

KIC 005980061

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})
005980061-01	OBS	No	0.630529	131.681526	92.9	1.069	10.4	10.8	0.89	5458	1.05	3329.00
005980061-02	OBS	4817.01	0.630534	131.995262	121.1	0.938	10.6	13.6	0.89	5458	1.20	3328.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005980061-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005980061-02	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET

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

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

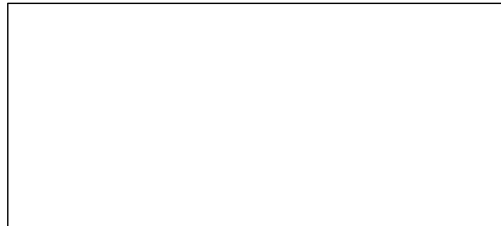
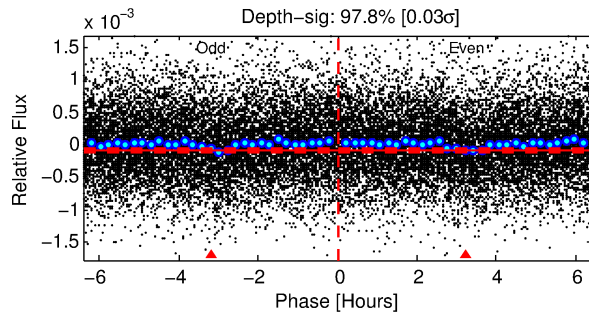
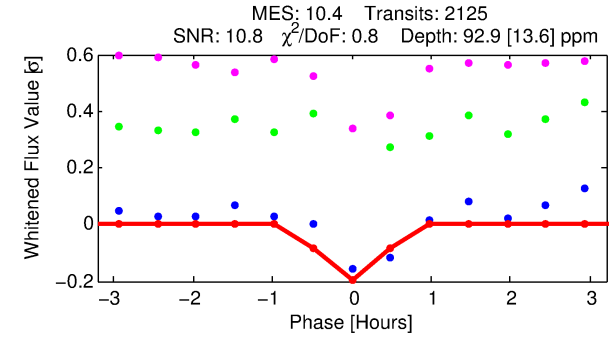
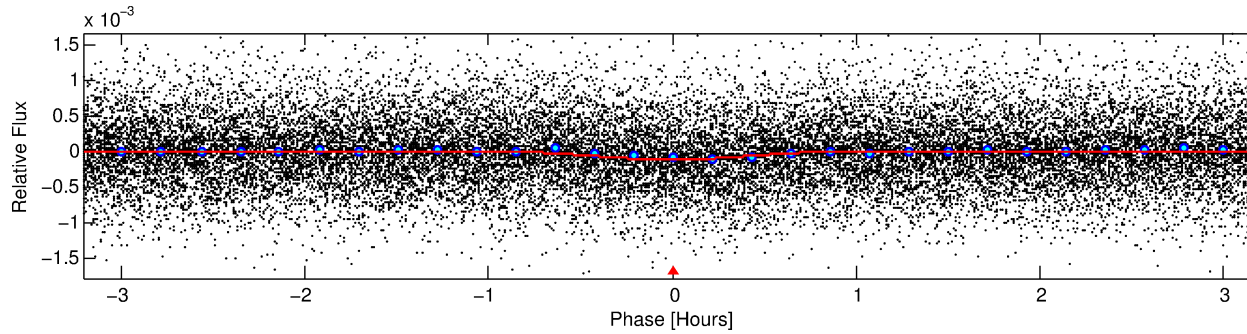
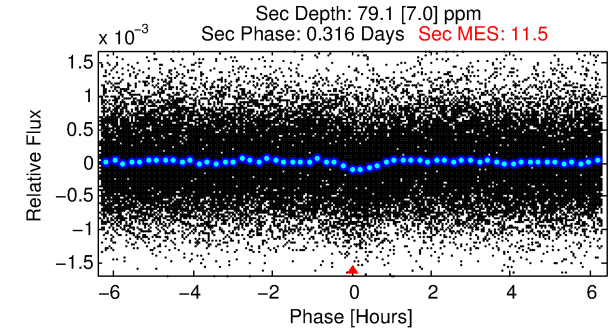
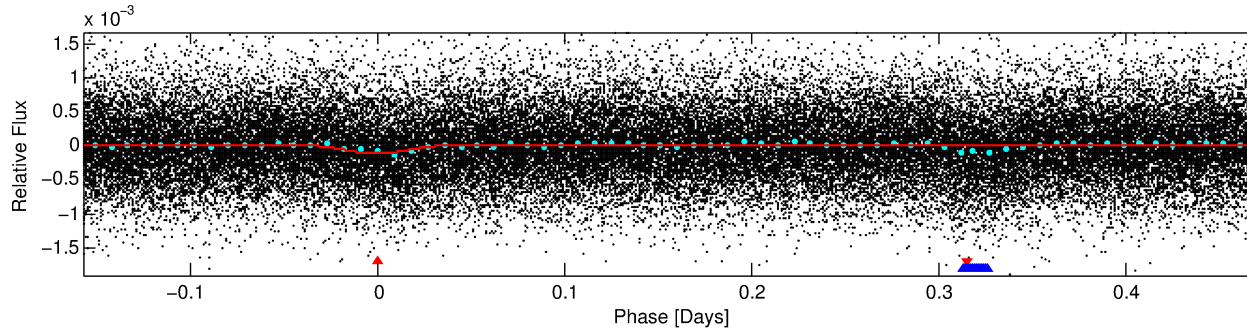
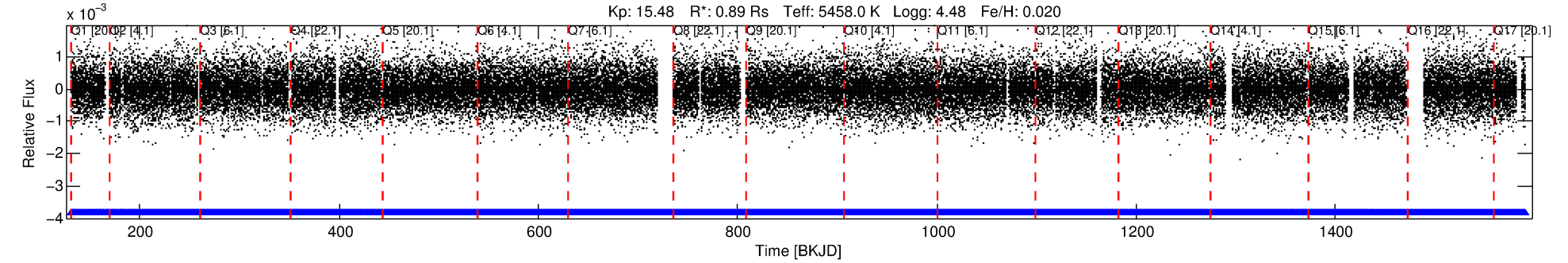
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005980061-01

No Significant Match Found

DV One-Page Summary

KIC: 5980061 Candidate: 1 of 2 Period: 0.631 d
KOI: K04817 Corr: No Ephemeris Match



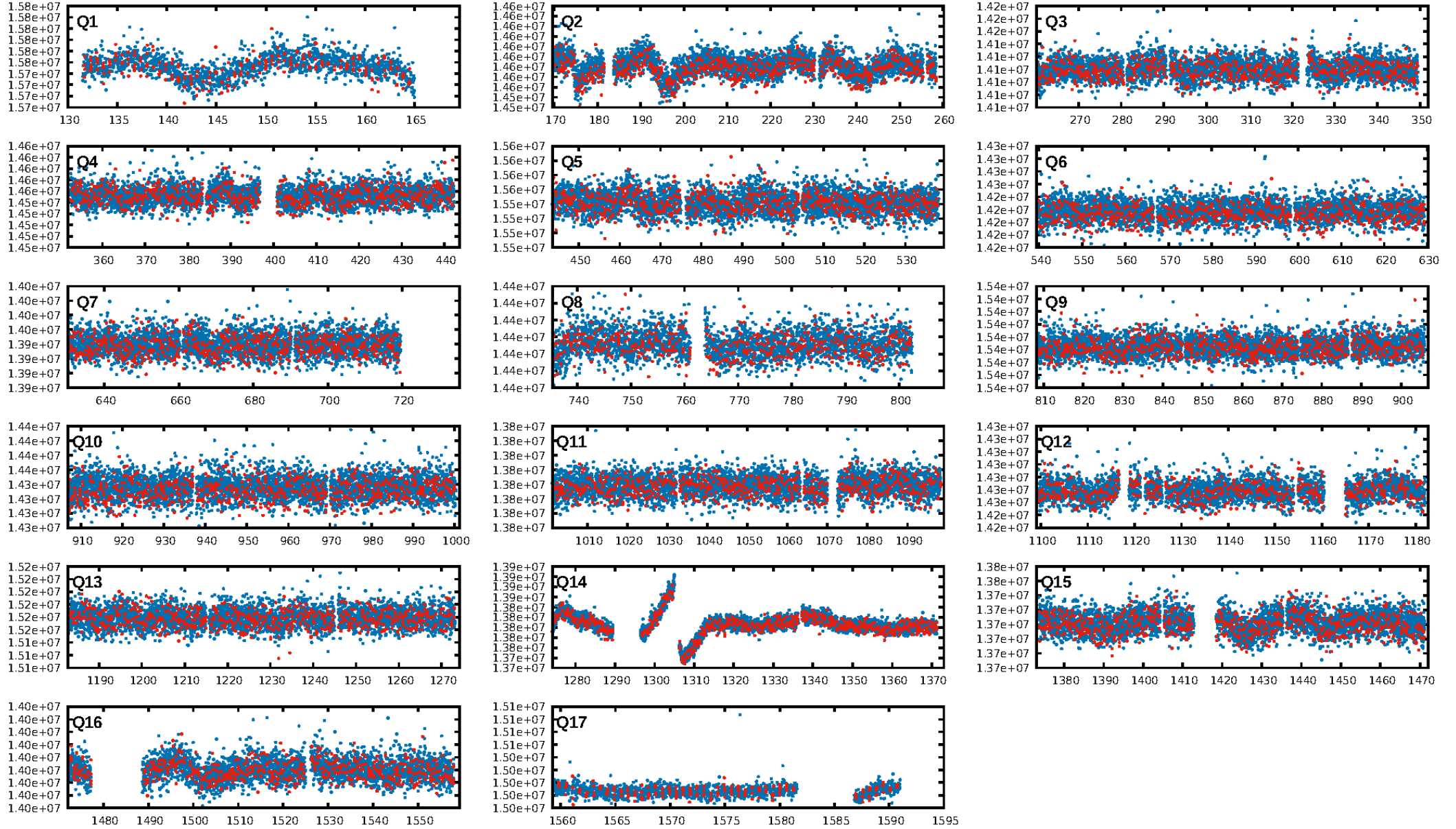
DV Fit Results:

Period = 0.63053 [0.00001] d
Epoch = 131.6815 [0.0017] BKJD
Rp/R* = 0.0107 [0.0085]
a/R* = 2.25 [6.33]
b = 0.90 [0.74]
Seff = 3329.00 [1007.35]
Teff = 1937 [147] K
Rp = 1.05 [0.86] Re
a = 0.0138 [0.0026] AU
Ag = 7.57 [12.19] [0.54σ]
Teffp = 4968 [1978] K [1.53σ]

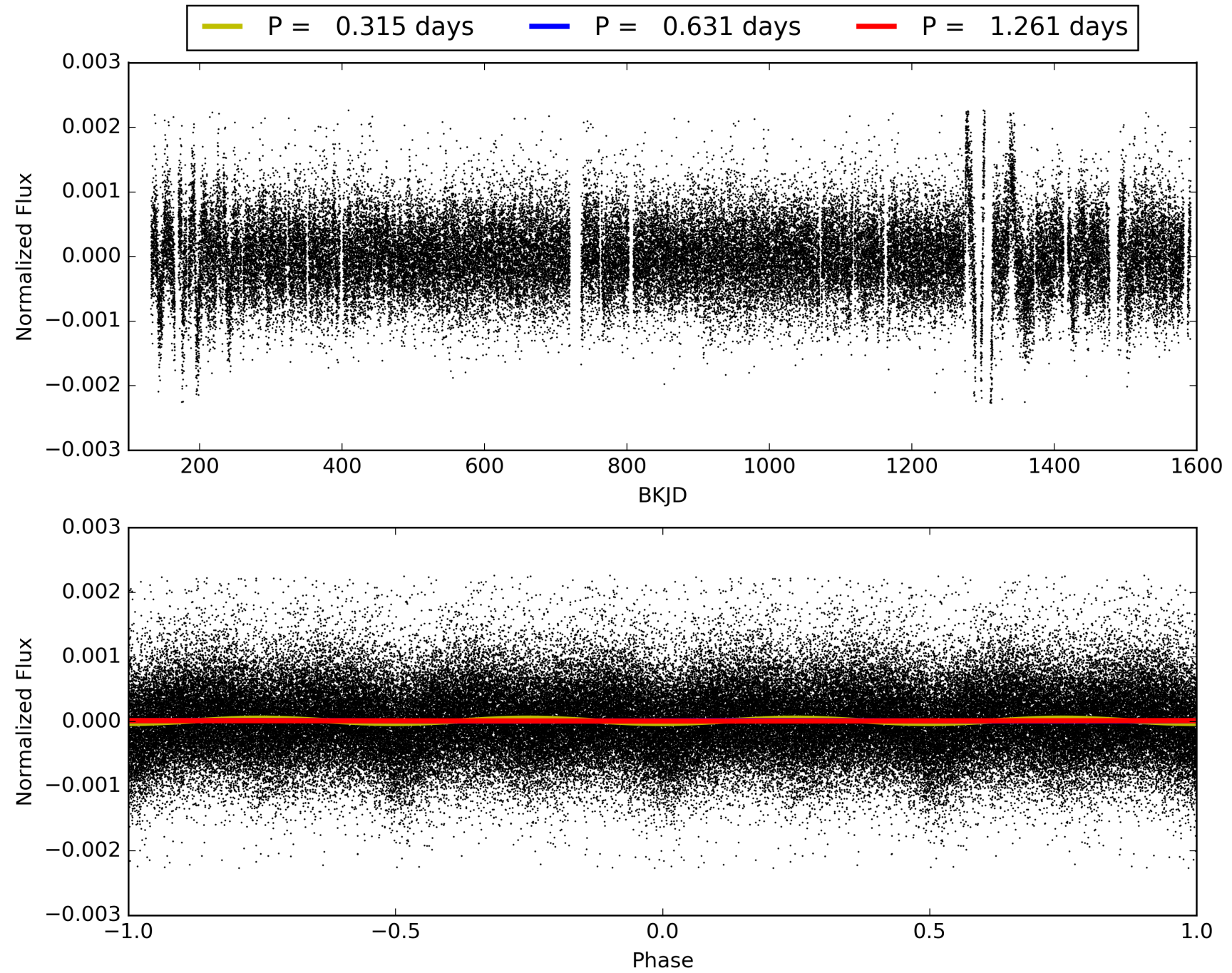
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.34e-27
RollingBand-fgt: 1.00 [2030/2030]
GhostDiagnostic-chr: -0.3034
Centroid-sig: 0.0%
Centroid-so: 15.534 arcsec [12.58σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005980061-01, PDC Light Curves

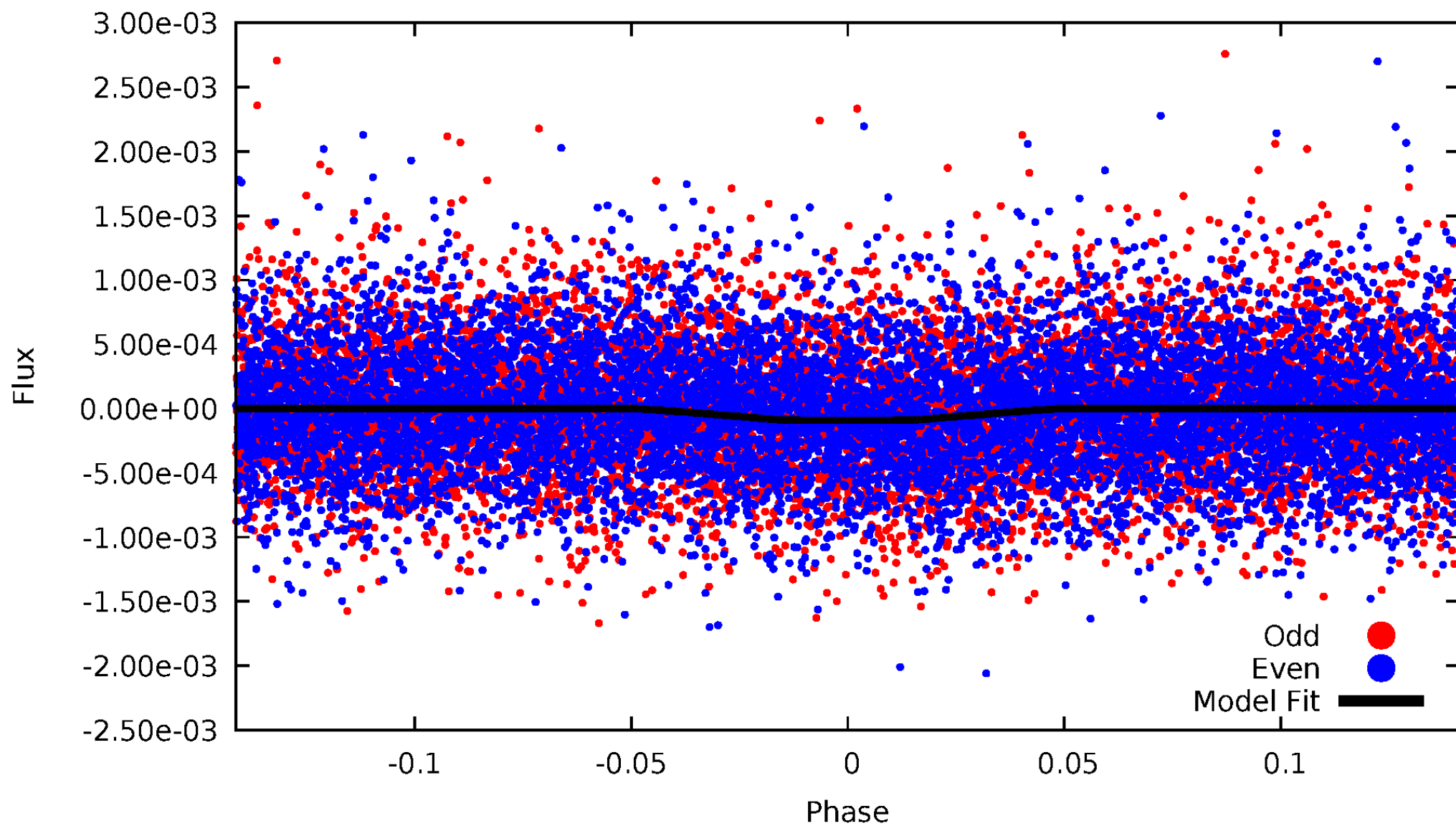


TCE 005980061-01



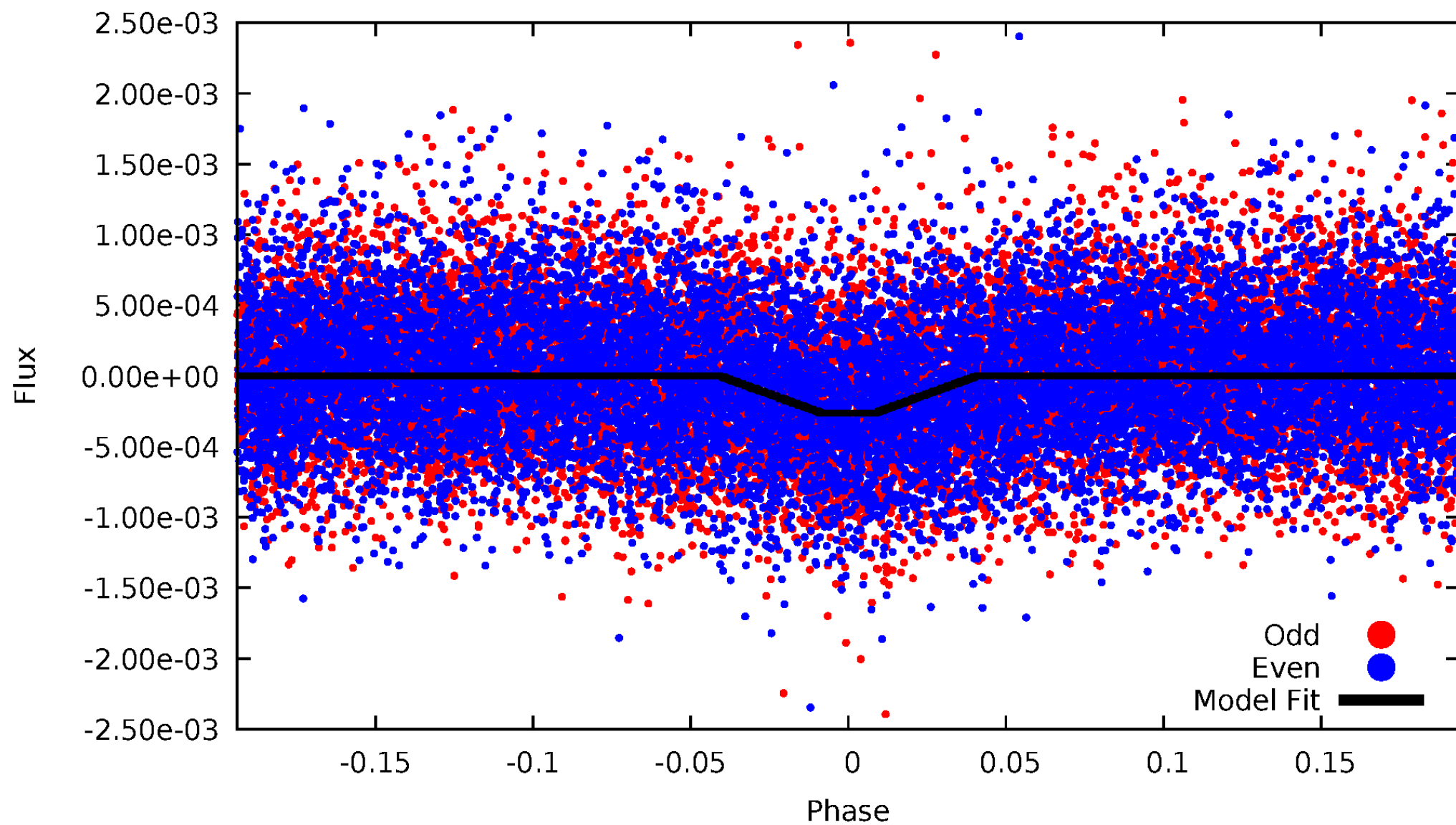
DV Odd/Even

TCE 005980061-01



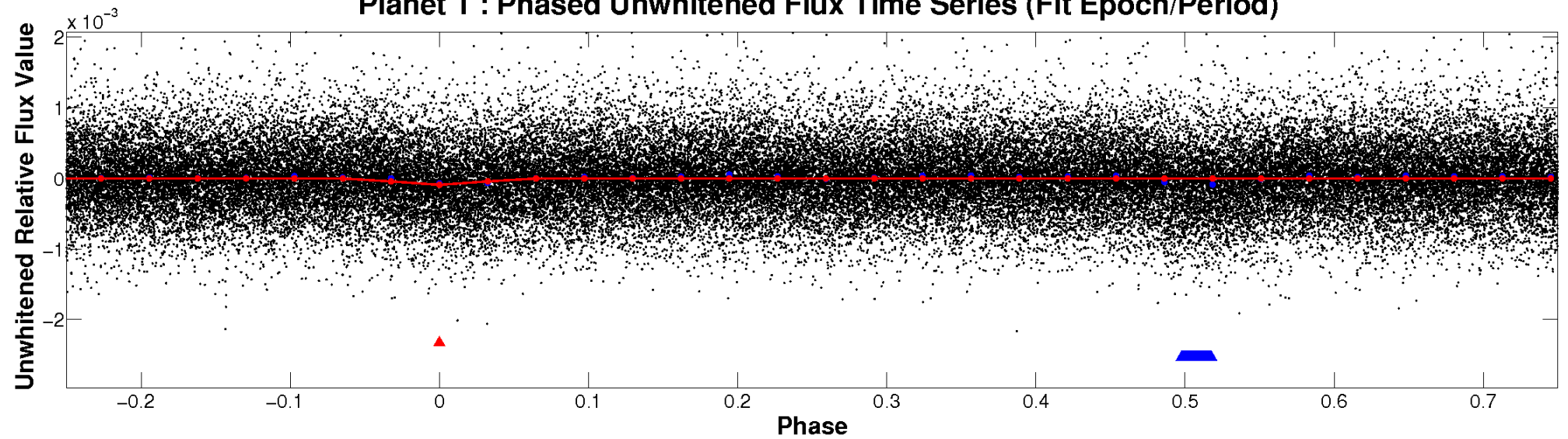
ALT Odd/Even

TCE 005980061-01

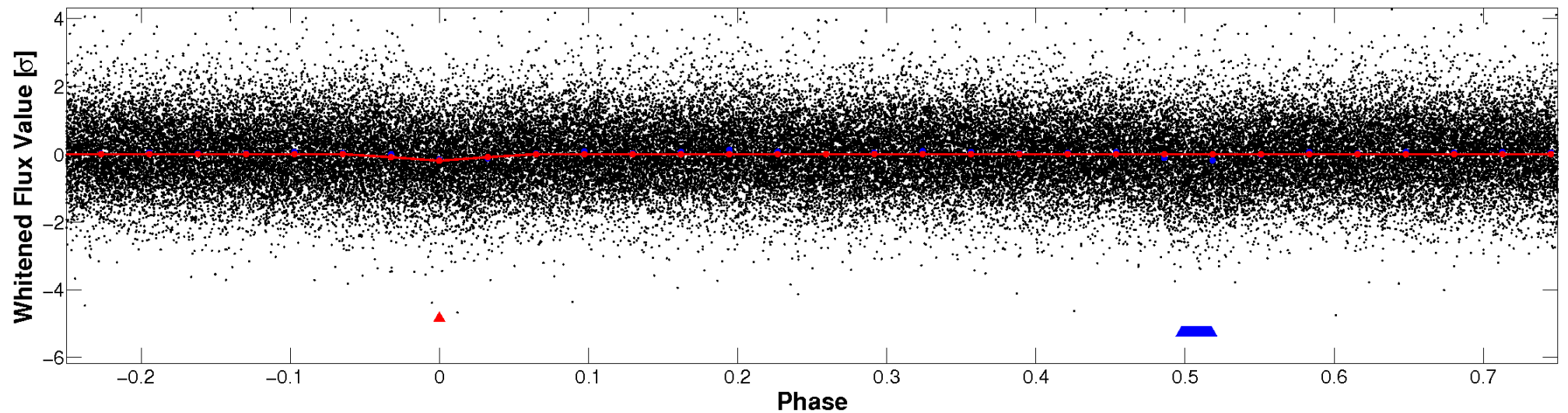


Non-Whitened Vs. Whitened Light Curve

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

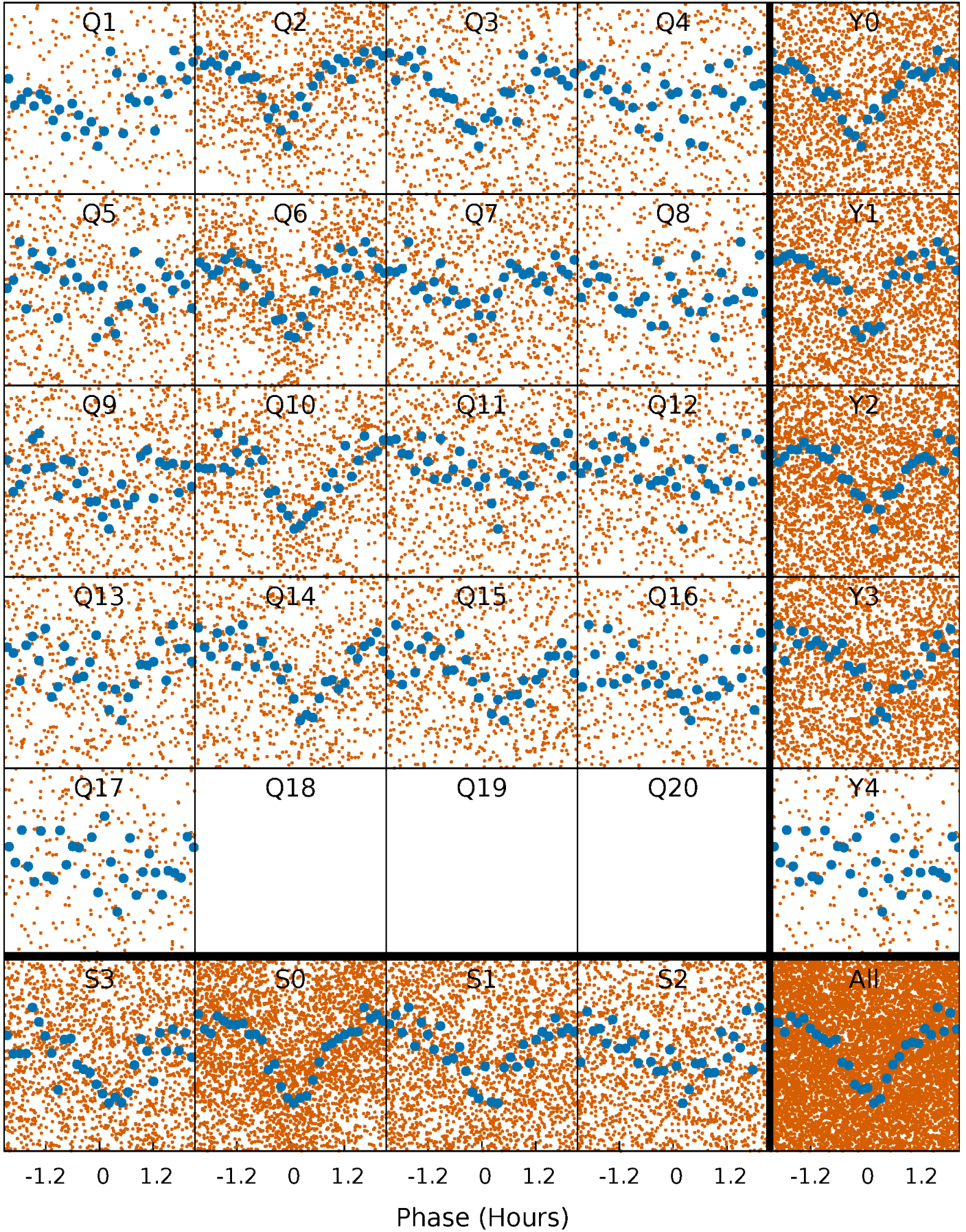


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



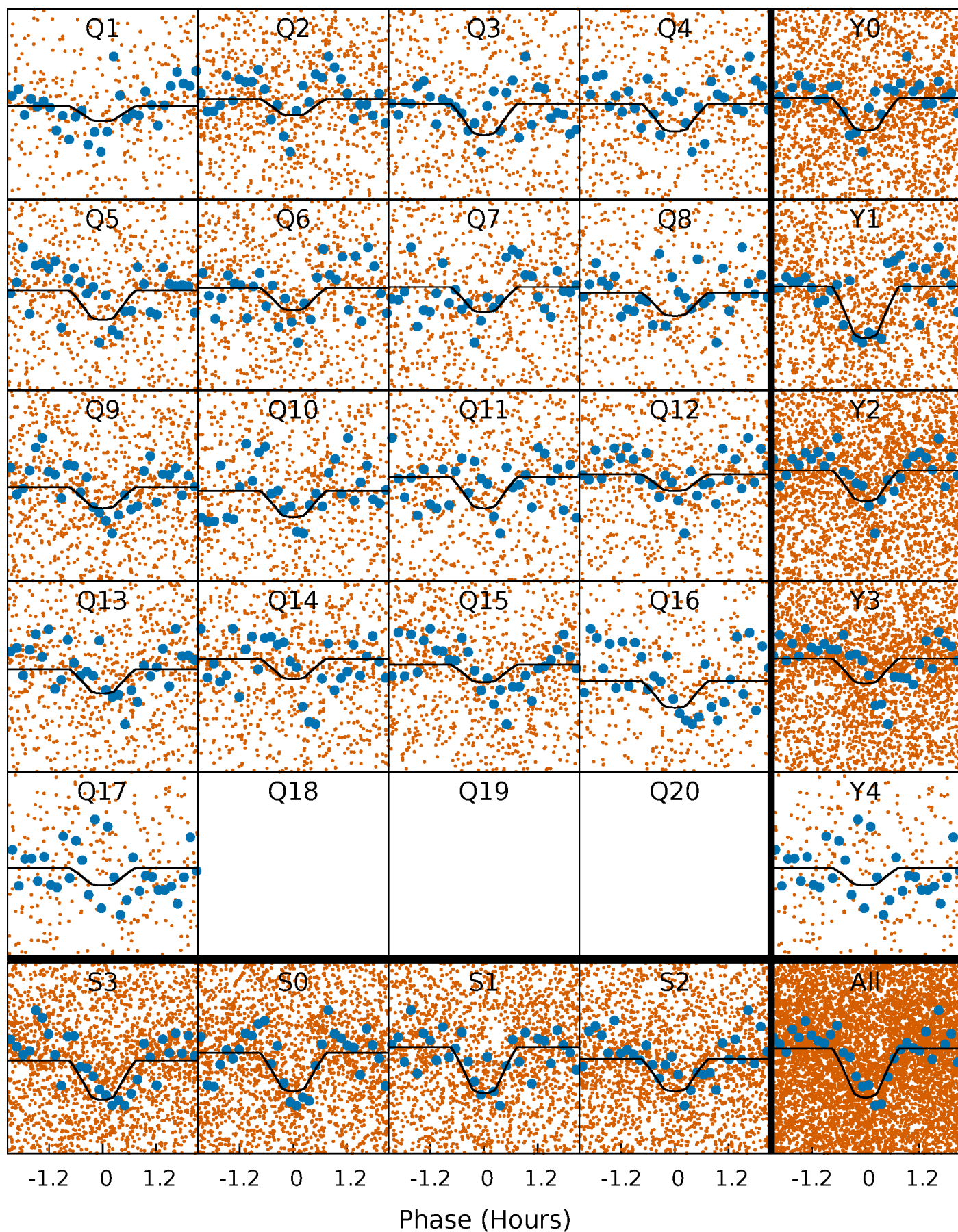
PDC Quarter-Phased Transit Curves

TCE 005980061-01 P= 0.630529 Days $T_0=131.681526$ (BKJD)



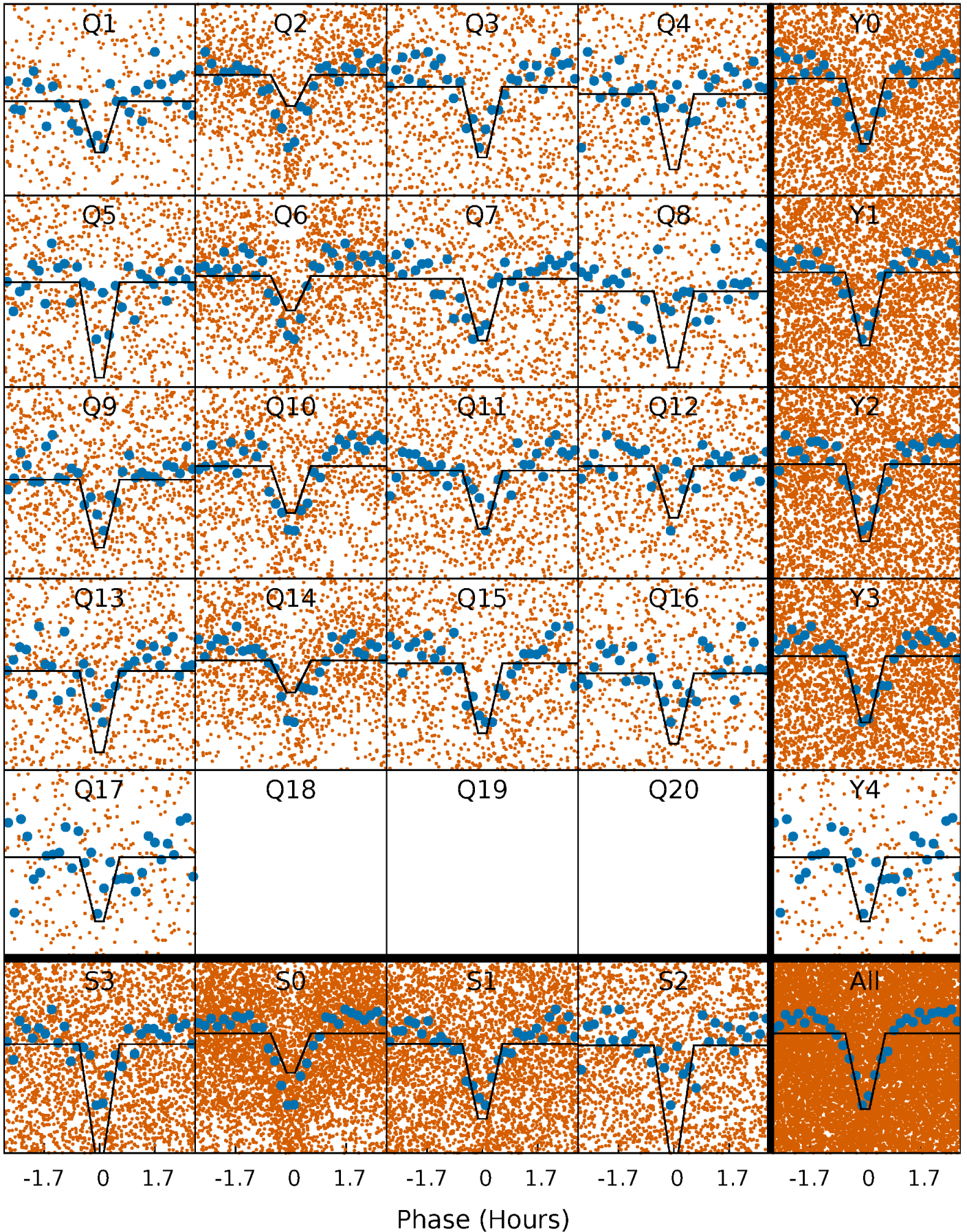
DV Quarter-Phased Transit Curves

TCE 005980061-01 P= 0.630529 Days $T_0=131.681526$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

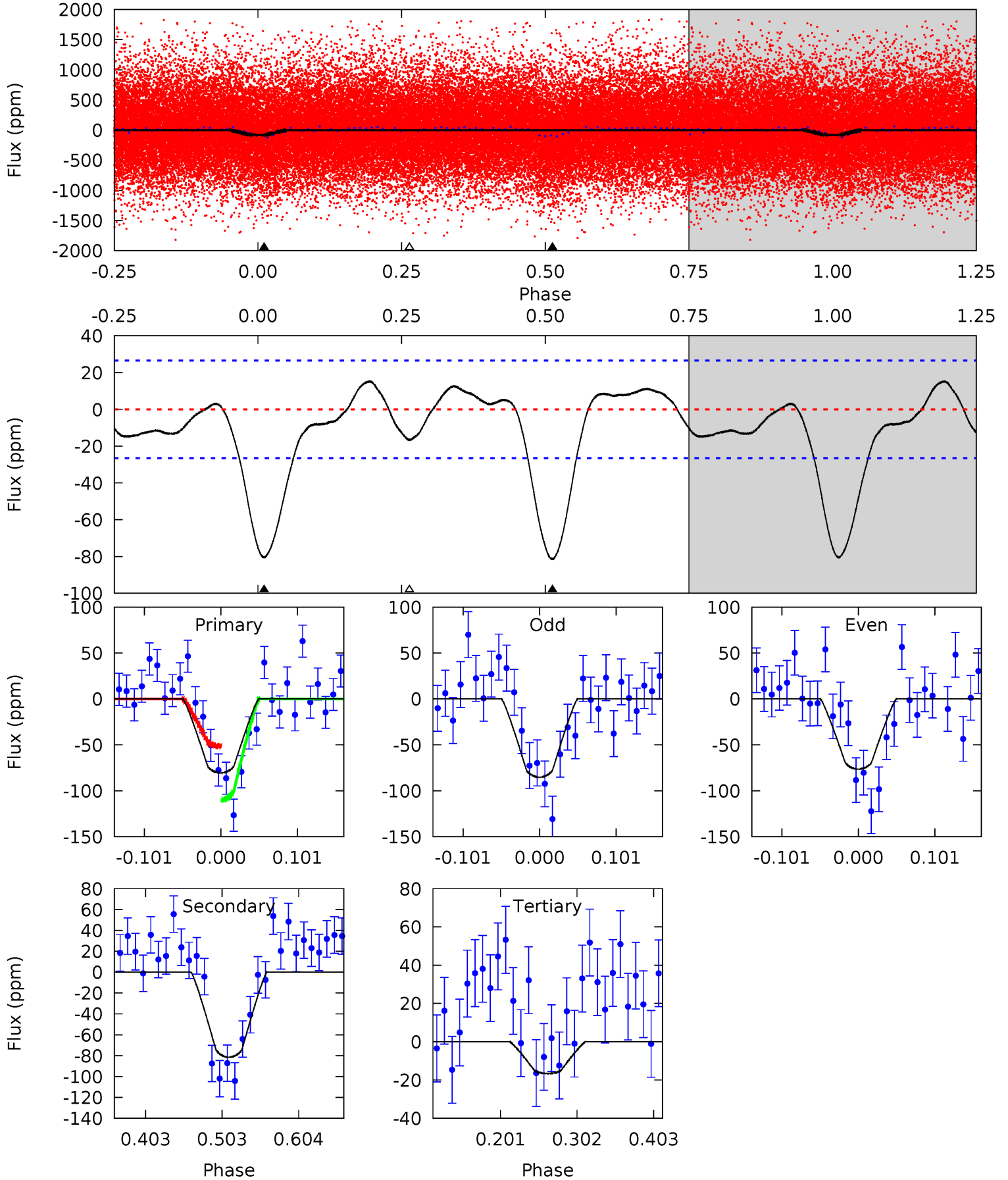
TCE 005980061-01 P= 0.630539 Days $T_0=131.676626$ (BKJD)



DV Model-Shift Uniqueness Test

005980061-01, P = 0.630529 Days, E = 131.050997 Days

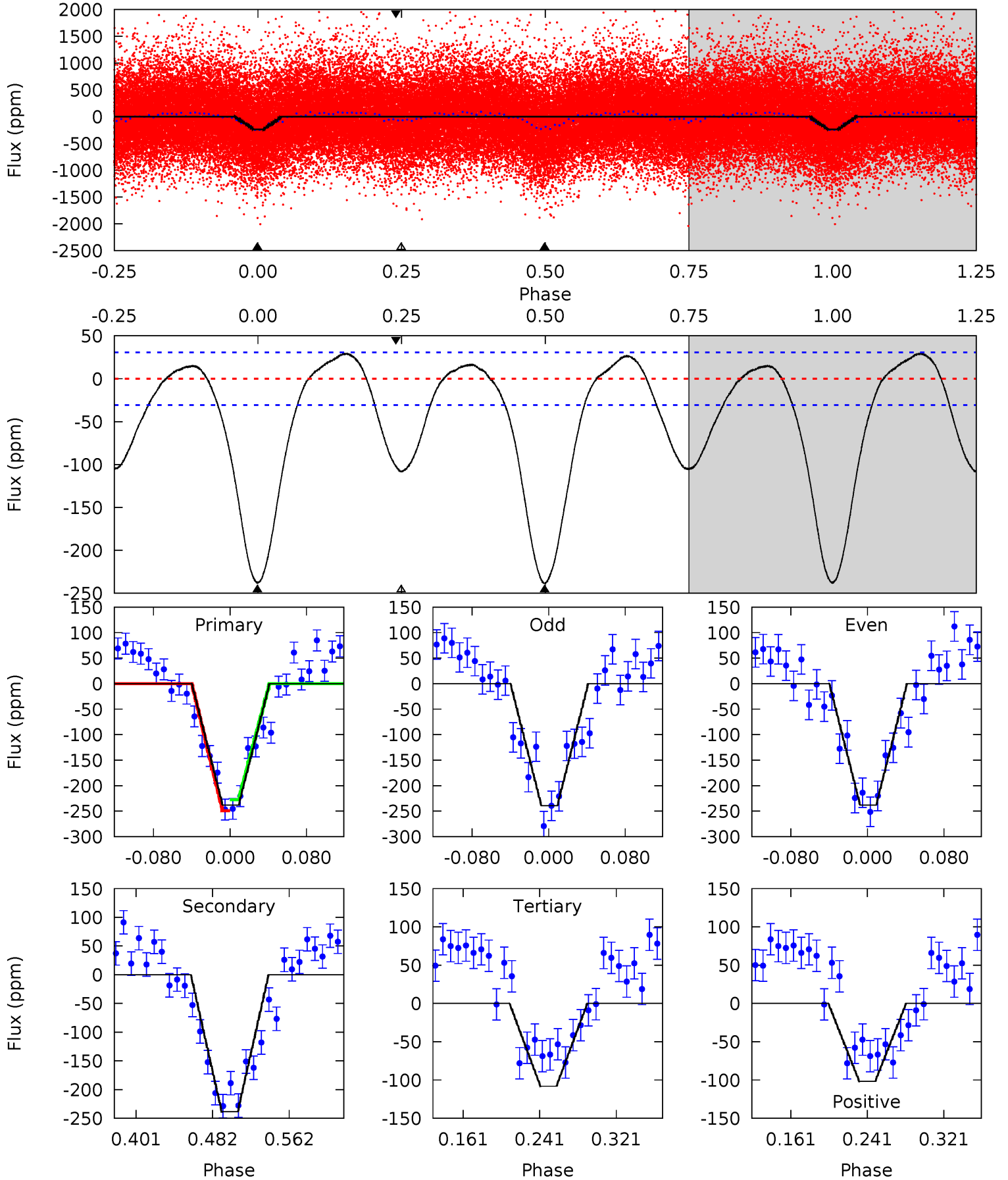
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	14.0	2.85	0	4.56	1.64	1.67	11.0	13.8	11.1	14.0	0.76	0.85	0.16	5.04



Alt Model-Shift Uniqueness Test

005980061-01, P = 0.630539 Days, E = 131.046087 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	35.9	16.2	-15.3	4.61	1.75	6.40	19.5	51.0	19.6	51.2	0.09	0.96	0.11	1.63



Stellar Parameters For KIC 005980061

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5458^{+180}_{-164}	$4.482^{+0.081}_{-0.150}$	$0.020^{+0.250}_{-0.300}$	$0.894^{+0.195}_{-0.090}$	$0.884^{+0.099}_{-0.082}$	$1.745^{+0.577}_{-0.714}$
	+3%/-3%	+2%/-3%	+1250%/-1500%	+22%/-10%	+11%/-9%	+33%/-41%
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 005980061-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-81 ± 6	$1.14^{+0.85}_{-0.65}$	2735^{+153}_{-120}	4856^{+2555}_{-977}	$6.403^{+30.503}_{-4.258}$
Alt.	-239 ± 7	$1.63^{+0.91}_{-0.83}$	2739^{+157}_{-136}	5304^{+2454}_{-910}	$9.412^{+29.812}_{-5.504}$

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

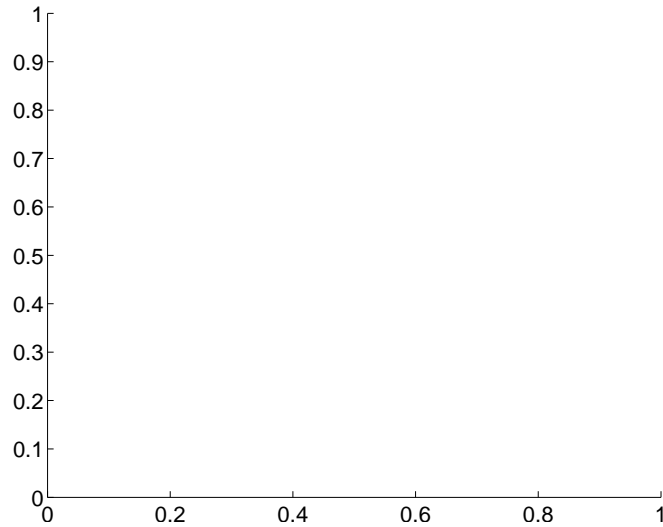
Supplemental centroid analysis for 005980061-01. Kepler magnitude: 15.48. Transit SNR 10.77

There are 0 quarters with good PRF difference image offsets

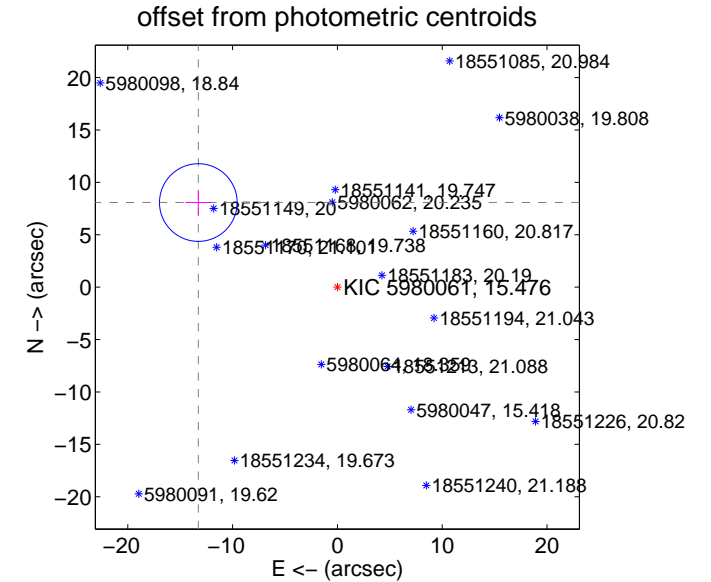
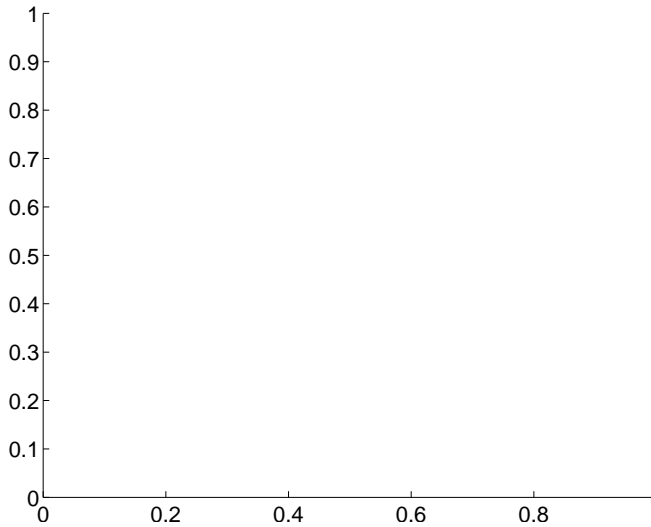
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	15.53 ± 1.23	12.58	13.27 ± 1.24	8.07 ± 1.21

There is no PRF-fit offset from OOT-fit

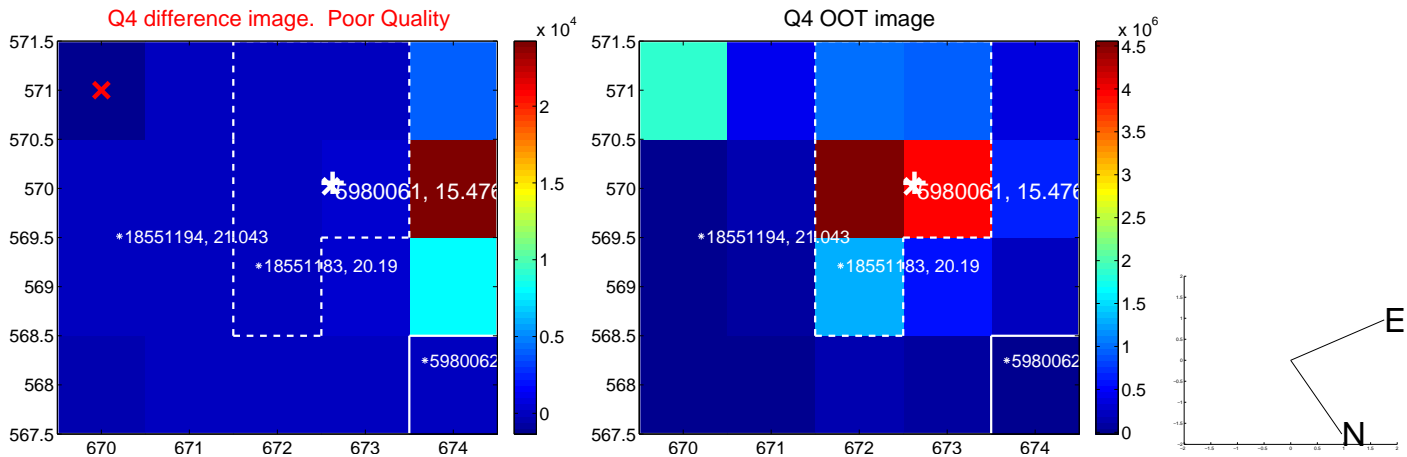
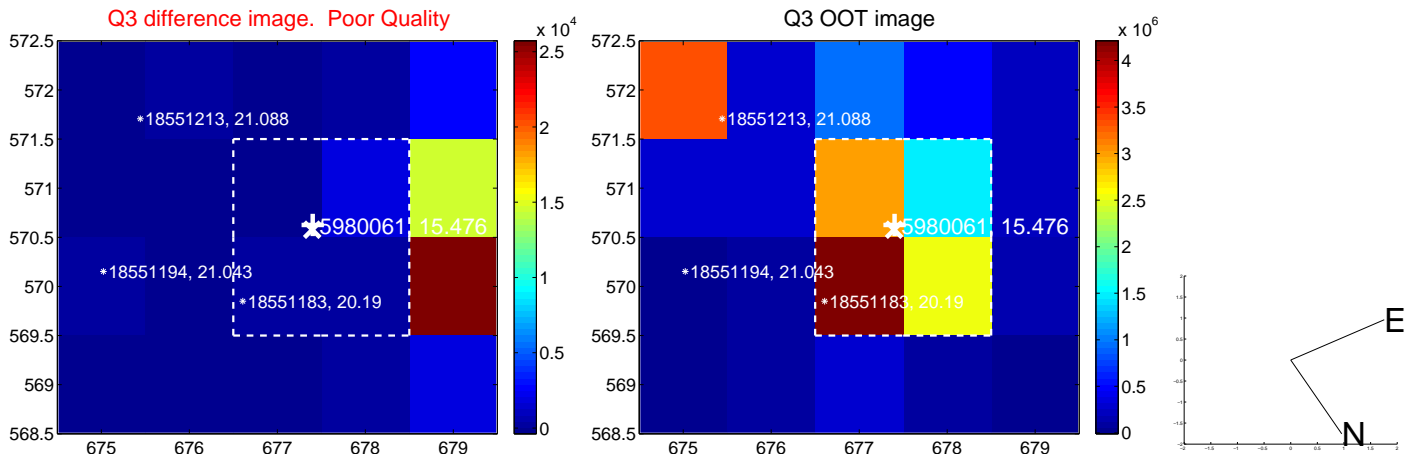
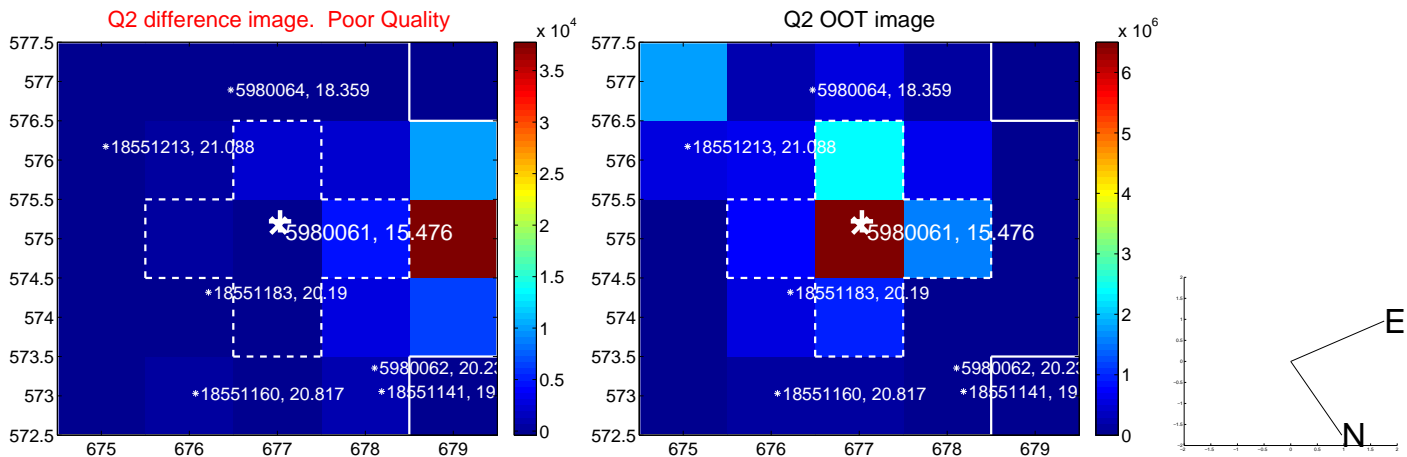
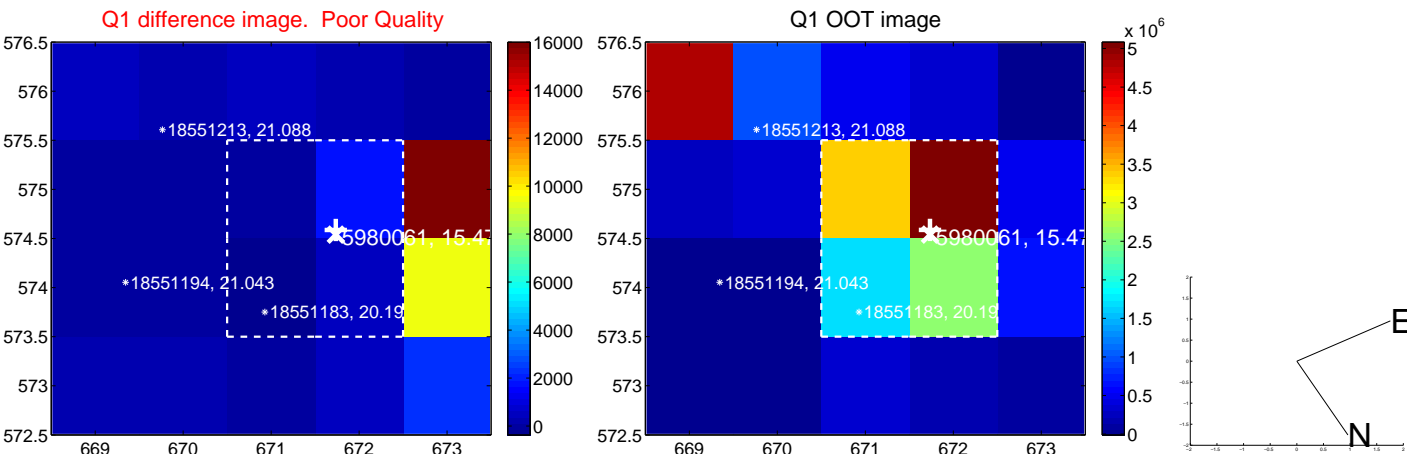


There is no PRF-fit offset from KIC

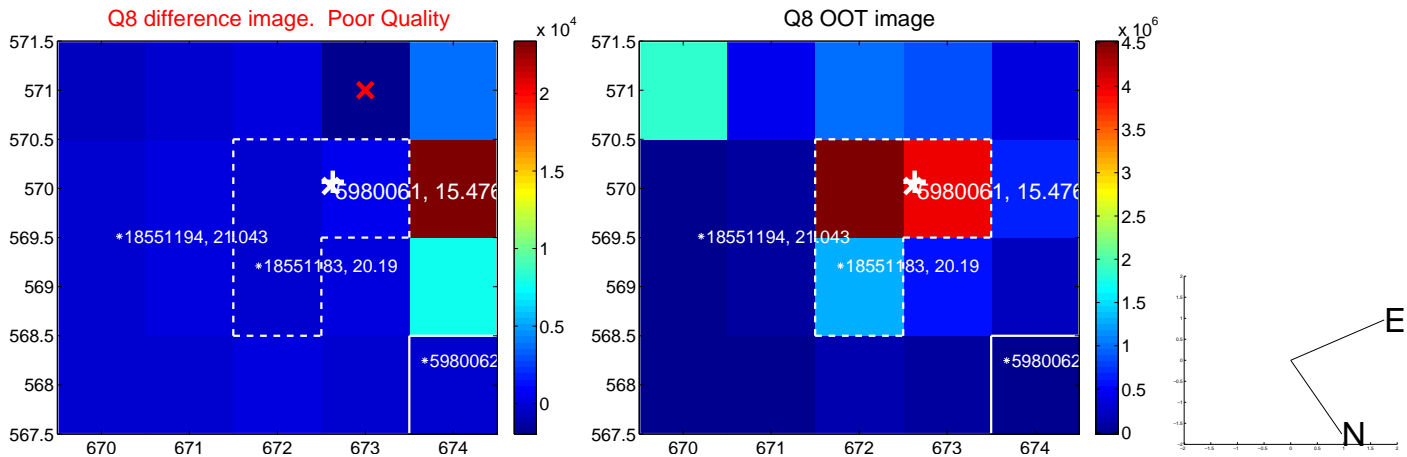
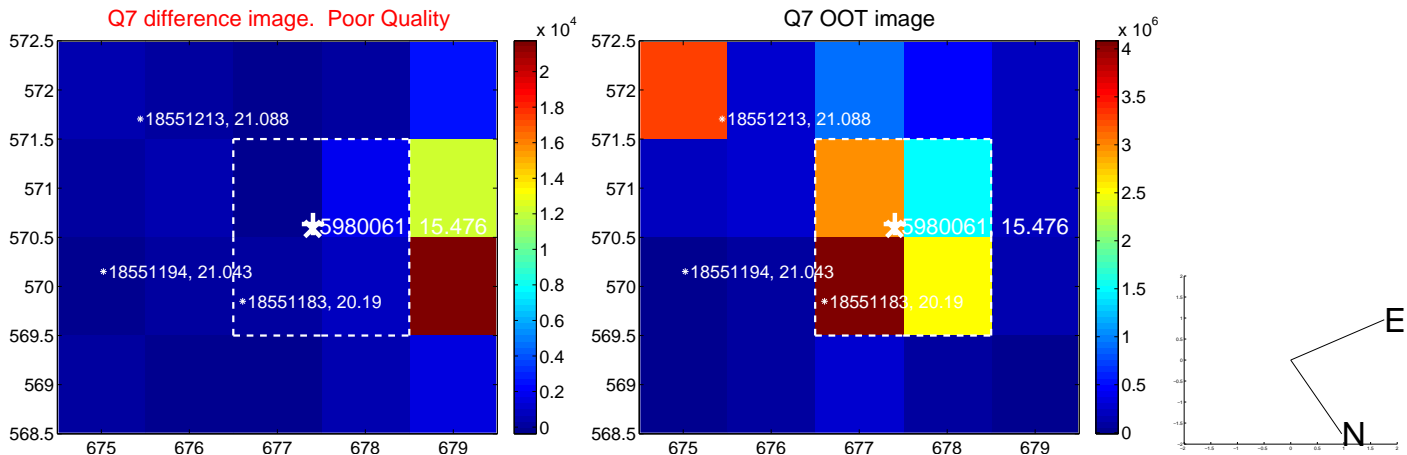
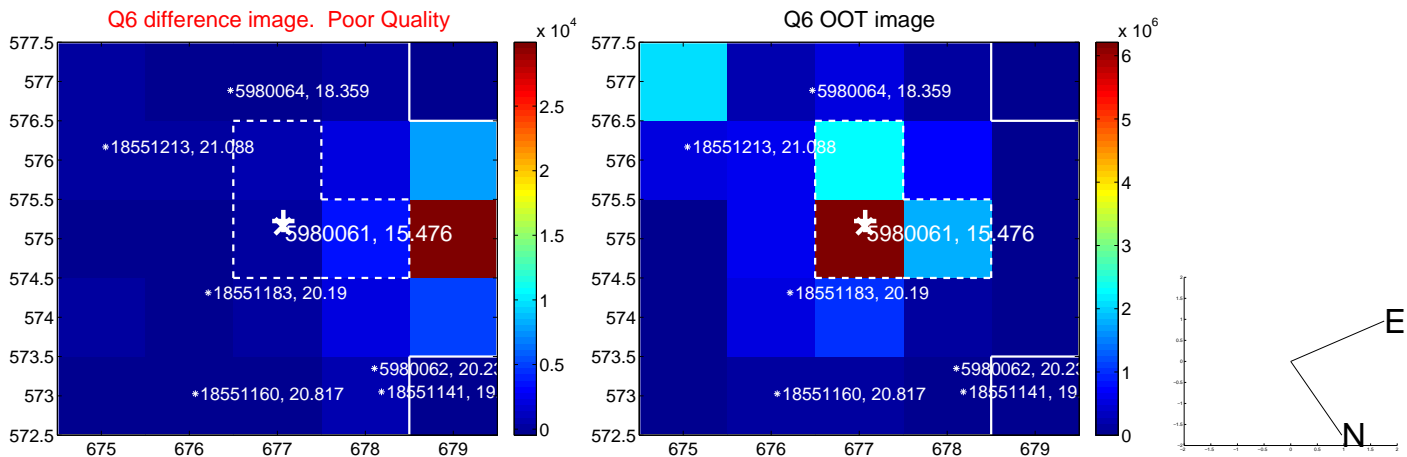
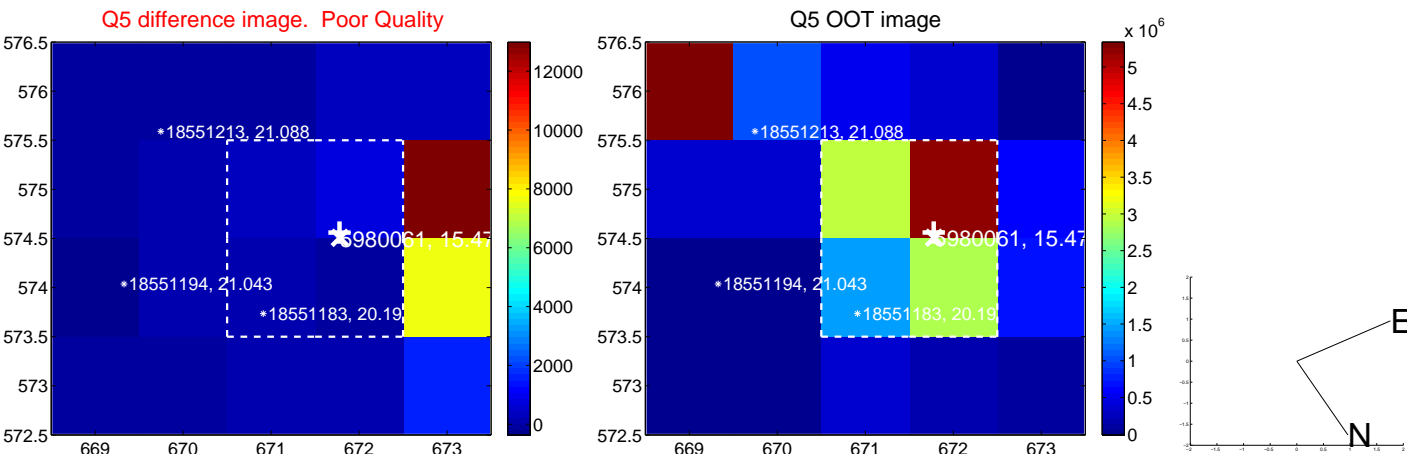


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

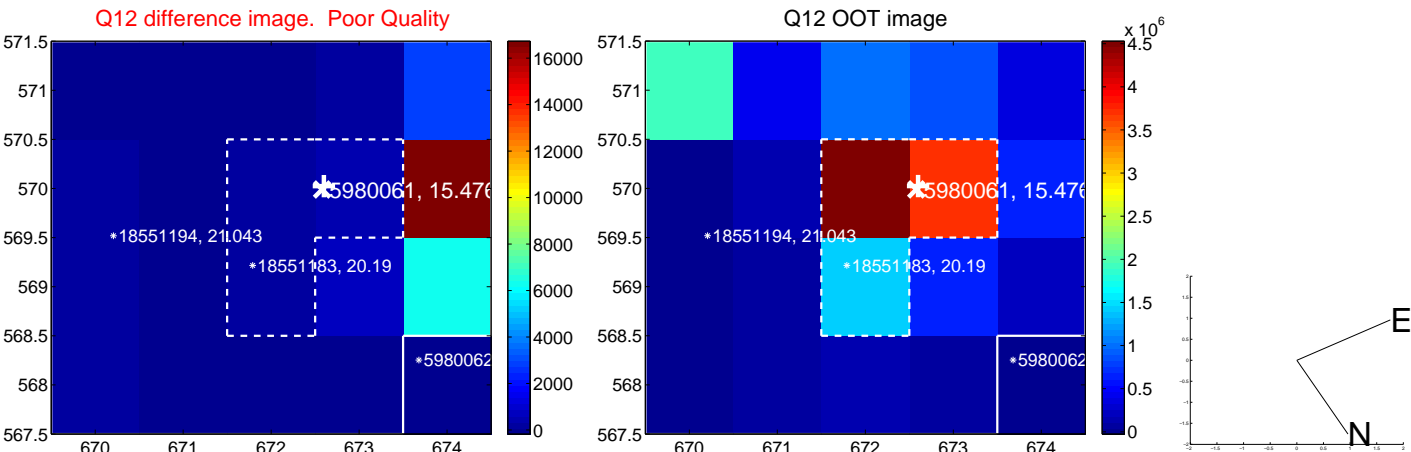
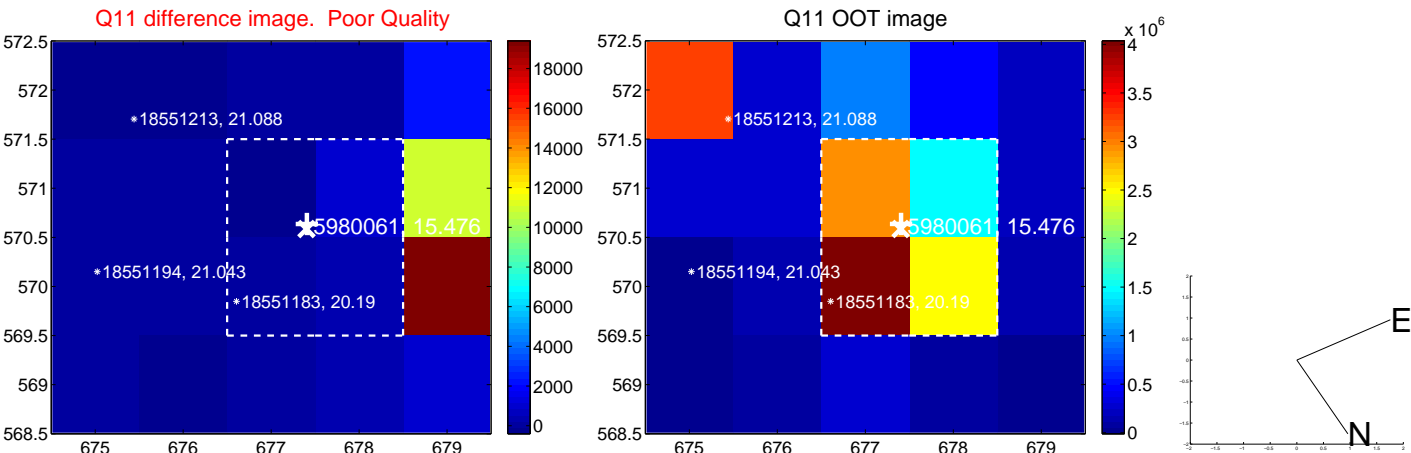
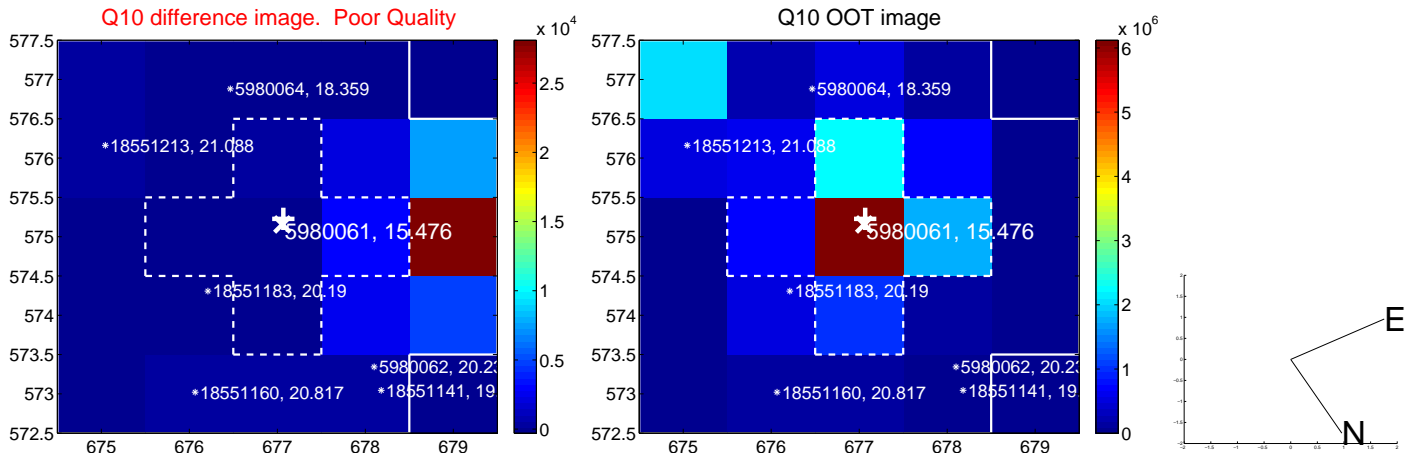
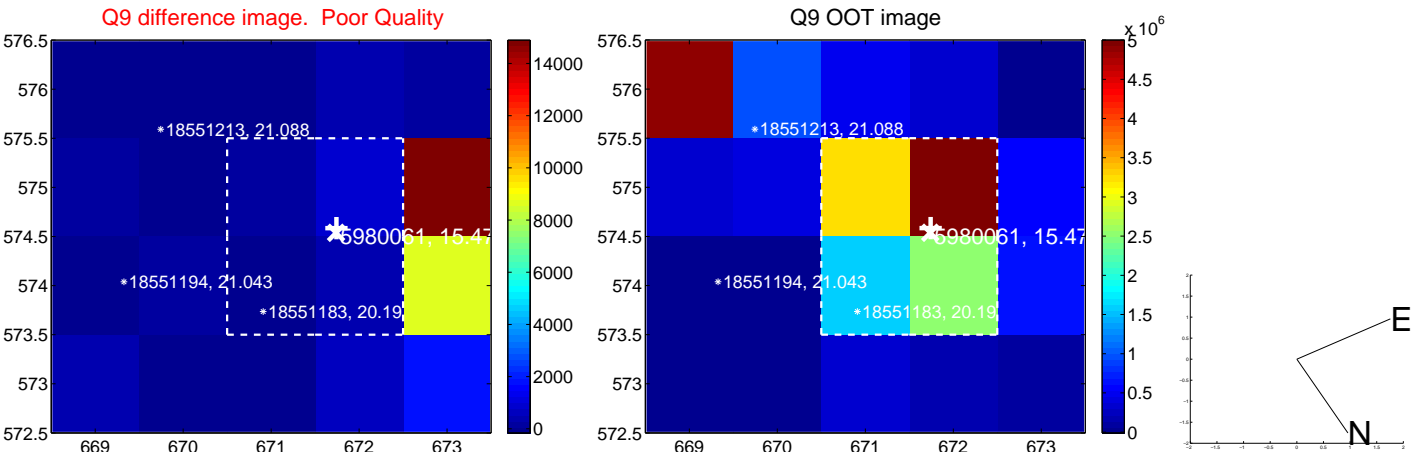
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



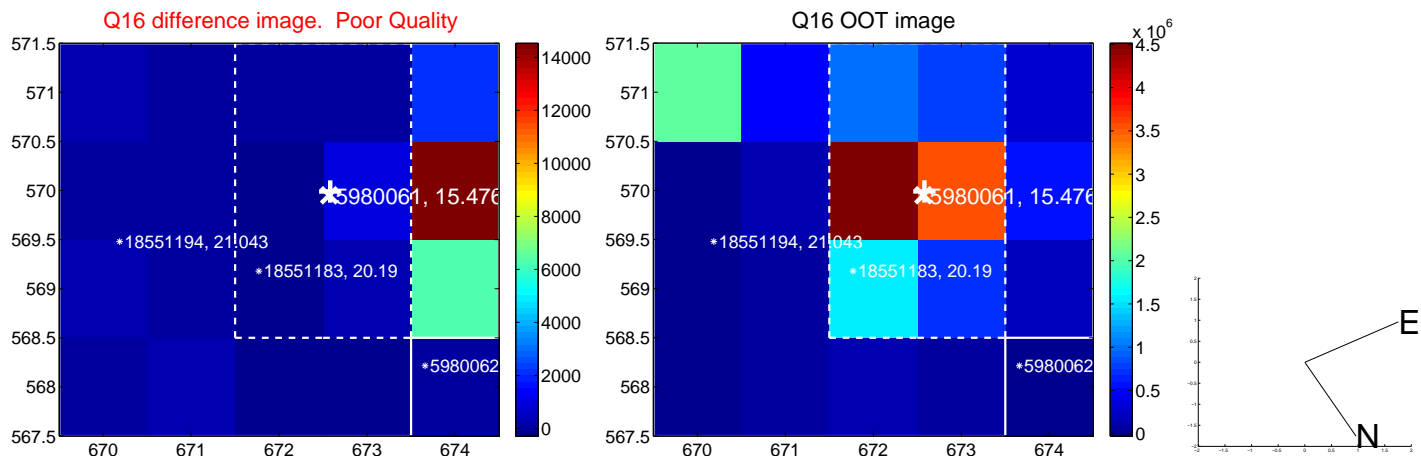
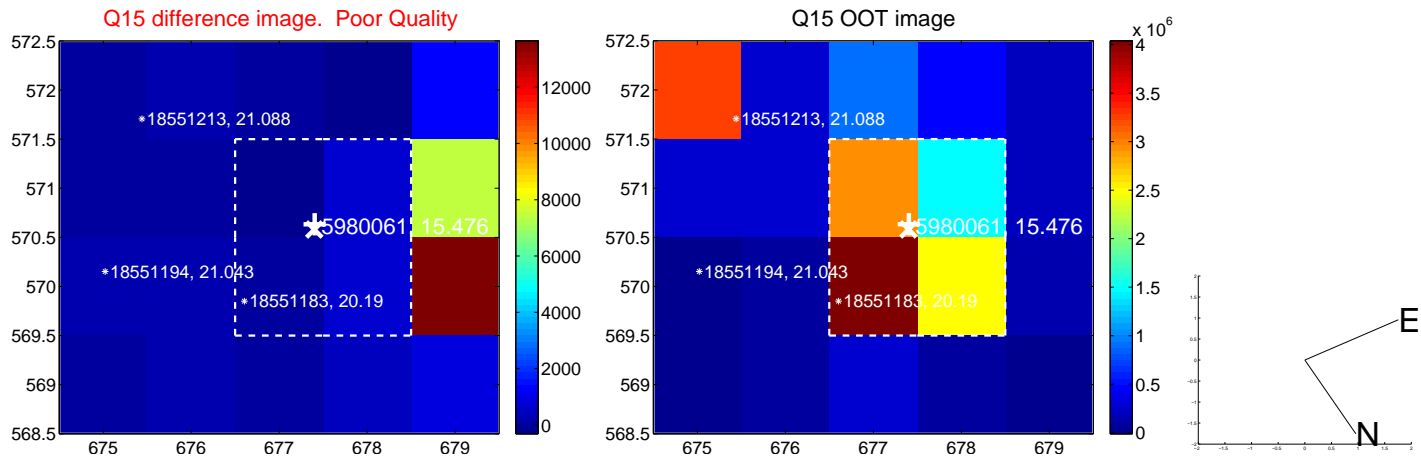
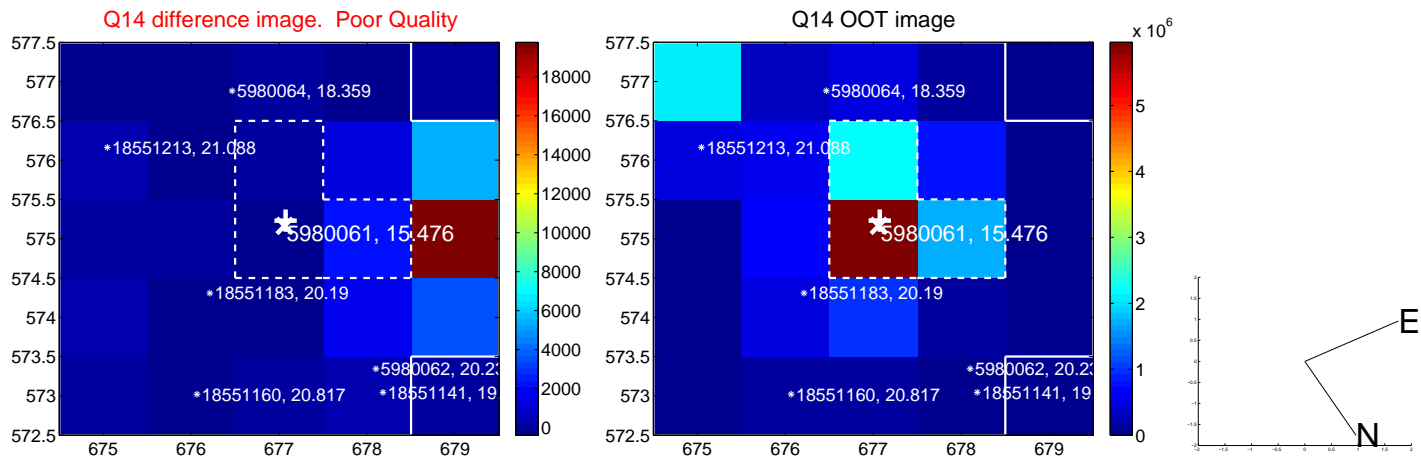
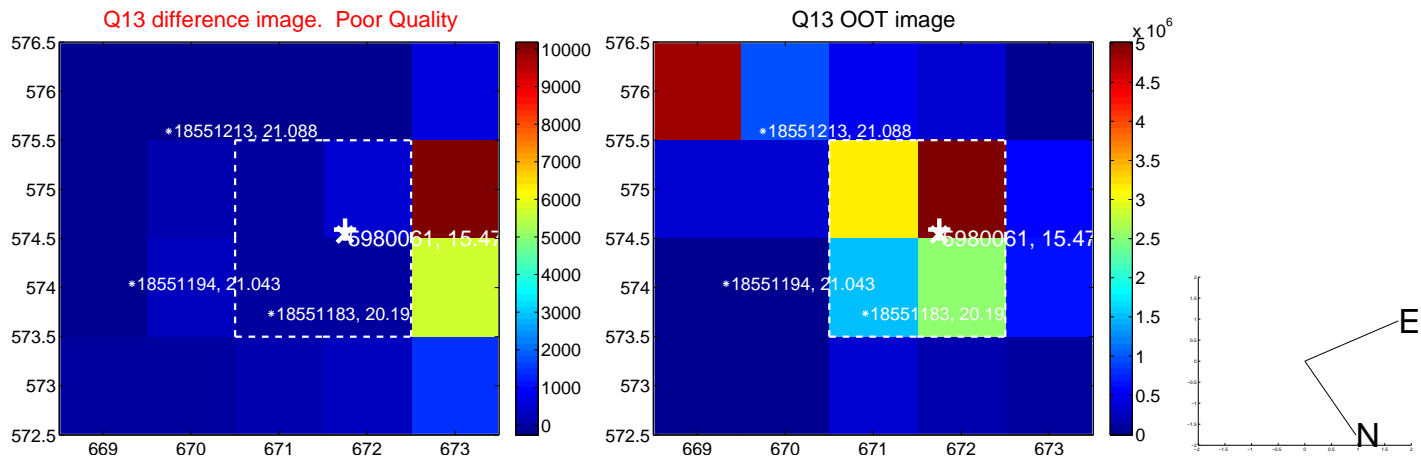
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



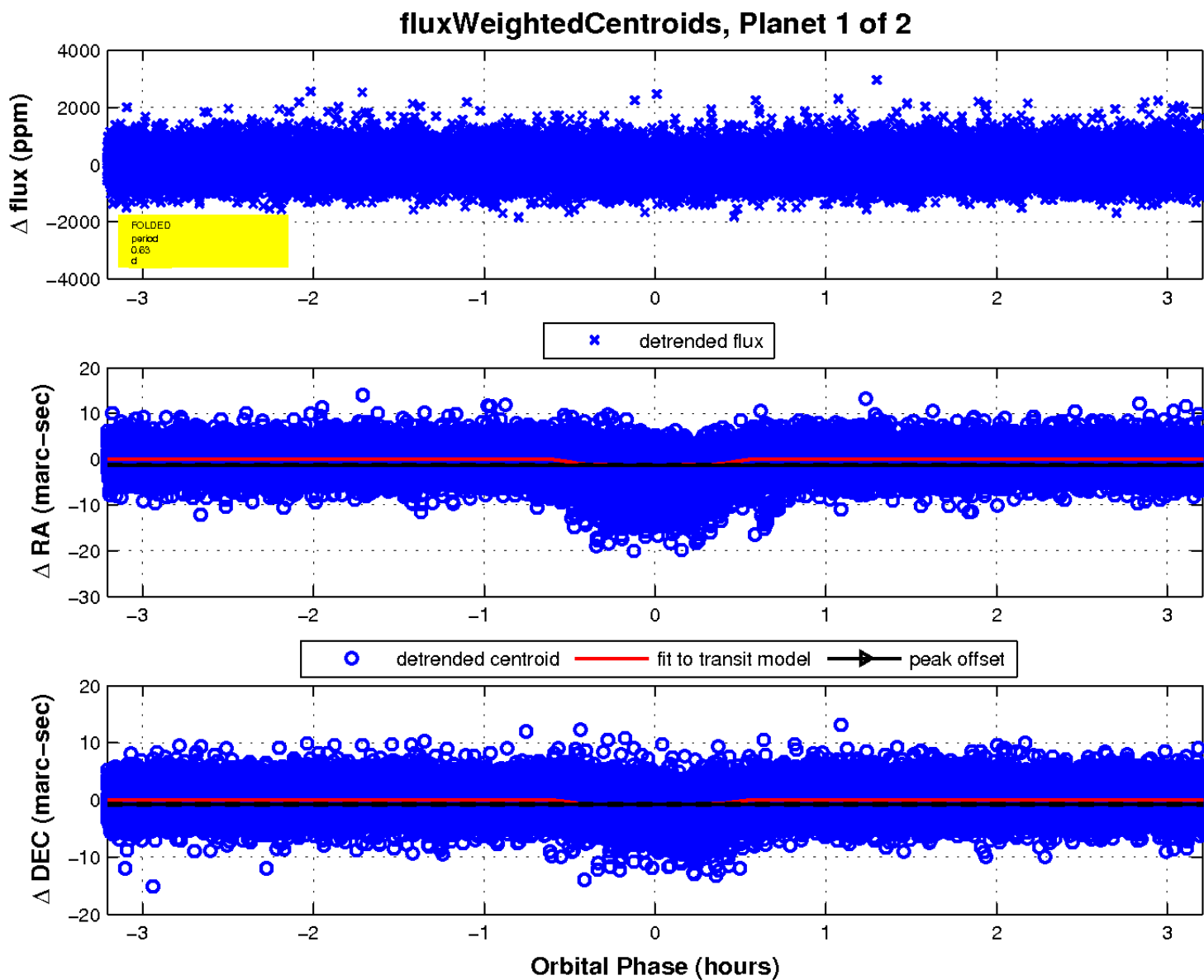
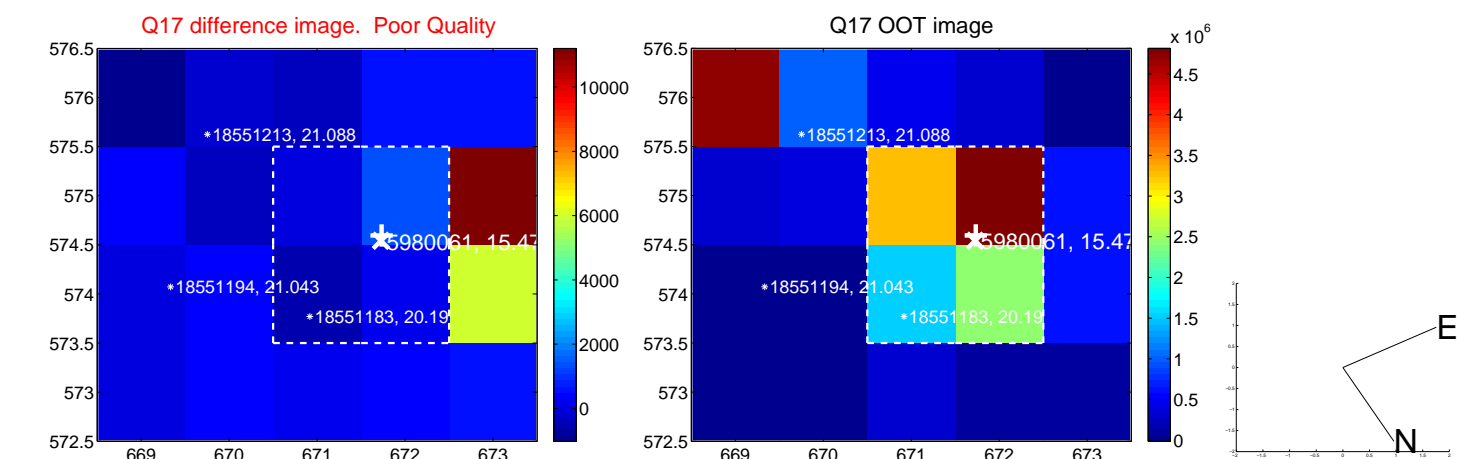
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

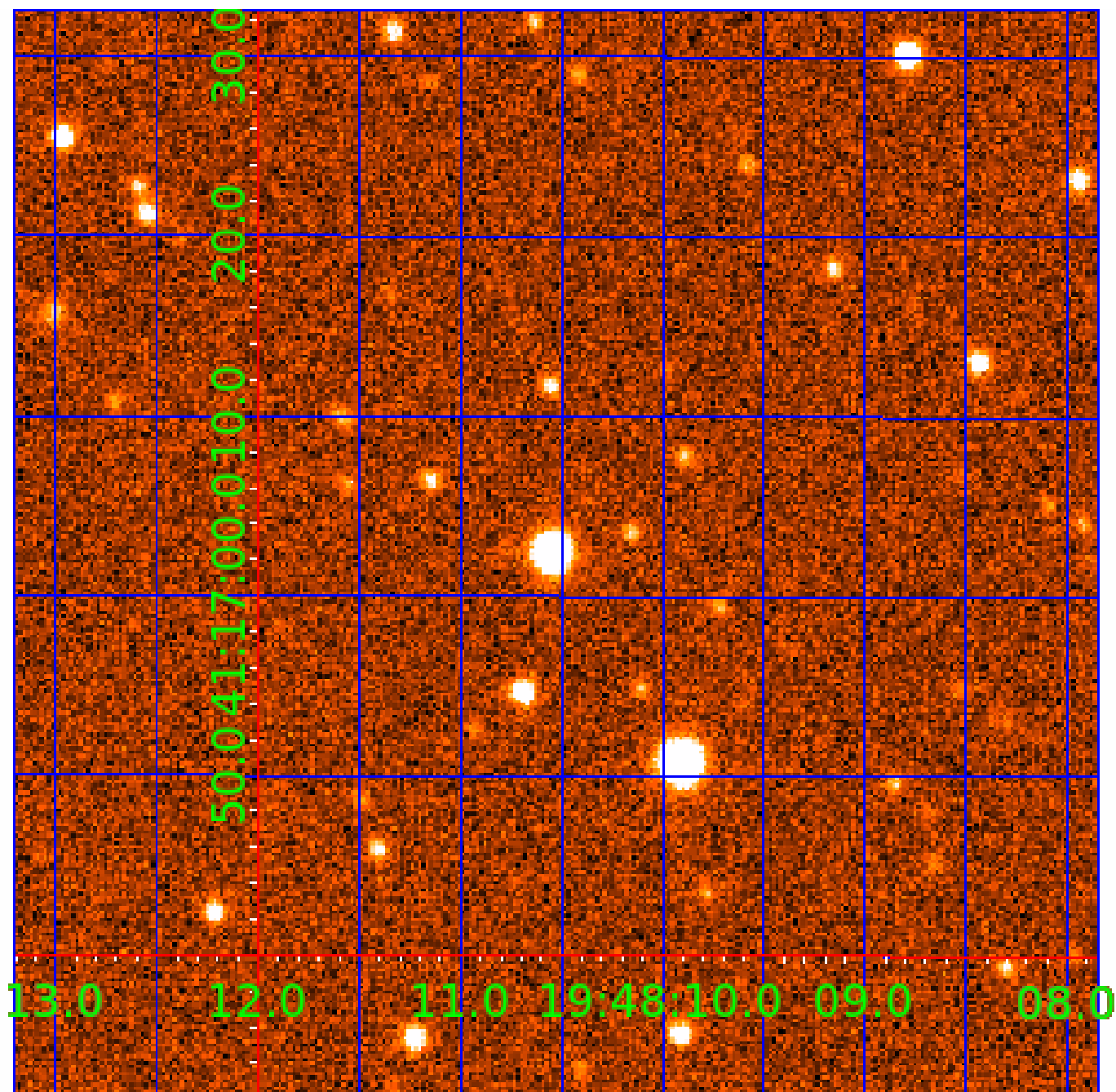


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005980061

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})
005980061-01	OBS	No	0.630529	131.681526	92.9	1.069	10.4	10.8	0.89	5458	1.05	3329.00
005980061-02	OBS	4817.01	0.630534	131.995262	121.1	0.938	10.6	13.6	0.89	5458	1.20	3328.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005980061-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
005980061-02	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET

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 005980061-02

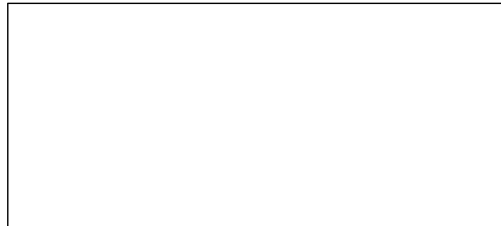
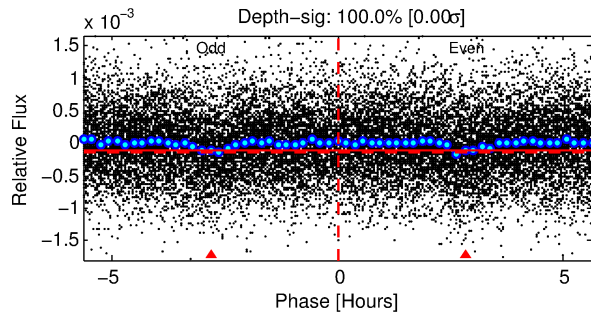
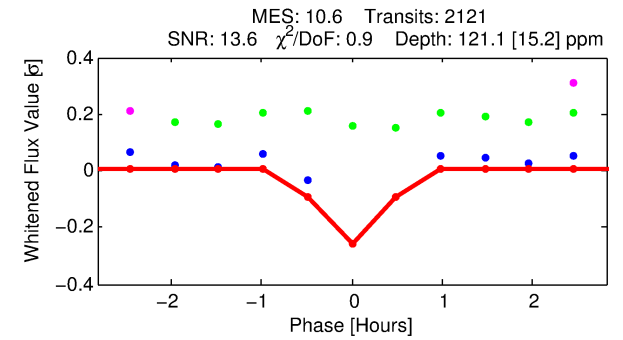
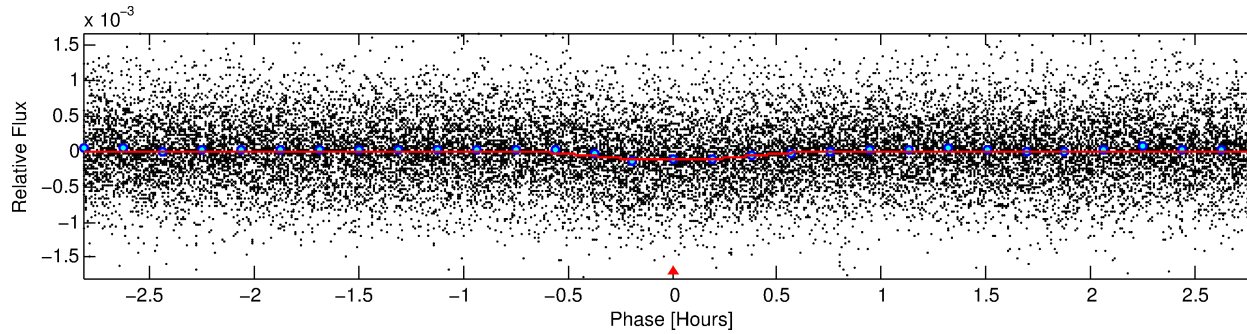
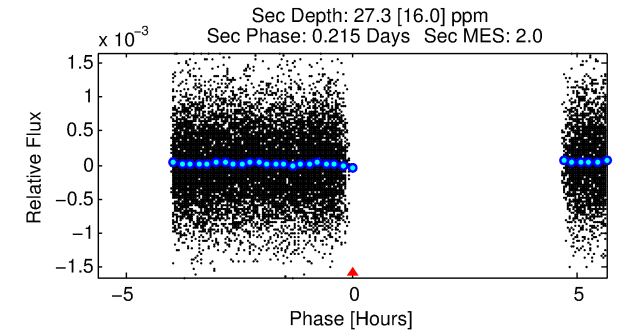
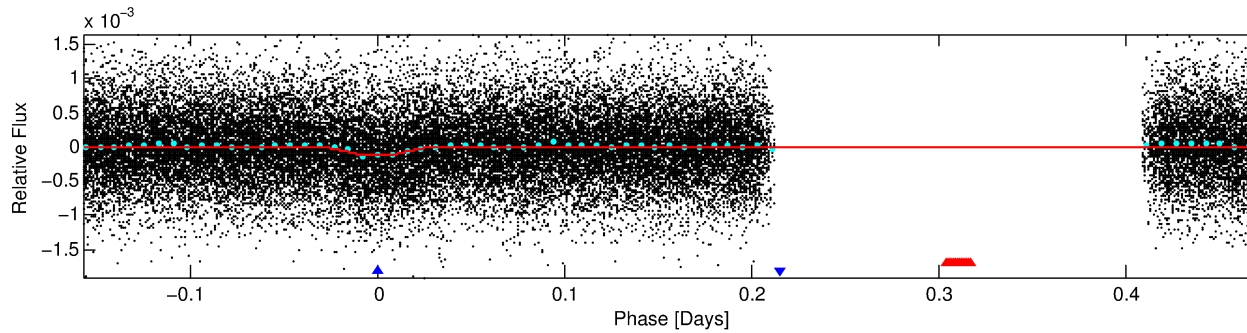
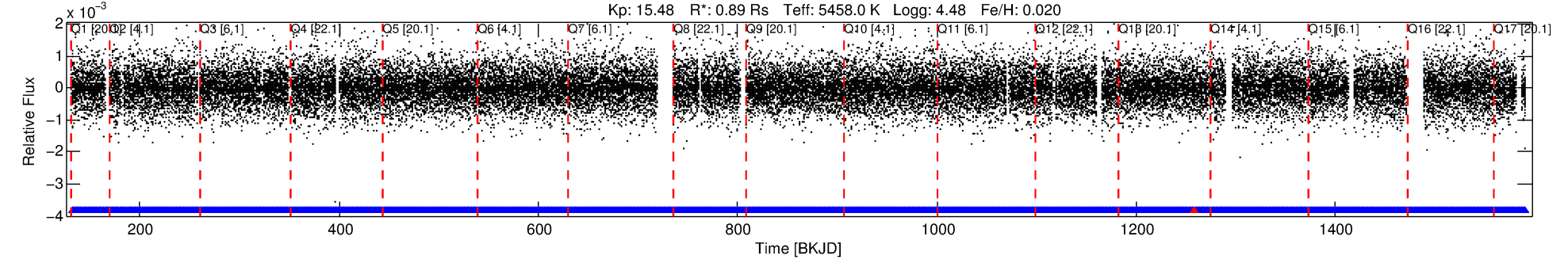
No Significant Match Found

DV One-Page Summary

KIC: 5980061 Candidate: 2 of 2 Period: 0.631 d

KOI: K04817 Corr: No Ephemeris Match

Kp: 15.48 R*: 0.89 Rs Teff: 5458.0 K Logg: 4.48 Fe/H: 0.020



DV Fit Results:

Period = 0.63053 [0.00001] d
Epoch = 131.9953 [0.0013] BKJD
Rp/R* = 0.0123 [0.0077]
a/R* = 2.55 [5.96]
b = 0.90 [0.59]
Seff = 3328.96 [1007.34]
Teq = 1937 [147] K
Rp = 1.20 [0.79] Re
a = 0.0138 [0.0026] AU
Ag = 2.01 [2.83] [0.36σ]
Teffp = 3564 [1239] K [1.30σ]

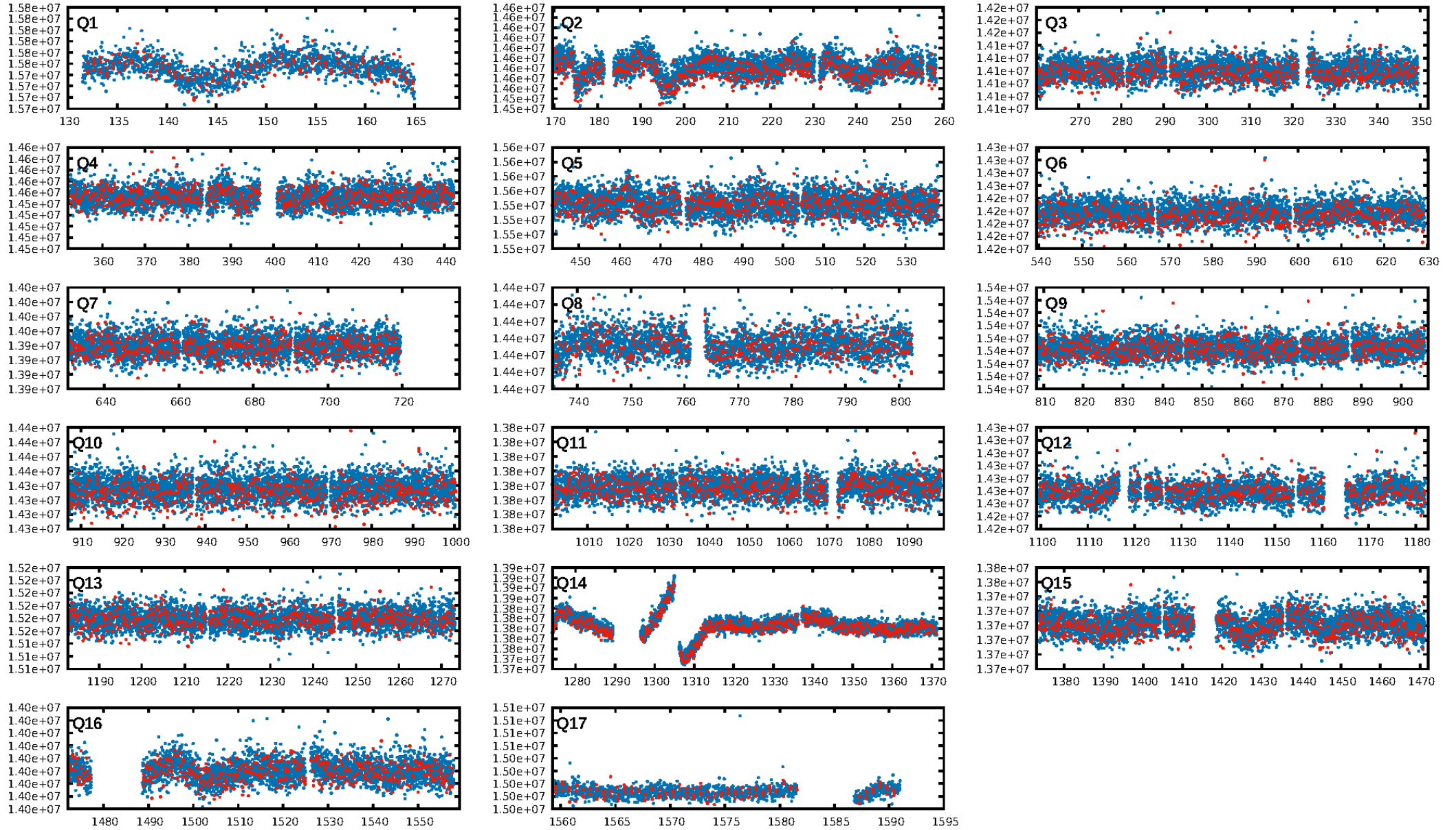
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.50e-28
RollingBand-fgt: 1.00 [2025/2026]
GhostDiagnostic-chr: -0.2507
Centroid-sig: 0.0%
Centroid-so: 20.855 arcsec [20.56σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

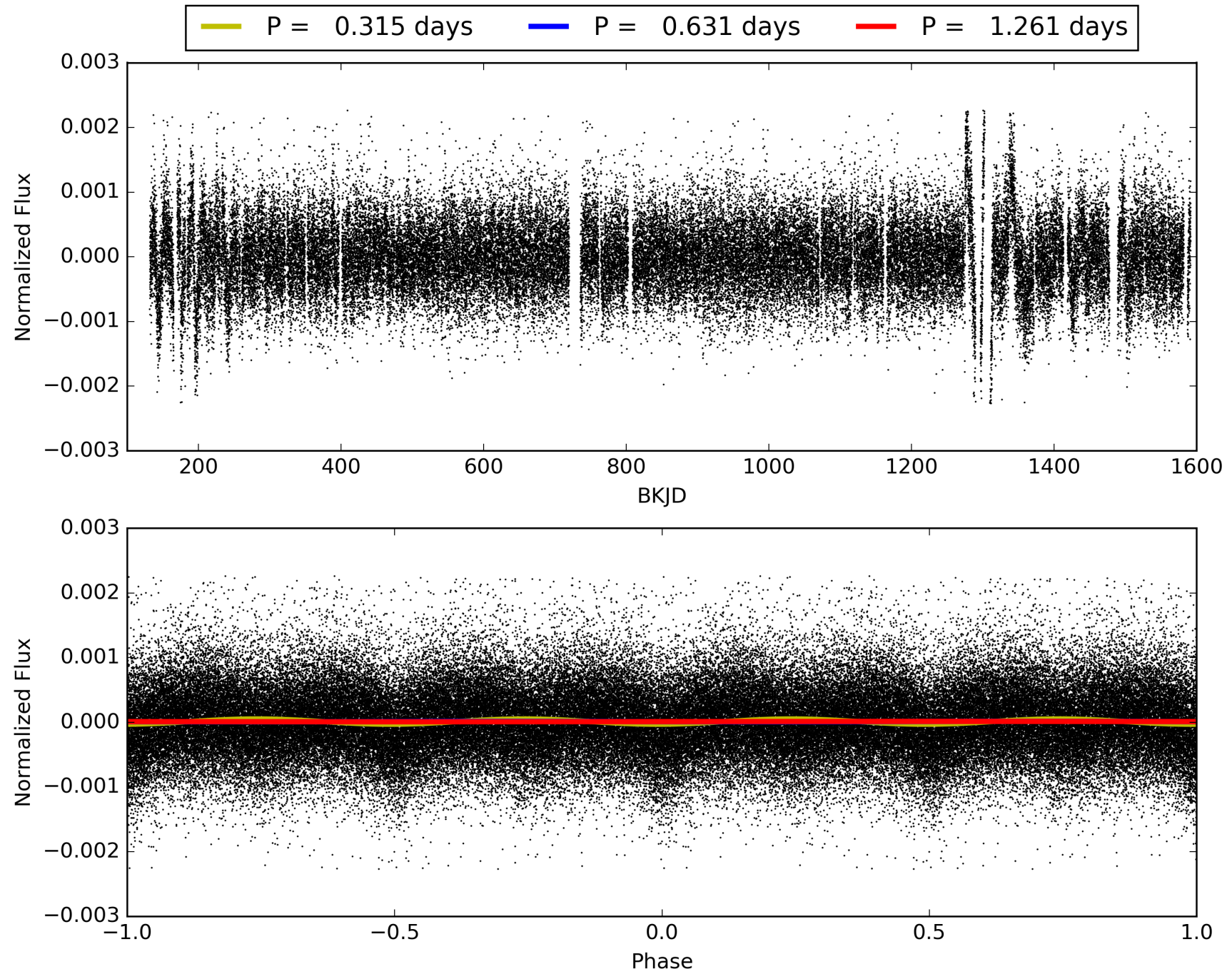
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:03:22 Z

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

TCE 005980061-02, PDC Light Curves

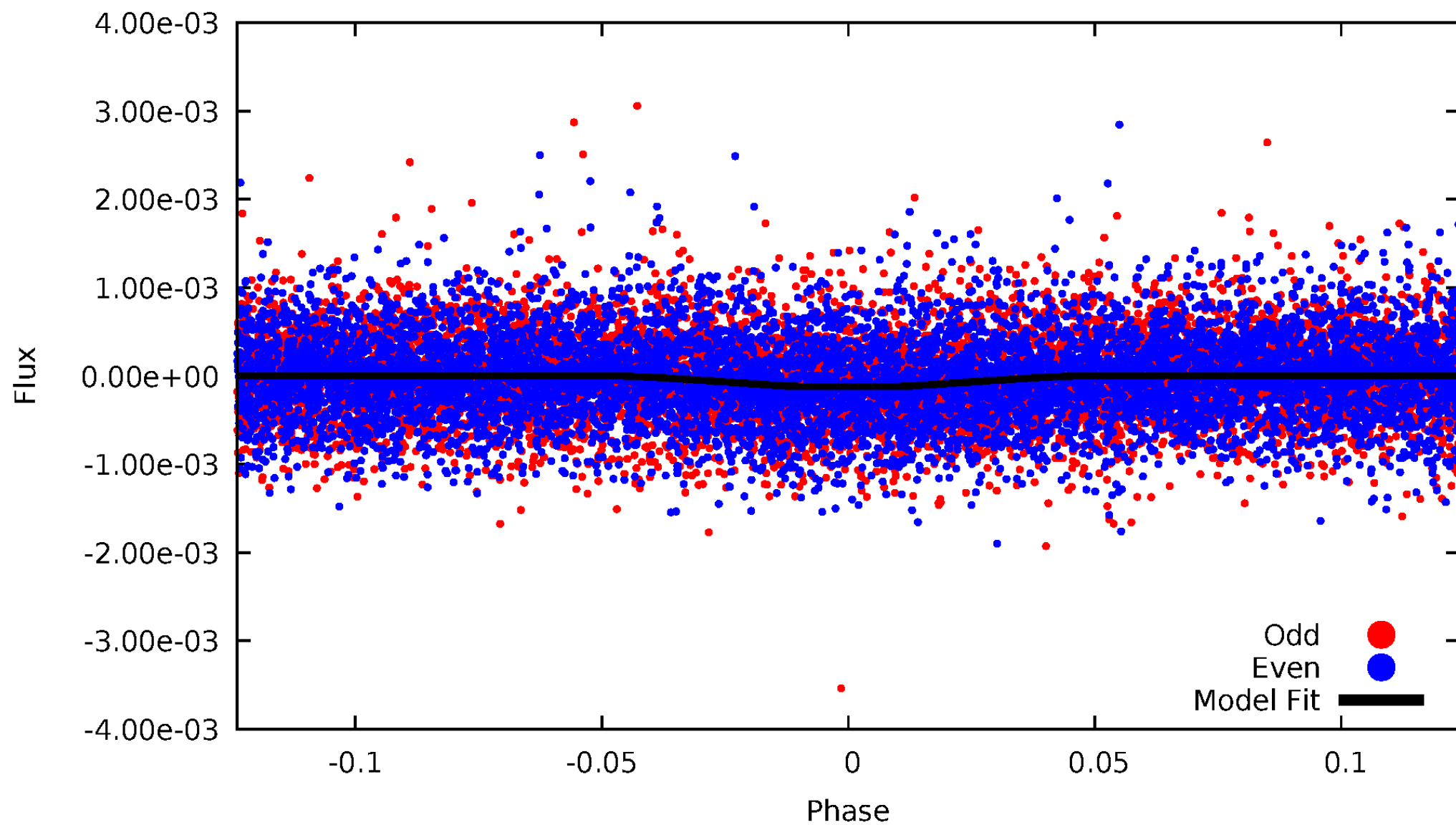


TCE 005980061-02



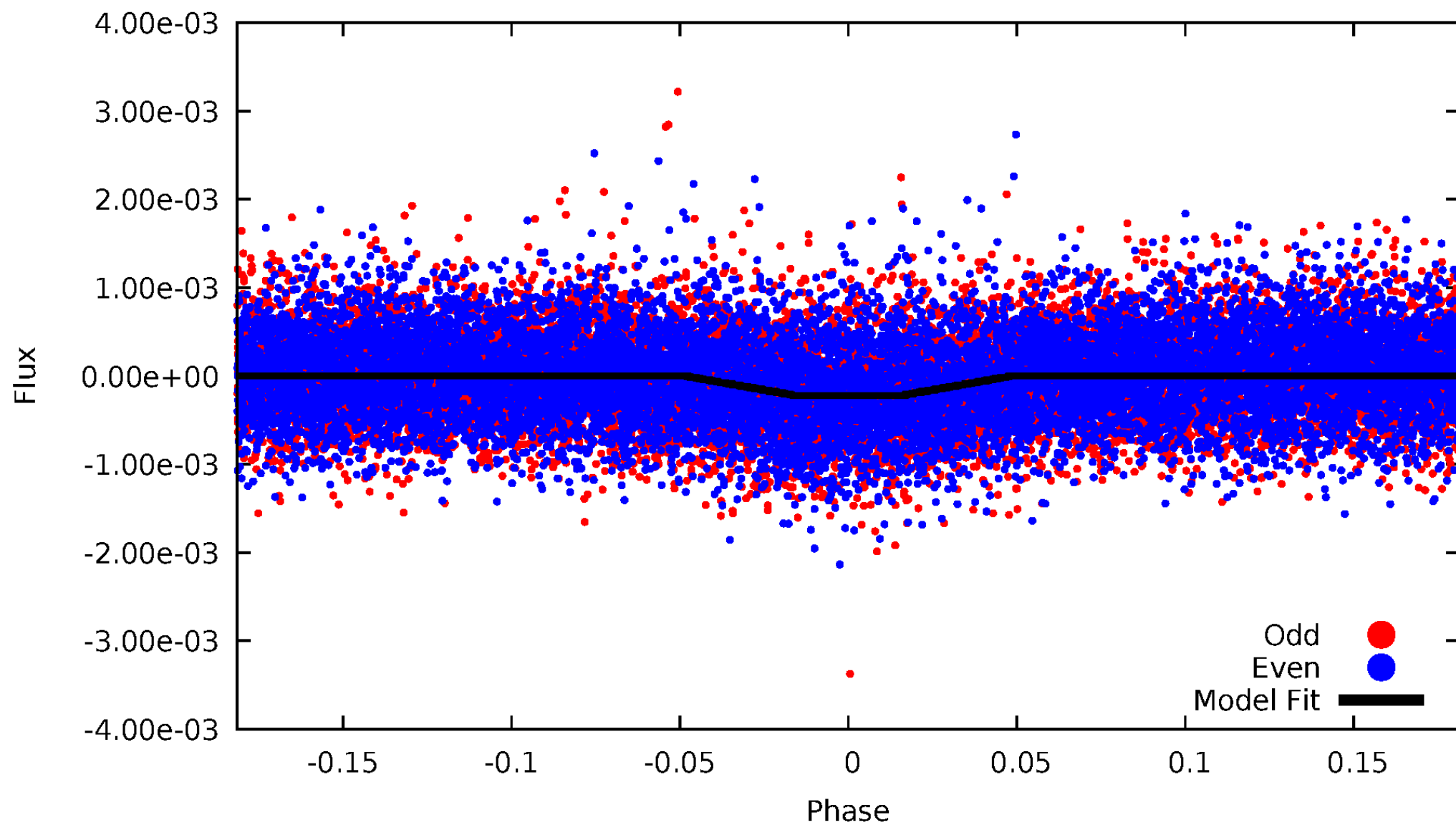
DV Odd/Even

TCE 005980061-02



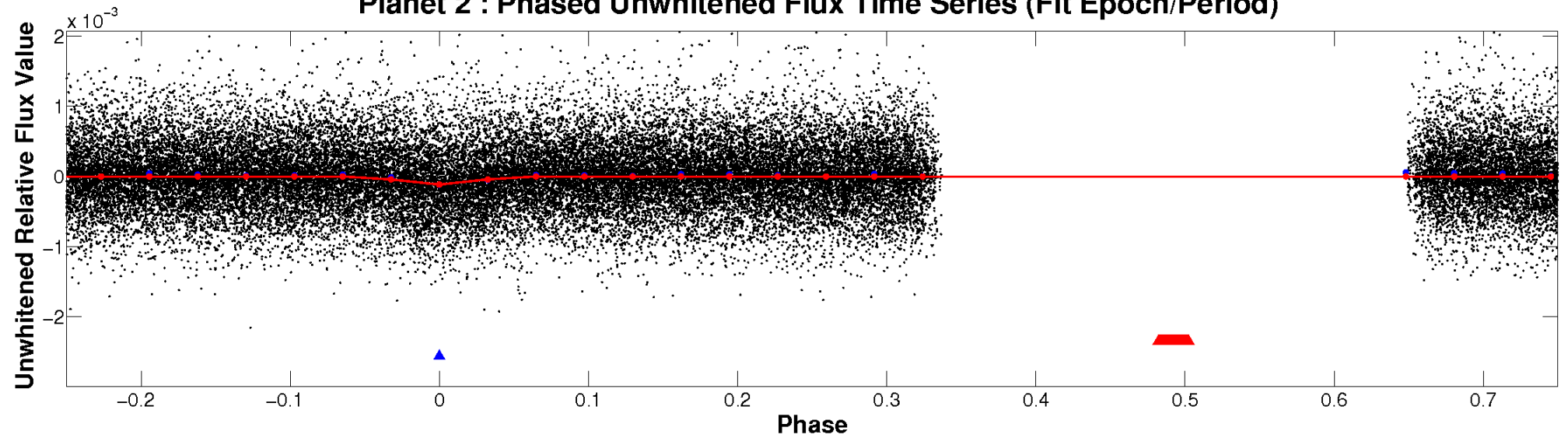
ALT Odd/Even

TCE 005980061-02

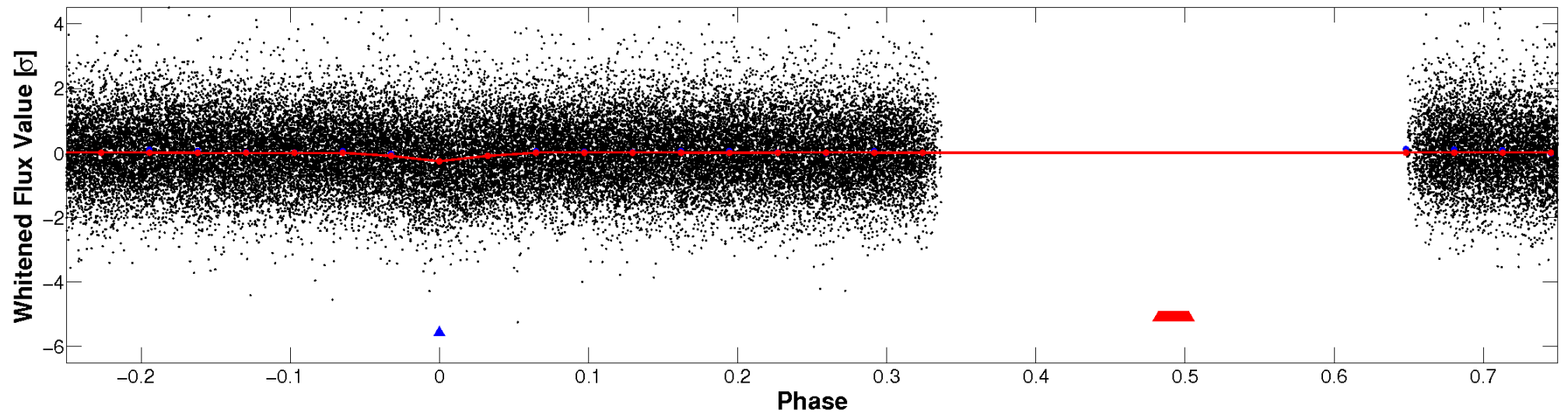


Non-Whitened Vs. Whitened Light Curve

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

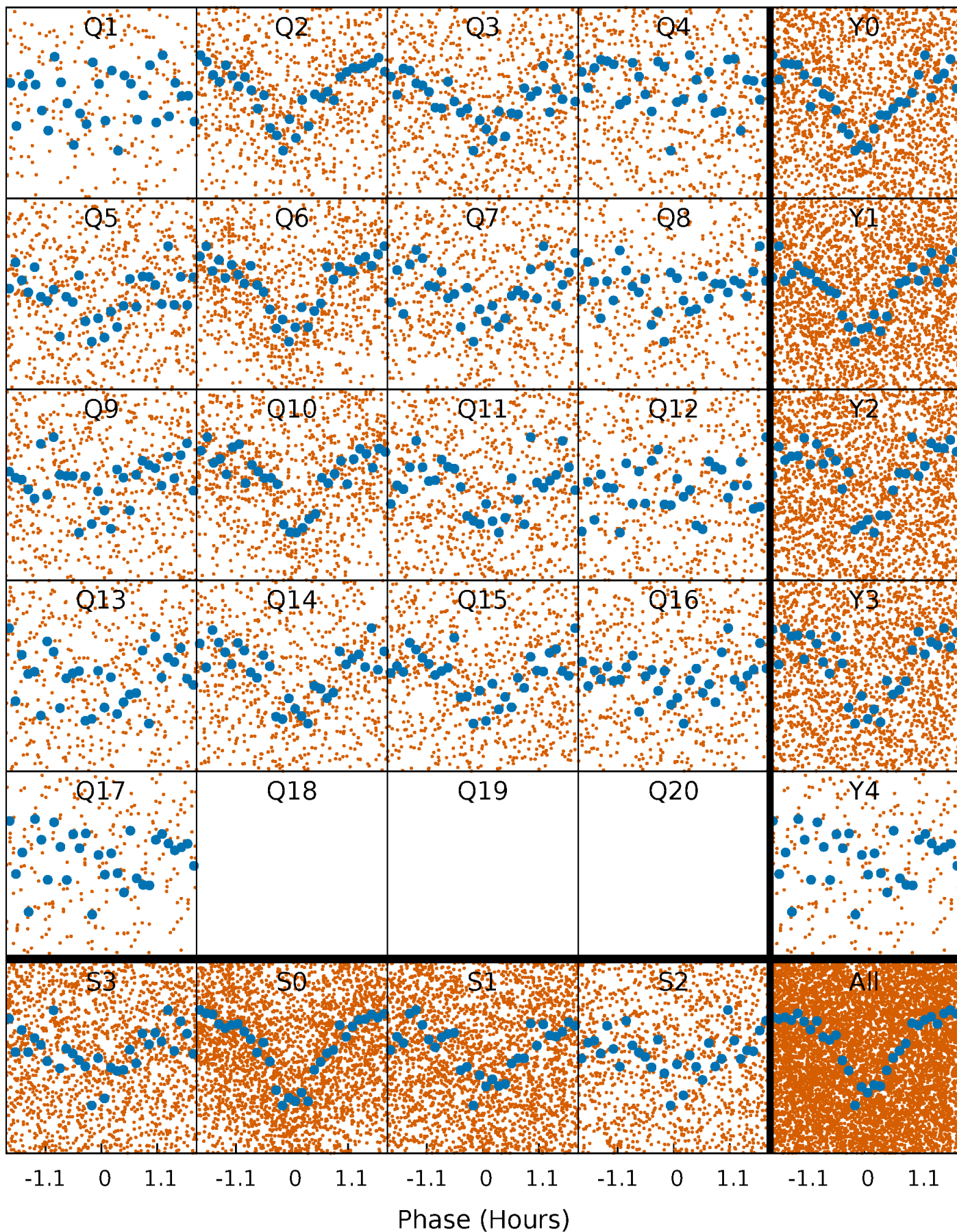


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



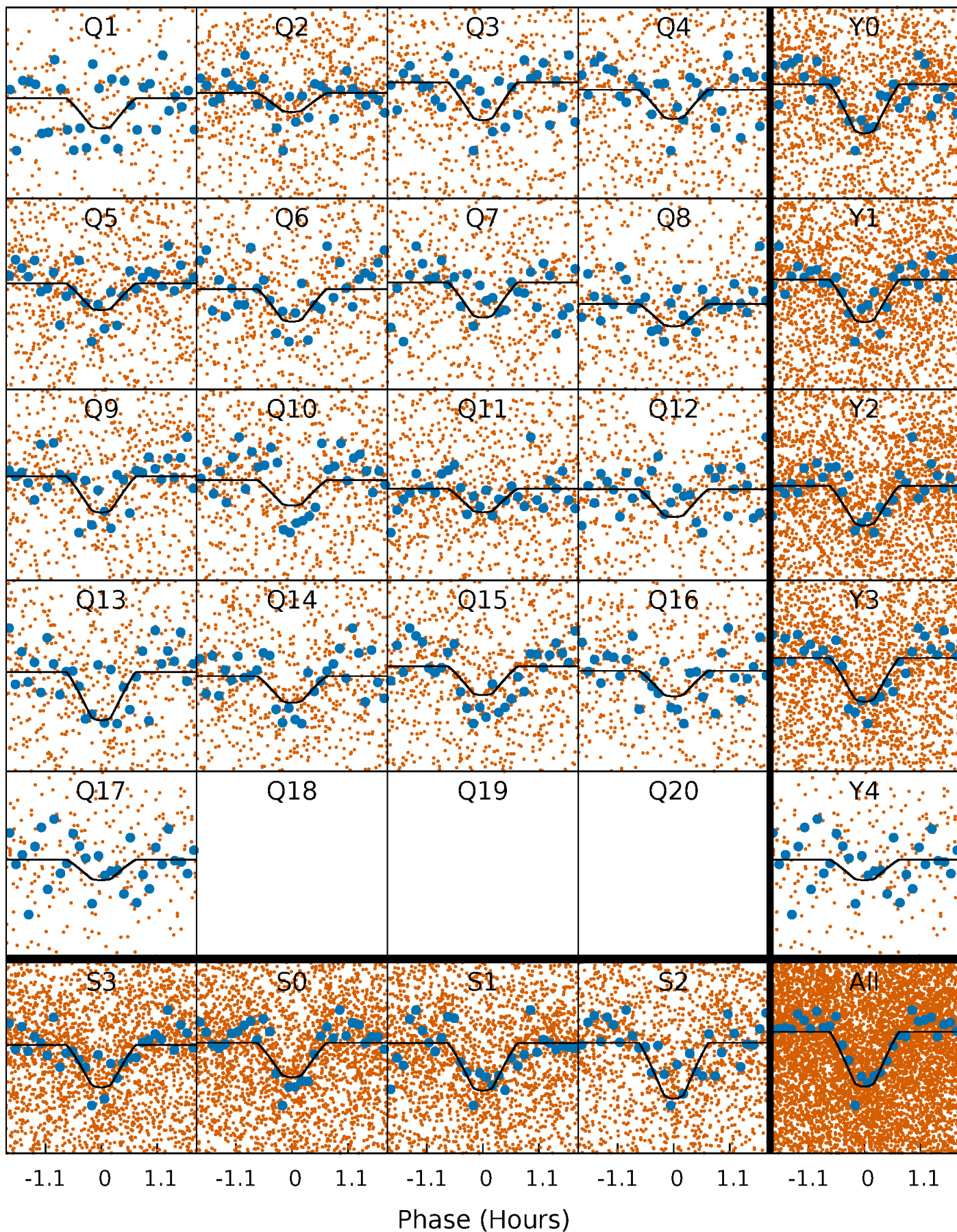
PDC Quarter-Phased Transit Curves

TCE 005980061-02 P= 0.630534 Days $T_0=131.995262$ (BKJD)



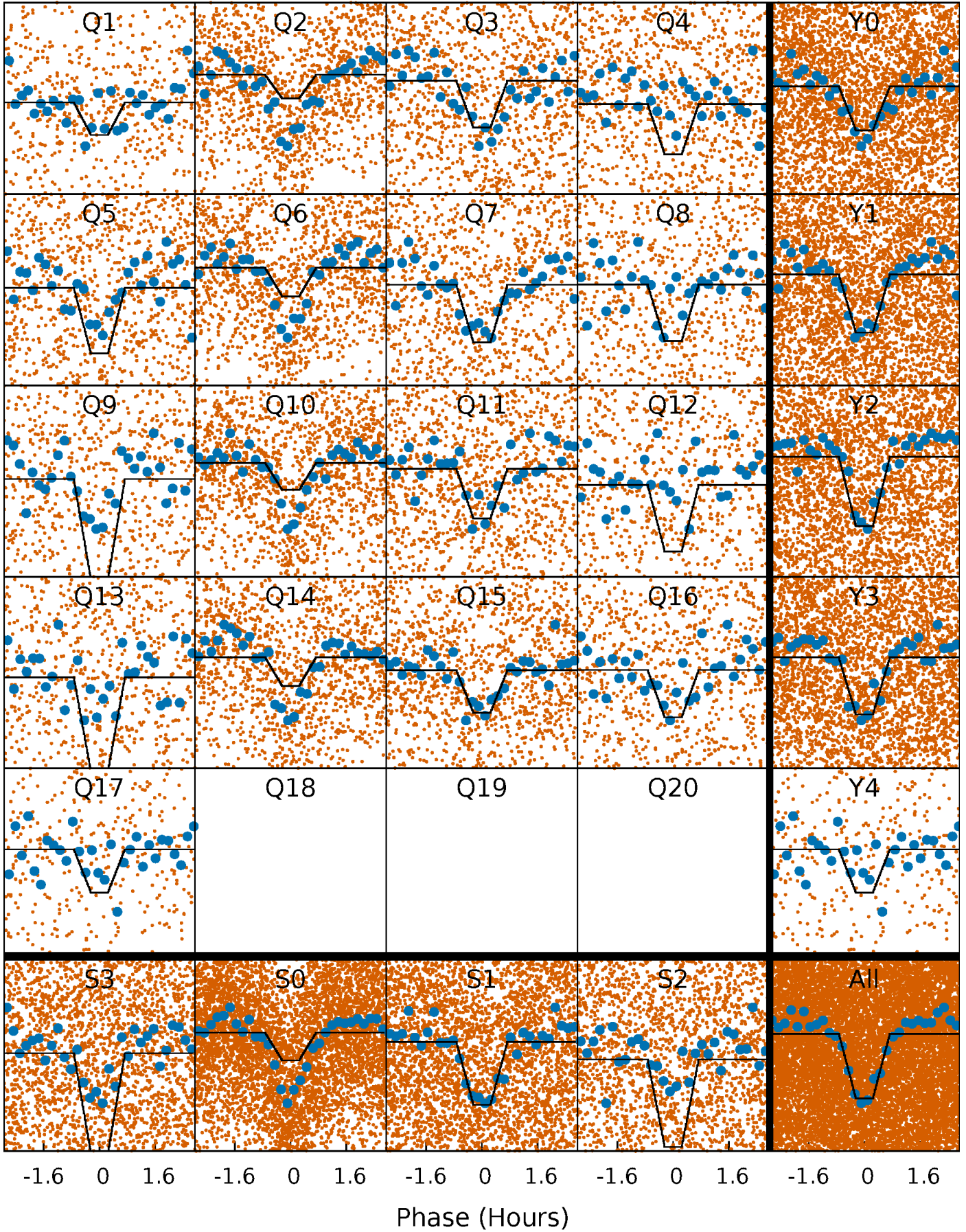
DV Quarter-Phased Transit Curves

TCE 005980061-02 $P = 0.630534$ Days $T_0 = 131.995262$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

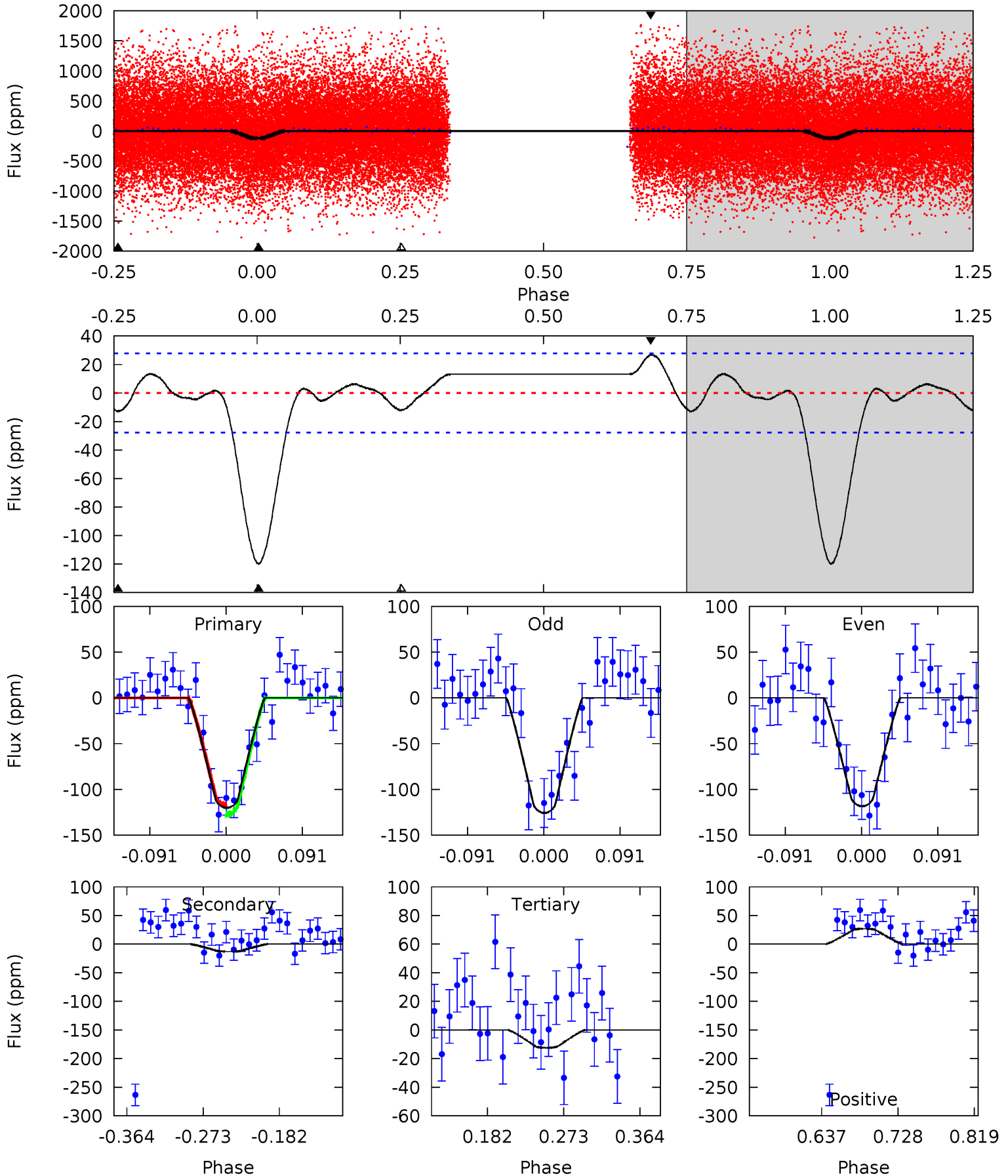
TCE 005980061-02 P= 0.630539 Days $T_0=131.991918$ (BKJD)



DV Model-Shift Uniqueness Test

005980061-02, P = 0.630534 Days, E = 131.364728 Days

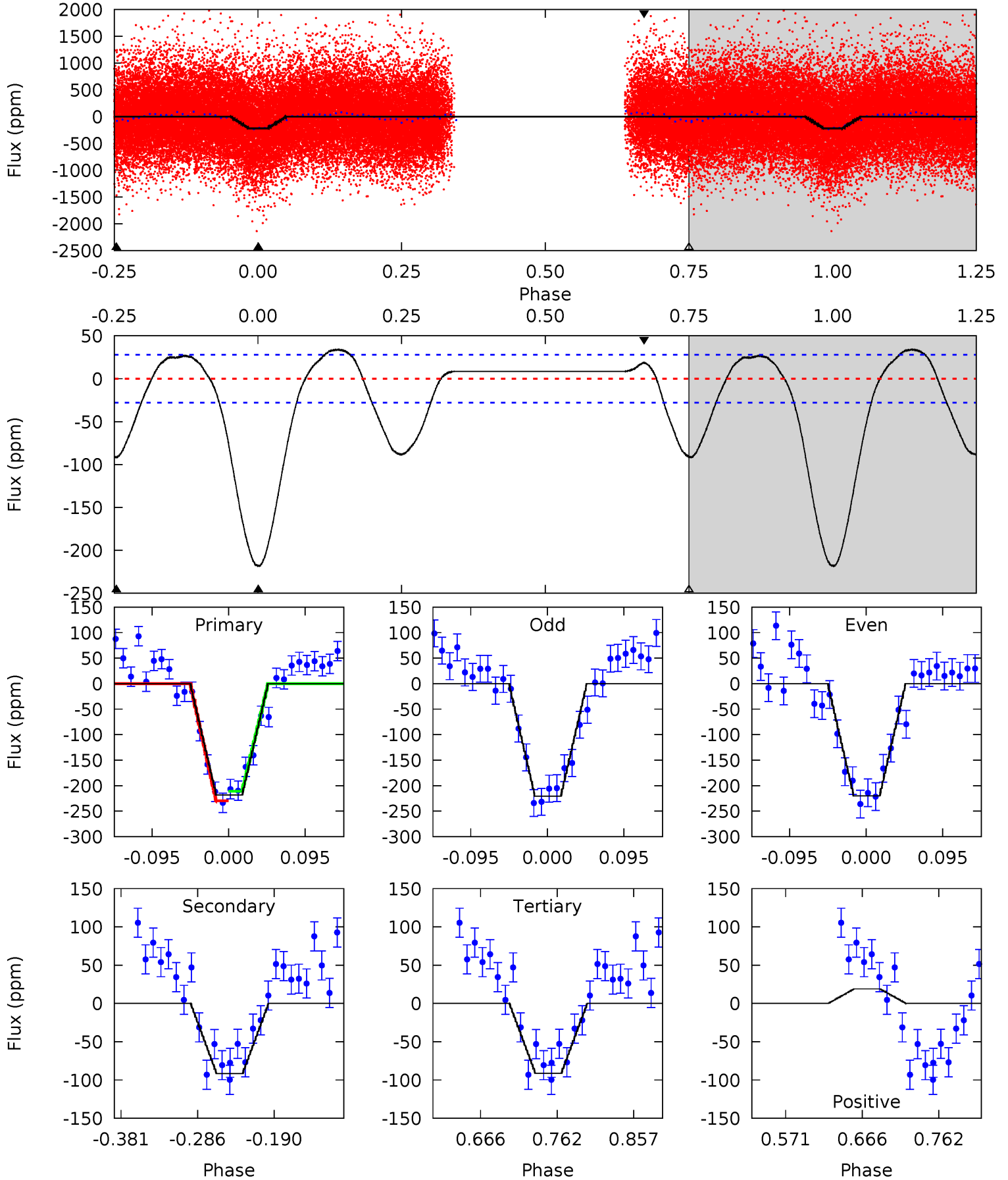
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	2.16	2.05	4.45	4.58	1.69	1.59	17.8	15.4	0.11	-2.29	0.60	1.01	0.18	0.84



Alt Model-Shift Uniqueness Test

005980061-02, P = 0.630539 Days, E = 131.361379 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	15.0	14.9	3.11	4.58	1.67	7.02	20.8	32.7	0.07	11.9	0.05	1.02	0.14	1.52



Stellar Parameters For KIC 005980061

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5458^{+180}_{-164}	$4.482^{+0.081}_{-0.150}$	$0.020^{+0.250}_{-0.300}$	$0.894^{+0.195}_{-0.090}$	$0.884^{+0.099}_{-0.082}$	$1.745^{+0.577}_{-0.714}$
	+3%/-3%	+2%/-3%	+1250%/-1500%	+22%/-10%	+11%/-9%	+33%/-41%
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 005980061-02 / KOI 4817.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 6	$1.24^{+0.82}_{-0.68}$	2722^{+172}_{-122}	3141^{+1275}_{-5568}	$0.823^{+3.279}_{-0.586}$
Alt.	-92 ± 6	$1.49^{+0.81}_{-0.75}$	2734^{+171}_{-141}	4449^{+1662}_{-688}	$4.379^{+12.866}_{-2.596}$

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 $A_{\text{obs}} \gg 1.0$

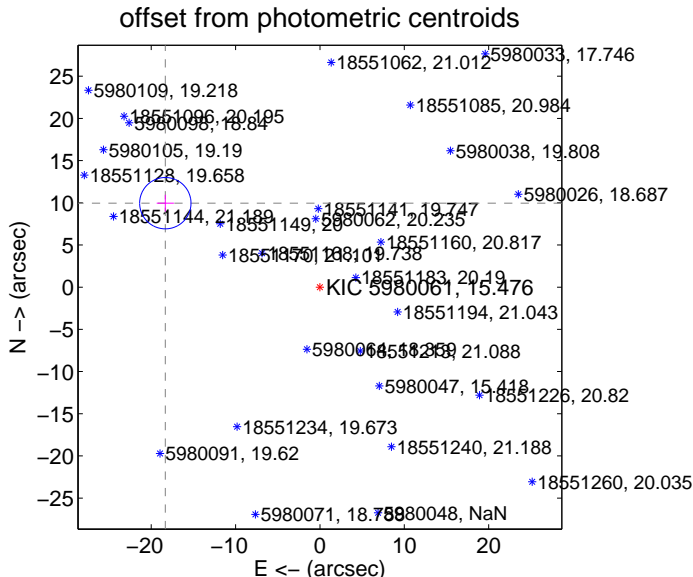
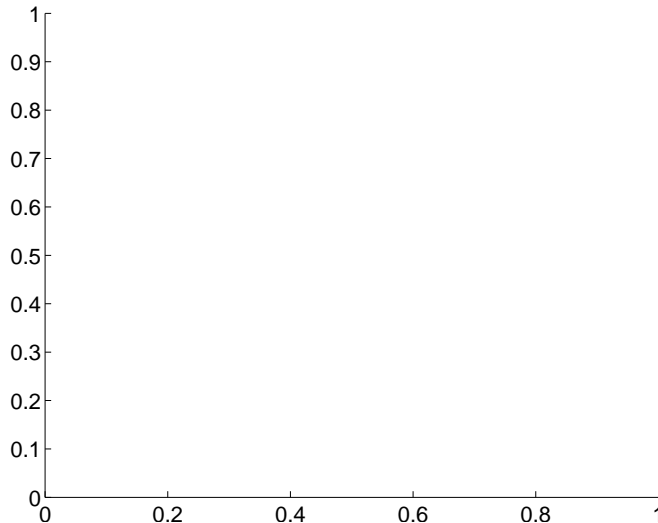
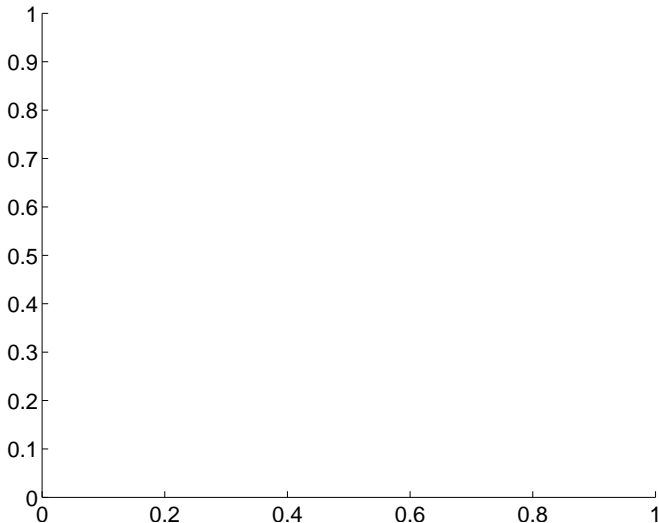
DV Centroid Data

Supplemental centroid analysis for 005980061-02. Kepler magnitude: 15.48. Transit SNR 13.59

There are 0 quarters with good PRF difference image offsets

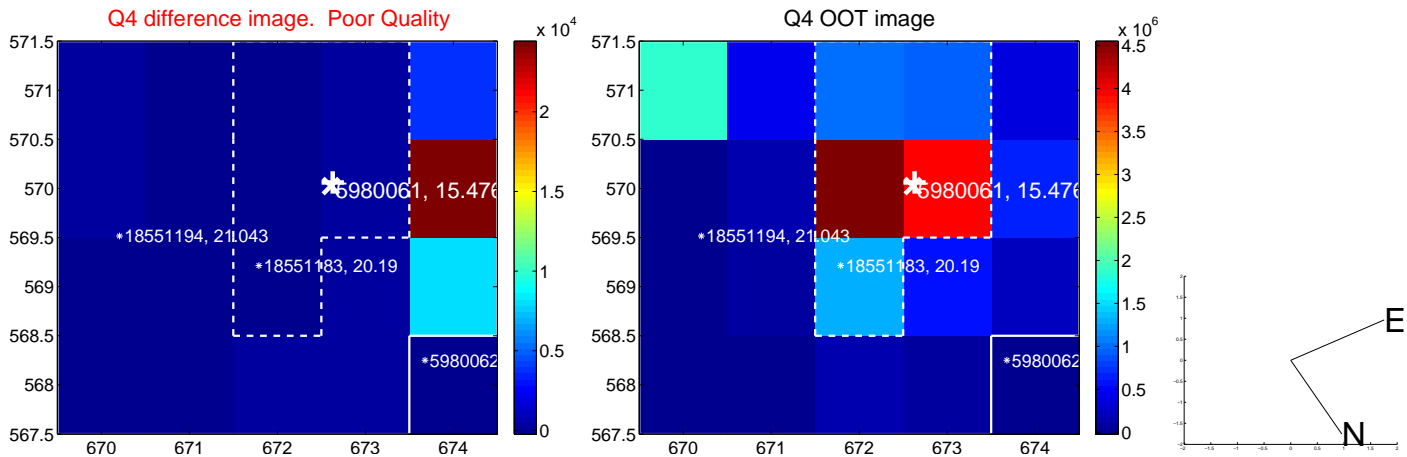
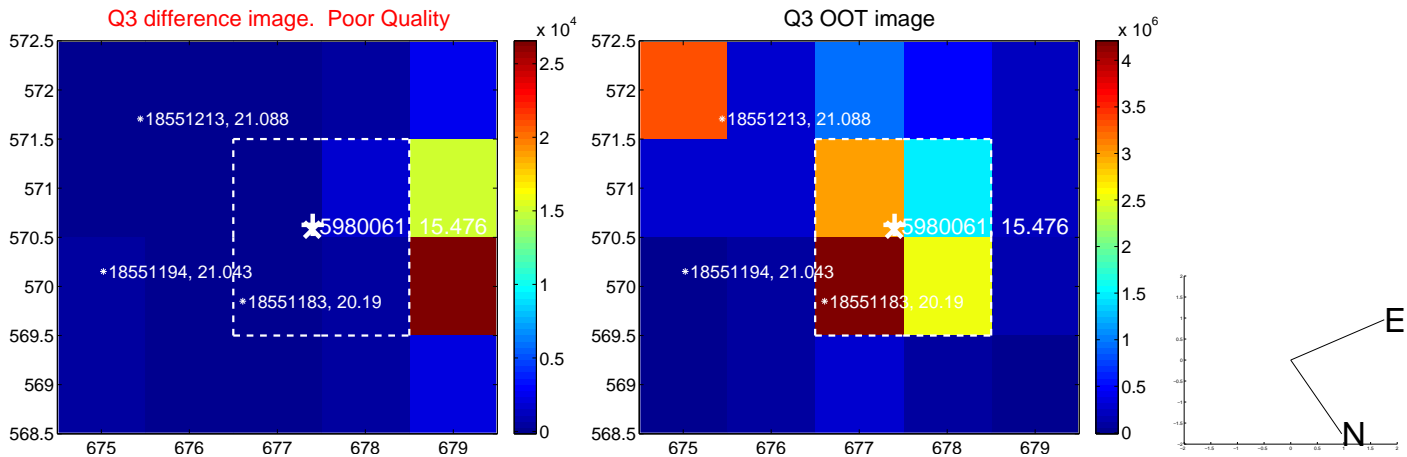
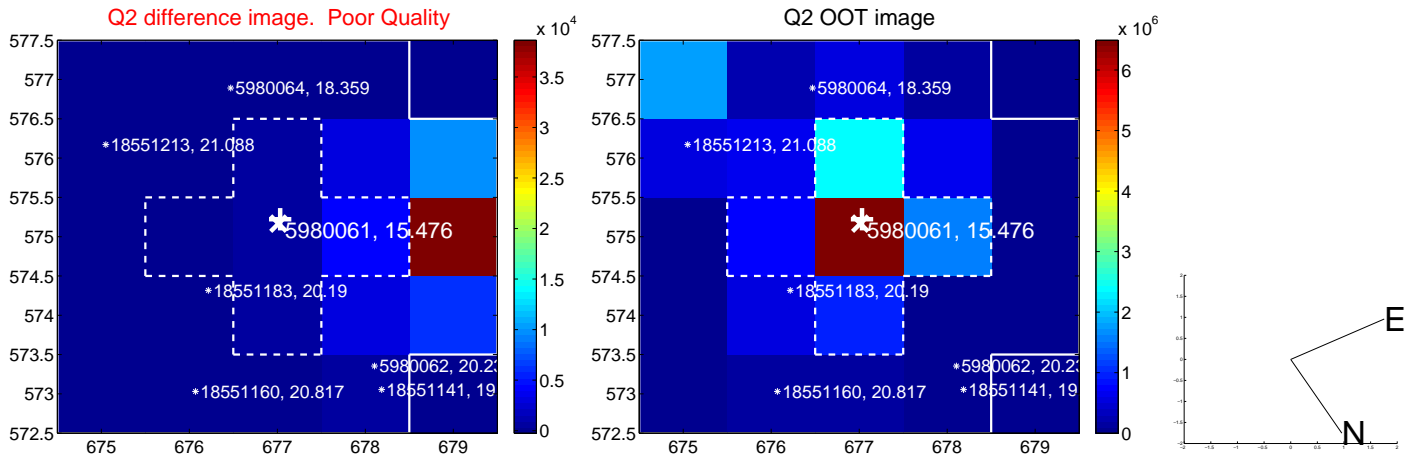
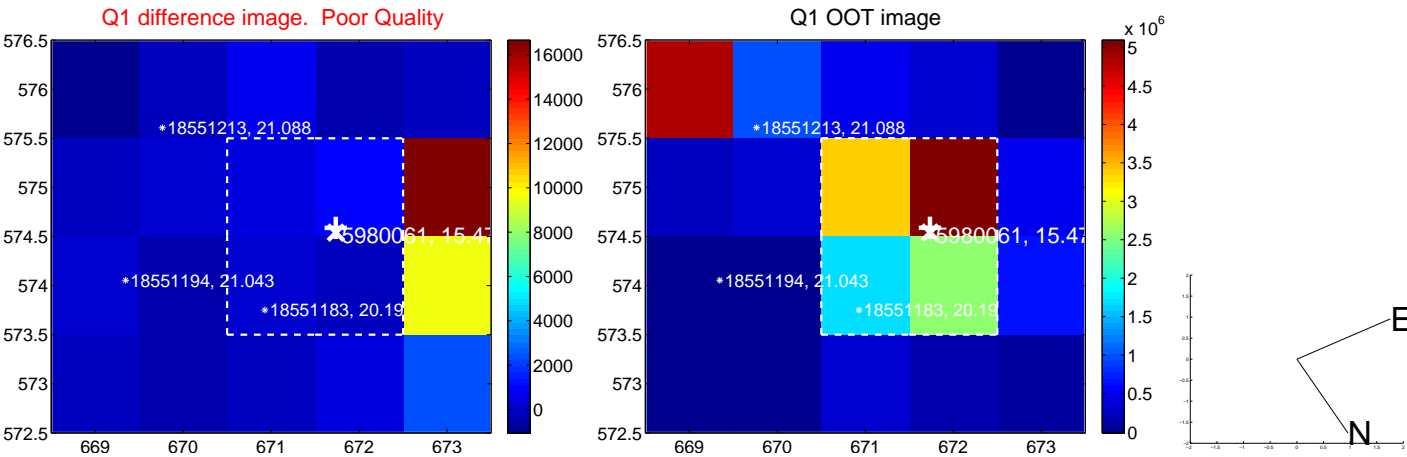
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	20.85 ± 1.01	20.56	18.33 ± 1.02	9.95 ± 1.00

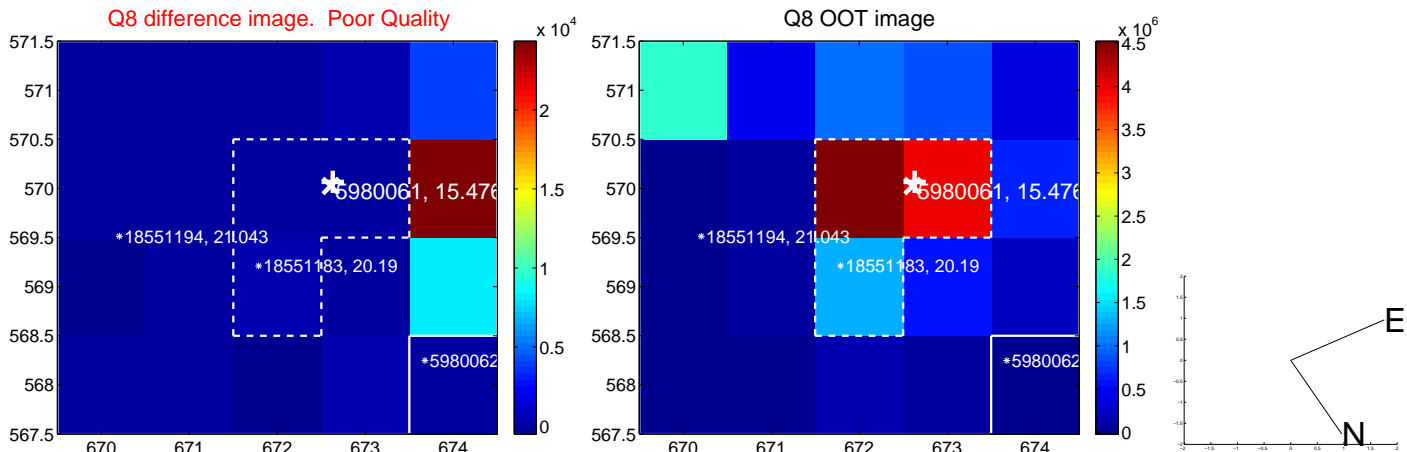
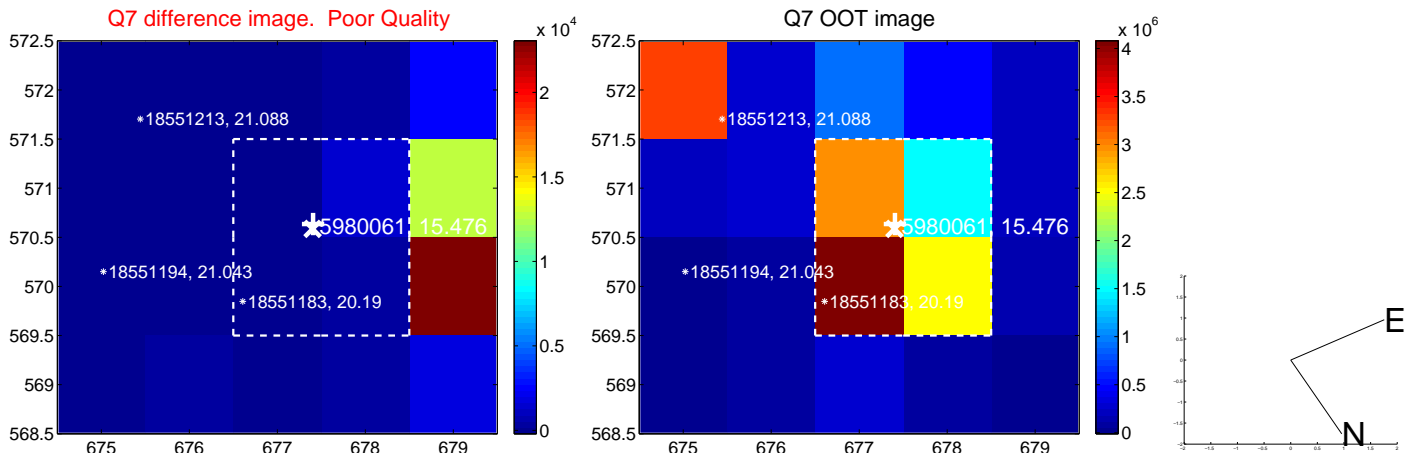
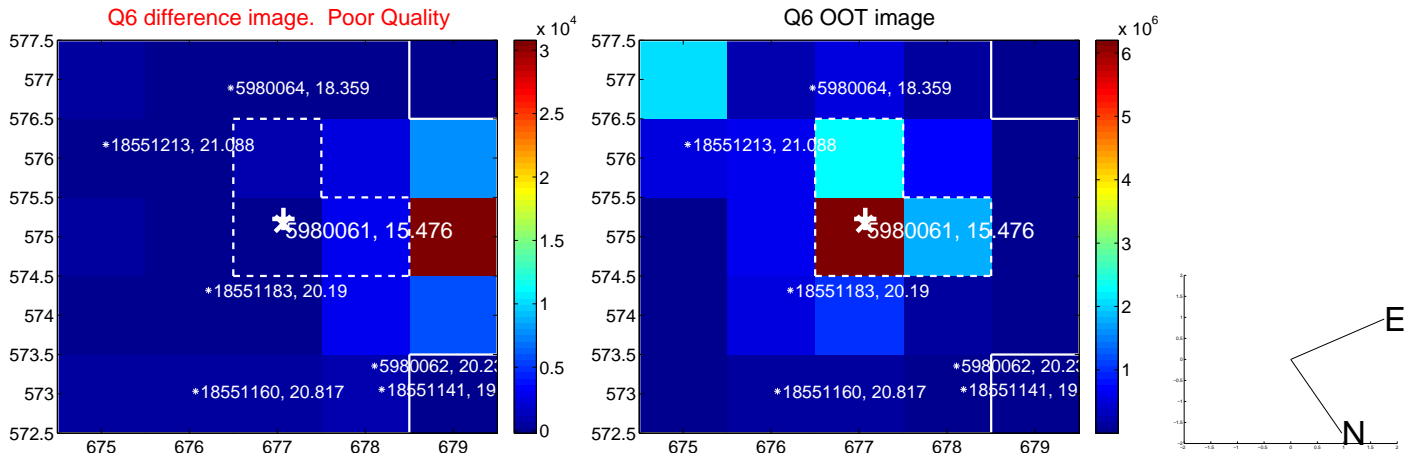
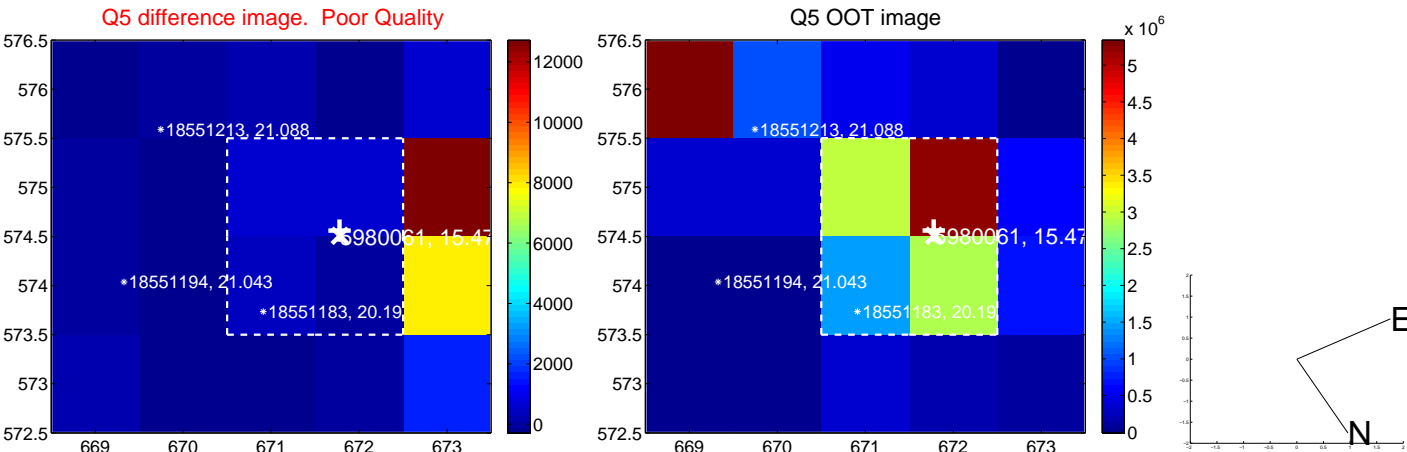


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

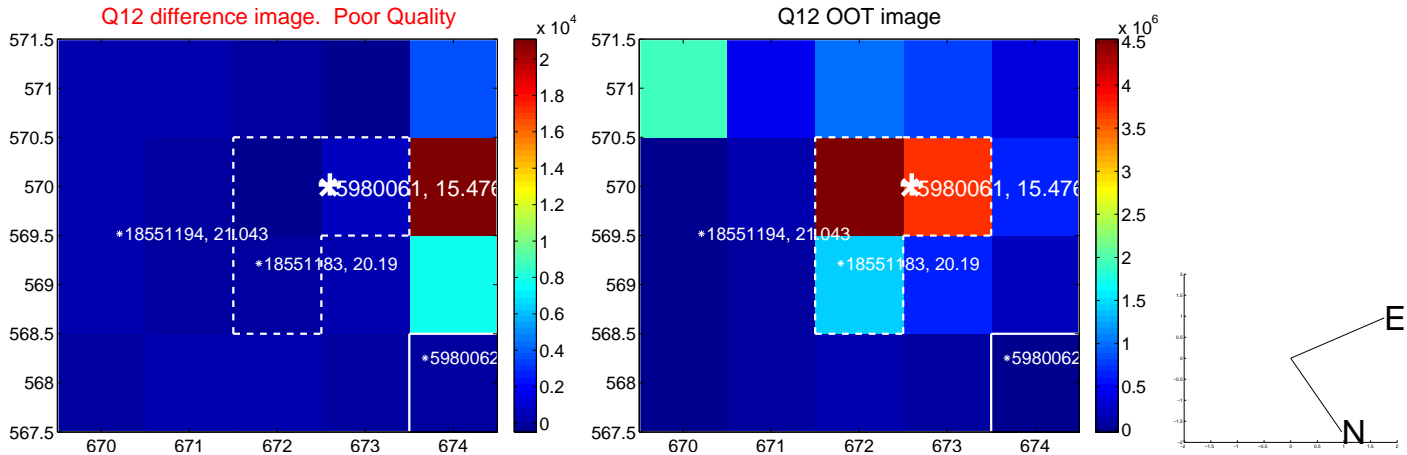
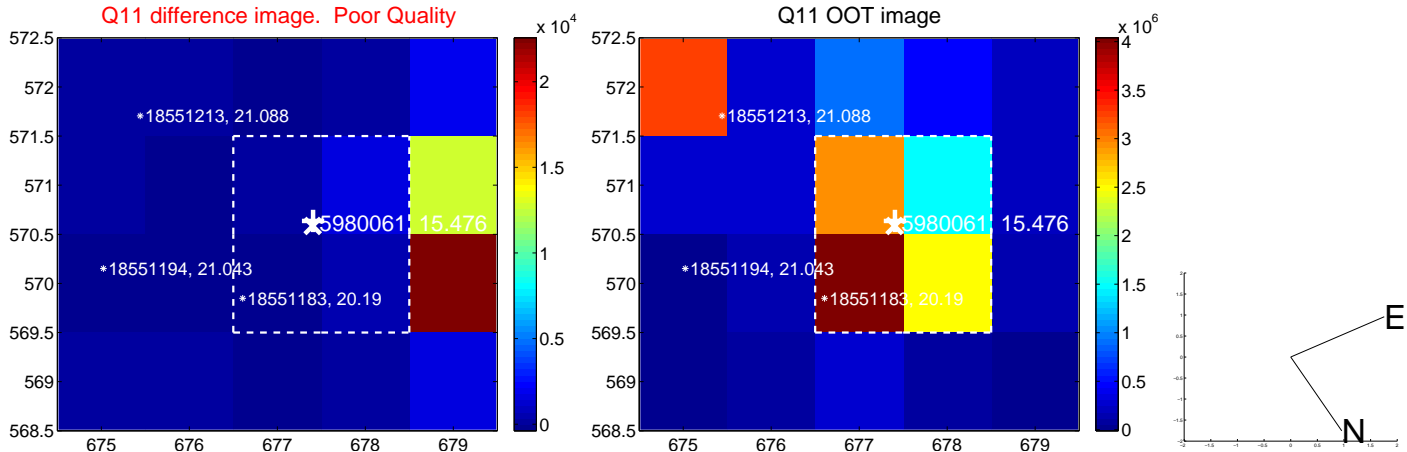
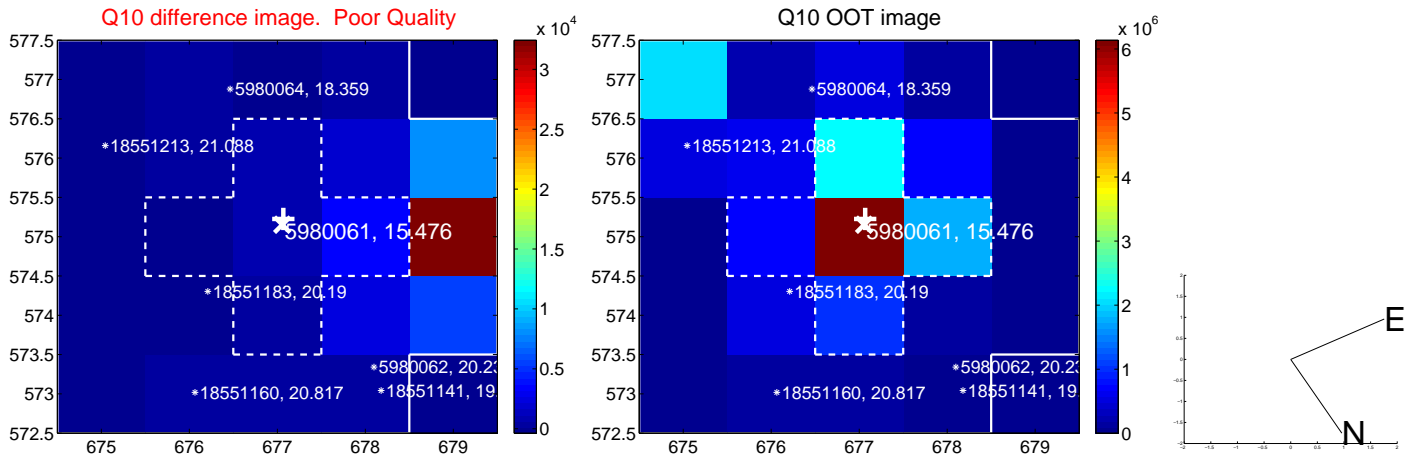
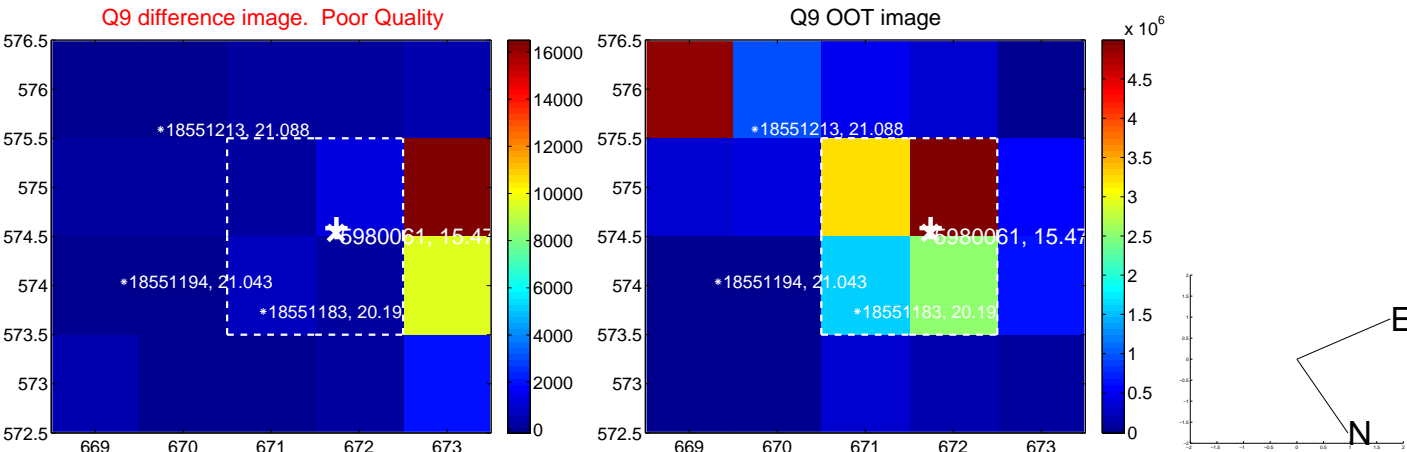
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



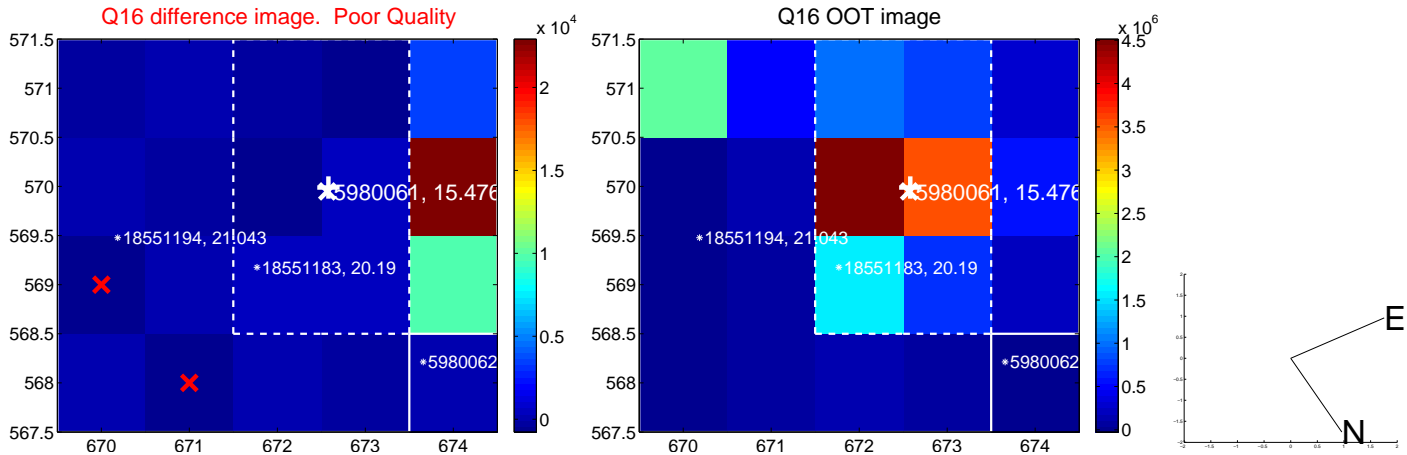
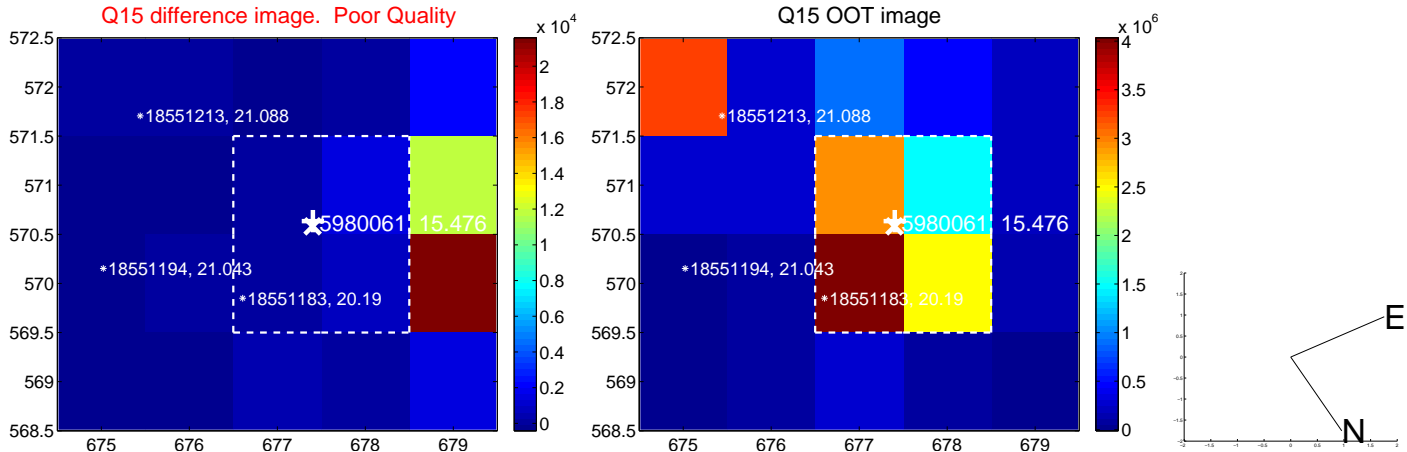
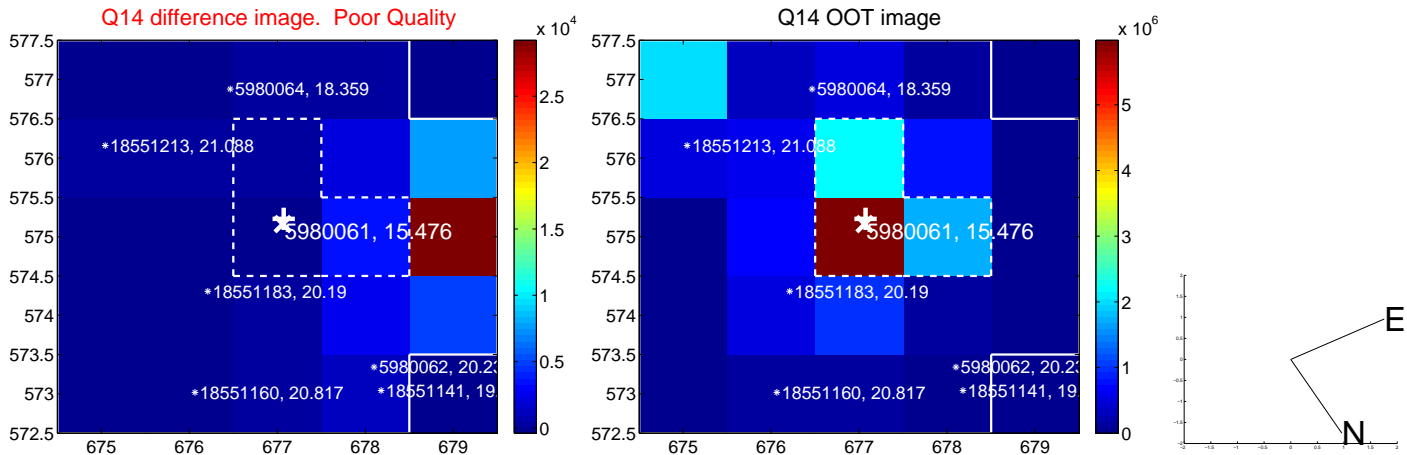
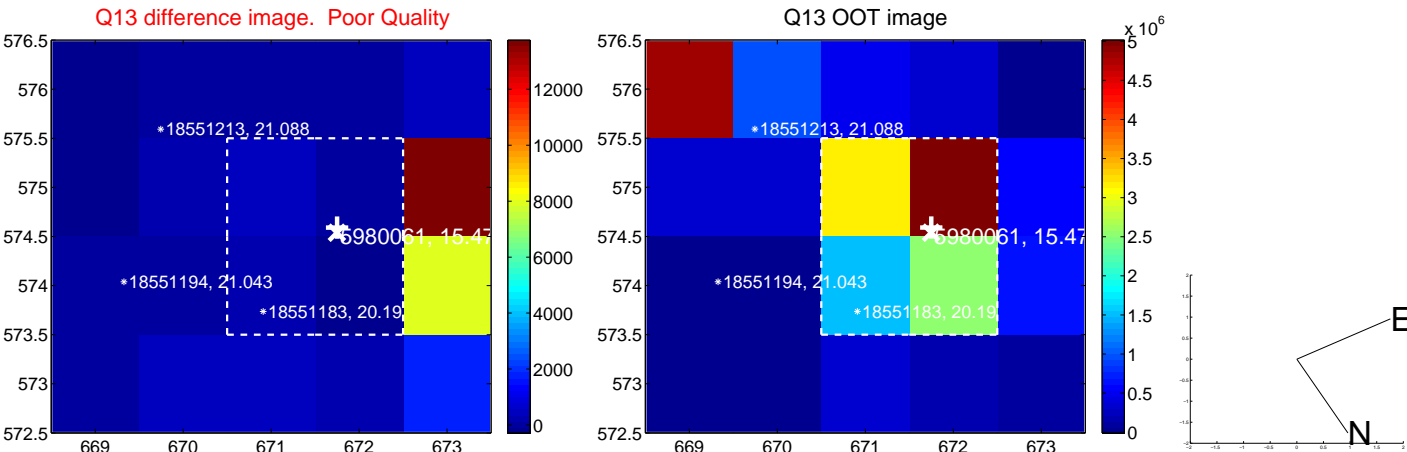
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



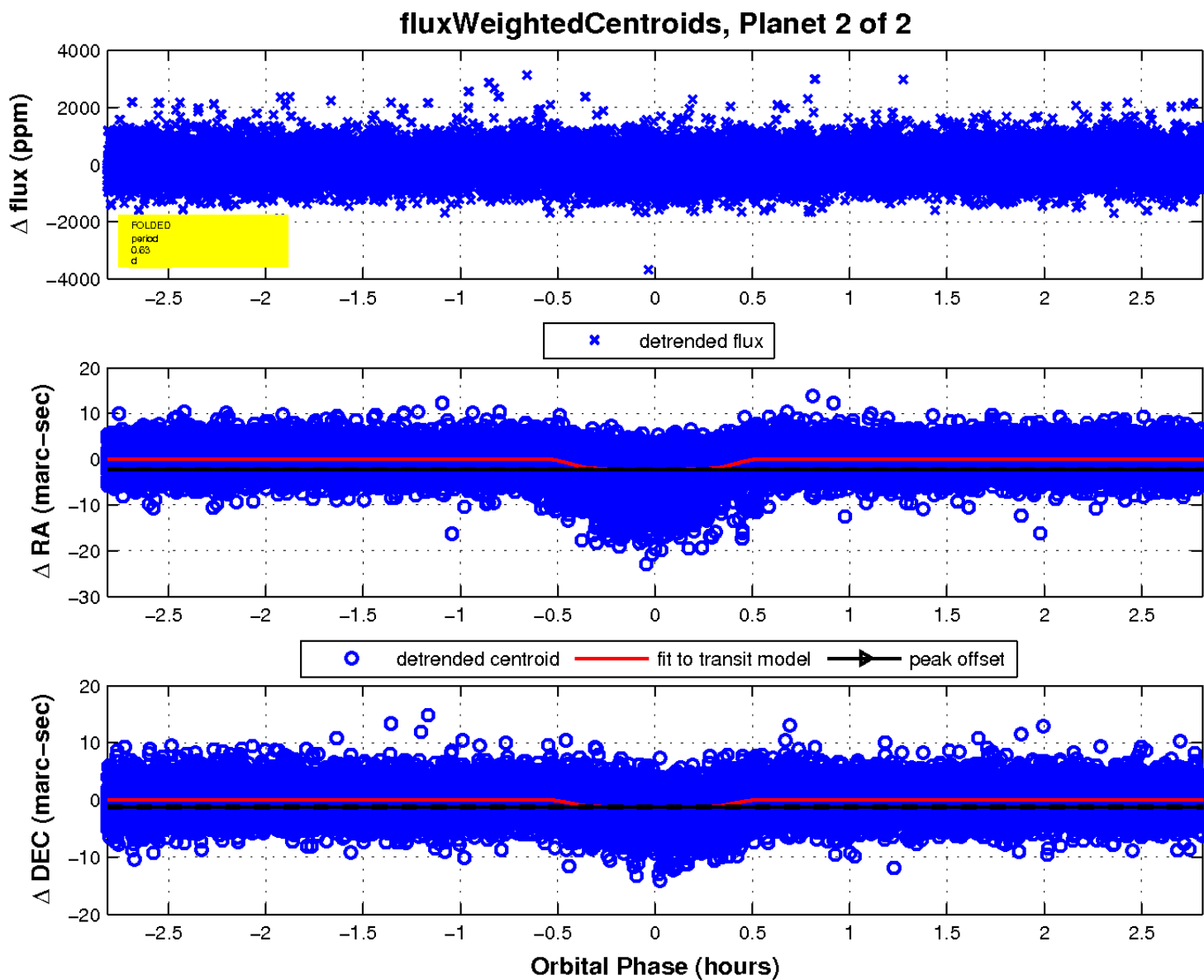
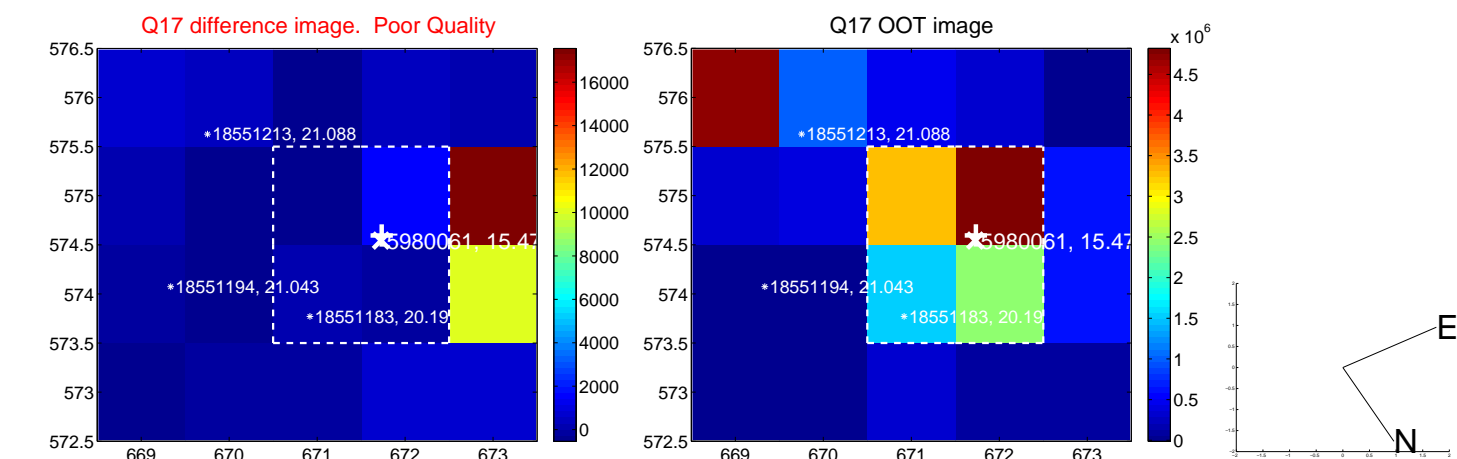
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

