

KIC 006057080

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})
006057080-01	OBS	No	1.251049	132.254091	13.9	4.970	11.6	10.9	1.88	7627	0.84	14550.22
006057080-02	OBS	No	297.545298	240.877395	134.5	15.457	8.5	8.5	1.88	7627	2.42	9.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057080-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT
006057080-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

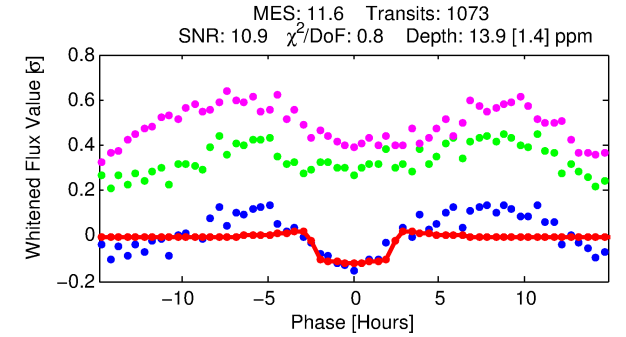
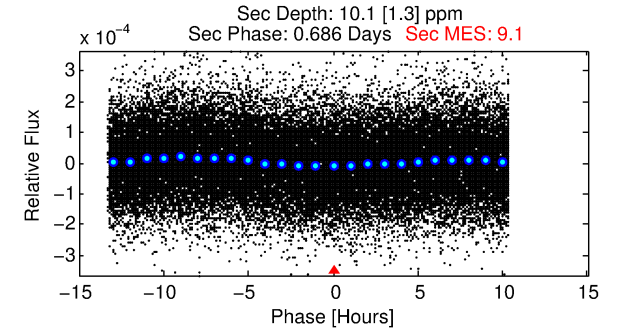
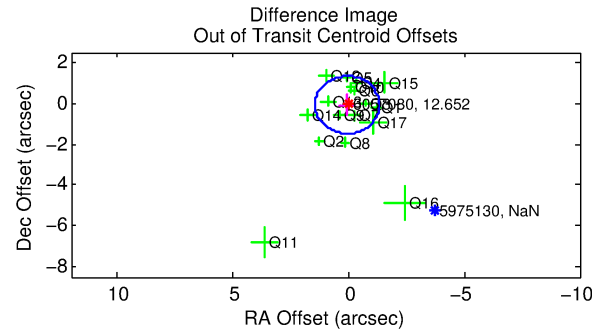
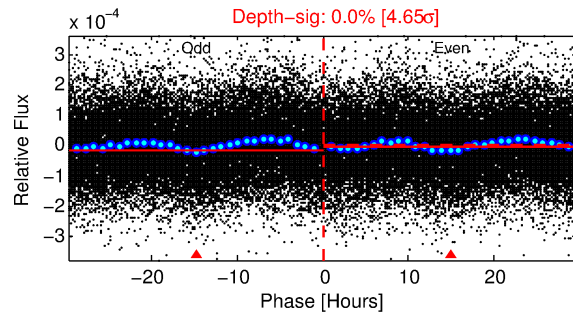
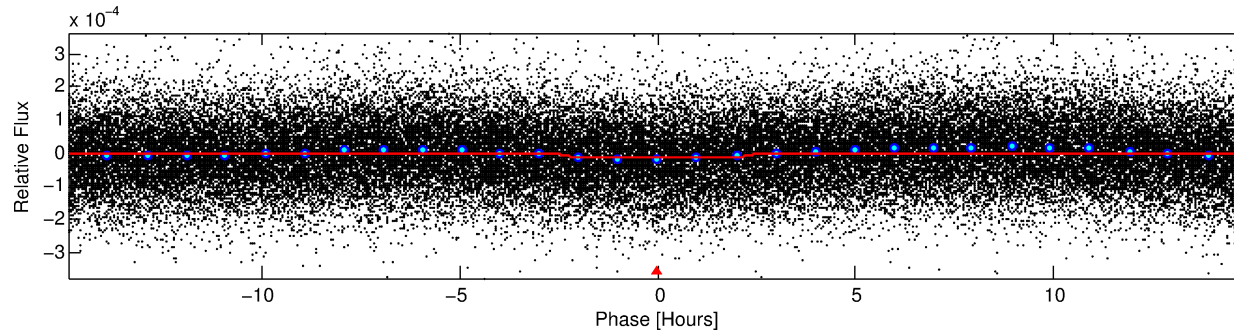
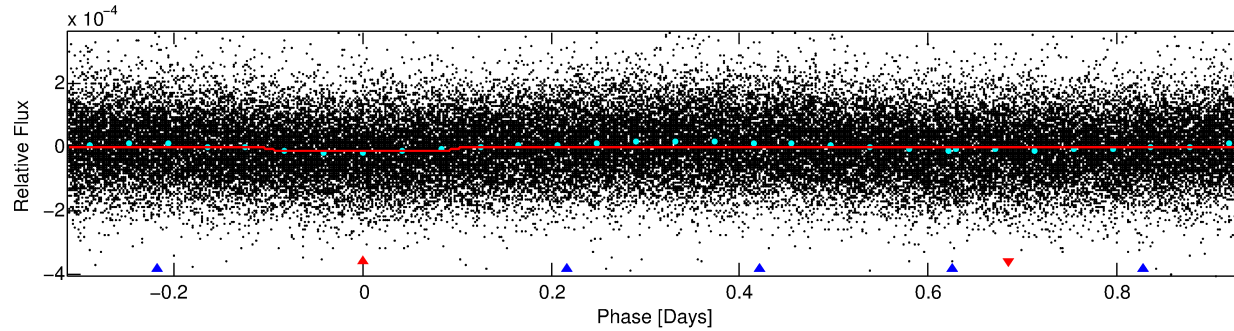
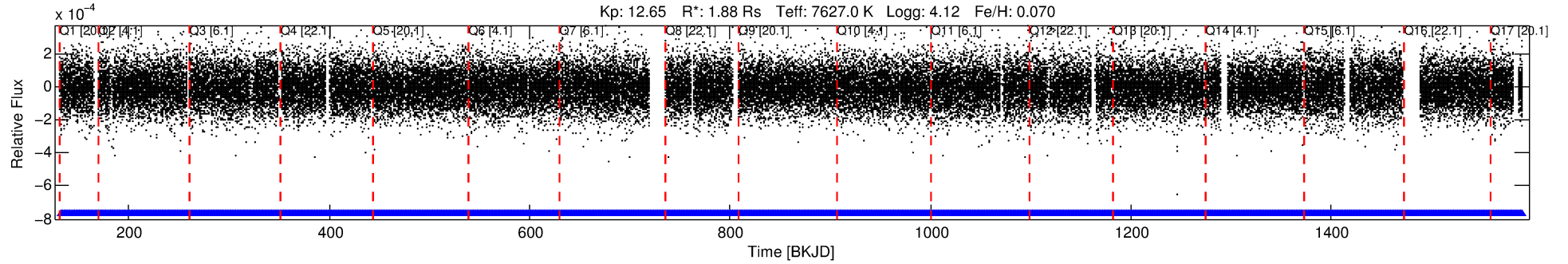
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057080-01

No Significant Match Found

DV One-Page Summary

KIC: 6057080 Candidate: 1 of 2 Period: 1.251 d



DV Fit Results:

Period = 1.25105 [0.00001] d
Epoch = 132.2541 [0.0043] BKJD
Rp/R* = 0.0041 [0.0010]
a/R* = 1.18 [0.53]
b = 0.94 [0.20]
Seff = 14550.22 [5379.02]
Teq = 2801 [259] K
Rp = 0.84 [0.31] Re
a = 0.0272 [0.0064] AU
Ag = 5.85 [3.43] [1.41 σ]
Teffp = 6733 [861] K [4.37 σ]

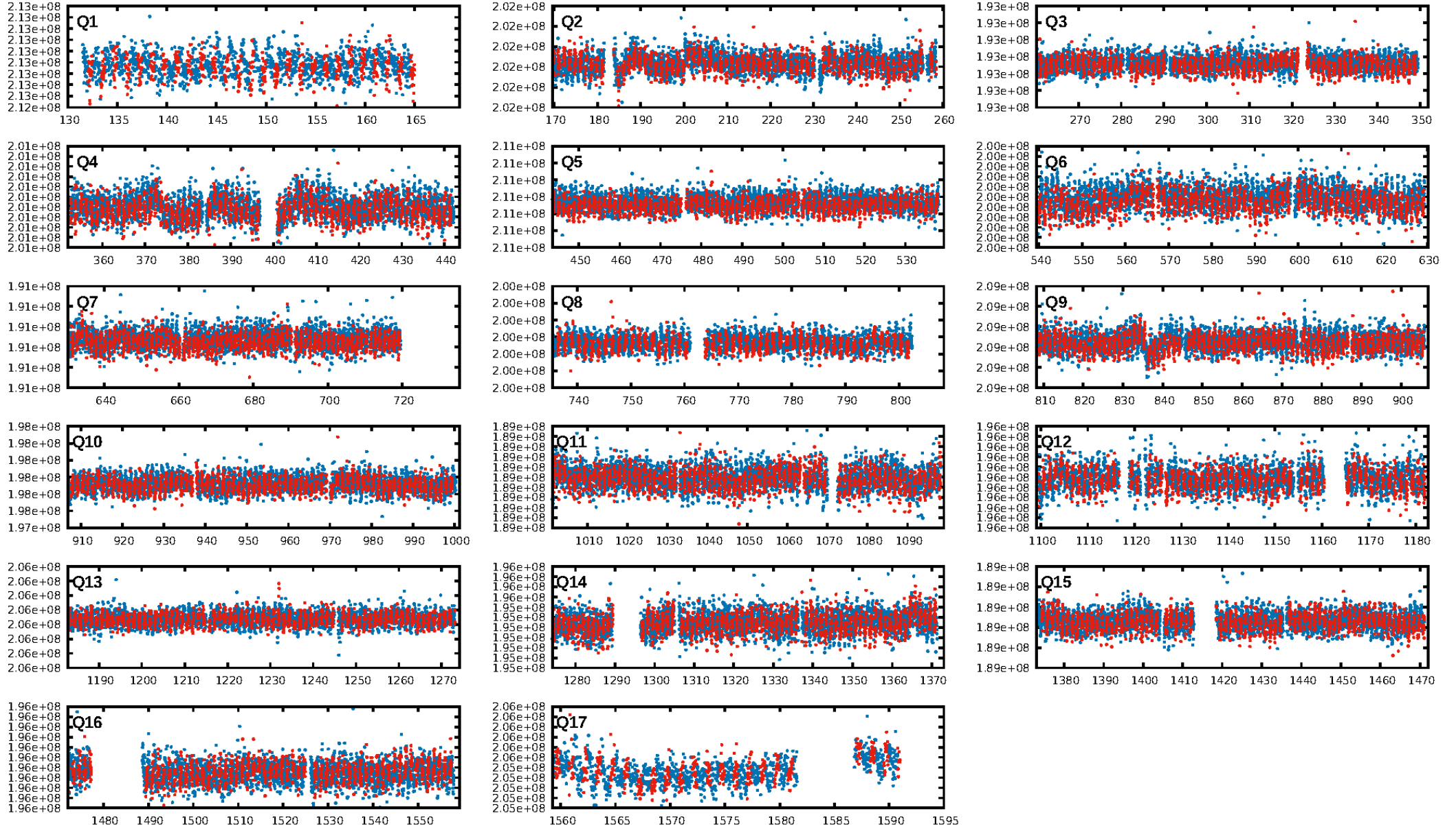
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [437.96 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.83e-23
RollingBand-fgt: 1.00 [1024/1024]
GhostDiagnostic-chr: 8.147
Centroid-sig: 14.8%
Centroid-so: 1.394 arcsec [1.36 σ]
OotOffset-rm: 0.097 arcsec [0.21 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.159 arcsec [0.35 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

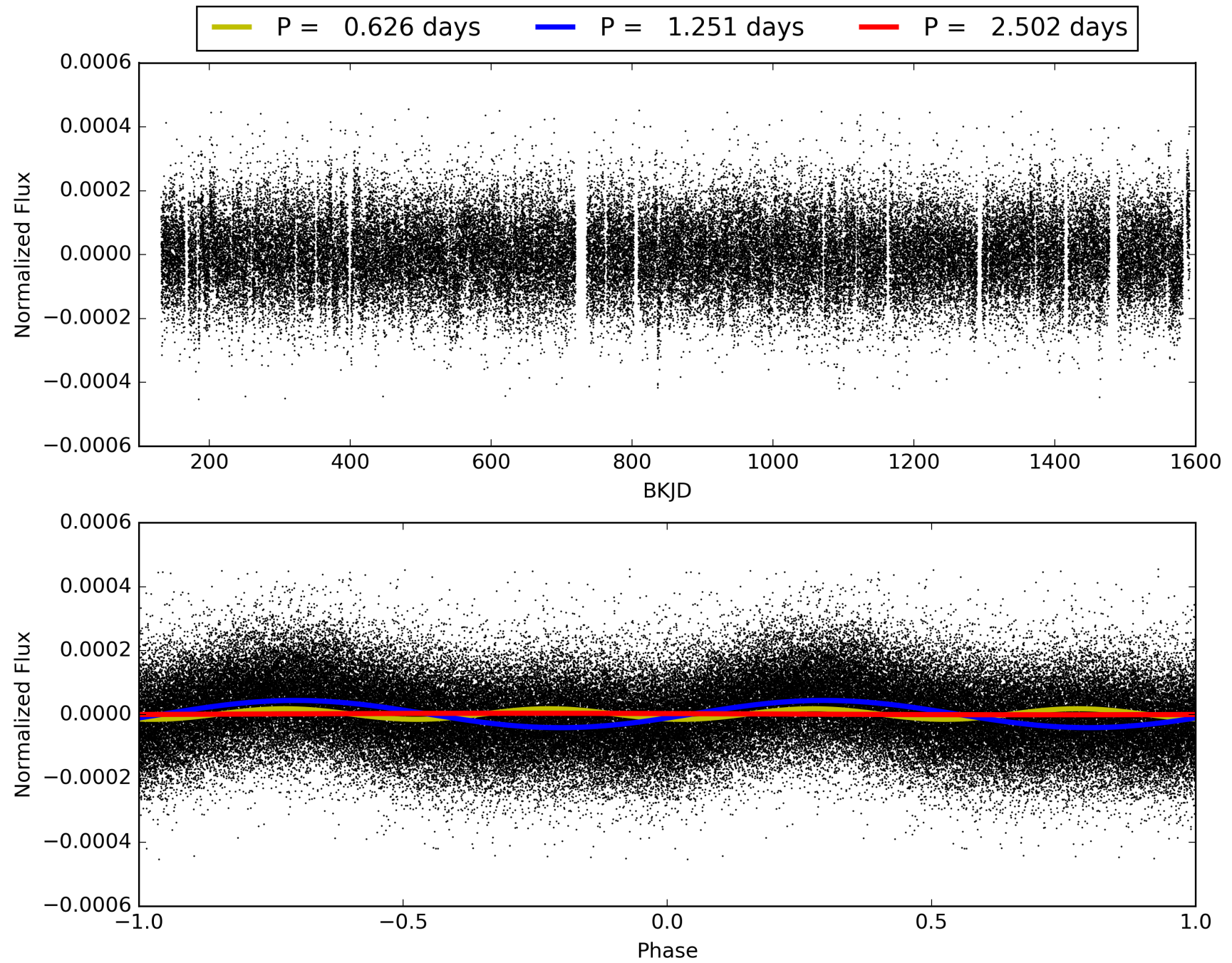
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:43:28 Z

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

TCE 006057080-01, PDC Light Curves

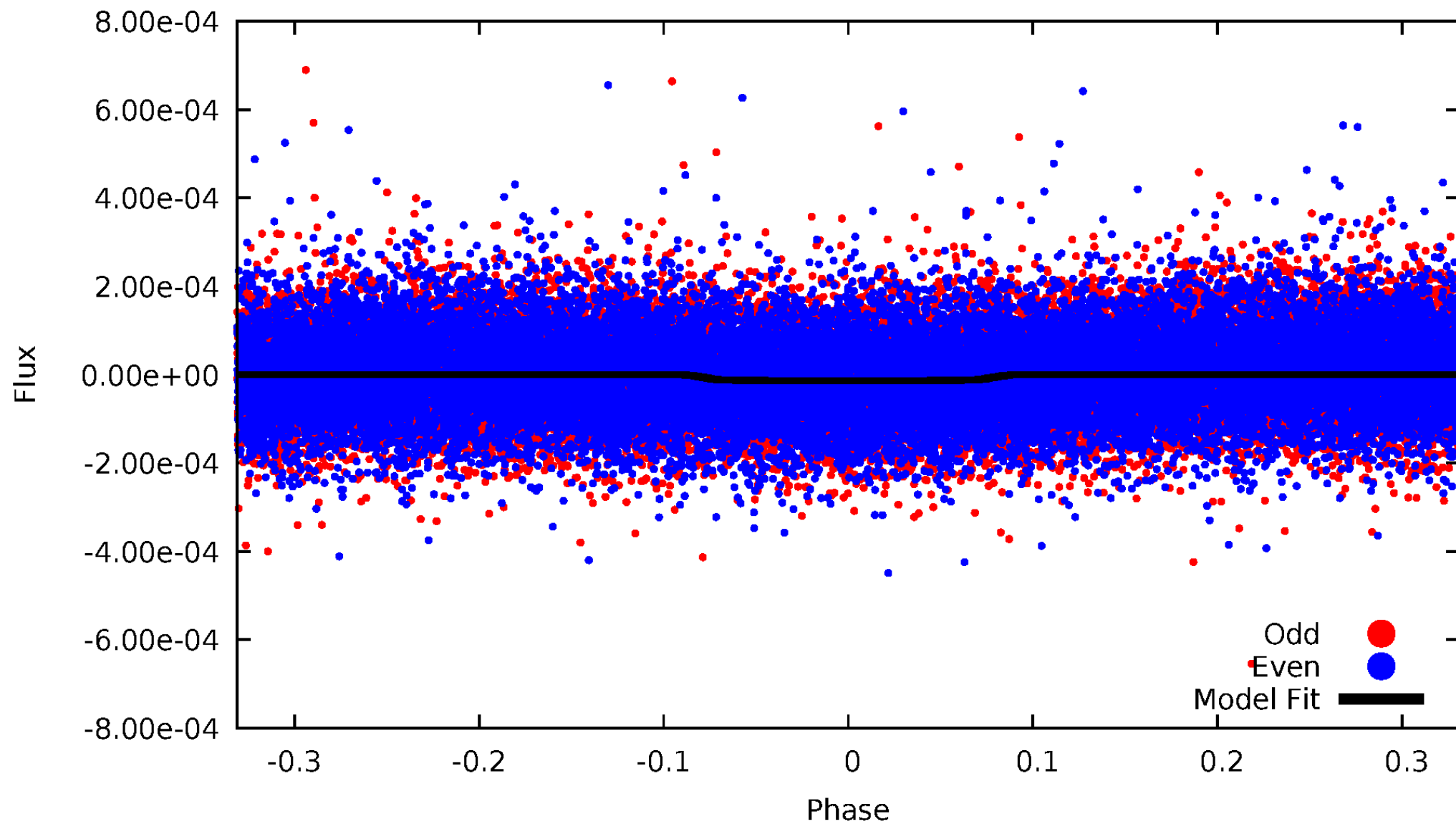


TCE 006057080-01



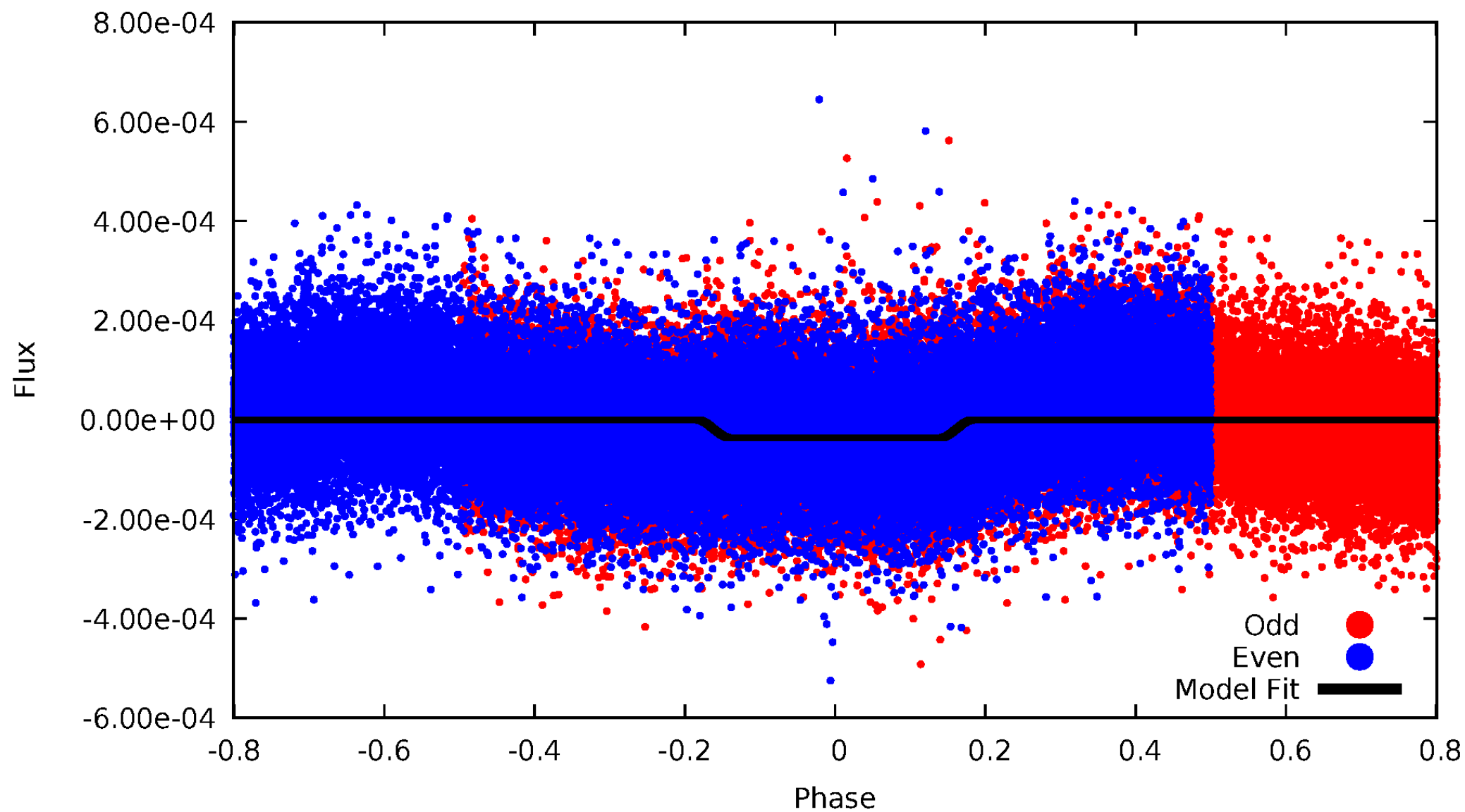
DV Odd/Even

TCE 006057080-01

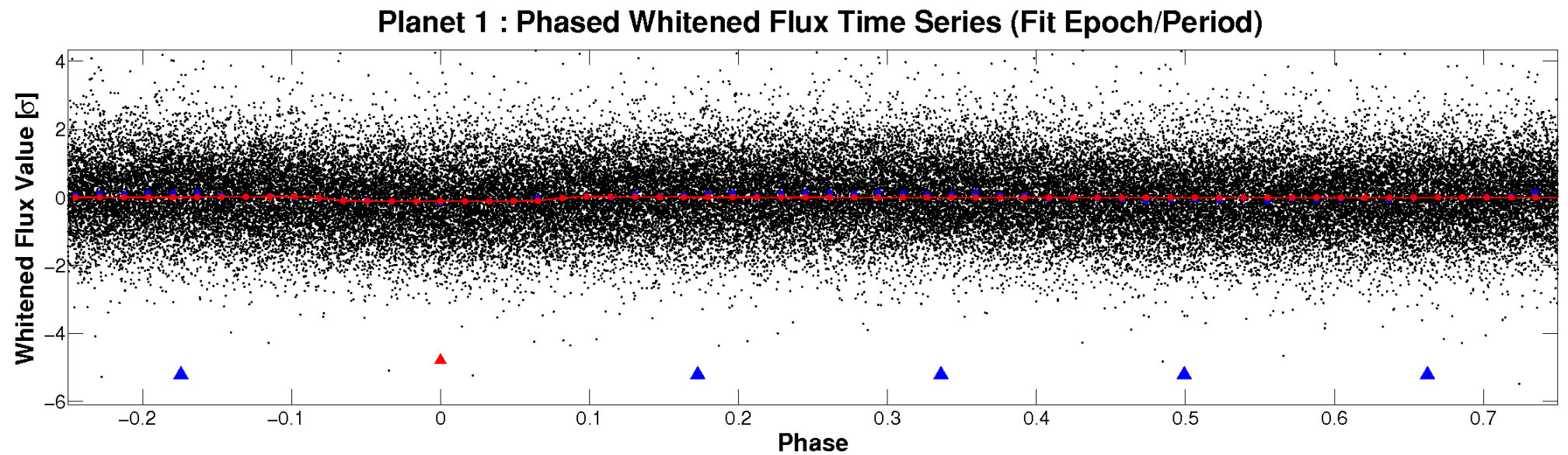
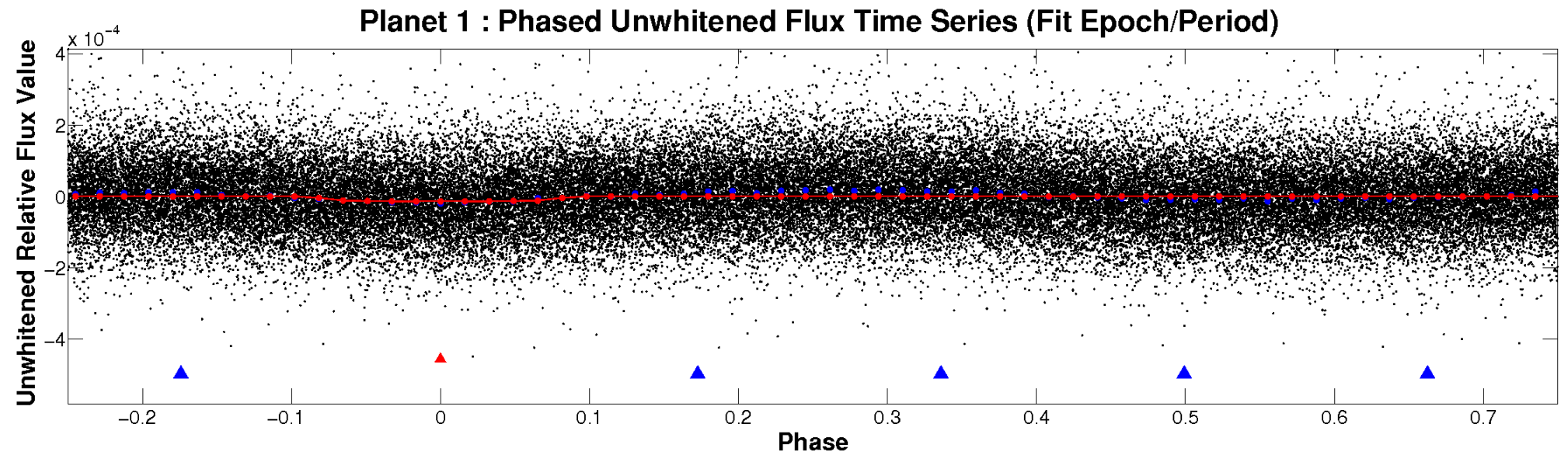


ALT Odd/Even

TCE 006057080-01

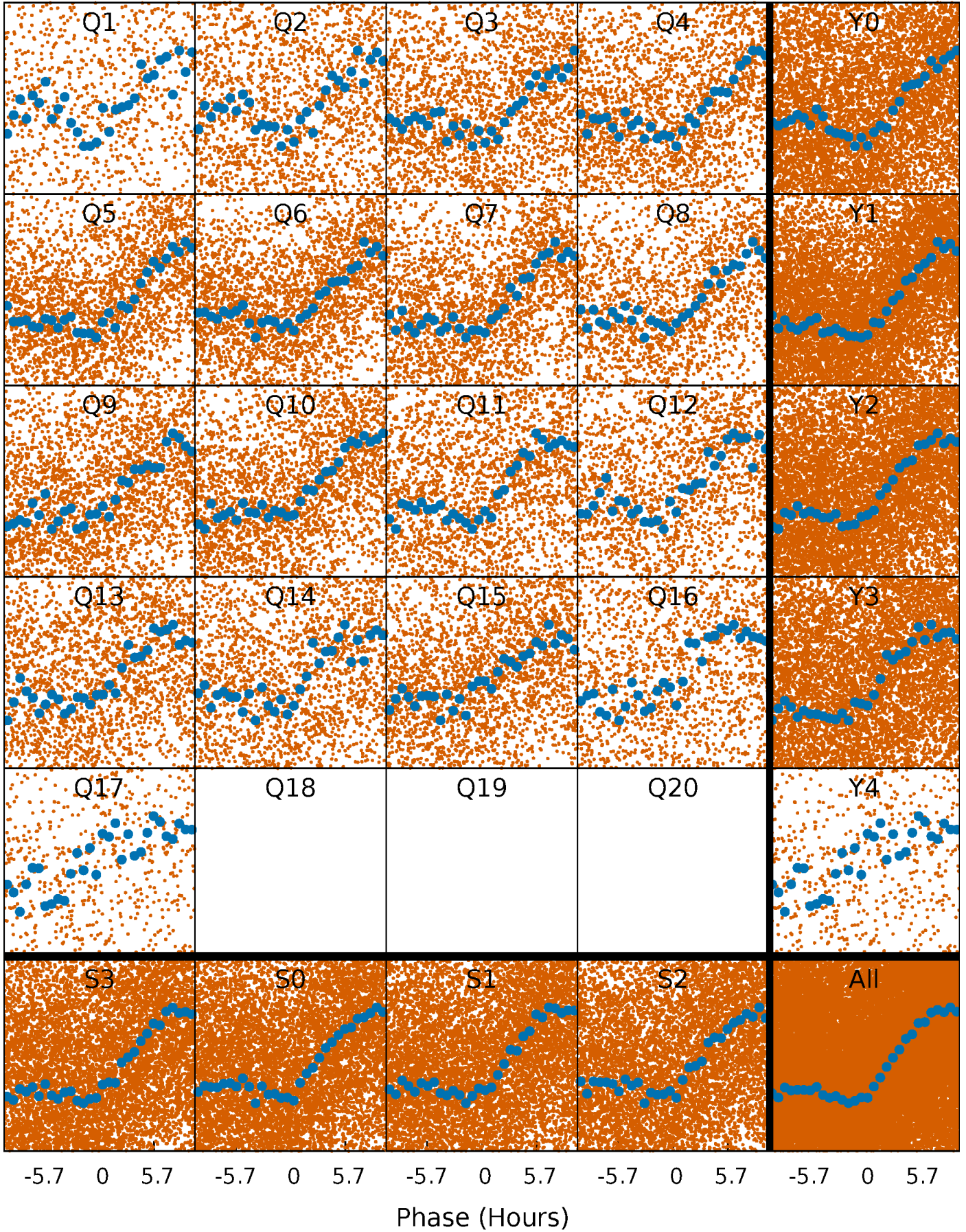


Non-Whitened Vs. Whitened Light Curve



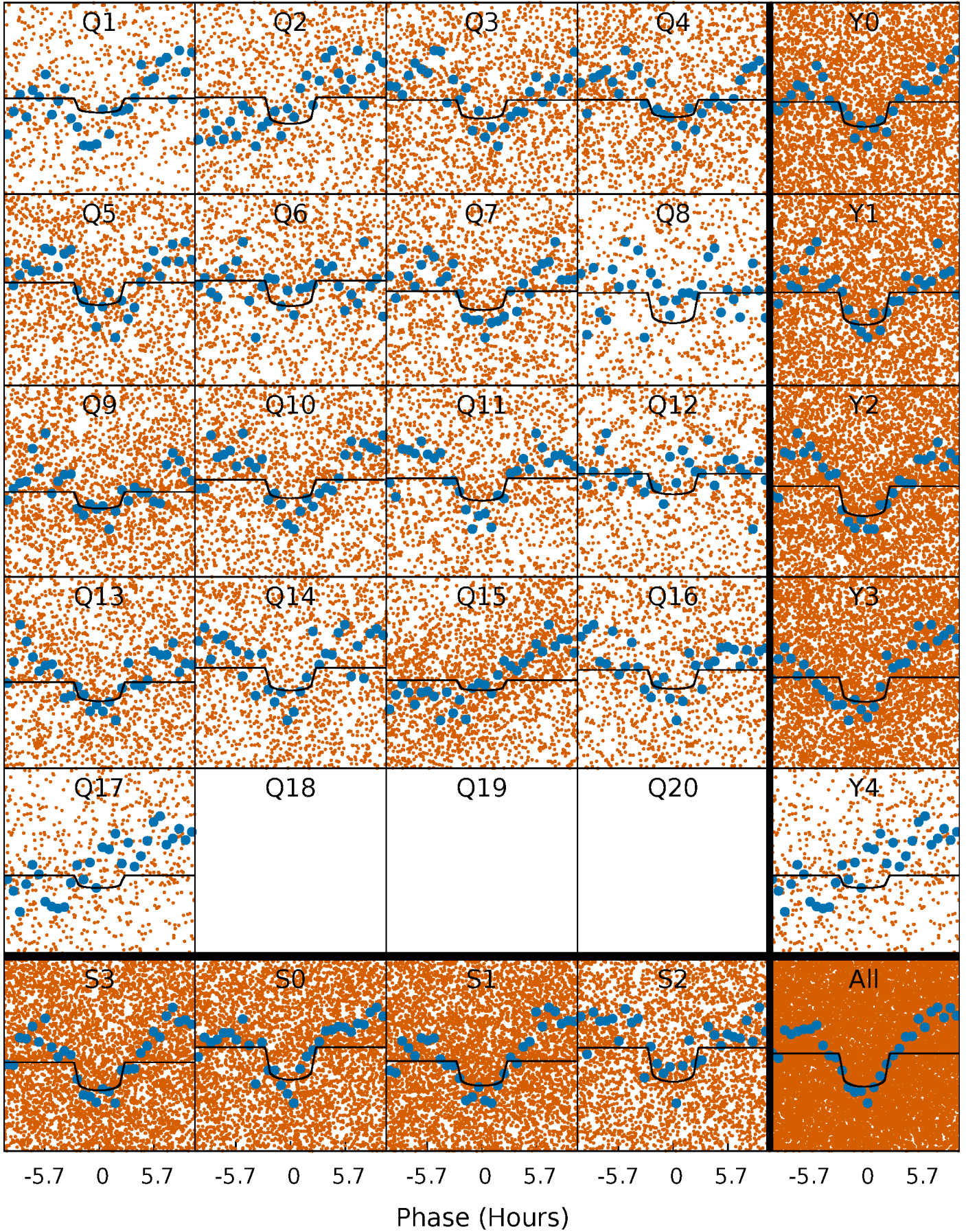
PDC Quarter-Phased Transit Curves

TCE 006057080-01 P= 1.251049 Days $T_0=132.254091$ (BKJD)



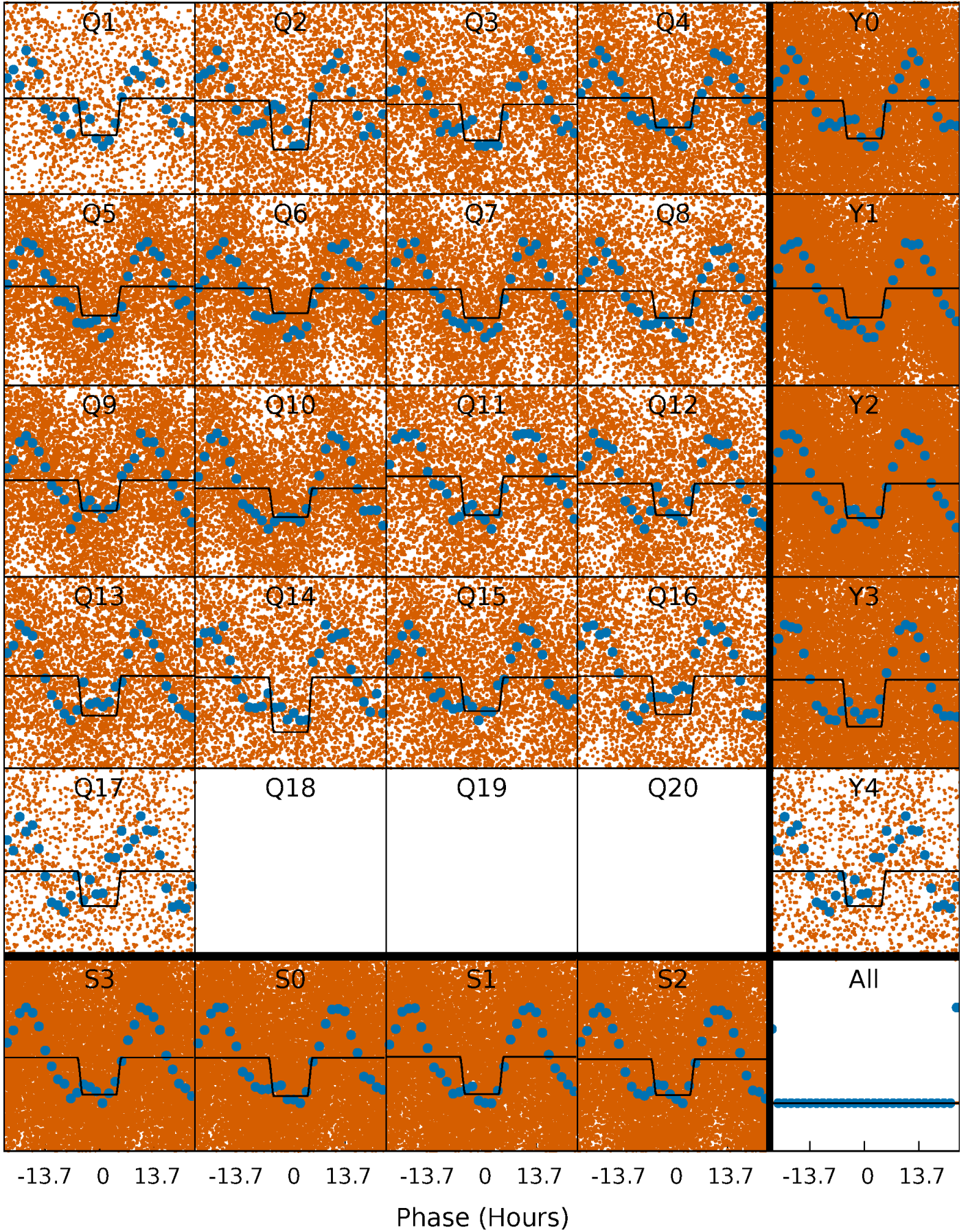
DV Quarter-Phased Transit Curves

TCE 006057080-01 P= 1.251049 Days $T_0=132.254091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

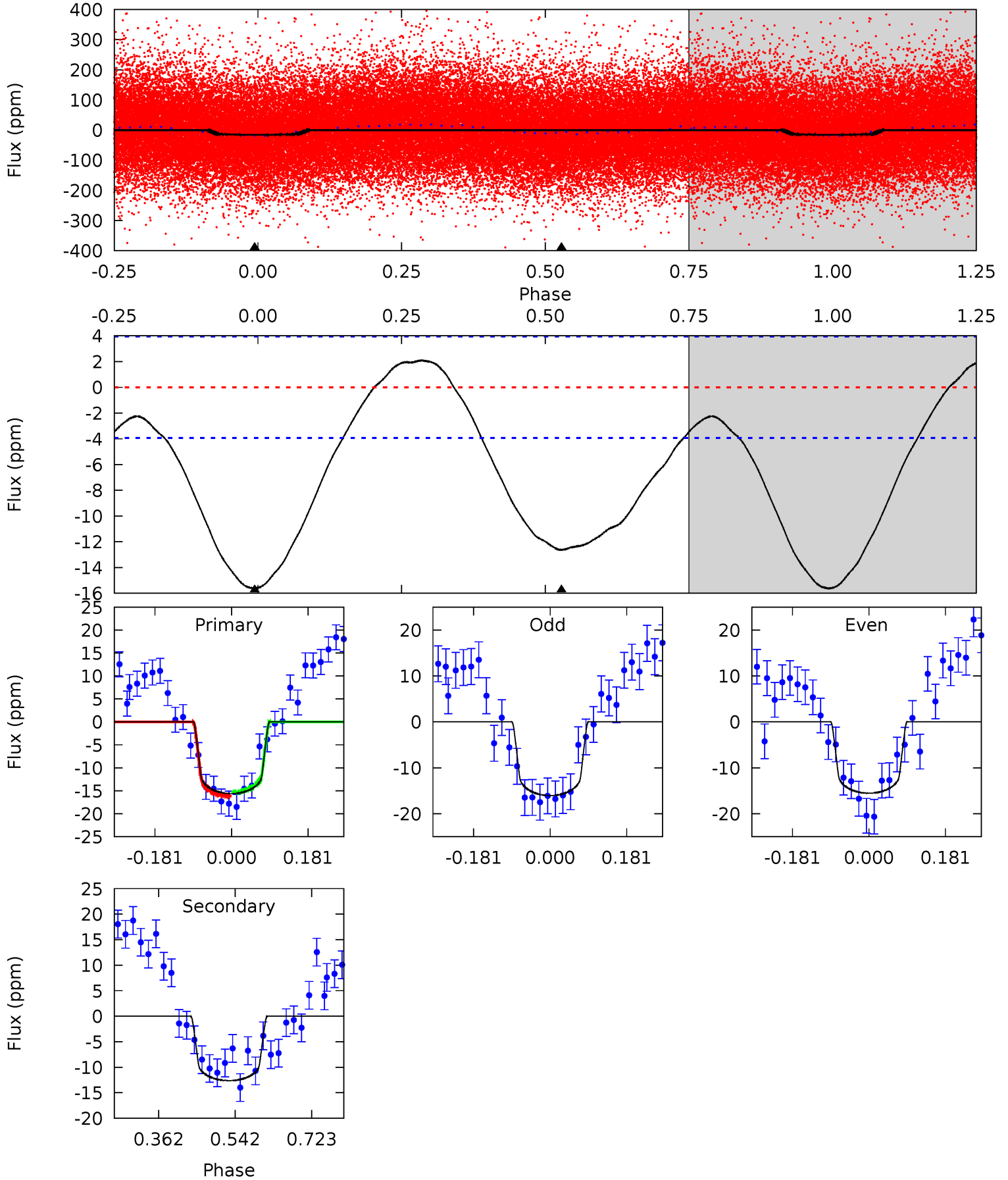
TCE 006057080-01 P= 1.250966 Days $T_0=132.174435$ (BKJD)



DV Model-Shift Uniqueness Test

006057080-01, P = 1.251049 Days, E = 131.003042 Days

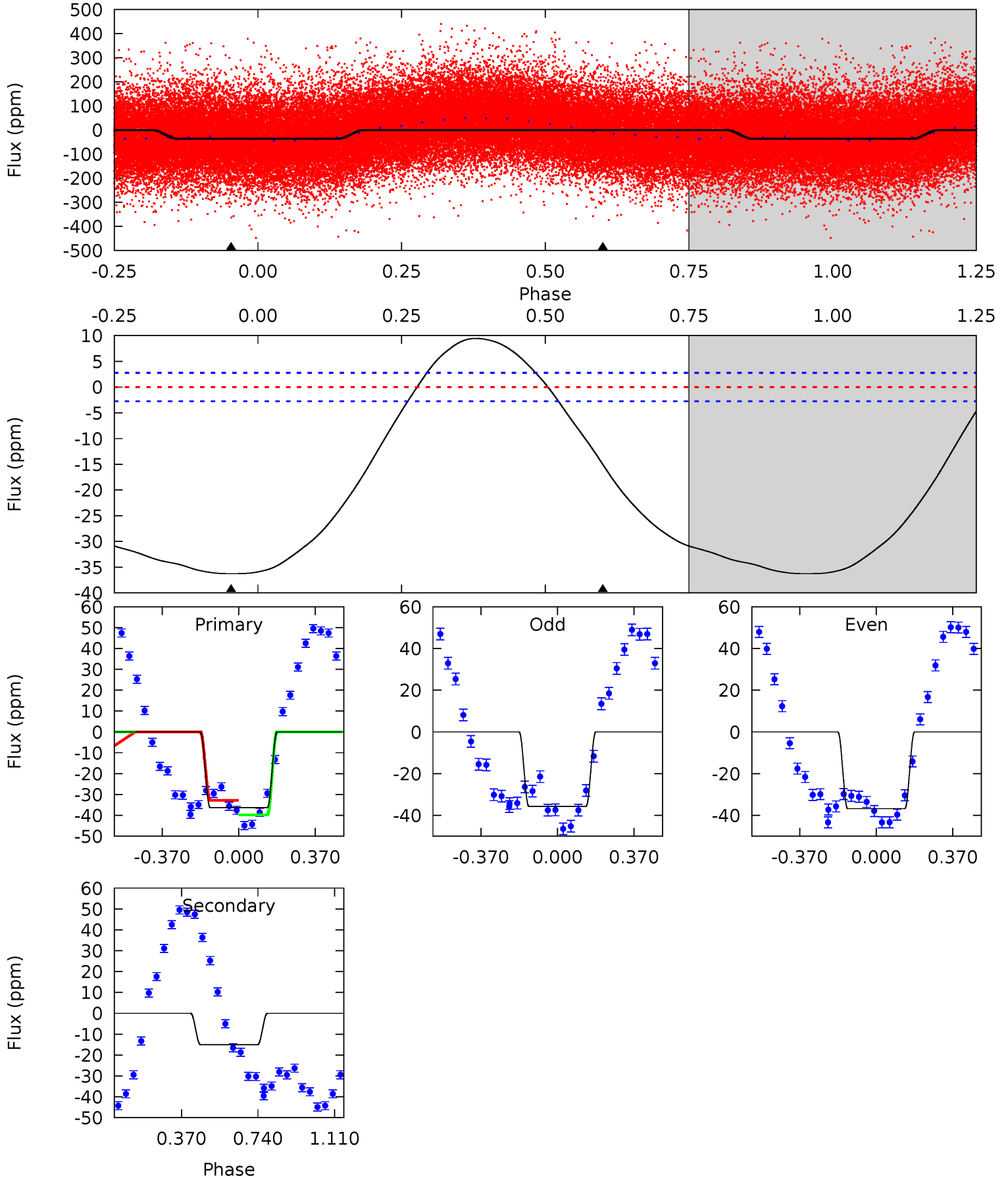
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	14.3	0	0	4.44	1.34	2.70	17.6	17.6	14.3	14.3	0.29	0.92	0.12	0.47



Alt Model-Shift Uniqueness Test

006057080-01, P = 1.250966 Days, E = 130.923469 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.3	23.3	0	0	4.28	0.90	7.45	56.3	56.3	23.3	23.3	0.87	0.96	0.21	5.45



Stellar Parameters For KIC 006057080

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7627^{+211}_{-316}	$4.121^{+0.101}_{-0.174}$	$0.070^{+0.150}_{-0.350}$	$1.881^{+0.549}_{-0.338}$	$1.703^{+0.204}_{-0.250}$	$0.360^{+0.201}_{-0.175}$
	+3%/-4%	+2%/-4%	+214%/-500%	+29%/-18%	+12%/-15%	+56%/-49%
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 006057080-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 1	$0.85^{+0.25}_{-0.22}$	3936^{+301}_{-237}	6902^{+1278}_{-806}	$6.960^{+5.592}_{-2.814}$
Alt.	-15 ± 1	$1.28^{+0.25}_{-0.24}$	3951^{+270}_{-227}	5849^{+586}_{-451}	$3.717^{+1.858}_{-1.119}$

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 $A_{obs} \gg 1.0$

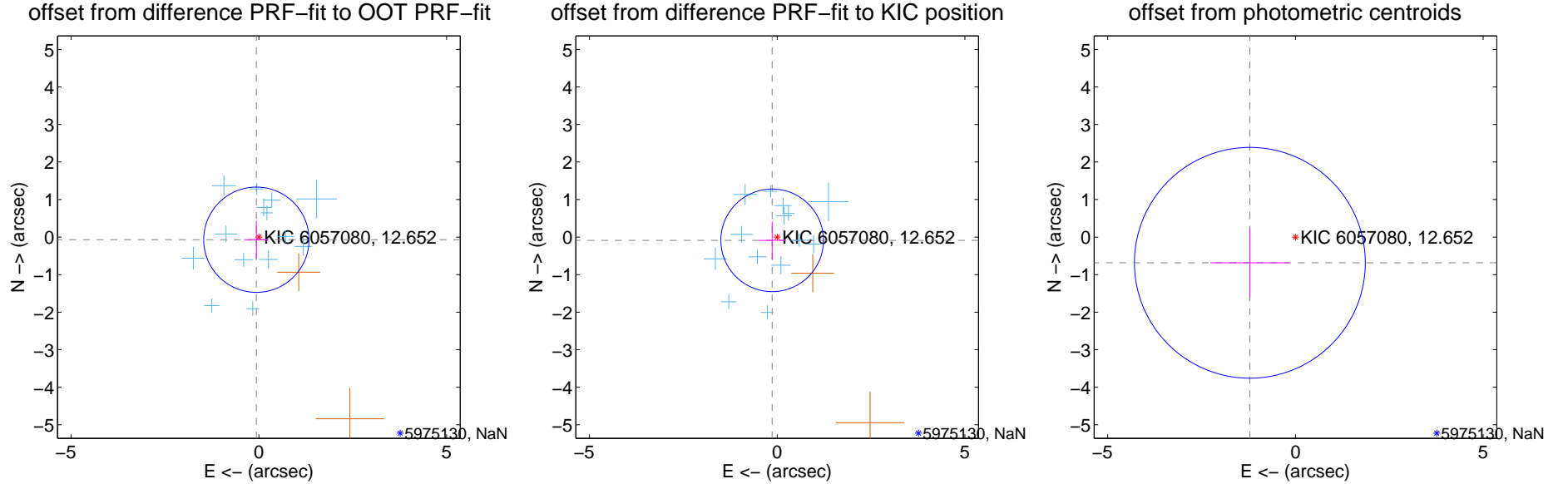
DV Centroid Data

Supplemental centroid analysis for 006057080-01. Kepler magnitude: 12.65. Transit SNR 10.88

There are 14 quarters with good PRF difference image offsets

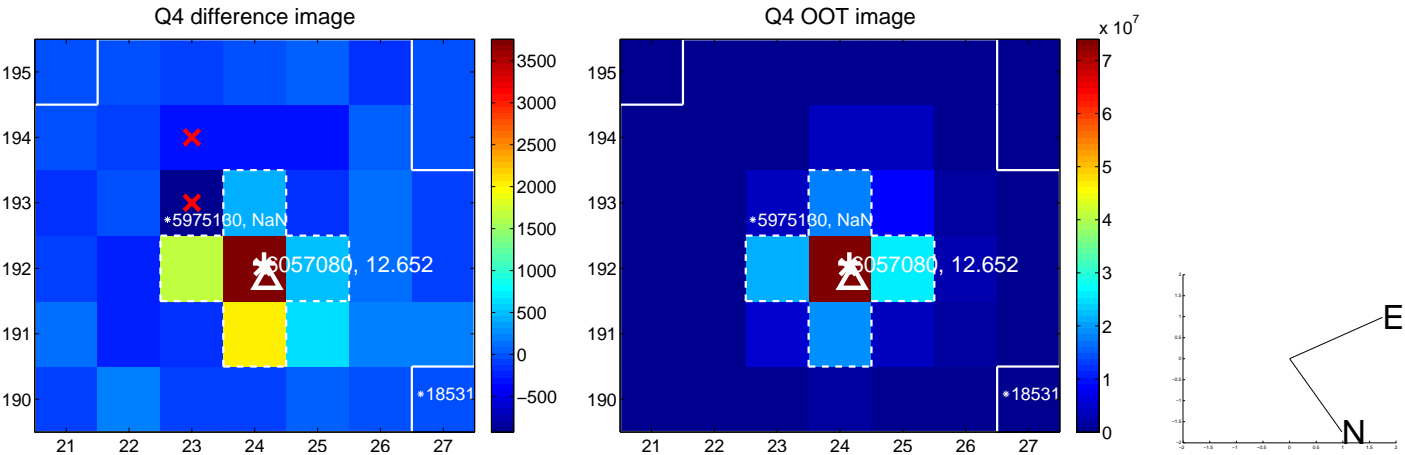
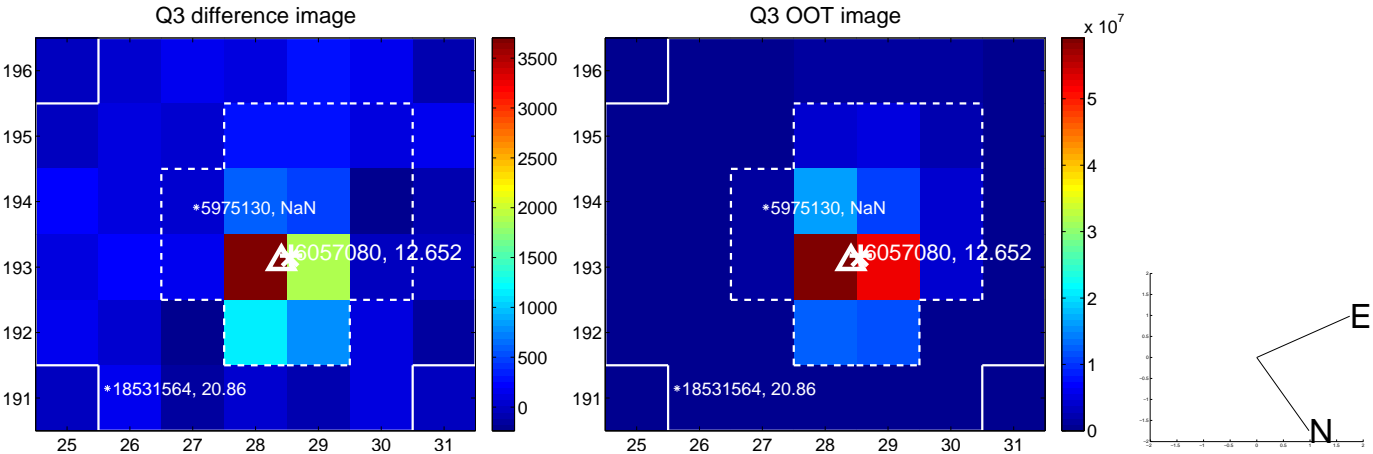
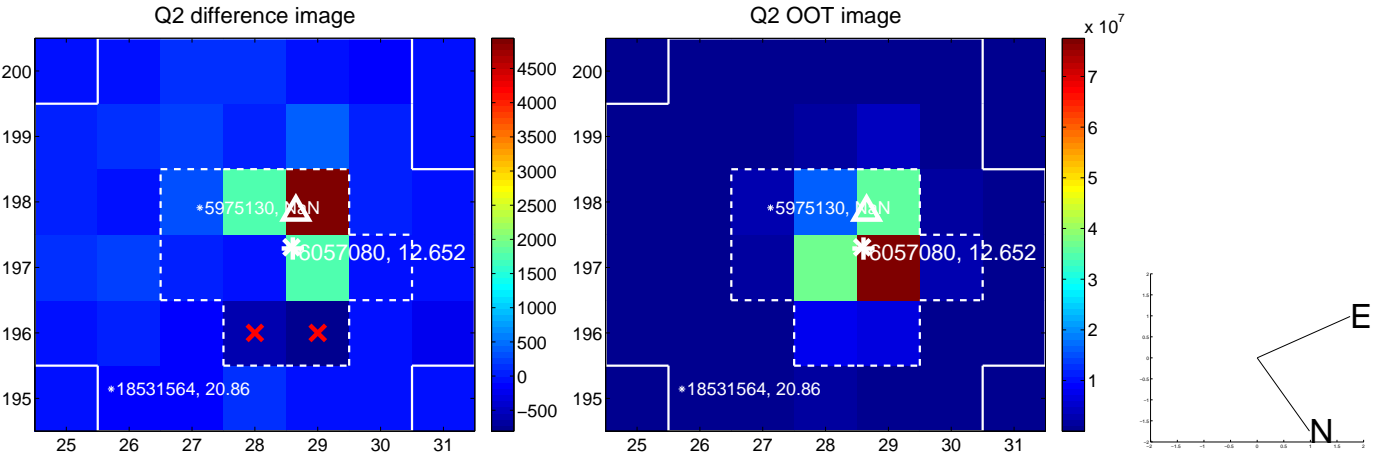
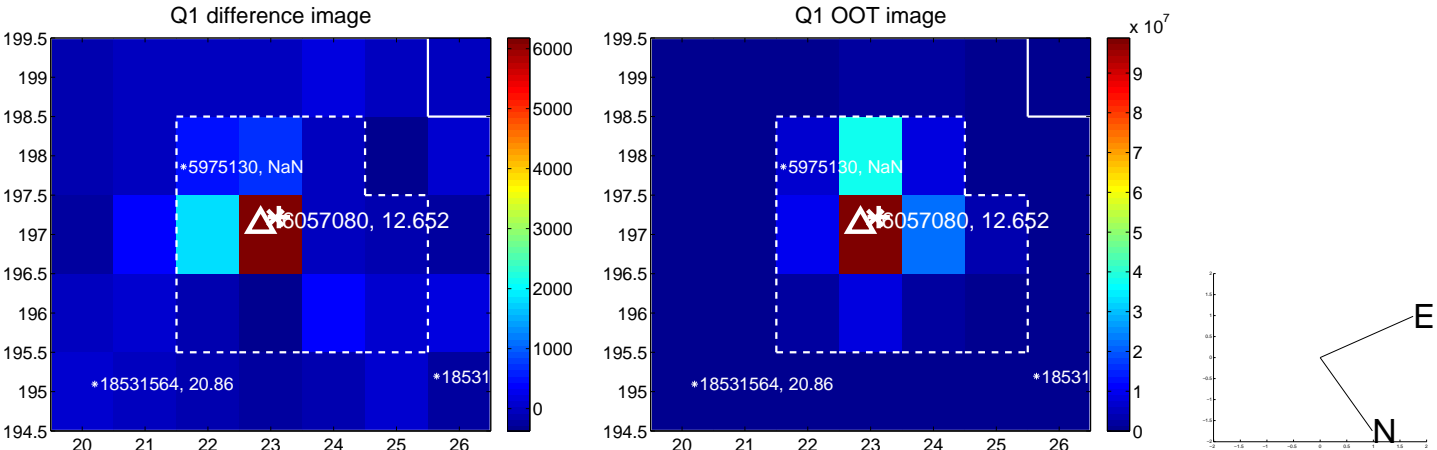
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.468	0.21	0.067 ± 0.329	-0.070 ± 0.500
PRF-fit source offset from KIC position	0.159 ± 0.456	0.35	0.133 ± 0.353	-0.086 ± 0.507
photometric centroid source offset	1.39 ± 1.02	1.36	1.21 ± 1.06	-0.68 ± 0.92

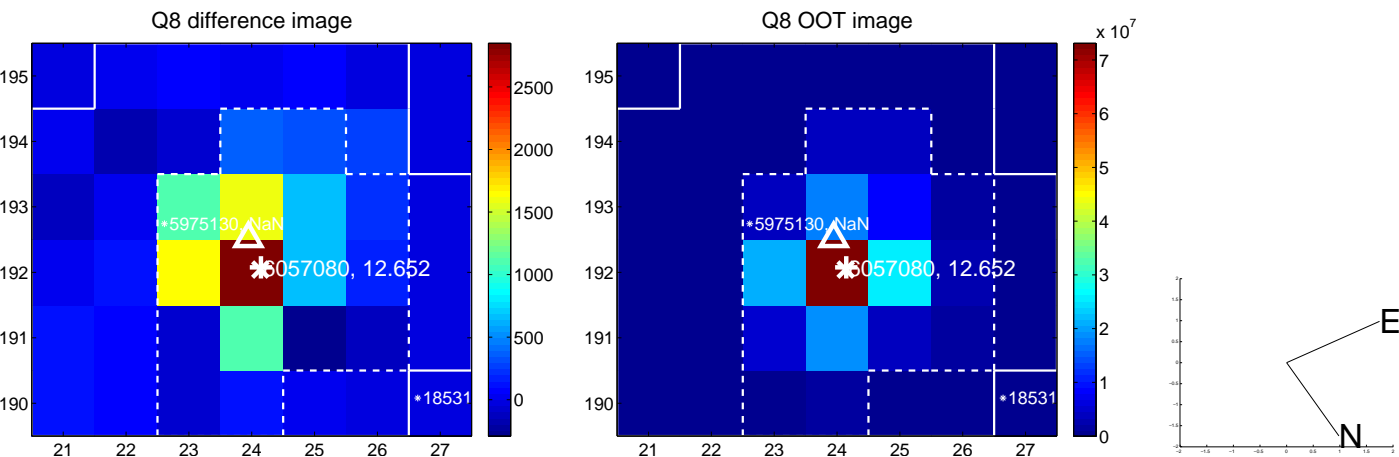
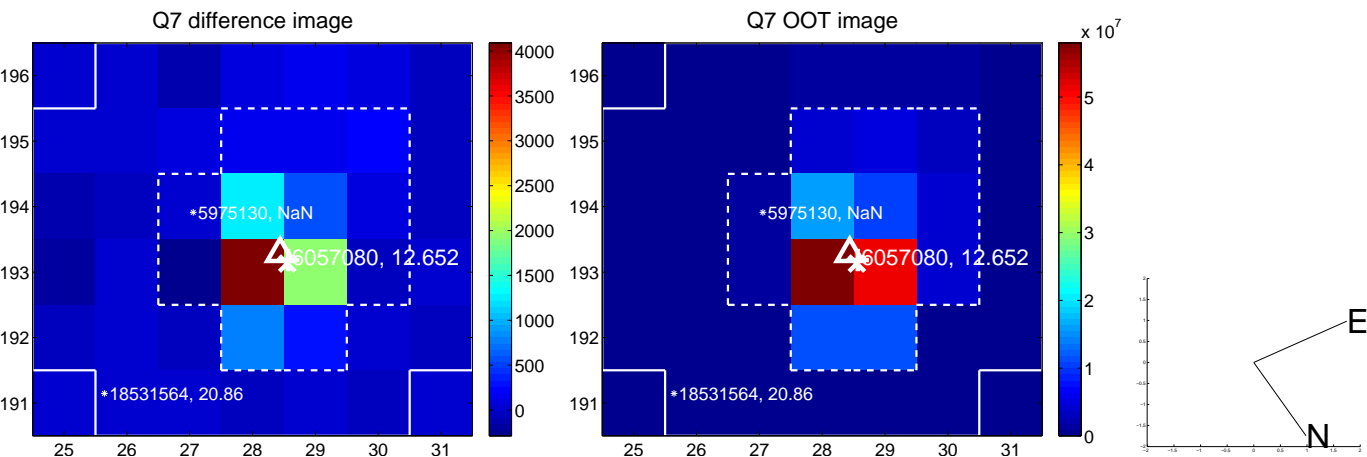
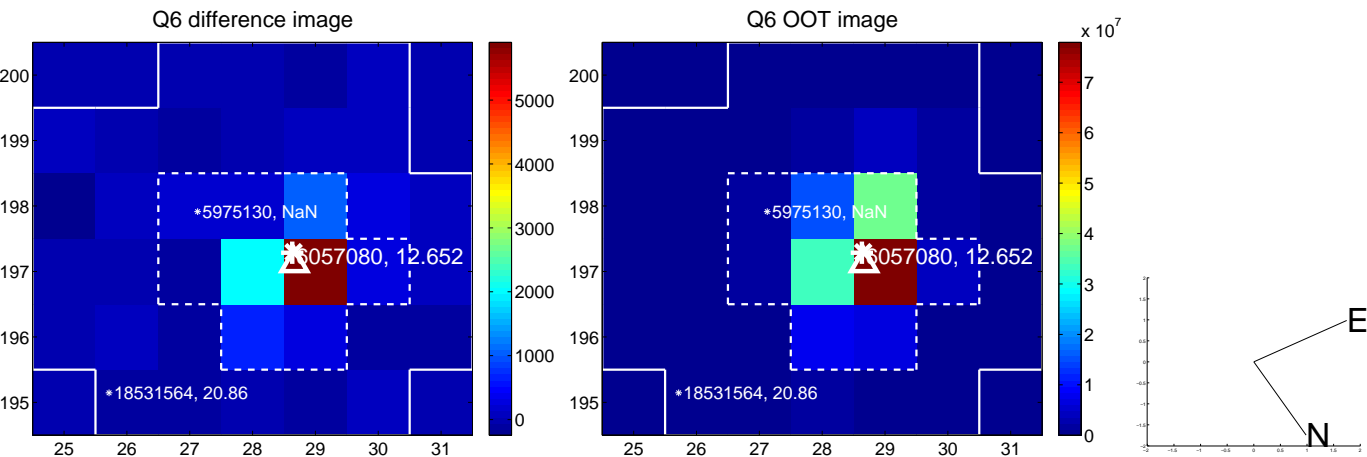
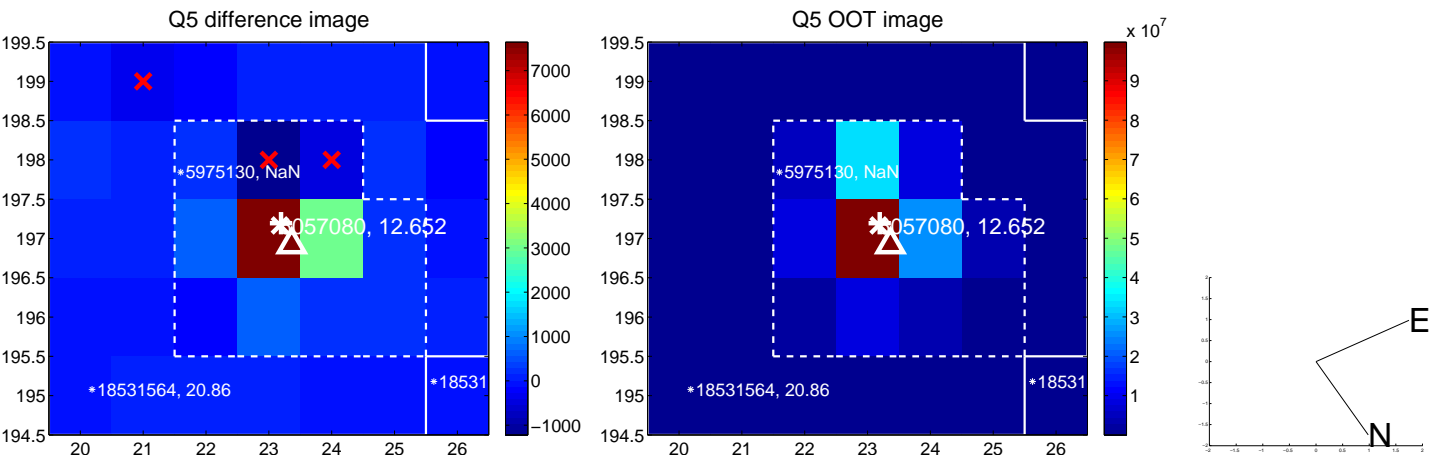


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

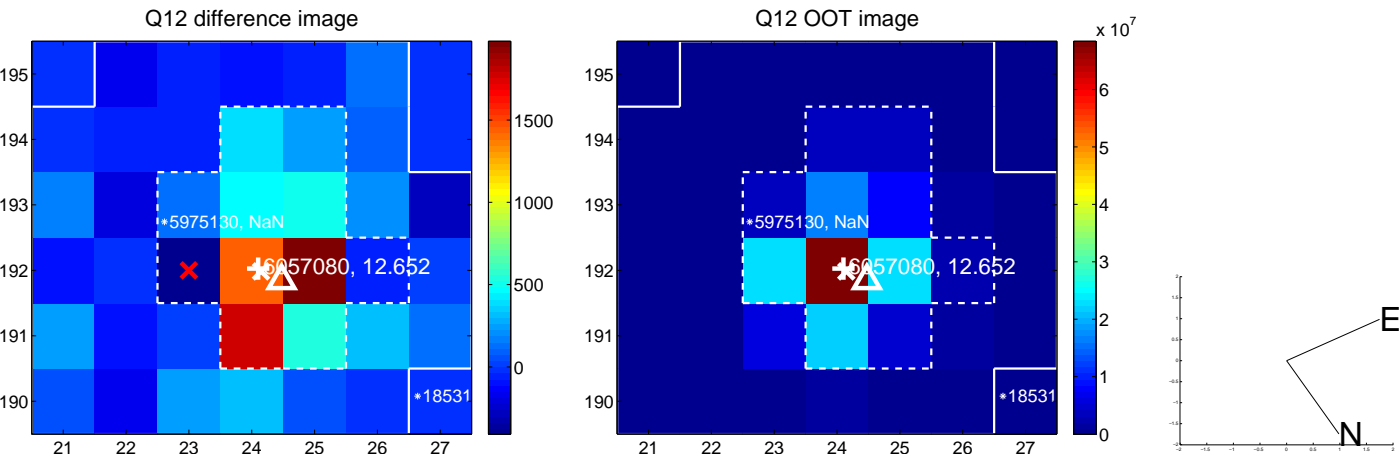
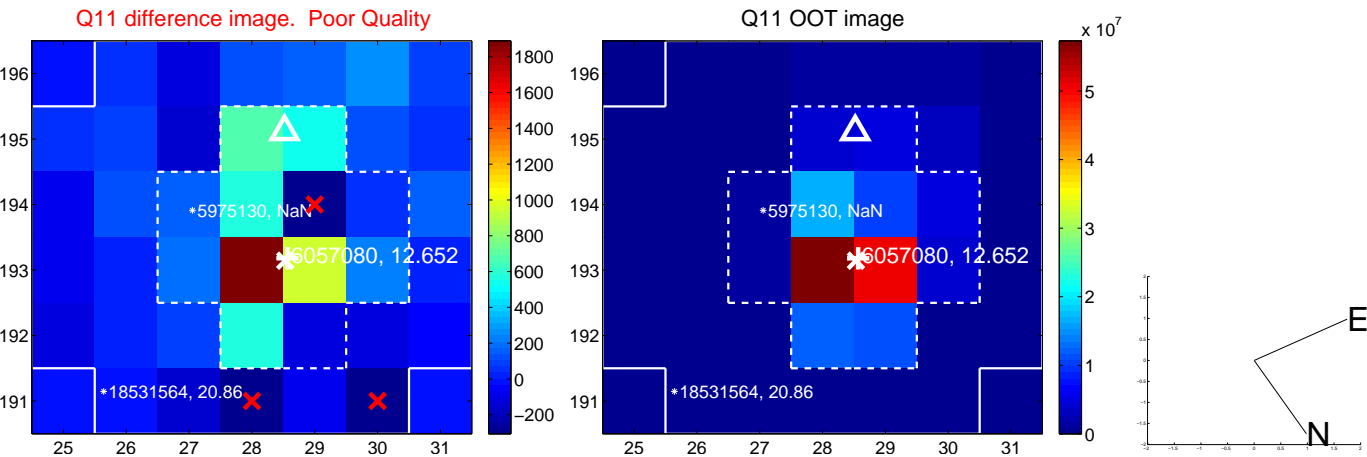
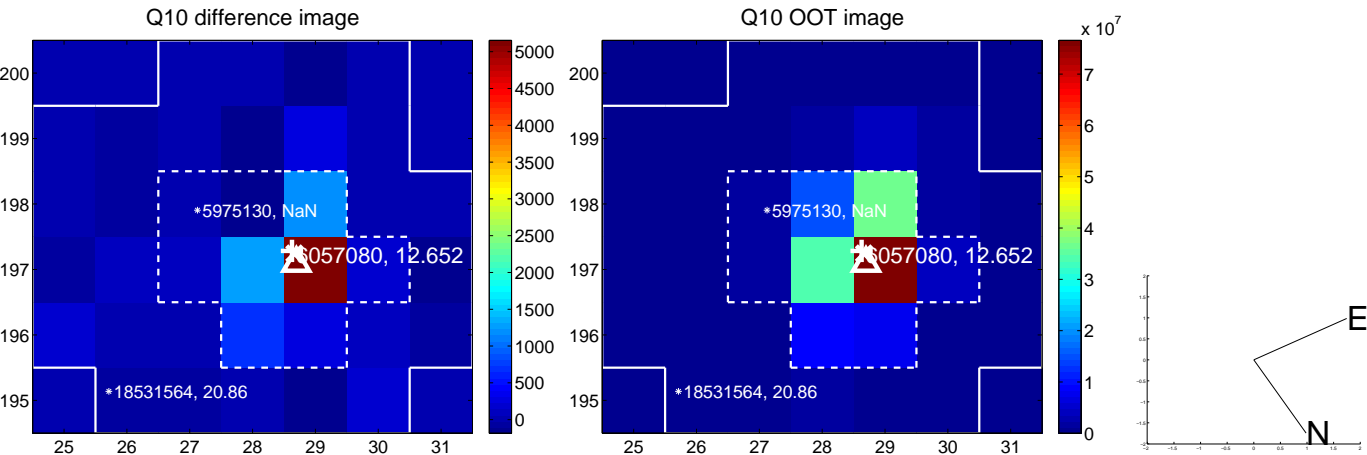
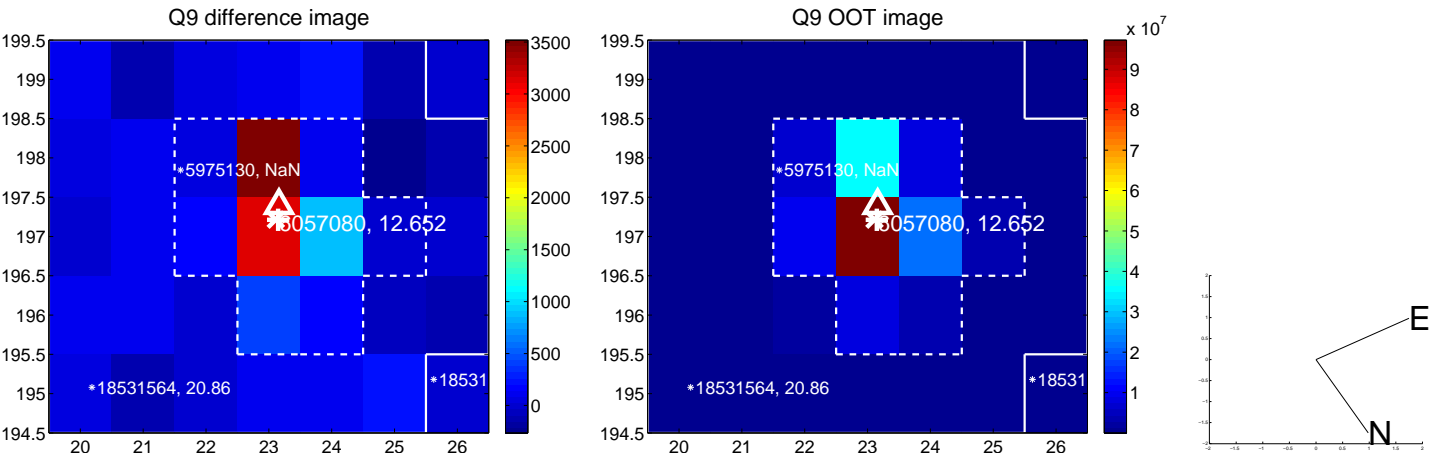
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



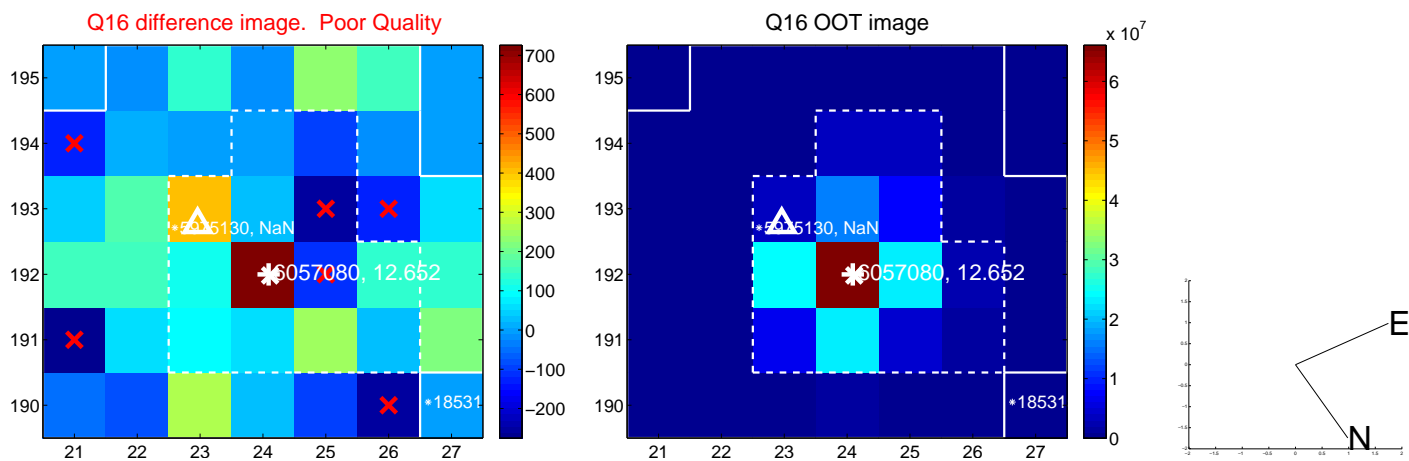
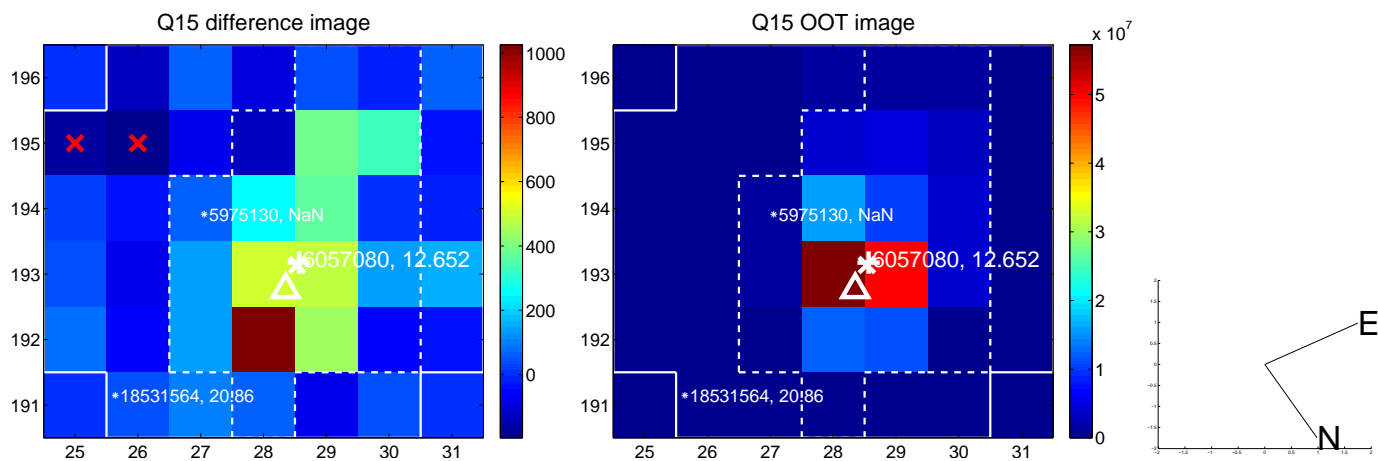
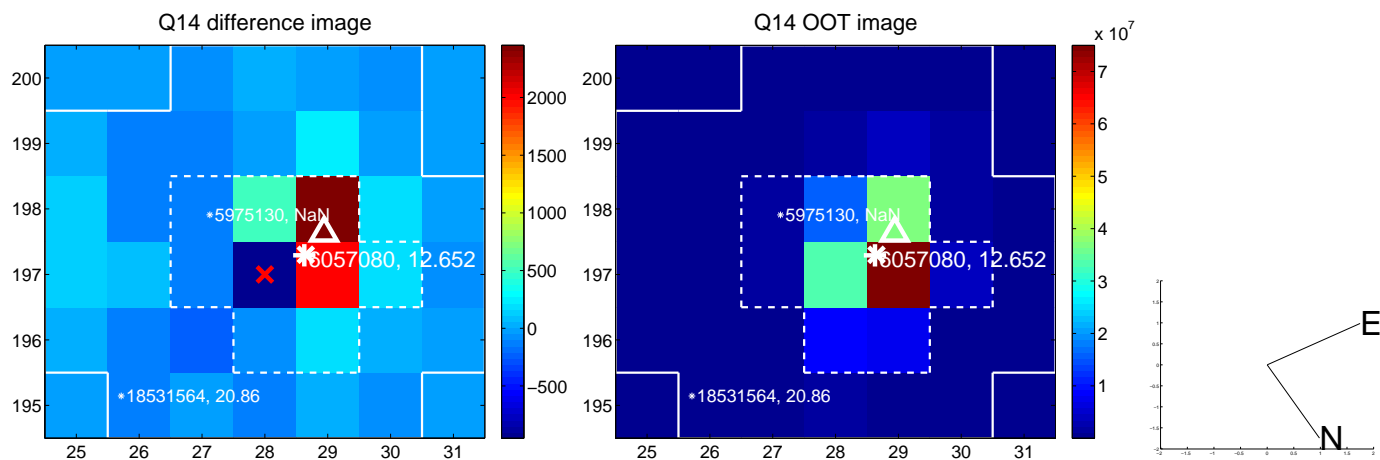
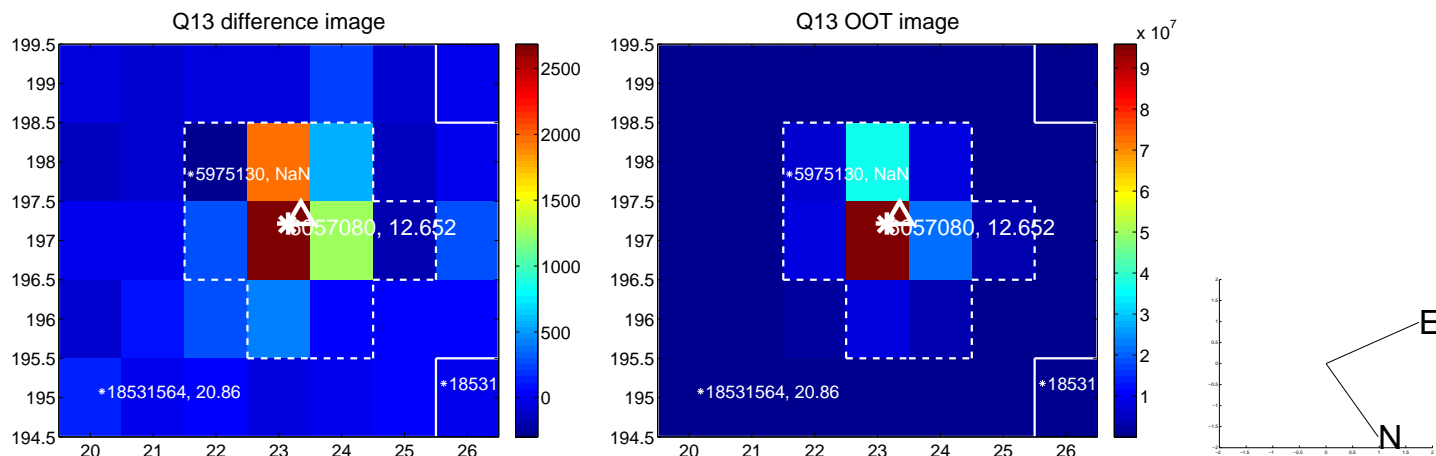
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

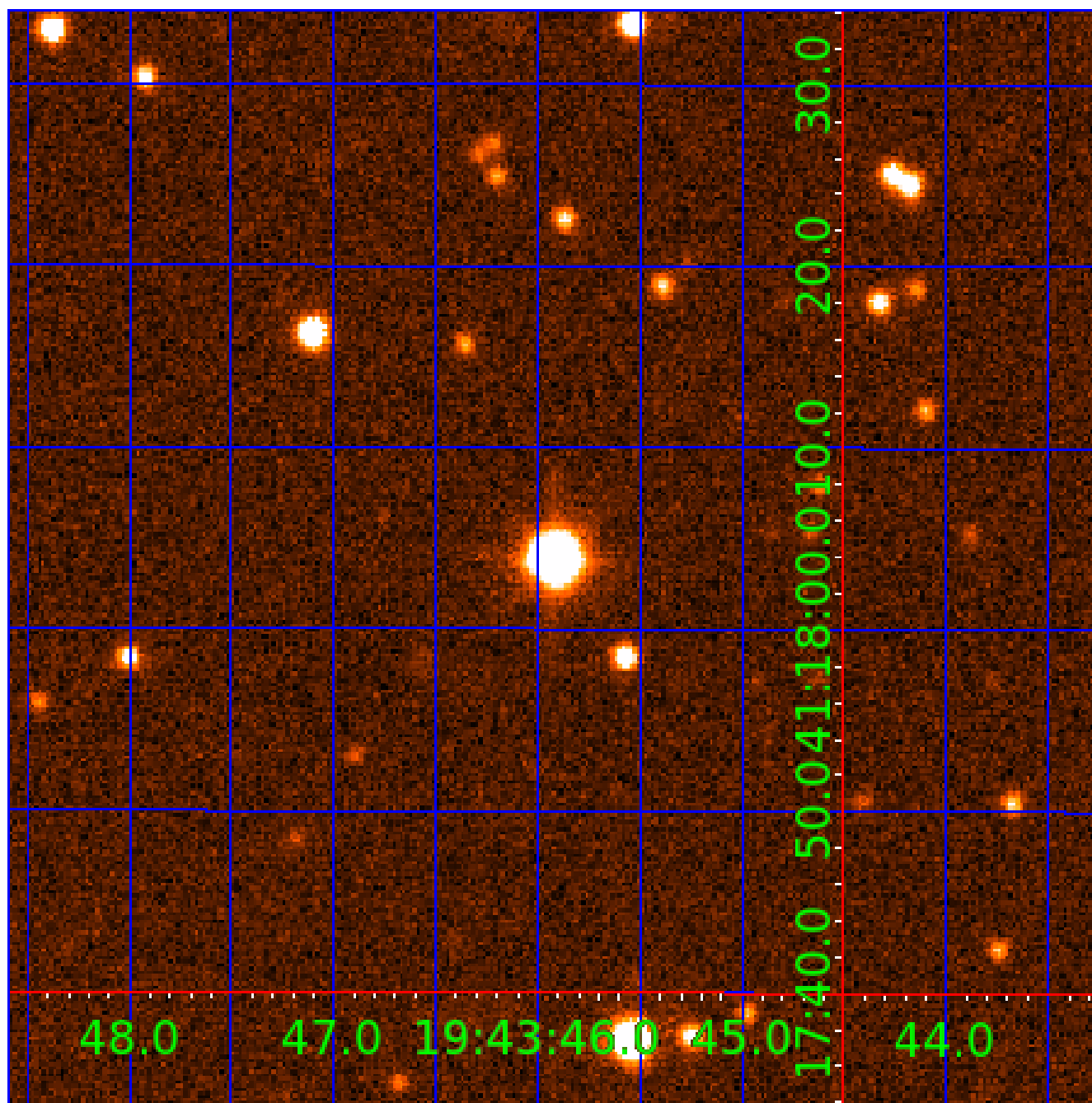


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006057080

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})
006057080-01	OBS	No	1.251049	132.254091	13.9	4.970	11.6	10.9	1.88	7627	0.84	14550.22
006057080-02	OBS	No	297.545298	240.877395	134.5	15.457	8.5	8.5	1.88	7627	2.42	9.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006057080-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT
006057080-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

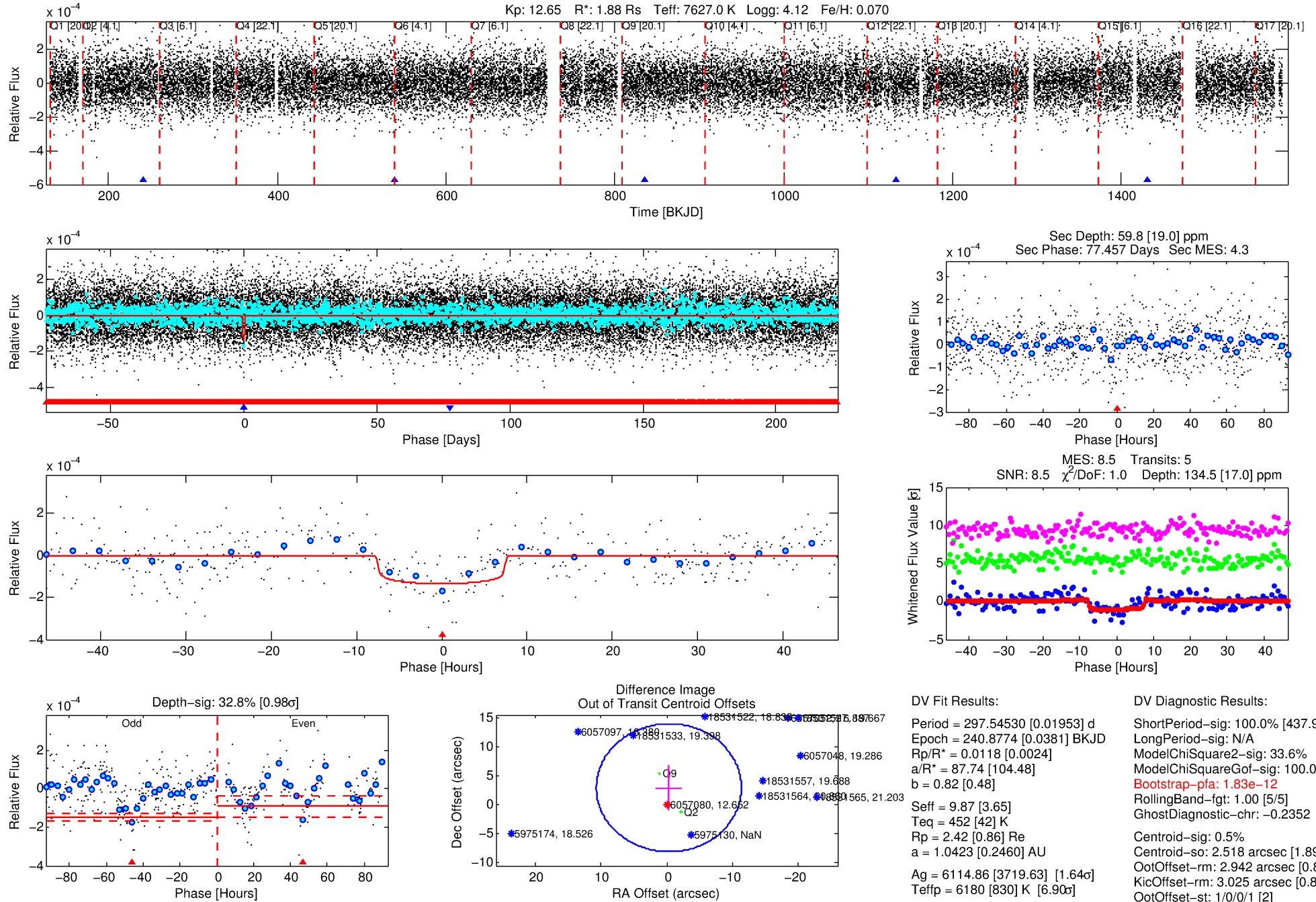
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006057080-02

No Significant Match Found

DV One-Page Summary

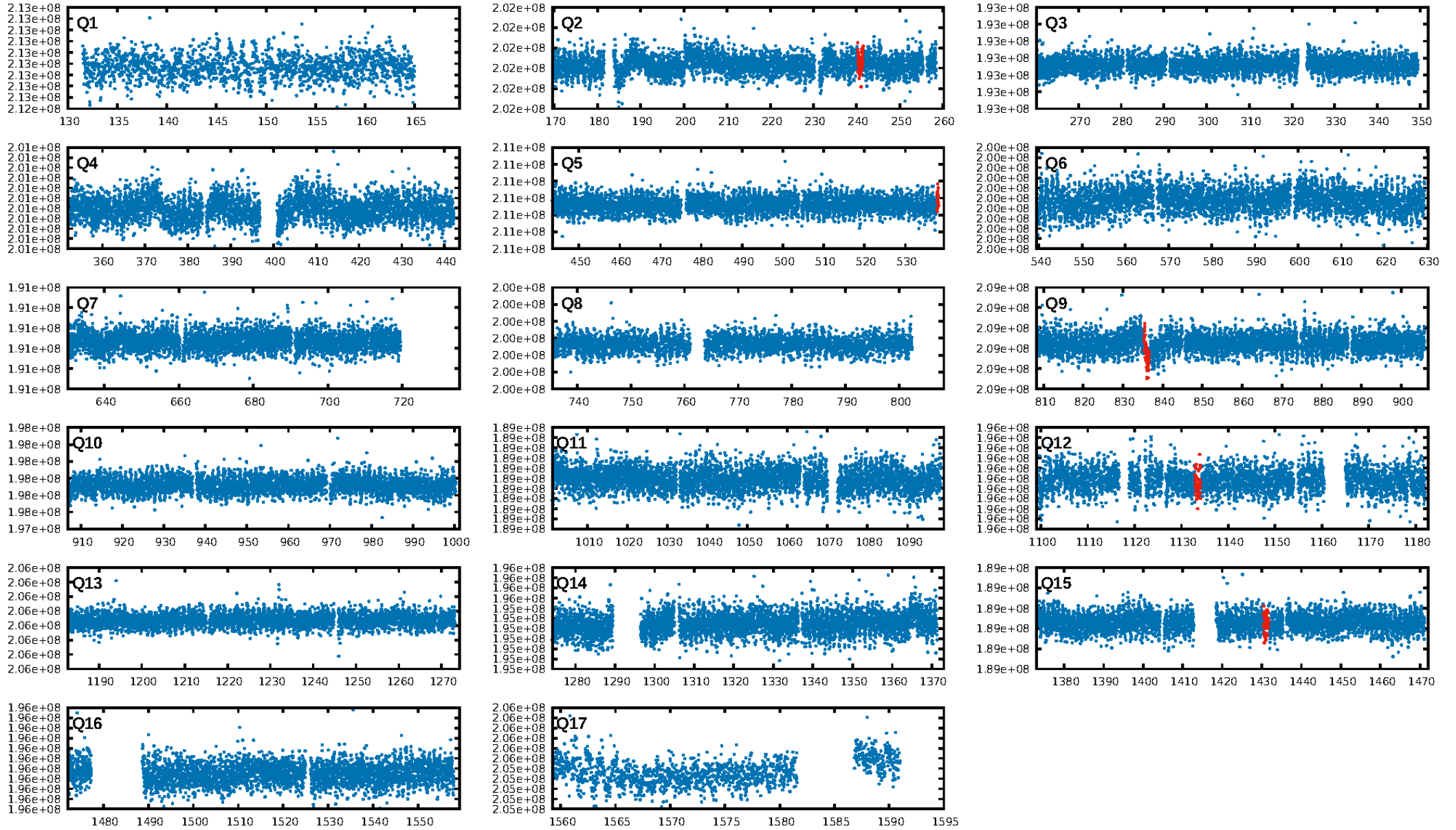
KIC: 6057080 Candidate: 2 of 2 Period: 297.545 d



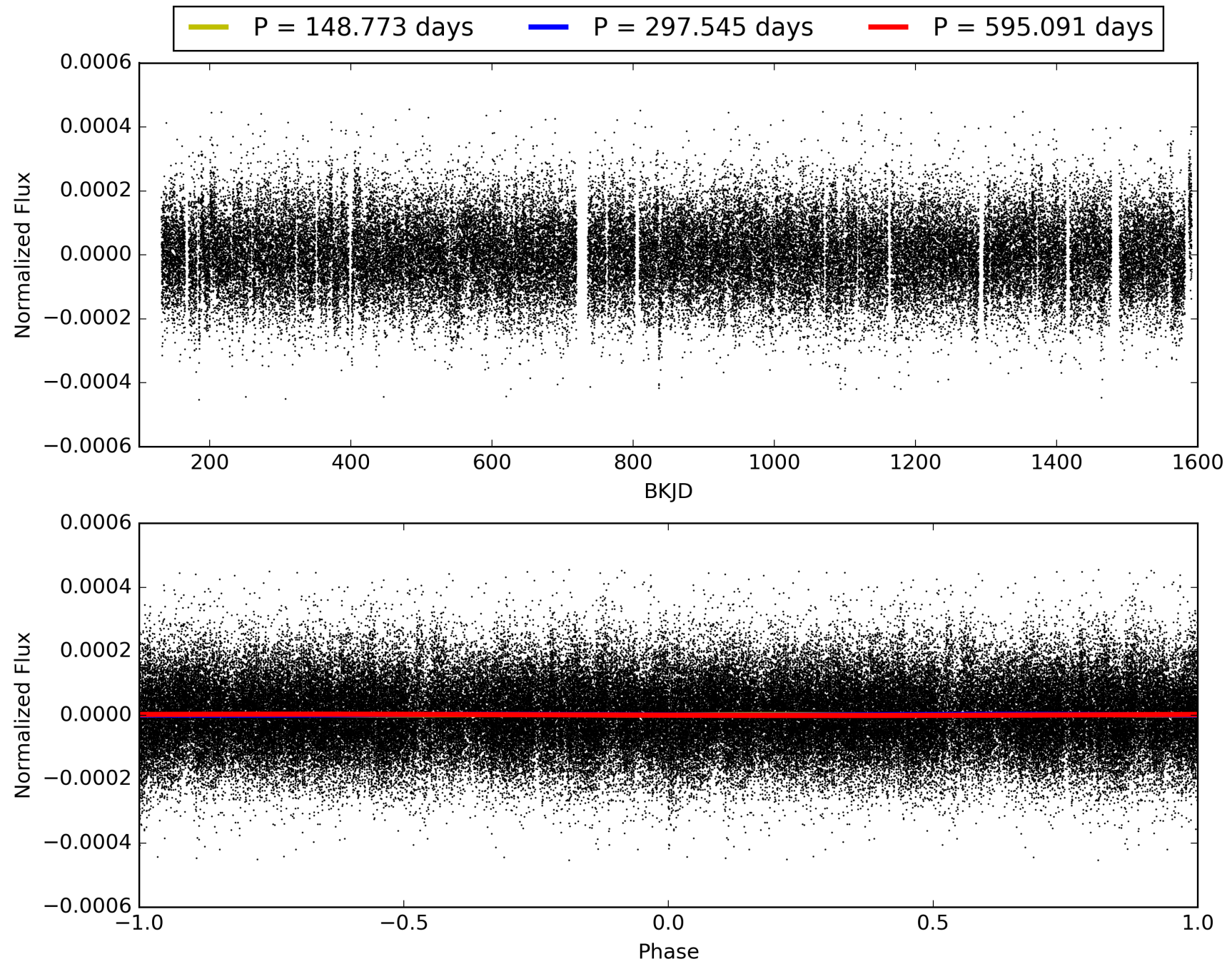
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:43:39 Z

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

TCE 006057080-02, PDC Light Curves

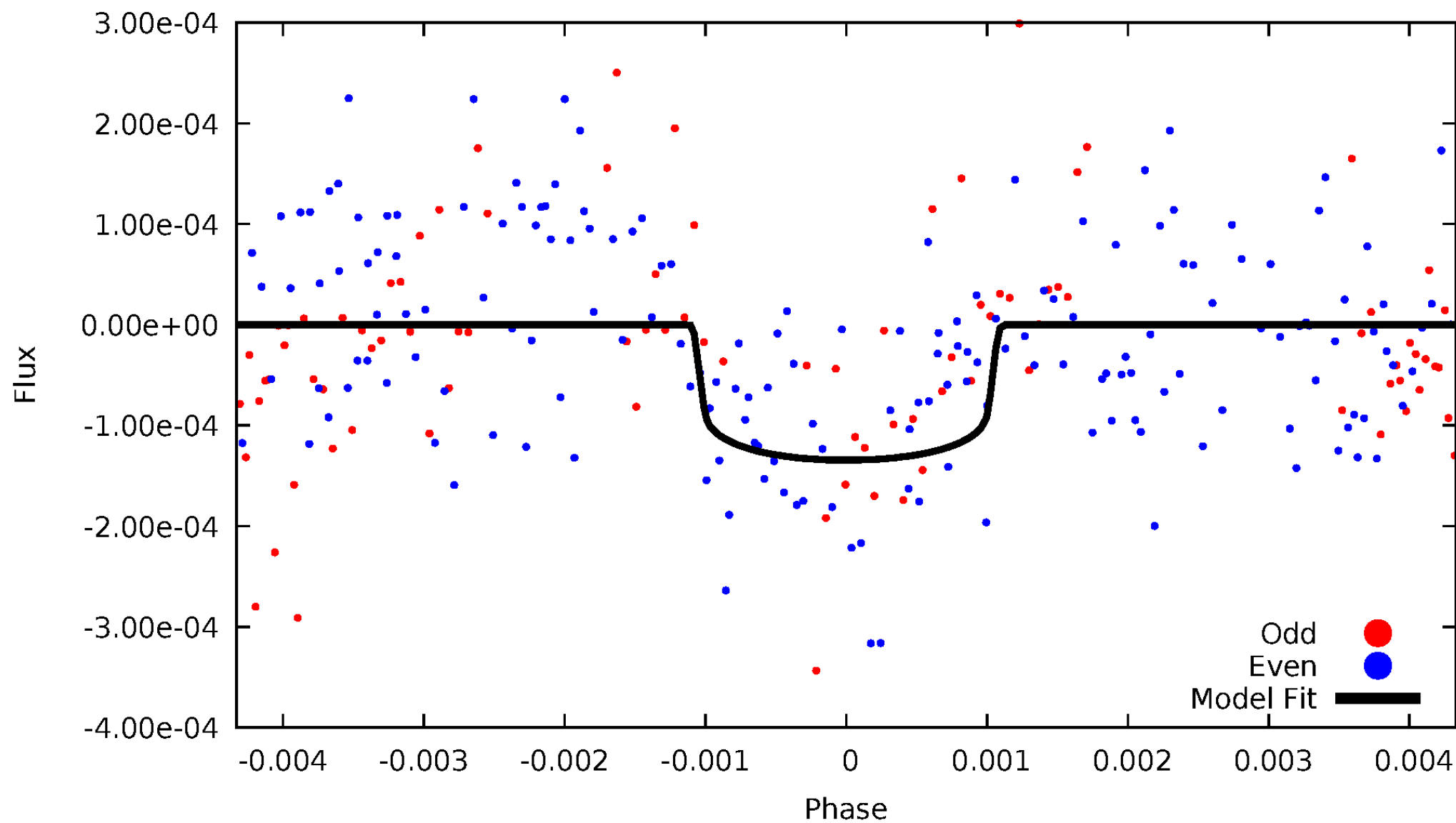


TCE 006057080-02



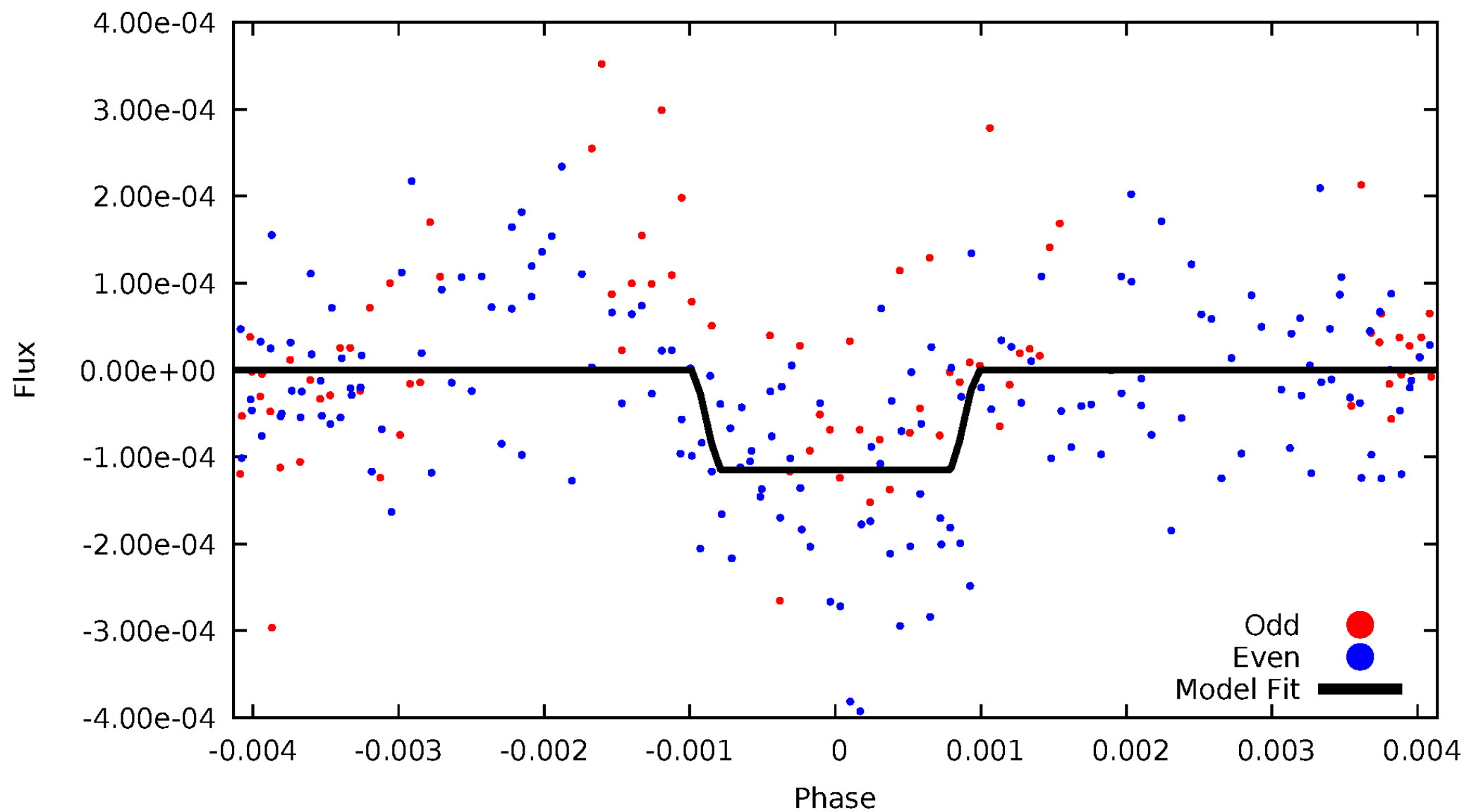
DV Odd/Even

TCE 006057080-02



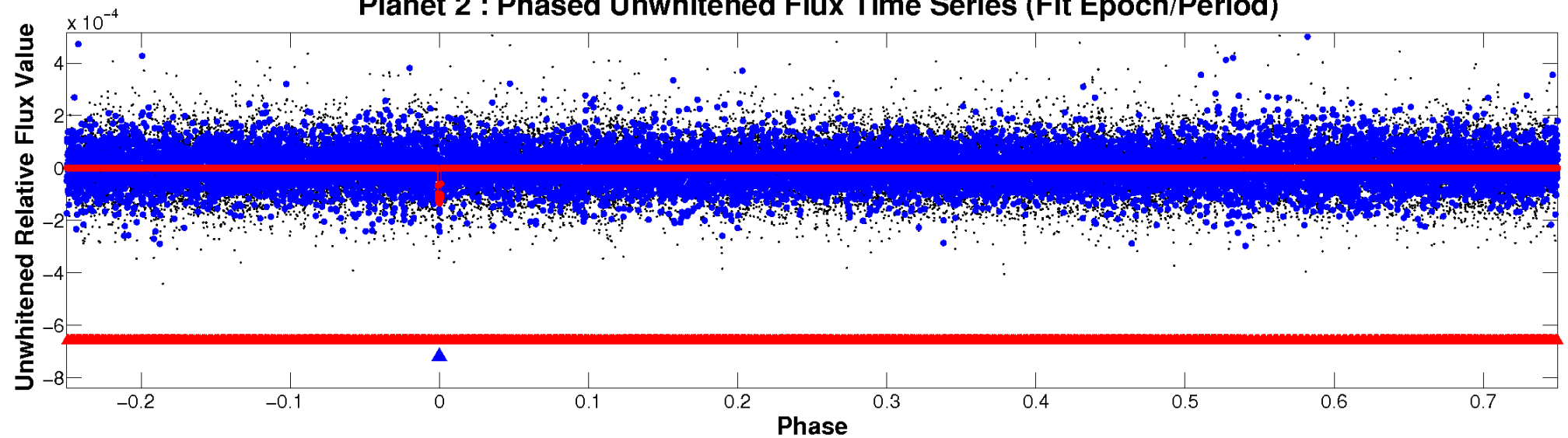
ALT Odd/Even

TCE 006057080-02

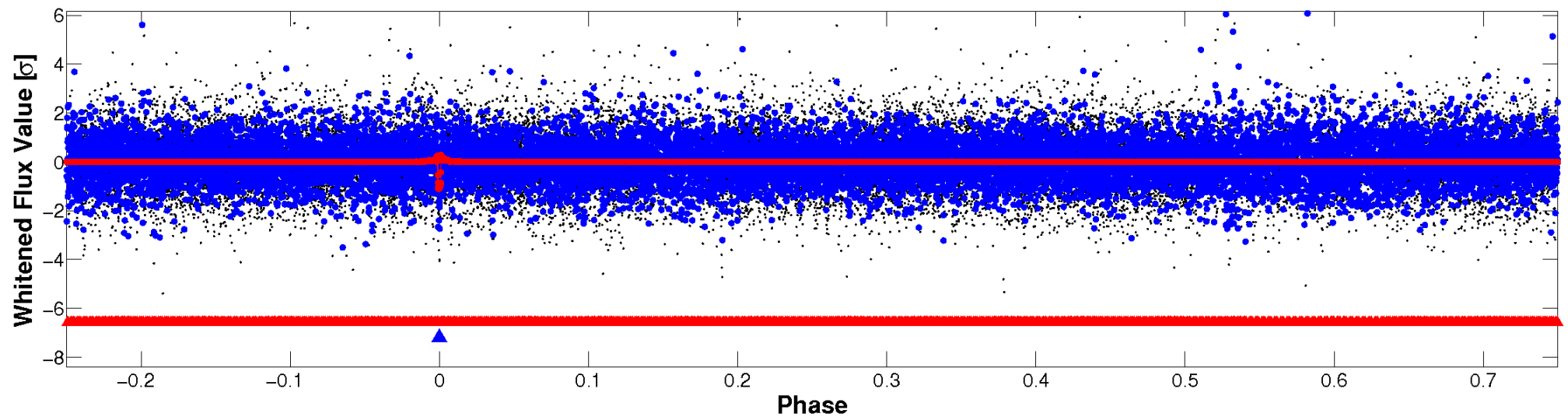


Non-Whitened Vs. Whitened Light Curve

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

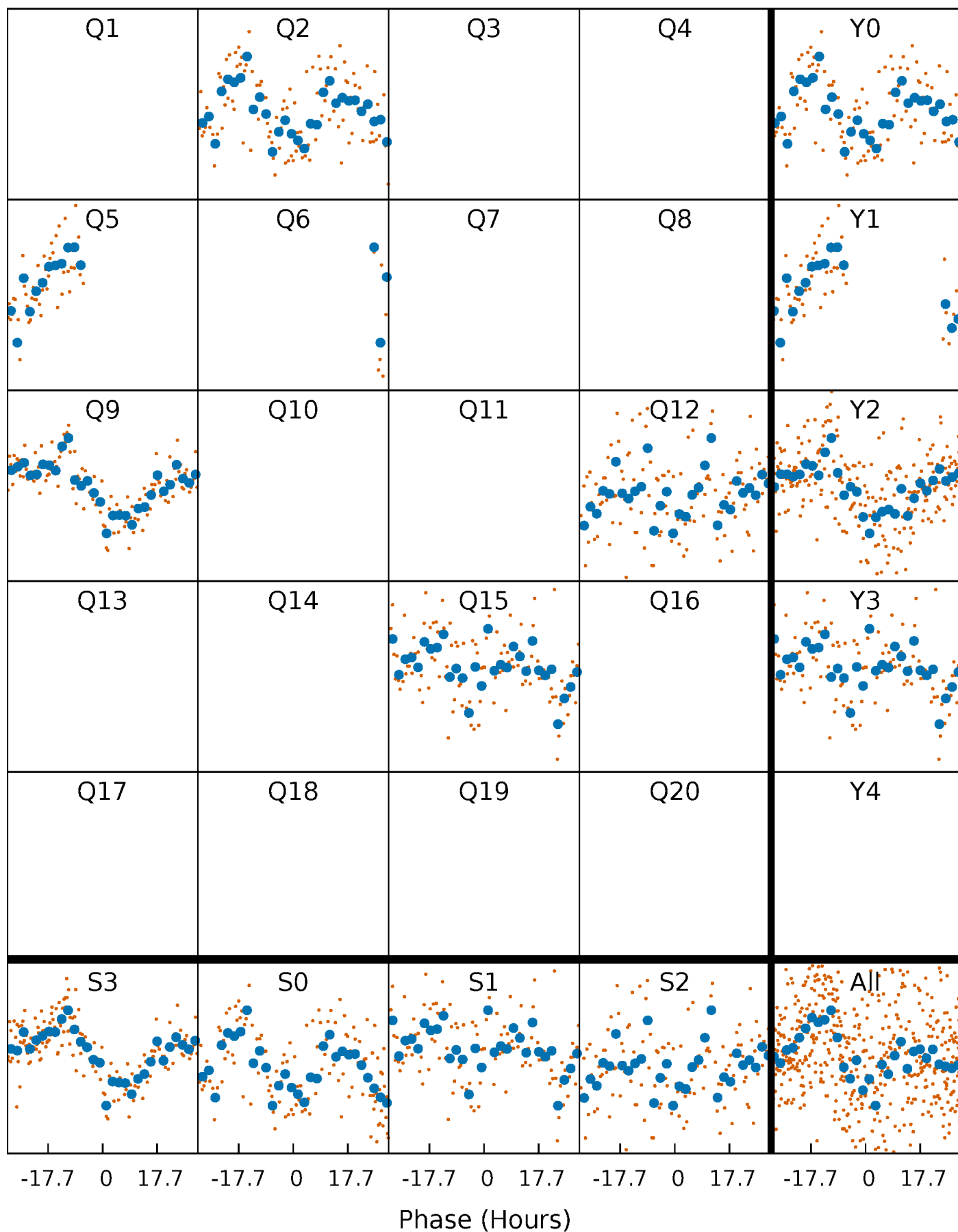


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



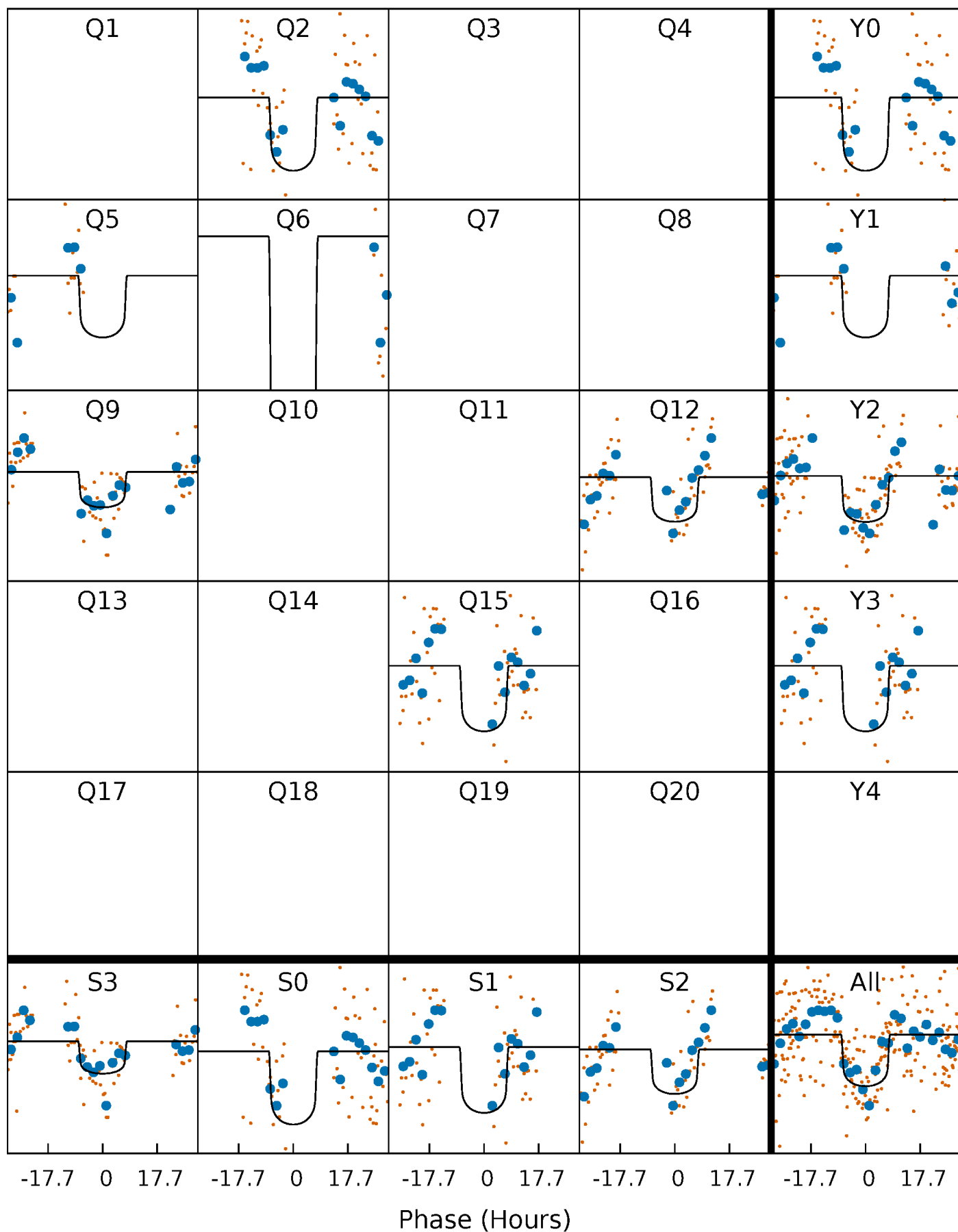
PDC Quarter-Phased Transit Curves

TCE 006057080-02 $P=297.545298$ Days $T_0=240.877395$ (BKJD)



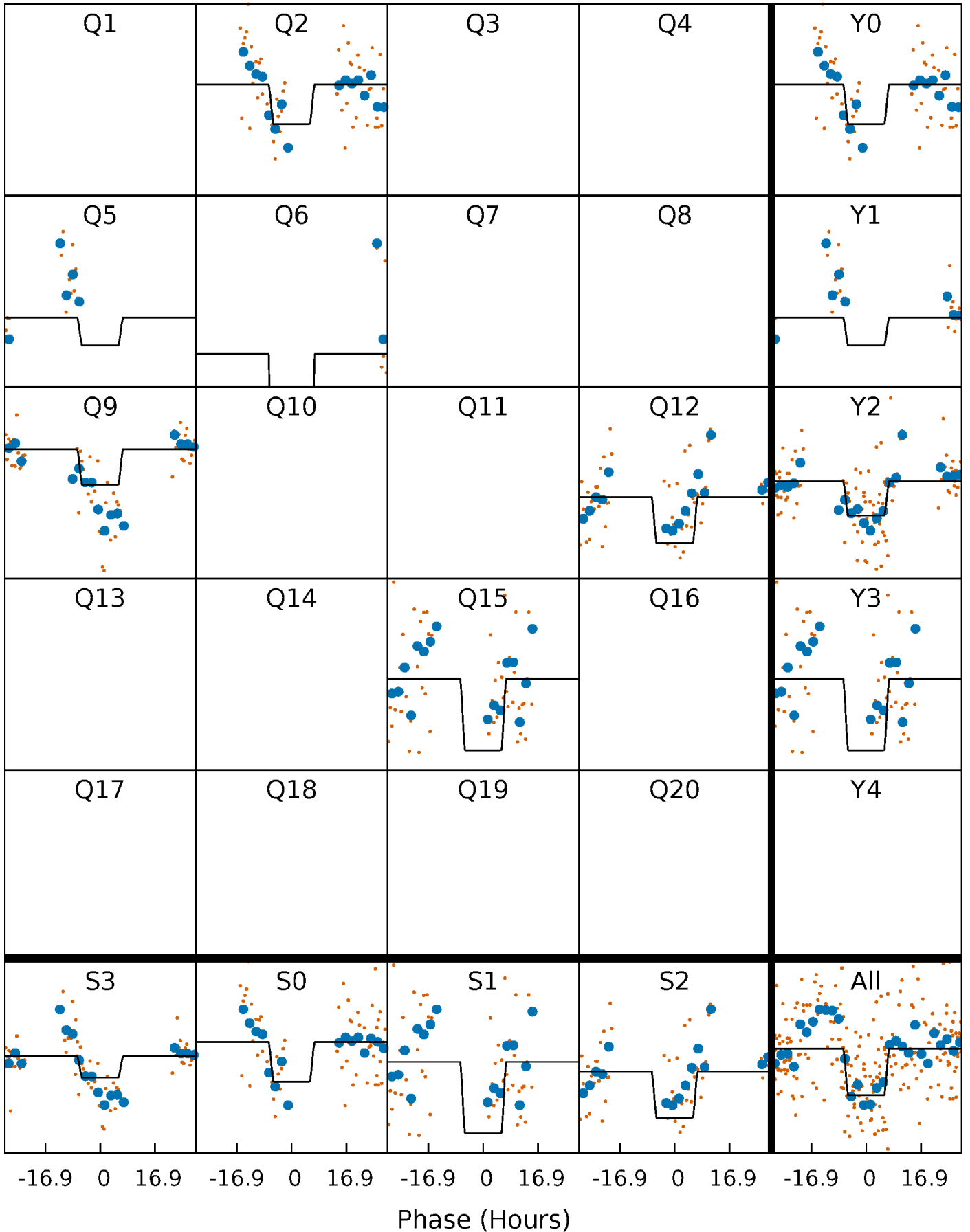
DV Quarter-Phased Transit Curves

TCE 006057080-02 $P=297.545298$ Days $T_0=240.877395$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

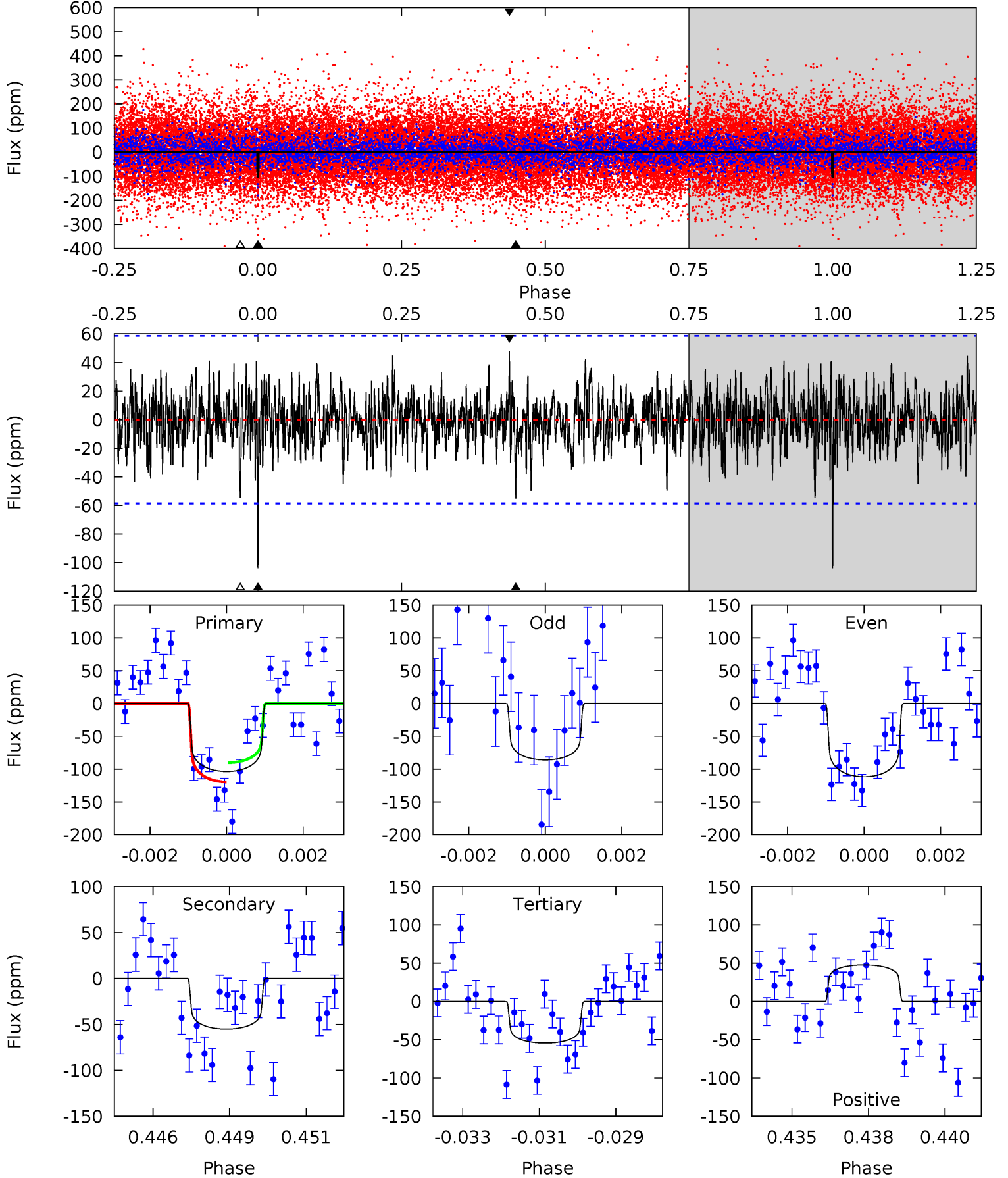
TCE 006057080-02 $P=297.573934$ Days $T_0=240.841636$ (BKJD)



DV Model-Shift Uniqueness Test

006057080-02, P = 297.545298 Days, E = 240.877395 Days

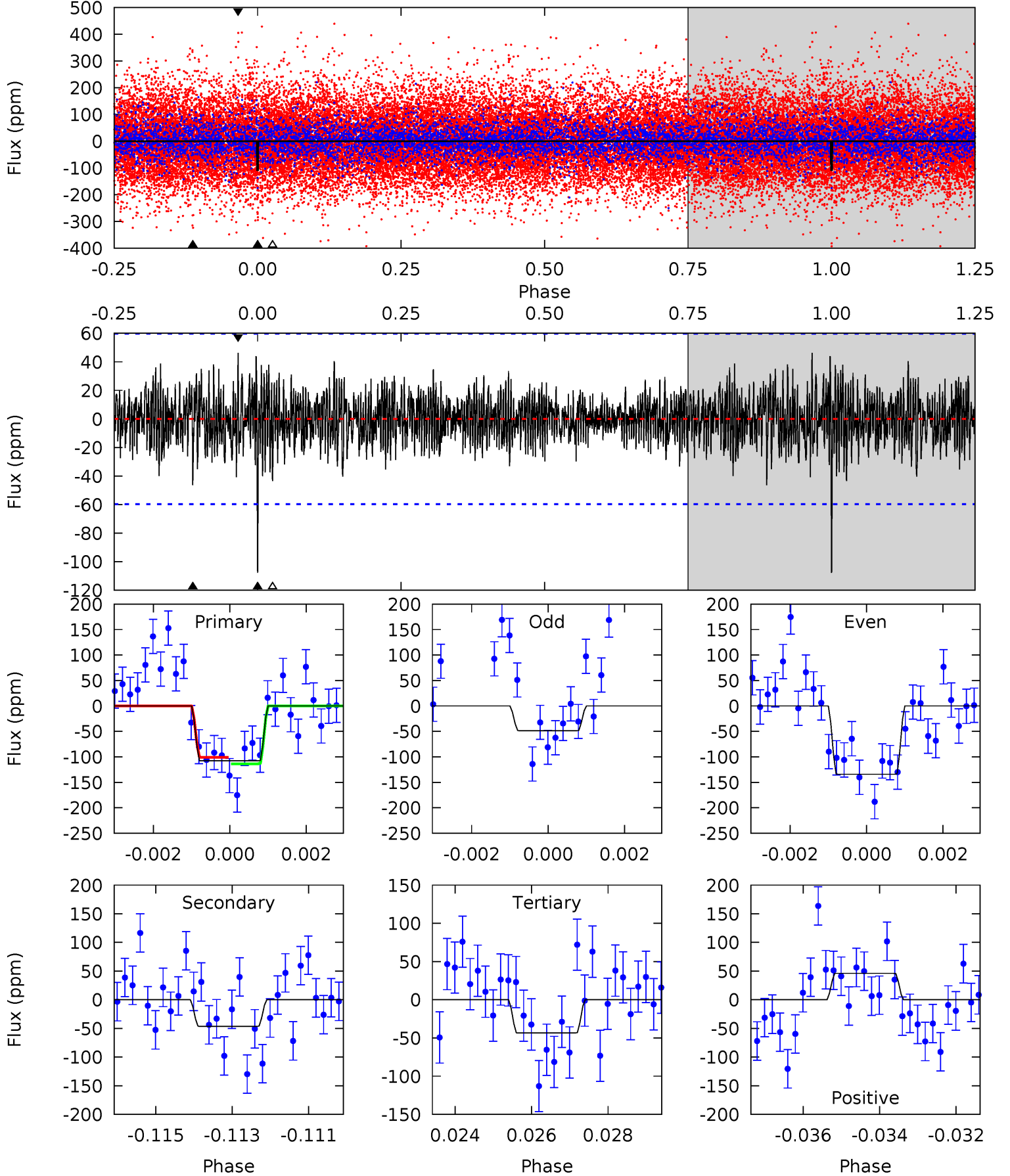
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.39	4.99	4.93	4.32	5.31	3.06	1.33	4.46	5.07	0.06	0.67	1.08	0.90	0.31	1.32



Alt Model-Shift Uniqueness Test

006057080-02, $P = 297.573934$ Days, $E = 240.841636$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.62	4.14	3.87	4.12	5.33	3.09	1.19	5.75	5.50	0.26	0.02	3.50	1.23	0.30	0.57



Stellar Parameters For KIC 006057080

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7627^{+211}_{-316}	$4.121^{+0.101}_{-0.174}$	$0.070^{+0.150}_{-0.350}$	$1.881^{+0.549}_{-0.338}$	$1.703^{+0.204}_{-0.250}$	$0.360^{+0.201}_{-0.175}$
	+3%/-4%	+2%/-4%	+214%/-500%	+29%/-18%	+12%/-15%	+56%/-49%
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 006057080-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-55 ± 11	$2.47^{+0.59}_{-0.58}$	636^{+43}_{-37}	5917^{+801}_{-605}	5310^{+3729}_{-2092}
Alt.	-46 ± 11	$2.24^{+0.65}_{-0.54}$	638^{+43}_{-38}	5925^{+955}_{-631}	5361^{+4514}_{-2164}

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 $A_{obs} \gg 1.0$

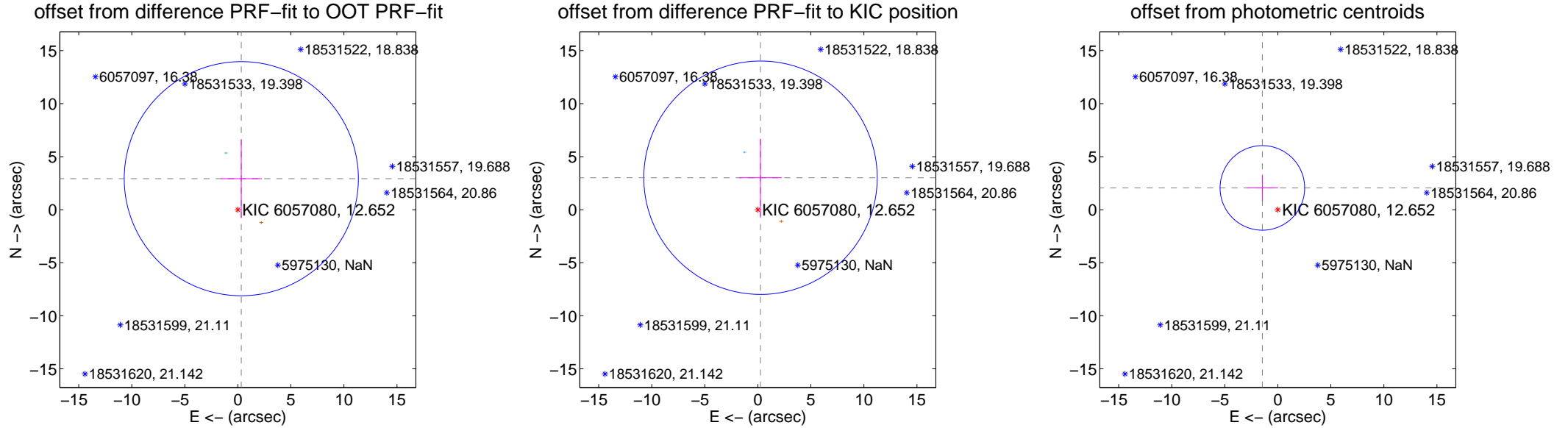
DV Centroid Data

Supplemental centroid analysis for 006057080-02. Kepler magnitude: 12.65. Transit SNR 8.49

There are 1 quarters with good PRF difference image offsets

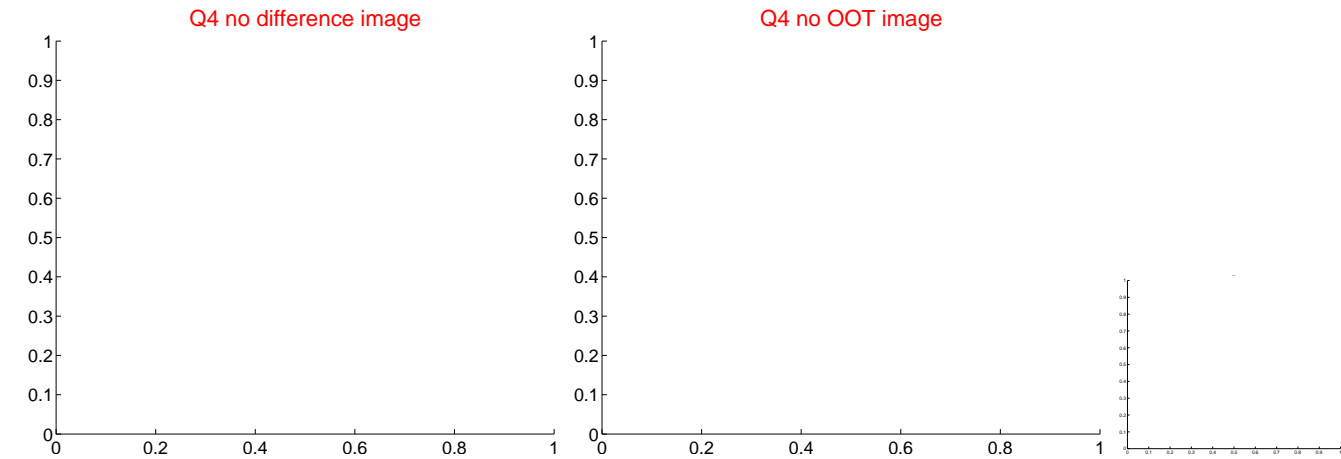
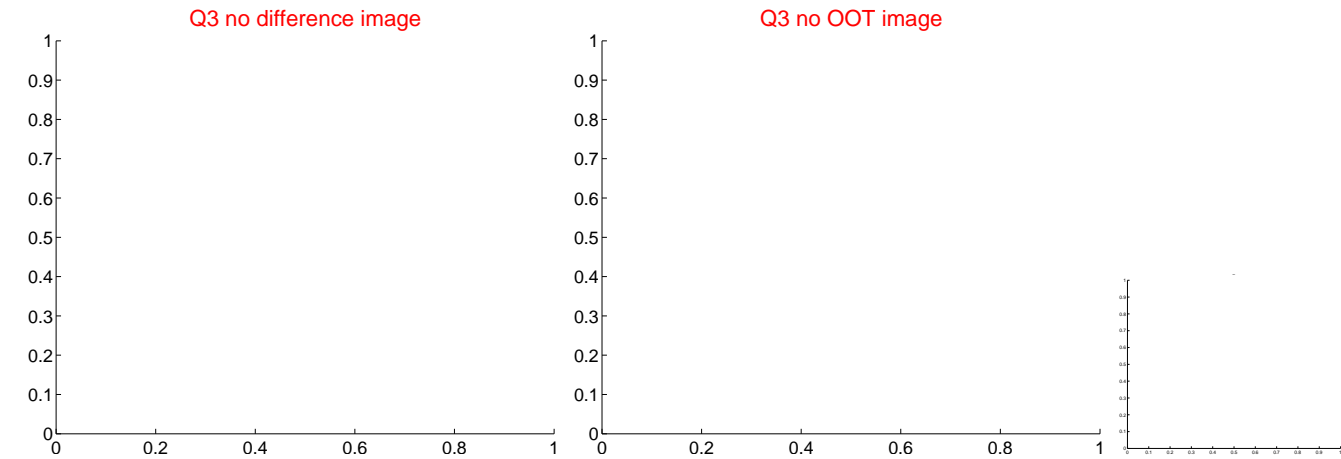
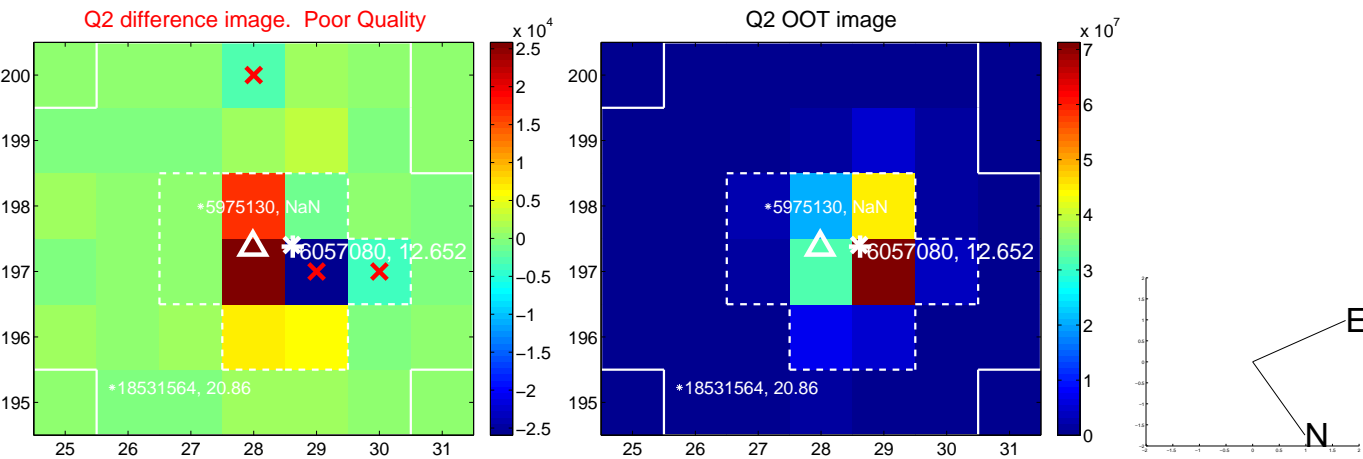
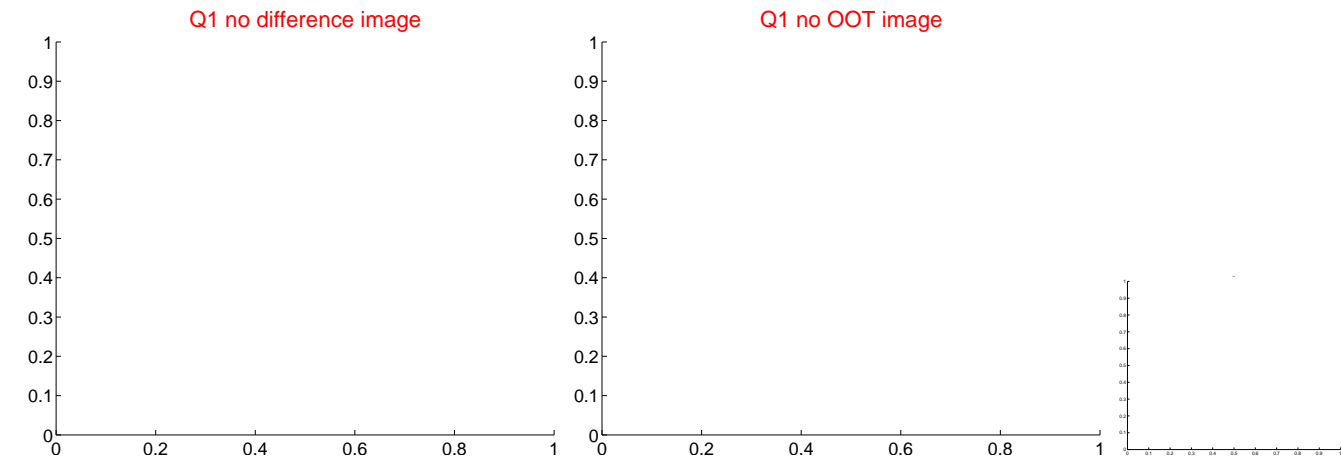
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.942 ± 3.678	0.80	-0.324 ± 1.932	2.925 ± 3.694
PRF-fit source offset from KIC position	3.025 ± 3.666	0.83	-0.252 ± 2.003	3.015 ± 3.675
photometric centroid source offset	2.52 ± 1.33	1.89	1.45 ± 1.48	2.05 ± 1.25



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.

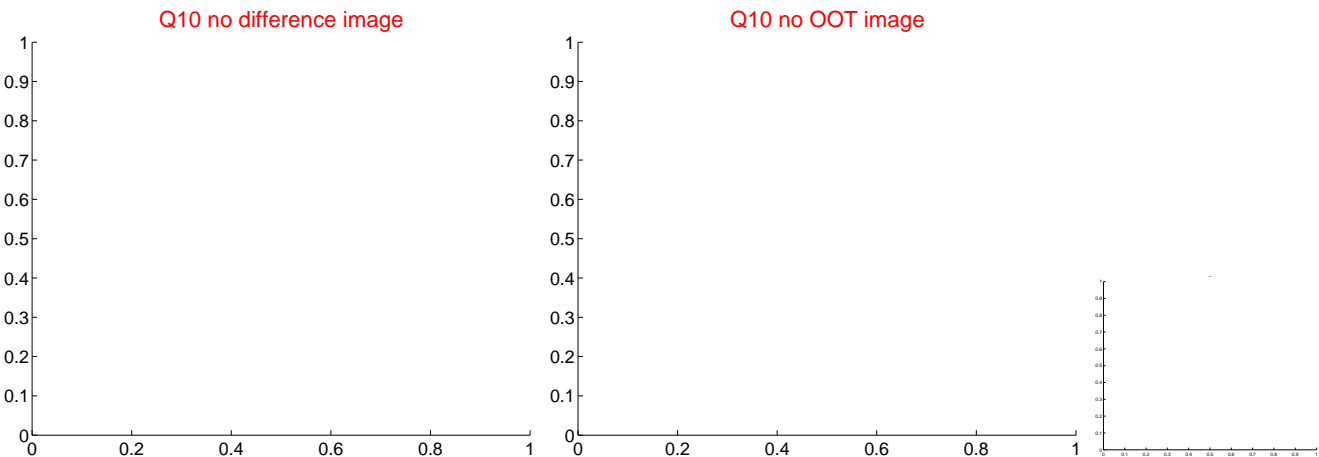
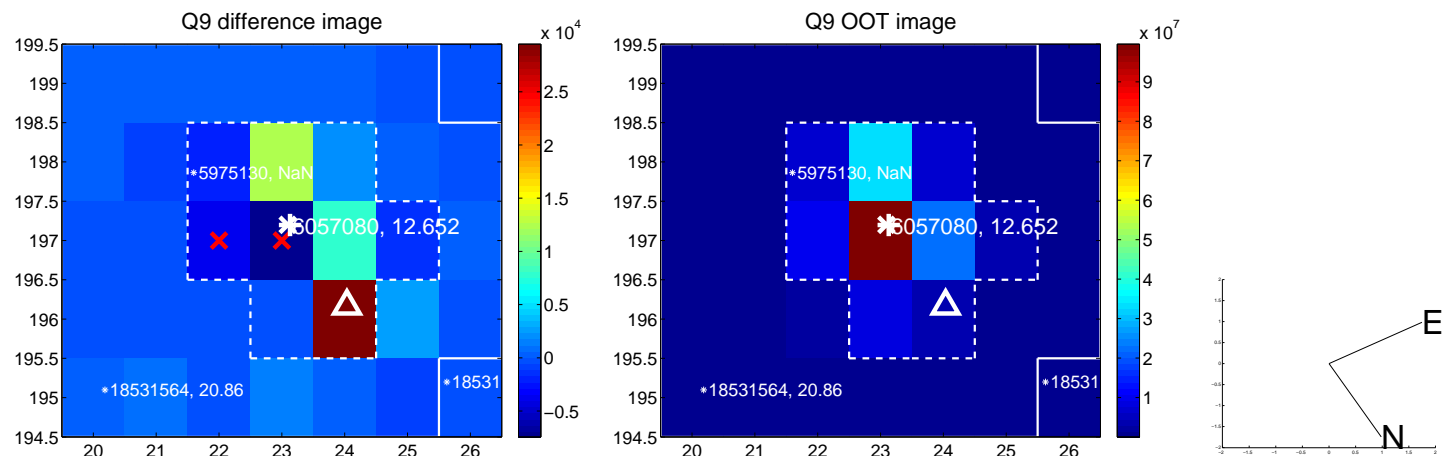
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



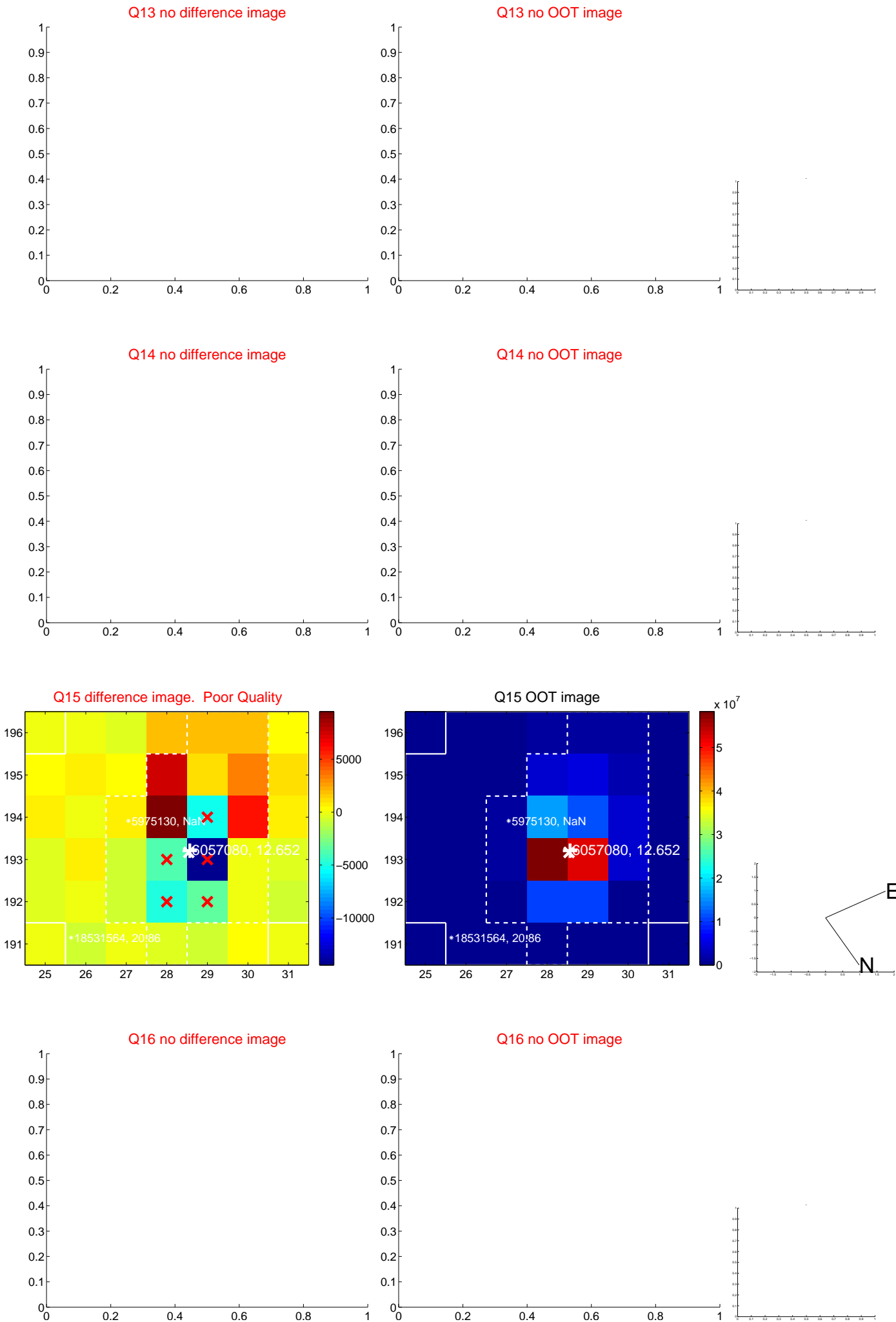
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



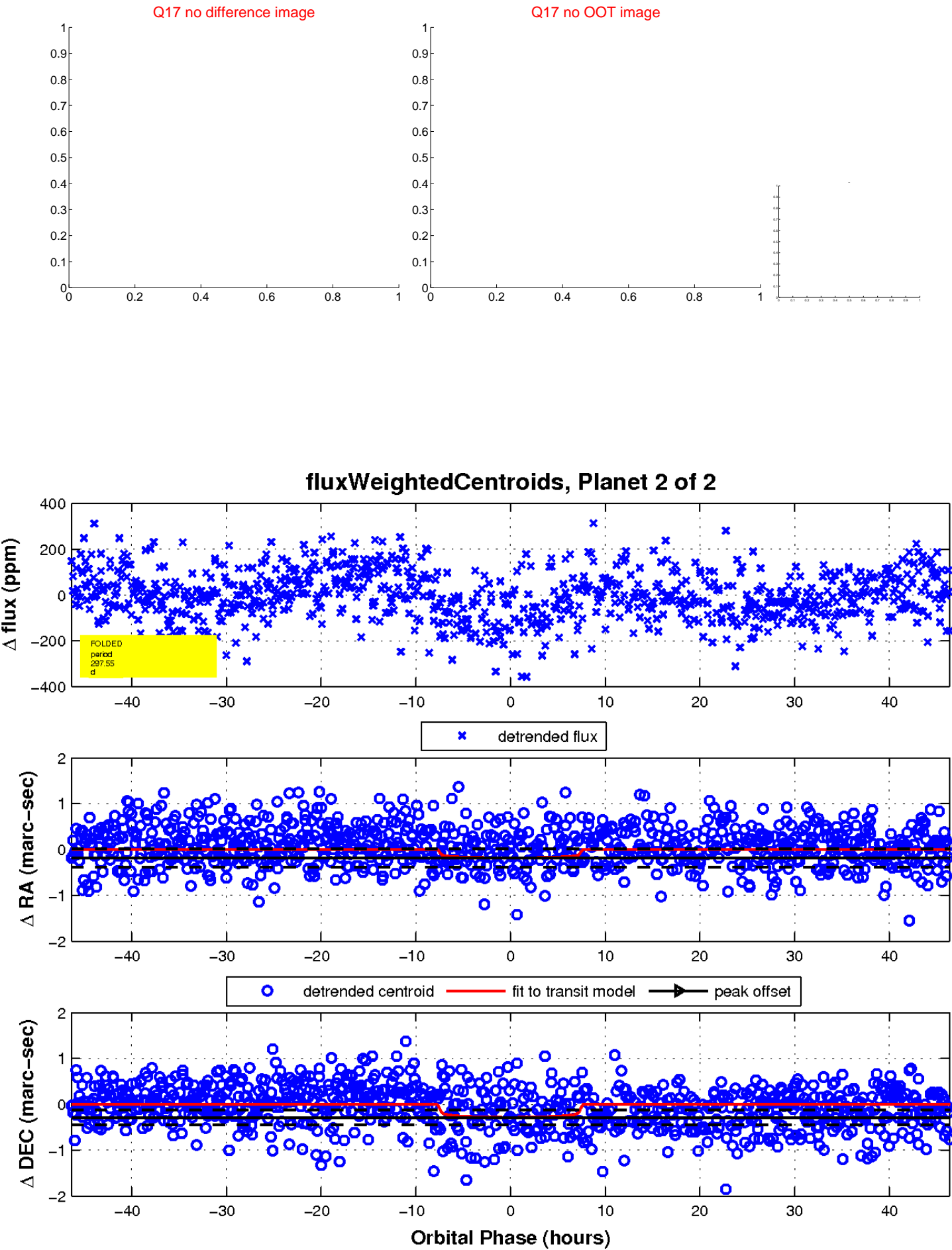
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

