

# KIC 011200191

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011200191-01	OBS	No	392.893429	141.286490	620.2	6.492	15.1	6.5	0.81	5272	2.33	0.44
011200191-02	OBS	No	418.267646	514.621185	680.8	3.834	9.5	8.9	0.81	5272	2.69	0.41
011200191-03	OBS	No	234.683941	241.942272	625.0	3.422	8.7	8.9	0.81	5272	2.08	0.88

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011200191-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011200191-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011200191-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

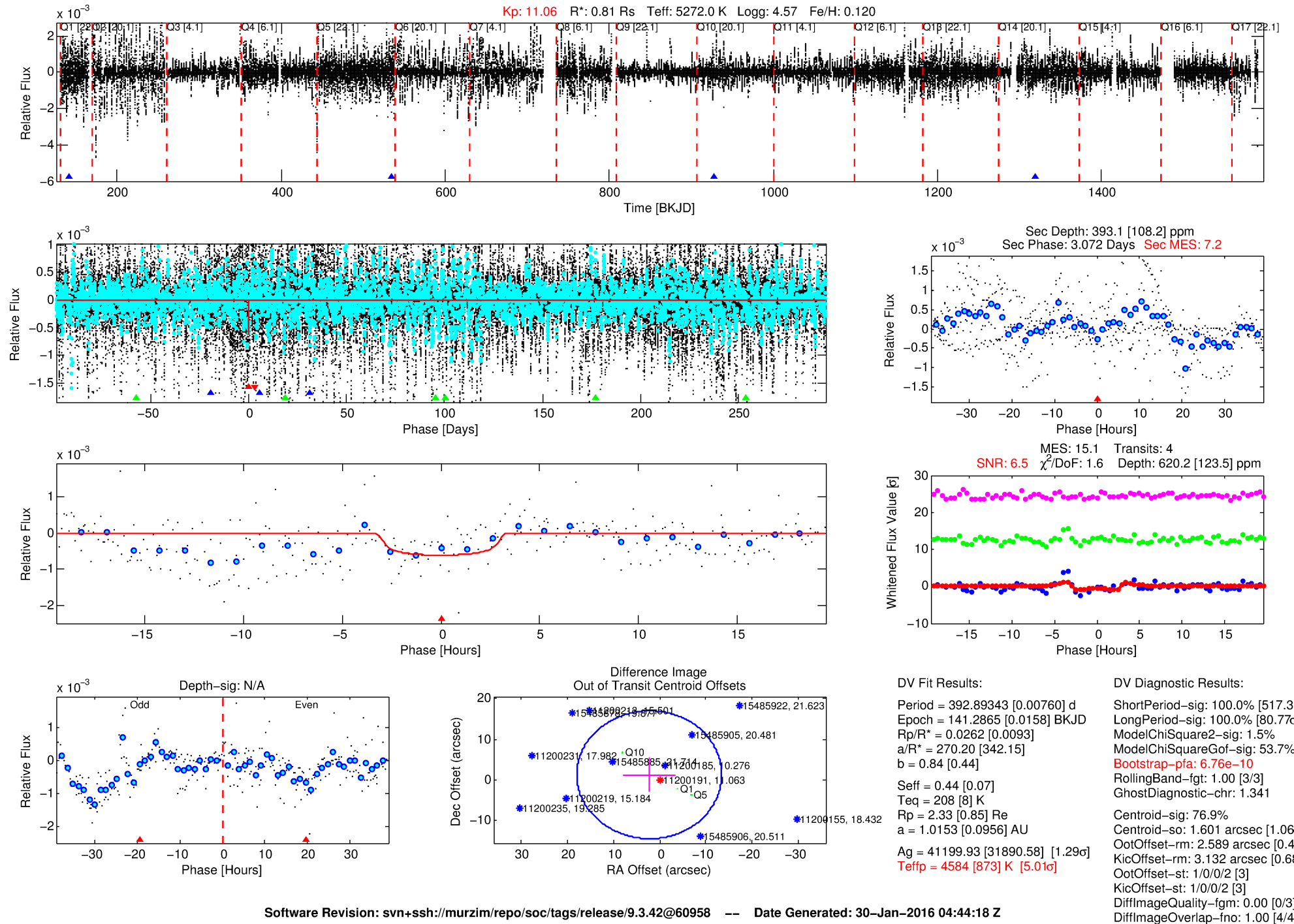
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011200191-01

No Significant Match Found

# DV One-Page Summary

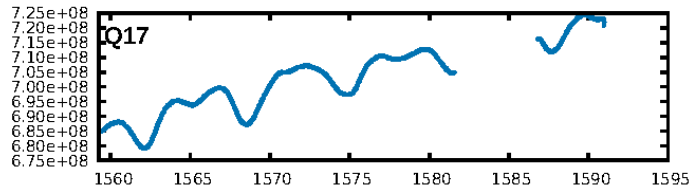
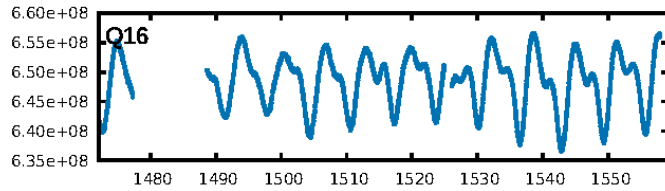
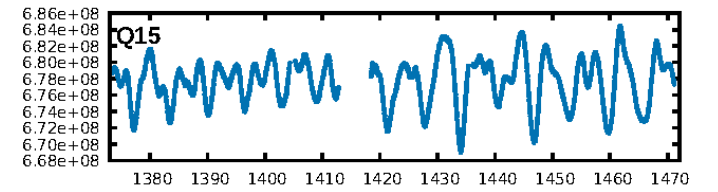
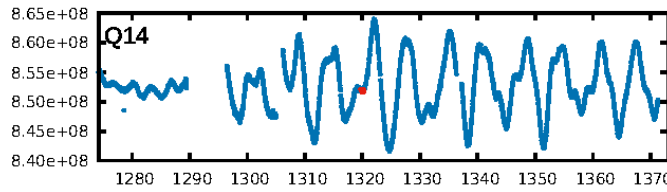
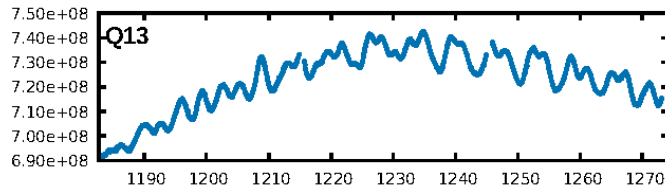
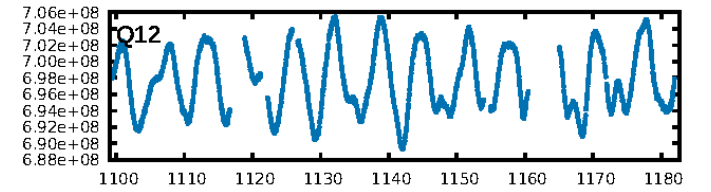
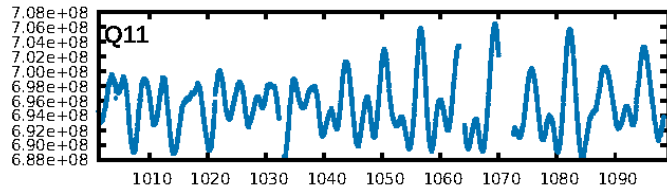
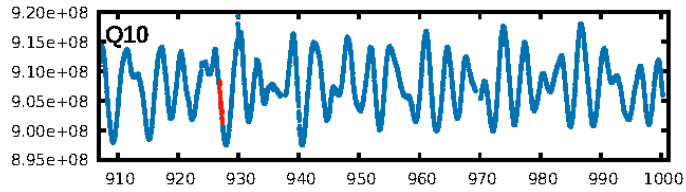
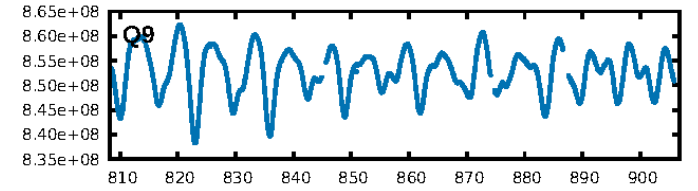
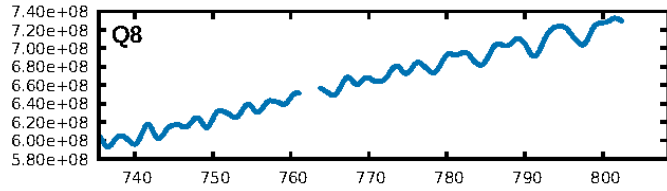
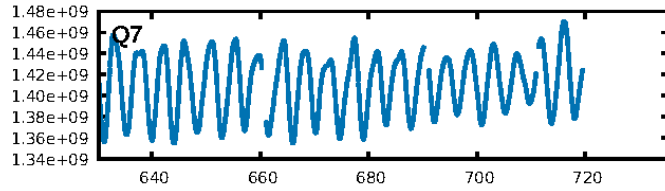
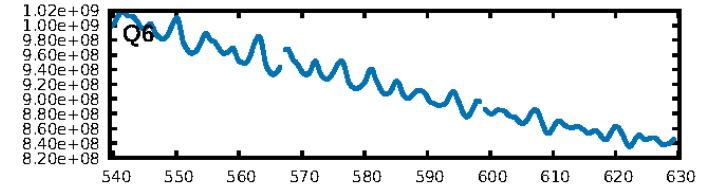
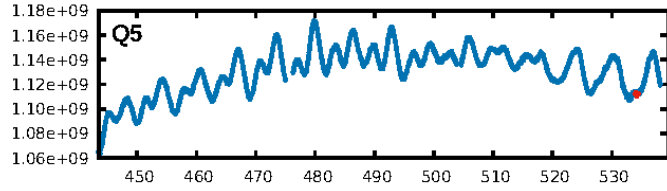
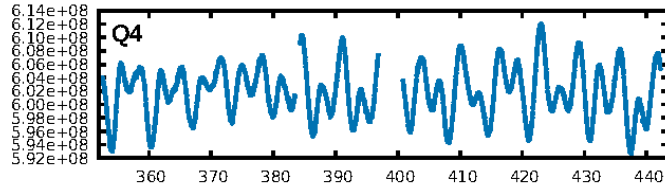
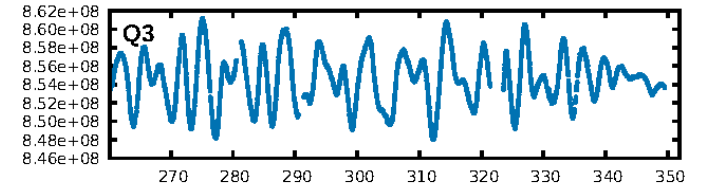
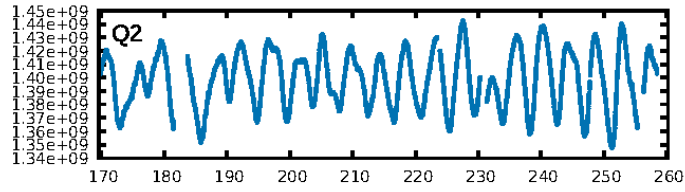
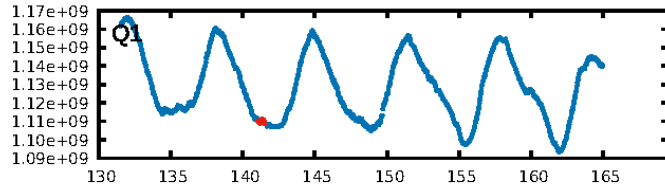
KIC: 11200191 Candidate: 1 of 3 Period: 392.893 d



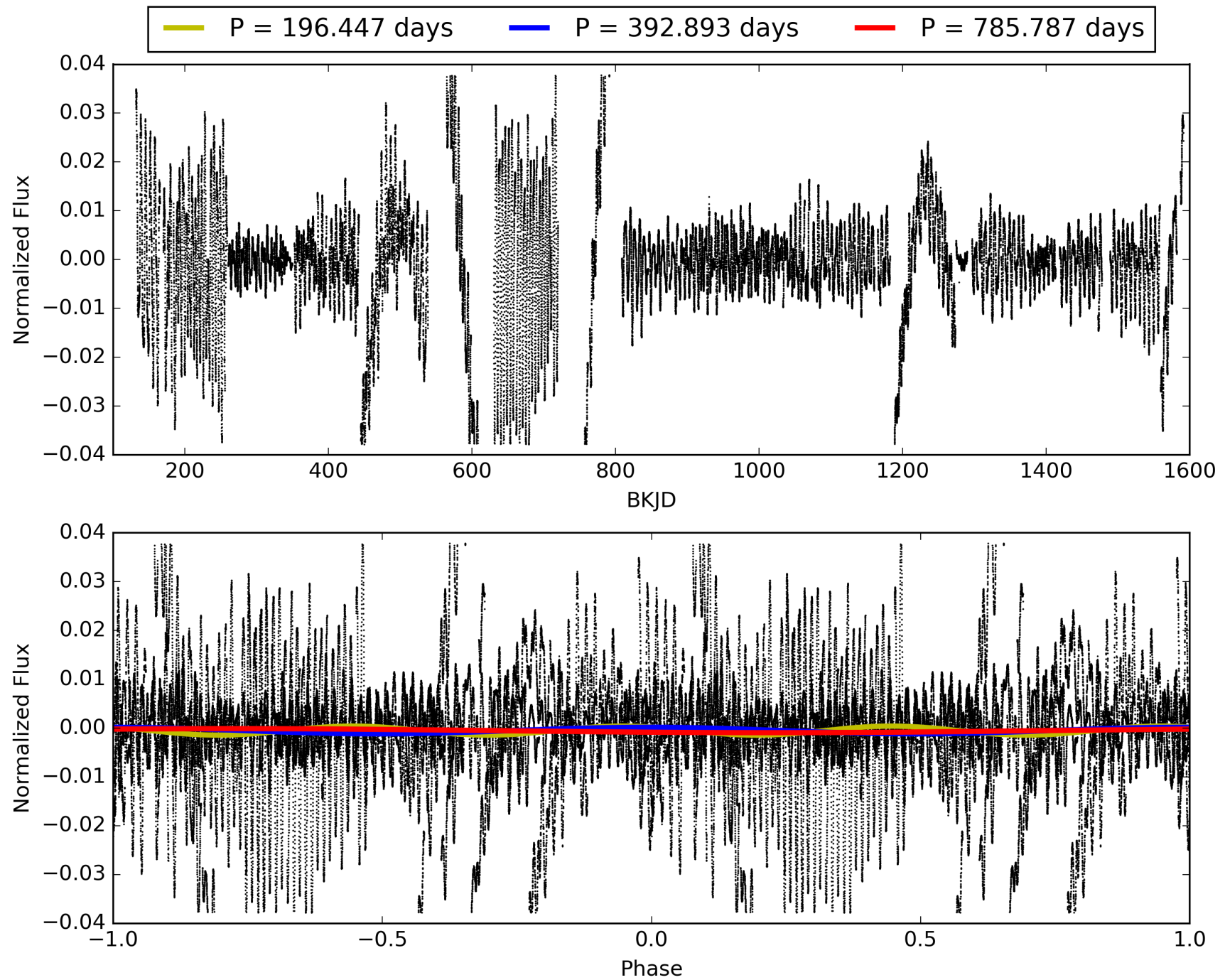
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:44:18 Z

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

# TCE 011200191-01, PDC Light Curves

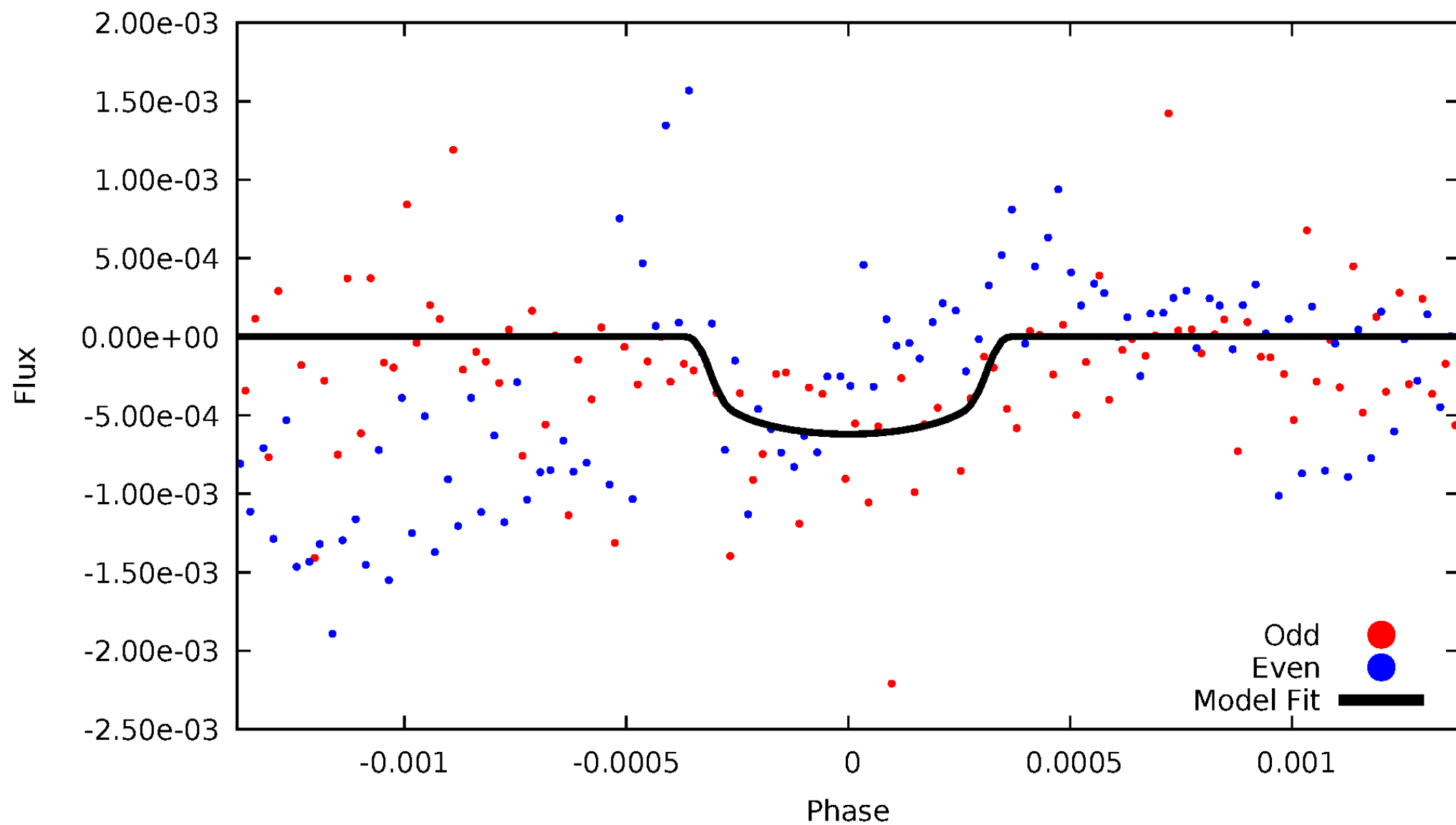


TCE 011200191-01



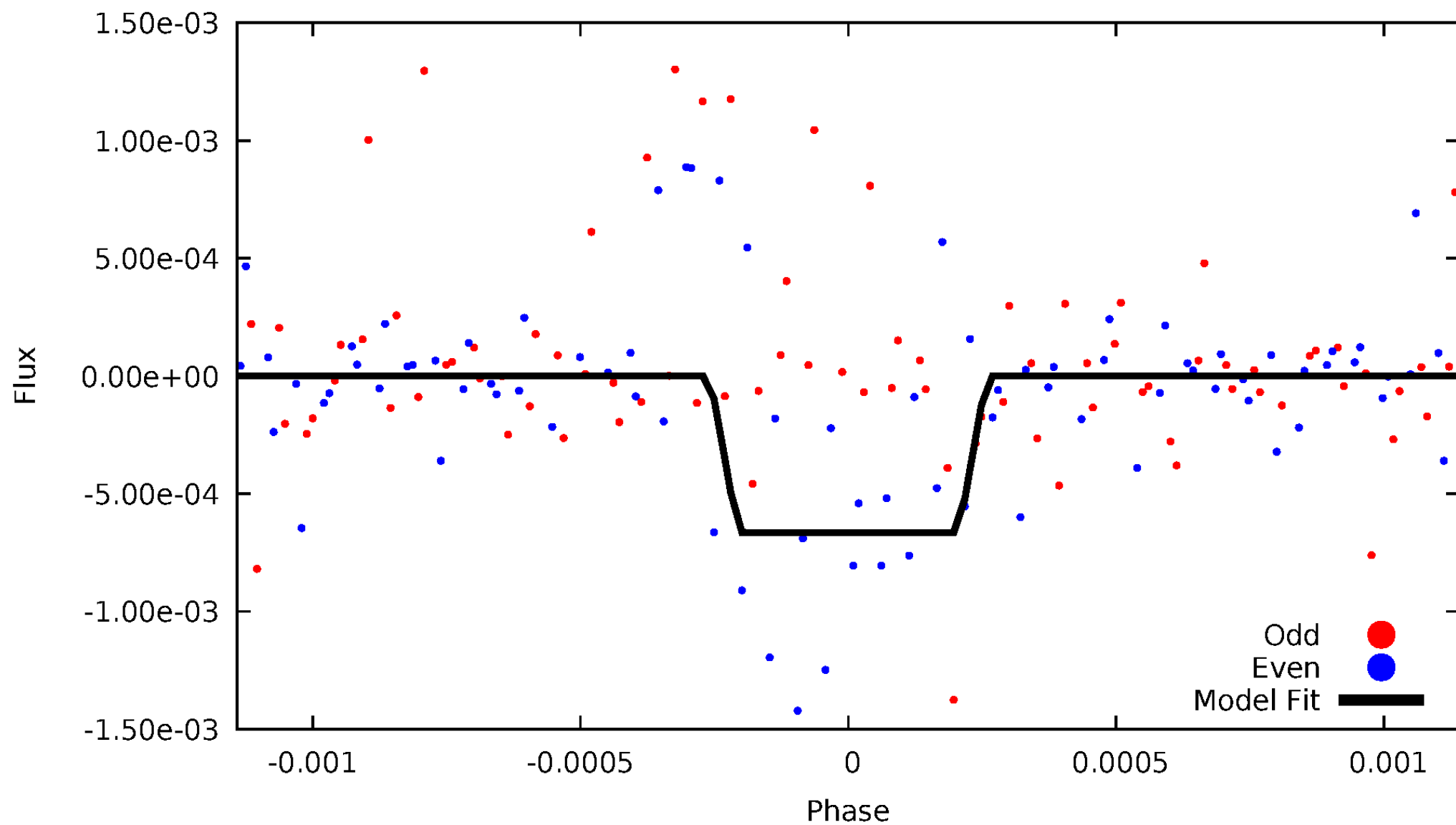
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TCE 011200191-01



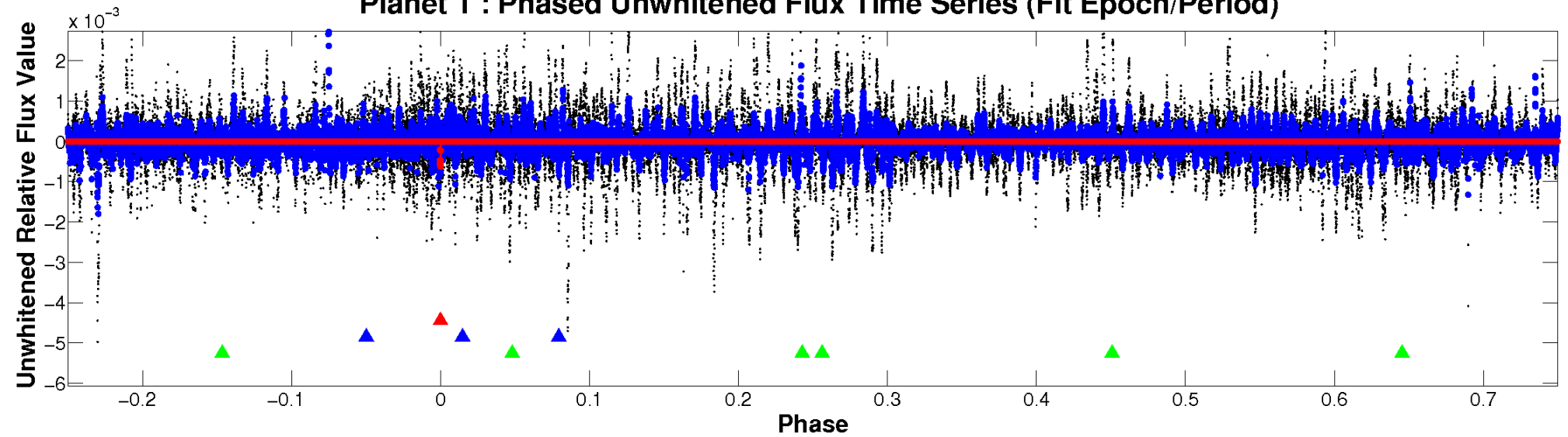
# ALT Odd/Even

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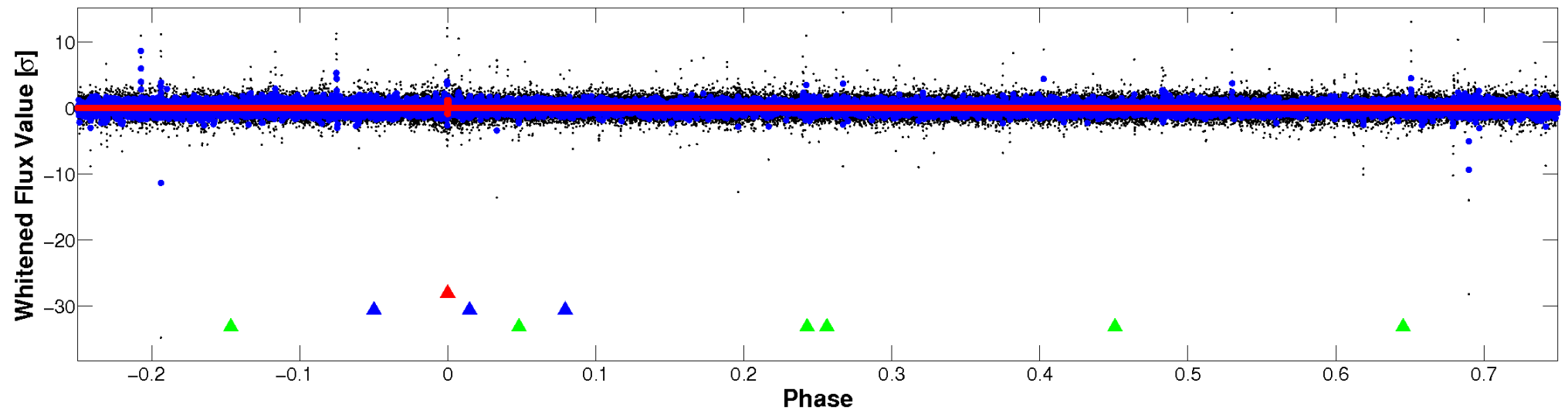


# Non-Whitened Vs. Whitened Light Curve

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

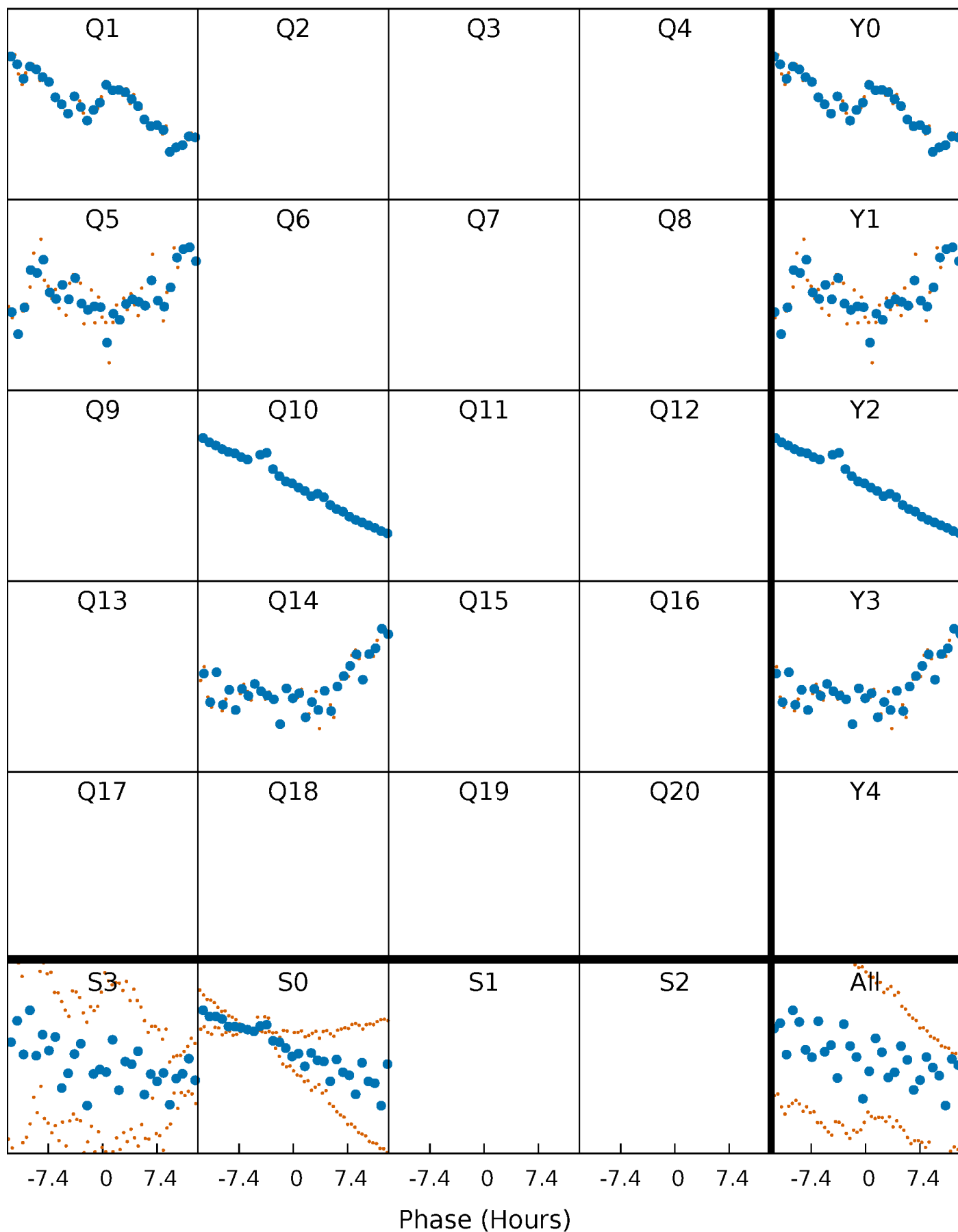


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

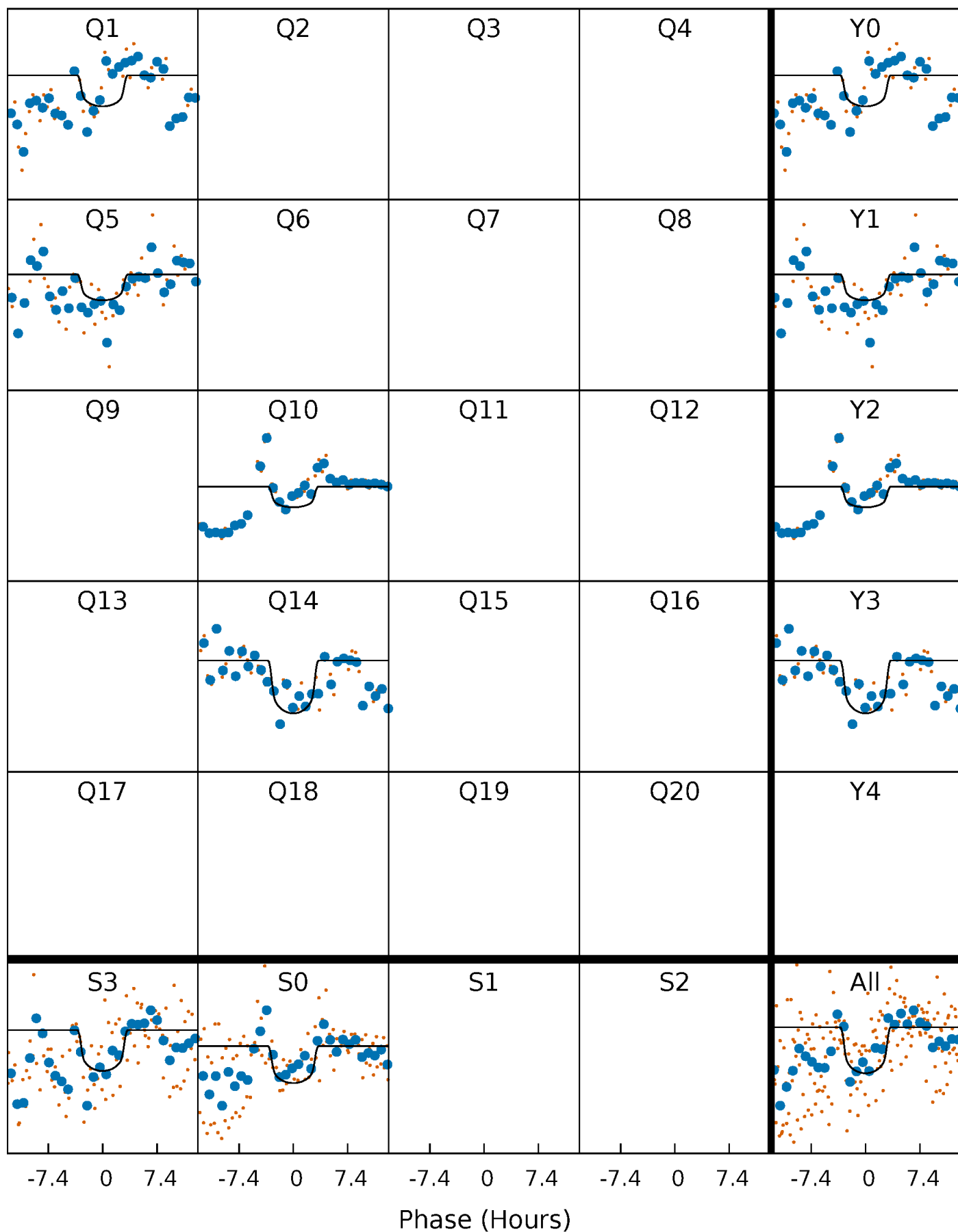
TCE 011200191-01     $P=392.893429$  Days     $T_0=141.286490$  (BKJD)





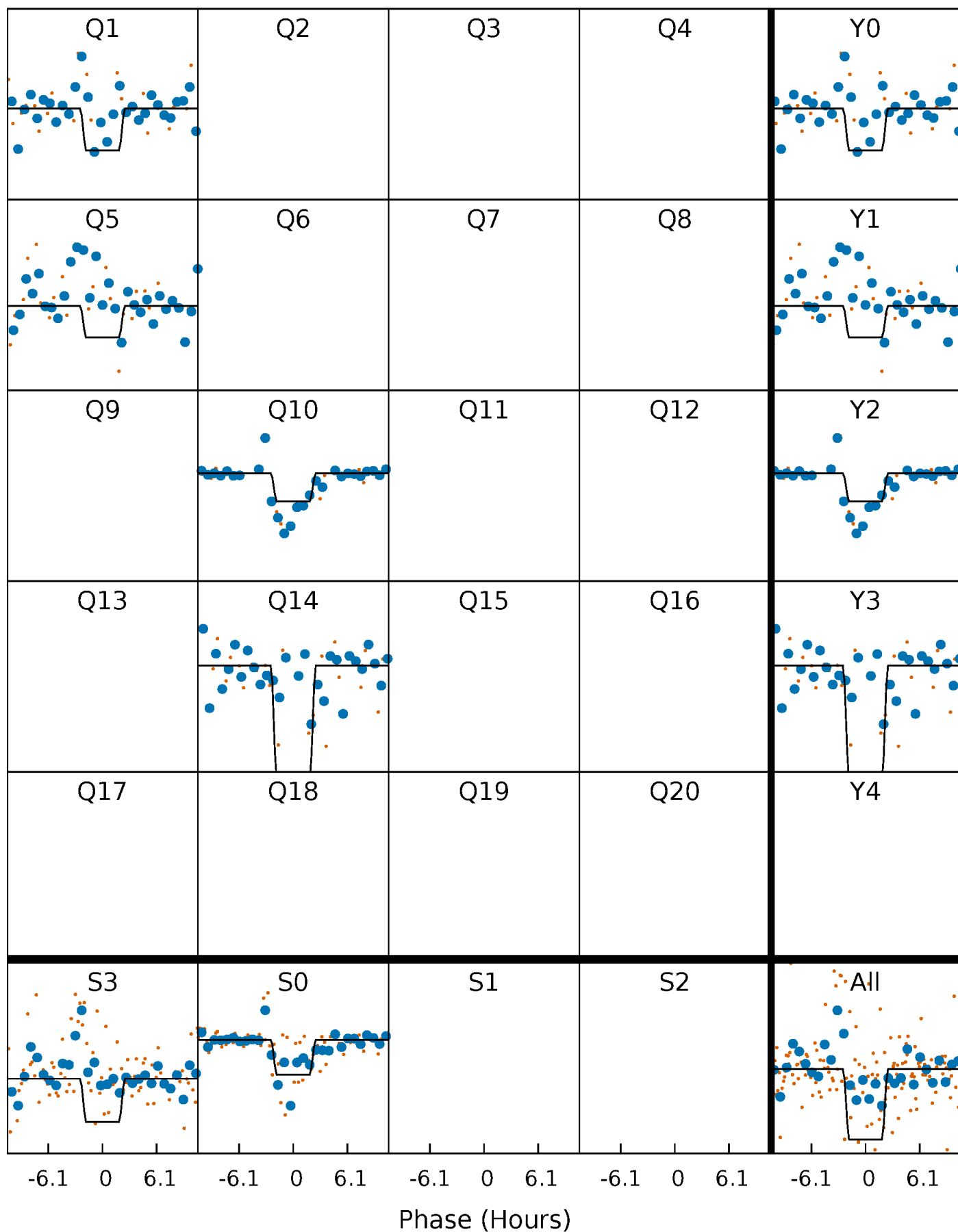
# DV Quarter-Phased Transit Curves

TCE 011200191-01 P=392.893429 Days  $T_0=141.286490$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

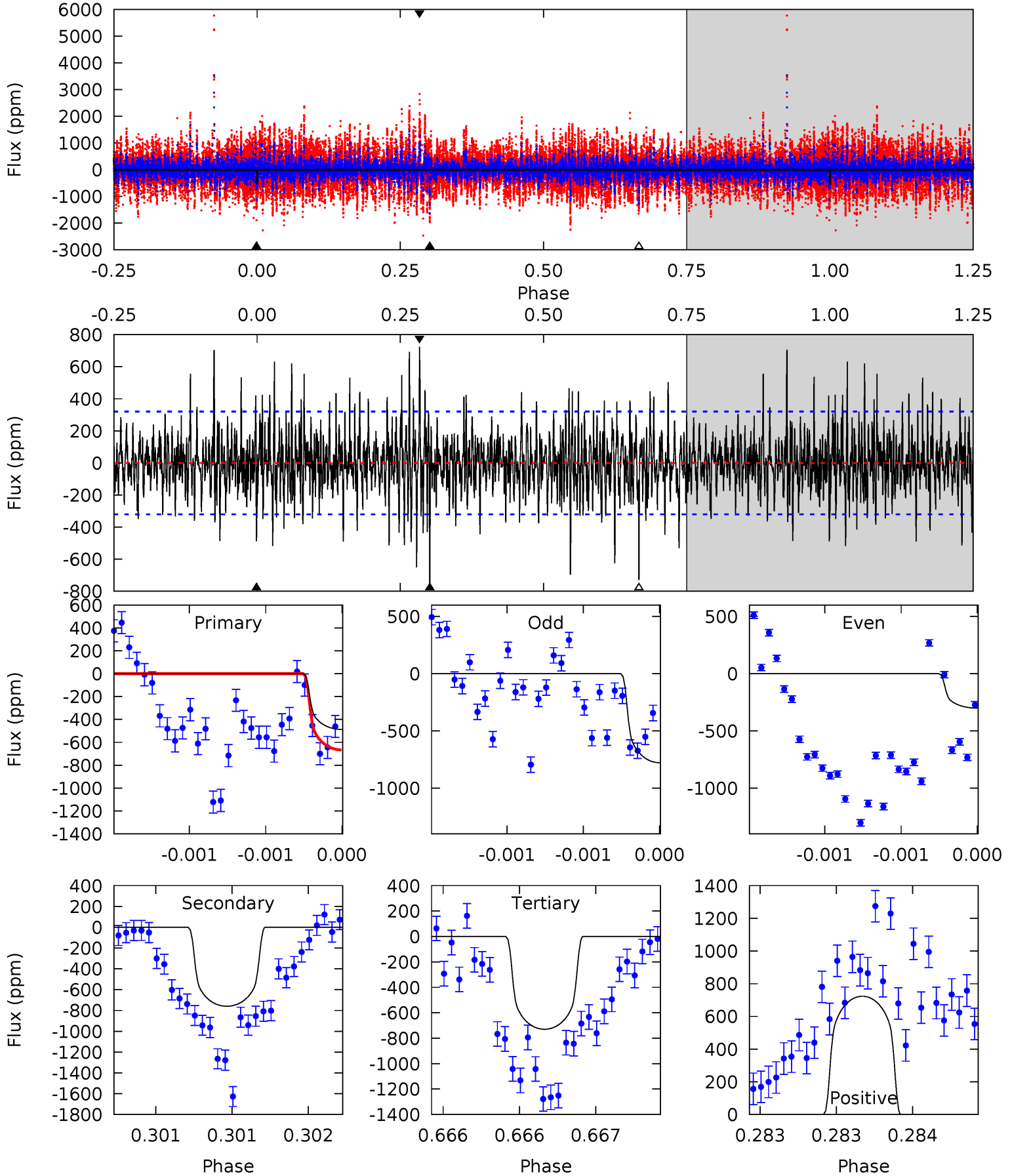
TCE 011200191-01 P=392.910114 Days  $T_0=141.230903$  (BKJD)



# DV Model-Shift Uniqueness Test

011200191-01, P = 392.893429 Days, E = 141.286490 Days

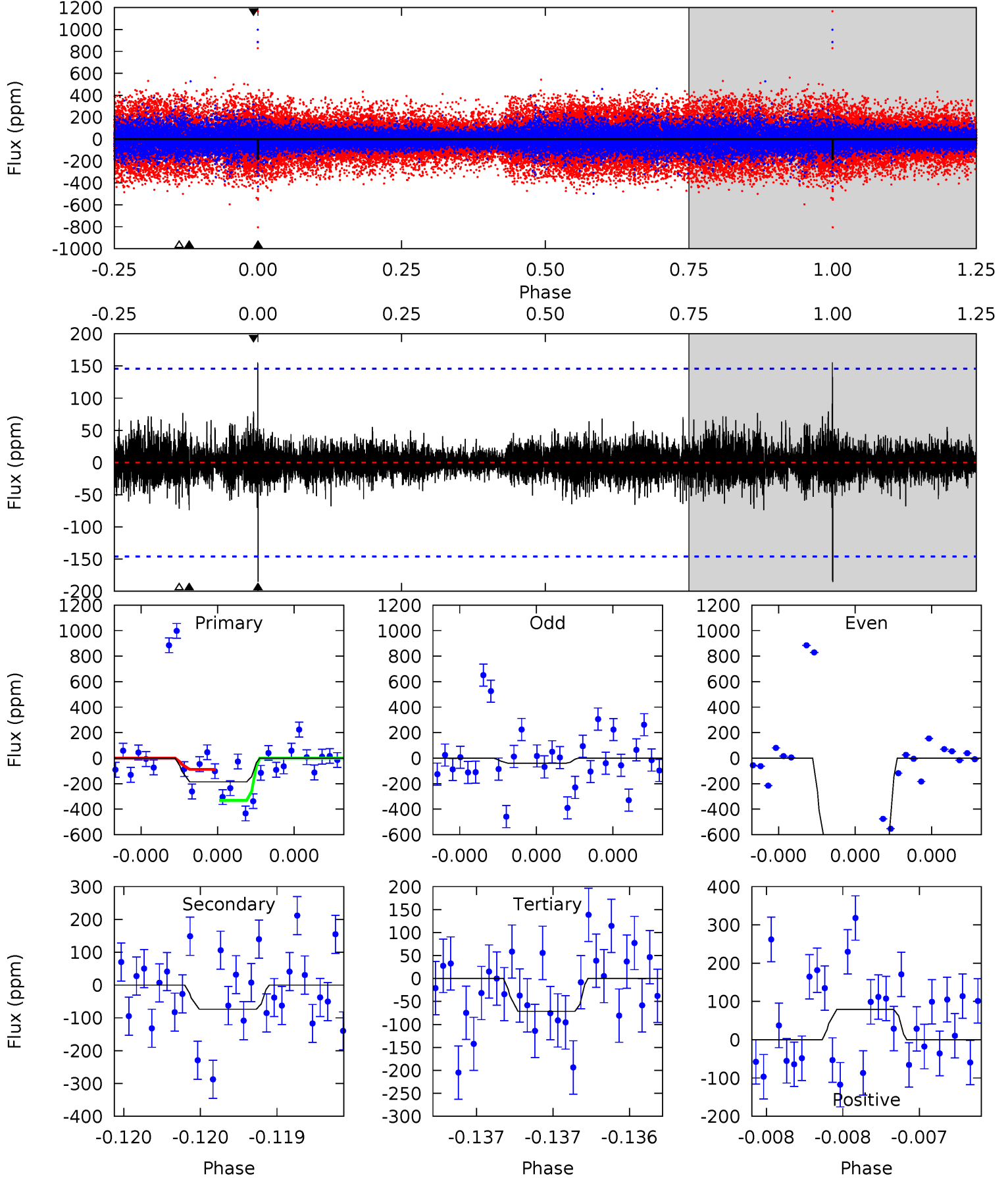
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	13.1	12.6	12.4	5.51	3.38	2.76	-4.16	-4.05	0.52	0.63	3.35	1.30	0.49	3.11



# Alt Model-Shift Uniqueness Test

011200191-01, P = 392.910114 Days, E = 141.230903 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
7.09	2.82	2.73	3.02	5.58	3.49	0.58	4.36	4.07	0.09	-0.20	15.6	2.23	0.46	4.41



### Stellar Parameters For KIC 011200191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5272^{+73}_{-84}$	$4.574^{+0.017}_{-0.088}$	$0.120^{+0.150}_{-0.150}$	$0.813^{+0.080}_{-0.029}$	$0.902^{+0.032}_{-0.064}$	$2.365^{+0.182}_{-0.609}$
	+1%/-2%	+0%/-2%	+125%/-125%	+10%/-4%	+4%/-7%	+8%/-26%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 011200191-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-760 \pm 58$	$2.35^{+0.88}_{-0.84}$	$293^{+8}_{-6}$	$5393^{+1322}_{-651}$	$77883^{+107807}_{-36900}$
Alt.	$-74 \pm 26$	$2.34^{+0.82}_{-0.88}$	$294^{+8}_{-7}$	$3488^{+606}_{-378}$	$7514^{+11316}_{-3951}$

$T_{\text{max}}$  = 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

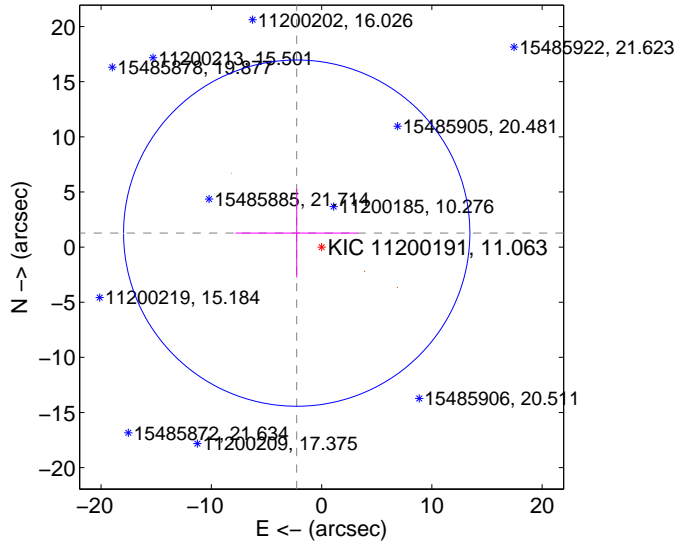
Supplemental centroid analysis for 011200191-01. **Kepler magnitude: 11.06.** Transit SNR 6.51

There are 0 quarters with good PRF difference image offsets

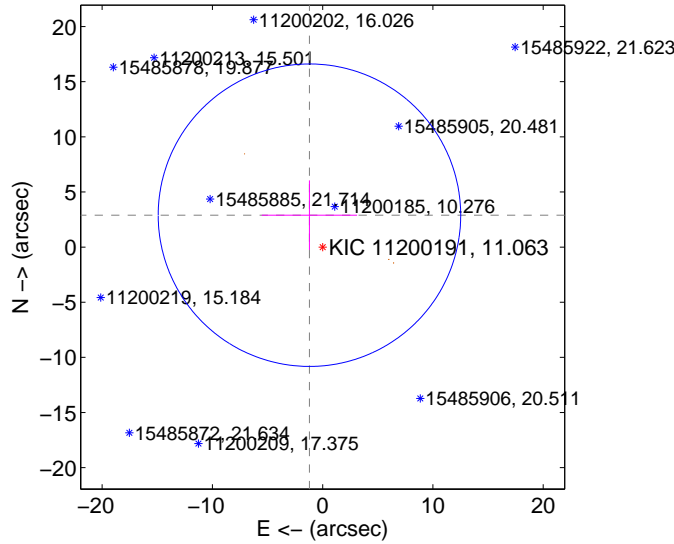
The OOT PRF centroid is offset from the target star catalog position by about 2.05 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$2.589 \pm 5.233$	0.49	$2.257 \pm 5.561$	$1.268 \pm 4.023$
PRF-fit source offset from KIC position	$3.132 \pm 4.572$	0.68	$1.198 \pm 4.318$	$2.893 \pm 3.161$
photometric centroid source offset	$1.60 \pm 1.50$	1.06	$-1.13 \pm 0.99$	$1.14 \pm 1.88$

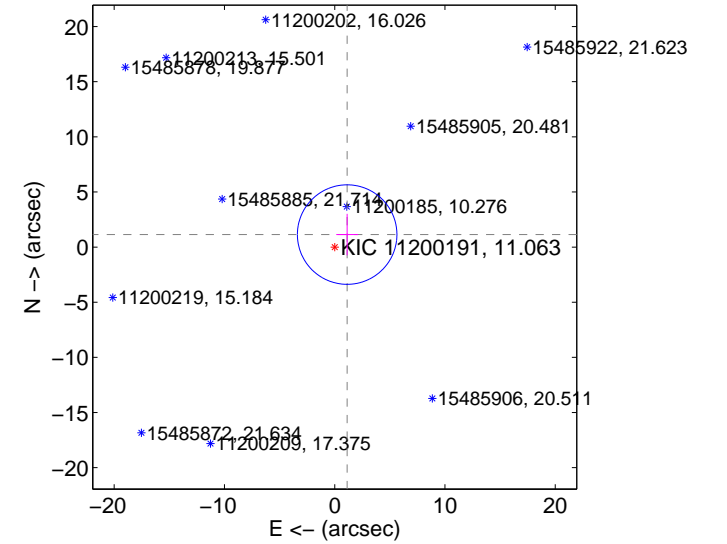
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

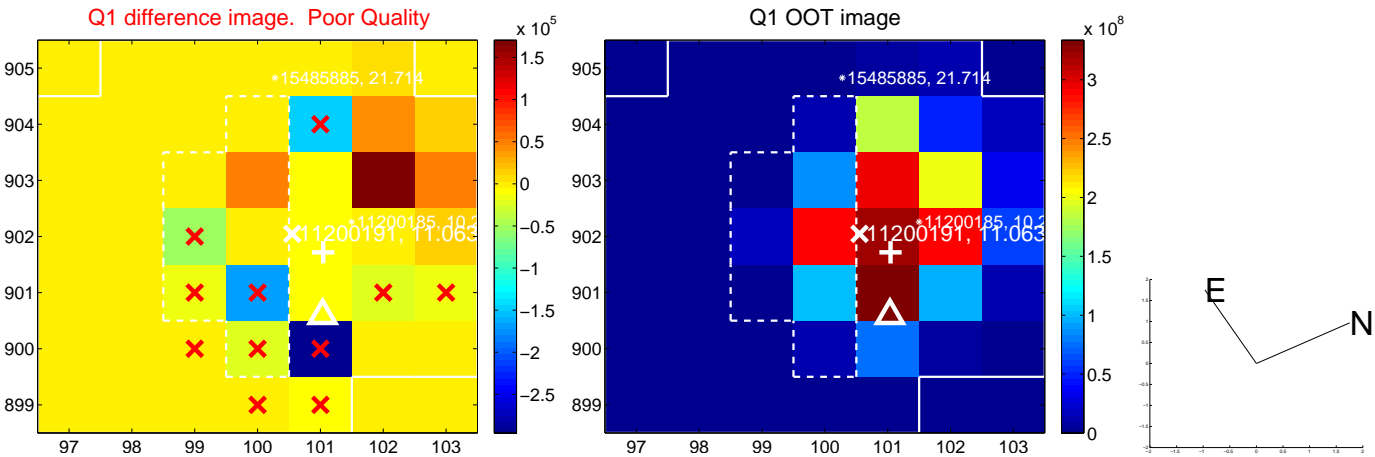


offset from photometric centroids

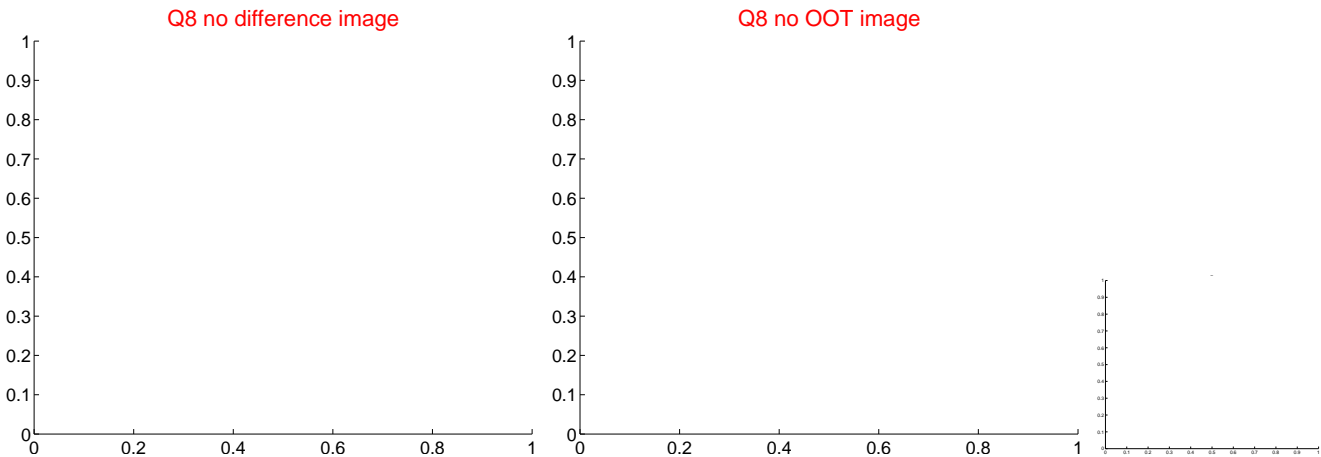
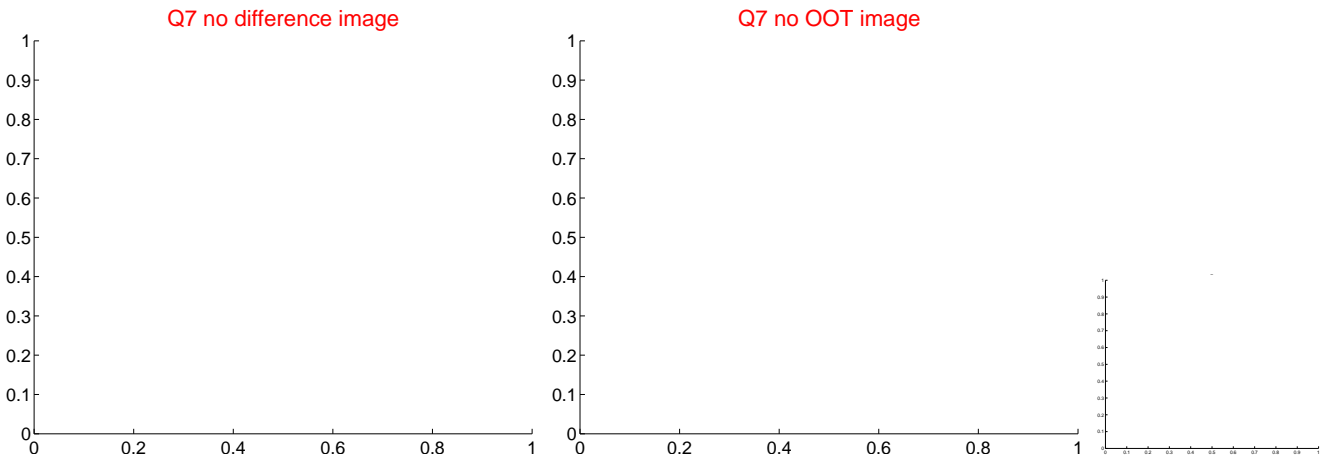
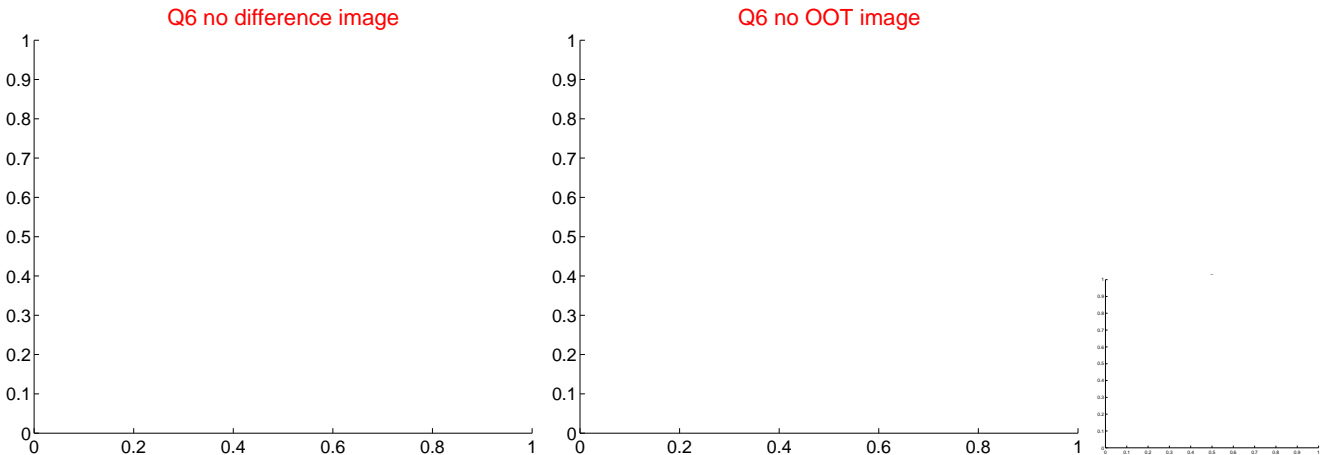
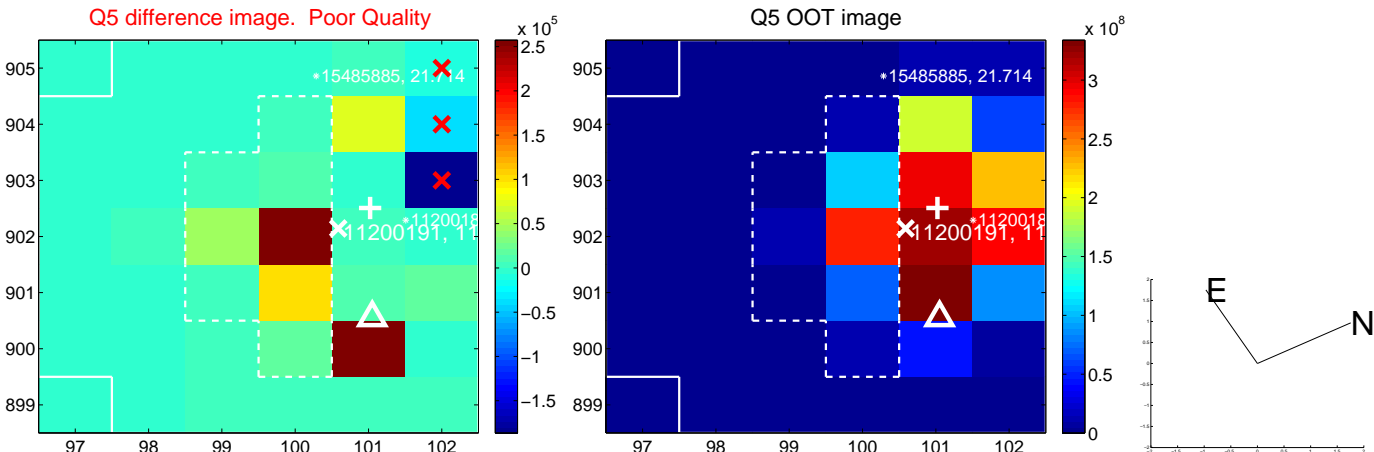


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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

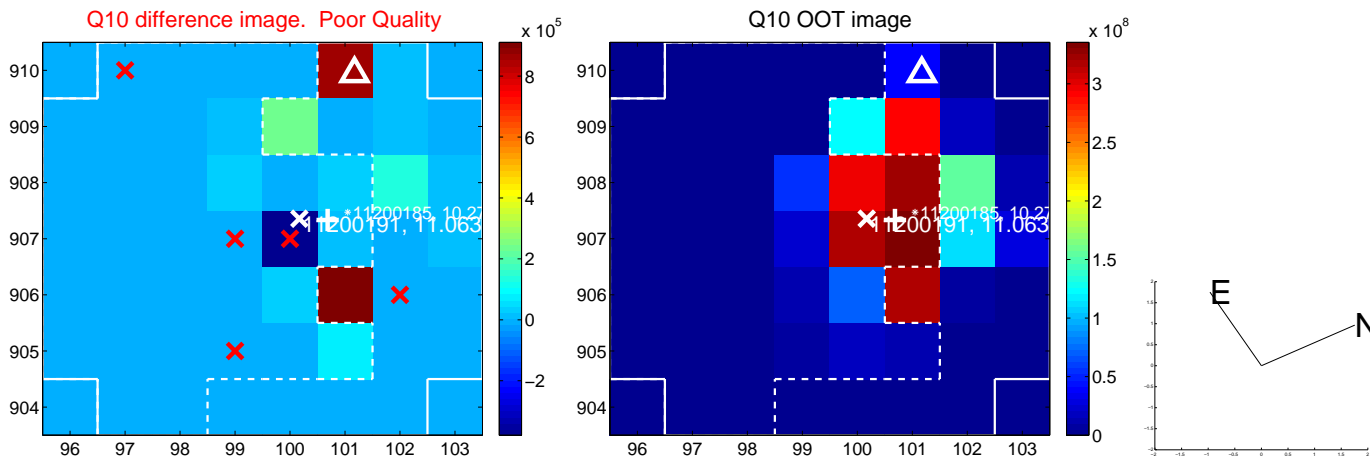


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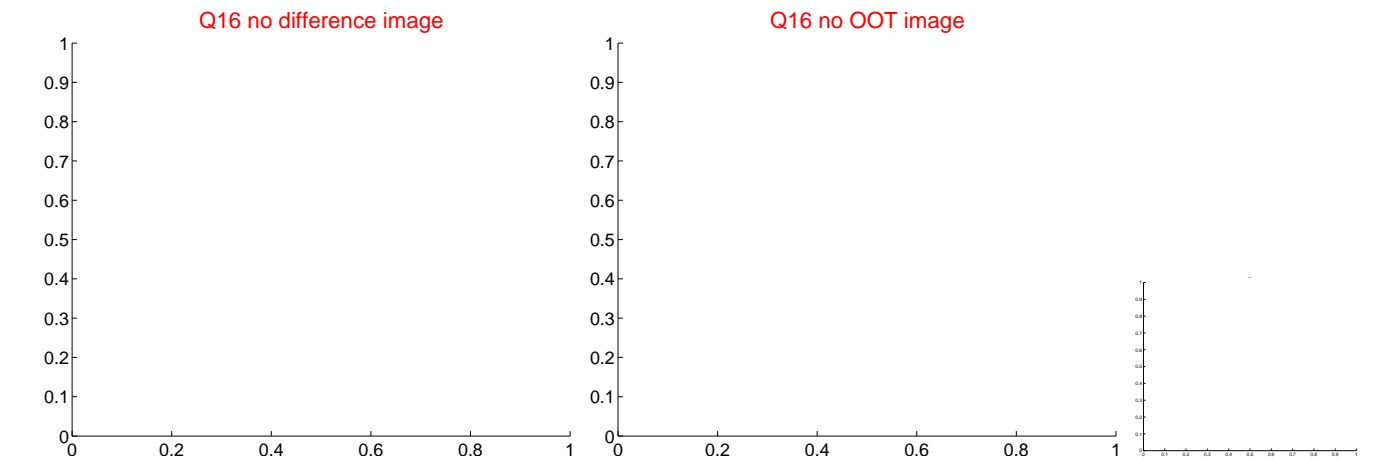
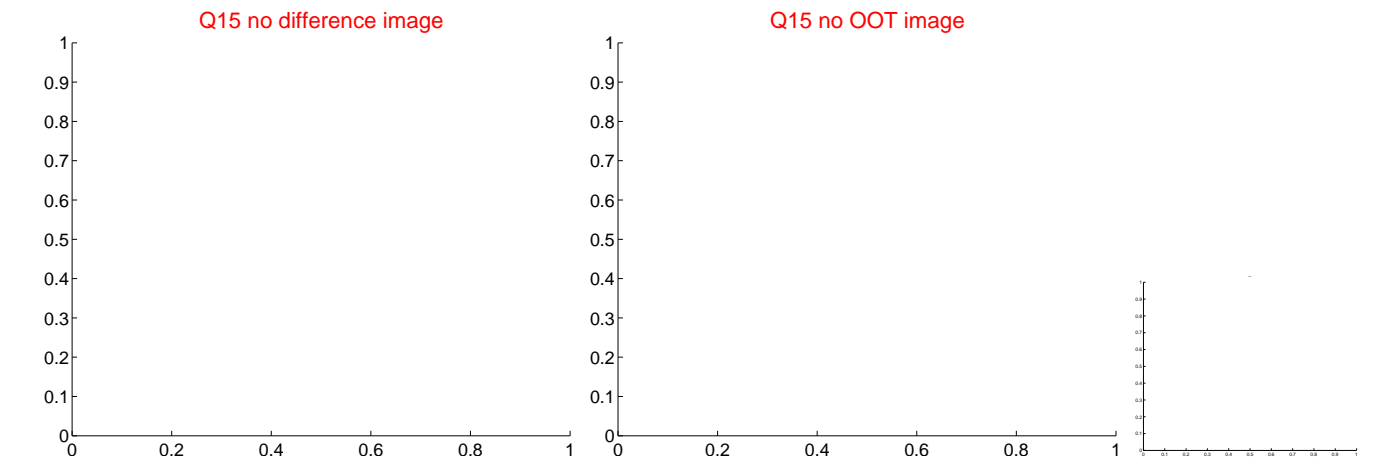
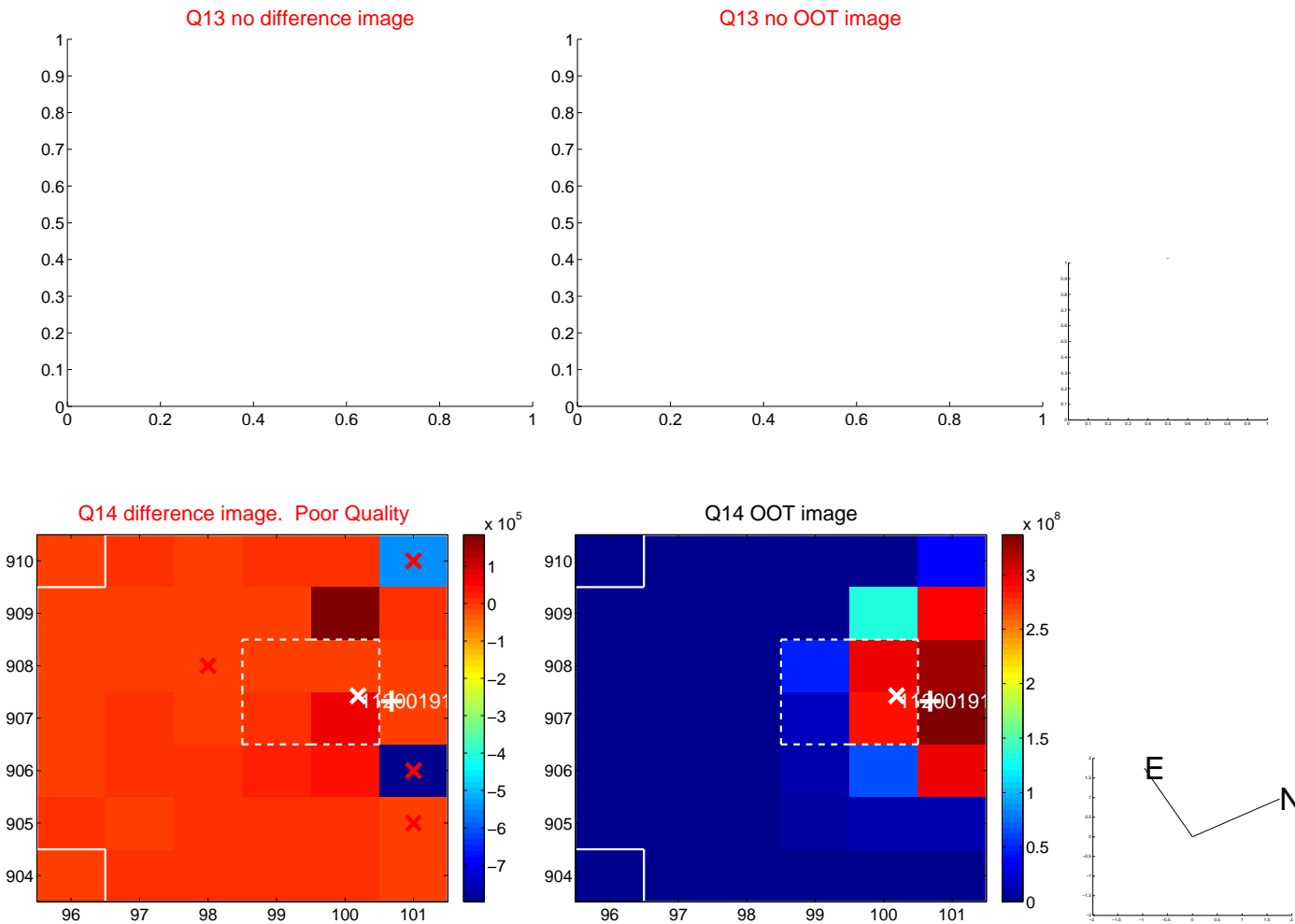




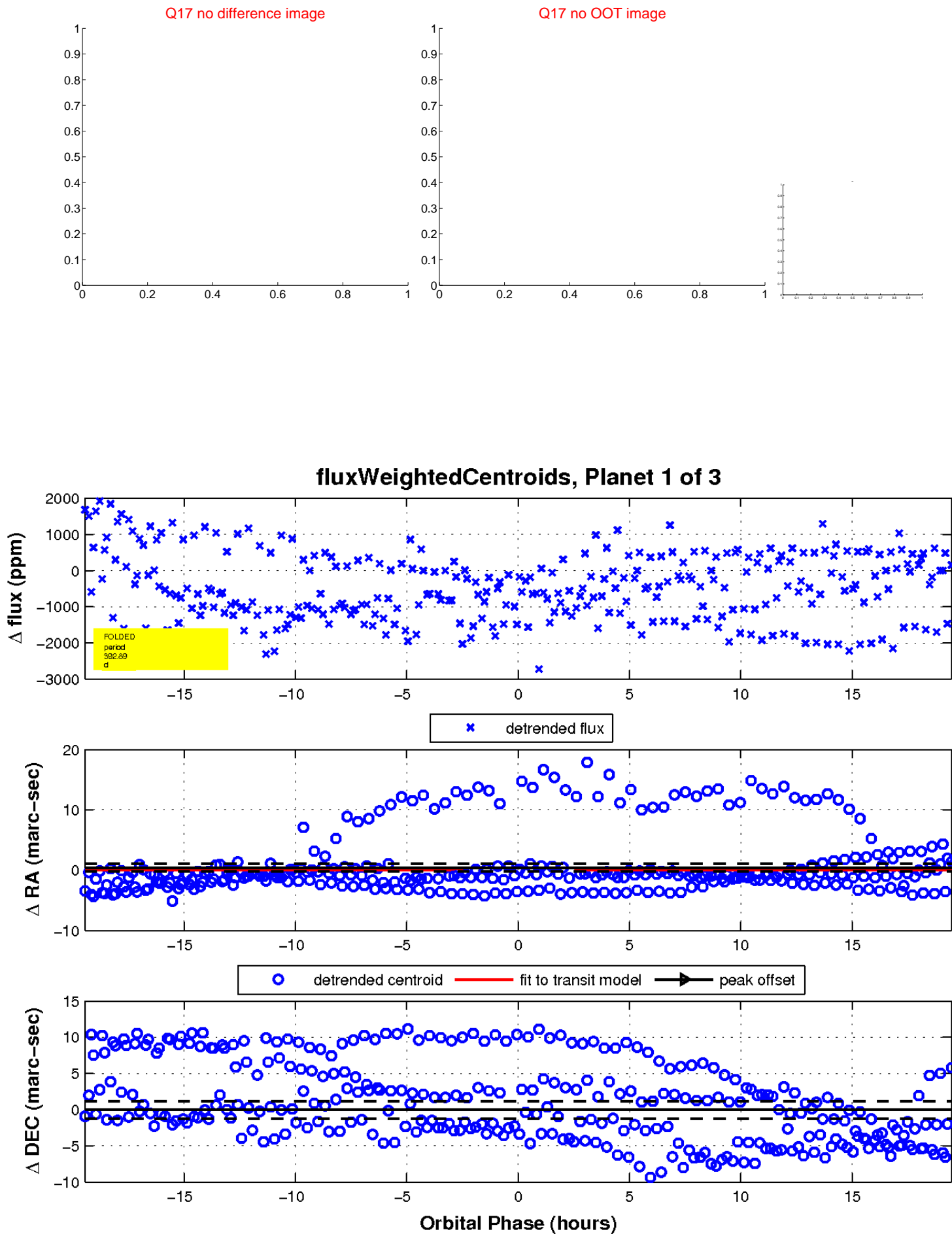
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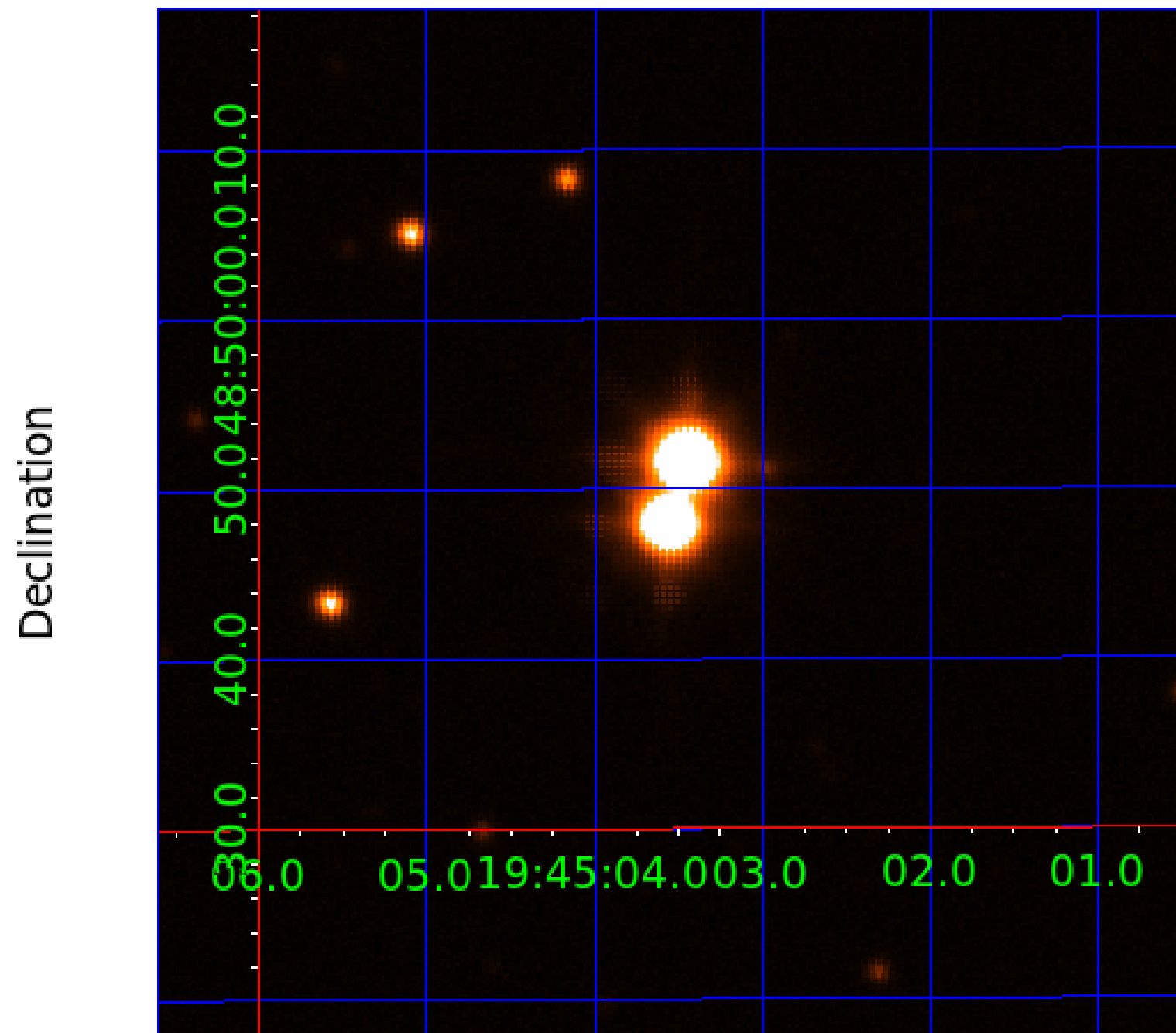
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image



# KIC 011200191

## 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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011200191-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011200191-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

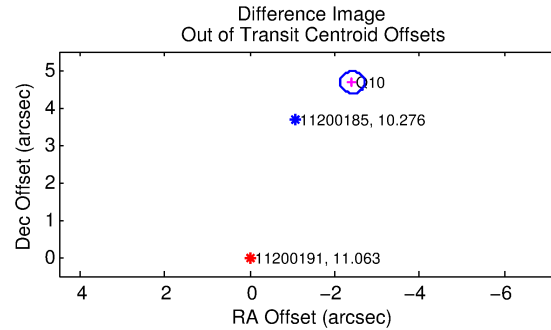
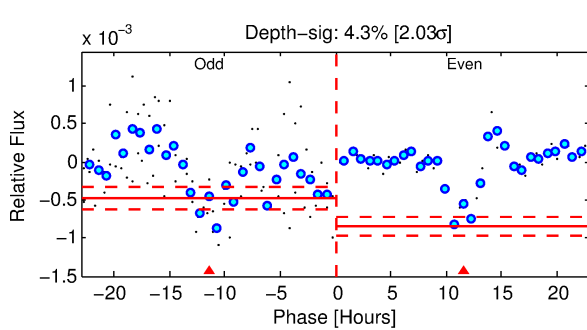
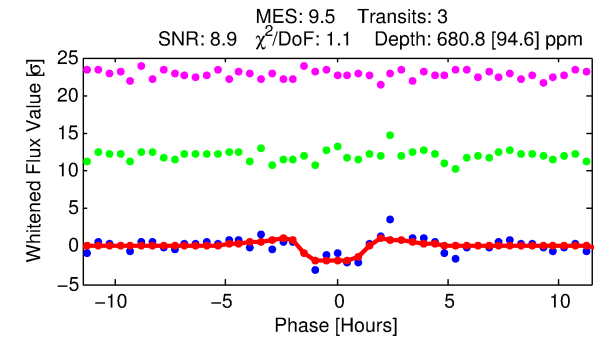
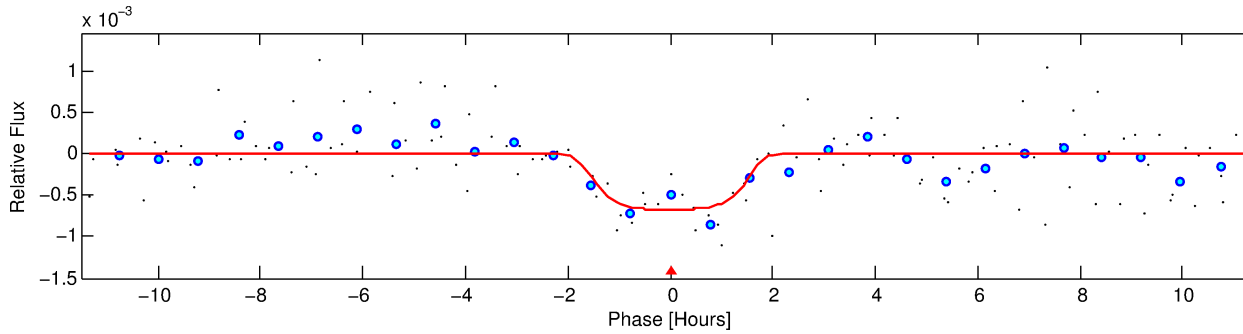
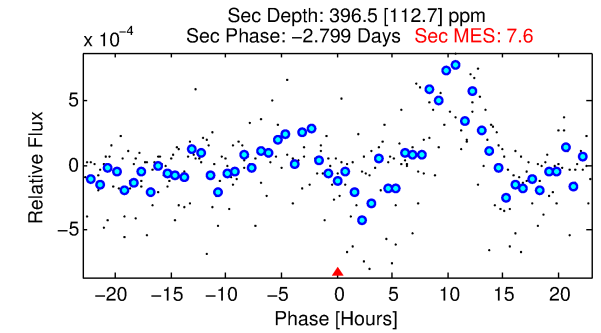
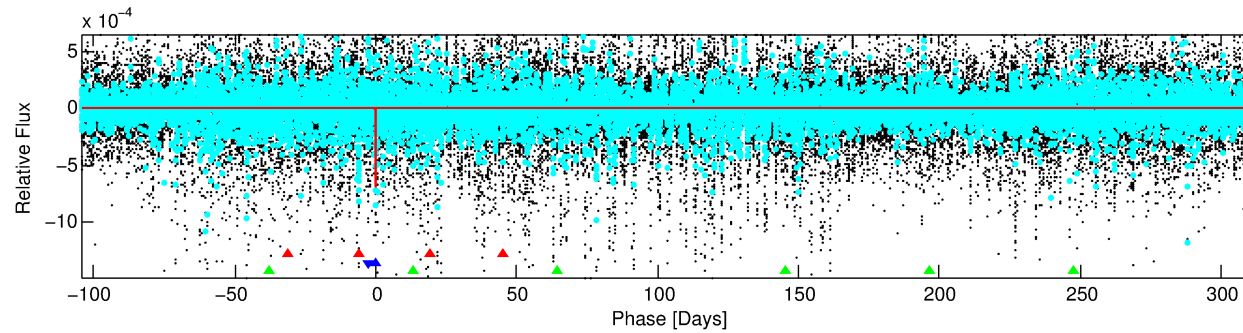
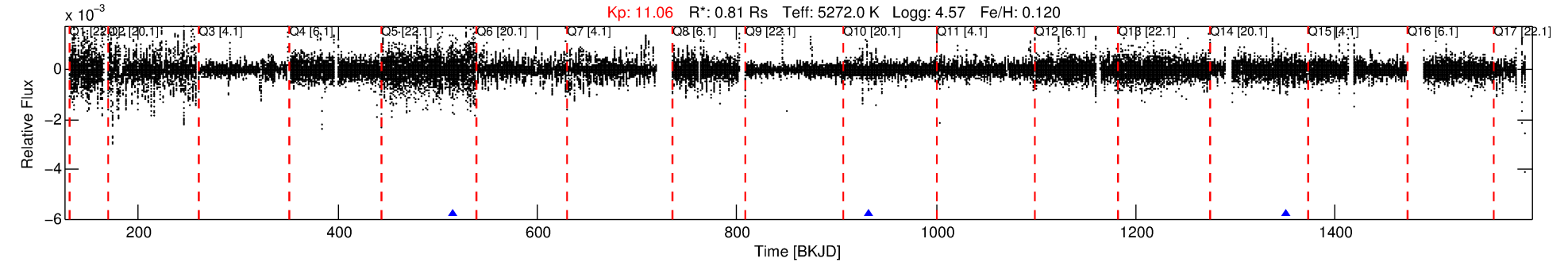
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011200191-02

No Significant Match Found

# DV One-Page Summary

KIC: 11200191 Candidate: 2 of 3 Period: 418.268 d



## DV Fit Results:

Period = 418.26765 [0.00714] d  
Epoch = 514.6212 [0.0104] BKJD  
Rp/R\* = 0.0303 [0.0048]  
a/R\* = 362.83 [202.47]  
b = 0.93 [0.08]  
Seff = 0.41 [0.07]  
Teq = 204 [8] K  
Rp = 2.69 [0.50] Re  
a = 1.0586 [0.0997] AU  
Ag = 33837.51 [15273.14] [2.22σ]  
Teffp = 4274 [460] K [8.85σ]

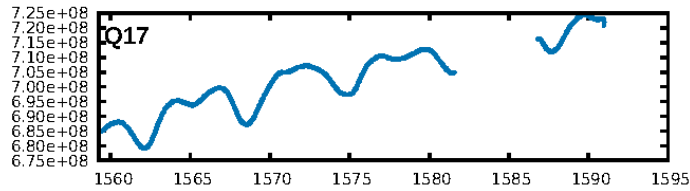
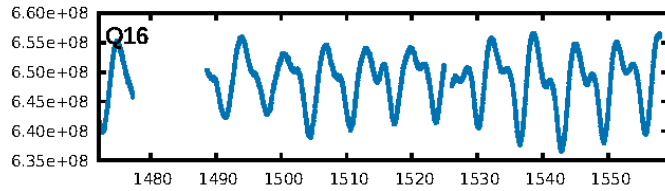
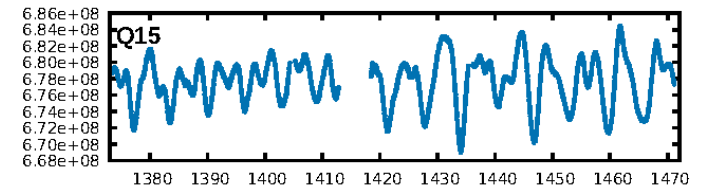
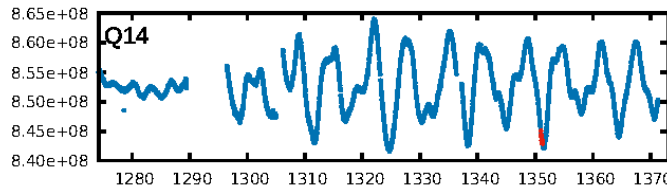
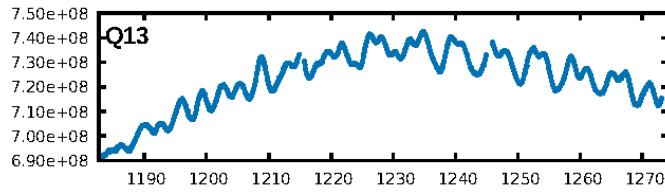
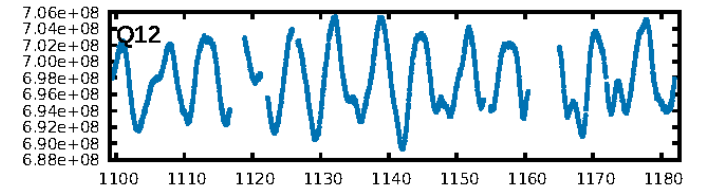
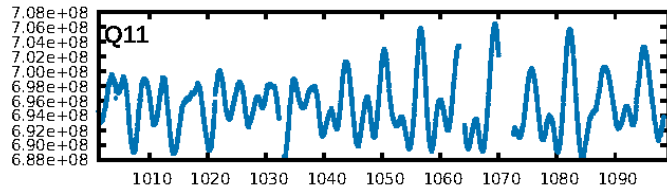
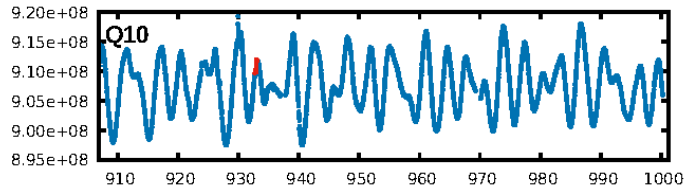
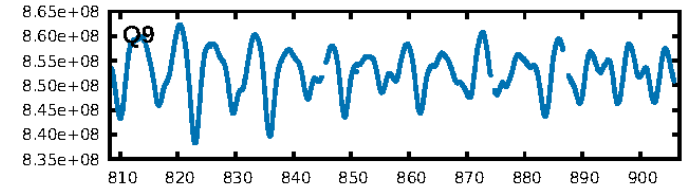
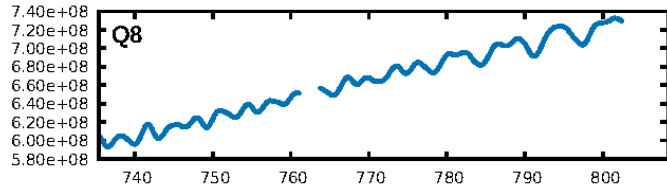
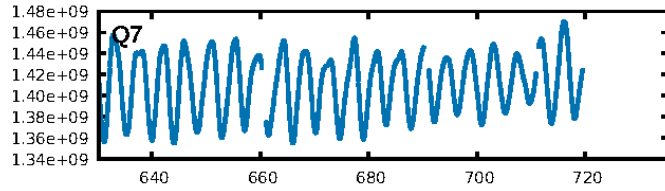
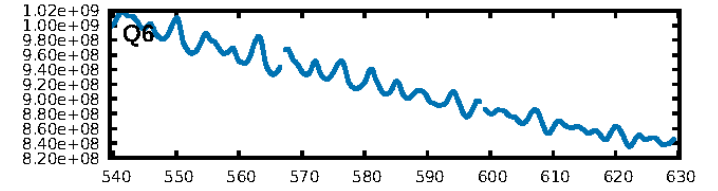
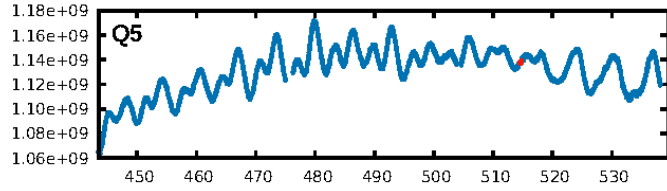
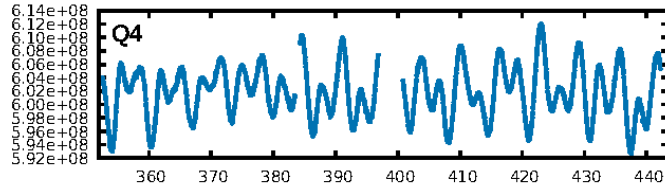
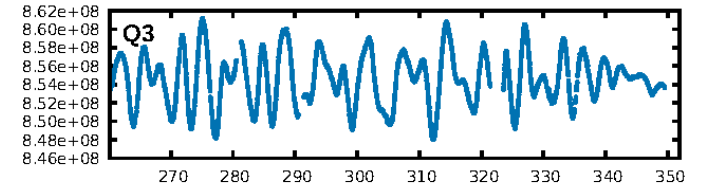
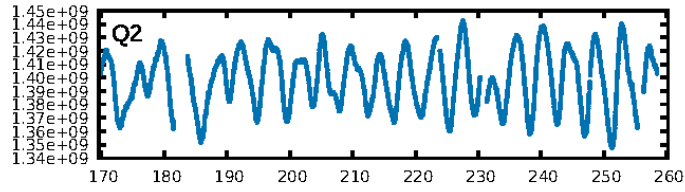
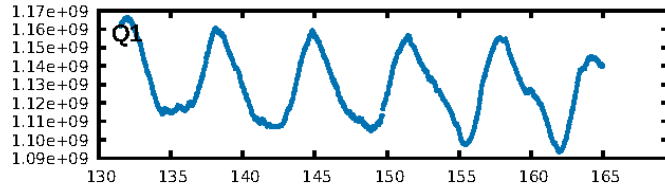
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.77σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 43.6%  
ModelChiSquareGof-sig: 87.8%  
Bootstrap-pfa: 8.83e-06  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 7.749  
Centroid-sig: 8.6%  
Centroid-so: 2.034 arcsec [2.21σ]  
OotOffset-rm: 5.259 arcsec [54.02σ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-rm: 7.272 arcsec [75.01σ]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [3/3]

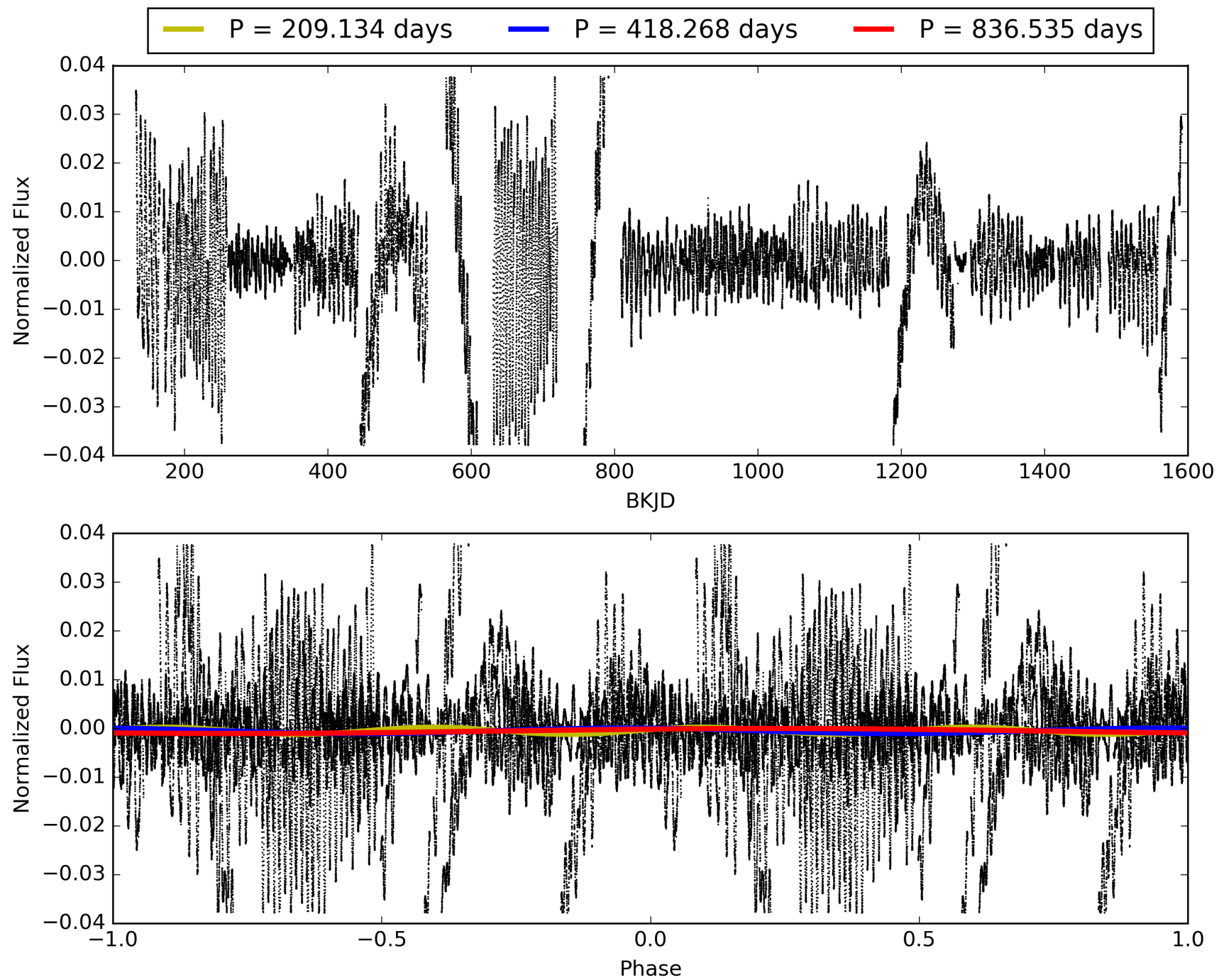
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:44:34 Z

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

# TCE 011200191-02, PDC Light Curves



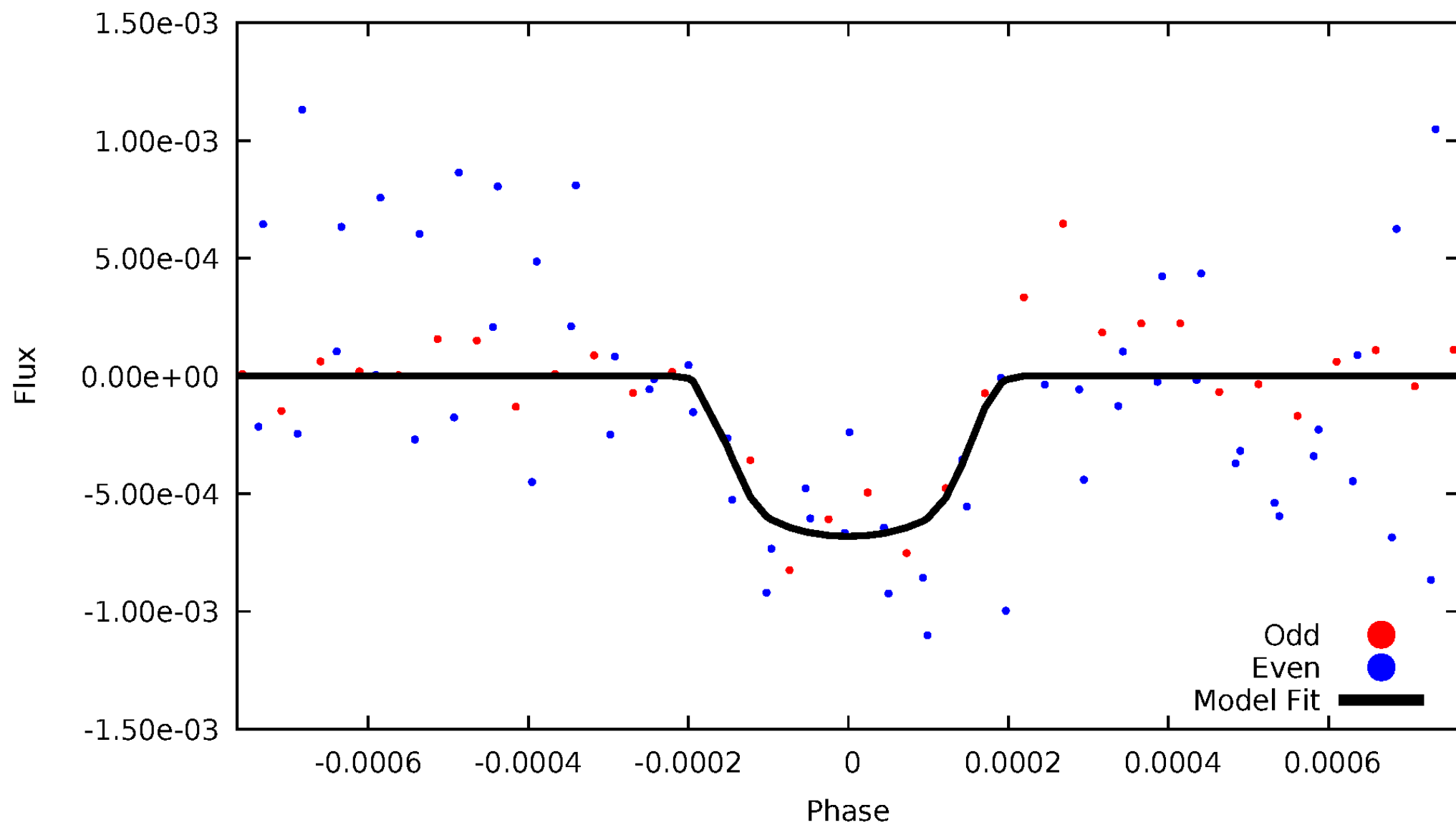
# TCE 011200191-02





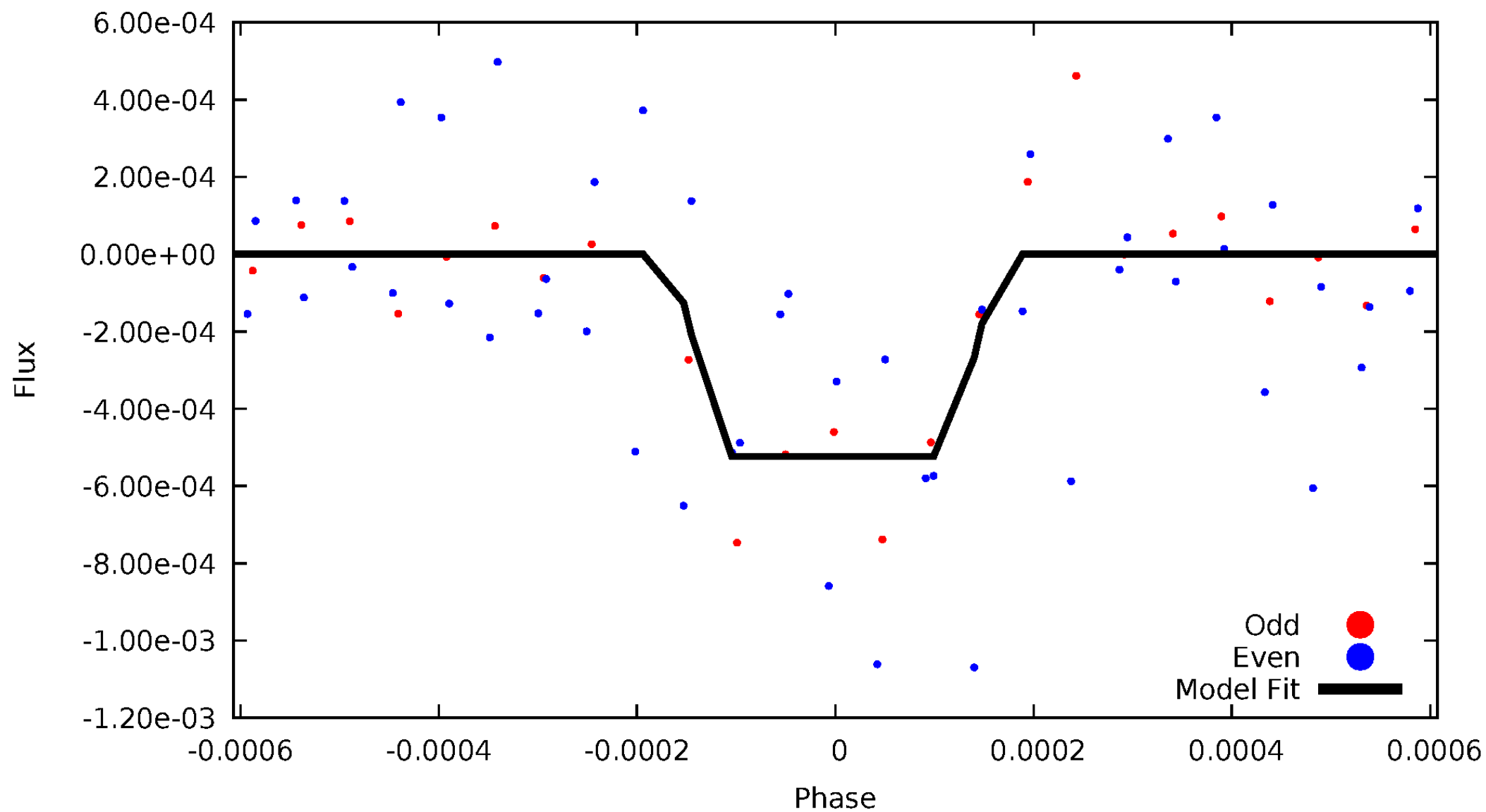
# DV Odd/Even

TCE 011200191-02



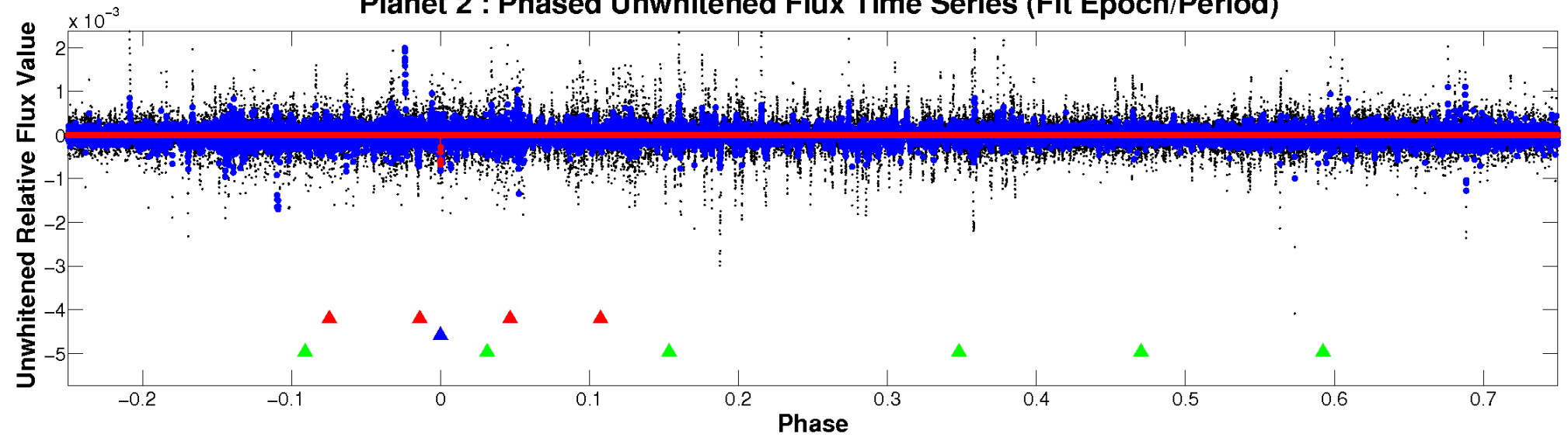
# ALT Odd/Even

TCE 011200191-02

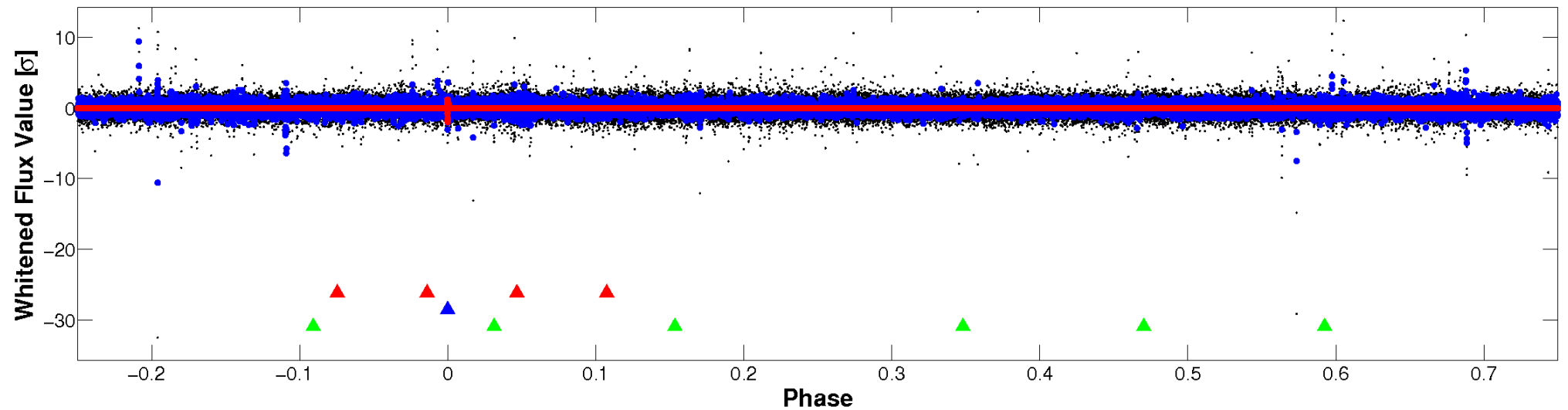


# Non-Whitened Vs. Whitened Light Curve

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

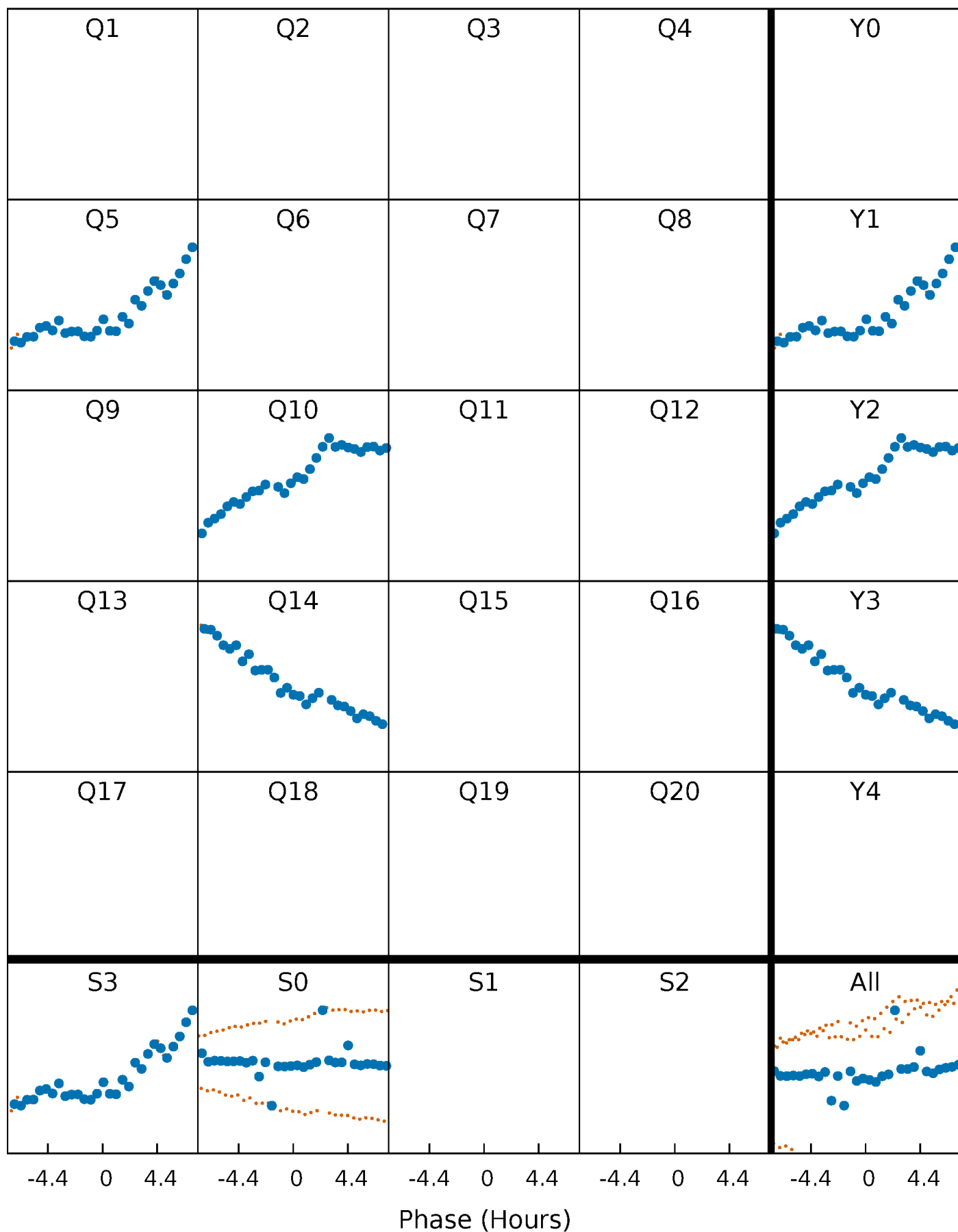


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



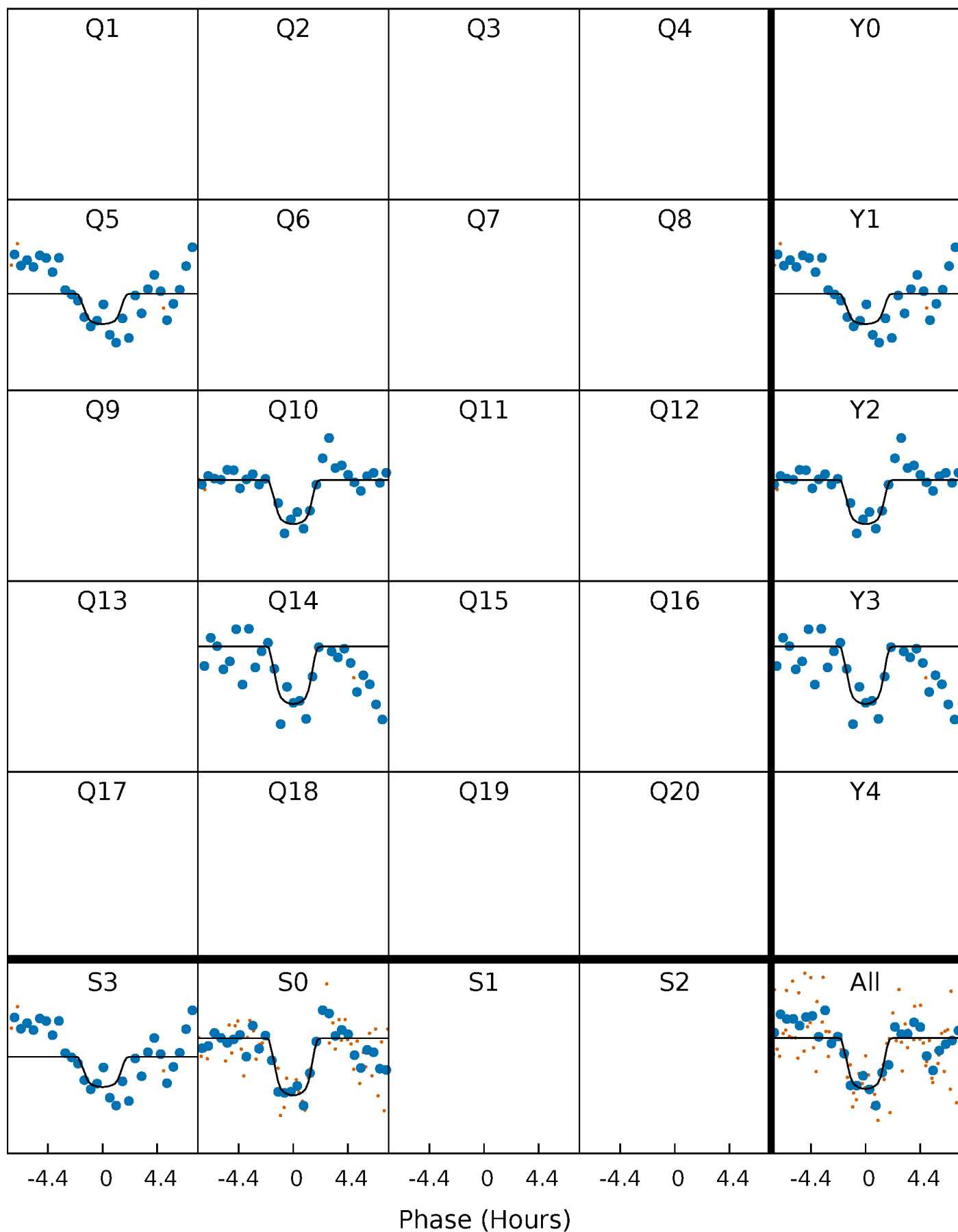
# PDC Quarter-Phased Transit Curves

TCE 011200191-02 P=418.267646 Days  $T_0=514.621185$  (BKJD)



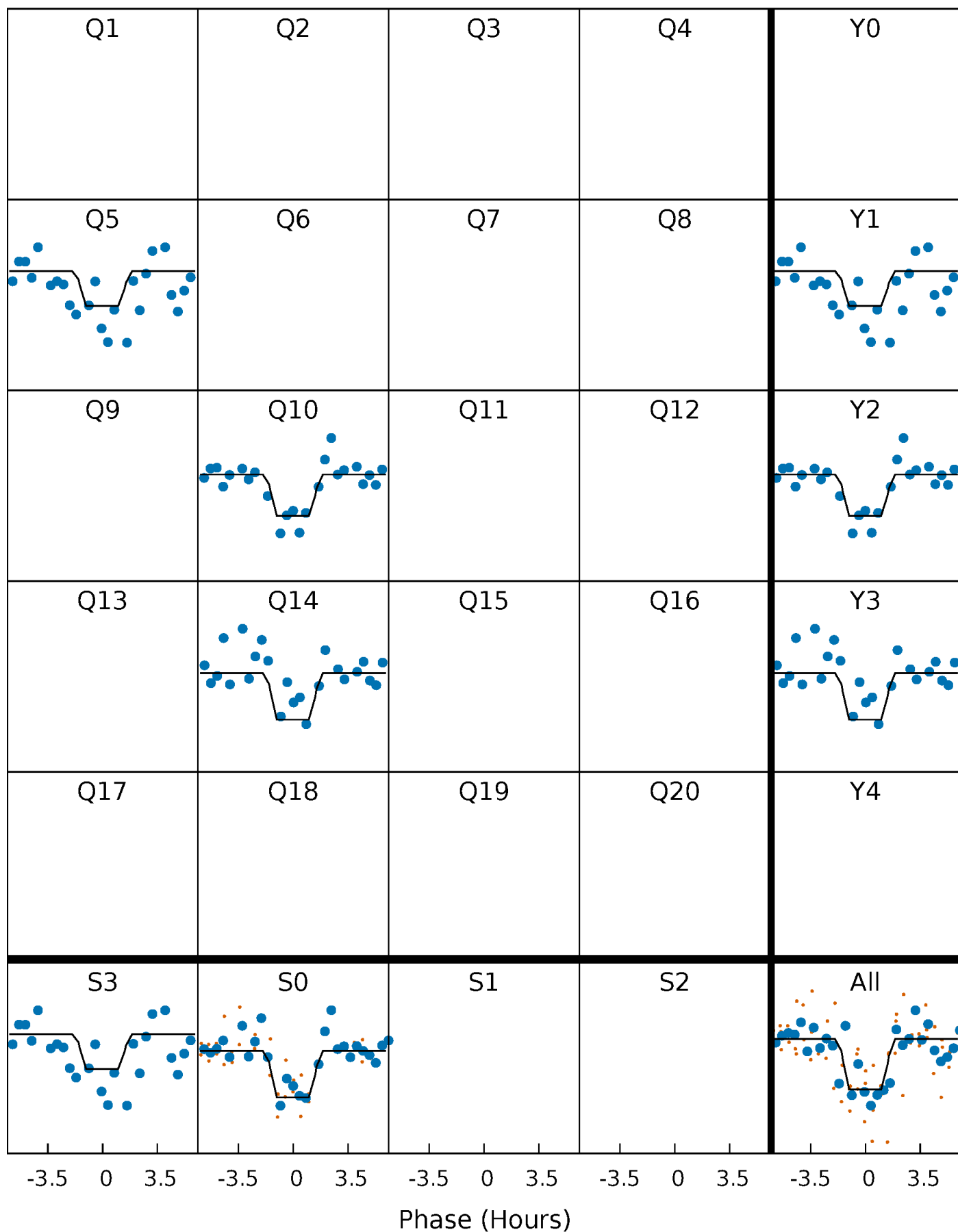
# DV Quarter-Phased Transit Curves

TCE 011200191-02     $P=418.267646$  Days     $T_0=514.621185$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

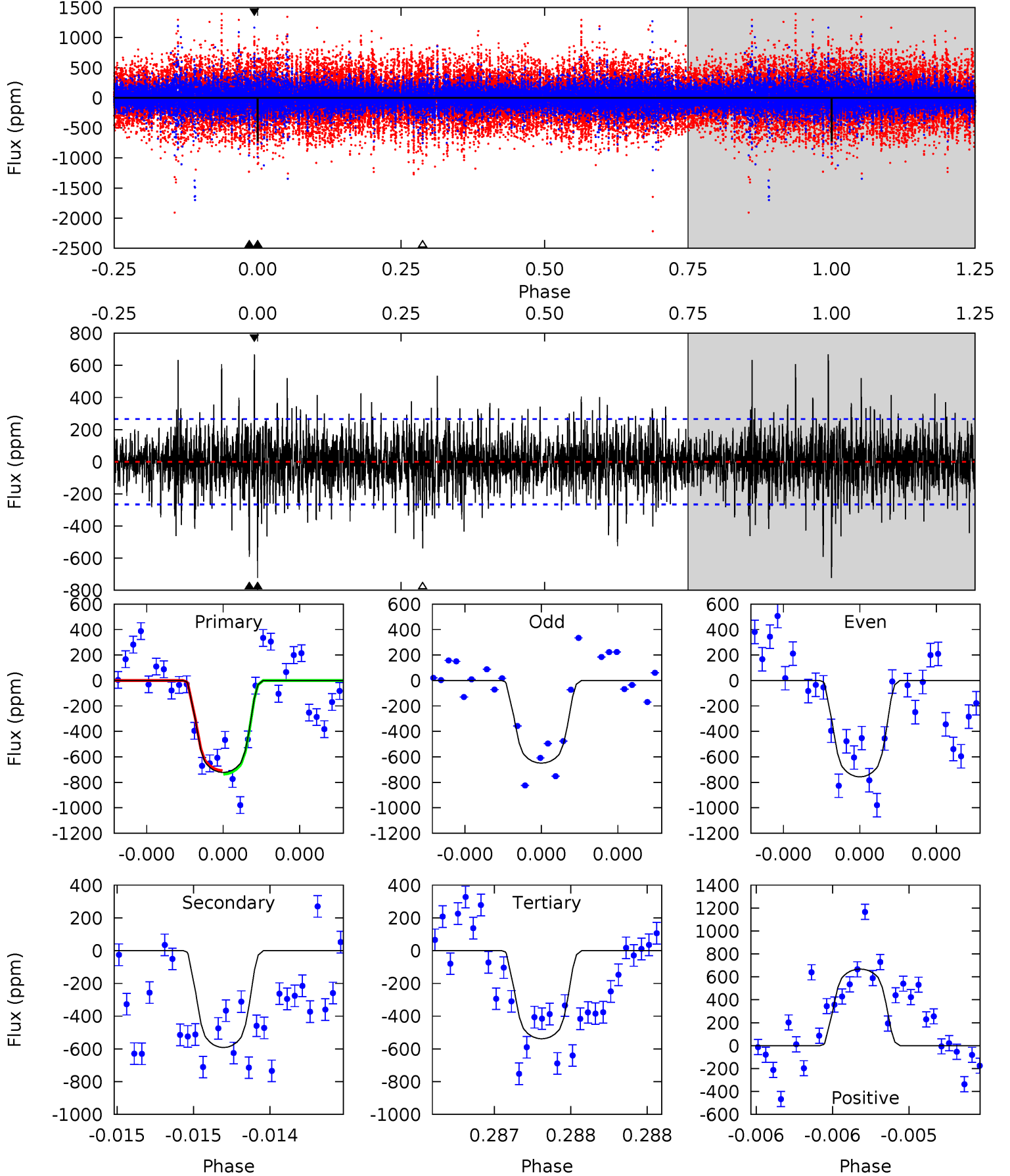
TCE 011200191-02     $P=418.254540$  Days     $T_0=514.644972$  (BKJD)



# DV Model-Shift Uniqueness Test

011200191-02,  $P = 418.267646$  Days,  $E = 96.353539$  Days

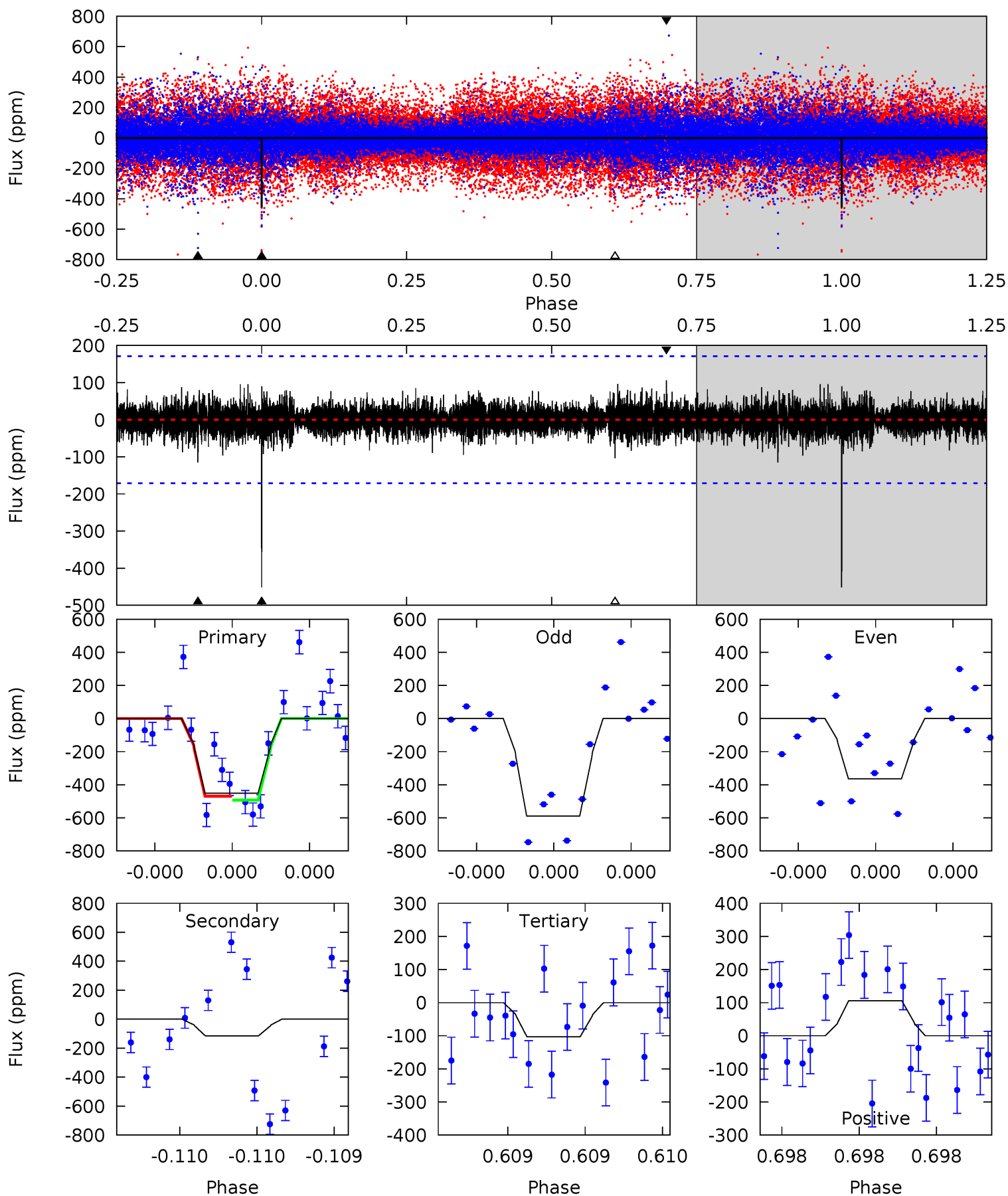
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	12.5	11.4	14.1	5.60	3.53	2.31	3.89	1.15	1.13	-1.61	0.89	0.99	0.48	0.30



# Alt Model-Shift Uniqueness Test

011200191-02, P = 418.254540 Days, E = 96.390432 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	3.81	3.42	3.50	5.66	3.62	0.69	11.5	11.4	0.39	0.31	3.77	0.93	0.19	0.39





### Stellar Parameters For KIC 011200191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5272^{+73}_{-84}$	$4.574^{+0.017}_{-0.088}$	$0.120^{+0.150}_{-0.150}$	$0.813^{+0.080}_{-0.029}$	$0.902^{+0.032}_{-0.064}$	$2.365^{+0.182}_{-0.609}$
	+1%/-2%	+0%/-2%	+125%/-125%	+10%/-4%	+4%/-7%	+8%/-26%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 011200191-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-592 \pm 47$	$2.77^{+0.44}_{-0.47}$	$287^{+8}_{-6}$	$4781^{+401}_{-277}$	$46537^{+21990}_{-11932}$
Alt.	$-115 \pm 30$	$2.07^{+0.45}_{-0.43}$	$288^{+8}_{-6}$	$3914^{+376}_{-301}$	$16454^{+10292}_{-6506}$

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

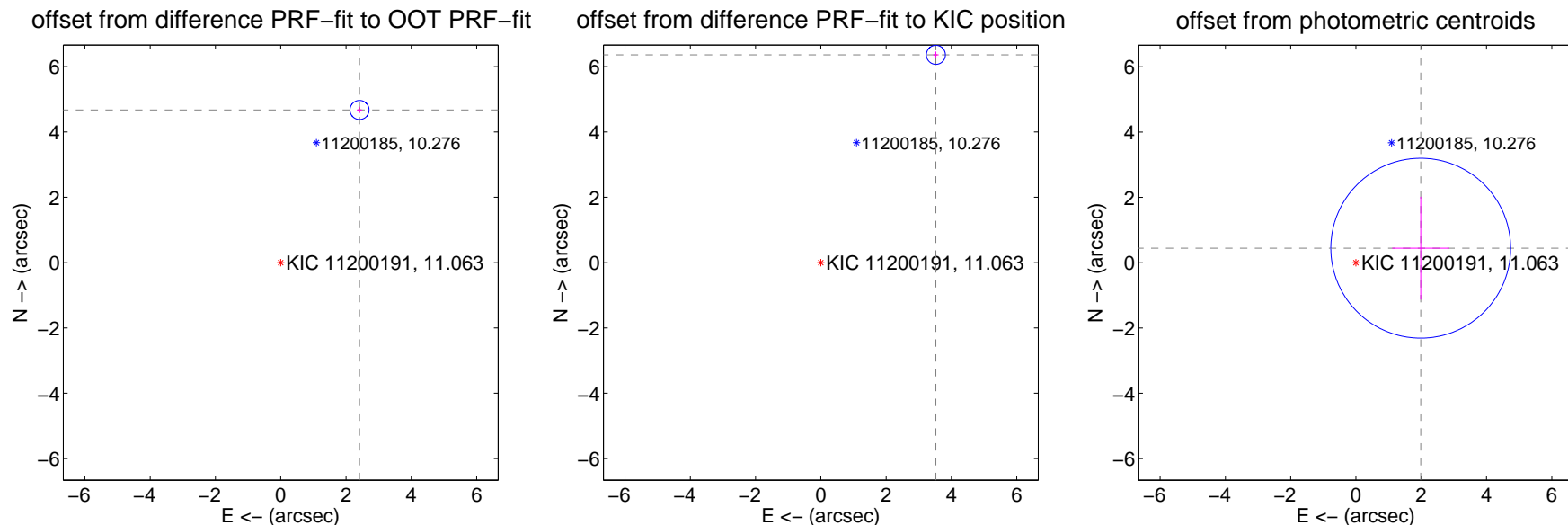
## DV Centroid Data

Supplemental centroid analysis for 011200191-02. **Kepler magnitude: 11.06.** Transit SNR 8.85

There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.02 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>5.259 <math>\pm</math> 0.097</b>	<b>54.02</b>	-2.413 $\pm$ 0.083	4.673 $\pm$ 0.101
PRF-fit source offset from KIC position	<b>7.272 <math>\pm</math> 0.097</b>	<b>75.01</b>	-3.524 $\pm$ 0.083	6.361 $\pm$ 0.101
photometric centroid source offset	2.03 $\pm$ 0.92	2.21	-1.98 $\pm$ 0.87	0.44 $\pm$ 1.57

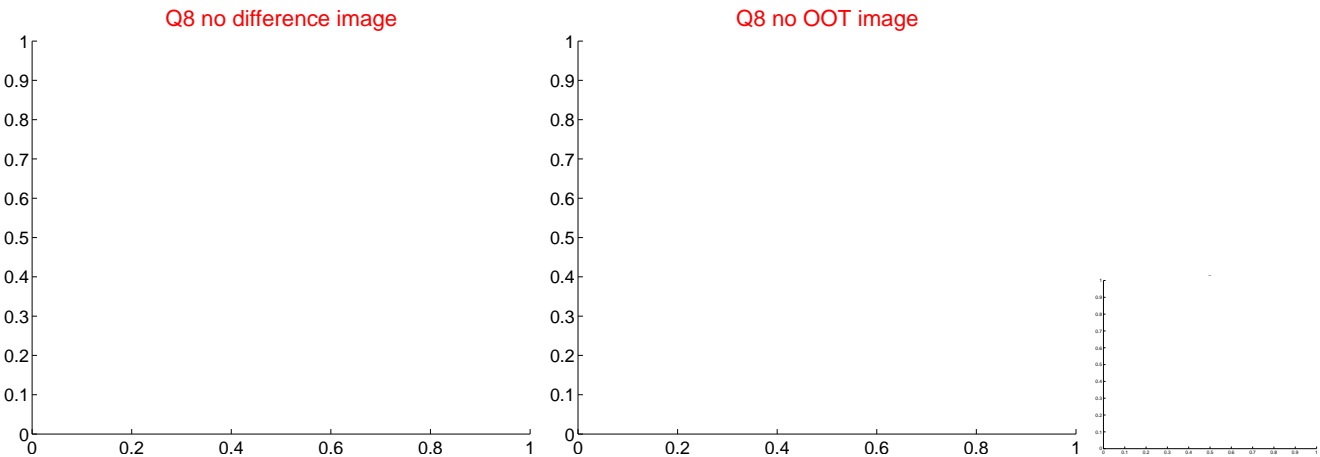
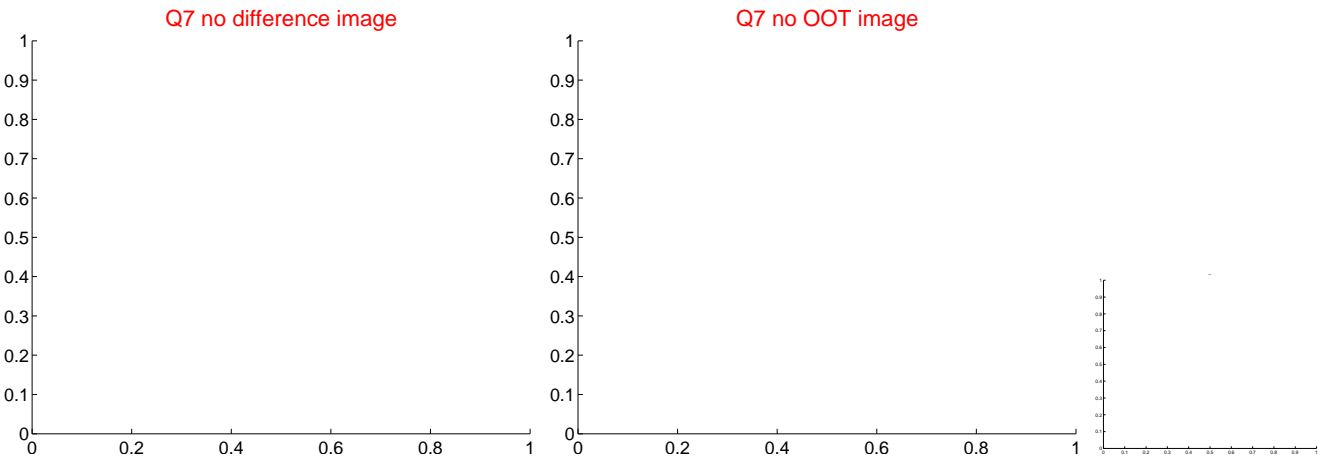
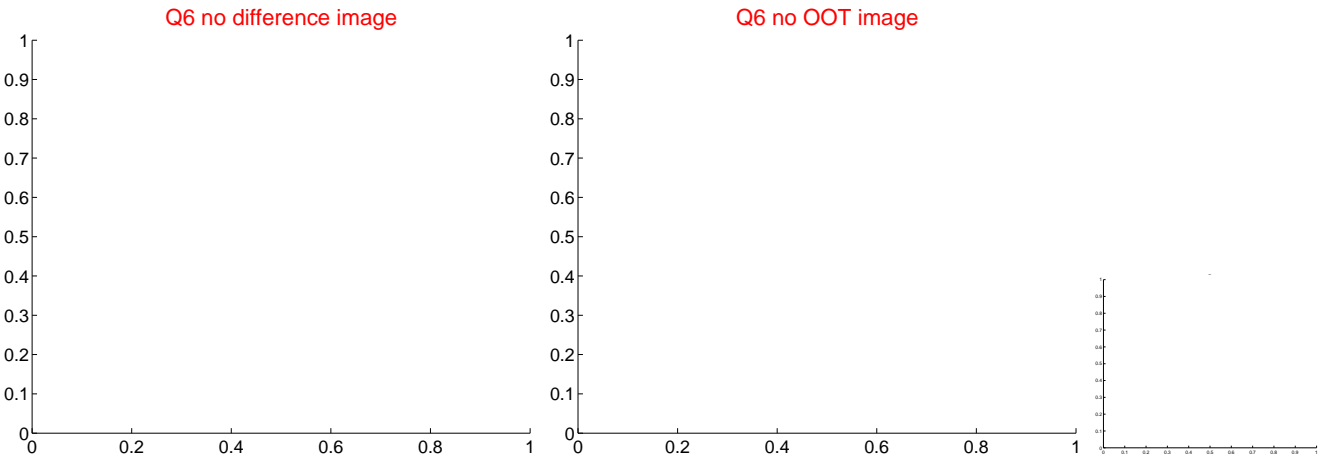
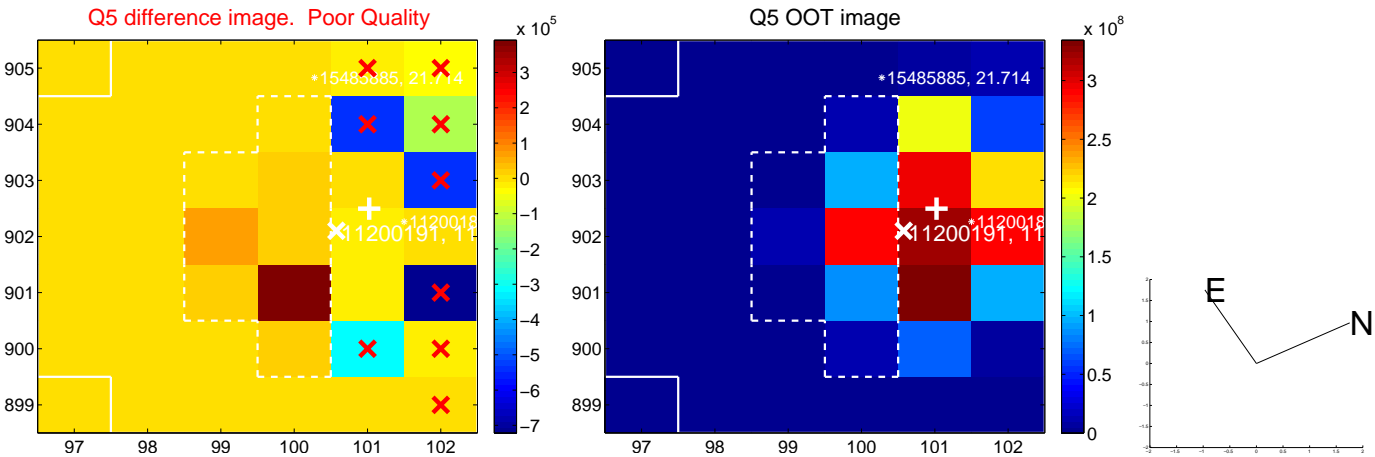


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

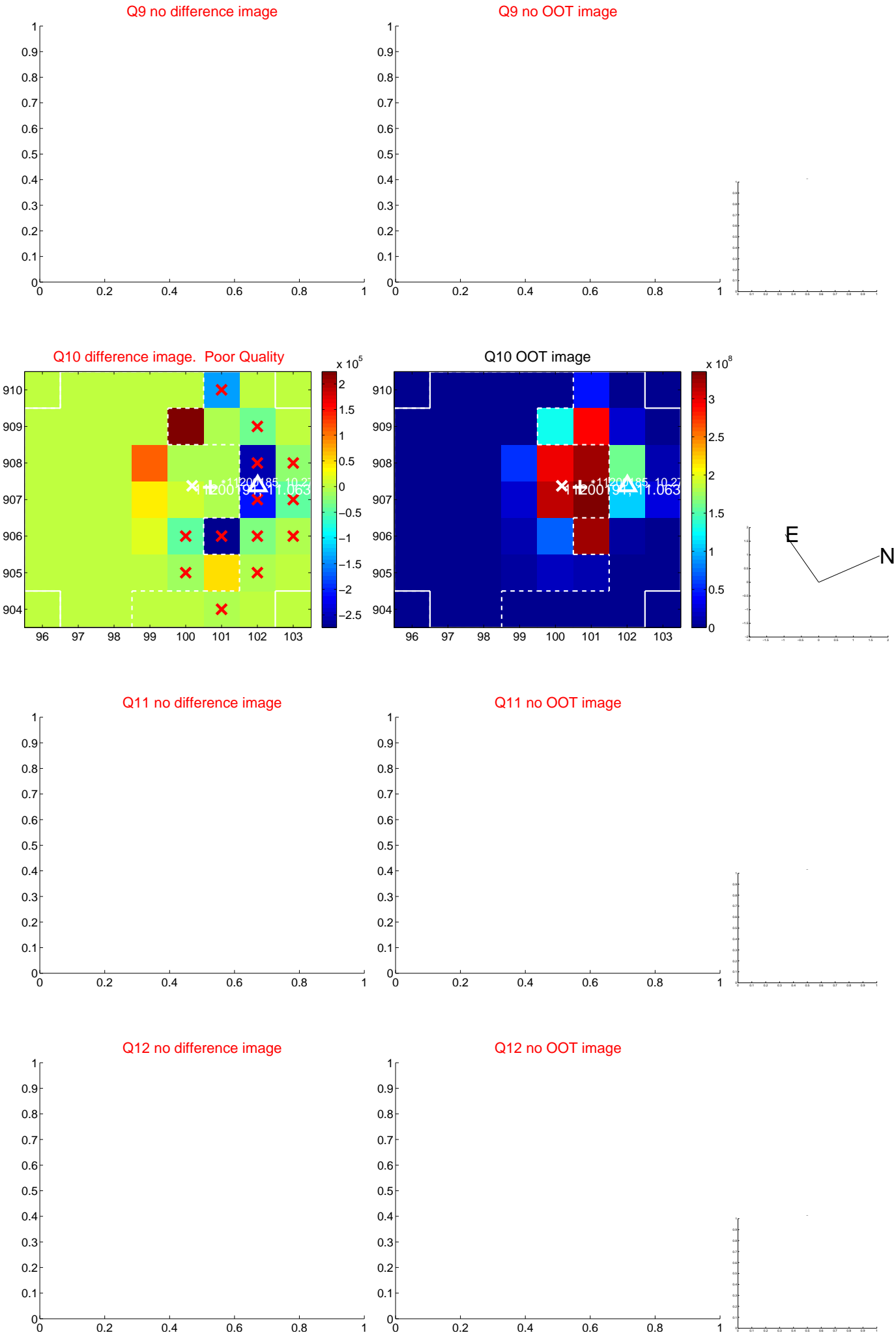
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



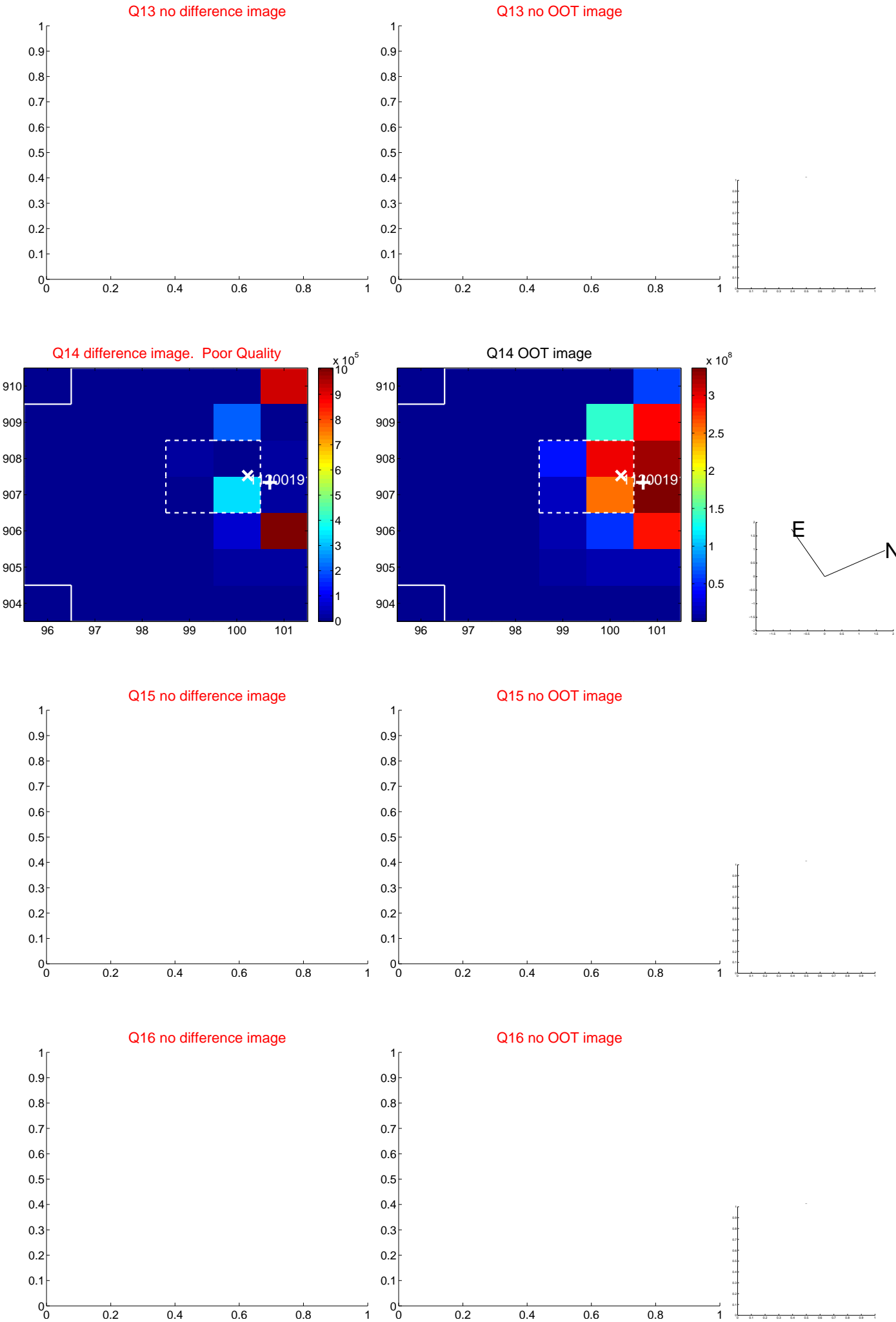
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



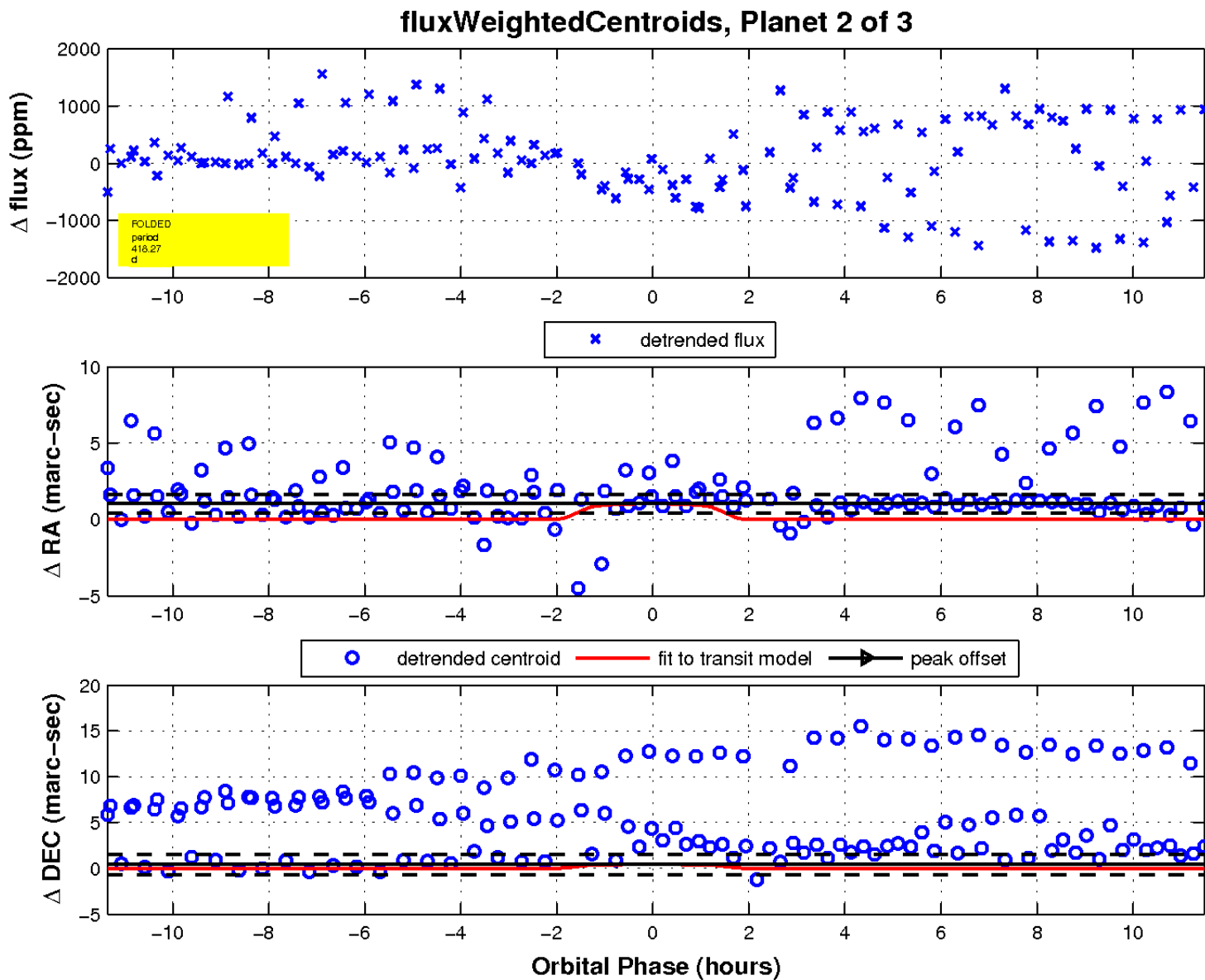
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



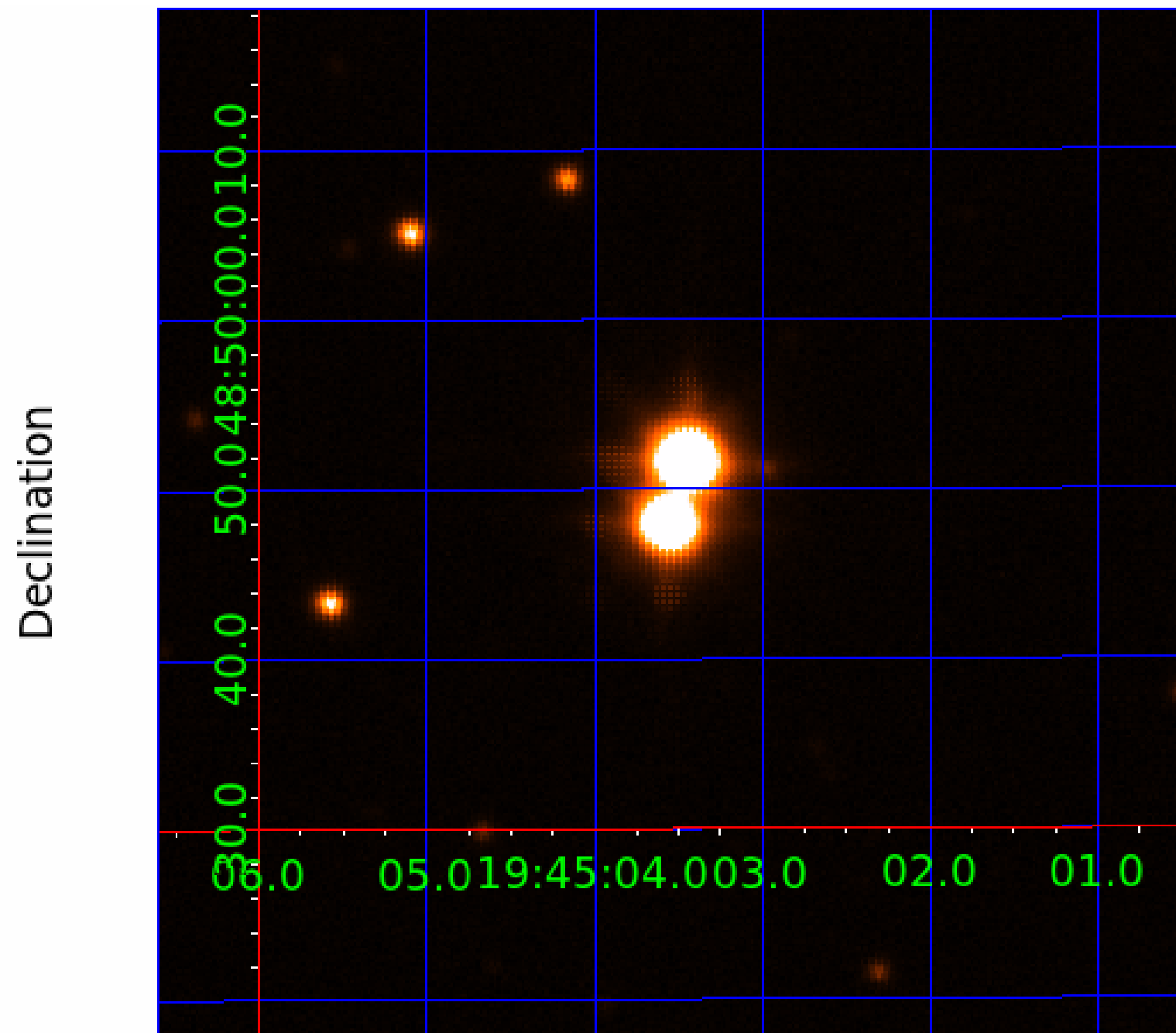
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image





# KIC 011200191

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011200191-01	OBS	No	392.893429	141.286490	620.2	6.492	15.1	6.5	0.81	5272	2.33	0.44
011200191-02	OBS	No	418.267646	514.621185	680.8	3.834	9.5	8.9	0.81	5272	2.69	0.41
011200191-03	OBS	No	234.683941	241.942272	625.0	3.422	8.7	8.9	0.81	5272	2.08	0.88

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011200191-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011200191-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
011200191-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

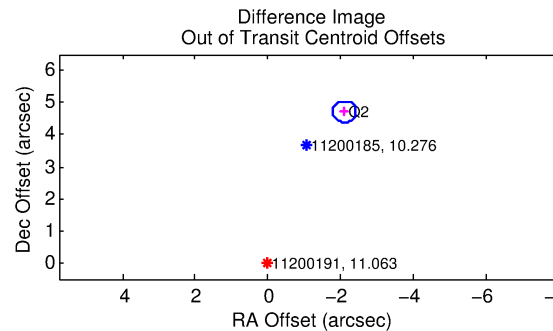
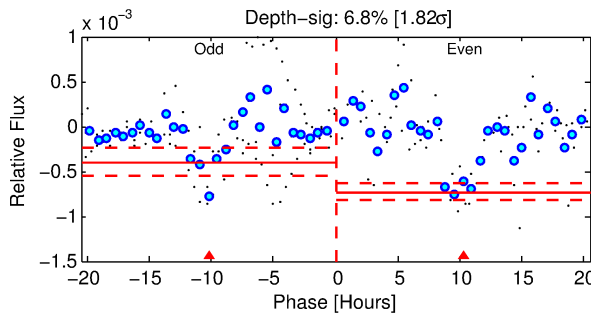
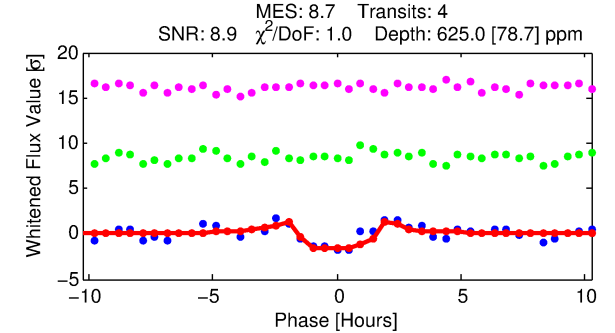
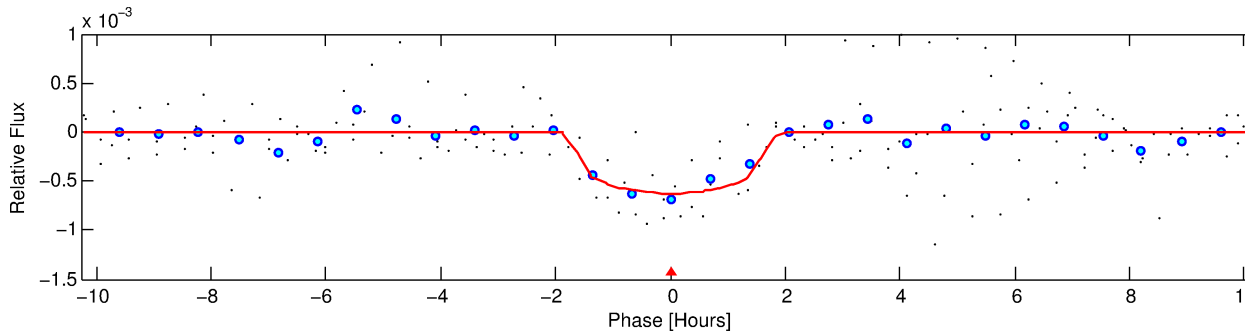
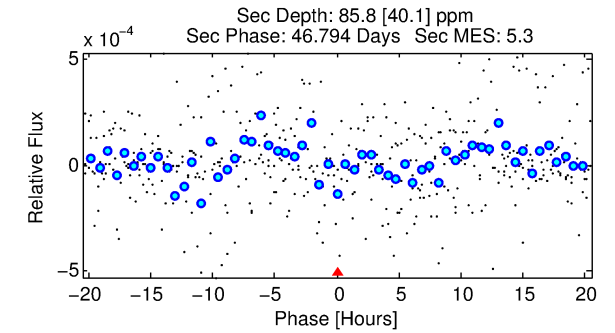
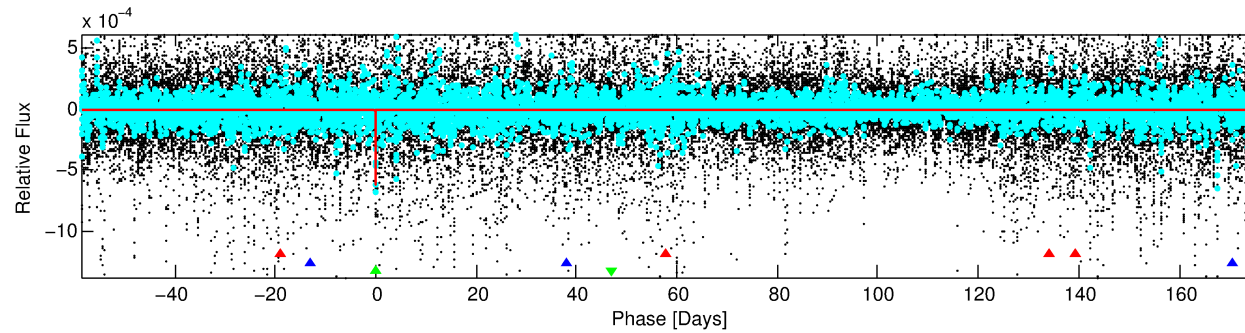
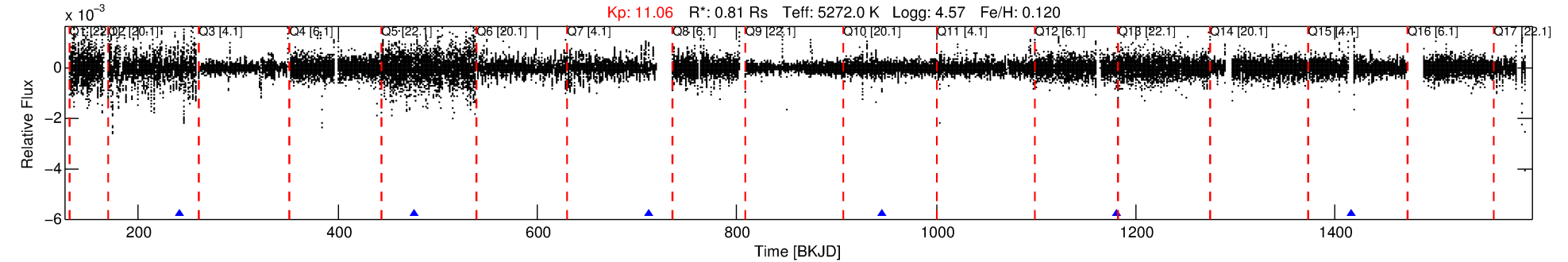
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 011200191-03

No Significant Match Found

# DV One-Page Summary

KIC: 11200191 Candidate: 3 of 3 Period: 234.684 d



## DV Fit Results:

Period = 234.68394 [0.00207] d  
Epoch = 241.9423 [0.0049] BKJD  
Rp/R\* = 0.0234 [0.0332]  
a/R\* = 454.44 [2345.75]  
b = 0.54 [6.84]  
Seff = 0.88 [0.14]  
Teq = 247 [10] K  
Rp = 2.08 [2.96] Re  
a = 0.7201 [0.0678] AU  
Ag = 5676.36 [16366.05] [0.35σ]  
Teffp = 3316 [2388] K [1.29σ]

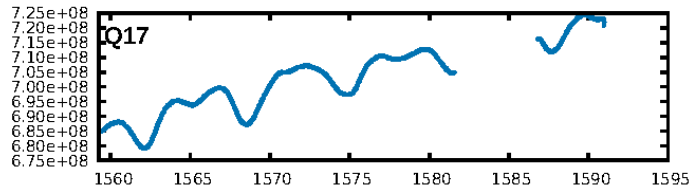
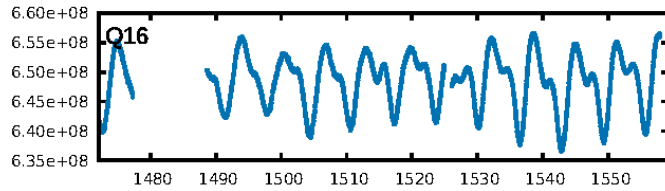
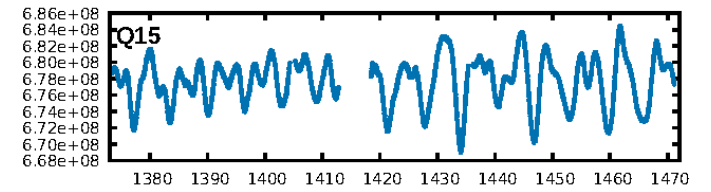
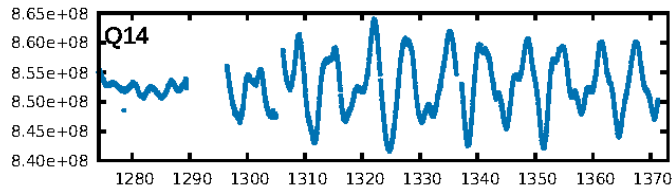
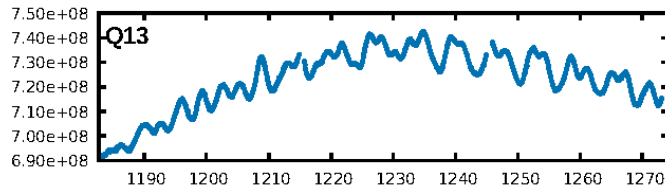
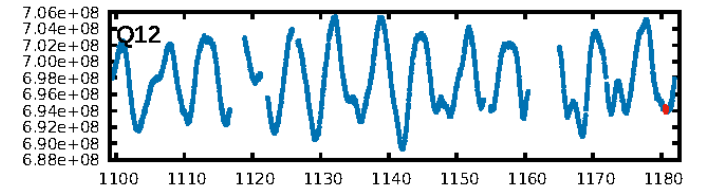
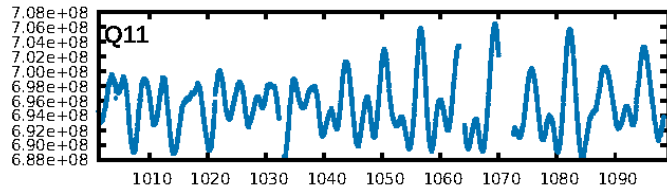
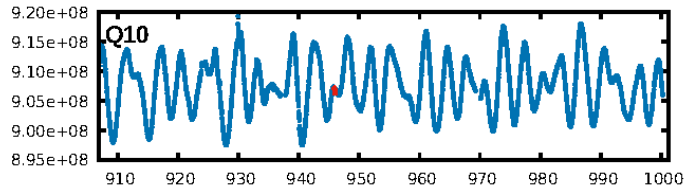
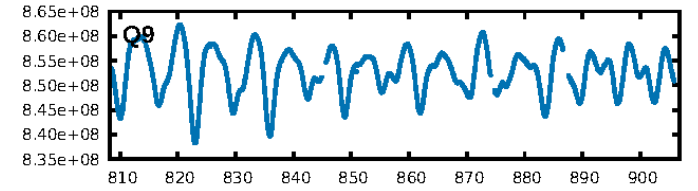
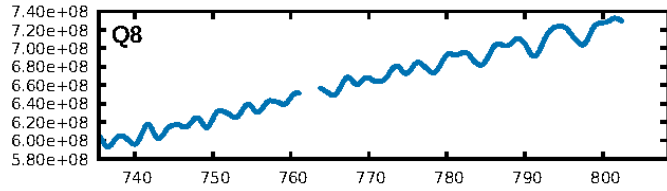
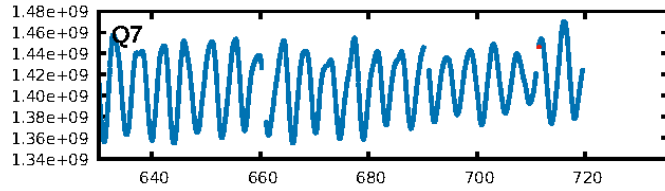
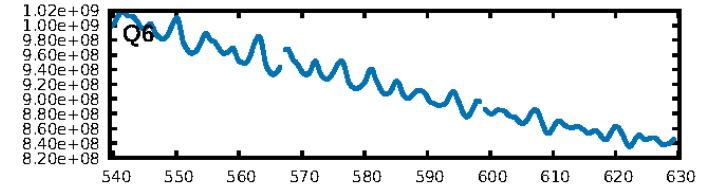
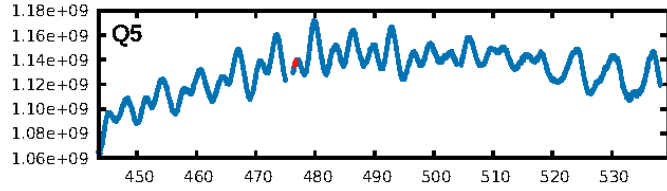
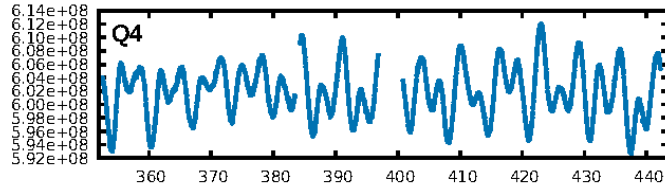
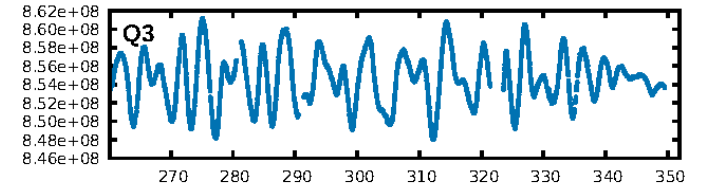
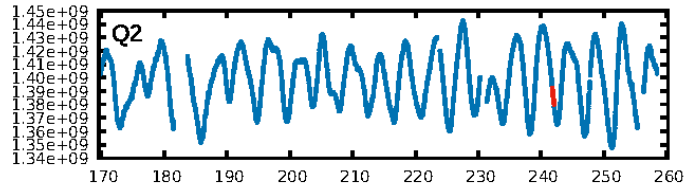
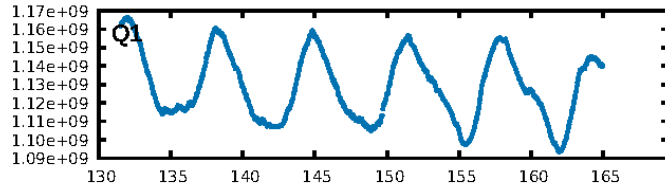
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [517.35σ]  
ModelChiSquare2-sig: 6.9%  
ModelChiSquareGof-sig: 88.4%  
**Bootstrap-pfa: 1.20e-07**  
RollingBand-fgt: 1.00 [4/4]  
**GhostDiagnostic-chr: -6.969**  
Centroid-sig: 28.7%  
Centroid-so: 1.021 arcsec [1.32σ]  
**OotOffset-rm: 5.160 arcsec [47.19σ]**  
**KicOffset-rm: 7.097 arcsec [65.51σ]**  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 0.00 [0/1]  
DiffImageOverlap-fno: 1.00 [3/3]

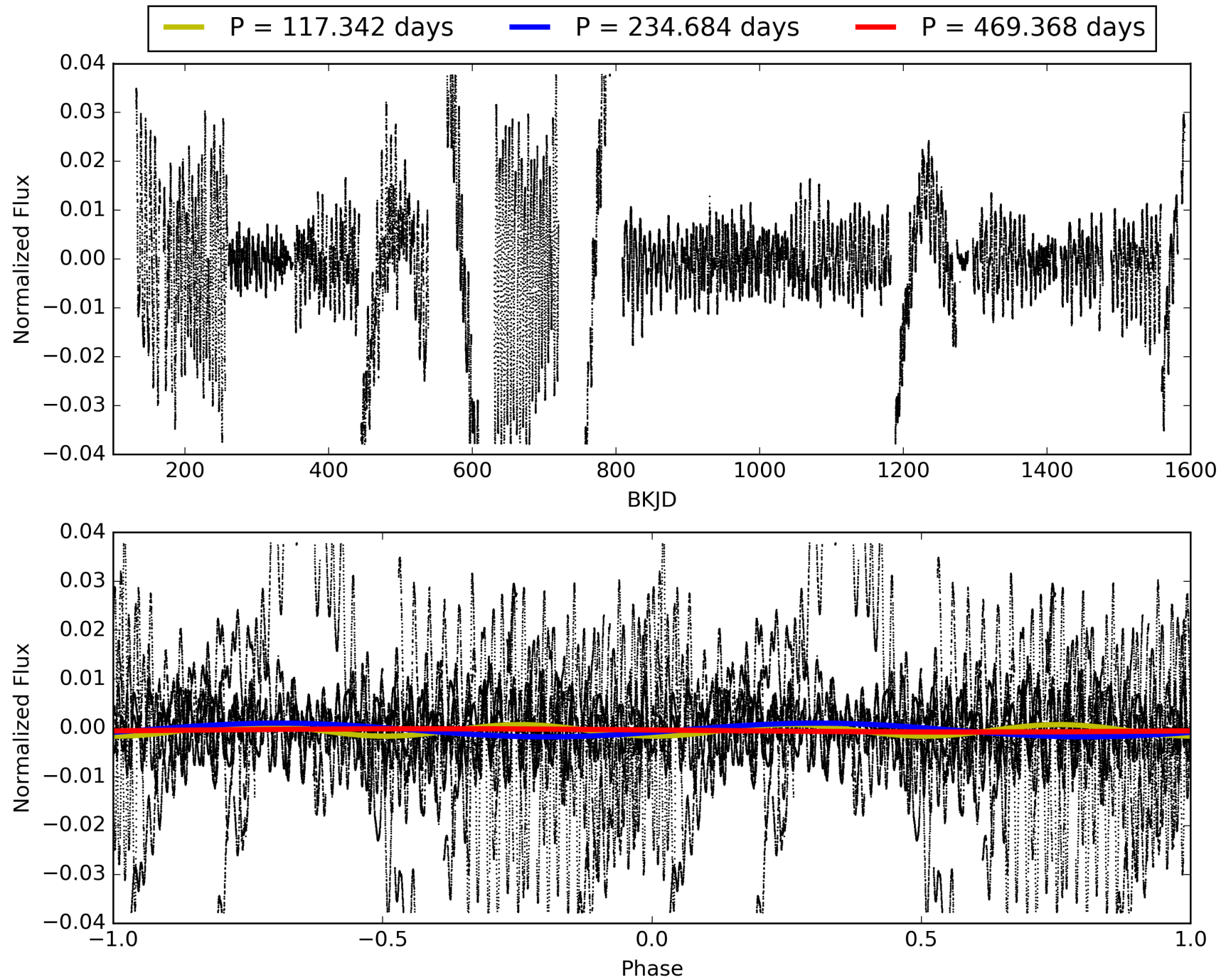
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:44:47 Z

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

# TCE 011200191-03, PDC Light Curves

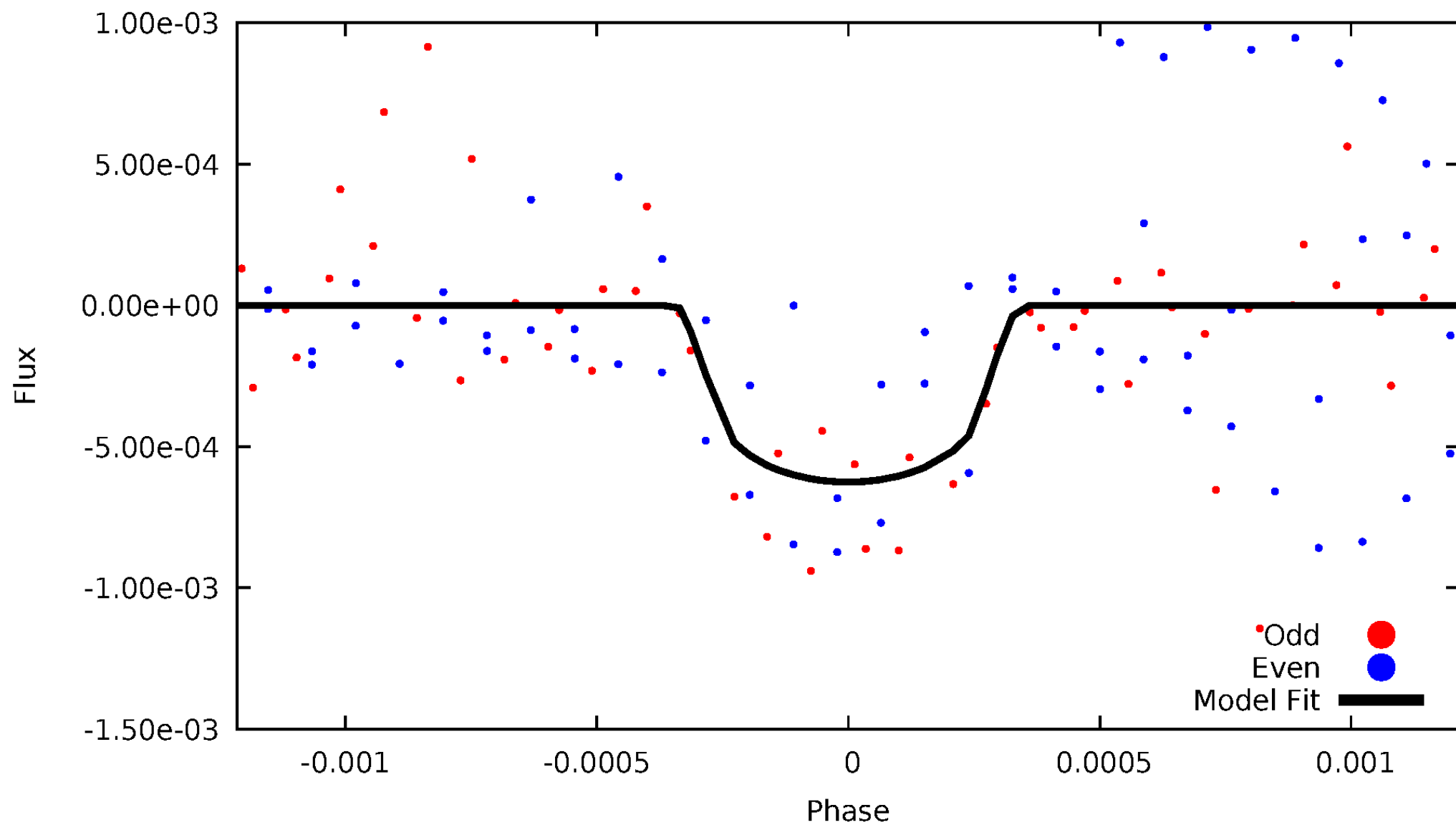


TCE 011200191-03



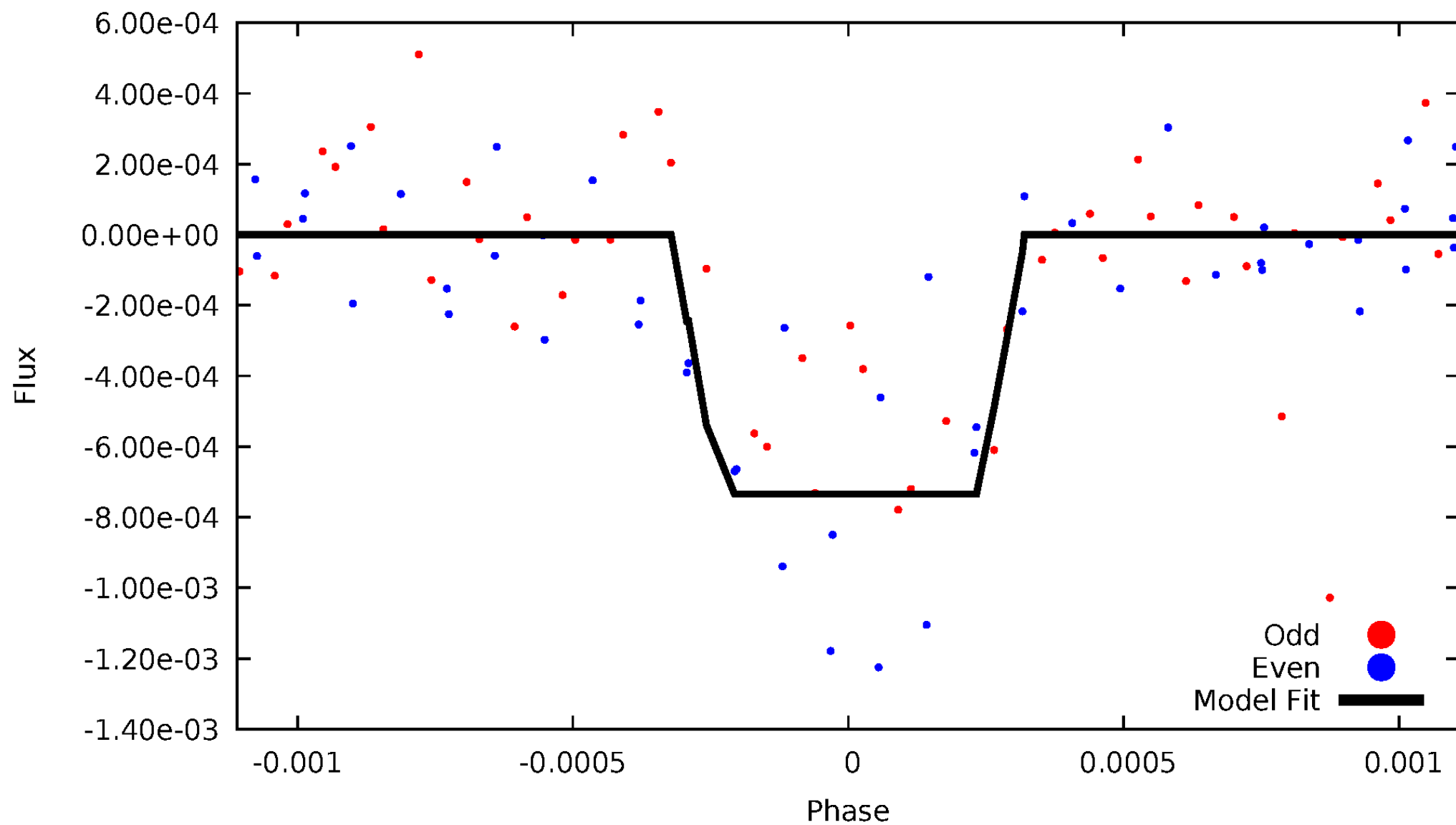
# DV Odd/Even

TCE 011200191-03



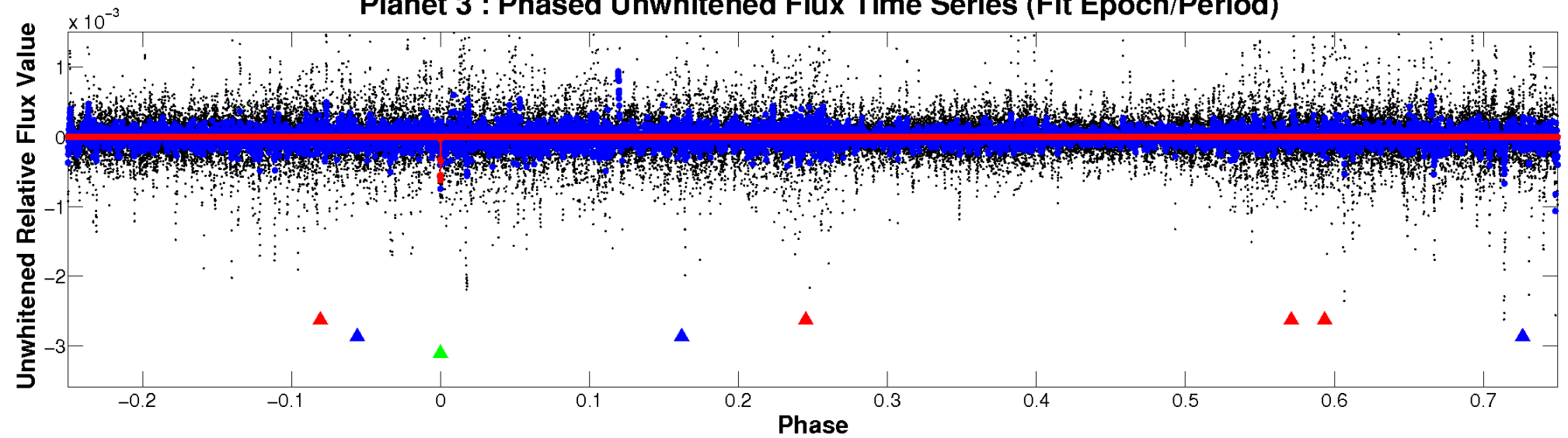
# ALT Odd/Even

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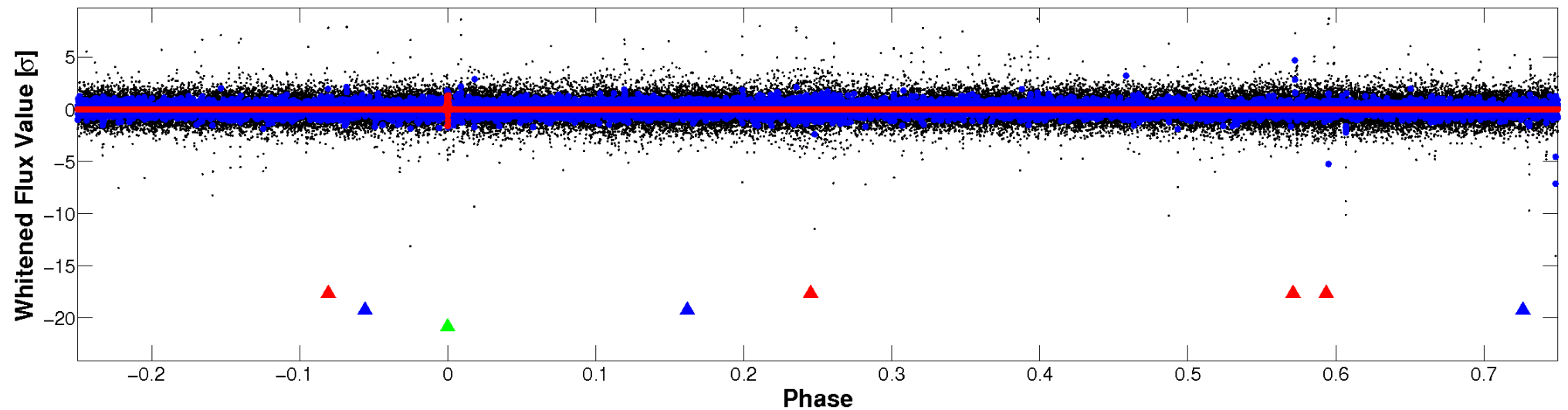


# Non-Whitened Vs. Whitened Light Curve

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

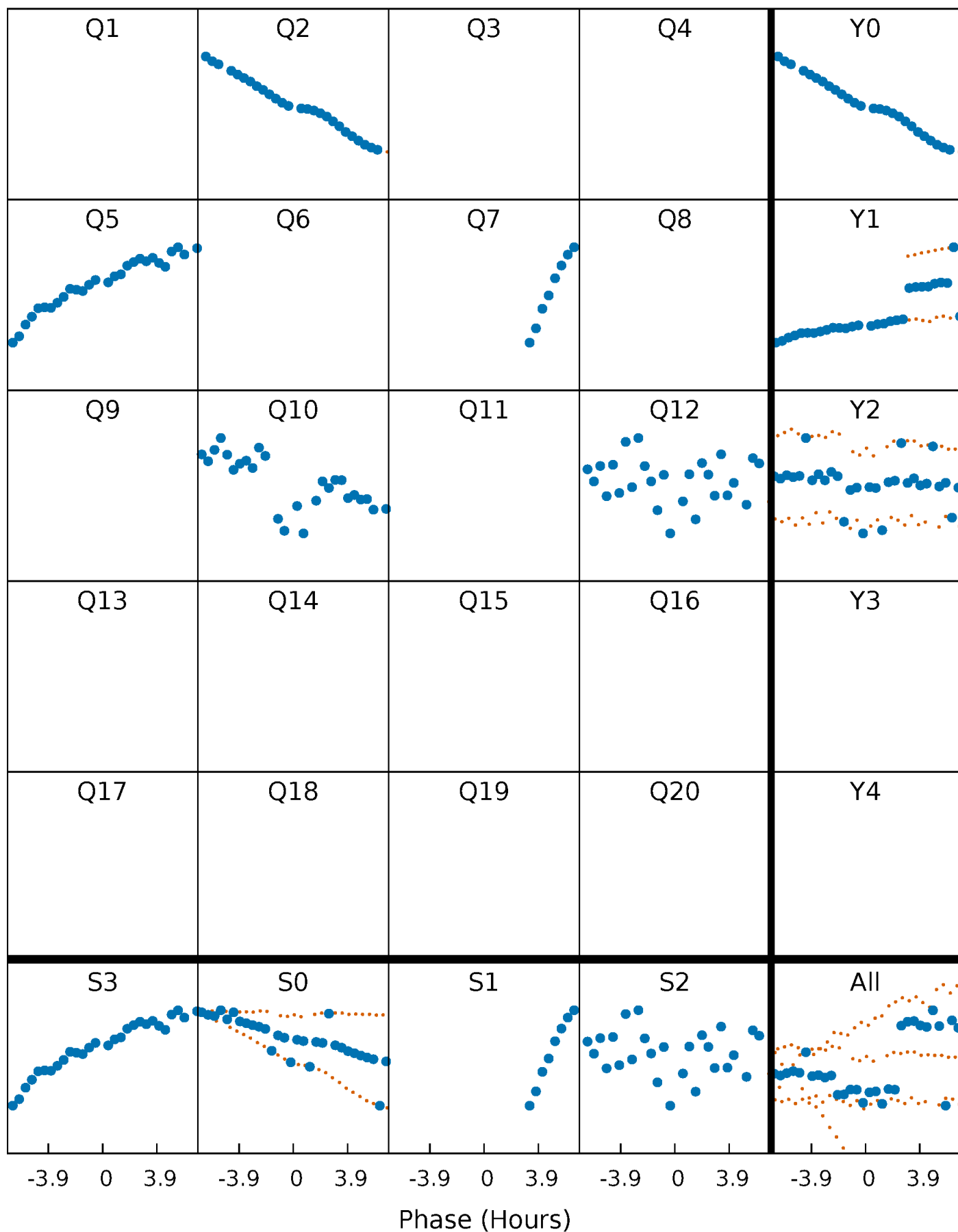


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

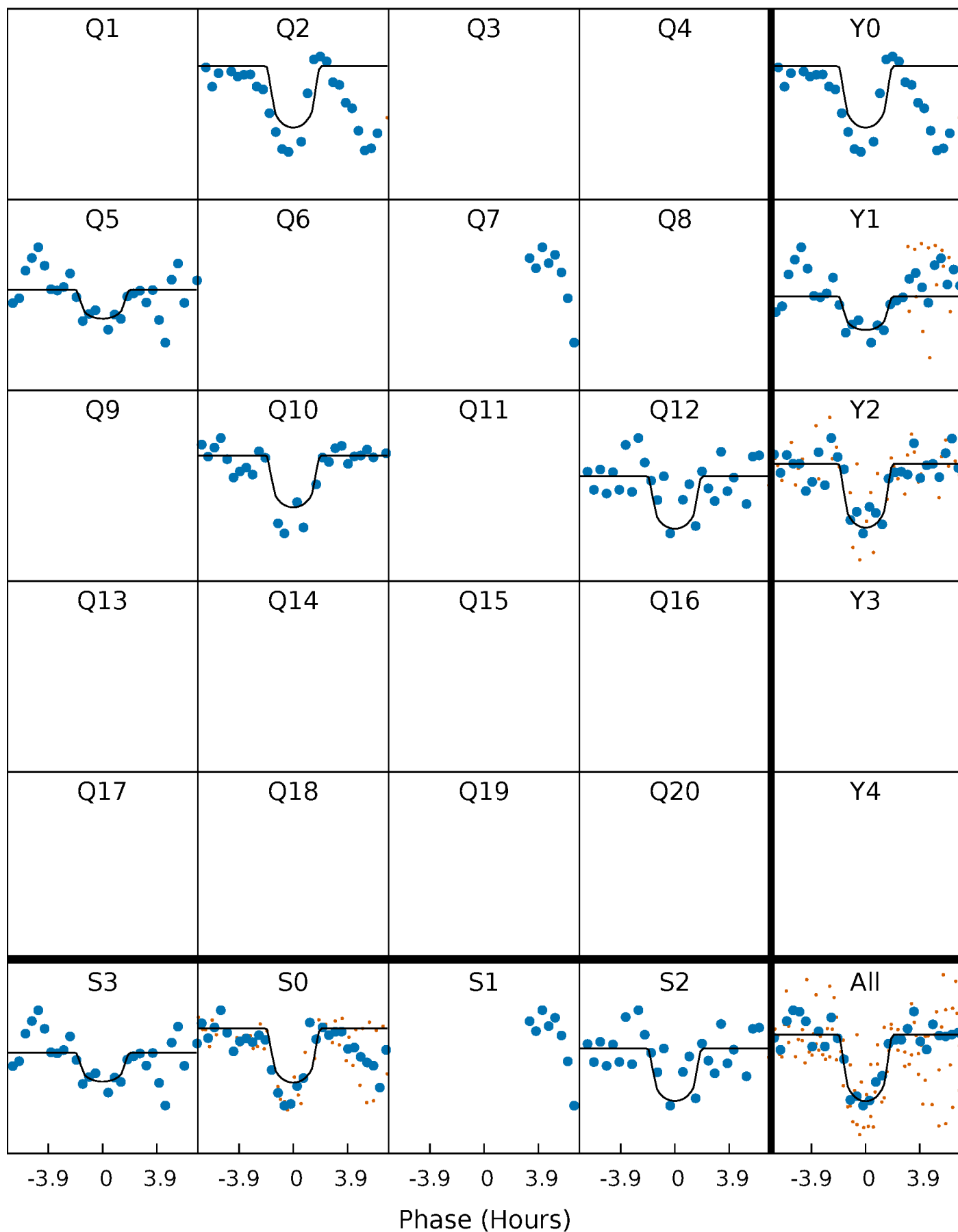
TCE 011200191-03 P=234.683941 Days  $T_0=241.942272$  (BKJD)





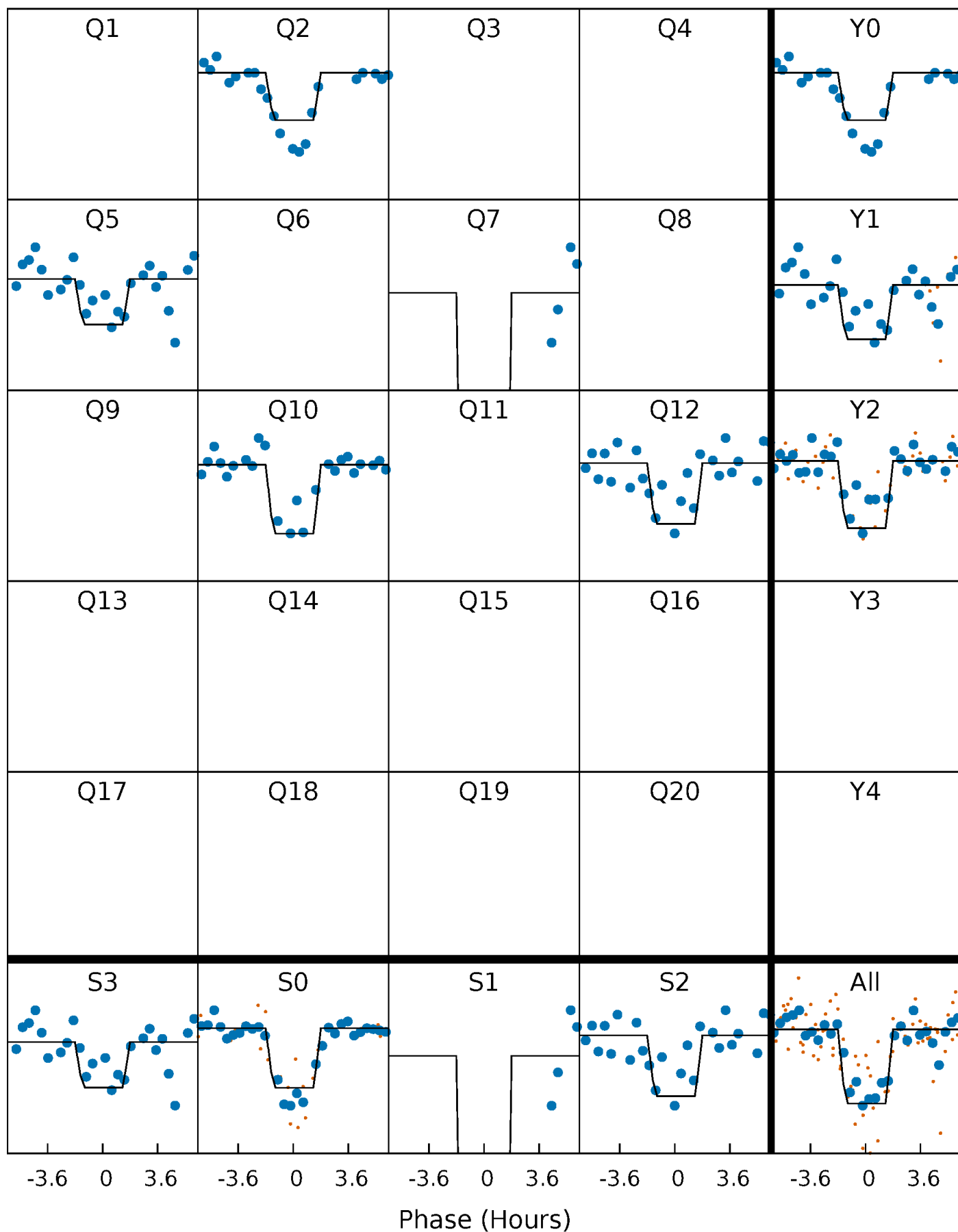
# DV Quarter-Phased Transit Curves

TCE 011200191-03     $P=234.683941$  Days     $T_0=241.942272$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

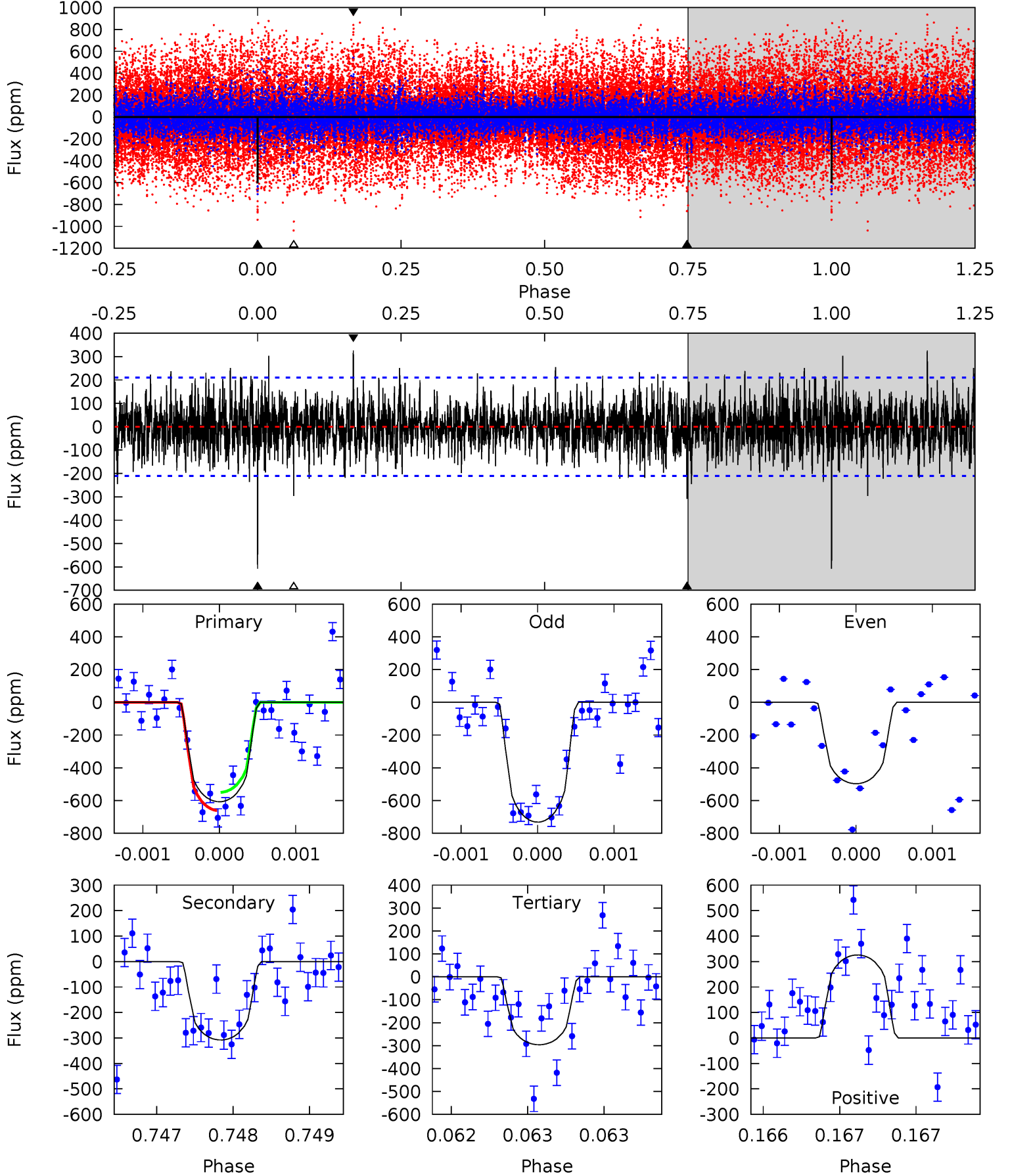
TCE 011200191-03     $P=234.688870$  Days     $T_0=241.924210$  (BKJD)



# DV Model-Shift Uniqueness Test

011200191-03, P = 234.683941 Days, E = 7.258331 Days

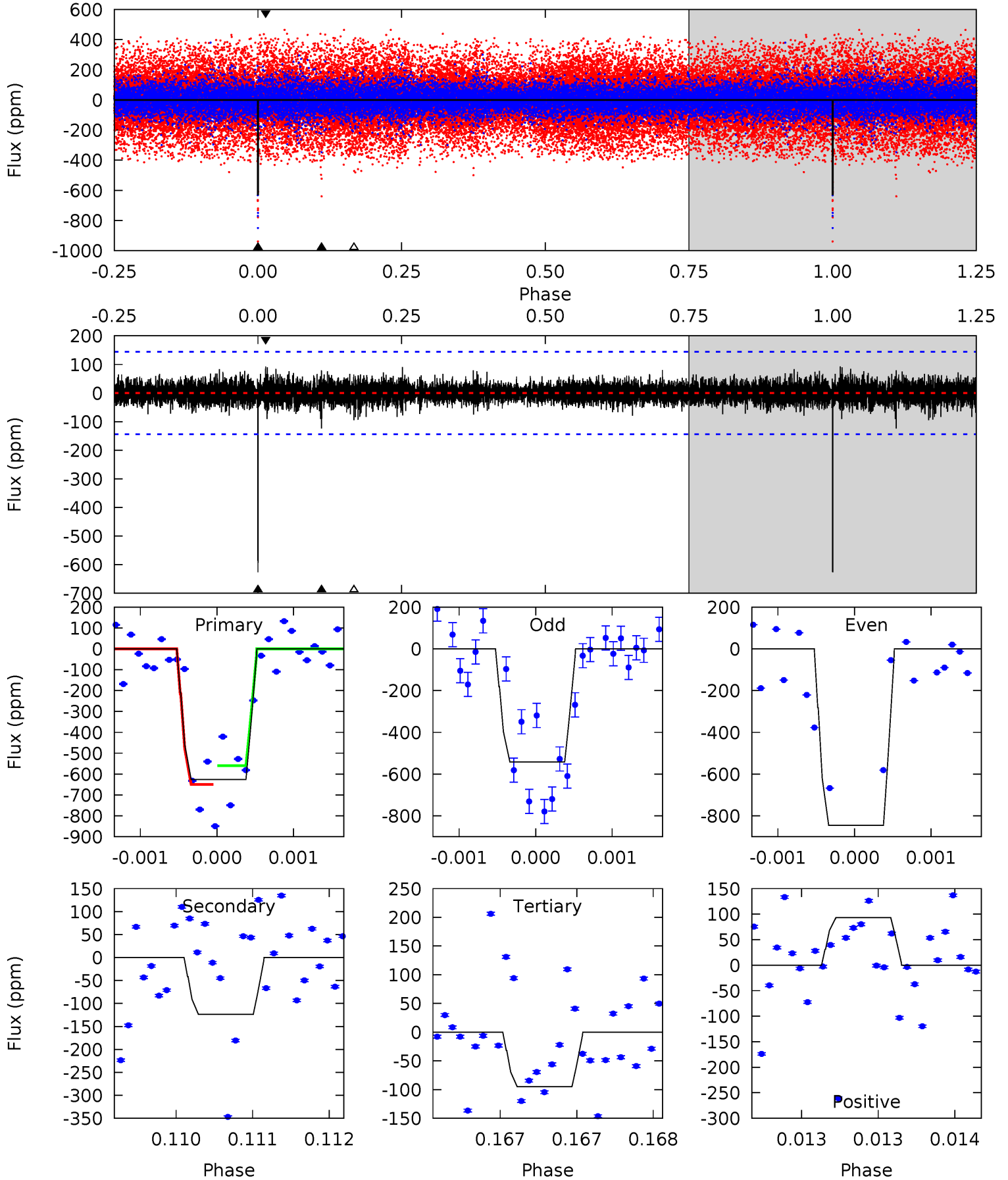
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	8.08	7.77	8.55	5.52	3.40	1.84	8.16	7.38	0.31	-0.47	2.93	0.94	0.35	1.47



# Alt Model-Shift Uniqueness Test

011200191-03, P = 234.688870 Days, E = 7.235340 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
24.0	4.76	3.64	3.57	5.54	3.43	0.81	20.4	20.5	1.11	1.18	6.17	1.16	0.13	1.79



### Stellar Parameters For KIC 011200191

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	$5272^{+73}_{-84}$	$4.574^{+0.017}_{-0.088}$	$0.120^{+0.150}_{-0.150}$	$0.813^{+0.080}_{-0.029}$	$0.902^{+0.032}_{-0.064}$	$2.365^{+0.182}_{-0.609}$
	+1%/-2%	+0%/-2%	+125%/-125%	+10%/-4%	+4%/-7%	+8%/-26%
Source	SPE68	SPE68	SPE68	DSEP		

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

### Secondary Eclipse Parameters for KIC 011200191-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-308 \pm 38$	$3.09^{+2.62}_{-1.96}$	$348^{+9}_{-7}$	$4050^{+2114}_{-739}$	$9159^{+57982}_{-6471}$
Alt.	$-124 \pm 26$	$3.23^{+2.49}_{-1.95}$	$349^{+9}_{-7}$	$3407^{+1310}_{-532}$	$3393^{+16503}_{-2403}$

$T_{max}$  = 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

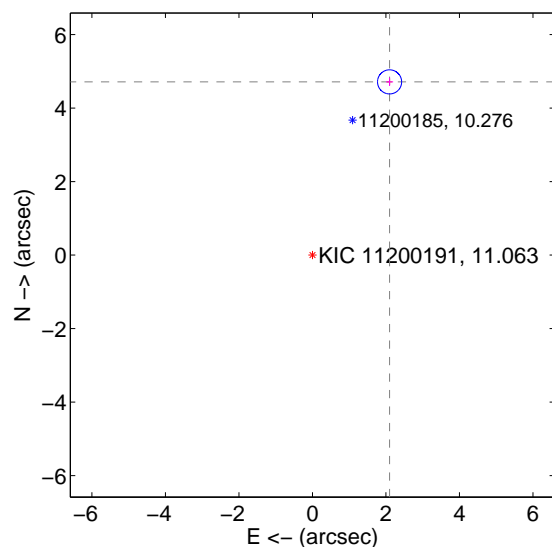
Supplemental centroid analysis for 011200191-03. **Kepler magnitude: 11.06.** Transit SNR 8.87

There are 0 quarters with good PRF difference image offsets

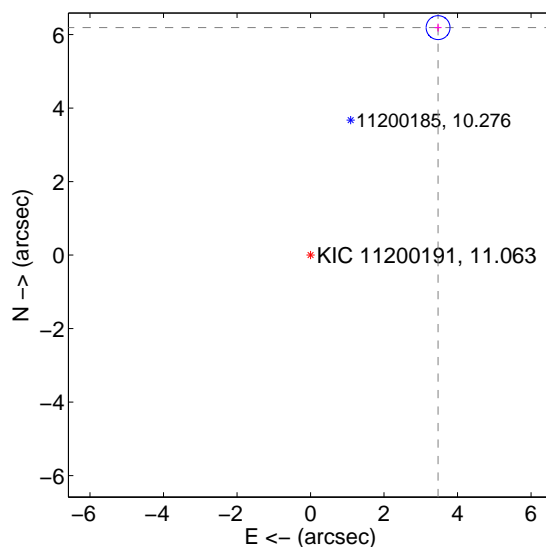
The OOT PRF centroid is offset from the target star catalog position by about 2.02 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b>5.160 <math>\pm</math> 0.109</b>	<b>47.19</b>	-2.099 $\pm$ 0.097	4.714 $\pm$ 0.112
PRF-fit source offset from KIC position	<b>7.097 <math>\pm</math> 0.108</b>	<b>65.51</b>	-3.471 $\pm$ 0.097	6.190 $\pm$ 0.112
photometric centroid source offset	1.02 $\pm$ 0.78	1.32	-0.96 $\pm$ 0.66	0.35 $\pm$ 1.35

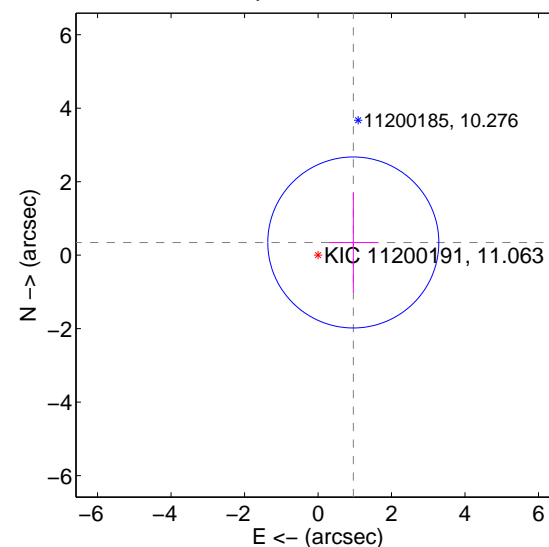
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

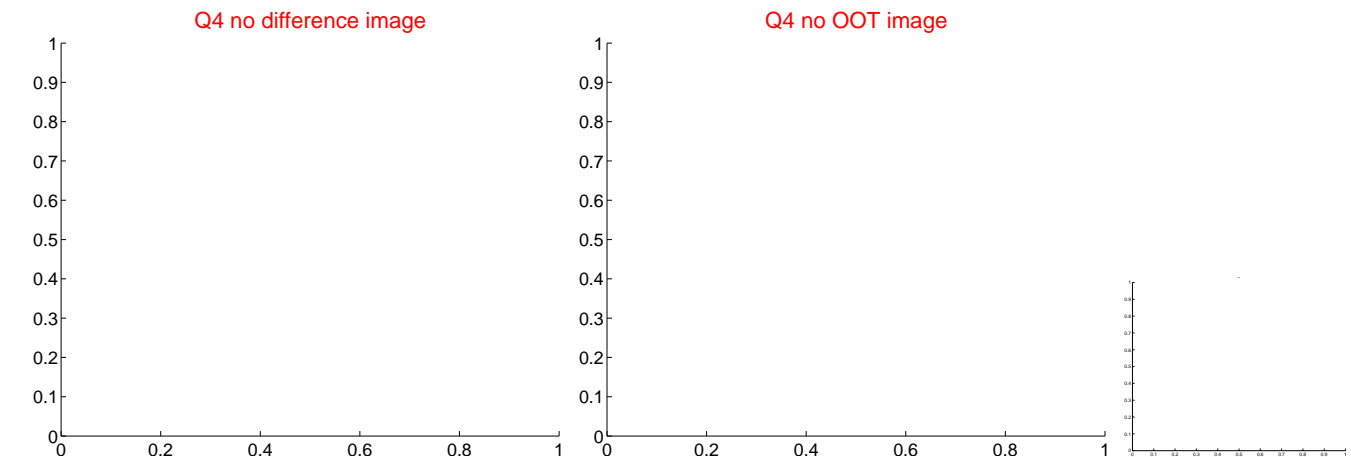
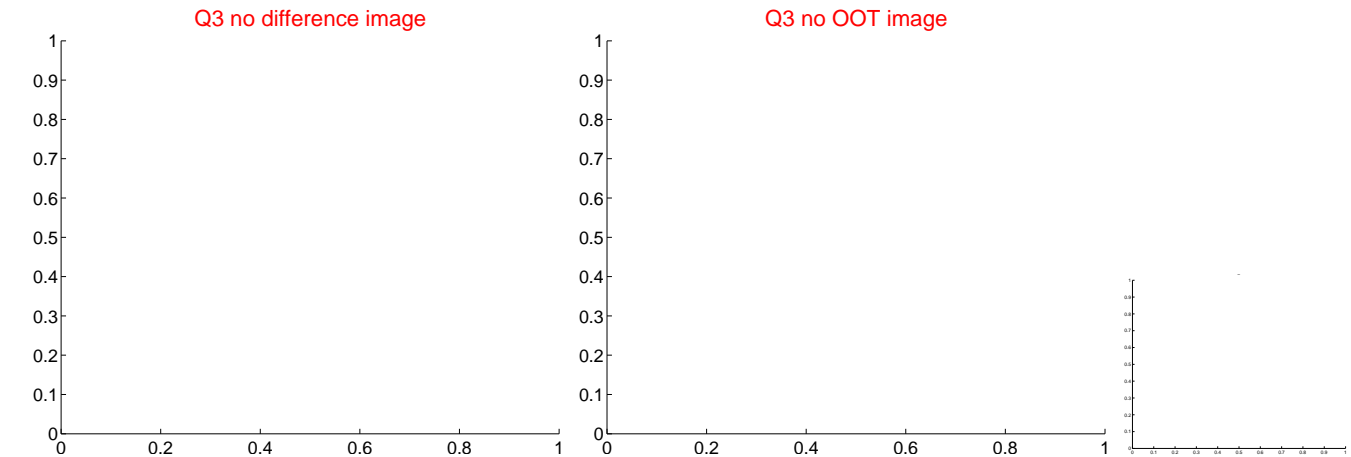
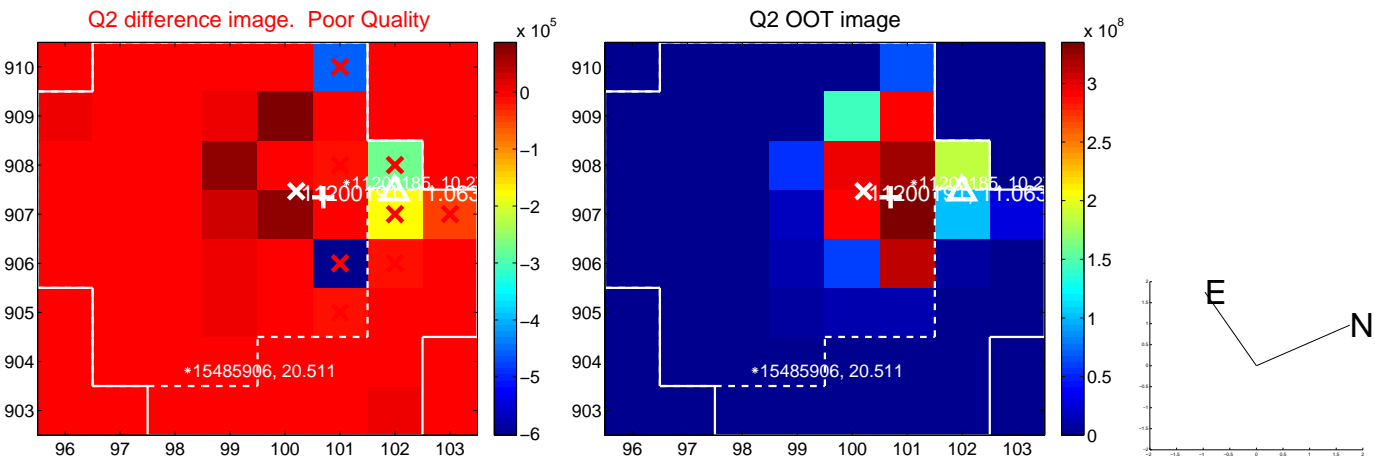
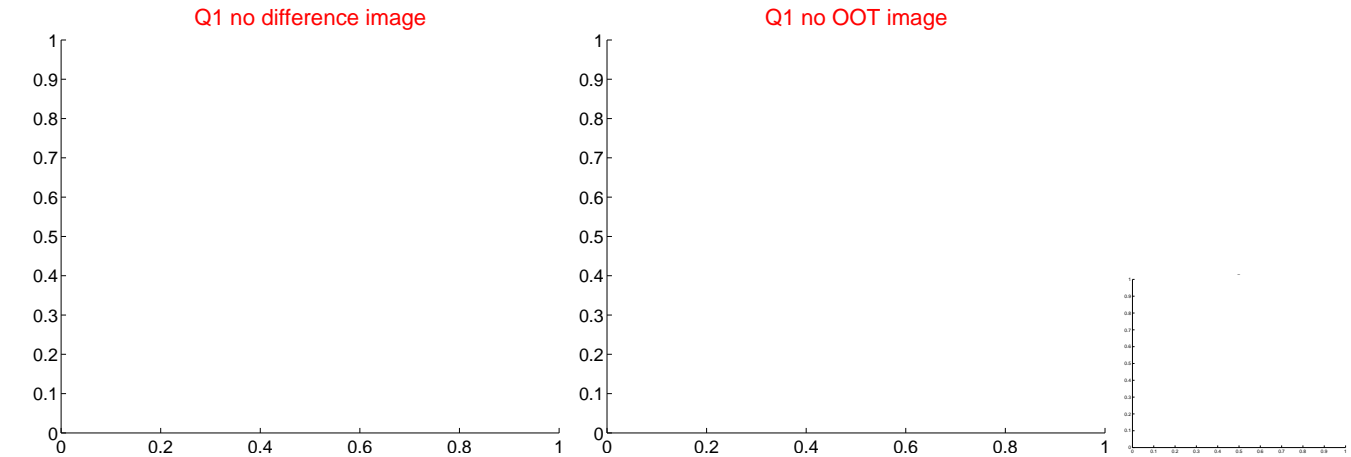


offset from photometric centroids



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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

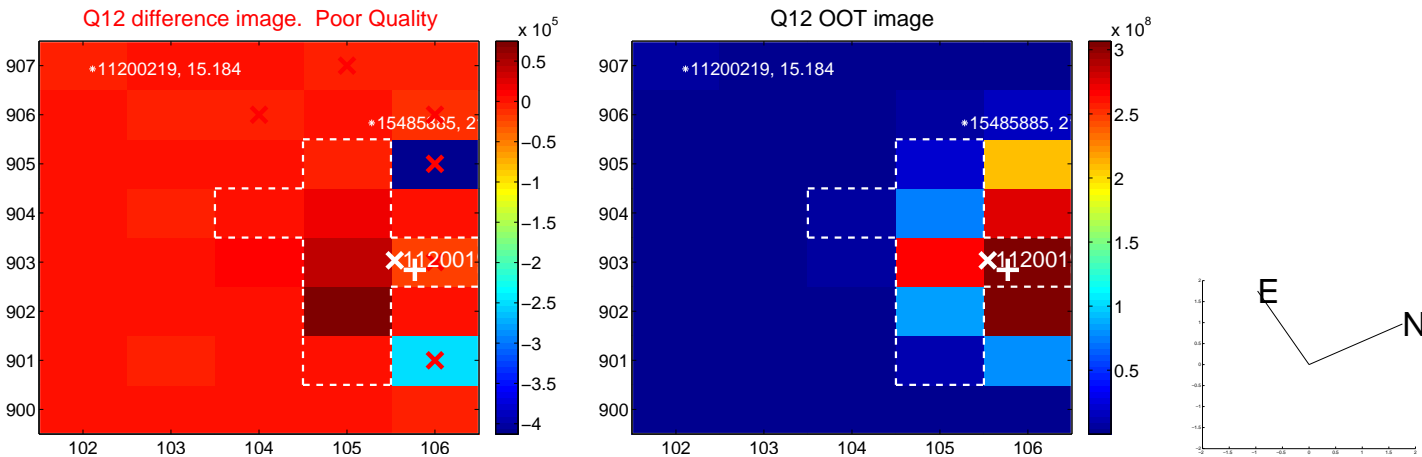
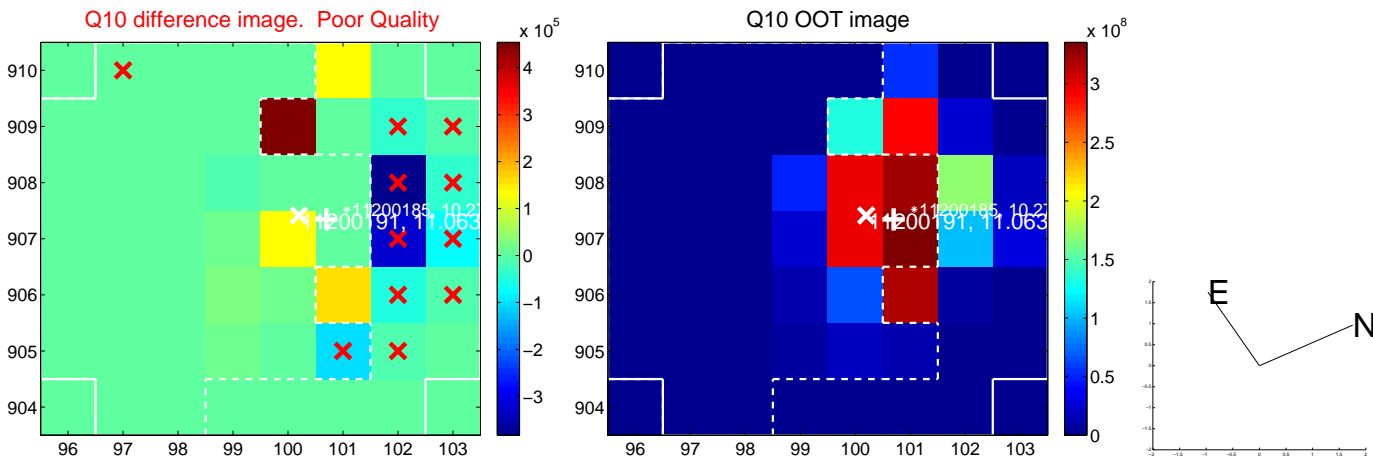


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





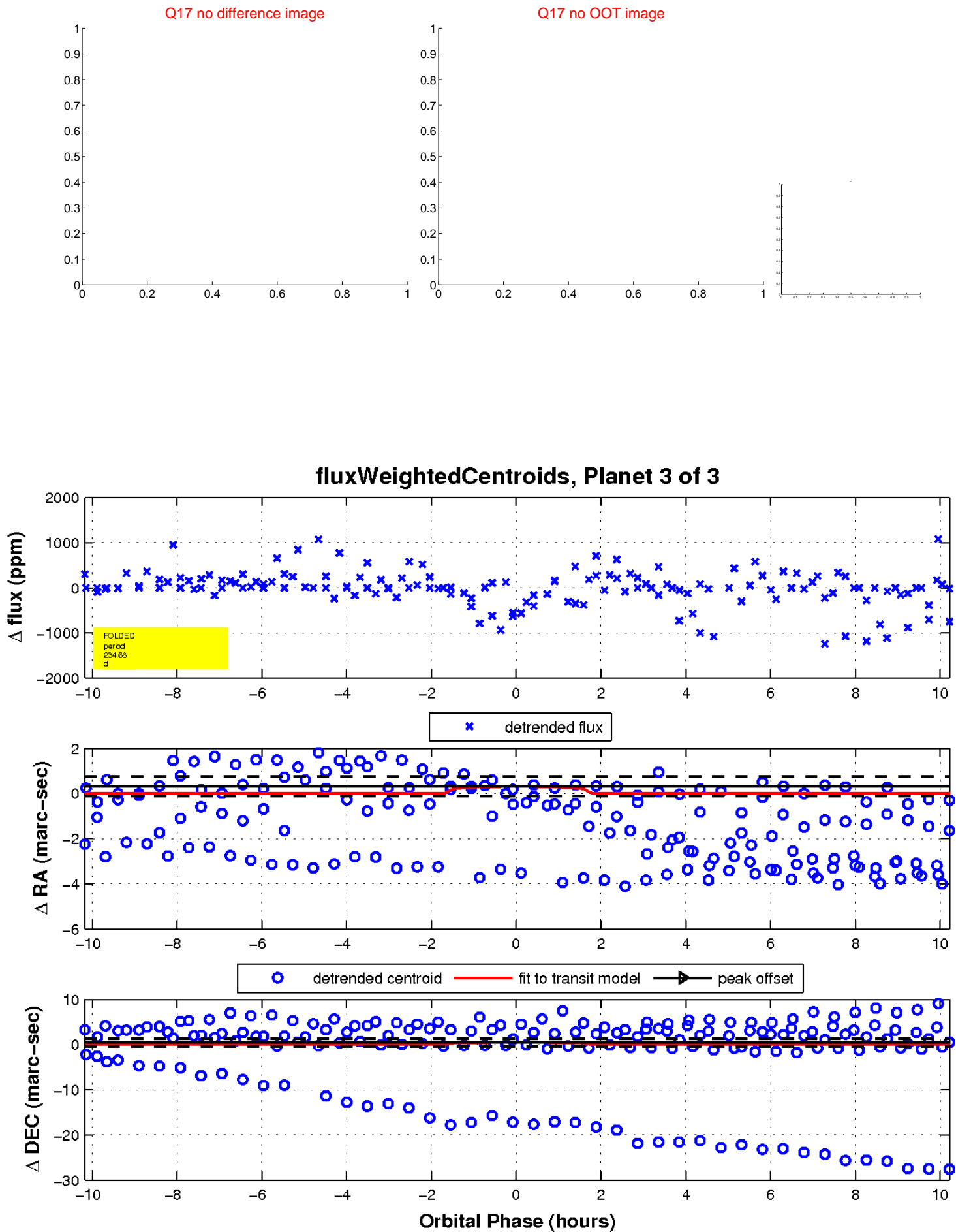
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



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



UKIRT Image

