

# KIC 007035274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007035274-01	OBS	No	1.188090	132.449014	29.0	3.713	10.4	10.0	1.54	6365	0.96	6517.36
007035274-02	OBS	No	1.188062	131.860258	21.9	4.923	8.9	8.9	1.54	6365	0.84	6517.56
007035274-03	OBS	No	50.848012	139.616306	347.2	4.500	10.0	-1.0	1.54	6365	2.87	43.53

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007035274-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
007035274-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_KIC_POS—HALO_GHOST
007035274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

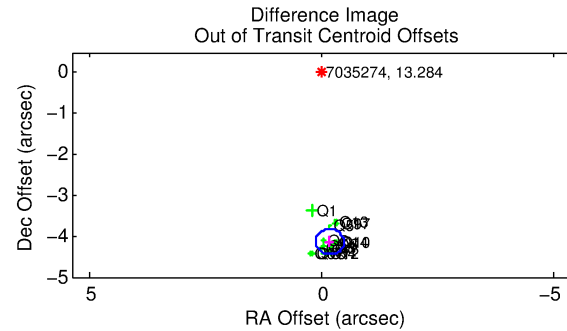
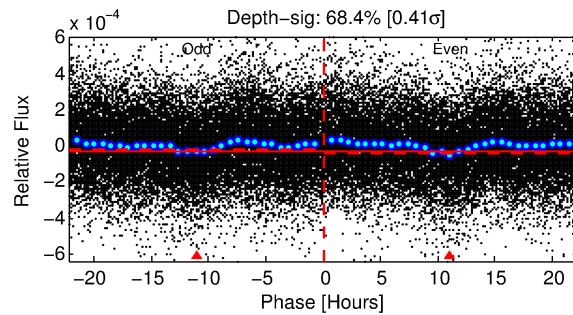
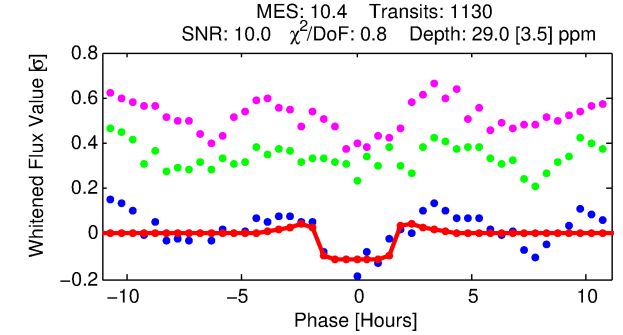
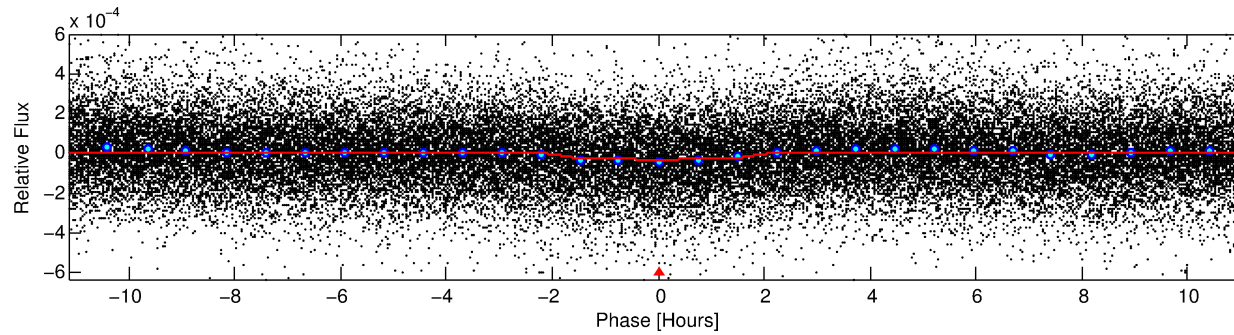
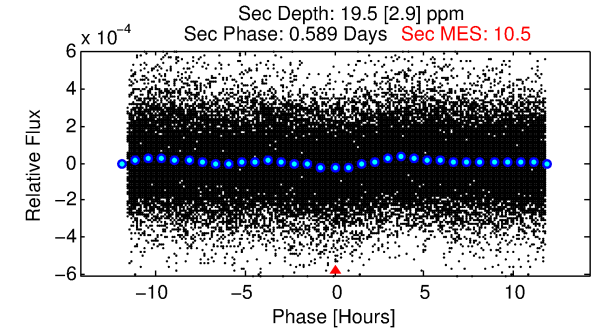
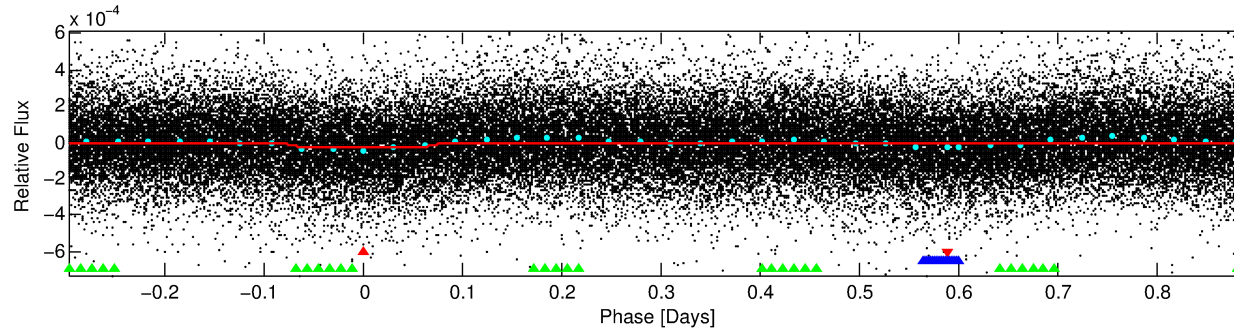
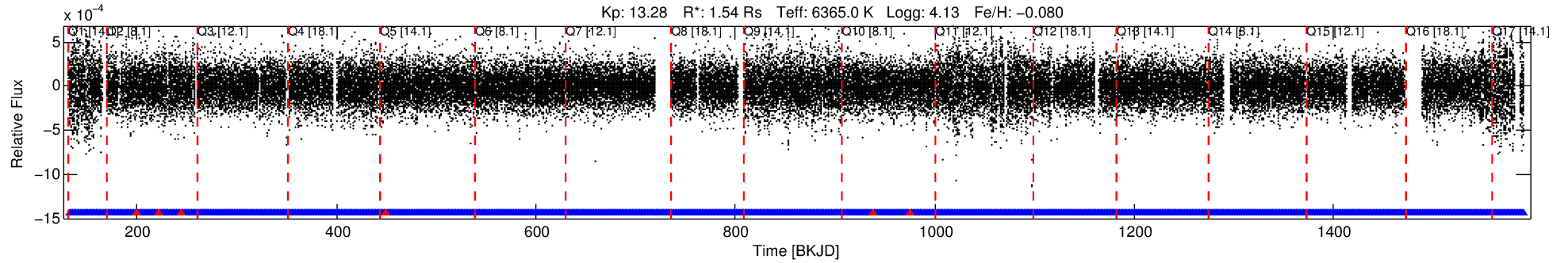
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 007035274-01

No Significant Match Found

# DV One-Page Summary

KIC: 7035274 Candidate: 1 of 3 Period: 1.188 d



## DV Fit Results:

Period = 1.18809 [0.00001] d  
Epoch = 132.4490 [0.0027] BKJD  
Rp/R\* = 0.0058 [0.0017]  
a/R\* = 1.46 [1.30]  
b = 0.89 [0.38]  
Seff = 6517.36 [1842.75]  
Teq = 2291 [162] K  
Rp = 0.97 [0.34] Re  
a = 0.0231 [0.0041] AU  
Ag = 6.14 [4.18] [1.23σ]  
**Teff = 5577 [869] K [3.72σ]**

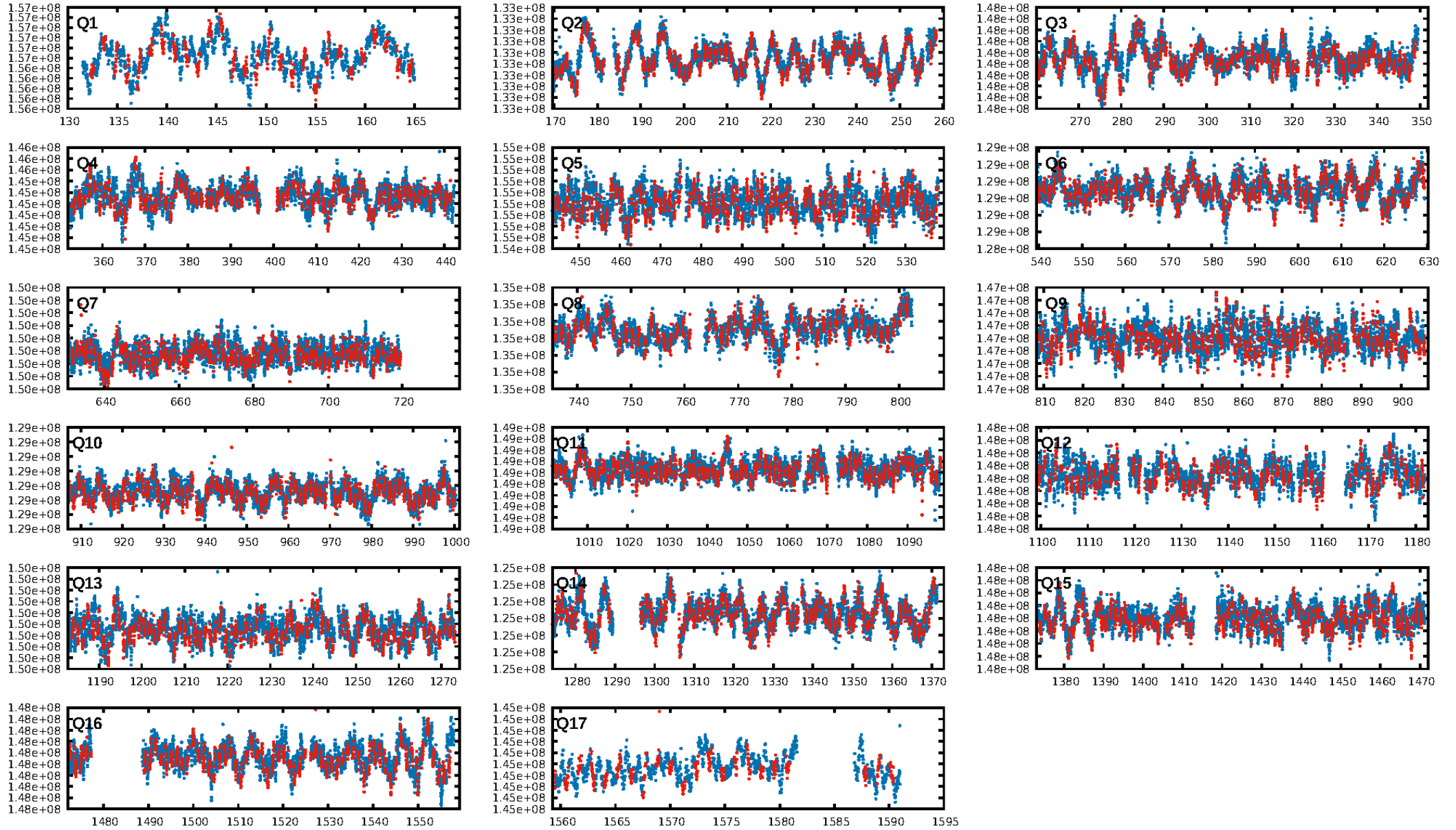
## DV Diagnostic Results:

**ShortPeriod-sig: 0.0% [0.00σ]**  
LongPeriod-sig: 100.0% [204.29σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 9.06e-25  
RollingBand-fgt: 0.99 [1074/1080]  
**GhostDiagnostic-chr: 0.4169**  
Centroid-sig: 0.0%  
Centroid-so: 4.522 arcsec [4.49σ]  
OotOffset-rm: 4.143 arcsec [40.37σ]  
KicOffset-rm: 5.193 arcsec [72.84σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:13:22 Z

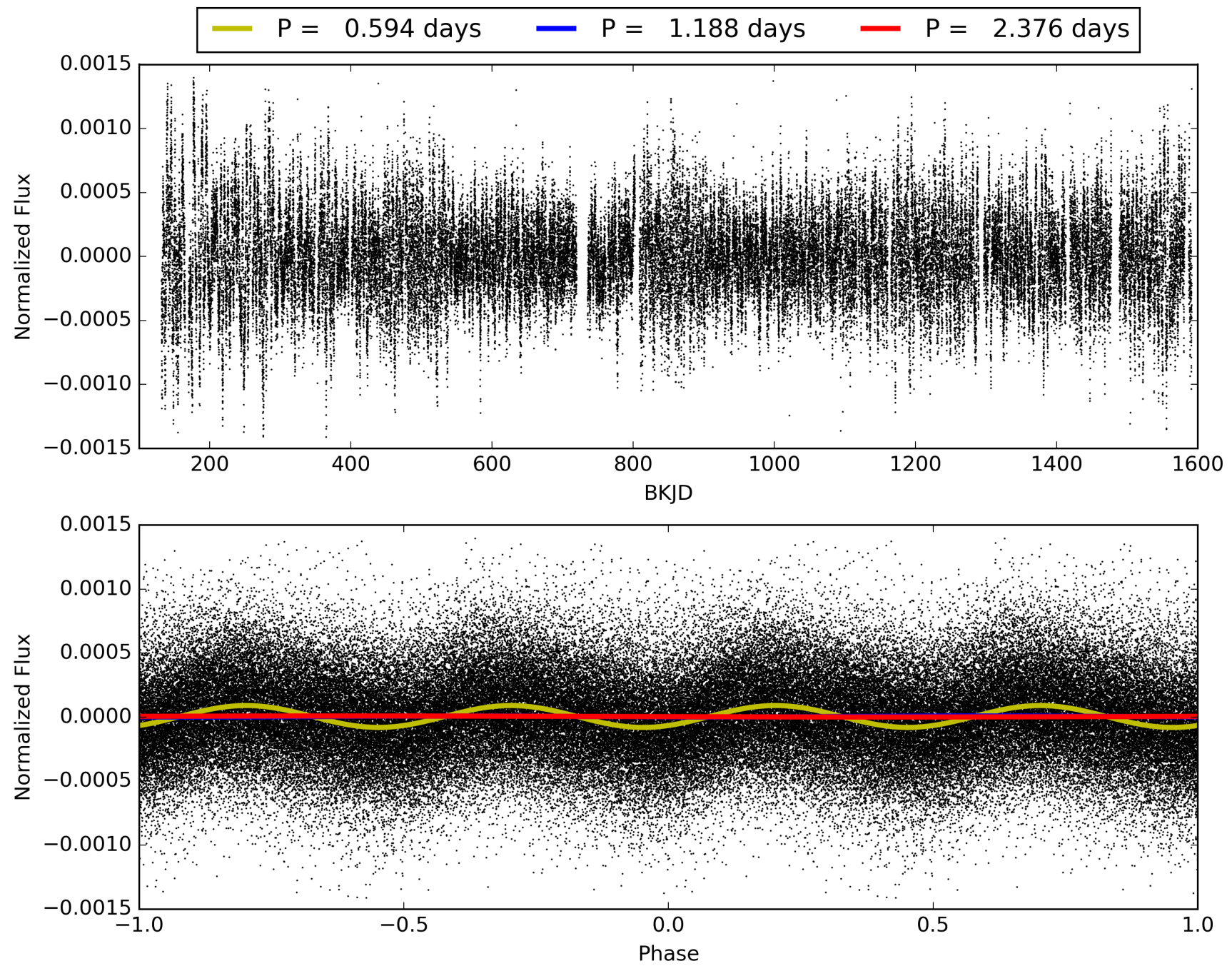
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007035274-01, PDC Light Curves





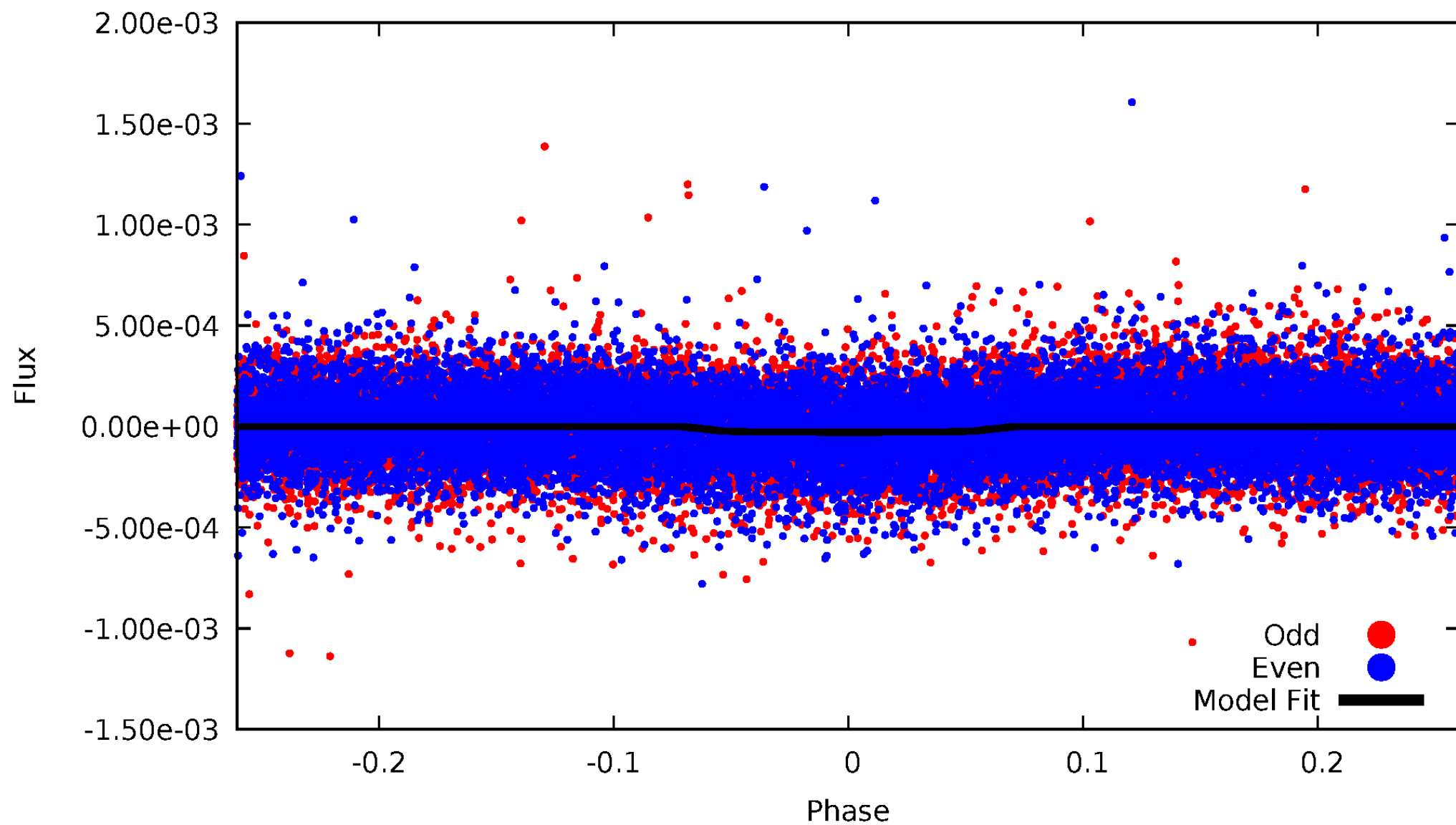
TCE 007035274-01





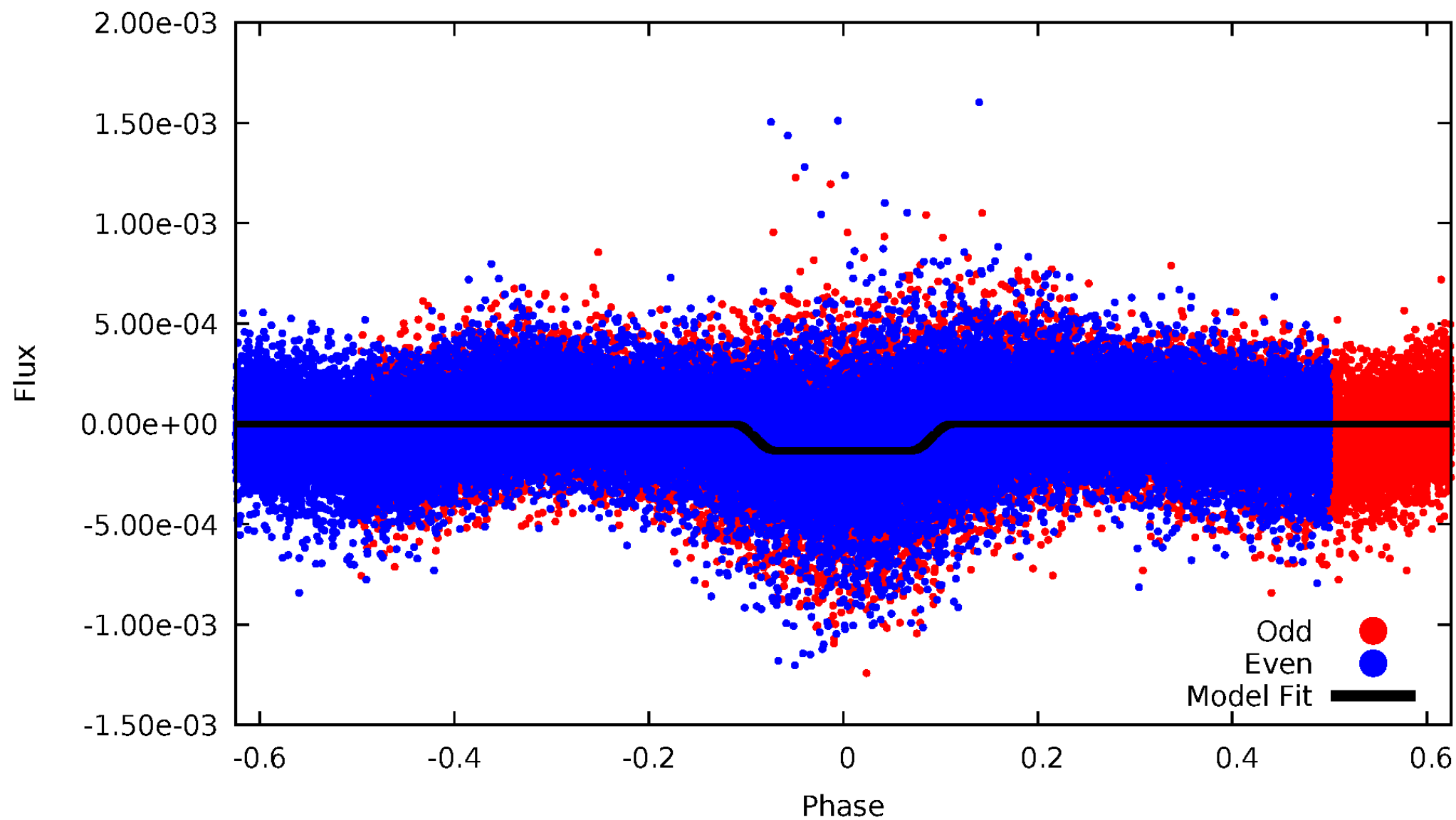
# DV Odd/Even

TCE 007035274-01



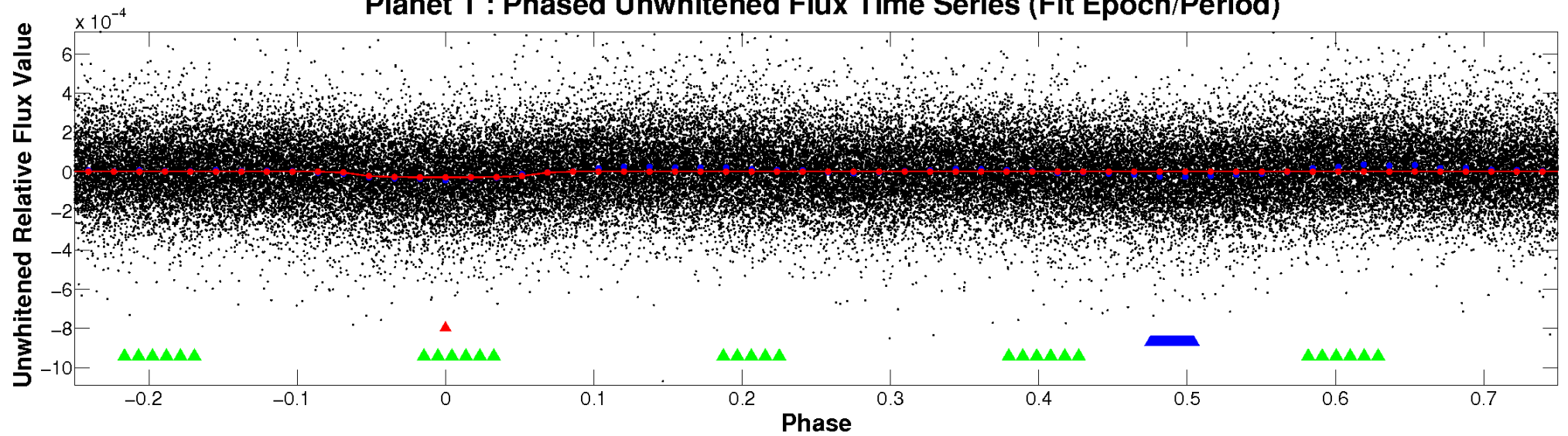
# ALT Odd/Even

TCE 007035274-01

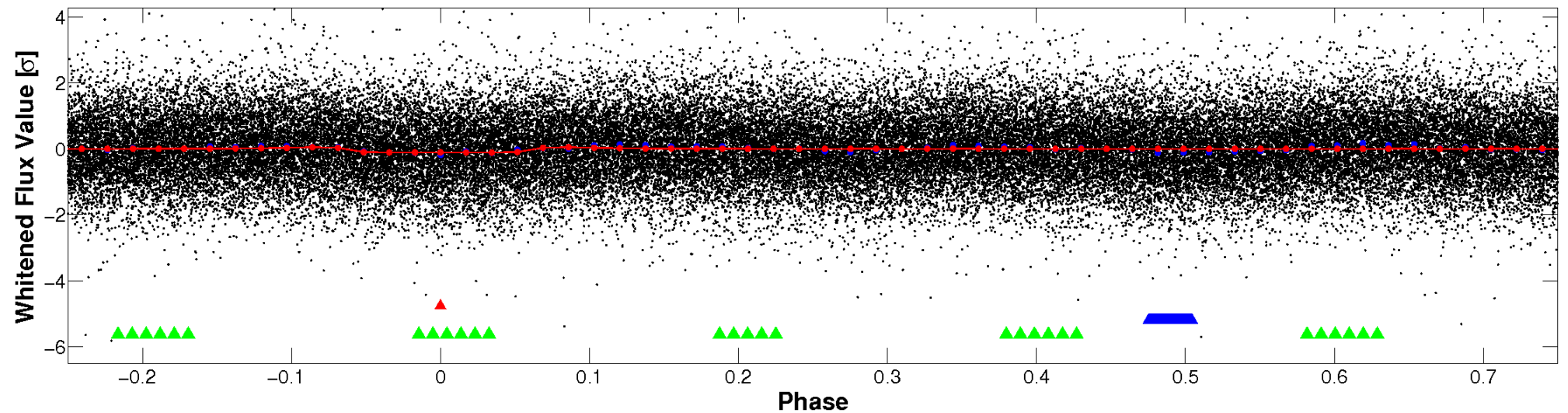


# Non-Whitened Vs. Whitened Light Curve

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



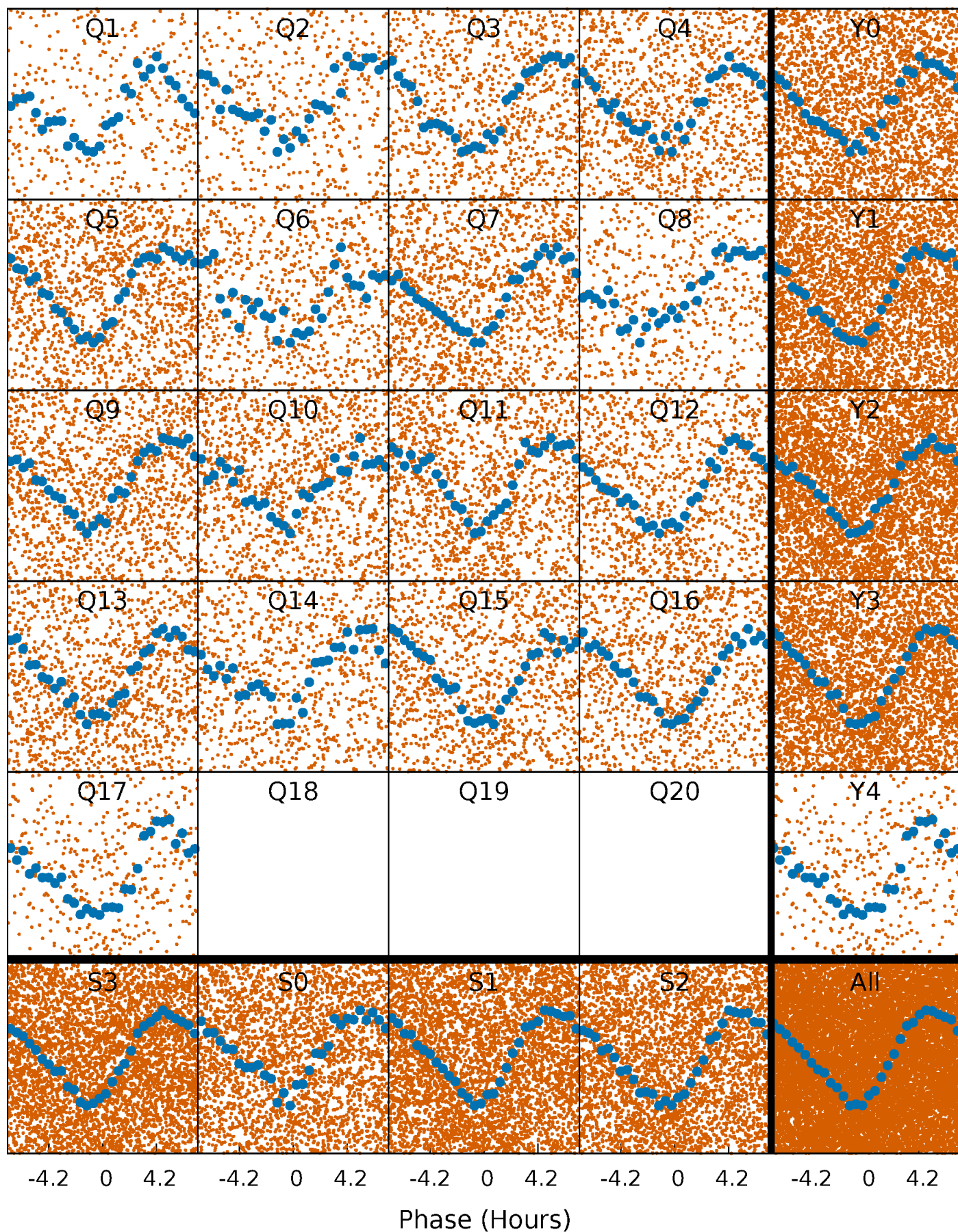
## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





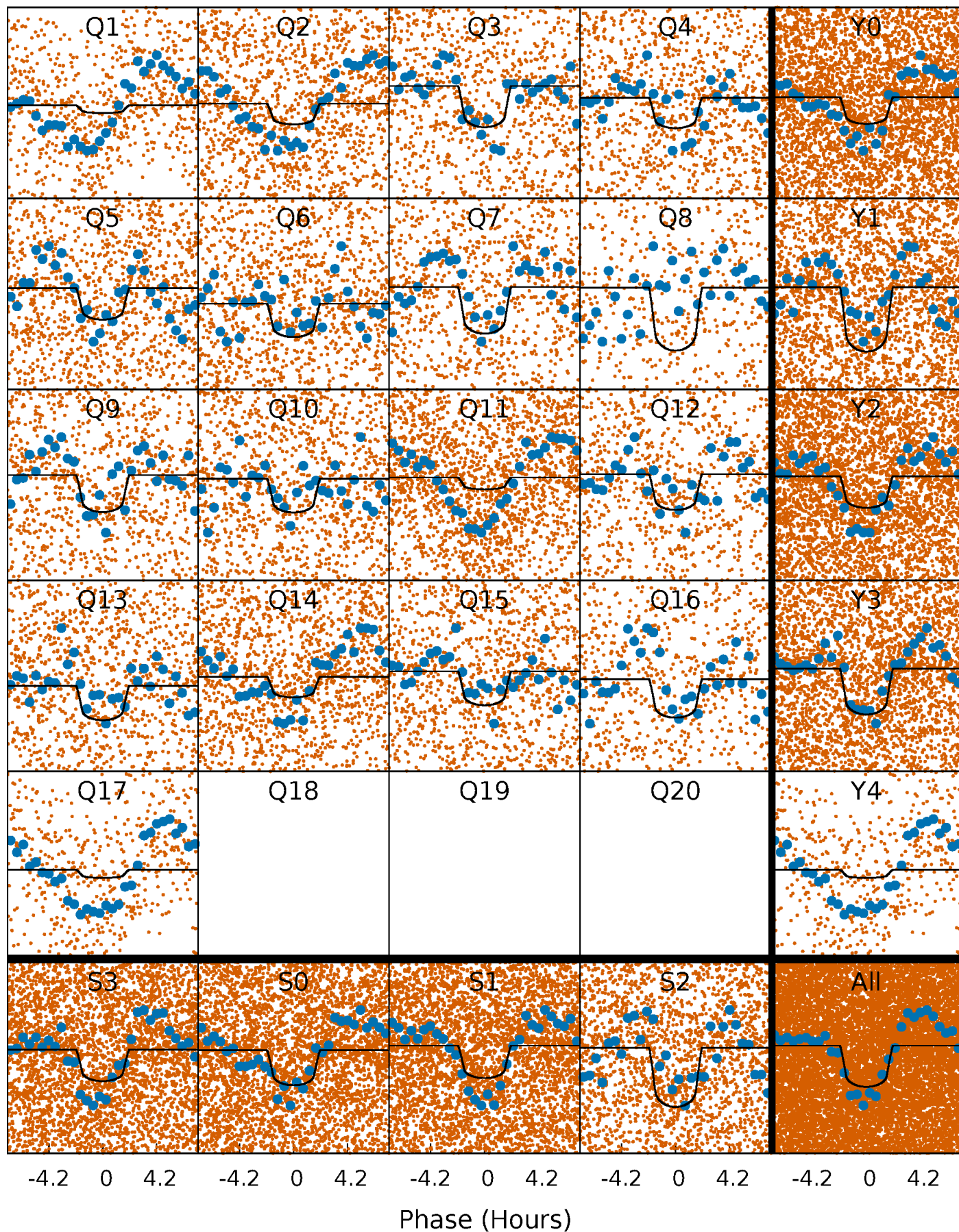
# PDC Quarter-Phased Transit Curves

TCE 007035274-01 P= 1.188090 Days  $T_0=132.449014$  (BKJD)



# DV Quarter-Phased Transit Curves

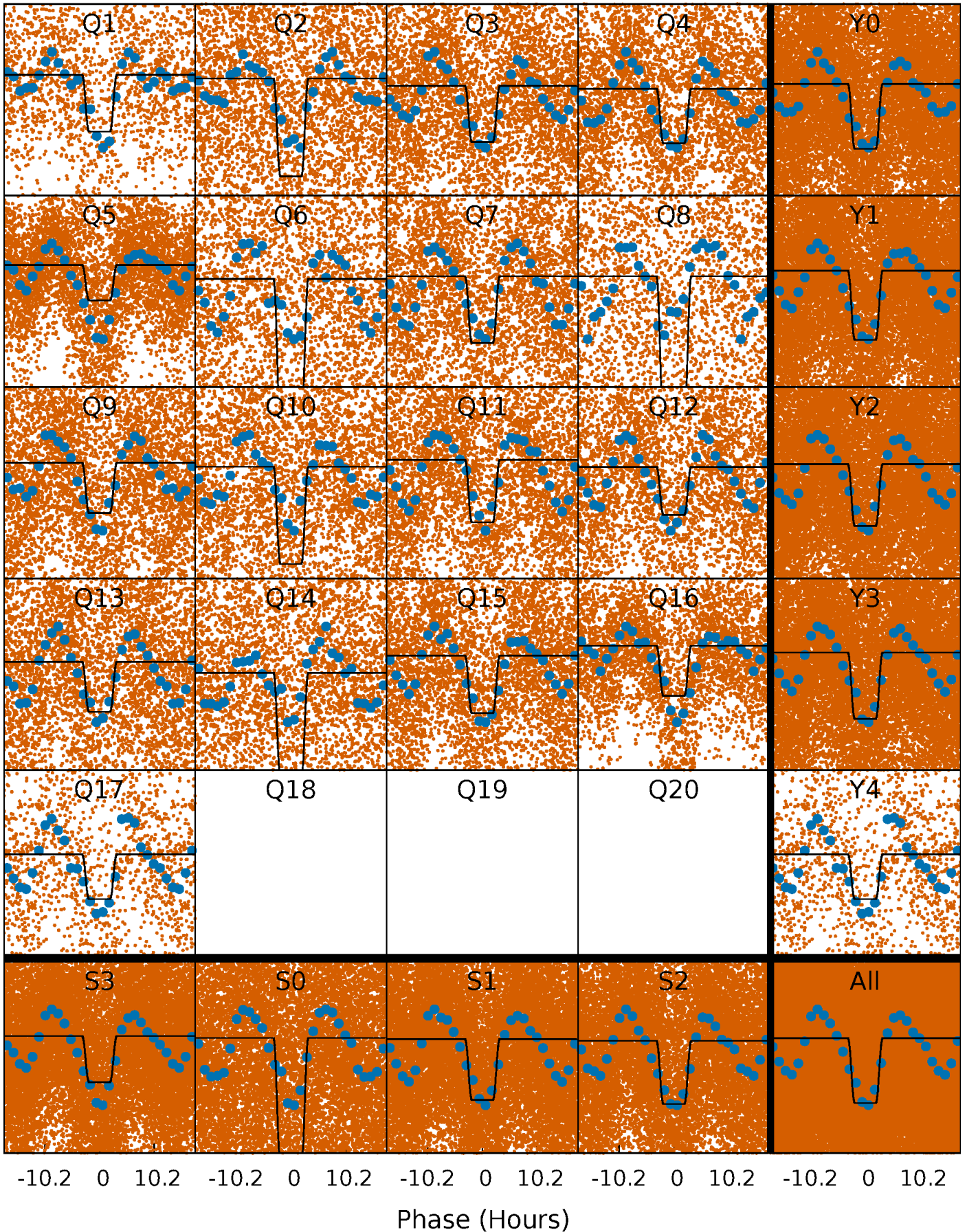
TCE 007035274-01 P= 1.188090 Days  $T_0=132.449014$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

TCE 007035274-01 P= 1.188119 Days  $T_0=132.392280$  (BKJD)

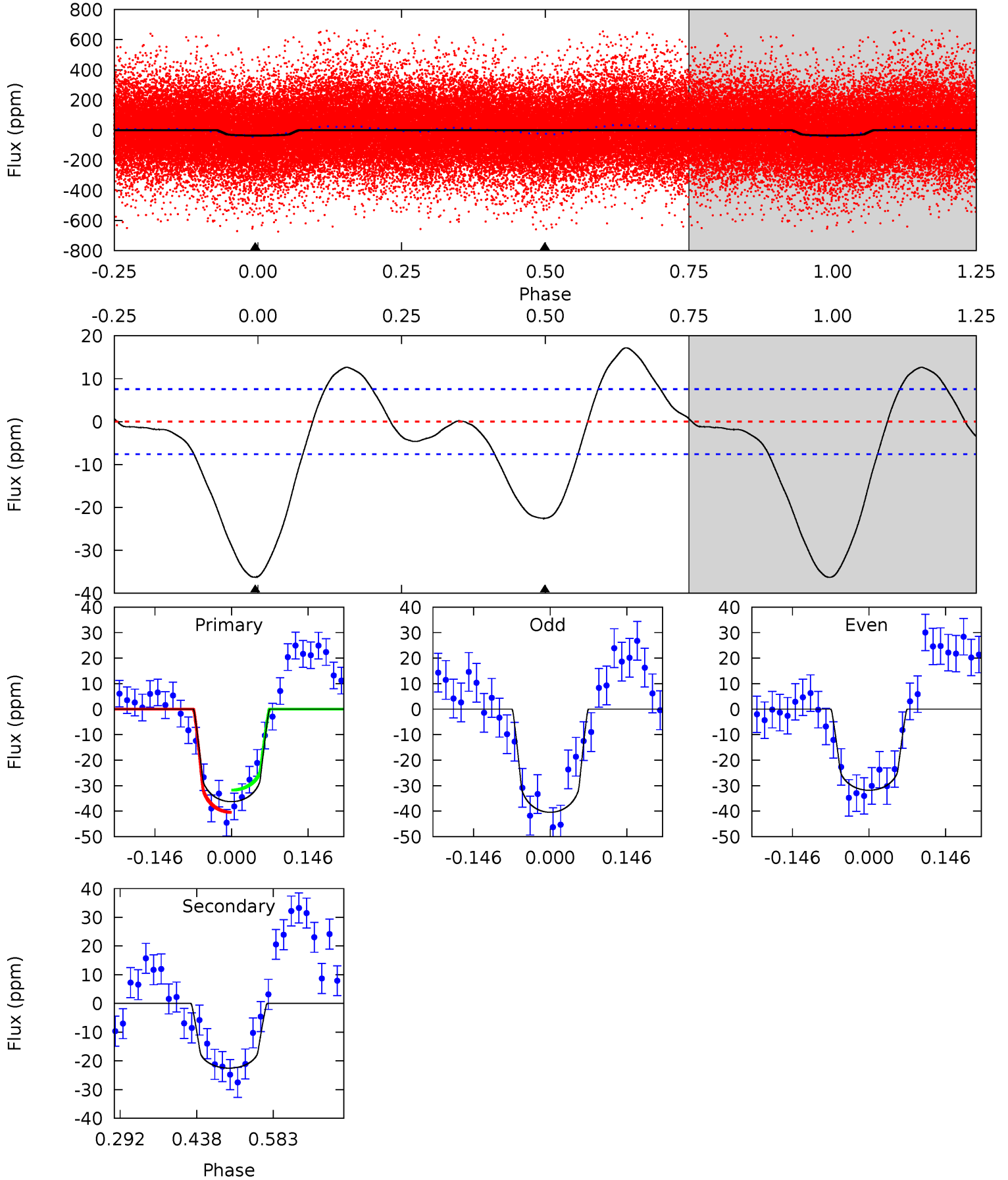




# DV Model-Shift Uniqueness Test

007035274-01, P = 1.188090 Days, E = 131.260924 Days

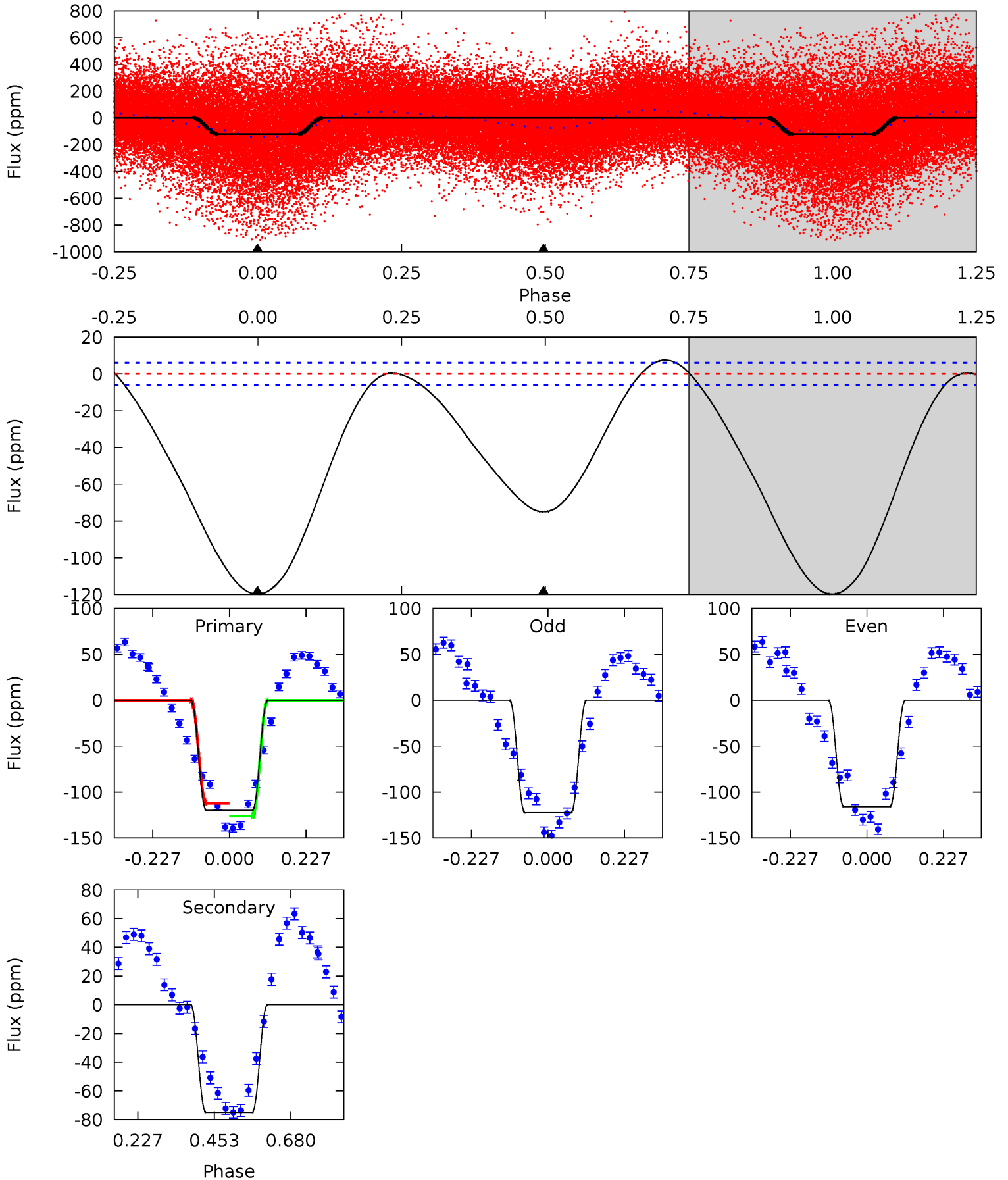
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	13.4	0	0	4.48	1.45	3.72	21.5	21.5	13.4	13.4	2.56	1.19	0.32	2.59



# Alt Model-Shift Uniqueness Test

007035274-01, P = 1.188119 Days, E = 131.204161 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
87.1	54.6	0	0	4.39	1.21	2.59	87.1	87.1	54.6	54.6	2.34	1.11	0.06	5.06



### Stellar Parameters For KIC 007035274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6365^{+76}_{-76}$	$4.130^{+0.162}_{-0.108}$	$-0.080^{+0.150}_{-0.150}$	$1.537^{+0.290}_{-0.290}$	$1.163^{+0.134}_{-0.083}$	$0.451^{+0.370}_{-0.147}$
	+1%/-1%	+4%/-3%	+188%/-188%	+19%/-19%	+12%/-7%	+82%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 007035274-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-23 \pm 2$	$0.95^{+0.32}_{-0.29}$	$3189^{+150}_{-158}$	$5735^{+1204}_{-688}$	$7.456^{+7.968}_{-3.317}$
Alt.	$-75 \pm 1$	$1.96^{+0.34}_{-0.36}$	$3190^{+153}_{-156}$	$5425^{+462}_{-326}$	$5.817^{+2.753}_{-1.654}$

$T_{max}$  = 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

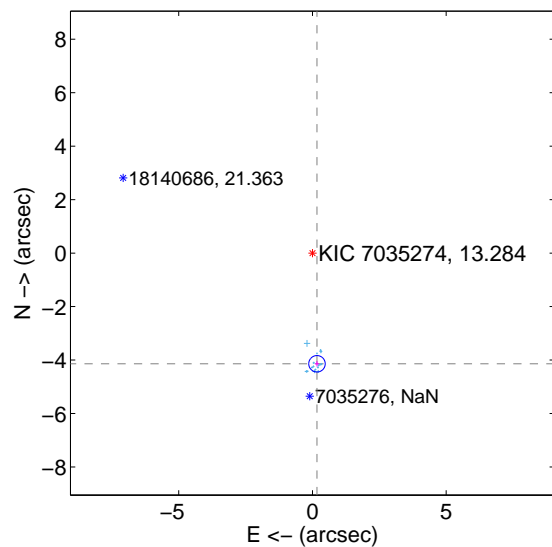
Supplemental centroid analysis for 007035274-01. Kepler magnitude: 13.28. Transit SNR 9.95

There are 17 quarters with good PRF difference image offsets

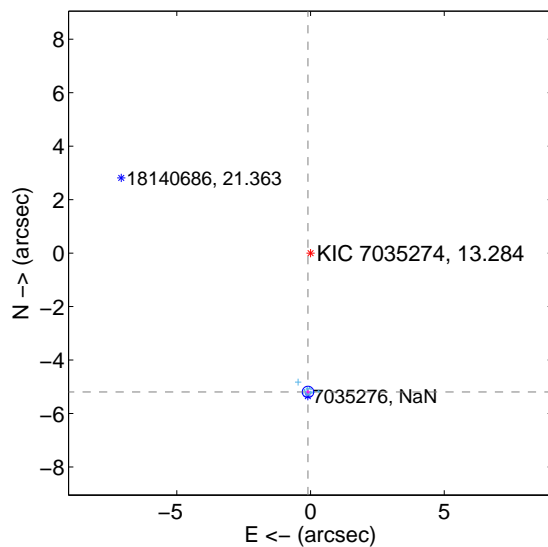
The direct PRF centroid is offset from the target star catalog position by about 1.45 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.143 \pm 0.103$	40.37	$-0.170 \pm 0.080$	$-4.139 \pm 0.103$
PRF-fit source offset from KIC position	$5.193 \pm 0.071$	72.84	$0.095 \pm 0.077$	$-5.192 \pm 0.071$
photometric centroid source offset	$4.52 \pm 1.01$	4.49	$0.59 \pm 0.47$	$-4.48 \pm 1.01$

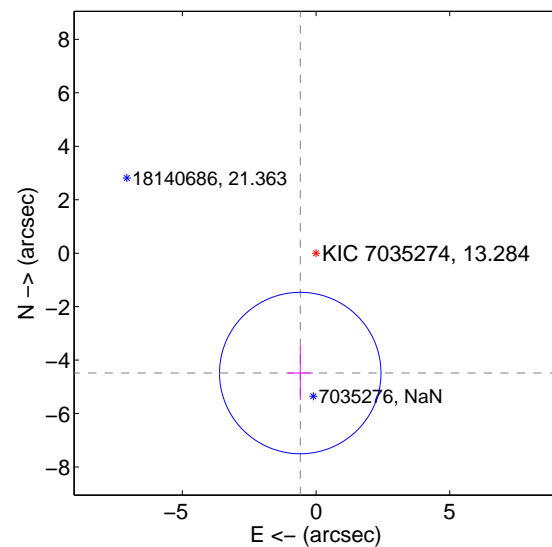
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

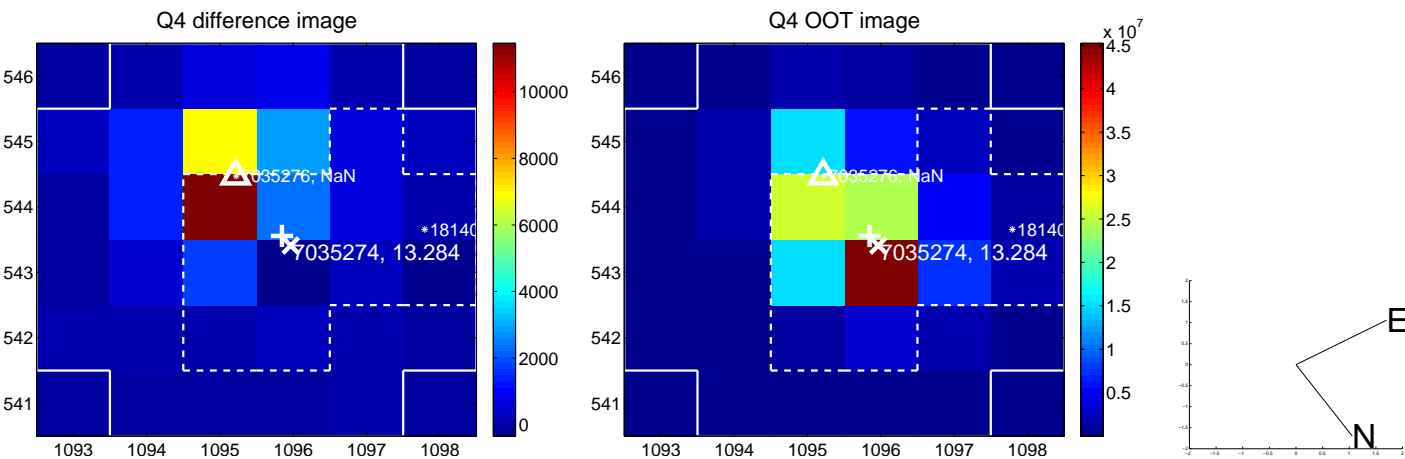
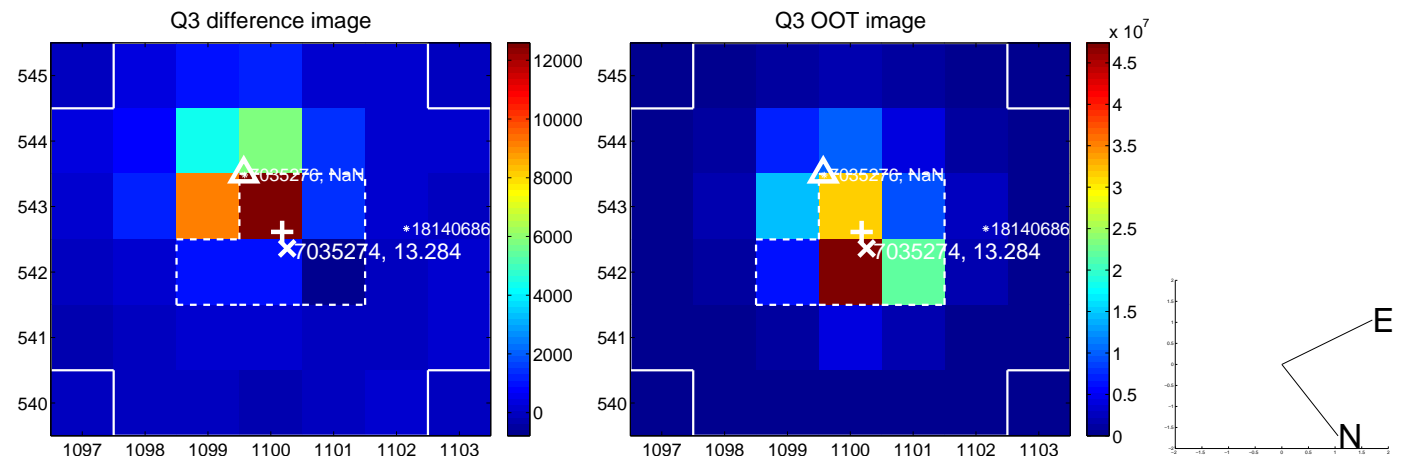
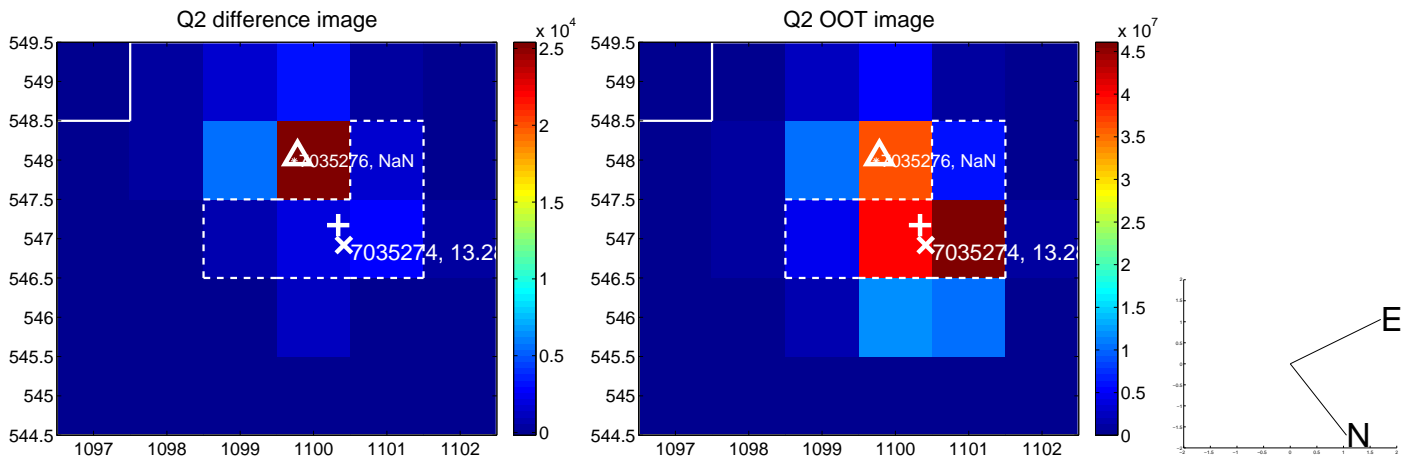
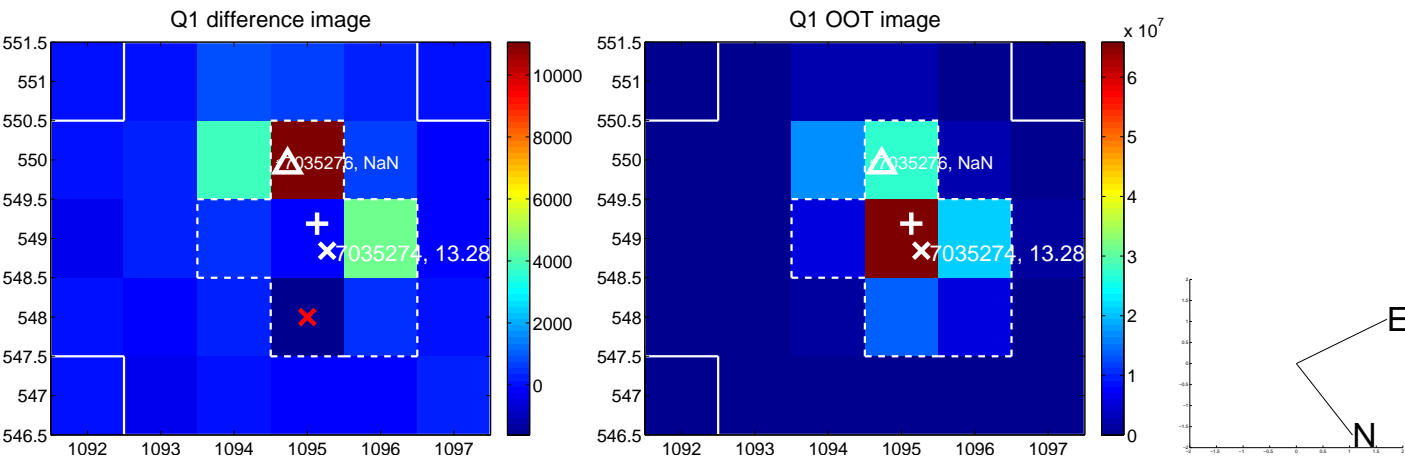


offset from photometric centroids



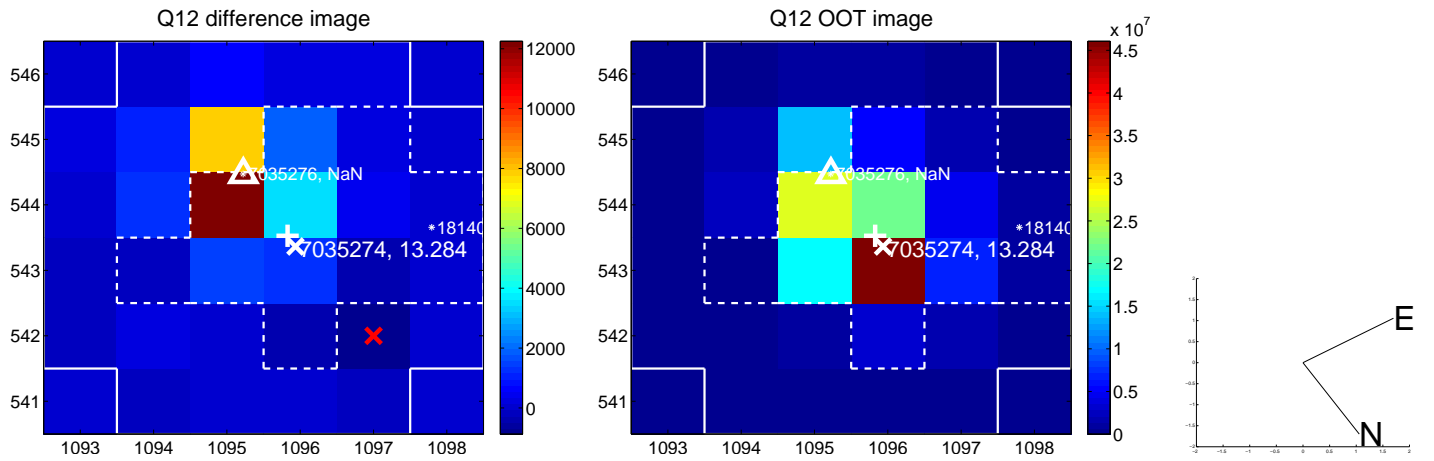
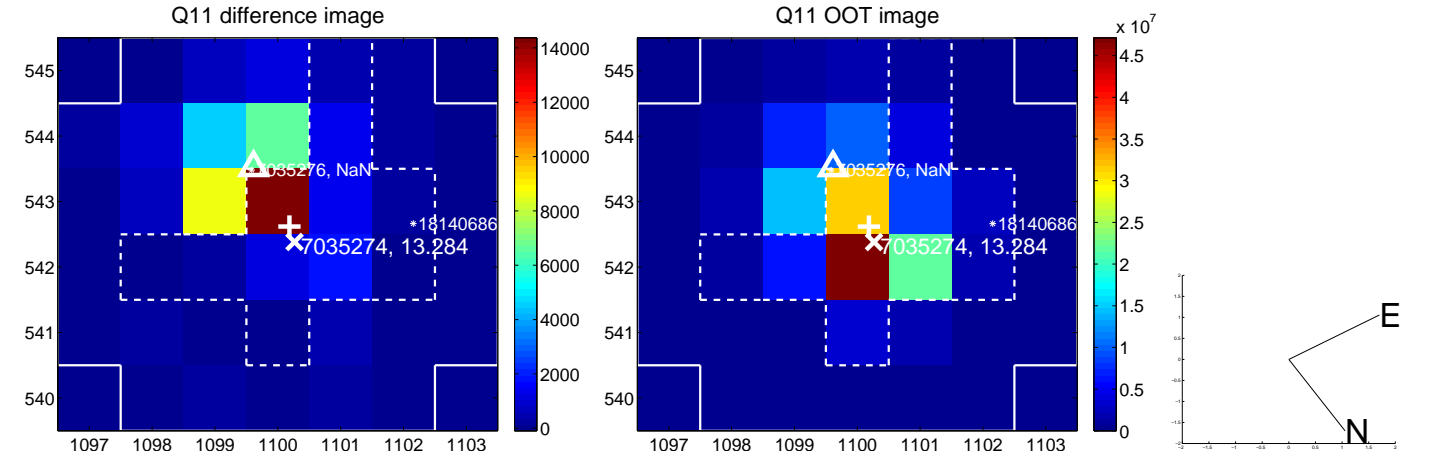
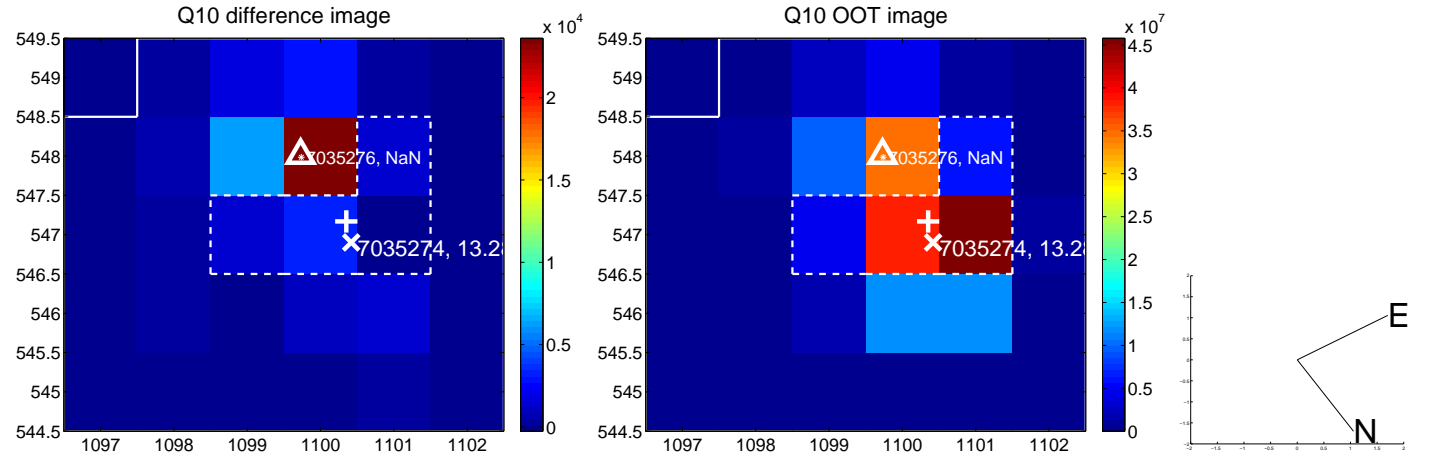
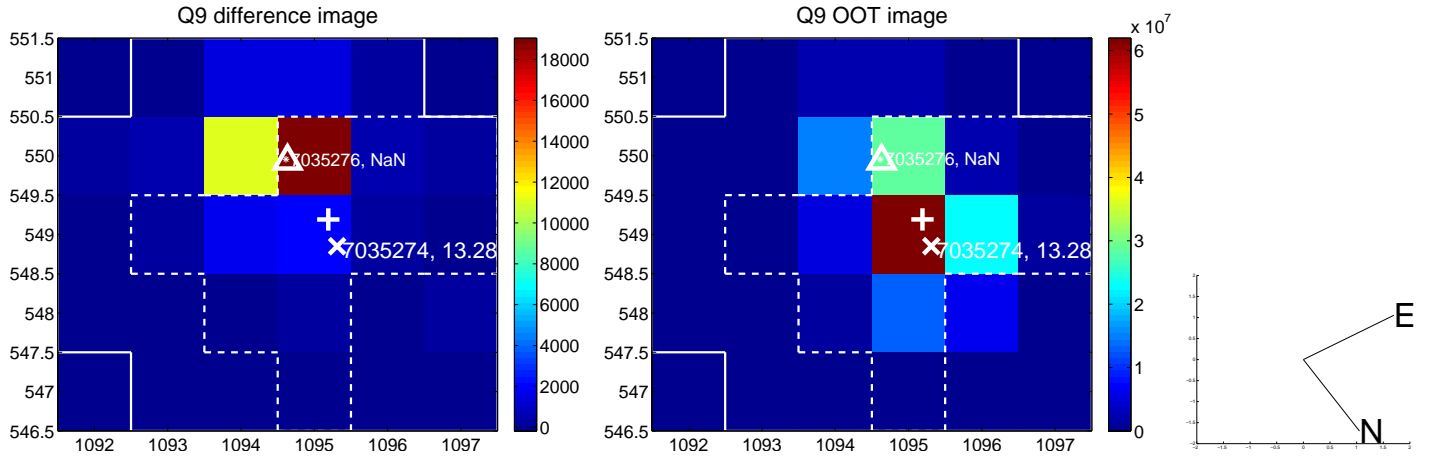
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



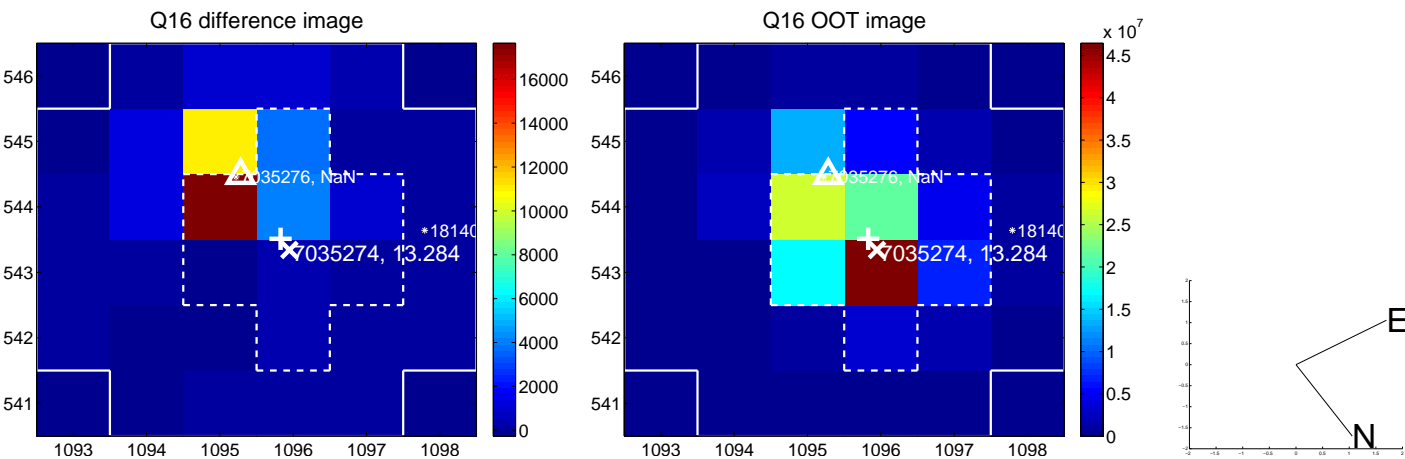
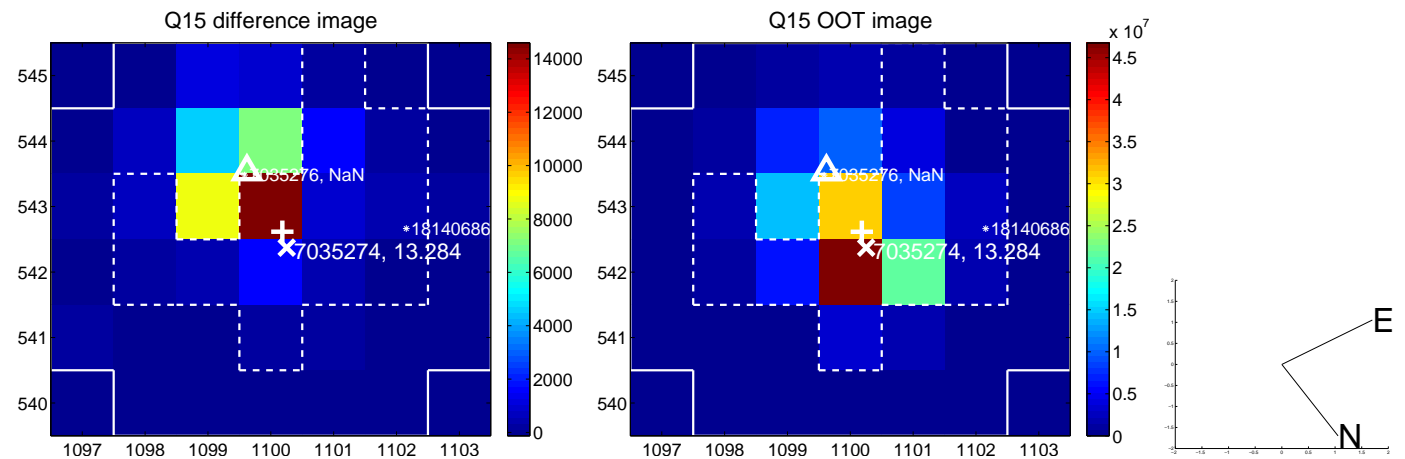
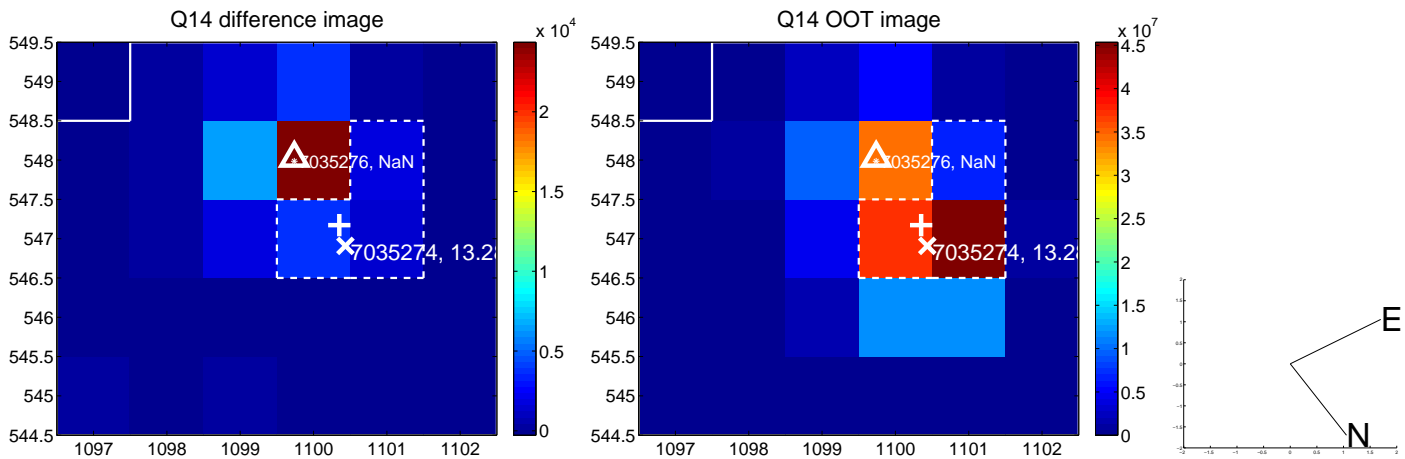
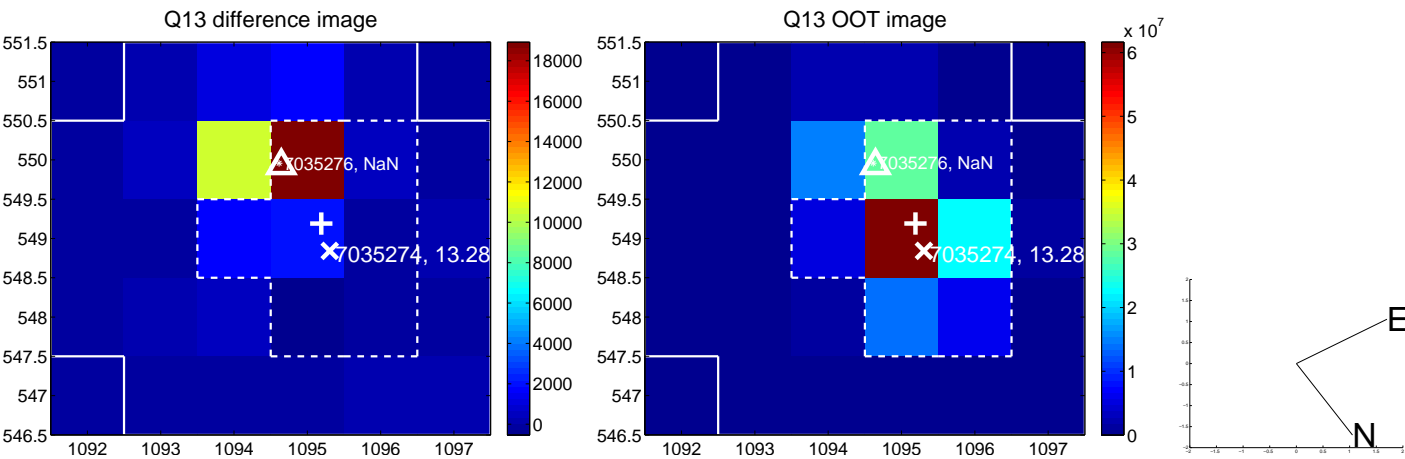


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





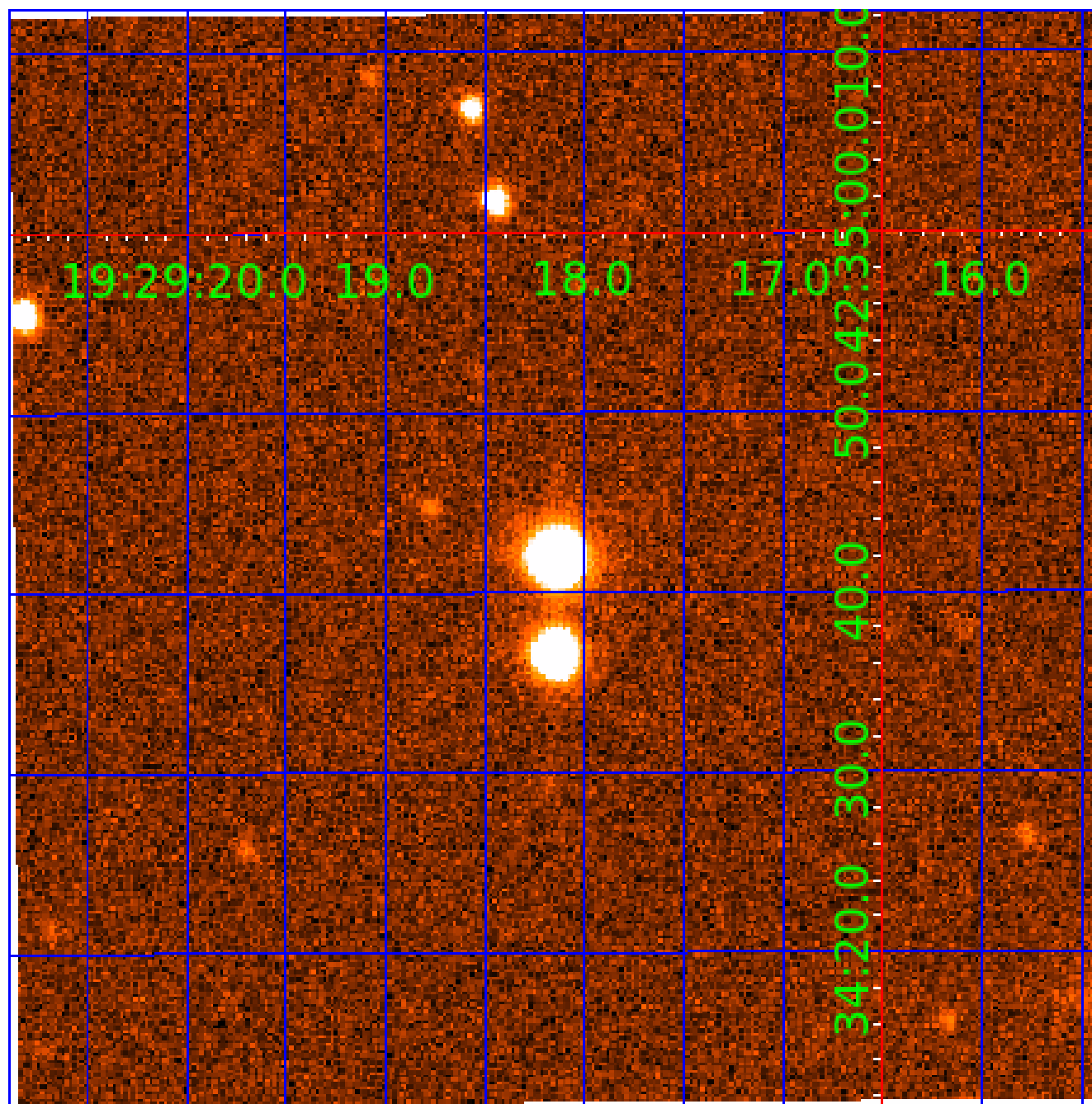
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





# UKIRT Image

Declination



# KIC 007035274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007035274-01	OBS	No	1.188090	132.449014	29.0	3.713	10.4	10.0	1.54	6365	0.96	6517.36
007035274-02	OBS	No	1.188062	131.860258	21.9	4.923	8.9	8.9	1.54	6365	0.84	6517.56
007035274-03	OBS	No	50.848012	139.616306	347.2	4.500	10.0	-1.0	1.54	6365	2.87	43.53

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007035274-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
007035274-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_KIC_POS—HALO_GHOST
007035274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

**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.

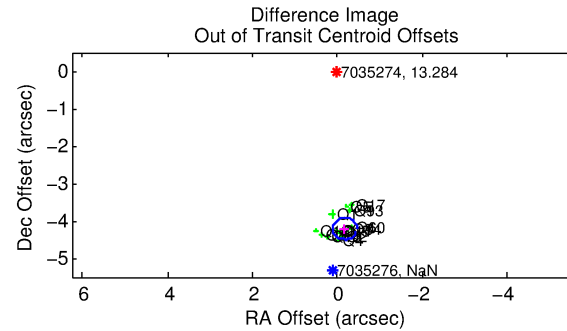
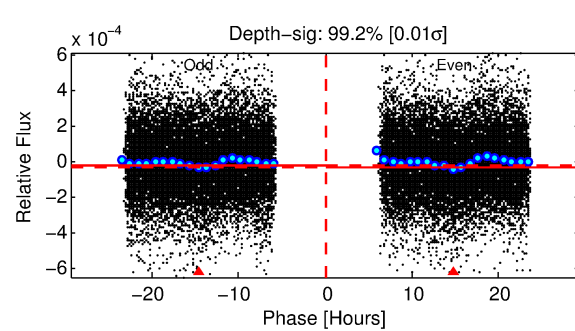
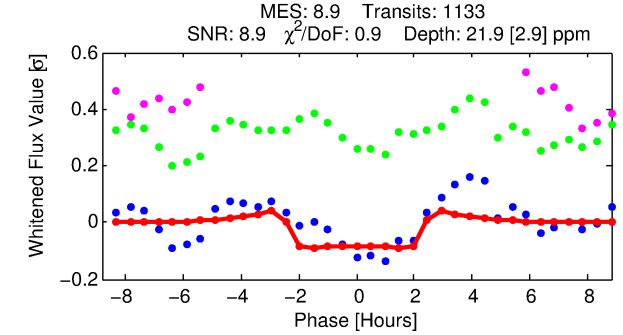
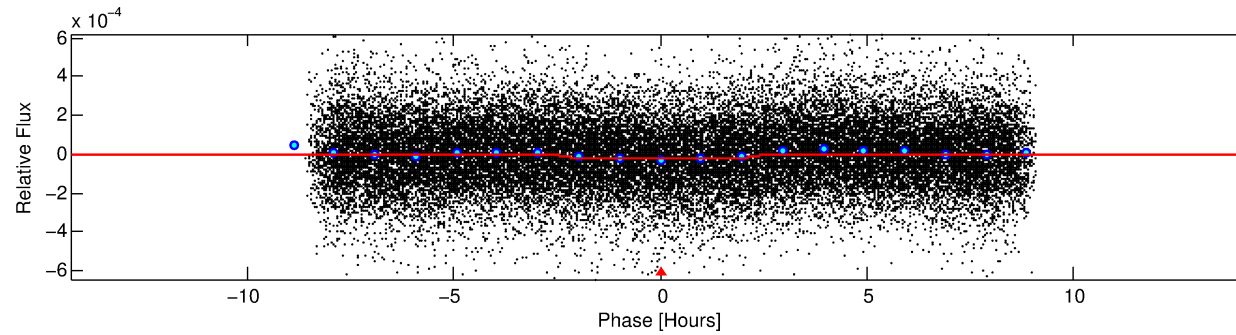
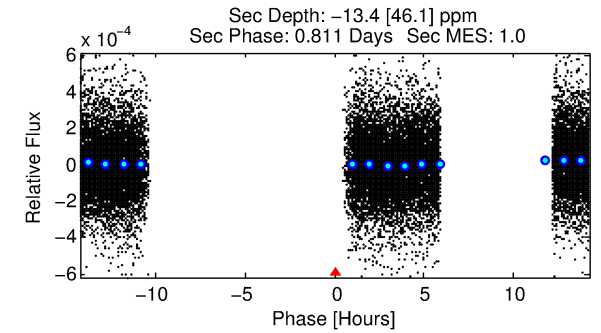
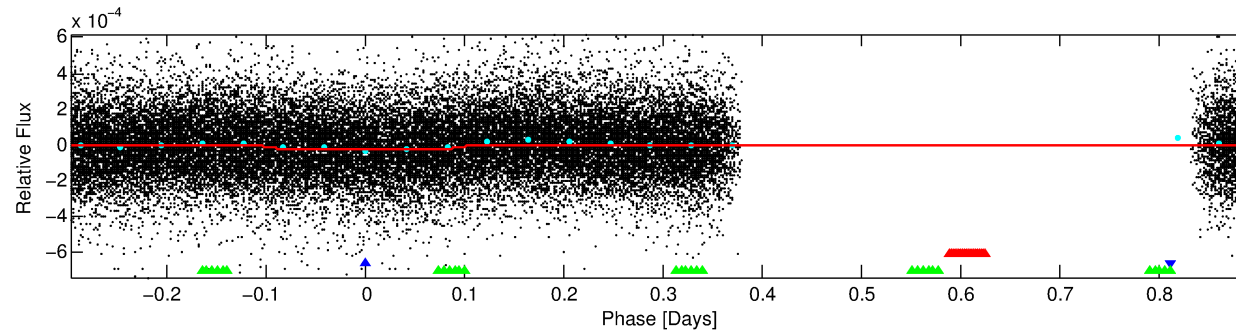
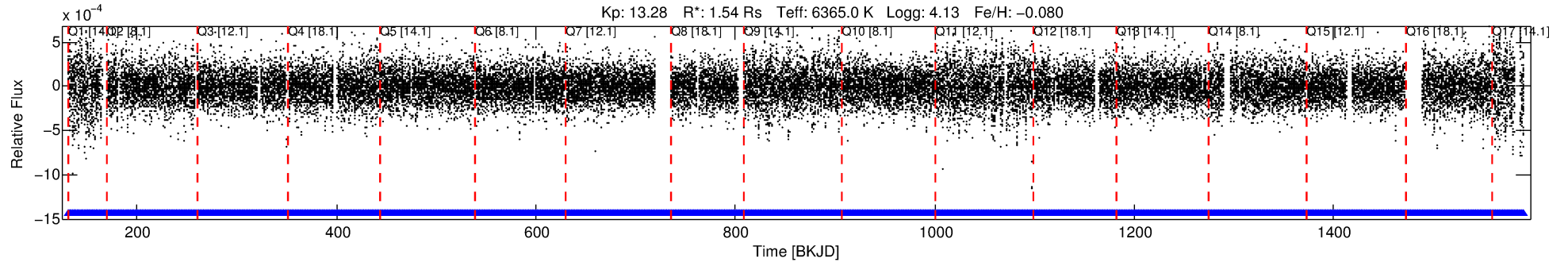
## Ephemeris Match Information For 007035274-02

No Significant Match Found



# DV One-Page Summary

KIC: 7035274 Candidate: 2 of 3 Period: 1.188 d



## DV Fit Results:

Period = 1.18806 [0.00001] d  
Epoch = 131.8603 [0.0039] BKJD  
Rp/R\* = 0.0050 [0.0014]  
a/R\* = 1.26 [0.74]  
b = 0.90 [0.36]  
Seff = 6517.56 [1842.81]  
Teq = 2291 [162] K  
Rp = 0.84 [0.29] Re  
a = 0.0231 [0.0041] AU  
Ag = N/A  
Teffp = N/A

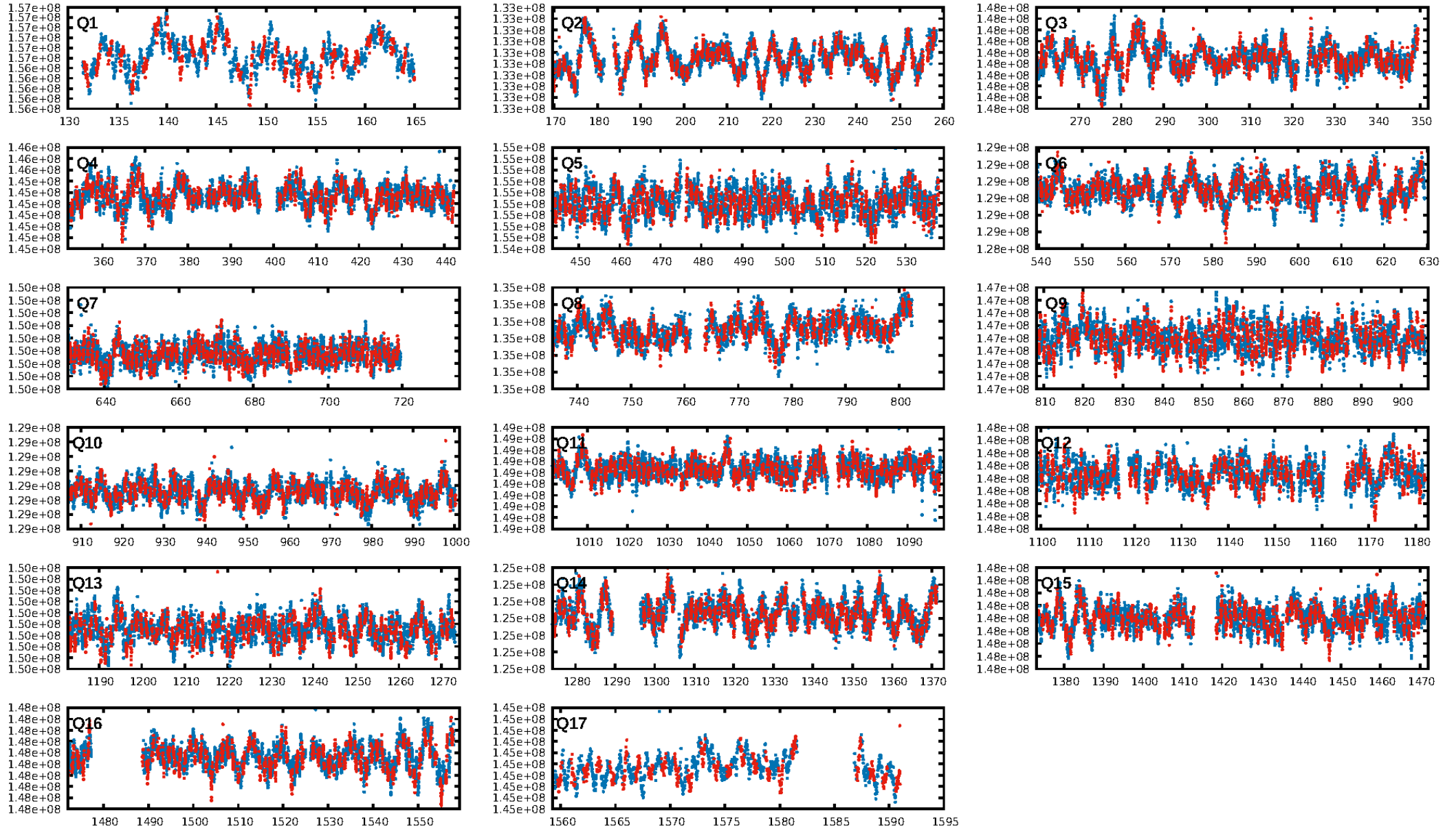
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 0.0% [0.00σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.66e-26  
RollingBand-fgt: 1.00 [1082/1082]  
GhostDiagnostic-chr: 0.1397  
Centroid-sig: 0.5%  
Centroid-so: 2.420 arcsec [2.20σ]  
OotOffset-rm: 4.213 arcsec [43.32σ]  
KicOffset-rm: 5.201 arcsec [71.87σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

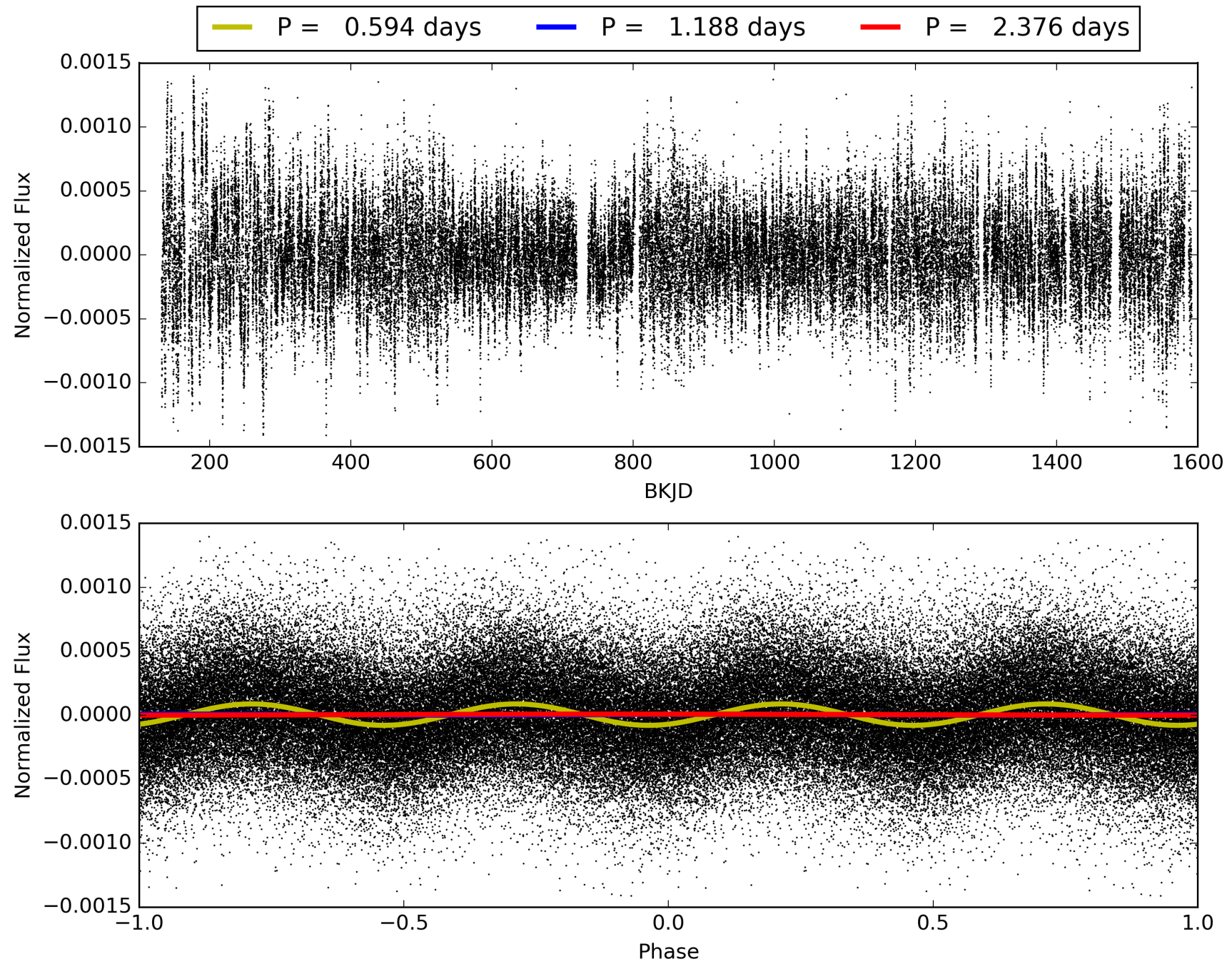
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:13:34 Z

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

# TCE 007035274-02, PDC Light Curves

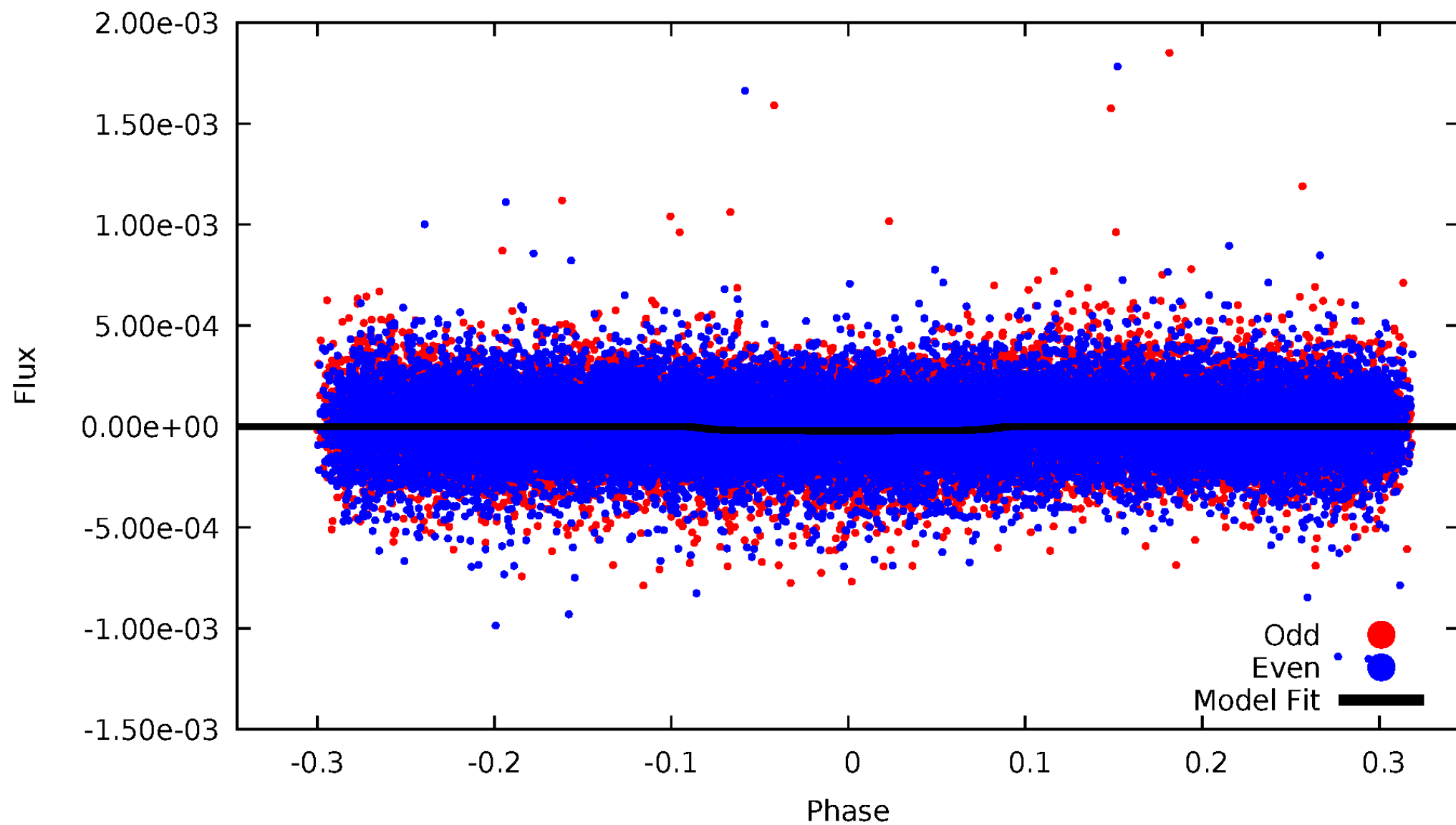


TCE 007035274-02



# DV Odd/Even

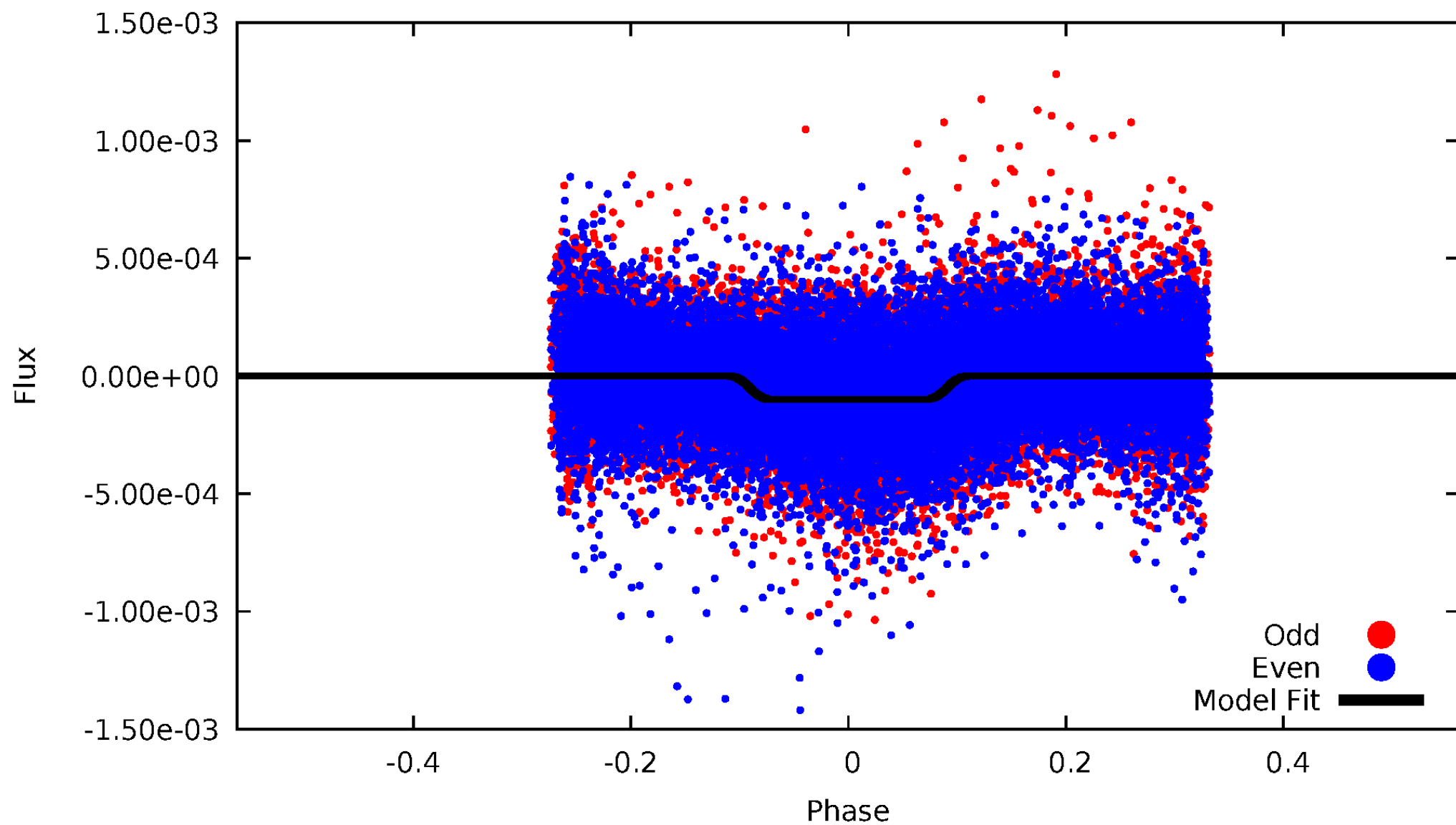
TCE 007035274-02





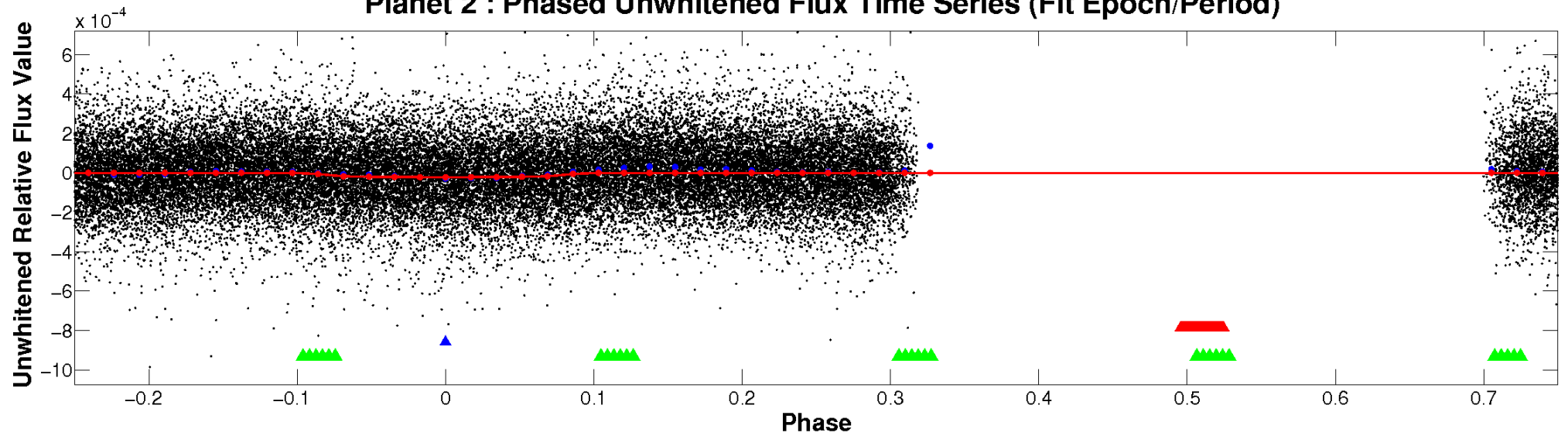
# ALT Odd/Even

TCE 007035274-02

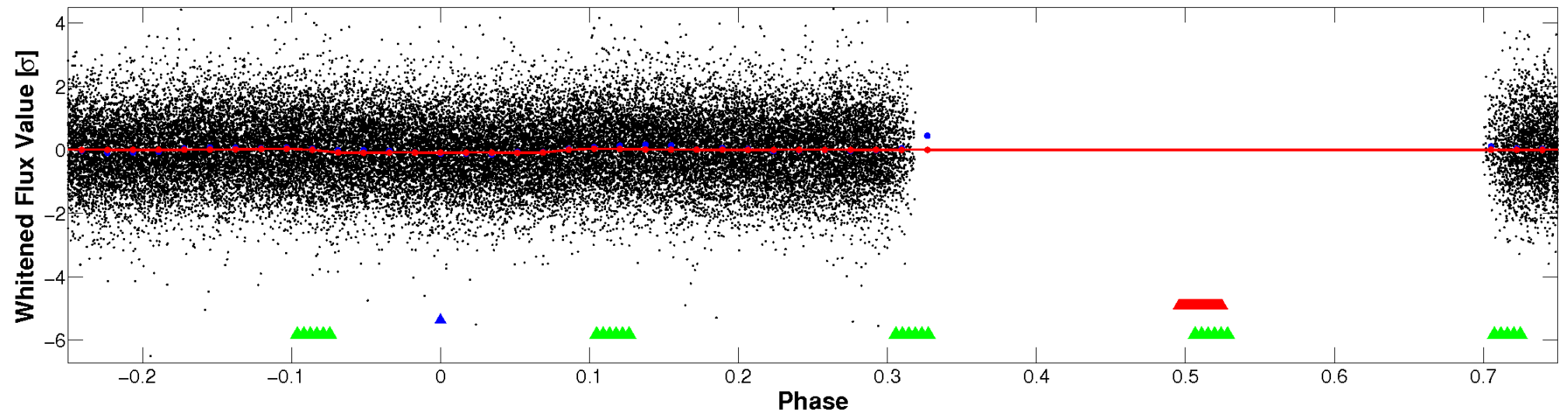


# Non-Whitened Vs. Whitened Light Curve

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

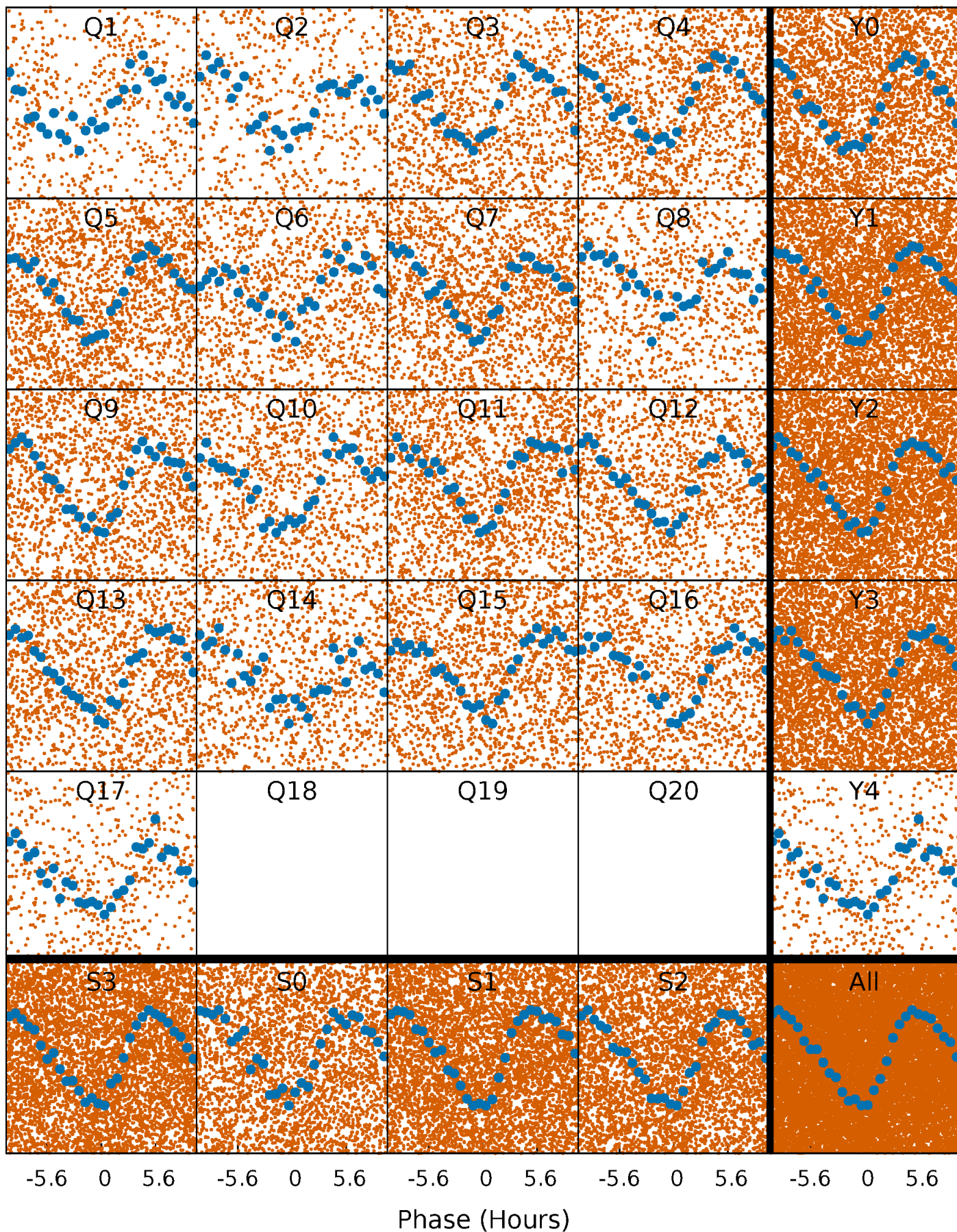


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

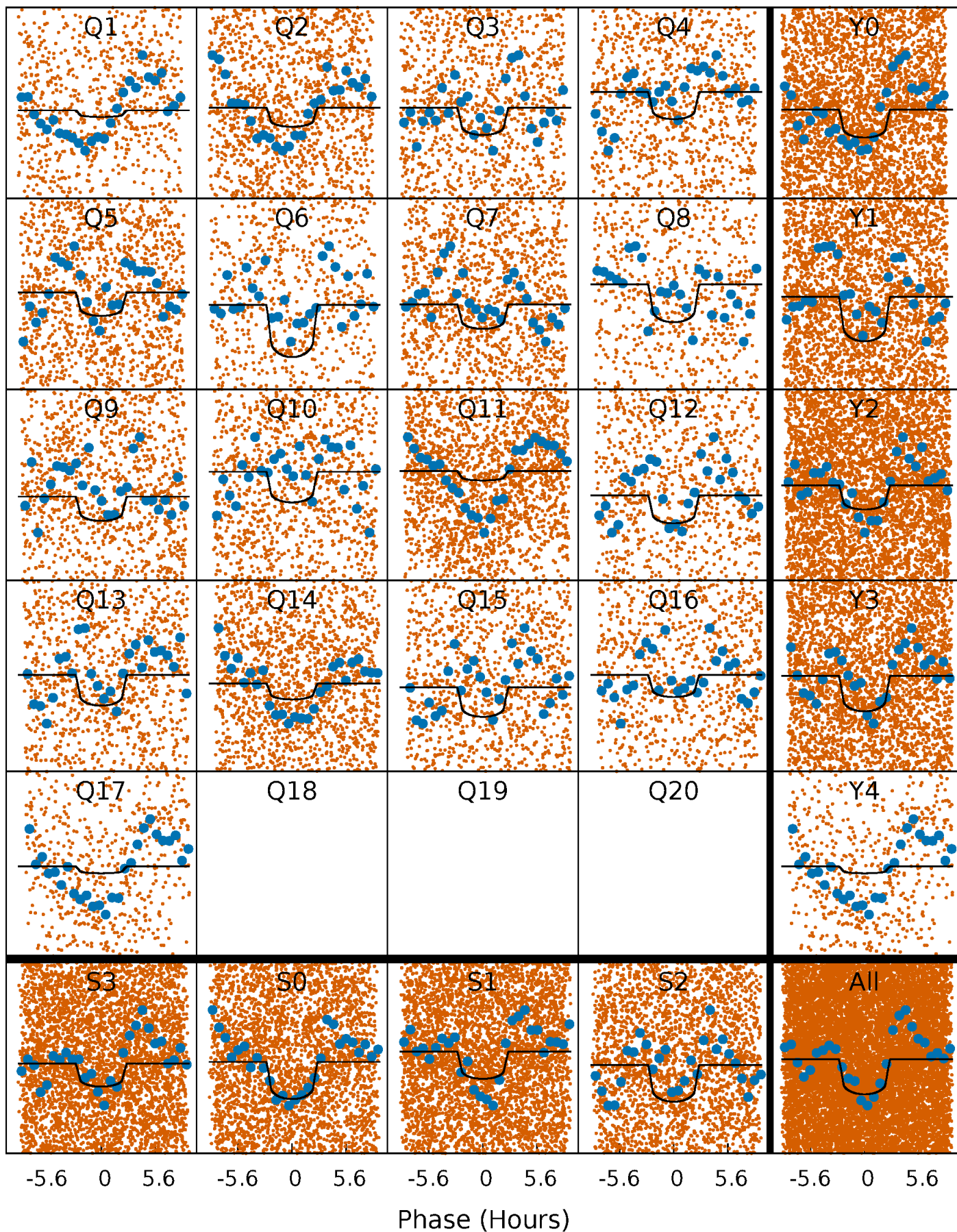
TCE 007035274-02 P= 1.188062 Days  $T_0=131.860258$  (BKJD)





# DV Quarter-Phased Transit Curves

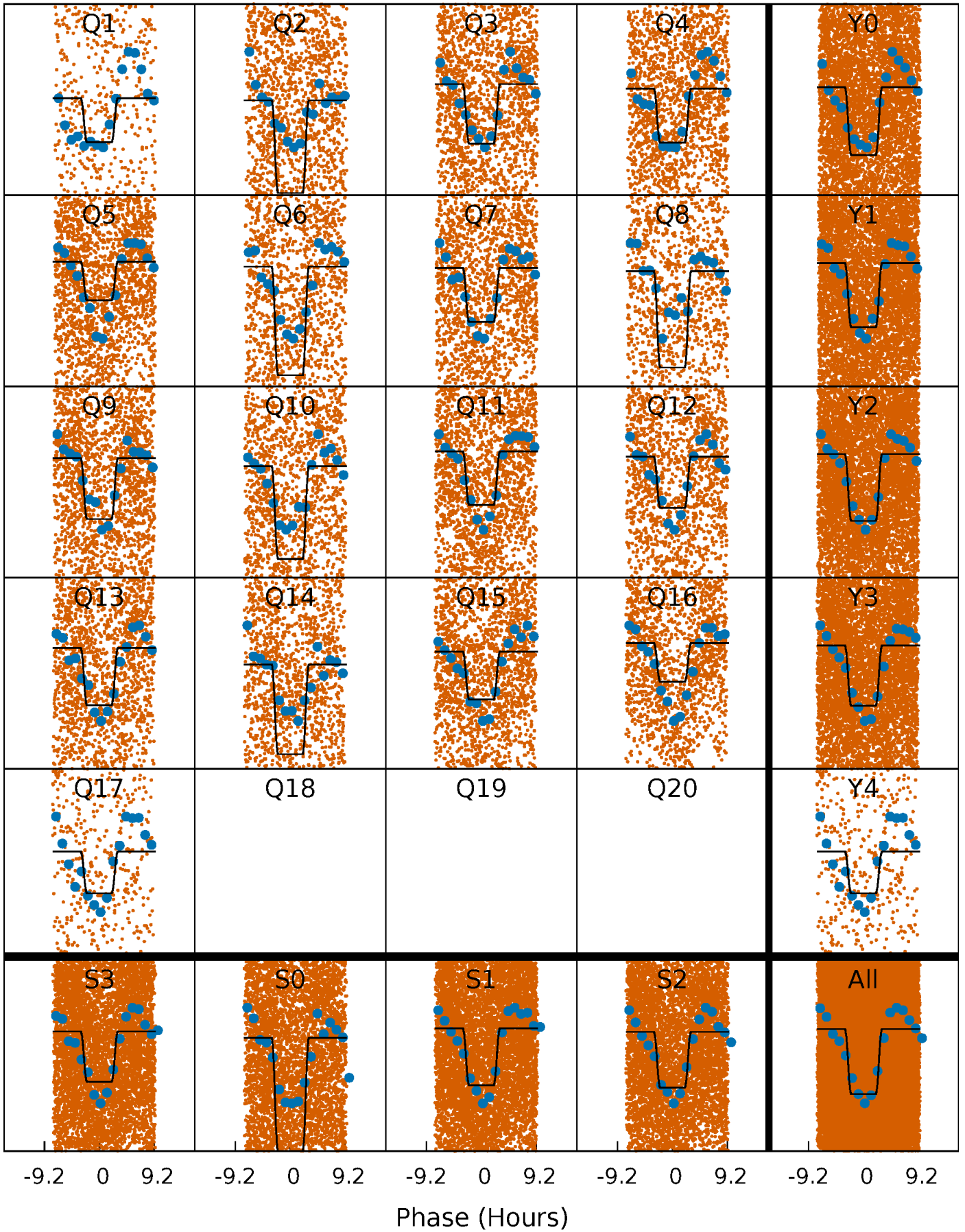
TCE 007035274-02   P= 1.188062 Days    $T_0=131.860258$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

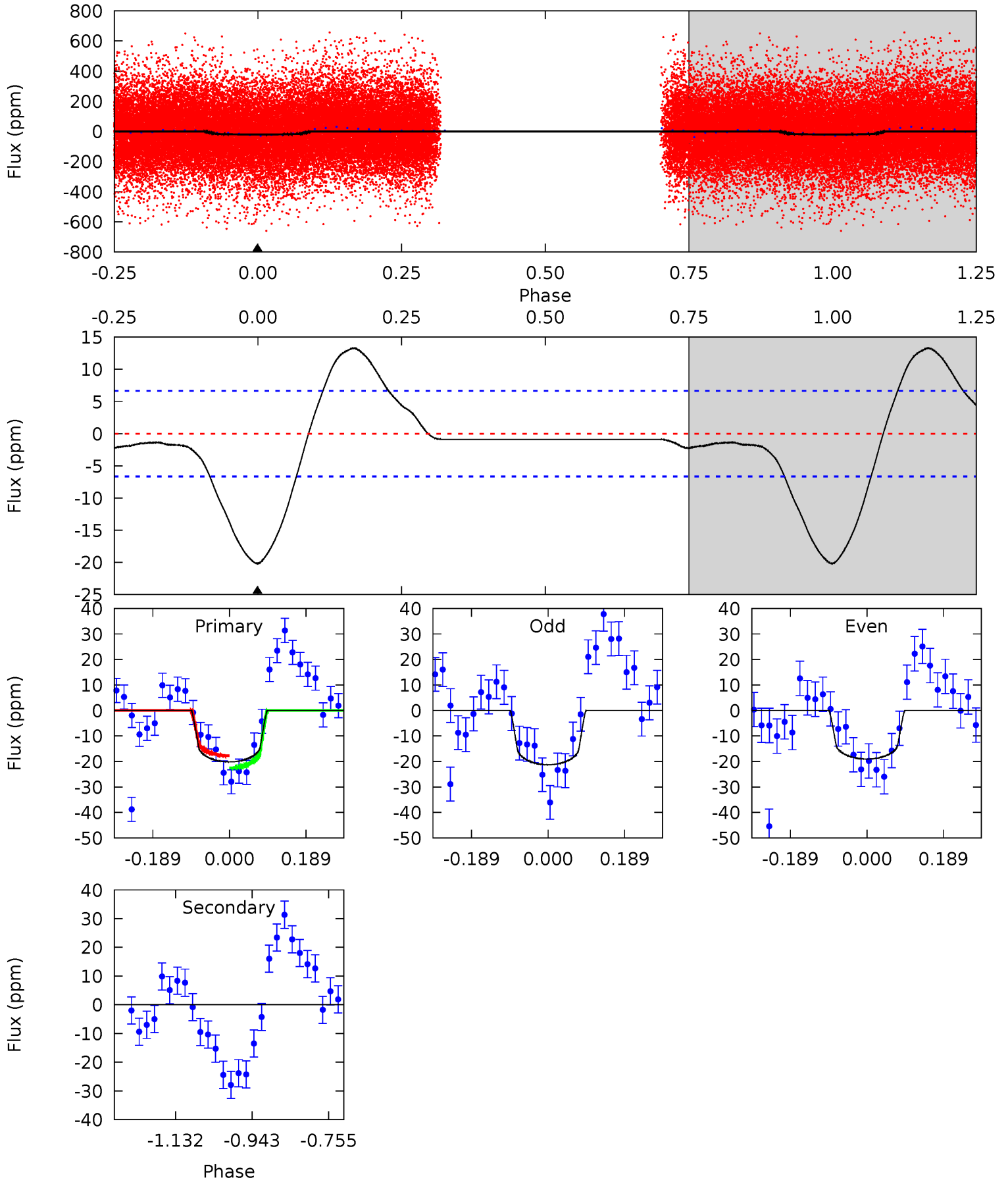
TCE 007035274-02   P= 1.188105 Days    $T_0=131.810349$  (BKJD)



# DV Model-Shift Uniqueness Test

007035274-02, P = 1.188062 Days, E = 130.672196 Days

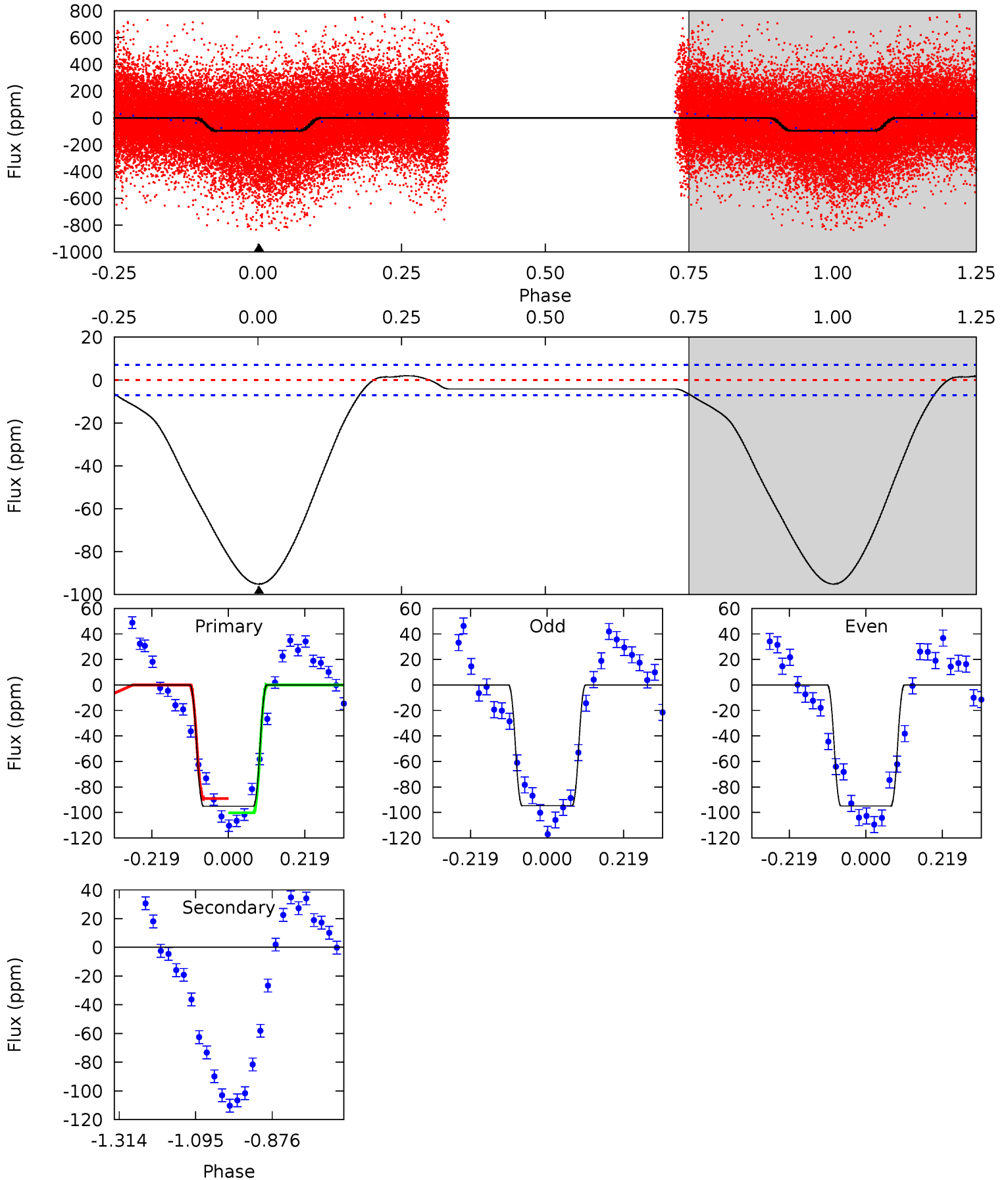
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	0	0	0	4.43	1.31	2.90	13.4	13.4	0	0	0.74	1.32	0.40	1.60



# Alt Model-Shift Uniqueness Test

007035274-02, P = 1.188105 Days, E = 130.622244 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
59.1	0	0	0	4.40	1.23	2.72	59.1	59.1	0	0	0.09	1.18	0.02	3.42



### Stellar Parameters For KIC 007035274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6365^{+76}_{-76}$	$4.130^{+0.162}_{-0.108}$	$-0.080^{+0.150}_{-0.150}$	$1.537^{+0.290}_{-0.290}$	$1.163^{+0.134}_{-0.083}$	$0.451^{+0.370}_{-0.147}$
	+1%/-1%	+4%/-3%	+188%/-188%	+19%/-19%	+12%/-7%	+82%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 007035274-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 2$	$0.83^{+0.26}_{-0.25}$	$3189^{+152}_{-174}$	$-3214^{+6522}_{-720}$	$-0.005^{+0.730}_{-0.747}$
Alt.	$0 \pm 2$	$1.65^{+0.30}_{-0.27}$	$3183^{+151}_{-153}$	$-3207^{+404}_{-242}$	$-0.001^{+0.169}_{-0.182}$

$T_{max}$  = 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

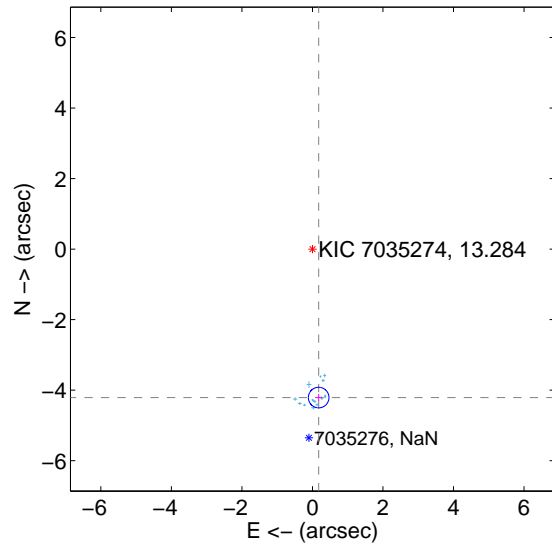
Supplemental centroid analysis for 007035274-02. Kepler magnitude: 13.28. Transit SNR 8.93

There are 17 quarters with good PRF difference image offsets

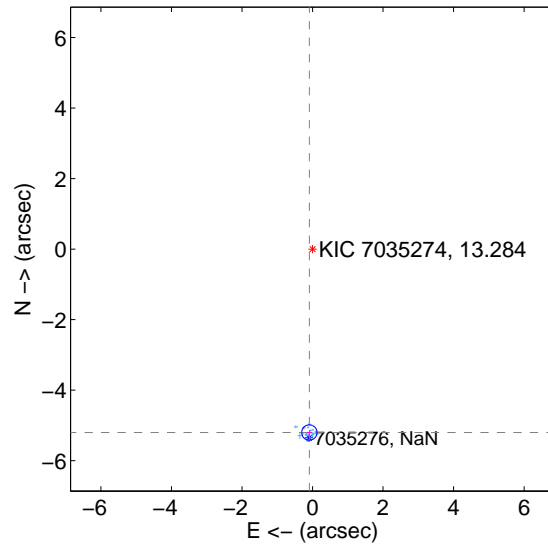
The direct PRF centroid is offset from the target star catalog position by about 1.45 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$4.213 \pm 0.097$	43.32	$-0.177 \pm 0.094$	$-4.209 \pm 0.098$
PRF-fit source offset from KIC position	$5.201 \pm 0.072$	71.87	$0.090 \pm 0.075$	$-5.201 \pm 0.072$
photometric centroid source offset	$2.42 \pm 1.10$	2.20	$1.18 \pm 0.55$	$-2.11 \pm 1.22$

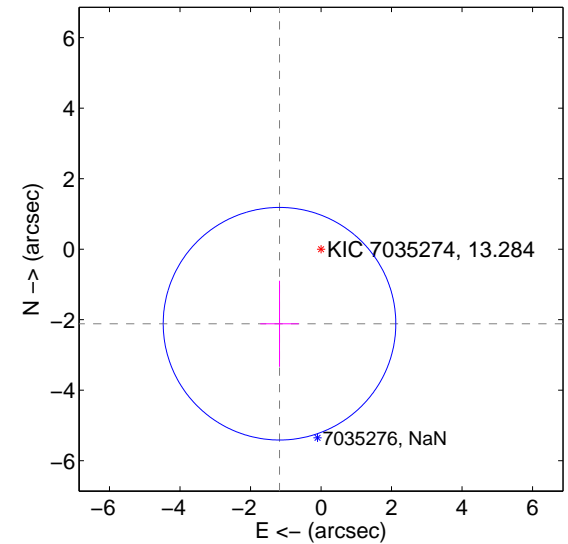
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

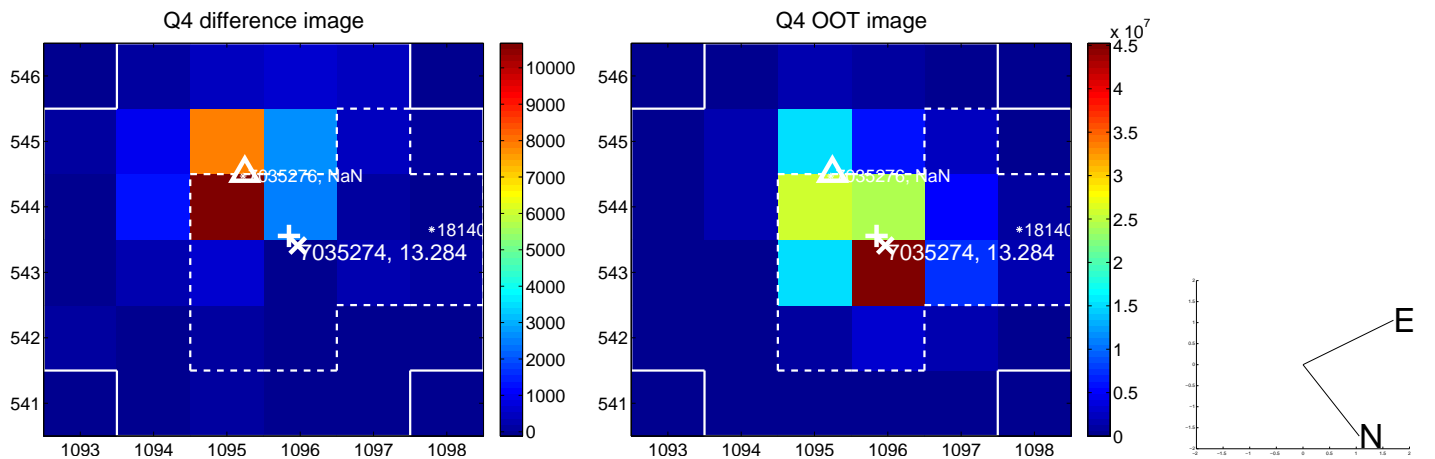
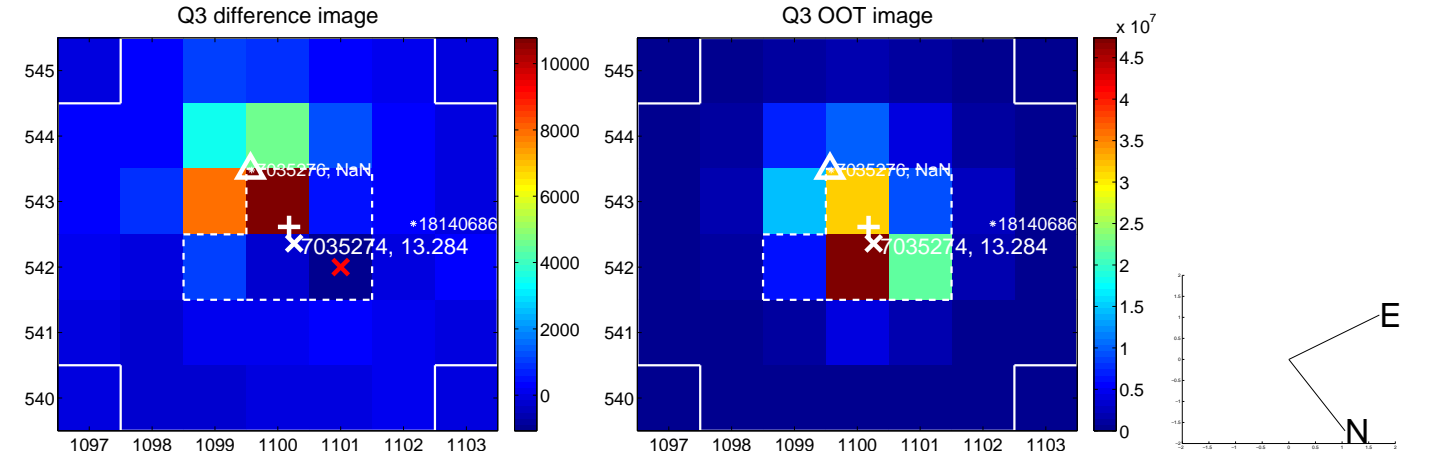
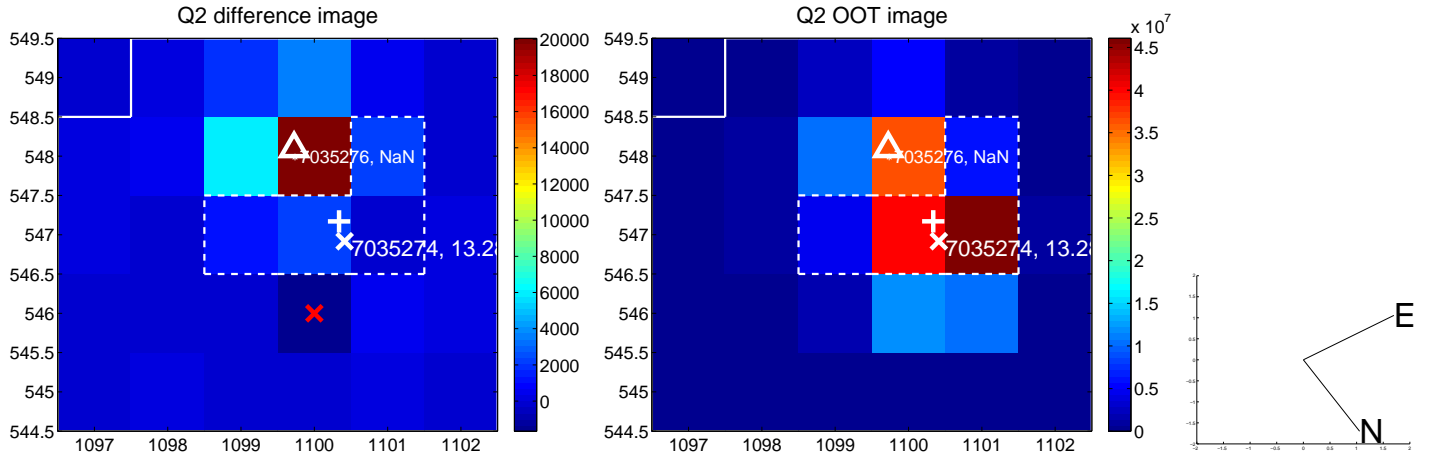
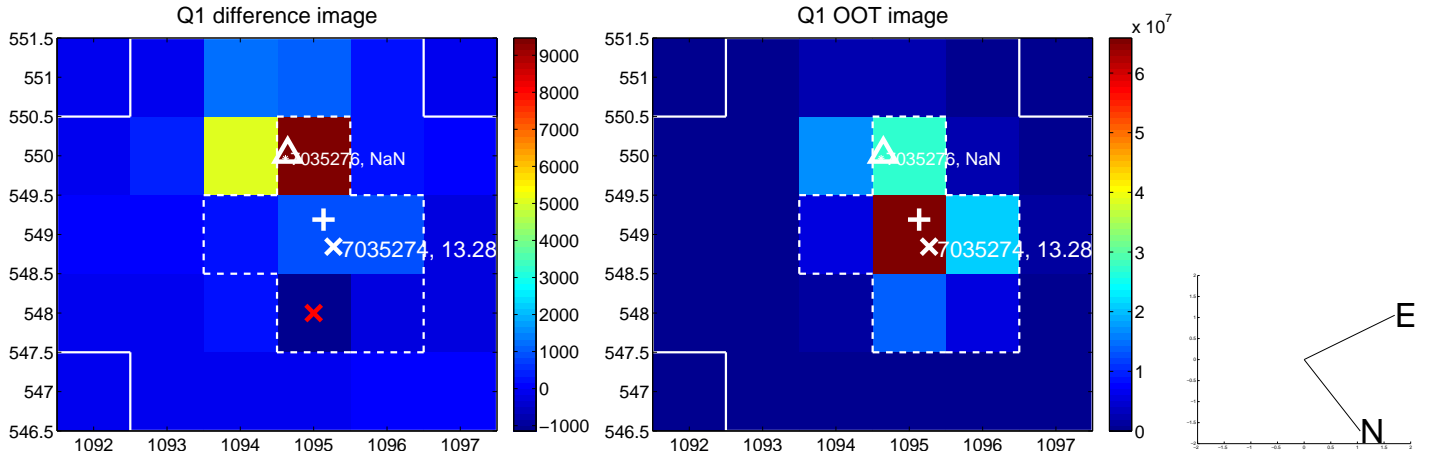


offset from photometric centroids

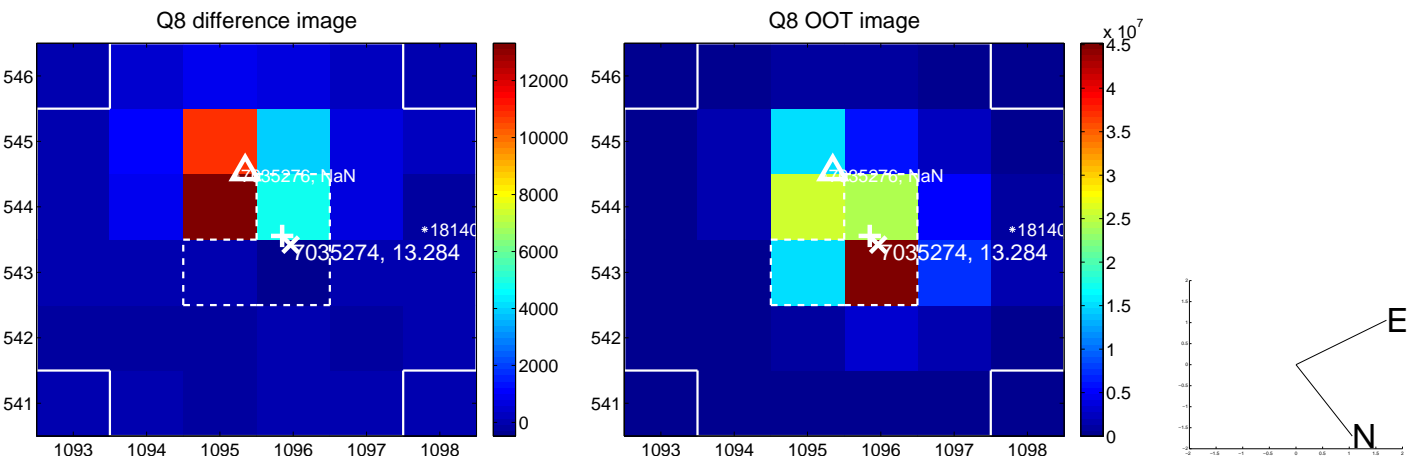
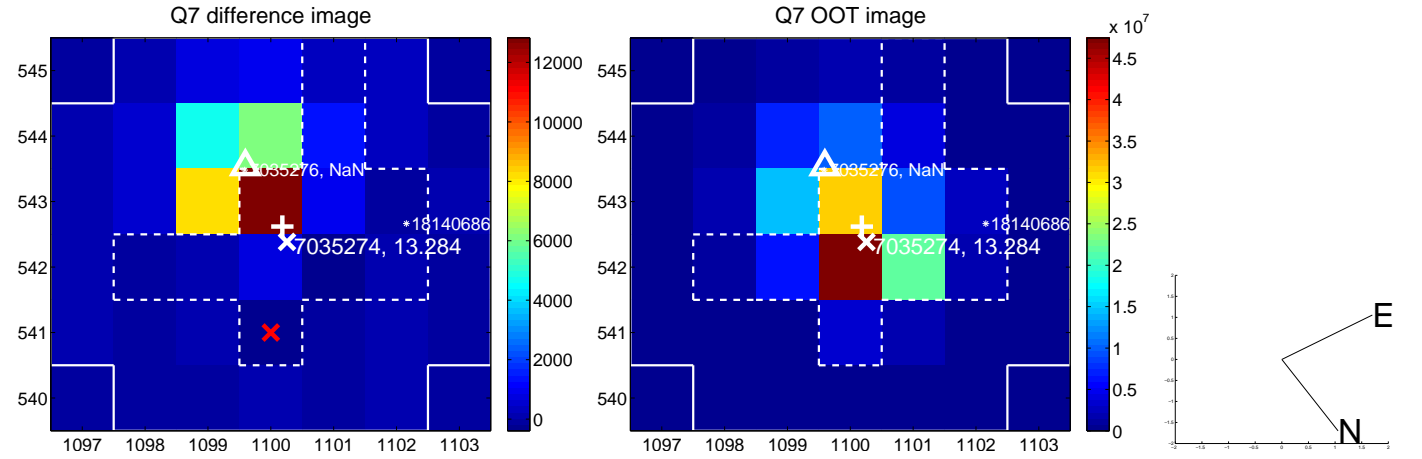
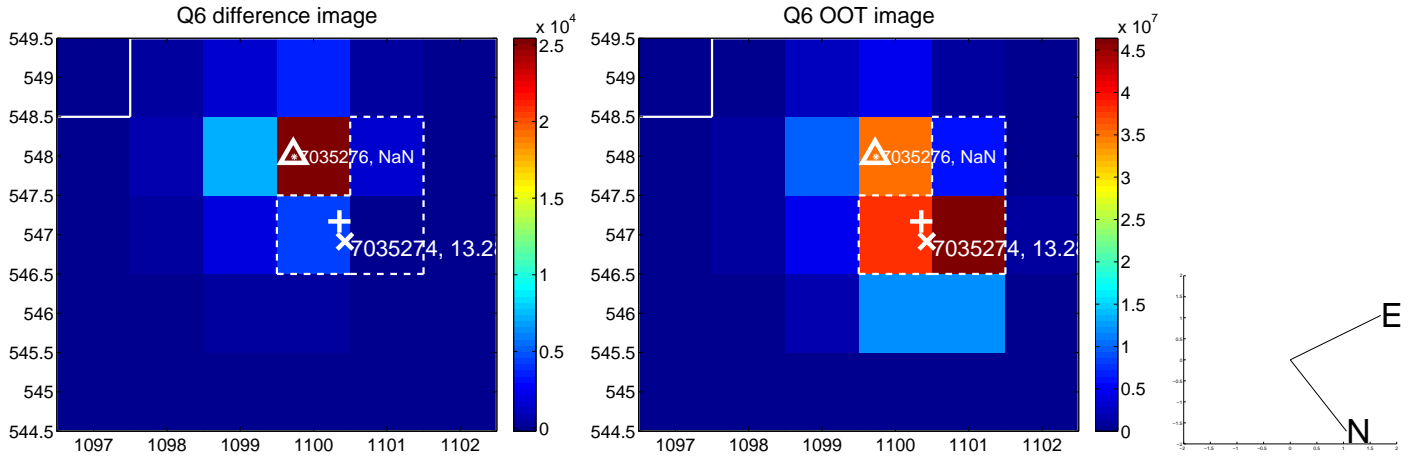
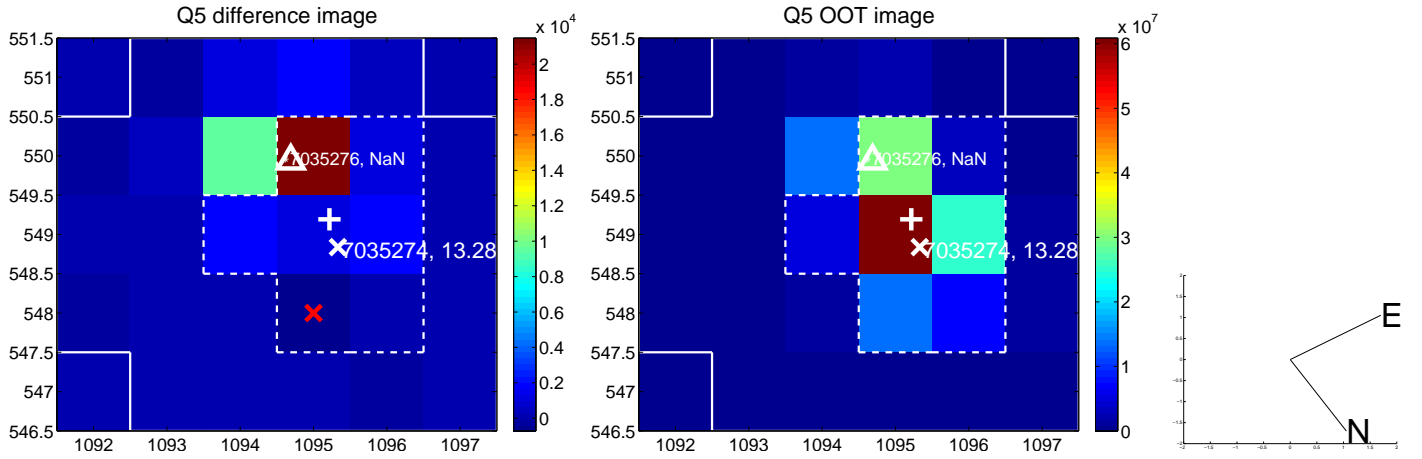


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

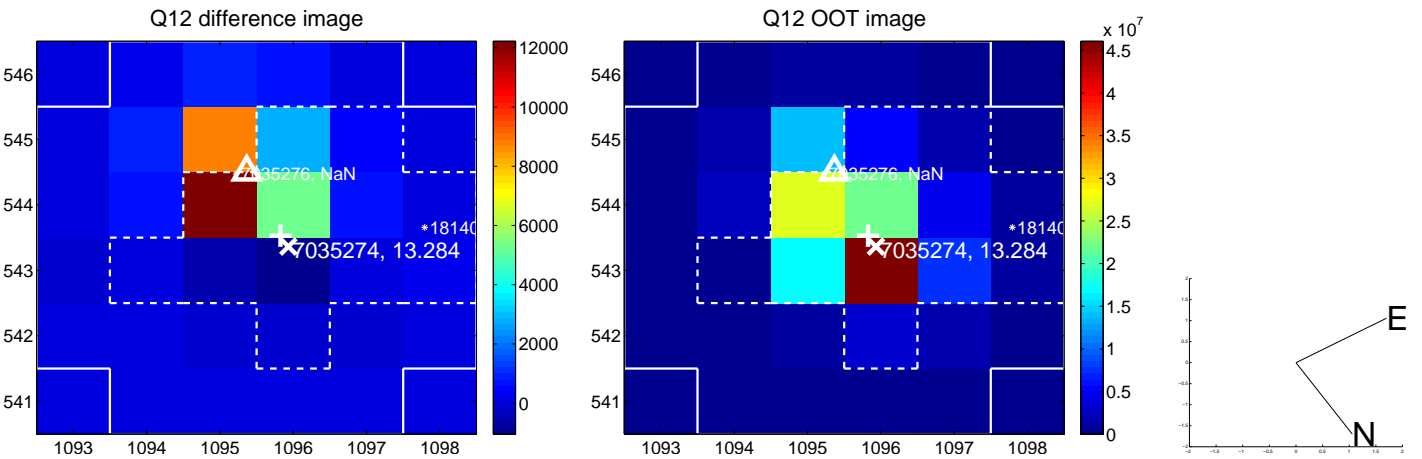
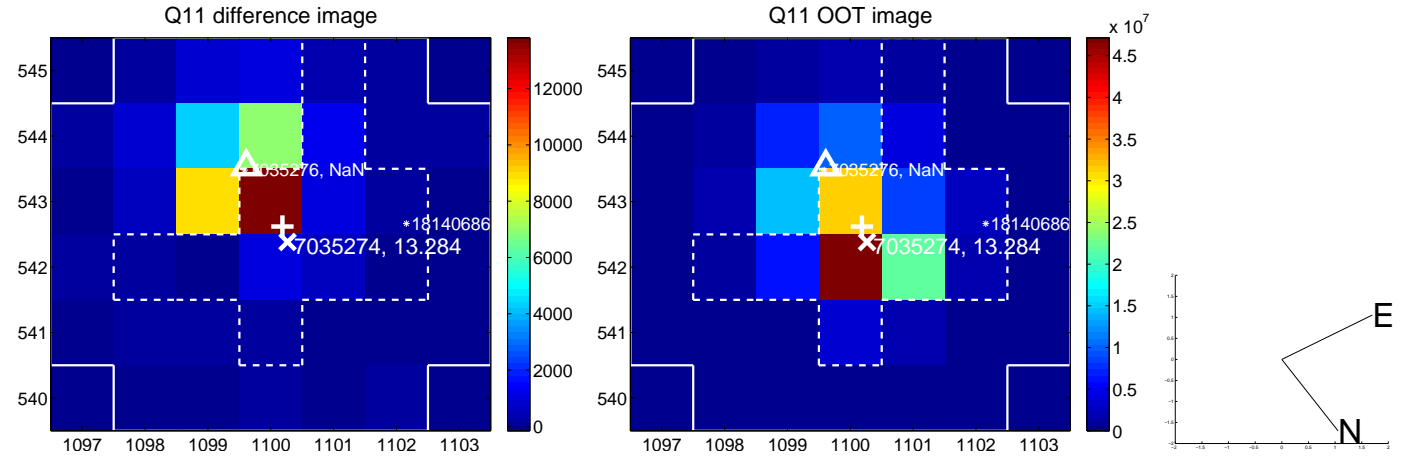
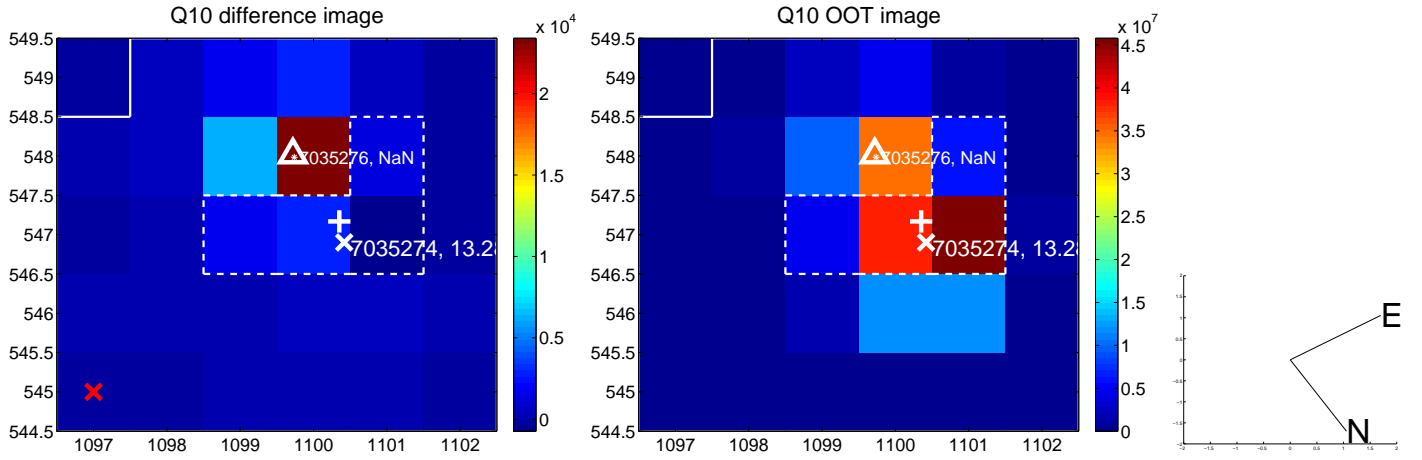
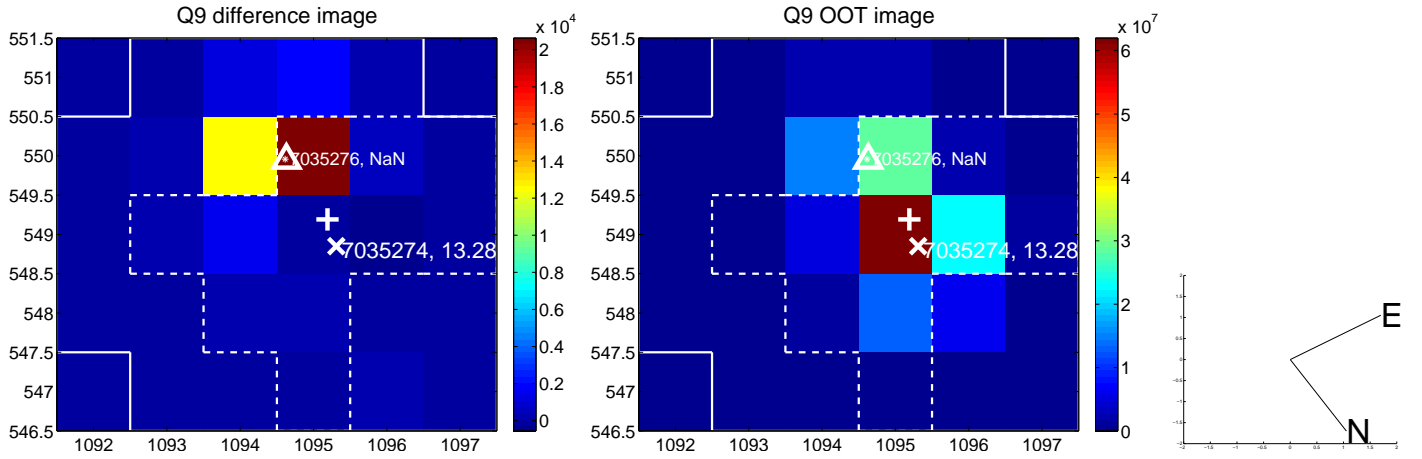
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



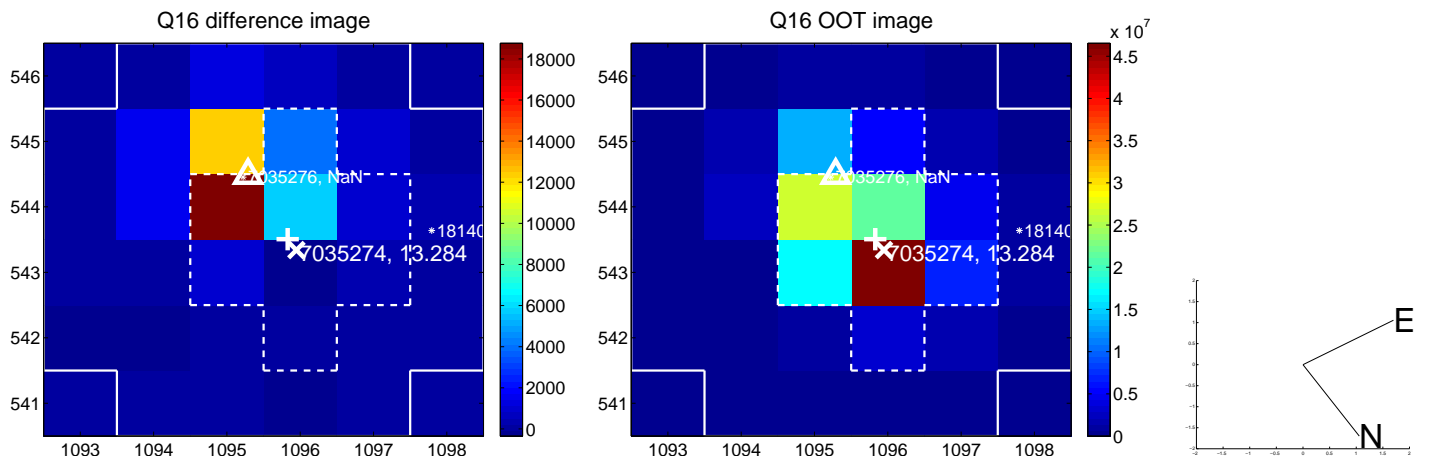
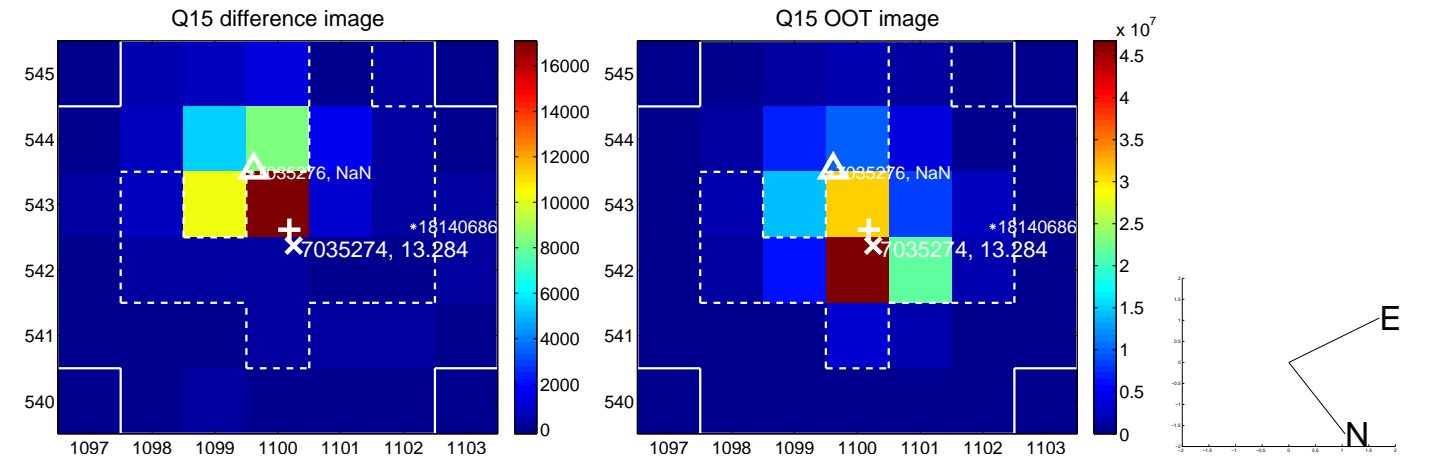
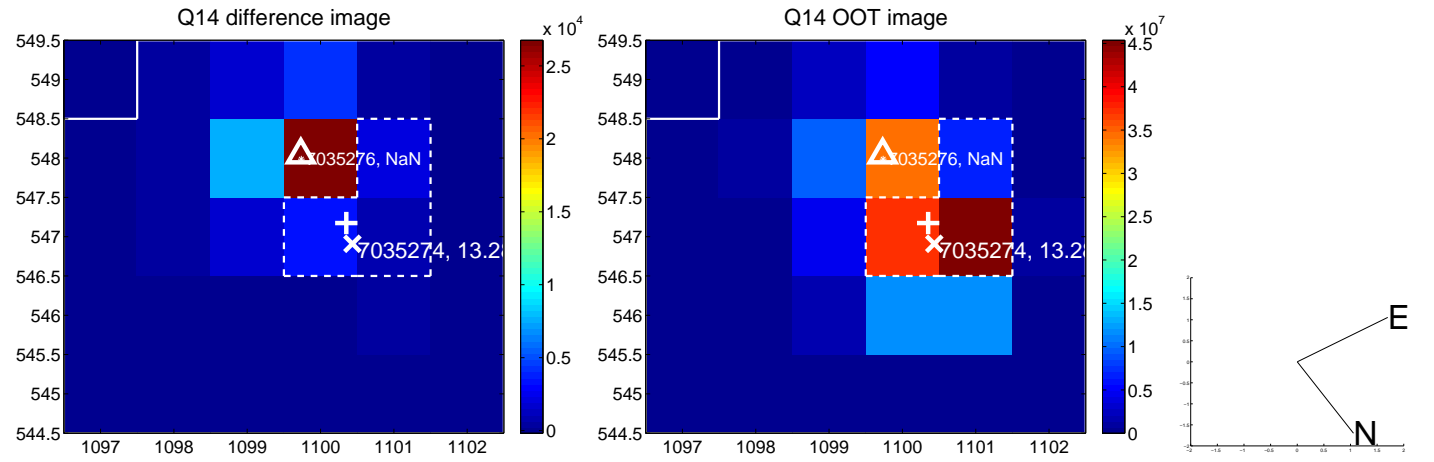
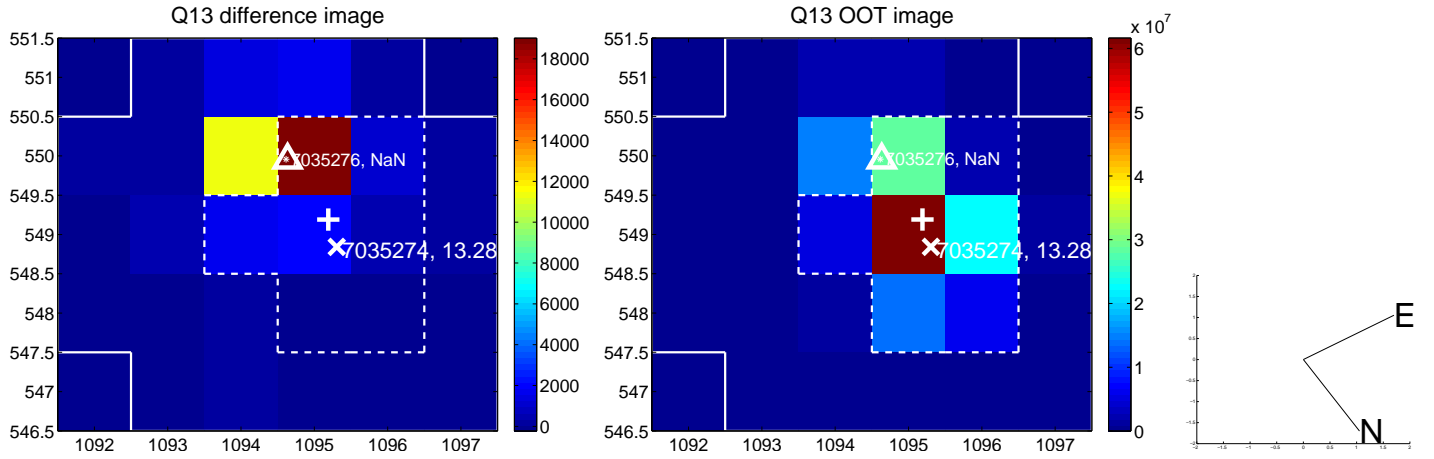
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

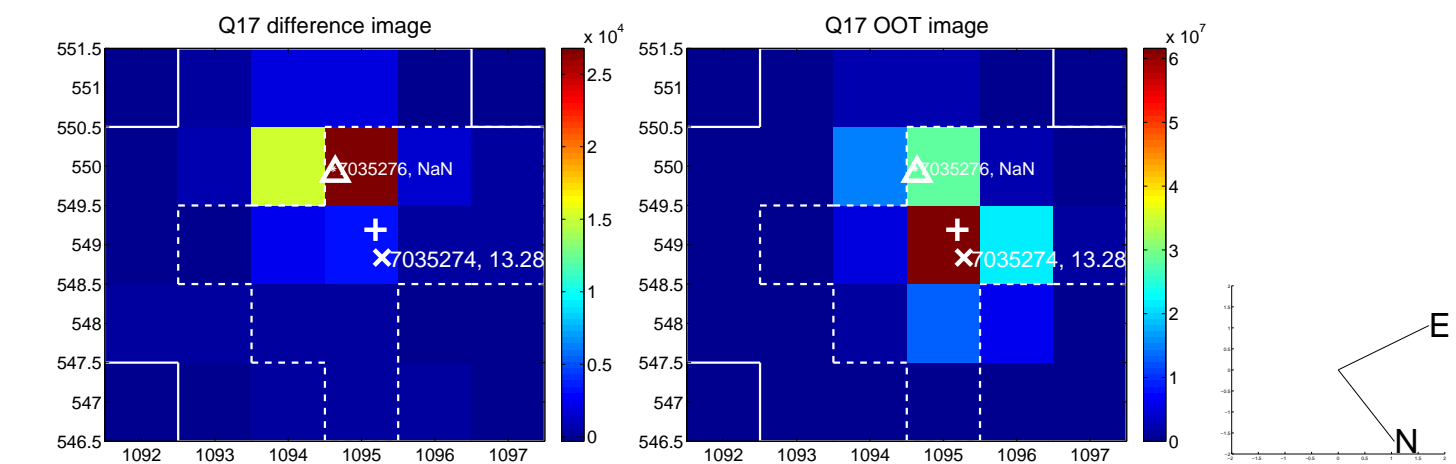


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

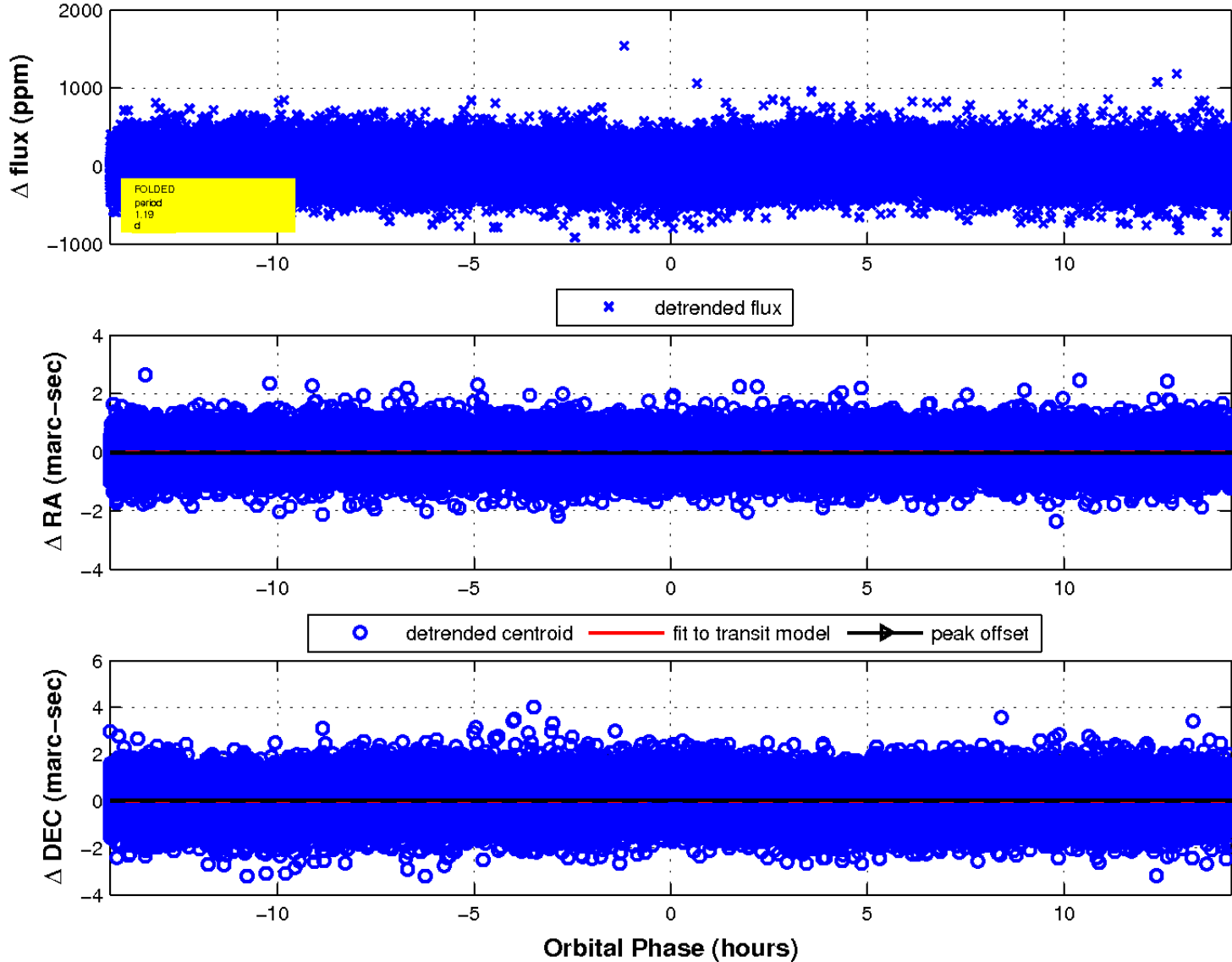




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

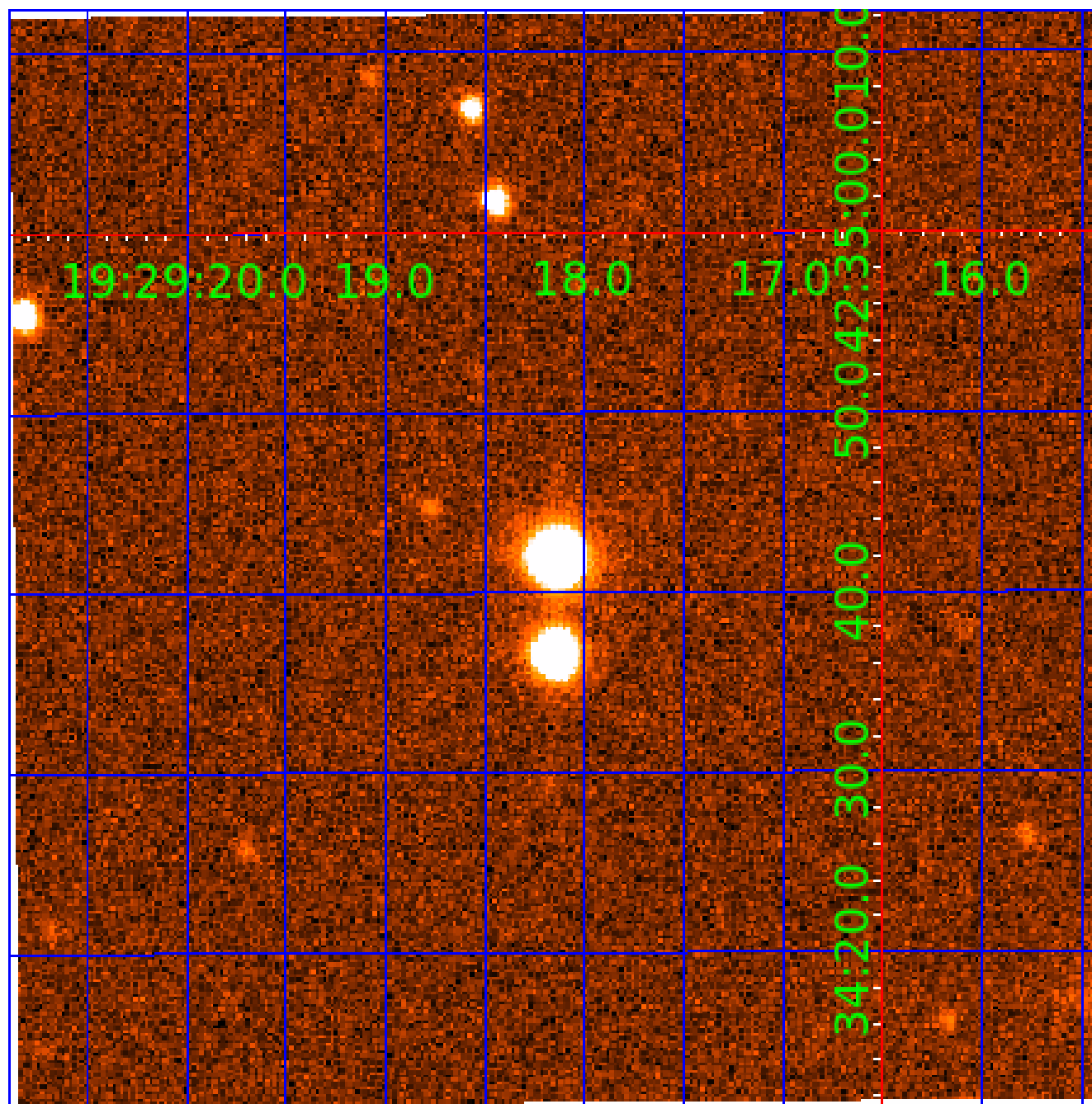


fluxWeightedCentroids, Planet 2 of 3



# UKIRT Image

Declination



# KIC 007035274

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007035274-01	OBS	No	1.188090	132.449014	29.0	3.713	10.4	10.0	1.54	6365	0.96	6517.36
007035274-02	OBS	No	1.188062	131.860258	21.9	4.923	8.9	8.9	1.54	6365	0.84	6517.56
007035274-03	OBS	No	50.848012	139.616306	347.2	4.500	10.0	-1.0	1.54	6365	2.87	43.53

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007035274-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_KIC_POS
007035274-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_KIC_POS—HALO_GHOST
007035274-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

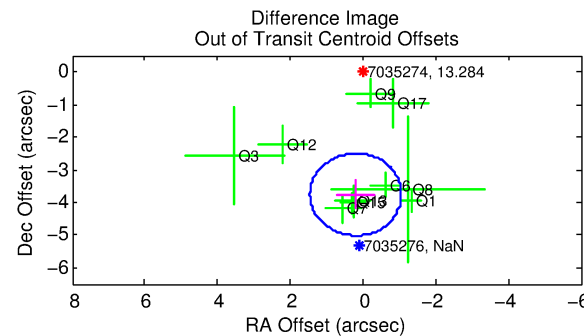
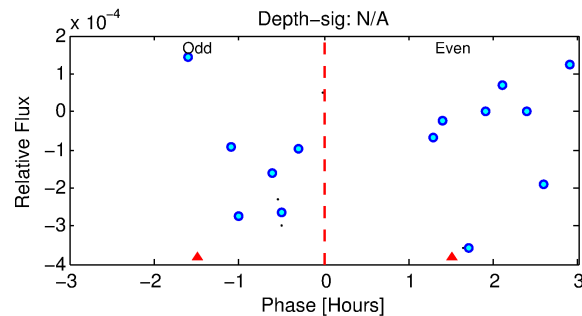
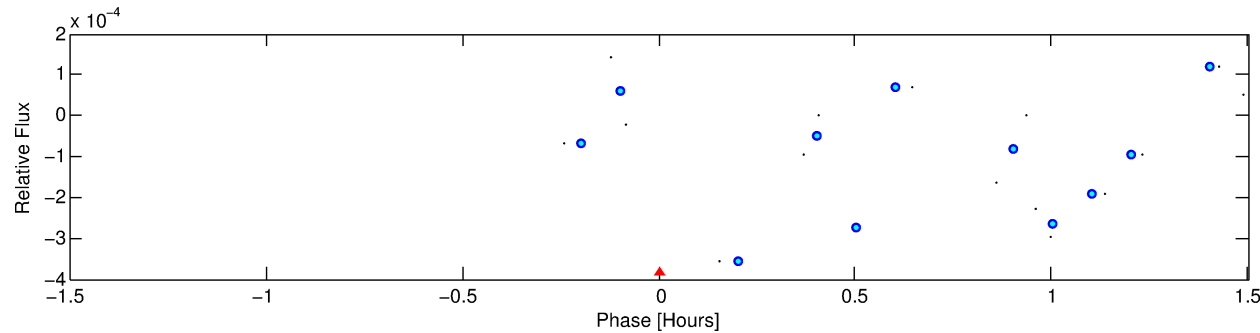
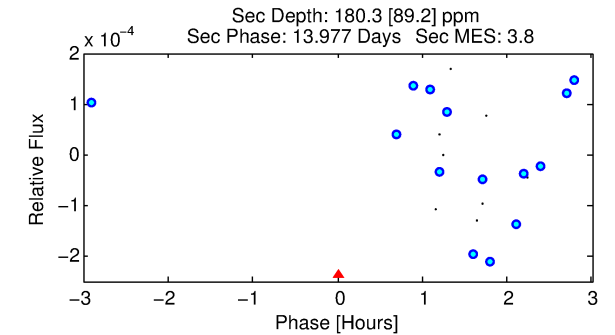
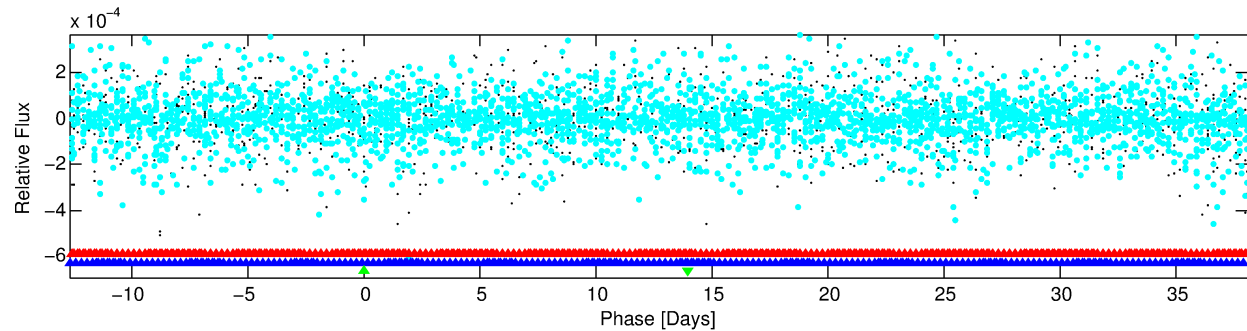
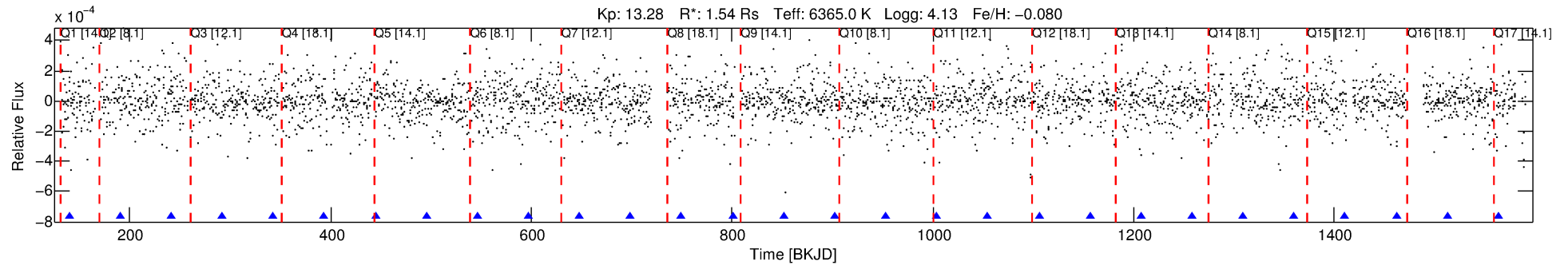
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007035274-03

No Significant Match Found

# DV One-Page Summary

KIC: 7035274 Candidate: 3 of 3 Period: 50.848 d



## TPS TCE Results:

Period = 50.84801 d  
Epoch = 139.6163 BKJD

DV fit results are unavailable

## DV Diagnostic Results:

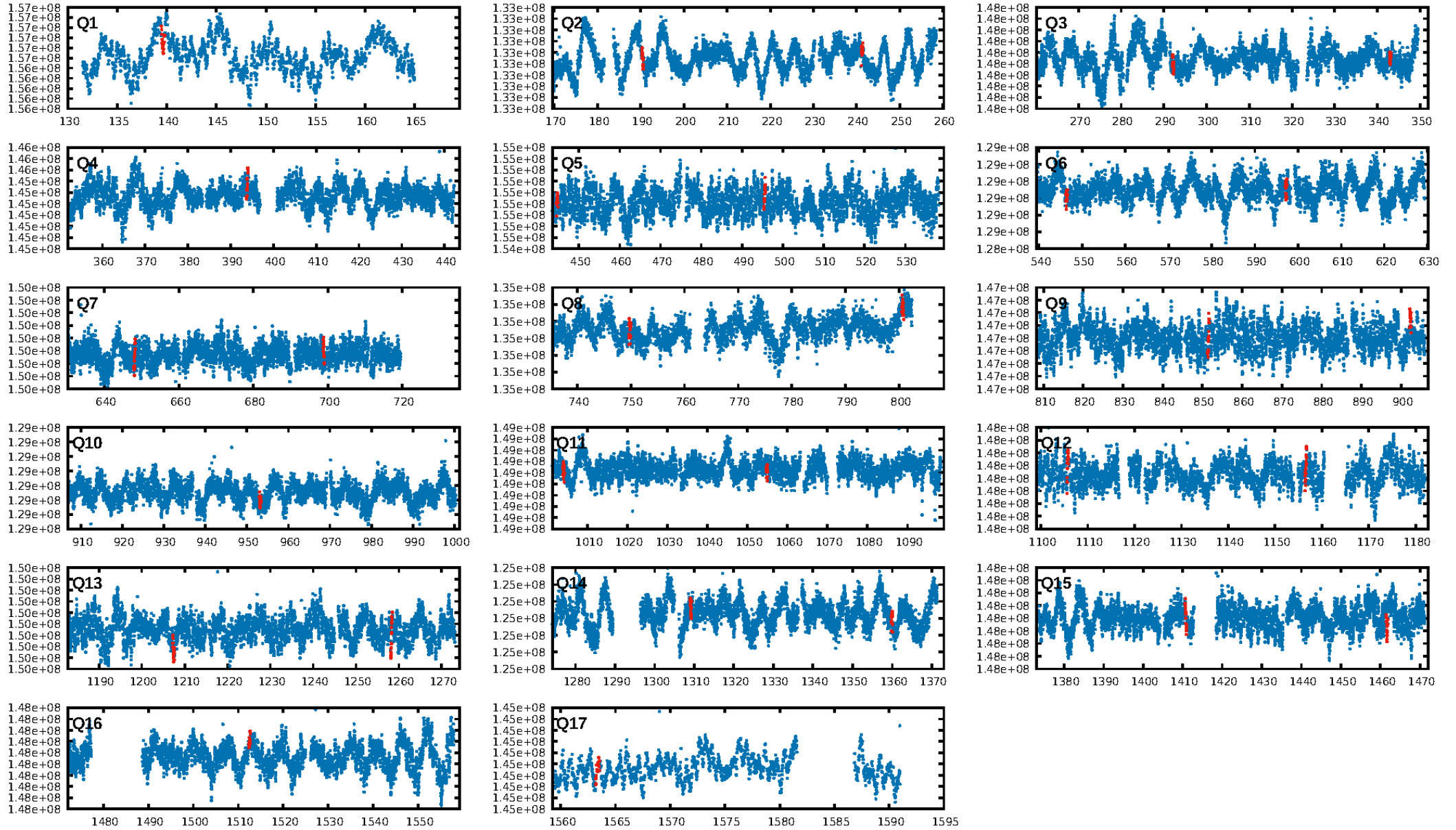
ShortPeriod-sig: 100.0% [204.29σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.63e-15  
RollingBand-fgt: 1.00 [7/7]  
GhostDiagnostic-chr: -1.128

Centroid-sig: 69.1%  
Centroid-so: 0.866 arcsec [0.70σ]  
OotOffset-rm: 3.766 arcsec [8.97σ]  
KicOffset-rm: 4.912 arcsec [13.17σ]  
OotOffset-st: 1/3/2/4 [10]  
KicOffset-st: 1/3/2/4 [10]  
DiffImageQuality-fgm: 0.30 [3/10]  
DiffImageOverlap-fno: 0.00 [0/12]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:13:42 Z

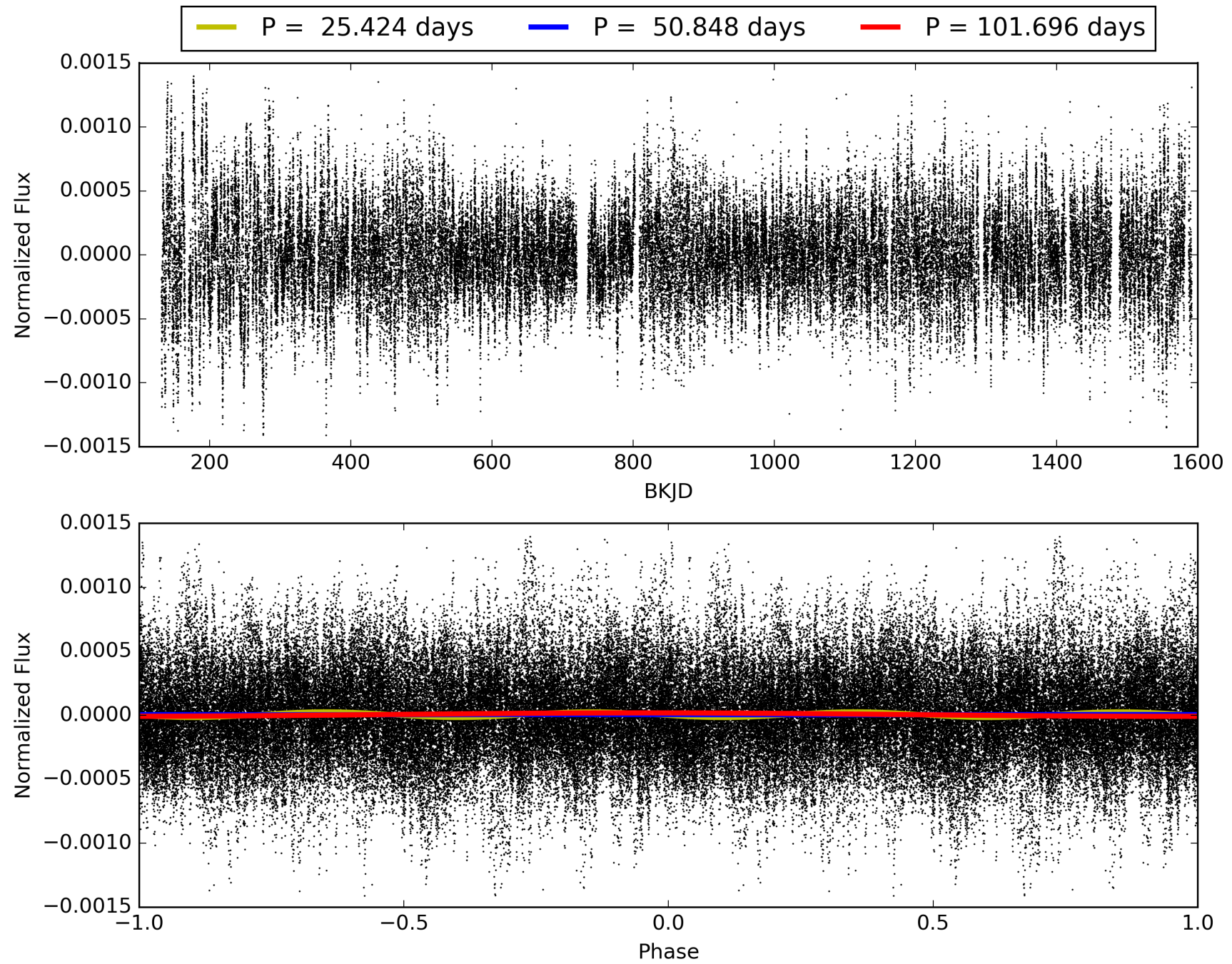
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007035274-03, PDC Light Curves



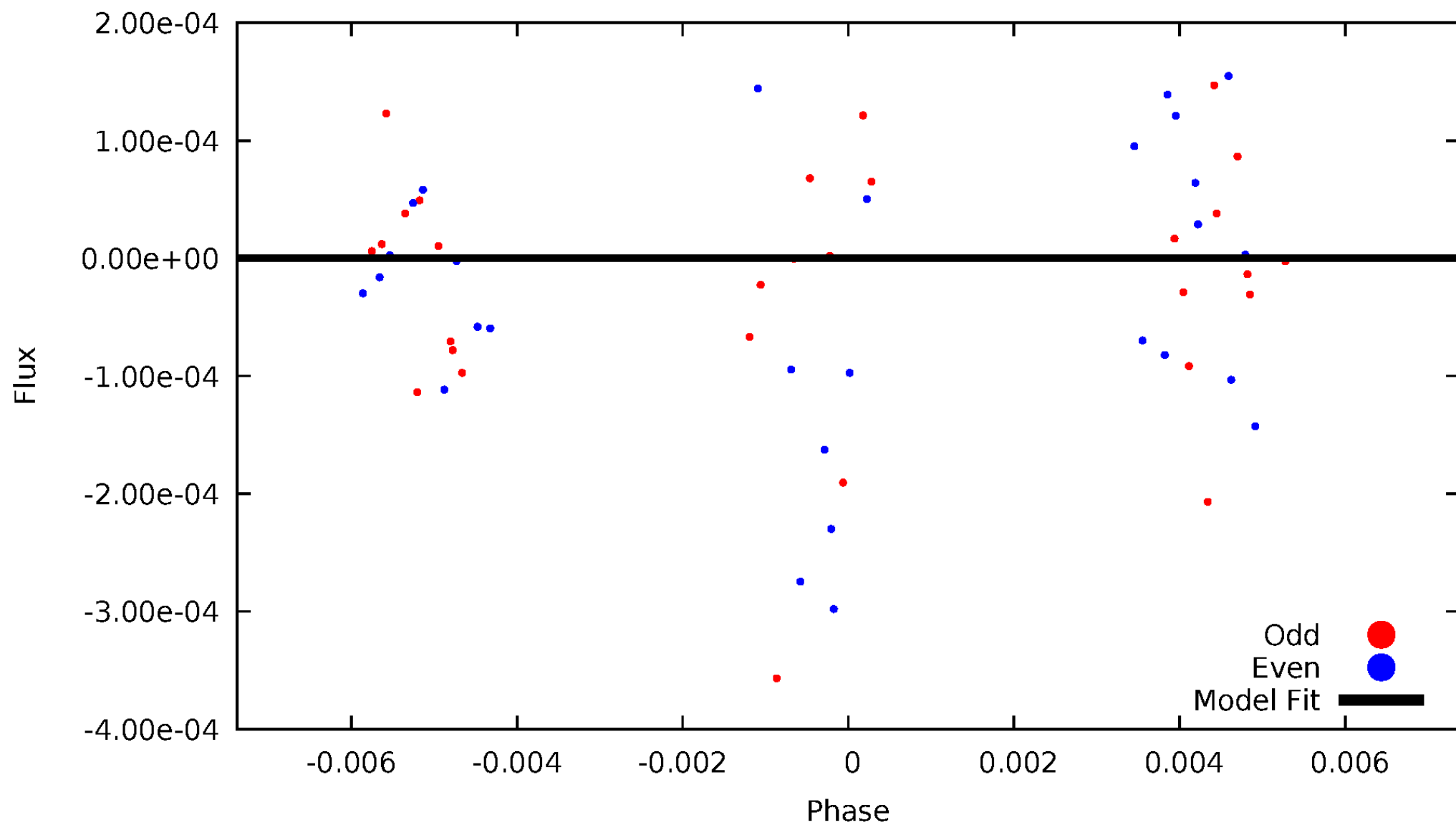


TCE 007035274-03



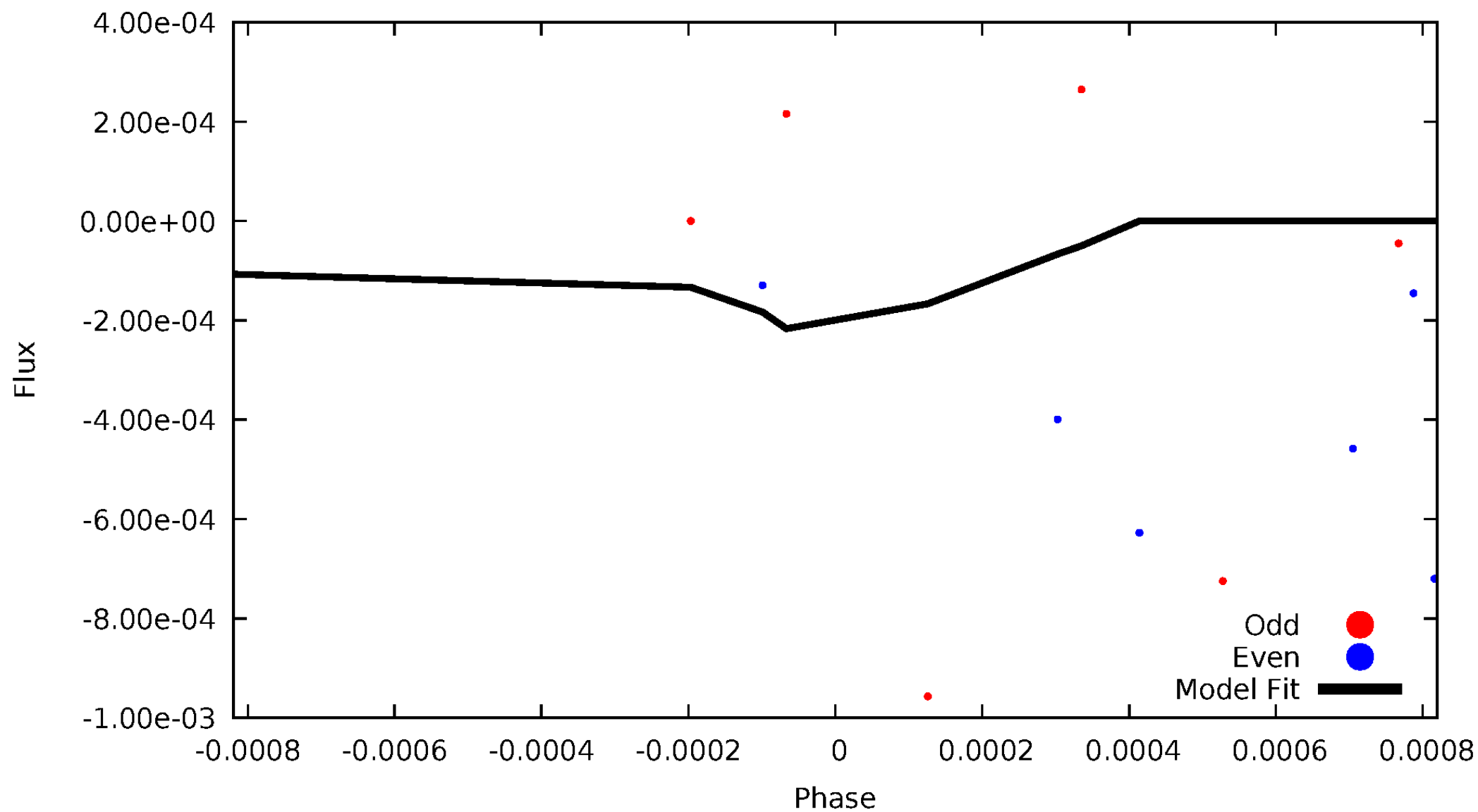
# DV Odd/Even

TCE 007035274-03

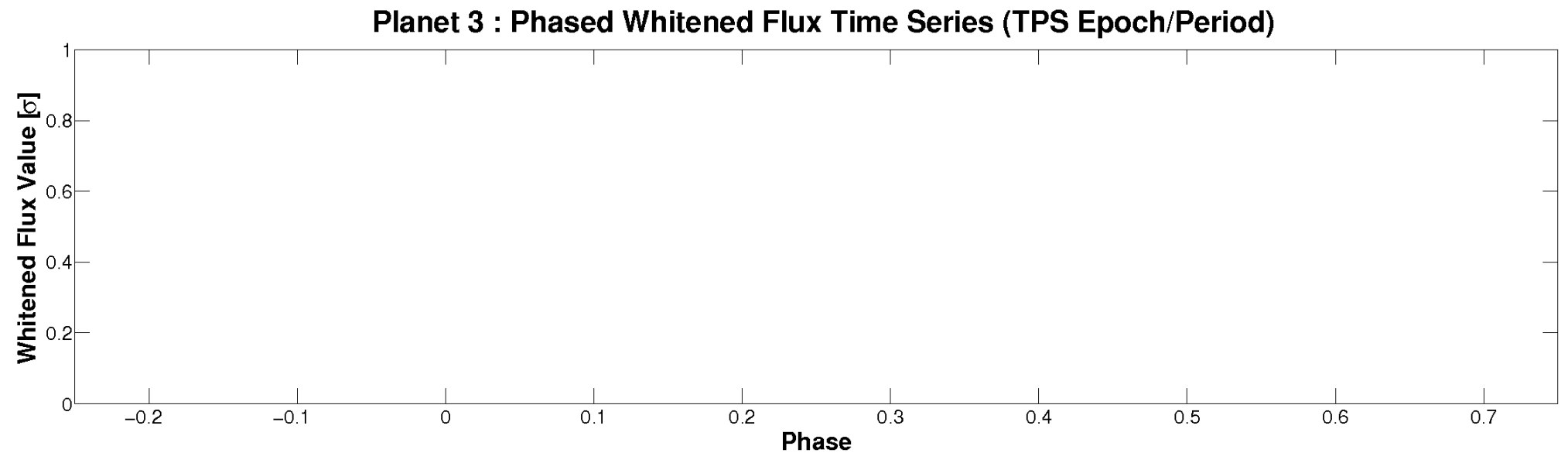
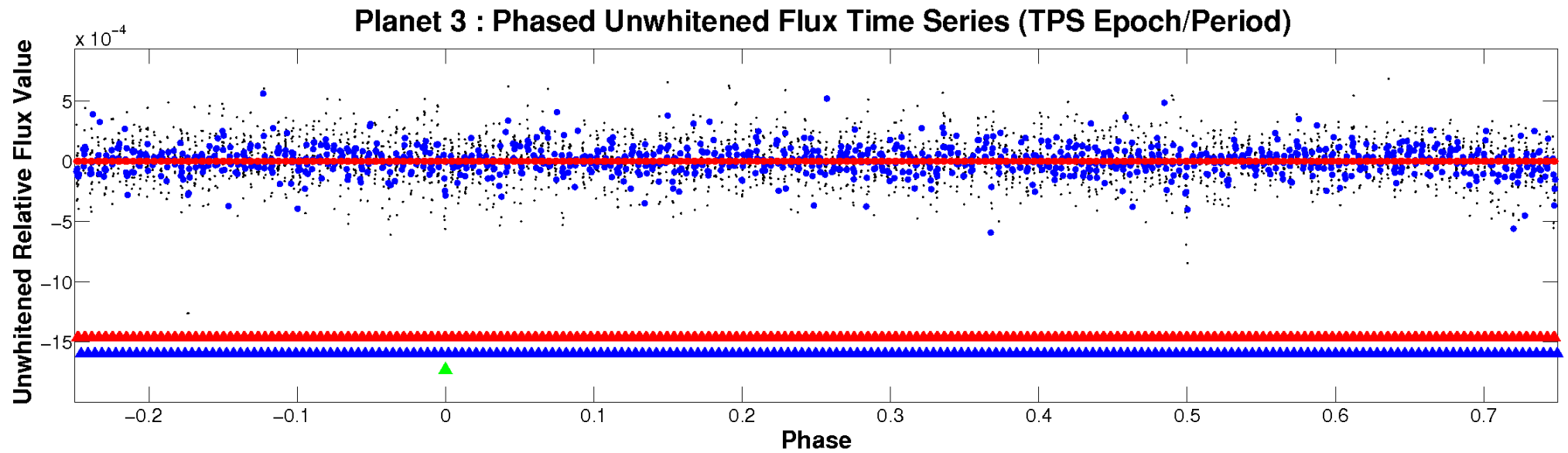


# ALT Odd/Even

TCE 007035274-03

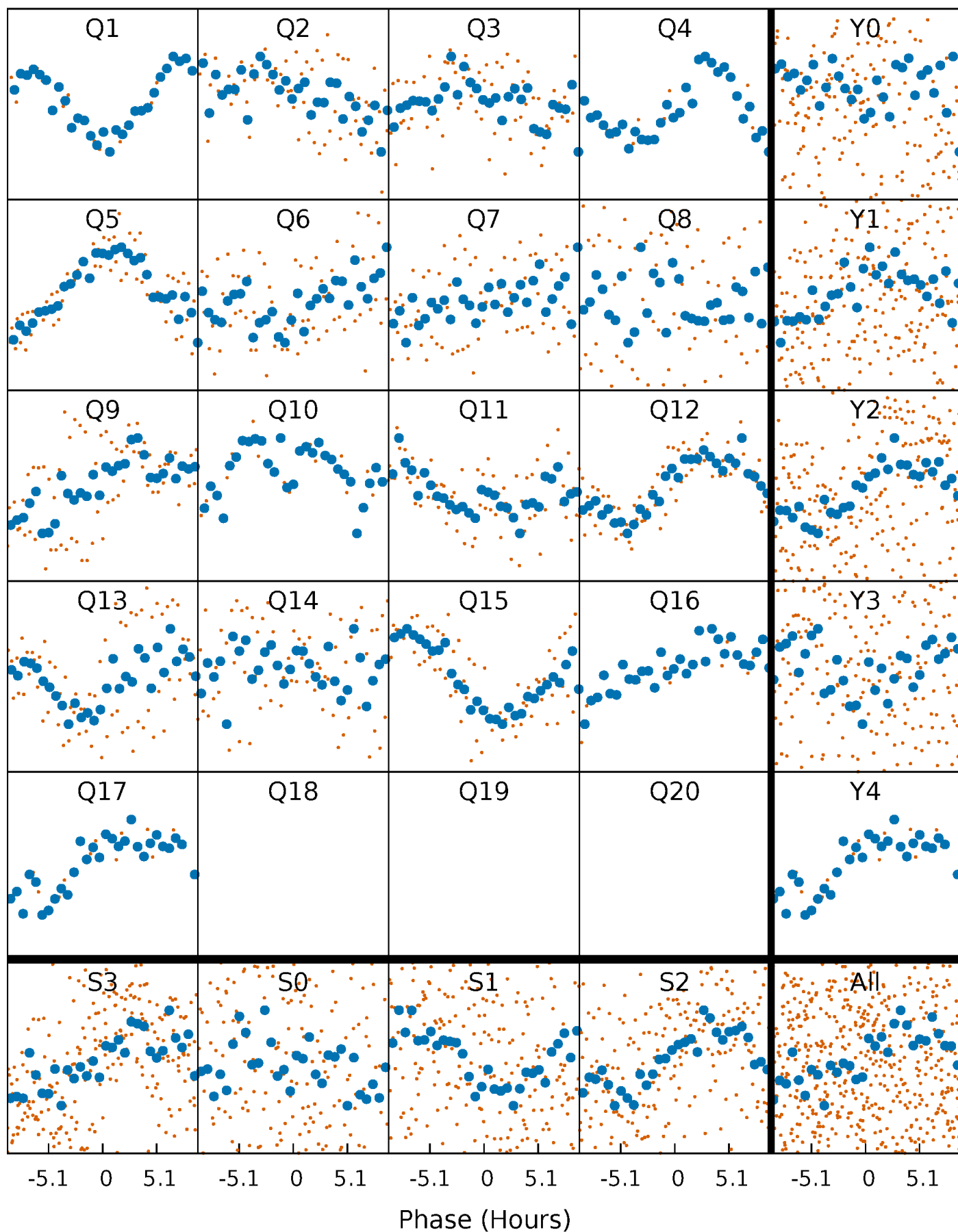


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

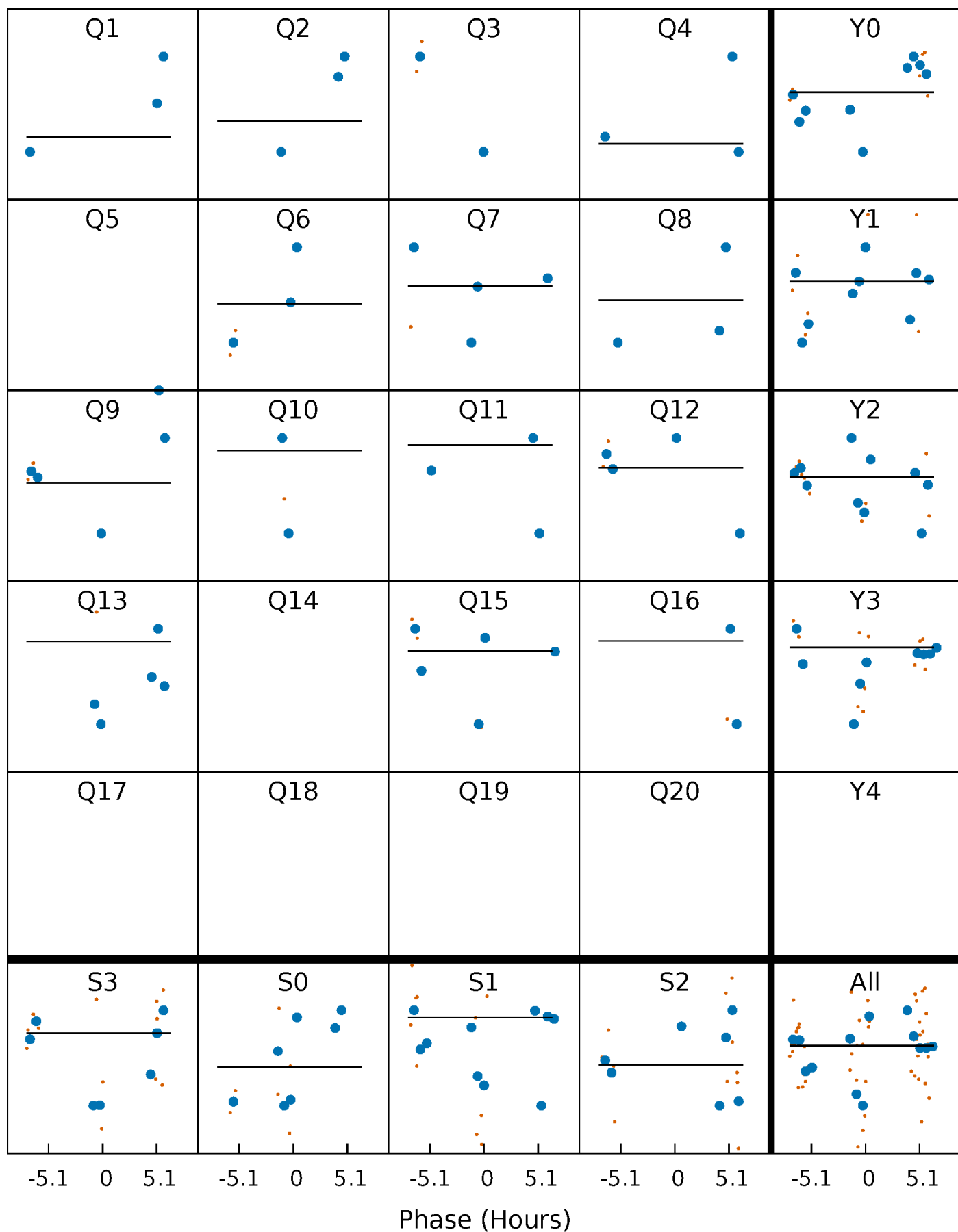
TCE 007035274-03 P= 50.848012 Days  $T_0=139.616306$  (BKJD)





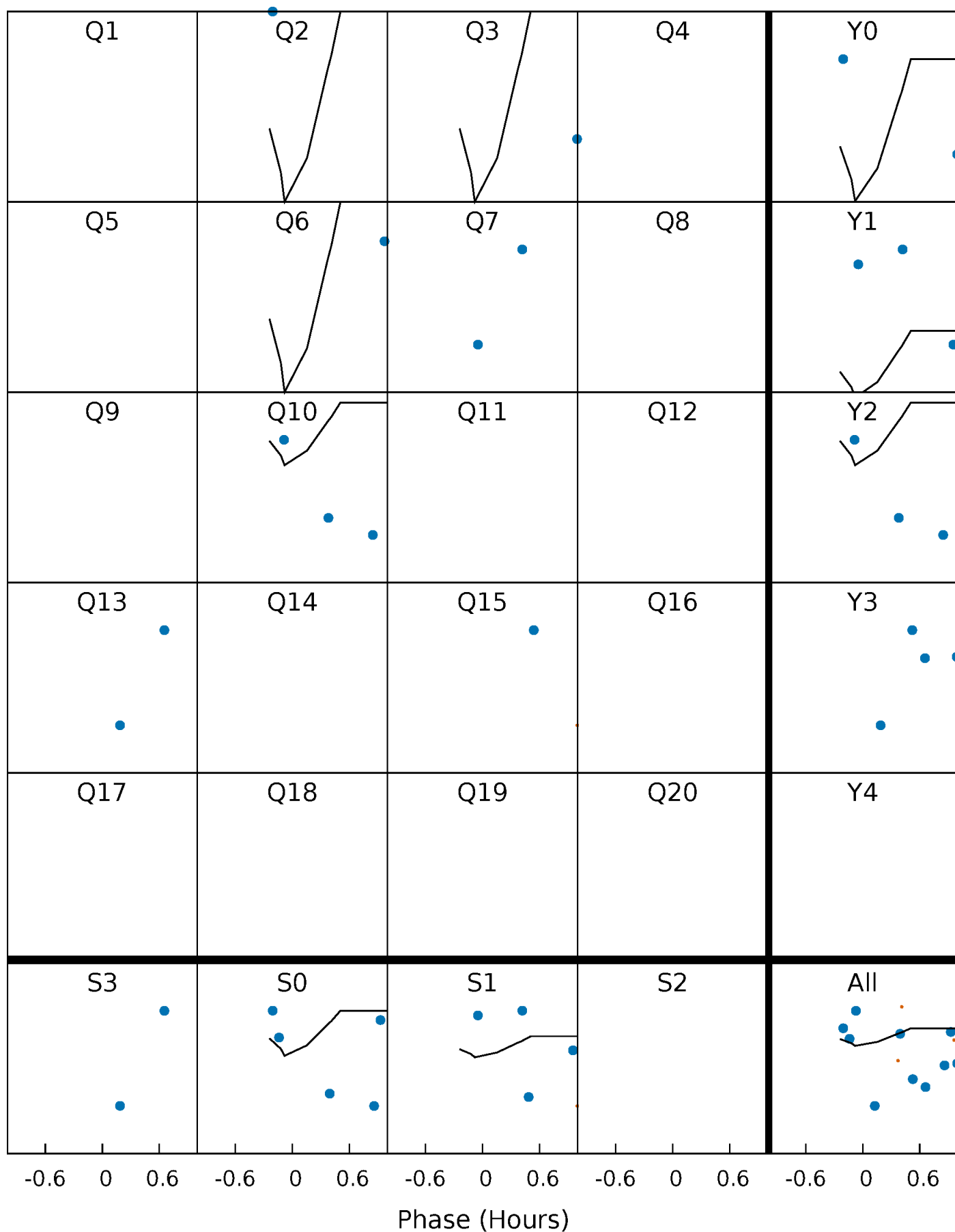
# DV Quarter-Phased Transit Curves

TCE 007035274-03 P= 50.848012 Days  $T_0=139.616306$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

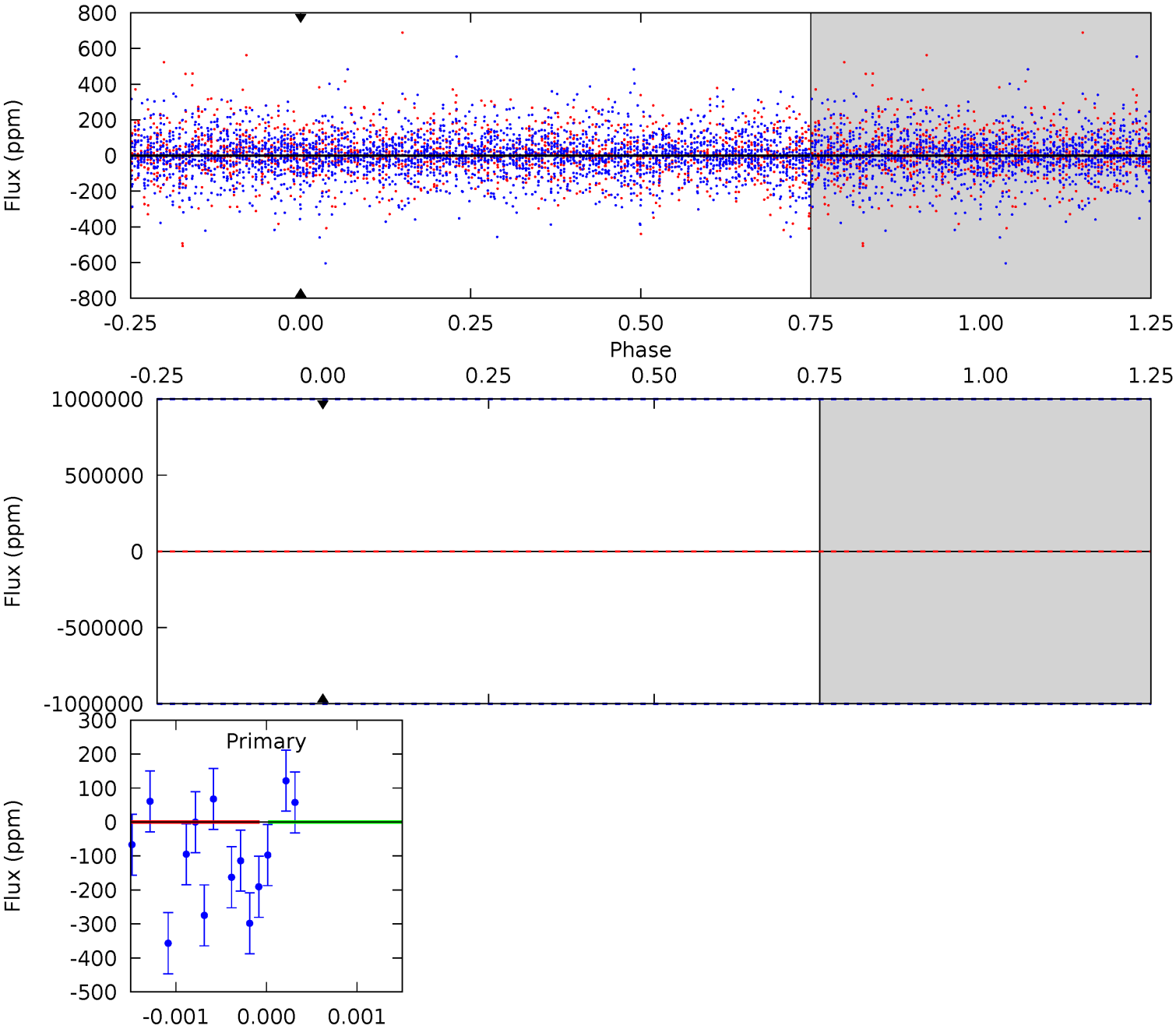
TCE 007035274-03 P= 50.848012 Days  $T_0=139.565858$  (BKJD)



# DV Model-Shift Uniqueness Test

007035274-03, P = 50.848012 Days, E = 88.768294 Days

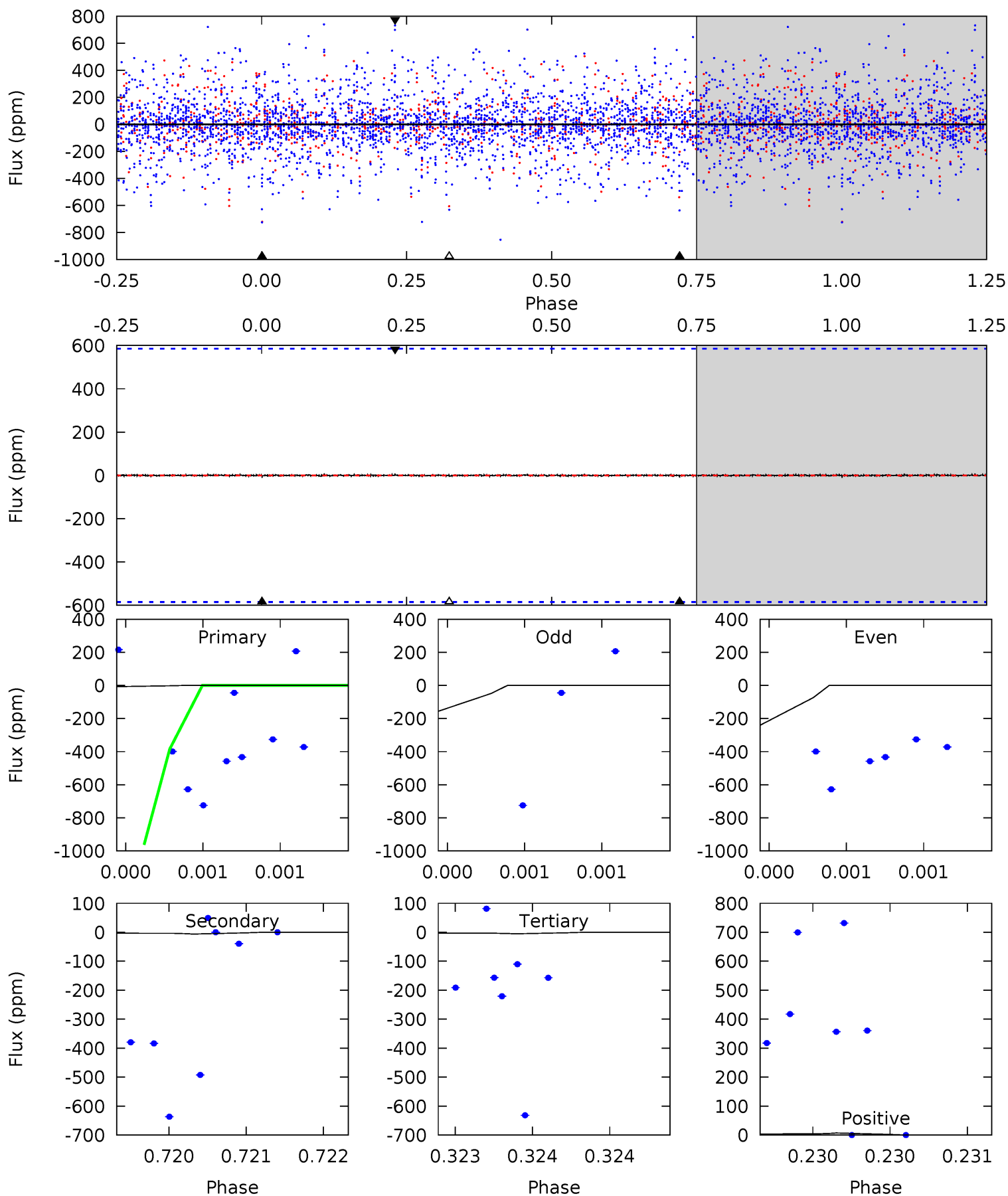
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

007035274-03, P = 50.848012 Days, E = 88.717846 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
0.07	0.06	0.05	0.07	5.56	3.46	0.01	0.02	0.00	0.01	-0.01	0.36	1.00	0.50	5.19



### Stellar Parameters For KIC 007035274

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$6365^{+76}_{-76}$	$4.130^{+0.162}_{-0.108}$	$-0.080^{+0.150}_{-0.150}$	$1.537^{+0.290}_{-0.290}$	$1.163^{+0.134}_{-0.083}$	$0.451^{+0.370}_{-0.147}$
	+1%/-1%	+4%/-3%	+188%/-188%	+19%/-19%	+12%/-7%	+82%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 007035274-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$12.28^{+13.31}_{-8.73}$	$912^{+40}_{-48}$	$4776^{+24353}_{-28582}$	$507^{+60094}_{-46870}$
Alt.	$-6 \pm 105$	$11.82^{+11.87}_{-8.15}$	$913^{+43}_{-46}$	$1623^{+1707}_{-4915}$	$0.388^{+53.911}_{-55.563}$

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



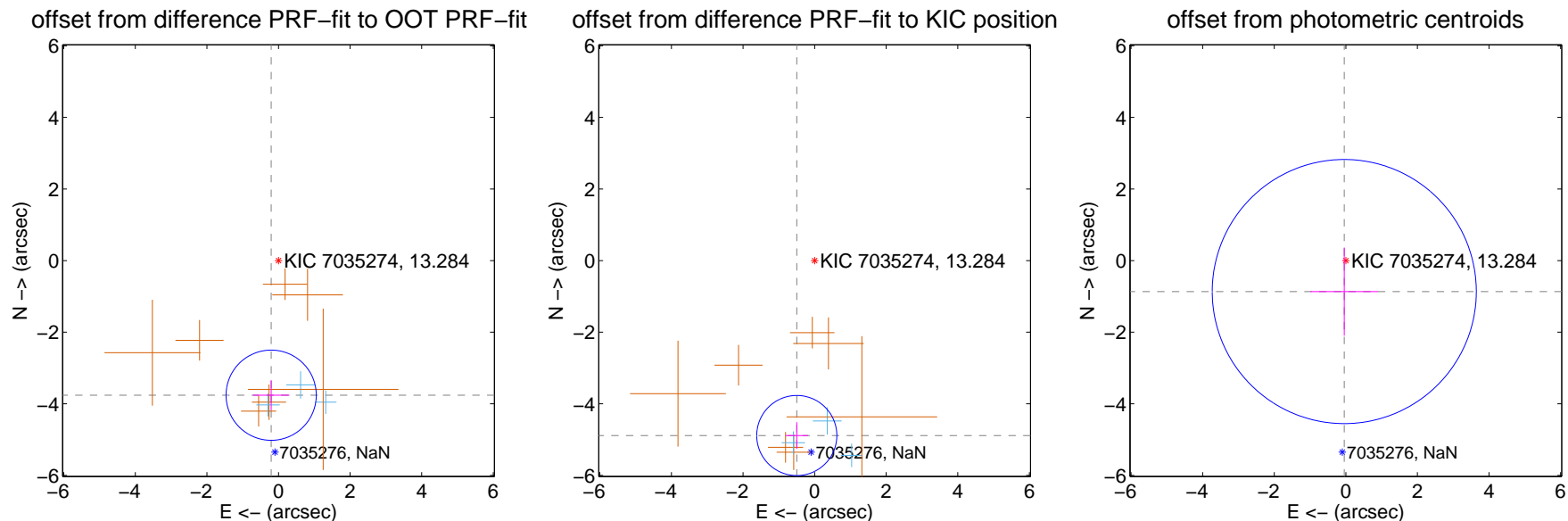
## DV Centroid Data

Supplemental centroid analysis for 007035274-03. Kepler magnitude: 13.28. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

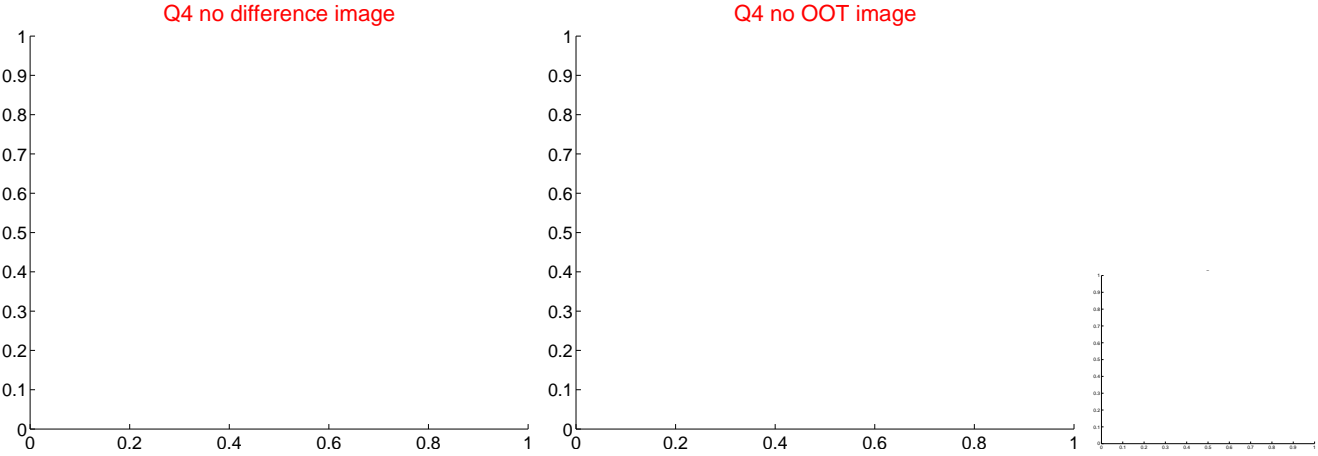
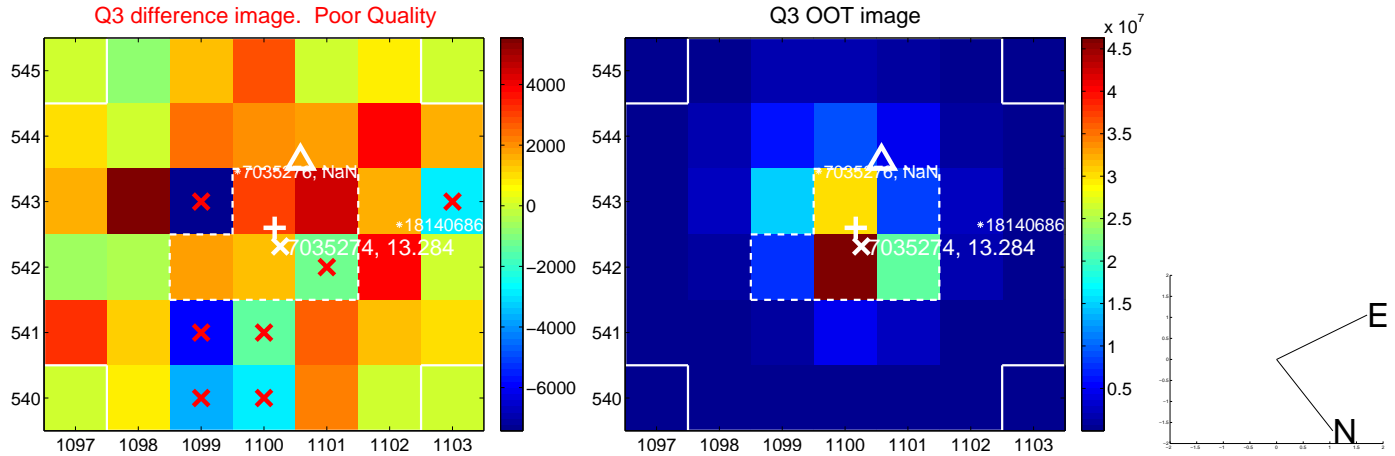
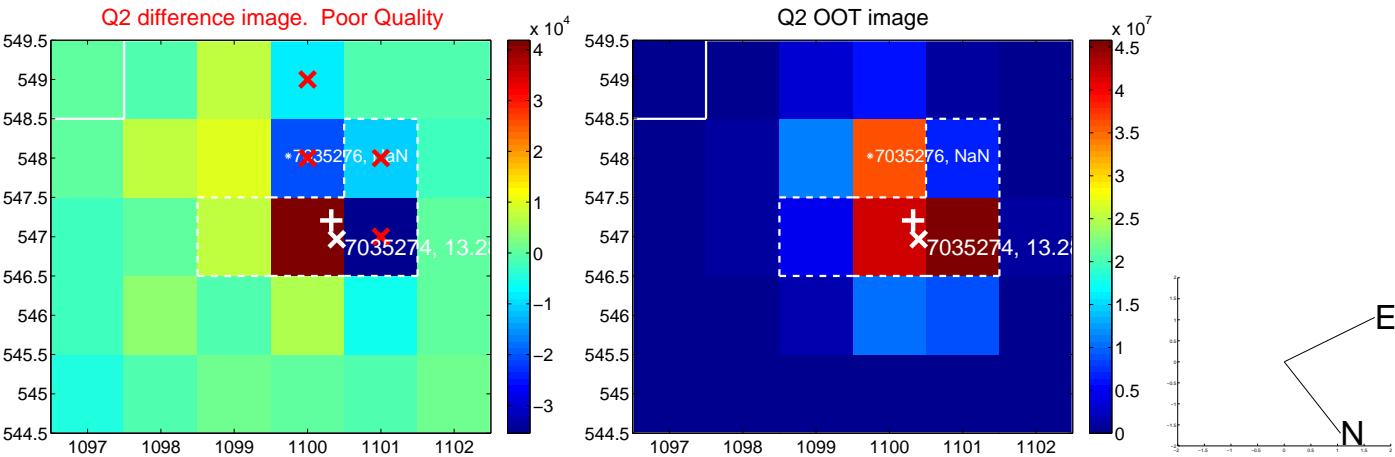
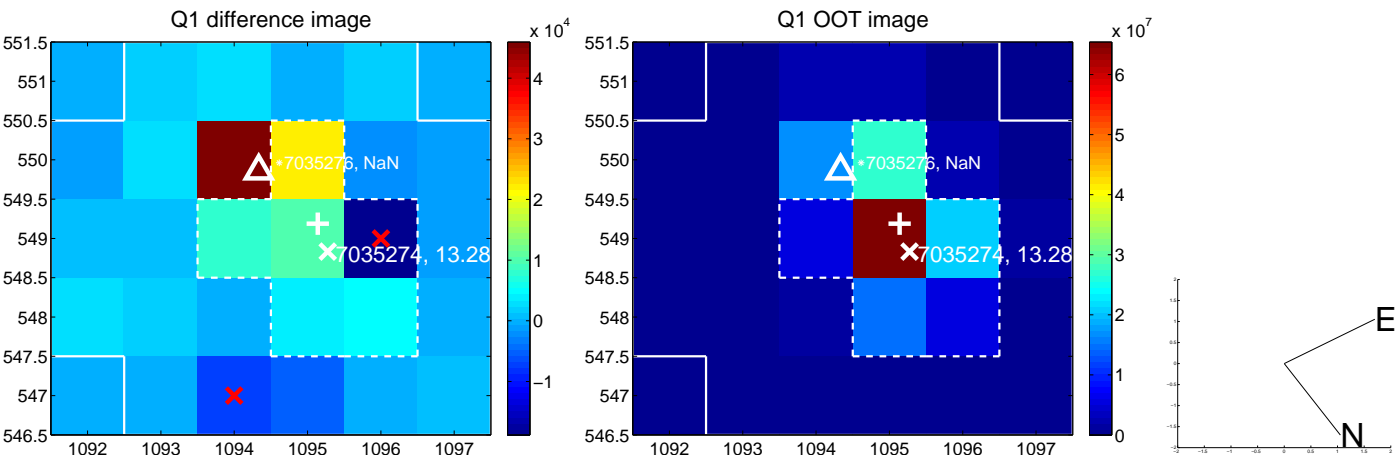
The direct PRF centroid is offset from the target star catalog position by about 1.42 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$3.766 \pm 0.420$	8.97	$0.204 \pm 0.508$	$-3.760 \pm 0.420$
PRF-fit source offset from KIC position	$4.912 \pm 0.373$	13.17	$0.498 \pm 0.315$	$-4.886 \pm 0.374$
photometric centroid source offset	$0.87 \pm 1.23$	0.70	$0.04 \pm 0.94$	$-0.86 \pm 1.23$

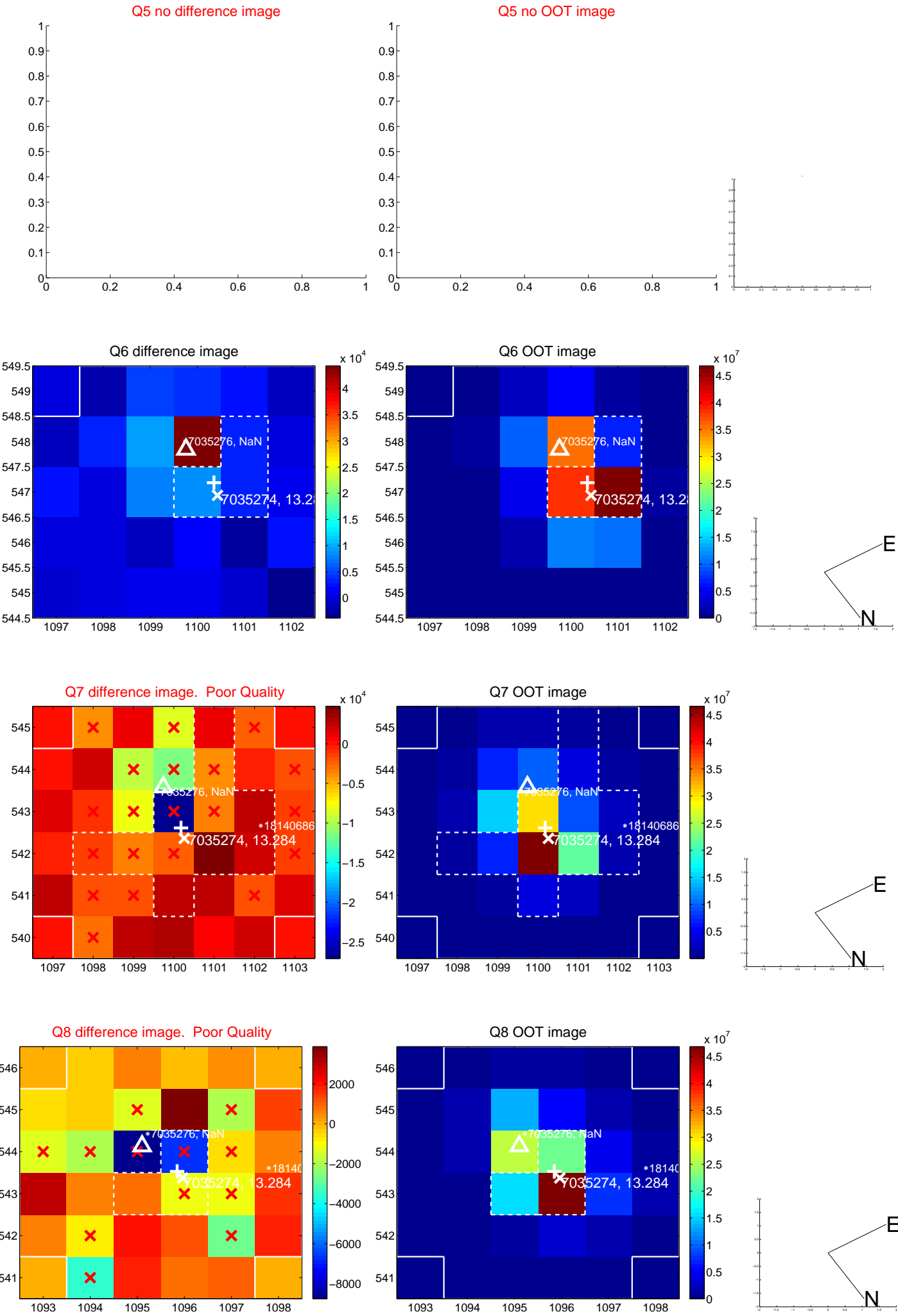


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

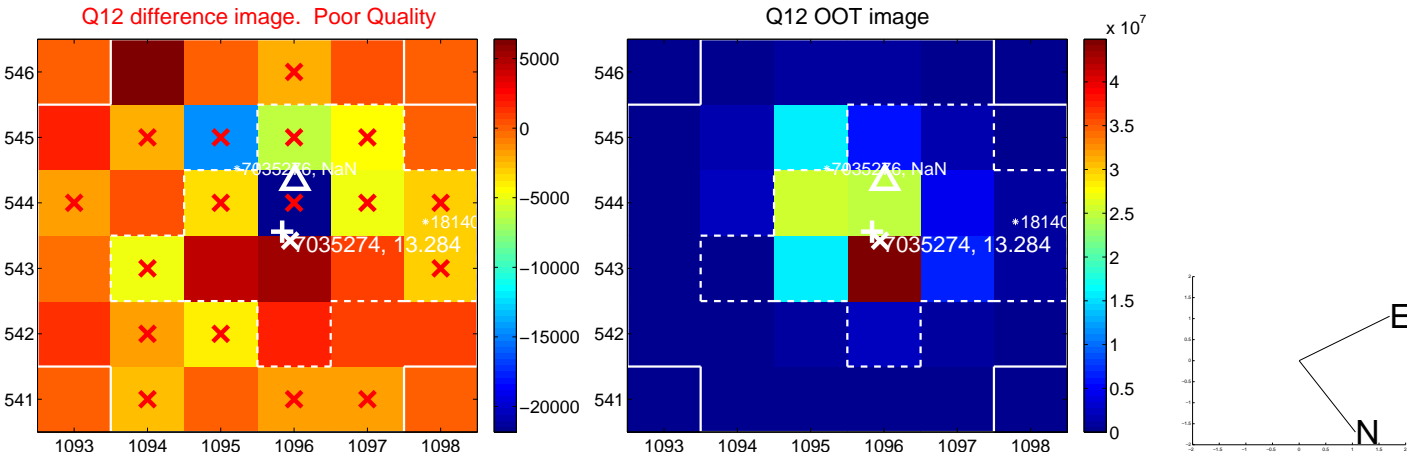
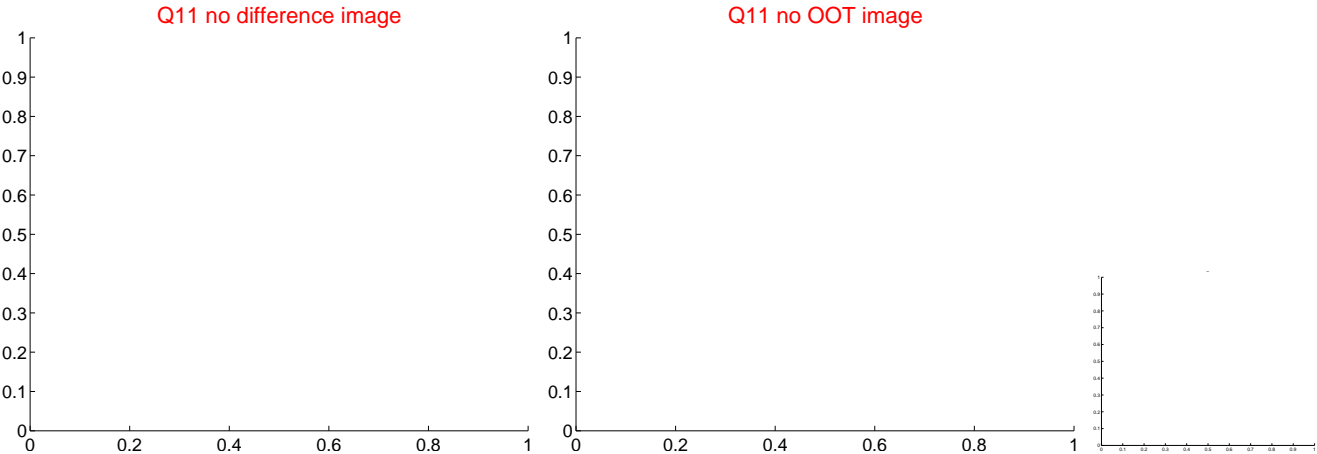
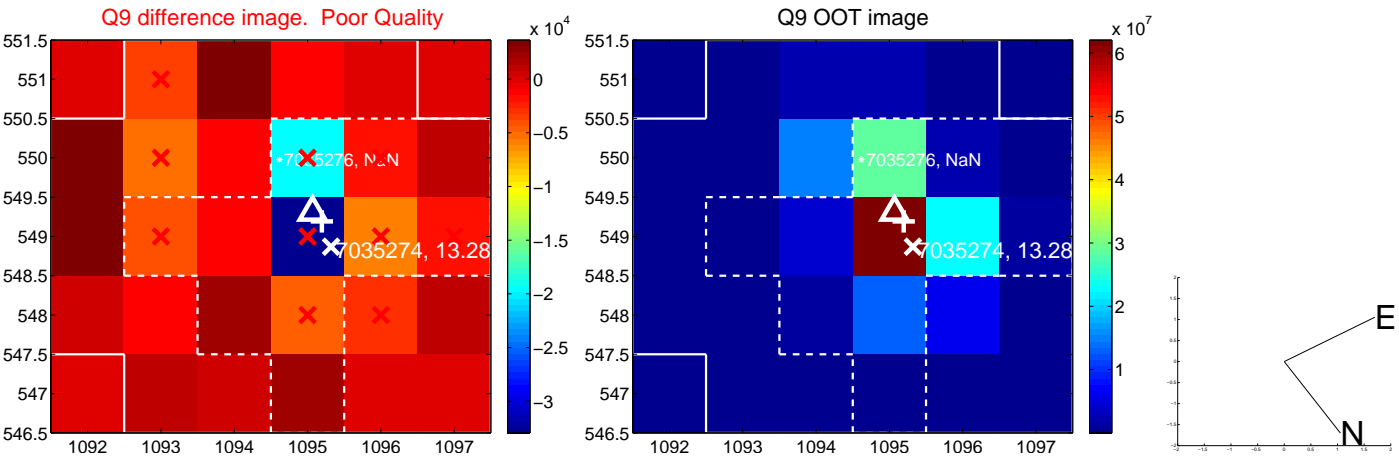
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



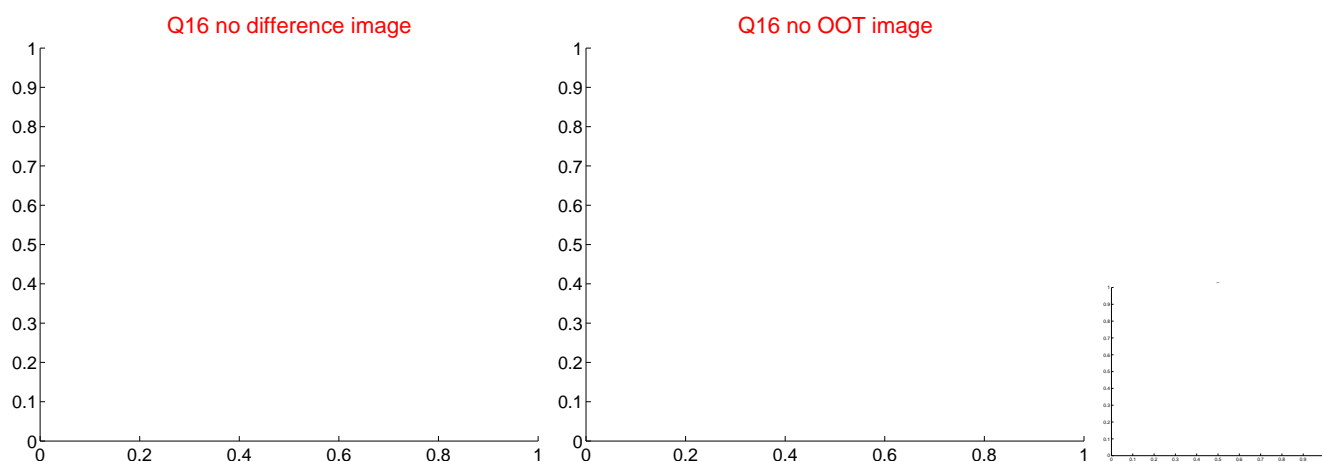
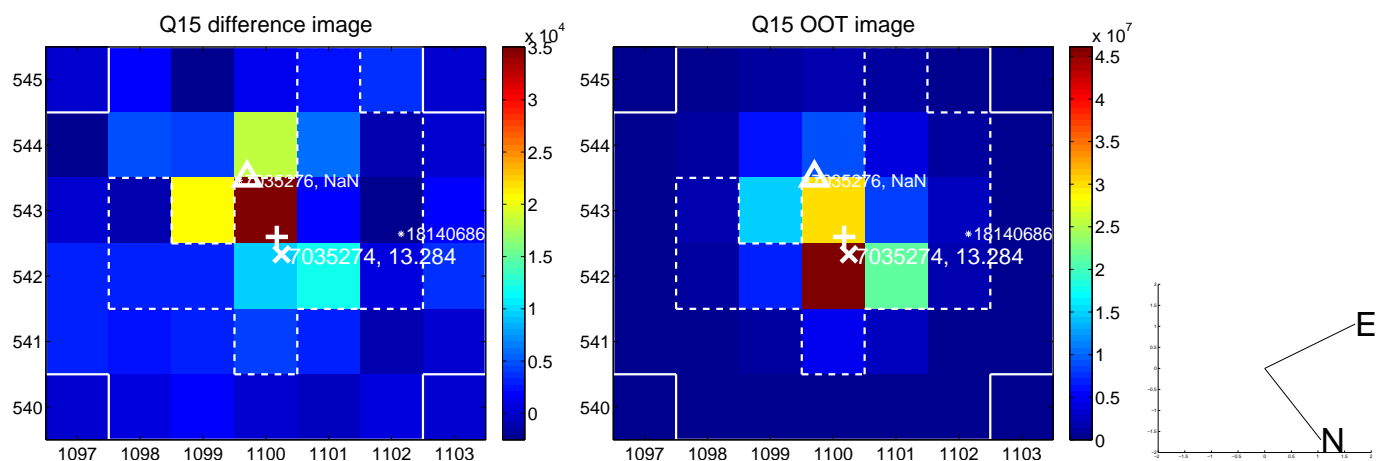
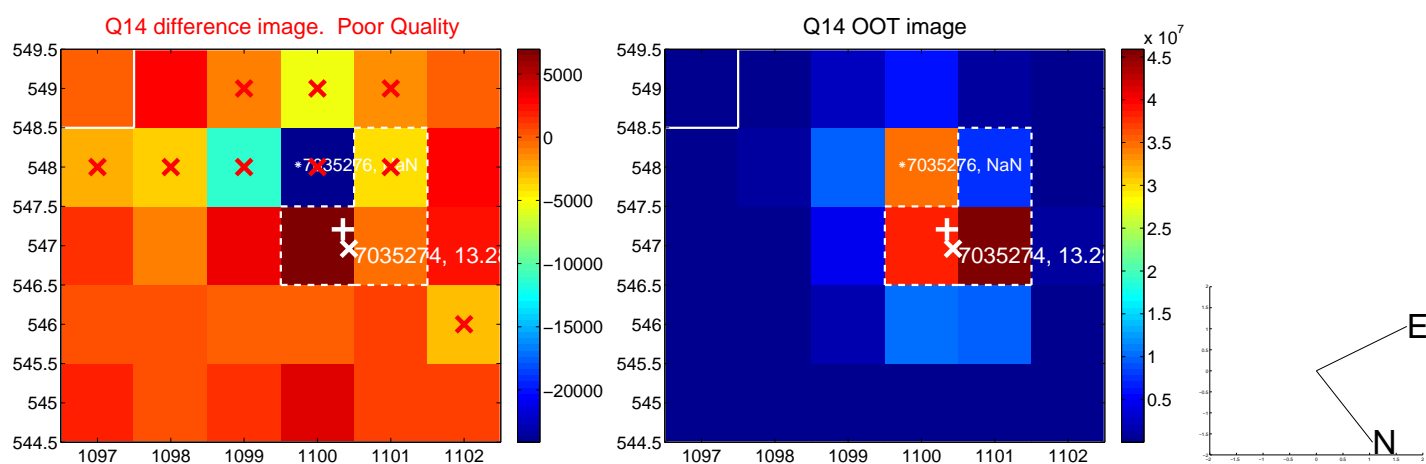
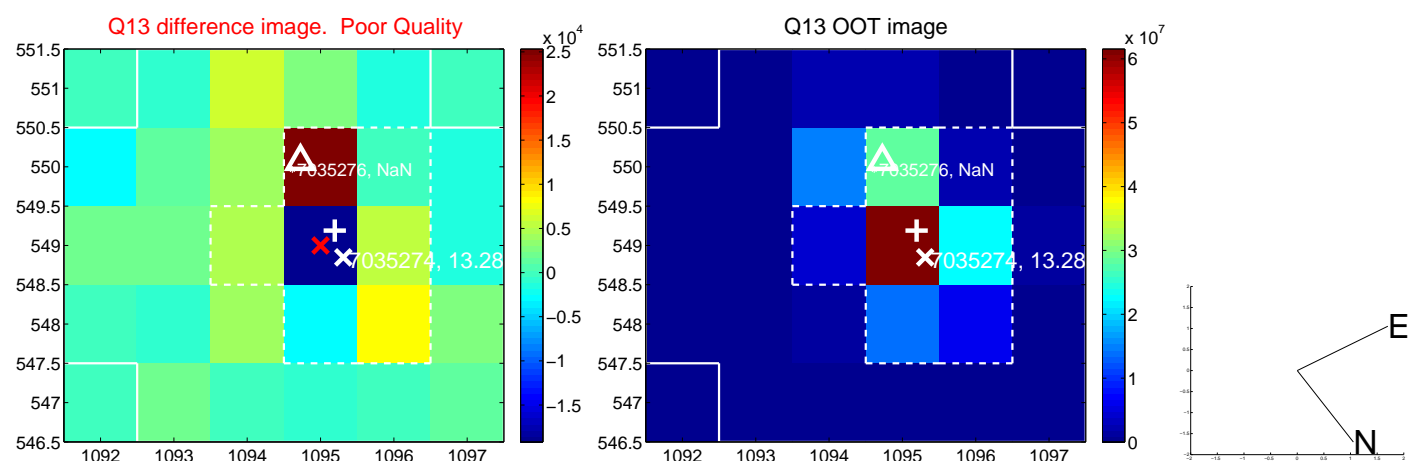
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.







# UKIRT Image

Declination

