

KIC 008041249

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})
008041249-01	OBS	No	587.675997	275.754899	188.5	5.000	29.5	-1.0	2.30	6947	3.19	4.43
008041249-02	OBS	No	507.901818	187.897261	1040.4	13.322	24.0	4.3	2.30	6947	8.78	5.38
008041249-03	OBS	No	376.003189	455.407104	232.2	3.000	17.6	-1.0	2.30	6947	3.54	8.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008041249-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—CENT_SATURATED
008041249-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008041249-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

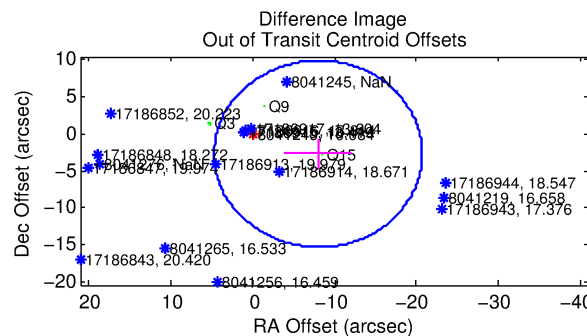
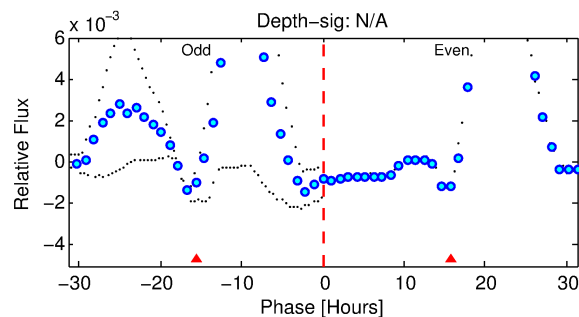
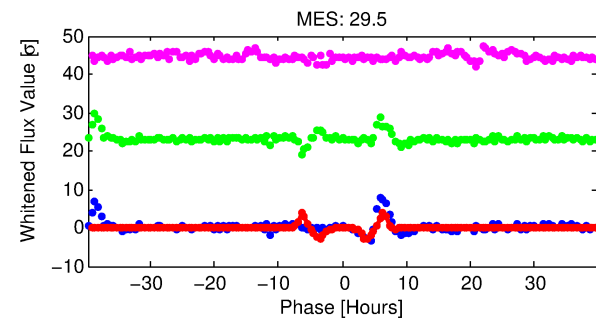
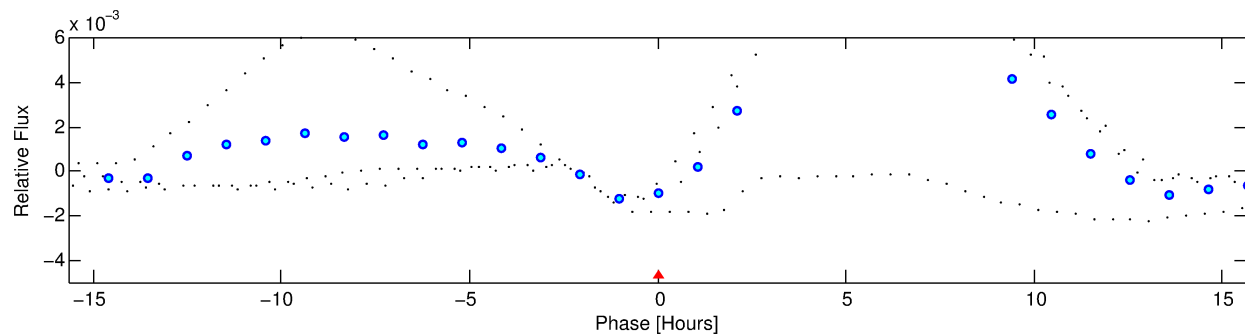
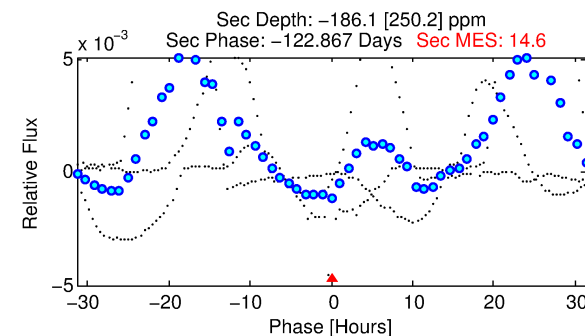
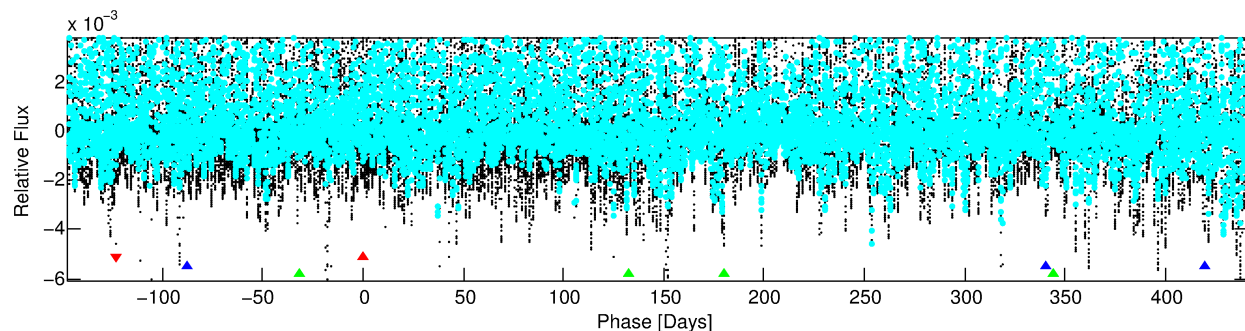
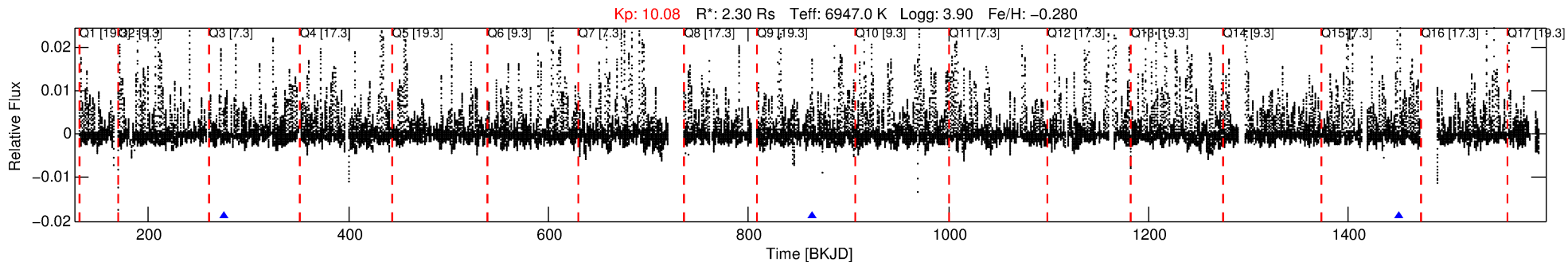
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008041249-01

No Significant Match Found

DV One-Page Summary

KIC: 8041249 Candidate: 1 of 3 Period: 587.676 d



TPS TCE Results:

Period = 587.67600 d
Epoch = 275.7549 BKJD

DV fit results are unavailable

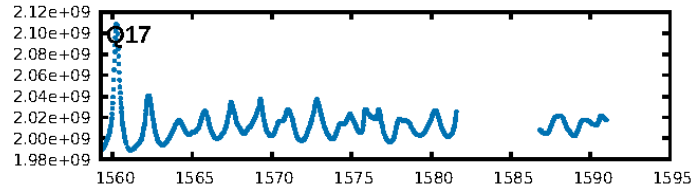
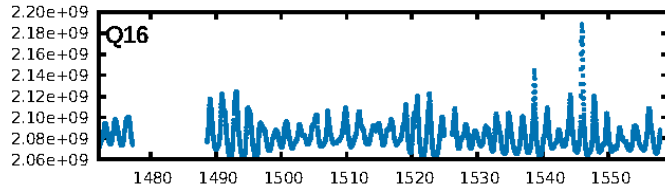
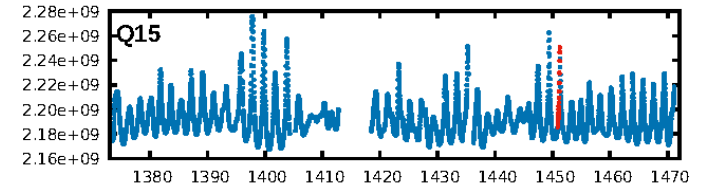
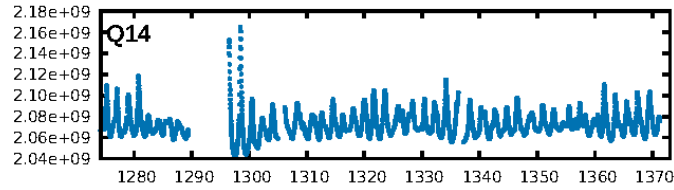
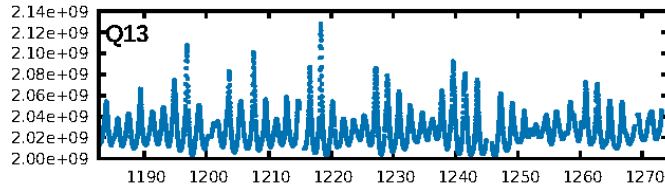
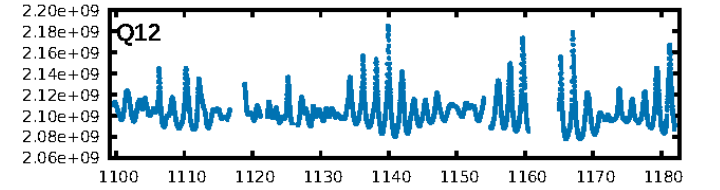
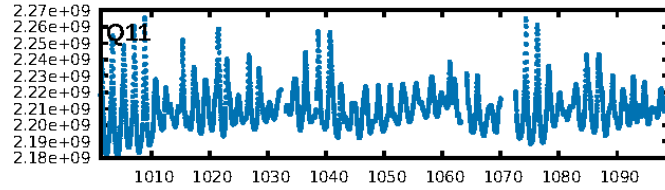
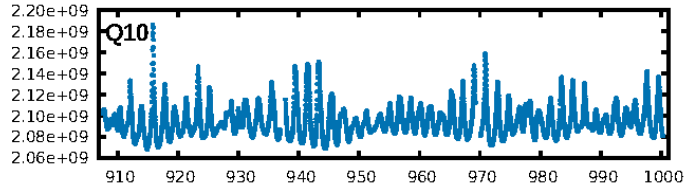
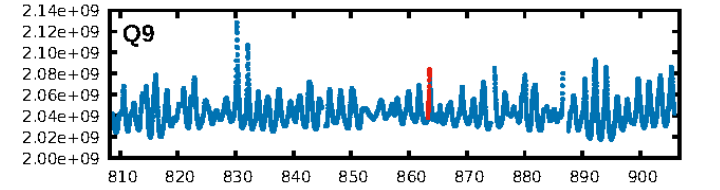
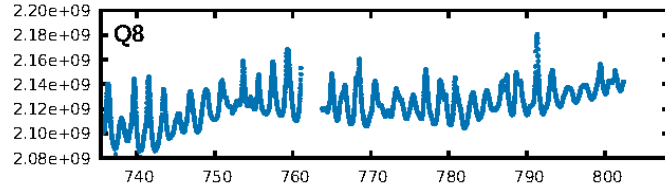
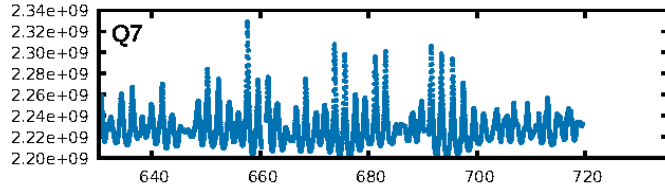
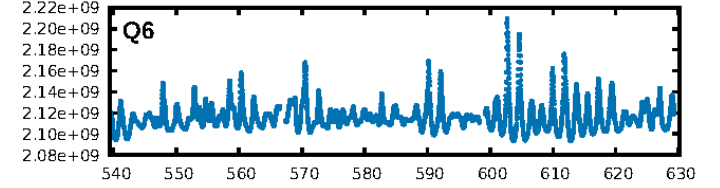
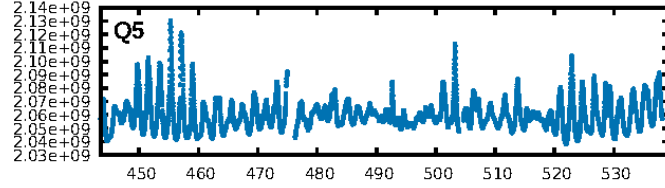
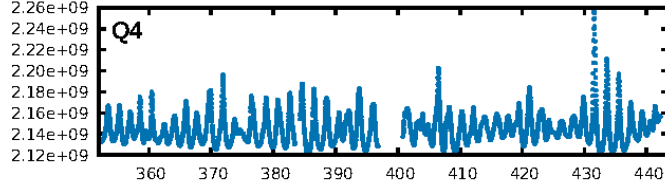
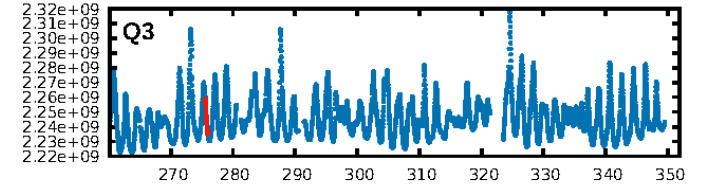
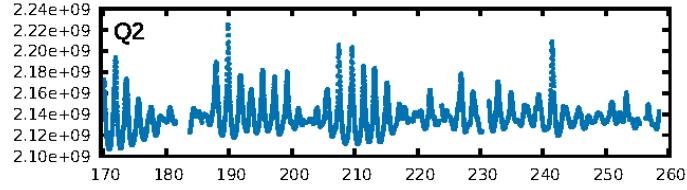
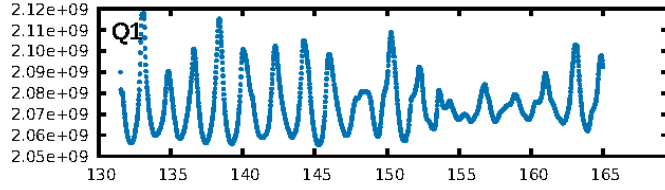
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [134.55σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 14.4%
Centroid-so: 0.725 arcsec [2.93σ]
OotOffset-rm: 8.462 arcsec [2.00σ]
KicOffset-rm: 8.852 arcsec [2.48σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

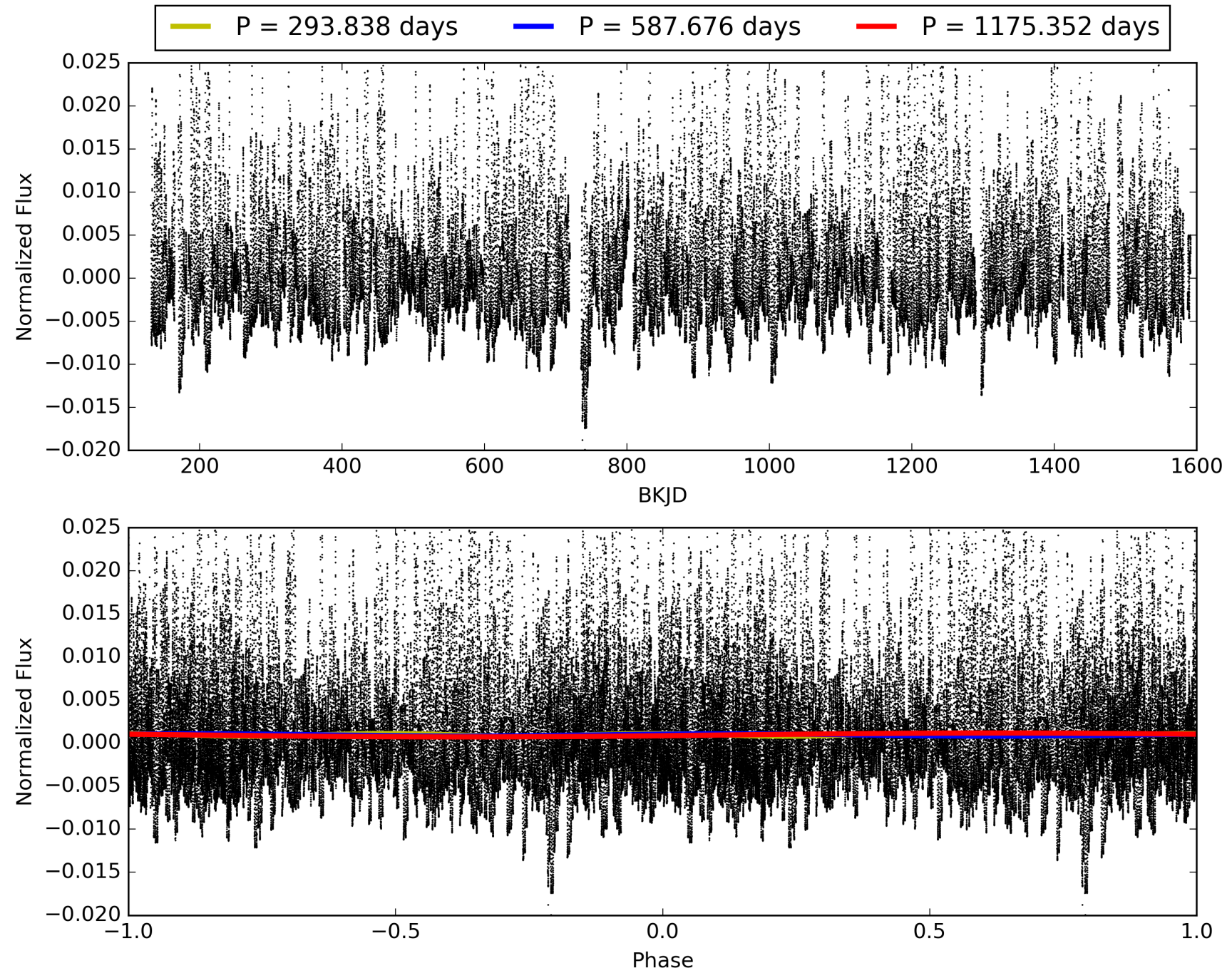
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:39:34 Z

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

TCE 008041249-01, PDC Light Curves

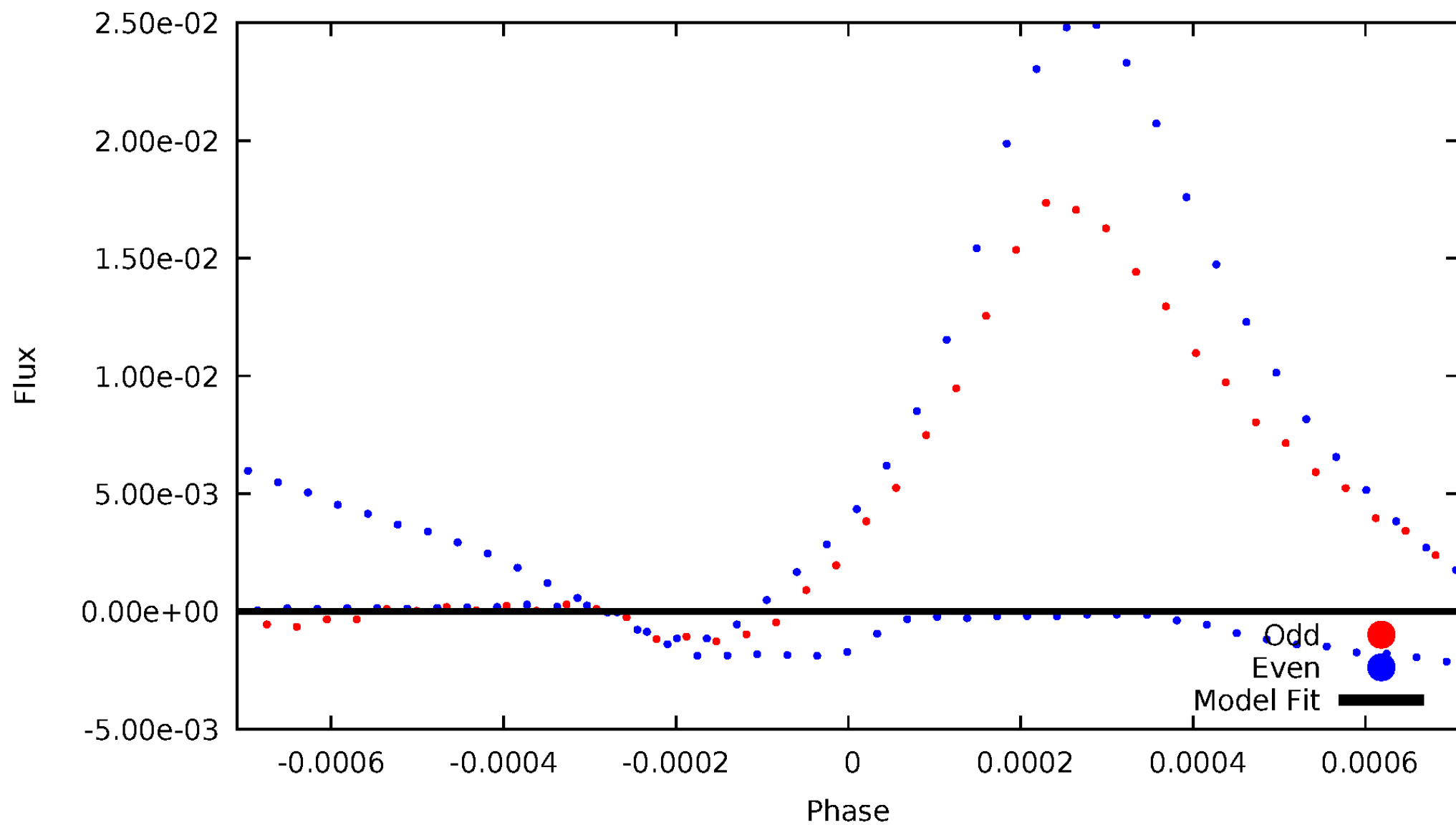


TCE 008041249-01



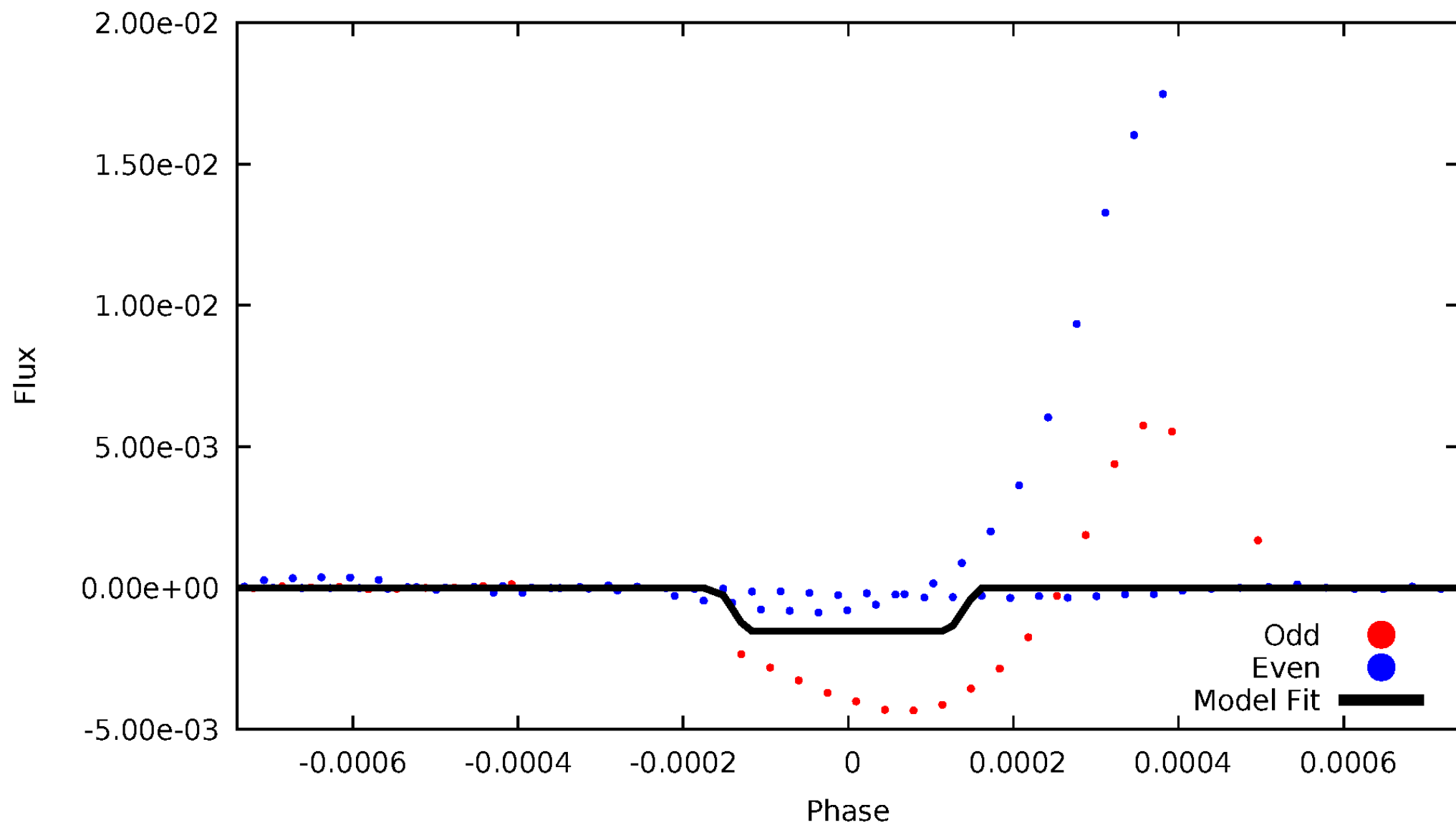
DV Odd/Even

TCE 008041249-01



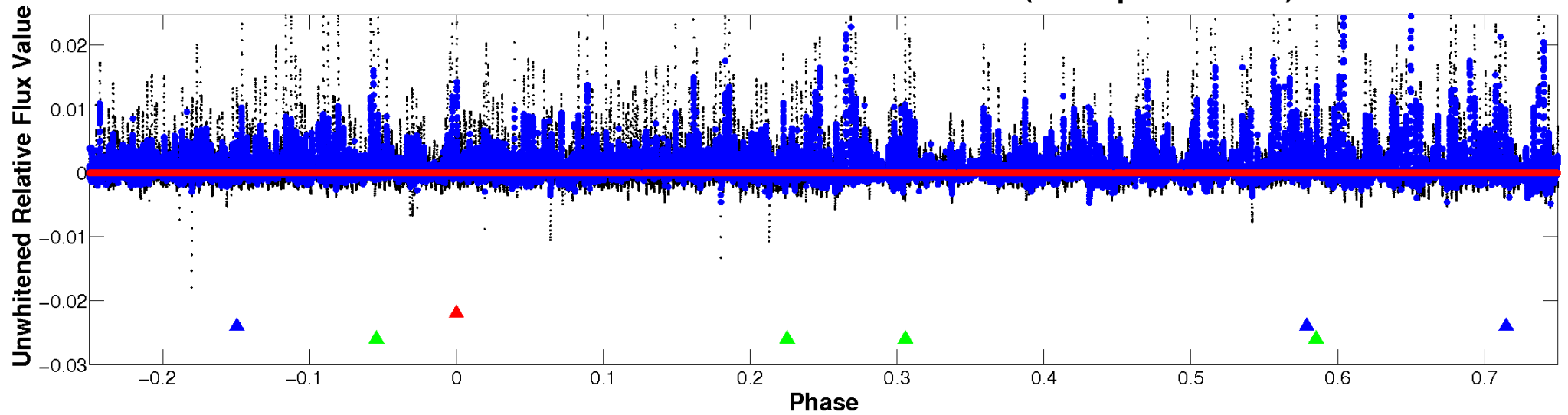
ALT Odd/Even

TCE 008041249-01



Non-Whitened Vs. Whitened Light Curve

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

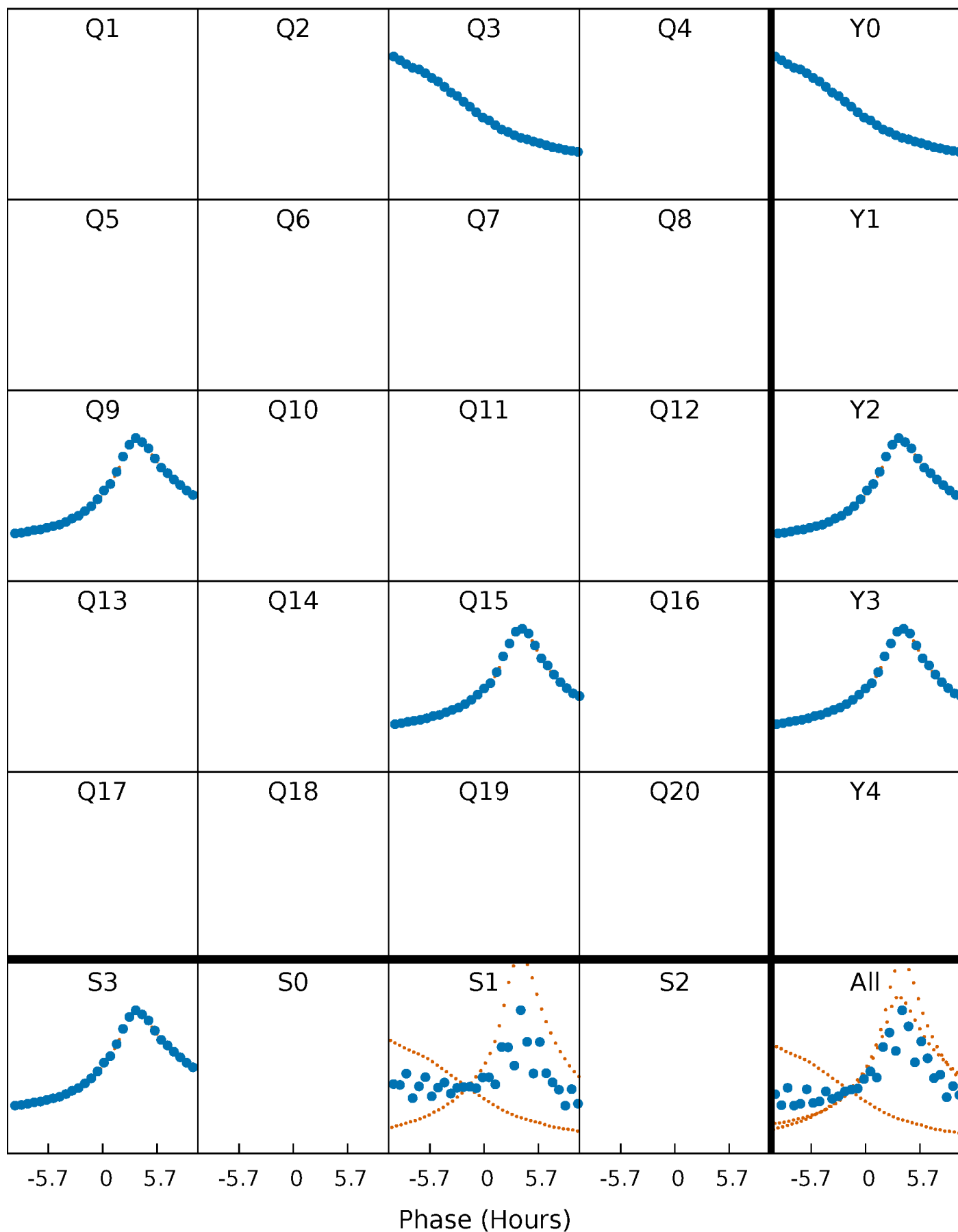


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



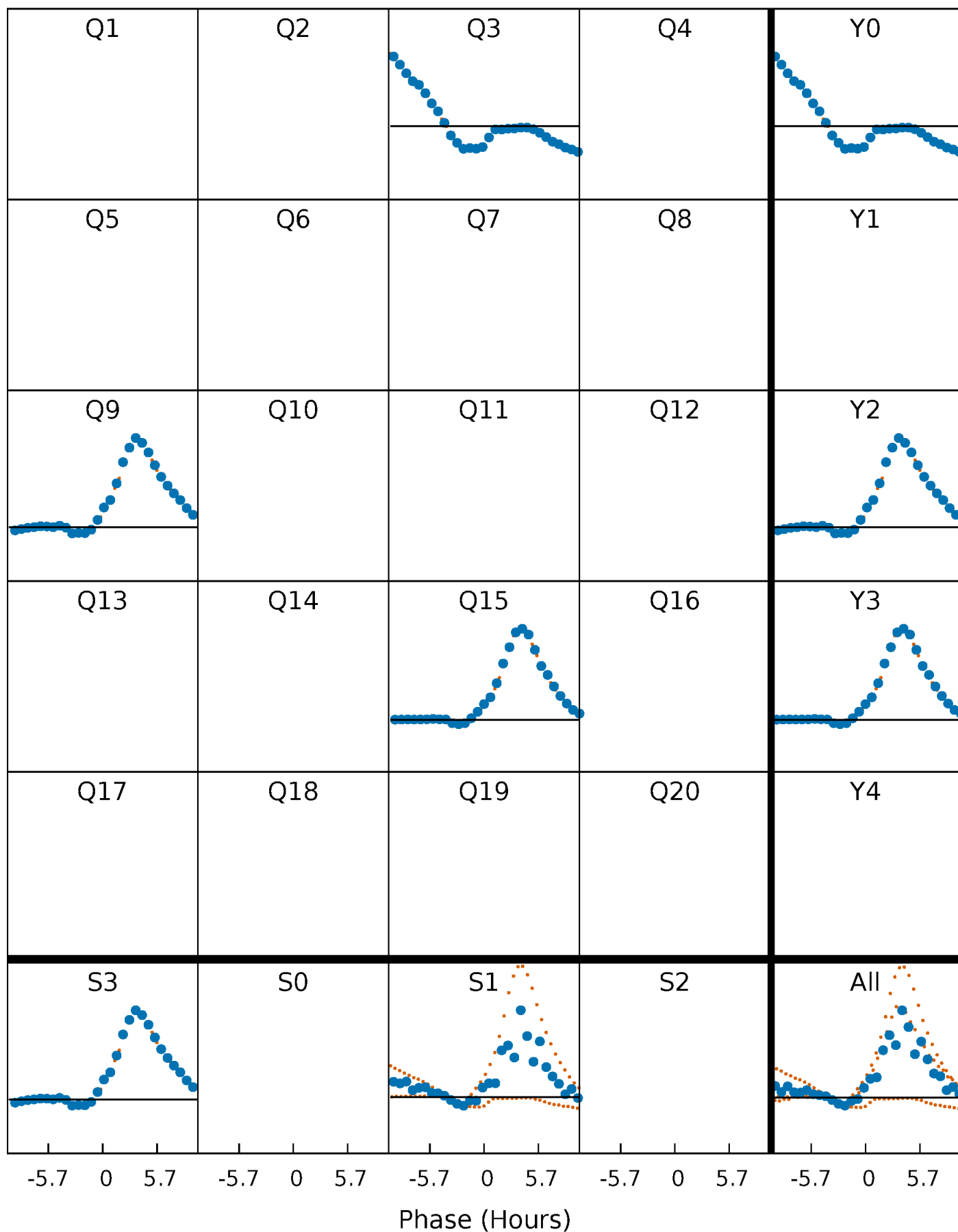
PDC Quarter-Phased Transit Curves

TCE 008041249-01 P=587.675997 Days $T_0=275.754899$ (BKJD)



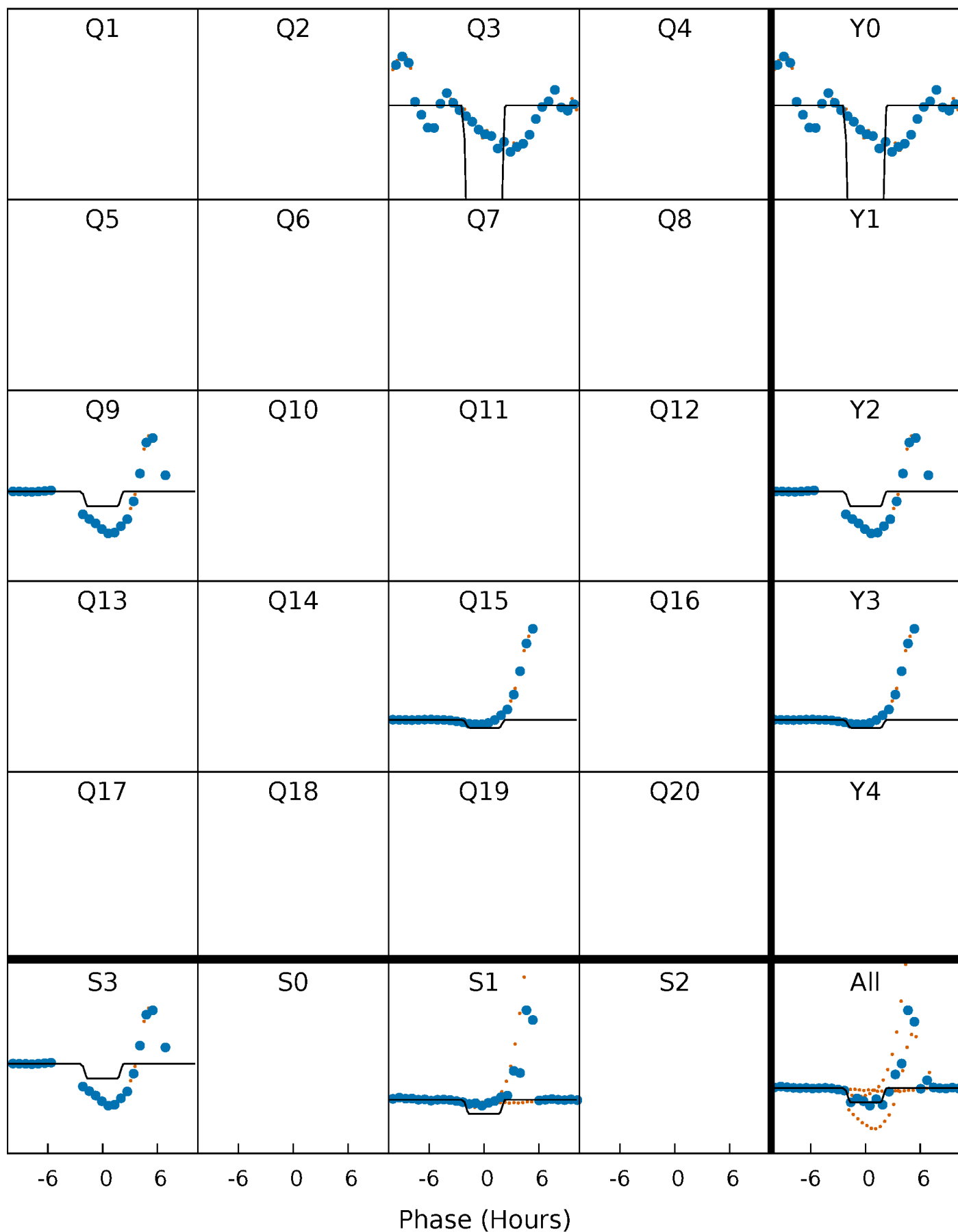
DV Quarter-Phased Transit Curves

TCE 008041249-01 P=587.675997 Days $T_0=275.754899$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

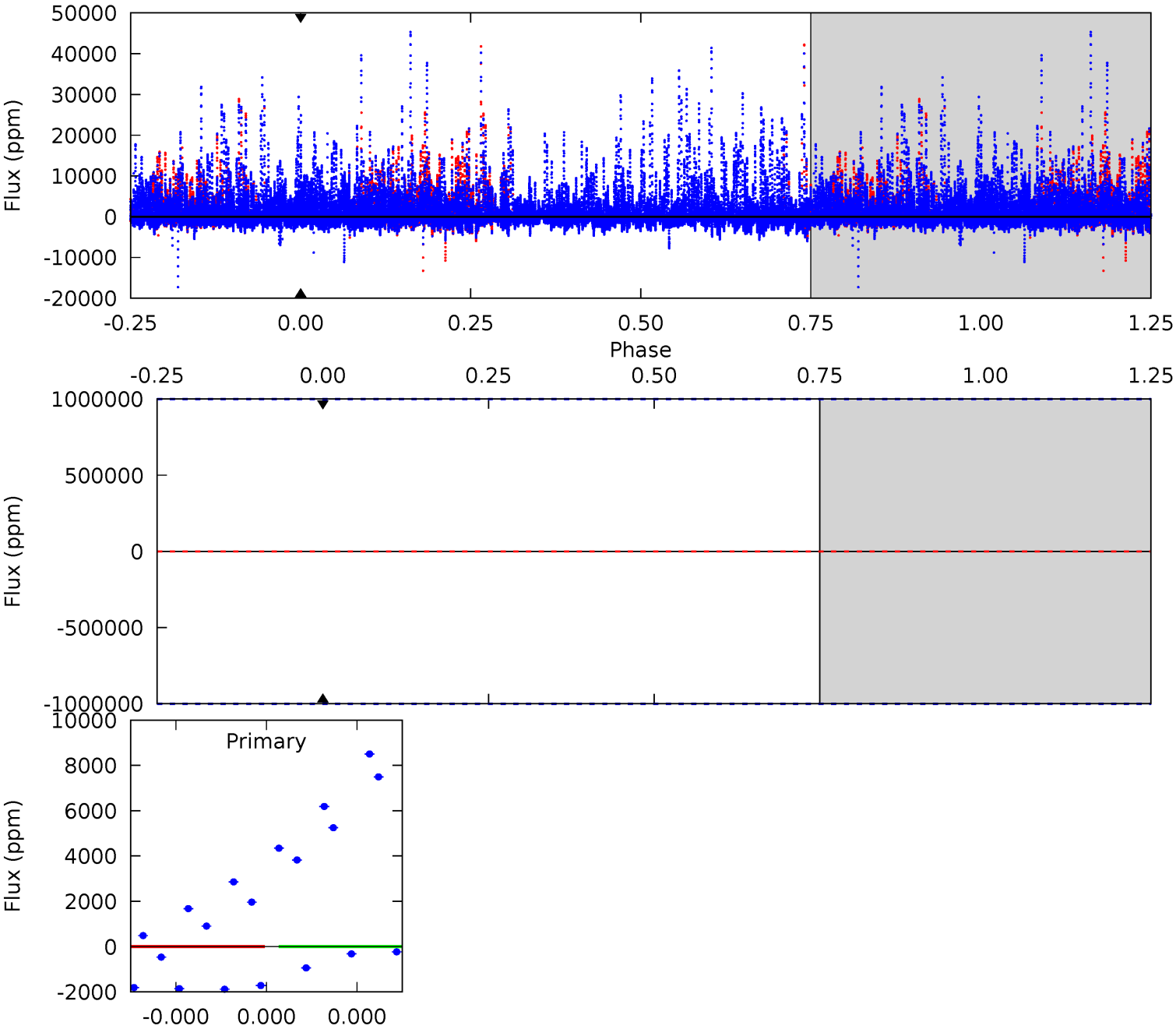
TCE 008041249-01 P=587.675997 Days $T_0=275.679754$ (BKJD)



DV Model-Shift Uniqueness Test

008041249-01, P = 587.675997 Days, E = 275.754899 Days

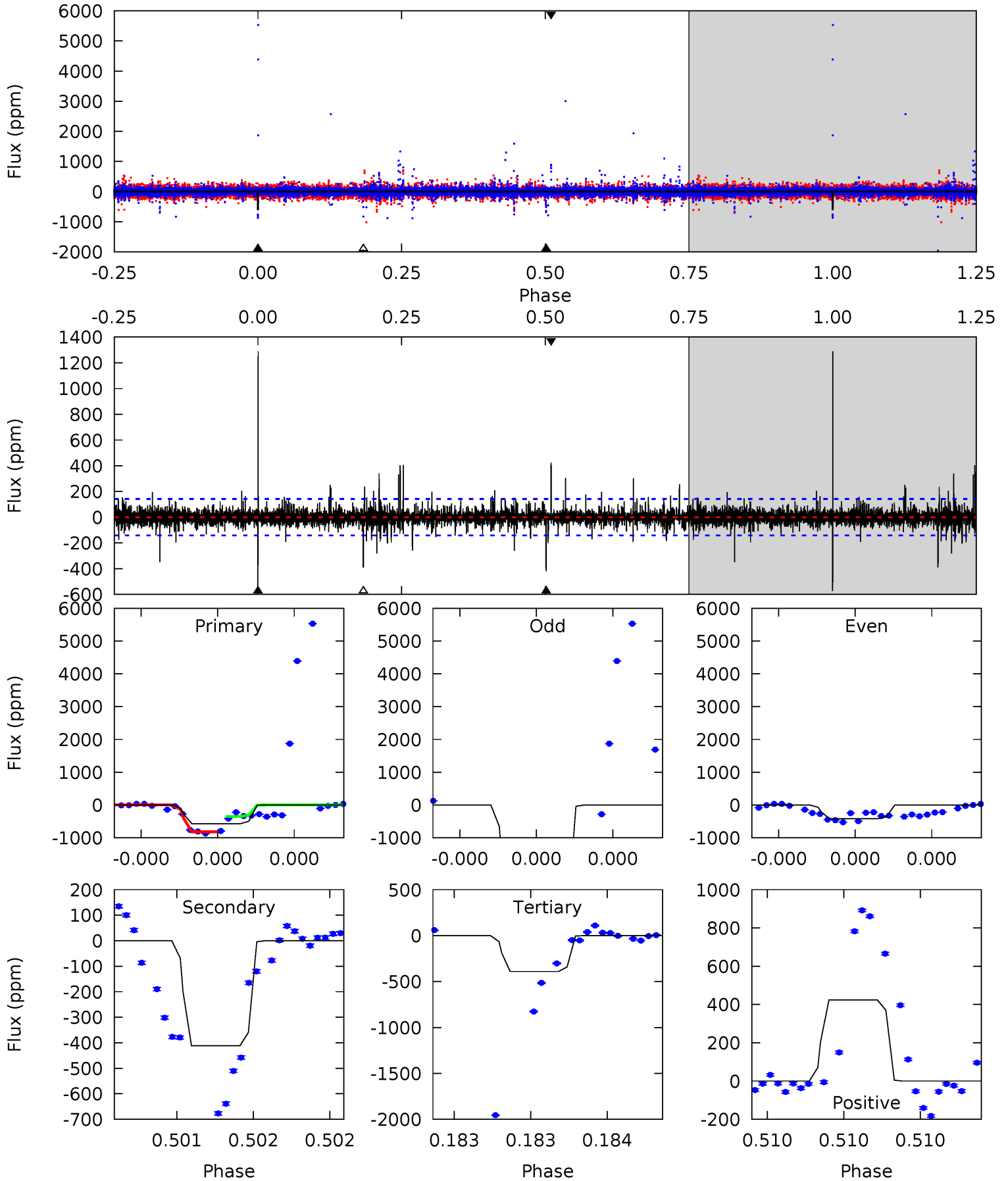
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008041249-01, P = 587.675997 Days, E = 275.679754 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	16.5	15.6	16.9	5.65	3.60	1.43	7.23	5.90	0.86	-0.47	37.7	3.13	0.69	9.38



Stellar Parameters For KIC 008041249

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6947^{+171}_{-222}	$3.895^{+0.343}_{-0.123}$	$-0.280^{+0.300}_{-0.300}$	$2.297^{+0.521}_{-0.892}$	$1.511^{+0.185}_{-0.343}$	$0.176^{+0.519}_{-0.063}$
	+2%/-3%	+9%/-3%	+107%/-107%	+23%/-39%	+12%/-23%	+296%/-36%
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 008041249-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$17.16^{+19.48}_{-11.63}$	509^{+36}_{-47}	3923^{+29569}_{-38589}	$2518^{+790794}_{-896816}$
Alt.	-412 ± 25	$19.84^{+20.42}_{-13.08}$	504^{+36}_{-51}	3770^{+1878}_{-713}	1396^{+10304}_{-1034}

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

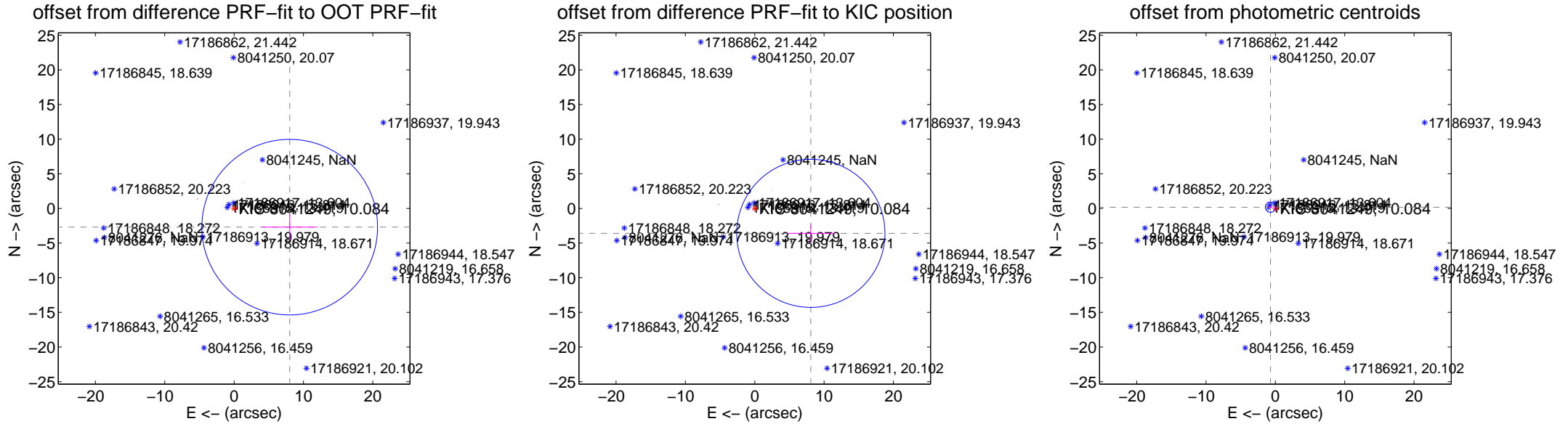
DV Centroid Data

Supplemental centroid analysis for 008041249-01. **Kepler magnitude: 10.08.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

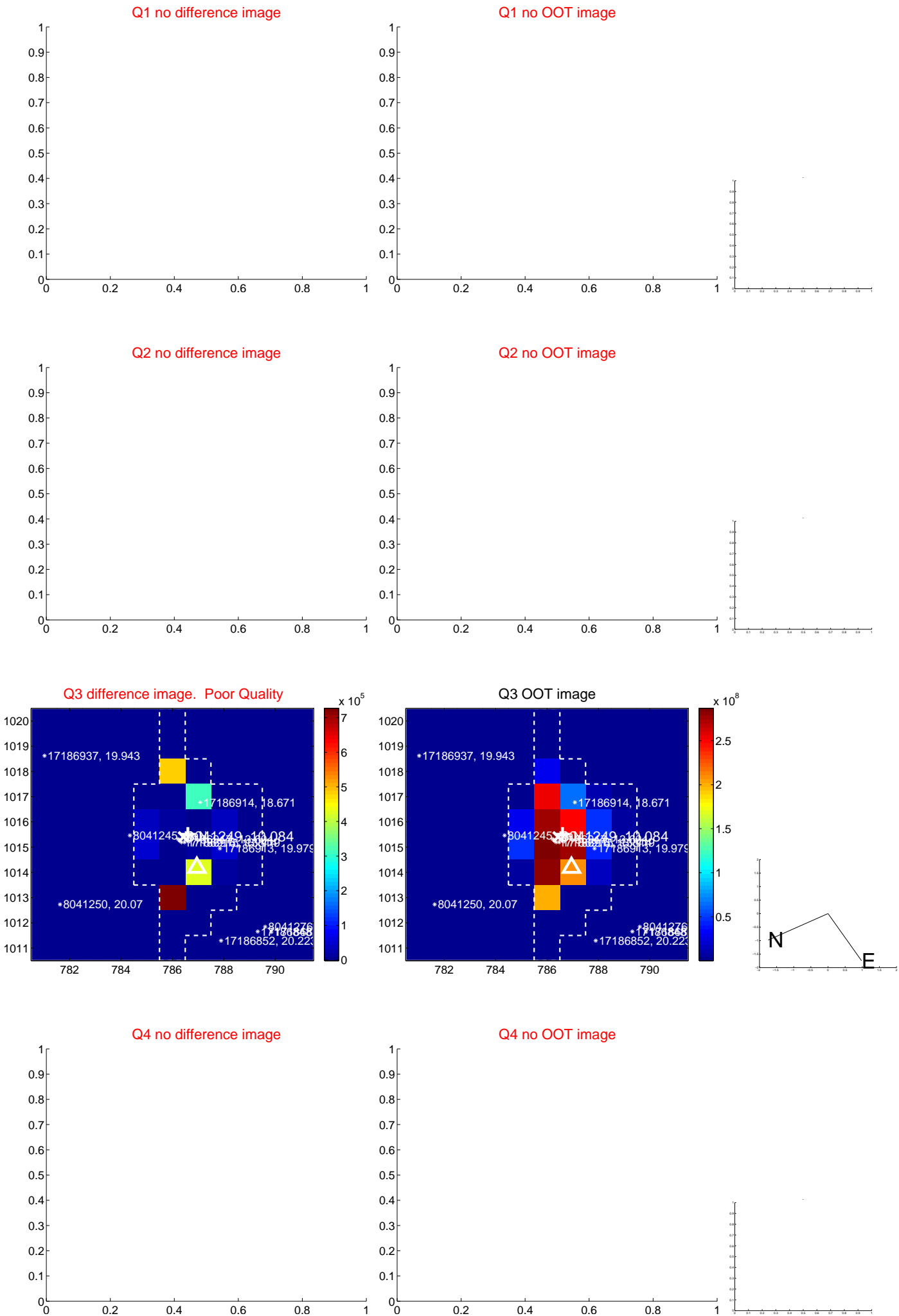
The direct PRF centroid is offset from the target star catalog position by about 0.89 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.462 ± 4.224	2.00	-8.020 ± 4.003	-2.700 ± 1.864
PRF-fit source offset from KIC position	8.852 ± 3.563	2.48	-8.088 ± 3.459	-3.596 ± 1.288
photometric centroid source offset	0.72 ± 0.25	2.93	0.70 ± 0.25	0.18 ± 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- 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.

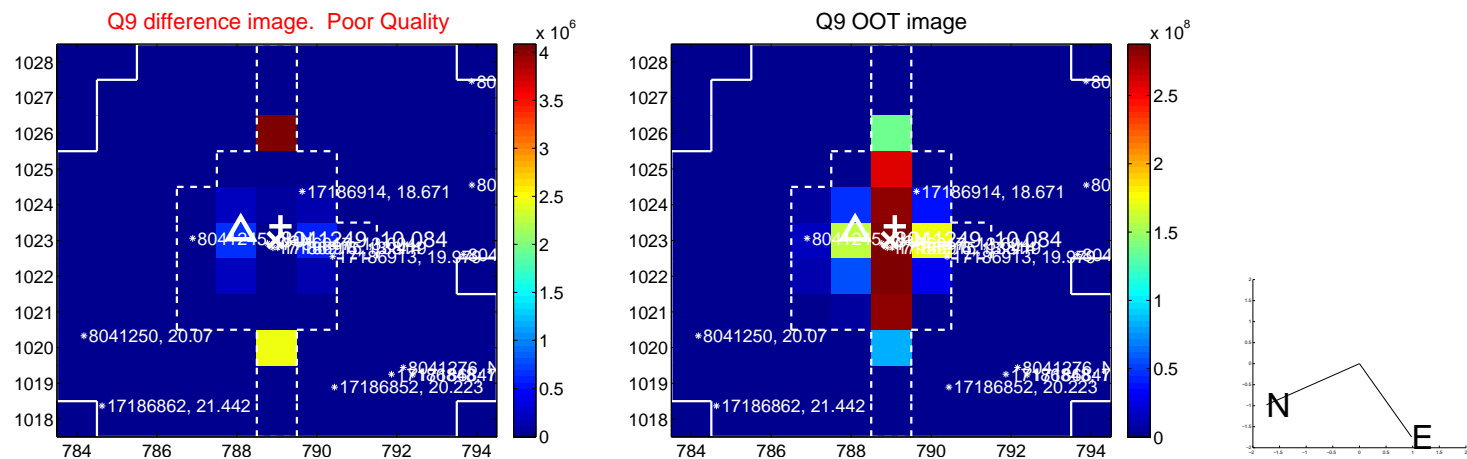
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Q13 no difference image



Q13 no OOT image



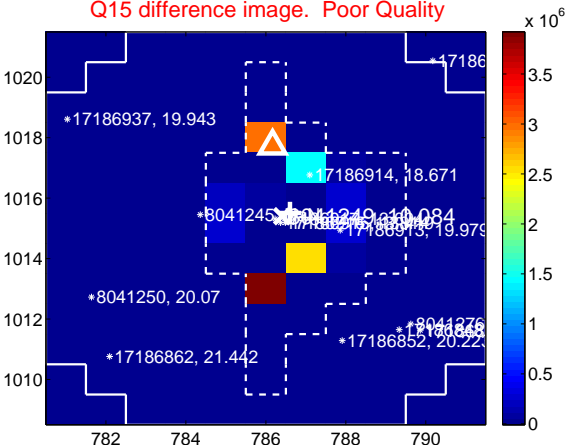
Q14 no difference image



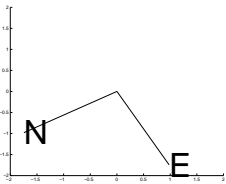
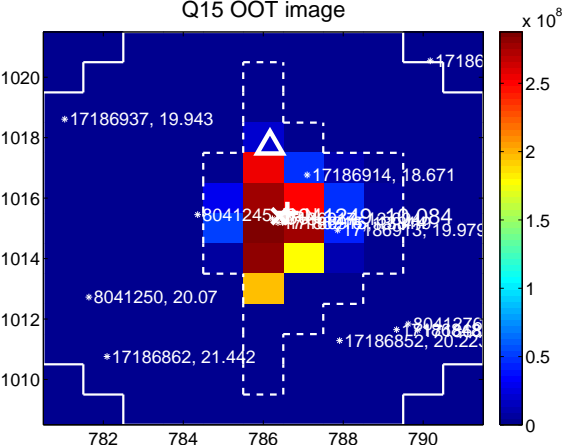
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



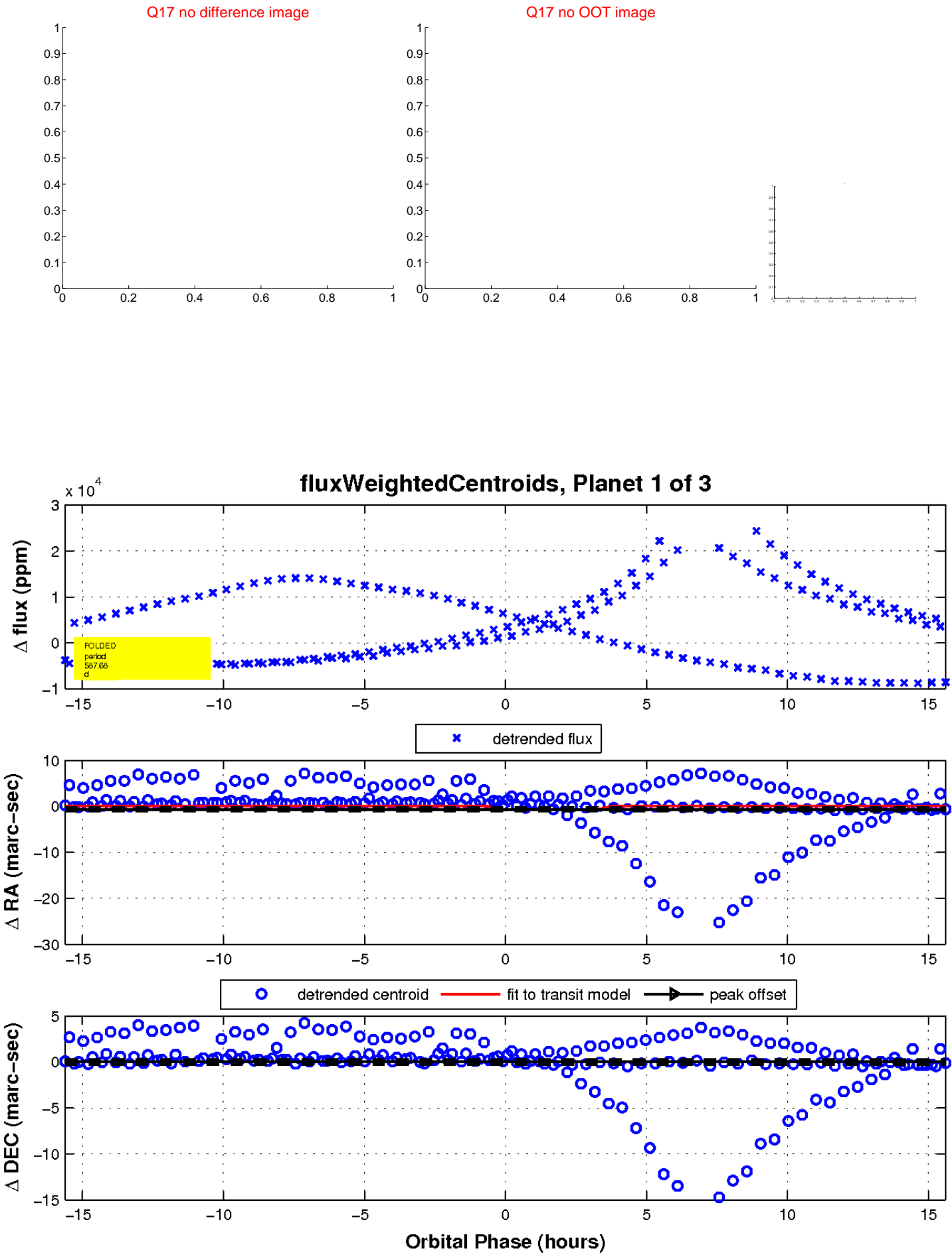
Q16 no difference image



Q16 no OOT image

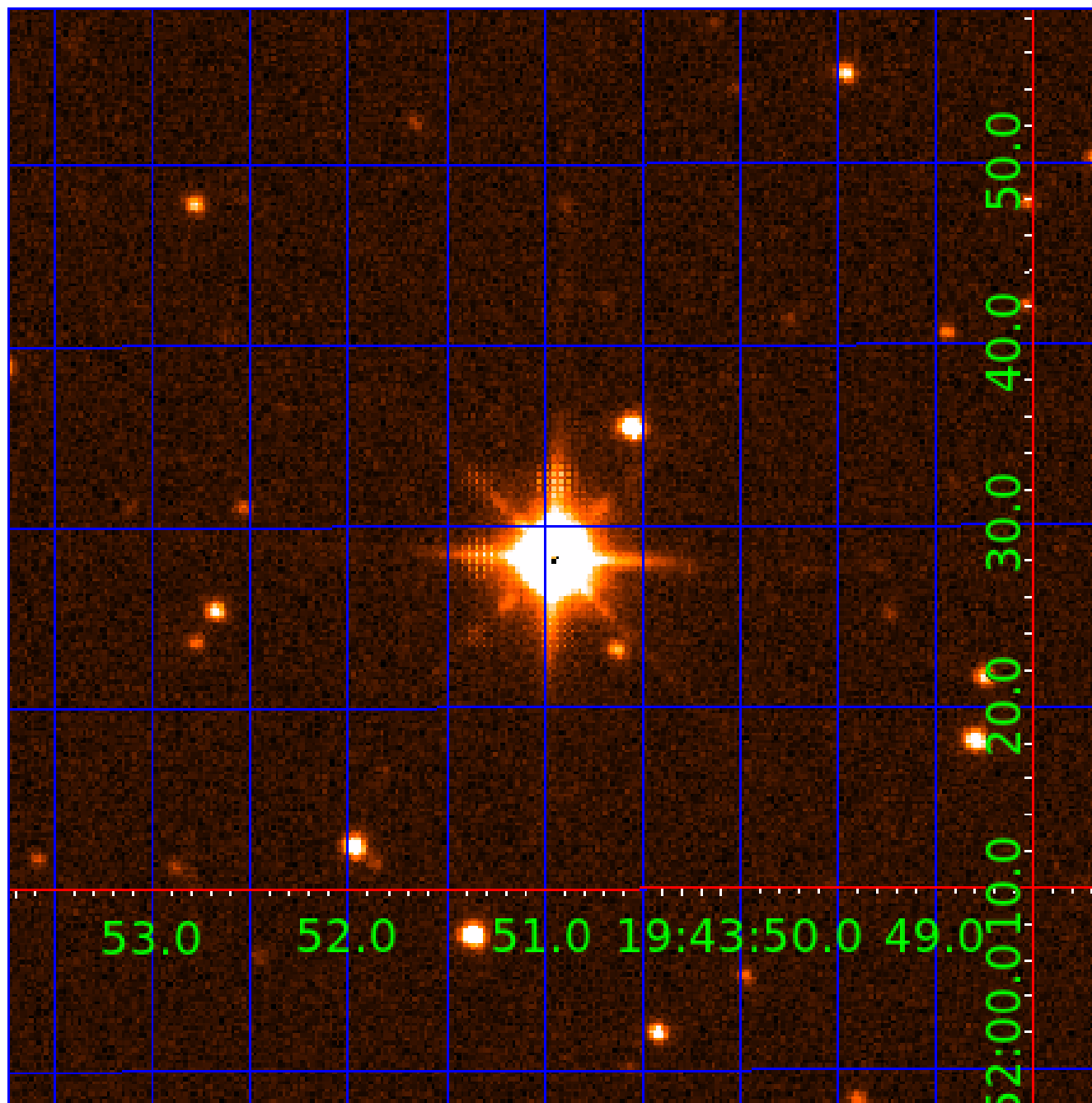


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008041249

Q1-17 DR25 TCE Parameters

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008041249-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

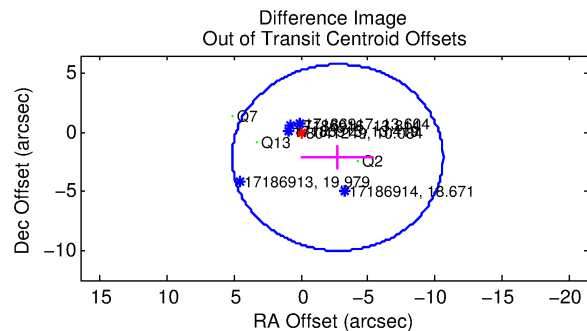
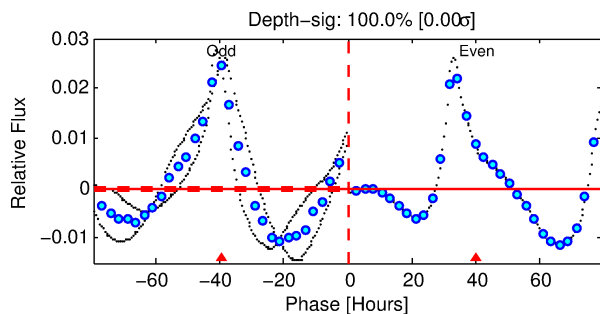
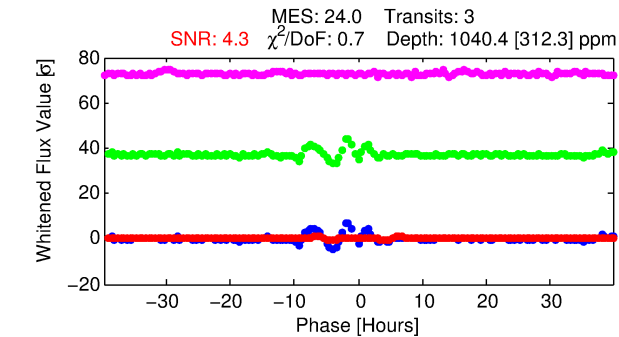
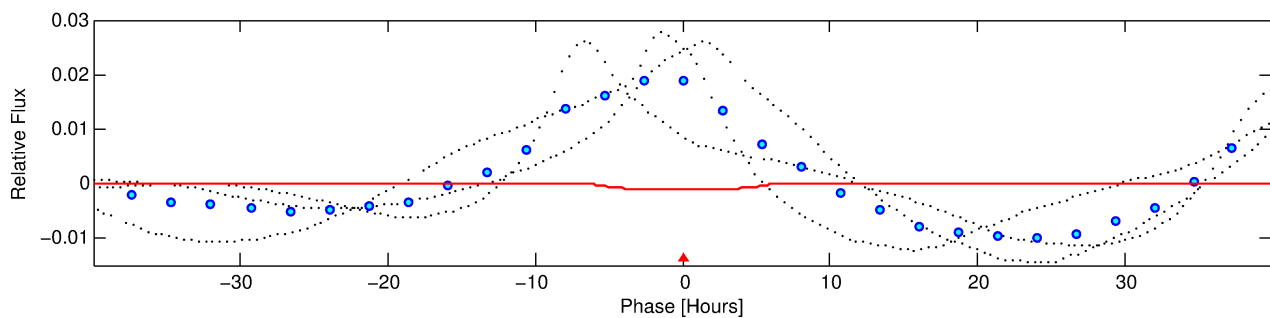
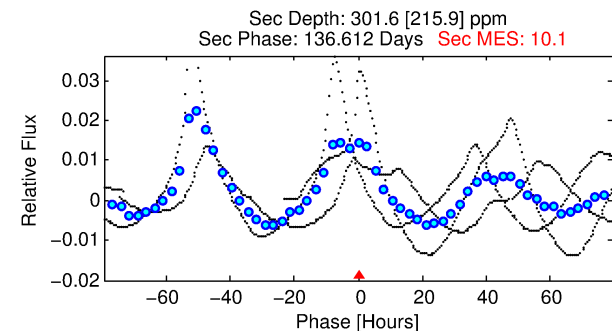
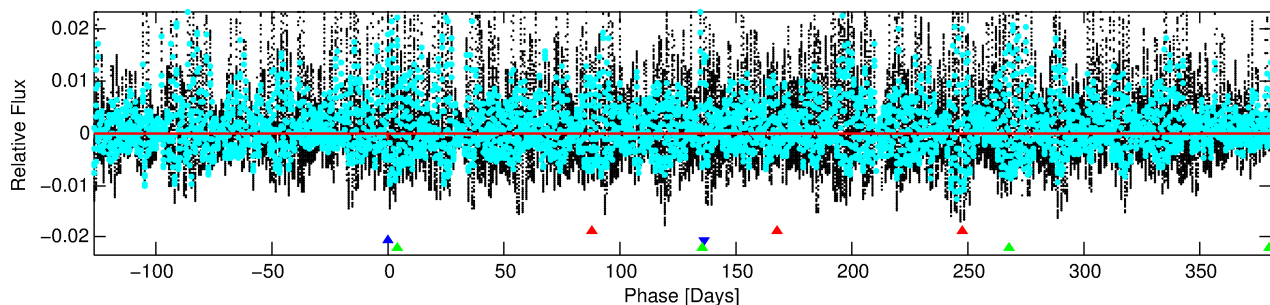
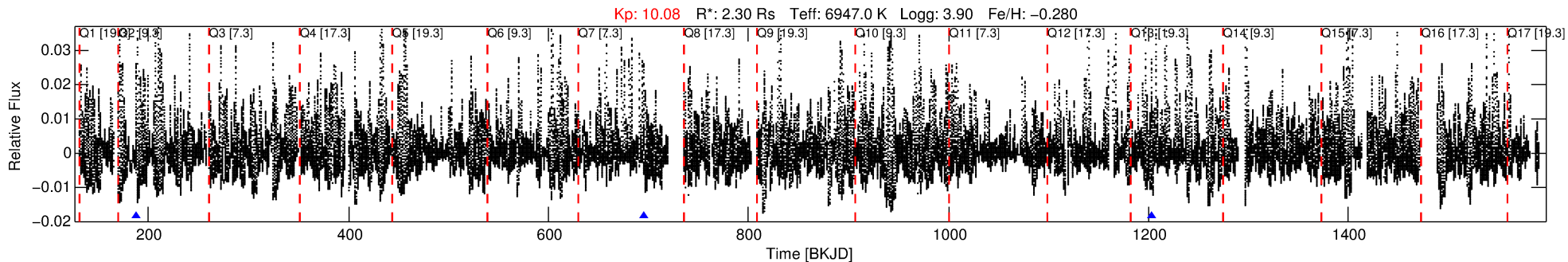
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008041249-02

No Significant Match Found

DV One-Page Summary

KIC: 8041249 Candidate: 2 of 3 Period: 507.902 d



DV Fit Results:

Period = 507.90182 [0.00776] d
Epoch = 187.8973 [0.0085] BKJD
Rp/R* = 0.0350 [0.0052]
a/R* = 136.99 [7.91]
b = 0.92 [0.01]
Seff = 5.38 [3.23]
Teq = 388 [58] K
Rp = 8.78 [3.66] Re
a = 1.4300 [0.5280] AU
Ag = 4399.07 [4279.82] [1.03σ]
Teffp = 4891 [962] K [4.67σ]

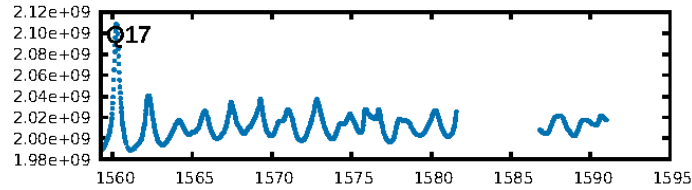
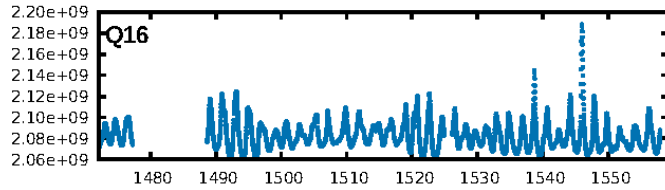
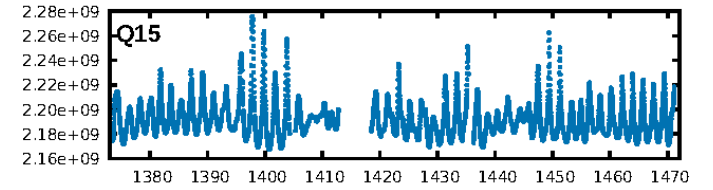
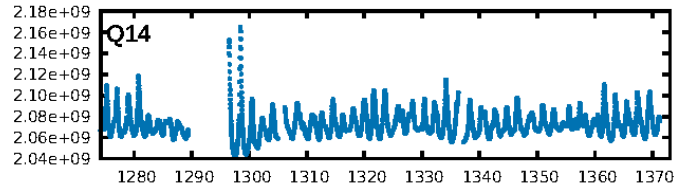
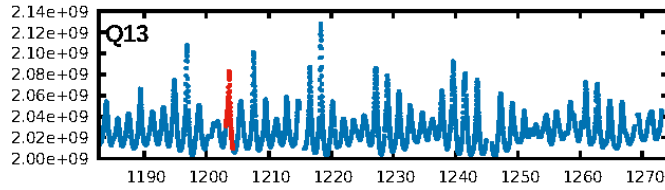
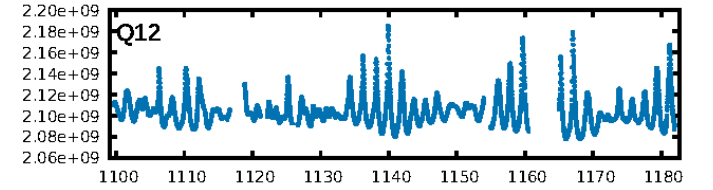
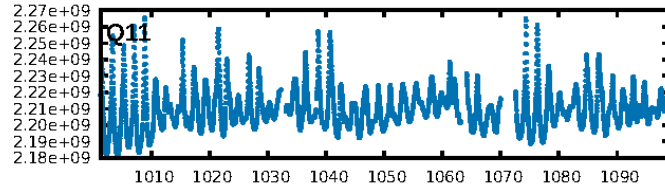
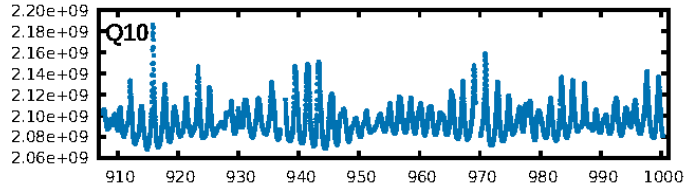
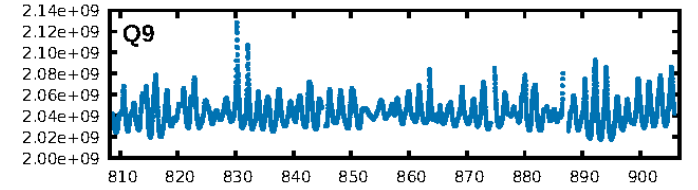
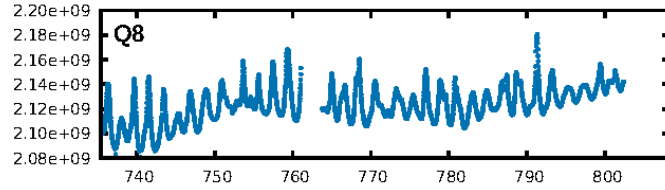
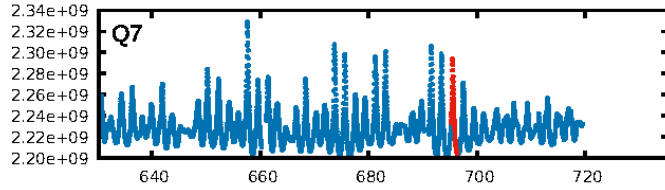
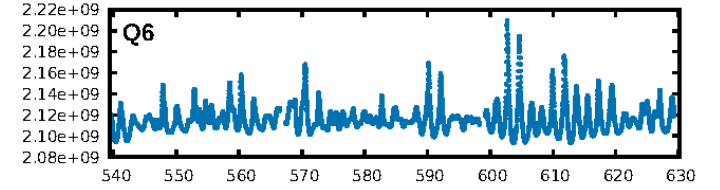
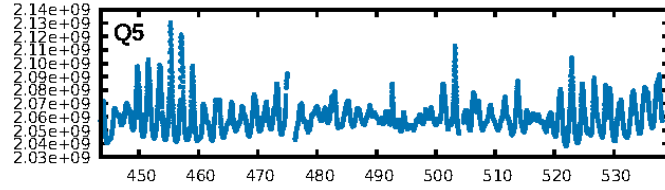
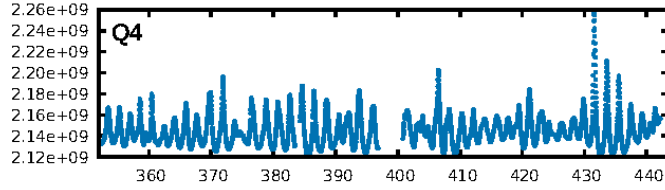
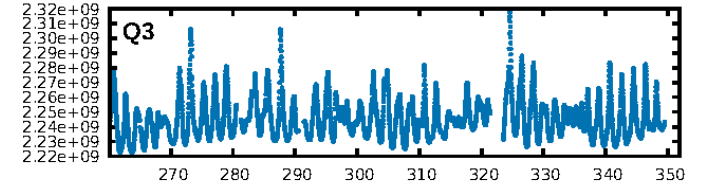
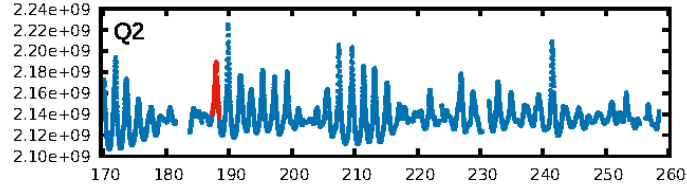
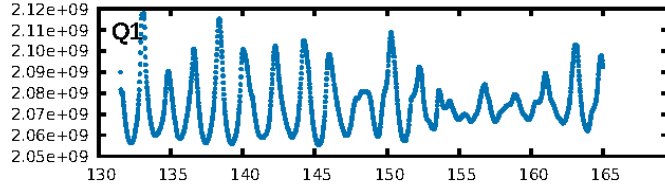
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [231.81σ]
LongPeriod-sig: 100.0% [134.55σ]
ModelChiSquare2-sig: 56.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 3.9%
Centroid-so: 0.973 arcsec [1.35σ]
OotOffset-rm: 3.467 arcsec [1.32σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 4.667 arcsec [1.85σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

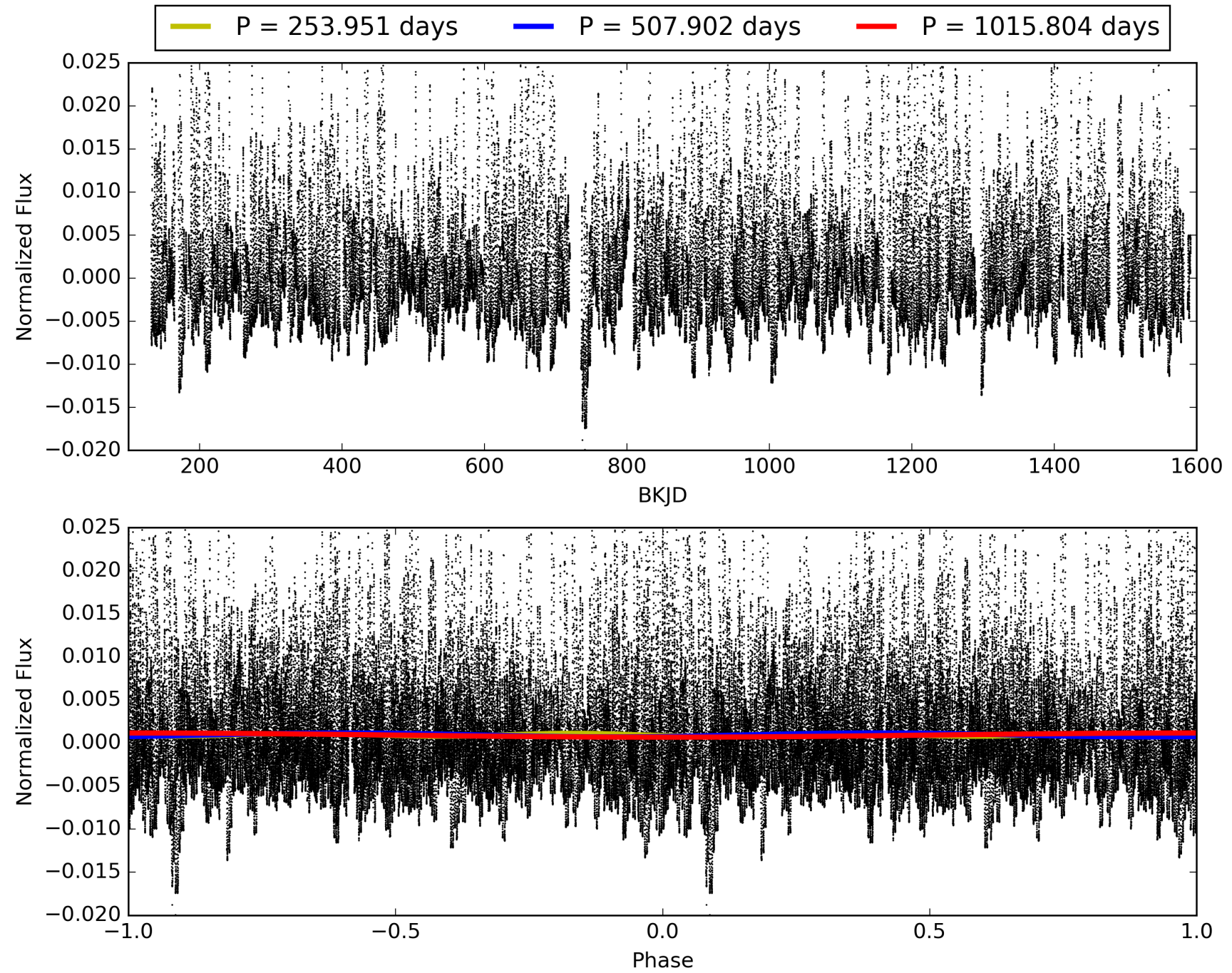
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:39:43 Z

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

TCE 008041249-02, PDC Light Curves

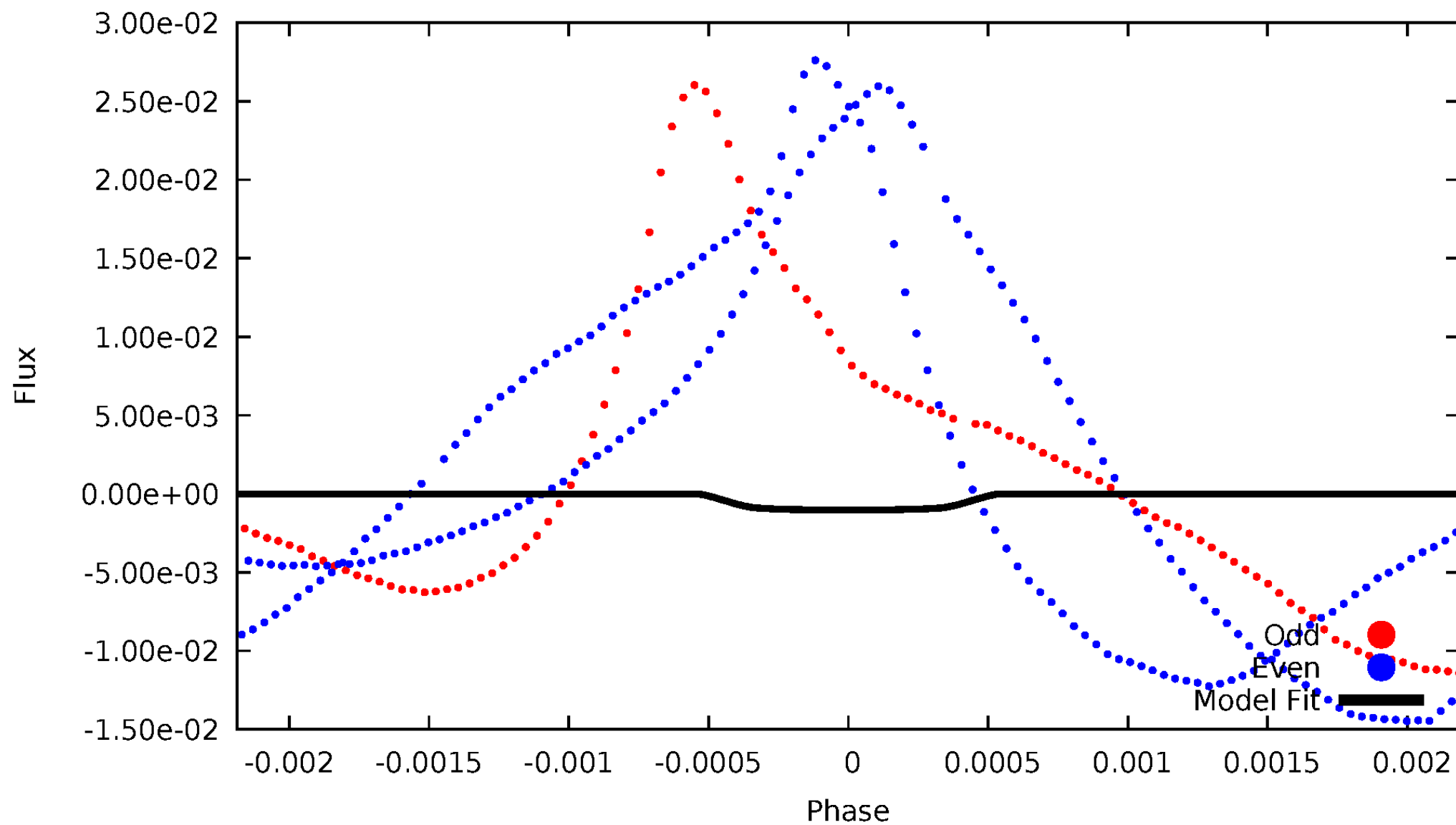


TCE 008041249-02



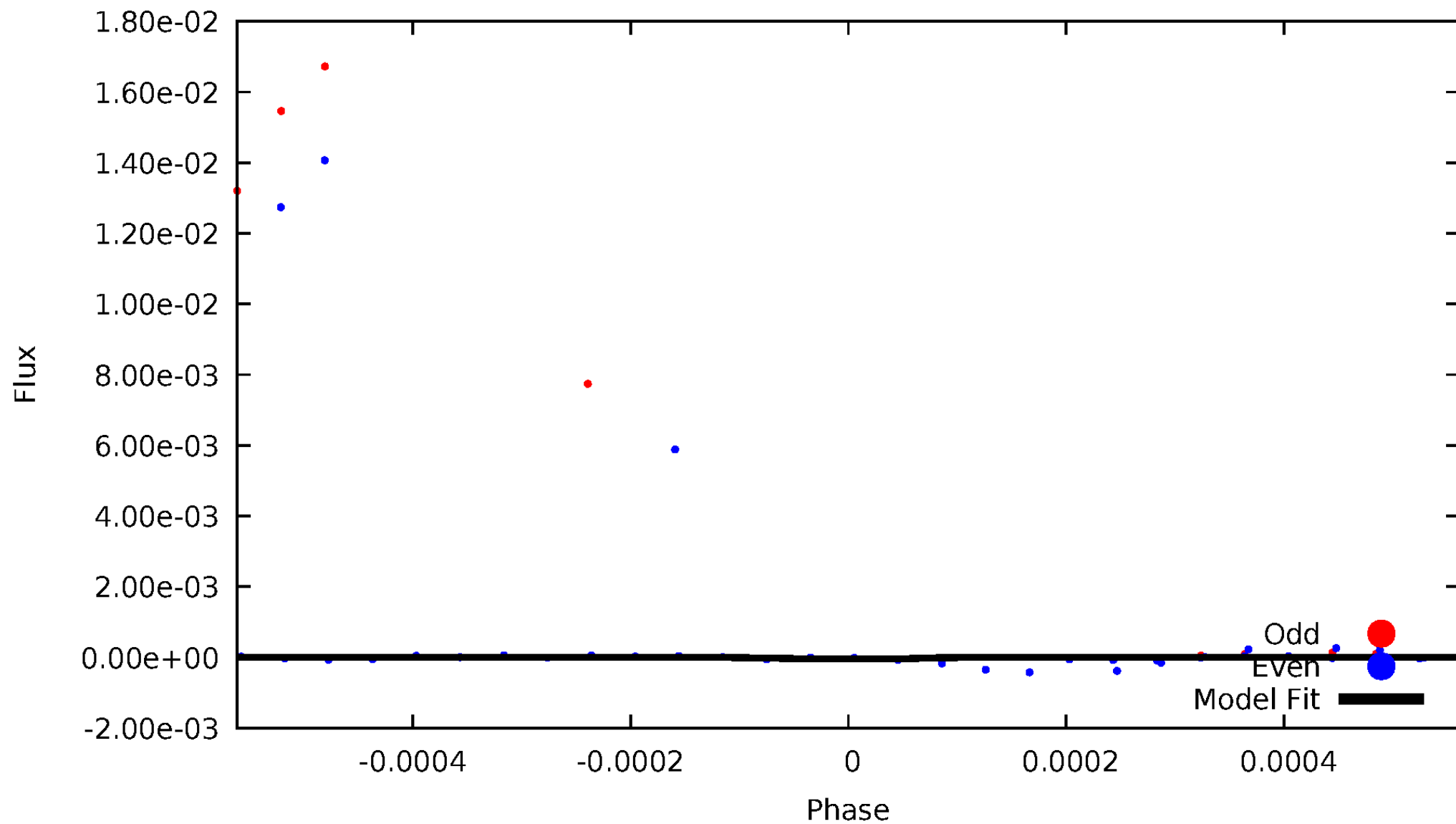
DV Odd/Even

TCE 008041249-02



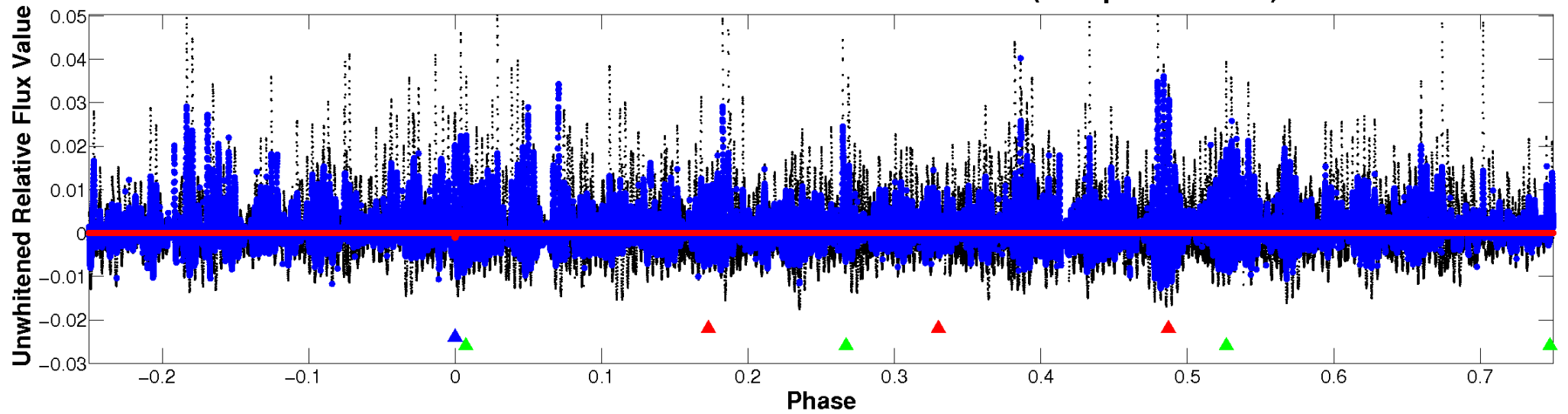
ALT Odd/Even

TCE 008041249-02

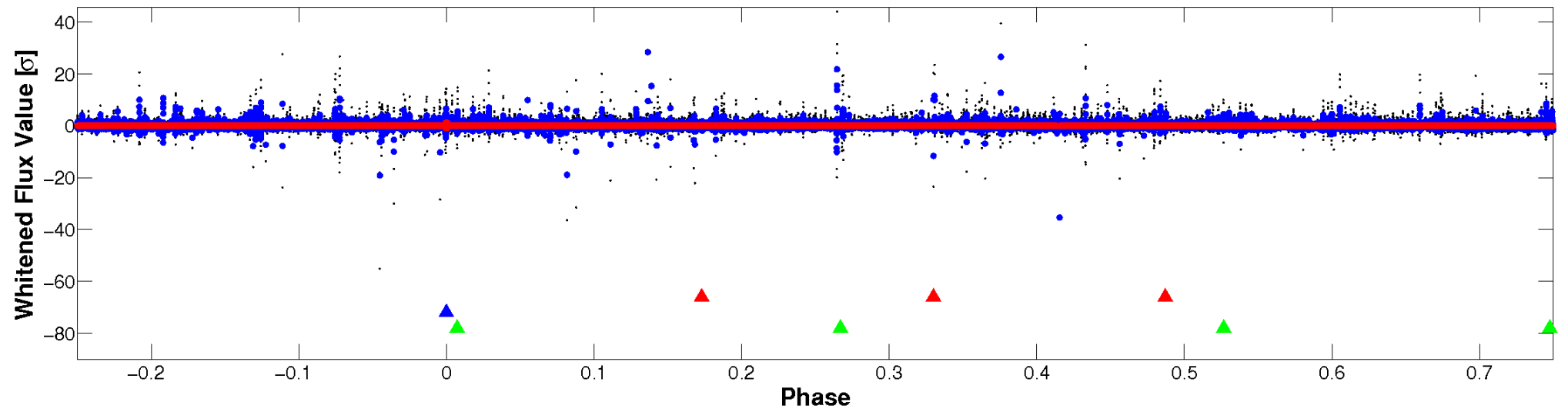


Non-Whitened Vs. Whitened Light Curve

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

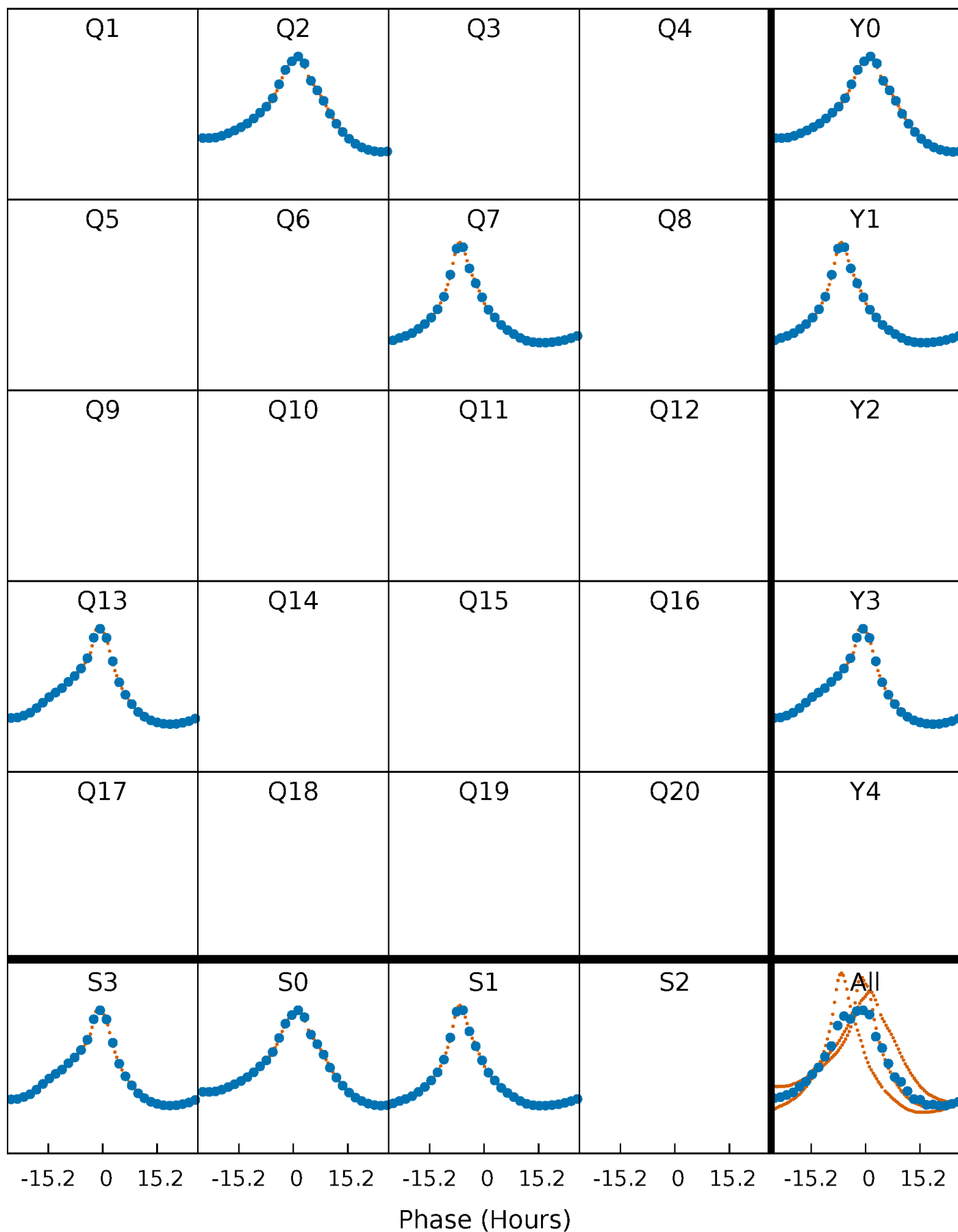


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



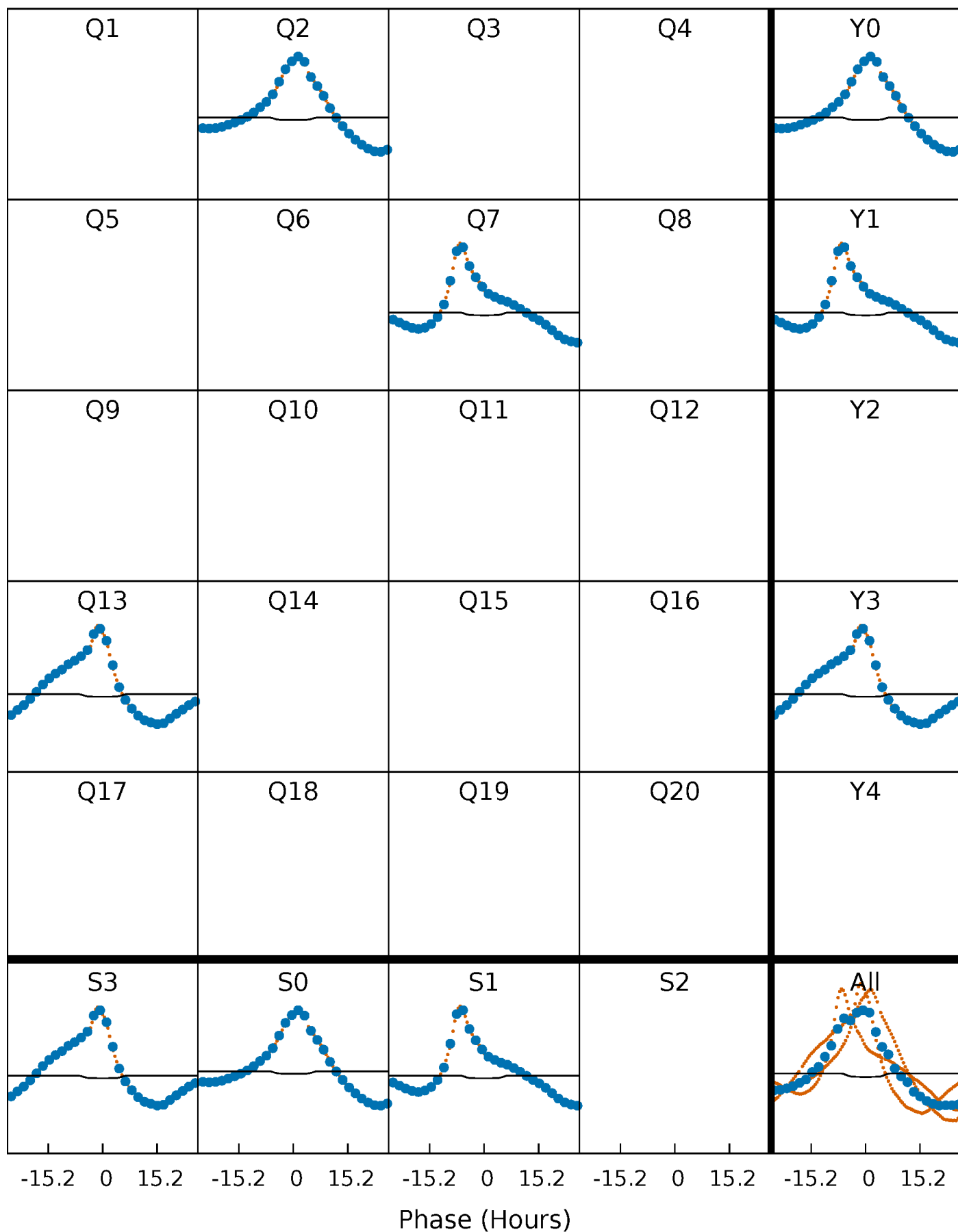
PDC Quarter-Phased Transit Curves

TCE 008041249-02 P=507.901818 Days $T_0=187.897261$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008041249-02 P=507.901818 Days $T_0=187.897261$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

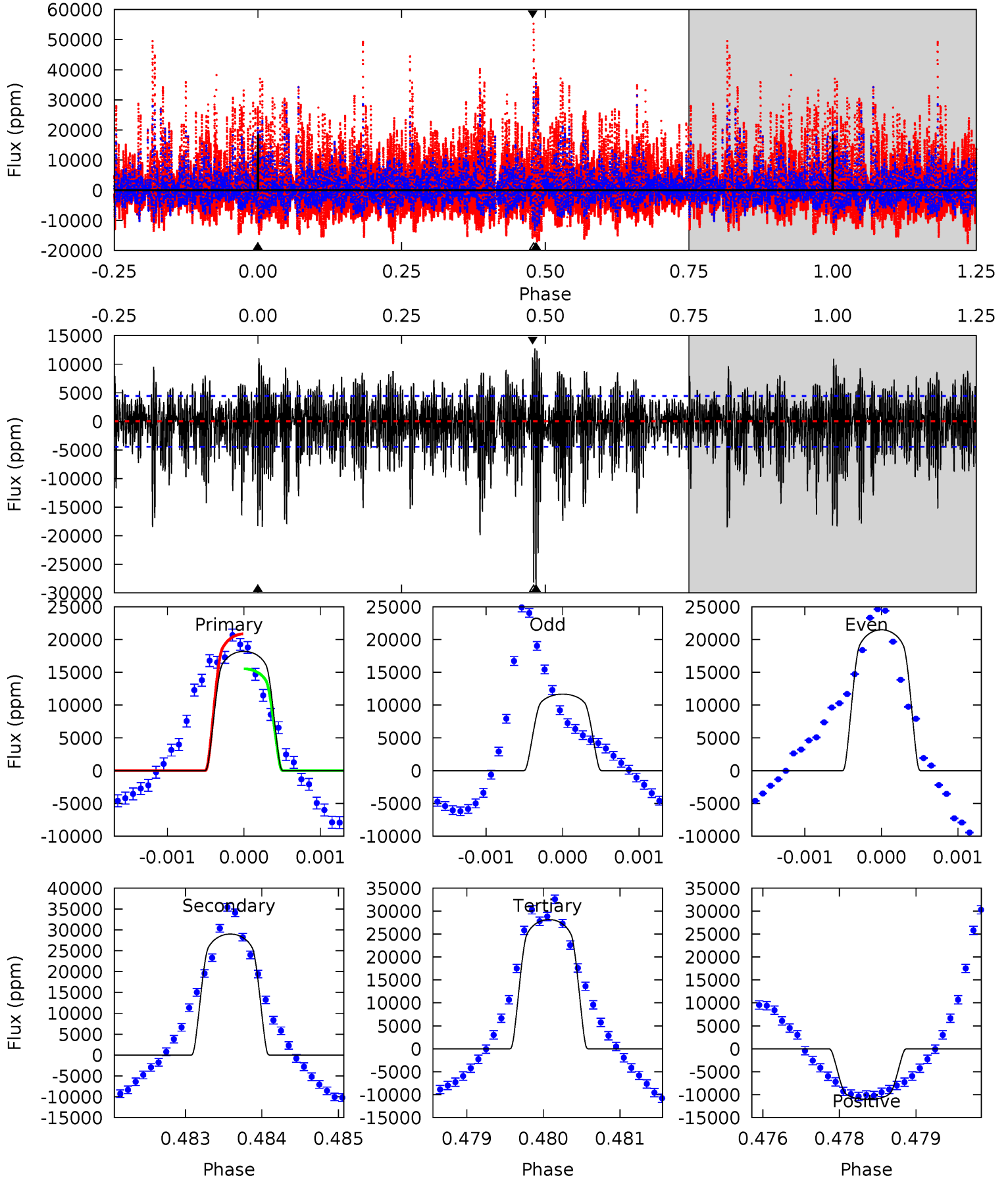
TCE 008041249-02 P=508.141770 Days $T_0=187.601469$ (BKJD)



DV Model-Shift Uniqueness Test

008041249-02, P = 507.901818 Days, E = 187.897261 Days

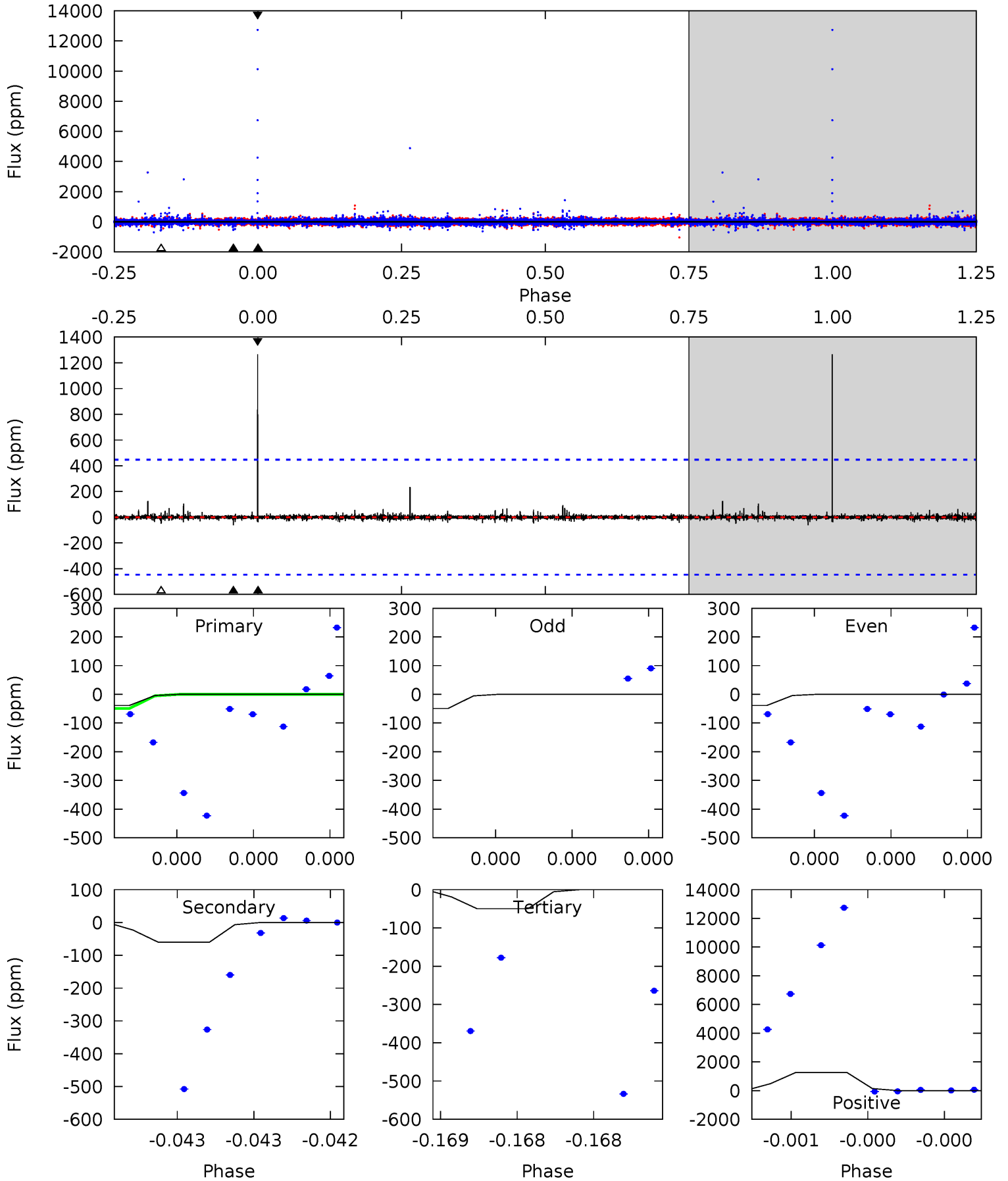
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	35.5	34.5	13.5	5.43	3.26	5.77	-12.2	8.75	1.03	22.0	5.46	0.92	0.31	3.28



Alt Model-Shift Uniqueness Test

008041249-02, P = 508.141770 Days, E = 187.601469 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.50	0.78	0.65	16.4	5.82	3.84	0.14	-0.14	-15.9	0.14	-15.7	0.12	1.00	0.95	0.00



Stellar Parameters For KIC 008041249

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6947^{+171}_{-222}	$3.895^{+0.343}_{-0.123}$	$-0.280^{+0.300}_{-0.300}$	$2.297^{+0.521}_{-0.892}$	$1.511^{+0.185}_{-0.343}$	$0.176^{+0.519}_{-0.063}$
	+2%/-3%	+9%/-3%	+107%/-107%	+23%/-39%	+12%/-23%	+296%/-36%
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 008041249-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-28993 ± 817	$8.48^{+1.84}_{-2.25}$	534^{+36}_{-57}	26879^{+7561}_{-4384}	$473685^{+359119}_{-153478}$
Alt.	-60 ± 77	$1.61^{+1.15}_{-0.99}$	529^{+41}_{-56}	6906^{+6710}_{-11982}	$20582^{+118555}_{-26258}$

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

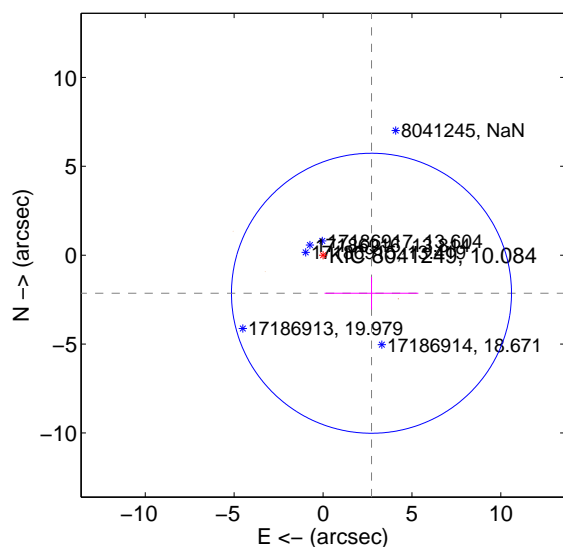
Supplemental centroid analysis for 008041249-02. **Kepler magnitude: 10.08.** Transit SNR 4.26

There are 0 quarters with good PRF difference image offsets

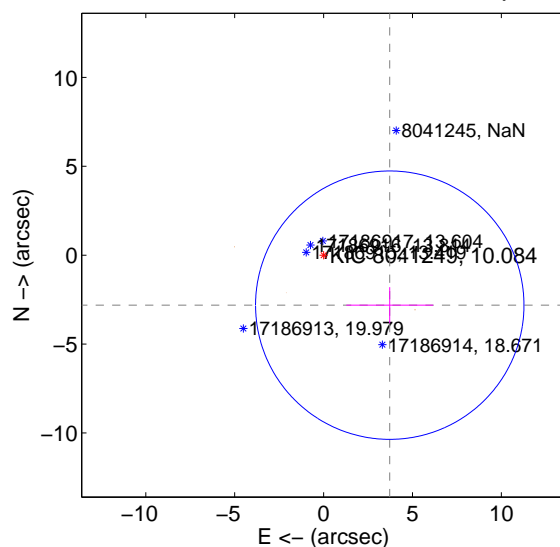
The direct PRF centroid is offset from the target star catalog position by about 1.67 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.467 ± 2.626	1.32	-2.726 ± 2.636	-2.143 ± 0.923
PRF-fit source offset from KIC position	4.667 ± 2.517	1.85	-3.724 ± 2.445	-2.813 ± 1.015
photometric centroid source offset	0.97 ± 0.72	1.35	-0.93 ± 0.74	-0.28 ± 0.46

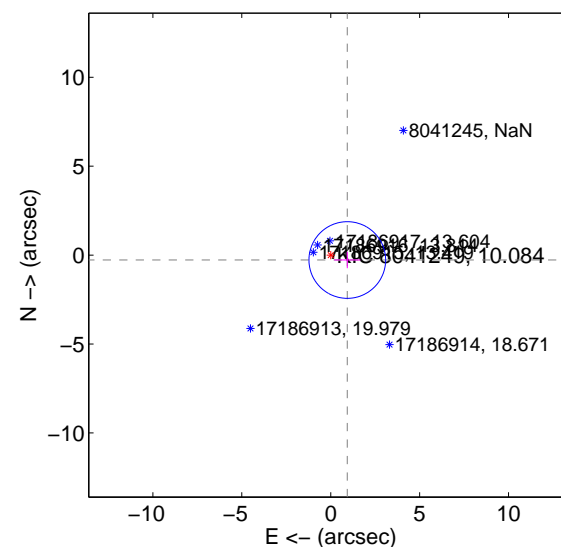
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

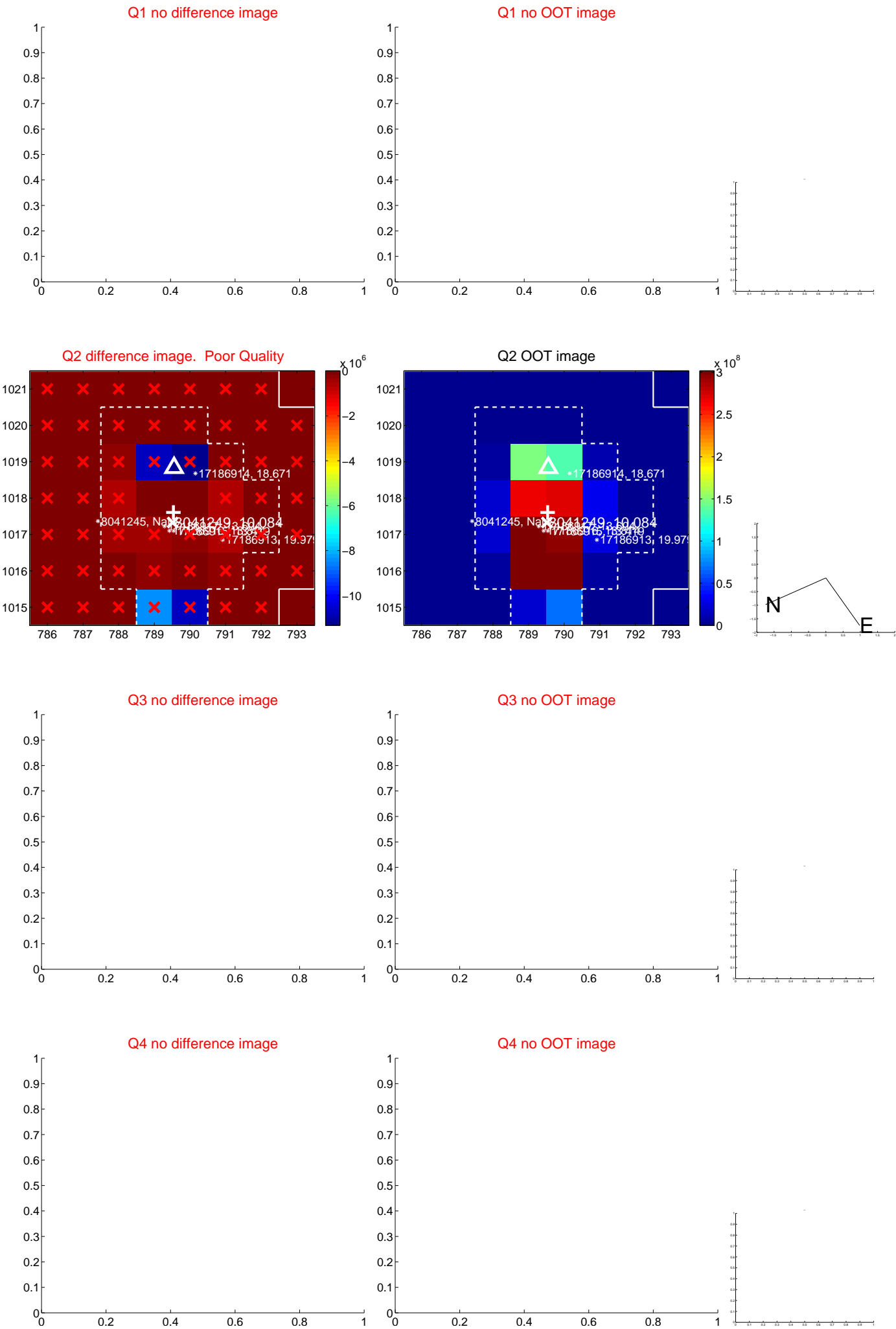


offset from photometric centroids

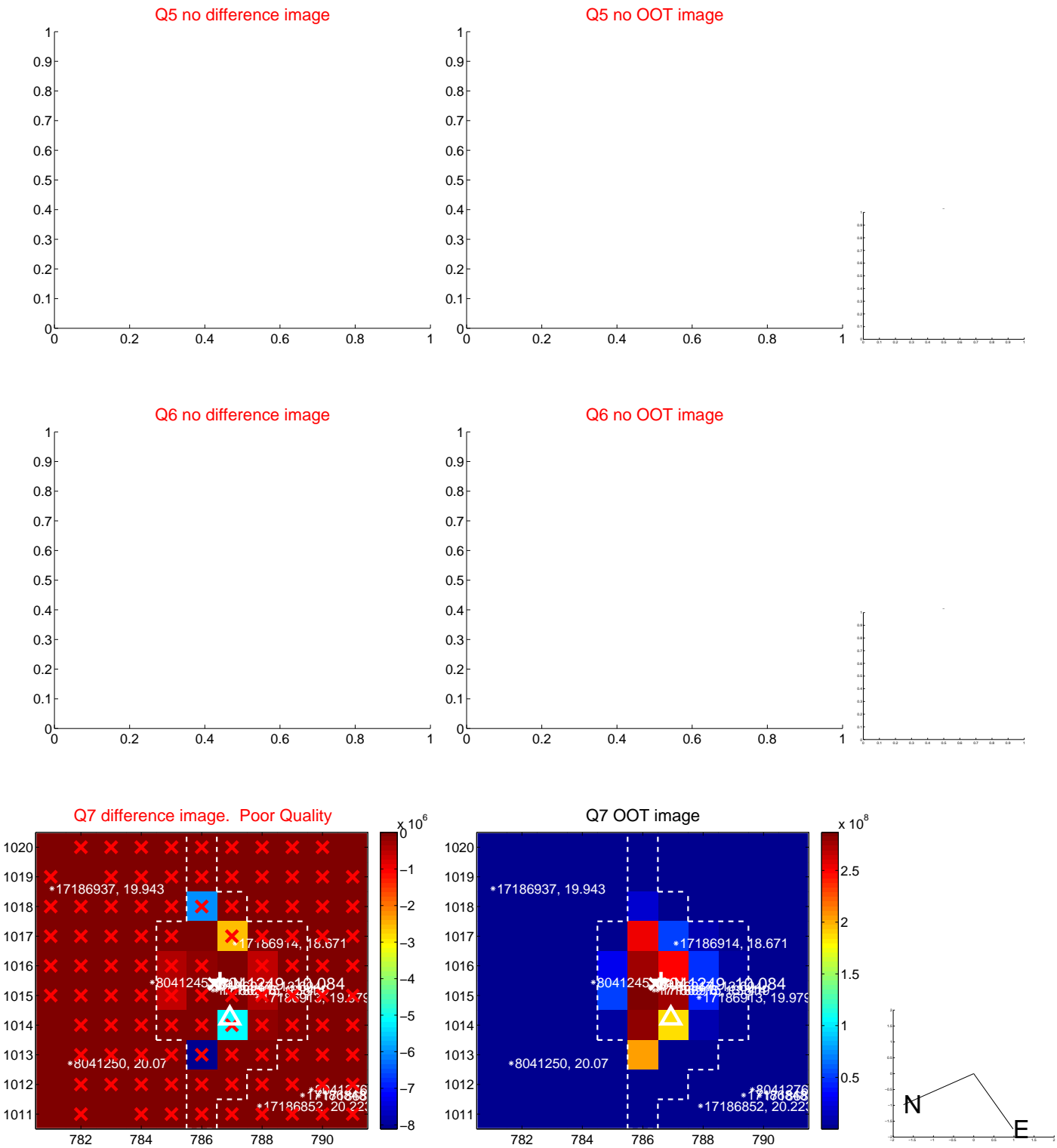


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



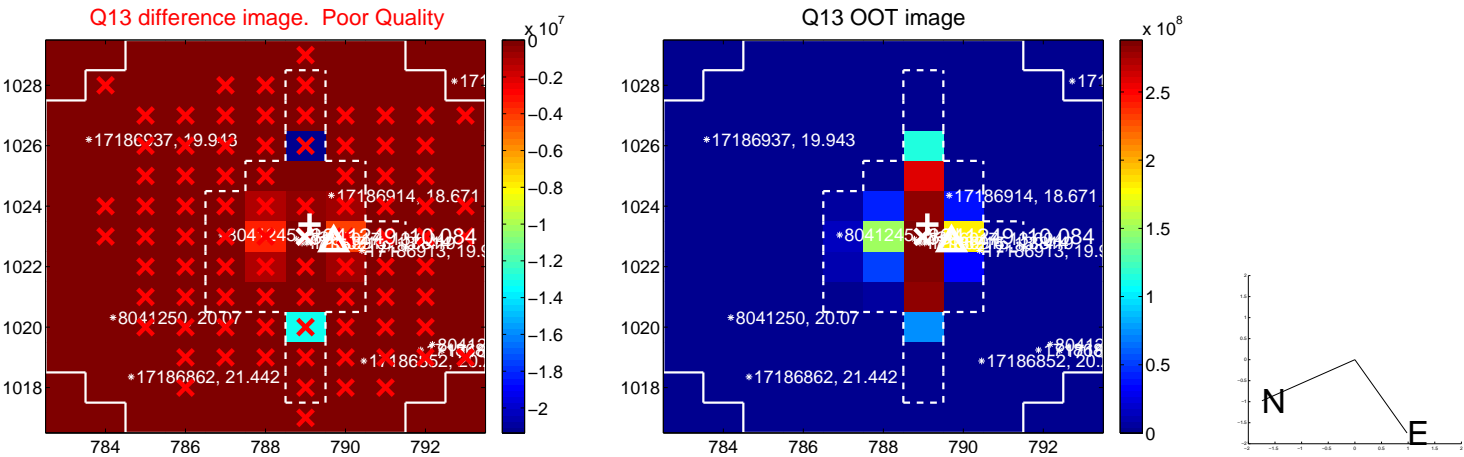
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



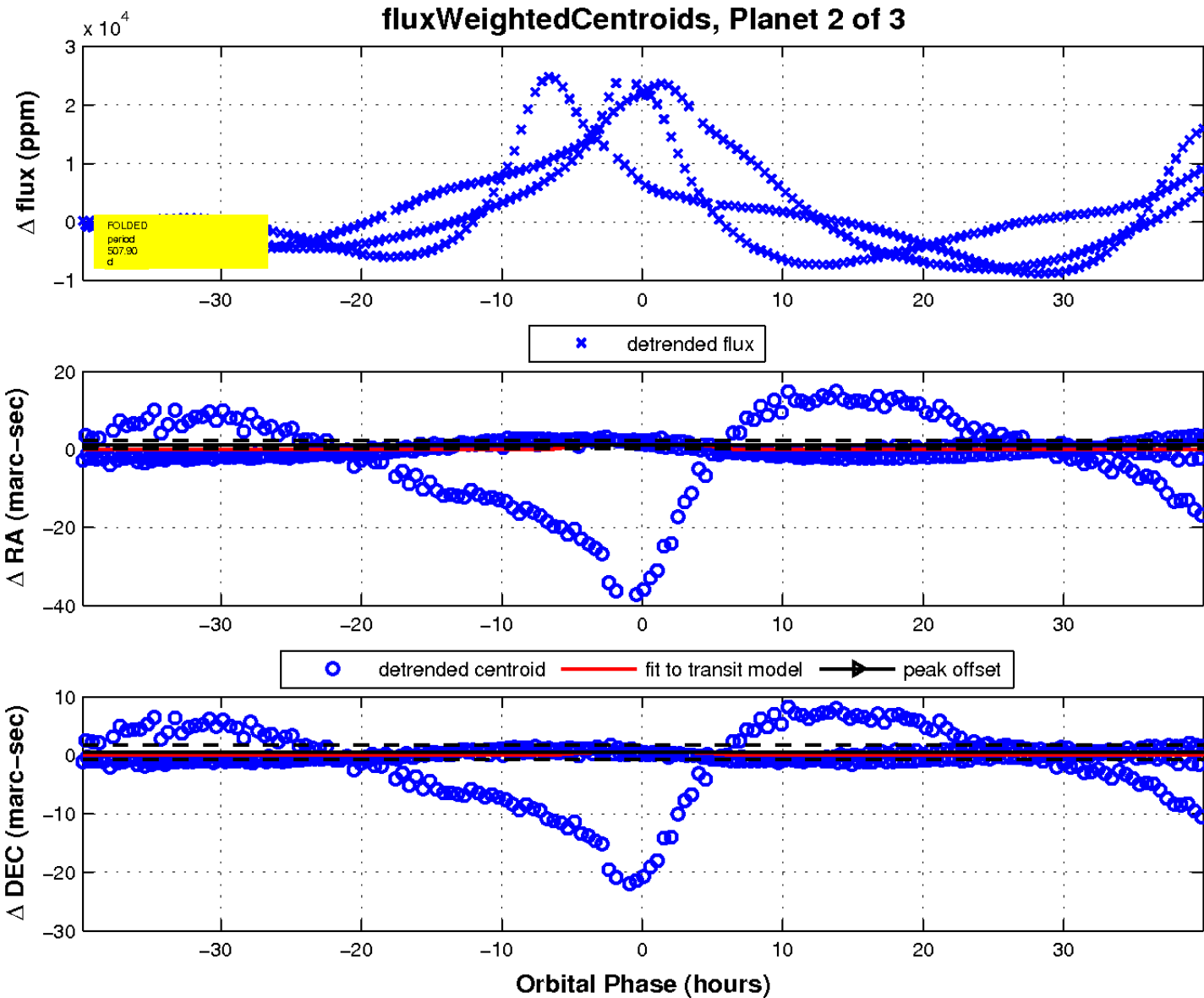
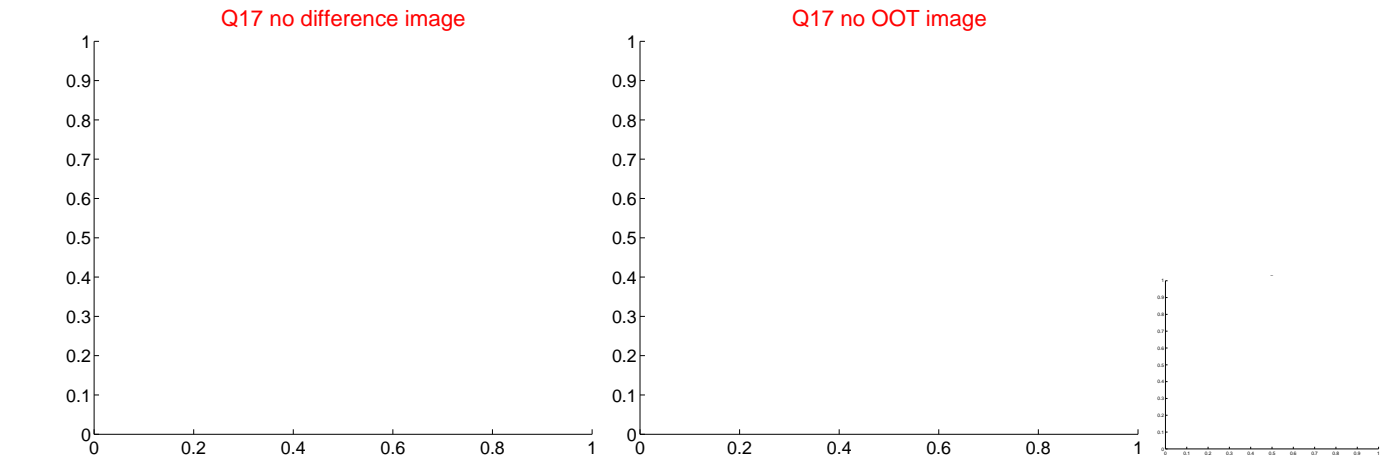
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

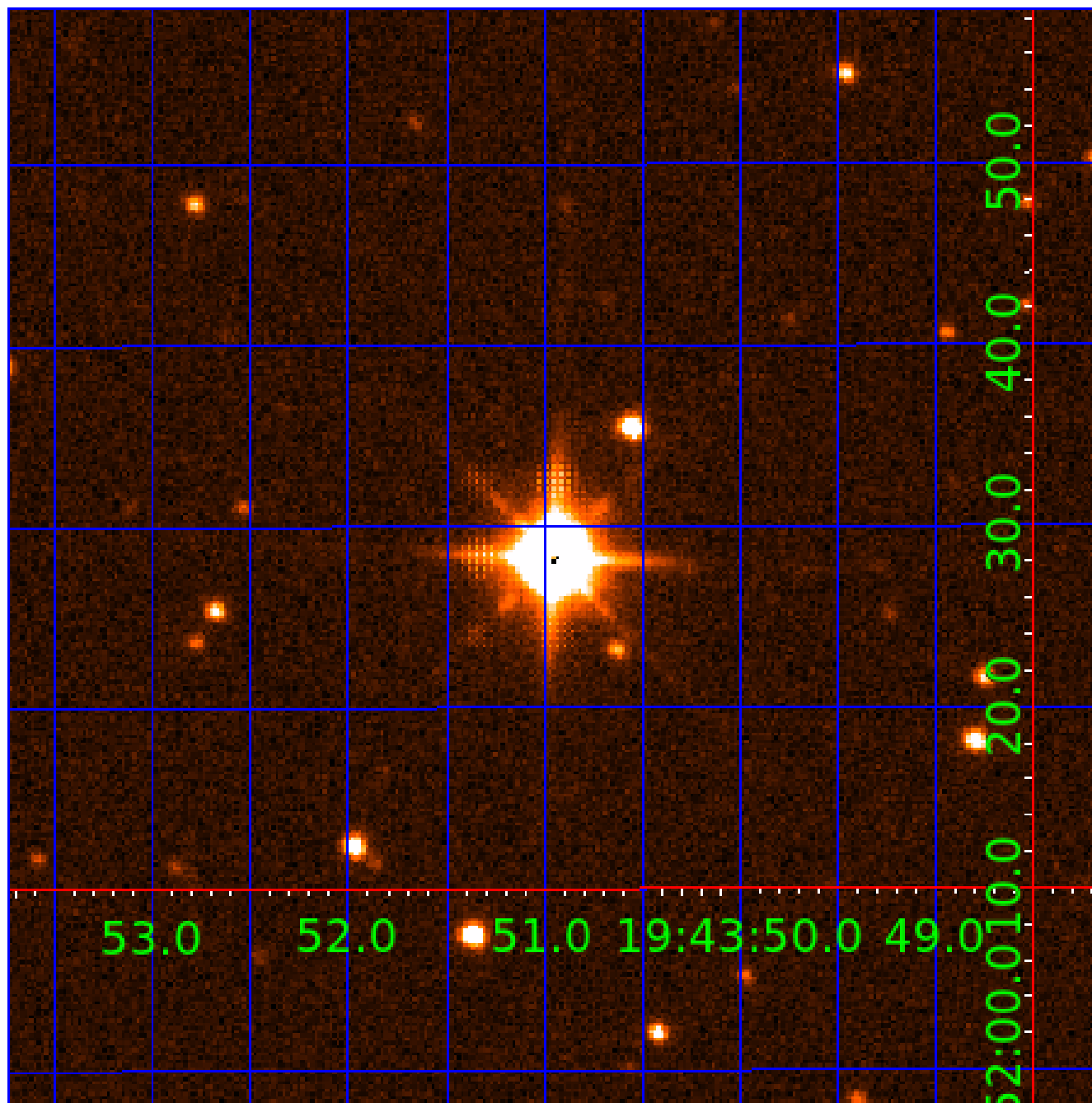


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008041249

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})
008041249-01	OBS	No	587.675997	275.754899	188.5	5.000	29.5	-1.0	2.30	6947	3.19	4.43
008041249-02	OBS	No	507.901818	187.897261	1040.4	13.322	24.0	4.3	2.30	6947	8.78	5.38
008041249-03	OBS	No	376.003189	455.407104	232.2	3.000	17.6	-1.0	2.30	6947	3.54	8.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008041249-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—CENT_SATURATED
008041249-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
008041249-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

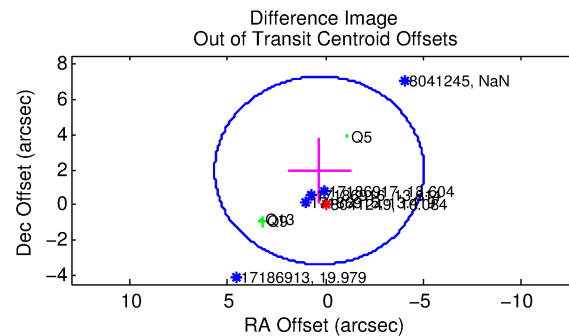
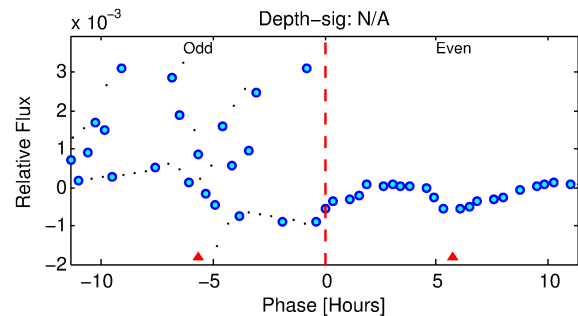
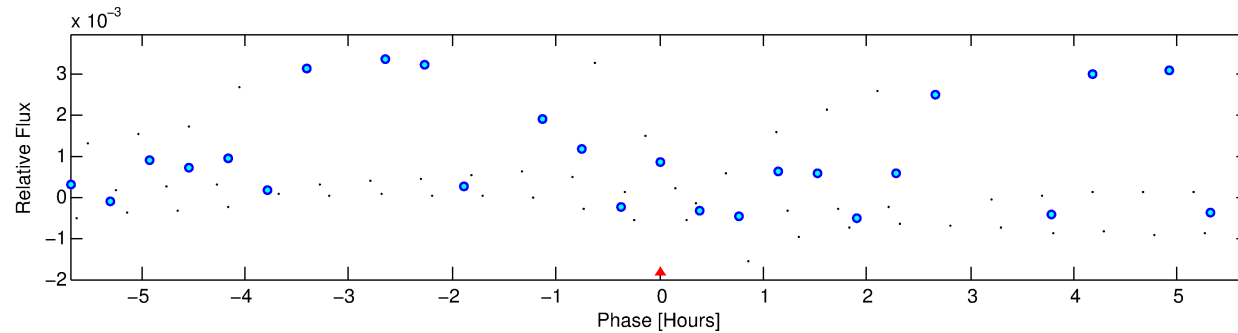
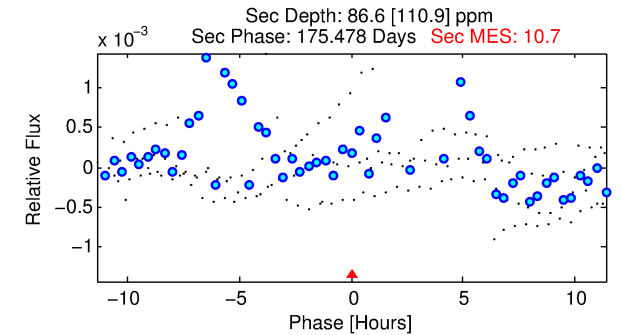
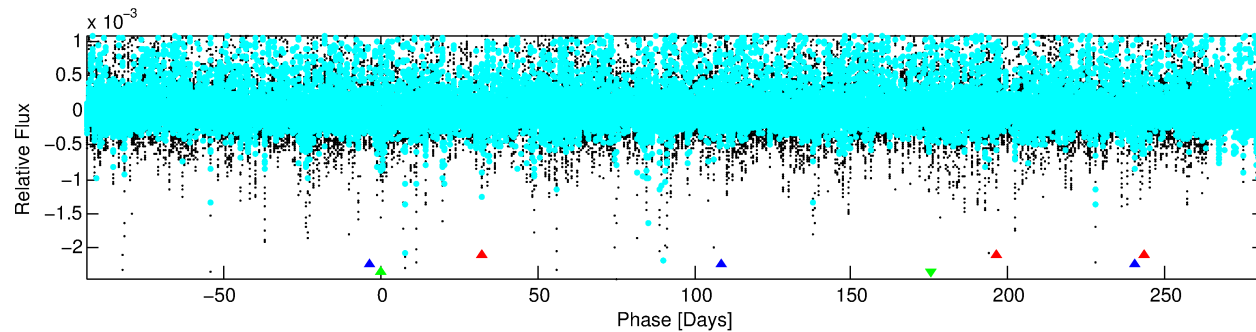
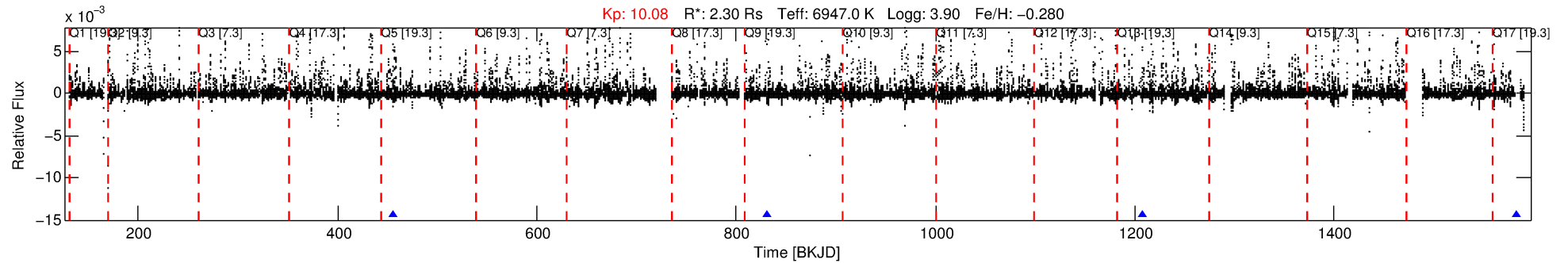
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008041249-03

No Significant Match Found

DV One-Page Summary

KIC: 8041249 Candidate: 3 of 3 Period: 376.003 d



TPS TCE Results:

Period = 376.00319 d
Epoch = 455.4071 BKJD

DV fit results are unavailable

DV Diagnostic Results:

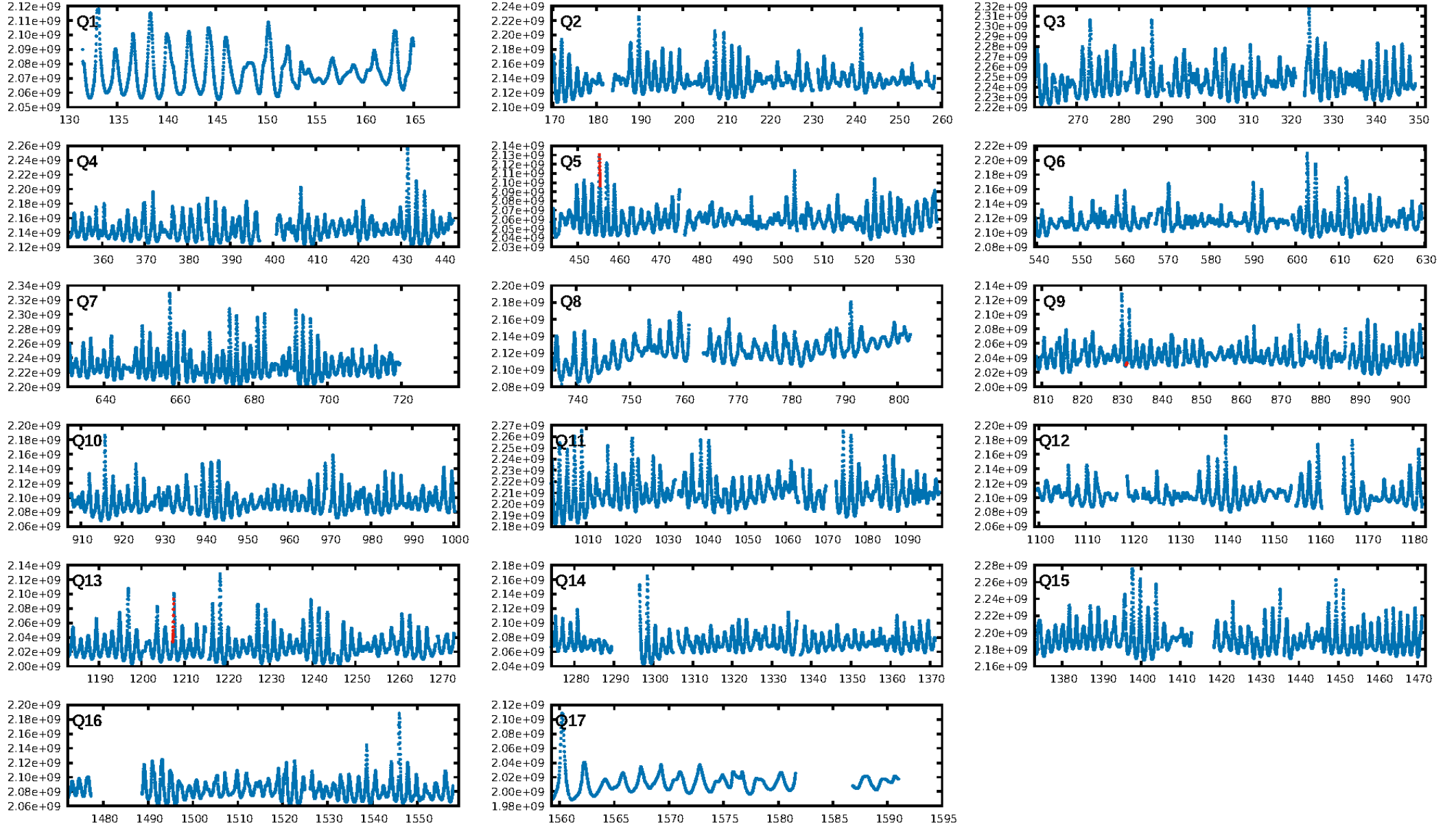
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [231.81 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A

Centroid-sig: 0.0%
Centroid-so: 3.901 arcsec [3.18 σ]
OotOffset-rm: 1.988 arcsec [1.12 σ]
KicOffset-rm: 1.212 arcsec [0.72 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

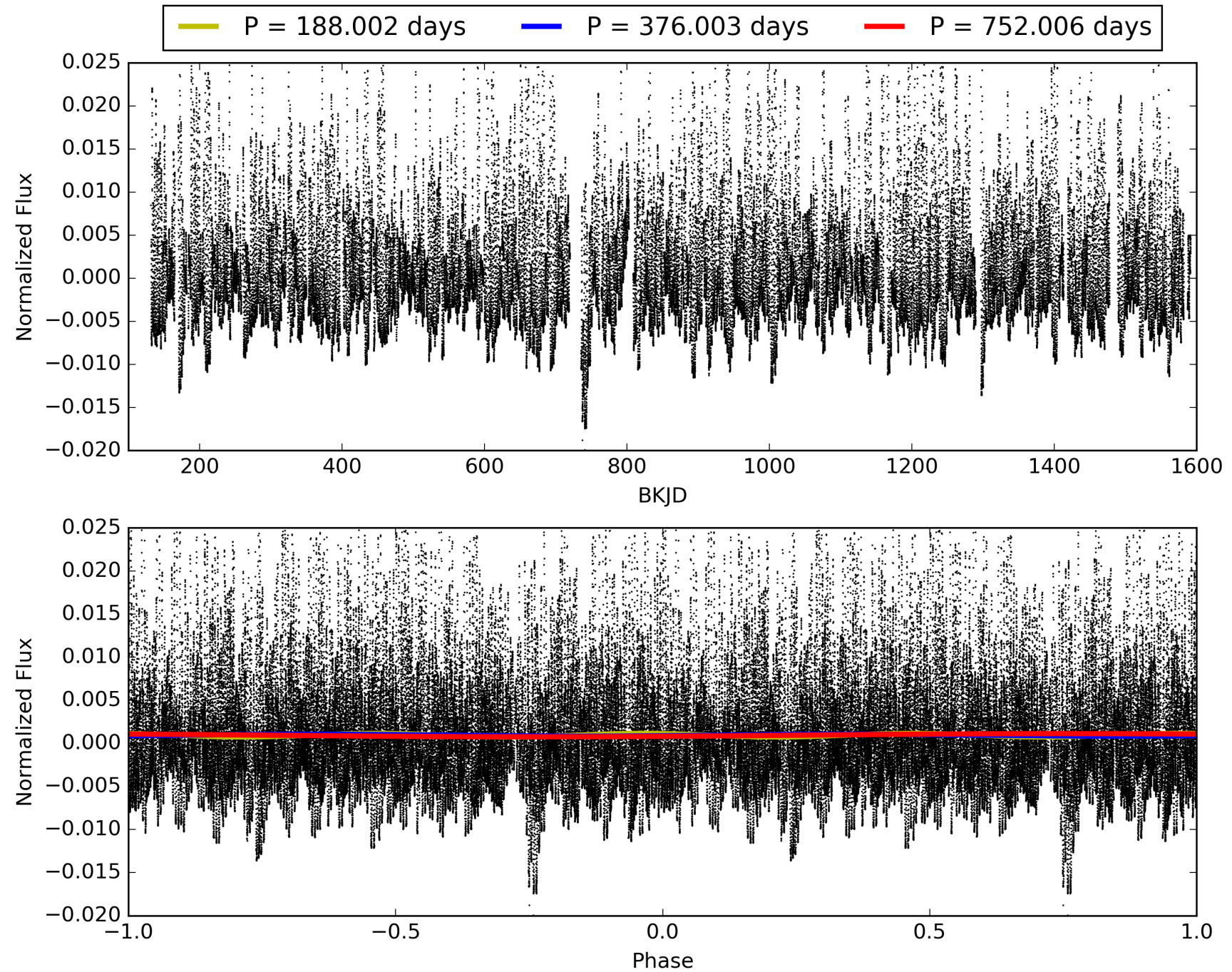
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:40:08 Z

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

TCE 008041249-03, PDC Light Curves

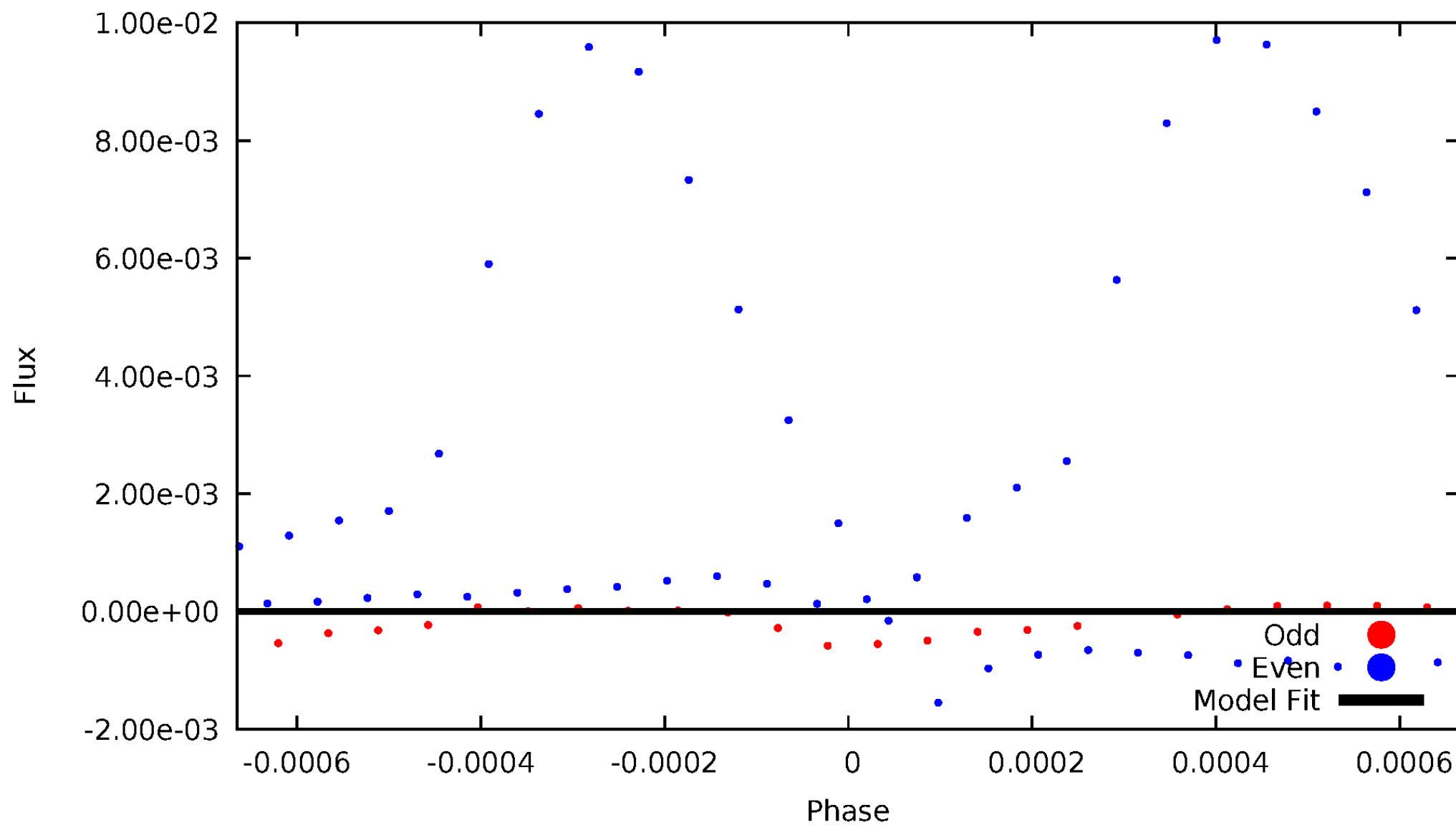


TCE 008041249-03



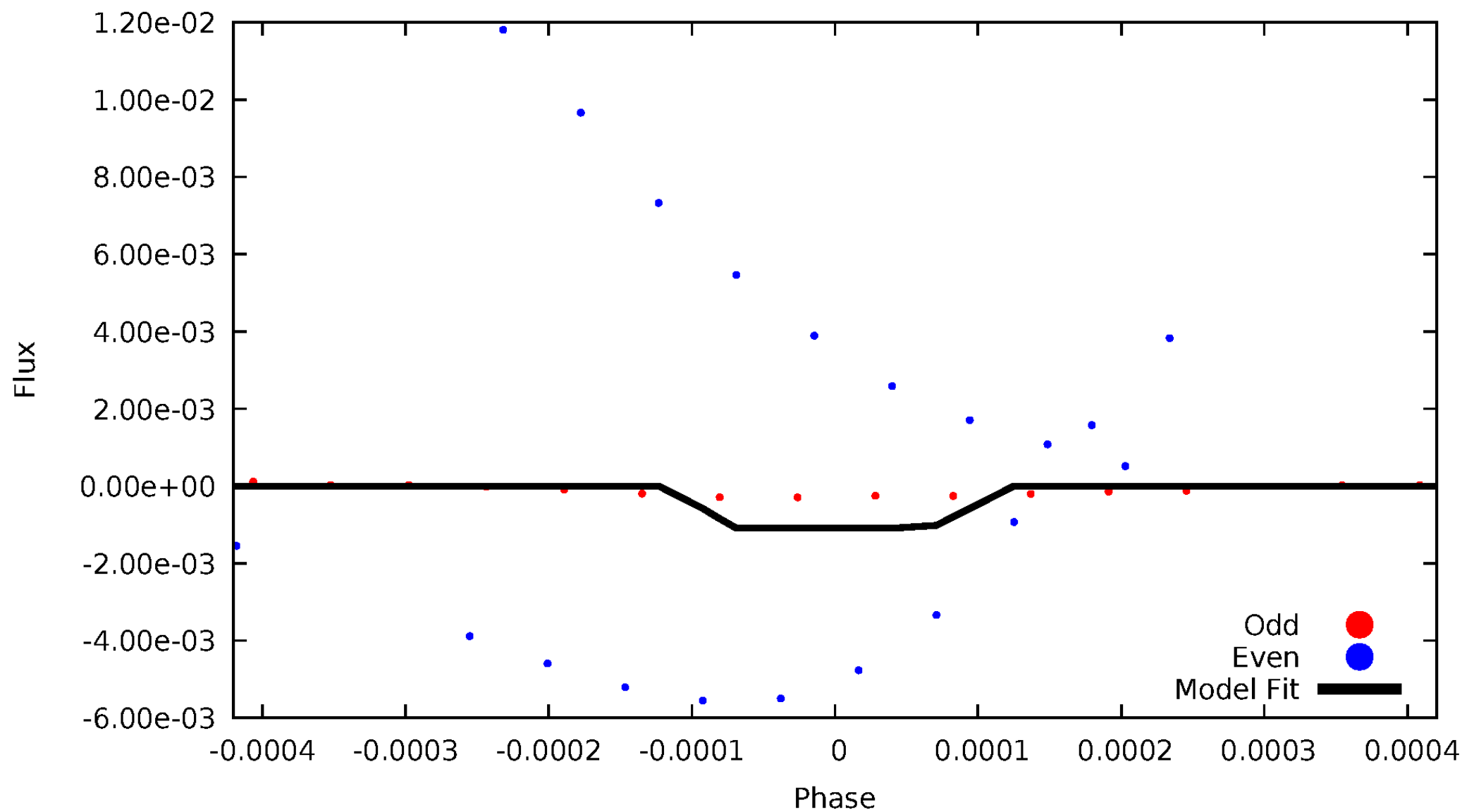
DV Odd/Even

TCE 008041249-03



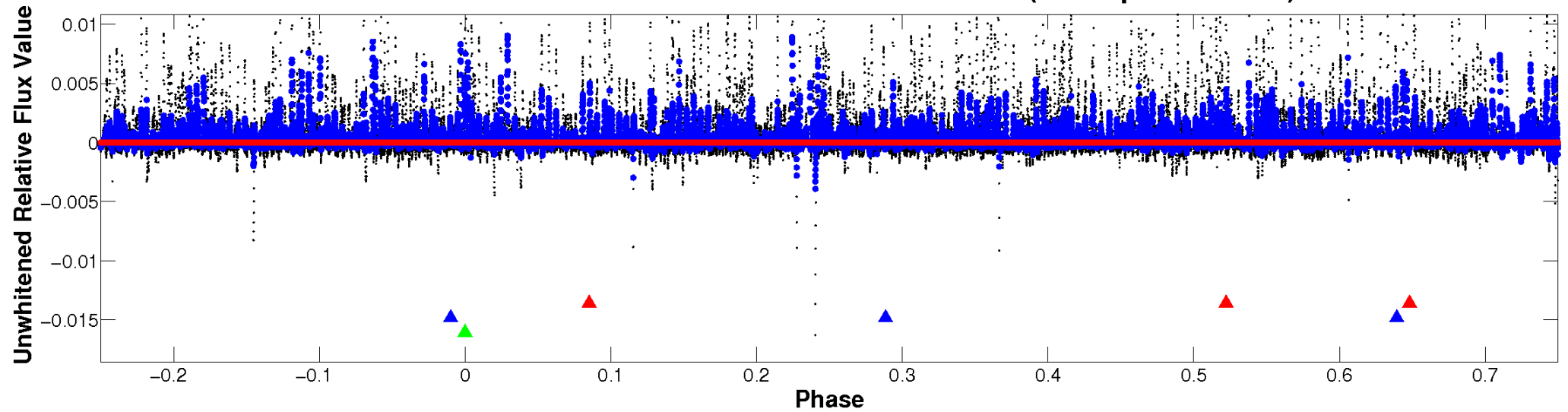
ALT Odd/Even

TCE 008041249-03



Non-Whitened Vs. Whitened Light Curve

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

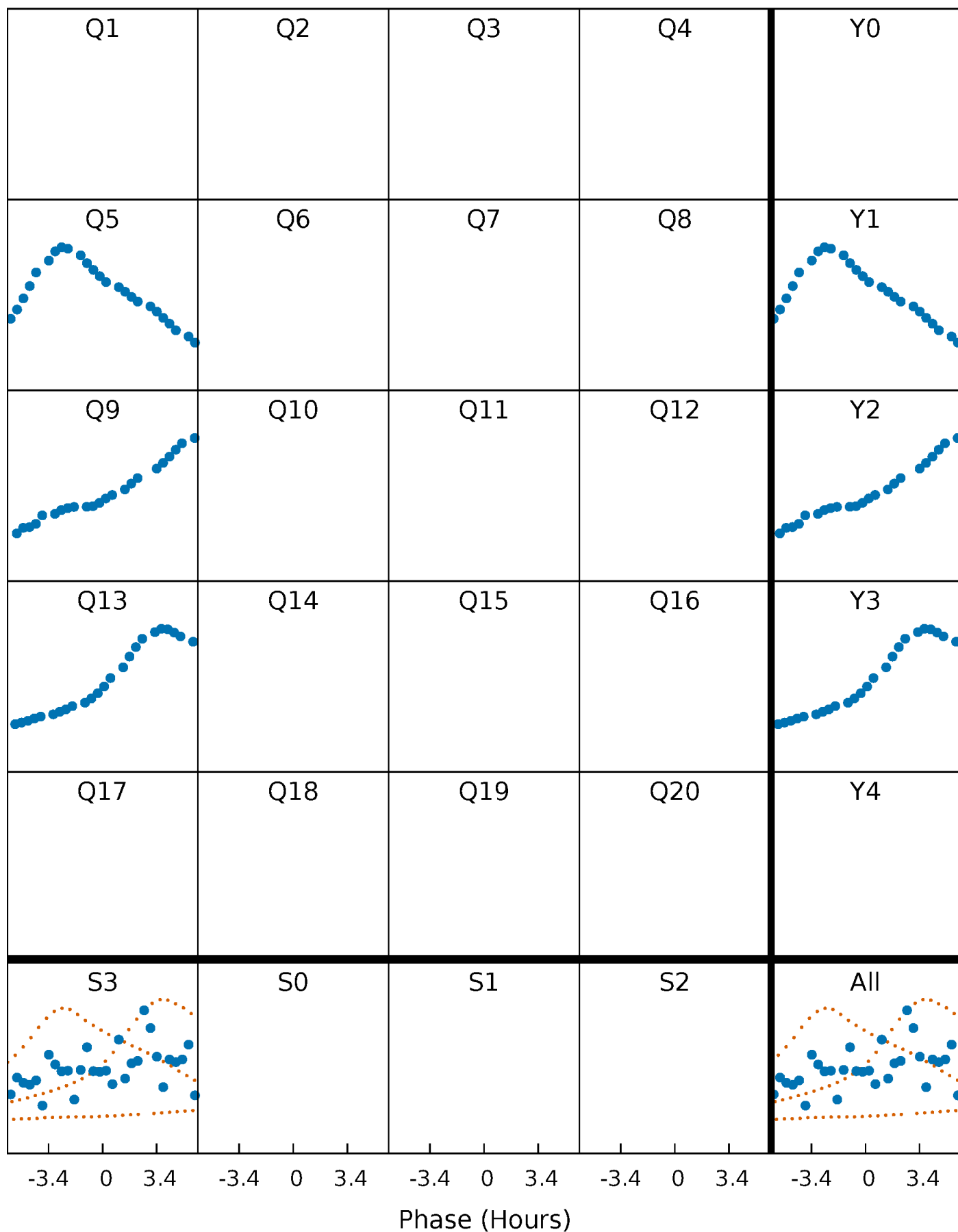


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



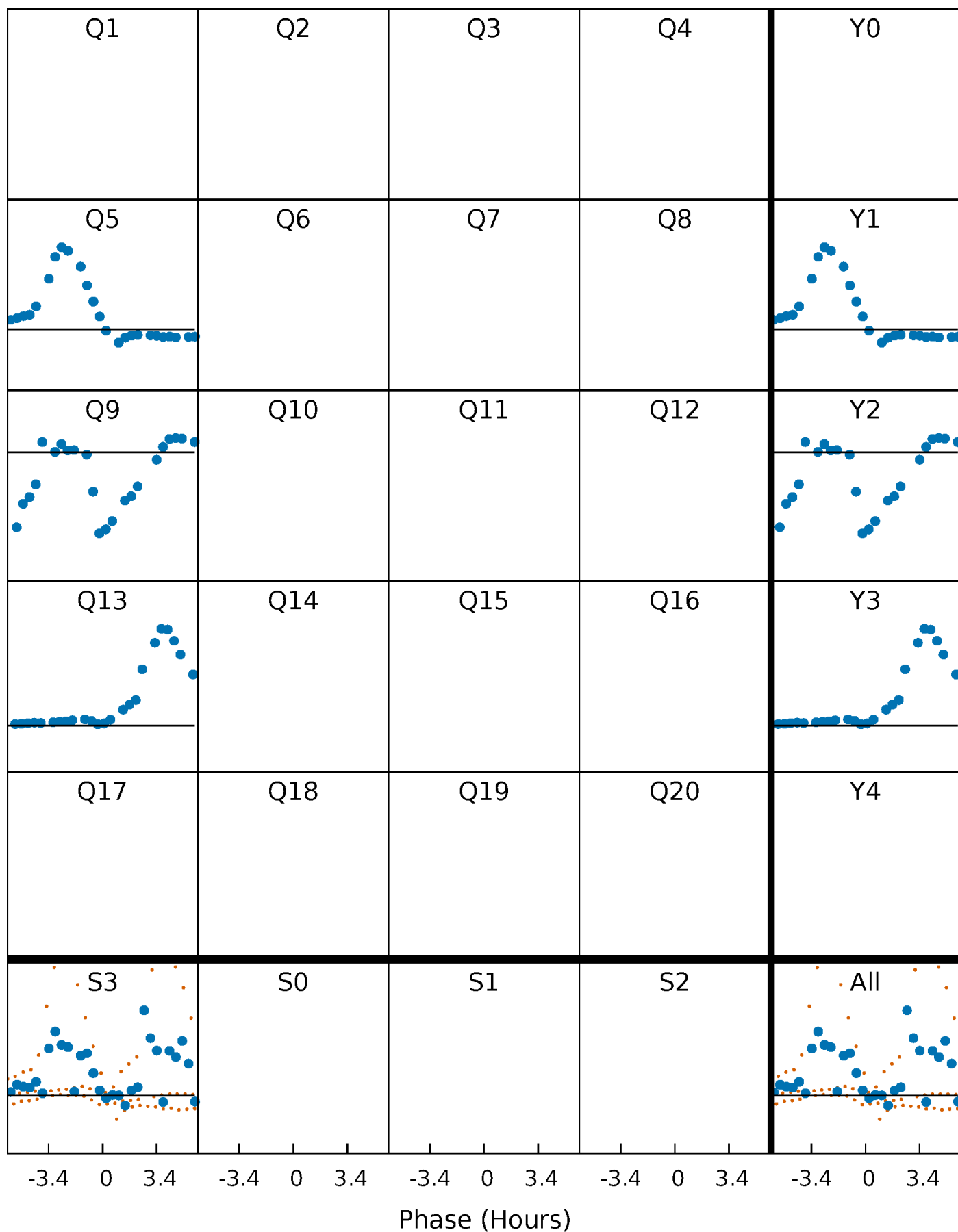
PDC Quarter-Phased Transit Curves

TCE 008041249-03 $P=376.003189$ Days $T_0=455.407104$ (BKJD)



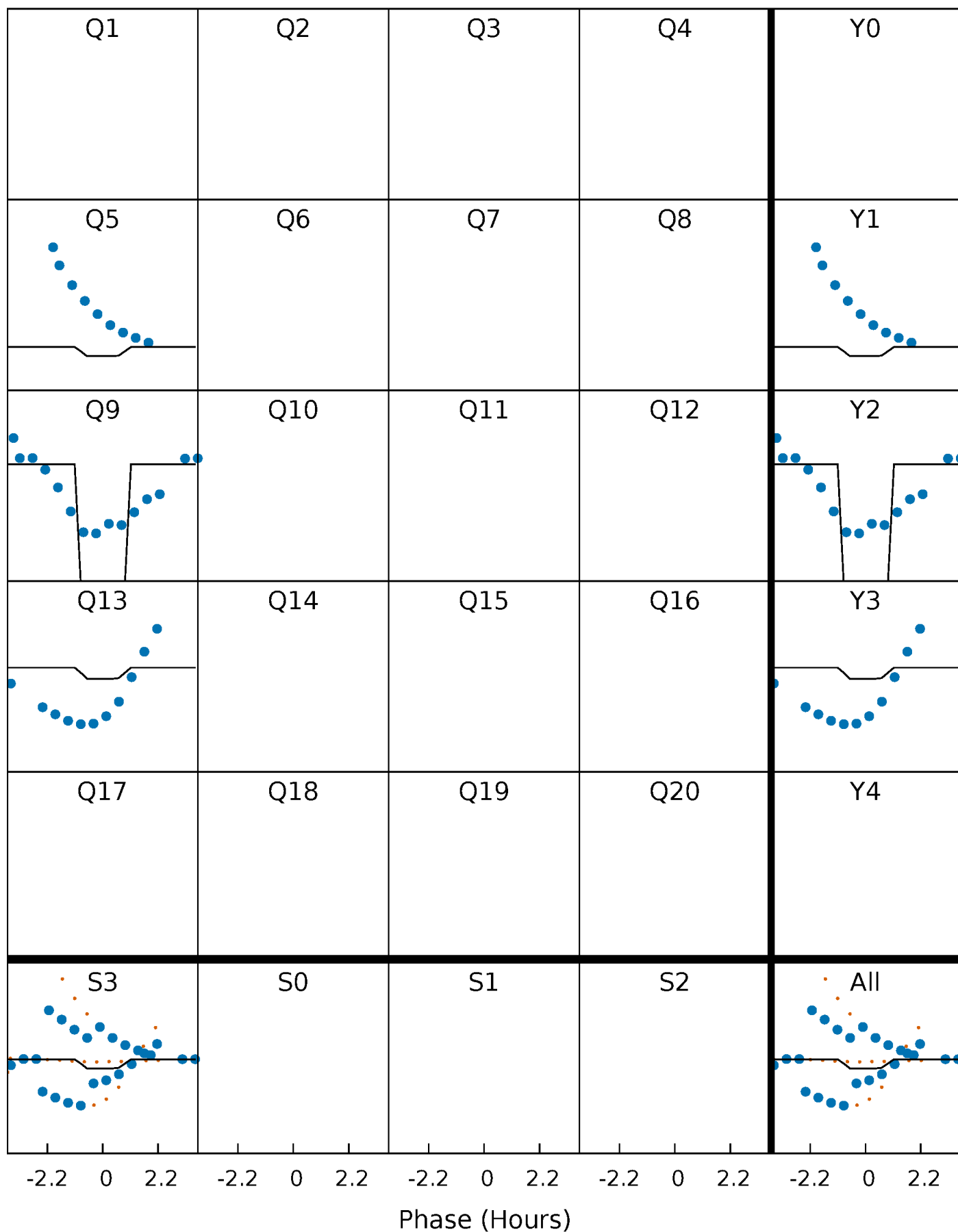
DV Quarter-Phased Transit Curves

TCE 008041249-03 $P=376.003189$ Days $T_0=455.407104$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

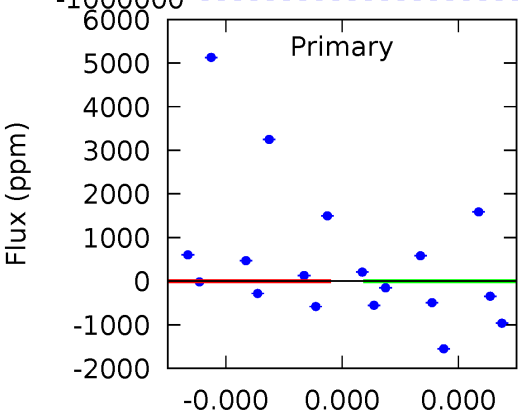
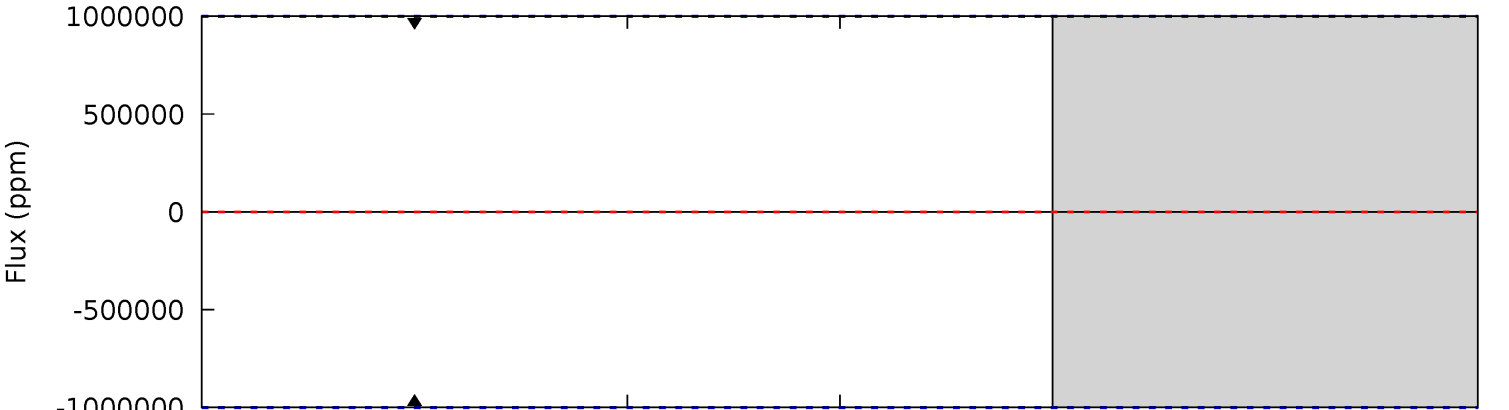
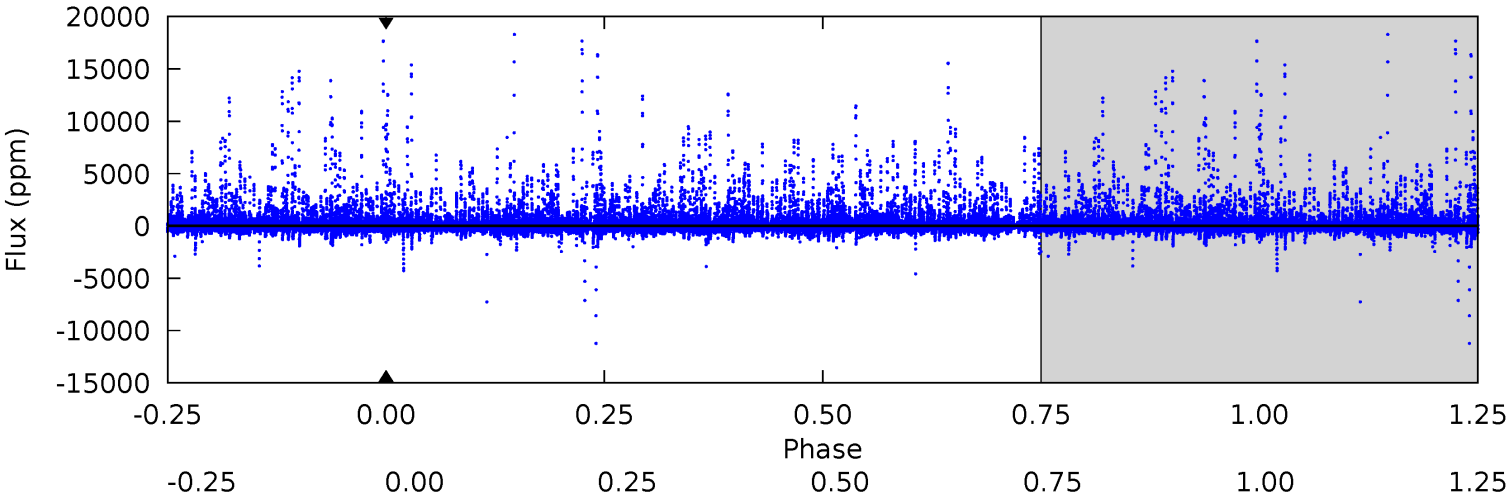
TCE 008041249-03 P=376.003189 Days $T_0=455.408524$ (BKJD)



DV Model-Shift Uniqueness Test

008041249-03, P = 376.003189 Days, E = 79.403915 Days

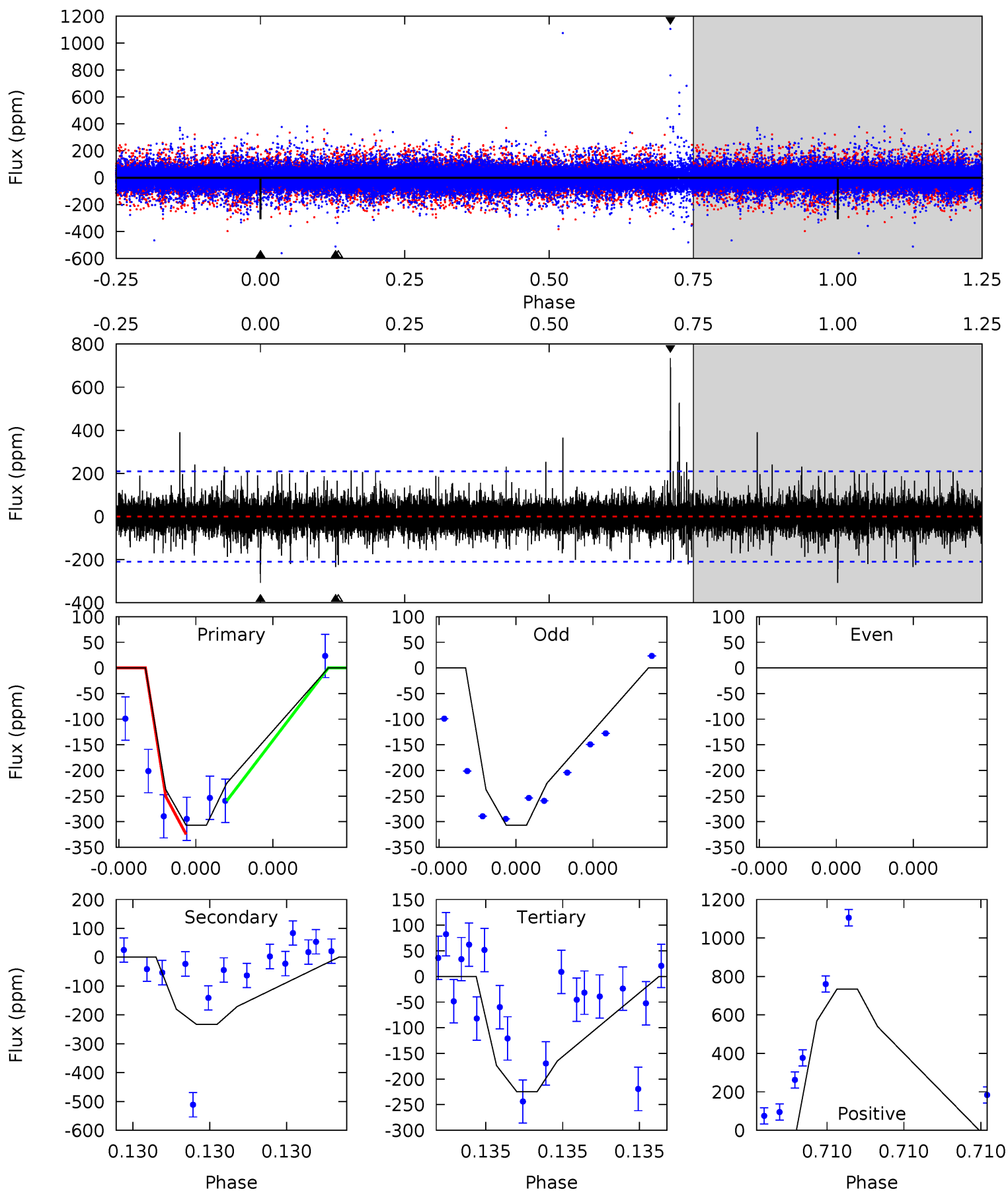
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008041249-03, P = 376.003189 Days, E = 79.405335 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.39	6.38	6.15	20.1	5.73	3.71	1.09	2.25	-11.7	0.23	-13.7	0	1.72	0.71	0



Stellar Parameters For KIC 008041249

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6947^{+171}_{-222}	$3.895^{+0.343}_{-0.123}$	$-0.280^{+0.300}_{-0.300}$	$2.297^{+0.521}_{-0.892}$	$1.511^{+0.185}_{-0.343}$	$0.176^{+0.519}_{-0.063}$
	+2%/-3%	+9%/-3%	+107%/-107%	+23%/-39%	+12%/-23%	+296%/-36%
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 008041249-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$17.24^{+17.86}_{-12.51}$	585^{+40}_{-60}	5001^{+32120}_{-35141}	$3481^{+477480}_{-412742}$
Alt.	-233 ± 37	$19.25^{+20.15}_{-13.57}$	584^{+42}_{-55}	3427^{+1949}_{-619}	453^{+4535}_{-344}

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

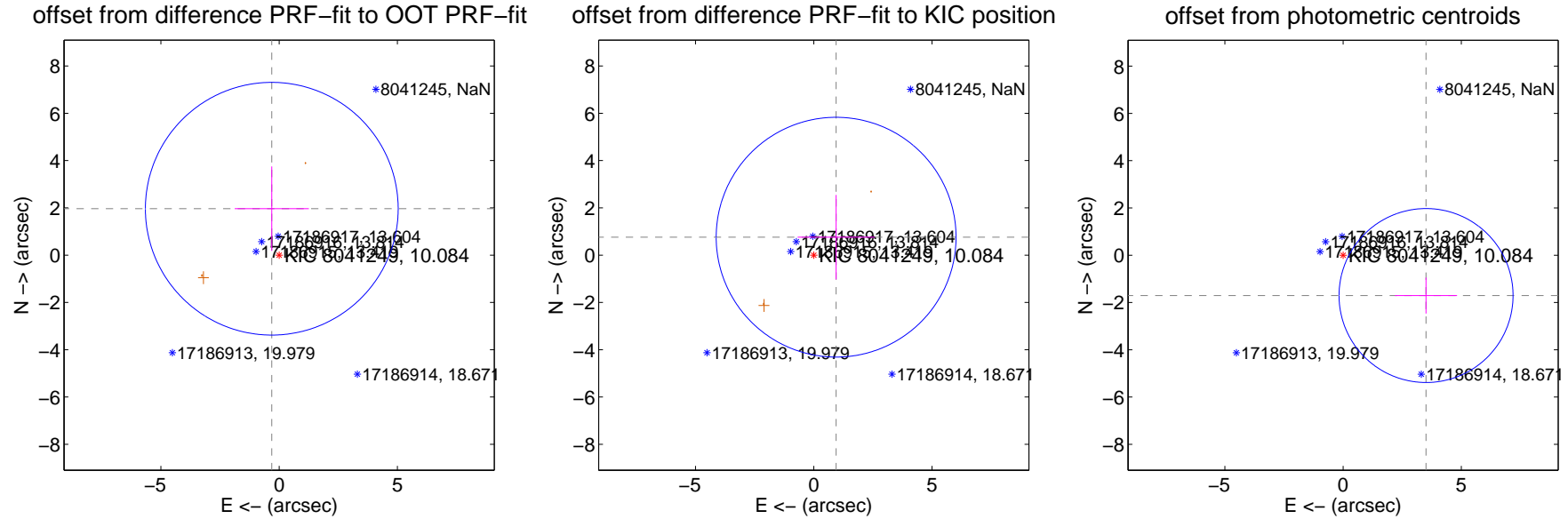
DV Centroid Data

Supplemental centroid analysis for 008041249-03. **Kepler magnitude: 10.08.** Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.988 ± 1.782	1.12	0.311 ± 1.568	1.964 ± 1.787
PRF-fit source offset from KIC position	1.212 ± 1.691	0.72	-0.945 ± 1.626	0.759 ± 1.786
photometric centroid source offset	3.90 ± 1.23	3.18	-3.51 ± 1.31	-1.71 ± 0.76

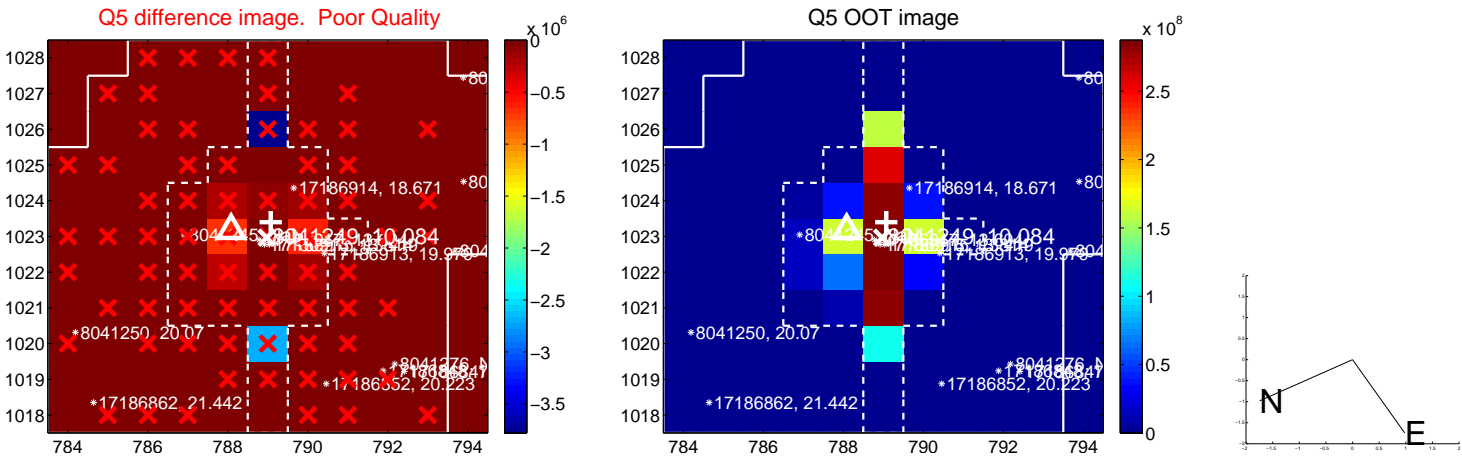


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

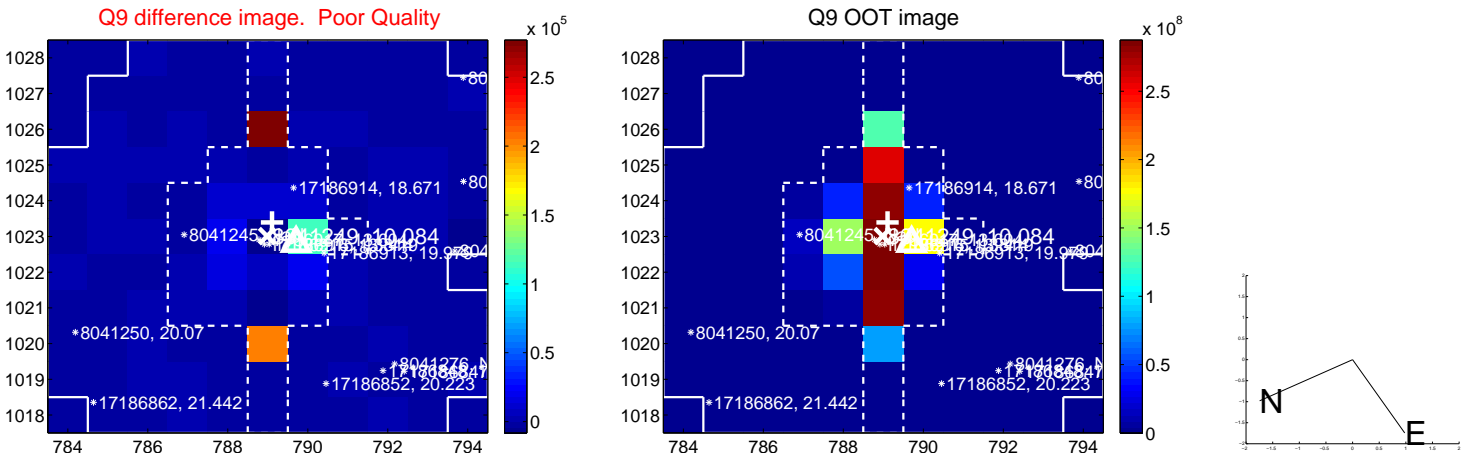
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



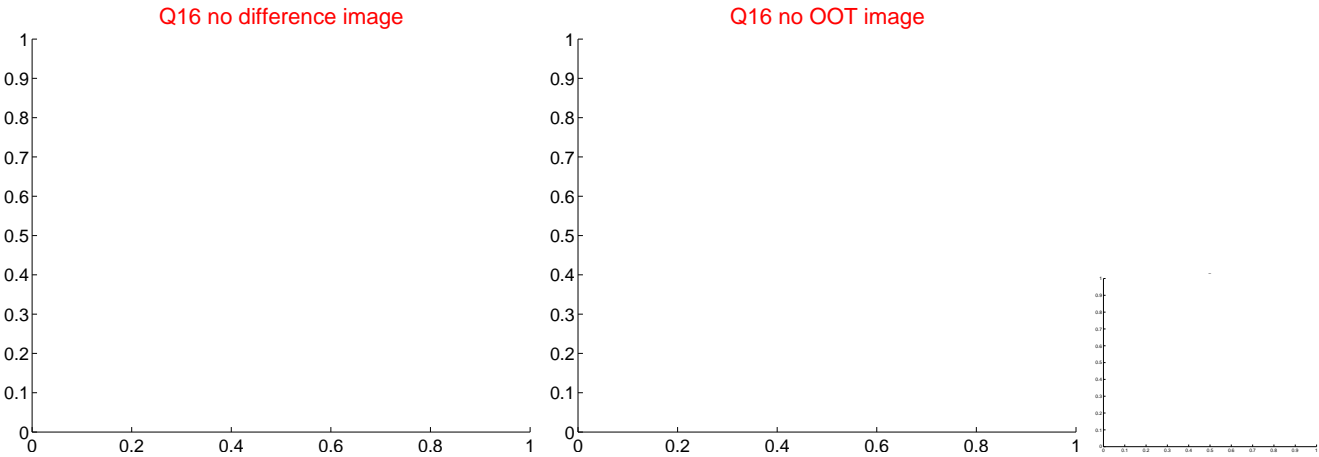
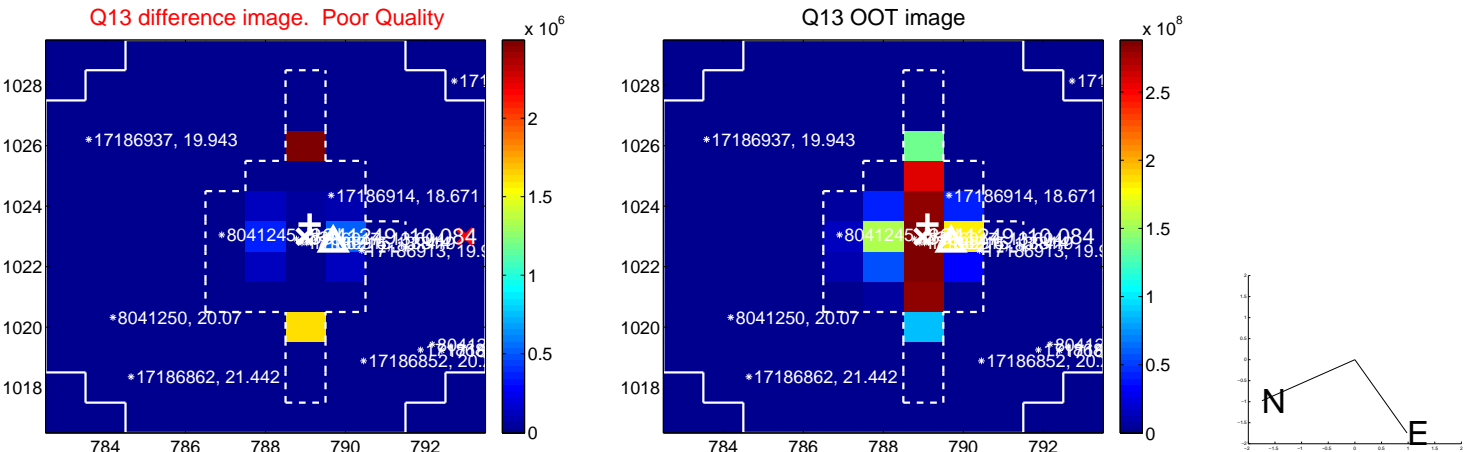
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



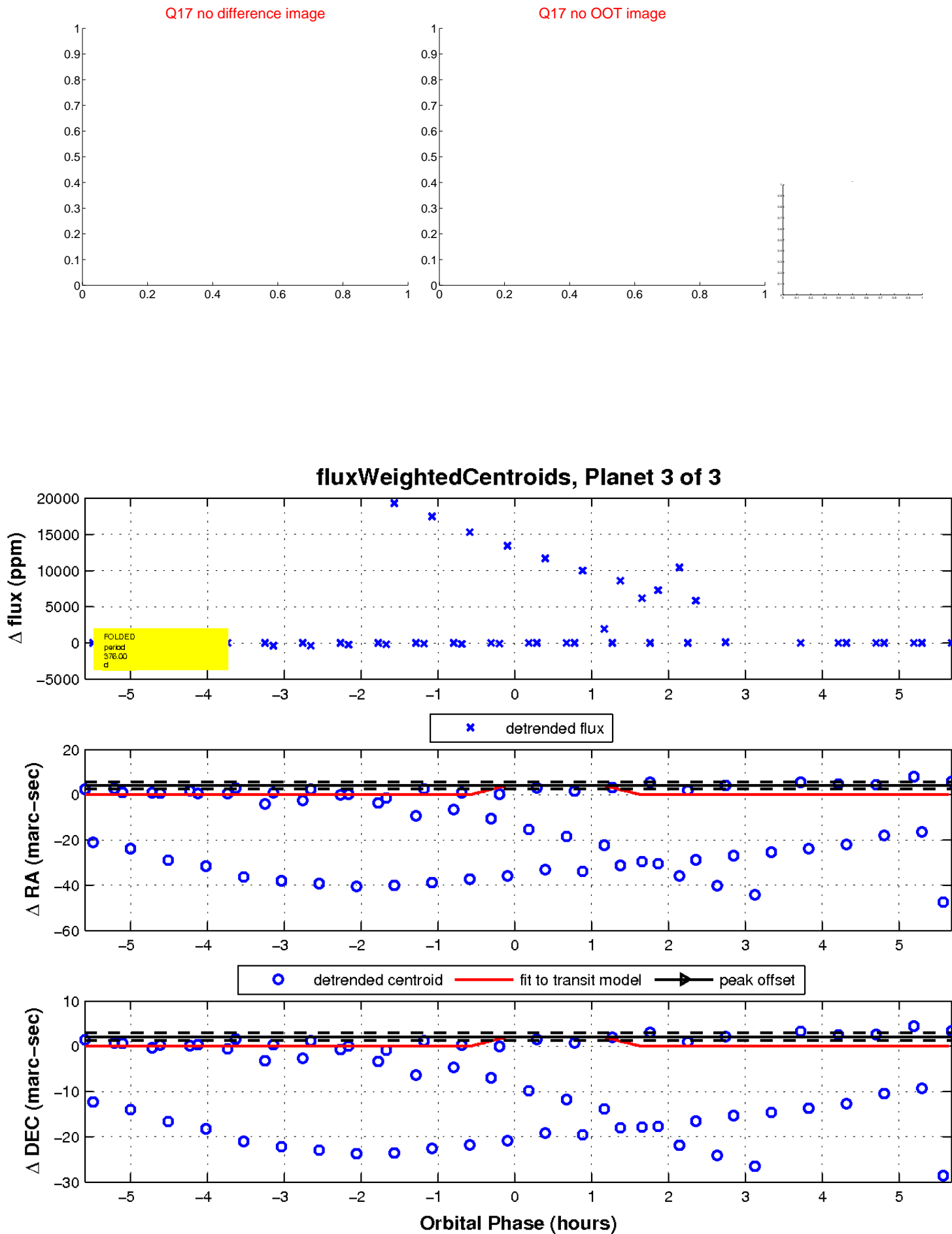
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

