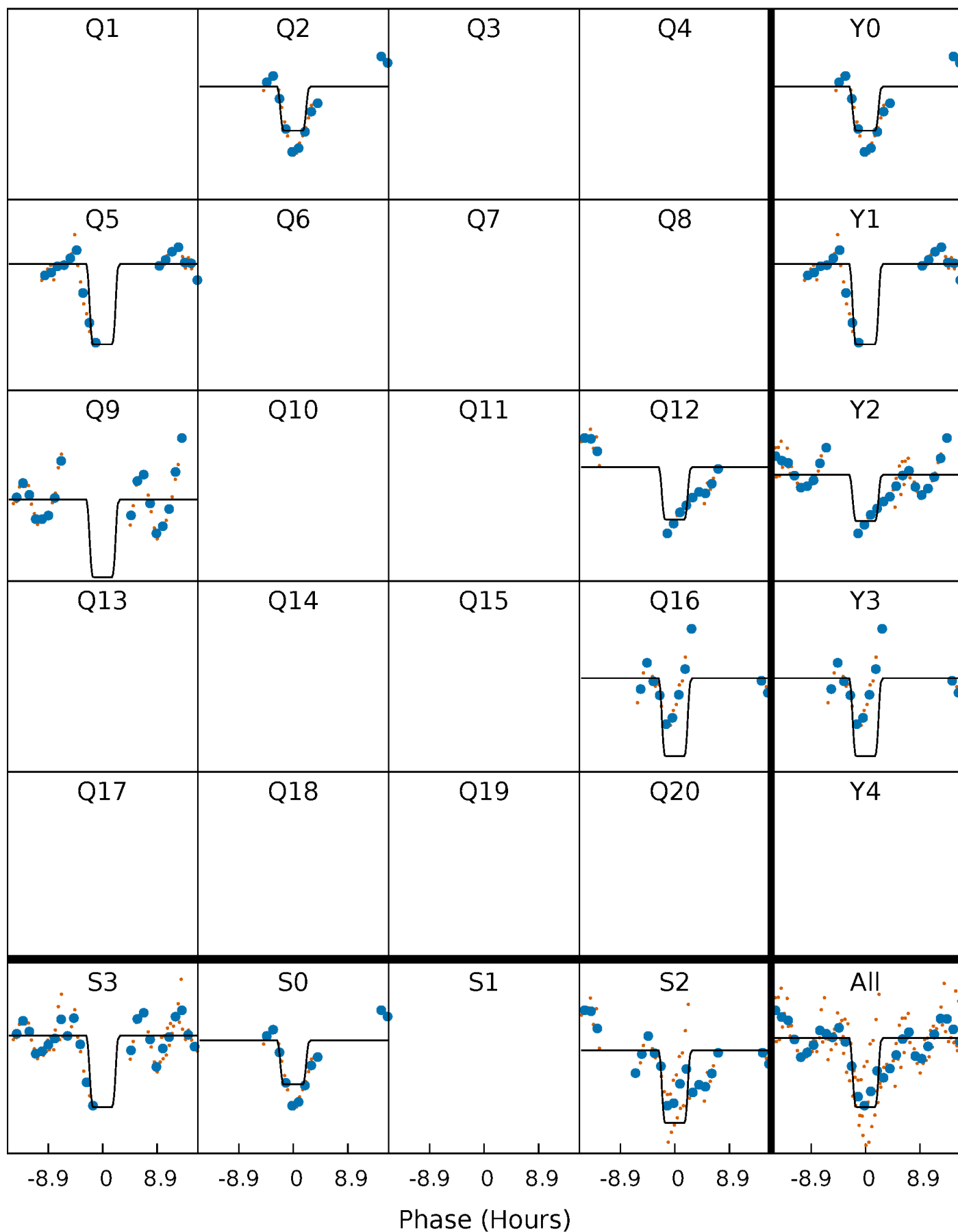
# DV Quarter-Phased Transit Curves

TCE 008264274-04     $P=329.701335$  Days     $T_0=178.700403$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 008264274-04 P=329.703238 Days  $T_0=178.712801$  (BKJD)

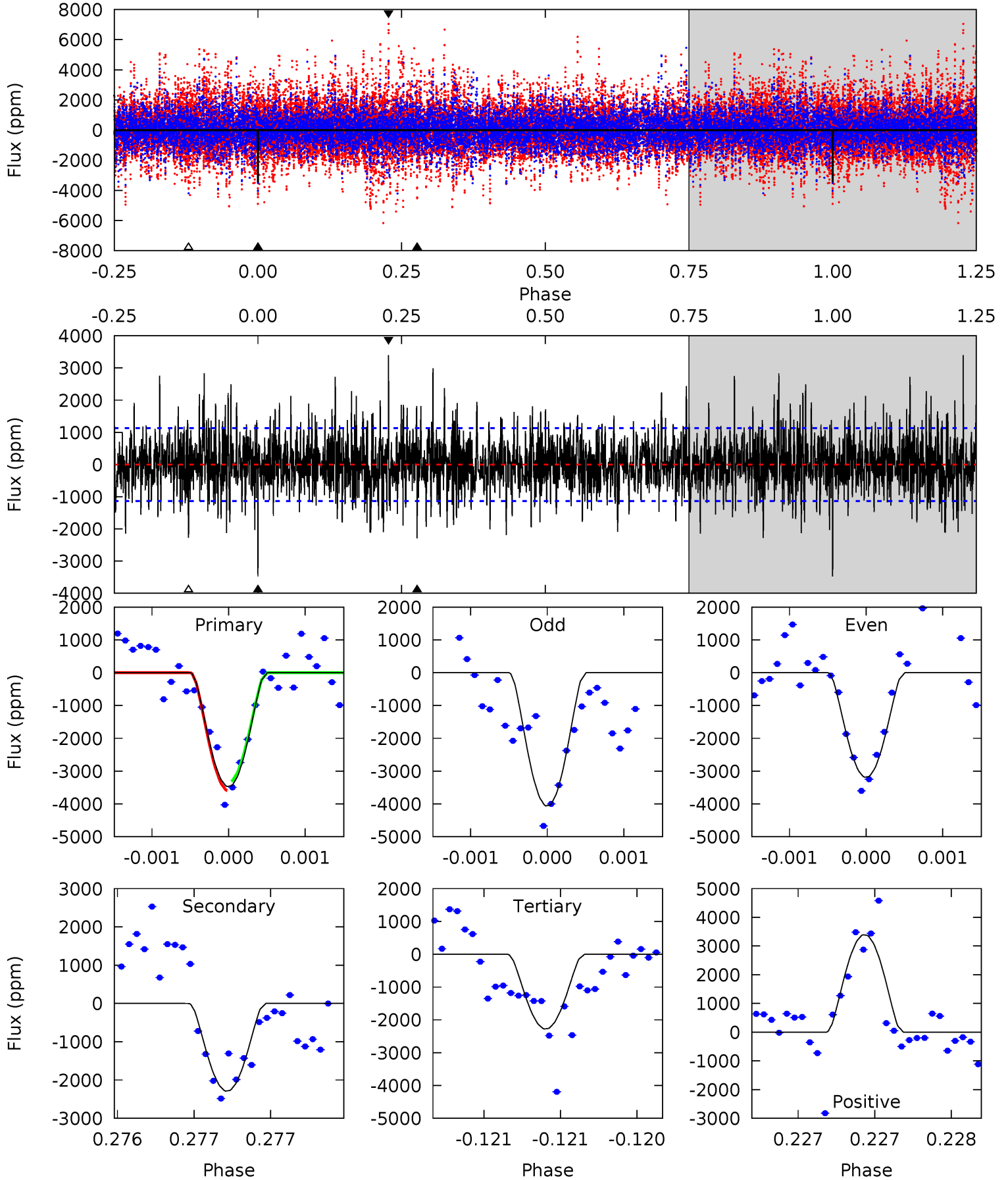




# DV Model-Shift Uniqueness Test

008264274-04, P = 329.701335 Days, E = 178.700403 Days

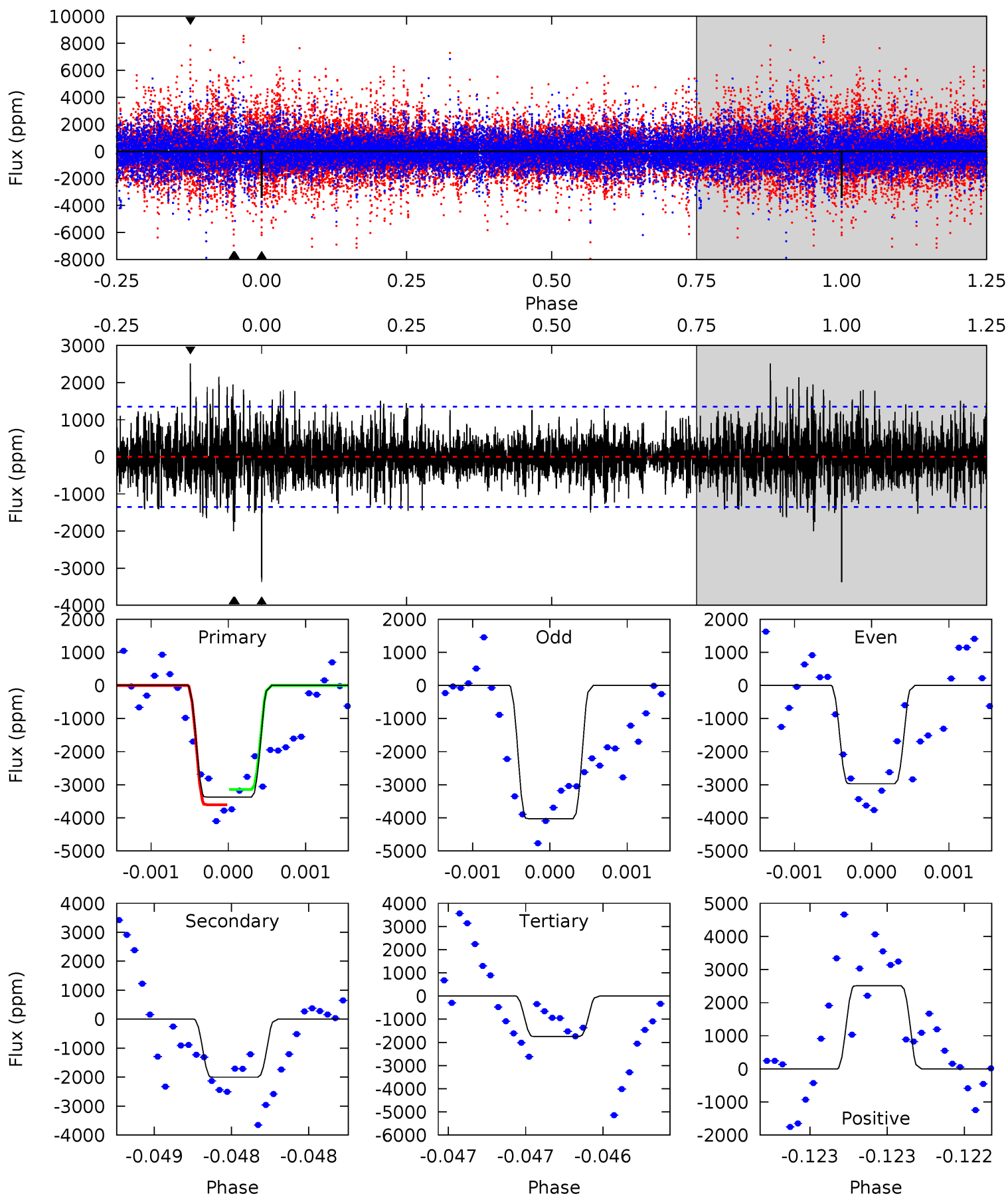
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	11.1	11.0	16.4	5.49	3.35	3.33	5.78	0.37	0.06	-5.35	1.96	1.00	0.49	0.68



# Alt Model-Shift Uniqueness Test

008264274-04, P = 329.703238 Days, E = 178.712801 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	8.18	7.14	10.3	5.53	3.41	2.00	6.65	3.53	1.04	-2.08	2.02	0.85	0.43	0.93



### Stellar Parameters For KIC 008264274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7850^{+218}_{-327}$	$3.743^{+0.417}_{-0.074}$	$-0.100^{+0.200}_{-0.350}$	$3.062^{+0.430}_{-1.375}$	$1.891^{+0.103}_{-0.410}$	$0.093^{+0.306}_{-0.029}$
	+3%/-4%	+11%/-2%	+200%/-350%	+14%/-45%	+5%/-22%	+329%/-31%
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 008264274-04 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-2289 \pm 207$	$43.26^{+43.89}_{-27.85}$	$760^{+54}_{-90}$	$4537^{+2837}_{-910}$	$875^{+5862}_{-650}$
Alt.	$-2002 \pm 245$	$37.96^{+35.21}_{-25.57}$	$761^{+50}_{-88}$	$4662^{+3329}_{-971}$	$1022^{+7837}_{-747}$

$T_{max}$  = 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  $A_{obs} \gg 1.0$

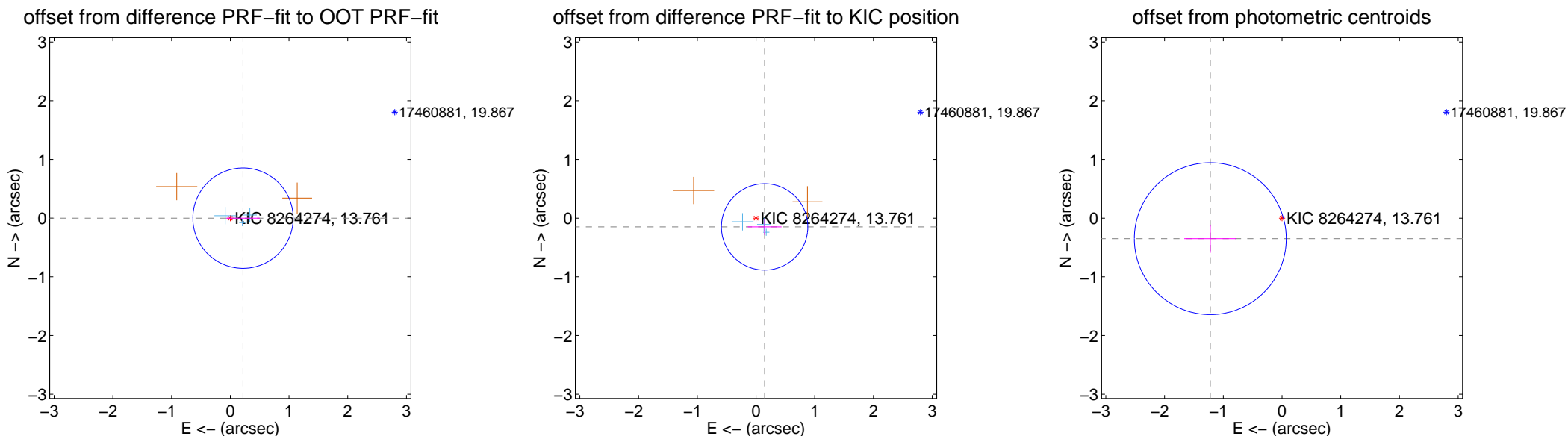
## DV Centroid Data

Supplemental centroid analysis for 008264274-04. Kepler magnitude: 13.76. Transit SNR 8.36

There are 3 quarters with good PRF difference image offsets

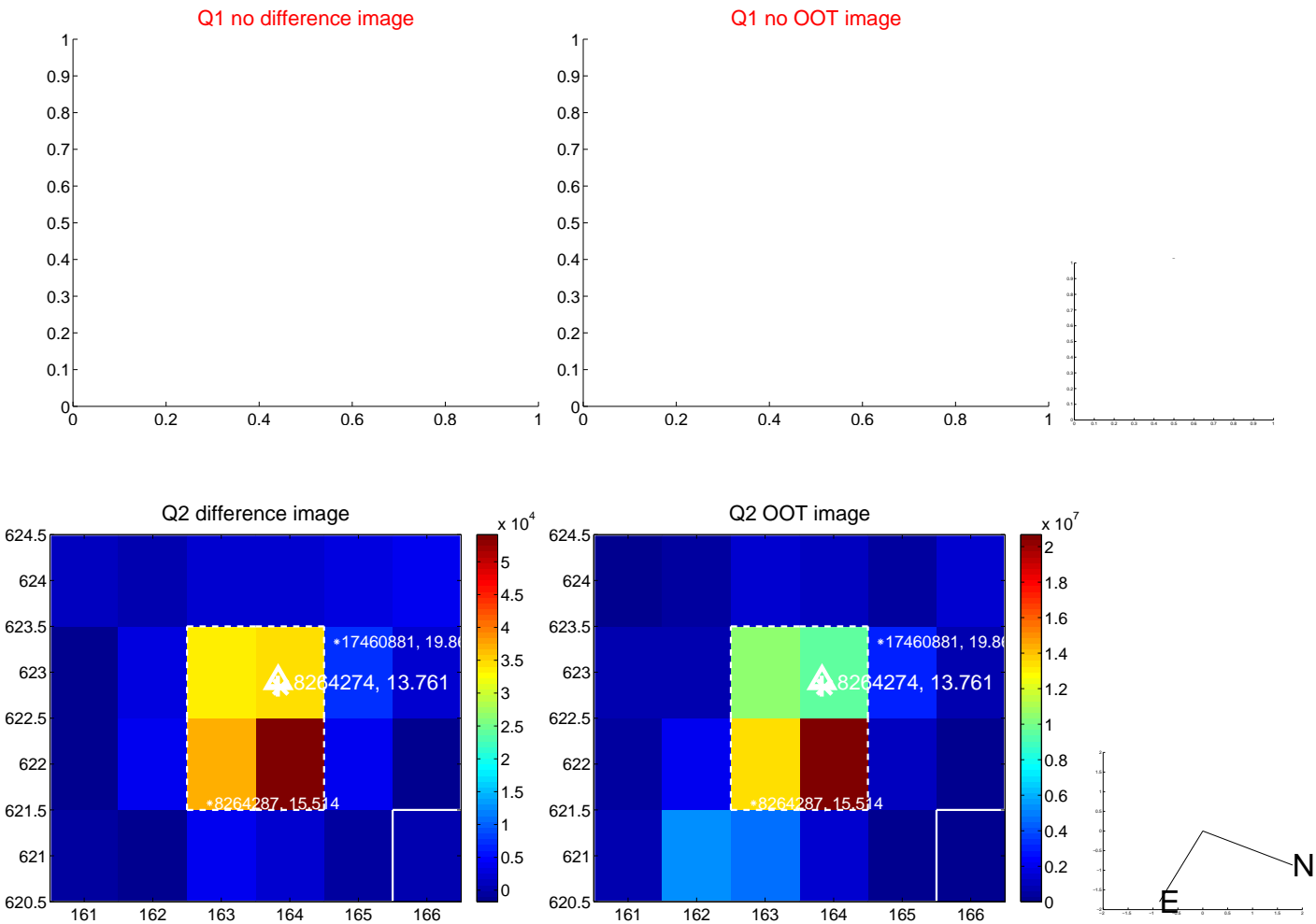
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.216 \pm 0.285$	0.76	$-0.216 \pm 0.285$	$-0.001 \pm 0.114$
PRF-fit source offset from KIC position	$0.209 \pm 0.245$	0.85	$-0.147 \pm 0.287$	$-0.149 \pm 0.138$
photometric centroid source offset	$1.27 \pm 0.43$	2.95	$1.22 \pm 0.44$	$-0.35 \pm 0.24$

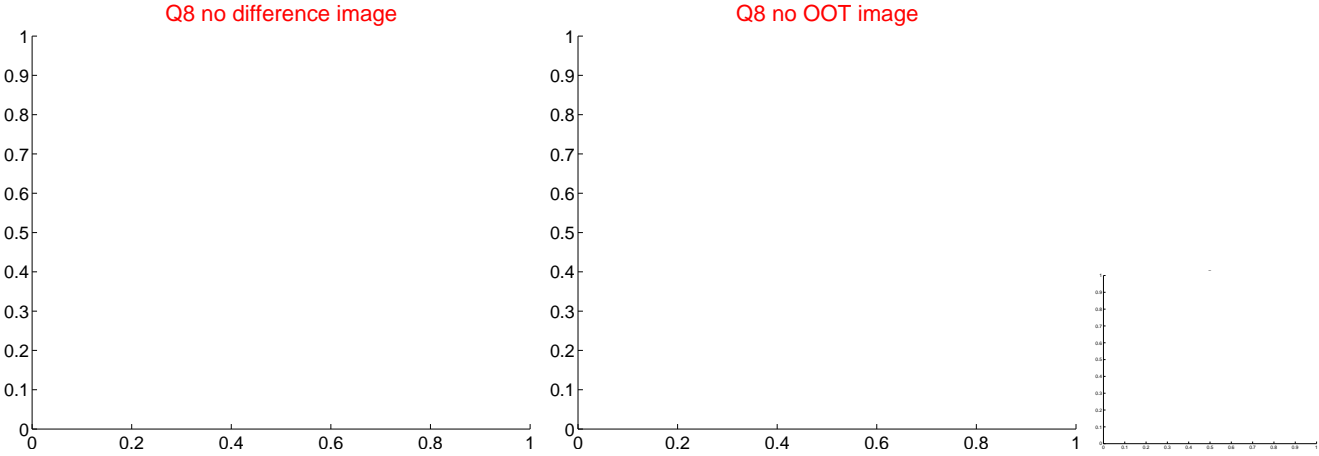
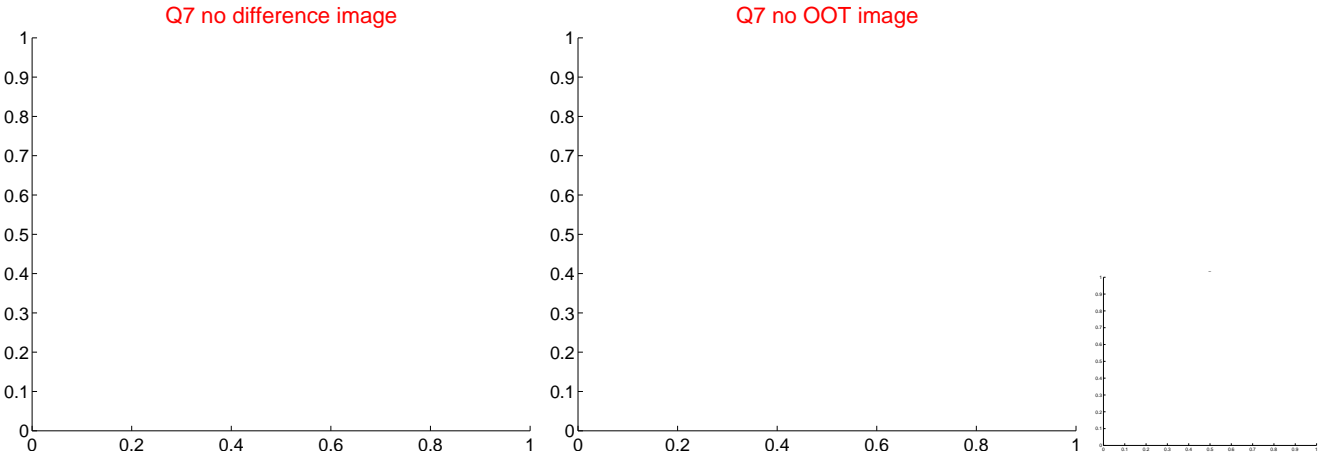
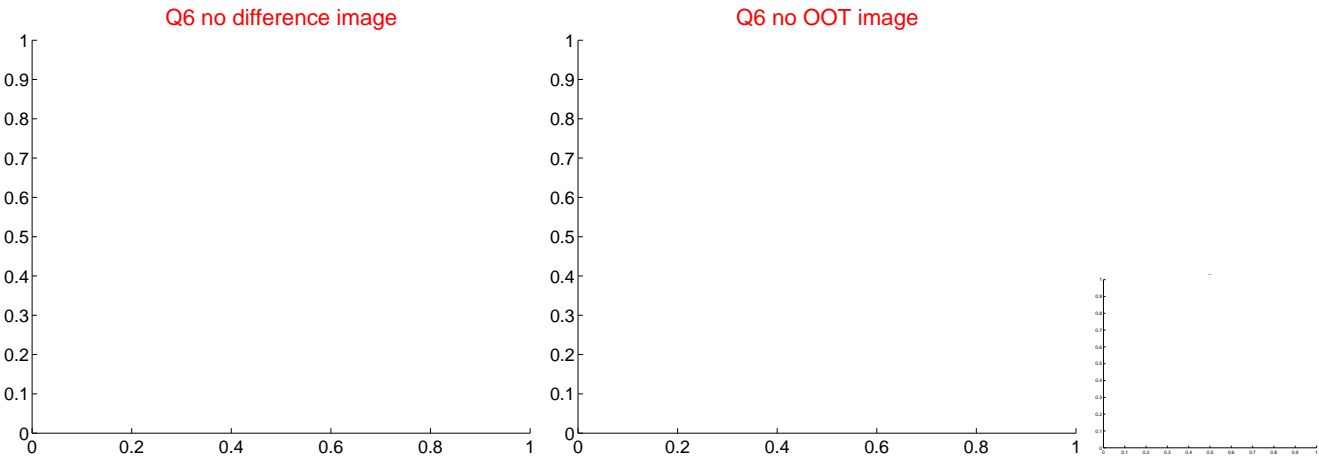
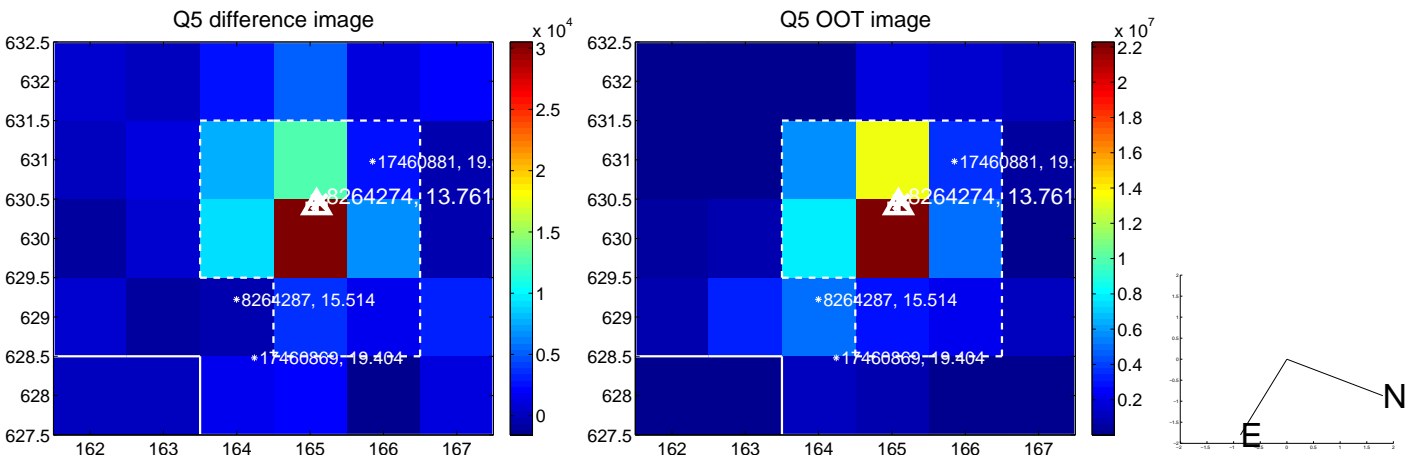


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

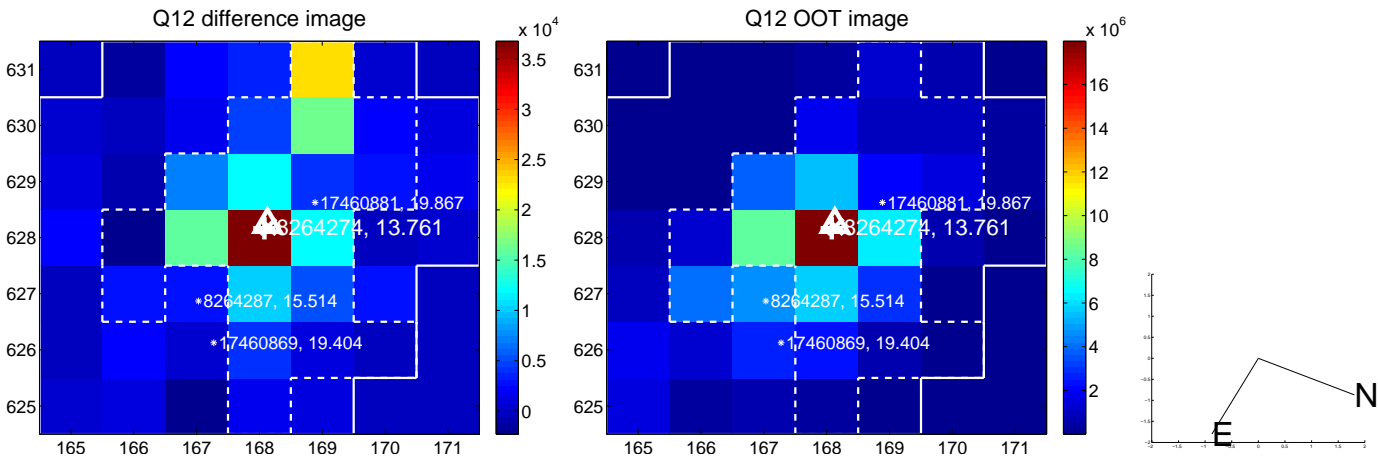
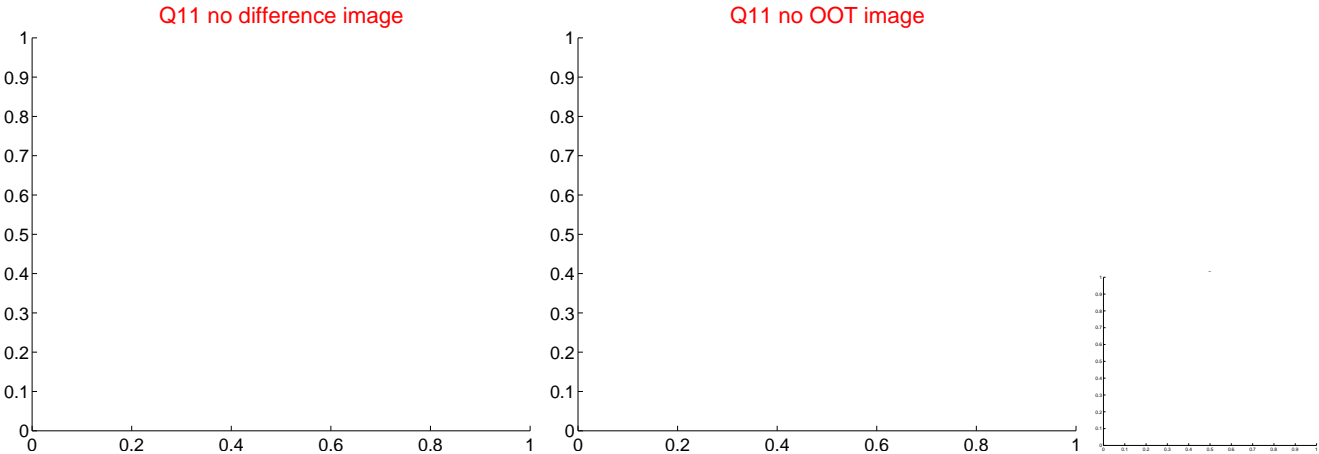
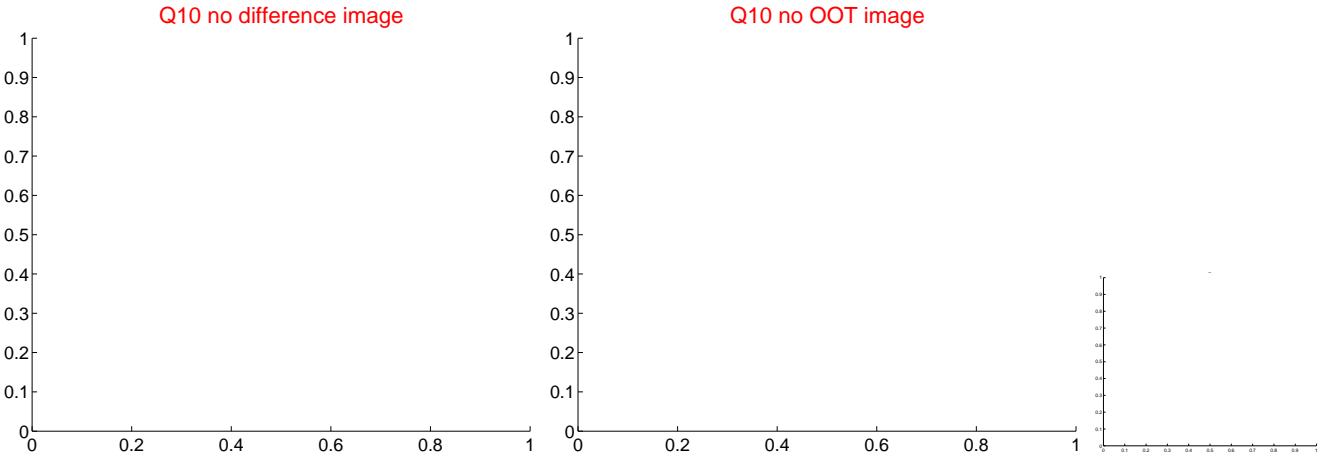
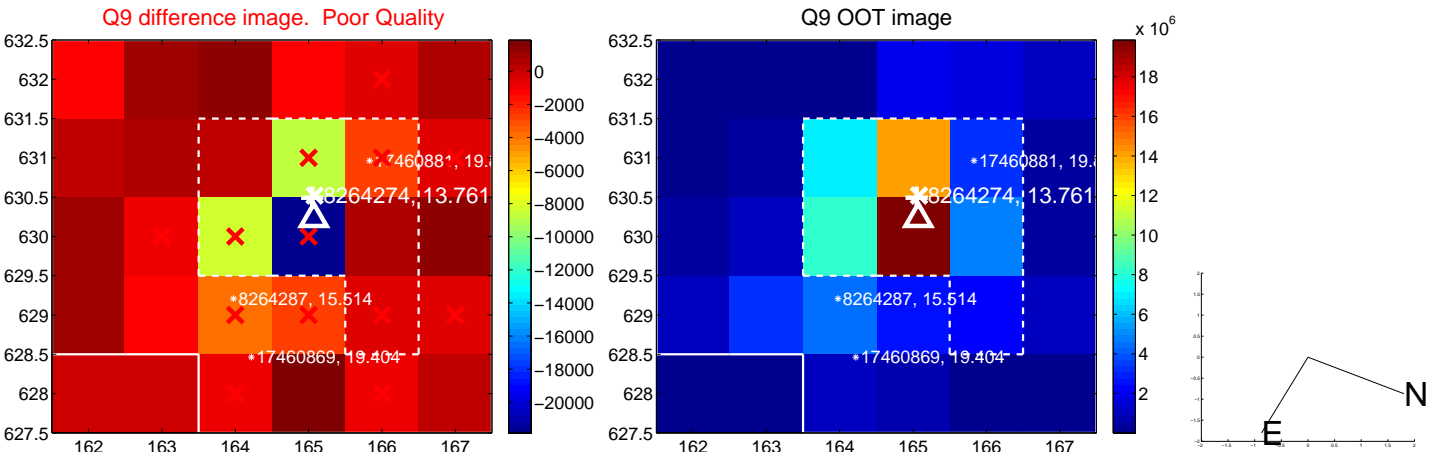
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

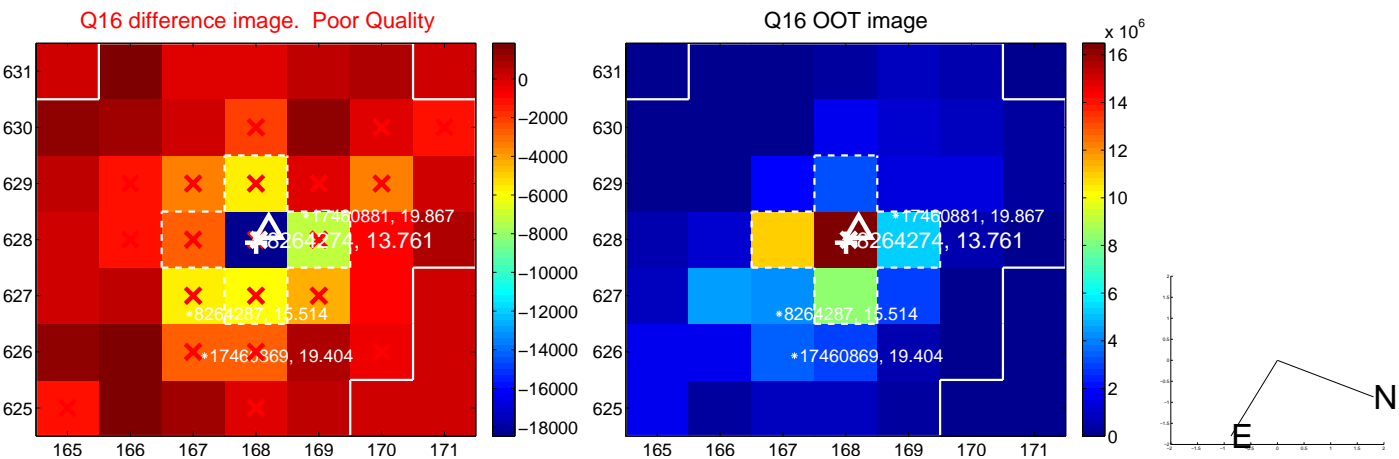
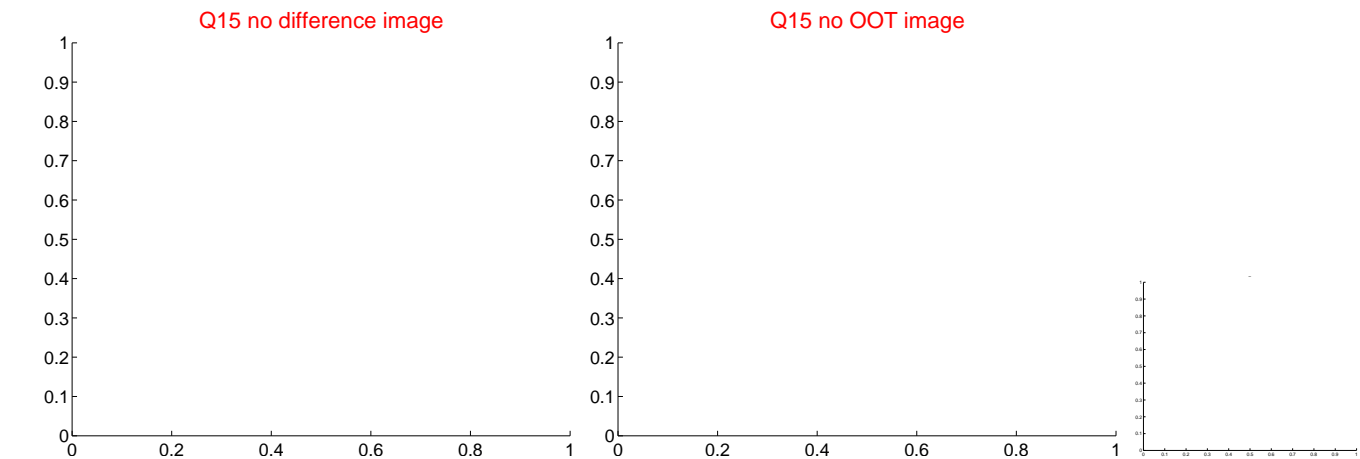
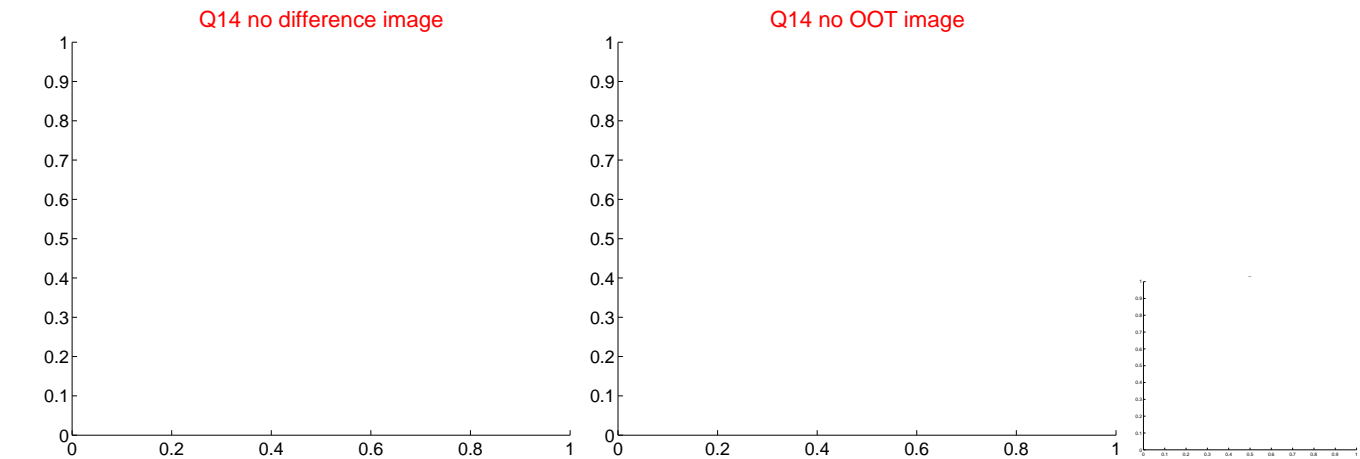
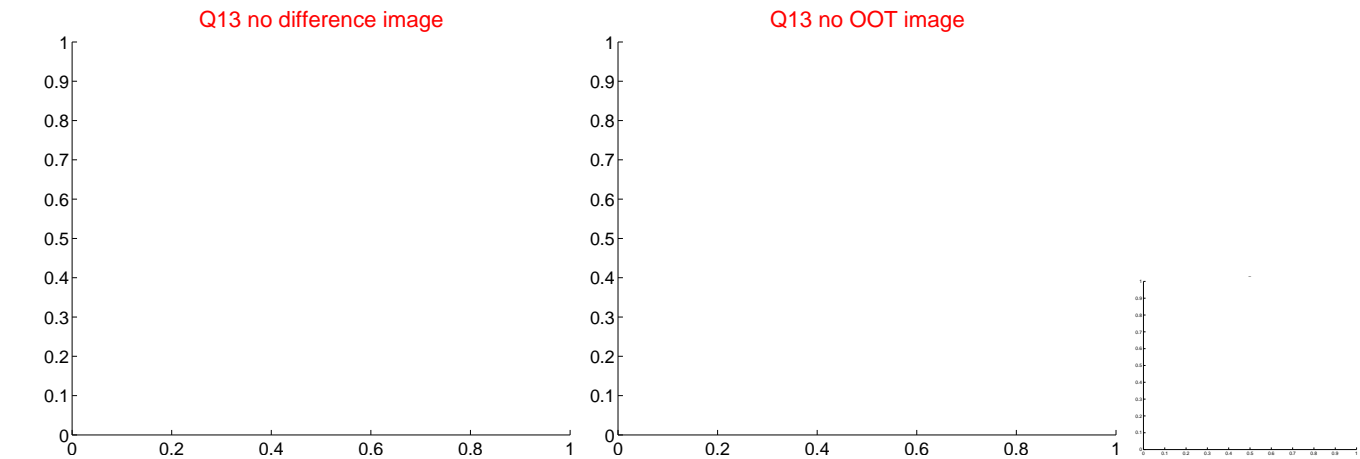


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

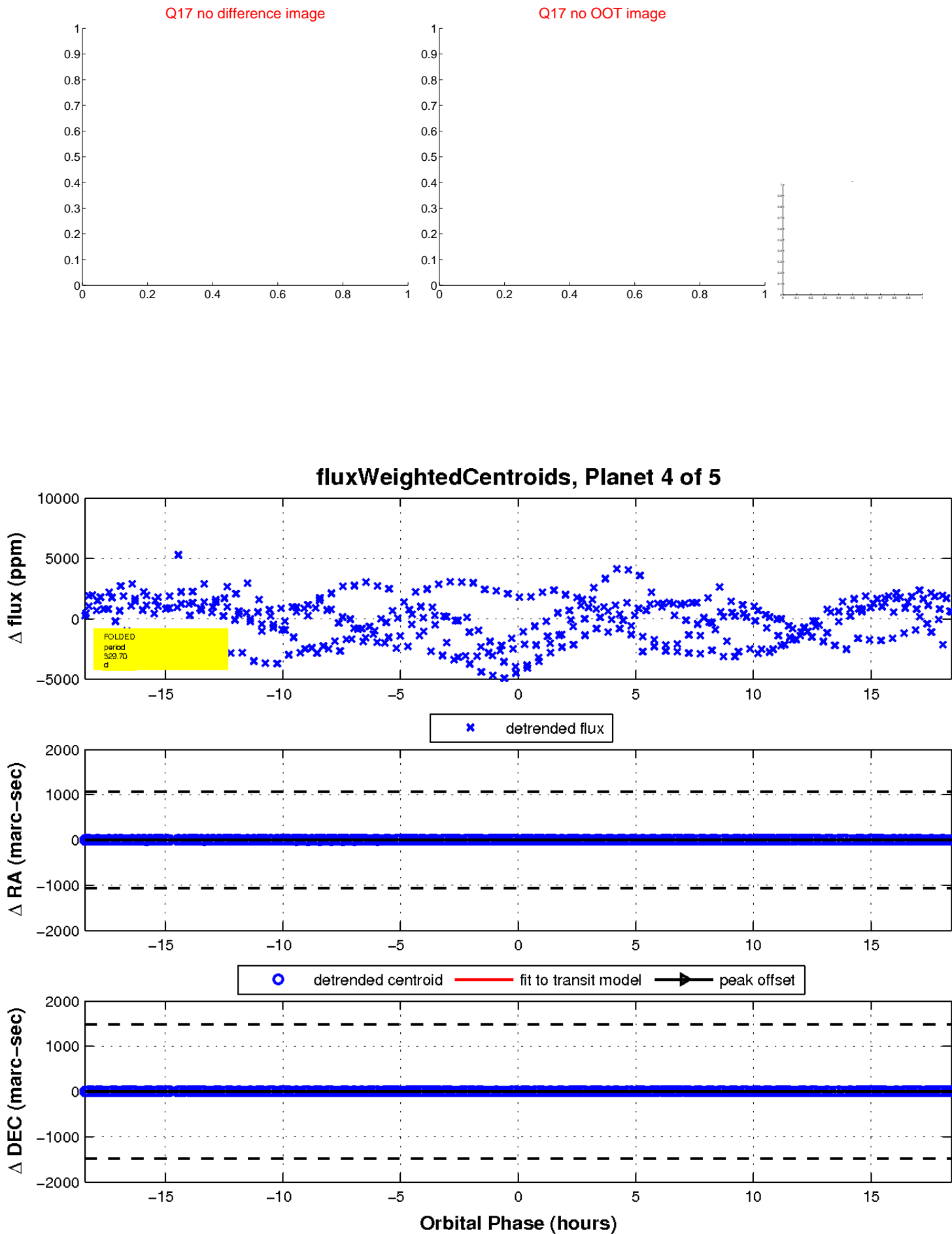




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

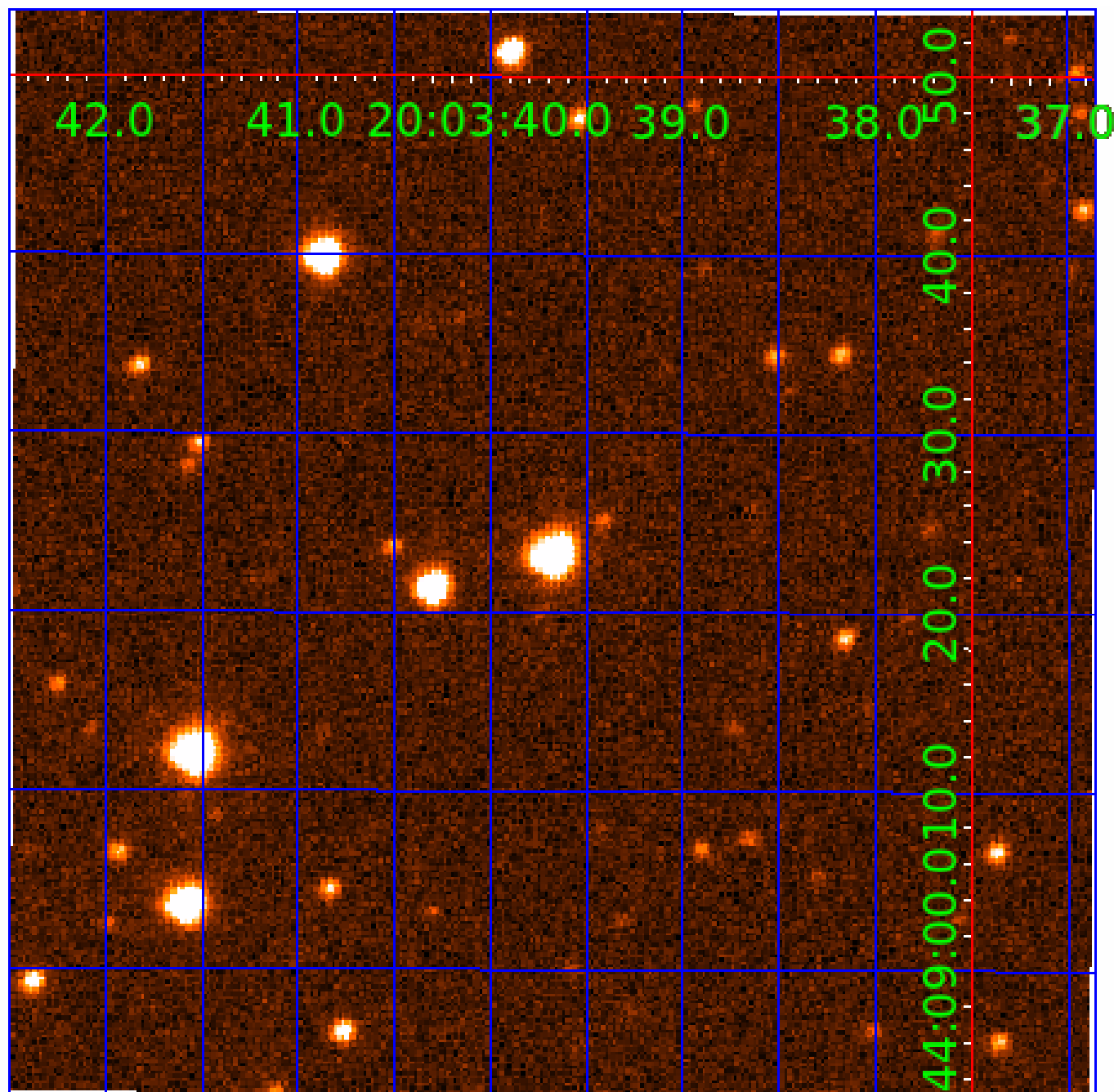


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 008264274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008264274-01	OBS	No	0.815562	131.789170	75.5	3.422	9.0	6.3	3.06	7850	3.09	71411.34
008264274-02	OBS	No	137.953290	134.207957	1817.8	17.169	8.9	7.8	3.06	7850	14.71	76.34
008264274-03	OBS	No	512.100023	421.072268	4304.6	7.037	8.1	9.1	3.06	7850	35.80	13.28
008264274-04	OBS	No	329.701335	178.700403	3461.4	6.158	7.7	8.4	3.06	7850	32.44	23.89
008264274-05	OBS	No	463.415952	187.437241	3469.1	14.322	7.3	7.7	3.06	7850	21.77	15.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008264274-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008264274-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008264274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008264274-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
008264274-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

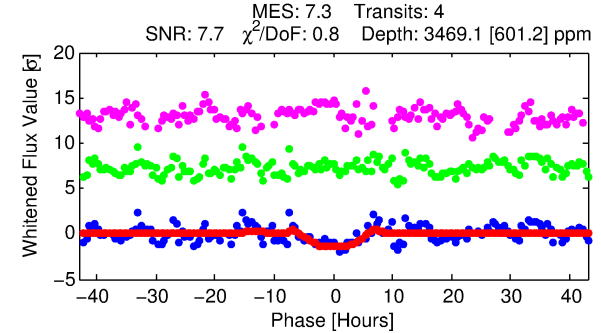
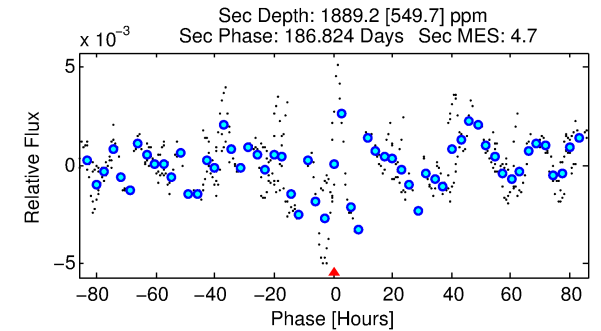
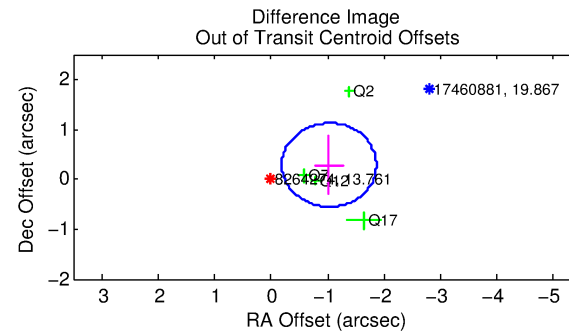
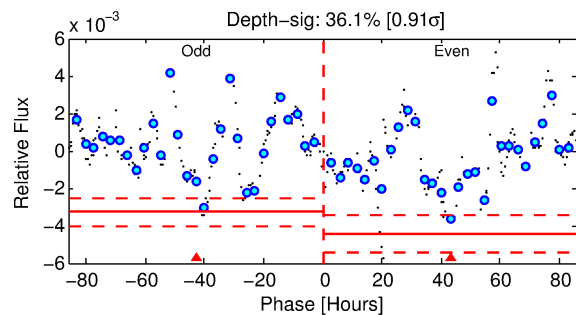
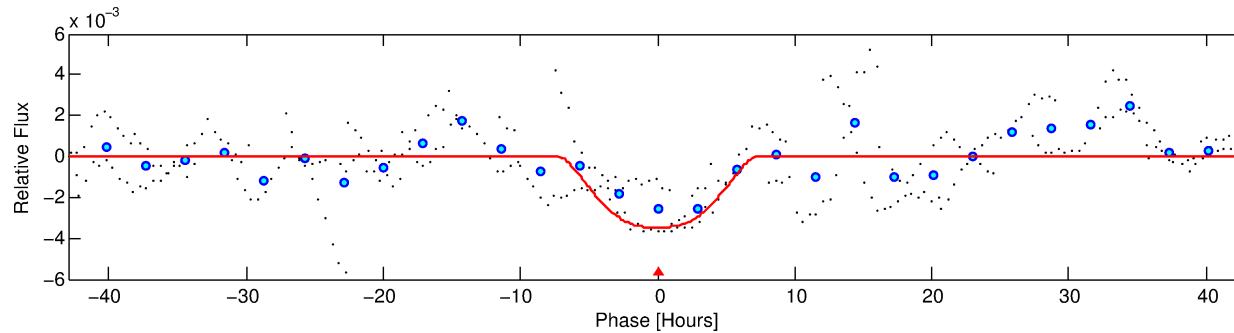
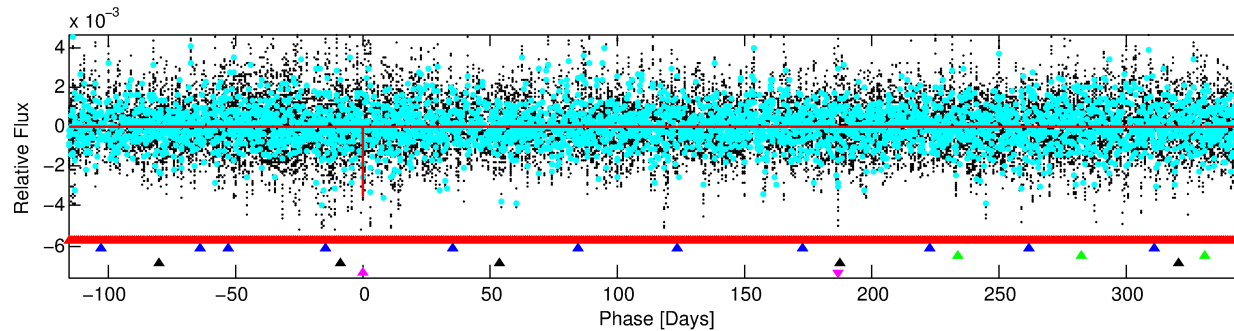
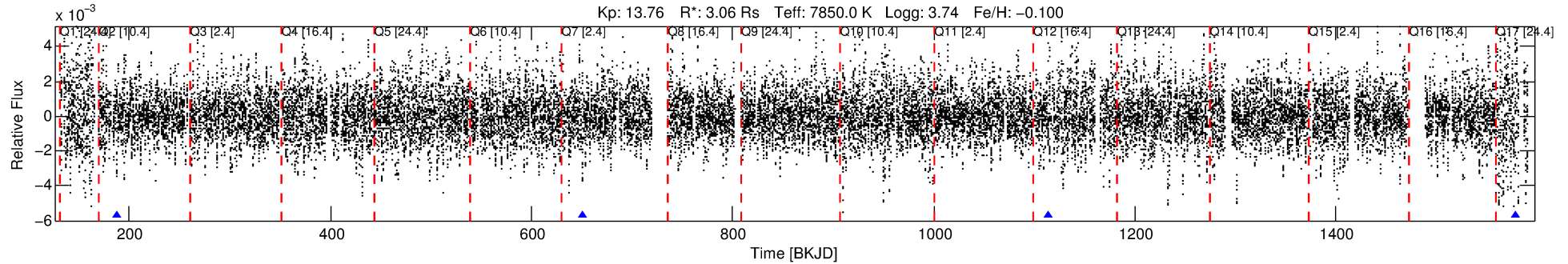
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008264274-05

No Significant Match Found

# DV One-Page Summary

KIC: 8264274 Candidate: 5 of 5 Period: 463.416 d



## DV Fit Results:

Period = 463.41595 [0.03784] d  
Epoch = 187.4372 [0.0494] BKJD  
Rp/R\* = 0.0651 [0.0073]  
a/R\* = 127.33 [26.07]  
b = 0.93 [0.03]  
Seff = 15.17 [11.02]  
Teq = 503 [91] K  
Rp = 21.77 [10.07] Re  
a = 1.4499 [0.6354] AU  
Ag = 4611.74 [3671.19] [1.26 $\sigma$ ]  
Teffp = 6412 [645] K [9.07 $\sigma$ ]

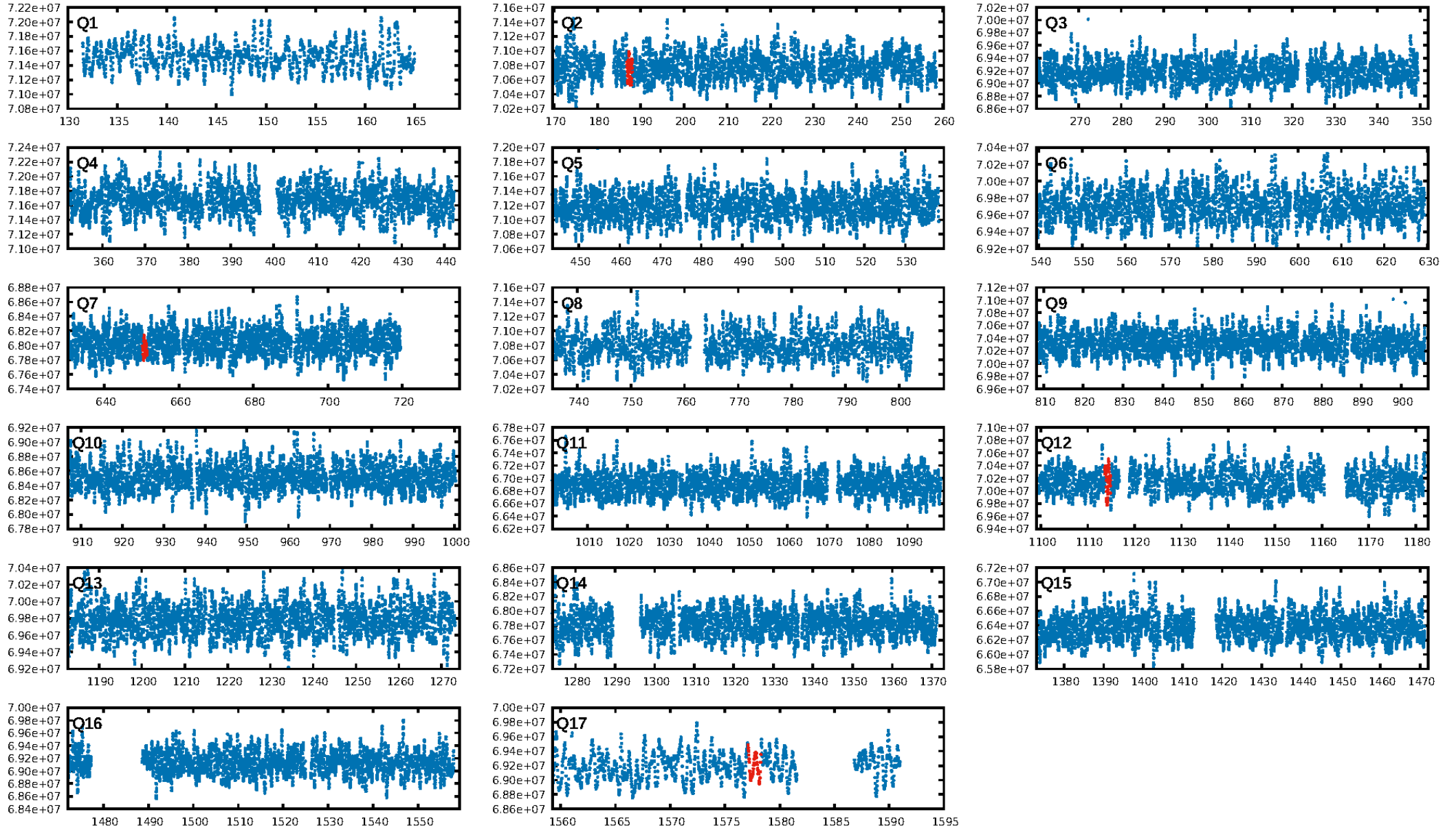
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [205.85 $\sigma$ ]  
LongPeriod-sig: 100.0% [73.22 $\sigma$ ]  
ModelChiSquare2-sig: 51.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.20e-08  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.2386  
Centroid-sig: 29.2%  
Centroid-so: 1.943 arcsec [4.28 $\sigma$ ]  
OotOffset-rm: 1.065 arcsec [3.81 $\sigma$ ]  
KicOffset-rm: 0.955 arcsec [3.10 $\sigma$ ]  
OotOffset-st: 1/1/1/1 [4]  
KicOffset-st: 1/1/1/1 [4]  
DiffImageQuality-fgm: 0.75 [3/4]  
DiffImageOverlap-fno: 0.00 [0/4]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:35:00 Z

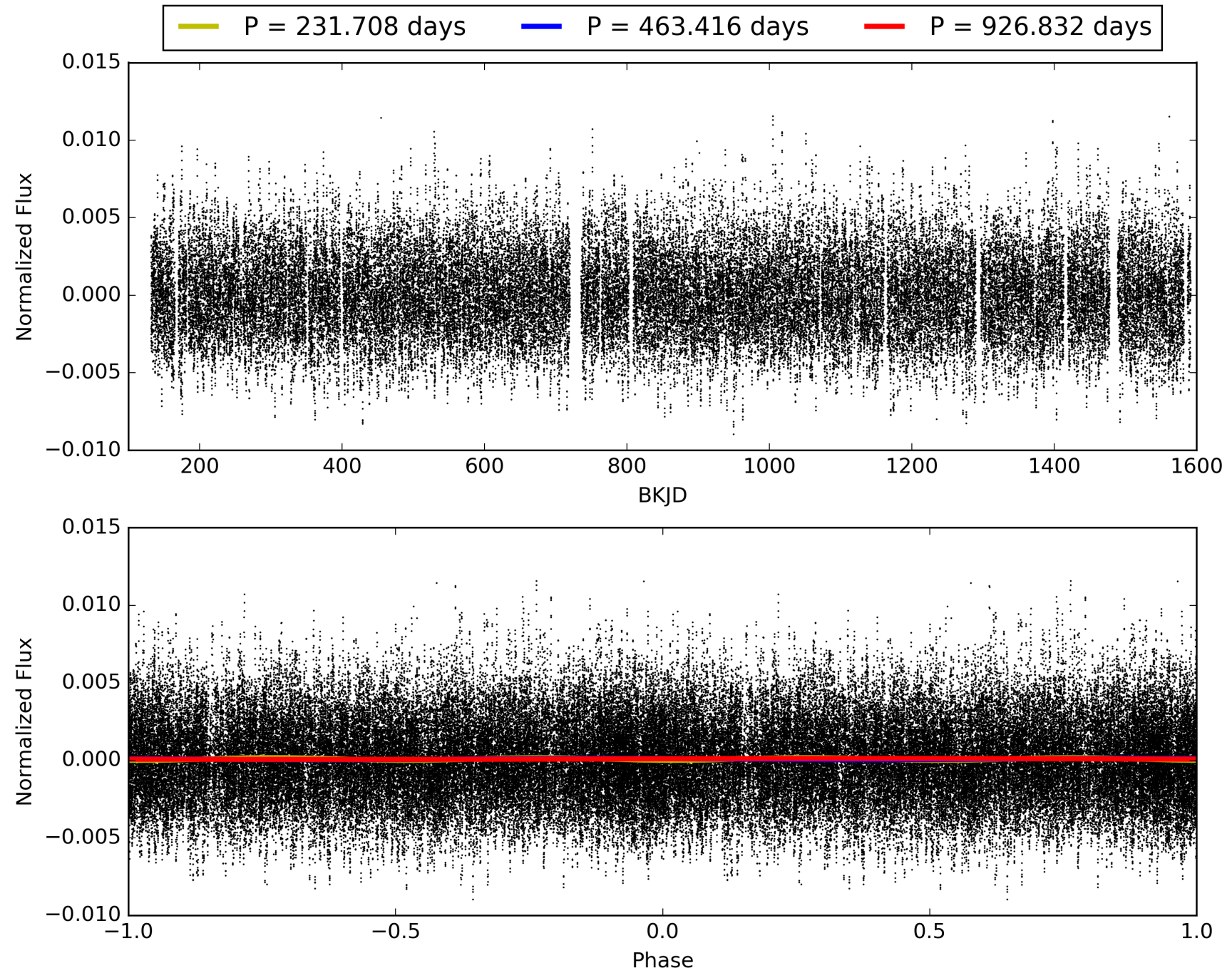
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 008264274-05, PDC Light Curves





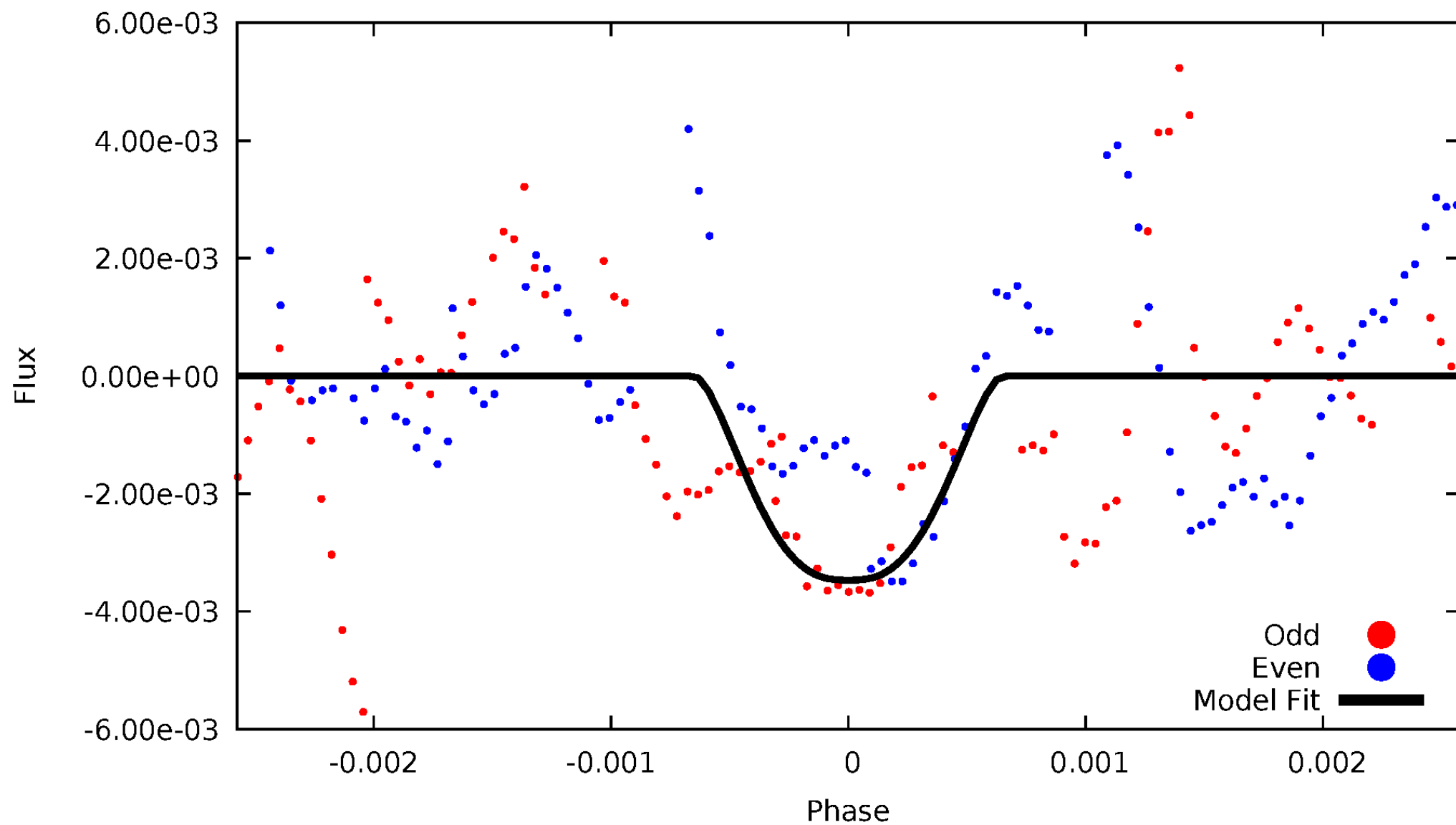
TCE 008264274-05





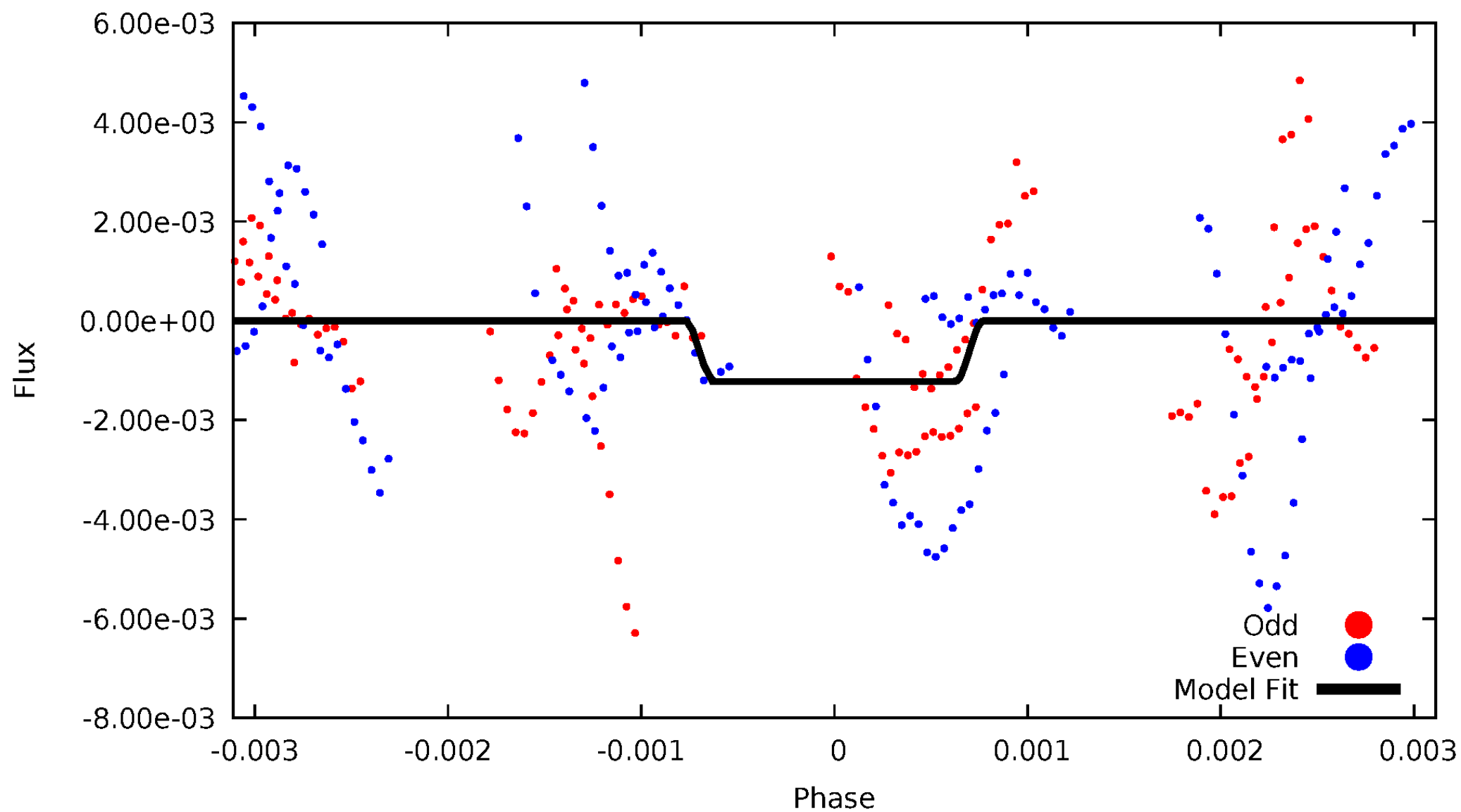
# DV Odd/Even

TCE 008264274-05



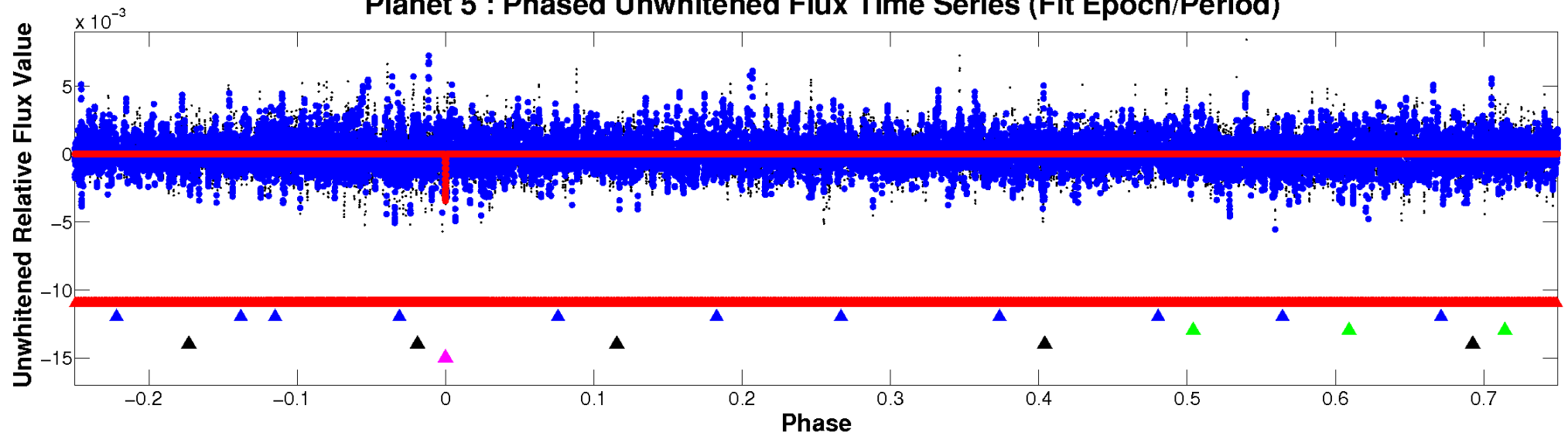
# ALT Odd/Even

TCE 008264274-05

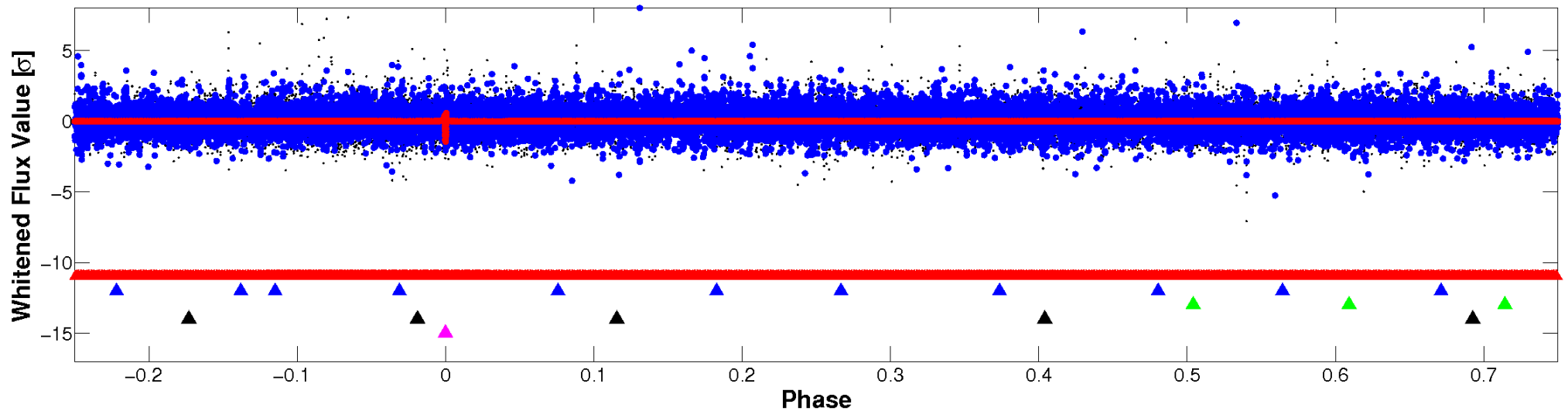


# Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

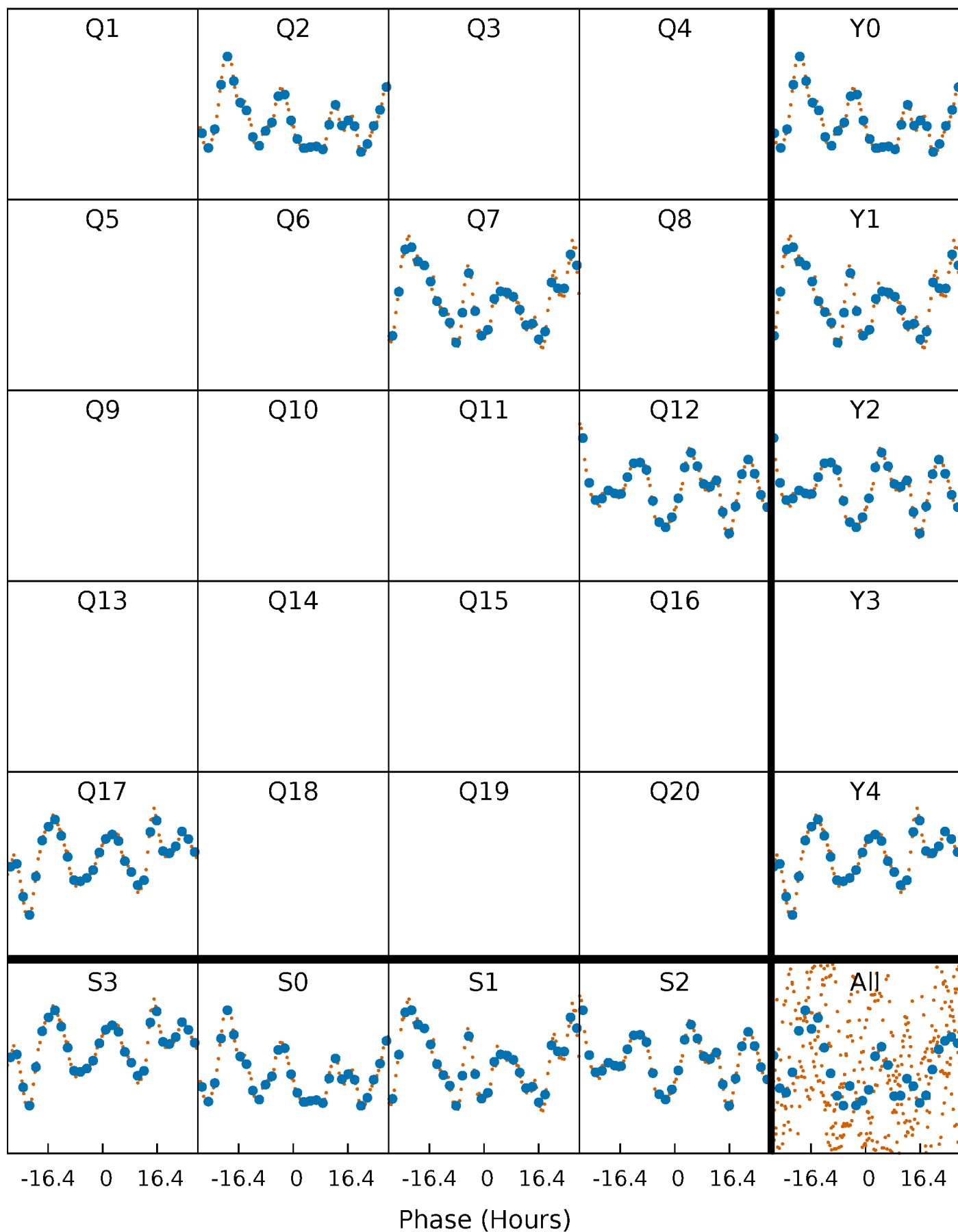


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



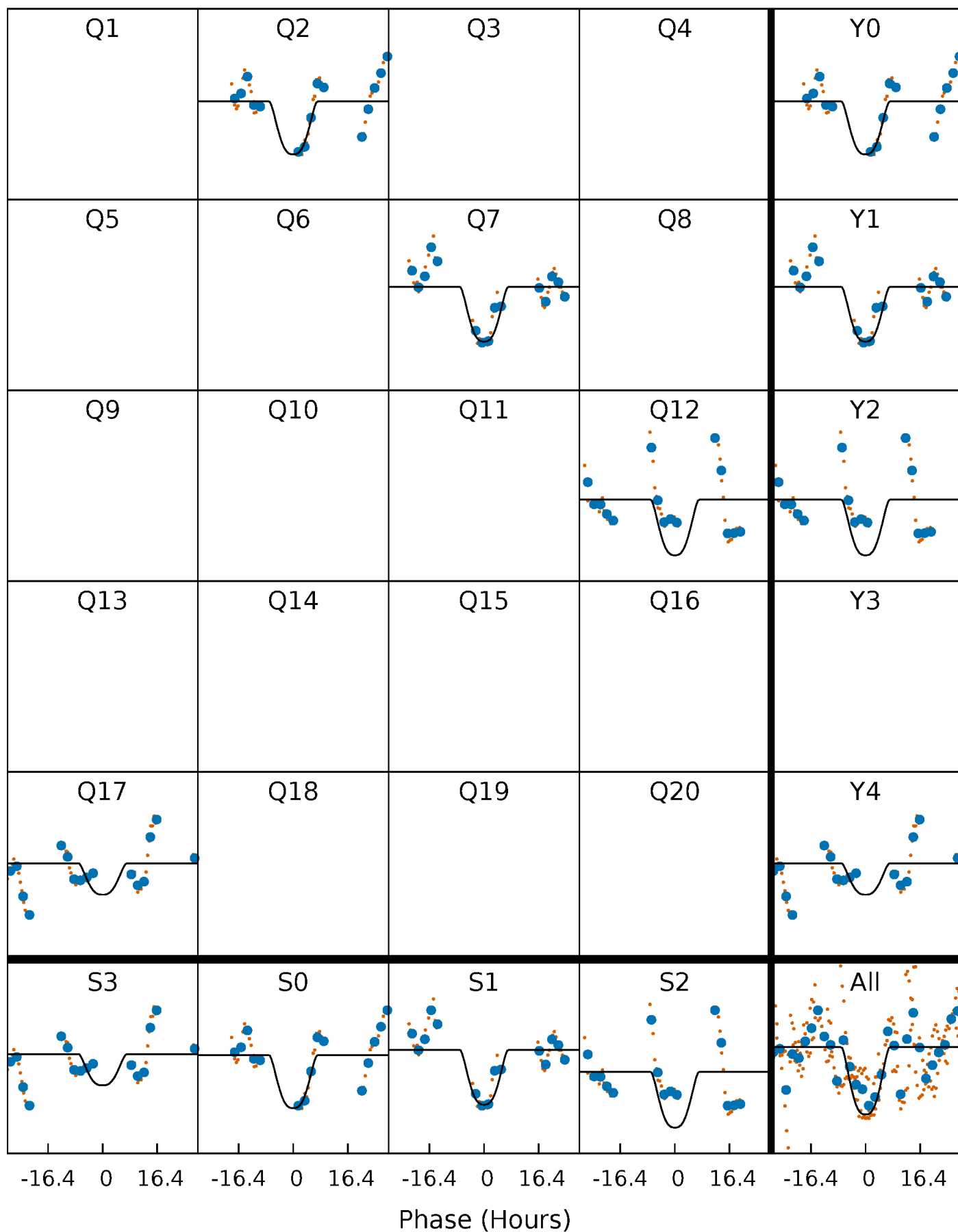
# PDC Quarter-Phased Transit Curves

TCE 008264274-05     $P=463.415952$  Days     $T_0=187.437241$  (BKJD)



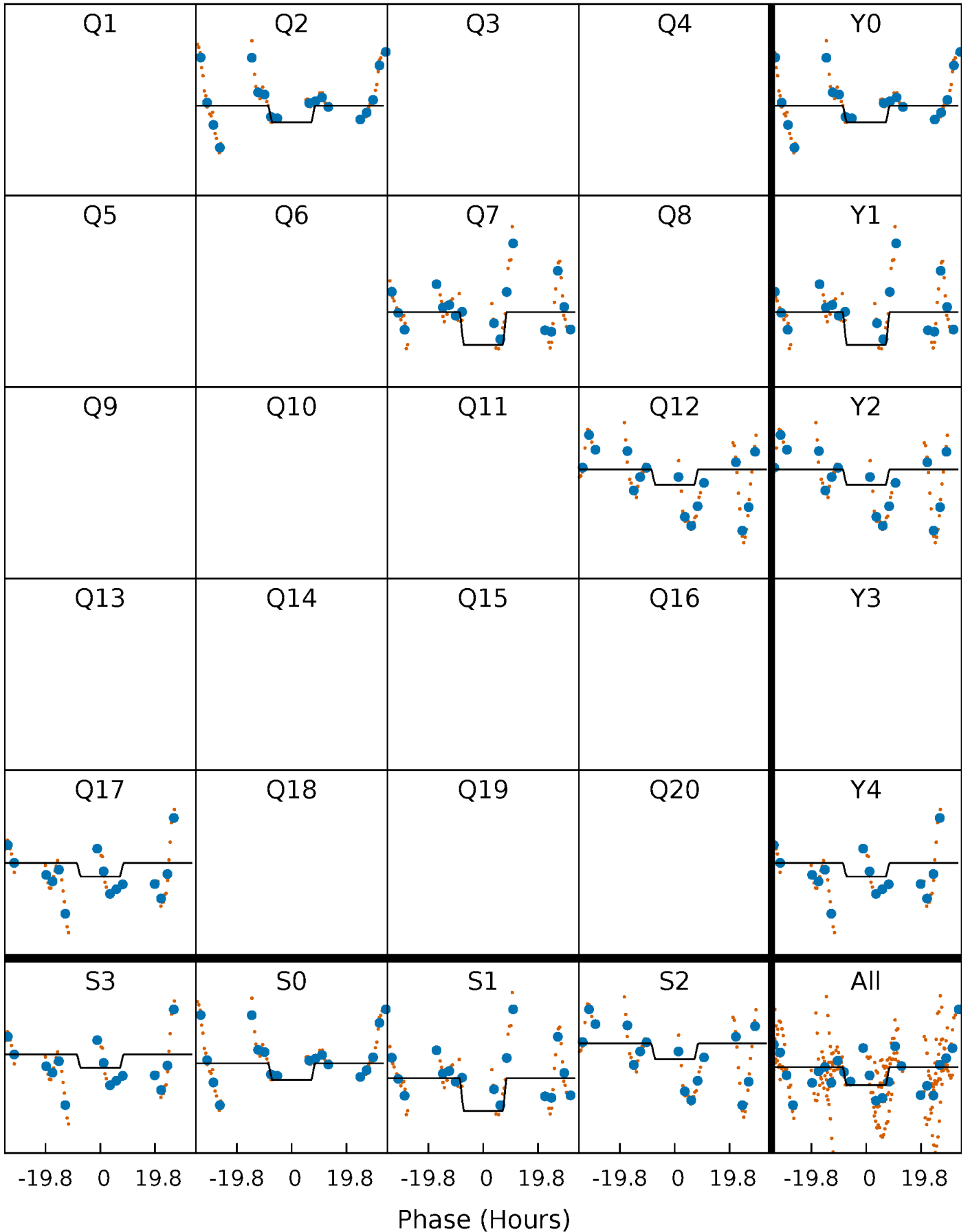
# DV Quarter-Phased Transit Curves

TCE 008264274-05     $P=463.415952$  Days     $T_0=187.437241$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

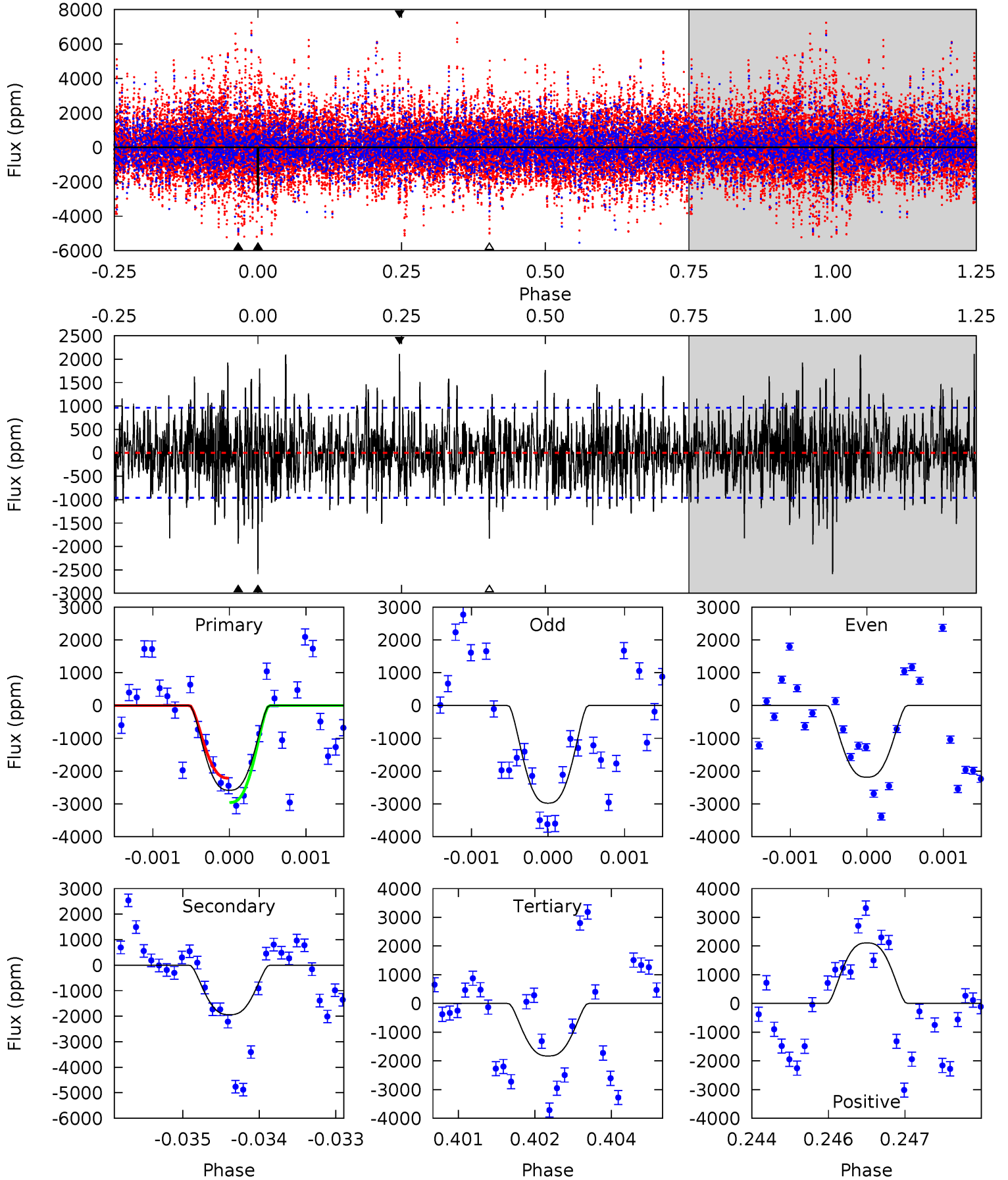
TCE 008264274-05     $P=463.317351$  Days     $T_0=187.263476$  (BKJD)



# DV Model-Shift Uniqueness Test

008264274-05, P = 463.415952 Days, E = 187.437241 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	10.9	10.3	11.9	5.41	3.23	2.93	4.25	2.68	0.62	-0.95	2.23	0.96	0.45	2.10

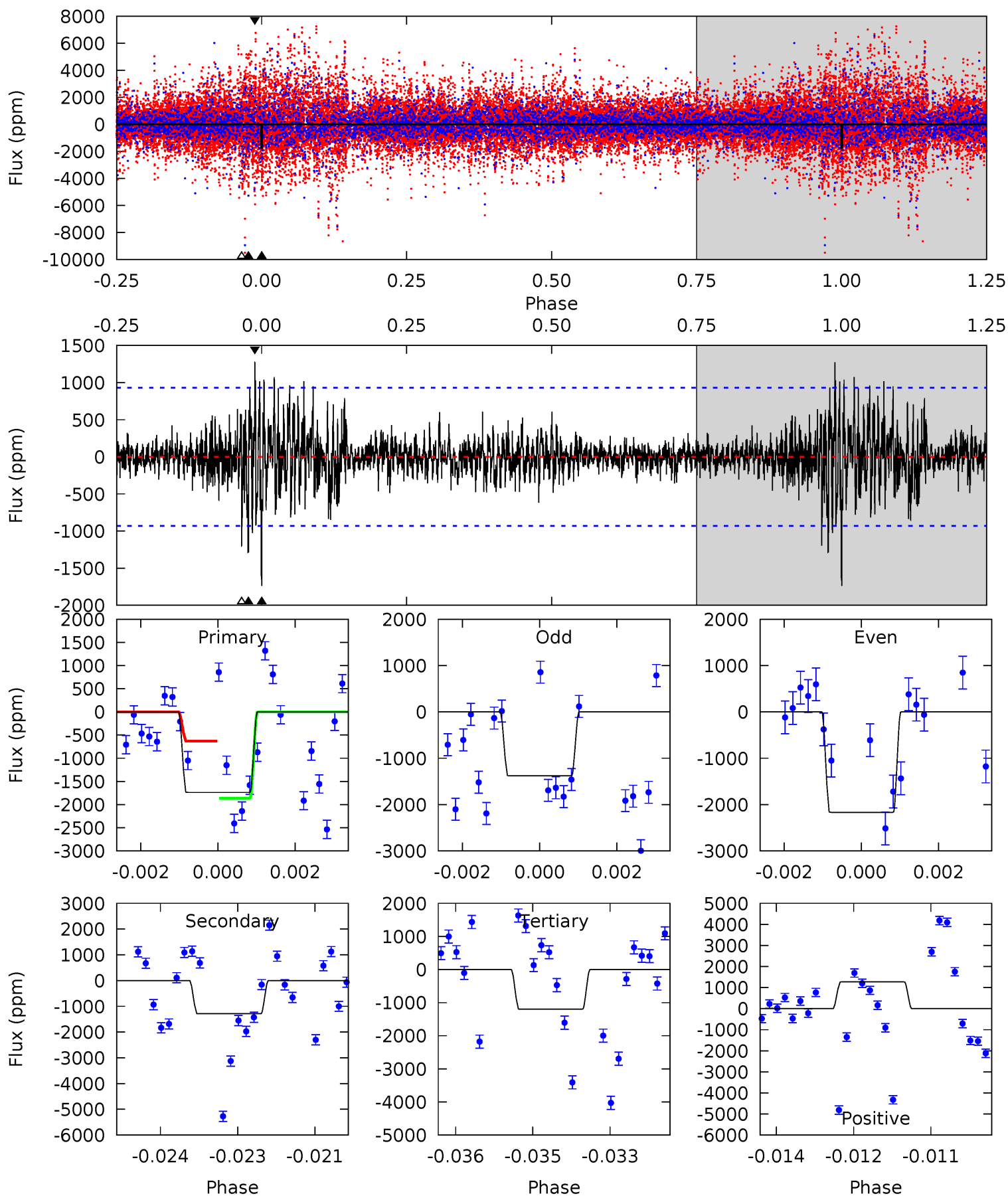




# Alt Model-Shift Uniqueness Test

008264274-05, P = 463.317351 Days, E = 187.263476 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	7.45	6.92	7.34	5.38	3.17	1.36	3.13	2.70	0.53	0.10	2.21	1.25	0.42	2.56



### Stellar Parameters For KIC 008264274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$7850^{+218}_{-327}$	$3.743^{+0.417}_{-0.074}$	$-0.100^{+0.200}_{-0.350}$	$3.062^{+0.430}_{-1.375}$	$1.891^{+0.103}_{-0.410}$	$0.093^{+0.306}_{-0.029}$
	+3%/-4%	+11%/-2%	+200%/-350%	+14%/-45%	+5%/-22%	+329%/-31%
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 008264274-05 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1941 \pm 178$	$19.92^{+3.75}_{-4.90}$	$678^{+46}_{-80}$	$6305^{+469}_{-407}$	$5607^{+3788}_{-1679}$
Alt.	$-1289 \pm 173$	$10.73^{+3.12}_{-3.03}$	$678^{+49}_{-81}$	$7841^{+1295}_{-898}$	$12437^{+11245}_{-4851}$

$T_{max}$  = 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  $A_{obs} \gg 1.0$

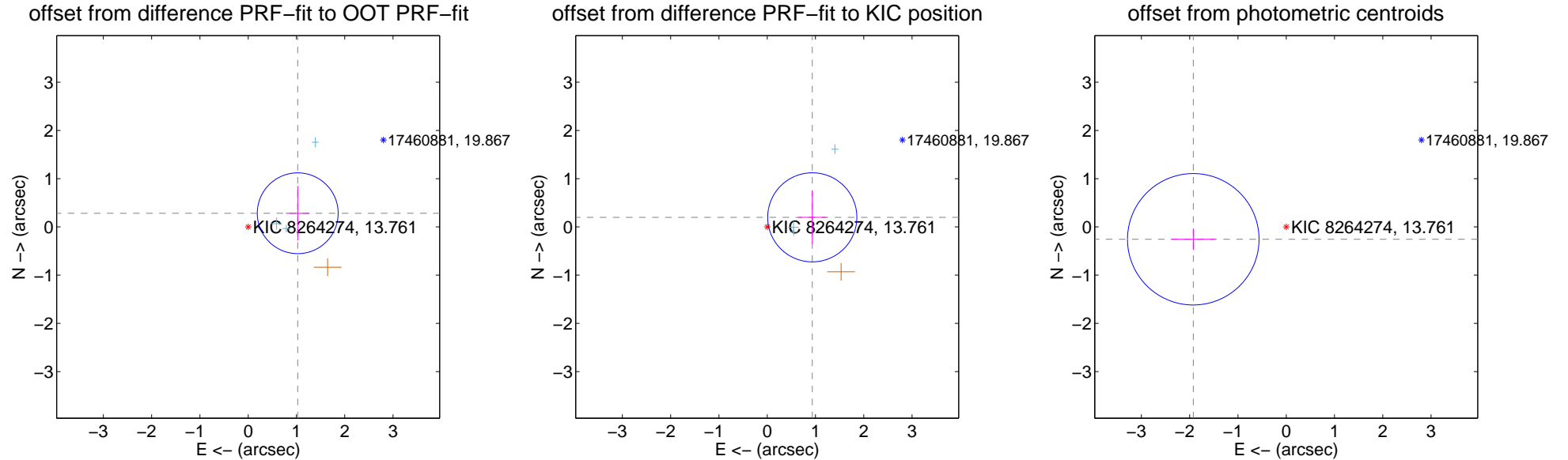
## DV Centroid Data

Supplemental centroid analysis for 008264274-05. Kepler magnitude: 13.76. Transit SNR 7.72

There are 3 quarters with good PRF difference image offsets

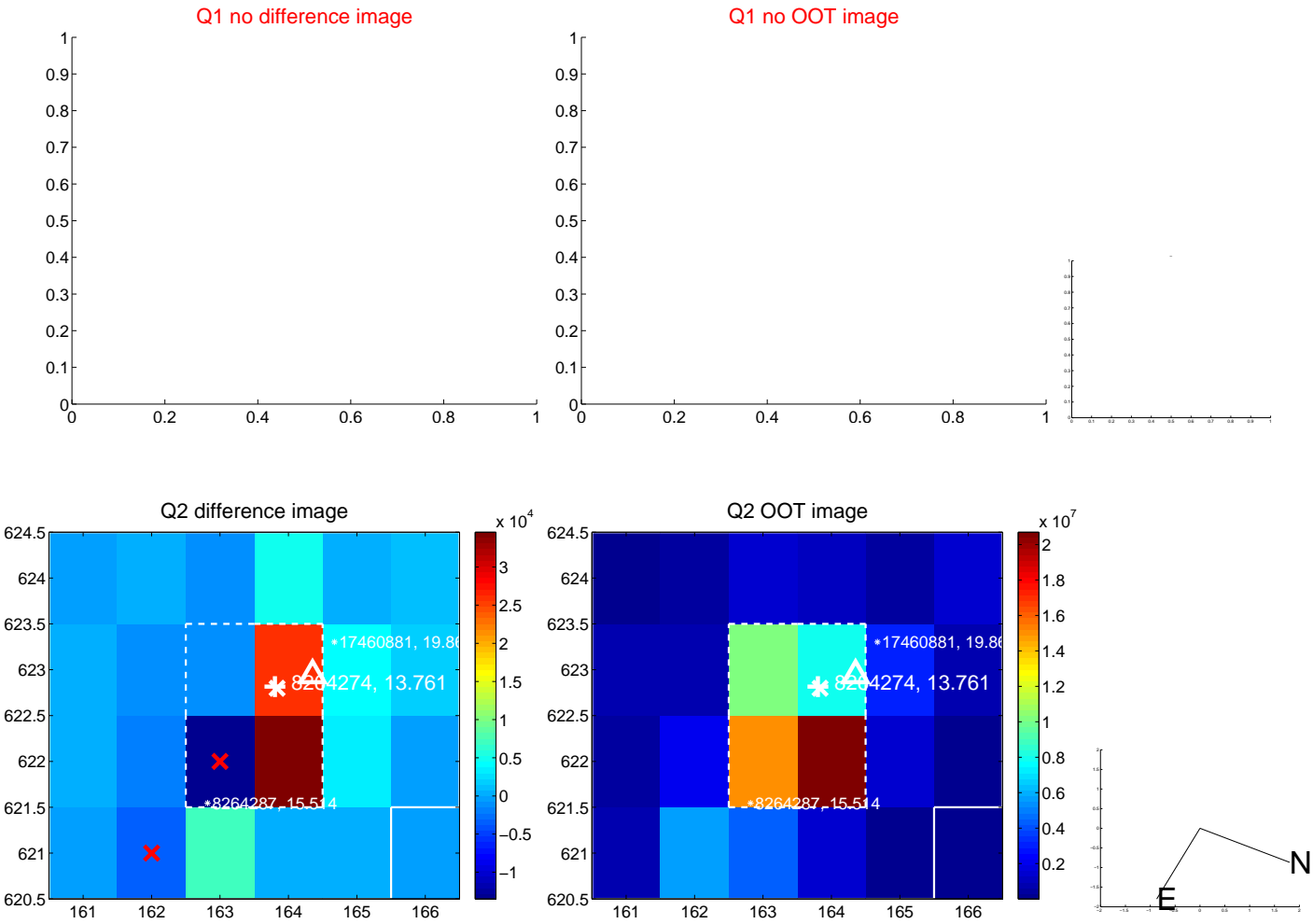
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.065 \pm 0.279$	3.81	$-1.026 \pm 0.244$	$0.283 \pm 0.567$
PRF-fit source offset from KIC position	$0.955 \pm 0.308$	3.10	$-0.934 \pm 0.292$	$0.199 \pm 0.548$
photometric centroid source offset	$1.94 \pm 0.45$	4.28	$1.93 \pm 0.46$	$-0.26 \pm 0.22$

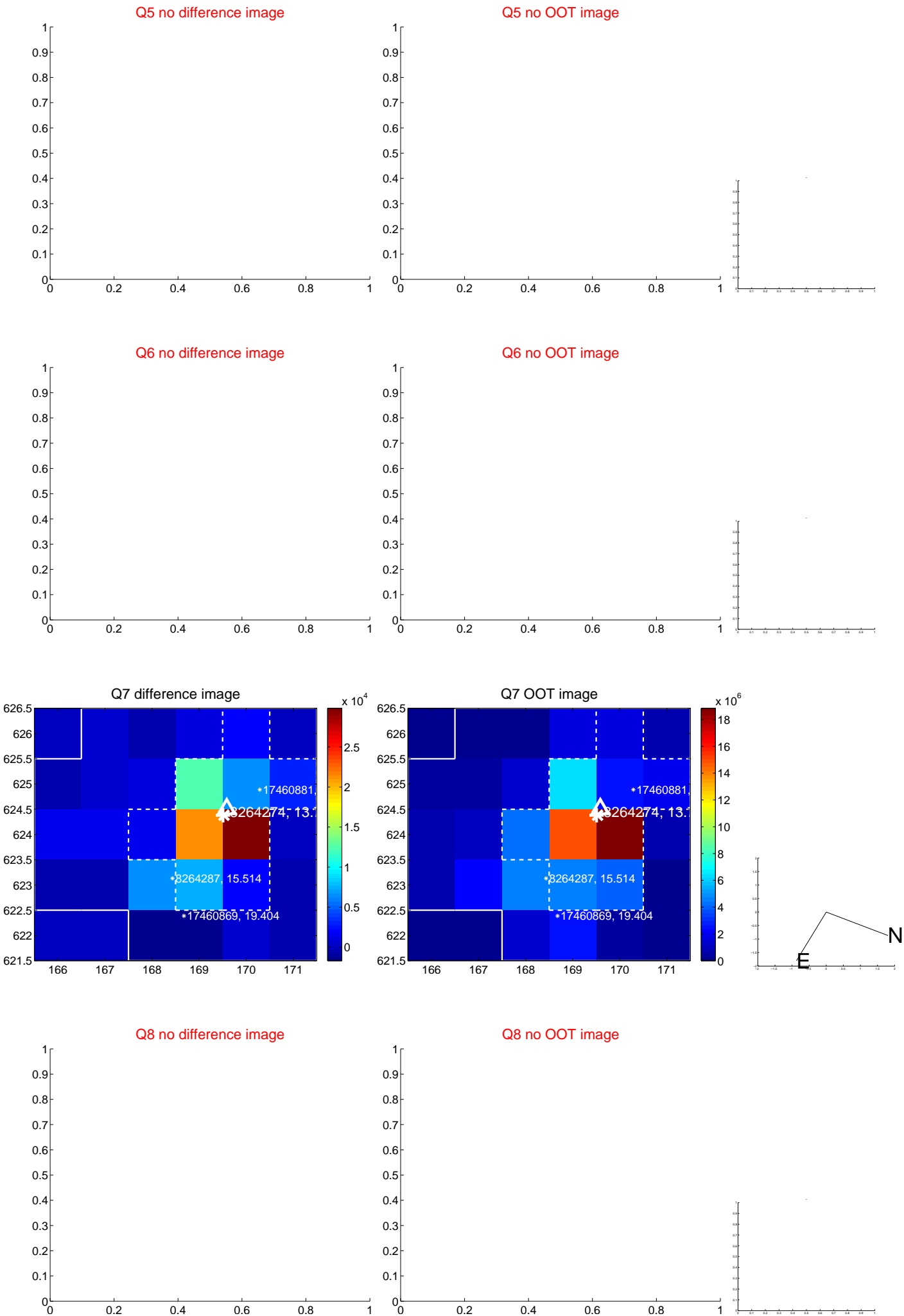


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

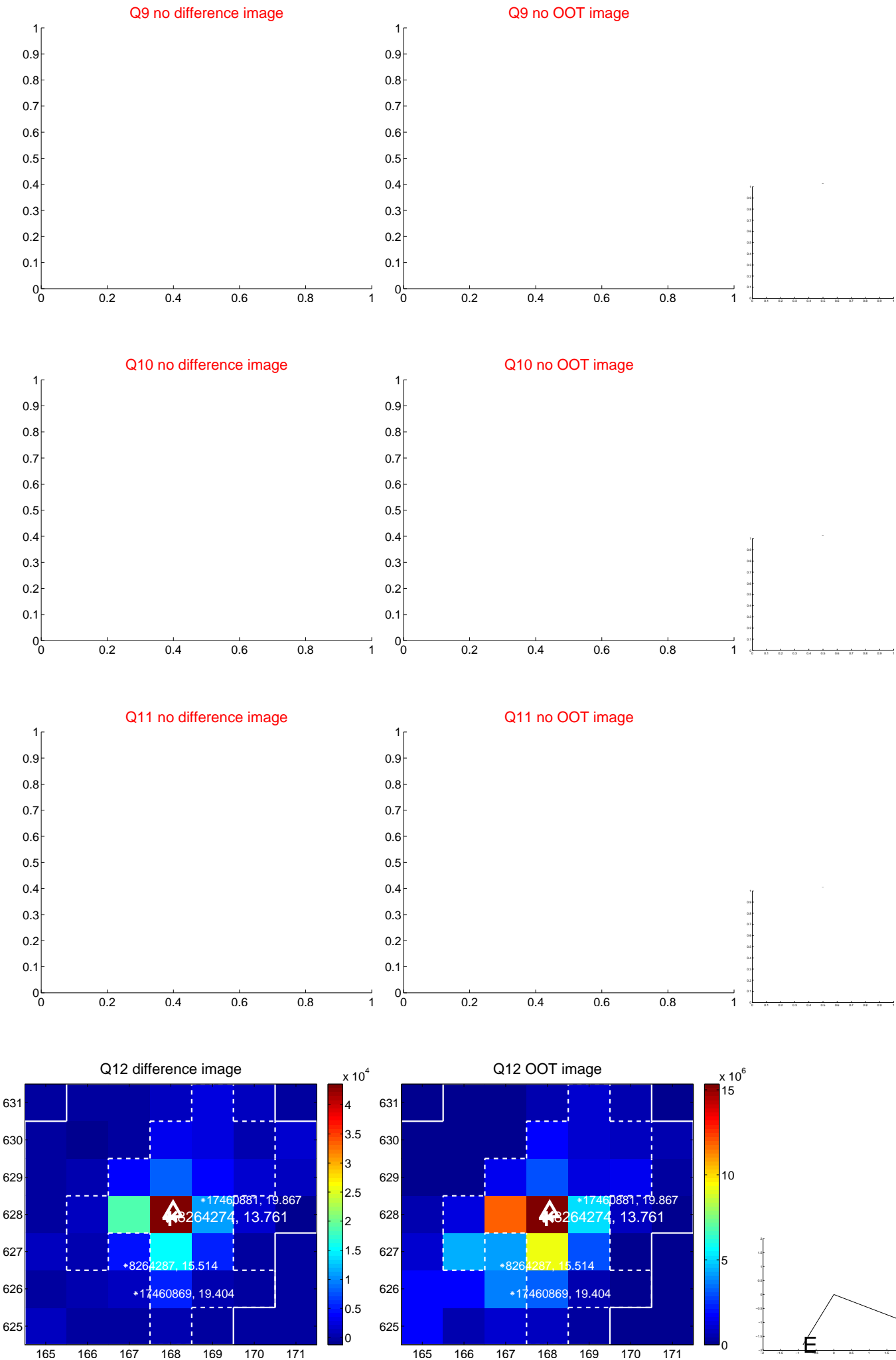
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.

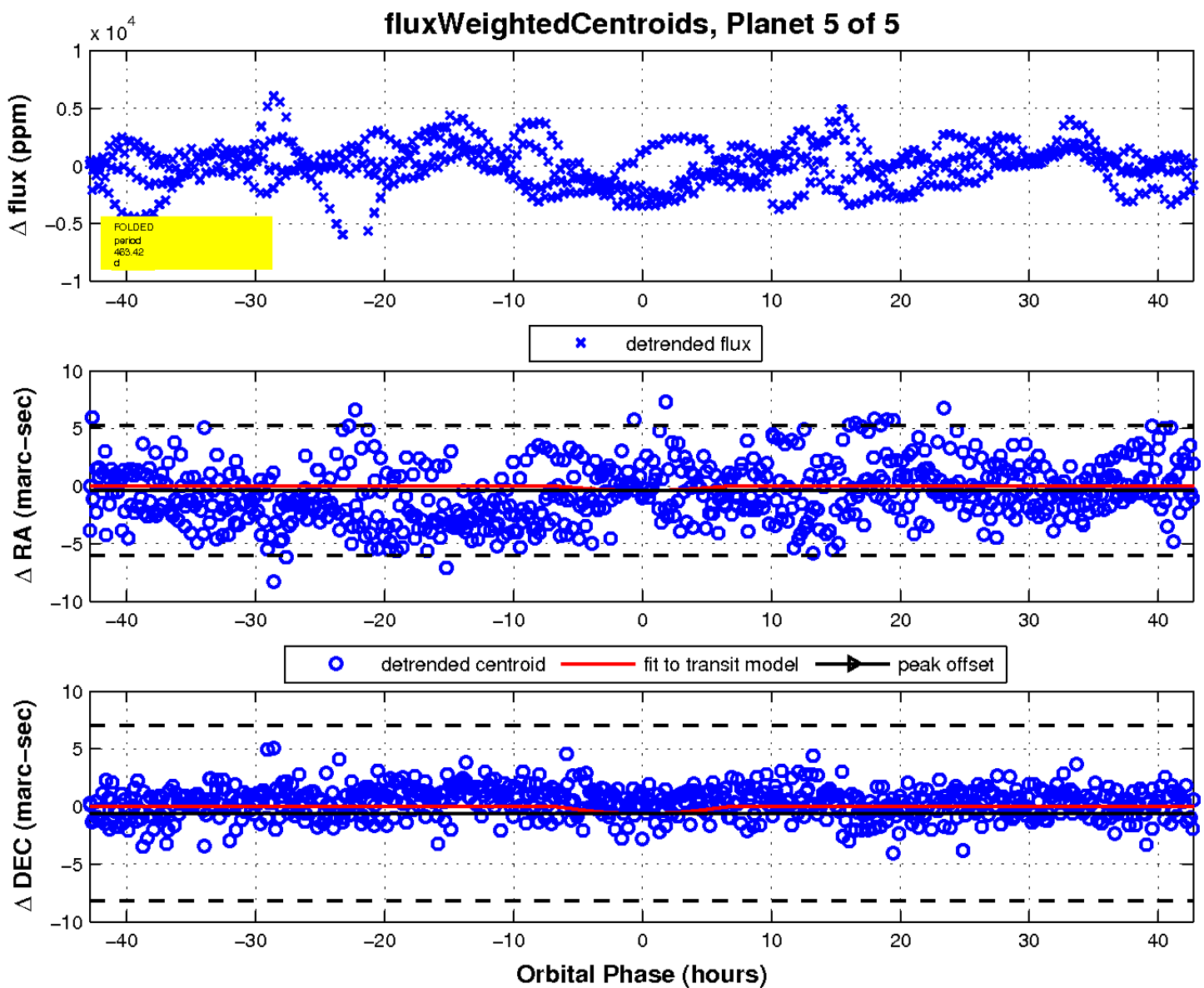
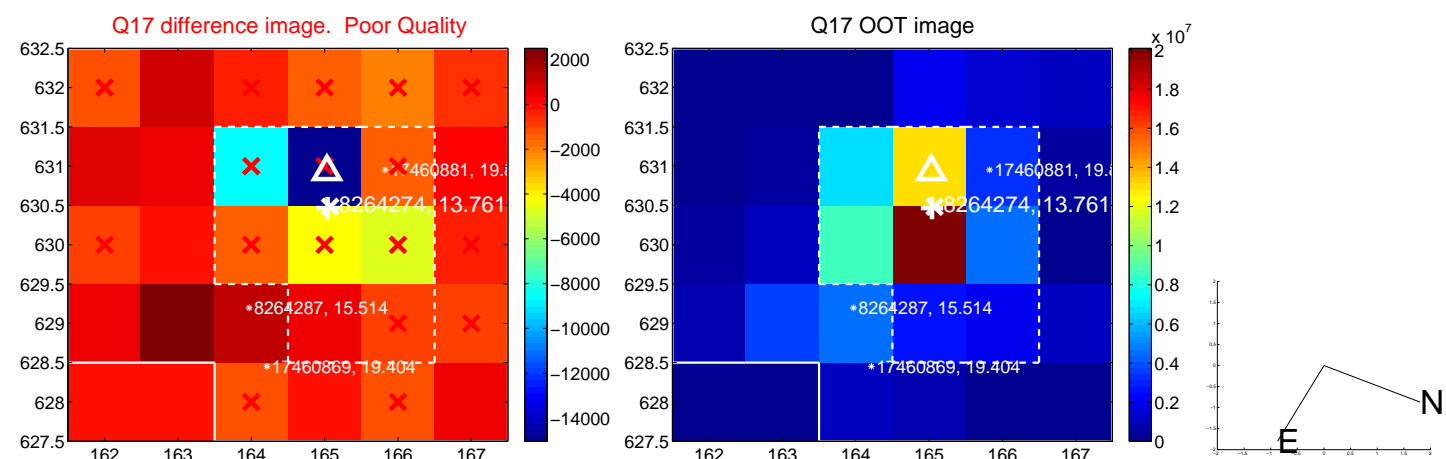


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





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



UKIRT Image

Declination

