

KIC 005565261

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})
005565261-01	OBS	5180.01	2.362341	131.707856	567.2	3.163	54.2	62.2	3.29	5088	15.97	4638.25
005565261-02	OBS	No	1.181145	131.717157	61.3	2.490	9.1	8.2	3.29	5088	3.13	11687.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005565261-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
005565261-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—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 for comment definitions.

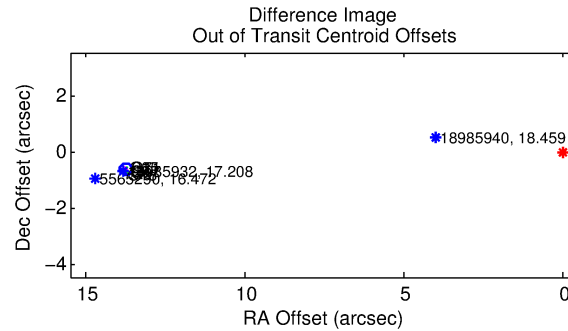
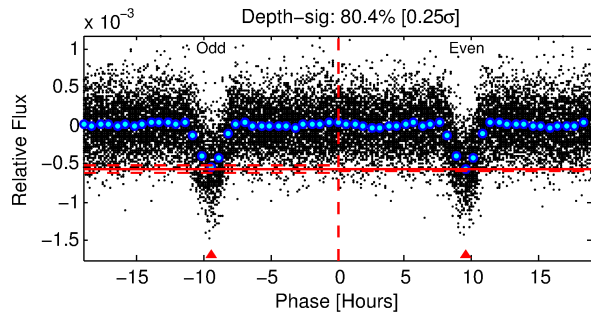
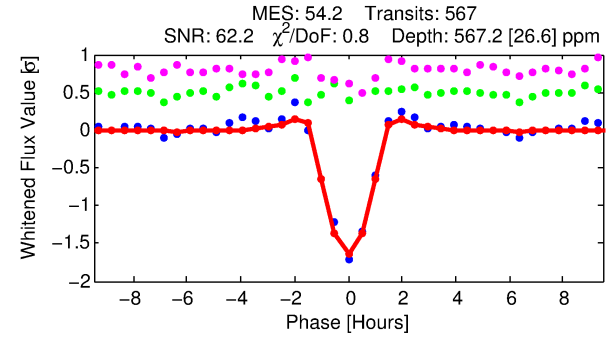
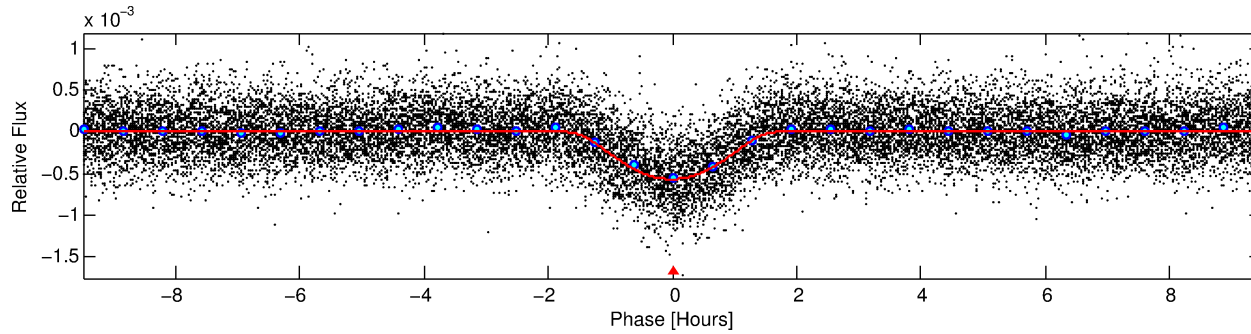
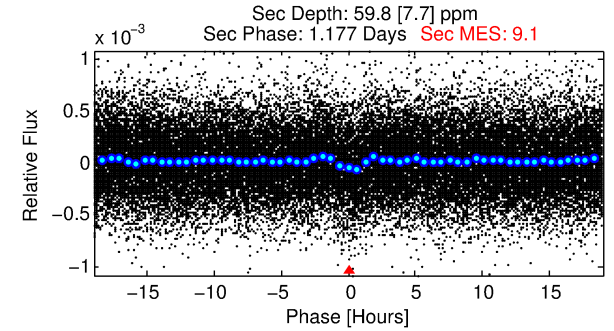
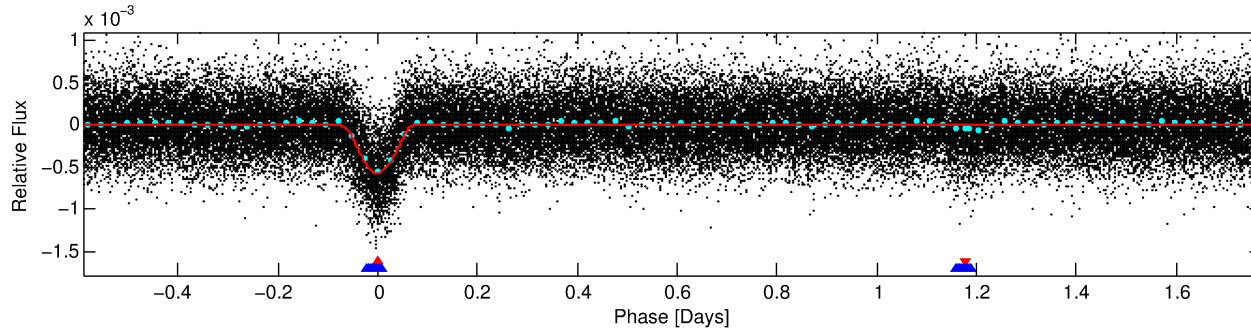
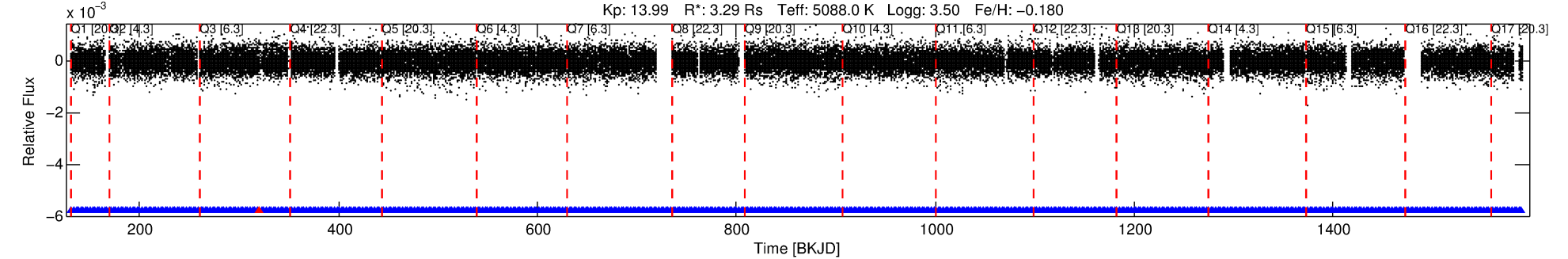
Ephemeris Match Information For 005565261-01

No Significant Match Found

DV One-Page Summary

KIC: 5565261 Candidate: 1 of 2 Period: 2.362 d
KOI: K05180.01 Corr: 0.942

Kp: 13.99 R*: 3.29 Rs Teff: 5088.0 K Logg: 3.50 Fe/H: -0.180



DV Fit Results:

Period = 2.36234 [0.00000] d
Epoch = 131.7079 [0.0007] BKJD
Rp/R* = 0.0444 [0.0232]
a/R* = 2.01 [0.18]
b = 1.00 [0.03]
Seff = 4638.25 [3595.98]
Teq = 2104 [408] K
Rp = 15.97 [10.90] Re
a = 0.0375 [0.0172] AU
Ag = 0.18 [0.24] [-3.47σ]
Teff = 2123 [561] K [0.03σ]

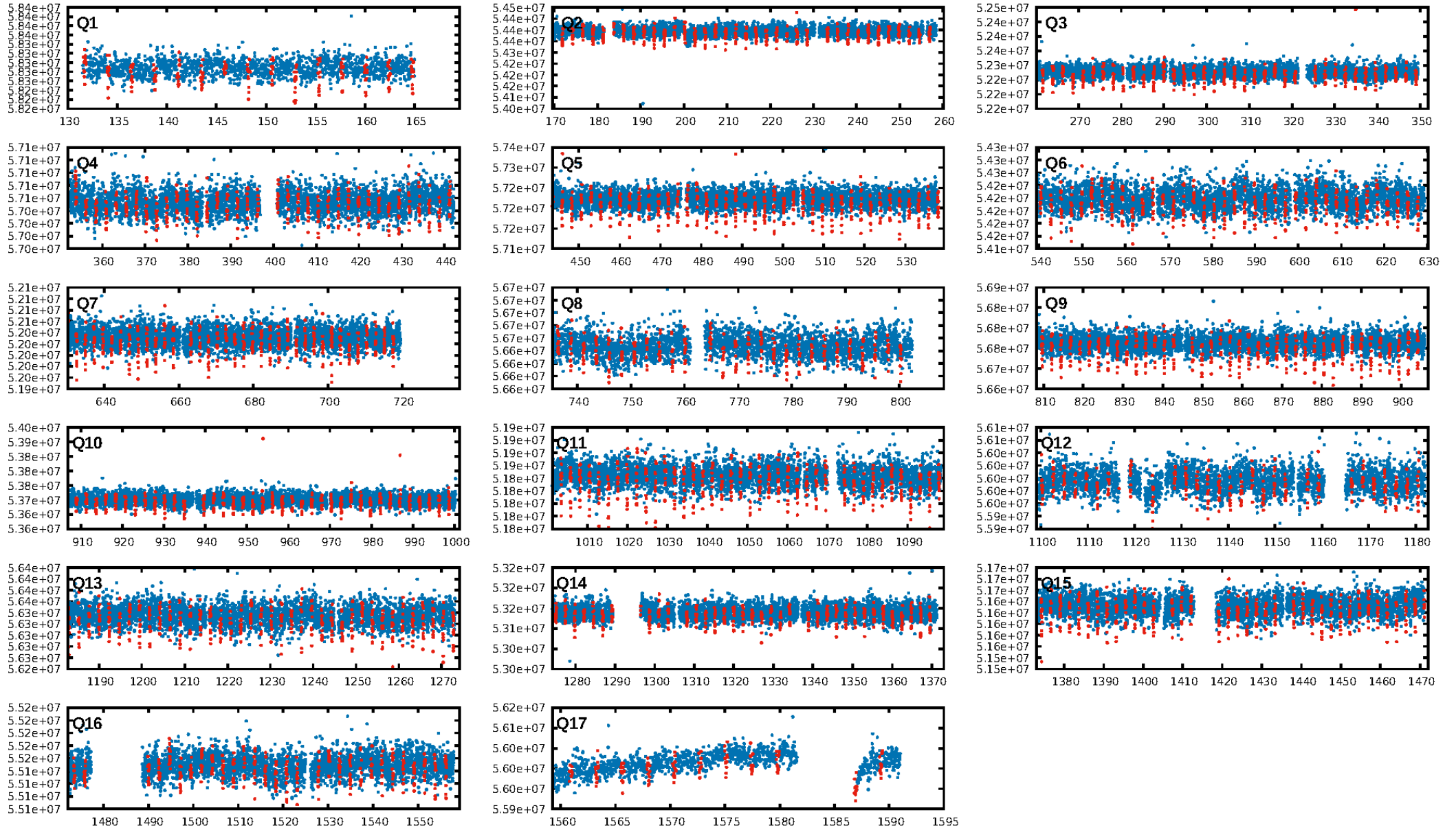
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [540/541]
GhostDiagnostic-chr: -0.2893
Centroid-sig: N/A
Centroid-so: 28.317 arcsec [132.75σ]
OotOffset-rm: 13.765 arcsec [202.80σ]
KicOffset-rm: 13.750 arcsec [193.89σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 0.00 [0/17]

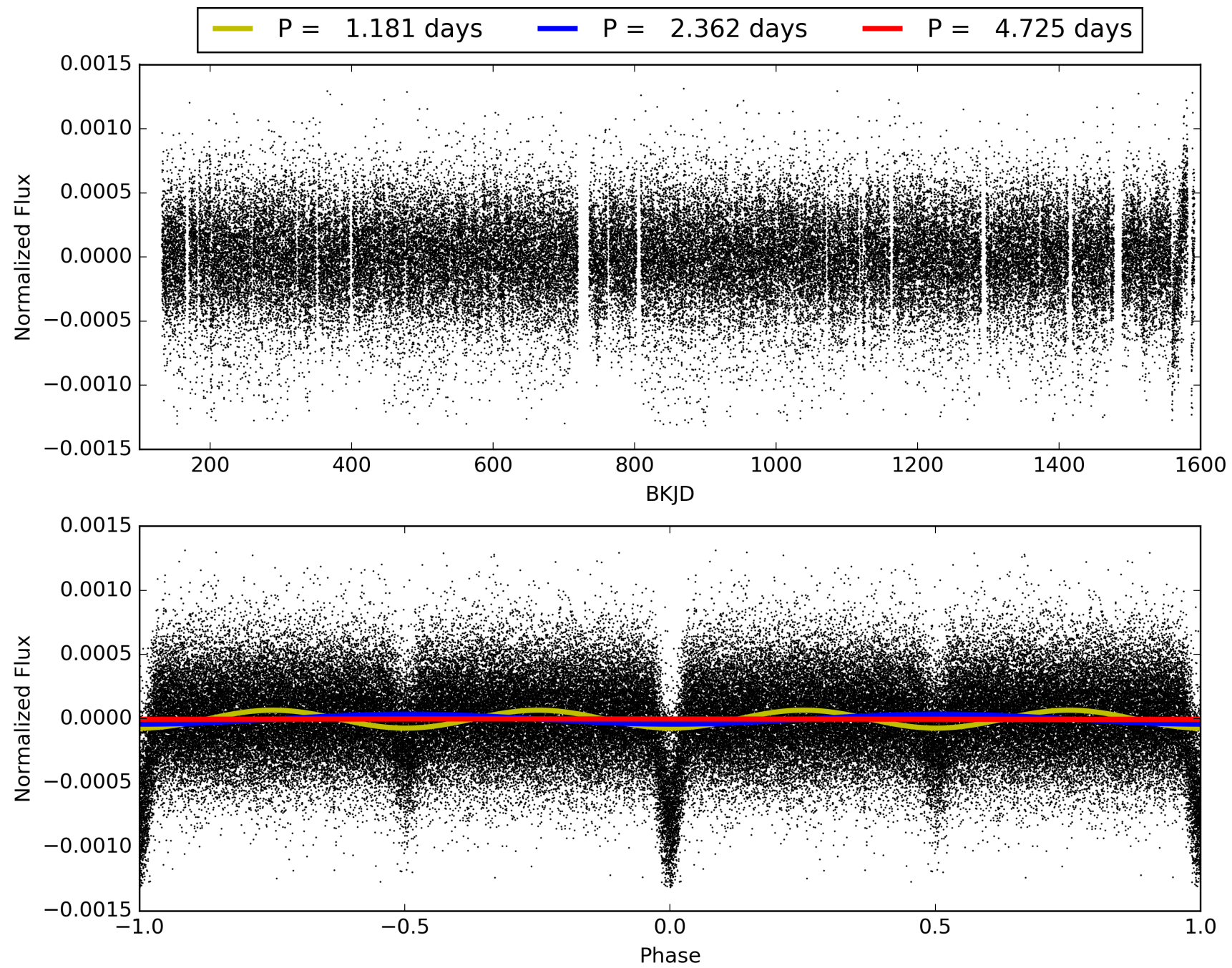
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:04:34 Z

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

TCE 005565261-01, PDC Light Curves

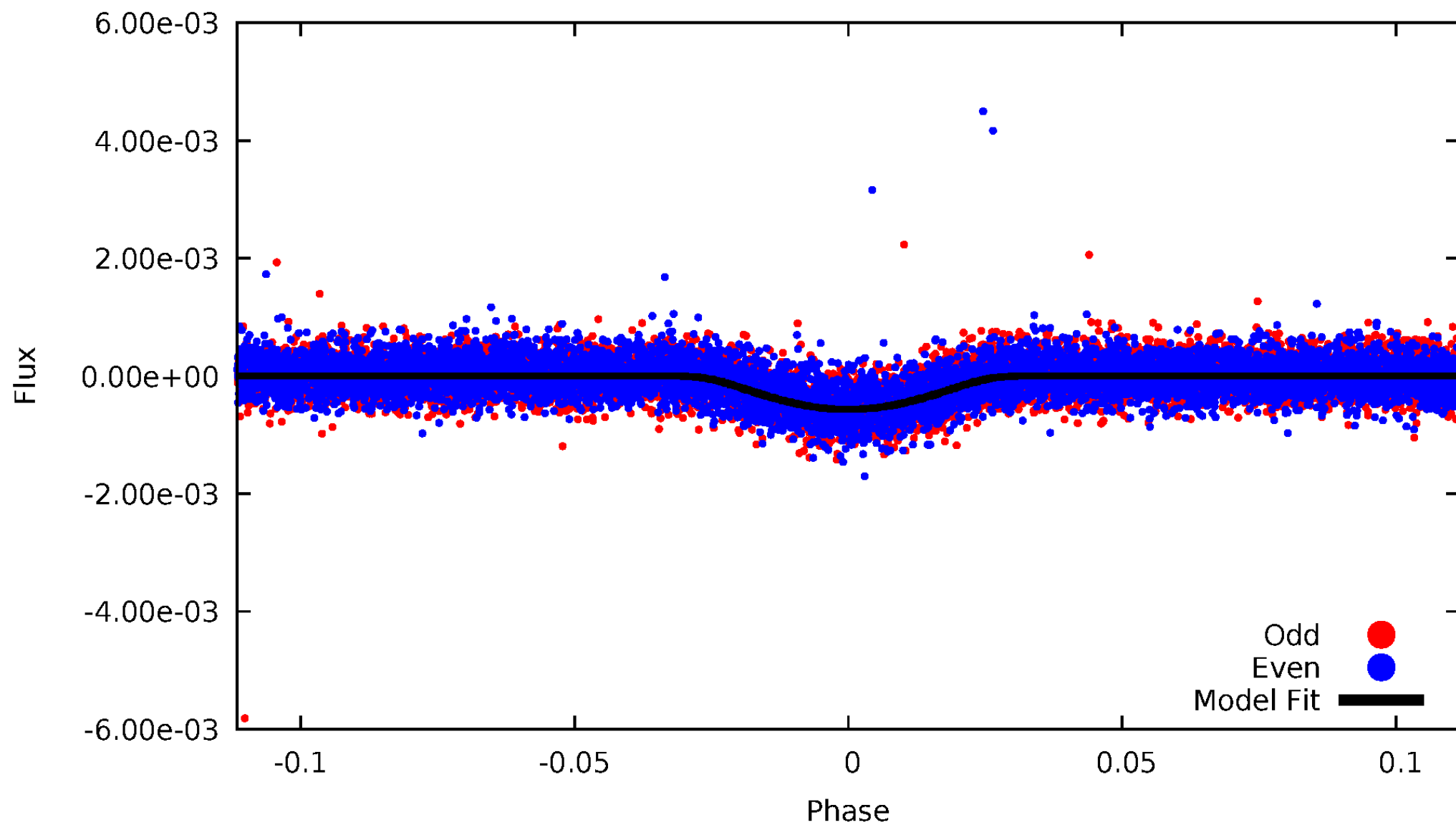


TCE 005565261-01



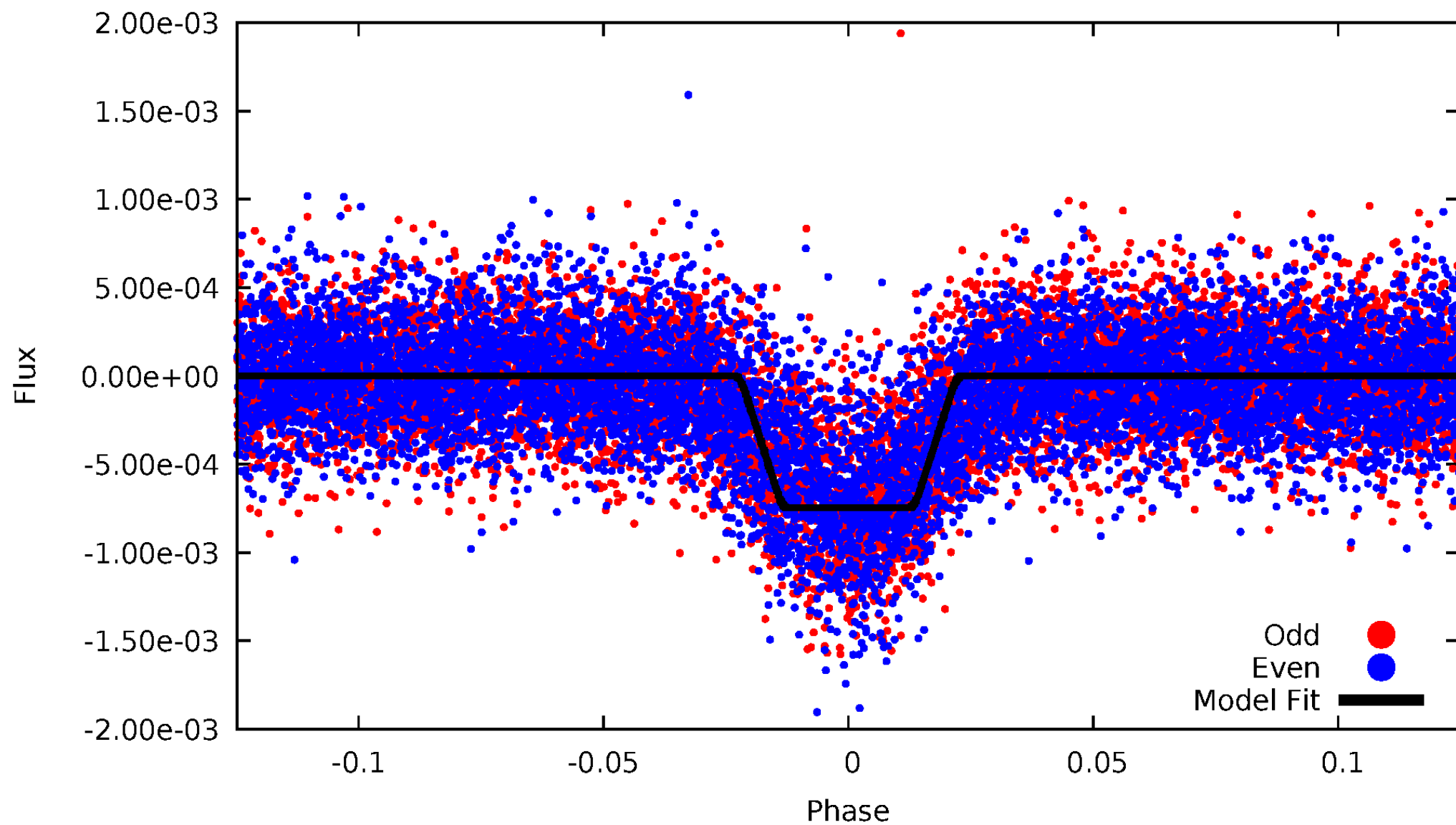
DV Odd/Even

TCE 005565261-01

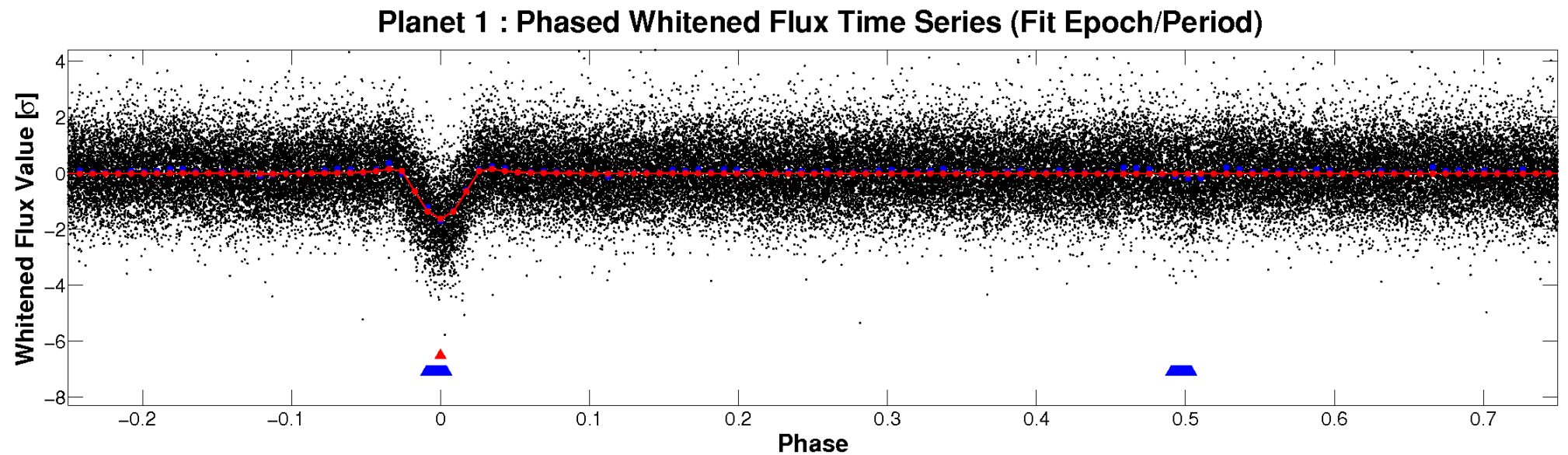
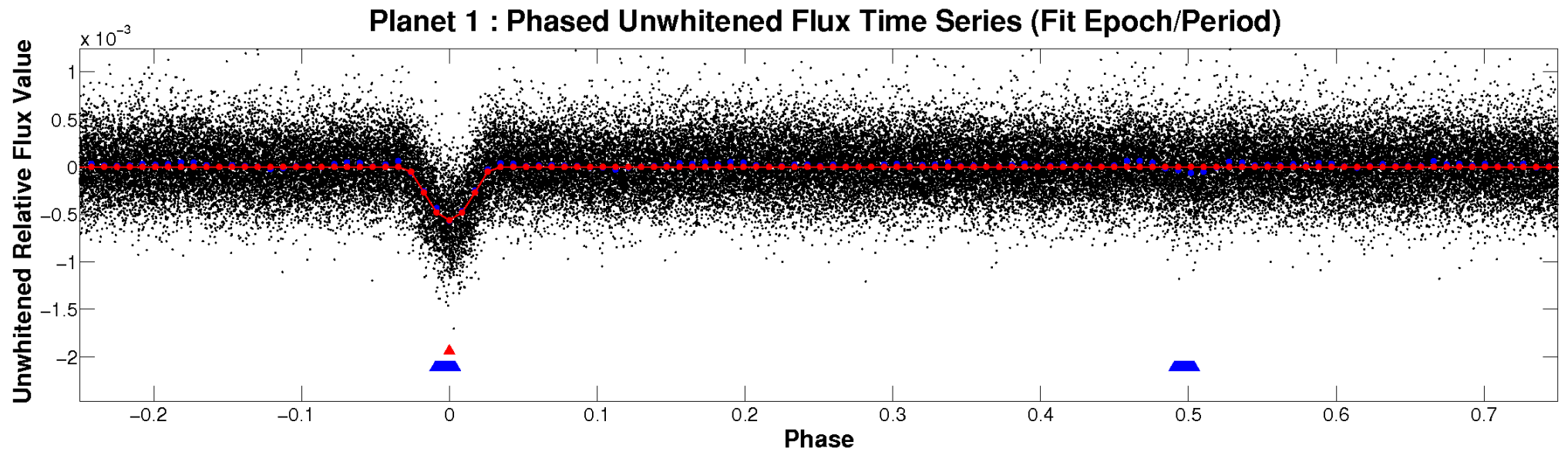


ALT Odd/Even

TCE 005565261-01

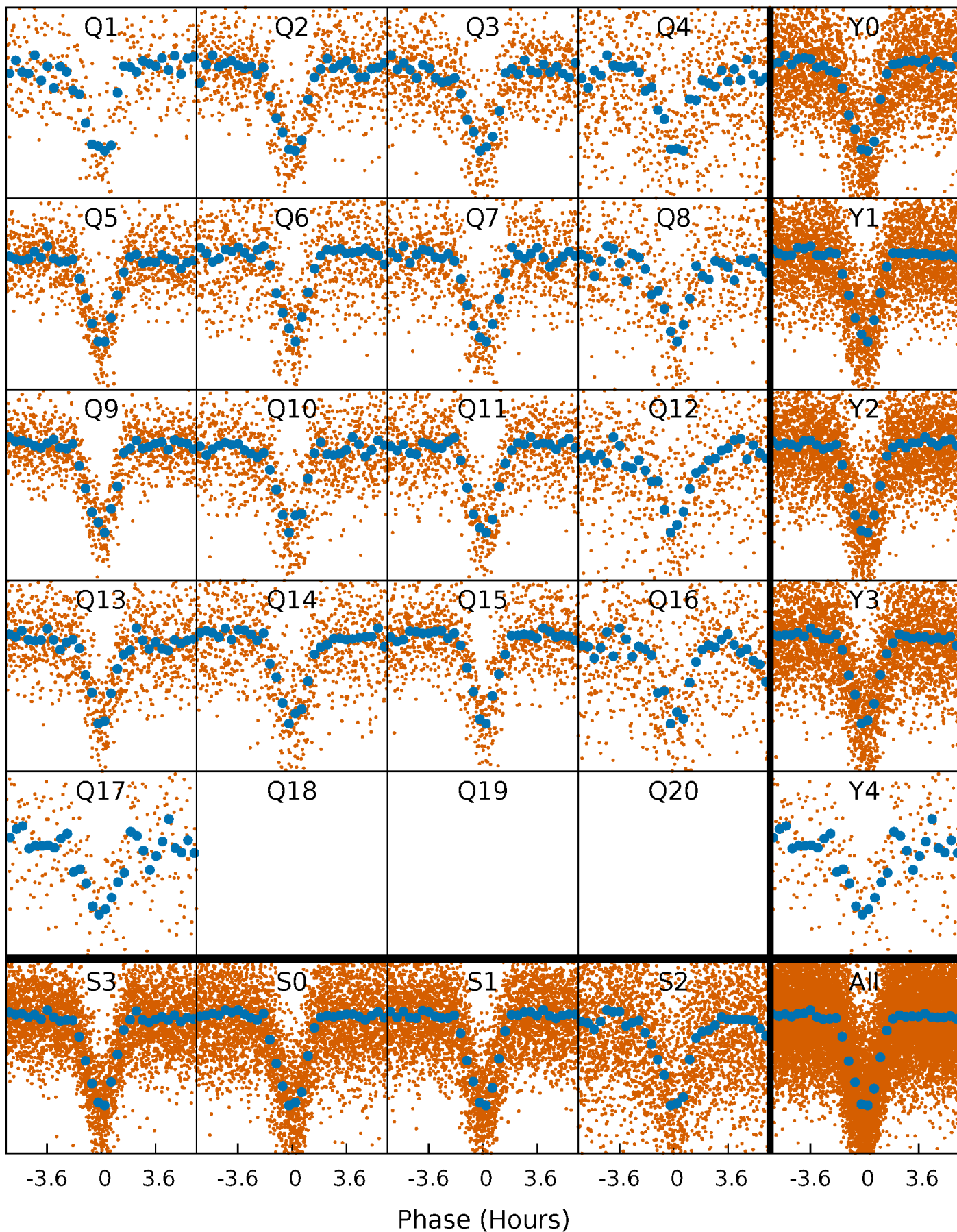


Non-Whitened Vs. Whitened Light Curve



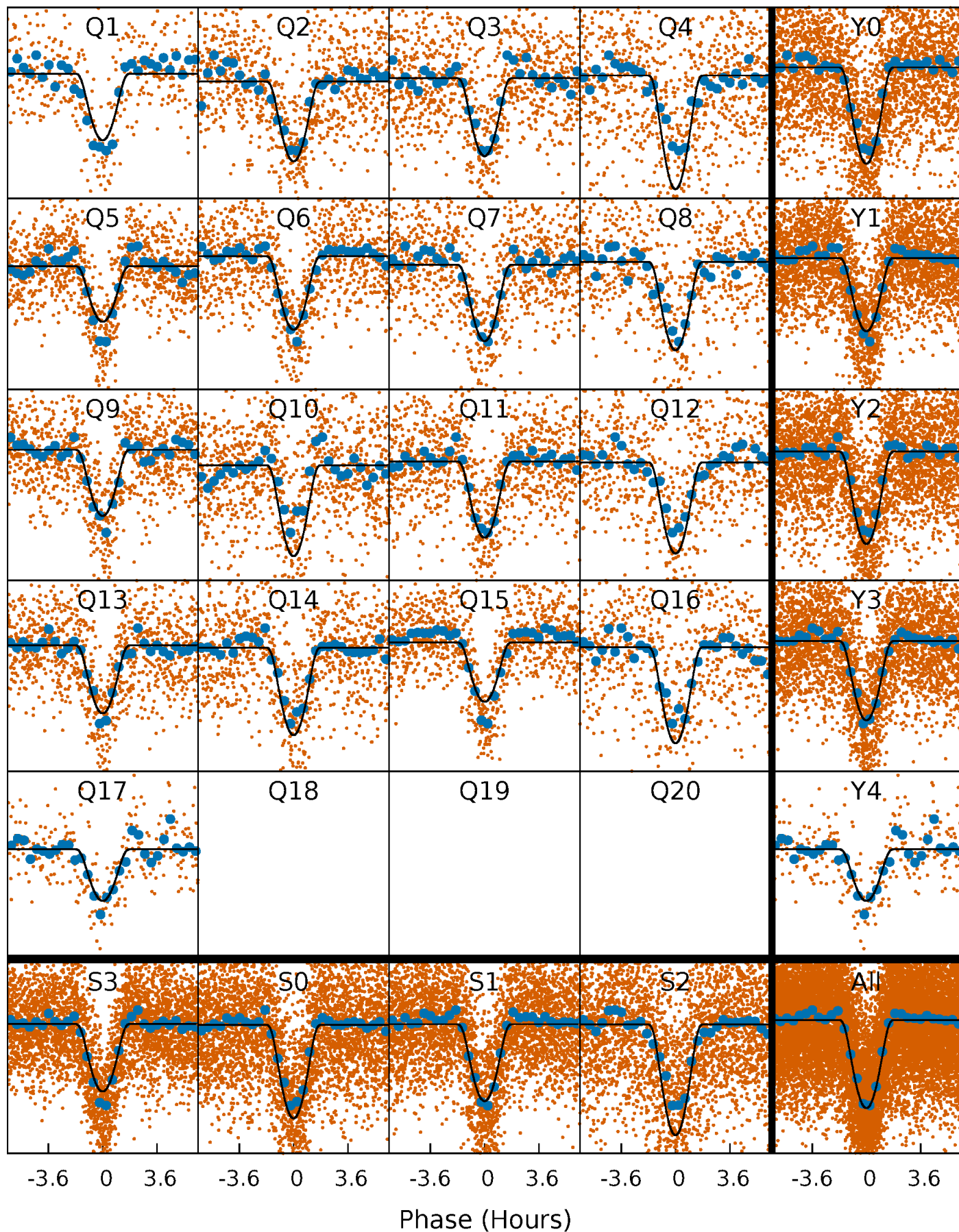
PDC Quarter-Phased Transit Curves

TCE 005565261-01 P= 2.362341 Days $T_0=131.707856$ (BKJD)



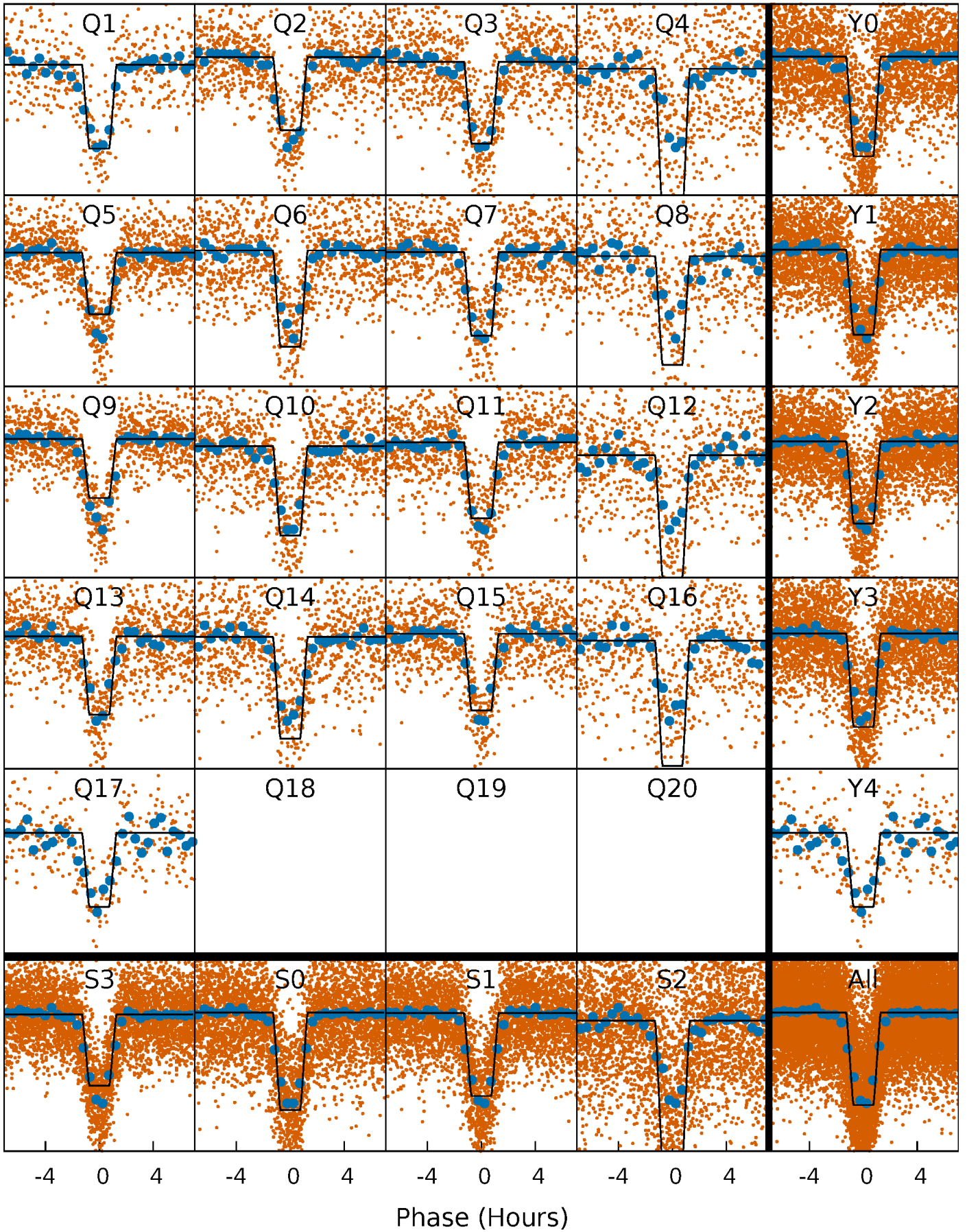
DV Quarter-Phased Transit Curves

TCE 005565261-01 P= 2.362341 Days $T_0=131.707856$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

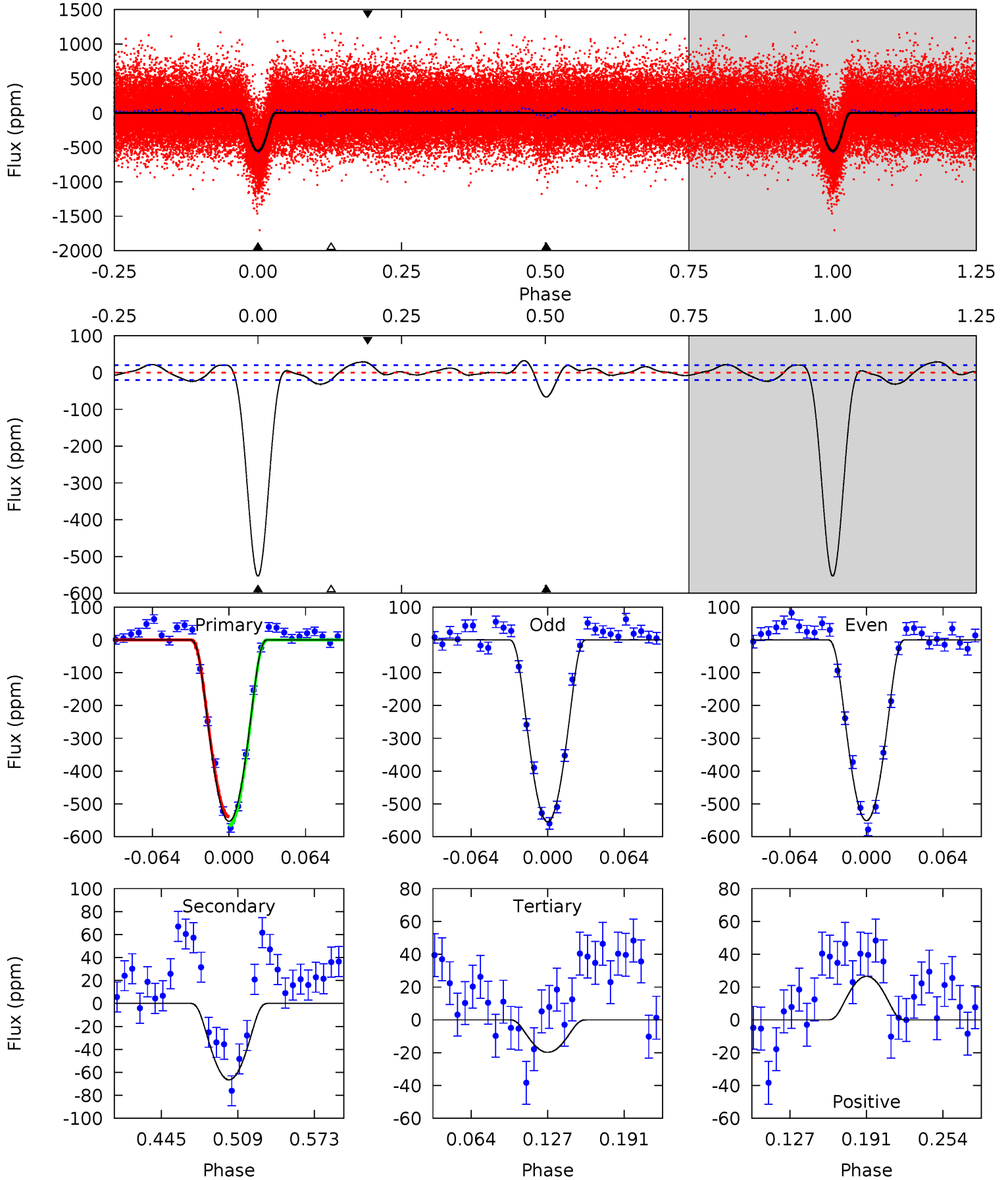
TCE 005565261-01 P= 2.362348 Days $T_0=131.705556$ (BKJD)



DV Model-Shift Uniqueness Test

005565261-01, P = 2.362341 Days, E = 129.345515 Days

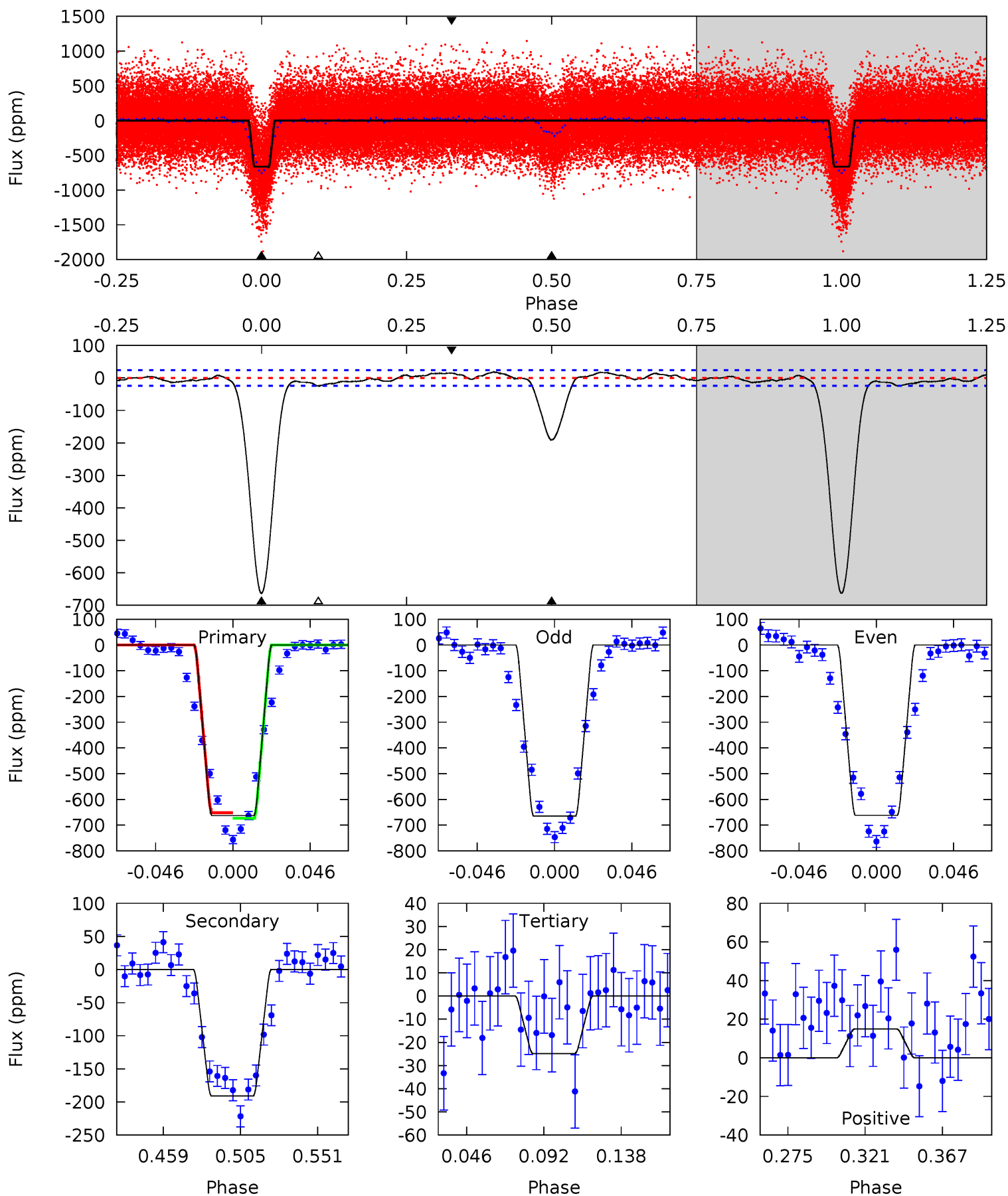
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
126.9	15.3	4.54	6.09	4.66	1.85	2.88	122.4	120.8	10.7	9.16	0.41	0.98	0.06	3.20



Alt Model-Shift Uniqueness Test

005565261-01, P = 2.362348 Days, E = 129.343208 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
130.0	37.4	4.87	2.93	4.73	2.00	1.97	125.2	127.1	32.6	34.5	0.27	0.99	0.03	2.09



Stellar Parameters For KIC 005565261

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5088^{+139}_{-139}	$3.502^{+0.462}_{-0.249}$	$-0.180^{+0.250}_{-0.250}$	$3.293^{+1.186}_{-1.450}$	$1.257^{+0.172}_{-0.343}$	$0.050^{+0.209}_{-0.030}$
	+3%/-3%	+13%/-7%	+139%/-139%	+36%/-44%	+14%/-27%	+422%/-61%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005565261-01 / KOI 5180.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-66 ± 4	$14.22^{+9.97}_{-7.18}$	2895^{+343}_{-352}	-2388^{+5719}_{-572}	$0.243^{+0.753}_{-0.158}$
Alt.	-191 ± 5	$10.08^{+8.71}_{-6.41}$	2916^{+322}_{-366}	3649^{+1912}_{-994}	$1.444^{+9.245}_{-1.037}$

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 $A_{obs} \gg 1.0$

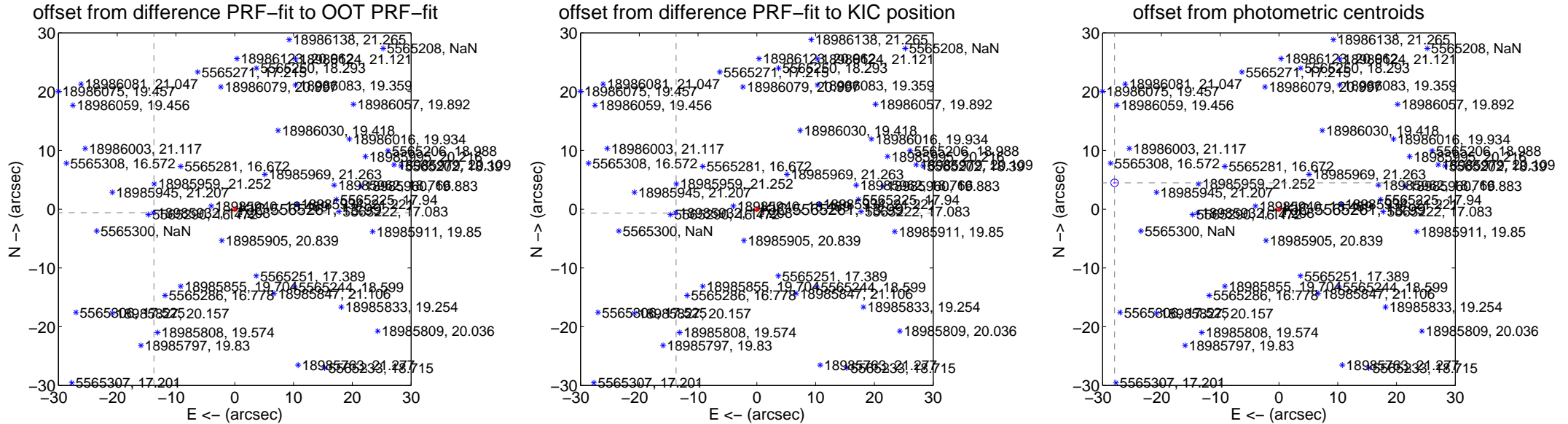
DV Centroid Data

Supplemental centroid analysis for 005565261-01. Kepler magnitude: 13.99. Transit SNR 62.19

There are 9 quarters with good PRF difference image offsets

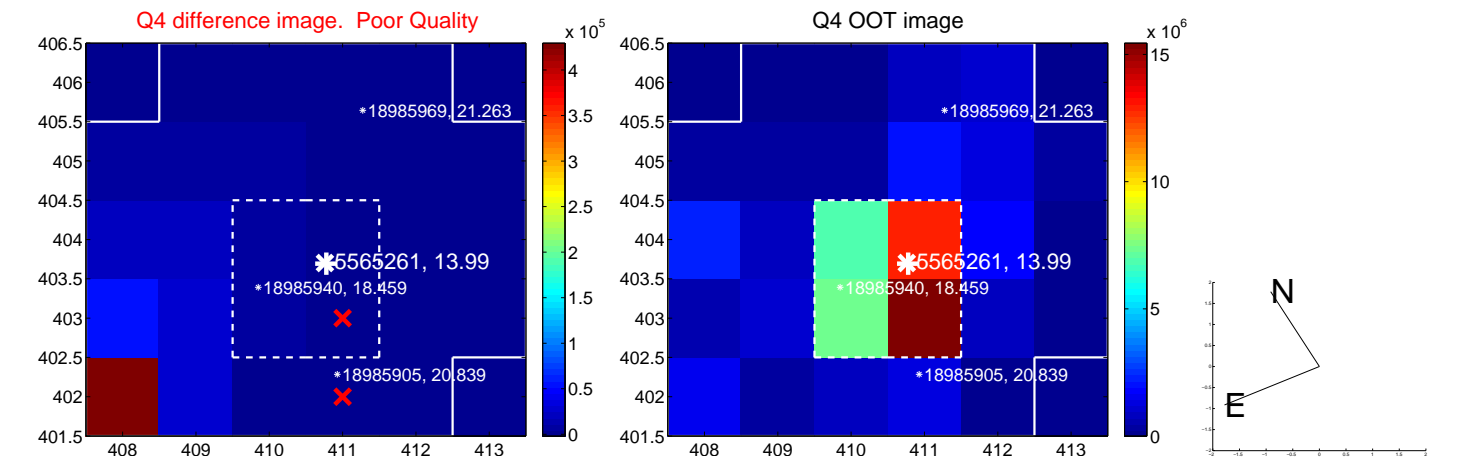
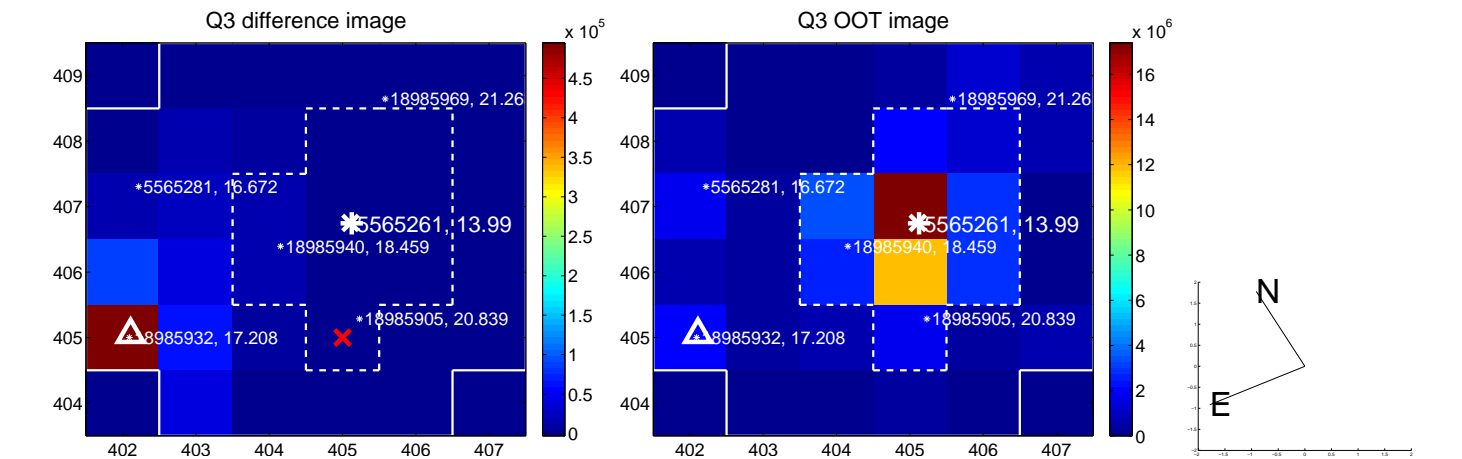
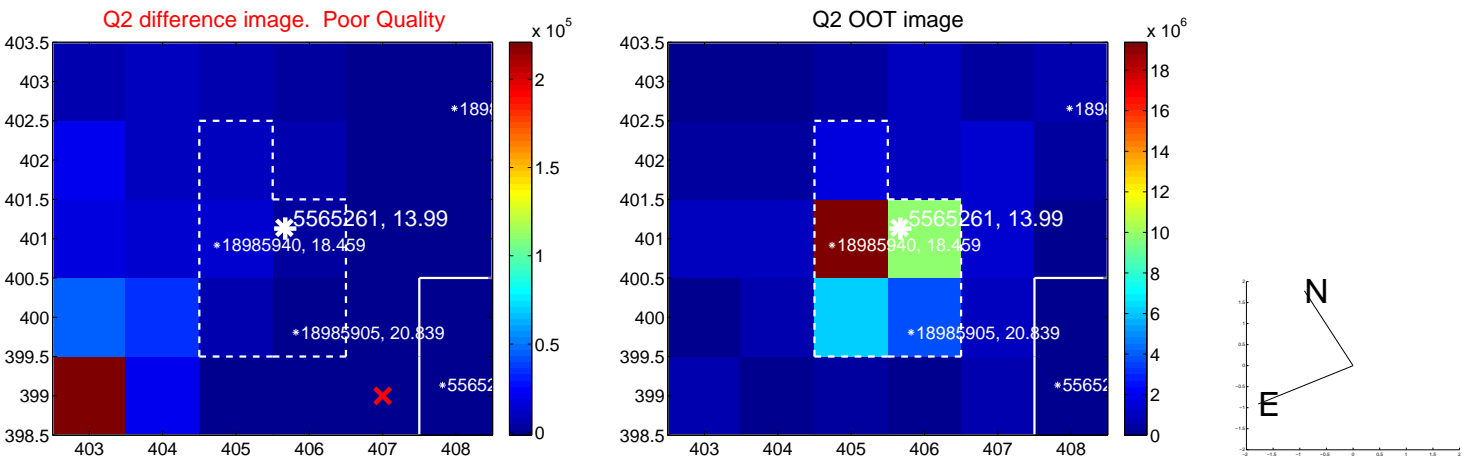
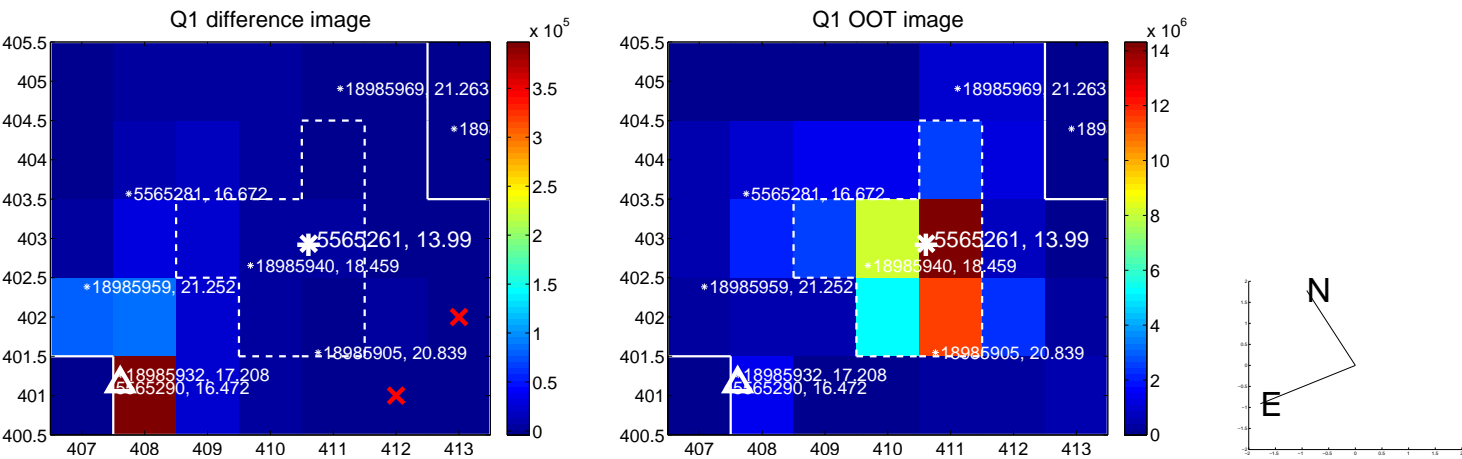
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	13.765 \pm 0.068	202.80	13.751 \pm 0.068	-0.605 \pm 0.075
PRF-fit source offset from KIC position	13.750 \pm 0.071	193.89	13.734 \pm 0.071	-0.660 \pm 0.076
photometric centroid source offset	28.32 \pm 0.21	132.75	27.96 \pm 0.21	4.48 \pm 0.21

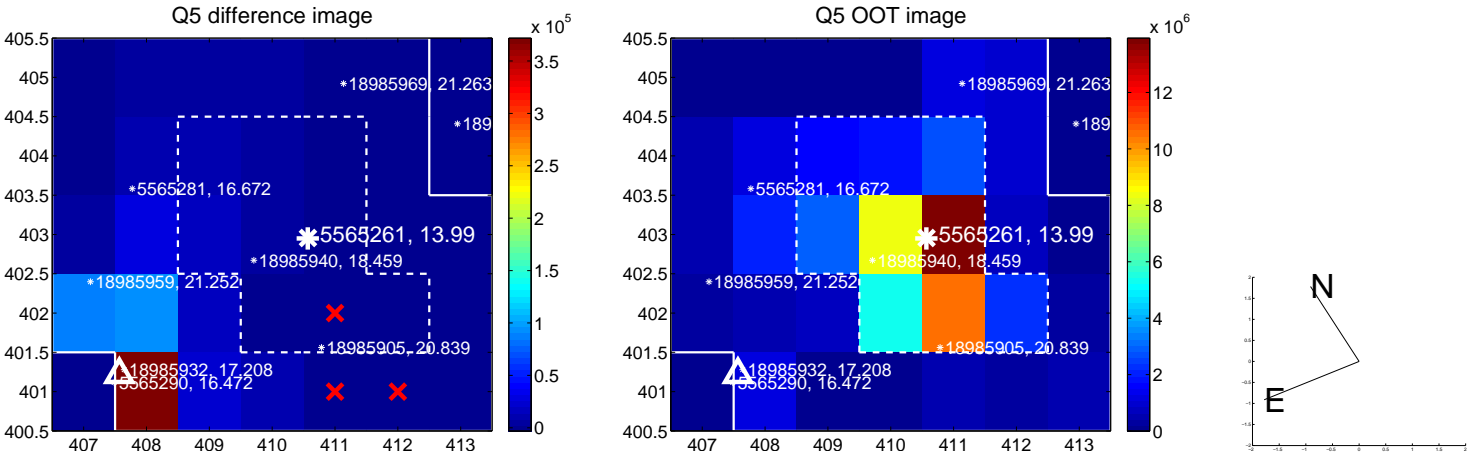


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

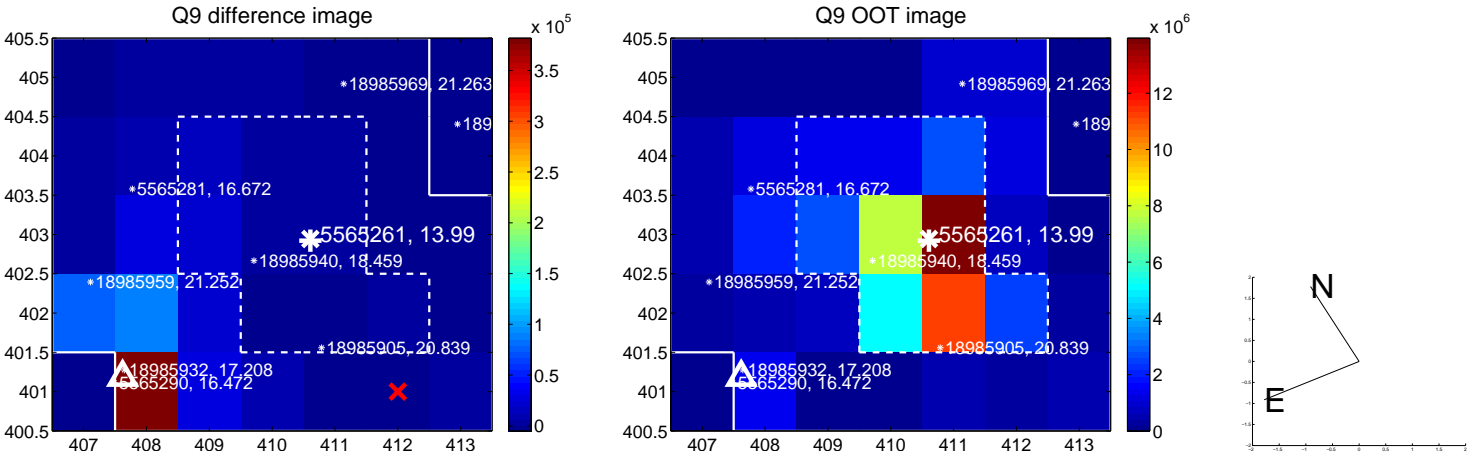
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



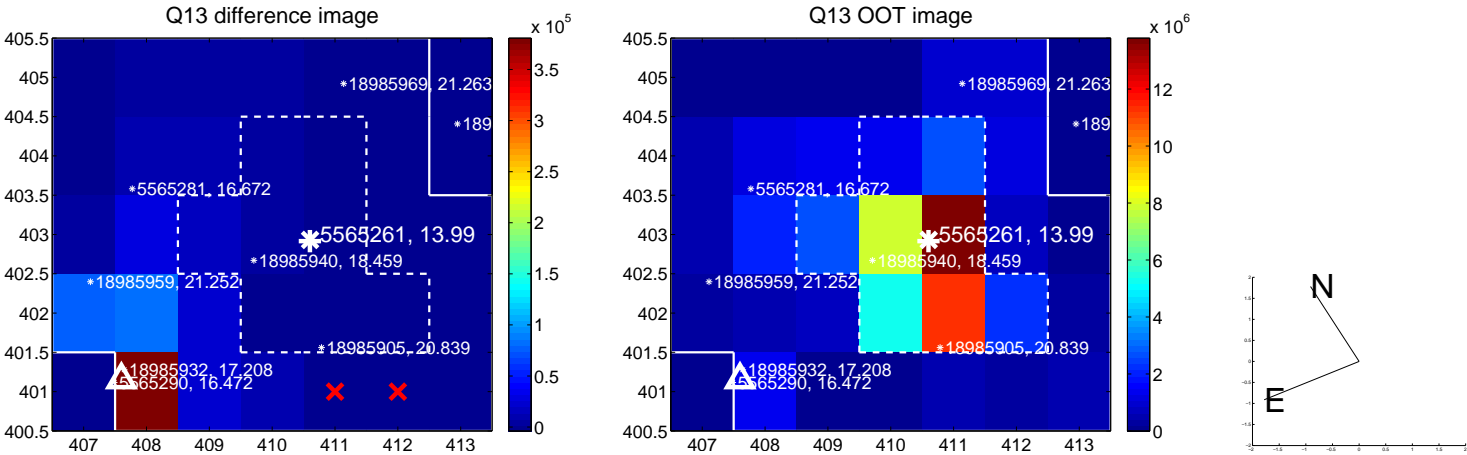
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



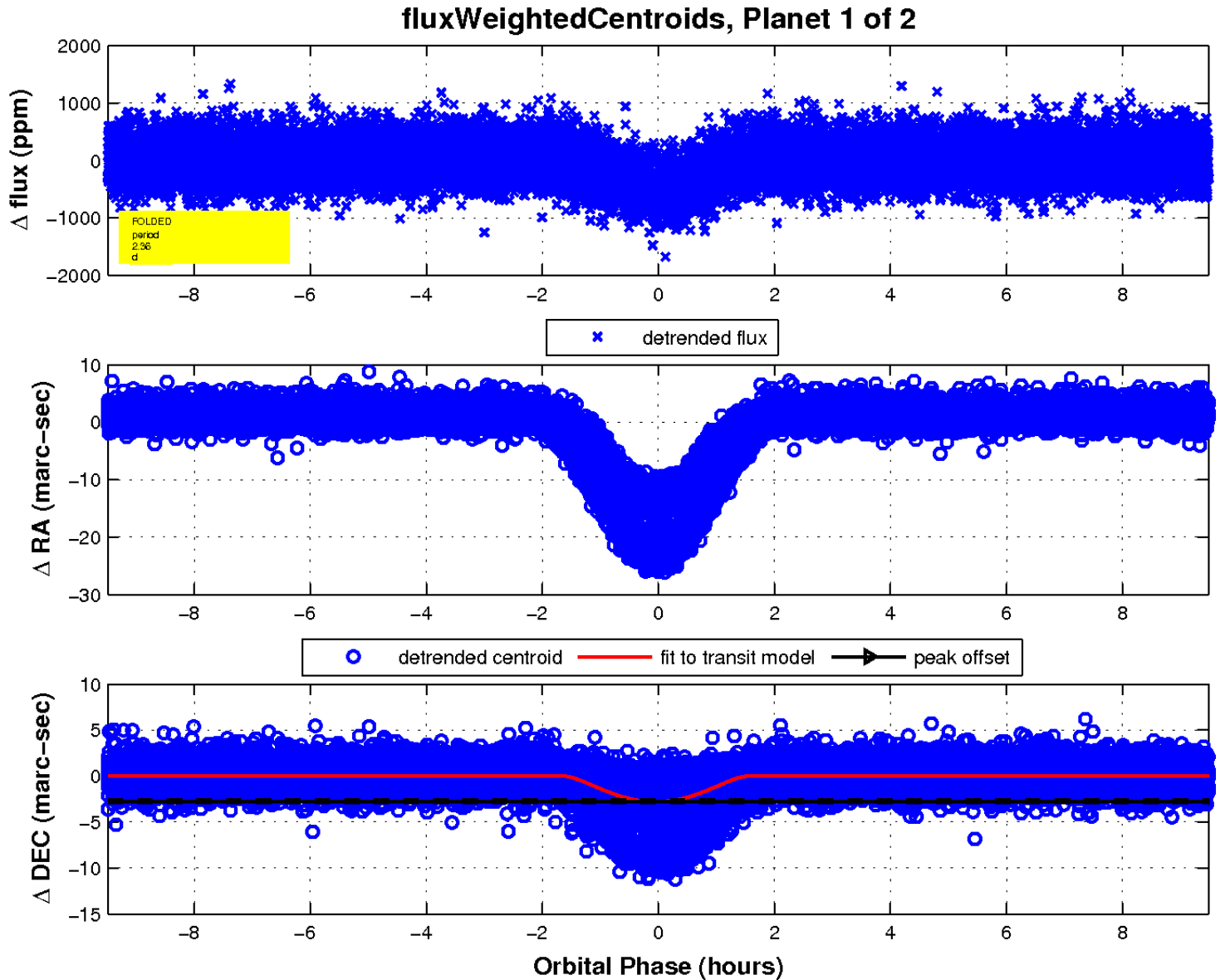
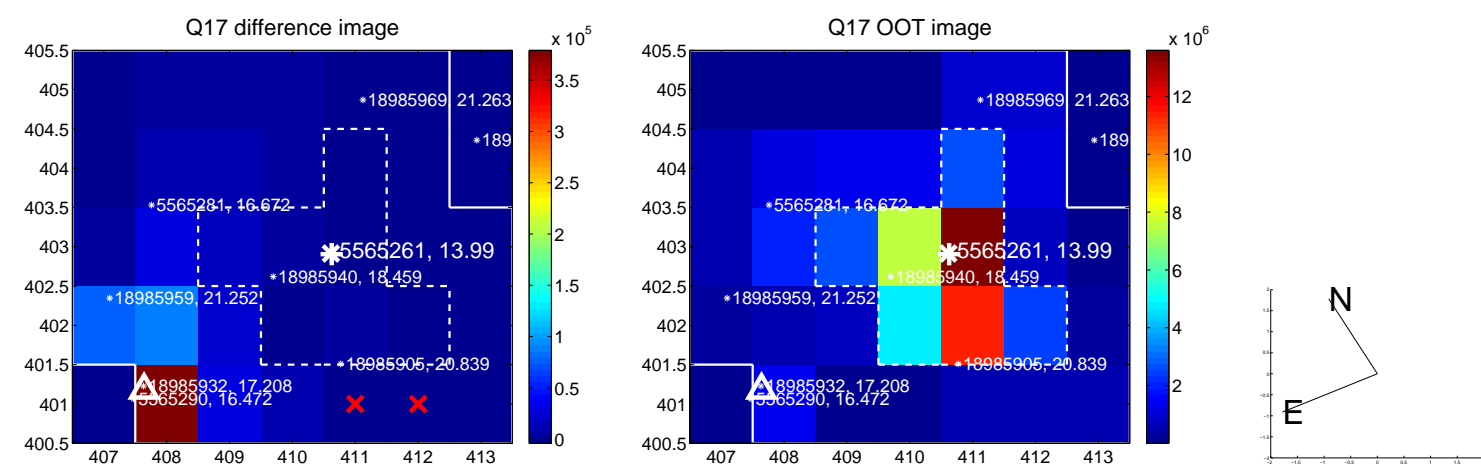
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

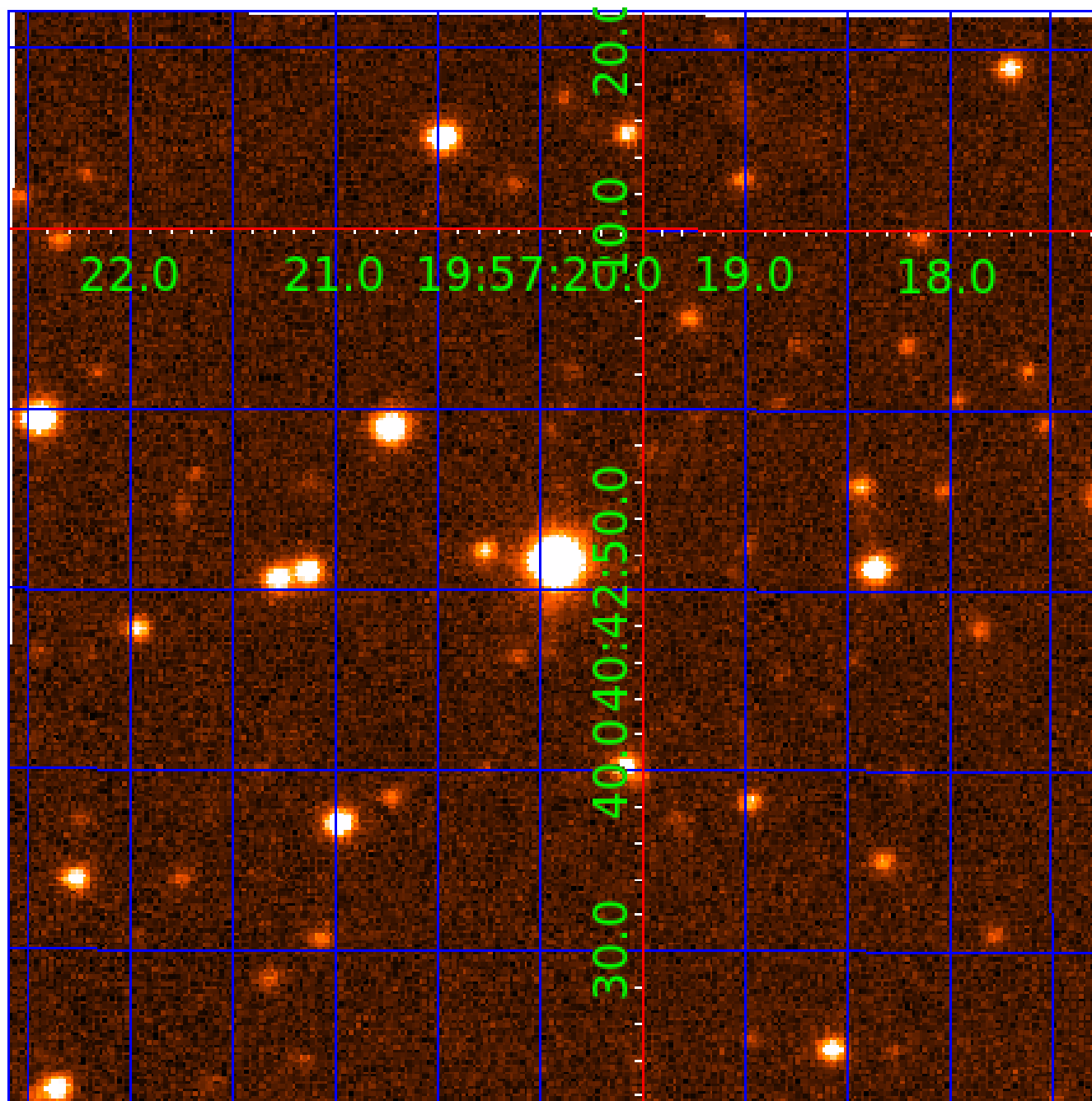


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005565261

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})
005565261-01	OBS	5180.01	2.362341	131.707856	567.2	3.163	54.2	62.2	3.29	5088	15.97	4638.25
005565261-02	OBS	No	1.181145	131.717157	61.3	2.490	9.1	8.2	3.29	5088	3.13	11687.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005565261-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
005565261-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—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 for comment definitions.

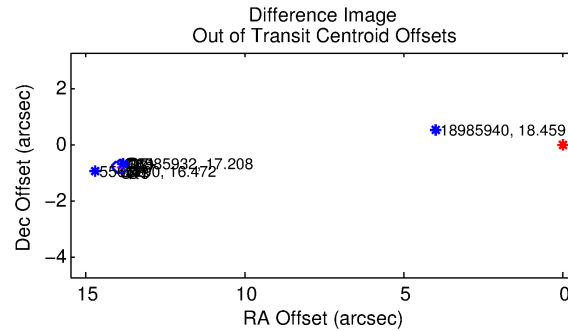
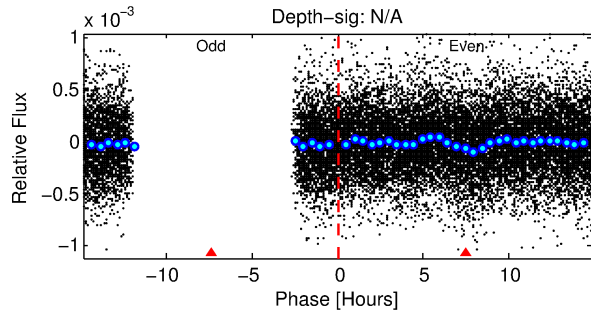
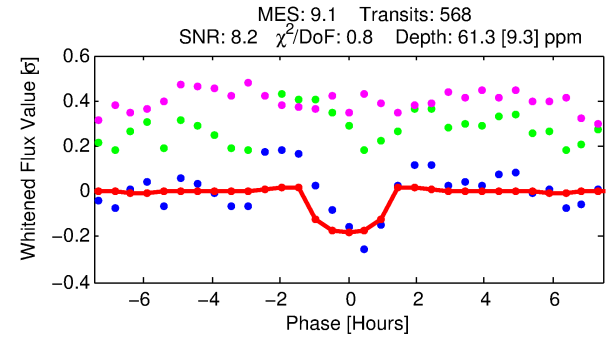
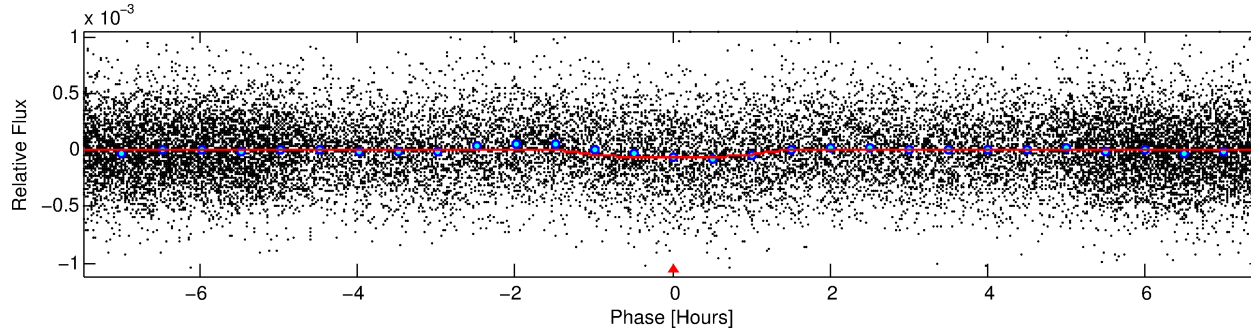
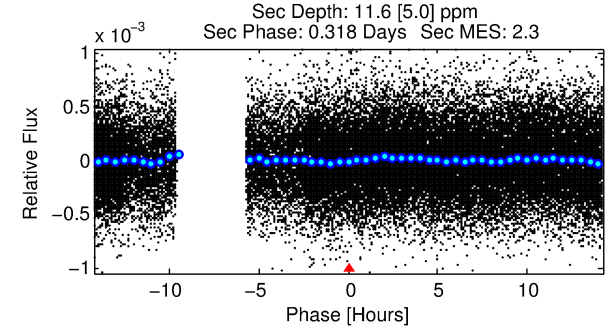
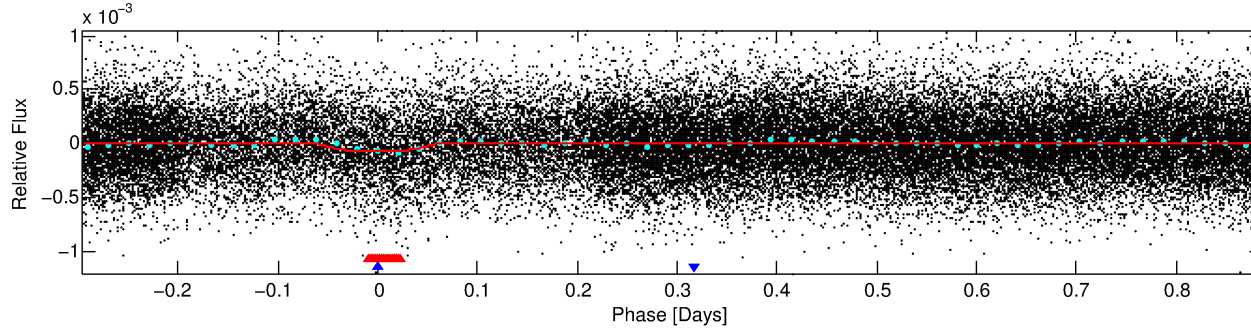
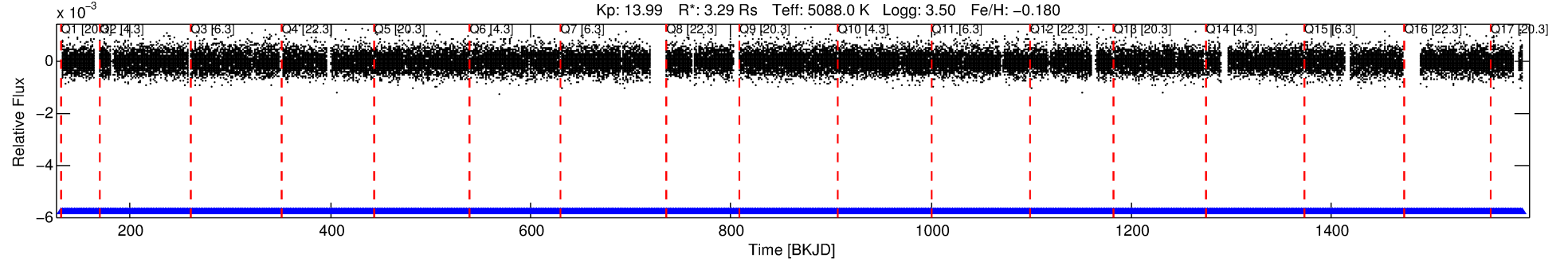
Ephemeris Match Information For 005565261-02

No Significant Match Found

DV One-Page Summary

KIC: 5565261 Candidate: 2 of 2 Period: 1.181 d
KOI: K05180 Corr: No Ephemeris Match

Kp: 13.99 R*: 3.29 Rs Teff: 5088.0 K Logg: 3.50 Fe/H: -0.180



DV Fit Results:

Period = 1.18114 [0.00001] d
Epoch = 131.7172 [0.0035] BKJD
Rp/R* = 0.0087 [0.0068]
a/R* = 1.88 [4.45]
b = 0.90 [0.70]
Seff = 11687.99 [9061.57]
Teff = 2651 [514] K
Rp = 3.13 [2.81] Re
a = 0.0236 [0.0109] AU
Ag = 0.36 [0.65] [-0.98σ]
Teffp = 3181 [1292] K [0.38σ]

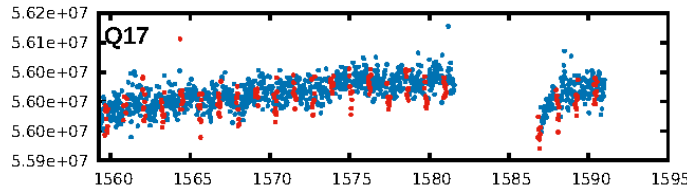
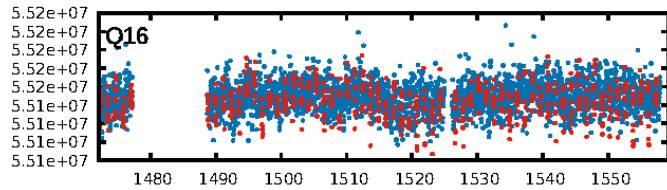
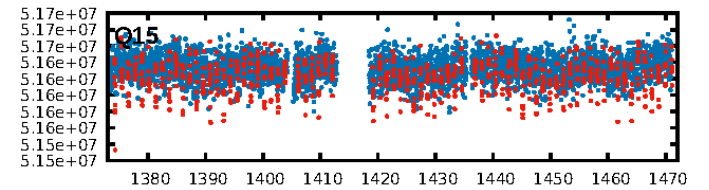
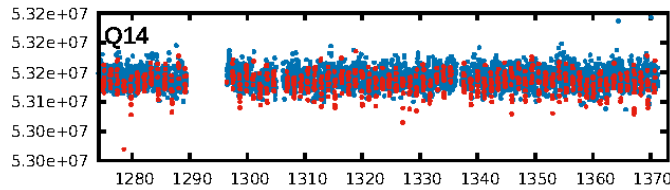
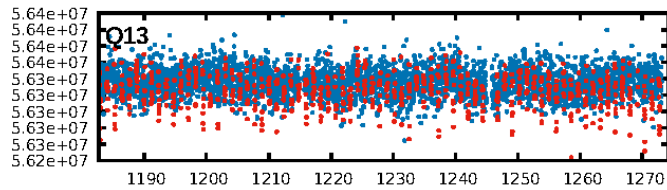
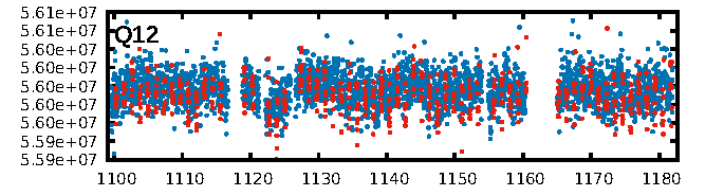
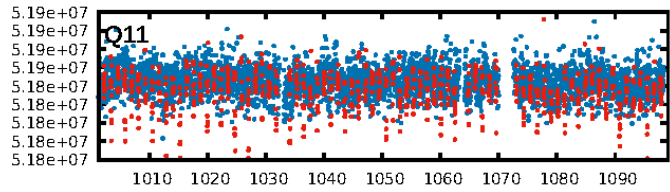
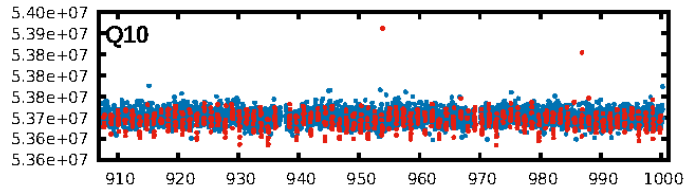
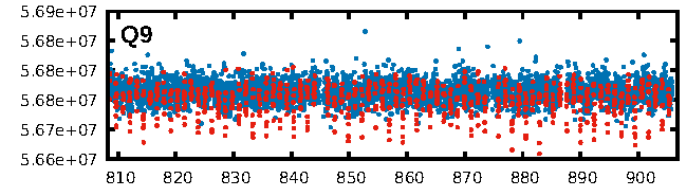
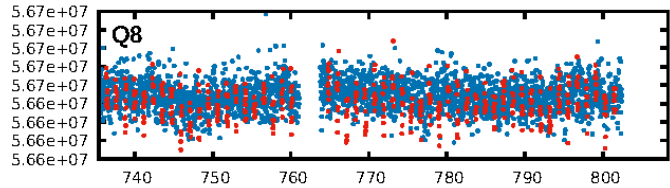
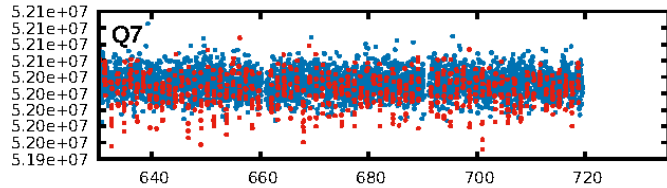
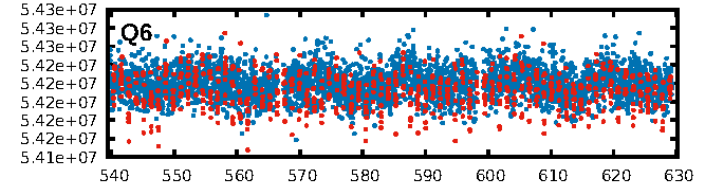
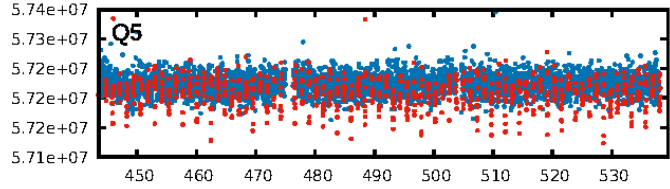
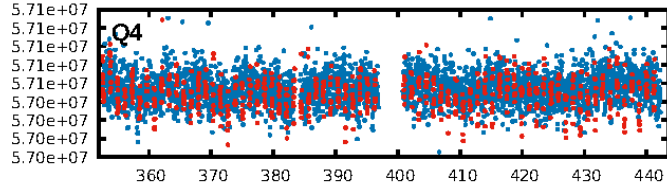
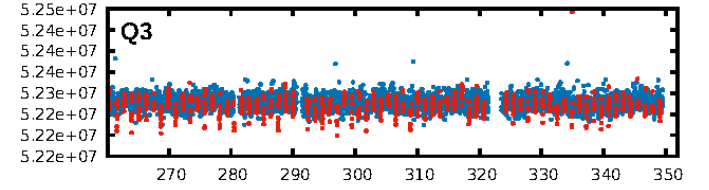
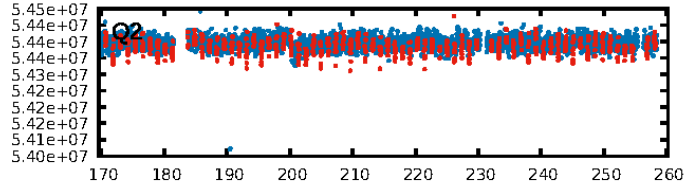
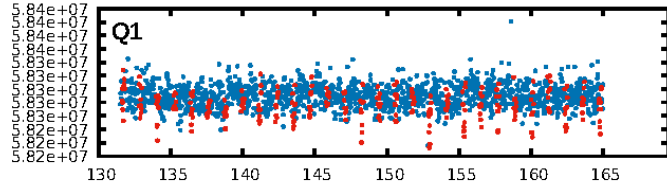
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [7.04σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.52e-17
RollingBand-fgt: 1.00 [542/542]
GhostDiagnostic-chr: -0.2071
Centroid-sig: N/A
Centroid-so: 30.324 arcsec [25.26σ]
OotOffset-rm: 13.961 arcsec [186.22σ]
KicOffset-rm: 13.956 arcsec [170.95σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

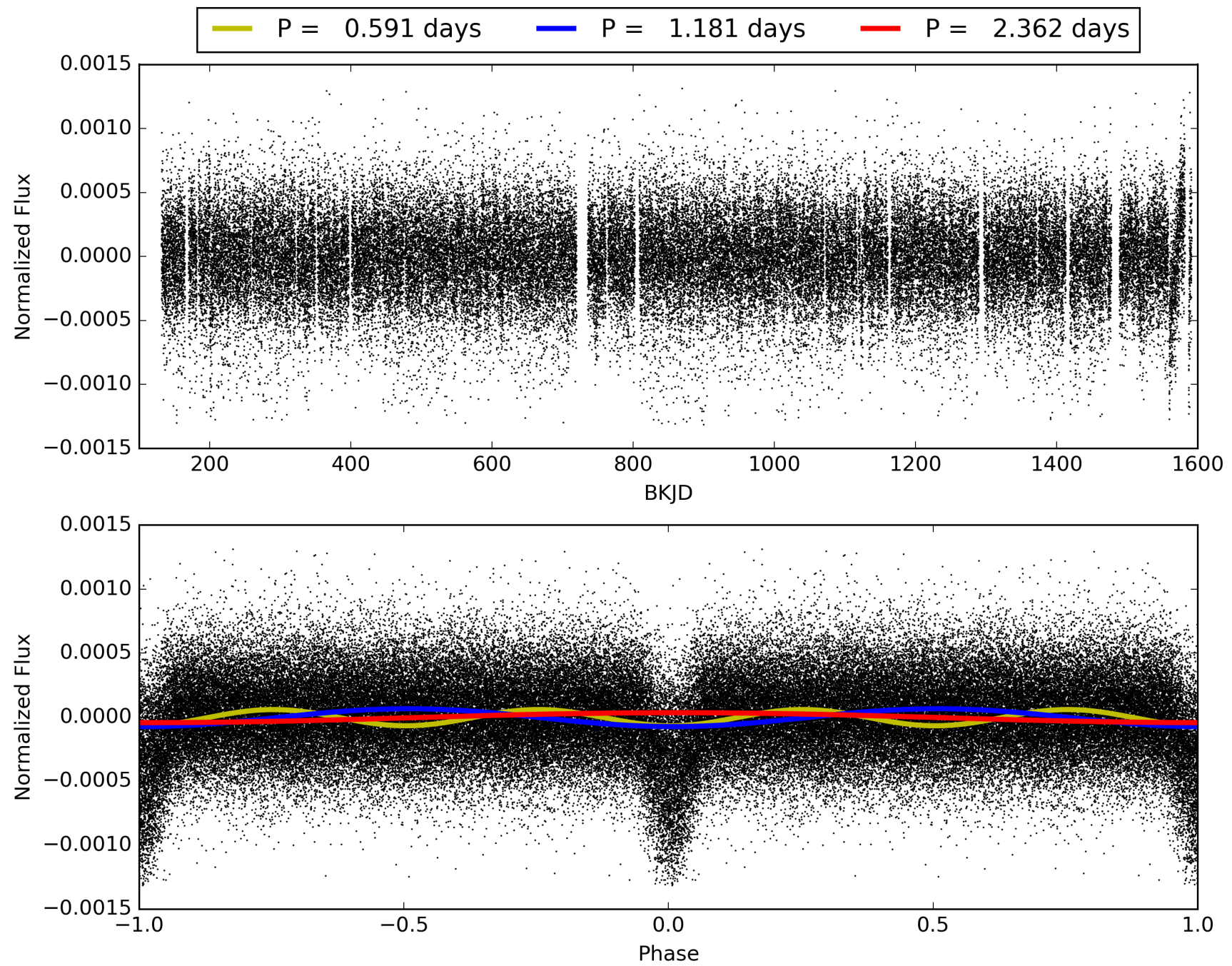
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005565261-02, PDC Light Curves

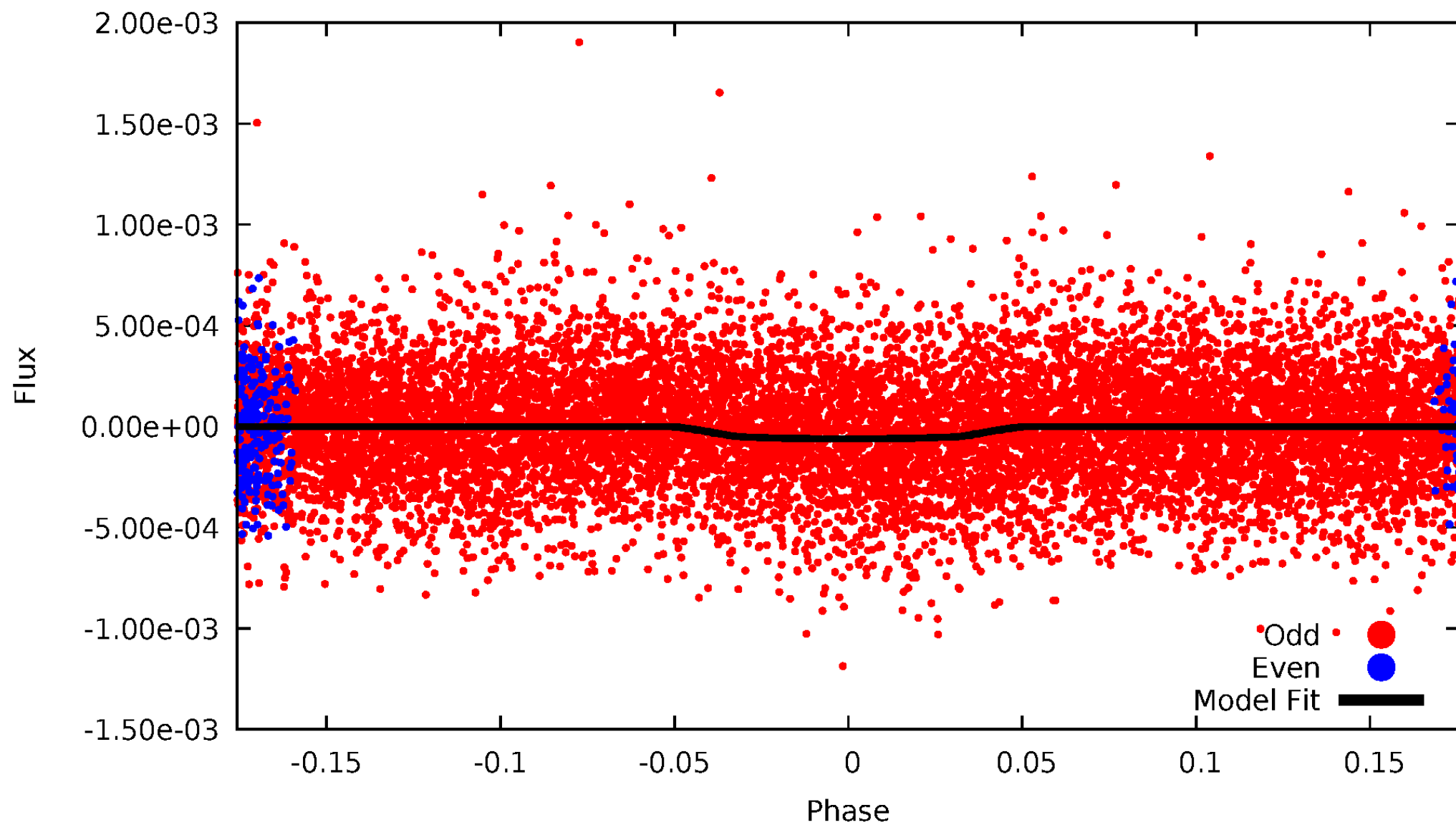


TCE 005565261-02



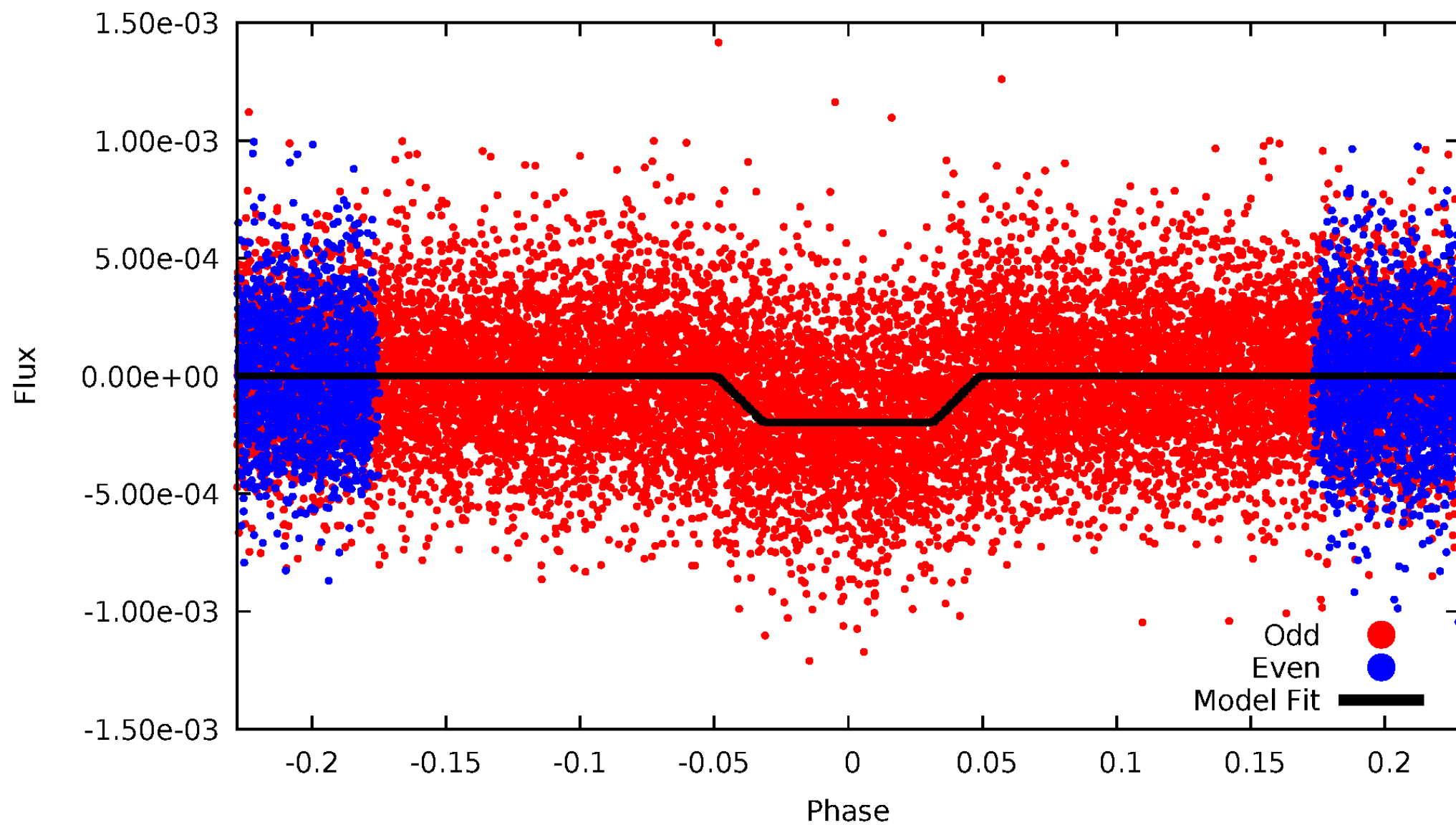
DV Odd/Even

TCE 005565261-02



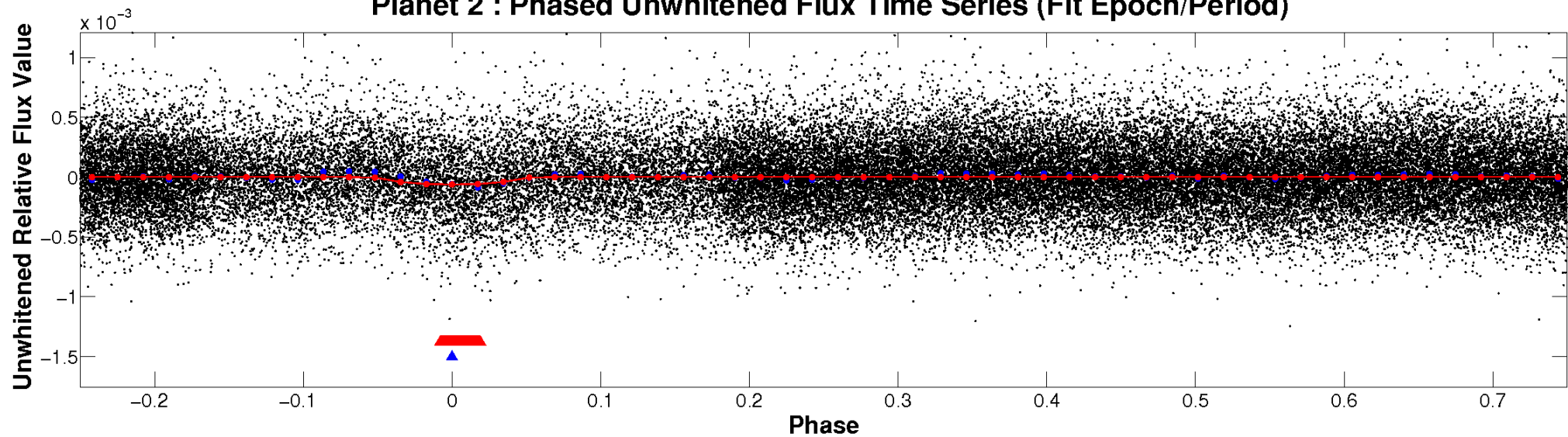
ALT Odd/Even

TCE 005565261-02

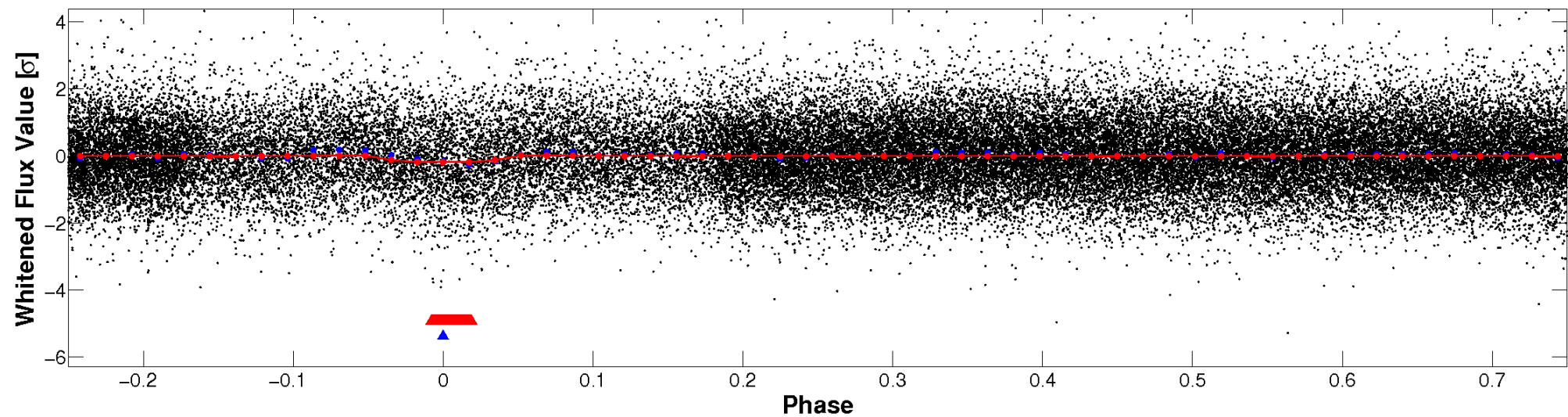


Non-Whitened Vs. Whitened Light Curve

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

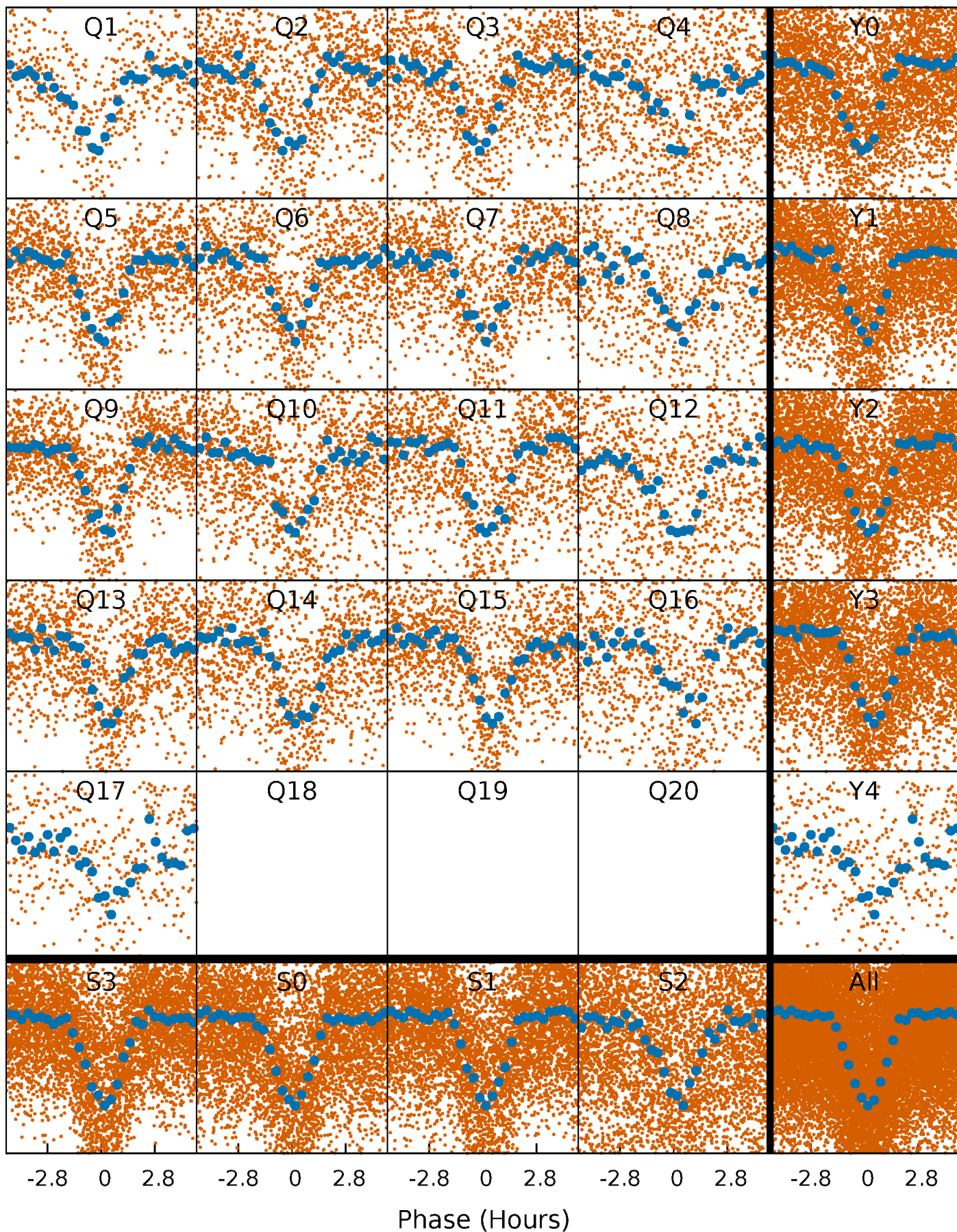


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



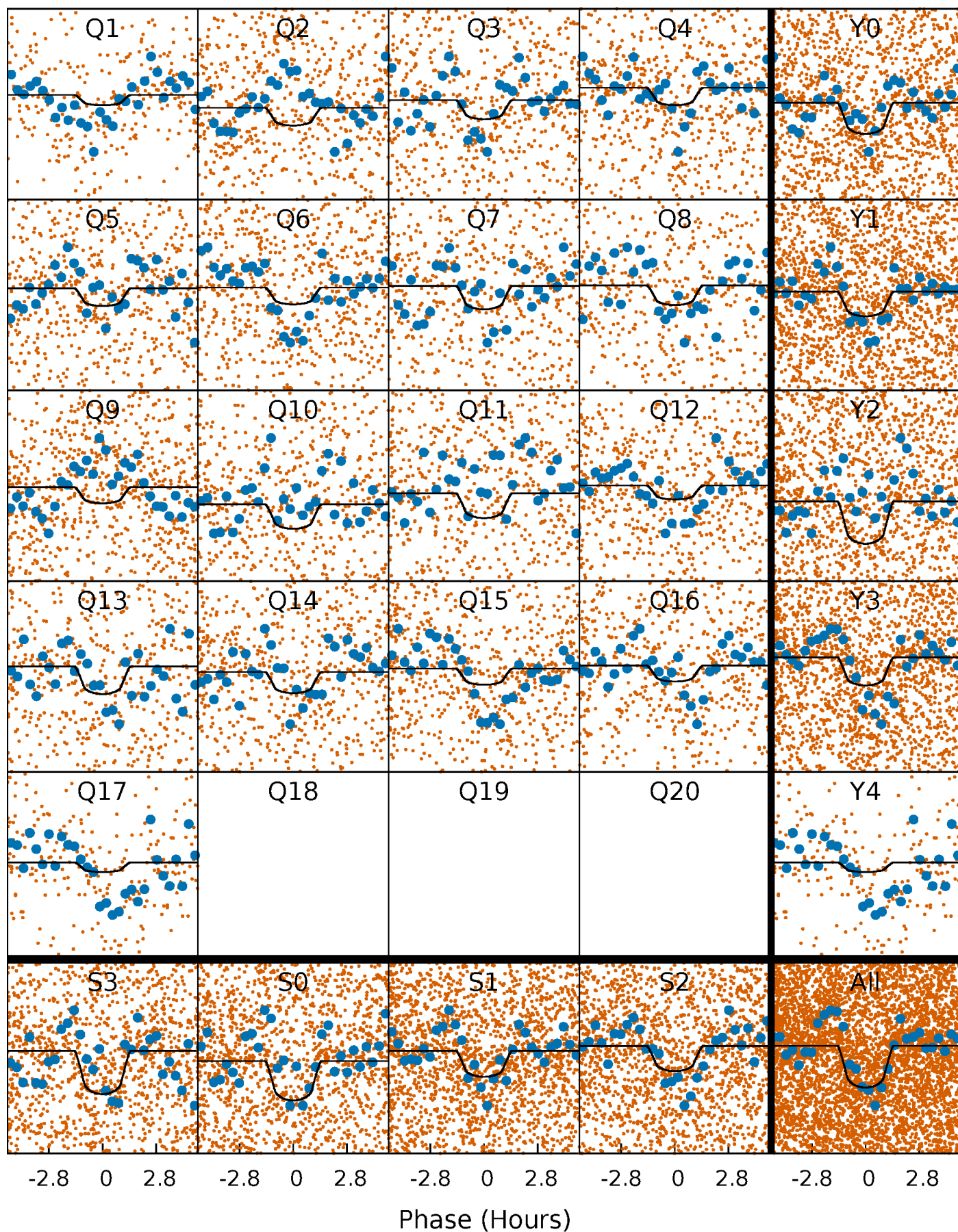
PDC Quarter-Phased Transit Curves

TCE 005565261-02 P= 1.181145 Days $T_0=131.717157$ (BKJD)



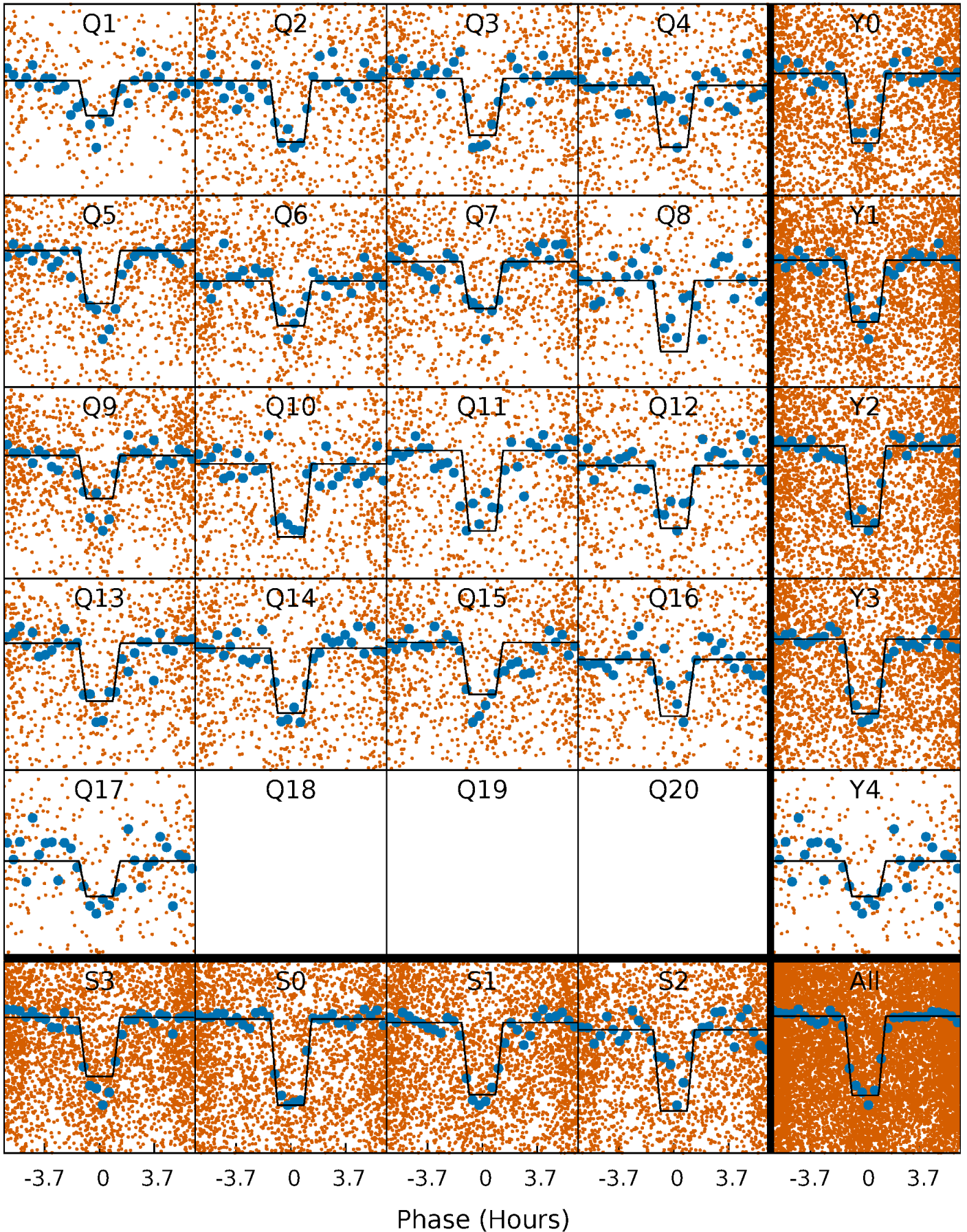
DV Quarter-Phased Transit Curves

TCE 005565261-02 P= 1.181145 Days $T_0=131.717157$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

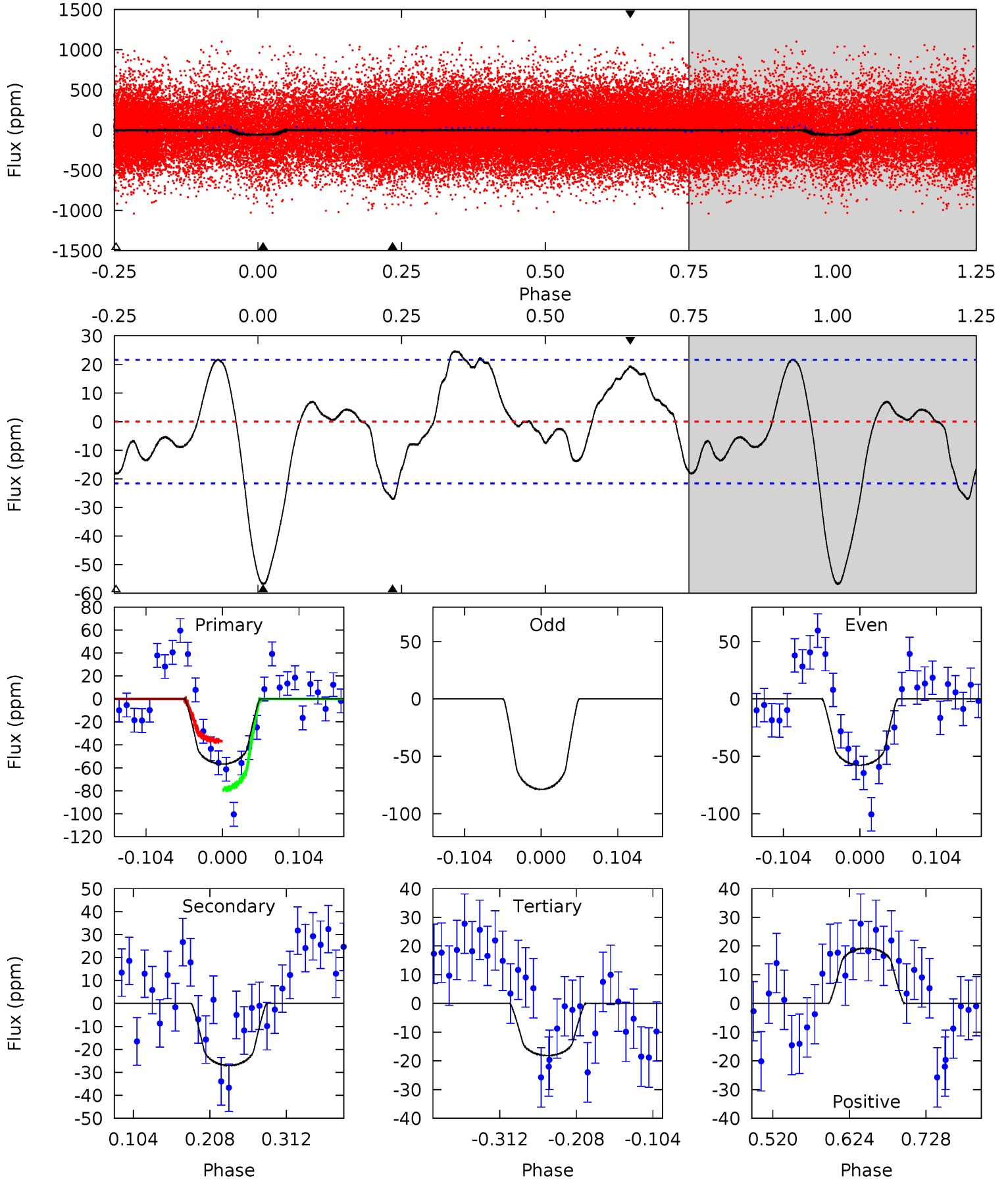
TCE 005565261-02 P= 1.181175 Days $T_0=131.706097$ (BKJD)



DV Model-Shift Uniqueness Test

005565261-02, P = 1.181145 Days, E = 131.717157 Days

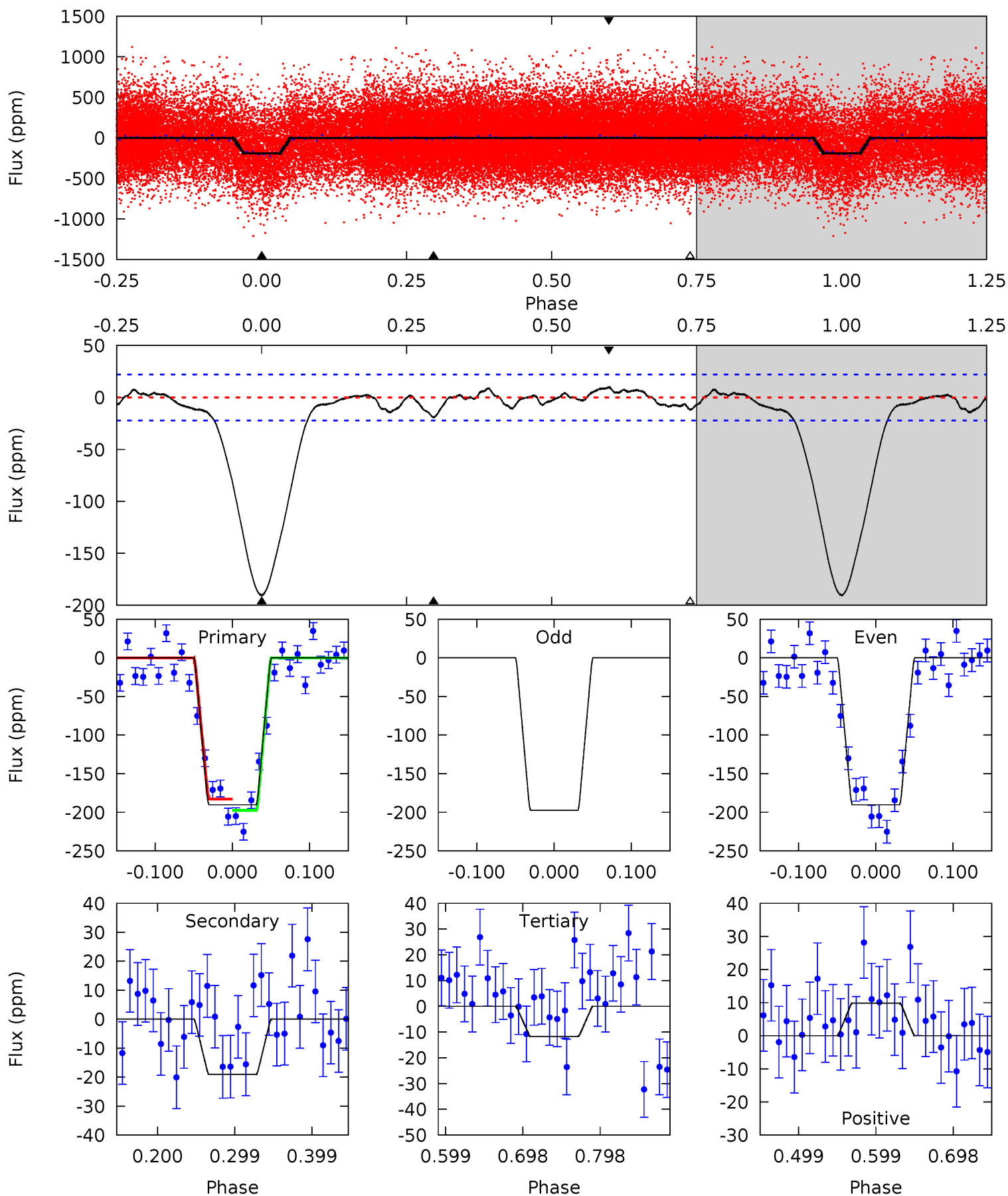
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	5.70	3.83	4.06	4.56	1.63	2.52	8.12	7.89	1.87	1.64	2.55	1.00	0.30	4.42



Alt Model-Shift Uniqueness Test

005565261-02, P = 1.181175 Days, E = 131.706097 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.3	3.94	2.43	2.04	4.57	1.65	1.14	36.9	37.3	1.51	1.90	0.86	1.02	0.05	1.51



Stellar Parameters For KIC 005565261

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5088^{+139}_{-139}	$3.502^{+0.462}_{-0.249}$	$-0.180^{+0.250}_{-0.250}$	$3.293^{+1.186}_{-1.450}$	$1.257^{+0.172}_{-0.343}$	$0.050^{+0.209}_{-0.030}$
	+3%/-3%	+13%/-7%	+139%/-139%	+36%/-44%	+14%/-27%	+422%/-61%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005565261-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 5	$3.33^{+2.47}_{-2.05}$	3683^{+408}_{-451}	3605^{+2023}_{-6416}	$0.754^{+4.027}_{-0.523}$
Alt.	-19 ± 5	$4.78^{+3.02}_{-2.53}$	3632^{+405}_{-475}	-2601^{+6380}_{-766}	$0.251^{+0.821}_{-0.158}$

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

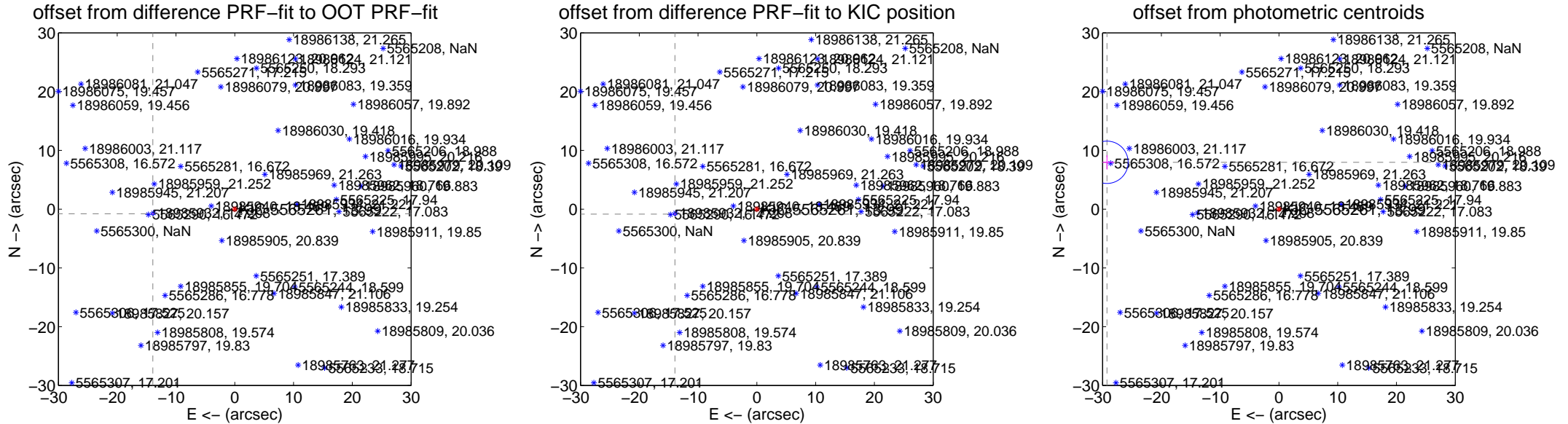
DV Centroid Data

Supplemental centroid analysis for 005565261-02. Kepler magnitude: 13.99. Transit SNR 8.16

There are 9 quarters with good PRF difference image offsets

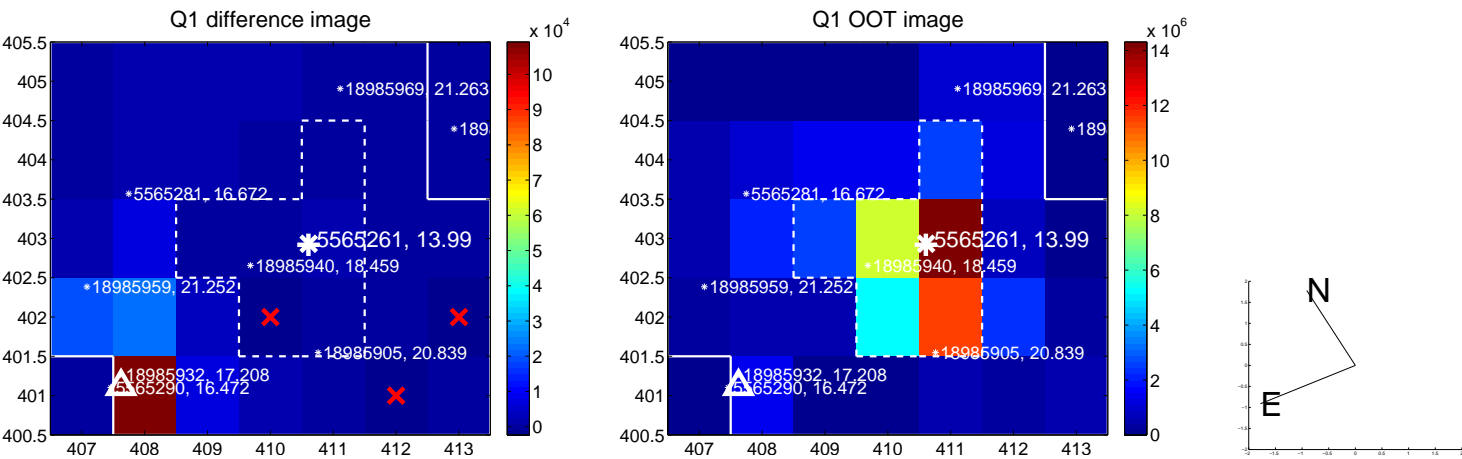
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	13.961 \pm 0.075	186.22	13.938 \pm 0.075	-0.787 \pm 0.083
PRF-fit source offset from KIC position	13.956 \pm 0.082	170.95	13.931 \pm 0.082	-0.839 \pm 0.082
photometric centroid source offset	30.32 \pm 1.20	25.26	29.26 \pm 1.20	7.98 \pm 1.21

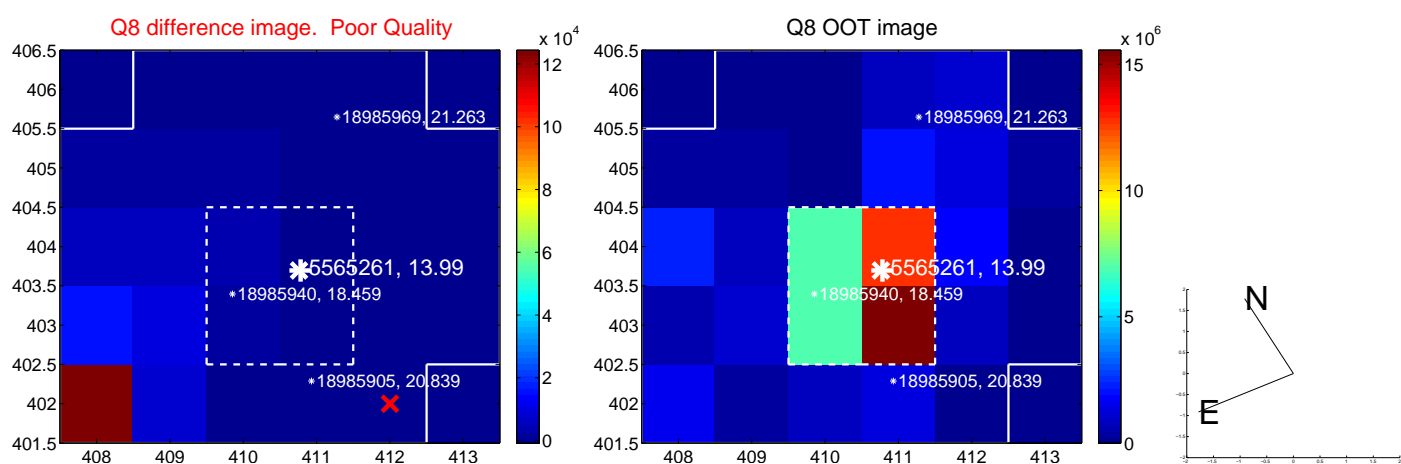
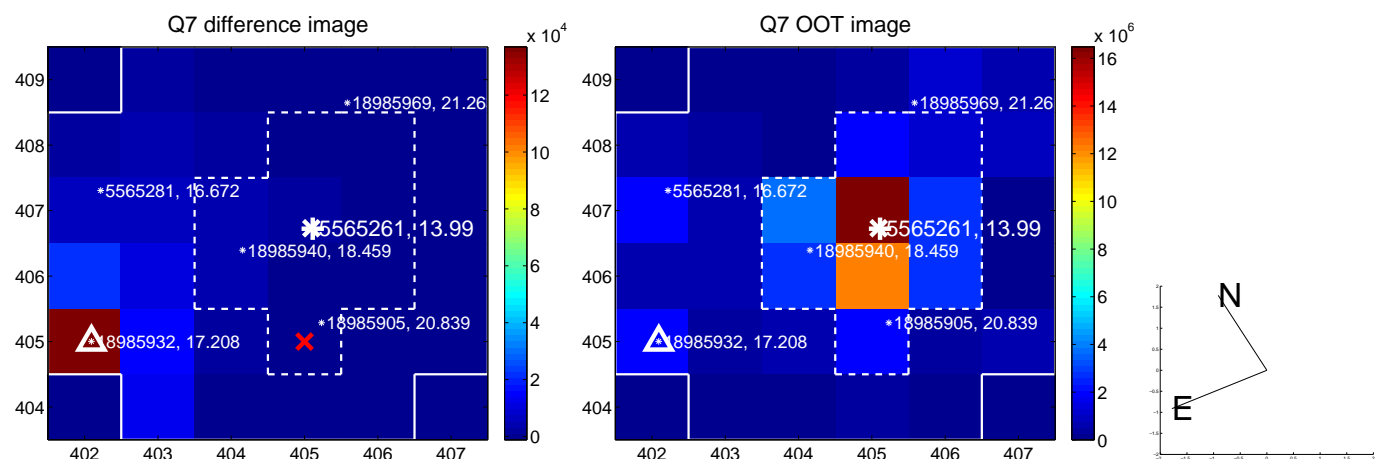
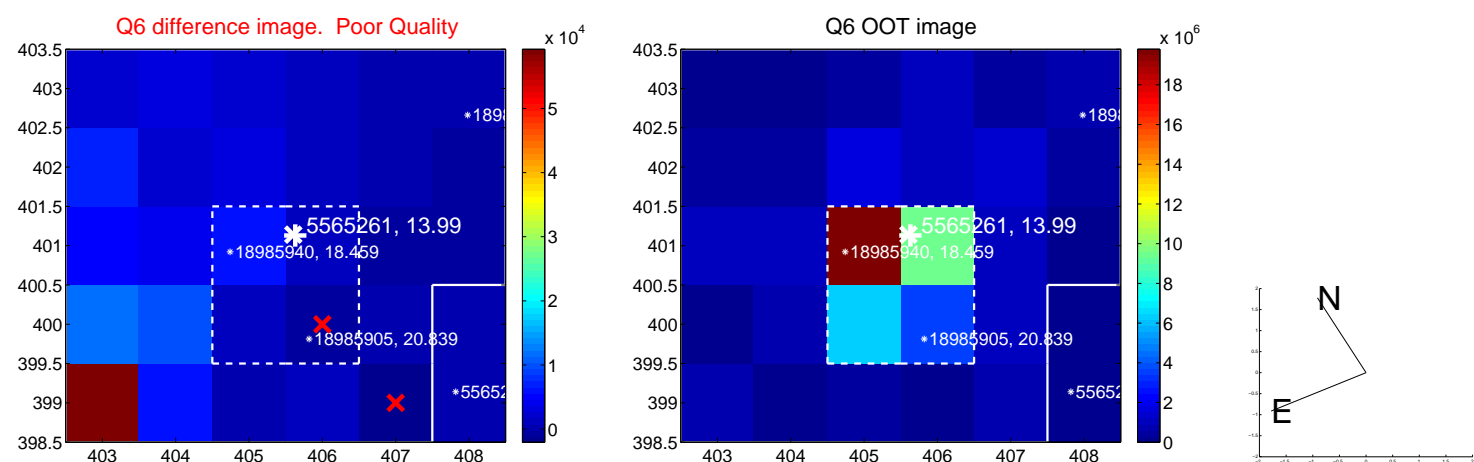
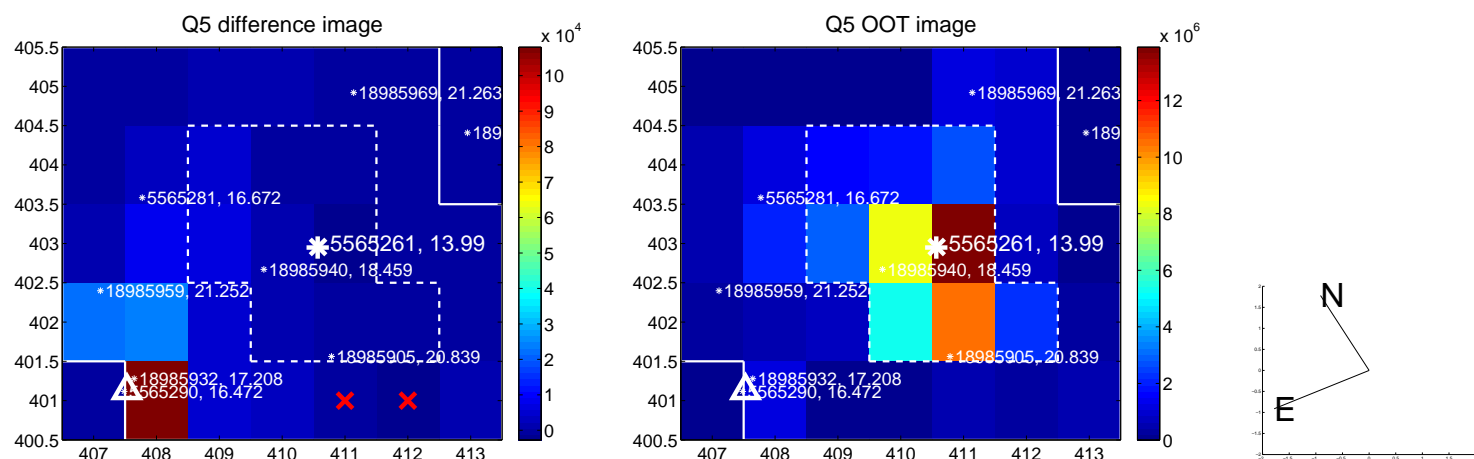


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

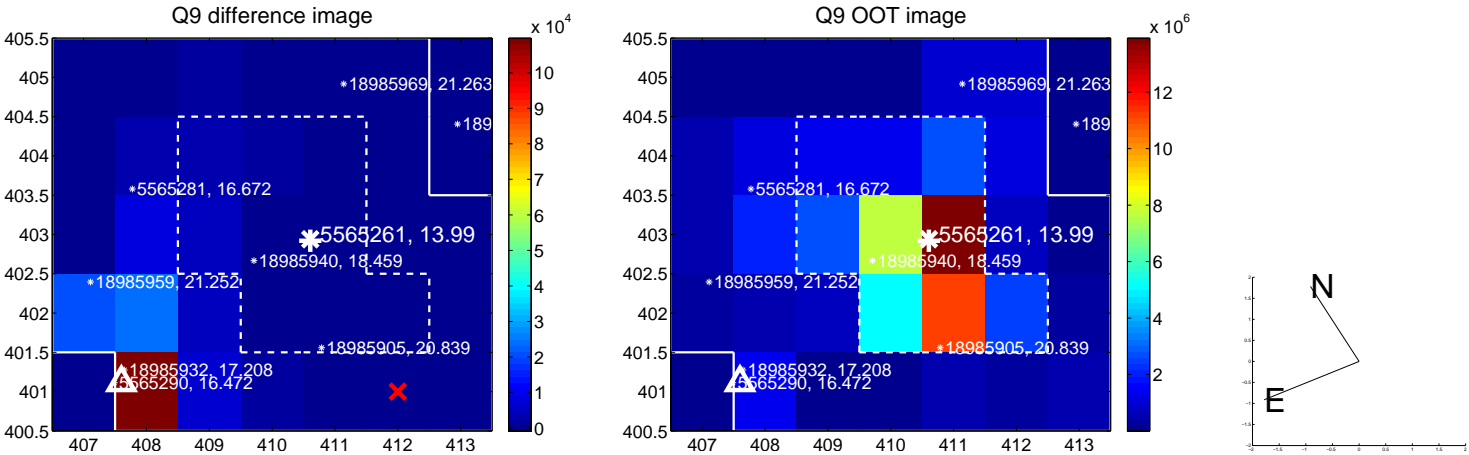
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



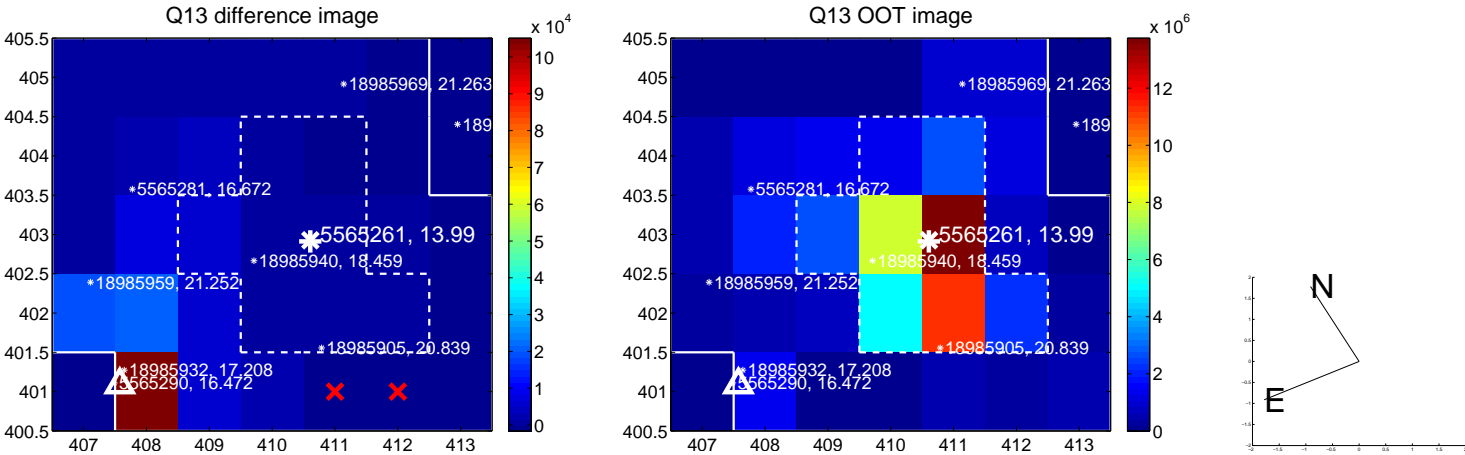
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



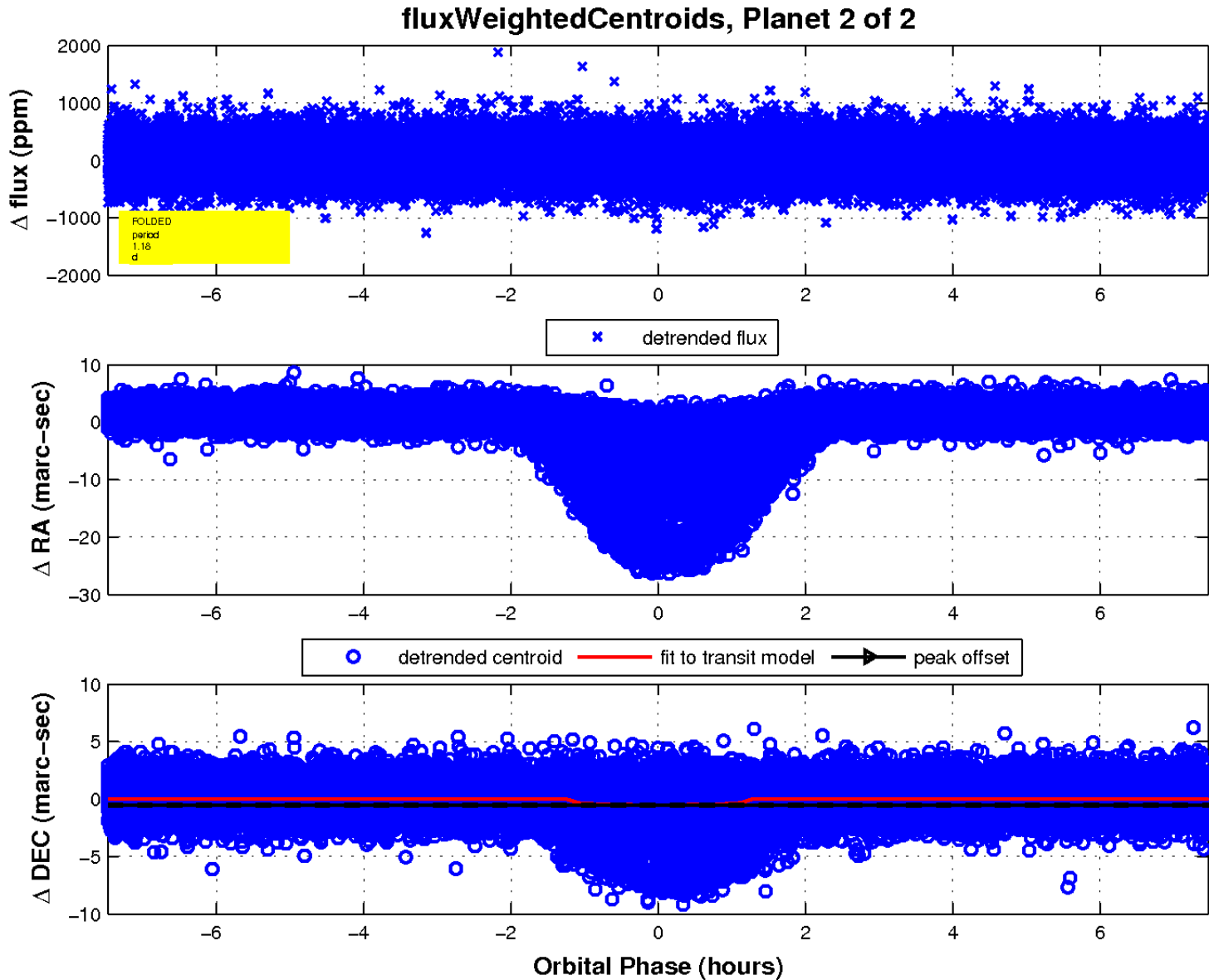
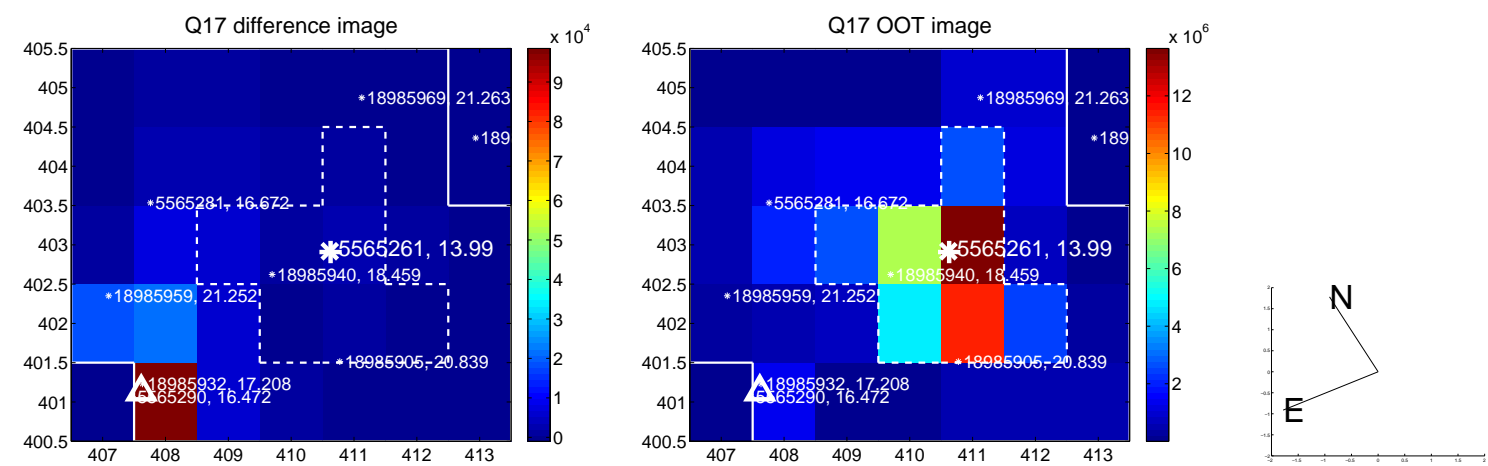
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

