

# KIC 005262561

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005262561-01	OBS	No	432.405002	523.025887	2650.6	9.647	15.6	8.9	0.46	3625	2.34	0.04
005262561-02	OBS	No	433.280026	456.616656	2249.0	9.752	13.2	7.0	0.46	3625	2.14	0.04
005262561-03	OBS	No	450.102616	367.582477	677.4	2.760	13.2	2.4	0.46	3625	1.27	0.04
005262561-04	OBS	No	352.549254	210.363742	2684.8	4.346	11.4	8.2	0.46	3625	2.45	0.06
005262561-05	OBS	No	375.221462	235.585926	718.8	15.000	10.3	-1.0	0.46	3625	1.21	0.05
005262561-06	OBS	No	272.428273	386.654427	1771.4	4.120	10.9	7.2	0.46	3625	1.90	0.08
005262561-07	OBS	No	460.413789	428.856492	1954.7	5.033	9.4	6.6	0.46	3625	2.06	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005262561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

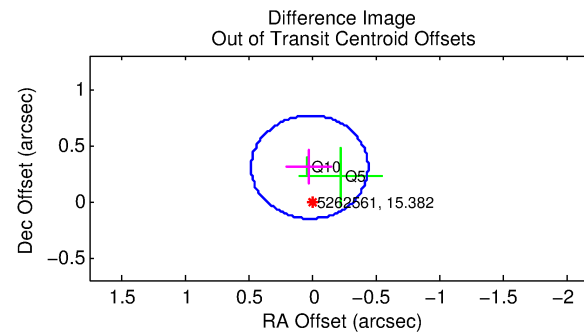
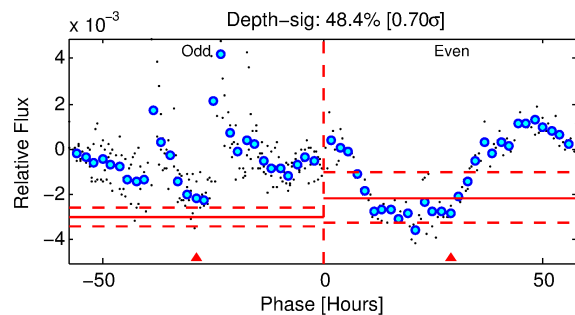
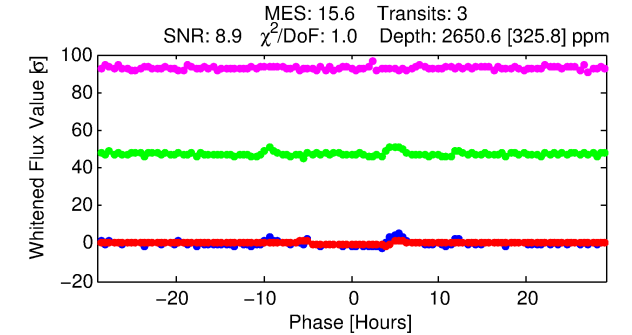
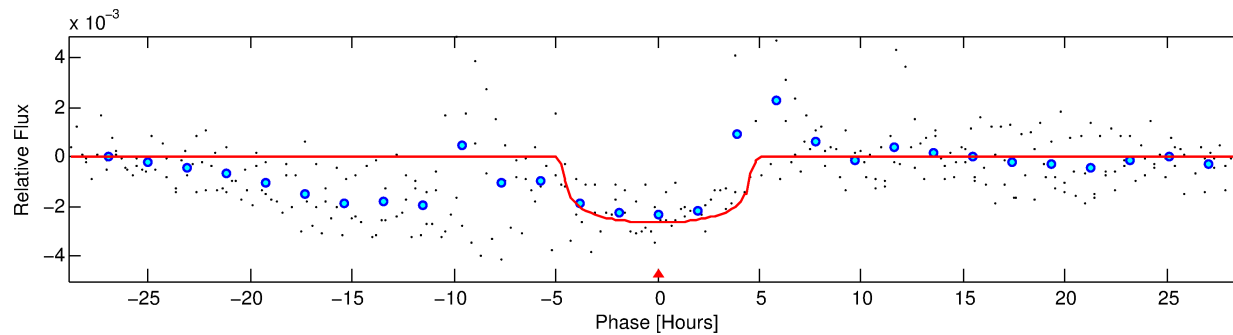
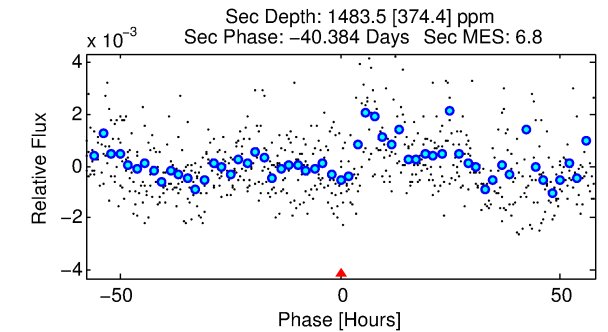
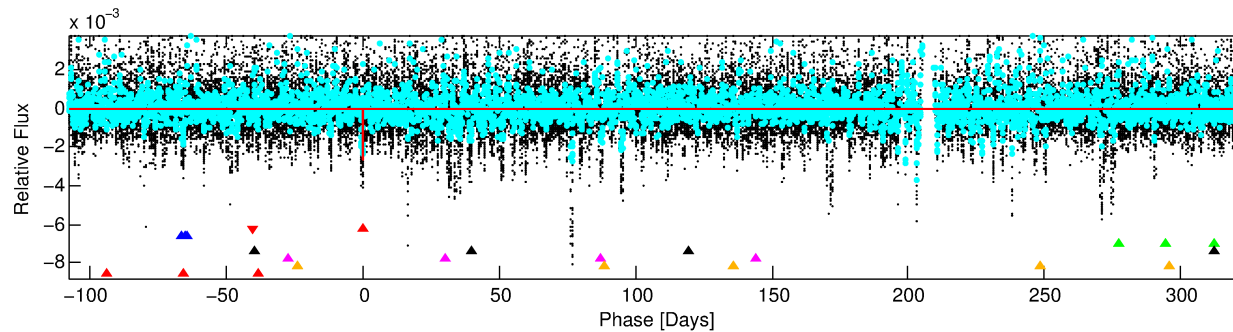
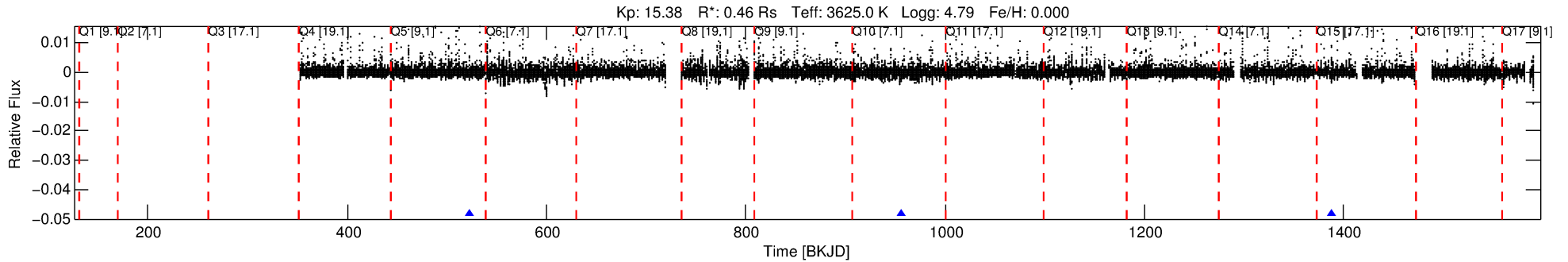
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005262561-01

No Significant Match Found

# DV One-Page Summary

KIC: 5262561 Candidate: 1 of 7 Period: 432.405 d



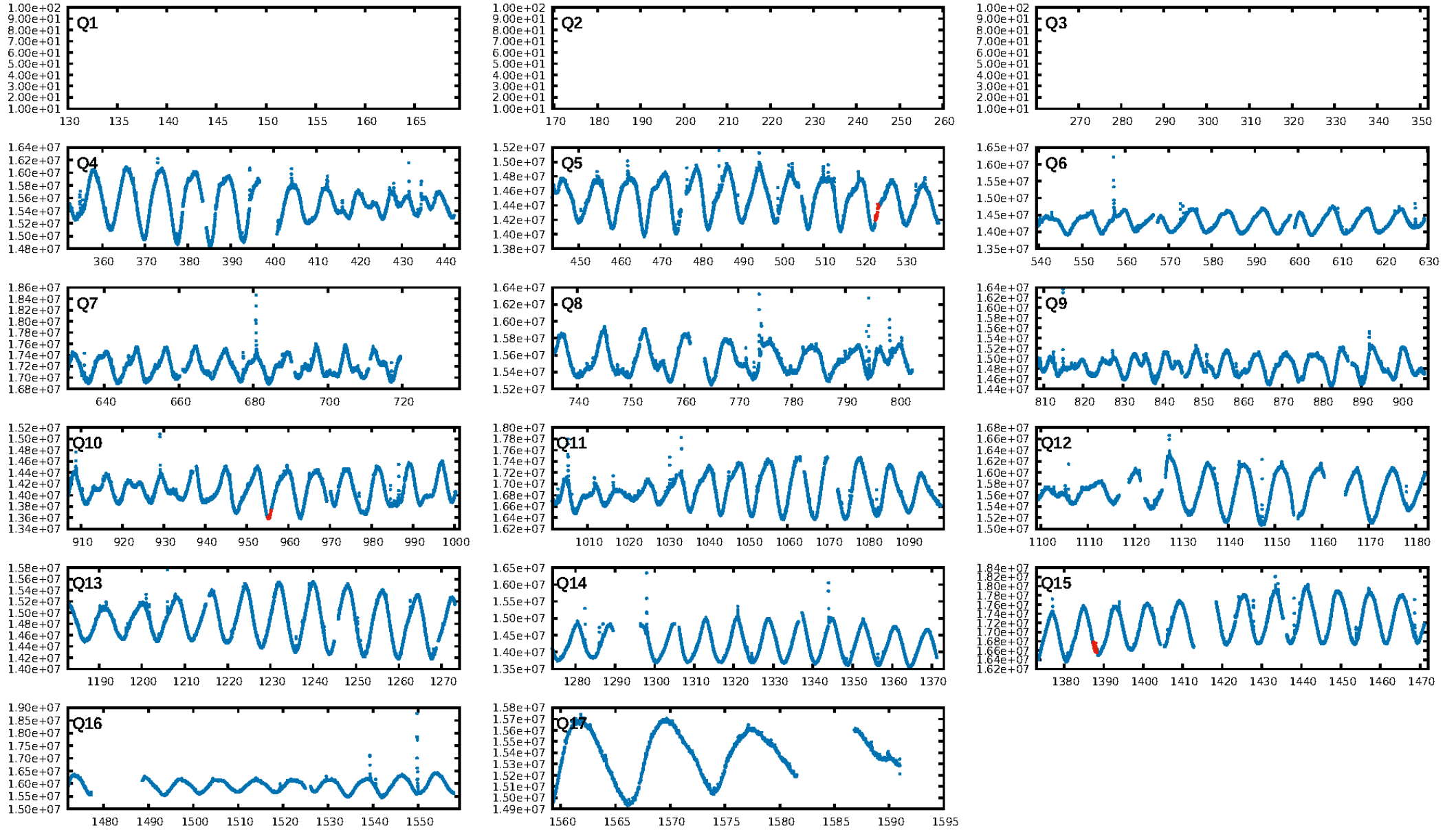
## DV Fit Results:

Period = 432.40500 [0.00537] d  
Epoch = 523.0259 [0.0071] BKJD  
Rp/R\* = 0.0470 [0.0110]  
a/R\* = 344.54 [316.52]  
b = 0.29 [2.92]  
Seff = 0.04 [0.01]  
Teq = 116 [4] K  
Rp = 2.34 [0.60] Re  
a = 0.8682 [0.0701] AU  
Ag = 112458.77 [61031.72] [1.84σ]  
Teffp = 3282 [441] K [7.17σ]

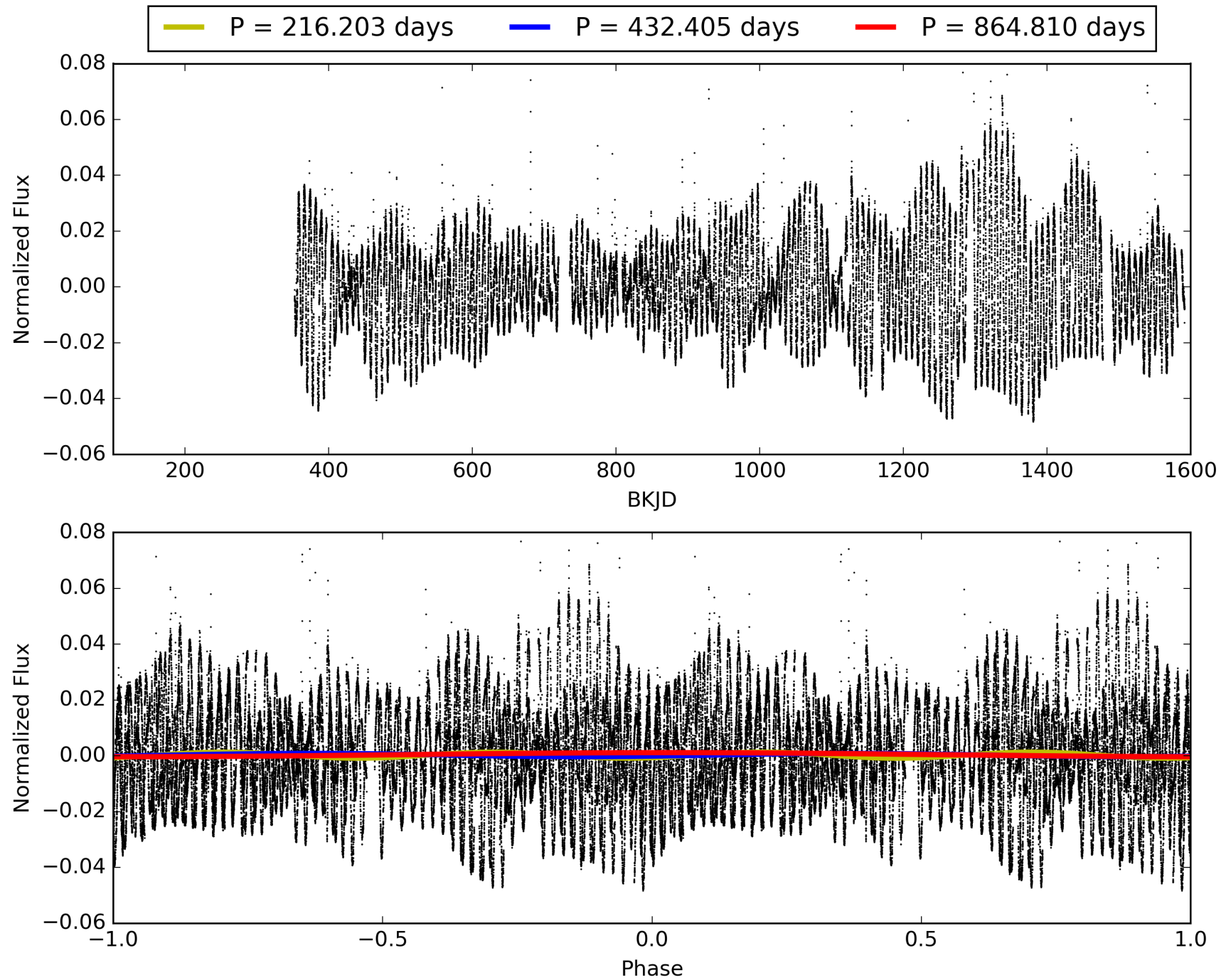
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [76.95σ]  
LongPeriod-sig: 87.4% [1.53σ]  
ModelChiSquare2-sig: 11.5%  
ModelChiSquareGof-sig: 99.8%  
Bootstrap-pfa: 5.99e-15  
RollingBand-fgt: 1.00 [3/3]  
**GhostDiagnostic-chr: 1.406**  
Centroid-sig: 52.1%  
Centroid-so: 0.425 arcsec [1.01σ]  
OotOffset-rm: 0.306 arcsec [2.00σ]  
KicOffset-rm: 0.167 arcsec [0.99σ]  
OotOffset-st: 1/0/0/1 [2]  
KicOffset-st: 1/0/0/1 [2]  
DiffImageQuality-fgm: 1.00 [2/2]  
DiffImageOverlap-fno: 1.00 [2/2]

# TCE 005262561-01, PDC Light Curves

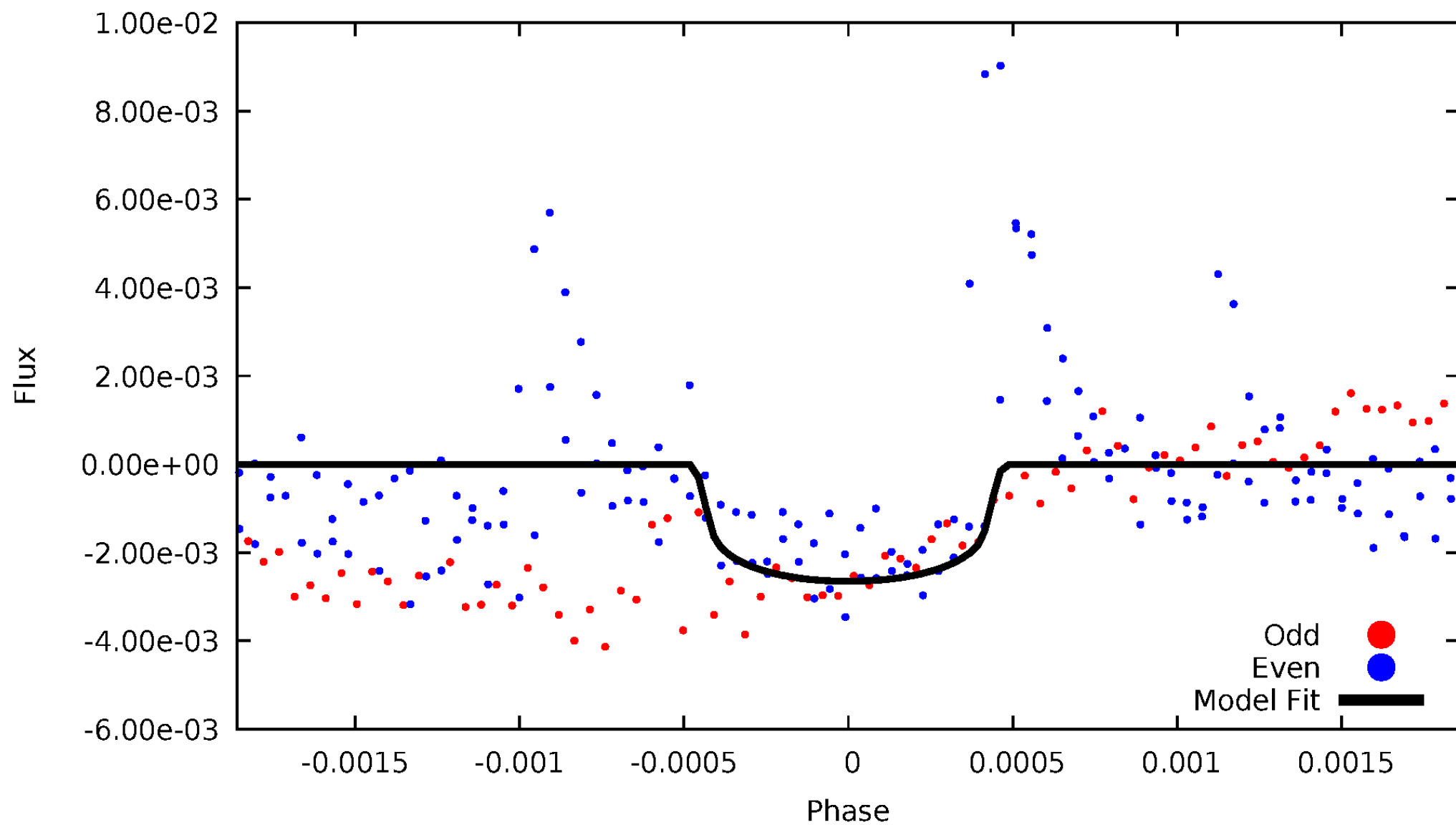


TCE 005262561-01



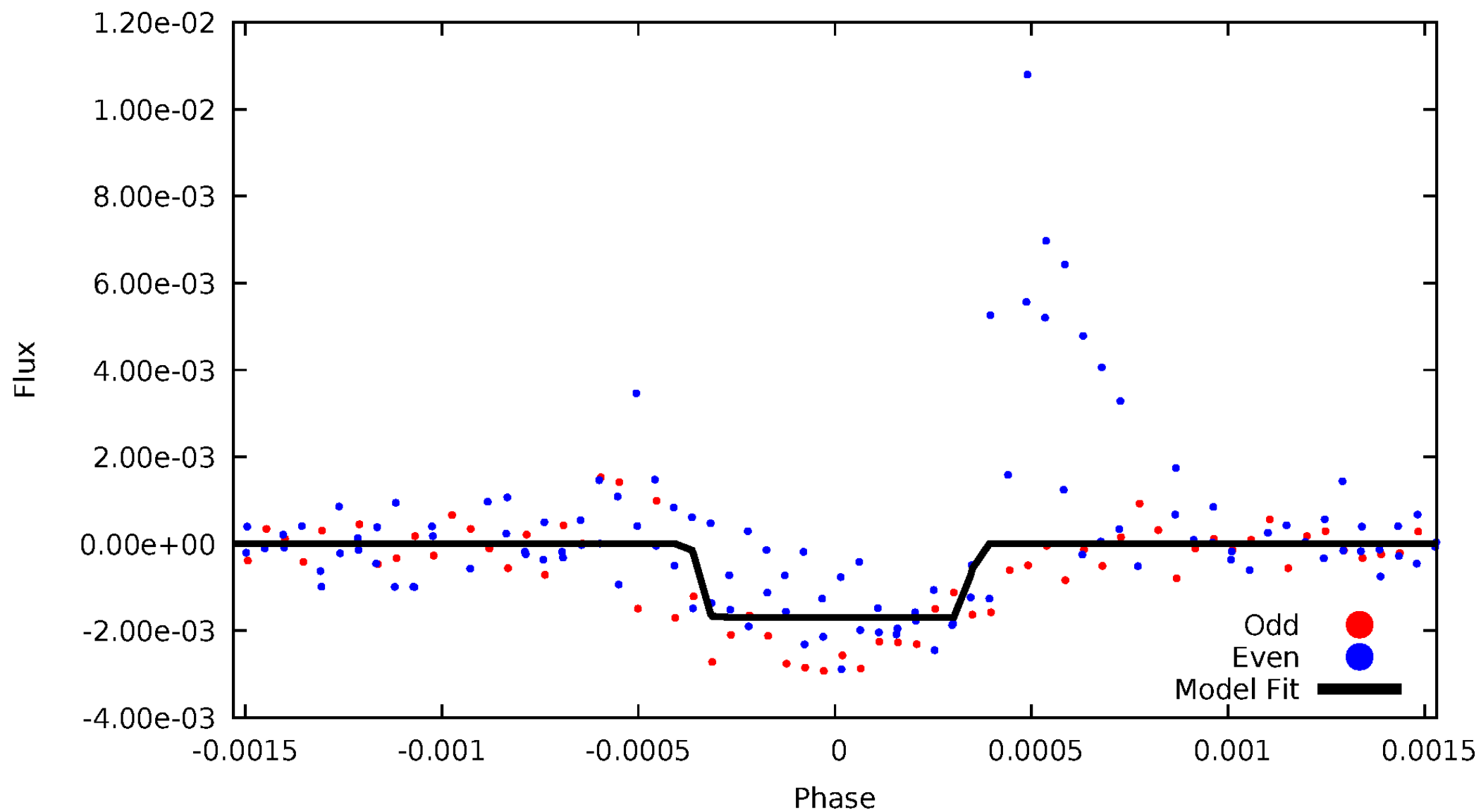
# DV Odd/Even

TCE 005262561-01



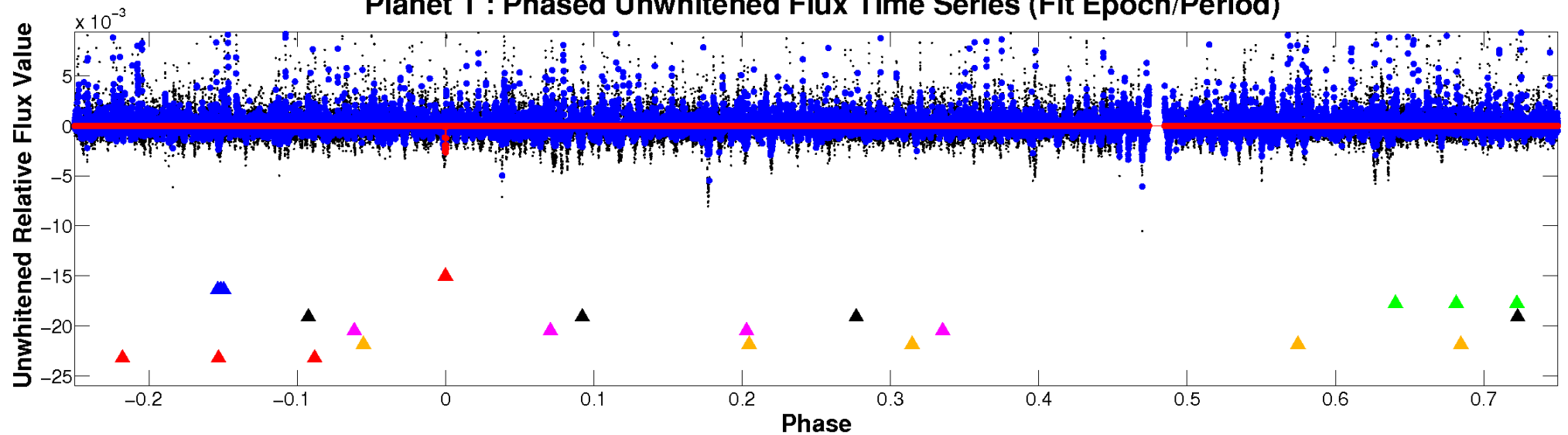
# ALT Odd/Even

TCE 005262561-01

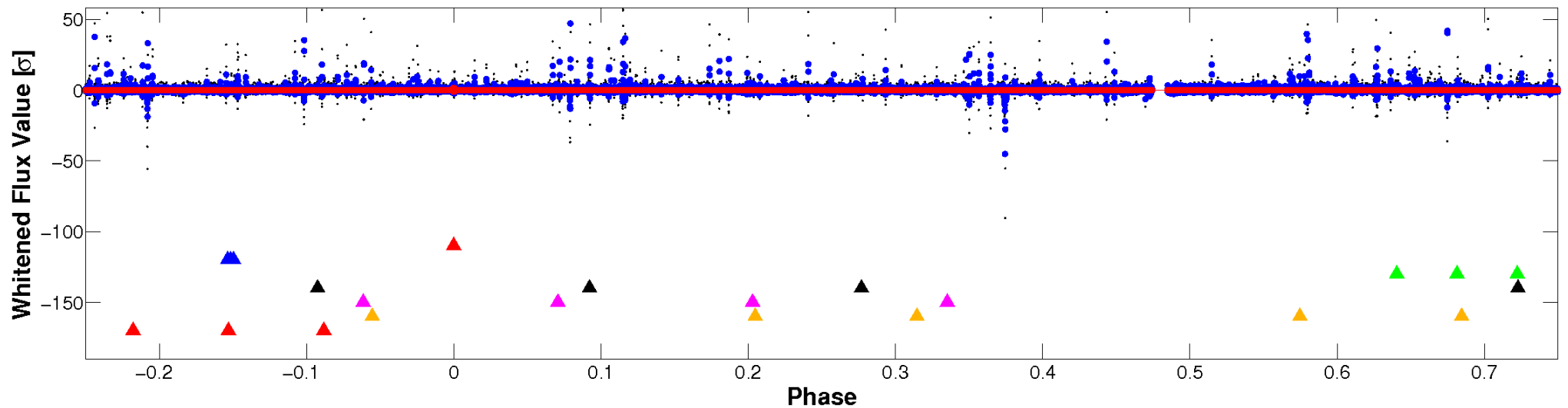


# Non-Whitened Vs. Whitened Light Curve

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

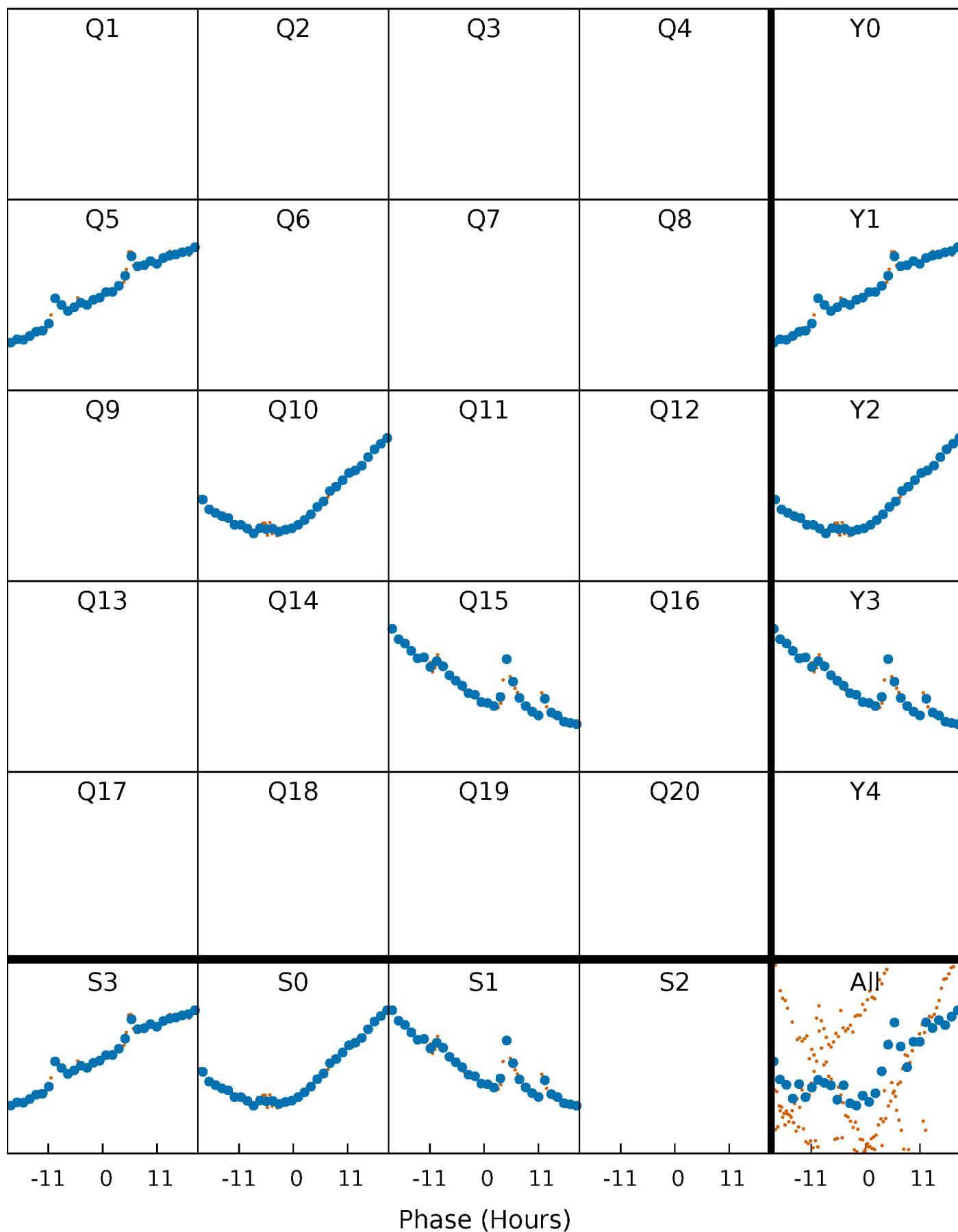


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



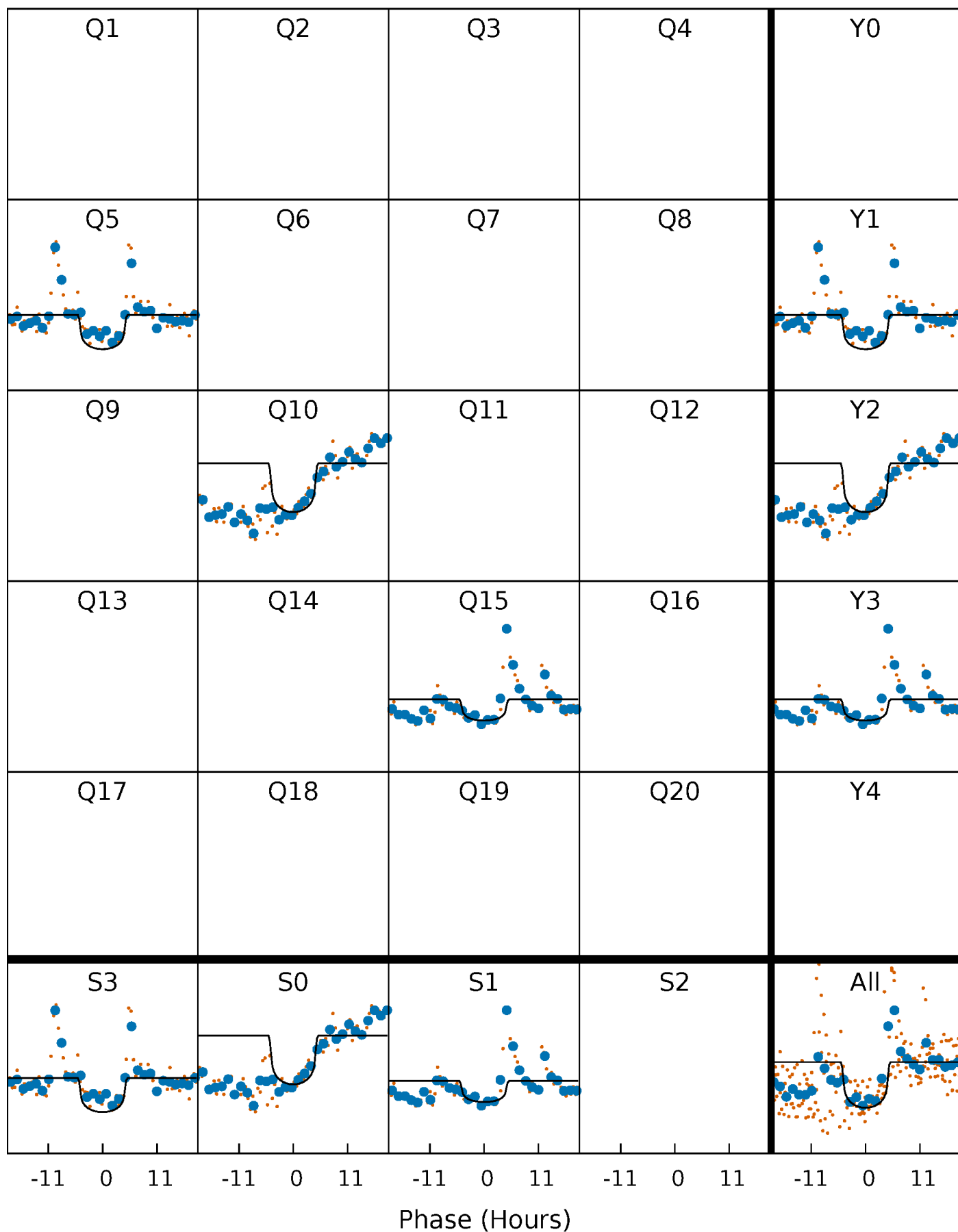
# PDC Quarter-Phased Transit Curves

TCE 005262561-01 P=432.405002 Days  $T_0=523.025886$  (BKJD)



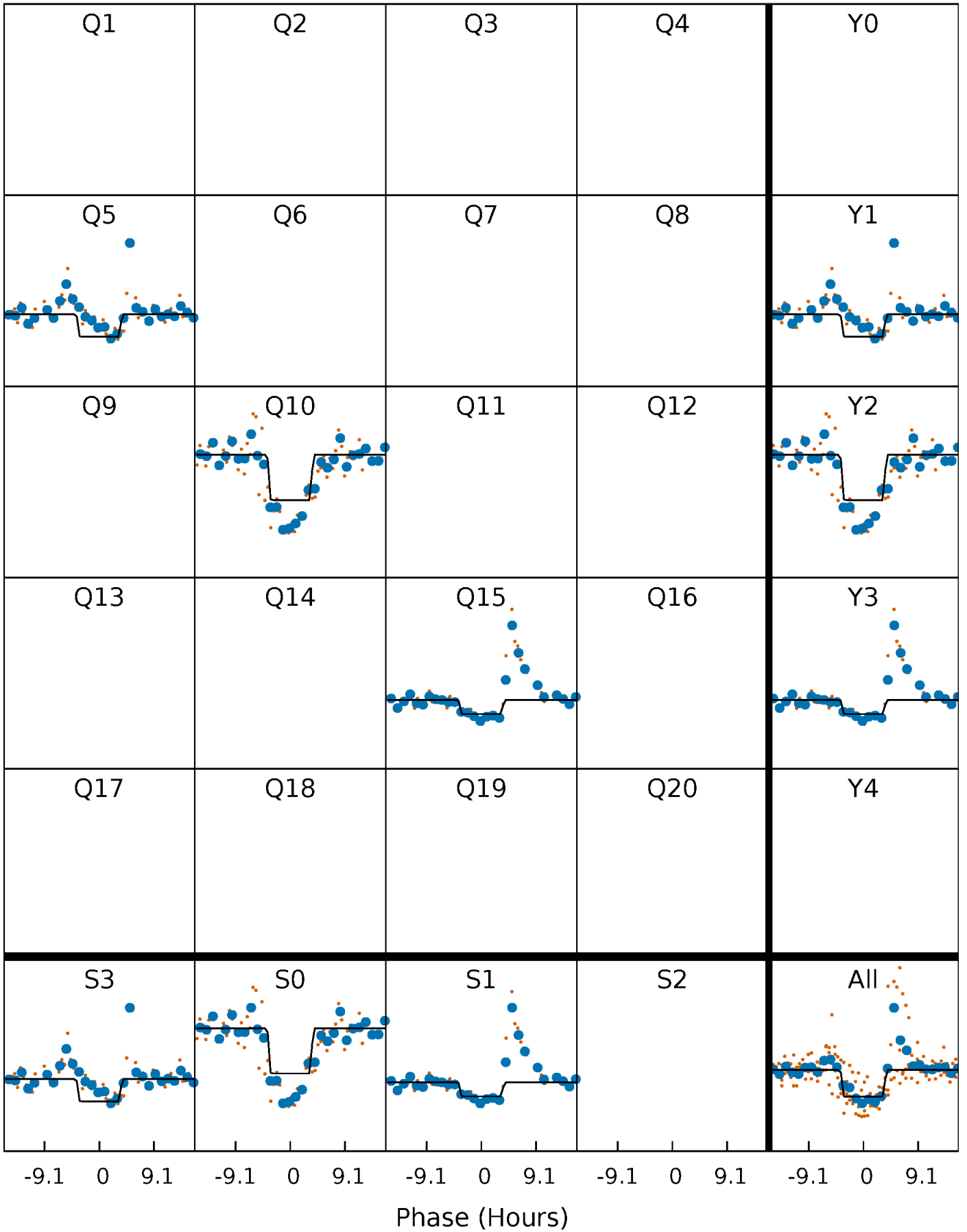
# DV Quarter-Phased Transit Curves

TCE 005262561-01 P=432.405002 Days  $T_0=523.025886$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

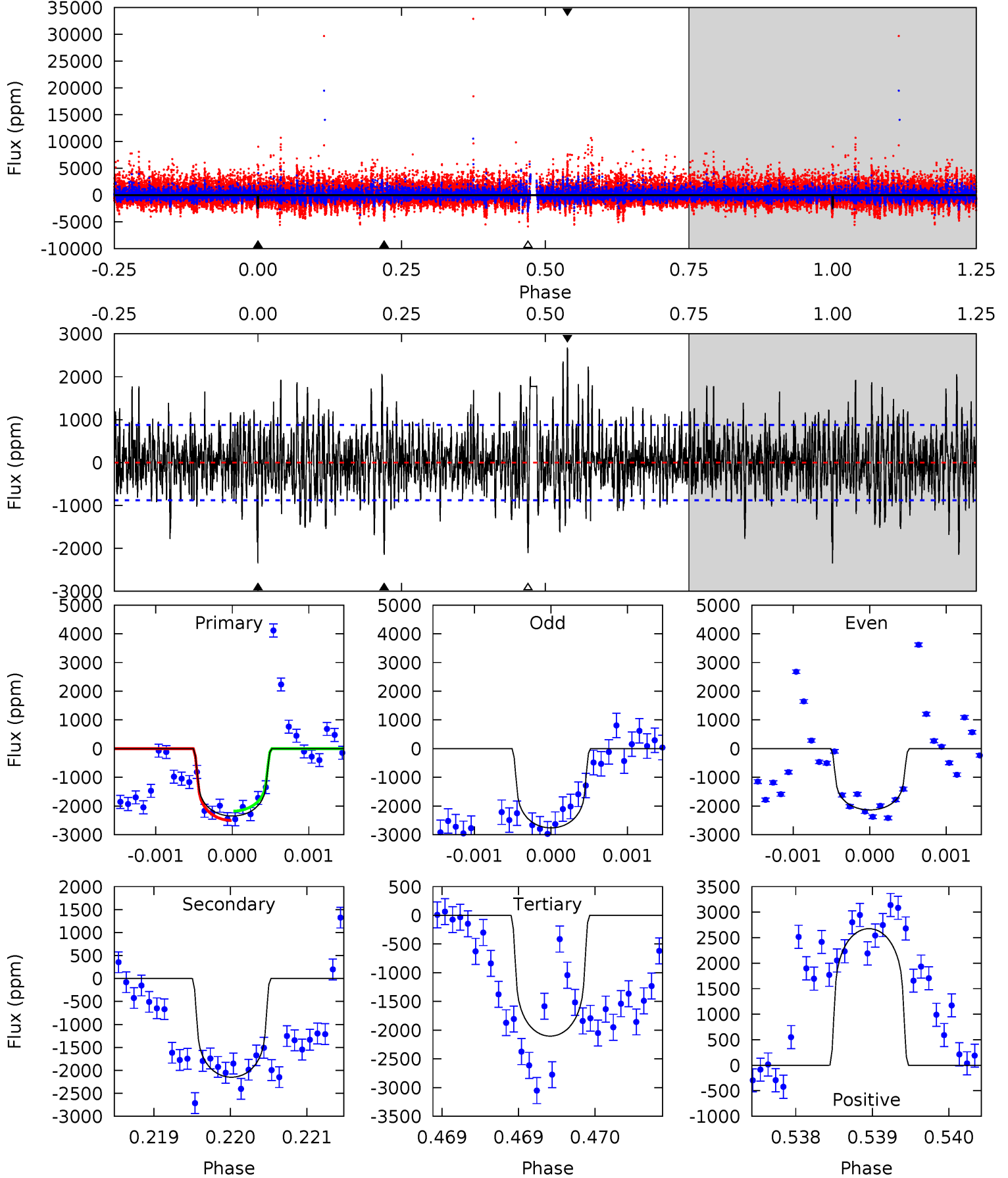
TCE 005262561-01 P=432.394563 Days  $T_0=523.035469$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-01, P = 432.405002 Days, E = 90.620884 Days

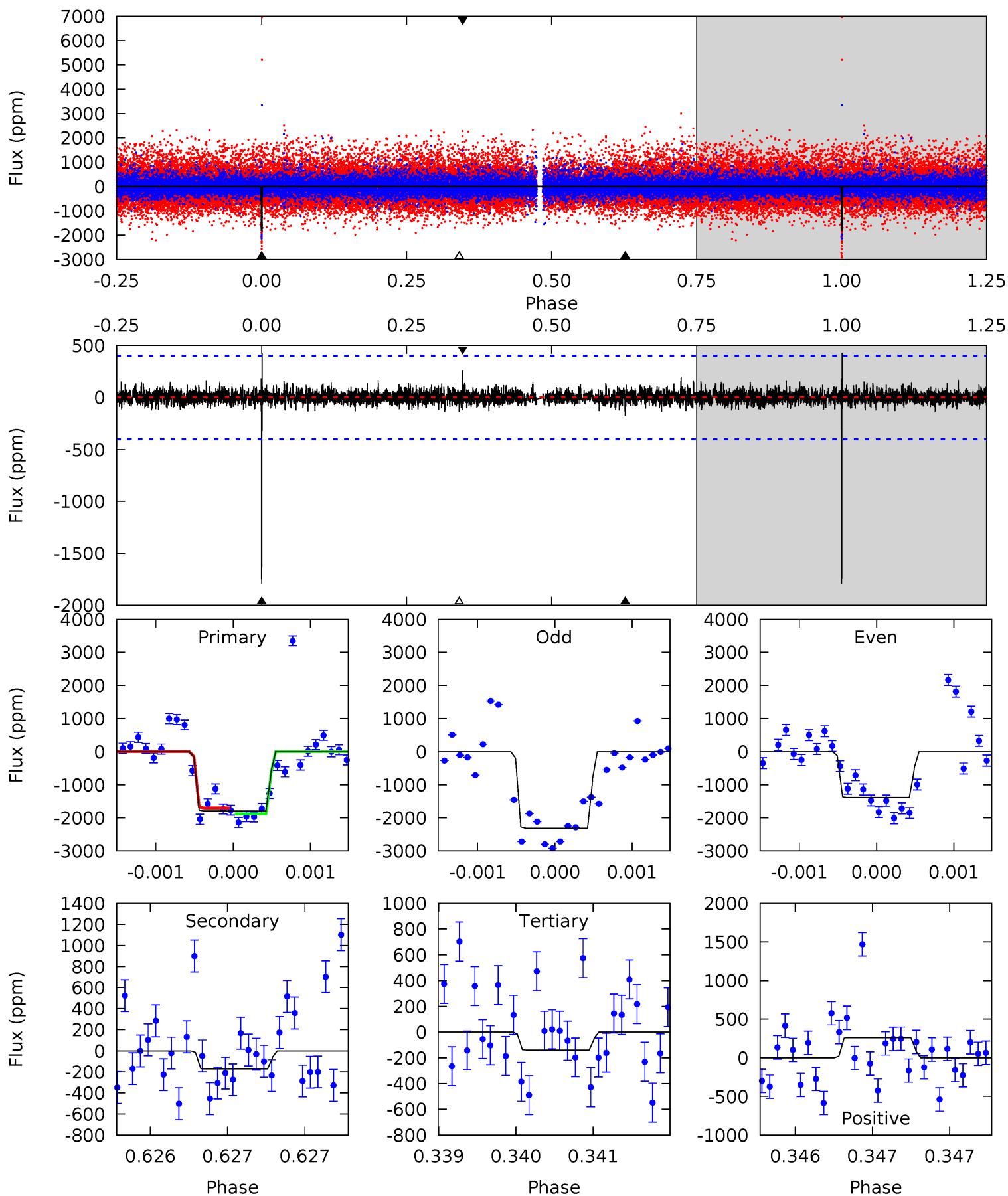
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	13.4	13.1	16.7	5.46	3.31	3.40	1.53	-2.04	0.28	-3.28	1.24	1.12	0.53	1.02



# Alt Model-Shift Uniqueness Test

005262561-01, P = 432.394563 Days, E = 90.640906 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
24.6	2.36	1.91	3.58	5.51	3.38	0.53	22.7	21.0	0.46	-1.22	5.63	0.88	0.19	1.23



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-2149 \pm 160$	$2.29^{+0.57}_{-0.57}$	$161^{+4}_{-4}$	$3619^{+366}_{-242}$	$171990^{+135000}_{-62294}$
Alt.	$-173 \pm 73$	$2.04^{+0.57}_{-0.54}$	$161^{+4}_{-4}$	$2601^{+264}_{-213}$	$16776^{+18155}_{-8584}$

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

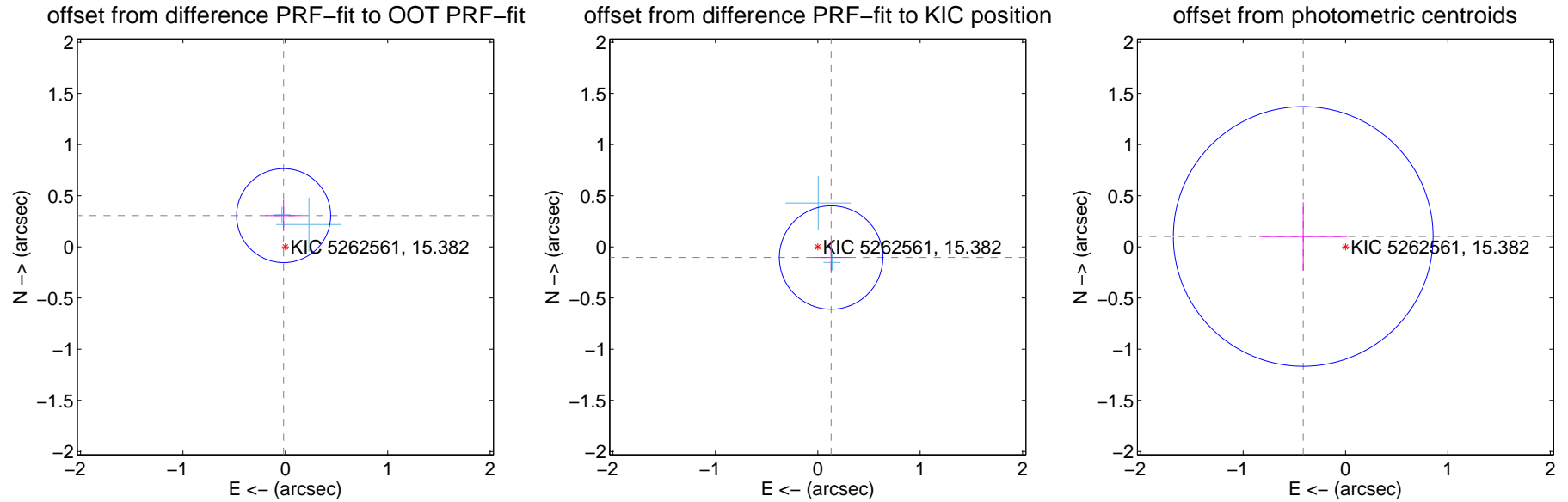
## DV Centroid Data

Supplemental centroid analysis for 005262561-01. Kepler magnitude: 15.38. Transit SNR 8.93

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.50 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.306 \pm 0.153$	2.00	$0.017 \pm 0.178$	$0.305 \pm 0.153$
PRF-fit source offset from KIC position	$0.167 \pm 0.169$	0.99	$-0.130 \pm 0.178$	$-0.104 \pm 0.153$
photometric centroid source offset	$0.43 \pm 0.42$	1.01	$0.41 \pm 0.43$	$0.10 \pm 0.33$

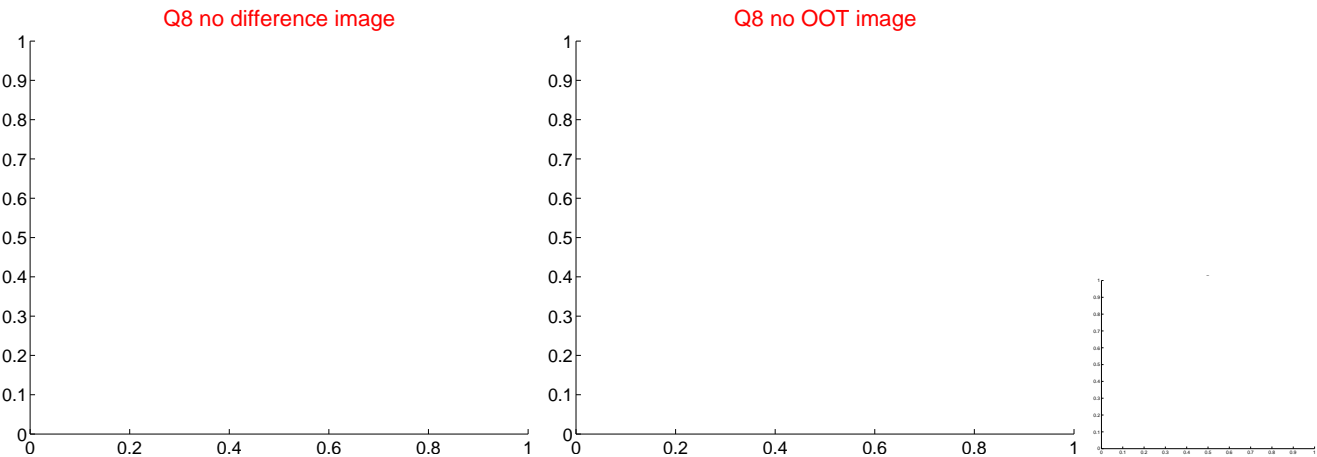
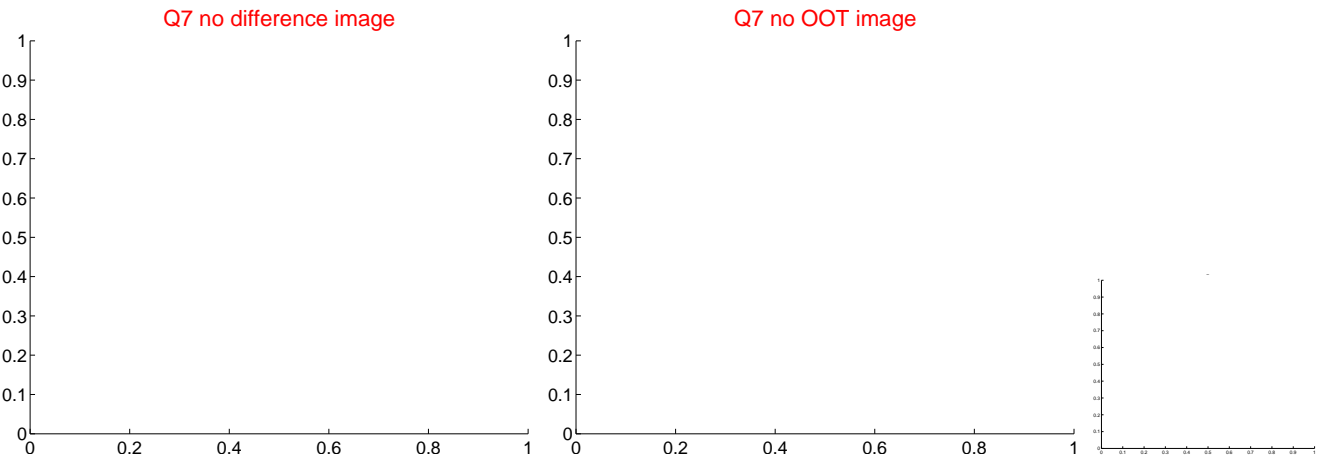
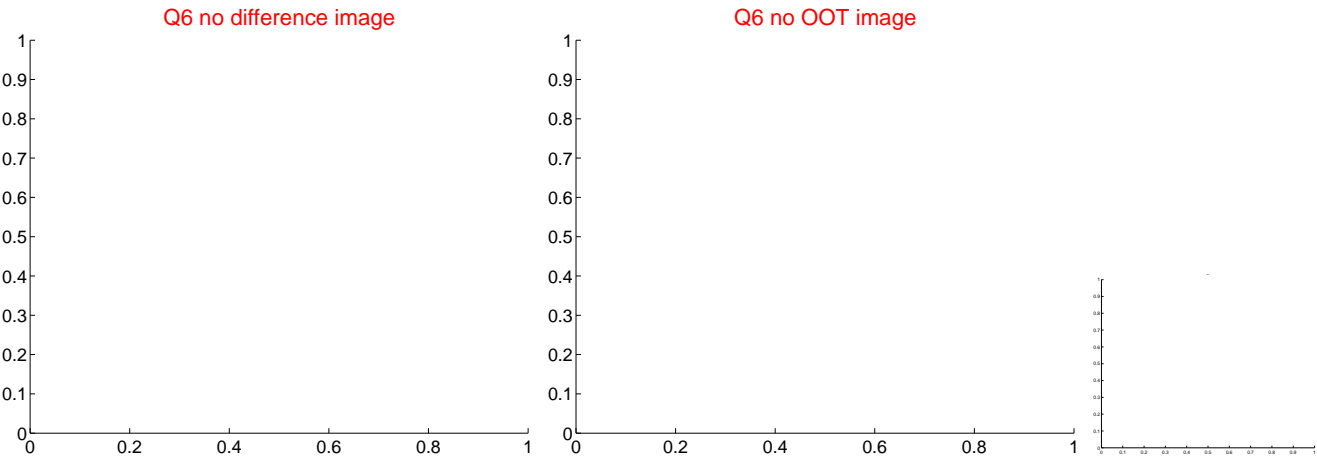
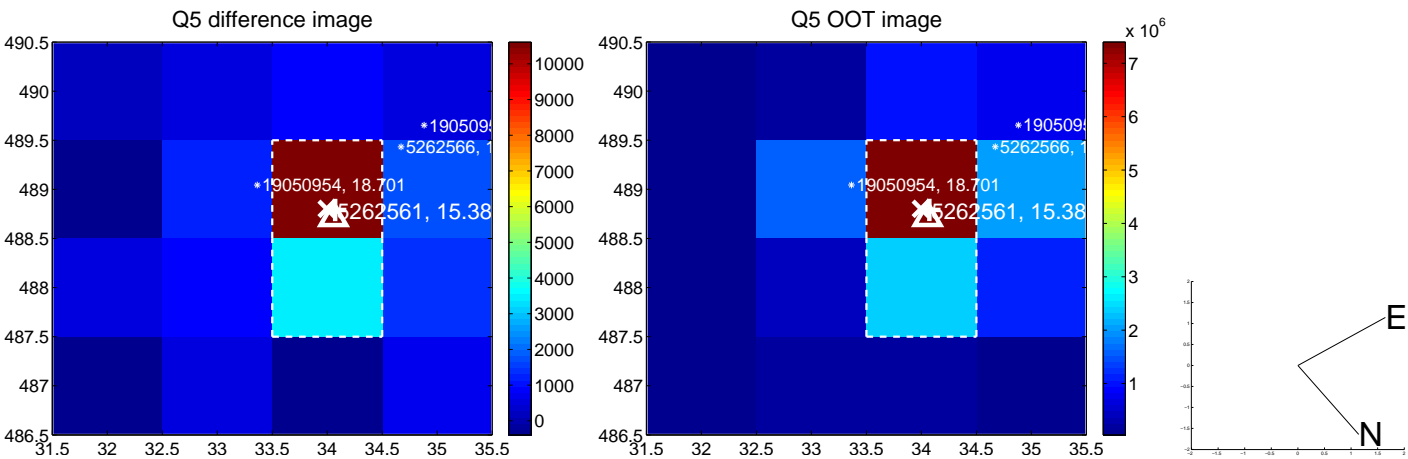


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

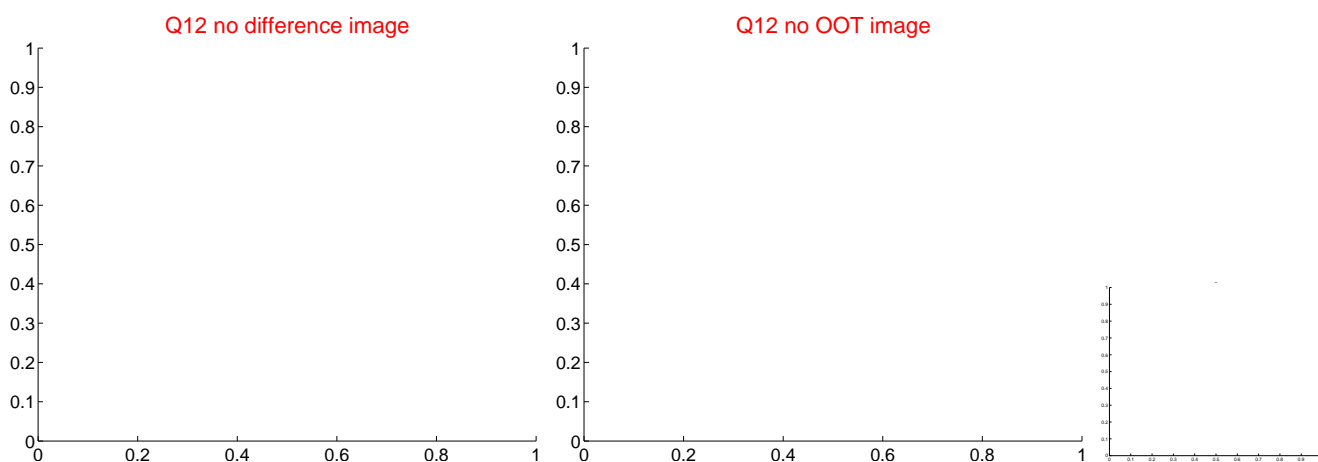
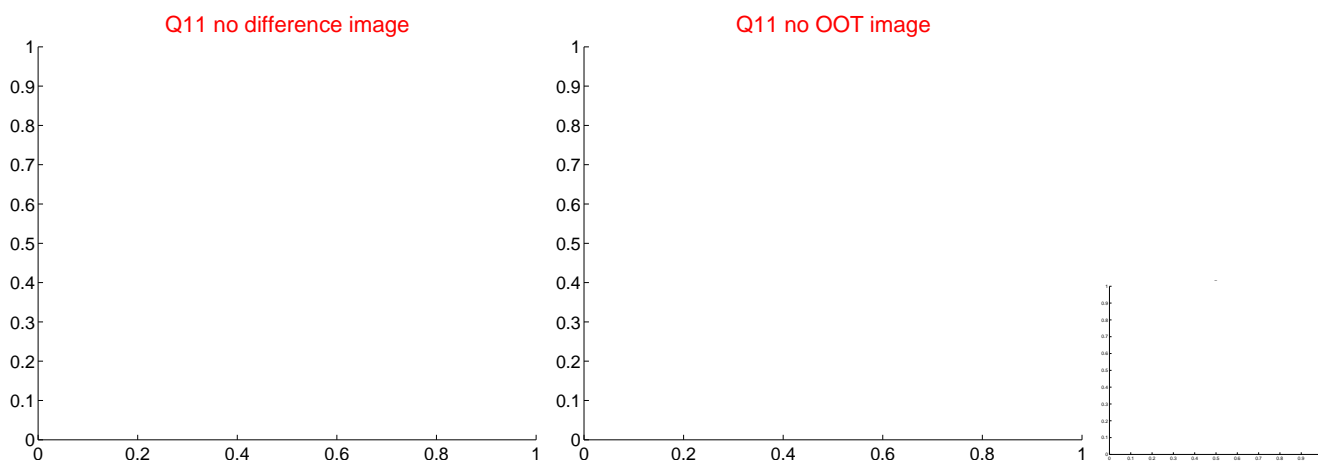
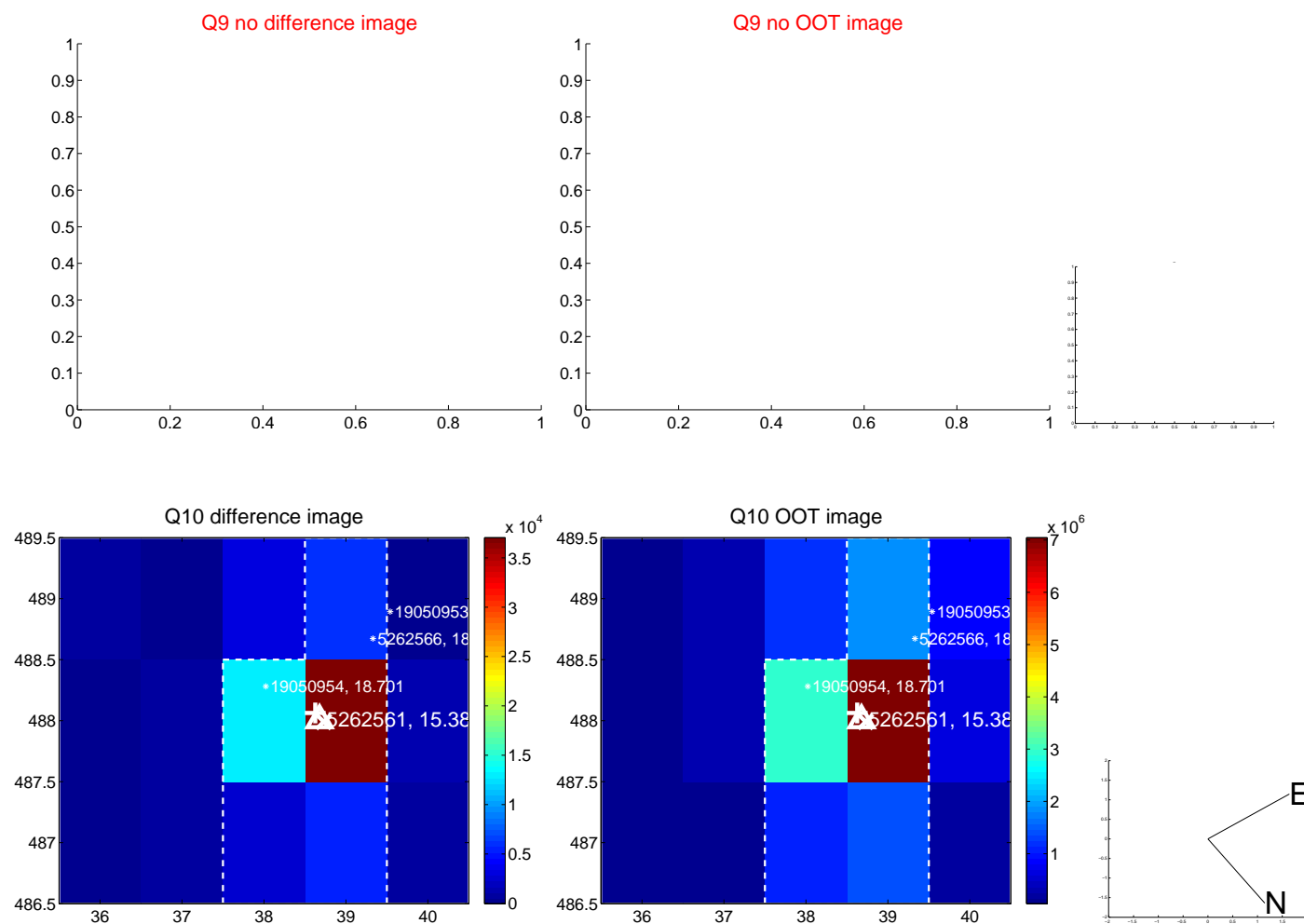
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



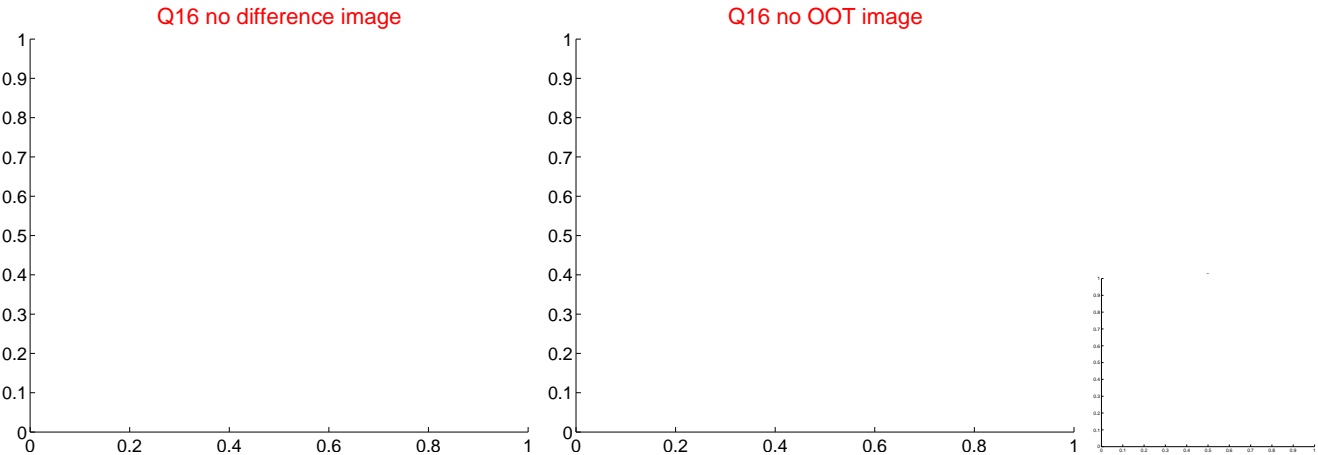
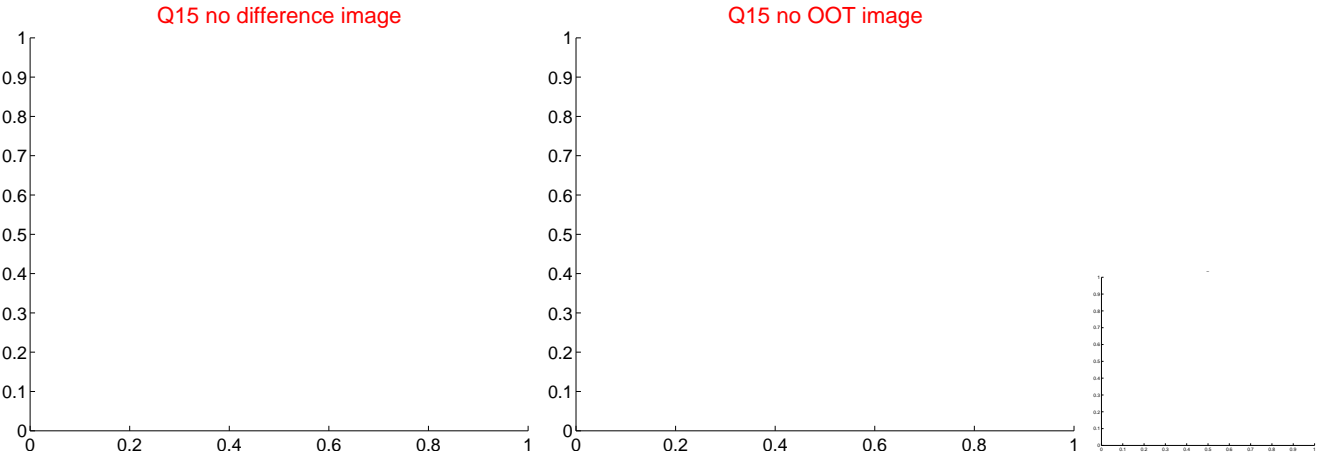
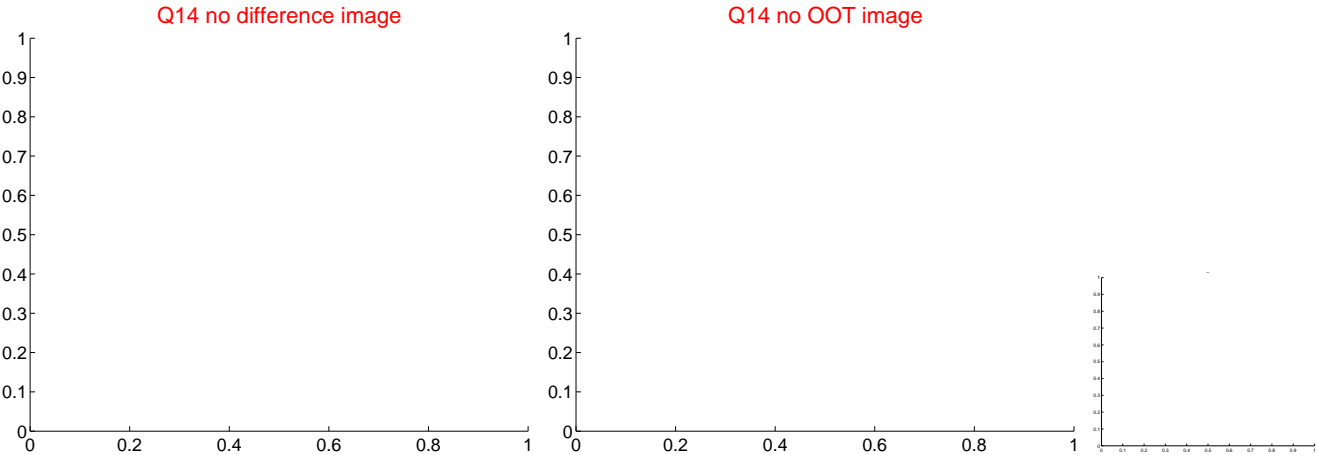
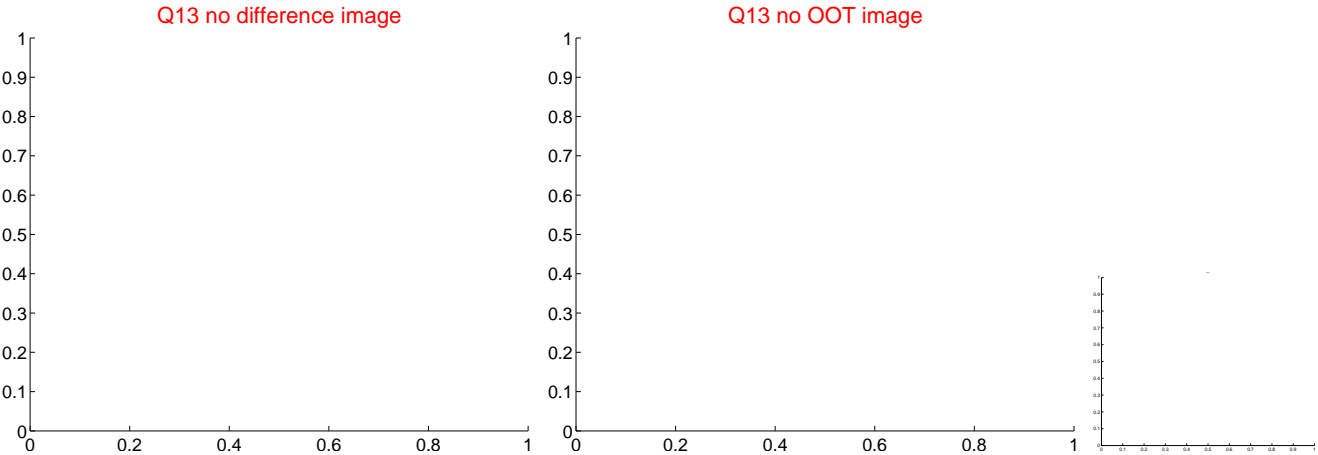
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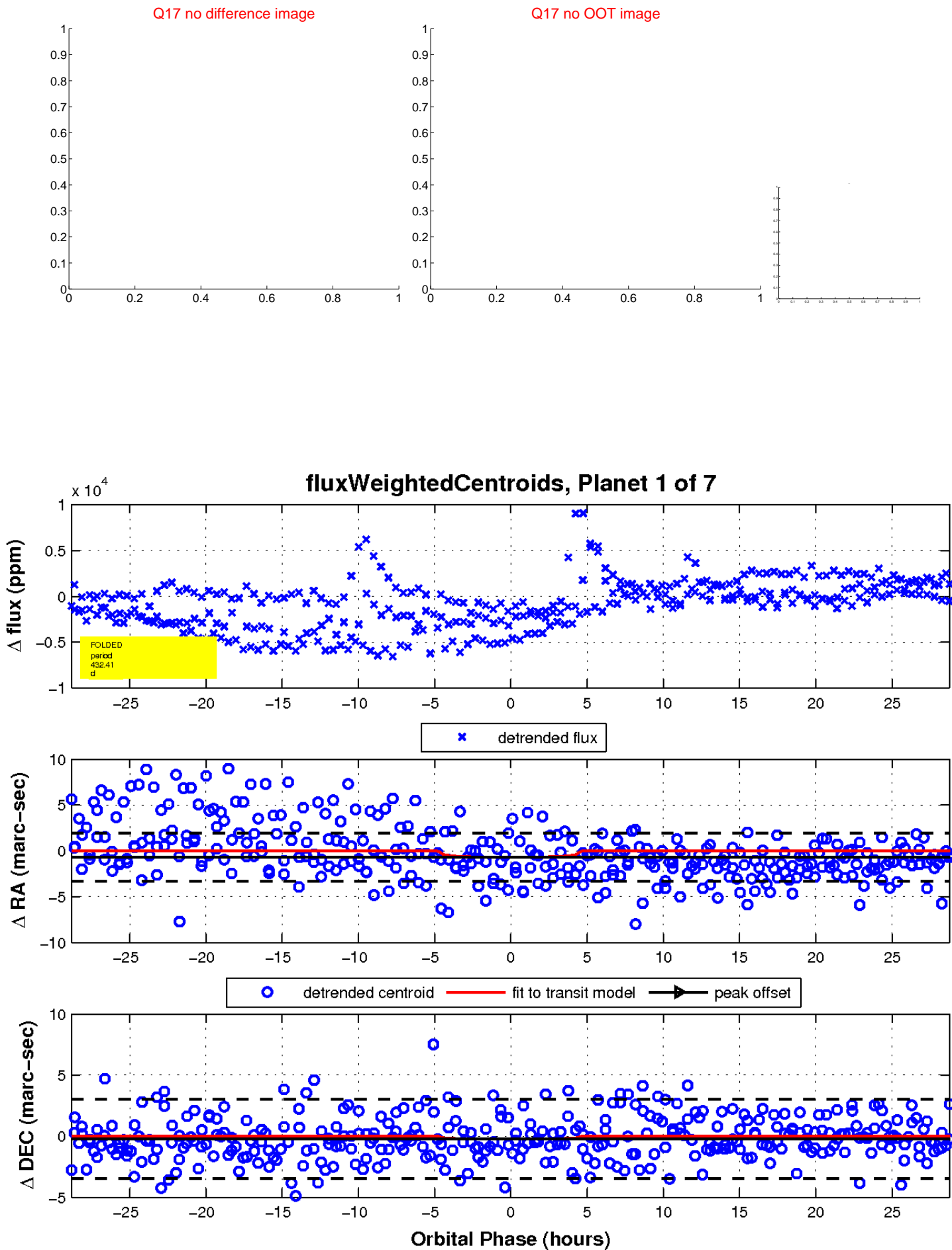
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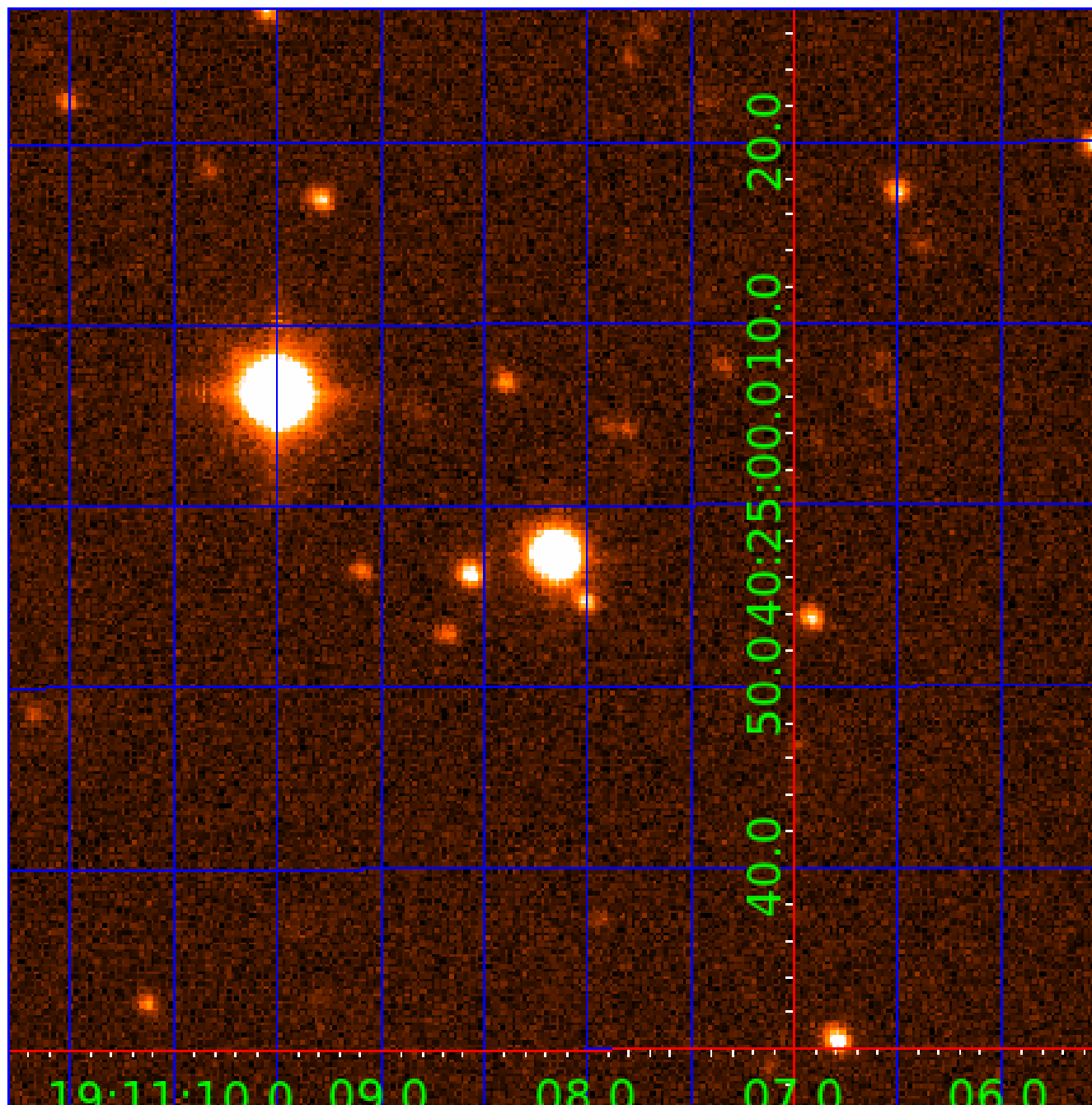


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 005262561

## 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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005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

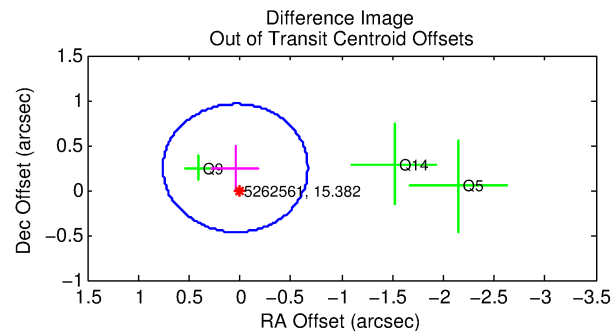
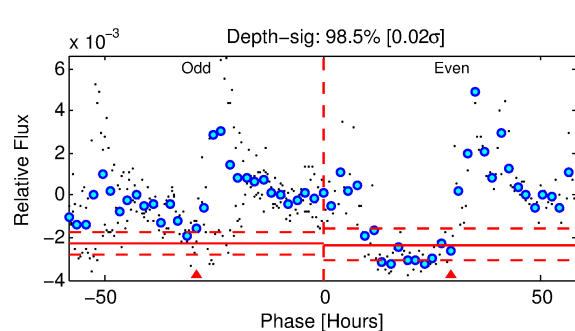
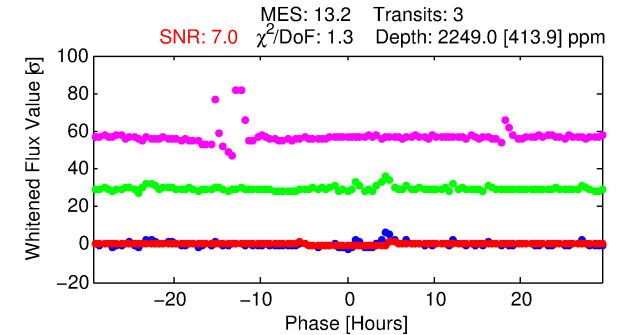
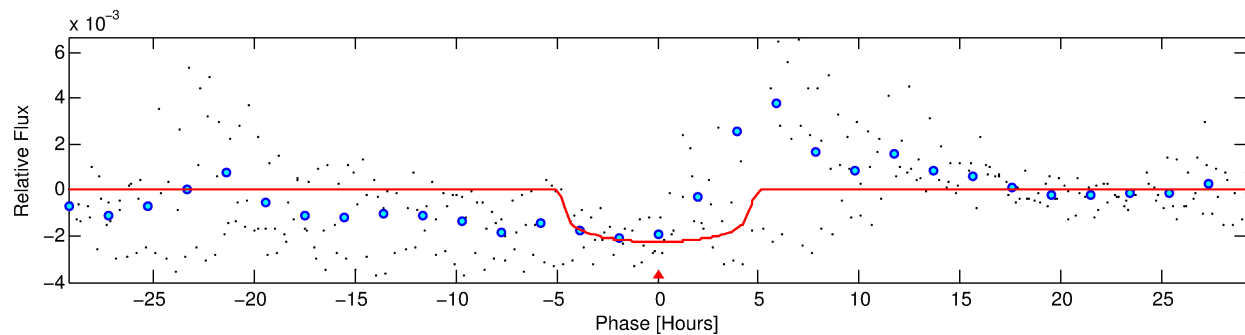
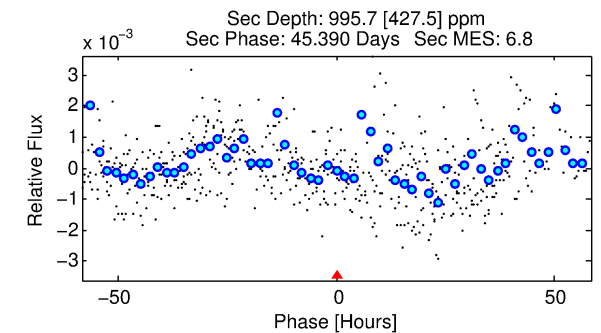
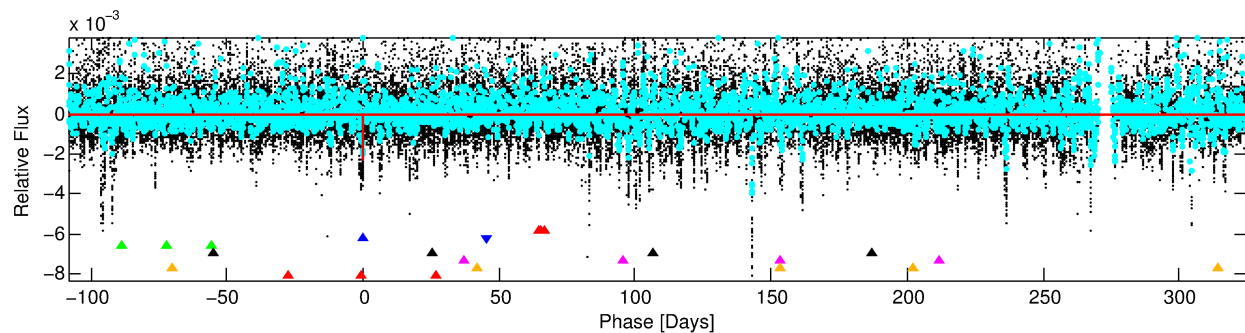
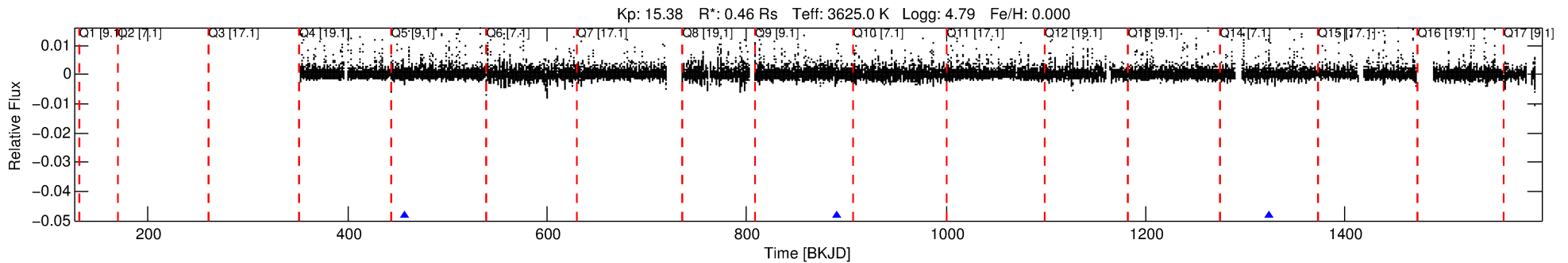
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 005262561-02

No Significant Match Found

# DV One-Page Summary

KIC: 5262561 Candidate: 2 of 7 Period: 433.280 d



## DV Fit Results:

Period = 433.28003 [0.00812] d  
Epoch = 456.6167 [0.0099] BKJD  
Rp/R\* = 0.0430 [0.0321]  
a/R\* = 350.01 [1091.65]  
b = 0.16 [19.58]  
Seff = 0.04 [0.01]  
Teq = 116 [4] K  
Rp = 2.14 [1.61] Re  
a = 0.8693 [0.0702] AU  
Ag = 90490.55 [140858.02] [0.64σ]  
Teffp = 3106 [1207] K [2.48σ]

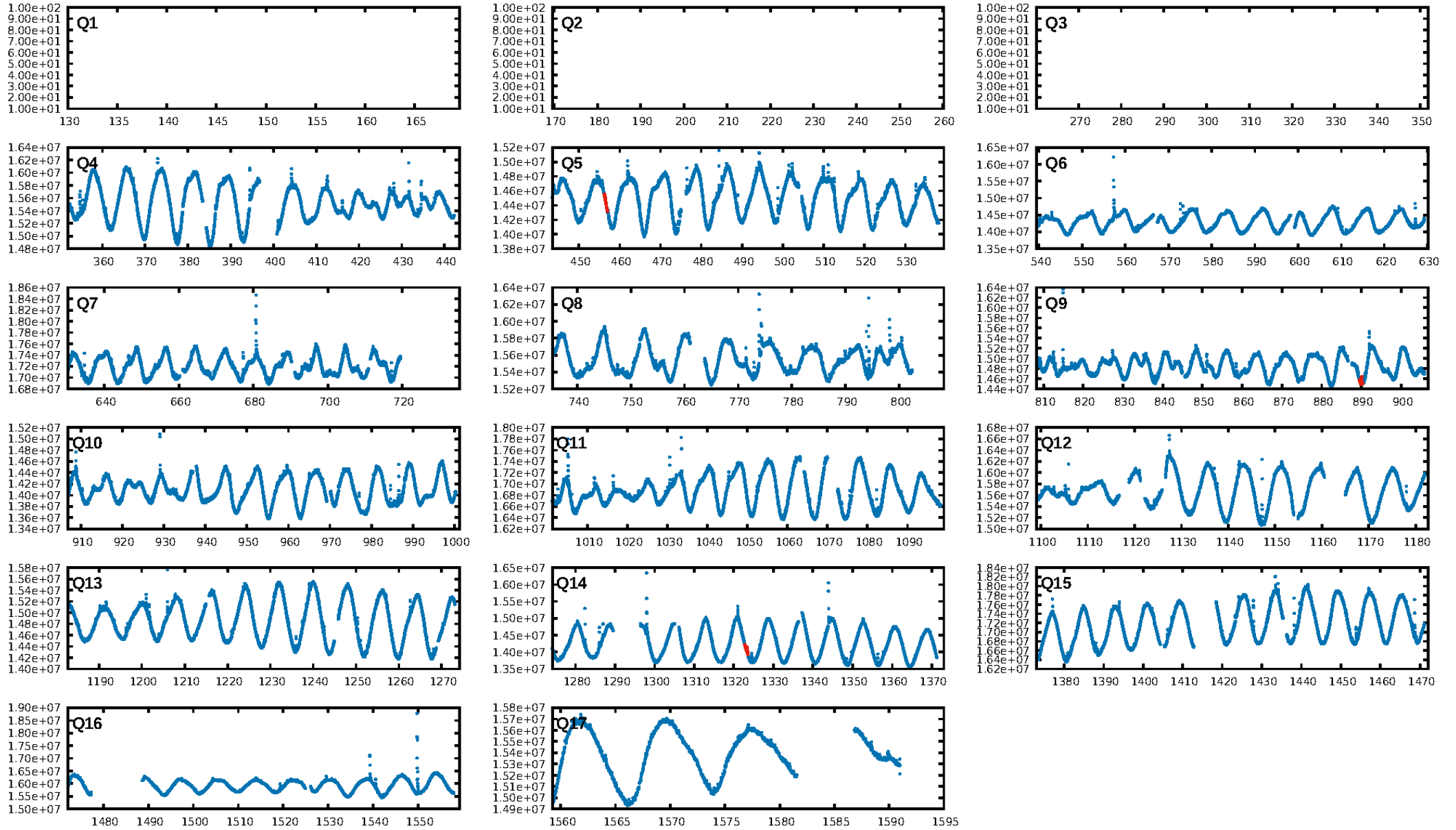
## DV Diagnostic Results:

ShortPeriod-sig: 87.4% [1.53σ]  
LongPeriod-sig: 100.0% [39.84σ]  
ModelChiSquare2-sig: 0.9%  
ModelChiSquareGof-sig: 90.7%  
**Bootstrap-pfa: 9.53e-11**  
RollingBand-fgt: 1.00 [3/3]  
**GhostDiagnostic-chr: 0.6089**  
Centroid-sig: 22.0%  
Centroid-so: 0.485 arcsec [0.85σ]  
OotOffset-rm: 0.249 arcsec [1.05σ]  
KicOffset-rm: 0.364 arcsec [1.41σ]  
OotOffset-st: 1/0/0/2 [3]  
KicOffset-st: 1/0/0/2 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 0.67 [2/3]

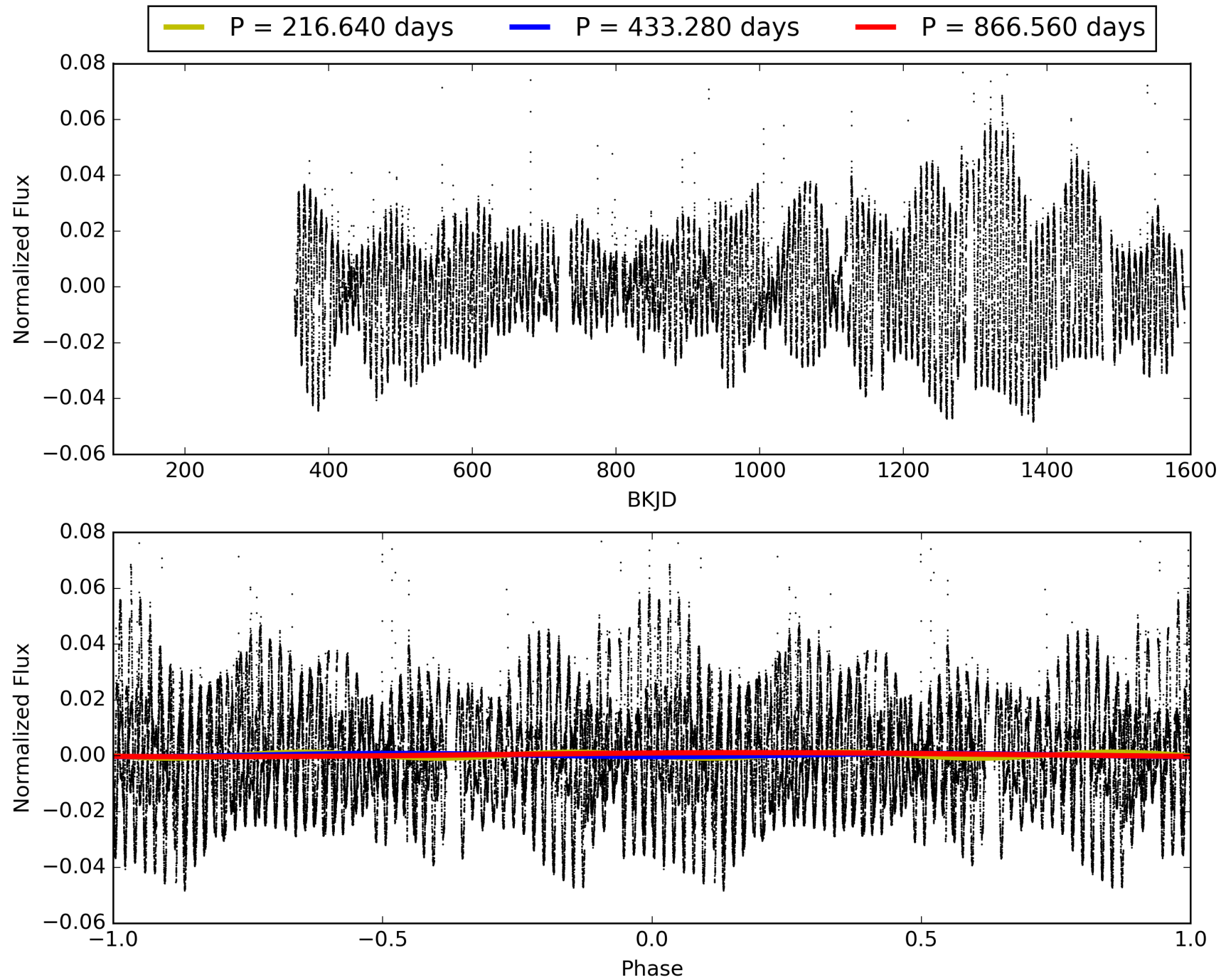
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 22:34:46 Z

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

# TCE 005262561-02, PDC Light Curves

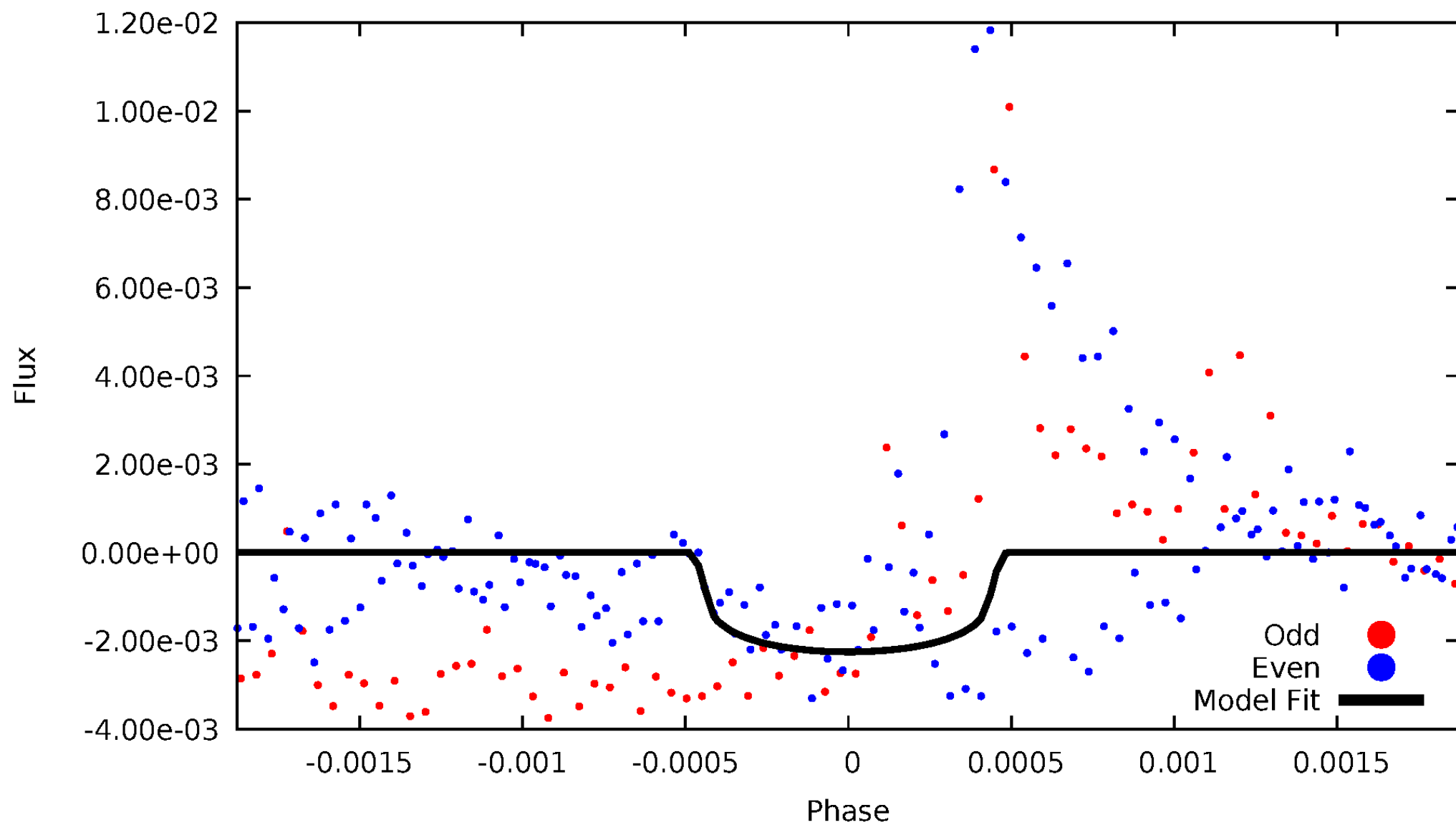


TCE 005262561-02



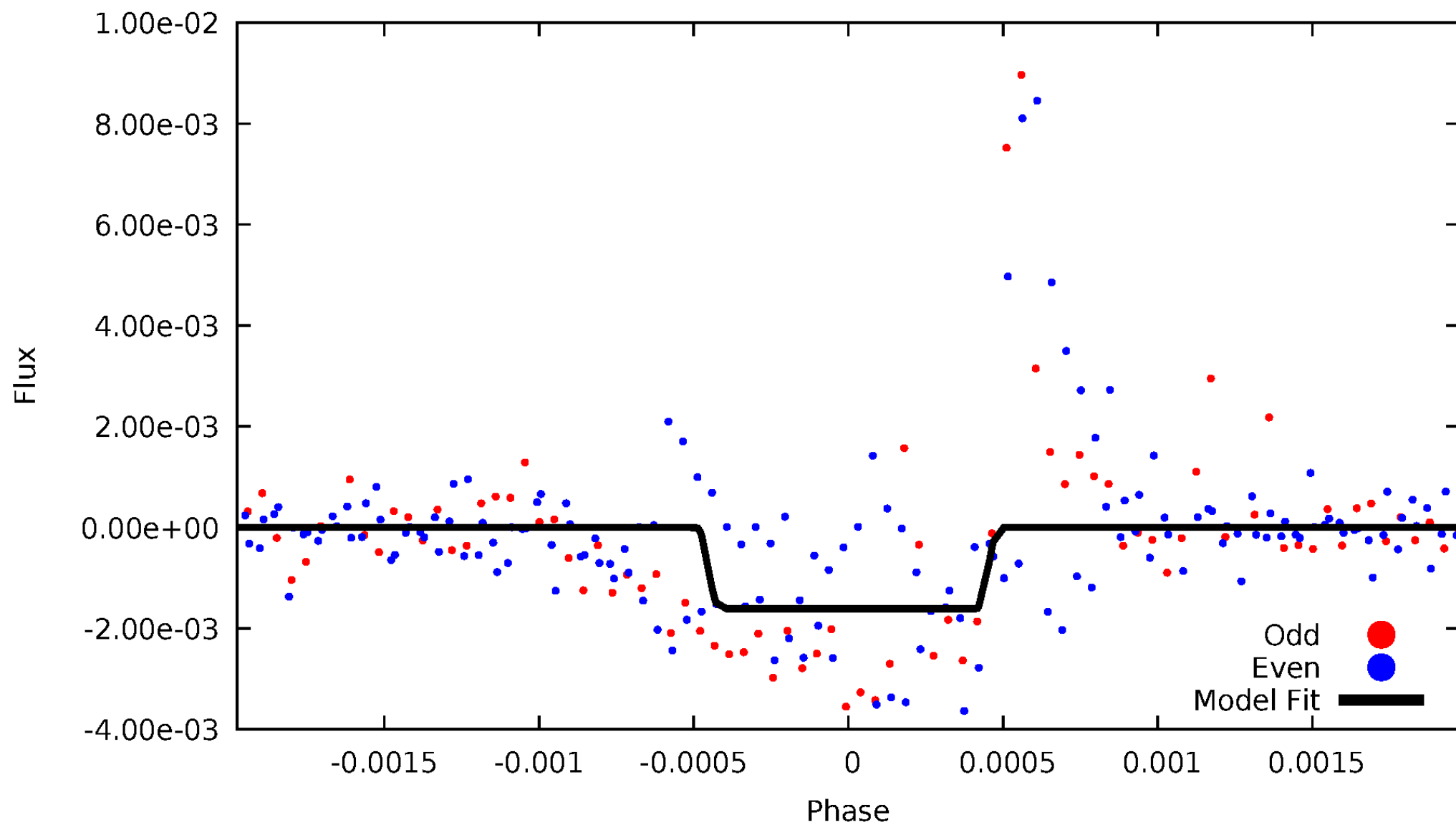
# DV Odd/Even

TCE 005262561-02



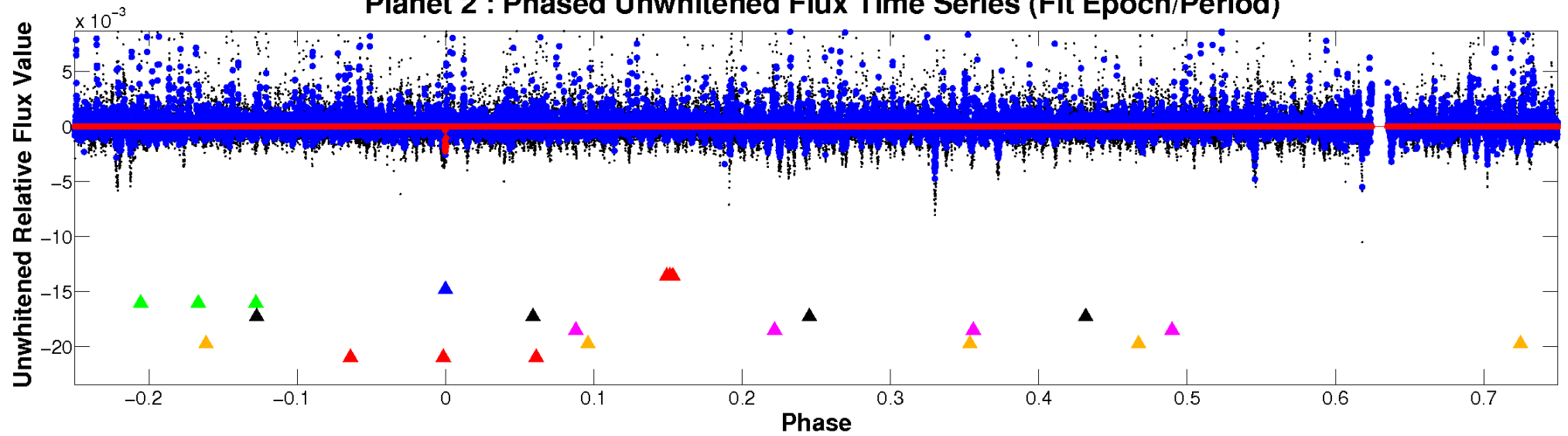
# ALT Odd/Even

TCE 005262561-02

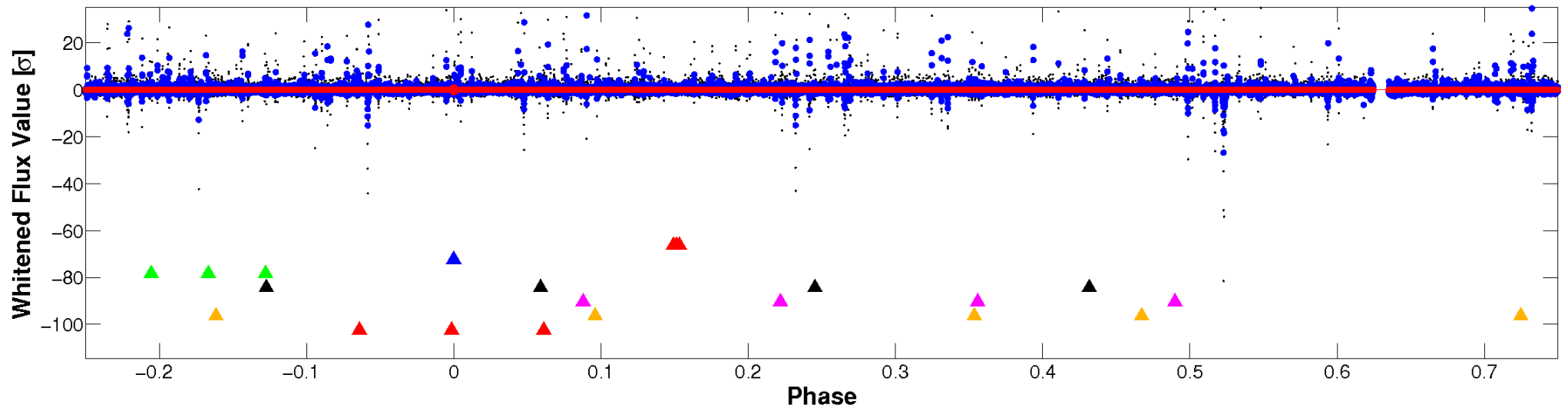


# Non-Whitened Vs. Whitened Light Curve

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

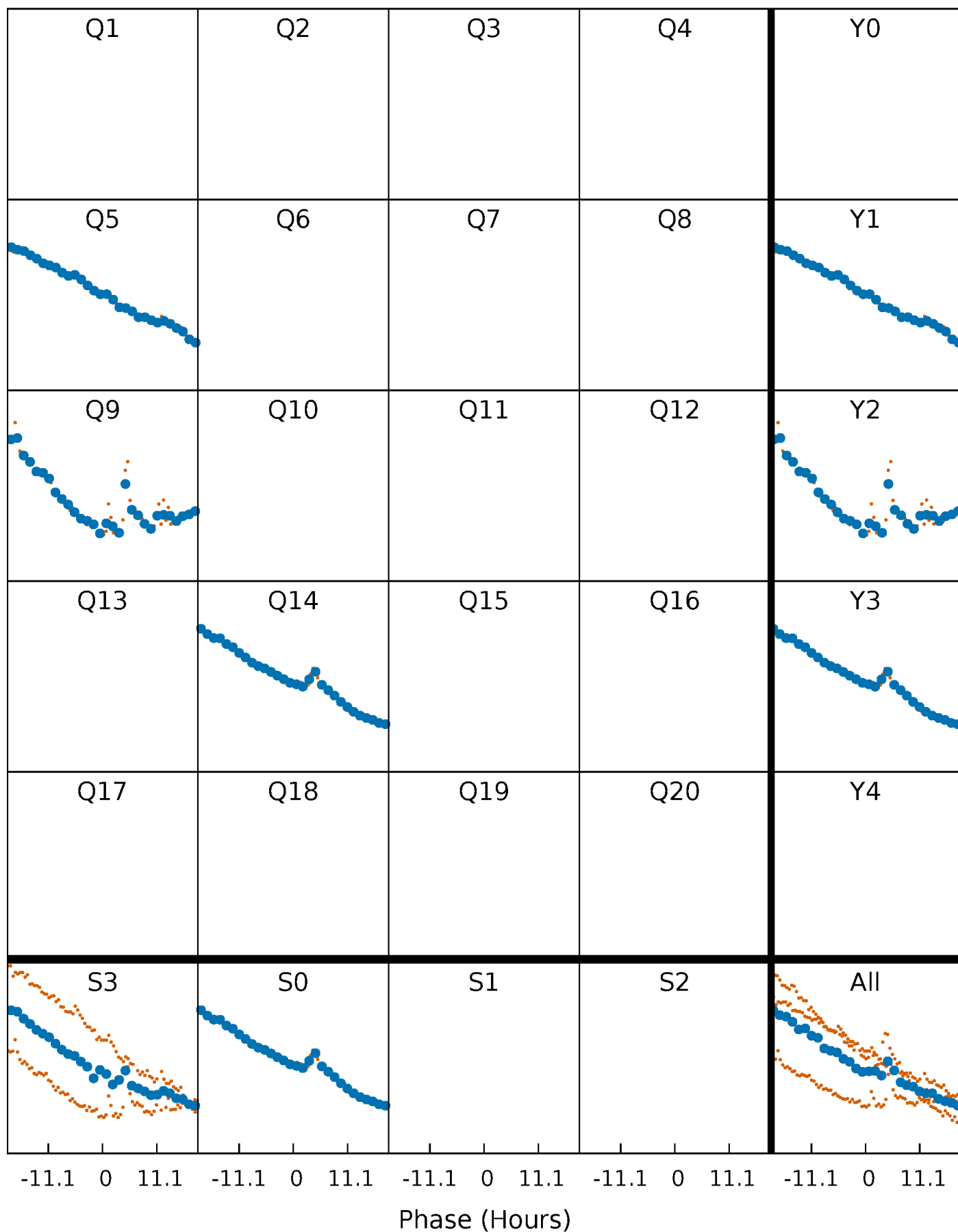


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



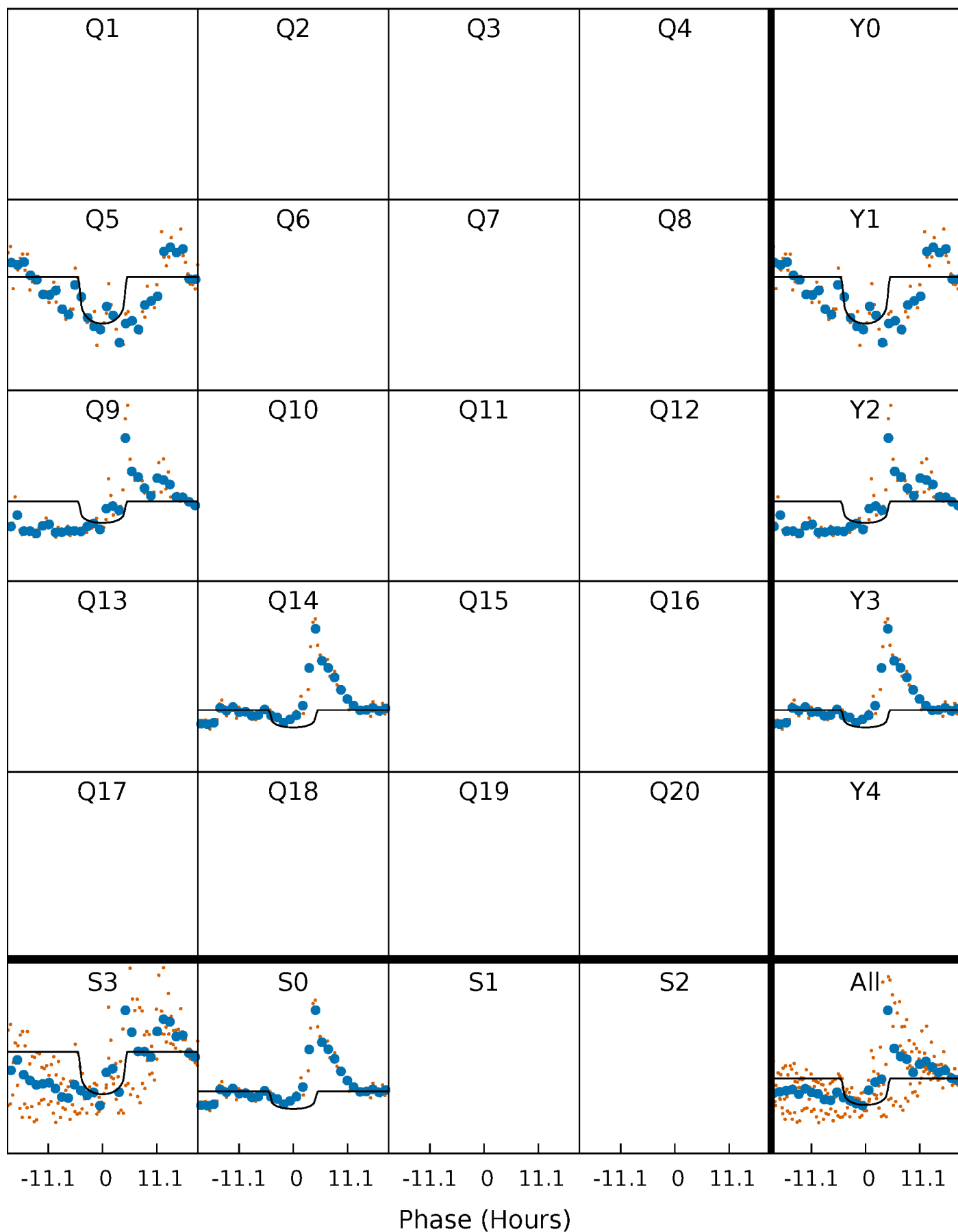
# PDC Quarter-Phased Transit Curves

TCE 005262561-02     $P=433.280026$  Days     $T_0=456.616656$  (BKJD)



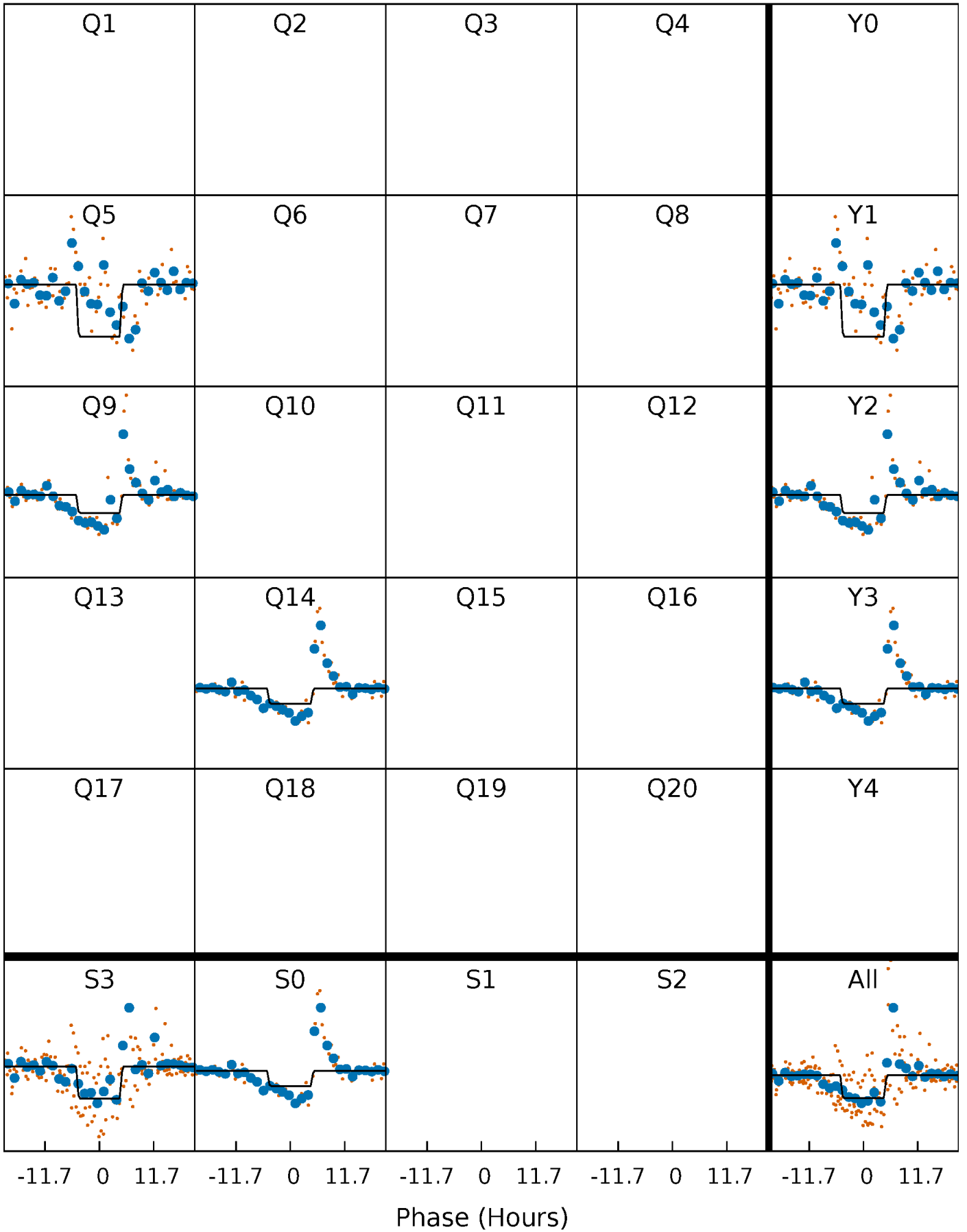
# DV Quarter-Phased Transit Curves

TCE 005262561-02     $P=433.280026$  Days     $T_0=456.616656$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

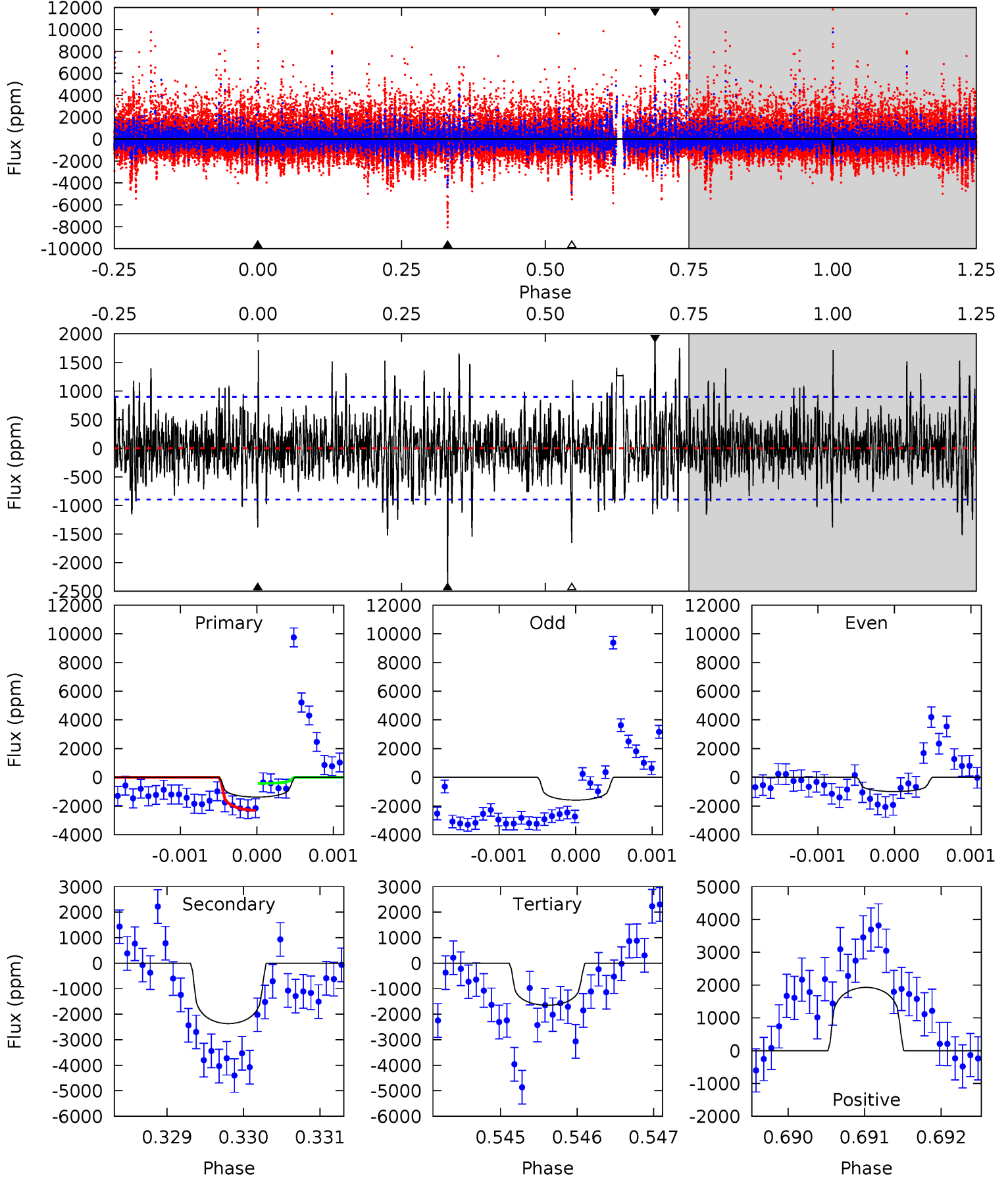
TCE 005262561-02     $P=433.232339$  Days     $T_0=456.636521$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-02, P = 433.280026 Days, E = 23.336630 Days

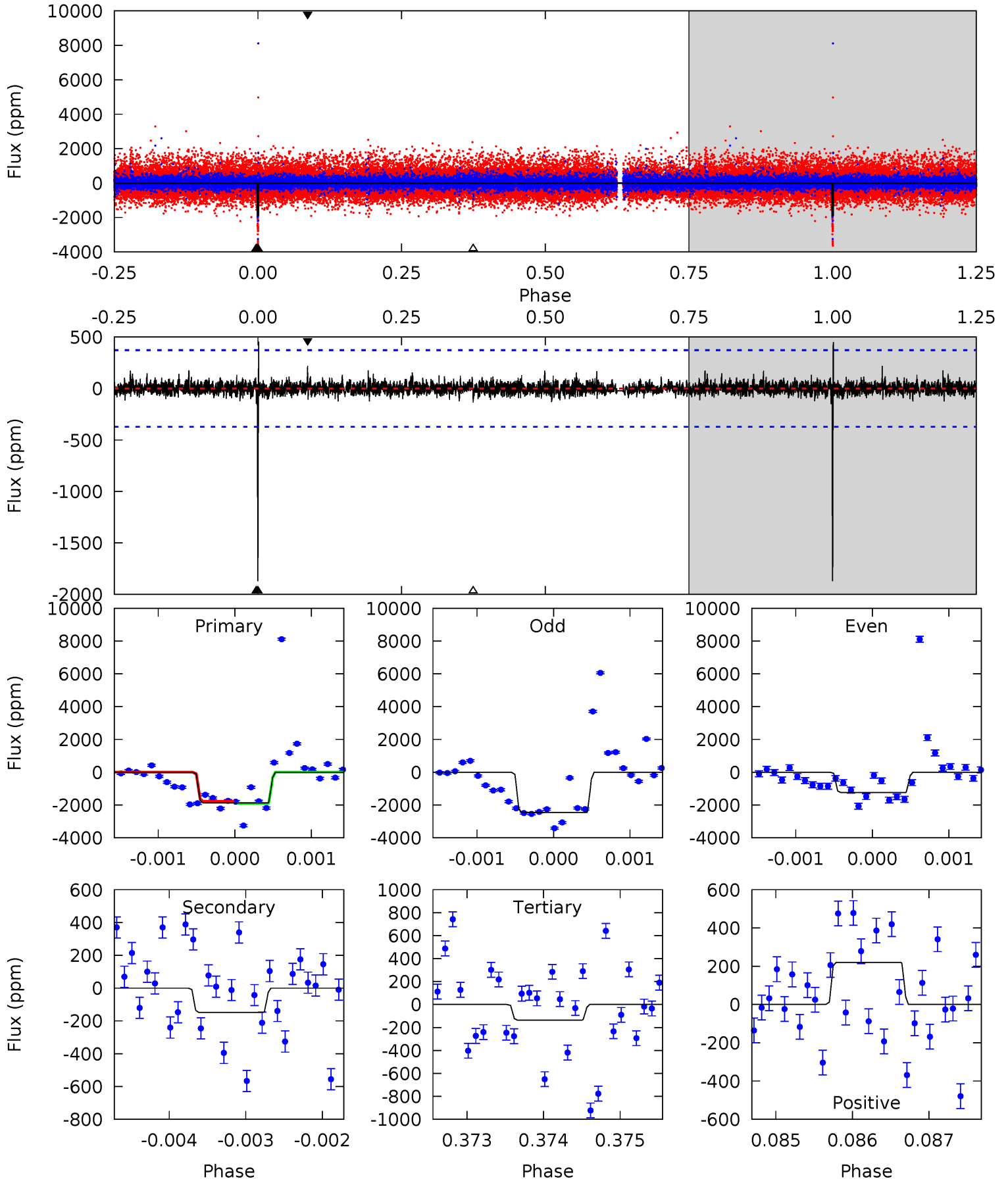
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.39	14.4	10.0	11.7	5.45	3.30	2.45	-1.63	-3.34	4.38	2.67	1.22	0.56	0.45	5.75



# Alt Model-Shift Uniqueness Test

005262561-02,  $P = 433.232339$  Days,  $E = 23.404182$  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
27.5	2.17	1.98	3.23	5.46	3.31	0.52	25.5	24.3	0.19	-1.06	7.72	0.77	0.19	0.93



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-02 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-2367 \pm 164$	$2.30^{+1.56}_{-1.30}$	$161^{+4}_{-4}$	$3661^{+1366}_{-536}$	$186668^{+782818}_{-120660}$
Alt.	$-148 \pm 68$	$2.27^{+1.43}_{-1.34}$	$161^{+4}_{-4}$	$2487^{+670}_{-317}$	$11403^{+57836}_{-7962}$

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

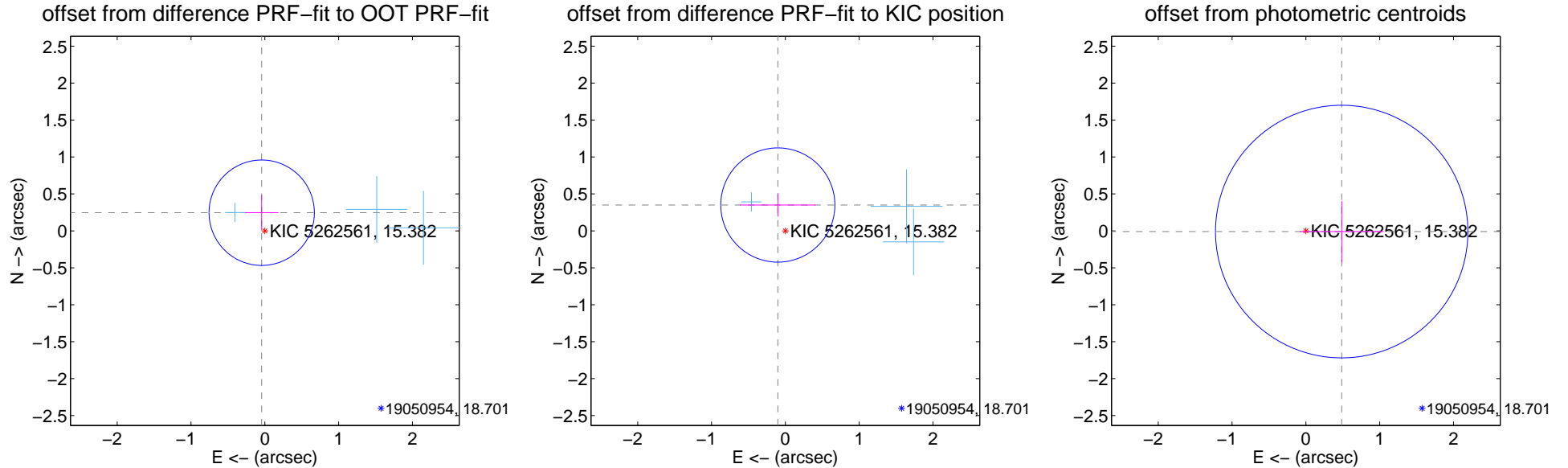
## DV Centroid Data

Supplemental centroid analysis for 005262561-02. Kepler magnitude: 15.38. Transit SNR 7.05

There are 3 quarters with good PRF difference image offsets

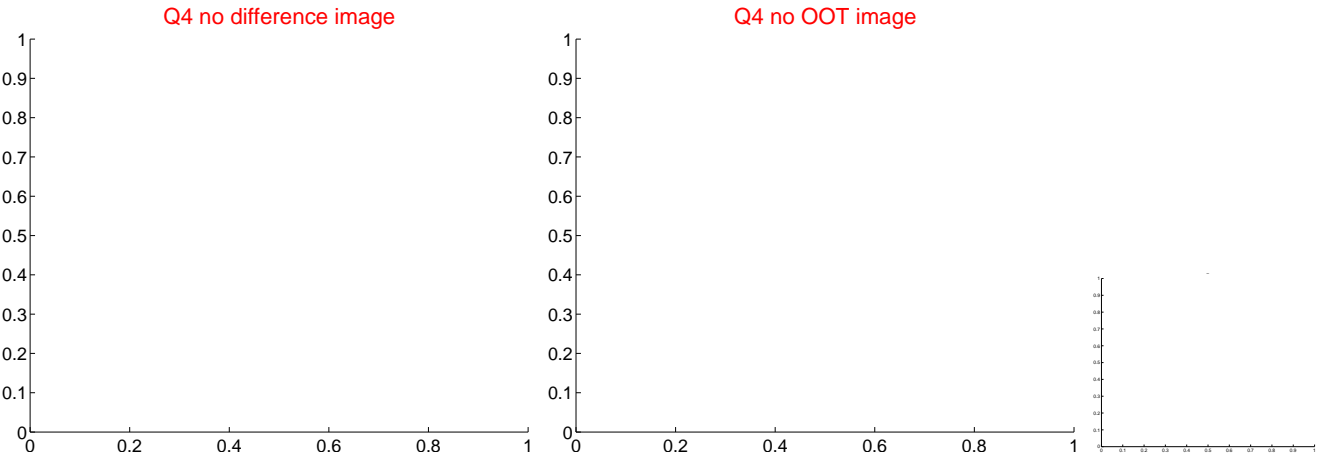
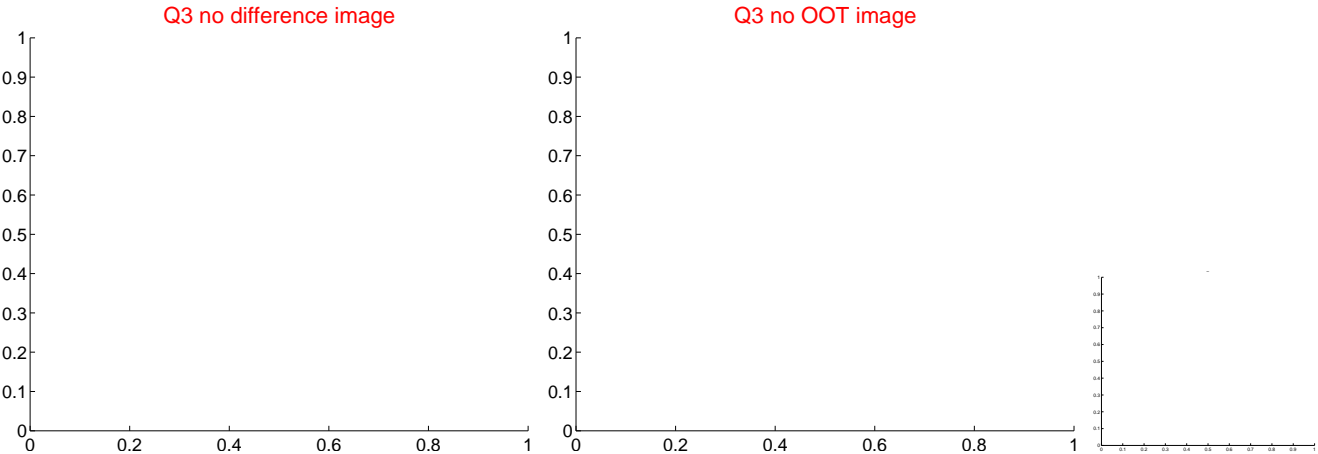
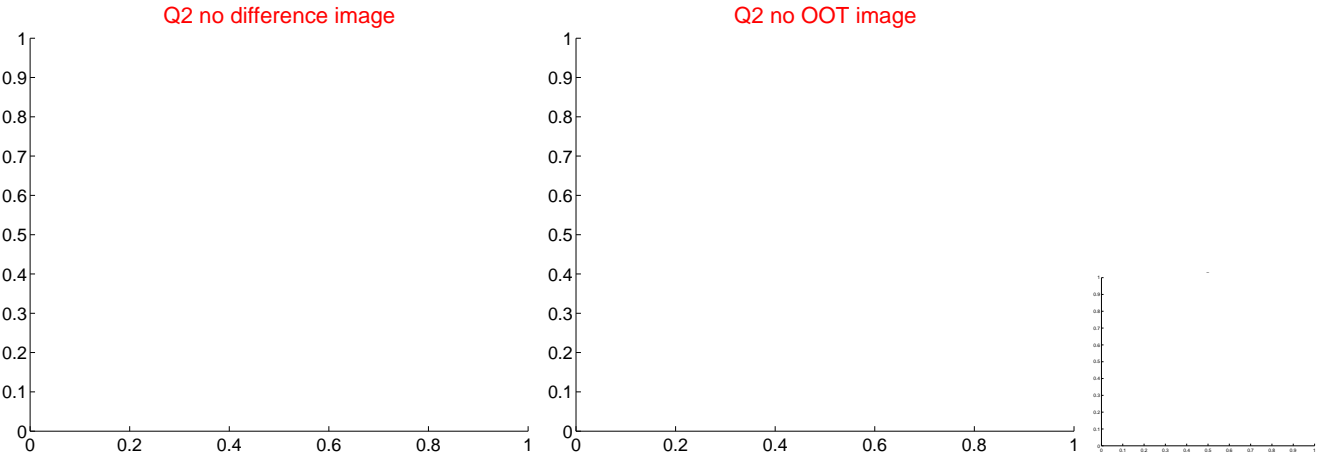
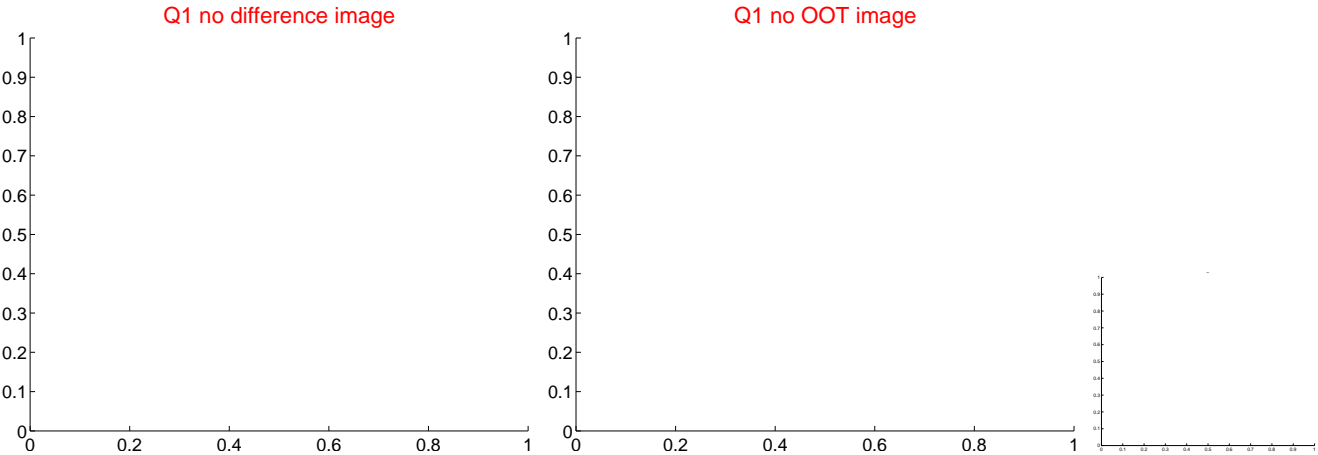
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.249 \pm 0.238$	1.05	$0.042 \pm 0.228$	$0.246 \pm 0.238$
PRF-fit source offset from KIC position	$0.364 \pm 0.258$	1.41	$0.102 \pm 0.513$	$0.350 \pm 0.156$
photometric centroid source offset	$0.49 \pm 0.57$	0.85	$-0.49 \pm 0.57$	$-0.01 \pm 0.41$

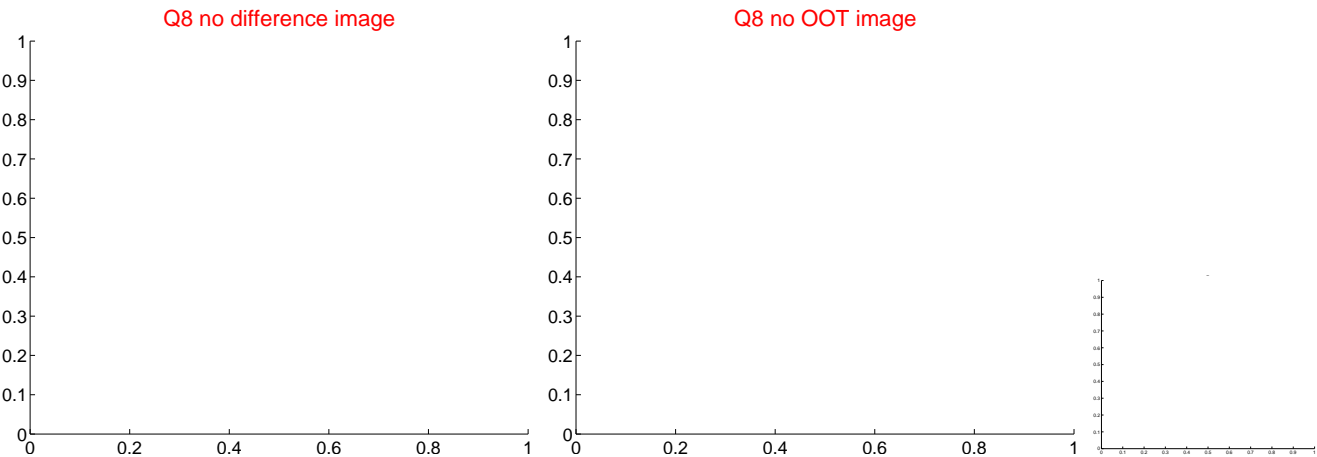
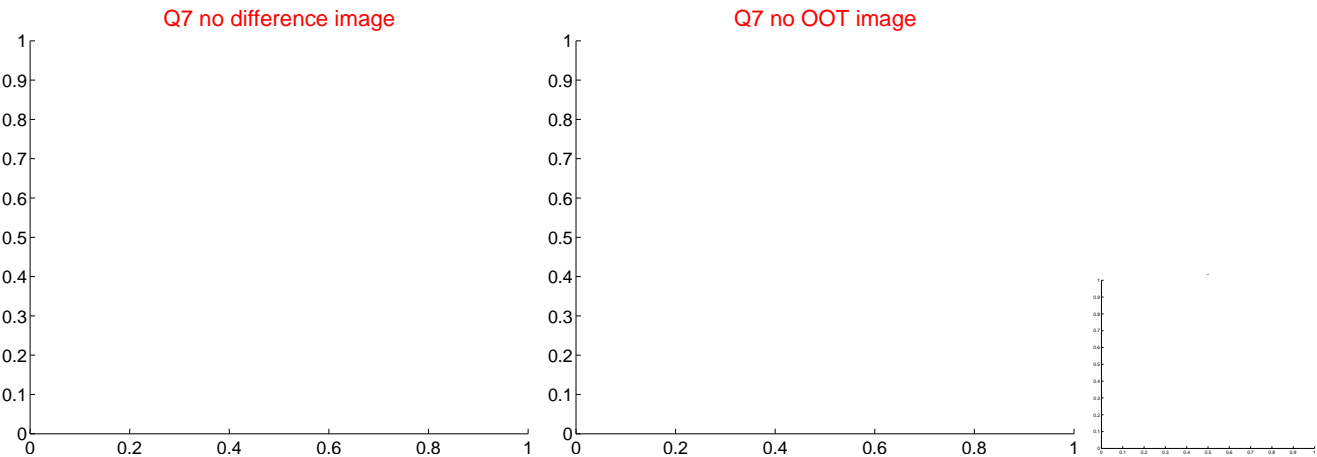
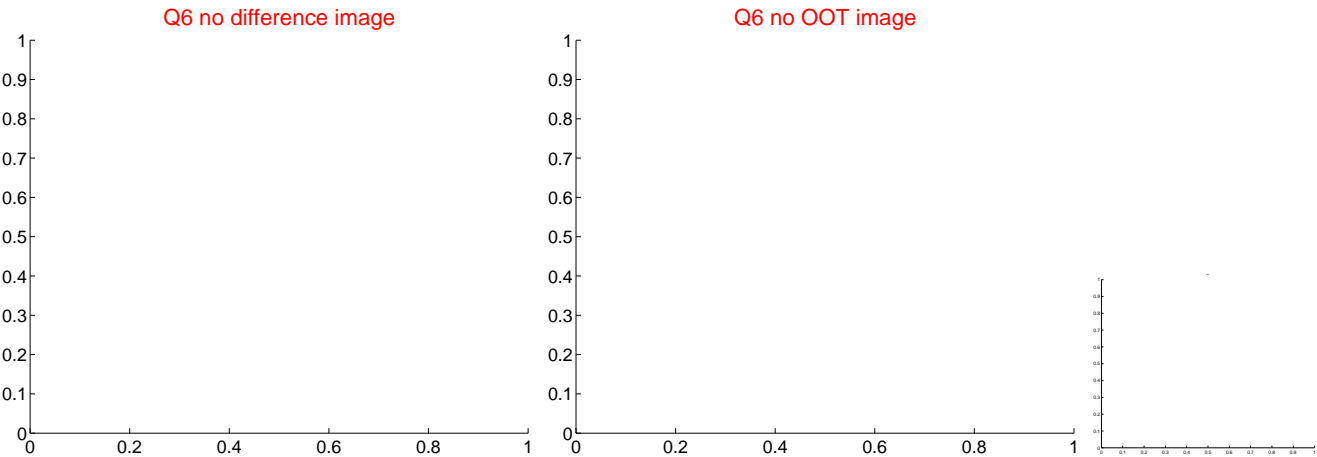
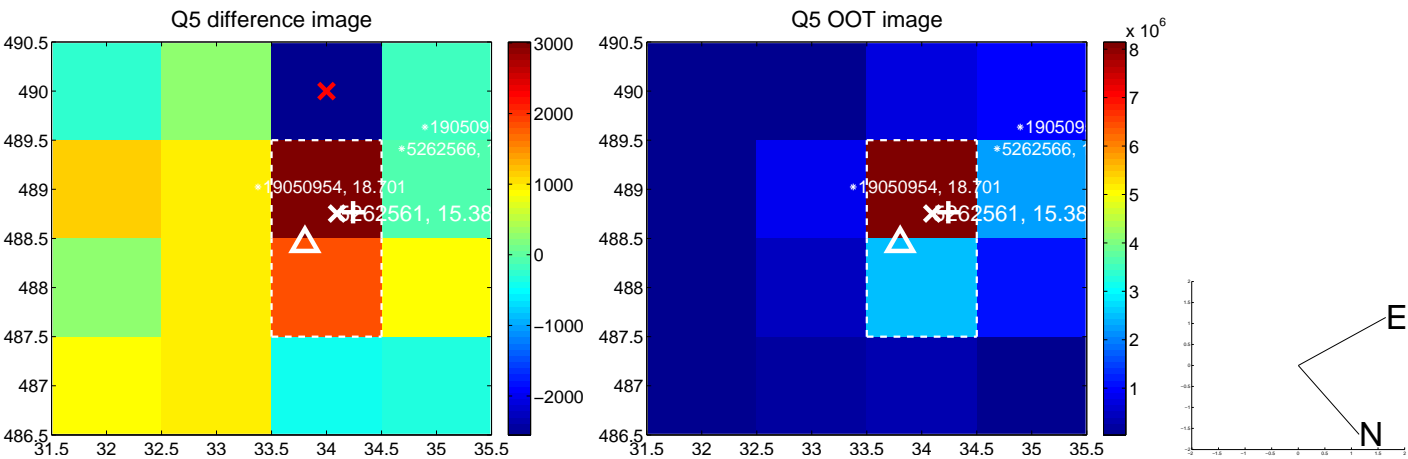


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

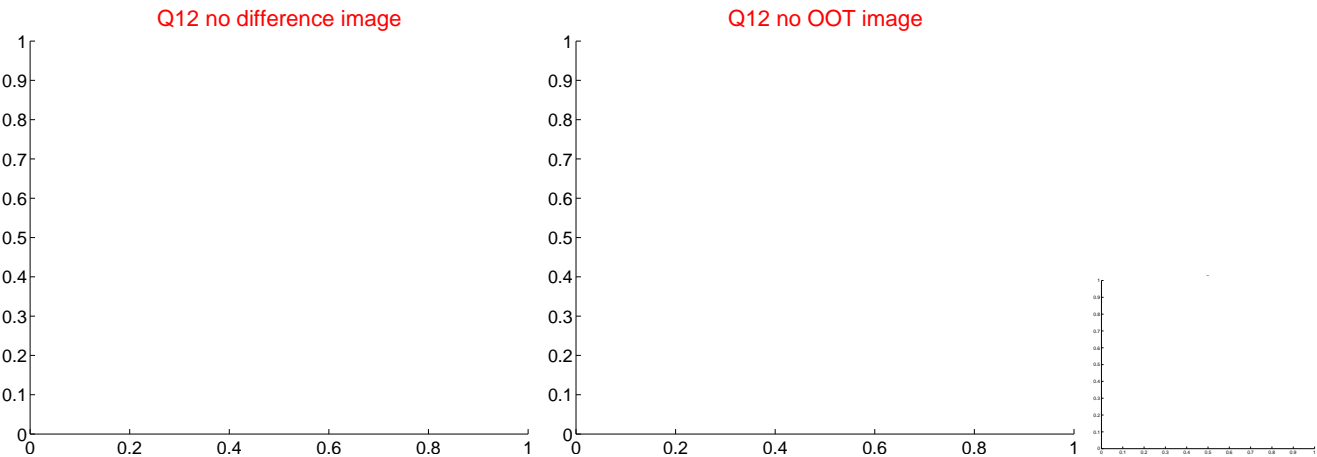
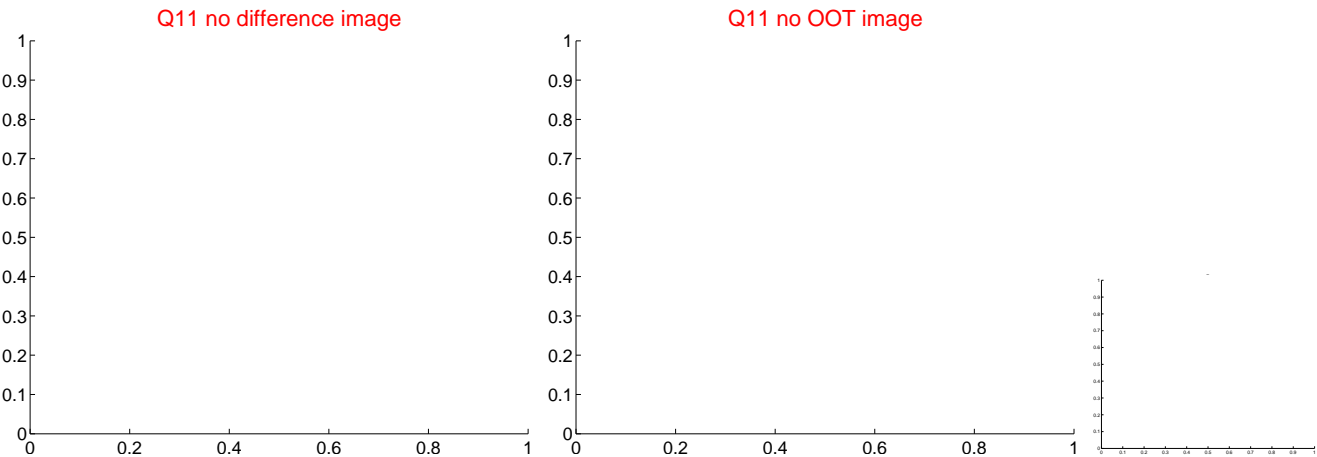
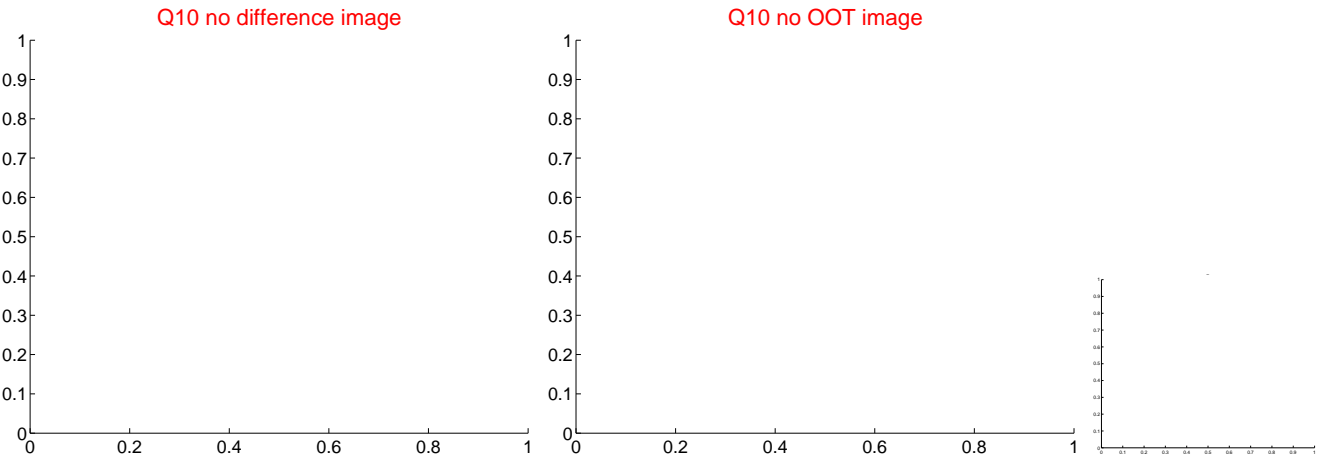
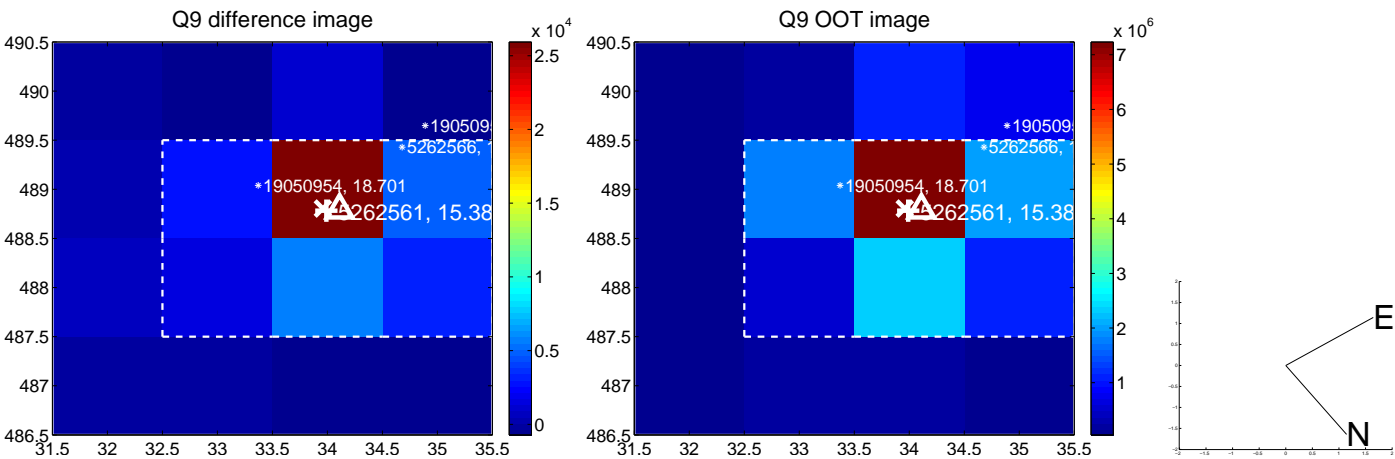
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



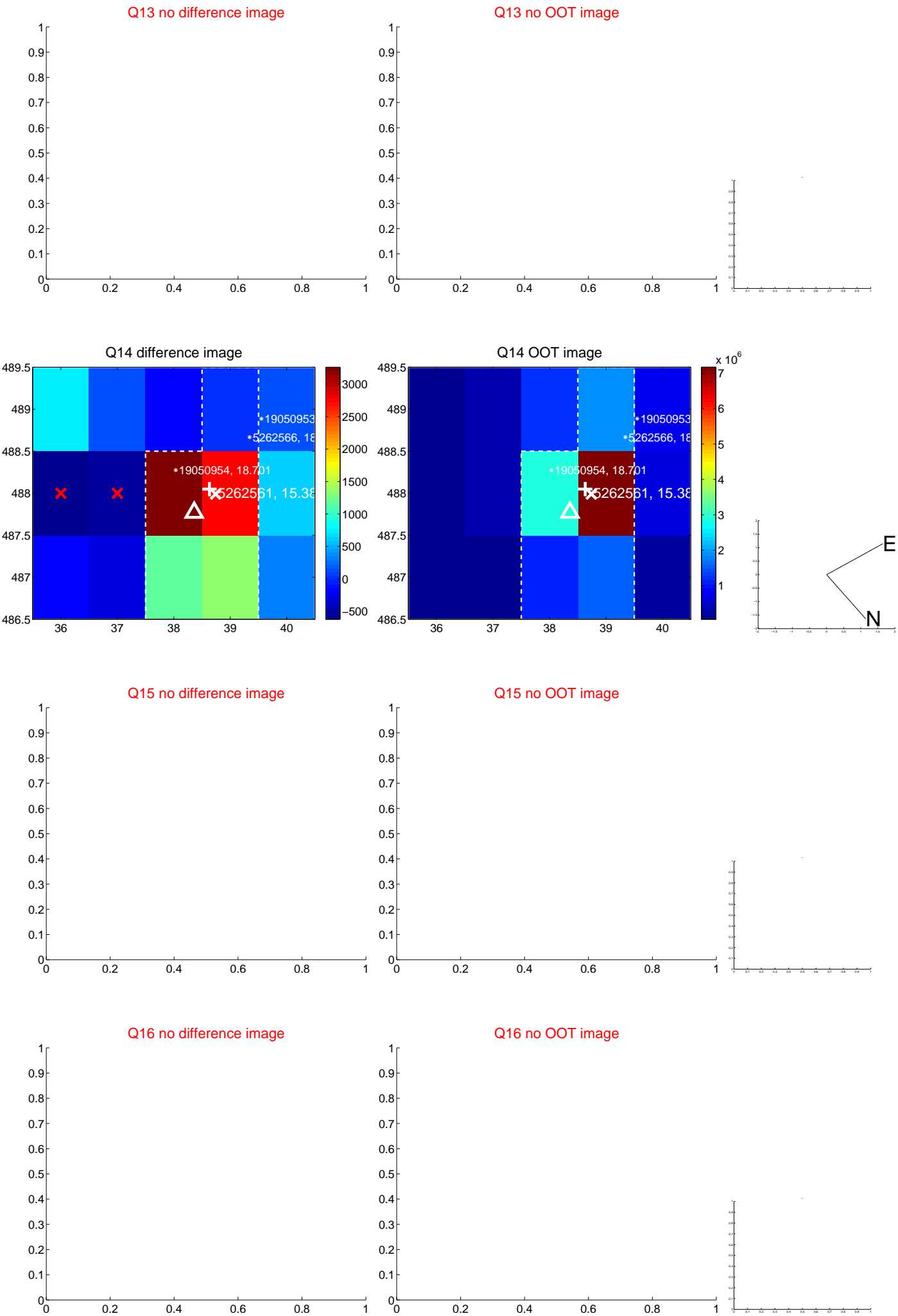
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



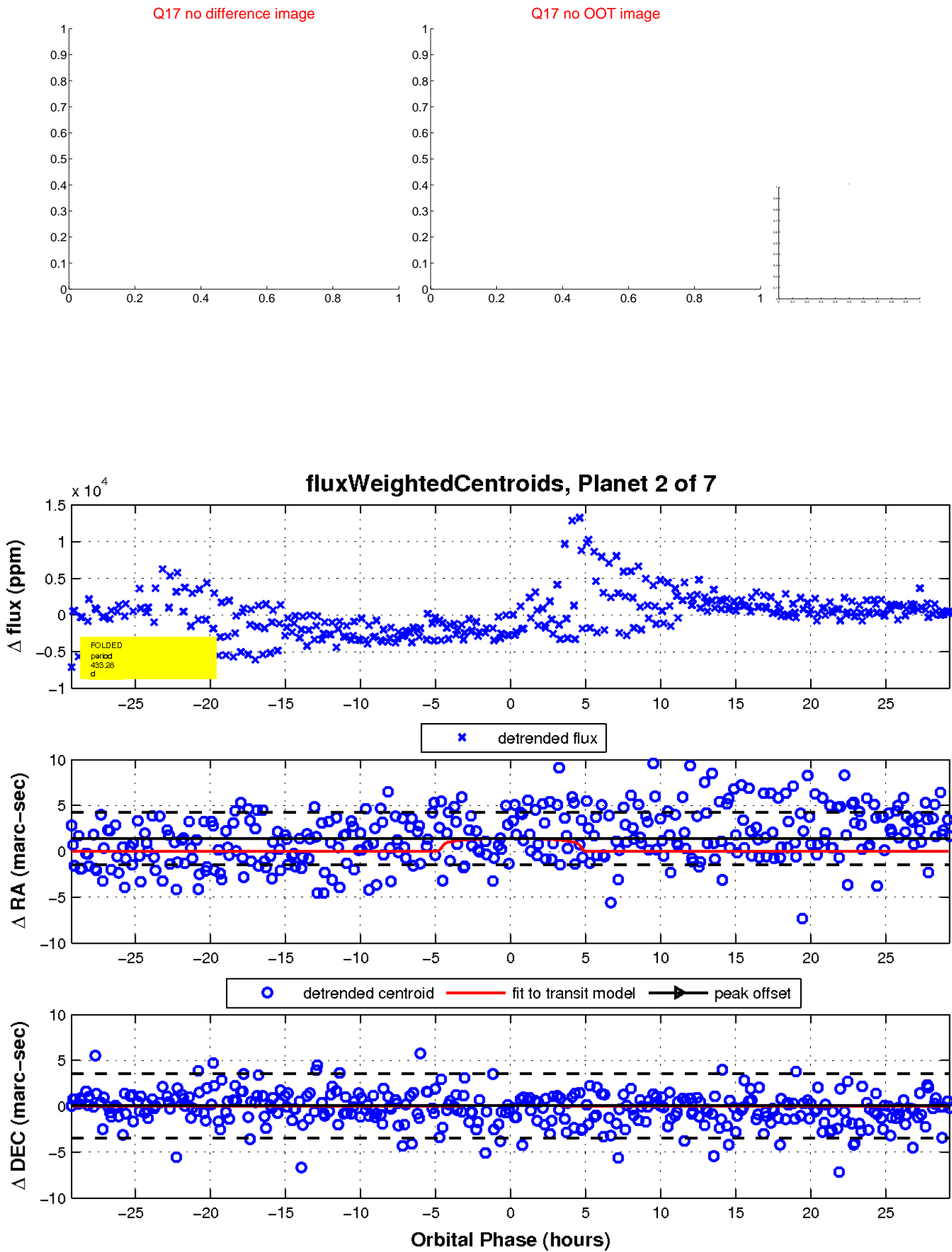
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

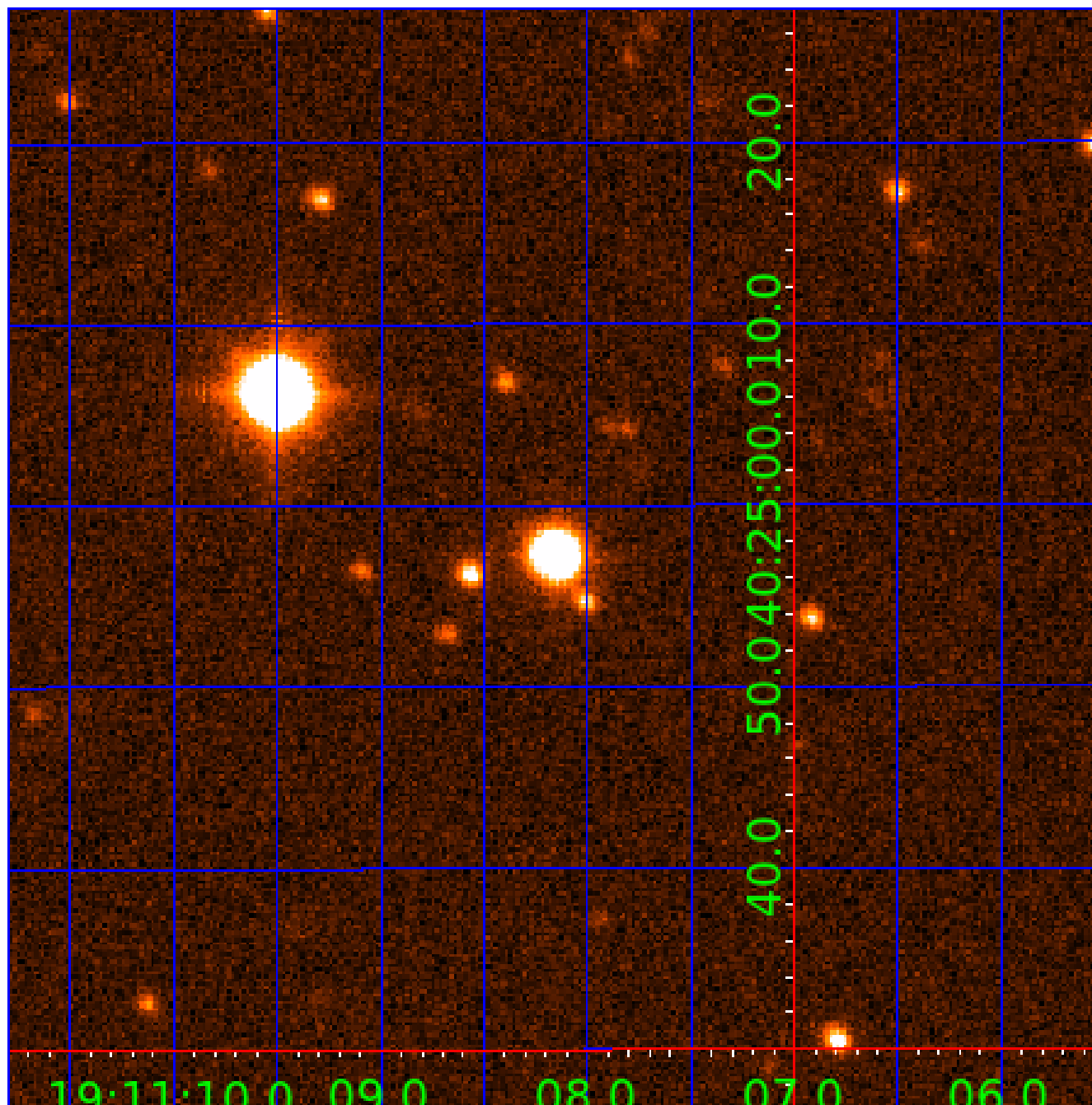


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 005262561

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005262561-01	OBS	No	432.405002	523.025887	2650.6	9.647	15.6	8.9	0.46	3625	2.34	0.04
005262561-02	OBS	No	433.280026	456.616656	2249.0	9.752	13.2	7.0	0.46	3625	2.14	0.04
005262561-03	OBS	No	450.102616	367.582477	677.4	2.760	13.2	2.4	0.46	3625	1.27	0.04
005262561-04	OBS	No	352.549254	210.363742	2684.8	4.346	11.4	8.2	0.46	3625	2.45	0.06
005262561-05	OBS	No	375.221462	235.585926	718.8	15.000	10.3	-1.0	0.46	3625	1.21	0.05
005262561-06	OBS	No	272.428273	386.654427	1771.4	4.120	10.9	7.2	0.46	3625	1.90	0.08
005262561-07	OBS	No	460.413789	428.856492	1954.7	5.033	9.4	6.6	0.46	3625	2.06	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005262561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

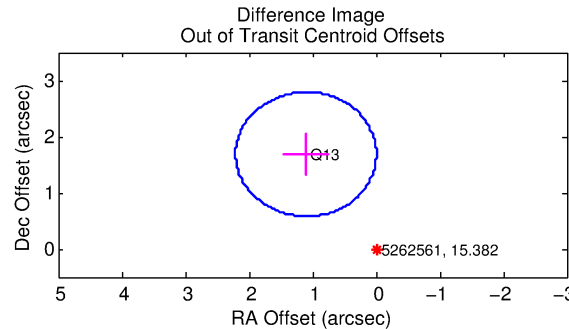
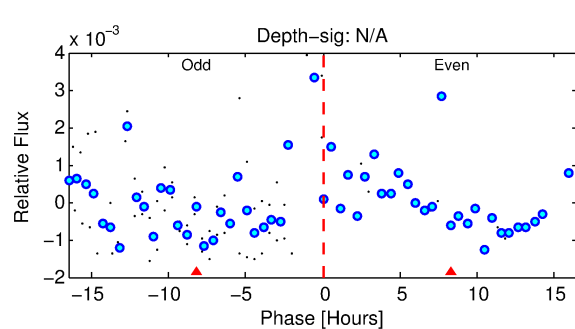
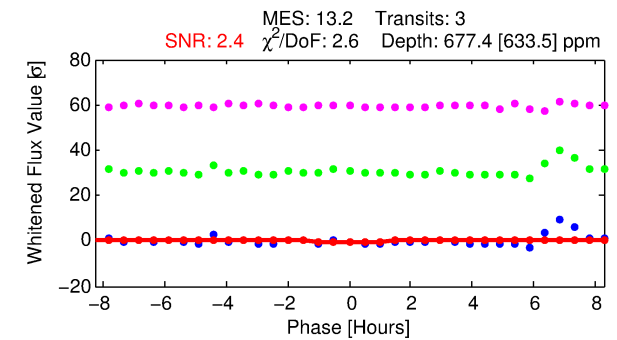
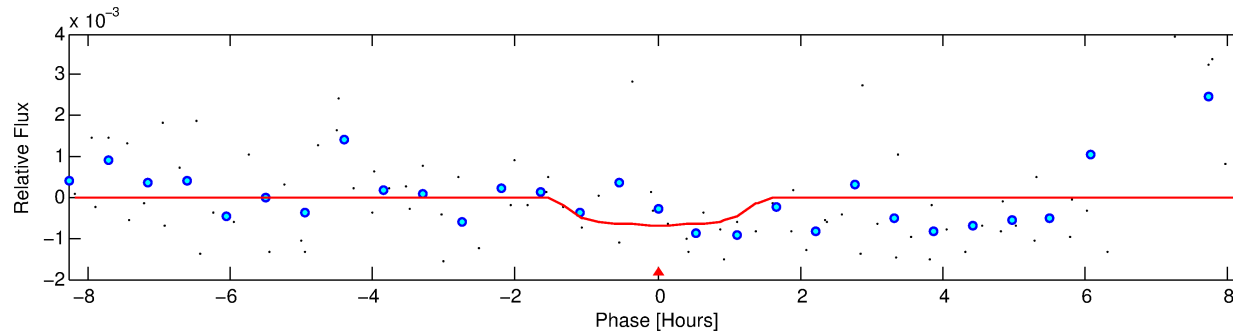
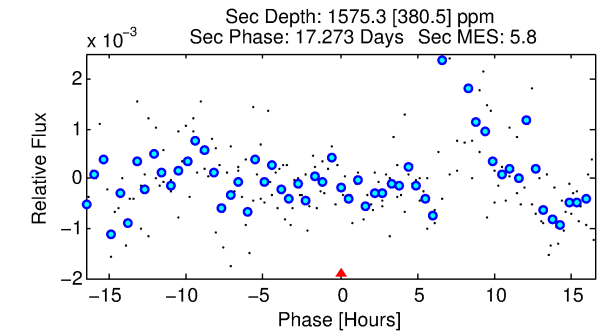
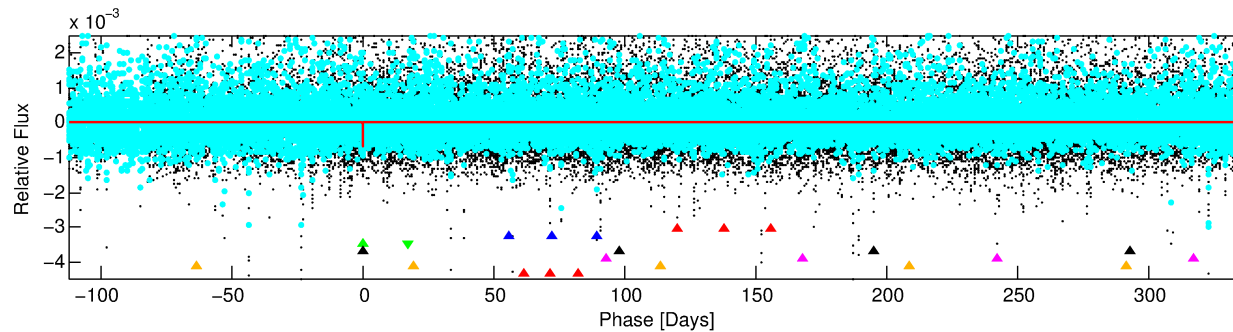
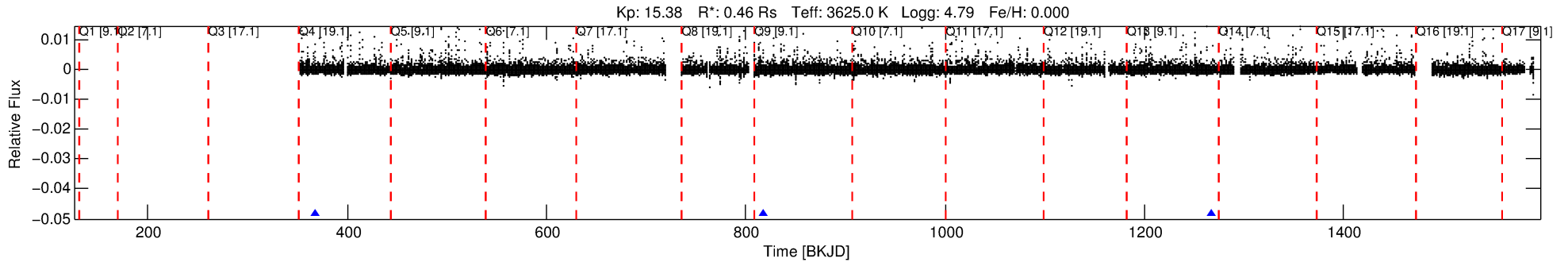
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005262561-03

No Significant Match Found

# DV One-Page Summary

KIC: 5262561 Candidate: 3 of 7 Period: 450.103 d



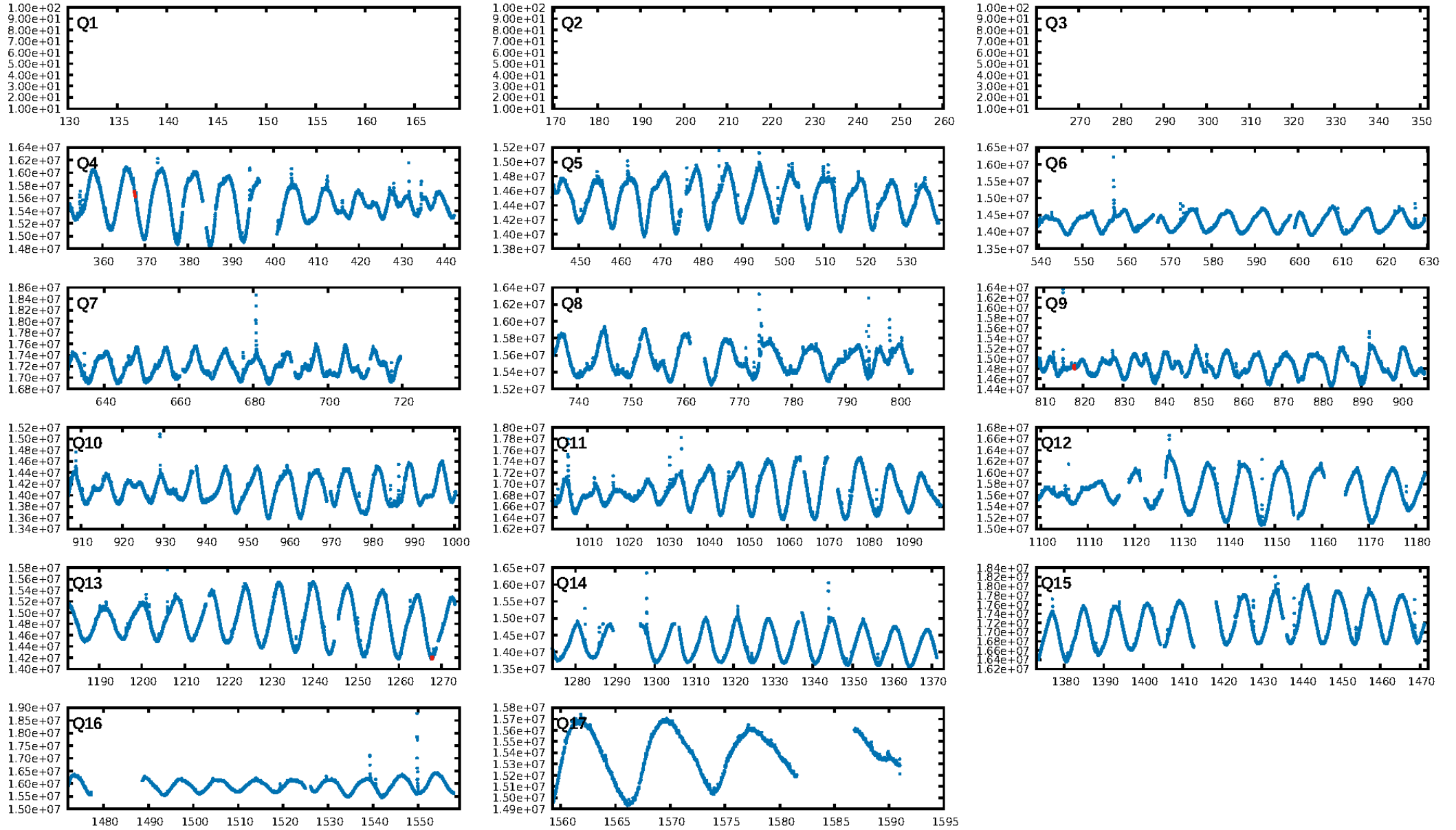
## DV Fit Results:

Period = 450.10262 [0.02599] d  
Epoch = 367.5825 [0.0334] BKJD  
Rp/R\* = 0.0255 [0.1454]  
a/R\* = 920.69 [22314.60]  
b = 0.71 [16.93]  
Seff = 0.04 [0.01]  
Teq = 114 [4] K  
Rp = 1.27 [7.24] Re  
a = 0.8917 [0.0720] AU  
Ag = 426827.47 [4862375.59] [0.09σ]  
Teffp = 4519 [12871] K [0.34σ]

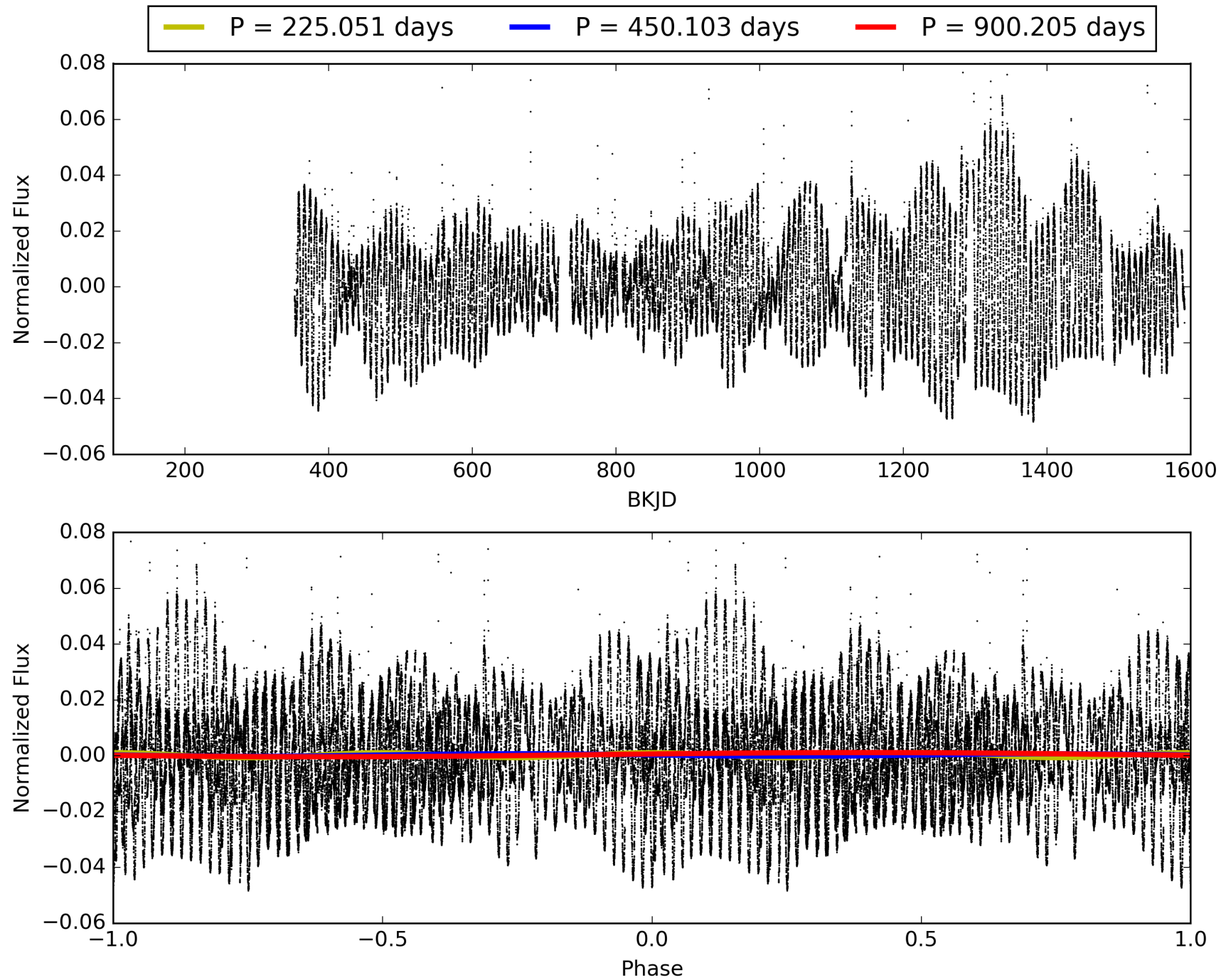
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [39.84σ]  
LongPeriod-sig: 100.0% [43.11σ]  
ModelChiSquare2-sig: 46.1%  
ModelChiSquareGof-sig: 69.6%  
**Bootstrap-pfa: 1.10e-10**  
RollingBand-fgt: 1.00 [3/3]  
**GhostDiagnostic-chr: 0.2712**  
Centroid-sig: 65.6%  
Centroid-so: 1.103 arcsec [0.43σ]  
**OotOffset-rm: 2.014 arcsec [5.46σ]**  
**KicOffset-rm: 2.077 arcsec [5.62σ]**  
OotOffset-st: 0/0/0/1 [1]  
KicOffset-st: 0/0/0/1 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 0.67 [2/3]

# TCE 005262561-03, PDC Light Curves

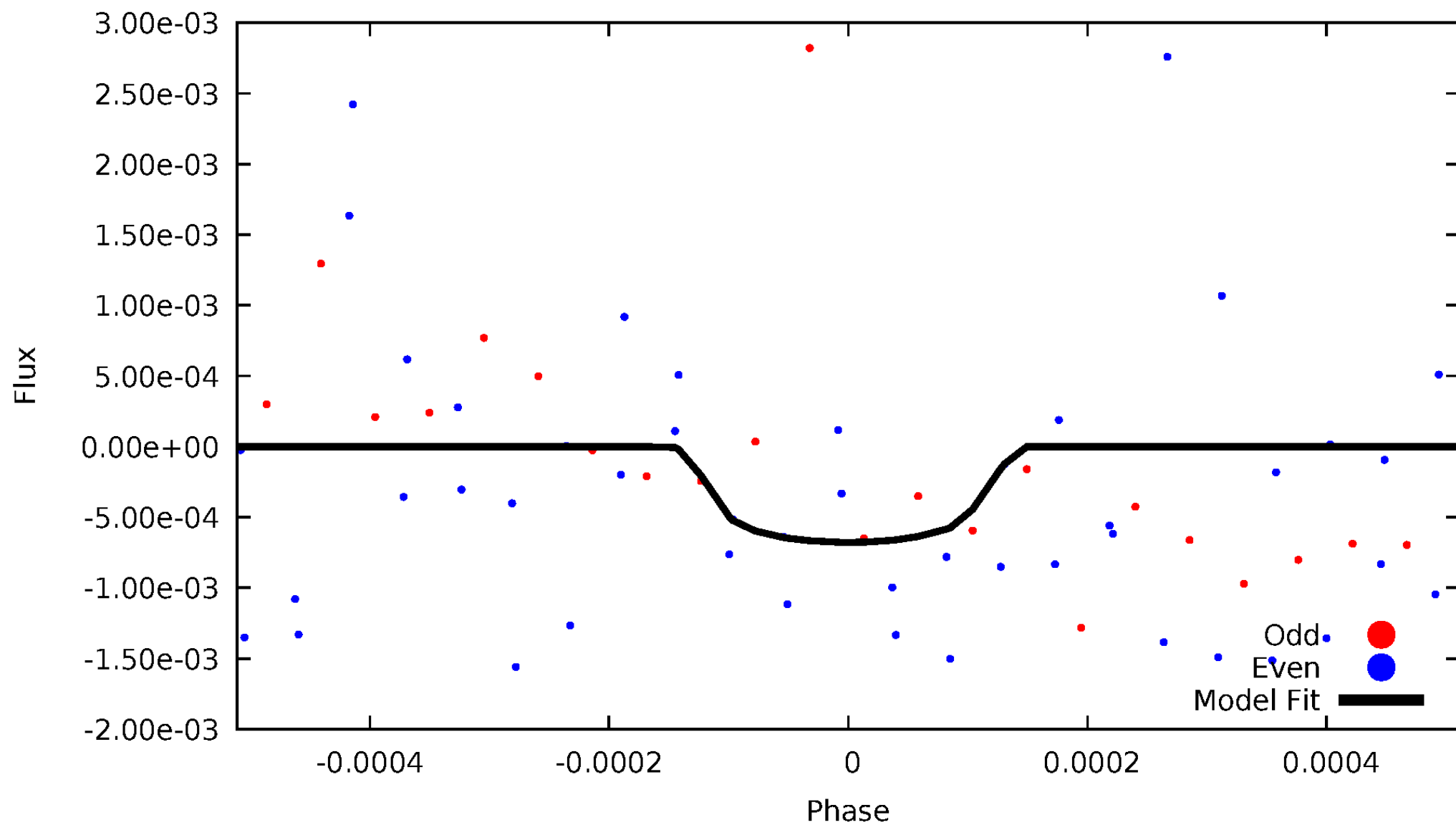


TCE 005262561-03



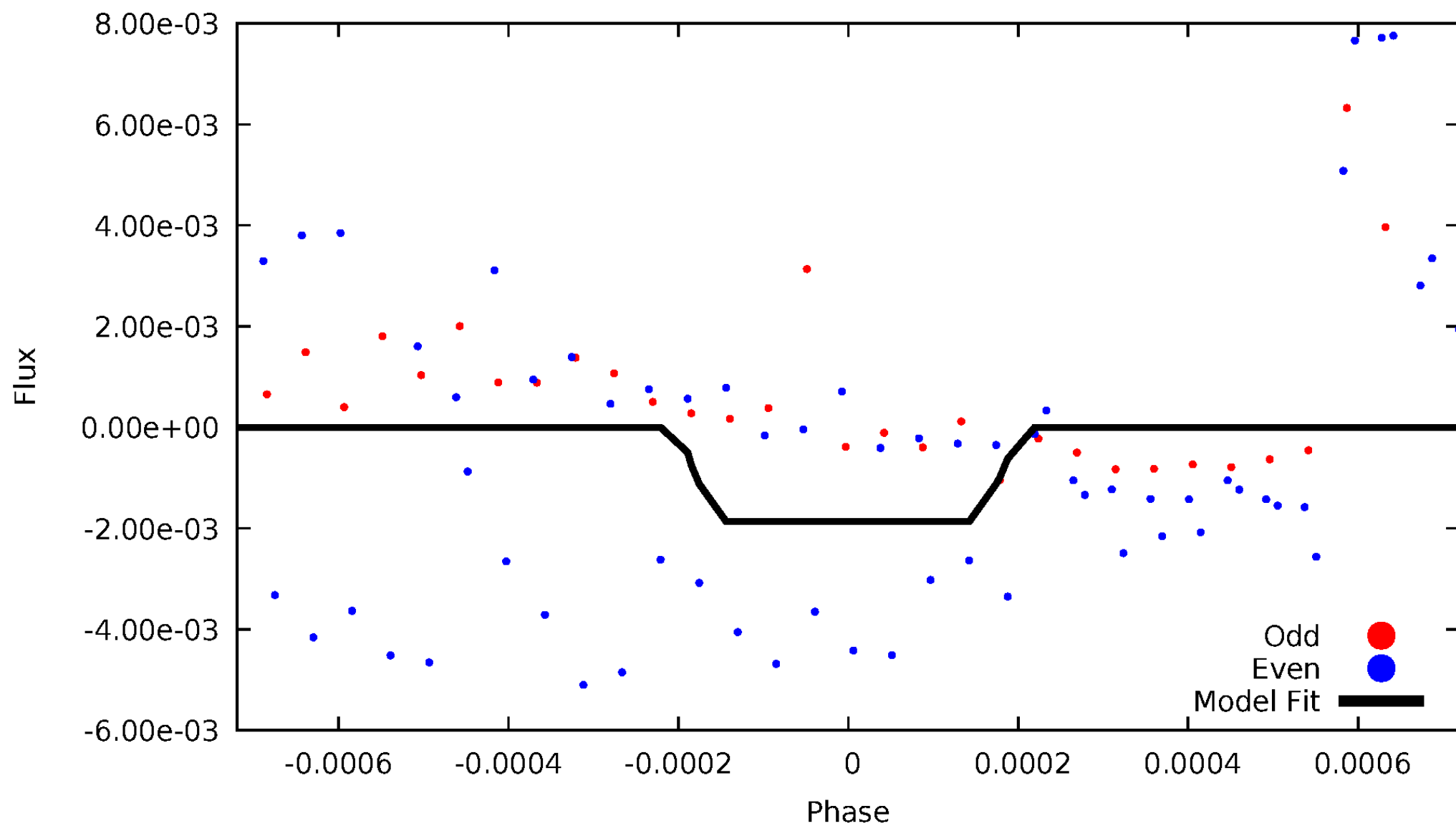
# DV Odd/Even

TCE 005262561-03



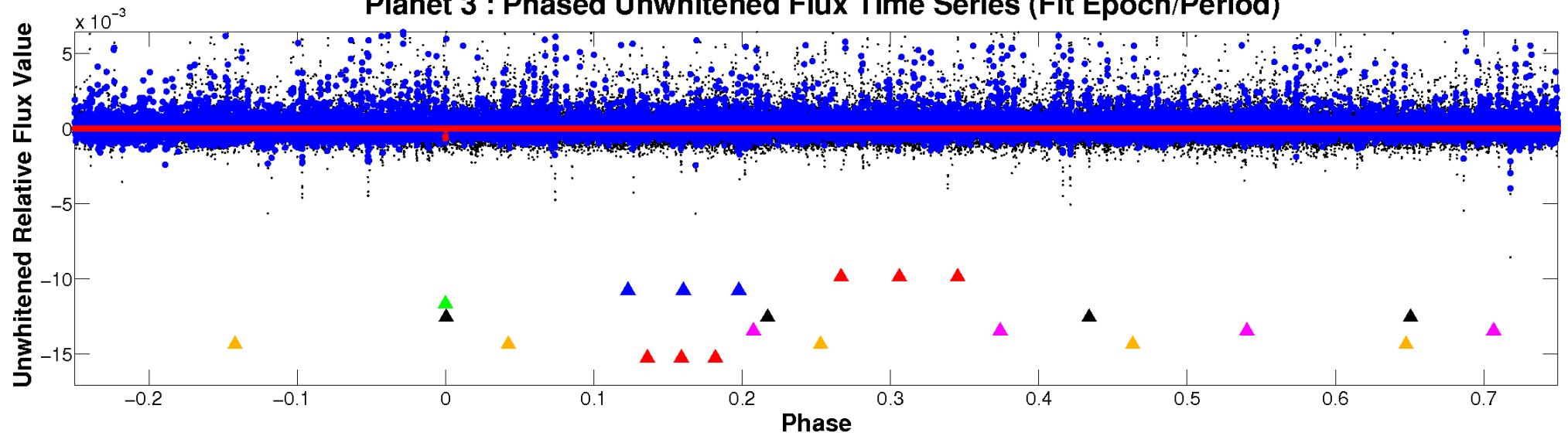
# ALT Odd/Even

TCE 005262561-03

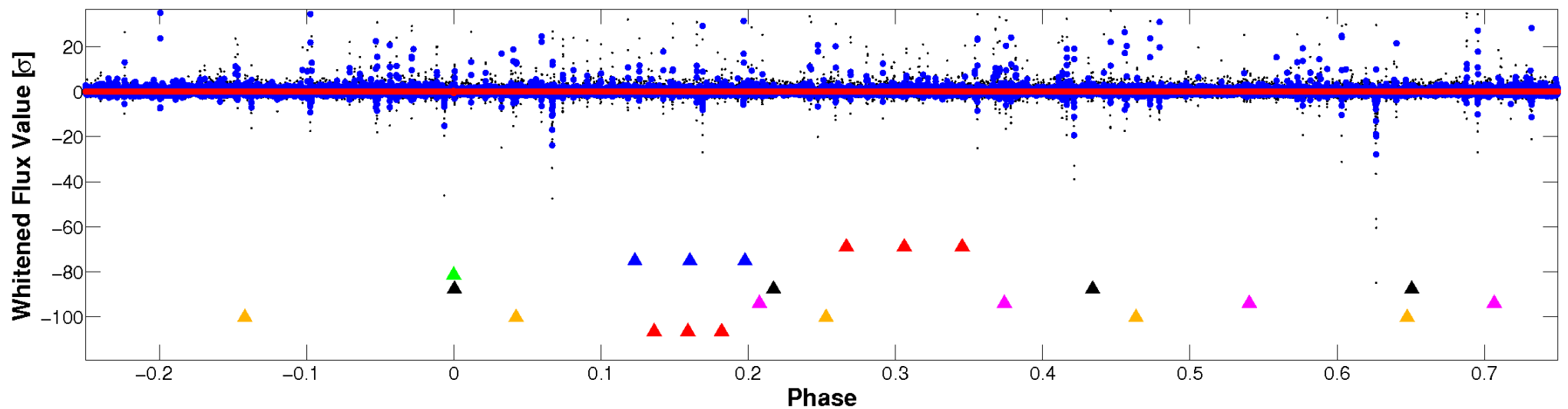


# Non-Whitened Vs. Whitened Light Curve

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

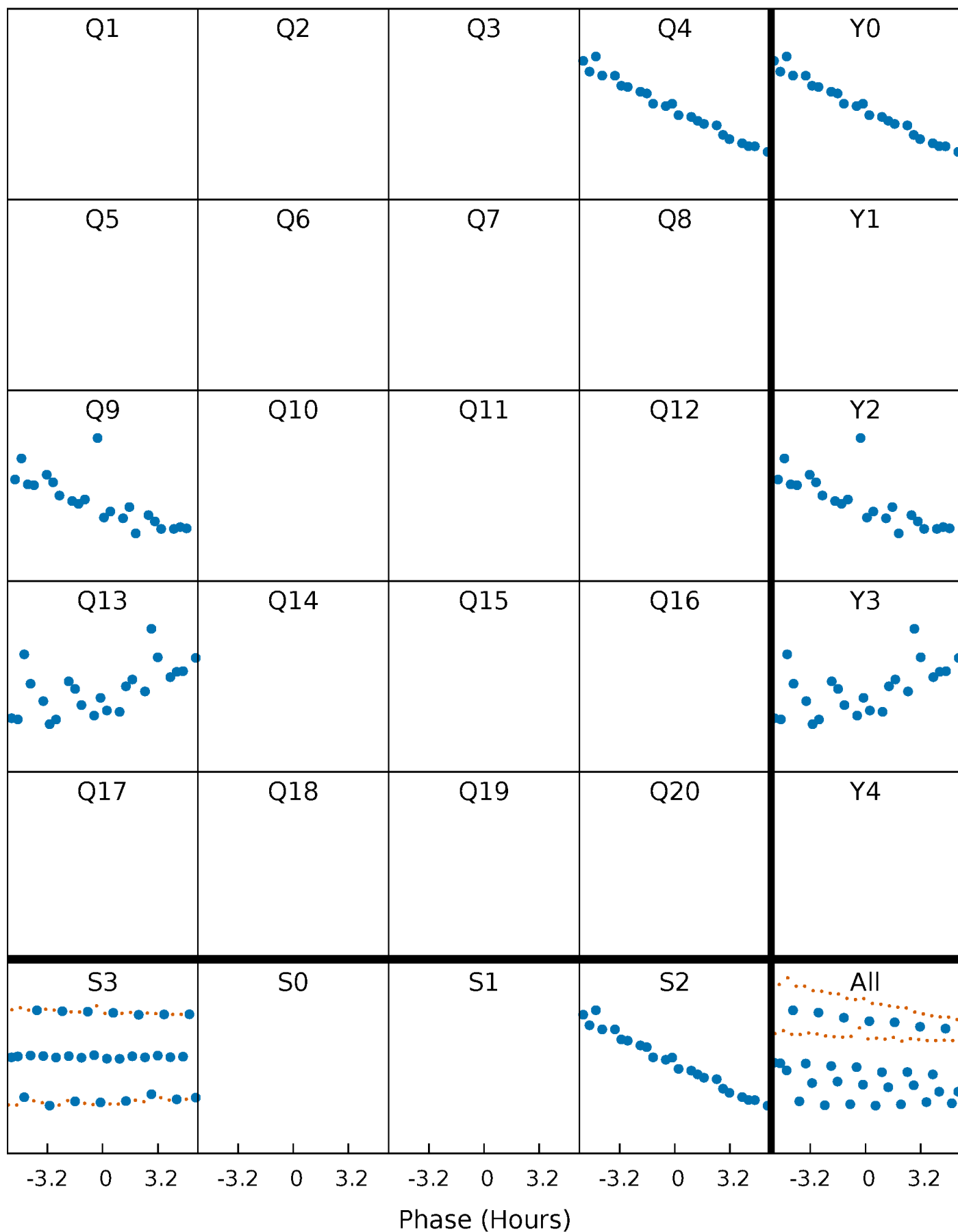


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



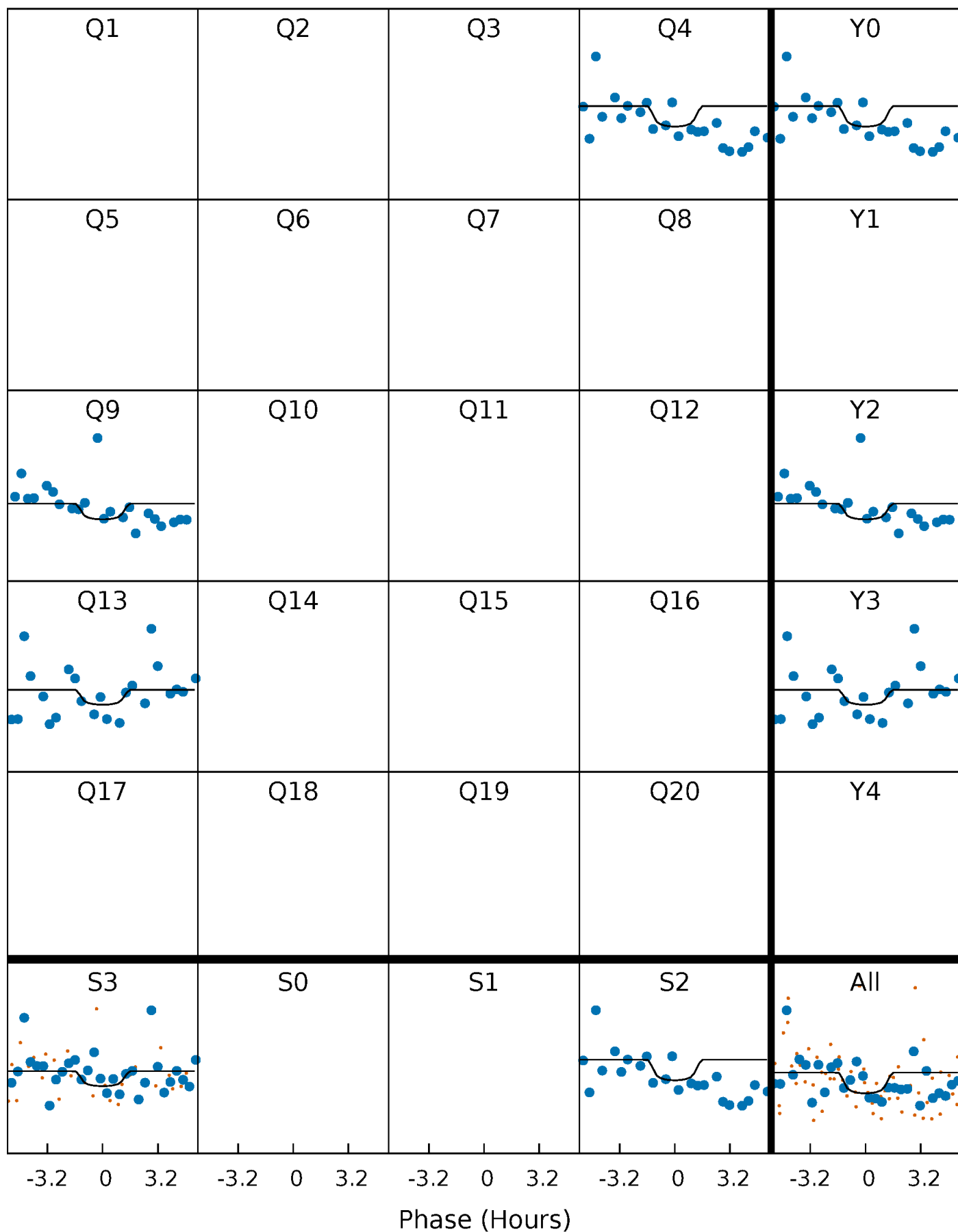
# PDC Quarter-Phased Transit Curves

TCE 005262561-03     $P=450.102616$  Days     $T_0=367.582477$  (BKJD)



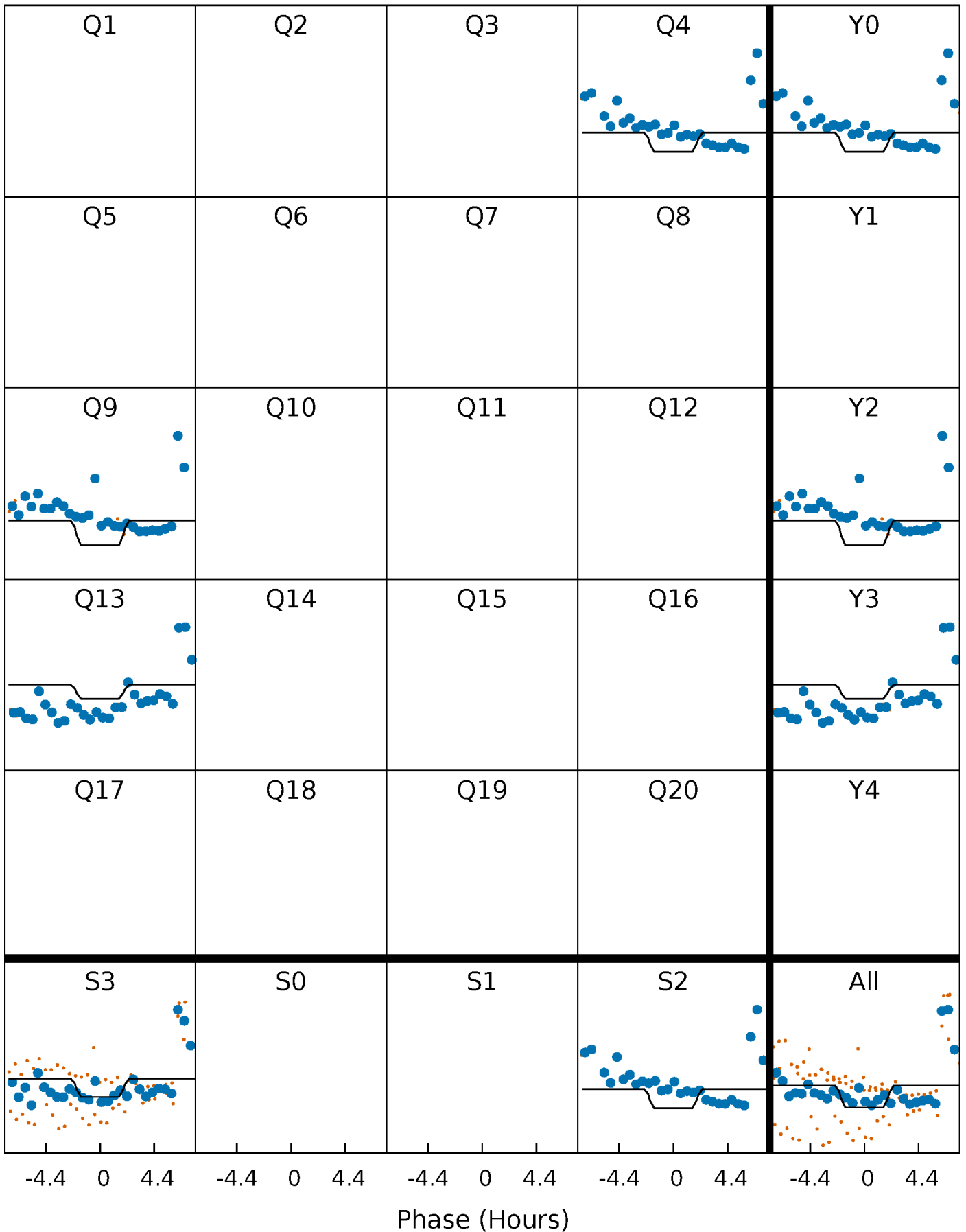
# DV Quarter-Phased Transit Curves

TCE 005262561-03     $P=450.102616$  Days     $T_0=367.582477$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

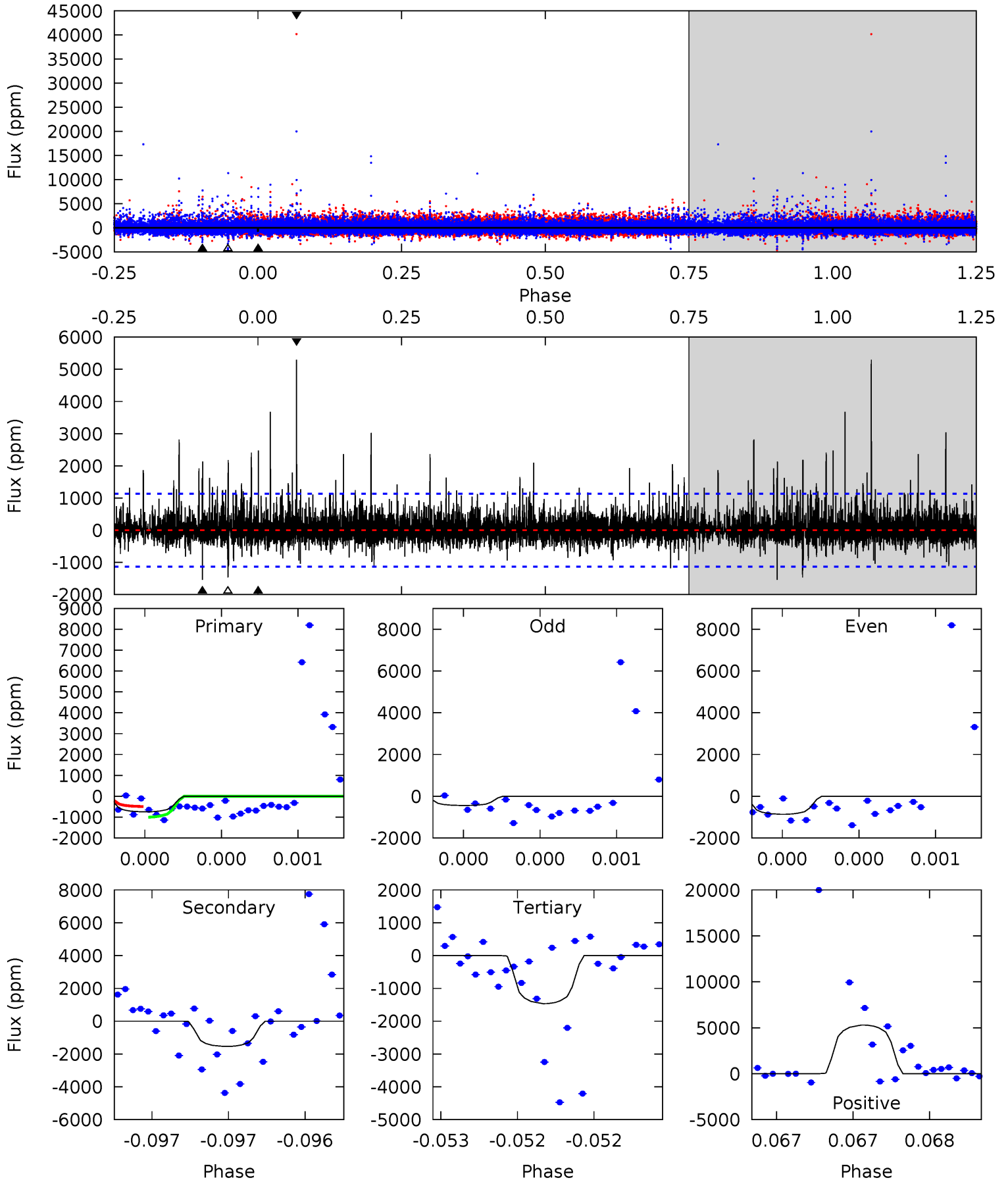
TCE 005262561-03 P=450.110460 Days  $T_0=367.581985$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-03, P = 450.102616 Days, E = 367.582477 Days

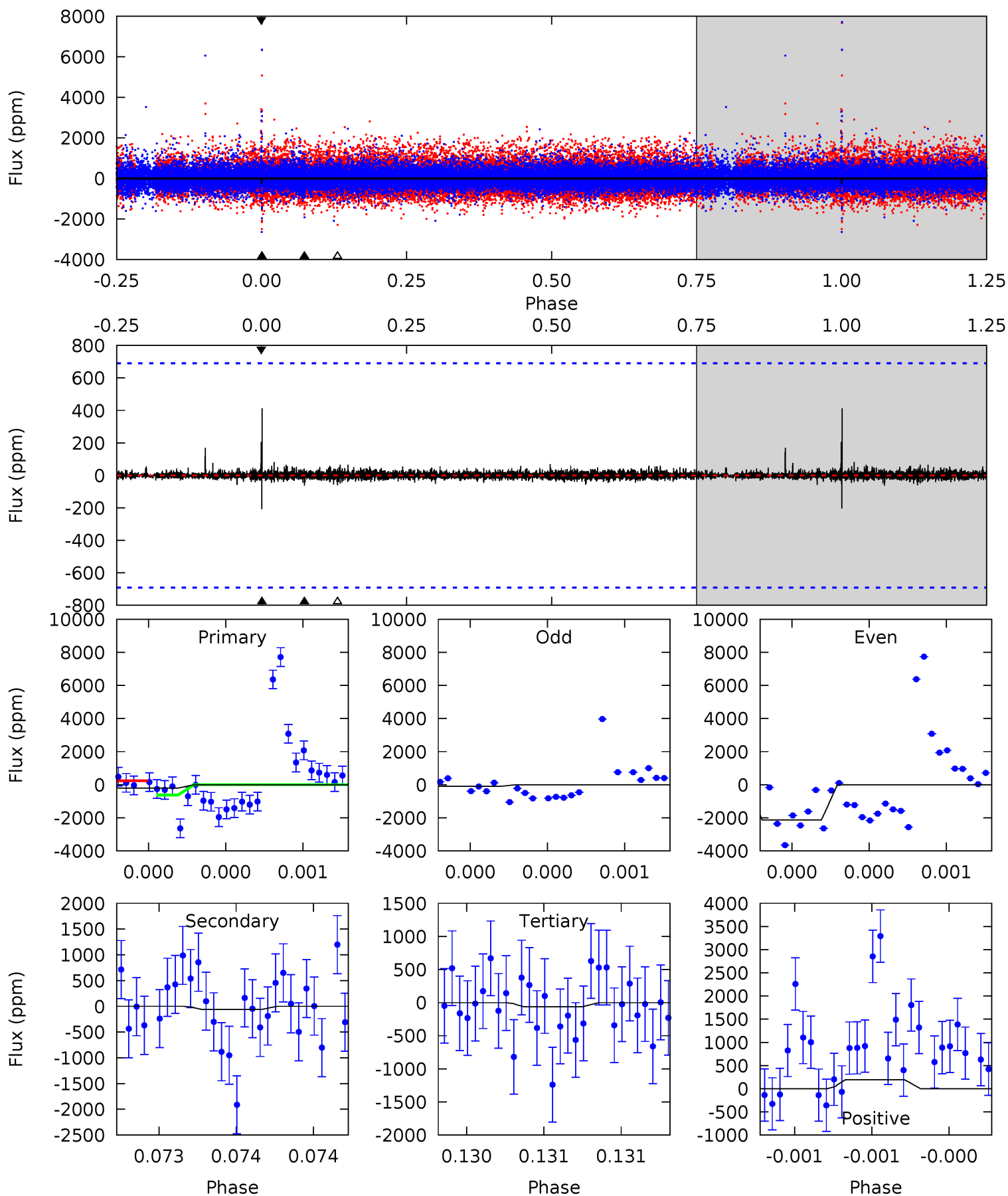
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.74	7.70	7.32	26.5	5.67	3.62	1.65	-3.58	-22.7	0.37	-18.8	0.56	0.68	0.77	1.29



# Alt Model-Shift Uniqueness Test

005262561-03, P = 450.110460 Days, E = 367.581985 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
1.65	0.50	0.49	1.57	5.62	3.56	0.11	1.16	0.09	0.01	-1.06	7.97	-31.4	0.67	1.56



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-03 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1541 \pm 200$	$5.29^{+5.78}_{-3.65}$	$159^{+4}_{-4}$	$2699^{+1159}_{-426}$	$24120^{+236311}_{-18693}$
Alt.	$-62 \pm 123$	$5.93^{+5.69}_{-4.08}$	$159^{+4}_{-4}$	$1727^{+553}_{-3598}$	$395^{+5641}_{-1406}$

$T_{max}$  = 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

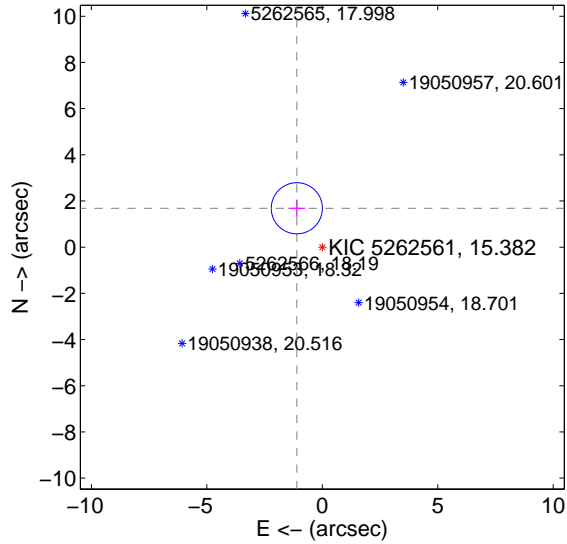
Supplemental centroid analysis for 005262561-03. Kepler magnitude: 15.38. Transit SNR 2.37

There are 1 quarters with good PRF difference image offsets

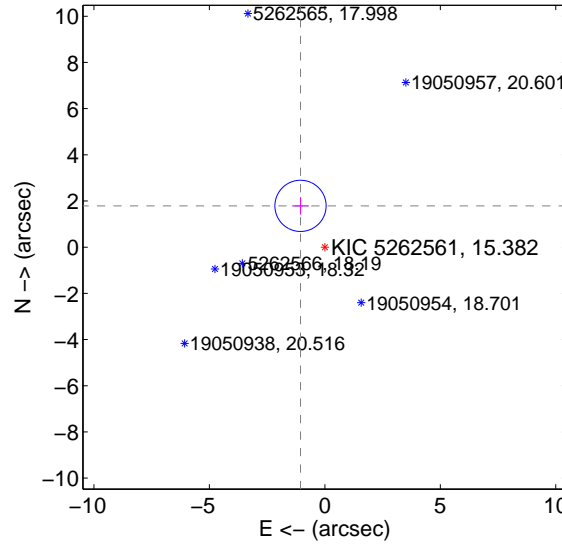
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	<b><math>2.014 \pm 0.369</math></b>	<b>5.46</b>	$1.103 \pm 0.357$	$1.685 \pm 0.374$
PRF-fit source offset from KIC position	<b><math>2.077 \pm 0.370</math></b>	<b>5.62</b>	$1.054 \pm 0.357$	$1.789 \pm 0.374$
photometric centroid source offset	$1.10 \pm 2.54$	0.43	$0.26 \pm 3.07$	$1.07 \pm 2.51$

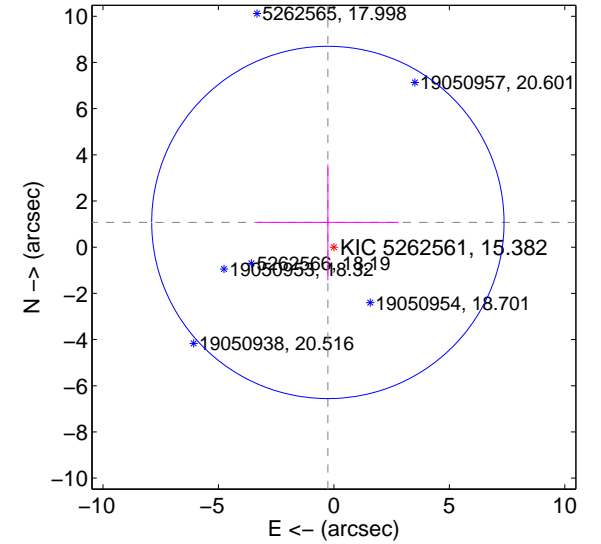
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

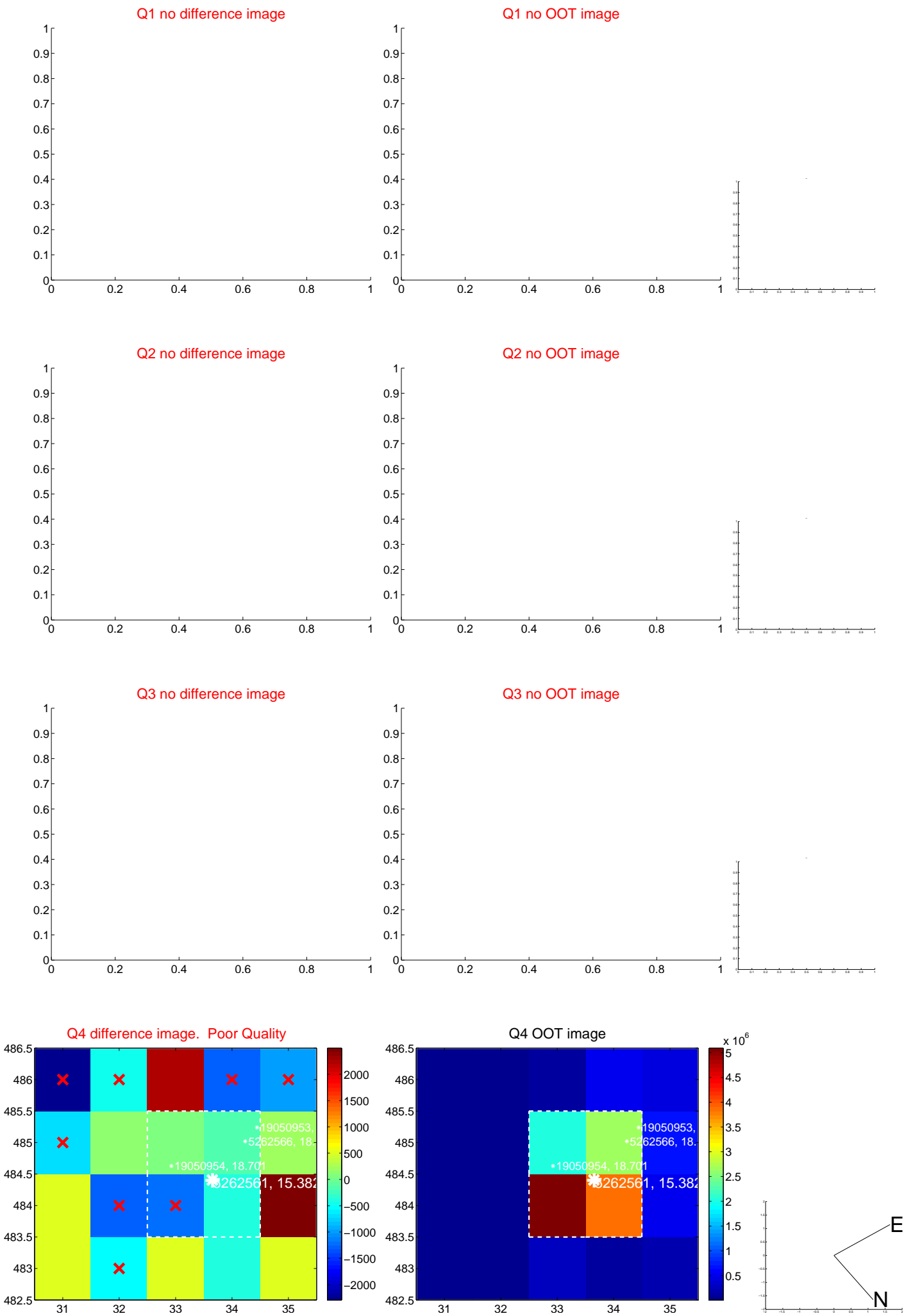


offset from photometric centroids

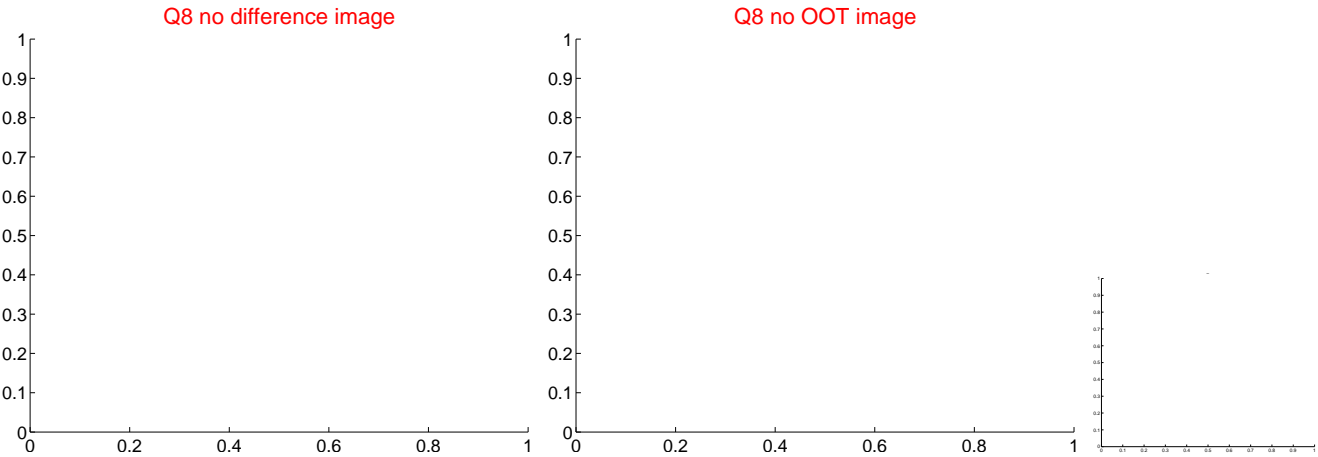
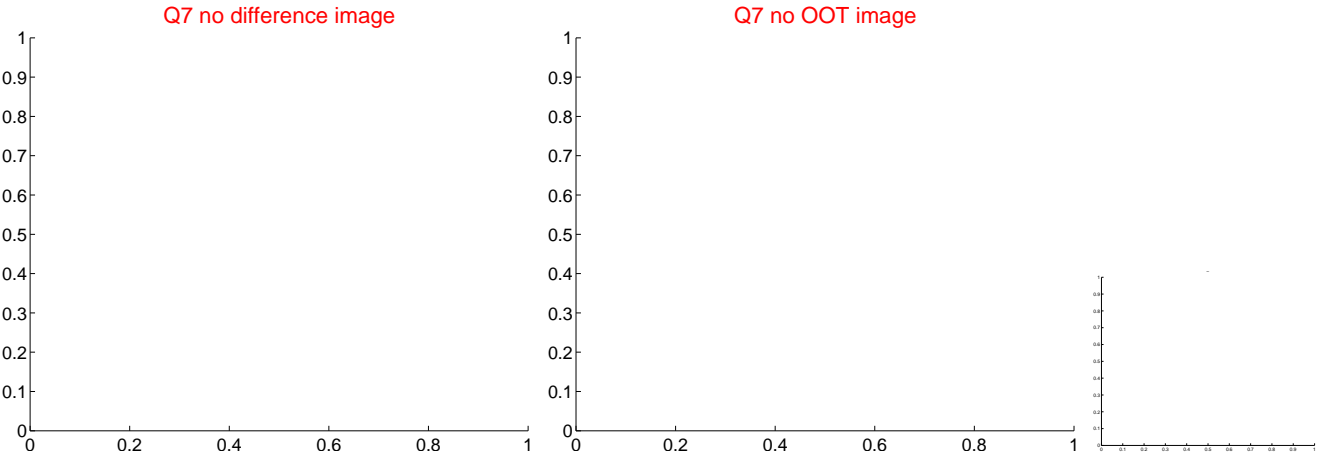
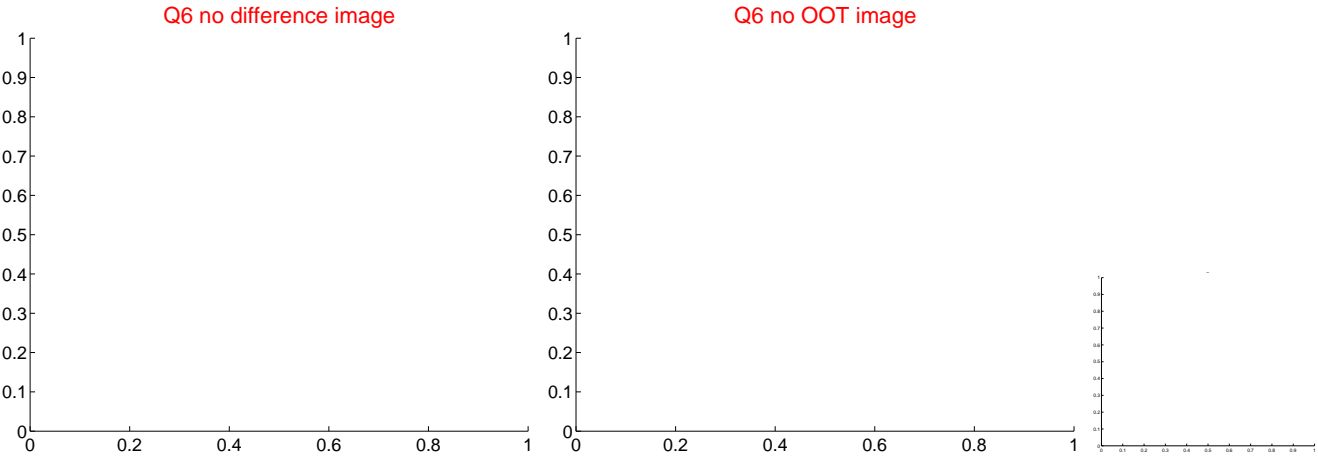
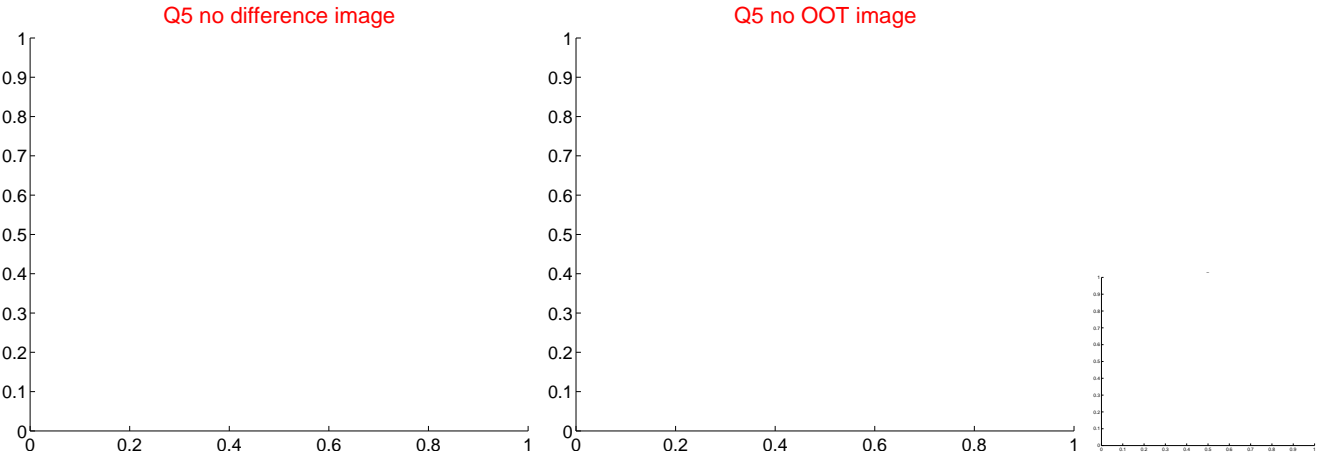


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

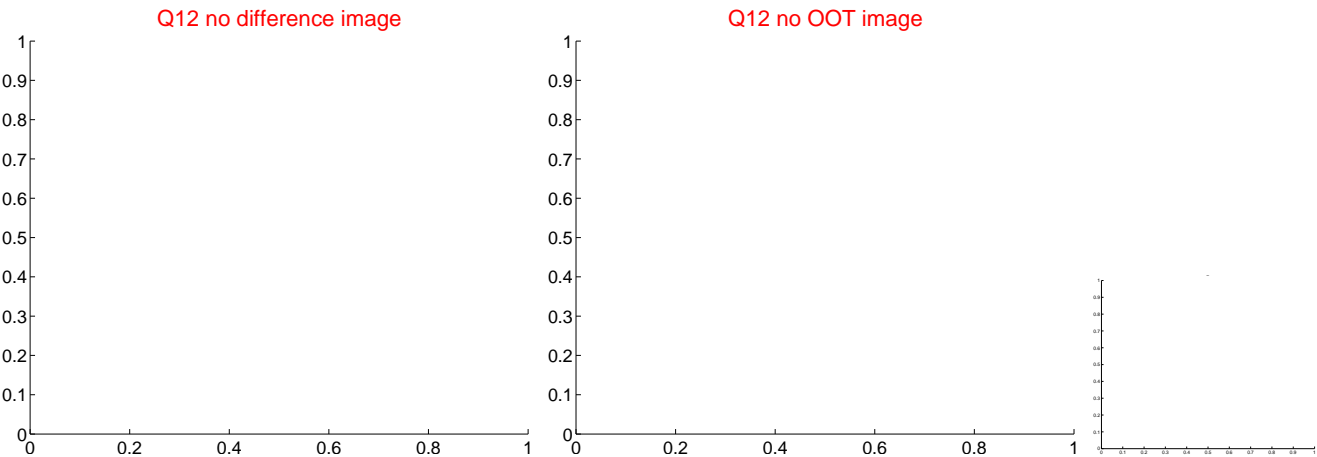
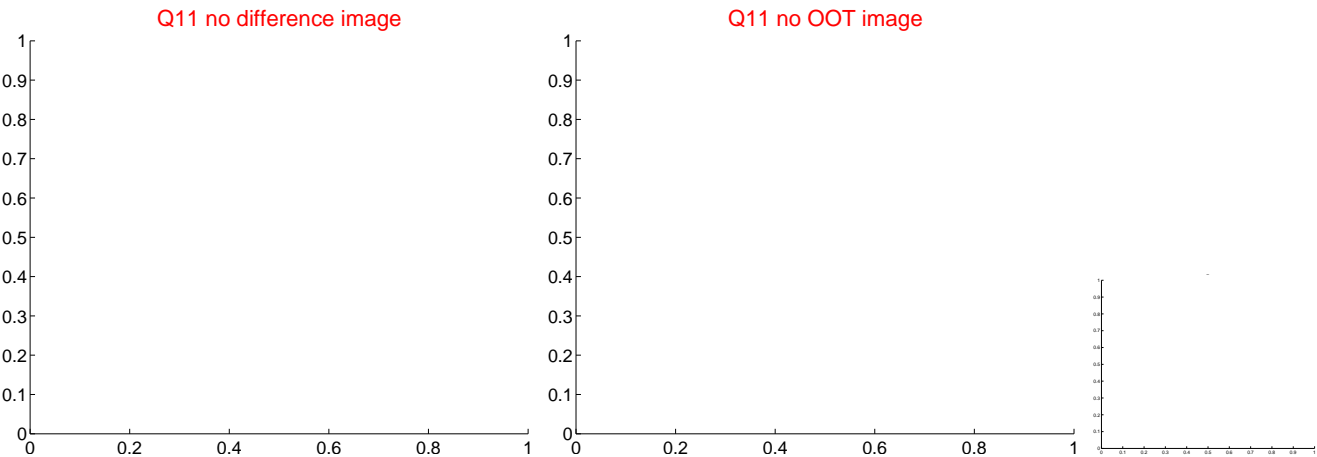
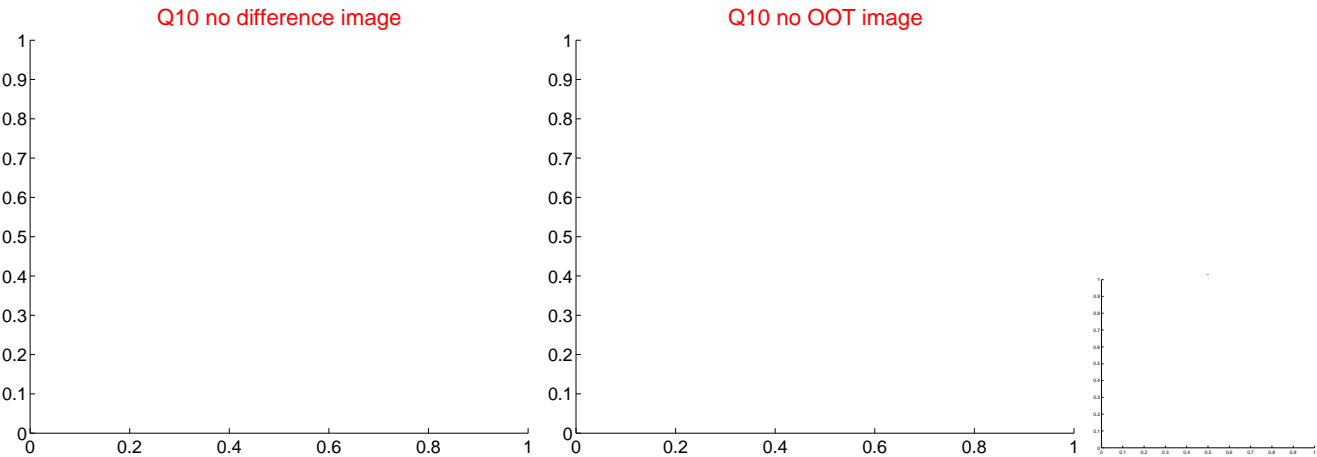
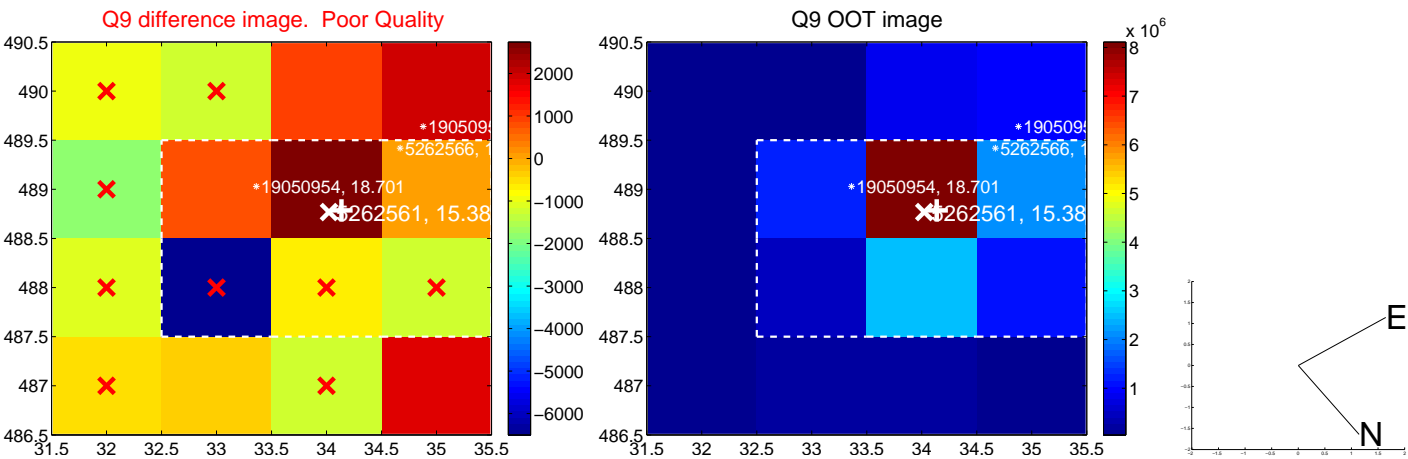
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



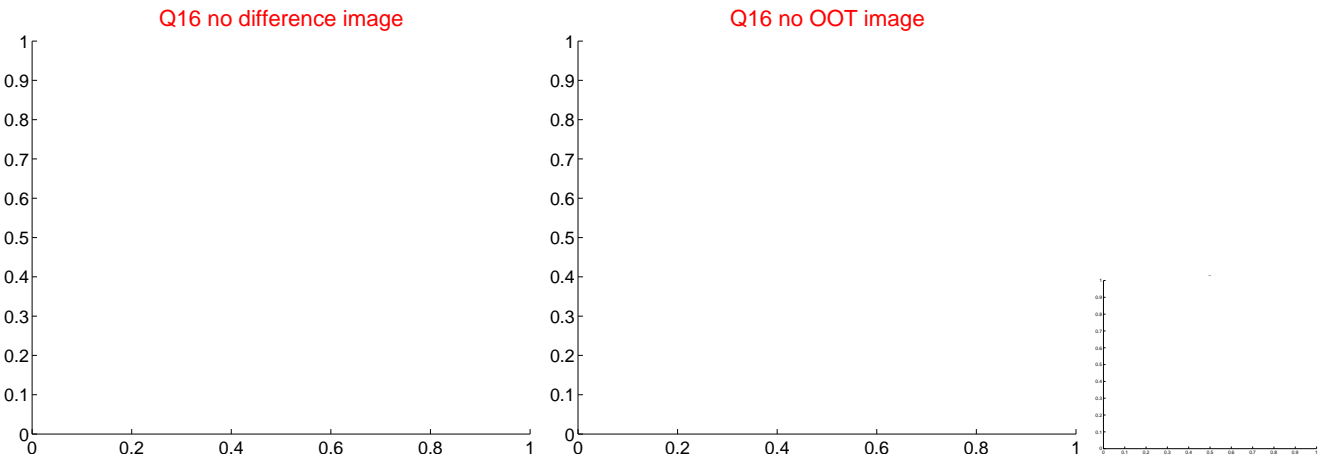
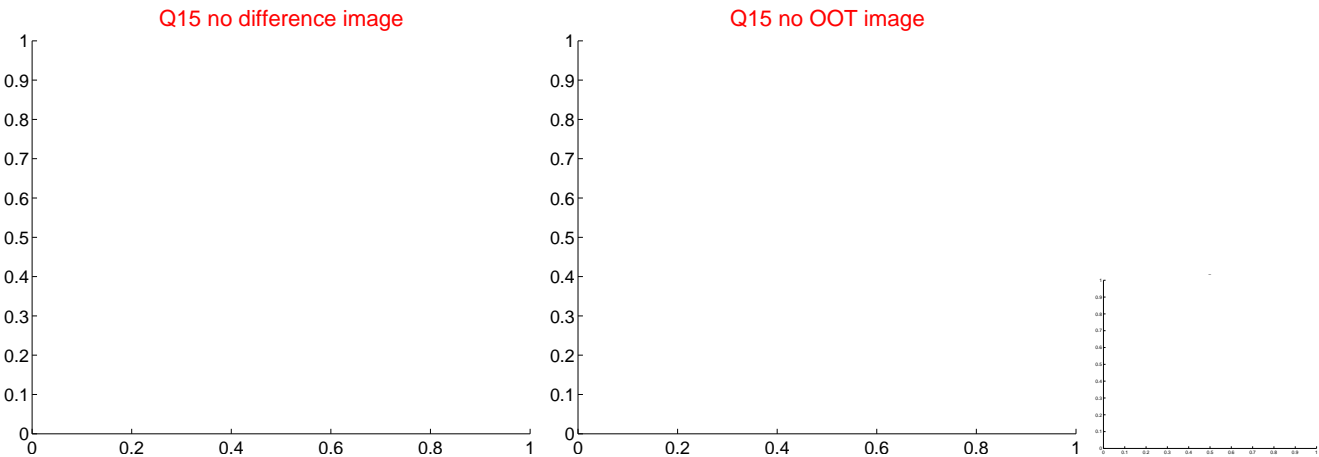
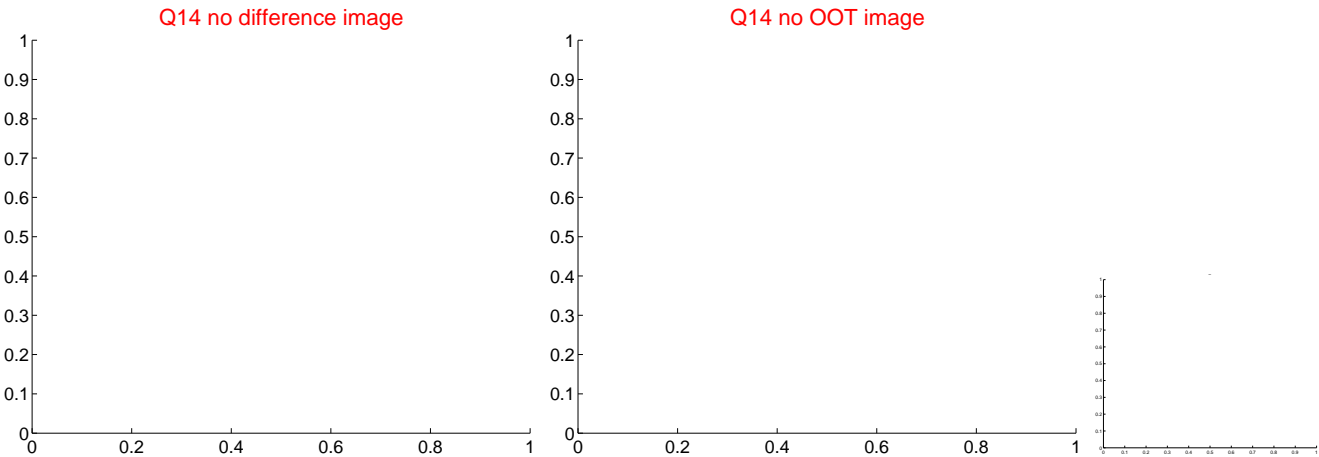
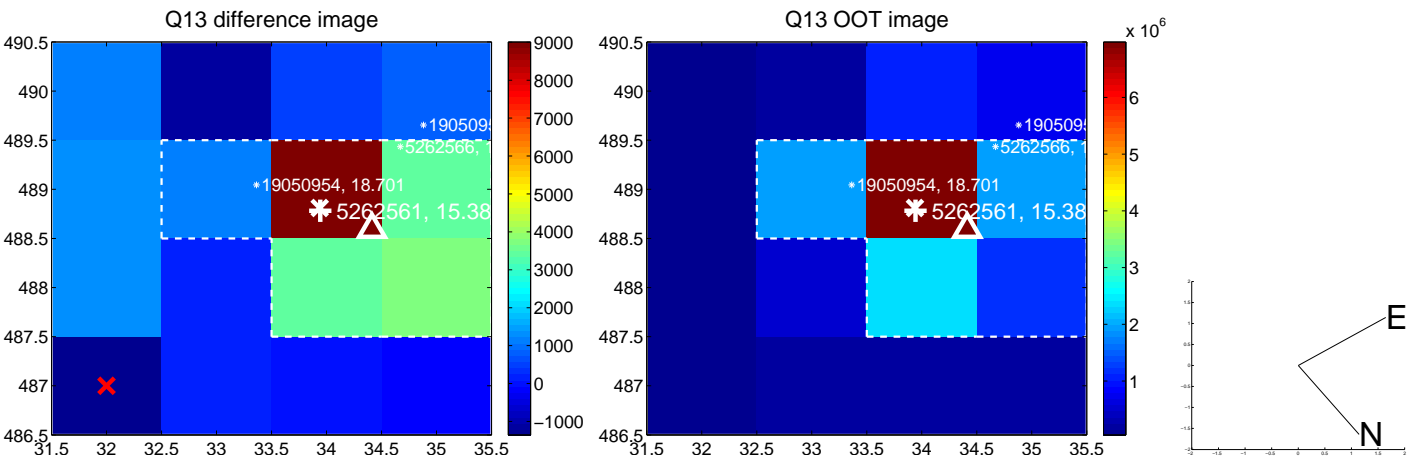
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



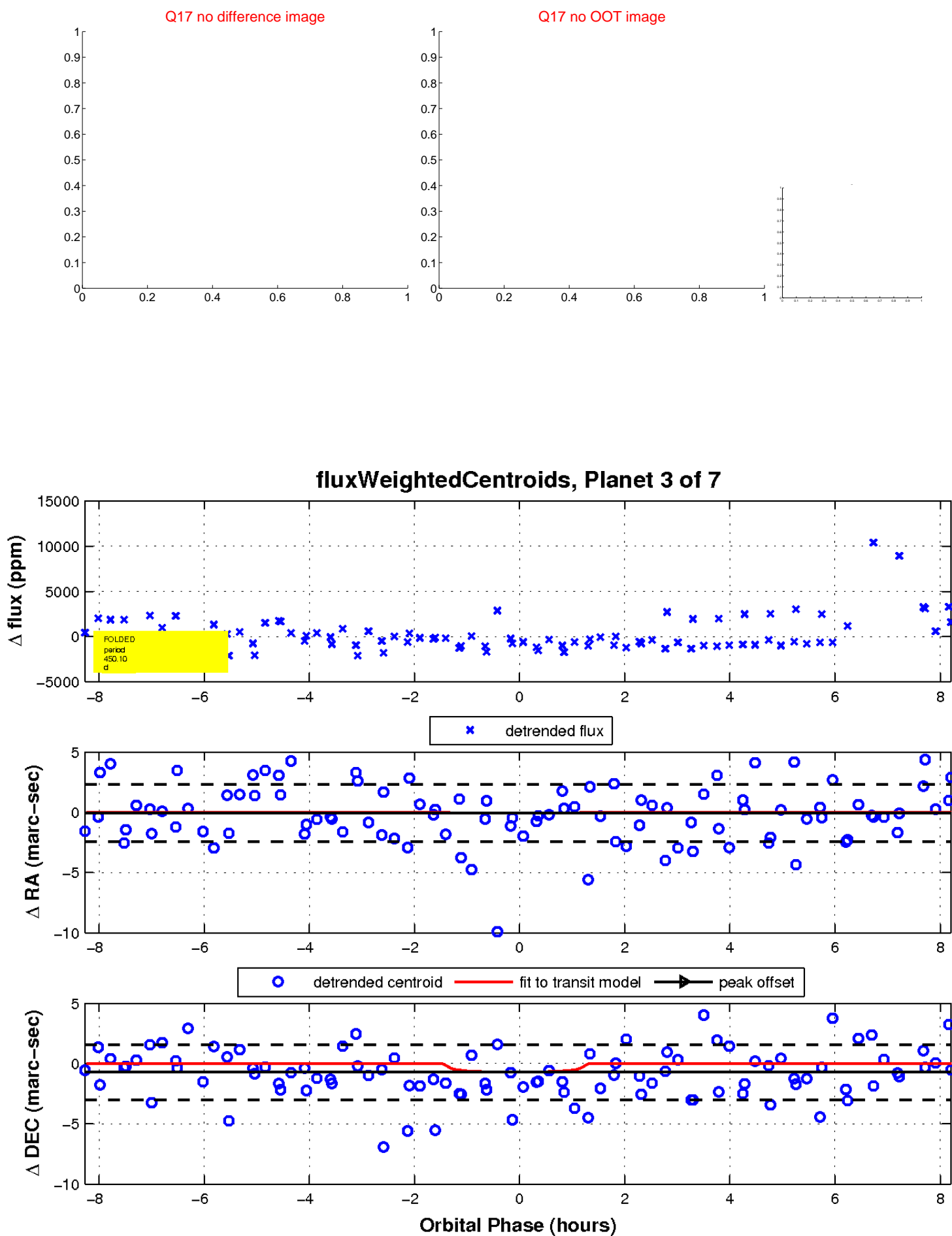
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

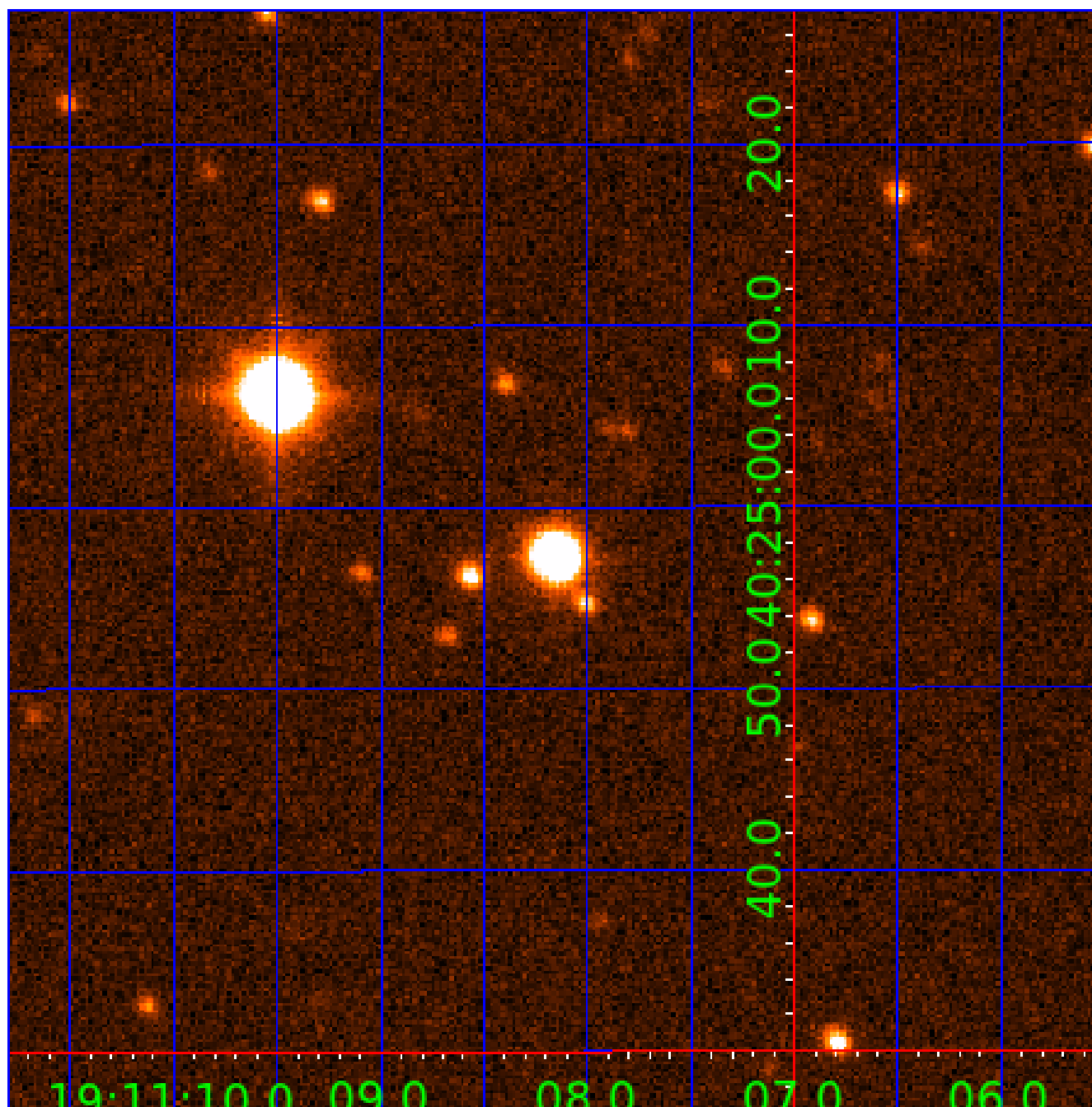


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 005262561

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005262561-01	OBS	No	432.405002	523.025887	2650.6	9.647	15.6	8.9	0.46	3625	2.34	0.04
005262561-02	OBS	No	433.280026	456.616656	2249.0	9.752	13.2	7.0	0.46	3625	2.14	0.04
005262561-03	OBS	No	450.102616	367.582477	677.4	2.760	13.2	2.4	0.46	3625	1.27	0.04
005262561-04	OBS	No	352.549254	210.363742	2684.8	4.346	11.4	8.2	0.46	3625	2.45	0.06
005262561-05	OBS	No	375.221462	235.585926	718.8	15.000	10.3	-1.0	0.46	3625	1.21	0.05
005262561-06	OBS	No	272.428273	386.654427	1771.4	4.120	10.9	7.2	0.46	3625	1.90	0.08
005262561-07	OBS	No	460.413789	428.856492	1954.7	5.033	9.4	6.6	0.46	3625	2.06	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005262561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

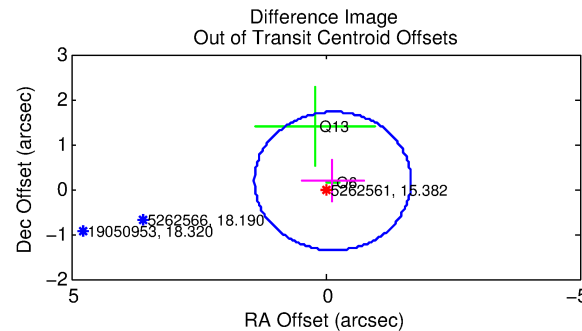
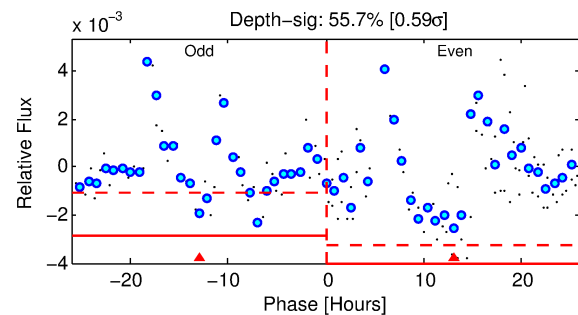
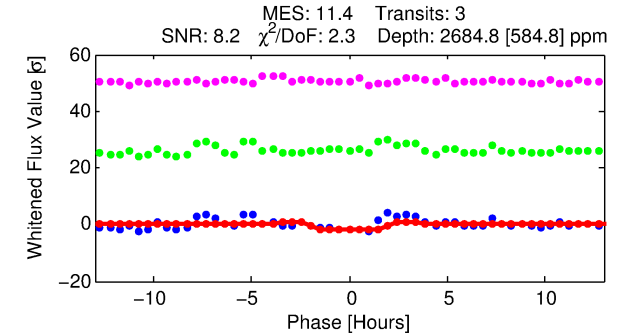
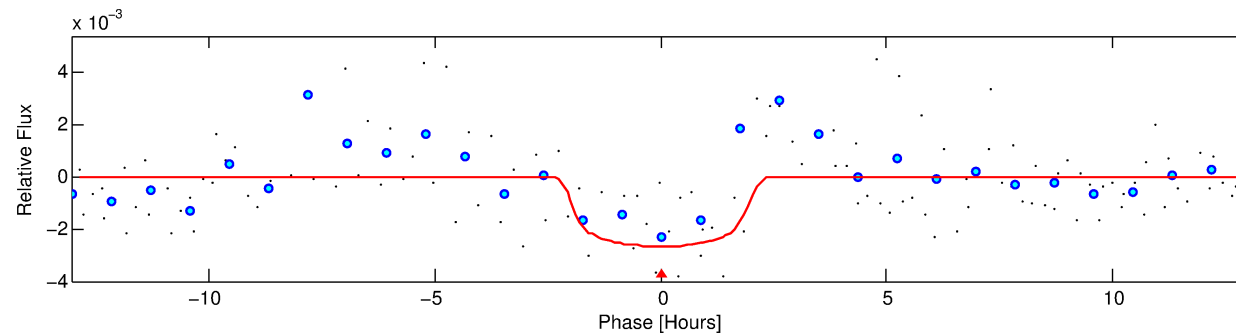
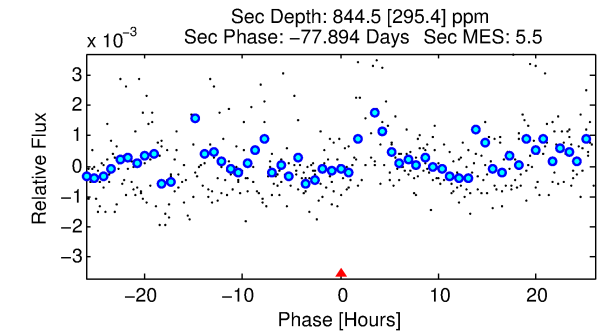
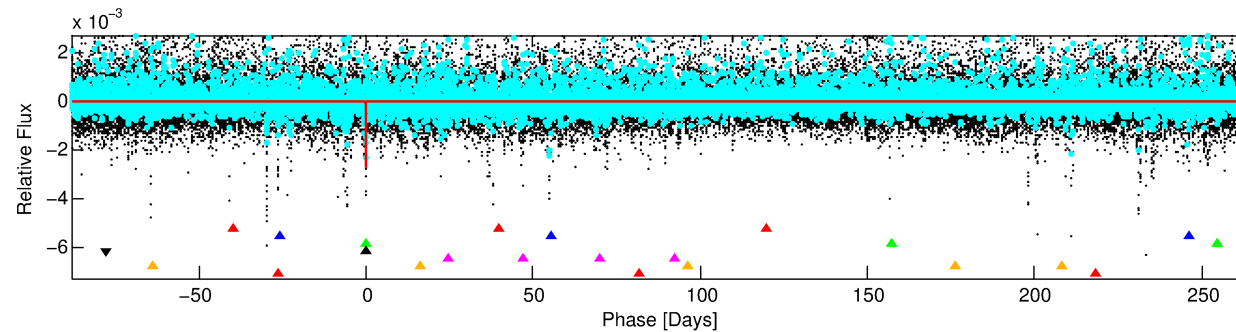
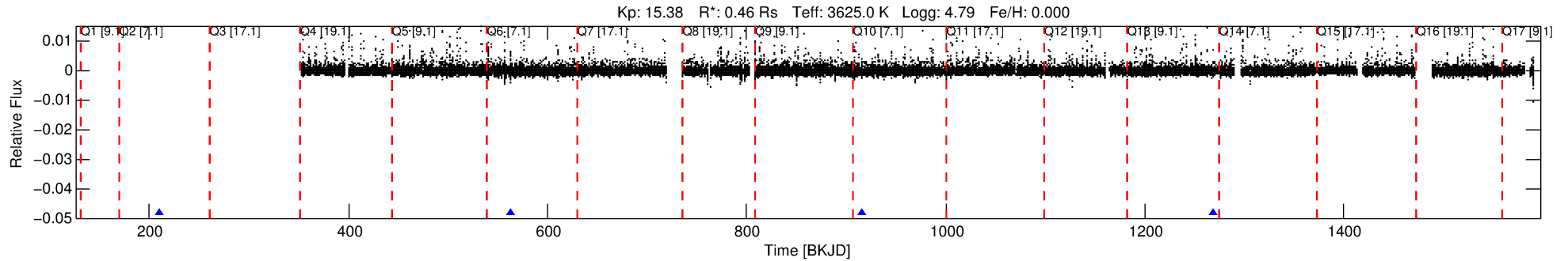
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005262561-04

No Significant Match Found

# DV One-Page Summary

KIC: 5262561 Candidate: 4 of 7 Period: 352.549 d



## DV Fit Results:

Period = 352.54925 [0.00918] d  
Epoch = 210.3637 [0.0183] BKJD  
Rp/R\* = 0.0493 [0.0425]  
a/R\* = 535.09 [1923.16]  
b = 0.60 [3.89]  
Seff = 0.06 [0.01]  
Teq = 124 [4] K  
Rp = 2.45 [2.13] Re  
a = 0.7577 [0.0612] AU  
Ag = 44366.71 [78277.79] [0.57σ]  
Teffp = 2784 [1227] K [2.17σ]

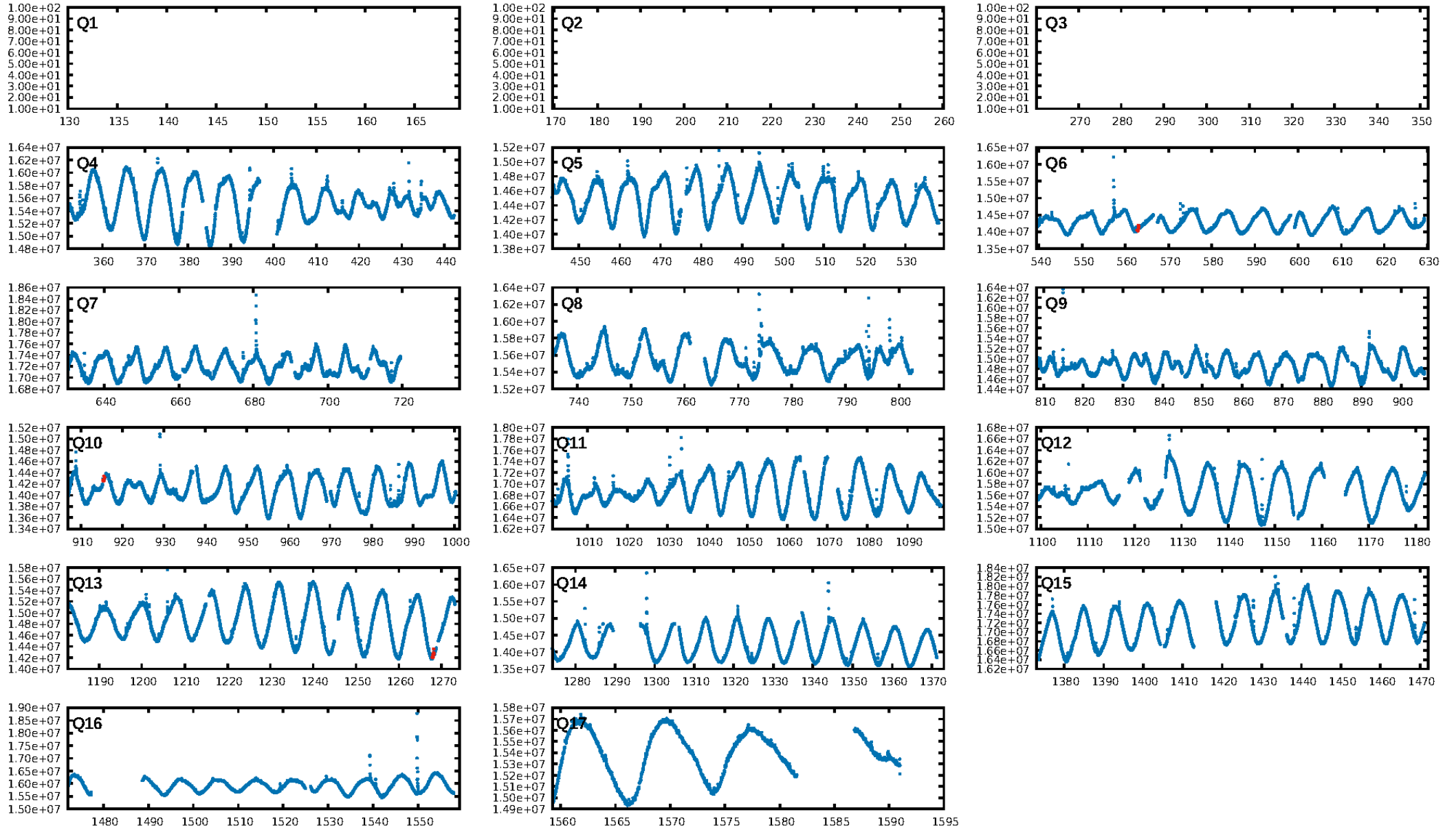
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [321.12σ]  
LongPeriod-sig: 100.0% [34.84σ]  
ModelChiSquare2-sig: 0.1%  
ModelChiSquareGof-sig: 22.5%  
Bootstrap-pfa: 3.80e-10  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.5306  
Centroid-sig: 47.7%  
Centroid-so: 0.230 arcsec [0.54σ]  
OotOffset-rm: 0.227 arcsec [0.44σ]  
KicOffset-rm: 0.397 arcsec [0.66σ]  
OotOffset-st: 1/0/0/1 [2]  
KicOffset-st: 1/0/0/1 [2]  
DiffImageQuality-fgm: 0.50 [1/2]  
DiffImageOverlap-fno: 0.67 [2/3]

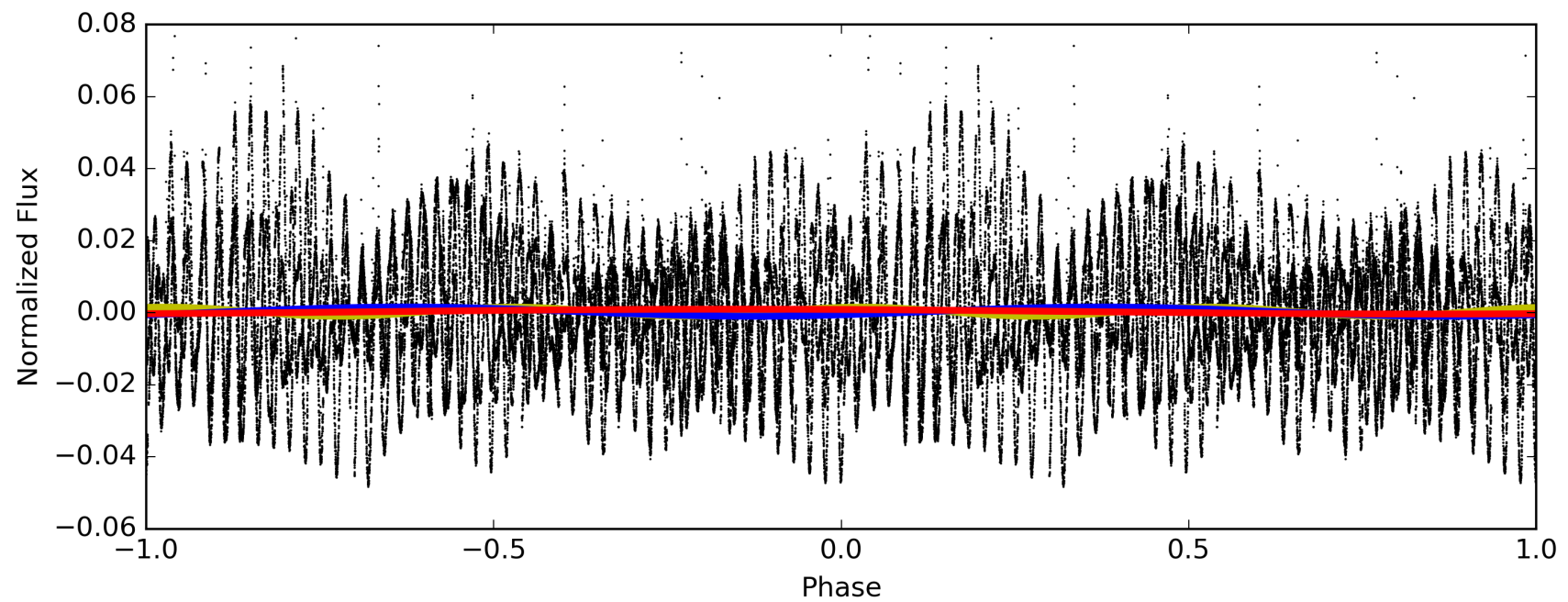
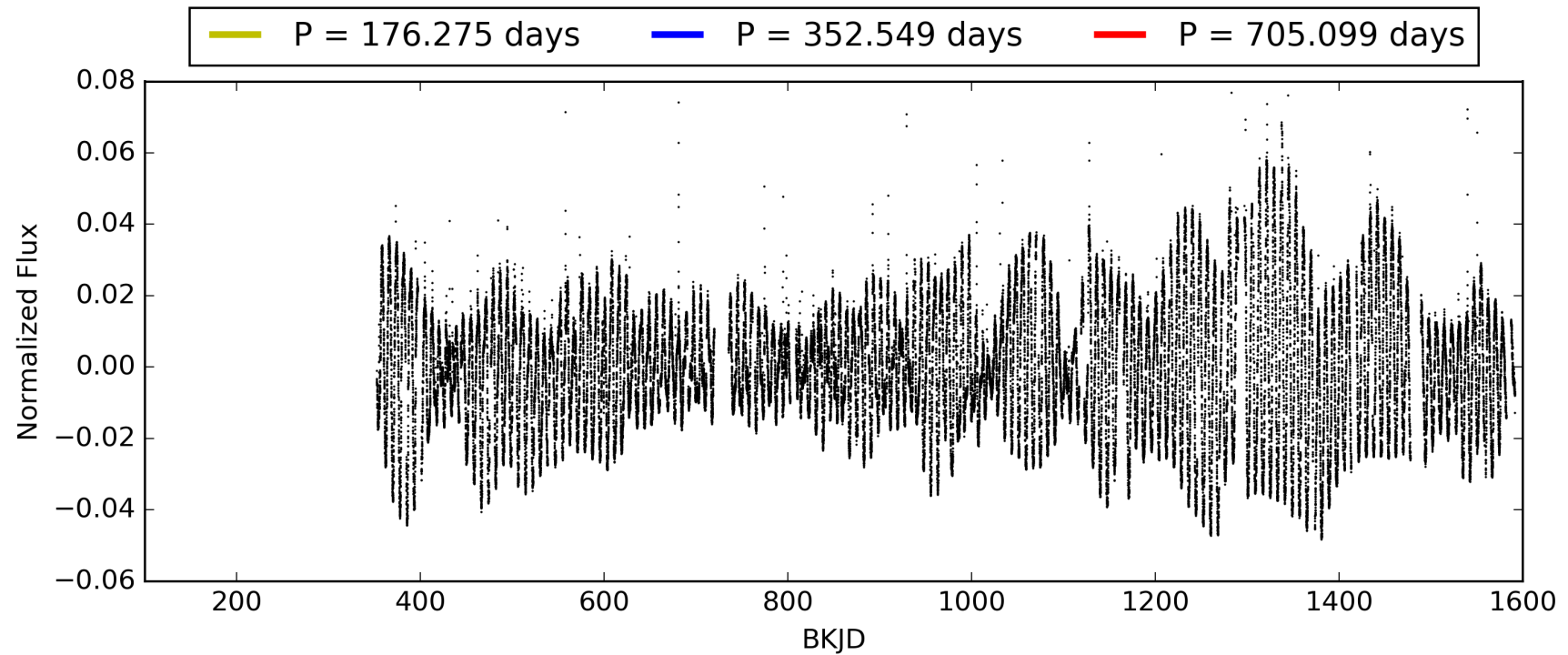
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 22:35:17 Z

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

# TCE 005262561-04, PDC Light Curves

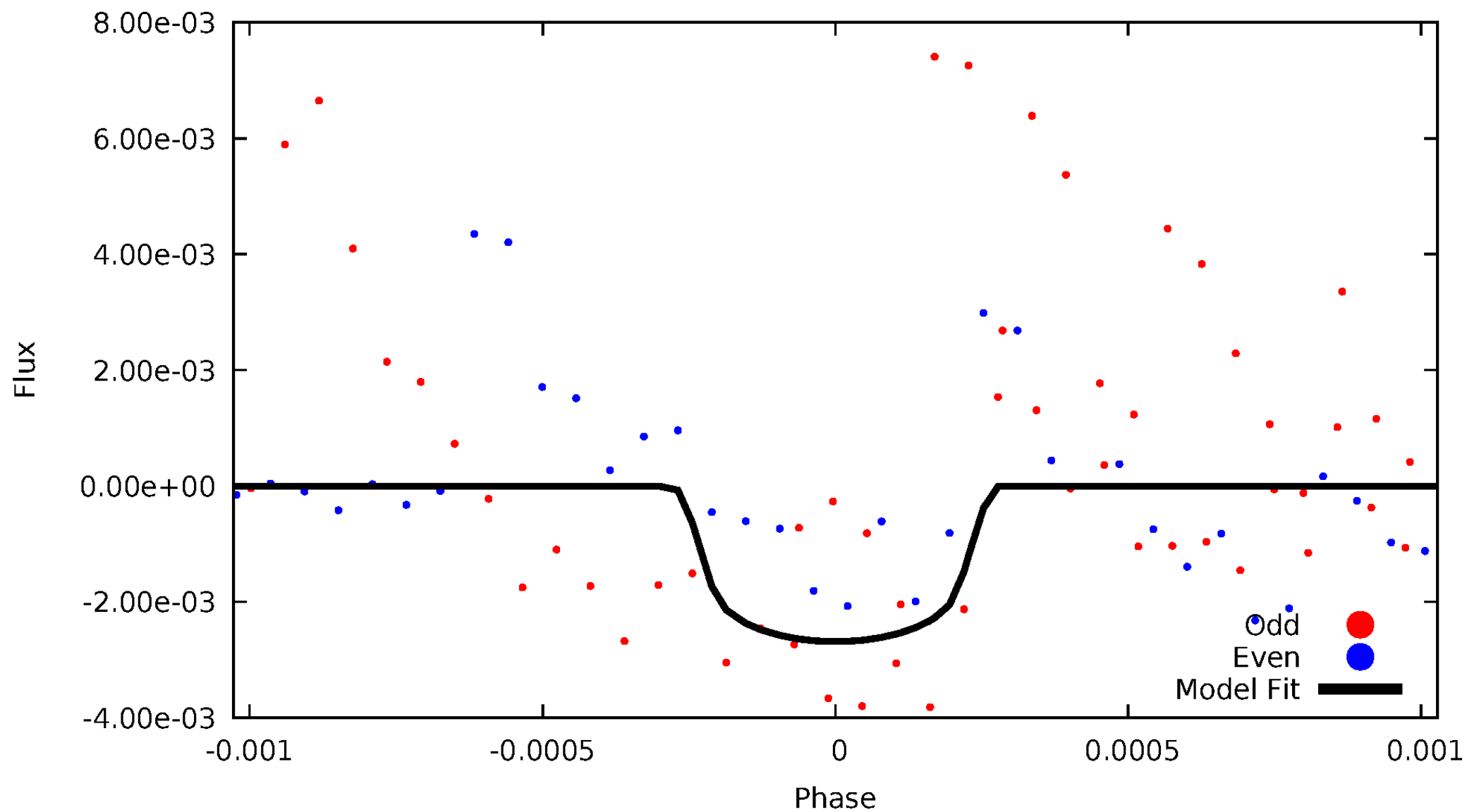


TCE 005262561-04



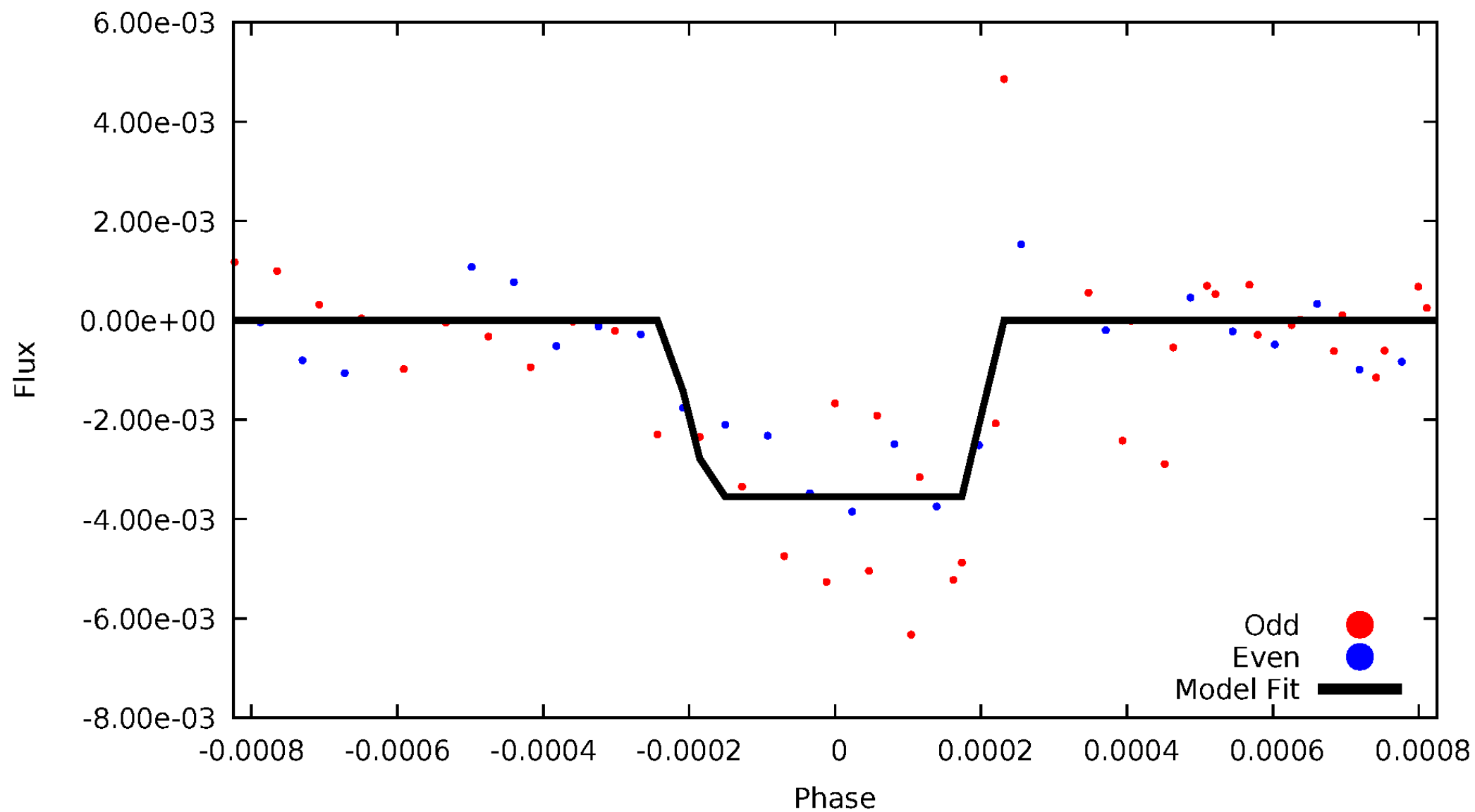
# DV Odd/Even

TCE 005262561-04



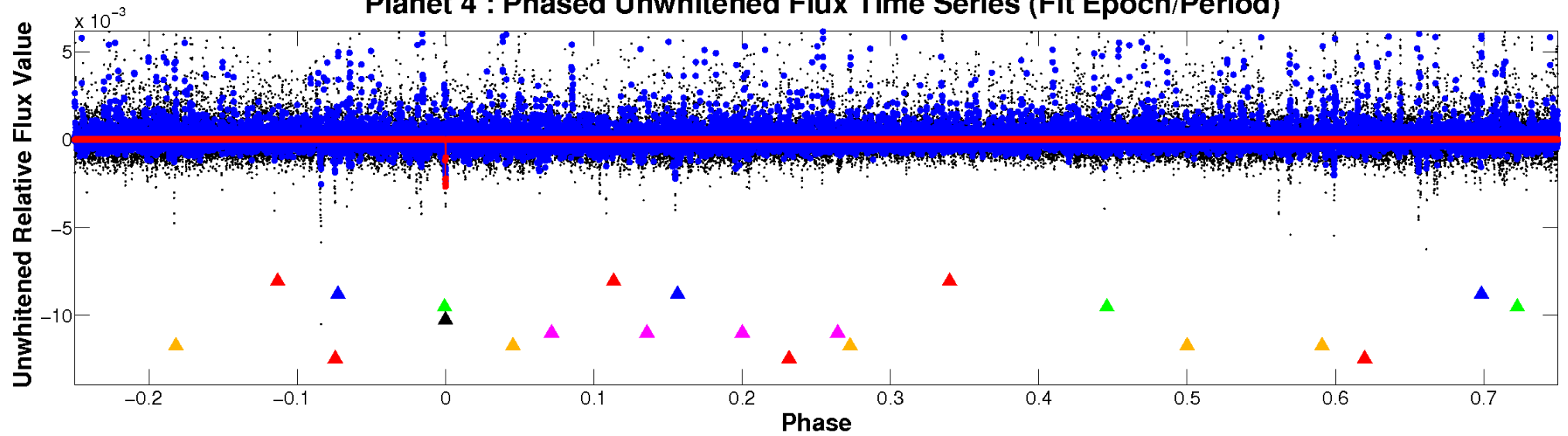
# ALT Odd/Even

TCE 005262561-04

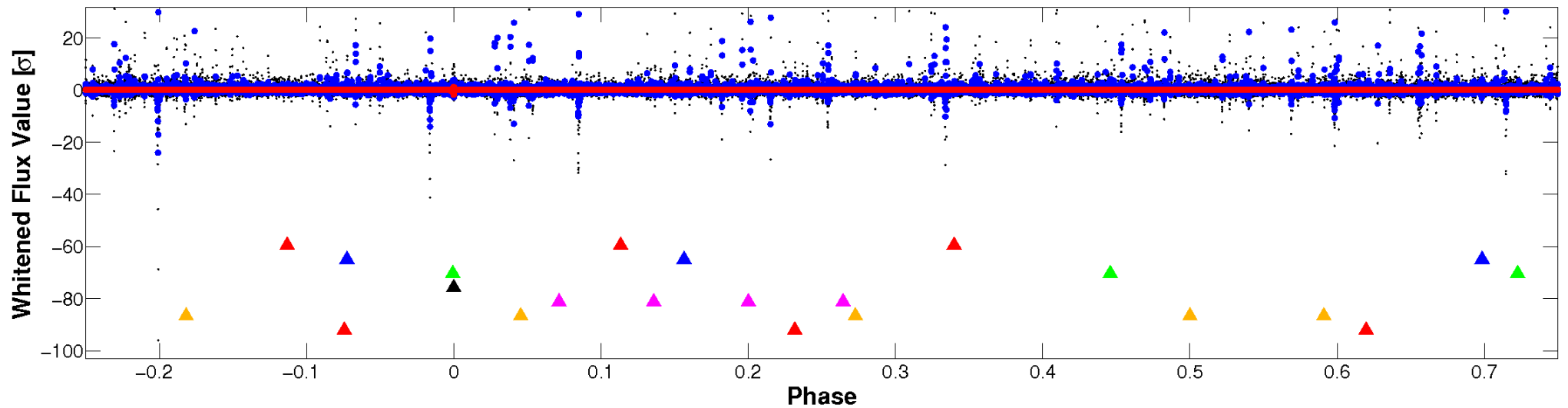


# Non-Whitened Vs. Whitened Light Curve

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

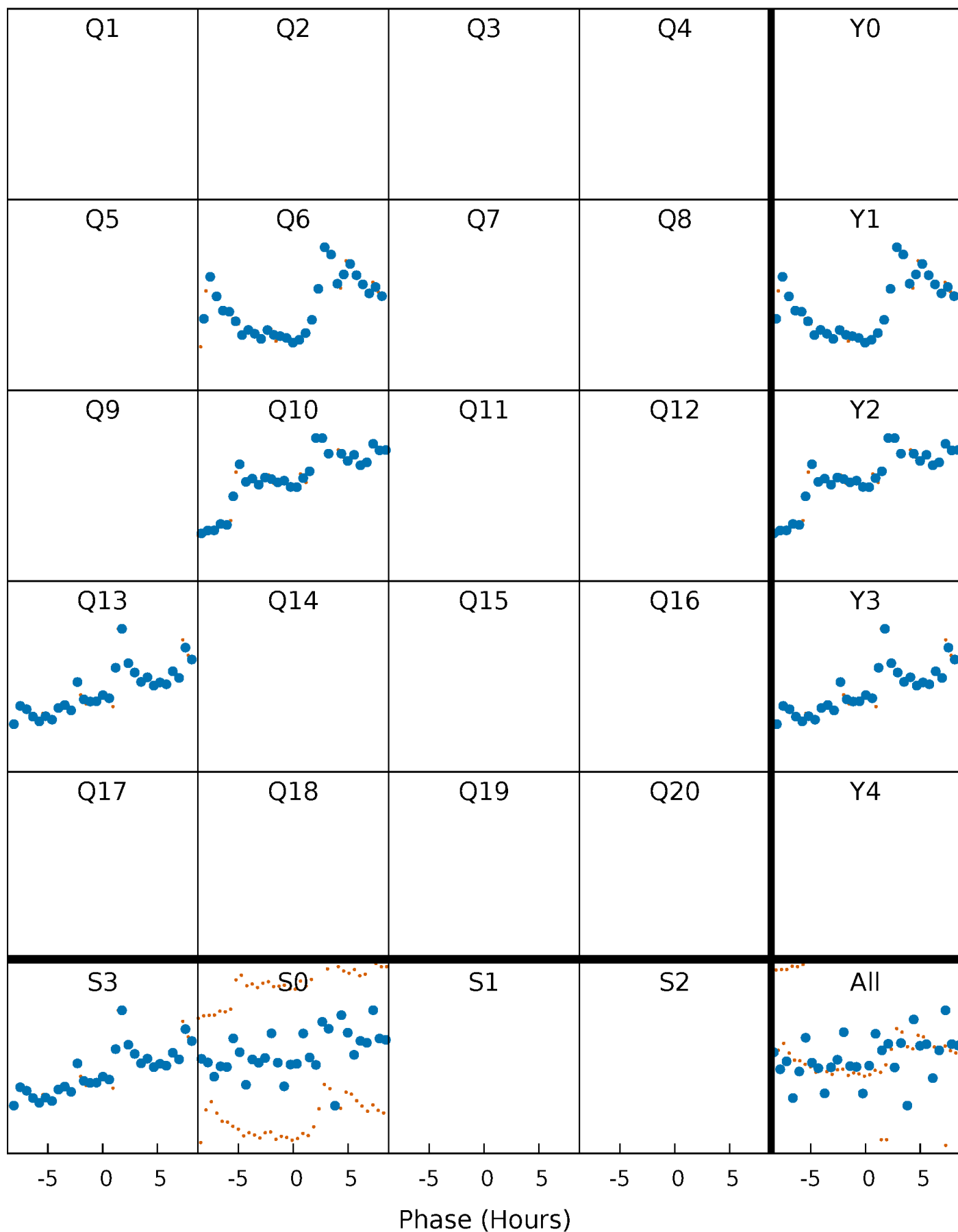


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



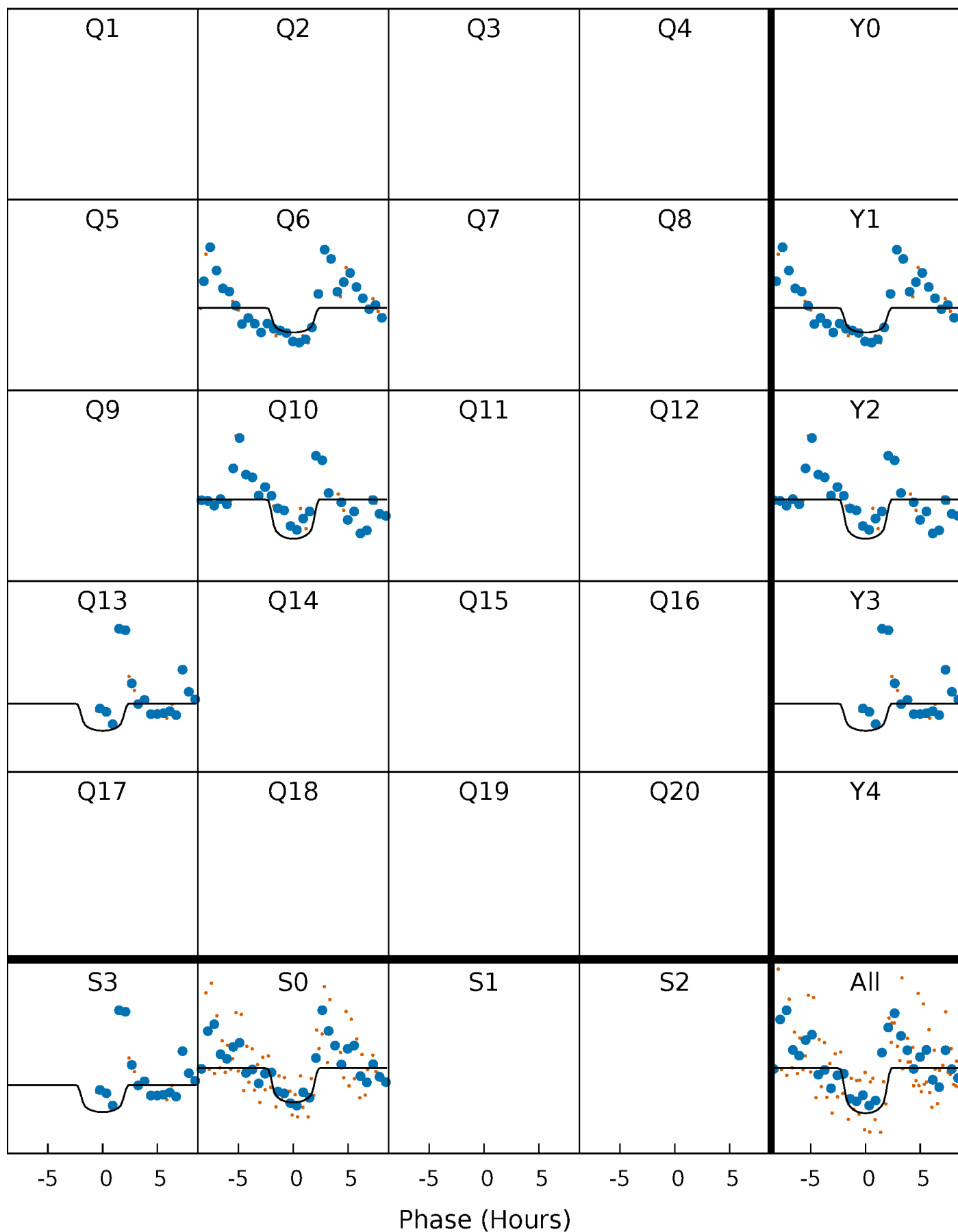
# PDC Quarter-Phased Transit Curves

TCE 005262561-04     $P=352.549254$  Days     $T_0=210.363742$  (BKJD)



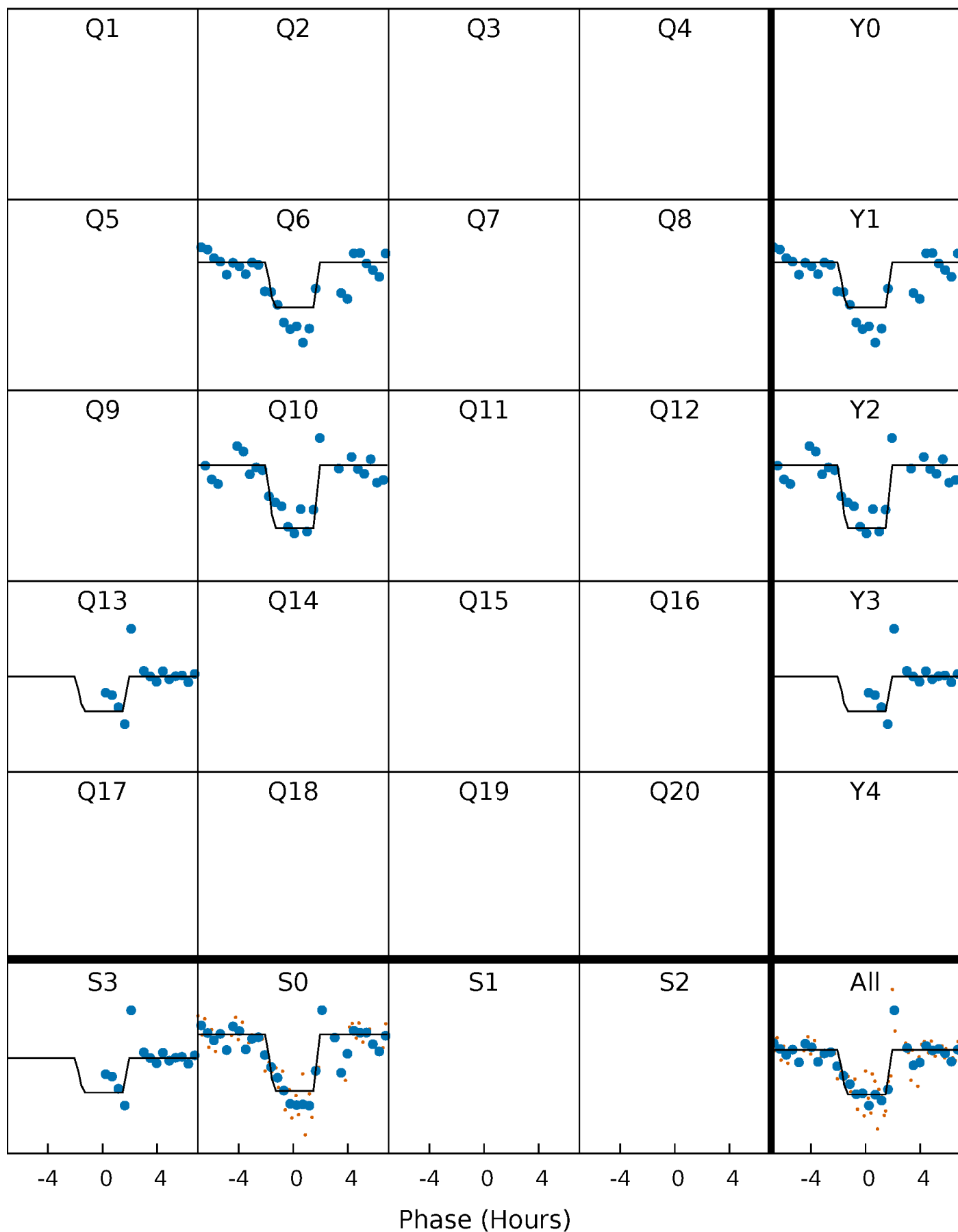
# DV Quarter-Phased Transit Curves

TCE 005262561-04     $P=352.549254$  Days     $T_0=210.363742$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

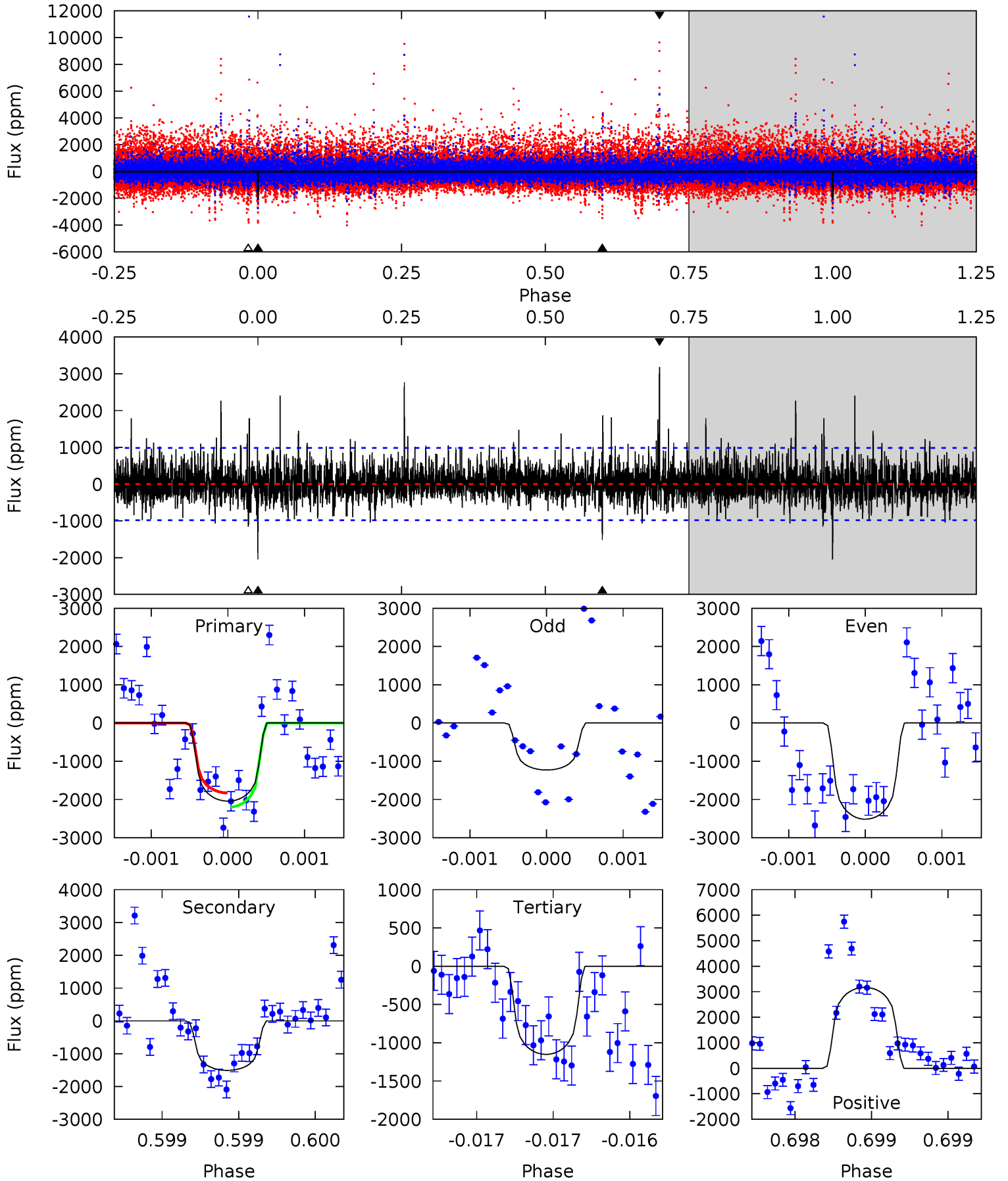
TCE 005262561-04 P=352.528184 Days  $T_0=210.405055$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-04, P = 352.549254 Days, E = 210.363742 Days

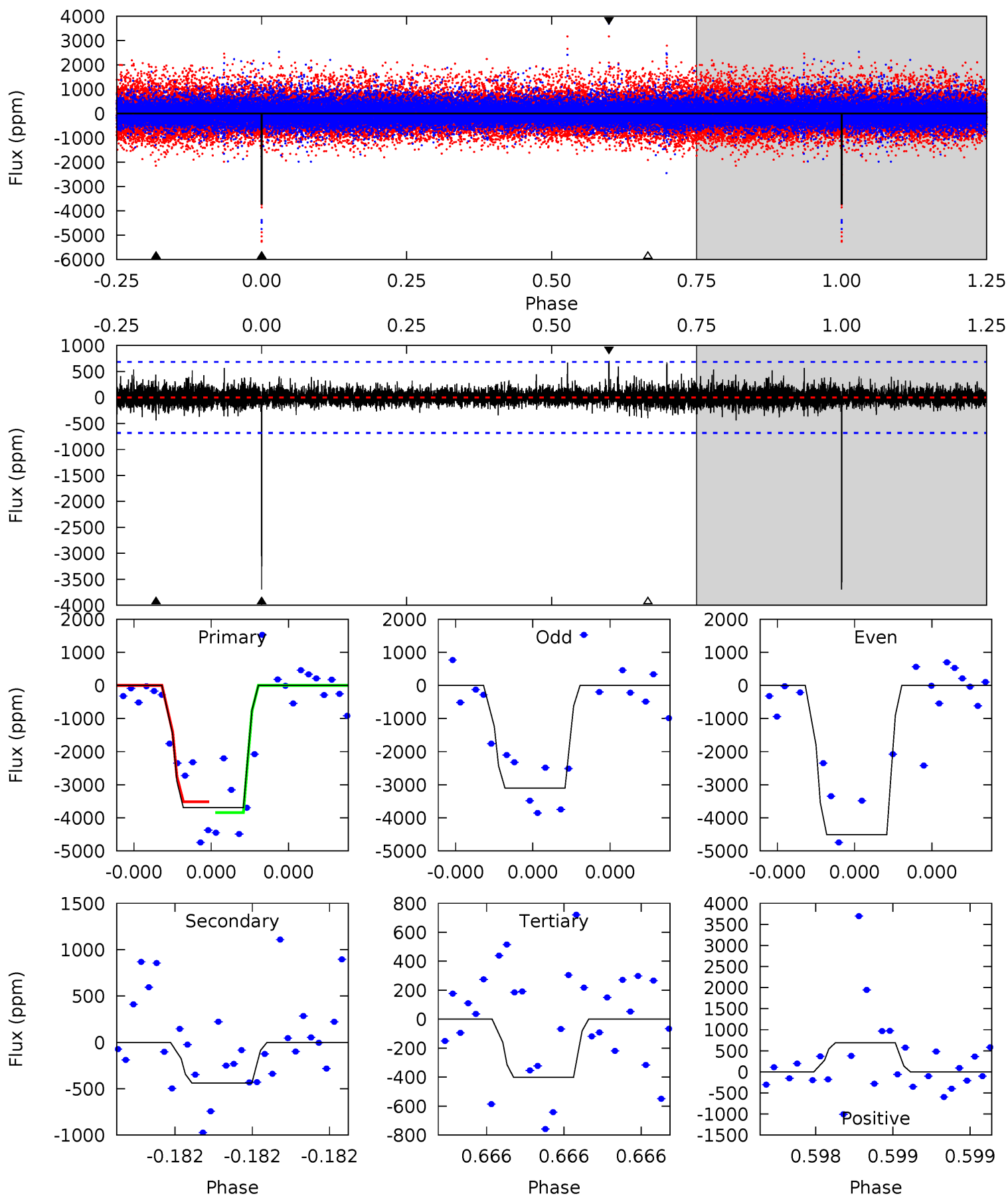
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	8.54	6.52	17.9	5.56	3.46	1.88	5.04	-6.38	2.02	-9.40	2.42	0.95	0.61	1.04



# Alt Model-Shift Uniqueness Test

005262561-04, P = 352.528184 Days, E = 210.405055 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
30.2	3.59	3.28	5.65	5.60	3.53	0.81	27.0	24.6	0.31	-2.06	5.50	1.17	0.16	0



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-04 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	-1509 $\pm$ 177	$2.83^{+1.90}_{-1.78}$	$172^{+4}_{-4}$	$3218^{+1254}_{-433}$	$60651^{+356855}_{-39283}$
Alt.	-439 $\pm$ 122	$3.25^{+1.93}_{-1.98}$	$172^{+4}_{-5}$	$2604^{+812}_{-294}$	$12635^{+75042}_{-7830}$

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

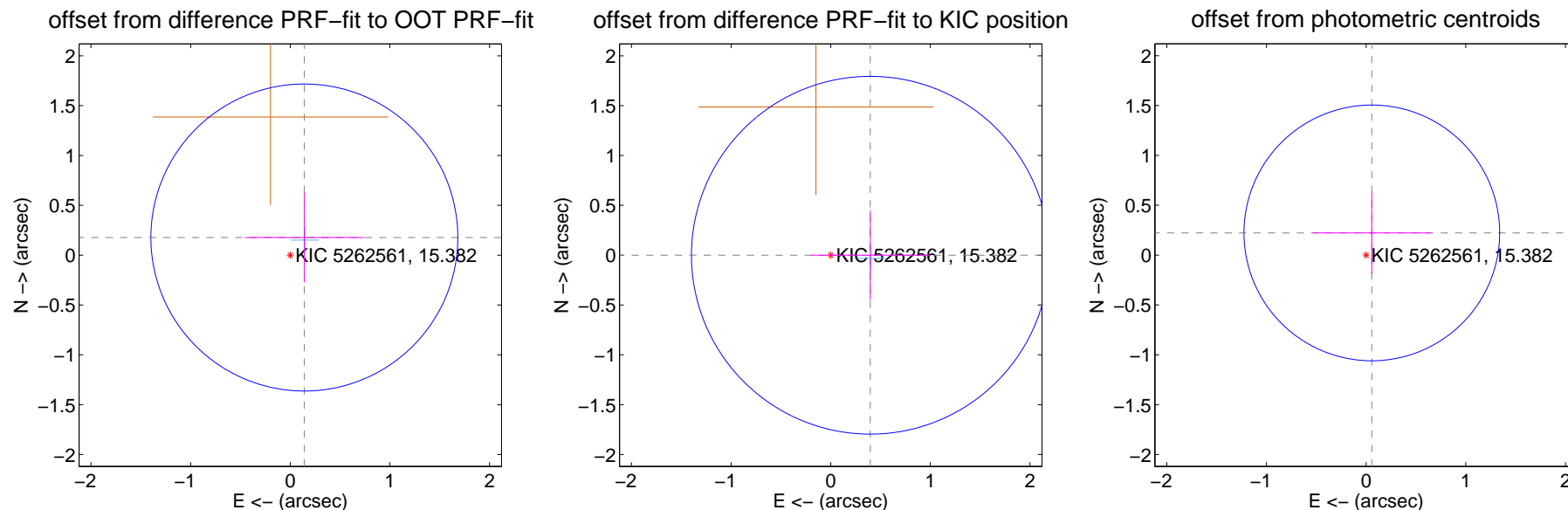
## DV Centroid Data

Supplemental centroid analysis for 005262561-04. Kepler magnitude: 15.38. Transit SNR 8.23

There are 1 quarters with good PRF difference image offsets

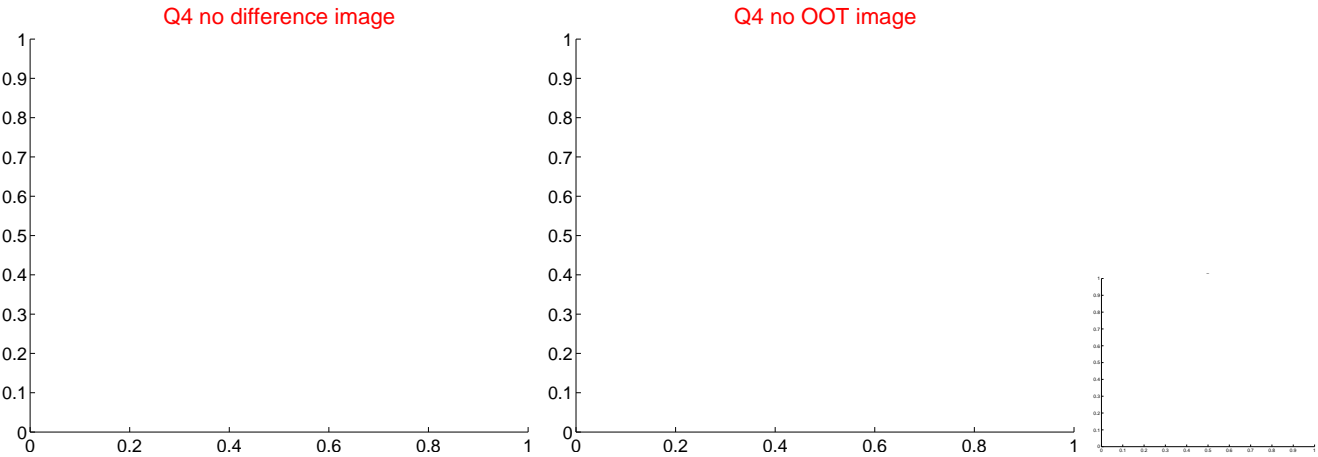
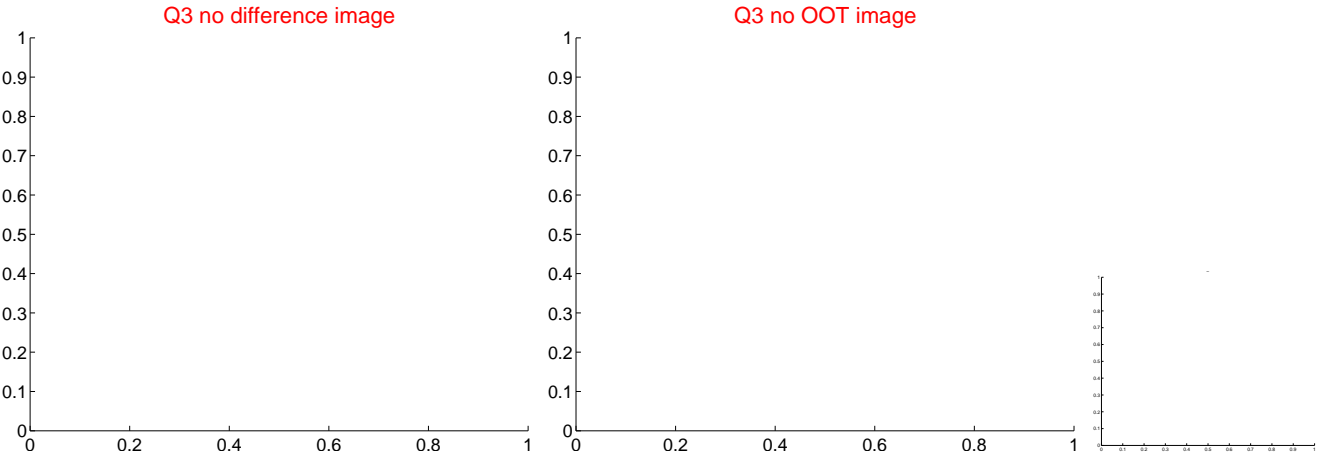
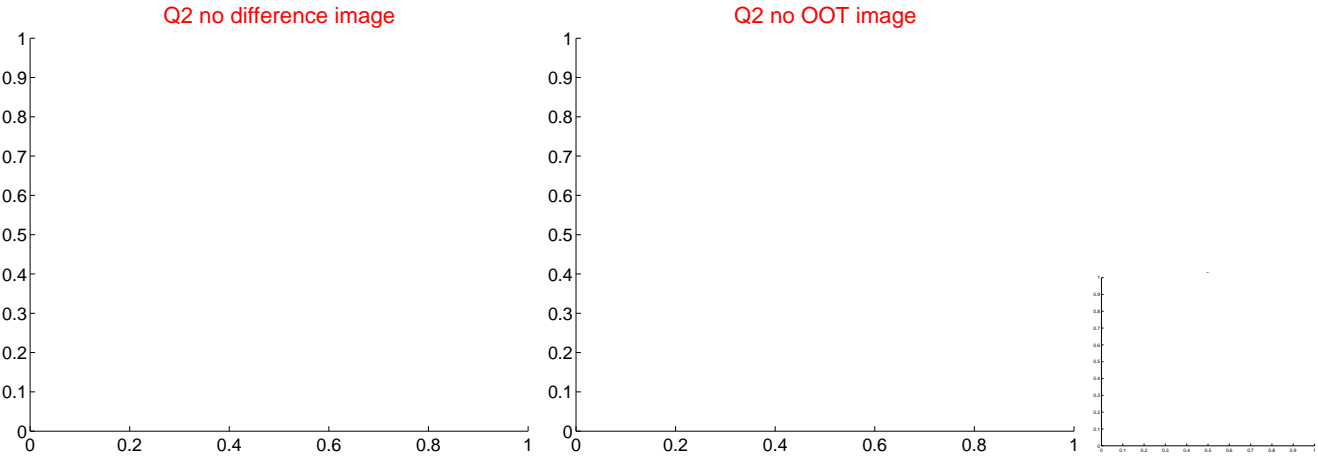
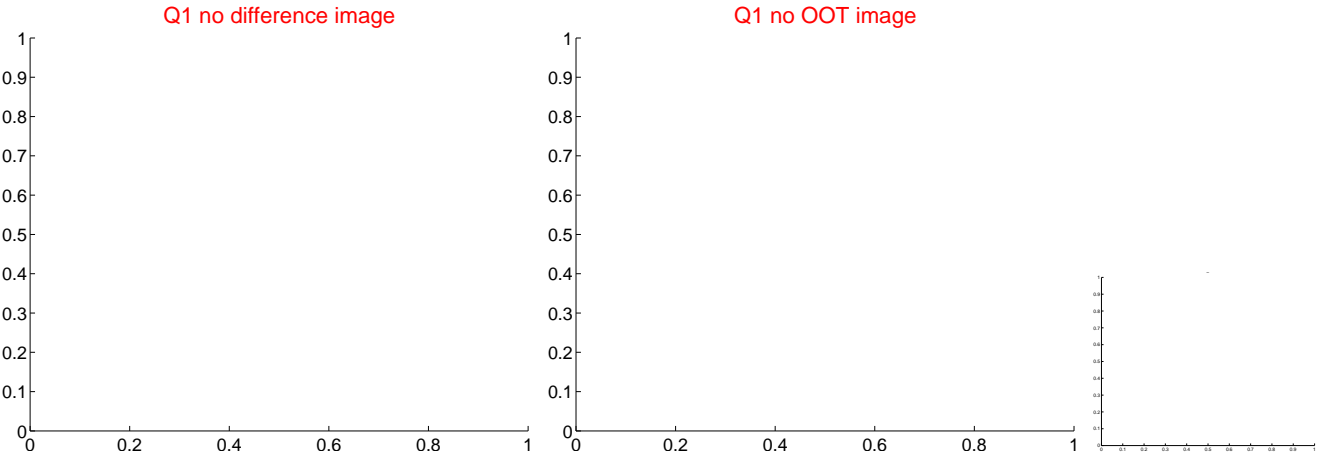
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.227 \pm 0.513$	0.44	$-0.141 \pm 0.598$	$0.177 \pm 0.451$
PRF-fit source offset from KIC position	$0.397 \pm 0.598$	0.66	$-0.397 \pm 0.598$	$-0.001 \pm 0.451$
photometric centroid source offset	$0.23 \pm 0.43$	0.54	$-0.06 \pm 0.59$	$0.22 \pm 0.41$

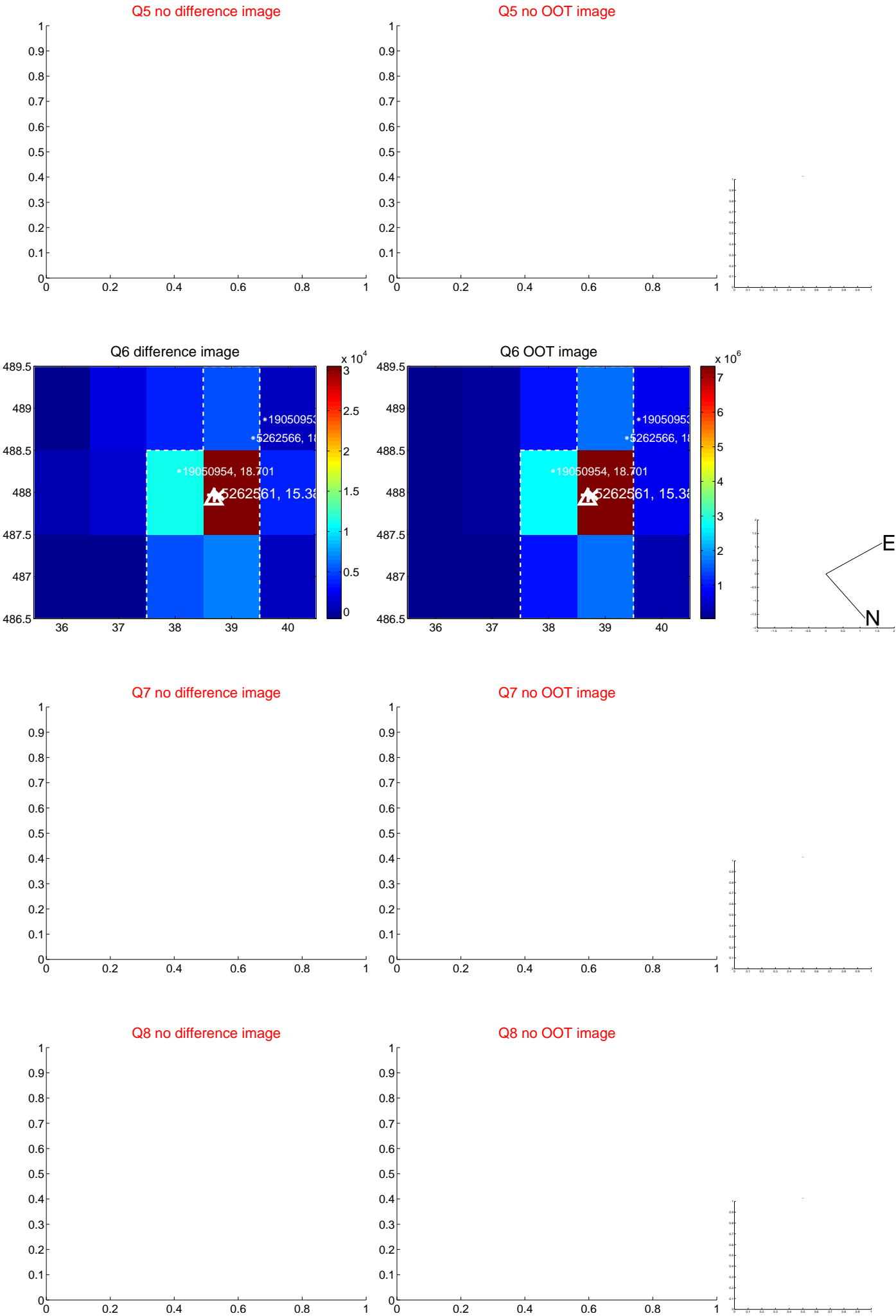


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

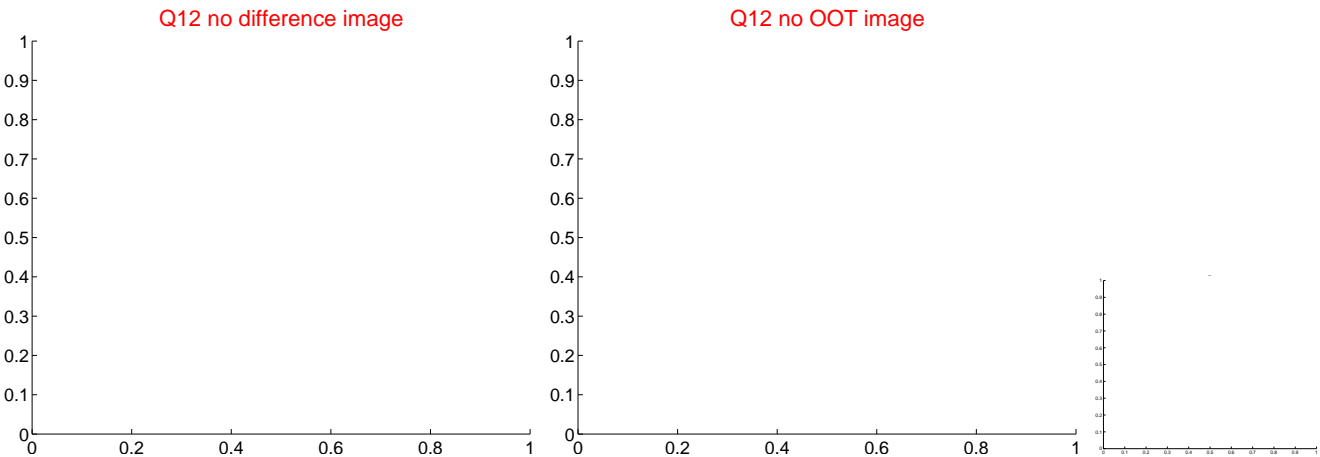
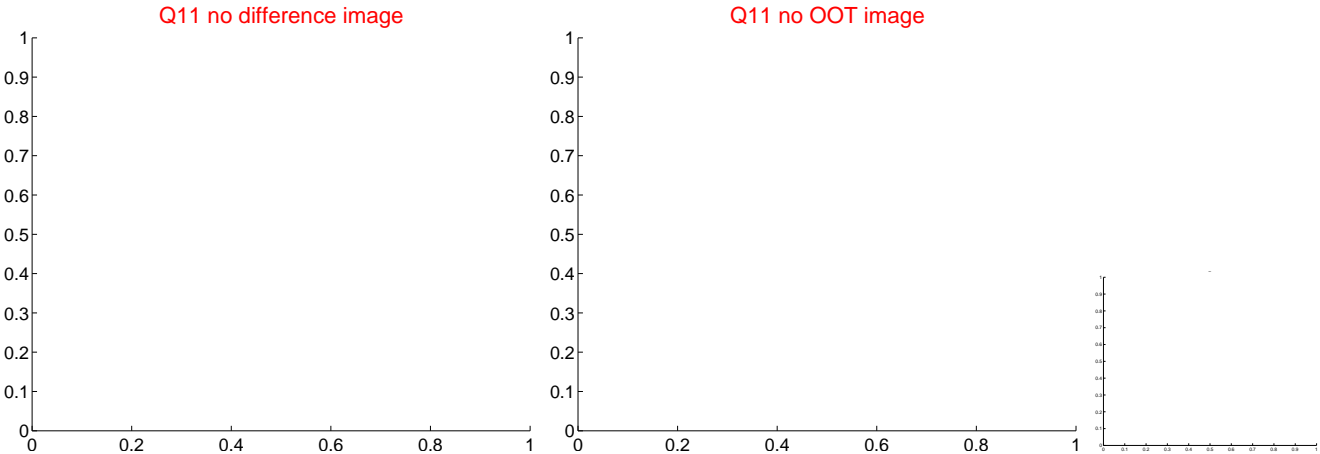
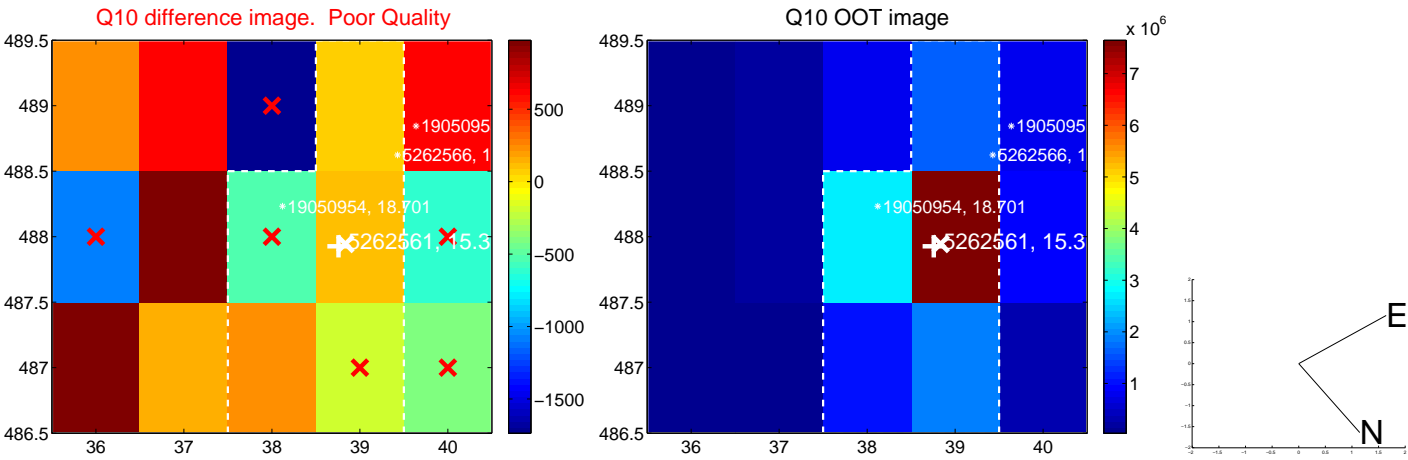
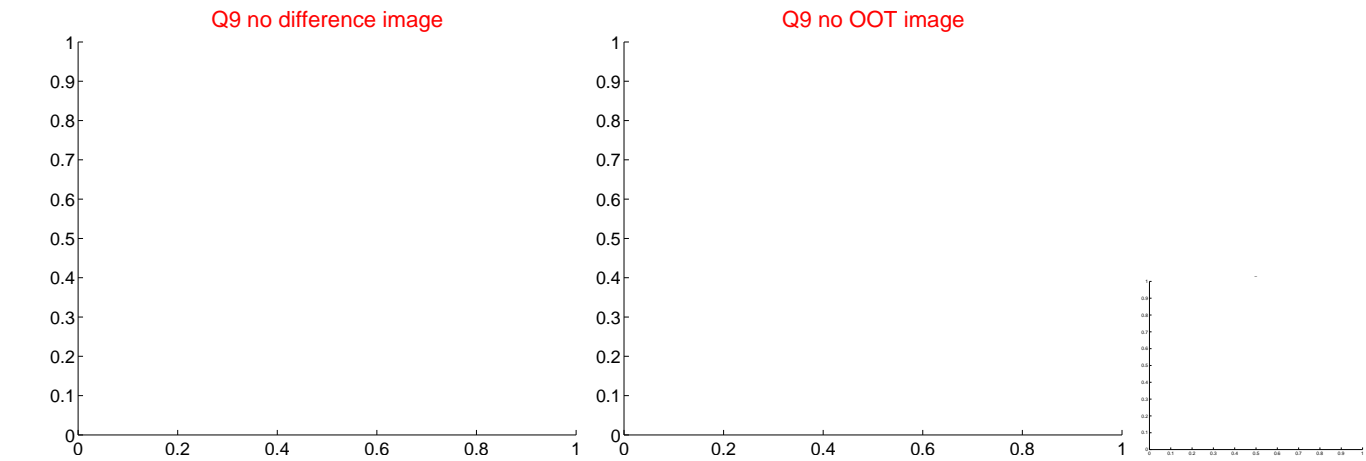
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



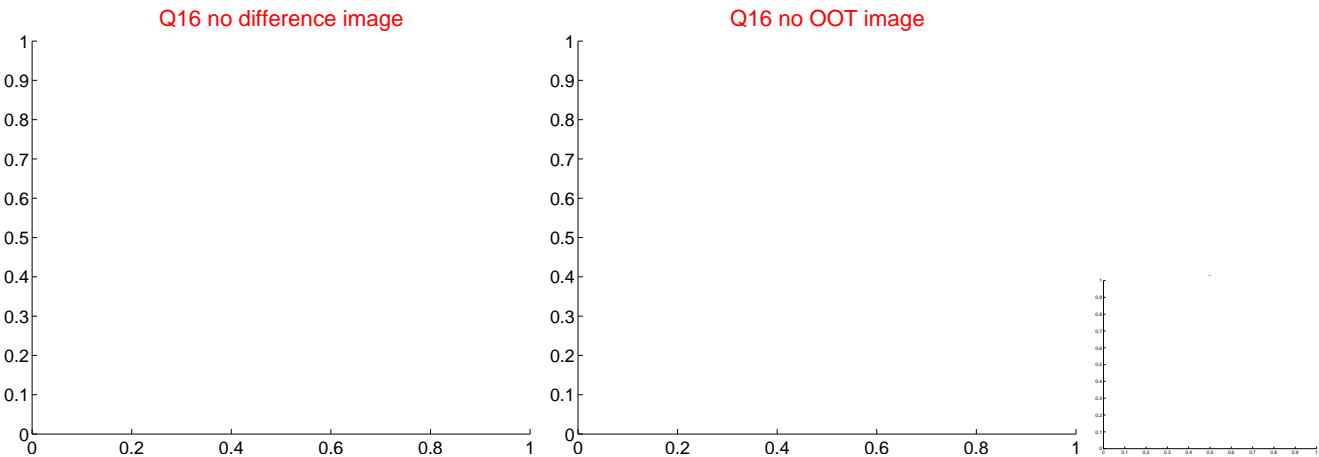
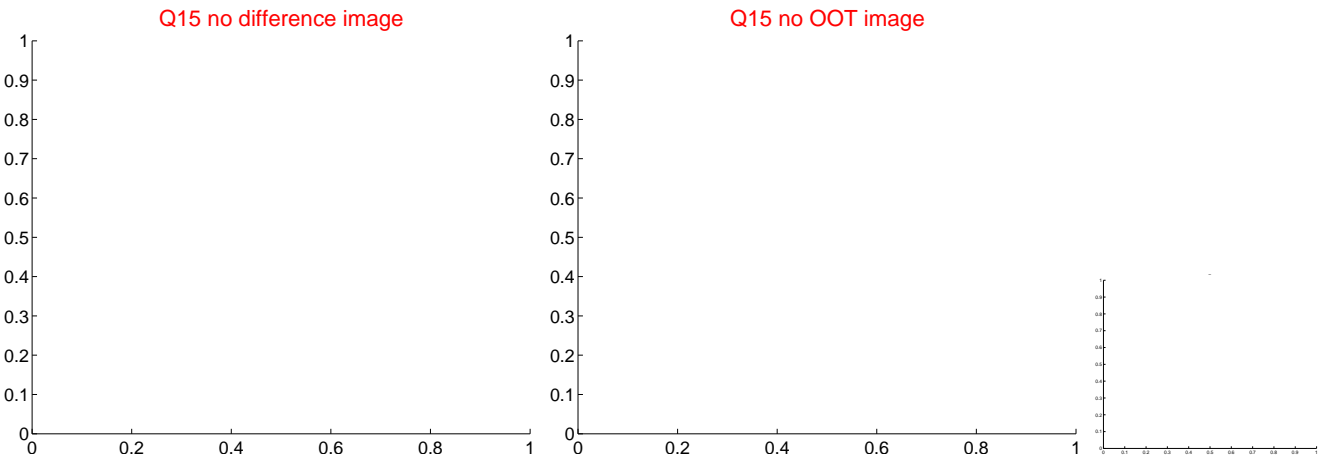
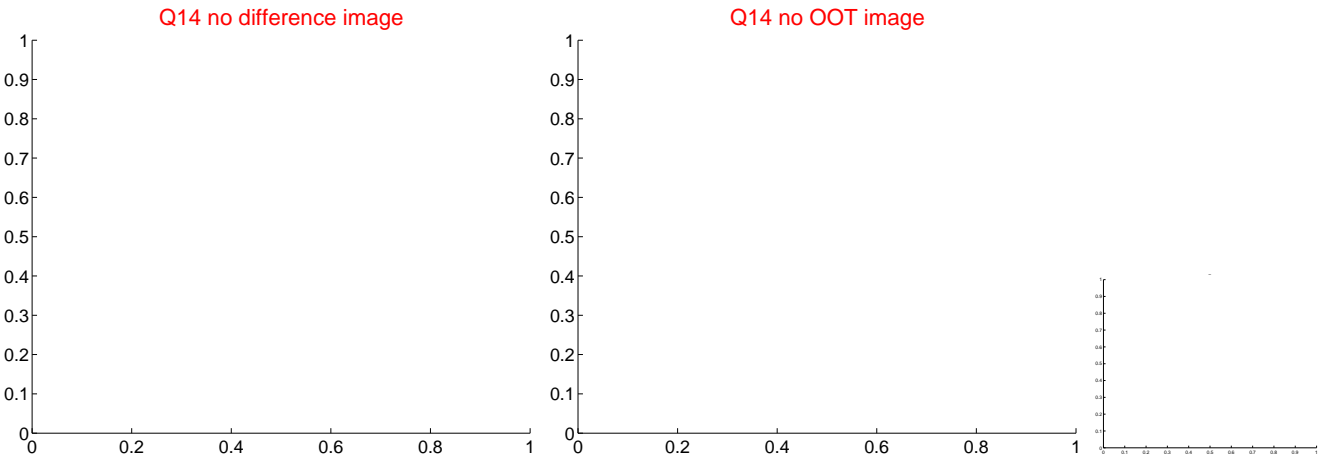
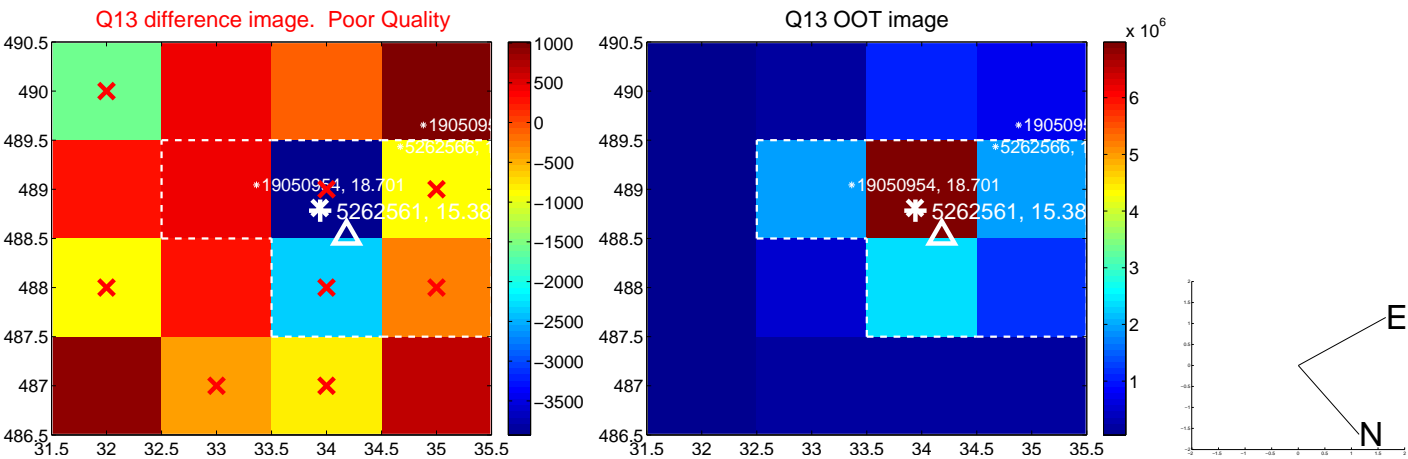
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



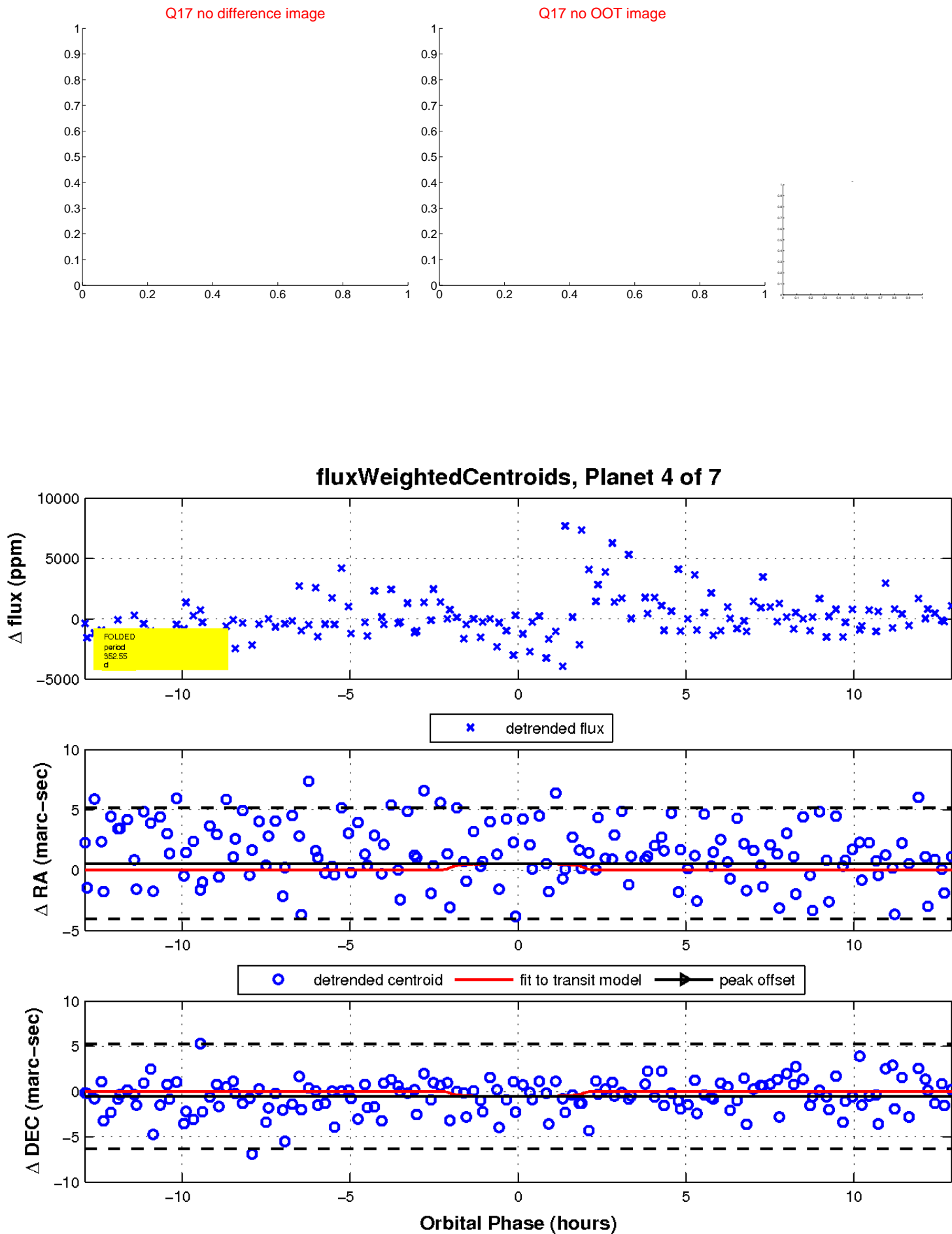
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

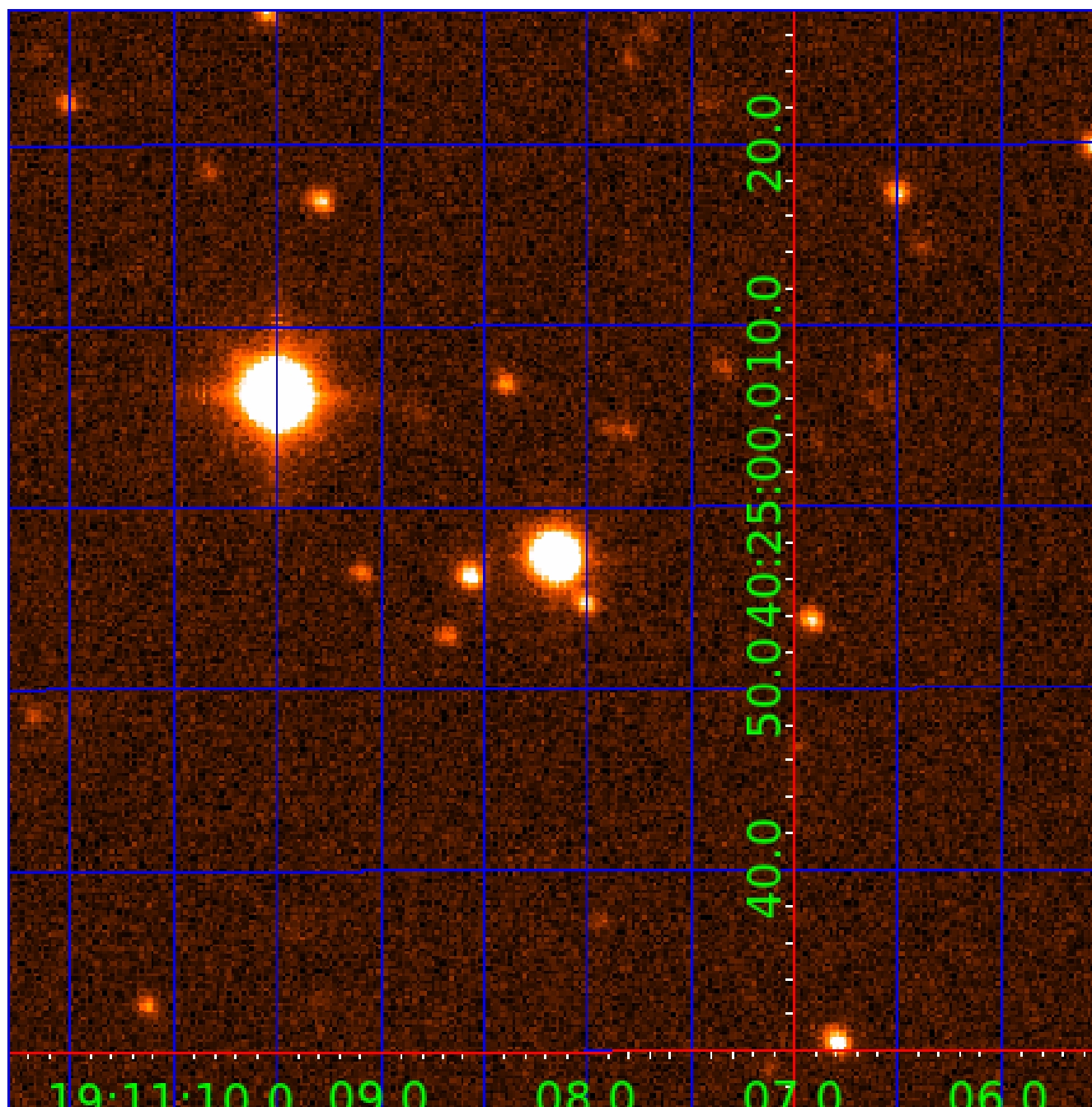


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 005262561

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005262561-01	OBS	No	432.405002	523.025887	2650.6	9.647	15.6	8.9	0.46	3625	2.34	0.04
005262561-02	OBS	No	433.280026	456.616656	2249.0	9.752	13.2	7.0	0.46	3625	2.14	0.04
005262561-03	OBS	No	450.102616	367.582477	677.4	2.760	13.2	2.4	0.46	3625	1.27	0.04
005262561-04	OBS	No	352.549254	210.363742	2684.8	4.346	11.4	8.2	0.46	3625	2.45	0.06
005262561-05	OBS	No	375.221462	235.585926	718.8	15.000	10.3	-1.0	0.46	3625	1.21	0.05
005262561-06	OBS	No	272.428273	386.654427	1771.4	4.120	10.9	7.2	0.46	3625	1.90	0.08
005262561-07	OBS	No	460.413789	428.856492	1954.7	5.033	9.4	6.6	0.46	3625	2.06	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005262561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

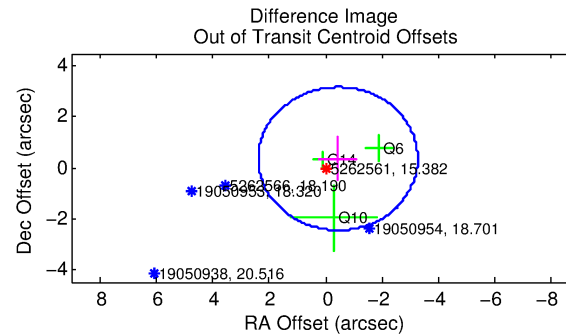
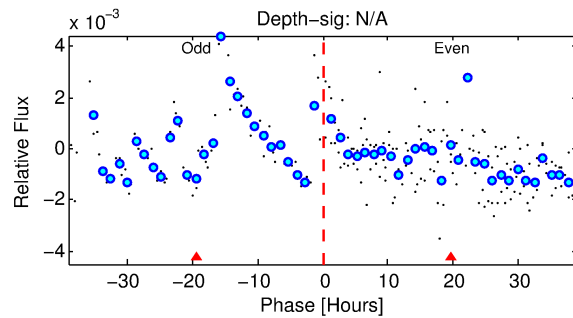
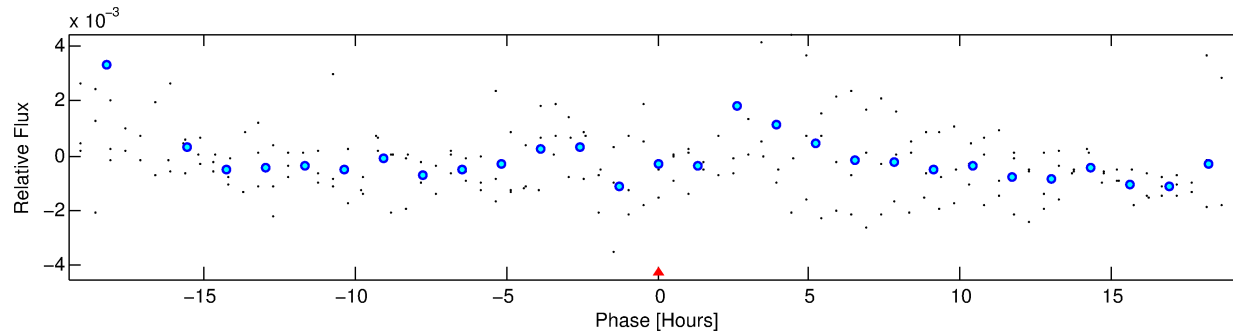
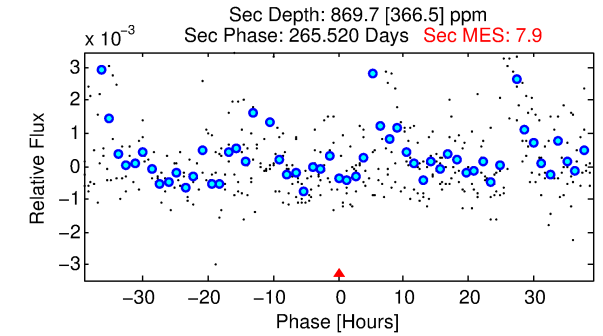
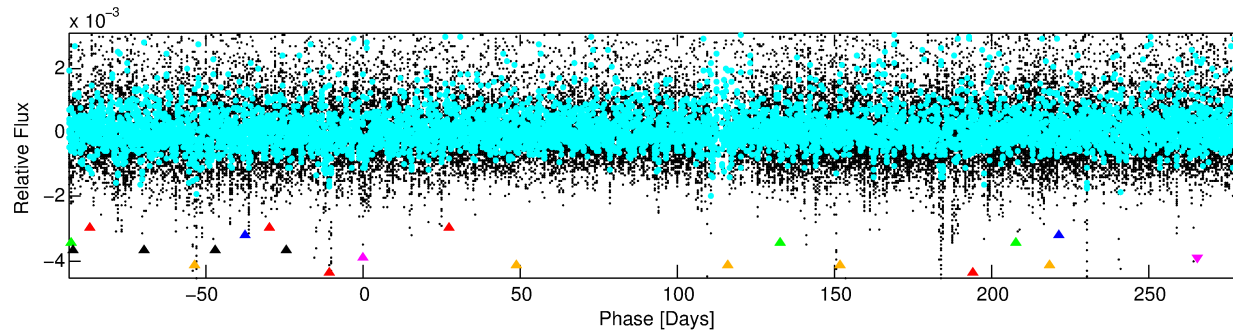
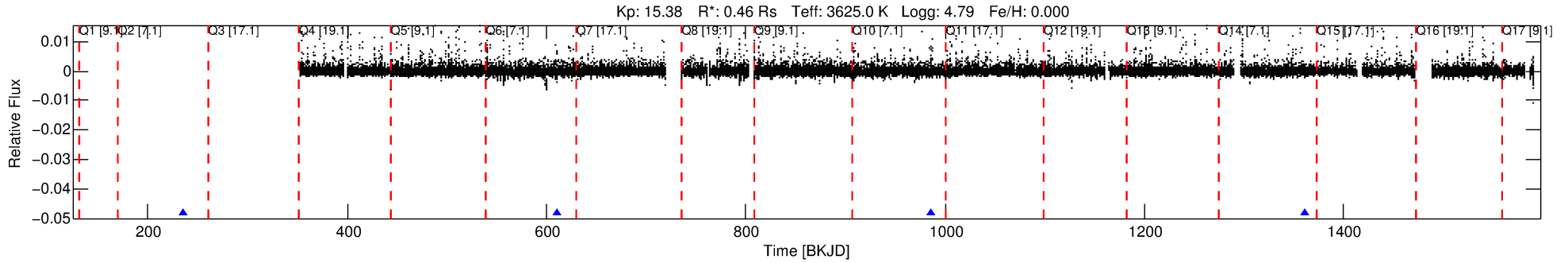
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005262561-05

No Significant Match Found

# DV One-Page Summary

KIC: 5262561 Candidate: 5 of 7 Period: 375.221 d



## TPS TCE Results:

Period = 375.22146 d  
Epoch = 235.5859 BKJD

**DV fit results are unavailable**

## DV Diagnostic Results:

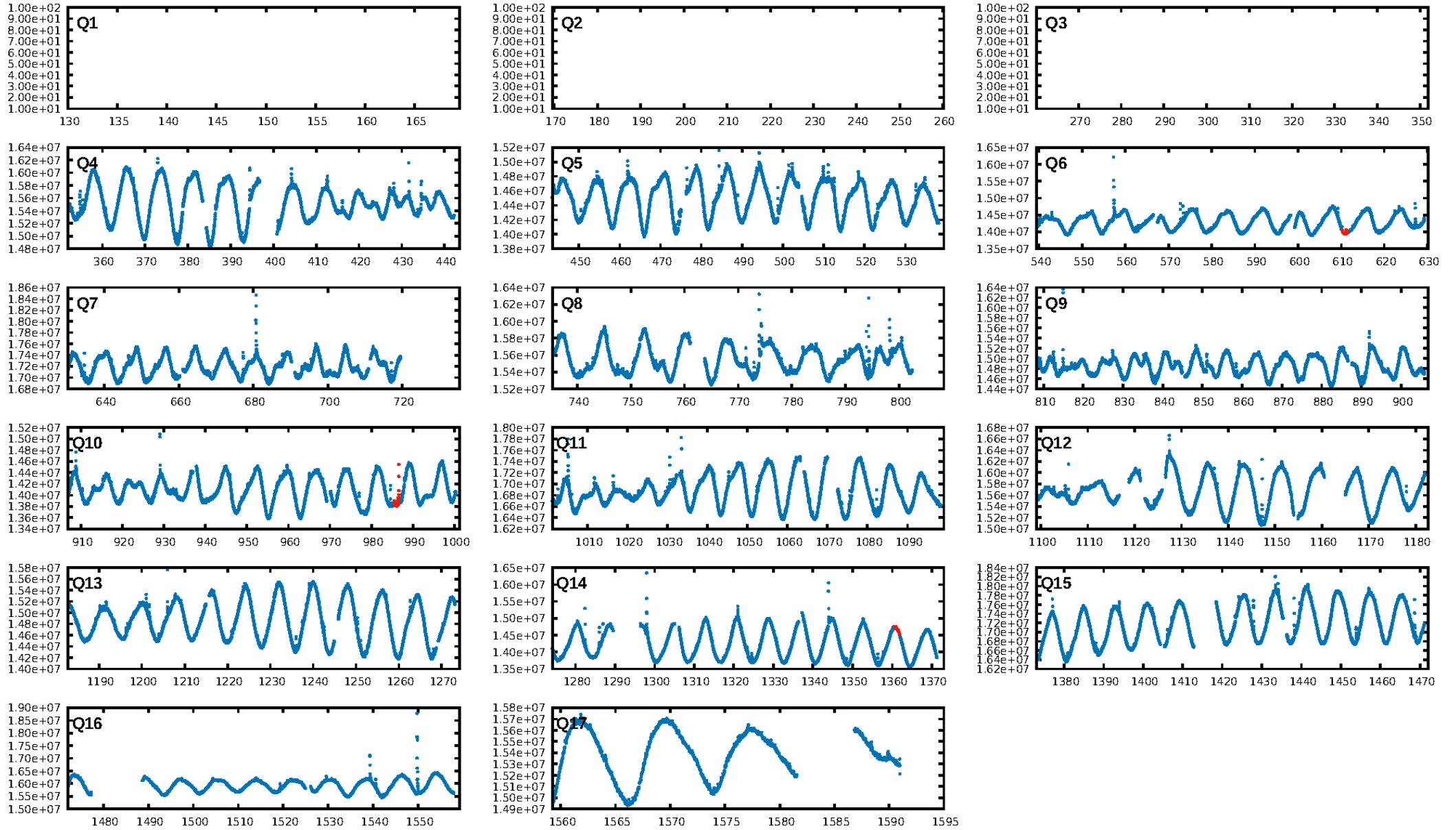
ShortPeriod-sig: 100.0% [34.84σ]  
LongPeriod-sig: 100.0% [76.95σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
**Bootstrap-pfa: 2.60e-08**  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: 0.8714

Centroid-sig: 62.7%  
Centroid-so: 15.967 arcsec [0.60σ]  
OotOffset-rm: 0.565 arcsec [0.60σ]  
KicOffset-rm: 0.525 arcsec [0.85σ]  
OotOffset-st: 3/0/0/0 [3]  
KicOffset-st: 3/0/0/0 [3]  
DiffImageQuality-fgm: 0.00 [0/3]  
DiffImageOverlap-fno: 1.00 [3/3]

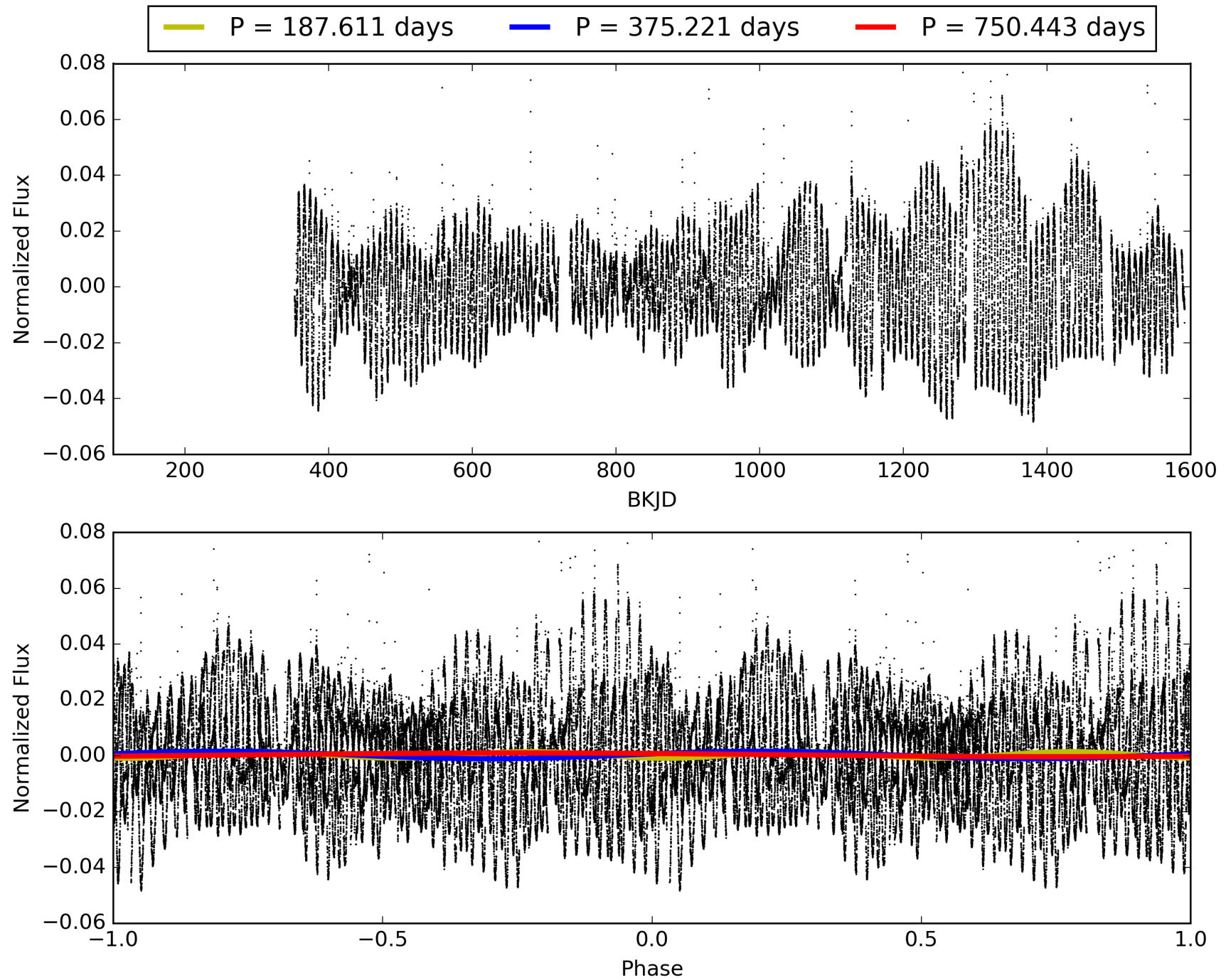
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 22:35:27 Z

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

# TCE 005262561-05, PDC Light Curves

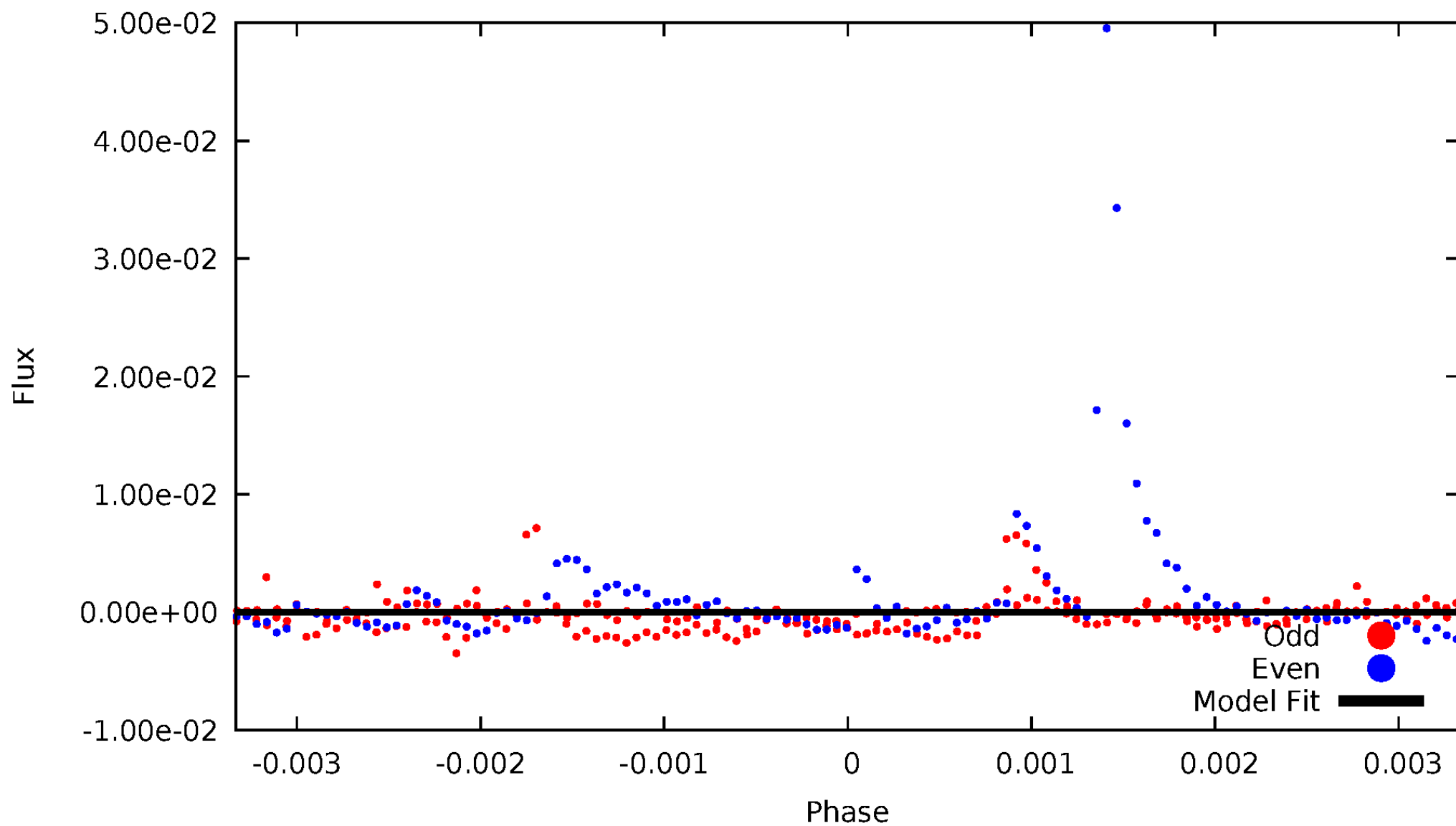


TCE 005262561-05



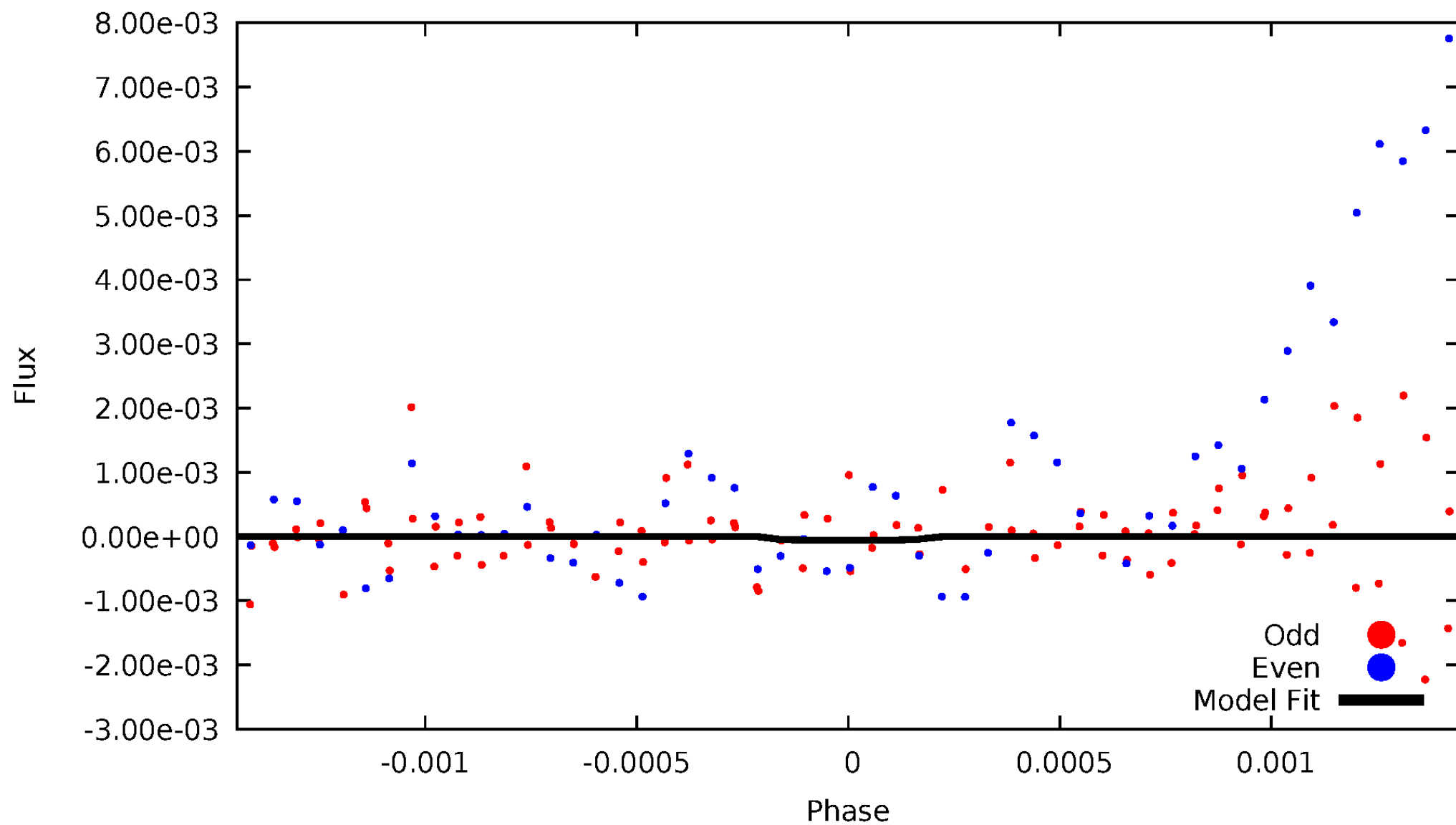
# DV Odd/Even

TCE 005262561-05



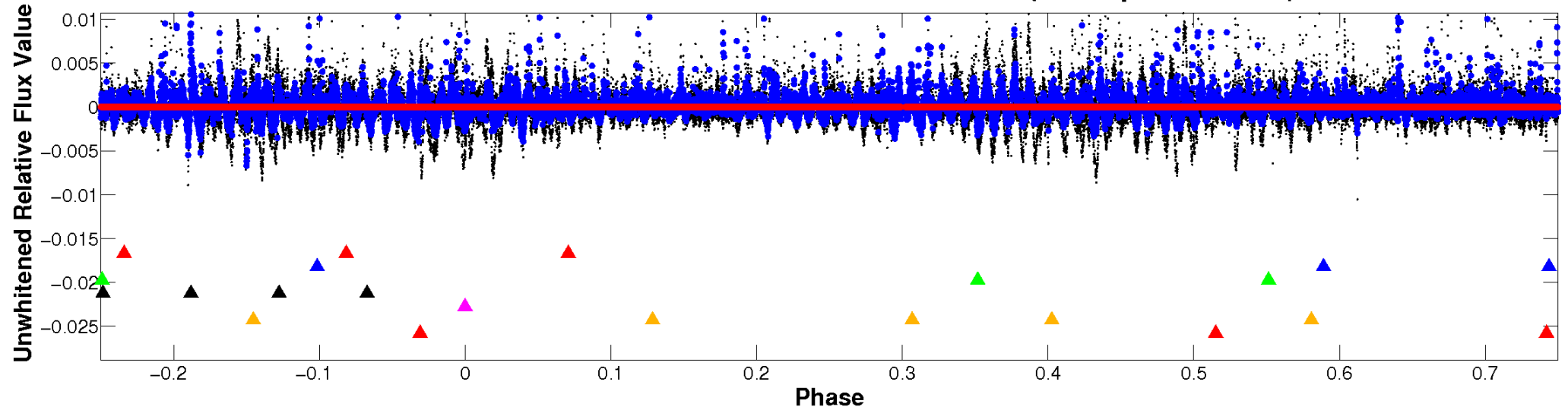
# ALT Odd/Even

TCE 005262561-05

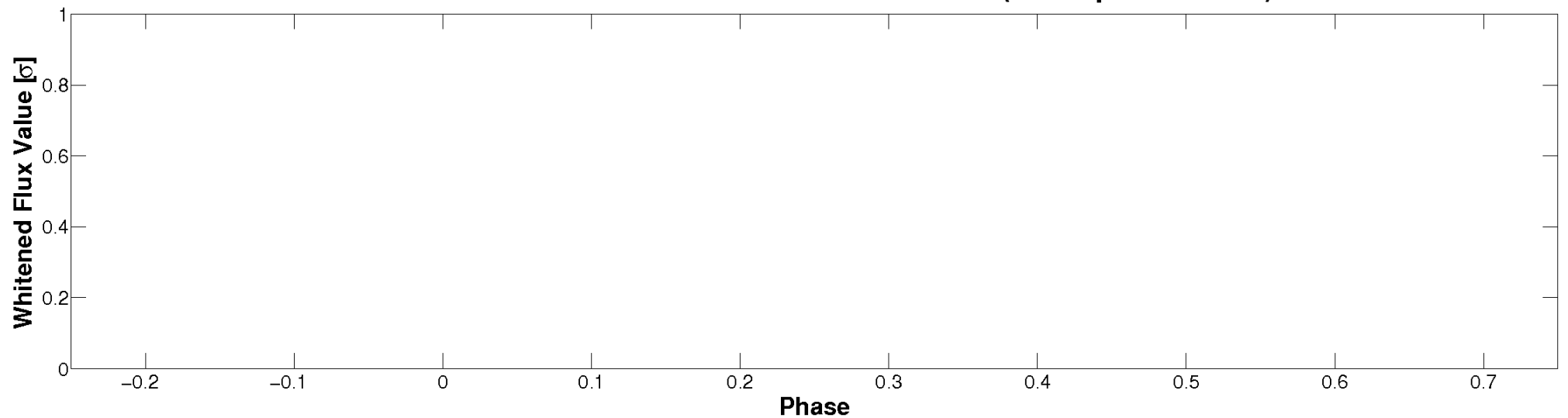


# Non-Whitened Vs. Whitened Light Curve

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

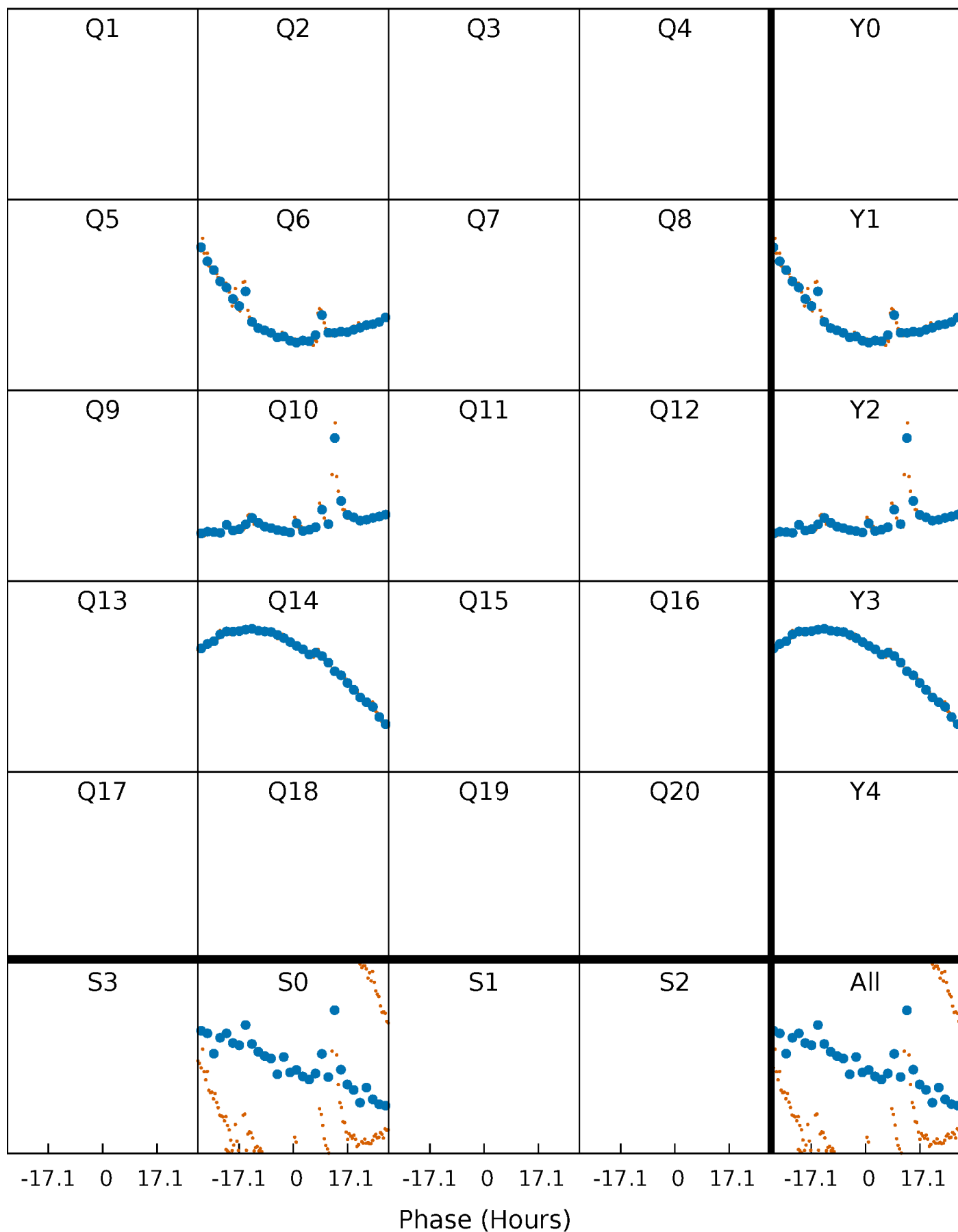


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



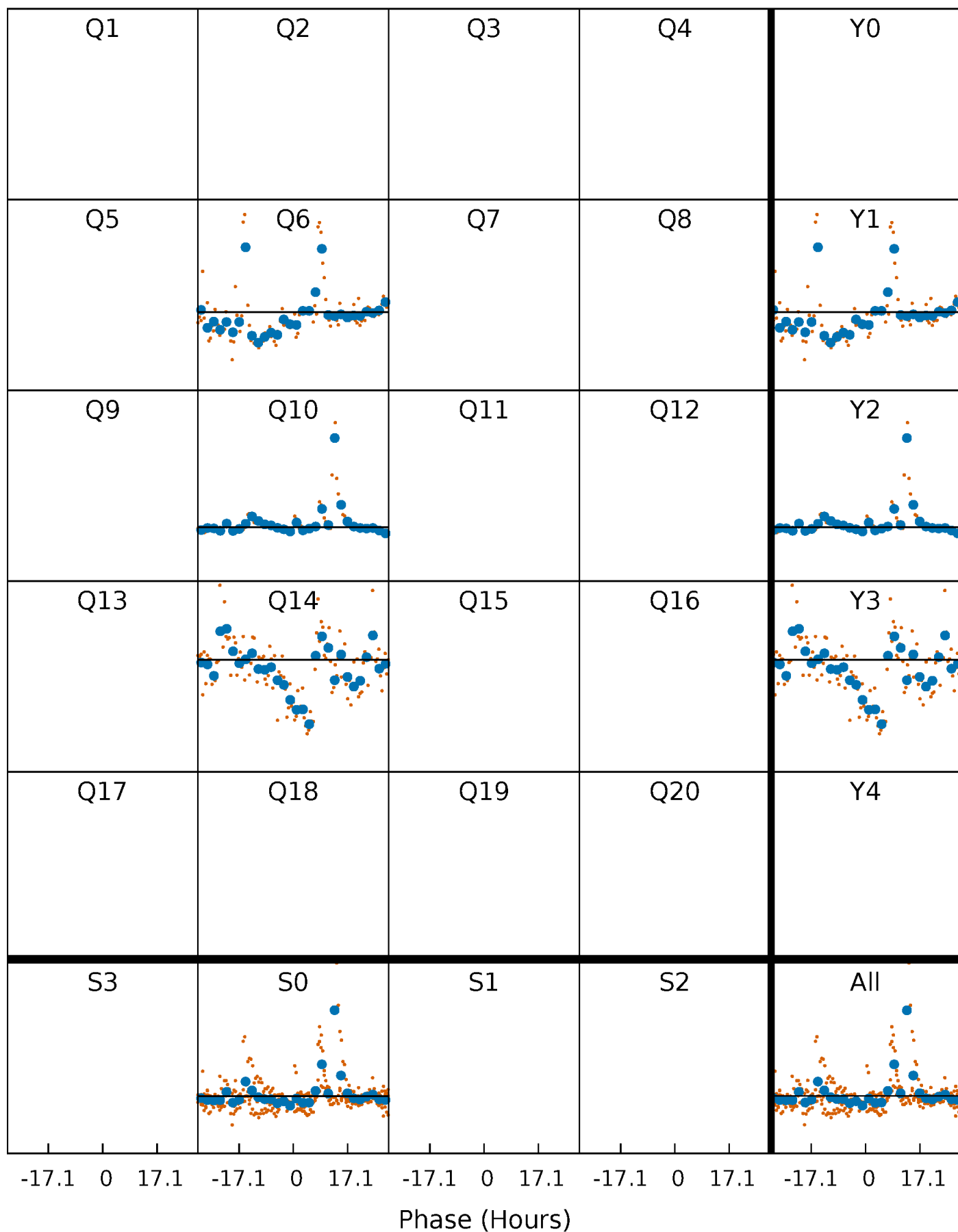
# PDC Quarter-Phased Transit Curves

TCE 005262561-05     $P=375.221462$  Days     $T_0=235.585926$  (BKJD)



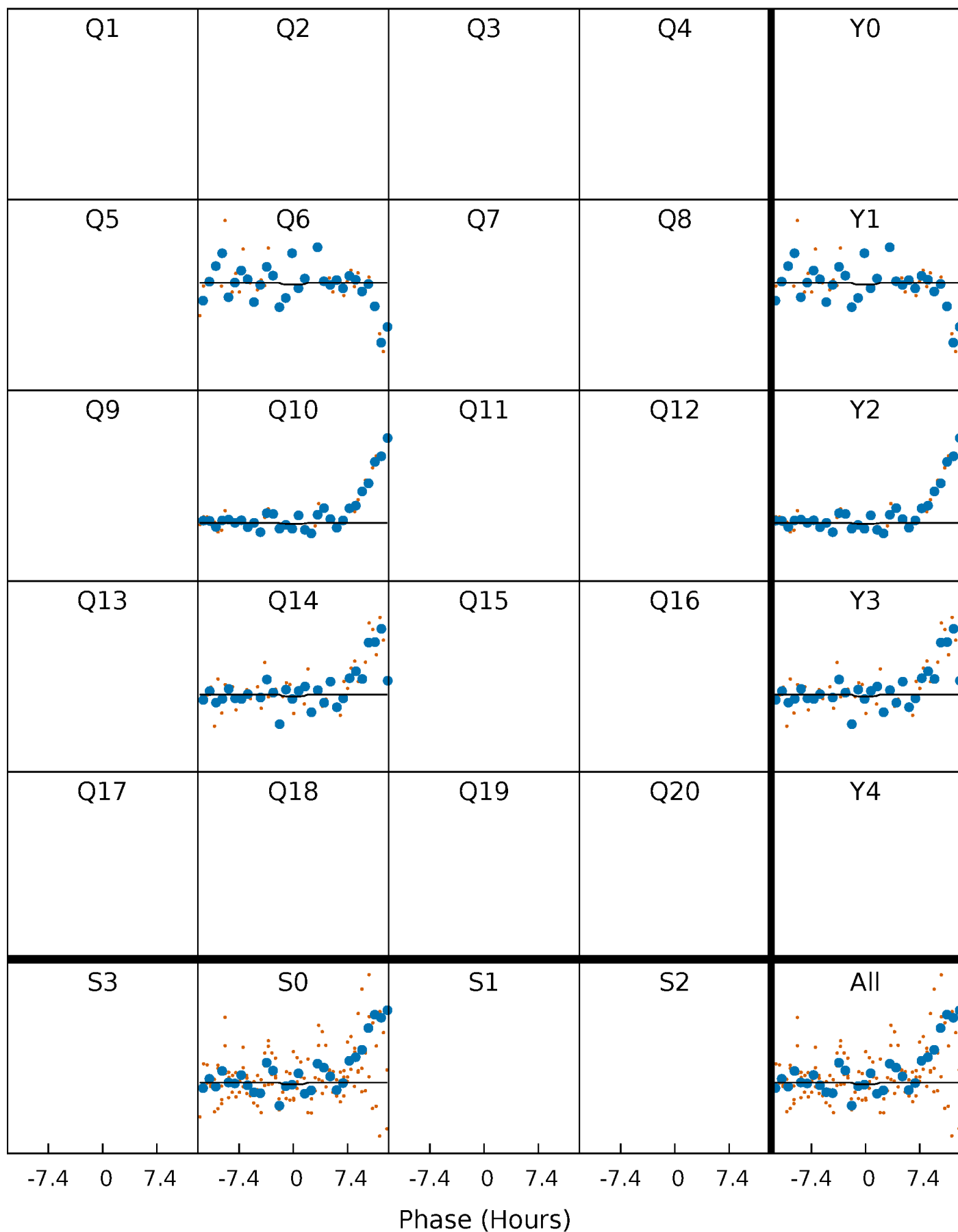
# DV Quarter-Phased Transit Curves

TCE 005262561-05     $P=375.221462$  Days     $T_0=235.585926$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

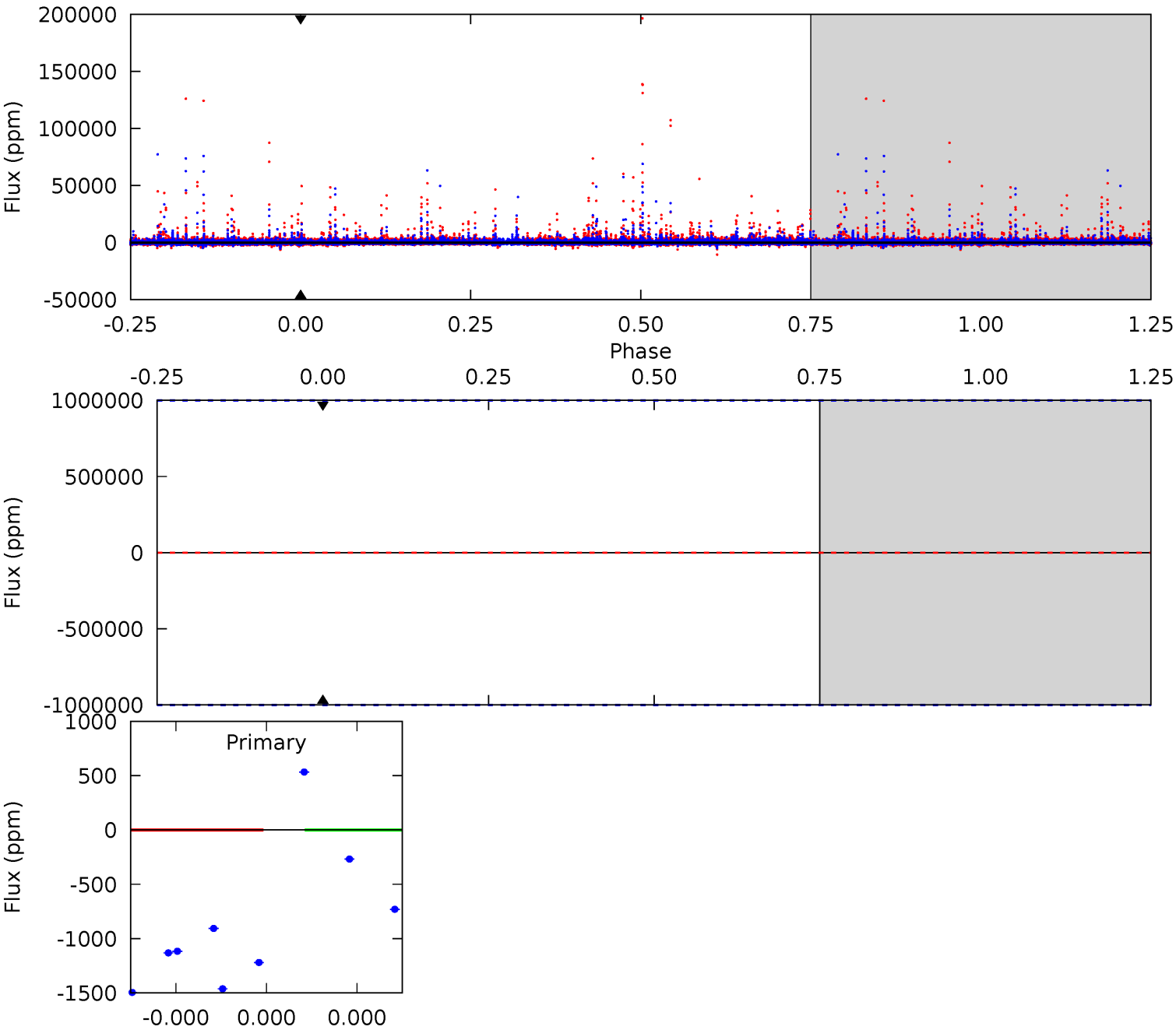
TCE 005262561-05     $P=375.221462$  Days     $T_0=234.846942$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-05, P = 375.221462 Days, E = 235.585926 Days

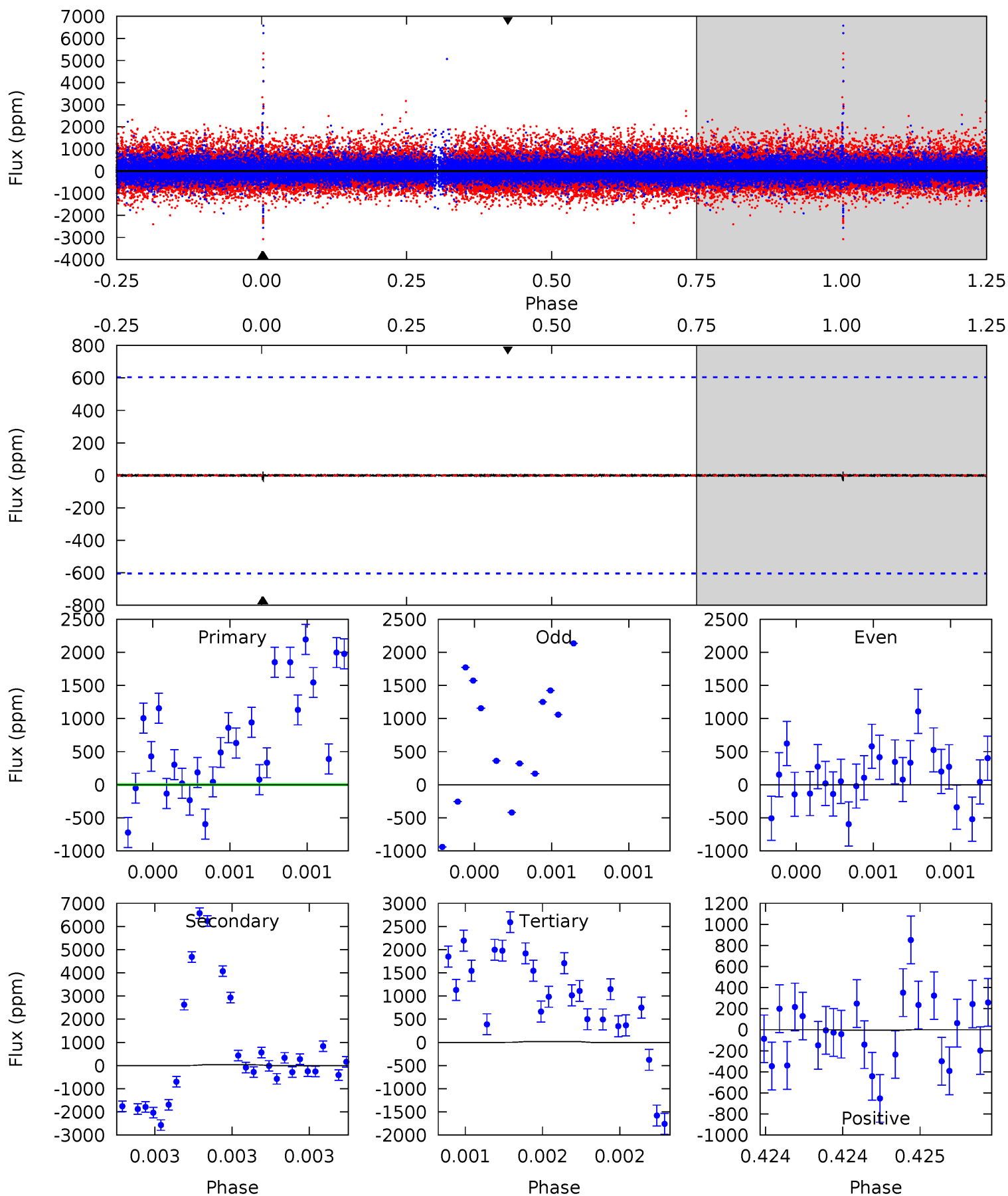
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

005262561-05, P = 375.221462 Days, E = 234.846942 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
0.08	0.33	0.17	0.05	5.60	3.52	0.01	-0.08	0.03	0.16	0.28	0.02	-6.78	0.39	0.14



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$3.81^{+3.53}_{-2.59}$	$169^{+4}_{-4}$	$2666^{+4944}_{-10001}$	$15773^{+4100999}_{-3919729}$
Alt.	$-35 \pm 108$	$3.50^{+3.59}_{-2.57}$	$169^{+5}_{-4}$	$1880^{+629}_{-3965}$	$709^{+10026}_{-2675}$

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

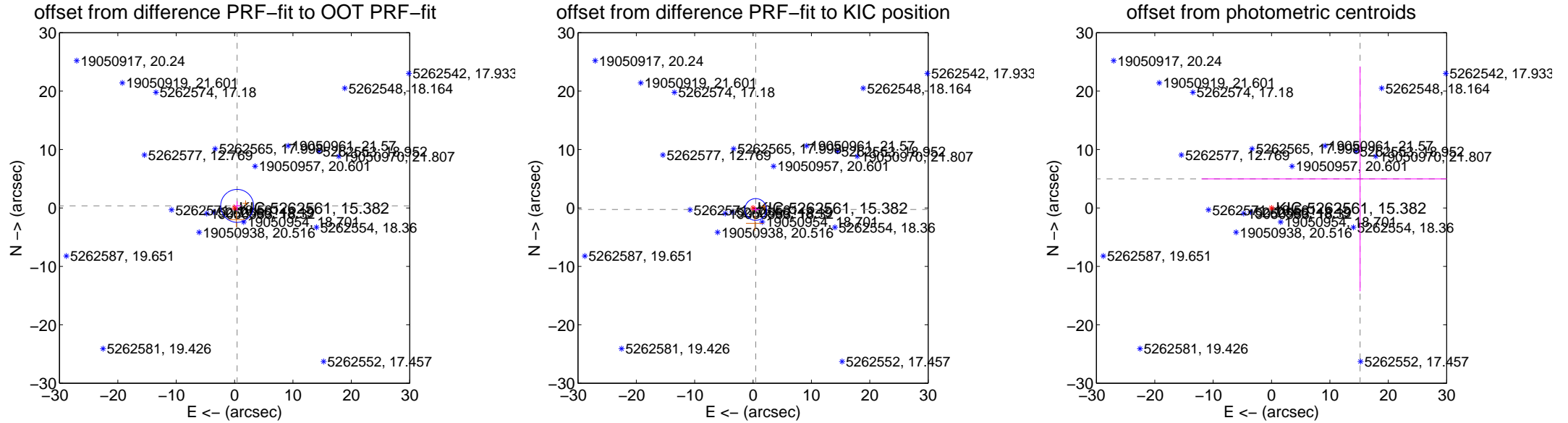
## DV Centroid Data

Supplemental centroid analysis for 005262561-05. Kepler magnitude: 15.38. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

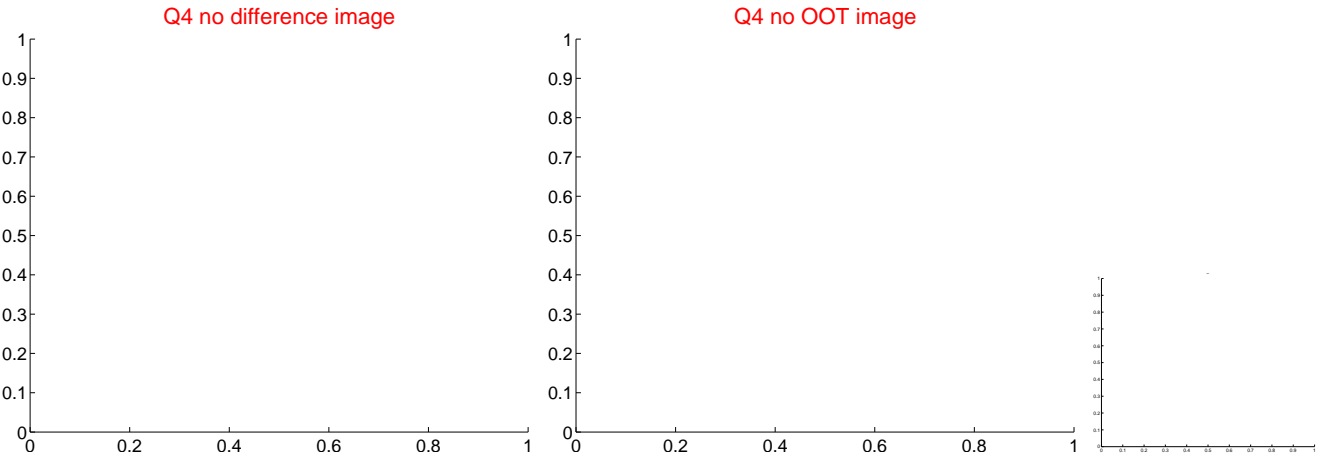
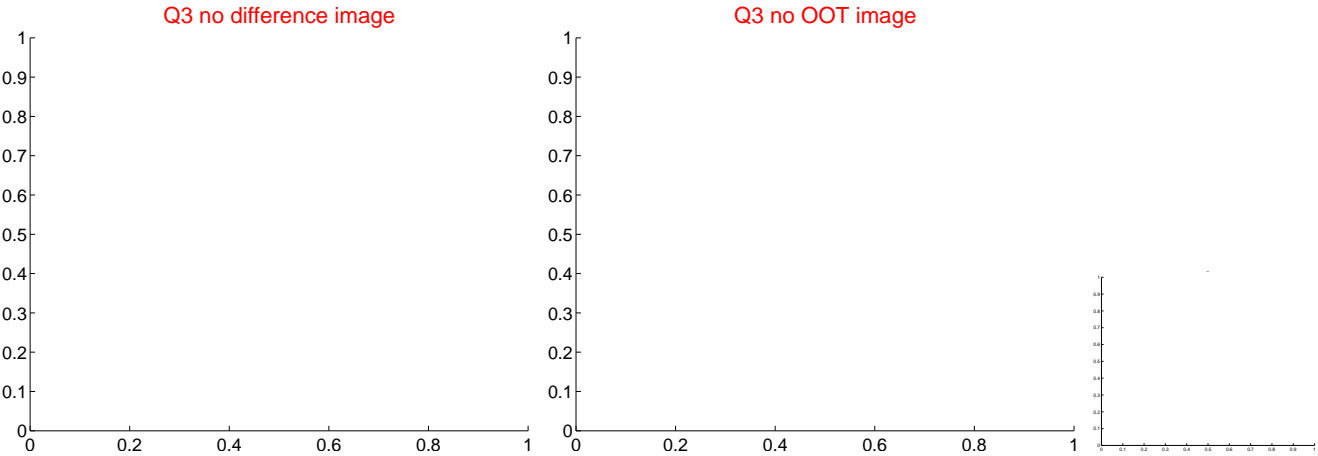
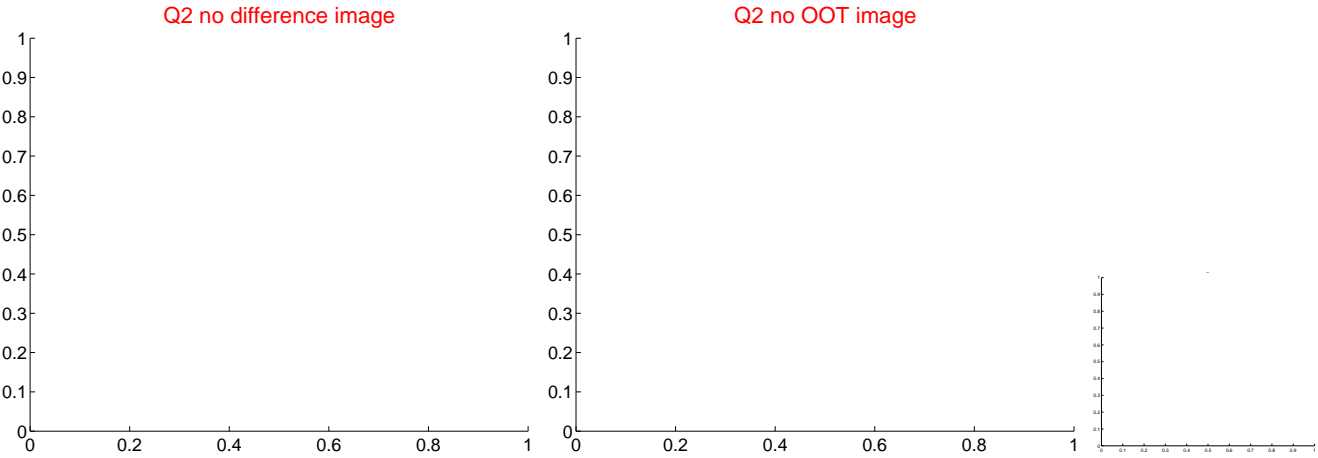
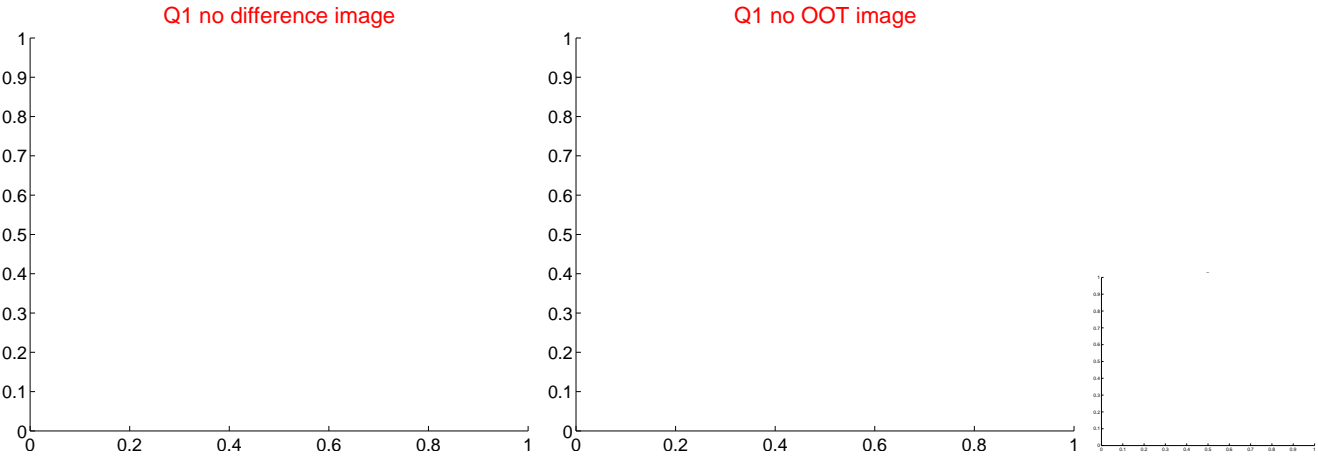
The direct PRF centroid is offset from the target star catalog position by about 0.63 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.565 \pm 0.940$	0.60	$-0.439 \pm 0.657$	$0.356 \pm 0.836$
PRF-fit source offset from KIC position	$0.525 \pm 0.621$	0.85	$-0.456 \pm 0.673$	$-0.259 \pm 0.420$
photometric centroid source offset	$15.97 \pm 26.51$	0.60	$-15.17 \pm 27.18$	$4.97 \pm 19.24$

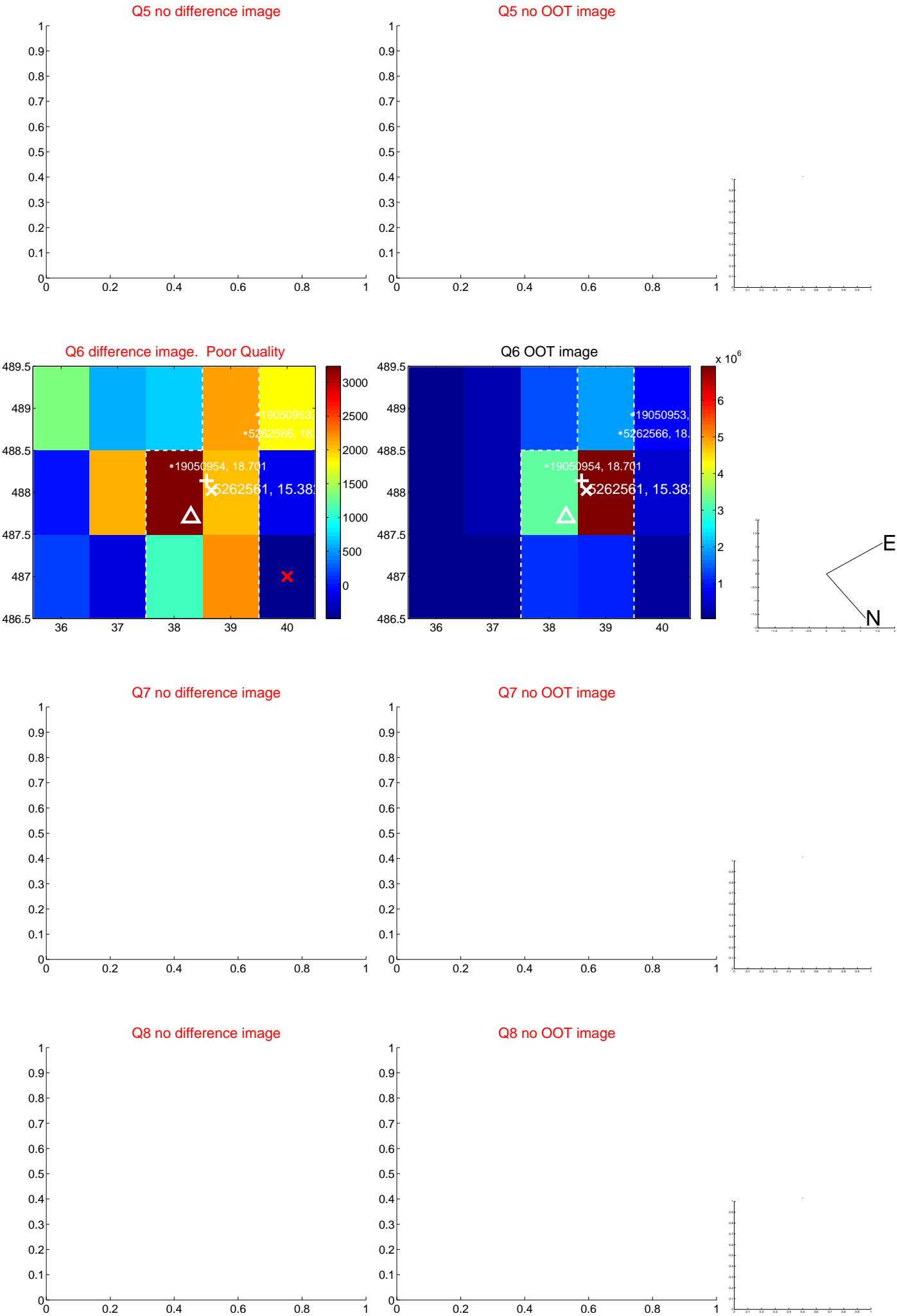


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

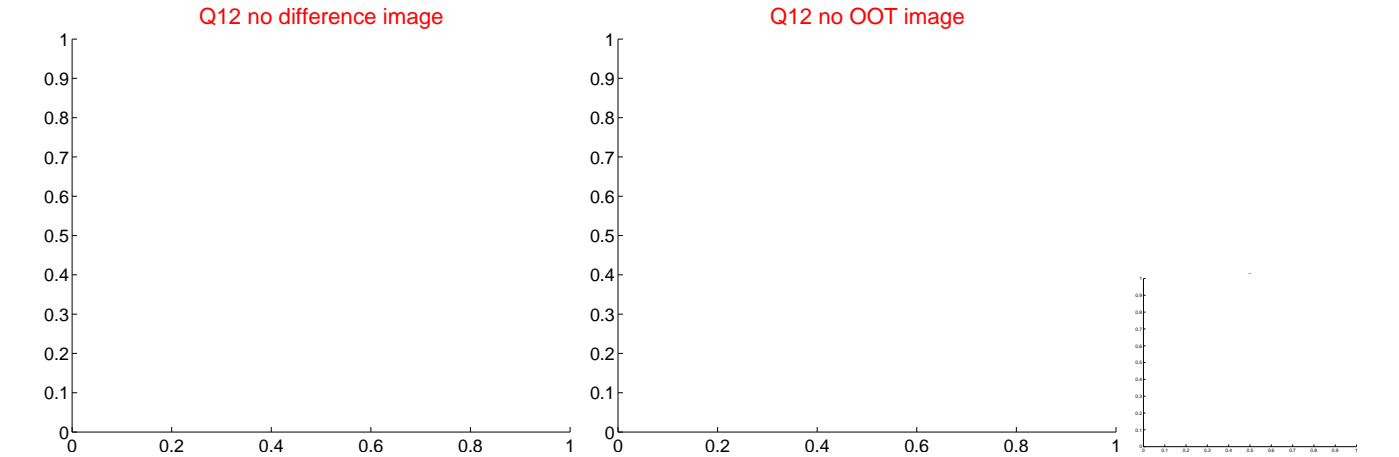
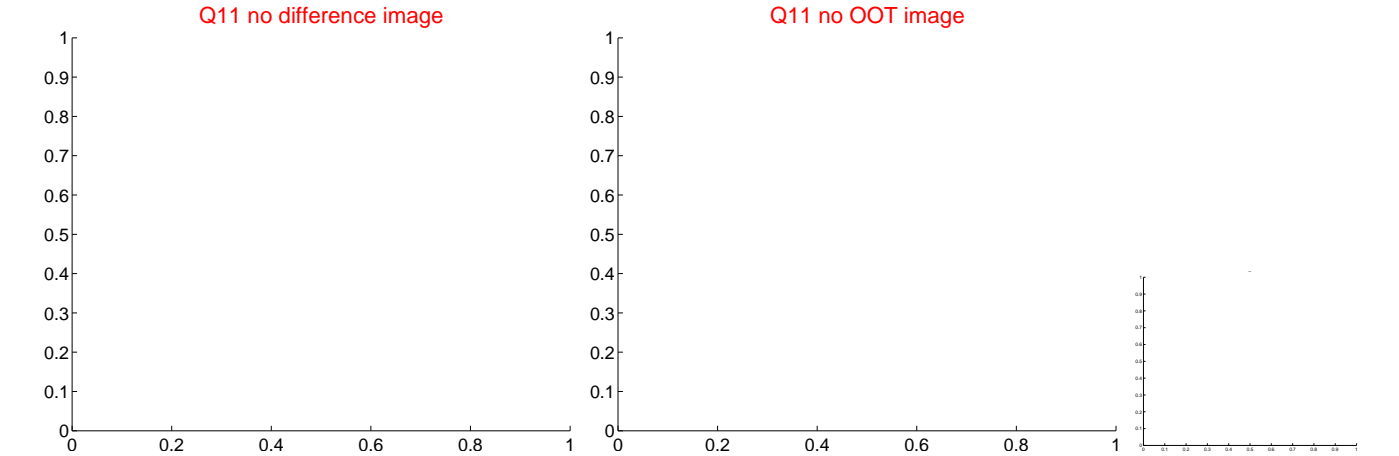
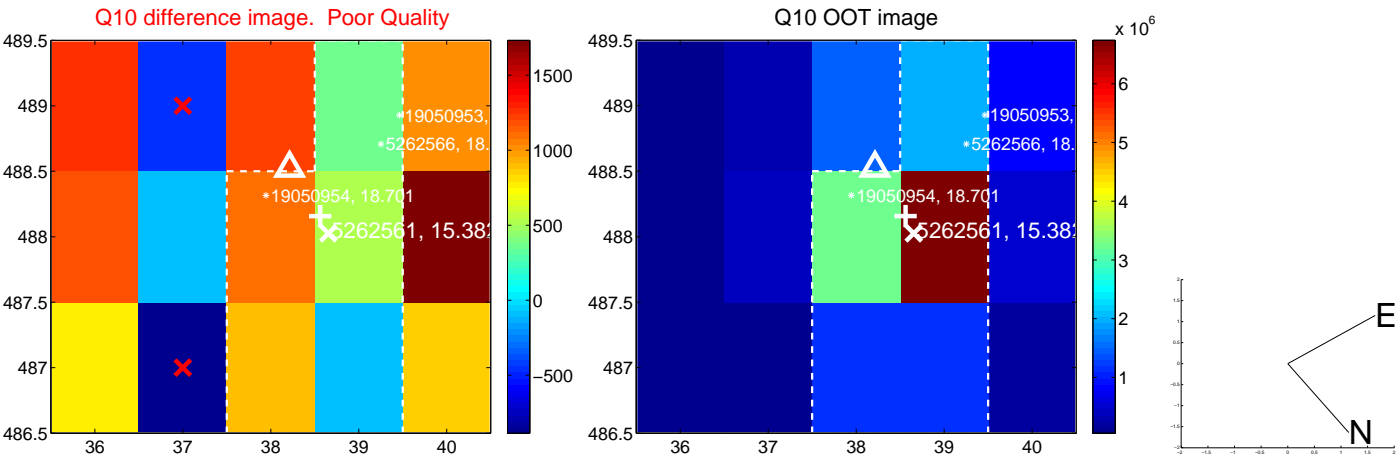
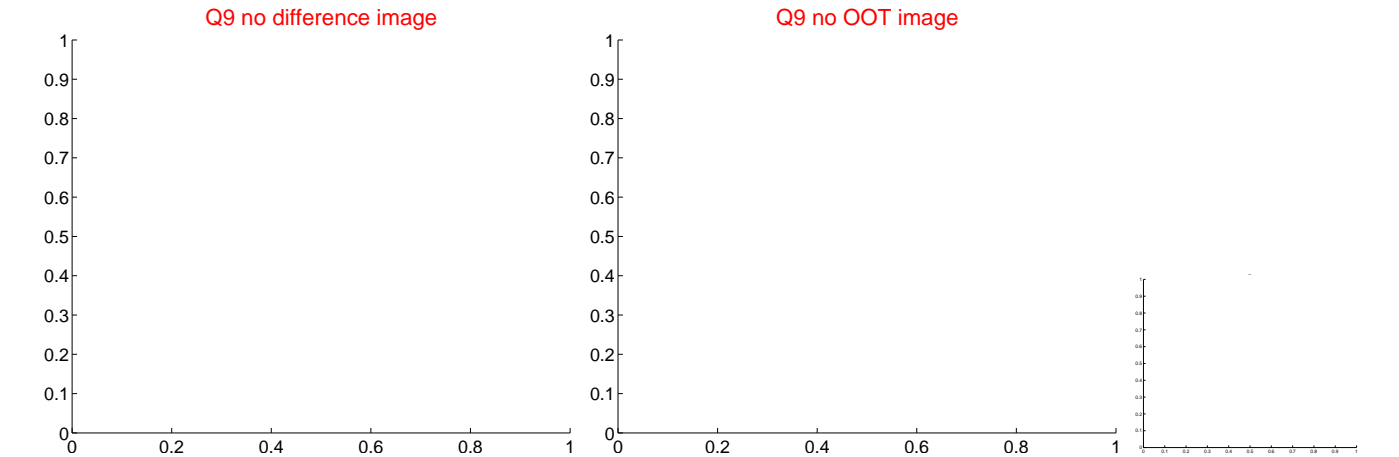
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

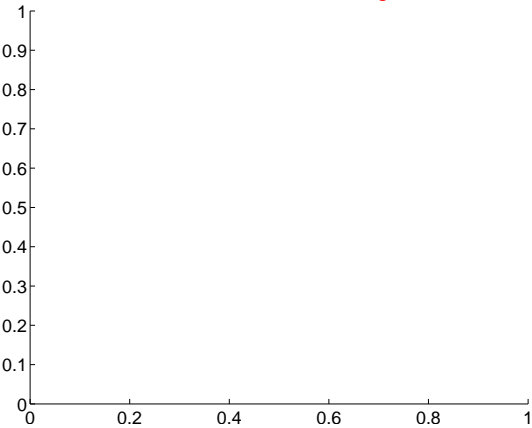


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

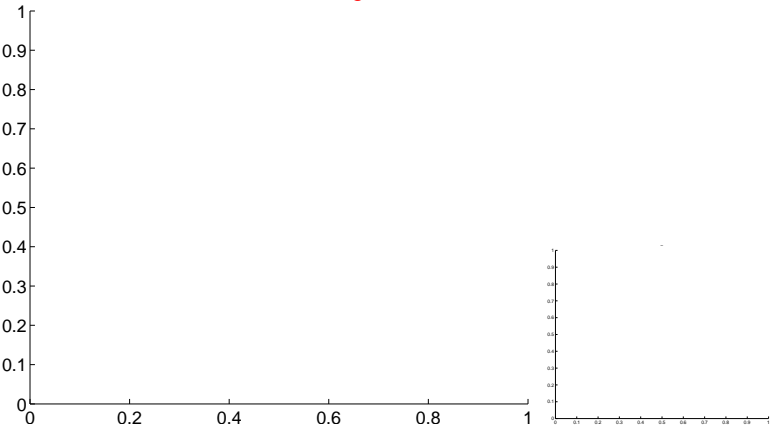


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

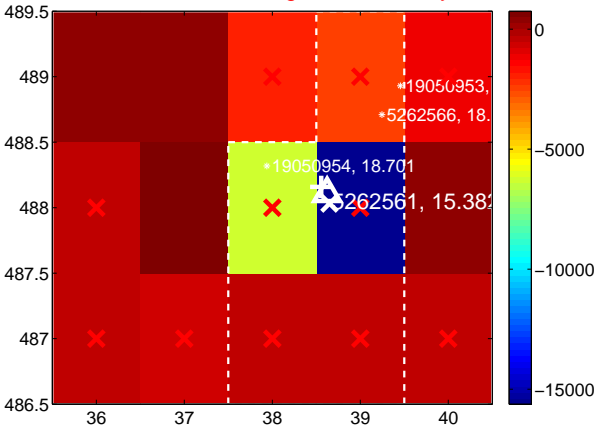
Q13 no difference image



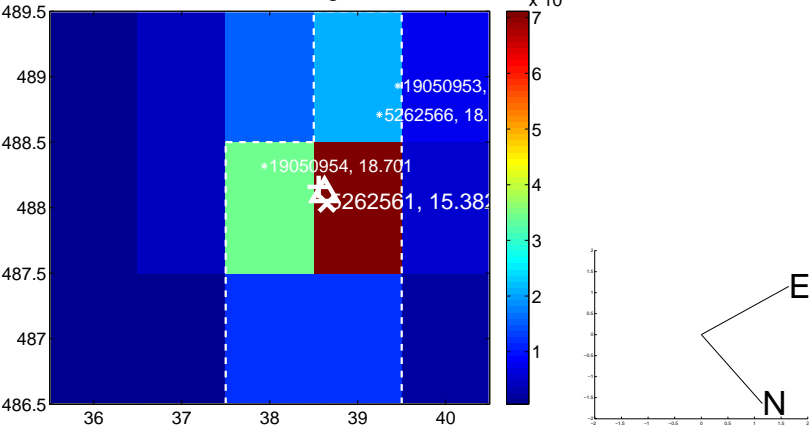
Q13 no OOT image



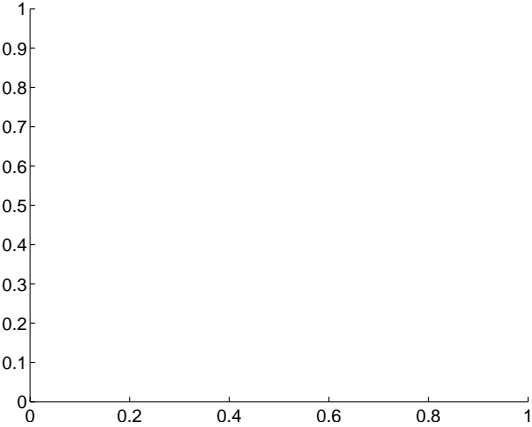
Q14 difference image. Poor Quality



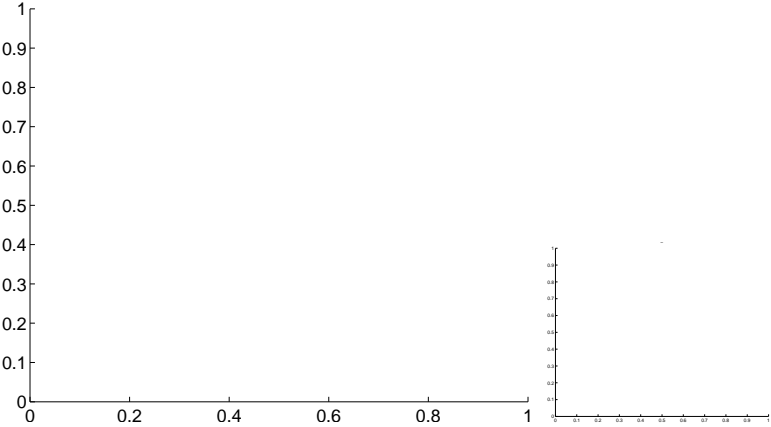
Q14 OOT image



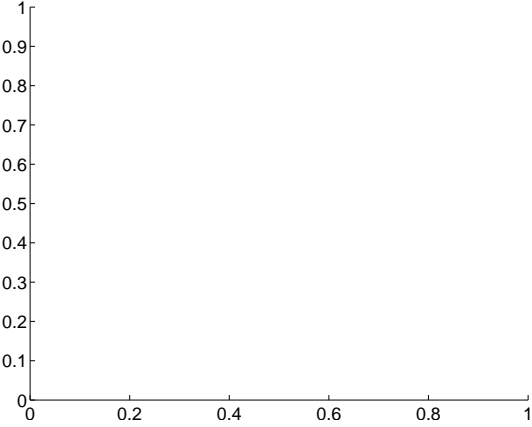
Q15 no difference image



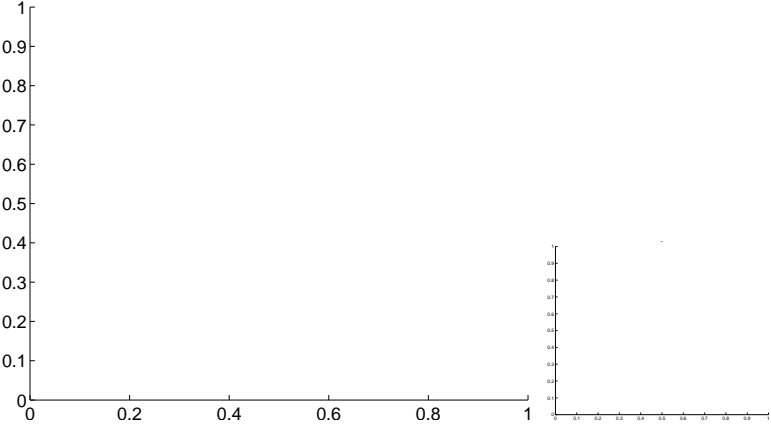
Q15 no OOT image



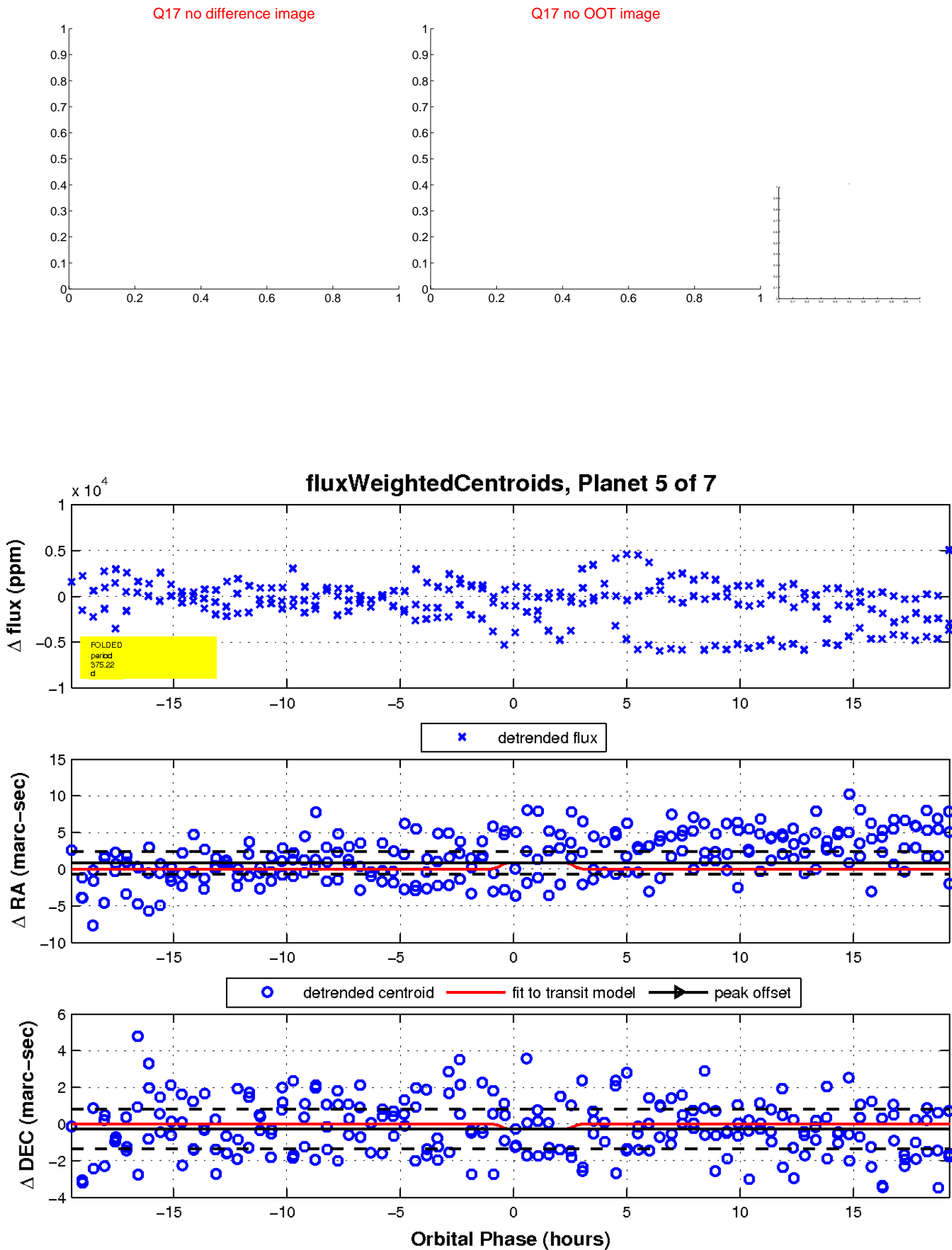
Q16 no difference image



Q16 no OOT image

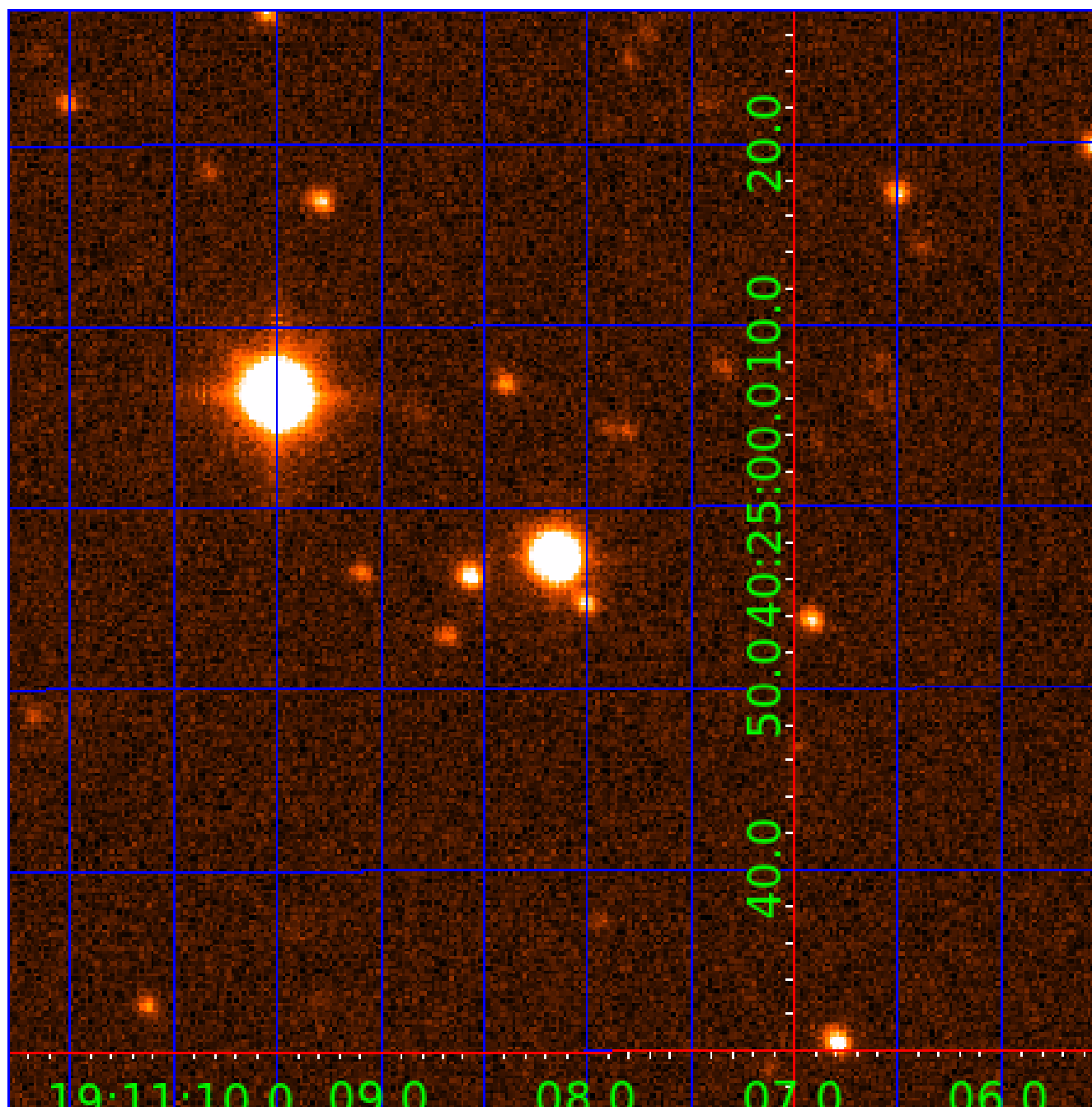


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 005262561

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005262561-01	OBS	No	432.405002	523.025887	2650.6	9.647	15.6	8.9	0.46	3625	2.34	0.04
005262561-02	OBS	No	433.280026	456.616656	2249.0	9.752	13.2	7.0	0.46	3625	2.14	0.04
005262561-03	OBS	No	450.102616	367.582477	677.4	2.760	13.2	2.4	0.46	3625	1.27	0.04
005262561-04	OBS	No	352.549254	210.363742	2684.8	4.346	11.4	8.2	0.46	3625	2.45	0.06
005262561-05	OBS	No	375.221462	235.585926	718.8	15.000	10.3	-1.0	0.46	3625	1.21	0.05
005262561-06	OBS	No	272.428273	386.654427	1771.4	4.120	10.9	7.2	0.46	3625	1.90	0.08
005262561-07	OBS	No	460.413789	428.856492	1954.7	5.033	9.4	6.6	0.46	3625	2.06	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005262561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

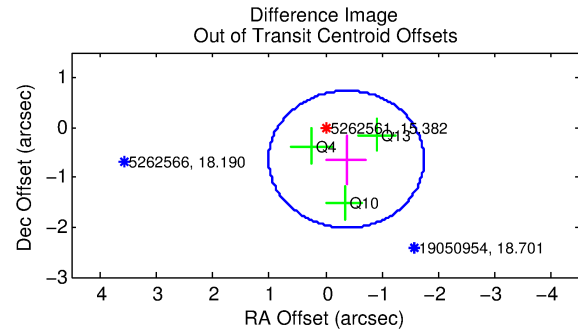
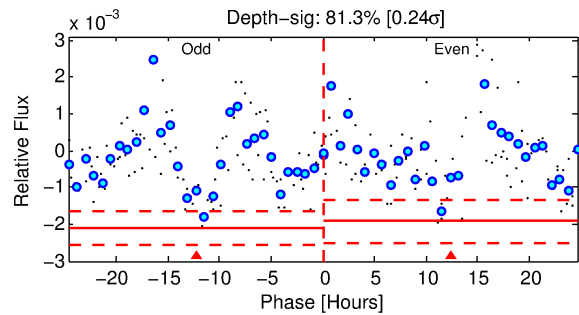
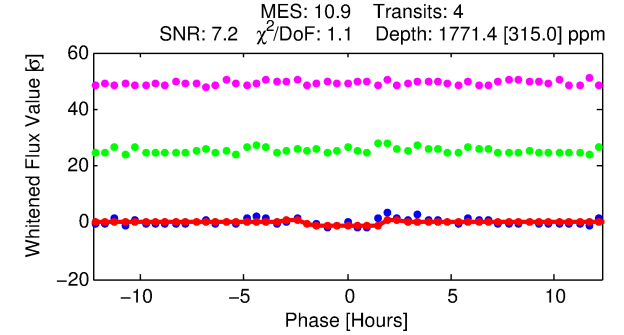
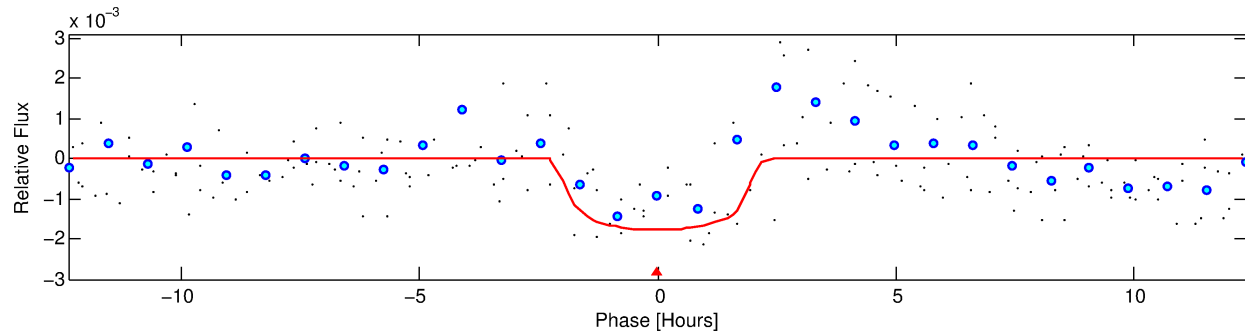
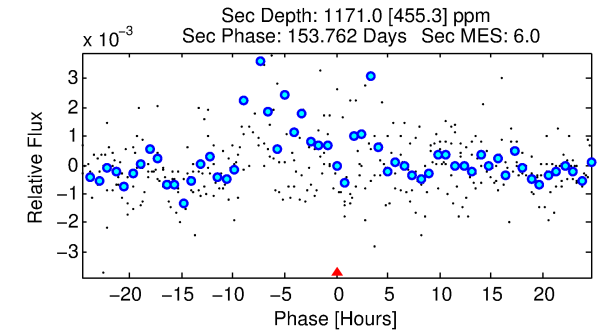
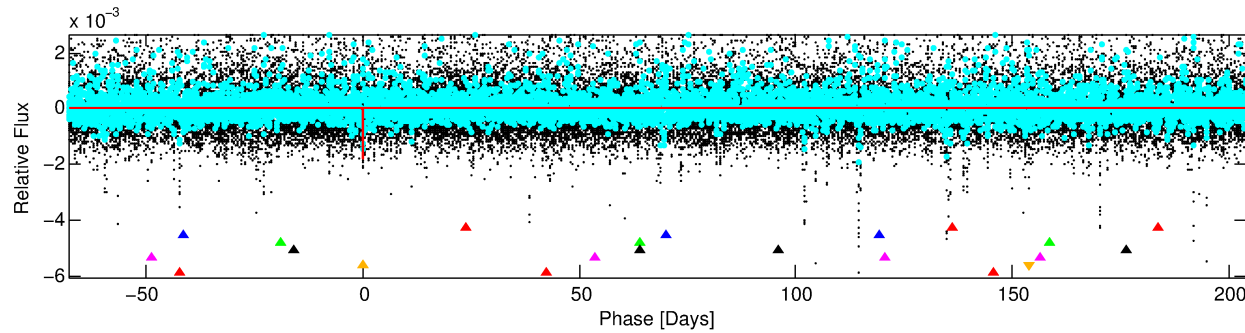
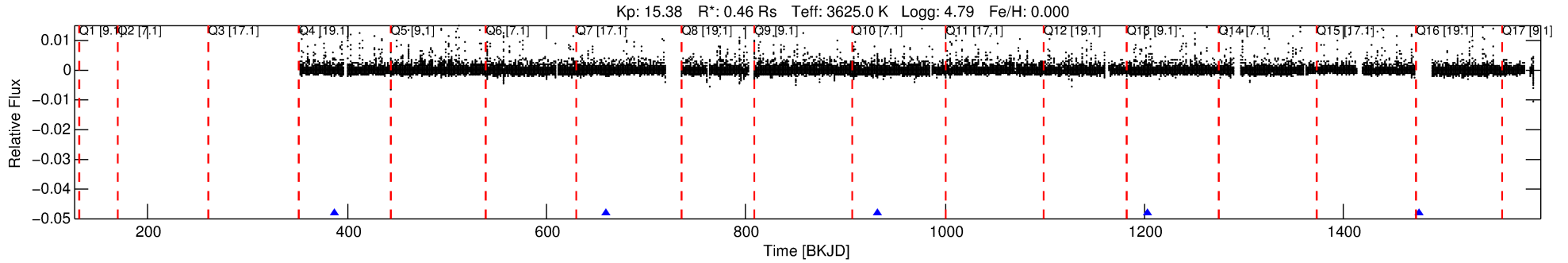
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005262561-06

No Significant Match Found

# DV One-Page Summary

KIC: 5262561 Candidate: 6 of 7 Period: 272.428 d



## DV Fit Results:

Period = 272.42827 [0.00444] d  
Epoch = 386.6544 [0.0080] BKJD  
Rp/R\* = 0.0382 [0.0470]  
a/R\* = 515.54 [2695.11]  
b = 0.19 [26.45]  
Seff = 0.08 [0.01]  
Teq = 135 [4] K  
Rp = 1.90 [2.35] Re  
a = 0.6380 [0.0515] AU  
Ag = 72516.70 [180664.66] [0.40σ]  
Teffp = 3430 [2136] K [1.54σ]

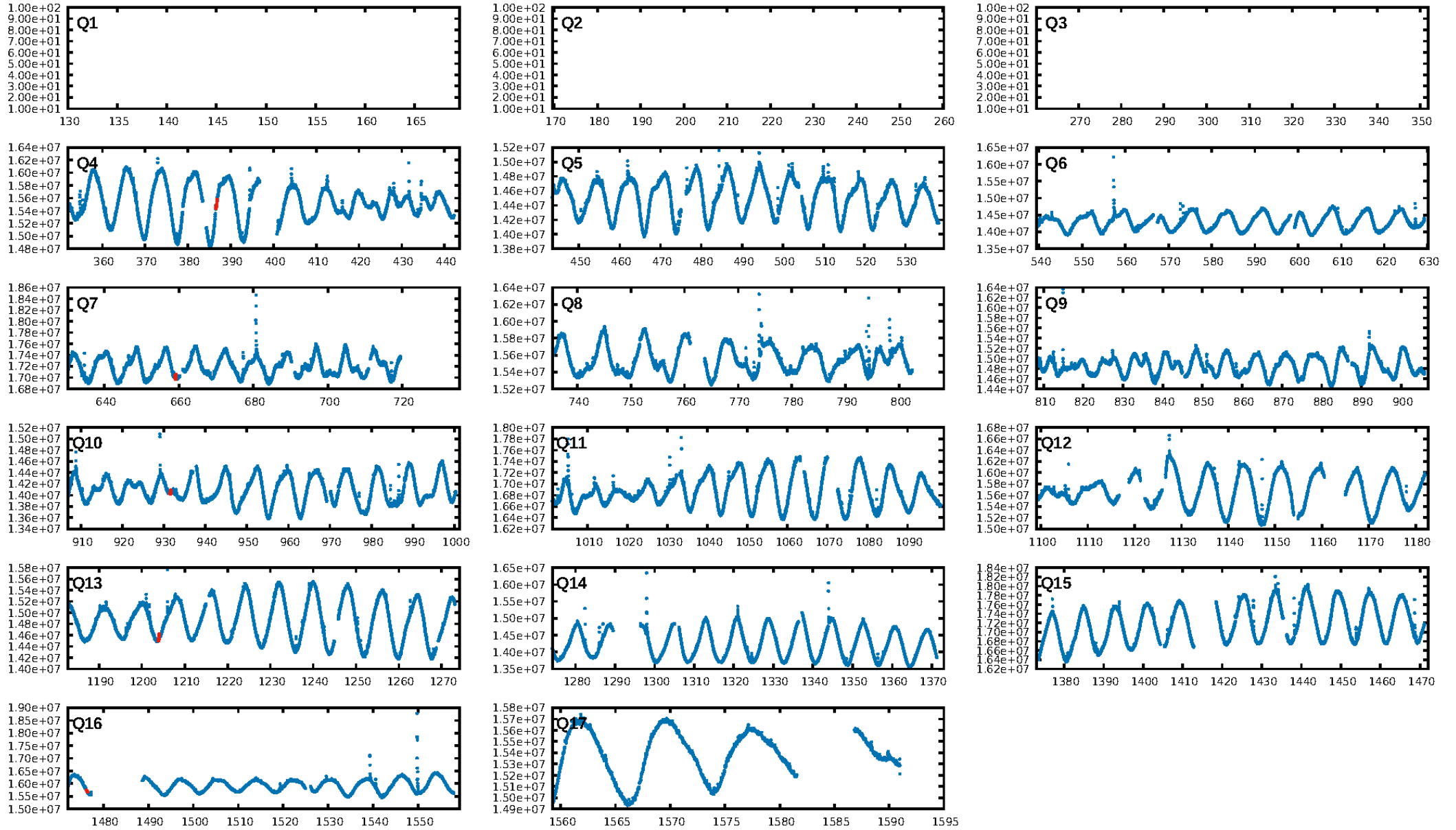
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 100.0% [321.12σ]  
ModelChiSquare2-sig: 73.8%  
ModelChiSquareGof-sig: 98.8%  
**Bootstrap-pfa: 6.41e-10**  
RollingBand-fgt: 1.00 [4/4]  
**GhostDiagnostic-chr: 0.4788**  
Centroid-sig: 13.7%  
Centroid-so: 0.947 arcsec [1.09σ]  
OotOffset-rm: 0.740 arcsec [1.62σ]  
KicOffset-rm: 0.700 arcsec [1.28σ]  
OotOffset-st: 1/0/1/1 [3]  
KicOffset-st: 1/0/1/1 [3]  
DiffImageQuality-fgm: 1.00 [3/3]  
DiffImageOverlap-fno: 1.00 [4/4]

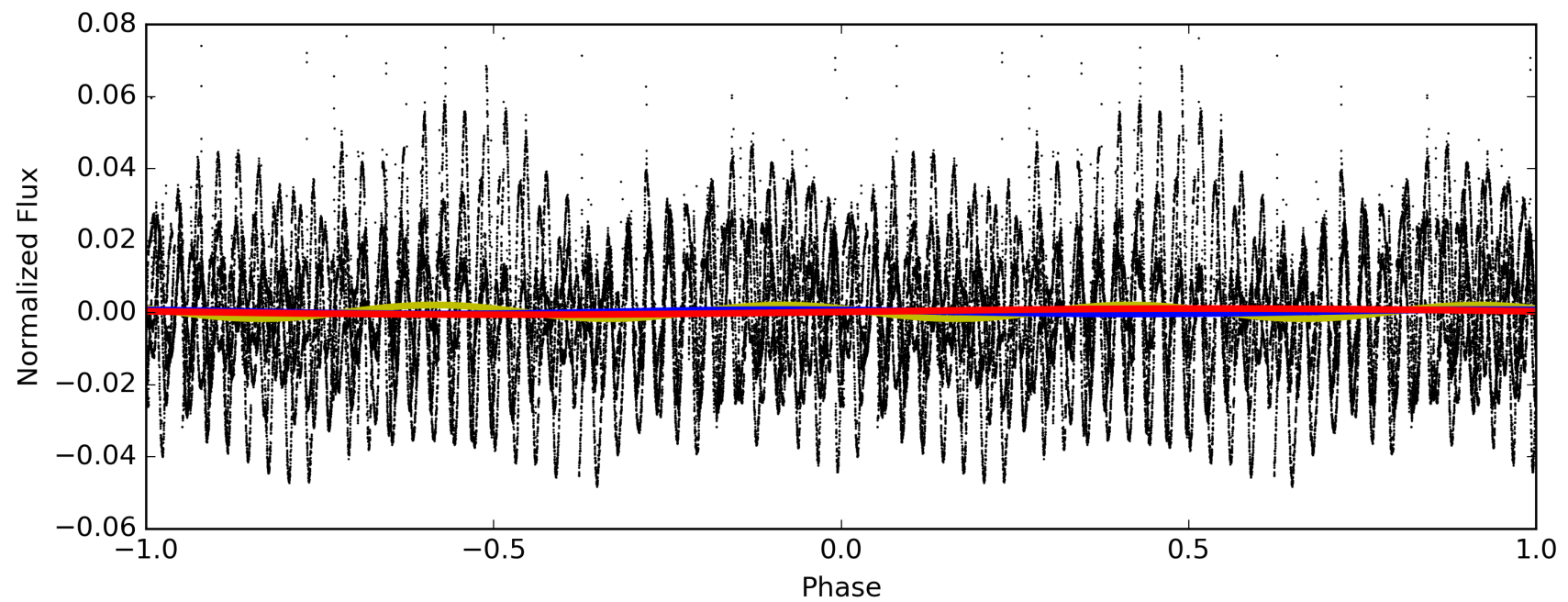
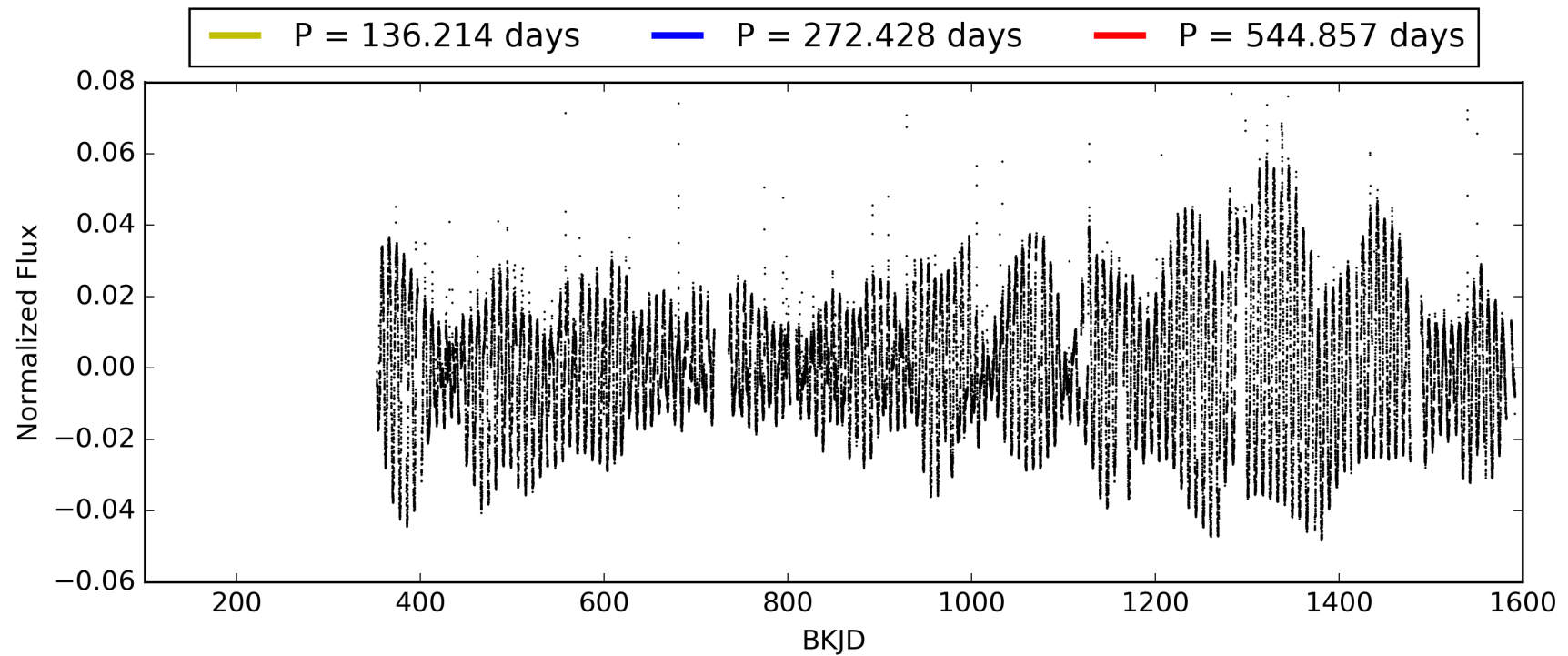
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 22:35:38 Z

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

# TCE 005262561-06, PDC Light Curves

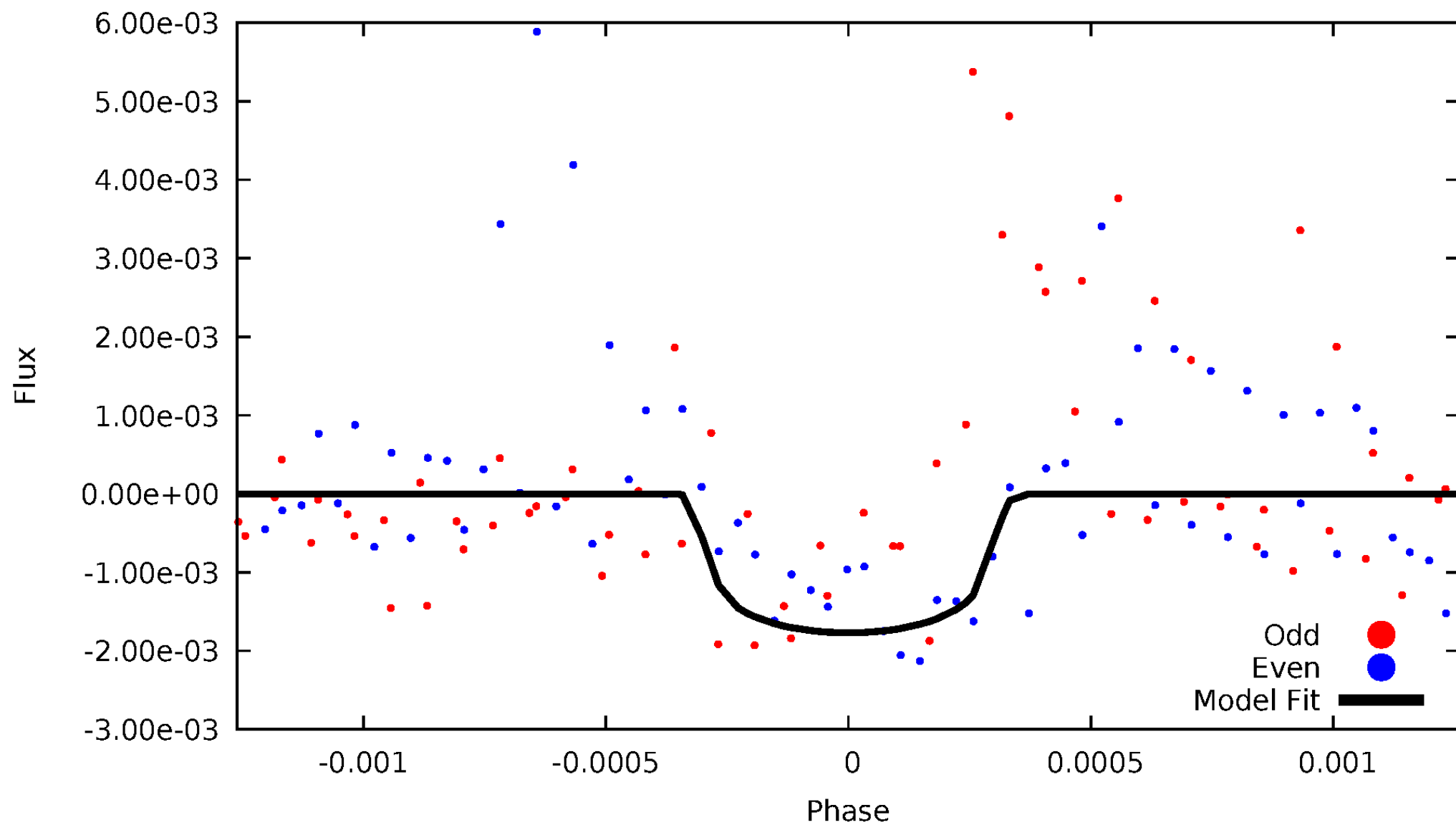


TCE 005262561-06



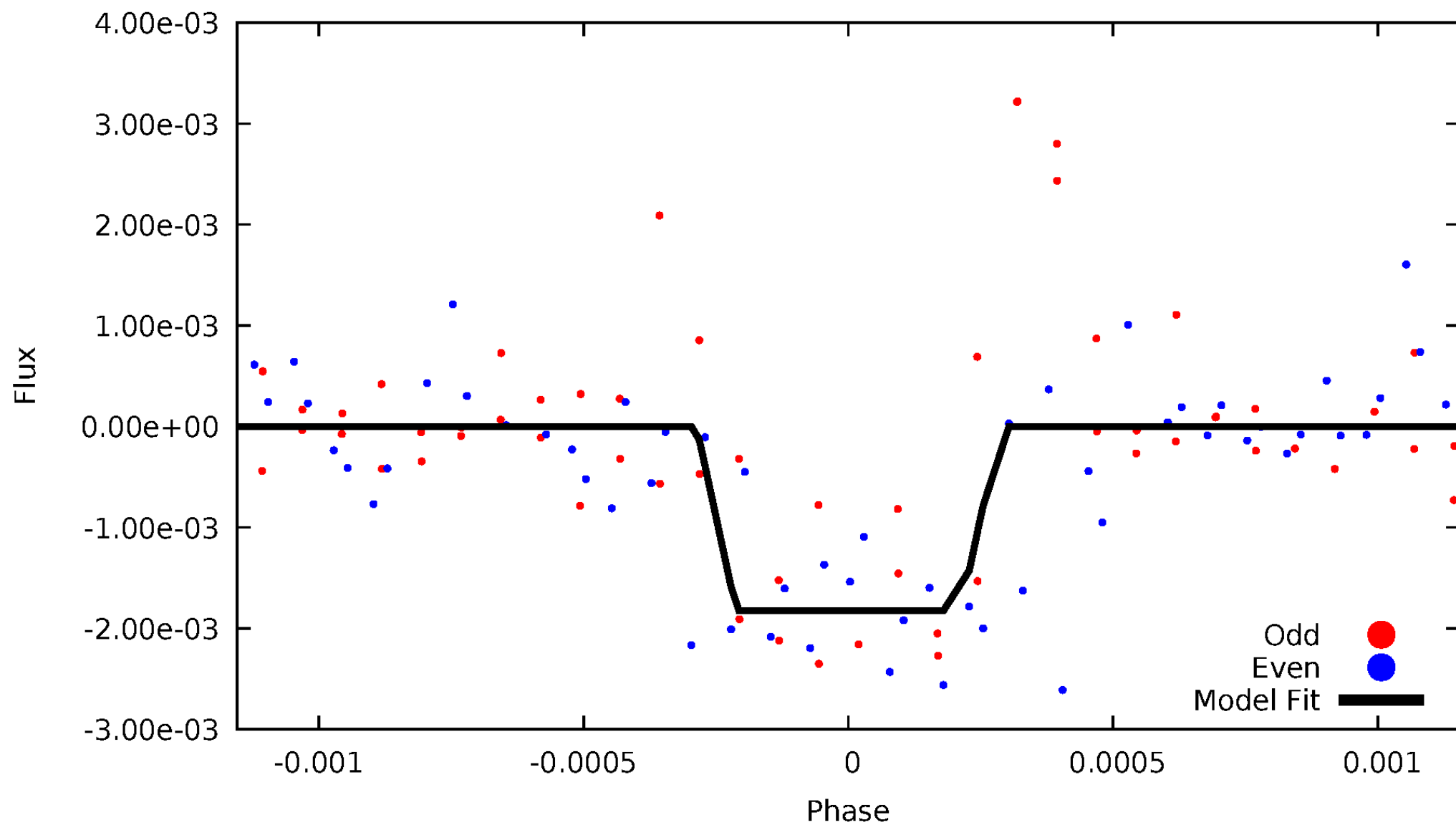
# DV Odd/Even

TCE 005262561-06



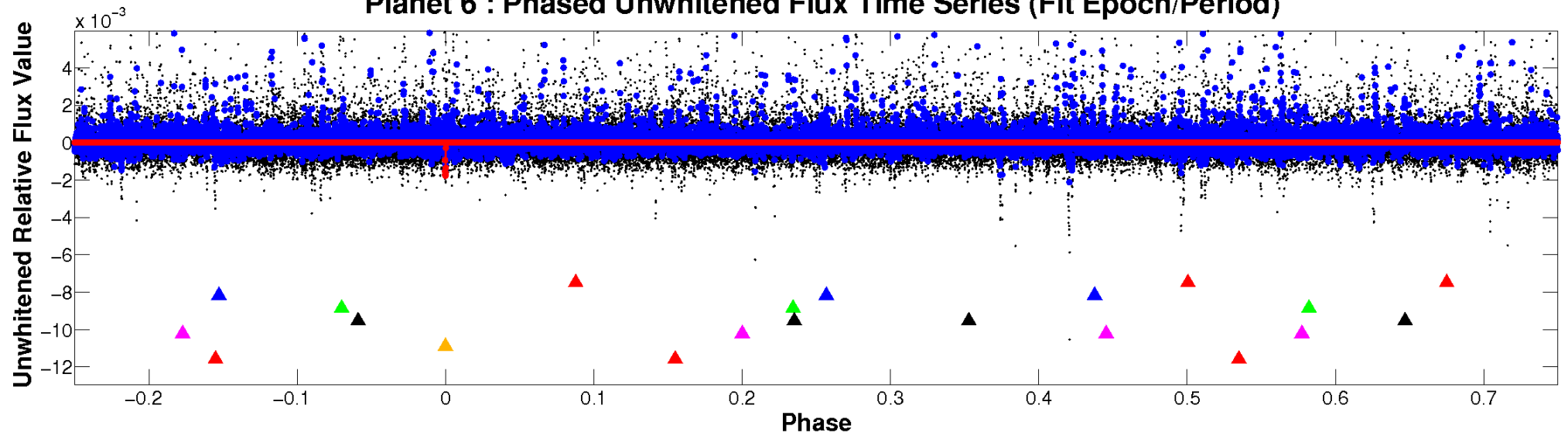
# ALT Odd/Even

TCE 005262561-06

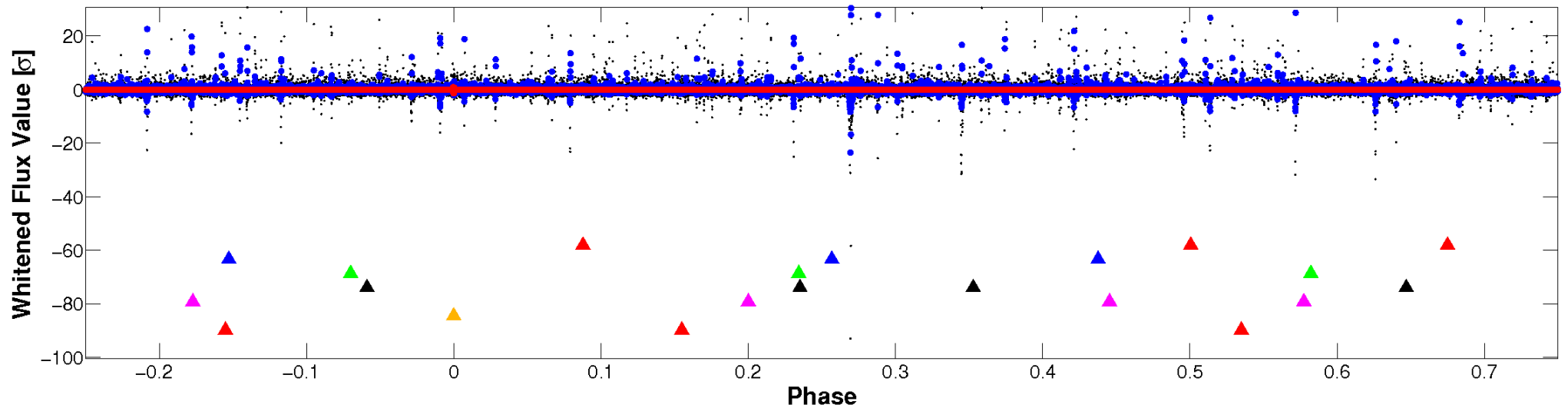


# Non-Whitened Vs. Whitened Light Curve

## Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

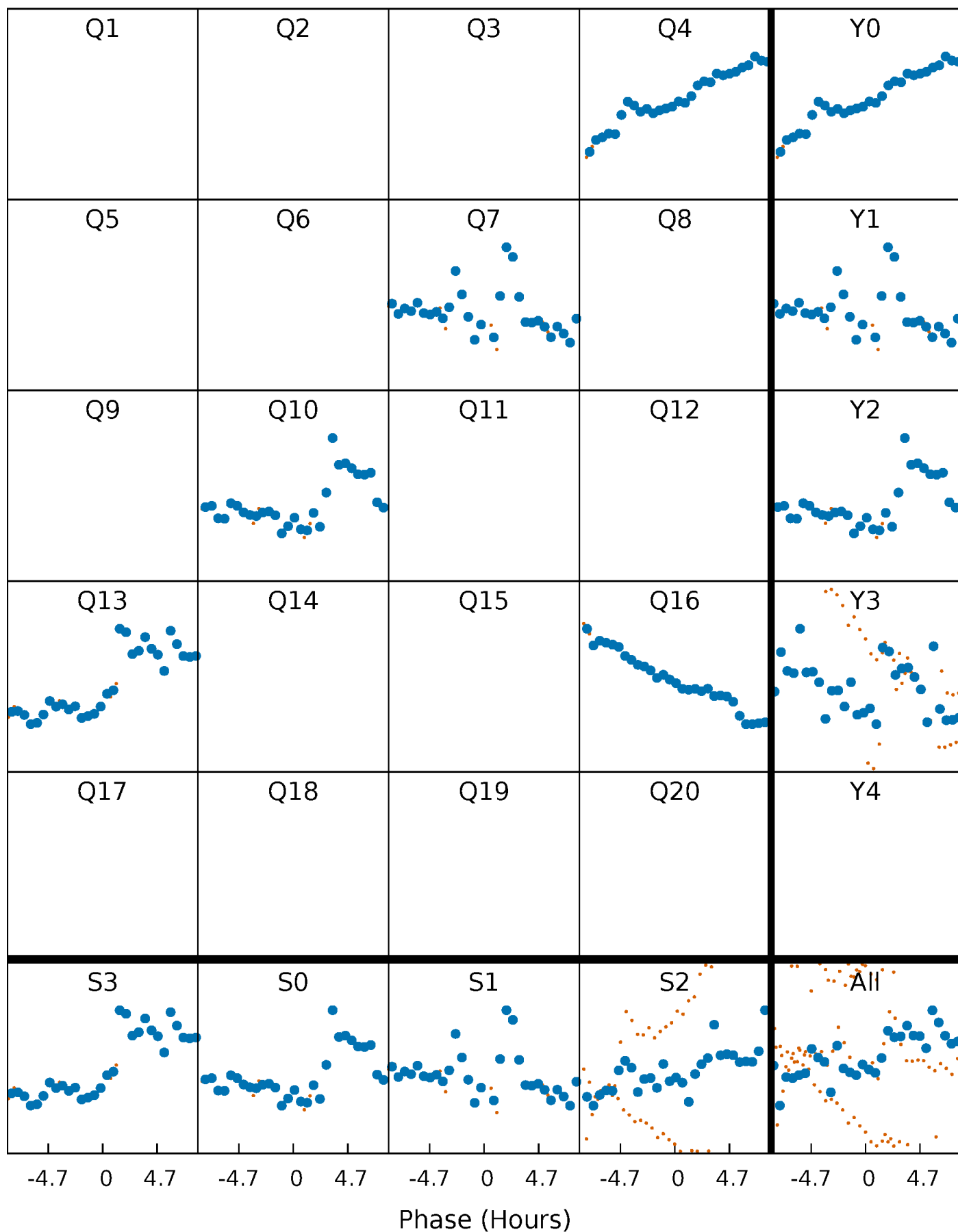


## Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



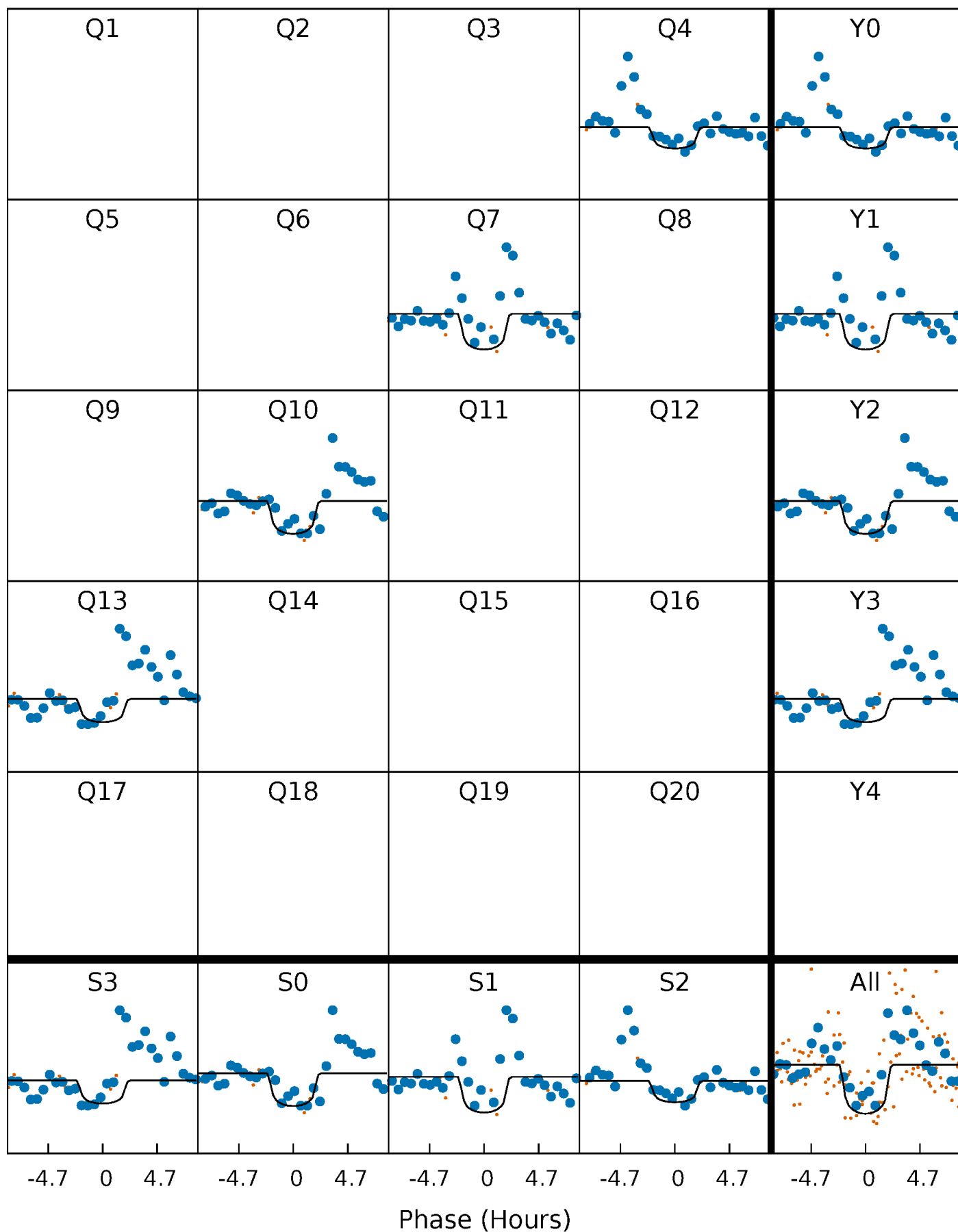
# PDC Quarter-Phased Transit Curves

TCE 005262561-06 P=272.428273 Days  $T_0=386.654427$  (BKJD)



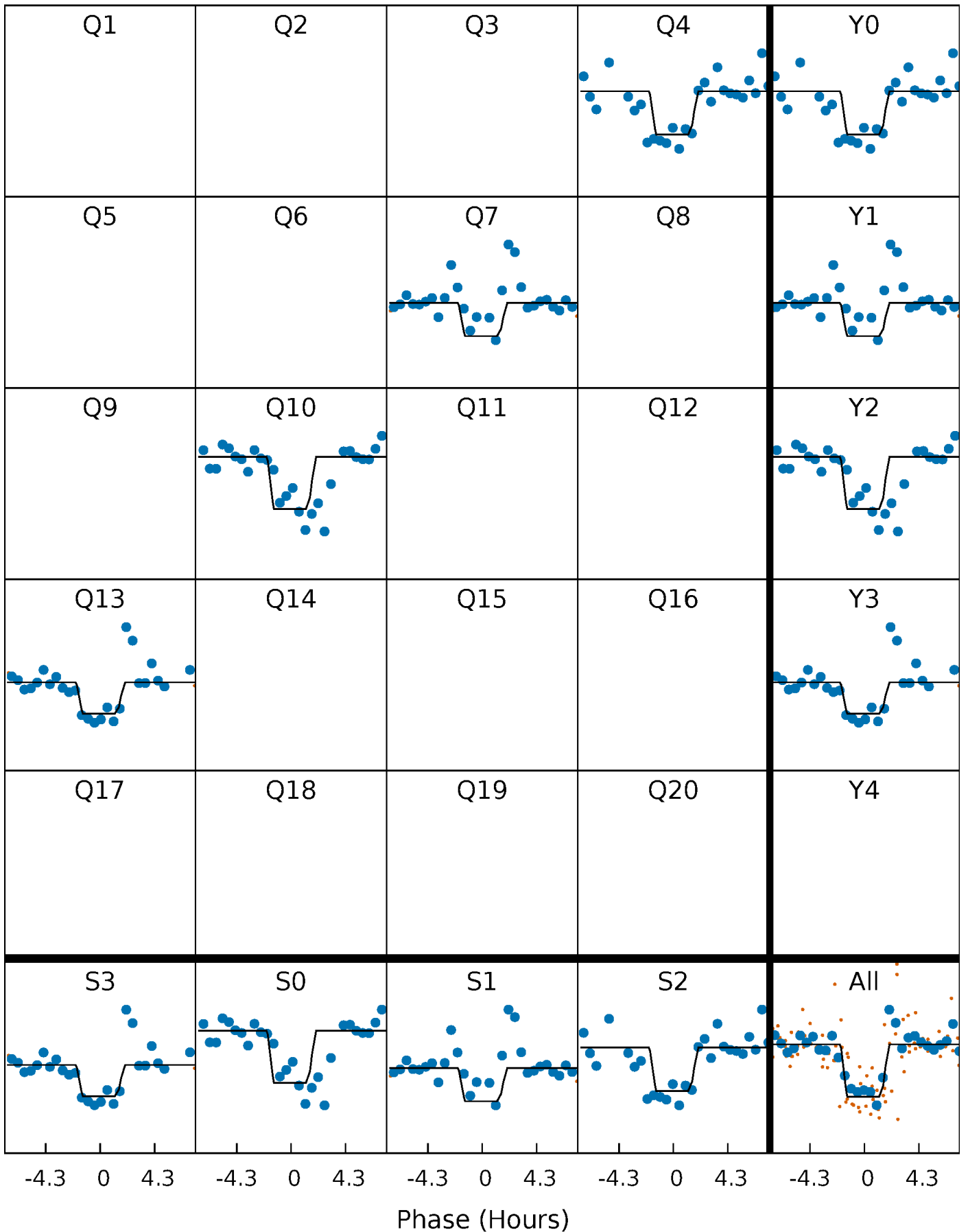
# DV Quarter-Phased Transit Curves

TCE 005262561-06     $P=272.428273$  Days     $T_0=386.654427$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

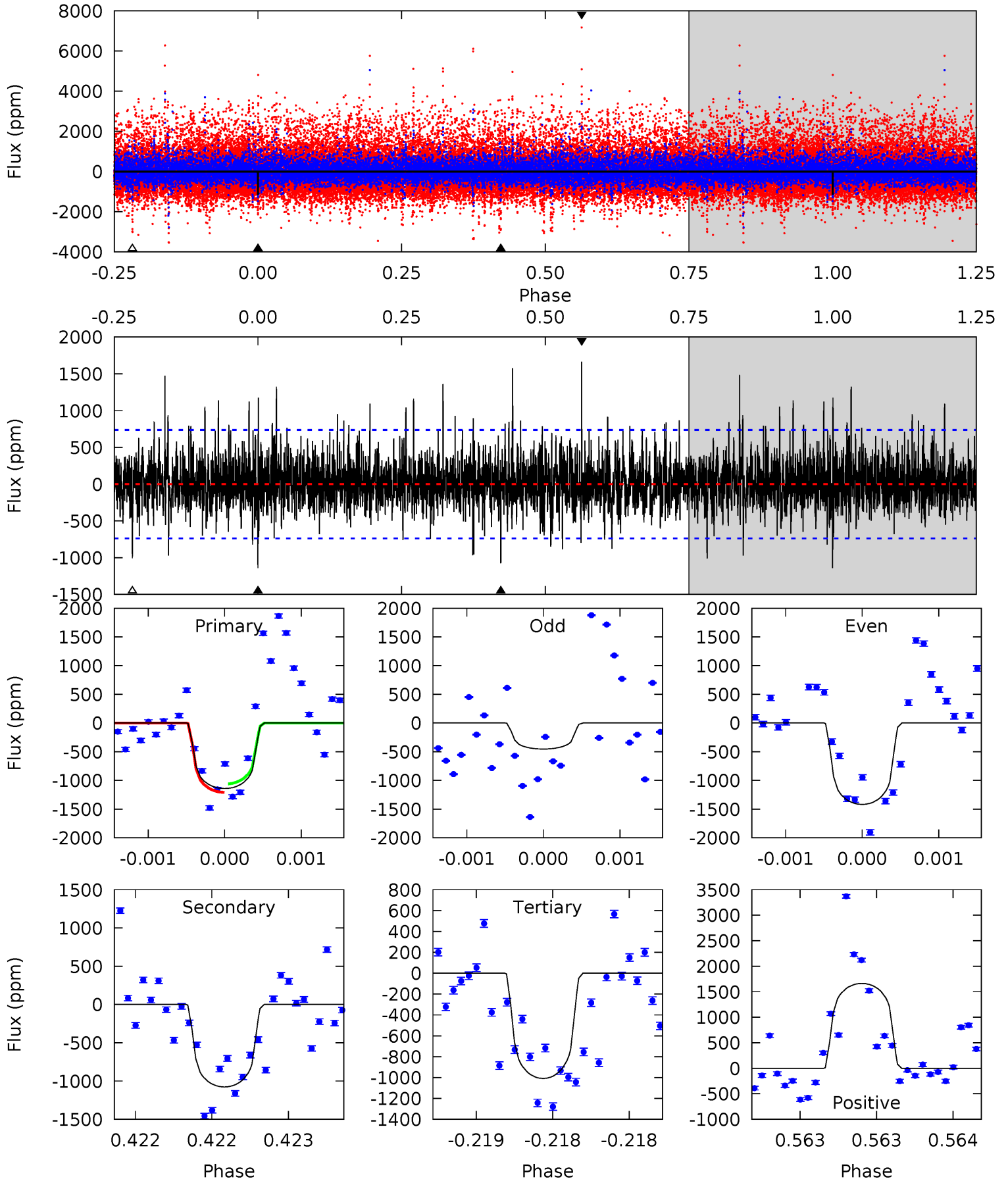
TCE 005262561-06 P=272.419891 Days  $T_0=386.662469$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-06, P = 272.428273 Days, E = 114.226154 Days

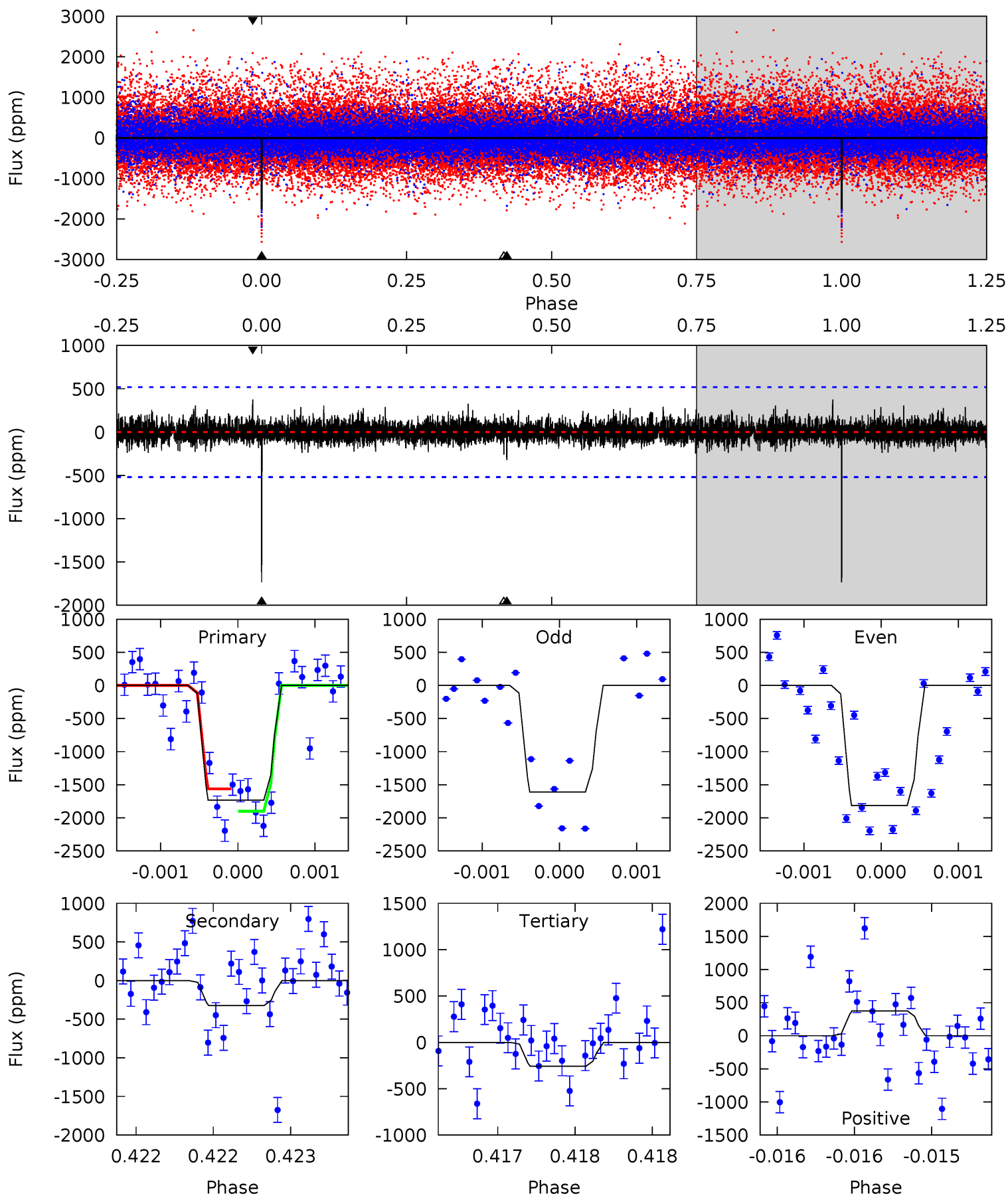
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.53	8.05	7.53	12.4	5.51	3.38	2.01	1.00	-3.90	0.51	-4.38	2.95	0.97	0.59	0.56



# Alt Model-Shift Uniqueness Test

005262561-06, P = 272.419891 Days, E = 114.242578 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
18.6	3.46	2.77	4.00	5.56	3.46	0.75	15.8	14.6	0.69	-0.54	1.07	0.92	0.18	1.82



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-06 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1077 \pm 134$	$2.61^{+1.98}_{-1.75}$	$188^{+5}_{-5}$	$3135^{+1423}_{-451}$	$36293^{+293187}_{-24420}$
Alt.	$-323 \pm 93$	$2.52^{+2.28}_{-1.59}$	$188^{+5}_{-5}$	$2657^{+908}_{-382}$	$11024^{+73661}_{-8004}$

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

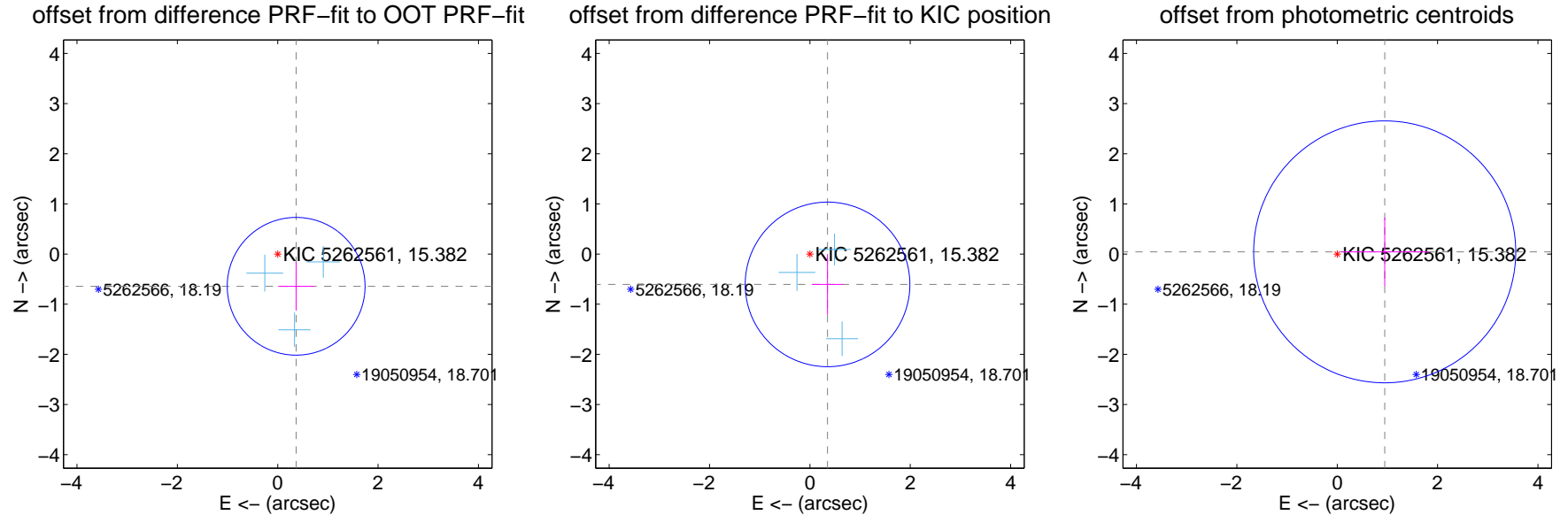
## DV Centroid Data

Supplemental centroid analysis for 005262561-06. Kepler magnitude: 15.38. Transit SNR 7.19

There are 3 quarters with good PRF difference image offsets

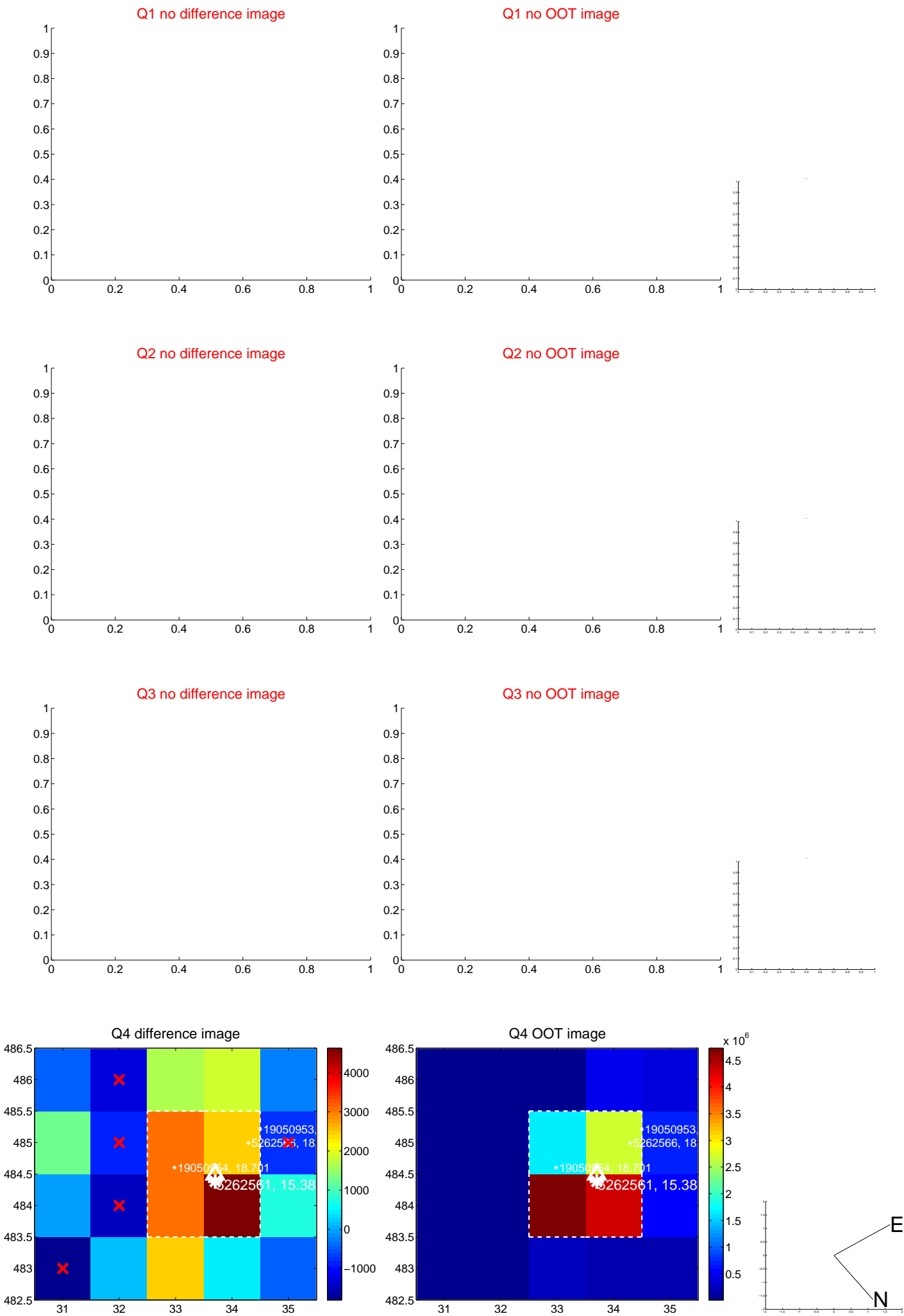
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.740 \pm 0.458$	1.62	$-0.367 \pm 0.357$	$-0.643 \pm 0.486$
PRF-fit source offset from KIC position	$0.700 \pm 0.547$	1.28	$-0.352 \pm 0.315$	$-0.605 \pm 0.606$
photometric centroid source offset	$0.95 \pm 0.87$	1.09	$-0.95 \pm 0.87$	$0.04 \pm 0.68$

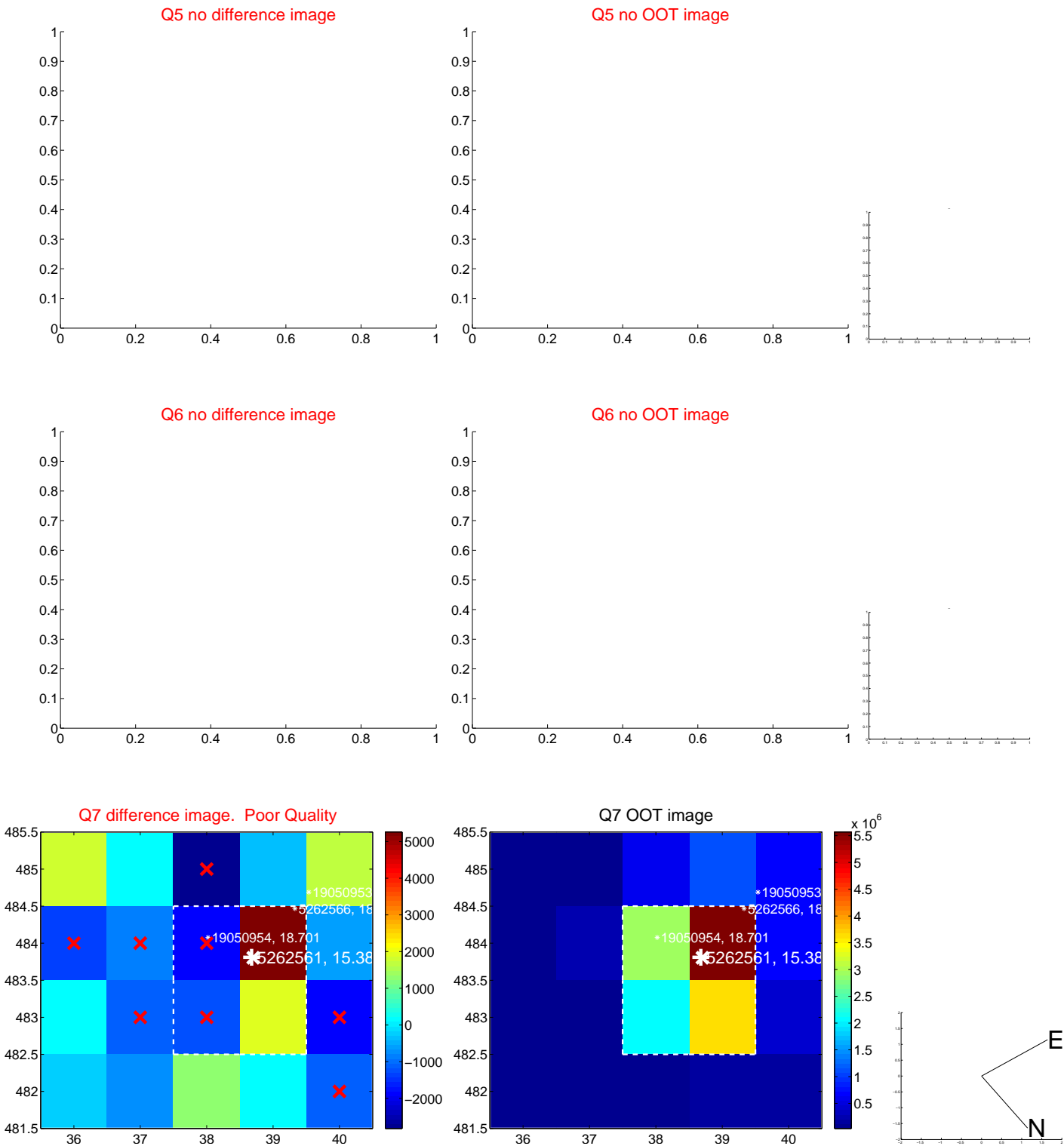


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

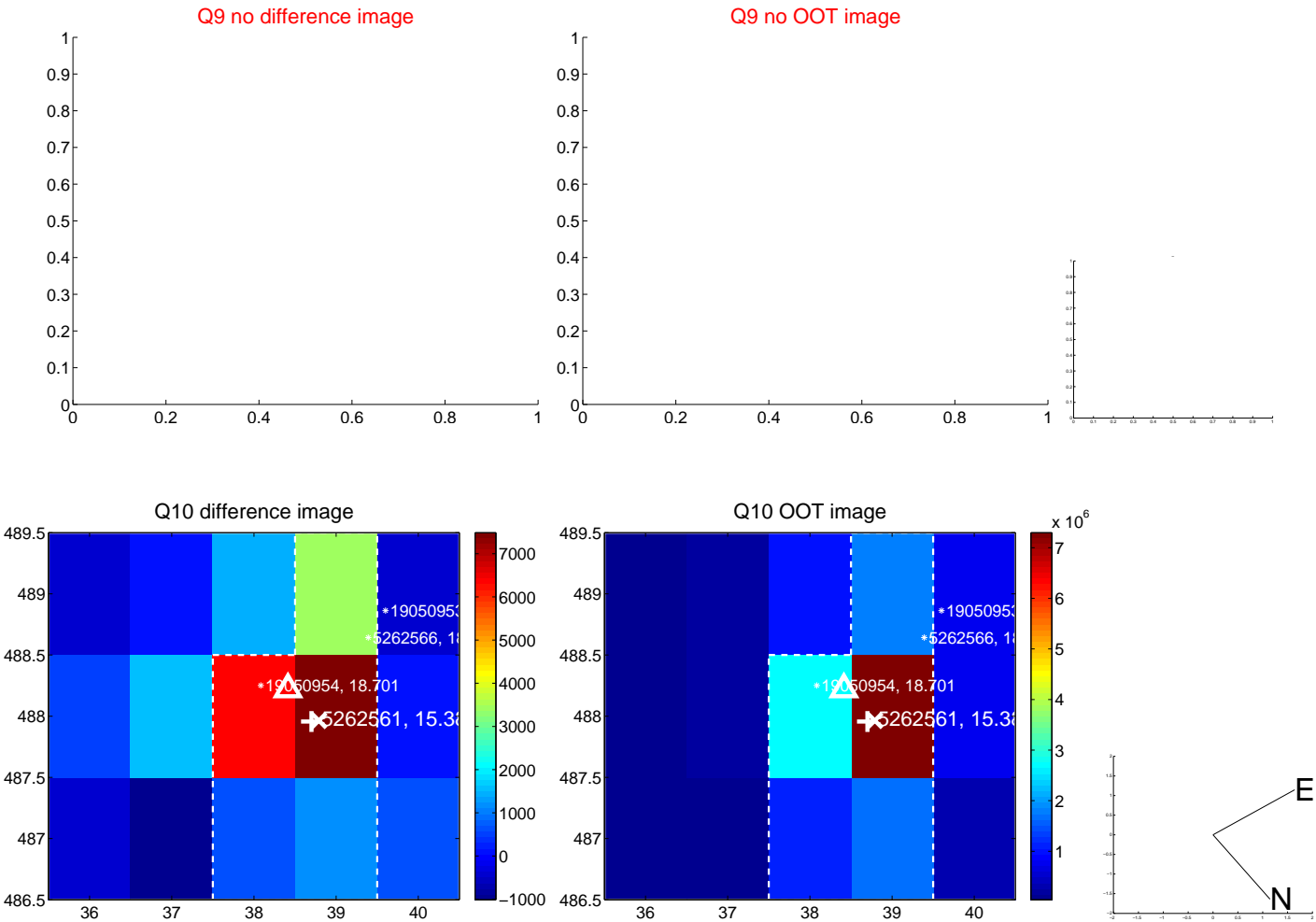
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



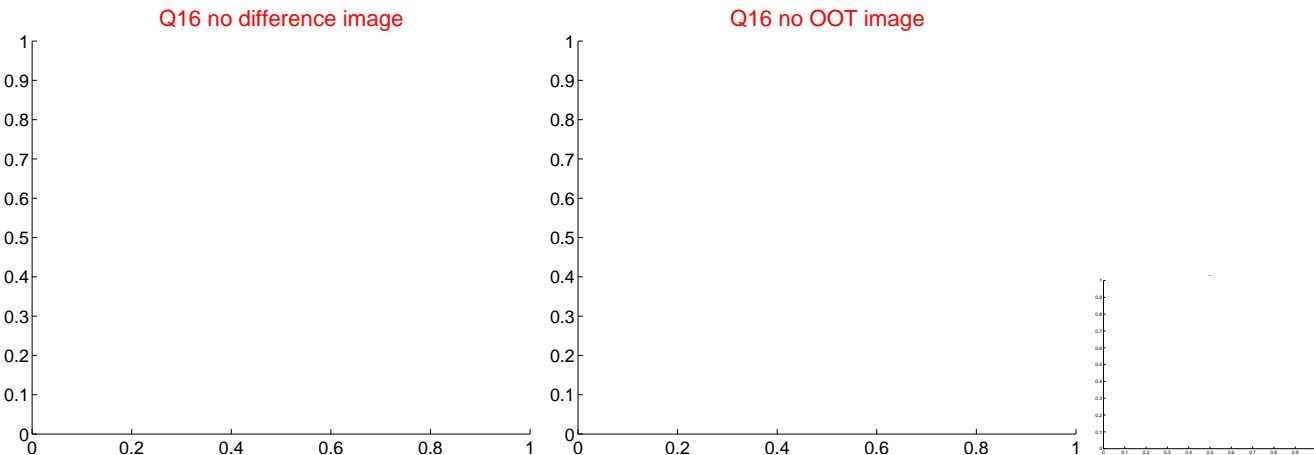
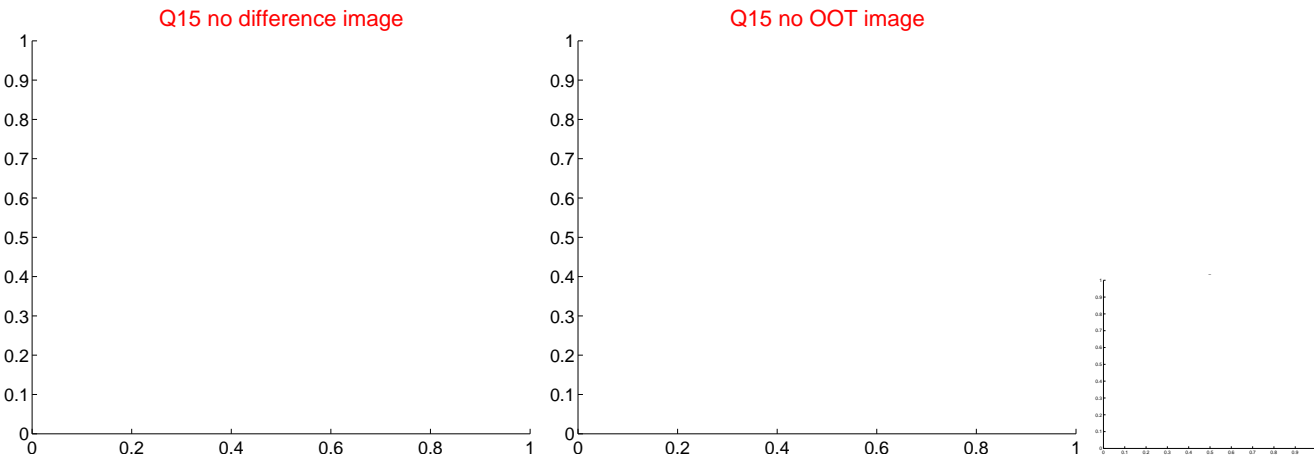
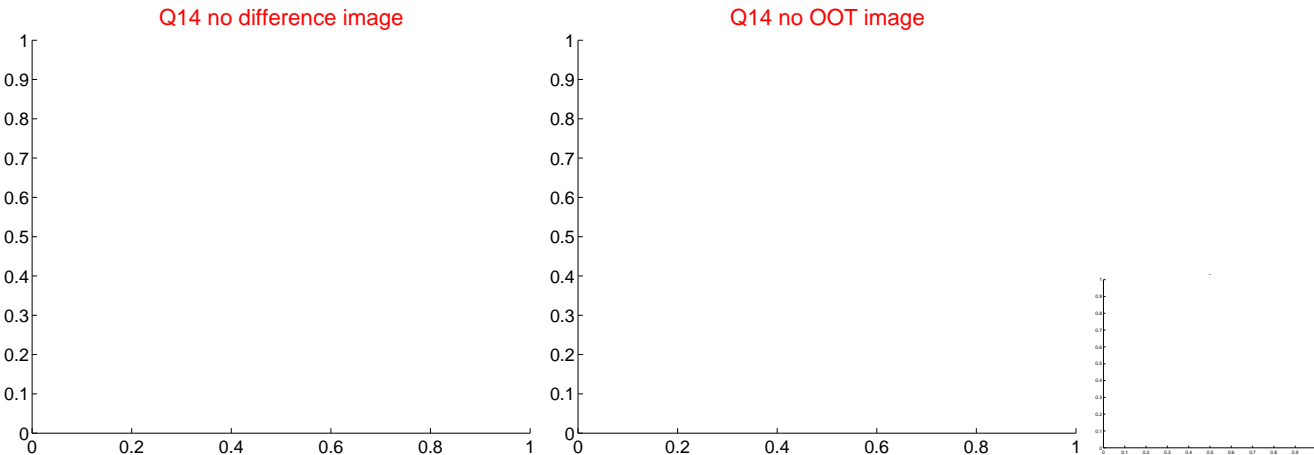
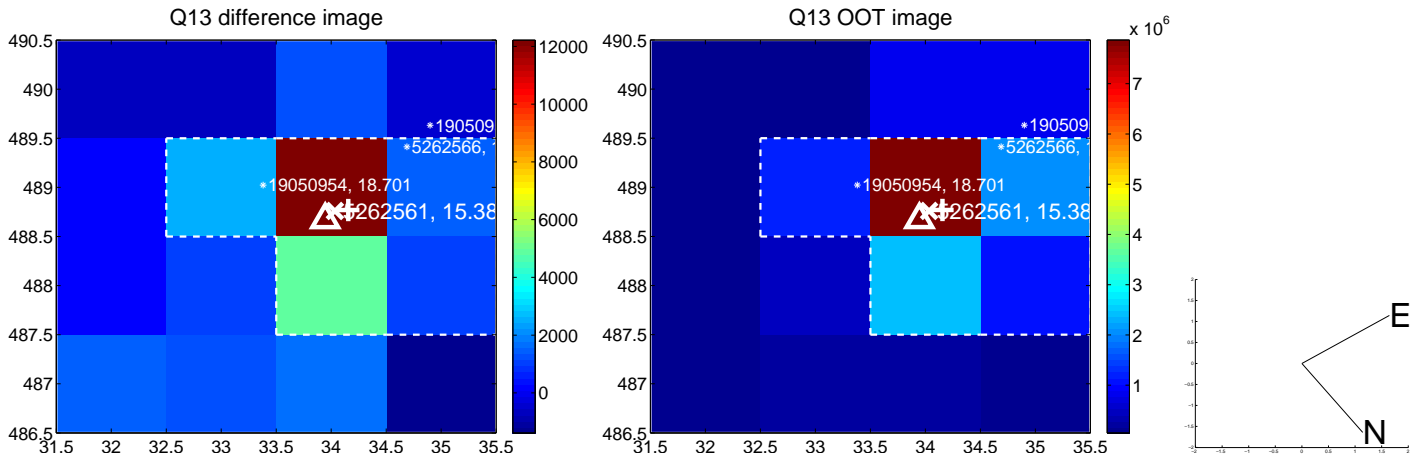
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



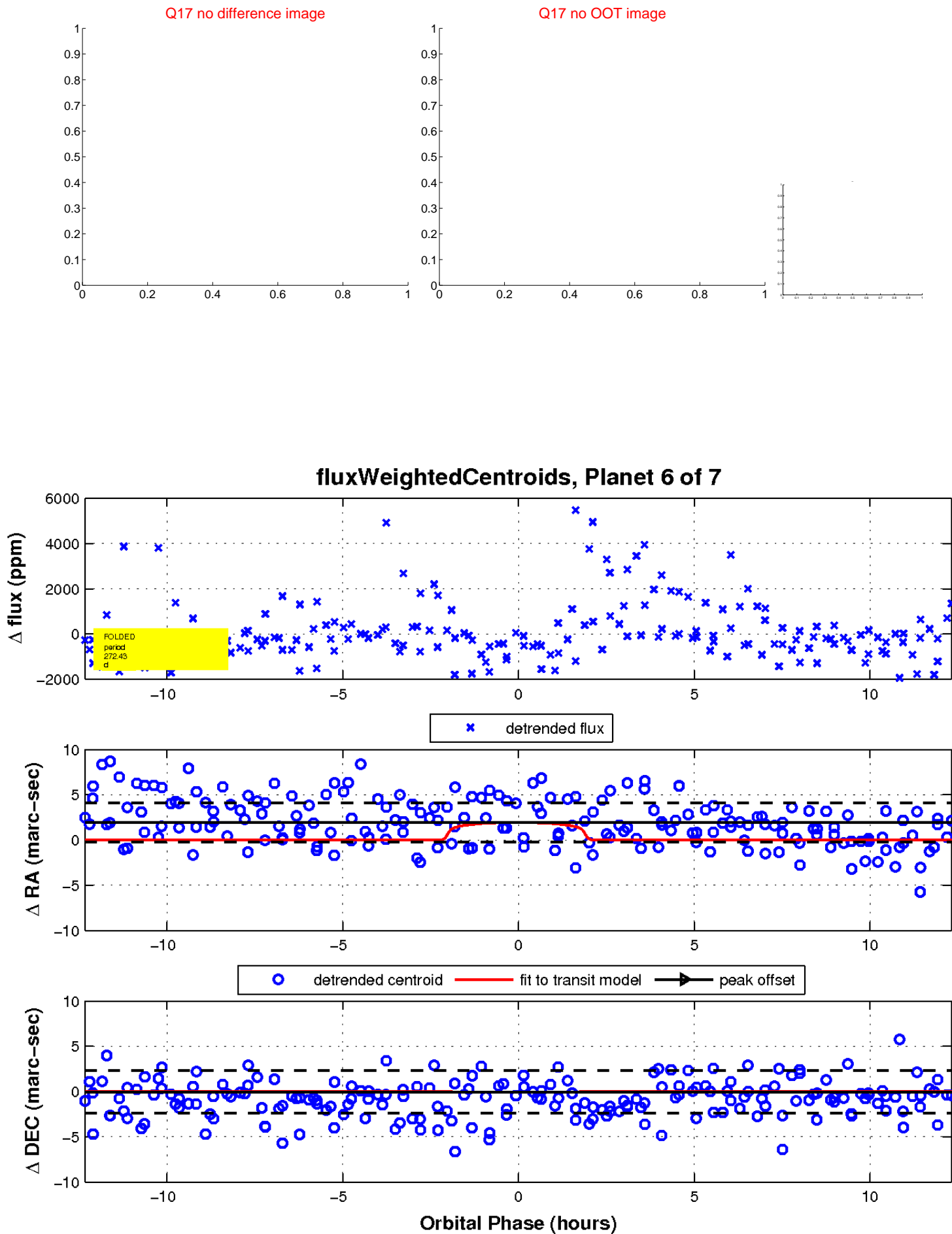
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

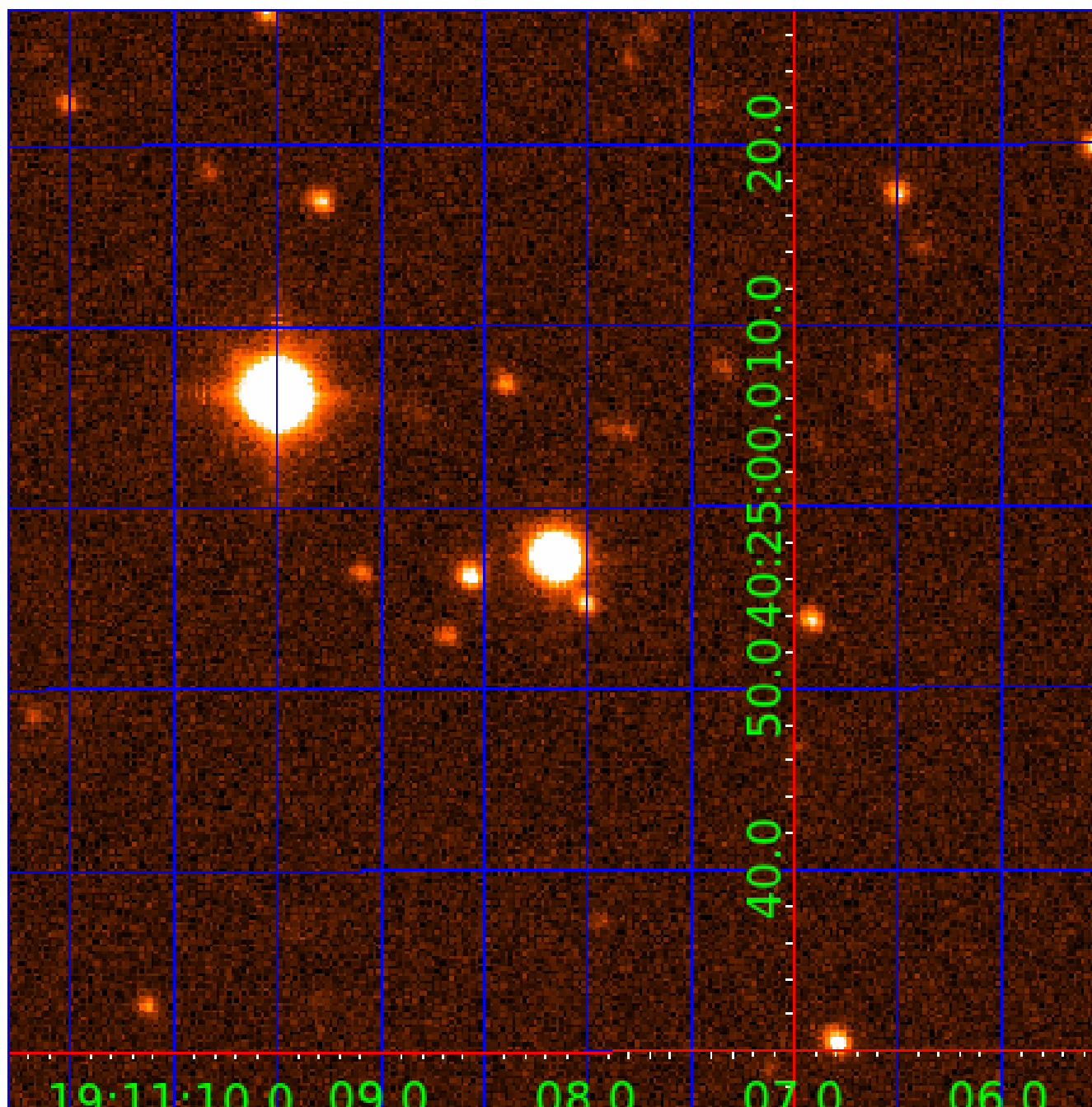


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination



# KIC 005262561

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005262561-01	OBS	No	432.405002	523.025887	2650.6	9.647	15.6	8.9	0.46	3625	2.34	0.04
005262561-02	OBS	No	433.280026	456.616656	2249.0	9.752	13.2	7.0	0.46	3625	2.14	0.04
005262561-03	OBS	No	450.102616	367.582477	677.4	2.760	13.2	2.4	0.46	3625	1.27	0.04
005262561-04	OBS	No	352.549254	210.363742	2684.8	4.346	11.4	8.2	0.46	3625	2.45	0.06
005262561-05	OBS	No	375.221462	235.585926	718.8	15.000	10.3	-1.0	0.46	3625	1.21	0.05
005262561-06	OBS	No	272.428273	386.654427	1771.4	4.120	10.9	7.2	0.46	3625	1.90	0.08
005262561-07	OBS	No	460.413789	428.856492	1954.7	5.033	9.4	6.6	0.46	3625	2.06	0.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005262561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005262561-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005262561-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005262561-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV
005262561-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS

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

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

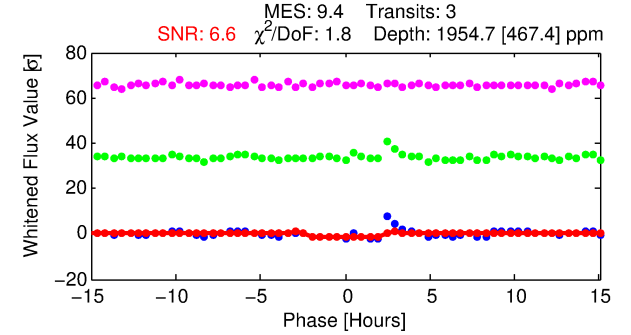
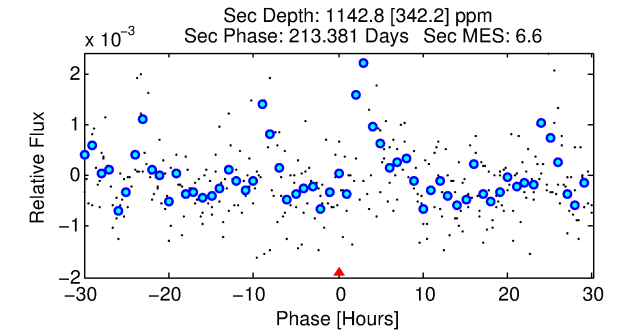
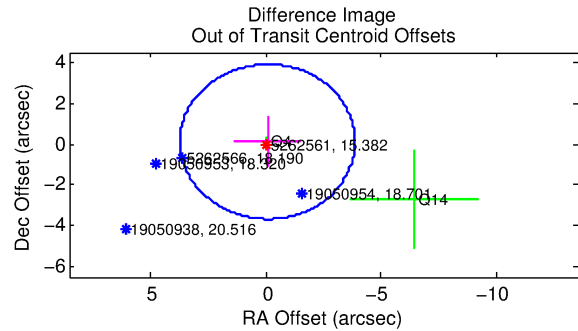
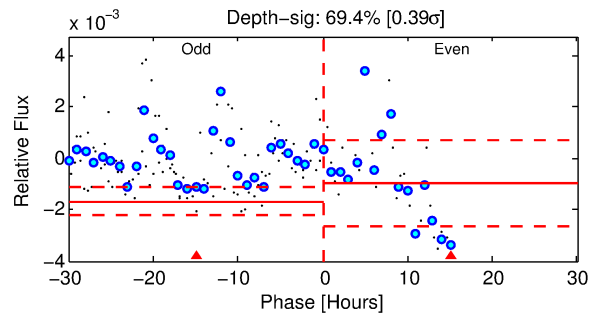
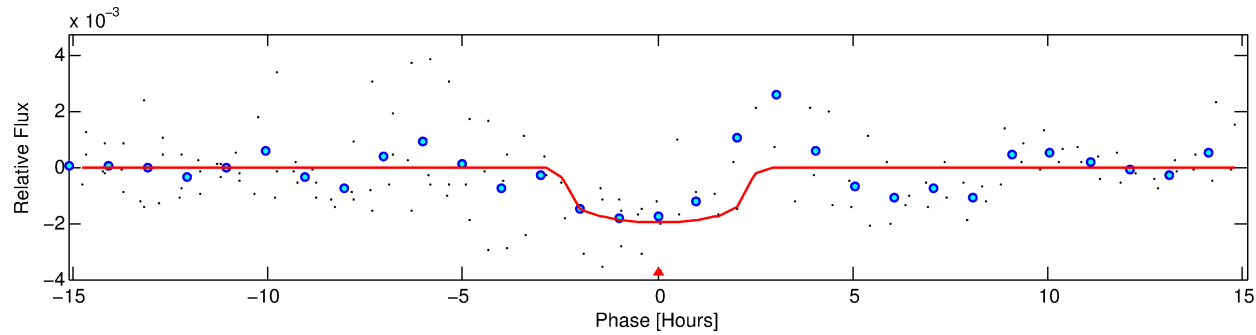
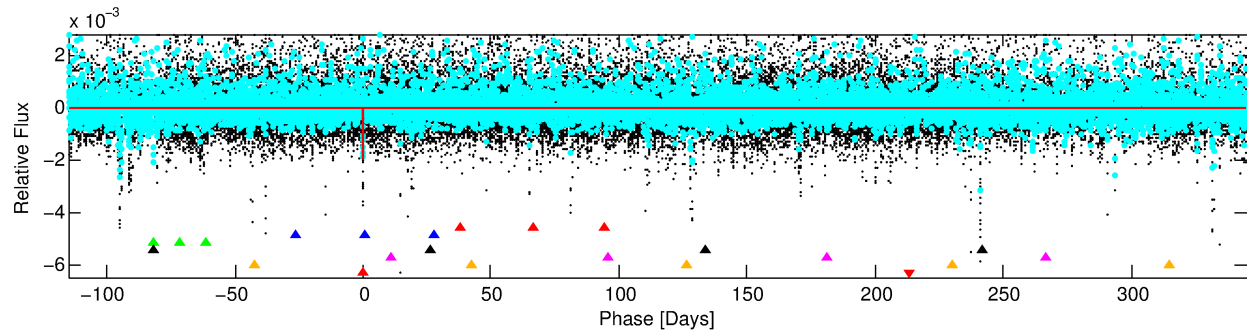
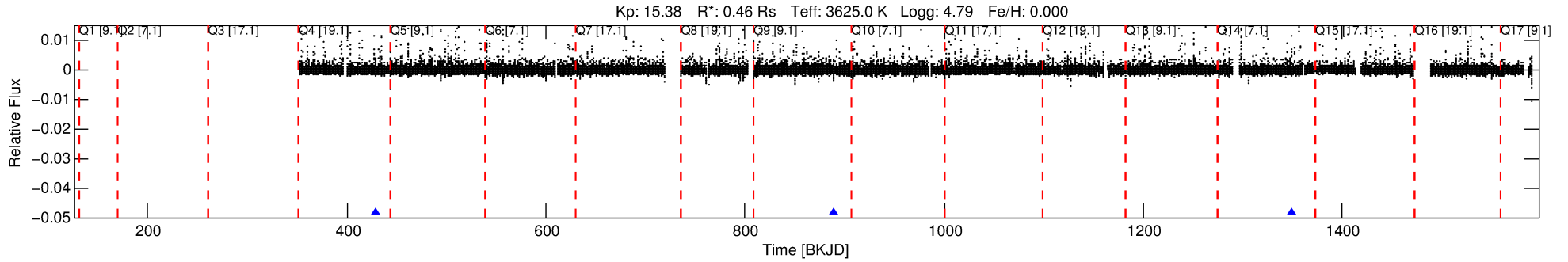
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005262561-07

No Significant Match Found

# DV One-Page Summary

KIC: 5262561    Candidate: 7 of 7    Period: 460.414 d



DV Fit Results:

Period = 460.41379 [0.00783] d  
 Epoch = 428.8565 [0.0109] BKJD  
 Rp/R\* = 0.0414 [0.0942]  
 a/R\* = 635.43 [6156.14]  
 b = 0.51 [14.30]  
 Seff = 0.04 [0.01]  
 Teq = 114 [4] K  
 Rp = 2.06 [4.69] Re  
 a = 0.9053 [0.0731] AU  
 Ag = 121660.76 [555460.43] [0.2]  
 Tefp = 3277 [3740] K [0.855]

DV Diagnostic Results:

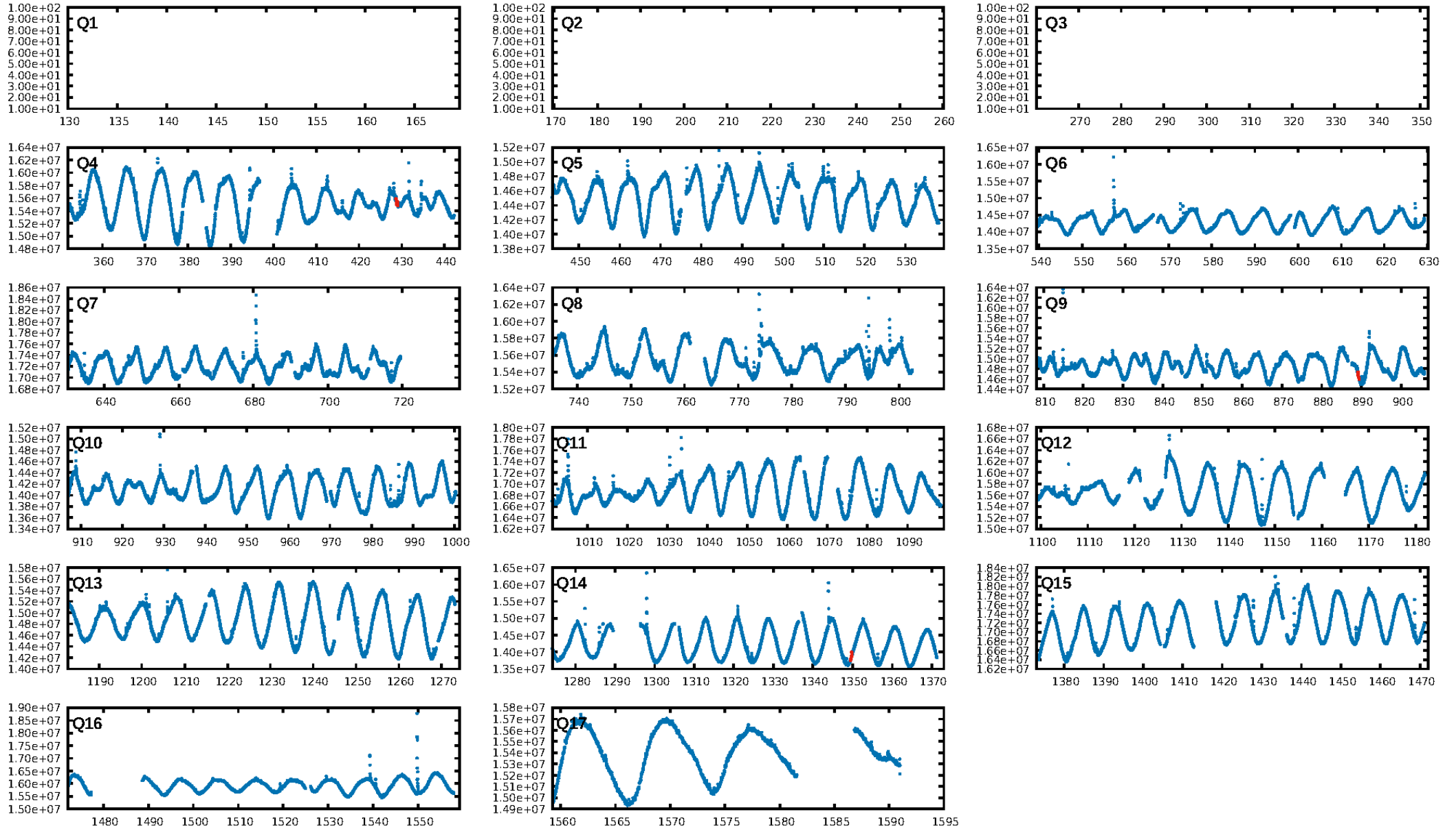
ShortPeriod-sig: 100.0% [43.11σ]  
 LongPeriod-sig: N/A  
 ModelChiSquare2-sig: 9.0%  
 ModelChiSquareGof-sig: 99.6%  
**Bootstrap-pfa: 9.49e-08**  
 RollingBand-fgt: 1.00 [3/3]  
 GhostDiagnostic-chr: -34.38

Centroid-sig: 85.6%  
 Centroid-so: 0.510 arcsec [0.59σ]  
 OotOffset-rm: 0.145 arcsec [0.11σ]  
 KicOffset-rm: 0.141 arcsec [0.11σ]  
 OotOffset-st: 1/0/1/0 [2]  
 KicOffset-st: 1/0/1/0 [2]  
 DiffImageQuality-fgm: 0.50 [1/2]  
 DiffImageOverlap-fno: 0.67 [2/3]

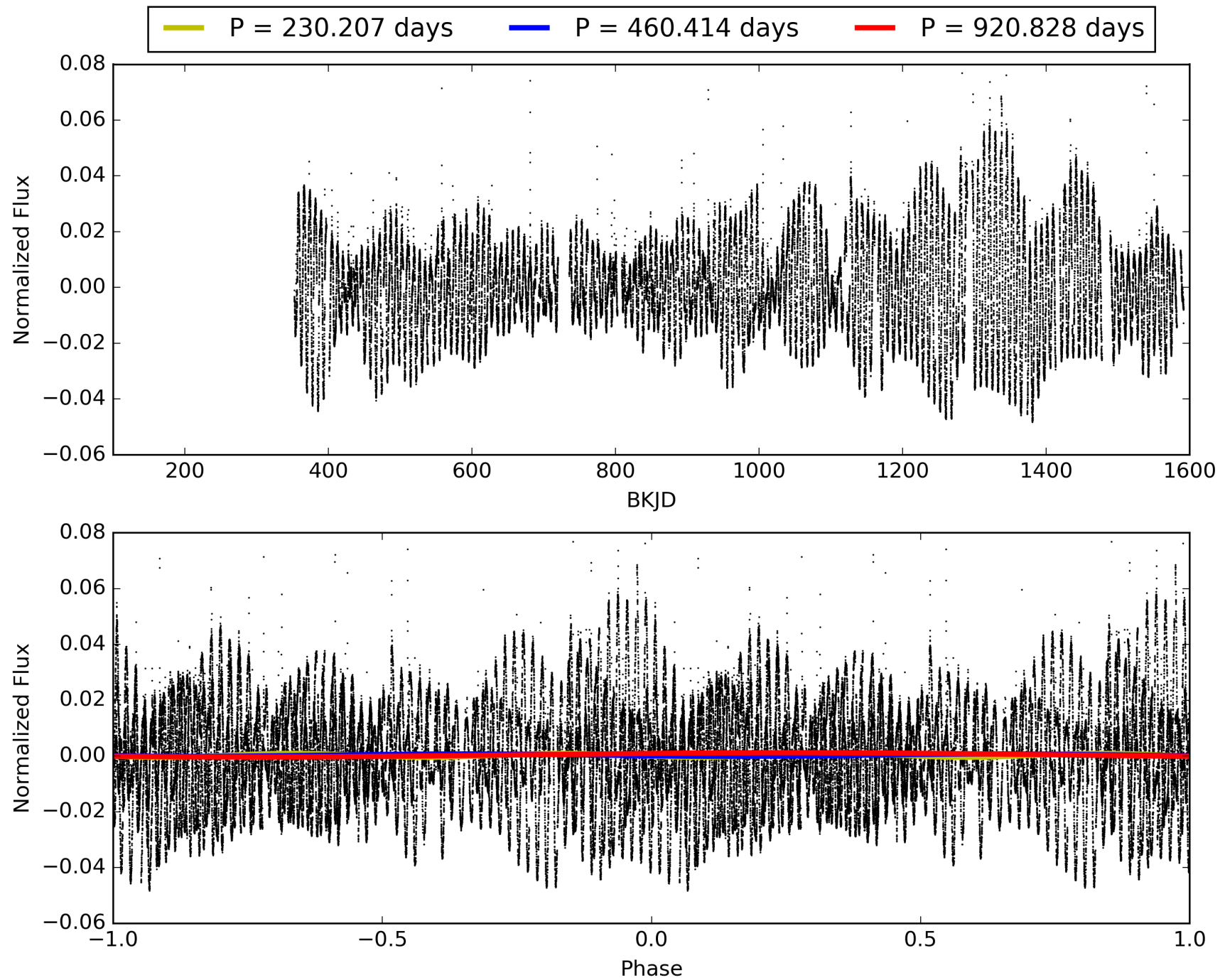
Software Revision: <svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958> -- Date Generated: 01-Feb-2016 22:35:50 Z

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

# TCE 005262561-07, PDC Light Curves

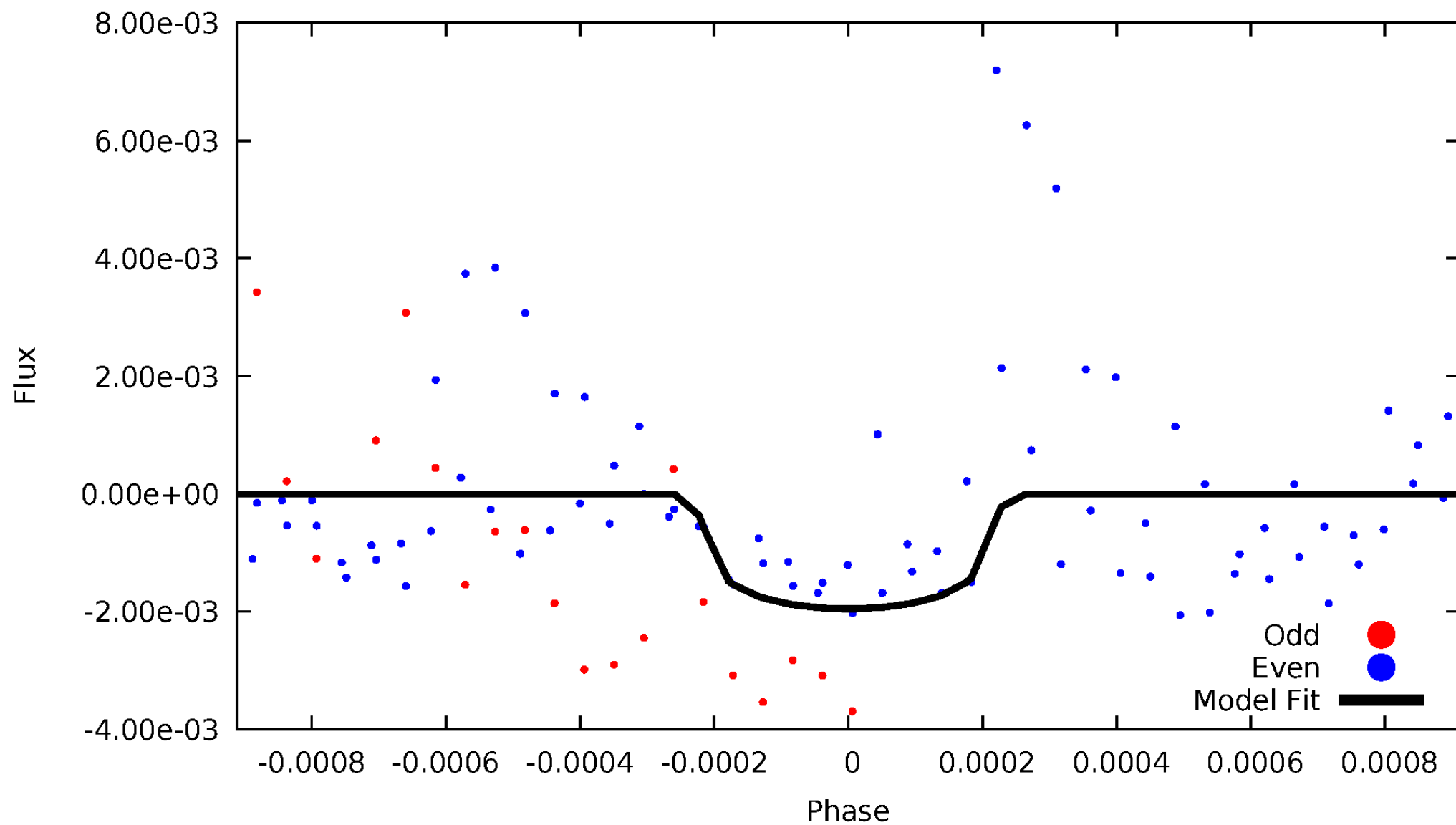


TCE 005262561-07



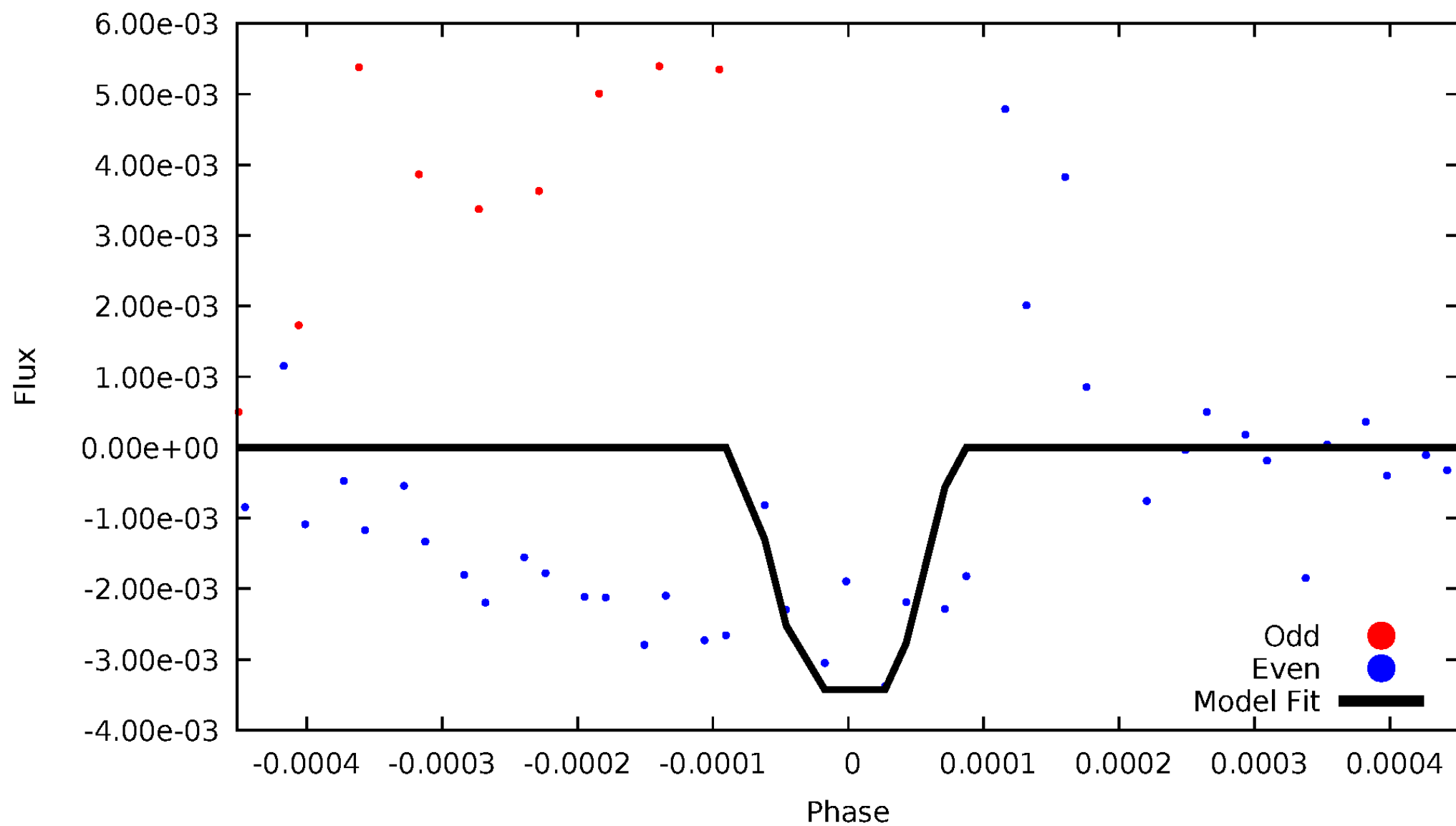
# DV Odd/Even

TCE 005262561-07



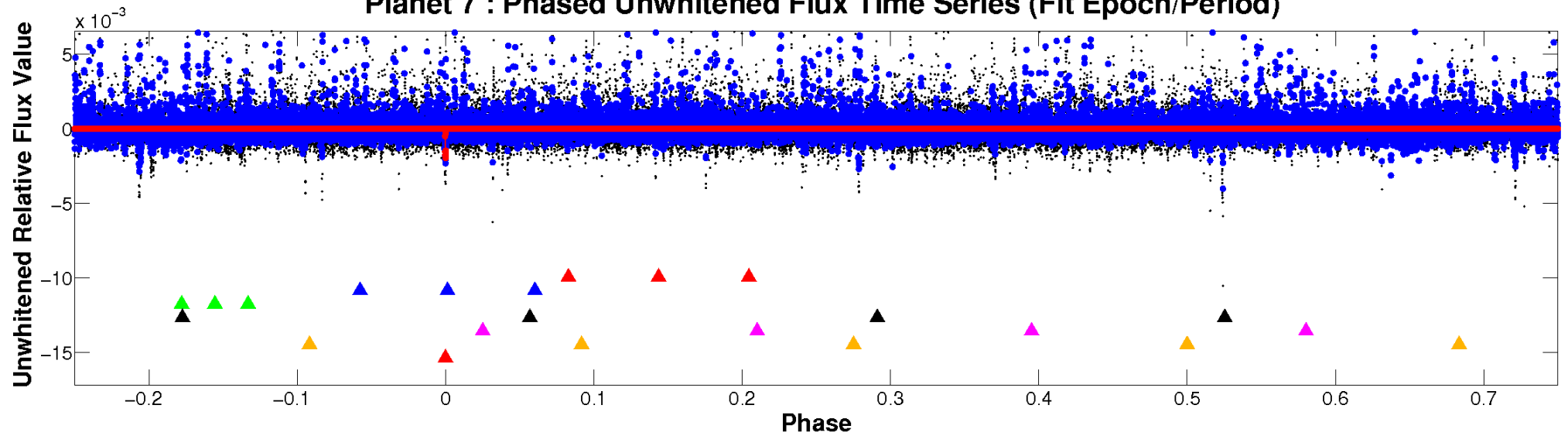
# ALT Odd/Even

TCE 005262561-07

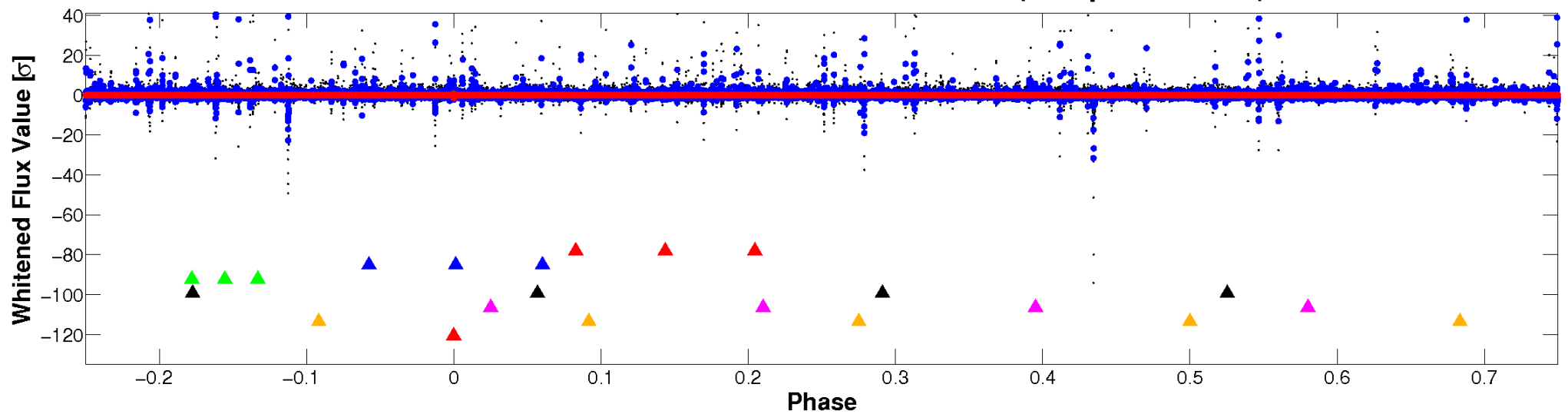


# Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

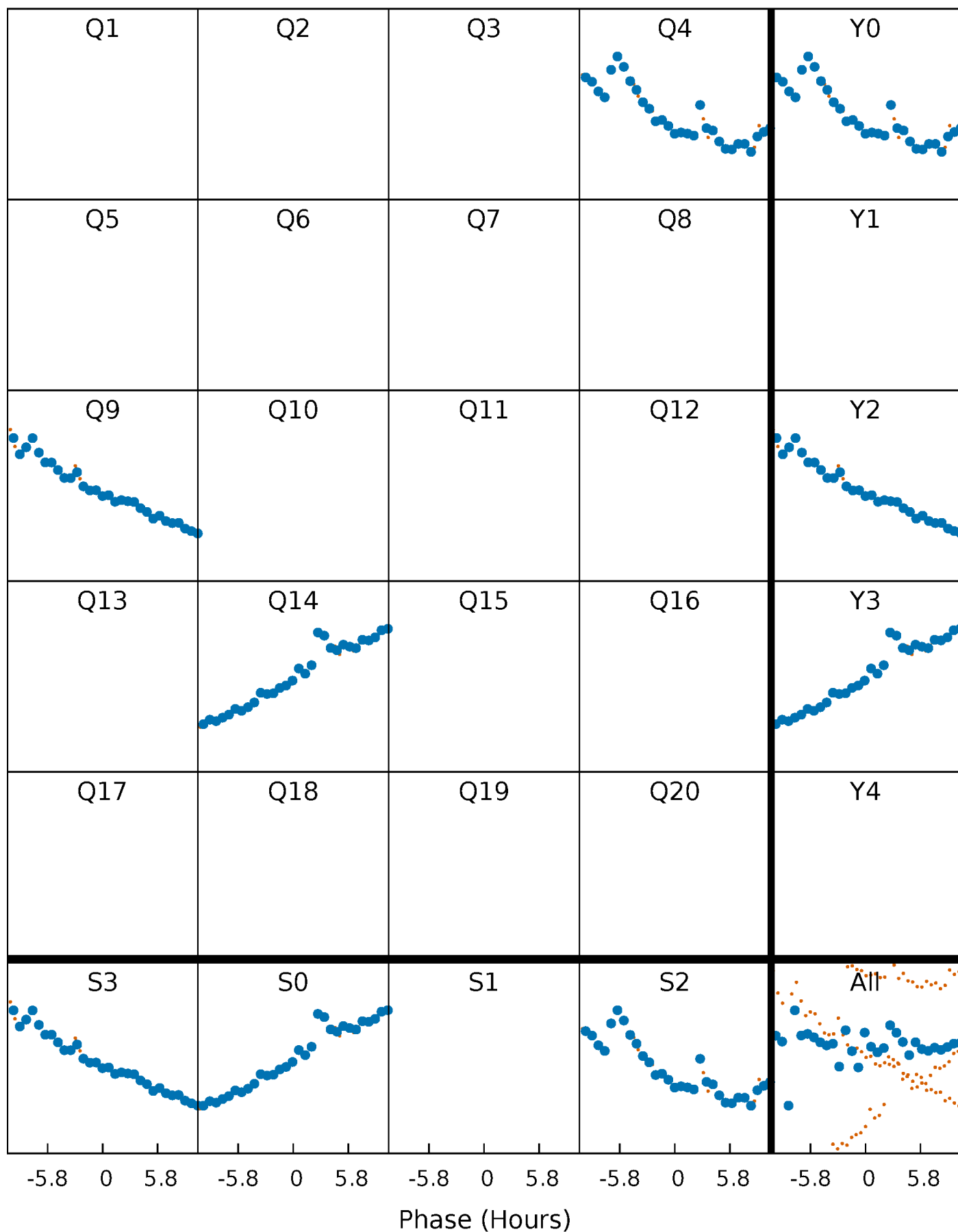


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



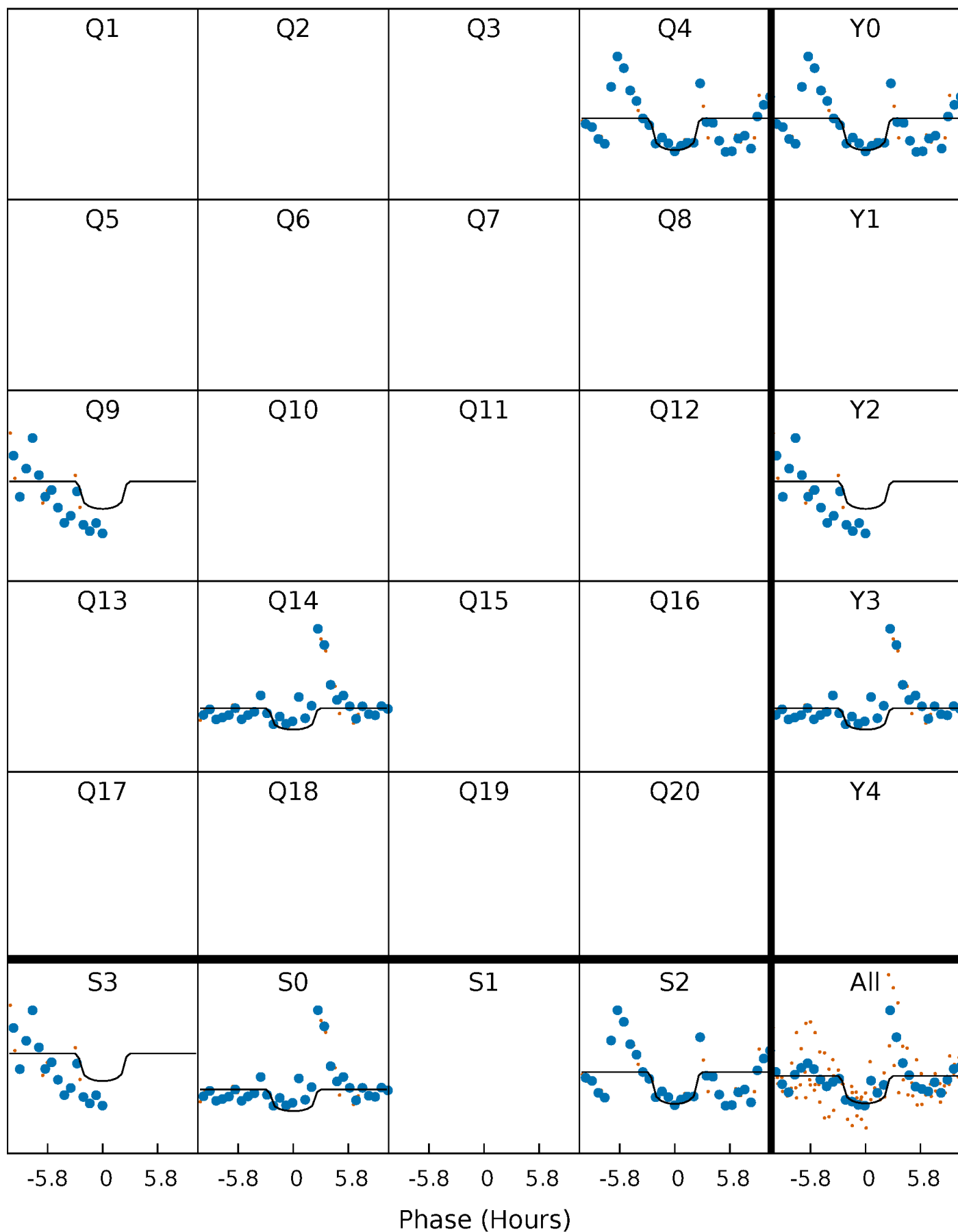
# PDC Quarter-Phased Transit Curves

TCE 005262561-07     $P=460.413789$  Days     $T_0=428.856492$  (BKJD)



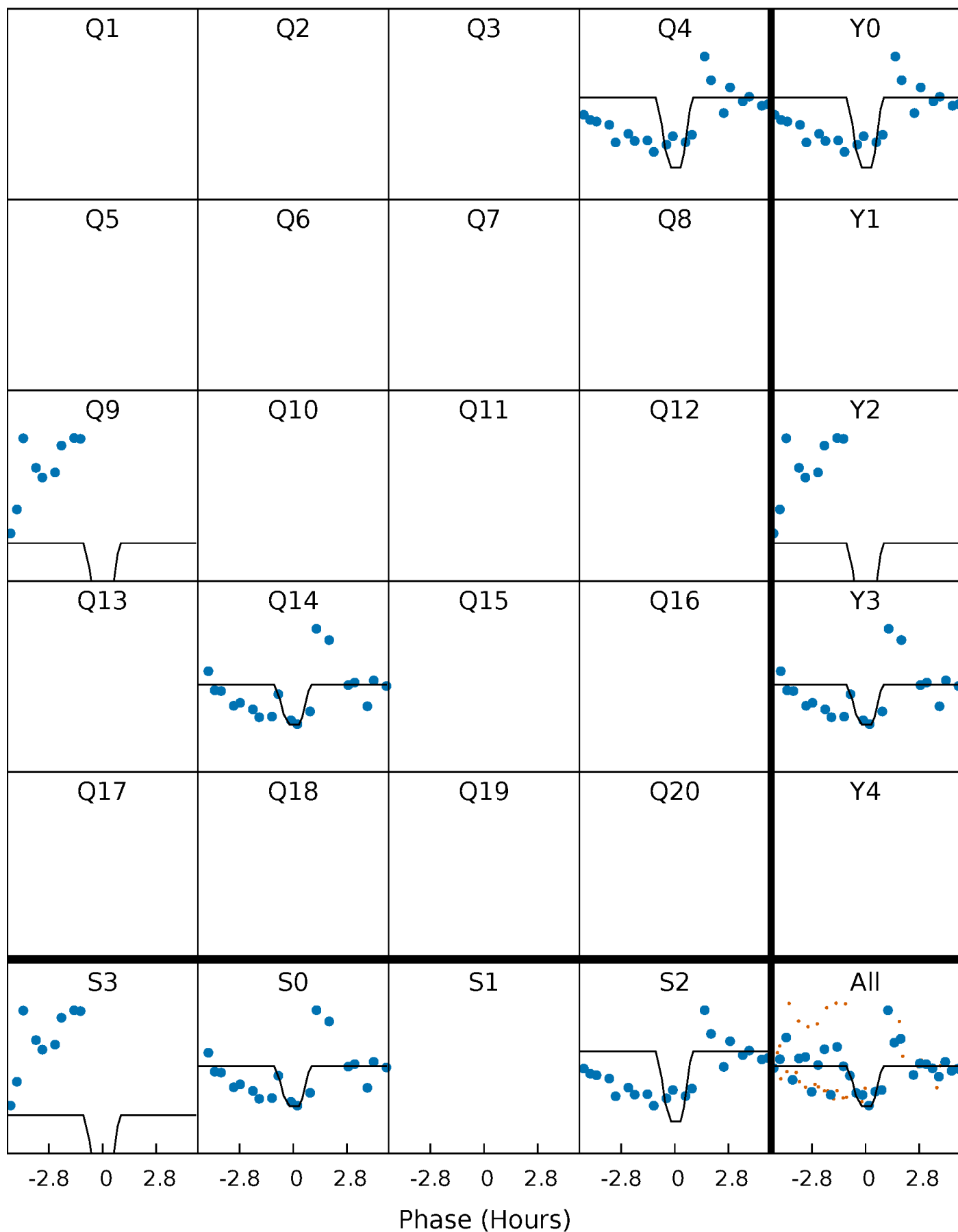
# DV Quarter-Phased Transit Curves

TCE 005262561-07     $P=460.413789$  Days     $T_0=428.856492$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

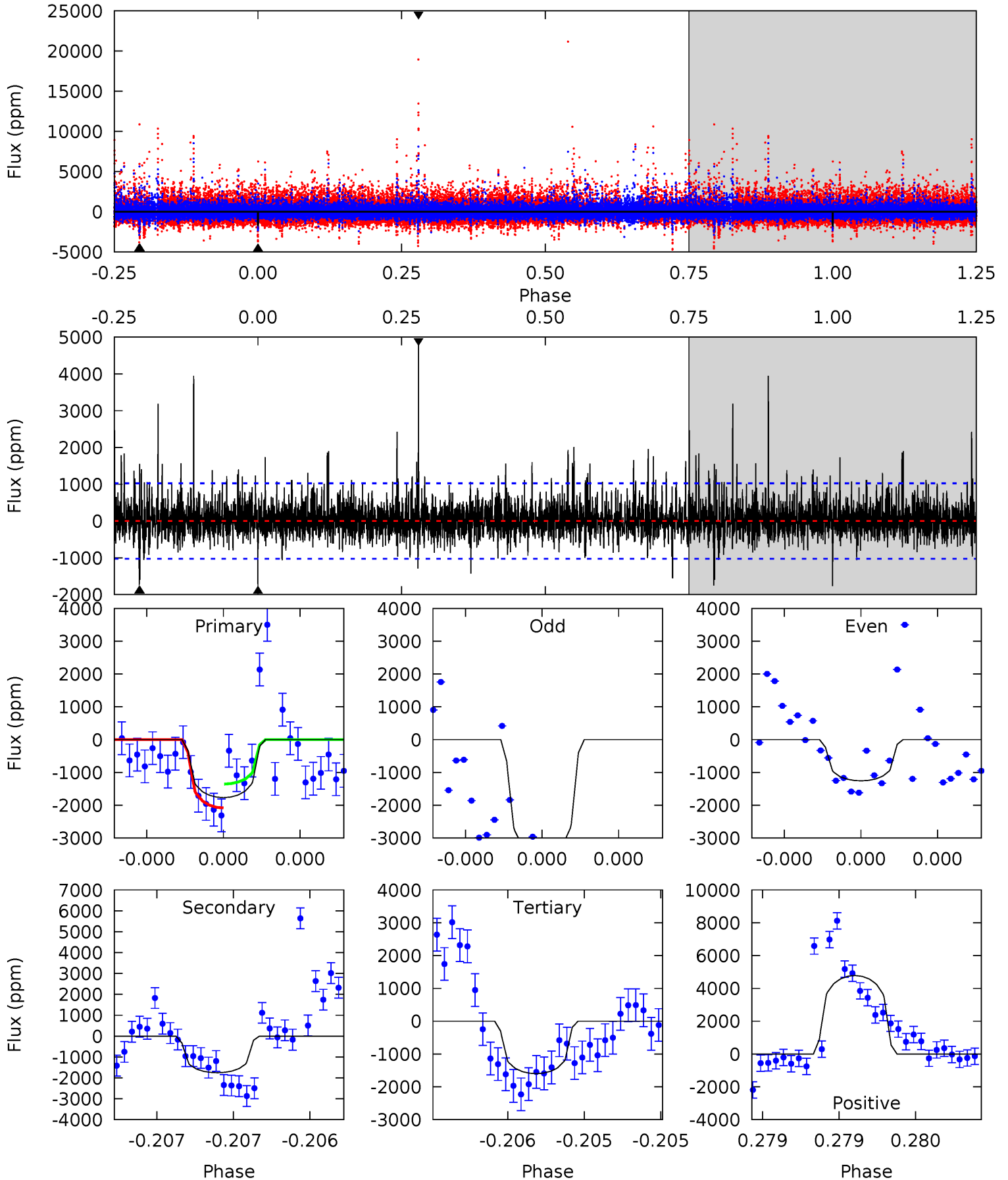
TCE 005262561-07 P=460.415785 Days  $T_0=428.901006$  (BKJD)



# DV Model-Shift Uniqueness Test

005262561-07, P = 460.413789 Days, E = 428.856492 Days

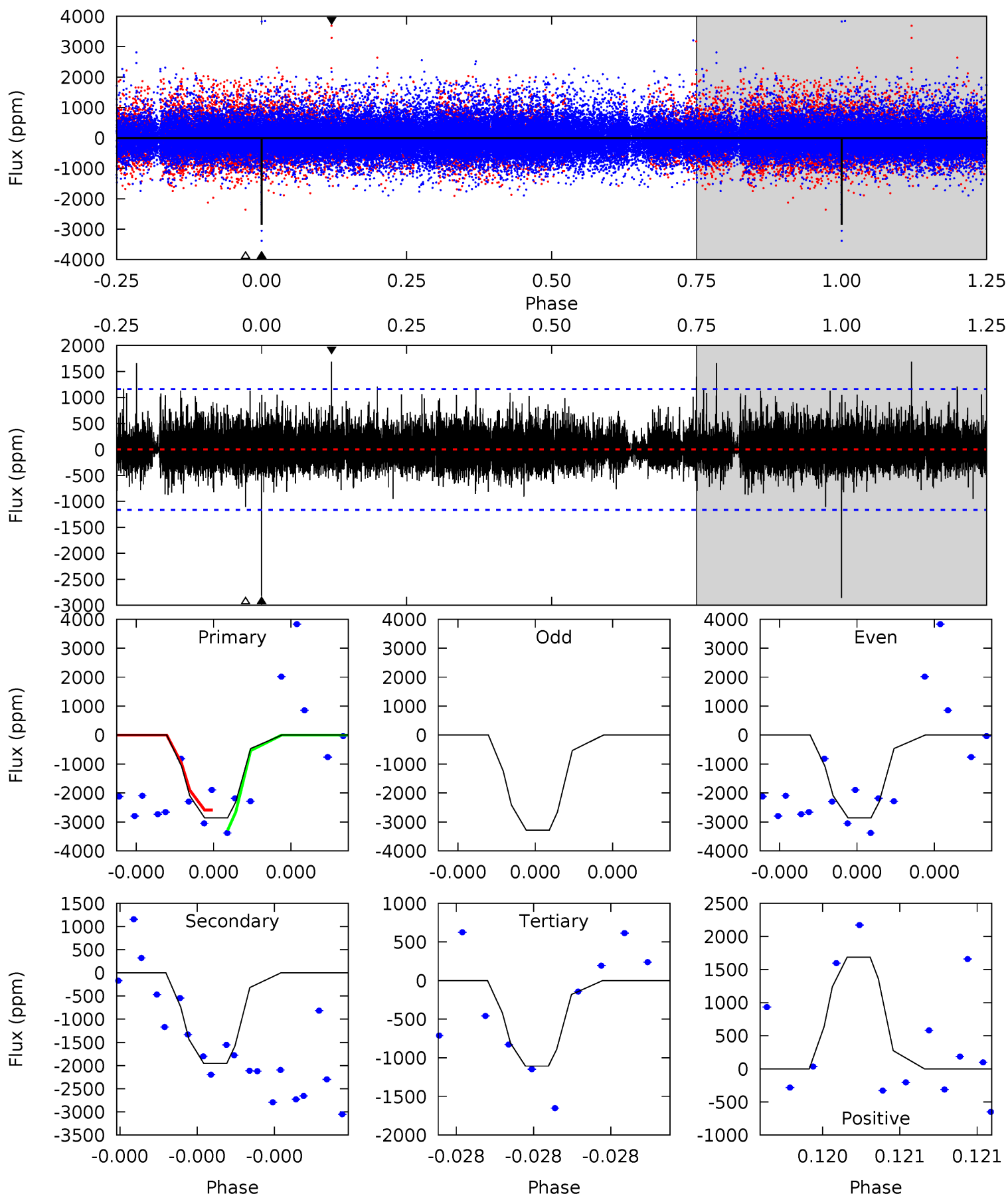
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.61	9.53	8.68	26.0	5.58	3.49	2.10	0.93	-16.4	0.84	-16.5	2.73	1.17	0.73	1.99



# Alt Model-Shift Uniqueness Test

005262561-07, P = 460.415785 Days, E = 428.901006 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
14.2	9.71	5.50	8.37	5.78	3.79	1.13	8.69	5.82	4.21	1.34	1.25	1.00	0.37	1.74



### Stellar Parameters For KIC 005262561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$3625^{+65}_{-72}$	$4.789^{+0.052}_{-0.028}$	$0.000^{+0.100}_{-0.100}$	$0.456^{+0.032}_{-0.048}$	$0.467^{+0.034}_{-0.043}$	$6.929^{+1.701}_{-0.832}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+7%/-11%	+7%/-9%	+25%/-12%
Source	PHO2	PHO2	PHO2	DSEP		

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

### Secondary Eclipse Parameters for KIC 005262561-07 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-1753 \pm 184$	$4.20^{+3.93}_{-2.84}$	$158^{+4}_{-5}$	$2935^{+1240}_{-465}$	$44162^{+375682}_{-32198}$
Alt.	$-1954 \pm 201$	$4.74^{+3.99}_{-3.13}$	$158^{+4}_{-4}$	$2871^{+1145}_{-404}$	$39991^{+311021}_{-28301}$

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

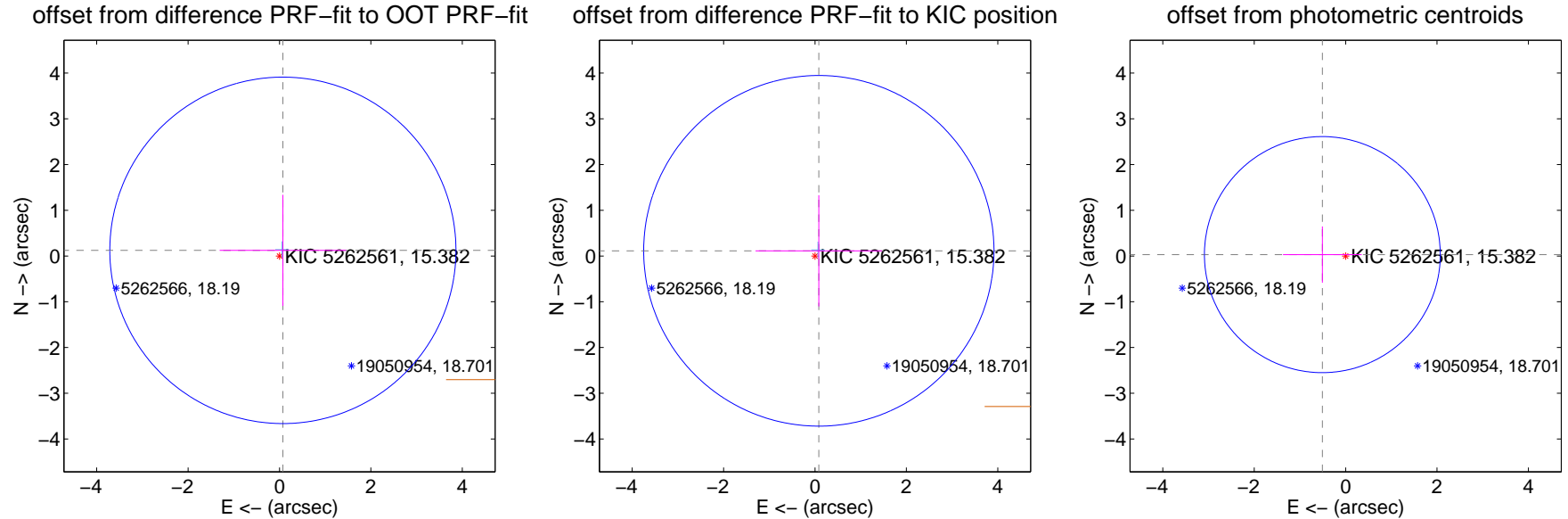
## DV Centroid Data

Supplemental centroid analysis for 005262561-07. Kepler magnitude: 15.38. Transit SNR 6.63

There are 1 quarters with good PRF difference image offsets

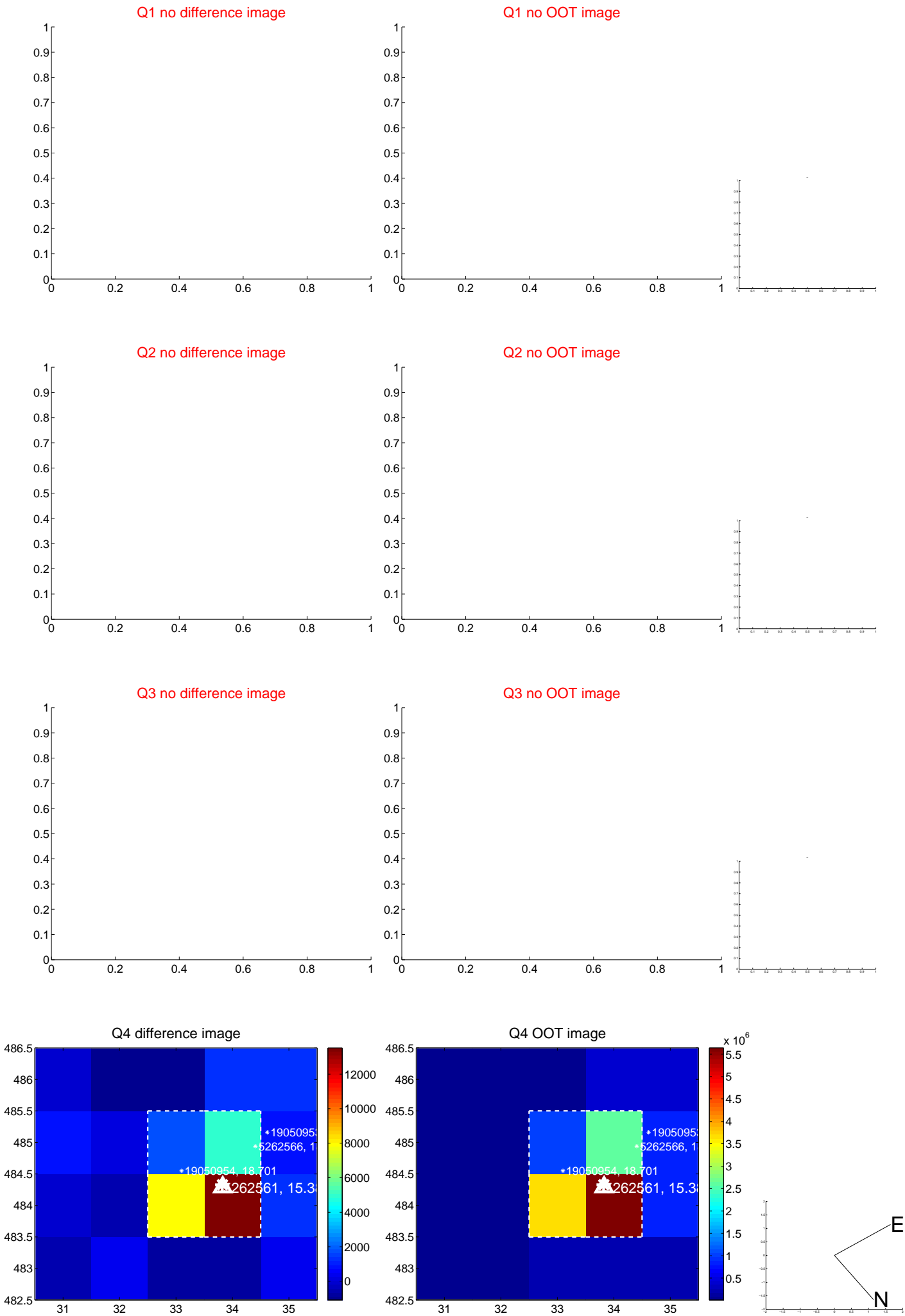
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.145 \pm 1.262$	0.11	$-0.074 \pm 1.384$	$0.124 \pm 1.216$
PRF-fit source offset from KIC position	$0.141 \pm 1.278$	0.11	$-0.084 \pm 1.384$	$0.114 \pm 1.216$
photometric centroid source offset	$0.51 \pm 0.86$	0.59	$0.51 \pm 0.86$	$0.03 \pm 0.61$

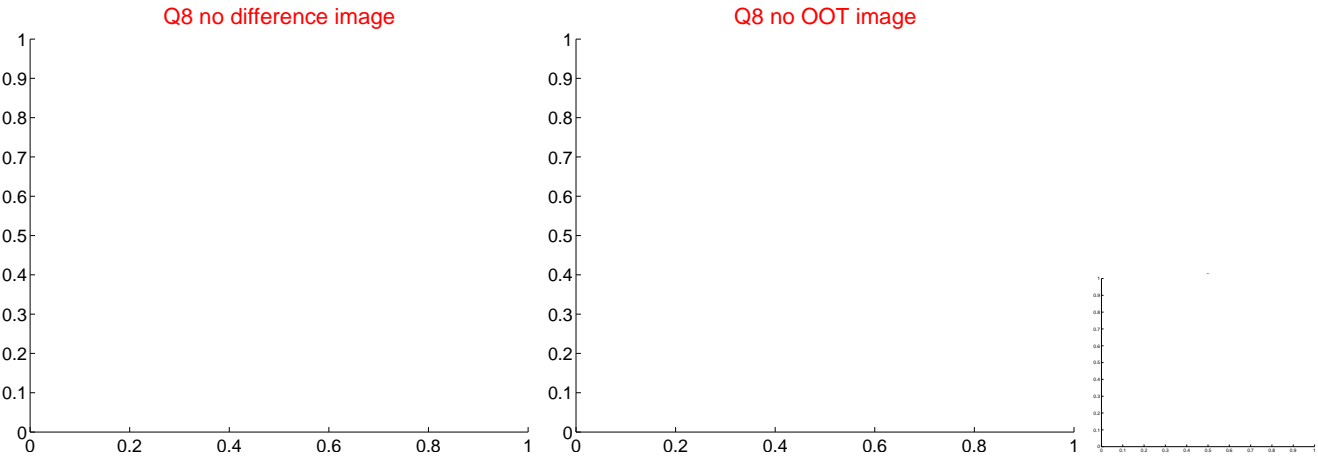
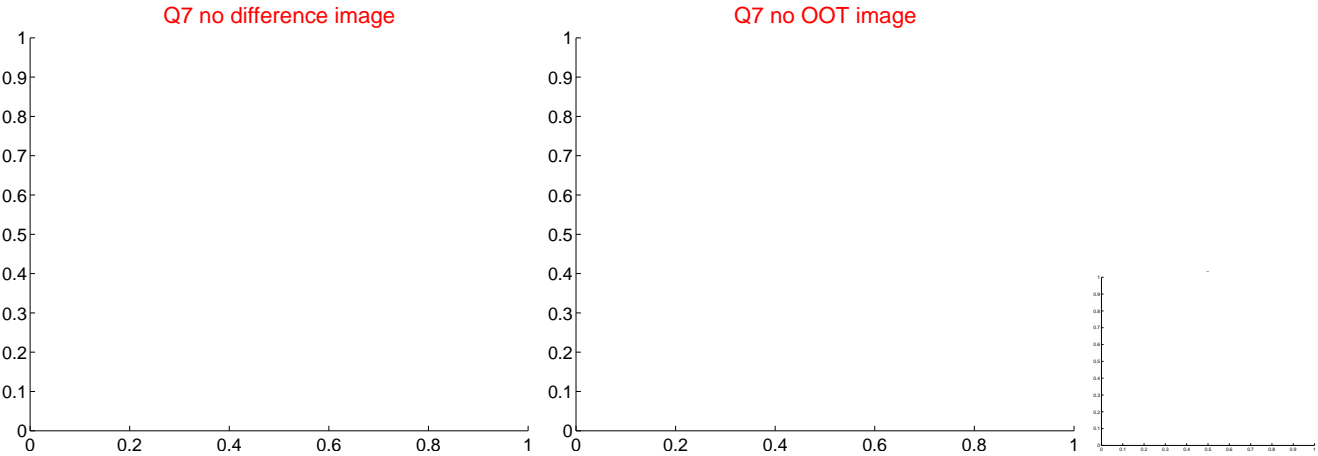
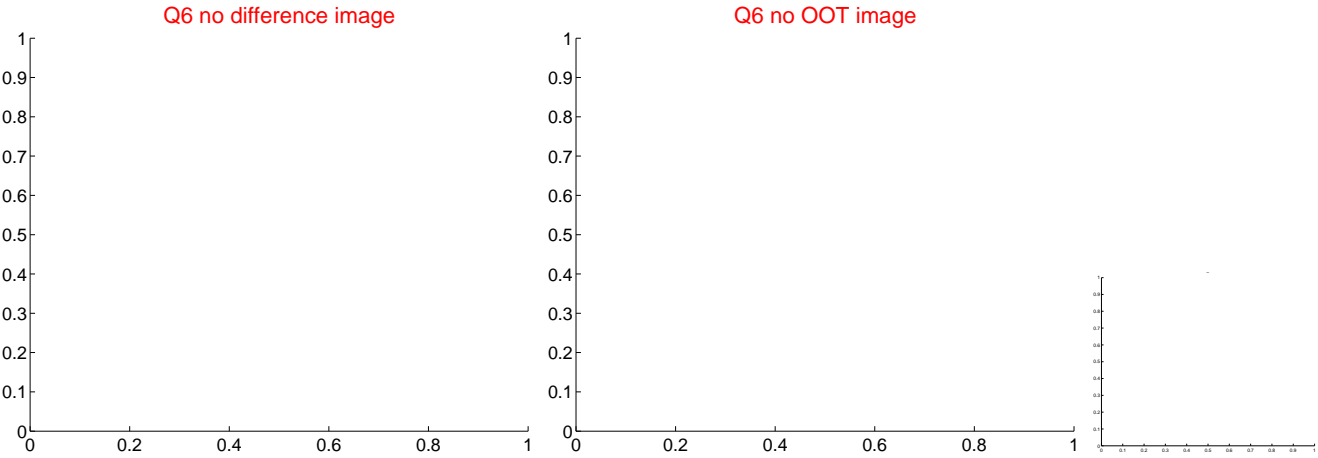
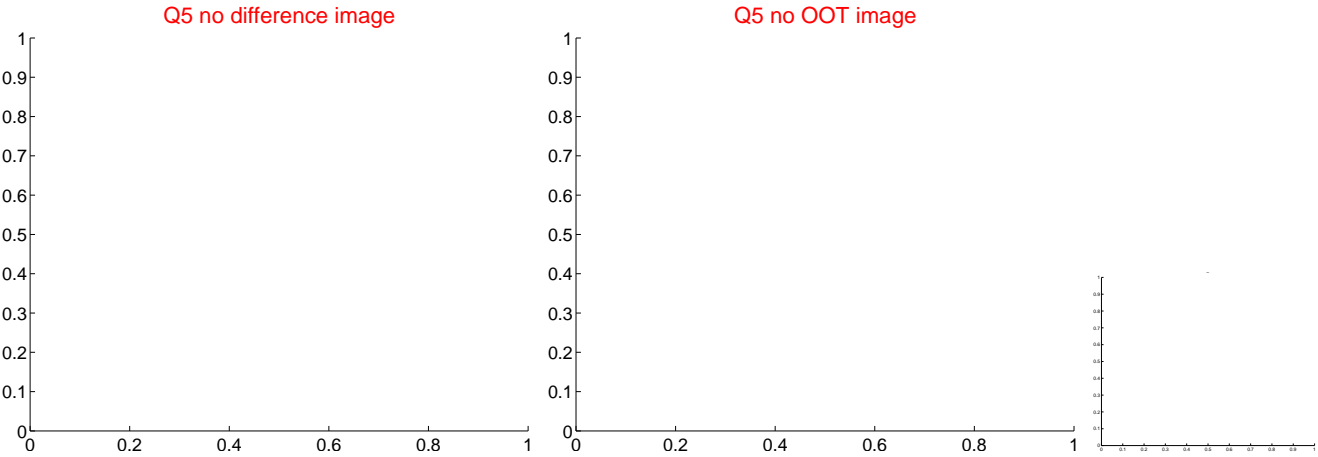


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three-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

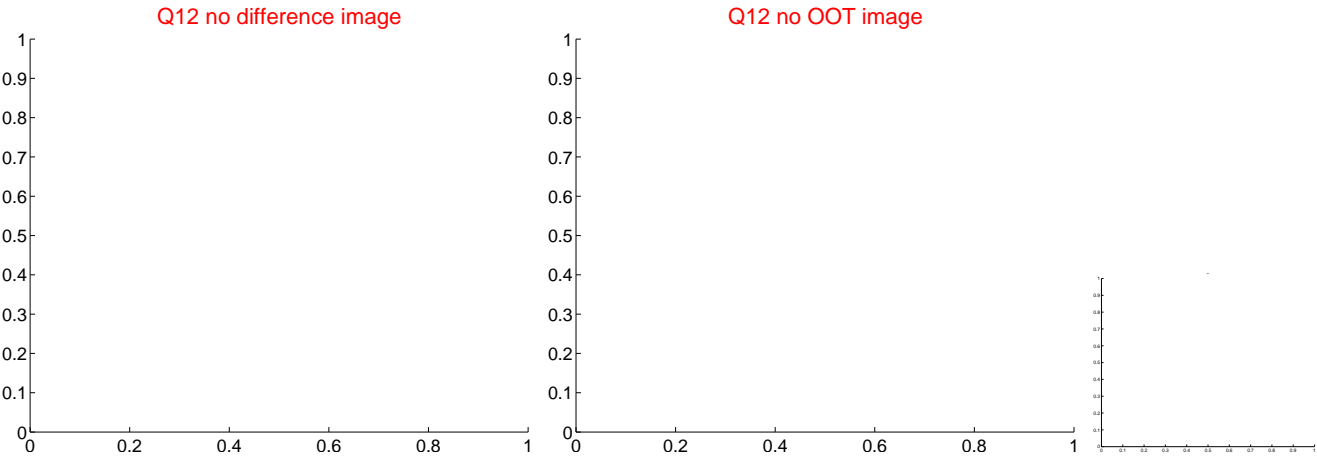
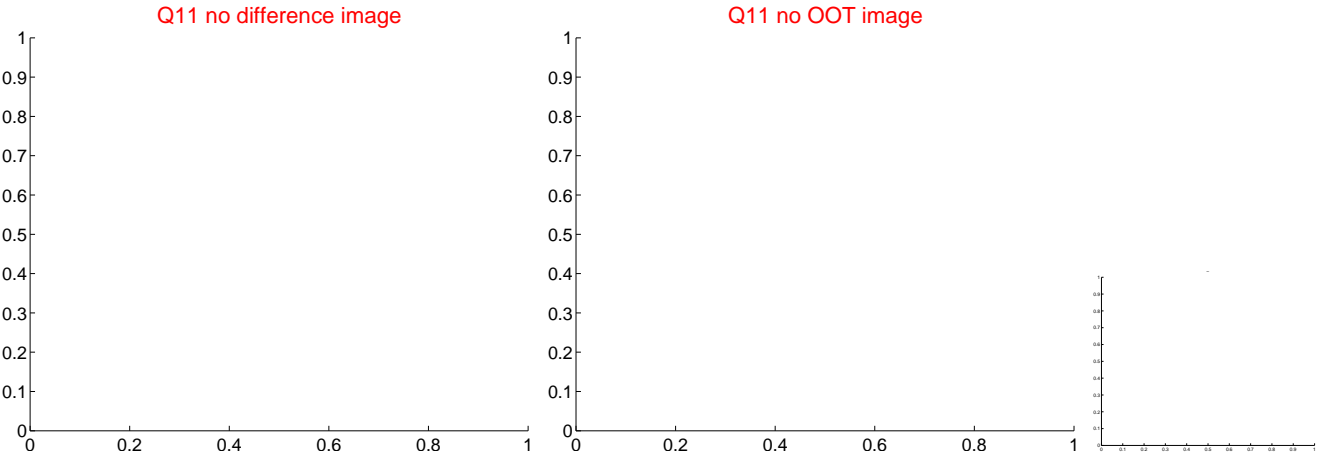
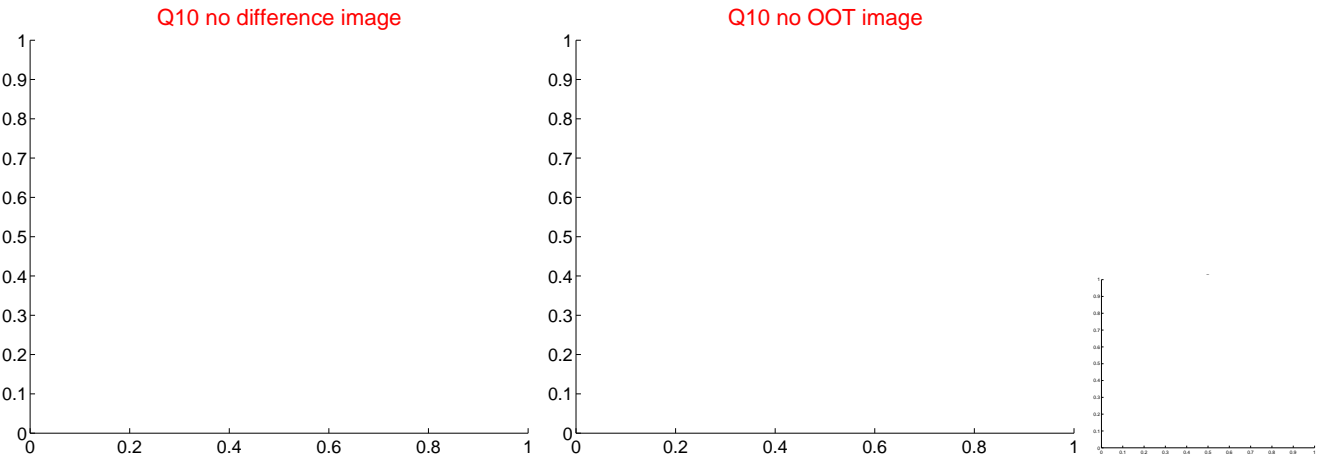
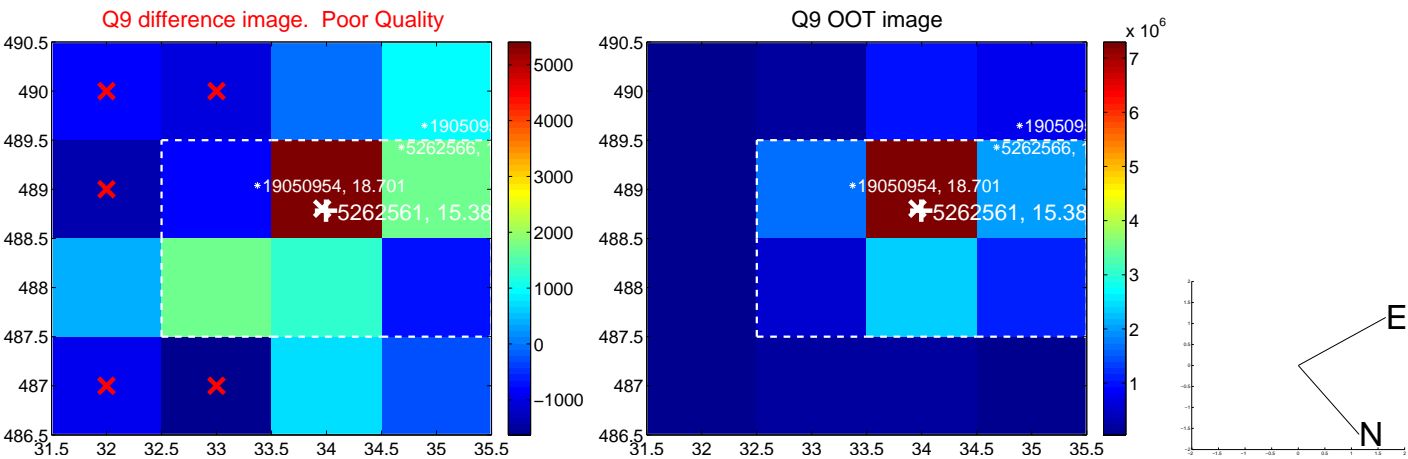
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



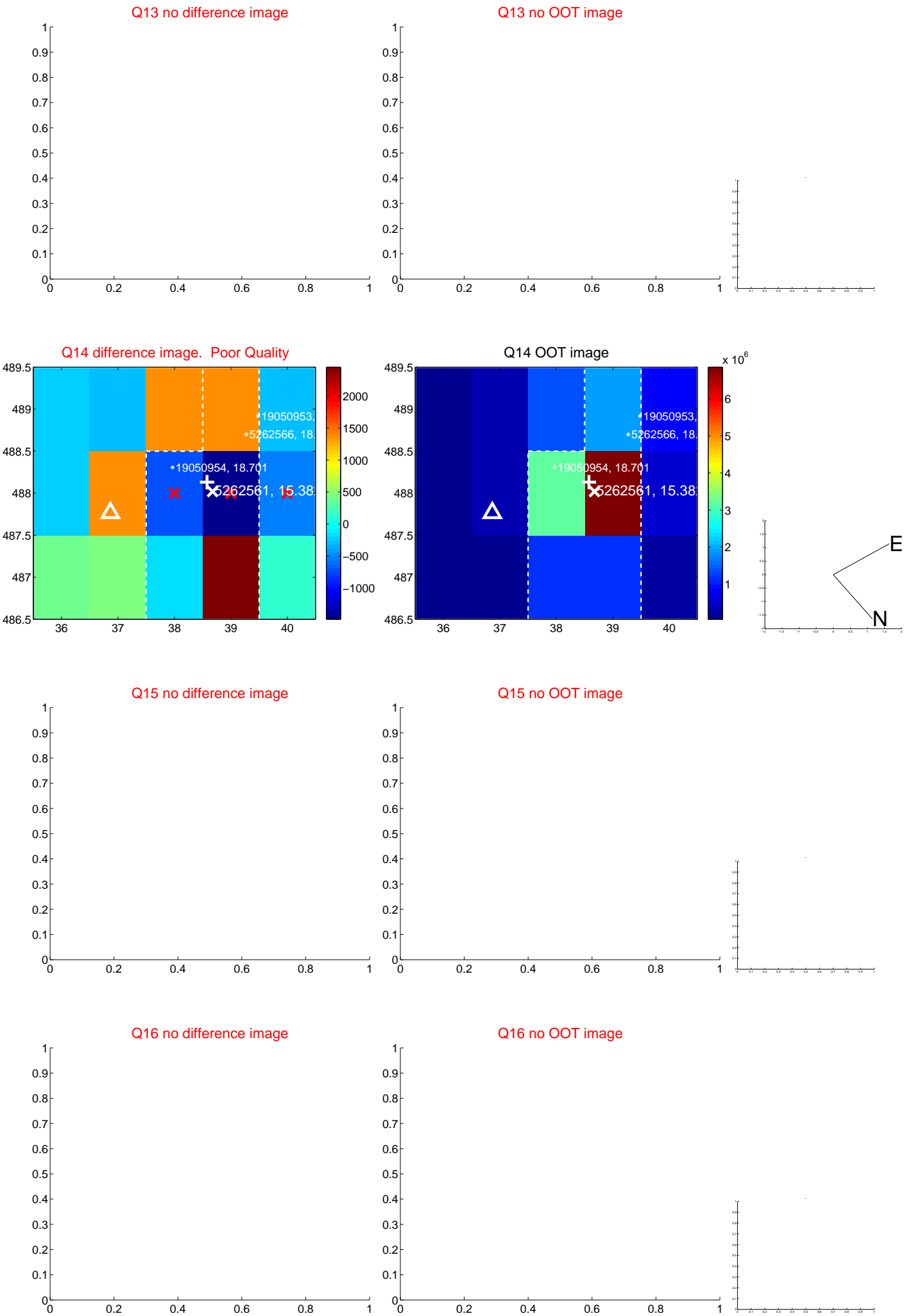
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



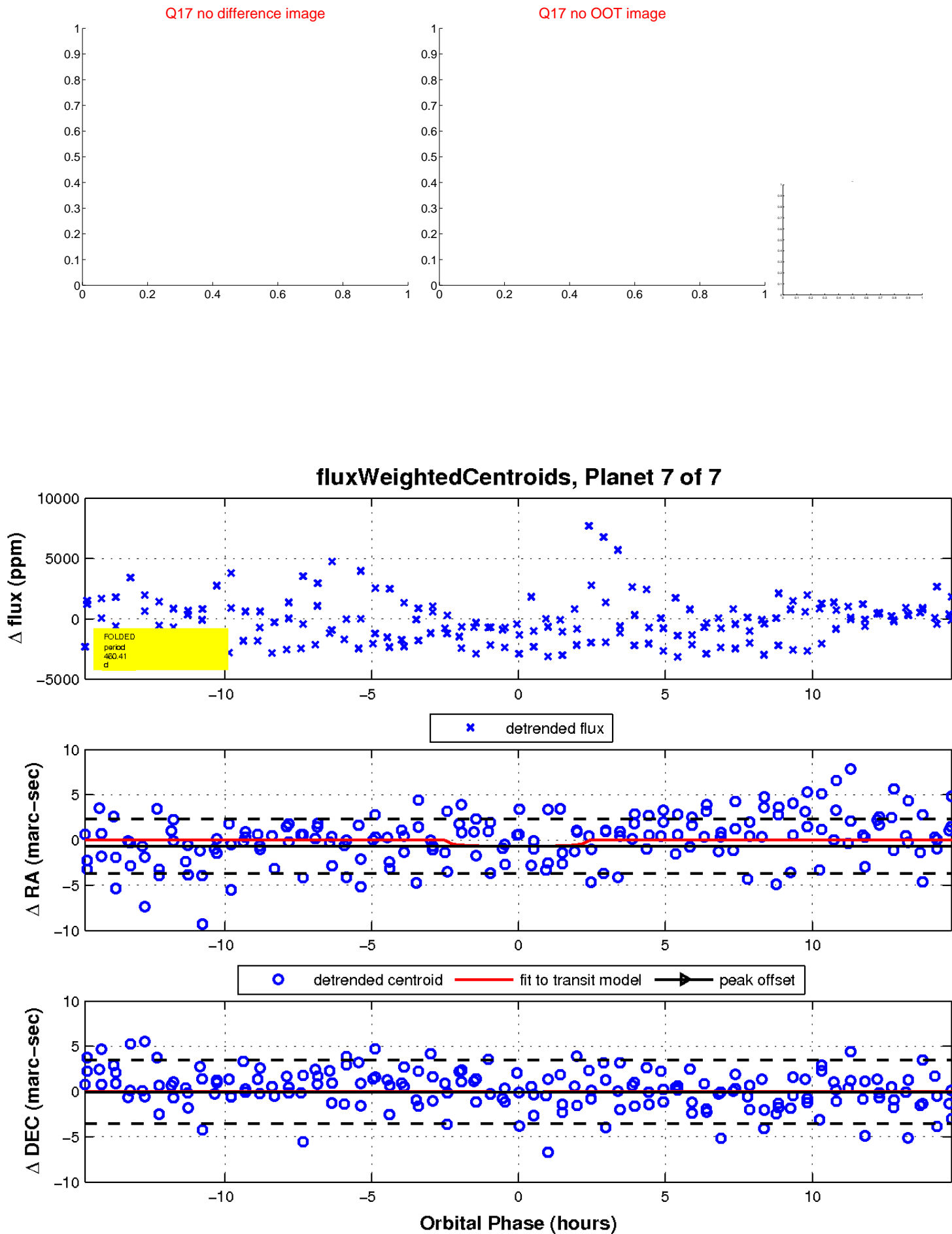
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

