

# KIC 005265699

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005265699-01	OBS	No	1.374044	131.714311	33.5	3.650	9.2	9.7	2.22	7282	1.49	15215.14
005265699-02	OBS	No	0.689031	132.203374	3.0	3.776	10.8	1.0	2.22	7282	0.40	38190.78
005265699-03	OBS	No	60.711829	146.341993	472.9	9.051	9.4	8.8	2.22	7282	6.09	97.41
005265699-04	OBS	No	59.952043	156.502807	201.6	3.187	9.9	6.7	2.22	7282	3.62	99.05
005265699-05	OBS	No	50.545316	159.964247	234.4	4.380	9.1	6.5	2.22	7282	3.88	124.37
005265699-06	OBS	No	68.720978	171.196883	393.1	12.671	8.9	8.0	2.22	7282	5.10	82.57
005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
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005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
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005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

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

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

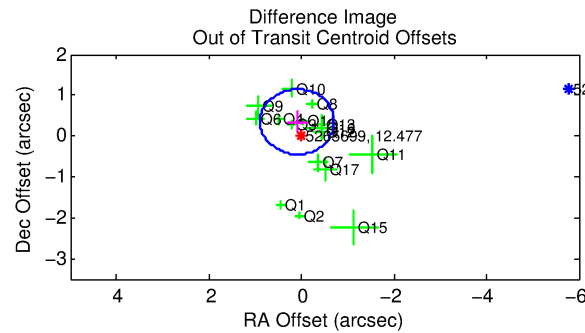
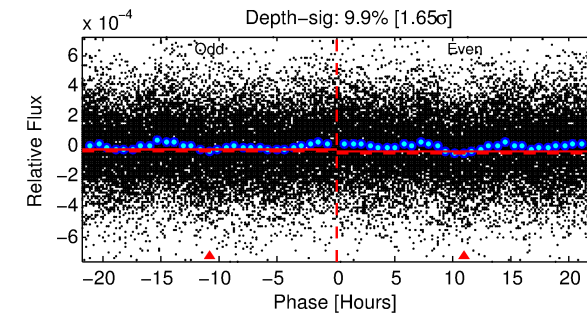
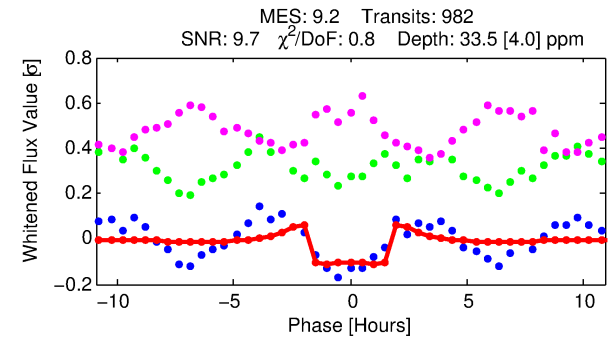
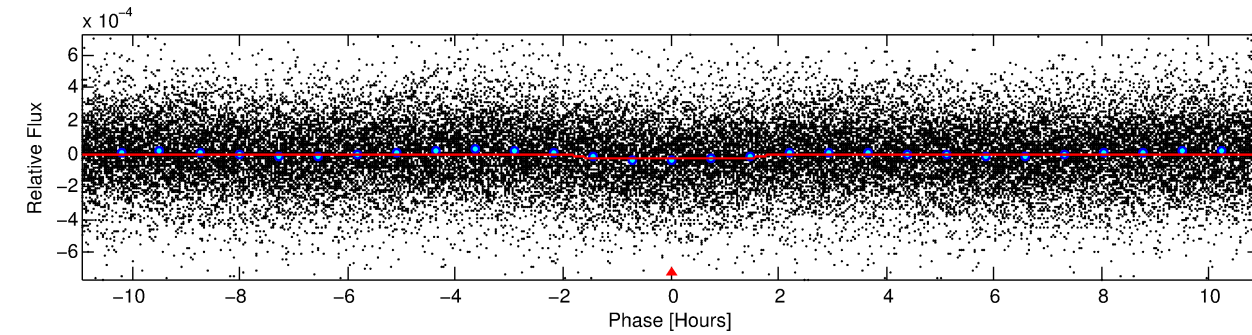
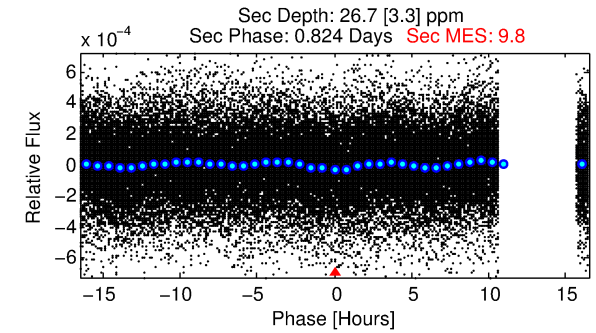
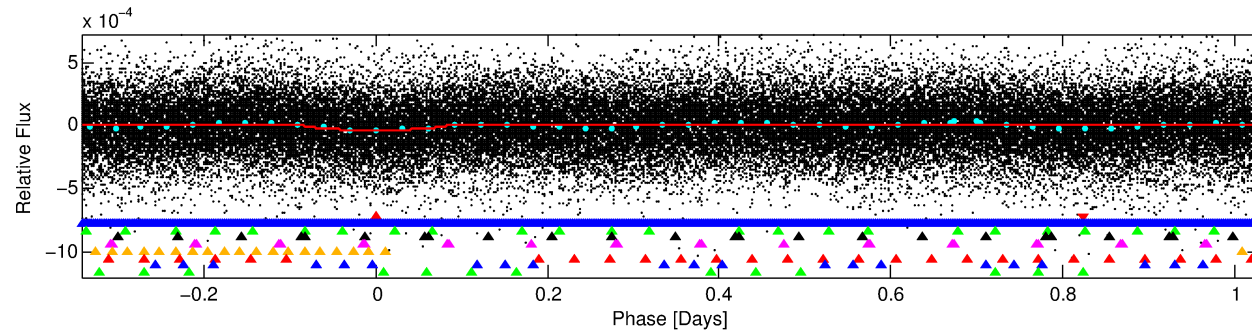
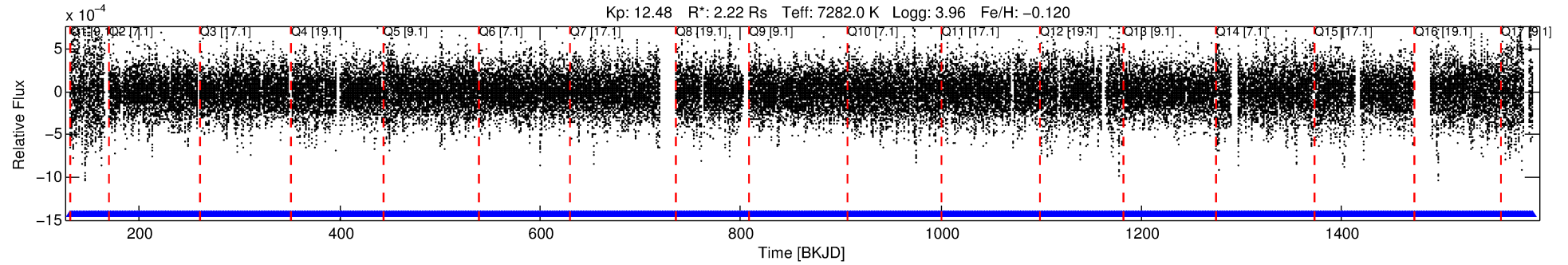
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-01

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 1 of 9 Period: 1.374 d



## DV Fit Results:

Period = 1.37404 [0.00001] d  
Epoch = 131.7143 [0.0022] BKJD  
Rp/R\* = 0.0062 [0.0012]  
a/R\* = 1.60 [1.11]  
b = 0.90 [0.24]  
Seff = 15215.14 [7415.65]  
Teq = 2832 [345] K  
Rp = 1.49 [0.58] Re  
a = 0.0285 [0.0086] AU  
Ag = 5.37 [3.30] [1.33σ]  
Teffp = 6665 [736] K [4.71σ]

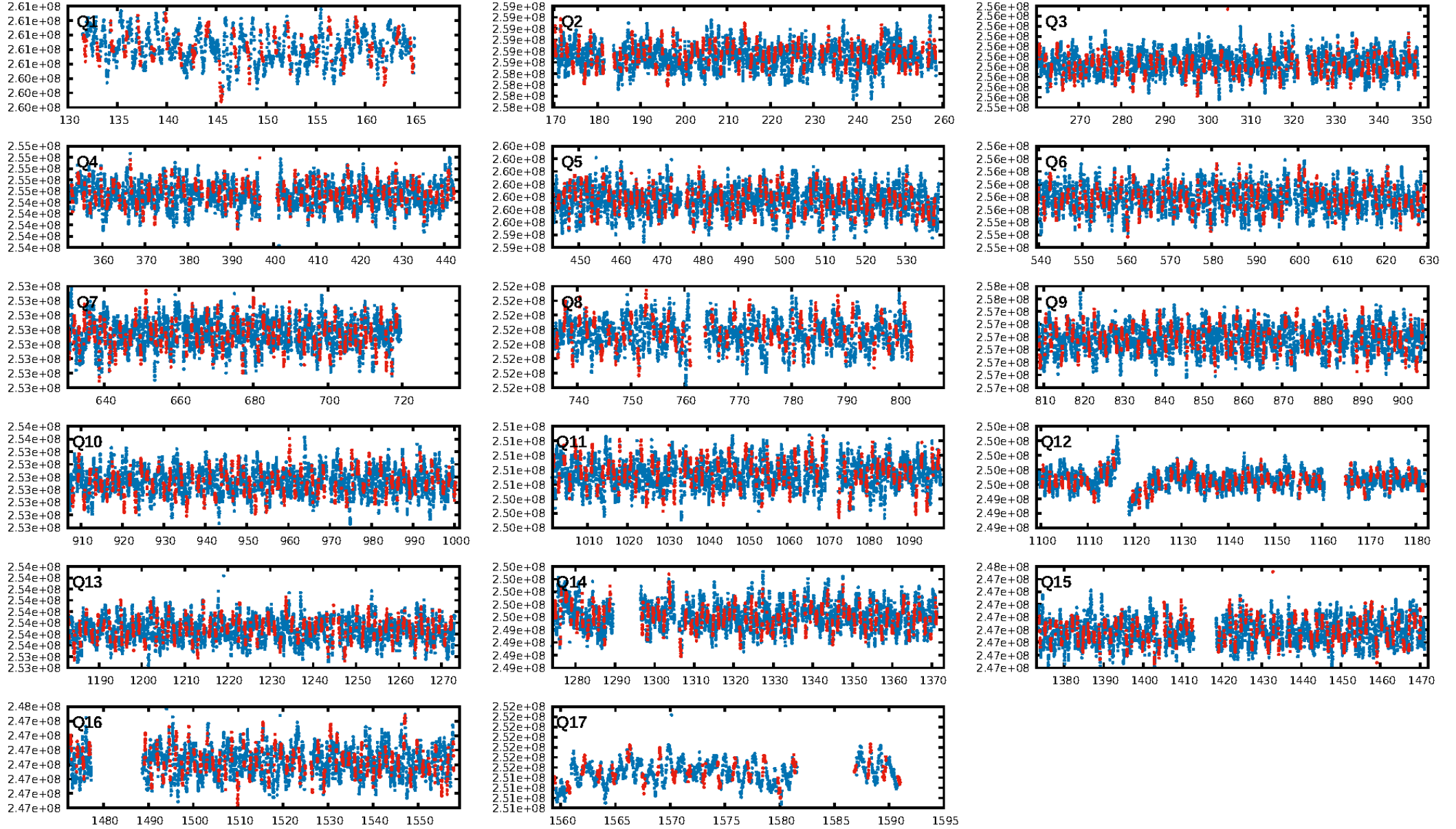
## DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.13σ]  
LongPeriod-sig: 100.0% [206.99σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [936/936]  
GhostDiagnostic-chr: 4.612  
Centroid-sig: 5.1%  
Centroid-so: 0.459 arcsec [1.17σ]  
OotOffset-rm: 0.361 arcsec [1.36σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-rm: 0.401 arcsec [1.56σ]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 0.50 [8/16]  
DiffImageOverlap-fno: 0.00 [0/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:37:33 Z

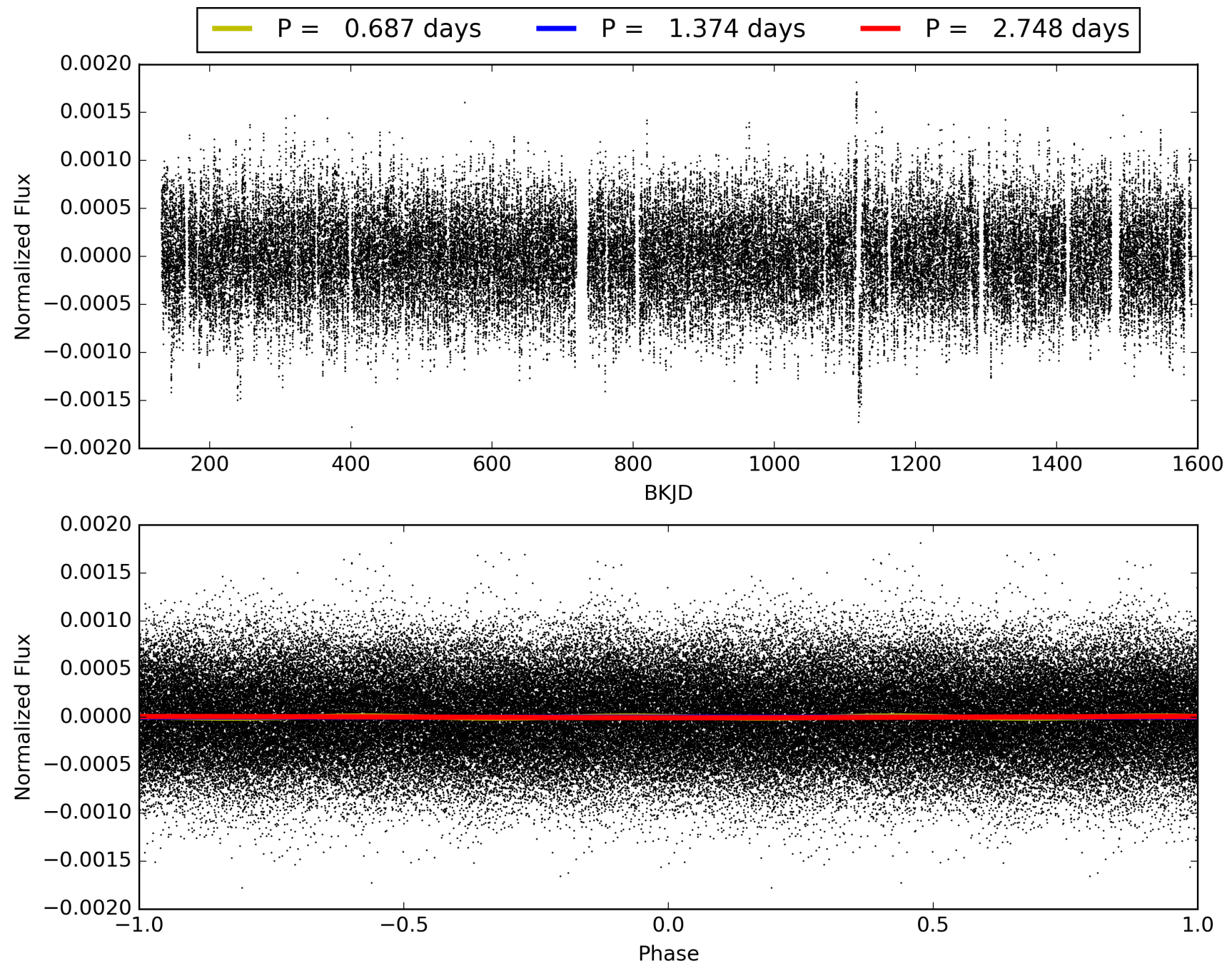
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005265699-01, PDC Light Curves





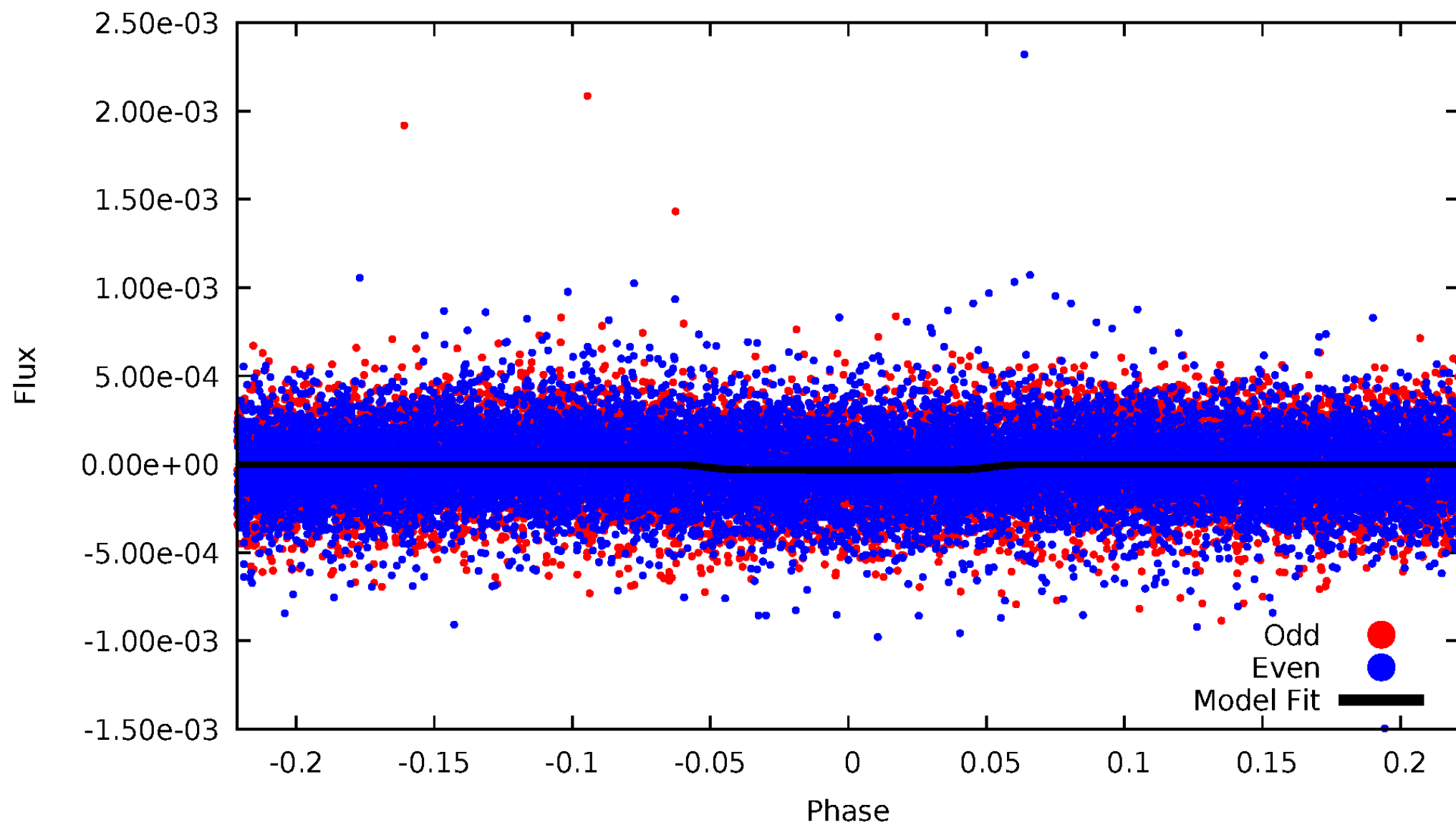
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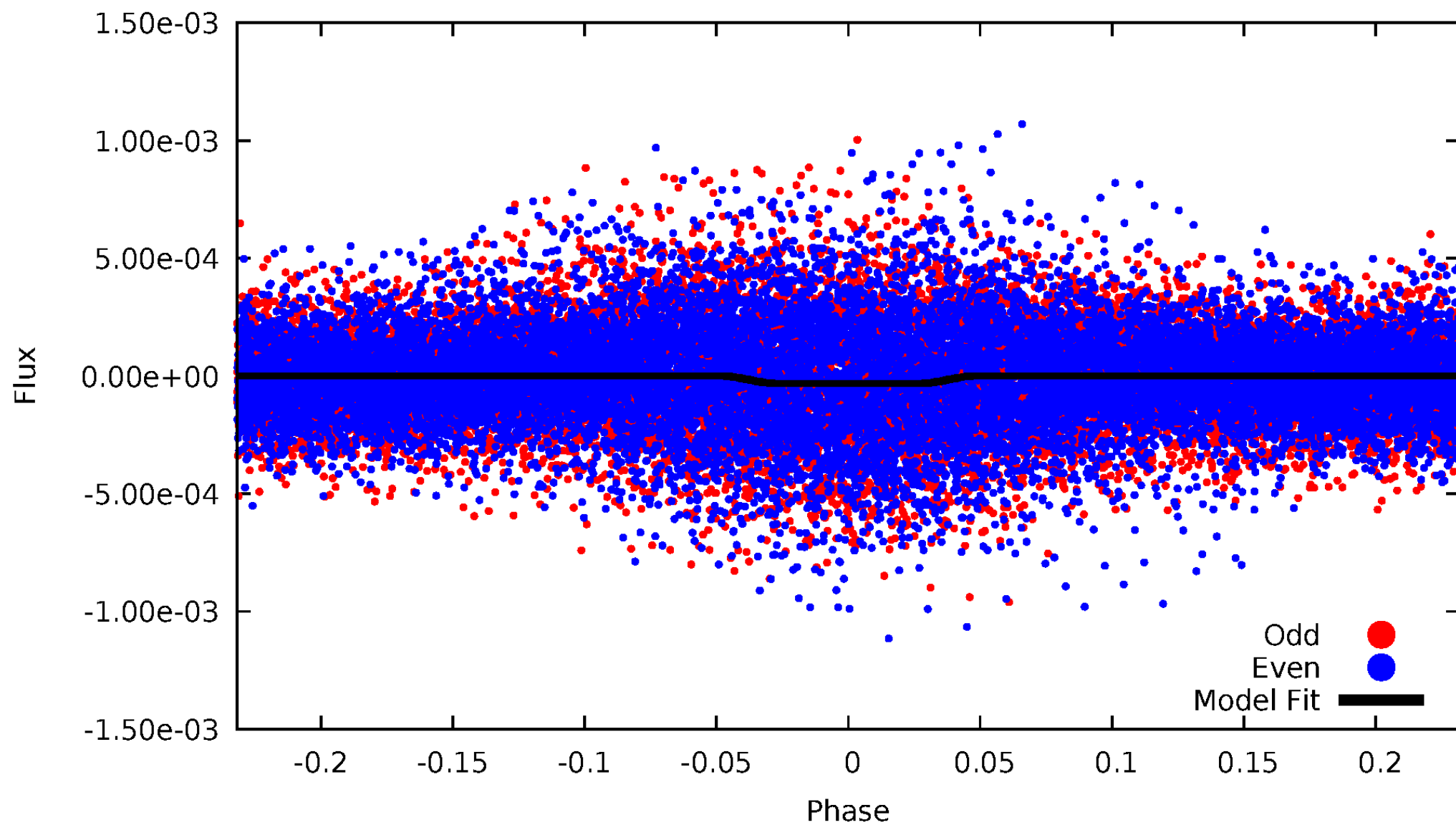
# DV Odd/Even

TCE 005265699-01

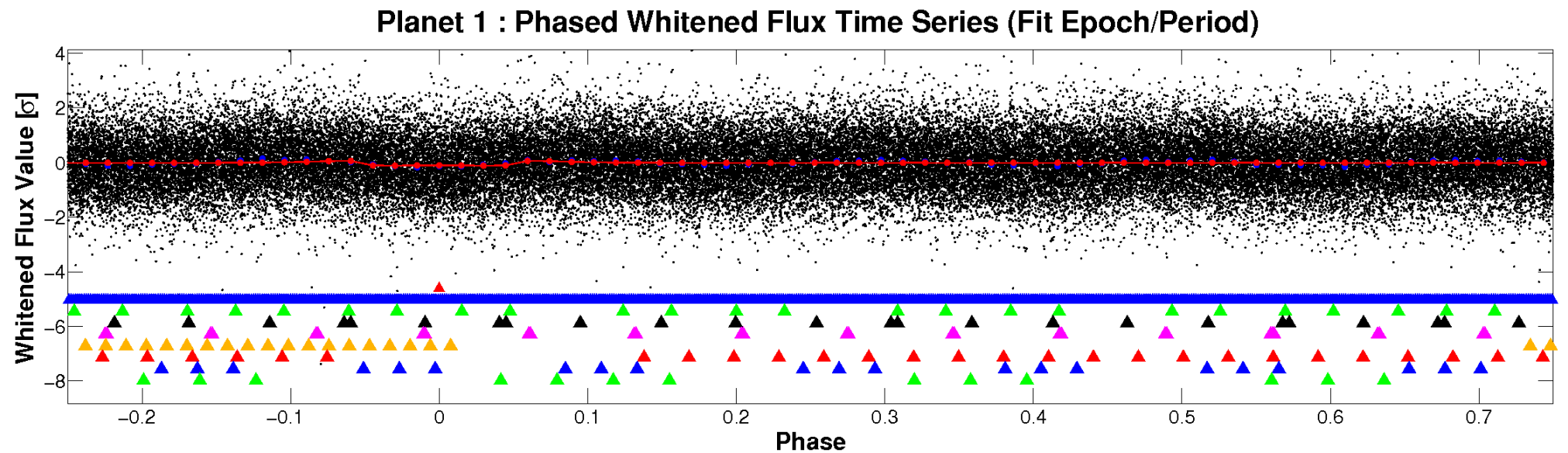
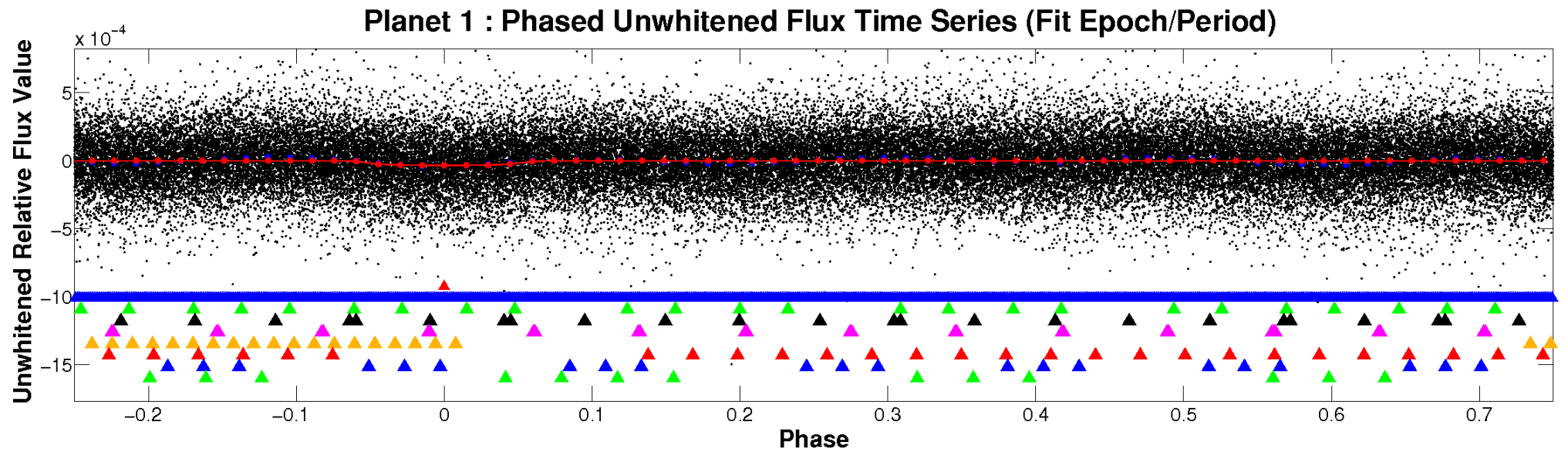


# ALT Odd/Even

TCE 005265699-01



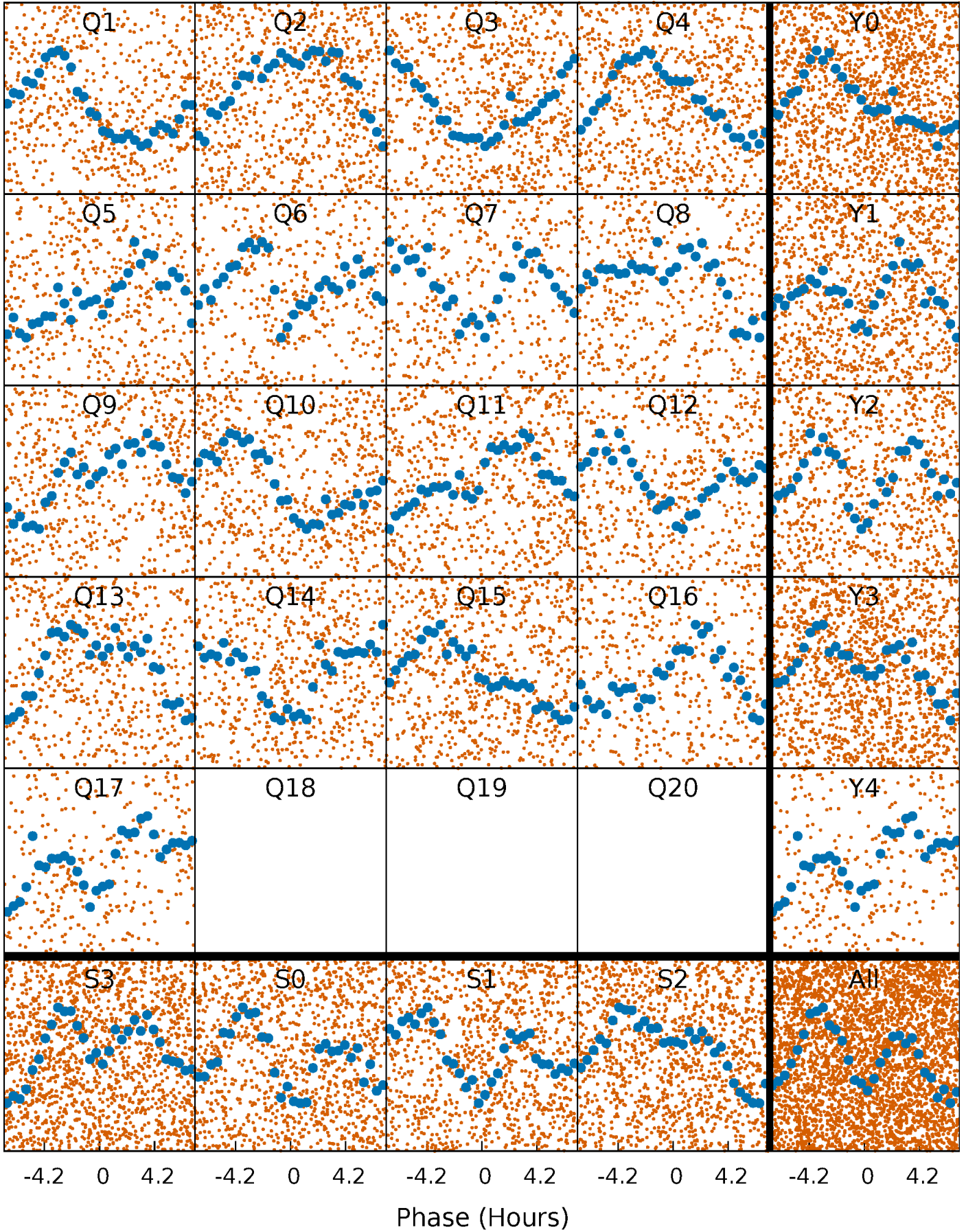
# Non-Whitened Vs. Whitened Light Curve





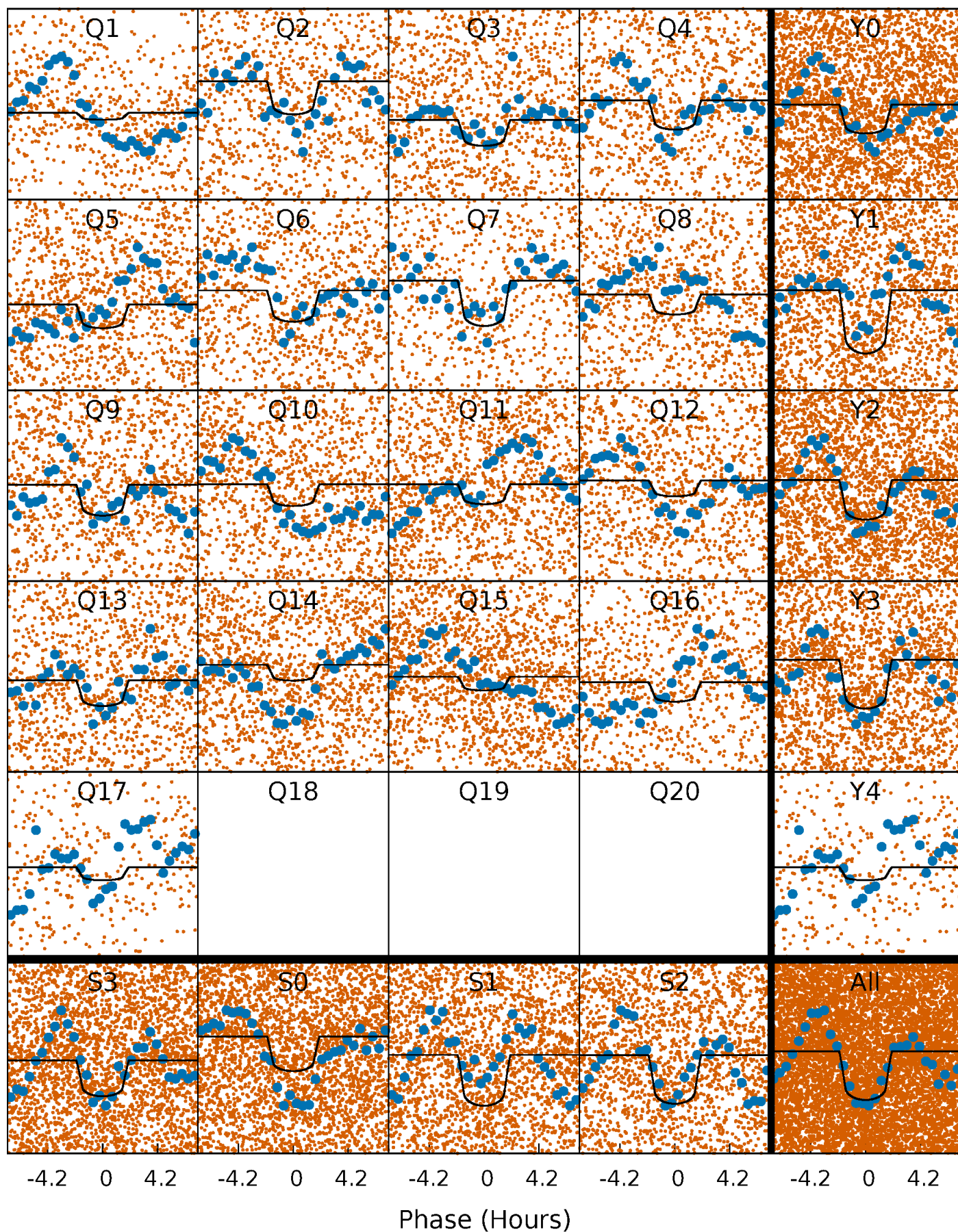
# PDC Quarter-Phased Transit Curves

TCE 005265699-01   P= 1.374044 Days    $T_0=131.714311$  (BKJD)



# DV Quarter-Phased Transit Curves

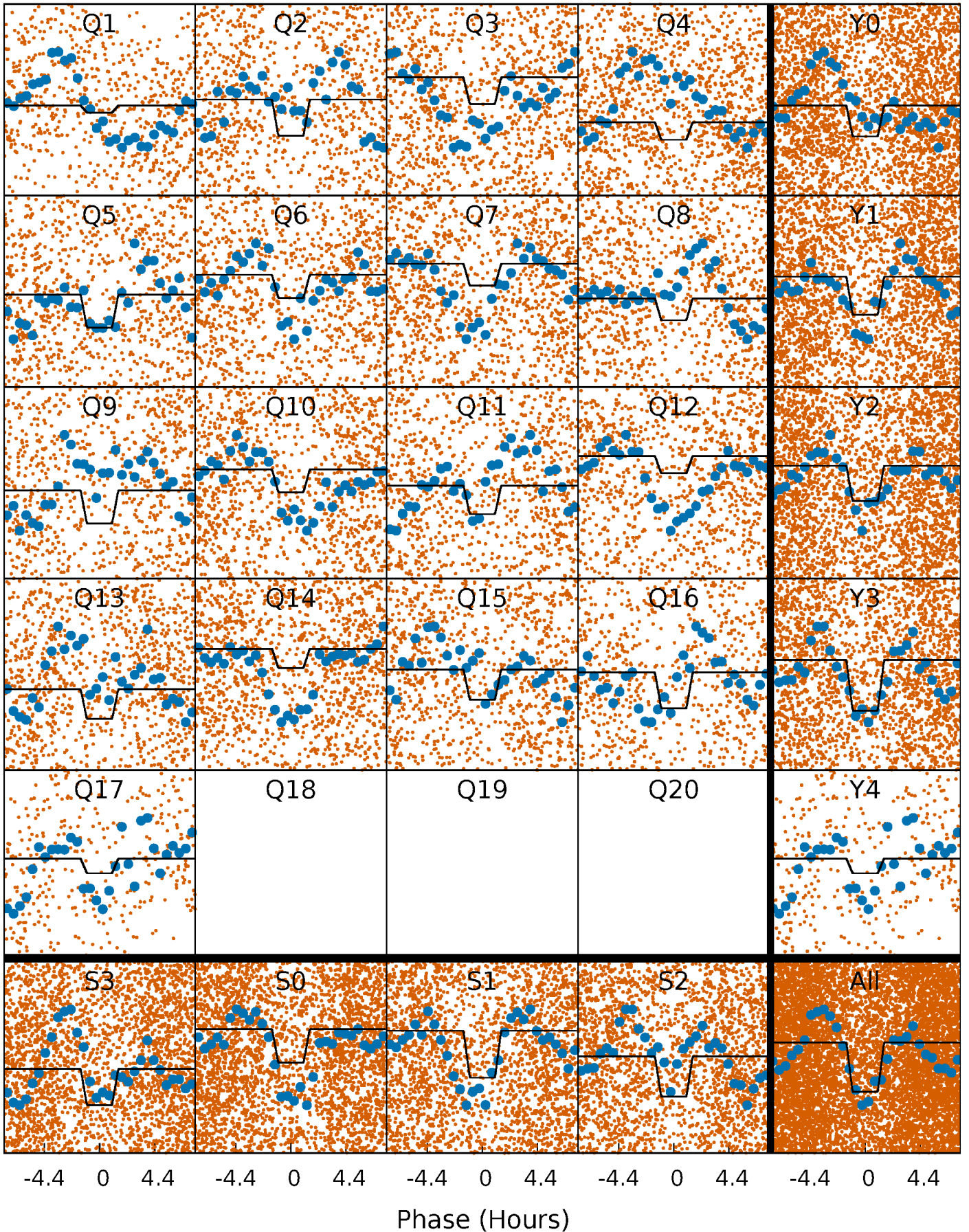
TCE 005265699-01 P= 1.374044 Days  $T_0=131.714311$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

TCE 005265699-01 P= 1.374043 Days  $T_0=131.707984$  (BKJD)

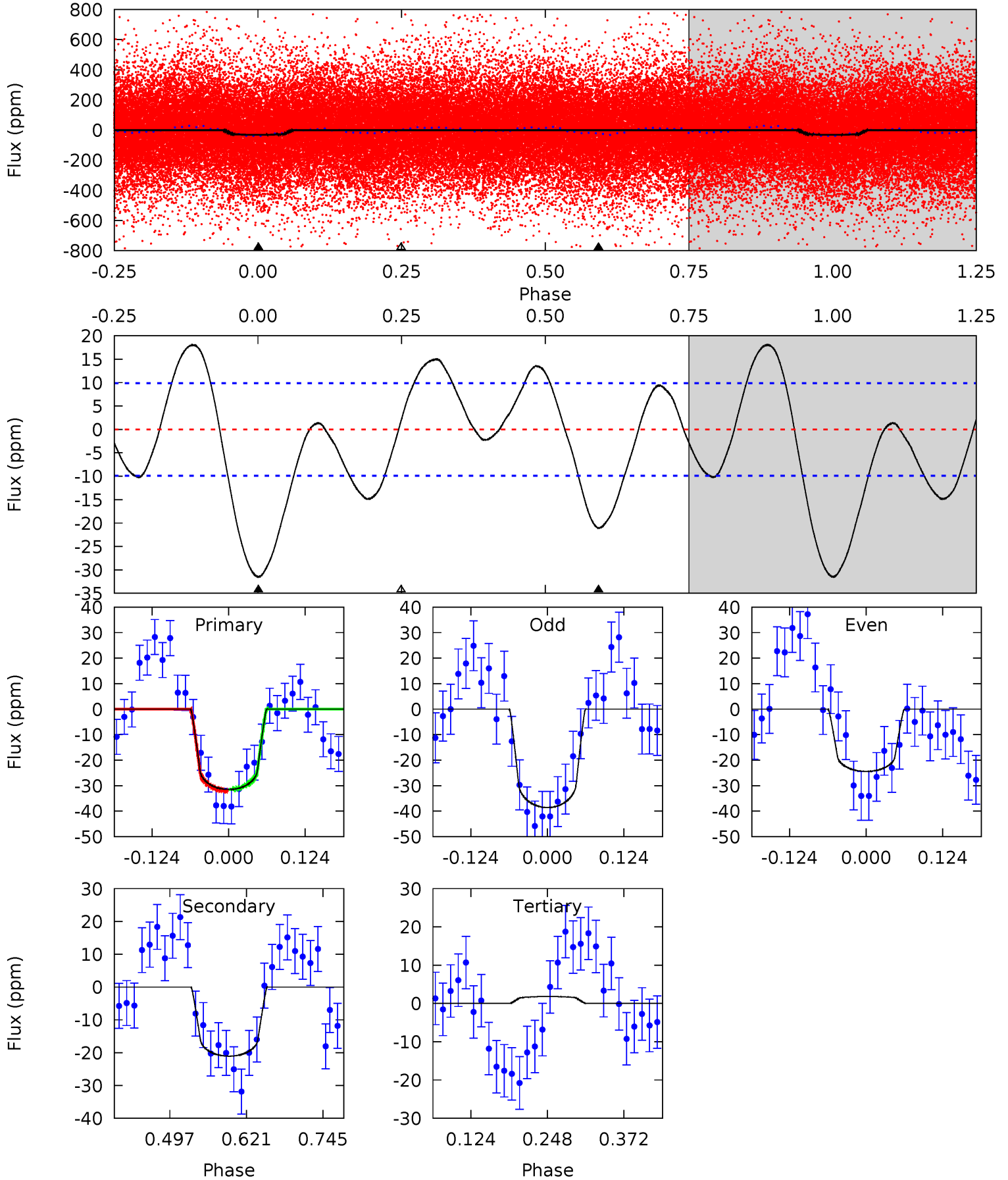




# DV Model-Shift Uniqueness Test

005265699-01, P = 1.374044 Days, E = 130.340267 Days

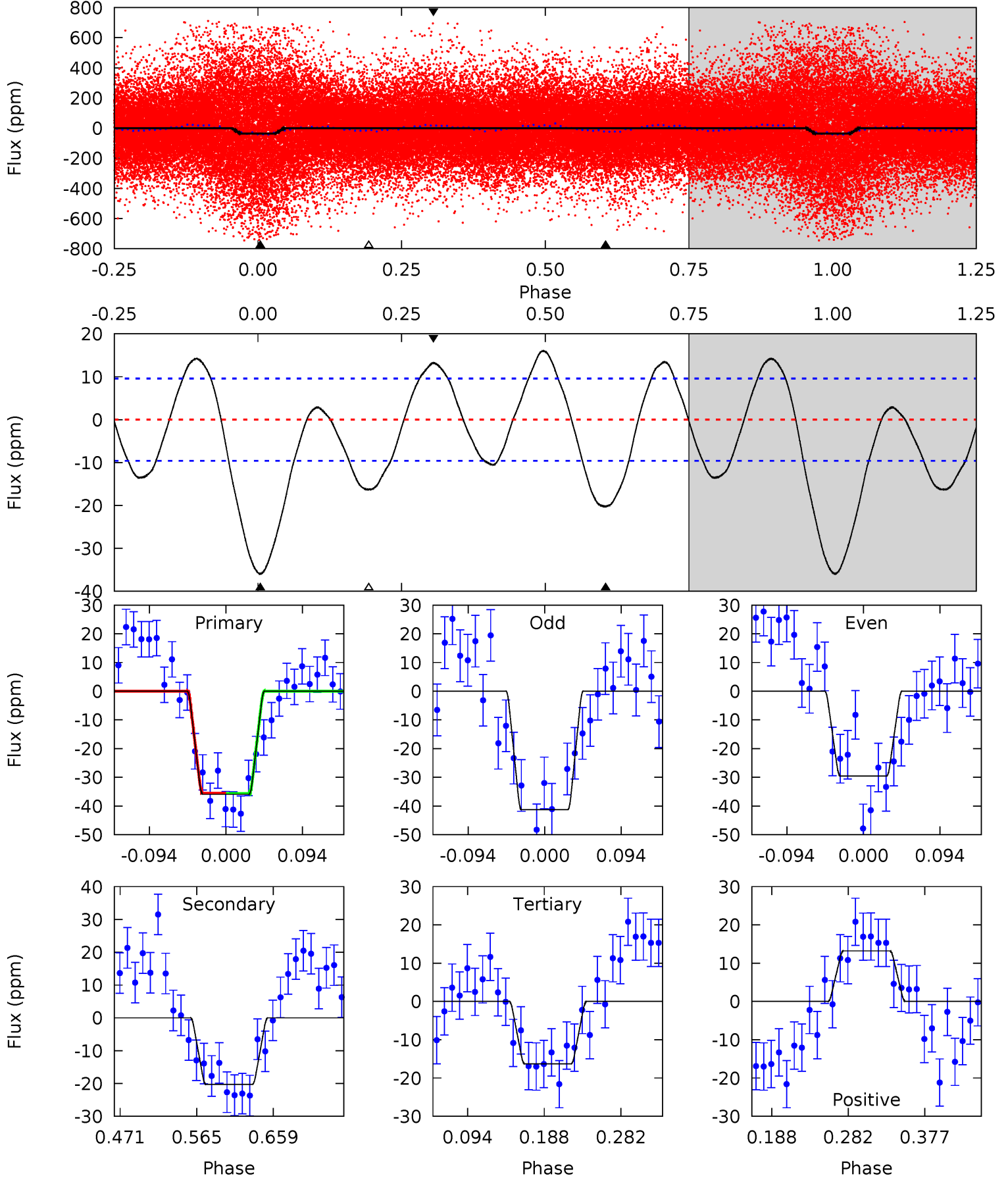
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	9.62	-0.83	0	4.52	1.54	4.06	15.2	14.4	10.4	9.62	3.25	1.04	0.36	0.12



# Alt Model-Shift Uniqueness Test

005265699-01, P = 1.374043 Days, E = 130.333941 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
17.2	9.67	7.78	6.31	4.58	1.67	4.69	9.38	10.9	1.90	3.36	2.78	0.92	0.31	0.03



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-21 \pm 2$	$1.43^{+0.38}_{-0.33}$	$3922^{+285}_{-333}$	$6109^{+784}_{-585}$	$4.590^{+3.233}_{-1.688}$
Alt.	$-20 \pm 2$	$1.30^{+0.40}_{-0.34}$	$3909^{+292}_{-341}$	$6356^{+1026}_{-694}$	$5.343^{+4.397}_{-2.143}$

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



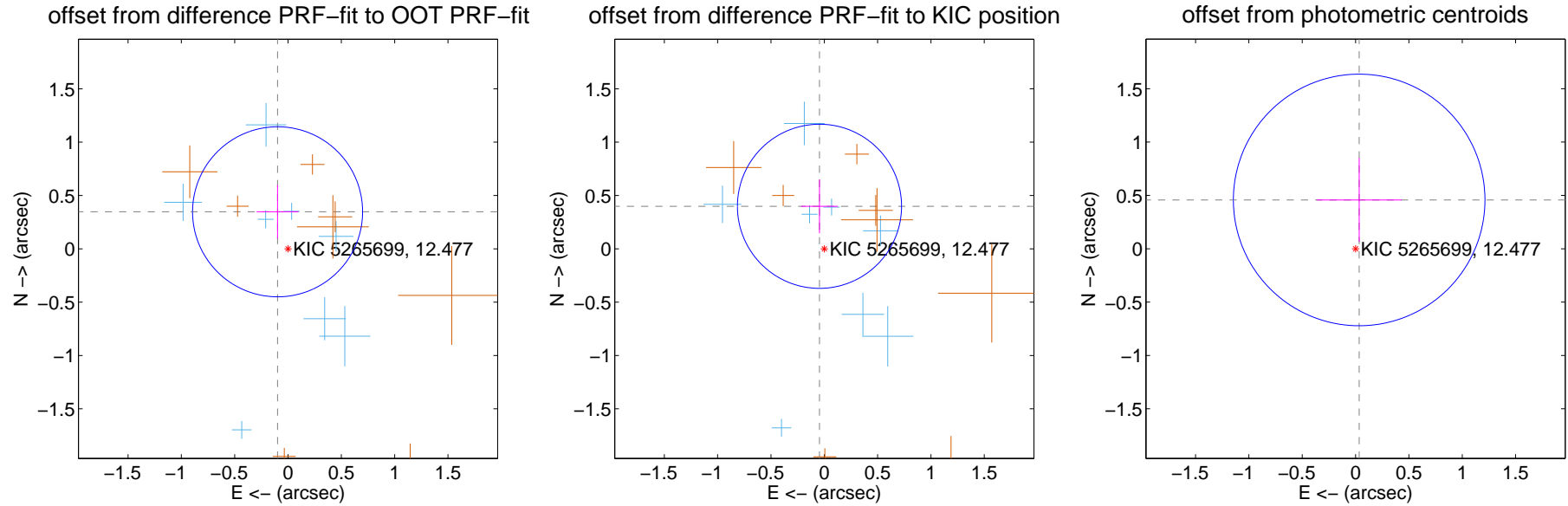
## DV Centroid Data

Supplemental centroid analysis for 005265699-01. Kepler magnitude: 12.48. Transit SNR 9.67

There are 8 quarters with good PRF difference image offsets

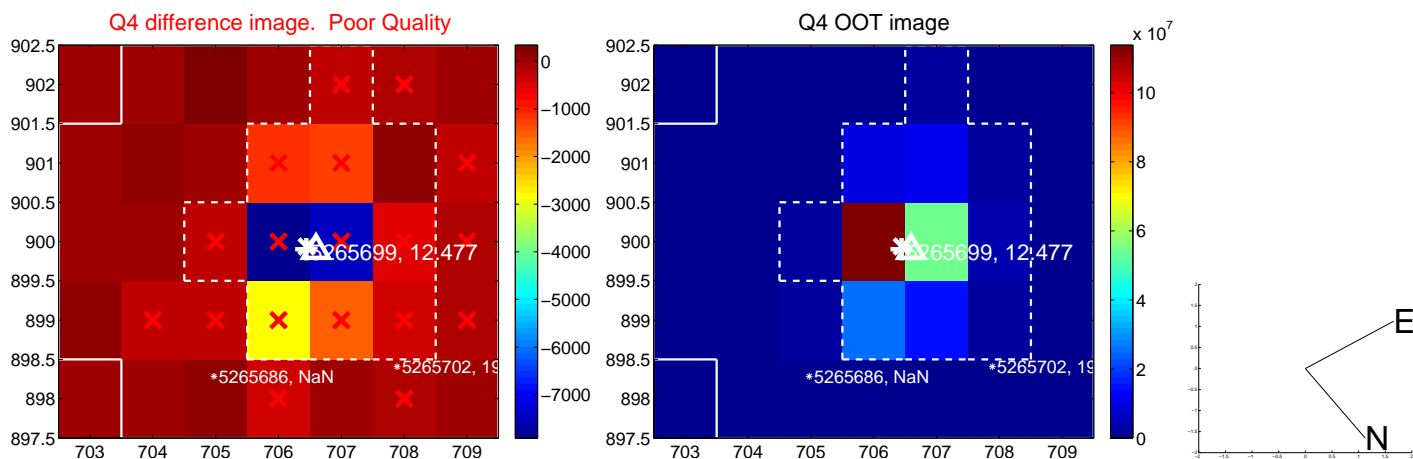
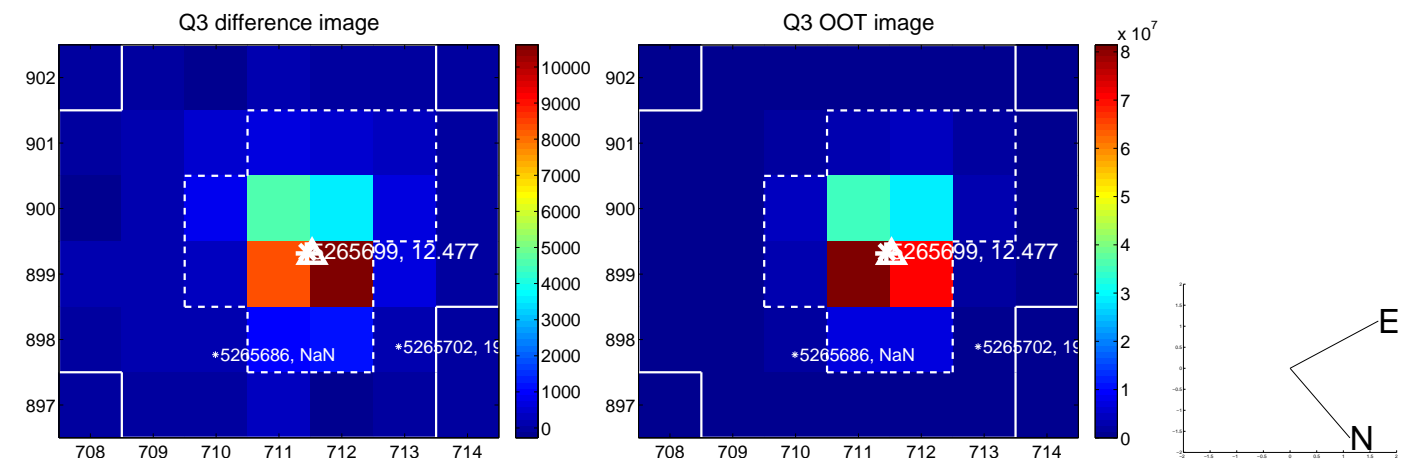
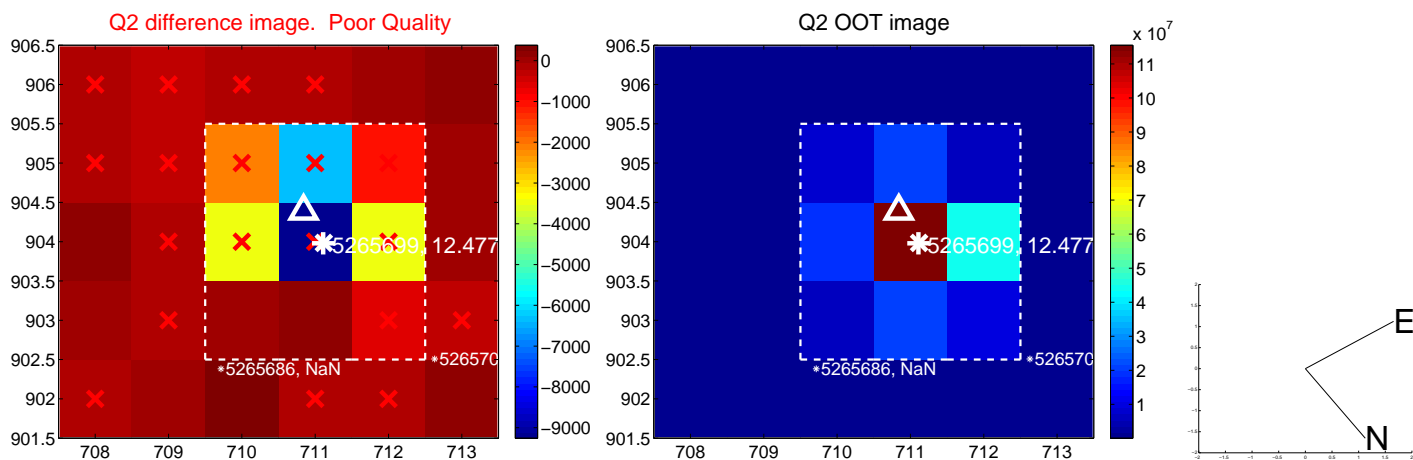
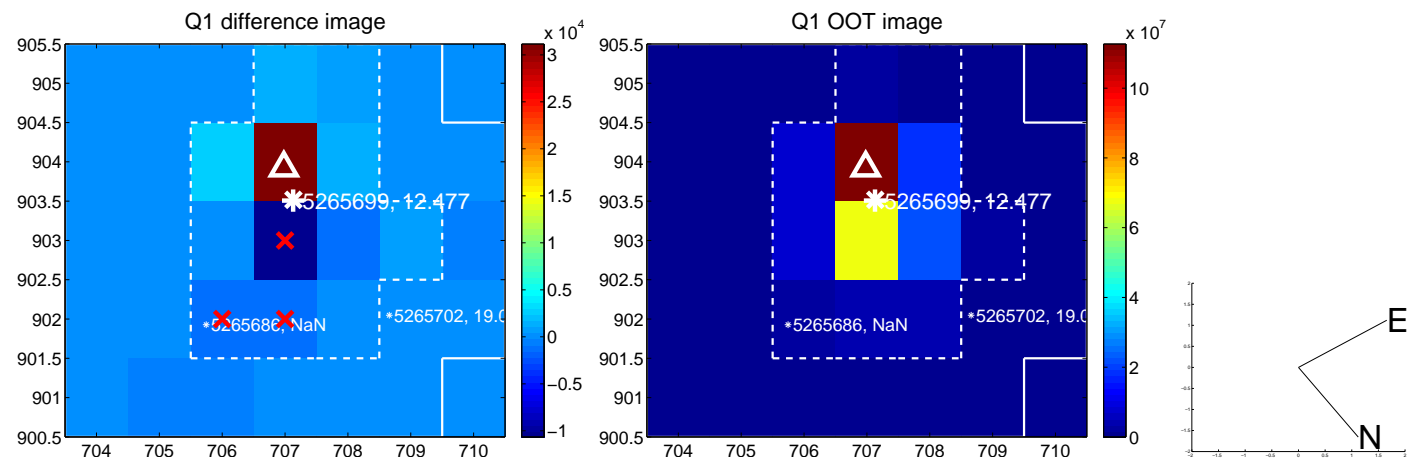
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.361 \pm 0.266$	1.36	$0.098 \pm 0.197$	$0.347 \pm 0.251$
PRF-fit source offset from KIC position	$0.401 \pm 0.256$	1.56	$0.045 \pm 0.172$	$0.399 \pm 0.253$
photometric centroid source offset	$0.46 \pm 0.39$	1.17	$-0.03 \pm 0.40$	$0.46 \pm 0.39$

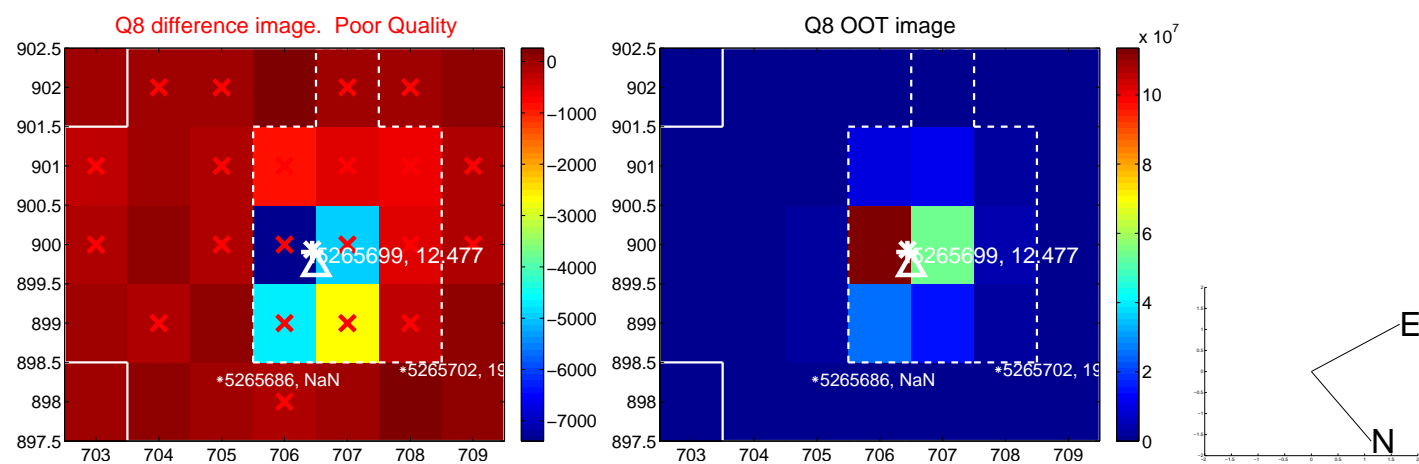
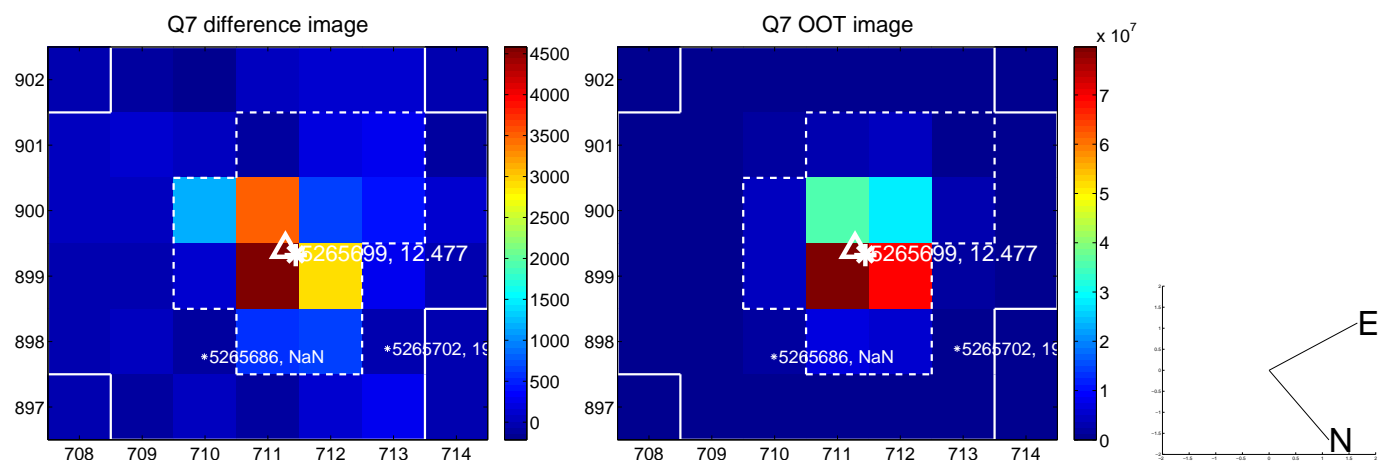
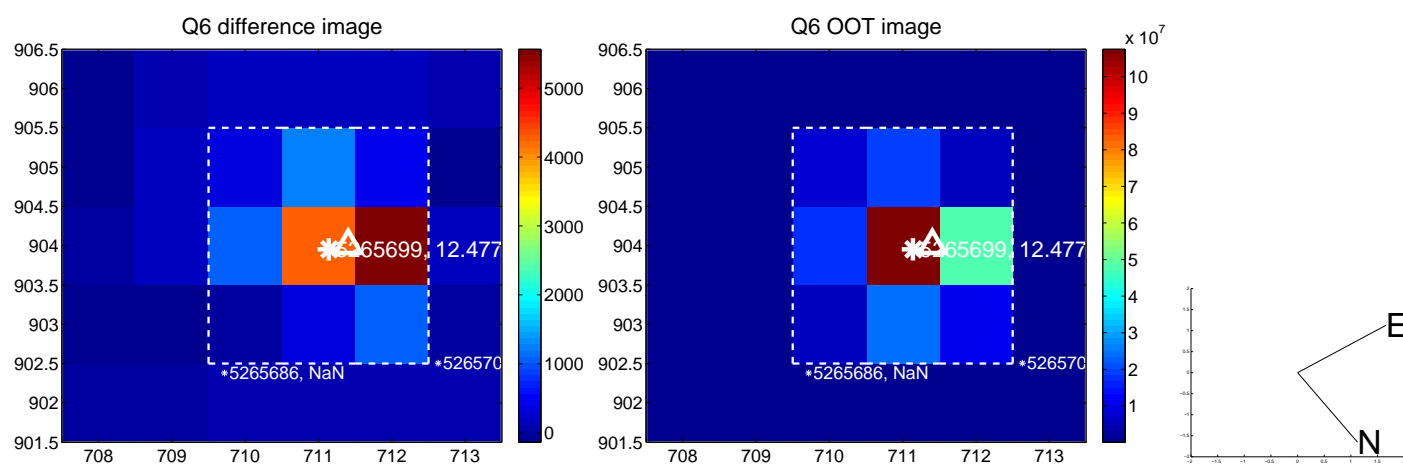
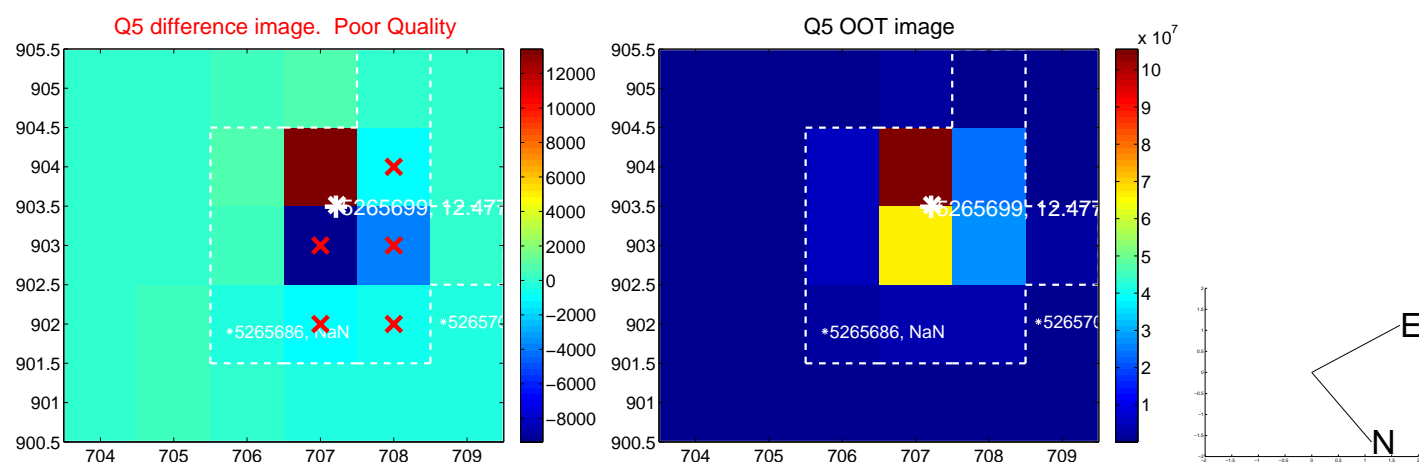


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

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

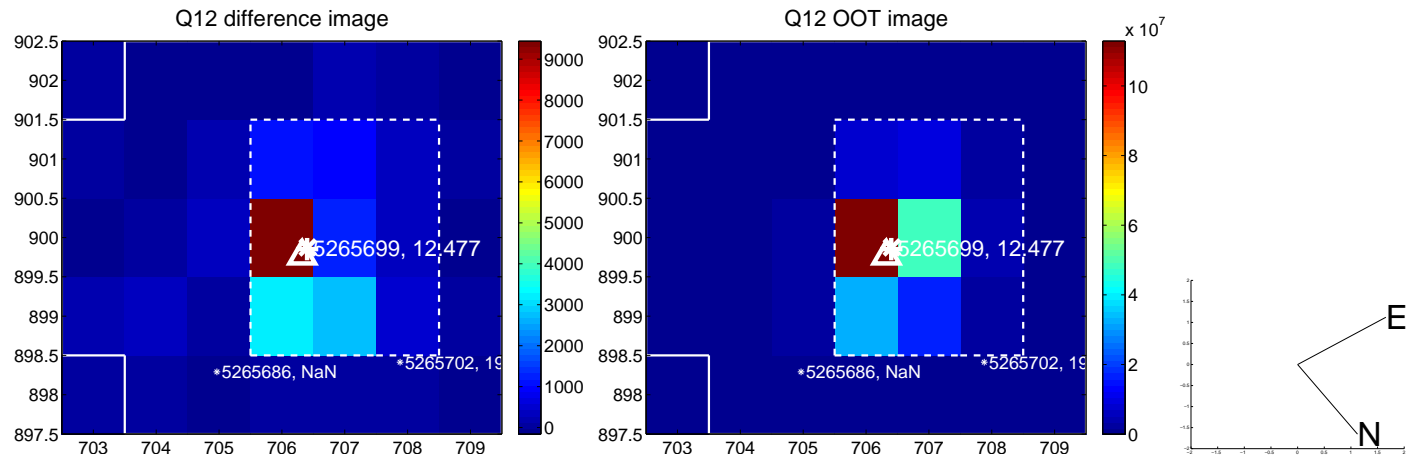
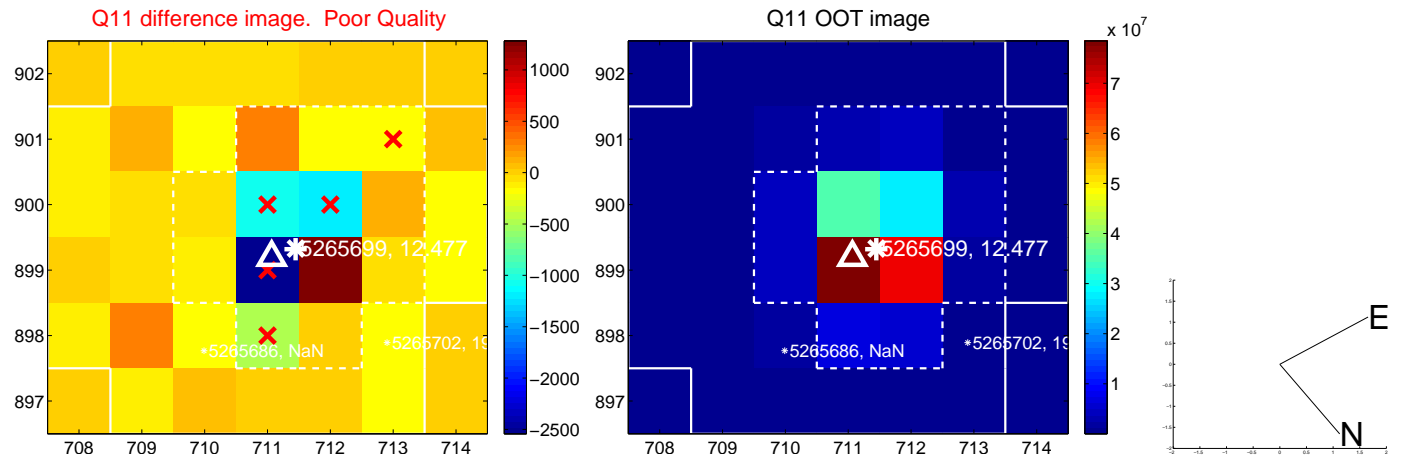
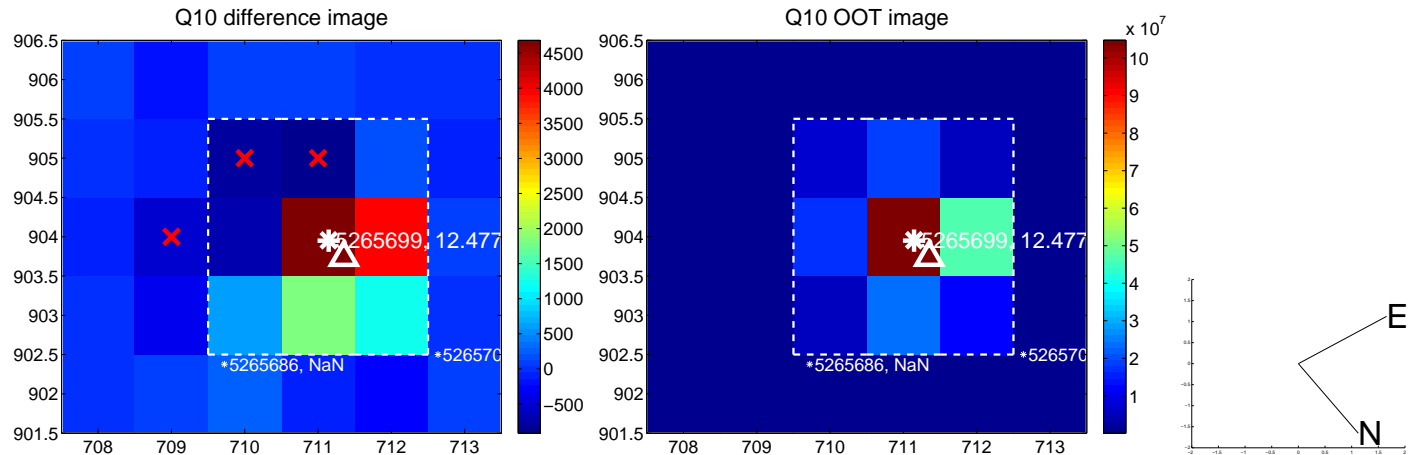
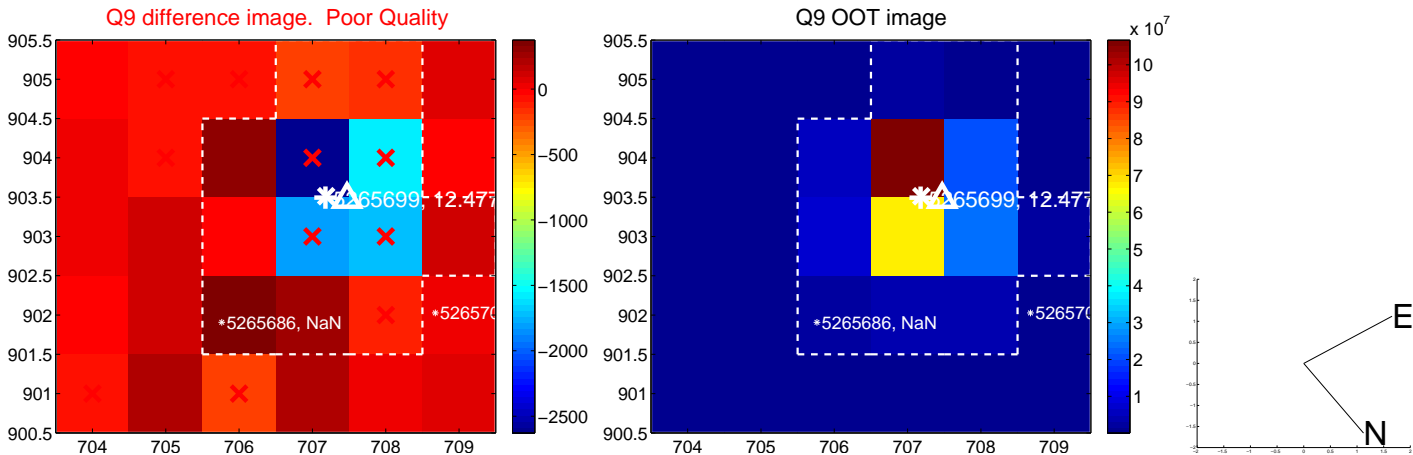


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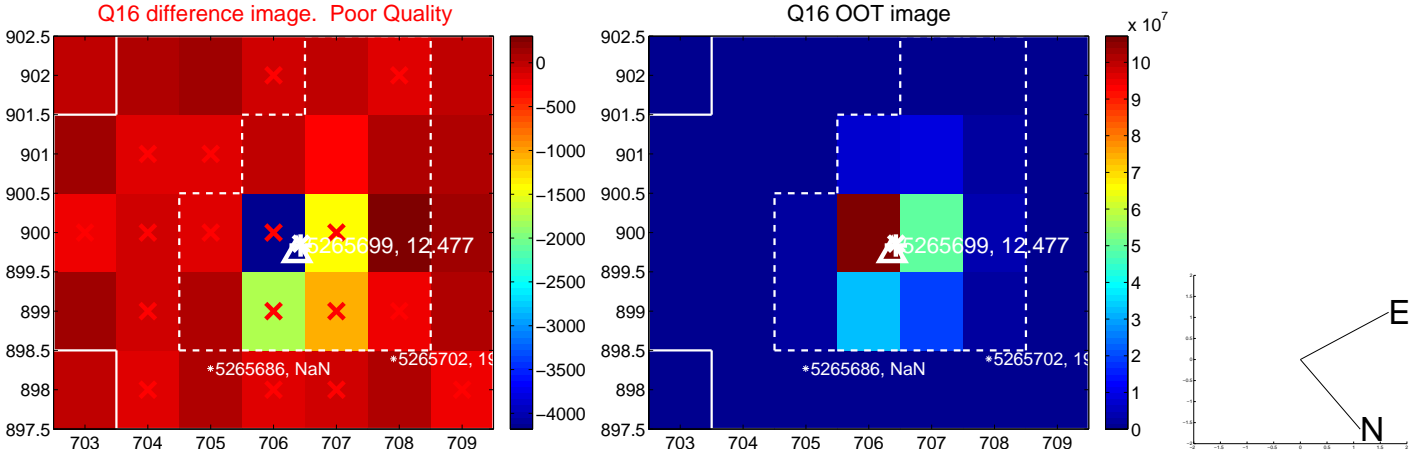
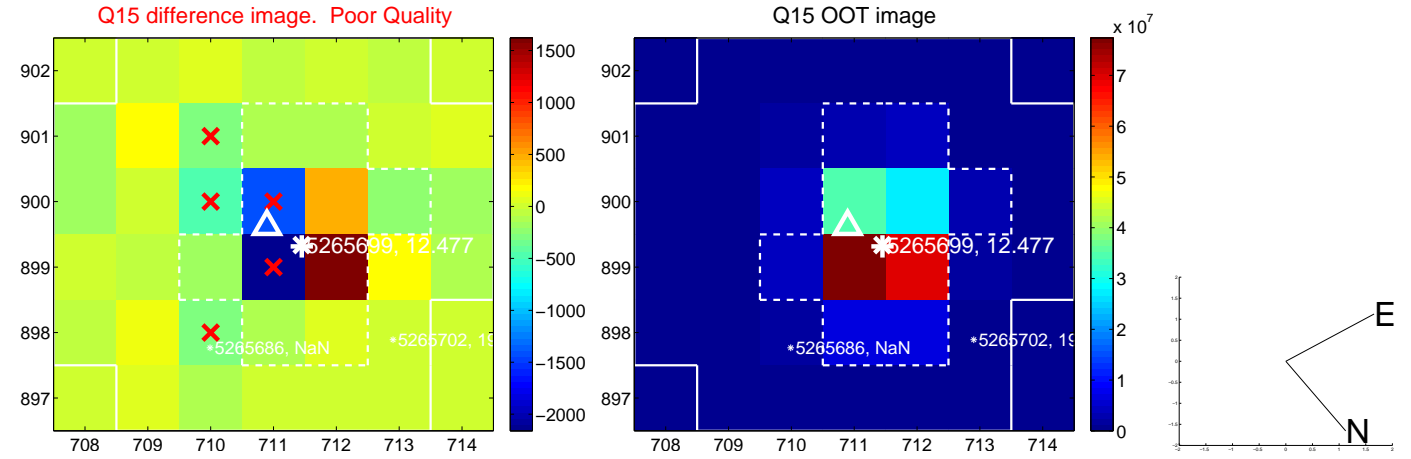
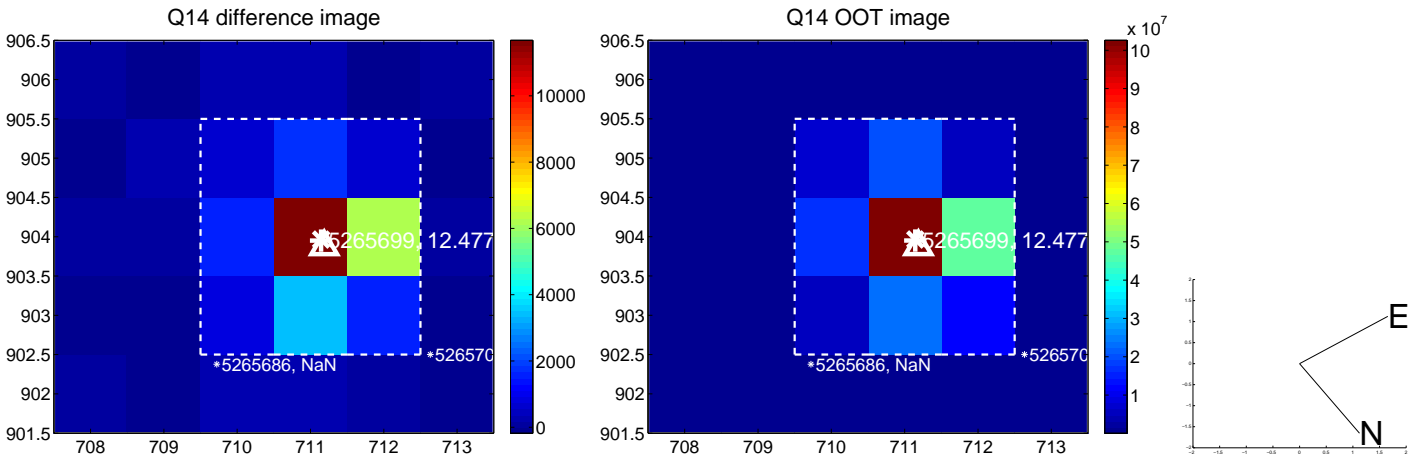
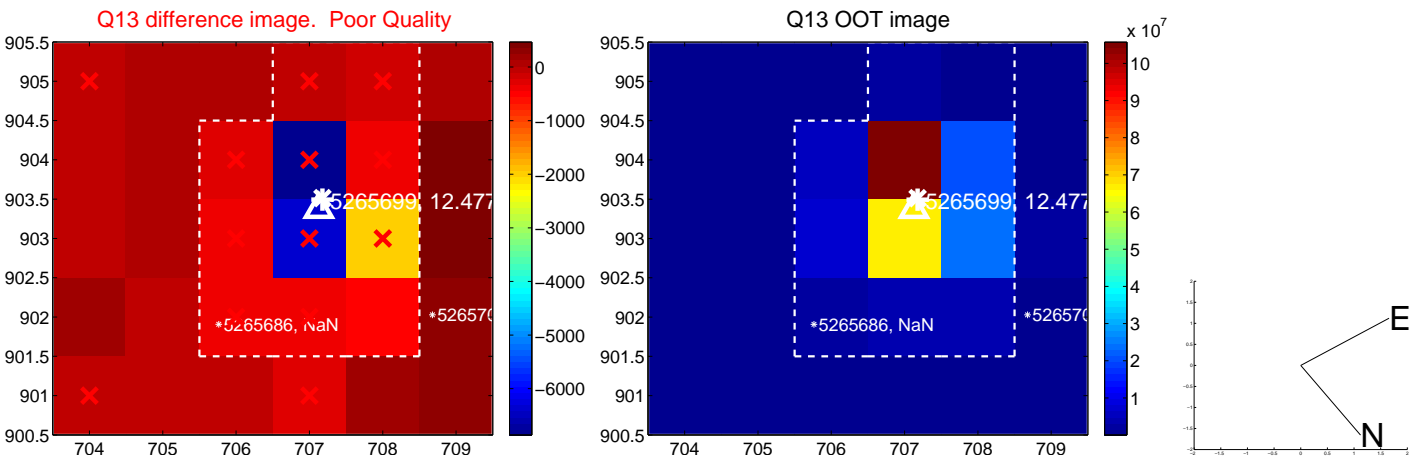




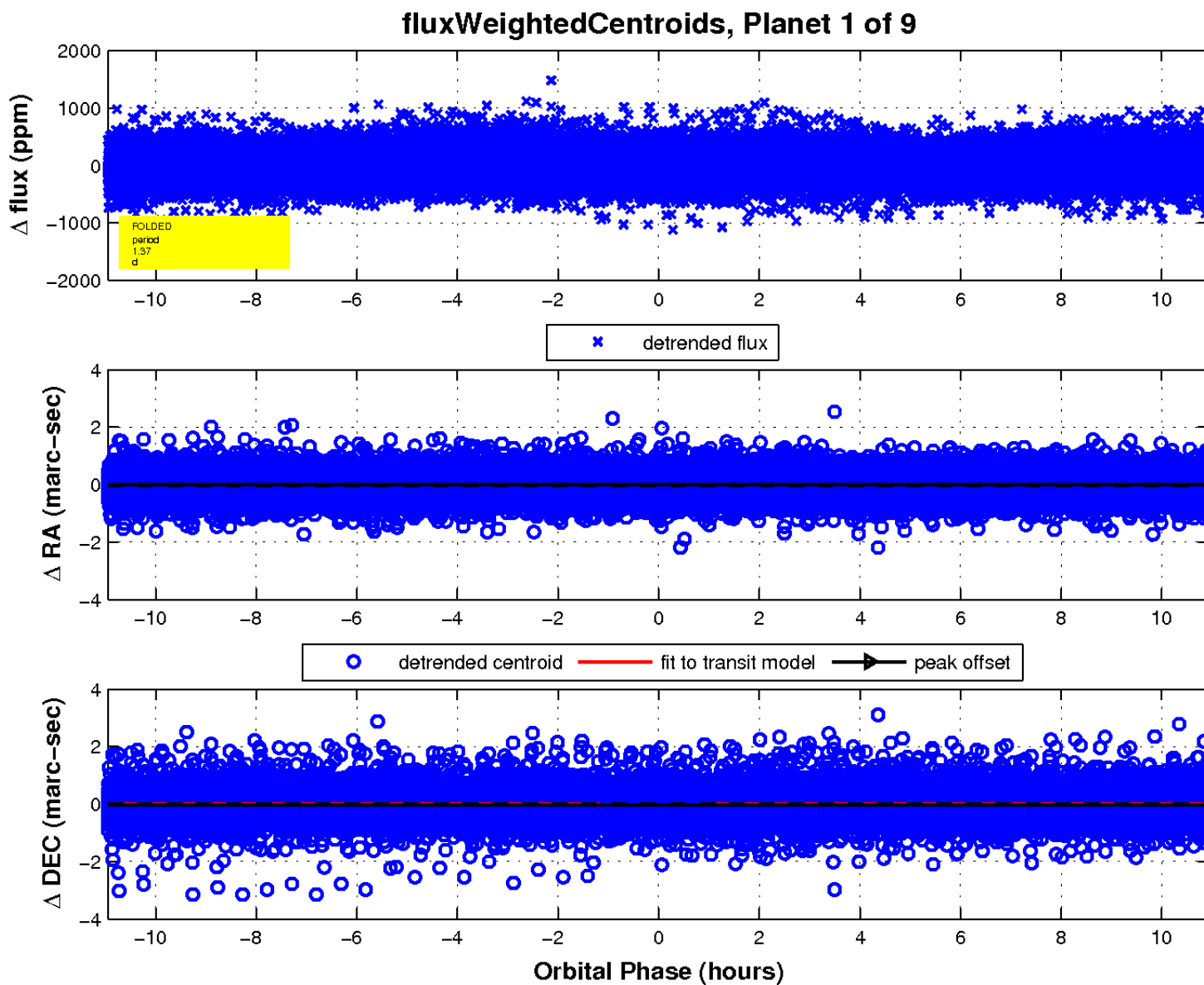
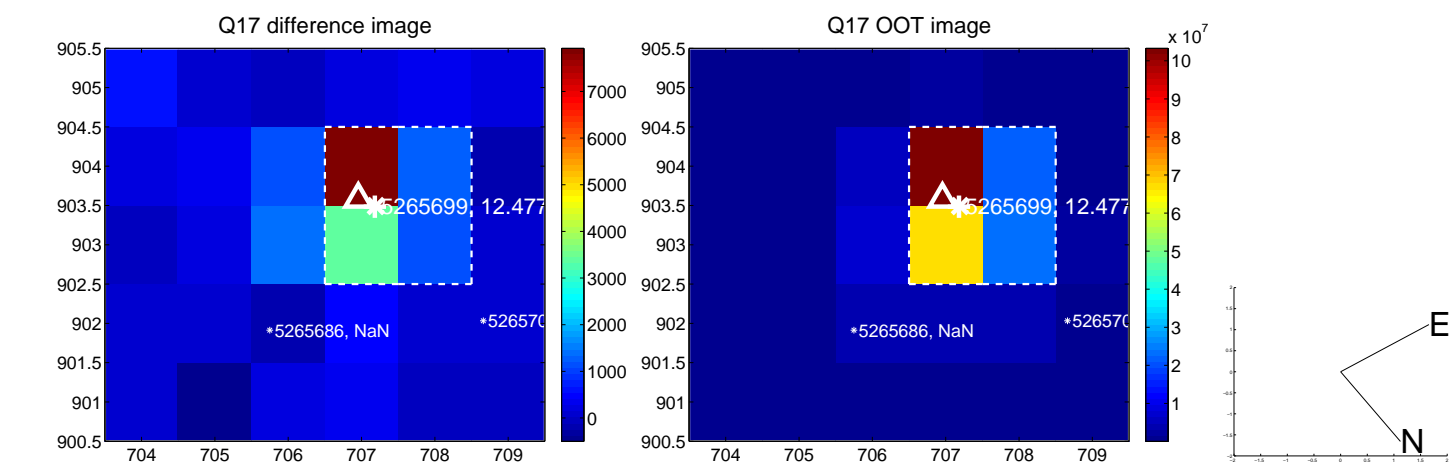
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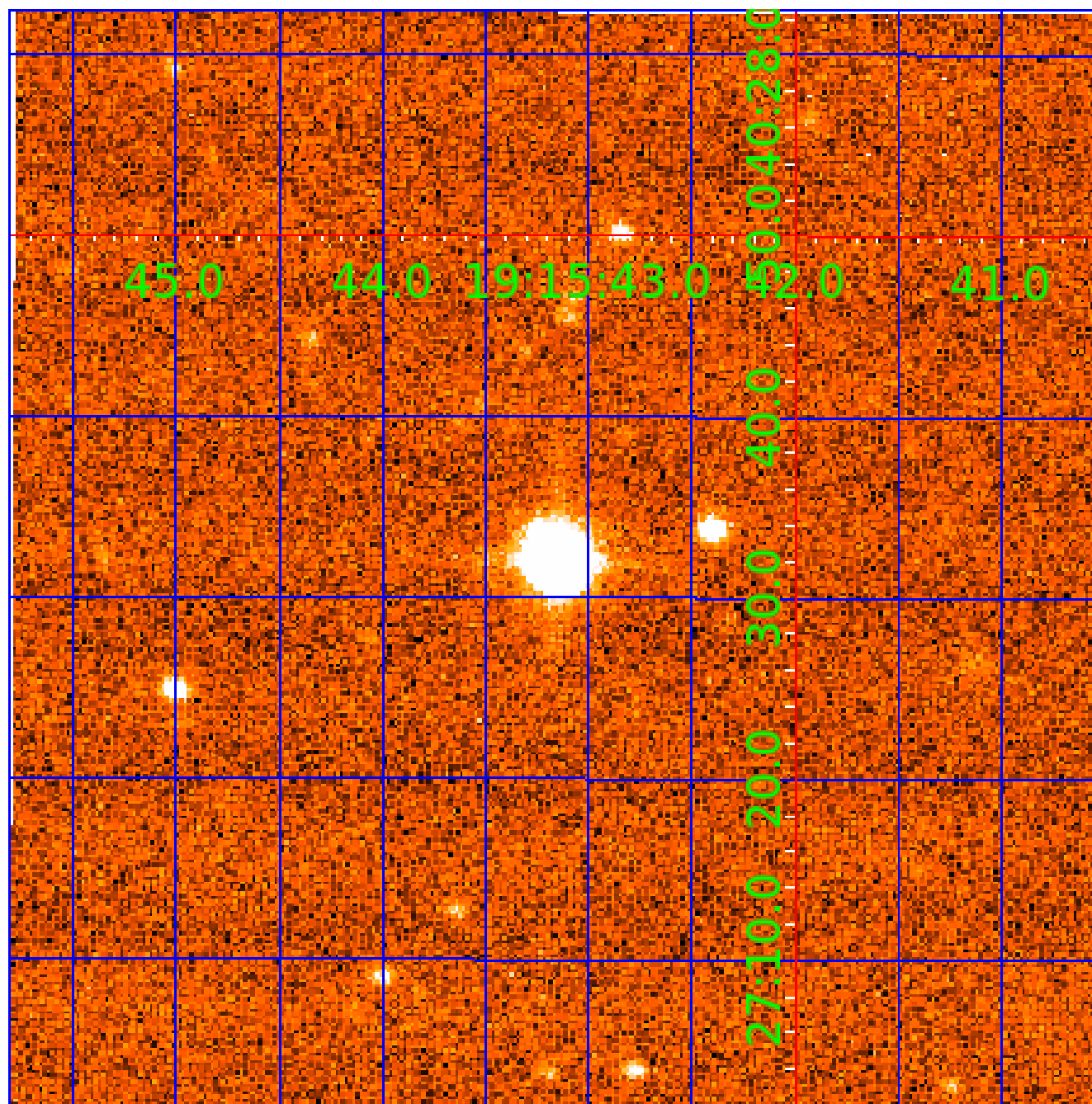


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# UKIRT Image

Declination





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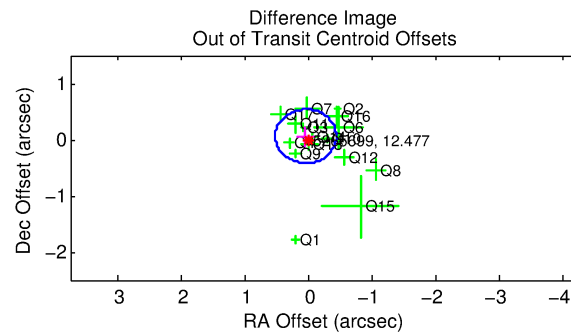
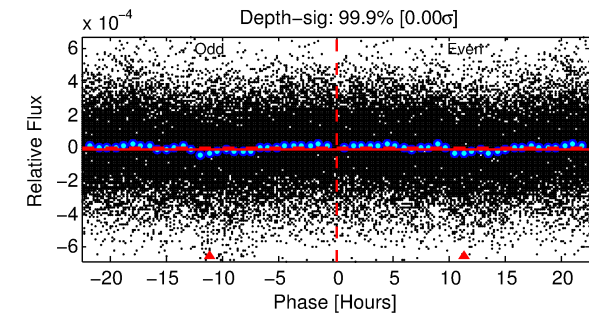
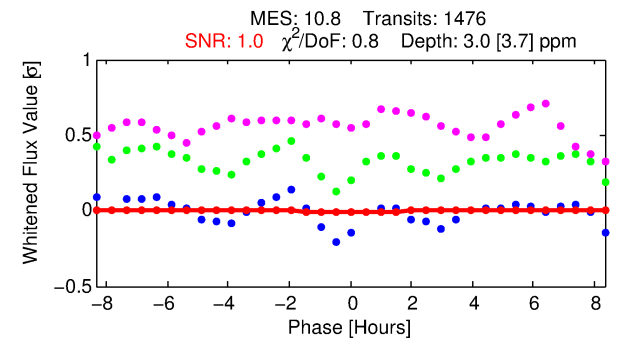
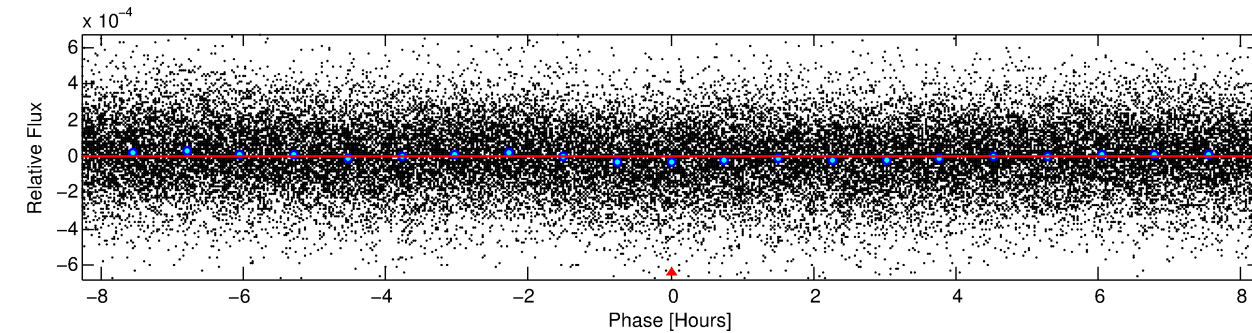
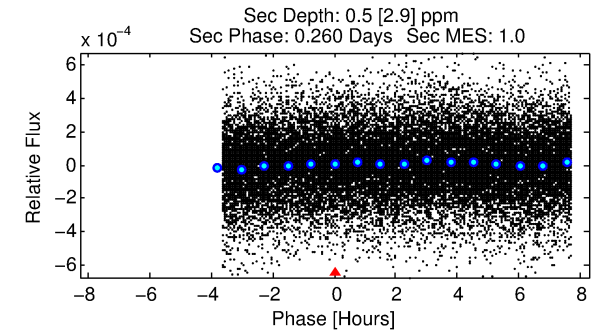
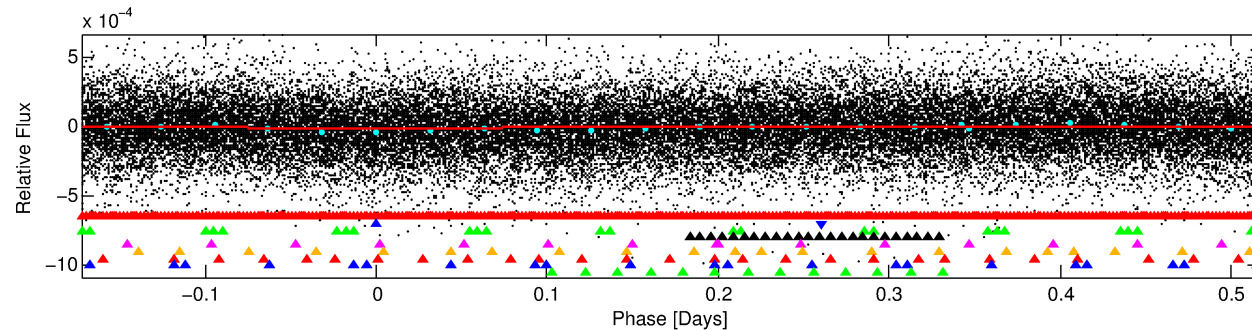
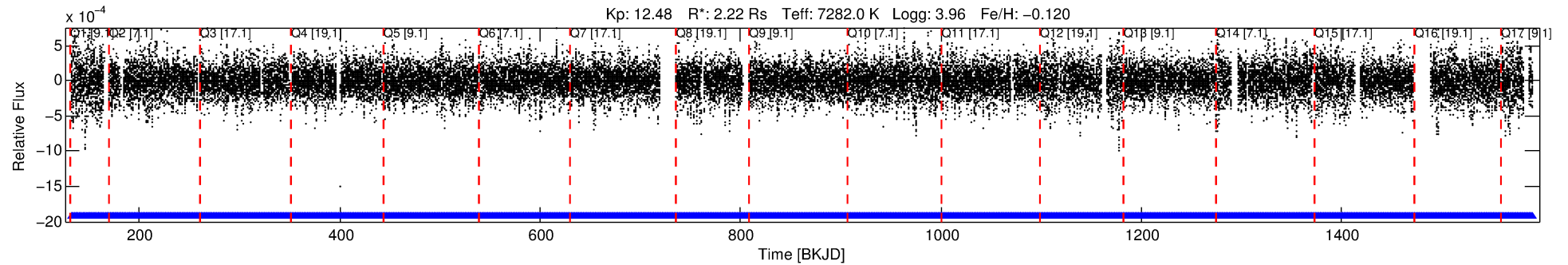
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-02

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 2 of 9 Period: 0.689 d



## DV Fit Results:

Period = 0.68903 [0.00010] d  
Epoch = 132.2034 [0.0213] BKJD  
Rp/R\* = 0.0016 [0.0016]  
a/R\* = 1.41 [3.13]  
b = 0.50 [6.71]  
Seff = 38190.78 [18613.66]  
Teq = 3565 [434] K  
Rp = 0.39 [0.41] Re  
a = 0.0180 [0.0054] AU  
Ag = 0.56 [3.49] [-0.13σ]  
Teffp = 4760 [7441] K [0.16σ]

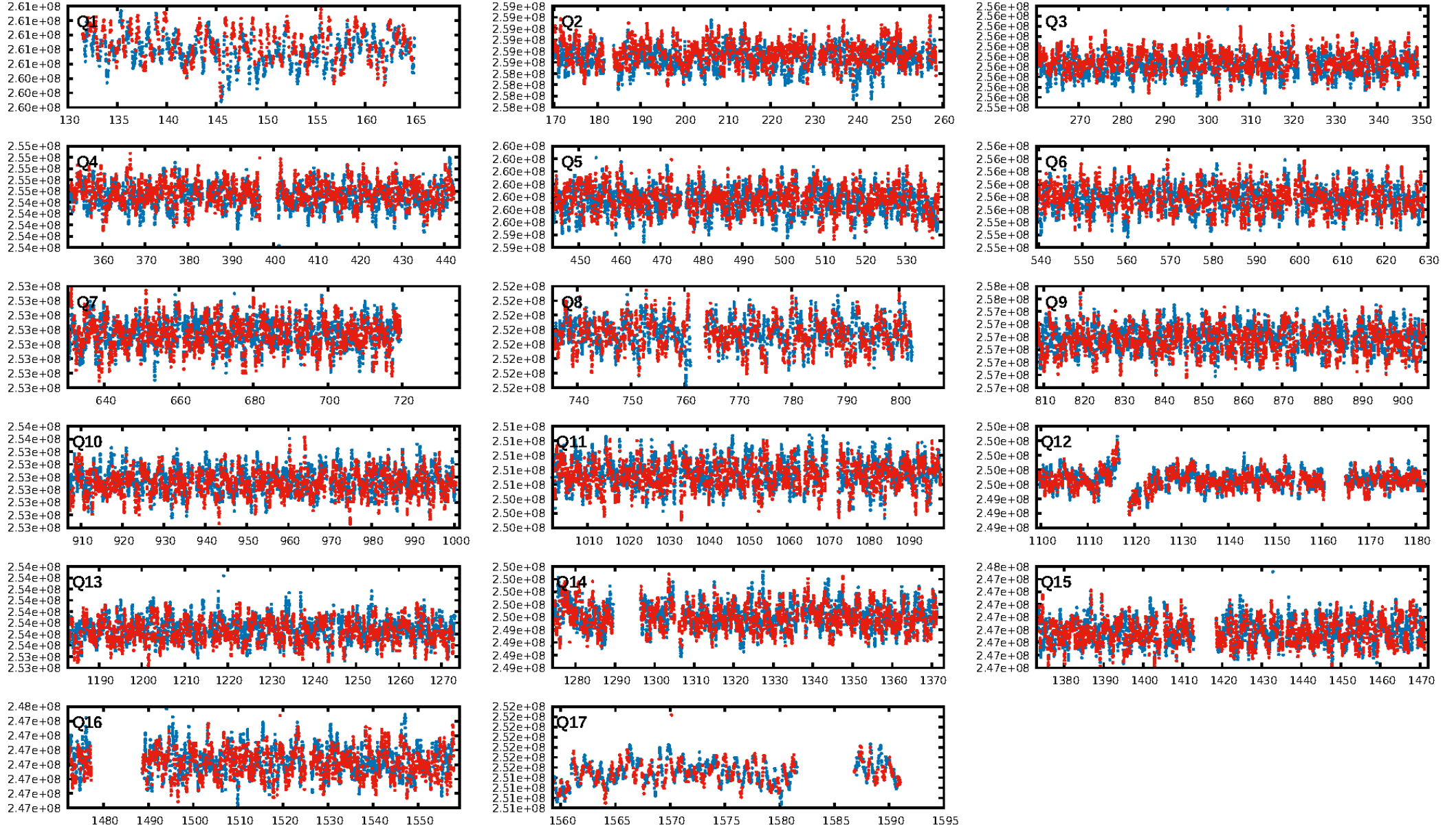
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: 99.8% [3.13σ]  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1423/1423]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: 0.076 arcsec [0.47σ]  
KicOffset-rm: 0.128 arcsec [0.74σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 0.75 [12/16]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:37:46 Z

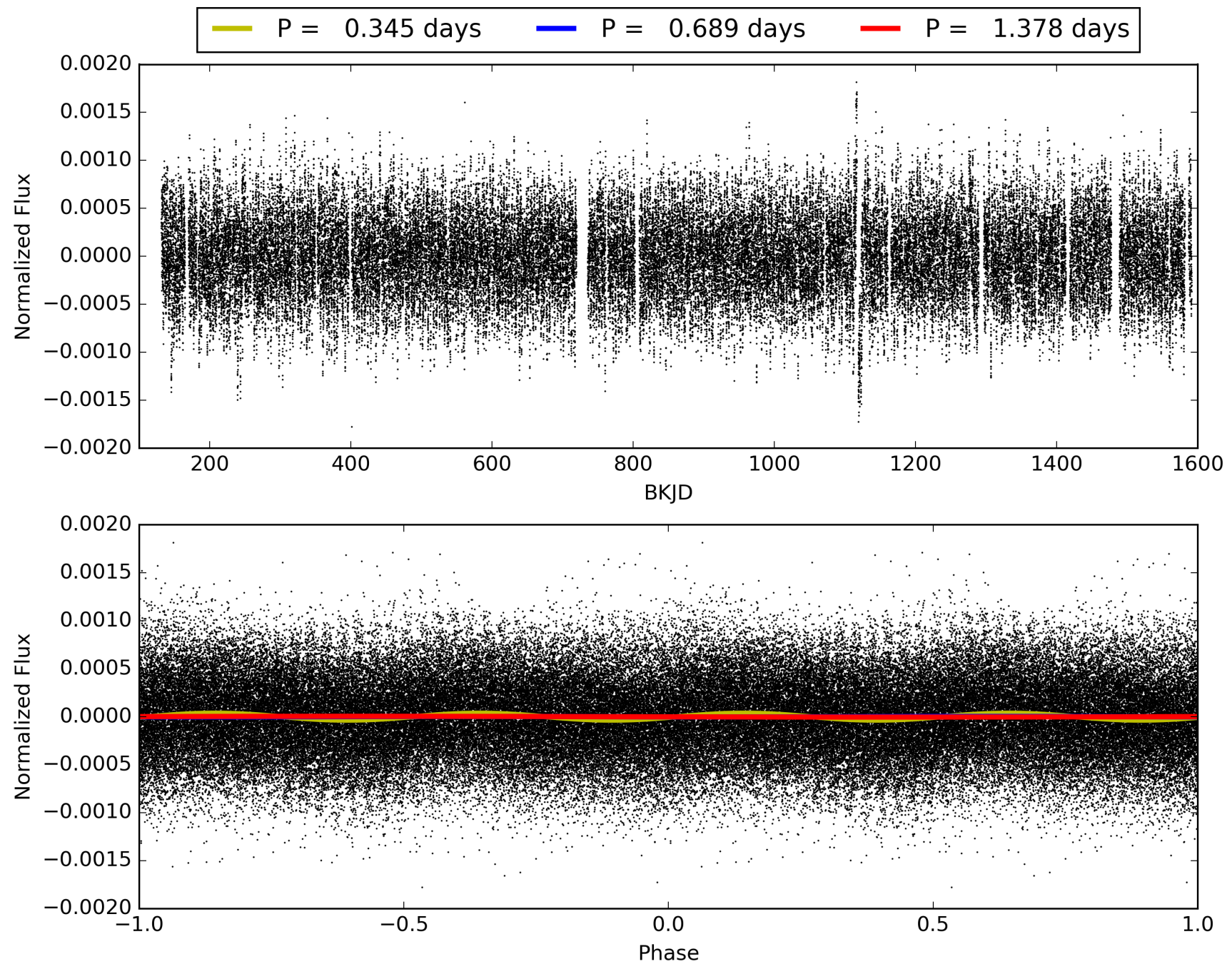
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005265699-02, PDC Light Curves





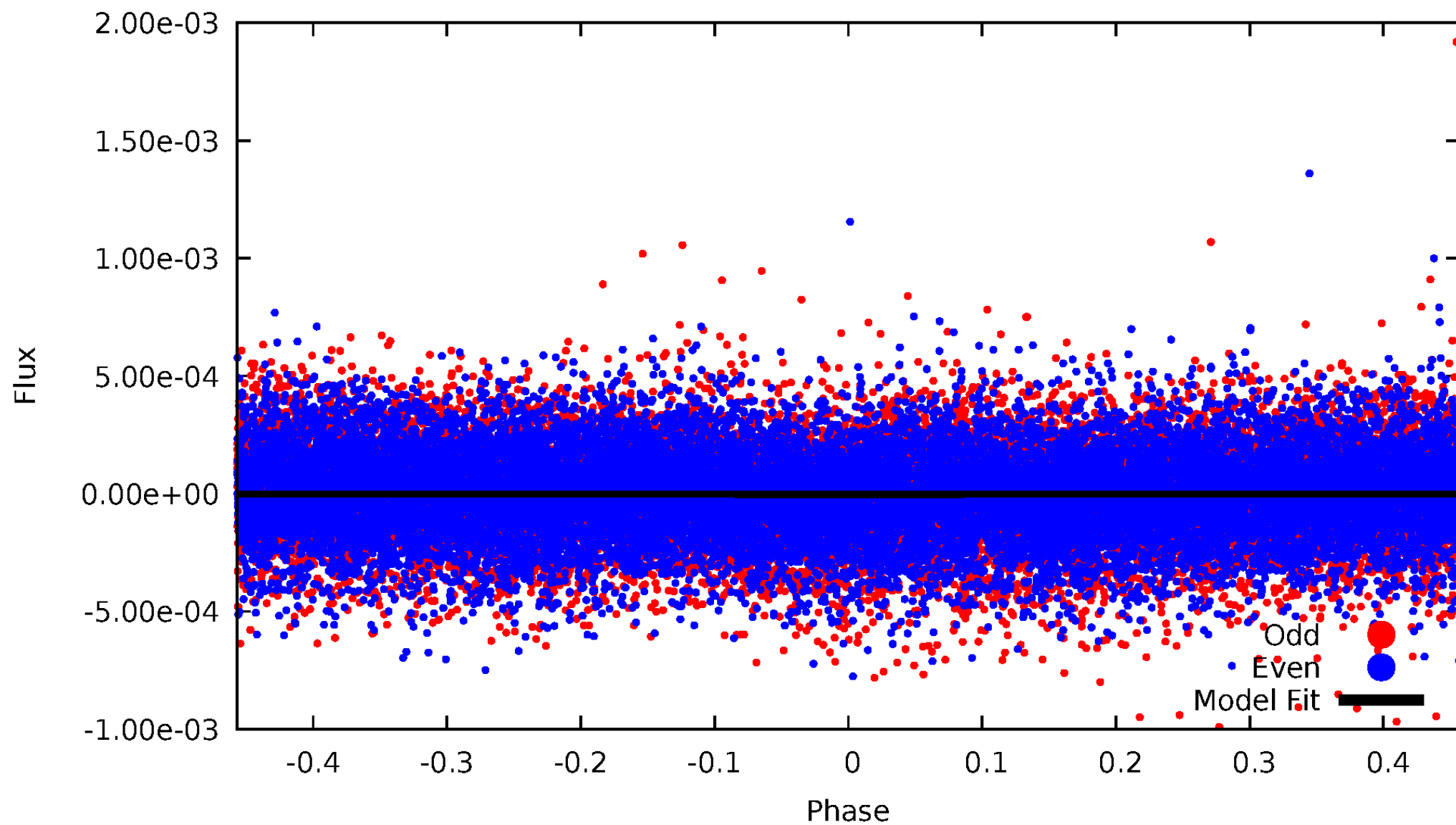
TCE 005265699-02





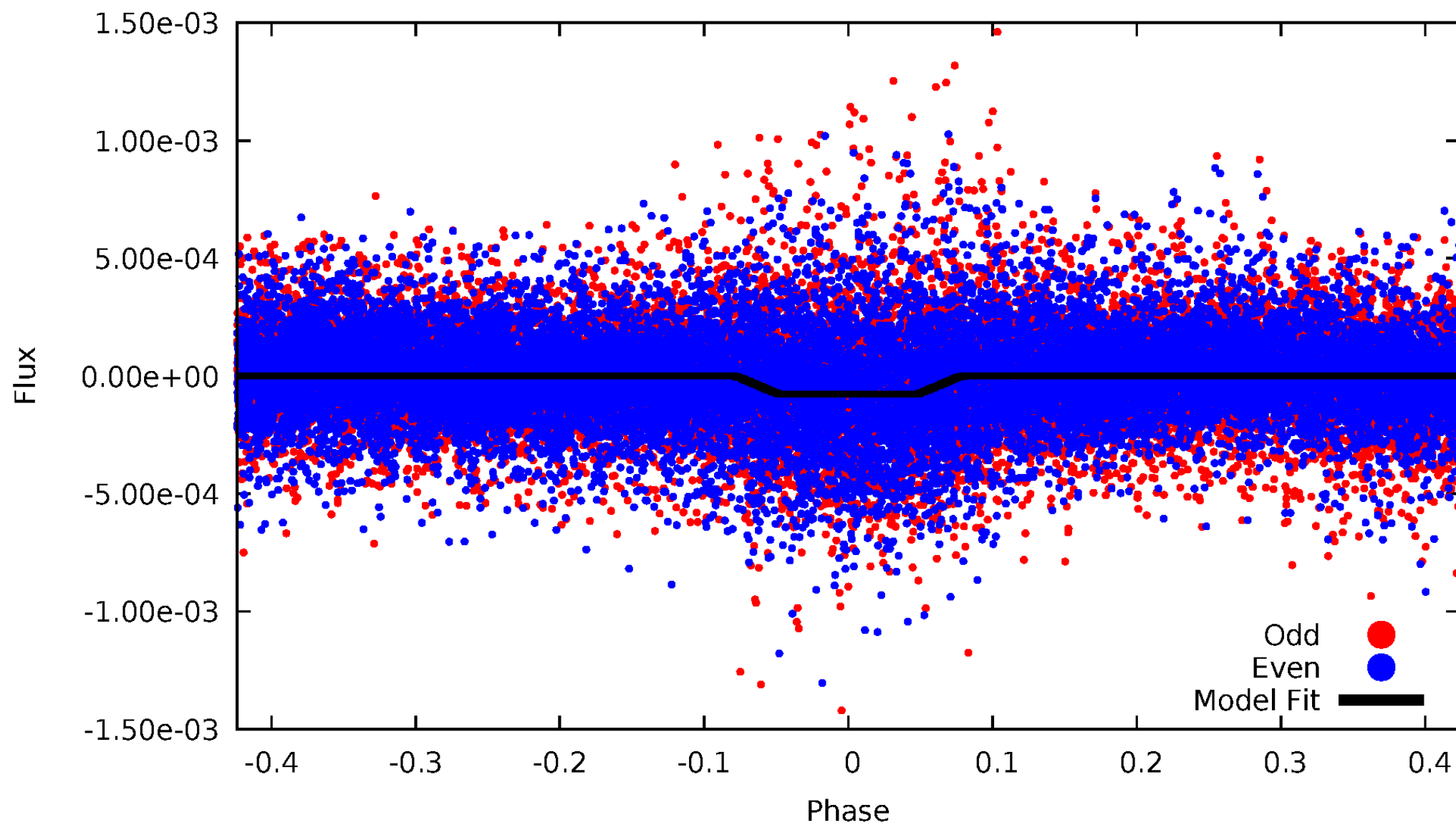
# DV Odd/Even

TCE 005265699-02



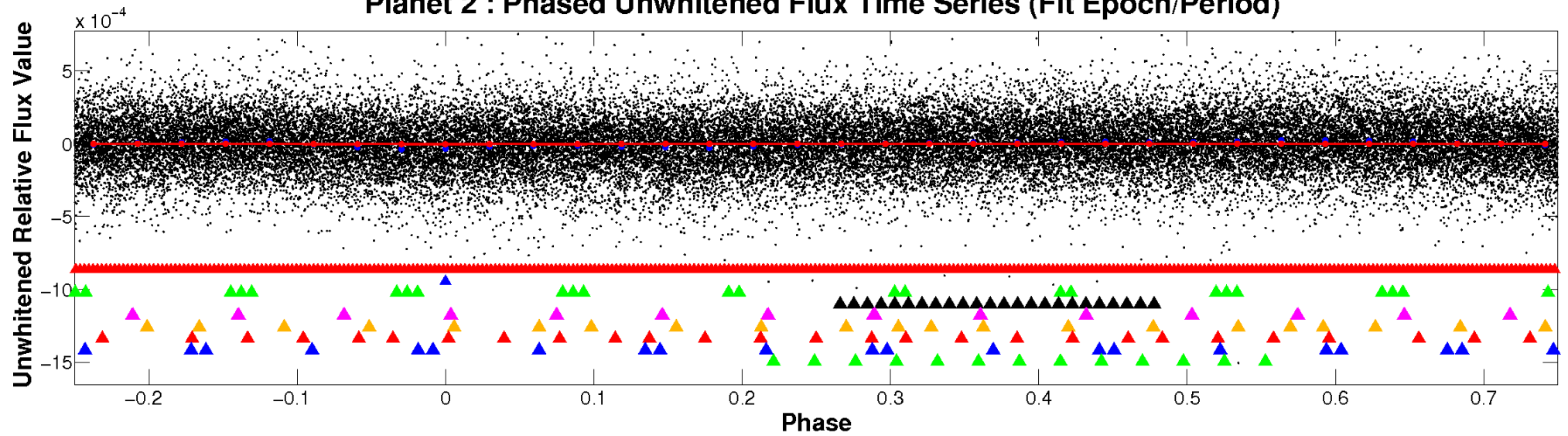
# ALT Odd/Even

TCE 005265699-02

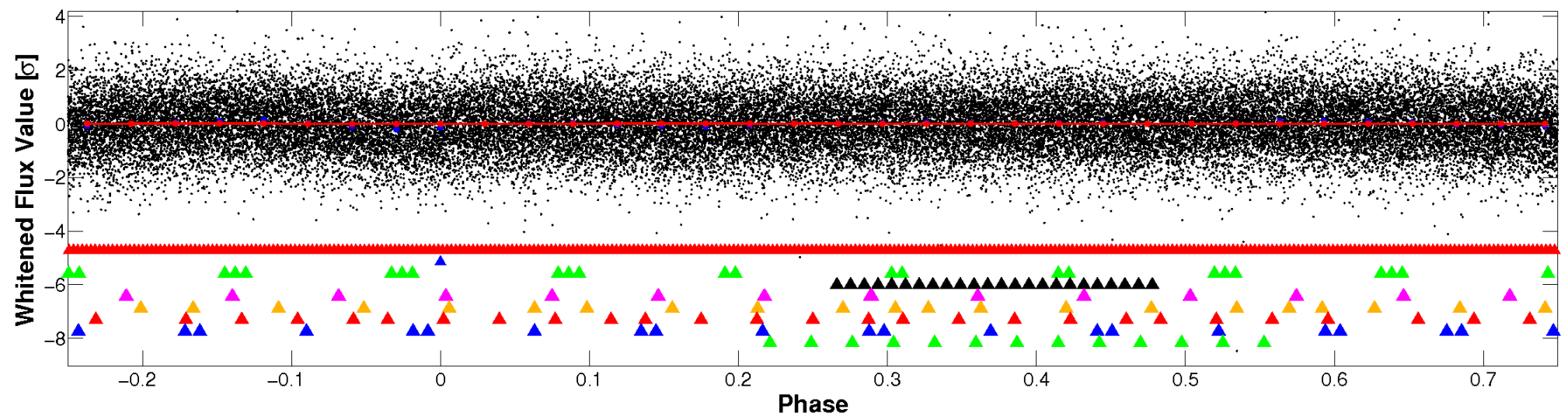


# Non-Whitened Vs. Whitened Light Curve

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

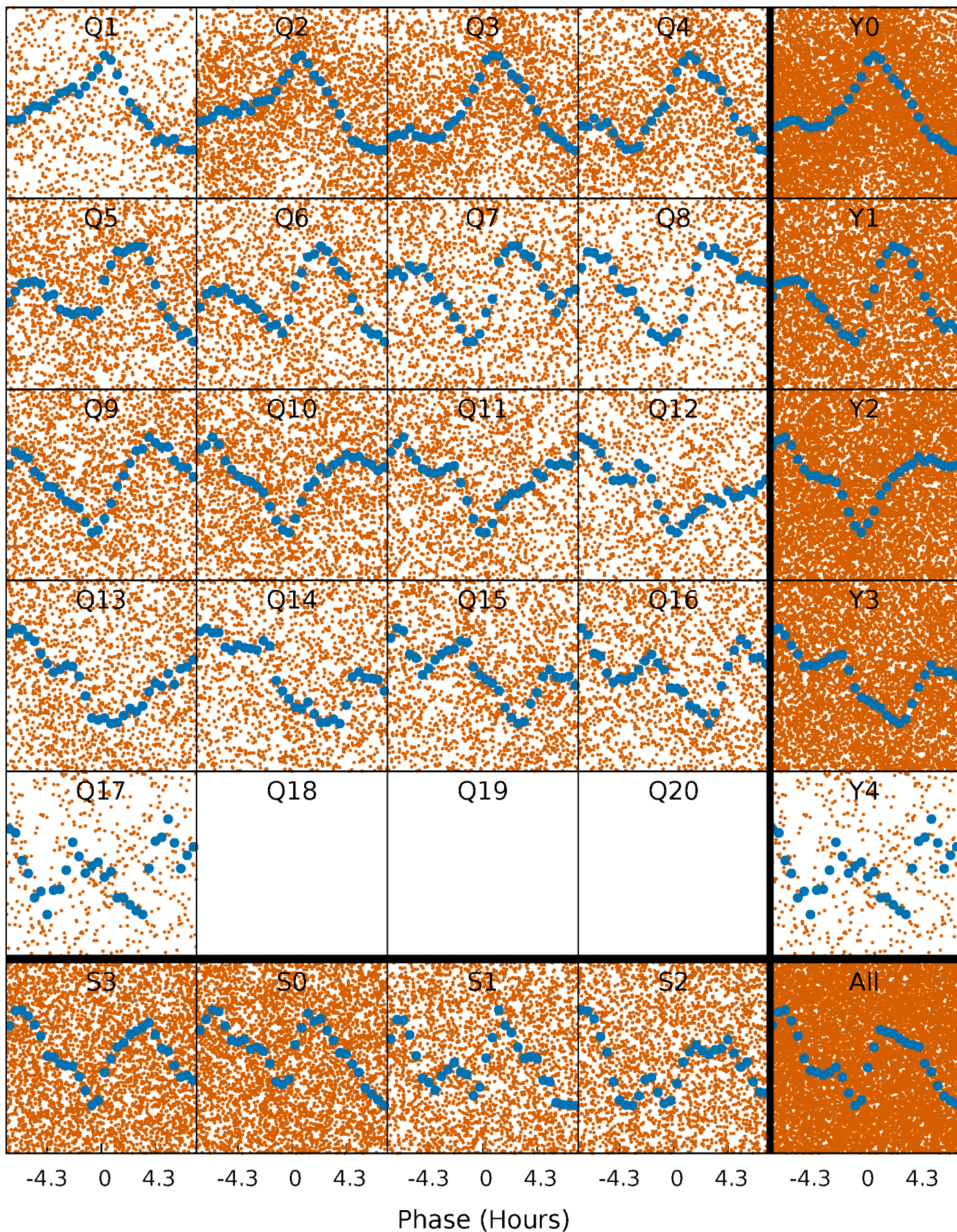


## Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



# PDC Quarter-Phased Transit Curves

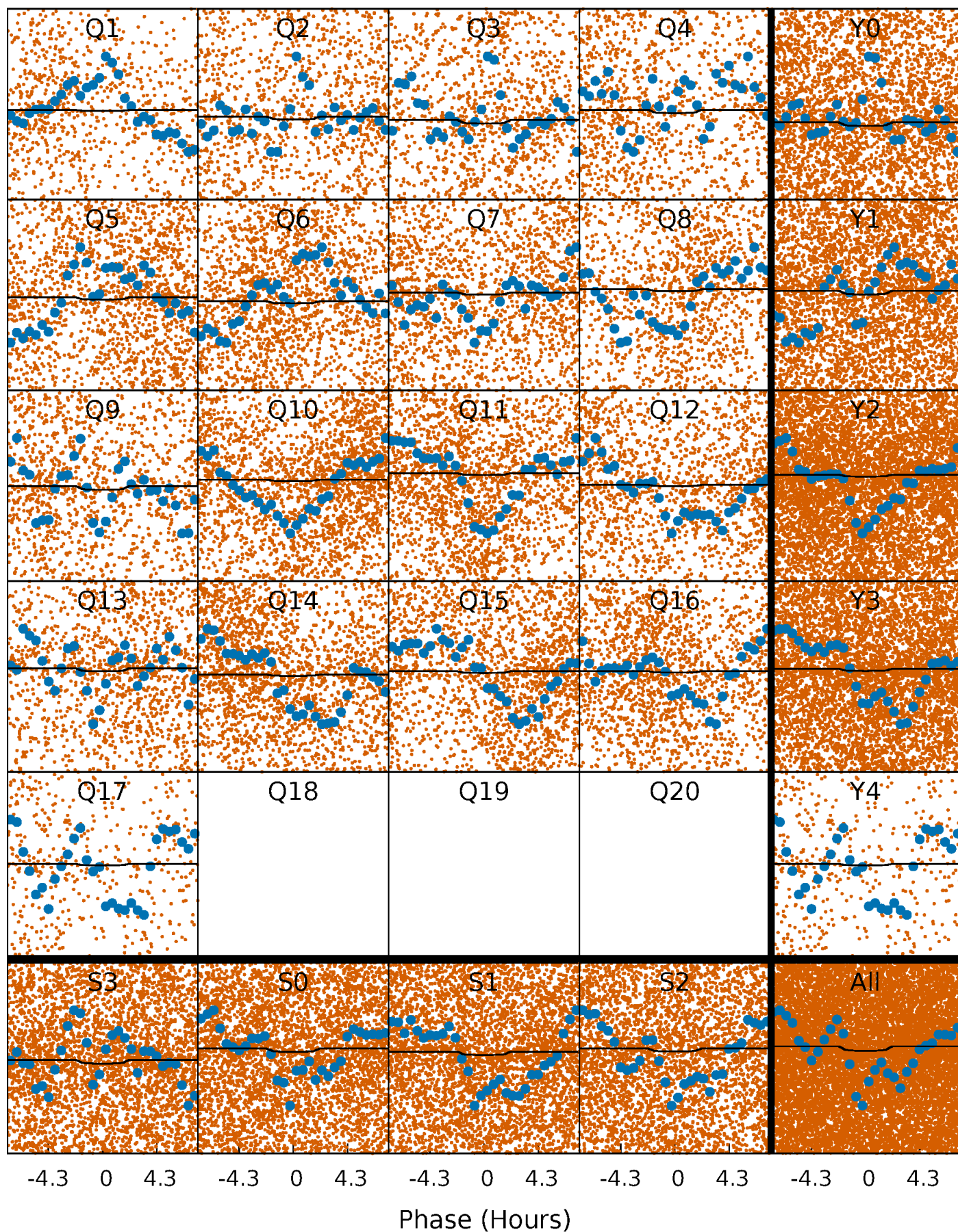
TCE 005265699-02   P= 0.689031 Days    $T_0=132.203374$  (BKJD)





# DV Quarter-Phased Transit Curves

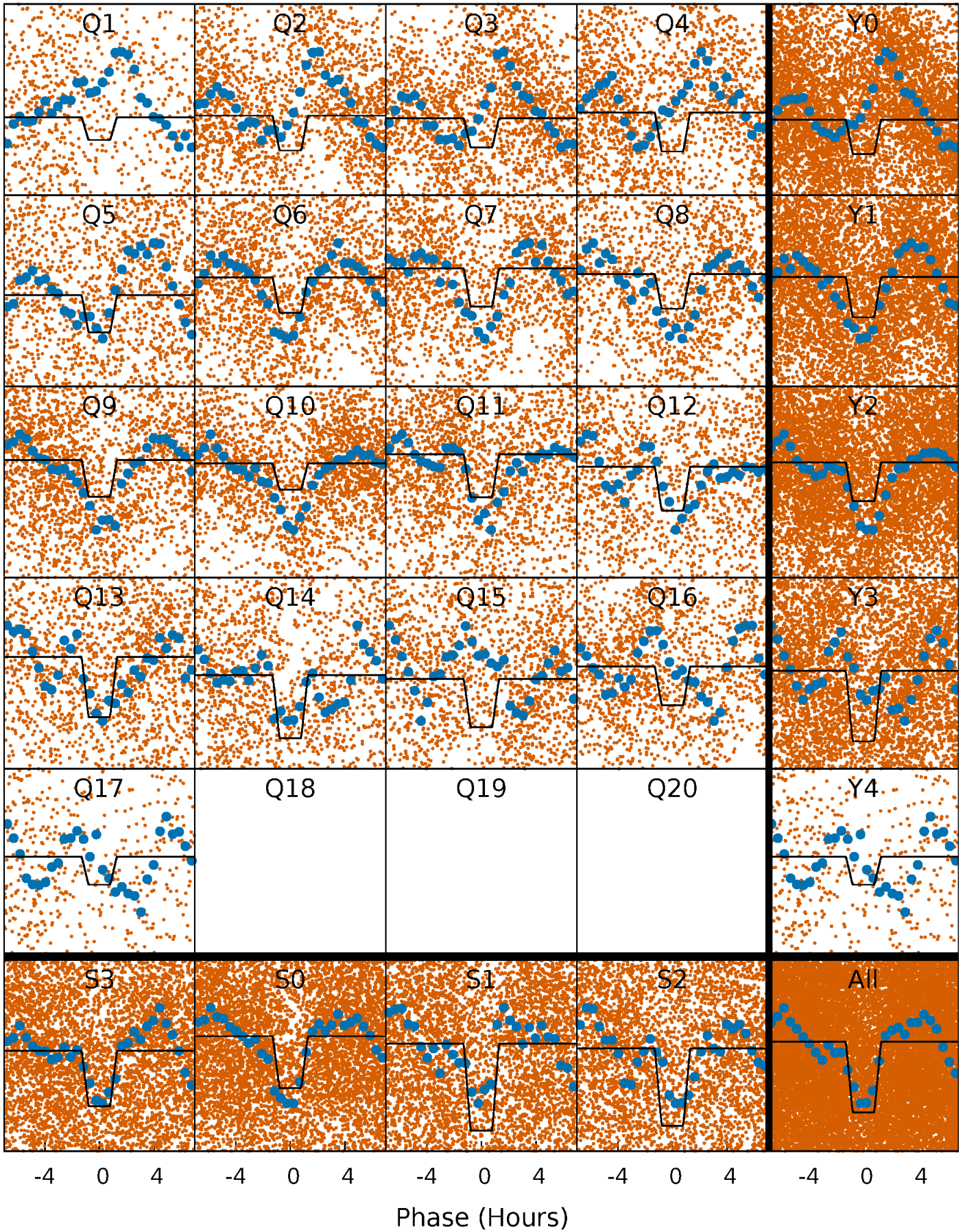
TCE 005265699-02     $P = 0.689031$  Days     $T_0 = 132.203374$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

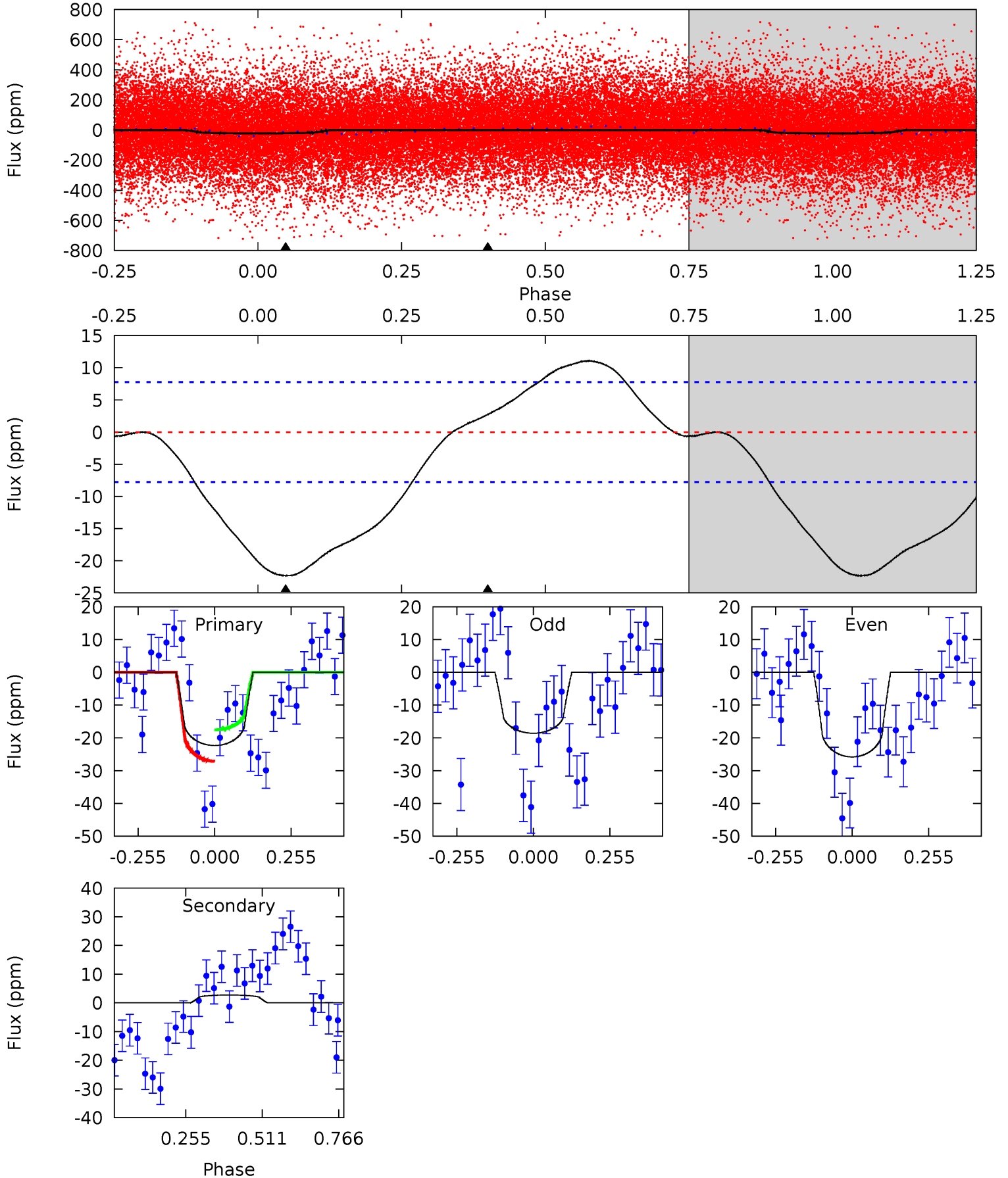
TCE 005265699-02   P= 0.689052 Days    $T_0=132.155965$  (BKJD)



# DV Model-Shift Uniqueness Test

005265699-02, P = 0.689031 Days, E = 131.514343 Days

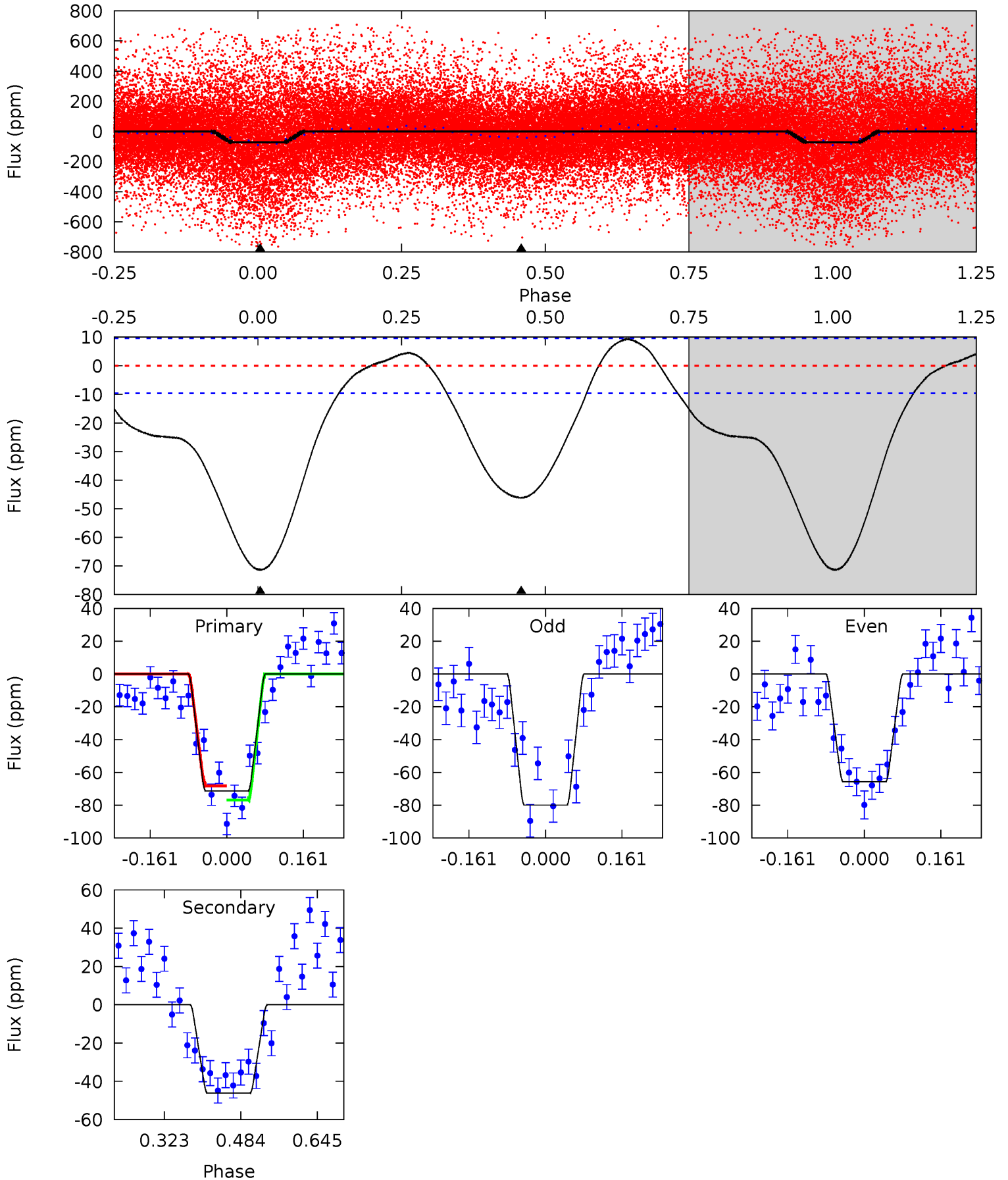
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	-1.54	0	0	4.36	1.14	1.12	12.6	12.6	-1.54	-1.54	2.04	1.45	0.33	2.75



# Alt Model-Shift Uniqueness Test

005265699-02, P = 0.689052 Days, E = 131.466913 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
33.1	21.4	0	0	4.46	1.40	5.37	33.1	33.1	21.4	21.4	3.32	0.94	0.12	2.01





### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$3 \pm 2$	$0.45^{+0.35}_{-0.28}$	$4926^{+366}_{-474}$	$-6679^{+1576}_{-5210}$	$-2.147^{+1.690}_{-13.904}$
Alt.	$-46 \pm 2$	$2.06^{+0.56}_{-0.50}$	$4927^{+377}_{-453}$	$6014^{+823}_{-614}$	$1.883^{+1.400}_{-0.671}$

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

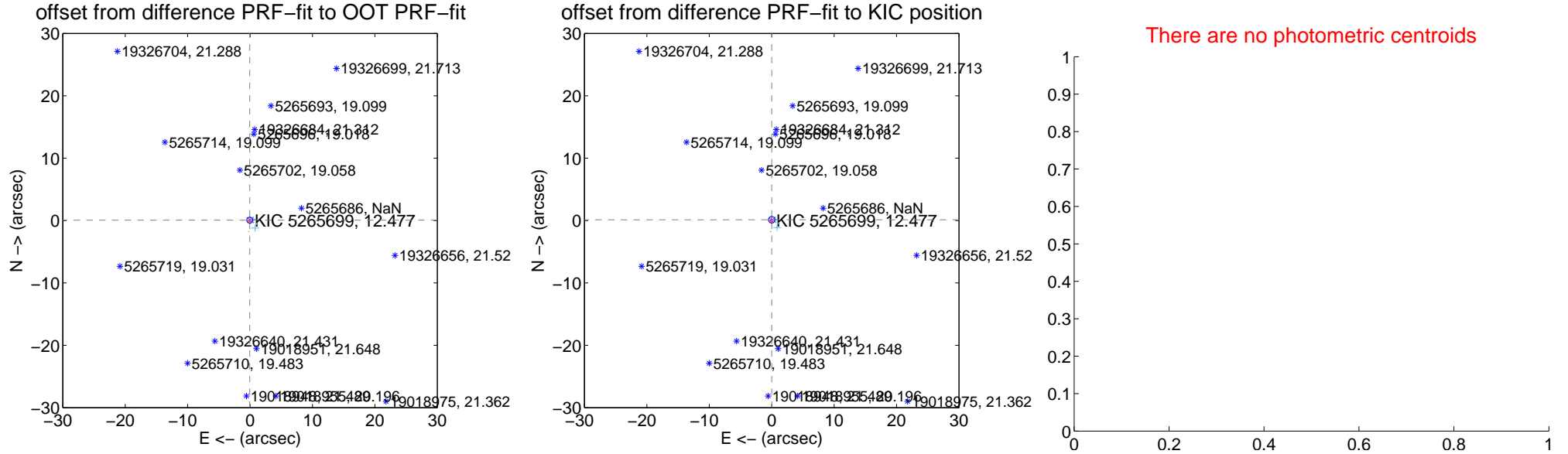
## DV Centroid Data

Supplemental centroid analysis for 005265699-02. Kepler magnitude: 12.48. Transit SNR 1.02

There are 12 quarters with good PRF difference image offsets

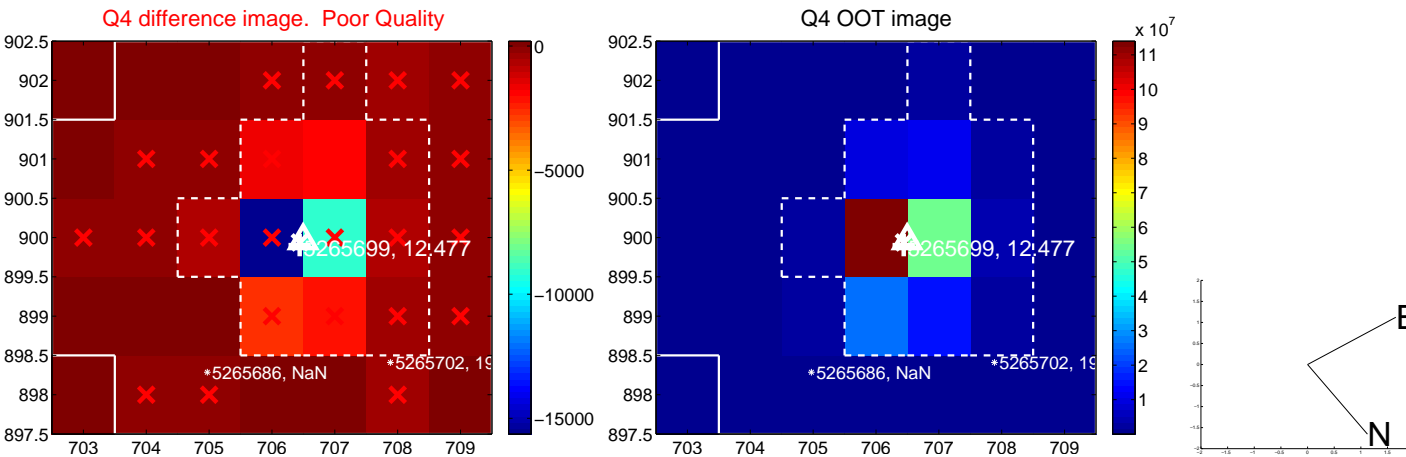
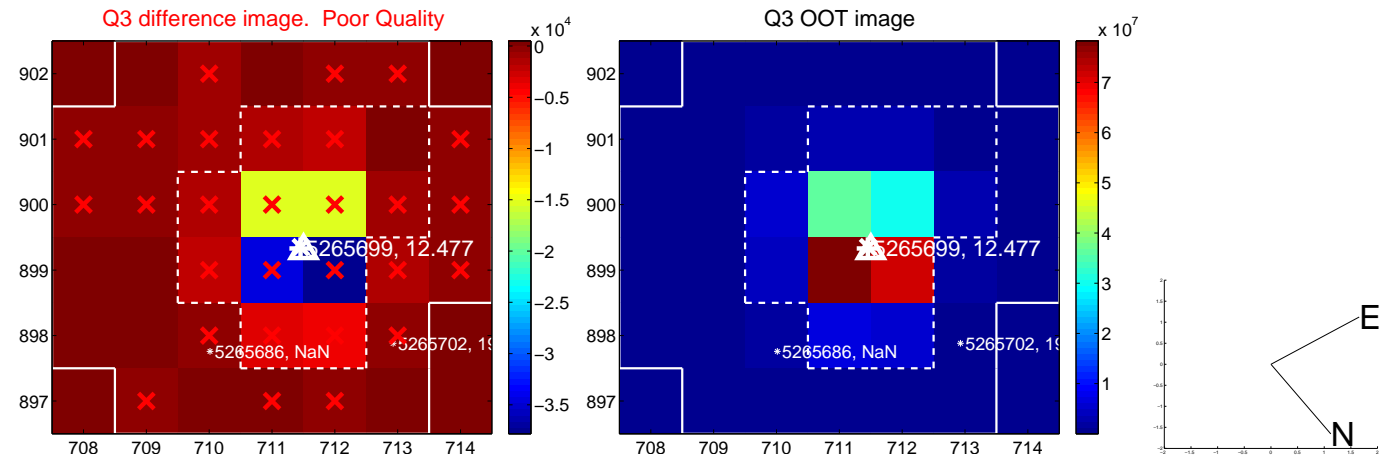
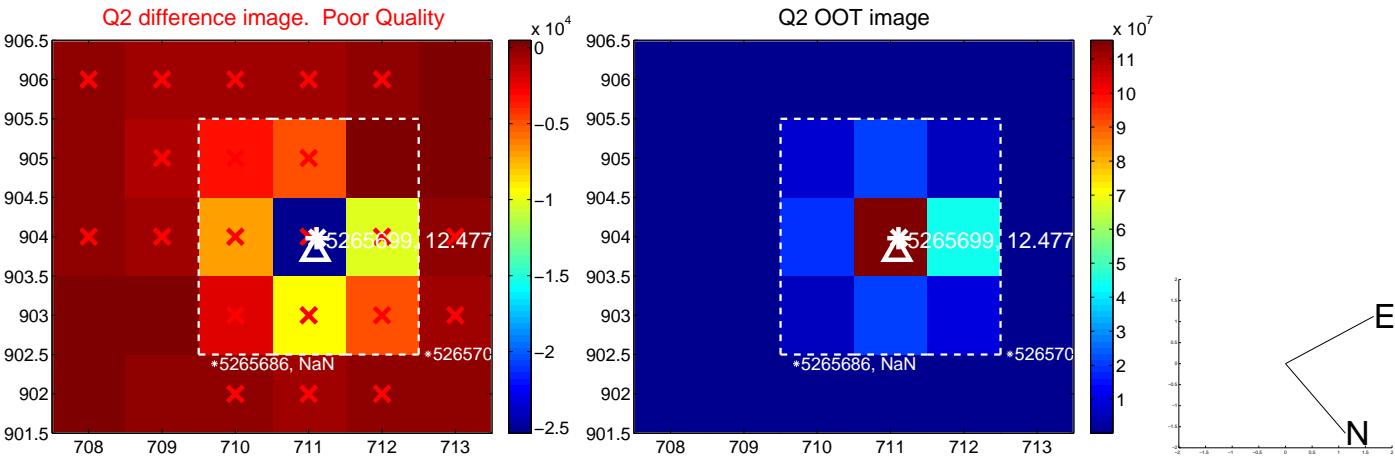
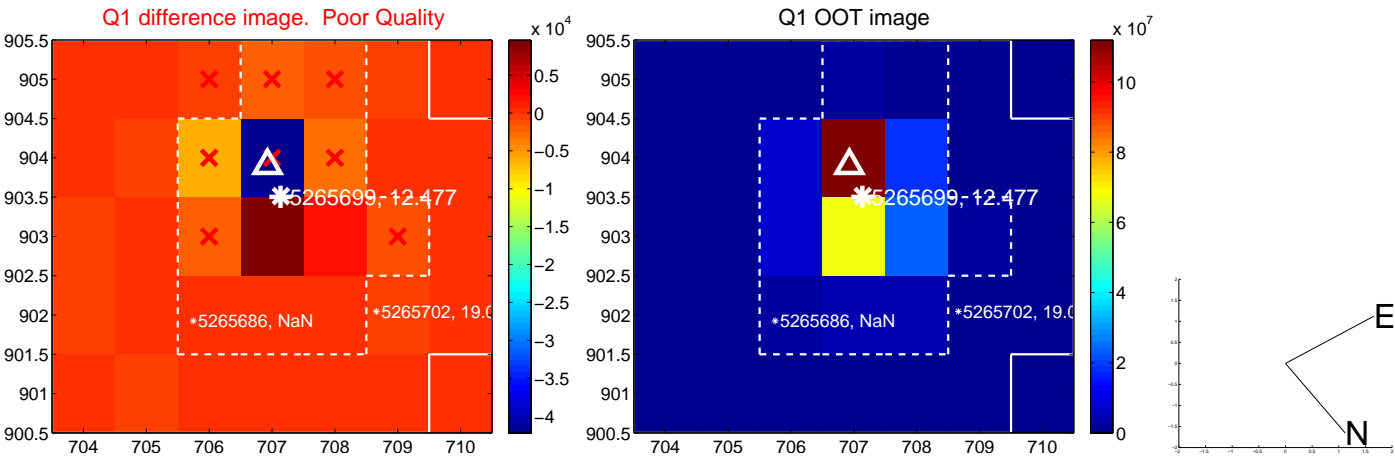
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.076 \pm 0.160$	0.47	$0.049 \pm 0.123$	$0.058 \pm 0.163$
PRF-fit source offset from KIC position	$0.128 \pm 0.173$	0.74	$-0.003 \pm 0.128$	$0.128 \pm 0.174$
photometric centroid source offset	—	—	—	—

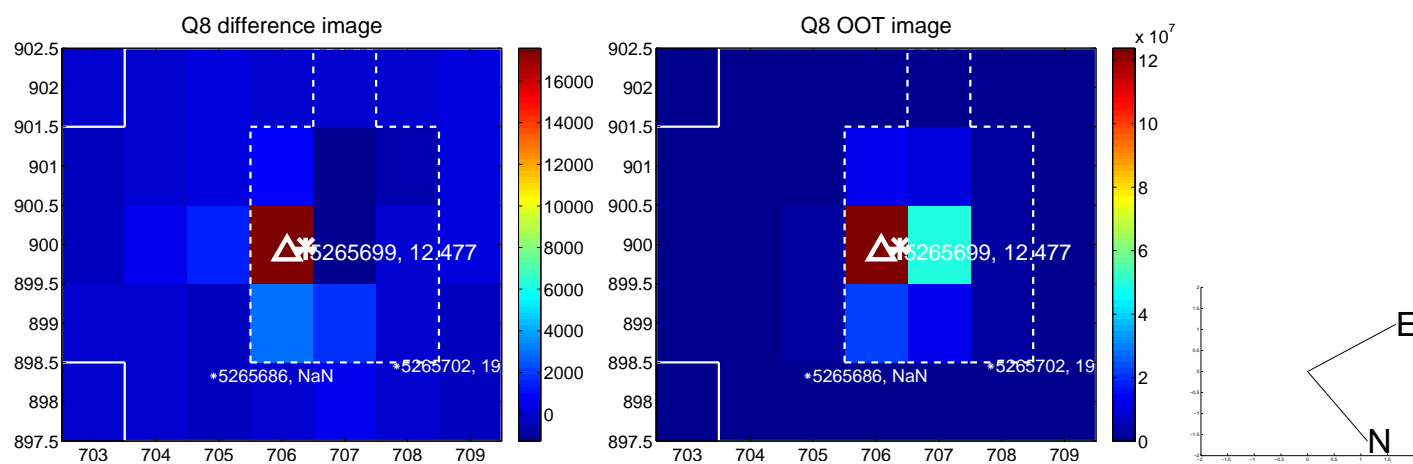
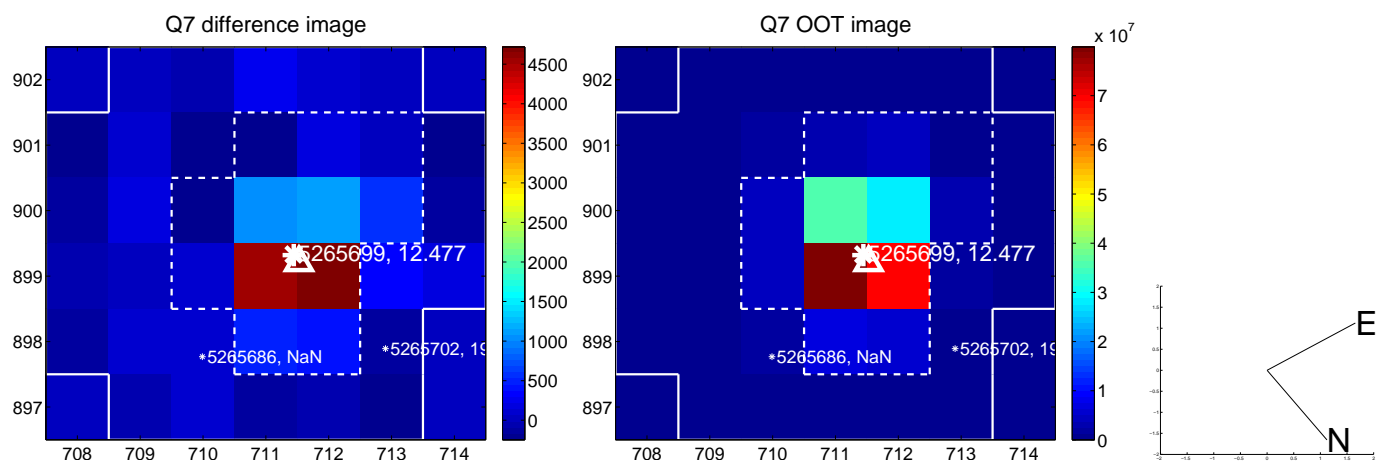
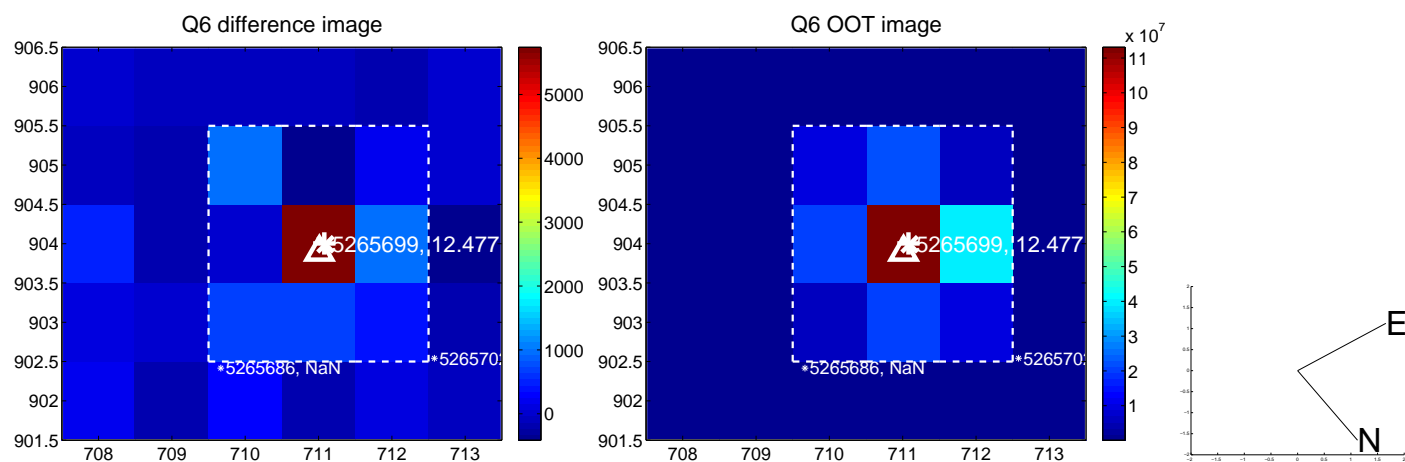
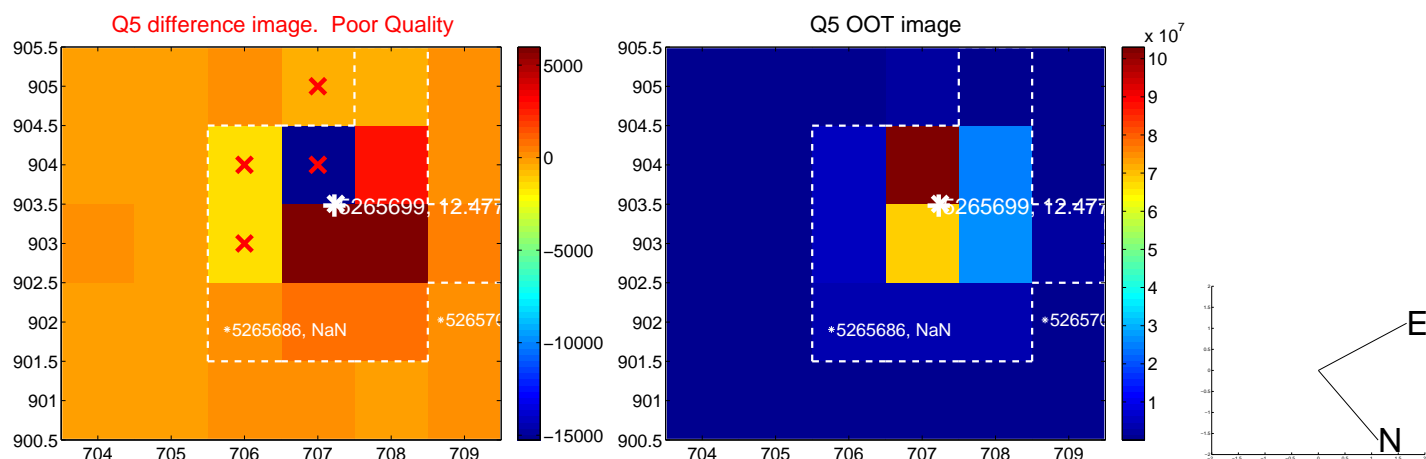


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

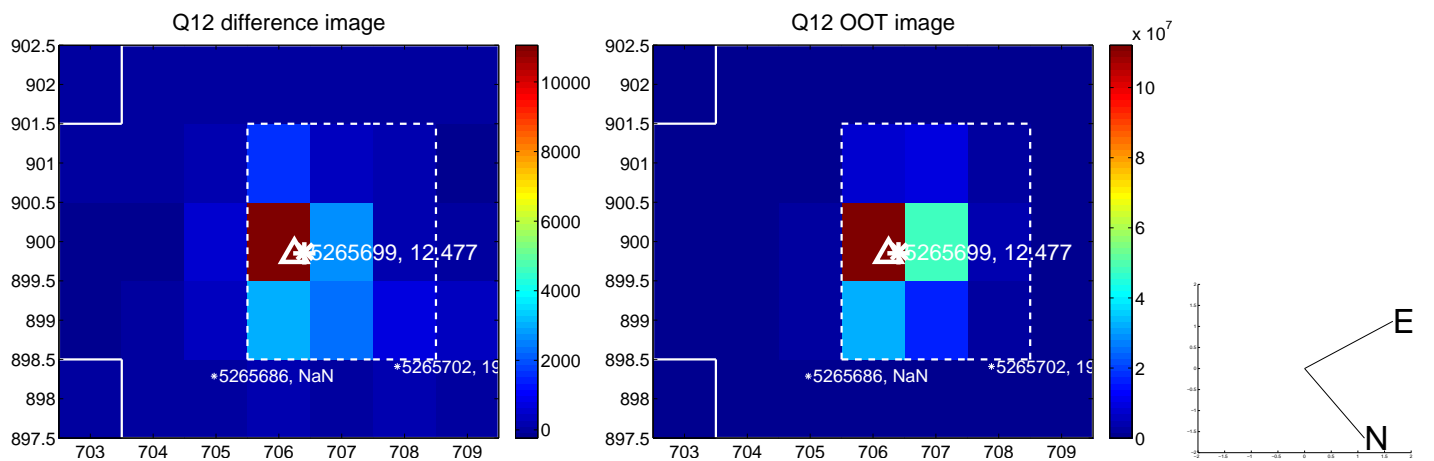
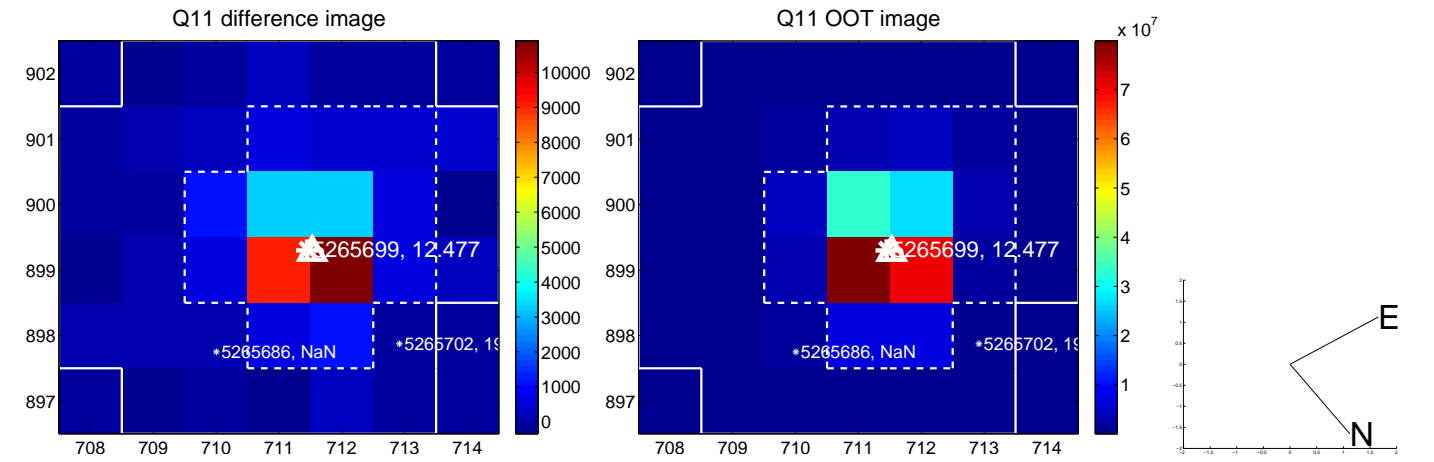
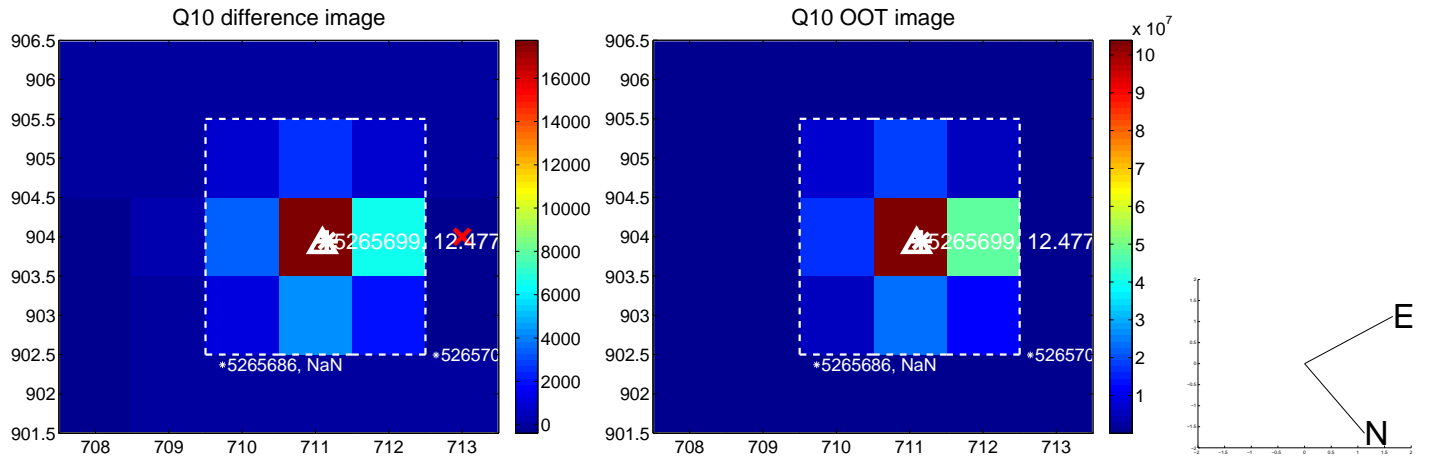
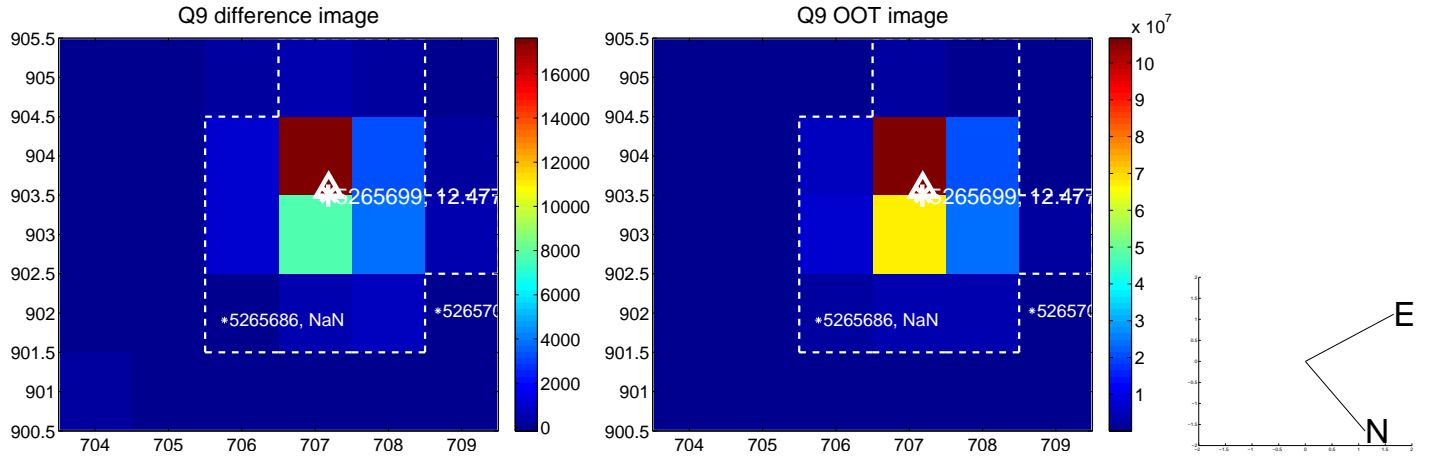
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

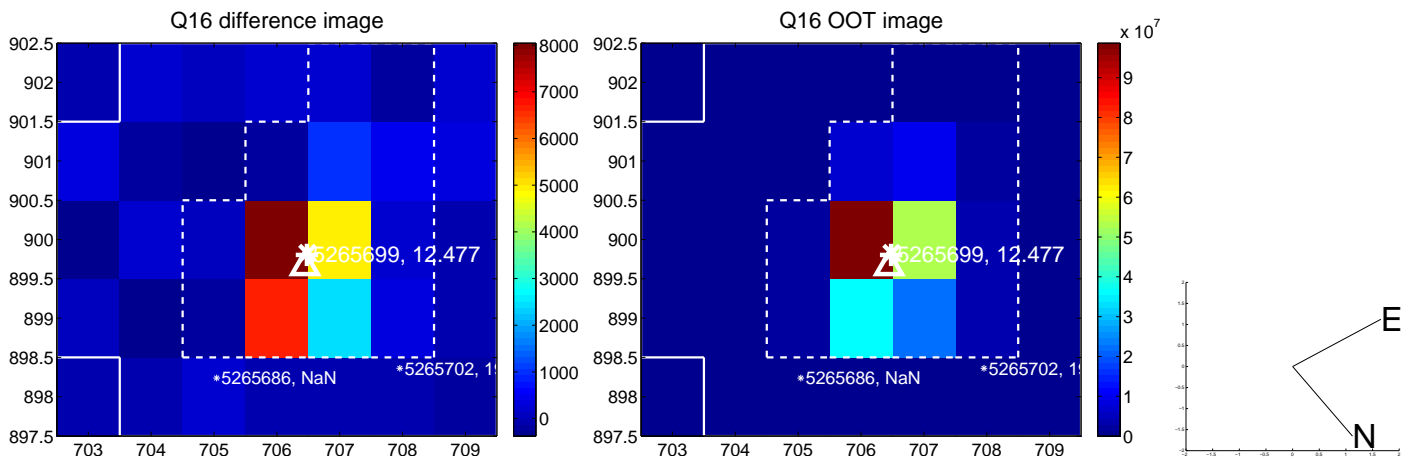
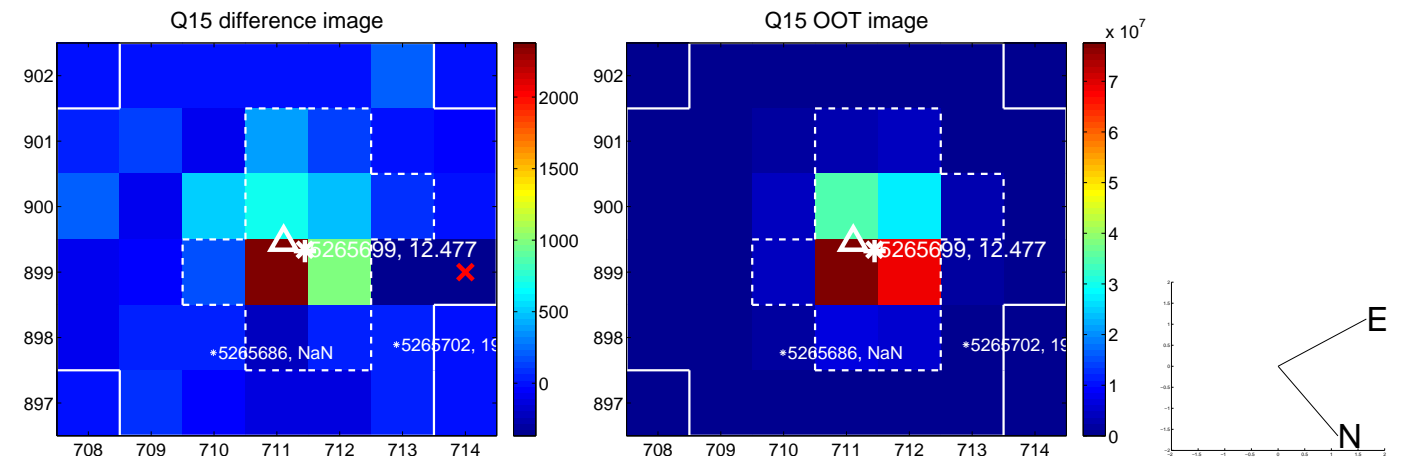
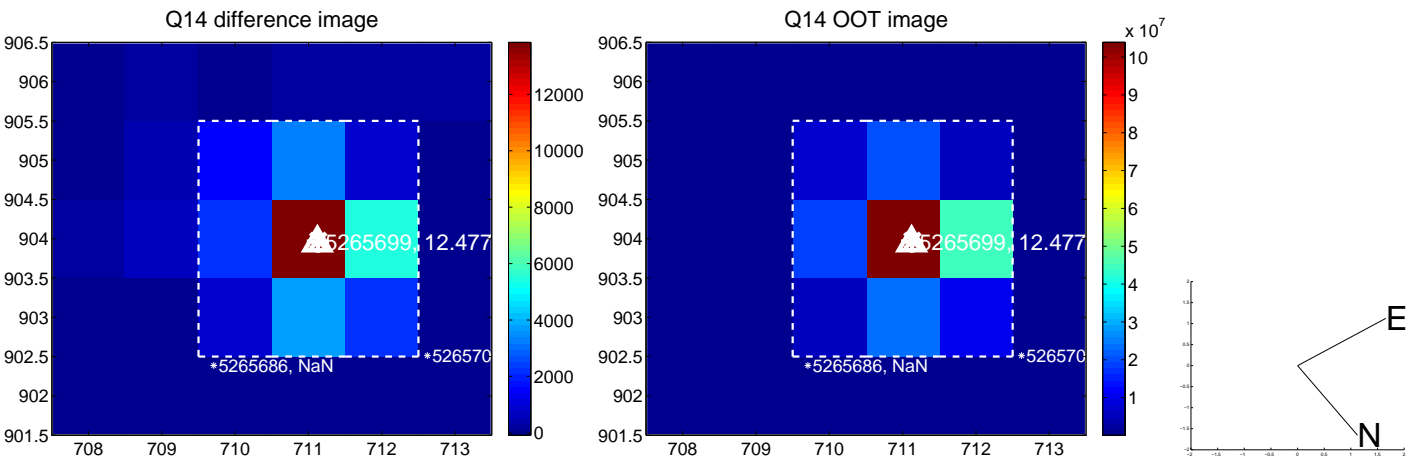
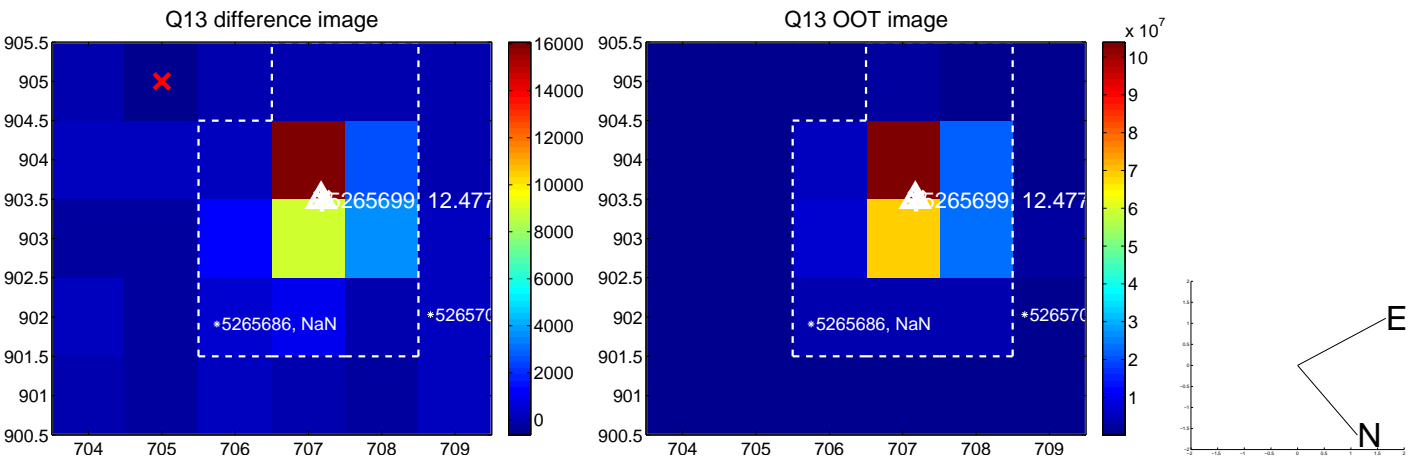


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

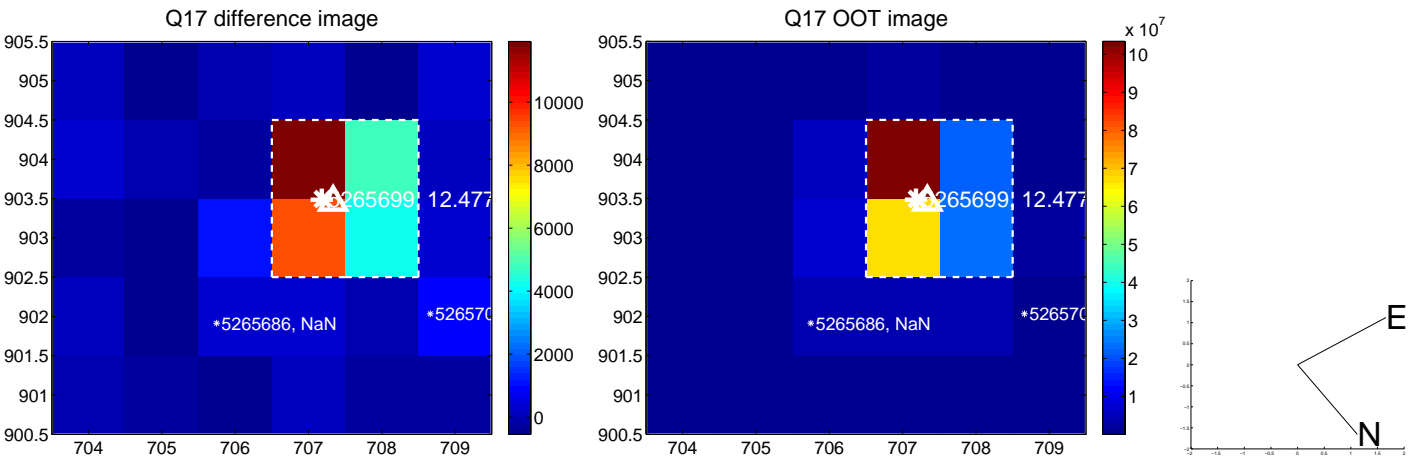




white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



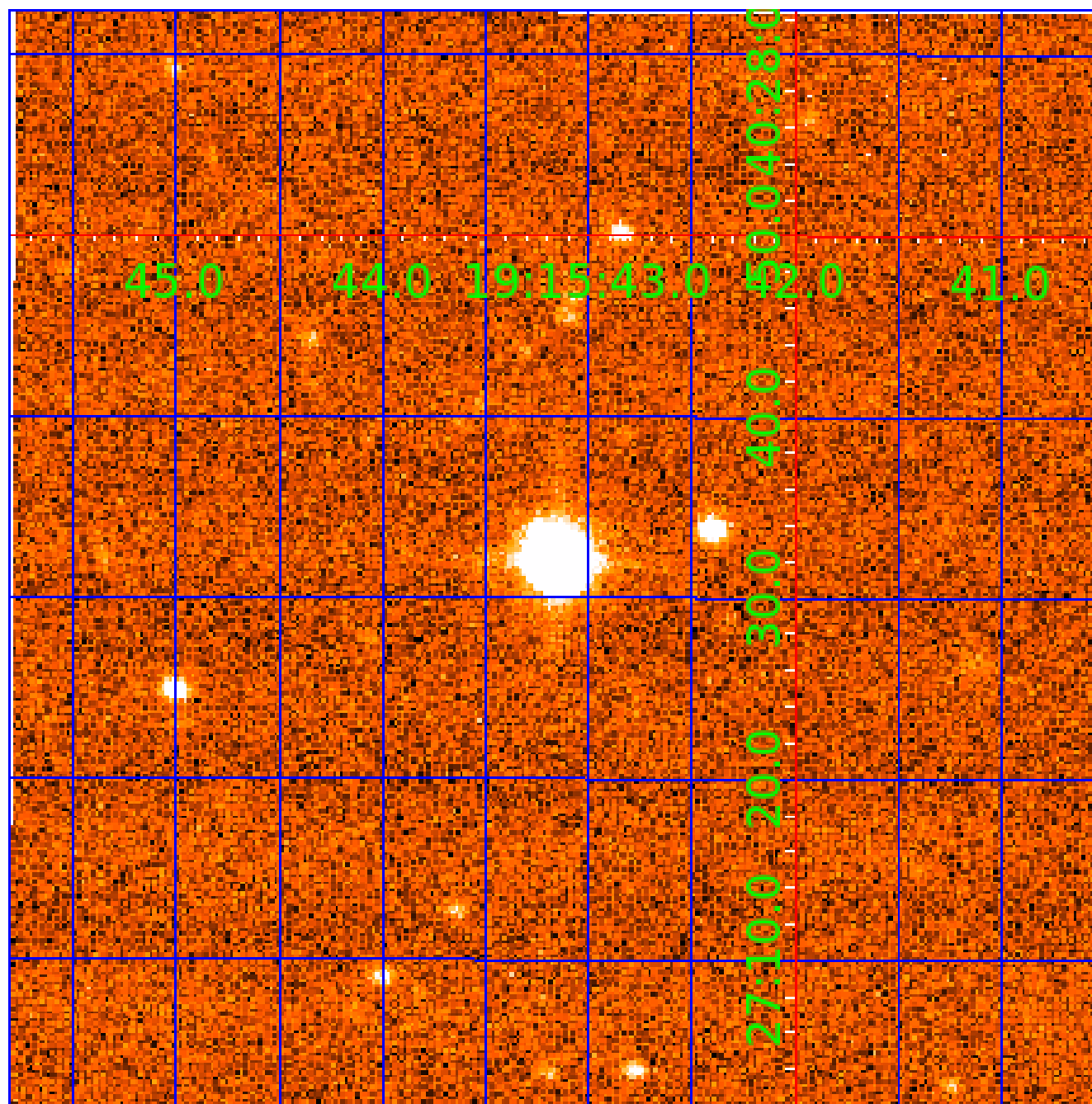
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



folded centroid time series figure for this object.

# UKIRT Image

Declination



# KIC 005265699

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005265699-01	OBS	No	1.374044	131.714311	33.5	3.650	9.2	9.7	2.22	7282	1.49	15215.14
005265699-02	OBS	No	0.689031	132.203374	3.0	3.776	10.8	1.0	2.22	7282	0.40	38190.78
005265699-03	OBS	No	60.711829	146.341993	472.9	9.051	9.4	8.8	2.22	7282	6.09	97.41
005265699-04	OBS	No	59.952043	156.502807	201.6	3.187	9.9	6.7	2.22	7282	3.62	99.05
005265699-05	OBS	No	50.545316	159.964247	234.4	4.380	9.1	6.5	2.22	7282	3.88	124.37
005265699-06	OBS	No	68.720978	171.196883	393.1	12.671	8.9	8.0	2.22	7282	5.10	82.57
005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005265699-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

**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.

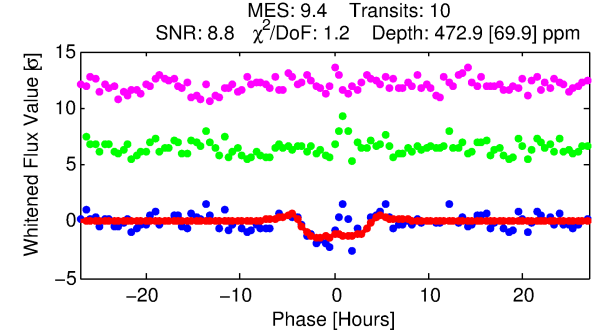
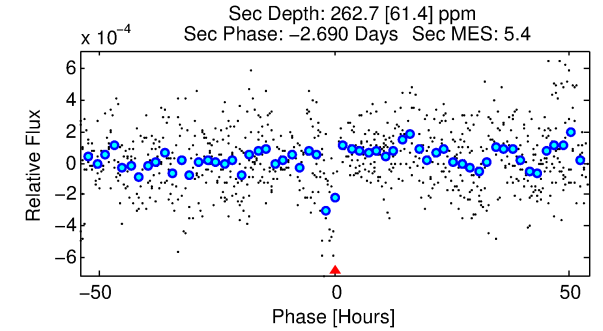
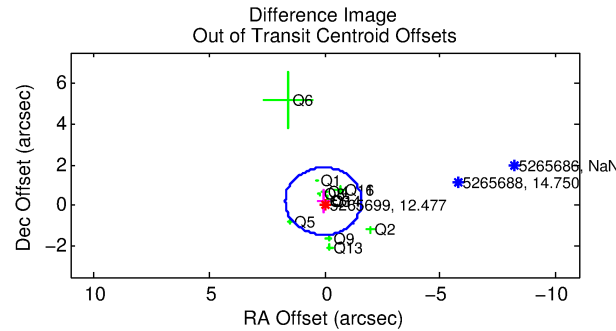
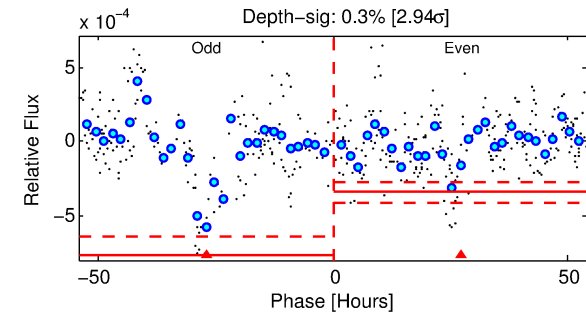
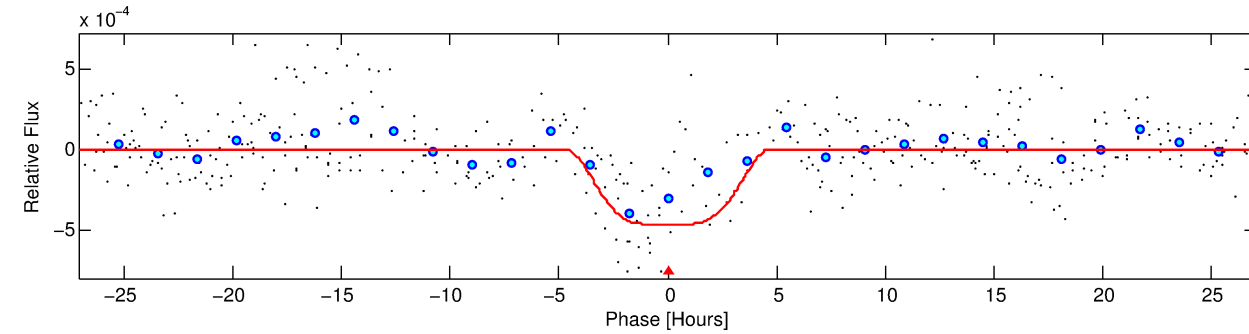
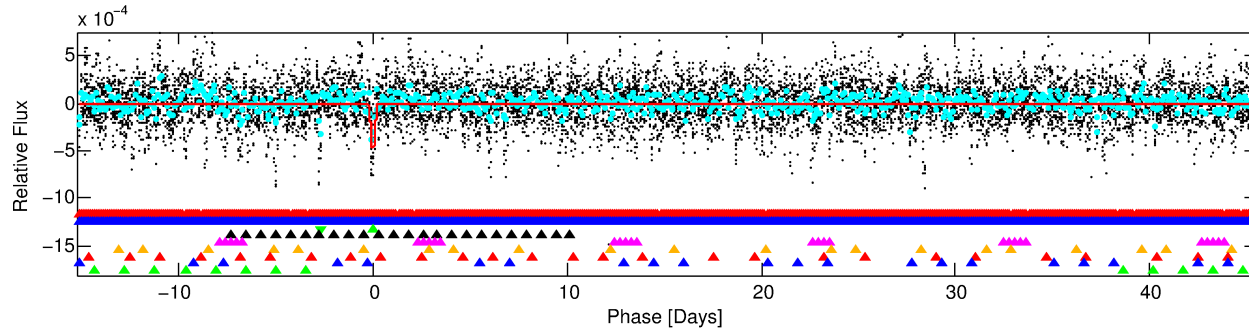
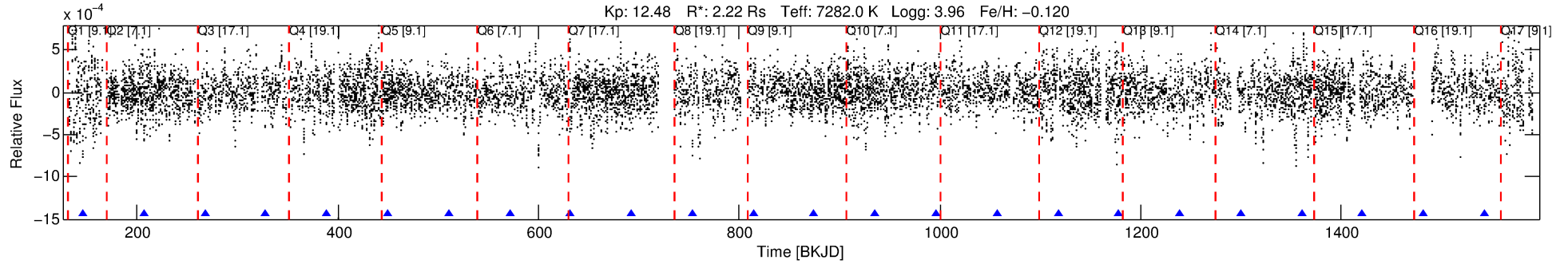
Ephemeris Match Information For 005265699-03

No Significant Match Found



# DV One-Page Summary

KIC: 5265699 Candidate: 3 of 9 Period: 60.712 d



## DV Fit Results:

Period = 60.71183 [0.00165] d  
Epoch = 146.3420 [0.0226] BKJD  
Rp/R\* = 0.0252 [0.0021]  
a/R\* = 17.64 [2.55]  
b = 0.97 [0.01]  
Seff = 97.40 [47.47]  
Teq = 801 [98] K  
Rp = 6.09 [2.11] Re  
a = 0.3564 [0.1070] AU  
Ag = 495.66 [268.22] [1.84 $\sigma$ ]  
Teffp = 5844 [487] K [10.16 $\sigma$ ]

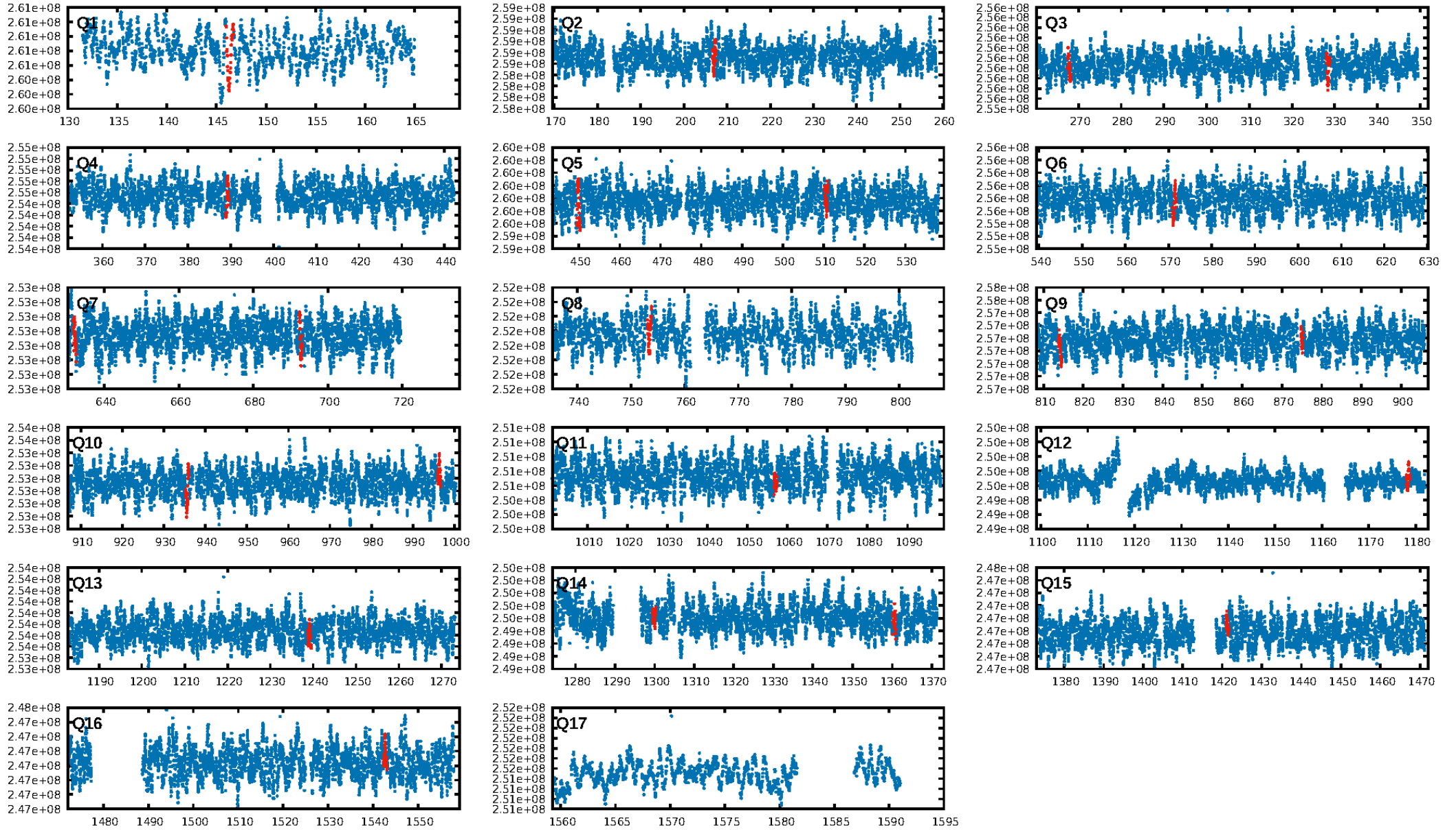
## DV Diagnostic Results:

ShortPeriod-sig: 94.3% [1.90 $\sigma$ ]  
LongPeriod-sig: 100.0% [17.35 $\sigma$ ]  
ModelChiSquare2-sig: 14.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [9/9]  
GhostDiagnostic-chr: 0.2553  
Centroid-sig: 0.0%  
Centroid-so: 0.496 arcsec [3.08 $\sigma$ ]  
OotOffset-rm: 0.214 arcsec [0.39 $\sigma$ ]  
KicOffset-rm: 0.309 arcsec [0.68 $\sigma$ ]  
OotOffset-st: 3/2/3/4 [12]  
KicOffset-st: 3/2/3/4 [12]  
DiffImageQuality-fgm: 0.42 [5/12]  
DiffImageOverlap-fno: 0.00 [0/15]

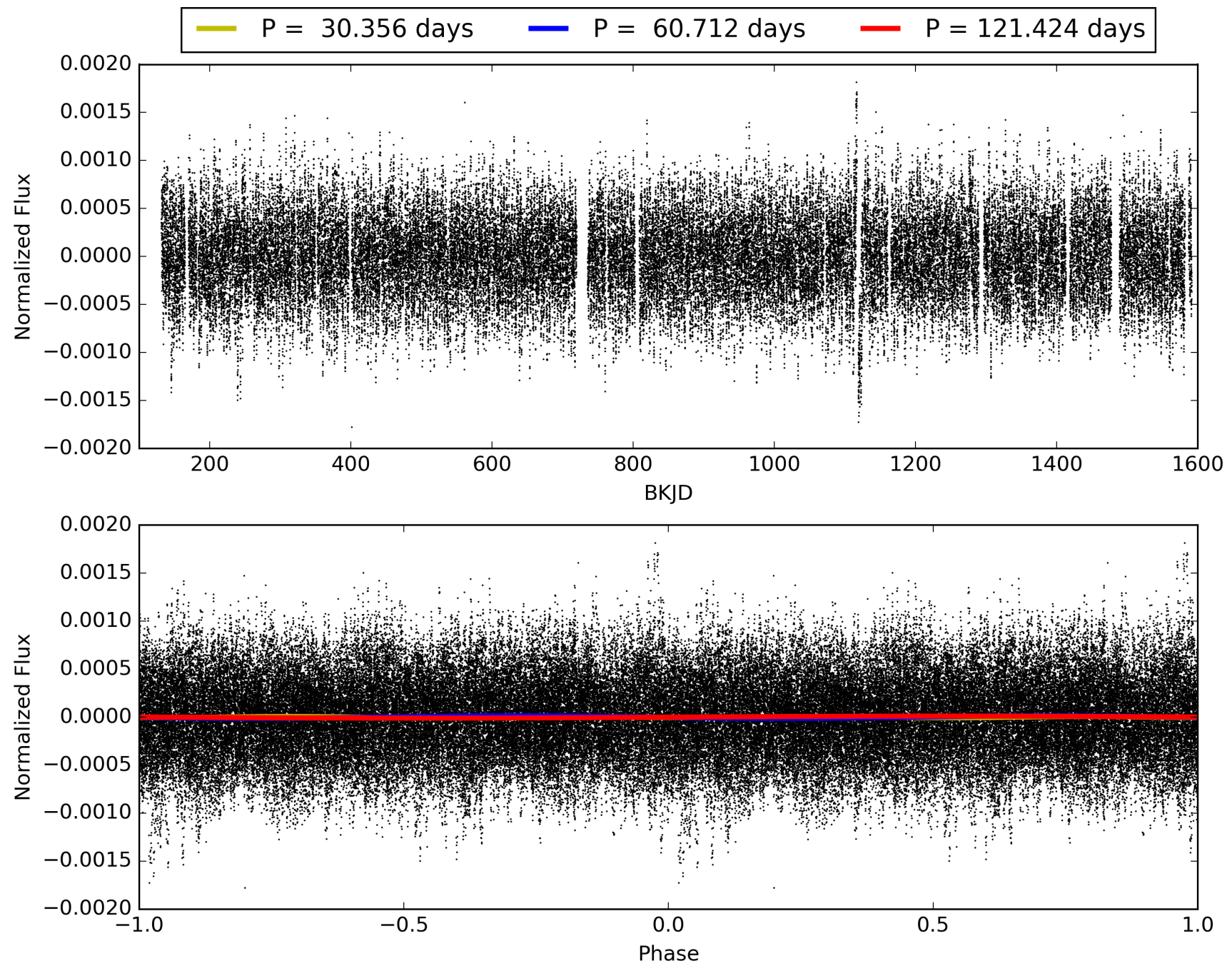
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:37:55 Z

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

# TCE 005265699-03, PDC Light Curves

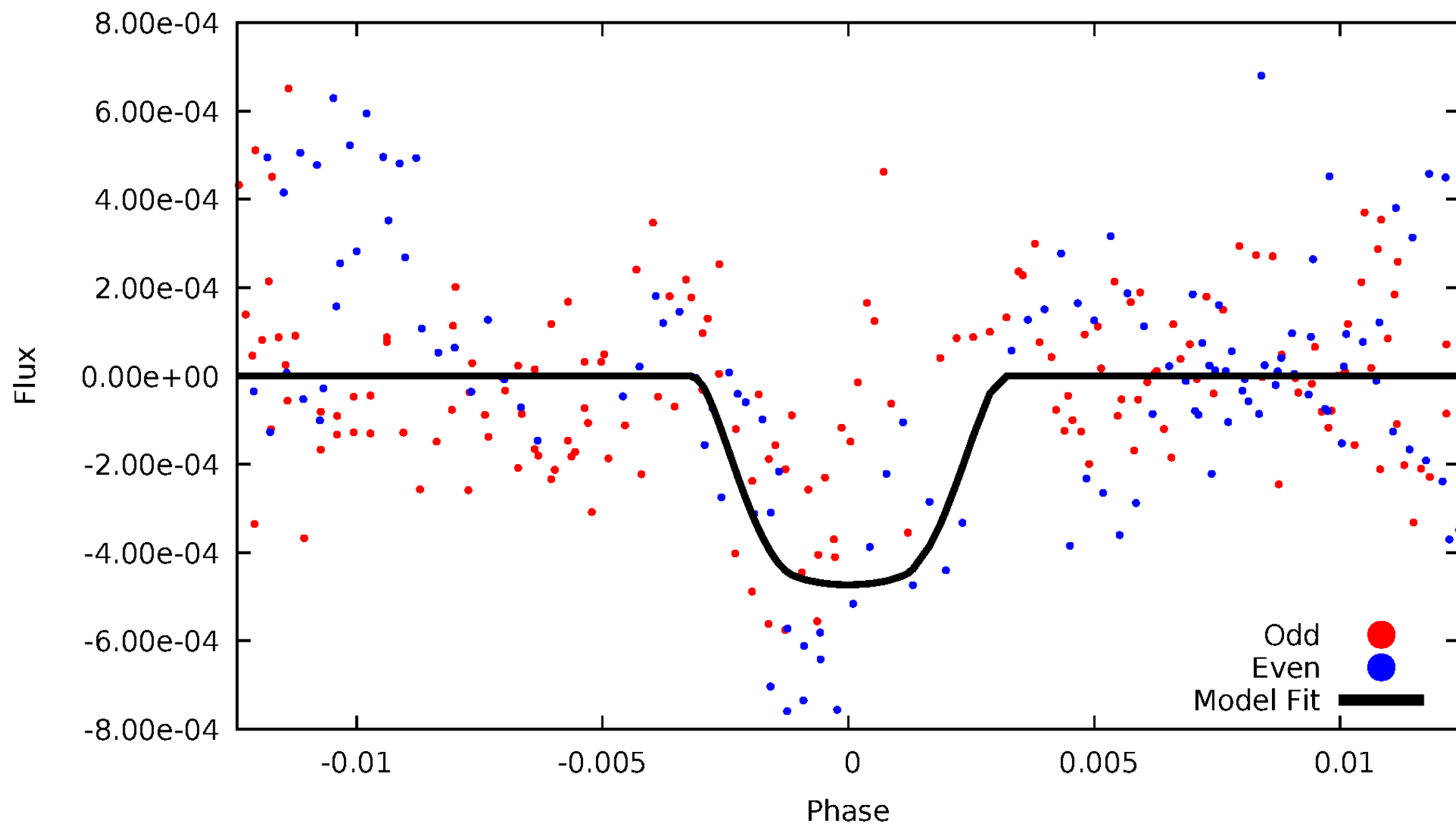


# TCE 005265699-03



# DV Odd/Even

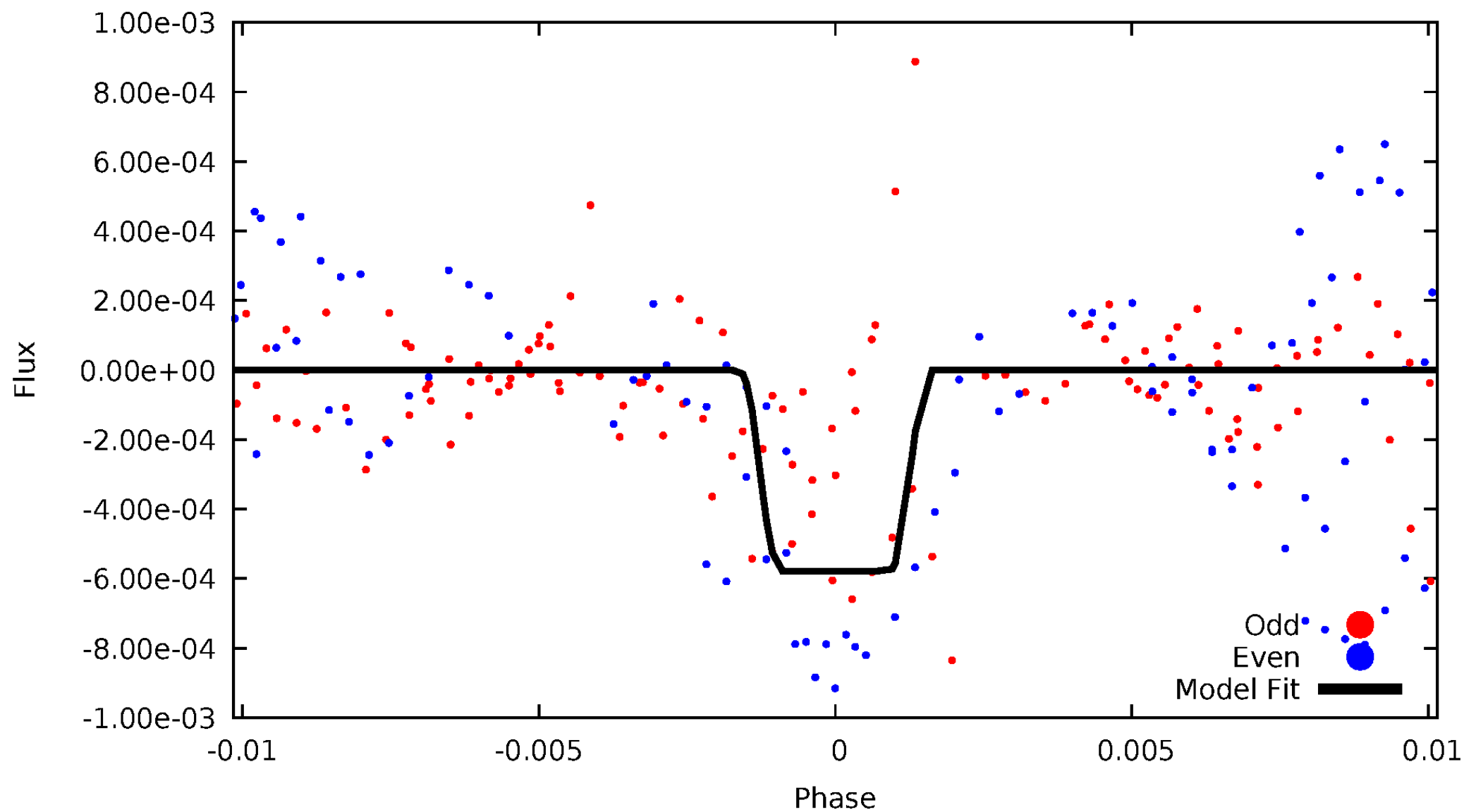
TCE 005265699-03





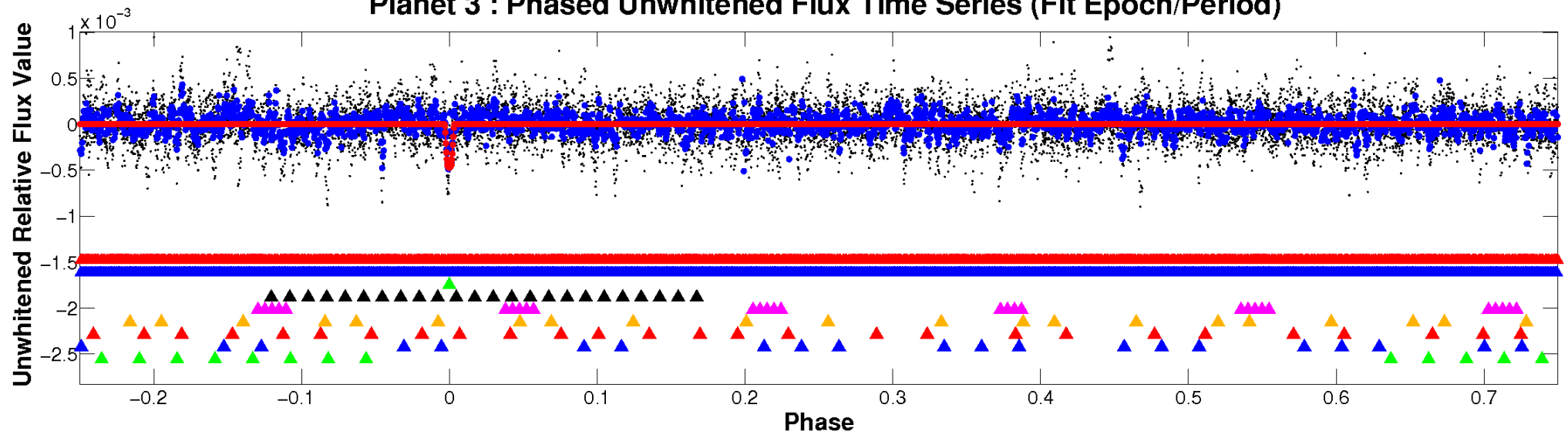
# ALT Odd/Even

TCE 005265699-03

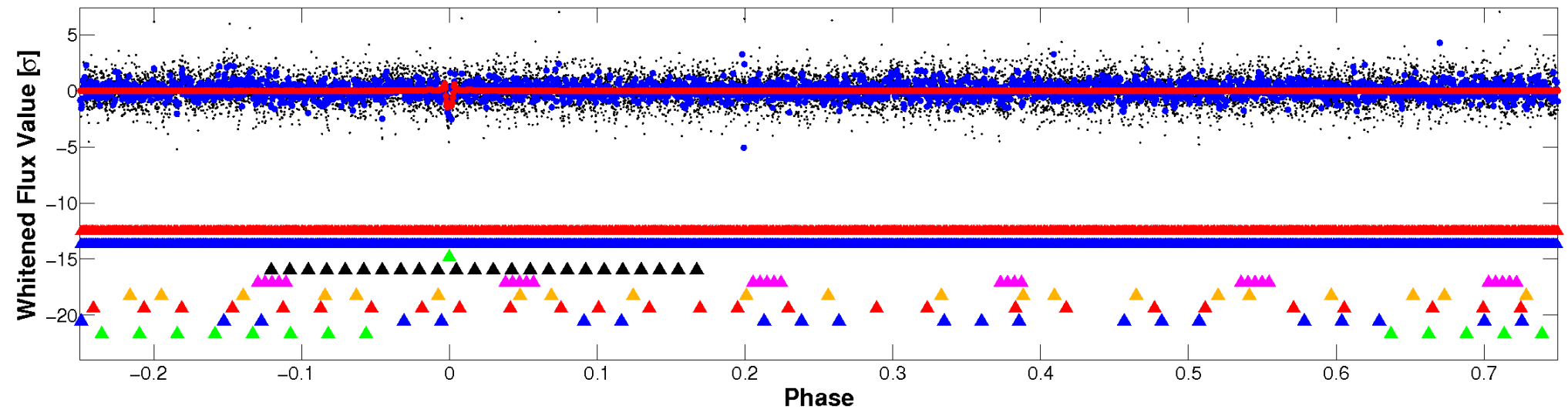


# Non-Whitened Vs. Whitened Light Curve

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

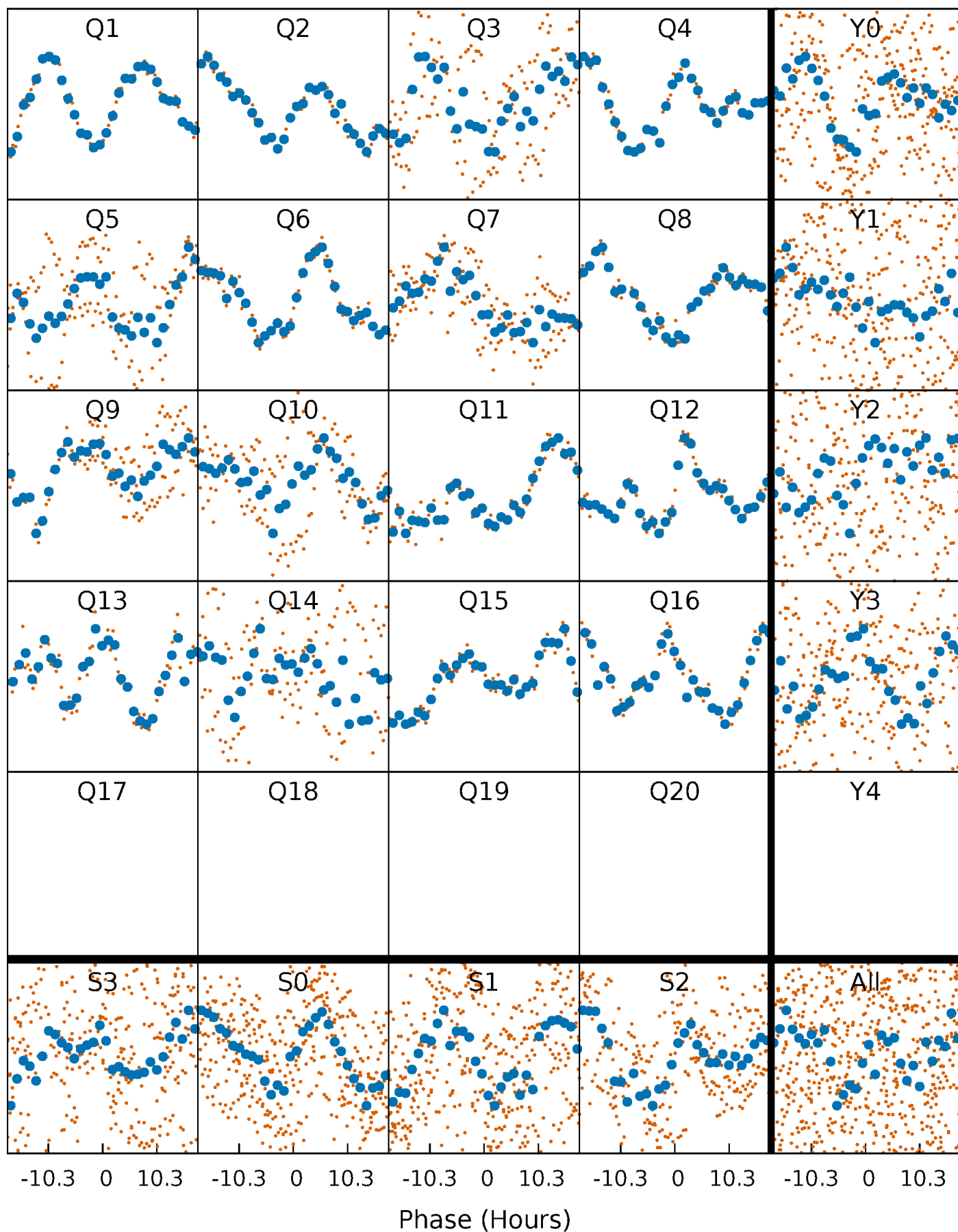


## Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



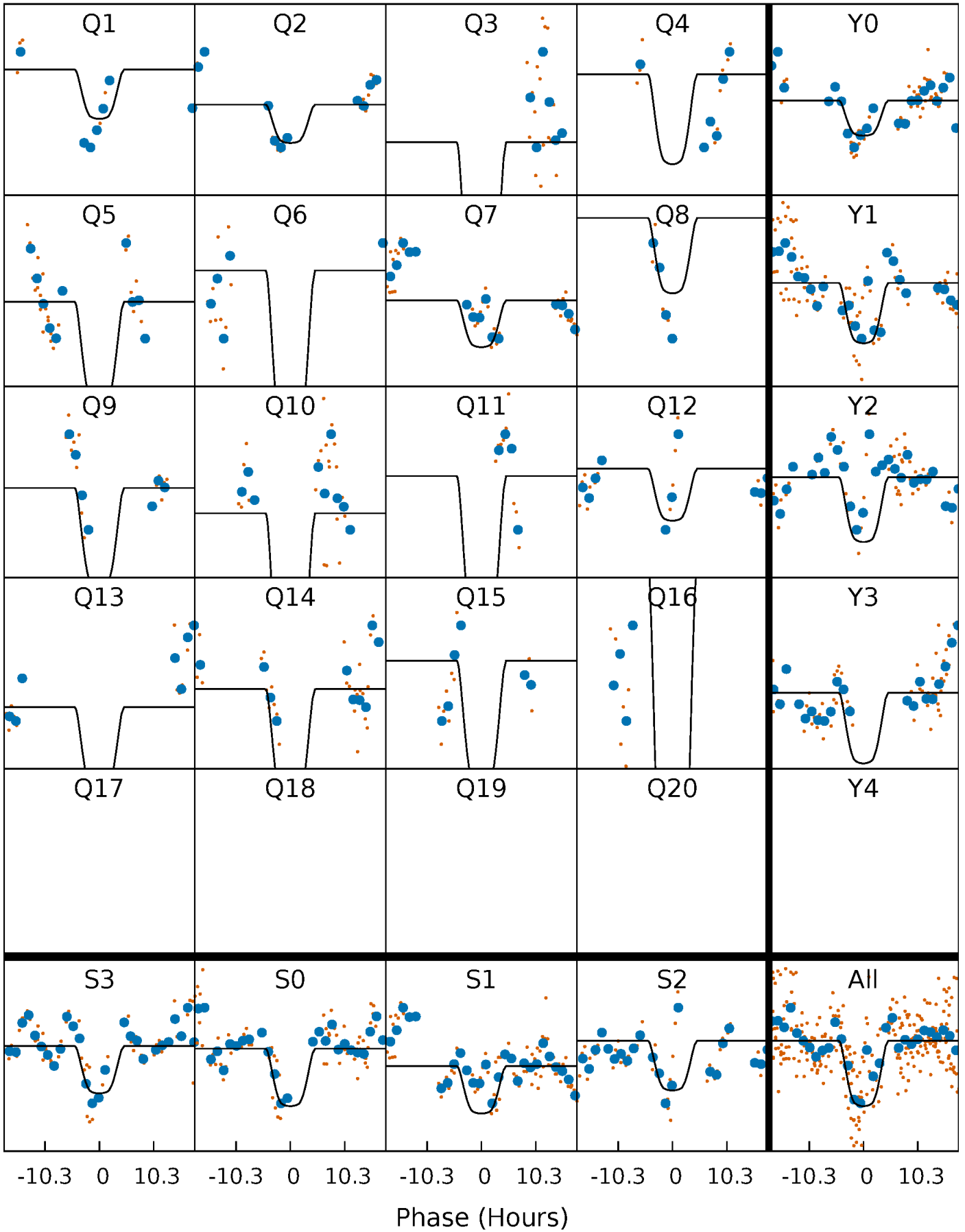
# PDC Quarter-Phased Transit Curves

TCE 005265699-03 P= 60.711829 Days  $T_0=146.341993$  (BKJD)



# DV Quarter-Phased Transit Curves

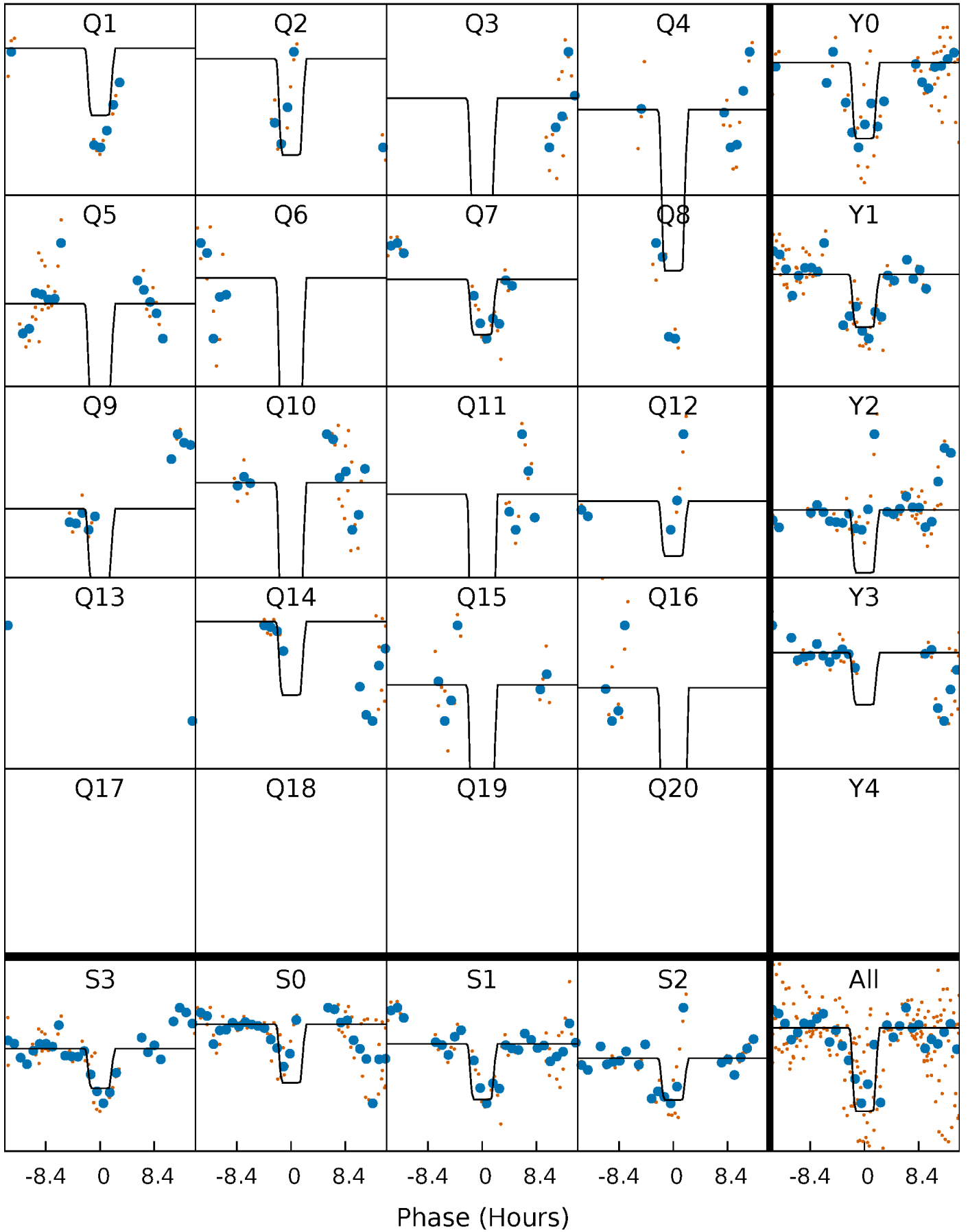
TCE 005265699-03     $P = 60.711829$  Days     $T_0 = 146.341993$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

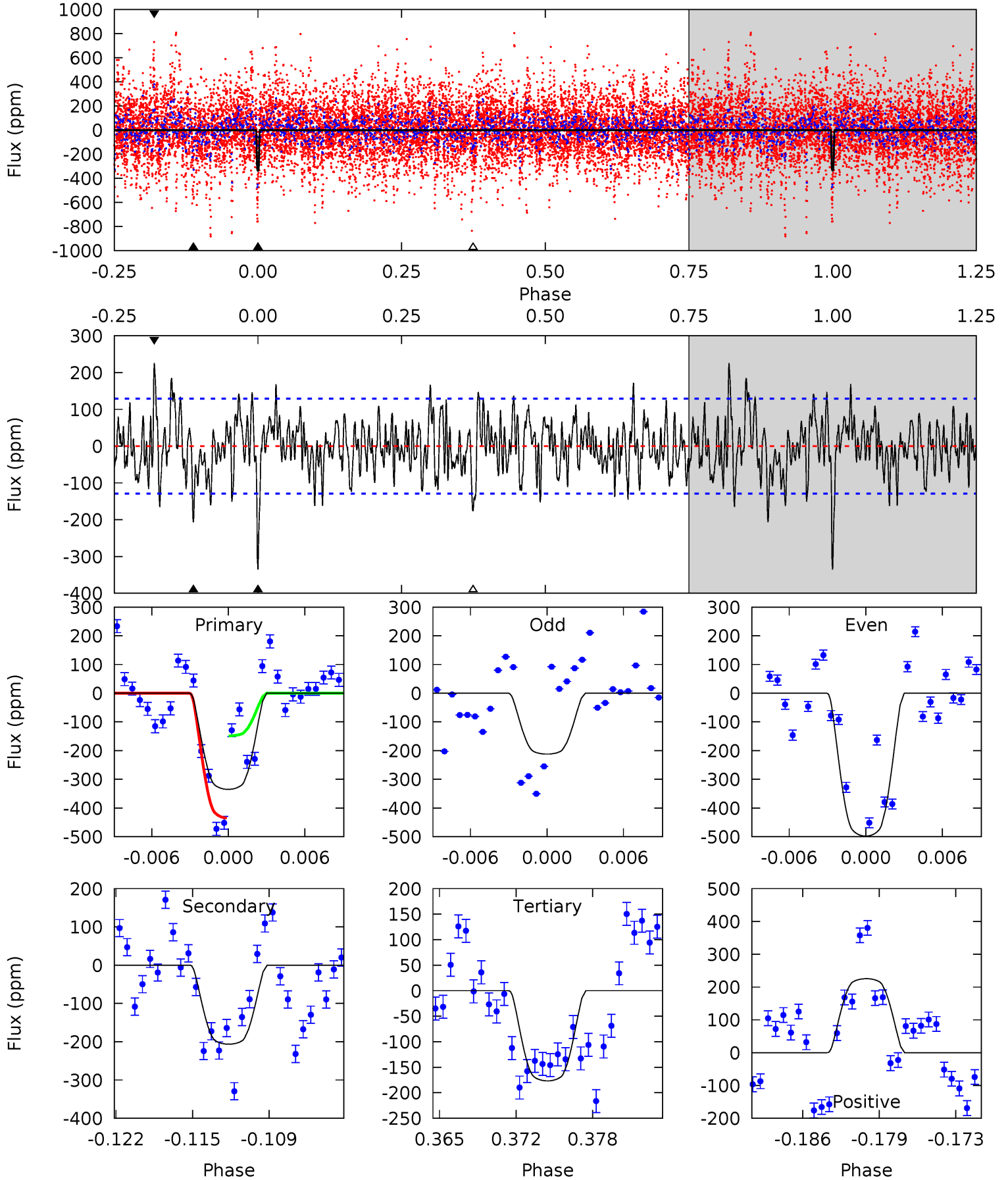
TCE 005265699-03     $P = 60.712806$  Days     $T_0 = 146.286953$  (BKJD)



# DV Model-Shift Uniqueness Test

005265699-03, P = 60.711829 Days, E = 85.630164 Days

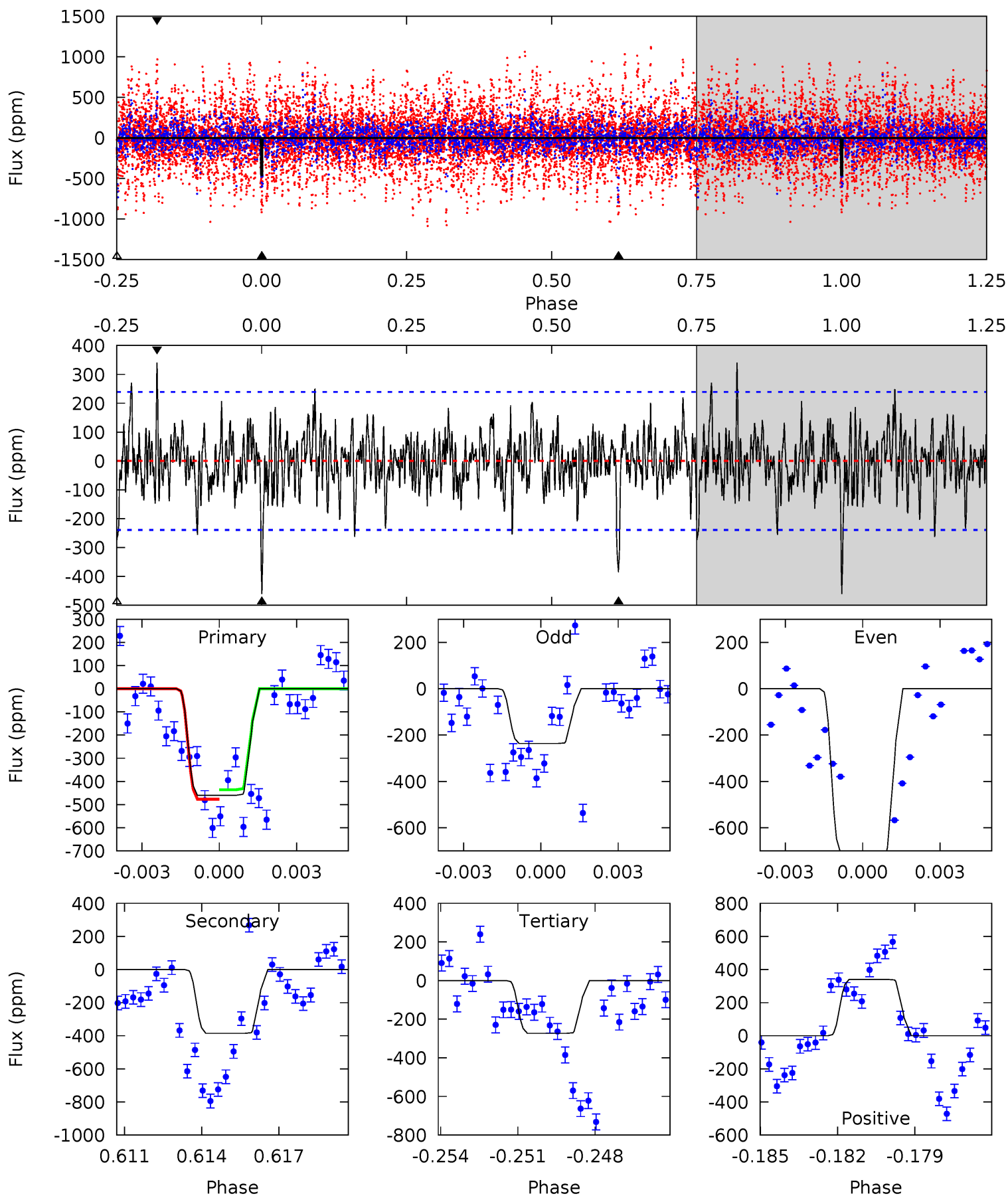
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	8.17	7.00	8.93	5.11	2.73	2.46	6.27	4.34	1.18	-0.75	5.58	0.62	0.40	5.23



# Alt Model-Shift Uniqueness Test

005265699-03, P = 60.712806 Days, E = 85.574147 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
10.1	8.47	6.00	7.47	5.24	2.95	1.69	4.10	2.63	2.47	1.00	5.09	1.33	0.43	0.44



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-206 \pm 25$	$5.99^{+1.03}_{-1.12}$	$1109^{+82}_{-100}$	$5434^{+327}_{-293}$	$399^{+194}_{-116}$
Alt.	$-386 \pm 46$	$5.65^{+1.05}_{-0.99}$	$1102^{+83}_{-89}$	$6482^{+428}_{-408}$	$824^{+386}_{-241}$

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

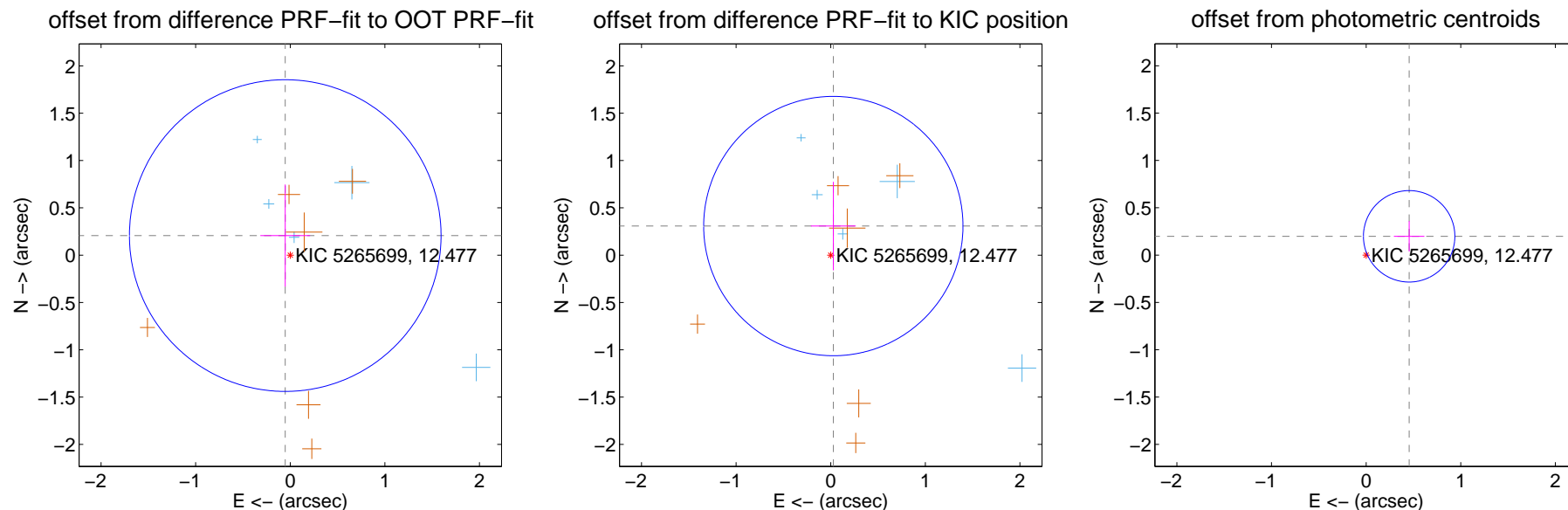
## DV Centroid Data

Supplemental centroid analysis for 005265699-03. Kepler magnitude: 12.48. Transit SNR 8.76

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

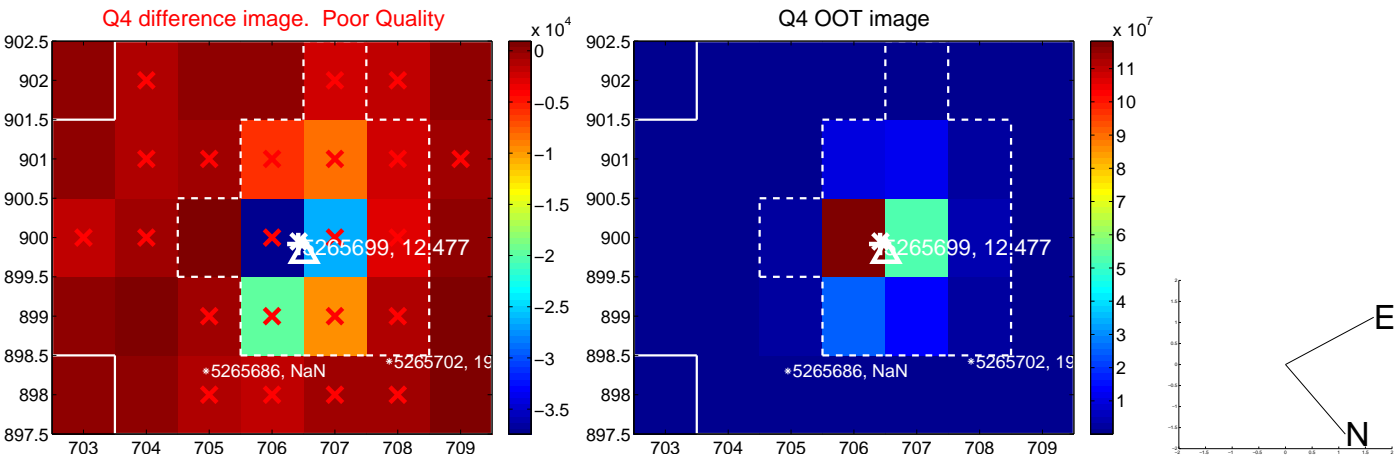
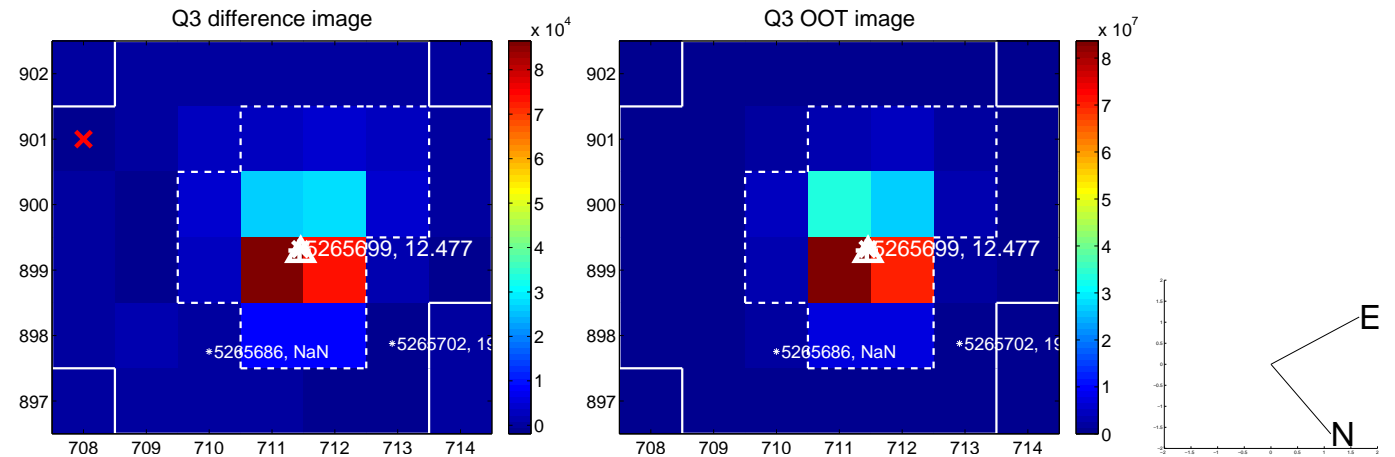
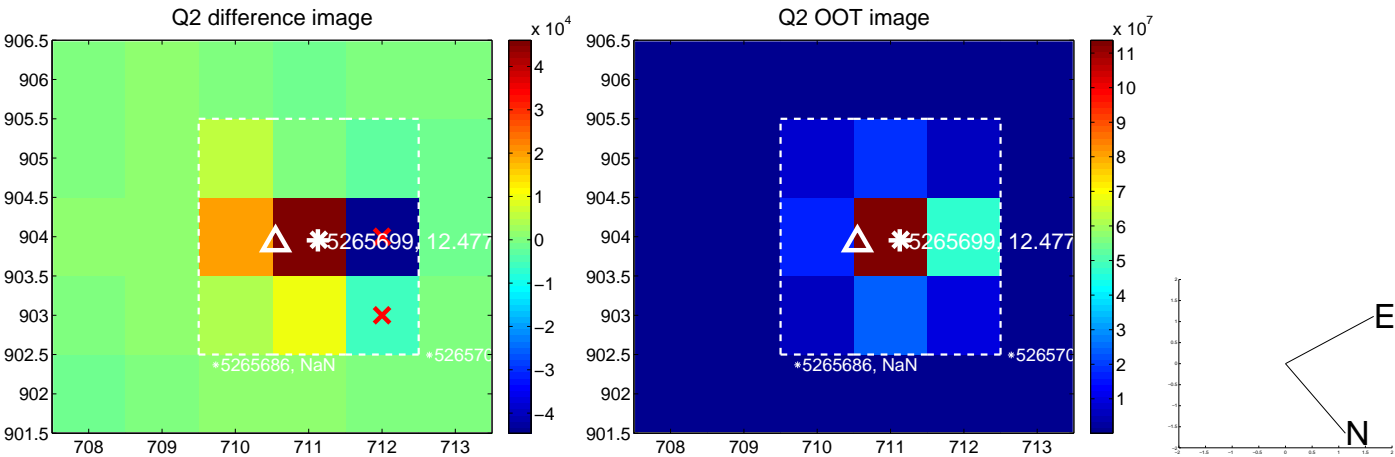
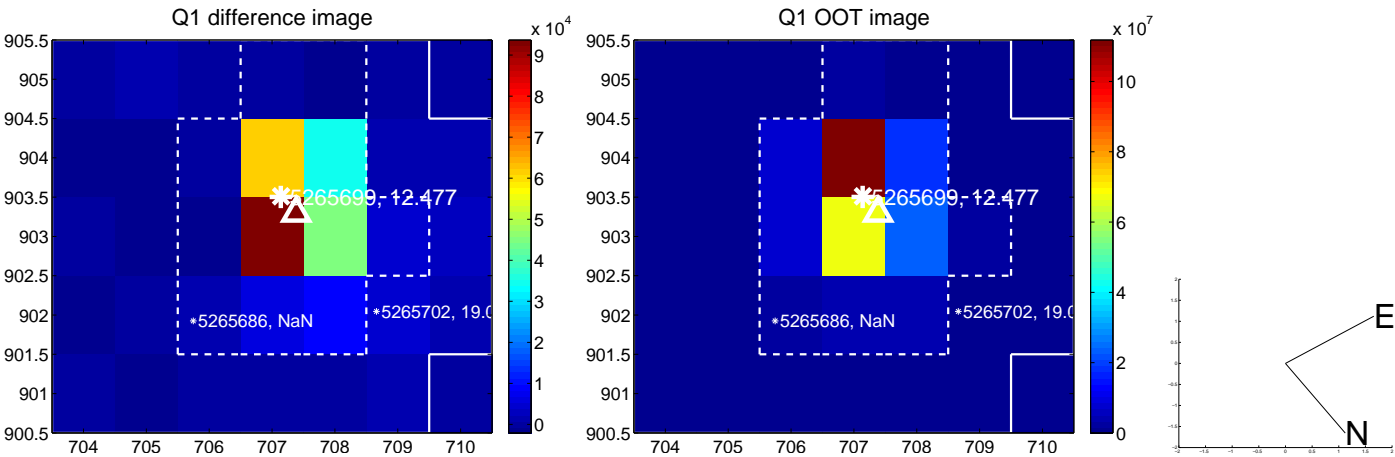
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.214 \pm 0.549$	0.39	$0.053 \pm 0.263$	$0.207 \pm 0.539$
PRF-fit source offset from KIC position	$0.309 \pm 0.457$	0.68	$-0.028 \pm 0.238$	$0.308 \pm 0.468$
photometric centroid source offset	$0.50 \pm 0.16$	3.08	$-0.45 \pm 0.16$	$0.20 \pm 0.16$



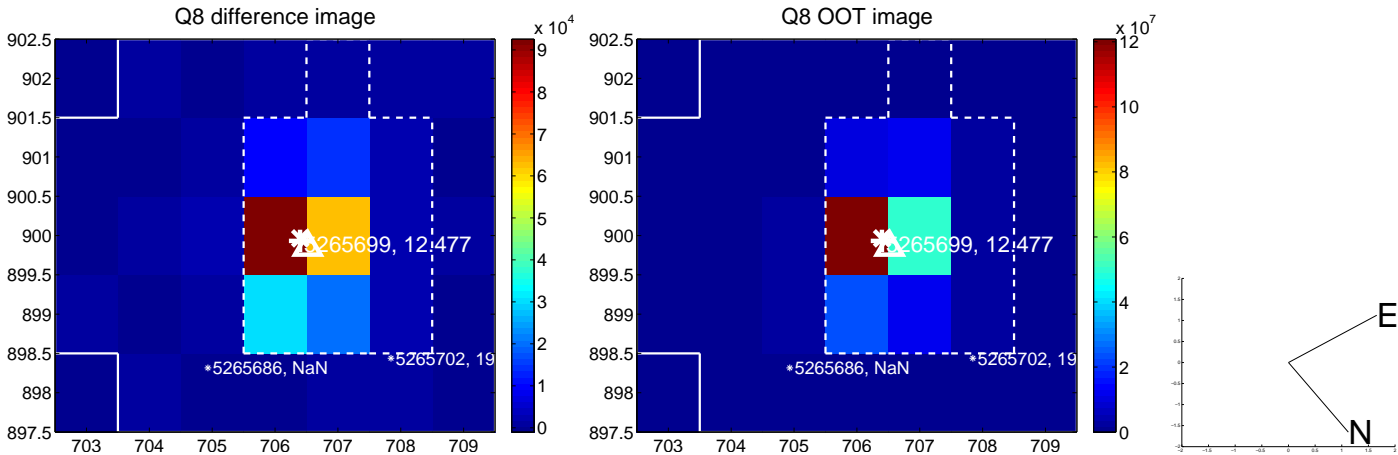
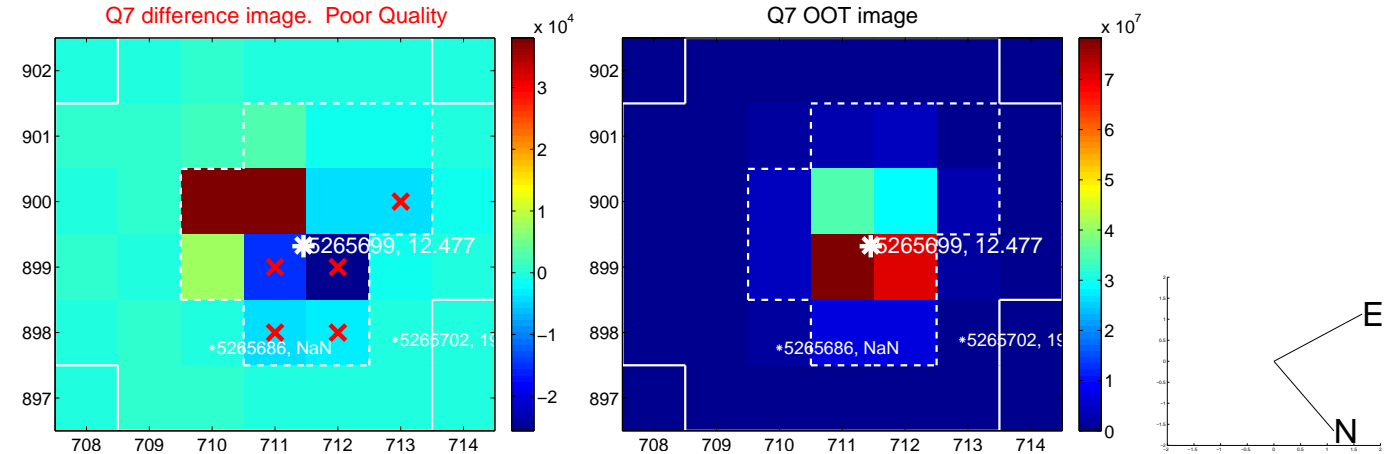
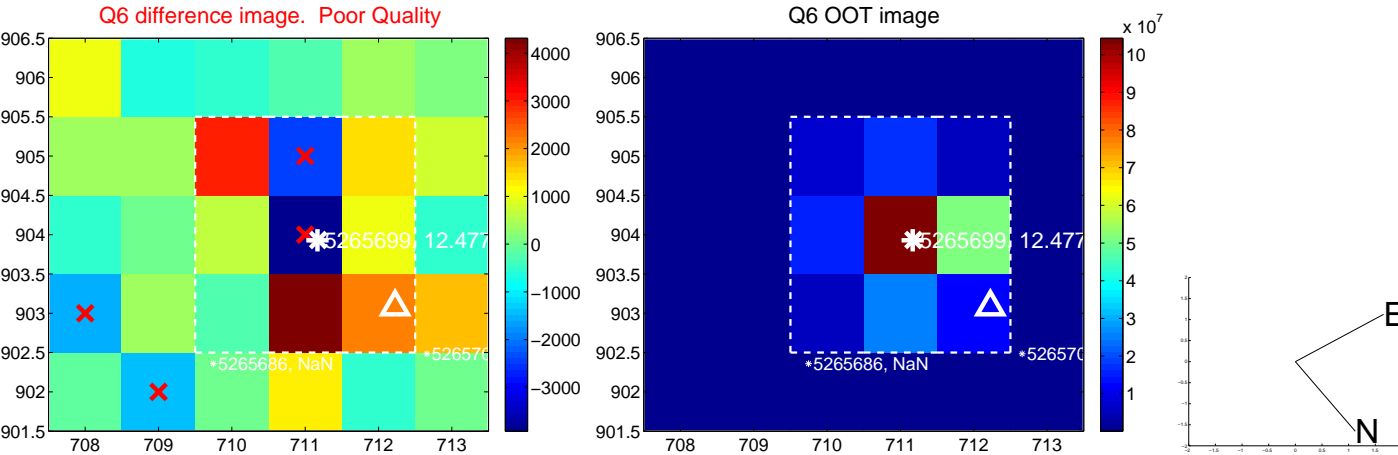
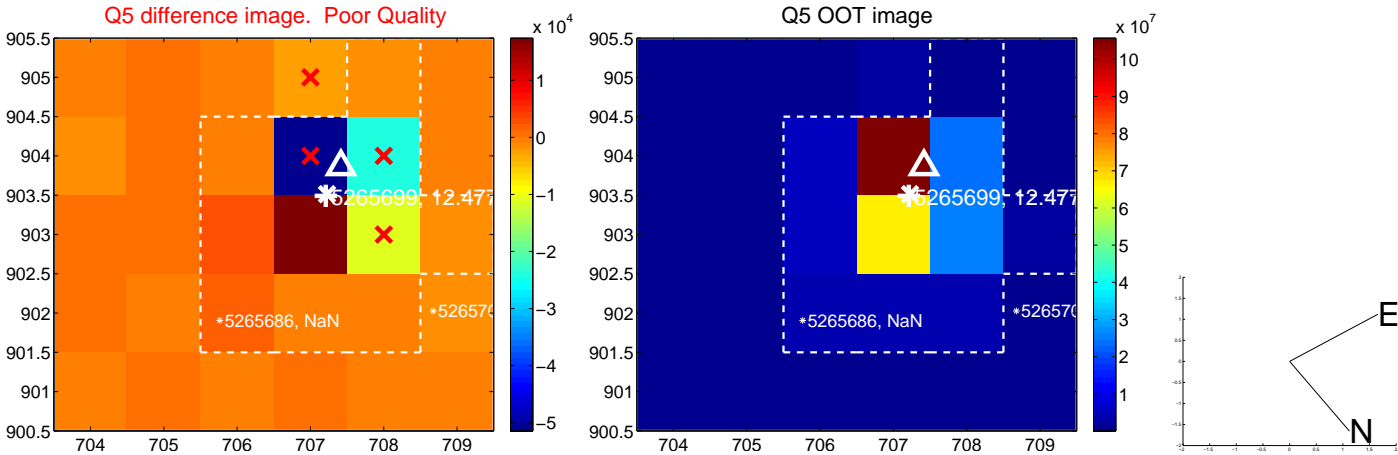
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



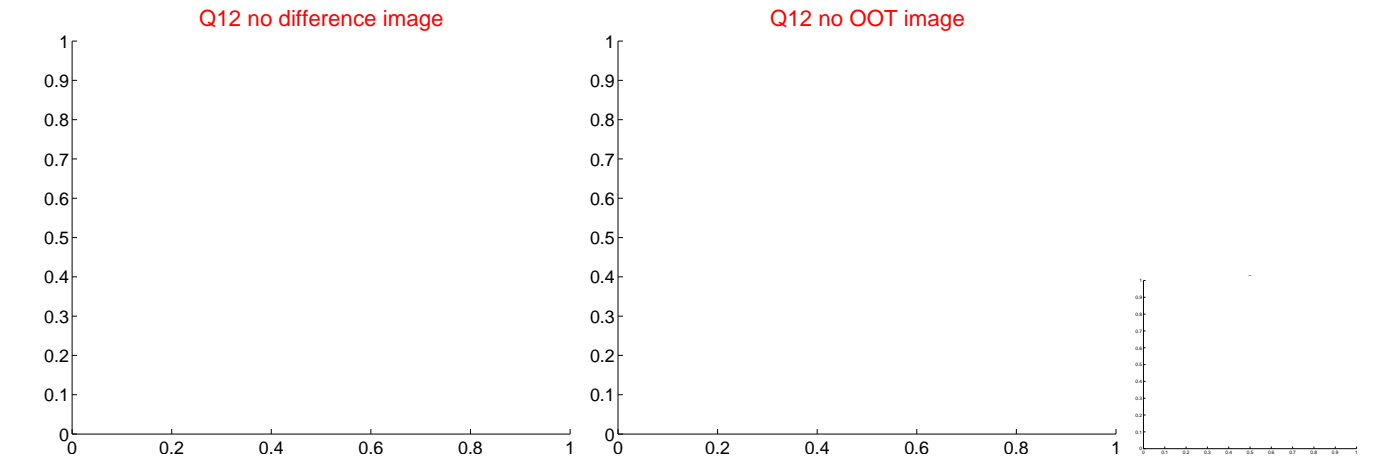
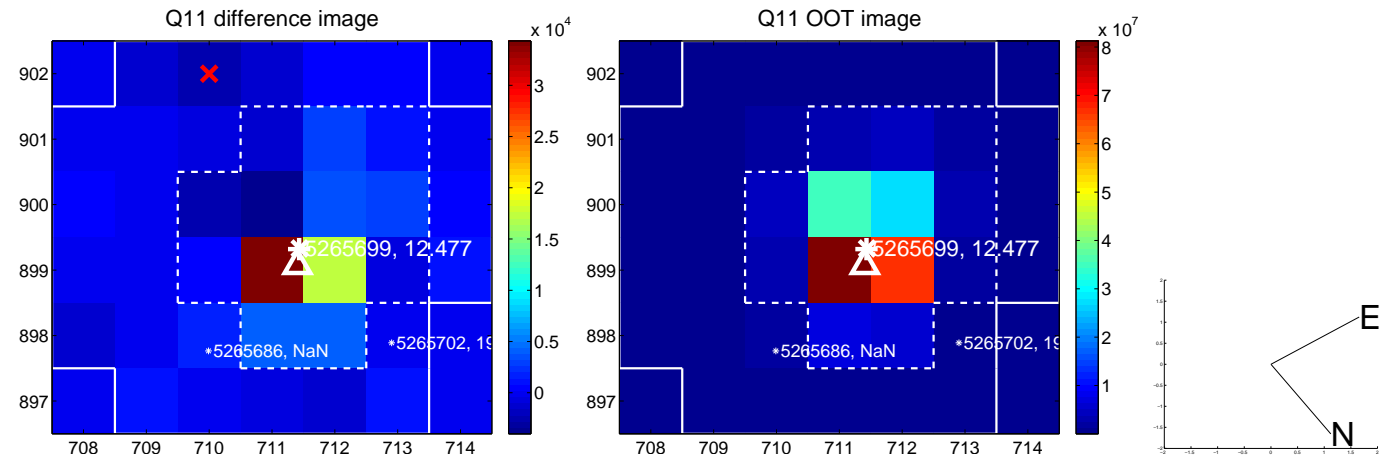
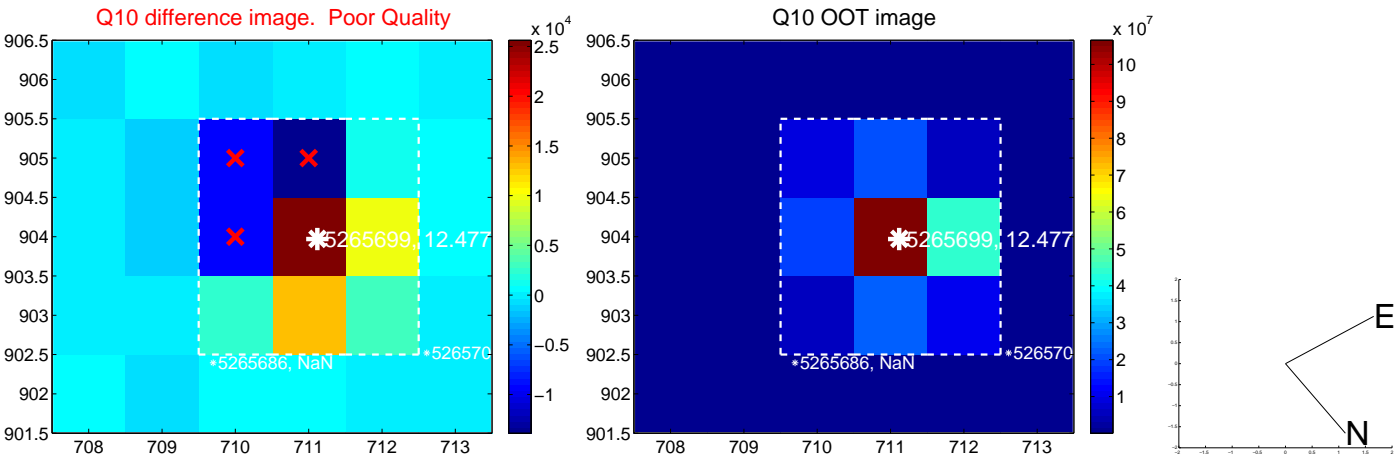
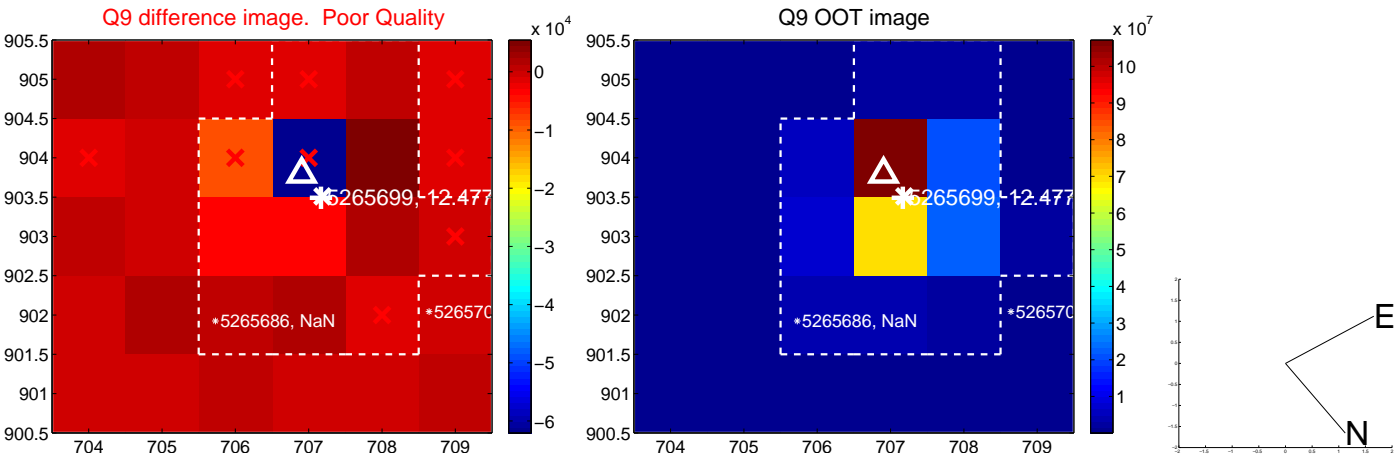
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



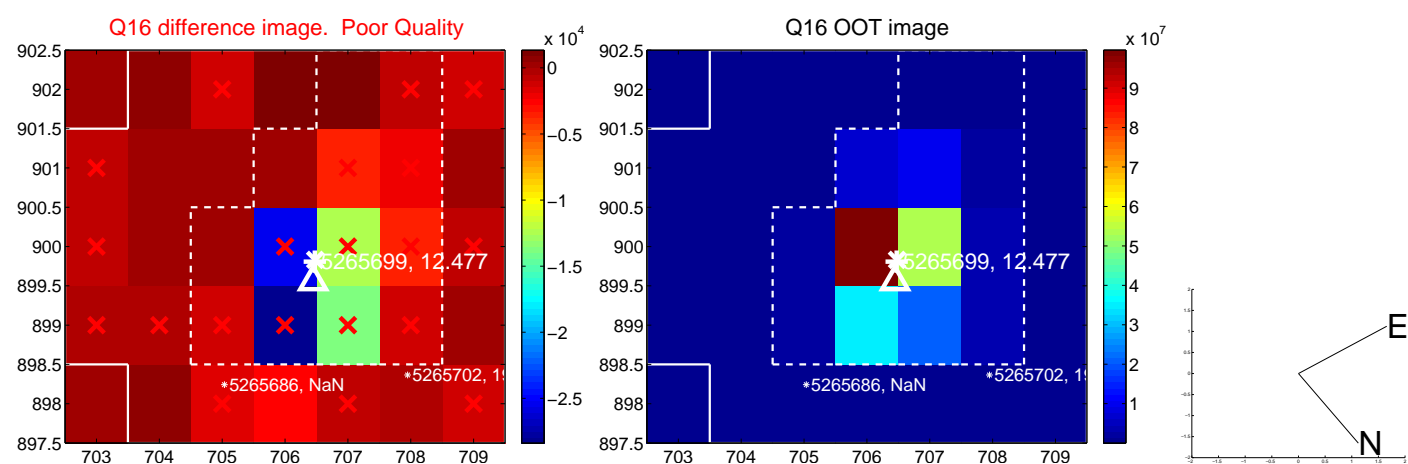
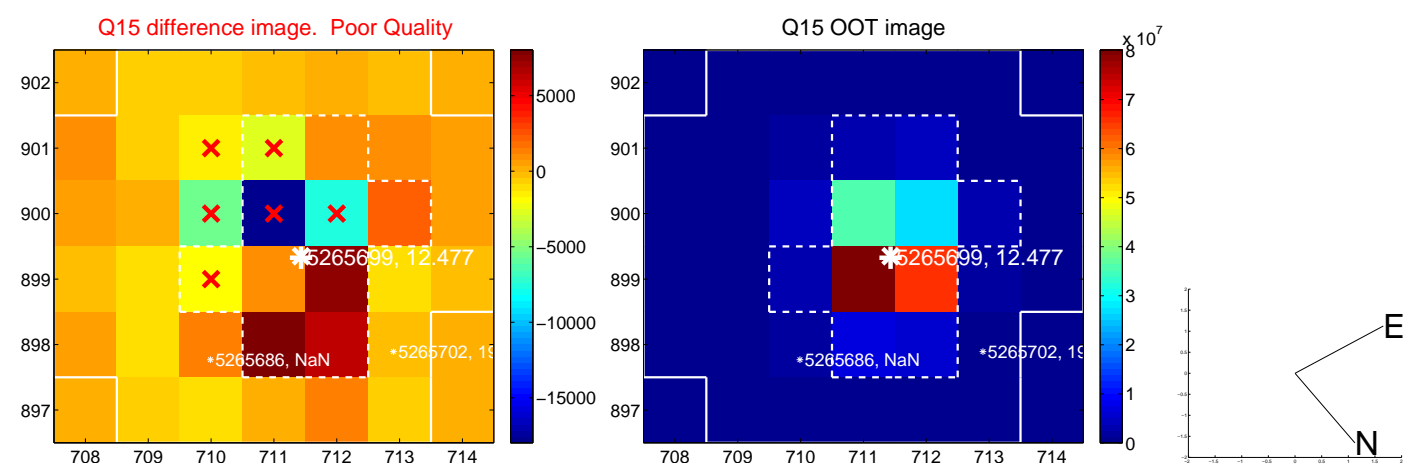
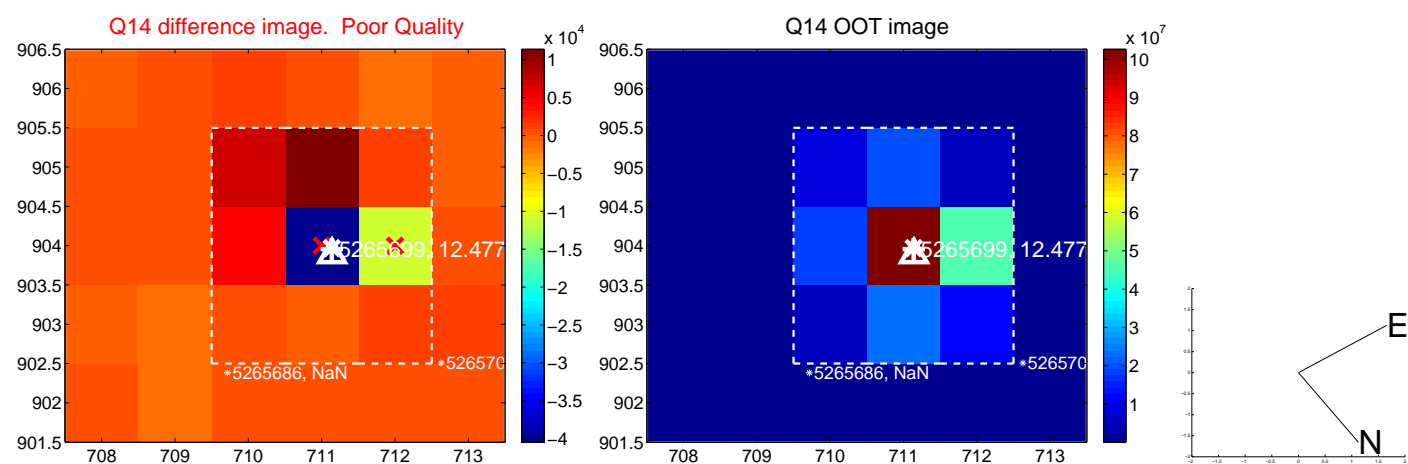
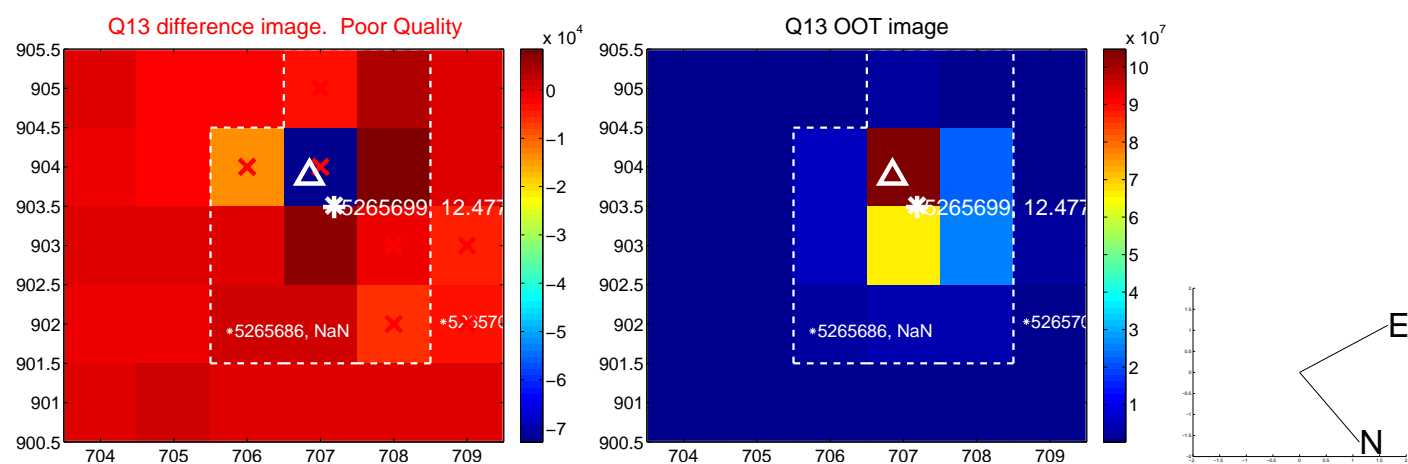
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



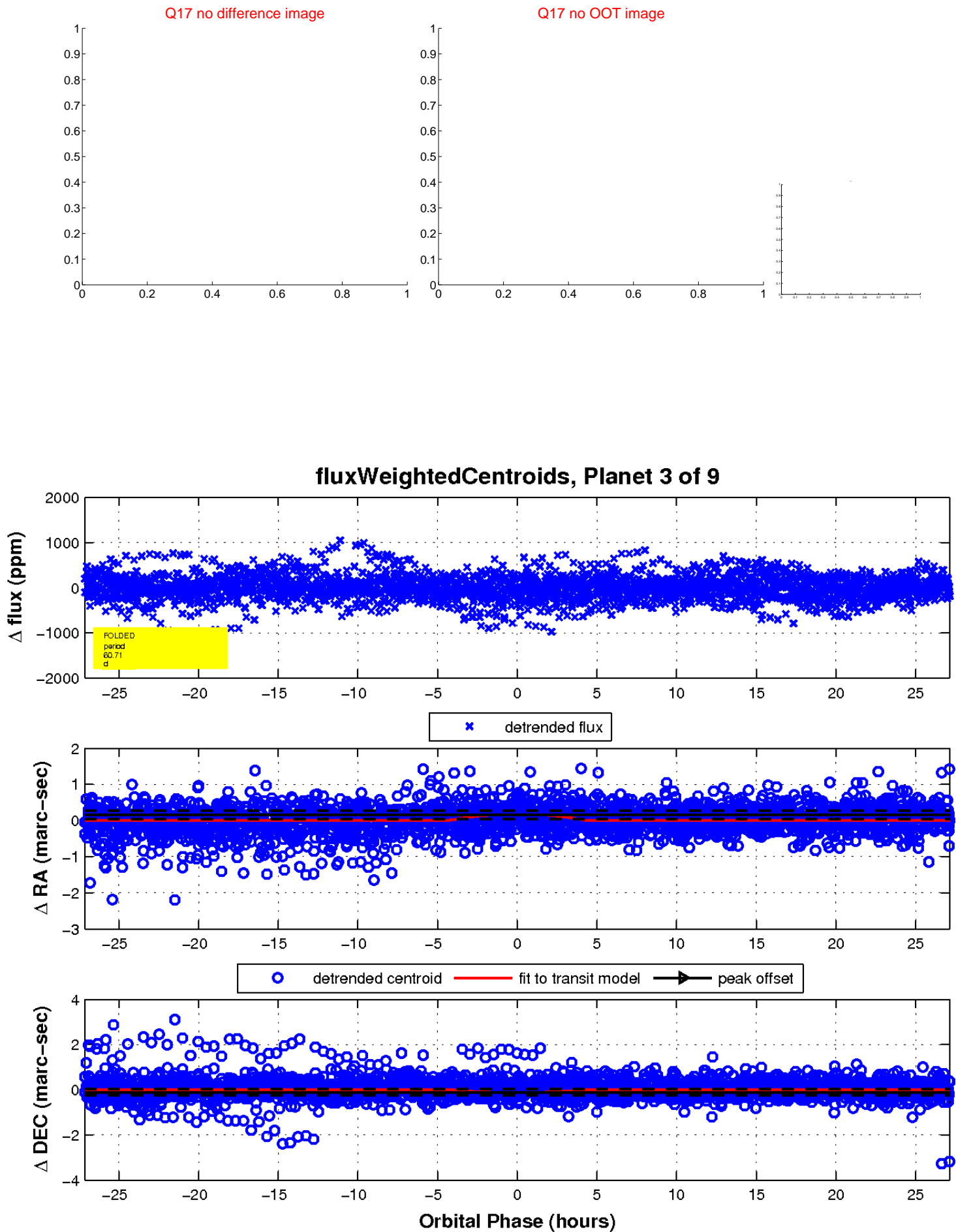
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



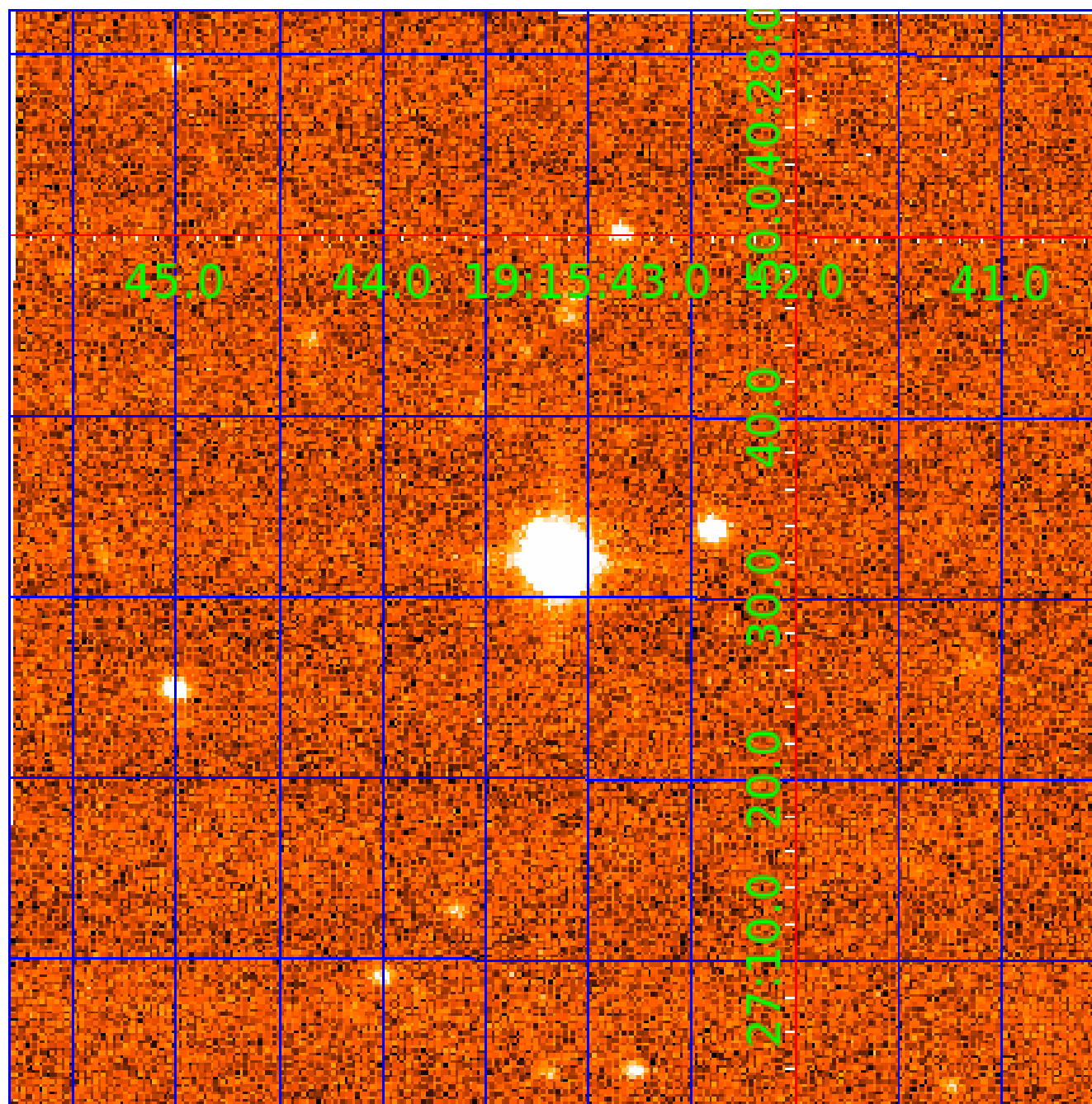
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





# UKIRT Image

Declination



# KIC 005265699

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005265699-01	OBS	No	1.374044	131.714311	33.5	3.650	9.2	9.7	2.22	7282	1.49	15215.14
005265699-02	OBS	No	0.689031	132.203374	3.0	3.776	10.8	1.0	2.22	7282	0.40	38190.78
005265699-03	OBS	No	60.711829	146.341993	472.9	9.051	9.4	8.8	2.22	7282	6.09	97.41
005265699-04	OBS	No	59.952043	156.502807	201.6	3.187	9.9	6.7	2.22	7282	3.62	99.05
005265699-05	OBS	No	50.545316	159.964247	234.4	4.380	9.1	6.5	2.22	7282	3.88	124.37
005265699-06	OBS	No	68.720978	171.196883	393.1	12.671	8.9	8.0	2.22	7282	5.10	82.57
005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005265699-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

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

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

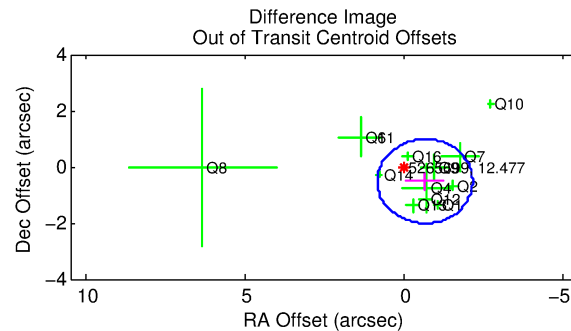
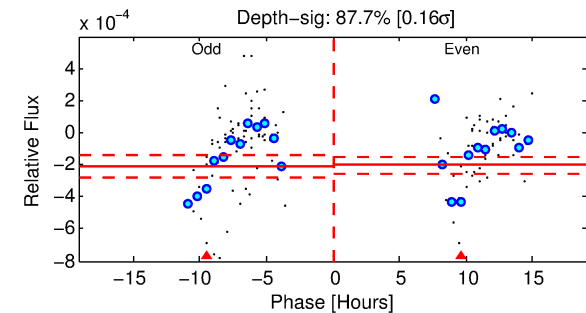
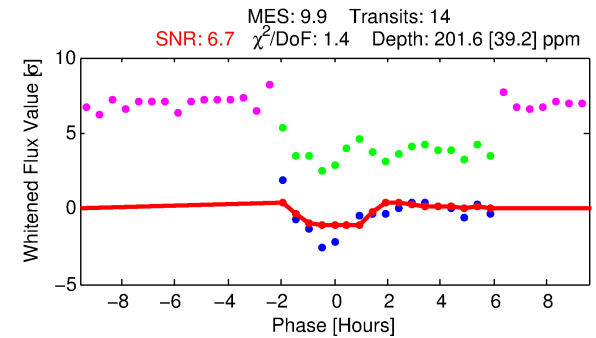
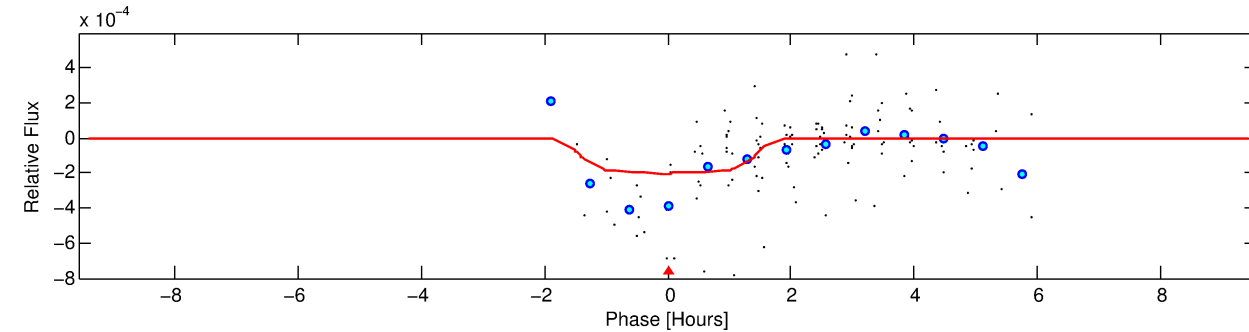
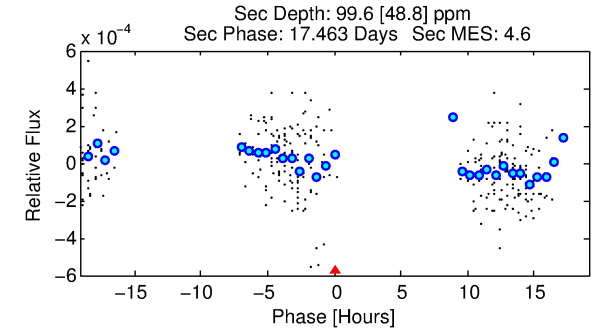
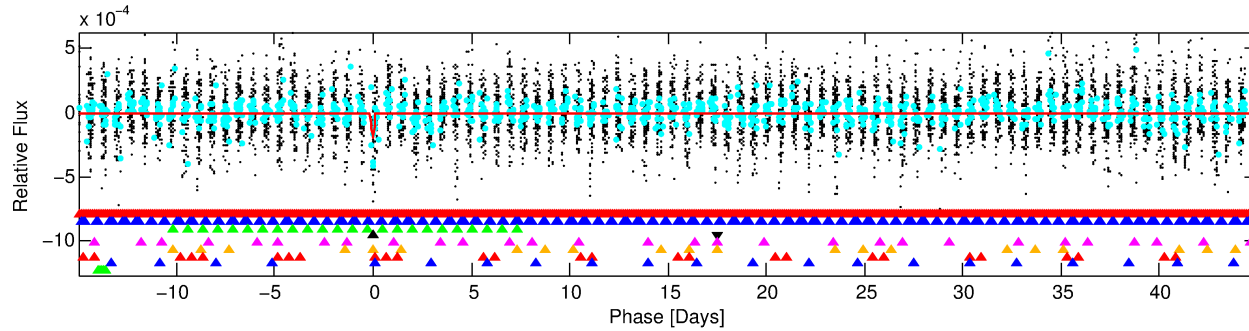
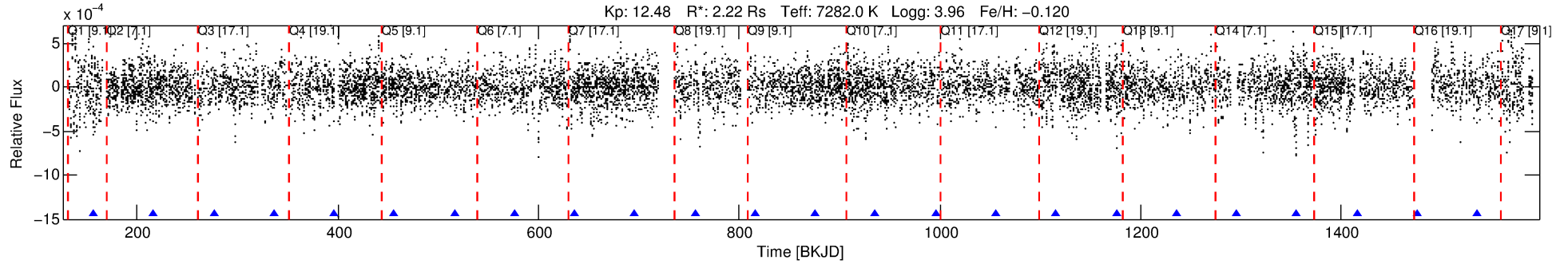
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-04

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 4 of 9 Period: 59.952 d



## DV Fit Results:

Period = 59.95204 [0.00085] d  
Epoch = 156.5028 [0.0161] BKJD  
Rp/R\* = 0.0150 [0.0329]  
a/R\* = 71.65 [972.34]  
b = 0.88 [3.41]  
Seff = 99.05 [48.28]  
Teq = 804 [98] K  
Rp = 3.62 [8.04] Re  
a = 0.3534 [0.1061] AU  
Ag = 522.74 [2323.15] [0.22σ]  
Teffp = 5947 [6577] K [0.78σ]

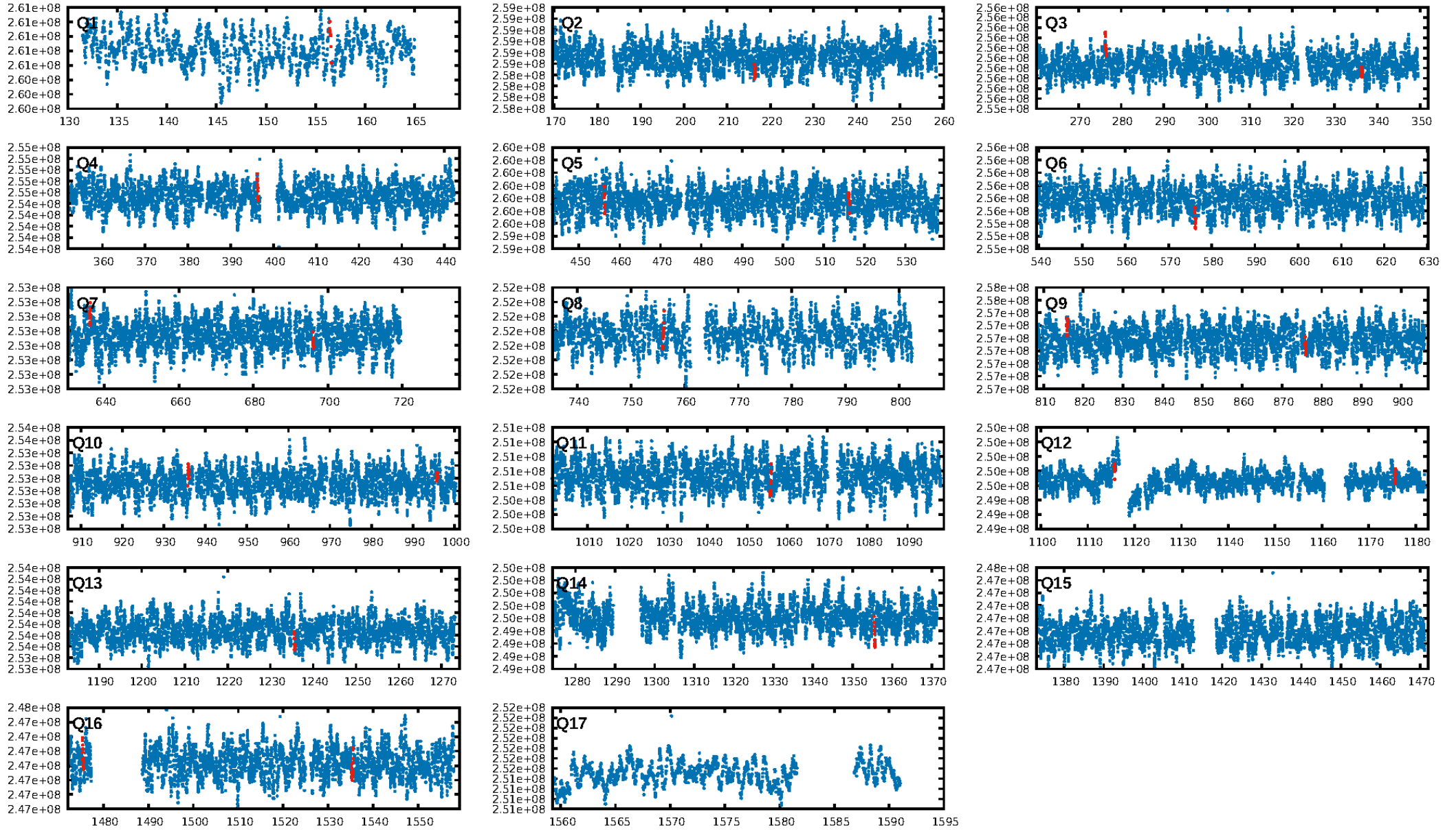
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [13.20σ]  
LongPeriod-sig: 94.3% [1.90σ]  
ModelChiSquare2-sig: 0.3%  
ModelChiSquareGof-sig: 99.9%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [14/14]  
GhostDiagnostic-chr: 0.398  
Centroid-sig: 9.4%  
Centroid-so: 0.749 arcsec [1.46σ]  
OotOffset-rm: 0.836 arcsec [1.67σ]  
OotOffset-st: 4/2/4/3 [13]  
KicOffset-rm: 0.883 arcsec [1.54σ]  
KicOffset-st: 4/2/4/3 [13]  
DiffImageQuality-fgm: 0.62 [8/13]  
DiffImageOverlap-fno: 0.00 [0/15]

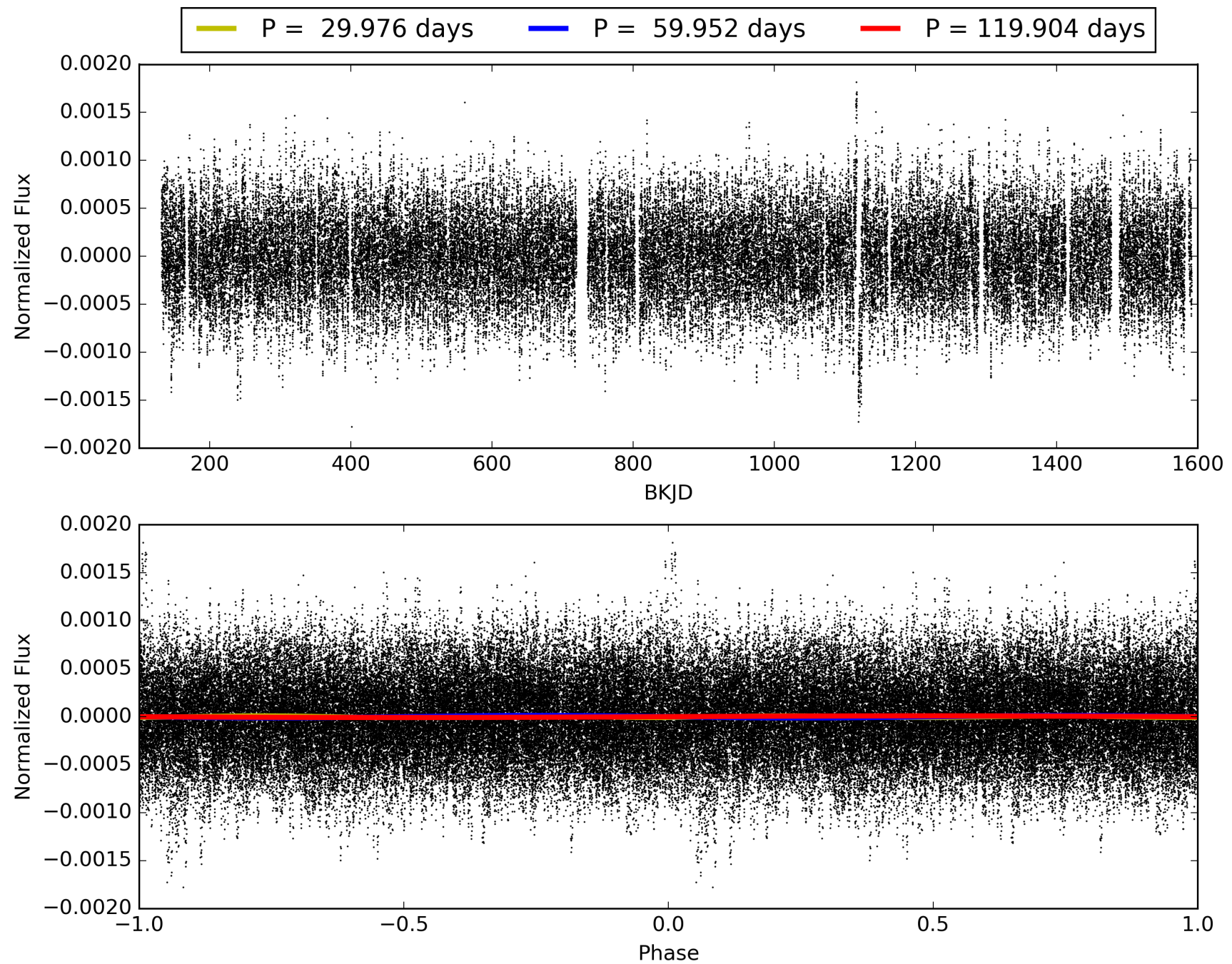
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:37:59 Z

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

# TCE 005265699-04, PDC Light Curves



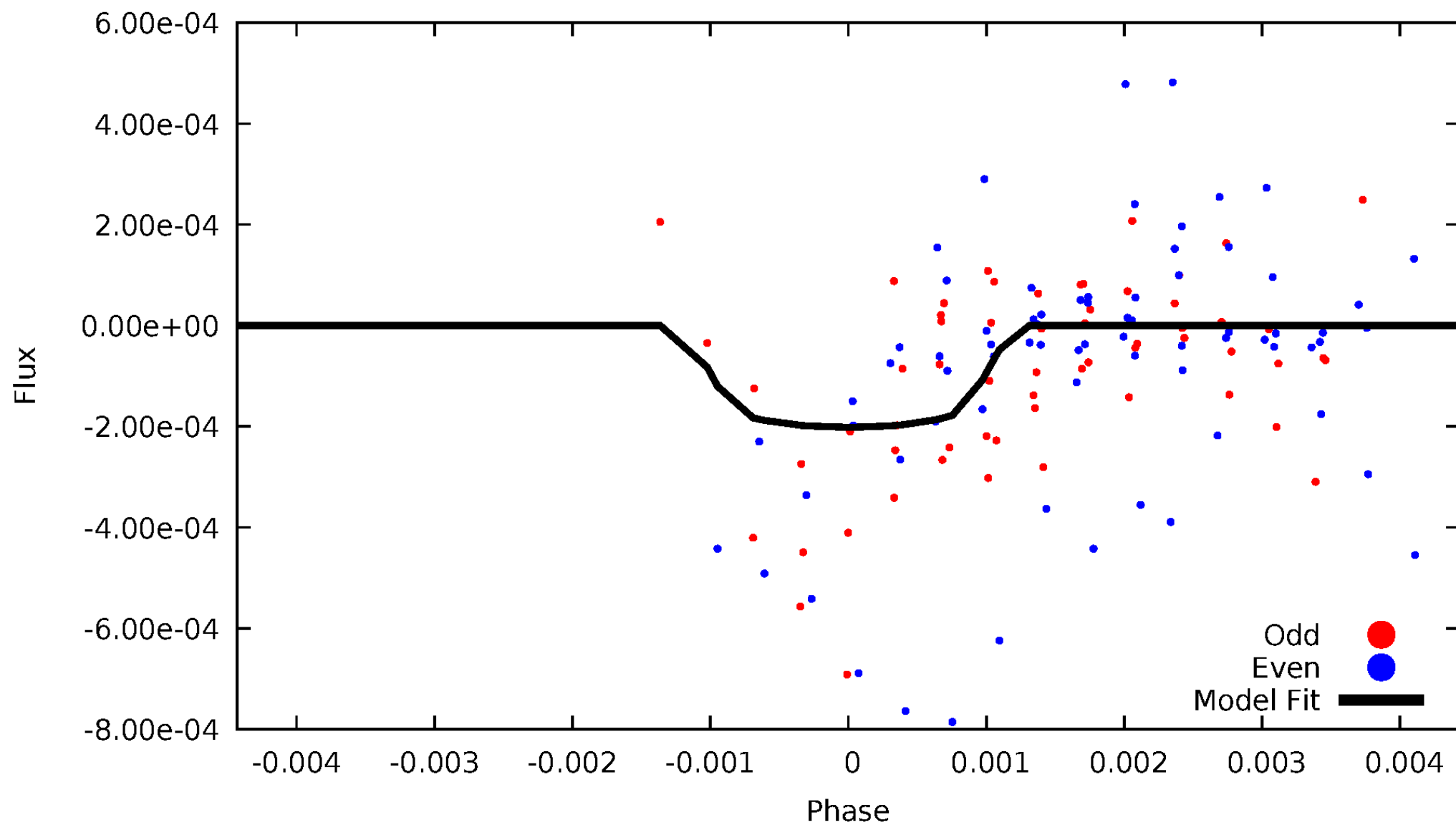
TCE 005265699-04





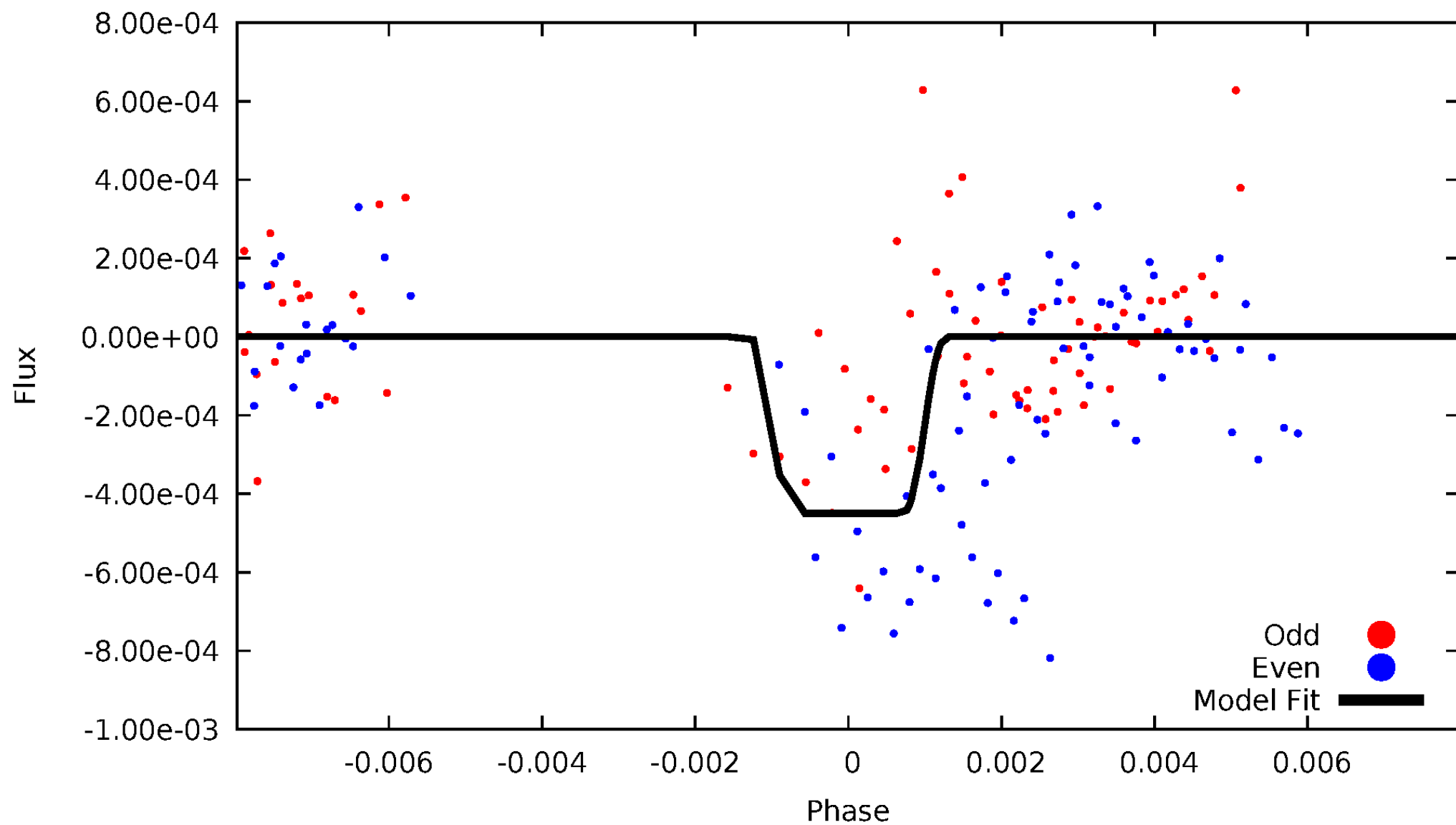
# DV Odd/Even

TCE 005265699-04



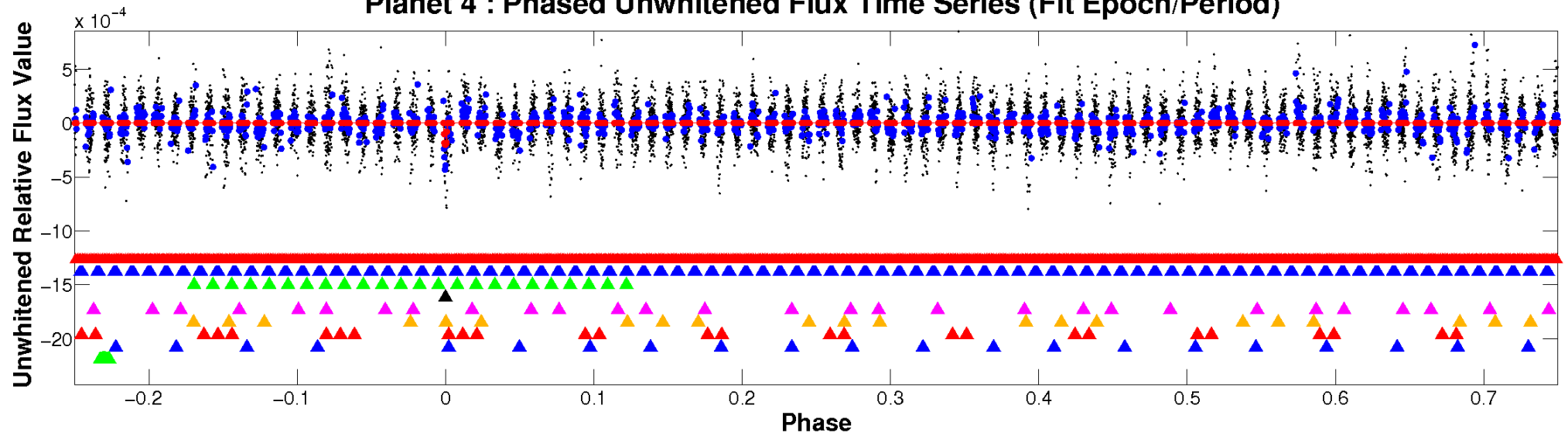
# ALT Odd/Even

TCE 005265699-04

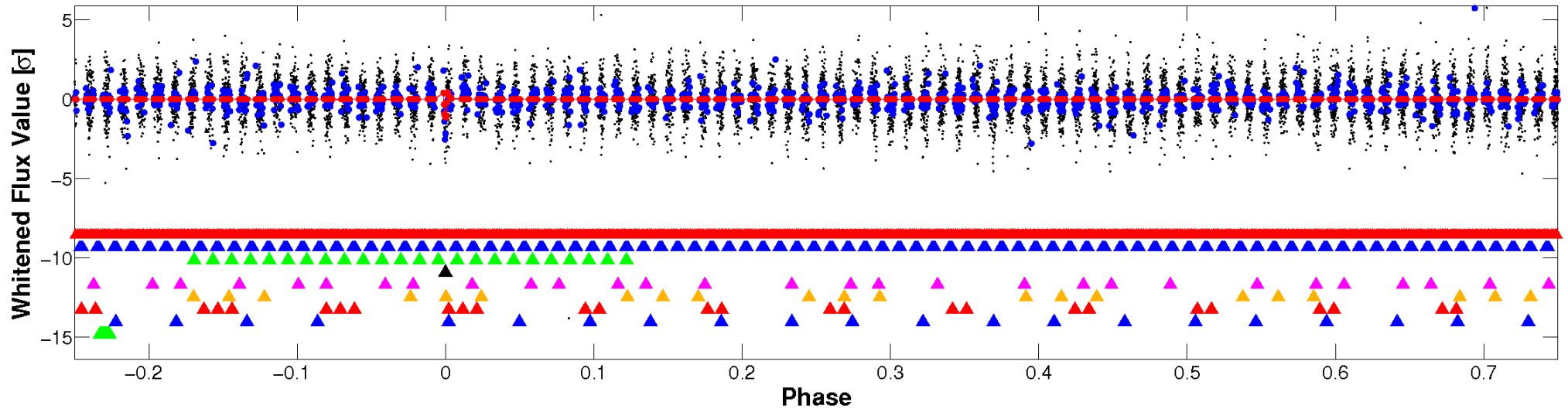


# Non-Whitened Vs. Whitened Light Curve

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

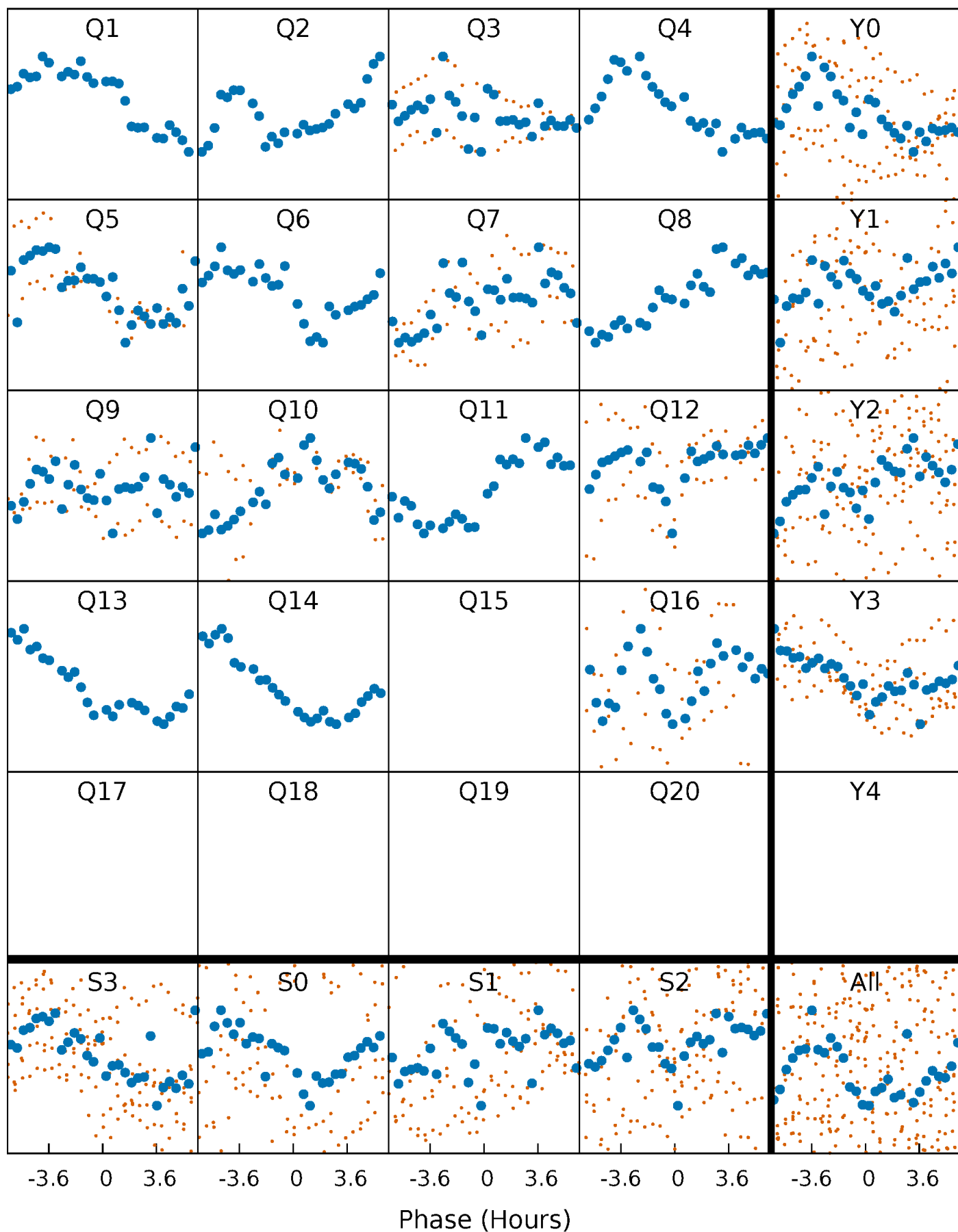


## Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



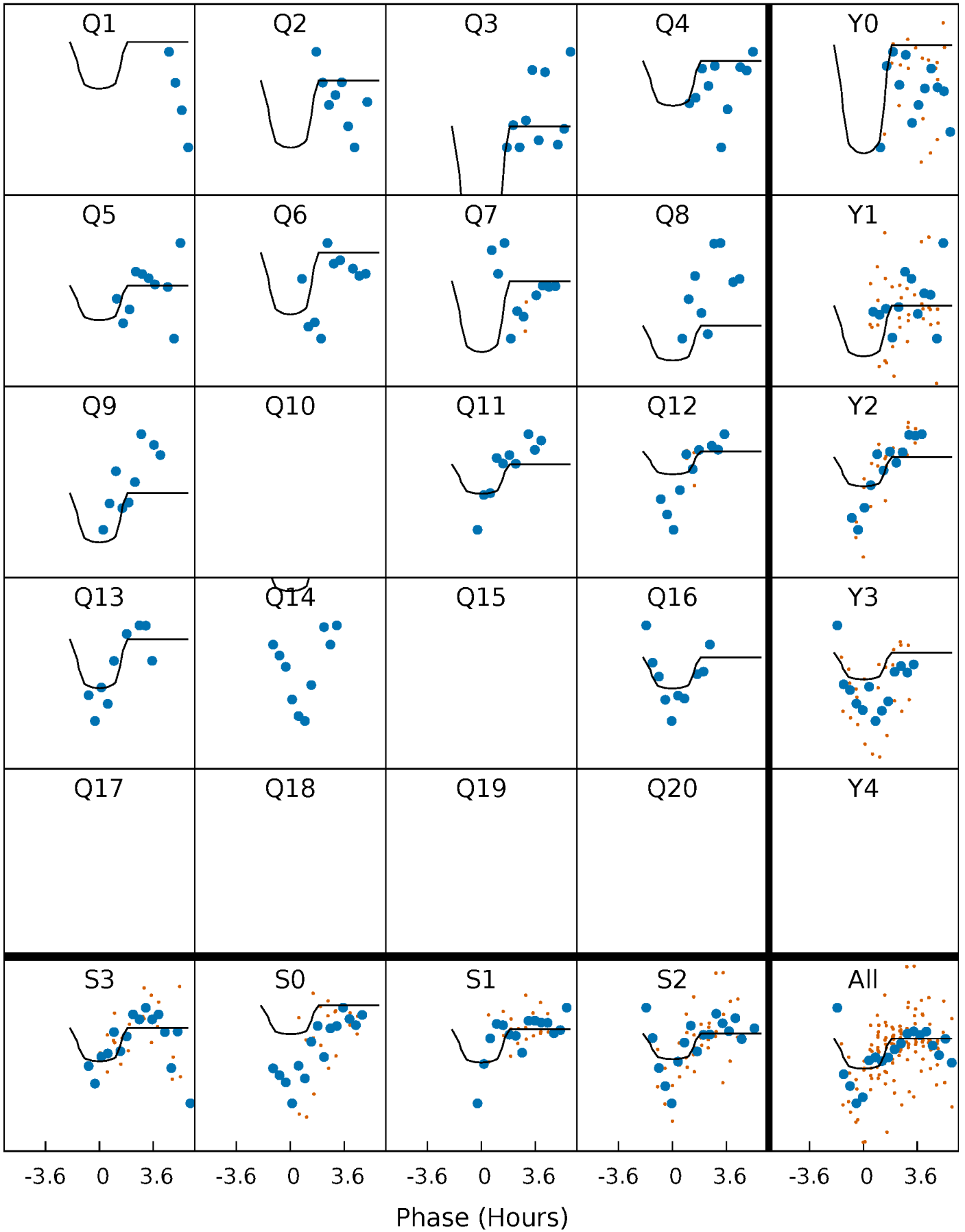
# PDC Quarter-Phased Transit Curves

TCE 005265699-04 P= 59.952043 Days  $T_0=156.502807$  (BKJD)



# DV Quarter-Phased Transit Curves

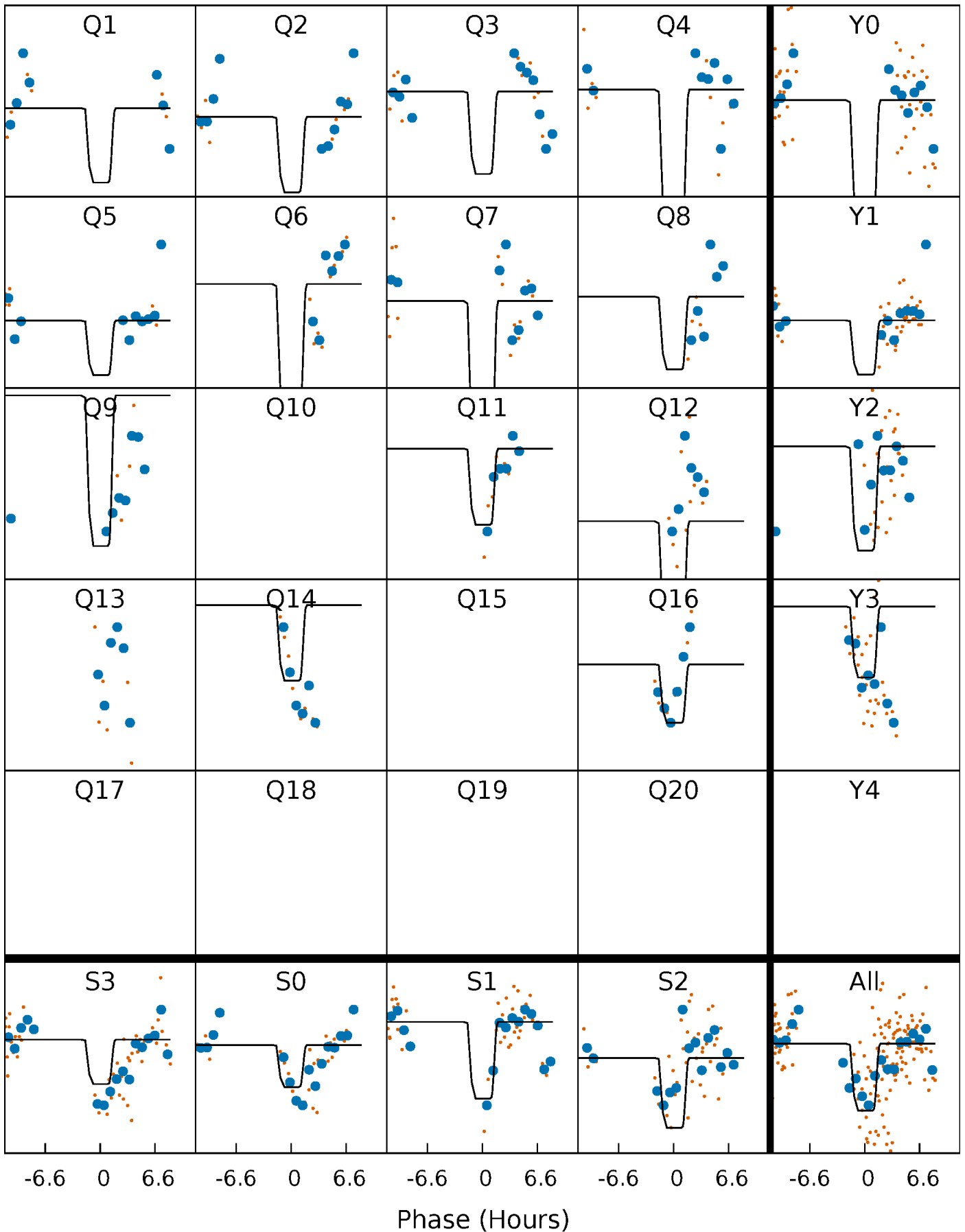
TCE 005265699-04   P= 59.952043 Days    $T_0=156.502807$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

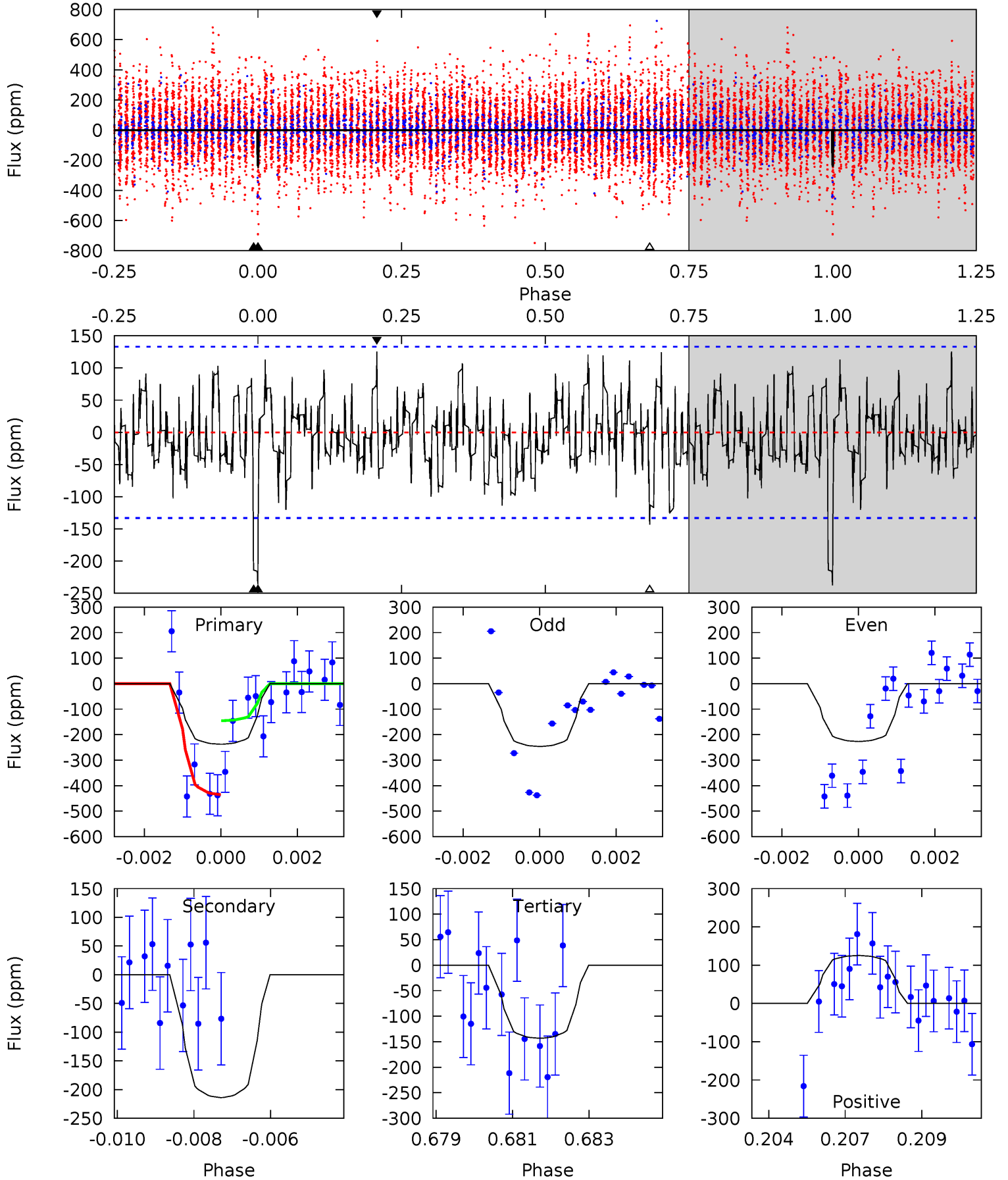
TCE 005265699-04 P= 59.957198 Days  $T_0=156.397076$  (BKJD)



# DV Model-Shift Uniqueness Test

005265699-04, P = 59.952043 Days, E = 96.550764 Days

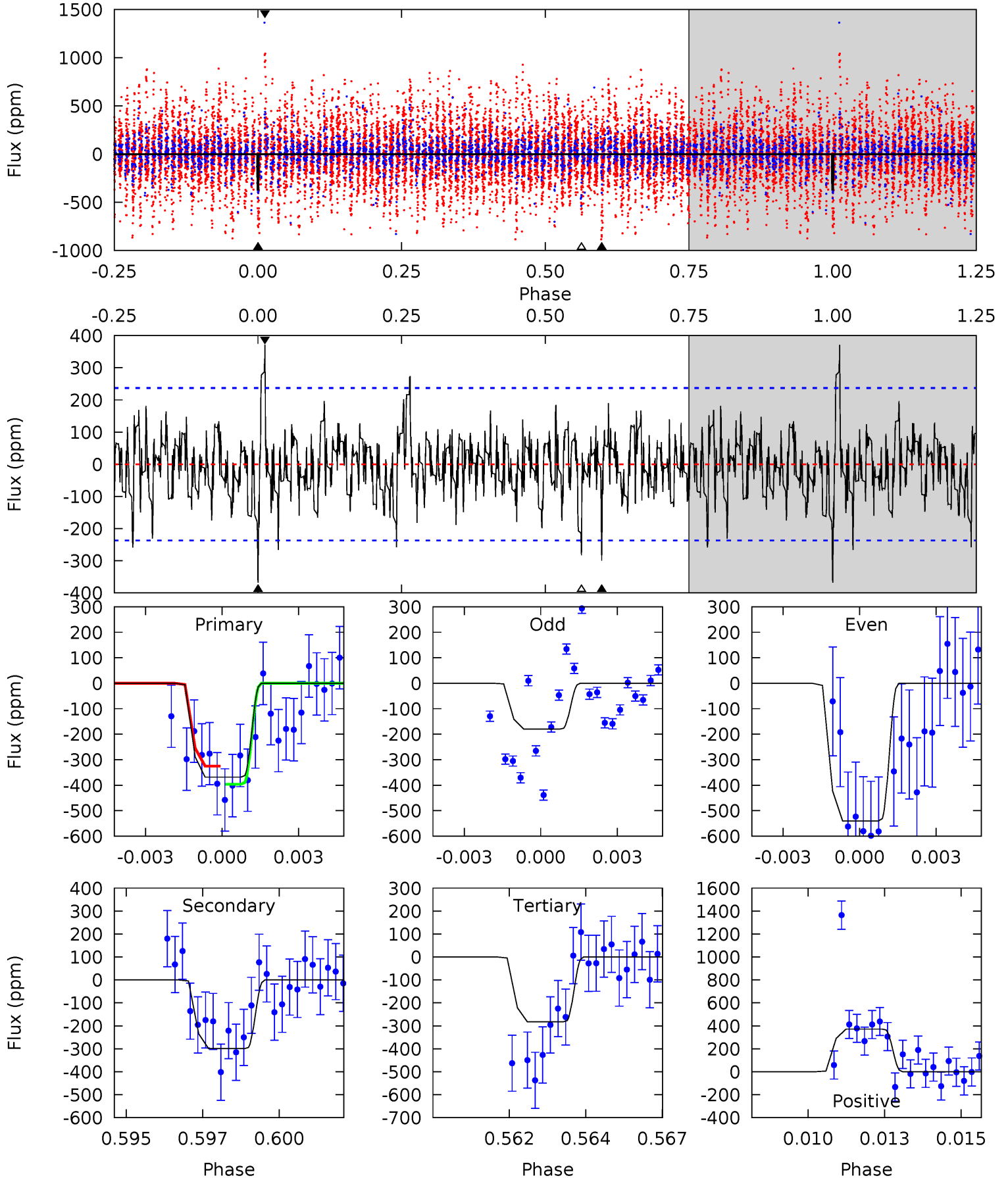
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	8.56	5.73	5.01	5.32	3.08	1.70	3.77	4.50	2.83	3.55	0.39	0.98	0.35	4.90



# Alt Model-Shift Uniqueness Test

005265699-04, P = 59.957198 Days, E = 96.439878 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
8.22	6.68	6.30	8.29	5.28	3.02	1.57	1.91	-0.07	0.37	-1.61	4.00	0.85	0.50	0.75



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-214 \pm 25$	$6.96^{+6.37}_{-4.84}$	$1112^{+78}_{-100}$	$5121^{+4442}_{-1162}$	$295^{+2899}_{-214}$
Alt.	$-299 \pm 45$	$7.66^{+7.22}_{-4.96}$	$1110^{+88}_{-102}$	$5200^{+4068}_{-1136}$	$336^{+2272}_{-240}$

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

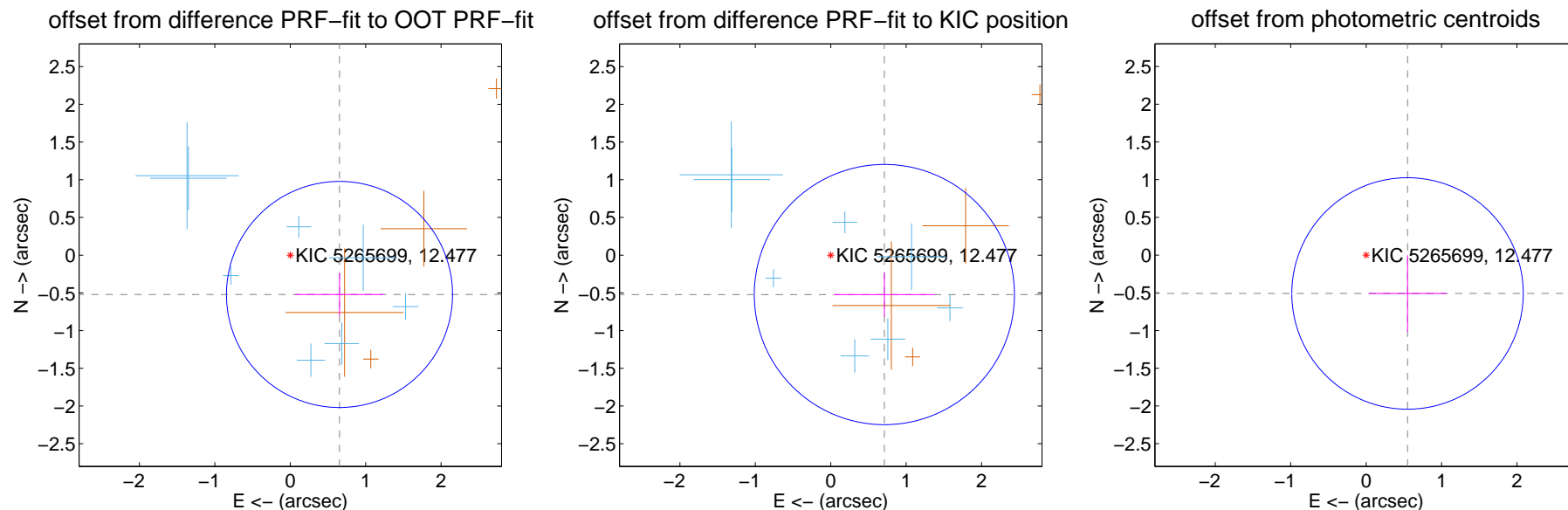
## DV Centroid Data

Supplemental centroid analysis for 005265699-04. Kepler magnitude: 12.48. Transit SNR 6.73

There are 8 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

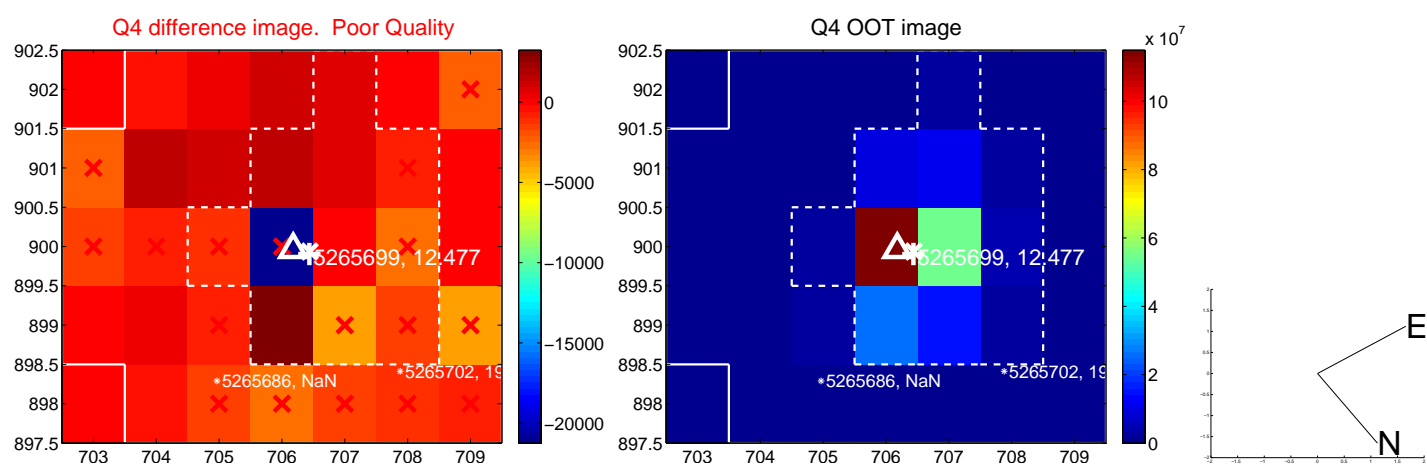
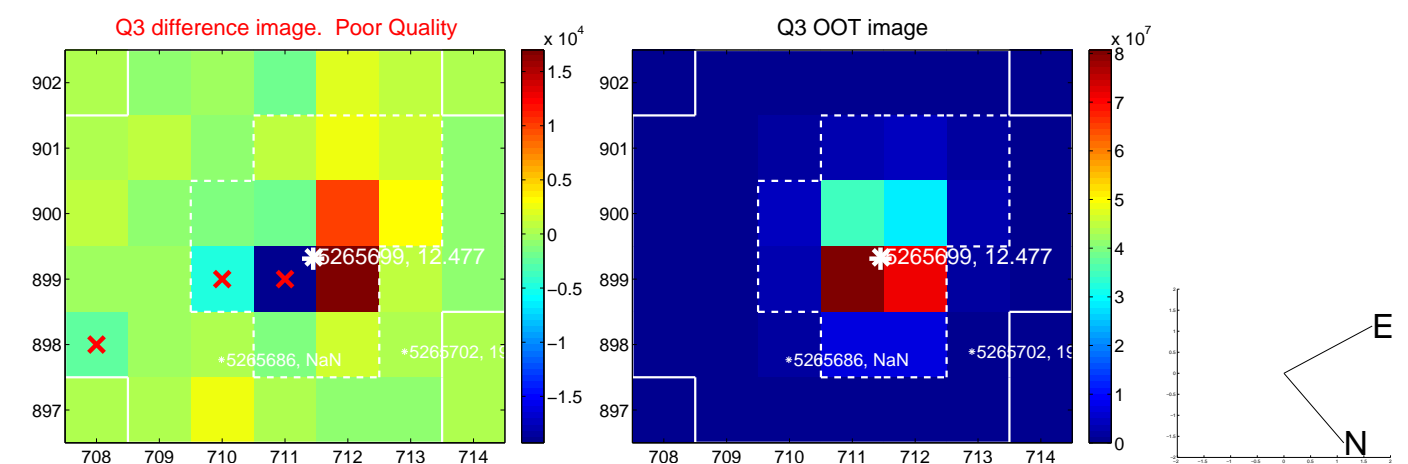
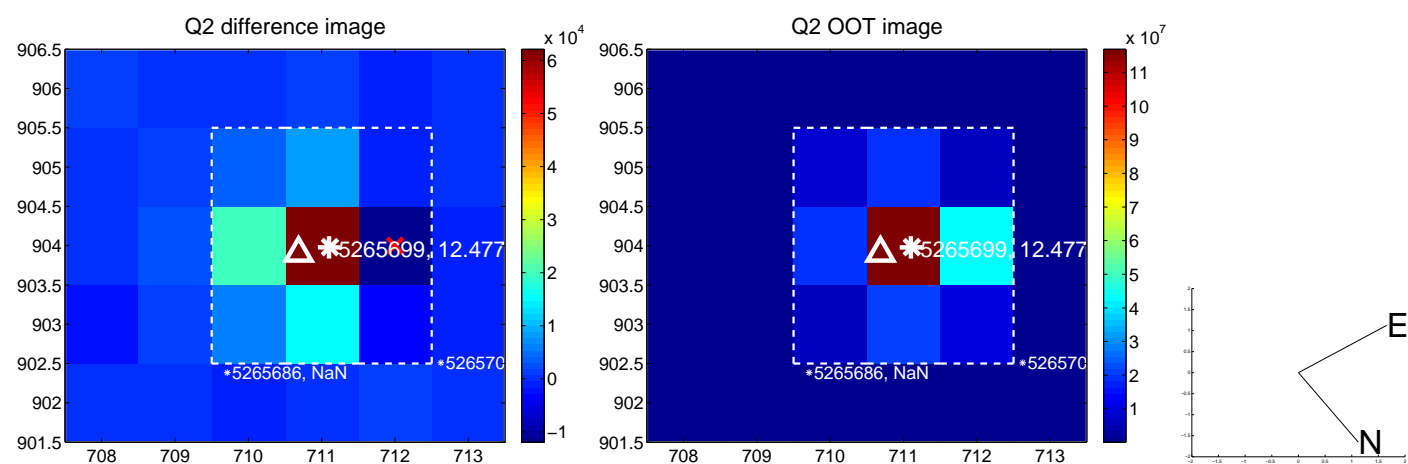
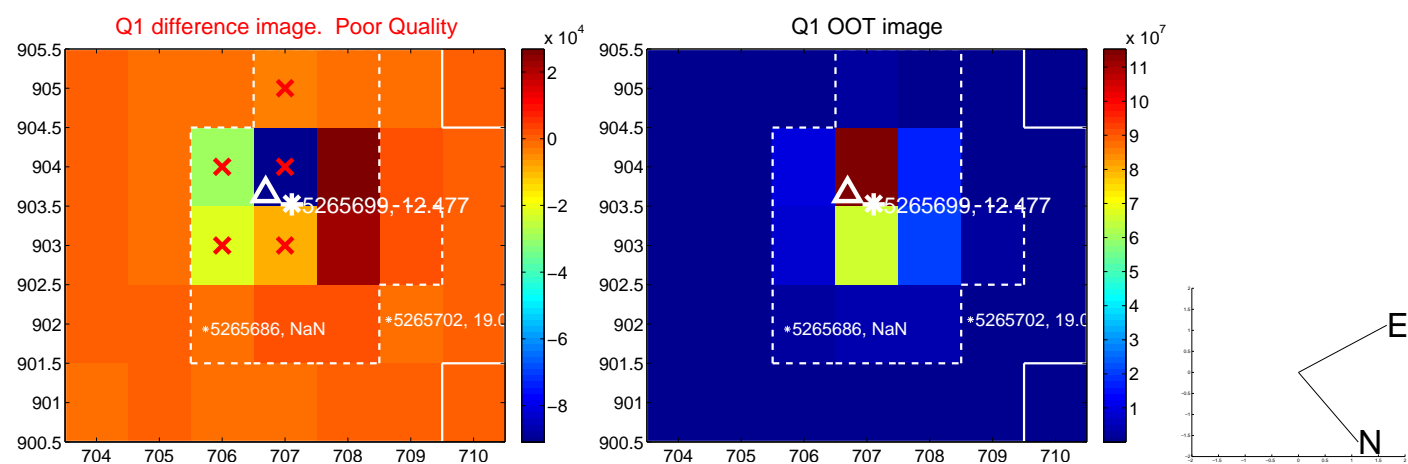
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.836 \pm 0.500$	1.67	$-0.653 \pm 0.585$	$-0.521 \pm 0.279$
PRF-fit source offset from KIC position	$0.883 \pm 0.575$	1.54	$-0.712 \pm 0.667$	$-0.522 \pm 0.292$
photometric centroid source offset	$0.75 \pm 0.51$	1.46	$-0.55 \pm 0.52$	$-0.51 \pm 0.51$



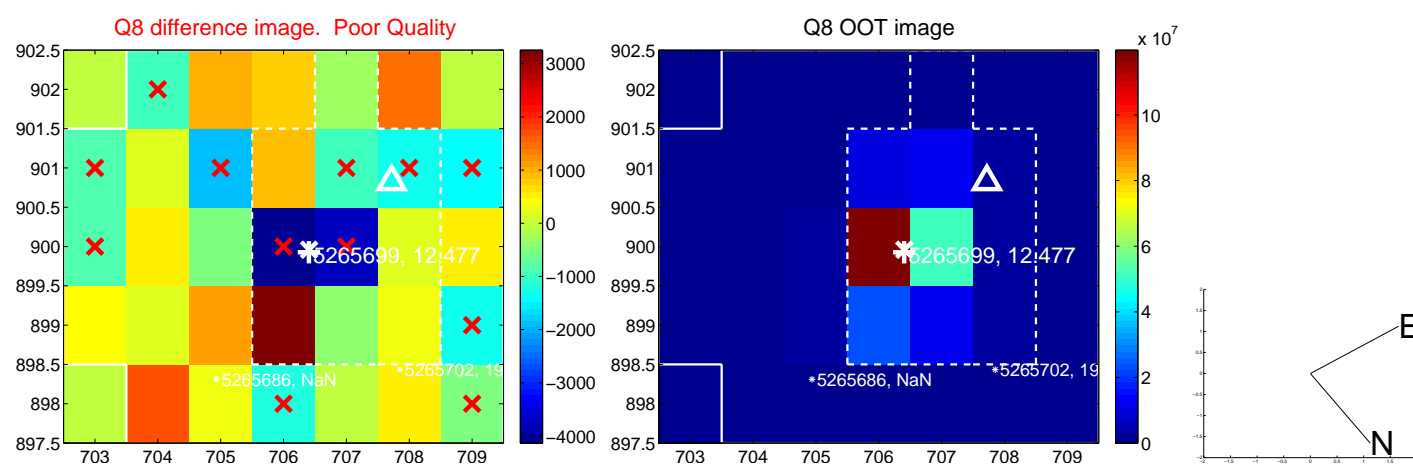
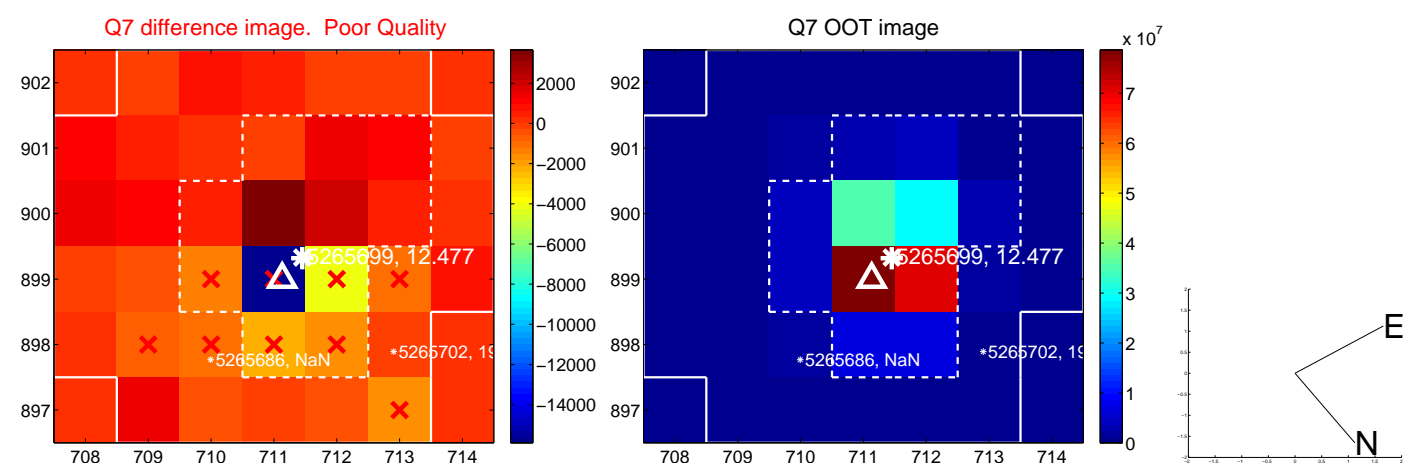
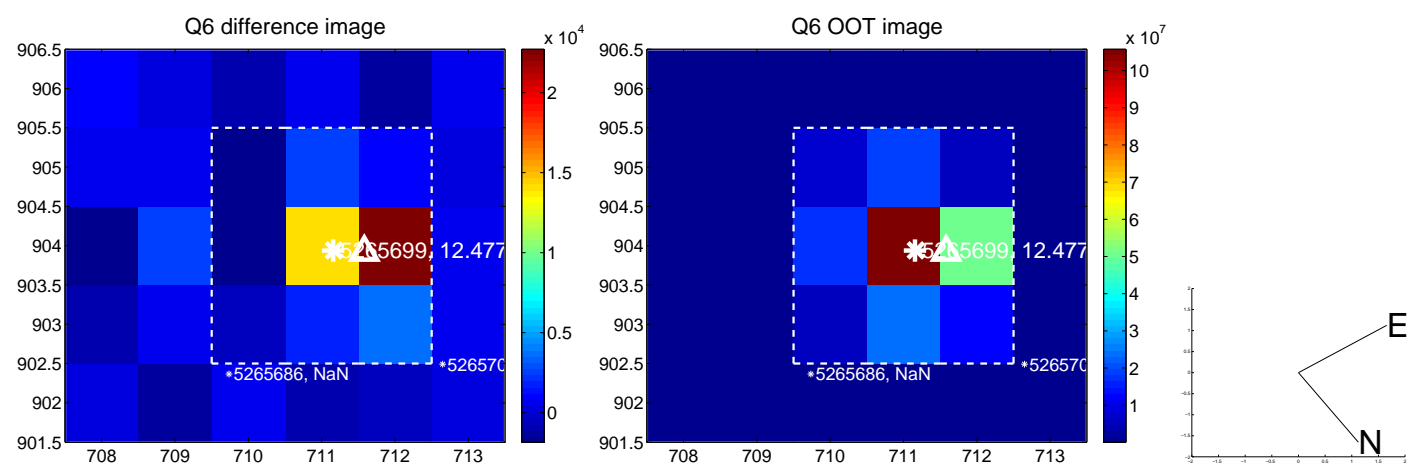
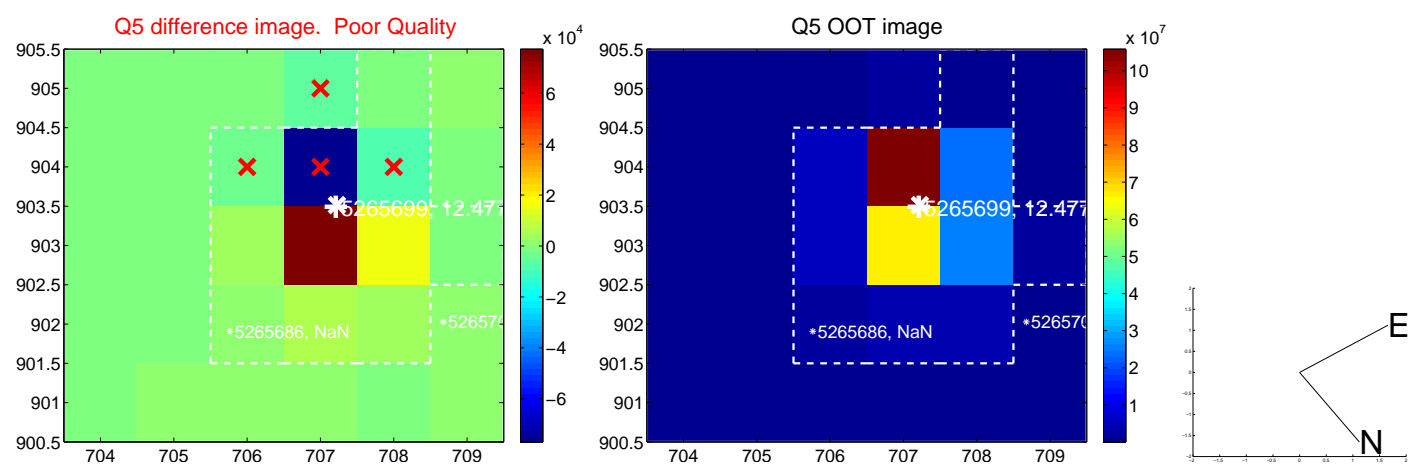
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



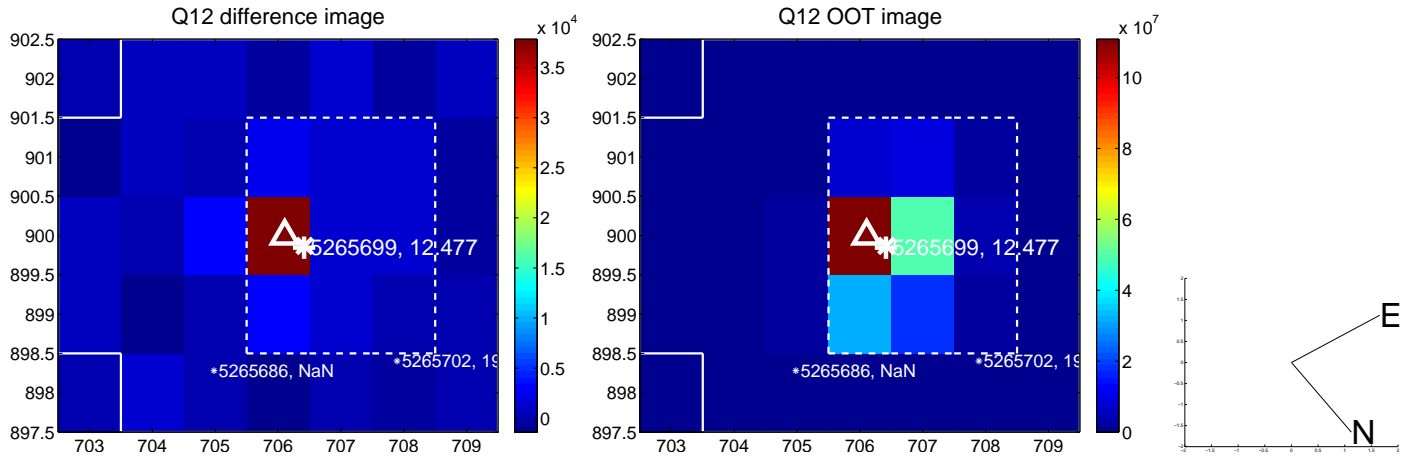
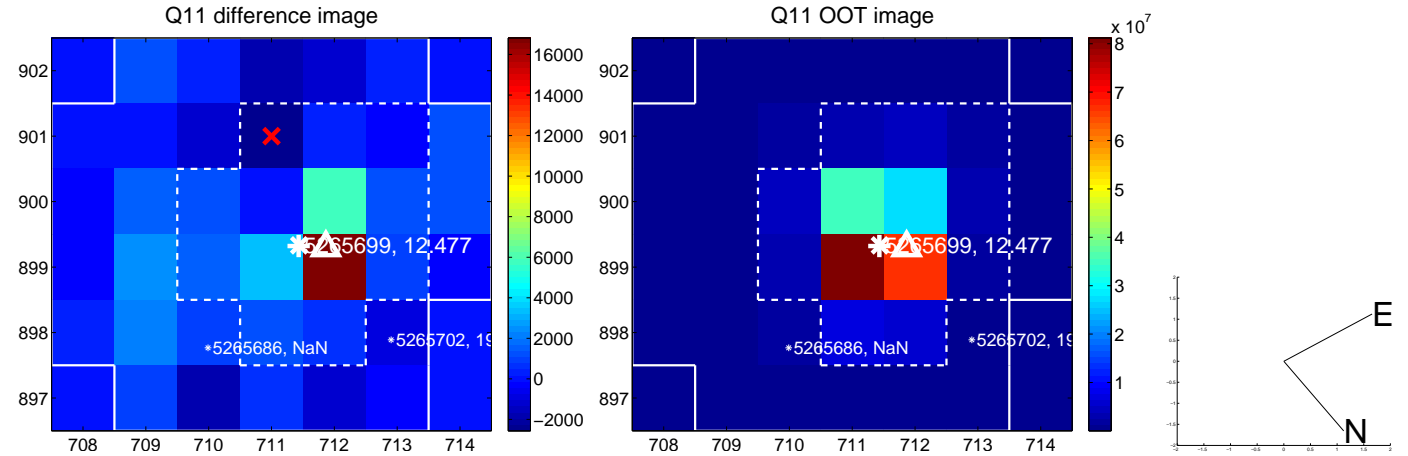
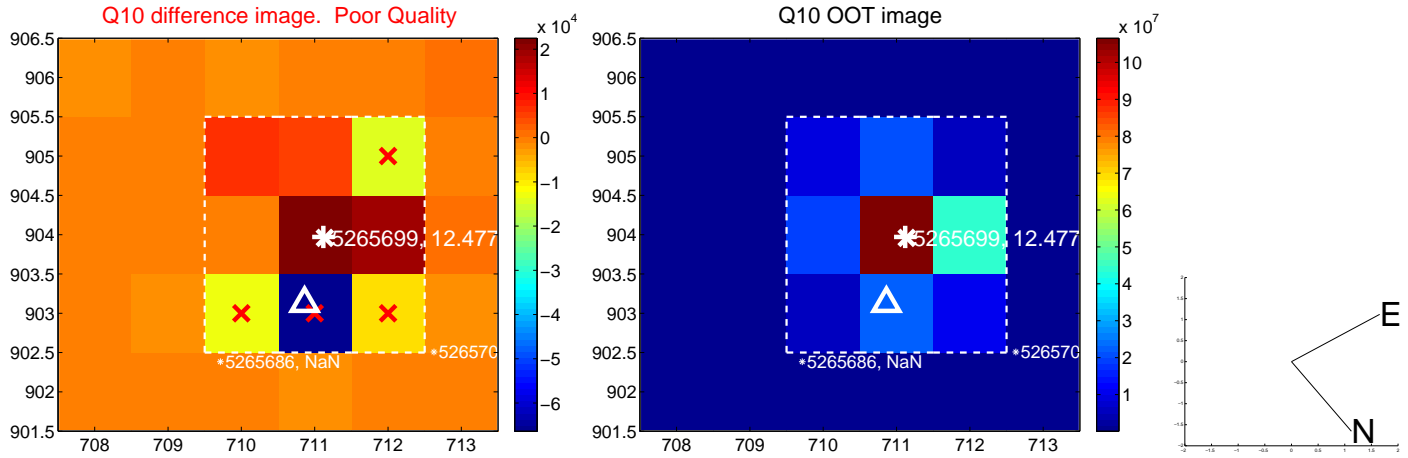
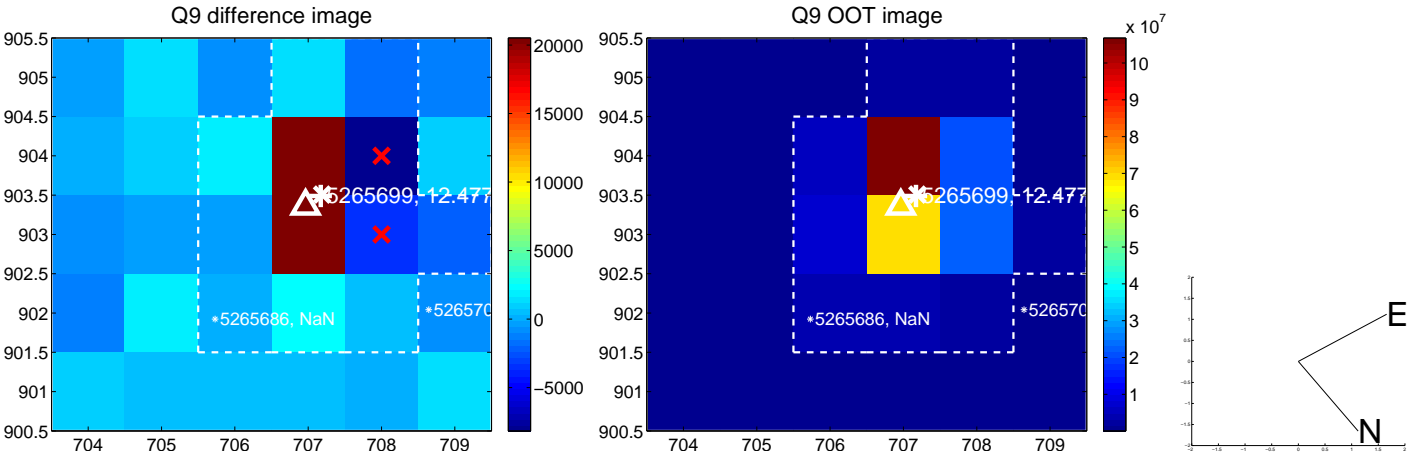
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



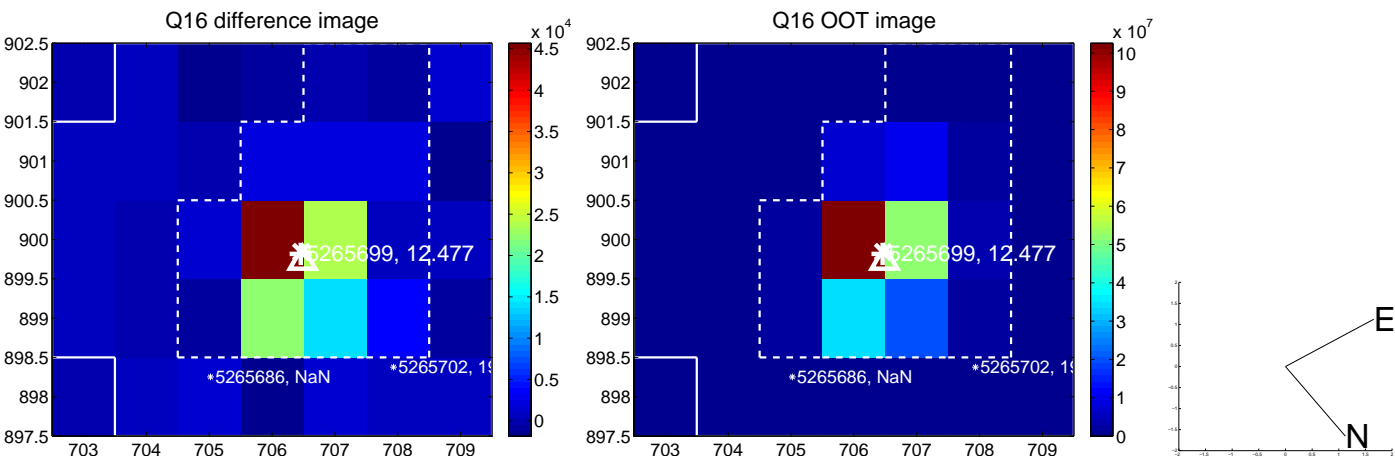
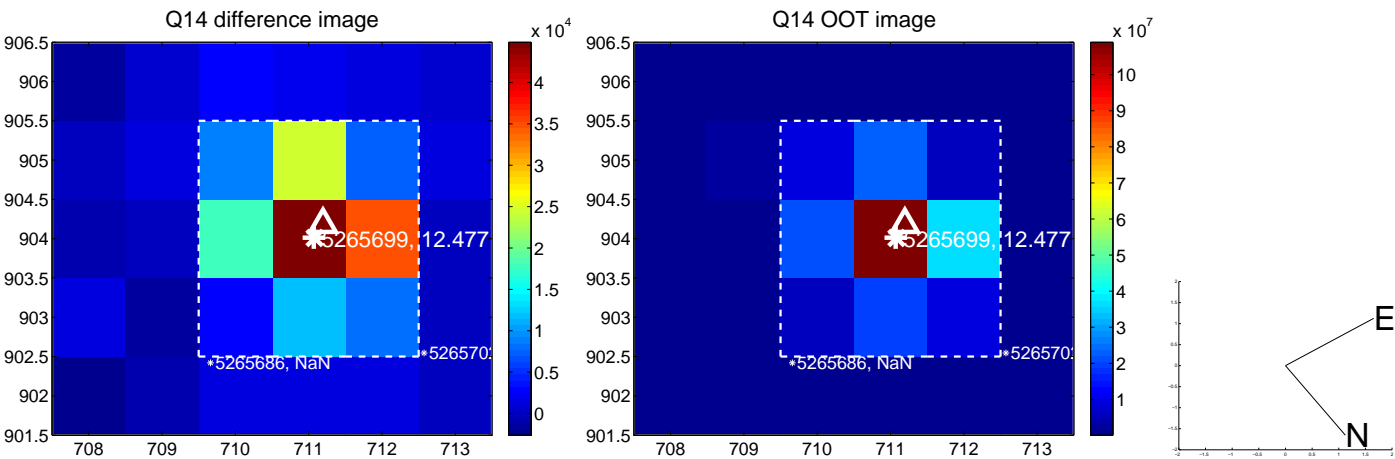
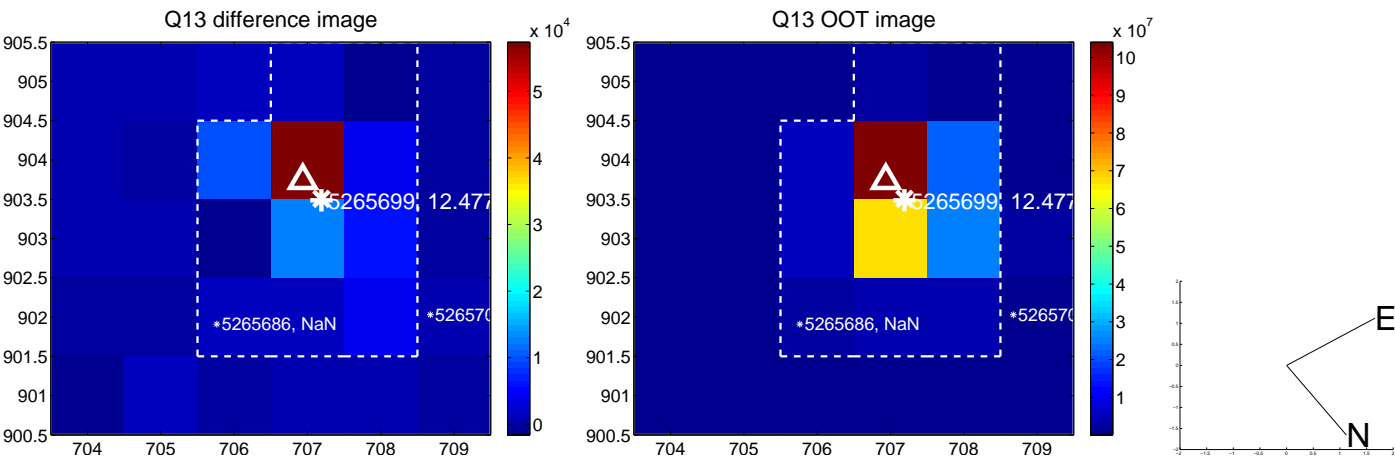
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



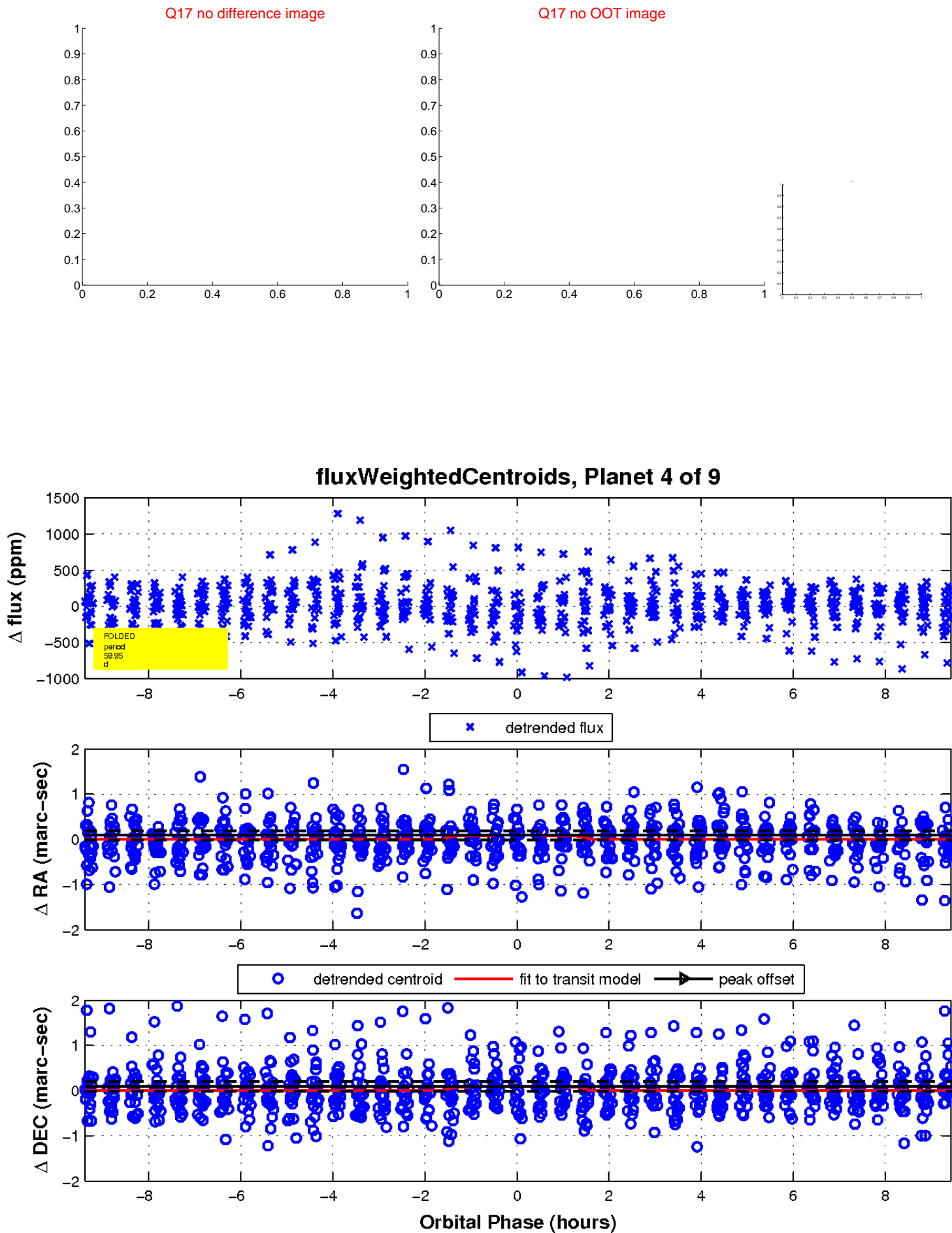
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



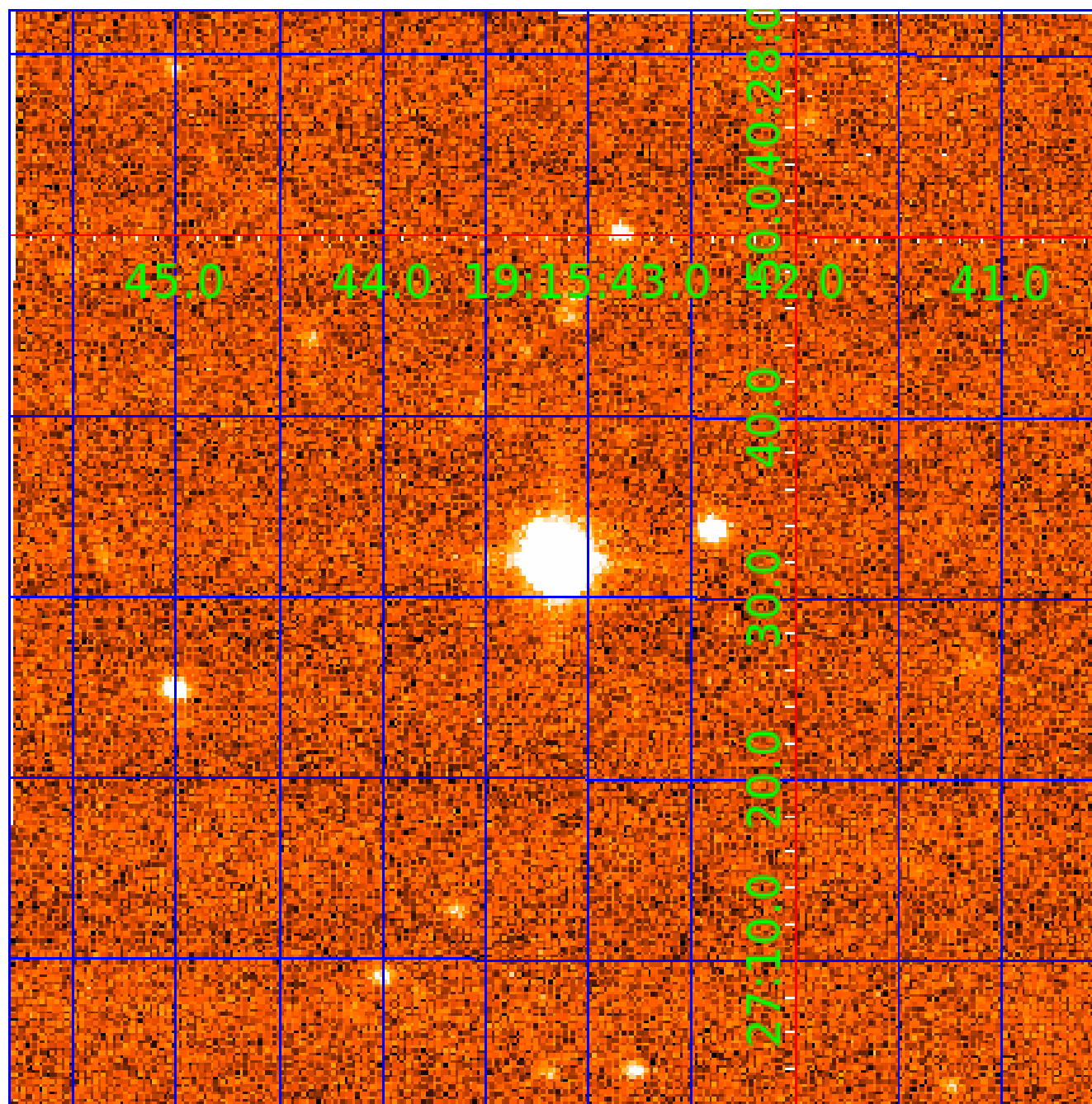
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





# UKIRT Image

Declination



# KIC 005265699

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005265699-01	OBS	No	1.374044	131.714311	33.5	3.650	9.2	9.7	2.22	7282	1.49	15215.14
005265699-02	OBS	No	0.689031	132.203374	3.0	3.776	10.8	1.0	2.22	7282	0.40	38190.78
005265699-03	OBS	No	60.711829	146.341993	472.9	9.051	9.4	8.8	2.22	7282	6.09	97.41
005265699-04	OBS	No	59.952043	156.502807	201.6	3.187	9.9	6.7	2.22	7282	3.62	99.05
005265699-05	OBS	No	50.545316	159.964247	234.4	4.380	9.1	6.5	2.22	7282	3.88	124.37
005265699-06	OBS	No	68.720978	171.196883	393.1	12.671	8.9	8.0	2.22	7282	5.10	82.57
005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005265699-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

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

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

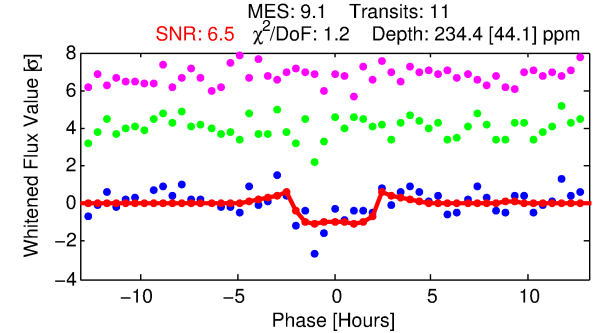
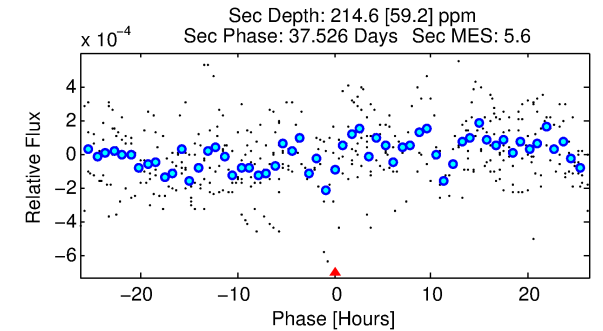
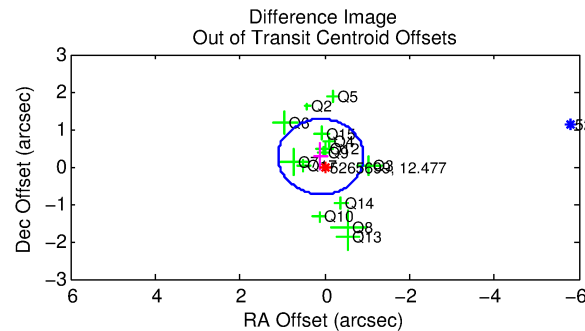
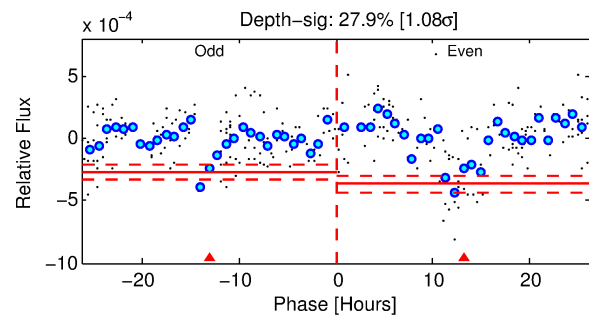
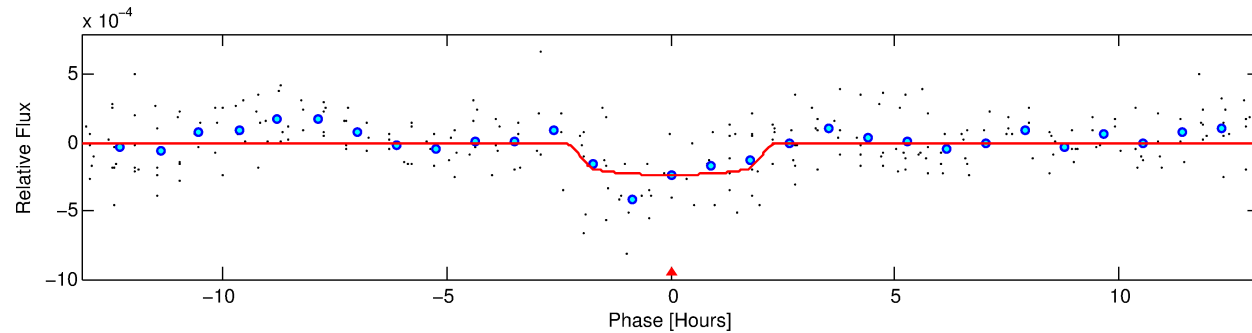
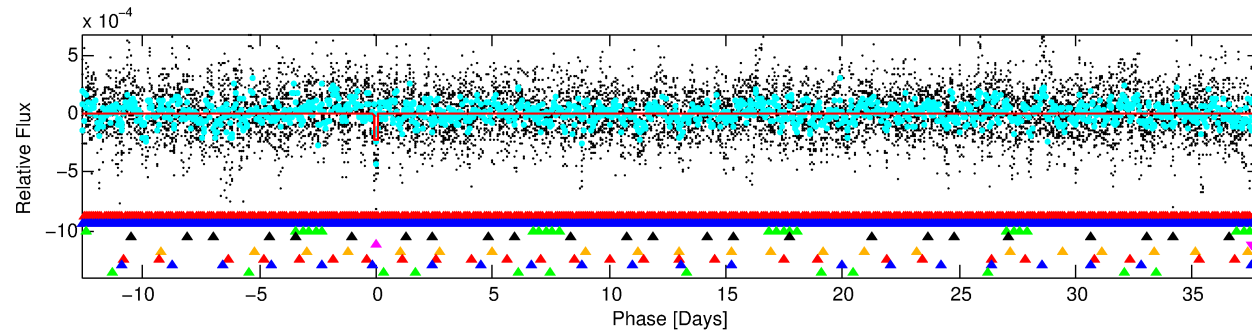
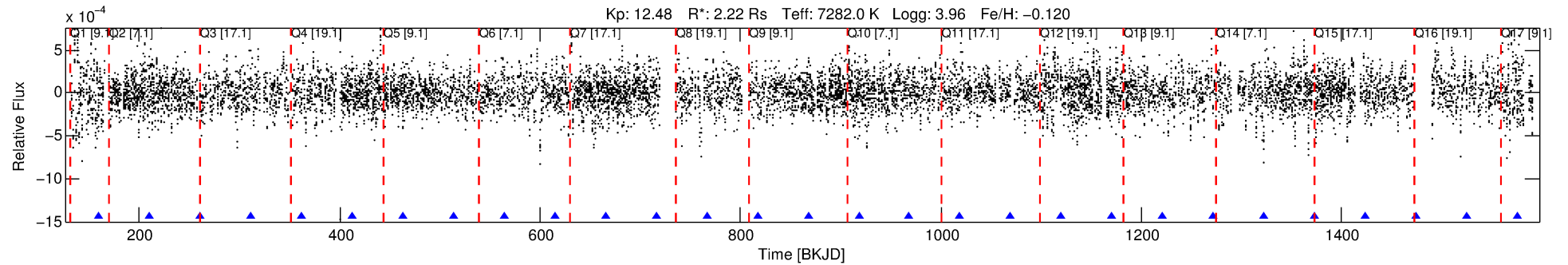
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-05

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 5 of 9 Period: 50.545 d



## DV Fit Results:

Period = 50.54532 [0.00058] d  
Epoch = 159.9642 [0.0091] BKJD  
Rp/R\* = 0.0160 [0.0051]  
a/R\* = 45.73 [79.30]  
b = 0.87 [0.47]  
Seff = 124.37 [60.61]  
Teq = 852 [104] K  
Rp = 3.88 [1.80] Re  
a = 0.3154 [0.0947] AU  
Ag = 781.84 [650.25] [1.20 $\sigma$ ]  
Teffp = 6962 [1243] K [4.90 $\sigma$ ]

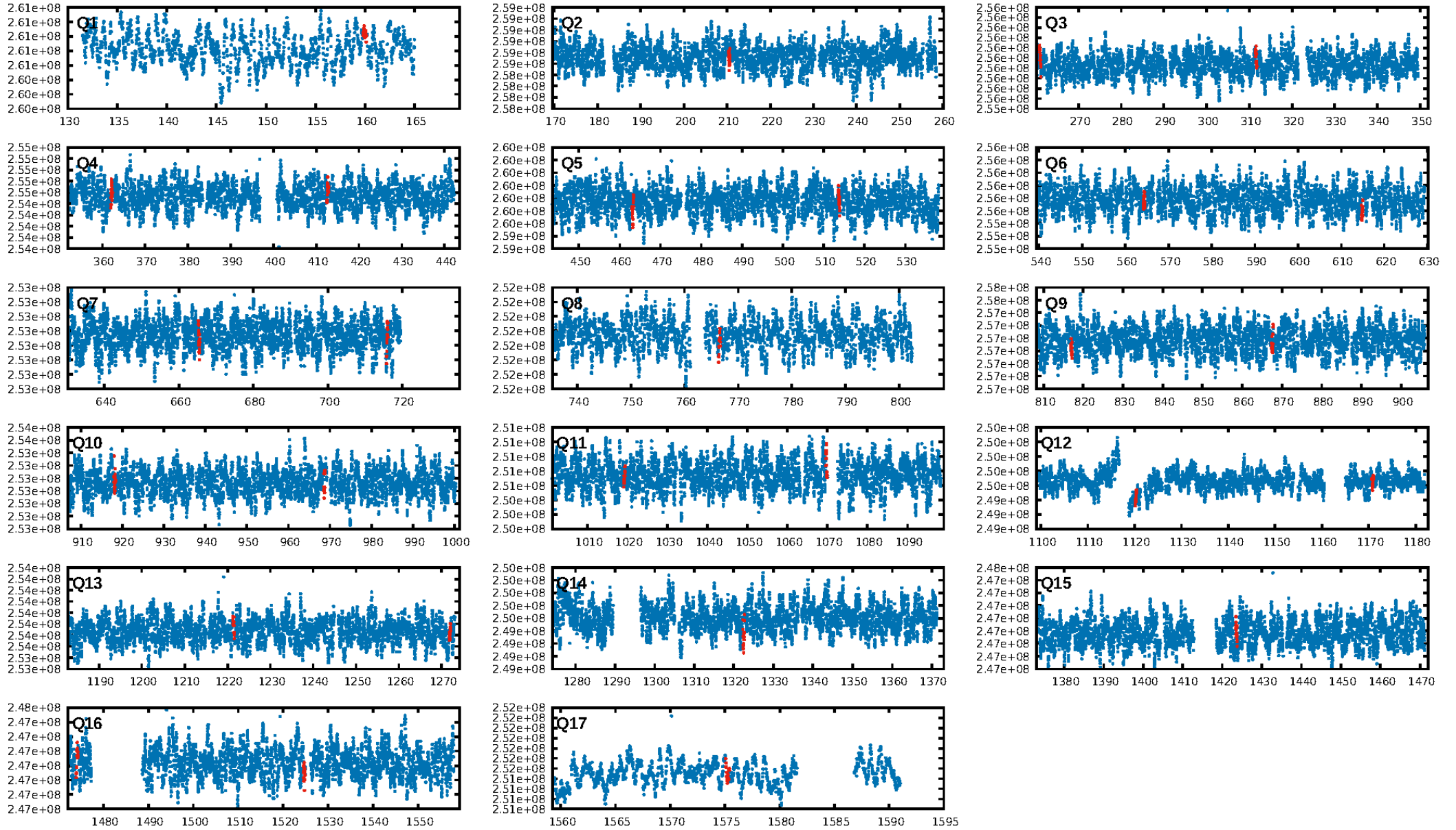
## DV Diagnostic Results:

ShortPeriod-sig: 100.0% [206.99 $\sigma$ ]  
LongPeriod-sig: 100.0% [11.28 $\sigma$ ]  
ModelChiSquare2-sig: 0.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [9/9]  
GhostDiagnostic-chr: -1.307  
Centroid-sig: 83.6%  
Centroid-so: 0.245 arcsec [0.75 $\sigma$ ]  
OotOffset-rm: 0.284 arcsec [0.85 $\sigma$ ]  
KicOffset-rm: 0.365 arcsec [1.20 $\sigma$ ]  
OotOffset-st: 4/3/3/4 [14]  
KicOffset-st: 4/3/3/4 [14]  
DiffImageQuality-fgm: 0.57 [8/14]  
DiffImageOverlap-fno: 0.00 [0/16]

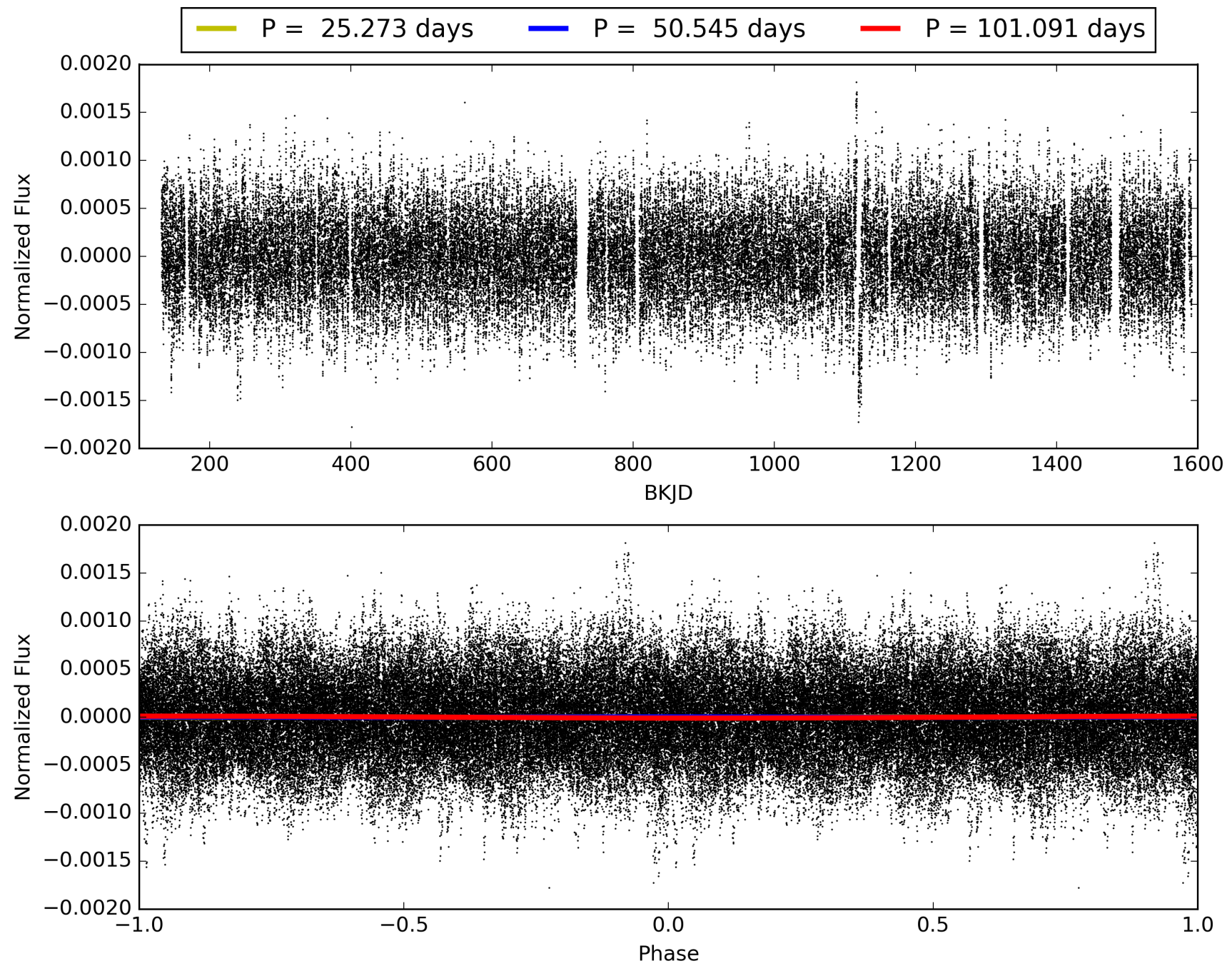
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:38:03 Z

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

# TCE 005265699-05, PDC Light Curves



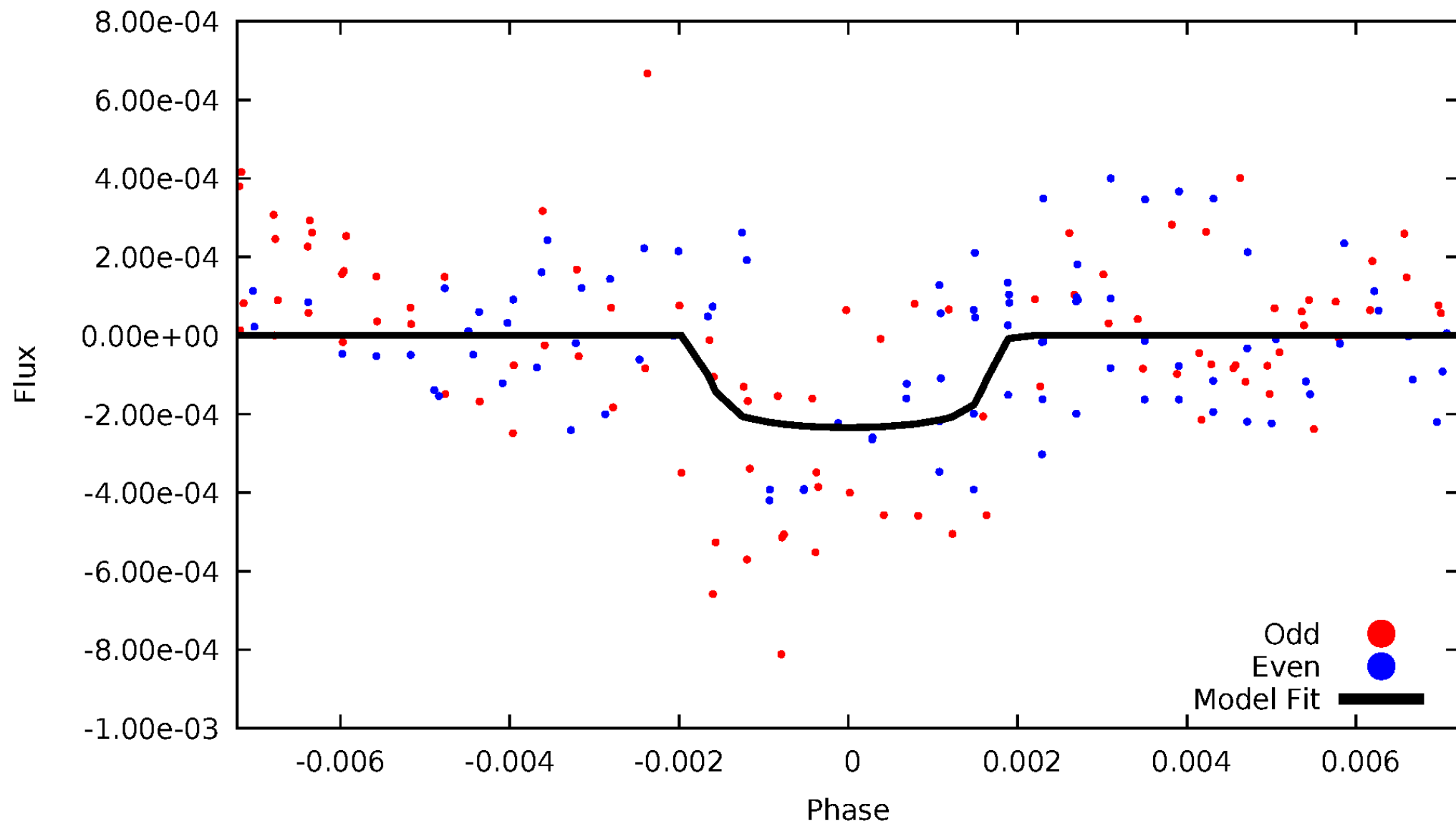
TCE 005265699-05





# DV Odd/Even

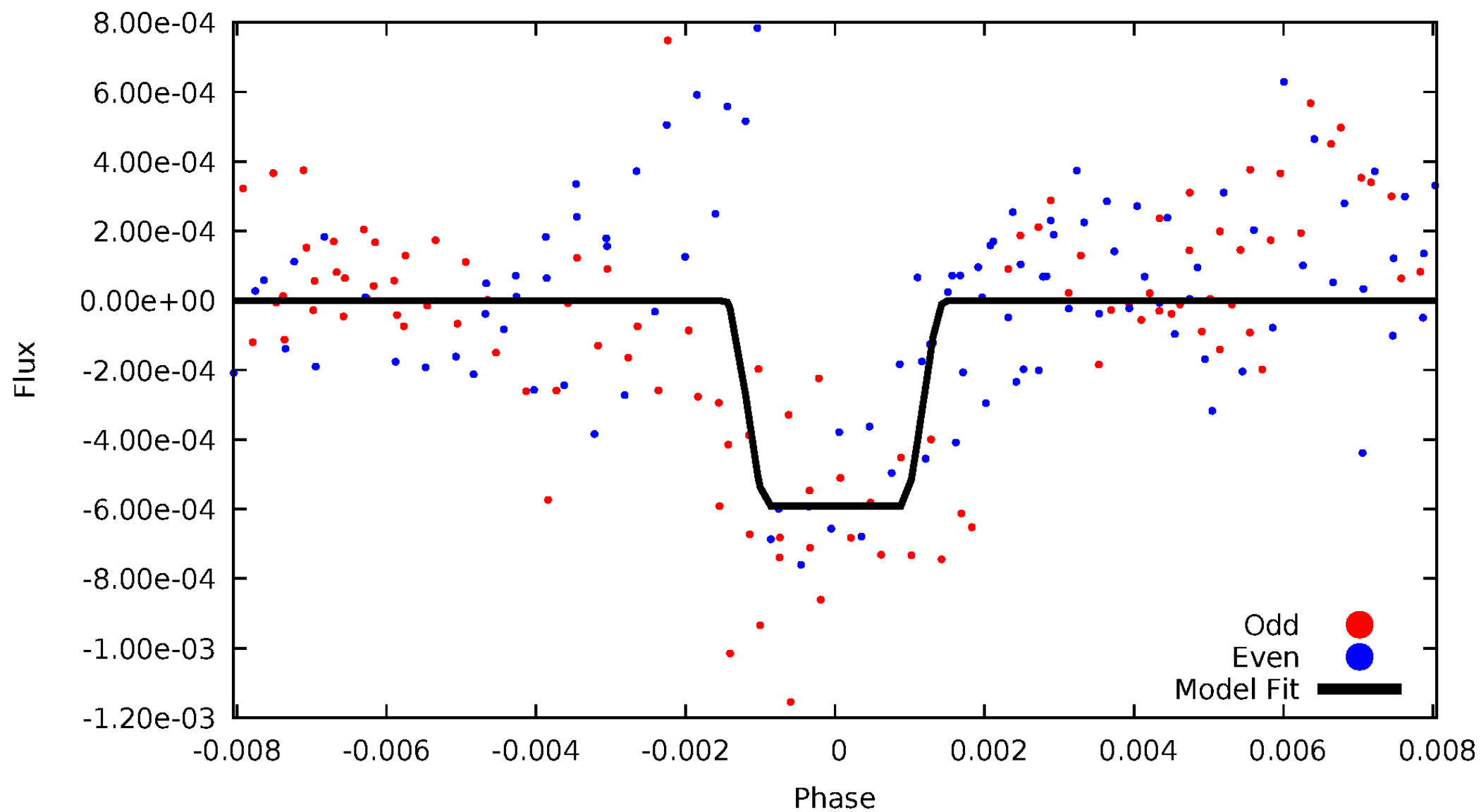
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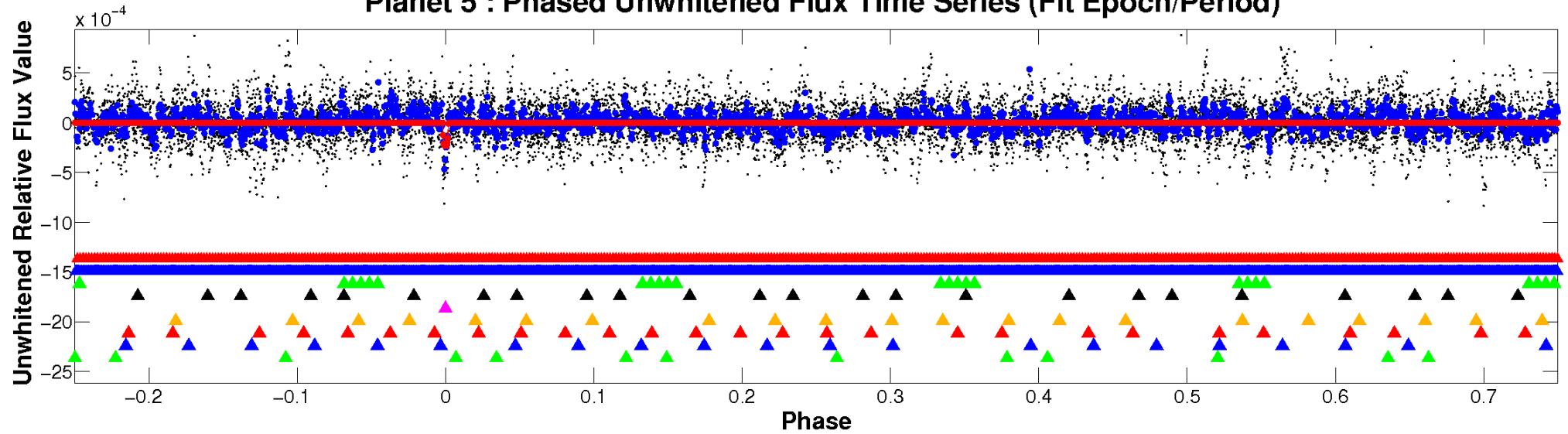
# ALT Odd/Even

TCE 005265699-05

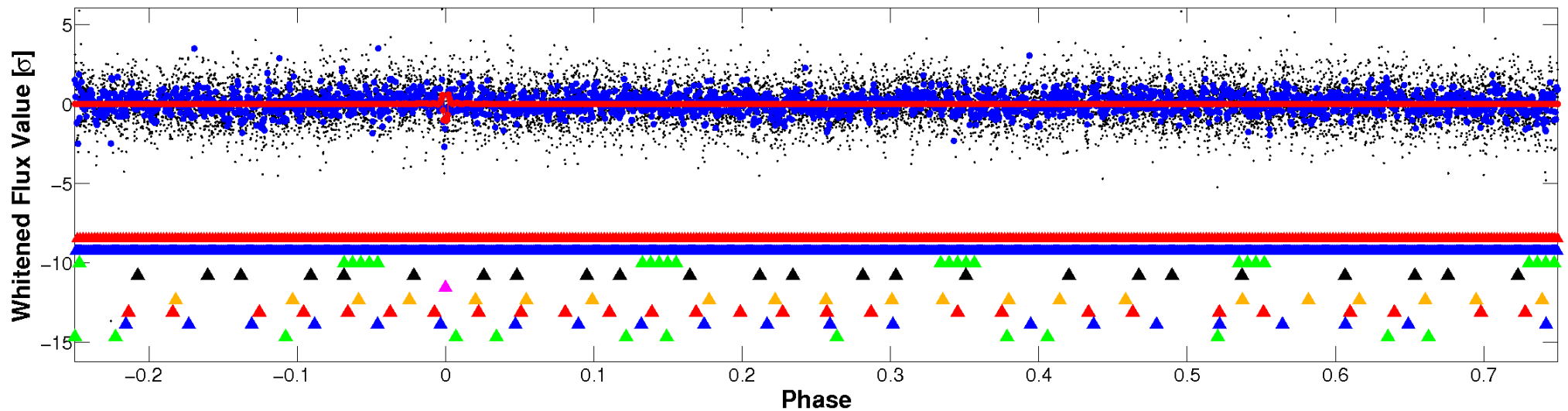


# Non-Whitened Vs. Whitened Light Curve

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

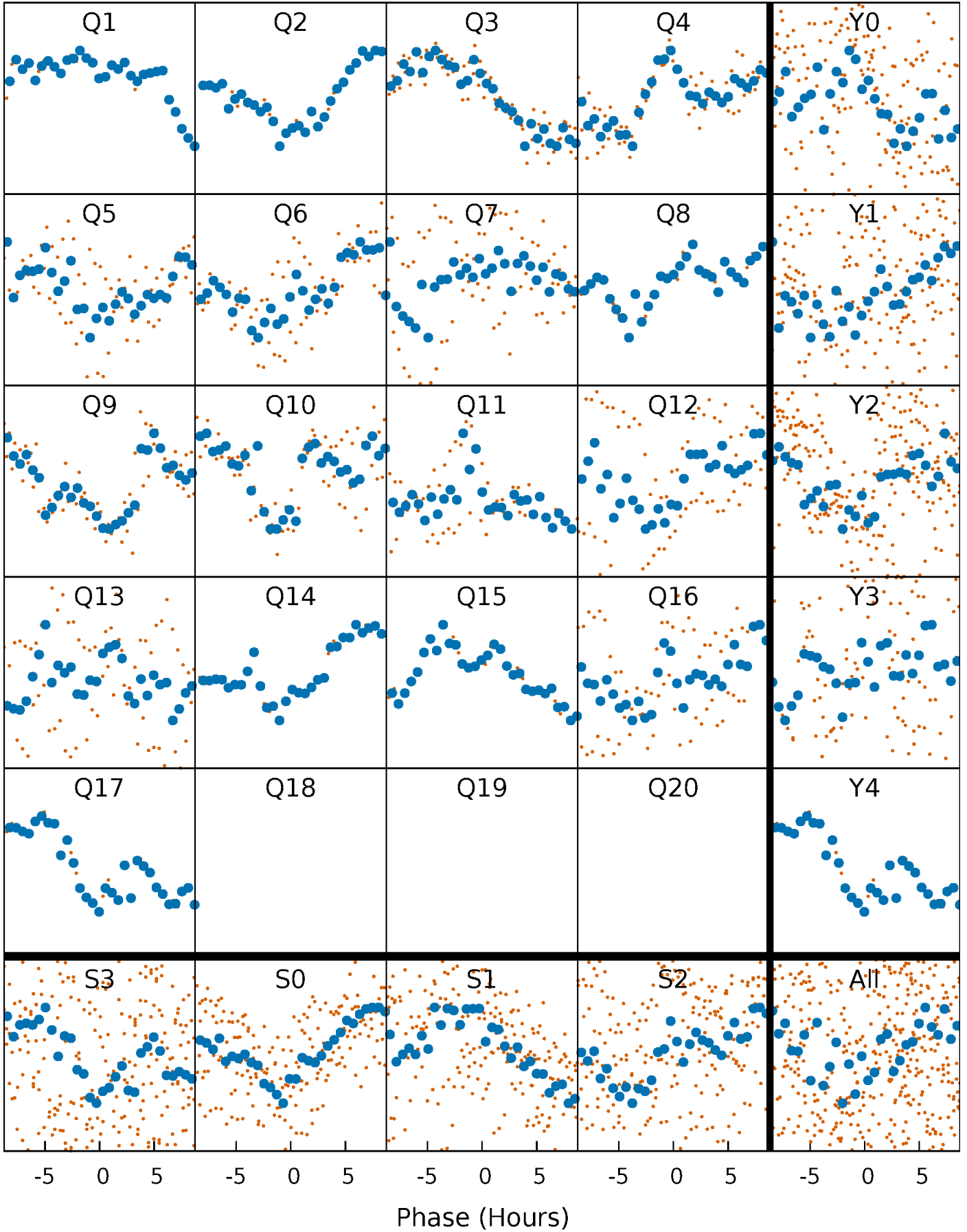


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



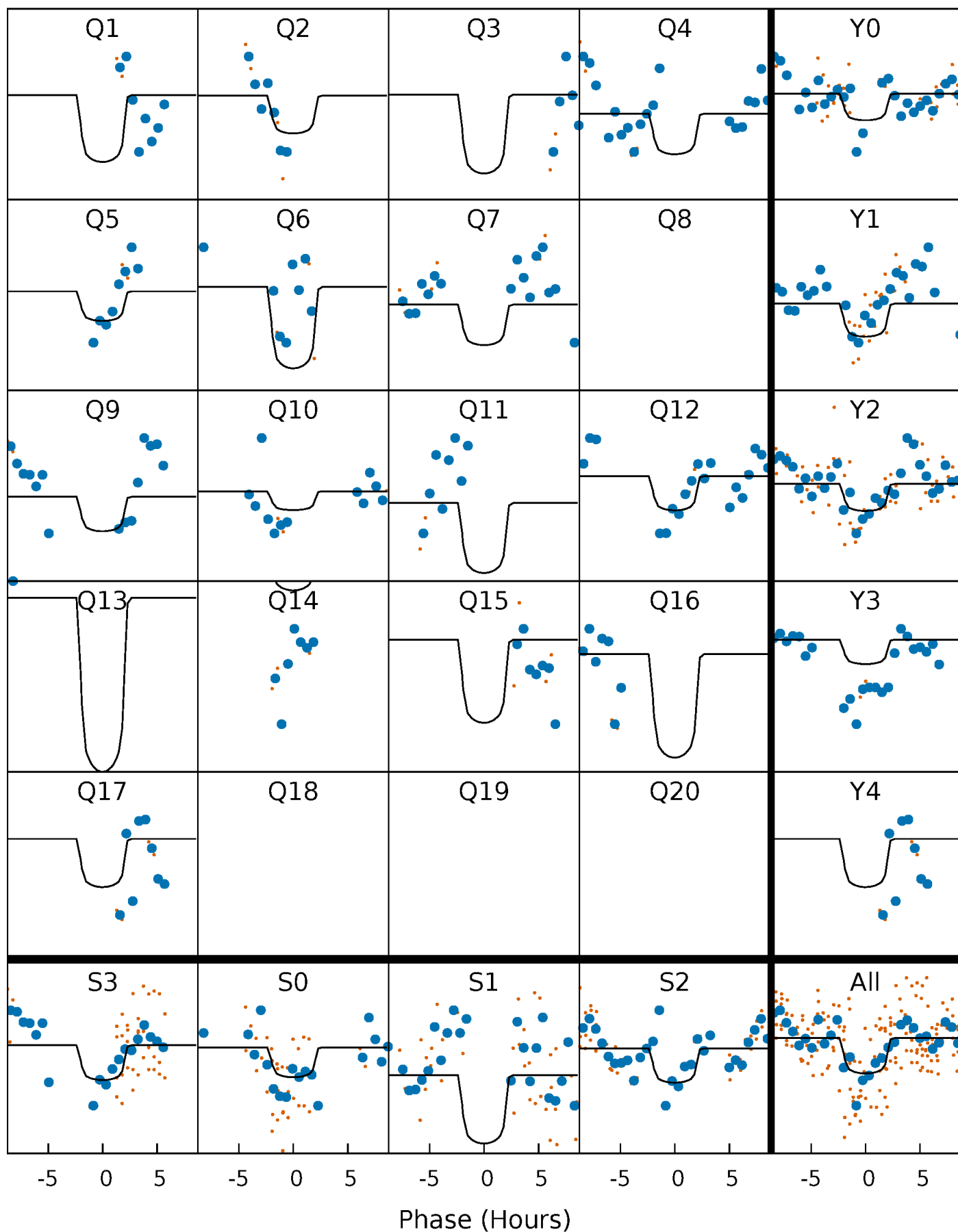
# PDC Quarter-Phased Transit Curves

TCE 005265699-05   P= 50.545316 Days    $T_0=159.964247$  (BKJD)



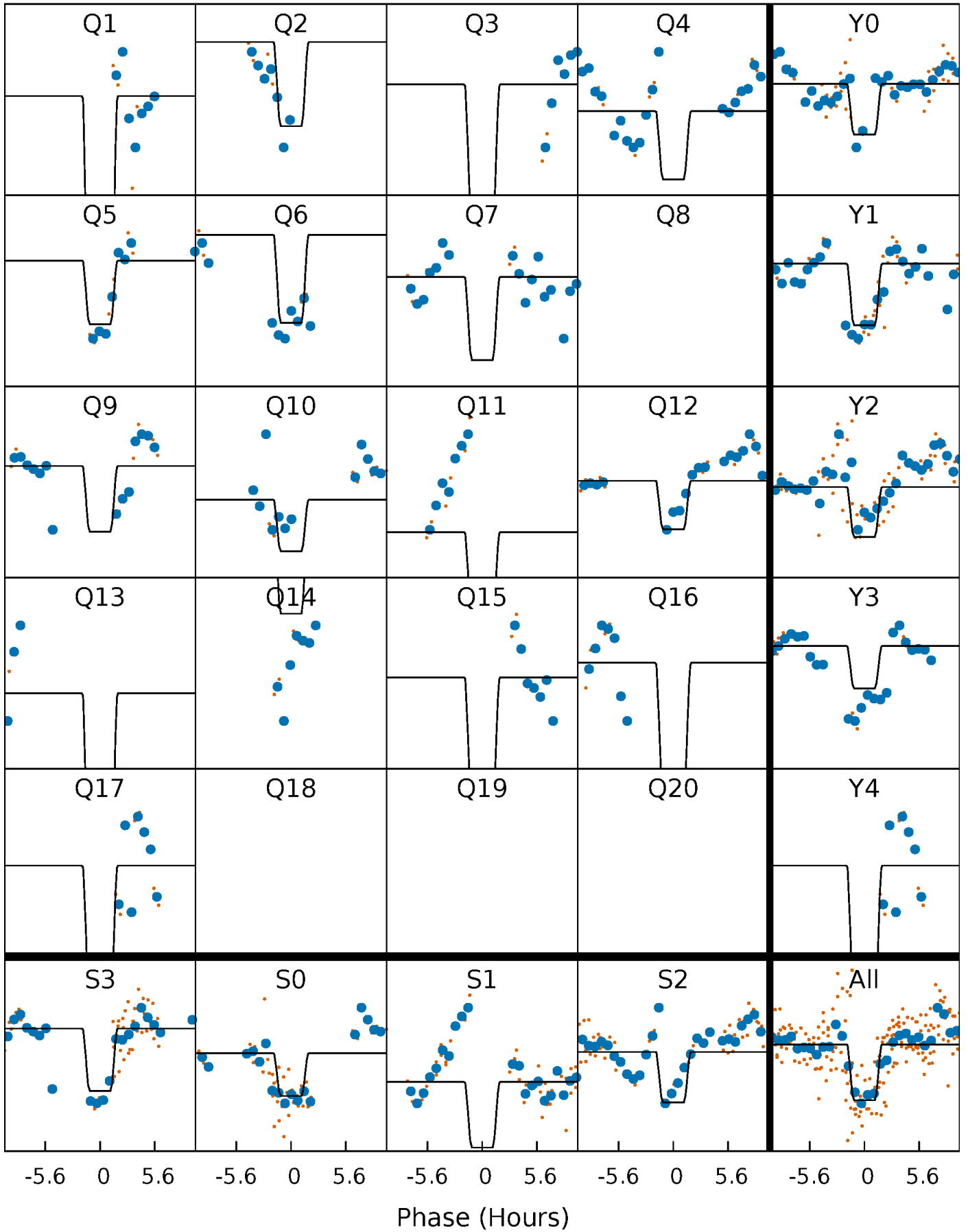
# DV Quarter-Phased Transit Curves

TCE 005265699-05   P= 50.545316 Days    $T_0=159.964247$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

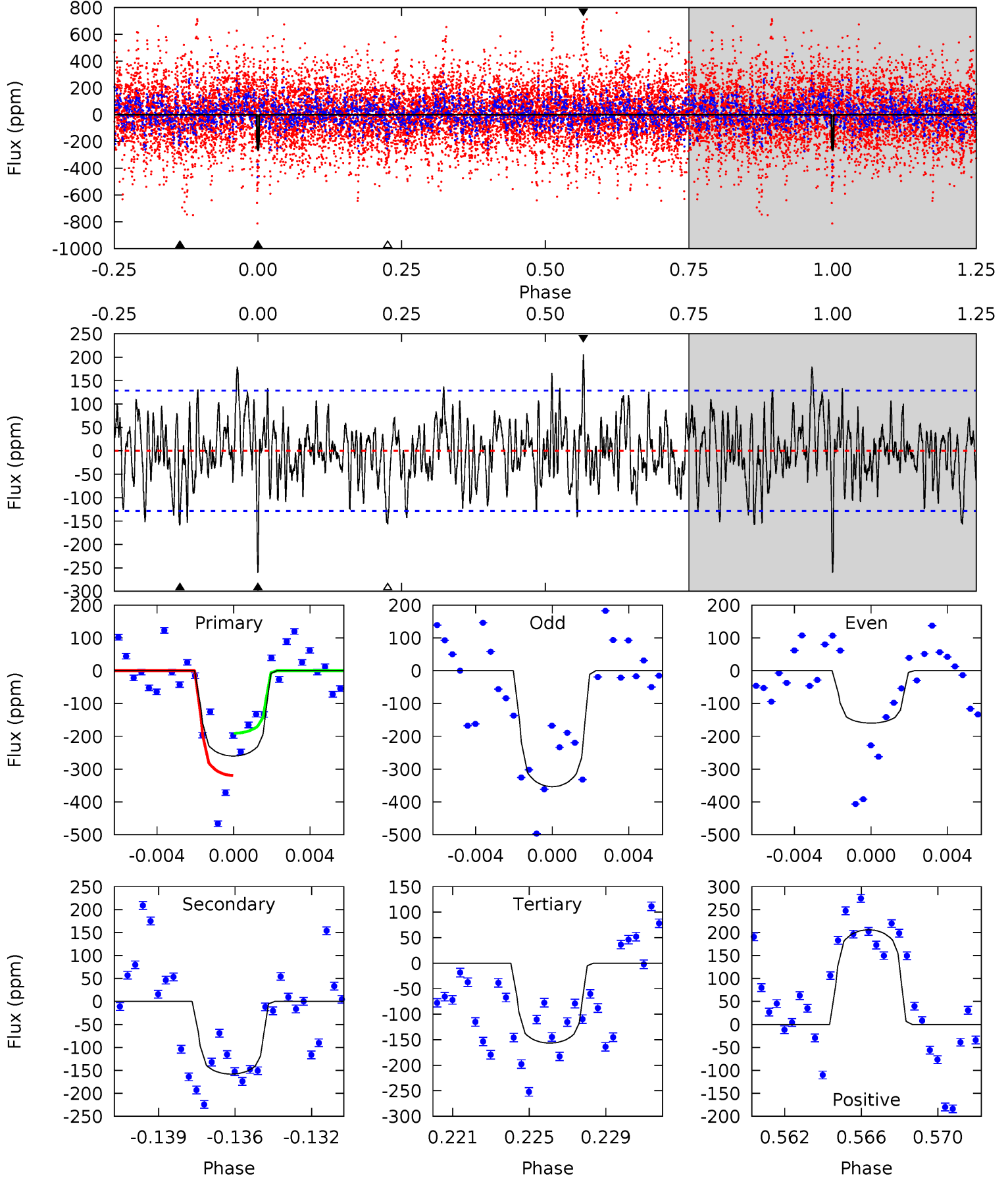
TCE 005265699-05     $P = 50.544947$  Days     $T_0 = 159.962745$  (BKJD)



# DV Model-Shift Uniqueness Test

005265699-05, P = 50.545316 Days, E = 109.418931 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
10.5	6.40	6.34	8.34	5.21	2.89	2.28	4.20	2.19	0.06	-1.94	3.93	0.80	0.44	2.61

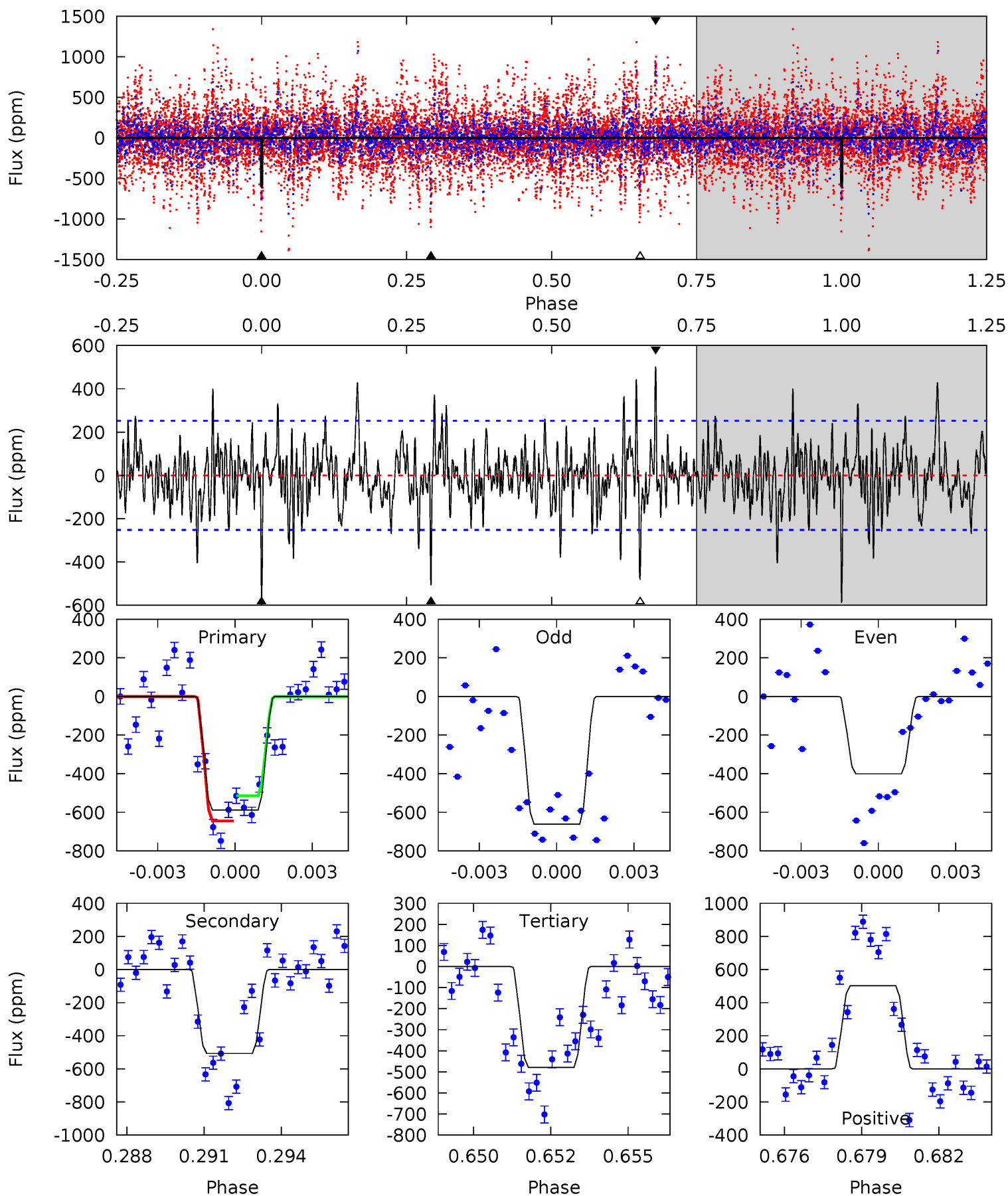




# Alt Model-Shift Uniqueness Test

005265699-05, P = 50.544947 Days, E = 109.417798 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
12.3	10.6	9.99	10.5	5.26	2.97	2.42	2.28	1.80	0.58	0.11	2.73	0.58	0.46	1.38



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-158 \pm 25$	$3.73^{+1.46}_{-1.32}$	$1170^{+86}_{-97}$	$6373^{+1570}_{-904}$	$615^{+856}_{-296}$
Alt.	$-507 \pm 48$	$5.74^{+1.48}_{-1.41}$	$1171^{+92}_{-100}$	$6881^{+1090}_{-668}$	$847^{+622}_{-320}$

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

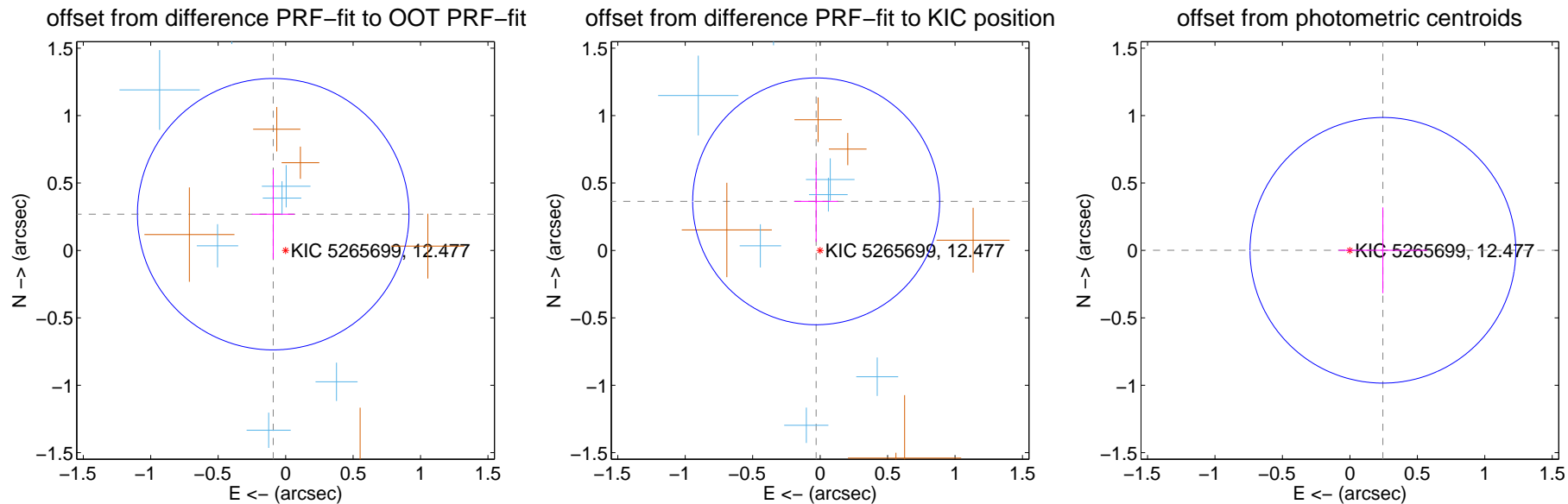
## DV Centroid Data

Supplemental centroid analysis for 005265699-05. Kepler magnitude: 12.48. Transit SNR 6.51

There are 8 quarters with good PRF difference image offsets

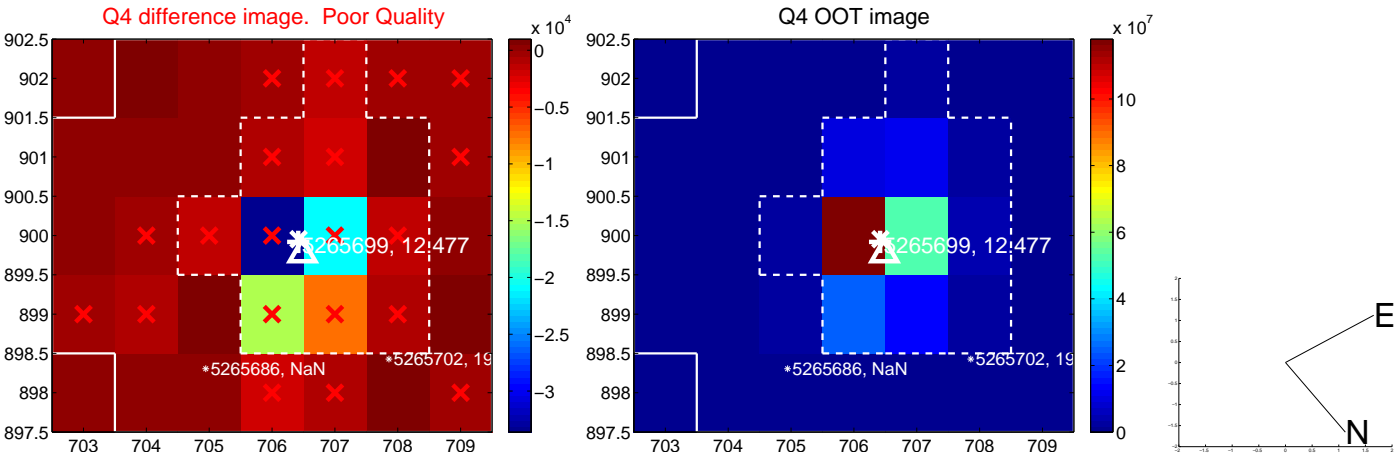
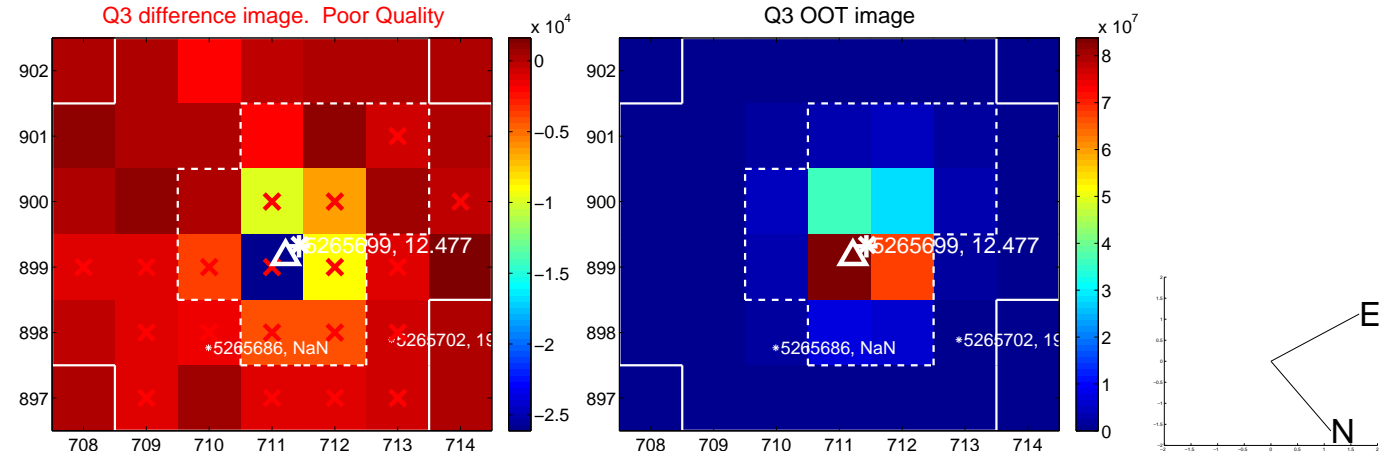
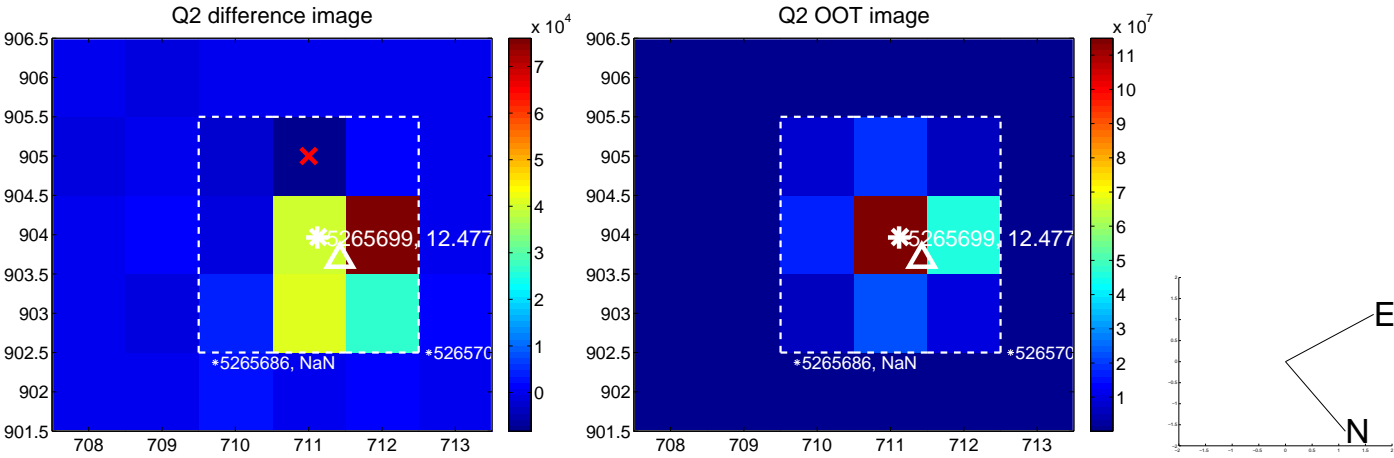
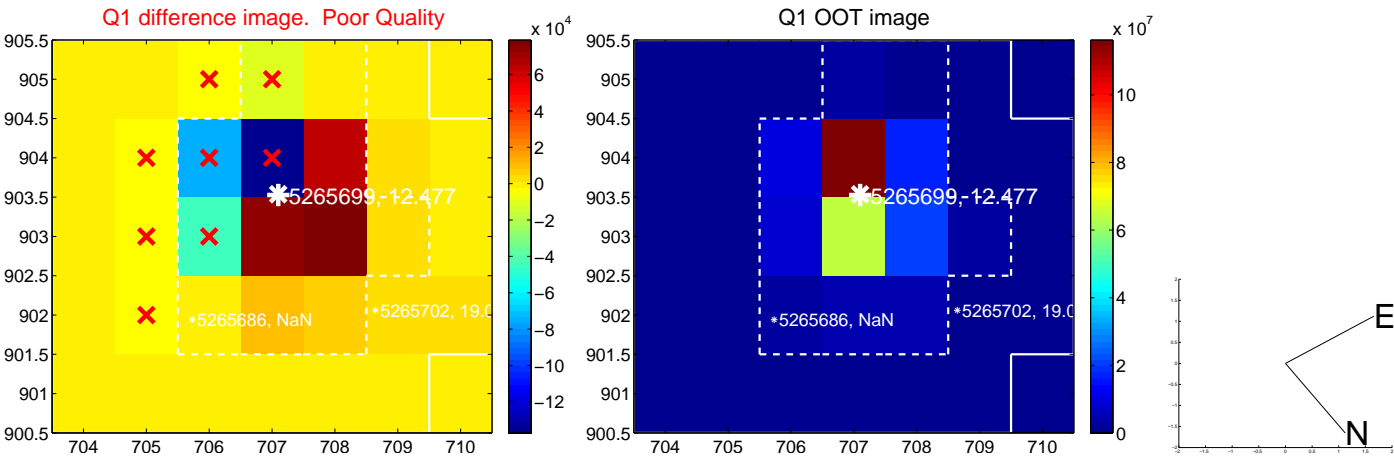
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.284 \pm 0.335$	0.85	$0.092 \pm 0.158$	$0.269 \pm 0.333$
PRF-fit source offset from KIC position	$0.365 \pm 0.305$	1.20	$0.029 \pm 0.162$	$0.364 \pm 0.301$
photometric centroid source offset	$0.24 \pm 0.33$	0.75	$-0.24 \pm 0.33$	$0.00 \pm 0.32$

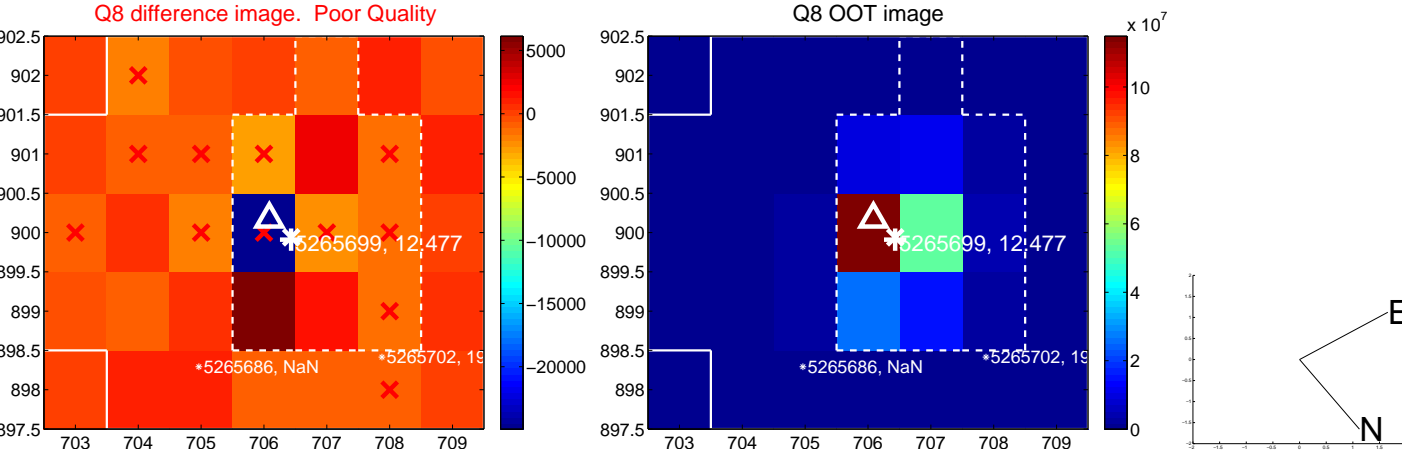
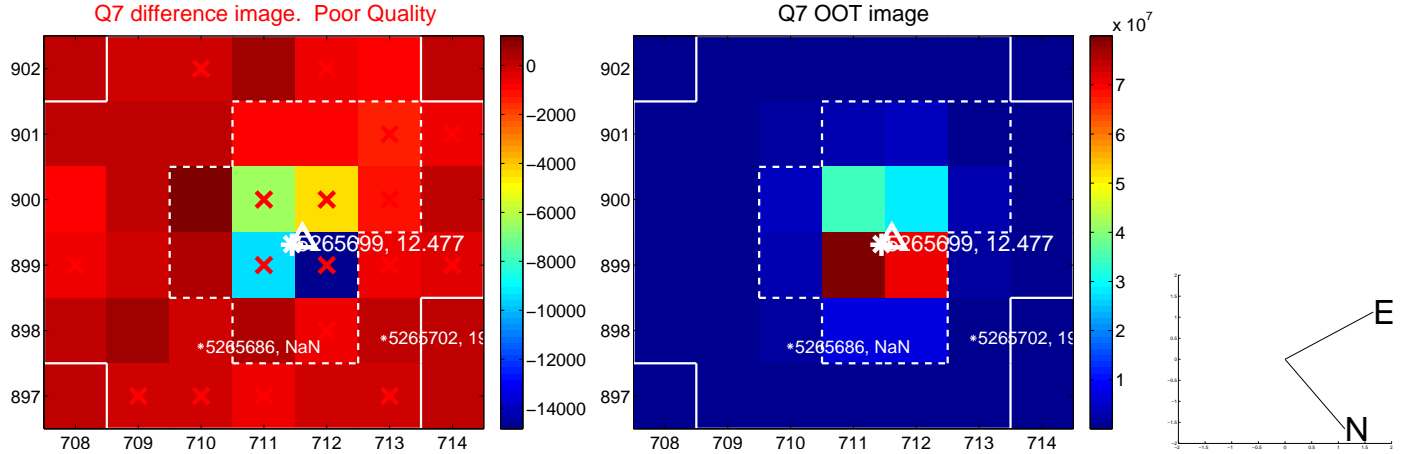
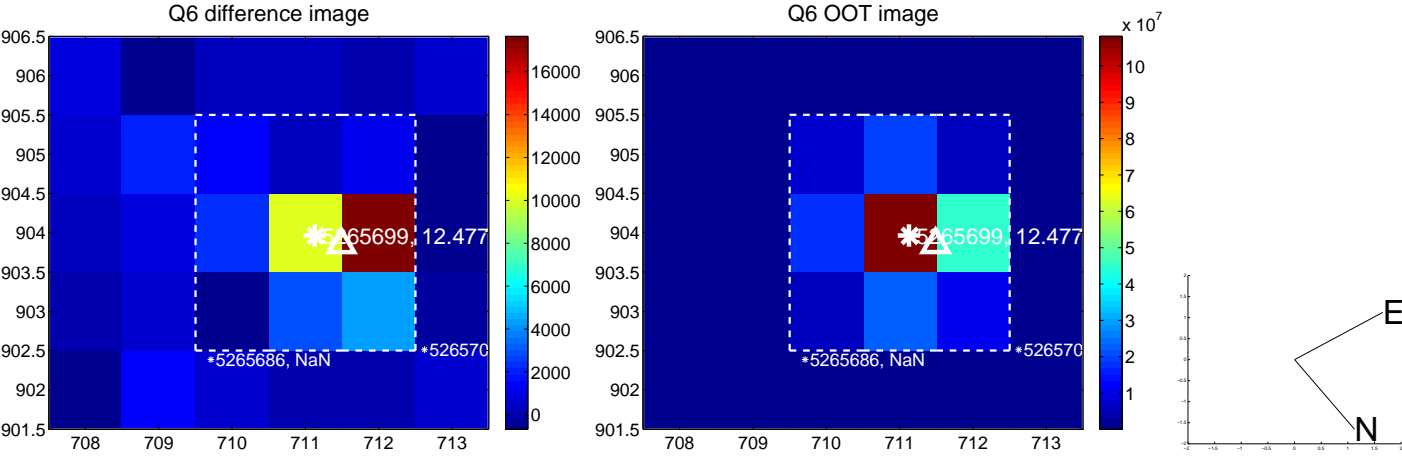
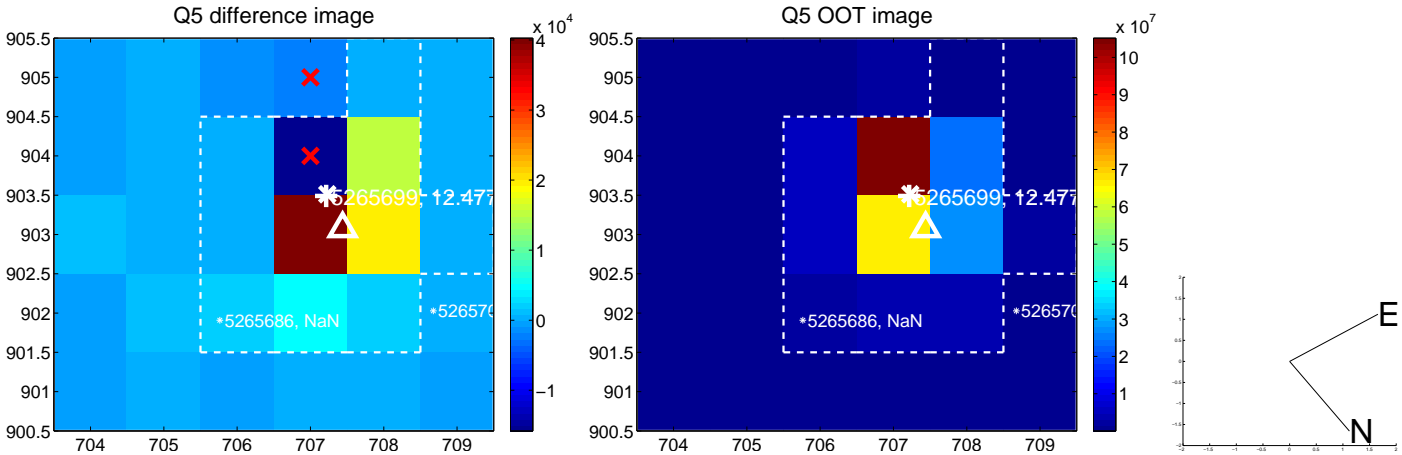


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

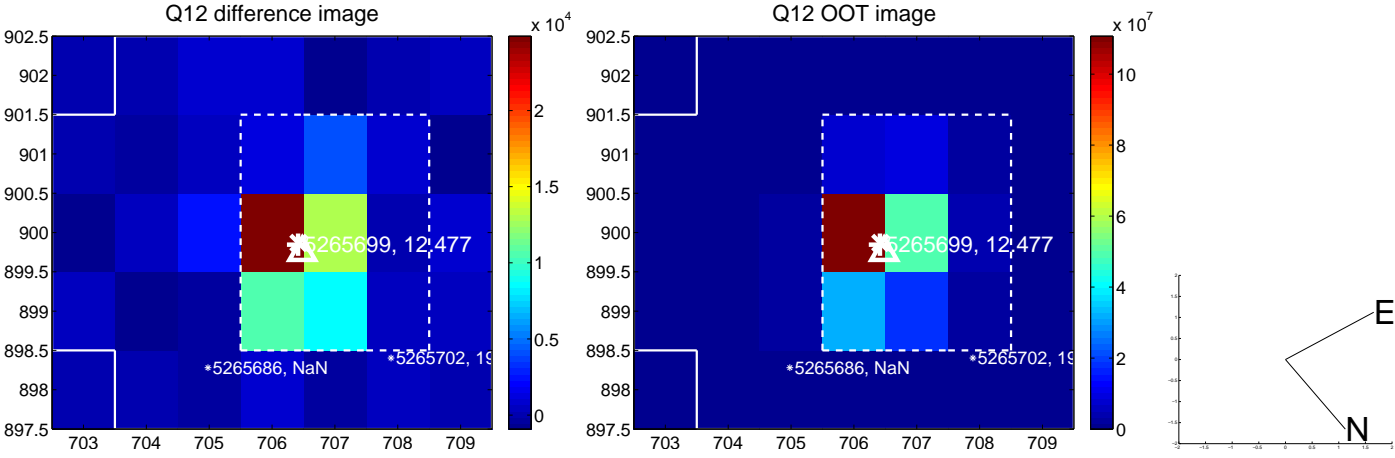
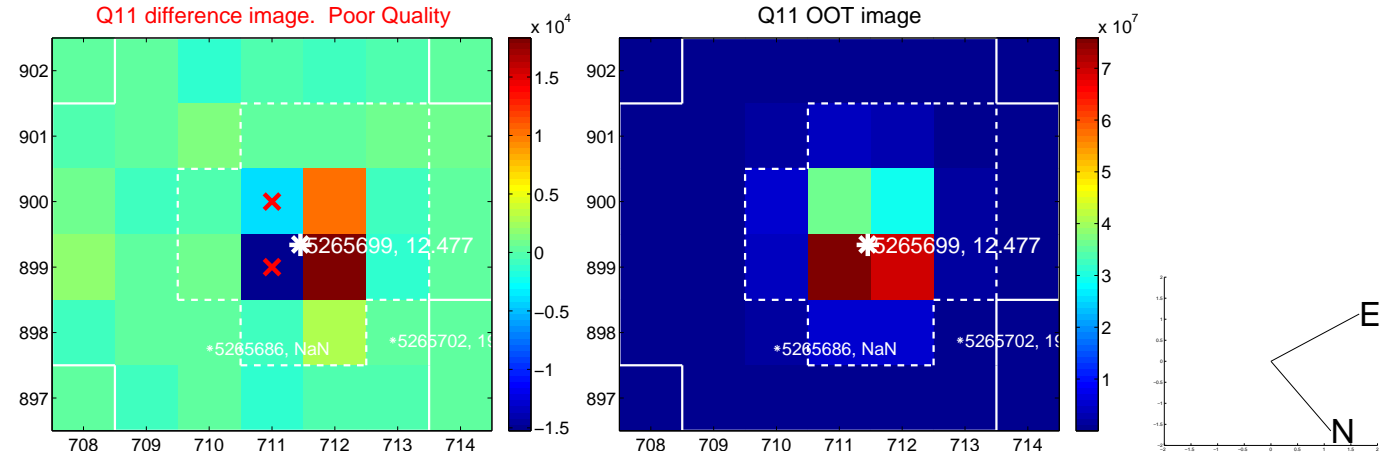
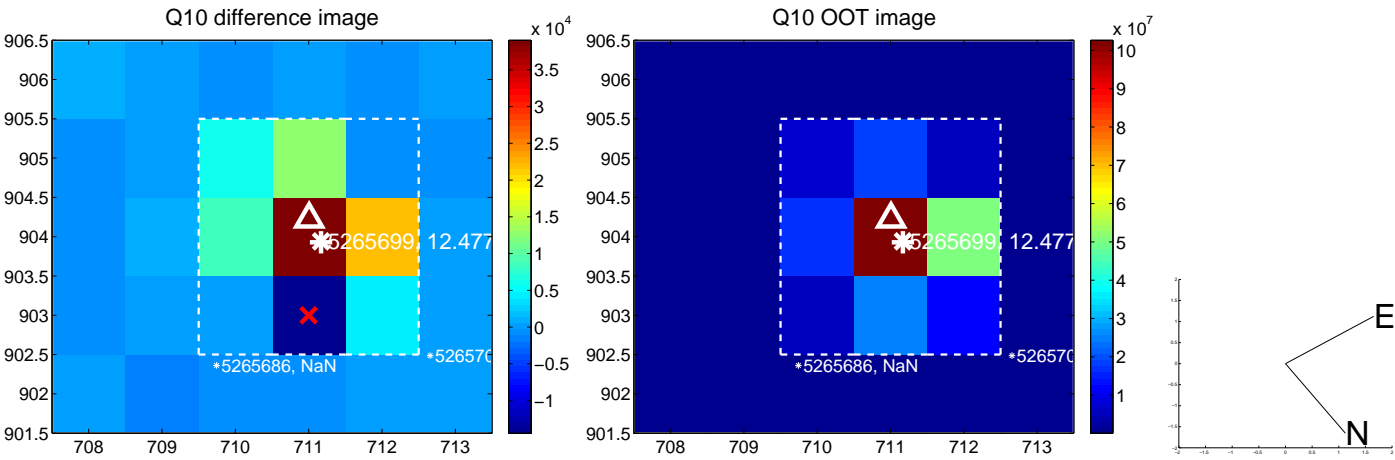
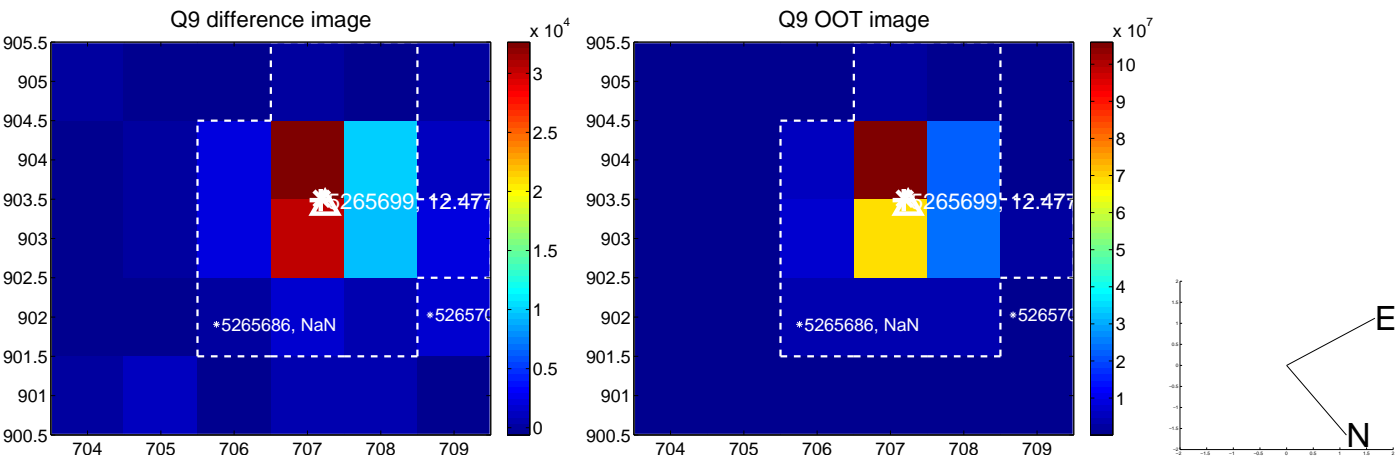
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

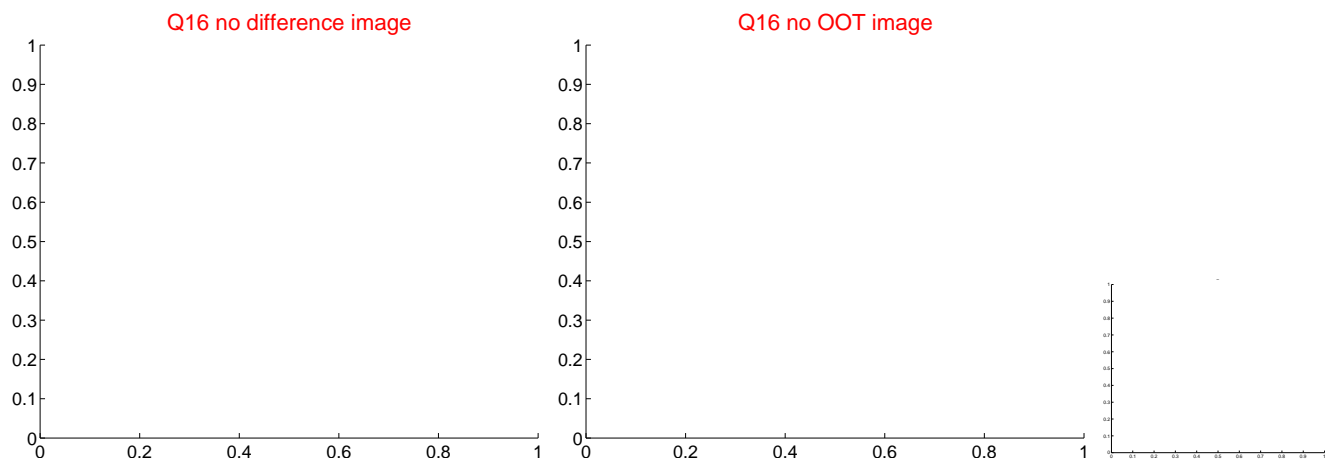
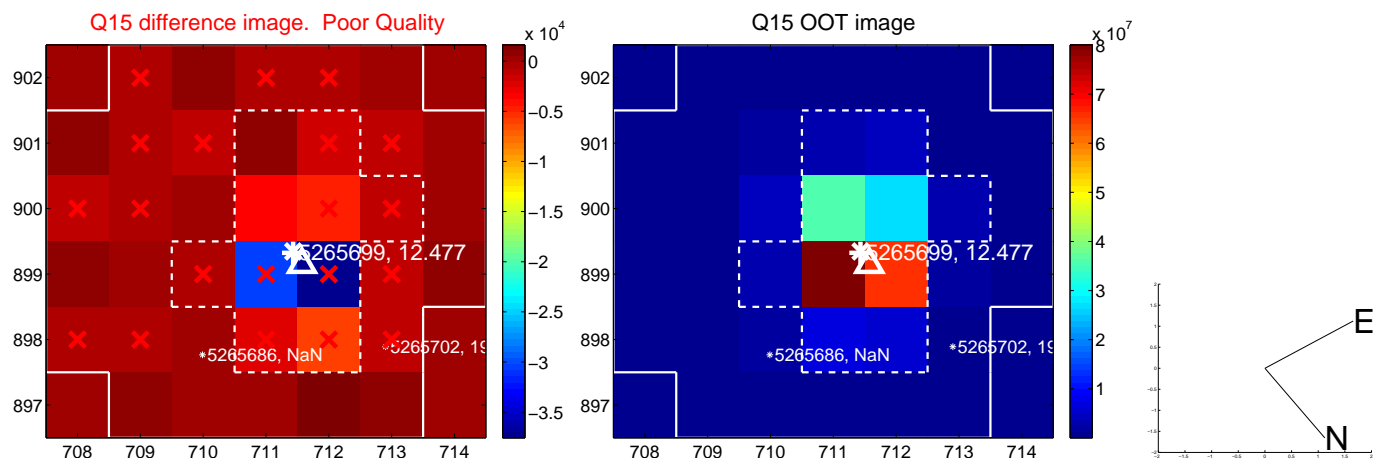
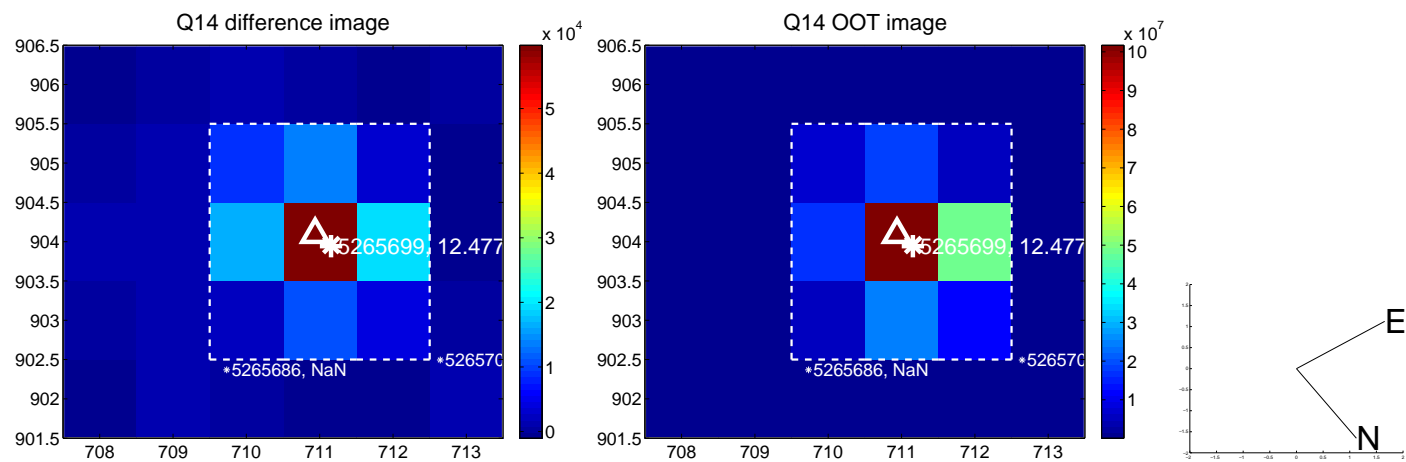
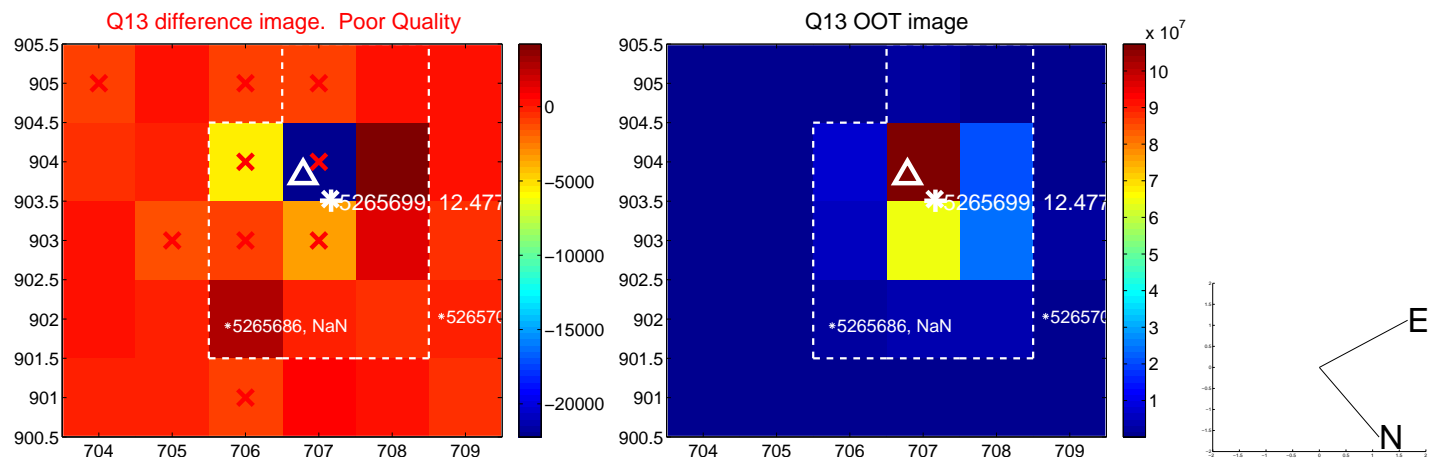


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

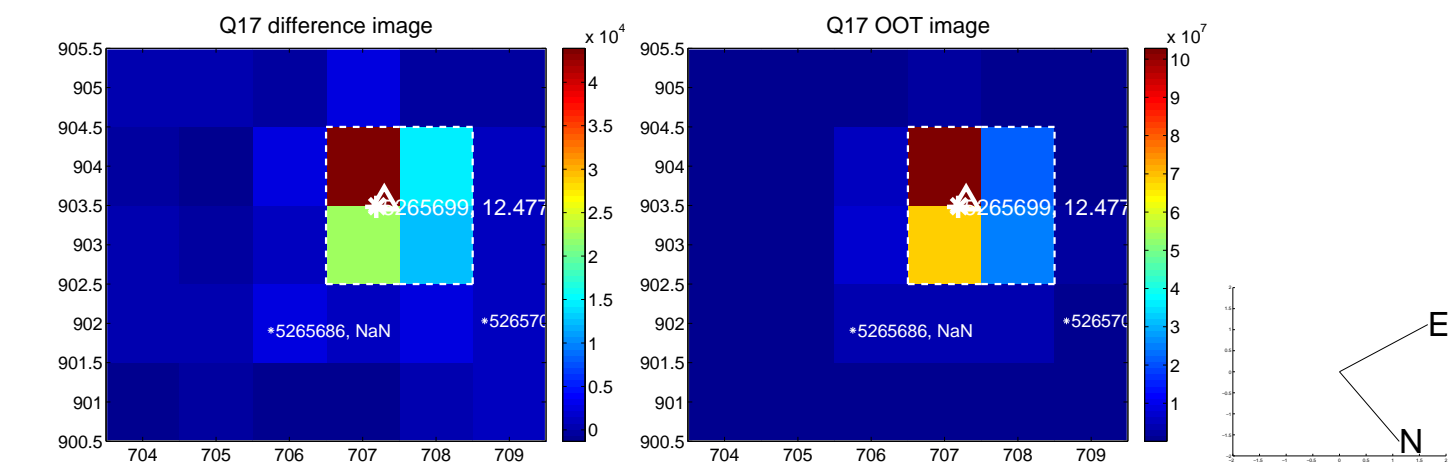




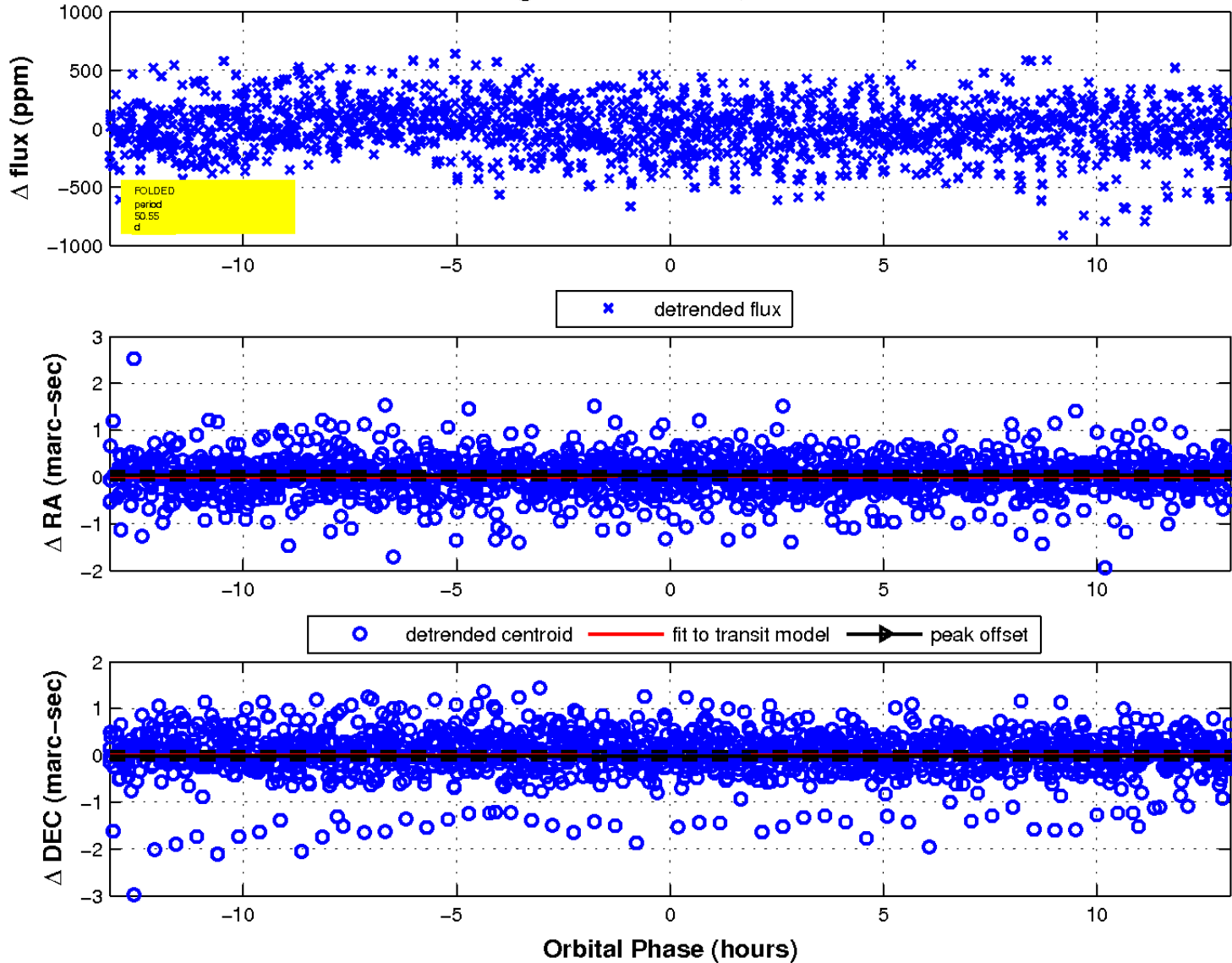
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

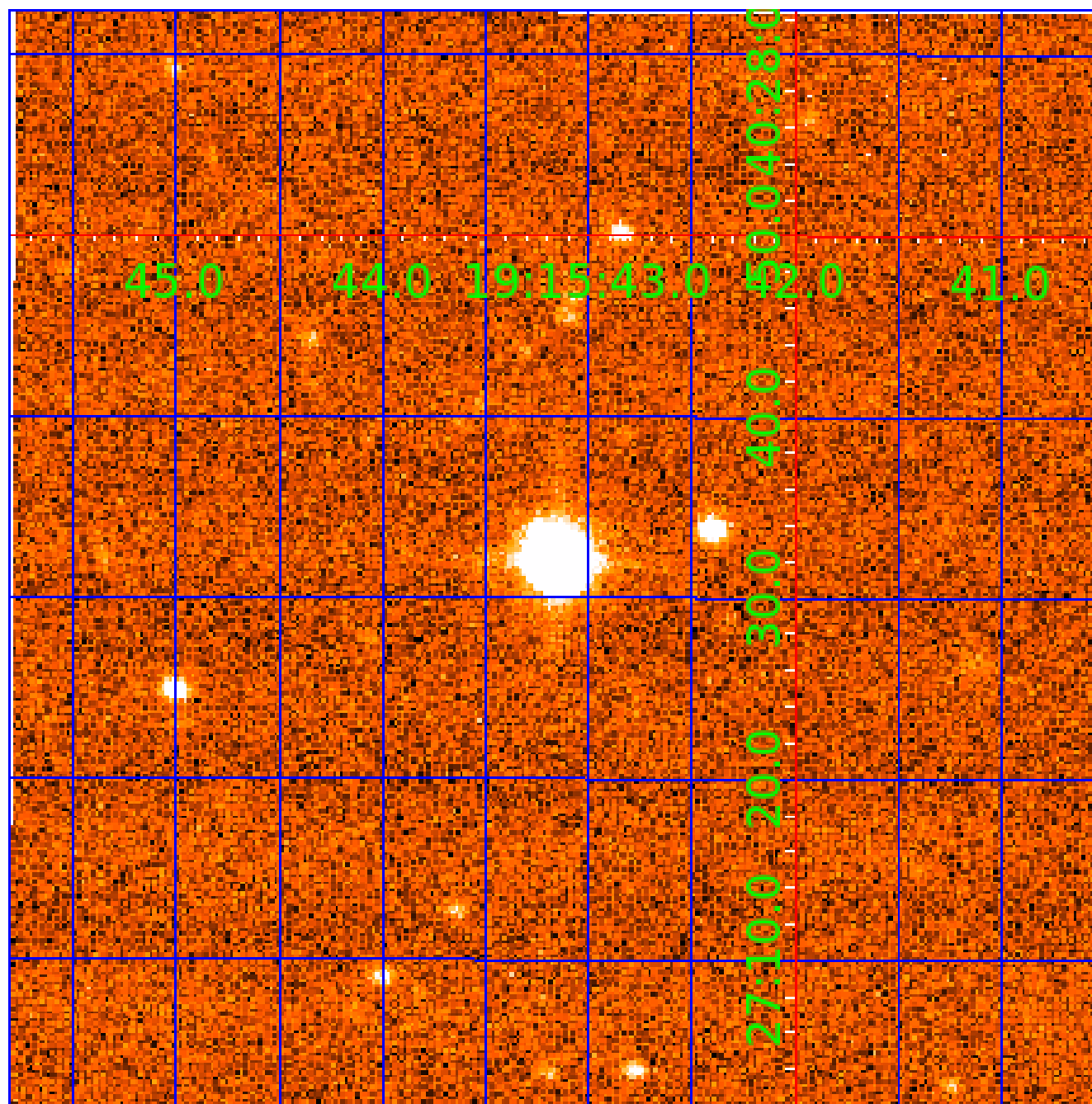


fluxWeightedCentroids, Planet 5 of 9



# UKIRT Image

Declination



# KIC 005265699

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005265699-01	OBS	No	1.374044	131.714311	33.5	3.650	9.2	9.7	2.22	7282	1.49	15215.14
005265699-02	OBS	No	0.689031	132.203374	3.0	3.776	10.8	1.0	2.22	7282	0.40	38190.78
005265699-03	OBS	No	60.711829	146.341993	472.9	9.051	9.4	8.8	2.22	7282	6.09	97.41
005265699-04	OBS	No	59.952043	156.502807	201.6	3.187	9.9	6.7	2.22	7282	3.62	99.05
005265699-05	OBS	No	50.545316	159.964247	234.4	4.380	9.1	6.5	2.22	7282	3.88	124.37
005265699-06	OBS	No	68.720978	171.196883	393.1	12.671	8.9	8.0	2.22	7282	5.10	82.57
005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005265699-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

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

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

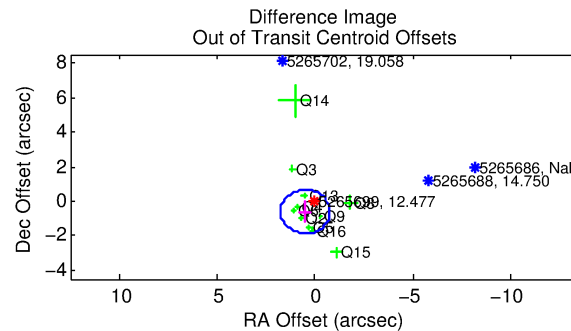
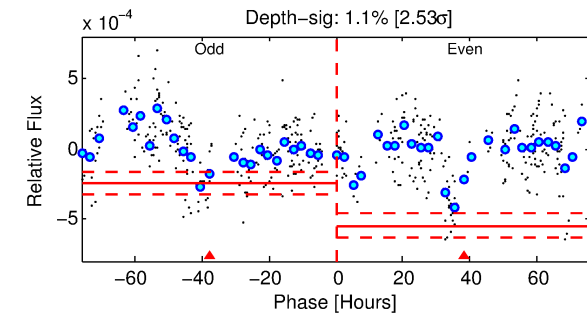
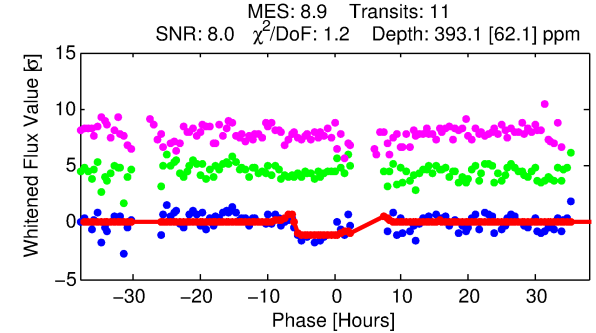
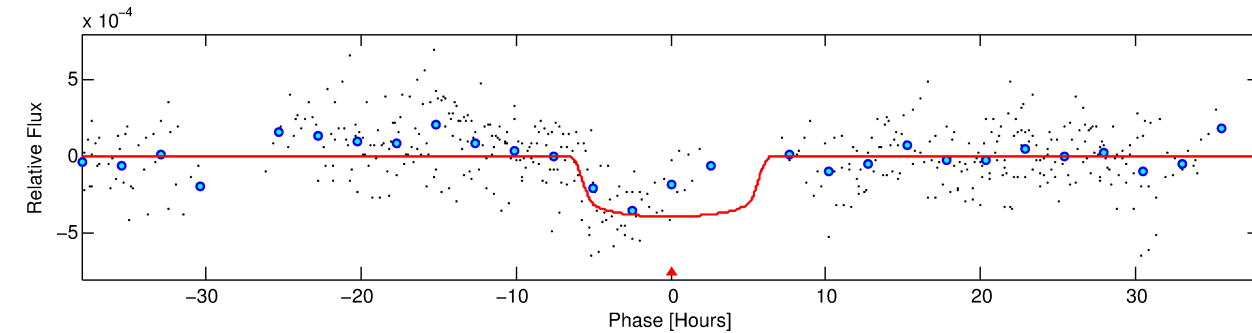
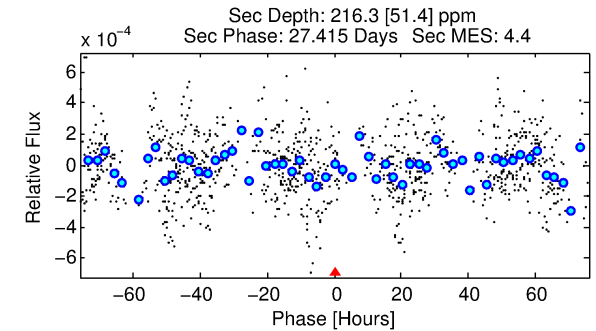
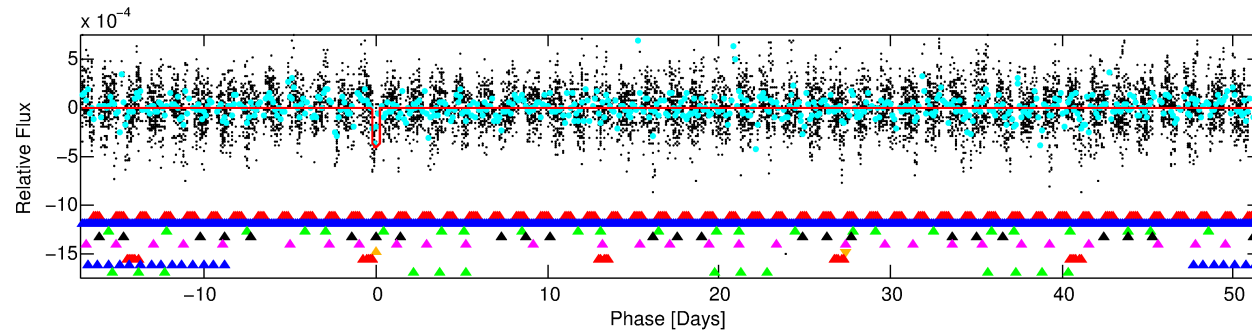
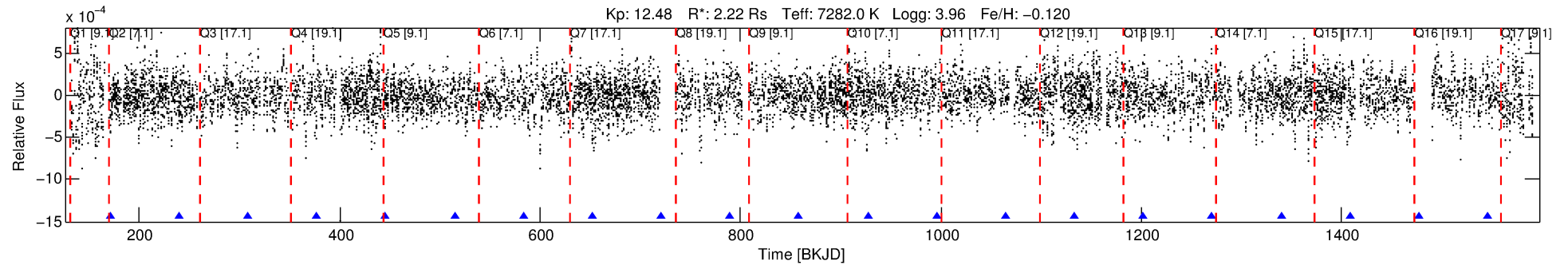
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-06

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 6 of 9 Period: 68.721 d



## DV Fit Results:

Period = 68.72098 [0.00164] d  
Epoch = 171.1969 [0.0424] BKJD  
Rp/R\* = 0.0211 [0.0022]  
a/R\* = 20.23 [6.53]  
b = 0.90 [0.09]  
Seff = 82.57 [40.24]  
Teq = 769 [94] K  
Rp = 5.10 [1.79] Re  
a = 0.3871 [0.1162] AU  
Ag = 686.49 [381.41] [1.80σ]  
Teffp = 6083 [542] K [9.67σ]

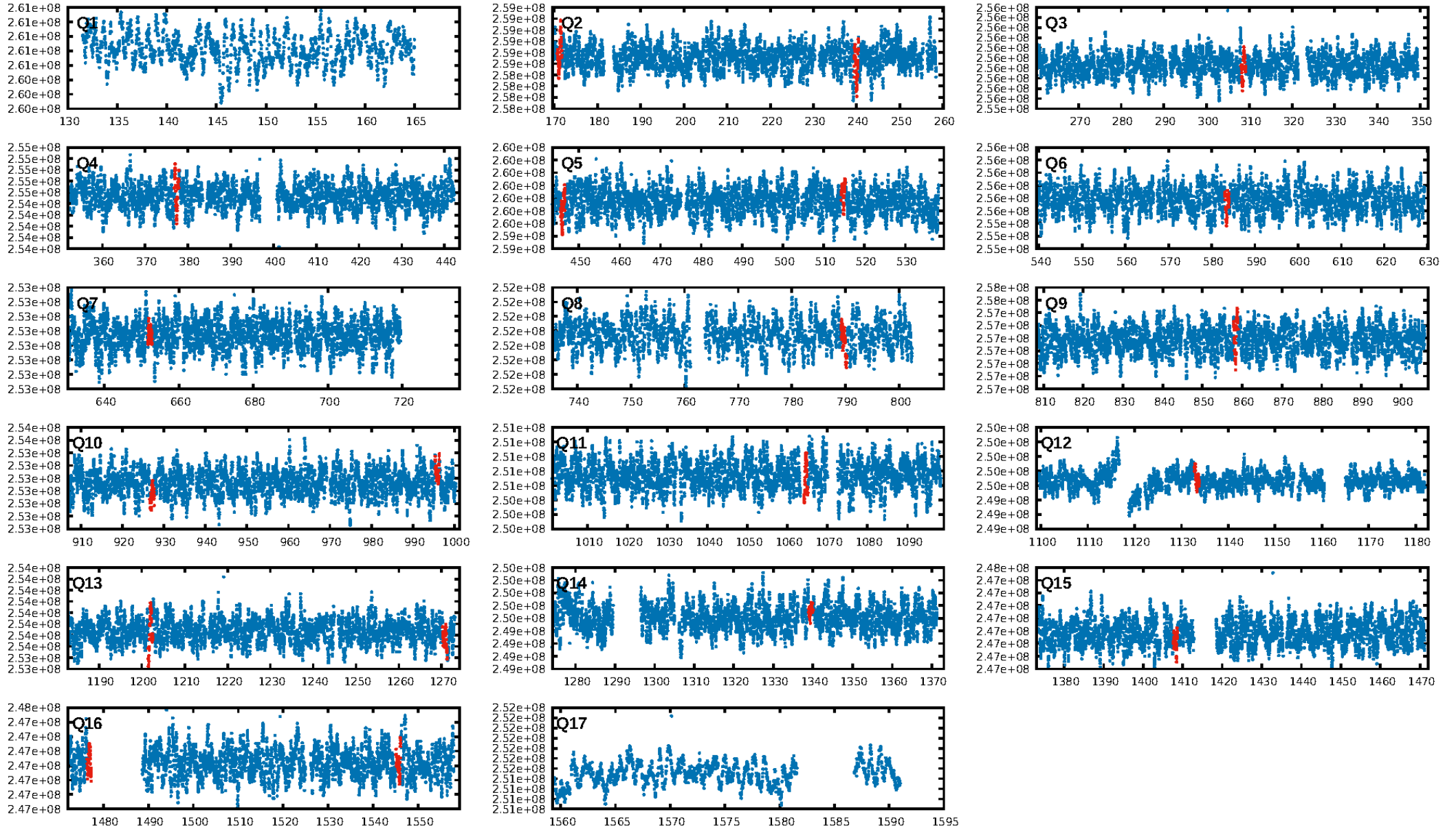
## DV Diagnostic Results:

ShortPeriod-sig: 72.2% [1.09σ]  
LongPeriod-sig: 100.0% [93.39σ]  
ModelChiSquare2-sig: 17.6%  
ModelChiSquareGoF-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [11/11]  
GhostDiagnostic-chr: 6.766  
Centroid-sig: 35.8%  
Centroid-so: 0.091 arcsec [0.52σ]  
OotOffset-rm: 0.778 arcsec [1.85σ]  
KicOffset-rm: 0.715 arcsec [1.52σ]  
OotOffset-st: 3/2/3/3 [11]  
KicOffset-st: 3/2/3/3 [11]  
DiffImageQuality-fgm: 0.73 [8/11]  
DiffImageOverlap-fno: 0.00 [0/13]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:38:07 Z

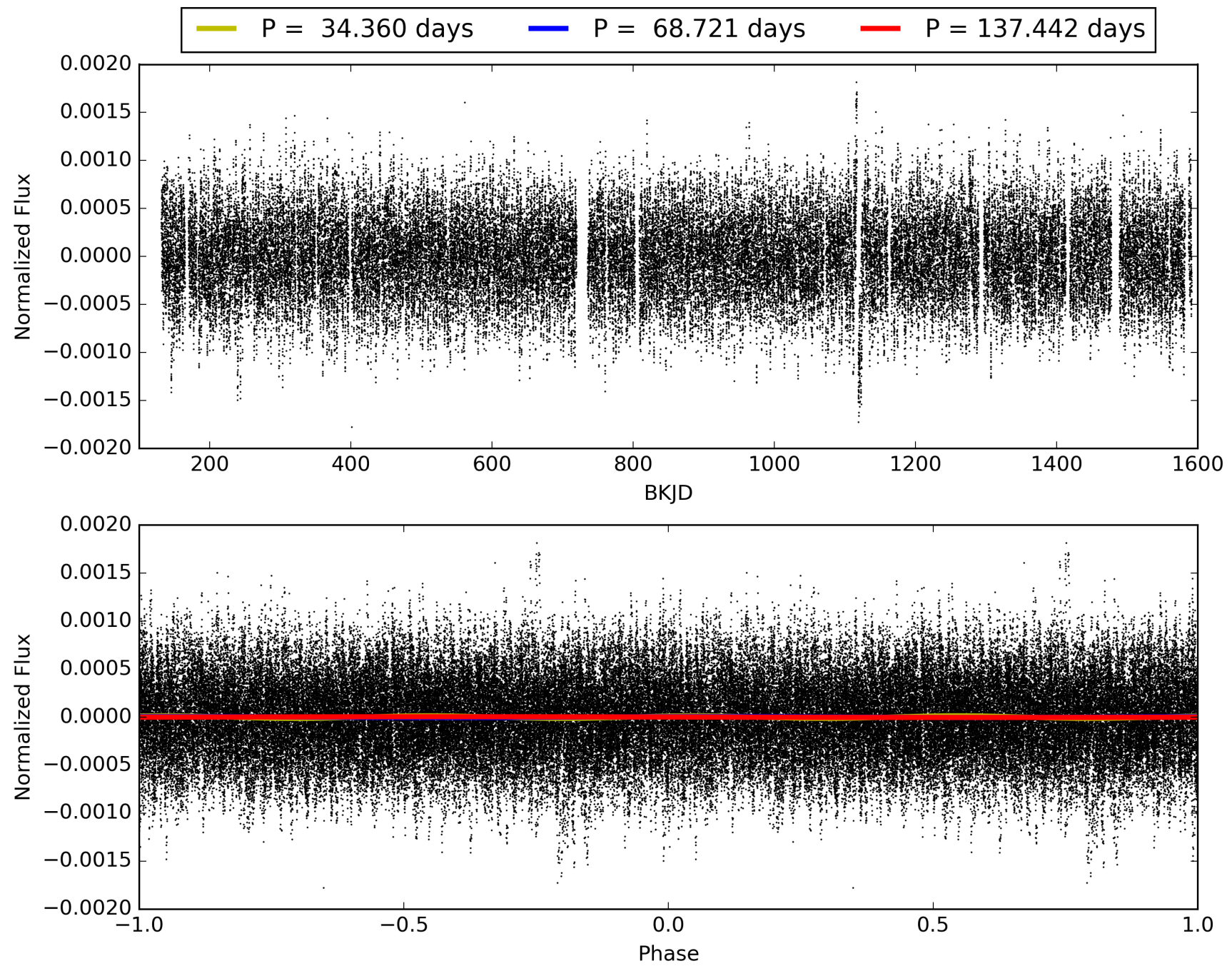
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005265699-06, PDC Light Curves



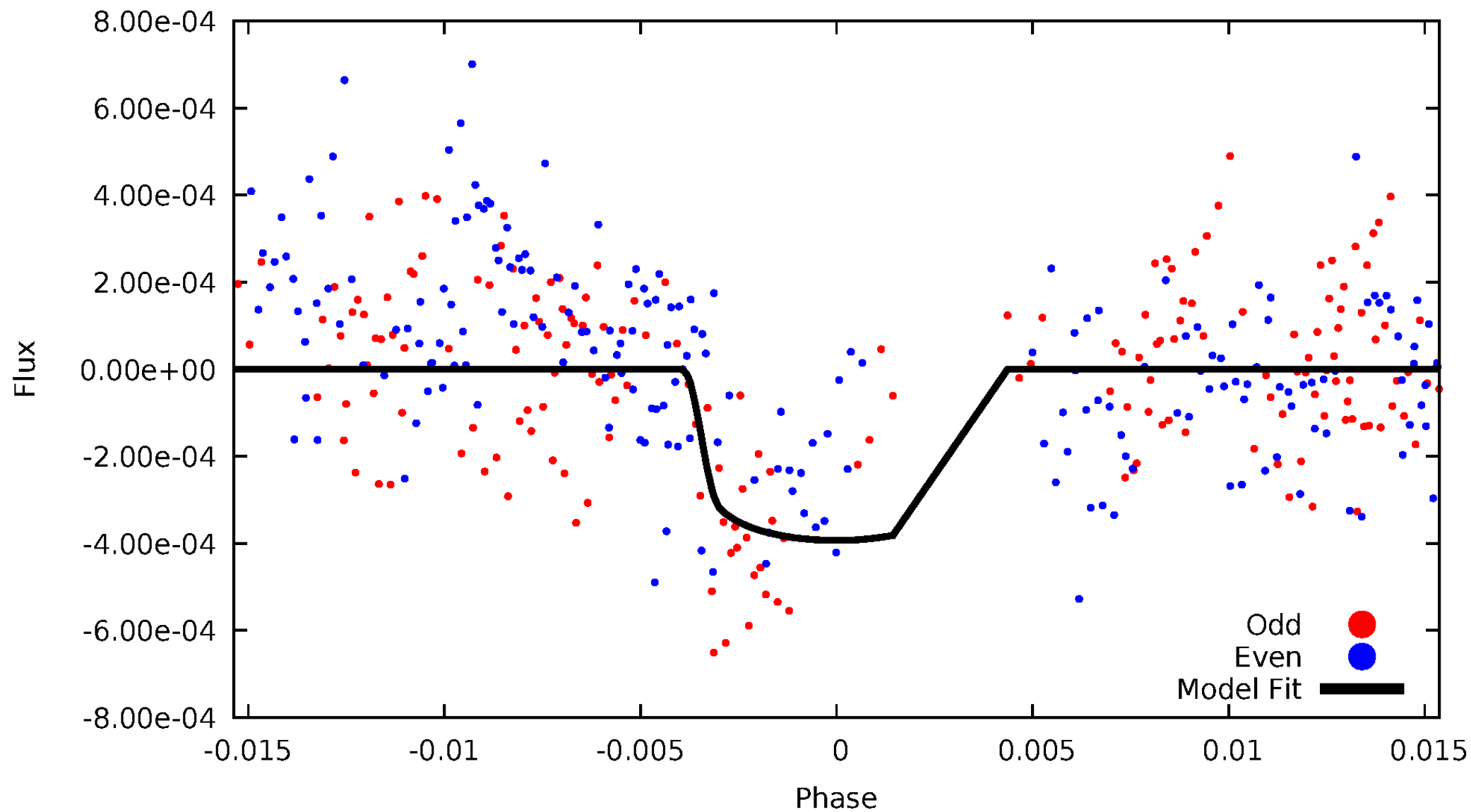


TCE 005265699-06



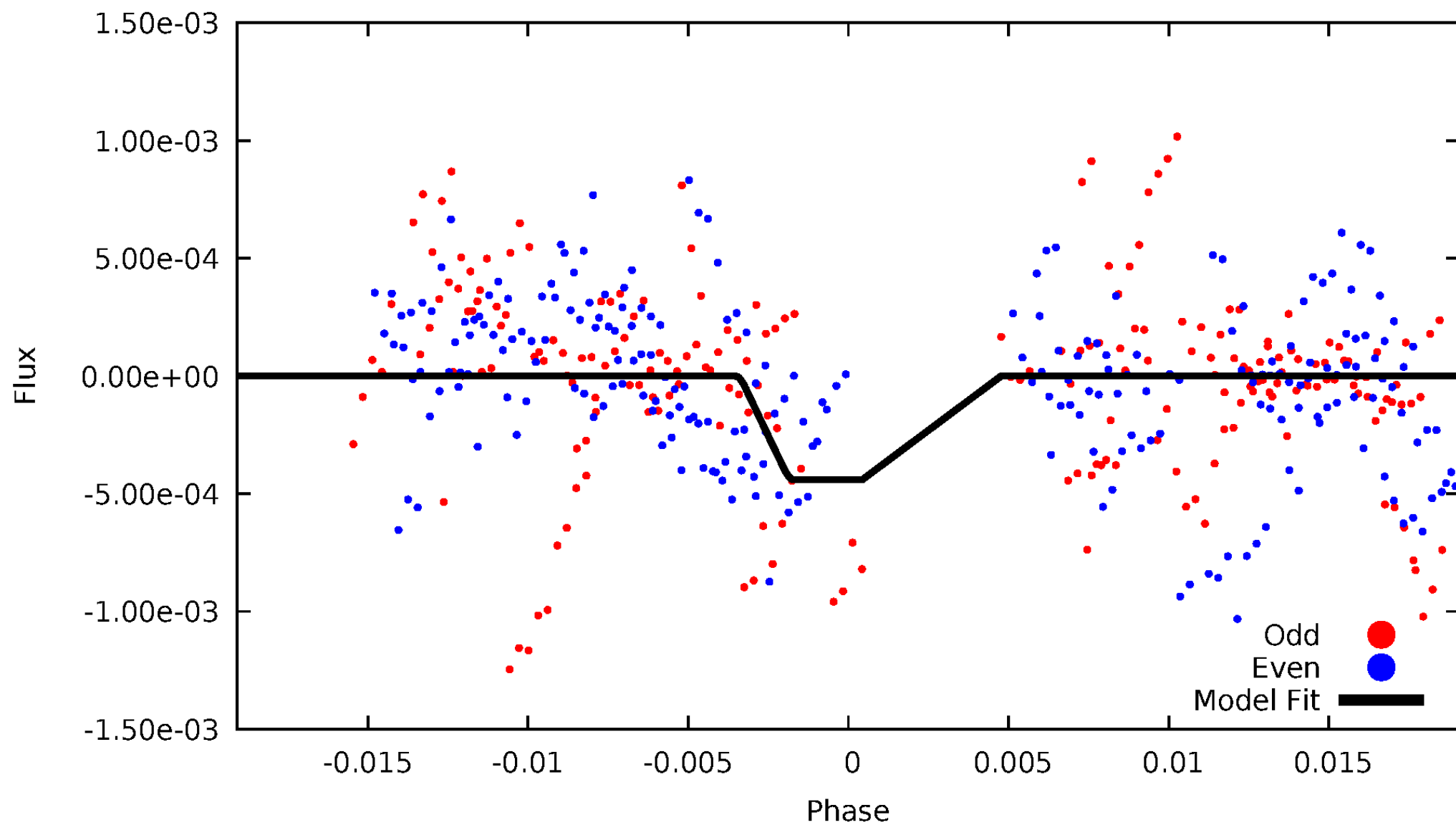
# DV Odd/Even

TCE 005265699-06



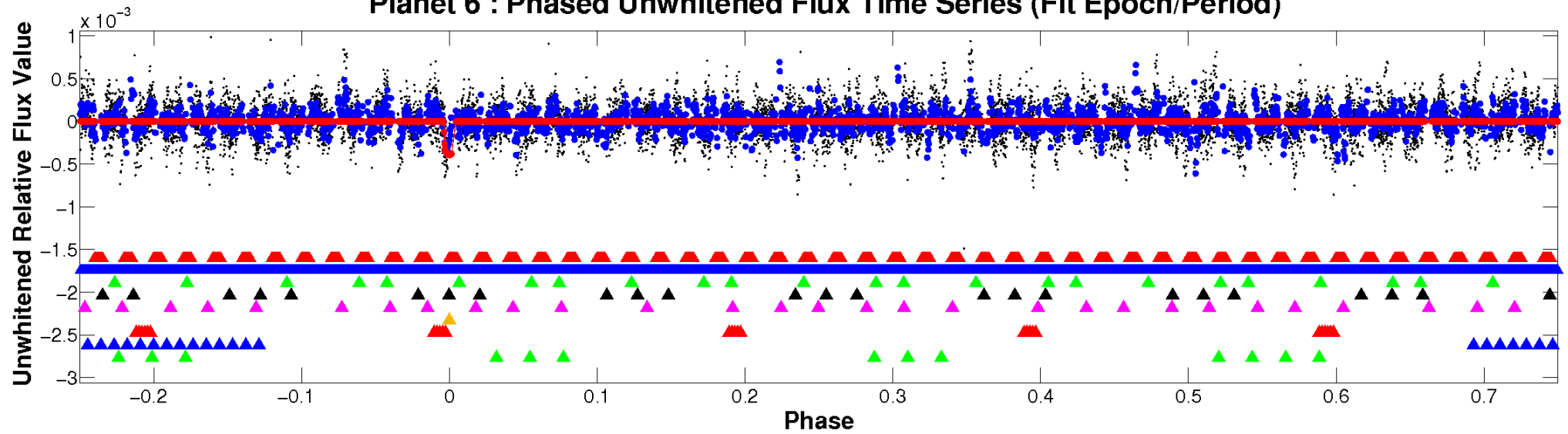
# ALT Odd/Even

TCE 005265699-06

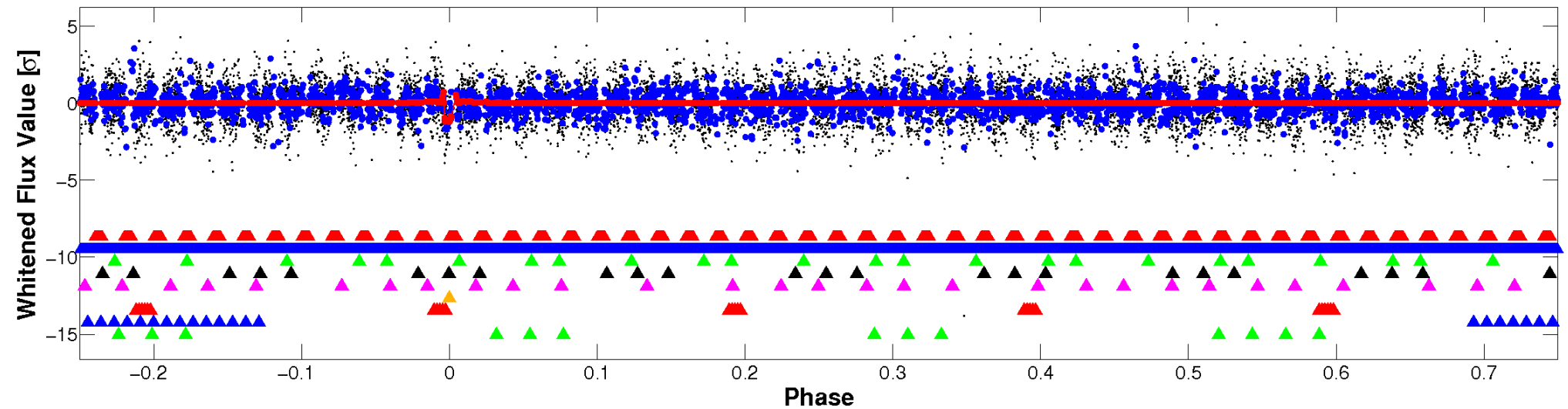


# Non-Whitened Vs. Whitened Light Curve

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

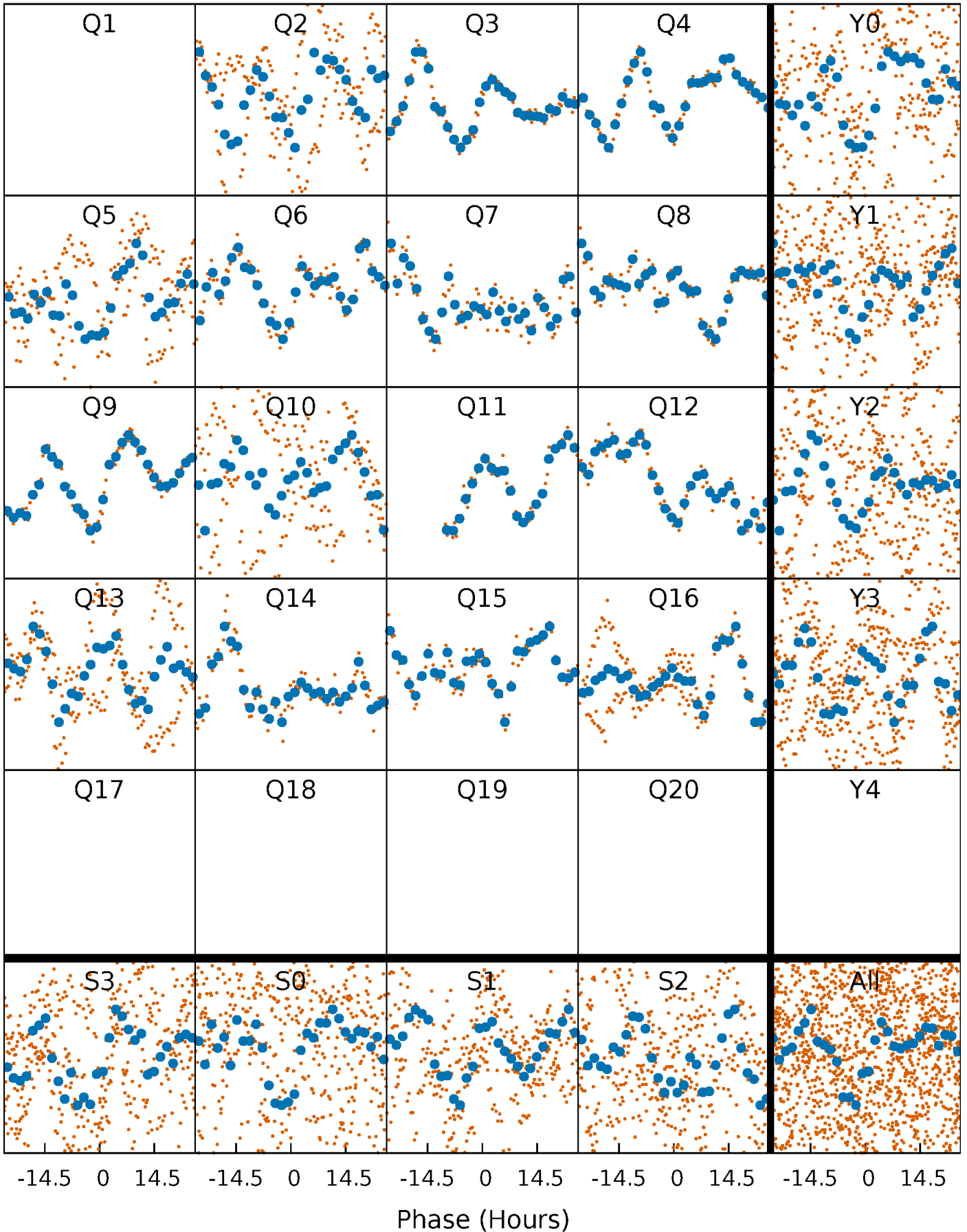


## Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



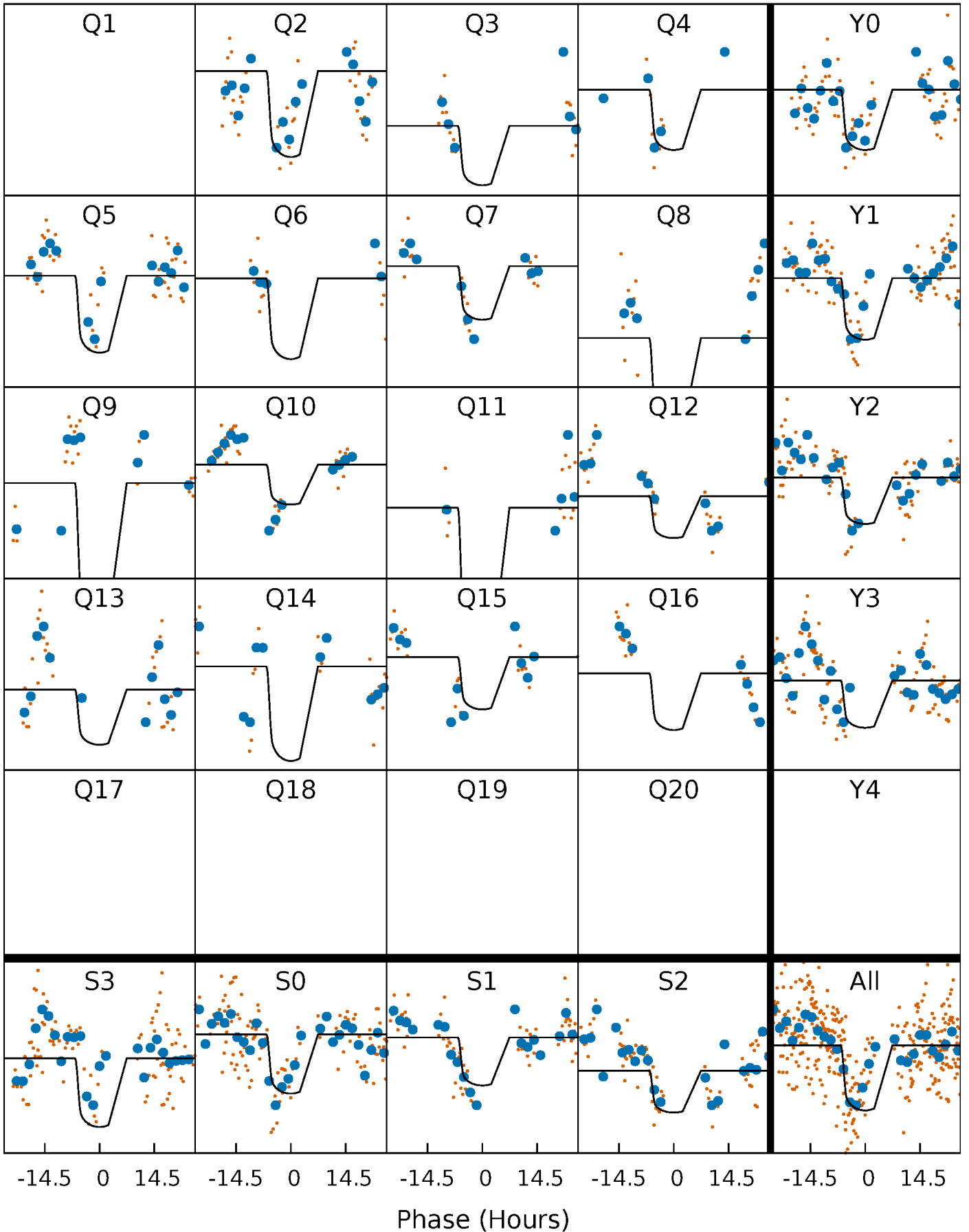
# PDC Quarter-Phased Transit Curves

TCE 005265699-06 P= 68.720978 Days  $T_0=171.196883$  (BKJD)



# DV Quarter-Phased Transit Curves

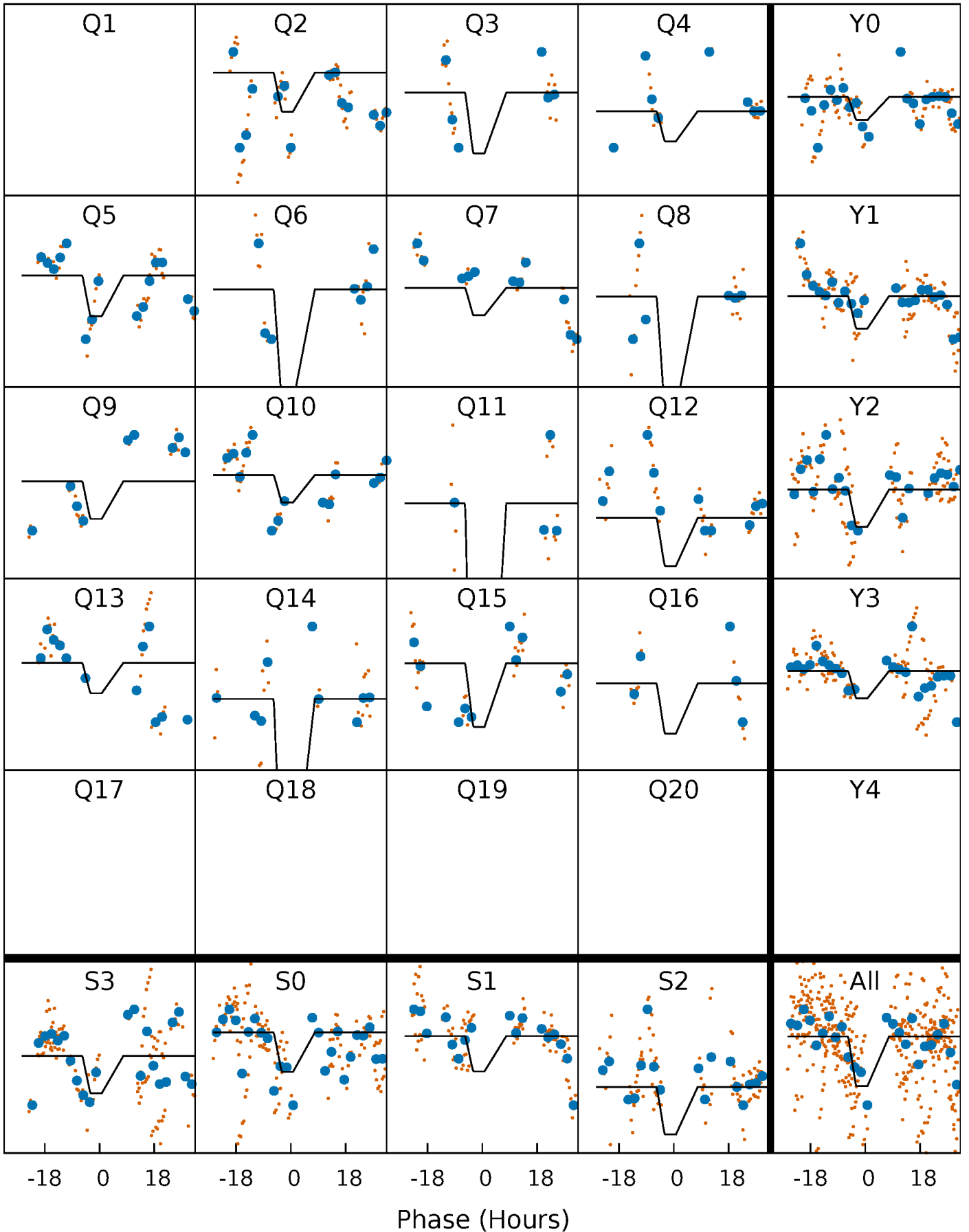
TCE 005265699-06 P= 68.720978 Days  $T_0=171.196883$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

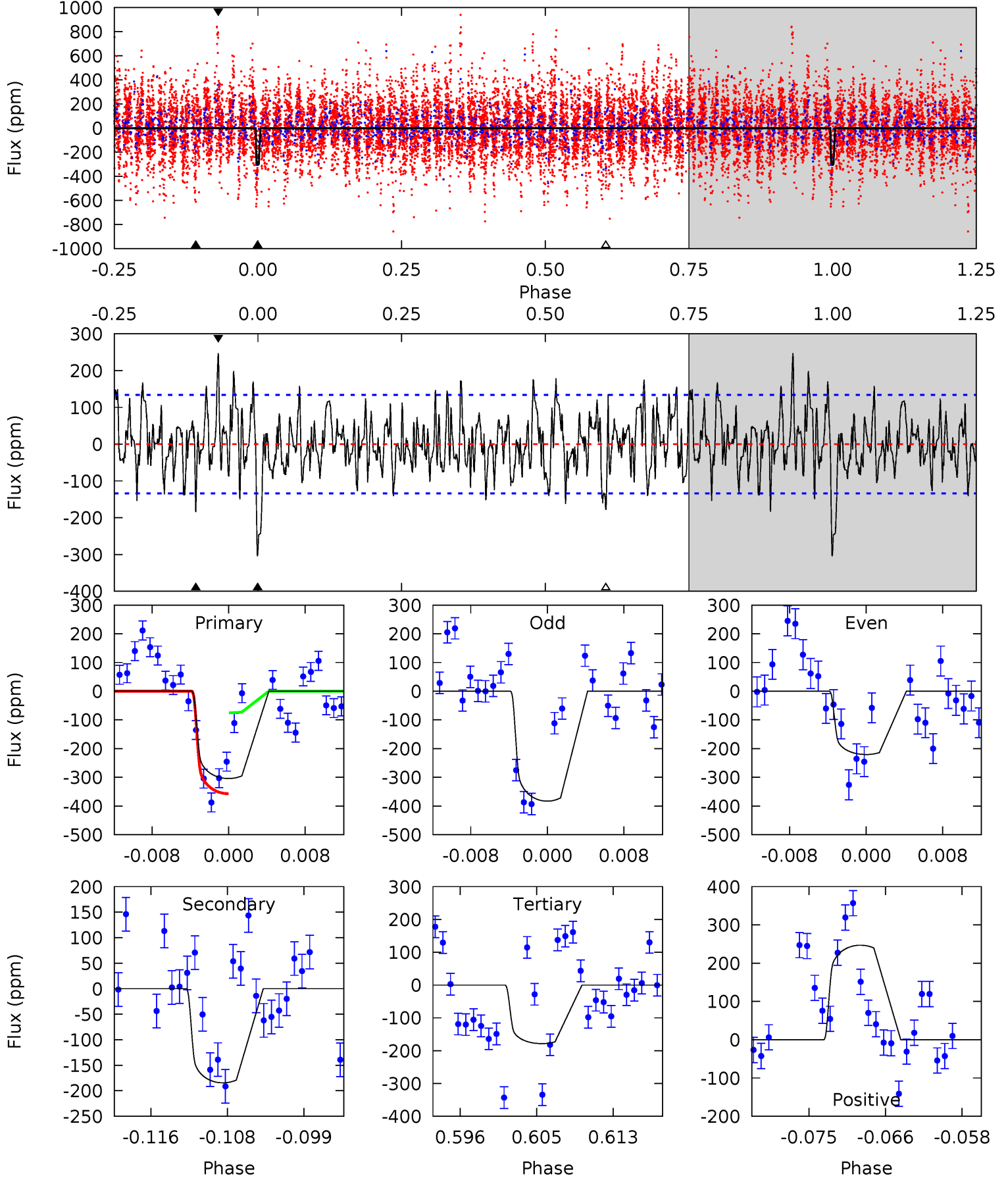
TCE 005265699-06 P= 68.714902 Days  $T_0=171.272177$  (BKJD)



# DV Model-Shift Uniqueness Test

005265699-06, P = 68.720978 Days, E = 102.475905 Days

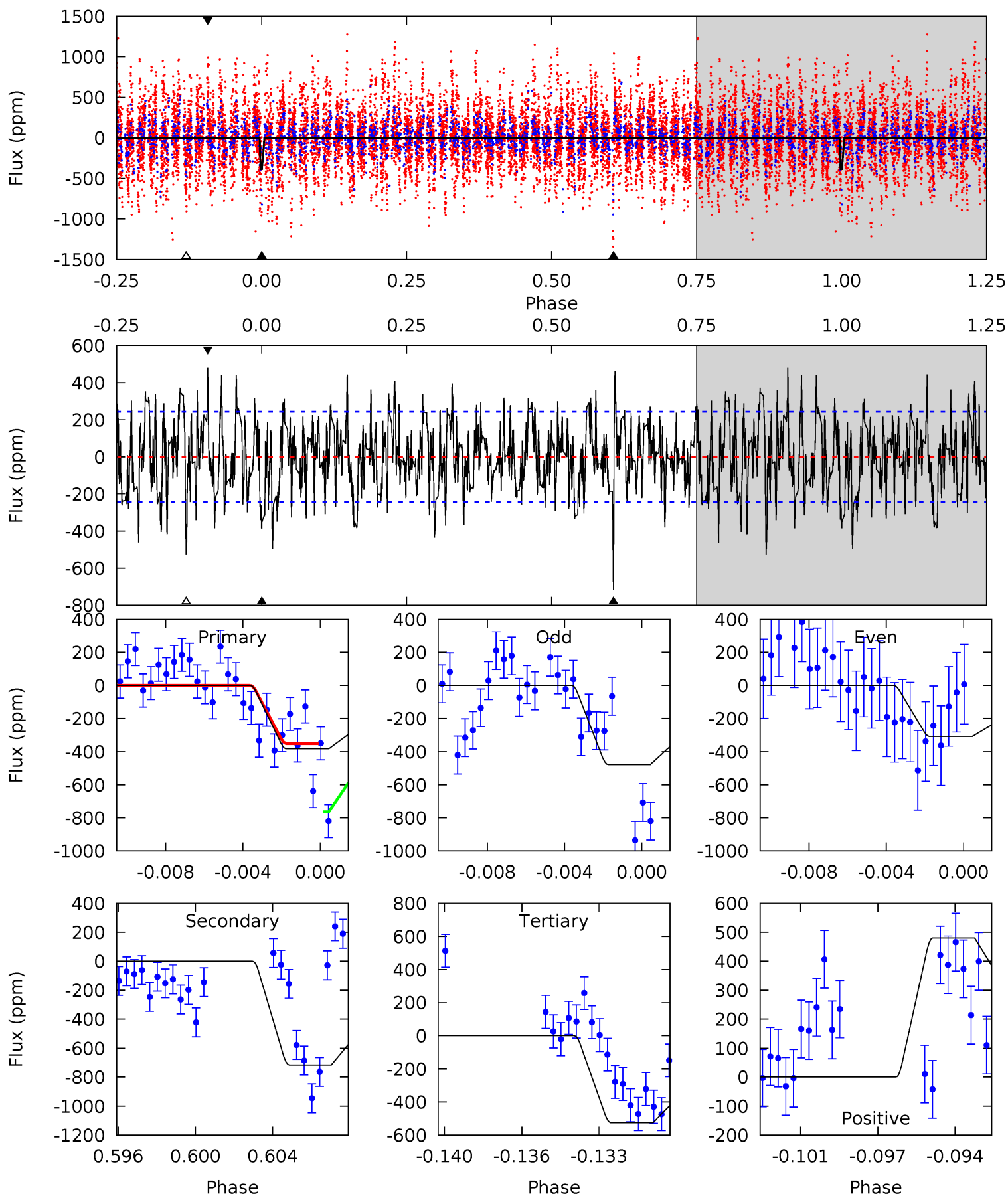
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	6.97	6.75	9.33	5.06	2.64	2.50	4.75	2.16	0.22	-2.36	3.09	0.97	0.45	3.77



# Alt Model-Shift Uniqueness Test

005265699-06, P = 68.714902 Days, E = 102.557275 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
8.22	15.3	11.2	10.3	5.20	2.89	3.15	-3.02	-2.07	4.09	5.05	1.81	1.15	0.40	1.33



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-184 \pm 26$	$5.00^{+0.89}_{-0.97}$	$1063^{+80}_{-95}$	$5786^{+408}_{-391}$	$601^{+313}_{-173}$
Alt.	$-716 \pm 47$	$4.90^{+0.93}_{-0.93}$	$1062^{+73}_{-98}$	$8421^{+743}_{-644}$	$2416^{+1219}_{-695}$

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

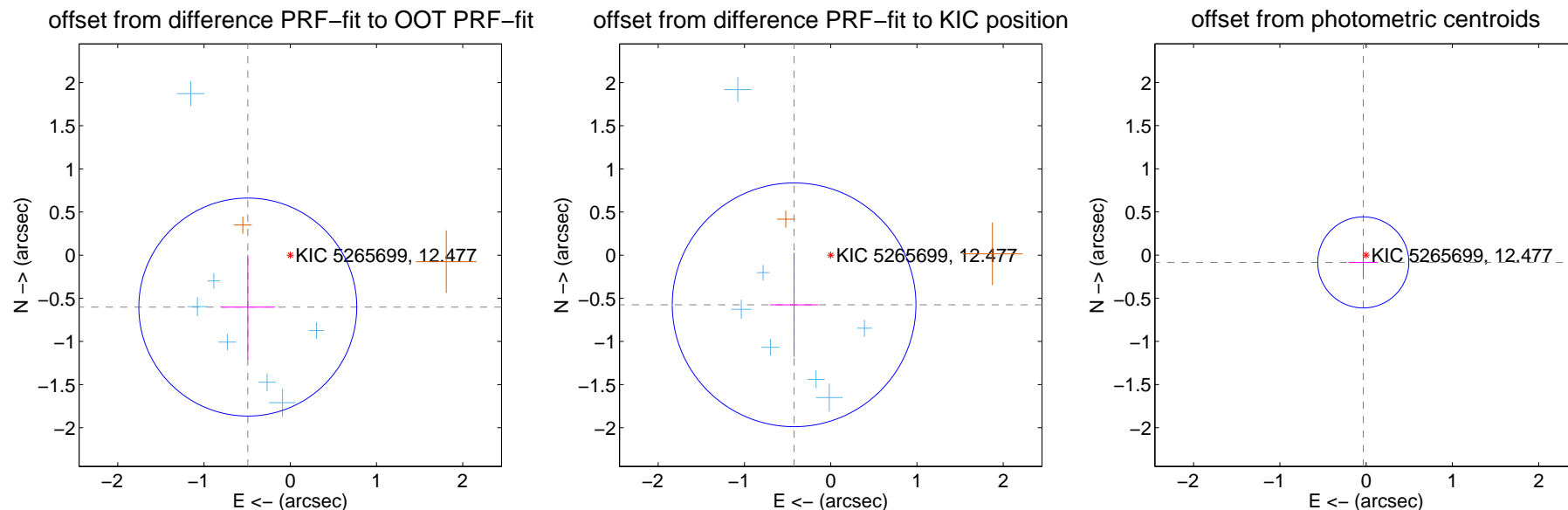
## DV Centroid Data

Supplemental centroid analysis for 005265699-06. Kepler magnitude: 12.48. Transit SNR 7.96

There are 8 quarters with good PRF difference image offsets

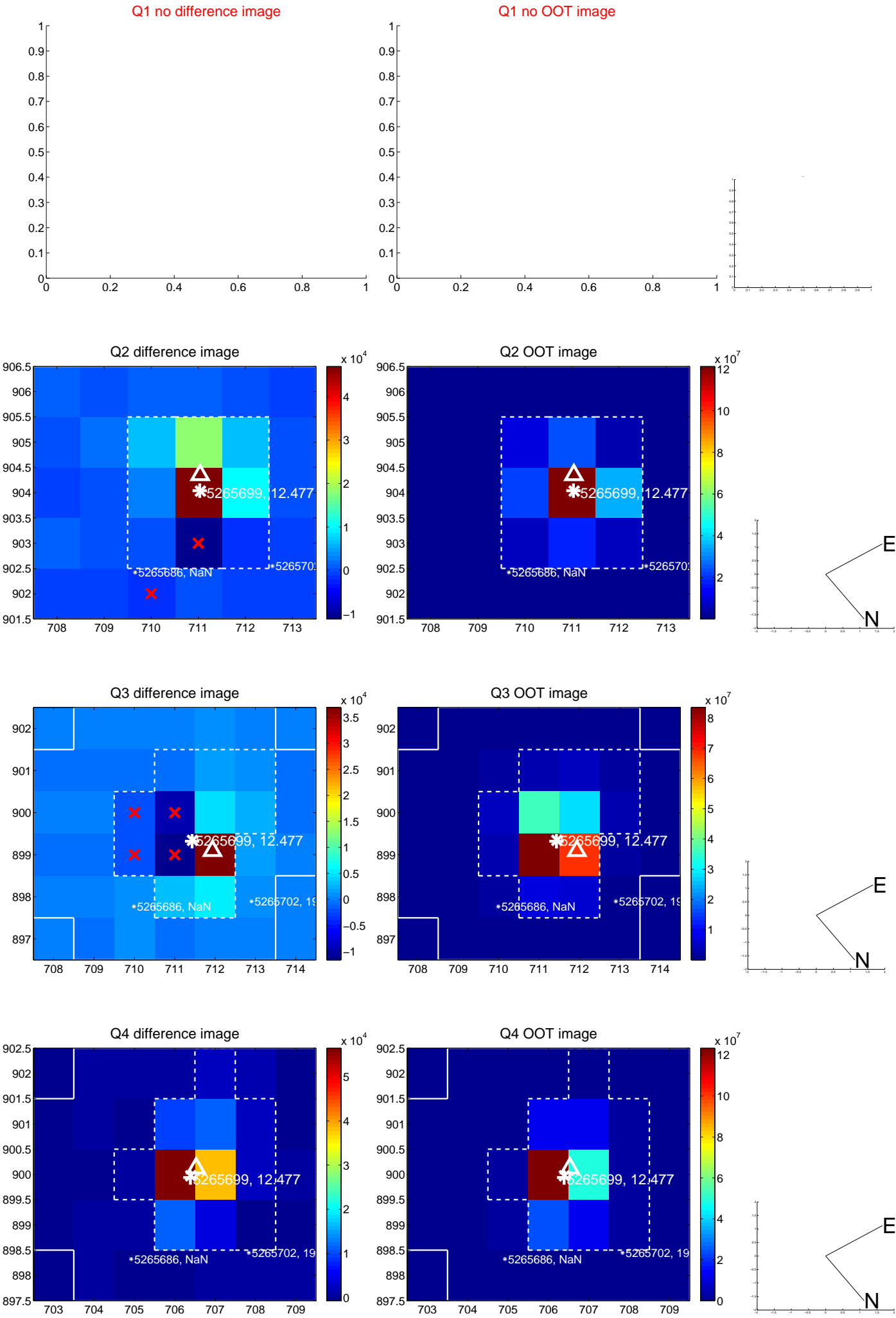
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.778 \pm 0.421$	1.85	$0.492 \pm 0.316$	$-0.602 \pm 0.606$
PRF-fit source offset from KIC position	$0.715 \pm 0.471$	1.52	$0.425 \pm 0.280$	$-0.576 \pm 0.603$
photometric centroid source offset	$0.09 \pm 0.18$	0.52	$0.03 \pm 0.17$	$-0.08 \pm 0.18$



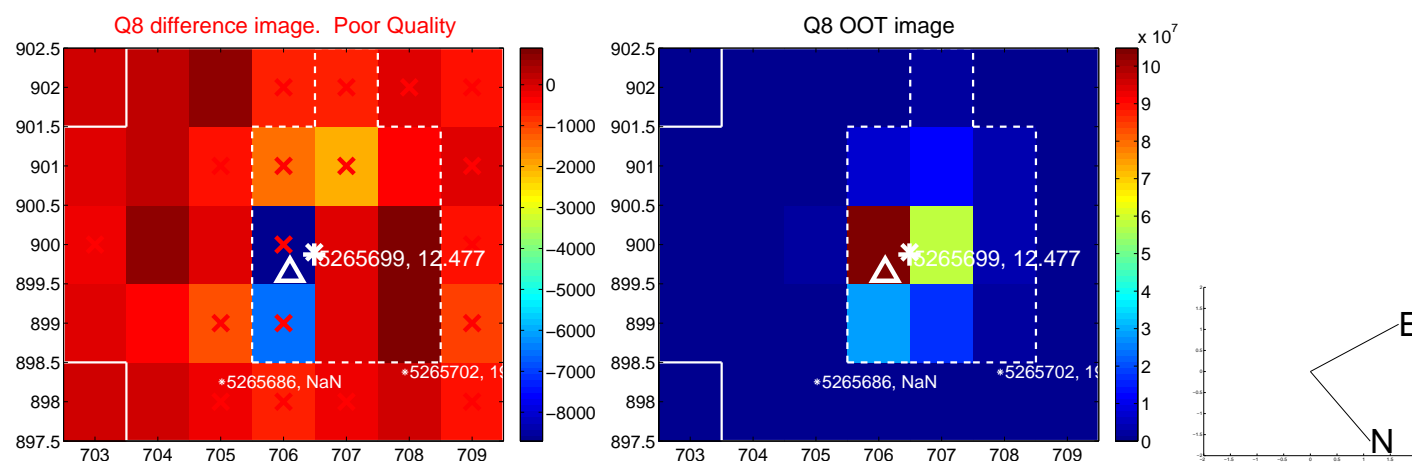
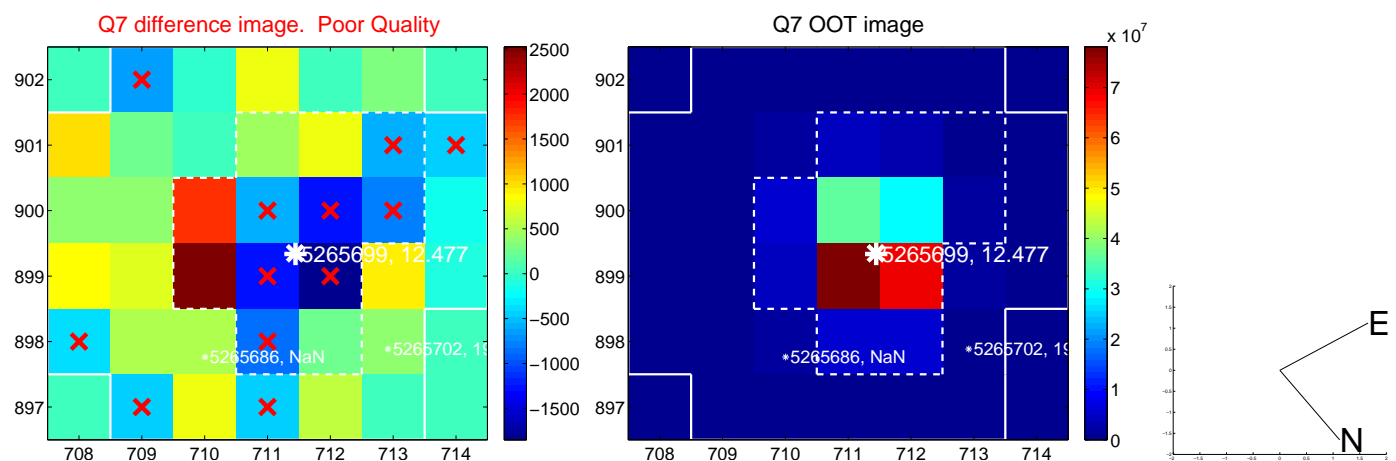
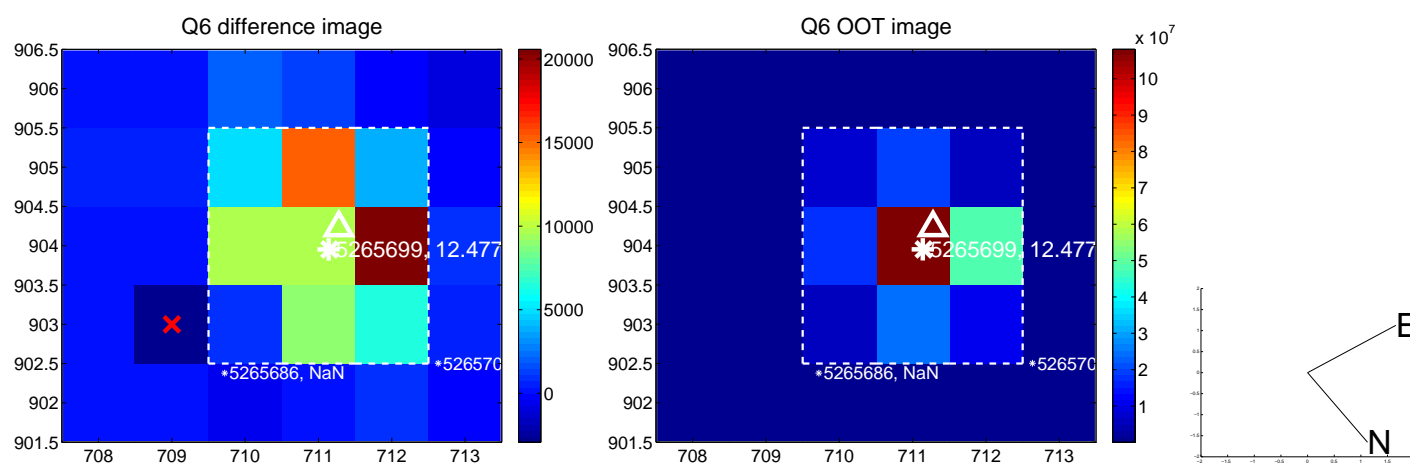
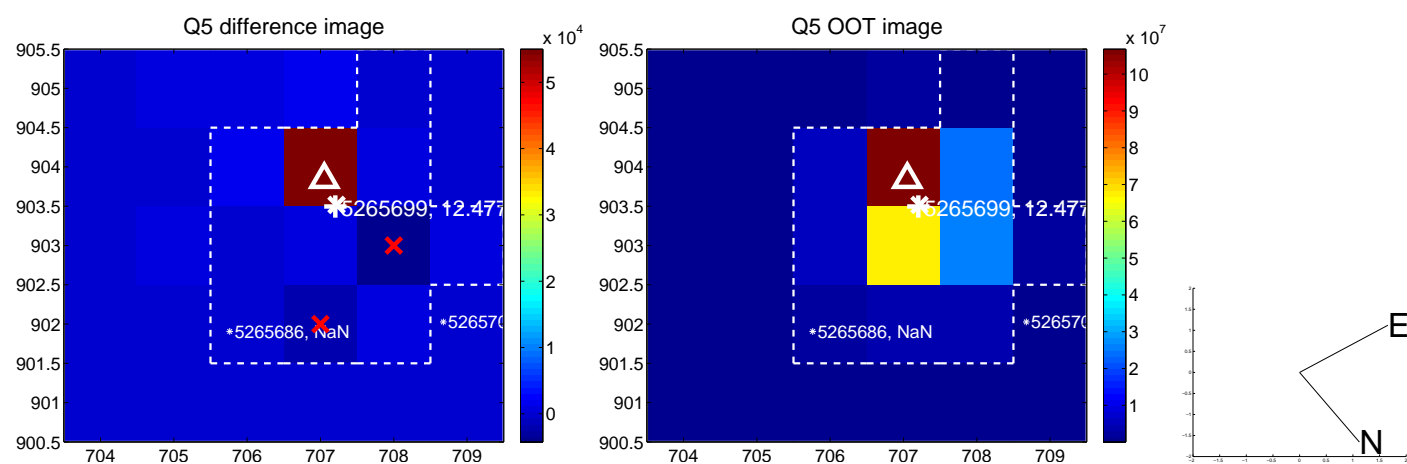
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

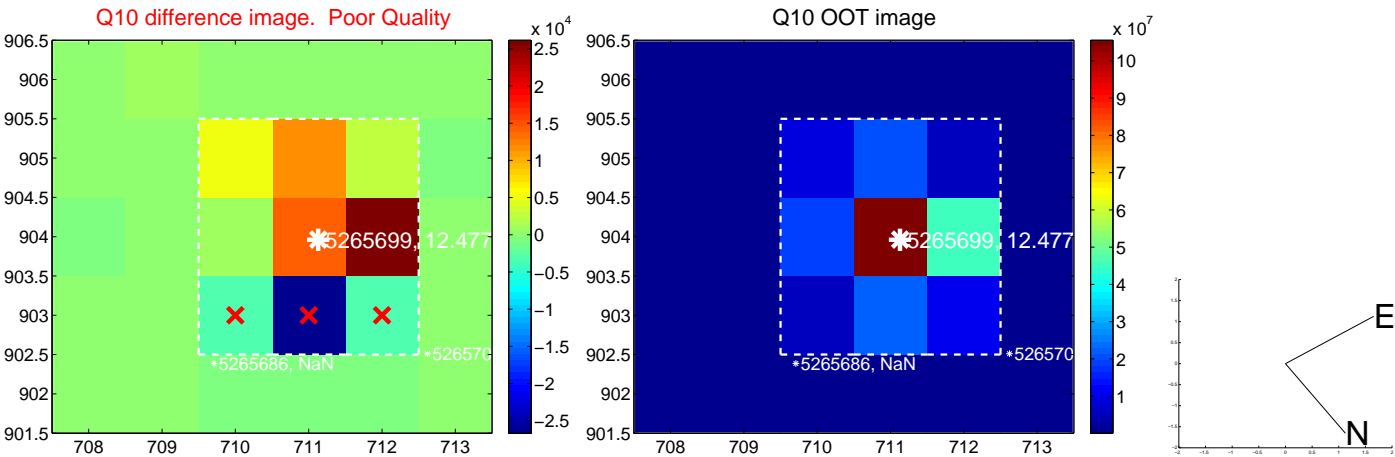
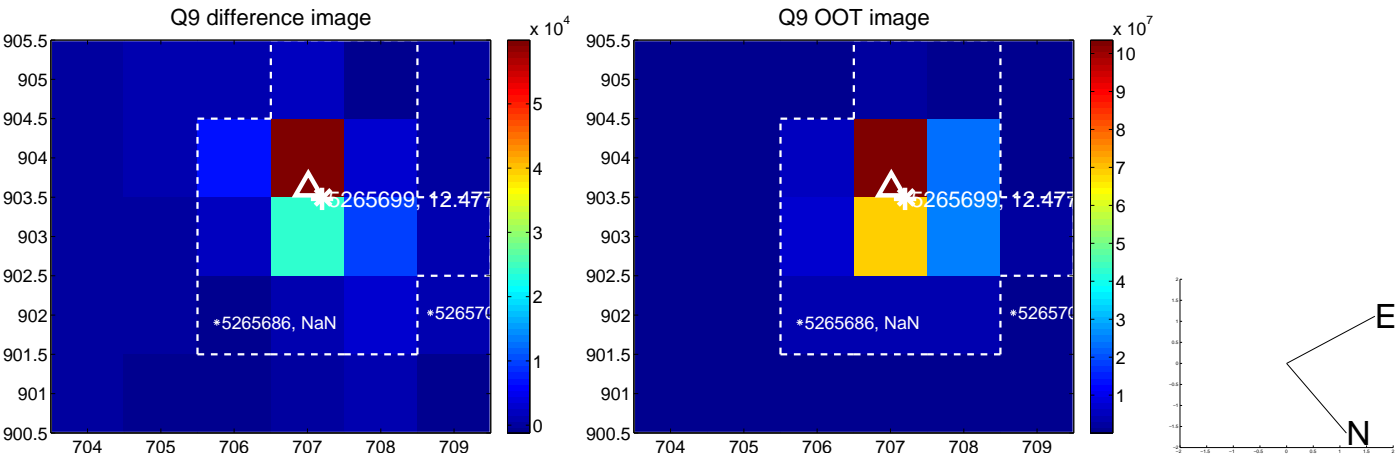




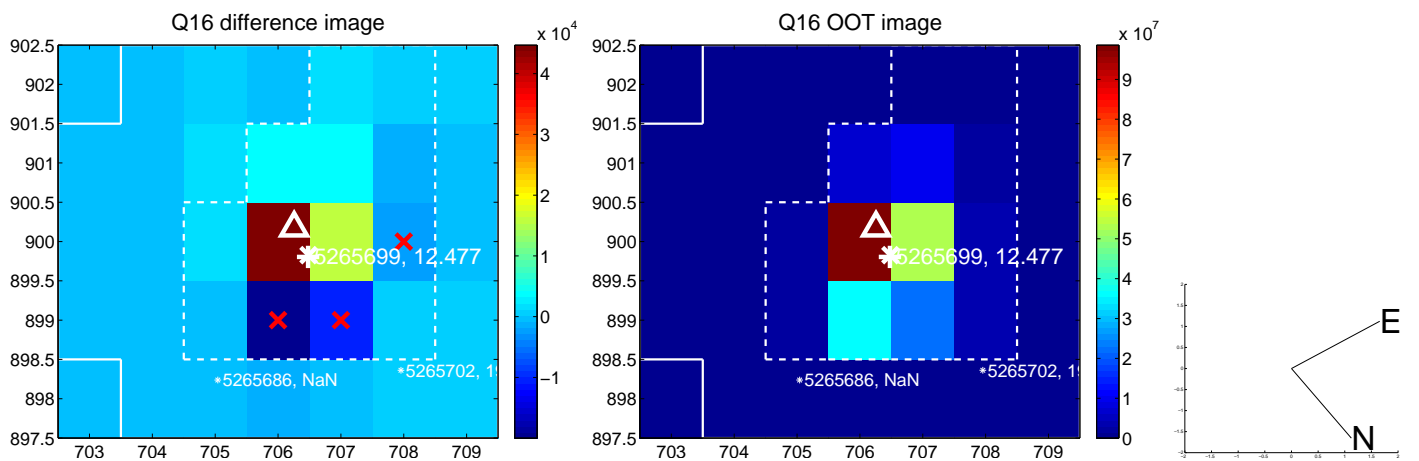
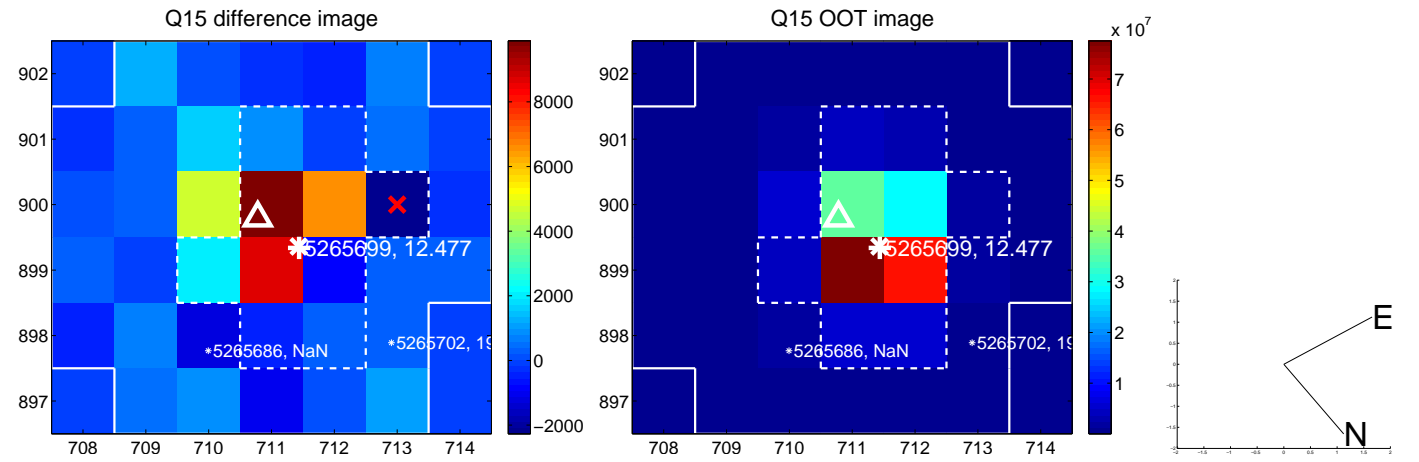
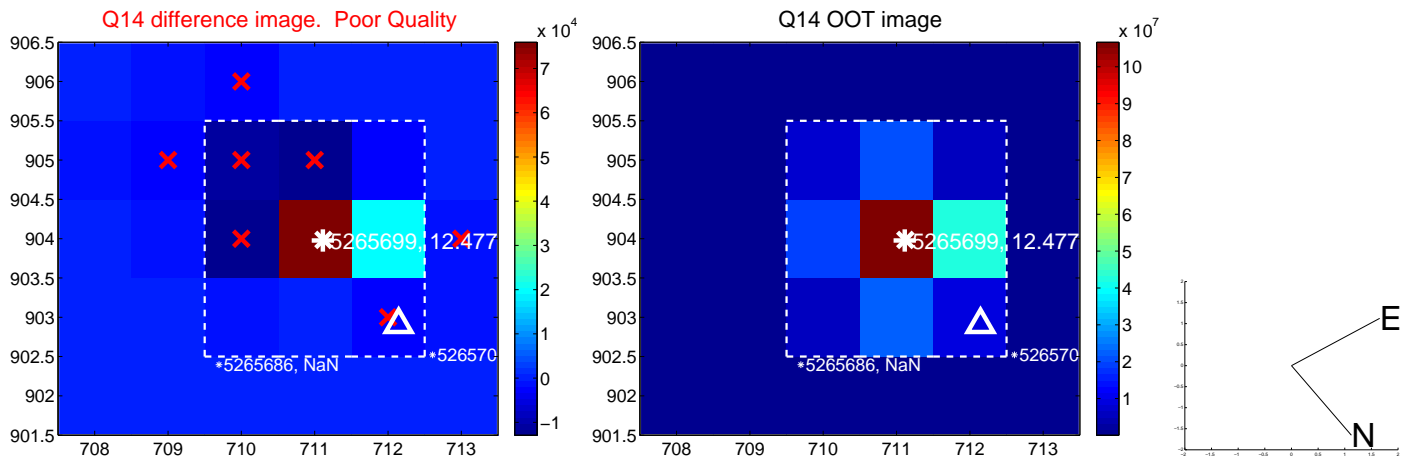
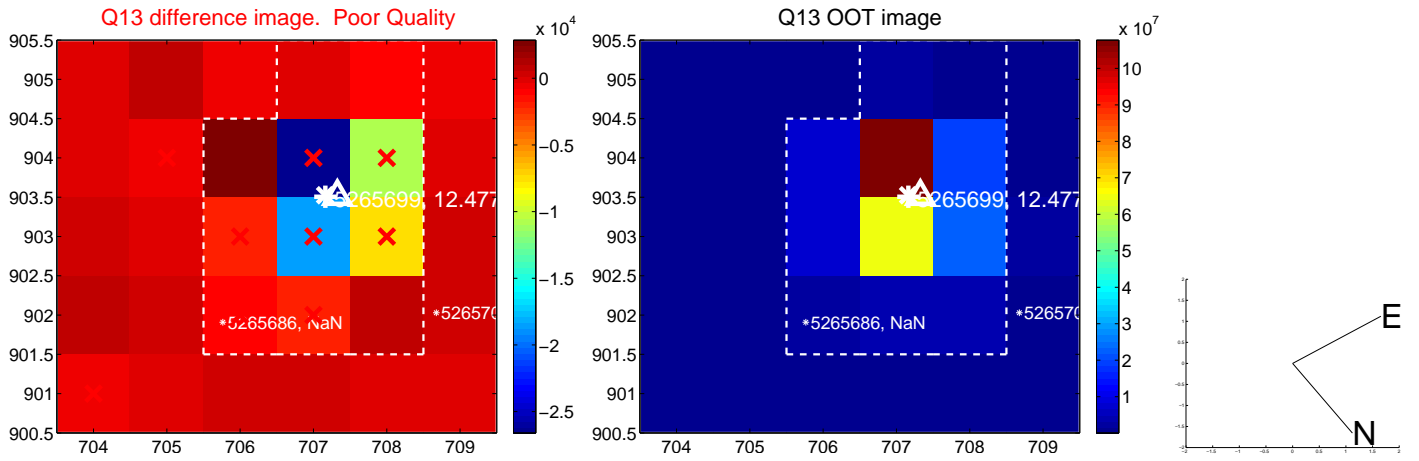
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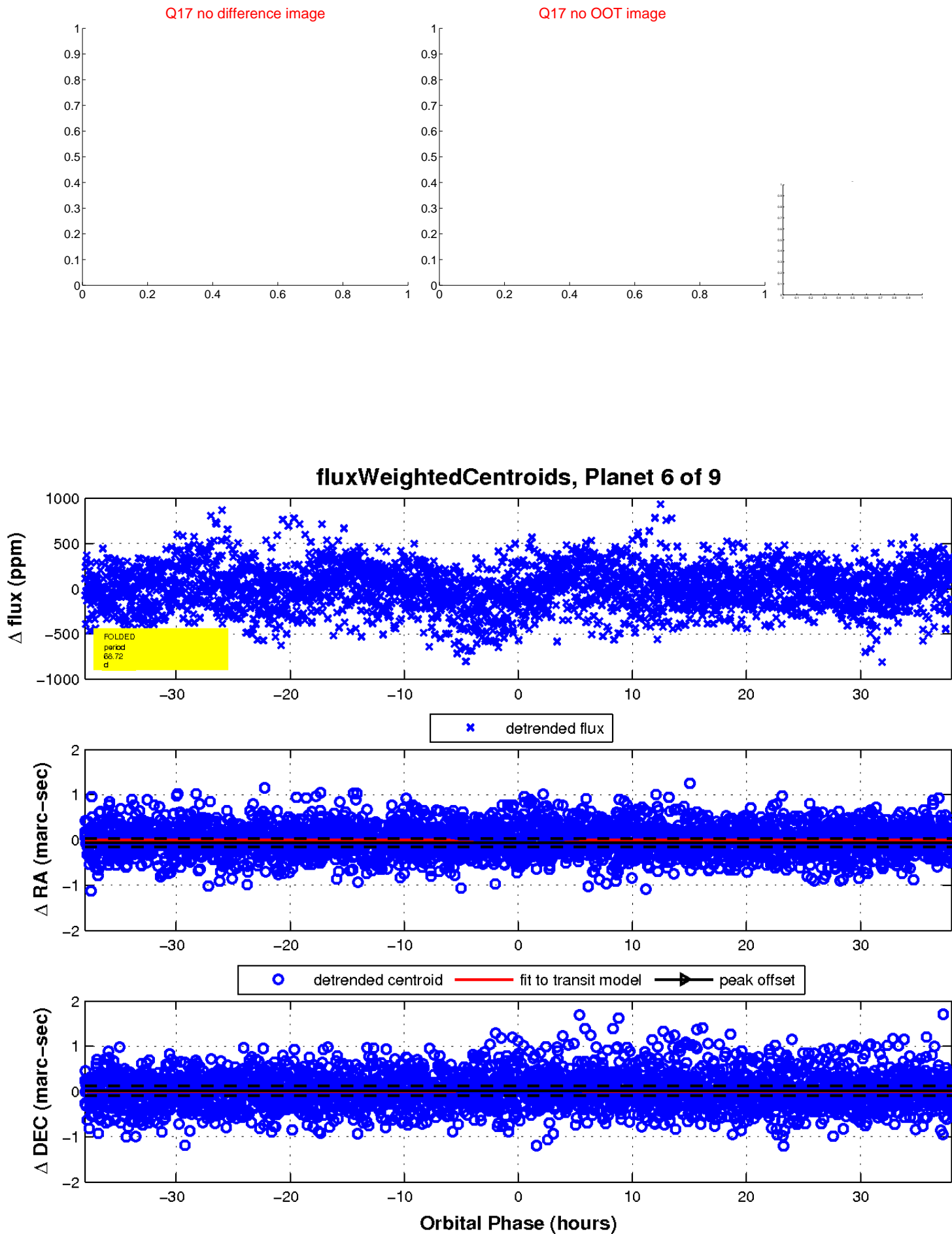
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white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

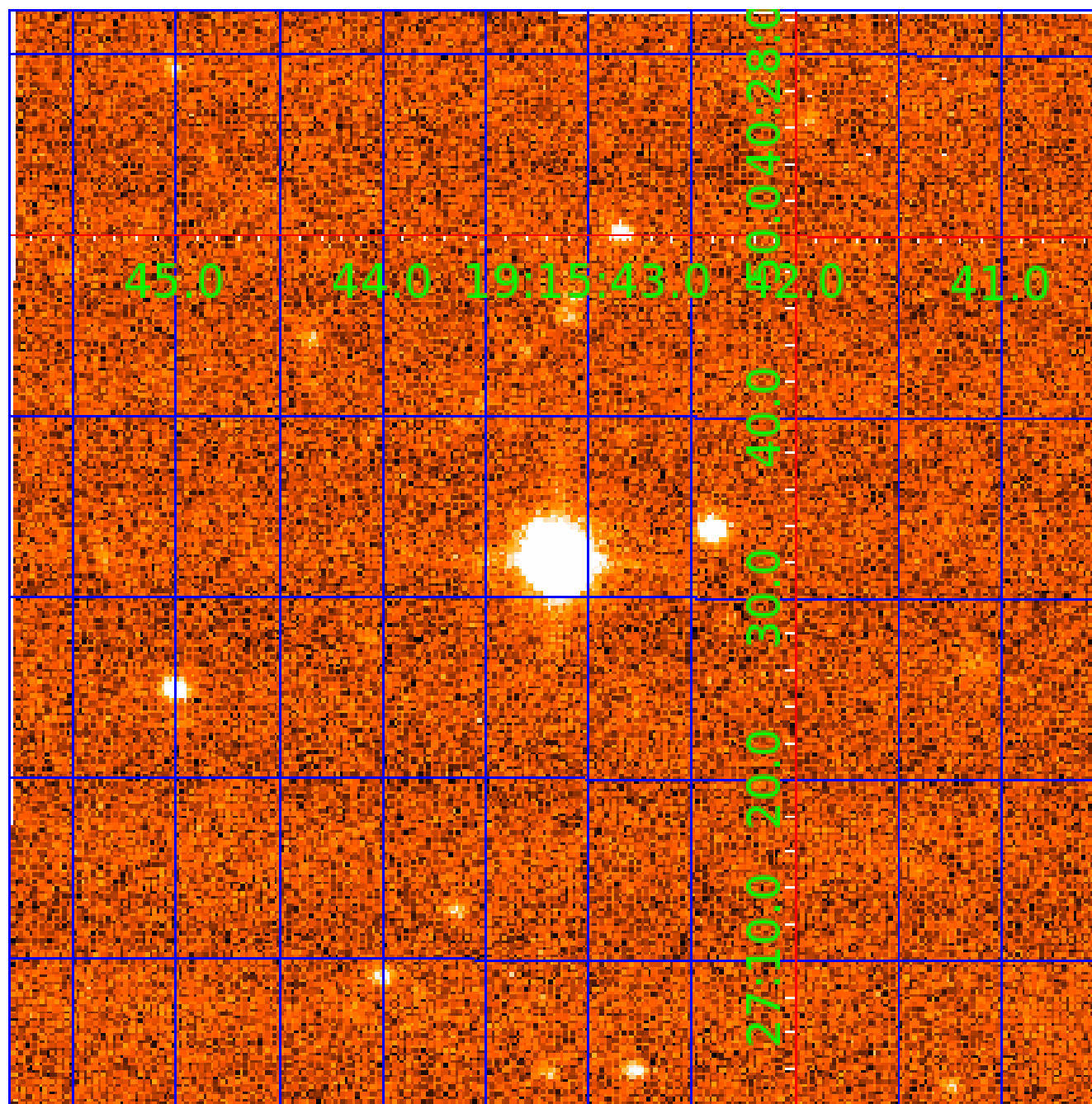


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



# UKIRT Image

Declination



# KIC 005265699

## Q1-17 DR25 TCE Parameters

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005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005265699-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

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

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

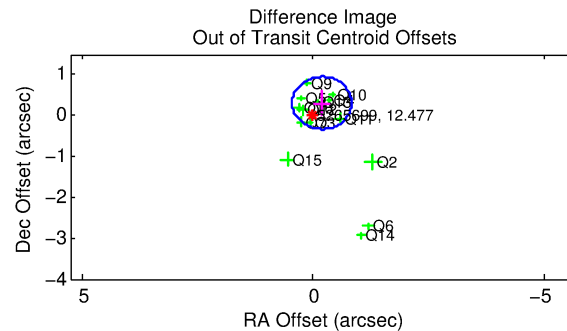
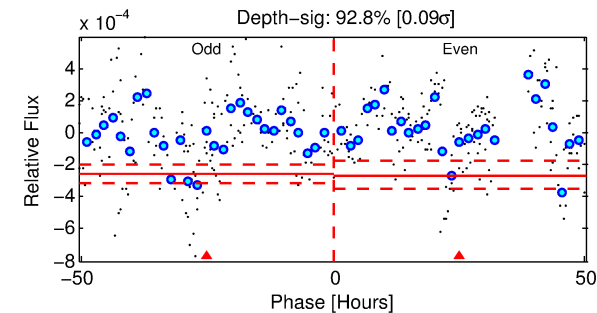
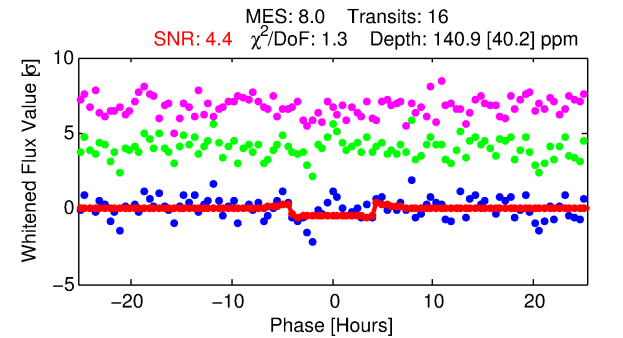
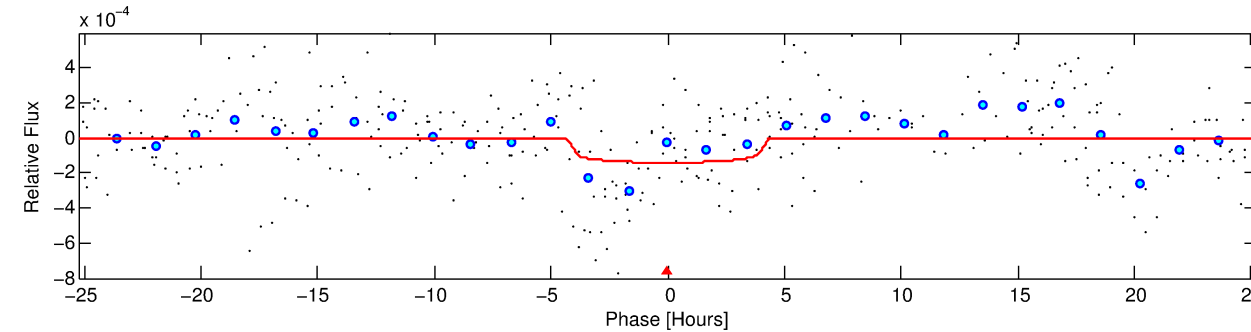
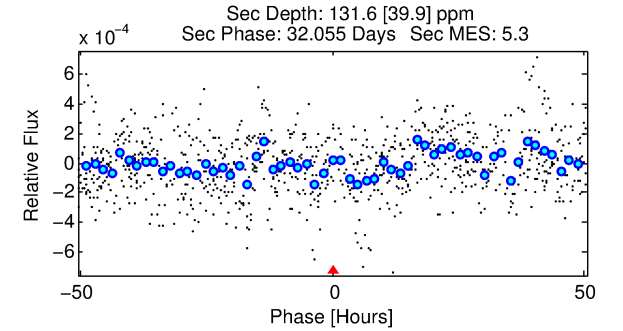
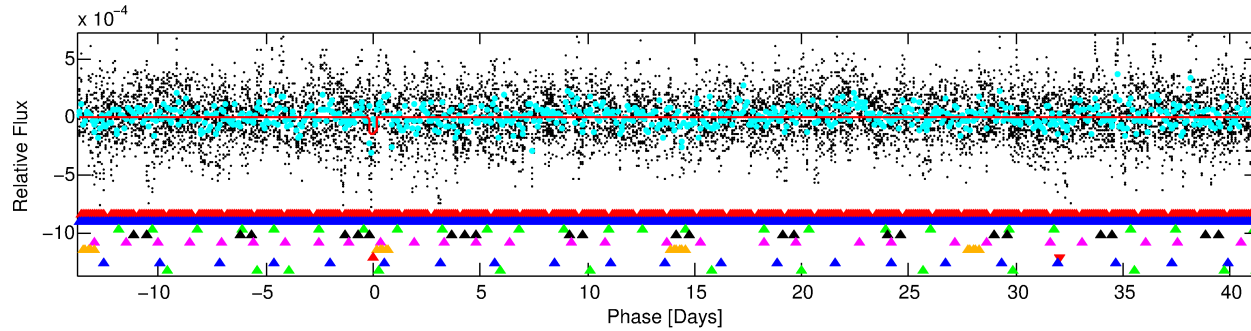
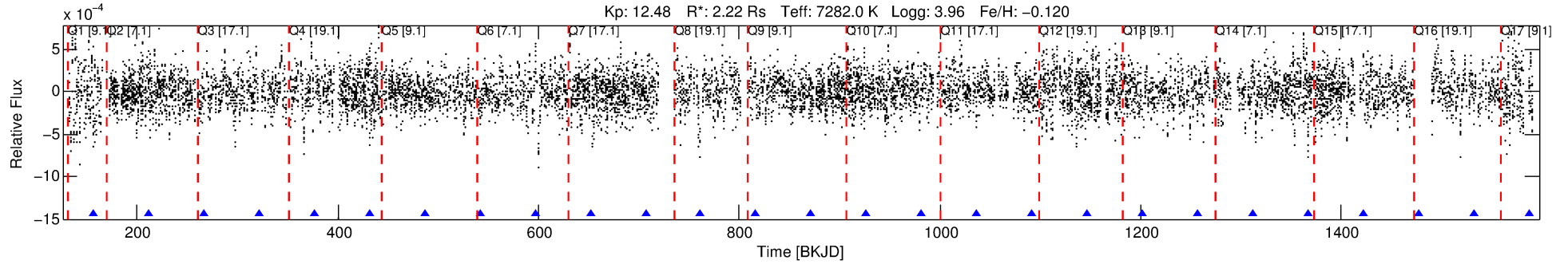
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-07

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 7 of 9 Period: 55.003 d



## DV Fit Results:

Period = 55.00334 [0.00187] d  
Epoch = 156.6366 [0.0270] BKJD  
Rp/R\* = 0.0117 [0.0071]  
a/R\* = 36.46 [123.89]  
b = 0.70 [2.47]  
Seff = 111.11 [54.15]  
Teq = 828 [101] K  
Rp = 2.82 [1.97] Re  
a = 0.3337 [0.1002] AU  
Ag = 1015.67 [1362.30] [0.74σ]  
Teffp = 7226 [2297] K [2.78σ]

## DV Diagnostic Results:

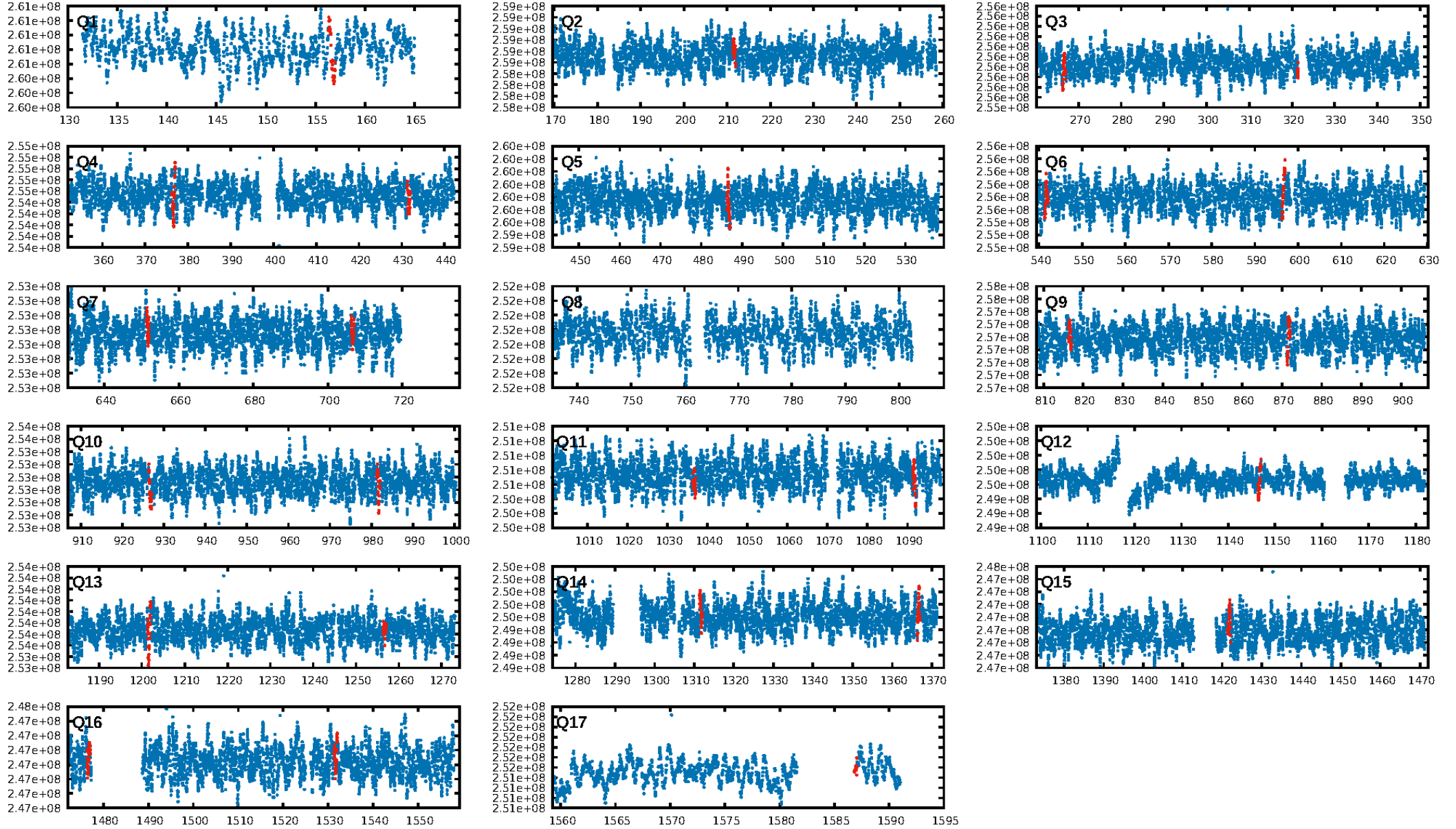
ShortPeriod-sig: 100.0% [11.28σ]  
LongPeriod-sig: 100.0% [13.20σ]  
ModelChiSquare2-sig: 0.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [15/15]  
GhostDiagnostic-chr: -1.509  
Centroid-sig: 3.5%  
Centroid-so: 0.944 arcsec [2.02σ]  
OotOffset-rm: 0.359 arcsec [1.68σ]  
OotOffset-st: 4/4/3/3 [14]  
KicOffset-rm: 0.437 arcsec [1.99σ]  
KicOffset-st: 4/4/3/3 [14]  
DiffImageQuality-fgm: 0.43 [6/14]  
DiffImageOverlap-fno: 0.00 [0/15]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:38:11 Z

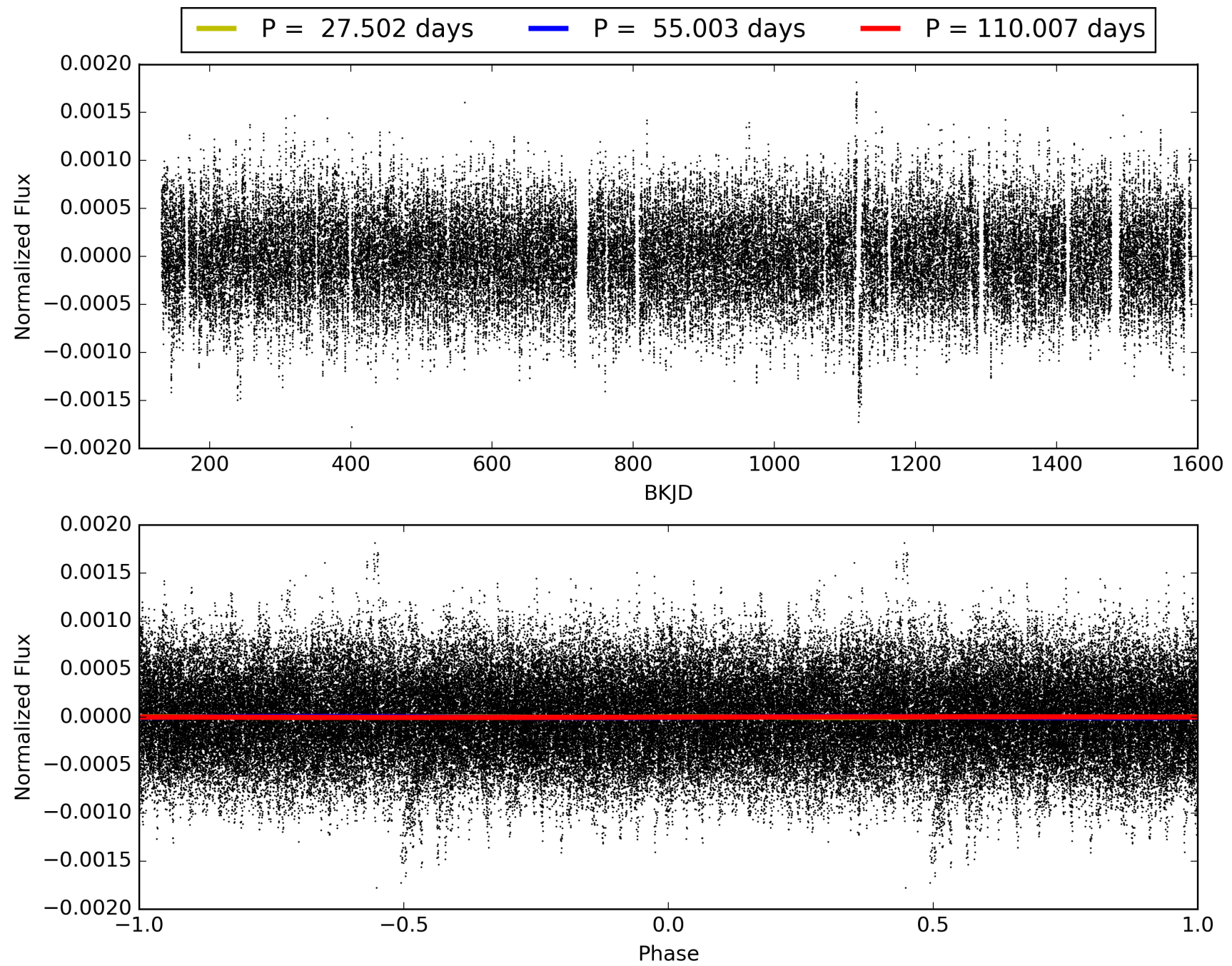
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center



# TCE 005265699-07, PDC Light Curves

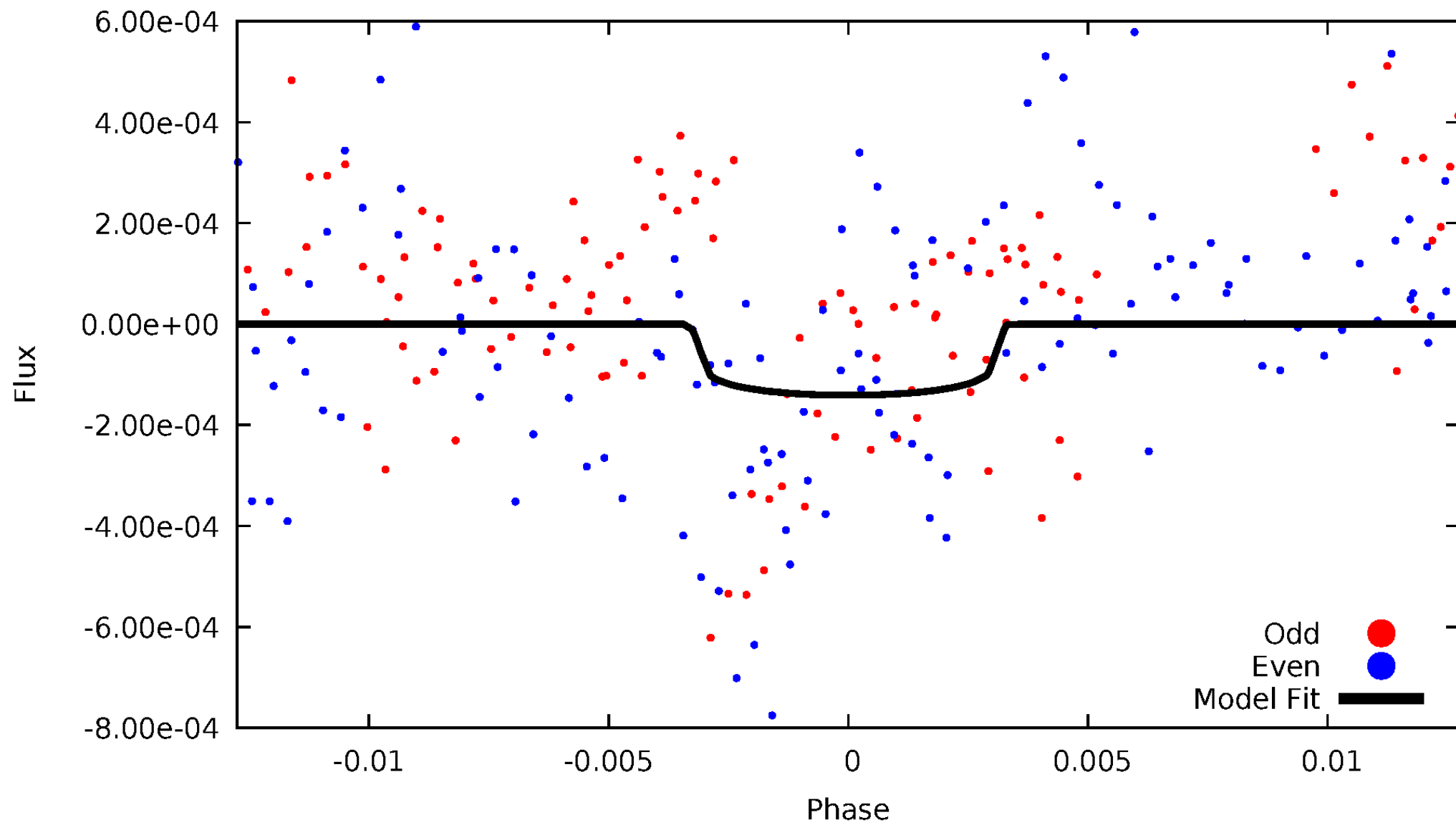


TCE 005265699-07



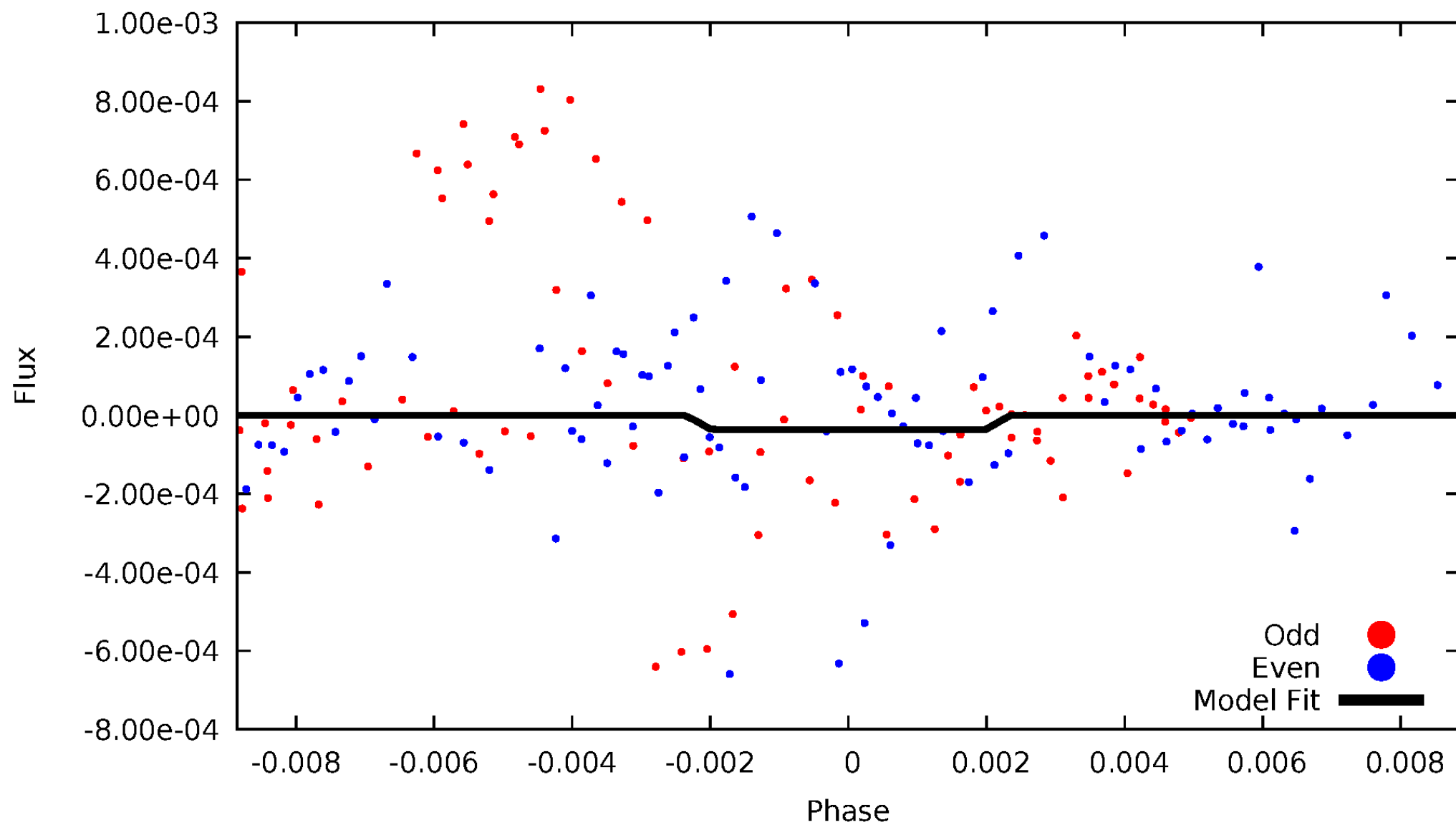
# DV Odd/Even

TCE 005265699-07



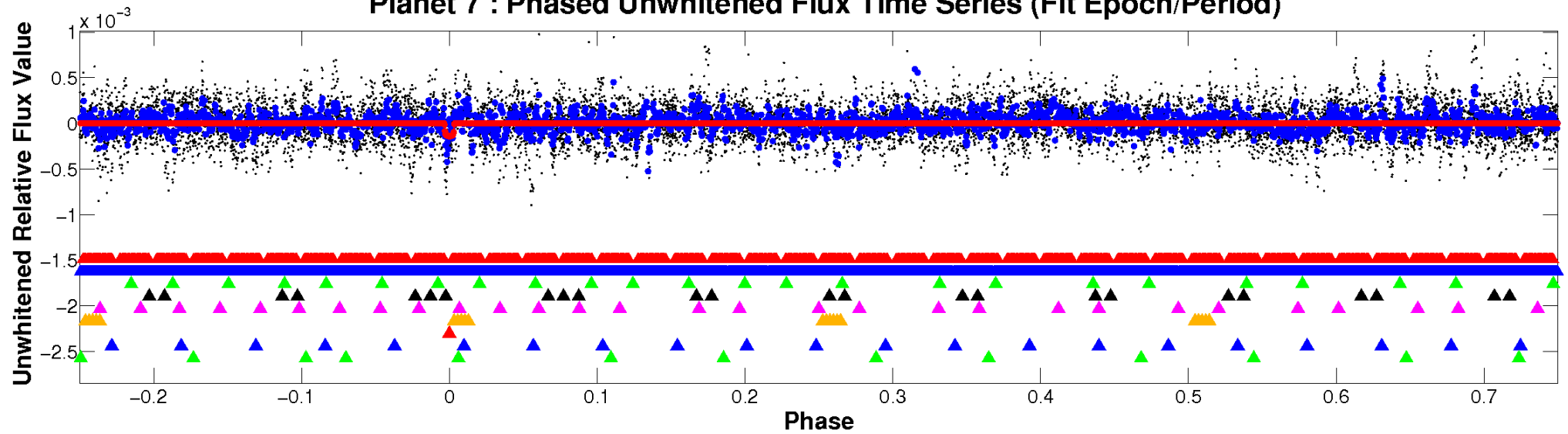
# ALT Odd/Even

TCE 005265699-07

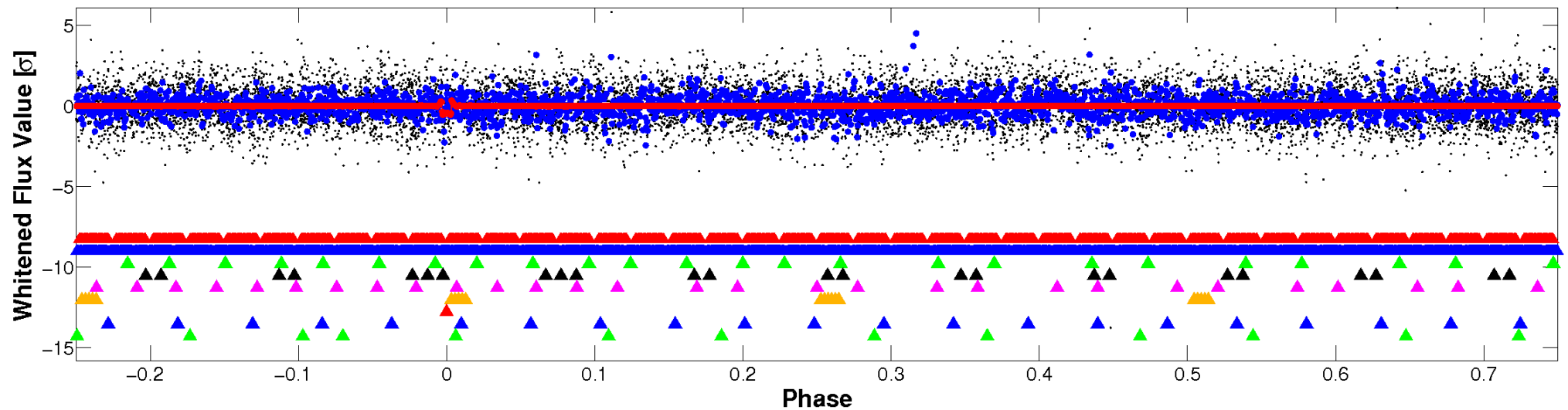


# Non-Whitened Vs. Whitened Light Curve

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

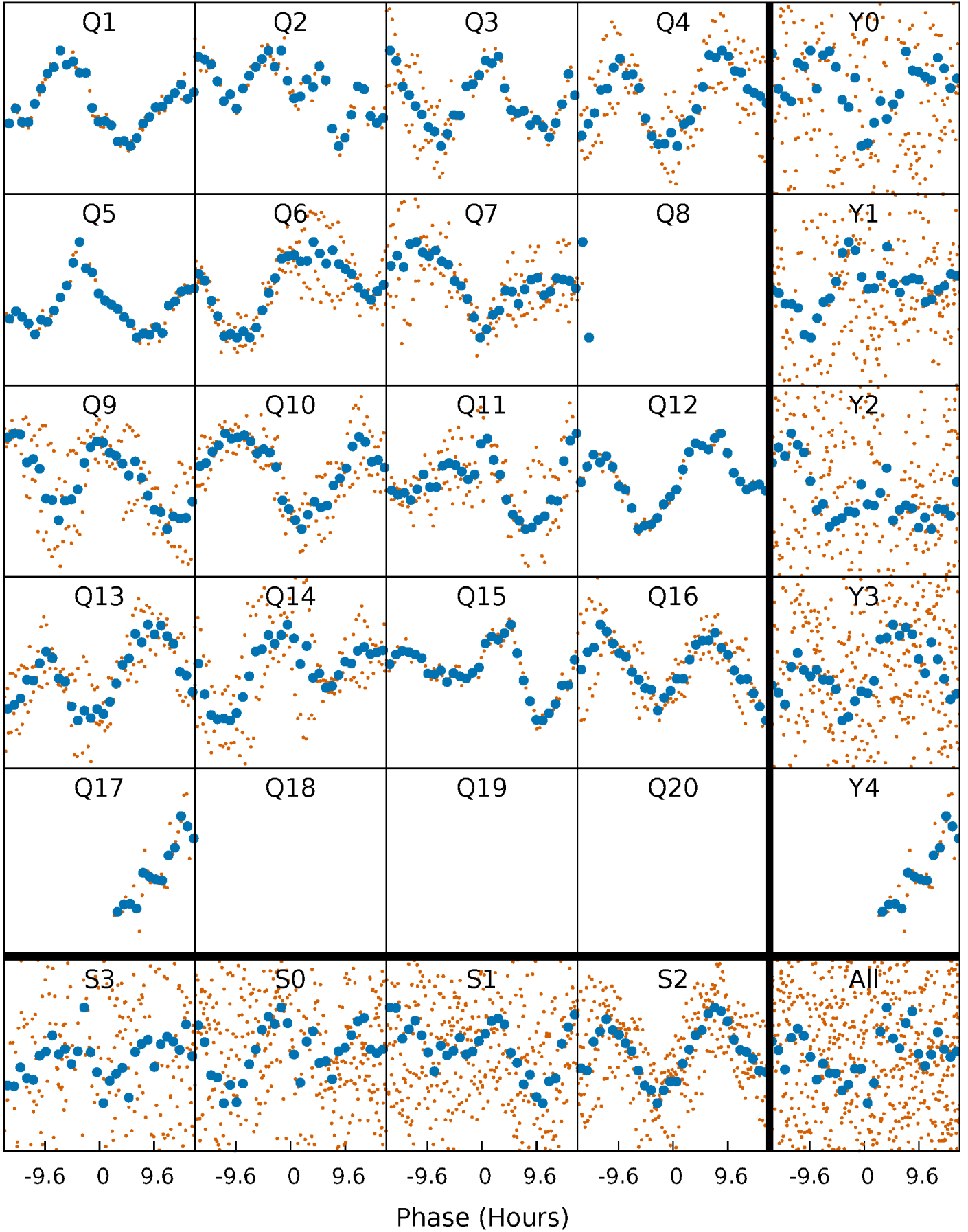


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



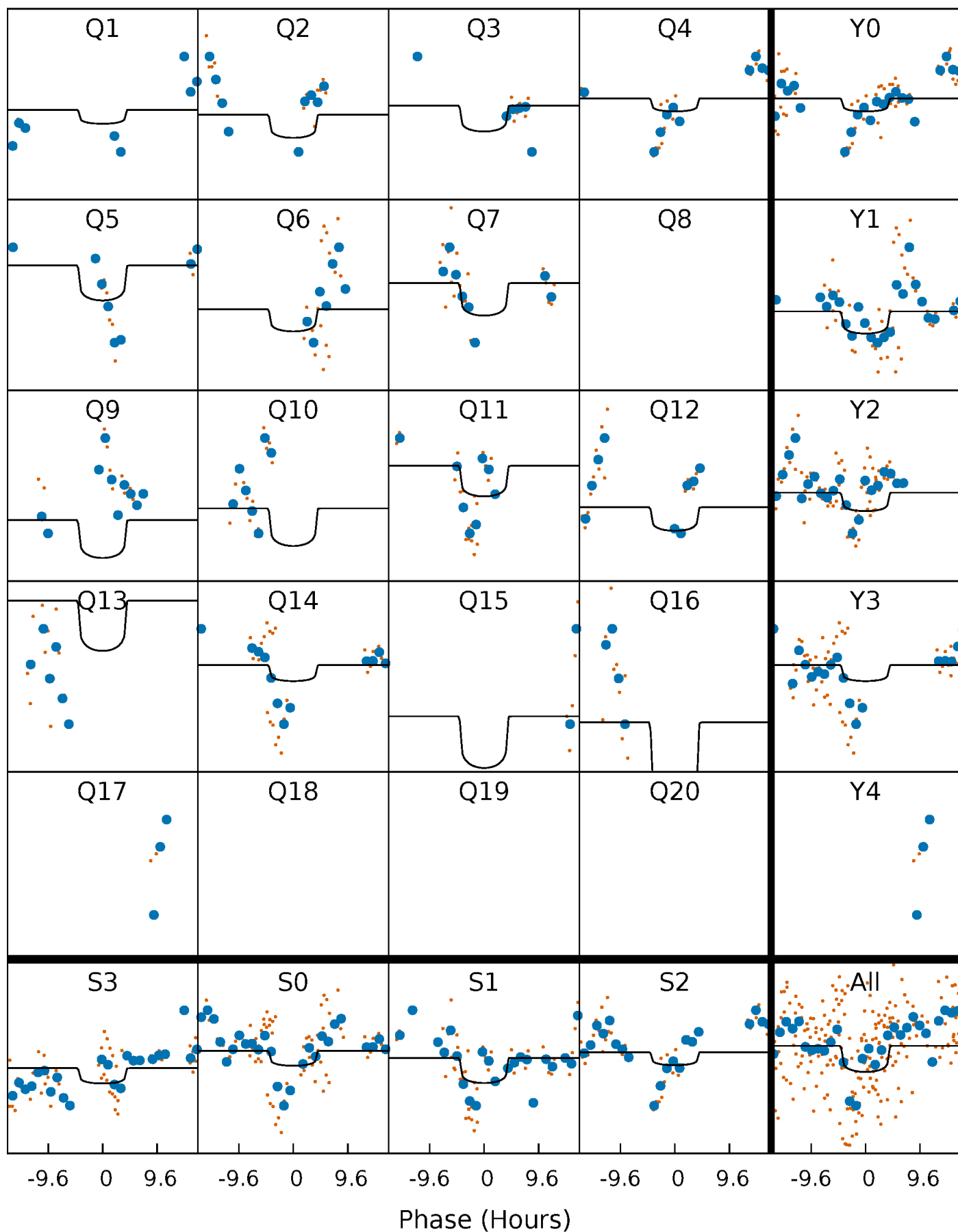
# PDC Quarter-Phased Transit Curves

TCE 005265699-07     $P = 55.003341$  Days     $T_0 = 156.636623$  (BKJD)



# DV Quarter-Phased Transit Curves

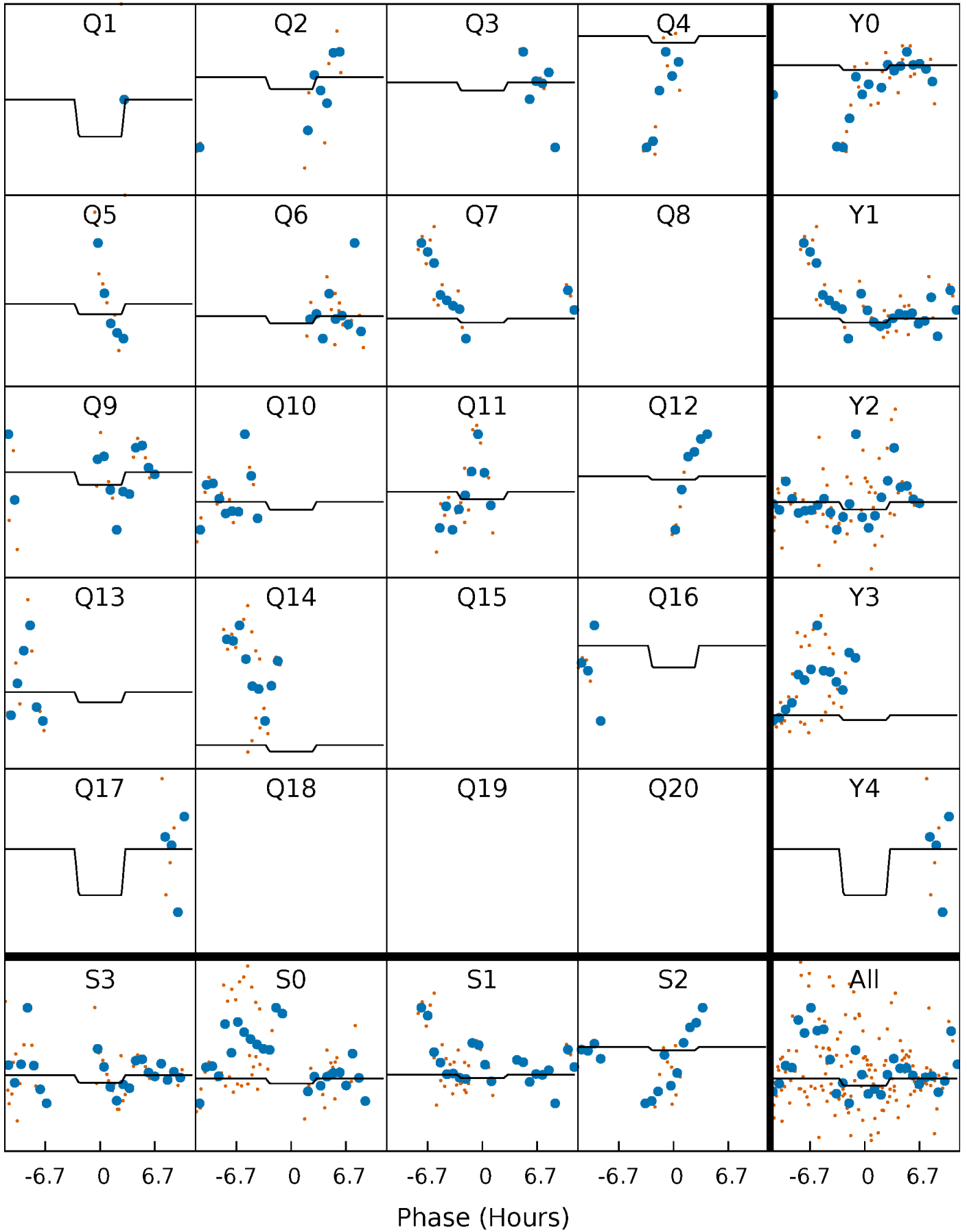
TCE 005265699-07     $P = 55.003341$  Days     $T_0 = 156.636623$  (BKJD)





# Alt. Detrend Quarter-Phased Transit Curves

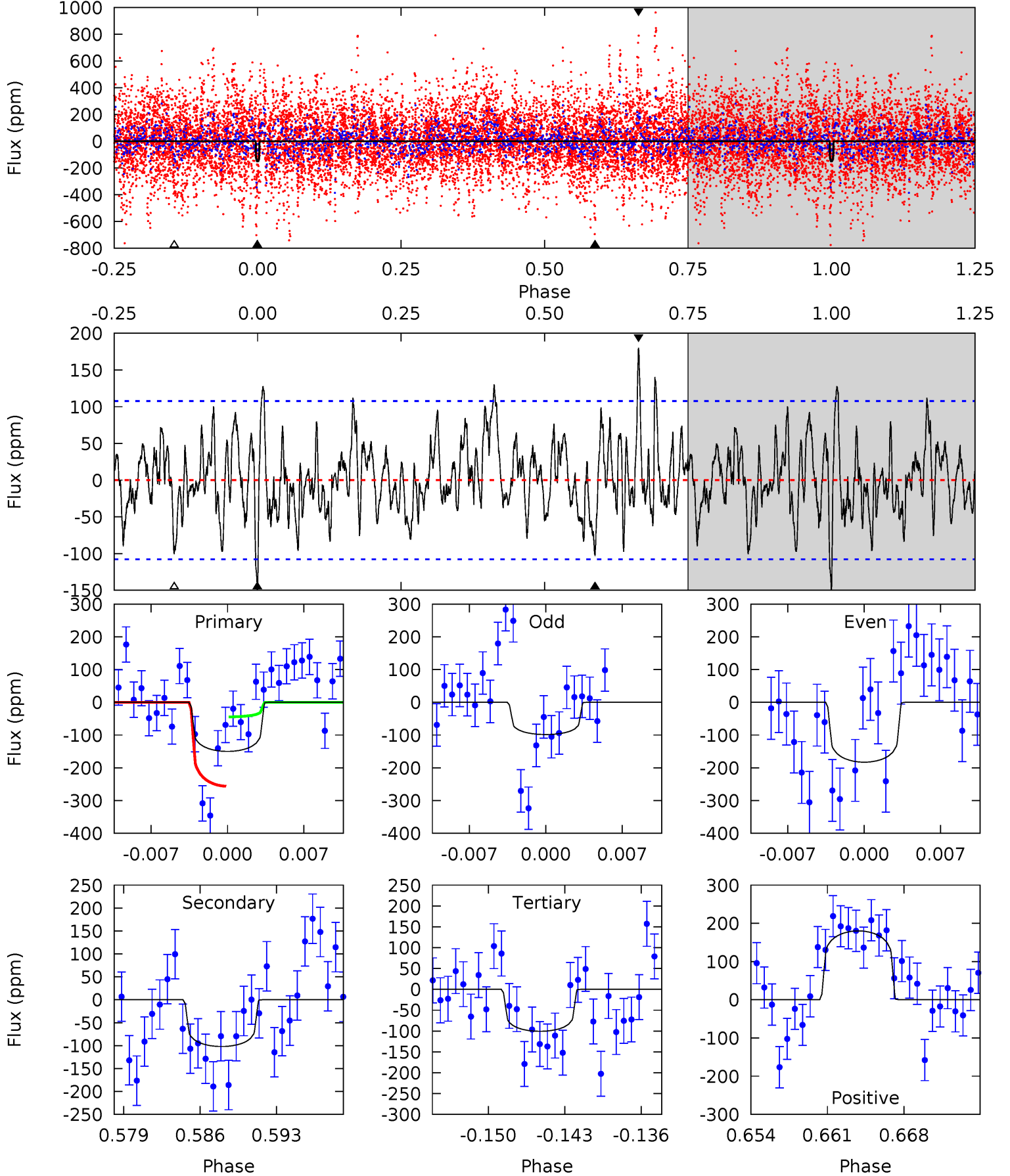
TCE 005265699-07     $P = 55.005414$  Days     $T_0 = 156.621681$  (BKJD)



# DV Model-Shift Uniqueness Test

005265699-07, P = 55.003341 Days, E = 101.633282 Days

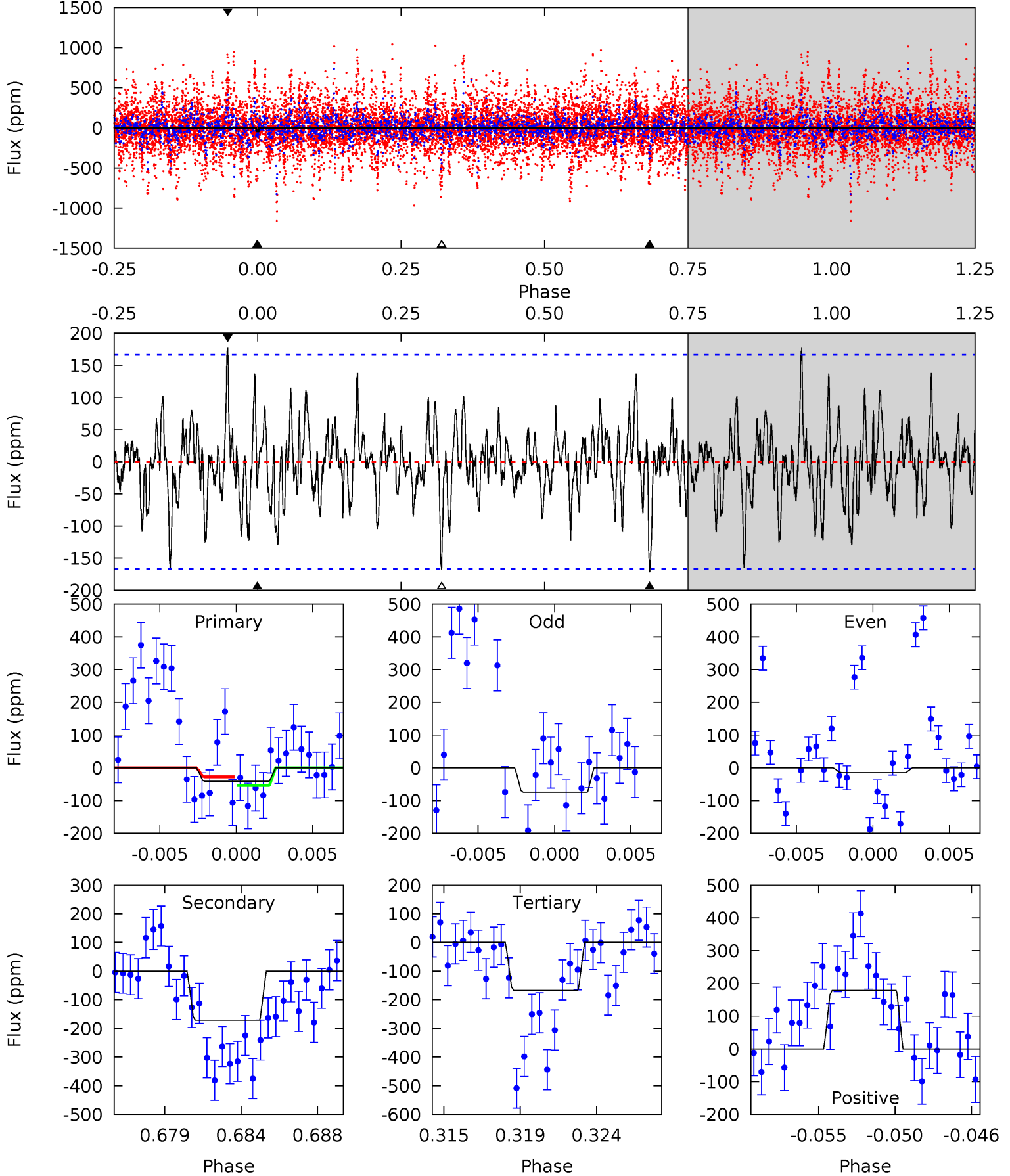
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.10	4.82	4.76	8.53	5.10	2.71	2.06	2.33	-1.43	0.06	-3.70	1.99	0.59	0.55	5.04



# Alt Model-Shift Uniqueness Test

005265699-07, P = 55.005414 Days, E = 101.616267 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
1.28	5.34	5.20	5.54	5.17	2.84	1.42	-3.93	-4.26	0.13	-0.20	0.91	0.85	0.51	0.42



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-102 \pm 21$	$2.77^{+1.62}_{-1.47}$	$1144^{+86}_{-96}$	$6606^{+4050}_{-1425}$	$805^{+3092}_{-496}$
Alt.	$-172 \pm 32$	$1.68^{+1.74}_{-1.07}$	$1145^{+82}_{-98}$	$10540^{+20241}_{-3644}$	$3475^{+24000}_{-2572}$

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

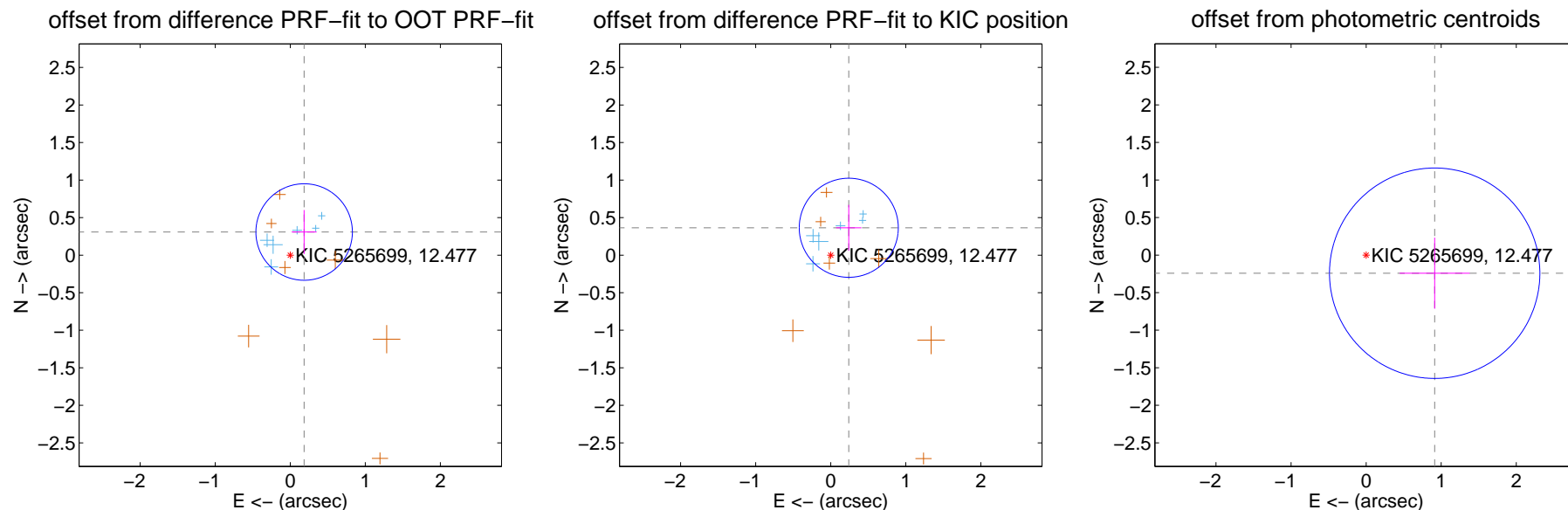
## DV Centroid Data

Supplemental centroid analysis for 005265699-07. Kepler magnitude: 12.48. Transit SNR 4.40

There are 6 quarters with good PRF difference image offsets

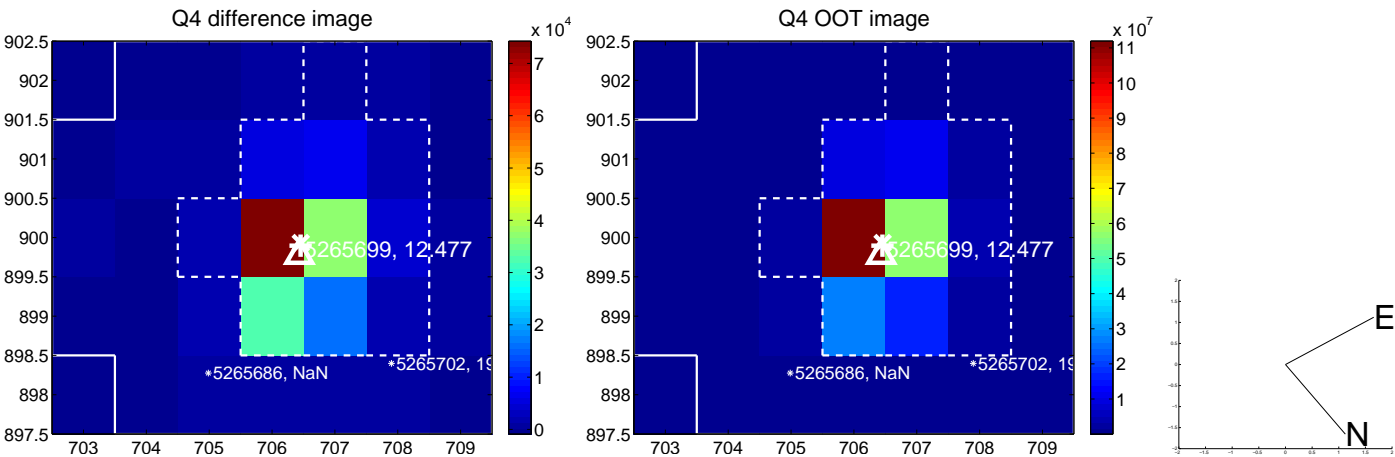
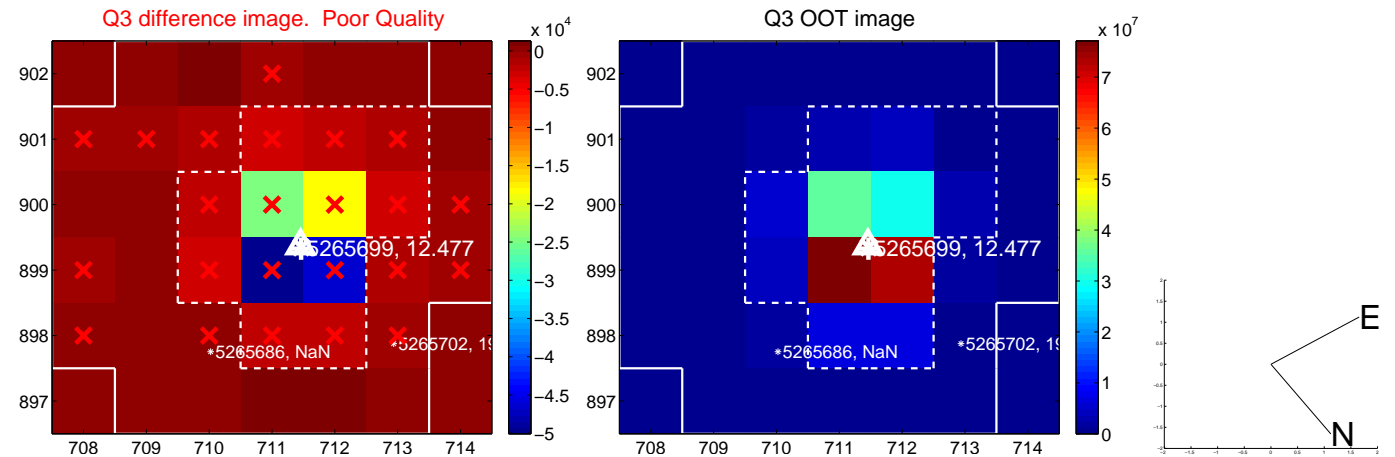
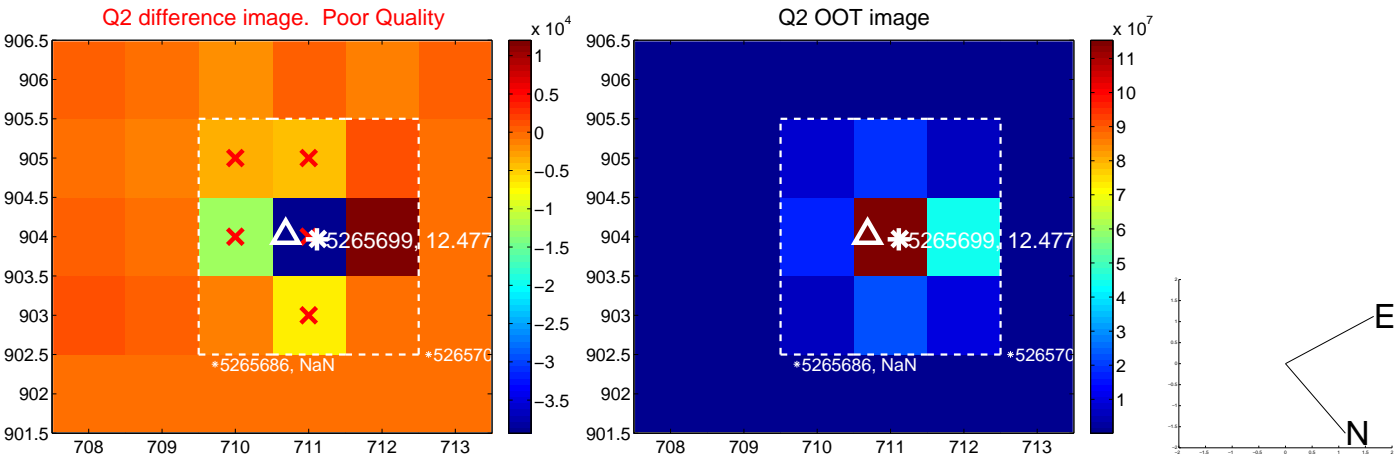
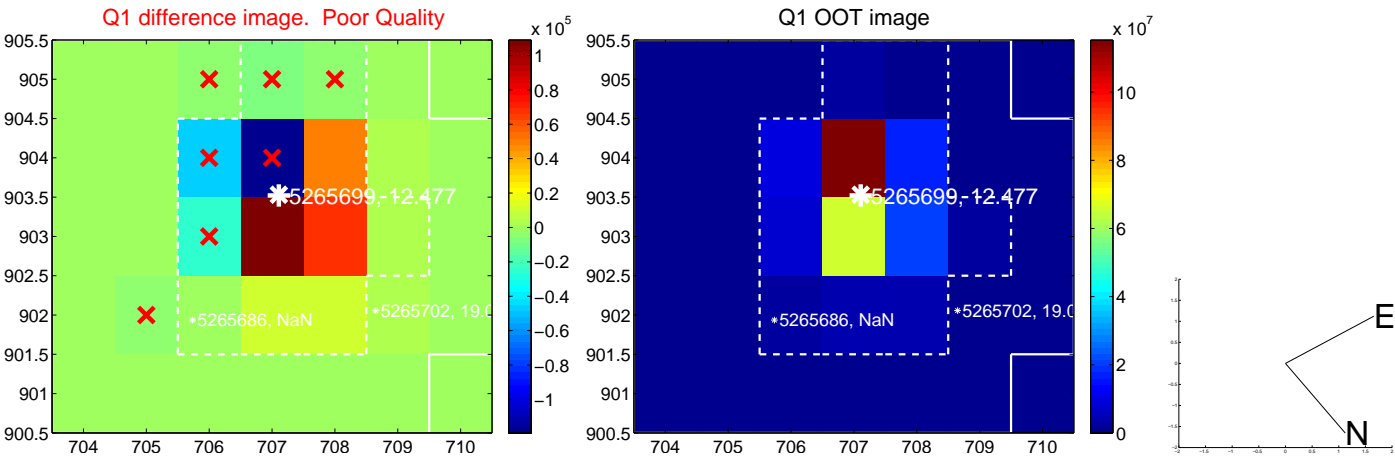
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.359 \pm 0.214$	1.68	$-0.185 \pm 0.166$	$0.308 \pm 0.293$
PRF-fit source offset from KIC position	$0.437 \pm 0.220$	1.99	$-0.241 \pm 0.168$	$0.365 \pm 0.305$
photometric centroid source offset	$0.94 \pm 0.47$	2.02	$-0.91 \pm 0.47$	$-0.24 \pm 0.47$

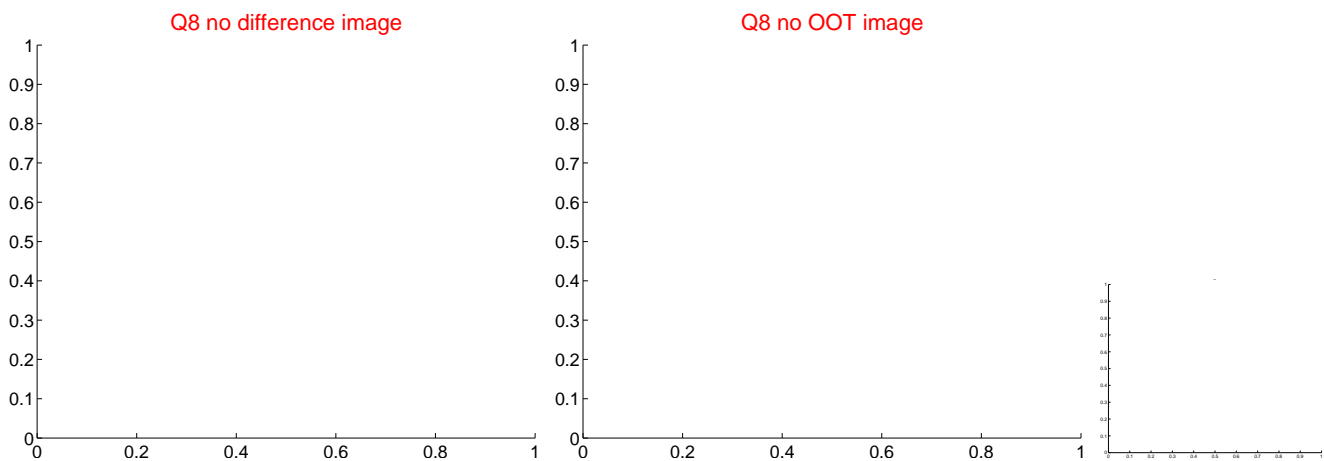
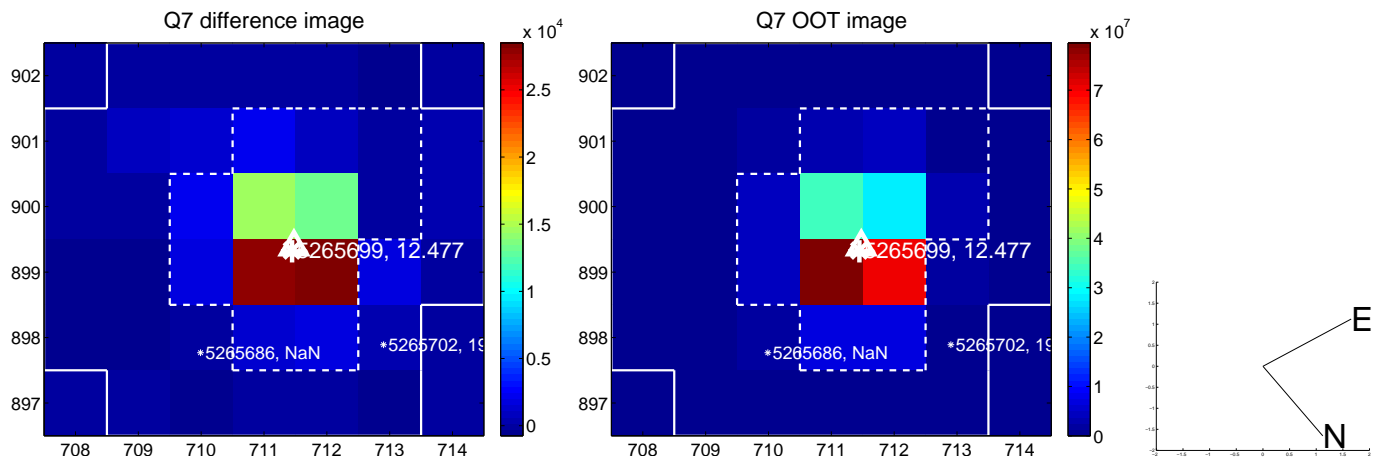
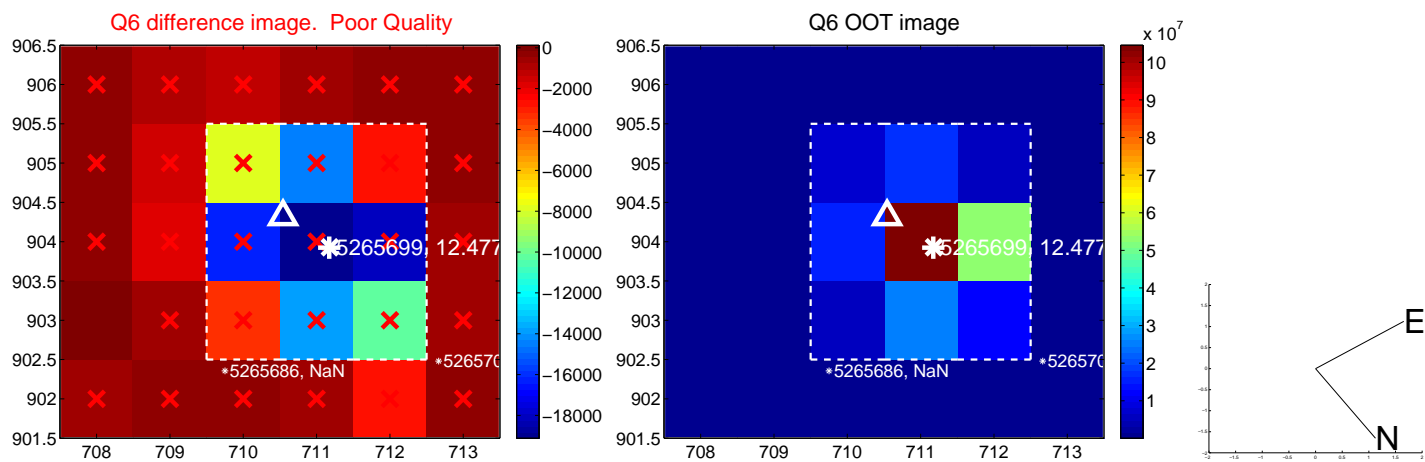
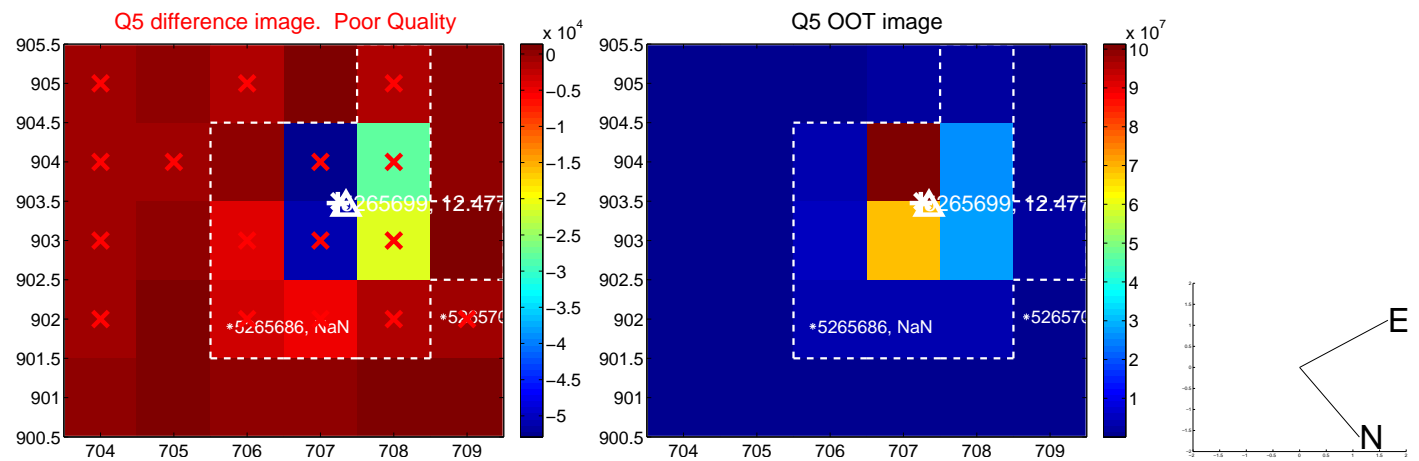


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

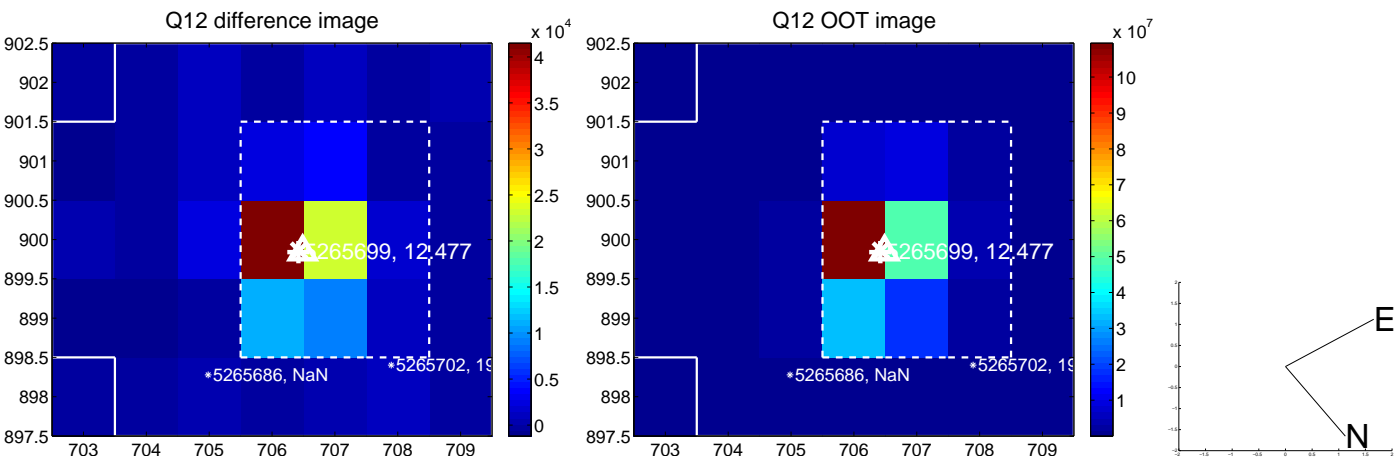
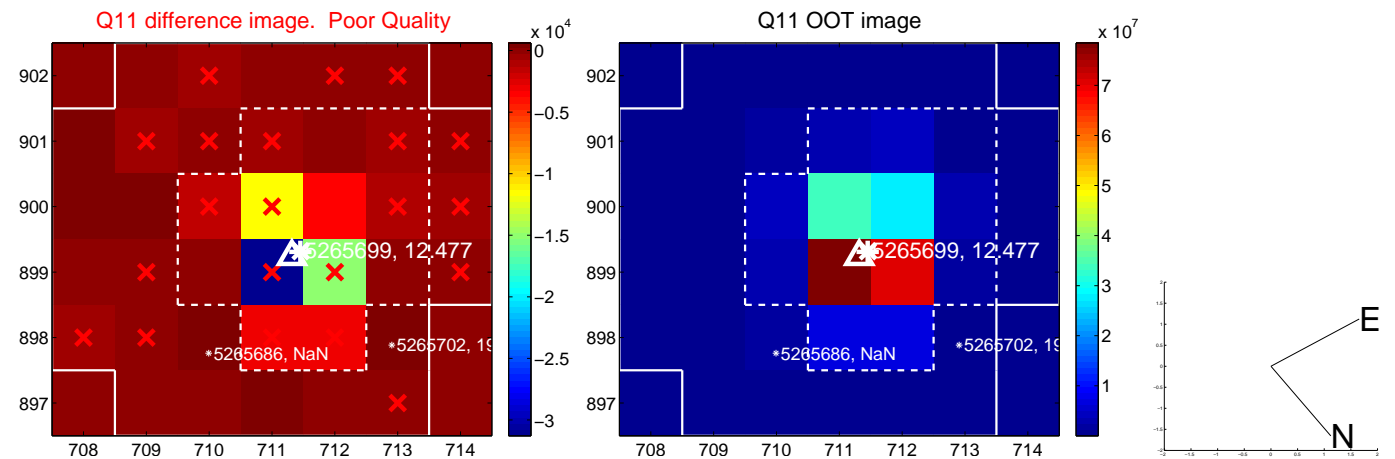
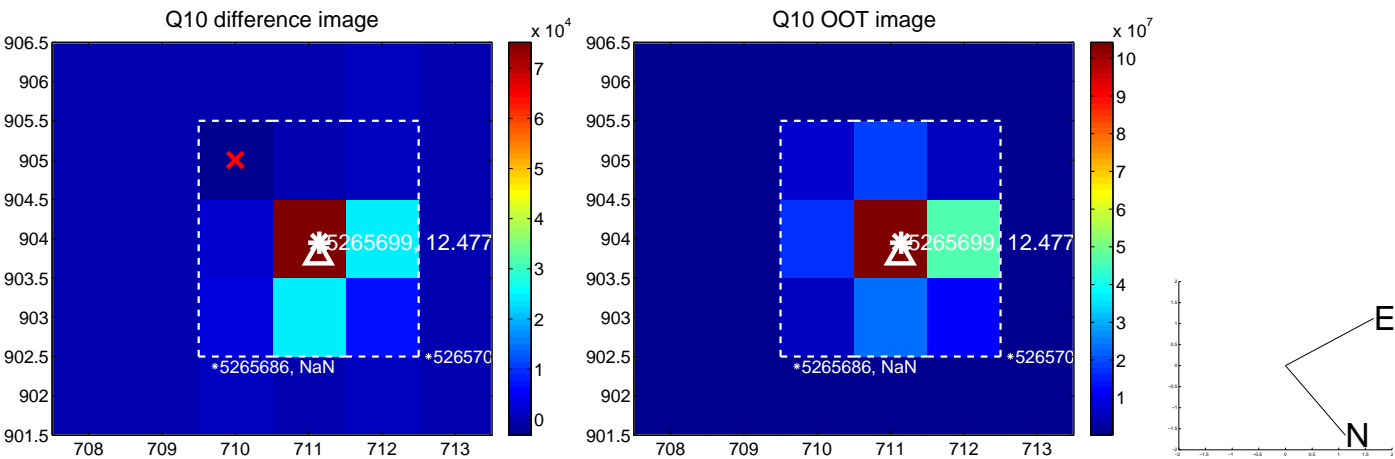
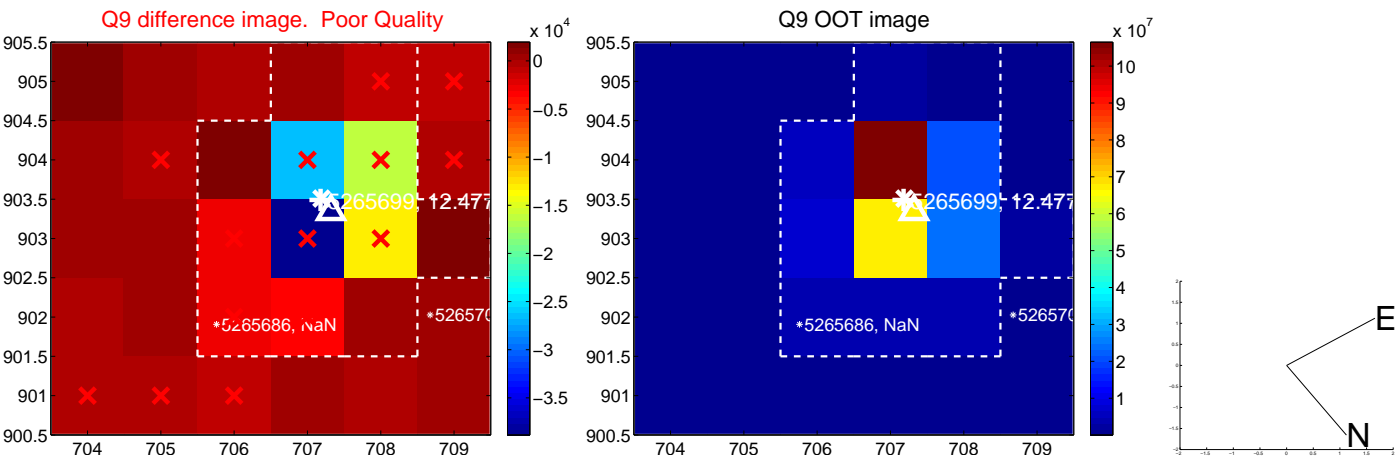


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

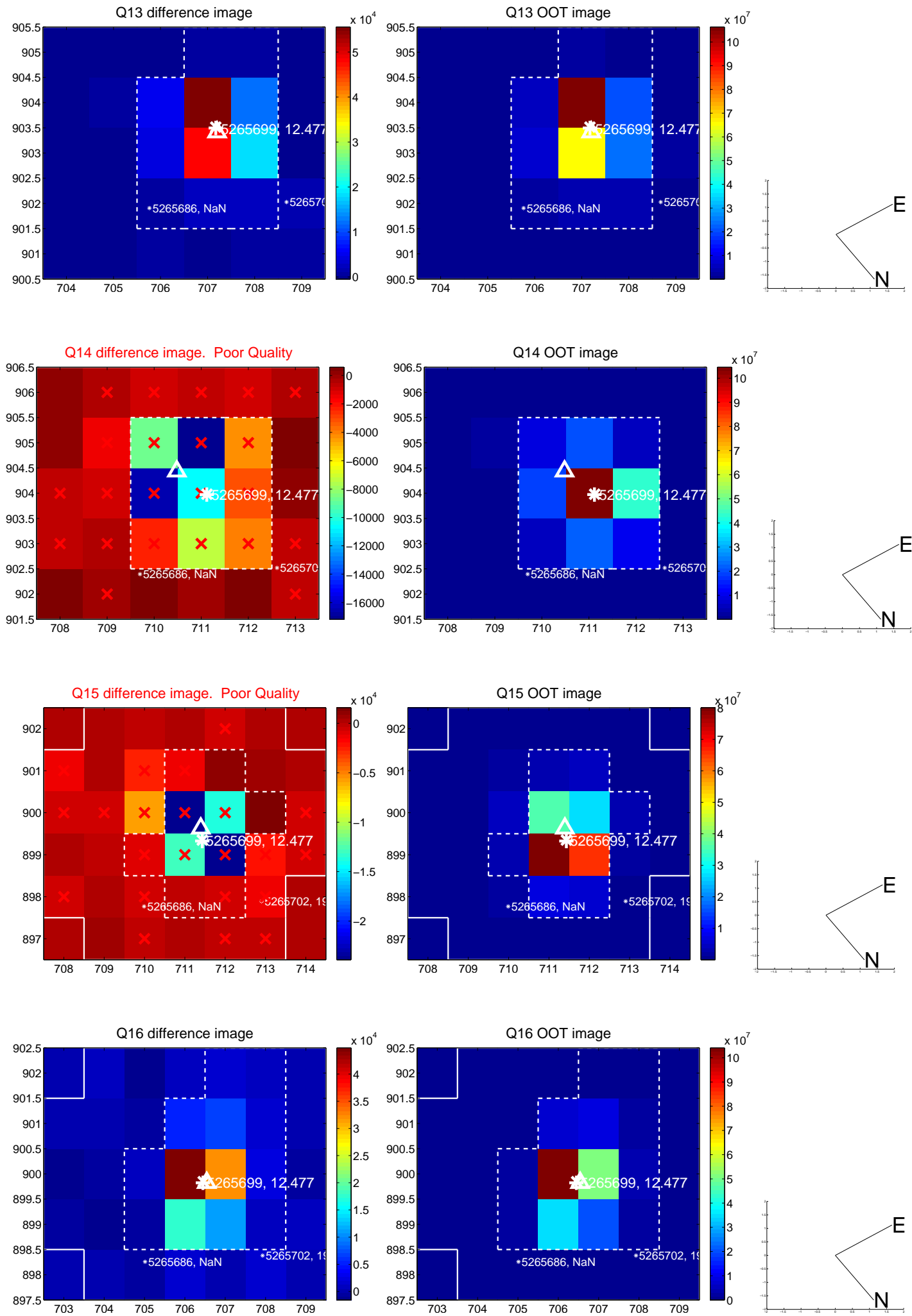




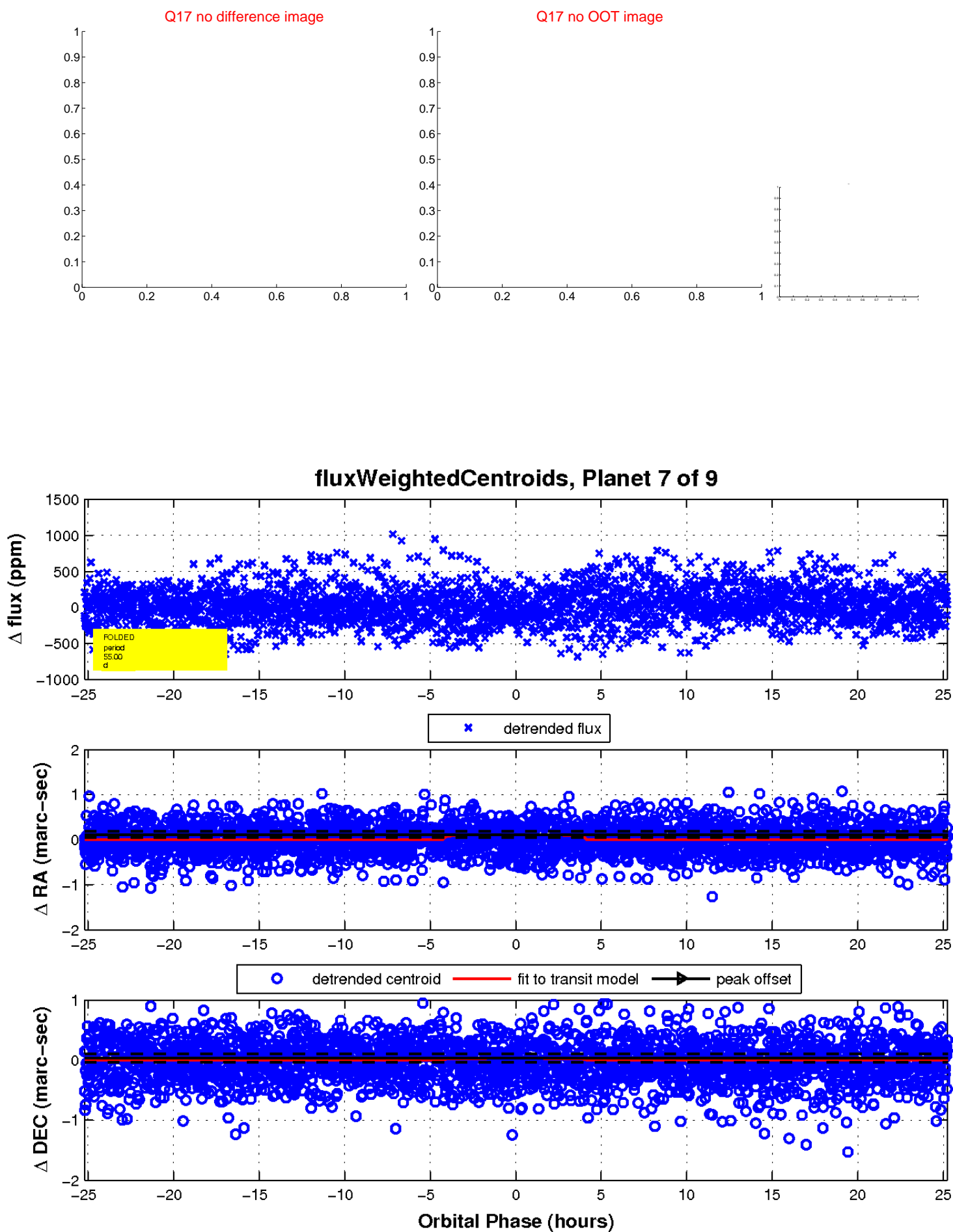
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

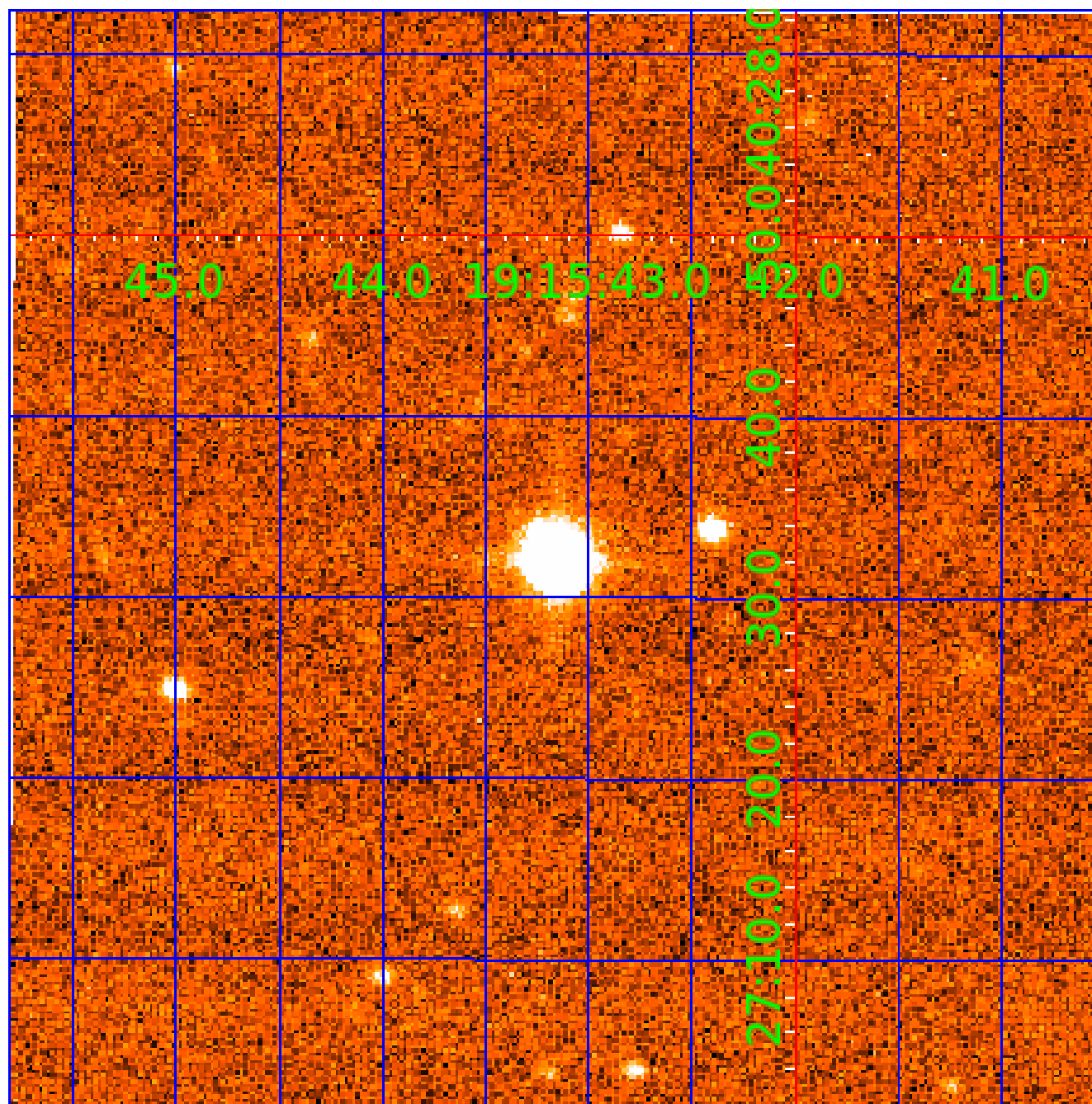


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



# UKIRT Image

Declination



# KIC 005265699

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005265699-01	OBS	No	1.374044	131.714311	33.5	3.650	9.2	9.7	2.22	7282	1.49	15215.14
005265699-02	OBS	No	0.689031	132.203374	3.0	3.776	10.8	1.0	2.22	7282	0.40	38190.78
005265699-03	OBS	No	60.711829	146.341993	472.9	9.051	9.4	8.8	2.22	7282	6.09	97.41
005265699-04	OBS	No	59.952043	156.502807	201.6	3.187	9.9	6.7	2.22	7282	3.62	99.05
005265699-05	OBS	No	50.545316	159.964247	234.4	4.380	9.1	6.5	2.22	7282	3.88	124.37
005265699-06	OBS	No	68.720978	171.196883	393.1	12.671	8.9	8.0	2.22	7282	5.10	82.57
005265699-07	OBS	No	55.003341	156.636623	140.9	8.415	8.0	4.4	2.22	7282	2.82	111.11
005265699-09	OBS	No	119.872360	142.919731	175.7	3.500	7.5	-1.0	2.22	7282	2.97	39.32

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005265699-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005265699-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005265699-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
005265699-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005265699-09	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS—HALO_GHOST

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

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

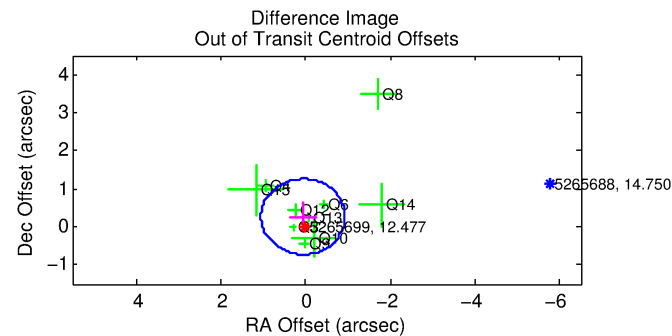
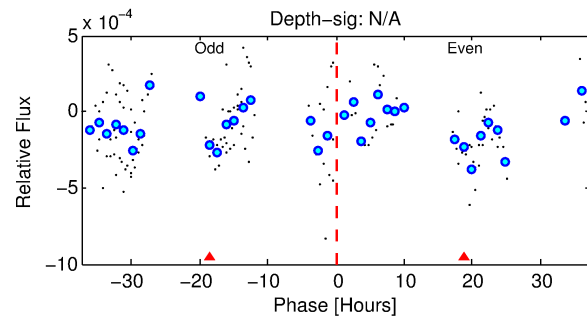
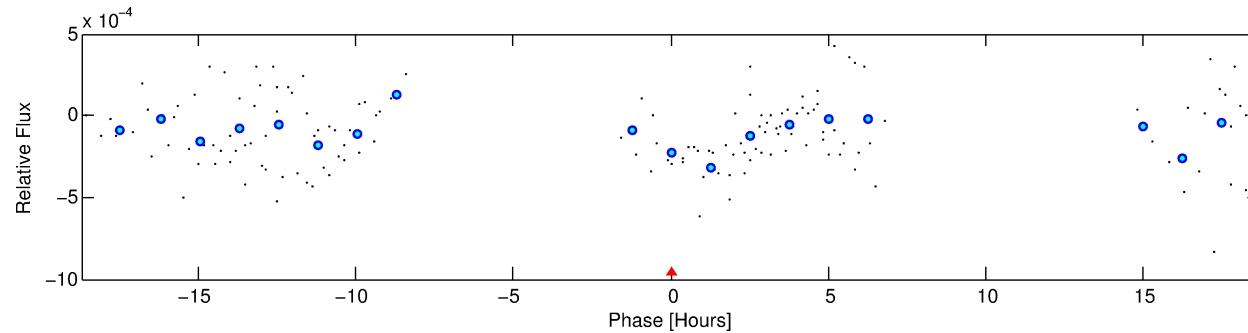
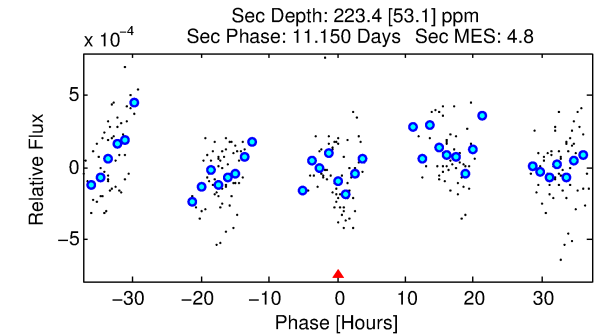
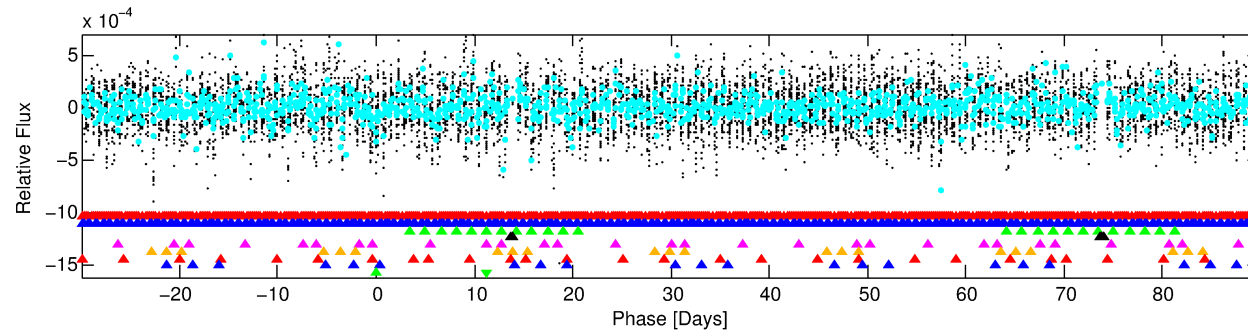
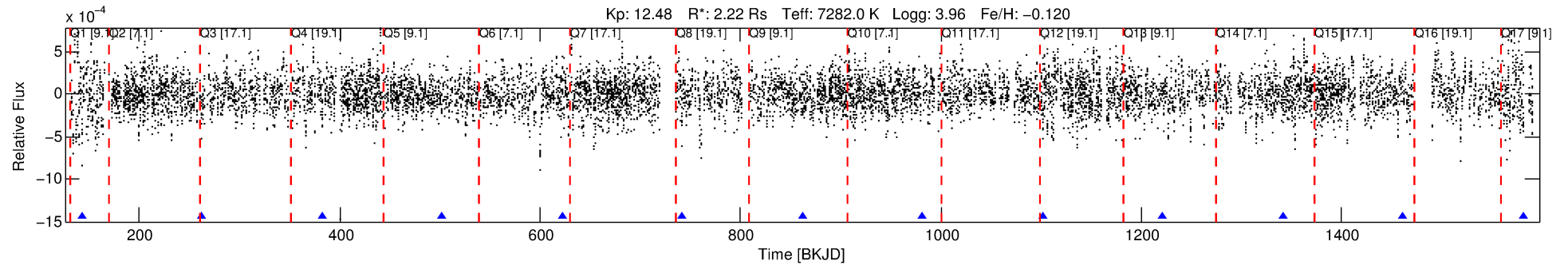
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

Ephemeris Match Information For 005265699-09

No Significant Match Found

# DV One-Page Summary

KIC: 5265699 Candidate: 9 of 9 Period: 119.872 d



## TPS TCE Results:

Period = 119.87236 d  
Epoch = 142.9197 BKJD

DV fit results are unavailable

## DV Diagnostic Results:

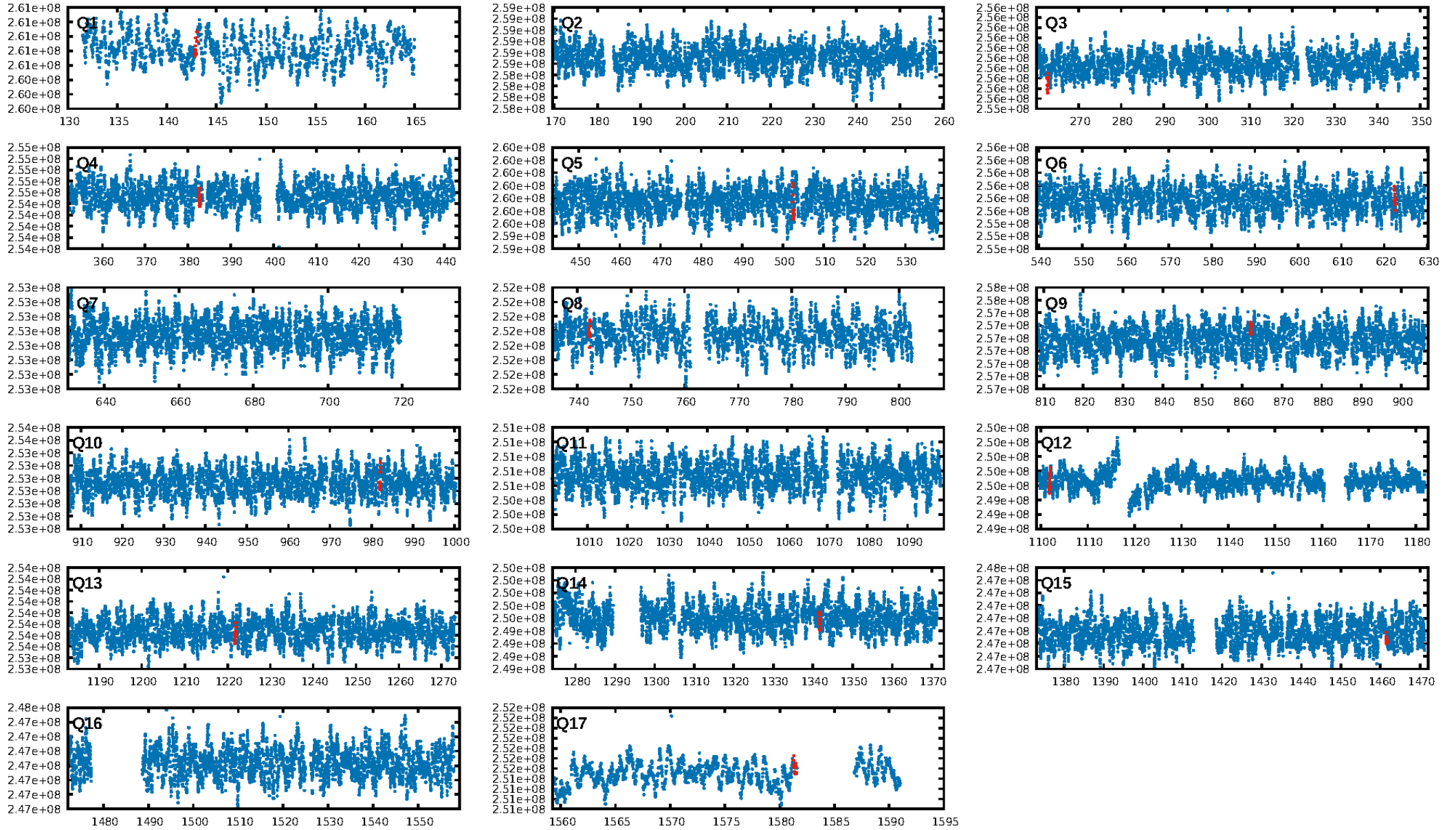
ShortPeriod-sig: 100.0% [93.39σ]  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [8/8]  
GhostDiagnostic-chr: 0.03535

Centroid-sig: 12.7%  
Centroid-so: 0.290 arcsec [0.94σ]  
OotOffset-rm: 0.274 arcsec [0.83σ]  
KicOffset-rm: 0.286 arcsec [0.94σ]  
OotOffset-st: 3/2/3/2 [10]  
KicOffset-st: 3/2/3/2 [10]  
DiffImageQuality-fgm: 0.60 [6/10]  
DiffImageOverlap-fno: 0.00 [0/12]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:38:18 Z

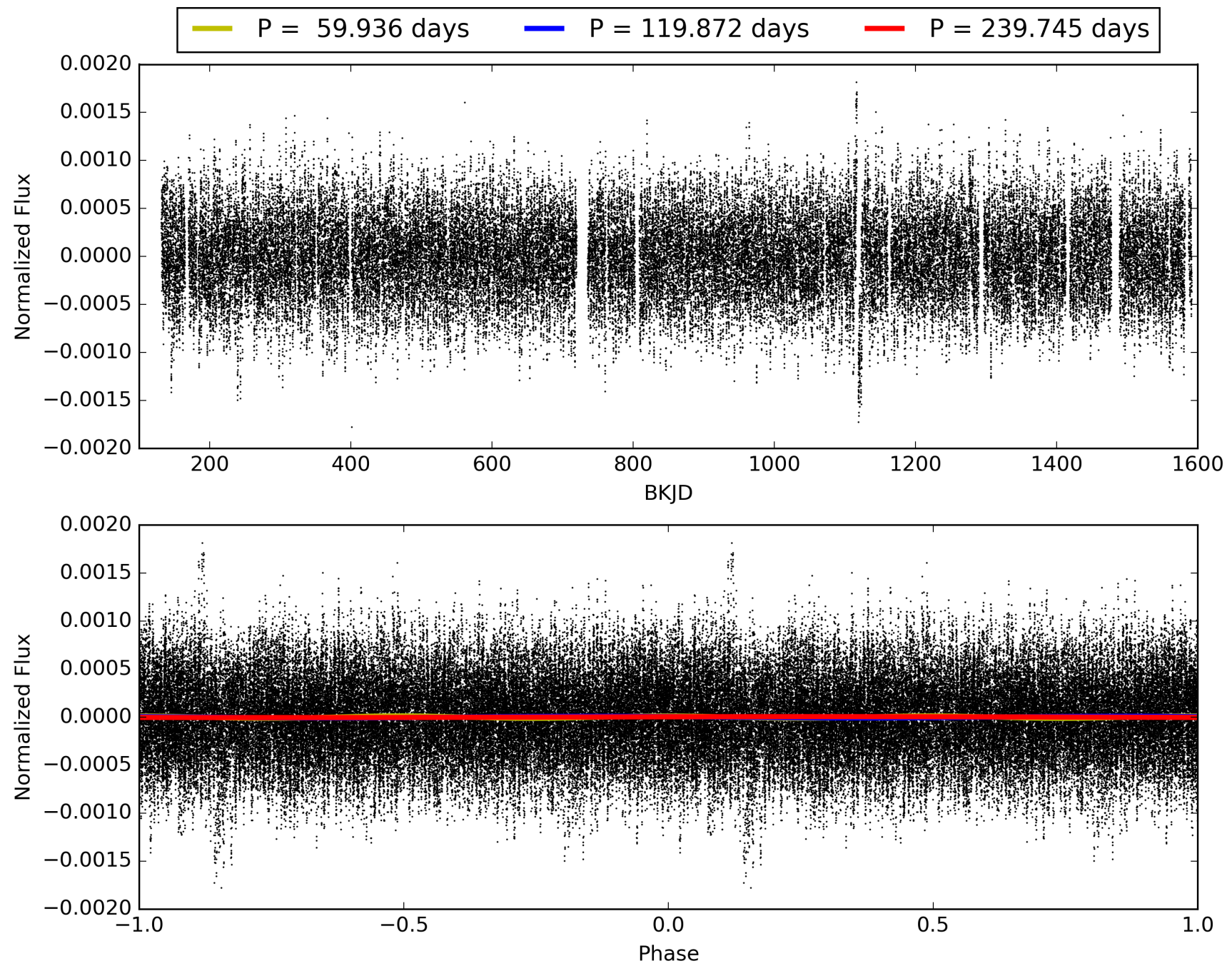
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005265699-09, PDC Light Curves



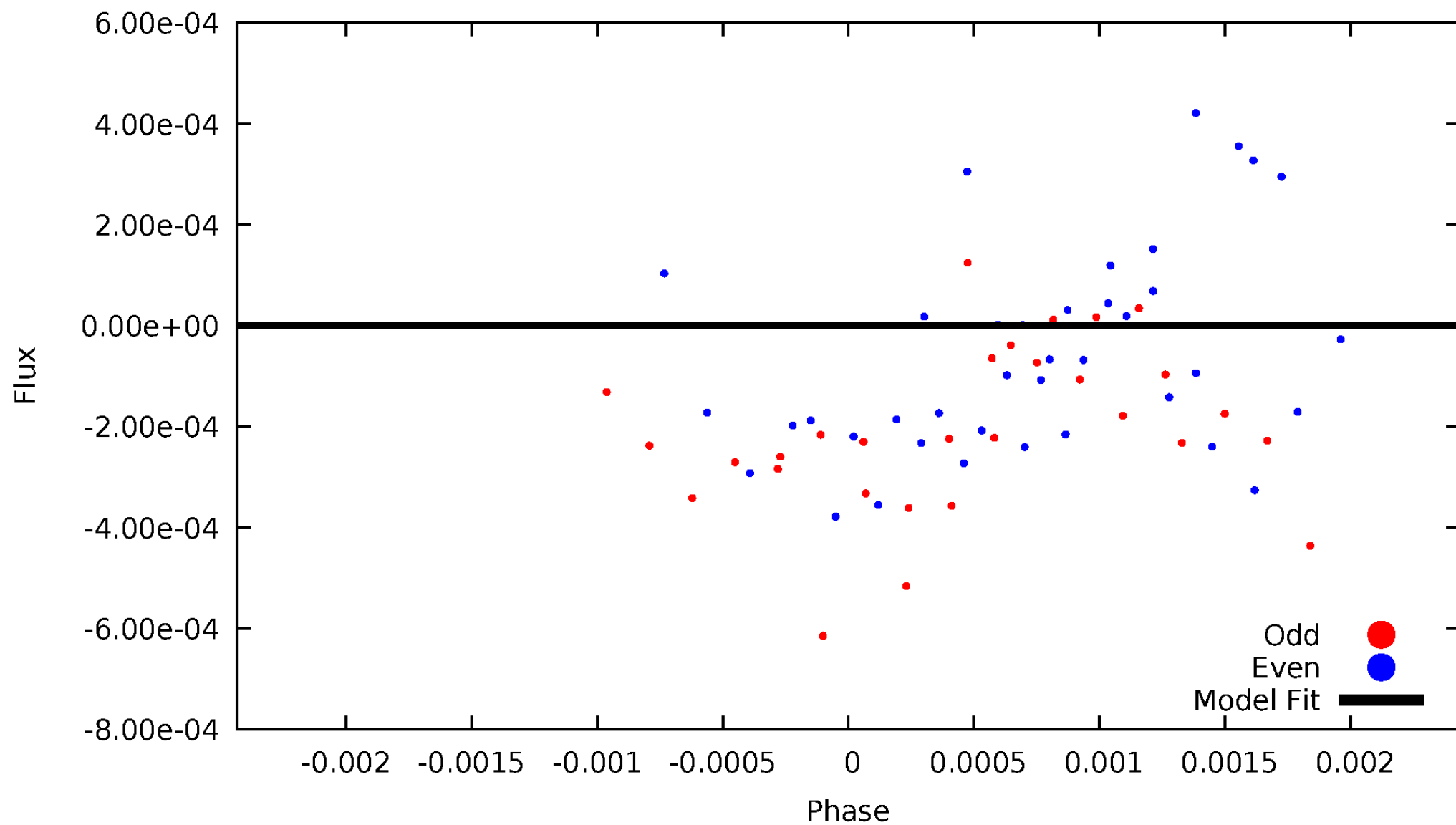


TCE 005265699-09



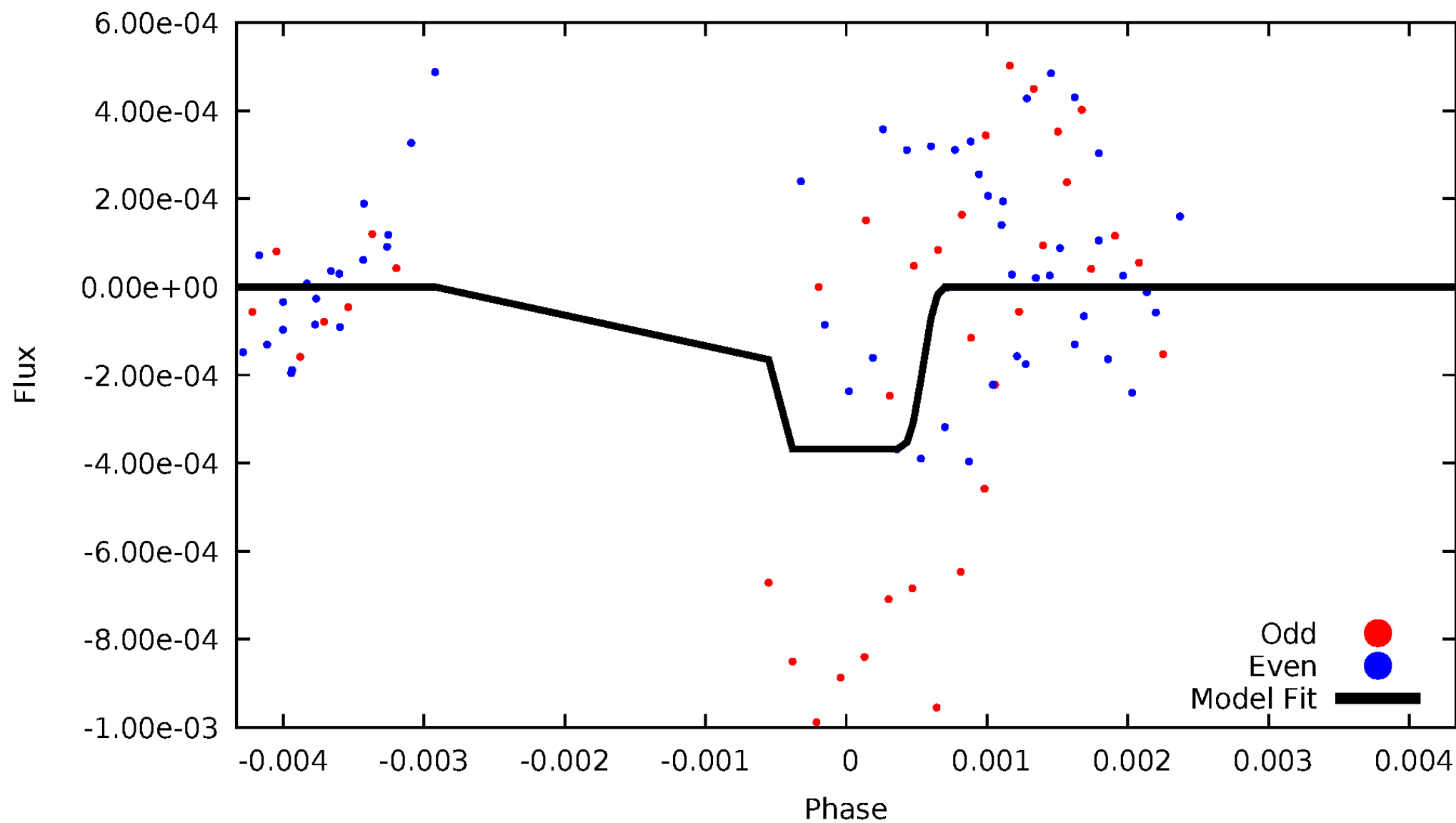
# DV Odd/Even

TCE 005265699-09

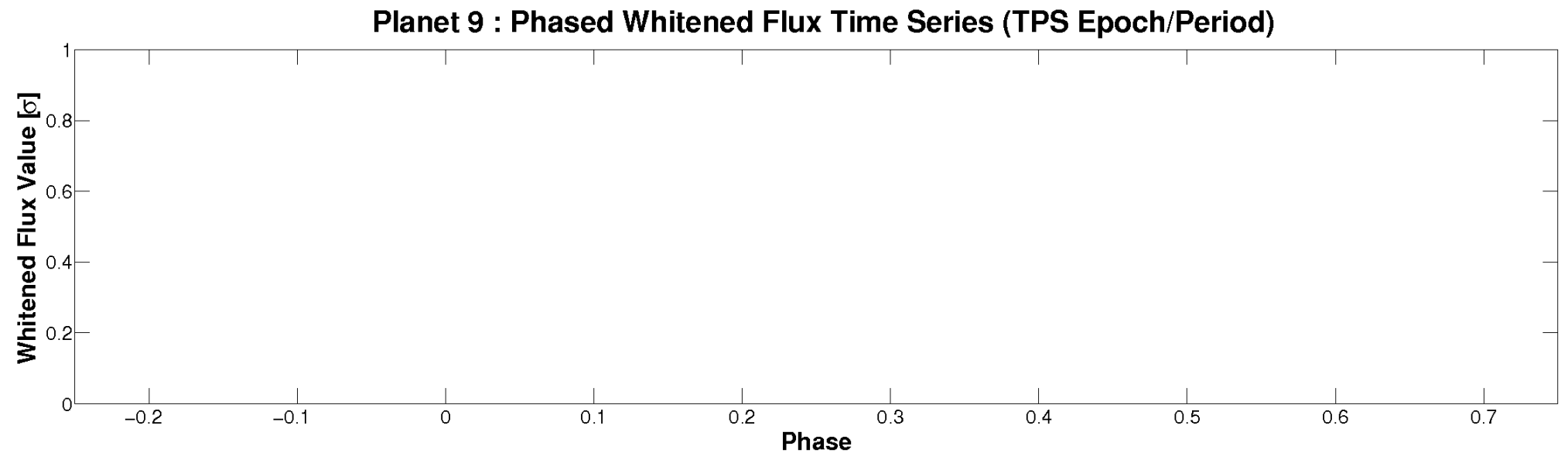
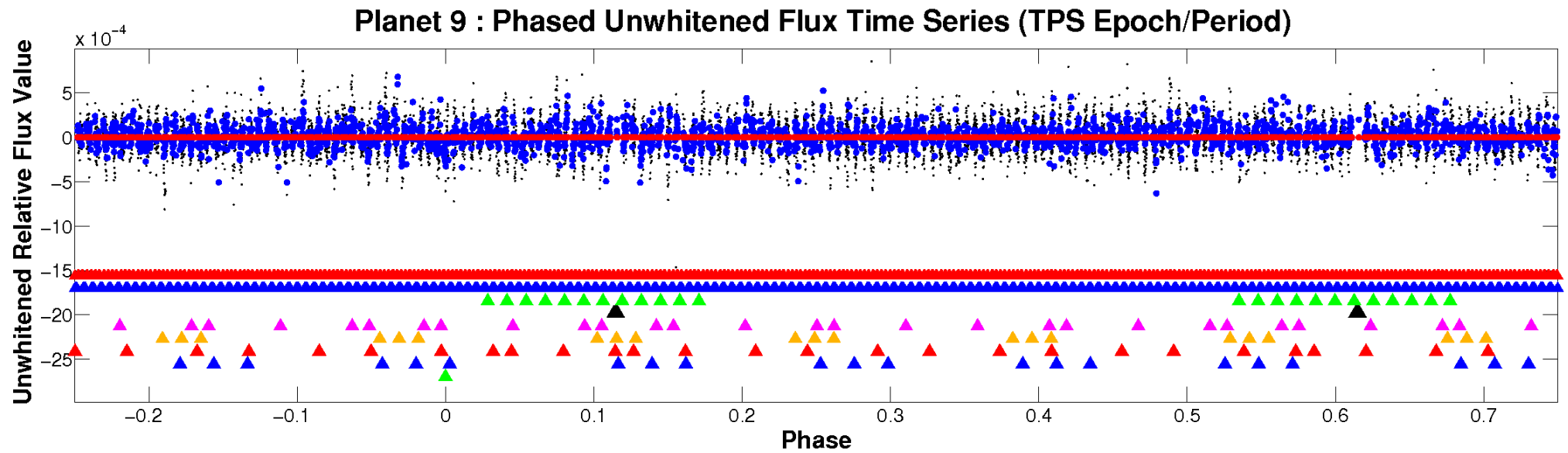


# ALT Odd/Even

TCE 005265699-09

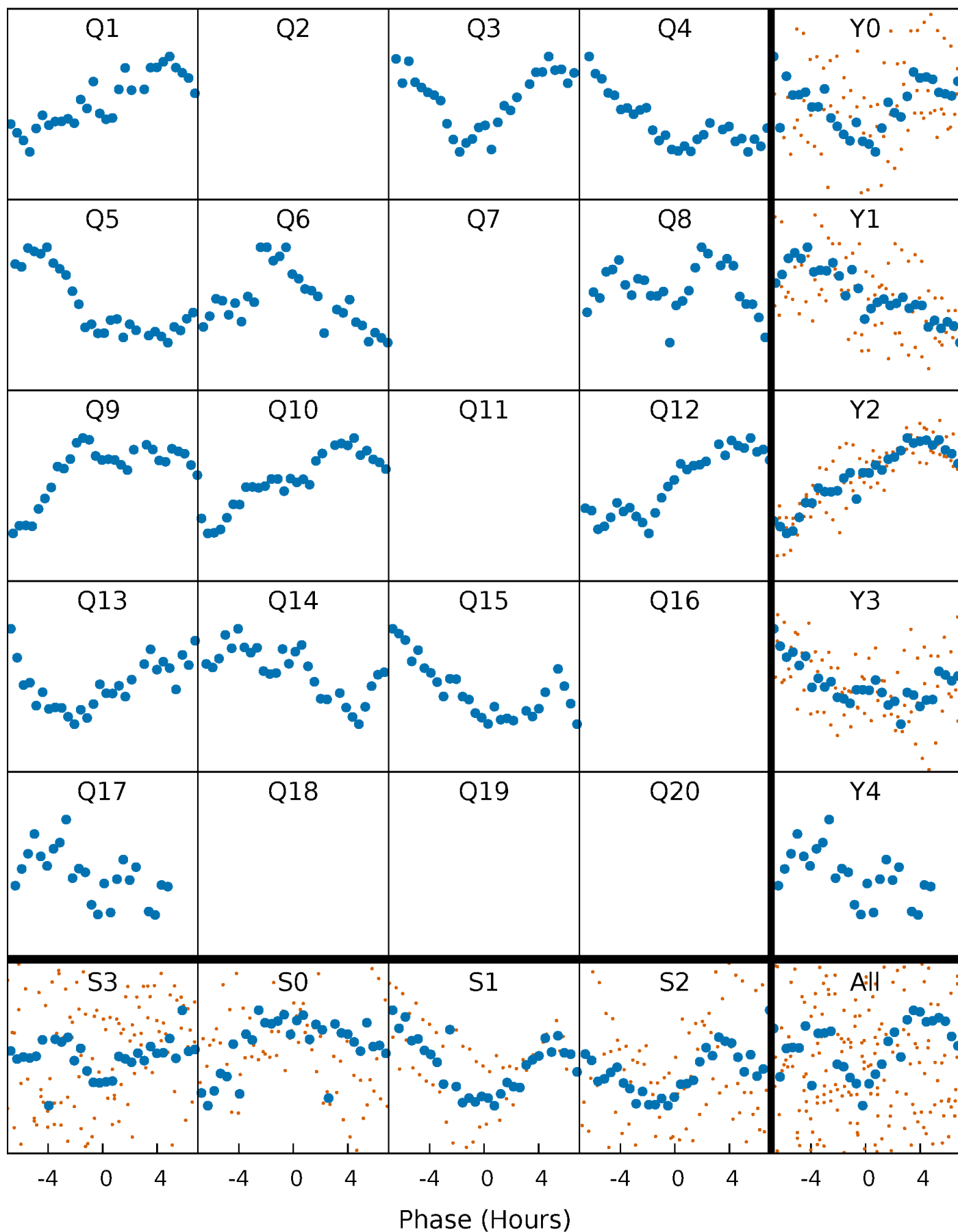


# Non-Whitened Vs. Whitened Light Curve



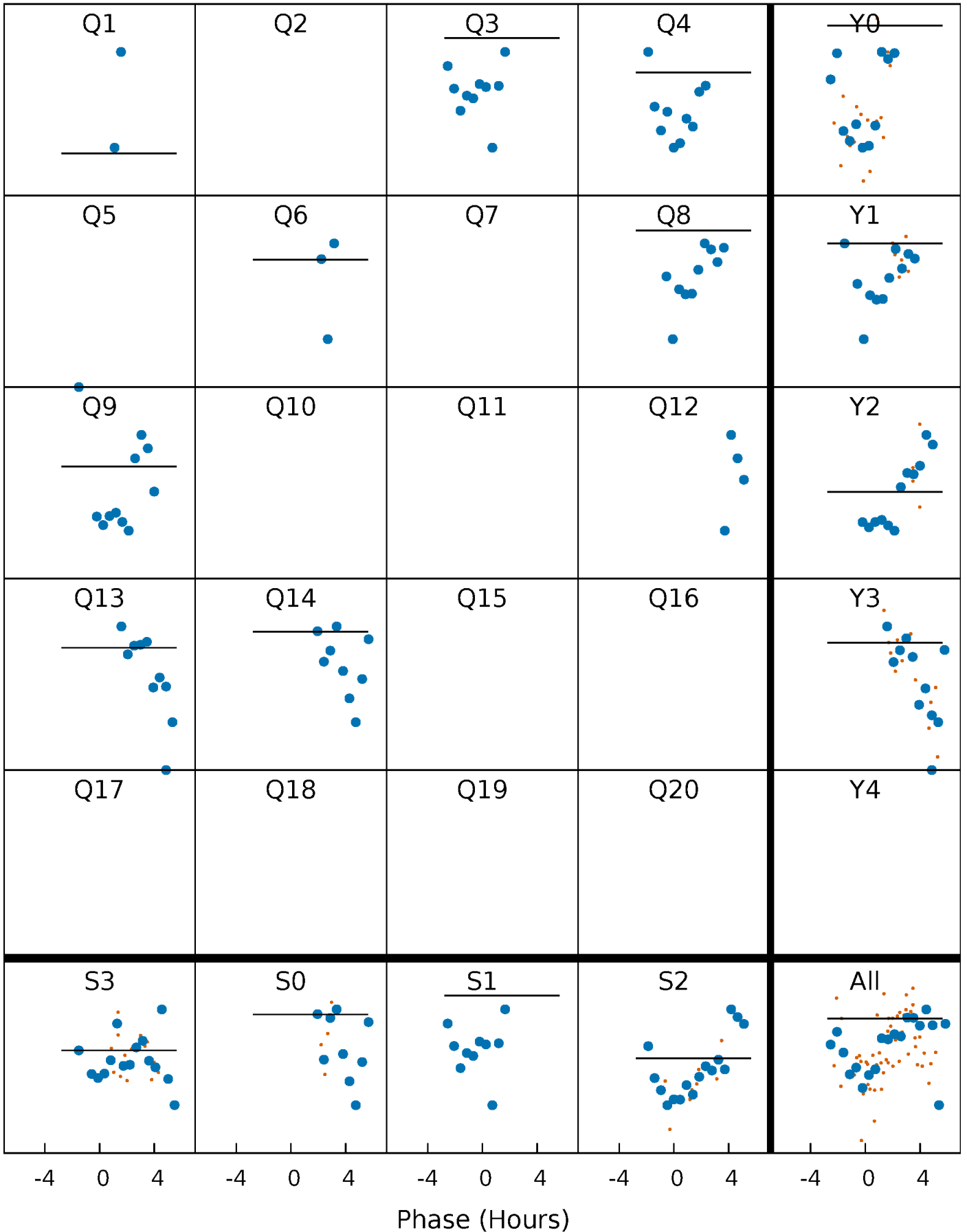
# PDC Quarter-Phased Transit Curves

TCE 005265699-09 P=119.872360 Days  $T_0=142.919732$  (BKJD)



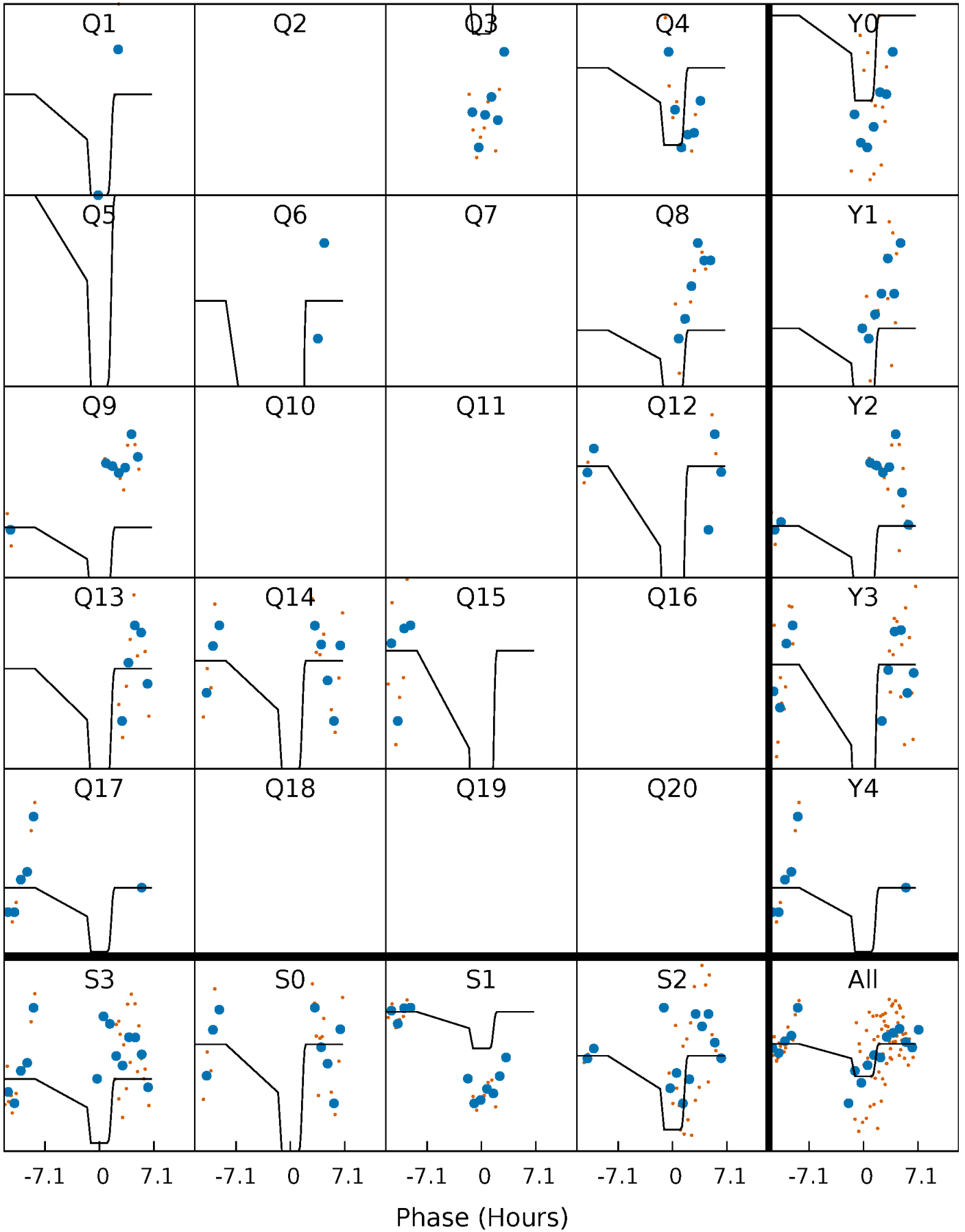
# DV Quarter-Phased Transit Curves

TCE 005265699-09     $P=119.872360$  Days     $T_0=142.919732$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 005265699-09 P=119.872360 Days  $T_0=142.870497$  (BKJD)

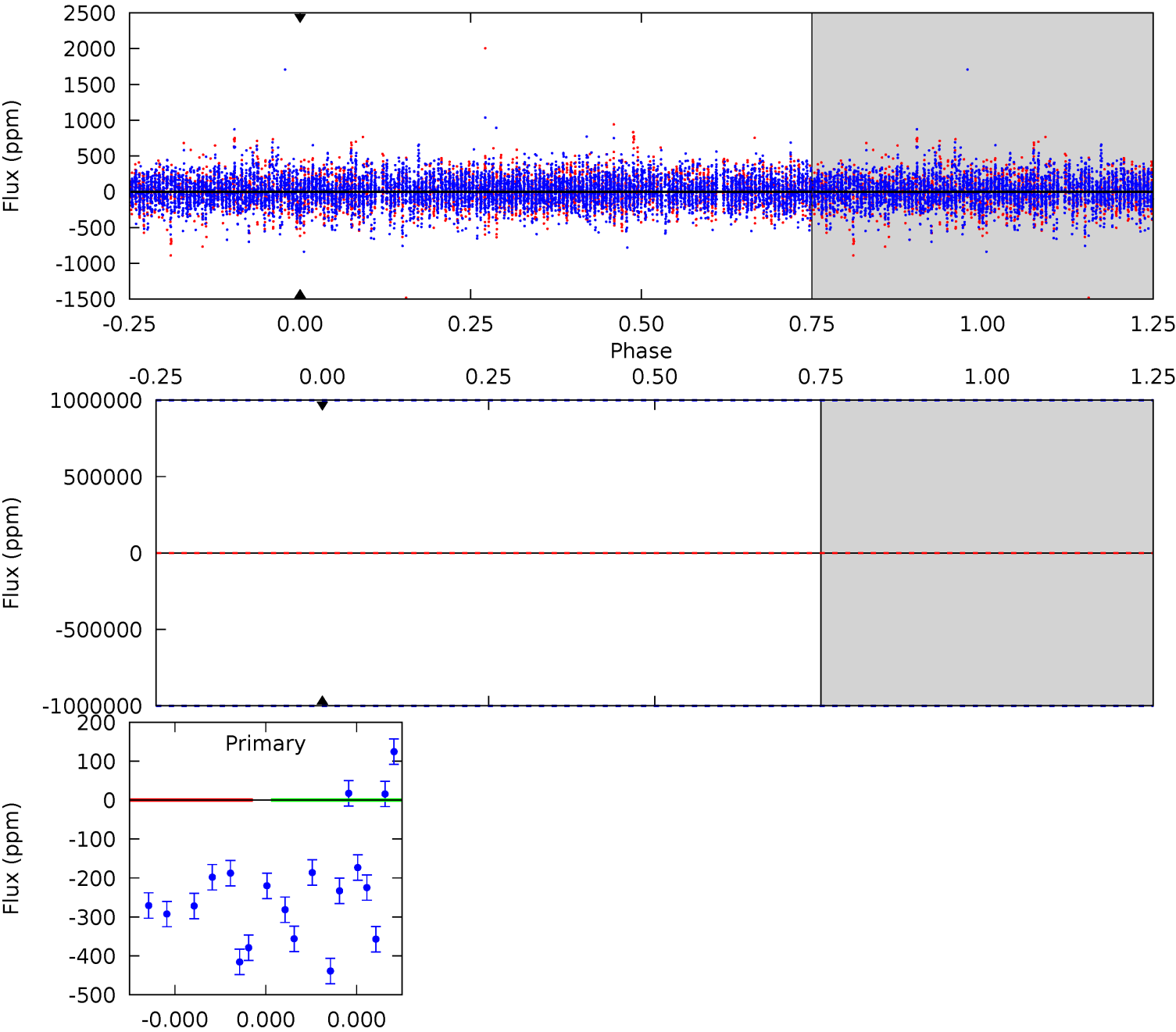




# DV Model-Shift Uniqueness Test

005265699-09, P = 119.872360 Days, E = 23.047372 Days

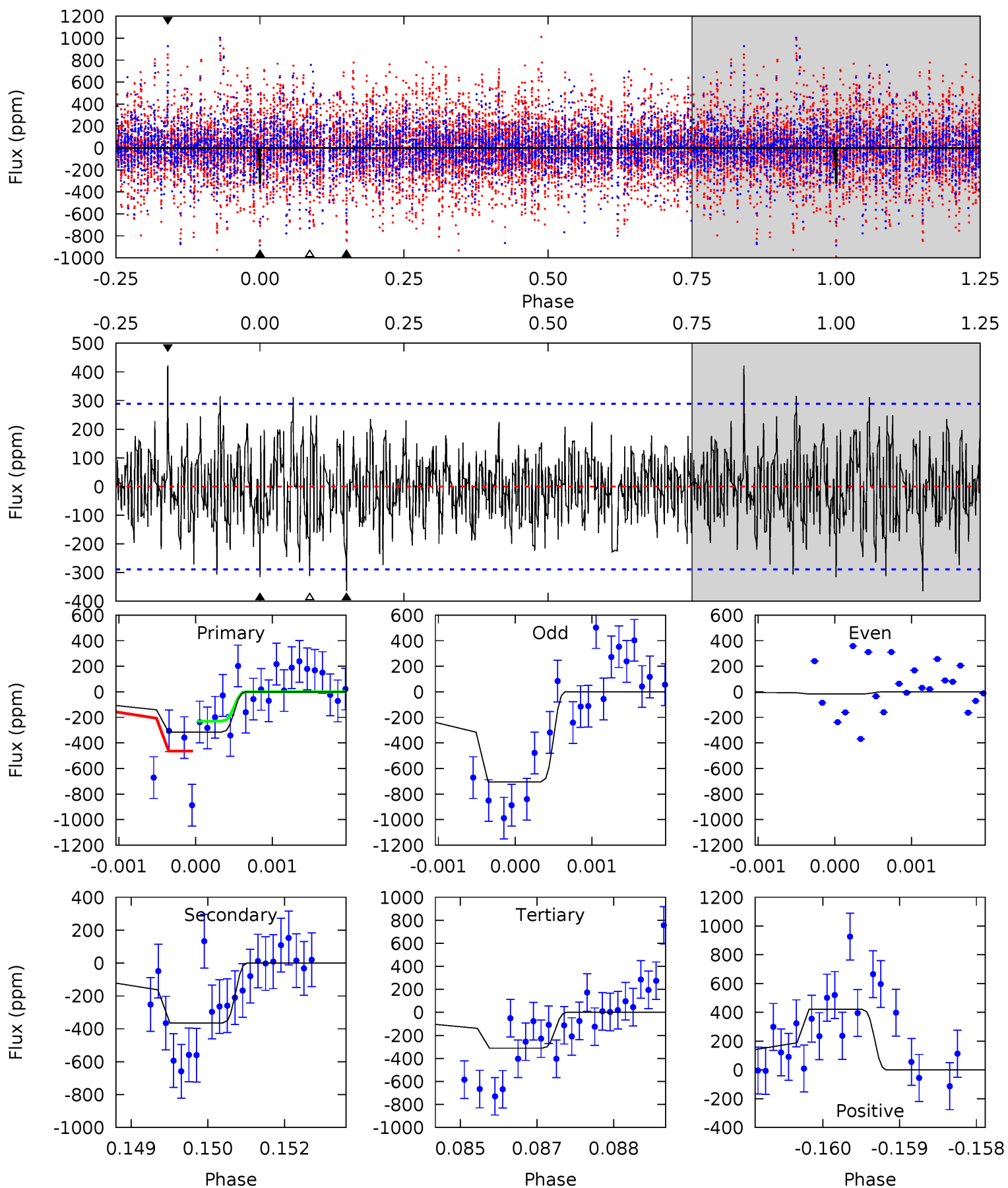
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

005265699-09, P = 119.872360 Days, E = 22.998137 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.94	6.87	5.86	7.94	5.44	3.27	1.64	0.08	-2.00	1.00	-1.08	6.29	1.95	0.54	2.00



### Stellar Parameters For KIC 005265699

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7282^{+228}_{-304}$	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-4%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
Source	KIC0	KIC0	KIC0	DSEP		

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

### Secondary Eclipse Parameters for KIC 005265699-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$0 \pm 1000000$	$15.24^{+18.07}_{-10.54}$	$878^{+72}_{-79}$	$-4916^{+54083}_{-37691}$	$-548.452^{+145778.020}_{-130110.843}$
Alt.	$-365 \pm 53$	$16.86^{+19.00}_{-12.18}$	$880^{+63}_{-82}$	$4018^{+3053}_{-851}$	$220^{+2699}_{-173}$

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

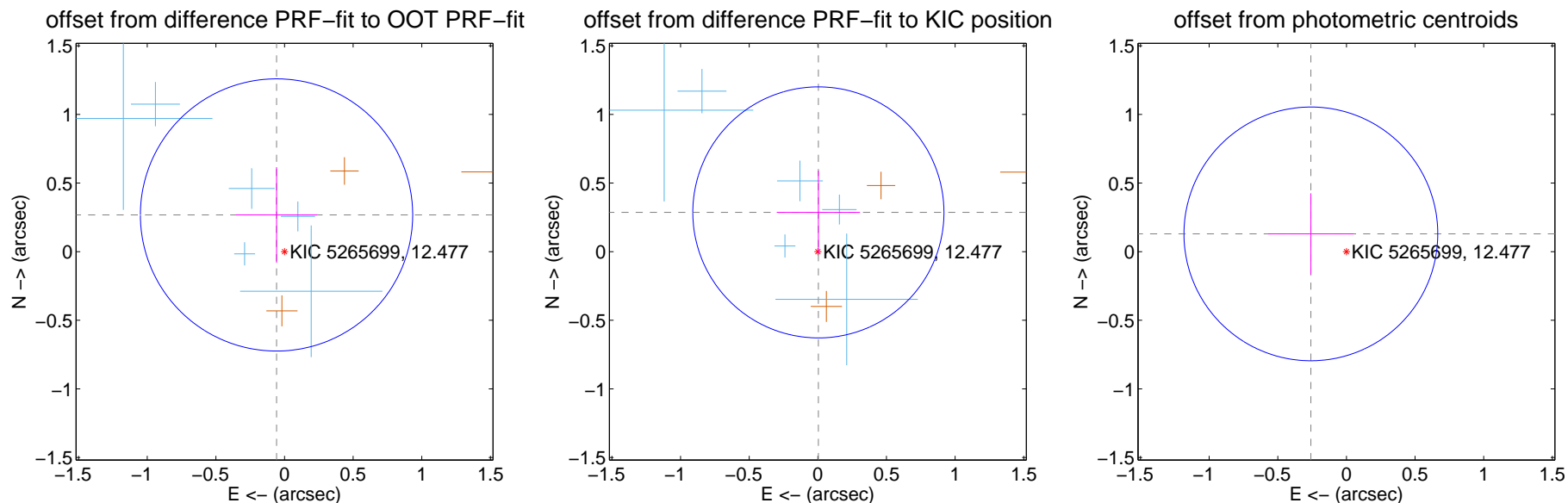
## DV Centroid Data

Supplemental centroid analysis for 005265699-09. Kepler magnitude: 12.48. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

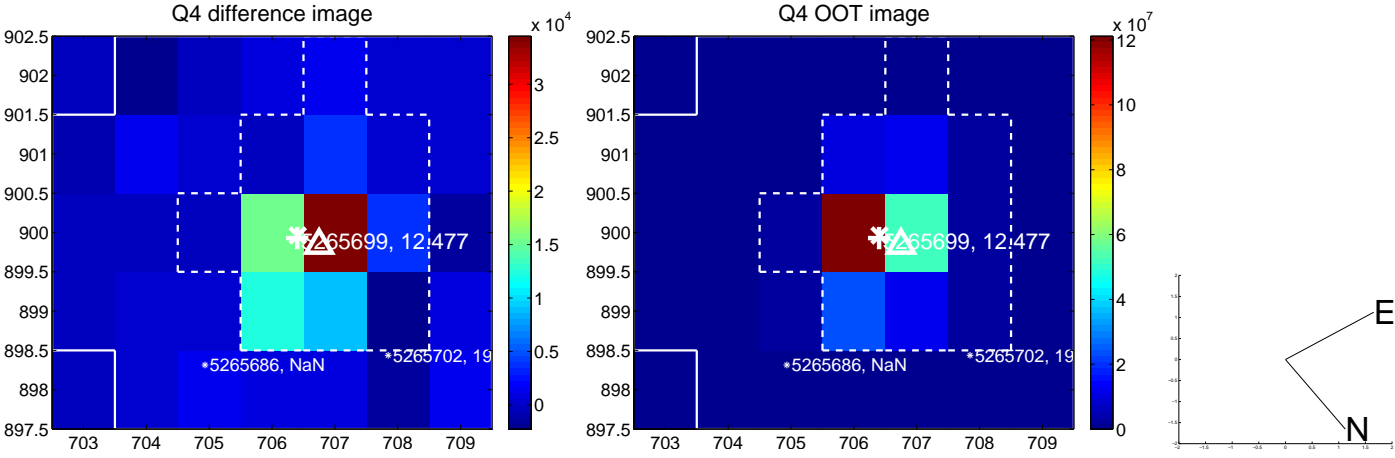
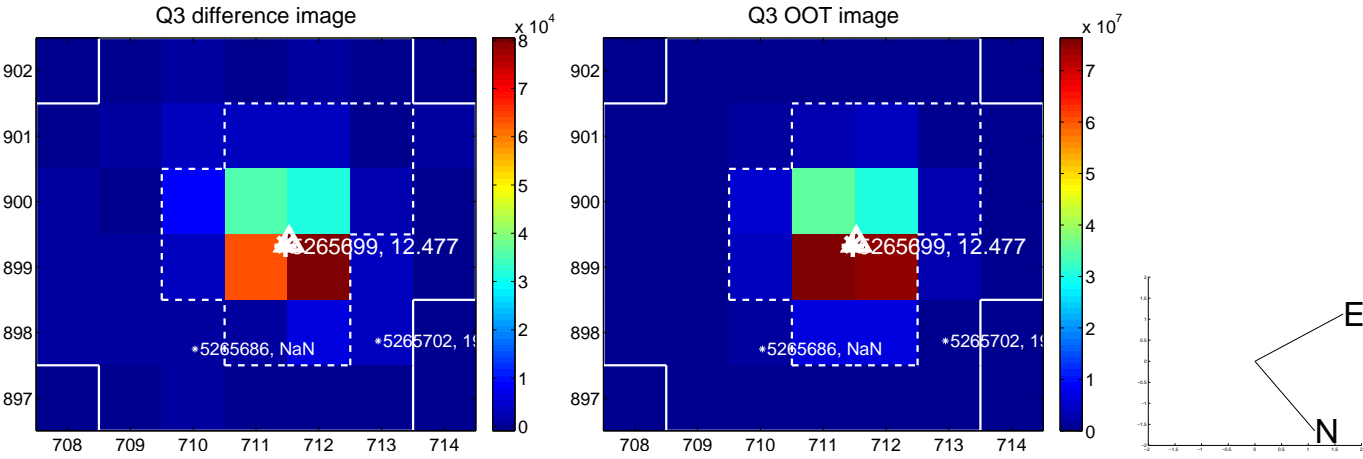
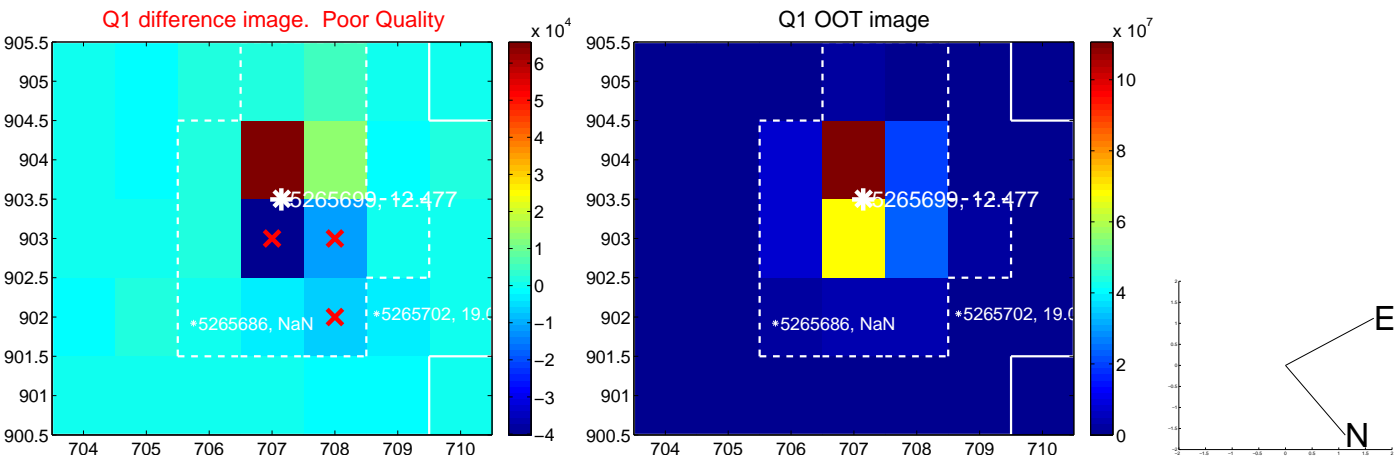
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.274 \pm 0.331$	0.83	$0.058 \pm 0.295$	$0.267 \pm 0.348$
PRF-fit source offset from KIC position	$0.286 \pm 0.305$	0.94	$-0.004 \pm 0.303$	$0.286 \pm 0.304$
photometric centroid source offset	$0.29 \pm 0.31$	0.94	$0.26 \pm 0.31$	$0.13 \pm 0.30$

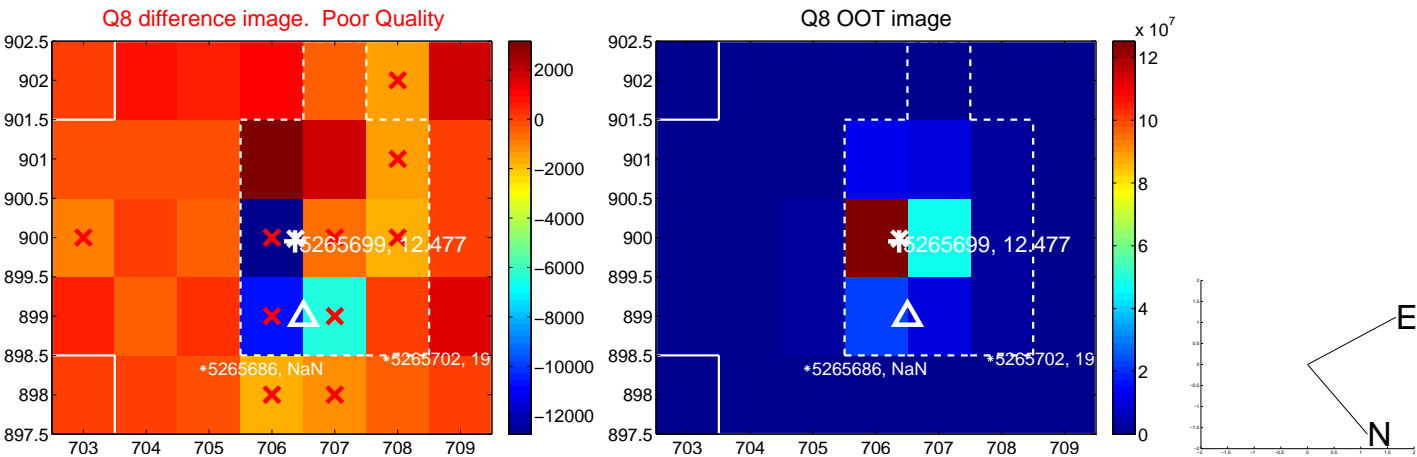
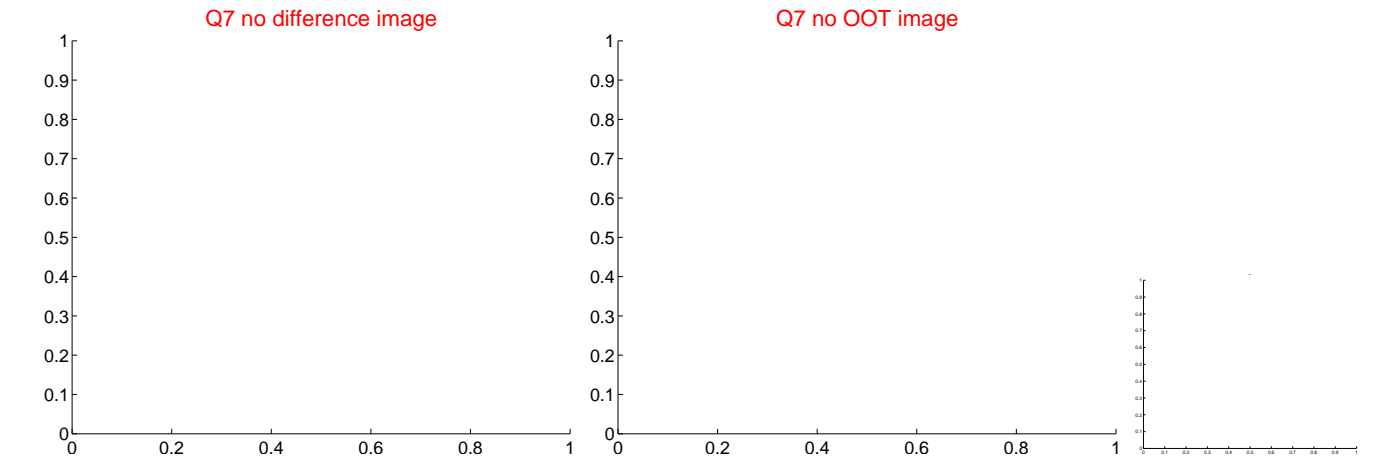
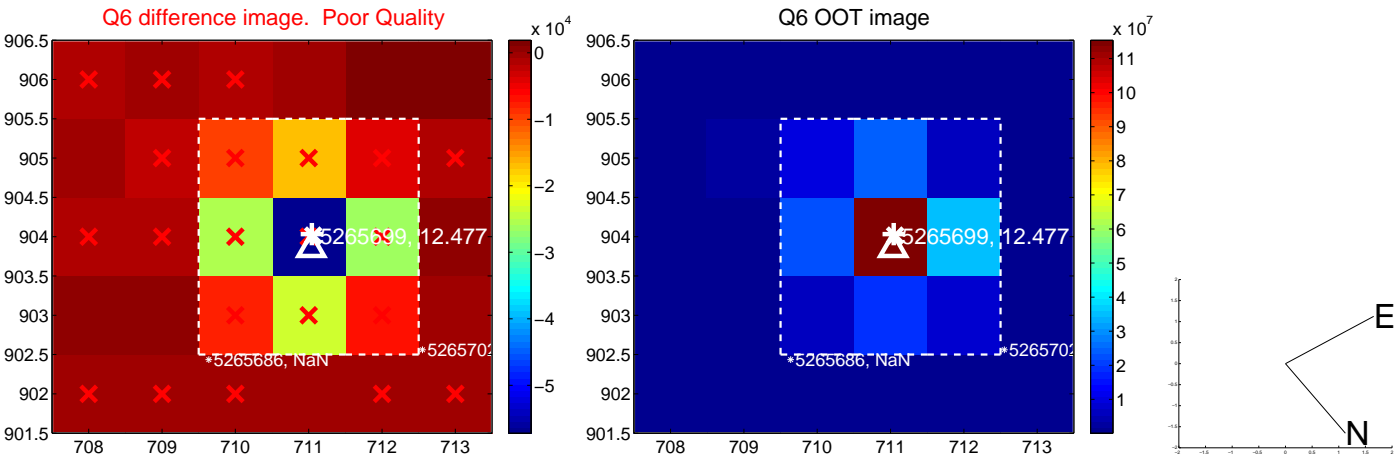
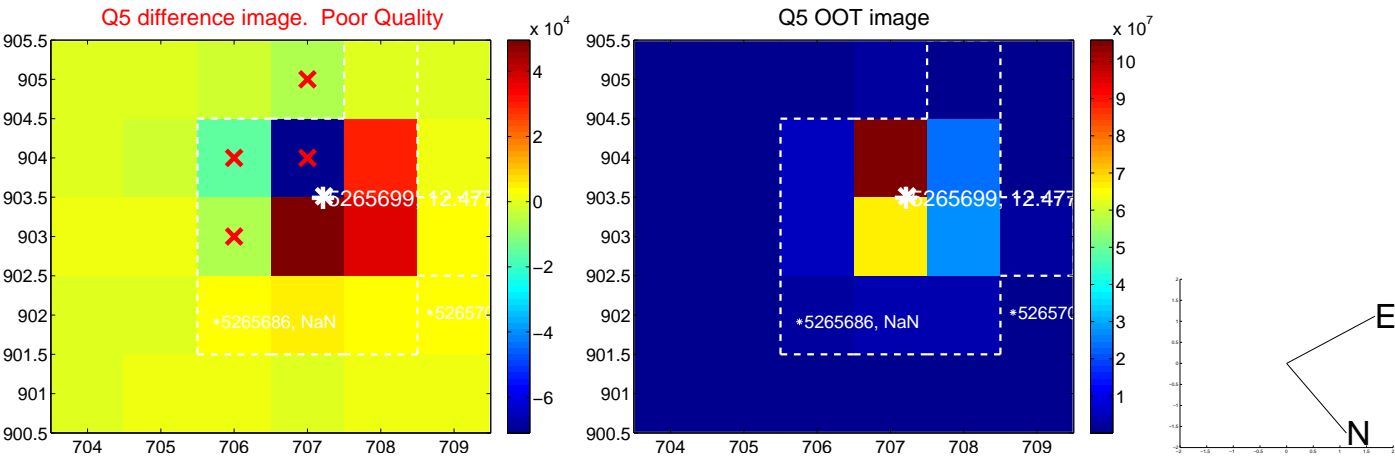


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

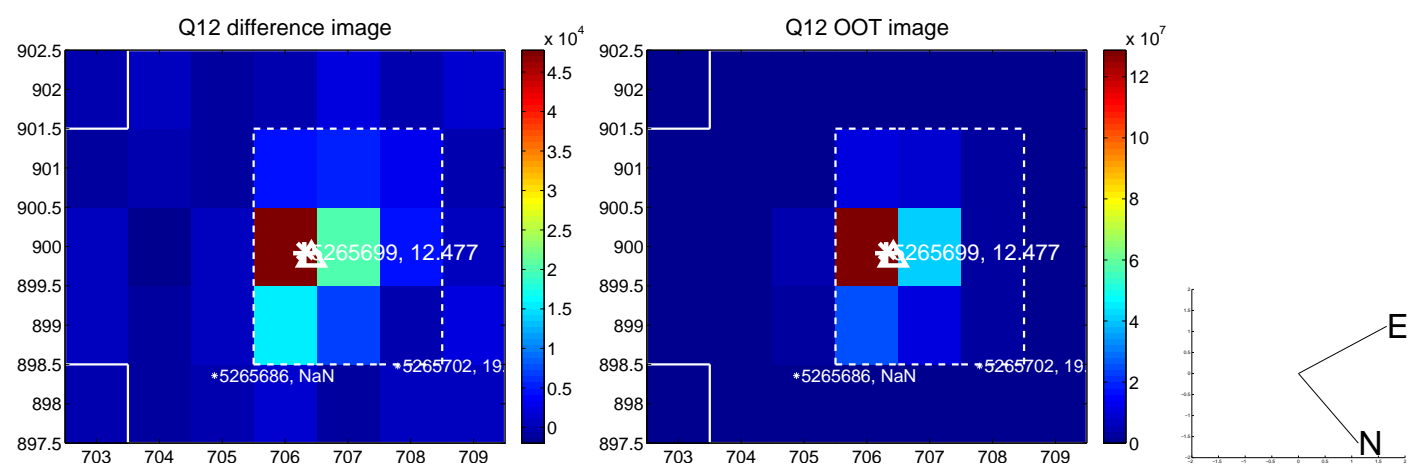
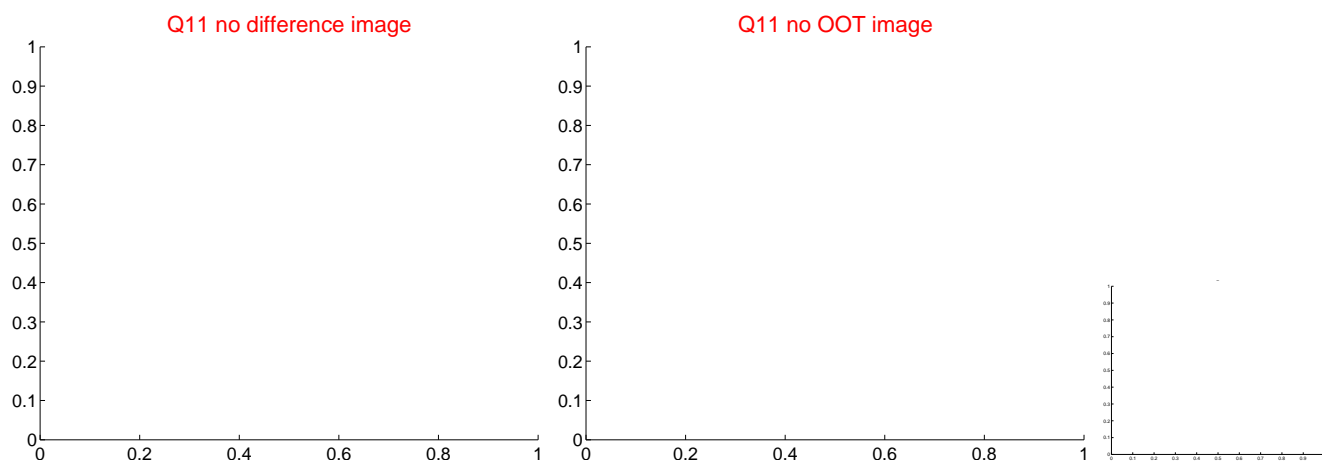
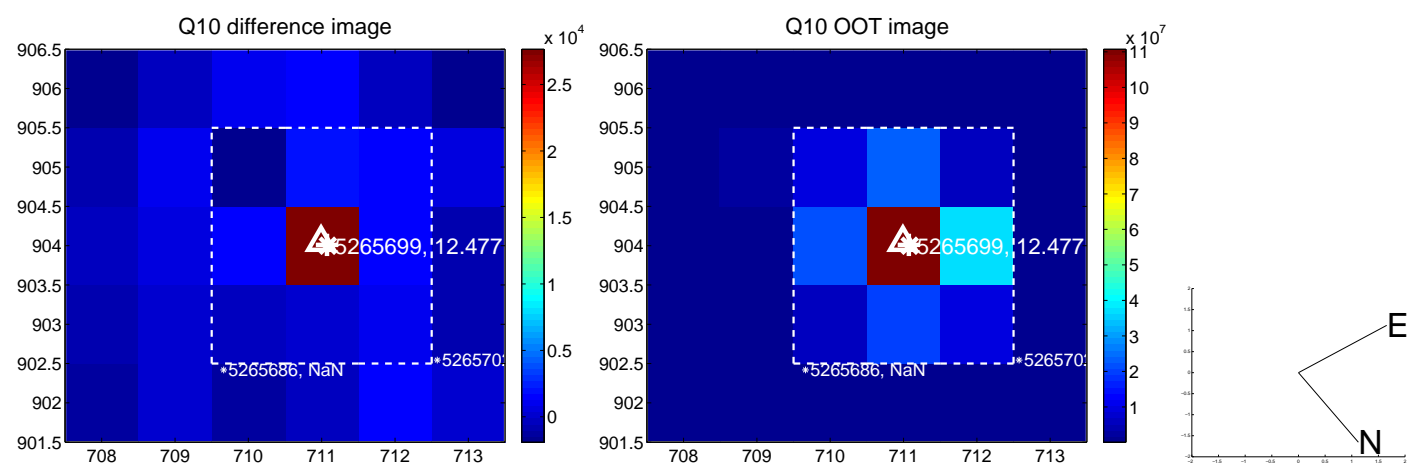
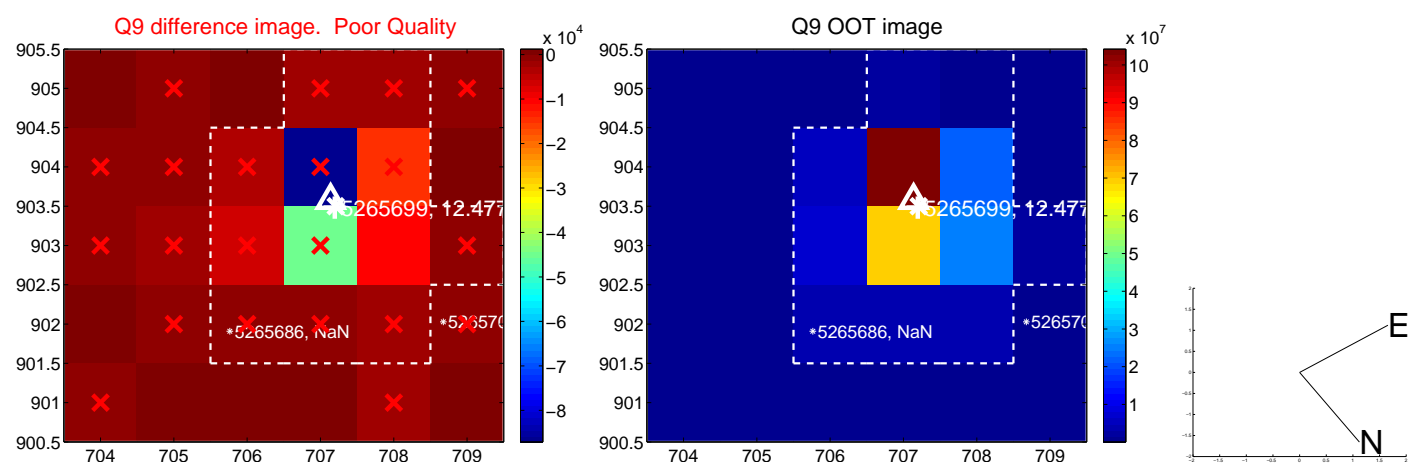
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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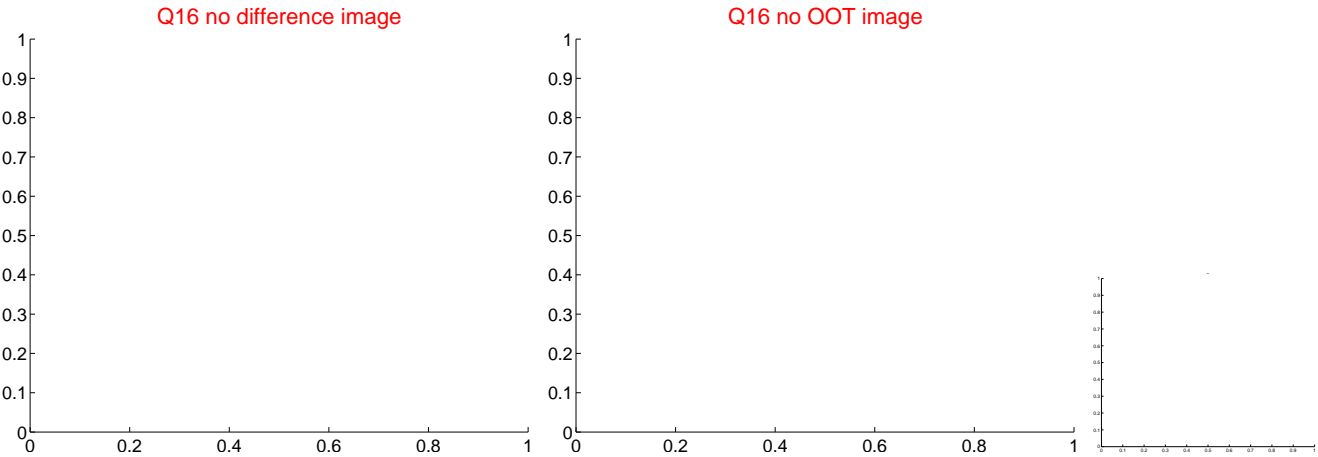
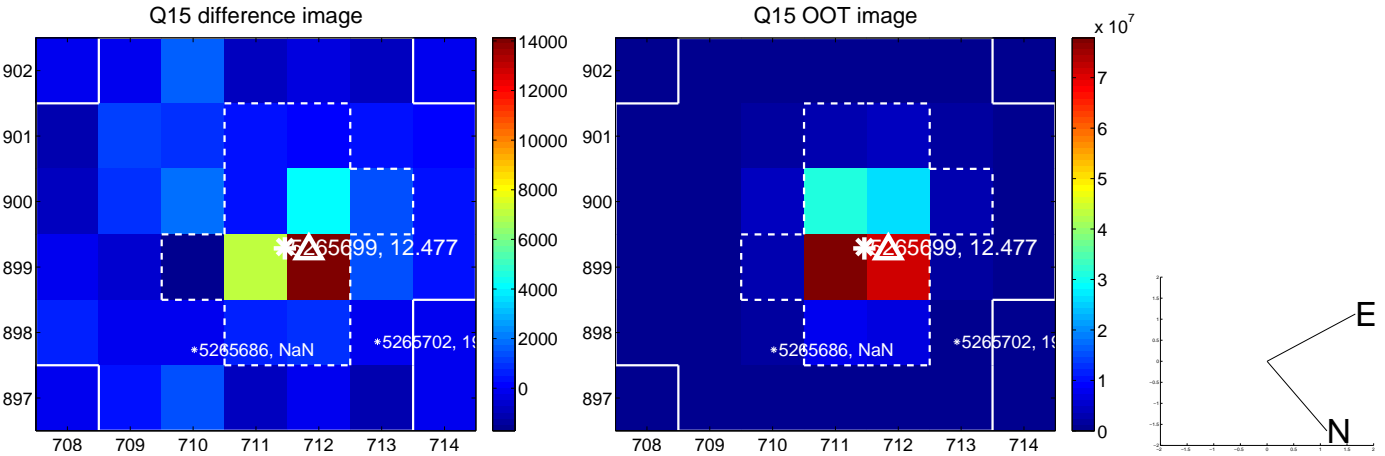
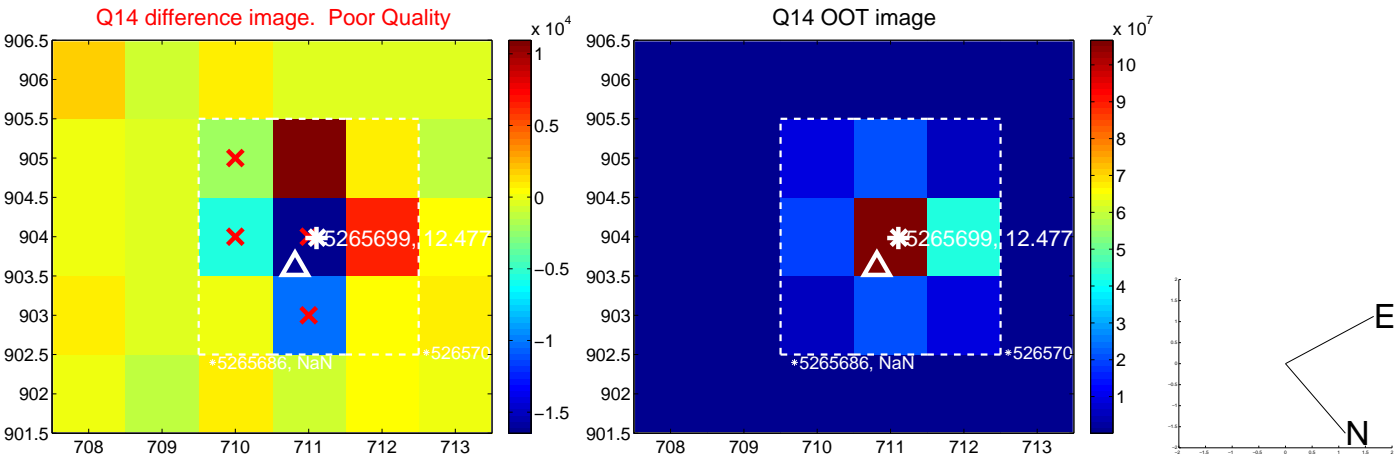
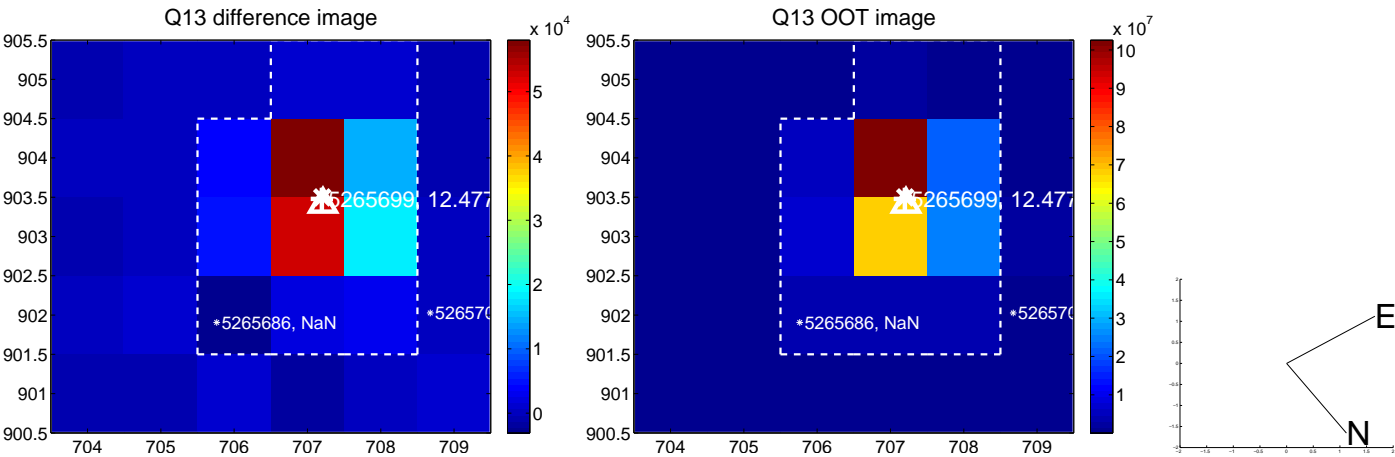


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

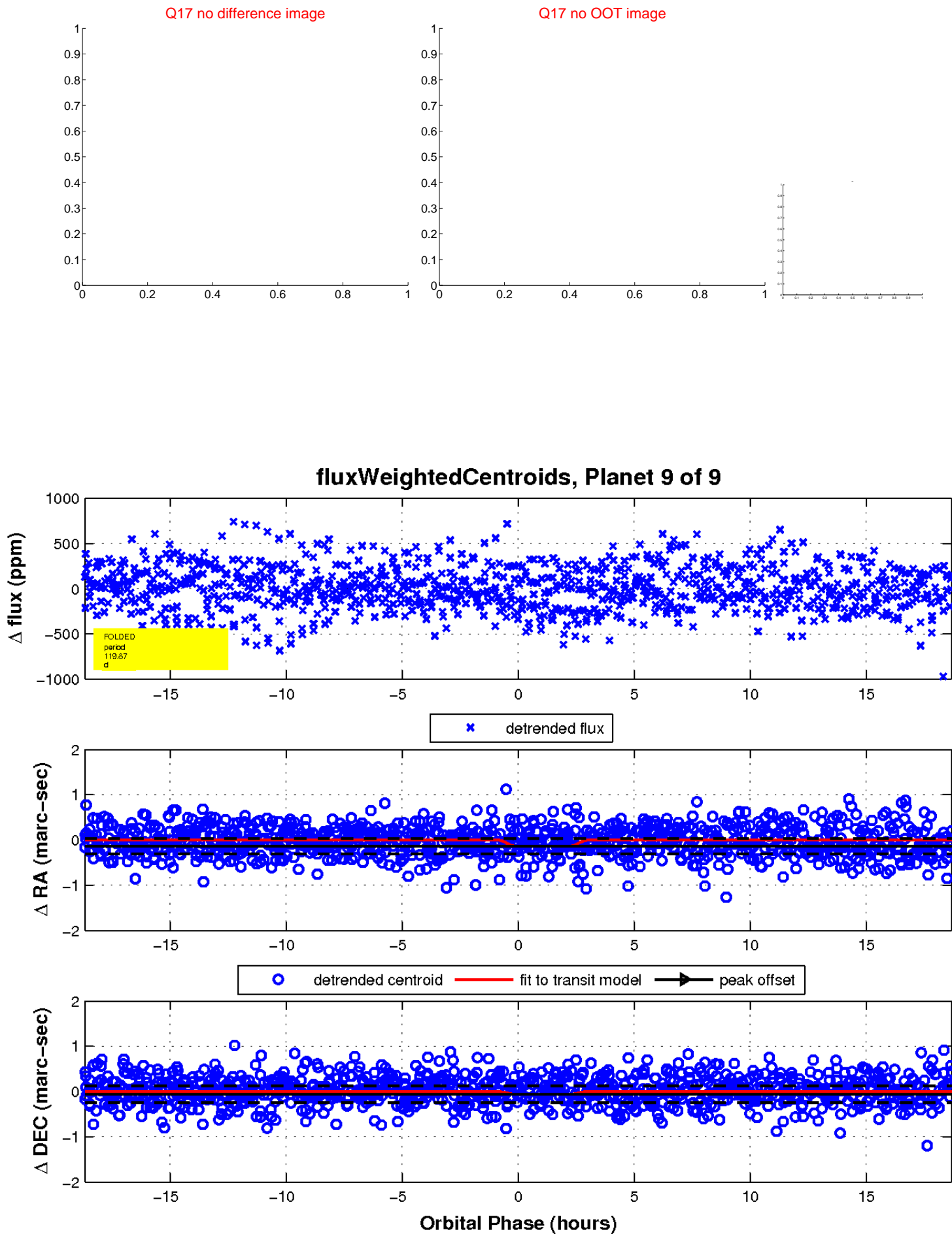




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# UKIRT Image

Declination

