

# KIC 008625249

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008625249-01	OBS	No	51.808360	133.366181	26.6	0.828	45.3	0.0	1.00	5780	0.52	13.51
008625249-02	OBS	No	51.151791	149.935254	125212.9	15.000	60.1	-1.0	1.00	5780	35.25	13.74
008625249-03	OBS	No	51.522481	142.585983	72016.5	15.000	40.9	-1.0	1.00	5780	26.66	13.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008625249-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_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—CENT_FEW_DIFFS
008625249-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008625249-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

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

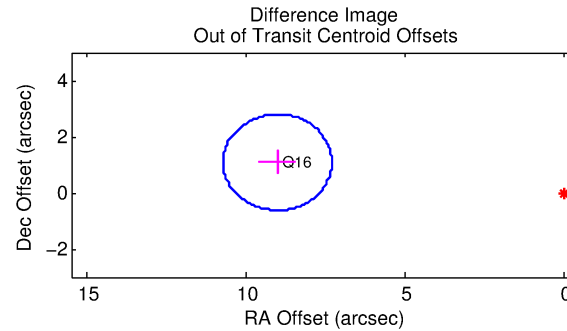
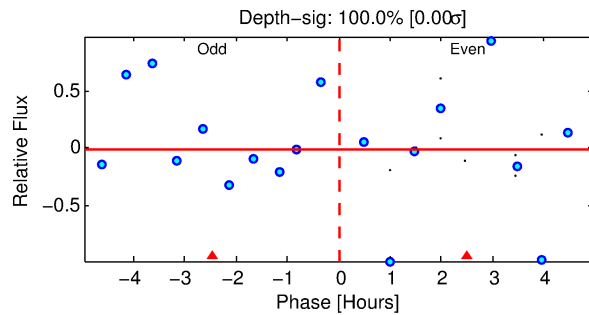
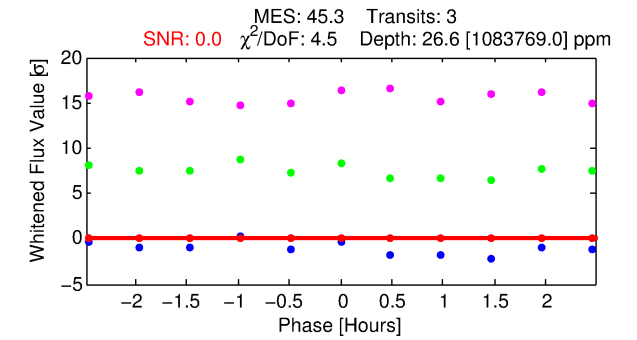
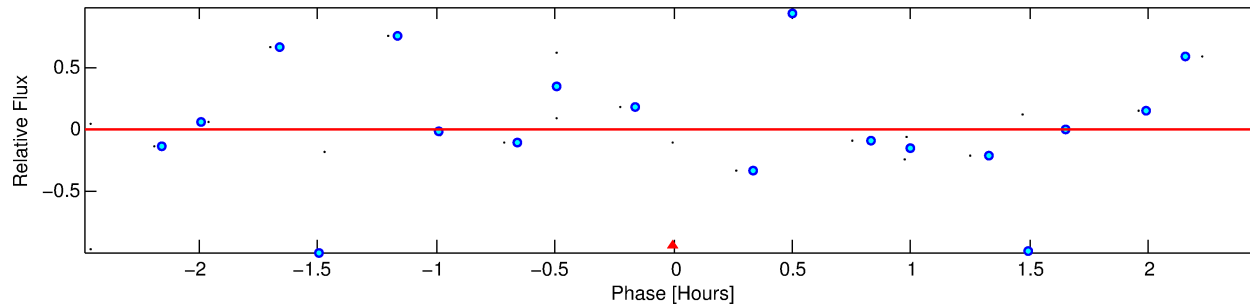
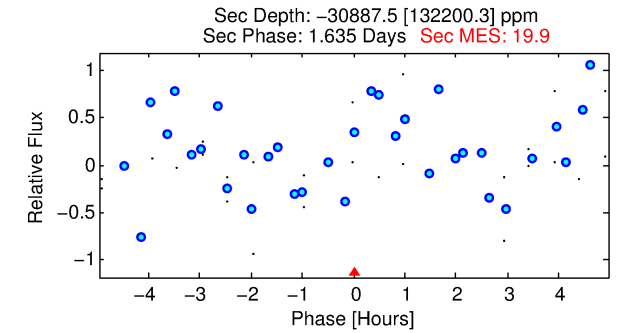
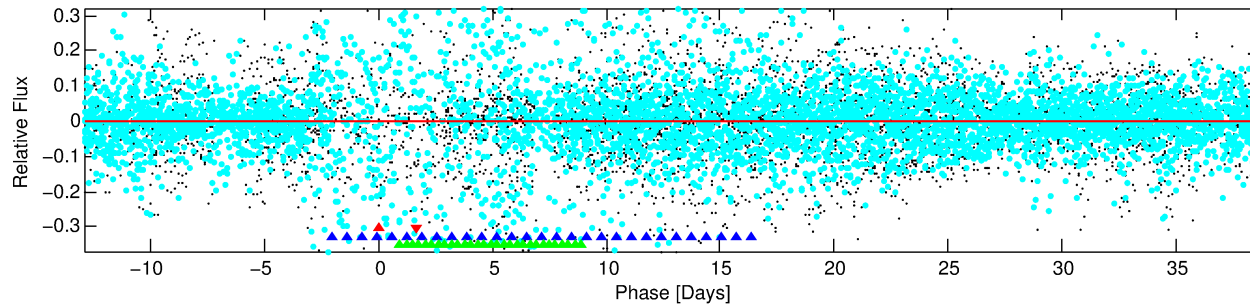
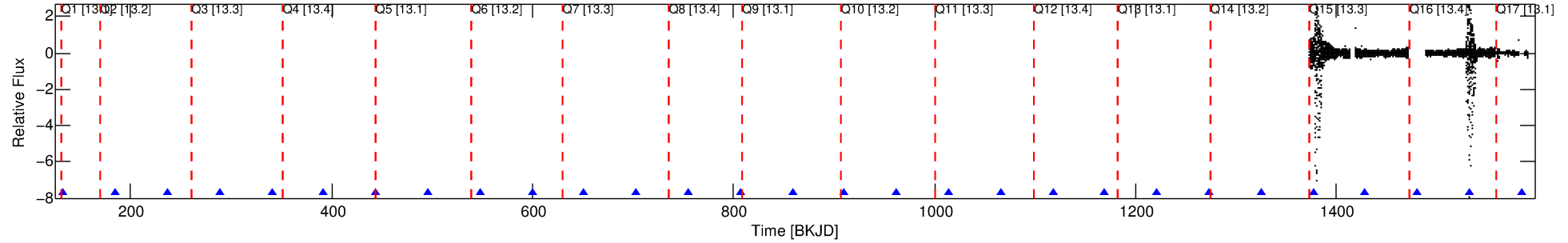
## Ephemeris Match Information For 008625249-01

No Significant Match Found

# DV One-Page Summary

KIC: 8625249 Candidate: 1 of 3 Period: 51.808 d

Kp: 18.44 R\*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



## DV Fit Results:

Period = 51.80836 [240.99911] d  
Epoch = 133.3662 [6308.5061] BKJD  
Rp/R\* = 0.0047 [46782.4145]  
a/R\* = 480.20 [20636827661.79]  
b = 0.02 [1927632454.50]  
Seff = 13.51 [83.81]  
Teff = 489 [758] K  
Rp = 0.52 [5105026.83] Re  
a = 0.2720 [0.8436] AU  
Ag = N/A  
Teffp = N/A

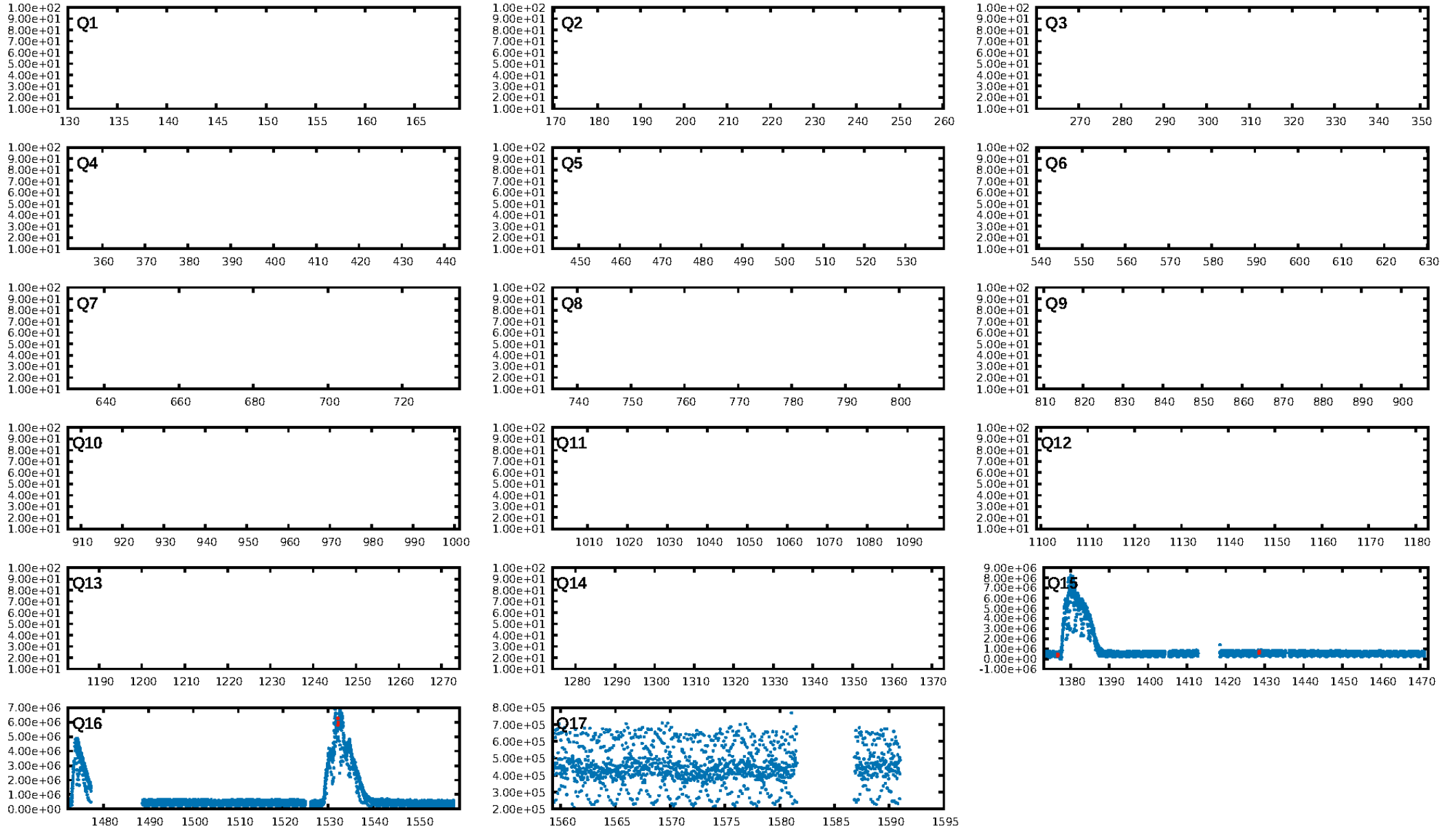
## DV Diagnostic Results:

ShortPeriod-sig: 35.2% [0.46σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 36.8%  
ModelChiSquareGof-sig: 73.3%  
Bootstrap-pfa: 4.98e-221  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -1.467  
Centroid-sig: N/A  
Centroid-so: 2536.095 arcsec [0.68σ]  
OotOffset-rm: 9.082 arcsec [15.94σ]  
KicOffset-rm: 0.611 arcsec [0.96σ]  
OotOffset-st: 0/0/1/0 [1]  
KicOffset-st: 0/1/1/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 0.50 [1/2]

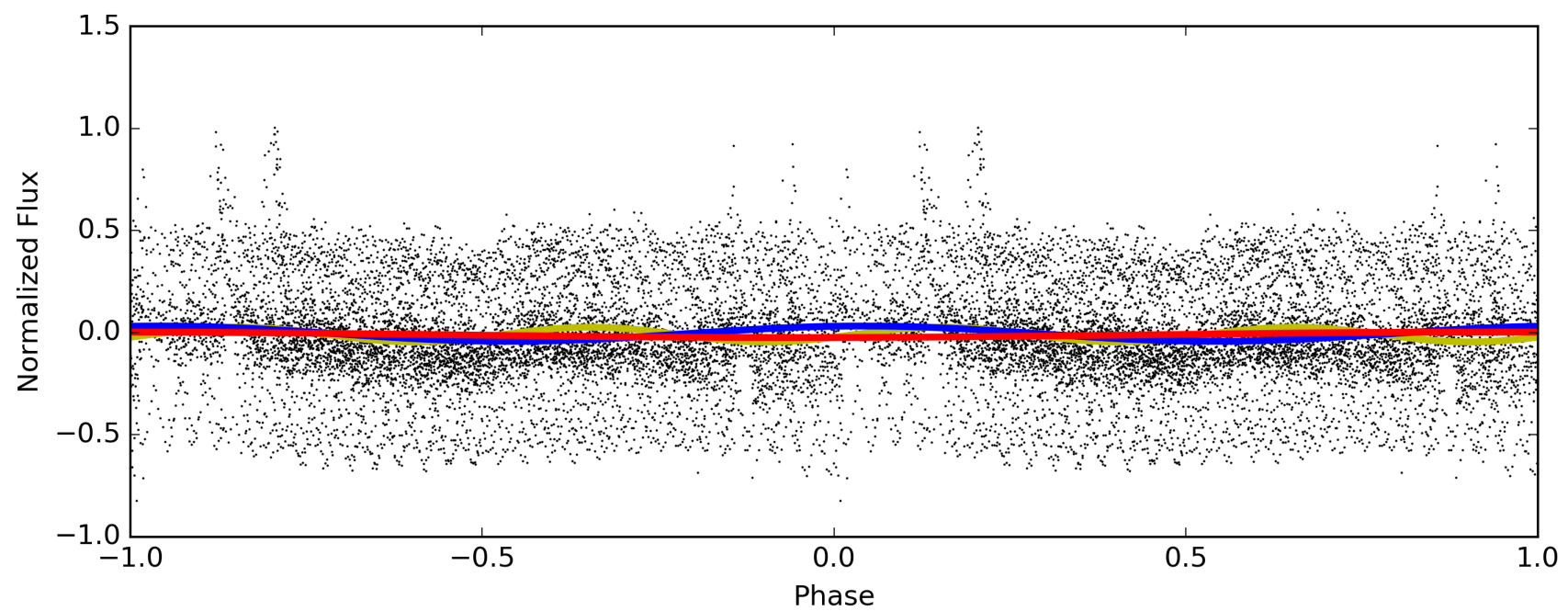
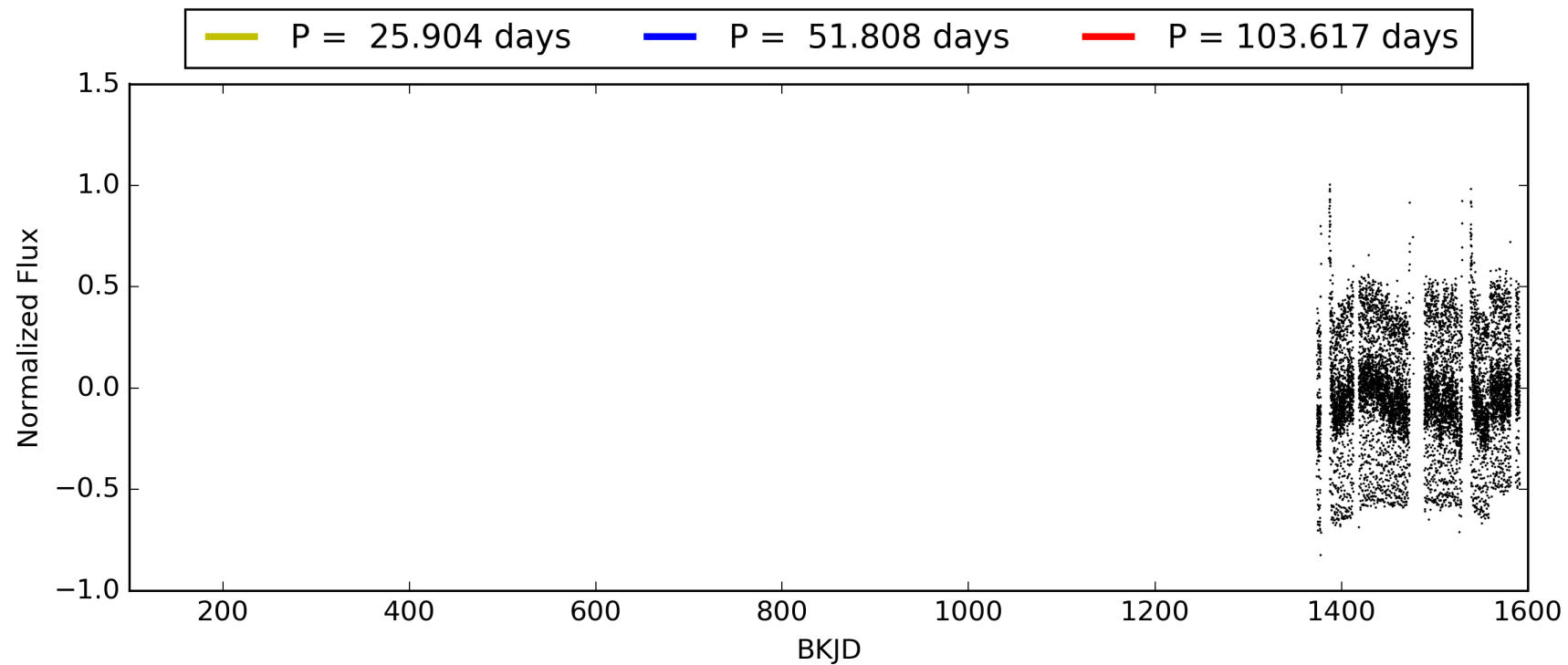
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:46:23 Z

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

# TCE 008625249-01, PDC Light Curves

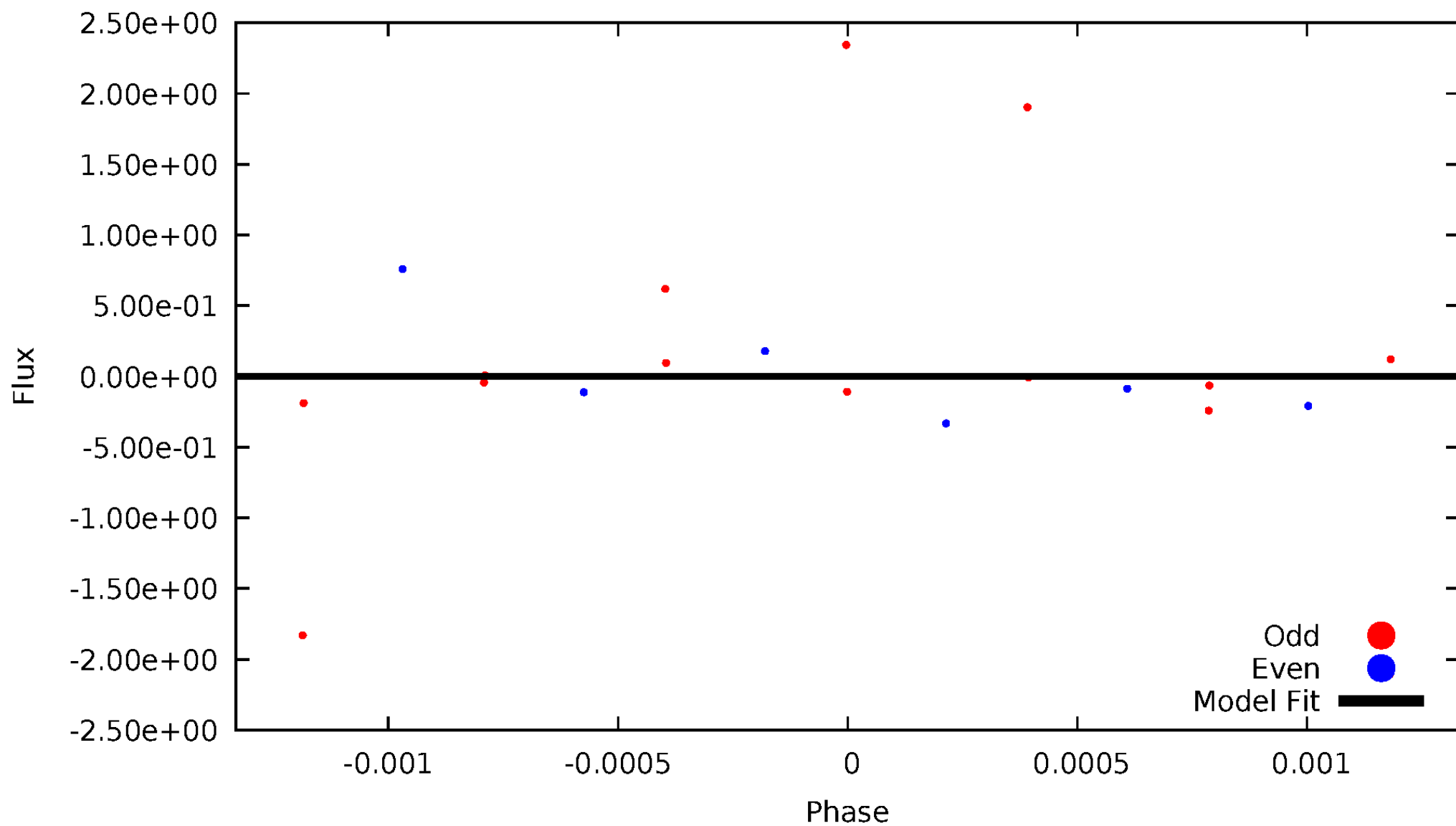


TCE 008625249-01



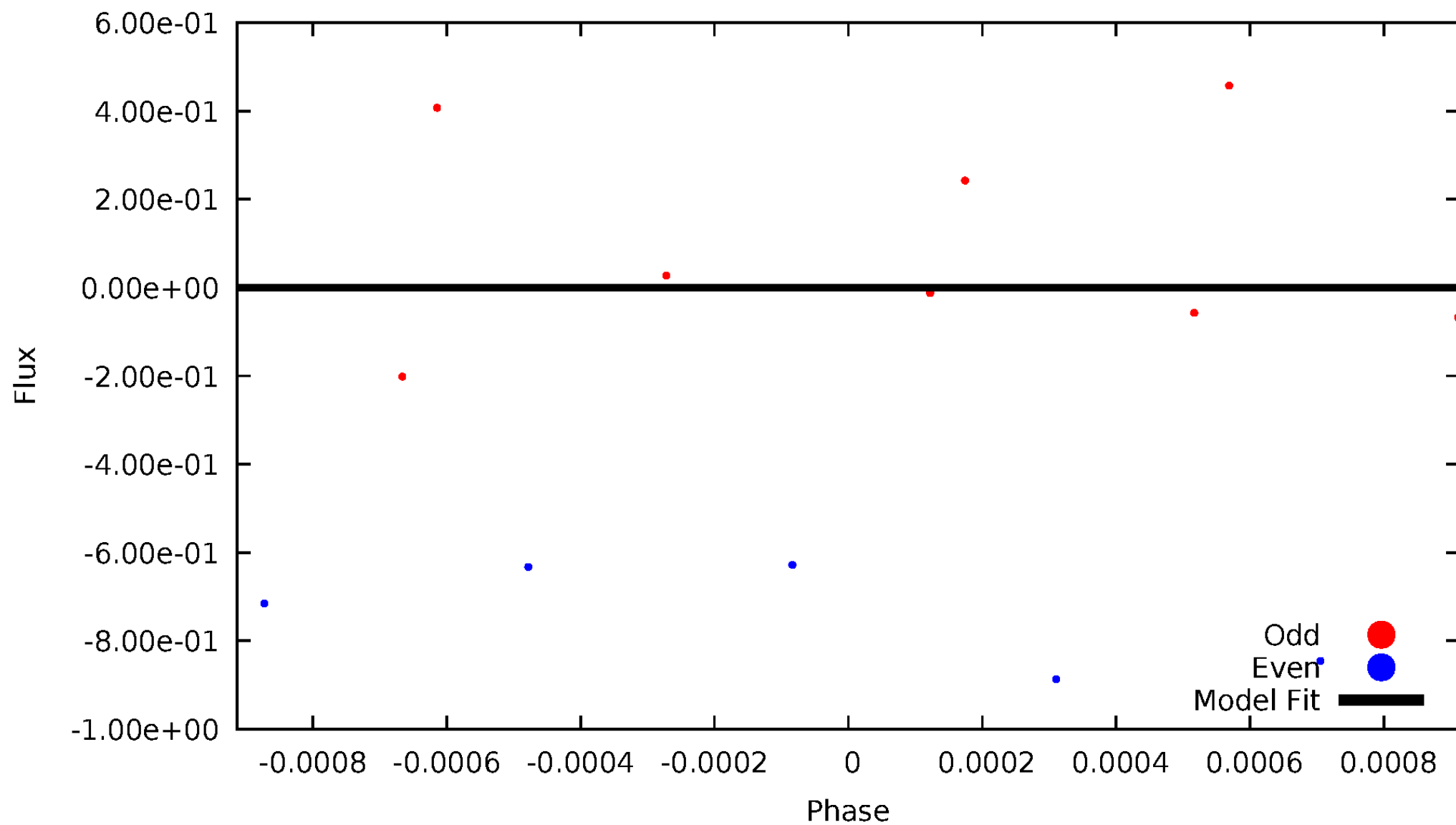
# DV Odd/Even

TCE 008625249-01



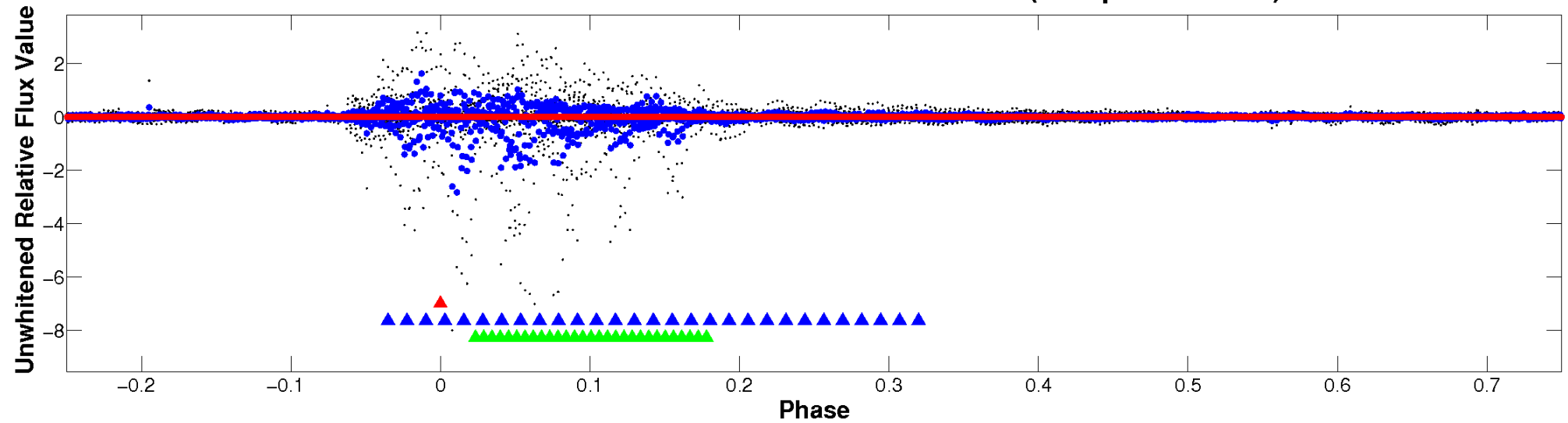
# ALT Odd/Even

TCE 008625249-01

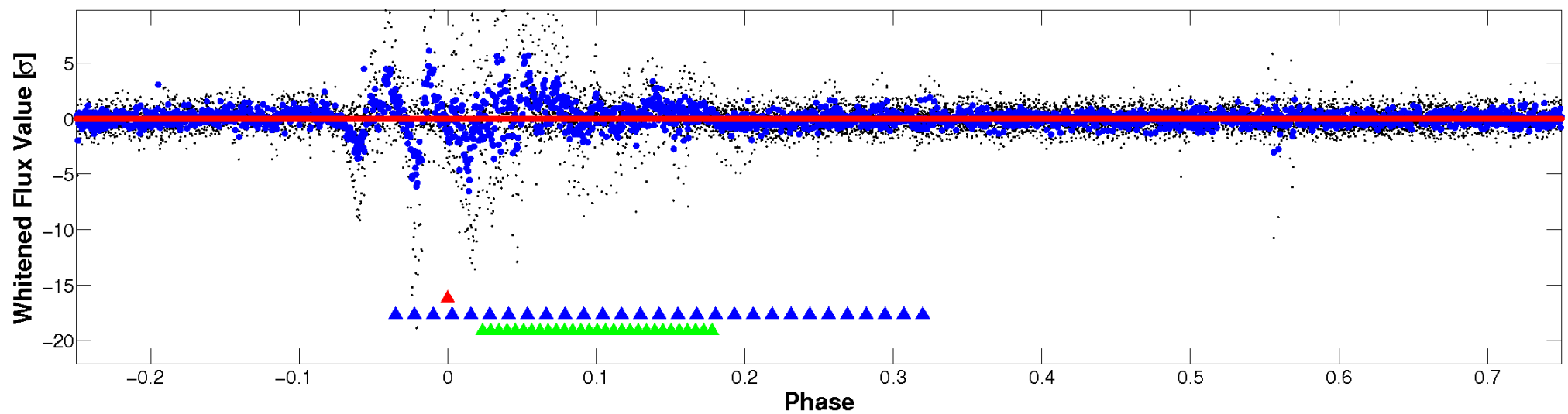


# Non-Whitened Vs. Whitened Light Curve

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

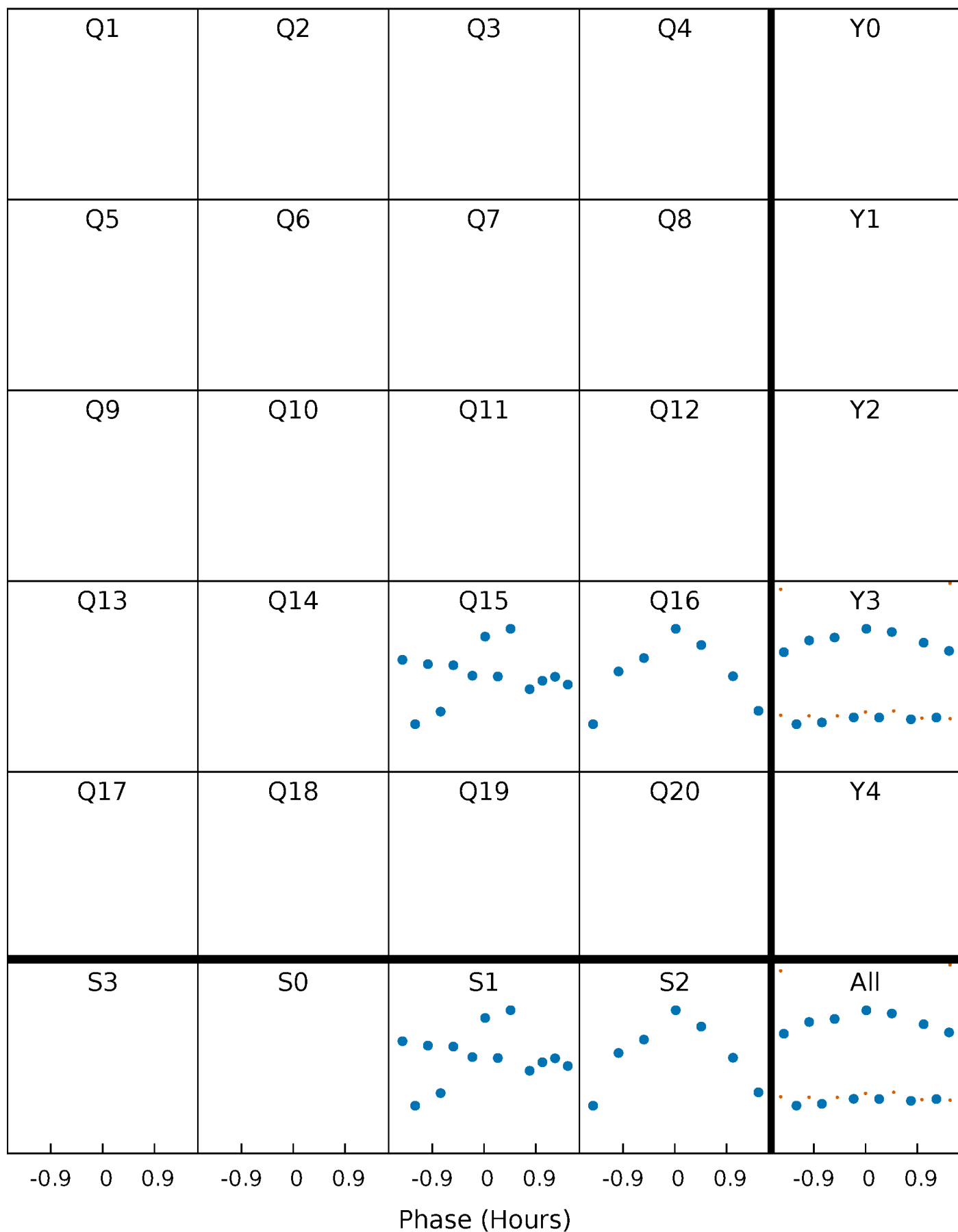


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

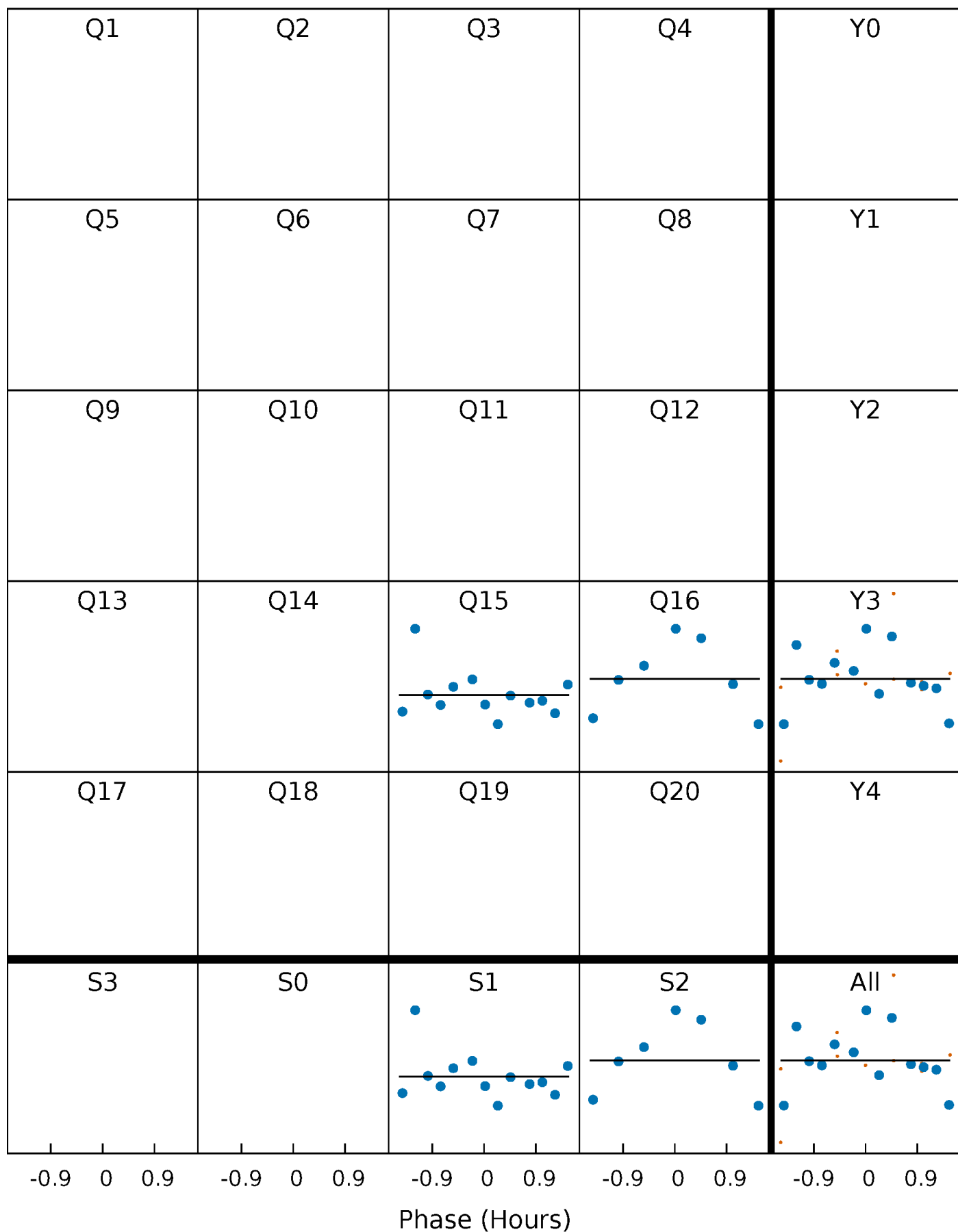
TCE 008625249-01 P= 51.808360 Days  $T_0=133.366182$  (BKJD)





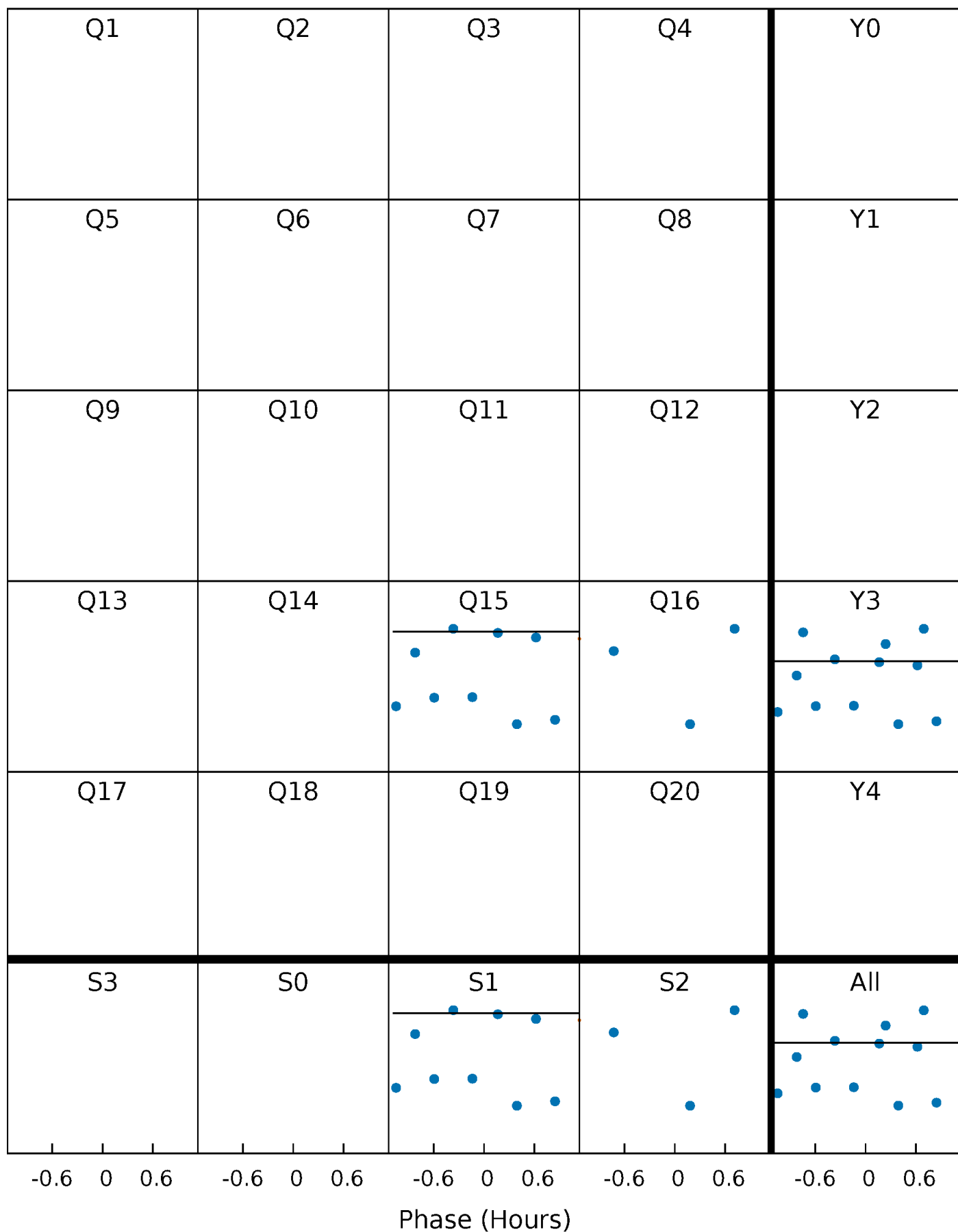
# DV Quarter-Phased Transit Curves

TCE 008625249-01 P= 51.808360 Days  $T_0=133.366182$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

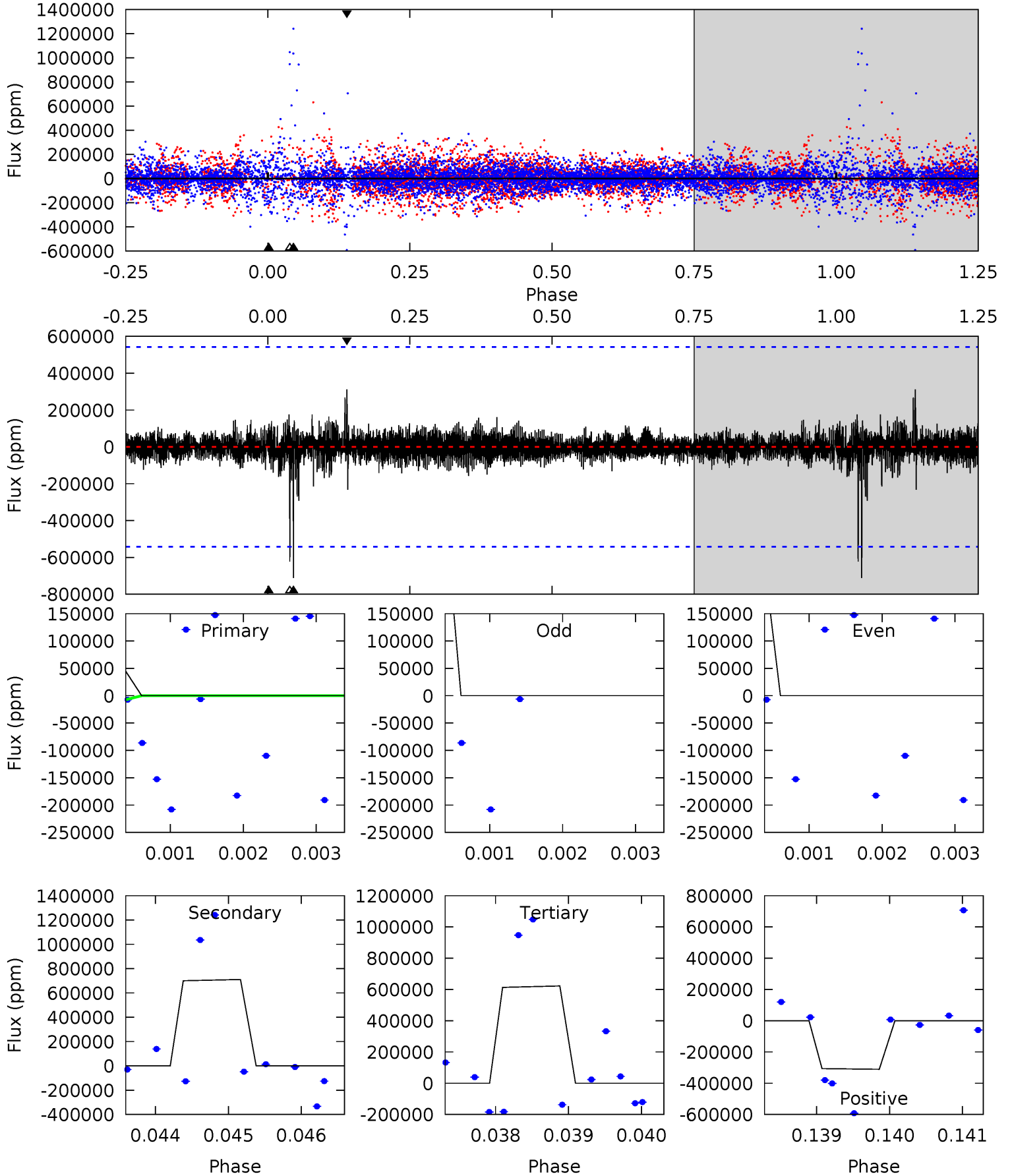
TCE 008625249-01 P= 51.806964 Days  $T_0=133.333391$  (BKJD)



# DV Model-Shift Uniqueness Test

008625249-01, P = 51.808360 Days, E = 133.366182 Days

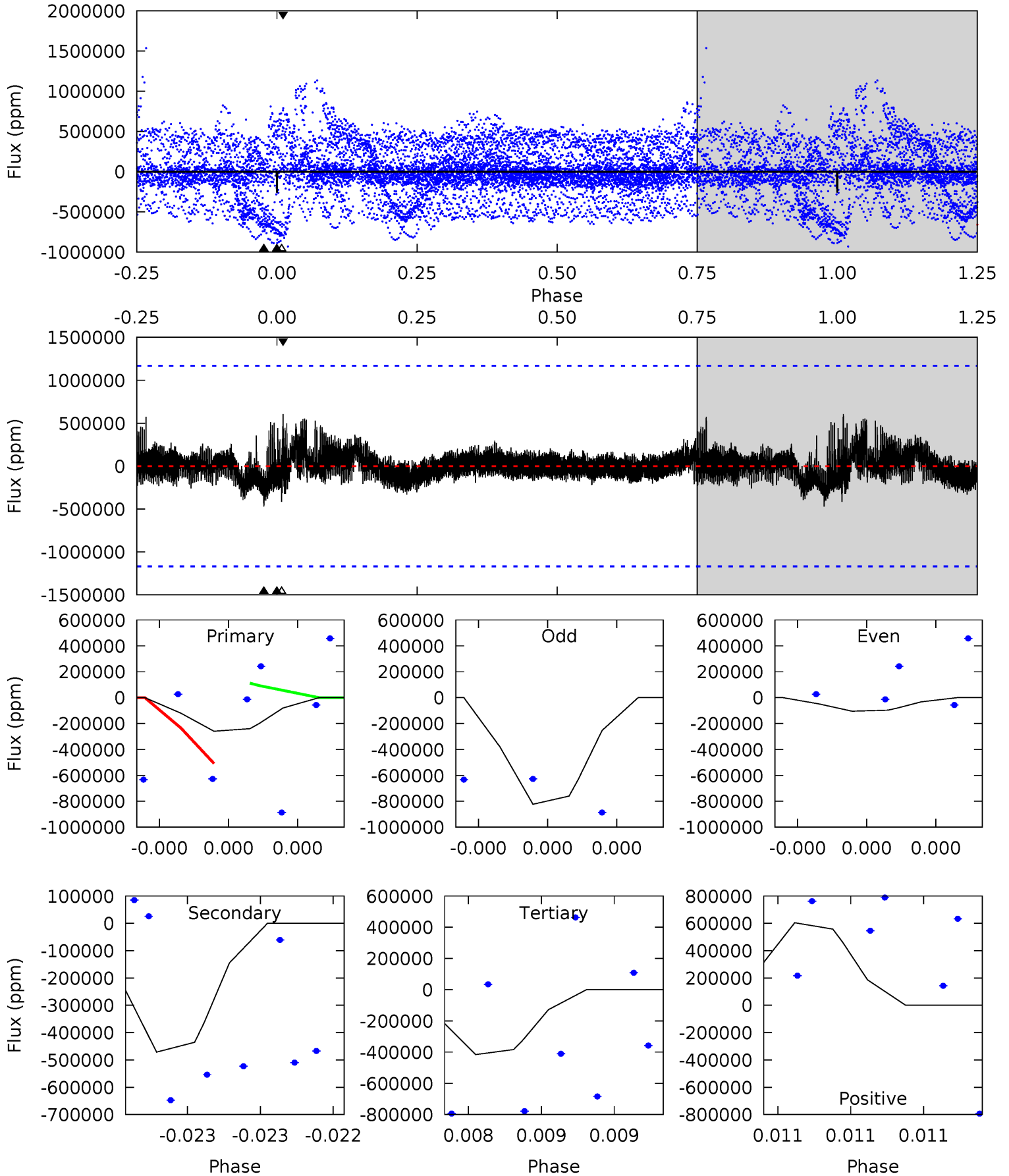
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.44	7.15	6.26	3.13	5.45	3.29	0.45	-5.82	-2.68	0.89	4.02	0.44	-11.4	0.30	0



# Alt Model-Shift Uniqueness Test

008625249-01, P = 51.806964 Days, E = 133.333391 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
1.25	2.27	2.00	2.90	5.61	3.54	0.60	-0.75	-1.66	0.27	-0.64	2.59	1.00	0.56	0.39



### Stellar Parameters For KIC 008625249

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 008625249-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	-710581±99403	$3472929.37^{+3913861.47}_{-2328693.75}$	$448^{+233}_{-93}$	$-1405^{+92}_{-203}$	$0.000^{+0.001}_{-0.000}$
Alt.	-471511±208047	$3391354.81^{+3893329.00}_{-2391341.03}$	$452^{+210}_{-97}$	$-1411^{+100}_{-184}$	$0.000^{+0.000}_{-0.000}$

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

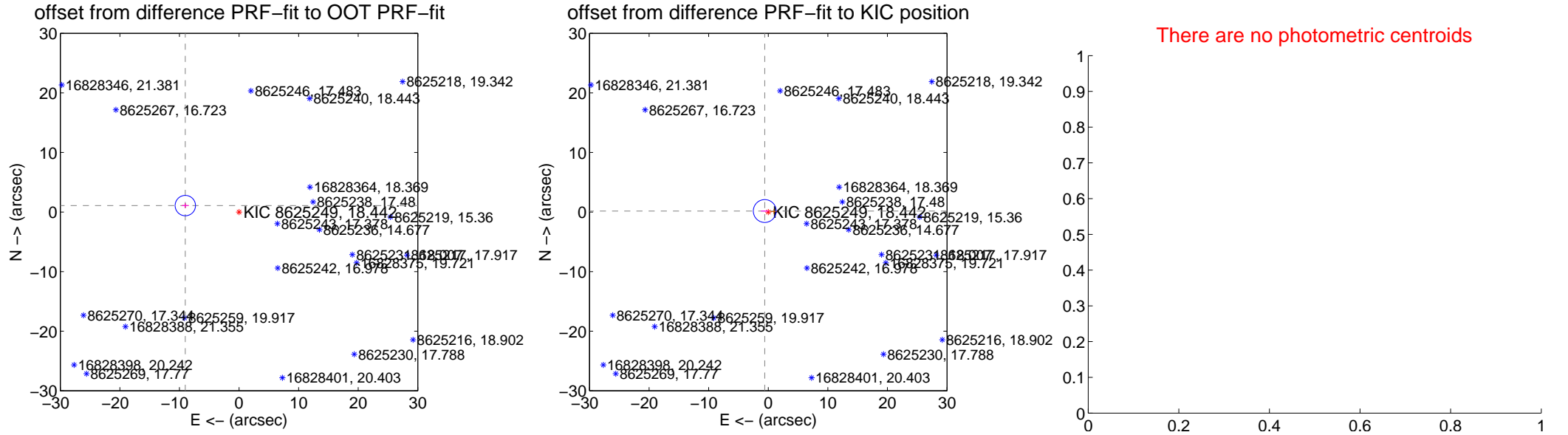
## DV Centroid Data

Supplemental centroid analysis for 008625249-01. Kepler magnitude: 18.44. Transit SNR 0.00

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 10.02 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>9.082 <math>\pm</math> 0.570</b>	<b>15.94</b>	9.017 $\pm$ 0.572	1.083 $\pm$ 0.407
PRF-fit source offset from KIC position	0.611 $\pm$ 0.640	0.96	0.587 $\pm$ 0.654	0.170 $\pm$ 0.078
photometric centroid source offset	—	—	—	—



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

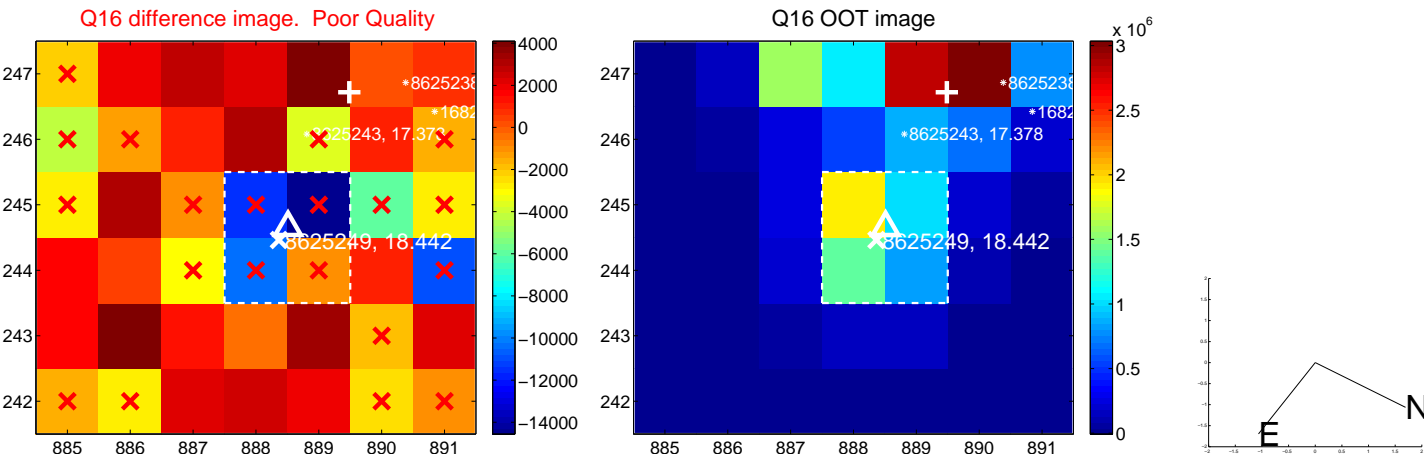
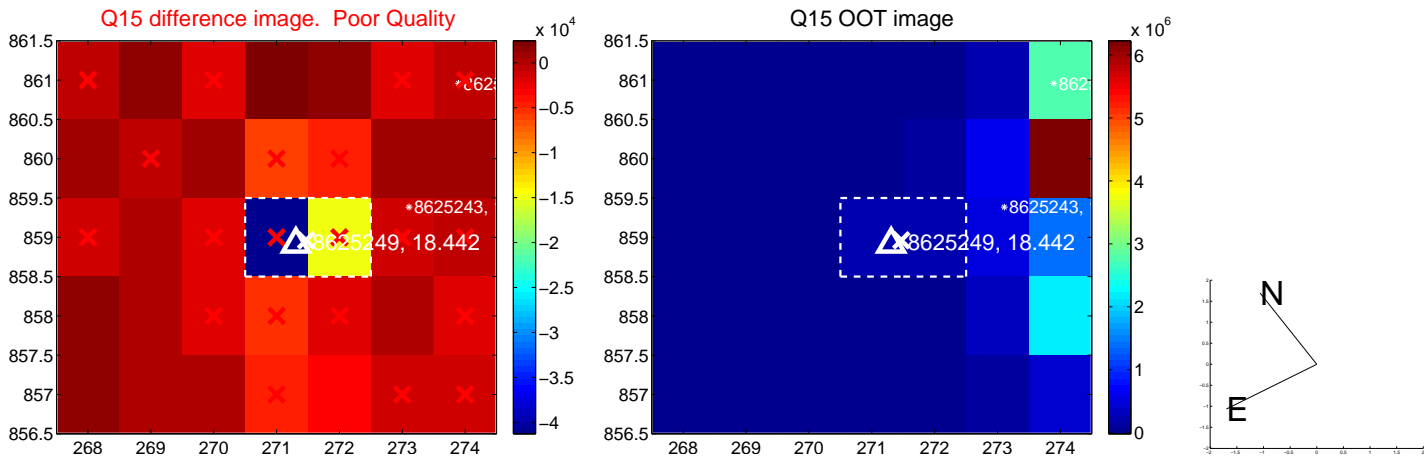




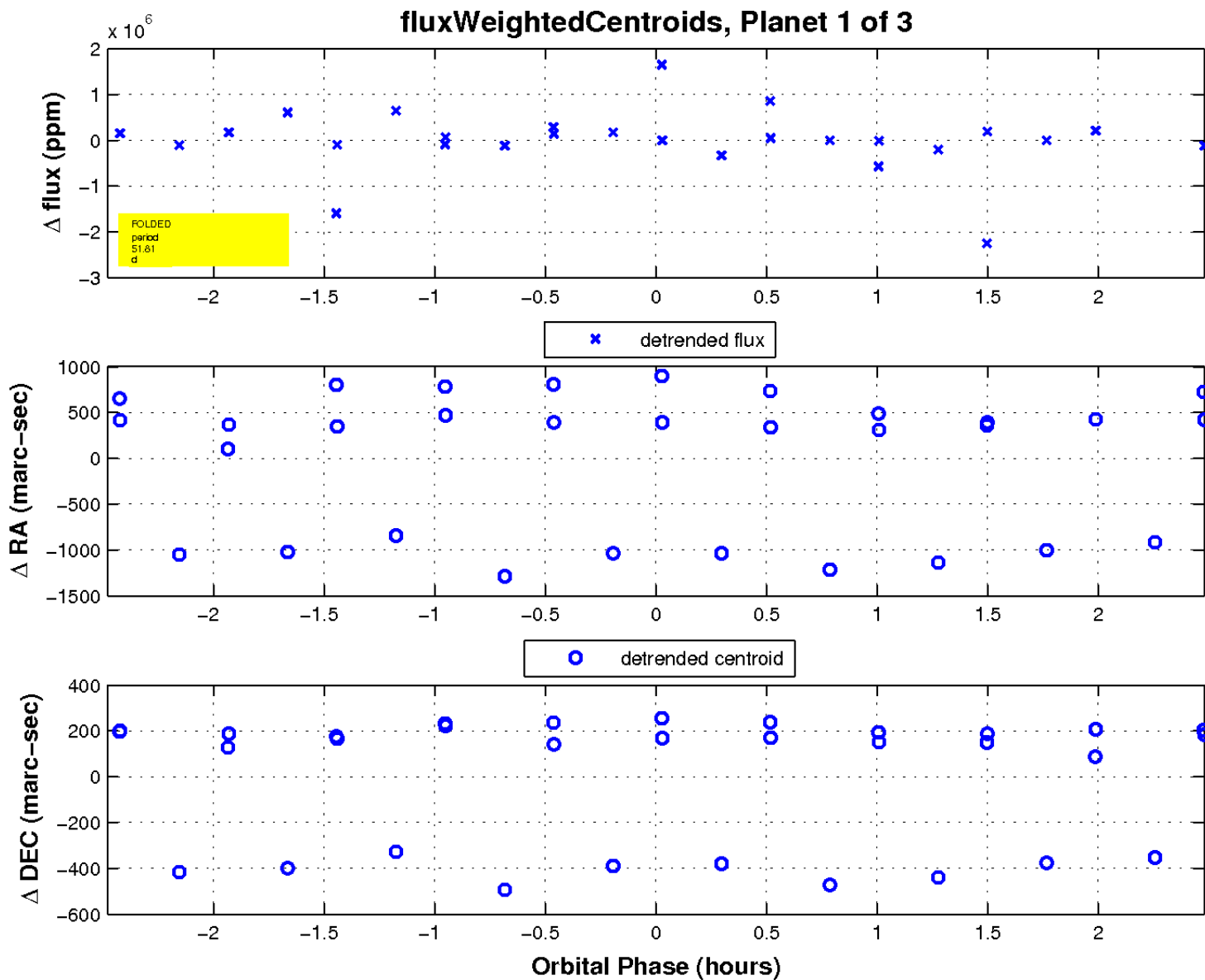
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

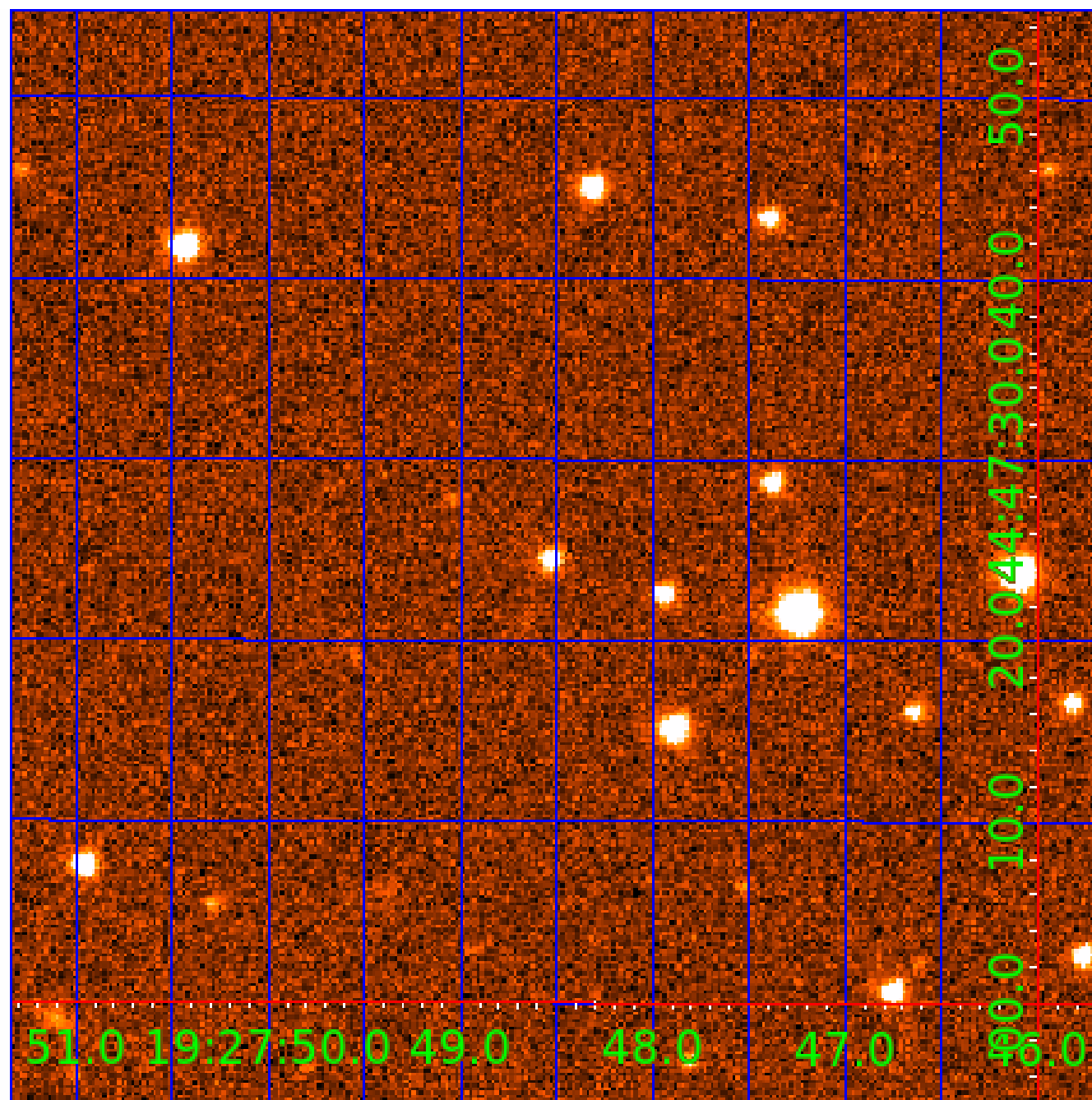


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



# UKIRT Image

Declination



# KIC 008625249

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008625249-01	OBS	No	51.808360	133.366181	26.6	0.828	45.3	0.0	1.00	5780	0.52	13.51
008625249-02	OBS	No	51.151791	149.935254	125212.9	15.000	60.1	-1.0	1.00	5780	35.25	13.74
008625249-03	OBS	No	51.522481	142.585983	72016.5	15.000	40.9	-1.0	1.00	5780	26.66	13.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008625249-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_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—CENT_FEW_DIFFS
008625249-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008625249-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

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

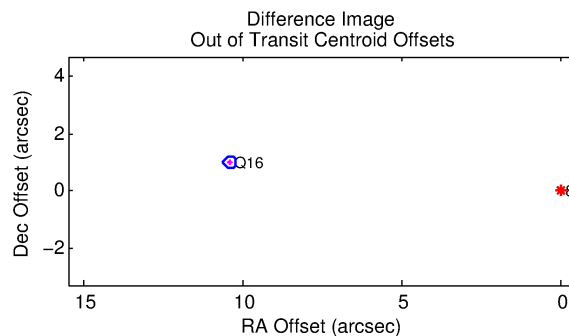
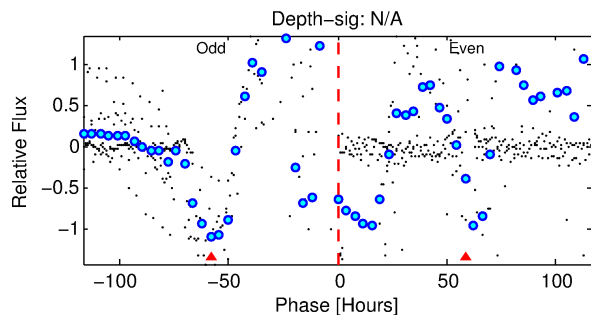
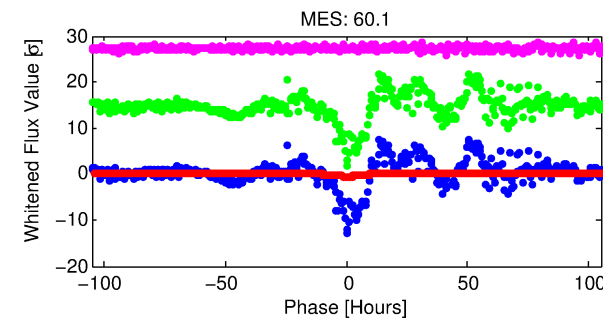
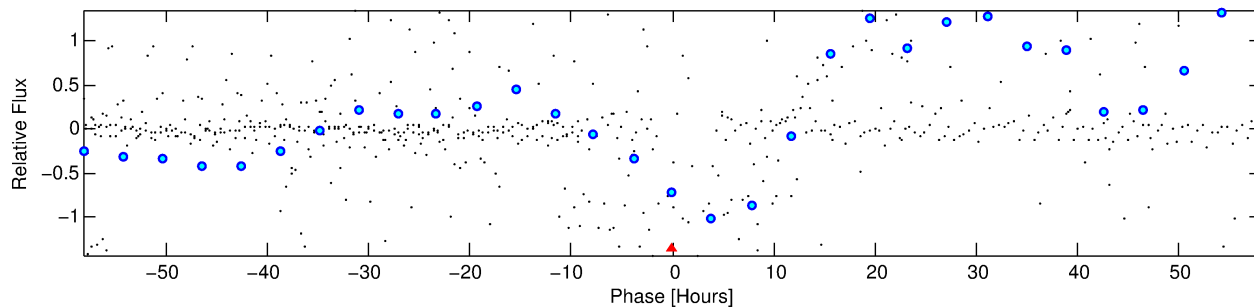
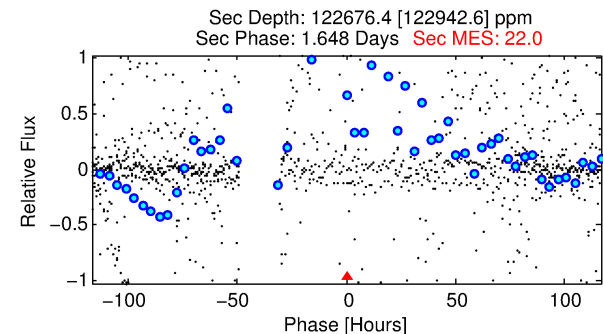
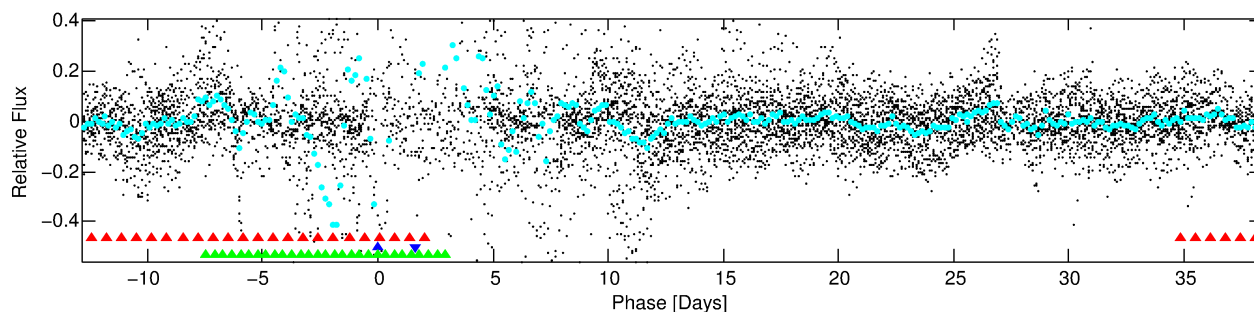
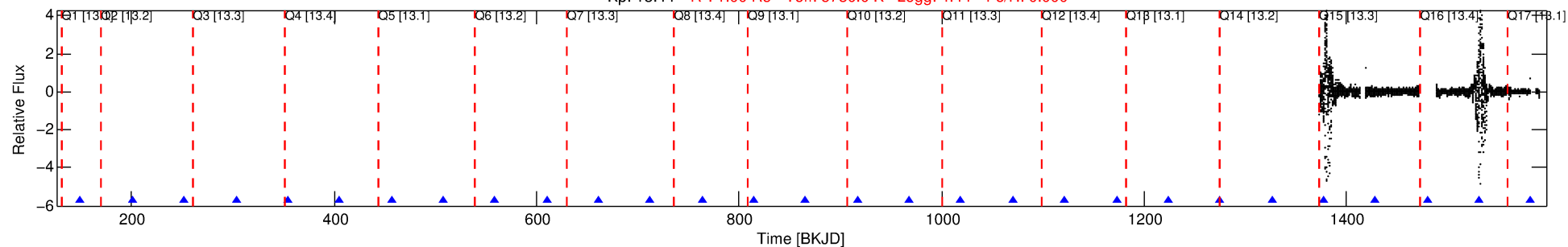
## Ephemeris Match Information For 008625249-02

No Significant Match Found

# DV One-Page Summary

KIC: 8625249 Candidate: 2 of 3 Period: 51.152 d

Kp: 18.44 R\*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



TPS TCE Results:

Period = 51.15179 d  
Epoch = 149.9353 BKJD

DV fit results are unavailable

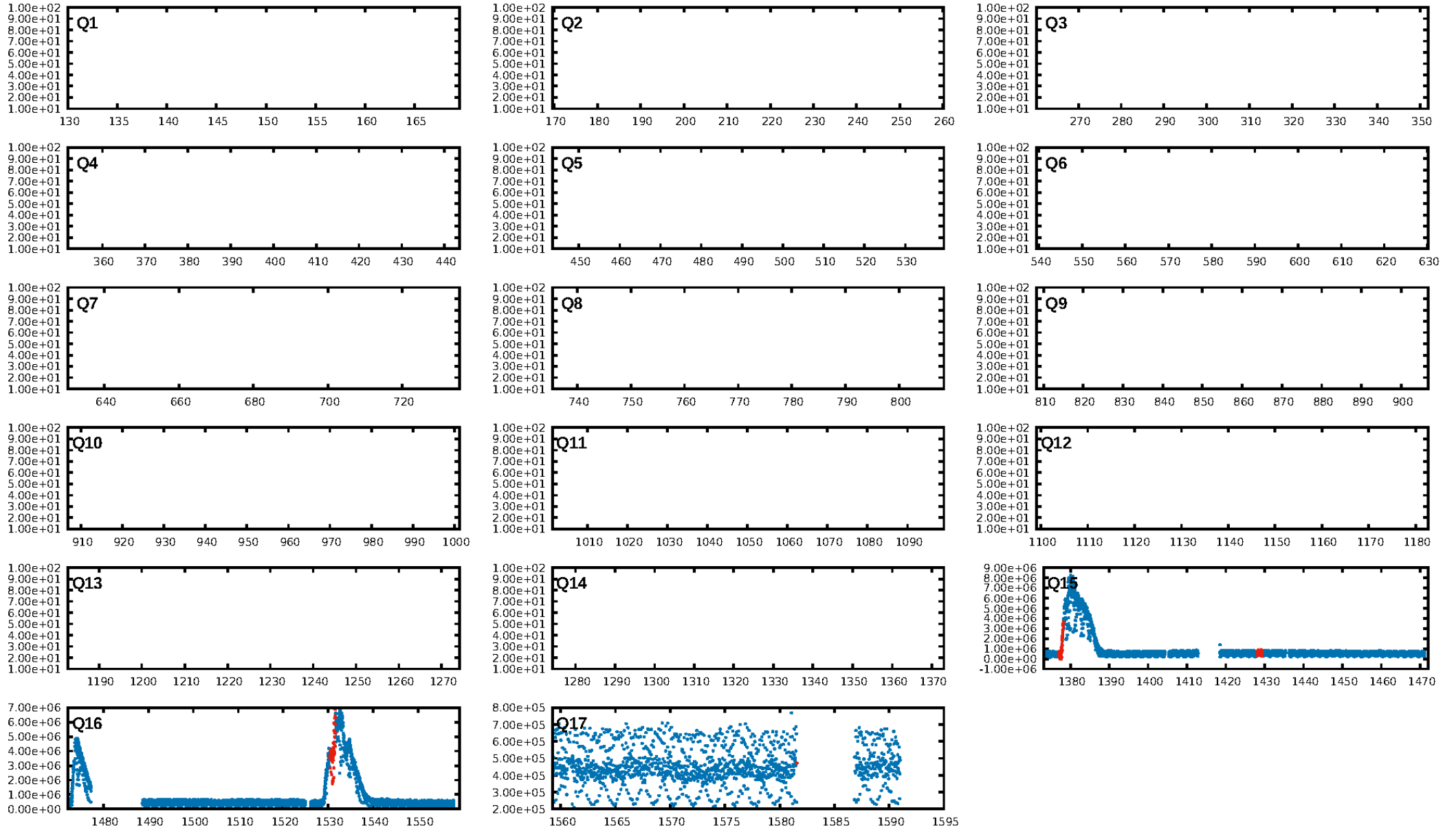
DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 32.5% [0.42σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 2.594  
Centroid-sig: N/A  
Centroid-so: 5.392 arcsec [3.80σ]  
OotOffset-rm: 10.469 arcsec [156.43σ]  
KicOffset-rm: 0.404 arcsec [5.53σ]  
OotOffset-st: 0/0/1/0 [1]  
KicOffset-st: 0/1/1/0 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 0.00 [0/2]

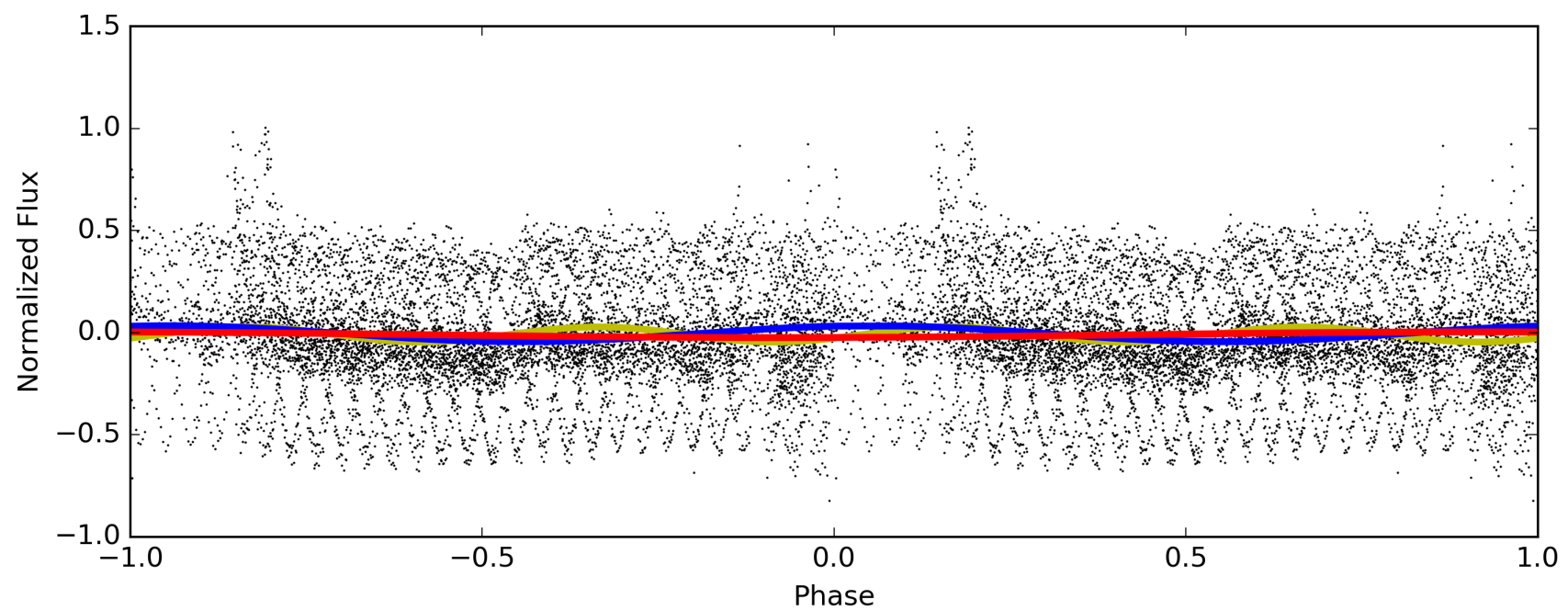
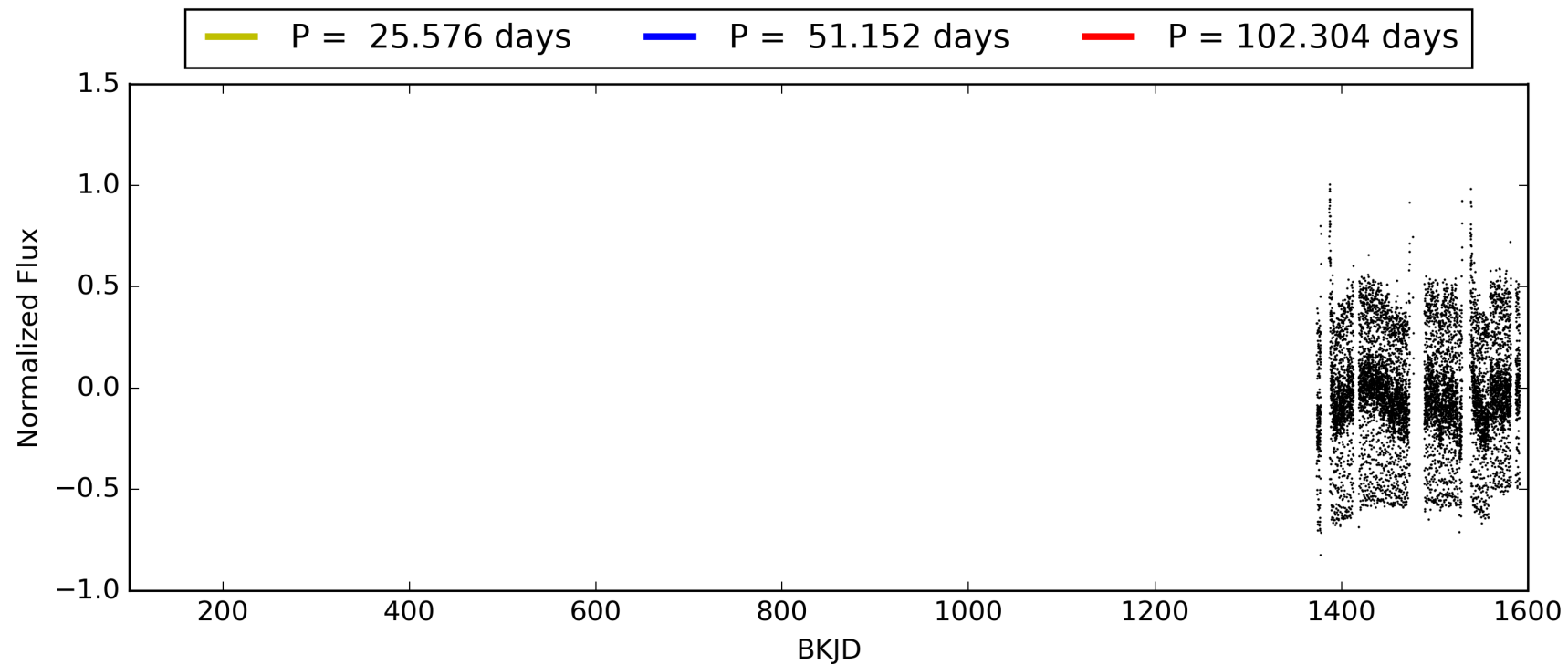
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:46:27 Z

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

# TCE 008625249-02, PDC Light Curves



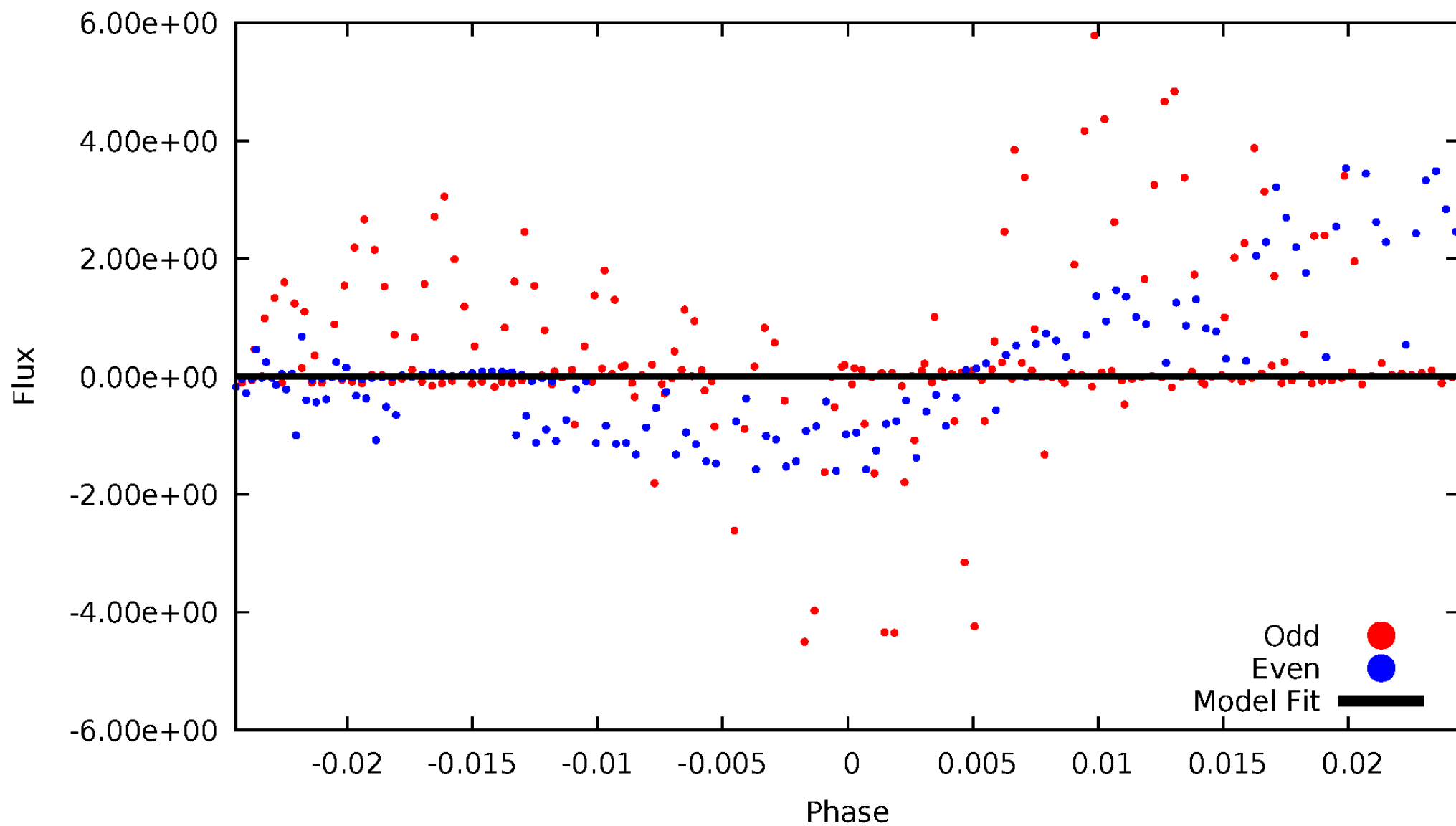
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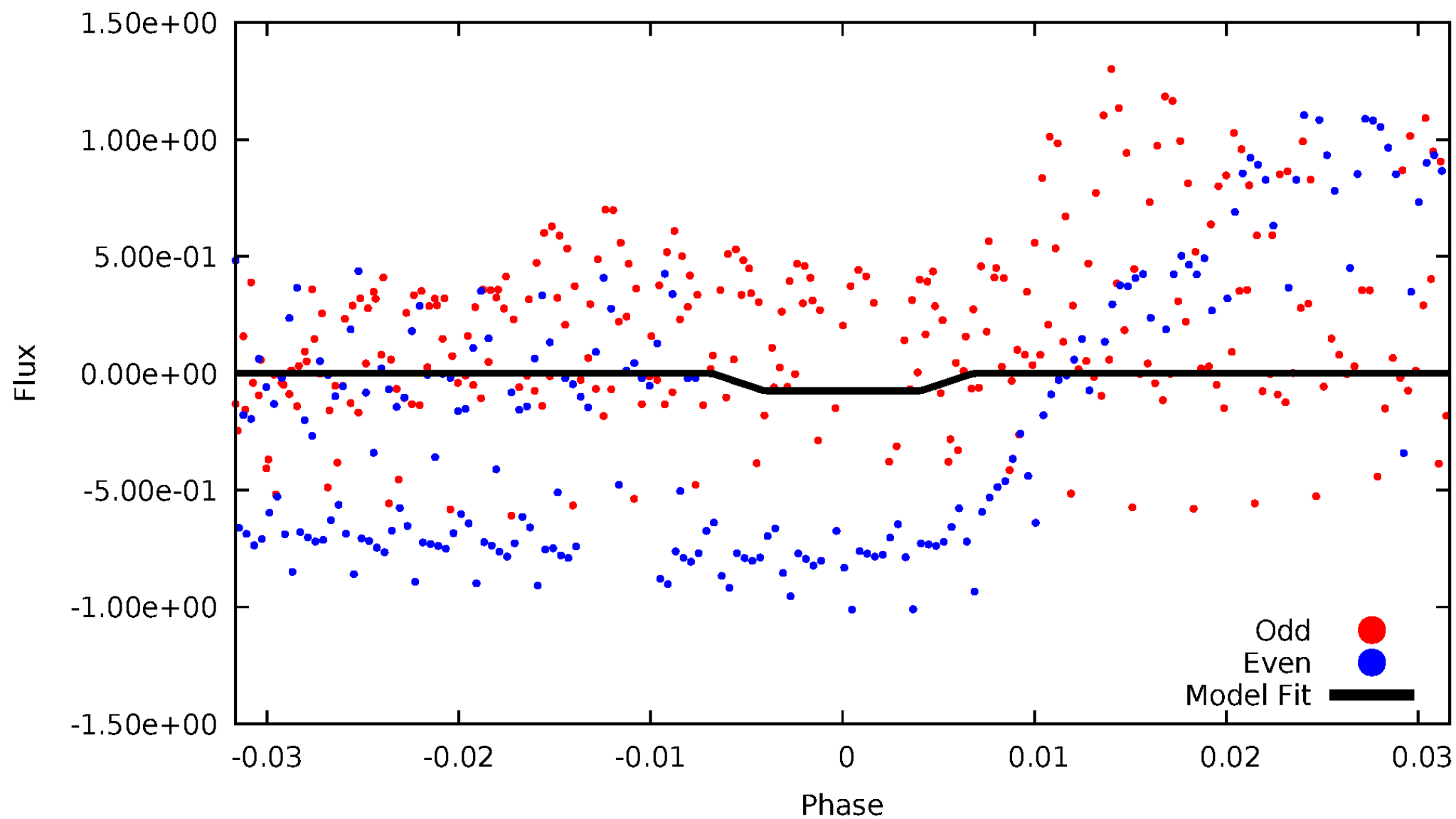
# DV Odd/Even

TCE 008625249-02



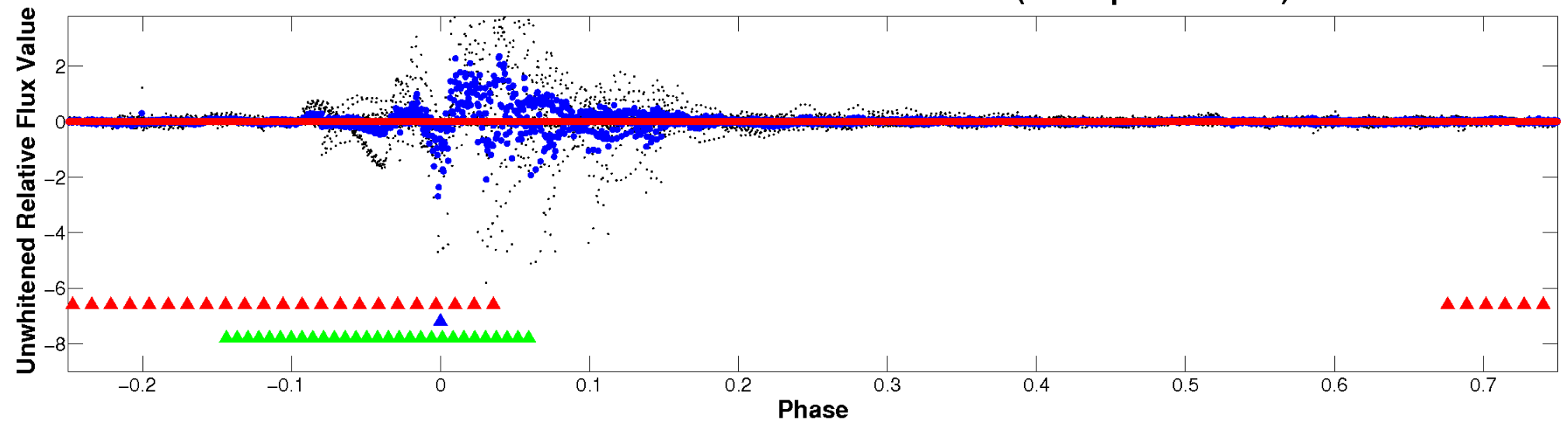
# ALT Odd/Even

TCE 008625249-02



# Non-Whitened Vs. Whitened Light Curve

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

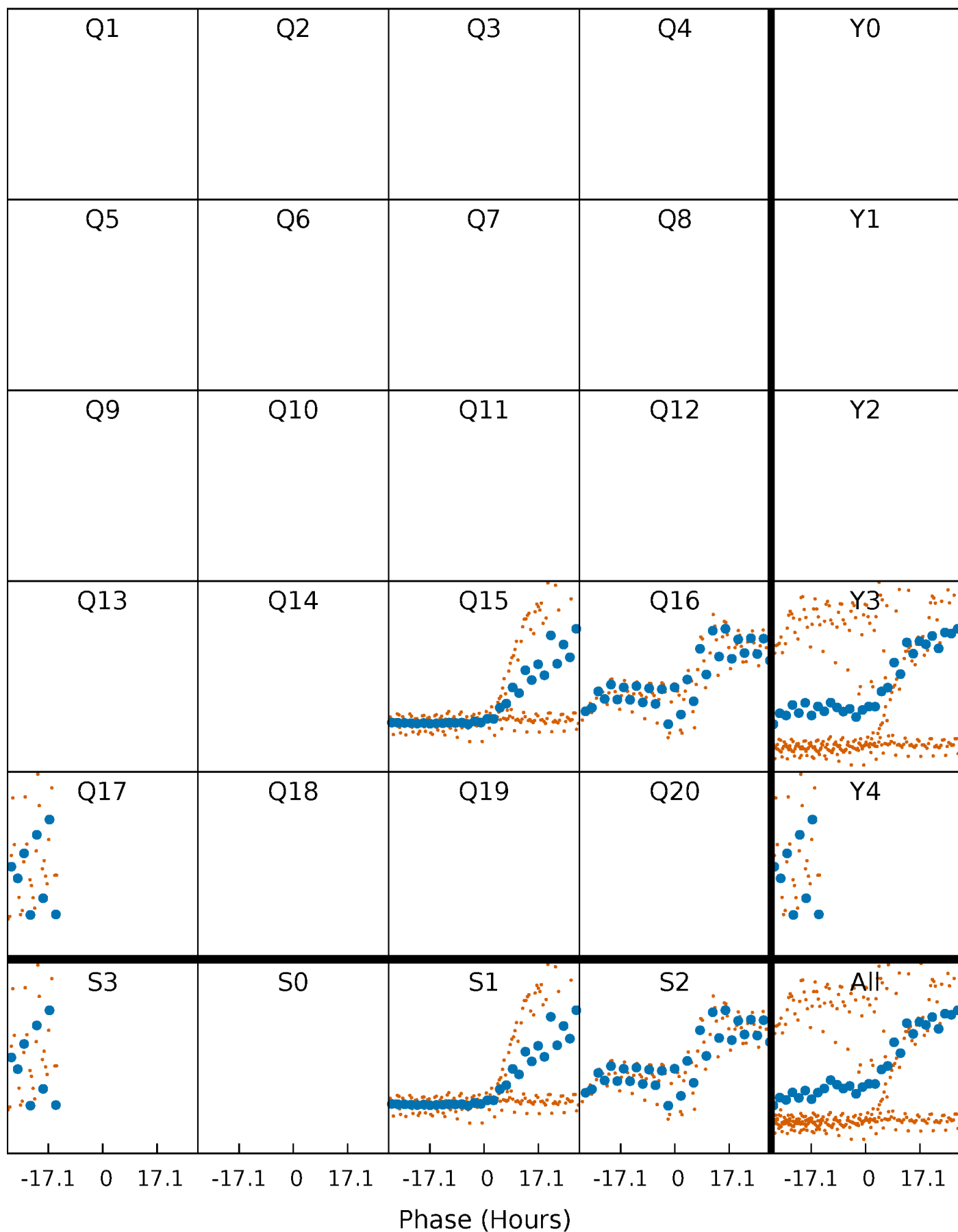


**Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



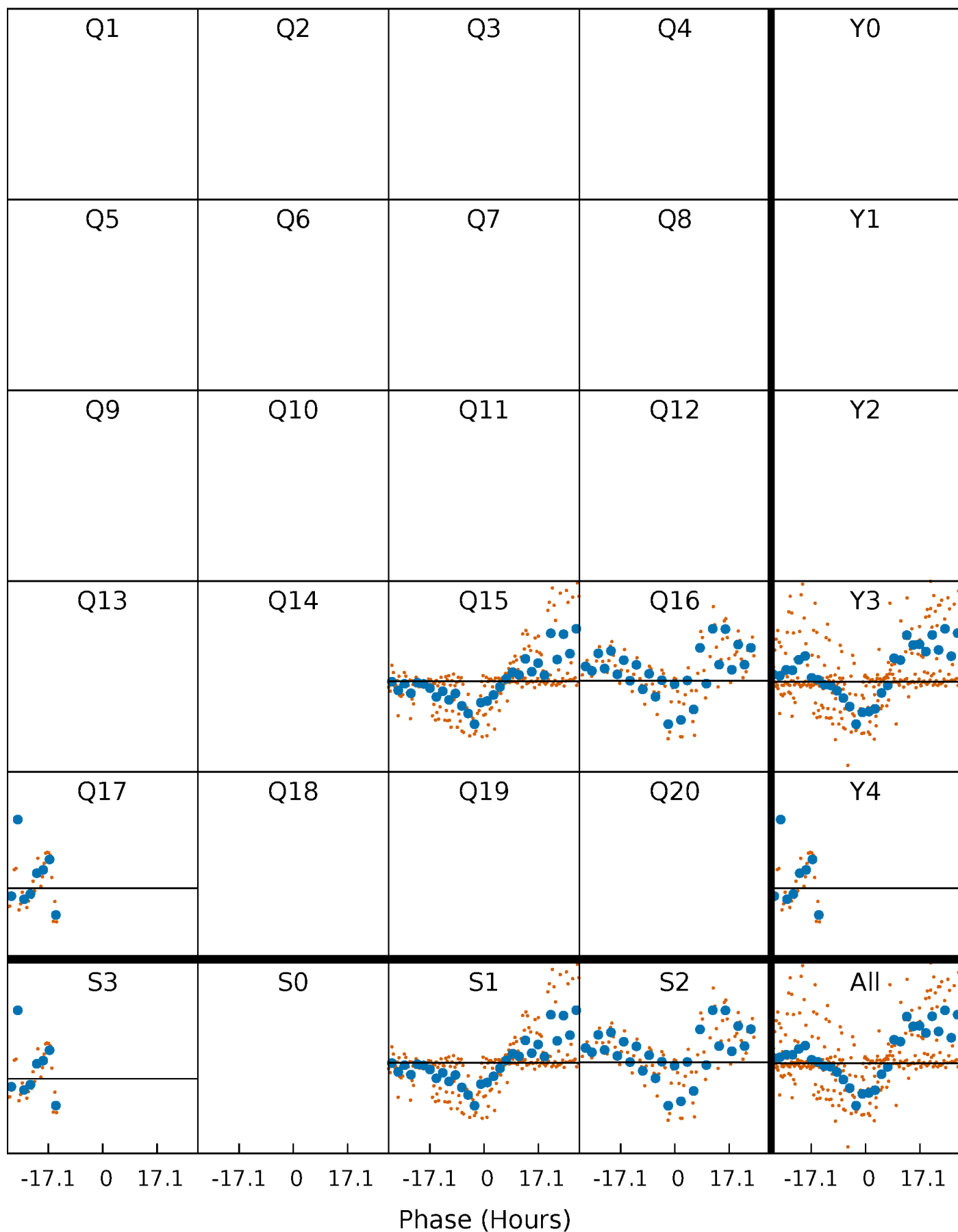
# PDC Quarter-Phased Transit Curves

TCE 008625249-02   P= 51.151791 Days    $T_0=149.935254$  (BKJD)



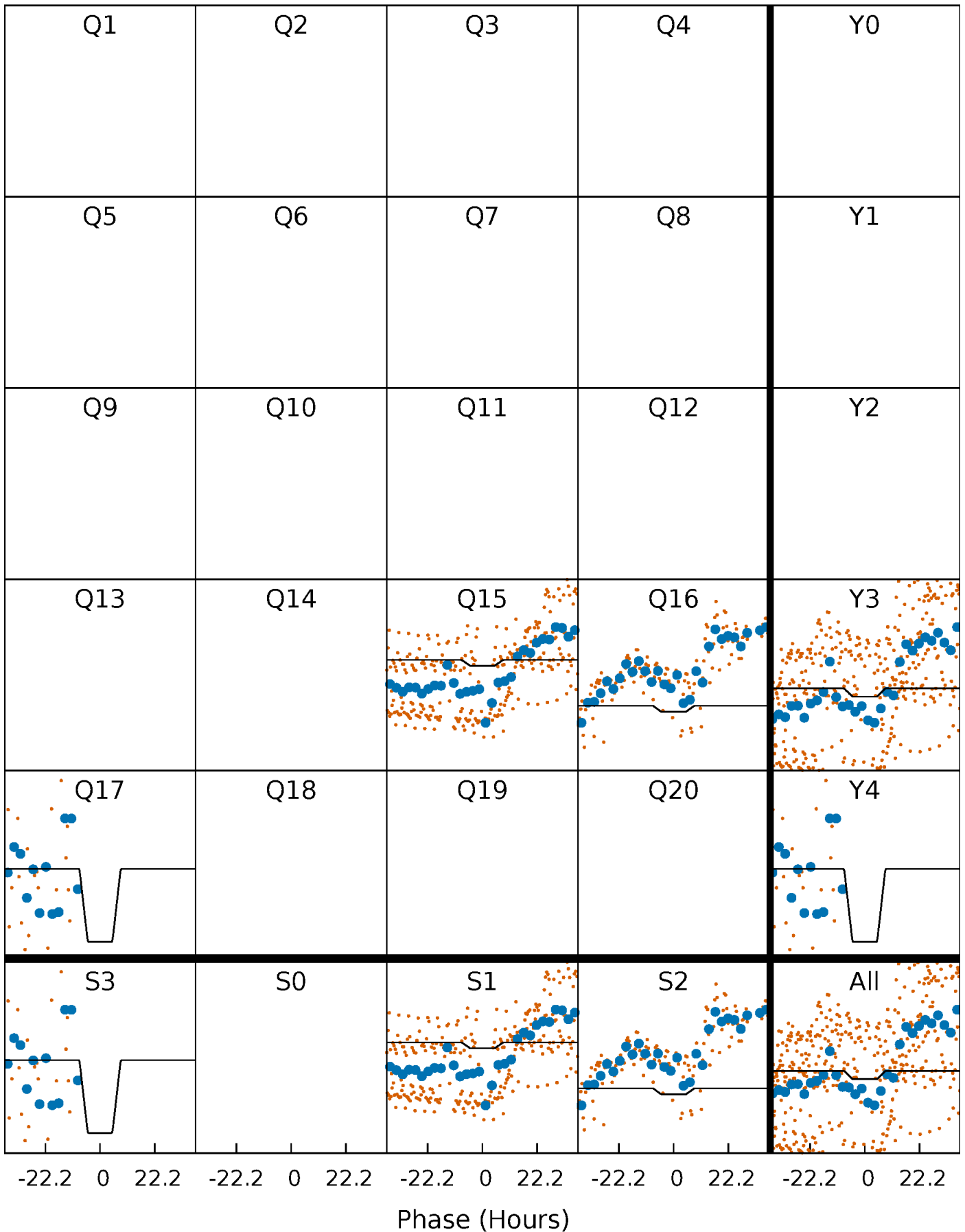
# DV Quarter-Phased Transit Curves

TCE 008625249-02 P= 51.151791 Days  $T_0=149.935254$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

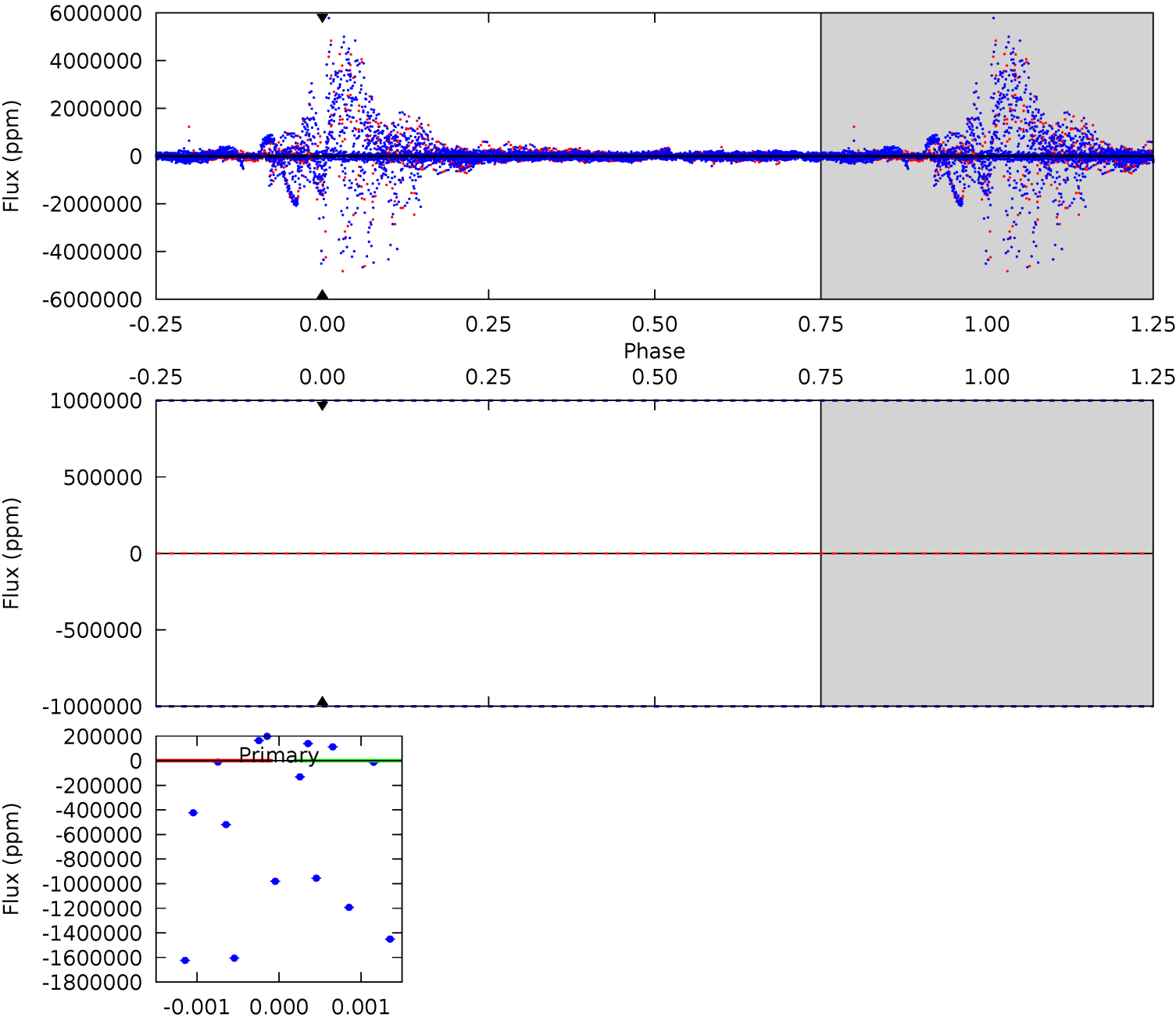
TCE 008625249-02 P= 51.151791 Days  $T_0=149.722960$  (BKJD)



# DV Model-Shift Uniqueness Test

008625249-02, P = 51.151791 Days, E = 149.935254 Days

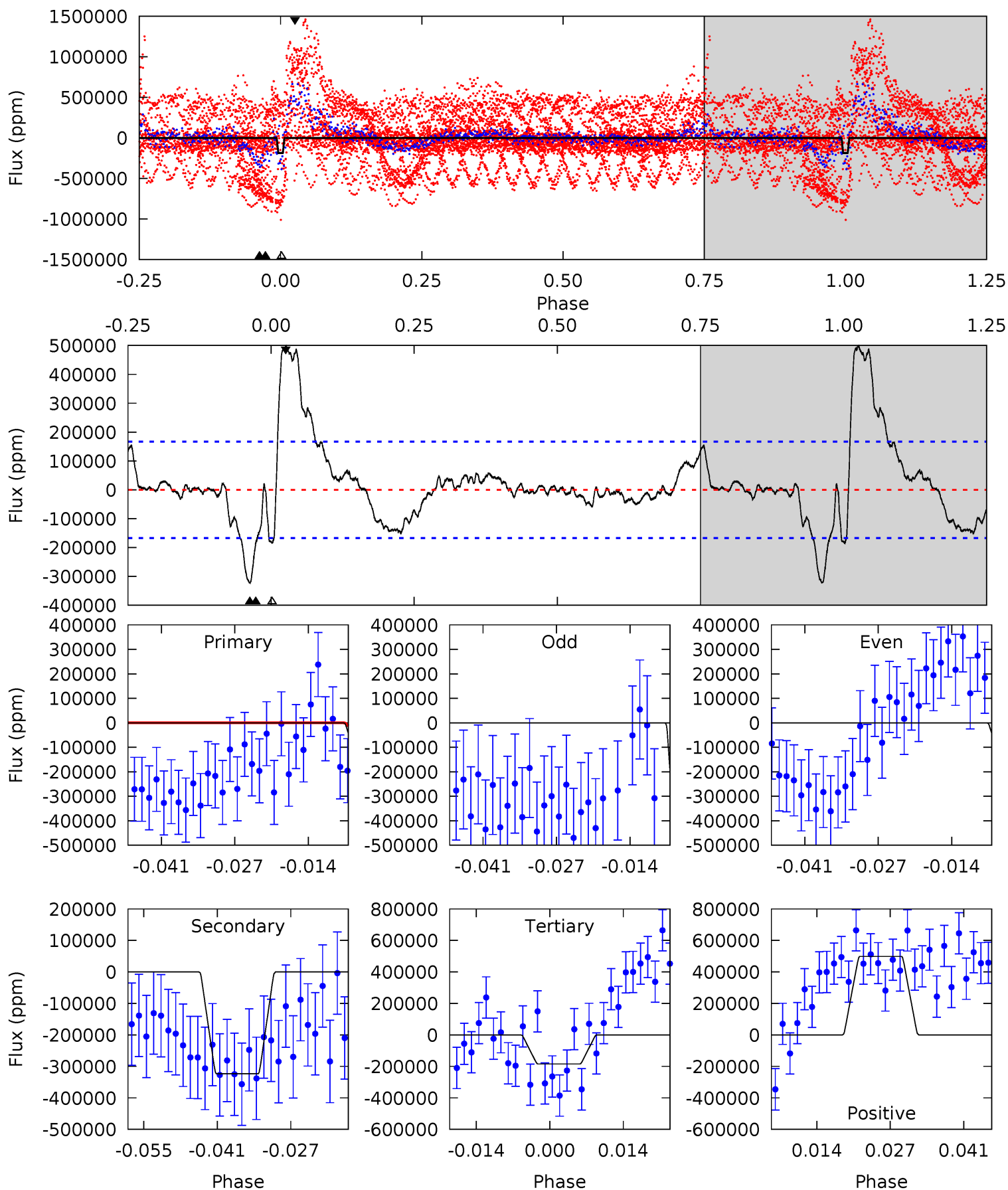
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008625249-02, P = 51.151791 Days, E = 149.722960 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
5.55	9.62	5.50	14.8	4.97	2.47	3.15	0.05	-9.28	4.12	-5.22	7.90	-3.73	0.61	2.80





### Stellar Parameters For KIC 008625249

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 008625249-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$35.33^{+11.11}_{-10.80}$	$684^{+32}_{-31}$	$3101^{+3013}_{-8828}$	$119^{+4108}_{-3270}$
Alt.	$-323311 \pm 33608$	$30.53^{+11.29}_{-10.73}$	$688^{+31}_{-33}$	$9828^{+3737}_{-1910}$	$20359^{+26718}_{-9524}$

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

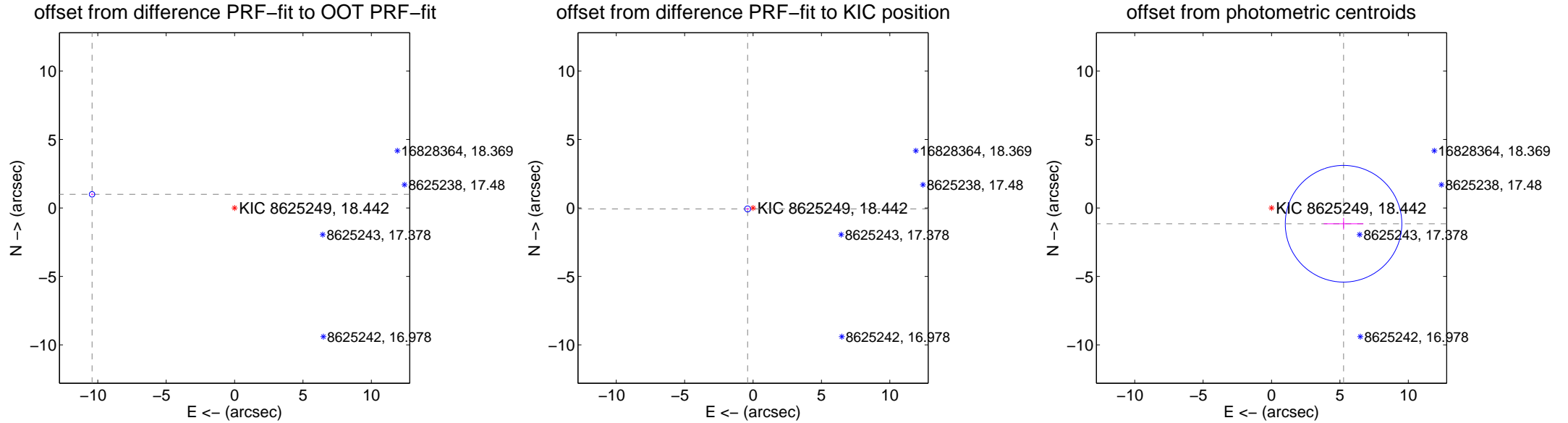
## DV Centroid Data

Supplemental centroid analysis for 008625249-02. Kepler magnitude: 18.44. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 10.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$10.469 \pm 0.067$	156.43	$10.422 \pm 0.067$	$0.997 \pm 0.067$
PRF-fit source offset from KIC position	$0.404 \pm 0.073$	5.53	$0.398 \pm 0.073$	$-0.072 \pm 0.069$
photometric centroid source offset	$5.39 \pm 1.42$	3.80	$-5.27 \pm 1.45$	$-1.15 \pm 0.43$



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.

Q13 no difference image



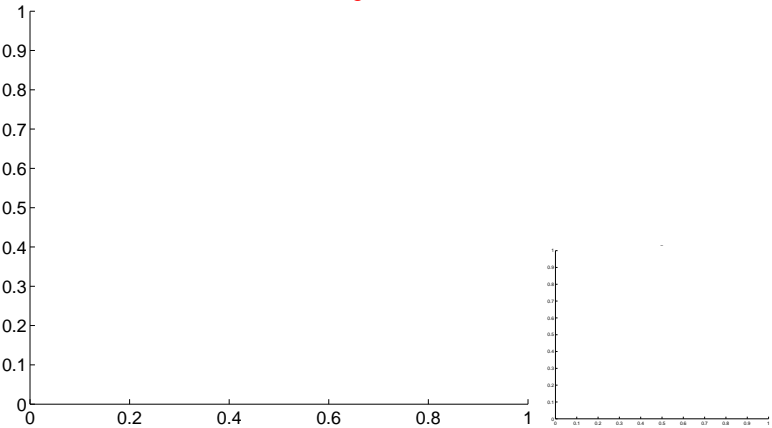
Q13 no OOT image



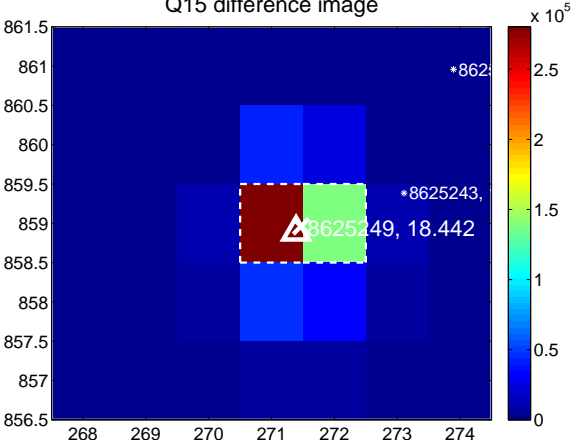
Q14 no difference image



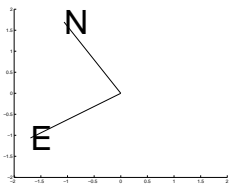
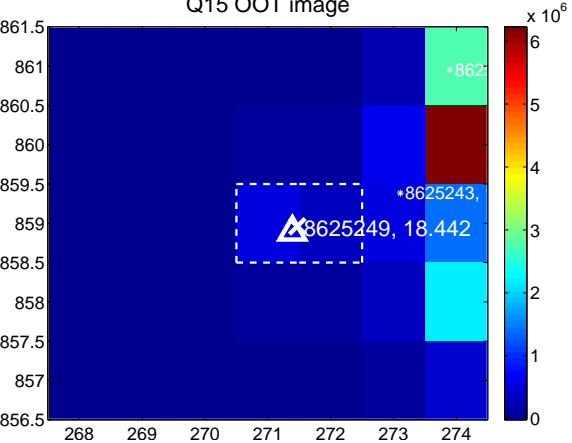
Q14 no OOT image



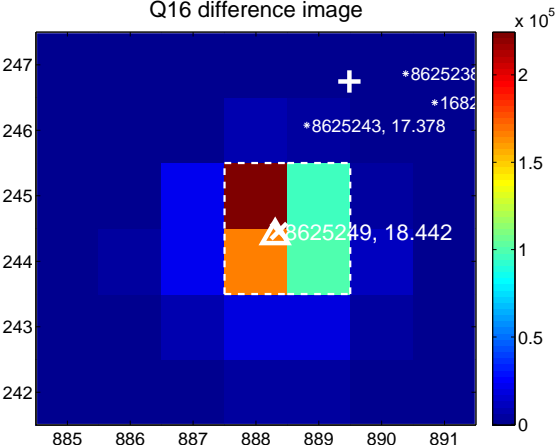
Q15 difference image



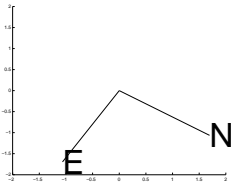
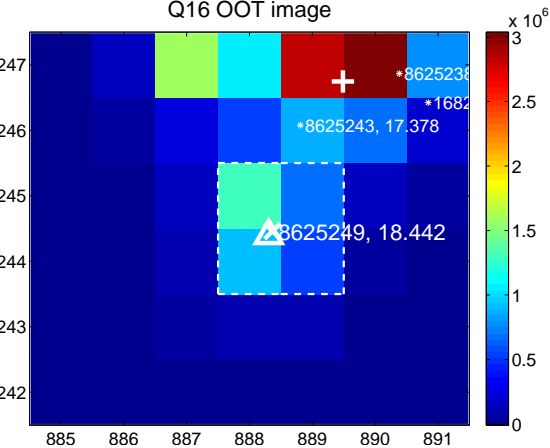
Q15 OOT image



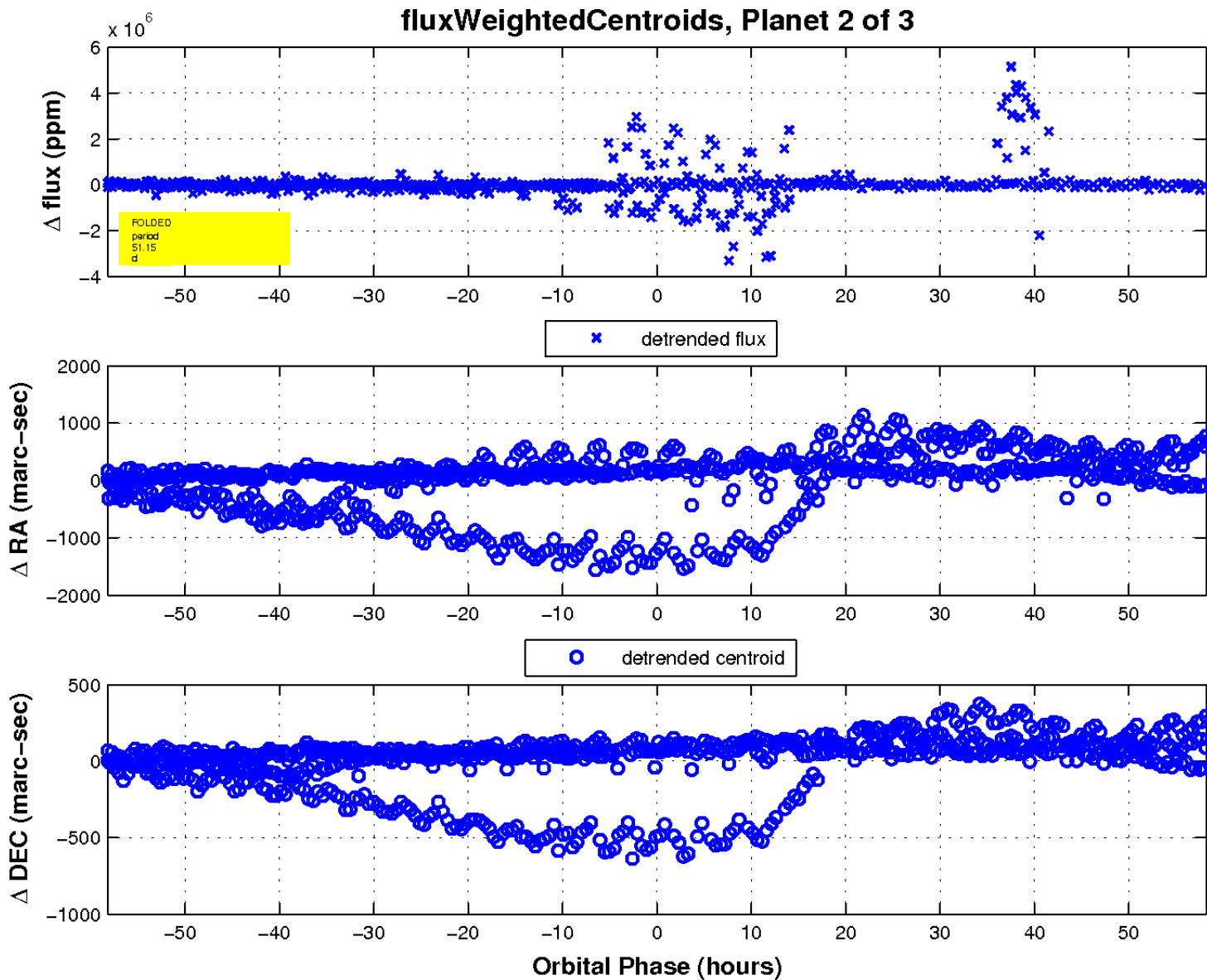
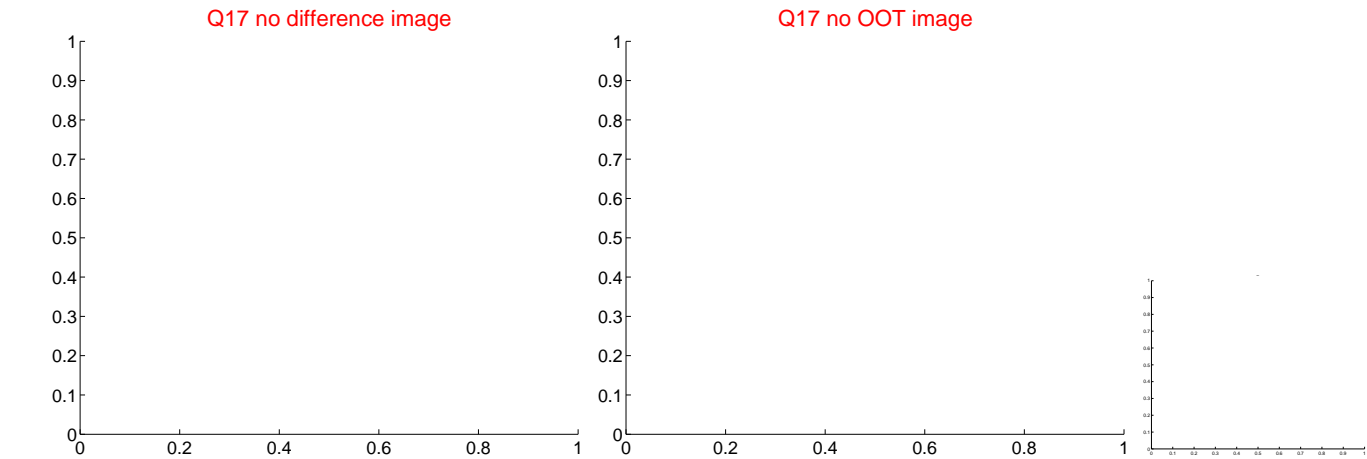
Q16 difference image



Q16 OOT image

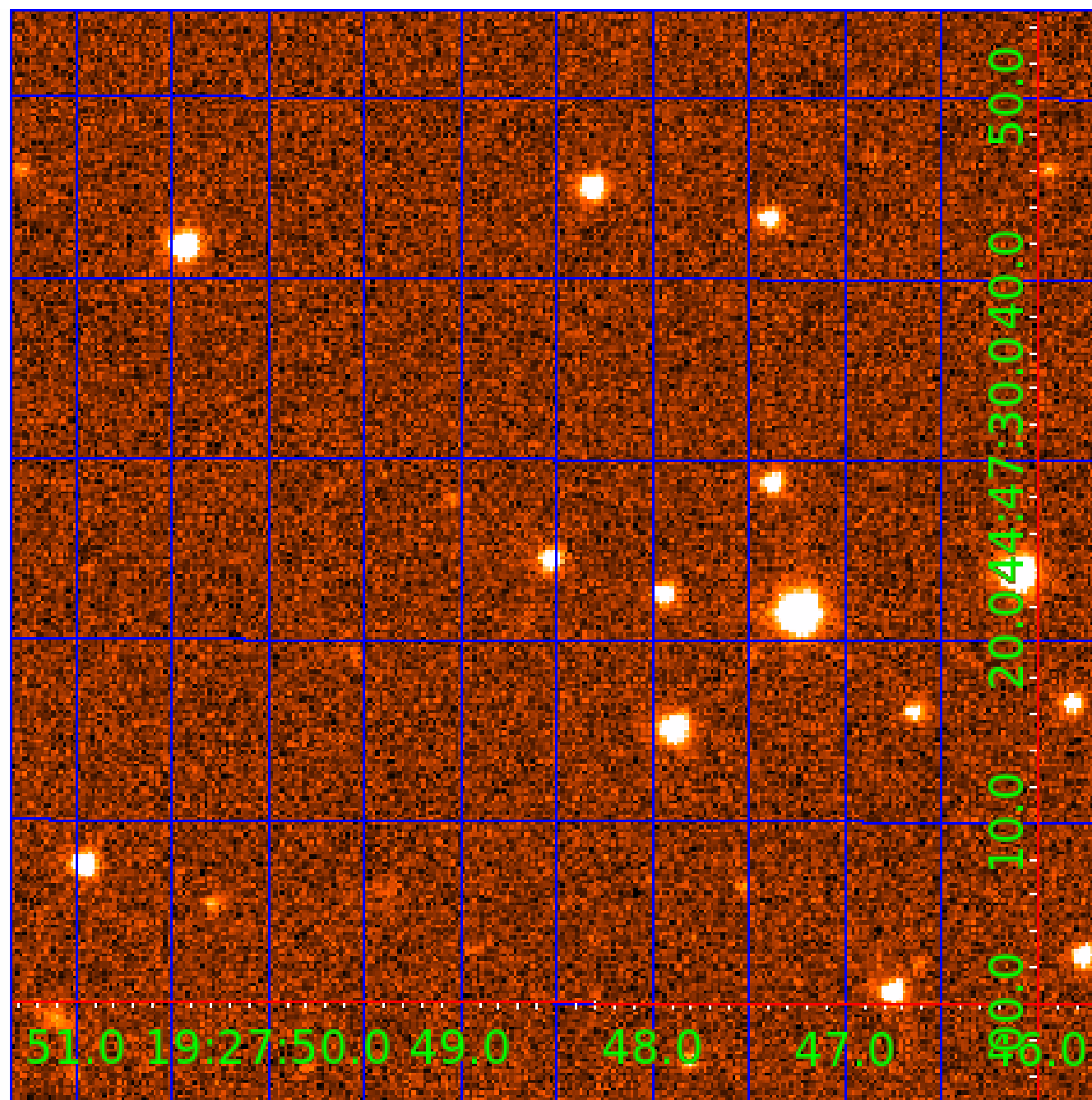


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination





# KIC 008625249

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008625249-01	OBS	No	51.808360	133.366181	26.6	0.828	45.3	0.0	1.00	5780	0.52	13.51
008625249-02	OBS	No	51.151791	149.935254	125212.9	15.000	60.1	-1.0	1.00	5780	35.25	13.74
008625249-03	OBS	No	51.522481	142.585983	72016.5	15.000	40.9	-1.0	1.00	5780	26.66	13.61

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008625249-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_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—CENT_FEW_DIFFS
008625249-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008625249-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

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

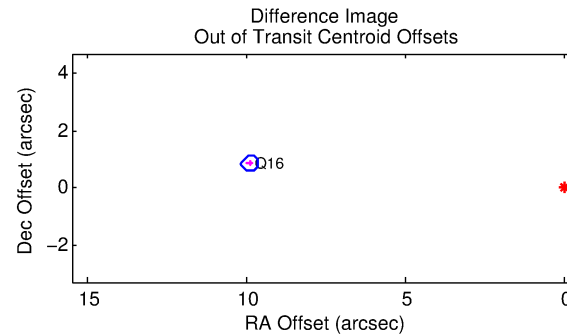
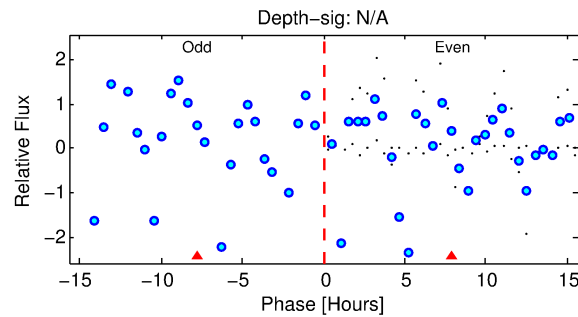
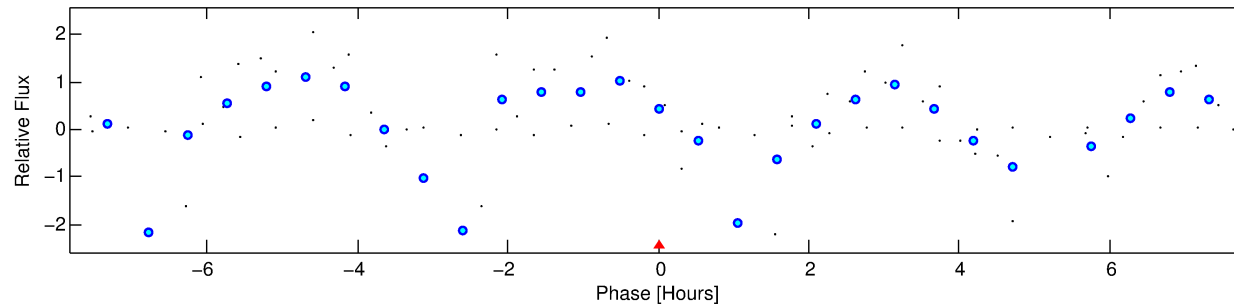
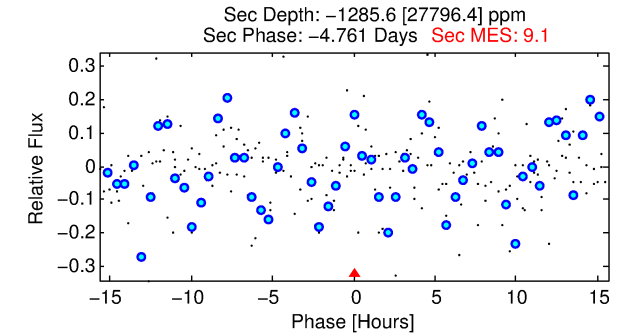
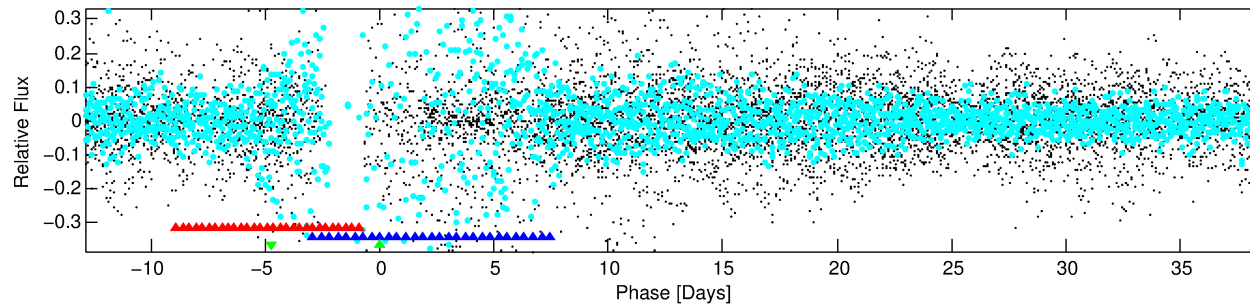
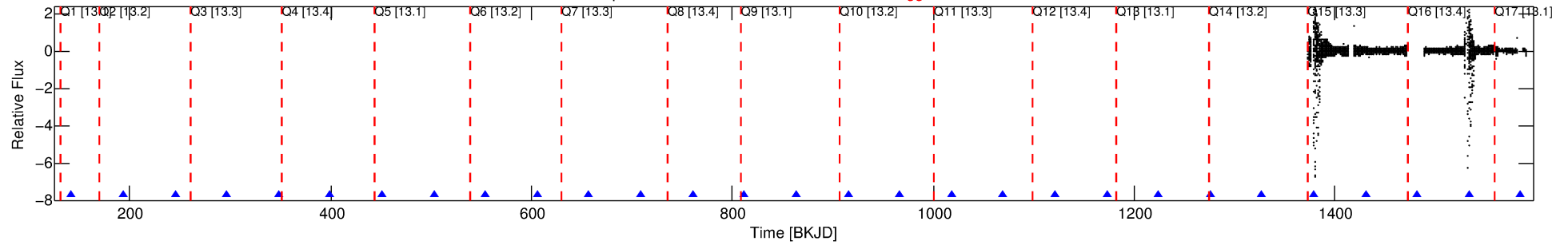
## Ephemeris Match Information For 008625249-03

No Significant Match Found

# DV One-Page Summary

KIC: 8625249 Candidate: 3 of 3 Period: 51.522 d

Kp: 18.44 R\*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



## TPS TCE Results:

Period = 51.52248 d  
Epoch = 142.5860 BKJD

DV fit results are unavailable

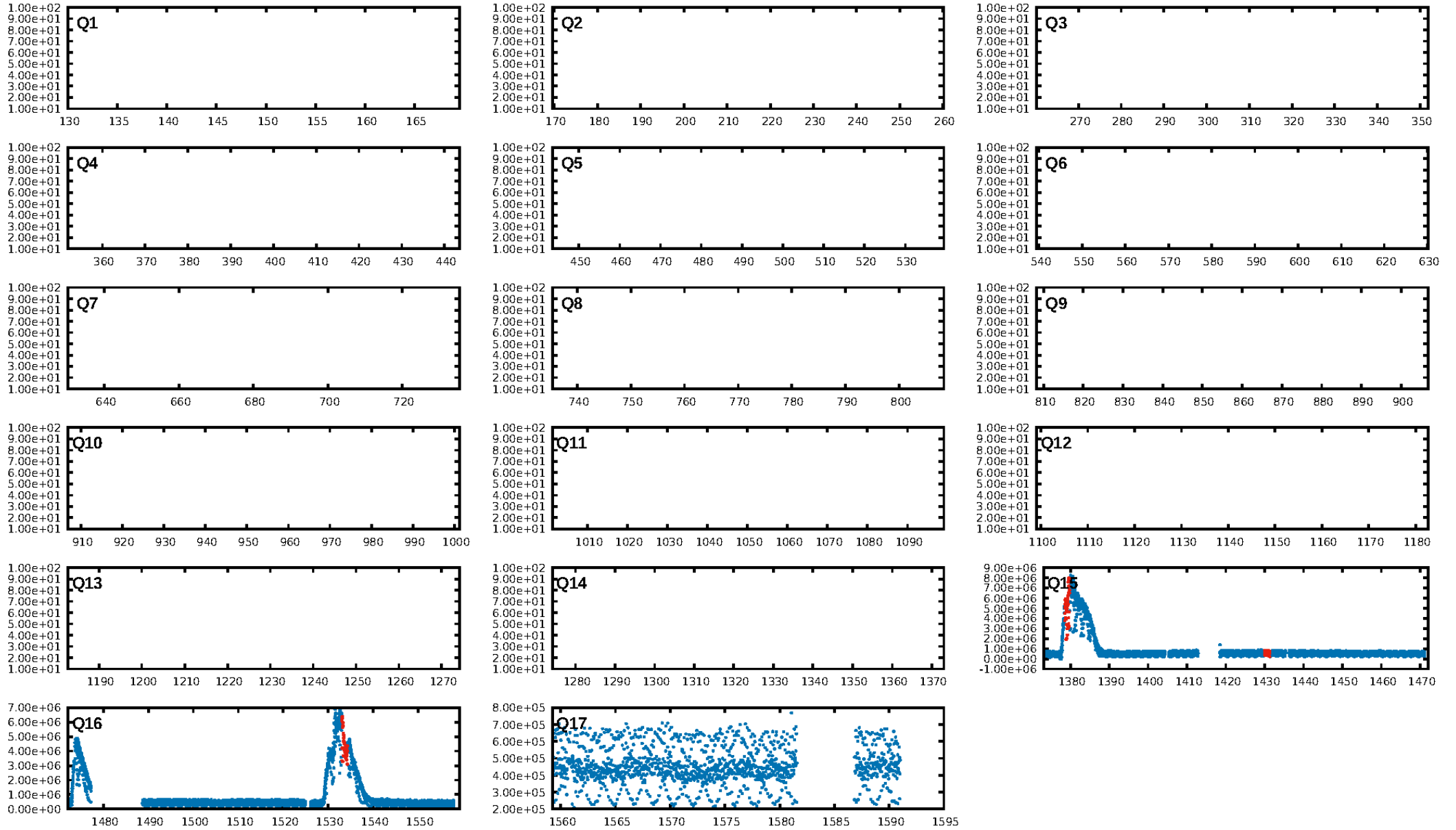
## DV Diagnostic Results:

ShortPeriod-sig: 32.5% [0.42 $\sigma$ ]  
LongPeriod-sig: 35.2% [0.46 $\sigma$ ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 7.21e-182  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.7639  
Centroid-sig: N/A  
Centroid-so: 30.543 arcsec [0.40 $\sigma$ ]  
OotOffset-rm: 9.931 arcsec [114.28 $\sigma$ ]  
KicOffset-rm: 0.214 arcsec [0.29 $\sigma$ ]  
OotOffset-st: 0/0/1/0 [1]  
KicOffset-st: 0/1/1/0 [2]  
DiffImageQuality-fgm: 0.00 [0/2]  
DiffImageOverlap-fno: 1.00 [2/2]

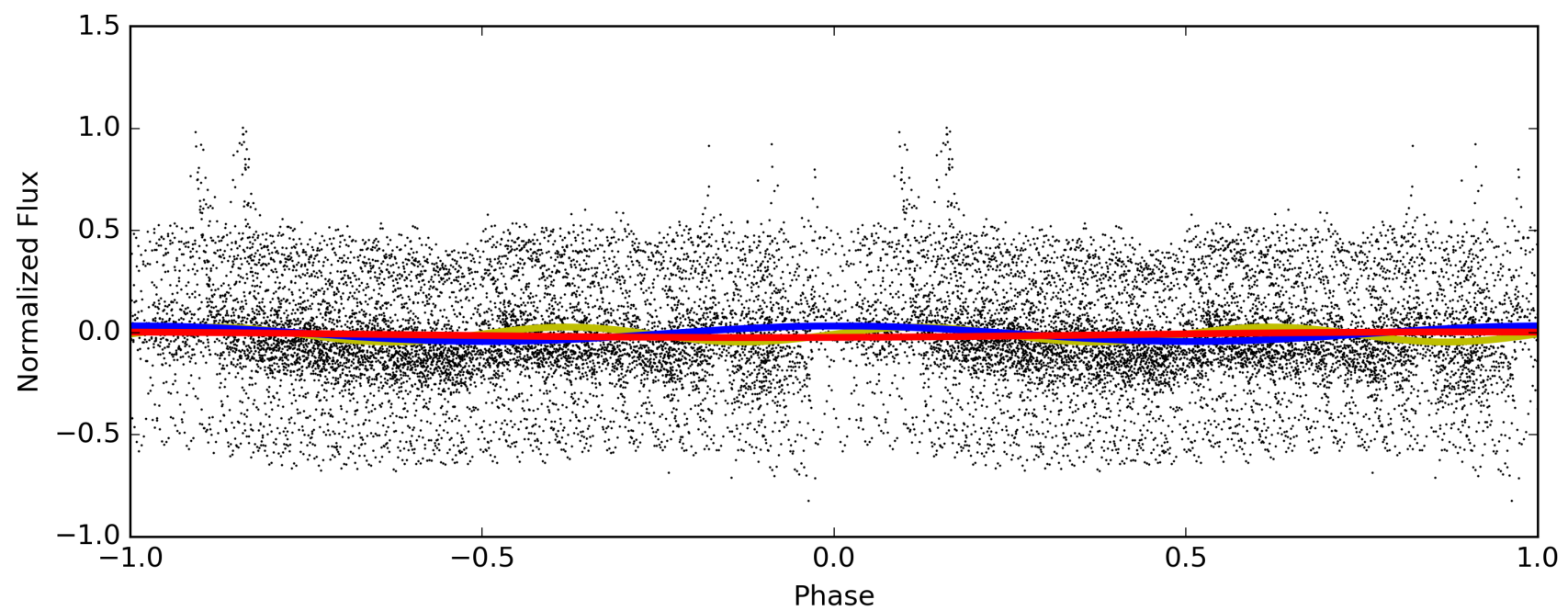
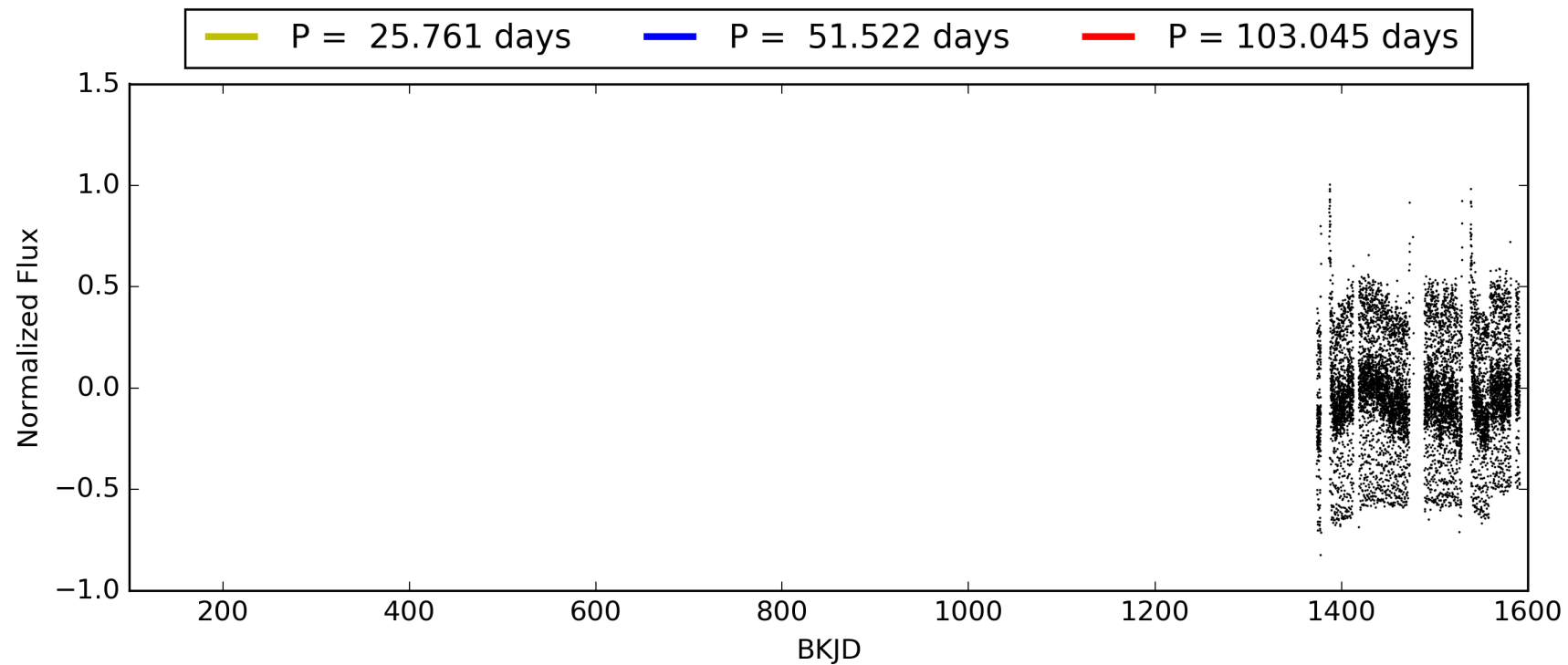
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:46:30 Z

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

# TCE 008625249-03, PDC Light Curves

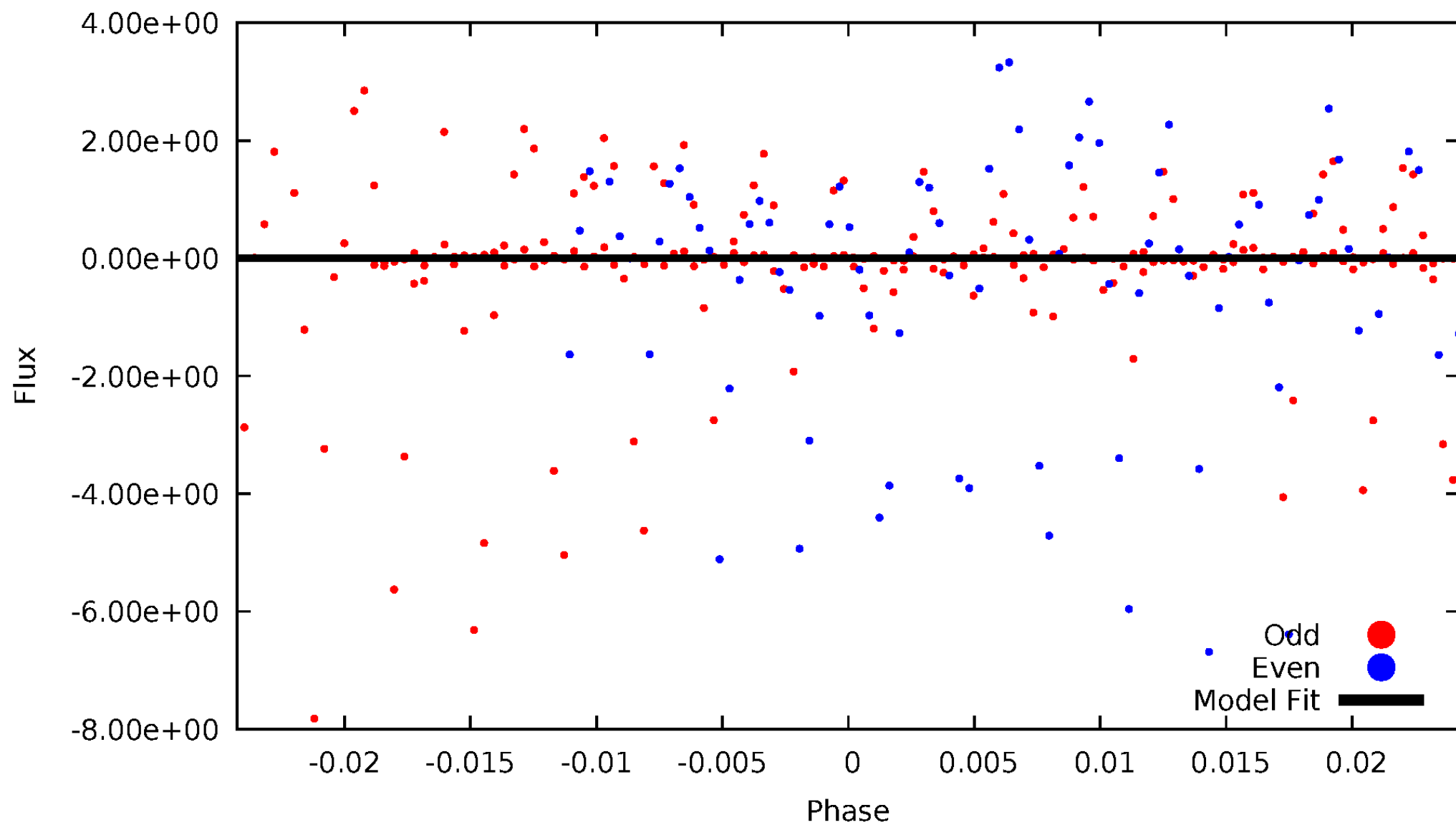


TCE 008625249-03



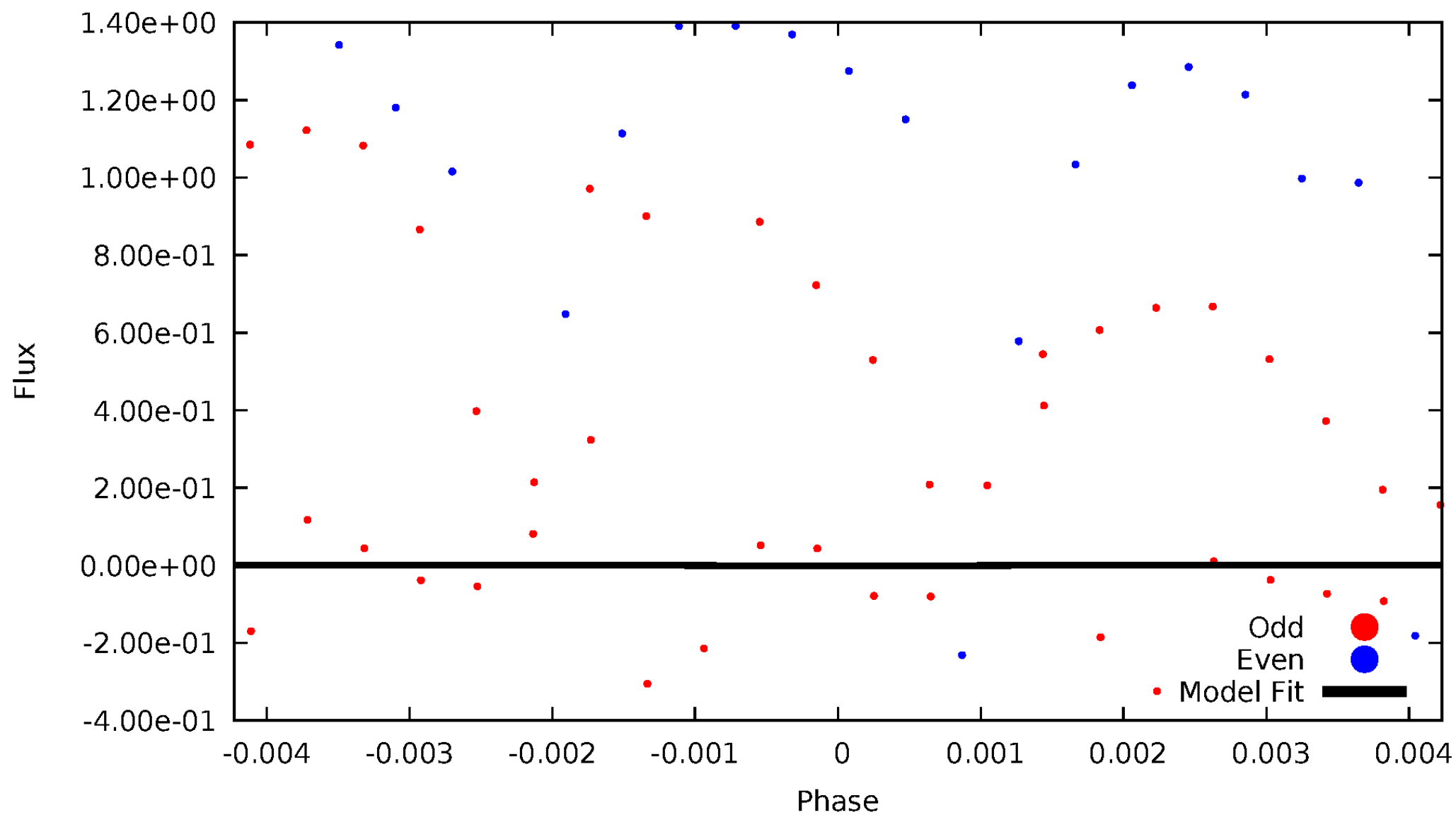
# DV Odd/Even

TCE 008625249-03



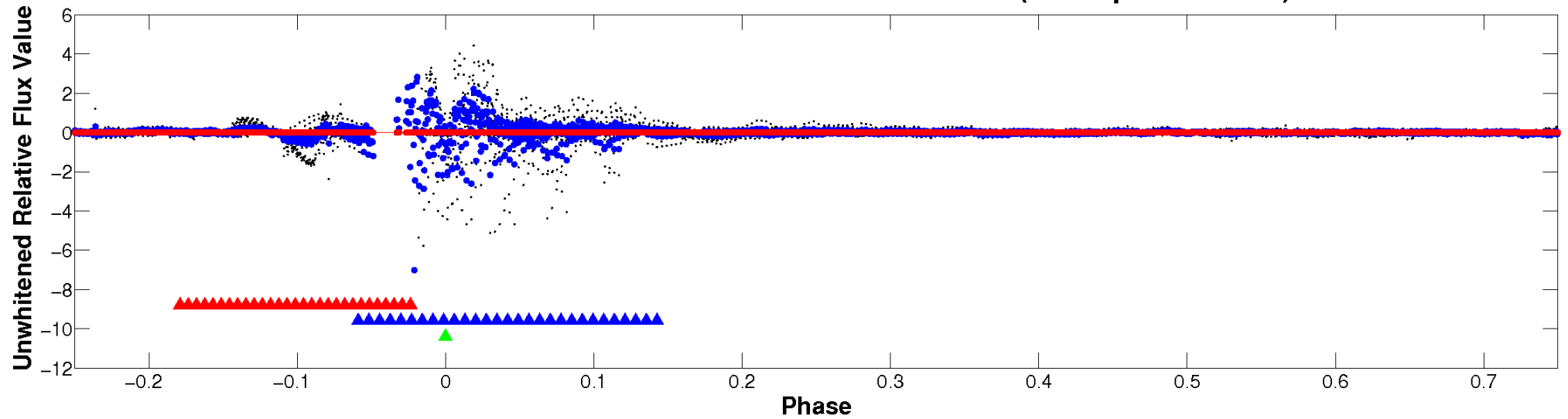
# ALT Odd/Even

TCE 008625249-03

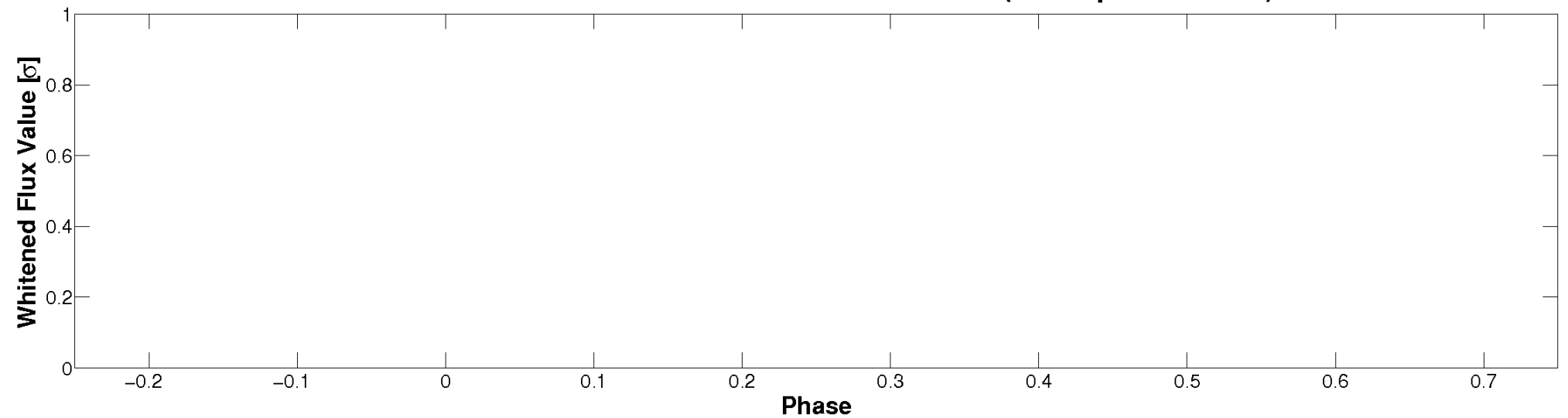


# Non-Whitened Vs. Whitened Light Curve

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

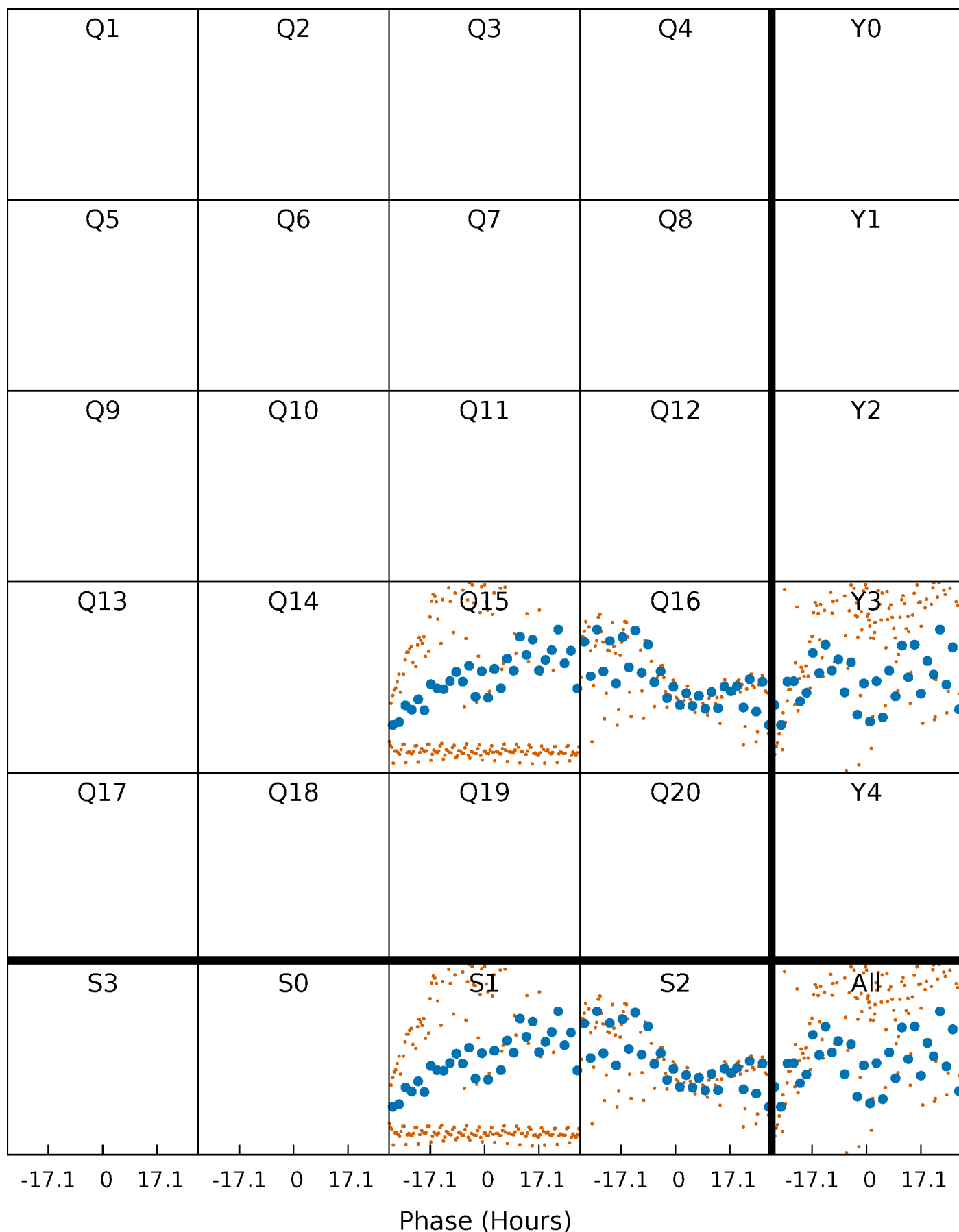


**Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)**



# PDC Quarter-Phased Transit Curves

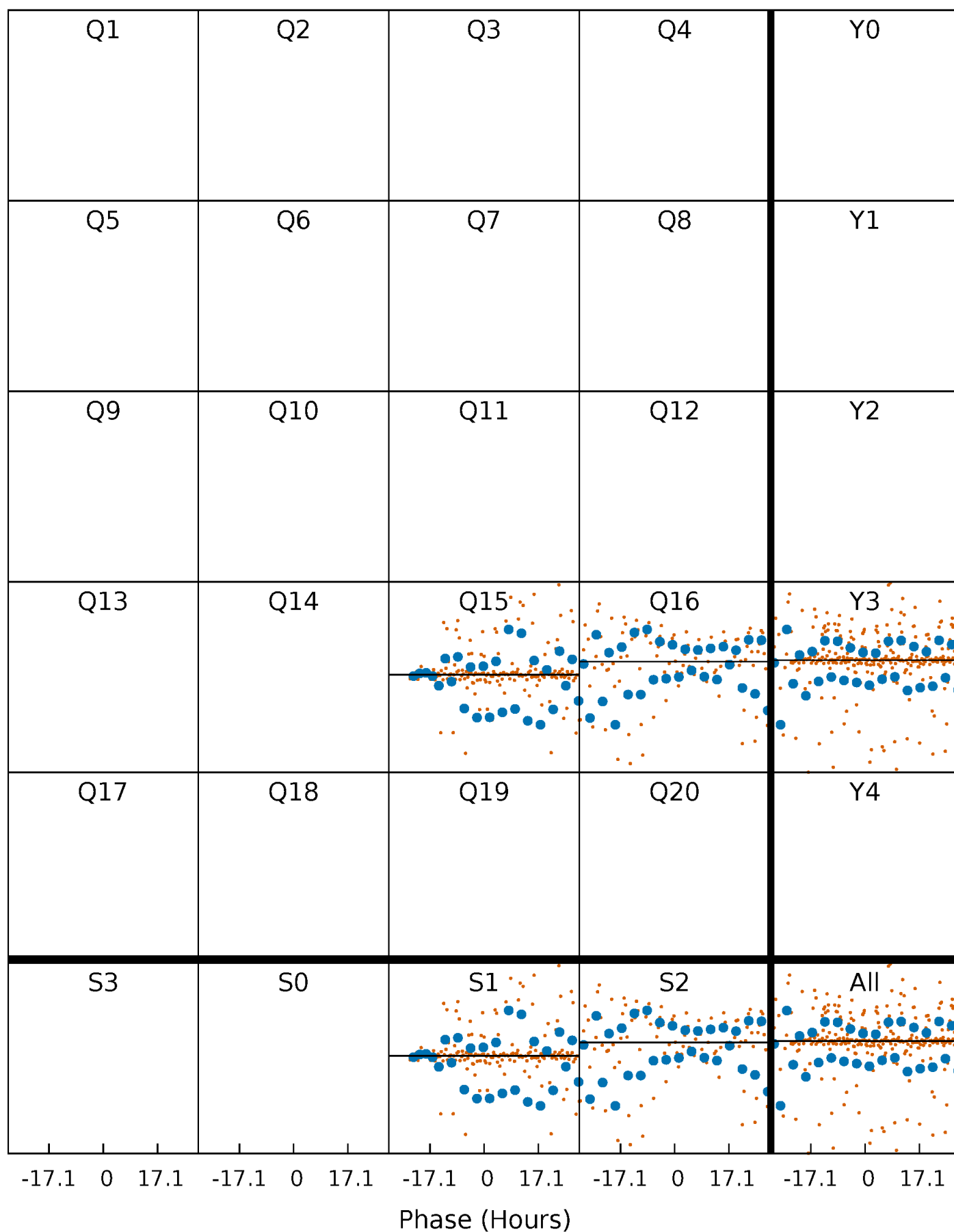
TCE 008625249-03 P= 51.522481 Days  $T_0=142.585983$  (BKJD)





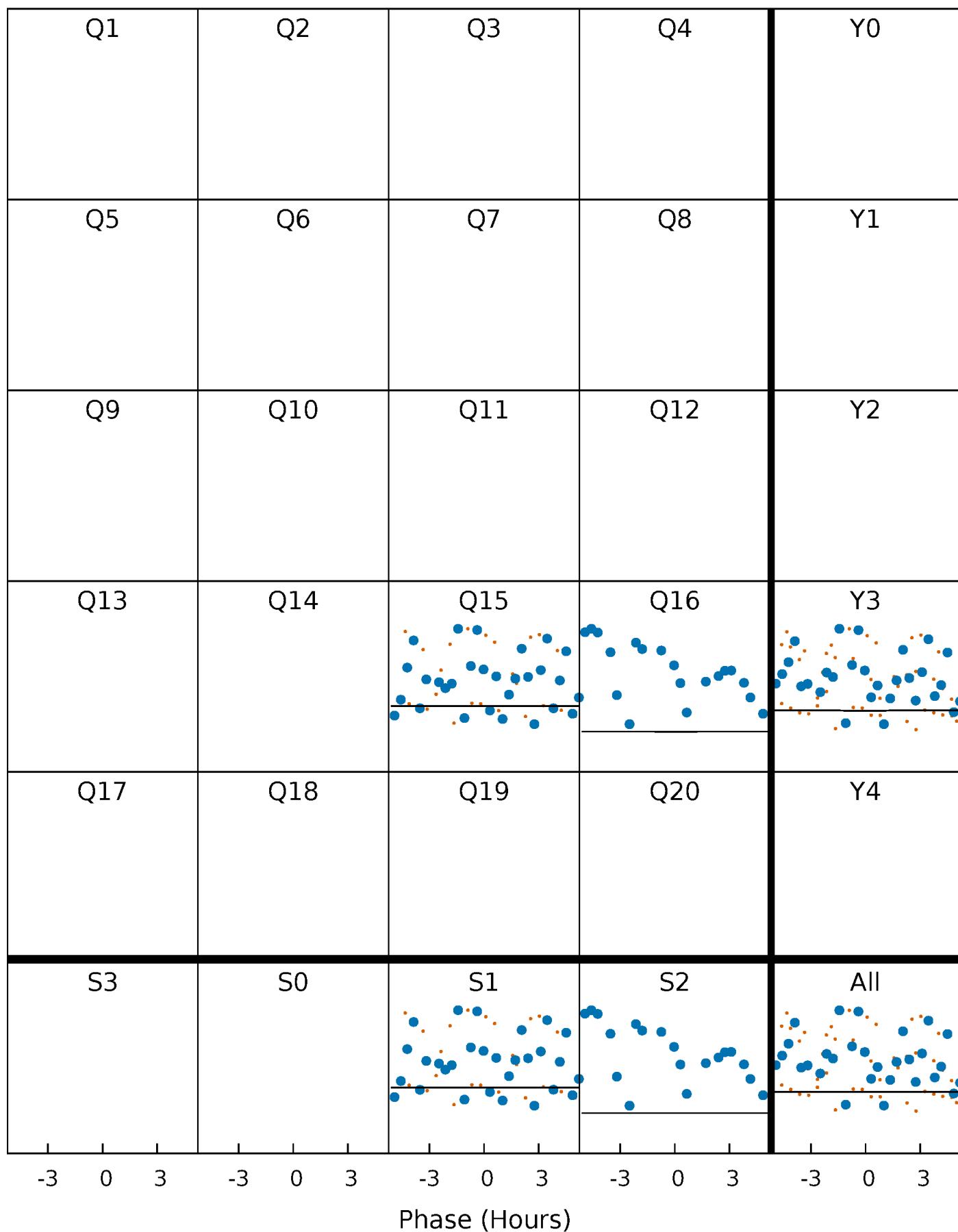
## DV Quarter-Phased Transit Curves

TCE 008625249-03    P= 51.522481 Days     $T_0=142.585983$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

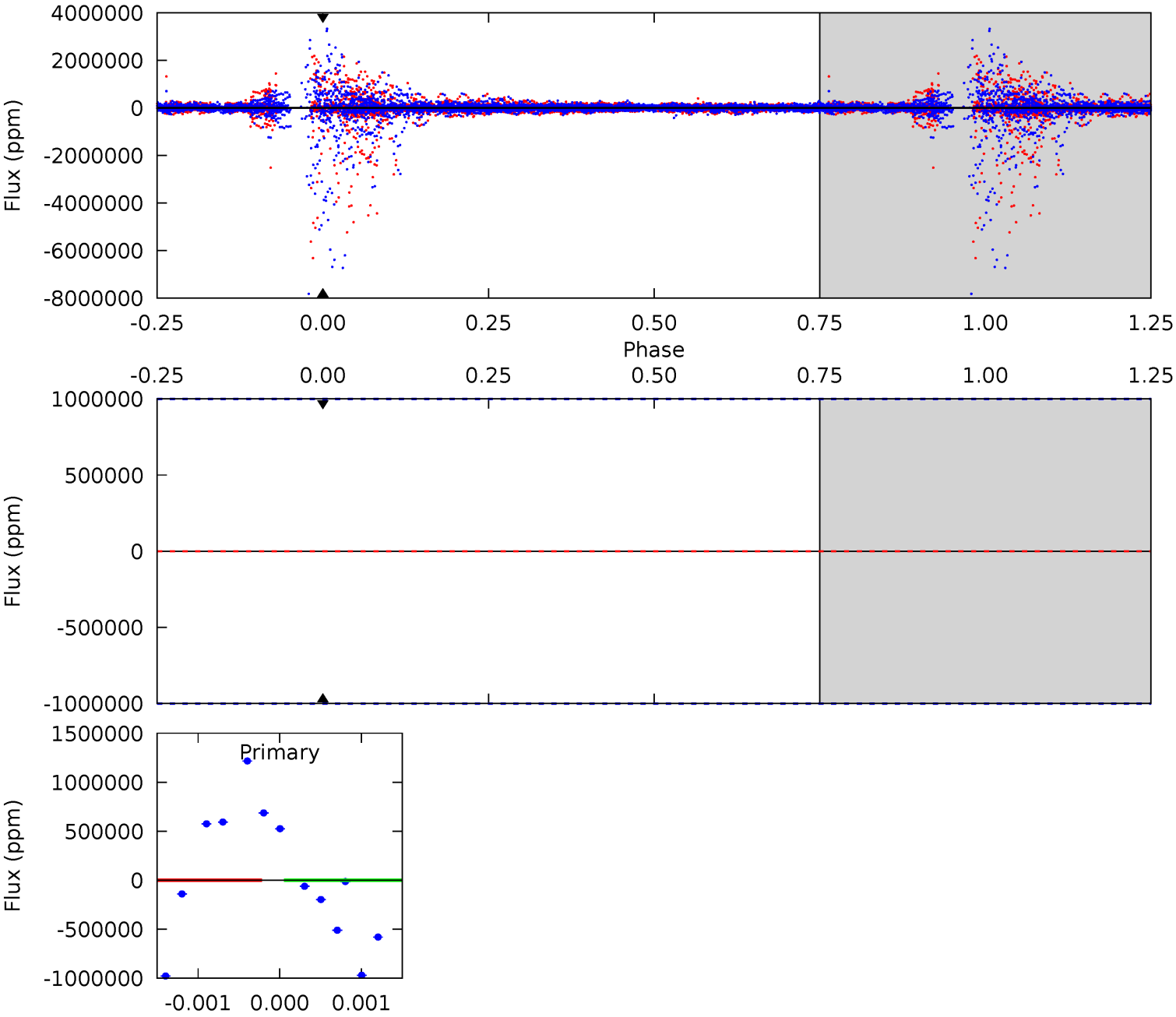
TCE 008625249-03   P= 51.522481 Days    $T_0=142.277783$  (BKJD)



# DV Model-Shift Uniqueness Test

008625249-03, P = 51.522481 Days, E = 142.585983 Days

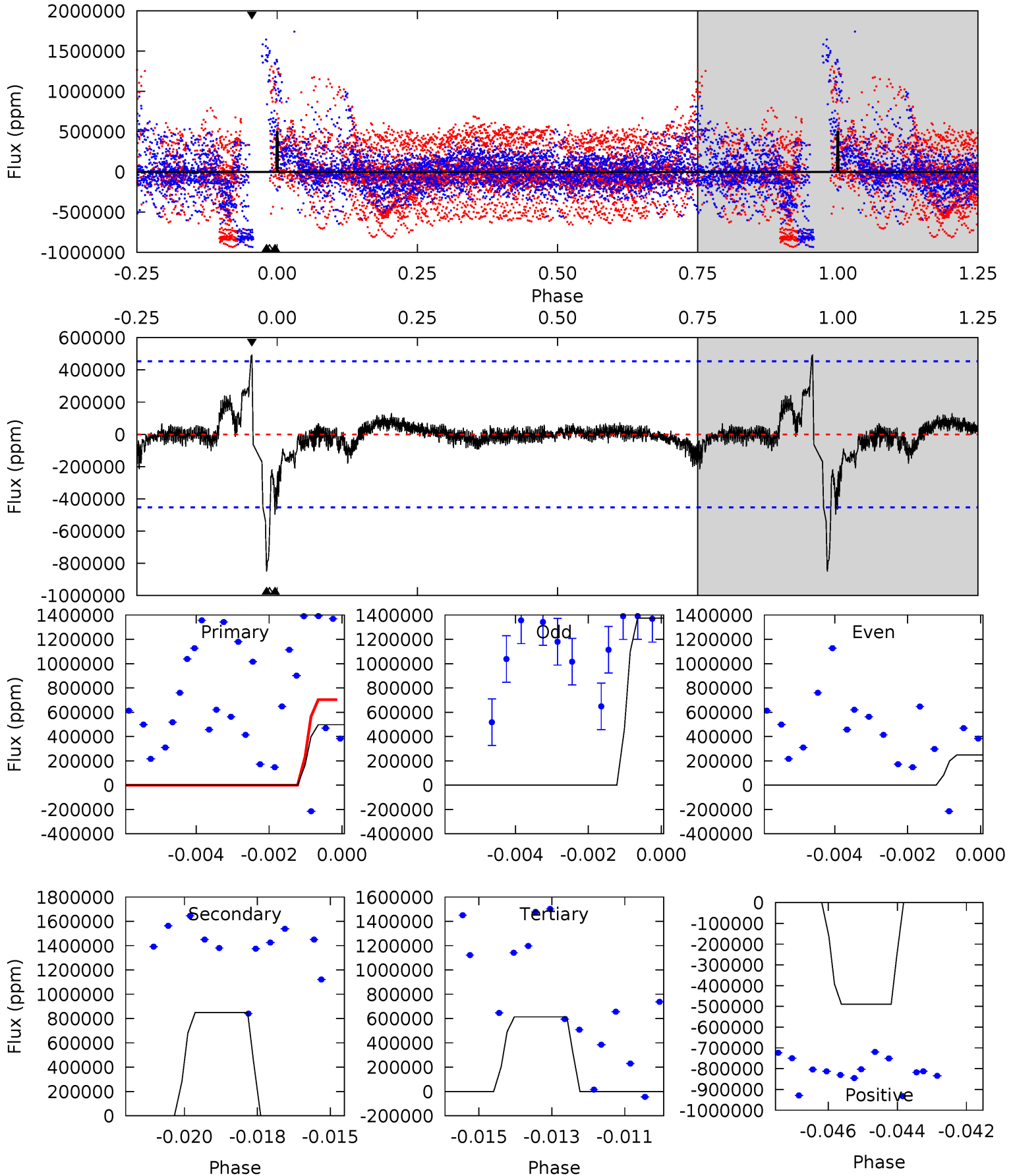
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008625249-03, P = 51.522481 Days, E = 142.277783 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
5.83	9.95	7.19	5.74	5.31	3.06	0.86	-1.36	0.09	2.76	4.21	4.50	0.92	0.37	2.53



### Stellar Parameters For KIC 008625249

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5780^{+1}_{-1}$	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

### Secondary Eclipse Parameters for KIC 008625249-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$26.18^{+10.62}_{-10.44}$	$683^{+34}_{-31}$	$-3038^{+10066}_{-3698}$	$-103.017^{+7579.275}_{-6011.908}$
Alt.	$-849676 \pm 85386$	$9.00^{+8.90}_{-6.31}$	$687^{+33}_{-35}$	$281330^{+3111162}_{-220415}$	$2896907^{+32797724}_{-2355403}$

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

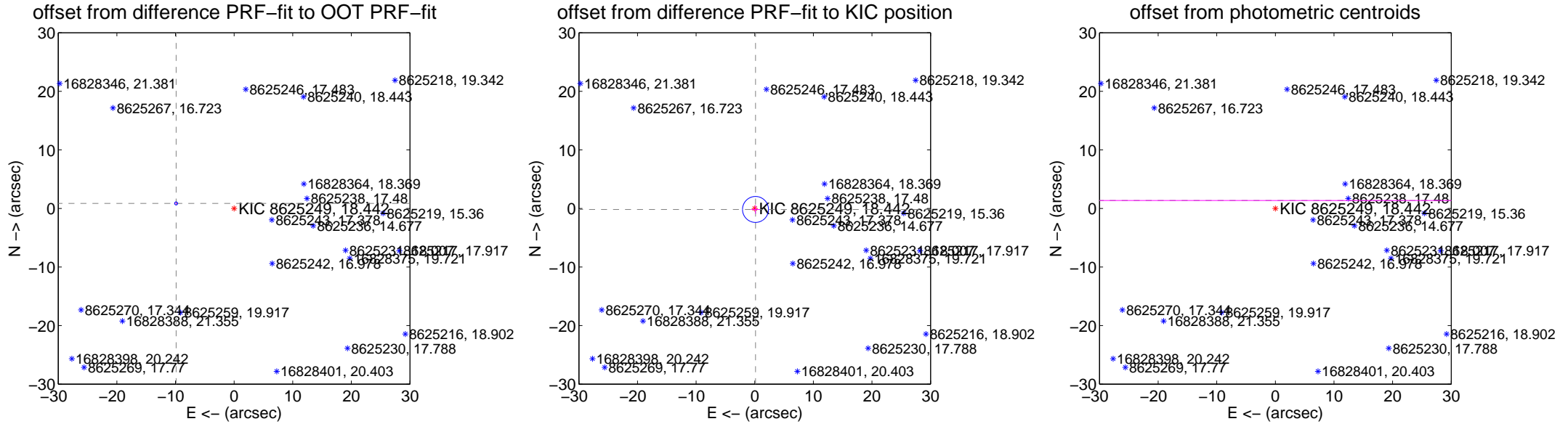
## DV Centroid Data

Supplemental centroid analysis for 008625249-03. Kepler magnitude: 18.44. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 10.07 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>9.931 <math>\pm</math> 0.087</b>	<b>114.28</b>	9.894 $\pm$ 0.087	0.853 $\pm$ 0.082
PRF-fit source offset from KIC position	0.214 $\pm$ 0.738	0.29	-0.130 $\pm$ 0.738	-0.171 $\pm$ 0.738
photometric centroid source offset	30.54 $\pm$ 76.87	0.40	30.51 $\pm$ 76.93	1.35 $\pm$ 25.79



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.

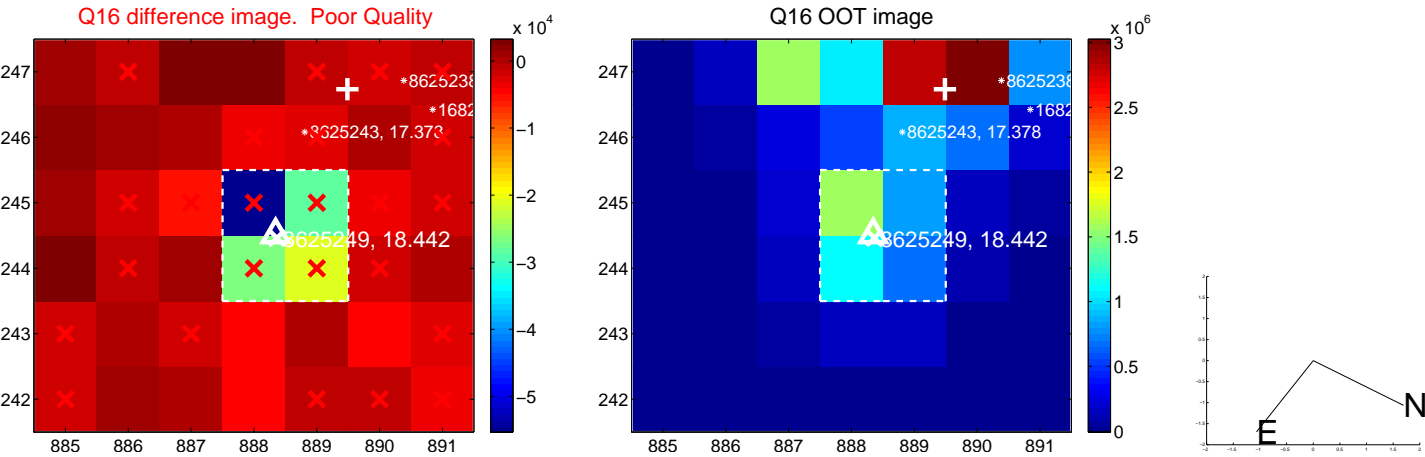
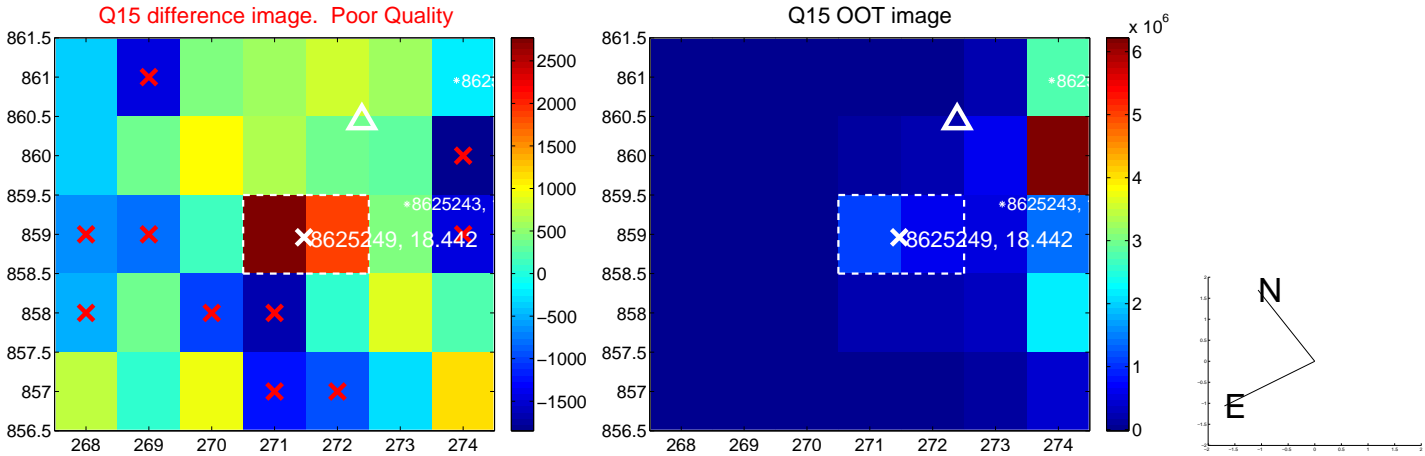




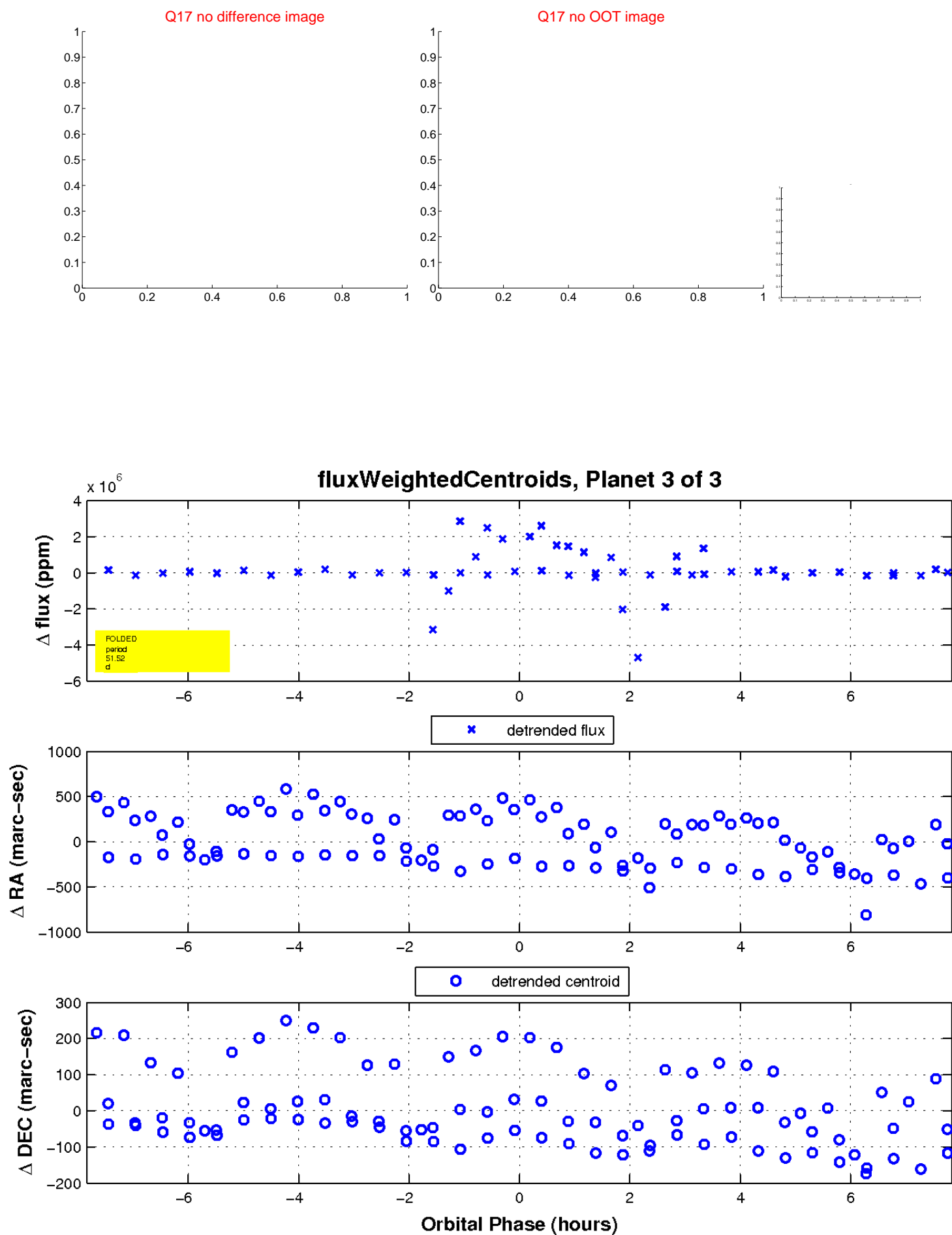
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



3



# UKIRT Image

Declination

