

# KIC 011499757

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011499757-01	OBS	7450.01	12.314318	134.255902	397140.2	3.500	10816.1	-1.0	1.07	6247	58.16	131.69
011499757-02	OBS	No	12.314388	141.996816	290898.0	6.000	9313.7	-1.0	1.07	6247	48.35	131.69
011499757-03	OBS	No	4.104894	133.970678	56.5	28.624	981.2	3.6	1.07	6247	0.80	569.75

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011499757-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
011499757-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_NOFITS
011499757-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

**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.

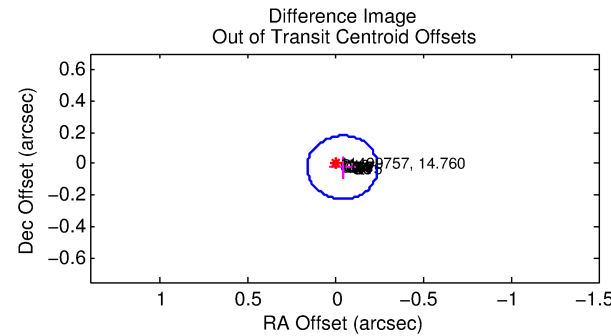
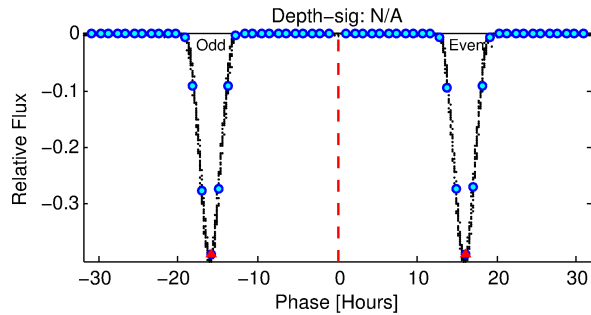
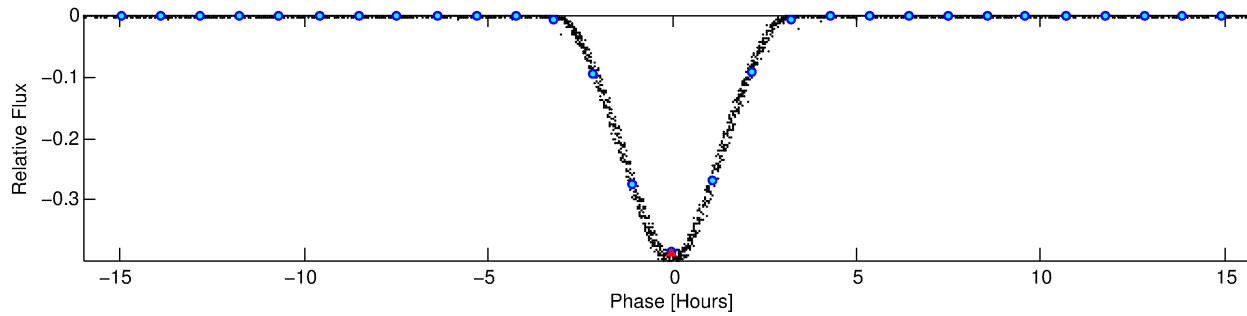
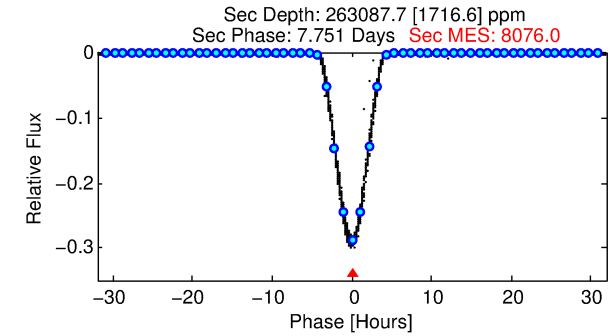
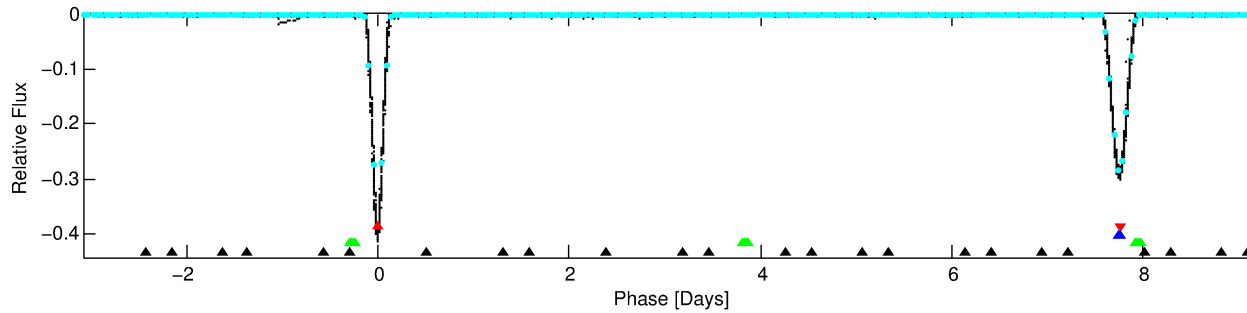
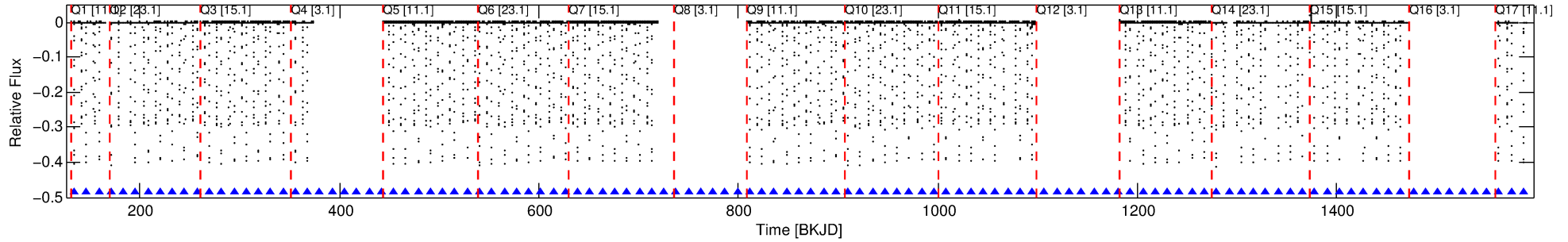
Ephemeris Match Information For 011499757-01

No Significant Match Found

# DV One-Page Summary

KIC: 11499757 Candidate: 1 of 4 Period: 12.314 d  
KOI: K07450.01 Corr: 0.771

Kp: 14.76 R\*: 1.07 Rs Teff: 6247.0 K Logg: 4.43 Fe/H: -0.060



## TPS TCE Results:

Period = 12.31432 d  
Epoch = 134.2559 BKJD

DV fit results are unavailable

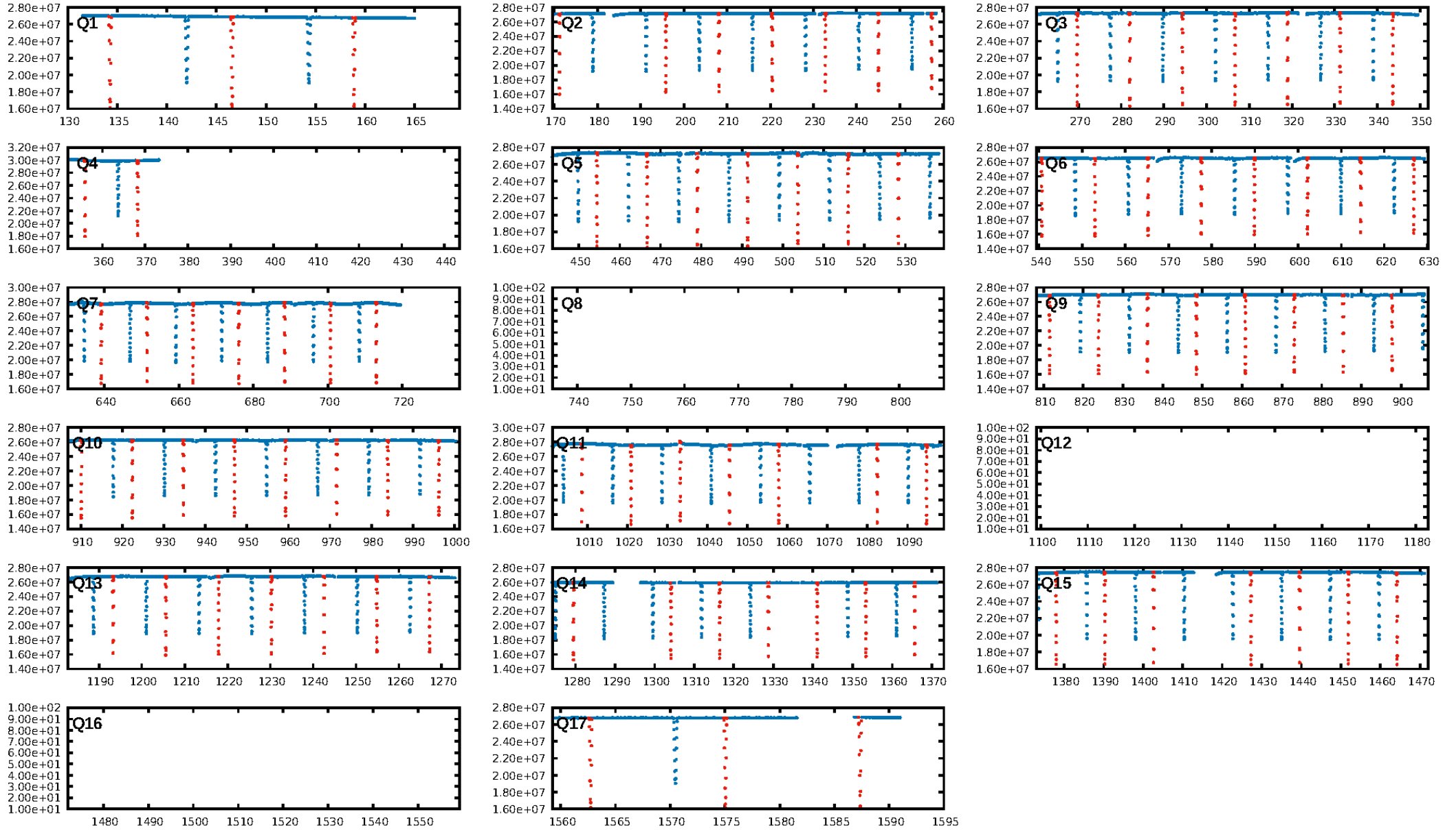
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.83 $\sigma$ ]  
LongPeriod-sig: 0.0% [0.00 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [80/80]  
GhostDiagnostic-chr: 3.472  
Centroid-sig: N/A  
Centroid-so: 0.101 arcsec [153.76 $\sigma$ ]  
OotOffset-rm: 0.046 arcsec [0.68 $\sigma$ ]  
KicOffset-rm: 0.180 arcsec [2.58 $\sigma$ ]  
OotOffset-st: 4/4/1/5 [14]  
KicOffset-st: 4/4/1/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
DiffImageOverlap-fno: 0.00 [0/14]

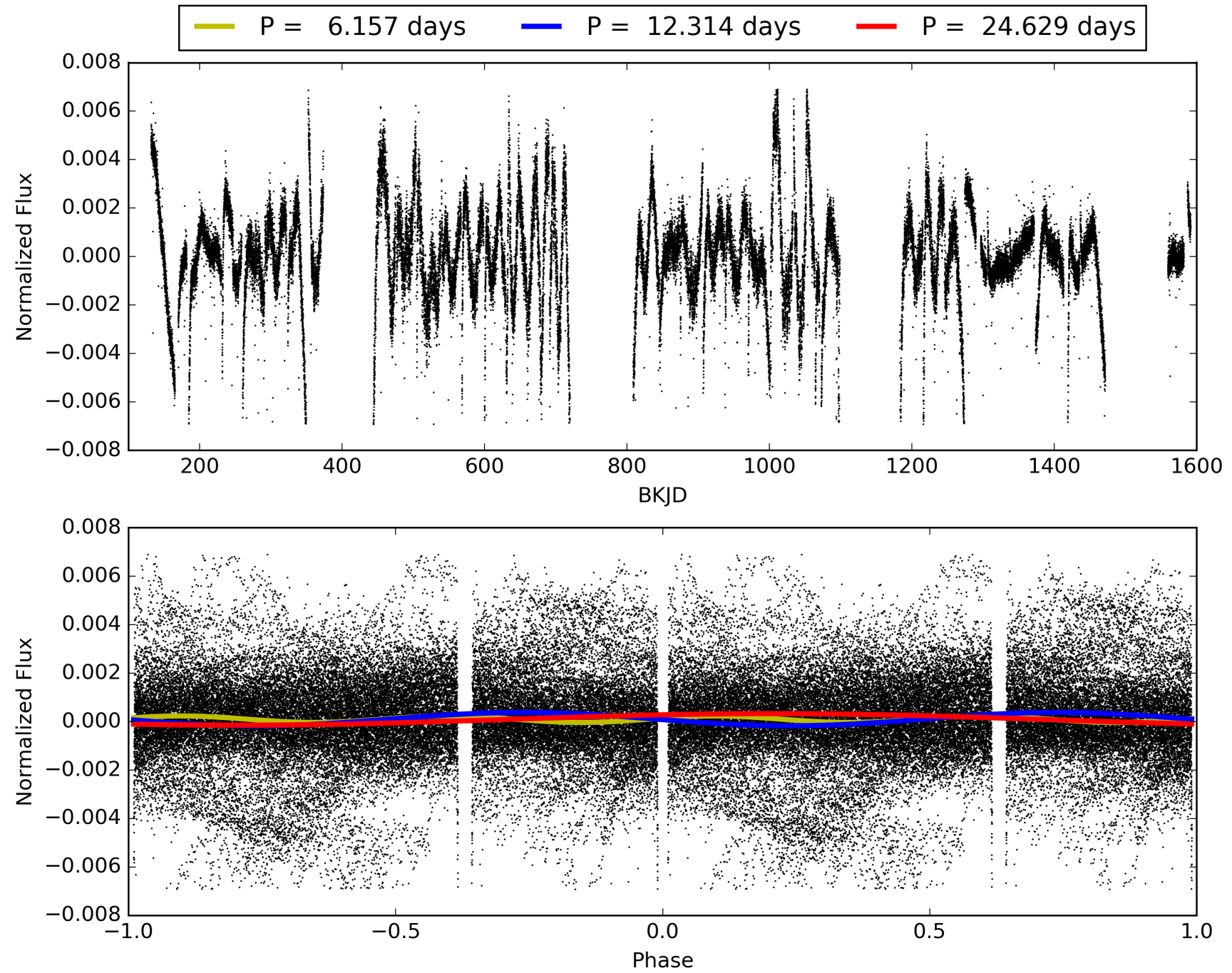
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:26:33 Z

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

# TCE 011499757-01, PDC Light Curves

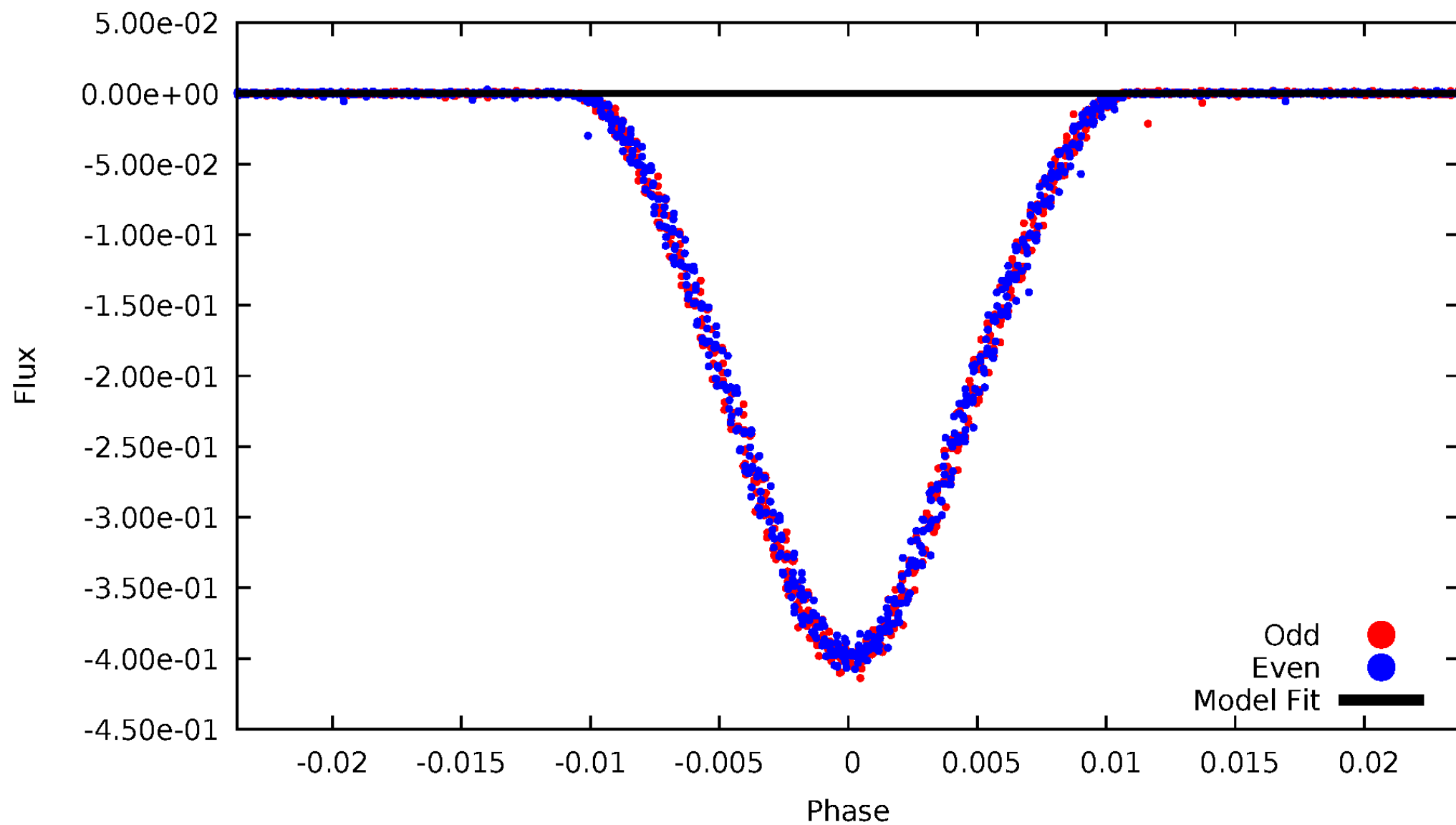


TCE 011499757-01



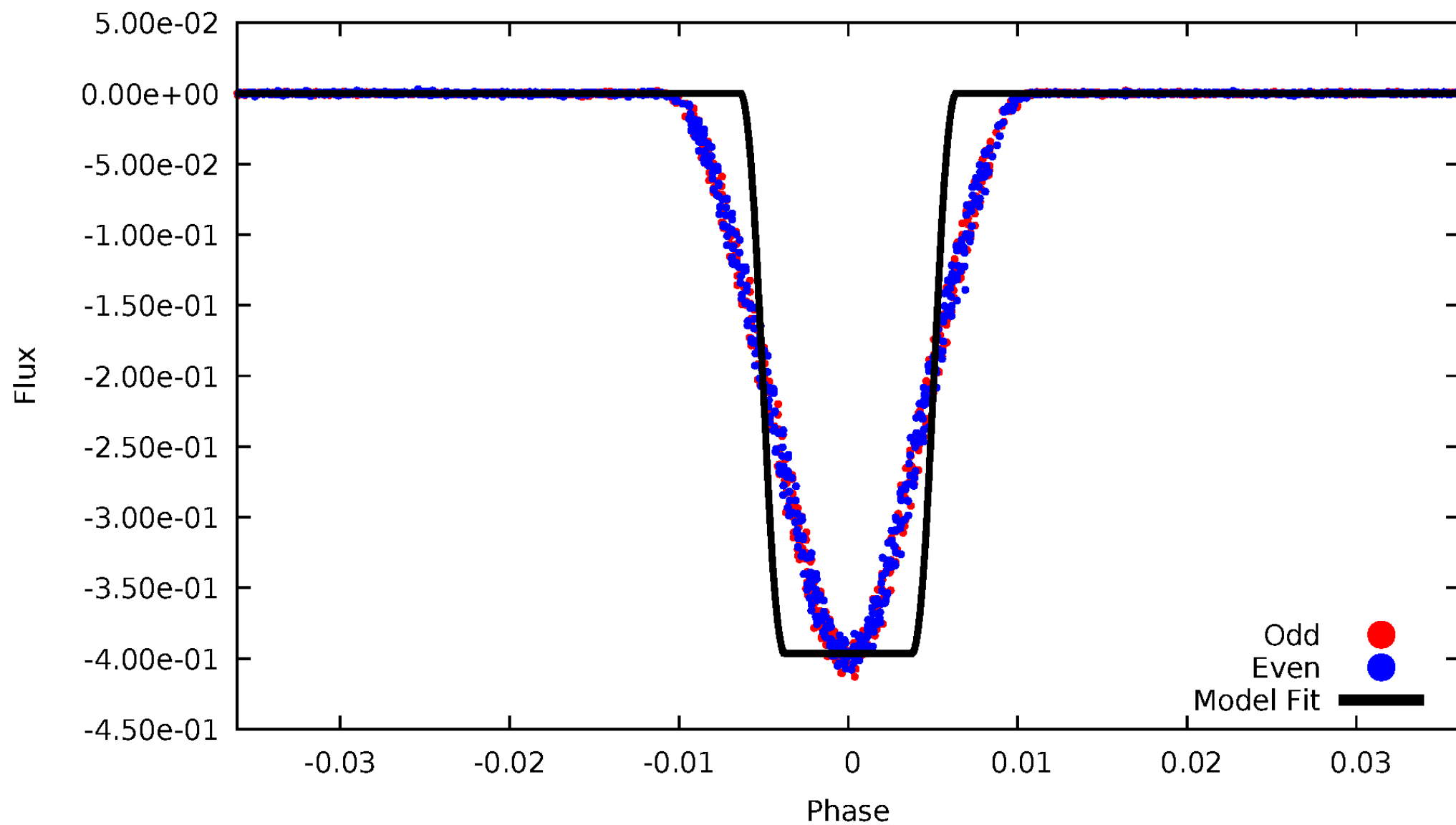
# DV Odd/Even

TCE 011499757-01



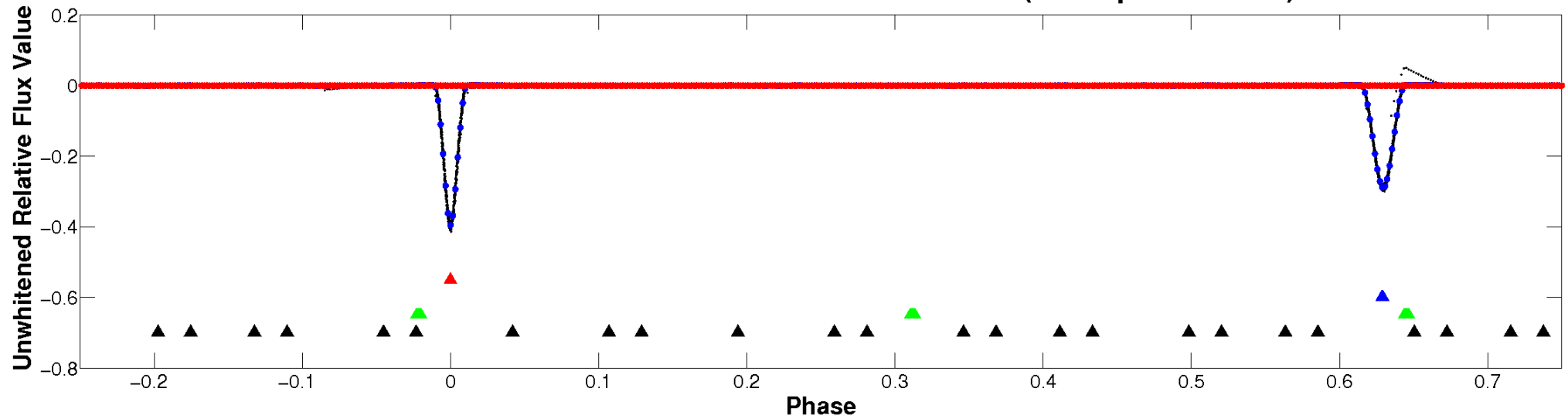
# ALT Odd/Even

TCE 011499757-01

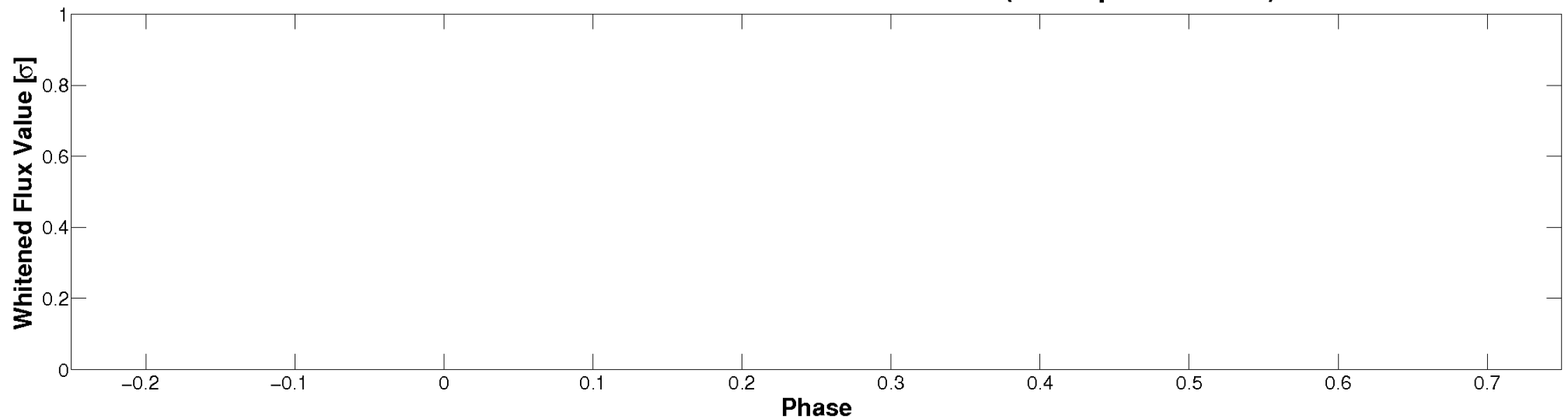


# Non-Whitened Vs. Whitened Light Curve

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

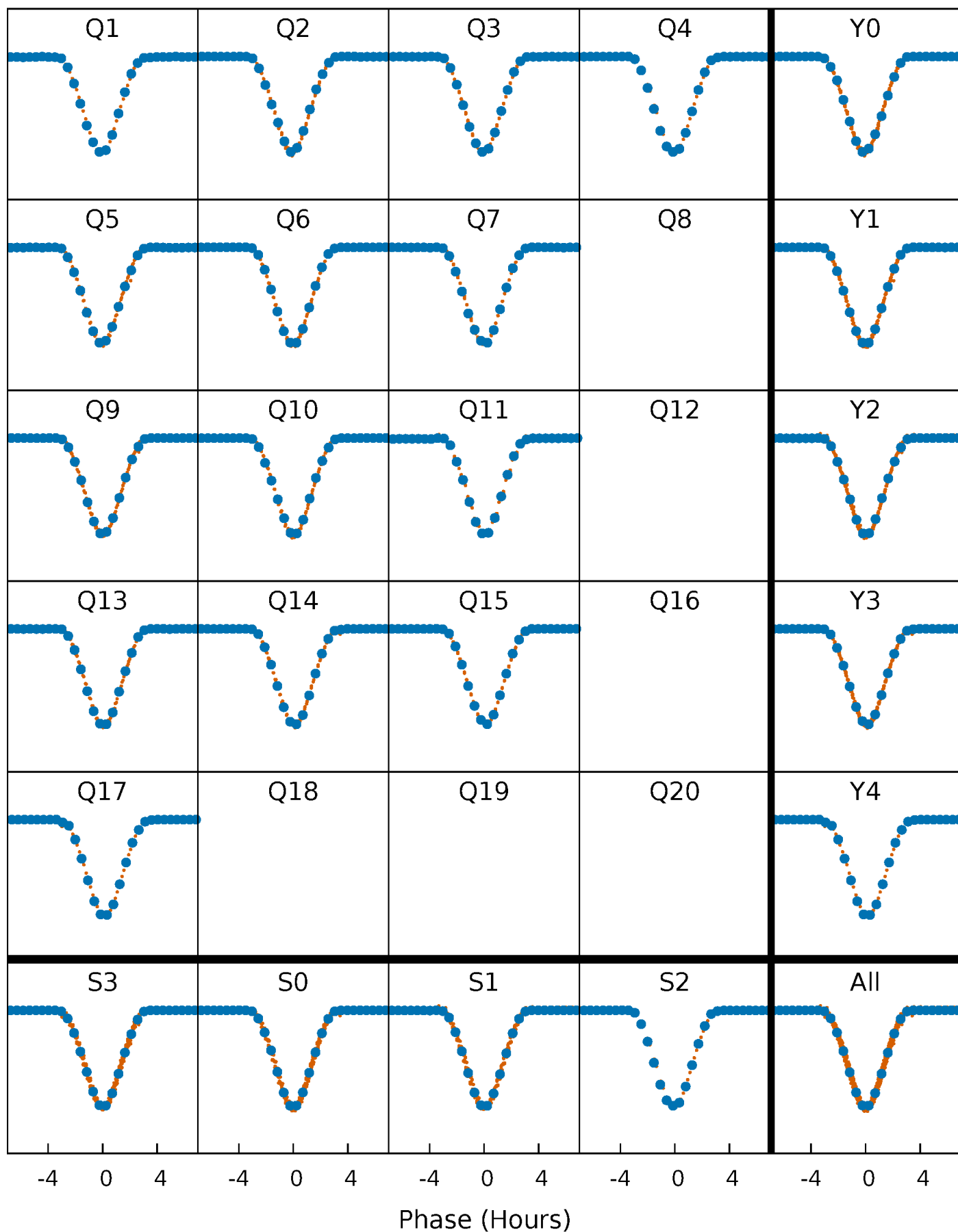


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



# PDC Quarter-Phased Transit Curves

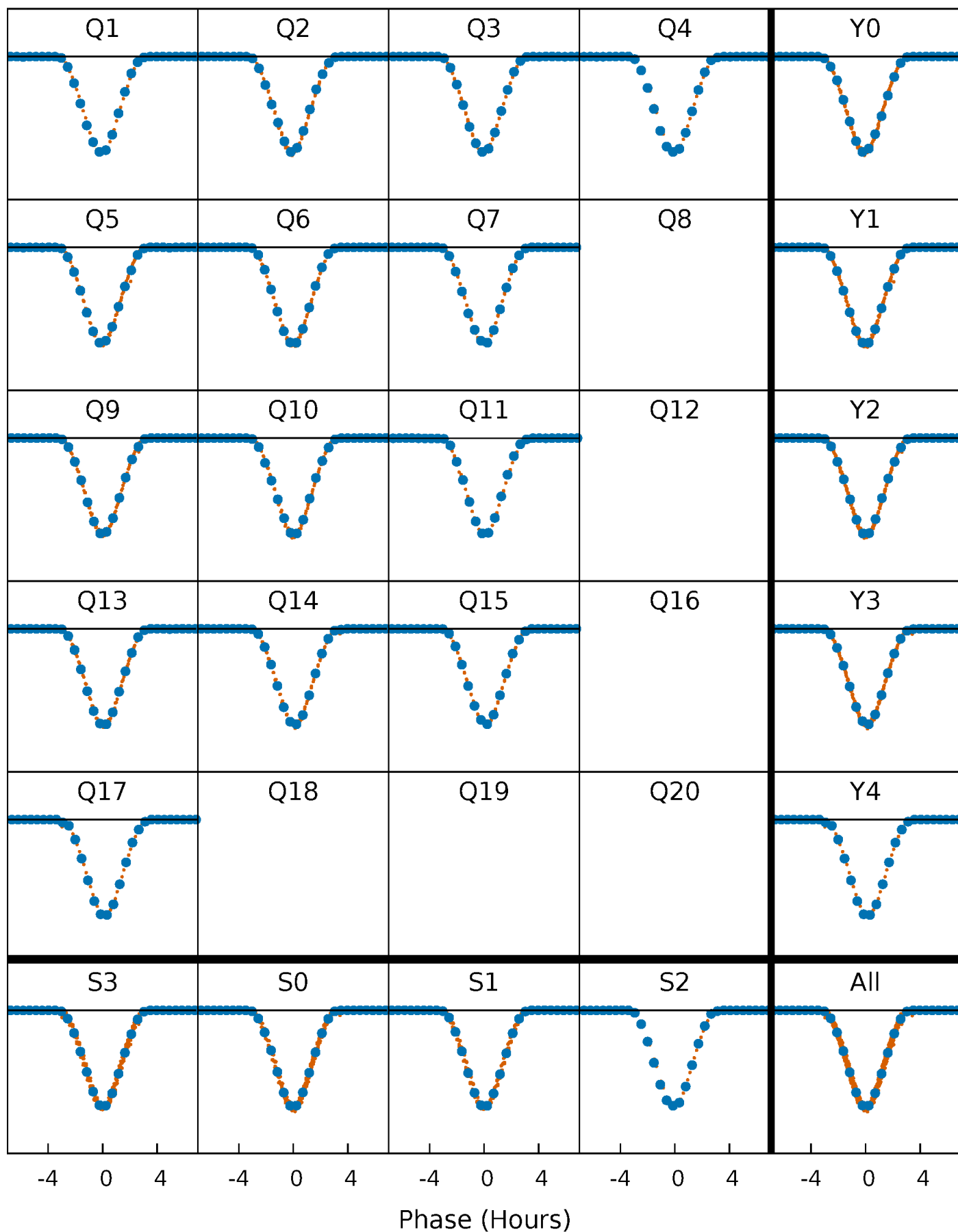
TCE 011499757-01 P= 12.314318 Days  $T_0=134.255902$  (BKJD)





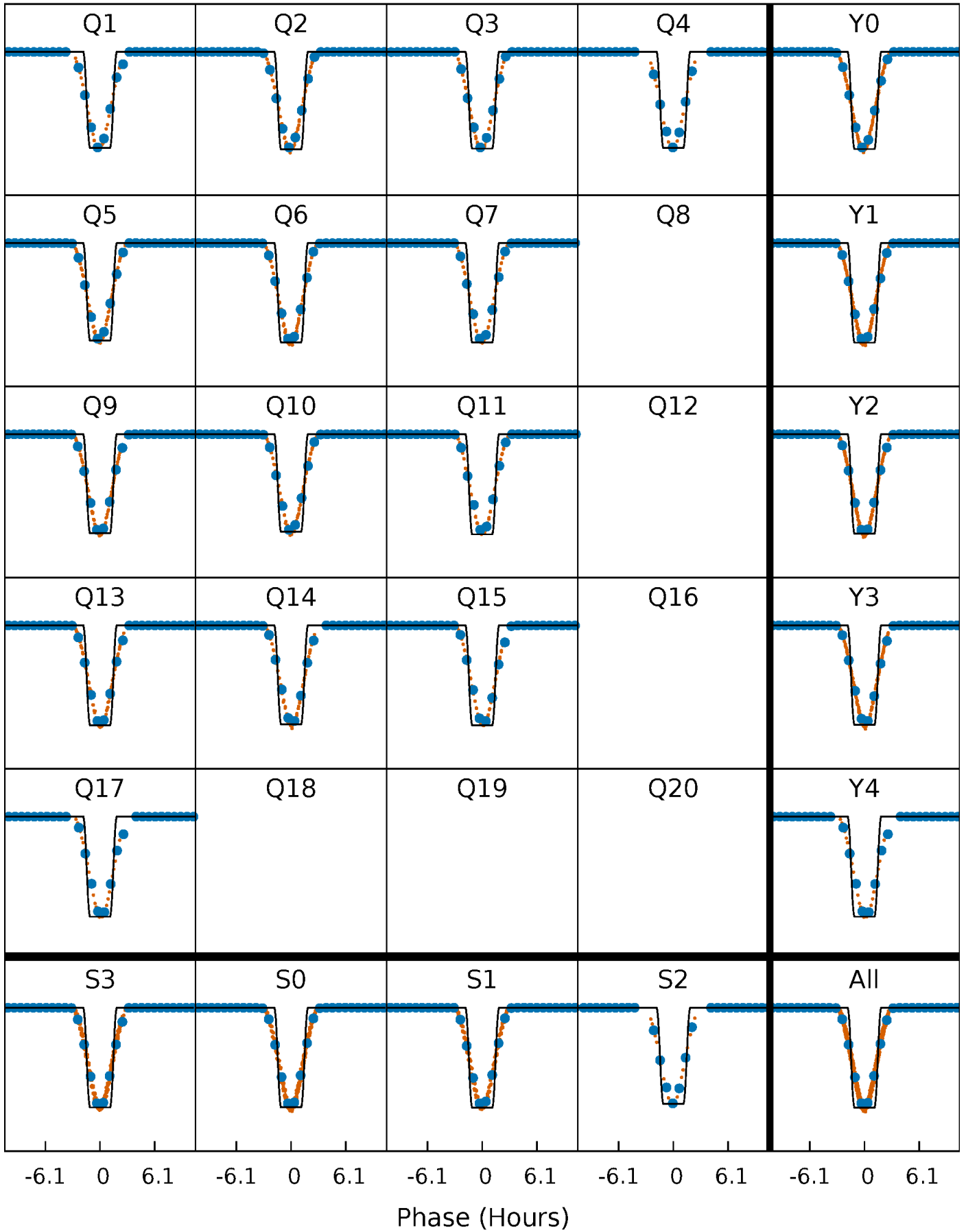
# DV Quarter-Phased Transit Curves

TCE 011499757-01 P= 12.314318 Days  $T_0=134.255902$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

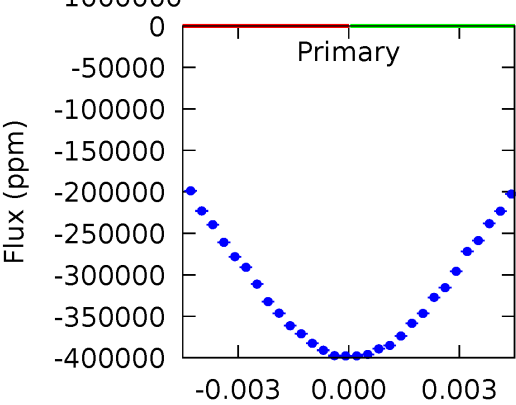
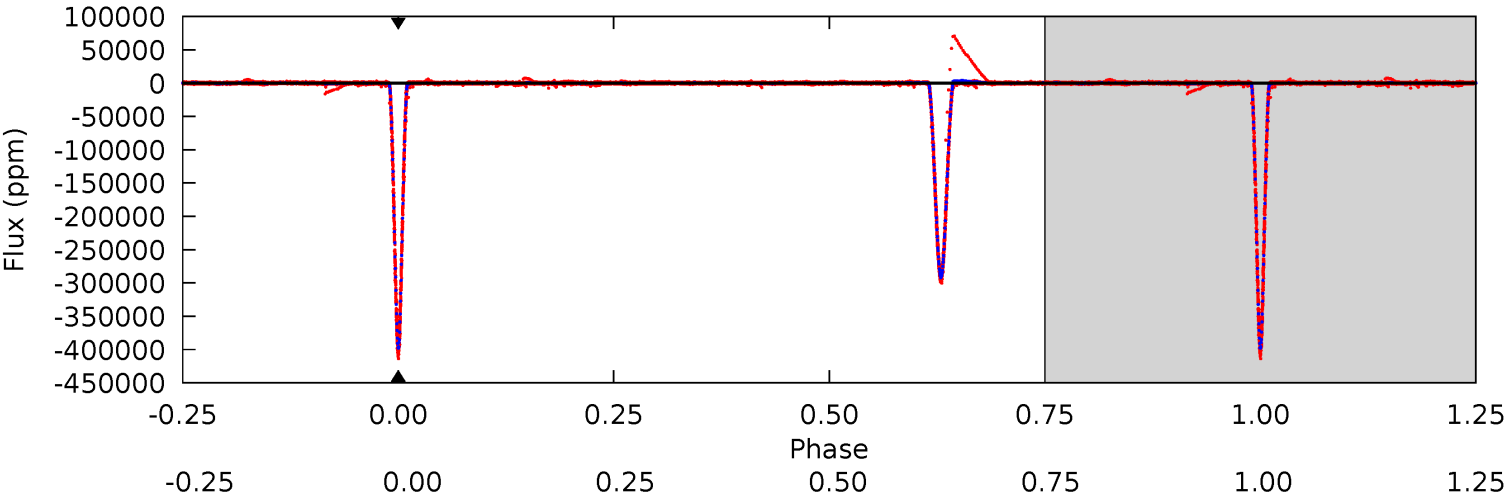
TCE 011499757-01 P= 12.314318 Days  $T_0=134.256964$  (BKJD)



# DV Model-Shift Uniqueness Test

011499757-01, P = 12.314318 Days, E = 121.941584 Days

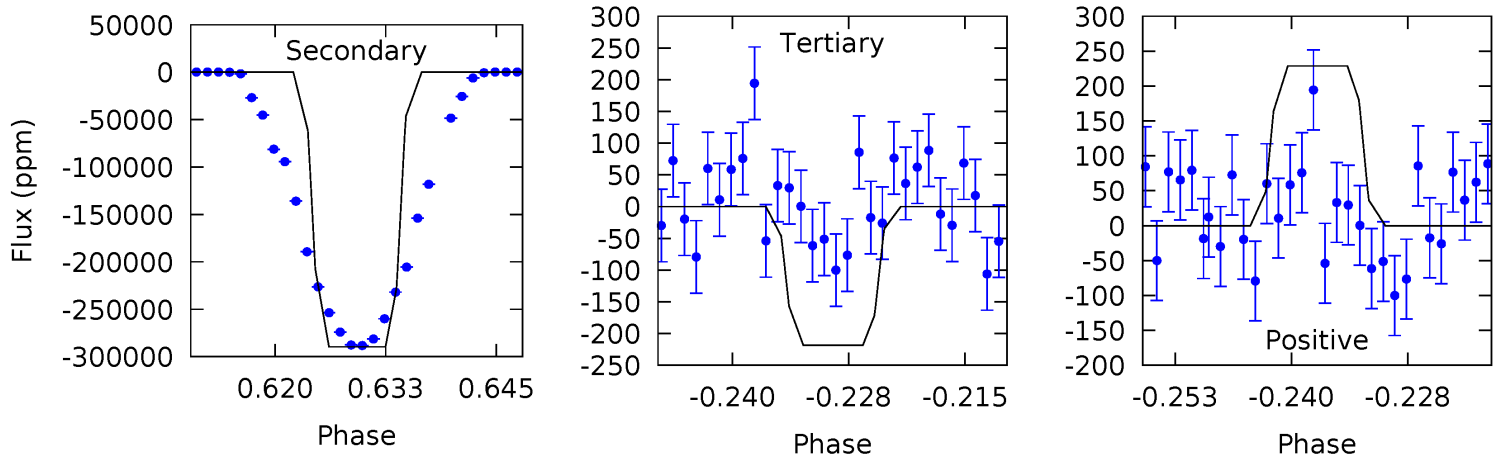
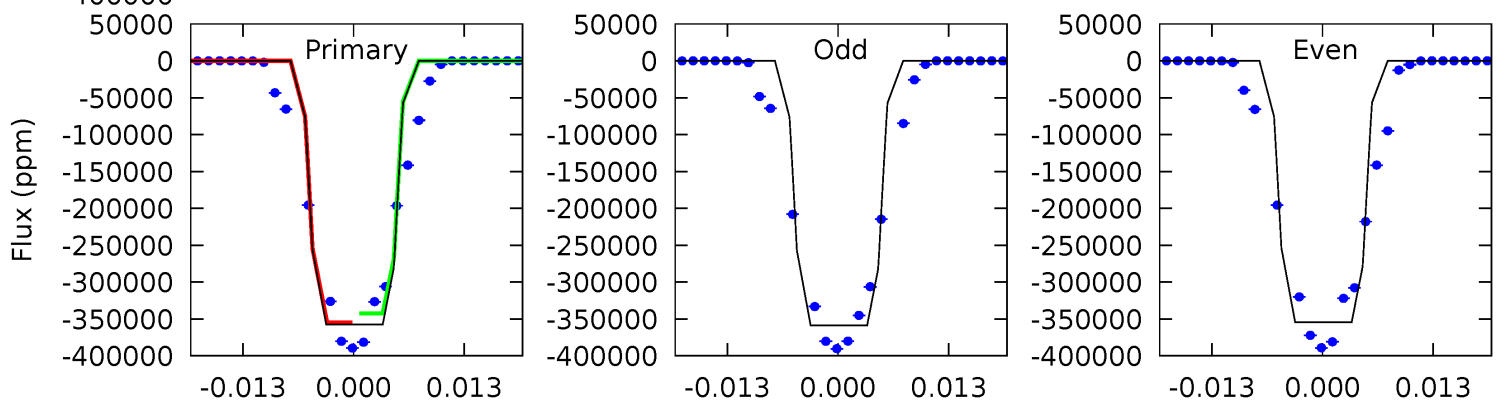
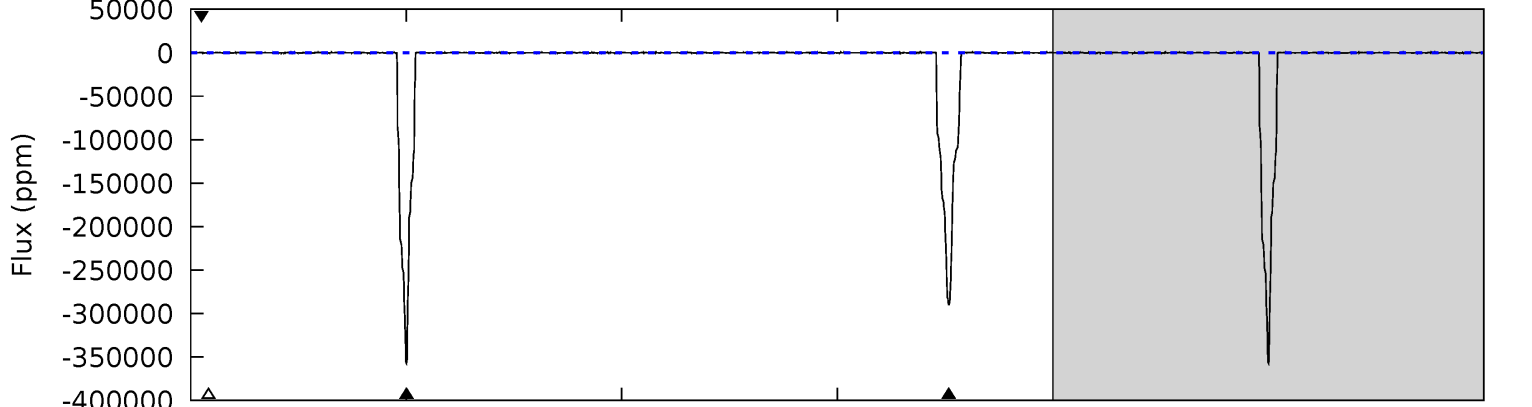
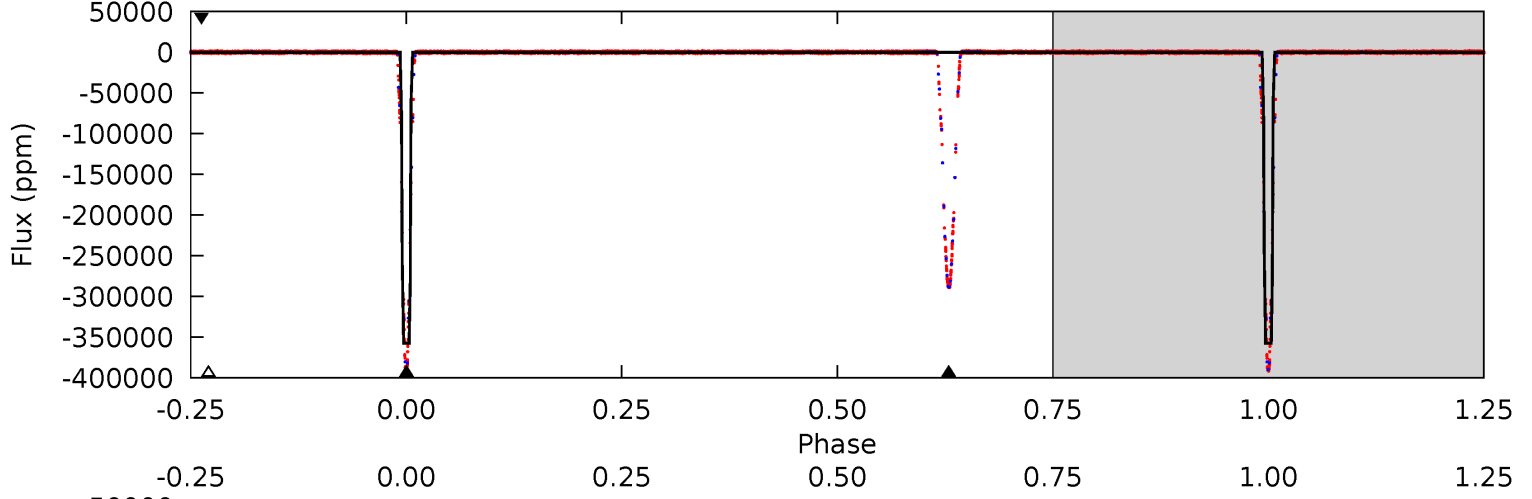
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

011499757-01, P = 12.314318 Days, E = 121.942646 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
6325	5125	3.87	4.05	4.98	2.49	22.8	6321	6321	5121	5121	37.2	1.00	0.00	0



### Stellar Parameters For KIC 011499757

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6247^{+174}_{-217}$	$4.433^{+0.065}_{-0.195}$	$-0.060^{+0.250}_{-0.350}$	$1.066^{+0.313}_{-0.112}$	$1.122^{+0.145}_{-0.145}$	$1.304^{+0.362}_{-0.683}$
	+3%/-3%	+1%/-4%	+417%/-583%	+29%/-11%	+13%/-13%	+28%/-52%
Source	PHO1	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 011499757-01 / KOI 7450.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$60.56^{+14.39}_{-12.61}$	$1222^{+86}_{-57}$	$-2535^{+7640}_{-2394}$	$-1.849^{+186.593}_{-151.298}$
Alt.	$-289587 \pm 57$	$76.00^{+15.41}_{-14.00}$	$1226^{+80}_{-63}$	$6288^{+642}_{-489}$	$451^{+219}_{-135}$

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

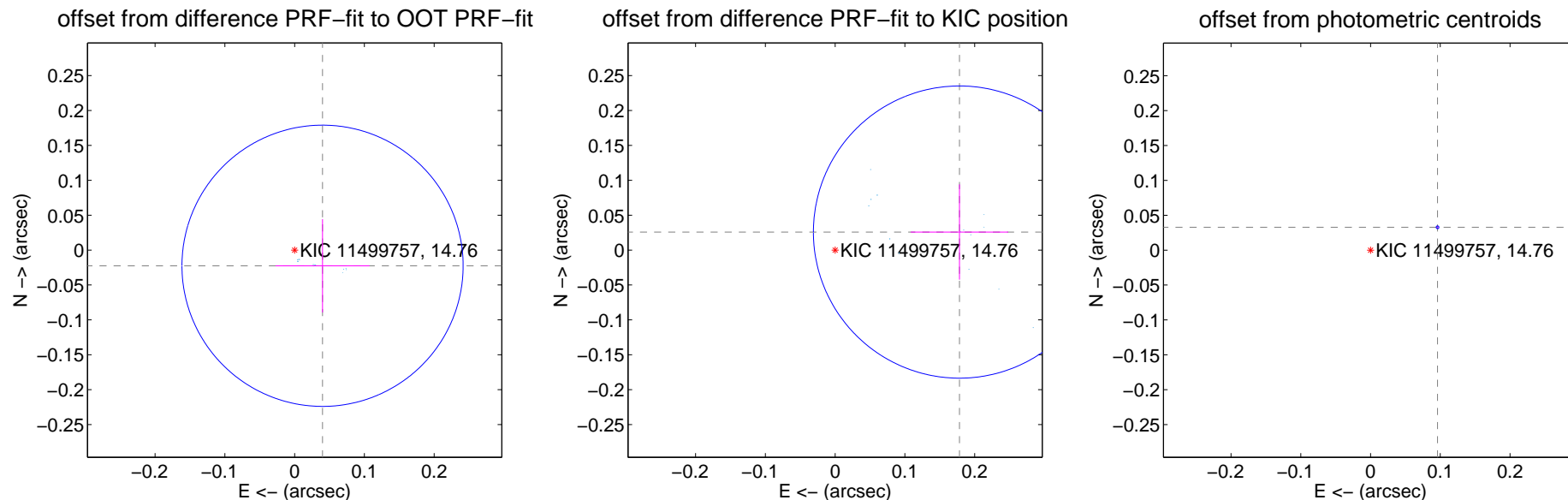
## DV Centroid Data

Supplemental centroid analysis for 011499757-01. Kepler magnitude: 14.76. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

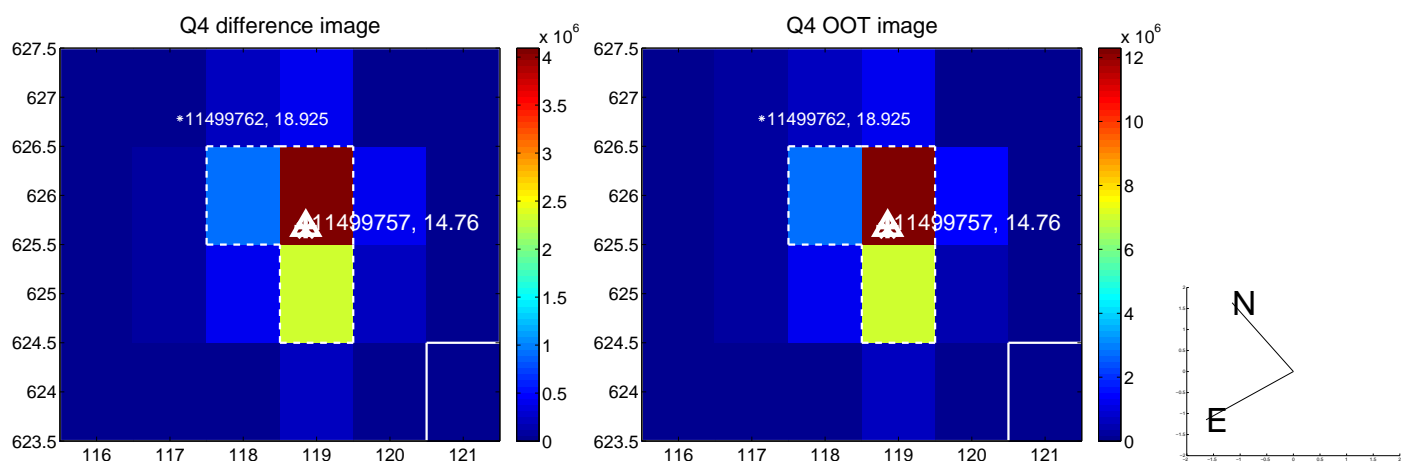
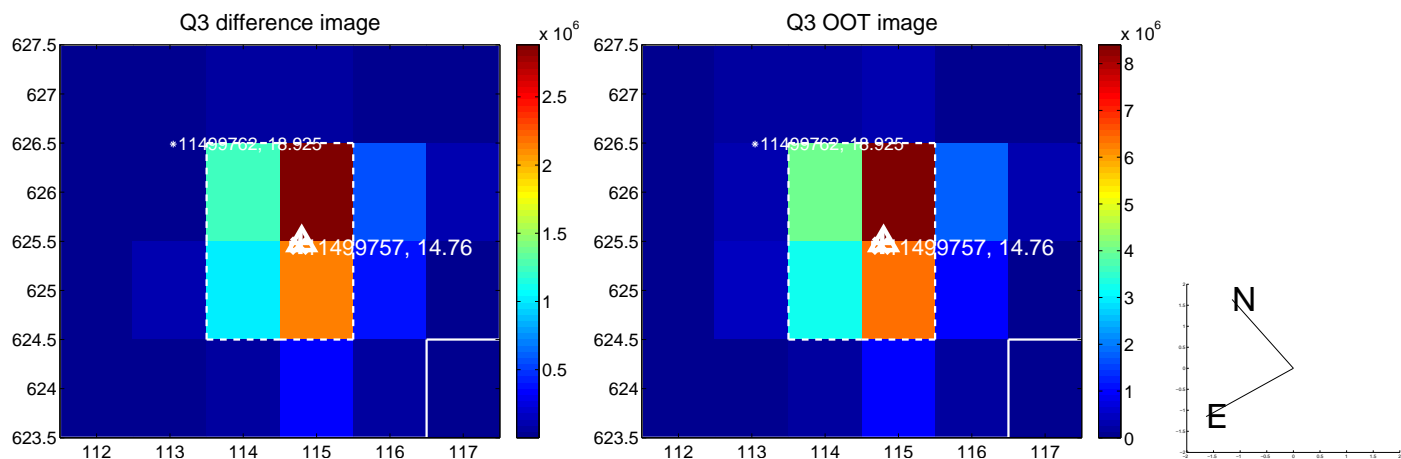
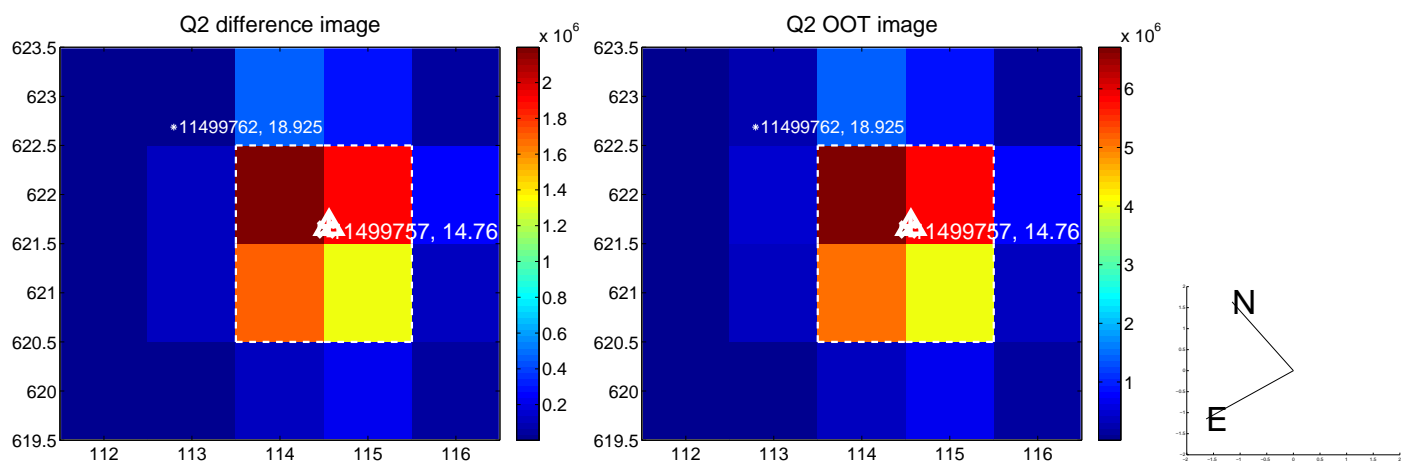
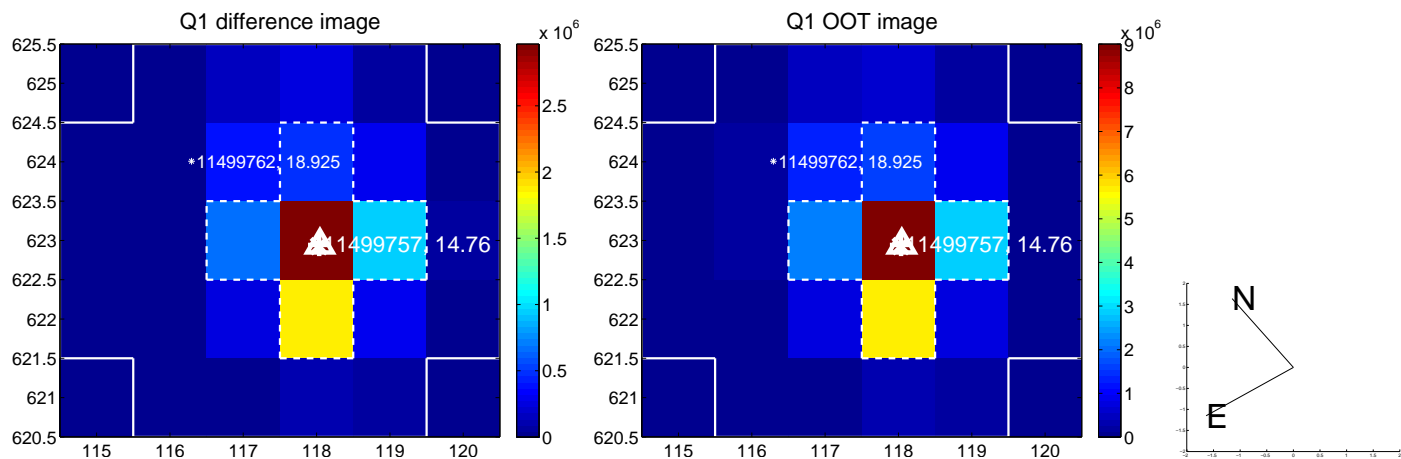
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.046 \pm 0.067$	0.68	$-0.040 \pm 0.067$	$-0.022 \pm 0.067$
PRF-fit source offset from KIC position	$0.180 \pm 0.070$	2.58	$-0.178 \pm 0.070$	$0.026 \pm 0.068$
photometric centroid source offset	$0.10 \pm 0.00$	153.76	$-0.10 \pm 0.00$	$0.03 \pm 0.00$

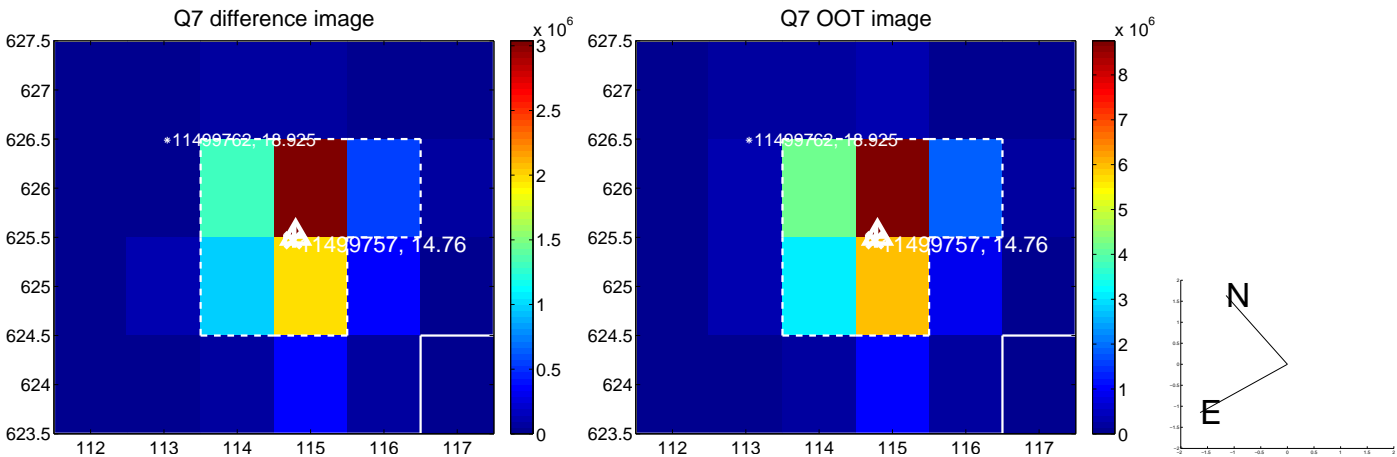
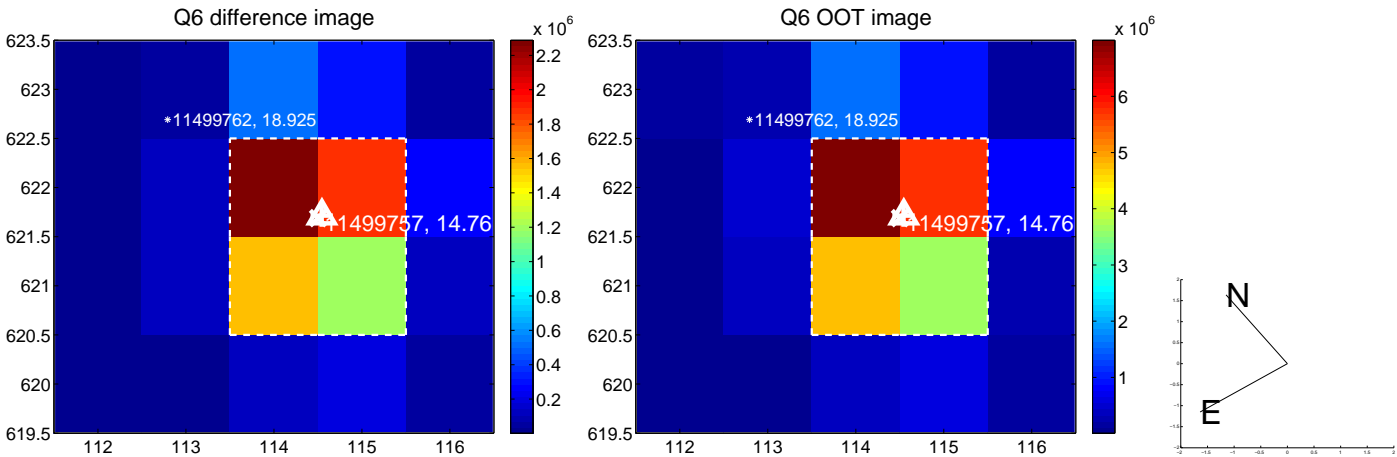
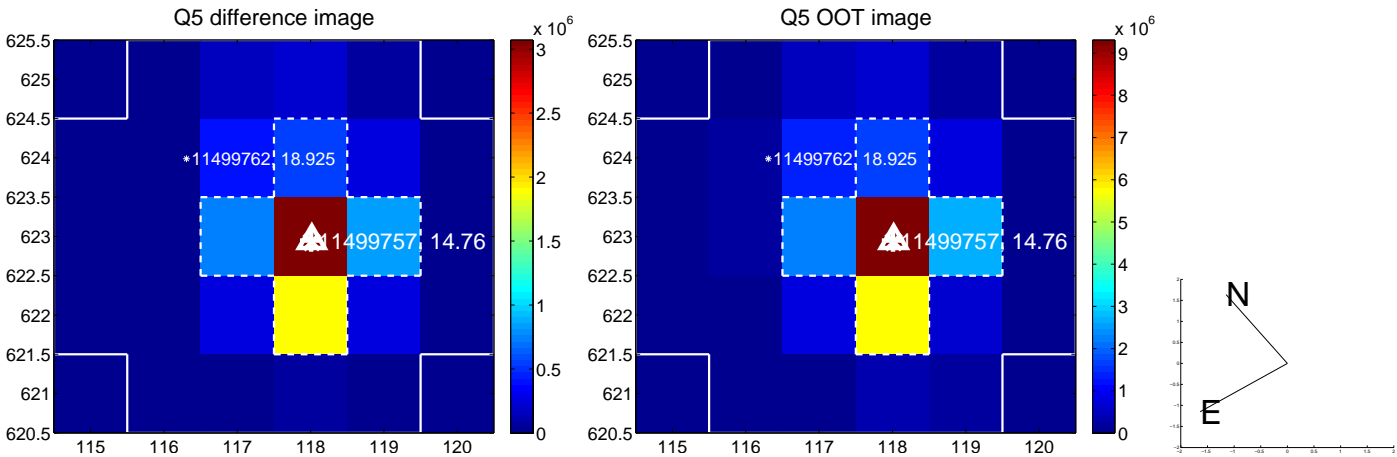


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

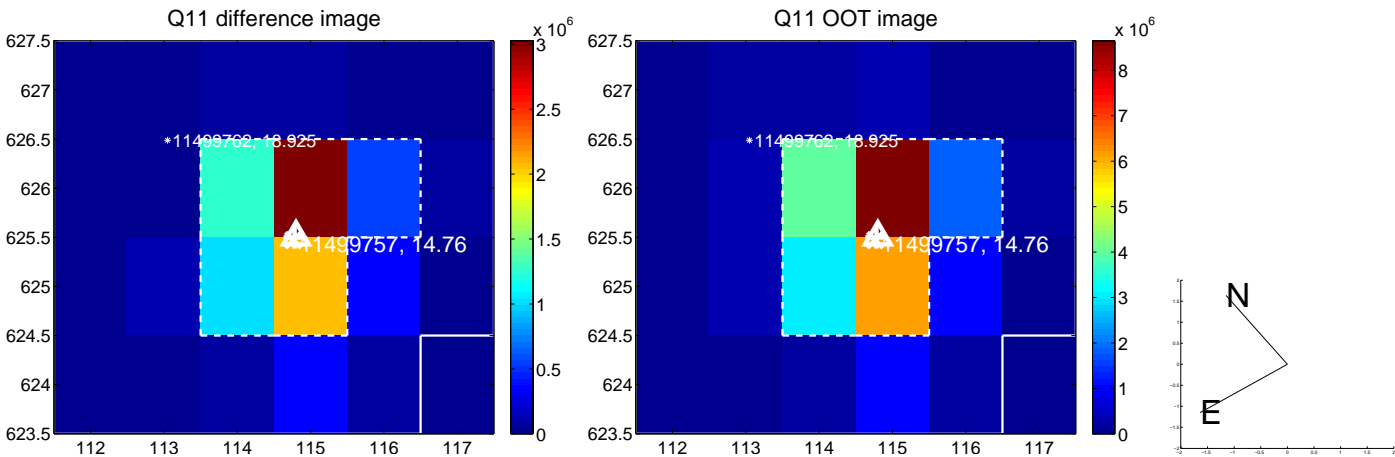
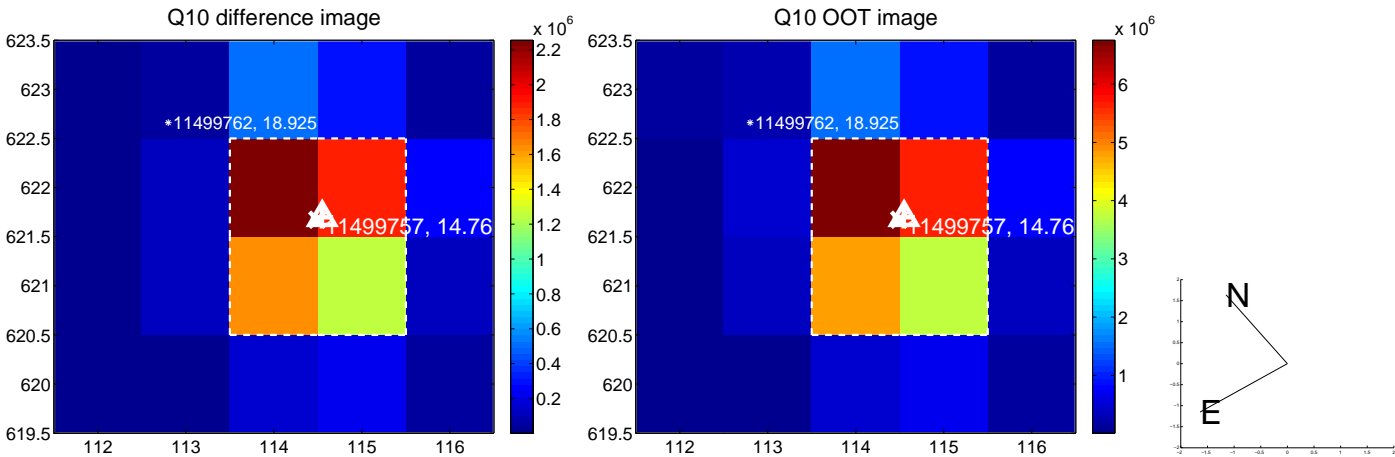
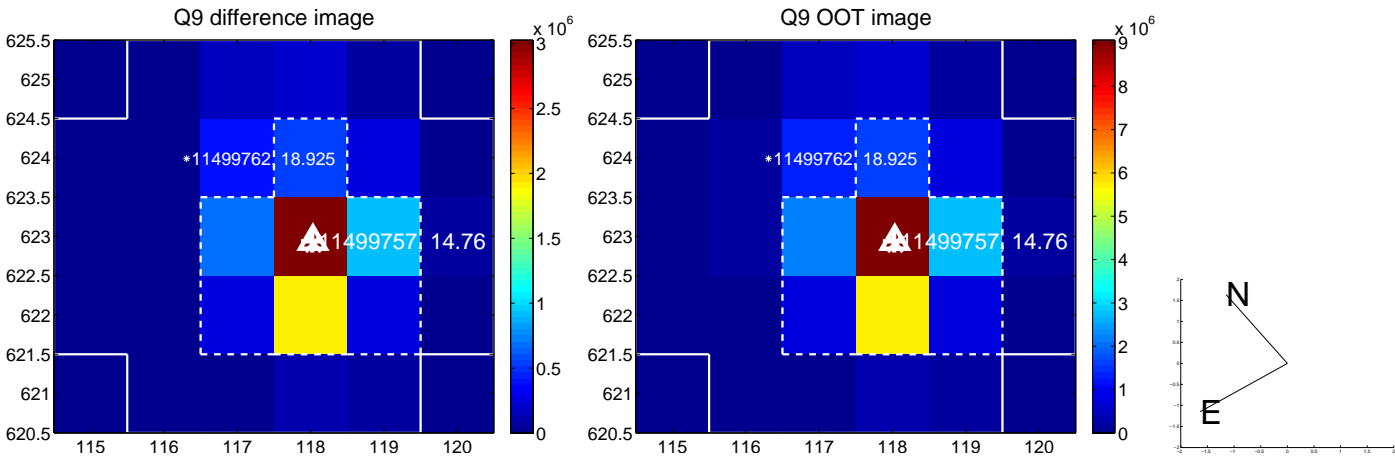


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

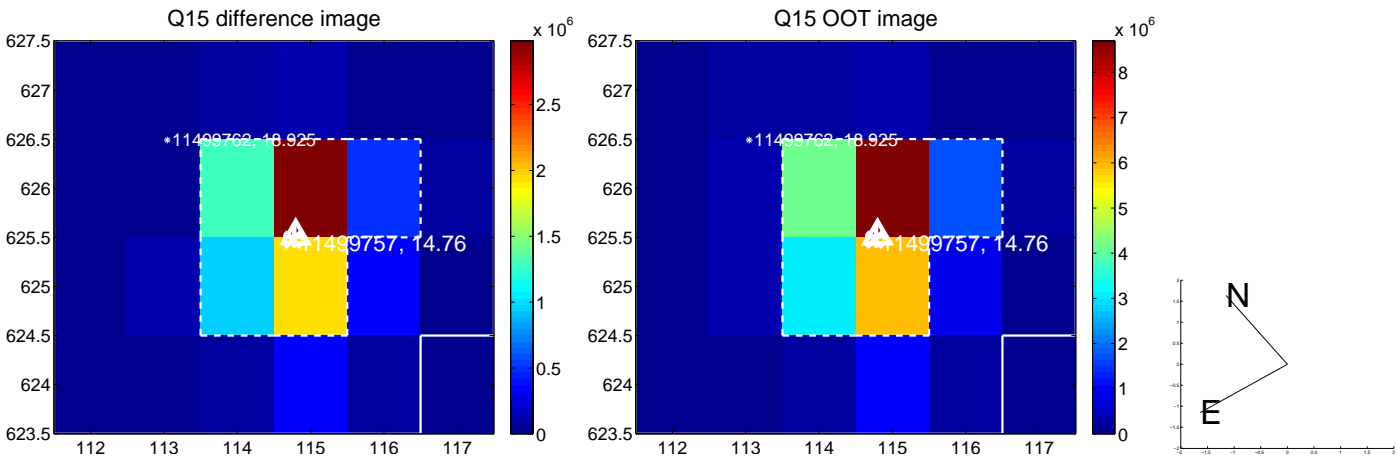
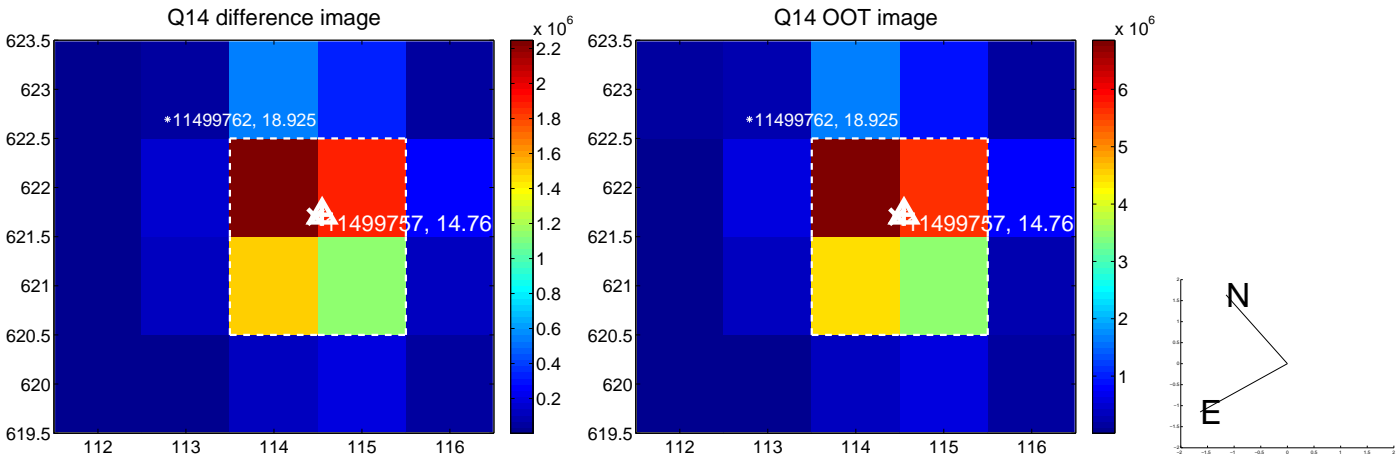
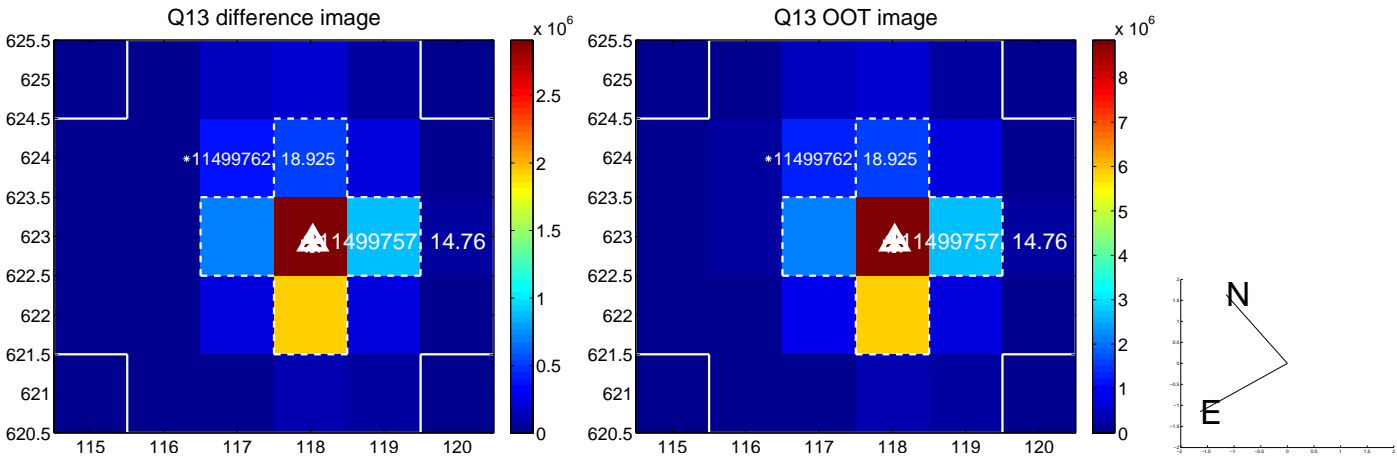




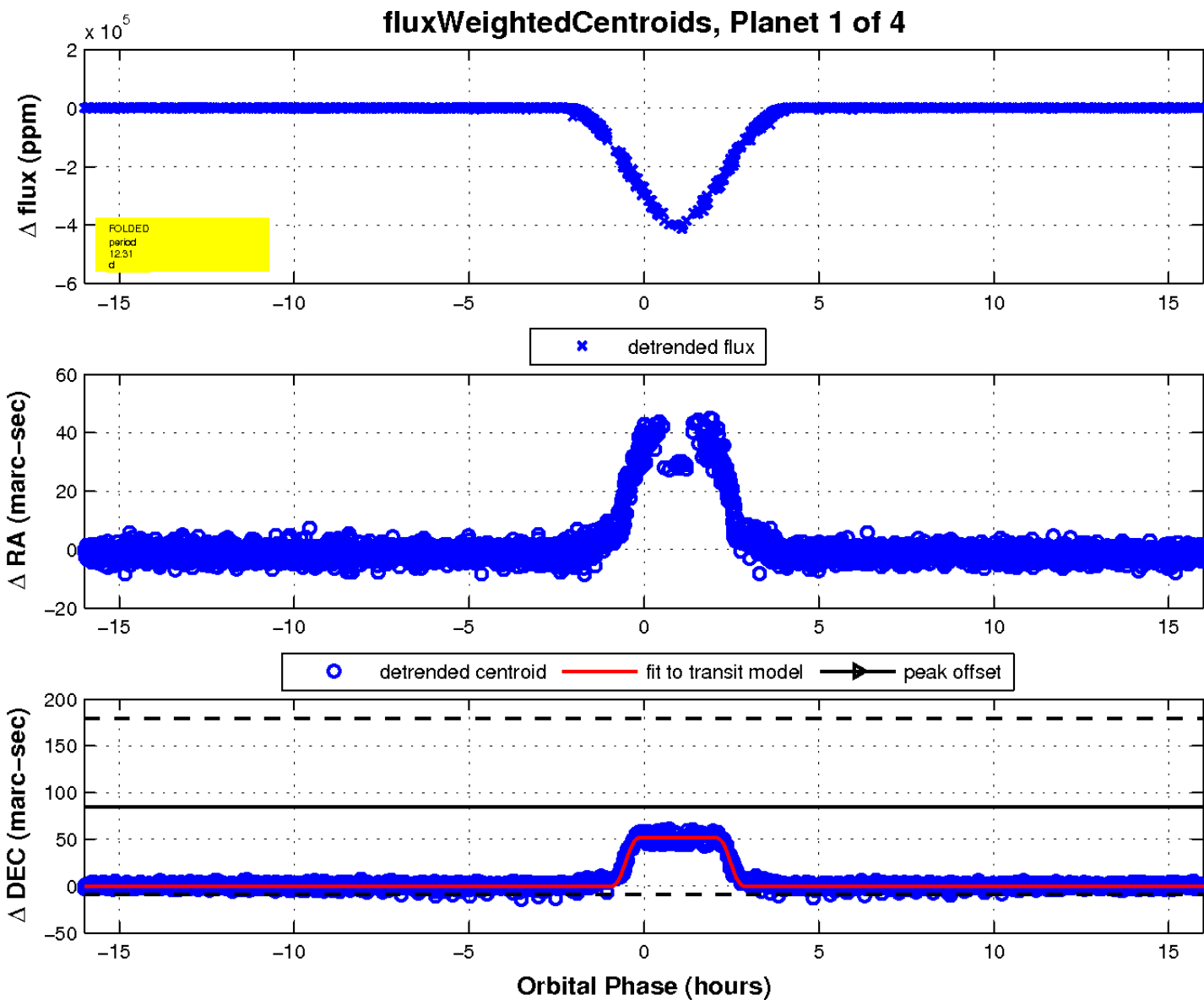
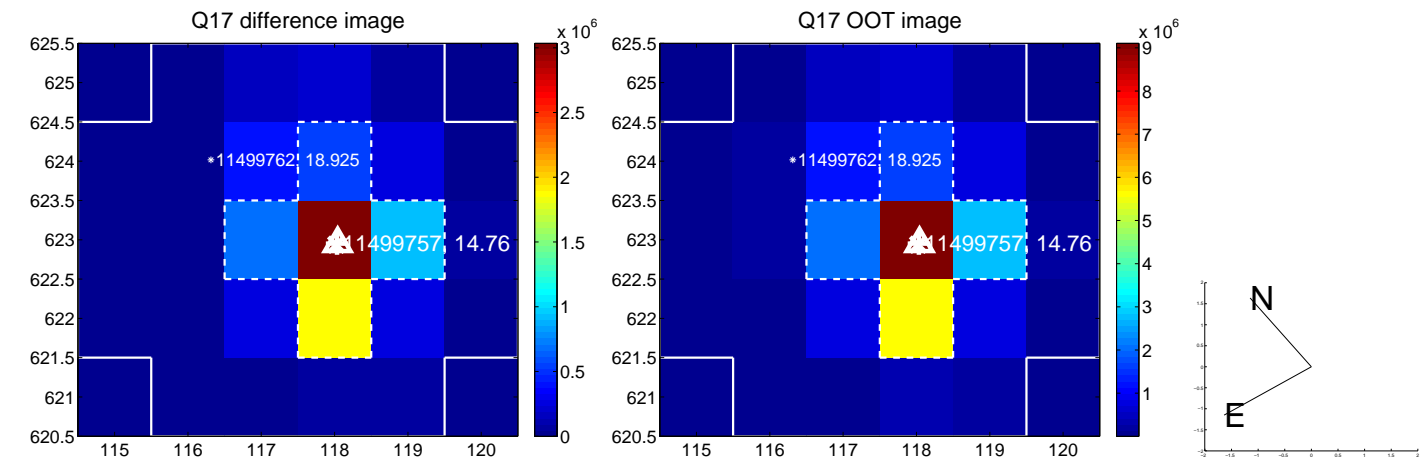
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

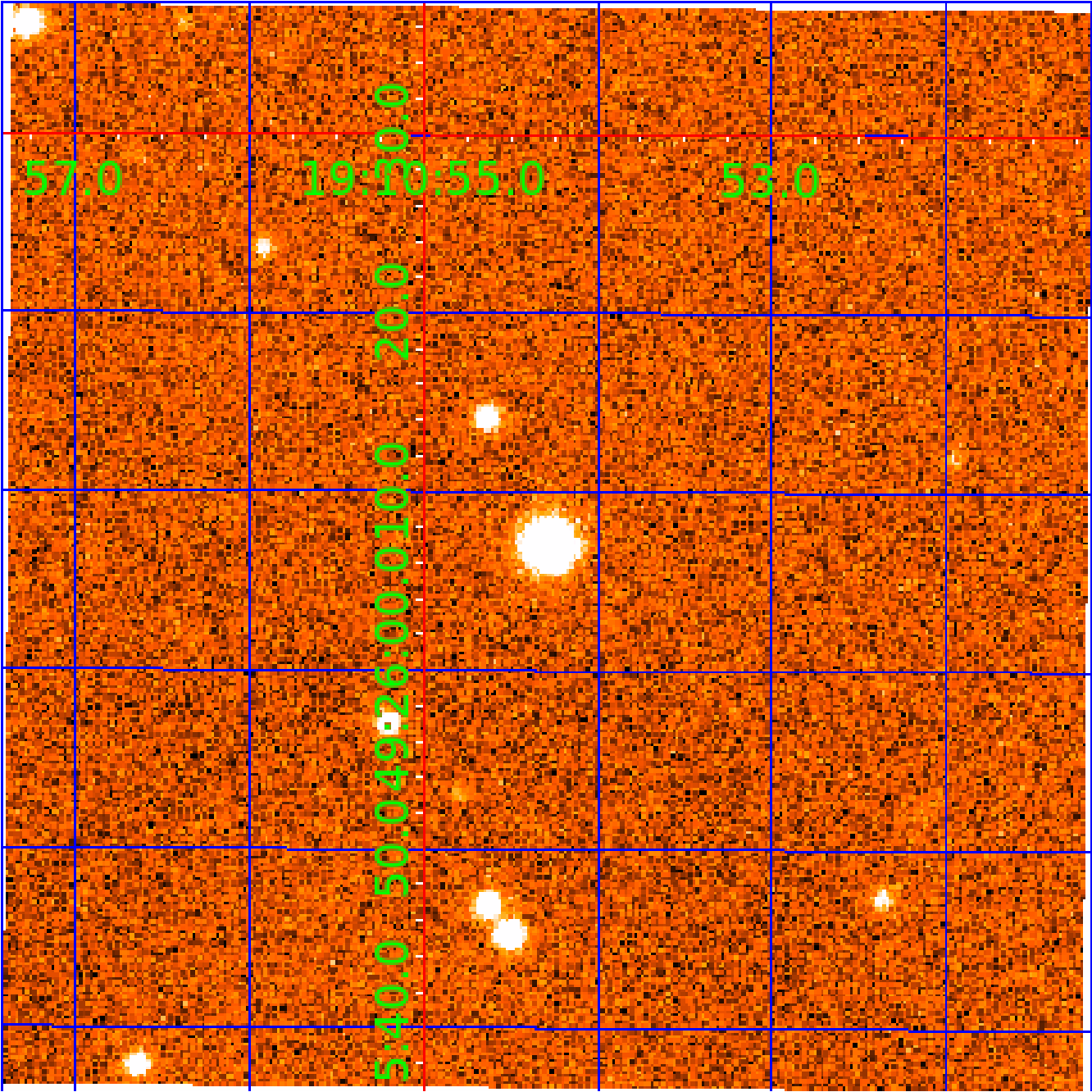


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 011499757

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011499757-01	OBS	7450.01	12.314318	134.255902	397140.2	3.500	10816.1	-1.0	1.07	6247	58.16	131.69
011499757-02	OBS	No	12.314388	141.996816	290898.0	6.000	9313.7	-1.0	1.07	6247	48.35	131.69
011499757-03	OBS	No	4.104894	133.970678	56.5	28.624	981.2	3.6	1.07	6247	0.80	569.75

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011499757-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
011499757-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_NOFITS
011499757-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

**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.

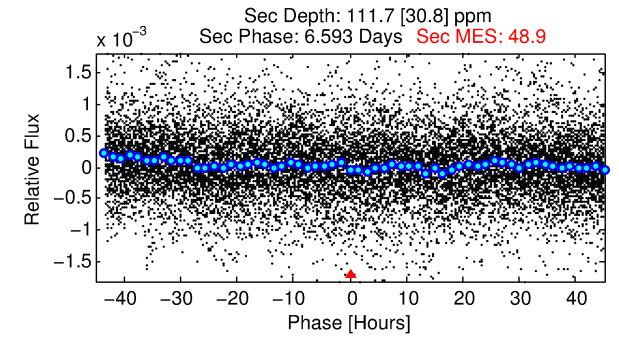
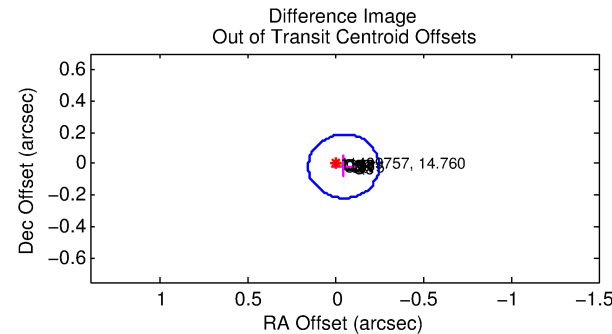
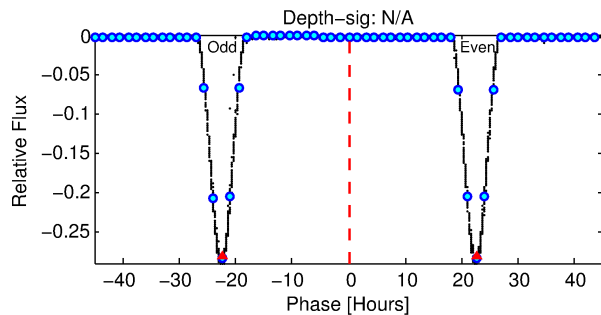
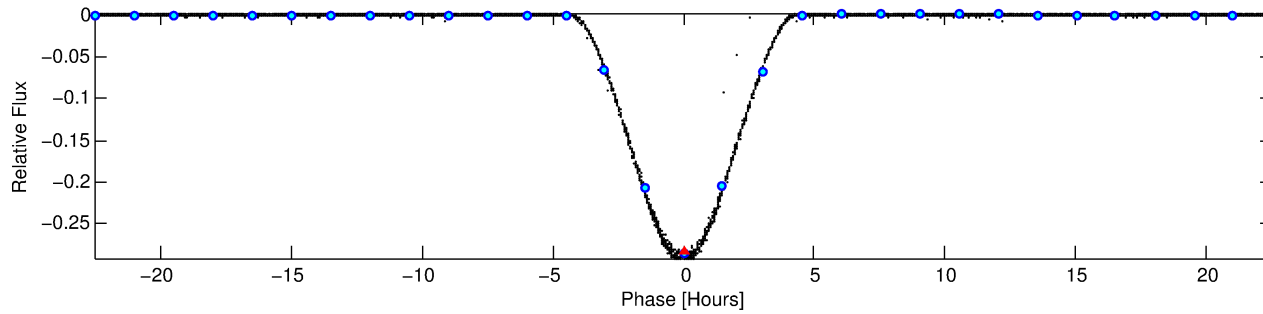
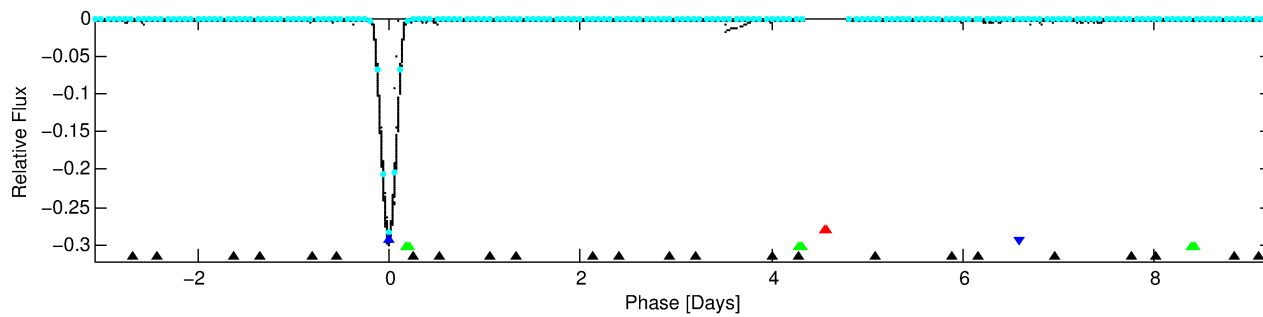
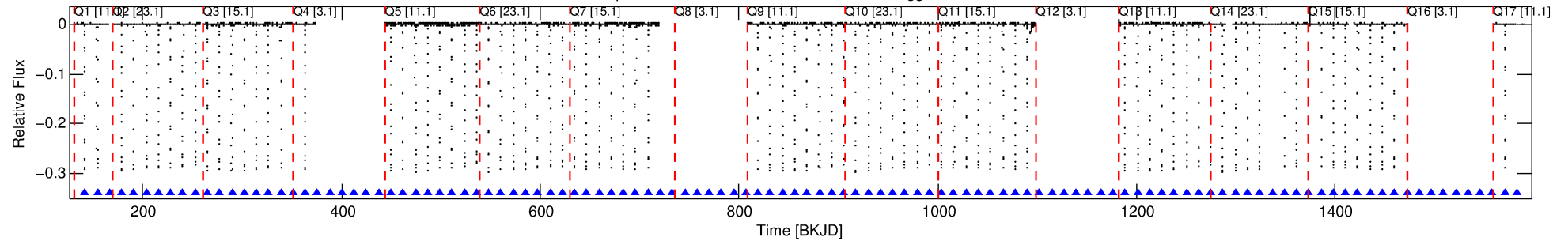
## Ephemeris Match Information For 011499757-02

No Significant Match Found

# DV One-Page Summary

KIC: 11499757 Candidate: 2 of 4 Period: 12.314 d  
KOI: K07450 Corr: No Ephemeris Match

Kp: 14.76 R\*: 1.07 Rs Teff: 6247.0 K Logg: 4.43 Fe/H: -0.060



## TPS TCE Results:

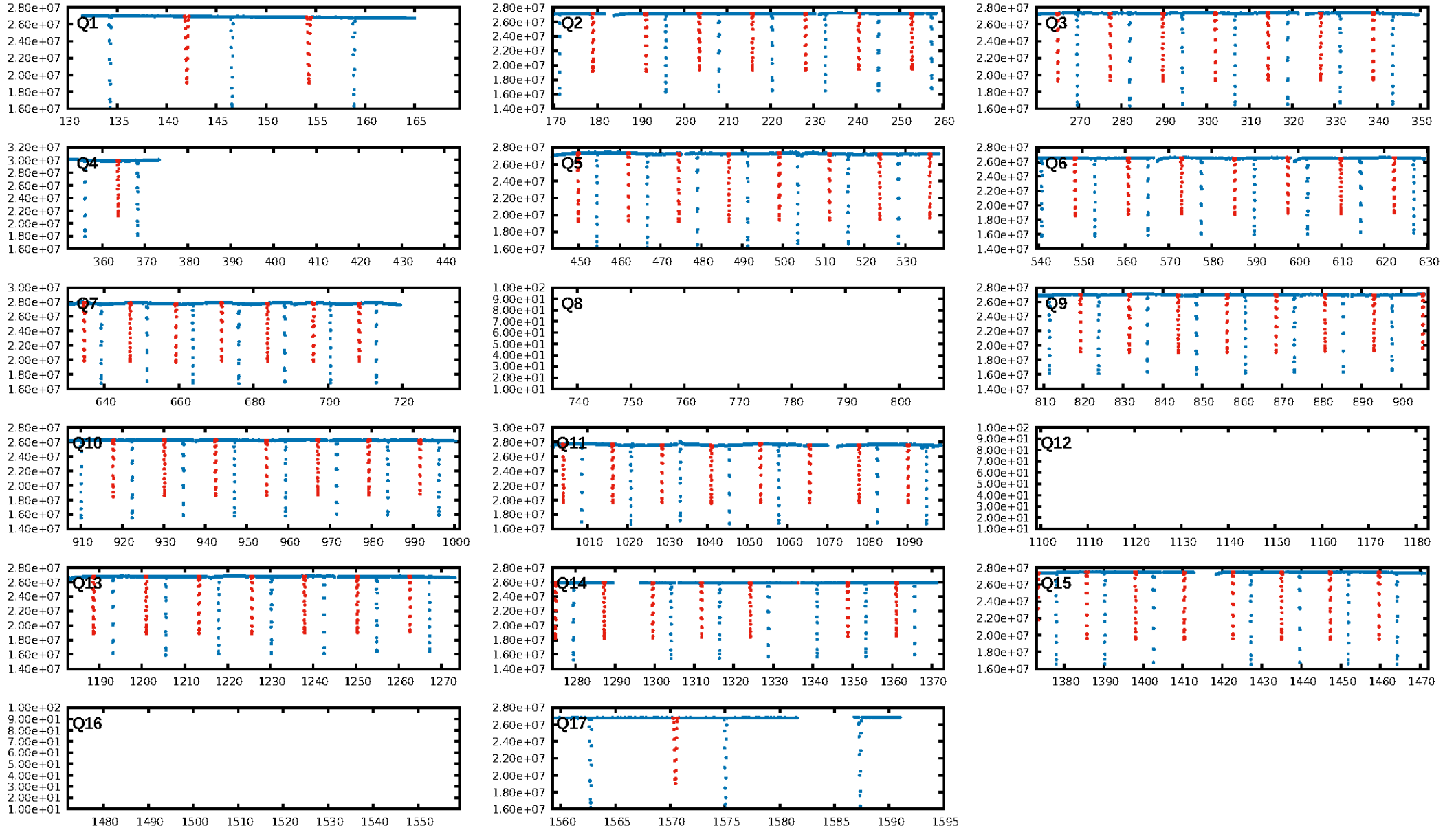
Period = 12.31439 d  
Epoch = 141.9968 BKJD

DV fit results are unavailable

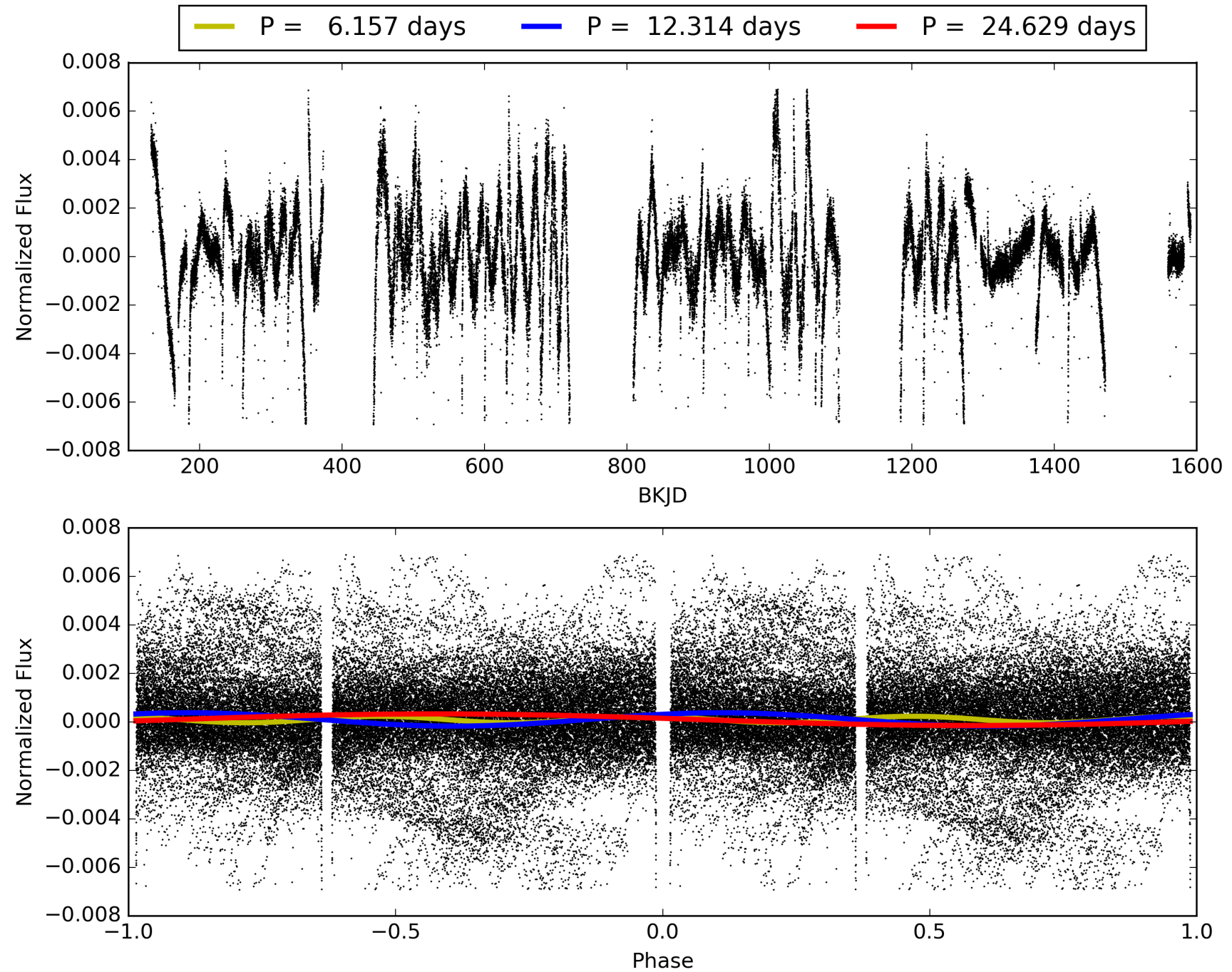
## DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 $\sigma$ ]  
LongPeriod-sig: 100.0% [105.20 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [81/81]  
GhostDiagnostic-chr: 2.613  
Centroid-sig: N/A  
Centroid-so: 0.101 arcsec [136.12 $\sigma$ ]  
OotOffset-rm: 0.049 arcsec [0.72 $\sigma$ ]  
KicOffset-rm: 0.191 arcsec [2.72 $\sigma$ ]  
OotOffset-st: 4/4/1/5 [14]  
KicOffset-st: 4/4/1/5 [14]  
DiffImageQuality-fgm: 1.00 [14/14]  
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# TCE 011499757-02, PDC Light Curves



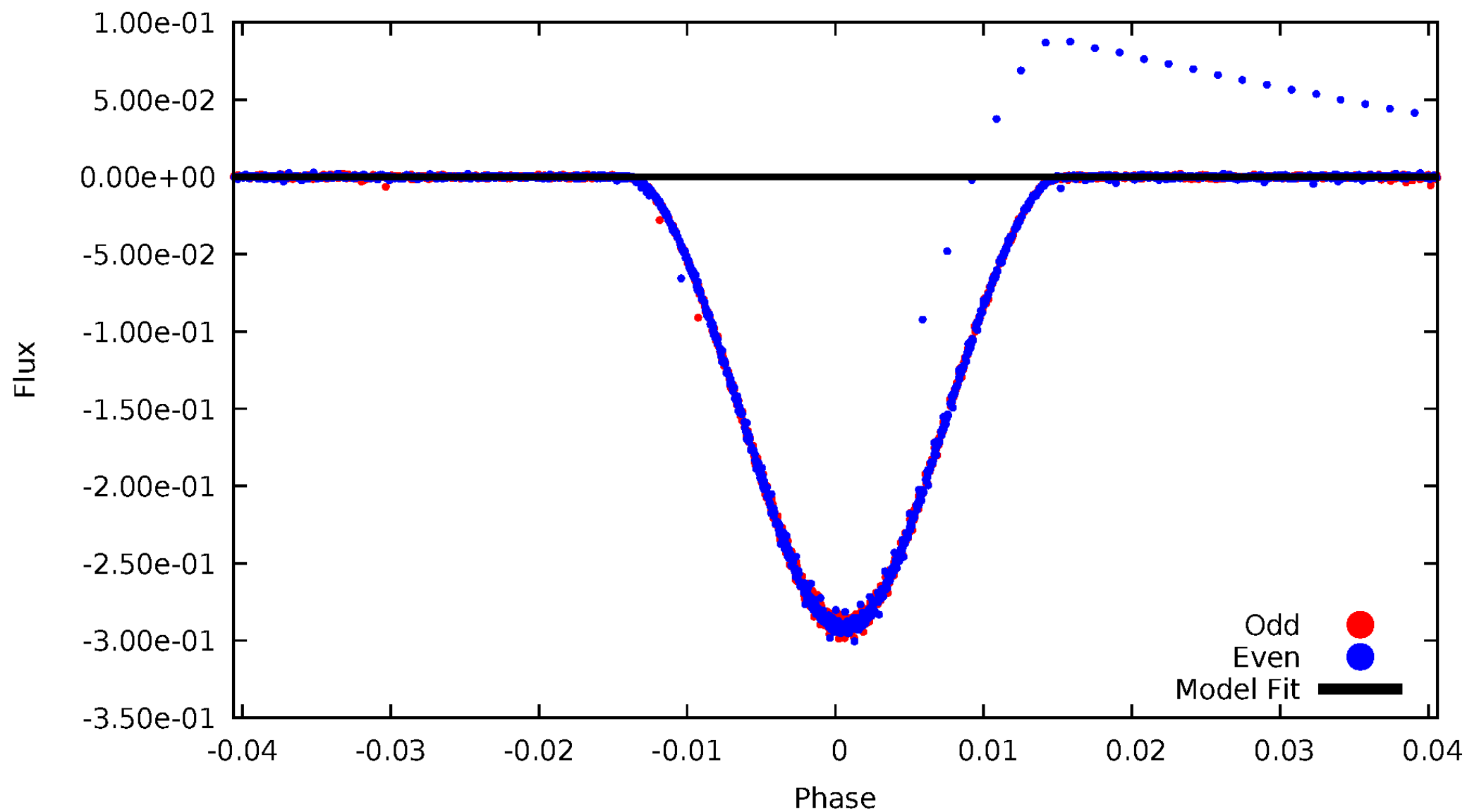
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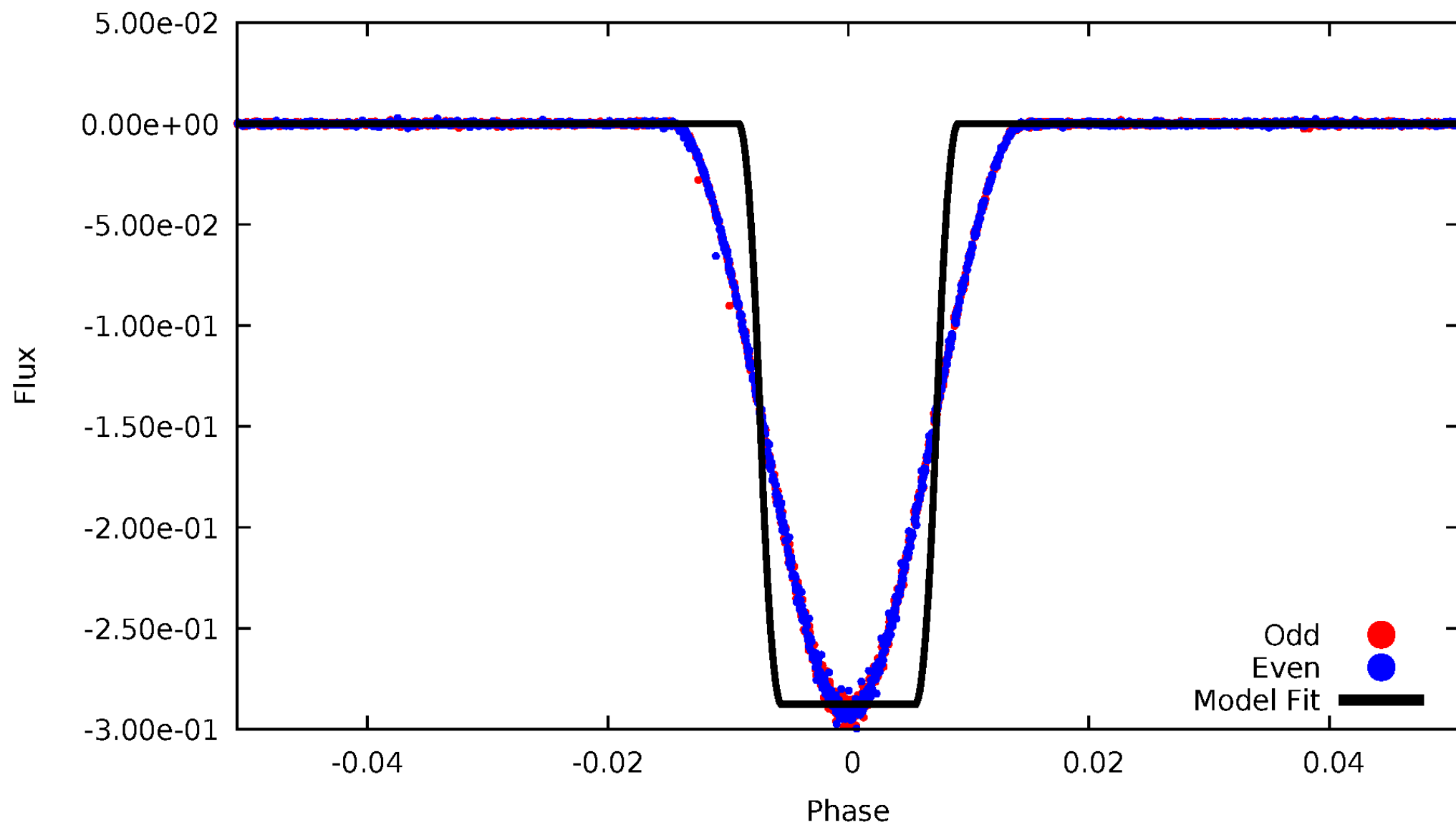
# DV Odd/Even

TCE 011499757-02



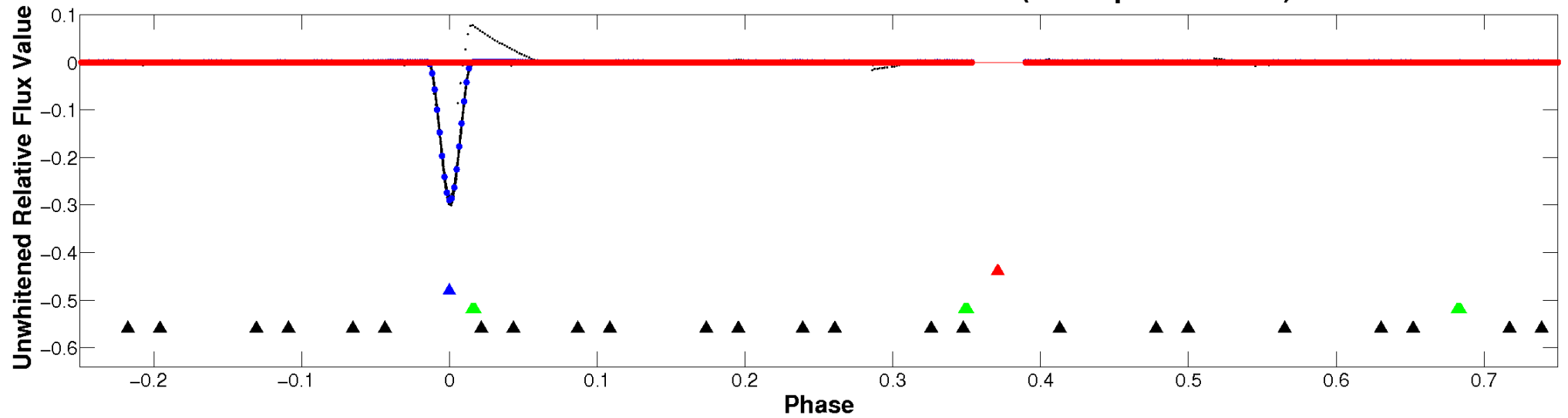
# ALT Odd/Even

TCE 011499757-02



# Non-Whitened Vs. Whitened Light Curve

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

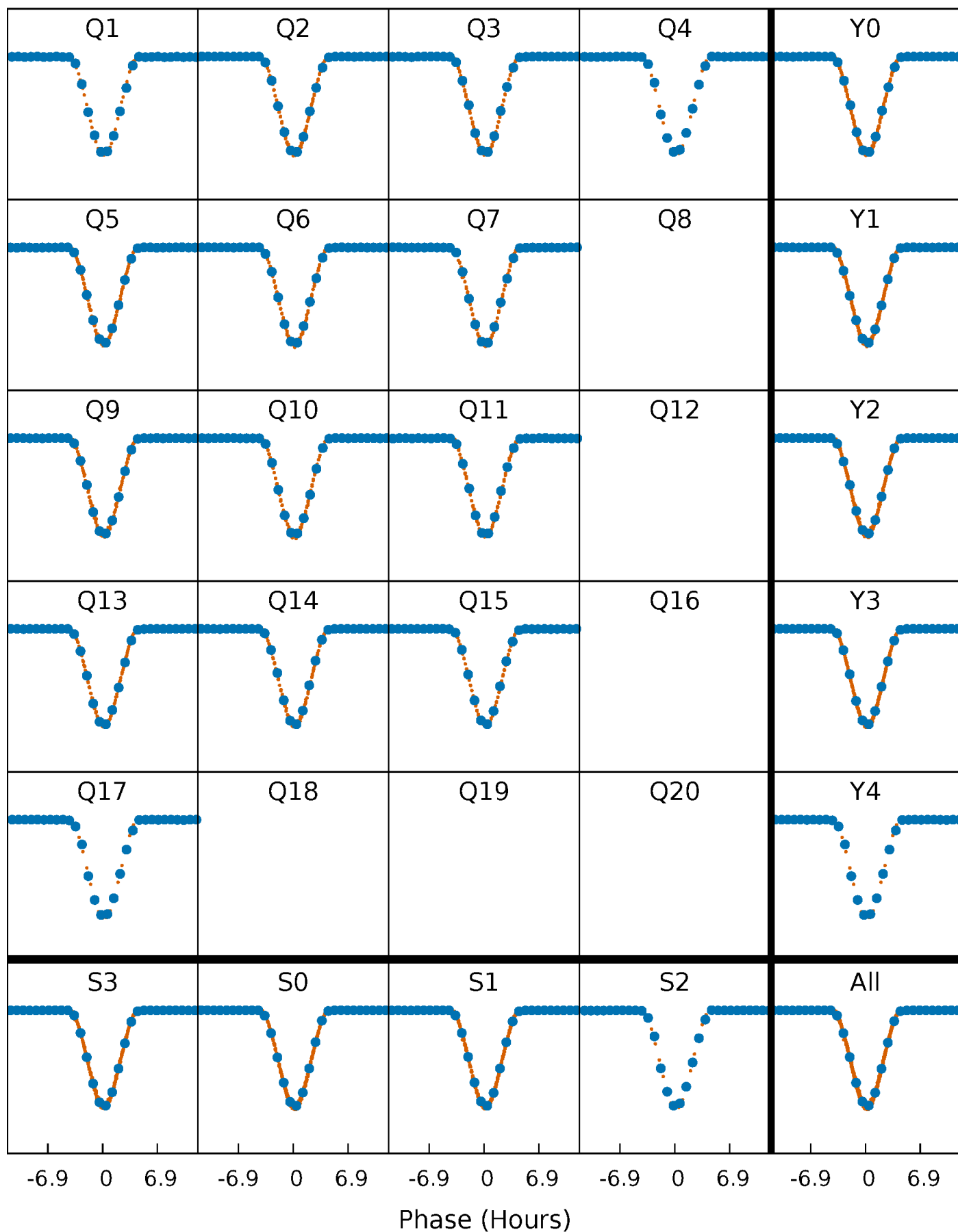


**Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



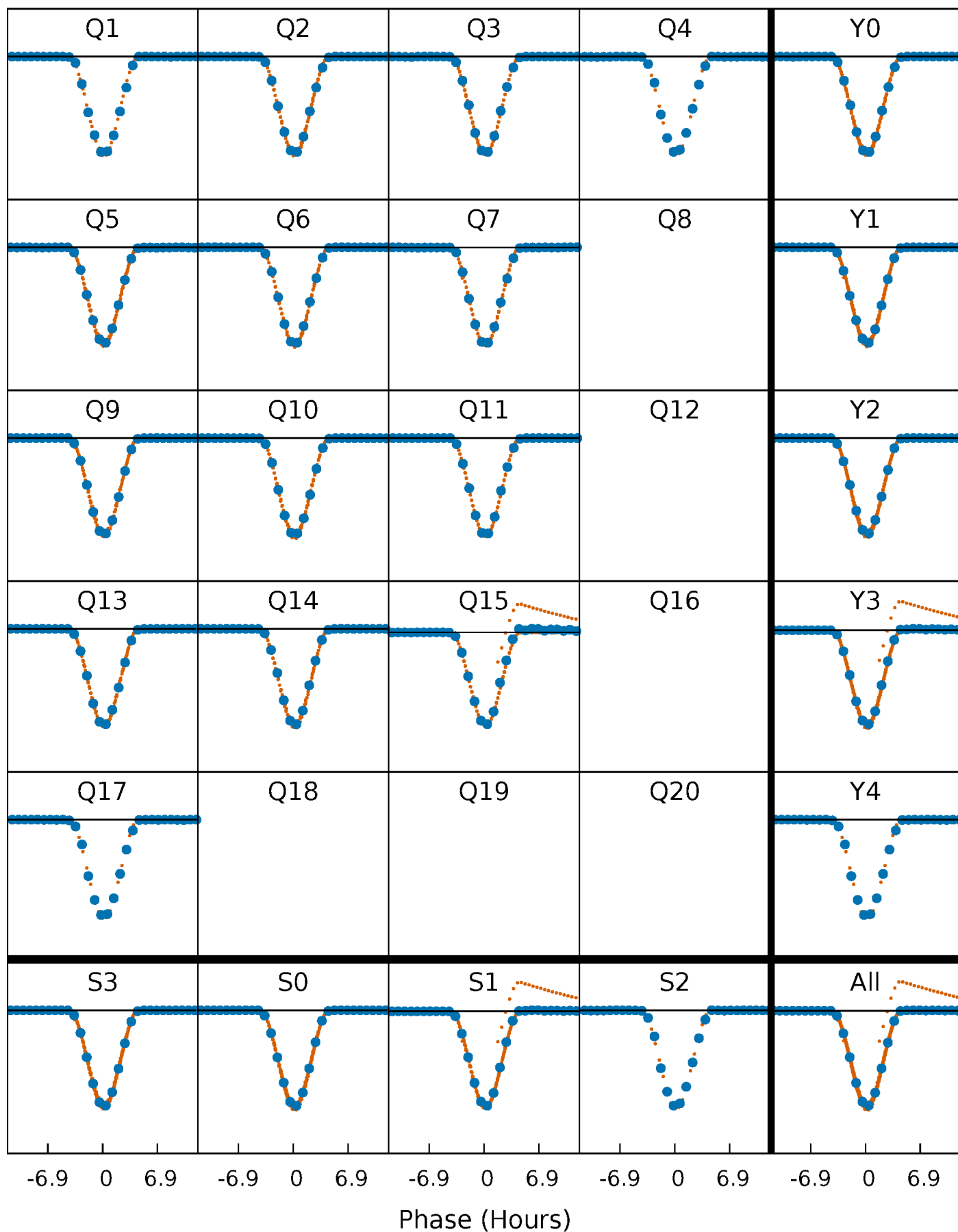
# PDC Quarter-Phased Transit Curves

TCE 011499757-02 P= 12.314388 Days  $T_0=141.996816$  (BKJD)



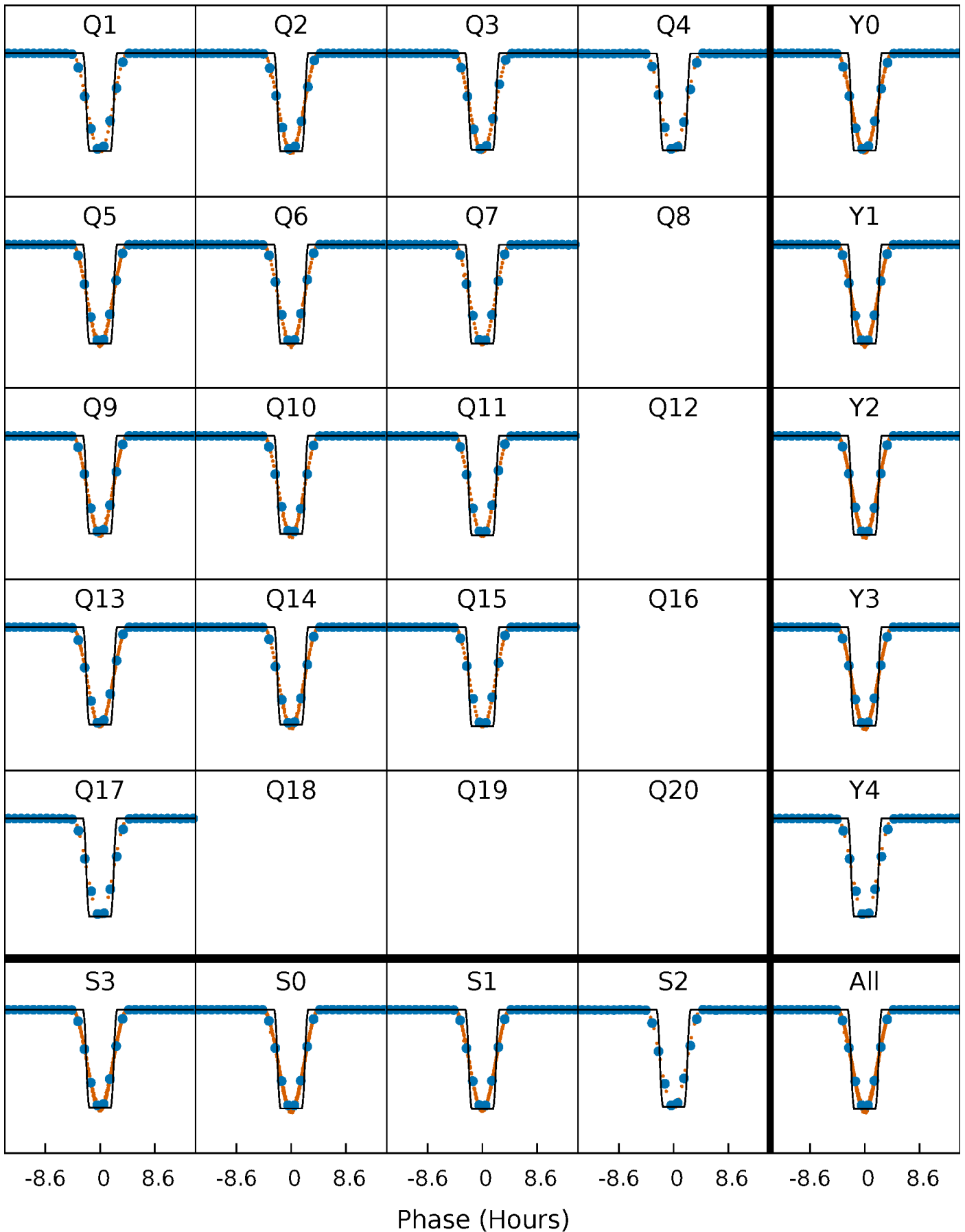
# DV Quarter-Phased Transit Curves

TCE 011499757-02   P= 12.314388 Days    $T_0=141.996816$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

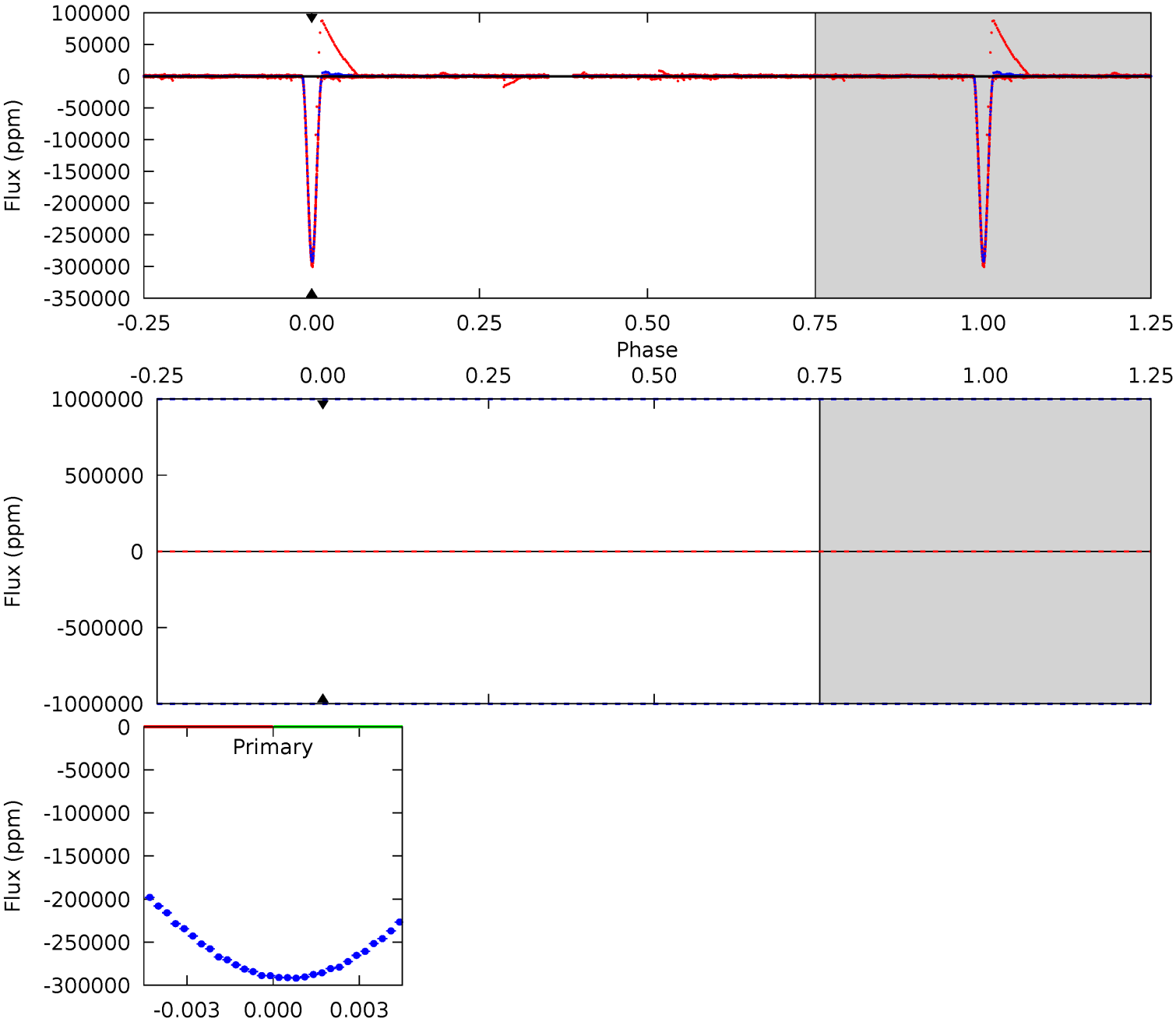
TCE 011499757-02   P= 12.314388 Days    $T_0=142.004220$  (BKJD)



# DV Model-Shift Uniqueness Test

011499757-02, P = 12.314388 Days, E = 129.682428 Days

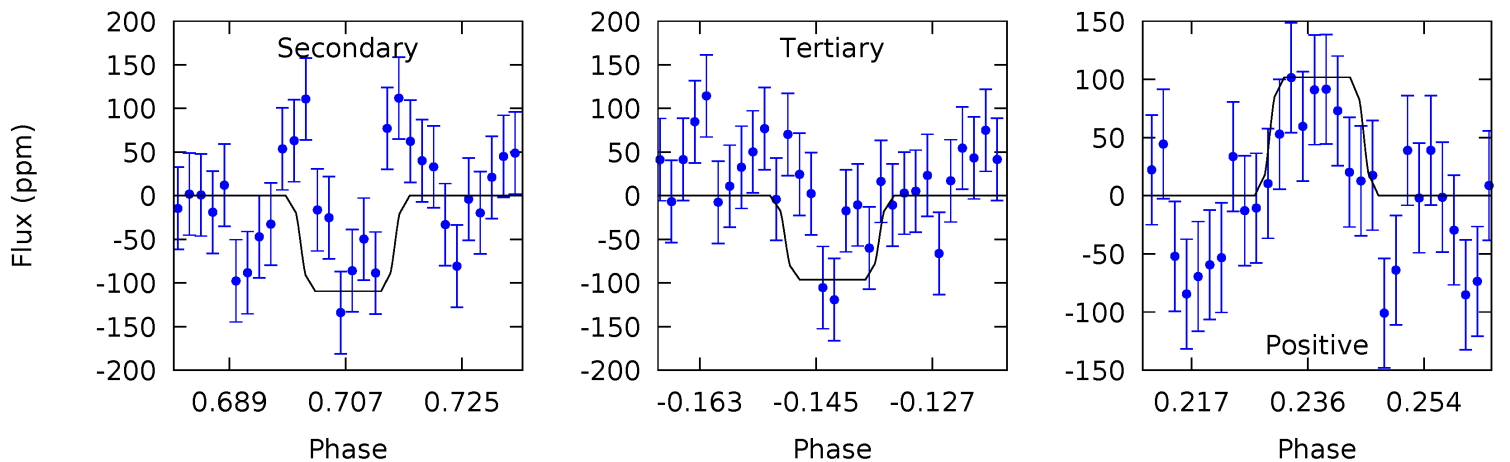
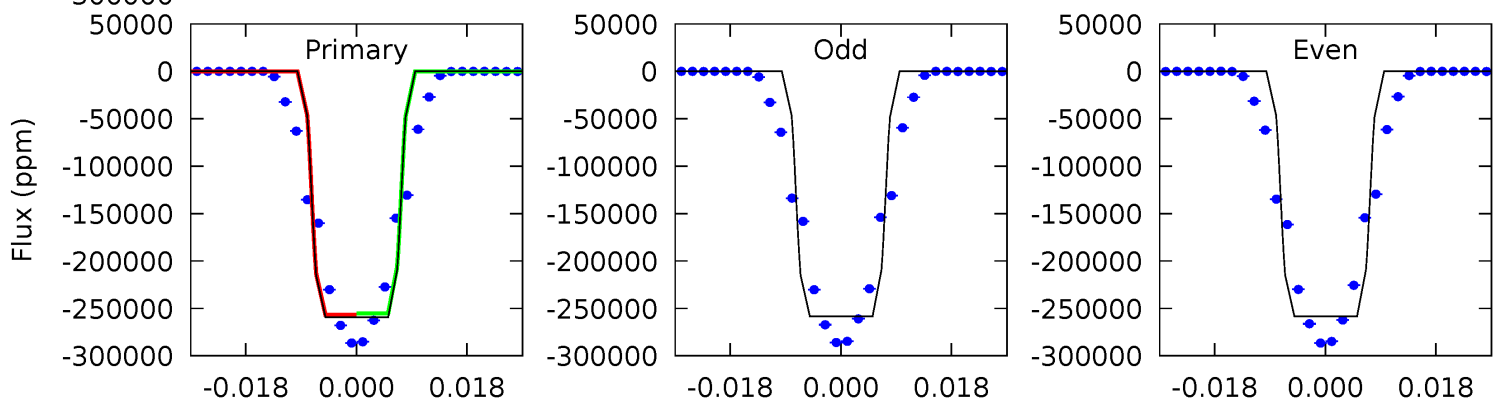
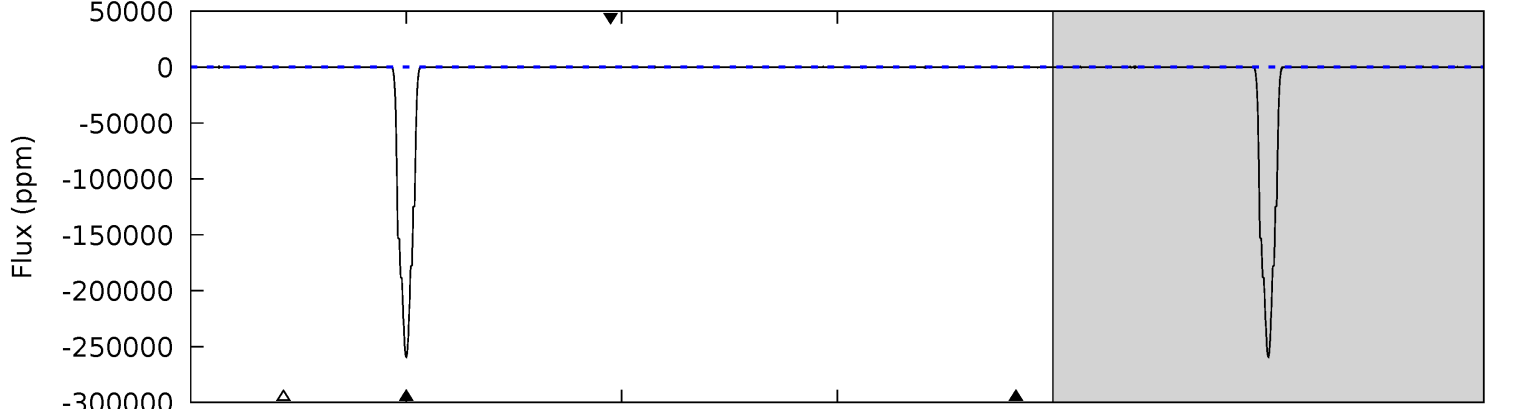
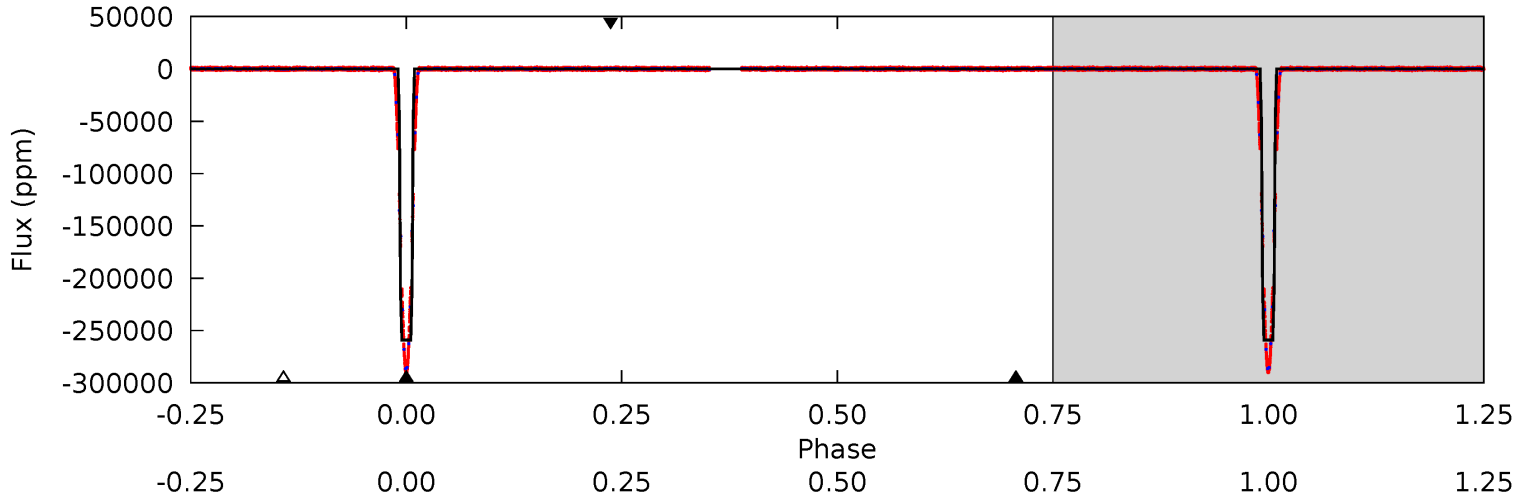
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

011499757-02, P = 12.314388 Days, E = 129.689832 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
9867	4.16	3.66	3.88	4.91	2.36	1.39	9864	9863	0.50	0.29	6.04	1.00	0.00	27.5





### Stellar Parameters For KIC 011499757

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6247^{+174}_{-217}$	$4.433^{+0.065}_{-0.195}$	$-0.060^{+0.250}_{-0.350}$	$1.066^{+0.313}_{-0.112}$	$1.122^{+0.145}_{-0.145}$	$1.304^{+0.362}_{-0.683}$
	+3%/-3%	+1%/-4%	+417%/-583%	+29%/-11%	+13%/-13%	+28%/-52%
Source	PHO1	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 011499757-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$51.02^{+15.10}_{-13.00}$	$1231^{+91}_{-65}$	$-2550^{+8193}_{-2953}$	$-1.407^{+291.386}_{-263.292}$
Alt.	$-109 \pm 26$	$64.55^{+15.35}_{-13.32}$	$1231^{+83}_{-67}$	$-1849^{+220}_{-105}$	$0.165^{+0.101}_{-0.066}$

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

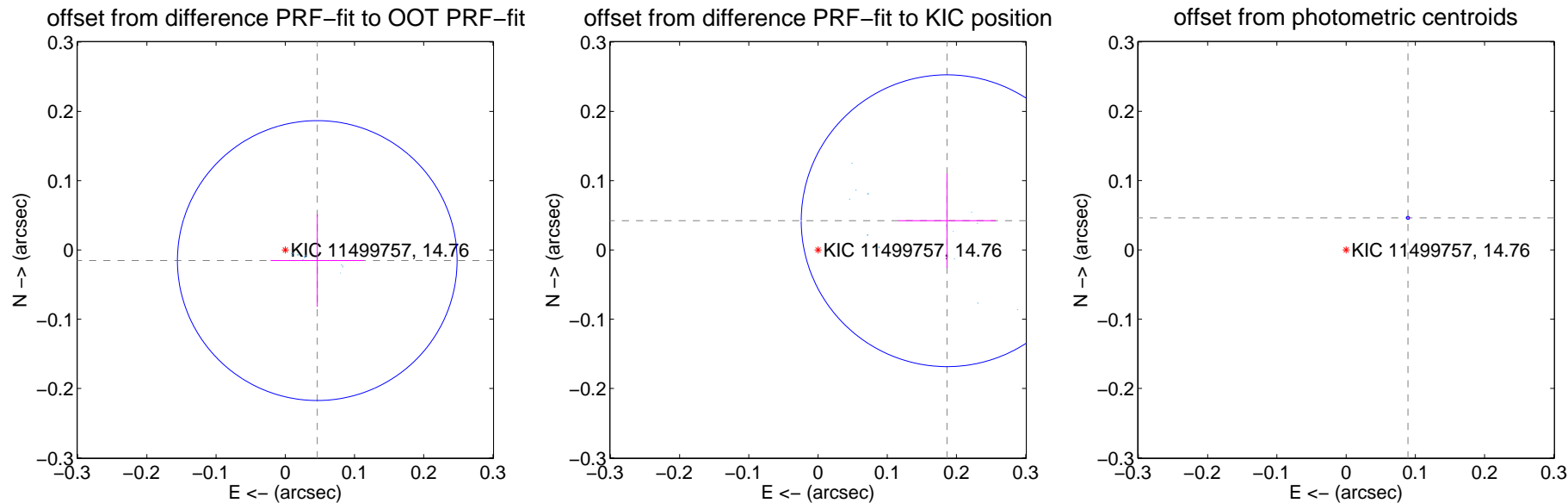
## DV Centroid Data

Supplemental centroid analysis for 011499757-02. Kepler magnitude: 14.76. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

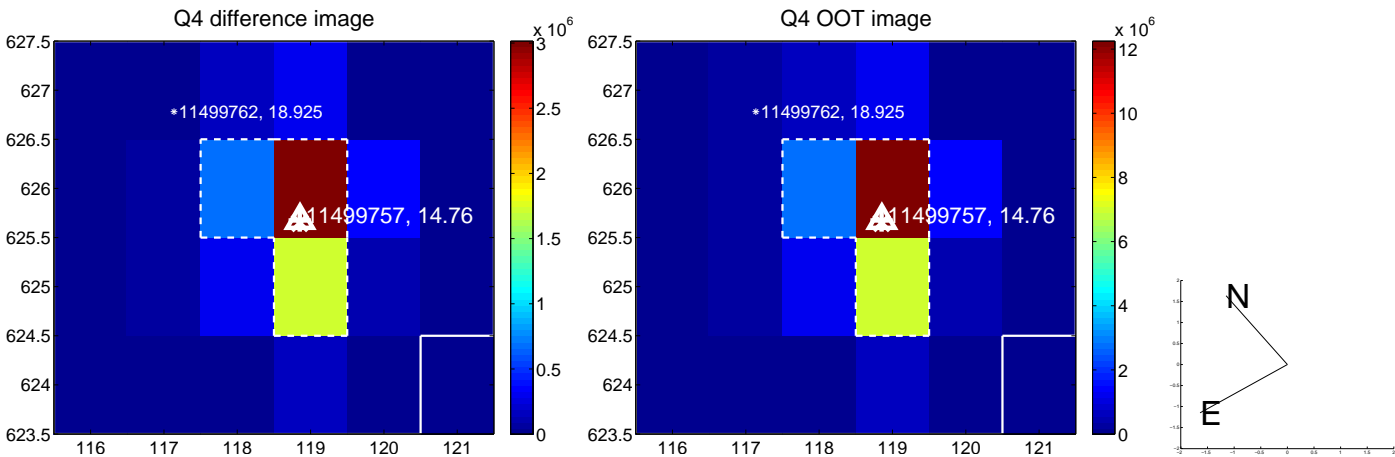
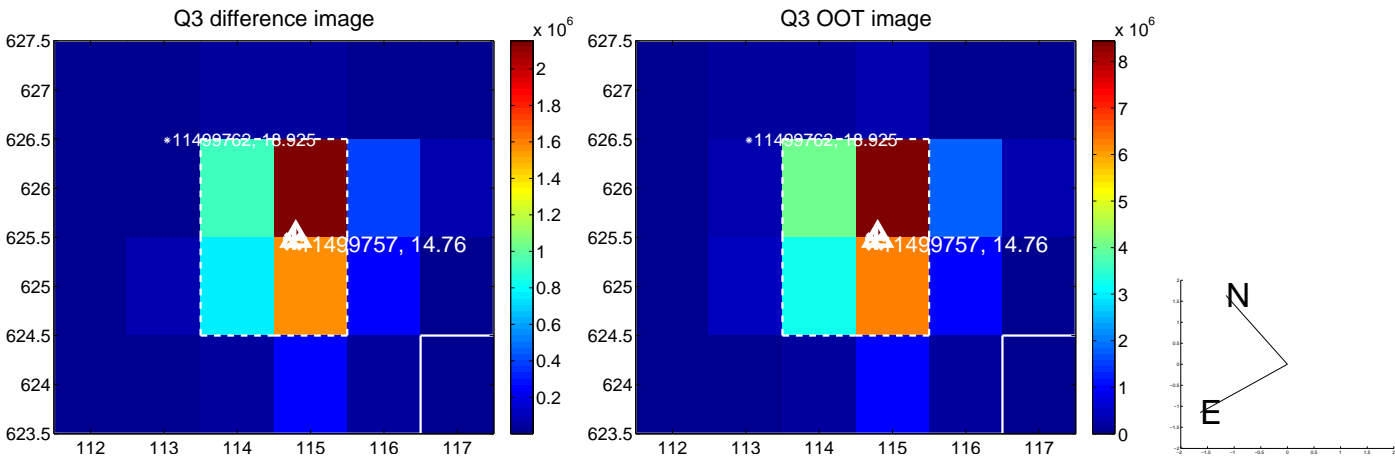
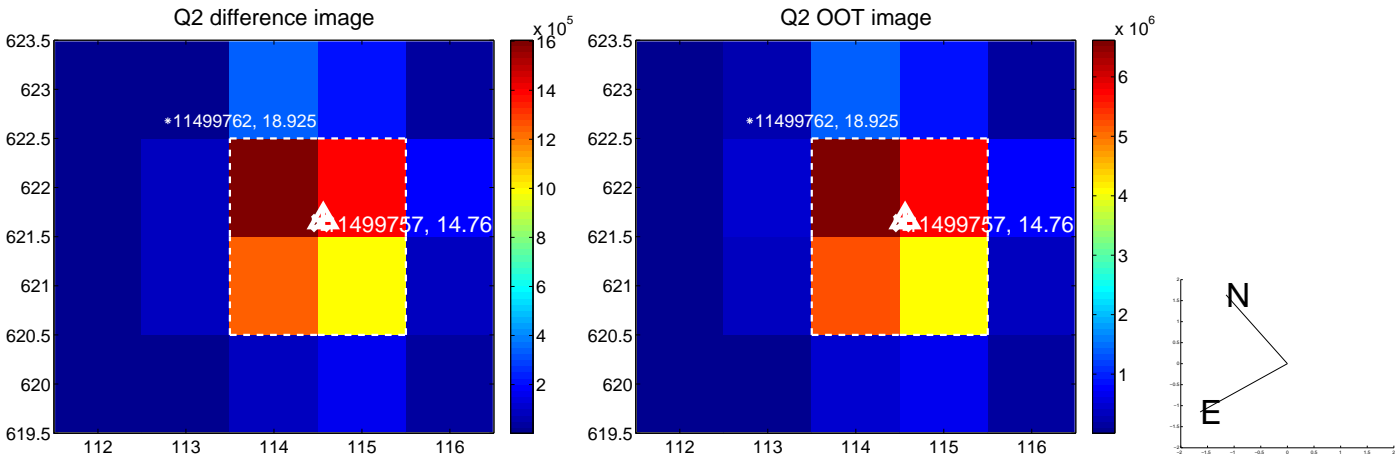
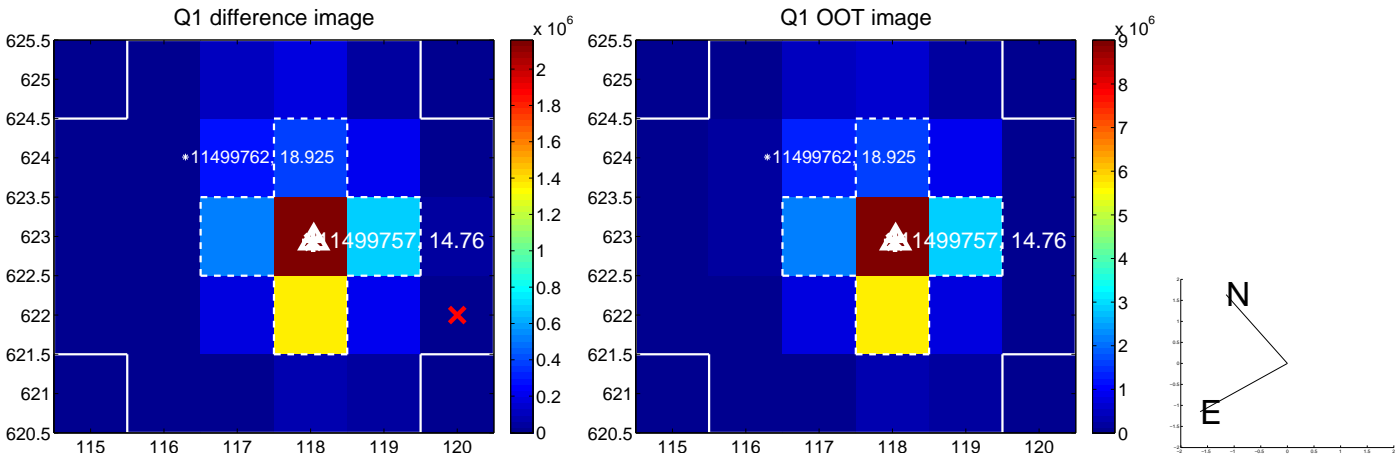
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.049 \pm 0.067$	0.72	$-0.046 \pm 0.067$	$-0.015 \pm 0.067$
PRF-fit source offset from KIC position	$0.191 \pm 0.070$	2.72	$-0.186 \pm 0.070$	$0.042 \pm 0.068$
photometric centroid source offset	$0.10 \pm 0.00$	136.12	$-0.09 \pm 0.00$	$0.05 \pm 0.00$

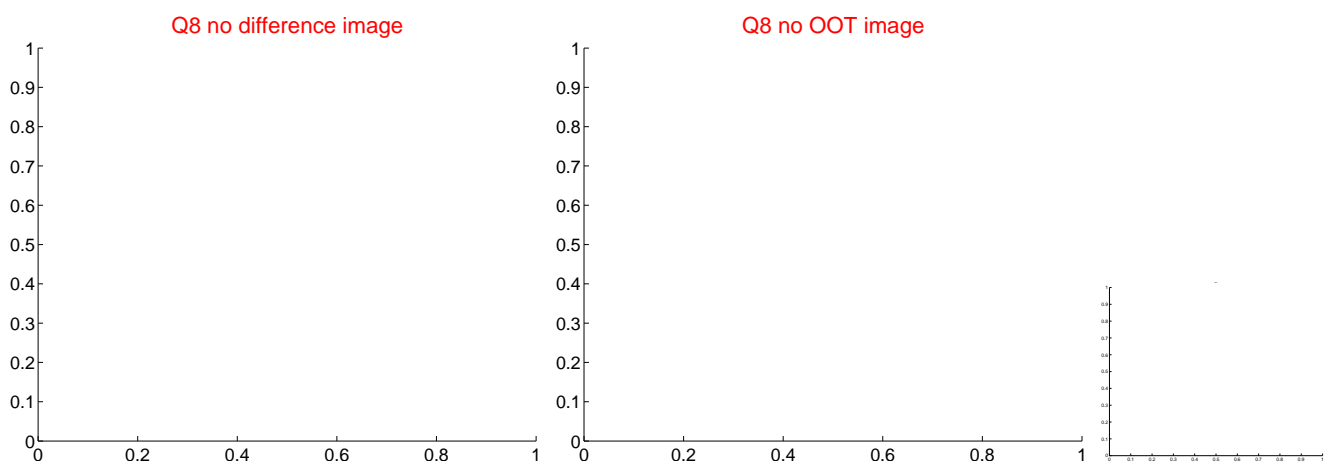
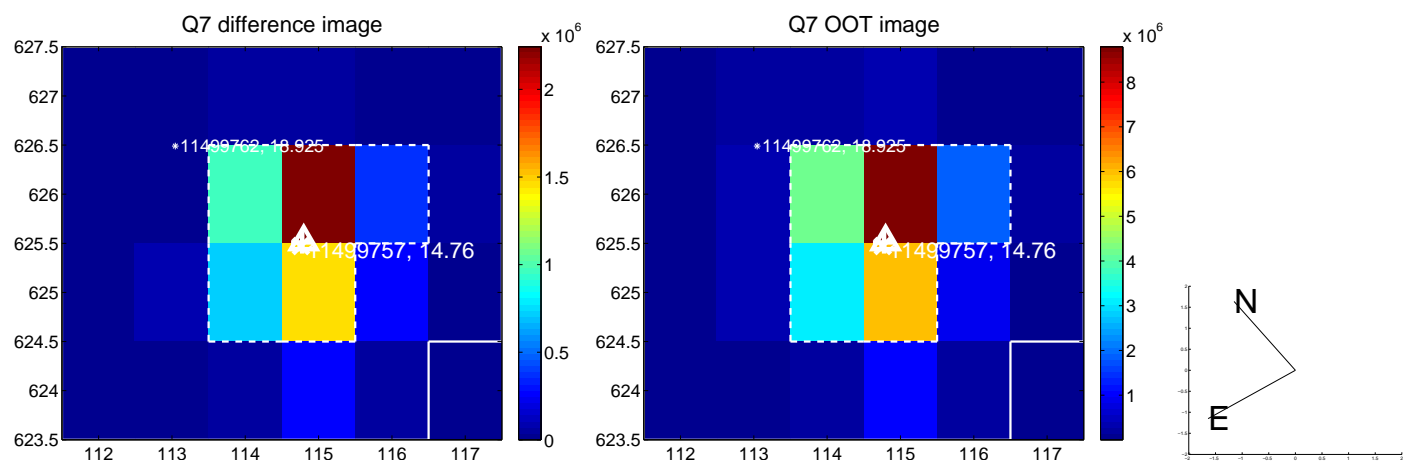
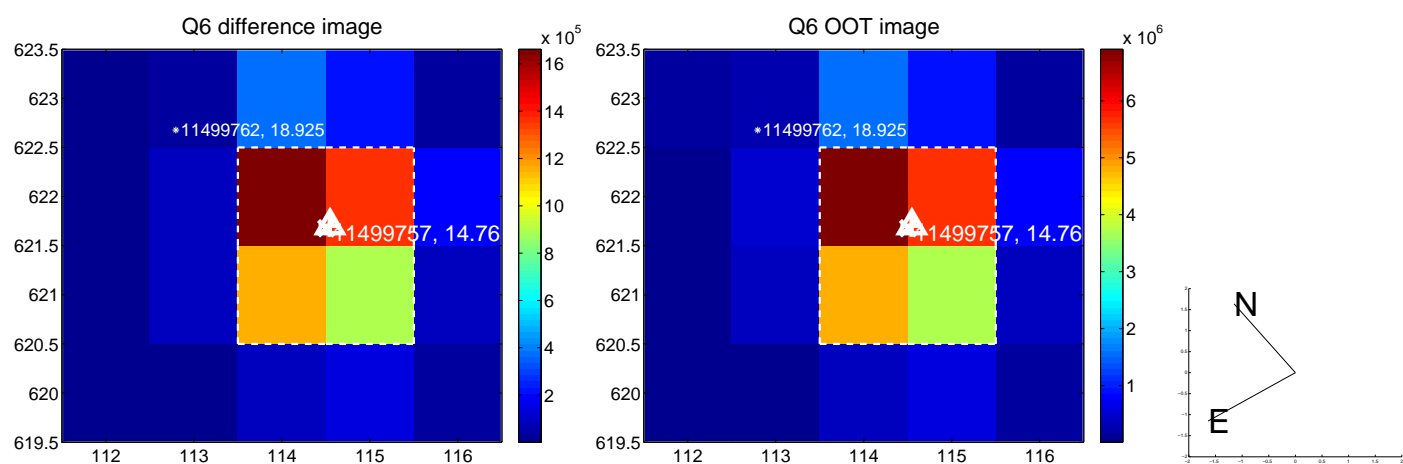
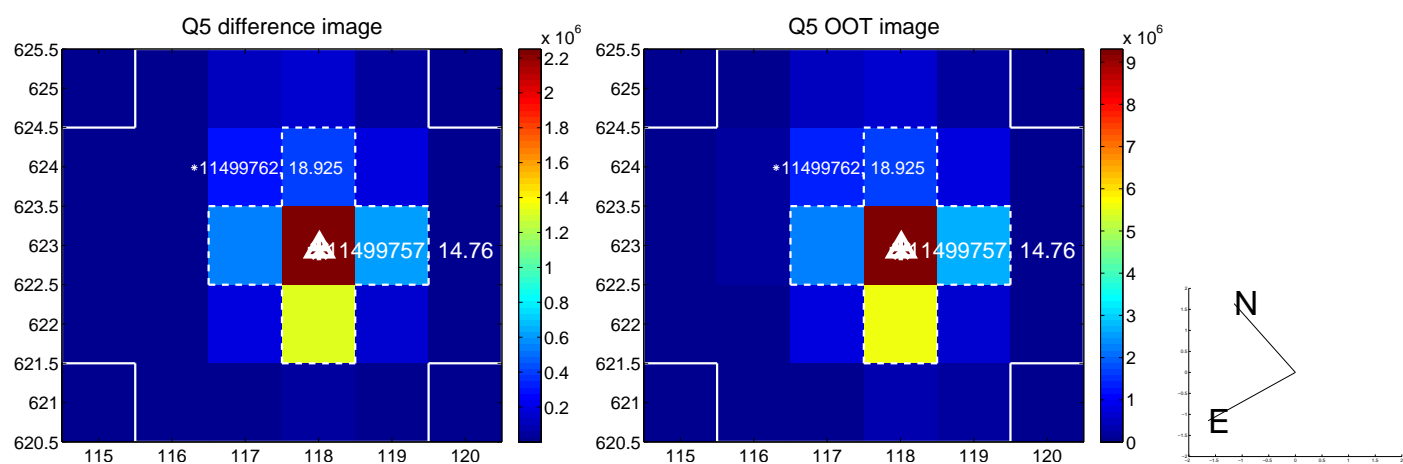


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

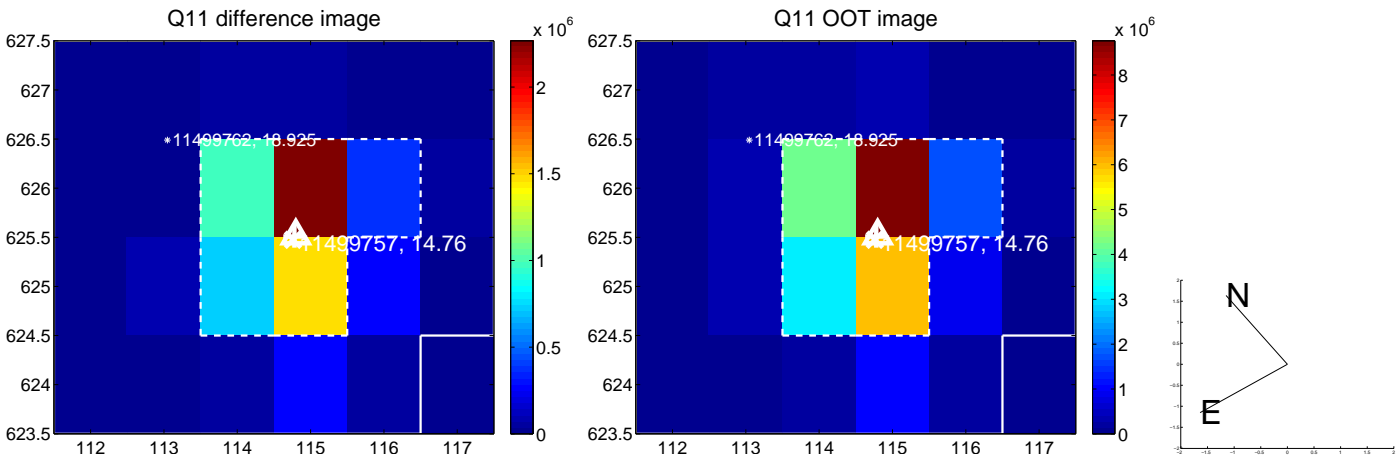
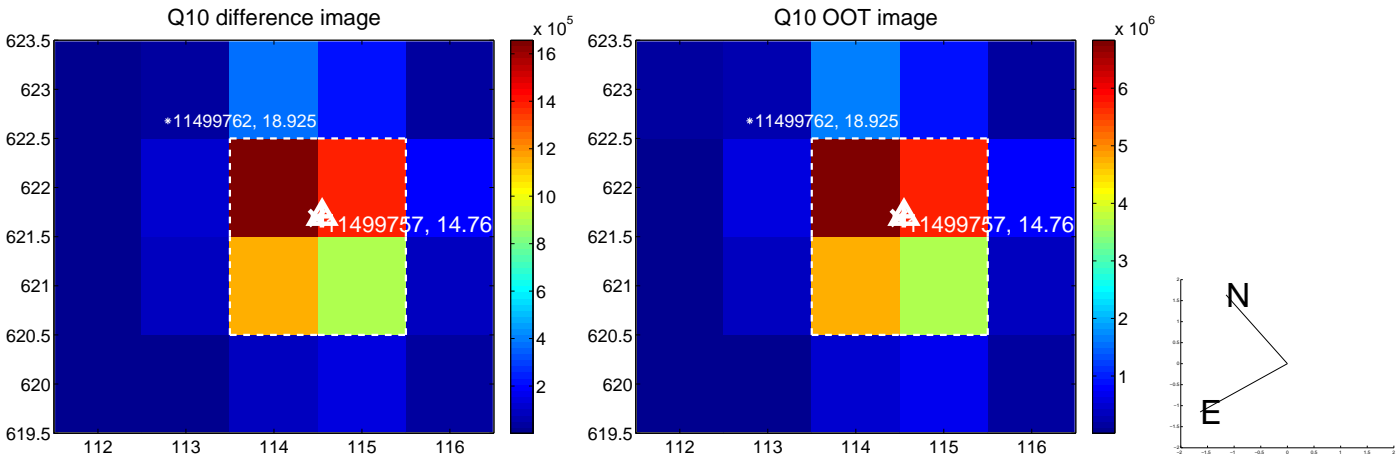
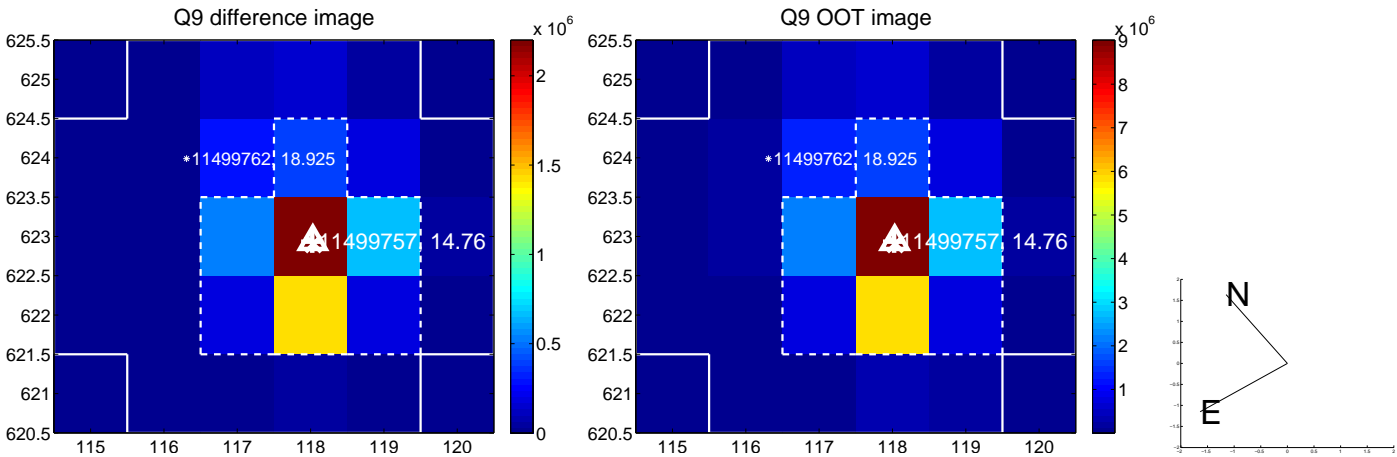
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



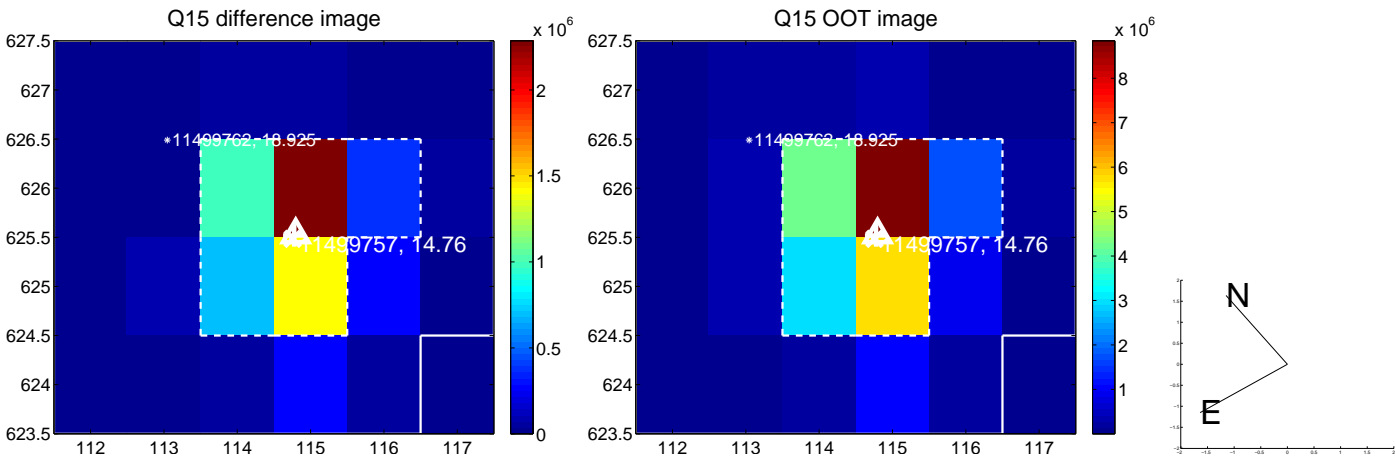
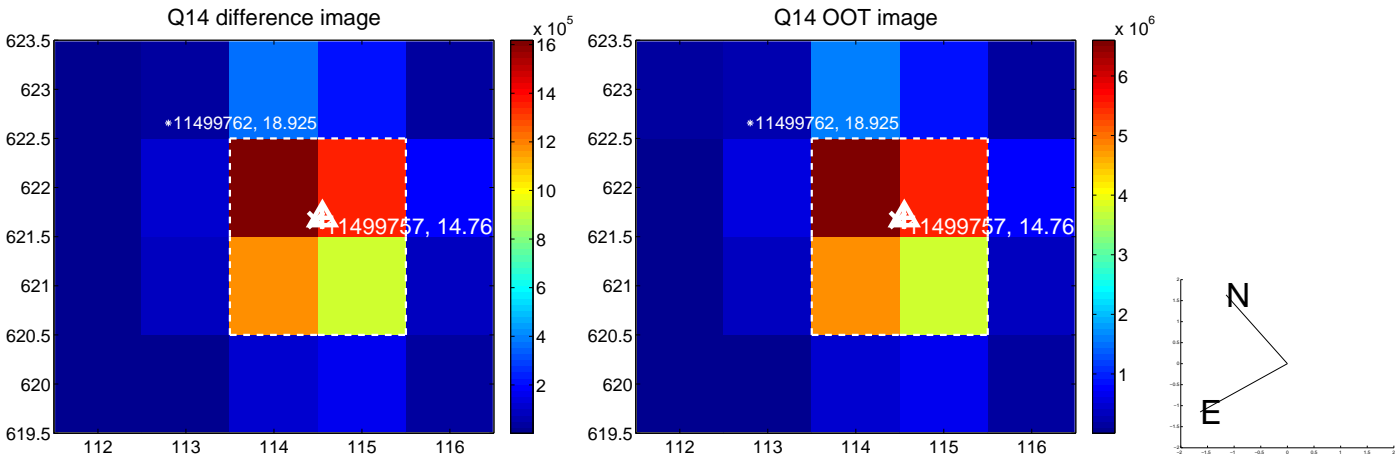
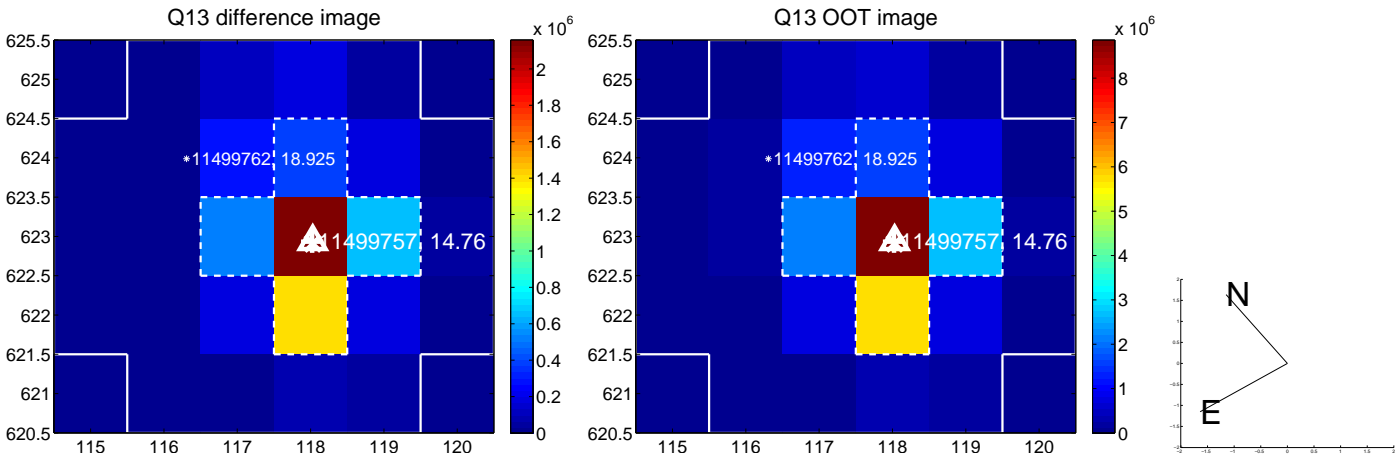
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



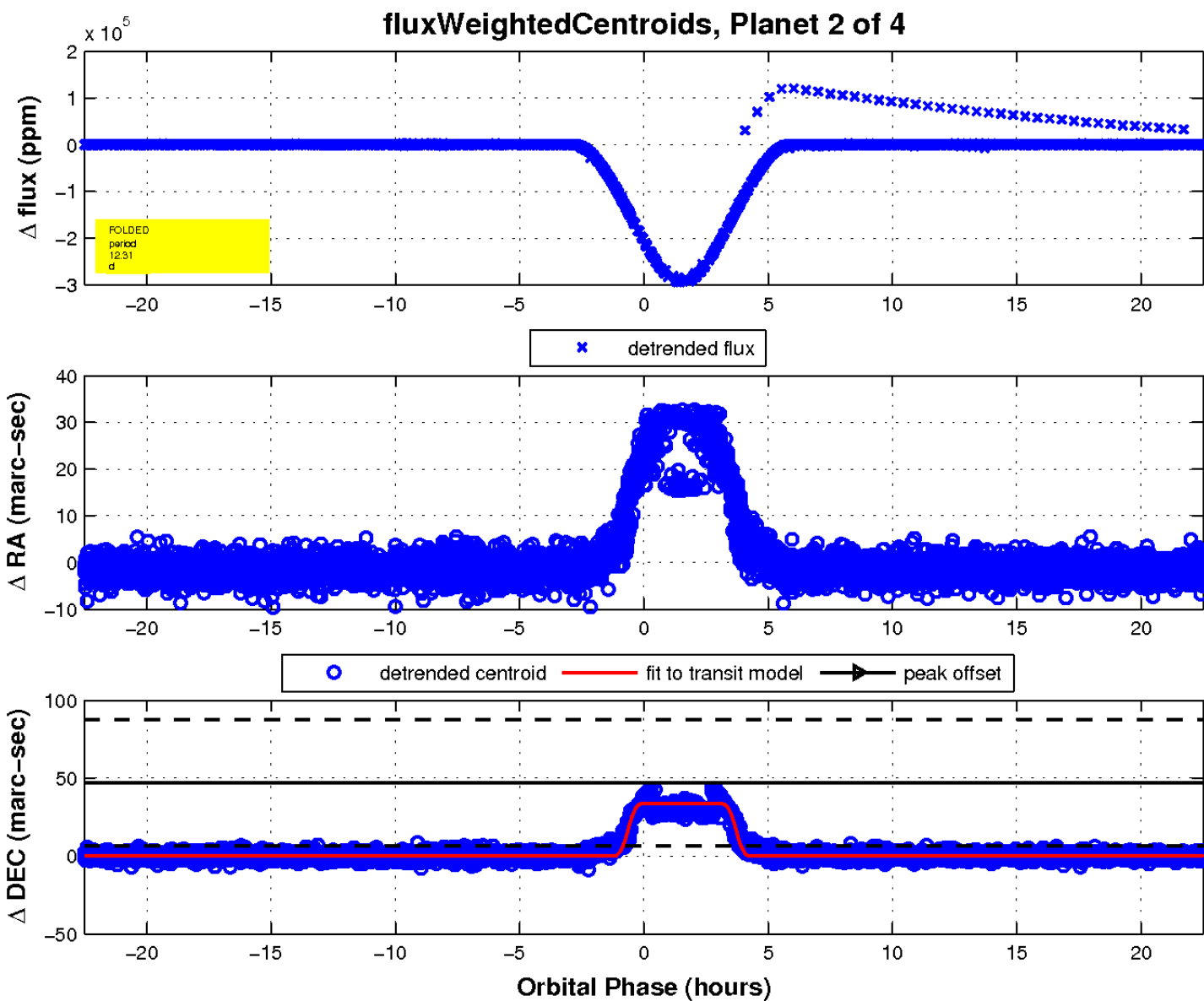
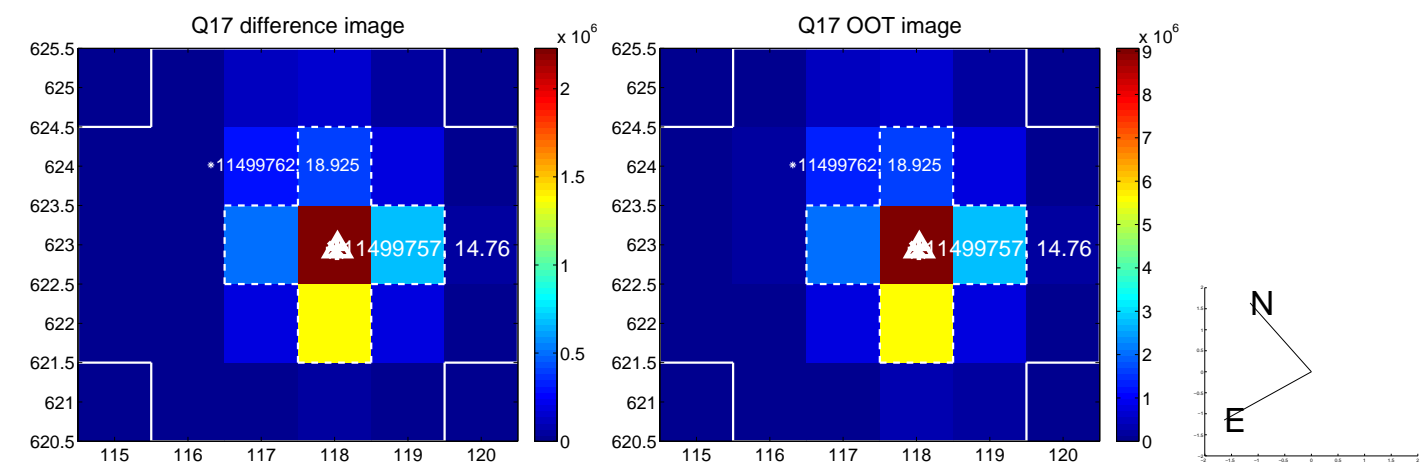
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

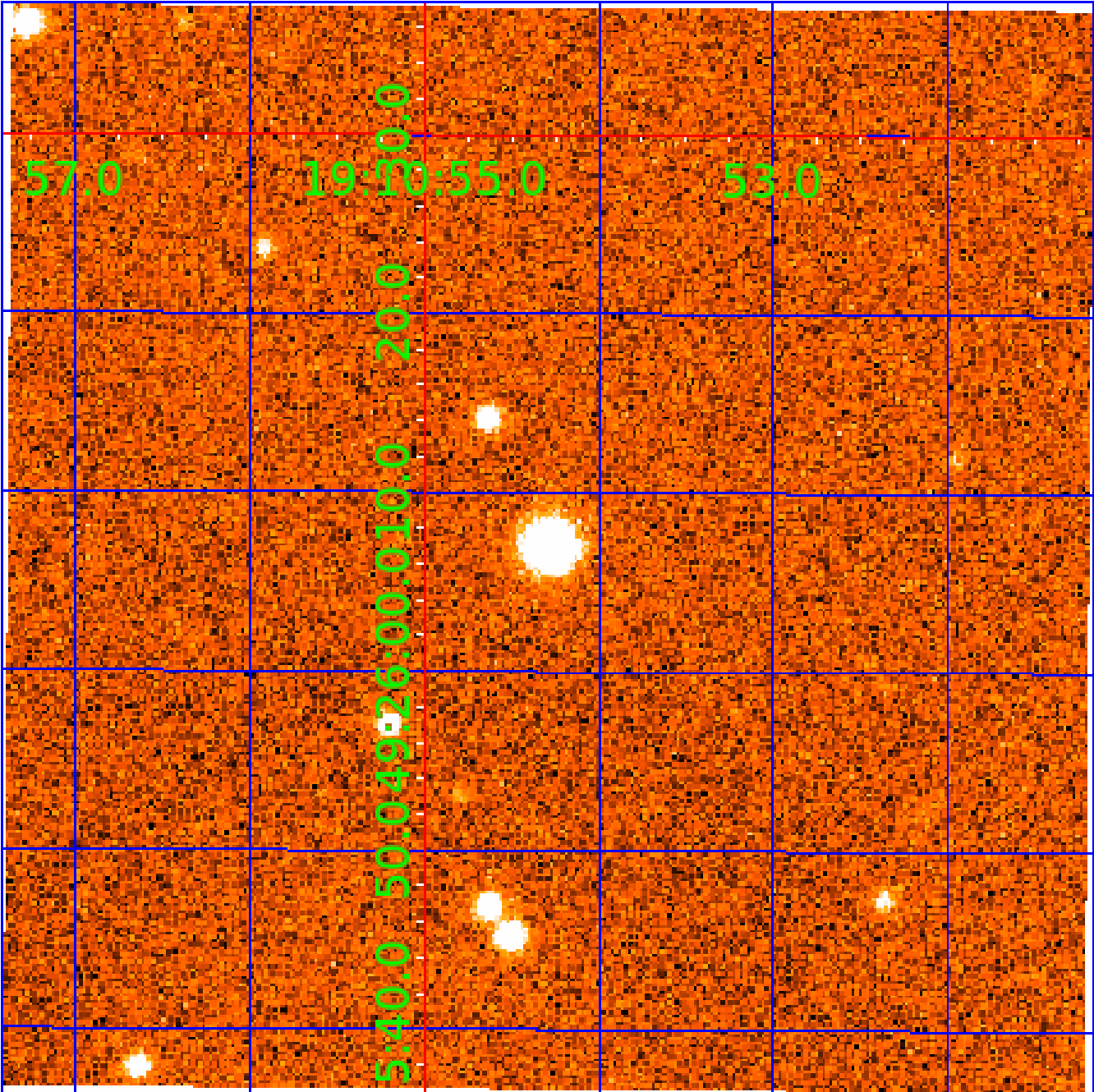


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 011499757

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011499757-01	OBS	7450.01	12.314318	134.255902	397140.2	3.500	10816.1	-1.0	1.07	6247	58.16	131.69
011499757-02	OBS	No	12.314388	141.996816	290898.0	6.000	9313.7	-1.0	1.07	6247	48.35	131.69
011499757-03	OBS	No	4.104894	133.970678	56.5	28.624	981.2	3.6	1.07	6247	0.80	569.75

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011499757-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
011499757-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_NOFITS
011499757-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_FEW_DIFFS

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

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

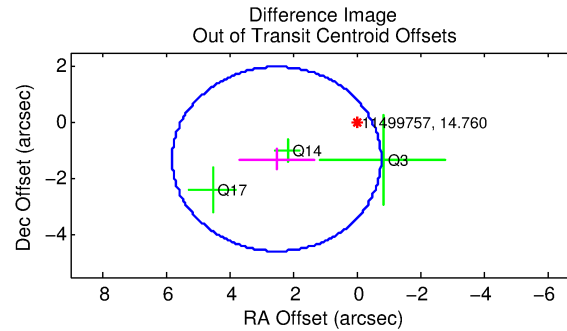
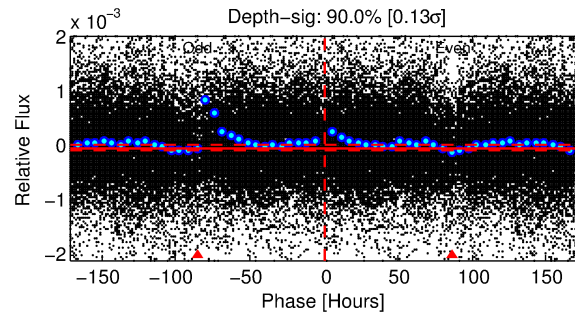
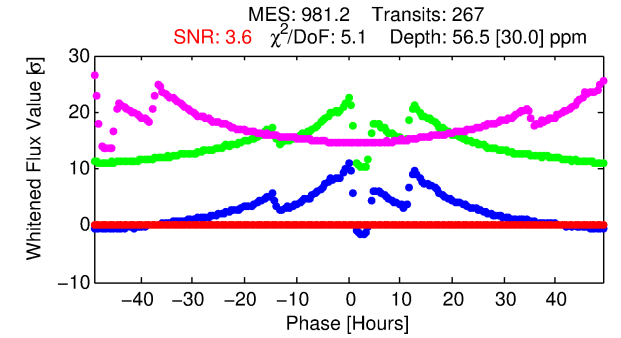
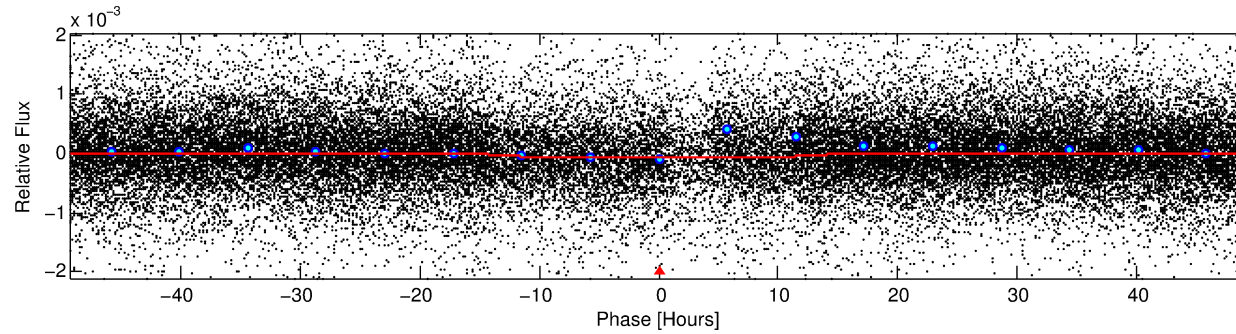
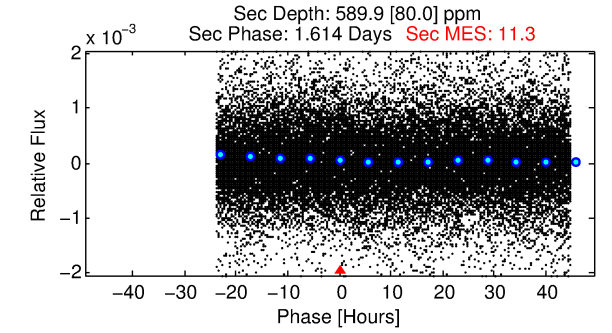
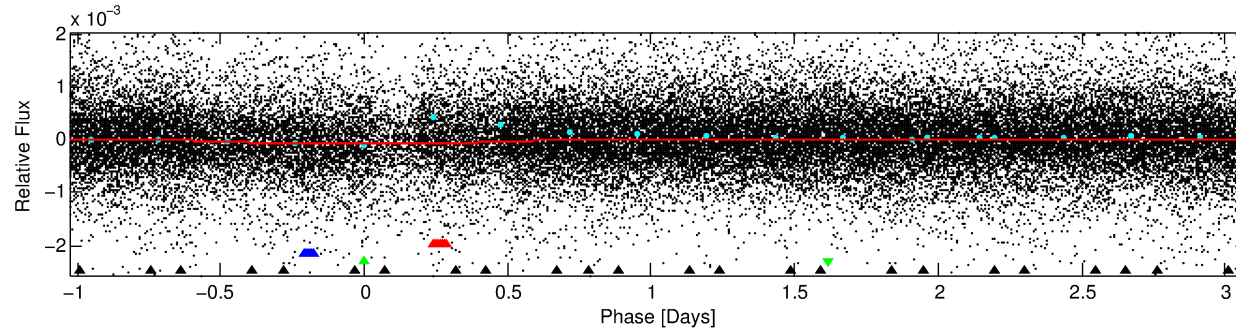
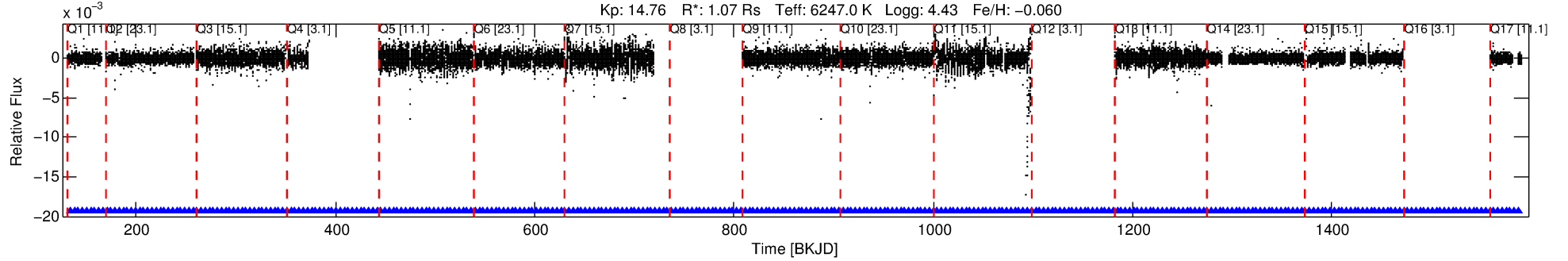
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011499757-03

No Significant Match Found

# DV One-Page Summary

KIC: 11499757 Candidate: 3 of 4 Period: 4.105 d  
KOI: K07450 Corr: No Ephemeris Match



## DV Fit Results:

Period = 4.10489 [0.00029] d  
Epoch = 133.9707 [0.0464] BKJD  
Rp/R\* = 0.0069 [0.0192]  
a/R\* = 1.27 [6.87]  
b = 0.01 [1100.33]  
Seff = 569.75 [218.61]  
Teq = 1246 [120] K  
Rp = 0.80 [2.24] Re  
a = 0.0522 [0.0129] AU  
Ag = 1374.82 [7675.53] [0.18 $\sigma$ ]  
Teffp = 11729 [16342] K [0.64 $\sigma$ ]

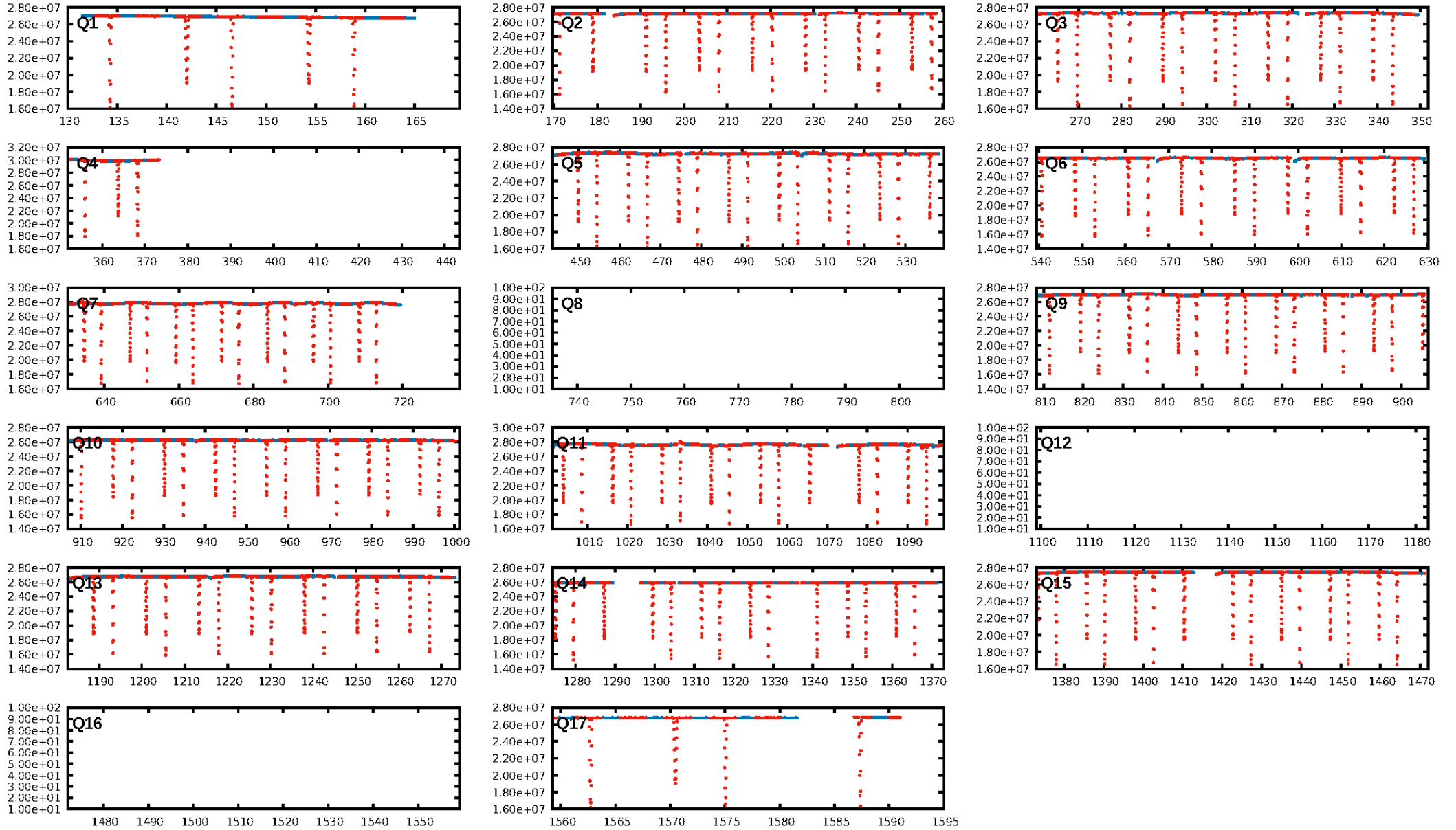
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [6.83 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [247/247]  
GhostDiagnostic-chr: 2.985  
Centroid-sig: N/A  
Centroid-so: 0.394 arcsec [0.49 $\sigma$ ]  
OotOffset-rm: 2.824 arcsec [2.58 $\sigma$ ]  
**KicOffset-rm: 2.646 arcsec [3.25 $\sigma$ ]**  
OotOffset-st: 1/1/0/1 [3]  
KicOffset-st: 1/1/0/1 [3]  
DiffImageQuality-fgm: 0.33 [1/3]  
DiffImageOverlap-fno: 1.00 [13/13]

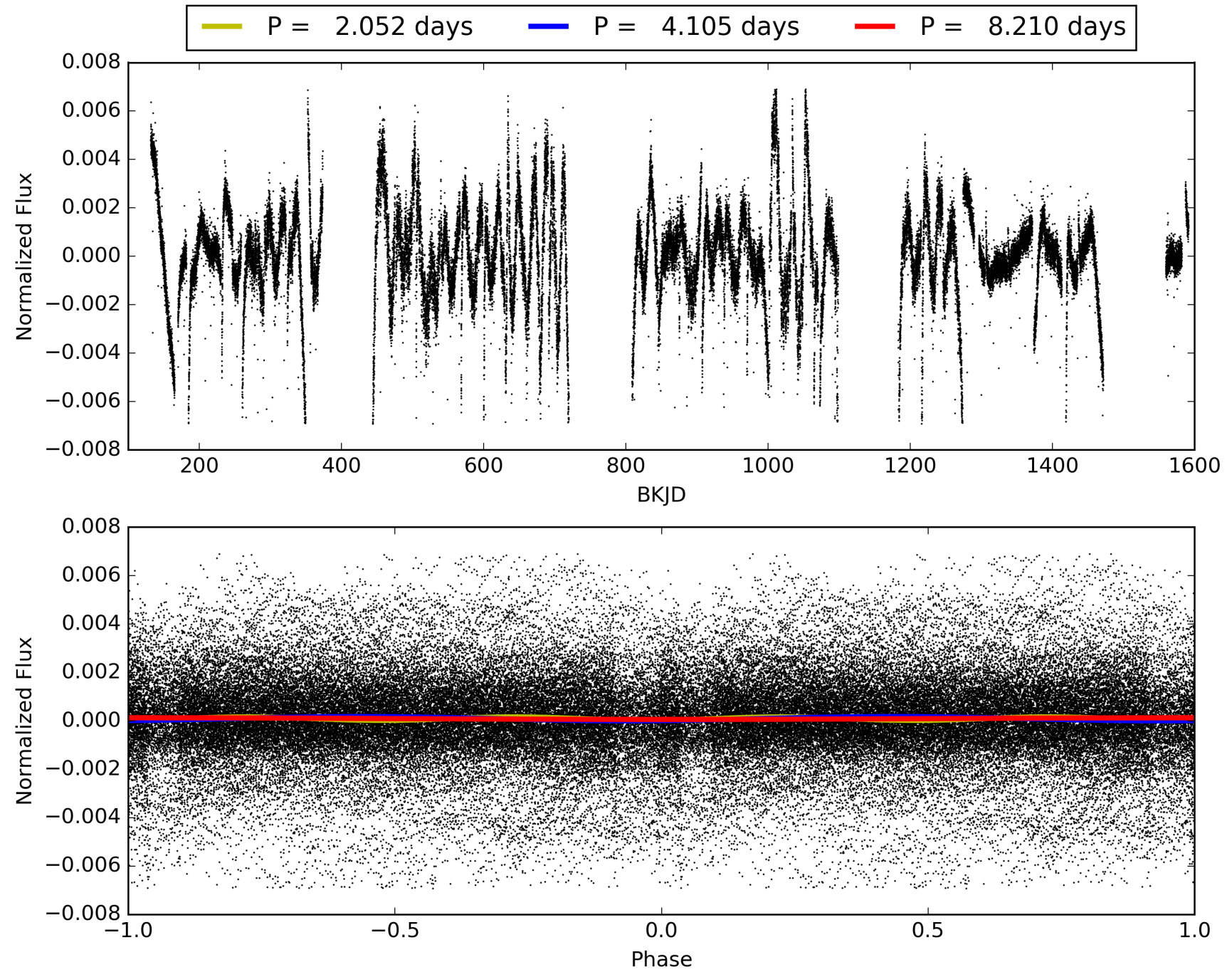
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:26:45 Z

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

# TCE 011499757-03, PDC Light Curves

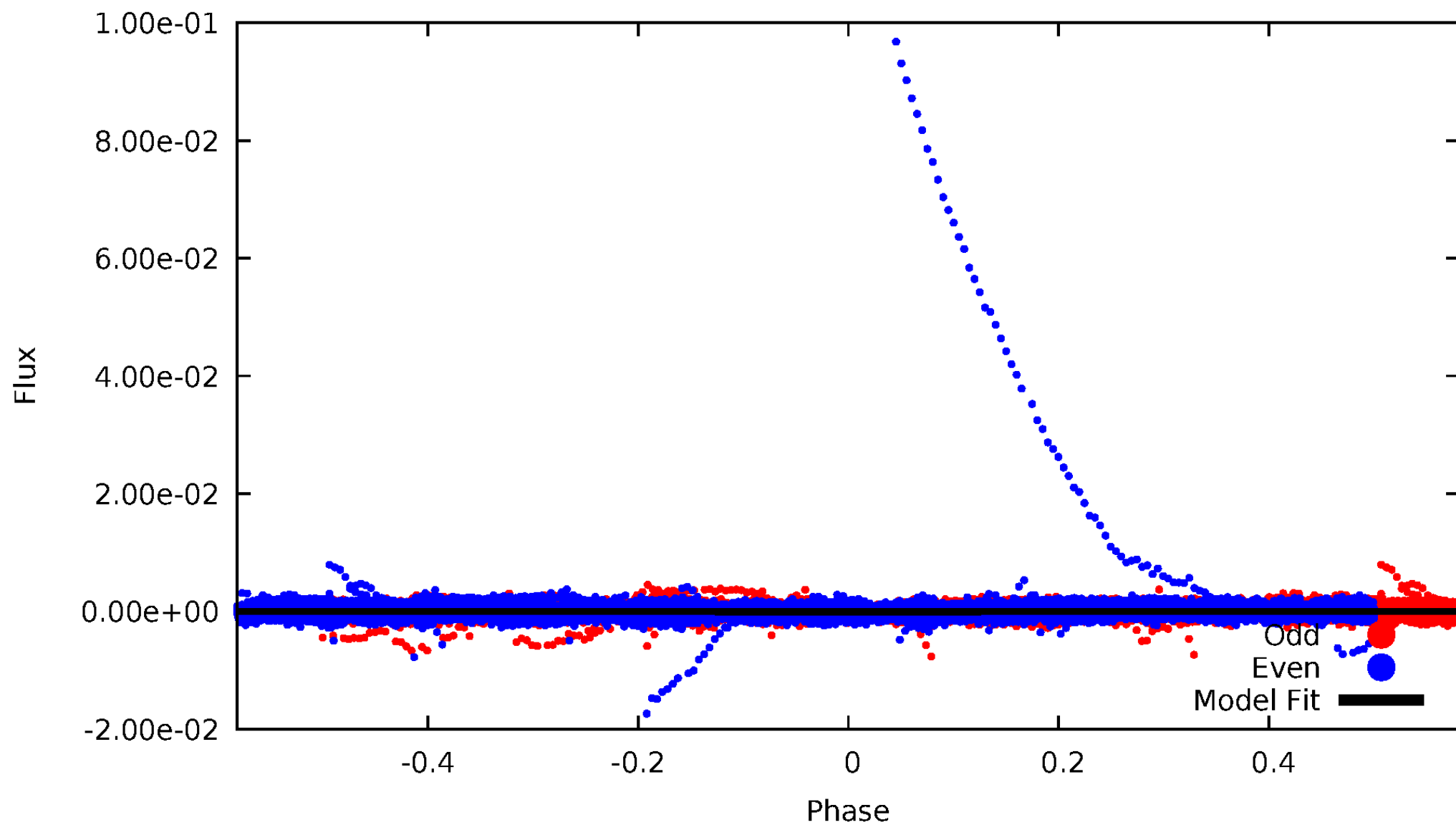


# TCE 011499757-03



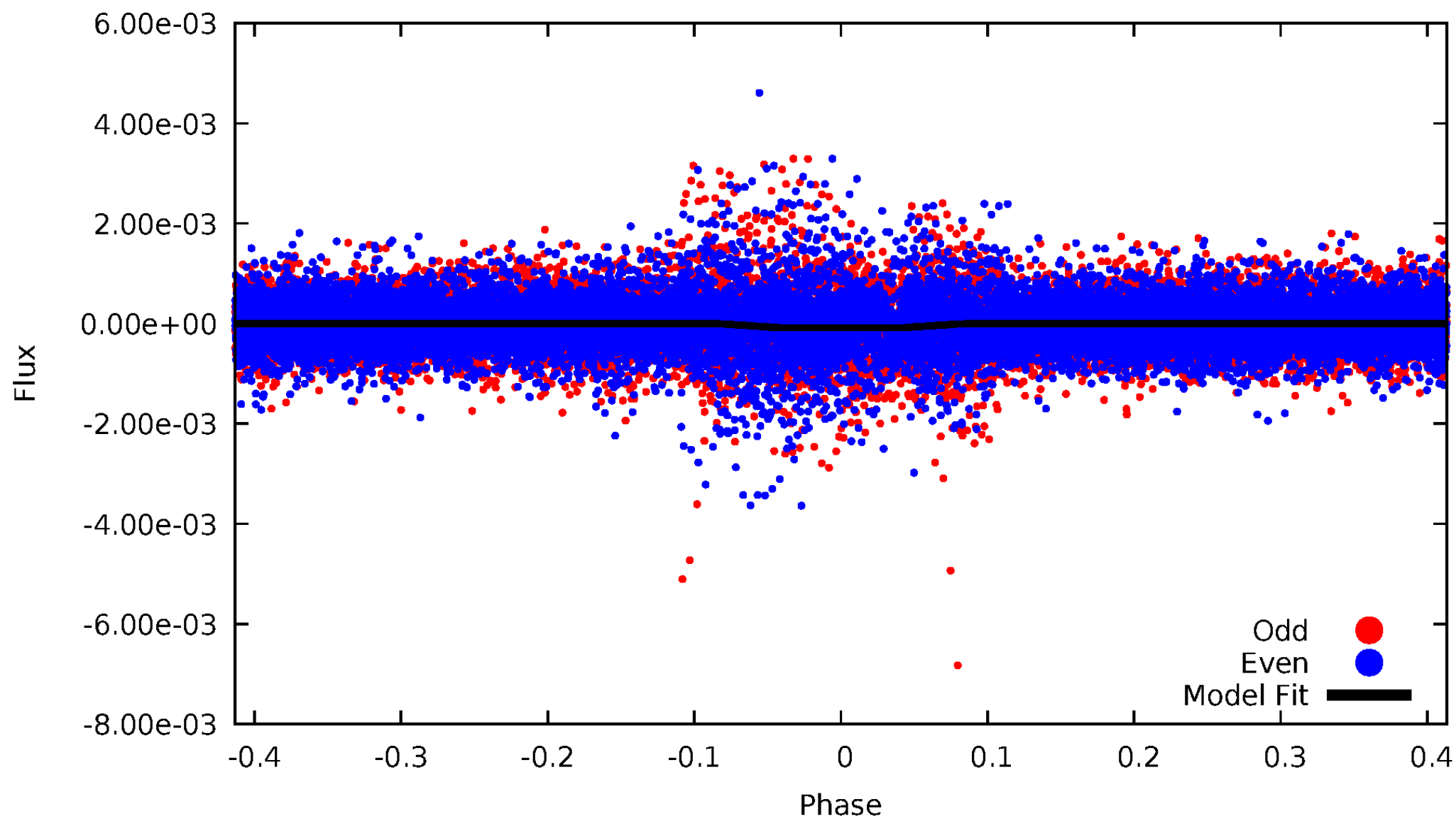
# DV Odd/Even

TCE 011499757-03



# ALT Odd/Even

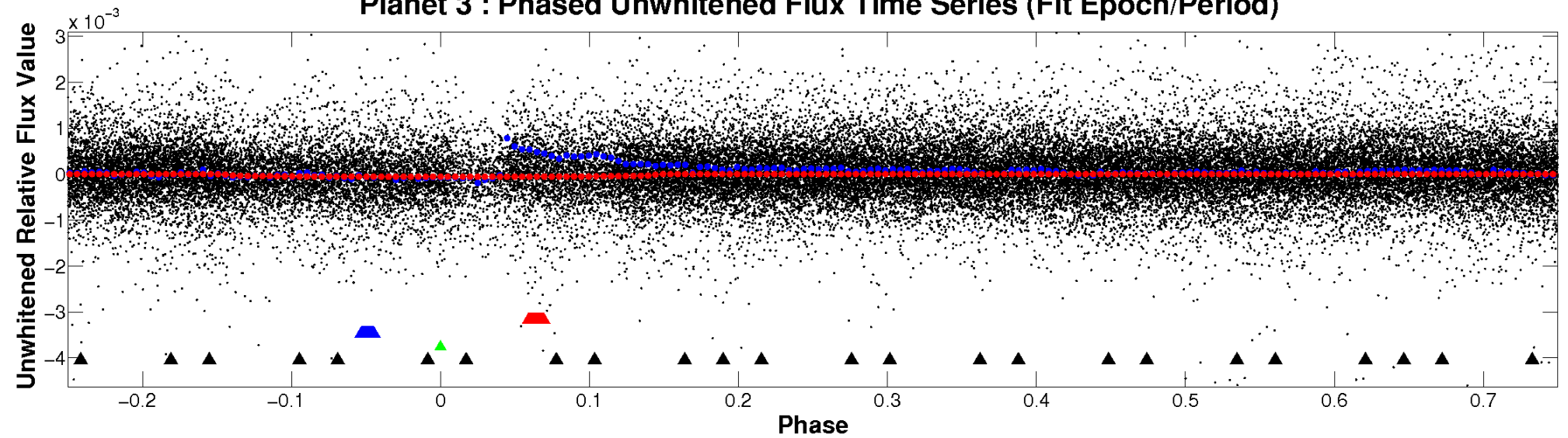
TCE 011499757-03



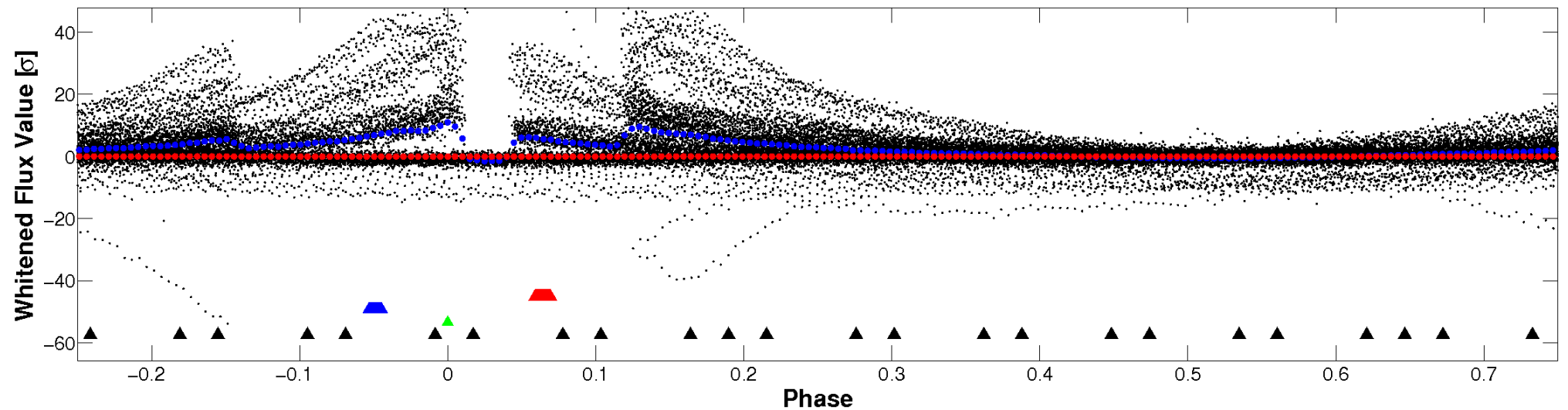


# Non-Whitened Vs. Whitened Light Curve

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

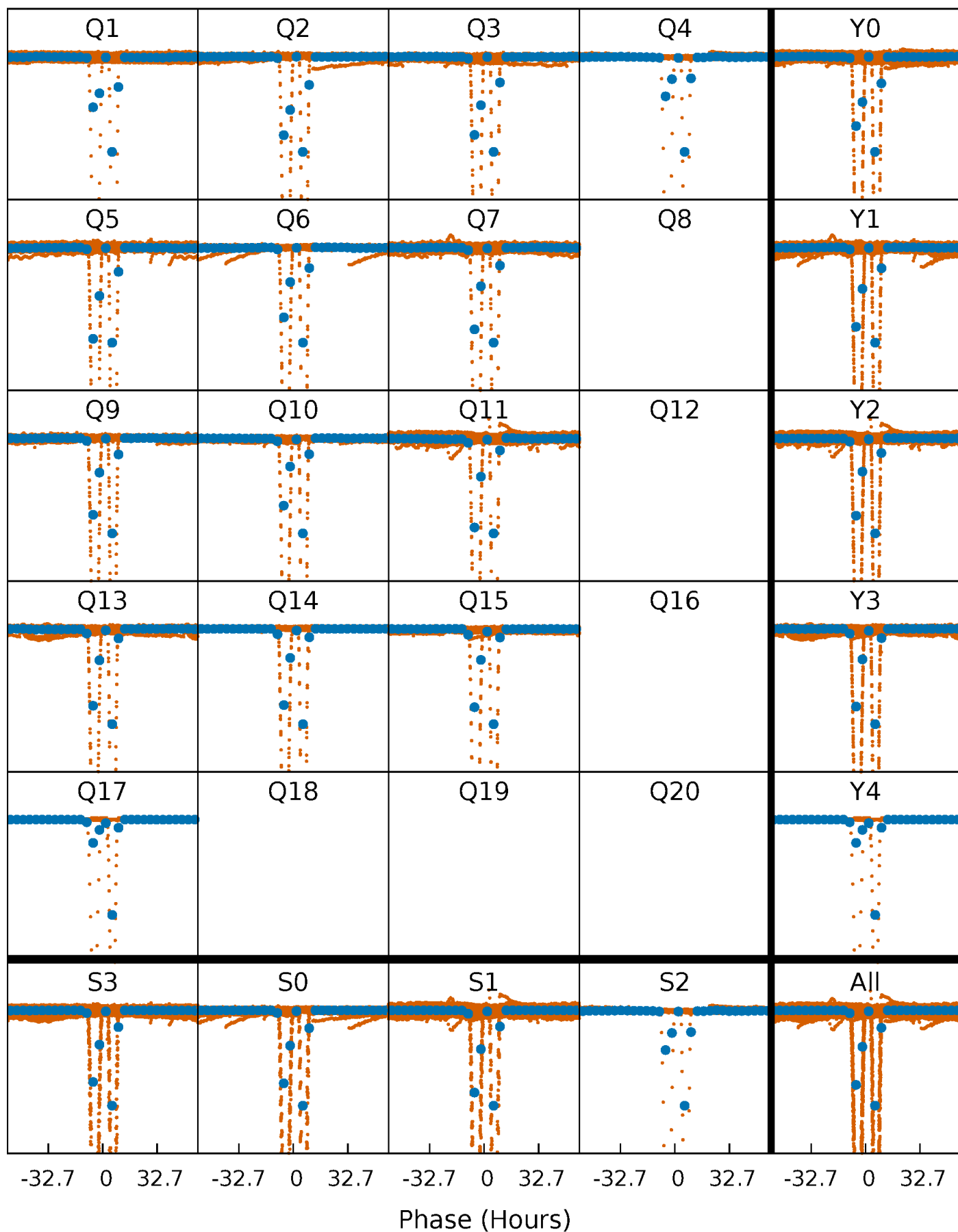


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

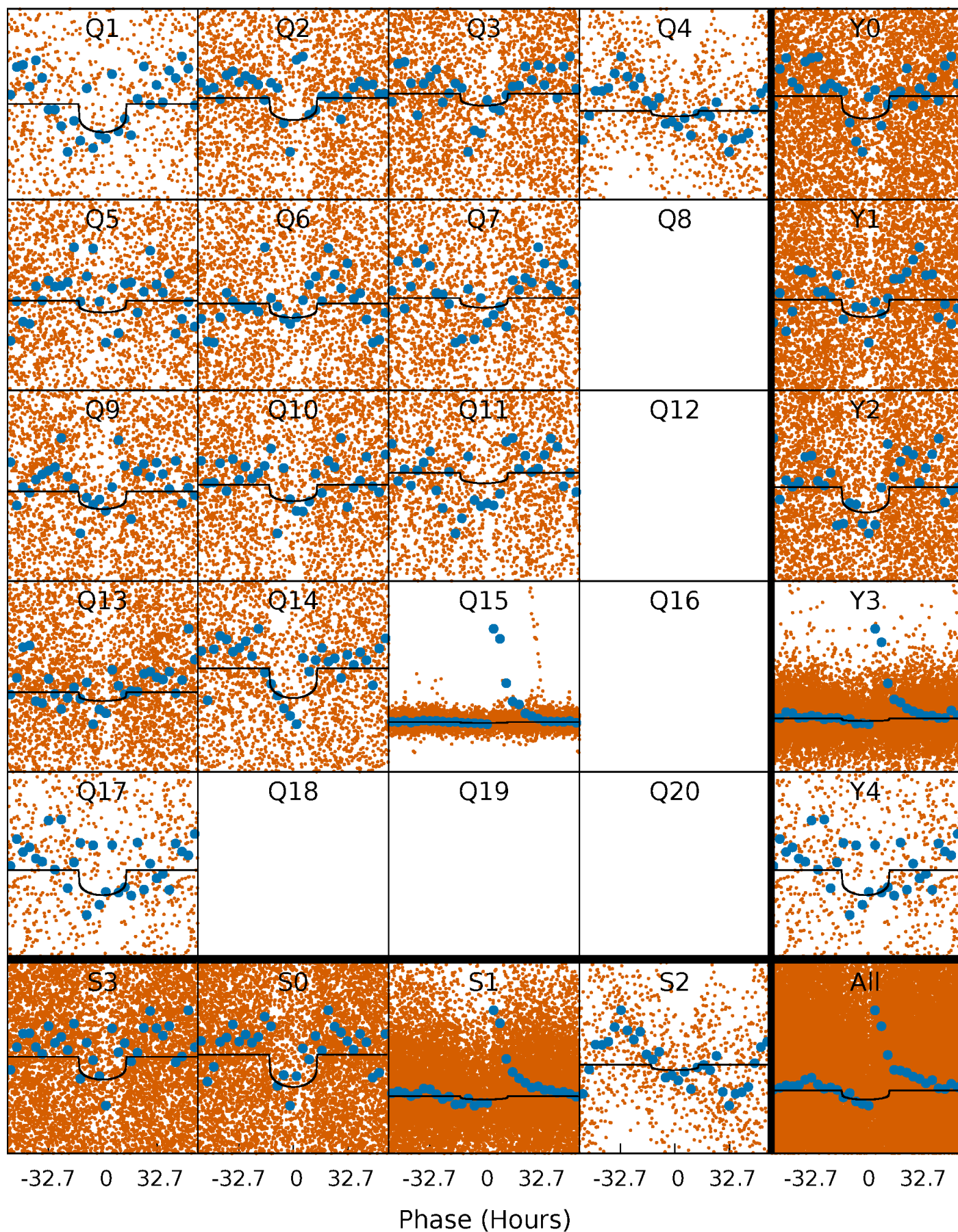
TCE 011499757-03 P= 4.104894 Days  $T_0=133.970678$  (BKJD)





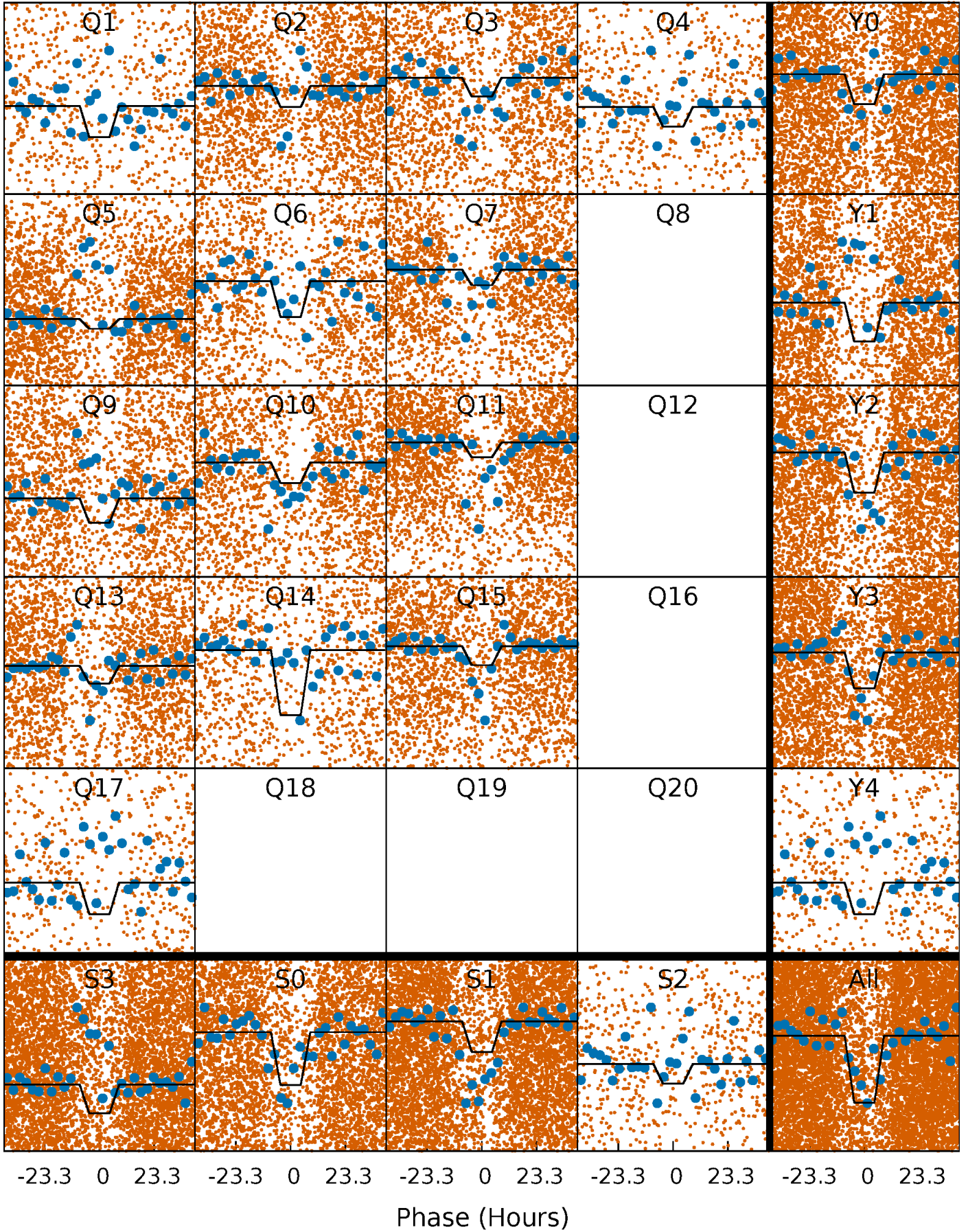
# DV Quarter-Phased Transit Curves

TCE 011499757-03 P= 4.104894 Days  $T_0=133.970678$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 011499757-03 P= 4.104903 Days  $T_0=133.965882$  (BKJD)

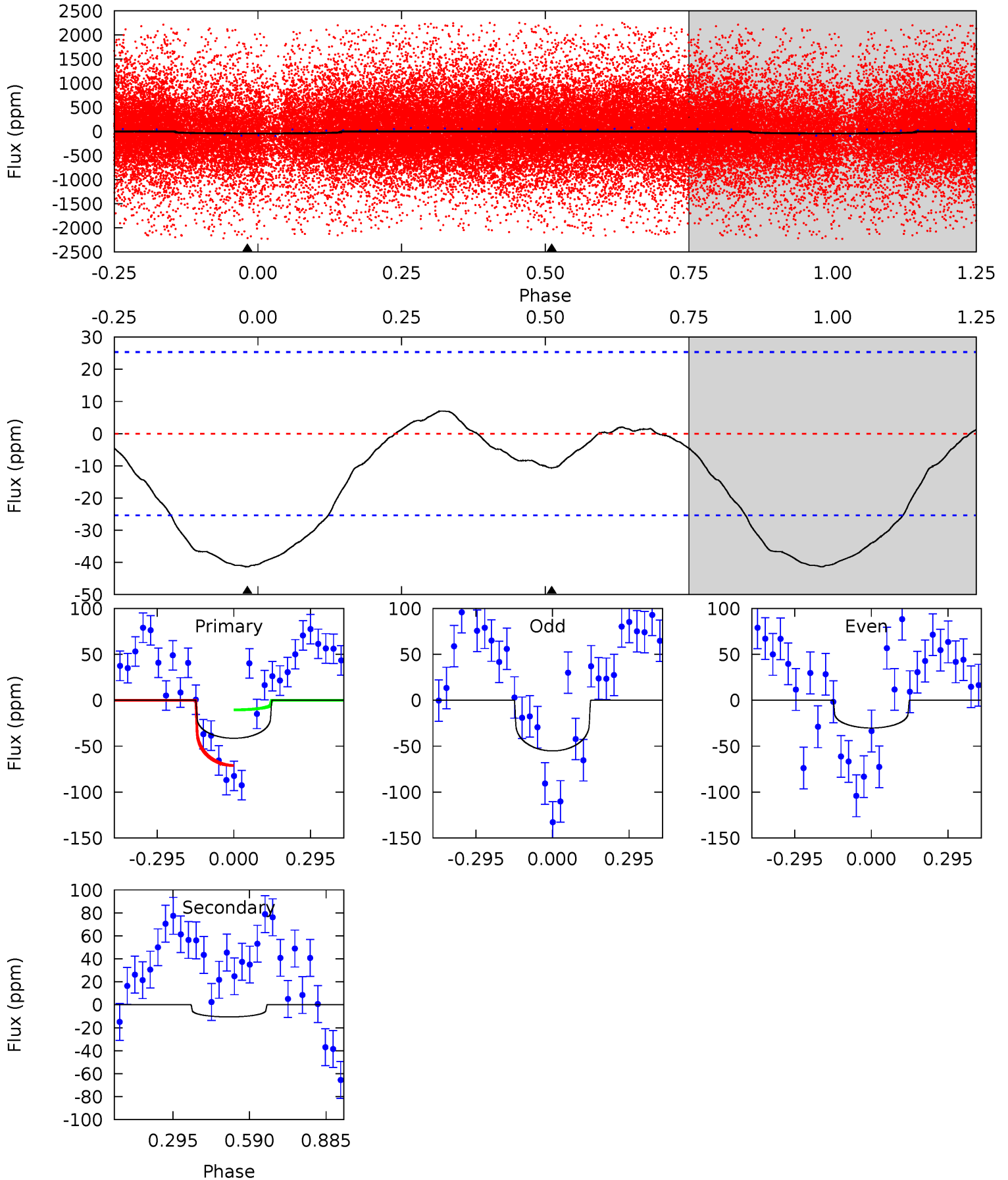




# DV Model-Shift Uniqueness Test

011499757-03, P = 4.104894 Days, E = 129.865784 Days

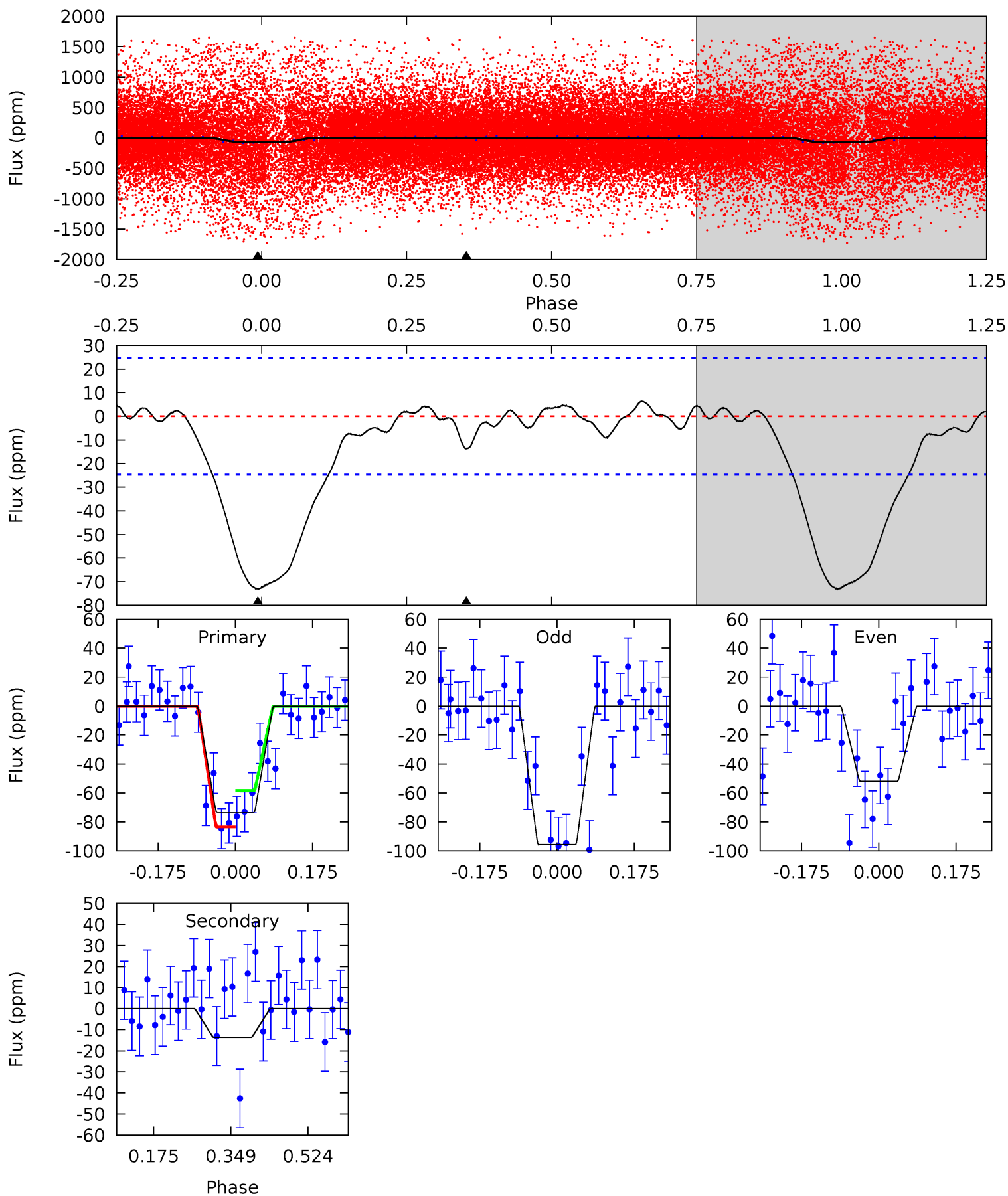
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.07	1.81	0	0	4.33	1.05	0.52	7.07	7.07	1.81	1.81	2.17	-7.64	0.15	5.15



# Alt Model-Shift Uniqueness Test

011499757-03, P = 4.104903 Days, E = 129.860979 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
13.2	2.46	0	0	4.45	1.36	0.70	13.2	13.2	2.46	2.46	3.94	1.10	0.08	2.28



### Stellar Parameters For KIC 011499757

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6247^{+174}_{-217}$	$4.433^{+0.065}_{-0.195}$	$-0.060^{+0.250}_{-0.350}$	$1.066^{+0.313}_{-0.112}$	$1.122^{+0.145}_{-0.145}$	$1.304^{+0.362}_{-0.683}$
	+3%/-3%	+1%/-4%	+417%/-583%	+29%/-11%	+13%/-13%	+28%/-52%
Source	PHO1	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 011499757-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-11 \pm 6$	$1.92^{+1.75}_{-1.33}$	$1767^{+115}_{-88}$	$3264^{+1710}_{-753}$	$3.907^{+35.381}_{-3.122}$
Alt.	$-14 \pm 6$	$2.01^{+2.04}_{-1.38}$	$1762^{+135}_{-83}$	$3400^{+1807}_{-728}$	$4.721^{+44.313}_{-3.610}$

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

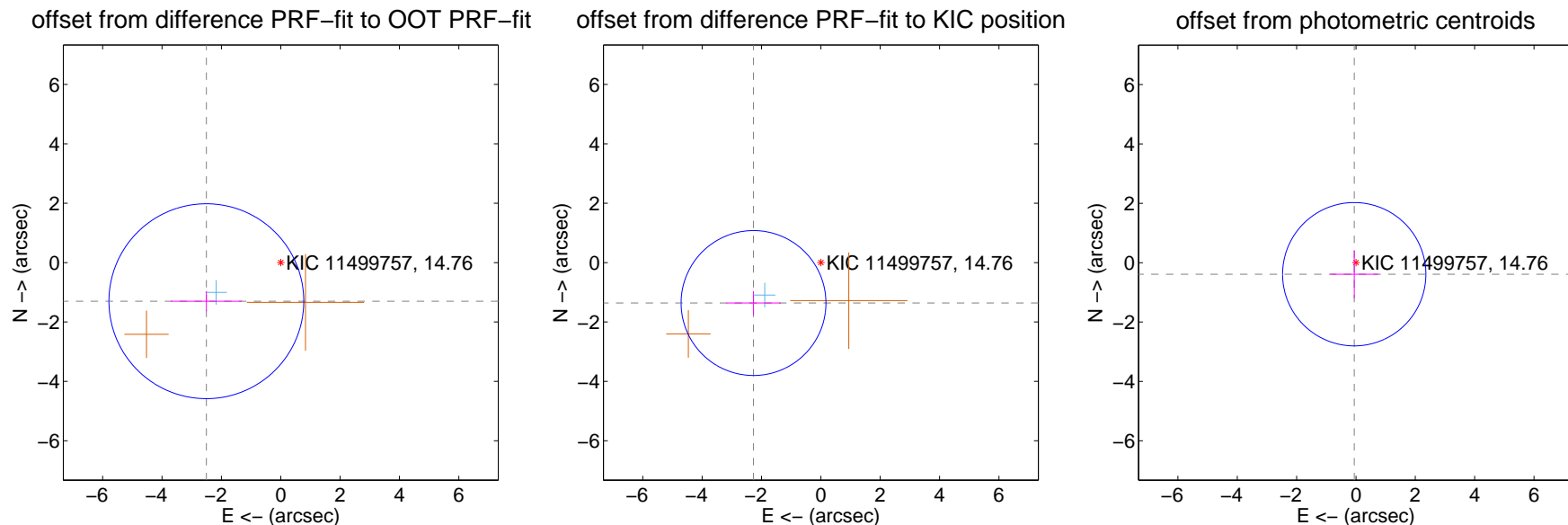
## DV Centroid Data

Supplemental centroid analysis for 011499757-03. Kepler magnitude: 14.76. Transit SNR 3.61

There are 1 quarters with good PRF difference image offsets

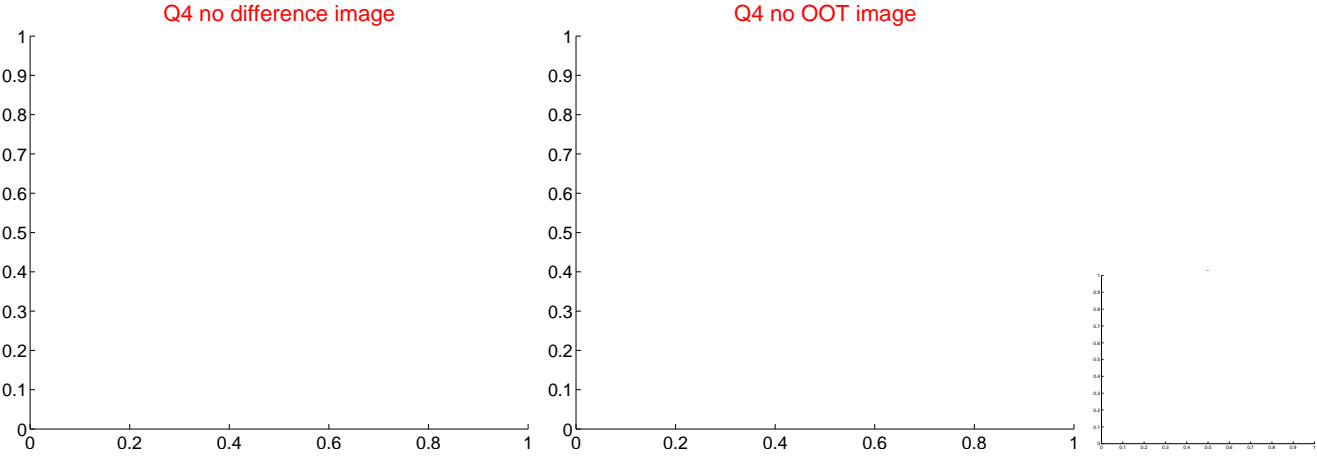
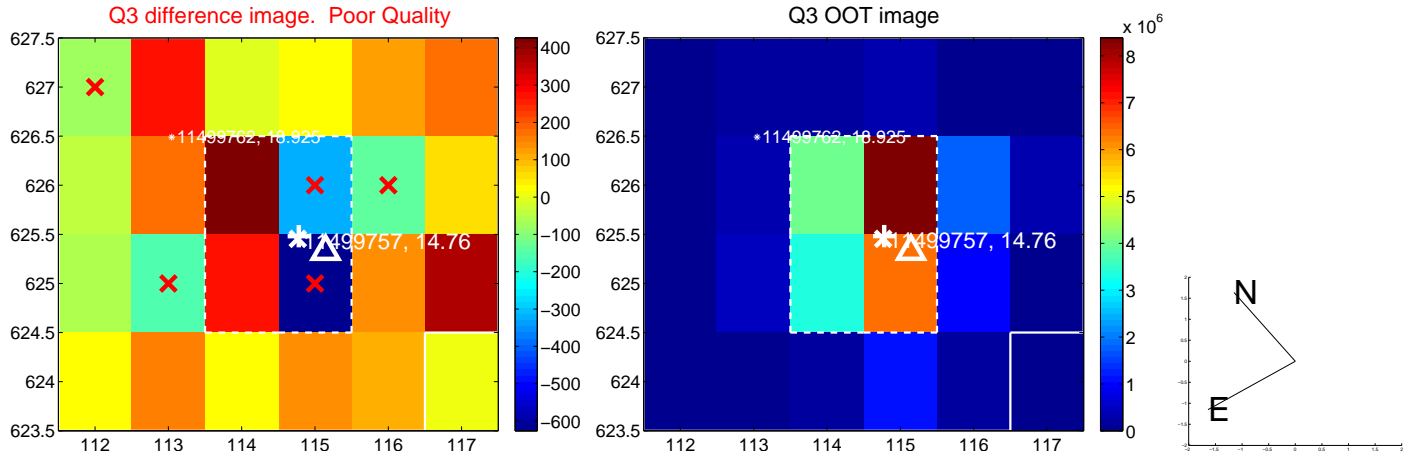
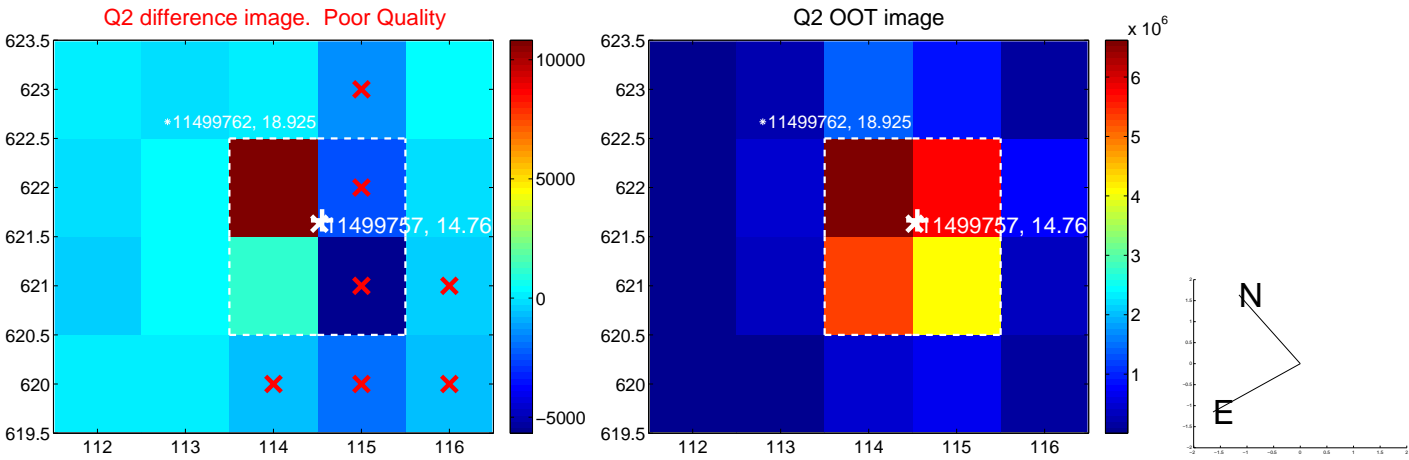
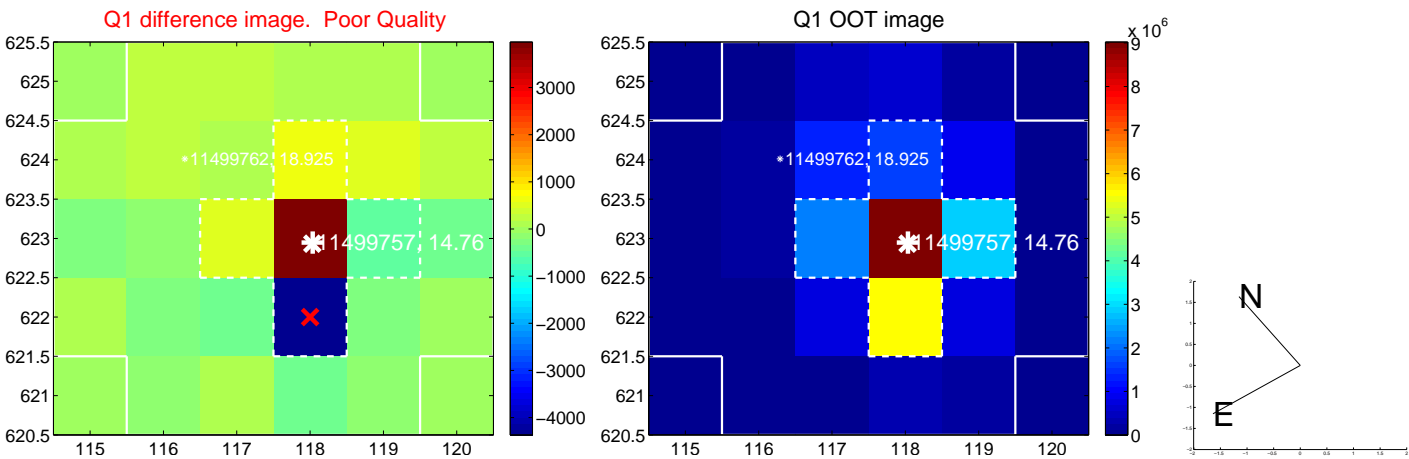
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.824 \pm 1.094$	2.58	$2.506 \pm 1.199$	$-1.300 \pm 0.338$
PRF-fit source offset from KIC position	<b><math>2.646 \pm 0.813</math></b>	<b>3.25</b>	$2.269 \pm 0.917$	$-1.362 \pm 0.404$
photometric centroid source offset	$0.39 \pm 0.80$	0.49	$0.06 \pm 0.81$	$-0.39 \pm 0.80$

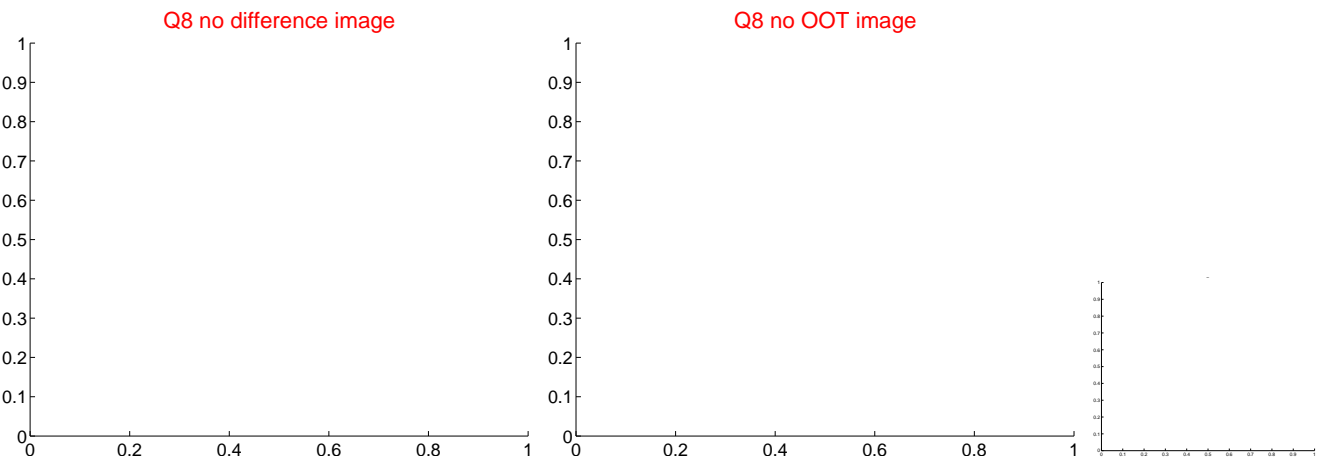
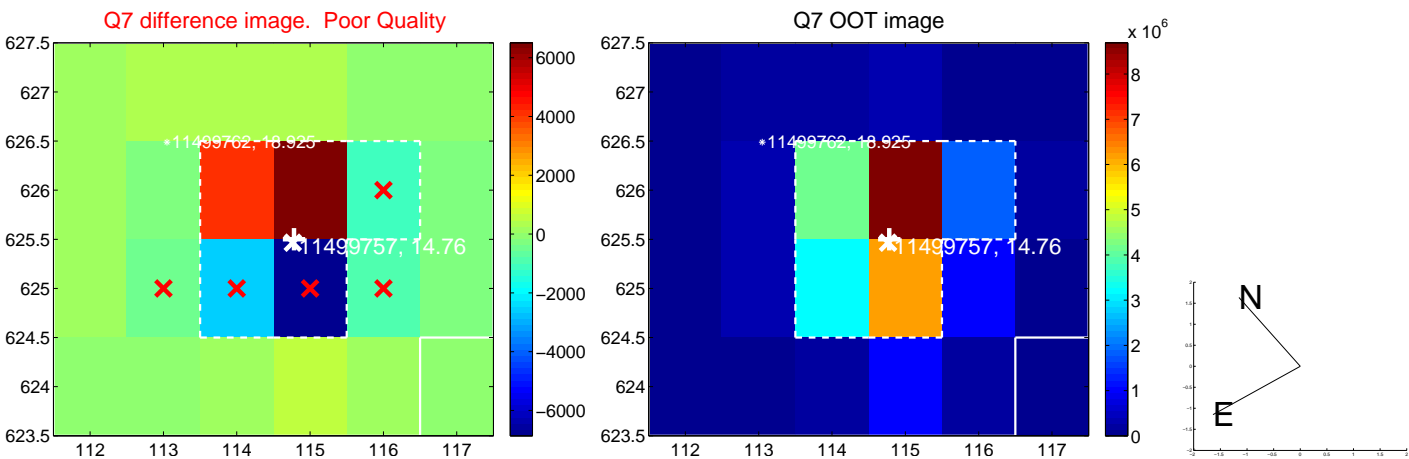
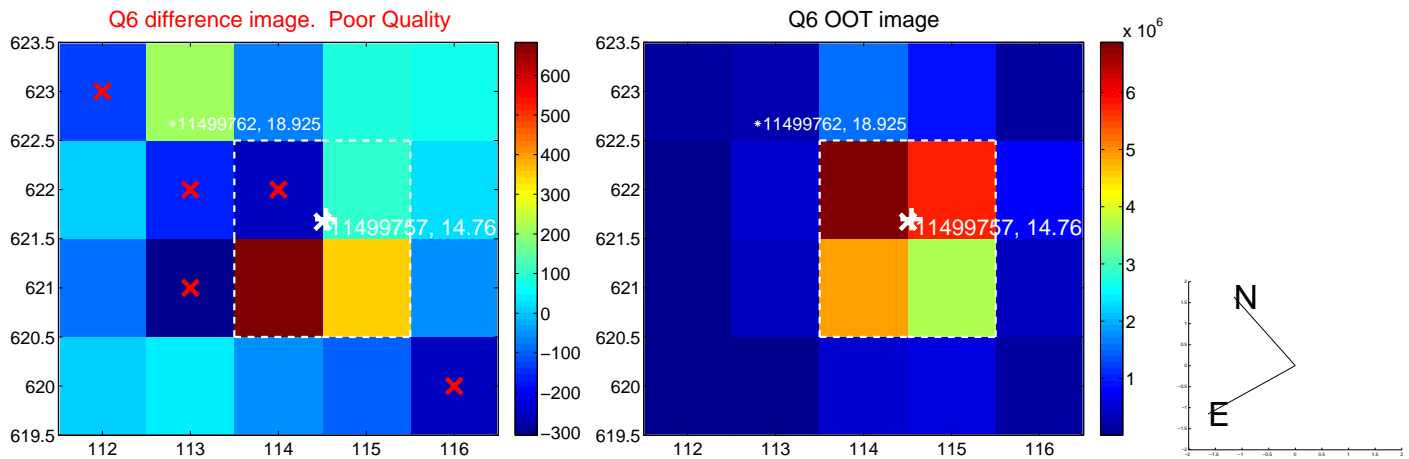
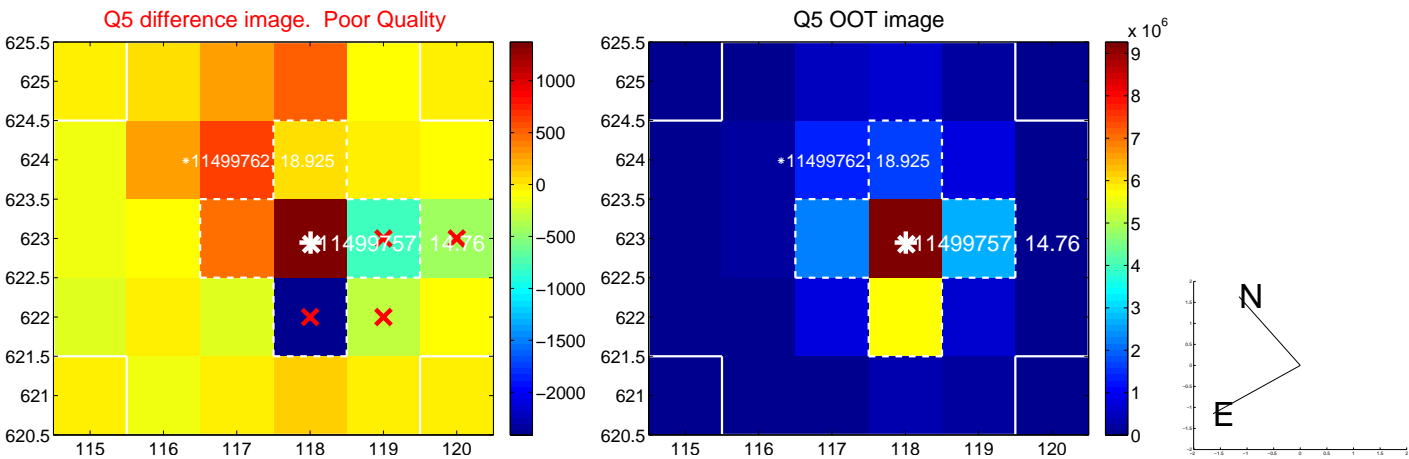


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

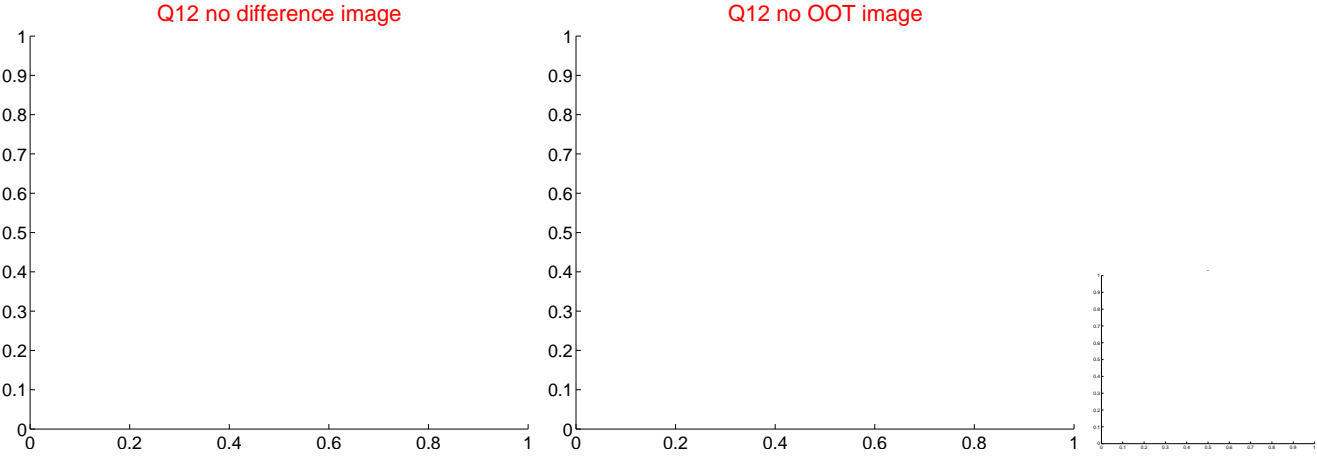
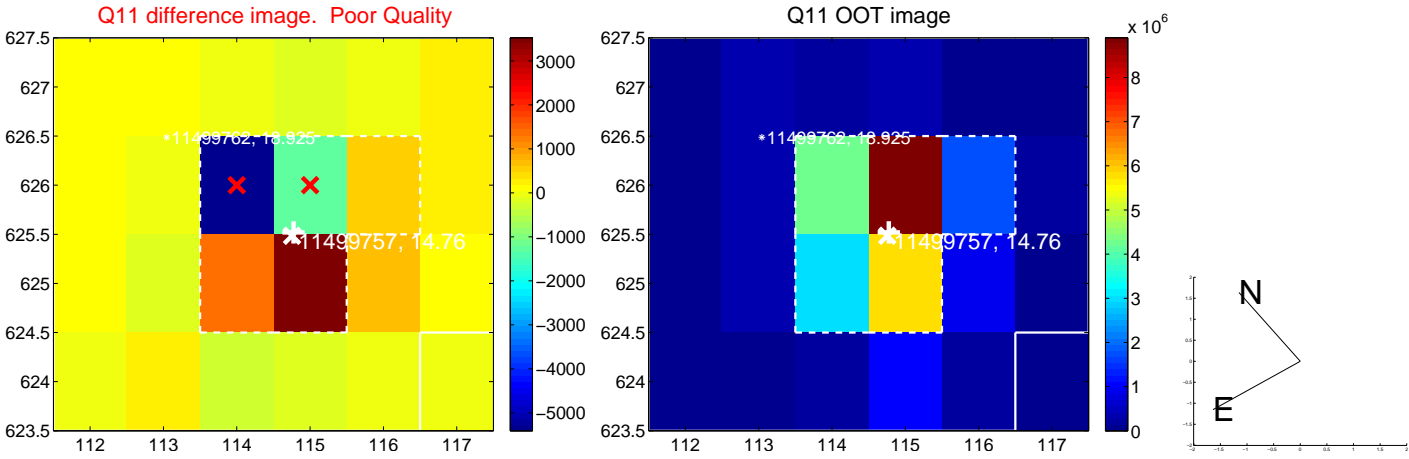
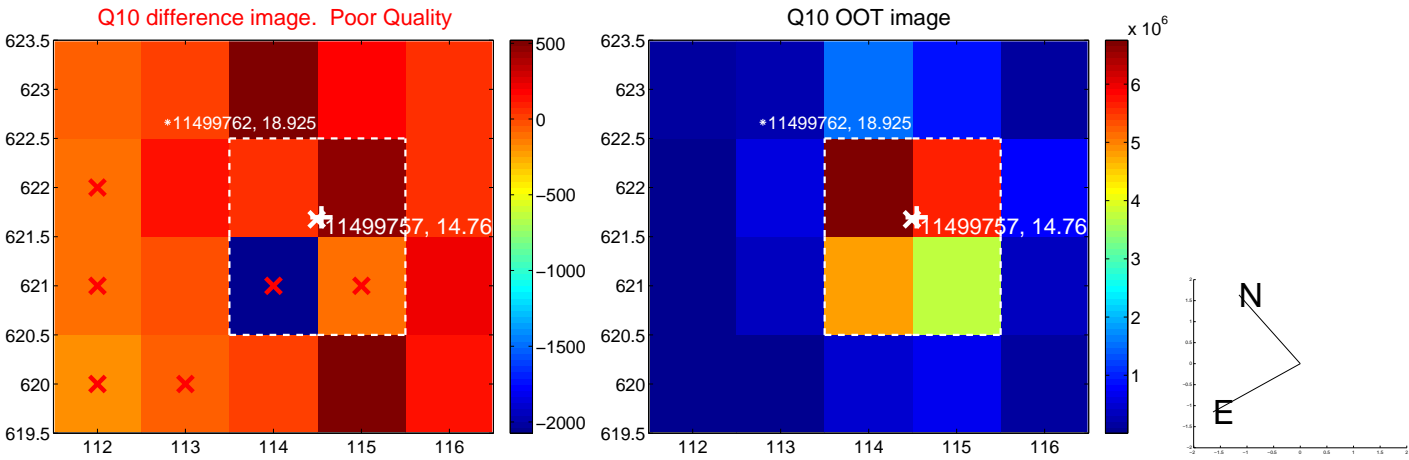
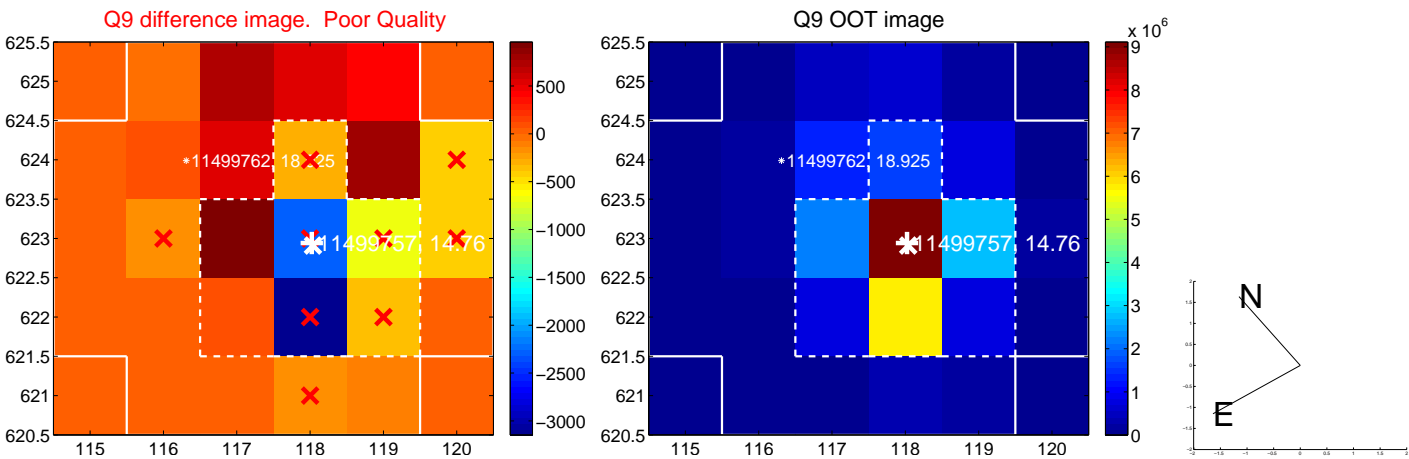


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

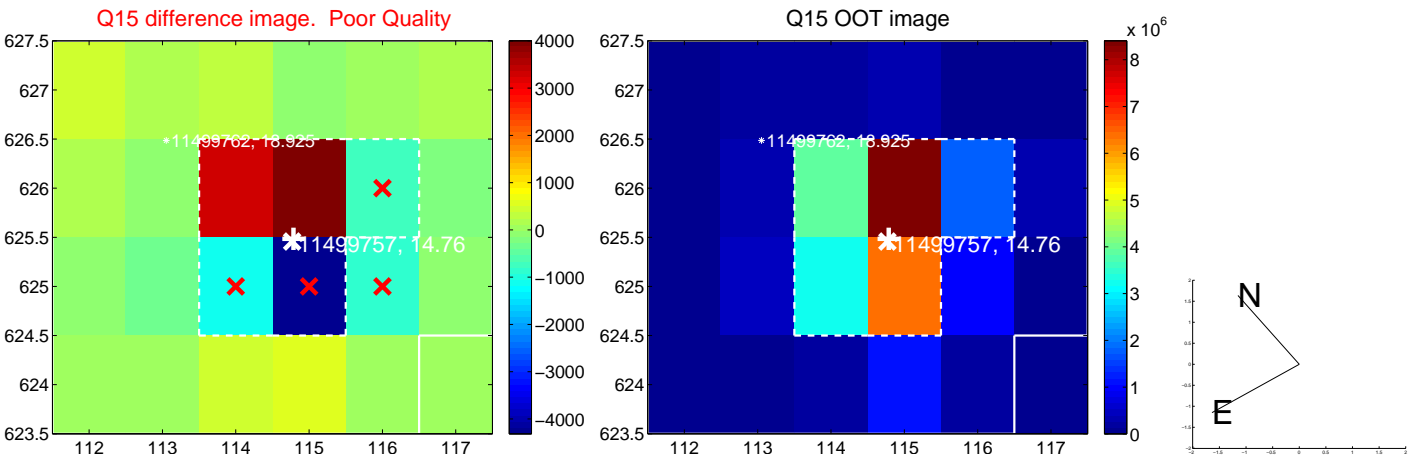
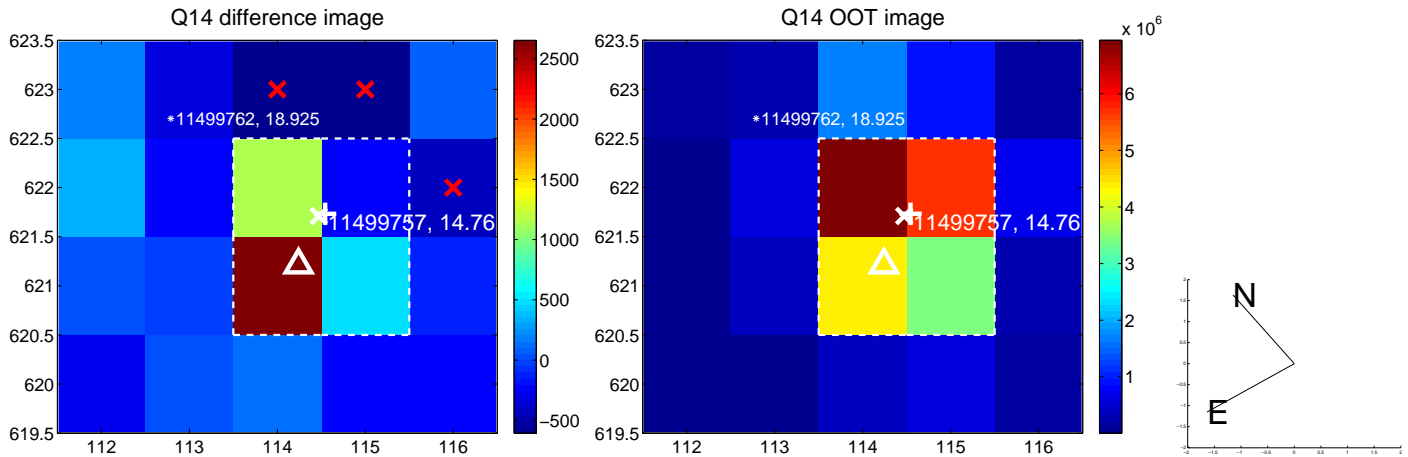
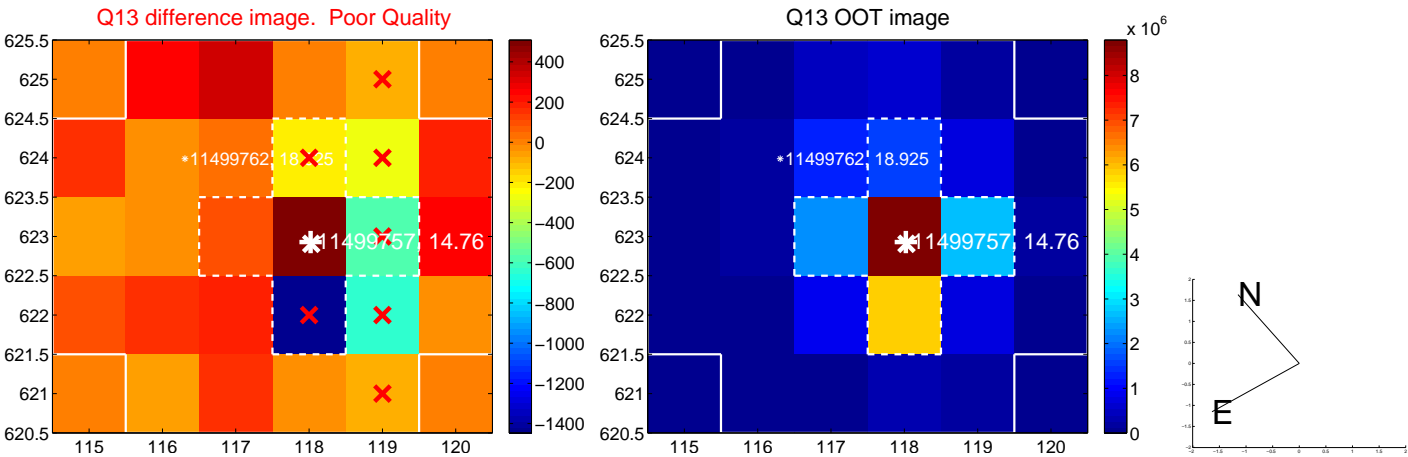




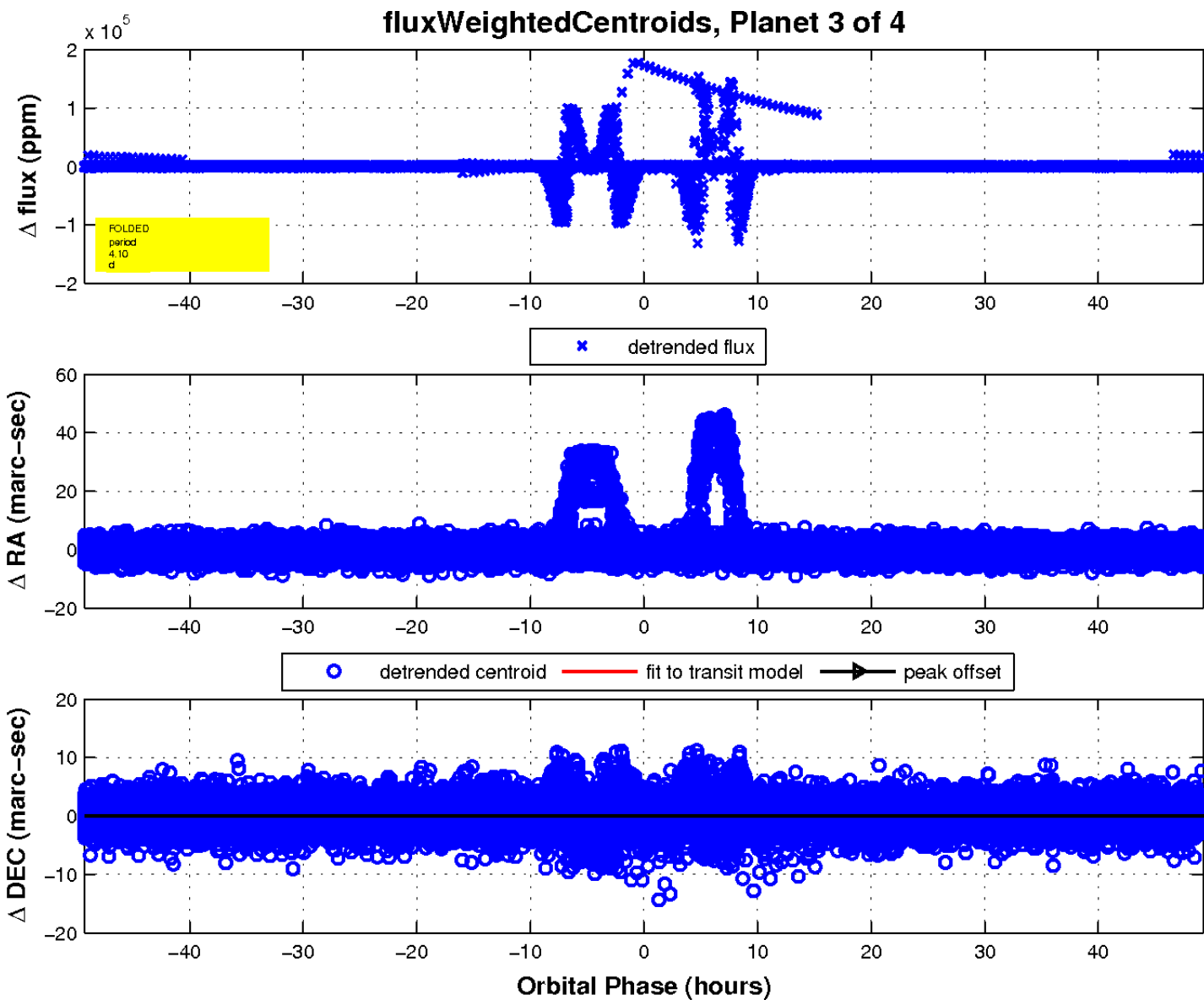
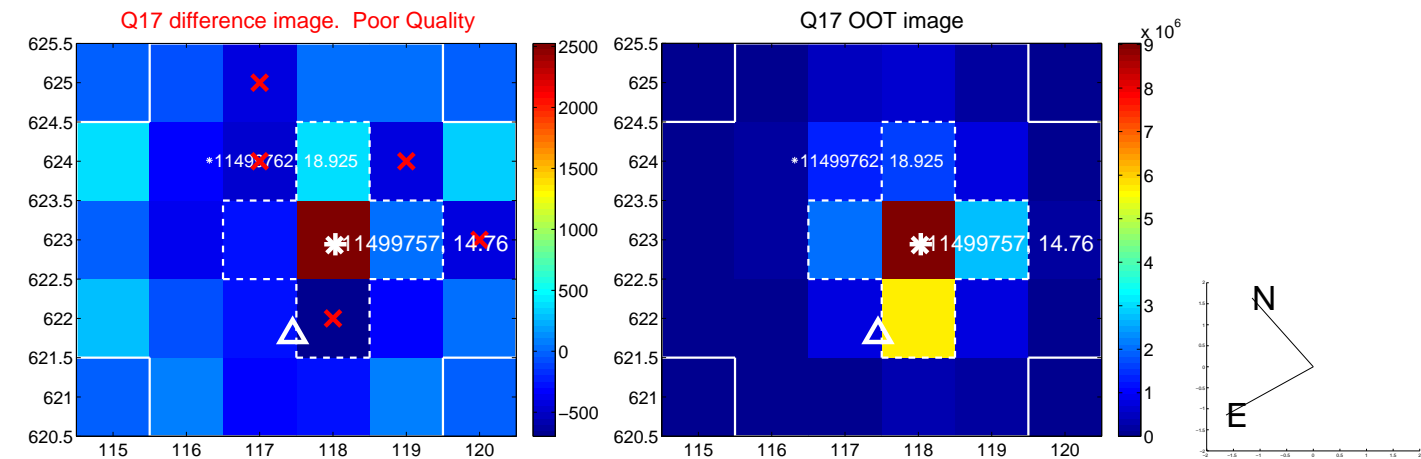
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

