

# KIC 006548447

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006548447-01	OBS	No	10.768368	133.027331	133948.7	14.244	4108.8	2247.7	1.64	5226	58.99	209.47
006548447-02	OBS	6730.01	5.384195	132.295329	108603.7	12.553	2952.8	3552.4	1.64	5226	53.04	527.84
006548447-03	OBS	No	413.839125	301.757572	396.4	2.801	20.0	4.5	1.64	5226	3.42	1.61
006548447-04	OBS	No	491.762913	558.270046	449.9	0.505	16.1	2.9	1.64	5226	3.83	1.28
006548447-05	OBS	No	527.846533	522.541220	478.6	7.500	15.6	-1.0	1.64	5226	3.50	1.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006548447-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006548447-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
006548447-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

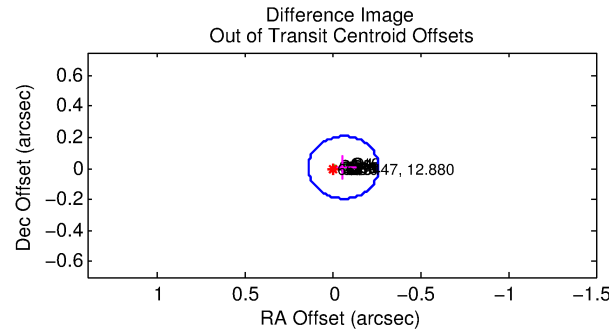
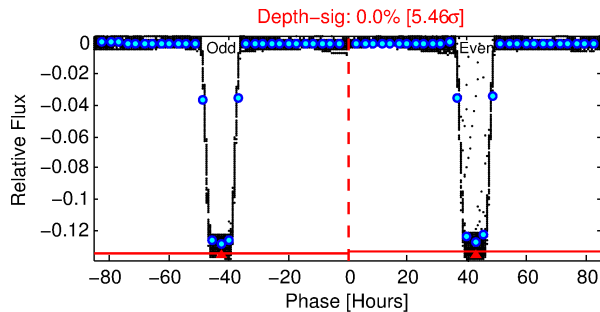
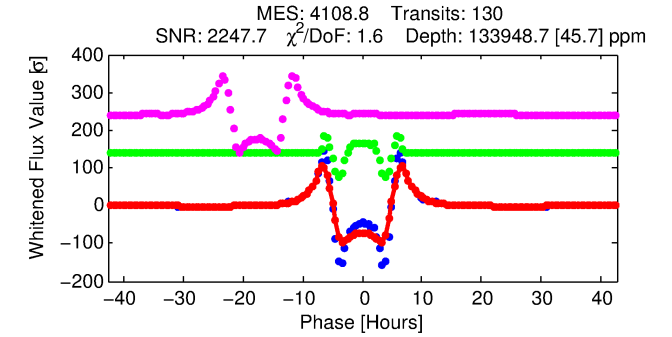
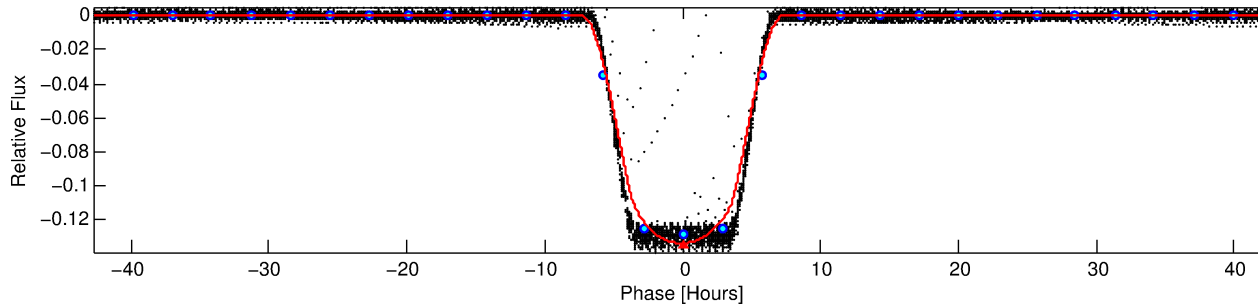
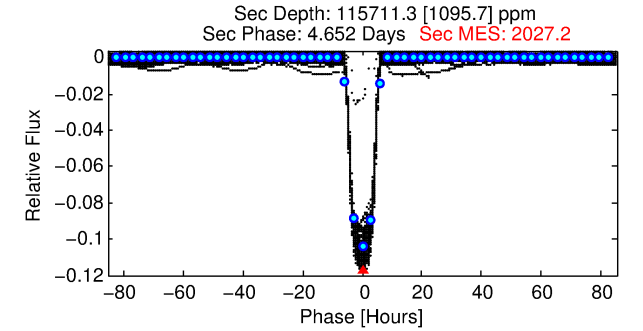
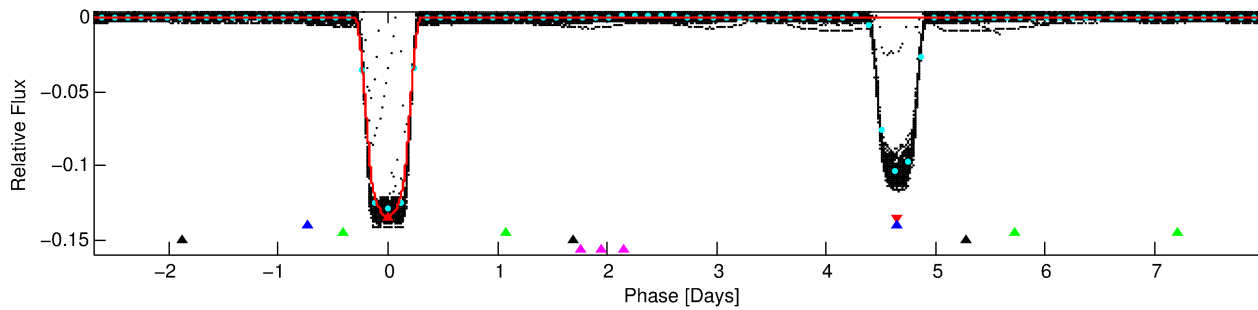
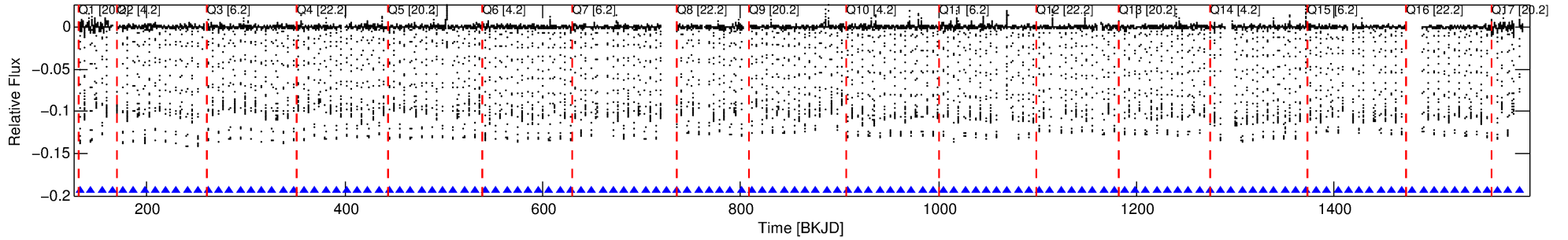
## Ephemeris Match Information For 006548447-01

No Significant Match Found

# DV One-Page Summary

KIC: 6548447 Candidate: 1 of 5 Period: 10.768 d  
KOI: K06730 Corr: No Ephemeris Match

Kp: 12.88 R\*: 1.64 Rs Teff: 5226.0 K Logg: 3.97 Fe/H: 0.000



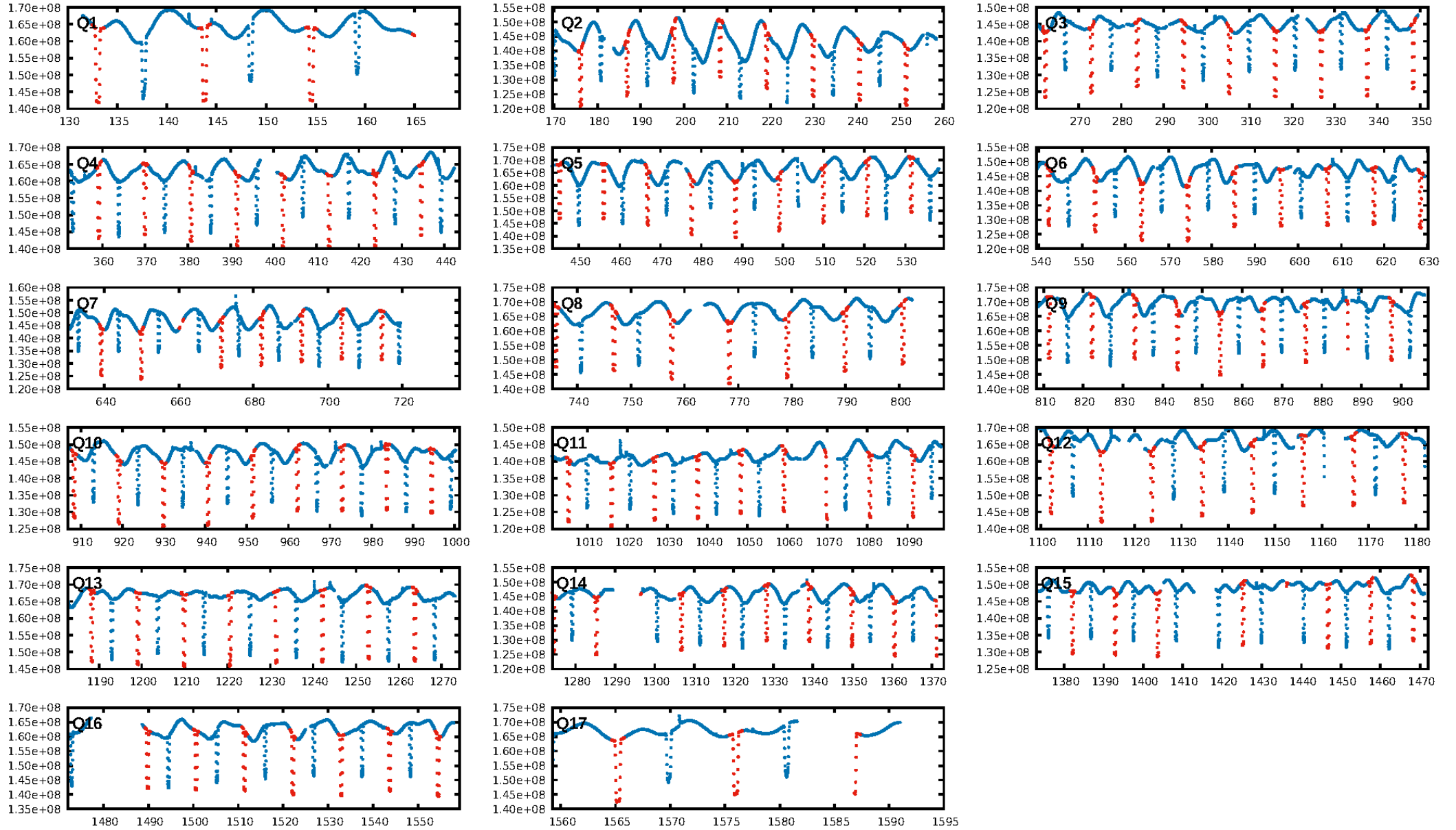
## DV Fit Results:

Period = 10.76837 [0.00000] d  
Epoch = 133.0273 [0.0000] BKJD  
Rp/R\* = 0.3290 [0.0001]  
a/R\* = 7.71 [0.00]  
b = 0.00 [0.14]  
Seff = 209.47 [208.52]  
Teff = 970 [241] K  
Rp = 58.99 [30.56] Re  
a = 0.0928 [0.0535] AU  
Ag = 157.52 [155.41] [1.01σ]  
Teffp = 5314 [177] K [14.50σ]

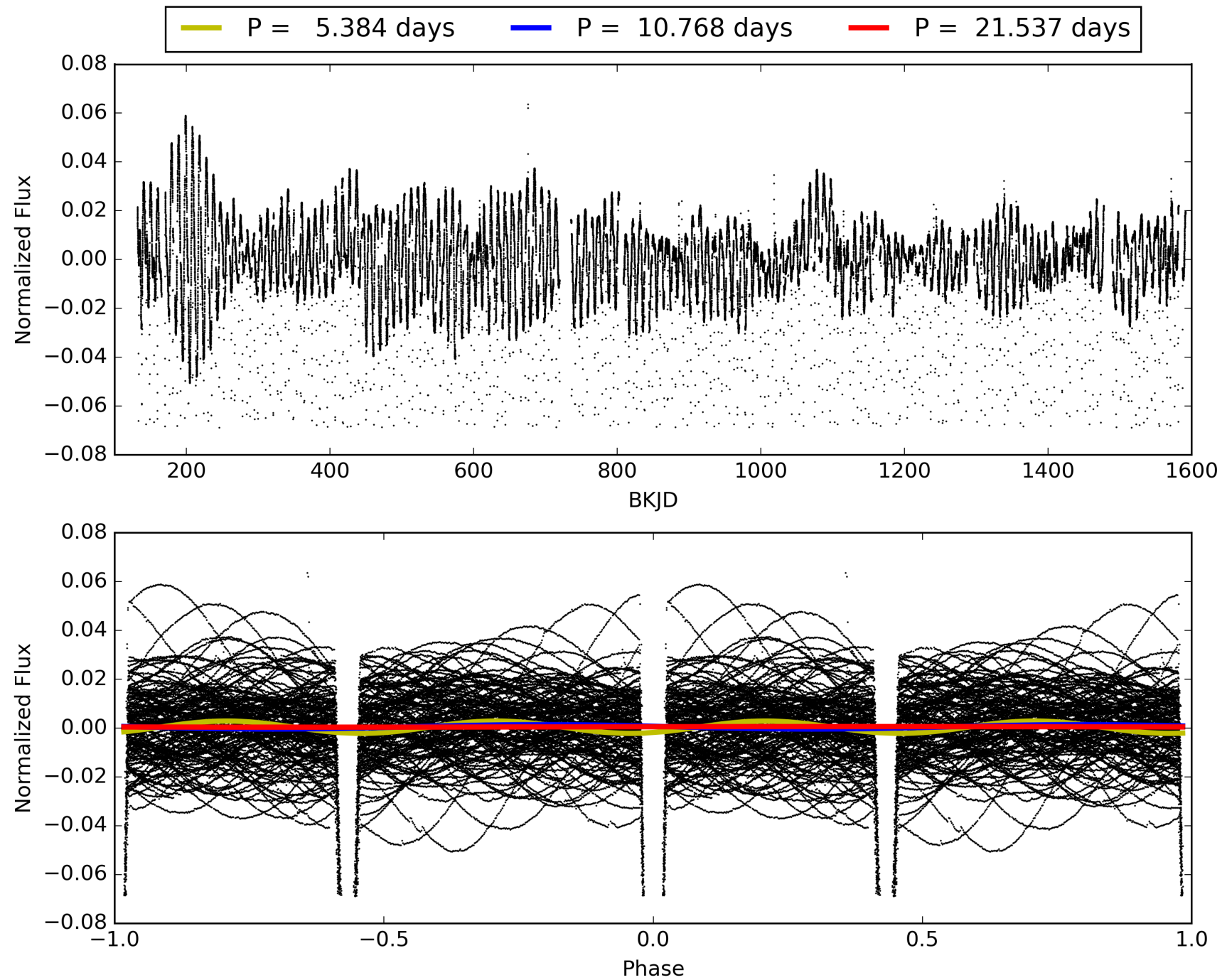
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.81σ]  
LongPeriod-sig: 100.0% [666.36σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 43.9%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [124/124]  
GhostDiagnostic-chr: 0.9716  
Centroid-sig: 0.0%  
Centroid-so: 0.103 arcsec [73.41σ]  
OotOffset-rm: 0.060 arcsec [0.90σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-rm: 0.118 arcsec [1.76σ]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 0.00 [0/17]

# TCE 006548447-01, PDC Light Curves



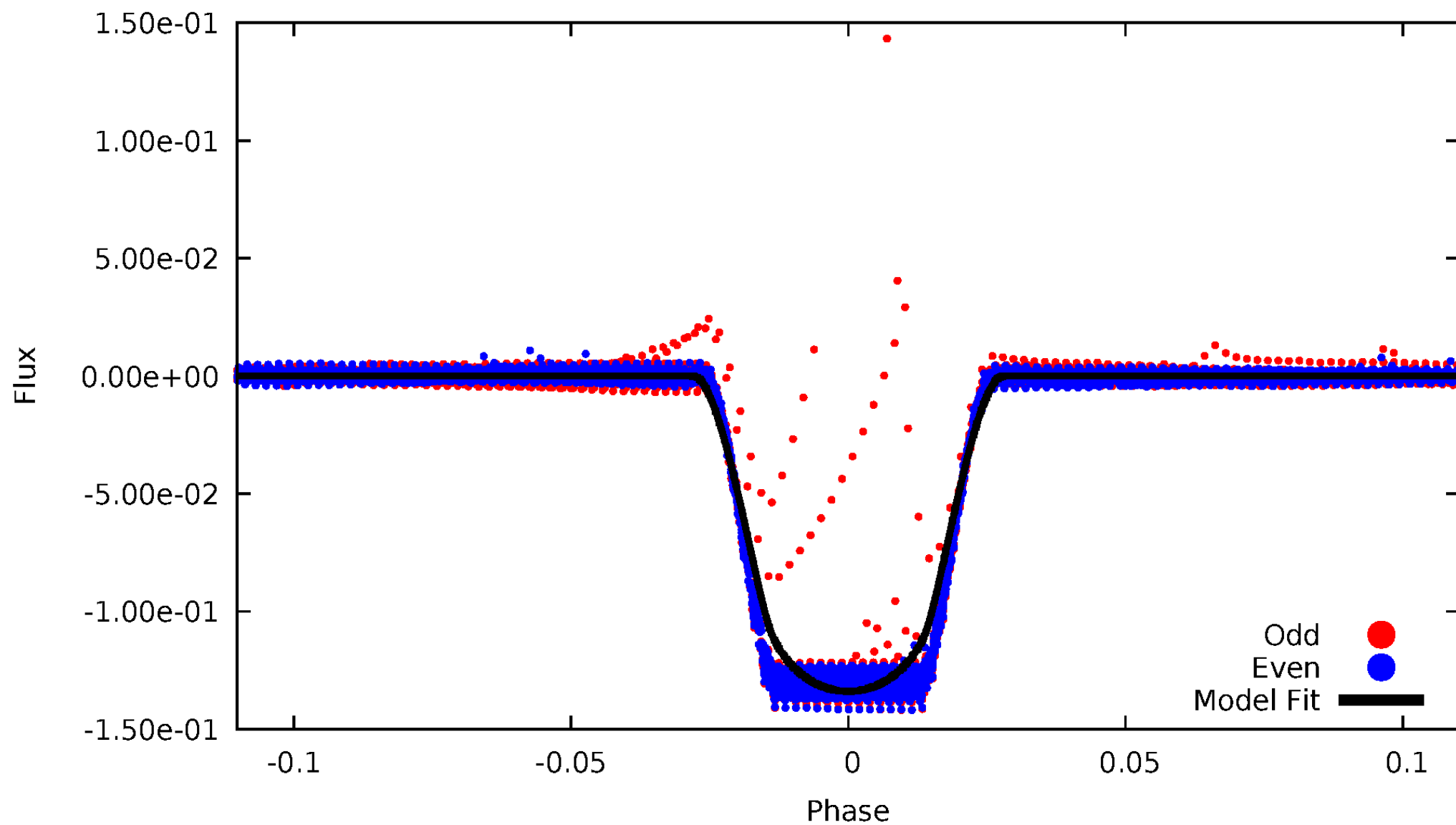
TCE 006548447-01





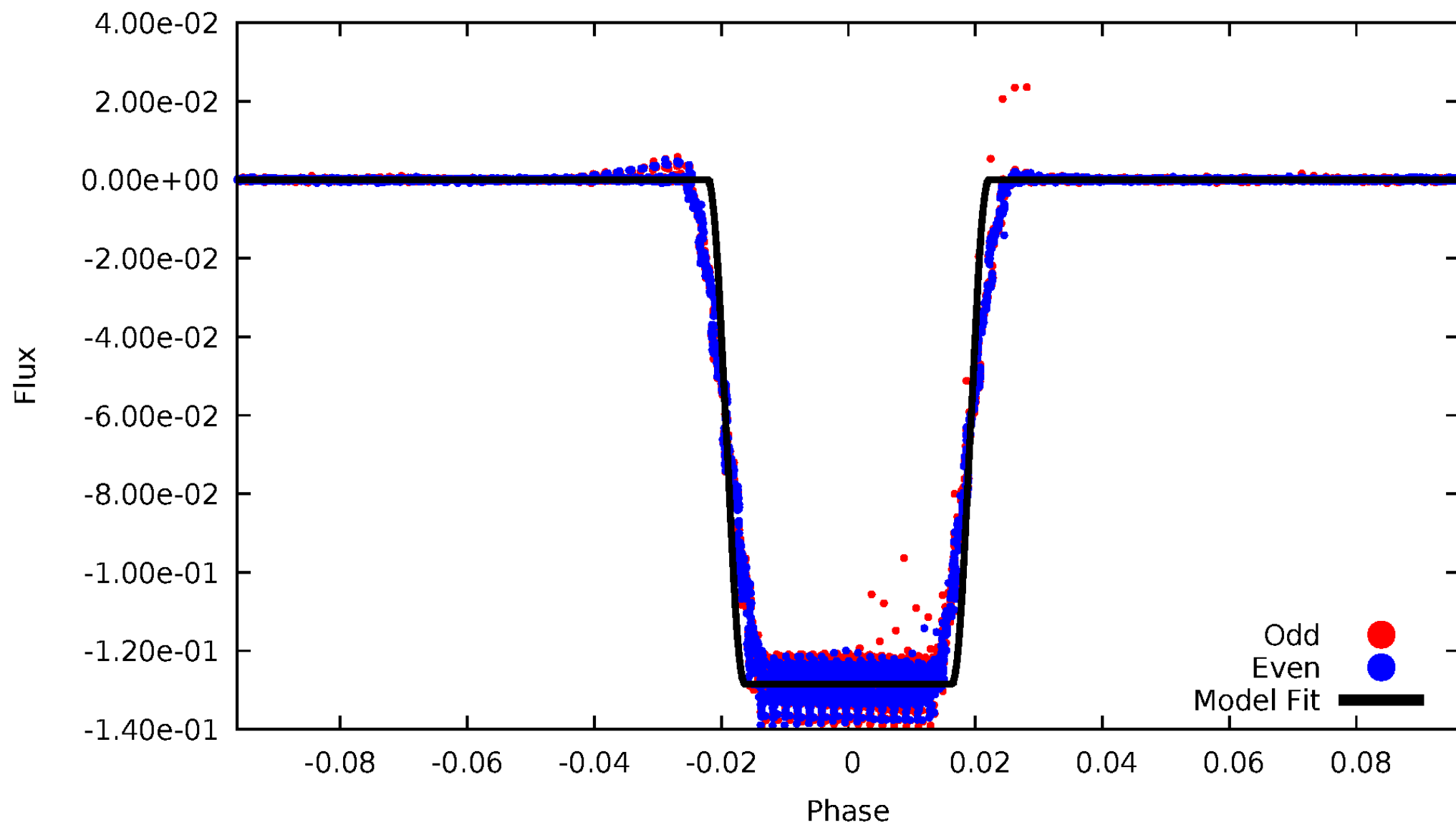
# DV Odd/Even

TCE 006548447-01



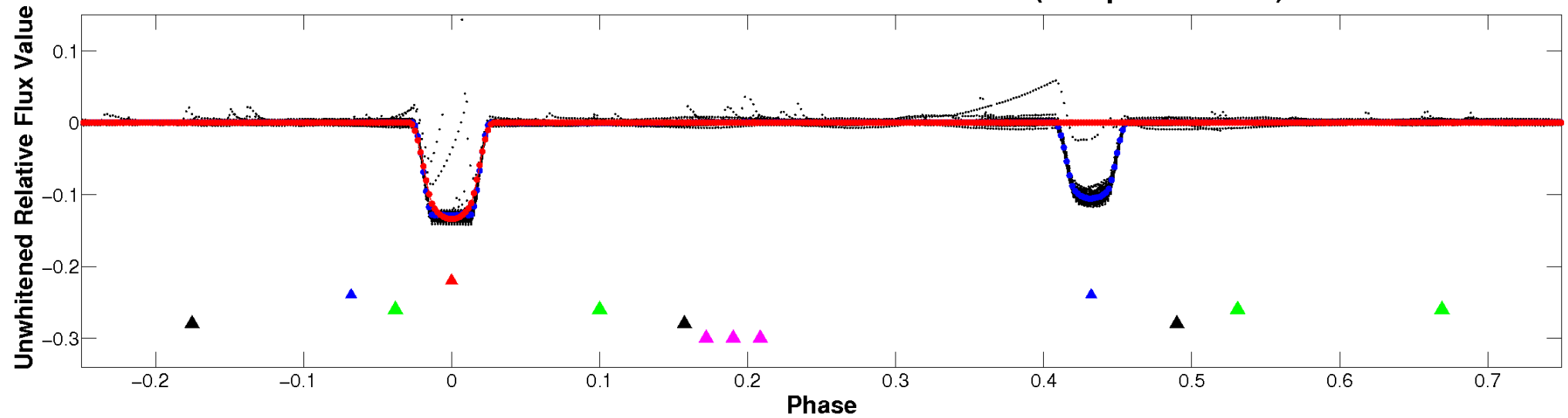
# ALT Odd/Even

TCE 006548447-01

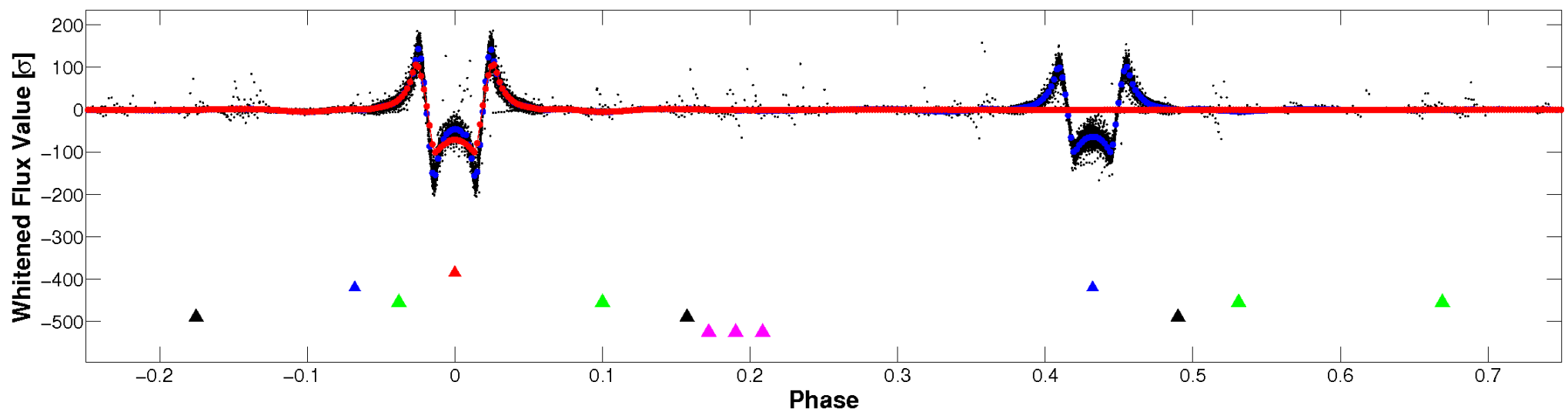


# Non-Whitened Vs. Whitened Light Curve

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

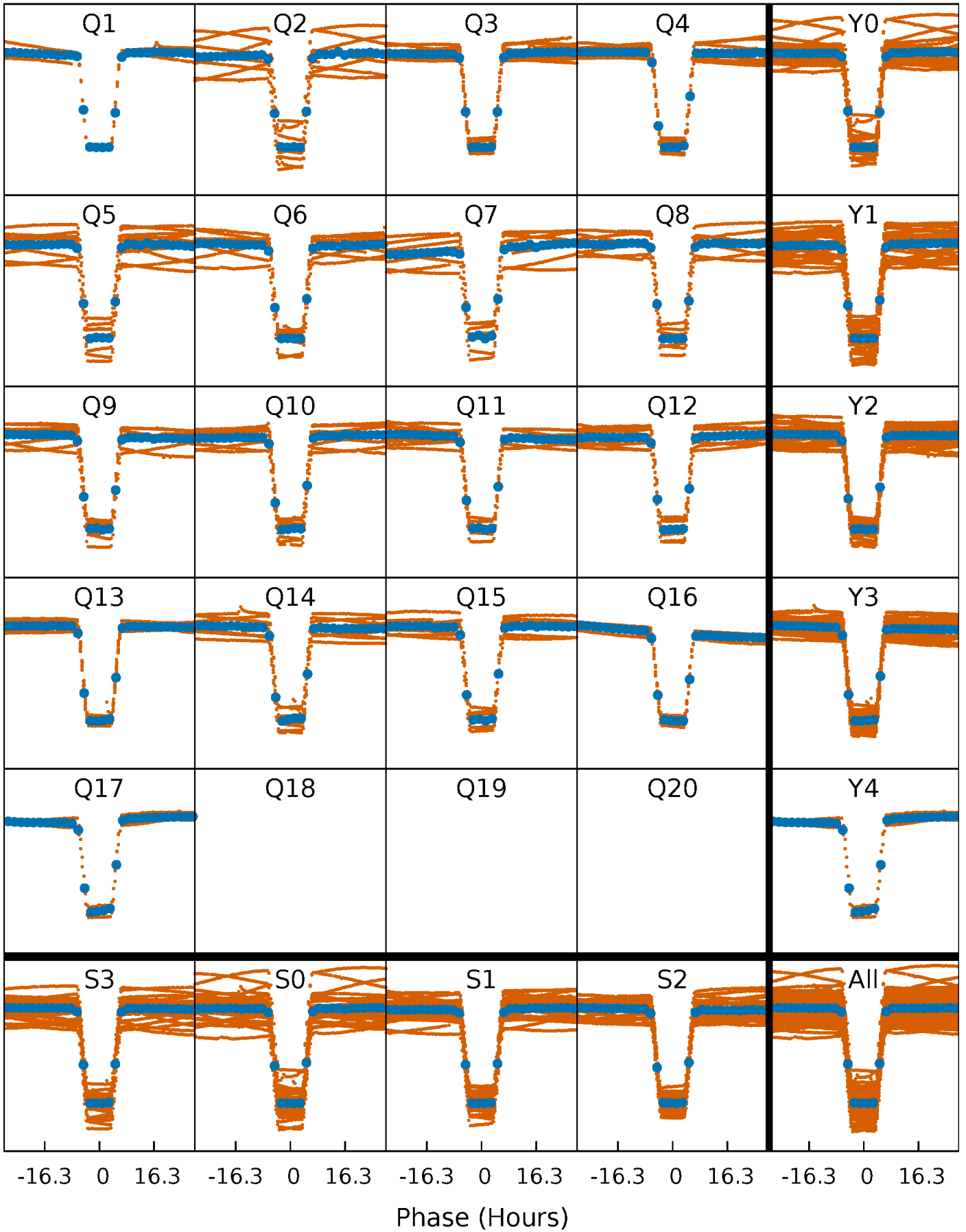


## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



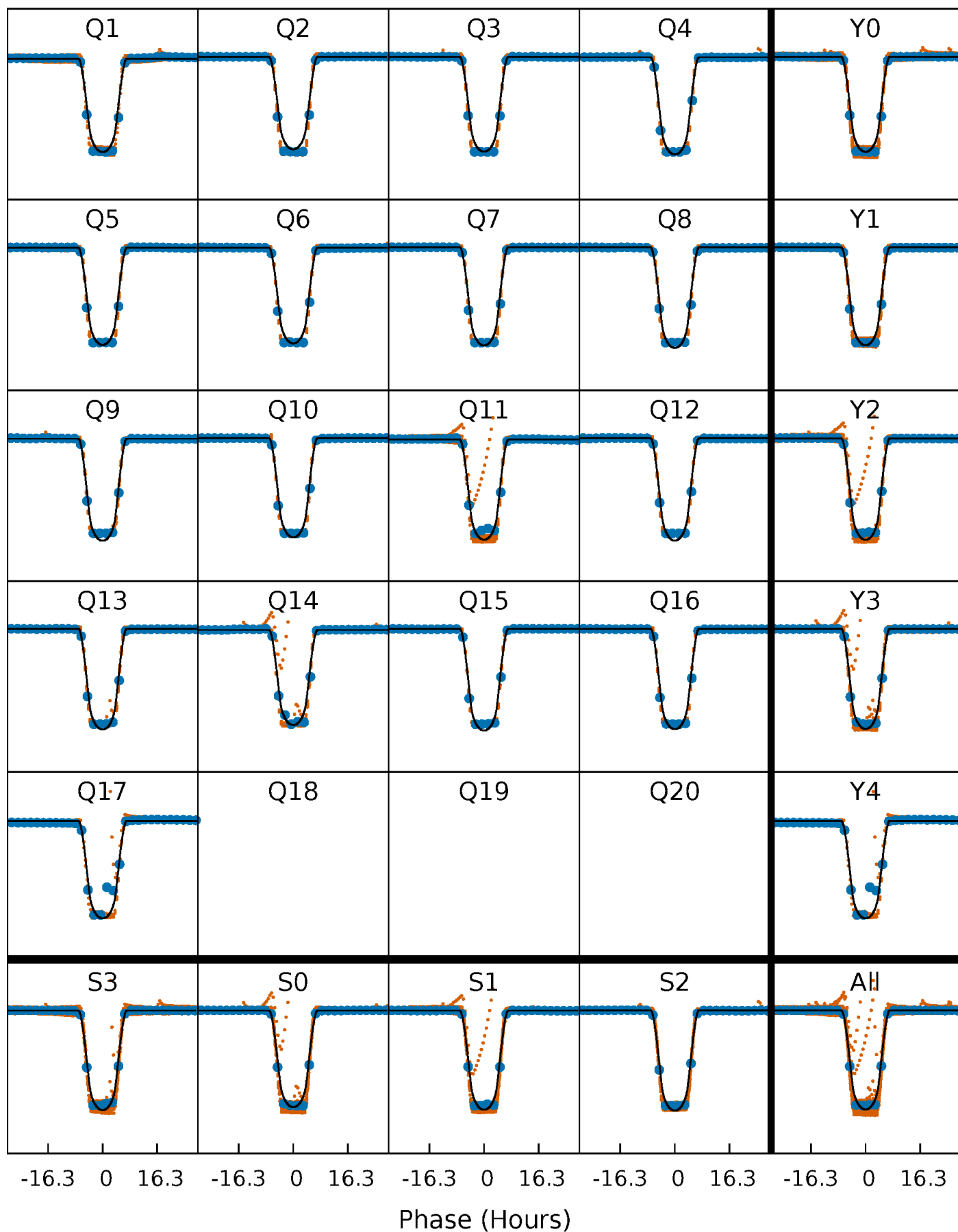
# PDC Quarter-Phased Transit Curves

TCE 006548447-01 P= 10.768368 Days  $T_0=133.027331$  (BKJD)



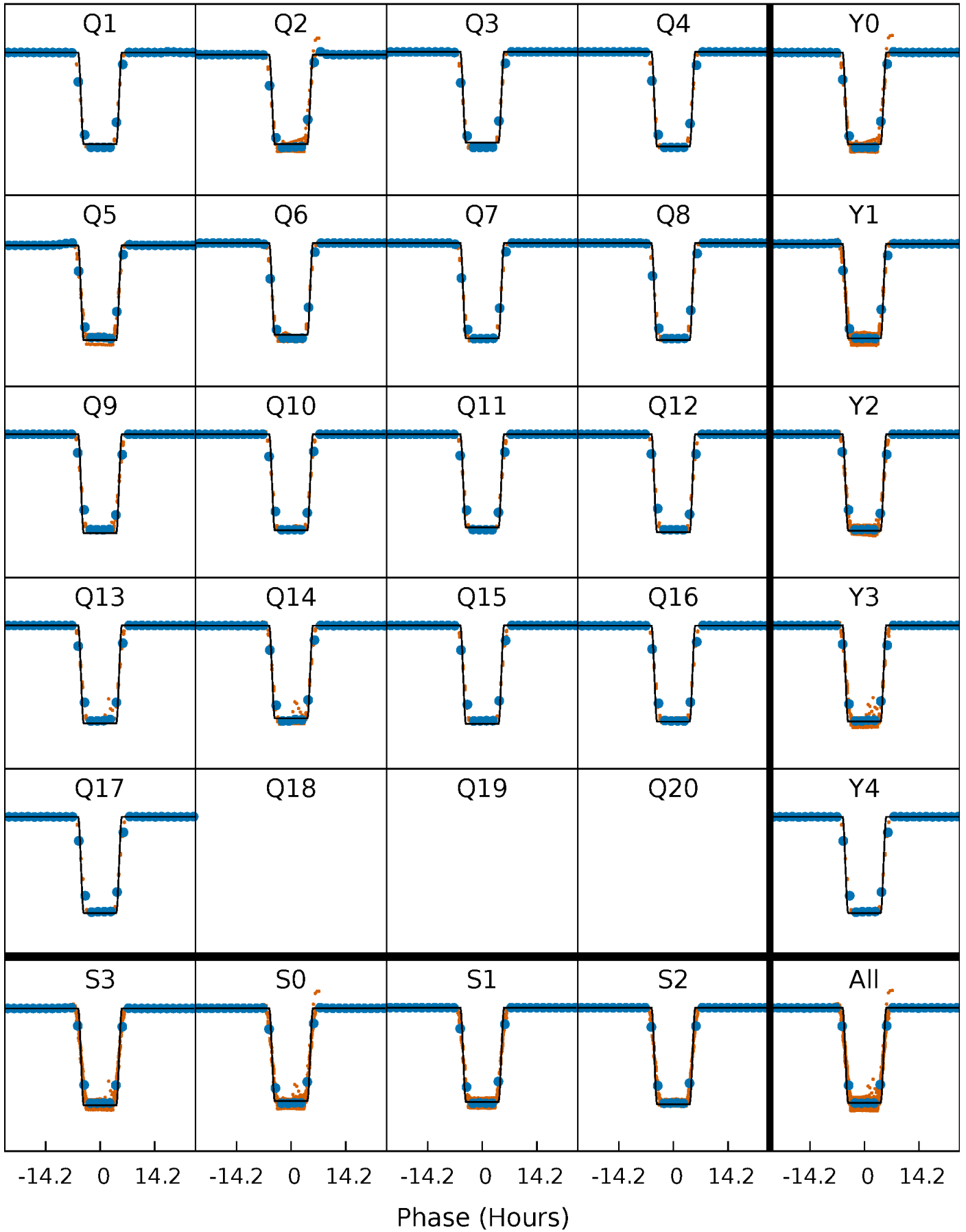
# DV Quarter-Phased Transit Curves

TCE 006548447-01 P= 10.768368 Days  $T_0=133.027331$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006548447-01 P= 10.768284 Days  $T_0=133.032553$  (BKJD)

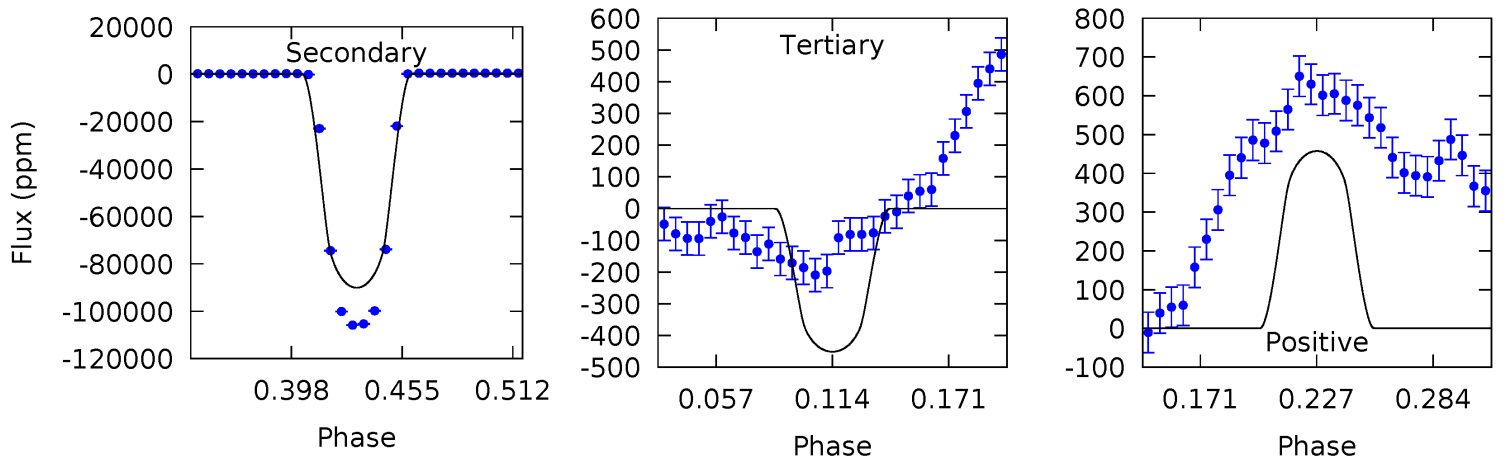
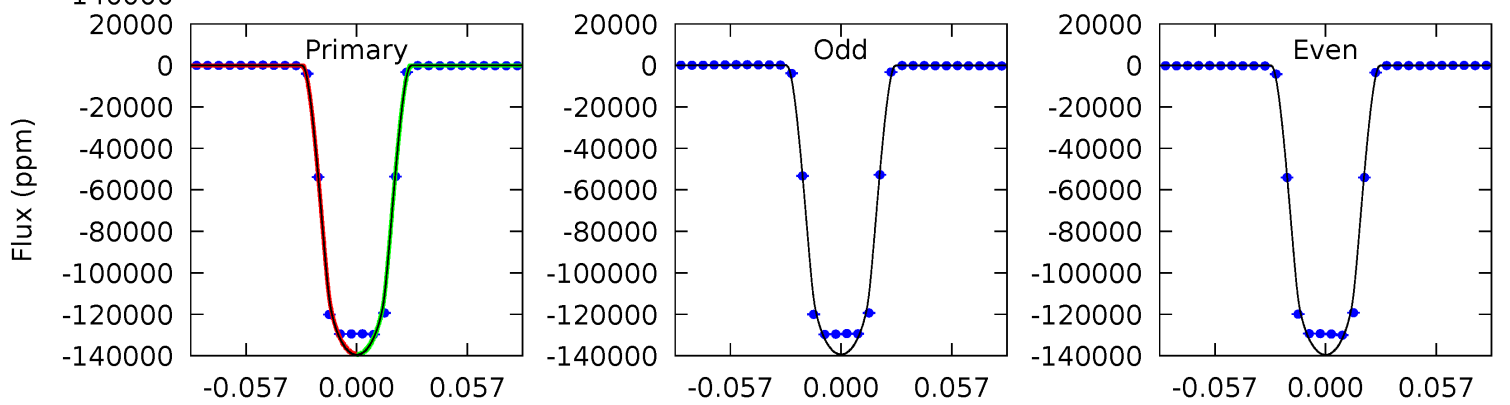
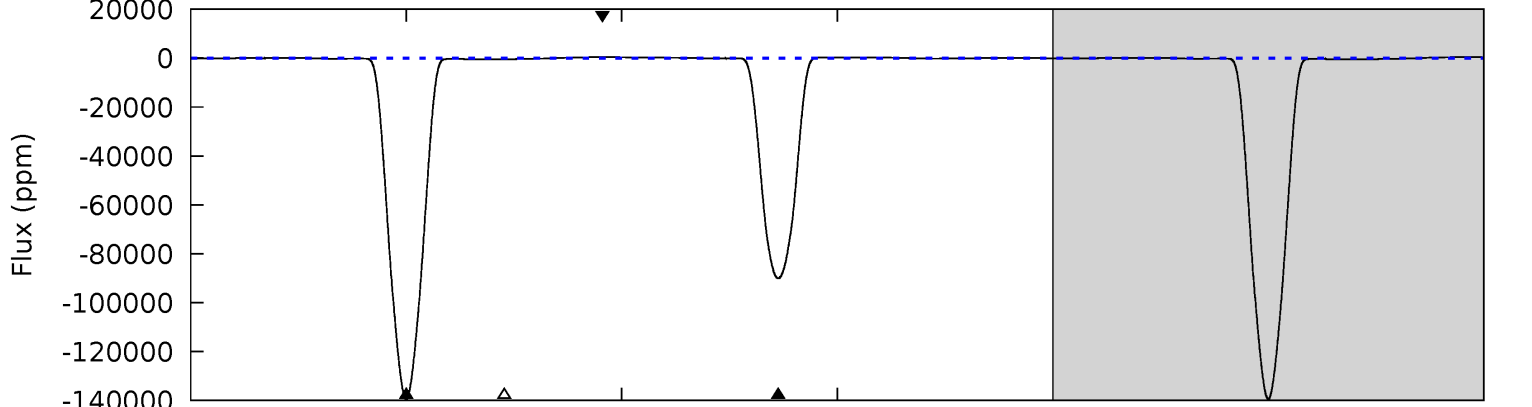
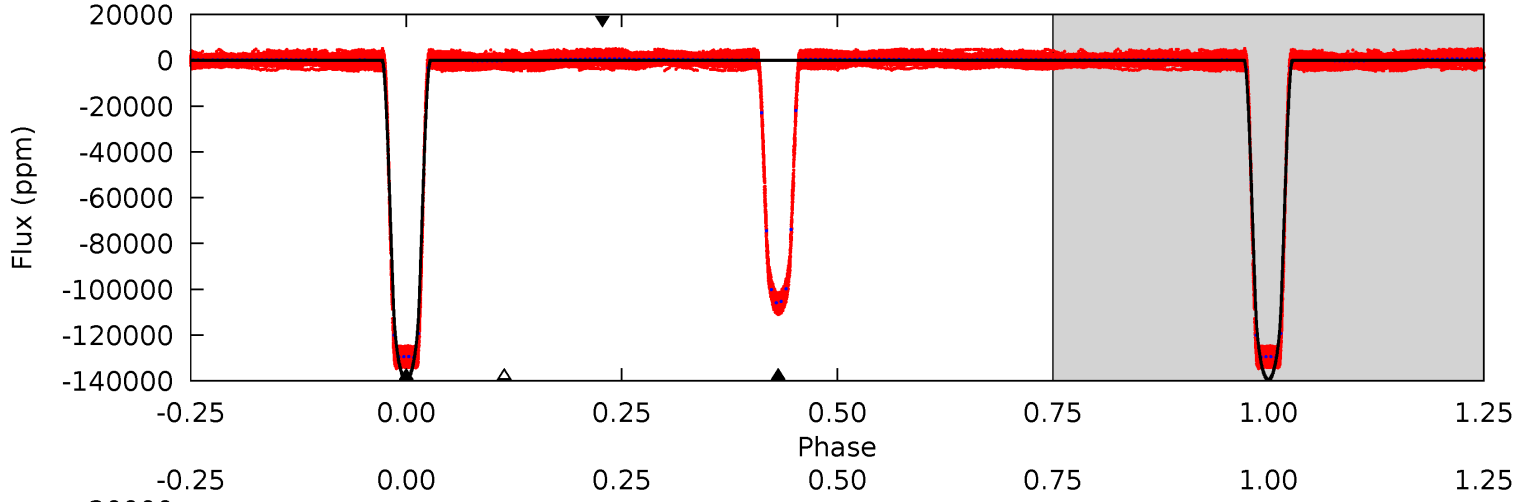




# DV Model-Shift Uniqueness Test

006548447-01, P = 10.768368 Days, E = 122.258963 Days

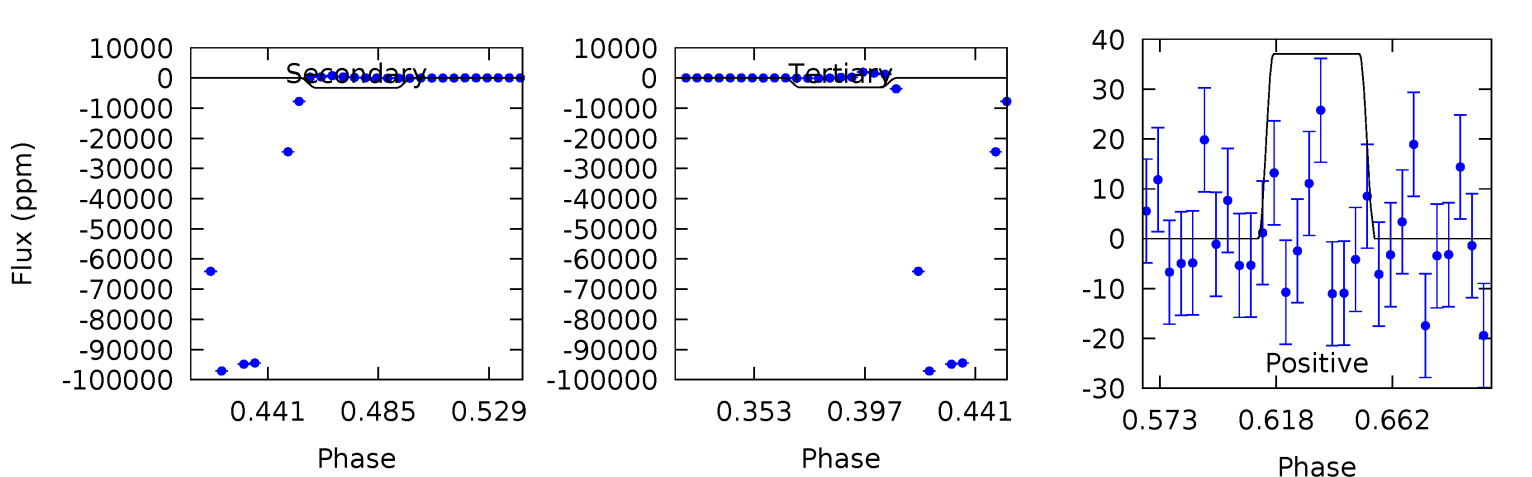
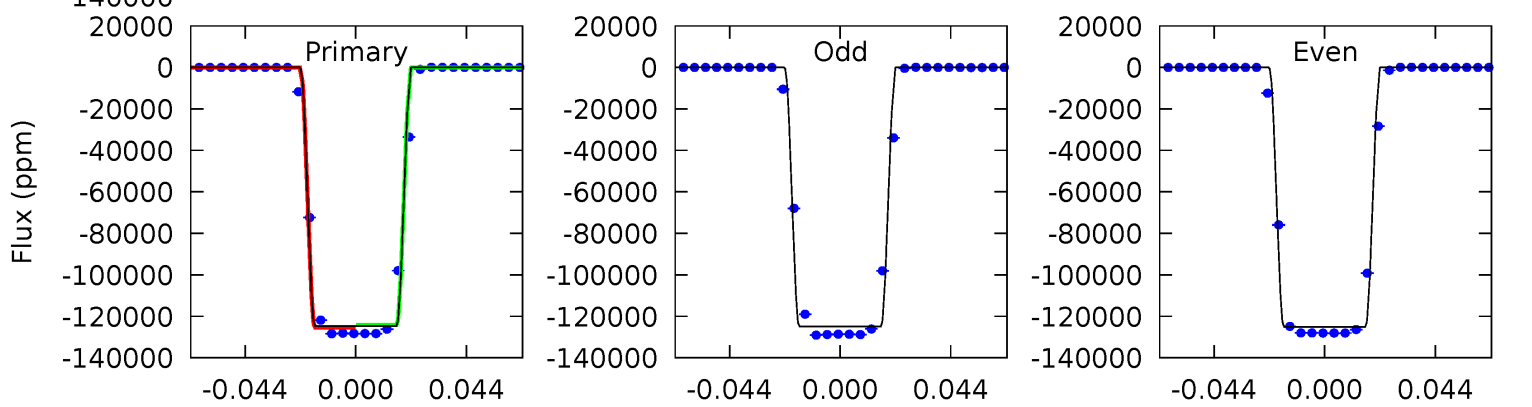
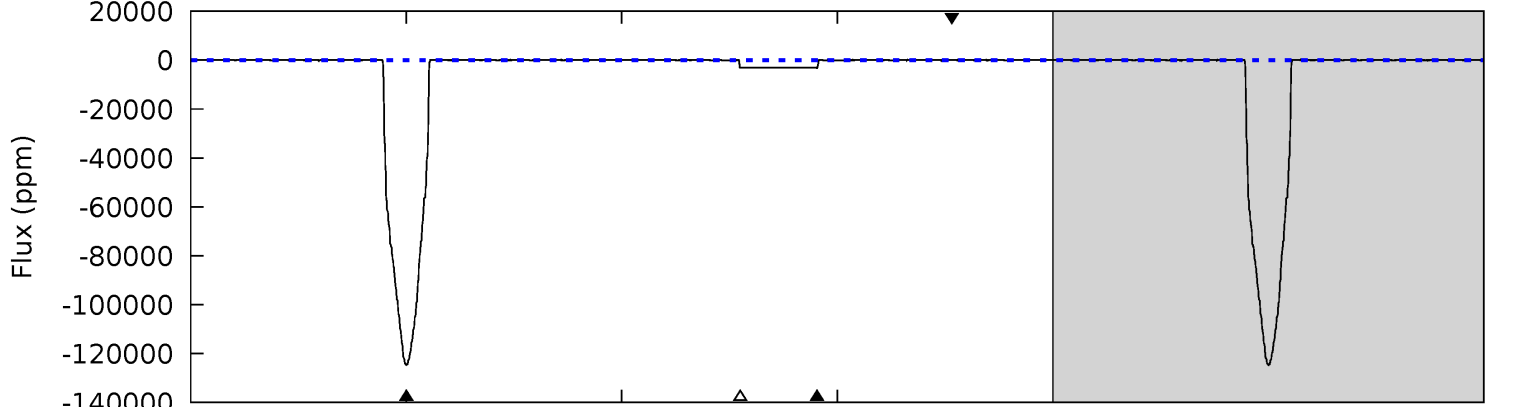
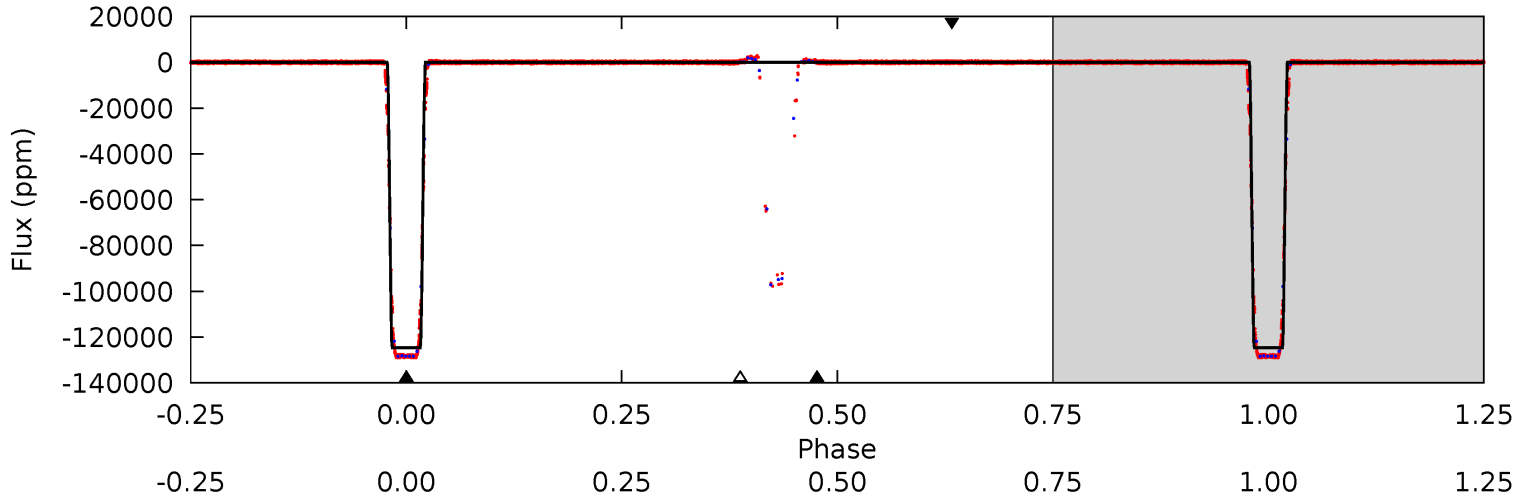
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6291	4062	20.3	20.6	4.68	1.90	10.5	6271	6271	4042	4042	4.23	0.98	0.00	0.66



# Alt Model-Shift Uniqueness Test

006548447-01, P = 10.768284 Days, E = 122.264269 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
2124	55.1	53.2	0.63	4.73	2.01	2.73	2071	2123	1.92	54.5	0.04	1.00	0.00	0



### Stellar Parameters For KIC 006548447

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5226^{+174}_{-142}$	$3.970^{+0.602}_{-0.258}$	$0.000^{+0.300}_{-0.250}$	$1.643^{+0.851}_{-0.851}$	$0.921^{+0.101}_{-0.112}$	$0.292^{+1.995}_{-0.200}$
	+3%/-3%	+15%/-6%	+inf%/-inf%	+52%/-52%	+11%/-12%	+683%/-68%
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 006548447-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-90067 \pm 22$	$55.57^{+15.63}_{-15.21}$	$1323^{+173}_{-206}$	$5123^{+165}_{-141}$	$151^{+137}_{-58}$
Alt.	$-3234 \pm 59$	$61.72^{+16.21}_{-15.72}$	$1330^{+173}_{-190}$	$2775^{+58}_{-50}$	$4.066^{+3.225}_{-1.542}$

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

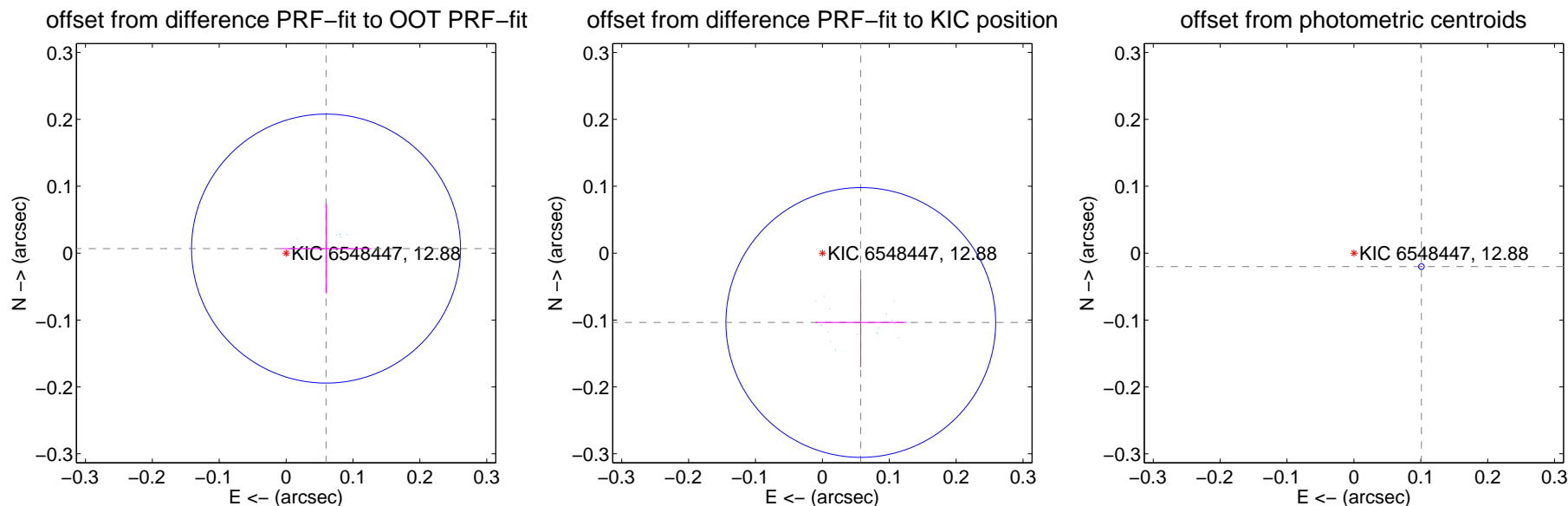
## DV Centroid Data

Supplemental centroid analysis for 006548447-01. Kepler magnitude: 12.88. Transit SNR 2247.68

There are 17 quarters with good PRF difference image offsets

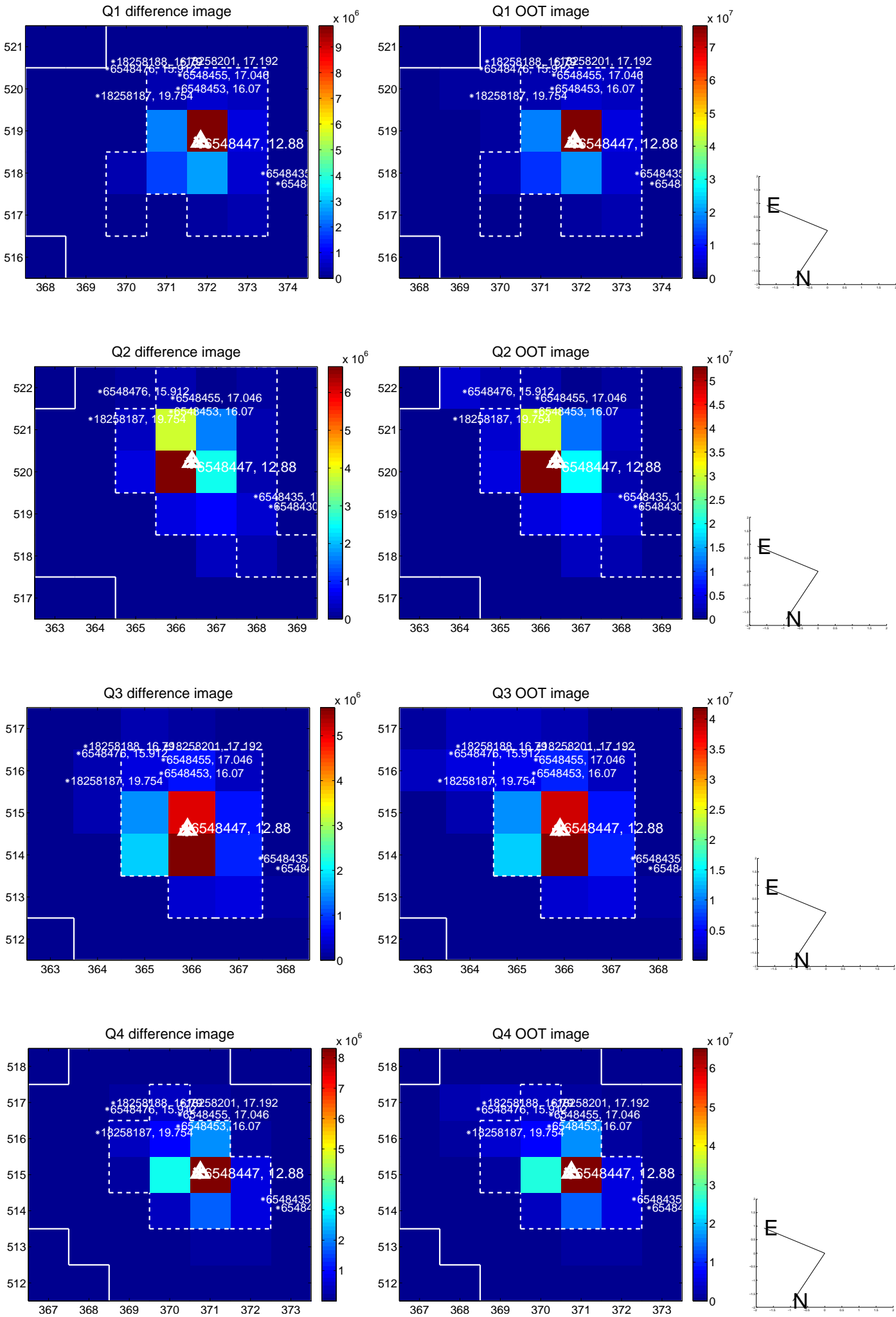
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.060 \pm 0.067$	0.90	$-0.060 \pm 0.067$	$0.007 \pm 0.067$
PRF-fit source offset from KIC position	$0.118 \pm 0.067$	1.76	$-0.057 \pm 0.068$	$-0.104 \pm 0.067$
photometric centroid source offset	$0.10 \pm 0.00$	73.41	$-0.10 \pm 0.00$	$-0.02 \pm 0.00$

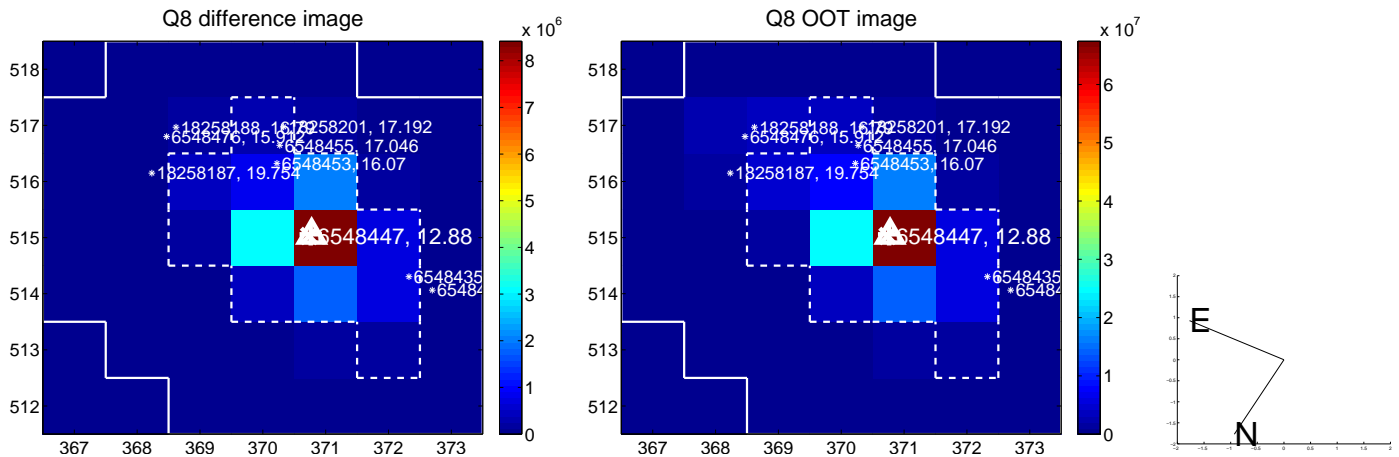
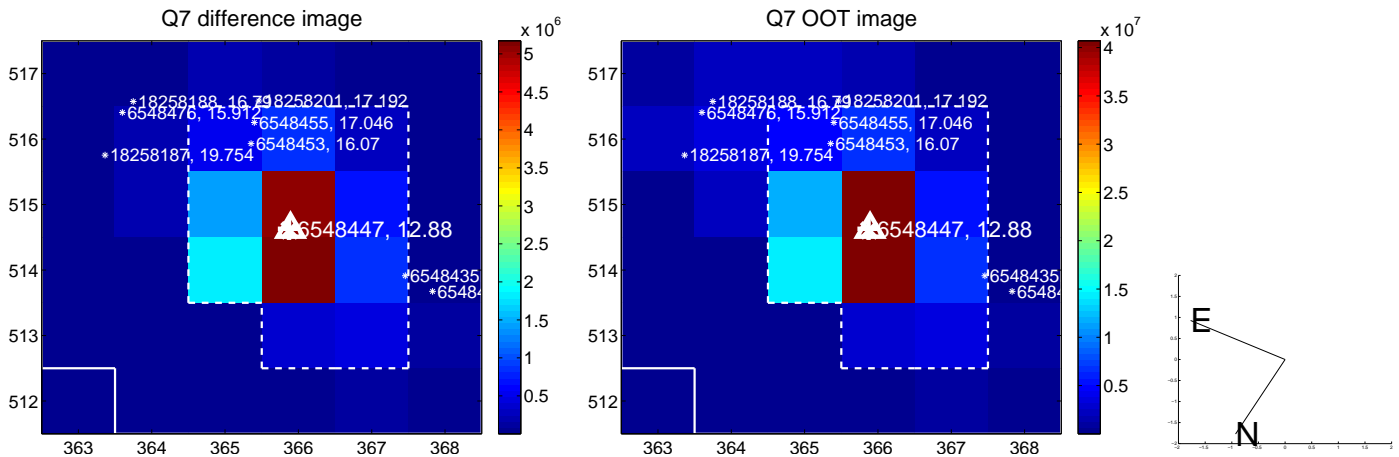
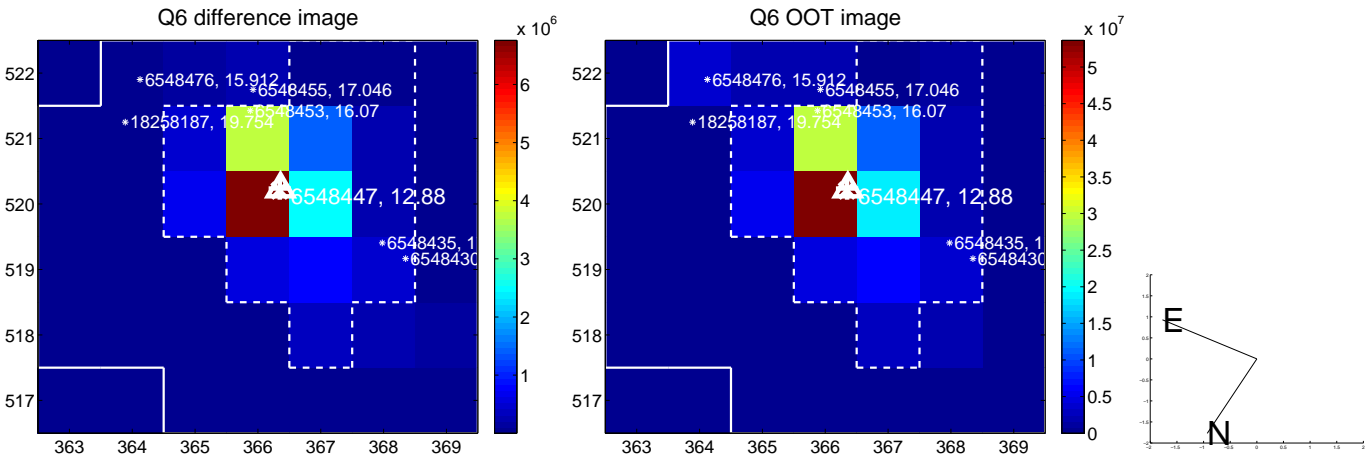
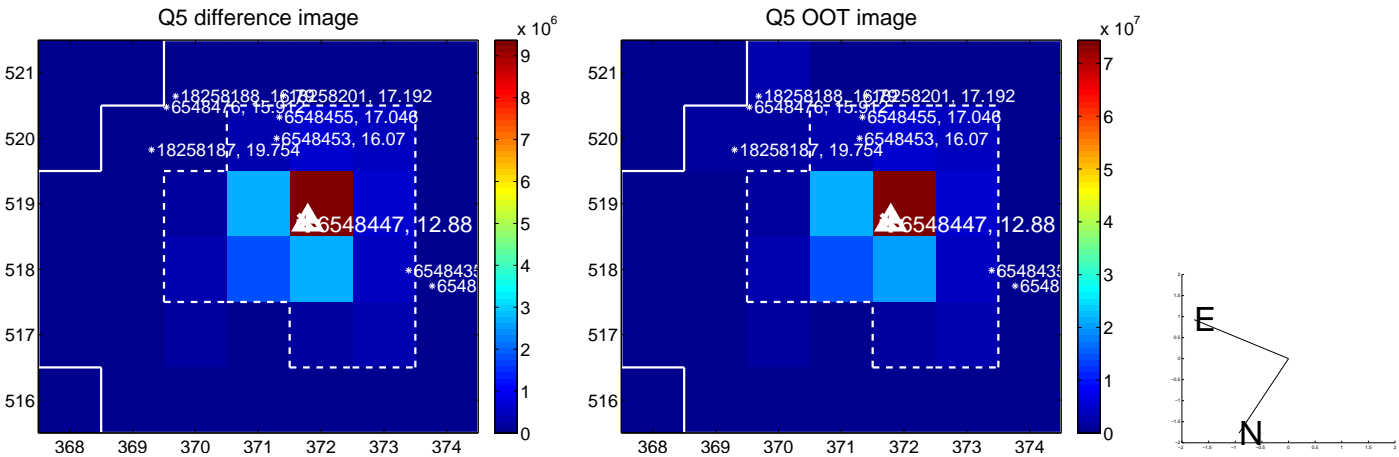


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

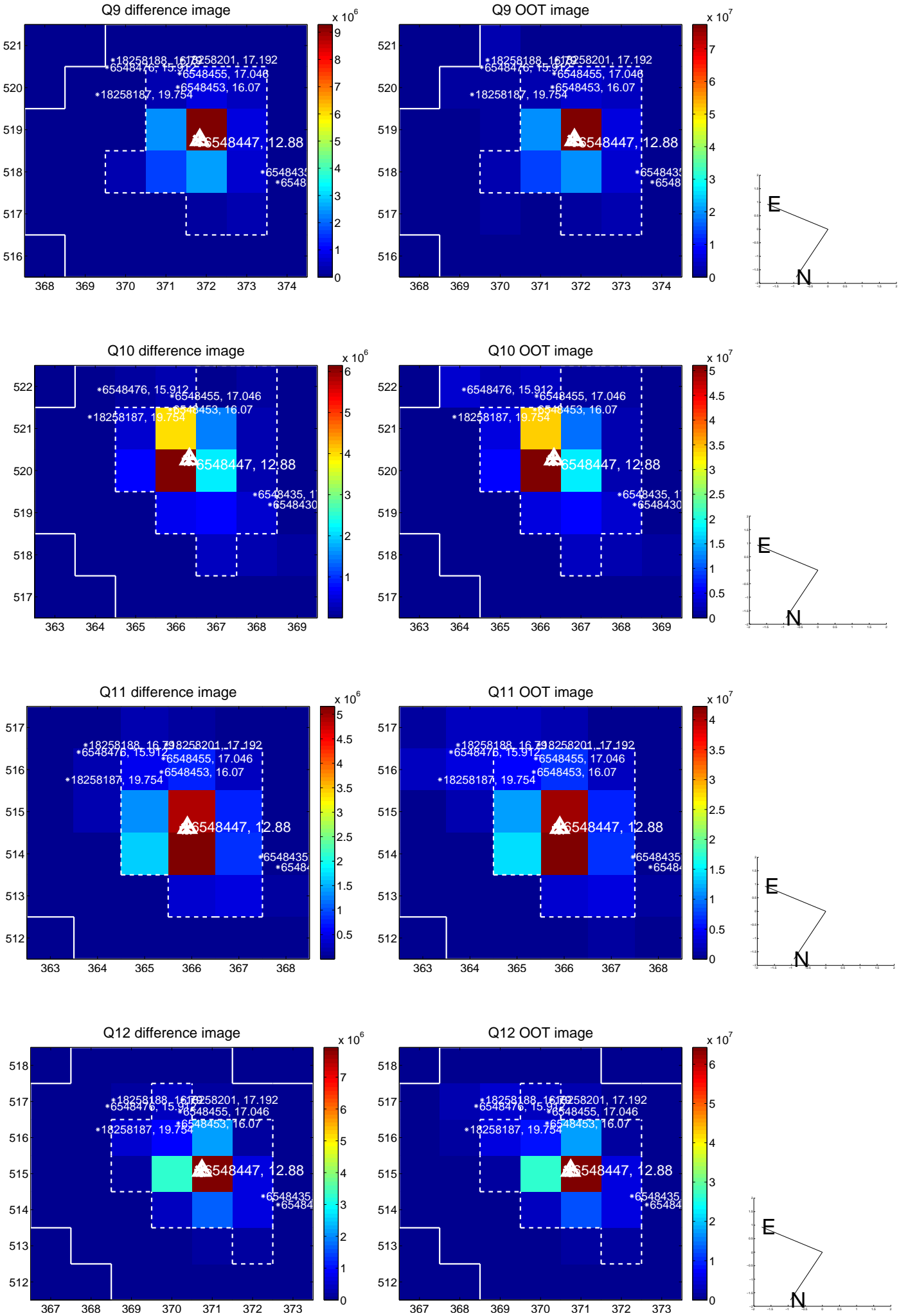


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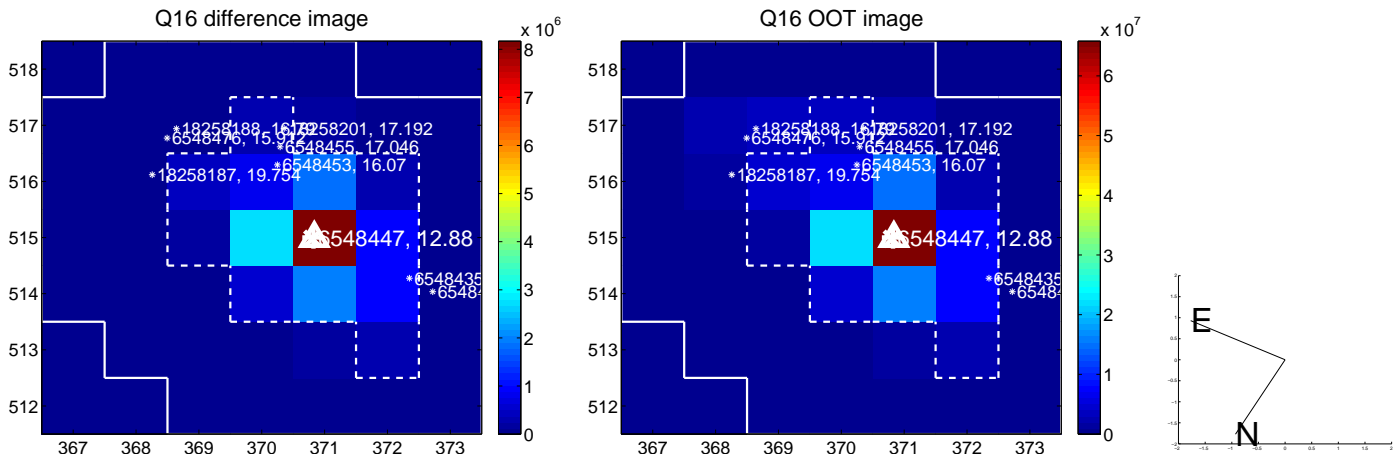
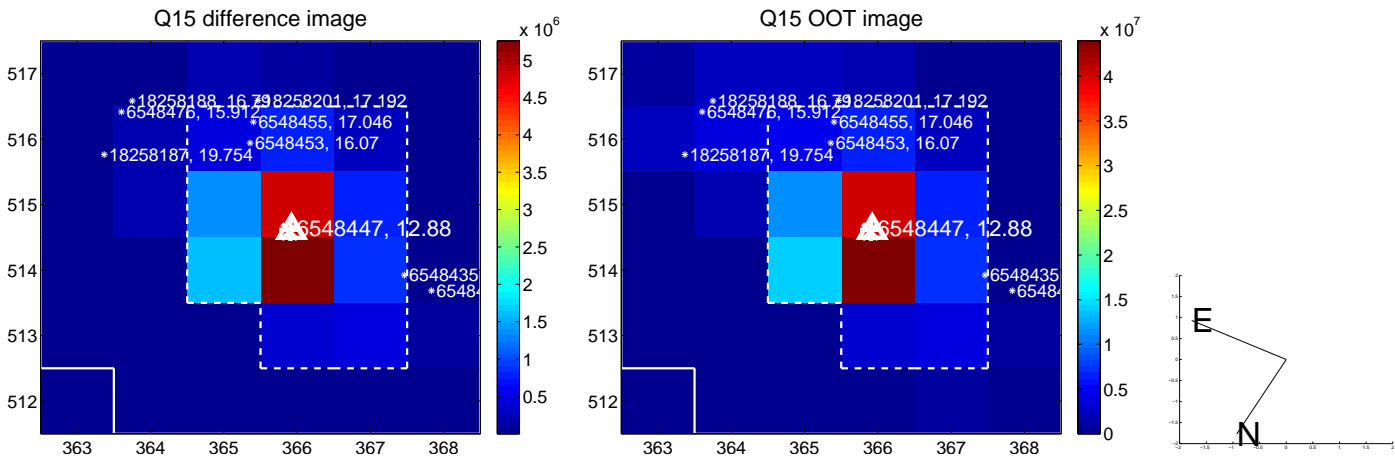
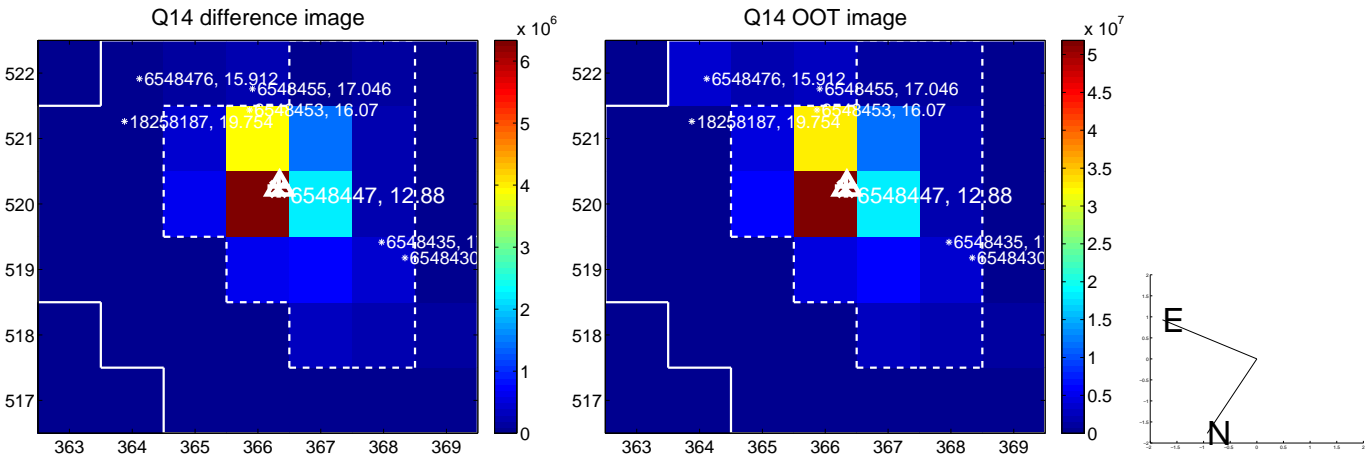
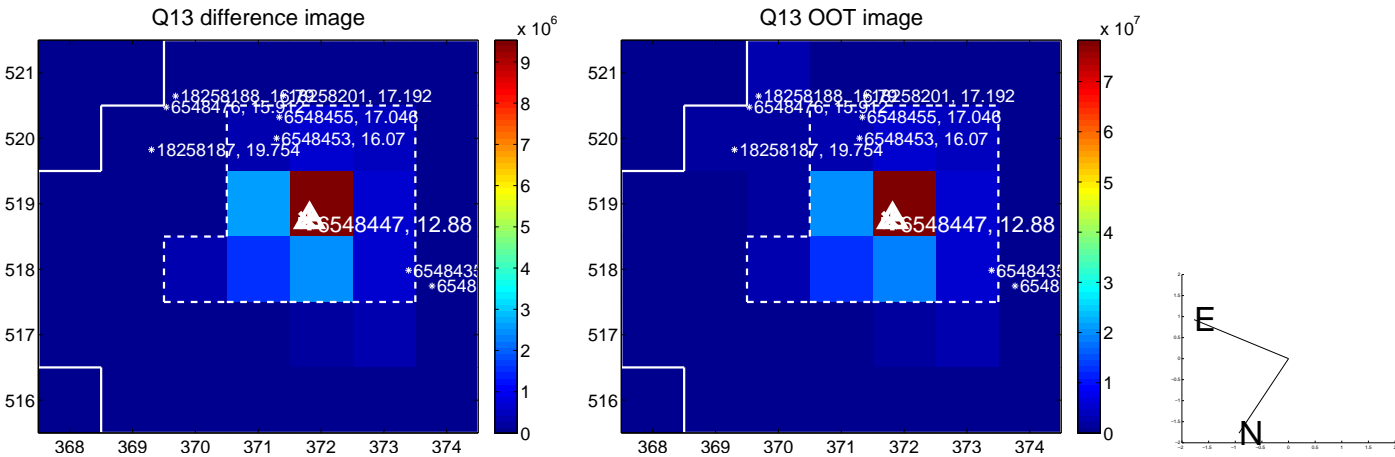




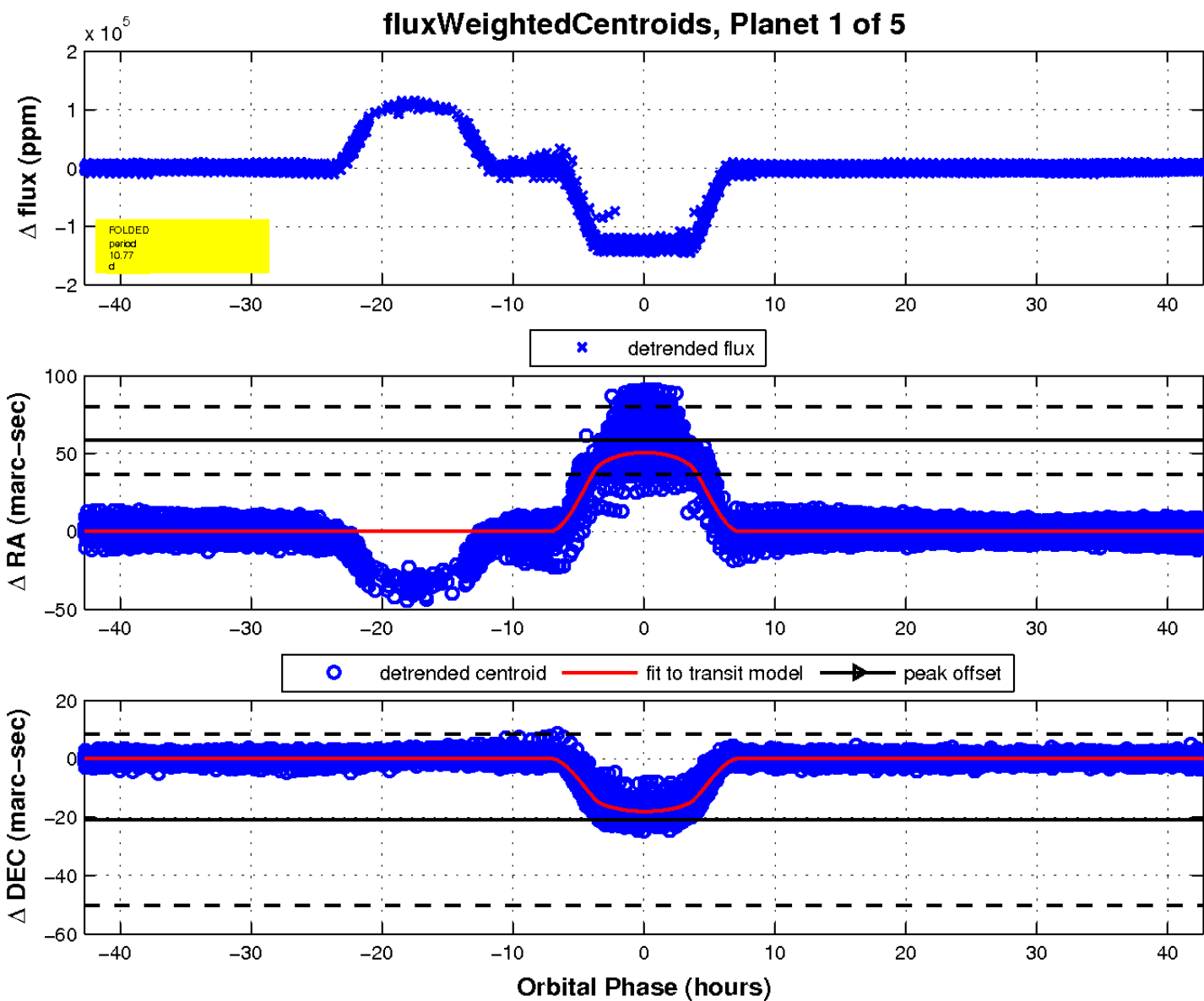
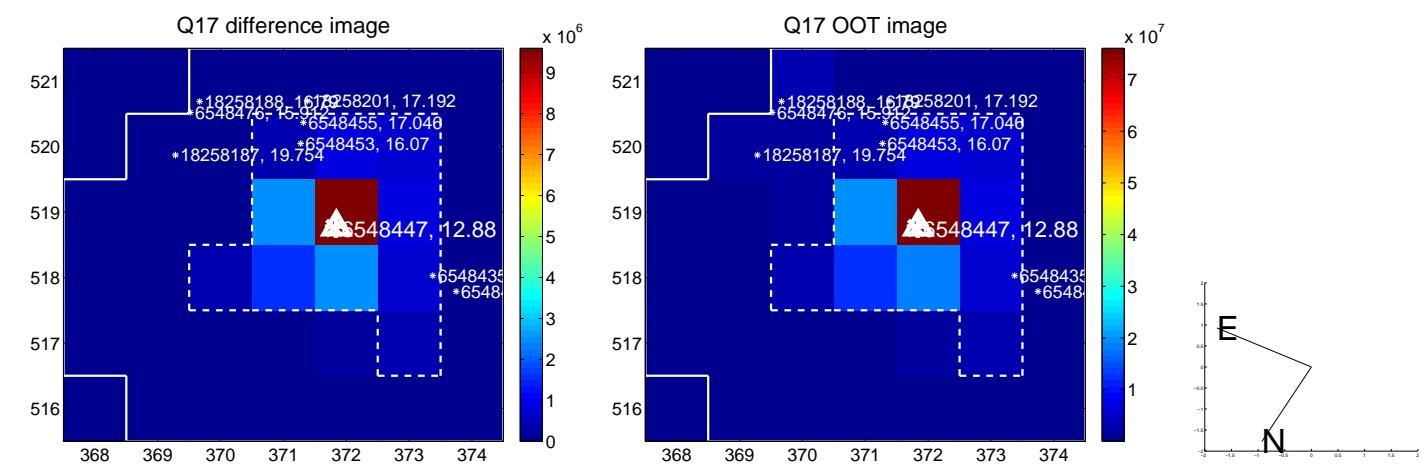
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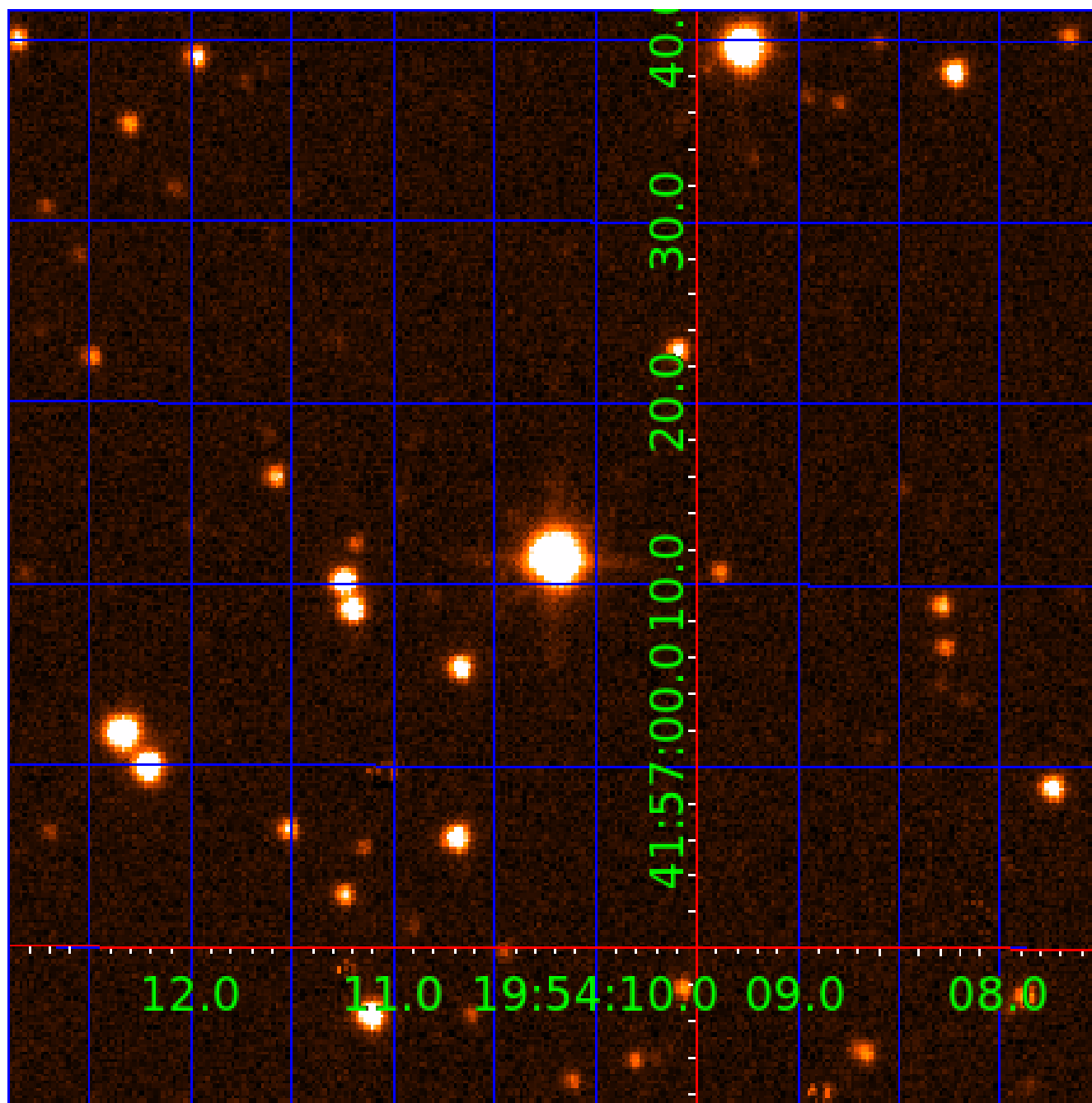


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UKIRT Image

Declination



# KIC 006548447

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
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## Robovetter Results

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006548447-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
006548447-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

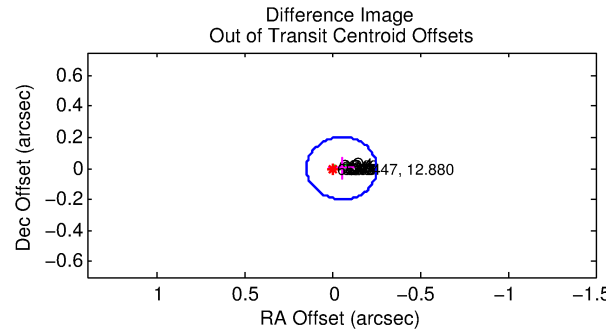
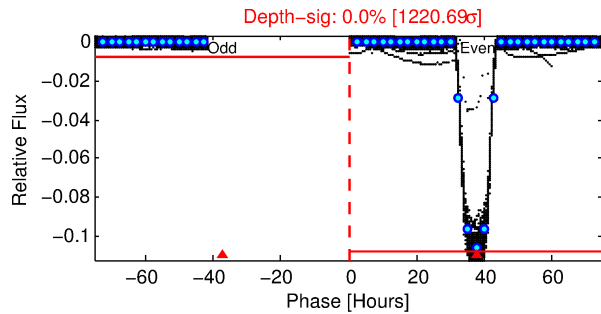
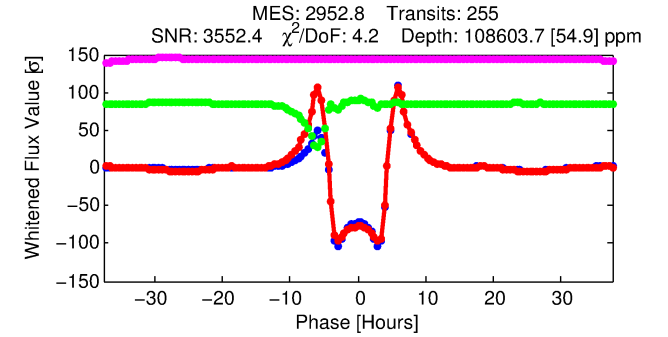
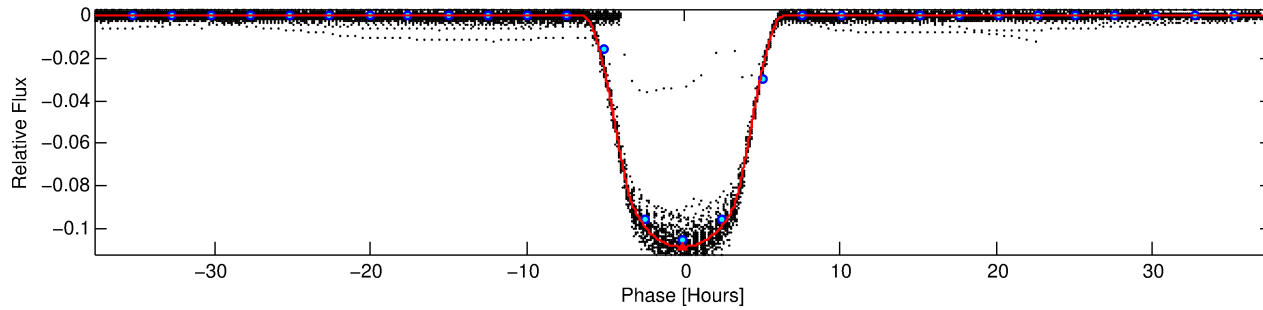
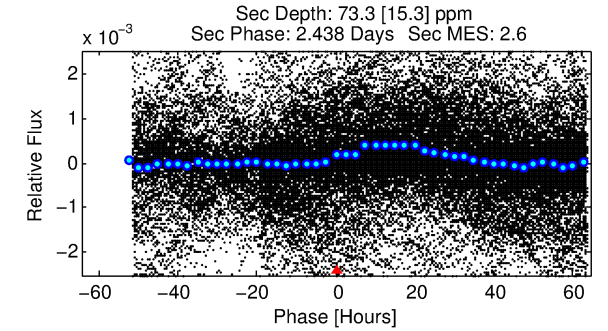
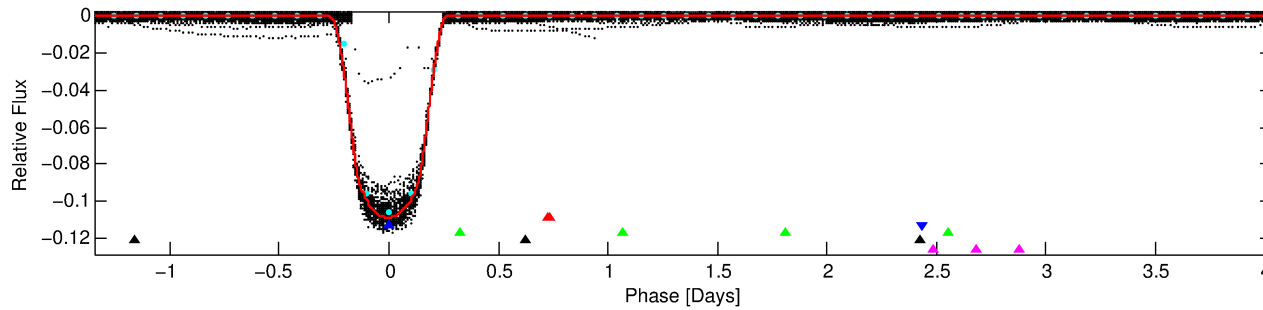
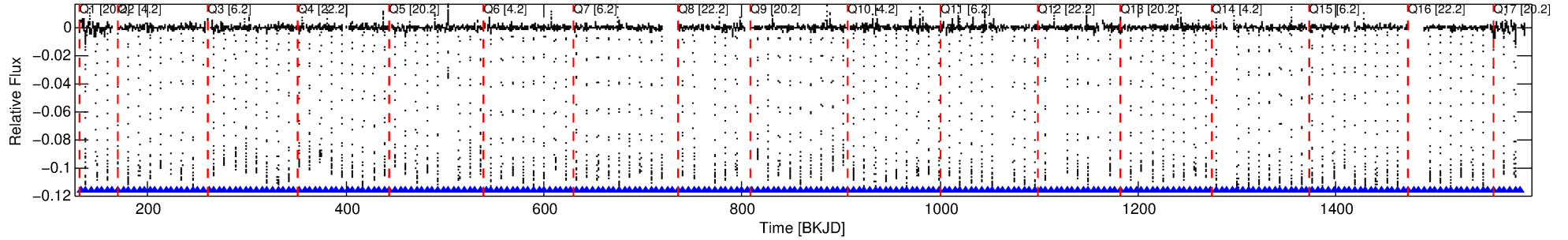
## Ephemeris Match Information For 006548447-02

No Significant Match Found

# DV One-Page Summary

KIC: 6548447 Candidate: 2 of 5 Period: 5.384 d  
KOI: K06730 Corr: No Ephemeris Match

Kp: 12.88 R\*: 1.64 Rs Teff: 5226.0 K Logg: 3.97 Fe/H: 0.000



## DV Fit Results:

Period = 5.38419 [0.00000] d  
Epoch = 132.2953 [0.0001] BKJD  
Rp/R\* = 0.2959 [0.0001]  
a/R\* = 4.31 [0.00]  
b = 0.00 [1.26]  
Seff = 527.84 [525.44]  
Teq = 1222 [304] K  
Rp = 53.04 [27.47] Re  
a = 0.0585 [0.0337] AU  
Ag = 0.05 [0.05] [-19.25σ]  
Teffp = 889 [55] K [-1.08σ]

## DV Diagnostic Results:

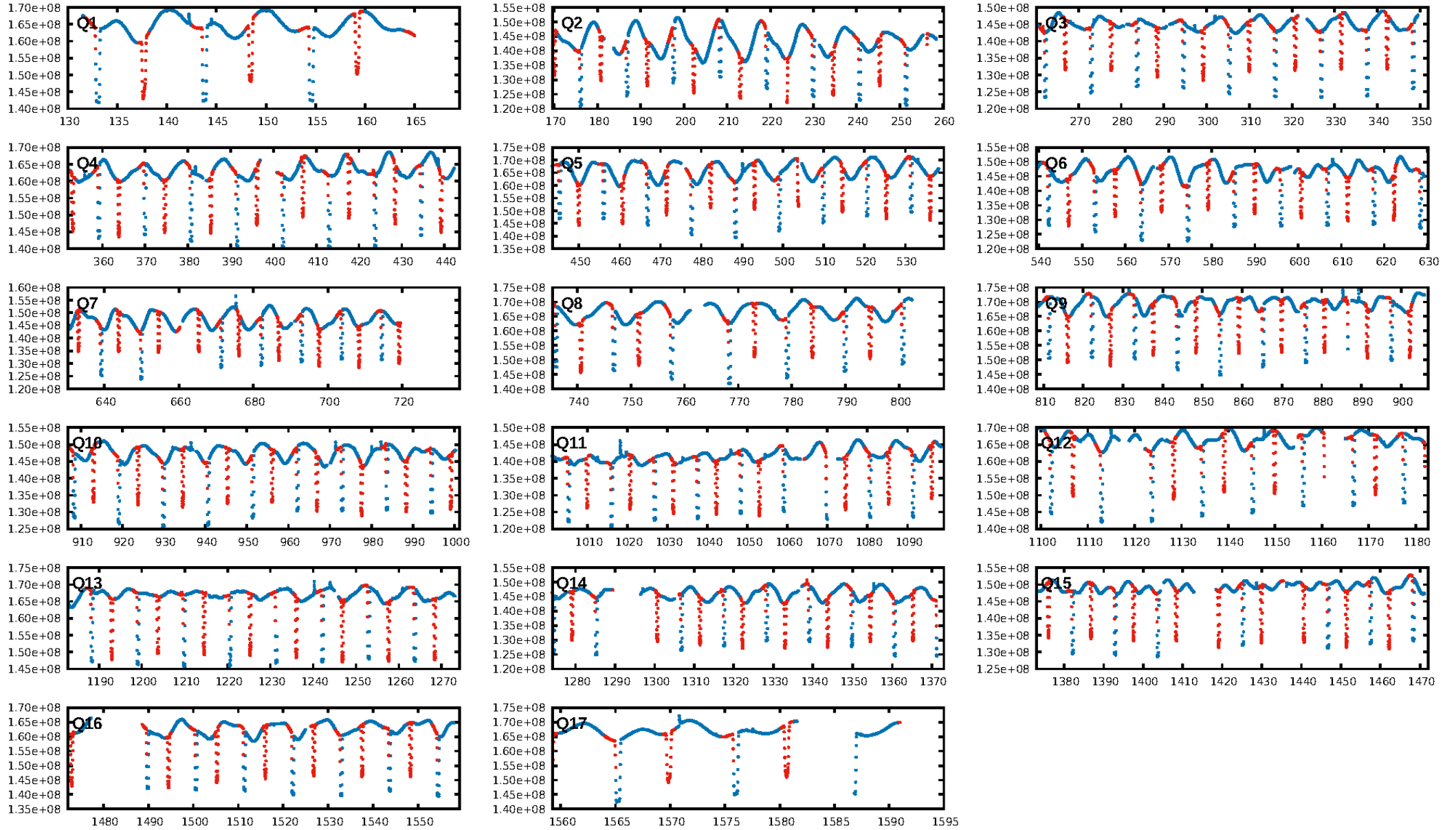
ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [6.81σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGoF-sig: 0.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [243/243]  
GhostDiagnostic-chr: 1.235  
Centroid-sig: 0.0%  
Centroid-so: 0.156 arcsec [257.25σ]  
OotOffset-rm: 0.051 arcsec [0.77σ]  
KicOffset-rm: 0.121 arcsec [1.80σ]  
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: 31-Jan-2016 06:38:38 Z

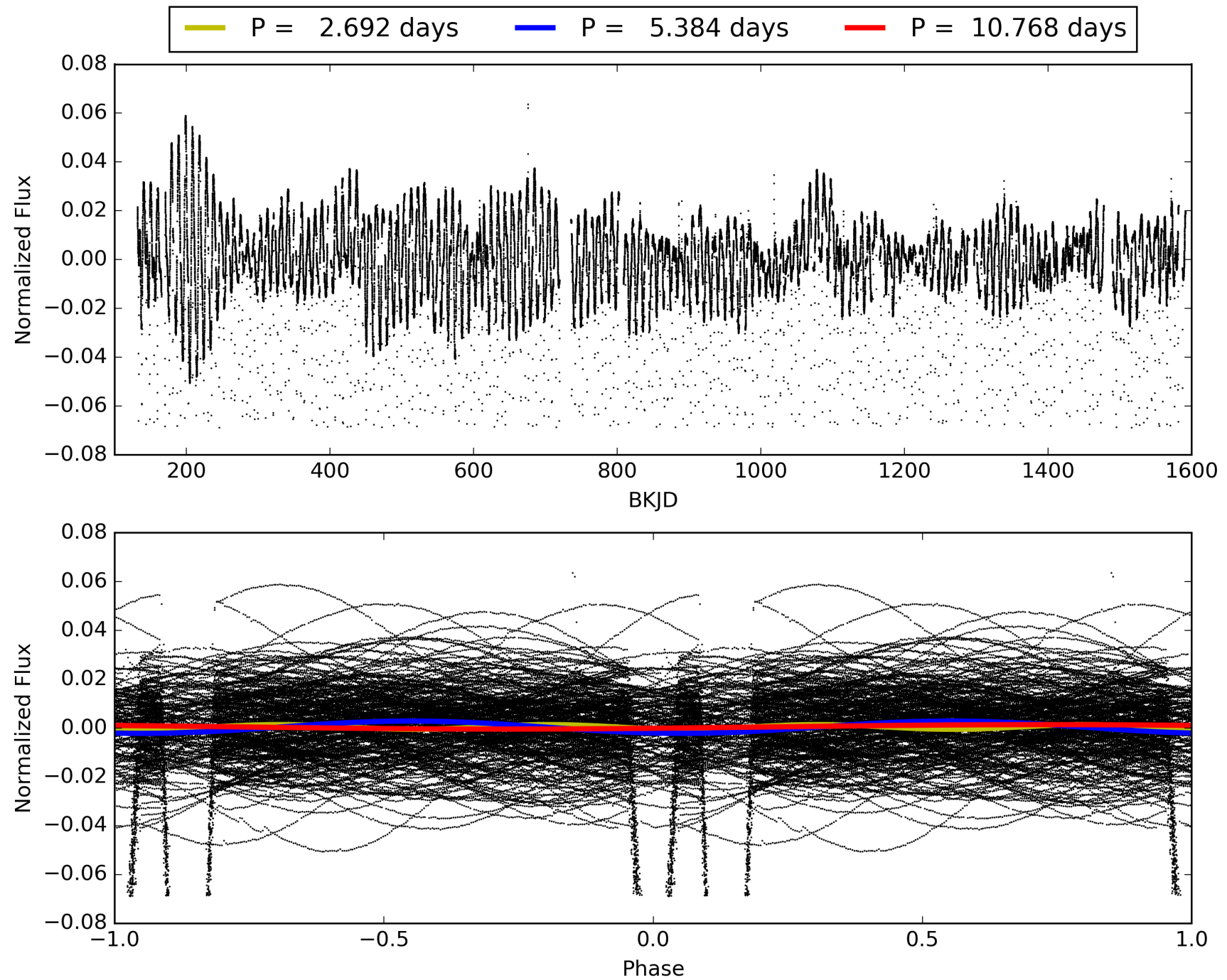
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center



# TCE 006548447-02, PDC Light Curves

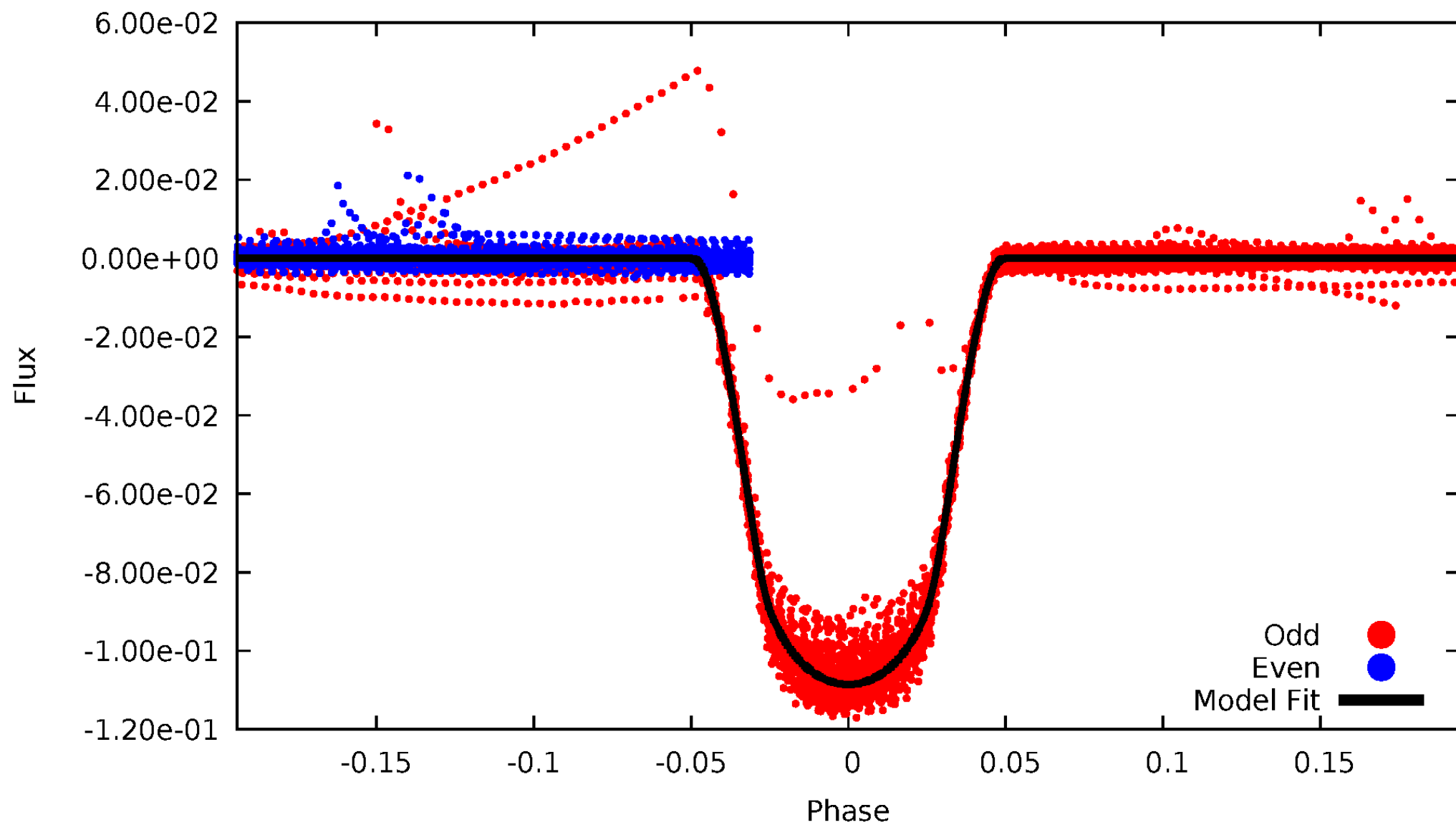


TCE 006548447-02



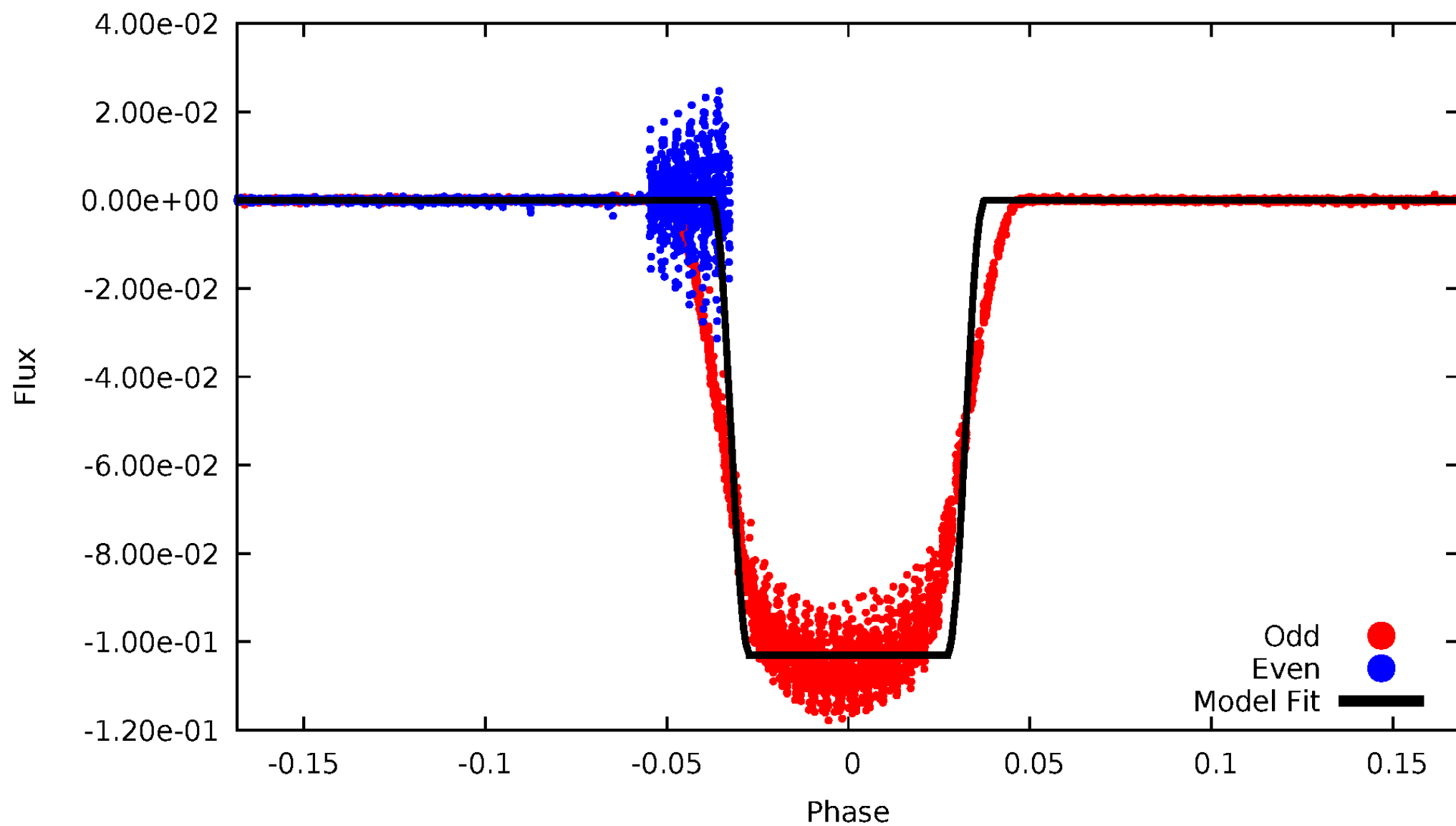
# DV Odd/Even

TCE 006548447-02



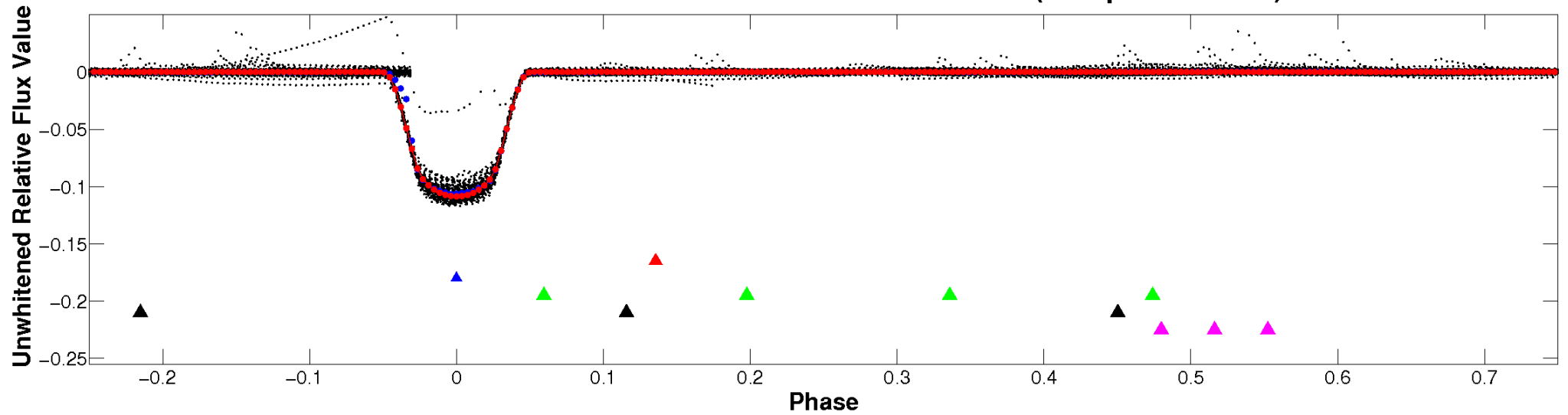
# ALT Odd/Even

TCE 006548447-02

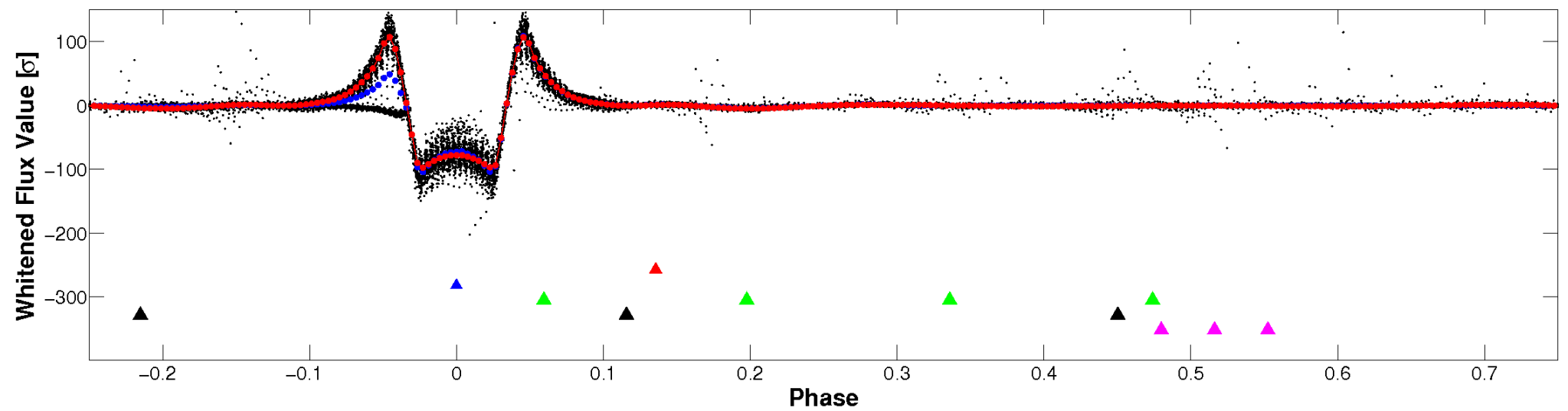


# Non-Whitened Vs. Whitened Light Curve

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

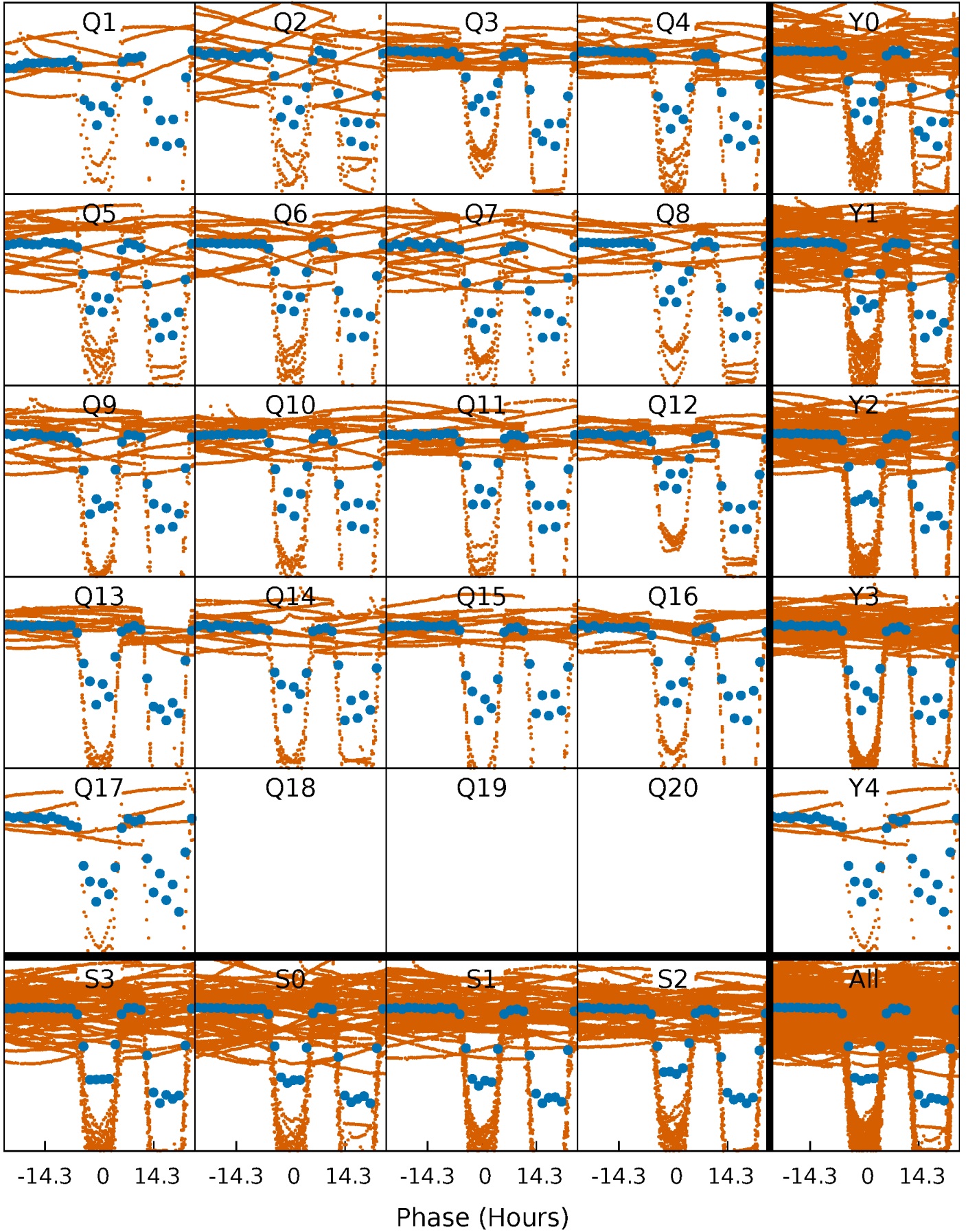


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

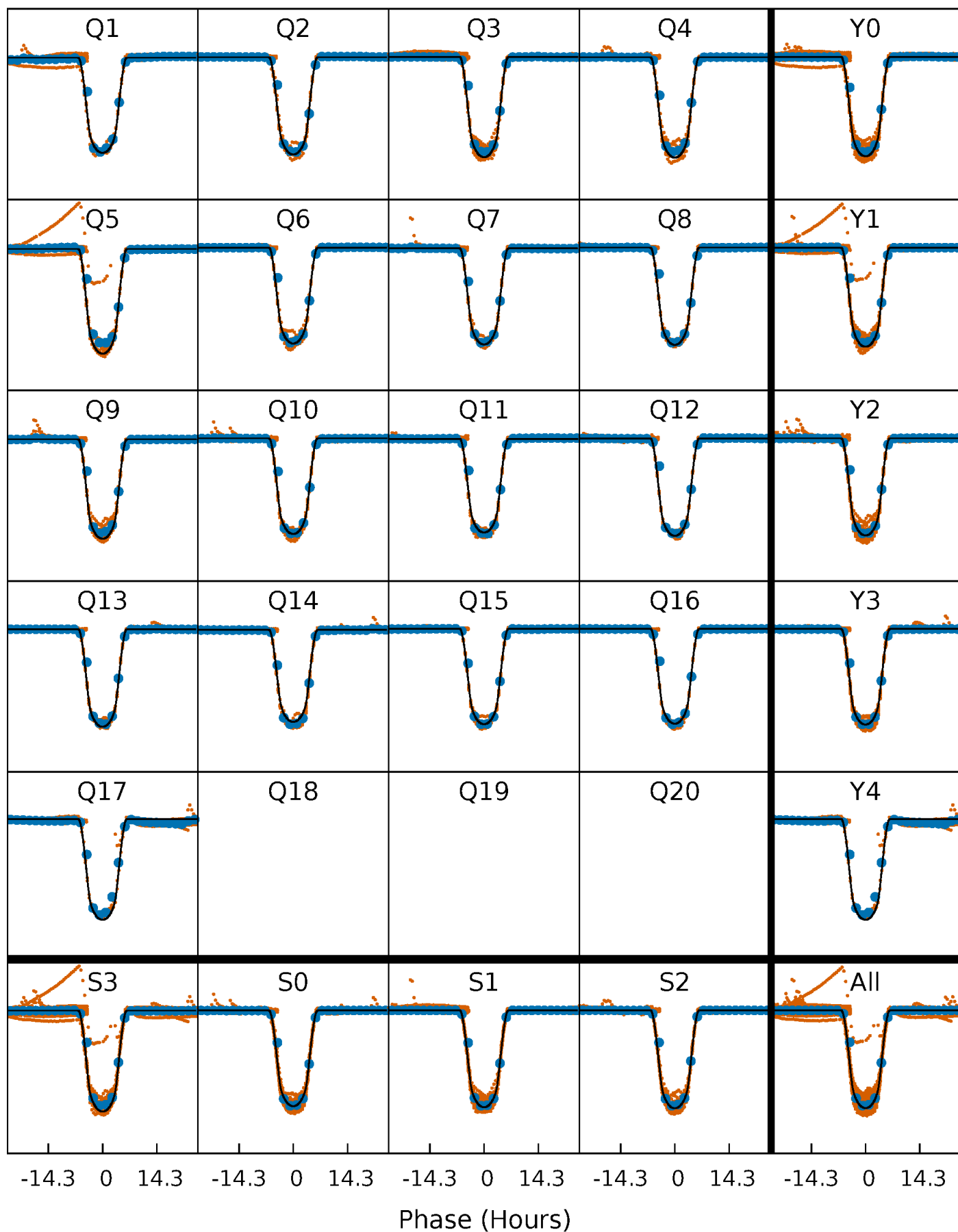
TCE 006548447-02 P= 5.384195 Days  $T_0=132.295329$  (BKJD)





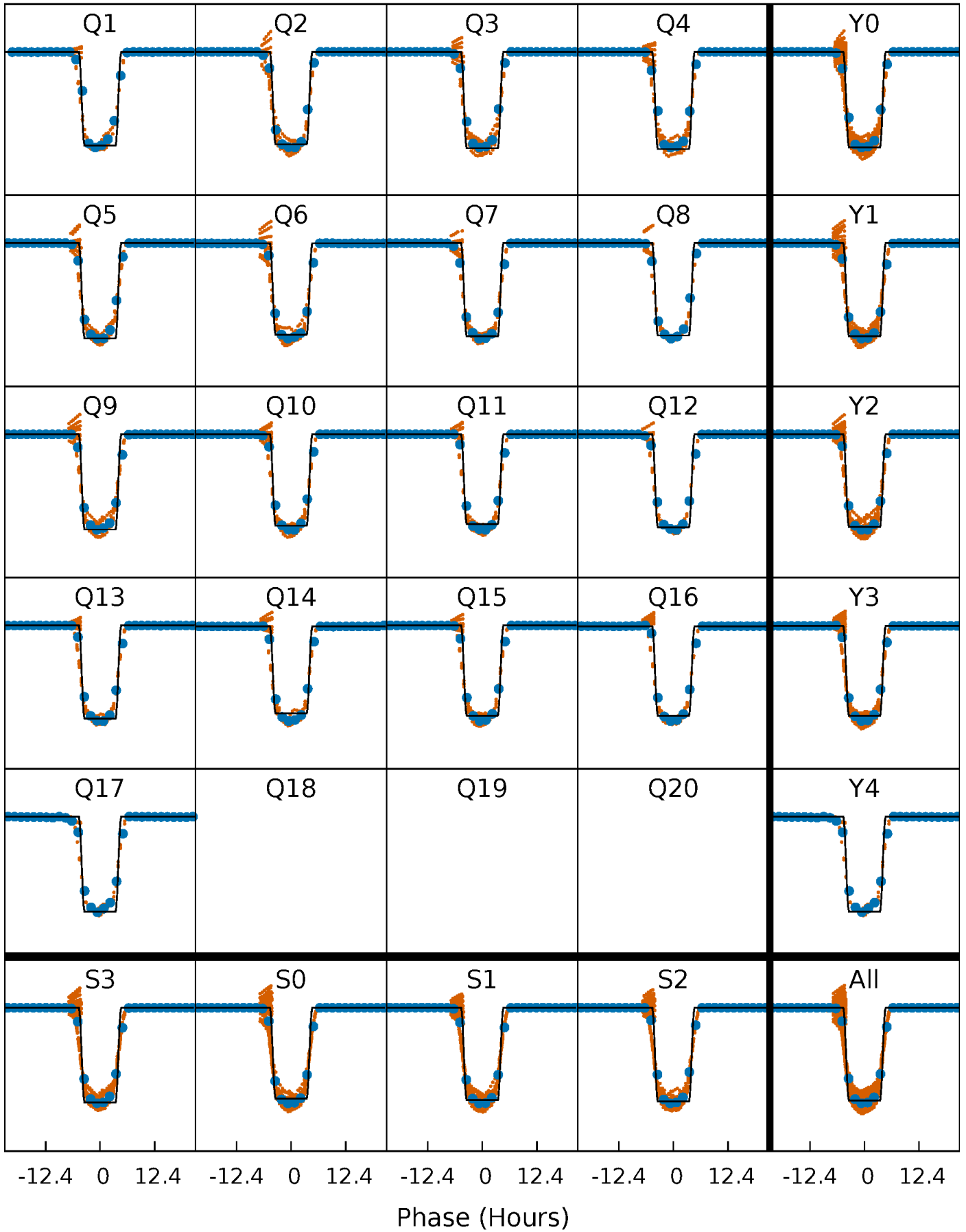
# DV Quarter-Phased Transit Curves

TCE 006548447-02 P= 5.384195 Days  $T_0=132.295329$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

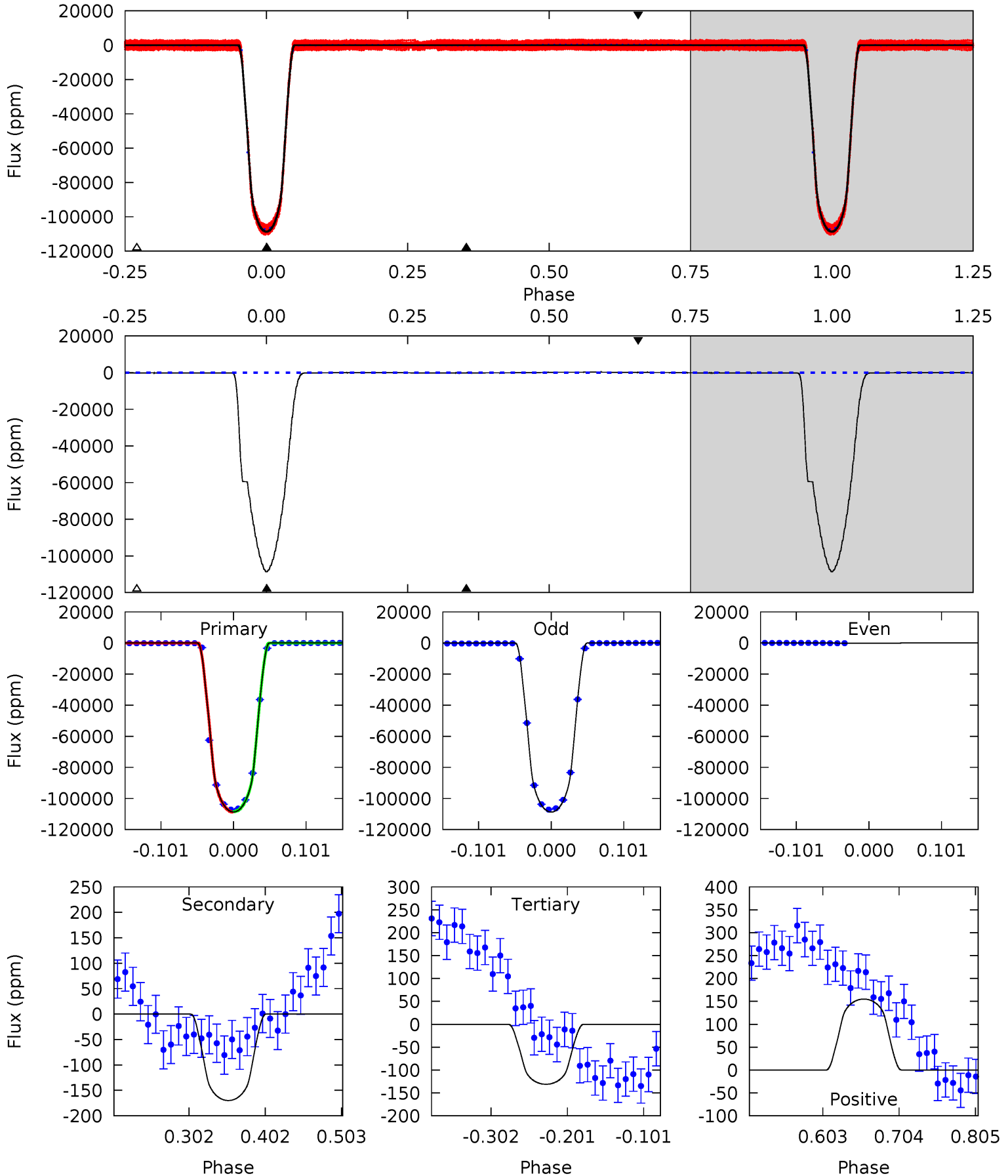
TCE 006548447-02     $P = 5.384199$  Days     $T_0 = 132.302151$  (BKJD)



# DV Model-Shift Uniqueness Test

006548447-02, P = 5.384195 Days, E = 126.911134 Days

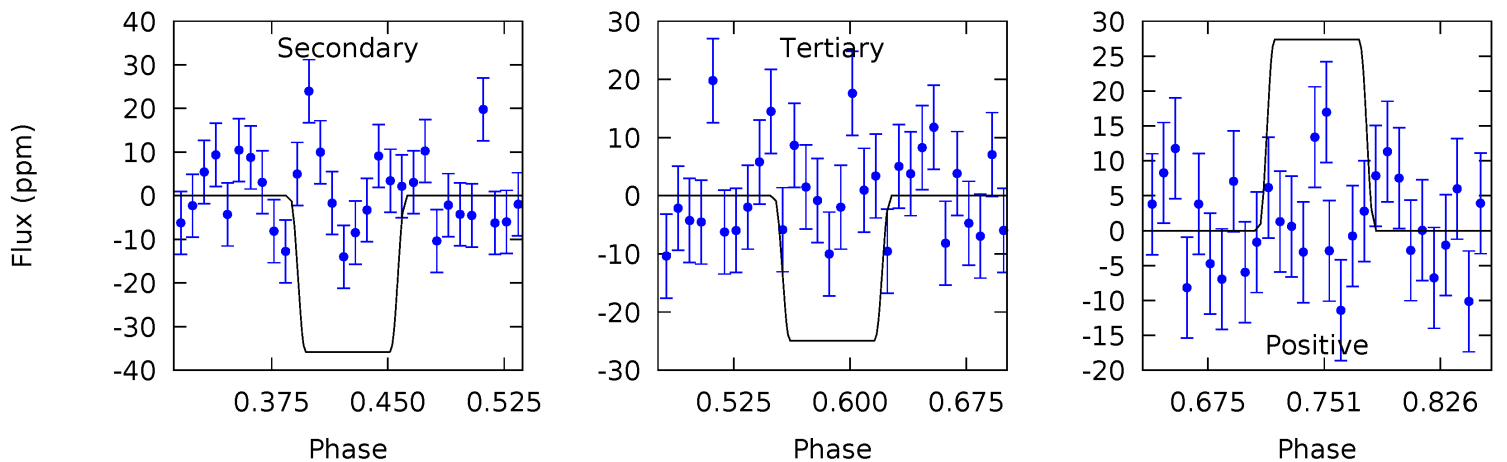
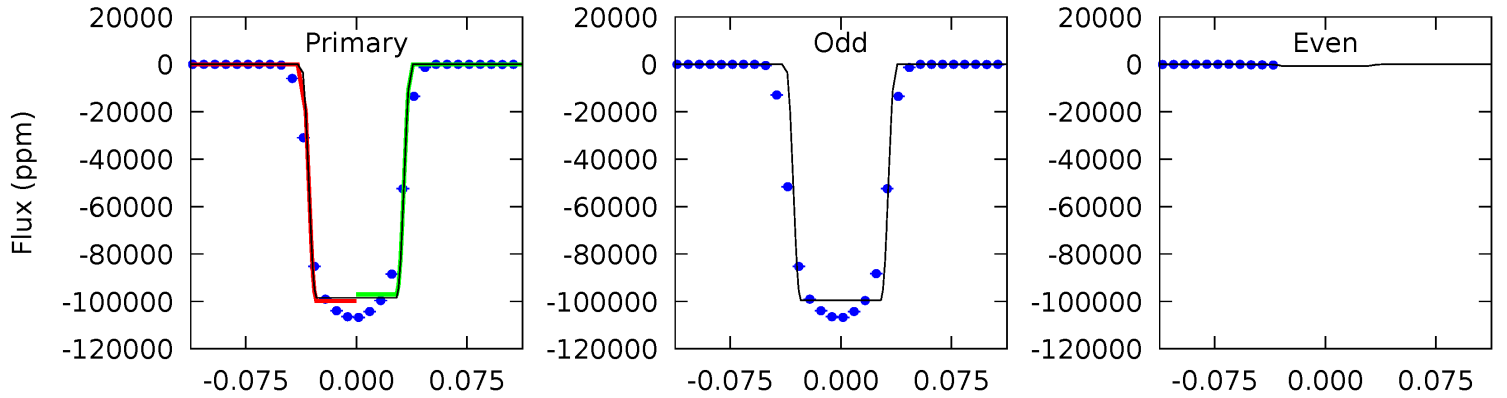
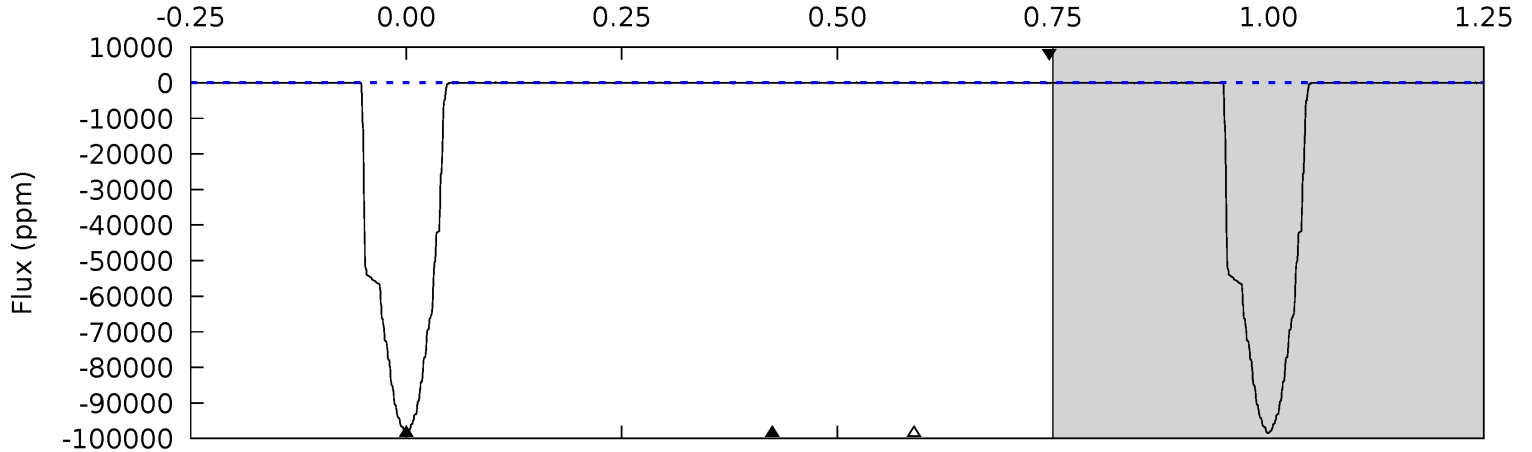
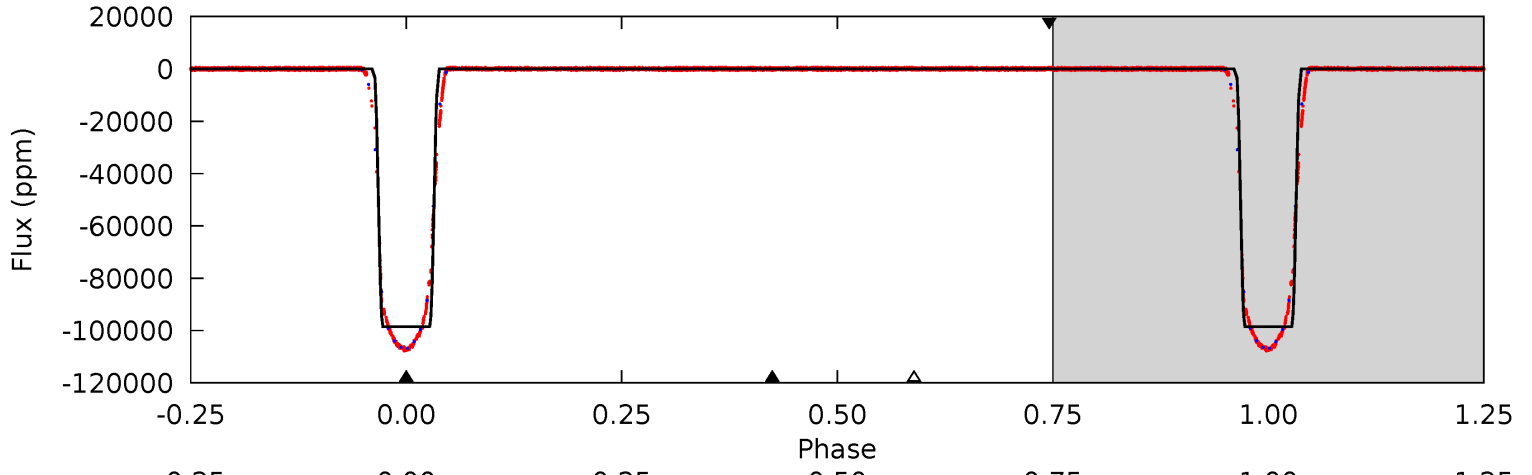
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5331	8.34	6.43	7.61	4.56	1.64	7.80	5324	5323	1.91	0.73	2873	5.67	0.00	0



# Alt Model-Shift Uniqueness Test

006548447-02, P = 5.384199 Days, E = 126.917952 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
10605	3.85	2.68	2.95	4.62	1.78	1.07	10602	10602	1.17	0.90	2075	0.90	0.00	0



### Stellar Parameters For KIC 006548447

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5226^{+174}_{-142}$	$3.970^{+0.602}_{-0.258}$	$0.000^{+0.300}_{-0.250}$	$1.643^{+0.851}_{-0.851}$	$0.921^{+0.101}_{-0.112}$	$0.292^{+1.995}_{-0.200}$
	+3%/-3%	+15%/-6%	+inf%/-inf%	+52%/-52%	+11%/-12%	+683%/-68%
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 006548447-02 / KOI 6730.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-170 \pm 20$	$50.30^{+14.36}_{-14.63}$	$1658^{+230}_{-247}$	$-2139^{+355}_{-195}$	$0.126^{+0.123}_{-0.049}$
Alt.	$-36 \pm 9$	$53.95^{+14.36}_{-14.30}$	$1665^{+211}_{-260}$	$-2258^{+182}_{-138}$	$0.022^{+0.024}_{-0.009}$

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

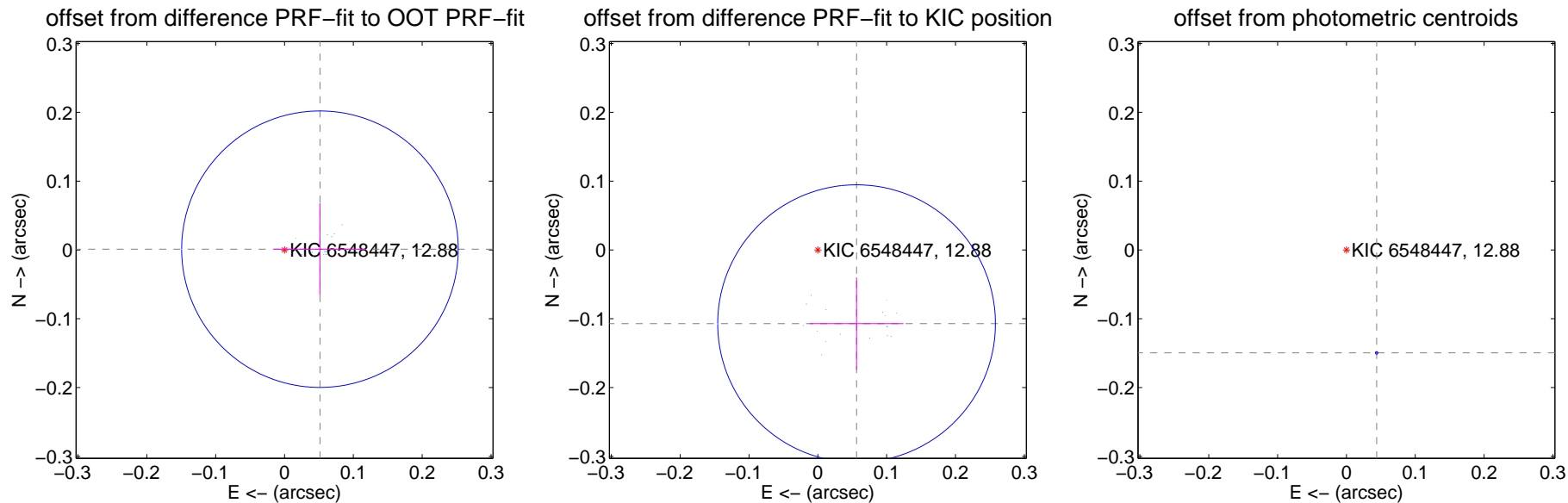
## DV Centroid Data

Supplemental centroid analysis for 006548447-02. Kepler magnitude: 12.88. Transit SNR 3552.37

There are 17 quarters with good PRF difference image offsets

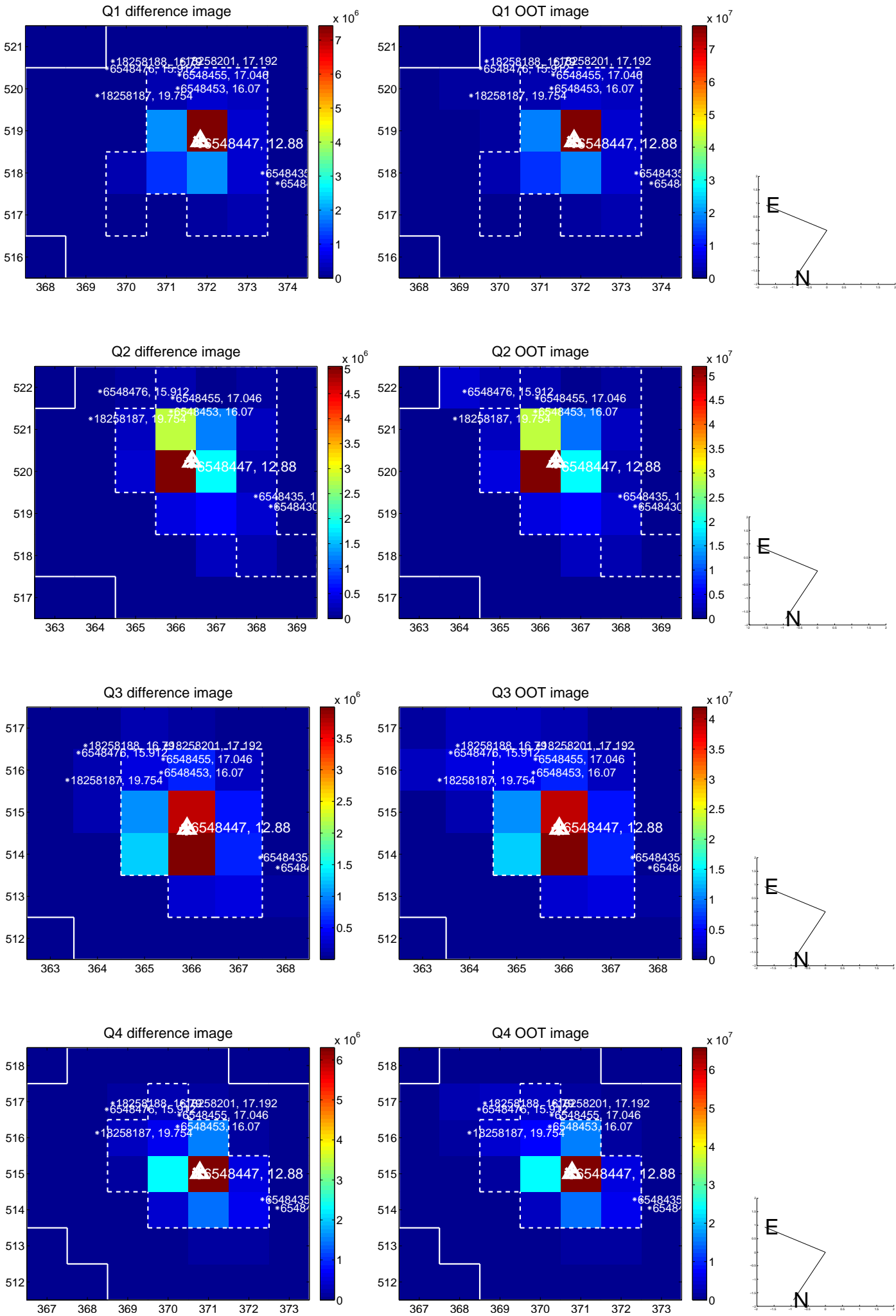
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.051 \pm 0.067$	0.77	$-0.051 \pm 0.067$	$0.001 \pm 0.067$
PRF-fit source offset from KIC position	$0.121 \pm 0.067$	1.80	$-0.056 \pm 0.068$	$-0.107 \pm 0.067$
photometric centroid source offset	$0.16 \pm 0.00$	<b>257.25</b>	$-0.04 \pm 0.00$	$-0.15 \pm 0.00$

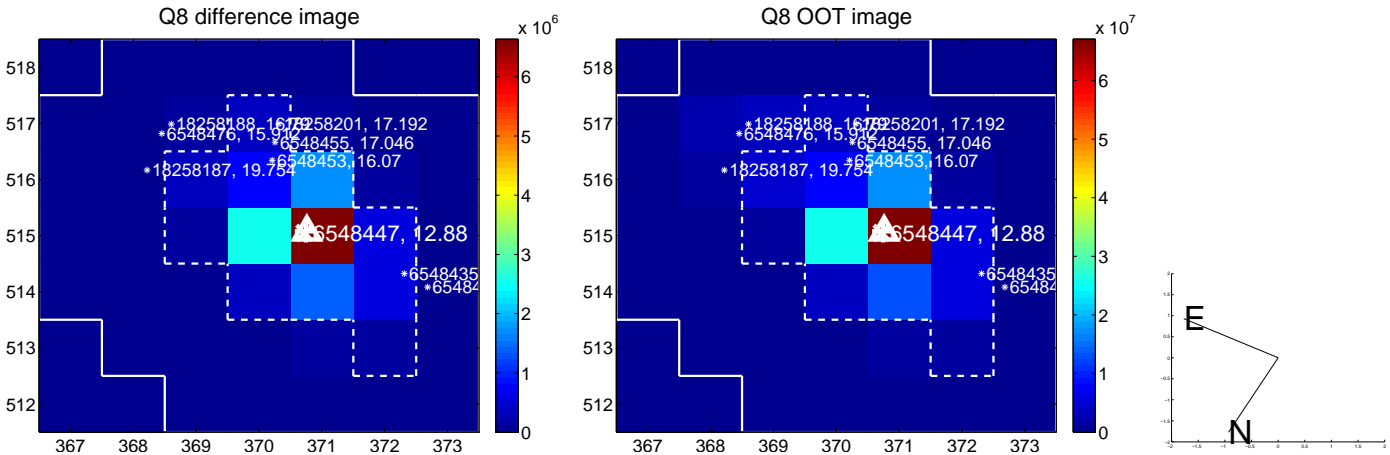
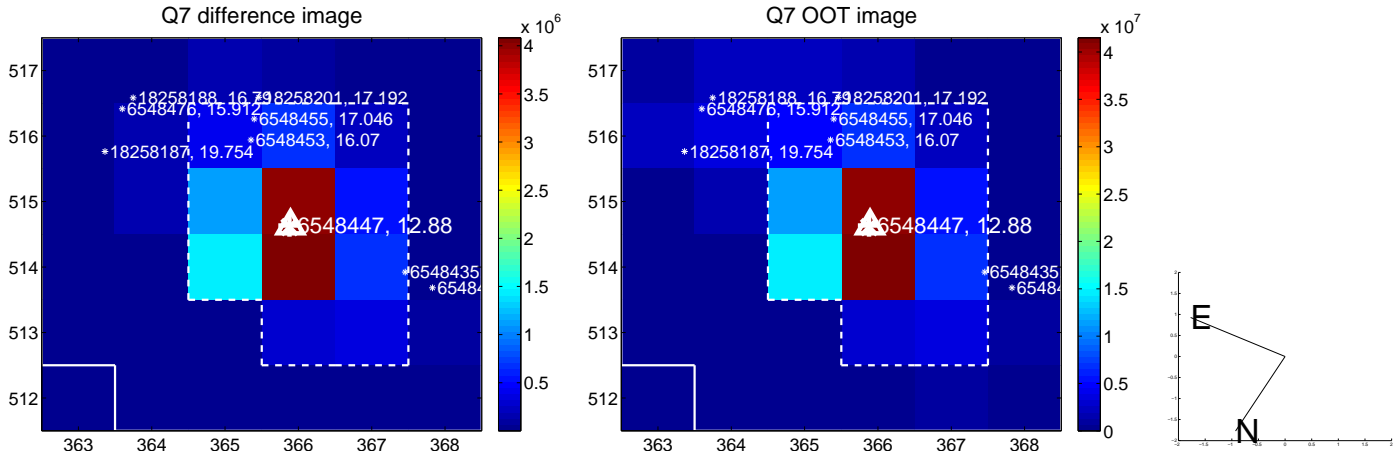
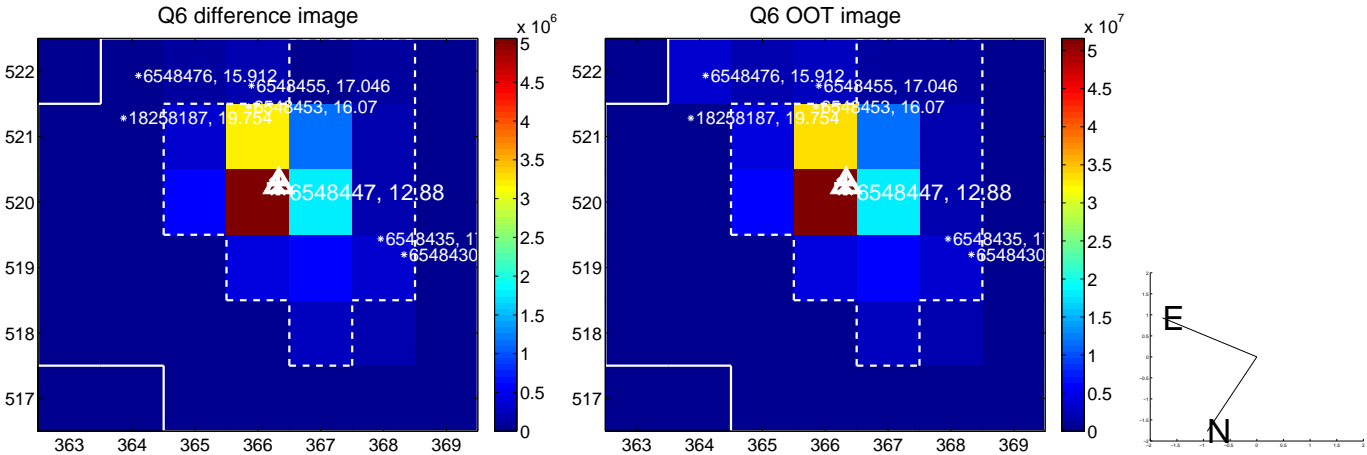
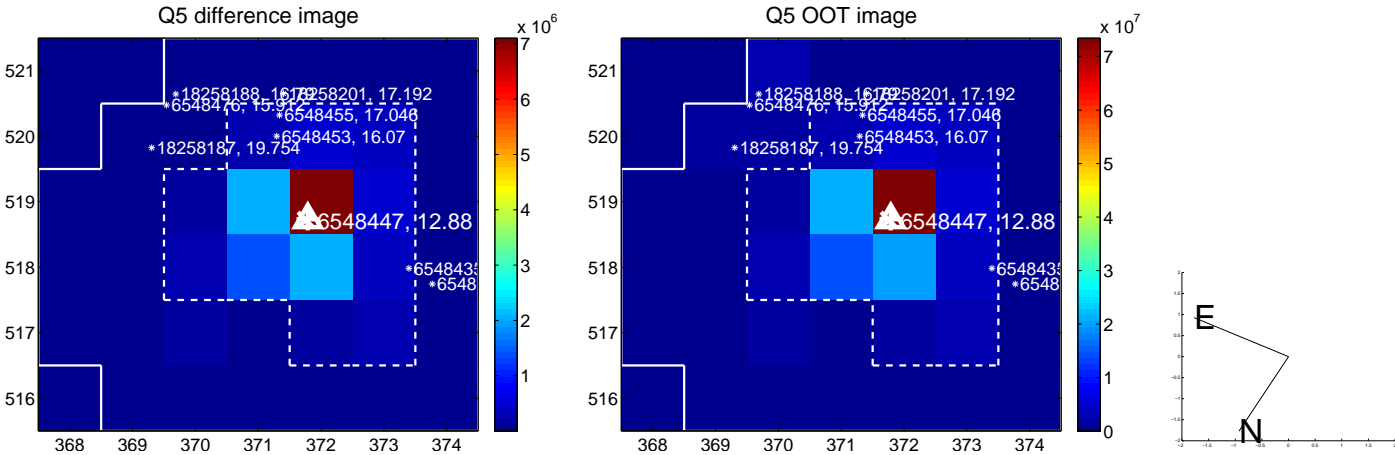


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

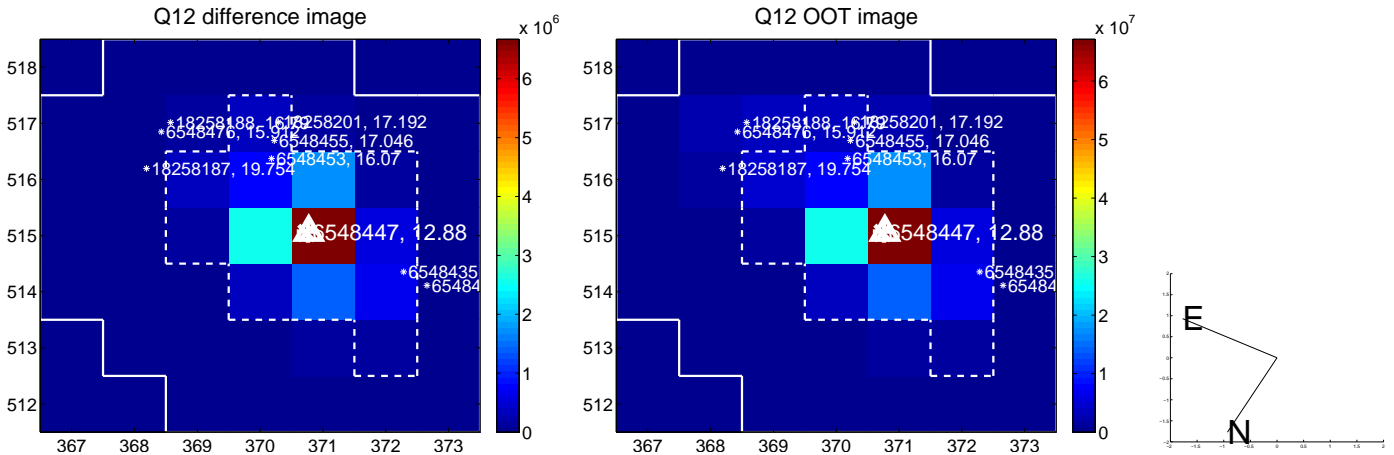
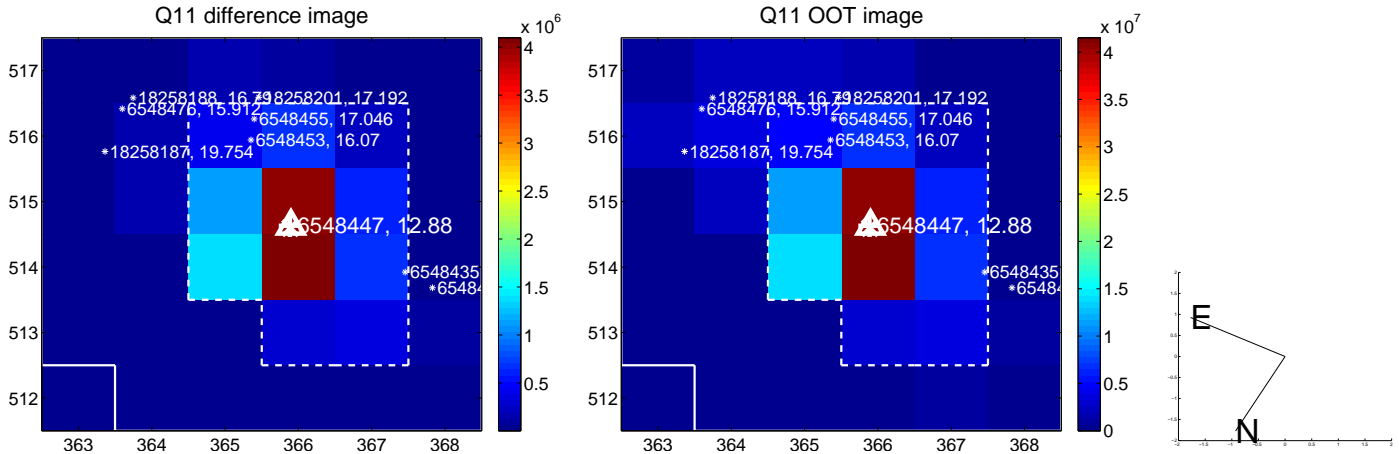
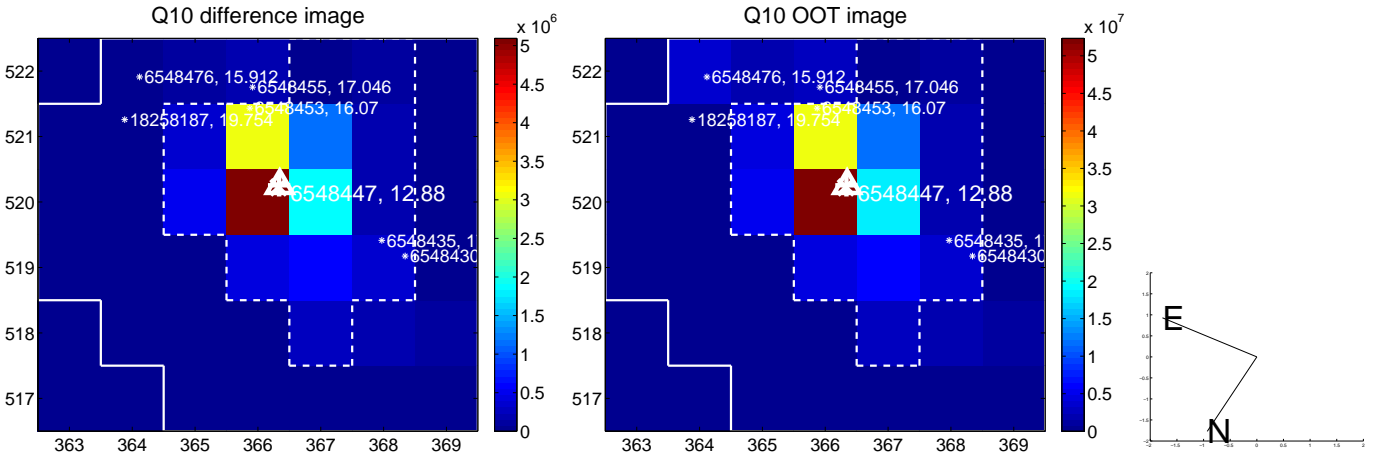
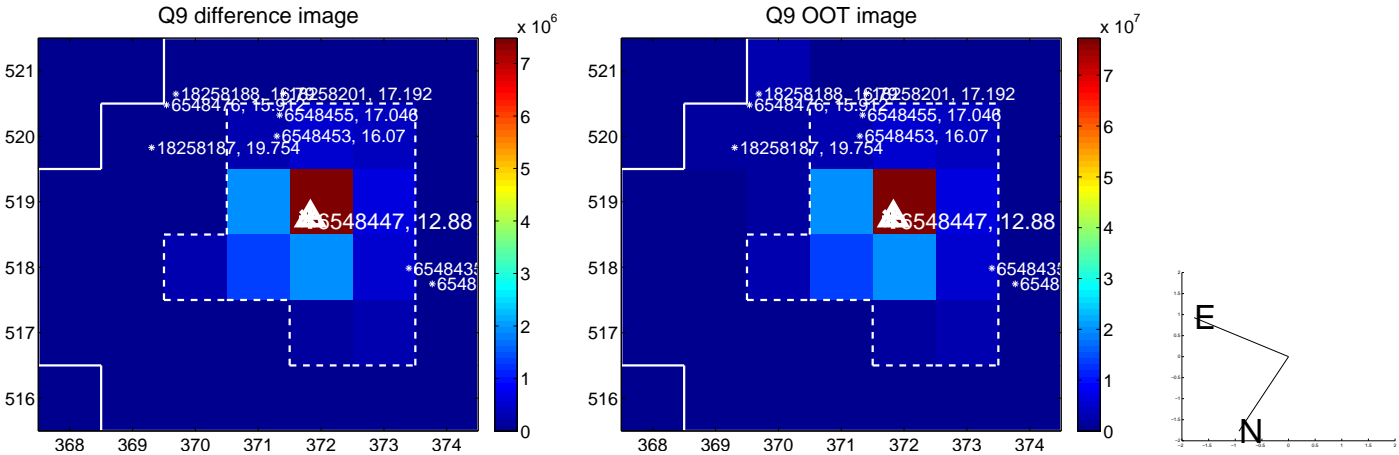


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

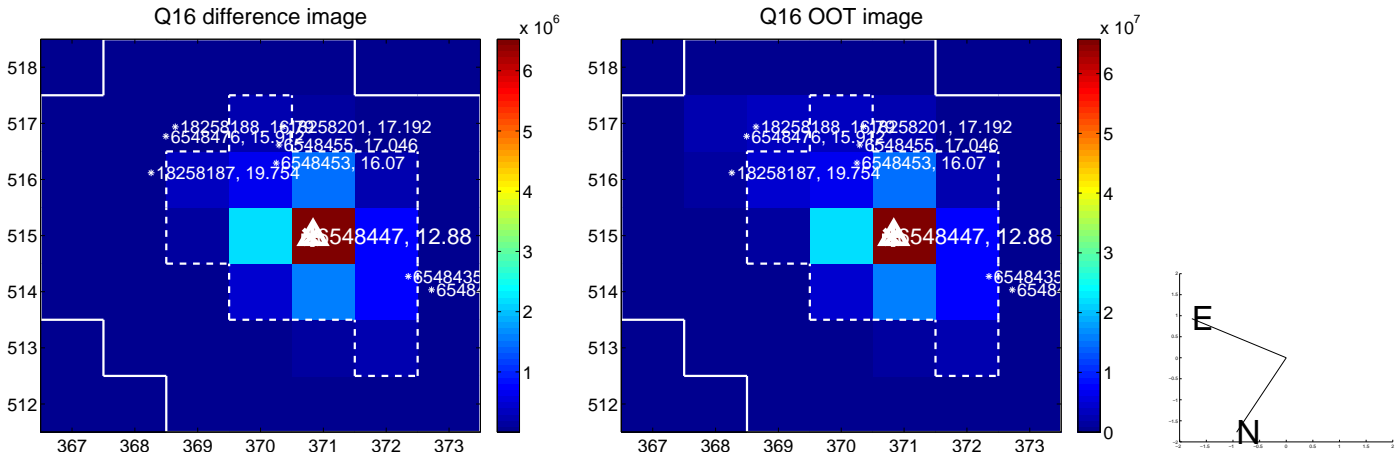
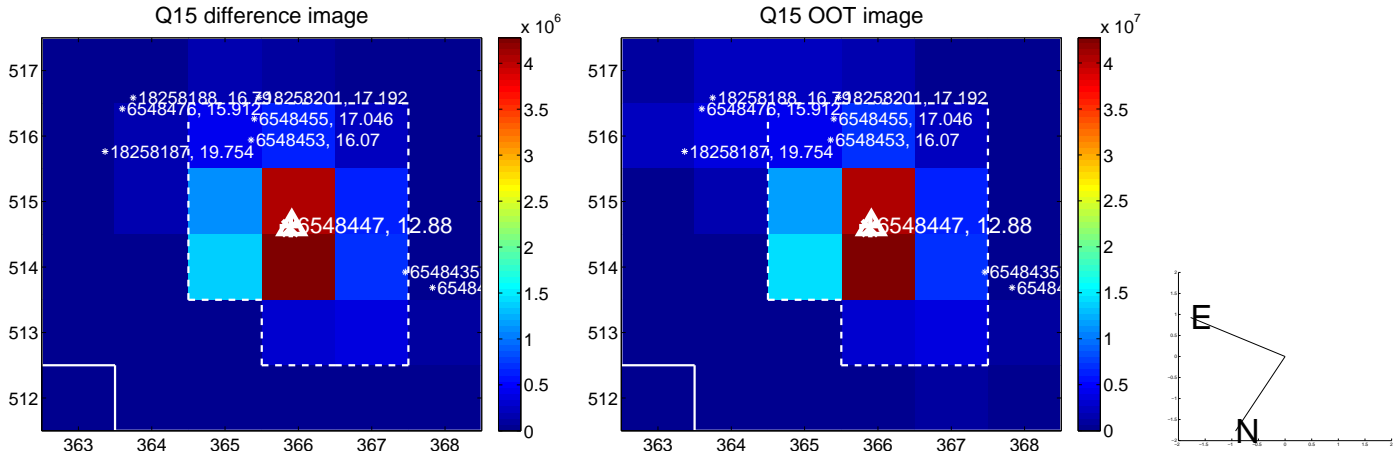
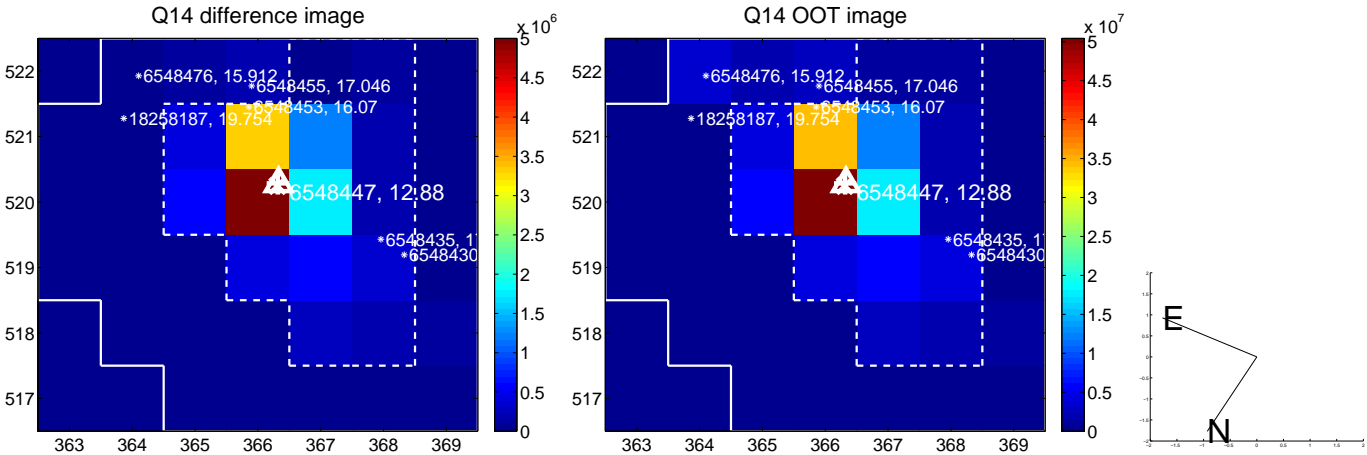
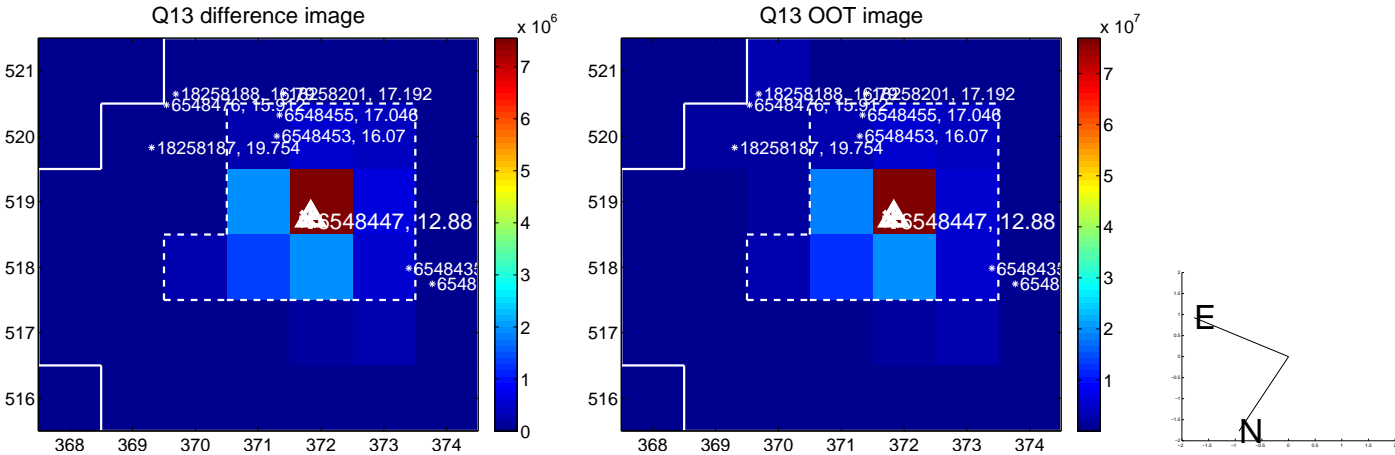




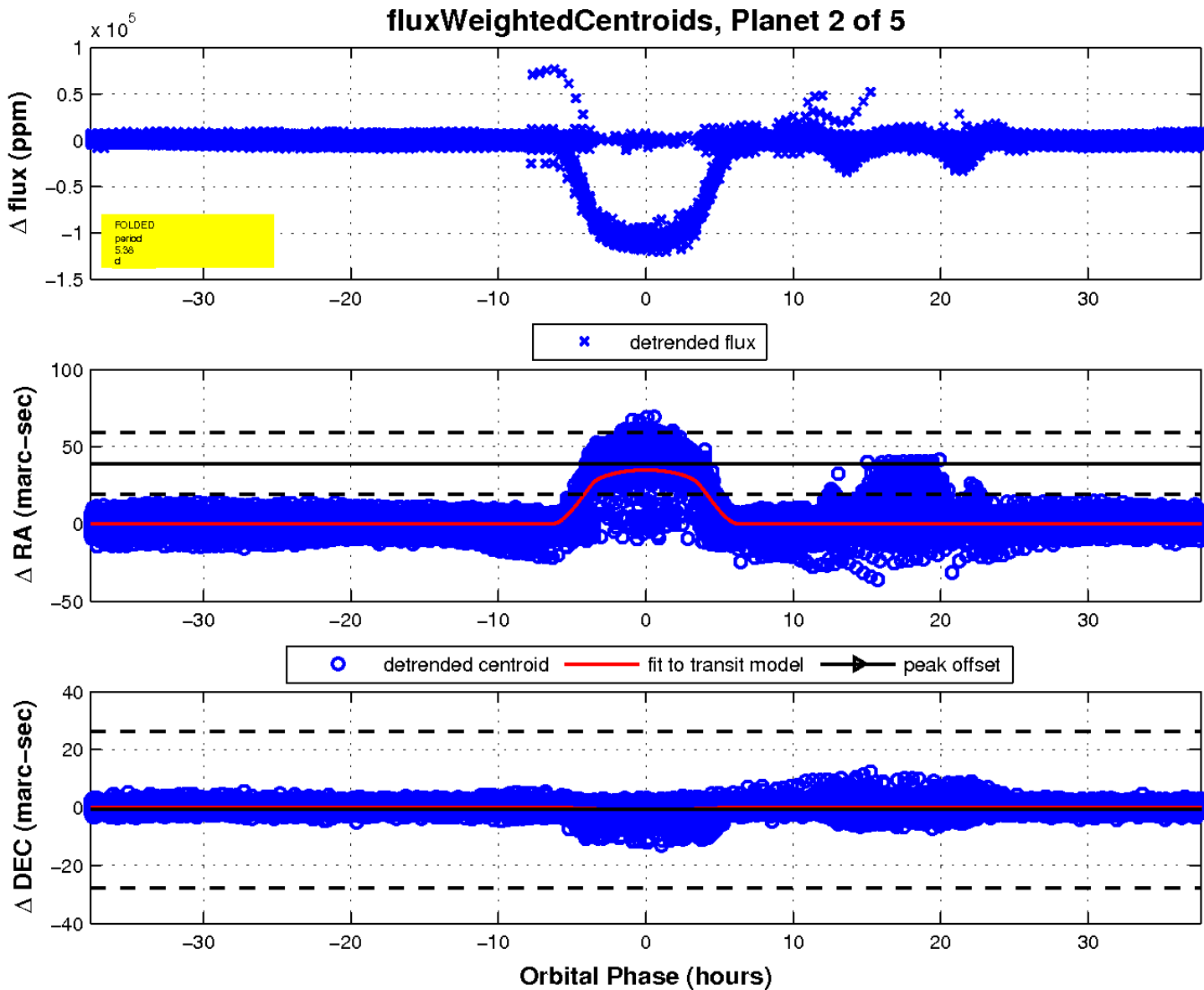
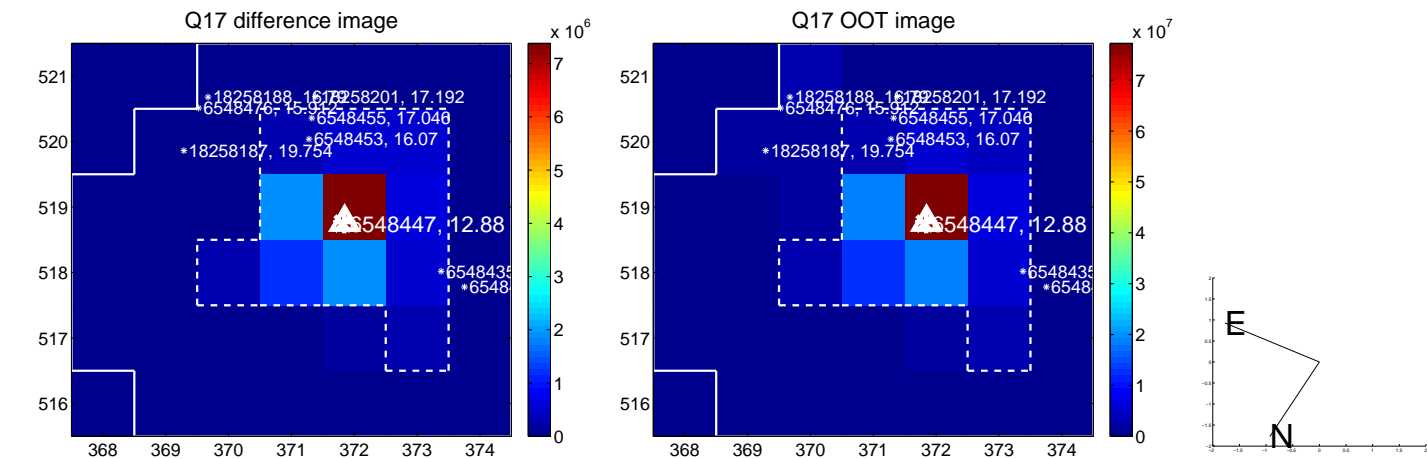
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

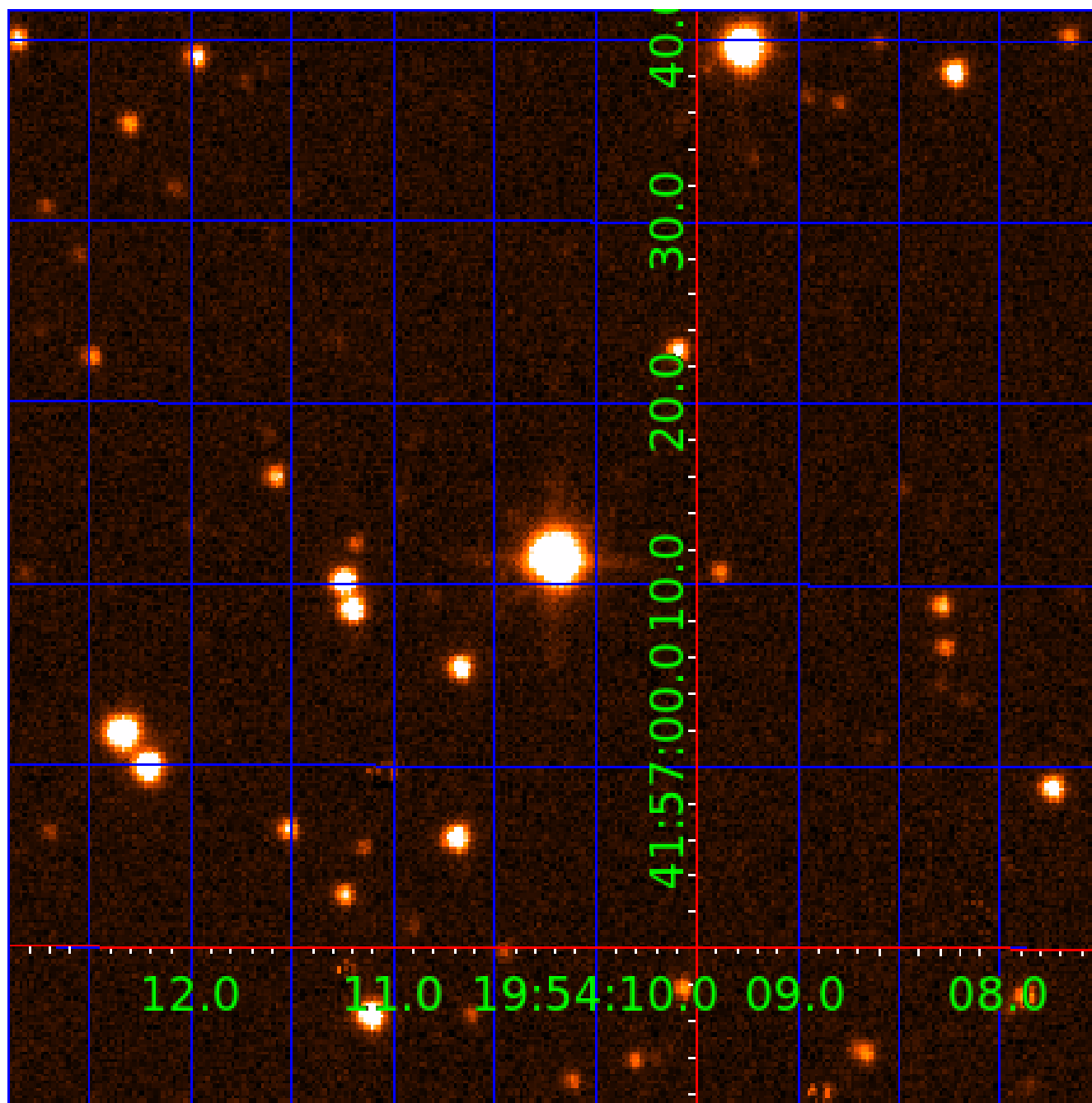


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006548447

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006548447-01	OBS	No	10.768368	133.027331	133948.7	14.244	4108.8	2247.7	1.64	5226	58.99	209.47
006548447-02	OBS	6730.01	5.384195	132.295329	108603.7	12.553	2952.8	3552.4	1.64	5226	53.04	527.84
006548447-03	OBS	No	413.839125	301.757572	396.4	2.801	20.0	4.5	1.64	5226	3.42	1.61
006548447-04	OBS	No	491.762913	558.270046	449.9	0.505	16.1	2.9	1.64	5226	3.83	1.28
006548447-05	OBS	No	527.846533	522.541220	478.6	7.500	15.6	-1.0	1.64	5226	3.50	1.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006548447-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006548447-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
006548447-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

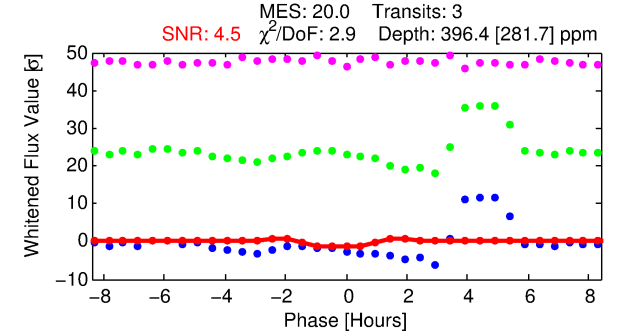
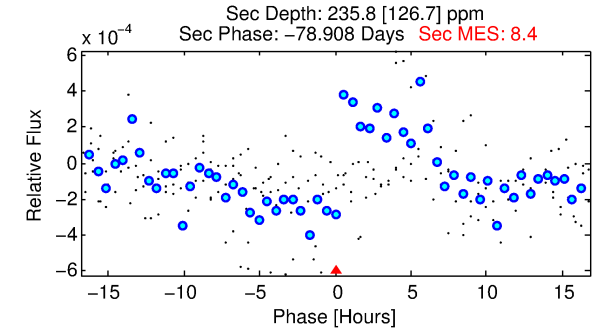
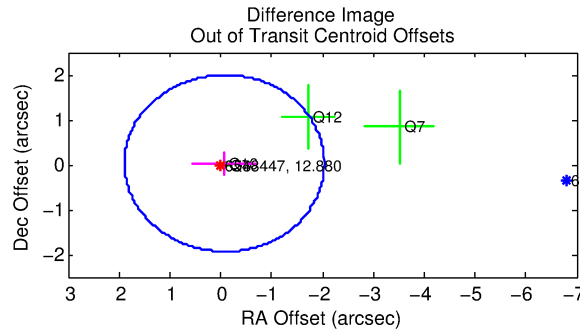
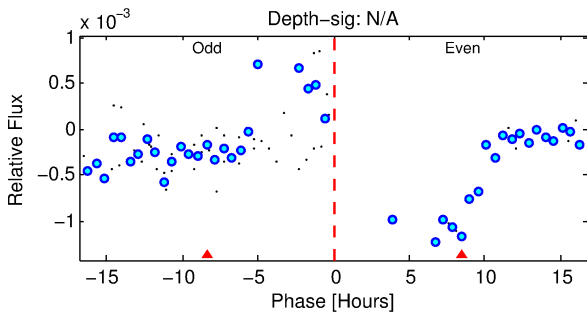
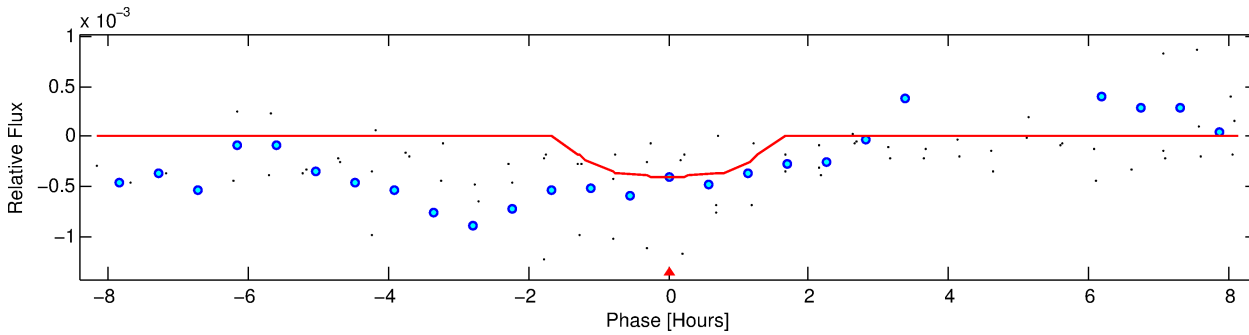
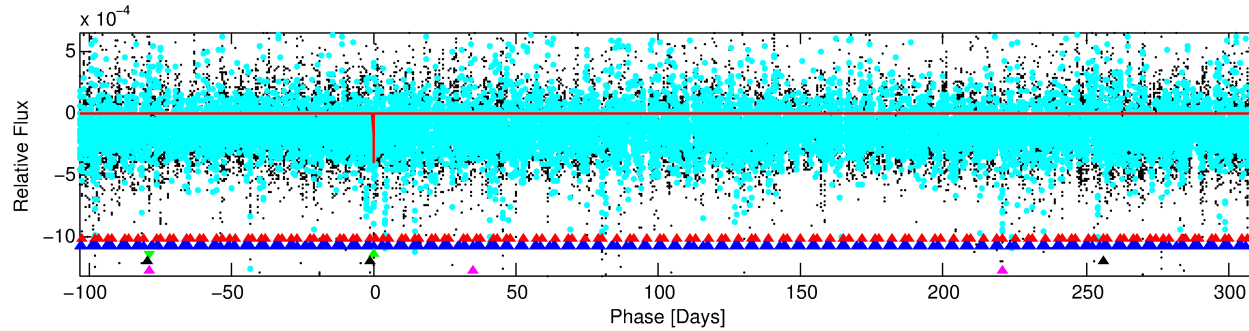
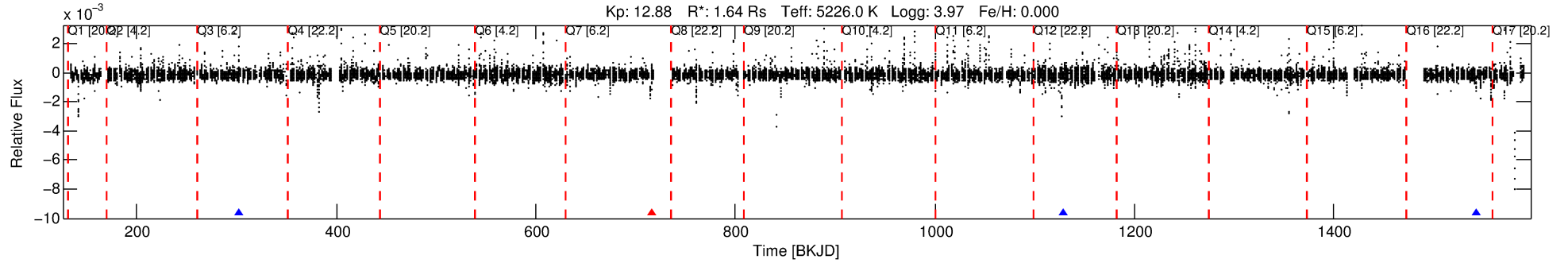
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006548447-03

No Significant Match Found

# DV One-Page Summary

KIC: 6548447 Candidate: 3 of 5 Period: 413.839 d  
KOI: K06730 Corr: No Ephemeris Match



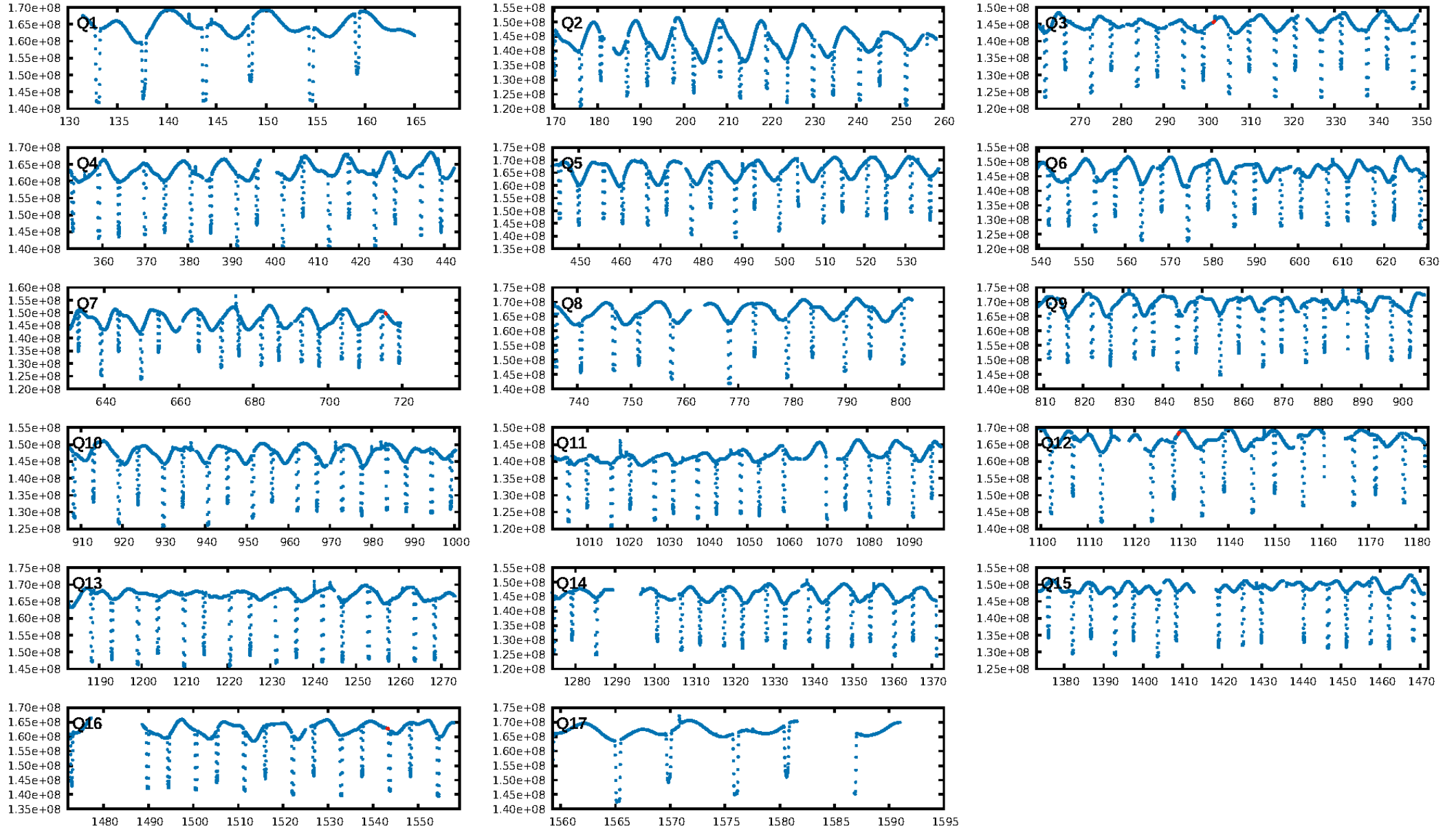
## DV Fit Results:

Period = 413.83913 [0.02027] d  
Epoch = 301.7576 [0.0313] BKJD  
Rp/R\* = 0.0191 [0.2319]  
a/R\* = 902.01 [40021.76]  
b = 0.63 [43.23]  
Seff = 1.62 [1.61]  
Teq = 287 [72] K  
Rp = 3.43 [41.62] Re  
a = 1.0568 [0.6096] AU  
Ag = 12350.10 [300173.62] [0.04σ]  
Teffp = 4685 [28447] K [0.15σ]

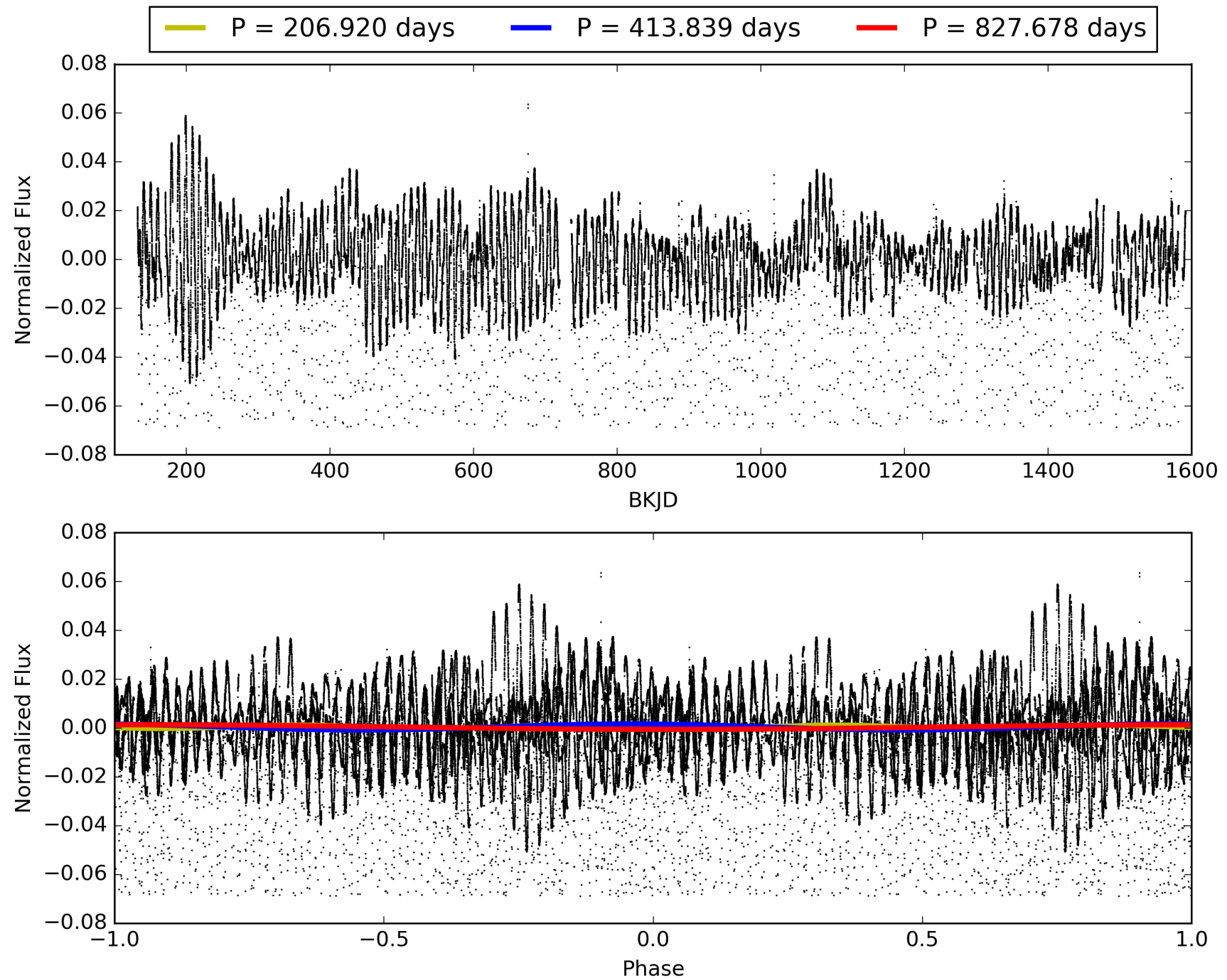
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [666.36σ]  
LongPeriod-sig: 100.0% [656.95σ]  
ModelChiSquare2-sig: 0.0%  
ModelChiSquareGof-sig: 15.2%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.67 [2/3]  
GhostDiagnostic-chr: -12.81  
Centroid-sig: 11.4%  
Centroid-so: 3.400 arcsec [1.61σ]  
OotOffset-rm: 0.080 arcsec [0.12σ]  
KicOffset-rm: 0.113 arcsec [0.34σ]  
OotOffset-st: 0/2/2/0 [4]  
KicOffset-st: 0/2/2/0 [4]  
DiffImageQuality-fgm: 0.25 [1/4]  
DiffImageOverlap-fno: 0.75 [3/4]

# TCE 006548447-03, PDC Light Curves



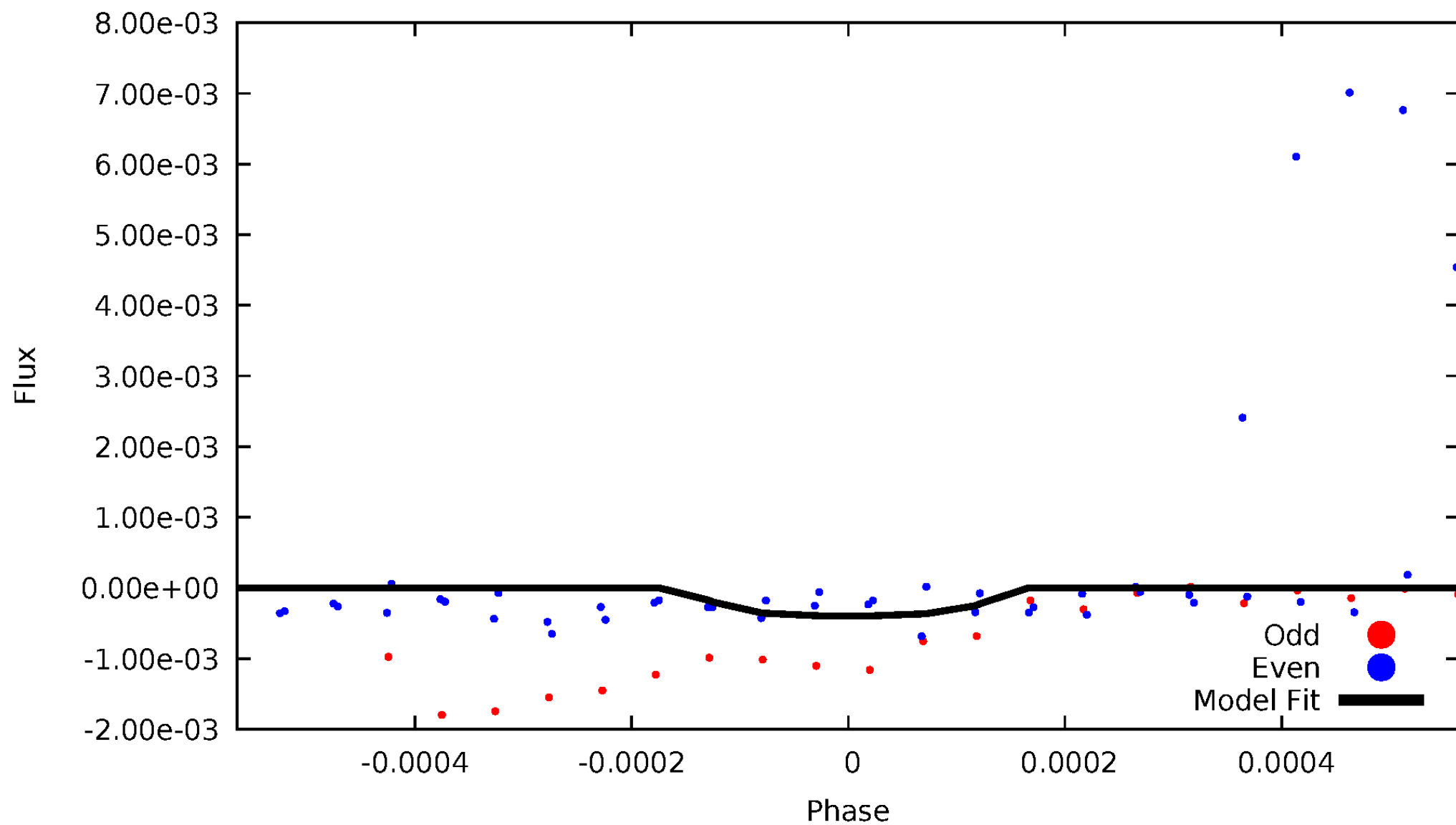
TCE 006548447-03





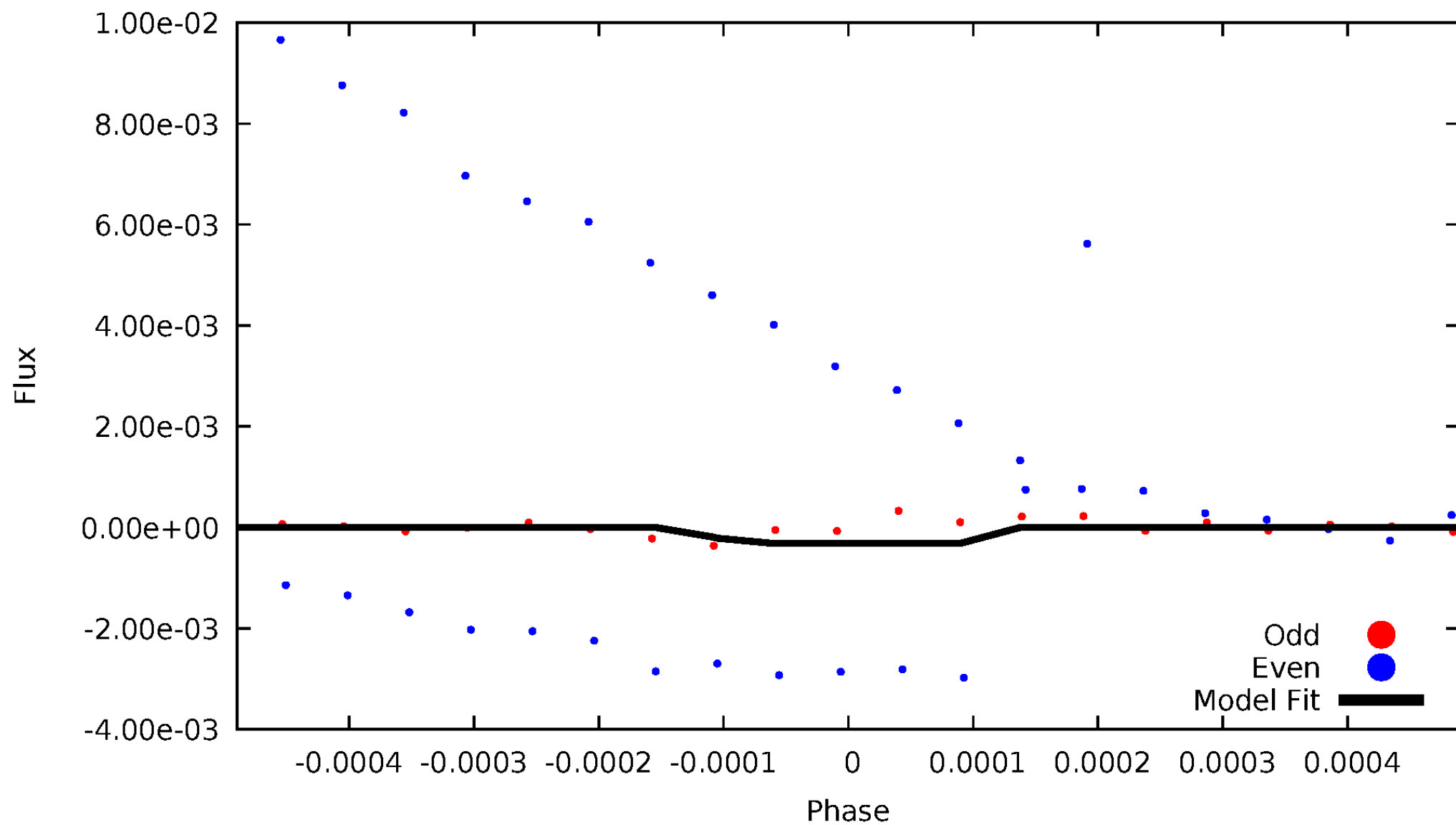
# DV Odd/Even

TCE 006548447-03



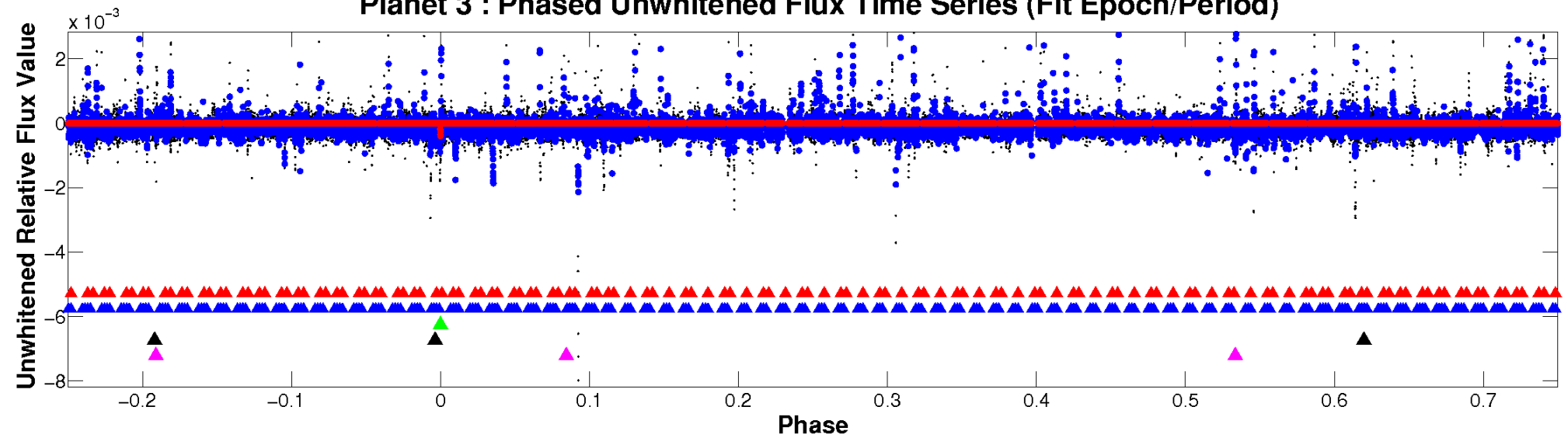
# ALT Odd/Even

TCE 006548447-03

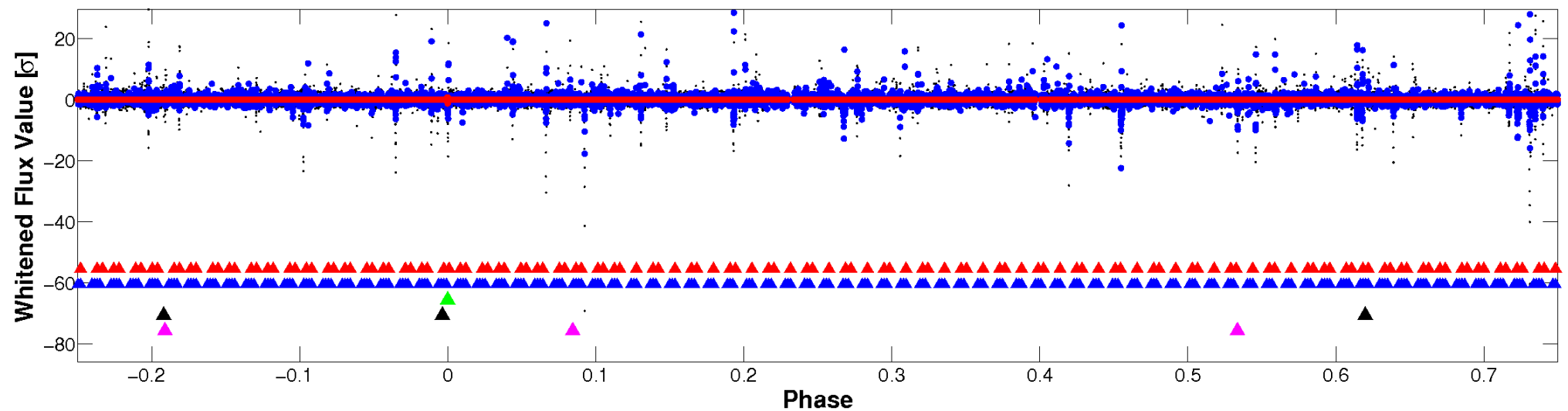


# Non-Whitened Vs. Whitened Light Curve

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

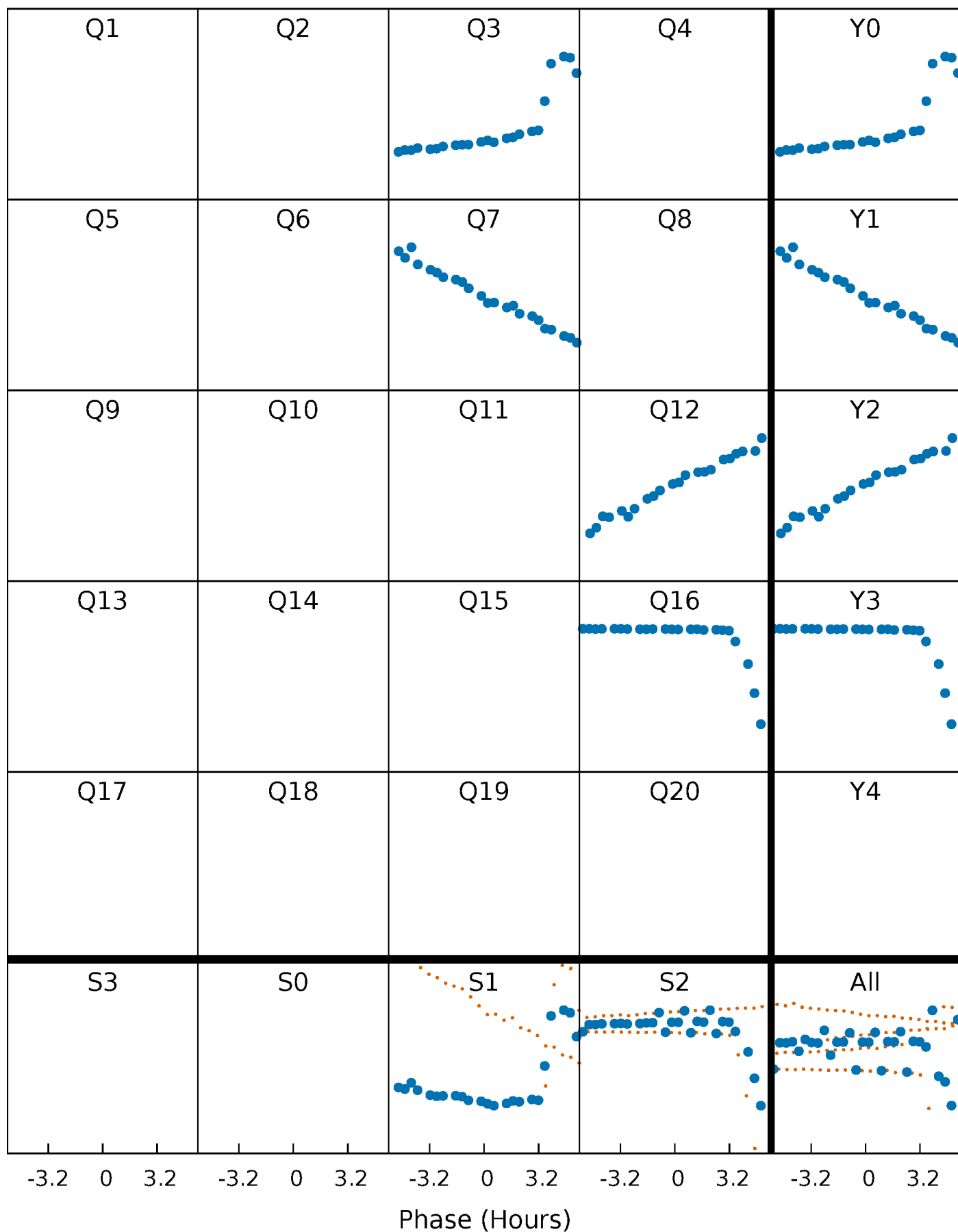


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



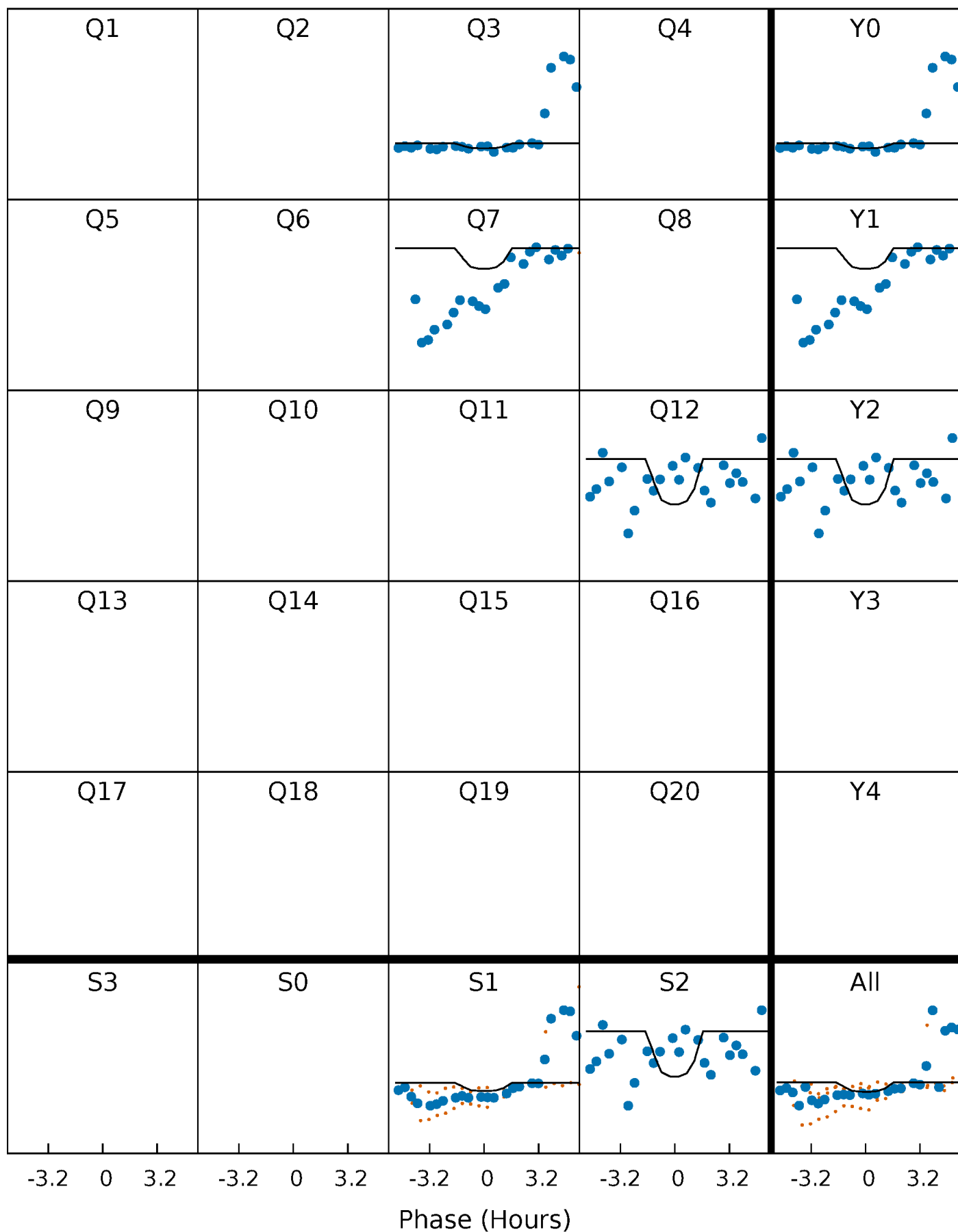
# PDC Quarter-Phased Transit Curves

TCE 006548447-03 P=413.839125 Days  $T_0=301.757572$  (BKJD)



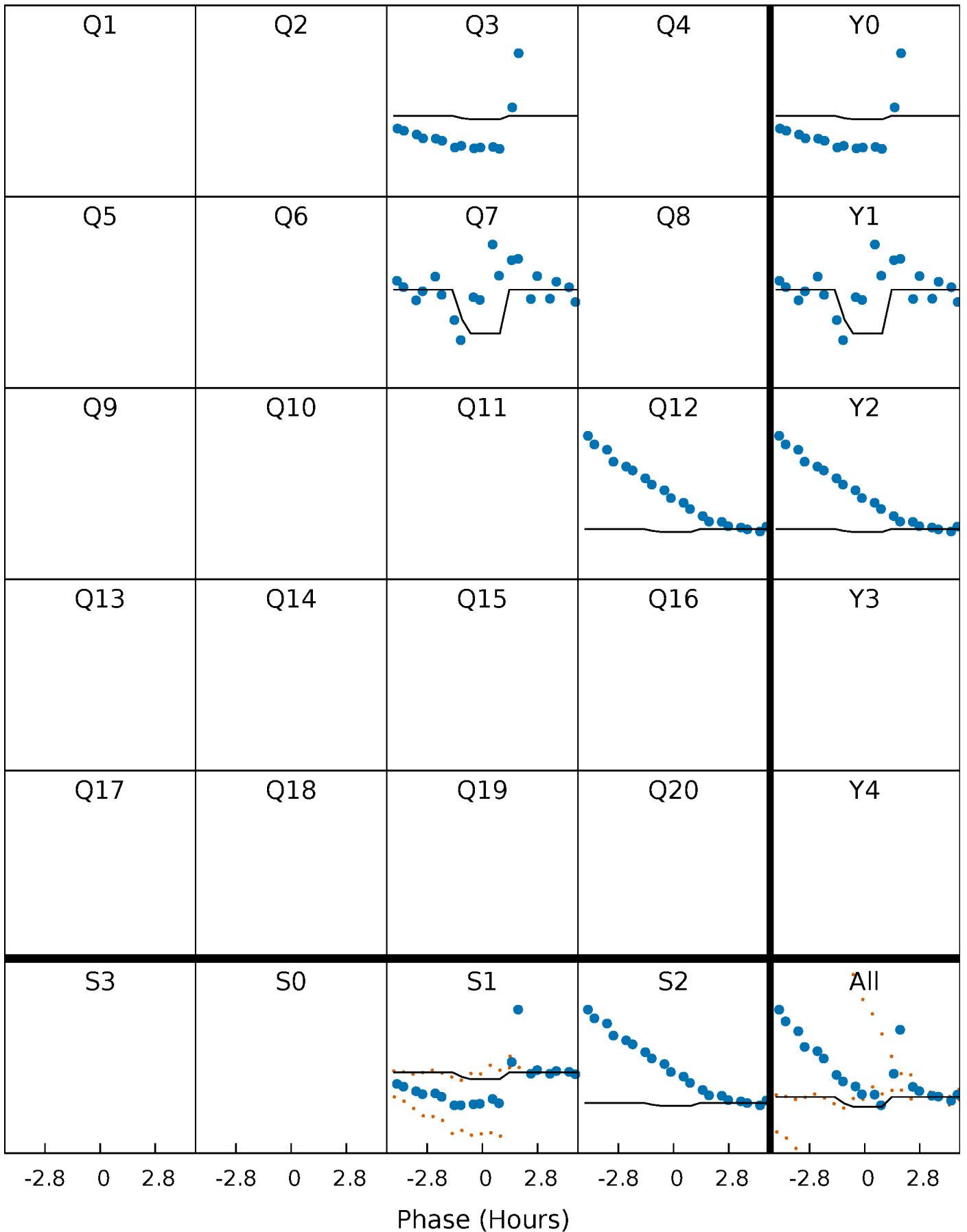
# DV Quarter-Phased Transit Curves

TCE 006548447-03     $P=413.839125$  Days     $T_0=301.757572$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

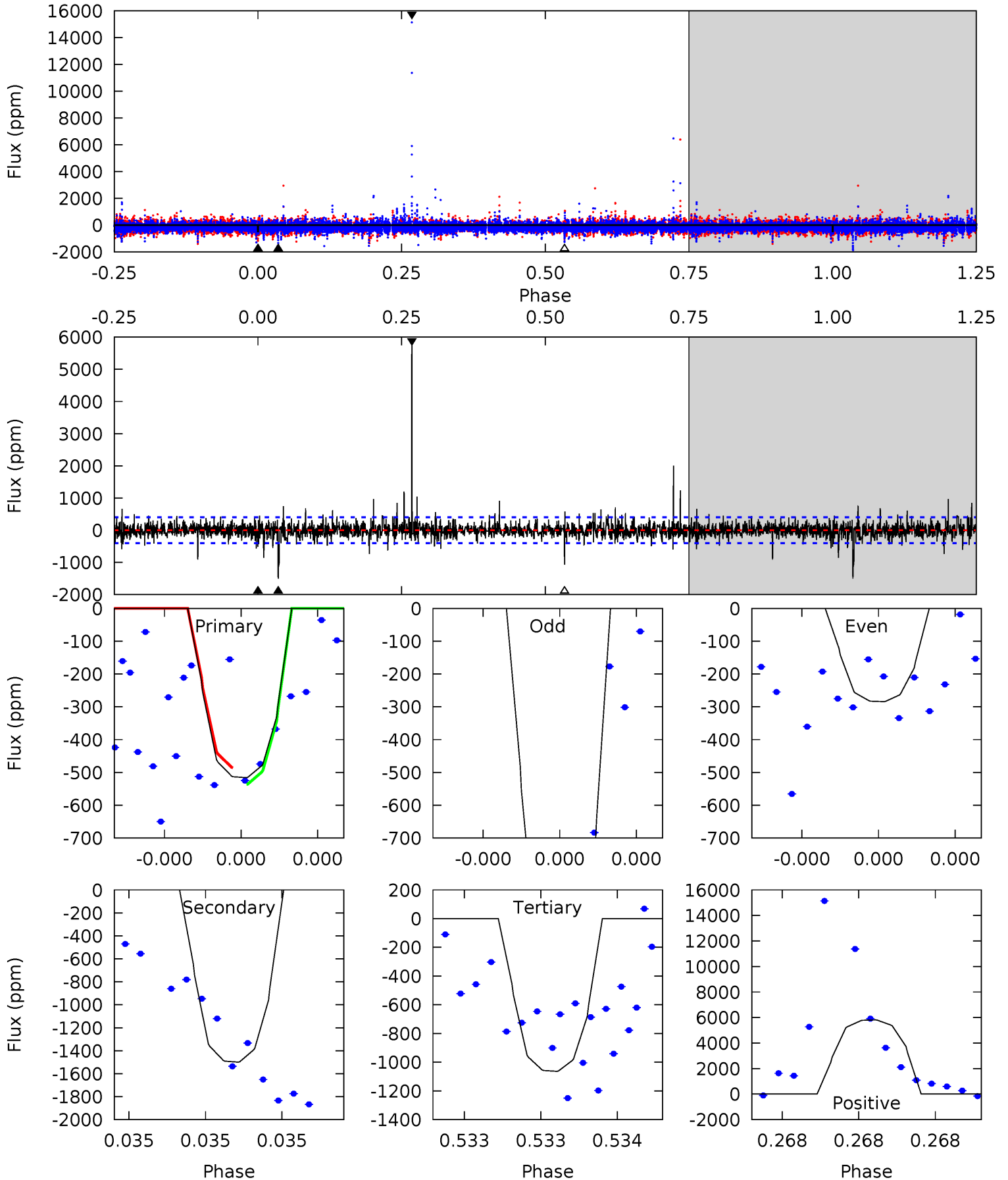
TCE 006548447-03     $P=413.800024$  Days     $T_0=301.849474$  (BKJD)



# DV Model-Shift Uniqueness Test

006548447-03, P = 413.839125 Days, E = 301.757572 Days

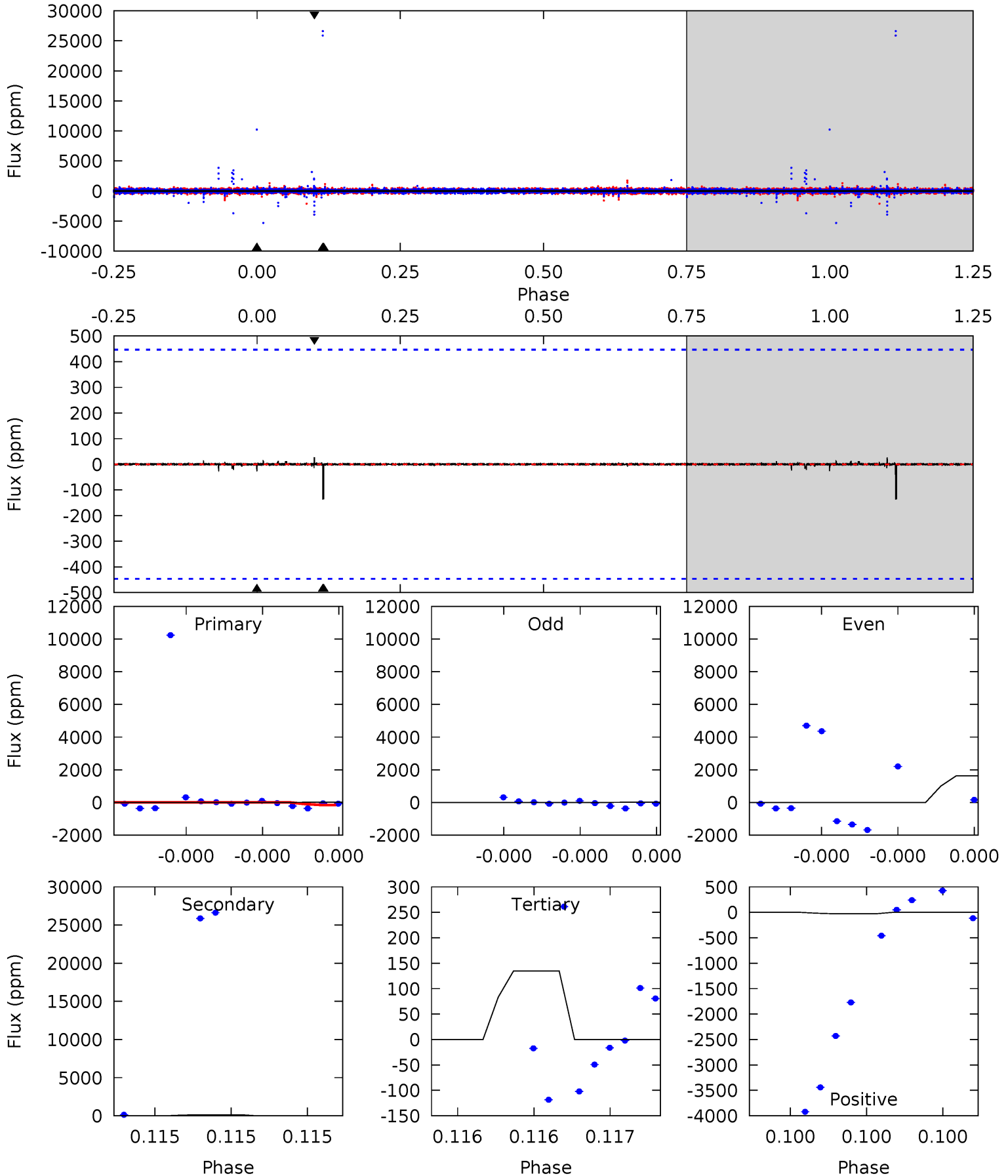
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.30	21.2	15.0	82.2	5.69	3.66	2.41	-7.74	-74.9	6.16	-61.0	4.21	1.30	0.79	0.36



# Alt Model-Shift Uniqueness Test

006548447-03, P = 413.800024 Days, E = 301.849474 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
0.22	1.72	1.72	0.34	5.69	3.67	0.02	-1.50	-0.13	0.01	1.38	8.95	6.83	0.17	0





### Stellar Parameters For KIC 006548447

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5226^{+174}_{-142}$	$3.970^{+0.602}_{-0.258}$	$0.000^{+0.300}_{-0.250}$	$1.643^{+0.851}_{-0.851}$	$0.921^{+0.101}_{-0.112}$	$0.292^{+1.995}_{-0.200}$
	+3%/-3%	+15%/-6%	+inf%/-inf%	+52%/-52%	+11%/-12%	+683%/-68%
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 006548447-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-1500 \pm 71$	$27.44^{+32.72}_{-19.59}$	$396^{+49}_{-62}$	$3128^{+1602}_{-552}$	$1202^{+14629}_{-944}$
Alt.	$-135 \pm 78$	$25.18^{+33.46}_{-17.65}$	$397^{+52}_{-64}$	$2277^{+841}_{-386}$	$109^{+1098}_{-95}$

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

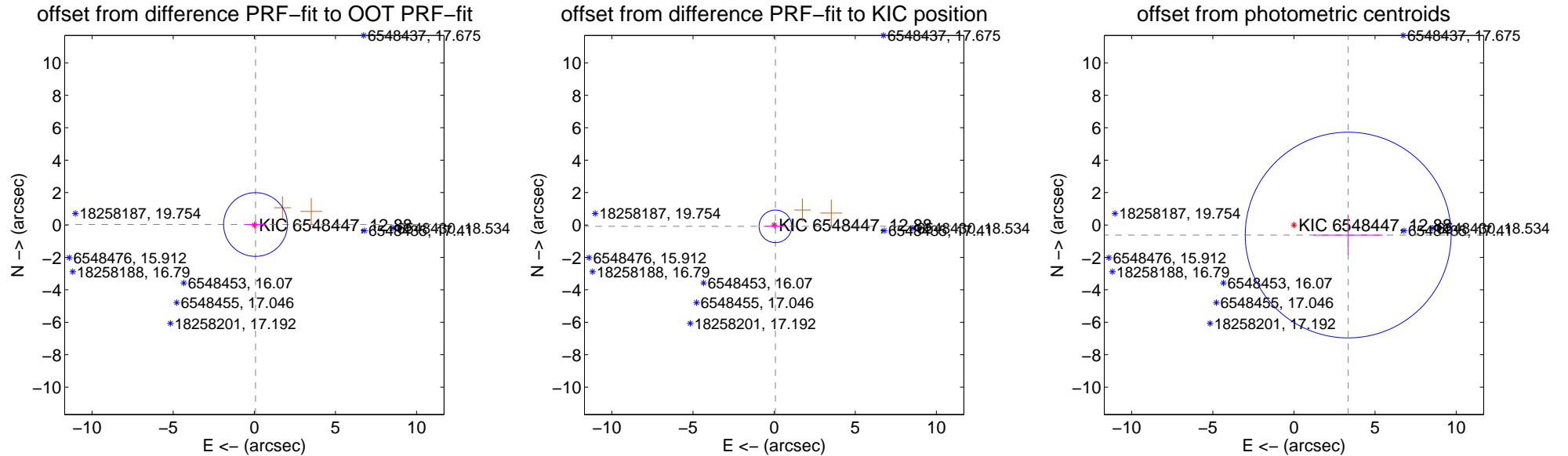
## DV Centroid Data

Supplemental centroid analysis for 006548447-03. Kepler magnitude: 12.88. Transit SNR 4.48

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.080 \pm 0.655$	0.12	$-0.074 \pm 0.628$	$0.030 \pm 0.247$
PRF-fit source offset from KIC position	$0.113 \pm 0.335$	0.34	$-0.078 \pm 0.627$	$-0.082 \pm 0.194$
photometric centroid source offset	$3.40 \pm 2.11$	1.61	$-3.34 \pm 2.14$	$-0.62 \pm 1.22$



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.

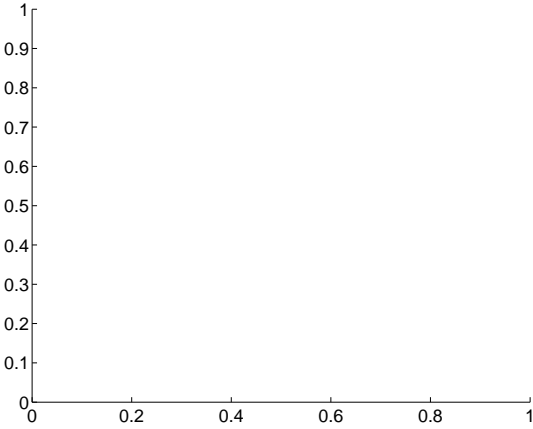
Q1 no difference image



Q1 no OOT image



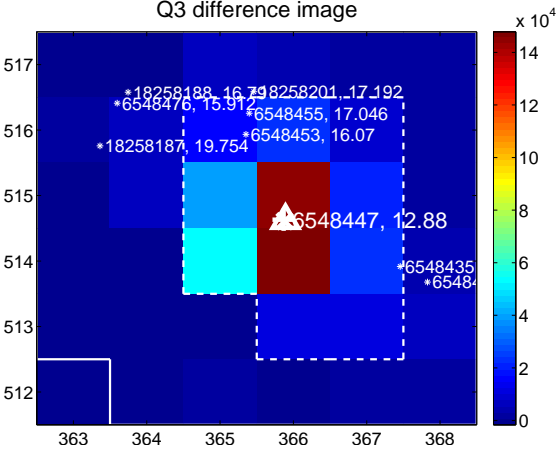
Q2 no difference image



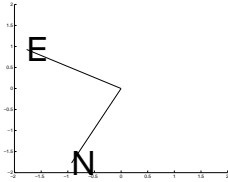
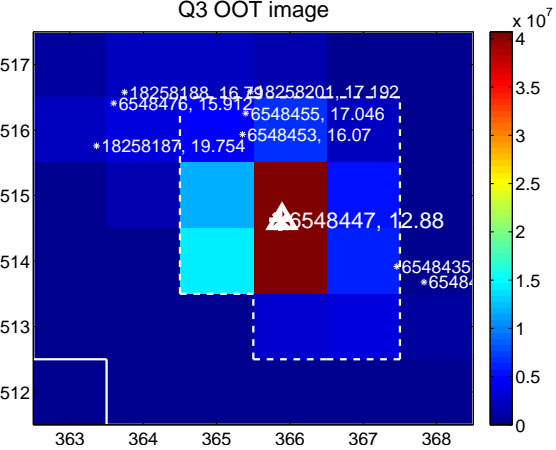
Q2 no OOT image



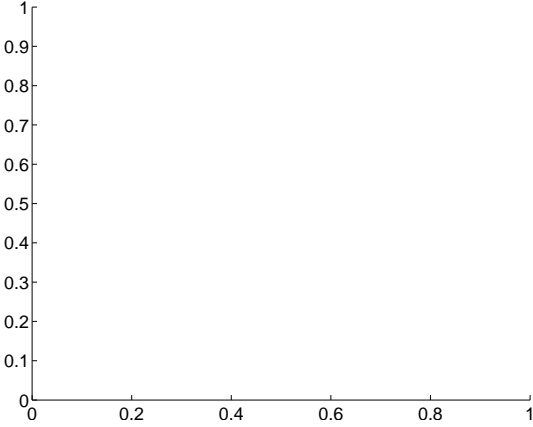
Q3 difference image



Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

Q5 no difference image



Q5 no OOT image



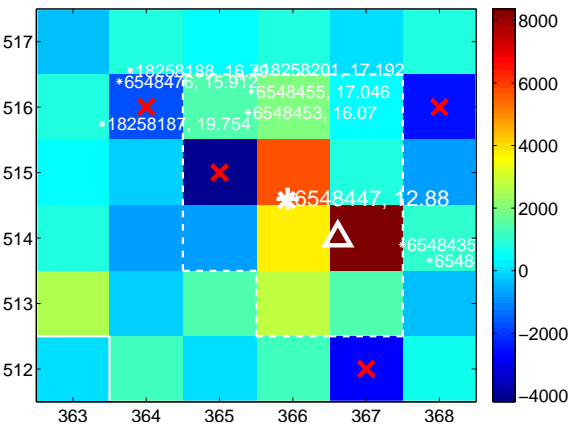
Q6 no difference image



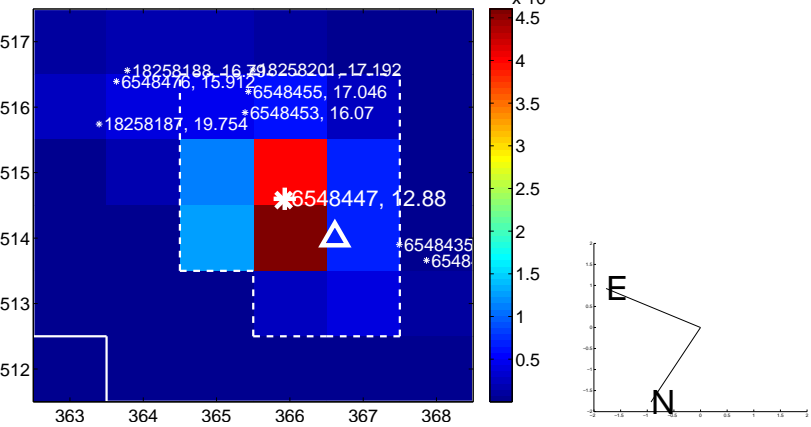
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



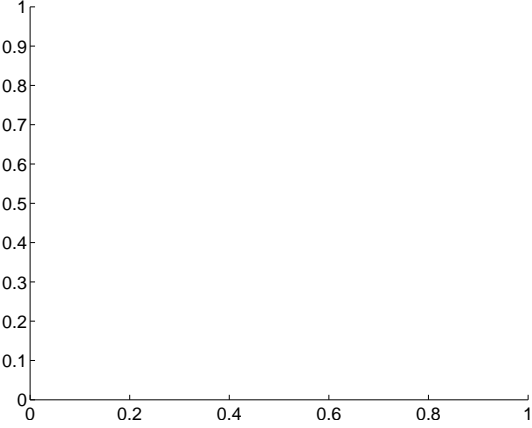
Q10 no difference image



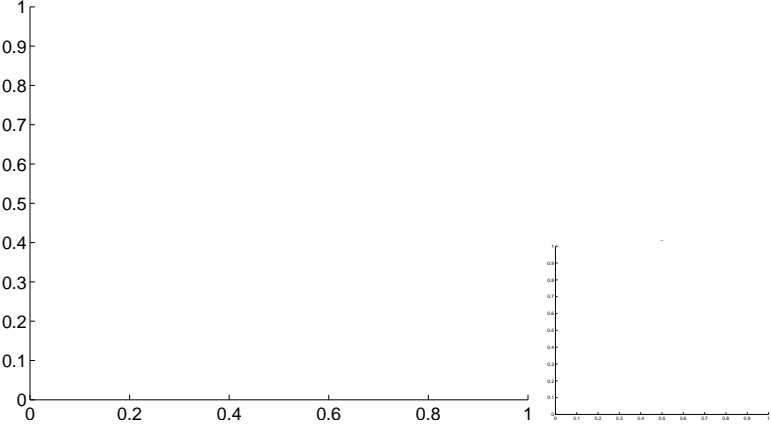
Q10 no OOT image



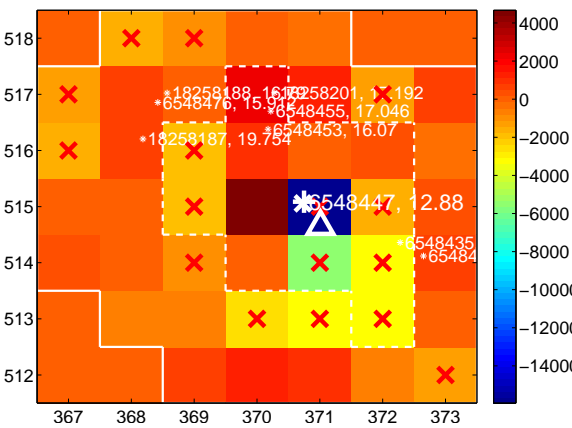
Q11 no difference image



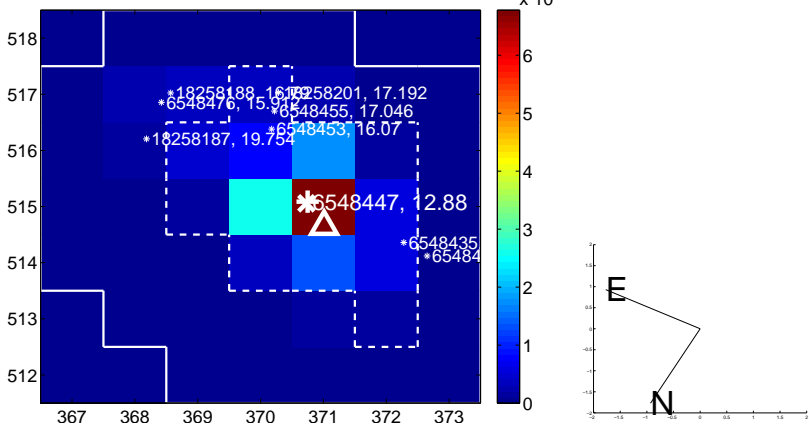
Q11 no OOT image



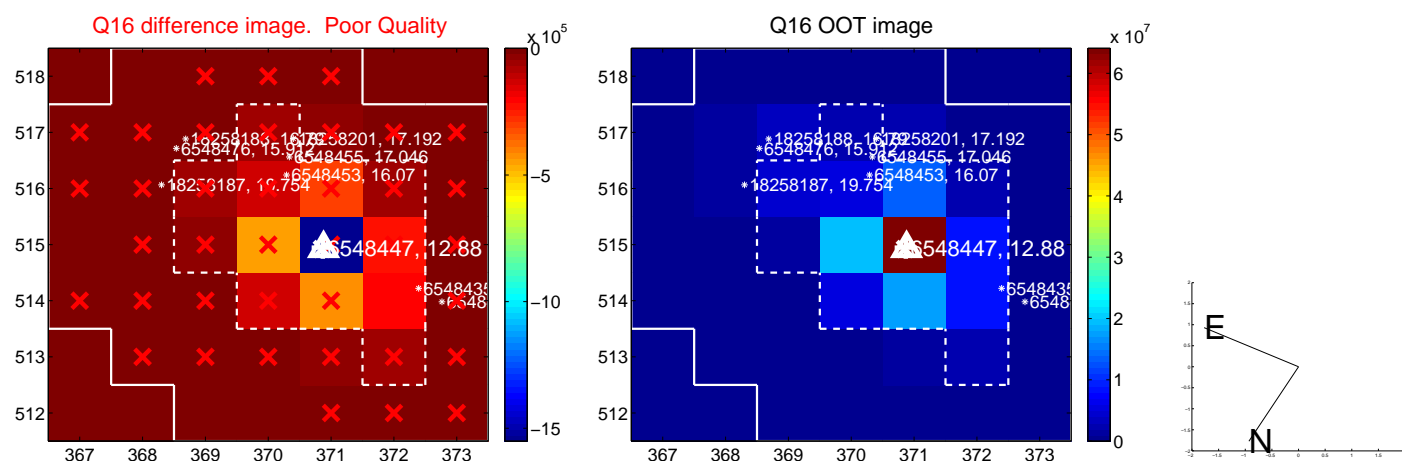
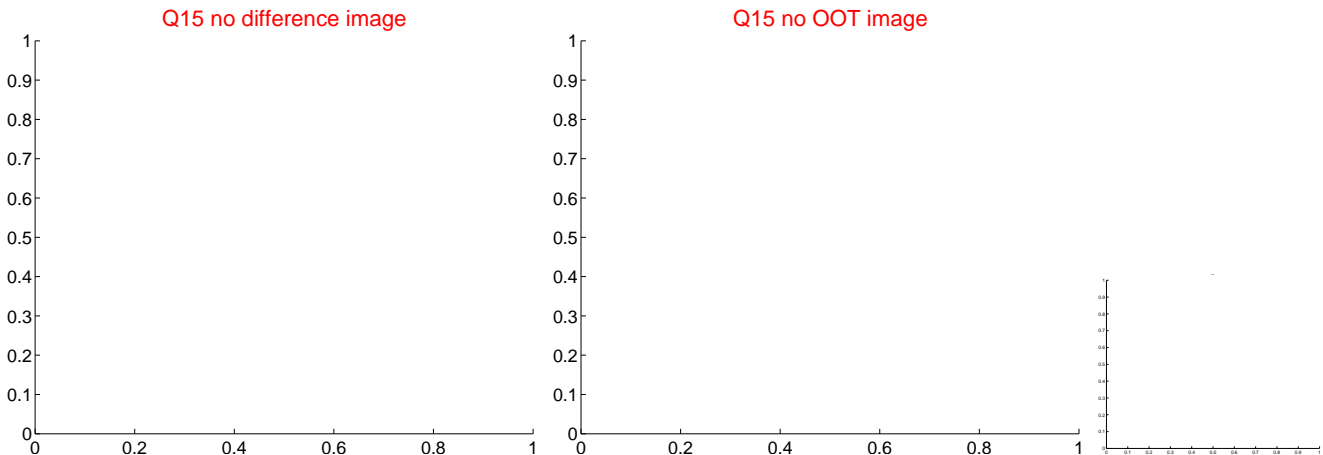
Q12 difference image. Poor Quality



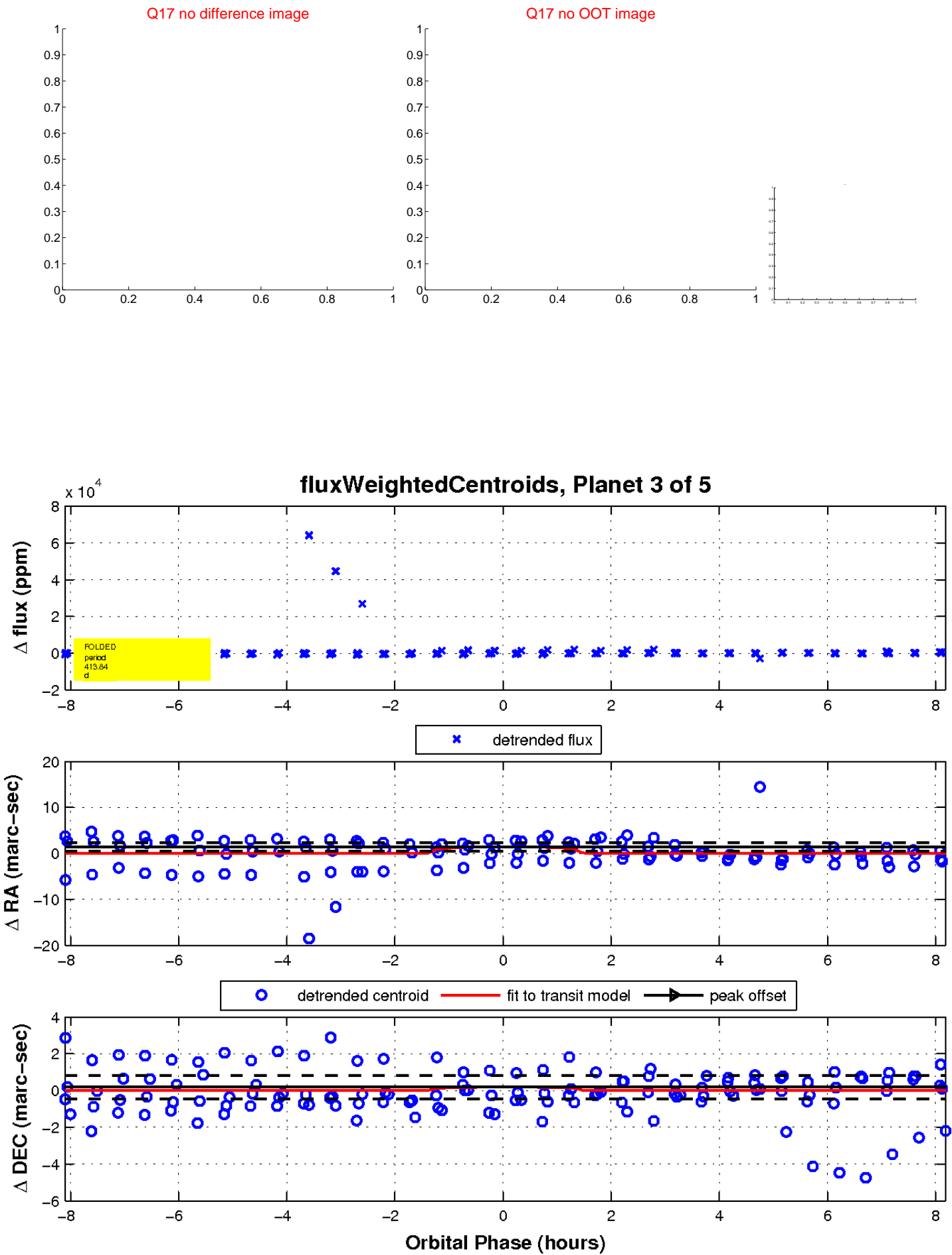
Q12 OOT image



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

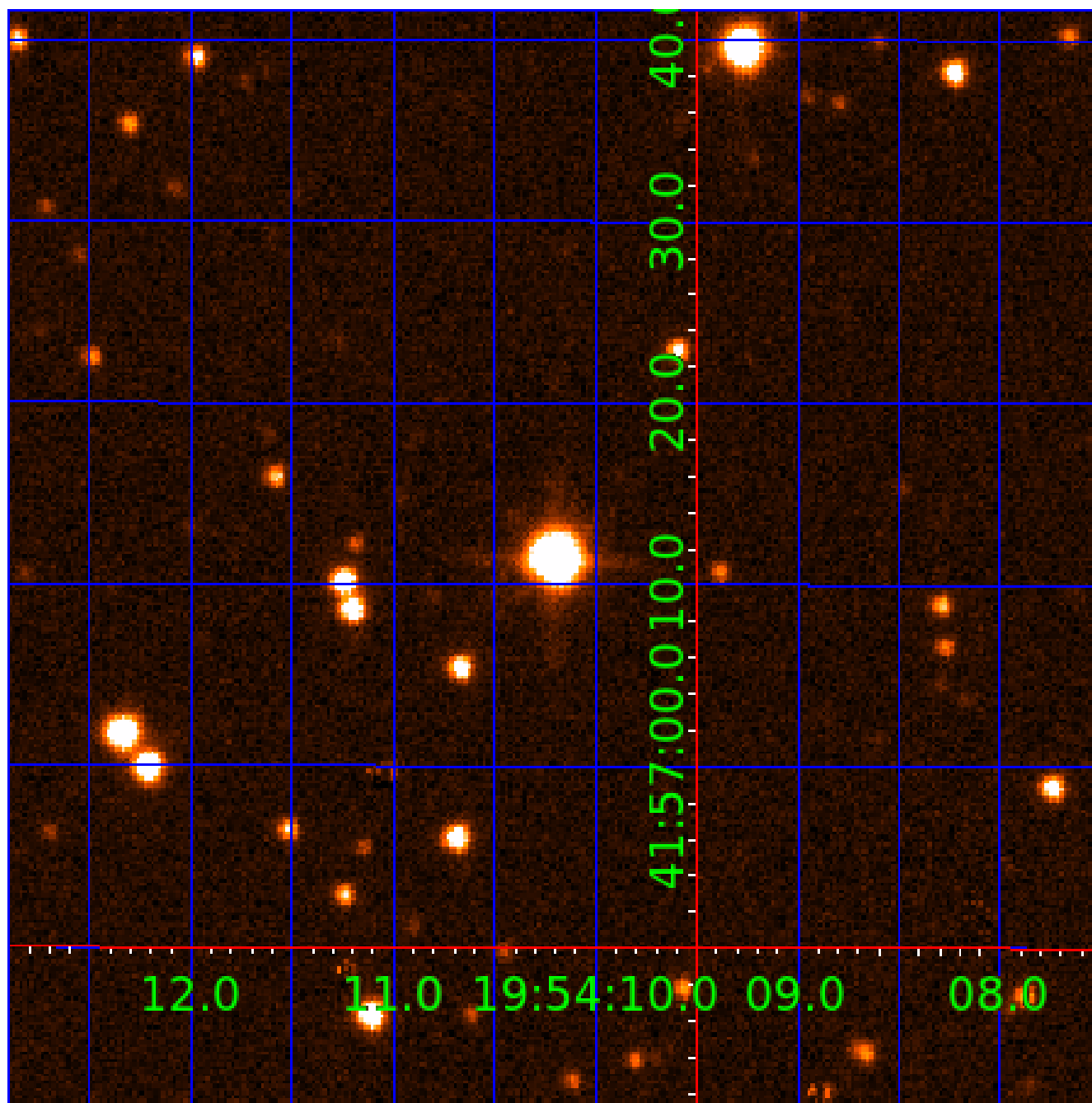


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 006548447

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006548447-01	OBS	No	10.768368	133.027331	133948.7	14.244	4108.8	2247.7	1.64	5226	58.99	209.47
006548447-02	OBS	6730.01	5.384195	132.295329	108603.7	12.553	2952.8	3552.4	1.64	5226	53.04	527.84
006548447-03	OBS	No	413.839125	301.757572	396.4	2.801	20.0	4.5	1.64	5226	3.42	1.61
006548447-04	OBS	No	491.762913	558.270046	449.9	0.505	16.1	2.9	1.64	5226	3.83	1.28
006548447-05	OBS	No	527.846533	522.541220	478.6	7.500	15.6	-1.0	1.64	5226	3.50	1.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006548447-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006548447-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
006548447-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

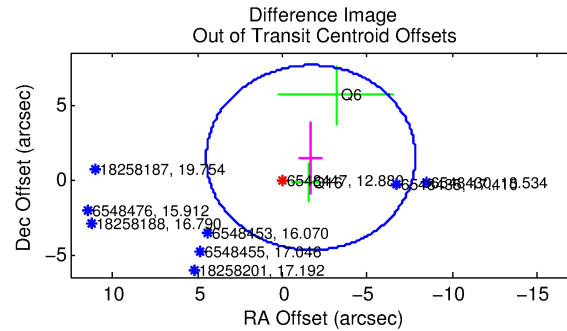
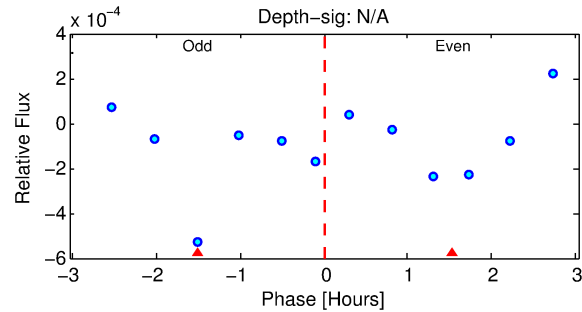
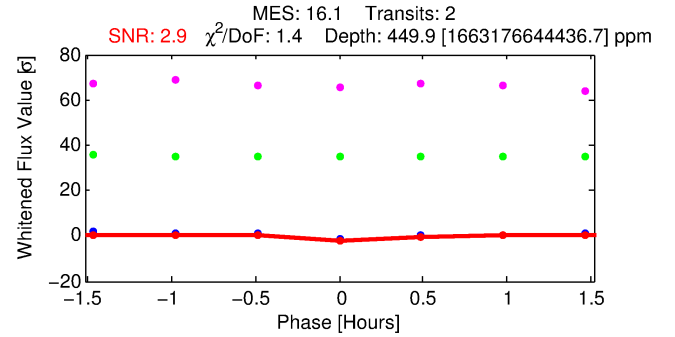
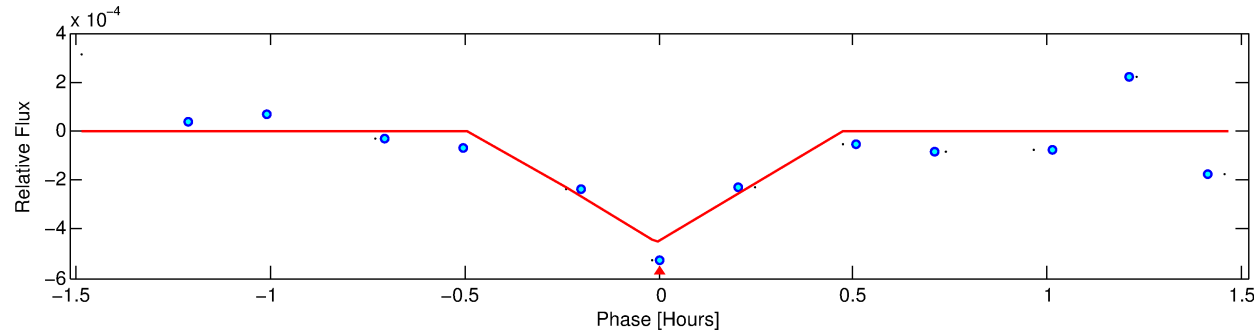
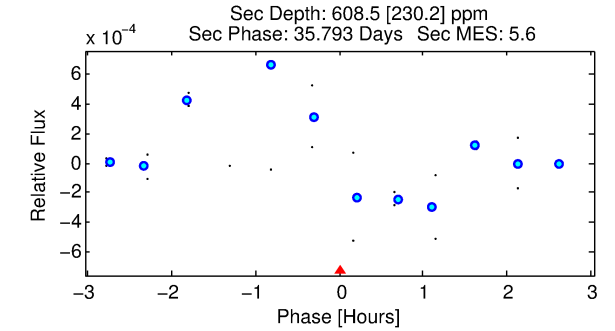
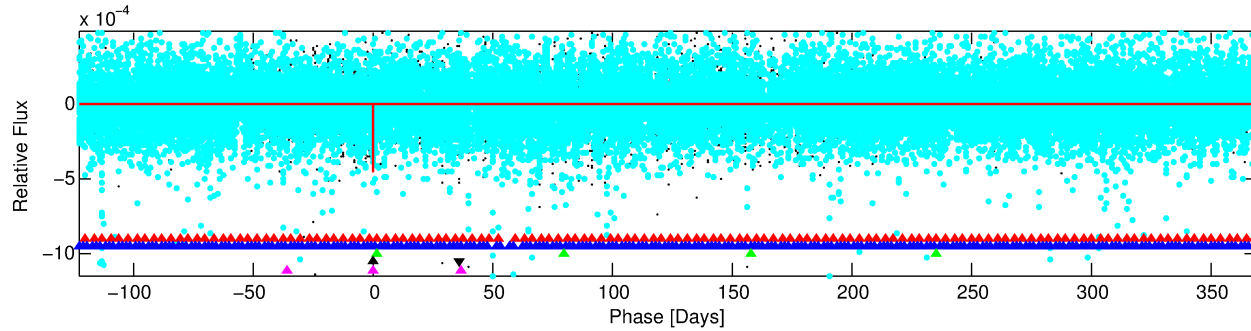
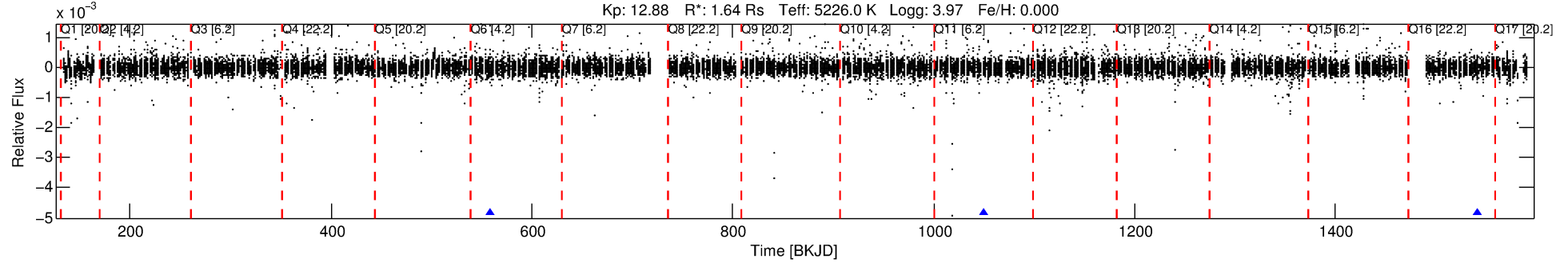
Ephemeris Match Information For 006548447-04

No Significant Match Found

# DV One-Page Summary

KIC: 6548447 Candidate: 4 of 5 Period: 491.763 d  
KOI: K06730 Corr: No Ephemeris Match

Kp: 12.88 R\*: 1.64 Rs Teff: 5226.0 K Logg: 3.97 Fe/H: 0.000



## DV Fit Results:

Period = 491.76291 [8047475.20012] d  
Epoch = 558.2700 [44151702.9011] BKJD  
Rp/R\* = 0.0213 [309773244.4370]  
a/R\* = 6267.46 [298789613365613.88]  
b = 0.58 [57458191360.99]  
Seff = 1.28 [28000.47]  
Teq = 271 [1480435] K  
Rp = 3.83 [55538847576.43] Re  
a = 1.1857 [12935.1655] AU  
Ag = 32160.99 [933911993219376.25] [0.000]  
Teff = 5619 [40794028894206] K

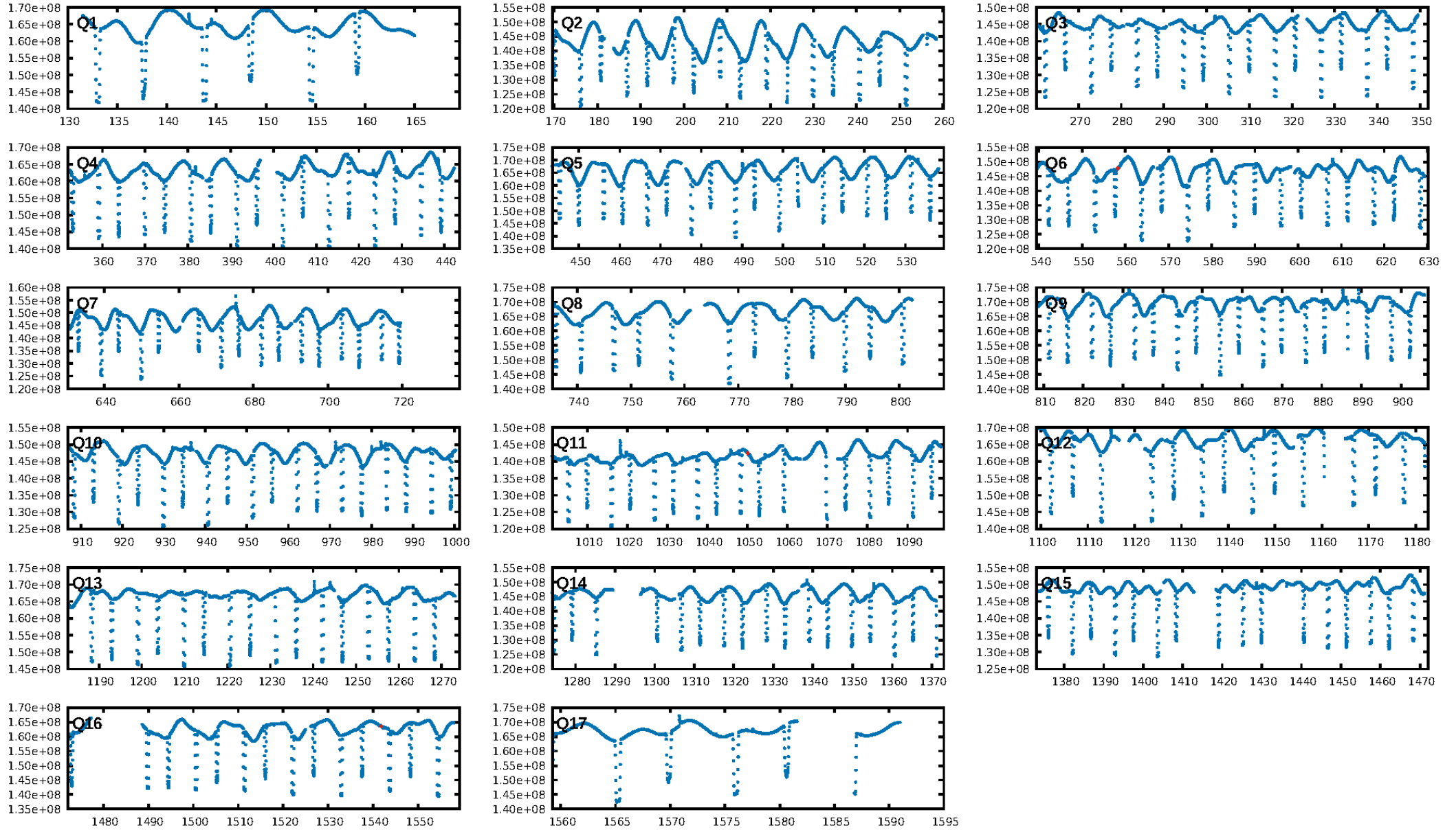
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [656.95]  
BKJDPeriod-sig: 100.0% [115.21]  
ModelChiSquare2-sig: 85.5%  
ModelChiSquareGof-sig: 97.5%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: -0.7169  
Centroid-sig: 36.9%  
Centroid-so: 2.561 arcsec [1.13]  
OutOffset-rm: 2.238 arcsec [1.09]  
OutOffset-rm: 2.170 arcsec [1.09]  
OutOffset-st: 1/0/1/0 [2]  
KicOffset-st: 1/0/1/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [2/2]

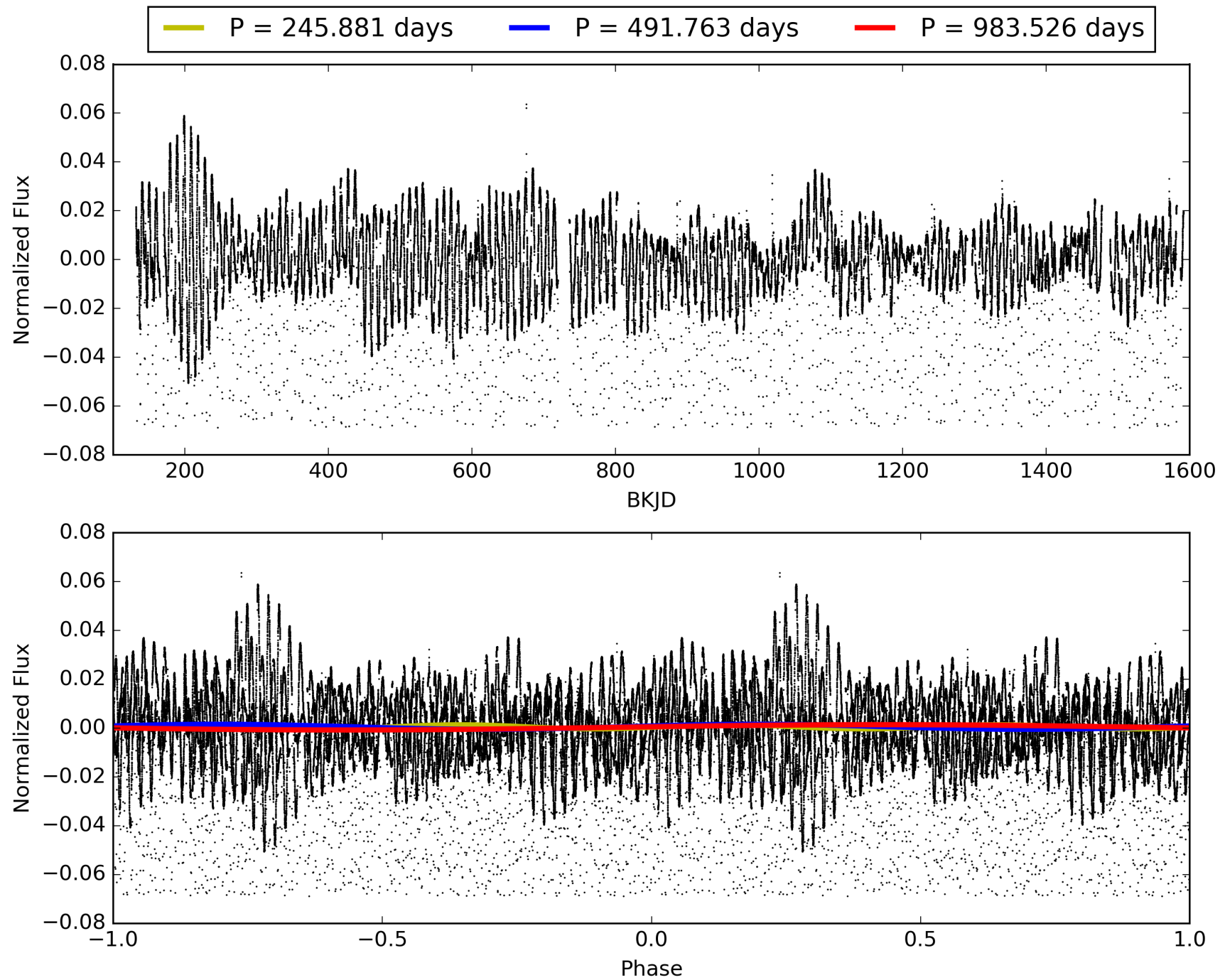
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:40:00 Z

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

# TCE 006548447-04, PDC Light Curves

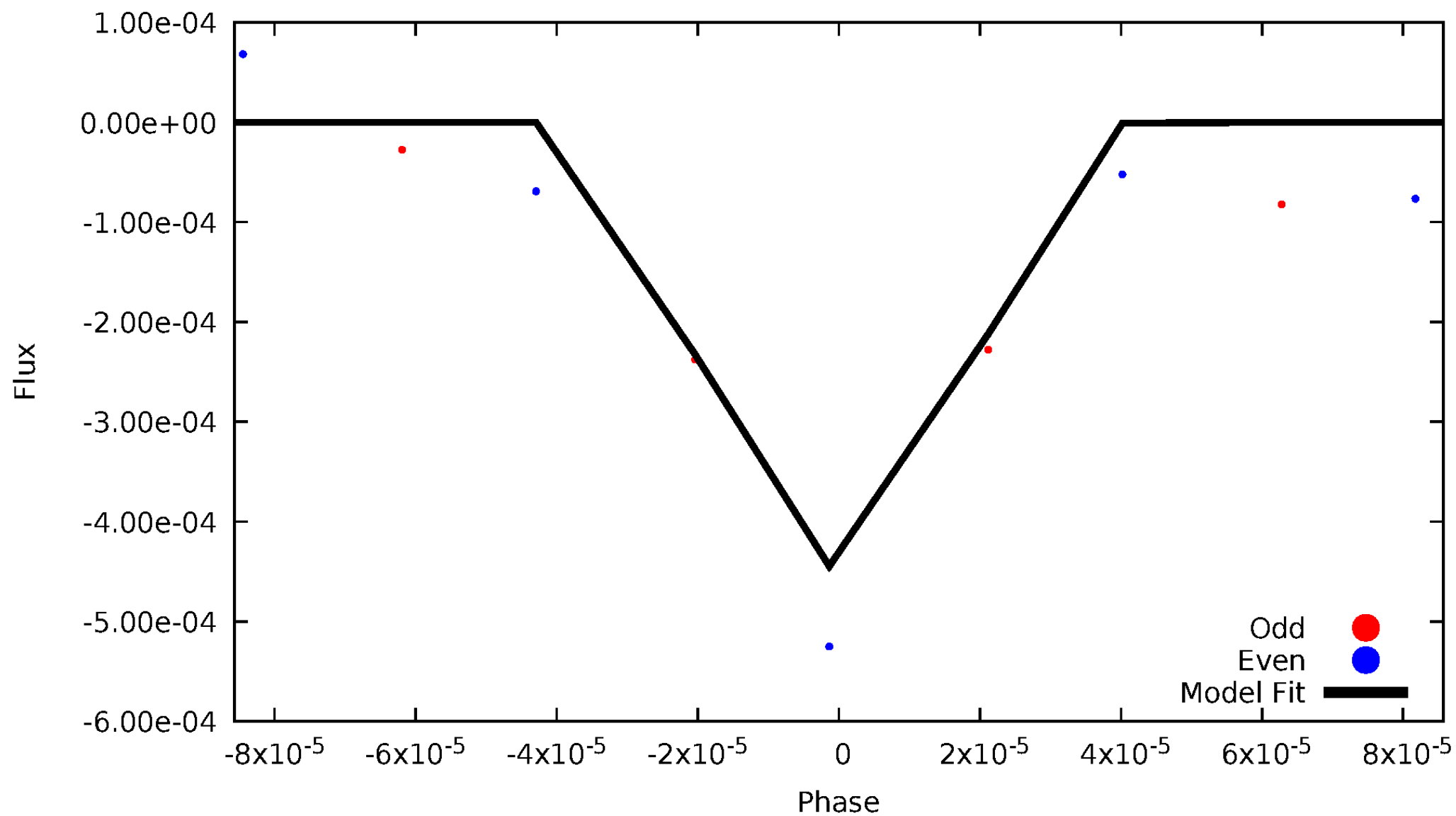


TCE 006548447-04



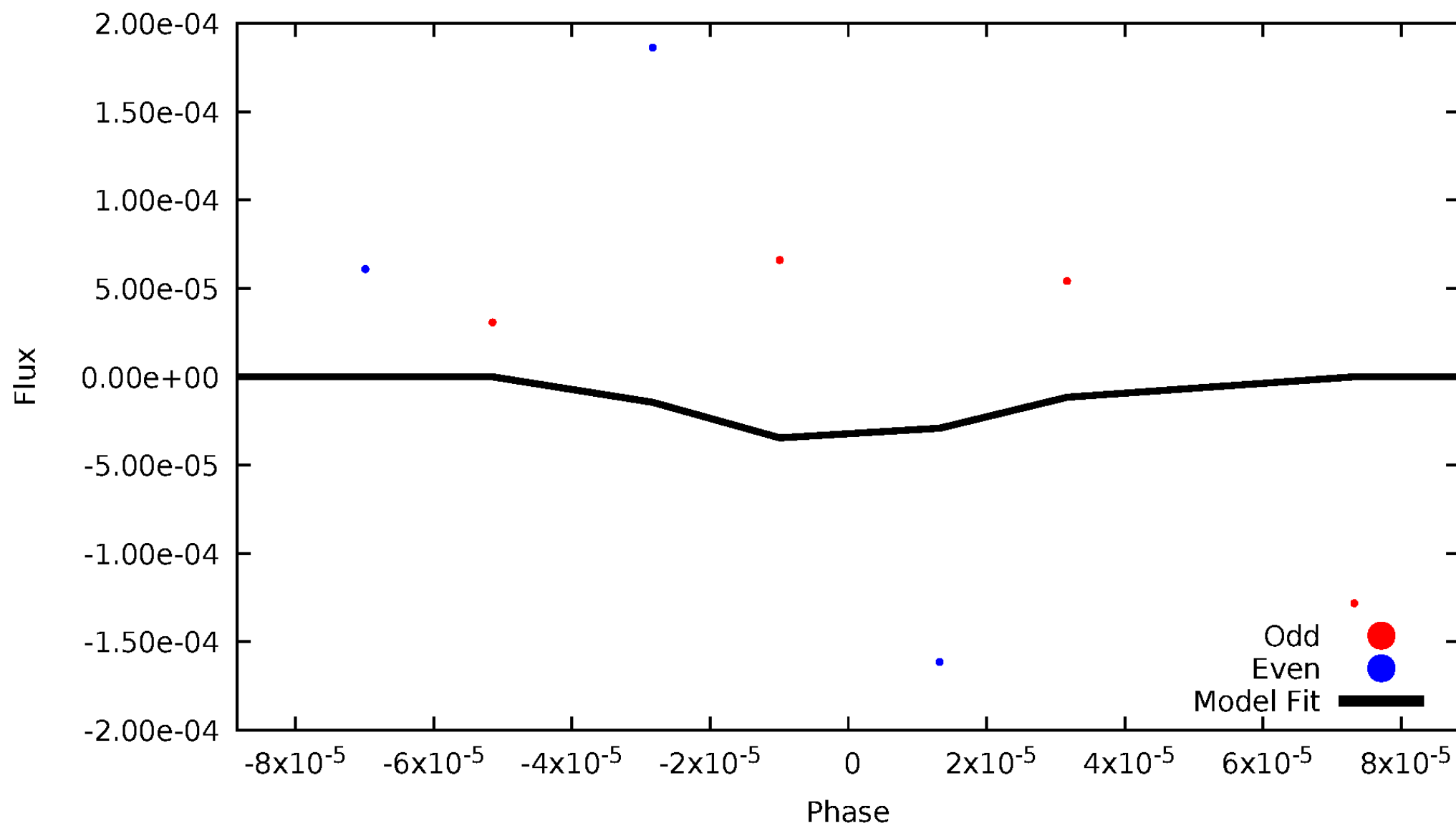
# DV Odd/Even

TCE 006548447-04



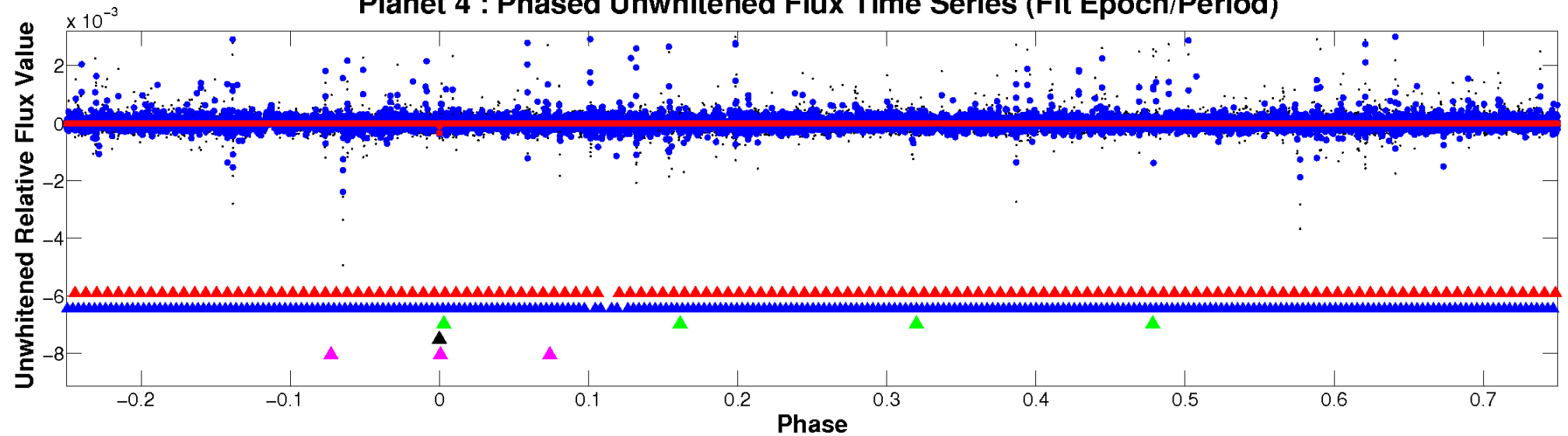
# ALT Odd/Even

TCE 006548447-04

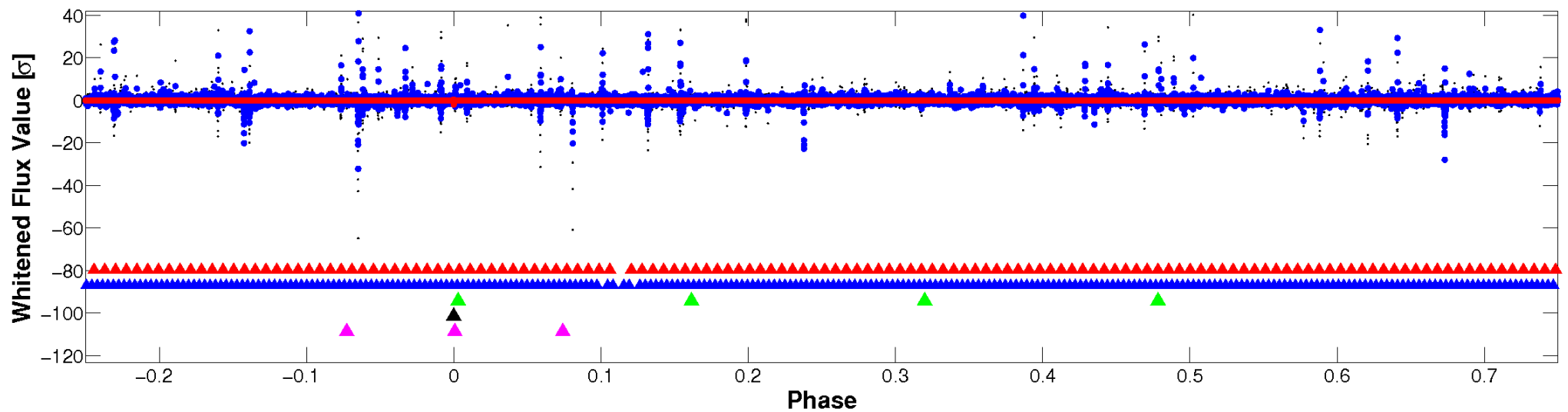


# Non-Whitened Vs. Whitened Light Curve

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

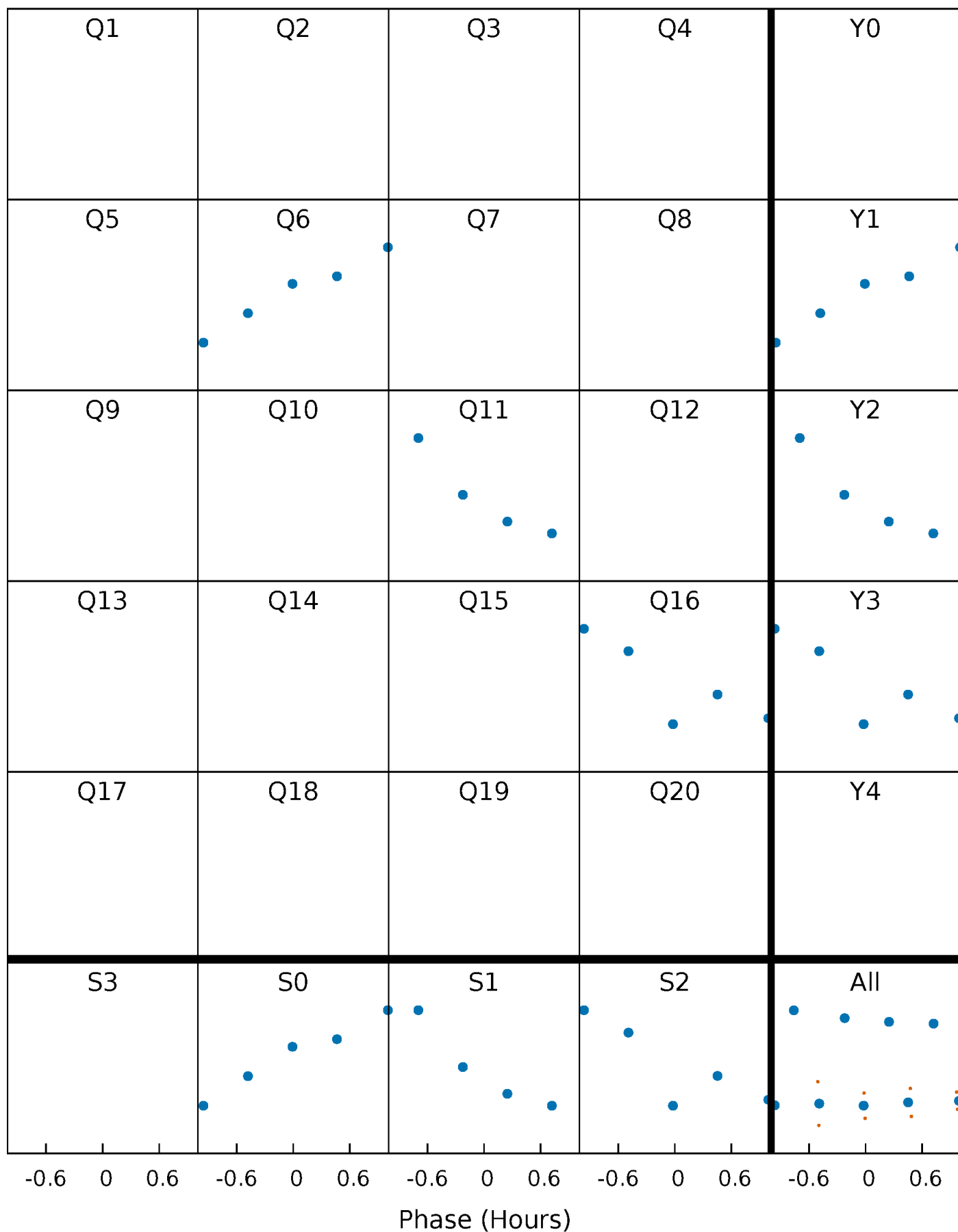


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

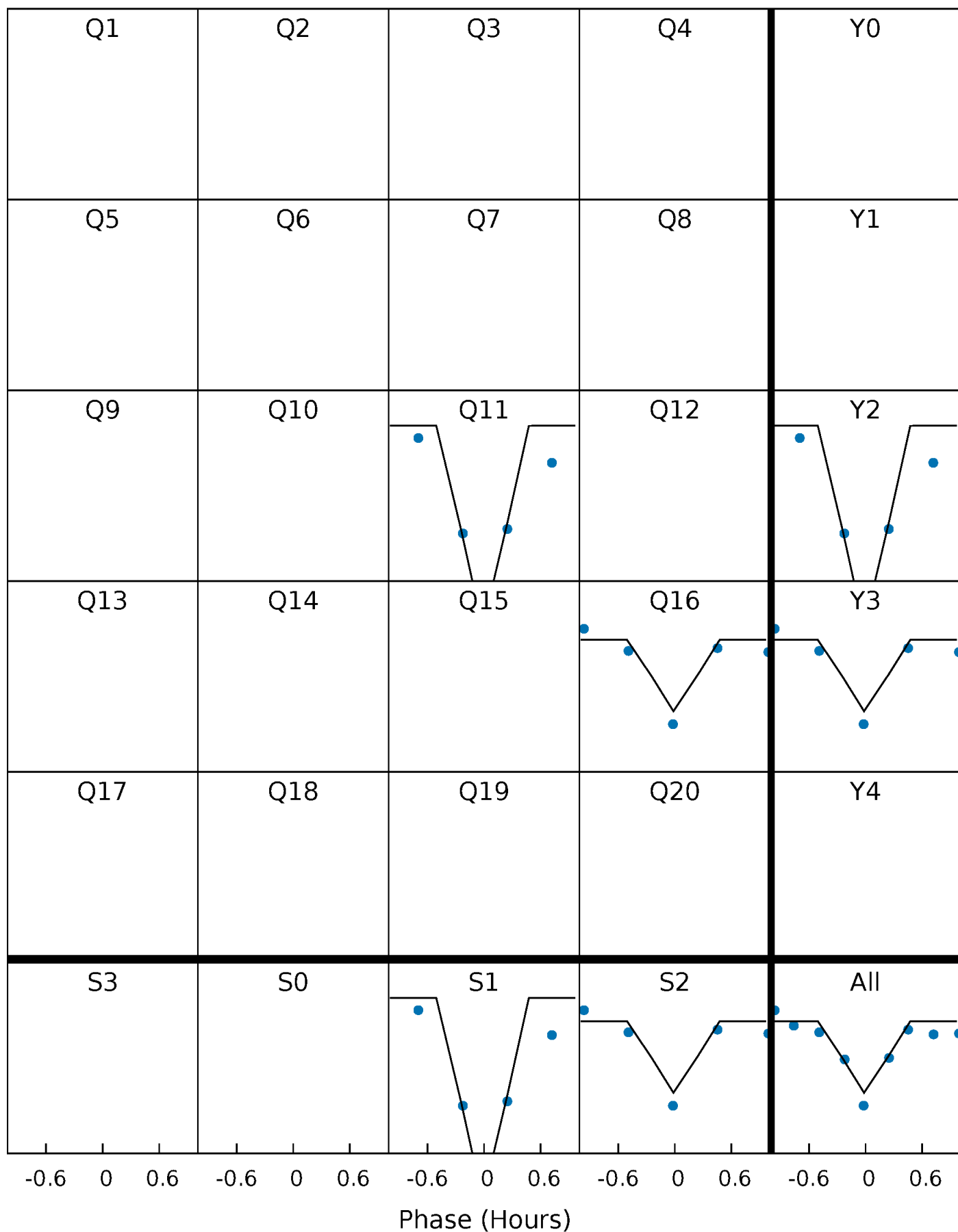
TCE 006548447-04 P=491.762913 Days  $T_0=558.270046$  (BKJD)





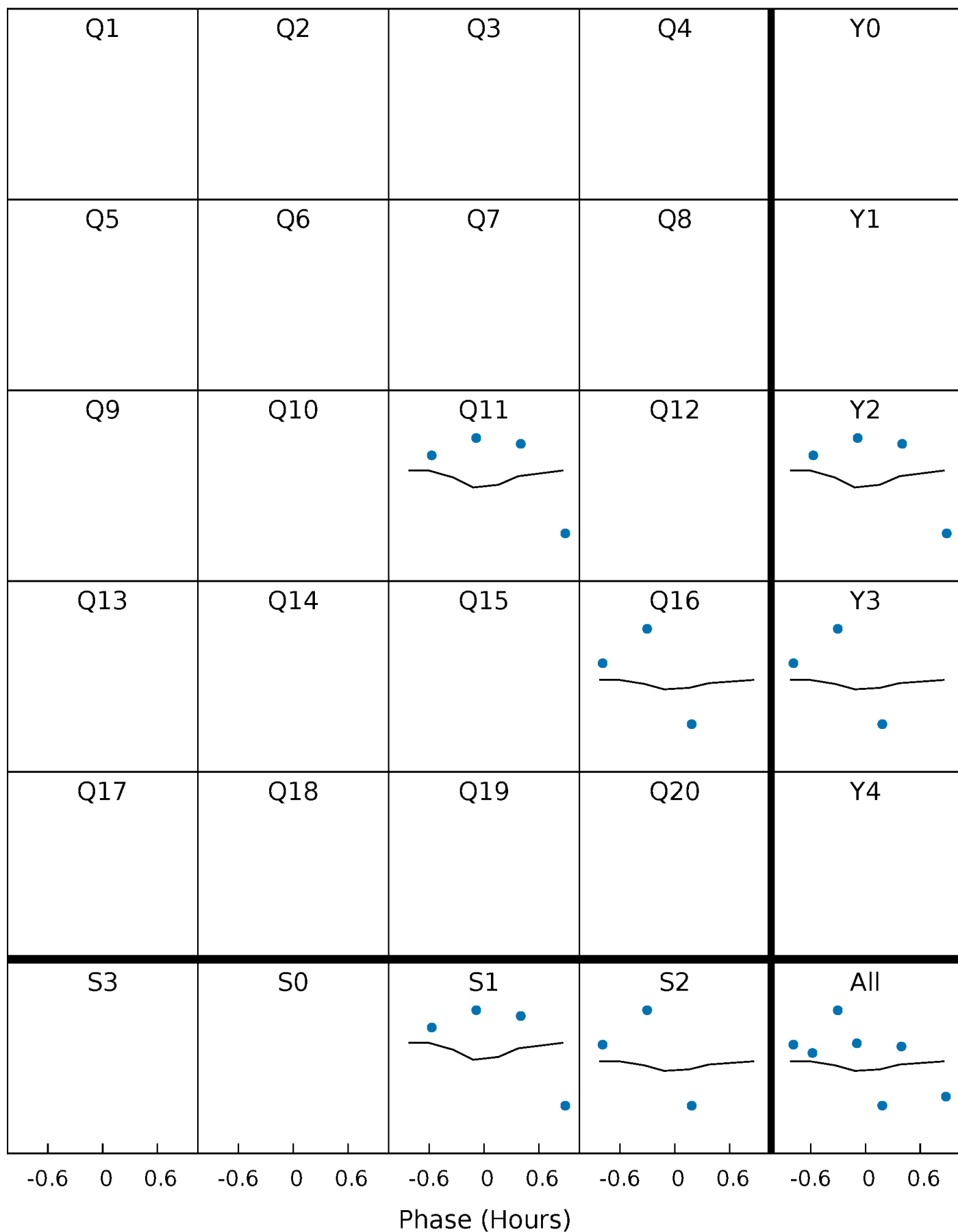
# DV Quarter-Phased Transit Curves

TCE 006548447-04 P=491.762913 Days  $T_0=558.270046$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

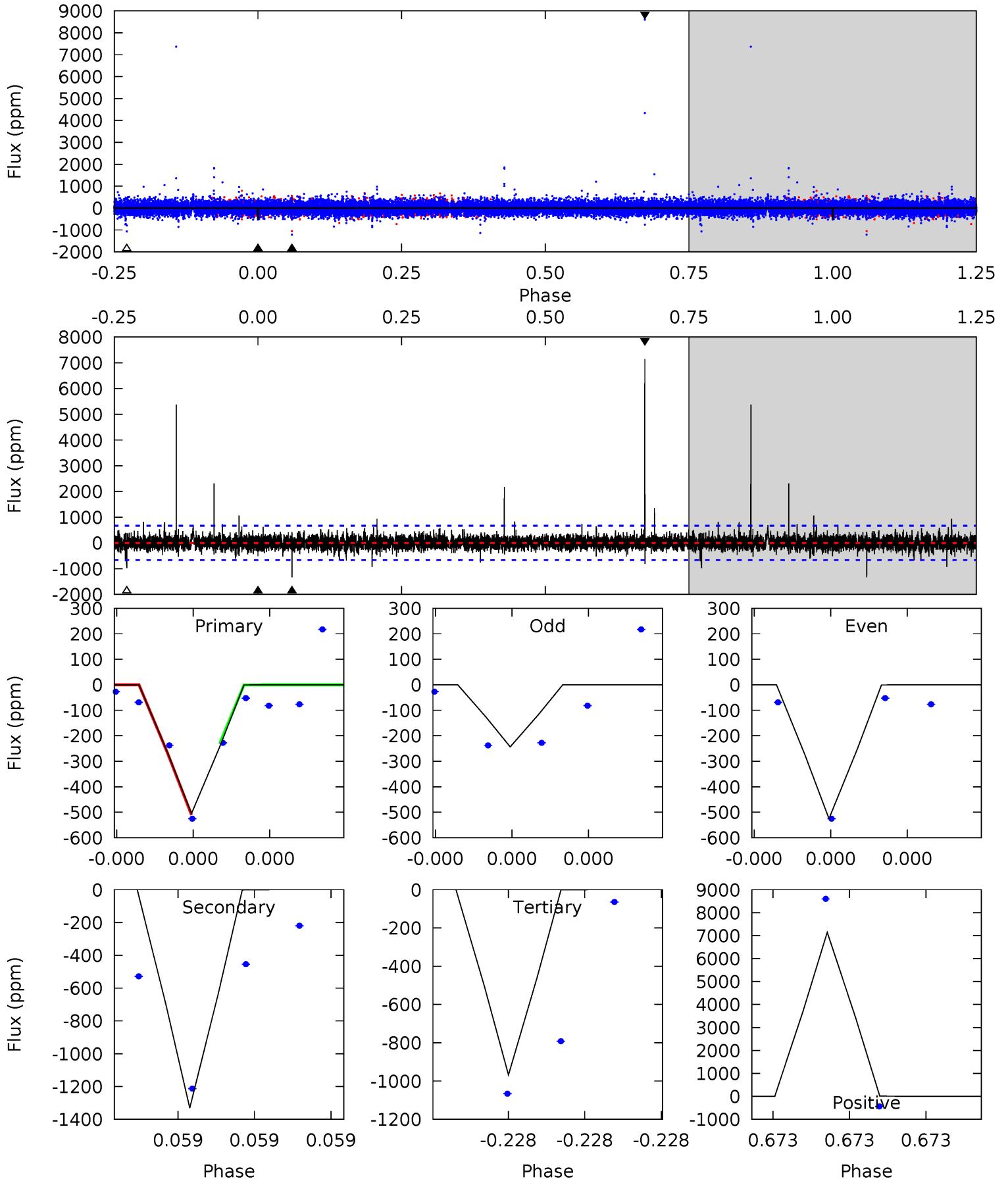
TCE 006548447-04 P=491.658698 Days  $T_0=558.328257$  (BKJD)



# DV Model-Shift Uniqueness Test

006548447-04, P = 491.762913 Days, E = 66.507133 Days

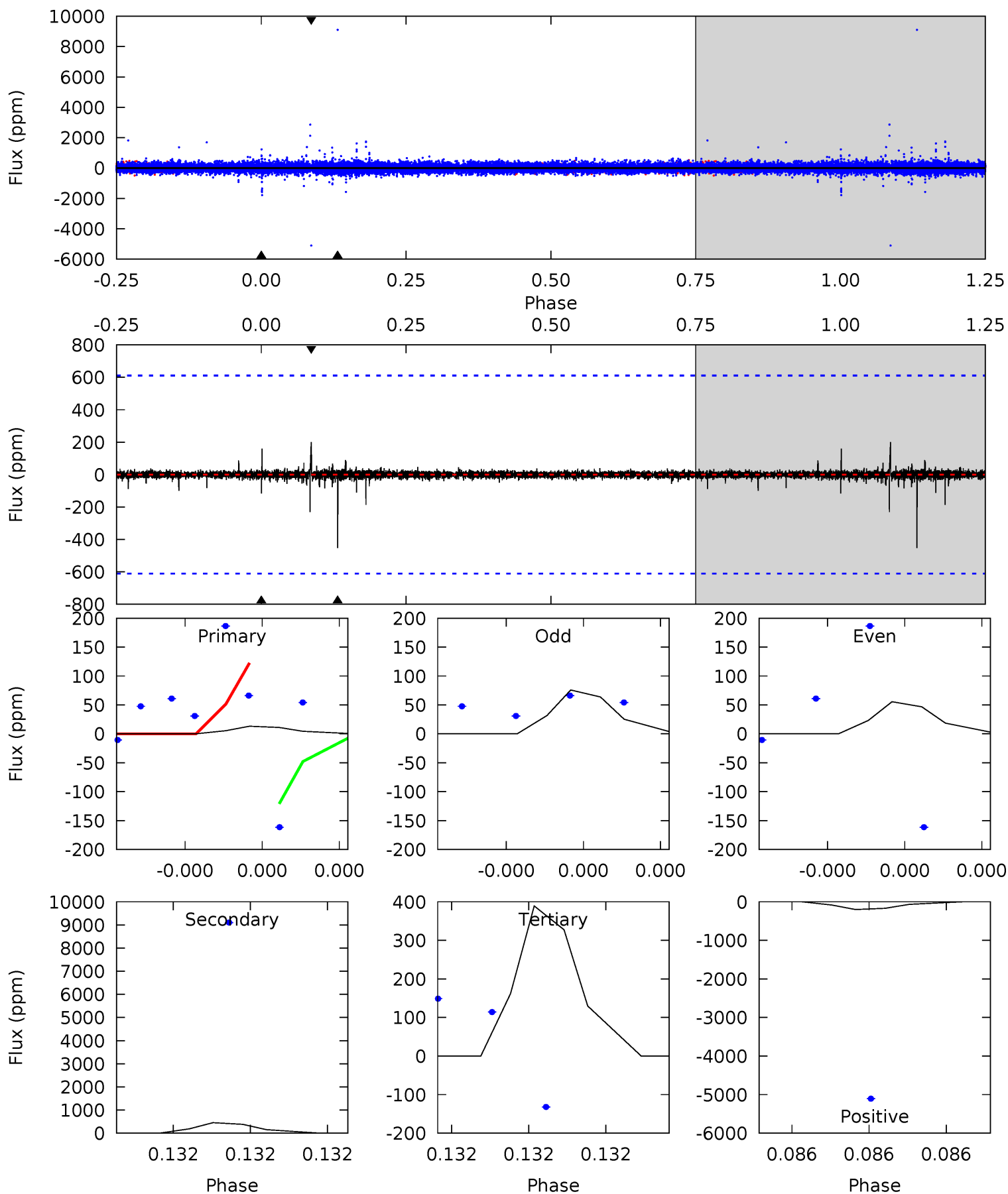
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.48	11.8	8.58	63.4	5.93	4.01	1.24	-4.10	-58.9	3.22	-51.6	1.04	1.00	0.84	1.26



# Alt Model-Shift Uniqueness Test

006548447-04, P = 491.658698 Days, E = 66.669559 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
0.13	4.39	3.78	1.95	5.93	4.01	0.10	-3.65	-1.82	0.61	2.44	0.07	1.00	0.31	0.01



### Stellar Parameters For KIC 006548447

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5226^{+174}_{-142}$	$3.970^{+0.602}_{-0.258}$	$0.000^{+0.300}_{-0.250}$	$1.643^{+0.851}_{-0.851}$	$0.921^{+0.101}_{-0.112}$	$0.292^{+1.995}_{-0.200}$
	+3%/-3%	+15%/-6%	+inf%/-inf%	+52%/-52%	+11%/-12%	+683%/-68%
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 006548447-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	-1331±113	$10000000000.00^{+0.00}_{-0.00}$	$17^{+8}_{-4}$	$-685^{+29}_{-46}$	$0.000^{+0.000}_{-0.000}$
Alt.	-452±103	$10000000000.00^{+0.00}_{-725480566.97}$	$17^{+9}_{-4}$	$-689^{+32}_{-49}$	$0.000^{+0.000}_{-0.000}$

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

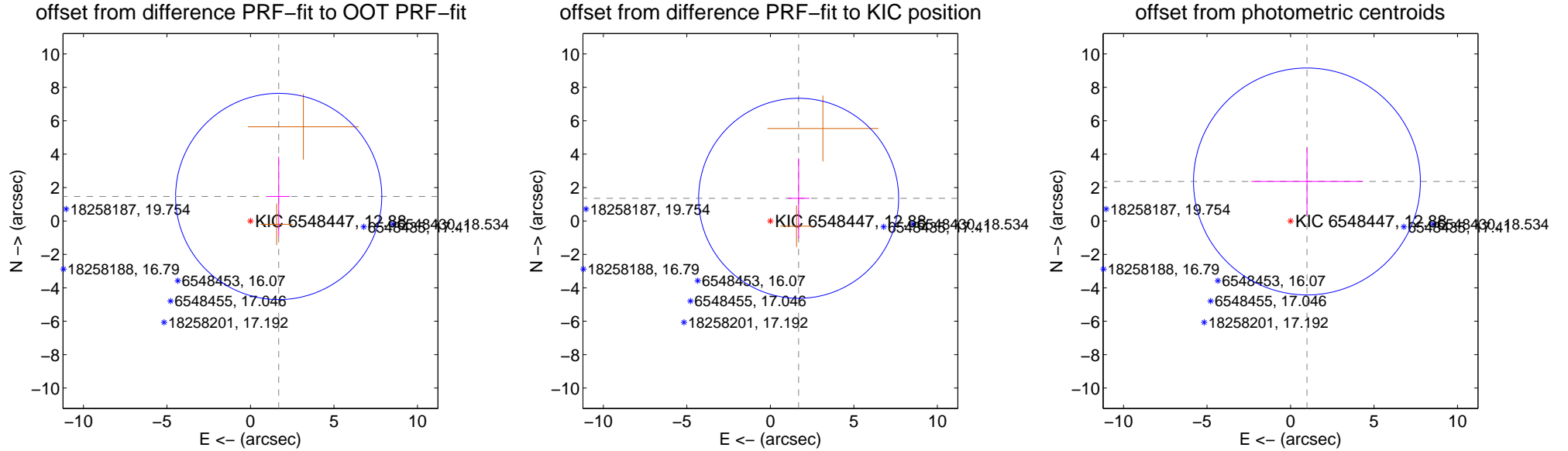
## DV Centroid Data

Supplemental centroid analysis for 006548447-04. Kepler magnitude: 12.88. Transit SNR 2.92

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.238 \pm 2.057$	1.09	$-1.690 \pm 0.658$	$1.467 \pm 2.384$
PRF-fit source offset from KIC position	$2.170 \pm 1.996$	1.09	$-1.693 \pm 0.646$	$1.357 \pm 2.388$
photometric centroid source offset	$2.56 \pm 2.26$	1.13	$-0.98 \pm 3.32$	$2.36 \pm 2.02$



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.

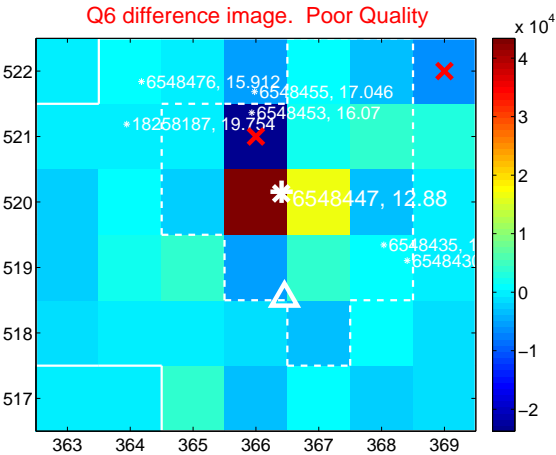
Q5 no difference image



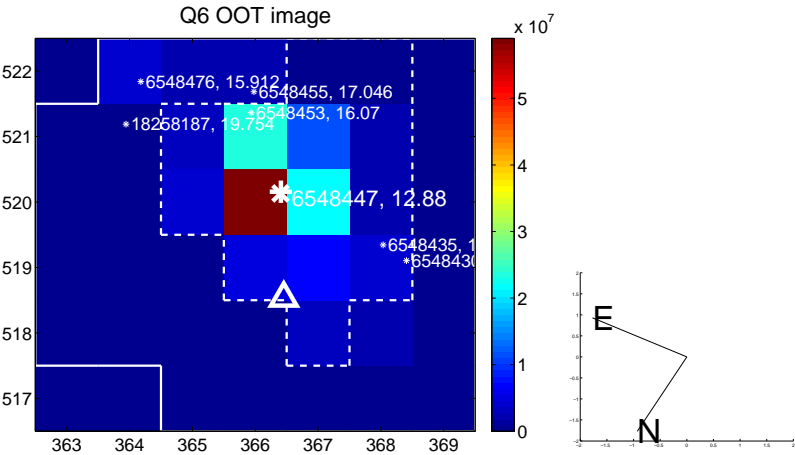
Q5 no OOT image



Q6 difference image. Poor Quality



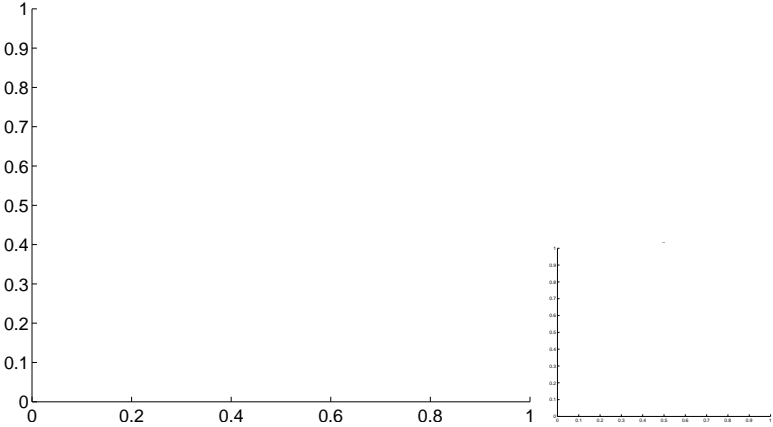
Q6 OOT image



Q7 no difference image



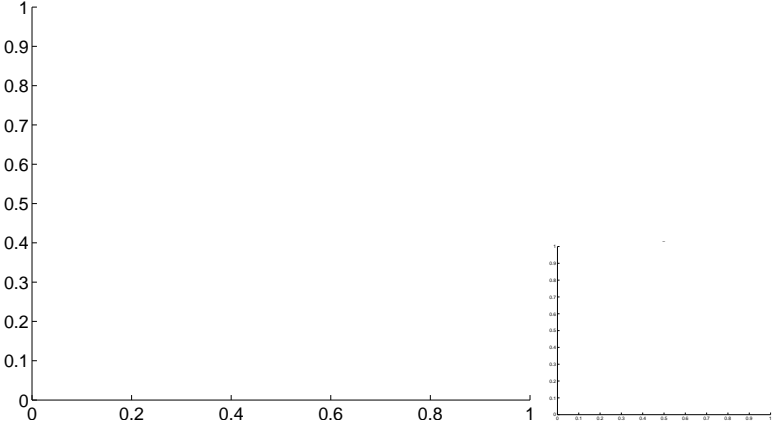
Q7 no OOT image



Q8 no difference image



Q8 no OOT image

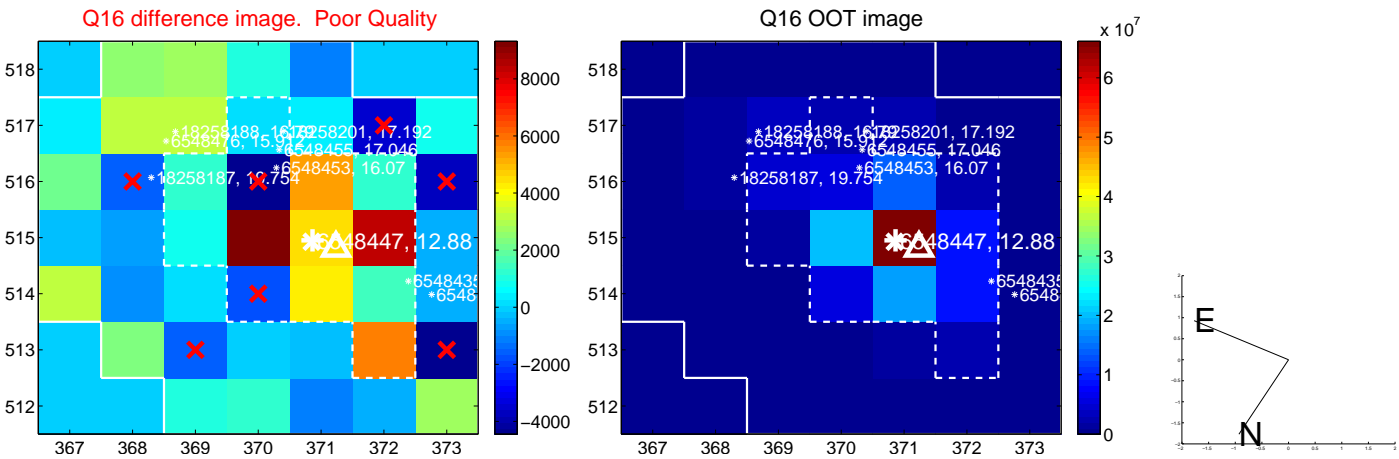




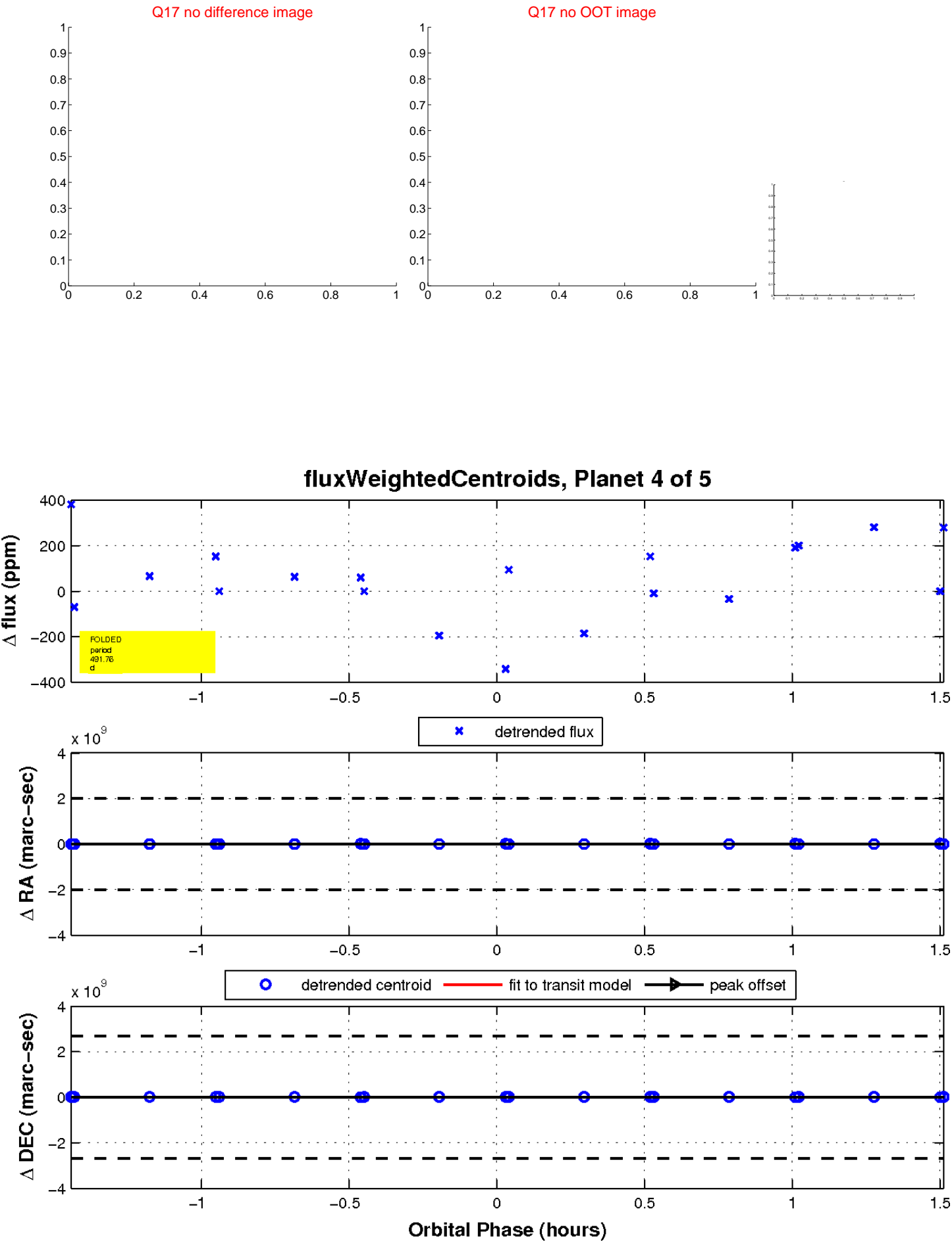
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

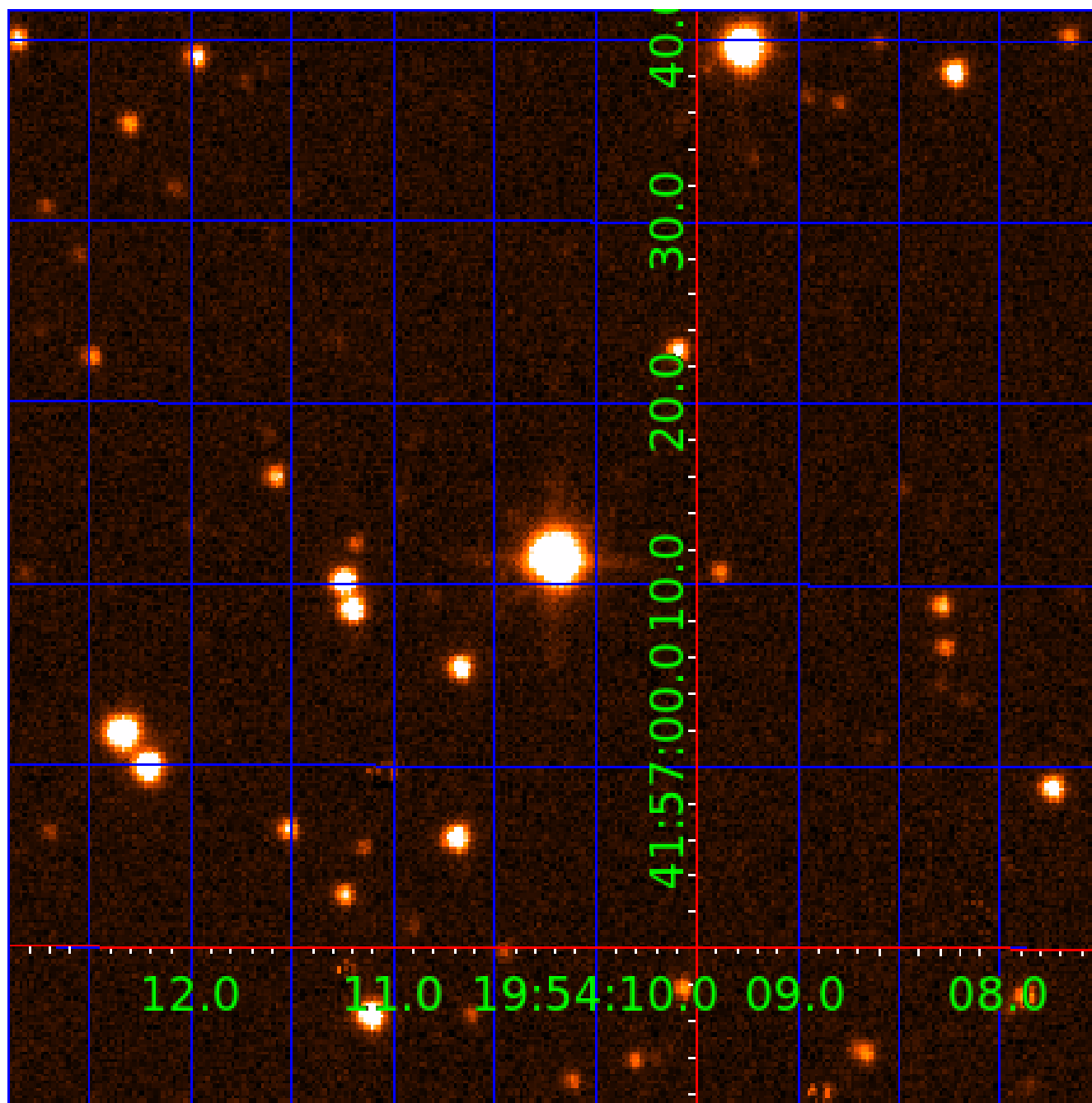


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 006548447

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006548447-01	OBS	No	10.768368	133.027331	133948.7	14.244	4108.8	2247.7	1.64	5226	58.99	209.47
006548447-02	OBS	6730.01	5.384195	132.295329	108603.7	12.553	2952.8	3552.4	1.64	5226	53.04	527.84
006548447-03	OBS	No	413.839125	301.757572	396.4	2.801	20.0	4.5	1.64	5226	3.42	1.61
006548447-04	OBS	No	491.762913	558.270046	449.9	0.505	16.1	2.9	1.64	5226	3.83	1.28
006548447-05	OBS	No	527.846533	522.541220	478.6	7.500	15.6	-1.0	1.64	5226	3.50	1.17

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006548447-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006548447-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SAME_NTL_PERIOD
006548447-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006548447-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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 006548447-05

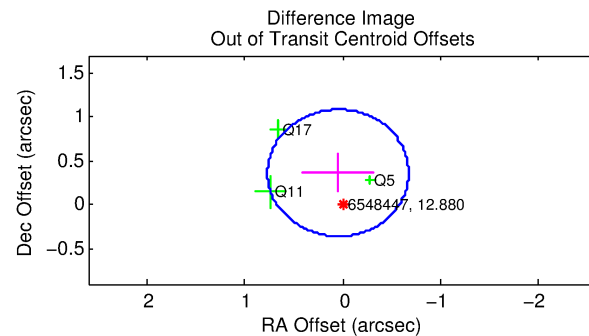
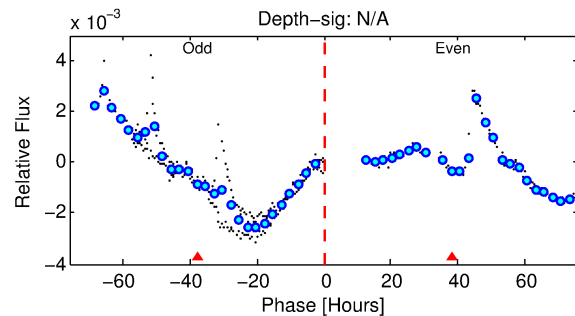
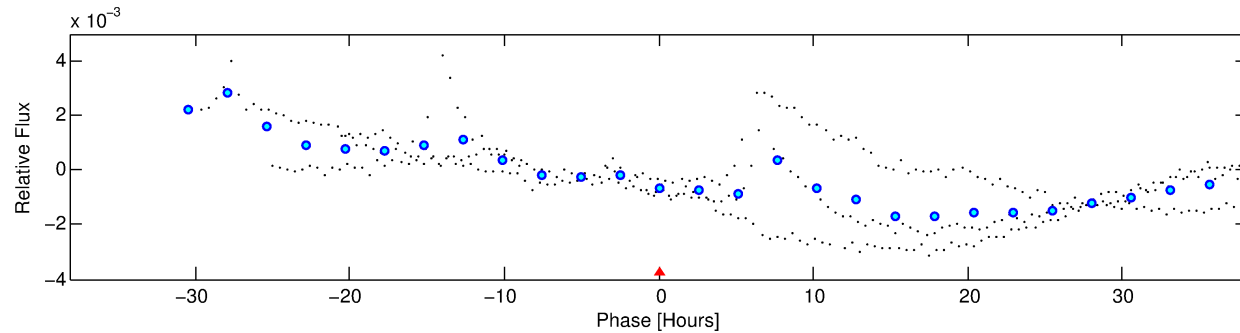
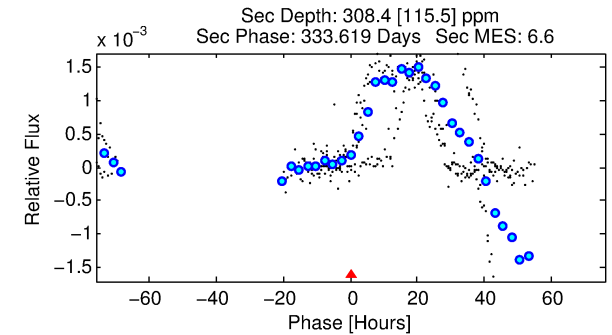
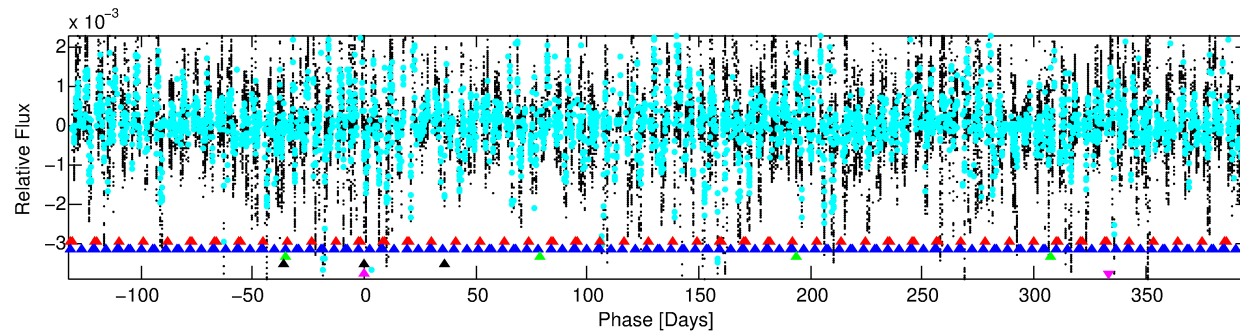
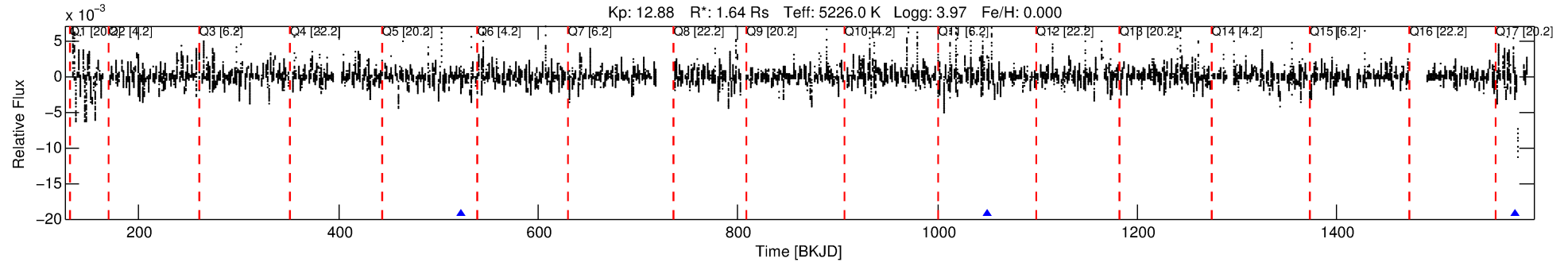
No Significant Match Found

# DV One-Page Summary

KIC: 6548447 Candidate: 5 of 5 Period: 527.847 d

KOI: K06730 Corr: No Ephemeris Match

Kp: 12.88 R\*: 1.64 Rs Teff: 5226.0 K Logg: 3.97 Fe/H: 0.000



## TPS TCE Results:

Period = 527.84653 d  
Epoch = 522.5412 BKJD

DV fit results are unavailable

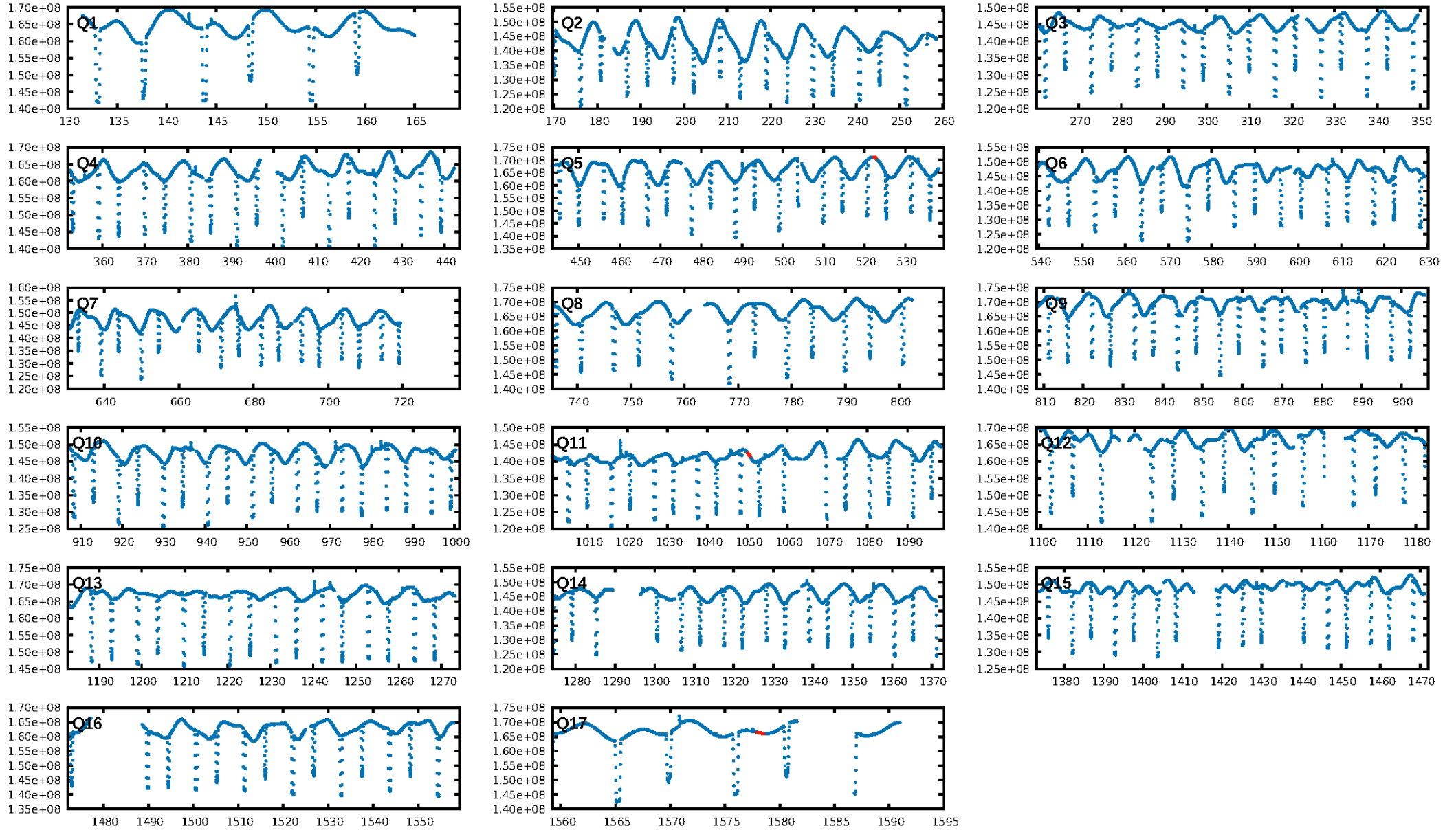
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [115.21σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [2/2]  
GhostDiagnostic-chr: -0.3374  
Centroid-sig: 10.2%  
Centroid-so: 1.025 arcsec [0.80σ]  
OotOffset-rm: 0.366 arcsec [1.52σ]  
KicOffset-rm: 0.264 arcsec [1.50σ]  
OotOffset-st: 0/1/0/2 [3]  
KicOffset-st: 0/1/0/2 [3]  
DiffImageQuality-fgm: 0.67 [2/3]  
DiffImageOverlap-fno: 0.67 [2/3]

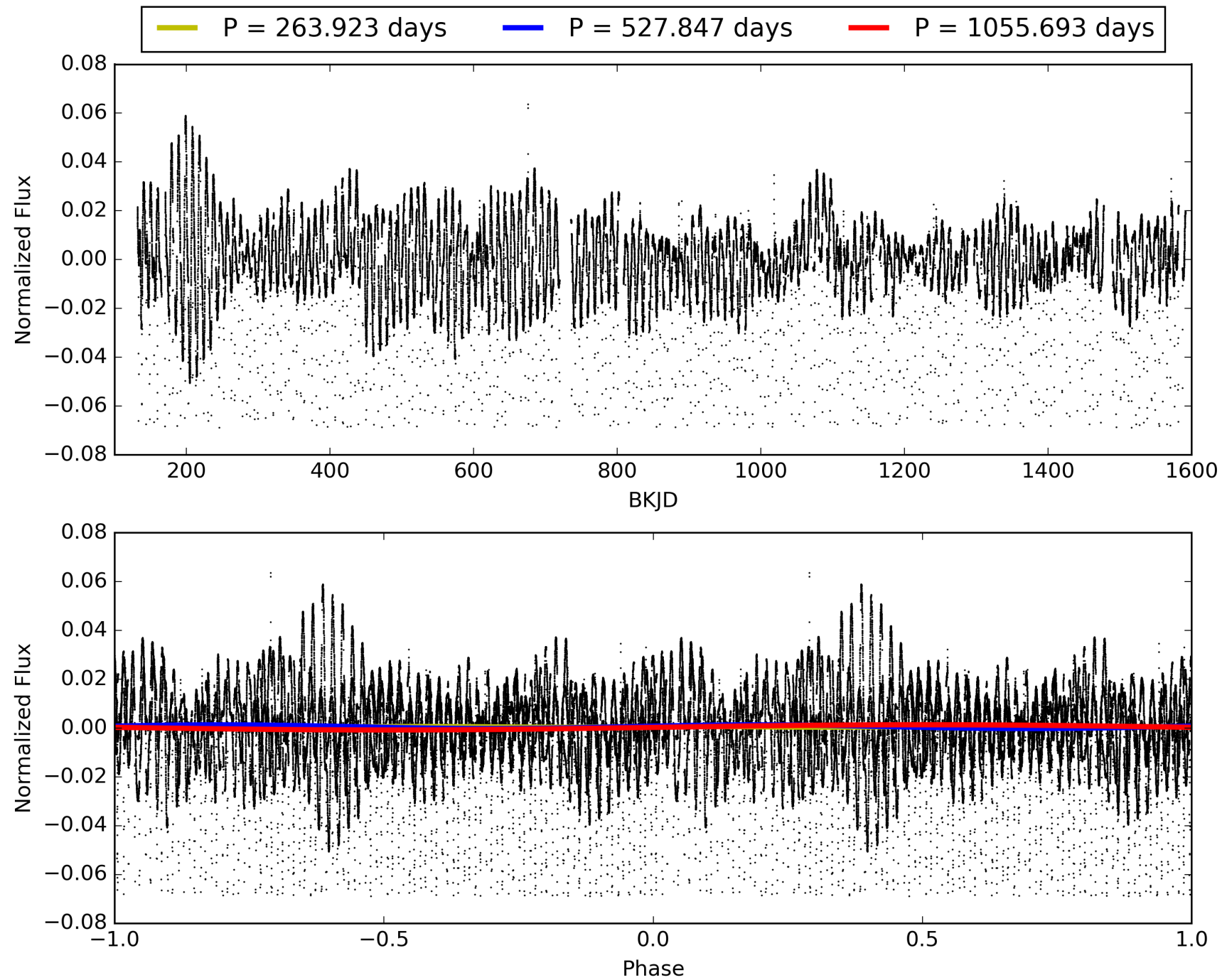
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:40:09 Z

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

# TCE 006548447-05, PDC Light Curves



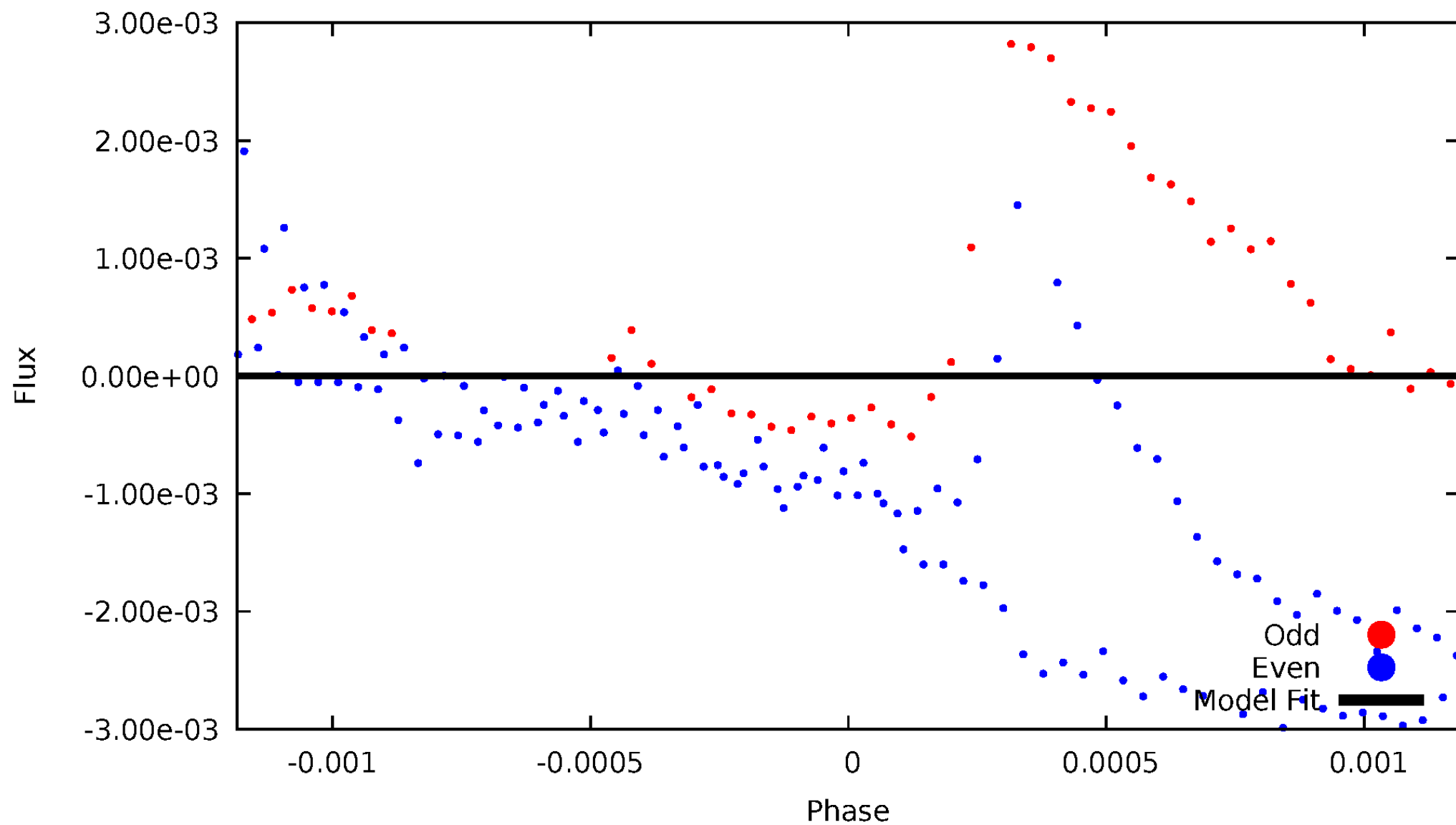
TCE 006548447-05





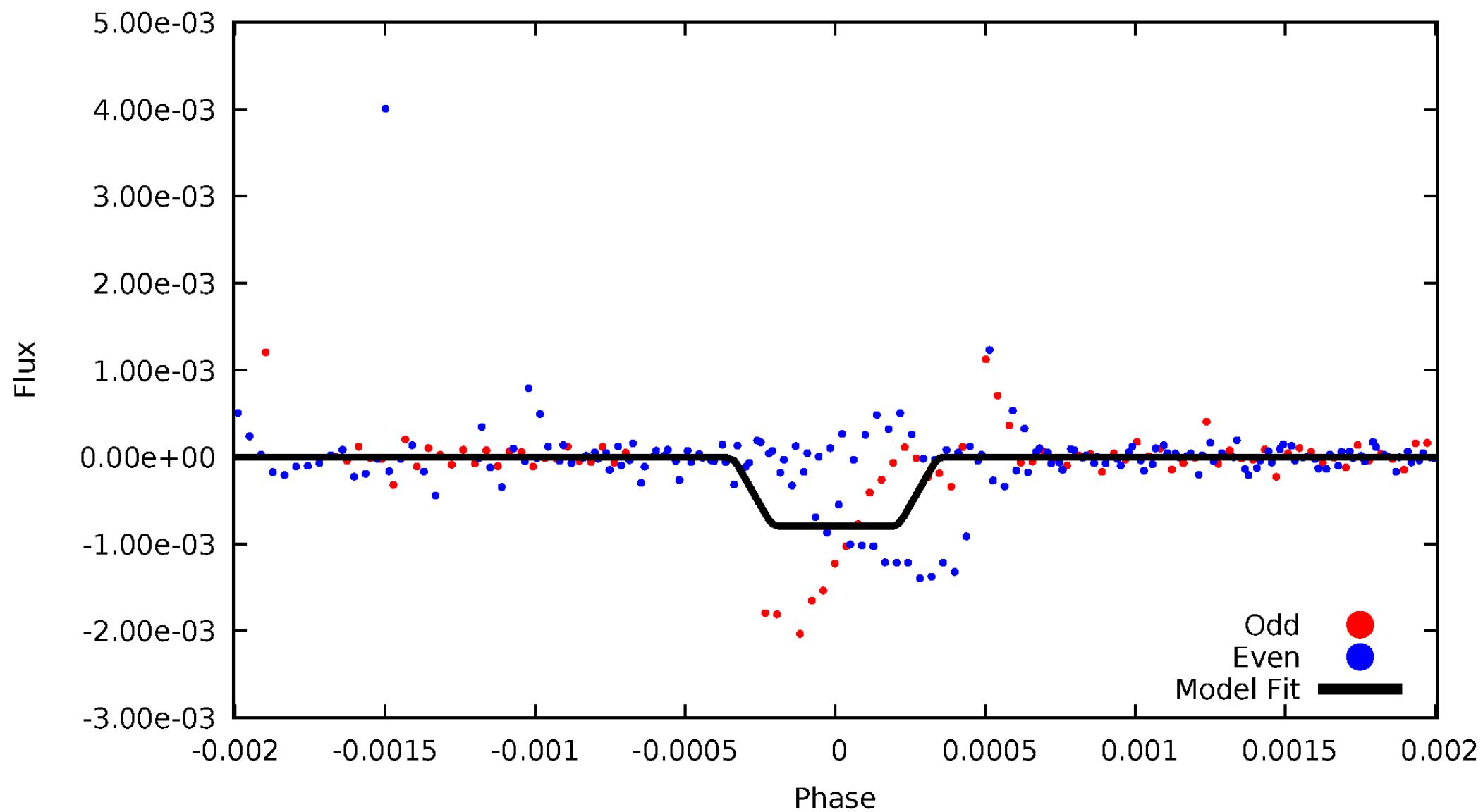
# DV Odd/Even

TCE 006548447-05



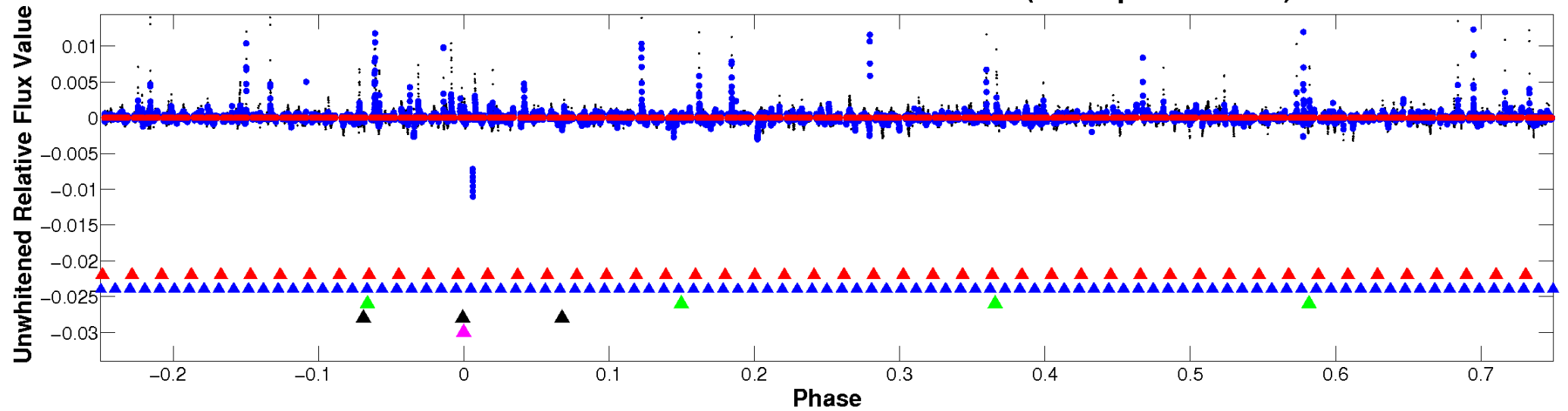
# ALT Odd/Even

TCE 006548447-05



# Non-Whitened Vs. Whitened Light Curve

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

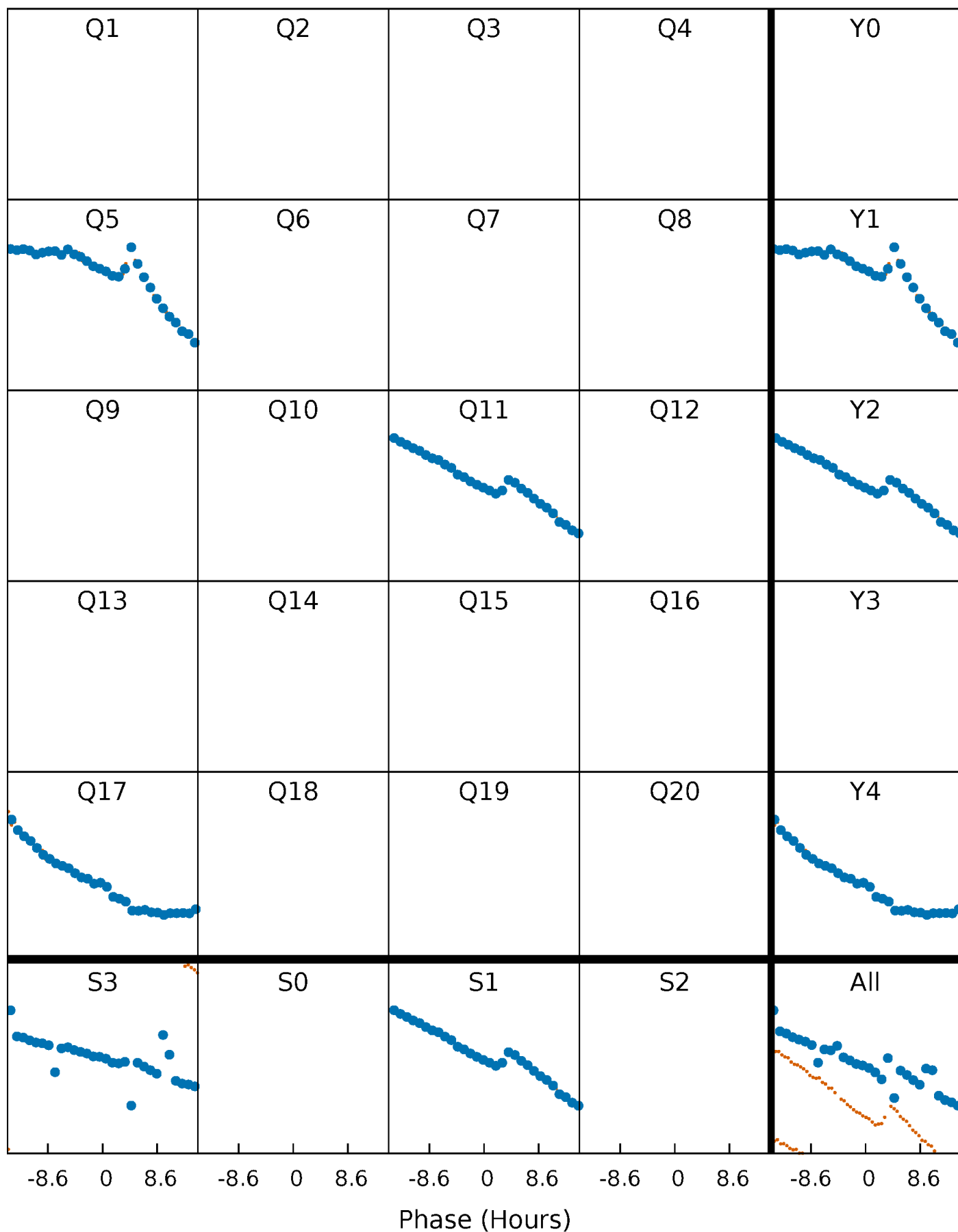


**Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



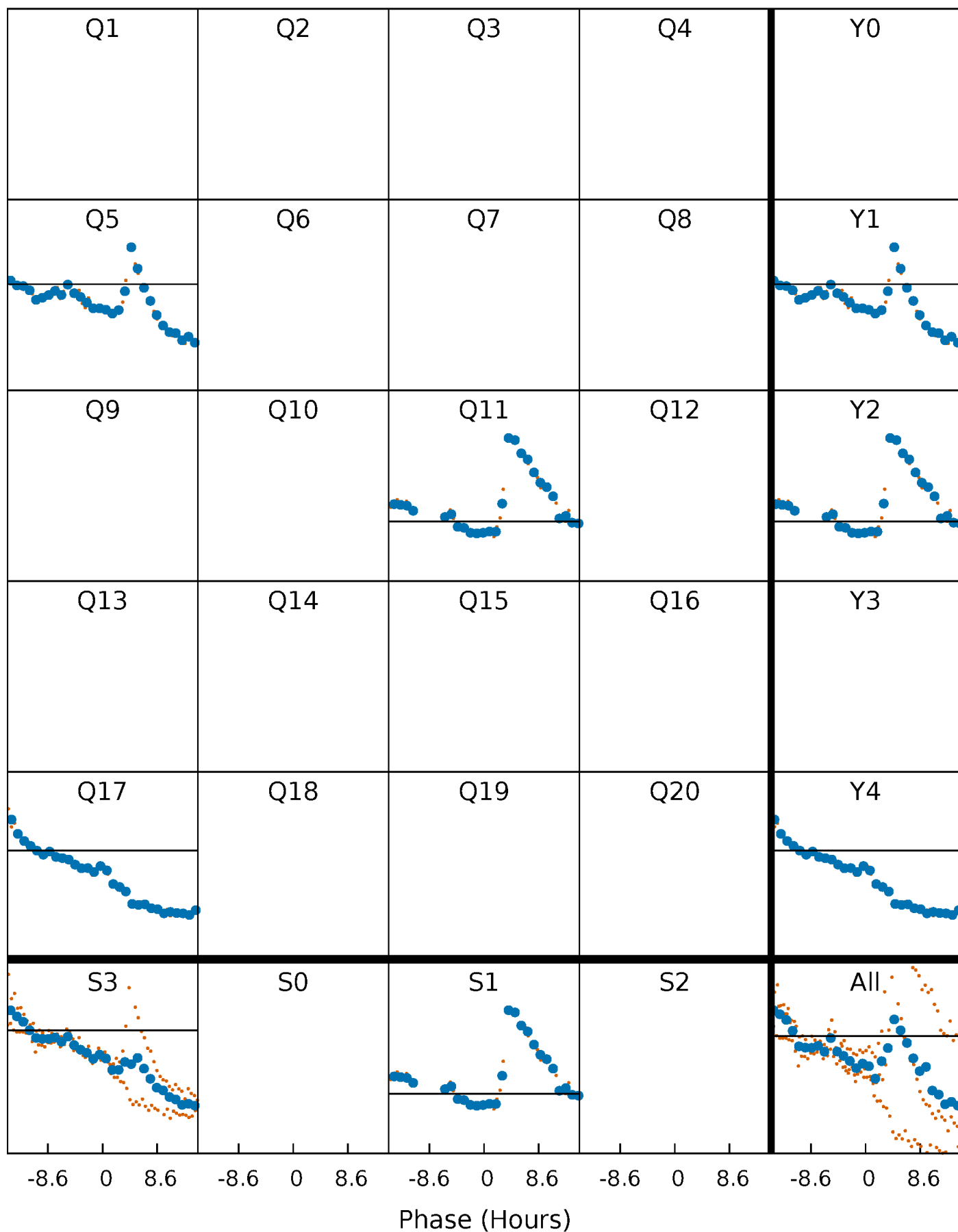
# PDC Quarter-Phased Transit Curves

TCE 006548447-05     $P=527.846533$  Days     $T_0=522.541220$  (BKJD)



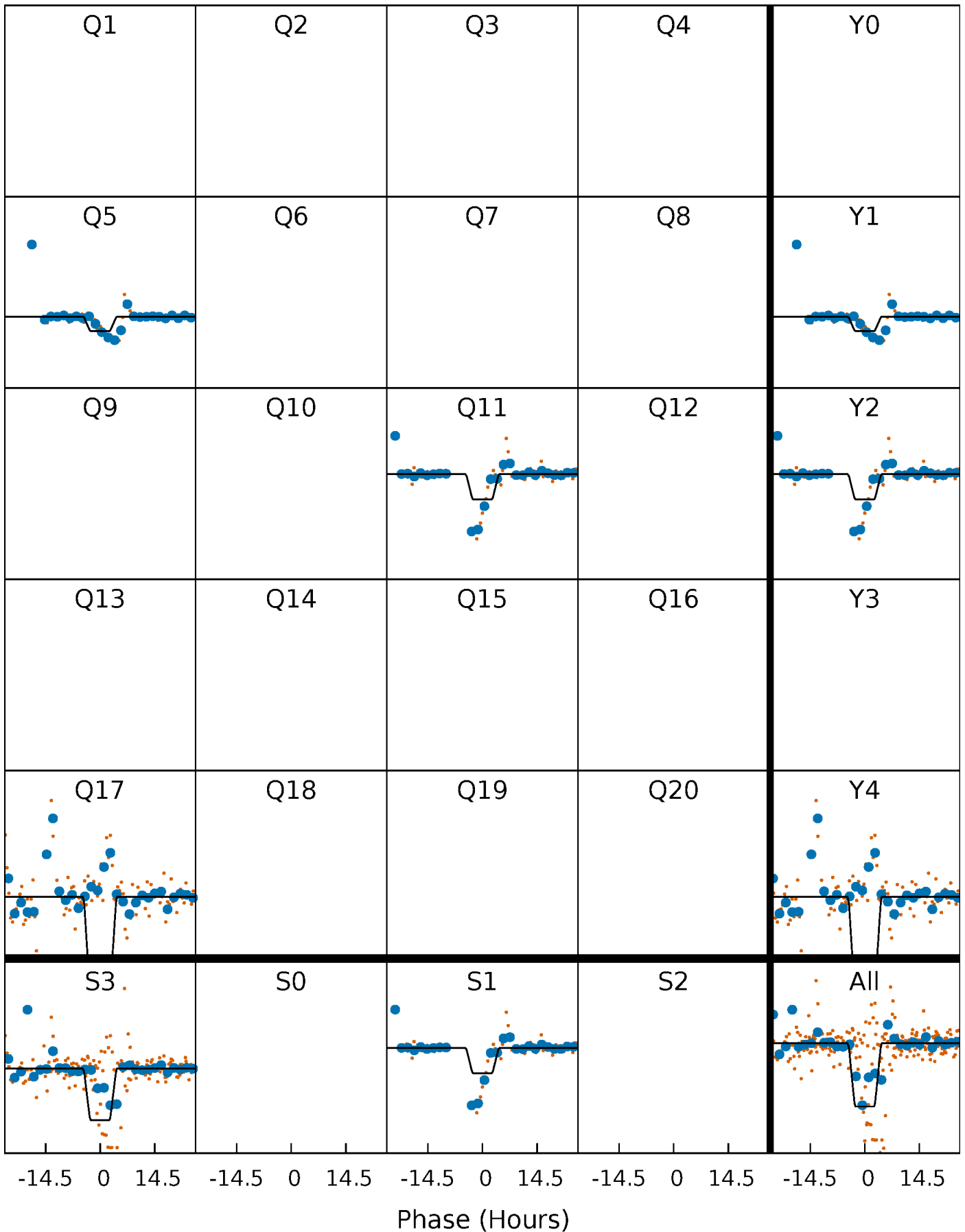
# DV Quarter-Phased Transit Curves

TCE 006548447-05     $P=527.846533$  Days     $T_0=522.541220$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

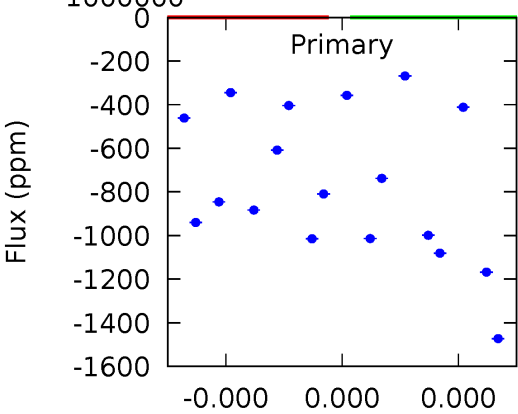
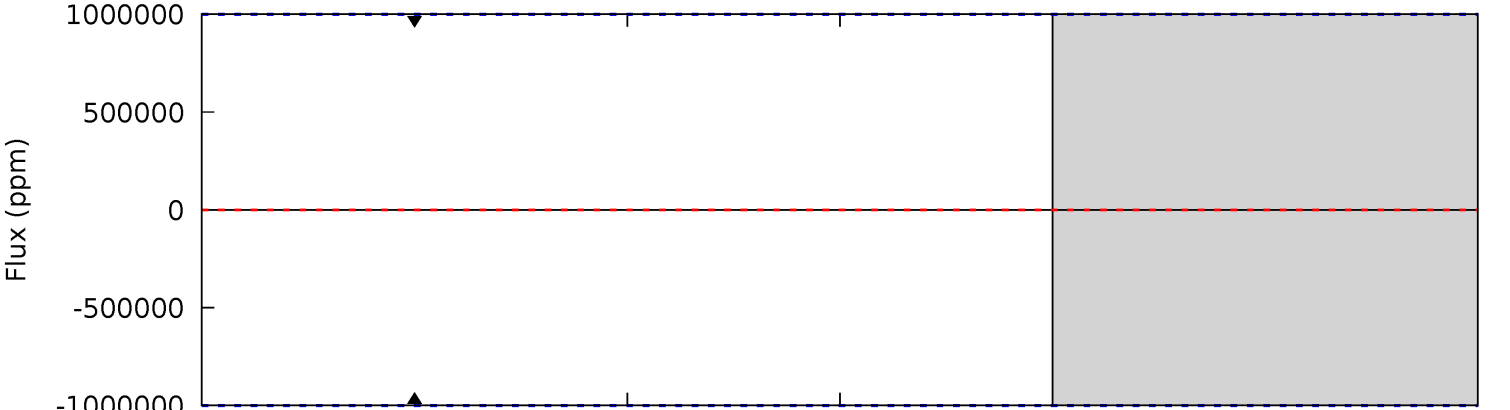
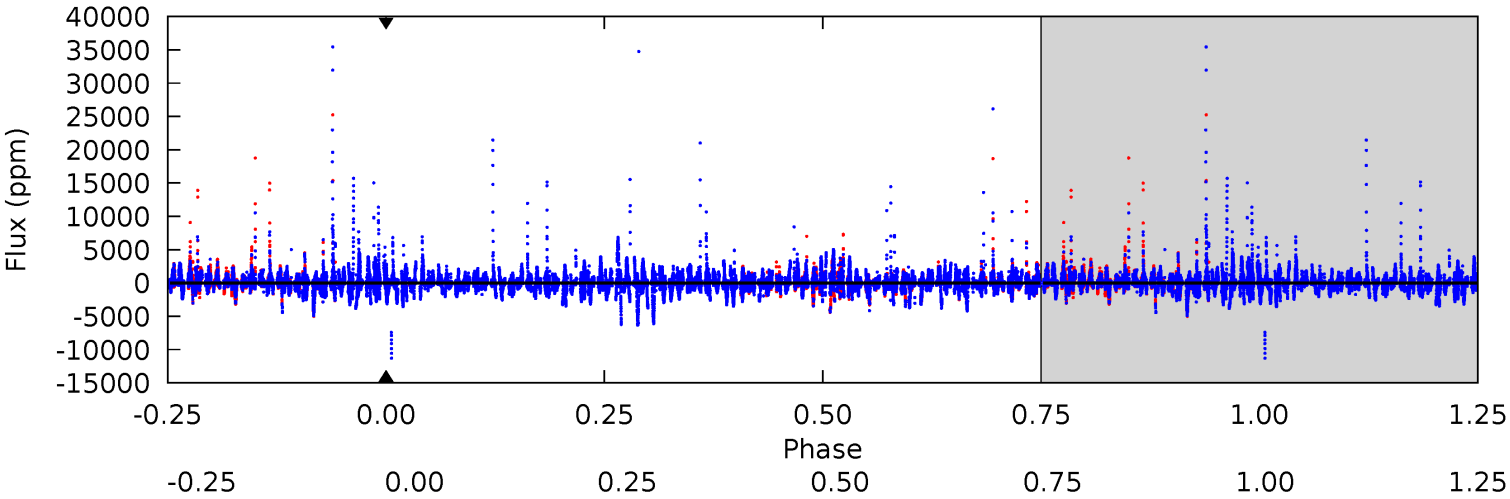
TCE 006548447-05     $P=527.846533$  Days     $T_0=522.442700$  (BKJD)



# DV Model-Shift Uniqueness Test

006548447-05, P = 527.846533 Days, E = 522.541220 Days

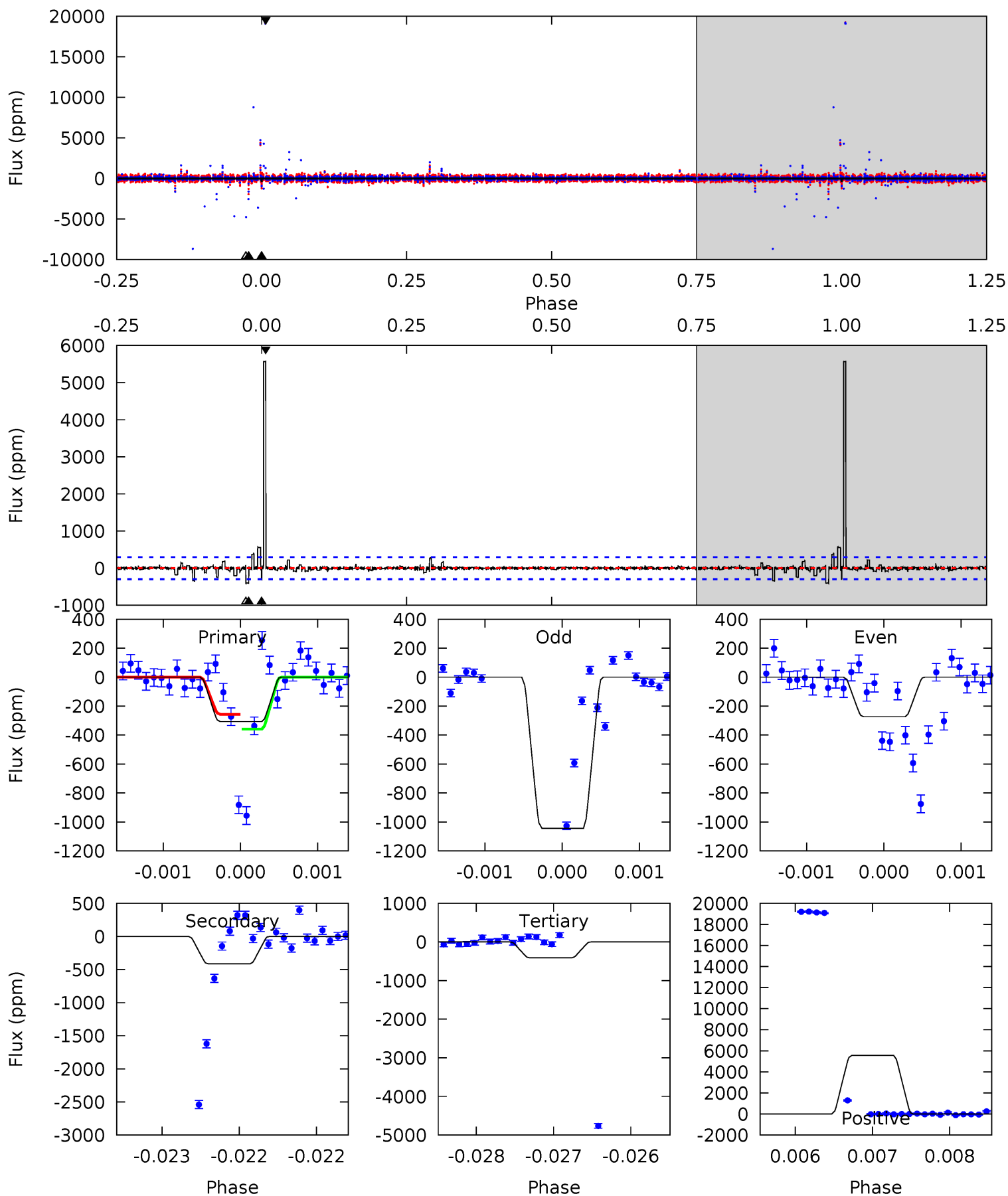
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

006548447-05, P = 527.846533 Days, E = 522.442700 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
5.69	7.70	7.65	103.3	5.52	3.39	2.56	-1.96	-97.6	0.05	-95.6	9.50	0.71	0.93	0.93





### Stellar Parameters For KIC 006548447

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5226^{+174}_{-142}$	$3.970^{+0.602}_{-0.258}$	$0.000^{+0.300}_{-0.250}$	$1.643^{+0.851}_{-0.851}$	$0.921^{+0.101}_{-0.112}$	$0.292^{+1.995}_{-0.200}$
	+3%/-3%	+15%/-6%	+inf%/-inf%	+52%/-52%	+11%/-12%	+683%/-68%
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 006548447-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$12.37^{+14.16}_{-8.84}$	$360^{+41}_{-52}$	$4338^{+14051}_{-18231}$	$10360^{+1395257}_{-814743}$
Alt.	$-415 \pm 54$	$12.18^{+15.25}_{-8.66}$	$362^{+46}_{-56}$	$3246^{+1797}_{-594}$	$2417^{+25040}_{-1952}$

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

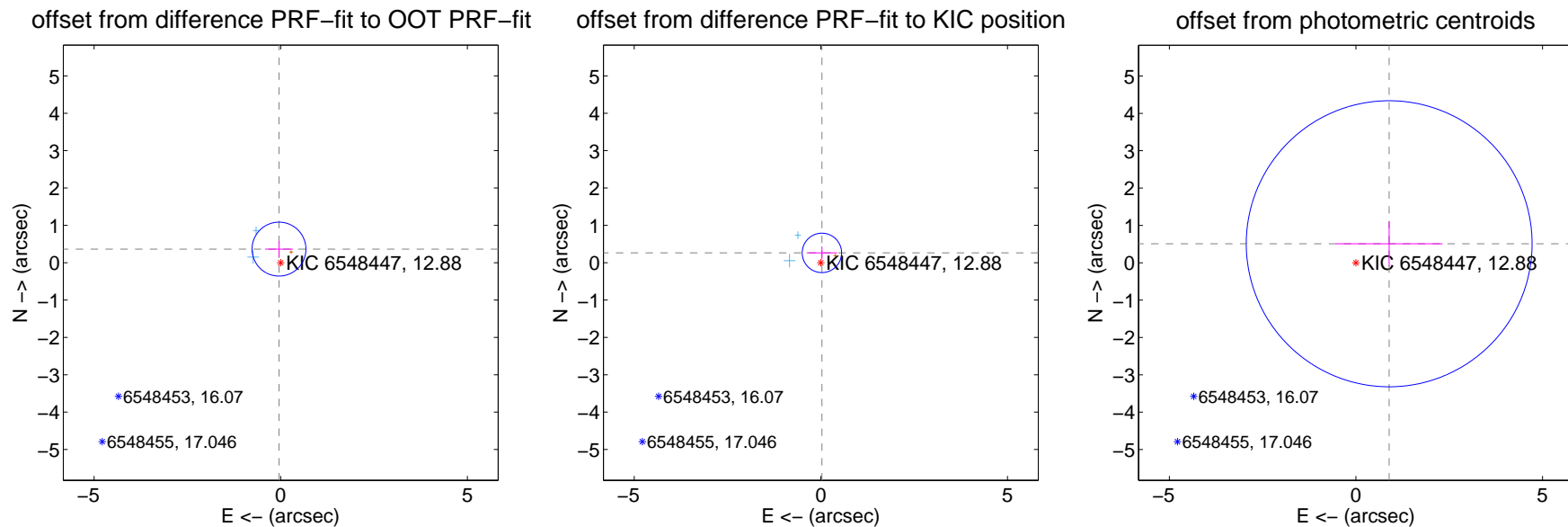
## DV Centroid Data

Supplemental centroid analysis for 006548447-05. Kepler magnitude: 12.88. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.366 \pm 0.241$	1.52	$0.047 \pm 0.372$	$0.363 \pm 0.214$
PRF-fit source offset from KIC position	$0.264 \pm 0.176$	1.50	$-0.028 \pm 0.407$	$0.262 \pm 0.171$
photometric centroid source offset	$1.03 \pm 1.28$	0.80	$-0.89 \pm 1.43$	$0.51 \pm 0.60$

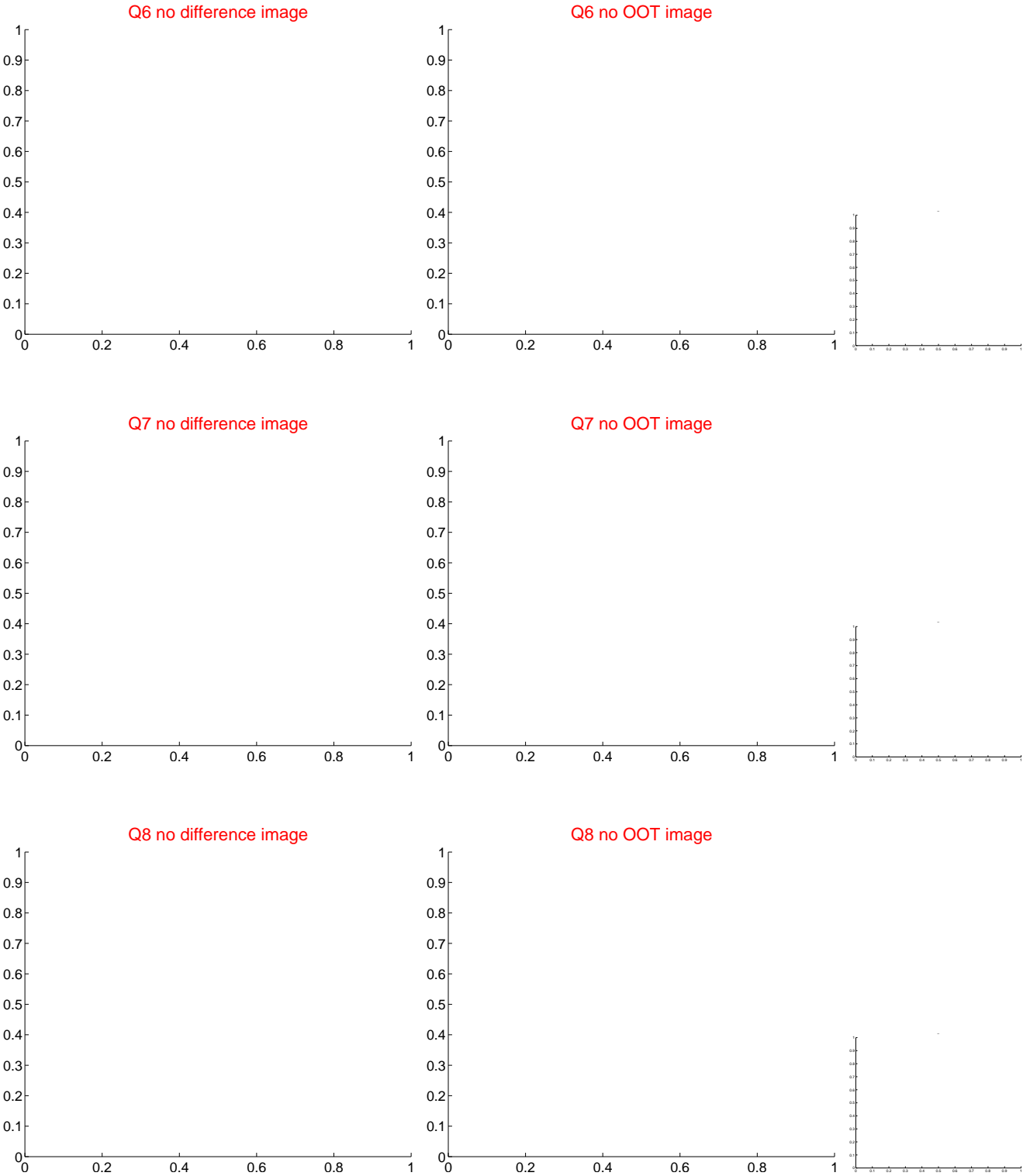
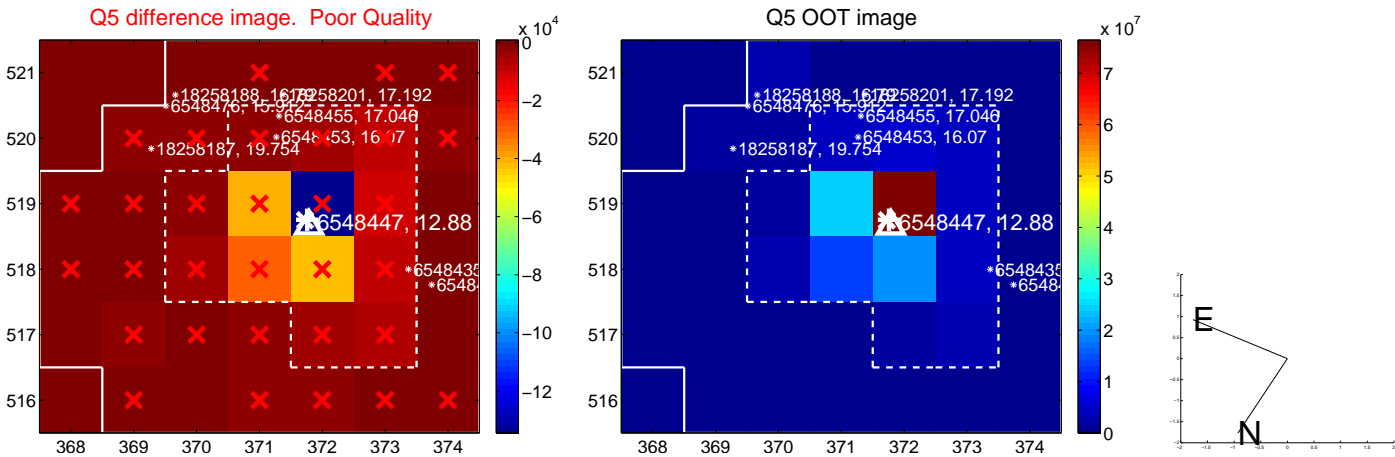


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

Q9 no difference image



Q9 no OOT image



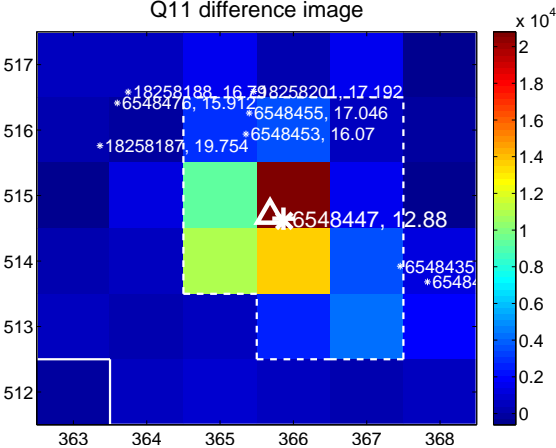
Q10 no difference image



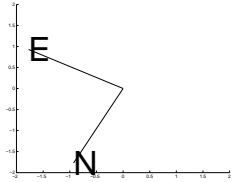
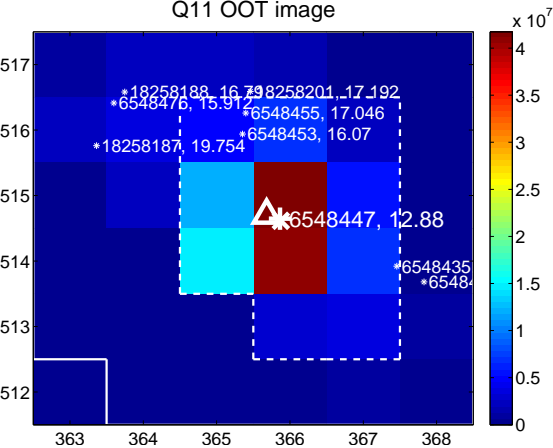
Q10 no OOT image



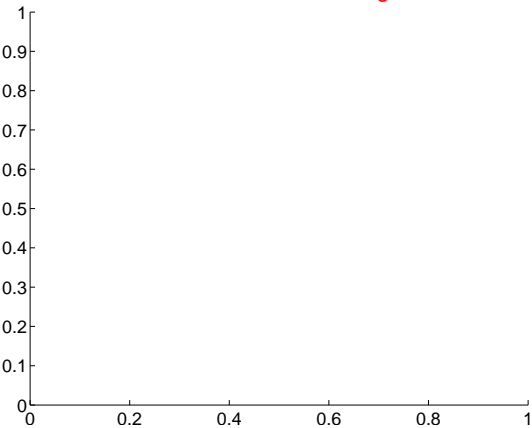
Q11 difference image



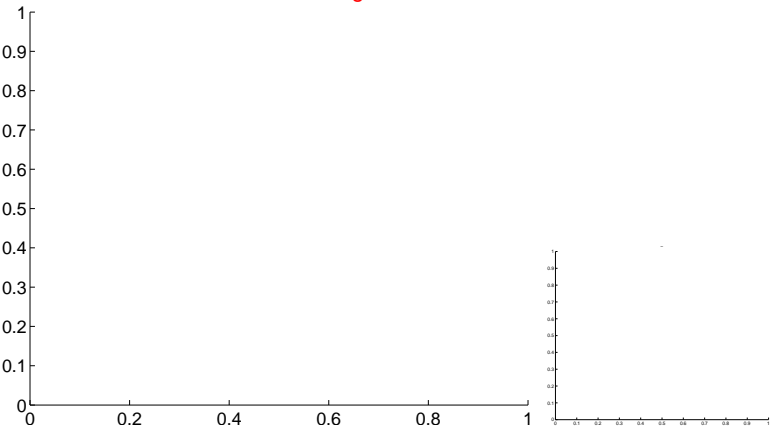
Q11 OOT image



Q12 no difference image



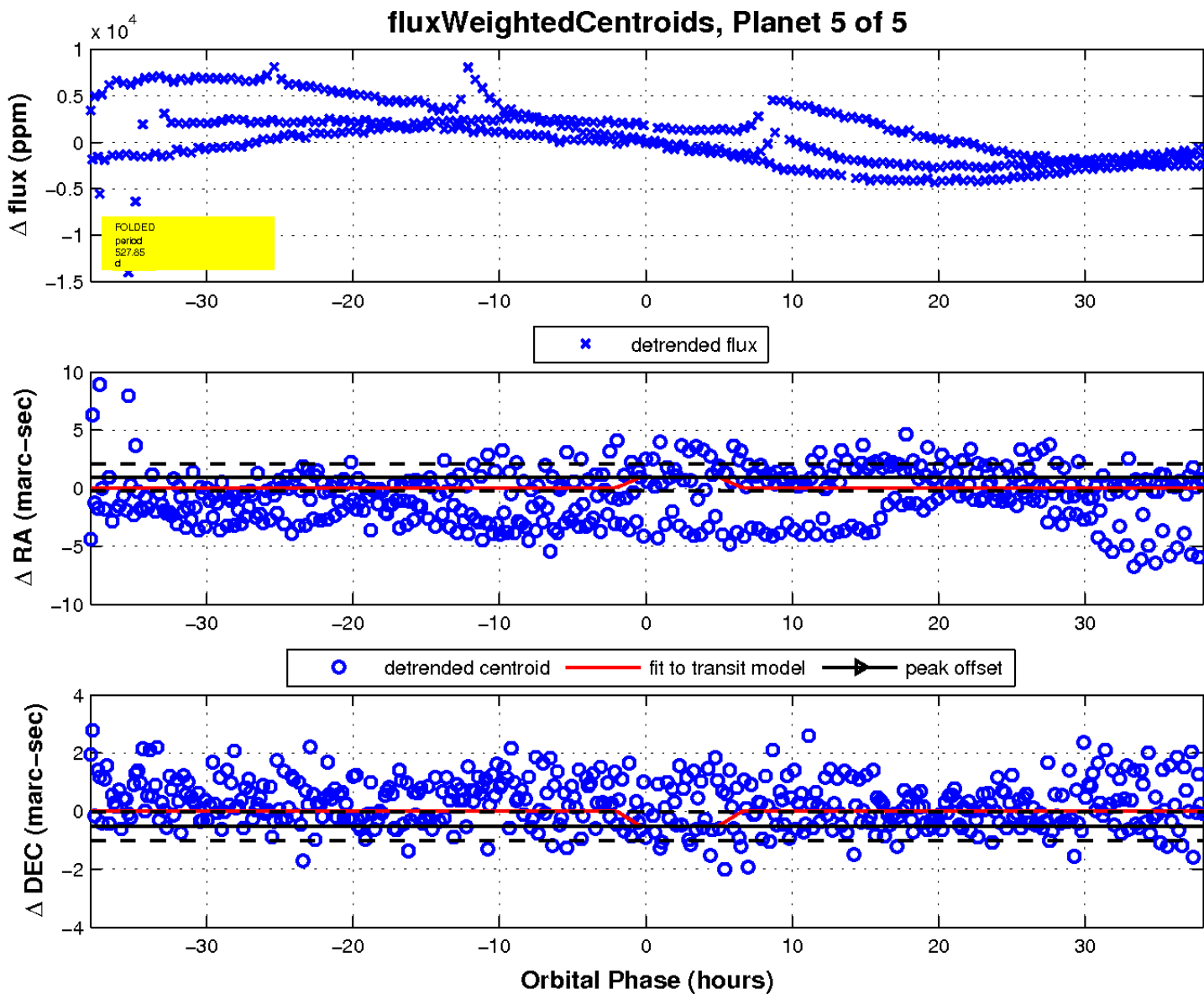
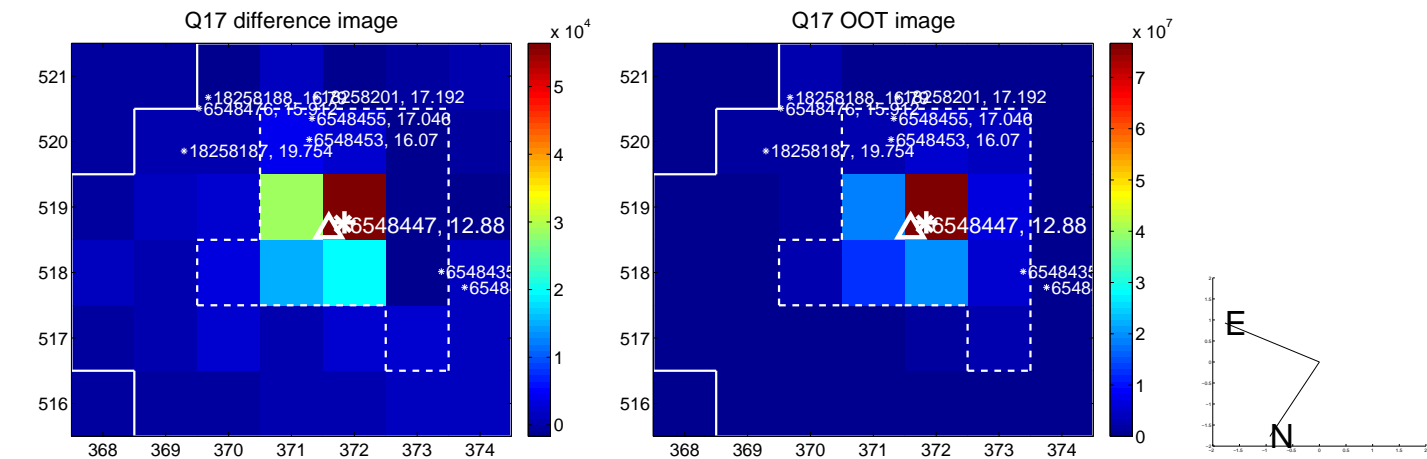
Q12 no OOT image



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

